(original)

OFFICE OF LYNDON R. LIE 10-15-02

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U.S. Department of Transportation

National Highway Traffic Safety Administration

OCT 7 2002

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

w/Reports

Mr. Lyndon R. Lie, Director
Product Investigations
General Motors Corporation
Mail Code 480-106-304
30500 Mound Road
Warren, MI 48090-9055

NSA-13phk
RQ02-012

GM-632 mex

Dear Mr. Lie:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Recall Query (RQ02-012) to investigate allegations of ball joint failures in certain Model Year (MY) 1998-2000 Blazer, Jimmy, and Bravada (4X4 only) vehicles manufactured by General Motors Corporation, and to request certain information.

This office has received eleven reports of sudden front suspension ball joint separations in certain MY 1998-2000 Blazer, Jimmy, and Bravada (4X4 only) model vehicles. These reports allege a loss of steering and/or braking control. Two complainants indicated that a brake line was severed as a result of the ball joint failure. Six complainants reported that an upper ball joint failed, while one complaint alleged that a lower ball joint had failed. Four complainants did not specify which ball joint had failed. A copy of each of the reports is enclosed for your information.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles**: all MY 1998-2000 Blazer, Jimmy, and Bravada (4X4 only) vehicles manufactured for sale or lease in the United States.

- **Subject component**: all front suspension ball joints manufactured for use on the subject vehicles.

- **GM**: General Motors Corporation, all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all

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1-888-DASH-2-DOT

of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after January 1, 1995, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

a. Design, engineering, analysis, modification or production (e.g. quality control);
b. Testing, assessment or evaluation;
c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.

- **Alleged defect**: Failure of a front suspension control arm ball joint, resulting in a front suspension collapse on the failed side.

- **Document**: "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by GM, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production.

In all cases where original and any non-identical copies are not available, "document(s)"also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by the manufacturer or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "field report," "fleet," "goodwill," "make," "model," "model year," "property damage," "property damage claim," "type," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as GM has previously provided a document to ODI, GM may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the information request letter (including the subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After GM's response to each request, identify the source of the information and indicate the last date the information was gathered. If requested information, so state and provide a brief explanation.

1. State the number of subject vehicles GM has manufactured for sale or lease in the United States by make, model and model year. Furnish an electronic summary of the following information for all subject vehicles manufactured to date by GM in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "PRODUCTION." See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.
   a. Vehicle identification number (VIN);
   b. Make;
   c. Model;
   d. Model Year;
   e. Date of build;
   f. Warranty/service start date; and
   g. U.S. State where the vehicle was originally sold.

2. State the number of, and provide copies of all documents relating to the alleged defect in the subject vehicles, from each of the following categories, either received or authorized by GM, or of which GM are otherwise aware. For each source, organize the information by file/report number:
   a. Consumer and fleet complaints;

b. Field reports, including all reports and requests for technical assistance from dealer personnel and/or zone offices;
c. Reports of, or requests for, roadside assistance or recovery;
d. Fire incident reports;
e. Crash, injury and fatality reports, regardless of whether any claim, proceeding, or lawsuit is or was involved;
f. Property damage claims that do not involve a crash or fire;
g. Subrogation claims;
h. Third-party arbitration proceedings where GM is a party to the arbitration; and
i. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

Furnish a total number for each item separately, and provide copies of all requested documents, whether or not they have been verified by GM. GM's response shall include, but not be limited to, (1) all reported incidents that have occurred or may have occurred, at least in part, due to circumstances, conditions, or problems caused by the alleged defect in the subject vehicles; (2) complaints or information provided by fleets, consumer groups, government agencies, insurance companies, and other entities that have provided such information to GM; and (3) all crash, injury, or fatal incidents, regardless of whether any claim, proceeding, or lawsuit is or was involved, or whether or not each has been verified by GM. Multiple incidents involving the same vehicle are to be counted separately.

For items "d" through "i," the documentation provided should also include GM's file number; a summary of alleged component failure and causal factors; GM's assessment of the failure with a description of the significant underlying facts and evidence; and the identity of all involved parties, caption, court, docket number, and filing date (items "g" through "i" only).

3. Furnish an electronic summary of the following information, in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "FIELD DATA," summarizing the records provided in response to question 2. See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.
   a. GM file number;
   b. GM category as stated in Response 2 (2a: consumer and fleet complaints, etc.);
   c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
   d. Vehicle's VIN, make, model, model year and mileage at time of incident;
   e. Incident date;
   f. Report or claim date;
   g. Whether a fire is alleged;
   h. Whether a crash is alleged;
   i. Whether property damage is alleged;
   j. Number of alleged injuries, if any; and
   k. Number of alleged fatalities, if any.

If GM has developed or is developing other tables related to the alleged defect in the subject vehicles, provide electronic copies of each such table in separate submissions with a description of each and when they were created.

4. State the total number of warranty claims; extended warranty claims; requests for "good will," field, zone, or similar adjustments and reimbursements; and claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign that have been received by GM to date that relate, or could relate, to the alleged defect in the subject vehicles by model and model year. Describe the search criteria, including all labor operations and problem codes, used by GM in responding to this request and provide an electronic copy of all problem codes and problem code descriptions applicable to the subject component.

   Also, furnish an electronic summary of the following information, in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "WARRANTY DATA," listing the warranty claims for the subject component, including those contributing to the total count identified in GM's response to this request. See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.
   a. GM's claim number;
   b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
   c. VIN;
   d. Repair date;
   e. Repair mileage;
   f. Repairing dealer name, phone number and city and state or ZIP code;
   g. Labor operation number and description;
   h. Problem code and description;
   i. Replacement part number(s) and description(s);
   j. Customer concern summary; and
   k. Dealer/technician comment summary.

5. Furnish a copy of each service, warranty, or technical document(s), including (but not limited to) bulletins, advisories, informational documents, training documents, or other communications that relate to or may relate to the alleged defect in the subject vehicles that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities.

6. Identify and describe all studies, surveys, investigations, testing, and other analyses pertaining to the alleged defect in the subject vehicles that have been, are being or will be conducted by, or for, GM. For each such action, provide copies of all relevant documents, as a separate enclosure and in chronological order. This should include, but not be limited to, methodologies, action plans, final reports and presentations with the original file names and dates, regardless of whether the documents are in interim, draft, or final form. Also, furnish an electronic summary of all such actions, including the following information, in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "INVESTIGATIONS". See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.
   a. Study title, identifier or ID number;
   b. The actual or planned start date;
   c. The actual or planned end date;

d. Brief summary of the subject or objective;
e. Engineering group/supplier responsible; and,
f. Findings and or conclusions.

7. Identify and describe all modifications or changes made by, or on behalf of, GM in the manufacture, design, or material composition of the subject components from the start of production to date, which may relate to the alleged defect in the subject vehicles. The following information must be included for each such modification or change:
   a. The date or approximate date on which the modification or change was incorporated into production;
   b. A description of the modification or change;
   c. The reason(s) for the modification or change;
   d. The part number of the modified part;
   e. Whether the original unmodified component was withdrawn from sale, and if so, when; and
   f. Whether the modified or changed components can be interchanged with earlier production components.

   Also, include the above information for any modification or change that GM is aware of which may be produced, distributed, or made available within the next 120 days.

8. State the number of each of the following that GM has sold for use in the subject vehicles by component name, part number (both service and engineering); supplier; and month/year of sale:
   a. Subject component;
   b. State, by model and model year, all vehicles in which it is used; and
   c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly.

   Provide the supplier name and address and the name, title, and telephone number of the appropriate point of contact for each component.

9. Furnish GM's assessment of the alleged defect in the subject vehicle, including:
   a. The causal or contributory factor(s);
   b. The failure mechanism(s);
   c. The failure mode(s);
   d. The risk to motor vehicle safety that it poses; and
   e. The reports included with this inquiry.

10. Please update ODI in conjunction with past investigation EA99-022. This should include all information in GM's possession or control, or of which it is otherwise aware, which relates or potentially relates to the alleged defect associated with EA99-022. State the number of, and provide copies of all documents relating to the alleged defect in the subject vehicles, from each of the following categories, either received or authorized by GM, or of which GM are otherwise aware. For each source, organize the information by file/report number:
    a. Consumer and fleet complaints;

b. Field reports, including all reports and requests for technical assistance from dealer personnel and/or zone offices;
c. Reports of, or requests for, roadside assistance or recovery;
d. Fire incident reports;
e. Crash, injury and fatality reports, regardless of whether any claim, proceeding, or lawsuit is or was involved;
f. Property damage claims that do not involve a crash or fire;
g. Subrogation claims;
h. Third-party arbitration proceedings where GM is a party to the arbitration; and
i. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

Furnish a total number for each item separately, and provide copies of all requested documents, whether or not they have been verified by GM. GM's response shall include, but not be limited to, (1) all reported incidents that have occurred or may have occurred, at least in part, due to circumstances, conditions, or problems caused by the alleged defect in the subject vehicles; (2) complaints or information provided by fleets, consumer groups, government agencies, insurance companies, and other entities that have provided such information to GM; and (3) all crash, injury, or fatal incidents, regardless of whether any claim, proceeding, or lawsuit is or was involved, or whether or not each has been verified by GM. Multiple incidents involving the same vehicle are to be counted separately.

For items "d" through "i," the documentation provided should also include GM's file number; a summary of alleged component failure and causal factors; GM's assessment of the failure with a description of the significant underlying facts and evidence; and the identity of all involved parties, caption, court, docket number, and filing date (items "g" through "i" only).

This letter is being sent to GM pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49. It constitutes a new request for information. GM's failure to respond promptly and fully to this letter could subject GM to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) Please note that maximum civil penalties under 49 U.S.C. § 30165 have increased as a result of the recent enactment of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Public Law No. 106-414 (signed November 1, 2000). Section 5(a) of the TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties of up to $5,000 per day, with a maximum of $15 million for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. This includes failing to respond to ODI information requests.

If GM cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, GM does not submit one or more requested documents or items of information in response to this information request, GM must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, name and position of the person(s) from, and the person(s) to whom it was sent, and the name and position of any other recipient (to include all

carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

GM's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by November 25,2002. Please include in GM's response the identification codes referenced on page one of this letter. If GM finds that it is unable to provide all of the information requested within the time allotted, GM must request an extension from me at (202) 366-5207 no later than five business days before the response due date. If GM is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information GM then has available, even if an extension has been granted.

If GM claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, GM must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, to the Office of Chief Counsel (NCC-30), National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street, S.W., Washington, D.C. 20590. GM is required to submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.

If you have any technical questions concerning this matter, please call Peter Kivett of my staff at (202) 366-6178.

Sincerely,

Jeffrey L. Quandt, Chief
Vehicle Control Division
Office of Defects Investigation

Enclosures

GENERAL MOTORS NORTH AMERICA
Structure & Safety Integration

November 25, 2002

Jeffrey L. Quandt, Chief
Vehicle Control Division
Office of Defects Investigation
NHTSA Enforcement
Room #5326
400 Seventh Street, S.W.
Washington, D.C. 20590

GM-632

NSA-13phk
RQ02-012

Dear Mr. Quandt:

This letter is General Motors (GM) response to your information request (IR), dated October 15, 2002, regarding the alleged failure of a front suspension control arm ball joint, resulting in a front suspension collapse on the failed side on 1998-2000 Model Year (MY) Blazer, Jimmy, and Bravada (4x4) vehicles.

Your questions and our corresponding replies are as follows:

1. **State the number of subject vehicles GM has manufactured for sale or lease in the United States by make, model and model year. Furnish an electronic summary of the following information for all subject vehicles manufactured to date by GM in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "PRODUCTION." See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.**

   a. **Vehicle identification number (VIN);**
   b. **Make;**
   c. **Model;**
   d. **Model Year;**
   e. **Date of build;**
   f. **Warranty/service start date; and**
   g. **U.S. State where the vehicle was originally sold.**

   GM is providing the number of subject vehicles produced for sale or lease in the United States by make, model, and model year in Table 1 below.

MAKE	MODEL	1998 MY	1999 MY	2000 MY	TOTAL
Chevrolet	Blazer	184,361	152,863	185,906	523,130
GMC	Jimmy	63,717	49,792	67,854	181,363
Oldsmobile	Bravada	31,564	25,782	33,184	90,530
	TOTAL	279,642	228,437	286,944	795,023

TABLE 1: DOMESTIC POPULATION OF THE SUBJECT VEHICLES BY MODEL YEAR

Product Investigations
Mail Code: 480-106-304 • 30500 Mound Road • Warren, MI 48090-9055
Phone: (586) 986-8029 • Fax: (586) 947-2316

The information requested in 1a-1f is provided on the CD in Attachment 1; refer to the Microsoft Access 2000 file in the folder labeled "Response Q1." The GM database that contains vehicle VIN information does not include information on the state where an individual vehicle was sold. Instead, GM is providing the state to which the vehicle was shipped.

2. **State the number of, and provide copies of all documents relating to the alleged defect in the subject vehicles, from each of the following categories, either received or authorized by GM, or of which GM are otherwise aware. For each source, organize the information by file/report number:**

   a. **Consumer and fleet complaints;**
   b. **Field reports, including all reports and requests for technical assistance from dealer personnel and/or zone offices;**
   c. **Reports of, or requests for, roadside assistance or recovery;**
   d. **Fire incident reports;**
   e. **Crash, injury and fatality reports, regardless of whether any claim, proceeding, or lawsuit is or was involved;**
   f. **Property damage claims that do not involve a crash or fire;**
   g. **Subrogation claims;**
   h. **Third-party arbitration proceedings where GM is a party to the arbitration; and**
   i. **Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.**

   Furnish a total number for each item separately, and provide copies of all requested documents, whether or not they have been verified by GM. GM's response shall include, but not be limited to, (1) all reported incidents that have occurred or may have occurred, at least in part, due to circumstances, conditions, or problems caused by the alleged defect in the subject vehicles; (2) complaints or information provided by fleets, consumer groups, government agencies, insurance companies, and other entities that have provided such information to GM; and (3) all crash, injury, or fatal incidents, regardless of whether any claim, proceeding, or lawsuit is or was involved, or whether or not each has been verified by GM. Multiple incidents involving the same vehicle are to be counted separately.

   For items "d" through "i," the documentation provided should also include GM's file number; a summary of alleged component failure and causal factors; GM's assessment of the failure with a description of the significant underlying facts and evidence; and the identity of all involved parties, caption, court, docket number, and filing date (items "g" through "i" only).

   Table 2 summarizes the records reported to GM that could relate to the subject condition.

Type of Report	Count (Including Duplicates)	GM Reports	GM Reports Corresponding to NHTSA Reports	Location of Reports (Attachment)	Number of Property Damage Reports Not Involving a Crash or Fire	Number of Fire and Crash Incident Reports	Number of Reported Injuries or Fatalities
Owner Reports	22	20	2	2a	1	6	2
Field Reports and Technical Assistance System Reports	8	7	1	2b	5	3	1
Not-In-Suit Claims	0	0	0	-	0	0	0
Subrogation Claims	0	0	0	-	0	0	0
Third Party Arbitration Proceedings	0	0	0	-	0	0	0
Lawsuits	0	0	0	-	0	0	0
Total (Including Duplicates)	30	27	3	-	6	9	3
Total (Excluding Duplicates)	28	26	2	-	6	7	3

Table 2: Alleged Complaints Involving Subject Vehicle Population

3. **Furnish an electronic summary of the following information, in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "FIELD DATA," summarizing the records provided in response to question 2. See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.**

   a. **GM file number;**
   b. **GM category as stated in Response 2 (2a: consumer and fleet complaints, etc.);**
   c. **Vehicle owner or fleet name (and fleet contact person), address, and telephone number;**
   d. **Vehicle's VIN, make, model, model year and mileage at time of incident;**
   e. **Incident date;**
   f. **Report or claim date;**
   g. **Whether a fire is alleged;**
   h. **Whether a crash is alleged;**
   i. **Whether property damage is alleged;**
   j. **Number of alleged injuries, if any; and**
   k. **Number of alleged fatalities, if any.**

   If GM has developed or is developing other tables related to the alleged defect in the subject vehicles, provide electronic copies of each such table in separate submissions with a description of each and when they were created.

An electronic summary is provided on the CD in Attachment 1; refer to the Microsoft Access 2000 file in the folder labeled "Response Q3." GM has organized this summary by attachment number and GM file number.

4. State the total number of warranty claims; extended warranty claims; requests for "good will," field, zone, or similar adjustments and reimbursements; and claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign that have been received by GM to date that relate, or could relate, to the alleged defect in the subject vehicles by model and model year. Describe the search criteria, including all labor operations and problem codes, used by GM in responding to this request and provide an electronic copy of all problem codes and problem code descriptions applicable to the subject component.

Also, furnish an electronic summary of the following information, in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "WARRANTY DATA," listing the warranty claims for the subject component, including those contributing to the total count identified in GM's response to this request. See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.

a. GM's claim number;
b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
c. VIN;
d. Repair date;
e. Repair mileage;
f. Repairing dealer name, phone number and city and state or ZIP code;
g. Labor operation number and description;
h. Problem code and description;
i. Replacement part number(s) and description(s);
j. Customer concern summary; and
k. Dealer/technician comment summary.

A summary of warranty claims that may be related to the subject condition is provided on the CD in Attachment 1; refer to the Microsoft Access 2000 file in the folder labeled "Response Q4." The data was collected by searching for the following labor codes and trouble codes:

Labor codes and descriptions:

E2920	Ball joint- R-upper control arm replace
E2921	Ball joint- L-upper control arm replace
E2927	Ball joint- Both-upper control arm replace
E2930	Ball joint- R-lower control arm replace
E2931	Ball joint- L-lower control arm replace
E2937	Ball joint- Both-lower control arm replace

Trouble codes and descriptions:

1D	Broken
1J	Collapsed
3Z	Ruptured

GM's warranty database does not contain the following information: vehicle owner's name, address, telephone number, or replacement part number description. GM is providing a field labeled "Verbatim Text" in response to request 4k (dealer/technician comment summary). The verbatim text is an optional field in the GM warranty system for the dealer to enter any additional comments that may be applicable to the warranty claim. The verbatim text field is not required to be completed for every warranty claim.

The number of warranty claims by make, model and model year, is shown in Table 4 below:

Division	Model	1998 MY	1999 MY	2000 MY	Total
Chevrolet	Blazer 4WD 2 door	22	17	20	59
	Blazer 4WD 4 door	136	86	100	322
GMC	Jimmy 4WD 2 door	3	5	6	14
	Jimmy 4WD 4 door	37	37	79	153
Oldsmobile	Bravada 4WD 4 door	28	8	17	53
	Total	226	153	222	601

Table 4: Warranty Claims Involving the Subject Vehicles by Model Year

The warranty numbers provided have limited analytical value in analyzing the field performance of a motor vehicle component. The warranty records do not contain sufficient information to establish the condition of the part at the time of the warranty correction; and service personnel may not consistently use the appropriate labor and trouble codes. Warranty numbers represent claims by our dealers for reimbursement for parts and labor costs incurred in performing warranty service for our customers.

5. **Furnish a copy of each service, warranty, or technical document(s), including (but not limited to) bulletins, advisories, informational documents, training documents, or other communications that relate to or may relate to the alleged defect in the subject vehicles that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities.**

GM is not aware of any documents issued concerning front suspension control arm ball joints on the subject vehicles.

6. **Identify and describe all studies, surveys, investigations, testing, and other analyses pertaining to the alleged defect in the subject vehicles that have been, are being or will be conducted by, or for, GM. For each such action, provide copies of all relevant documents, as a separate enclosure and in chronological order. This should include, but not be limited to, methodologies, action plans, final reports and presentations with the original file names and dates, regardless of whether the documents are in interim,**

draft, or final form. Also, furnish an electronic summary of all such actions, including the following information, in Microsoft Access 2000, or a Microsoft Access 2000 compatible format, entitled "INVESTIGATIONS". See Enclosure 1, Data Collection Disc, for a pre-formatted table designed for this submission.

a. Study title, identifier or ID number;
b. The actual or planned start date;
c. The actual or planned end date;
d. Brief summary of the subject or objective;
e. Engineering group/supplier responsible; and,
f. Findings and or conclusions.

Attachment 6A contains responsive documents provided by Delphi Automotive Systems. Attachment 6B contains responsive GM documents. The data is organized in chronological order.

7. Identify and describe all modifications or changes made by, or on behalf of, GM in the manufacture, design, or material composition of the subject components from the start of production to date, which may relate to the alleged defect in the subject vehicles. The following information must be included for each such modification or change:

a. The date or approximate date on which the modification or change was incorporated into production;
b. A description of the modification or change;
c. The reason(s) for the modification or change;
d. The part number of the modified part;
e. Whether the original unmodified component was withdrawn from sale, and if so, when; and
f. Whether the modified or changed components can be interchanged with earlier production components.

Also, include the above information for any modification or change that GM is aware of which may be produced, distributed, or made available within the next 120 days.

Attachment 7 contains a chart summarizing the changes to the subject components. This information was previously supplied in Attachment H of GM's May 27, 1999 response to PE99-021. There have not been any changes in the subject components since the May 27, 1999 response.

8. State the number of each of the following that GM has sold for use in the subject vehicles by component name, part number (both service and engineering); supplier; and month/year of sale:

a. Subject component;
b. State, by model and model year, all vehicles in which it is used; and
c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly.

Provide the supplier name and address and the name, title, and telephone number of the appropriate point of contact for each component.

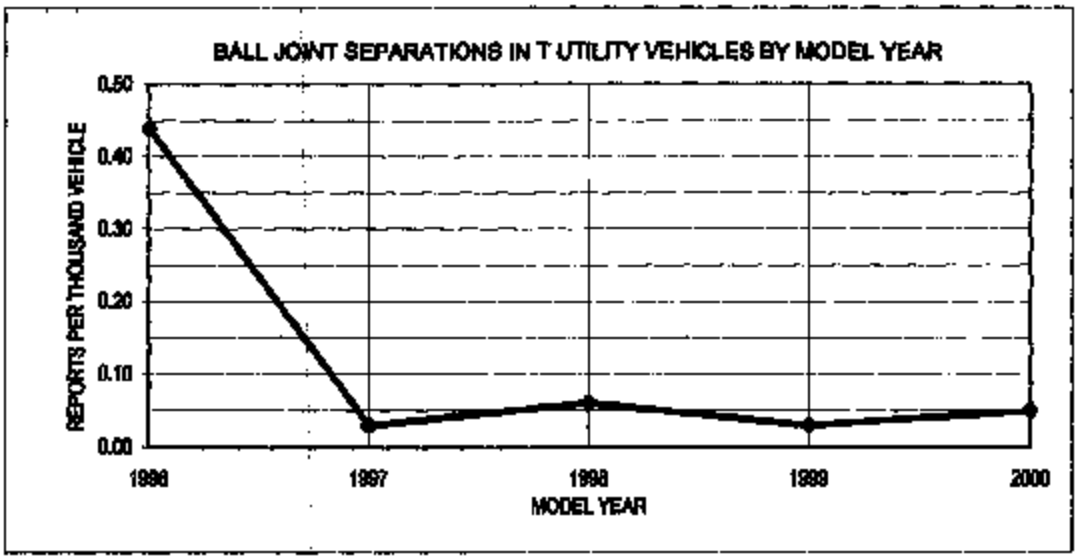
A summary of part sales information for ball joints used on the subject vehicles is provided on the CD in Attachment 1; refer to the excel file in the folder labeled "Response Q8." Monthly service part sales are available for the past 24 months. The sales figures reflect parts sold for current and previous model years.

9. Furnish GM's assessment of the alleged defect in the subject vehicle, including:

a. The causal or contributory factor(s);
b. The failure mechanism(s);
c. The failure mode(s);
d. The risk to motor vehicle safety that it poses; and
e. The reports included with this inquiry.

GM does not believe a safety defect exists in the subject vehicles for the following reasons:

- The number of alleged complaints is low (37), resulting in a complaint rate of 0.047 per thousand vehicles. For reference, GM is aware of 123 reports (56 in this response + 60 in GM's previous responses + 7 from NHTSA) alleging ball joint separations in 1996 MY T utility vehicles, resulting in a complaint rate of 0.44, 9.3 times greater than the subject vehicles. The 1996 MY rate prompted GM to recall a portion of the 1996 MY production. The chart below shows the significant drop in the report rate after 1996 MY.



- There are only 7 crashes reported in the 795,023 vehicles, resulting in a crash rate of 0.0088 per thousand vehicles.
- There are only 3 minor injuries reported in the 795,023 vehicles, resulting in an injury rate of 0.0038 per thousand vehicles.
- There are no severe injuries or fatalities reported.
- The warranty claim rate is low. GM is providing 601 warranty claims involving the replacement upper or lower ball joint in the subject vehicles; however, these claims do not necessarily correspond to ball joint failures. The resultant warranty claim rate is 0.75 claims per thousand vehicles.

- GM has not identified any abnormal trend in the warranty of the subject vehicles indicative of a safety defect.

Some ball joint failures are anticipated; caused by abuse or improper maintenance. However, GM believes there is no safety defect trend in the subject vehicles given the low number of complaints and the low warranty rate.

10. Please update ODI in conjunction with past investigation EA99-022. This should include all information in GM's possession or control, or of which it is otherwise aware, which relates or potentially relates to the alleged defect associated with EA99-022. State the number of, and provide copies of all documents relating to the alleged defect in the subject vehicles, from each of the following categories, either received or authorized by GM, or of which GM are otherwise aware. For each source, organize the information by file/report number:

a. Consumer and fleet complaints;
b. Field reports, including all reports and requests for technical assistance from dealer personnel and/or zone offices;
c. Reports of, or requests for, roadside assistance or recovery;
d. Fire incident reports;
e. Crash, injury and fatality reports, regardless of whether any claim, proceeding, or lawsuit is or was involved;
f. Property damage claims that do not involve a crash or fire;
g. Subrogation claims;
h. Third-party arbitration proceedings where GM is a party to the arbitration; and
i. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

Furnish a total number for each item separately, and provide copies of all requested documents, whether or not they have been verified by GM. GM's response shall include, but not be limited to, (1) all reported incidents that have occurred or may have occurred, at least in part, due to circumstances, conditions, or problems caused by the alleged defect in the subject vehicles; (2) complaints or information provided by fleets, consumer groups, government agencies, insurance companies, and other entities that have provided such information to GM; and (3) all crash, injury, or fatal incidents, regardless of whether any claim, proceeding, or lawsuit is or was involved, or whether or not each has been verified by GM. Multiple incidents involving the same vehicle are to be counted separately.

For items "d" through "i," the documentation provided should also include GM's file number; a summary of alleged component failure and causal factors; GM's assessment of the failure with a description of the significant underlying facts and evidence; and the identity of all involved parties, caption, court, docket number, and filing date (items "g" through "i" only).

Table 10 summarizes the records involving 1996 T utility vehicles reported to GM that could relate to a separated ball joint.

Type of Report	Count (Including Duplicates)	GM Reports	GM Reports Corresponding to NHTSA Reports	Location of Reports (Attachment)	Number of Property Damage Reports Not Involving a Crash or Fire	Number of Fire and Crash Incident Reports	Number of Reported Injuries or Fatalities
Owner Reports	72	72	0	10a	15	2	2
Field Reports & Technical Assistance System Reports	6	6	0	10b	0	3	0
Not-In-Suit Claims	1	1	0	10c	0	1	0
Subrogation Claims	1	1	0	10d	0	1	1
Third Party Arbitration Proceedings	0	0	0	-	0	0	0
Lawsuits	0	0	0	-	0	0	0
Total (Including Duplicates)[1]	79	79	0	-	15	7	3
Total (Excluding Duplicates)[2]	56	58	0	-	10	5	1

Table 10: Alleged Complaints Involving 1996 T Utility Vehicles

[1] Includes some reported incidents that are duplicated in GM's previous responses involving 1996 T utility vehicles.

[2] Count does not include reported incidents that are duplicated in GM's previous responses.

* * *

GM claims that certain information, in documents that are part of claims files maintained by the GM Legal Staff, is attorney work product and/or privileged. That information includes notes, memos, reports, photographs, and evaluations by attorneys (and by claims analysts, investigators, and engineers working at the request of attorneys). GM is producing responsive documents in response to question 10 from claims files that are neither attorney work product nor privileged and withholding those that are attorney work product and/or privileged.

This response is based on searches of General Motors Corporation (GM) locations where documents determined to be responsive to your request would ordinarily be found. As a result, the scope of this search did not include, nor could it reasonably include, "all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after January 1, 1995, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

a. Design, engineering, analysis, modification or production (e.g. quality control);
b. Testing, assessment or evaluation;
c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers."

This response was compiled and prepared by this office upon review of the documents produced by various GM locations, and does not include documents generated or received at those GM locations subsequent to their searches.

For the response to question 2 and 10, GM has searched these sources: Corporate Central File, Customer Assistance Center, Technical Assistance Center, ESIS, and Legal.

Please contact me if you require further information about this response or the nature or scope of our searches.

Sincerely,

Lyndon R. Lie
Director
Product Investigations

Attachments

GM632
RQ02-012

ATTACHMENT "1"

GM632
RQ02-012

ATTACHMENT "2A"

385439

GM RESTRICTED

R NUMBER: 05895130 VIN: 1GHDT13W6W2707965

DATE OPENED: 11/19/01 MODEL YEAR: 1998

DATE CLOSED: 05/25/02 SERIES: UNKNOWN

SOURCE: YES MILEAGE: 54000

CUSTOMER:

ADDRESS:

HOME PHONE: STATE: WI

BUS. PHONE:

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: JAMESVILLE ,
WI

HOME PHONE:

CASE NUMBER:	05895130	VIN:	1GHDT13W6W2707965
		MODEL YEAR:	1998
DATE OPENED:	2001-11-19	SERIES:	UNKNOWN
DATE CLOSED:	2002-05-25	MILEAGE:	54000
RCE:	Phone	DELIVERY DATE:	
TYPE:	Yes	DEALER NAME:	HESSER OLDS - TOYOTA,INC.
BRC PARENT:		DEALER ADDRESS:	2009 MILTON AVE,,JANESVILLE,WI,53545,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin Broken
0 REPAIR ATTEMPT(S) BROKEN

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.html]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.html]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary

G M R E S T R I C T E D

4) Establish & document a diagnosis and repair plan
oordinate with dealership to assist with customer's repair request
e prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link RUN C:\Progra-1\Plus!\Micros-1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.htm]]
Vehicle repair request - Repair not done
**********WORK HISTORY**********

CRM ATEMPTED TO CONTACT BUT THERE WAS NO ANSWER. NEXT CRM PLEASE ASSIST.
TONY GODINEZ/CARS/ATX; 0; 389553470
2002-05-23

CRM CONTACTED SVC MGR DAVE ENYART TO GET INFO REGARDING THE ISSUE. HE STATES THAT THE FAILURE IS NOT SOMETHING THAT THE CUST COULD HAVE PREVENTED OR THAT WAS DUE TO LACK OF MAINT. HE STATES THAT THE VEH WAS OUT OF HIS EMPOWERMENT AT 50,000 MILES BUT HE WILL CONTACT AVM MARY SONTAG TO SEE IF SHE APPROVES OF THE REIM THROUGH THE DLR SIDE. CRM THANKED FOR CONSIDERATION.
TONY GODINEZ/CARS/ATX; 0; 391025705
2001-11-19

CUST STATES THAT SHE WAS DRIVING ACROSS AN INTERSECTION WHEN HER VEH'S UPPER BALL JOINT BROKE AND SHE LOST CONTROL OF THE VEH. THIS OCCURRED ON 11/16/01. SHE HAD THE VEH TOWED INTO HESSER CHEV OLDS THIS MORNING AND THEY DIAG TEE VEH AS HAVING AN UPPERBALL JOINT BREAKING. CUST WAS INFORMED THAT THERE WAS A RECALL ON PREV YEARS OF THOSE MAKES AND MODDELS. CUST ALSO RESEARCHED ON THE INTERNET AND GOT SOME INFO FROM THERE ALSO. CUST SEEKS TO GET SOME FINANCIAL ASSISTANCE IN REPAIRING THE VEH. CRM ATTEMPTED TO CONTACT SVC MGR BUT COULD NOT GET ANYONE IN SVC. LEFT MESSAGE FOR JENNIFER RIO INFORMING HER OF THE CUST CONCERN AND ADVISING HER TO LEAVE V/M W/ SOME INFO ON THE VEH PROBLEM. CRM ISES CUST THAT WILL WAIT FOR RESPONSE FROM MS RIO. CRM WILL CONTACT CUST BACK LATER AY BETWEEN 3-5 PM CST.
TONY GODINEZ/CARS/ATX; 0; 375037008
2001-11-19

CRM CONTACTED CUST AND ADVISED THEM OF TWO OPTIONS THEY HAVE, PRE- AUTH OR REIM. CUST STATES THAT SHE NEEDS THE VEH SO SHE WILL GO AHEAD AND PAY FOR THE REPAIR AND SUBMITT FOR REIM. CRM ADVISES CUST TO SEND IN NECESSARY DOC'S.
CRM CLOSING UNTIL DOC'S ARRIVE.....TONY GODINEZ/CARS/ATX; 0; 375062407
2001-11-27

attaching docs and forwarding to crm GODINEZT.
patrick burtch corr/tpa/cac; 0; 375713754
2001-12-10

CRM AUDITING FILES. CRM FORWARDING FILE BACK TO PREV CRM TO FOLLOW UP WITH CUST AND ASSIST AS NECESSARY
LISA STAMBAUGH/CAC/ATX; 0; 376859221
2001-12-10

CRM AUDITING FILES. CRM FORWARDING FILE BACK TO PREV CRM TO FOLLOW UP WITH CUST AND ASSIST AS NECESSARY
LISA STAMBAUGH/CAC/ATX; 0; 376859261
2001-12-17

CRM STILL REVIEWING FILE, FORWARDING BACK TO CRM GODINEZT. DENISE TAYLOR/CORR/ATX/CARS; 377493143
2-01-05

GM RESTRICTED

CRM REVIEWING FILE FOR FOLLOW-UP. FILE BEING FOWARD TO PRE CRM FOR ADDITIONAL WORK, [illegible]K HISTORY SHOWS THAT CUST HAD AN ACCIDENT.. WAS PAR CASE EVER CREATED? WENDY [illegible]INA/CAC/ATX; 0; 379105022
2002-01-10

CRM CONTACTED SVC MGR DAVE. HE STATES THAT THE VEH WAS FOR A TOTALLY DIFFERENT YEAR OF THE MODEL VEH. HE DOES NOT AGREE THAT THE CUST IS ELIGABLE FOR REIM.
TONY GODINEZ/CARS/ATX; 0; 379542477
2002-01-10

CORRECTION FROM PREV ENTRY**********SVC MGR STATES THAT HE DOES NOT AGREE THAT SHE IS ELIGABLE FOR REIM DUE TO THE FACT THAT THE VEH WAS MADE IN A DIFFERENT YEAR THAN THE VEH INVOLVED IN THE RECALL.
TONY GODINEZ/CARS/ATX; 0; 379542584
2002-01-10

ATTEMPTED TO CONTACT CUST BUT SHE WAS UNAVAILABLE. WILL ATTEMPT AGAIN ON 1/11/02.
TONY GODINEZ/CARS/ATX; 0; 379542663
2002-01-14

CRM ATTEMPTED TO CONTACT CUST AGAIN BUT GOT NO ANSWER. SENDING CALL CAC LETTER. REQUEST CLOSED SATISFIED.....TONY GODINEZ/CARS/ATX; 0; 379896085
2002-01-15

LETTER APPROVED C/REESE-SPIVEY ATX; 0; 379950602
2002-01-22

[illegible]T CALLED IN RQST AN UPDATE ON HER REIMBURSEMENT FOR HER BALL JOINTS GOING OUT. CRM [illegible]ICED THAT CUST HAS NOT SENT IN PROOF OF OWNERSHIP. CRM INSTRUCTED CUST TO DO SO. WILL REOPEN WHEN DOC ARRIVE. REQUEST CLOSED SATISFIED. WILLIAM BANACH CAC/PDX.; 0; 380595032
2002-03-26

----WHITE MAIL-------CRM attaching docs to file pertaining to reimb. and forwarding to CRM BANACHW.
PAUL GRENIER/CORR/TAMPA; 0; 386018324
2002-03-26

REQUEST WAS SENT TO INCORRECT CRM. THIS CRM FORWARDING TO CORRECT CRM BANACHW.
TONY GODINEZ/CARS/ATX; 0; 386022369
2002-04-26

cust called and stated that she had not heard from previous crm and was seeking status..crm reviewed file and noted preivous crm reviewing req for reimbursement...crm informed cust of previous crm working on req..cust thanked and stated that she worked third shift and might not be available but had an answering machine and updates could be left at any time..crm fowarding to previous crm for futher processing.....Aaron Correll/cac/pdx; 0; 388698388
2002-05-06

TM REVIEWING FILE W/CRM. CRM WILL CONTACT SRV MGR & CUST FOR MORE INFO.
SHERRI MAURER/TM/ATX.; 0; 389569924
2002-05-15

CRM ATTEMPTED TO CONTACT SVC MGR BUT HE WAS UNAVAILABLE. CRM WILL ATTEMPT AGAIN AT A [illegible]ER TIME.
[illegible]Y GODINEZ/CARS/ATX; 0; 390322980
2002-05-25

GM RESTRICTED

CLOSING REQUEST AND TRANSFERRING TO SR 1-3856531.
Y GODINEZ/CARS/ATX; 0; 391191139

**********PAR INFORMATION**********

INCIDENT DATE:
INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME:
DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT:
ROAD CONDITION:
ROAD SURFACE:
NUMBER OF PEOPLE: 0
BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

VEHICLE INSURED:
INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
INSPECTORS NAME:
INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
LER ADDRESS: , ,
TACT: ,
PHONE NUMBER:
FAX NUMBER:

GM RESTRICTED

PRODUCT CODE:
ENGINE TYPE:
MILEAGE @ BUY-BACK: 0
MSRP:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
ACCOUNT NUMBER:
INTEREST RATE:
ACCOUNT BALANCE:
LEGAL:
DEALER ADMINISTRATION:
RELEASE:
REPLACEMENT VIN:

BODY TYPE:
TRIM:
TRANSMISSION:
VEHICLE DRIVEABLE:
BRC WARRANTY DATE:
NADA: 0
SALES TAX:
NAME:
INTEREST PAID:
DEALER BUYOUT:
LEGAL TYPE:
LEMON LAW:
VEHICLE DESTINATION:
LIEN PAYOFF:
TITLE BRAND:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:
NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
TYPE OF INJURY:
TREATED:

RESTRAINT:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
TITLE NAMES:
BUSINESS:
ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
MILEAGE AT PURCHASE: 0
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

DATE:
% BUSINESS: 0
DATE OF ACCIDENT:
DATE OF PURCHASE/LEASE:
PURCHASE/LEASE AS:

**********BRC CONTACT INFORMATION**********

NAME:
COMPANY:
ADDRESS:

CONTACT NUMBER: 1
CONTACT TYPE:
CONTACT PHONE:

January 15, 2002

Janesville, WI

Request: C05895130

Dear

We would like to discuss your request for reimbursement on your 1998 Oldsmobile Bravada, but we have been unsuccessful in our attempts to contact you.

To help us review your request in a timely manner, please contact our Oldsmobile Customer Assistance Center at 1-800-442-6537 Monday through Friday between 8:00 a.m. and 11:00 p.m., Eastern Time. Please refer to your request number above and any of our Customer Relationship Managers will be happy to assist you.

Sincerely,

Tony Godinez
Customer Relationship Manager

RS0006-A/CRS

MADISON WI 537
PM
NOV
2001

Janesville, WI

RECEIVED
NOV 26 2001

Olmobile Division
P.O. Box 33171
Detroit, Michigan
48232

Contract # 05895130

CONTACT # 05895130

AMERICAN FAMILY MUTUAL INSURANCE COMPANY
MADISON, WISCONSIN 53703-0001

Contact # 05895130

WISCONSIN MOTOR VEHICLE
PROOF OF INSURANCE CARD

Policy No: 0716-0016-01-77-FPPA-WI
Eff Date: 11-5-2001 Exp Date: 5-5-2002
1990 OLDS DEA VIN: [illegible]
Coverages: [illegible]

Agent: GARY A [illegible]
Agent Phone: (608) [illegible]

This card must be carried in the insured motor vehicle for production upon demand.
Important message on reverse side.

IMPORTANT INFORMATION

Examine Policy exclusions carefully. This form does not constitute any part of your insurance policy or bond. If this is a "Basic Car Policy" it may not provide coverage for vehicles you do not own. Except in Kansas, this policy does not provide coverage if the operator is an excluded person.

Various states require that you present "proof of insurance" when applying for the registration of your motor vehicle and some states require that you carry "proof of insurance" in your motor vehicle at all times and present this proof to a law enforcement officer upon request.

If you carry the coverages required by state law, the limits represented by this card meet or exceed the minimum financial responsibility requirements. If you do not carry or if you discontinue the required coverages, this Proof of Insurance is not valid. This coverage automatically extends to a newly acquired car until a new card can be issued.

ARIZONA POLICYHOLDERS: Coverage meets the limits required by law. Arizona law requires evidence of insurance be carried in the vehicle at all times.

NOTE: This Insurance Certificate is issued solely to satisfy the terms of the law in your state.
The policy term shown on this Certificate is subject to the insured's compliance with general policy provisions.

U-[illegible] Ed. [illegible]

ORIGINAL

HESSER

Oldsmobile

OLDSMOBILE - TOYOTA, INC.
2009 MILTON AVE. • JANESVILLE, WI 53545
608-754-7754

AURORA by Oldsmobile

TOYOTA

Contact # 05895130

[redacted]	JENNIFER REEL	147	11/20/01	OLCS75187
[redacted]	[redacted]	54,596	GREEN/	8108
JANESVILLE, WI	[redacted]		12/05/97	
	1GHDT13W6W2707965			
[redacted]			11/19/01	

[redacted]

TURNED LEFT CLUNK IN FRONT END LEFT THE FELL SIDEWAYS

INSTALL NEW UPPER BALL JOINTS AND PERFORM FRONT END ALIGNMENT

TOTAL LABOR 230.96

PARTS	QTY	PP NUMBER	DESCRIPTION	LIST PRICE	UNIT PRICE	
308 # 1	2	1700[illegible]	B/JNT 6.164	82.59	82.59	165.18
					TOTAL PARTS	165.18

MISC	CODE	DESCRIPTION	CONTROL NO		
308 # A	HO-OL	HAZARDOUS DISPOSAL			0.83
				TOTAL MISC	0.83

ESTIMATE
CUSTOMER HEREBY ACKNOWLEDGES THAT THIS IS ORIGINAL ESTIMATE OF [illegible] TOTAL

TOTALS

HESSER OLDSMOBILE-TOYOTA INC.
YOUR TRUST IN OUR SERVICE IS APPRECIATED. IT IS OUR DESIRE TO DO ALL THE WORK TO YOUR SATISFACTION. IF FOR ANY REASON YOU CANNOT GIVE US A 100% WITH OUR SERVICE, PLEASE CALL CHRIS HEWART AT 608-754-7754.
* INDICATED LIFETIME SERVICE GUARANTEE. SEE NOTICE FOR DETAILS.

TOTAL LABOR	230.96
TOTAL PARTS	165.18
TOTAL SUBLET	0.00
TOTAL G.O.G.	0.00
TOTAL MISC CHG.	0.83
TOTAL MISC DISC.	0.00
TOTAL TAX	19.86
TOTAL INVOICE $	416.81

CHARGE [ ] MASTERCARD [ ] VISA [X] AMEX [ ] DISC [ ] CASH [ ] ANY

CHECK [ ] DISCOVER [ ] OTHER [ ] ANY

YOU WILL BE RECEIVING A SURVEY FROM THE MANUFACTURER. PLEASE READ CAREFULLY AND GIVE US A 100%.

CUSTOMER SIGNATURE

COPY

CASH

NOV 20 2001

CASH

SERVICE HOURS:
MONDAY
7:30 AM - 7:00 PM
TUESDAY - FRIDAY
7:30 AM - 5:00 PM

Motor vehicle repair trade practices are regulated by chapter ATCP 132, Wis. Adm. Code, administered by the Bureau of Consumer Protection, Wisconsin Dept. of Agriculture, Trade and Consumer Protection, P.O. Box 8911, Madison, Wisconsin 53708-8911.

Thank You!
WE APPRECIATE YOUR PATRONAGE

HESSER
OLDSMOBILE - TOYOTA, INC.
2009 MILTON AVE. • JANESVILLE, WI 53545
608-754-7754
Oldsmobile TOYOTA
AURORA by Oldsmobile
THANK YOU FOR YOUR BUSINESS

left upper Ball Joint split, caused loss of control due to tire falling inwards

CUSTOMER COPY

END OF INVOICE 11/20/01

P
2
Janesville, WI

MAR 25 2002

Olds mobile Division
P.O. Box 33171
Detroit, MI
48232-5171

Request # C05895130
attn: Tony Godinez

Dear Mr. Gobling,

Here is the copy of the title you requested this should take care of all the paper work you required to reimburse me for the 416.81 Thanks

WISCONSIN
CERTIFICATE OF VEHICLE REGISTRATION

LICENSE NUMBER | VEHICLE IDENTIFICATION NUMBER: 1GHDT13W6W2787965

This Registration Certificate is not a Title Not Valid for Transfer of Ownership

EXPIRES END OF: Month OCT Year 2001

806414

YEAR	MAKE	Body Style	Gross Wt.	VEHICLE TYPE	Title No.	Fleet Number
1998	OLDS			TRUK	0123289009-2	

AMOUNT RECEIVED $********.00

REGISTERED TO:

JANESVILLE WI

— Request # 05895130

C 05895130

WISCONSIN CERTIFICATE OF TITLE FOR A VEHICLE

DEPARTMENT OF TRANSPORTATION

VEHICLE IDENTIFICATION NUMBER	YEAR	MAKE	BODY STYLE	VEHICLE TYPE	FLEET NUMBER
1GHDT13W6W2787965	1998	OLDS		TRUK	AUT TZG437

TITLE NUMBER	DATE TITLE ISSUED	ODOMETER	ODOMETER DATE
0123289009-2	08/23/2001	27 DISCLOSED AS ACTUAL	12/11/1997

REGISTERED OWNER(S)

JANESVILLE WI

The person, firm or corporation named on this Title has been duly registered as the lawful owner of the vehicle described, subject to any Security Interest (Lien) shown. The order in which the Security Interests appear on this Title does not necessarily represent their priority.

SECURED PARTY

CONTROL NUMBER (This is not a Title Number)

9-3293983

DIVISION OF MOTOR VEHICLES

Important - Buyer and Seller must complete the section below at time of sale

TITLE ASSIGNMENT AND MILEAGE, SELLING PRICE AND BRAND DISCLOSURE BY REGISTERED OWNER(S) SHOWN ABOVE

Federal and State law requires that SELLER state the mileage and provide written vehicle disclosure information in connection with transfer of ownership. Failure to complete a mileage statement, disclose required information, or providing a false statement may result in fines and/or imprisonment and may make you liable for damages to the transferee (buyer).

SELLER Print Person(s) Name signing as Seller

Print Seller's Address, City, State, Zip if different than shown above

BRAND DISCLOSURE (will be printed on future titles) Check all that apply:

☐ Flood damaged vehicle ☐ Previous police vehicle

☐ Previous lemon ☐ Salvage vehicle

ODOMETER NOW READS (No Tenths): and to the best of my knowledge is actual mileage of this vehicle unless one of the following statements is checked.

☐ The odometer reading reflects the amount of mileage in excess of its mechanical limit.

☐ The odometer reading is NOT actual mileage. WARNING: ODOMETER DISCREPANCY

I, the seller, certify that to the best of my knowledge the information contained on this document is true and correct and that I have entered the vehicle odometer reading, lawful disclosure, and selling price (owner) in compliance with federal and state law as indicated above. For value received, I hereby sell, assign or transfer the vehicle described on this document and warrant title to Purchaser as shown.

January 15, 2002

Janesville, WI

Request: C05895130

Dear

We would like to discuss your request for reimbursement on your 1998 Oldsmobile Bravada, but we have been unsuccessful in our attempts to contact you.

To help us review your request in a timely manner, please contact our Oldsmobile Customer Assistance Center at 1-800-442-6537 Monday through Friday between 8:00 a.m. and 11:00 p.m., Eastern Time. Please refer to your request number above and any of our Customer Relationship Managers will be happy to assist you.

Sincerely,

Tony Godinez
Customer Relationship Manager

RS0006-A/CRS

GM RESTRICTED

CASE NUMBER:	05895130	VIN:	1GHDT13W6W2707965
DATE	11/19/01	MODEL	1998
DATE	05/25/02	SERIES	UNKNOWN
SOURCE:	YES	MILEAGE	54000
CUSTOMER:			
ADDRESS:			
HOME PHONE:	'	STATE:	WI
BUS. PHONE:			

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: JANESVILLE
'' er balljoint WI
HOME PHONE:

CASE NUMBER: 05895130 Broke. :13W6W2707965

DATE OPENED: 2001-11-19)WN
DATE CLOSED: 2002-05-25 .....
SOURCE: Phone DELIVERY DATE:
CASE TYPE: Yes DEALER NAME: HESSER OLDS - TOYOTA,INC.
BRC PARENT: DEALER ADDRESS:2009 MILTON AVE,,JANESVILLE,WI,53545,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin Broken
0 REPAIR ATTEMPT(S) BROKEN

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.htm
]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.htm]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary

GM RESTRICTED

4) Establish & document a diagnosis and repair plan
Coordinate with dealership to assist with customer's repair request
Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.htm]]
Vehicle repair request - Repair not done
**********WORK HISTORY**********

CRM ATTEMPTED TO CONTACT BUT THERE WAS NO ANSWER. NEXT CRM PLEASE ASSIST.
TONY GODINEZ/CARS/ATX; 0; 389553470
2002-05-23

CRM CONTACTED SVC MGR DAVE ENYART TO GET INFO REGARDING THE ISSUE. HE STATES THAT THE FAILURE IS NOT SOMETHING THAT THE CUST COULD HAVE PREVENTED OR THAT WAS DUE TO LACK OF MAINT. HE STATES THAT THE VEH WAS OUT OF HIS EMPOWERMENT AT 50,000 MILES BUT HE WILL CONTACT AVM MARY SONTAG TO SEE IF SHE APPROVES OF THE REIM THROUGH THE DLR SIDE. CRM THANKED FOR CONSIDERATION.
TONY GODINEZ/CARS/ATX; 0; 391025705
2001-11-19

CUST STATES THAT SHE WAS DRIVING ACROSS AN INTERSECTION WHEN HER VEH'S UPPER BALL JOINT BROKE AND SHE LOST CONTROL OF THE VEH. THIS OCCURRED ON 11/16/01. SHE HAD THE VEH TOWED INTO HESSER CHEV OLDS THIS MORNING AND THEY DIAG THE VEH AS HAVING AN UPPERBALL JOINT BREAKING. CUST WAS INFORMED THAT THERE WAS A RECALL ON PREV YEARS OF THOSE MAKES AND MODDELS. CUST ALSO RESEARCHED ON THE INTERNET AND GOT SOME INFO FROM THERE ALSO. CUST SEEKS TO GET SOME FINANCIAL ASSISTANCE IN REPAIRING THE VEH. CRM ATTEMPTED TO CONTACT SVC MGR BUT COULD NOT GET ANYONE IN SVC. LEFT MESSAGE FOR JENNIFER RIO INFORMING HER OF THE CUST CONCHERN AND ADVISING HER TO LEAVE V/M W/ SOME INFO ON THE VEH PROBLEM. CRM ADVISES [illegible]T THAT WILL WAIT FOR RESPONSE FROM MS RIO. CRM WILL CONTACT CUST BACK LATER TODAY [illegible]TWEEN 3-5 PM CST.
TONY GODINEZ/CARS/ATX; 0; 375037008
2001-11-19

CRM CONTACTED CUST AND ADVISED THEM OF TWO OPTIONS THEY HAVE, PRE- AUTH OR REIM. CUST STATES THAT SHE NEEDS THE VEH SO SHE WILL GO AHEAD AND PAY FOR THE REPAIR AND SUBMITT FOR REIM. CRM ADVISES CUST TO SEND IN NECESSARY DOC'S.
CRM CLOSING UNTIL DOC'S ARRIVE.....TONY GODINEZ/CARS/ATX; 0; 375062407
2001-11-27

attaching docs and forwarding to crm GODINEZT.
patrick burtch corr/tpa/cac; 0; 375713754
2001-12-10

CRM AUDITING FILES. CRM FORWARDING FILE BACK TO PREV CRM TO FOLLOW UP WITH CUST AND ASSIST AS NECESSARY
LISA STAMBAUGH/CAC/ATX; 0; 376859221
2001-12-10

CRM AUDITING FILES. CRM FORWARDING FILE BACK TO PREV CRM TO FOLLOW UP WITH CUST AND ASSIST AS NECESSARY
LISA STAMBAUGH/CAC/ATX; 0; 376859261
2001-12-17

CRM STILL REVIEWING FILE, FORWARDING BACK TO CRM GODINEZT. DENISE TAYLOR/CORR/ATX/CARS; 0; [illegible]493143
[illegible]02-01-05

REVIEWING FILE FOR FOLLOW-UP. FILE BEING FOWARD TO PRE CRM FOR ADDITIONAL WORK, WORK HISTORY SHOWS THAT CUST HAD AN ACCIDENT.. WAS PAR CASE EVER CREATED? WENDY MEDINA/CAC/ATX; 0; 379105022
2002-01-10

CRM CONTACTED SVC MGR DAVE. HE STATES THAT THE VEH WAS FOR A TOTALLY DIFFERENT YEAR OF THE MODEL VEH. HE DOES NOT AGREE THAT THE CUST IS ELIGABLE FOR REIM.
TONY GODINEZ/CARS/ATX; 0; 379542477
2002-01-10

CORRECTION FROM PREV ENTRY**********SVC MGR STATES THAT HE DOES NOT AGREE THAT SHE IS ELIGABLE FOR REIM DUE TO THE FACT THAT THE VEH WAS MADE IN A DIFFERENT YEAR THAN THE VEH INVOLVED IN THE RECALL.
TONY GODINEZ/CARS/ATX; 0; 379542584
2002-01-10

ATTEMPTED TO CONTACT CUST BUT SHE WAS UNAVAILABLE. WILL ATTEMPT AGAIN ON 1/11/02.
TONY GODINEZ/CARS/ATX; 0; 379542663
2002-01-14

CRM ATTEMPTED TO CONTACT CUST AGAIN BUT GOT NO ANSWER. SENDING CALL CAC LETTER. REQUEST CLOSED SATISFIED.....TONY GODINEZ/CARS/ATX; 0; 379896085
2002-01-15

LETTER APPROVED C/REESE-SPIVEY ATX; 0; 379950602
2002-01-22

CUST CALLED IN RQST AN UPDATE ON HER REIMBURSEMENT FOR HER BALL JOINTS GOING OUT. CRM NOTICED THAT CUST HAS NOT SENT IN PROOF OF OWNERSHIP. CRM INSTRUCTED CUST TO DO SO. WILL REOPEN WHEN DOC ARRIVE. REQUEST CLOSED SATISFIED. WILLIAM BANACH CAC/PDX.; 0; 380595032
2002-03-26

----WHITE MAIL-------CRM attaching docs to file pertaining to reimb. and forwarding to CRM BANACHW.
PAUL GRENIER/CORR/TAMPA; 0; 386018324
2002-03-26

REQUEST WAS SENT TO INCORRECT CRM. THIS CRM FORWARDING TO CORRECT CRM BANACHW.
TONY GODINEZ/CARS/ATX; 0; 386022369
2002-04-26

cust called and stated that she had not heard from previous crm and was seeking status..crm reviewed file and noted preivous crm reviewing req for reimbursement...crm informed cust of previous crm working on req..cust thanked and stated that she worked third shift and might not be available but had an answering machine and updates could be left at any time..crm fowarding to previous crm for futher processing.....Aaron Correll/cac/pdx; 0; 388698388
2002-05-06

TM REVIEWING FILE W/CRM. CRM WILL CONTACT SRV MGR & CUST FOR MORE INFO.
SHERRI MAURER/TM/ATX.; 0; 389569924
2002-05-15

GM RESTRICTED

CRM ATTEMPTED TO CONTACT SVC MGR BUT HE WAS UNAVAILABLE. CRM WILL ATTEMPT AGAIN AT A
[illegible]ER TIME.
[illegible]NY GODINEZ/CARS/ATX; 0; 390322980
2002-05-25

CRM CLOSING REQUEST AND TRANSFERRING TO SR 1-3856531.
TONY GODINEZ/CARS/ATX; 0; 391191139

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
[illegible]BER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
[illegible]URCHASE REASON:

G M R E S T R I C T E D

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: @ BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

GM RESTRICTED

NAME:
COMPANY:

ADDRESS:

CONTACT NUMBER: 1
CONTACT TYPE:
CONTACT PHONE:

GM RESTRICTED

INVESTIGATIVE SUMMARY:
STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
SRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:

G M R E S T R I C T E D

PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:

ADDRESS:

385439

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: JANESVILLE
WI
HOME PHONE:

CASE NUMBER:	05895130	VIN:	1GHDT13W6W2707965
		MODEL YEAR:	1998
DATE OPENED:	2001-11-19	SERIES:	UNKNOWN
DATE CLOSED:	2002-06-25	MILEAGE:	54000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	HESSER OLDS - TOYOTA,INC.
BRC PARENT:		DEALER ADDRESS:	2009 MILTON AVE,,JANESVILLE,WI,53545,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin Broken
0 REPAIR ATTEMPT(S) BROKEN

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.html]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.html]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link
RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.html]]
Vehicle repair request - Repair not done
**********WORK HISTORY**********

ACCIDENTALLY RESUMED. RACHEL CONLEY/CAC/PDX; 0; 392073816
2002-05-06

CRM ATEMPTED TO CONTACT BUT THERE WAS NO ANSWER. NEXT CRM PLEASE ASSIST.
TONY GODINEZ/CARS/ATX; 0; 389553470
2002-05-23

CRM CONTACTED SVC MGR DAVE ENYART TO GET INFO REGARDING THE ISSUE. HE STATES THAT THE FAILURE IS NOT SOMETHING THAT THE CUST COULD HAVE PREVENTED OR THAT WAS DUE TO LACK OF MAINT. HE STATES THAT THE VEH WAS OUT OF HIS EMPOWERMENT AT 50,000 MILES BUT HE WILL CONTACT AVM MARY SONTAG TO SEE IF SHE APPROVES OF THE REIM THROUGH THE DLR SIDE. CRM

THANKED FOR CONSIDERATION.
TONY GODINEZ/CARS/ATX; 0; 391025705
2001-11-19

CUST STATES THAT SHE WAS DRIVING ACROSS AN INTERSECTION WHEN HER VEH'S UPPER BALL JOINT BROKE AND SHE LOST CONTROL OF THE VEH. THIS OCCURRED ON 11/16/01. SHE HAD THE VEH TOWED INTO HESSER CHEV OLDS THIS MORNING AND THEY DIAG THE VEH AS HAVING AN UPPERBALL JOINT BREAKING. CUST WAS INFORMED THAT THERE WAS A RECALL ON PREV YEARS OF THOSE MAKES AND MODDELS. CUST ALSO RESEARCHED ON THE INTERNET AND GOT SOME INFO FROM THERE ALSO. CUST SEEKS TO GET SOME FINANCIAL ASSISTANCE IN REPAIRING THE VEH. CRM ATTEMPTED TO CONTACT SVC MGR BUT COULD NOT GET ANYONE IN SVC. LEFT MESSAGE FOR JENNIFER RIO INFORMING HER OF THE CUST CONCERN AND ADVISING HER TO LEAVE V/M W/ SOME INFO ON THE VEH PROBLEM. CRM ADVISES CUST THAT WILL WAIT FOR RESPONSE FROM MS RIO. CRM WILL CONTACT CUST BACK LATER TODAY BETWEEN 3-5 PM CST.
TONY GODINEZ/CARS/ATX; 0; 375037008
2001-11-19

CRM CONTACTED CUST AND ADVISED THEM OF TWO OPTIONS THEY HAVE, PRE- AUTH OR REIM. CUST STATES THAT SHE NEEDS THE VEH SO SHE WILL GO AHEAD AND PAY FOR THE REPAIR AND SUBMITT FOR REIM. CRM ADVISES CUST TO SEND IN NECESSARY DOC'S.
CRM CLOSING UNTIL DOC'S ARRIVE.....TONY GODINEZ/CARS/ATX; 0; 375062407
2001-11-27

attaching docs and forwarding to crm GODINEZT.
patrick burtch corr/tpa/cac; 0; 375713754
2001-12-10

CRM AUDITING FILES. CRM FORWARDING FILE BACK TO PREV CRM TO FOLLOW UP WITH CUST AND ASSIST AS NECESSARY
LISA STAMBAUGH/CAC/ATX; 0; 376859221
2001-12-10

CRM AUDITING FILES. CRM FORWARDING FILE BACK TO PREV CRM TO FOLLOW UP WITH CUST AND ASSIST AS NECESSARY
LISA STAMBAUGH/CAC/ATX; 0; 376859261
2001-12-17

CRM STILL REVIEWING FILE, FORWARDING BACK TO CRM GODINEZT. DENISE TAYLOR/CORR/ATX/CARS; 0; 377493143
2002-01-05

CRM REVIEWING FILE FOR FOLLOW-UP. FILE BEING FOWARD TO FRE CRM FOR ADDITIONAL WORK, WORK HISTORY SHOWS THAT CUST HAD AN ACCIDENT.. WAS PAR CASE EVER CREATED? WENDY MEDINA/CAC/ATX; 0; 379105022
2002-01-10

CRM CONTACTED SVC MGR DAVE. HE STATES THAT THE VEH WAS FOR A TOTALLY DIFFERENT YEAR OF THE MODEL VEH. HE DOES NOT AGREE THAT THE CUST IS ELIGABLE FOR REIM.
TONY GODINEZ/CARS/ATX; 0; 379542477
2002-01-10

CORRECTION FROM PREV ENTRY**********SVC MGR STATES THAT HE DOES NOT AGREE THAT SHE IS ELIGABLE FOR REIM DUE TO THE FACT THAT THE VEH WAS MADE IN A DIFFERENT YEAR THAN THE VEH INVOLVED IN THE RECALL.
TONY GODINEZ/CARS/ATX; 0; 379542584
2002-01-10

ATTEMPTED TO CONTACT CUST BUT SHE WAS UNAVAILABLE. WILL ATTEMPT AGAIN ON 1/11/02.
TONY GODINEZ/CARS/ATX; 0; 379542663
2002-01-14

CRM ATTEMPTED TO CONTACT CUST AGAIN BUT GOT NO ANSWER. SENDING CALL CAC LETTER.
REQUEST CLOSED SATISFIED.....TONY GODINEZ/CARS/ATX; 0;
[illegible]896085
[illegible]02-01-15

LETTER APPROVED C/REESE-SPIVEY ATX; 0; 379950602
2002-01-22

CUST CALLED IN RQST AN UPDATE ON HER REIMBURSEMENT FOR HER BALL JOINTS GOING OUT. CRM NOTICED THAT CUST HAS NOT SENT IN PROOF OF OWNERSHIP. CRM INSTRUCTED CUST TO DO SO. WILL REOPEN WHEN DOC ARRIVE. REQUEST CLOSED SATISFIED. WILLIAM BANACH CAC/PDX.; 0; 380595032
2002-03-26

----WHITE MAIL-------CRM attaching docs to file pertaining to reimb. and forwarding to CRM BANACHW.
PAUL GRENIER/CORR/TAMPA; 0; 386018324
2002-03-26

REQUEST WAS SENT TO INCORRECT CRM. THIS CRM FORWARDING TO CORRECT CRM BANACHW.
TONY GODINEZ/CARS/ATX; 0; 386022369
2002-04-26

cust called and stated that she had not heard from previous crm and was seeking status..crm reviewed file and noted preivous crm reviewing req for reimbursement...crm informed cust of previous crm working on req..cust thanked and stated that she worked third shift and might not be available but had an answering machine and updates could be left at any time..crm fowarding to previous crm for futher processing.....Aaron Correll/cac/pdx; 0; 388698388
2002-05-06

[illegible] REVIEWING FILE W/CRM. CRM WILL CONTACT SRV MGR & CUST FOR MORE INFO.
[illegible]ERRI MAURER/TM/ATX.; 0; 389569924
2002-05-15

CRM ATTEMPTED TO CONTACT SVC MGR BUT HE WAS UNAVAILABLE. CRM WILL ATTEMPT AGAIN AT A LATER TIME.
TONY GODINEZ/CARS/ATX; 0; 390322980
2002-05-25

CRM CLOSING REQUEST AND TRANSFERRING TO SR 1-3856531.
TONY GODINEZ/CARS/ATX; 0; 391191139

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
[illegible]LICE REPORT: ROAD CONDITION: ROAD SURFACE:
[illegible]MBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

VEHICLE INSURED:

INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,

CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********ERC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GM RESTRICTED

386526

CASE NUMBER:	06071081	VIN:	1GNCT18W8WK149179
DATE OPENED:	12/21/01	MODEL YEAR:	98
DATE CLOSED:	01/08/02	SERIES:	UNKNOWN
SOURCE:	YES	MILEAGE:	46000
CUSTOMER:			
ADDRESS:			
HOME PHONE:		STATE:	MO
BUS. PHONE:			

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: CABOOL , MO
HOME PHONE:

CASE NUMBER:	06071081	VIN:	1GNCT18W8WK149179
		MODEL YEAR:	1998
DATE OPENED:	2001-12-21	SERIES:	UNKNOWN
DATE CLOSED:	2002-01-08	MILEAGE:	46000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	WEHR MOTORS OF THE OZARKS INC
BRC PARENT:		DEALER ADDRESS:	11311 BUSINESS HWY 60,,MOUNTAIN

GROVE,MO,65711,USA

**********GENERAL CASE INFORMATION**********

G26 U-Joints (Front/Rear)	Broken
0 REPAIR ATTEMPT(S)	UPPER AND LOWER BROKE
S13 Reimbursement Requested	Other
0 REPAIR ATTEMPT(S)	UPPER BALL JOINTS
S85 Dealer Resolved With Goodwill	Dealer Resolved With Good
0 REPAIR ATTEMPT(S)	REIMBURSEMENT

Vehicle reimbursement or Goodwill decision - Repair already done

INSTRUCTIONS TO CRM:
* Identify sp Determine Customer's expectation
* Determine Customers expectation
* Determine if any manufacturer / parts warranty remains in effect
* Probe to determine if consumer has an "Extended Warranty" GMPP or other
* Reference WKC[[GOODWILL RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/Goodwill/Goodwill_Main.html]] section on how to make decision, review warranty history, and other appropriate documents.
* Validate repair has already been performed and whether by dealer or independent
  (If not repaired - Change call type to "Repair Request")
  (If already repaired at Dealership - Review with Service management to determine

se of failure and consider reimbursement at dealership.)
(If already repaired at Independent - Review all relevant materials per SOG and P&P and make appropriate "Goodwill" decision.
(Note: Never make a "Final" commitment without appropriate documentation.)

* If necessary follow Dawin Wright letter "Goodwill" processing [[GOODWILL RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/Quickref/content/goodwill.html]
* If necessary follow SBS on "Contacting GM Field Personnel" [[Field Personnel RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/ContactingGMFieldPersonnel.htm]]
Vehicle reimbursement or Goodwill decision - Repair already done
**********WORK HISTORY**********

CUST STATES SHE PURCHASED VEH USED AT 27,000 MILES IN 8/2000. CUST STATES THAT SHE IS MOVING TO MO. CUST STATES SHETHE UPPER BALL JOINTS BROKE AND THE LOWER BALL JOINTS WERE HANGING. CUST STATES THAT SHE PAID $ 629.11 FOR THE REPAIR AT WBHR MOTORS. CUSTSTATES SHE WAS ADVSD BY 3 PEOPLE AT DLR THAT THIS WAS A KNOWN PROBLEM. CUST SEEKS TO KNOW IF THIS IS A KNOWN PROBLEM DUE TO CUST PAID FOR REPAIR. CRM DIDN'T SEE ANY CAMPAIGNS OR SP.
CRM THEN CALLED DLR SPOKE WITH SVC MGR MIKE MOORE, HE STATED THAT THE UPPER BALL JOINTS BROKE AND THE LOWER WERE LOOSE. THAT HE WILL CALL HIS AVM TO SEE IF ANY REIM CAN BE OOFER FOR ASSIST. CRM GAVE SVC MGR CASE # TO UPDATE. CRM ADVSD CSUT THAT CRM WILL RESEARCH AND WAIT FOR AN UPDATE OF ANY POSSIBLE ASSIST. CRM DID ADVSD CUST THAT CRM IS ON VAC TIL JAN 2. CRM GAVE CASE # TO CUST.
CRM ADVSD CRM NEARBY- DAIVD SLYDER, TO KEEP A EYE ON CASE.
JESSICA GARCIA/CAC/ATX; 0; 377811823
2002-01-04

CRMCALED SVC MGR, MIKE MOORE. CRM WAS ADVSD THAT CUST WILL BE GETTING ASSIST AND THE DLRSHIP WILL CALL CUST BACK TO INFORM OF INFO.
CRM CALLED CUST TO INFORM OF INFO AND HTAT DLR WILL BE CONTACTING THEM TO ADVSD OF WHAT TYPE OF ASSIST. CRM LEFT VM WITH800 AND CASE#
CRM IS CLOSING CASE SATISFIED
JESSICA GARCIA/CAC/ATX; 0; 379008655
2002-01-07

CUST STATES SHE WOULD LIKE PRIOR CRM JESSICA TO CONTACT CUST TOMORROW 1/08/02 ANYTIME DURING THE DAYTIME AT HER HOME NUMBER CUST SEEKS A CALL BACK TOMORROW 1/08/02. CRM ADVISED CUST CUST CRM WILL SEND THE INFO TO PRIOR CRM. CRM KAY DEBERNARD/CARS/TAMPA.; 0; 379265218
2002-01-08

CRM CALLED SVC MGR MIKE MOORE, HE STATES THAT HE HASN'T BEEN ABLE TO CONTACT CUST YET TO ADVSD OF HOW MUCH HE WILL BE REIM. SVC MGR STATES THAT REPAIR HAPPENED ON 12/17/01, THAT AS SOON AS SVC DEPT GETS PAID THEN THEY WILL REIM CUST $379.11.
CRM CALLEDCUST BACK TO ADVSD. CUST STATES THAT DLR JUST CALLED HER TO INFORM HER OF REIM ADN IS SATISFIED.
JESSICA GARCIA/CAC/ATX; 0; 379362534

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

GM RESTRICTED

386526

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
GRADE:
AFTERMARKET:
LEASE TERM:

GM RESTRICTED

386526

AGE:
THER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GM RESTRICTED

CASE NUMBER: 06276091 VIN: 1GHDT13W8W2703710

DATE OPENED: 01/30/02 MODEL YEAR: 1998

DATE CLOSED: 02/06/02 SERIES: BRAVADA

SOURCE: YES MILEAGE: 51000

CUSTOMER:

ADDRESS:

HOME PHONE: STATE: MI

BUS. PHONE:

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:

ADDRESS: BATTLE CREEK , MI

HOME PHONE:

CASE NUMBER:	06276091	VIN:	1GHDT13W8W2703710
		MODEL YEAR:	1998
DATE OPENED:	2002-01-30	SERIES:	BRAVADA
DATE CLOSED:	2002-02-06	MILEAGE:	51000
SOURCE:	Phone	DELIVERY DATE:	
CC TYPE:	Yes	DEALER NAME:	DEMAAGD OLDSMOBILE-NISSAN-GMC TRUCK,
BRC PARENT:		DEALER ADDRESS:	333 DICKMAN RD,,BATTLE CREEK,MI,49015,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
1 REPAIR ATTEMPT(S) — SEPARATED AFTER EXITING INTERSTATE

T44 Maintenance Certificate (Oil Change) — Customer Satisfaction
0 REPAIR ATTEMPT(S) — MAINTENCE LETTER

S86 CAC Resolved With Goodwill — CAC Resolved With Goodwil
0 REPAIR ATTEMPT(S) — MAINTENCE LETTER

Vehicle operation or design

INSTRUCTIONS TO CRM:
*Pinpoint / understand concern
* Determine Customers expectation
* Validate feature is on vehicle
* Review owners manual with owner - [[Owners Manuals RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http:\\carsweb\webknowledge]]. Click the Product Center Tab
* Review specific solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.ht]]
* Validate with dealership if necessary

GM RESTRICTED

* Coordinate with dealership to compare with another vehicle if necessary
Schedule a follow up if issue is not resolved during call
Vehicle operation or design

**********WORK HISTORY**********

CUST STATES 2ND OWNER 98 BRAVDOW/51K MILES. CUST STATES WHILE TRAVELING ON INTERSTATE VEH. SLIDE LIKE A SNAKE. CUST STATES HE PULLED OVER AND VEH. RIGHT SIDE BALL JOINTS HAD SEPARATED. CUST STATES DLR. REPLACED RIGHT SIDE UPPER AND LOWER AND HE PAID FOR THE LEFT SIDE AT WARRANTY RATE. CUST DOES NOT SEEK COST ASSISTANCE CUST SEEKS TO INFORM GM OF COND. CRM SUSPENDING FILE CUST SATISFIED PENDING VERIFICATION OF VIN FROM SVR. MGR. MARCELLAS LYLES/CARS/TAMPA/GALFORD.; 0; 381286454
2002-01-31

CRM RESUMED FILE TO GET CORRECT VIN. MARCELLAS LYLES/CARS/TAMPA/GALFORD.; 0; 381348395
2002-02-01

CRM CONTACTED AND VERIFIED ALL CONCERNS HAVE BEEN RESOLVED AND THE CUST IS SATISFIED. CRM WOULD LIKE TO OFFER THE CUST A MAINTENCE LETTER FOR A COMPLIMENTARY OIL CHANGE, LUBRICATE CHASIS COMPONETS, CHECK REAR/FRONT AXLE FLUID LEVEL AND ADD FLUID AS NEEDED,REPLACE AIR CLEANER FILTER, ROTATE TIRES, AND REPLACE FUEL FILTER FOR THE FOLLOWING BUSINESS REASONS: APOLOGETIC GESTURE, CUST INCONVIENCED, TO RETAIN A LOYAL GM CUST. CRM REC'Q OVER-THE-SHOULDER APPROVAL FROM L1E DOUG SMITH. CUST ACCEPTED AND WAS VERY SATISFIED. A VIN SEARCH WAS CODUCTED AND NO RELATED REQ. FOR GOODWILL WAS DISCOVERED. GOODWILL CHECKLIST HAS BEEN COMPLETED. FORWARDING OVER TO LIAISON ADAMSJ FOR PROCESSING. MARCELLAS LYLES/CARS/GALFORD; 0; 381462395
2002-02-05

Pre-approve maint cert. VIN search complete, no other requests for cust/VIN. TM
Galford. Cookie McCormick/Goodwill Liaison/Tampa; 0; 381776572
2002-02-05

FINAL APPROVAL..MAINT CERT..VIN SEARCH COMPLETED..JOY NIXON-TAMPA APPROVAL GROUP; 0; 381796712

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

GM RESTRICTED

WAS VEHICLE INSURED:
INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

G M R E S T R I C T E D

E: LOCATION:
DRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
DRESS:
,

GENERAL MOTORS CORPORATION
DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: CHESANING ,
MI
HOME PHONE:

CASE NUMBER:	00421179	VIN:	1GKCT18W3WK504532
		MODEL YEAR:	1998
DATE OPENED:	2000-05-23	SERIES:	Jimmy
DATE CLOSED:	2000-09-06	MILEAGE:	39000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:		DEALER NAME:	LABADIE OLDS CADI GMCT, INC.
BRC PARENT:		DEALER ADDRESS:	711 S EUCLID AVE,,BAY CITY,MI,48706,USA

**********GENERAL CASE INFORMATION**********

T58 Retention Certificate/Owner Loyalty — Customer Satisfaction
0 REPAIR ATTEMPT(S) — PER AVM REQUEST DUE TO THE CUST HAS LOST CONFIDENCE IN THE VEHICLE.

F18 Front Ball Joints/Kingpin — Broken
2 REPAIR ATTEMPT(S) — VEHICLE HAS HAD THIS COMPONENT FAIL TWICE.

tomer wants to document dissatisfaction.
**********WORK HISTORY**********

customer states she has had nothing but problems with her vehicle since she purchased it. customer wants to document her dissatisfaction with the vehicle. customer states she has had problems with squeaks, windows, and her major concern is that her frontball joint broke and the vehicle's wheel almost fell off, which could have called a major accident if she were not stopping at the time. crm apologized for the problems with the vehicle, and documented her concerns. alex lopez/tampa; 0; 99999
2000-05-24

AVM (MIKE GREGUS) CALLED IN REQUESTING A OWNER LOYALTY CERTIFICATE IN THE AMOUNT OF $1900.00. AVM STATES THAT THE CUST HAS HAD THE UPPER BALL JOINT AND THE LOWER BALL JOINTS FAIL TWICE WHICH ALMOST CAUSED THE CUST TO BE INVOLVED IN AN ACCIDENT. AVM STATES THAT THE CUST IS TERRIFIED TO DRIVE VEHICLE AND HAS LOST CONFIDENCE IN THE VEHICLE. AVM STATES THAT HE CONSULTED WITH THE CUST TO SEE WHAT COULD BE DONE TO GET CUST INTO ANOTHER VEHICLE, CUST ACCEPTED THE OLC. CRM WILL FORWARD TO TEAM MANAGER FOR APPROVAL. KIMBERLY GADSDEN/TAMPA CAC; 0; 328053556
2000-05-24

TM HAS REVIEWED FILE AND APPROVED OLC REQUEST. TM AGREES WITH AVM'S DECISION TO ISSUE OLC TO MAINTAIN CUST LOYALTY TO GM. TRACEY KIZZIAH/TEAM MANAGER/TAMPA; 0; 328059480
2000-05-31

APPROVED CERTIFICATE AT REQUEST OF AVM MIKE GREGUS. TIM MINNIS/GM ADR MNGR/TAMPA; 0; 328631147
2000-08-23

M MIKE GREGUS CALLED TO CHECK STATUS OF OLC. AVM REQUESTS THIS BE RUSHED. TIM MADDEN/TAMPA AVM LINE; 0; 335919953
2000-08-24

TEAM LEAD FOWARDING TO APPROVAL TEAM FOR FURTHER PROCESSING. REQUEST SHOULD BE EXPEDITED. NICOLE TORRES/TPA; 0; 335989104

2000-08-25

DWILL APPROVER REQUESTED OLC LETTER, LC0001, FOR $1900.00, VALID THROUGH 8-25-01
RWARDING TO LETTER APPROVER FOR PROCESSING PAMELA MORRAU/GOODWILL
APPROVER/TAMPA; 0; 336063536
2000-08-25

LETTER HAS BEEN APPROVED
DNEWTON/TAMPA-813; 0; 336063896
2000-09-06

CERT #CARS00421179 FOR $1,900.00 WAS SENT TO THE CUSTOMER ON 09/01/00. SHANTA MORRIS/TAMPA
APPROVAL GROUP.; 0; 337129452

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
LICE REPORT: ROAD CONDITION: ROAD SURFACE:
MBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

PONTIAC · GMC

00421179

Customer Assistance Center

August 25, 2000

09-07-00P03:24 RCVD

Cheaming, MI

RE: CARS00421179

Dear

Thank you for your recent inquiry. We are sorry you have experienced concerns with your 1998 GMC Jimmy. Customer satisfaction is a top priority for us at GMC.

Confirming our conversation regarding your GMC, vehicle identification number, 1GKCT18W3WK504532, enclosed is the Owner Loyalty Certificate for the amount of $1,900.00. This certificate is valid through August 25, 2001 towards the purchase of a new, unused GMC. This certificate may be used in addition to any other retail purchase incentive programs available at the time of purchasing a new vehicle.

We are proud you made GMC your choice when you purchased your 1998 GMC Jimmy and trust you will give us the opportunity to retain you as a GMC customer.

We hope you will take advantage of this special incentive offer, and assuming you do, simply present the certificate to your dealer after you have negotiated your best deal, sign the certificate and your dealer will complete the necessary information and process it for you.

Sincerely,

Pamela Moreau

Pamela Moreau
Customer Relationship Manager

LC0001-T/dlo

General Motors Loyalty Certificate

Issued by:
GMC

Certificate No. CARS00421179

Issue Date: August 29, 2000

Valid through: August 25, 2001

Issued exclusively for:

Chesaning, MI,

Amount: One Thousand Nine Hundred Dollars and No Cents
****$1,900.00****

Valid only when an eligible new model GM vehicle is purchased. (Some models may be excluded). This certificate is exclusively for the person named above, their spouse or surviving spouse. It may not be assigned to or used by anyone else. Only the original copy of this certificate will be honored. Mechanical reproductions or other facsimiles are not valid. Only one certificate can be redeemed per new vehicle purchased. NONTRANSFERABLE.

General Motors Authorized Signature

Customer Signature _____ Date _____

New Vehicle Identification Number

Delivery Date

Dealer Acknowledgement:

Dealership Name _____ Dealer Code

Dealer Signature _____ Date _____

CARS0007 Revised 3/1/00

Ft. Pleasant, NJ

GMC
P.O. Box 33172
Detroit, Michigan
48232

Attachment 01387787

File# 01387787

To whom It May Concern,

I had been going down the road and heard a pop. So I pulled over and got out and found my front right side wheel was bent under. I called the tow truck to come and tow it to the Dealer that Services GMC Jimmy's. I had told them what happen and they said that the ball joint was bad and popped out. My Son works for GM in Linden New Jersey and said that the only Two reasons this could happen is if the joint was bad OR that it was never greased.

My Dealer had greased the Truck 2 months ago. So the only thing I could think is that they never greased that one or that it was defective. They told me I would have to pay 1138.75 in order for them to repair the Truck. I did but I feel that I should be reimbursed Because it was not my fault. Also I believe that the Dealer should be checked out. I believe they are over charging people for work done on their vehicles. The dealer did not want to hear anything. Also I just want to say that the 2 girls that helped me on the phone were very nice & helpful. their names are Bridget Rosenbaum & Cookie McCormack. they were a big help. I would appreciate it if

OVER

you could see what you can do to assist me. about this matter. Thank you for your time. I am attaching a copy of the bill with the price highlighted. I Just Did not understand why they quoted me 3 different prices. I thought that was strange. → 1st 1800.00
2nd 1500.00
3rd 738.00

thank You Again

Pt. Pleasant, NJ

BUICK
Coast
PONTIAC
BUICK - PONTIAC - GMC TRUCKS
2208 HIGHWAY 35, SEA GIRT, NJ 08750
(732) 223-0139

JOINT PLEASANT, NJ

SERVICE ADVISOR JOHN LEVEY

INVOICE DATE	DATE READY	STOCK NO.	VEHICLE IDENTIFICATION	CUST. NO.	TAG NO.	PO NO.	DELIVERY DATE	INVOICE NO.
28AUG00	01SEP00	G6458	1GKDT13W6T2571505	966466			01SEP00	235257

TIME IN	TIME READY	YEAR MAKE & MODEL	TELEPHONE NO.	CUST PAY LABOR RATE	DELIVERY DATE	PAYMENT TYPE	...
13:36	12:36	96 GMC GMC JIMMY		71.00	20JUL96	30	30

MILEAGE IN	MILEAGE OUT	LICENSE NO.
27609	27613	------

A TOWED TO SHOP-BALLJOINT BROKEN
CAUSE: BROKEN
E2927 BALL JOINT, CONTROL ARM - REPLACE UPPER BOTH
26MAR94 1.30 (N/C)
1 17980952 B/JNT (N/C)
1 17980952 B/JNT (N/C)
FC: 2W
PART#: 17980952
COUNT: 1
CLAIM TYPE:
AUTH CODE: A
NG

B** BALL JOINT, CONTROL ARM - REPLACE LOWER RIGHT
CAUSE: BROKEN
E2937 BALL JOINT, CONTROL ARM - REPLACE LOWER BOTH
26MAR94 2.10 (N/C)
1 22156908 STUD KIT (N/C)
1 22156908 STUD KIT (N/C)
FC: 2W

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS,OIL,LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

LIMITED LABOR WARRANTY

[illegible]

New Jersey Licensed Inspection Center License #: [illegible]

I hereby authorize the repair work herein not both to be done along with the necessary material and repair that you are not responsible for loss or damage to vehicle or articles left in vehicle in case of fire, theft, or any other cause beyond your control or for any delays caused by unavailability of parts or delays in work anticipated by the supplier or manufacturer. I hereby grant you and/or your employees permission to operate the vehicle herein described on streets, highways or elsewhere for the purpose of testing and inspection. An express mechanic's lien is hereby acknowledged on above vehicle to secure the amount of repair thereon.

X

$10 $10

MONEY SAVER COUPON
CUT VALUABLE MONEY SAVING COUPON AND RECEIVE $10.00 OFF OF YOUR NEXT SERVICE (LABOR ONLY)
LIMIT ONE PER CUSTOMER

MINIMUM $50 LABOR CHARGE
NOT VALID WITH ANY OFFER

$10 NOT TO BE COMBINED WITH ANY OTHER OFFER. $10

[illegible] CUSTOMER [illegible] SERVICE MANAGER OR ALBERTO RIBON DATE

POINT PLEASANT, NJ

Coast
BUICK - PONTIAC - GMC TRUCKS
2209 HIGHWAY 35, NEW GRET, NJ 08750
(732) 229-0133

SERVICE ADVISOR JOHN LEVEY

INSPECTION STATION	DATE READY	STOCK NO.	VEHICLE IDENTIFICATION	CUST. NO.	TAG NO.	P.O. NO.	RO NO.	INVOICE NO.
28AUX300	01SEP00	G6458	1GKDT13W6T2571505	966466			01SEP00	235257

TIME IN	TIME READY	YEAR MAKE & MODEL	TELEPHONE NO.	DELIVERY DATE	DELIVERY TIME	HOURS	MI
13:36	12:36	96 GMC GMC JIMMY	71.00	20JUL96		30	30

MILEAGE IN	MILEAGE OUT	LICENSE NO.
27609	27613	

PART#: 22156908
COUNT: 1
CLAIM TYPE:
AUTH CODE: A
NG

** FOUR WHEEL ALIGNMENT
ALIGN4 FOUR WHEEL ALIGNMENT
26 CH 2.50 99.95 99.95

** HOSE, BRAKE - REPLACE FRONT RIGHT
CAUSE: STRETCHED
H0720 HOSE, BRAKE - REPLACE FRONT RIGHT
26MAR94 0.90 (N/C)
1 12377967 FLUID (N/C)
1 22113472 HOSE ASM (N/C)
2 10139097 GASKET (N/C)
FC: 6C
PART#: 22113472
COUNT: 4
CLAIM TYPE:
AUTH CODE: A
OJ

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS/OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

LIMITED LABOR WARRANTY

[illegible]

New Jersey Uniform Inspection Center Mission St 8877

I hereby authorize the repair work herein set forth to be done along with the necessary material and agree that you are not responsible for loss or damage to vehicle or articles left in vehicle in case of fire, theft, or any other cause beyond your control or for any delay caused by inability of parts or labor to arrive delivered by the supplier or transporter. I hereby grant you either your employees permission to operate the vehicle herein described on streets, highways or elsewhere for the purpose of testing and inspection. An express mechanic's lien is hereby acknowledged on above vehicle to secure the amount of repairs thereto.

X

$10 $10

MONEY SAVER COUPON
CUT VALUABLE MONEY SAVING COUPON AND RECEIVE $10.00 OFF OF YOUR NEXT SERVICE (LABOR ONLY)
LIMIT ONE PER CUSTOMER

MINIMUM $50 LABOR CHARGE
NOT VALID WITH ANY OFFER

$10 NOT TO BE COMBINED WITH ANY OTHER OFFER. $10

ON BEHALF OF MYSELF AND [illegible] I HEREBY CERTIFY THAT THE INFORMATION CONTAINED ABOVE IS ACCURATE AND TRUE AND THAT I AM THE OWNER OF THE VEHICLE DESCRIBED ABOVE, AND THAT THE VEHICLE IS NOT STOLEN. I HEREBY AUTHORIZE THE REPAIRS SPECIFIED ABOVE AND ALSO AUTHORIZE THE USE OF THE VEHICLE FOR ROAD TEST PURPOSES. I ALSO AGREE TO PAY FOR ALL REPAIRS, REGARDLESS OF WARRANTY, AND ALSO AGREE TO PAY FOR ALL TOWING AND STORAGE CHARGES. I ALSO AGREE TO PAY FOR ALL REPAIRS ON DATE OF VEHICLE DELIVERY AT THE SERVICE DEALER FOR INSPECTION BY UNINSPECTORS REPRESENTATIVE.

CUSTOMER [illegible]

POINT PLEASANT, NJ

SERVICE ADVISOR JOHN LEVEY

Coast
BUICK - PONTIAC - GMC TRUCKS
1305 HIGHWAY 88, BRA CRT, NJ 08750
(732) 223-0133

REPAIR ORDER NO.	DATE READY	STOCK NO.	VEHICLE IDENTIFICATION	CUST. NO.	TAG NO.	P.O. NO.	DATE	INVOICE NO.
28AU300	01SEP00	G6458	1GKDT13W6T2571505	966466			01SEP00	235257

TIME IN	TIME READY	YEAR	MAKE & MODEL	TELEPHONE NO.	TIME ALLOWANCE	PROMISED DATE	PROMISED BY	SA
13:36	12:36	96	GMC GMC JIMMY		71.00	20JUL96	30	30

MILEAGE IN	MILEAGE OUT	LICENSE NO.
27509	27613	

G** NEW JERSEY STANDARD PARTS MARK UP VARIANCE CAUSE: POLICY T5999 NEW JERSEY STANDARD PARTS MARK UP VARIANCE 26MAR94 0.00 PC: 95 PART#: COUNT: 0 CLAIM TYPE: AUTH CODE: MK	(N/C)
H** WHEEL - R&R OR REPLACE ONE E0420 WHEEL - R&R OR REPLACE ONE 26 CB 0.40 28.40	28.40
1 GMC-23 WHL 275.00 275.00	275.00
1 9439866 STEM ASM- 1.58 1.58	1.58
1 2357015MICH TIRE 130.00 130.00	130.00
I** SENSOR, WHEEL SPEED - REPLACE FRONT RIGHT CAUSE: INOP H2410 SENSOR, WHEEL SPEED - REPLACE FRONT RIGHT 26MAR94 1.10	(N/C)
1 15727018 SHIELD	(N/C)

DESCRIPTION	TOTAL
LABOR AMOUNT	
PARTS AMOUNT	
GAS/OIL/LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

LIMITED LABOR WARRANTY

[illegible]

New Jersey Licensed Inspection Center License #[illegible]

I hereby authorize the repair work herein set forth to be done along with the necessary material and grant that you are not responsible for loss or damage to vehicle or articles left in vehicle in case of fire, theft, or any other cause beyond your control or for any delays caused by unavailability of parts or delays in part shipments by the supplier or transporter. I further grant you and/or your employees permission to operate the vehicle herein described on streets, highways or elsewhere for the purpose of testing and/or inspection. An express mechanic's lien is hereby acknowledged on above vehicle to secure the amount of repairs thereto.

X

ON BEHALF OF REPAIRER HEREIN I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS ACCURATE AND THE REPAIRS DONE WITH REPAIRER HEREIN HAVE BEEN DONE AT MY CLAIM TO BEHALF AND THAT I AM AUTHORIZED TO ACT ON BEHALF OF REPAIRER. [illegible] THE DATE OF REPAIRS. [illegible] INSPECTION OF THE DAMAGED VEHICLE FOR INSPECTION OR INSPECTION BY A REPRESENTATIVE.

SIGNED CUSTOMER COPY [illegible] DATE

$10 $10

MONEY SAVER COUPON

CUT VALUABLE MONEY SAVING COUPON AND RECEIVE $10.00 OFF OF YOUR NEXT SERVICE (LABOR ONLY)

LIMIT ONE PER CUSTOMER

MINIMUM $50 LABOR CHARGE
NOT VALID WITH ANY OFFER

$10 NOT TO BE COMBINED WITH ANY OTHER OFFER. $10

POINT PLEASANT, NJ

SERVICE ADVISOR JOHN LEVEY

BUICK

Coast

BUICK - PONTIAC - GMC TRUCKS
3205 HIGHWAY 35, SEA GIRT, NJ 08750
(732) 223-0133

PONTIAC

REPAIR ORDER NO.	DATE READY	STOCK NO.	VEHICLE IDENTIFICATION	CUST. NO.	TAG NO.	P.O. NO.	[illegible]	INVOICE NO.
28AUG00	01SEP00	G6458	1GKDT13W6T2571505	966466			01SEP00	235257

TIME IN	TIME READY	YEAR	MAKE & MODEL	TELEPHONE NO.	CUST. PAY LABOR RATE	DELIVERY DATE	PROMISED BY	DA
13:36	12:36	96	GMC GMC JIMMY		71.00	20JUL96	30	30

MILEAGE IN	MILEAGE OUT	LICENSE NO.
27609	27613	

FC: 6C
PART#: 15727018
COUNT: 1
CLAIM TYPE:
AUTH CODE: A
OJ

J** REPLACE FRONT BRAKES AND RESURFACE
ROTORS-PADS HAVE LIFETIME WARRANTY BY
COAST BUICK ONLY
B003 REPLACE FRONT BRAKES AND RESURFACE
ROTORS-PADS HAVE LIFETIME WARRANTY BY
COAST BUICK ONLY
26 CB 2.00 98.95 98.95
1 18026296 PAD KIT 60.05 60.05 60.05
EPA1 EPA CHARGE FOR REPAIR ORDER
26 CB 0.00 3.00 3.00
K** LOANER CAR
CAUSE: RENTAL
Z7901 RENTAL FOR CUSTOMER SATISFACTION
26WAR94 0.00 (N/C)
FC: 95 PART#: COUNT: 0
CLAIM TYPE:

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS,OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

LIMITED LABOR WARRANTY

[illegible]

New Jersey Licensed Inspection Center License #: 2277

I hereby authorize the repair work herein set forth to be done along with the necessary material and agree that you are not responsible for loss or damage to vehicle or articles left in vehicle in case of fire, theft, or any other cause beyond your control or for any delays caused by unavailability of parts or delays in parts shipments by the supplier or transporter. I hereby grant you and/or your employees permission to operate the vehicle herein described on streets, highways or elsewhere for the purpose of testing and/or inspection. An express mechanic's lien is hereby acknowledged on above vehicle to secure the amount of repairs thereto.

X

$10 $10

MONEY SAVER COUPON
CUT VALUABLE MONEY SAVING COUPON AND RECEIVE $10.00 OFF OF YOUR NEXT SERVICE (LABOR ONLY)
LIMIT ONE PER CUSTOMER

MINIMUM $50 LABOR CHARGE NOT VALID WITH ANY OFFER

$10 NOT TO BE COMBINED WITH ANY OTHER OFFER. $10

[illegible]

SIGNED CUSTOMER [illegible] GENERAL MANAGER OR AUTHORIZED PERSON DATE

BUICK

Coast

BUICK - PONTIAC - GMC TRUCKS
2205 HIGHWAY 35, SEA. GIRT, NJ 08750
(732) 223-0133

PONTIAC

POINT PLEASANT, NJ

SERVICE ADVISOR JOHN LEVEY

REPAIR ORDER NUMBER	DATE READY	STOCK NO.	VEHICLE IDENTIFICATION	CUST. NO.	TAG NO.	F.O. NO.	[illegible]	INVOICE NO.
28AUG00	01SEP00	G6458	1GKDT13W6T2571505	966466			01SEP00	235257

TIME IN	TIME READY	YEAR	MAKE & MODEL	[illegible]	[illegible]	[illegible]	[illegible]
13:36	12:36	96	GMC GMC JIMMY	71.00	20JUL96	30	30

MILEAGE IN	MILEAGE OUT	LICENSE NO.
27609	27613	190RXK

AUTH CODE:
MK

MISC RENTAL
WAR94 (N/C)

L** TOWING
CAUSE: TOW
T2020 TOWING
26WAR94 0.00 (N/C)
FC: 95 PART#: COUNT: 0
CLAIM TYPE:
AUTH CODE:
MK

[illegible] TOW
WAR94 (N/C)

LIMITED LABOR WARRANTY

[illegible]

DESCRIPTION	TOTALS
LABOR AMOUNT	230.30
PARTS AMOUNT	466.63
GAS.OIL.LUBE	0.00
SUBLET AMOUNT	0.00
MISC. CHARGES	0.00
TOTAL CHARGES	696.93
LESS INSURANCE	0.00
SALES TAX	41.82
PLEASE PAY THIS AMOUNT	738.75

[illegible]

X

OUR GOAL AT COAST BUICK PONTIAC GMC IS YOUR COMPLETE SATISFACTION. YOU MAY RECEIVE A SURVEY IN THE MAIL REGUARDING TODAYS SERVICE VISIT. IF YOU CANT ANSWER COMPLETELY SATISFIED TO ALL THE SURVEY QUESTIONS PLEASE CALL ME AT 223-0133 WHEN POSSIBLE THANK YOU. MICHAEL MACKOWN SR SERVICE MANAGER

[illegible]

CUSTOMER COPY

$10 $10

MONEY SAVER COUPON

CUT VALUABLE MONEY SAVING COUPON AND RECEIVE $10.00 OFF OF YOUR NEXT SERVICE (LABOR ONLY)

LIMIT ONE PER CUSTOMER

MINIMUM $50 LABOR CHARGE NOT VALID WITH ANY OFFER

$10 NOT TO BE COMBINED WITH ANY OTHER OFFER. $10

October 27, 2000

Easton, PA

Request: C01996956

Dear

Thank you for recent inquiry. We are sorry you have experienced dissatisfaction with your 1996 Chevrolet Blazer and sincerely apologize for any inconvenience you may have experienced.

We have carefully reviewed the facts surrounding your case. Unfortunately, we are unable to offer you financial assistance.

If you have any further questions, we invite you to call our Chevrolet Customer Assistance Center at 1-800-222-1020 weekdays between 8:00 a.m. and 11:00 p.m. Eastern Time. Please refer to your request number above and any one of our Customer Relationship Managers will be able to assist you.

We appreciate the opportunity to review this matter.

Sincerely,

Gerald Oliver
Customer Relationship Manager

X04-P/jlc

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: MILWAUKEE
WI
HOME PHONE:

CASE NUMBER:	01788211	VIN:	1GNDT13W0WK127155
		MODEL YEAR:	1998
DATE OPENED:	2000-10-04	SERIES:	BLAZER 4X4 4-DR
DATE CLOSED:	2000-10-19	MILEAGE:	36634
SOURCE:		DELIVERY DATE:	
BRC TYPE:	ADR	DEALER NAME:	HEISER CHEV INC
BRC PARENT:	01788208	DEALER ADDRESS:	10200 W ARTHUR AVE,,WEST ALLIS,WI,53227,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
1 REPAIR ATTEMPT(S) — CUSTOMER STATES RIGHT FRONT WHEEL FELL OFF
DUE TO BALL JOINT BROKEN

S13 Reimbursement Requested — Customer Satisfaction
1 REPAIR ATTEMPT(S) — CUSTOMER SEEKS REIMBURSEMENT OF $980.40

POSSIBLE LEMON LAW
**********WORK HISTORY**********

CRM RECD THE INITIAL BBB CLAIM FOR REIMBURSEMENT. ELISSA WALKER/BRC/ADR/TAMPA X 58621; 0; 339539470
2000-10-04

CRM CLLD AND LEFT A VOICE MAIL MESSAGE FOR CUSTOMER REGARDING THE BBB CLAIM. ELISSA WALKER/ADR/BRC/TAMPA X 58621; 0; 339539531
2000-10-04

CRM HAS REVIEWED THE CUSTOMER'S BBB CLAIM AND WARRANTY HISTORY. CRM HAS DETERMINED THAT THE CUSTOMER IS INELIGIBLE TO ARBITRATE FOR REPAIRS/REIMBURSEMENT AS VEHICLE IS OUTSIDE OF THE NEW VEHICLE WARRANTY. (634 MILES OUTSIDE OF WARRANTY) ELISSA WALKER/BRC/ADR/TAMPA X 58621; 0; 339545793
2000-10-04

EXECUTIVE SUMMARY
****
DECISION-NO ASSISTANCE OFFERED.
JUSTIFICATION-CUSTOMER INELIGIBLE TO ARBITRATE DUE TO AGE/MILEAGE OF VEHICLE.
DECISION MAKER-CRM
FOLLOW UP-NONE
****
ELISSA WALKER/BRC/ADR/TAMPA X 58621; 0; 339545854

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION: Automatic
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
MAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES: BARBARA AND JOE MUDGETT
BUSINESS: Y % BUSINESS: 0
ACCIDENT: Y DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 1 DATE OF PURCHASE/LEASE: 1998-03-01
MILEAGE AT PURCHASE: 1 PURCHASE/LEASE AS: NEW
DOES OWNER HAVE POSESSION OF VEHICLE: Y
RESOLUTION SOUGHT: CUSTOMER SEEKS REIMBURSEMENT OF $980.40

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

0178821

To: Elissa Walker
Fax#: 13133810022
From:
Oct 02, 2000

Re: Chevrolet Motor Division/CHV0041785
TotalPages: 4

BBB AUTO LINE

October 2, 2000

Re: m01 1716 1667 CHV0041785 vs Chevrolet Motor Division

Ms. Elissa Walker
Chevrolet Motor Division
Tampa, FL

Dear Ms. Walker:

We have recently been contacted by one of your customers with a product complaint. Enclosed is information taken during the initial phone call.

You may contact the customer to resolve the complaint directly. Once the customer returns the completed *CCF*, the case will be opened, the 40 day clock will begin and all information received for the case will be sent to you.

Thank you for your participation in the BBB AUTO LINE program.

Sincerely,

Denise Trudo at Extension 614

[illegible] Wilson Blvd., Suite 800, Arlington, VA 22203 Phone 800.955.5100 Fax: 703.247.9700

Customer Claim Form

Case Number: CHV0041785
Contact Date: 10/02/00
Start Date :

Customer Name Address

MILWAUKEE, WI
Day Phone :
Fax Number:
Evening Phone:
E-mail address :

Vehicle Information

Name(s) that appear on vehicle title:
Is Vehicle titled to a business: no
Percentage of time vehicle used for business purposes:
Transmission Type: Automatic
Number of vehicles owned or leased by the business : 0
Make: Chevrolet Model: Blazer Model Year: 1996 Current Mileage: 38634
Vehicle Identification Number: _____
Servicing Dealer/City/State : Heiner Chevrolet,
Selling Dealer/City/State : Boucher Chevrolet, Waukesha WI
Insurance Carrier : _____ Policy Number: _____
Has vehicle been in an accident/had body damage? Yes __ No X Date of accident:
Description of Damage :

Purchase/Lease Information *(complete left side if vehicle was purchased/right side if vehicle was leased)*

Purchase Date: Mileage at purchase:
Purchased As :
Is the vehicle in your possession?
Lienholder's Name:
Address:
City/St/Zip:
Phone:

Lease Date: 03/01/98 Mileage at lease:
Leased As : New
Is the vehicle in your possession? yes
Leasing Company's Name: _____
Address:
City/St/Zip:
Phone: ( ) -

Resolution Sought

He would like for Chevrolet to cover the repairs. They had taken it in before the warranty ran out for a shake and rattle in the right front and a hard knocking noise. The dealership told them there was nothing wrong with the vehicle. Three weeks later the wheel fell off. All 4 ball joints were shot and they had to replace them all. ($690.40)

Signature of Owner(s): _____ Date_____

I am authorizing my lienholder/lessor to disclose to the BBB AUTO LINE program all information relating to the financing or lease of the vehicle named on this Customer Claim Form.

Return the Form to: BBB AUTO LINE, 4200 Wilson Blvd., Suite 800, Arlington Va. 22203-1838

Customer Claim Form

Customer Name: Case Number: CHM0041785

Problems	Servicing Dealer(s)	Current? Yes or No	# of Repair Attempts	Repair Date(s)	Mileage on Date(s)	Days Out of Service
right front wheel fell off (ball joint snapped)		no	1			

(Please indicate whether each problem is current)

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: PHELPS , KY
HOME PHONE:

CASE NUMBER:	02044694	VIN:	1GNCT18W4WK117166
		MODEL YEAR:	1998
DATE OPENED:	2000-10-26	SERIES:	BLAZER 4X4 2-DR
DATE CLOSED:	2000-11-07	MILEAGE:	90000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:		DEALER NAME:	MOORE CHEVROLET, OLDSMOBILE, CADILLA
BRC PARENT:		DEALER ADDRESS:	1626 W THIRD AVE,,WILLIAMSON,WV,25661,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin
0 REPAIR ATTEMPT(S)

Other
FRONT PASSENGER SIDE NEEDS REPLACEMENT

S13 Reimbursement Requested
0 REPAIR ATTEMPT(S)

Other
REQUEST FOR ASSIST

ASSIST ON WHEEL BALL JOINT REPAIR
**********WORK HISTORY**********

CUST STATES THAT HER TRUCK HAD ITS BALL JOINT POP OFF WHILE DRIVING AT LOW SPEEDS ON THE FREEWAY. CUST STATES THE DLR ESTIMATE IS $470.00..CUST STATES SHE LOST CONTROL AND WENT OVER TO THE SHOULDER. CUST STATES SHE DOES REGULAR SERVICE EVERY 3-4 WEEKS. CRM ADVISED CUST THAT HER CAR WAS OUTSIDE OF WARRANTY AND IT WAS VERY UNLIKELY WE WOULD BE ABLE TO ASSIST HER.....DEAN PARKS/PDX; 0; 341449000
2000-10-26

CRM RESEARCHED ISSUE. DENIAL DUE TO EXCESIVE MILEAGE, 54,000 MILES OVER THE FACTORY WARRENTY.....DEAN PARKS/PDX; 0; 341449065
2000-10-30

CRM CALLED CUST. CRM GAVE DENIAL TO CUST.....DEAN PARKS/PDX; 0; 341792736
2000-11-01

CUST STATES THAT INSTEAD OF HER VEH BEING REPAIRED FOR $470, THE TOTAL BILL CAME TO $1470. GM SHOULE HELP HER ON THIS. IF ALL GM CARS FALL APART AT 90000 MILES THEN GM DOES NOT MAKE A GOOD PRODUCT. CUST IS A TRAMA NURSE & SHE WILL BE TELLING ALL HER NURSING ASS. IF THEY OWN A BLAZER TO GET RID OF IT & NEVER BUY GM PRODUCTS AGAIN. SHE WILL BE GETTING AHOLD OF AN ATTORNEY, SHE HAS ALREADY CALL DATELINE SO THEY CAN INVESTIGATE. THIC CRM TRIED TO APOLOGIZE, TOLD HER THAT W/HER VEH BEING OUT OF MILEAGE PERAMETERS & THAT IT WOULD HAVE BEEN EVEN IF SHE HAD HAD THE EXTENDED WARRANTY THAT THERE WAS NOTHING WE COULD DO FOR HER. WE DO NOT HAVE CONTROL OVER HOW MUCH THE DLR'S CHARGE & I'M SORRY ABOUT THAT. CUST WAS NOT APPEASED. SHE SAID SHE GOT IT REPAIRED BUT WOULD BE TRADING IT IN JUST AS FAST AS SHE COULD ON ANOTHER BRAND PARTICULARLY SINCE SHE HAD ONLY USED IT 4X IN 4 WHEEL DRIVE. CUST THANKED ME FOR LISTENING. MARY VARGA/PDX; 0; 341983692
2000-11-03

TM WILL REVIEW FILE W/ CRM SINCE THERE IS INFORMATION MISSING. MAIRA ESPINOZA PDX; 0; 342128721
2000-11-03

CRM CALLED CUST TO GET VIN (AGAIN) & TO FIND OUT WHO HER DLR IS. HER DLR IS MOORE CHEVROLET IN WILLIAMSON, W V. CRM WILL GET PHONE NUMBER & CALL THEM TO FIND OUT EXACTLY [illegible]T WAS DONE TO HER VEH. MARY VARGA/PDX; 0; 342130842
[illegible]00-11-03

CRM CALL SCV MGR PAM ASK ABOUT BALL JOINT WAS WORN IN TWO. WHOEVER SHE HAS BEEN TAKING HER VEH FOR MAINTANCE SHOULD HAVE NOTICED. MESSED UP THE WIRES, RIMS BACK IN PLACE, OUTER TIRE ASSEMBLIE. BROKE DUE TO WEAR. BALL JOINTS USUAL BREAK DUE TO EXSIVESLACK . BEEN GOING ON FOR AWHILE, SHOULD HAVE BEEN NOTICED. SVC MGR SAID SHE DOESN'T KNOW WHAT WE COULD DO TO MAKE HER HAPPY. CUST IS VERY ANGRY & UNSET. MARY VARGA/PDX; 0; 342136676
2000-11-07

CRM CALLED CUST TO INFORM WHAT SVC MGR TOLD US YESTERDAY. CUST STATES THIS WAS THE WORSE EXPERIENCE SHE EVER HAD. EXTREMLY EXPENSIVE, DON'T DO VERY GOOD WORK, DIFICULT TO GET A CALL INTO W/NO ANSWER. CUST CALLED SEVERAL TIMES HERSELF, WAS NEVER TOLDHOW MUCH DAMAGE THERE WAS NOR HOW MUCH OVER THE ORIGINAL PRICE IT WAS. BAD SITUATION ALL AROUND. CUST SAID SHE WON'T HAVE TO BUY ANOTHER CHEVY. MARY VARGA/PDX; 0; 342470589

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

[illegible]LEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
[illegible]D TEST DESCRIPTION:
[illegible]D TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
PURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:
**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1

COMPANY:

RESS:

CONTACT TYPE:
CONTACT PHONE:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: SHERWOOD , MI
HOME PHONE:

CASE NUMBER:	02471601	VIN:	1GNCT18W3XK101753
		MODEL YEAR:	1999
DATE OPENED:	2000-12-07	SERIES:	BLAZER 4X4 2-DR
DATE CLOSED:	2000-12-07	MILEAGE:	38000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	No	DEALER NAME:	ROYAL CHEVROLET OLDSMOBILE CADILLAC,
BRC PARENT:		DEALER ADDRESS:	637 E CHICAGO RD,,COLDWATER,MI,49036,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
0 REPAIR ATTEMPT(S) — needs replacing

Safety.....lower ball joint assembly

**********WORK HISTORY**********

Cust states that he's had brake problems with his vehicle, and so he looked at his manual for assistance , and it states
[illegible]t his vehicle would be OK to drive while making that noise. Cust states that while [illegible]iving his vehicle, the lower assembly andball joint area broke . Vehicle was towed to Ed's Automotive. Cust seeks for this to repaired under
warranty or Goodwill. Crm adv the cust that after speaking with the svc writer and the svc mngr (Mandy & Bruce),
that due to uncertainty of veh being properly maintained, No Assistance is offered to cust. Vehicle has only been in the shop 3x's, and that was for oil changes (at 3,000, 15,000, and 24,000 miles). JMitchell // ATX.; 0; 345050873

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

[illegible] ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:

INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

WARE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:

TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: SADLT ST MARIE MI

HOME PHONE:

CASE NUMBER:	05568912	VIN:	1GNDT13W9N2230333
		MODEL YEAR:	1998
DATE OPENED:	2001-09-24	SERIES:	UNKNOWN
DATE CLOSED:	2001-09-24	MILEAGE:	55000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	
BRC PARENT:		DEALER ADDRESS:	

**********GENERAL CASE INFORMATION**********

T01 Product Allegation GM 1241 0 REPAIR ATTEMPT(S)	Customer Satisfaction par case set up
A04 Possible Safety Concern 0 REPAIR ATTEMPT(S)	Other ball joint failure
F18 Front Ball Joints/Kingpin 0 REPAIR ATTEMPT(S)	Broken failed

Initiate Par

INSTRUCTIONS TO CRM:
*Select PAR Button

[[SBS "Creating a Product Allegation Request RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/CreatingAProductAllegationRequest.html]]
Initiate Par

**********WORK HISTORY**********

(caller is wife, cust states her husband was driving south on mackinaw trail b/t 6 and 7 mile at 60mph when the veh locked up and had no steering. cust states veh went over the yellow line and headed towards another veh. cust states they barelymissed eachother and cust's veh went into the grass on the other side of the road. cust states upon getting out of the veh, they noticed that the front driver's side wheel was leaning at an angle. cust is alleging ball joint failure, and seeks to have chevrolet aware of this concern. crm submitting a par case. dana barr/cac/tampa; 0; 370214906

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:

POLICE REPORT:
ROAD CONDITION:
ROAD SURFACE:
NUMBER OF PEOPLE: 0
BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED:
INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
INSPECTORS NAME:
INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

BER OF INJURIES: 0
MENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

E: CONTACT NUMBER: 1
MPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LAKE RONKONKOMA ,
NY

HOME PHONE:

CASE NUMBER:	05701455	VIN:	1GNDT13W0Y2296756
		MODEL YEAR:	2000
DATE OPENED:	2001-10-17	SERIES:	UNKNOWN
DATE CLOSED:	2001-10-17	MILEAGE:	23000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	HUSTEDT CHEVROLET INC
BRC PARENT:		DEALER ADDRESS:	1815 MIDDLE COUNTRY RD,,CENTEREACH,NY,11720,USA

**********GENERAL CASE INFORMATION**********

T01 Product Allegation GM 1241 — Other
0 REPAIR ATTEMPT(S) — lower ball joint

A04 Possible Safety Concern — Other
0 REPAIR ATTEMPT(S) — lower ball joint

F18 Front Ball Joints/Kingpin — Other
0 REPAIR ATTEMPT(S) — lower ball joint

product allegation
**********WORK HISTORY**********

AVM, Frank Angelico called in initiate PAR. He states that the customer had an accident on 10/15/01. The cust called the dlr and had the vehicle towed in. The delaer notified their Arear Service Manager and he called to intiate PAR. AVM states thatthe left lower ball joint. rivet sheered off lower control arm. he has looked at the vehicle and he states that he has looked at the rivets on the ball joint and that the metal is clean (not exposed to moisture and air causing it to discolor). Bumper is bent at the middle and the left side is creased inward. he states that too many things don't add up and that he would like PAR to investigate. used vehicle bought from the dealer. sold to the customer in July 2001. no injuries. estimate currently unknown. front differential case is cracked. needs cv joint, lower control arm, tire, etc. minimum $1500-$2500. AVM can be reached at his voice mail 1-800-321-0164 box 8480. Seervice manager is George Shea. he can be reached at 631-585-2700 extension 50. number on file is the customer's work number. their home number is vehicle is currently located at the dealership. crm reviewed CAC for a file 05695543. CAC has not intiated PAR. scheduled call back time for today. crm advised the AVM that the CAC crm would be advised to discontinue working with the customer. PAR has taken ownership of the file. crm will call back the service manager to advise him of the PAR file number. crm advised AVM of 800# and extension for this crm. crm advised that a courtesy call would be made to the customer to advise that the AVM has intitated PAR for the customer that someone will be contacting them within 48 hours.

Amber Clark/tampa/par/57148; 0; 99999

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:

DRIVER DISABILITY:

ER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

S VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
ERMARKET:
ASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:

DEALER BUYOUT:

ACCOUNT BALANCE:
AL:

LEGAL TYPE:
LEMON LAW:

DEALER ADMINISTRATION:
RELEASE:

VEHICLE DESTINATION:
LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
CHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
EAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********ERC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

~~05702695~~
05701455

From: TAMMY HOLCOMB [illegible]
[illegible]
[illegible]
[illegible]
TAMPA, FL [illegible]

To: GM/SITEL (248)475-7314
c/o MSX International
1426 Pacific Drive

Auburn Hills, MI, 48326

Ref: PAR File

[redacted]

TRK # 7604 8375 4007

FedEx 2DAY

48326-MI-US

FI MTCA

DTW

FedEx.

FEB 14 2002

THU
AA
Deliver by:
07FEB02

PAR CASE INFORMATION

Problem ID: 05702696

CONTACT INFORMATION

Name:
Address:
LAKE RONKONKONA, NY
Phone:

VEHICLE INFORMATION

VIN: 1GNDT13W0Y2296758
MAKE: CHEVROLET
MODEL: UNKNOWN
YEAR: 2000
ODOMETER: 23,767

GM CONTACT INFORMATION

NAME:
COMPANY:
ADDRESS:
PHONE:
TYPE: Claimant

ACCOUNT/POLICY:
SERVICE DEALER: HUSTEDT CHEVROLET INC
CONTRACT: GEORGE SHEA, SVM
SELLING DEALER: HUSTEDT CHEVROLET INC
CONTRACT: N/A
PAYEE: No

PARTICULARS

CONTACT ID: C000005100769
DRIVER NAME:
DRIVER AGE: 0
DISABILATIES: unknown
ROAD SURFACE: Asphalt
ROAD CONDITION: Dry
PEOPLE IN VEHICLE: 1
INJURIES: No
OTHER VEHICLES INVOLVED: No
NUMBER INVOLVED:
DEFECTIVE COMPONENT: LOWER BALL JOINT
POLICE REPORT: No
INSURANCE: No
INSURNCE COMPANY:
INSURANCE COMPANY ADDR:
INSPECTION: Yes
INSP NAME: EAA
INSP DATE: 10/23/01
INSP MILES: 23,767
INSP DONE: VISUAL INSPECTION OF FRONT SUSPENSION
PROPERTY DAMAGE:
INCIDENT LOCATION: PARKING LOT
INCIDENT RESULT: REPAIR, 11/06/01, 1996 HRS
VEHICLE LOCATION: HUSTEDT CHEVROLET INC, 1616 MIDDLE COUNTRY RD, CENTERMACH, NY 11720-3534,
MAINTENANCE LOCATION: DEALERSHIP
OWNER DESC: CUST STATES SHE PULLED INTO PARKING LOT AND THE FRONT WHEEL CAME LOOSE. VEH THEN STRUCK A LIGHT POLE
MORE INFO: AVM INTIATED PAR FILE

BODY INJURY: No
COLLISION: No
PROPERTY DMG: No
NON COLL: Yes
DMB ABV K: No
NOTIFY NAME:
AGENT NAME:
STATUS: Accepted
REJECT REASON:
ROAD TEST: No
ROAD TEST DESC:
ROAD TEST RESULT:
COMP INSPECTED: FRONT SUSPENSION
INVEST SUMMARY: SEE HISTORY
AGENT PHONE:
INCIDENT DATE & TIME: 10/16/2001 12:00:00 AM

REIMBURSEMENT INFORMATION

ID:
PAYEE:
ADDRESS:
COMPANY:
AMOUNT:
ACCT_TYPE:
ACCT_NUM:
TAX_ID:
ISSUE_1099:
POLICY NUM:

PAR CASE INFORMATION

Problem ID: 05702695

DESCRIPTION:	
SOLUTION:	
COMPONENT CODE 1:	T01
COMPONENT DESCRIPTION 1:	lower ball joint
COMPLAINT CODE 1:	Other
COMPLAINT DESCRIPTION 1:	Product Allegation GM 1241
REPAIR ATTEMPTS 1:	0
COMPONENT CODE 2:	A04
COMPONENT DESCRIPTION 2:	lower ball joint
COMPLAINT CODE 2:	Other
COMPLAINT DESCRIPTION 2:	Possible Safety Concern
REPAIR ATTEMPTS 2:	0
COMPONENT CODE 3:	F18
COMPONENT DESCRIPTION 3:	lower ball joint
COMPLAINT CODE 3:	Other
COMPLAINT DESCRIPTION3:	Front Ball Joints/Kingpin
REPAIR ATTEMPTS 3:	0
COMPONENT CODE 4:	
COMPONENT DESCRIPTION 4:	
COMPLAINT CODE 4:	
COMPLAINT DESCRIPTION 4:	
REPAIR ATTEMPTS 4:	
COMPONENT CODE 5:	
COMPONENT DESCRIPTION 5:	
COMPLAINT CODE 5:	
COMPLAINT DESCRIPTION 5:	
REPAIR ATTEMPTS 5:	
COMPONENT CODE 6:	
COMPONENT DESCRIPTION 6:	
COMPLAINT CODE 6:	
COMPLAINT DESCRIPTION 6:	
REPAIR ATTEMPTS 6:	

PAR CASE INFORMATION

Problem ID: 05702695

10/17/2001 - 11:17:47 AM	The customer has been provided alternate transportation by the dealership. The vehicle is currently located at the dealer. Please review CAC file 05701455. Amber Clark/tampa/par/57148
10/18/2001 - 01:00:10 AM	CRM RECEIVED AND REVIEWED FILE FOR LOWER BALL JOINT ALLEGATION. CRM PRINTED CAC FILE AND VEH HISTORY. DON LATIMER/PAR/57748
10/18/2001 - 03:02:23 AM	CRM CONTACTED THE CUST AND CUST RELATED THE FOLLOWING DESCRIPTION OF THE INCIDENT: CUST STATES SHE HAD JUST PULLED INTO A PARKING LOT WHEN HER LEFT FRONT WHEEL CAME LOOSE CAUSING HER TO LOSE CONTROL OF HER VEH. CUST STATES THE NIGHT BEFORE THE INCIDE NT SHE NOTICED THAT WHEN SHE ACCELERATED FROM A STOP THERE WAS A KNOCKING SOUND COMING FROM THE LEFT FRONT. CUST GAVE HER PERMISSION TO INSPECT HER VEH. CUST SEEKS TO GET HER VEH REPAIRED. CRM ADVISED ADDITIONAL RESEARCH WOULD BE NEEDED AND SHE WOULD BE CONTACTED ASAP.
10/18/2001 - 01:47:38 AM	CRM LEFT VME FOR AVM, MR FRANK ANGELICO. DON LATIMER/PAR/57748
10/22/2001 - 09:16:44 AM	CRM CONTACTED THE DLR, HUSTEDT CHEVROLET INC, 1815 MIDDLE COUNTRY RD, CENTEREACH, NY 11720-6534, Phone: (631) 585-2700 , Fax: (631) 585-3414 , AND SPOKE W/MR GEORGE SHEA, SVM. MR SHEA AGREED TO INSPECT THE VEH AT HIS DLRSHIP. CRM FORWARDING REQUEST FOR INSPECTION. DON LATIMER/PAR/57748
10/23/2001 - 10:58:21 AM	CRM WAS CONTACTED BY THE AVM, MR FRANK ANGELICO ON 10-19-2001. AVM ADVISED HE HAD BRIEFLY LOOKED AT THE VEH AND BASED ON HIS FINDINGS HE WOULD LIKE TO HAVE AN INDEPENDENT INSPECTOR LOOK AT THE VEH. CRM ADVISED AN INDEPENDENT INSPECTOR WOULD BE REQUESTE D. DON LATIMER/PAR/57748
10/23/2001 - 03:59:39 AM	CRM RECEIVED A CALL FROM AVM, MR FRANK ANGELICO. CRM ADVISED MR ANGELICO OF THE REQUEST FOR AN INDEPENDENT INSPECTOR. DON LATIMER/PAR/57748
10/23/2001 - 11:15:40 AM	CRM REQUESTING EAA INSPECTION. DON LATIMER/PAR/57748
10/23/2001 - 12:00:31 AM	CRM CONTACTED THE AVM AND LEFT VME. CRM CONTACTED THE DLR AND SPOKE W/MR GEORGE SHEA, SVM, AND ADVISED HIM TO CANCEL THE REQUEST FOR THE INSPECTION. DON LATIMER/PAR 57748
10/24/2001 - 11:38:59 AM	CRM RECEIVED CALL FROM INSPECTOR. THE INSPECTOR ADVISED HE HAS RECEIVED THE REQUEST, HOWEVER, HE WILL NOT BE ABLE TO LOOK AT THE VEH UNTIL 10-30-2001. DON LATIMER/PAR/57748
10/29/2001 - 01:13:44 AM	CRM RECEIVED VME FROM CUST. CRM RETURNED CALL AND CUST HAD BEEN SEEKING A STATUS ON THE FILE, HOWEVER, CUST ADVISED SHE HAD JUST CONTACTED THE DLR AND HAD BEEN ADVISED THE INSPECTOR WAS LOOKING AT THE VEH. CUST ALSO REQUESTED ASST W/A TEN DOLLAR A DAY RENTAL CHARGE. CRM ADVISED THE INSPECTION WOULD NEED TO BE RECEIVED AND REVIEWED AND ANY ADDITIONAL COMP COULD BE ADDRESSED AT THE TIME A DECISION WAS MADE. DON LATIMER/PAR/57748
10/30/2001 - 01:07:33 AM	CUST CALLED SEEKING STATUS. CRM ADVISED THE INSPECTION REPORT HAS NOT BEEN RECEIVED. CRM ADVISED CUST SHE WOULD BE CONTACTED ASAP. DON LATIMER/PAR/57748
11/01/2001 - 03:26:31 AM	CUST CALLED SEEKING STATUS OF FILE. CRM ADVISED PRELIMINARY REPORT HAS BEEN RECEIVED AND ADDITIONAL RESEARCH IS REQUIRED. DON LATIMER/PAR/57748

PAR CASE INFORMATION

Problem ID: 05702695

11/05/2001 - 08:04:56 AM	CRM RECEIVED VME FROM INSPECTOR MAC ANENEY. CRM CONTACTED MR MAC ANENEY AND WAS ADVISED HE HAD RESOLVED HIS QUESTION AND HIS REPORT HAD BEEN SUBMITTED. DON LATIMER/PAR/57748
11/06/2001 - 02:00:49 AM	CRM RECEIVED MSG TO CONTACT MR FRANK ANGELICO, AVM, AT 631-865-8200. MR ANGELICO WAS SEEKING STATUS ON THE FILE. CRM ADVISED WE WERE AWAITING THE INSPECTOR'S REPORT. CRM DON LATIMER/PAR/TAMPA
11/06/2001 - 04:03:18 AM	CUST CALLED REQUESTING STATUS. CRM ADVISED THE INSPECTION REPORT HAS NOT BEEN RECEIVED. CRM AND CUST AGREED TO A CALLBACK FOR 11-8-2001 BETW 9:30 AM-1:30 PM ET. DON LATIMER/PAR/57748
11/07/2001 - 04:45:56 AM	CRM RECEIVED INSPECTION REPORT. DON LATIMER/PAR/57748
11/08/2001 - 10:38:42 AM	CRM REVIEWED INSPECTION REPORT W/TM G DEPALMA. IT WAS DETERMINED THERE WAS NO CLEAR INDICATION OF MFG'S CONCERN. BASED ON CUST DESCRIPTION OF THE INCIDENT REVIEW OF THE FACTS IN THE INSPECTION REPORT CRM WILL OFFER TO REPAIR THE CUST'S VEH. CRM CONT ACTED THE CUST AND CUST AGREED W/GM DECISION. DON LATIMER/PAR/57748
11/08/2001 - 10:51:50 AM	CRM CONTACTED THE DLR AND SPOKE W/MR GEORGE SHEA, SVM. CRM REQUESTED A COMPLETE RO. MR SHEA ADVISED HE WOULD FORWARD AN RO ASAP. DON LATIMER/PAR/57748
11/12/2001 - 02:28:29 AM	CUST STATES THAT SHE IS GETTING CMR VOICE MAIL. CUST SEEKS TO SPEAK W/ HIM IN REGARDS TO THIS CASE. CRM ADVISED THAT WOULD TAKE MSG AND GIVE IT TO HIM AND ONCE HE IS AVAIL HE WILL CONTACT HER BACK. VON KILPATRICK/PAR 57552
11/13/2001 - 08:23:20 AM	CRM CONTACTED THE MR SHEA, SVM, AND REQUESTED STATUS ON THE REPAIR EST. MR SHEA REQUESTED A COPY OF THE ORIG EST BE FAXED TO HIM. MR SHEA ADVISED HE WOULD HAVE A REVISED REPAIR EST COMPLETED THIS DATE. DON LATIMER/PAR/57748
11/13/2001 - 09:38:47 AM	CRM ATTEMPTED TO RETURN CALL TO CUST AT WORK. CRM WAS ADVISED THE CUST WOULD NOT BE IN UNTIL 9:30 AM ET.
11/15/2001 - 03:02:56 AM	CRM RECEIVED ESTIMATES. CRM AUTHORIZING REPAIRS FOR BODY AND MECHANICAL ACCORDING TO THE SUBMITTED ESTIMATES. DON LATIMER/PAR/57748
11/15/2001 - 03:11:56 AM	BUSINESS SUMMARY-1-CRM reviewed file. 2-CRM contacted customer and reviewed PAR facts. 3-CRM received customers authorization for inspection. 4-CRM initiated EAA inspection. 5-CRM reviewed inspection report. 6-CRM advising all concerned parties the t GM will repair vehicle. 7- customer accepts repairs 8-CRM closing file and forwarding to ESIS. Don Latimer/PAR/57748
11/16/2001 - 09:05:57 AM	**********FTT, SUE LE, TAMPA PAR 58509**********
11/28/2001 - 09:32:08 AM	1. CRM CALLED AND SPOKE WITH SVM, GEORGE SHEA 631-865-2700 / FAX 608-738-8015. GEORGE STATES HE WILL TRY TO HAVE VEH FINISH BY THIS WEEKEND. CRM ADVISED SVM TO FAX RO AND RECEIPTS WHEN COMPLETED. CUST IS IN A RENTAL.
12/06/2001 - 04:12:31 AM	CUST CALLED SEEKING REIMBURSEMENT FOR ONE MONTHS VEH PAYMENT AND INSURANCE. CRM REFERRED CUST TO GMAC. DON LATIMER/PAR/57748
12/13/2001 - 10:14:09 AM	2. GMWA Z1242 / DLR CODE 13-02145 / RO 105557 / $7433.32 / AUTH WGP / CRM ADVISED ELIZABETH WHEN AND HOW TO SUBMIT. CRM WILL CLOSE CASE
01/09/2002 - 10:16:05 AM	3. CRM RECEIVED A MESSAGE FROM SVM TO CALL CRM BACK. CRM CALLED BUT ELIZABETH IS NOT IN YET. GEORGE SHEA IS IN A MEETING. CRM WILL CALL BACK LATER

PAR CASE INFORMATION

Problem ID: 05702695

[illegible]/2003 - 12:05:11 AM

4. CRM CALLED AND SPOKE WITH LIZ. LIZ ADVISED THAT SHE IS TAKING THE REST OF THE TAX OUT (TOTAL OF $18.05). TOTAL AMOUNT FOR RENTAL IS $2072.80. CRM WILL RESUBMIT GMWA Z1242 FOR $7420.27. CRM ADVISED LIZ WHEN TO SUBMIT IT. CRM CLOSING CASE

LIGHT POLE

LINK

LINK

LINK

NOTE

DIST STATED LEFT LOWER BALL JOINT FAILED CAUSING VEH TO STRIKE POLE.

LEFT FRONT

DRY

PERSONAL

NONE

Customer Info

Caller Name: [redacted]

Customer Name: [redacted]

Phone: [redacted]

VIN: [redacted] 23000

Property Damage: Non-Collision [redacted]

Type of damage: [redacted]

Primary use of vehicle: PERSONAL

Weather condition: CLEAR/DRY

Incident (police) report: NONE

Comments: CUST STATED LEFT LOWER BALL JOINT FAILED CAUSING VEH TO STRIKE POLE.

Special equipment and features:

OK Save Cancel

CAC - CASE PRINT

Request Date: 10/18/2001

PROBLEM ID	08701466	VIN NUMBER	1GNDT13W0Y2296766
CONTACT NAME	I	MAKE	CHEVROLET
ADDRESS		MODEL	UNKNOWN BLAZER
CITY, STATE	LAKE RONKONKONA, NY	YEAR	2000
ZIP		VEHICLE MILAGE	23,000
COUNTRY	USA		
PHONE NUMBER			

COMPONENT CODE 1	T01
COMPONENT DESCRIPTION 1	lower ball joint
COMPLAINT CODE 1	Other
COMPLAINT DESCRIPTION 1	Product Allegation GM 1241
COMPONENT CODE 2	A04
COMPONENT DESCRIPTION 2	lower ball joint
COMPLAINT CODE 2	Other
COMPLAINT DESCRIPTION 2	Possible Safety Concern
COMPONENT CODE 3	F18
COMPONENT DESCRIPTION 3	lower ball joint
COMPLAINT CODE 3	Other
COMPLAINT DESCRIPTION3	Front Ball Joints/Kingpin
COMPONENT CODE 4	
COMPONENT DESCRIPTION 4	
COMPLAINT CODE 4	
COMPLAINT DESCRIPTION 4	
COMPONENT CODE 5	
COMPONENT DESCRIPTION 5	
COMPLAINT CODE 5	
COMPLAINT DESCRIPTION 5	
COMPONENT CODE 6	
COMPONENT DESCRIPTION 6	
COMPLAINT CODE 6	
COMPLAINT DESCRIPTION 6	

10/17/01 AVM, Frank Angelico called in initiate PAR. He states that the customer had an accident on 10/16/01. The cust called the dir and had the vehicle towed in. The dealer notified their Arear Service Manager and he called to initiate PAR. AVM states that the left lower ball joint. rivet sheared off lower control arm. he has looked at the vehicle and he states that he has looked at the rivets on the ball joint and that the metal is clean (not exposed to moisture and air causing it to discolor). Bumper is bent at the middle and the left side is creased inward. he states that too many things don't add up and that he would like PAR to investigate. used vehicle bought from the dealer. sold to the customer in July 2001. no injuries. estimate currently unknown. front differential case is cracked. nedds cv joint, lower control arm, tire, etc. minimum $1500-$2500. AVM can be reached at his voice mail 1-800-321-0184 box 8480. Seervice manager is George Shea. he can be reached at 631-585-2700 extension 50. number on file is the customer's work number. their home number is 631-981-6584. vehicle is currently located at the dealership. crm reviewed CAC for a file 06695543. CAC has not initiated PAR. scheduled call back time for today. crm advised the AVM that the CAC crm would be advised to discontinue working with the customer. PAR has taken ownership of the file. crm will call back the service manager to advise him of the PAR file number. crm advised AVM of 800# and extension for this crm. crm advised that a courtesy call would be made to the customer to advise that the AVM has initiated PAR for the customer that someone will be contacting them within 48 hours.

Amber Clark/tampa/par/57148

GM Vehicle Inquiry System
Summary

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W0Y2296756

VEHICLE INFORMATION

Merchandising Model:	CT10506 - 2000 4-DOOR 4WD BLAZER BASE	Warranty Start Date:	03/08/2000
BARS Order Type:	50 - FLEET		
Delivering Dealer:	H. B. CHEVROLET 105-20 QUEENS BLVD FOREST HILLS, NY 11375-4247 (718) 263-7700	Selling Source:	13 - CHEVROLET
		Site Code:	02199
		Business Associate Code:	111258

Service Contract:	Yes	Branded Title:	No	Warranty Block:	No	FDI Status:	Paid

CAMPAIGN ELIGIBILITY

Vehicle Has No Current Record Of Outstanding Campaigns.

APPLICABLE WARRANTIES

Description	Effective Date	Effective Odometer	End Date	End Odometer
36/36 BUMPER TO BUMPER - NO DEDUCTIBLE	03/08/2000	10 miles	3/8/2003	36010 miles
72/100 SHEET METAL RUST-THROUGH	03/08/2000	10 miles	3/8/2006	100010 miles
36/36 CORROSION	03/08/2000	10 miles	3/8/2003	36010 miles
96/80 PCM/CC EMISSIONS	03/08/2000	10 miles	3/8/2008	80010 miles
36/36 FEDERAL EMISSIONS	03/08/2000	10 miles	3/8/2003	36010 miles

CLAIM HISTORY

R.O. Date	R.O. Number	Type	Labor Operation	Odometer Reading
03/02/2000	296756	I	Z7000 - NEW VEHICLE INSPECTION ALLOWANCE	0 miles

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GM Vehicle Inquiry System
Claim History

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W0Y2296756

CLAIM HISTORY

Repair Order Date:	03/02/2000	Repair Order Number:	296756	Odometer Reading:	0 miles

Serviced By:	H. B. CHEVROLET 105-20 QUEENS BLVD FOREST HILLS, NY 11375-4247 (718) 263-7700	Selling Source:	13 - CHEVROLET
		Site Code:	02199
		Business Associate Code:	111258

Cycle Date	Cycle Nbr	Case	Type	Labor Operation	Part	Comments
03/07/2000	45	01	1	Z7000 - NEW VEHICLE INSPECTION ALLOWANCE	N/A	N

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GM Vehicle Inquiry System
Vehicle Build

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W0Y2296756

VEHICLE BUILD

Merchandising Model:	CT10506 - 2000 4-DOOR 4WD BLAZER BASE		
Gross Vehicle Weight Rating:	2429 kg (5356 lb)	Order Number:	CFGRD1
Build Date:	03/02/2000	Build Plant:	1Y206 - MORIANE ASSY. PLANT

- OPTION CODES

AJ1 - DEFOGGER	AU3 - POWER DOOR LOCK SYSTEM
AV5 - BUCKET SEATS W/VALUE CLOTH	AXP - MPV VIN IDENT POSITION
A31 - POWER WINDOWS	B30 - WHEELHOUSING & FLOOR CARPETING
B84 - BODY SIDE MOLDINGS	C1U - FLT--ENTERPRISE RAC
C25 - REAR WINDOW WIPER SYSTEM	C3T - GVW RATING - 5350 LBS
C49 - ELECTRIC REAR WINDOW DEFOGGER	C60 - AIR CONDITIONING-FRONT
DAY - ASSEMBLY PLANT MORAINE, OHIO	DH6 - LIGHTED LH & RH VISOR MIRRORS
DK2 - ELECTRIC OSRV MIRROR W/DEFOGGER	DK7 - CUSTOM INTERIOR ROOF CONSOLE
D55 - CONSOLE	EVA - EVAP EMISSION REQUIREMENT
FK2 - TORSION BAR SPRING ADJUSTMENT	FK3 - TORSION BAR SPRING ADJUSTMENT
FLT - FLEET PROCESSING OPTION	GU6 - REAR AXLE 3.42 RATIO
JC1 - FOUR WHEEL DISC BRAKES	K18 - ELECTRIC AIR INJECTION SYSTEM
K34 - WITH RESUME SPEED	K60 - 100 AMP DELCOTRON GENERATOR
L35 - VORTEC 4300 V6 SFI ENGINE	M30 - 4 SPEED ELECTRONIC AUTOMATIC
NC1 - CALIFORNIA EMISSIONS LEV	NG1 - CALIFORNIA/NEW YORK EMISSIONS
NP1 - ELECTRONIC SHIFT TRANSFER CASE	N33 - COMFORTILT STEERING WHEEL
N40 - POWER STEERING	N90 - 5-SPOKE ALUMINUM WHEELS
QBF - P235/70R 15 ALL SEAS BW TIRES	RSA - PASSIVE AUTO FRT SEAT RESTRAINT
TB4 - LIFTGATE	TFD - RETAIL AMENITY DELETE
T61 - DAYTIME RUNNING LIGHTS	UL0 - ATC, THEFT LOCK, SPEED COMP VOL

UP4 - STEREO RADIO PROVISIONS	U16 - TACHOMETER
U73 - FIXED MAST ANTENNA	U89 - WIRING HARNESS - 5 LEAD
VQ2 - FLEET ORDERING & ASSIST. PROG.	VXS - COMPLETE VEHICLE LABEL
VX7 - LONG TERM DAILY RENTAL PROGRAM	V54 - BLACK ROOF LUGGAGE CARRIER
V73 - STATEMENT OF VEHICLE CERT.-U.S.	XBF - STEEL BELT BLACKWALL
XB8 - CHEVROLET CONVERSION	YBP - REAR TIRES P235/70R 15
YD3 - BASE EQUIP FOR SCH GVW PL-FT AX	YD5 - BASE FRONT SPRING
YD6 - BASE REAR SPRING	ZBF - P235/70R 15 BW SPARE TIRE
ZM8 - REAR WINDOW DEFOGGER	ZQ3 - TILT WHEEL & SPEED CONTROL
ZQ6 - * CONTENT THEFT PROTECTION	ZY1 - SOLID PAINT
Z85 - INCREASED CAPACITY CHASSIS PACK	1SC - AUTO TONE CONTROL, CASSETTE
1SZ - GROUP SAVINGS IS RESTRICTED	12H - GRAPHITE SPORT CLOTH
121 - GRAPHITE INTERIOR TRIM	41U - BLACK
6WI - FRONT SUSPENSION	7WJ - FRONT SUSPENSION

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PRODUCT ALLEGATION RESOLUTION
PRELIMINARY INSPECTION
STEERING, SUSPENSION, AXLE, TIRE & WHEEL SYSTEMS

Division: CHEVROLET | Ref# 05702695 | VIN: 1GNDT13W0Y2296756

Claimant's Name (LAST, First)

Inspected By: JACK MAC ANENEY Organization: E.A.A.

Phone: 631) 754 x3728 Inspection Date: 10-29-01 Mileage at Inspection: 23757

I INSPECTION SUMMARY

Following the inspection, summarize the tests and observations: SEVERAL POINTS ARE INTERESTING. FIRST THERE IS LITTLE EVIDENCE OF ROAD SURFACE CONTACT WITH THE SUSPENSION, SECOND THE LEFT LOWER BALL JOINT MOUNTING SHOWS THAT THERE ARE TWO CLEAN SHEARED RIVETS AND TWO EMPTY RUSTED HOLES WHERE RIVETS SHOULD BE. SEE PICTURE NO.14. THIRD, THE LEFT FRONT BUMPER END RUB STRIP SHOWS ABRASION BUT IT WAS HARD ENOUGH TO BEND THE BUMPER SEE PICTURE NO.20. THE LARGE INNER LEFT FRONT TIRE CUTS APPEAR TO COME FROM THE UPPER CONTROL ARM, THERE IS LITTLE WHEEL DAMAGE, SEE PICTURE NO13AND 14

II INTERVIEW - VEHICLE HISTORY

Note to the Inspector: In questions 3-6 below, document only the information which relates to the incident/allegation.

1. *Name, address & phone number* of person being interviewed: LAKE RONKONKOMA, N.Y.

2. *Prior collision* damage (date, description, etc.) NONE

Repaired by:

3. Describe *existing vehicle conditions* at the time of the incident(e.g. warning lights "On", tires worn, etc.): NORMAL VEHICLE OPERATION.

4. *Repairs* outside of warranty (what, when, by whom?): NONE

5. Other *vehicle history* information (from person being interviewed or GM Warranty History)? NONE

6. *Last maintenance* (date, description, by whom?): RECENT PURCHASE FROM DEALER

If vehicle is a truck, or a car trailering cargo at the time of the incident, estimated total weight of cargo and trailer: ____ lbs. Load description: ____
Load location: ____

Describe the following:	Before the Incident	At the Beginning* and During the Incident
Steering (normal, other)	NORMAL	
Suspension (normal, other)	NORMAL	
Engine (normal, other)	NORMAL	
Transmission (normal, other)	NORMAL	
Electrical (normal, other)	NORMAL	
Warning lights/messages	NORMAL	
Unusual noises (from where?)	OWNER STATES THAT THE DAY BEFORE I HEARD NOISE FROM LEFT FRONT,LIKE THUMPING	
Smoke/steam (from where?)	NOTHING	
Other	NOTHING	

*The beginning of the incident is the start of the sequence which resulted in the incident.

Exact incident location: SHOPPING MALL ON SUNRISE HWAY IN PATCHOGUE, N.Y.

Surface where incident occurred:
Type: Concrete, Asphalt, Gravel, Crushed Rock, Dirt, or Other? A Describe: ____
Condition: Wet, Dry, Icy, or Other? D If other, specify: ____

Estimated vehicle speed 10 MPH Source of estimate: DRIVER

Incident occurred while: Accelerating, Turning, Braking, Coasting, Driving normally: T-TURNING

What did you do after you realized something was wrong? Describe: I BECAME VERY NERVOUS. I GOT OF THE CAR. PHONED MY JOB VERY QUICKLY. CALLED DEALER AND THEY PICKED THE CAR UP AND BROUGHT IT TO THE DEALER.

Any other comments or observations that have not been covered? NO.

IV VEHICLE INSPECTION

The vehicle inspection documents the physical evidence via color photographs and written observations. By recording your observations in the following section, you will be following a methodical inspection format.

Take color photographs of the following:

A. Exterior:
- Front
- Right side
- Rear
- VIN
- Left side

Comments: SEE PHOTO LOG. PICTURES 23 AND 24 ARE THE AREAS OF CONCERN

B. Corner assemblies, if applicable:
- Struts/shocks
- Springs
- Control arms
- Ball joints
- Steering knuckles
- Axle assemblies

Comments: THE ABOVE ASSEMBLIES ARE DAMAGED. THE SPRING AND SHOCK ARE OUT OF POSITION AND REQUIRE REMOVAL FOR VERIFICATION. THE KNUCKLE APPEARS TWISTED. PRELIMINARY PARTS LIST ATTACHED TO THIS REPORT

C. Interior:
- Instrument panel & odometer

Comments: NO INCIDENT RELATED DAMAGE.

D. Underhood:
- Engine compartment
- Steering linkage
- Steering
- Power steering lines/hoses, connections/clamps

Comments: START ENGINE. CHECK STEERING FLUID BOTH RUNNING AND OFF. FLUID AT FULL MARK. THE ENGINE ASSY. IS INTACT. LEFT SIDE TIE ROD END, KNUCKLE THERE ARE OTHER RELATED LEFT SIDE SUSPENSION PARTS LISTED ON THE ATTACHED PRELIMINARY PARTS LIST.

E. Underbody:
- Steering linkage
- Scrapes or impact damage on the following:
  - Fuel tank
  - Tires/Wheels
  - Etc.

Comments: NO FUEL TANK DAMAGE-LEFT FRONT TIRE IS DESTROYED, SEE TIRE SECTION: SPARE IS MISSING. THE FRONT CROSS MEMBER IS BENT AND THE COVER PLATE IS TORN. BODY SHOP ESTIMATE IS INCLUDED IN THIS REPORT

F. General Observations (Take photographs if applicable):

Anything on vehicle which is after-market: NOTHING

Anything on vehicle which is a modification: NOTHING

Anything on vehicle which is unusual, out-of-place, etc.: NOTHING

Other relevant information: I CONTACTED THE OWNER(DRIVER) FOR ADDITIONAL INFORMATION AS TO SITE, SPEED,AND PRE INCIDENT INFORMATION. THIS WAS NOT LISTED ON THE PAR REQUEST BUT I FELT THAT IT WAS NECESSARY.

V CHASSIS INSPECTION

Record your observations and measurements for the sections and questions which relate to the incident and items which were inspected. Write N/A for sections and questions unrelated to the customer allegation.

A. STEERING, SUSPENSION, WHEELS, AXLES:

Use the following table to identify what you did and what you found during the inspection. Identify the tests and test results for the applicable items. Describe anything relevant to the allegation that is not in normal working condition, does not function properly or is a non production part. Take appropriate photographs, and indicate whether or not a photograph was taken.

	OBSERVATIONS/TEST RESULTS
Steering system	STEERING OPERATES TO THE RIGHT NORMALLY. DAMAGE IS TO THE LEFT SIDE
Steering linkage	PRELIMINARY INVESTIGATION LISTS, TIE ROD END,CONTROL ARMS STABILIZER LINK, KNUCKLE
Gearrack and pinion	APPEARS TO BE INTACT
Steering column, ignition switch, intermediate shaft	APPEARS TO BE INTACT
Steering pump, drive, hoses, connections, flow, pressure	NO EVIDENCE OF LOW PRESSURE OR POWER STEERING FLUID LEAK
PS fluid level and condition	FULL AND CLEAR.
Steering knuckle	BENT
Suspension components - LF	HEAVY DAMAGE TO THE LEFT FRONT SUSPENSION AND CROSS MEMBER. PARTIAL PARTS LIST INCLUDED IN REPORT
RF	NOT INVOLVED
LR	NOT INVOLVED
RR	NOT INVOLVED
Rear axle assembly	NOT INVOLVED
Deformation to the frame	FRONT CROSS MEMBER IS DAMAGED FROM A FRONT IMPACT. SEE PICTURE NO.17

	OBSERVATIONS/TEST RESULTS
Describe evidence of axle/ suspension/ tire contact with frame, body or components	IT APPEARS THAT THE LEFT FRONT TIRE MADE CONTACT WITH THE LEFT FRONT UPPER CONTROL ARM-THERE ARE SEVERAL LARGE RIPS IN THE TIRE. PICTURE NO. 20
Describe contact of the under-carriage with the road surface (road, shoulder, curb, or grass)	THE FRONT CROSS MEMBER APPEARS TO HAVE BEEN DAMAGED BY CURB OR ROAD CONTACT, SEE PICTURE NO.17.
Electronic level control system/components	not equipped
Engine (normal, other)	normal-BATTERY LOW AT INSPECTION
Electrical (normal, other)	NORMAL
Warning lights/messages	NONE
Wheels (damage/impact marks)	LEFT FRONT WHEEL HAS SMALL ABRASION AND SCRAPE MARKS BUT NOT ENOUGH TO CAUSE THAT MUCH TIRE DAMAGE
Codes/numbers for failed components. Describe	NONE
Other	

B. ECM/PCM

Stored codes? (Y/N) Y If yes, list code number and description.

CODE	COUNTS	DESCRIPTION
0287	-	STOP LAMP CIRCUIT IN HISTORY

Other comments: FUSE #2-15AMP,OPEN CIG FUSE
MALFUNCTION LAMPS ARE OPERATING CORRECTLY.

C. ROAD-SENSING SUSPENSION/SPEED-SENSITIVE SUSPENSION (Fill out this section for suspension allegations on vehicles equipped with road-sensing suspensions/speed-sensitive suspensions)

1. Enter Diagnostics per the service manual and record any current or history codes. (Enter "none" if no codes are present)

CURRENT CODE	DESCRIPTION
	NOT EQUIPPED

HISTORY CODE	DESCRIPTION
	NOT EQUIPPED

Follow the procedures in the service manual to determine the cause of the stored codes which relate to the situation. State which procedures were followed, record the results of each test, and state the root cause of the code. Do not conduct tests which require disassembly of components. Follow the procedure in the General Guidelines for parts which need to be disassembled for evaluation.

2. Inspect the system wiring, connections, and components for damage. Indicate whether the damage was the result of the incident. Comments: NOT INCIDENT RELATED

3. Other comments:

D. TIRE INSPECTION

1. IDENTIFICATION:

	TIRE BRAND (Goodyear)	TIRE TYPE (Eagle GA)	TIRE SIZE (P205/70R16)	PRESSURE (psi)	AVE. TREAD DEPTH 32nds of inch
LF	UNI-ROYAL	LAREDO	P235/70R15	DESTROYED	9/32
RF	"	"	"		8/32
LR	"	"	"		9/32
RR	"	"	"		8/32

Describe any damage to tires, such as scrapes, marks due to impact, cuts, tread separation, flat spots etc.

LF CUTS IN TWO PLACES-APPEARS TO BE CAUSED BY CONTROL ARM

RF

LR

RR

2. TIRE PLACARD DATA:
Record the following data: (located on driver's door edge or inside the deckid)

	SIZE	PRESSURE (psi)	PRESSURE AT MAXIMUM LOAD(psi)
TIRES	P235/70R15		
SPARE TIRE	MISSING		

VI SITE INSPECTION

Make a diagram of the incident scene showing where the vehicle started, the path of the vehicle, and all points of impact. Make measurements and record on the diagram. Inspect the scene for tire marks. Take color pictures and enter comments below. If significant other vehicle or property damage occurred, take pictures of the damage, if possible, and make notes as necessary.

Comments: INFORMATION SUPPLIED AS TO LOCATION.

PRELIMINARY PAR INSPECTION
FIELD PHOTOGRAPHIC NOTES

Division: CHEVROLET	File: 05702695	VIN: 1GNDT13WOY2296756
Claimant's Name (LAST, First)		

Inspected By: JOHN MAC ANENEY Organization: R.A.A.

Phone: (631) 754-3728 x____ Inspection Date: 10 /29 / 01 Mileage at Inspection: 23757

Roll Number ONE

Neg.#	Description
0	NO PICTURE
1.	FILE NO. AND VEHICLE IDENT. NO.
2.	BACK UP PICTURE OF ABOVE
3.	MFG. LABEL
4.	TRIED TO GET MILAGE-SEE LATER PICTURE
5.	LEFT FRONT WHEEL-TOP LAID IN.
6.	LEFT REAR 1/4 AND WHEEL-NO DAMAGE
7.	REAR VIEW-NO DAMAGE
8.	RIGHT REAR-NO DAMAGE
9.	RIGHT FRONT-NO DAMAGE
10.	POOR PICTURE OF LEFT FRONT FENDER BINDING INTO LEFT FRONT DOOR
11.	RIGHT FRONT FENDER TO RIGHT FRONT DOOR-PROPER CLEARENCE-SEE #10
12.	LEFT FRONT WHEEL CONTACT AREA WITH LEFT FENDER
13.	LEFT FRONT TIRE CUTS OR RIPS POSSIBLY CAUSED BY CONTROL ARM
14.	LEFT BALL JOINT MOUNTING-TWO RIVETS SHEARED OFF AND TWO MISSING
15.	LEFT AXLE PULLED OUT OF DIFFERENTIAL
16.	CRACKED DIFFERENTIAL ASSY.
17.	FRONT CHASSIS RAIL DAMAGED AND BENT
18.	LEFT SIDE UPPER CONTROLARM BUMPER BROKEN OFF
19.	LEFT SIDE UPPER CONTROL ARM BENT
20.	LEFT FRONT TIRE RIPS AND POSSIBLE CONTROL
21.	DASH PANEL IGN ON-ODOMETER 23757 MI.
22.	POWER STEERING FLUID AT FULL MARK
23.	LEFT FRONT BUMPER DAMAGE
24.	FULL VIEW OF DAMAGE AREA.
26.	
25.	
27.	
28.	
29.	
30.	
31.	
32.	
33.	
34.	
35.	
36.	
37.	

PHOTO.DOC

Outer Tie Rod End 12471300 — 7308

L/ Lower Control Arm 15018807 — 15433
DS- 22150108 — 6343

L/ Hub Bearing 7470607 — 4520

L/ Upper Arm 15661507 — 22264

15024511-555 Stibilizer Link — Stabilizer May Be Bent 15010348 15800

Leave Poss

26059675 3460 /C/V Boot Inner Steering Knuckle 20500 Open CV Dammy 26059677 — 351.58

15704493 Ft. Diff Housing 12471599 — 44792

2- 26022006 — 7425

1- 12471587 1753
1- 12471585 lbc 988
1- 3974898 668
1- 14031587 495
1- 9439877 4520
1- 9417714 4x4 3450 Acuation out of Shape - Leak -

1 — P235 70 15 Uniroyal Channels

History 0281 Stop Lamp

Fender Dammage
Ft. Crossmember Bent

CHEVROLET HUGHEST CHEVROLET INC. GEO
1815 Middle Country Road
Centereach, New York 11720
(516) 585-2700
N.Y.S. REPAIR SHOP NO. R 152 0016
FAX PHONE # (516) 585-3414

FAX COVER SHEET

DATE 11/9/01

TO: Don Latimer

THIS IS PAGE ONE OF 5 PAGES-INCLUDING THIS COVER SHEET.

FROM: George Shea

MESSAGE: File # 05702695
Please contact George Shea at
631-585-2700 ex 50 in ref to the
Repairs on the Blazer. Please FAX BACK
the body ESTIMATE WE LOST OURS OUT OF OUR
DATA Base @ 631-738-8015

**** THANK YOU AND HAVE A NICE DAY ****

10/24/2001 at 10:21 AM
69356

Job Number:

Black Blazer

"WE'RE NOT JUST CHEVY'S"
1815 MIDDLE COUNTRY RD
CENTEREACH, NY

PRELIMINARY ESTIMATE

Written by: RICHIE WALTERS 4
Adjuster:

Insured:	HOSTEDT SERVICE	Claim #	
Owner:		Policy #	
Address:		Deductible:	
		Date of Loss:	
Day:		Type of Loss:	
Evening:		Point of Impact:	
Inspect Location:			
Insurance Company:		Days to Repair	

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:
VIN: 1GNDT13W0Y2296756 Lic: Prod Date: Odometer:

Air Conditioning	Intermittent Wipers	Dual Mirrors
Privacy Glass	Luggage/Roof Rack	Clear Coat Paint
Power Steering	Power Brakes	Anti-Lock Brakes (4)
Driver Airbag	Passenger Airbag	4 Wheel Disc Brakes
Cloth Seats	Split Bench Seats	Rear Step Bumper
Aluminum Wheels		

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
1		FRONT BUMPER				
2		O/H front bumper			1.6	
3		Repl Bumper chrome w/decor package	1	274.00	Incl.	

10/24/2001 at 10:21 AM Job Number:
69356

PRELIMINARY ESTIMATE

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
4	Repl	Impact strip	1	24.40	Incl.	
5*	Repl	Deflector w/decor pkg	1	300.00	Incl.	0.0
6		FENDER				
7*	Rpr	LT Fender w/o high wider			3.0	2.2
8		Add for Clear Coat				0.9
9		FRONT DOOR				
10*	Rpr	RT Door shell			0.5	2.2
11		Overlap Major Non-Adj. Panel				-0.2
12		Add for Clear Coat				0.4
13	R&I	LT Mirror w/o electric mirror			0.3	
14	R&I	LT Lower molding Blazer			0.3	
15	R&I	LT Handle			0.2	
		Subtotals ==>		598.40	5.9	5.5

Parts		598.40
Body Labor	5.9 hrs @ $ 40.00/hr	236.00
Paint Labor	5.5 hrs @ $ 40.00/hr	220.00
Paint Supplies	5.5 hrs @ $ 17.00/hr	93.50
SUBTOTAL		$ 1147.90
Sales Tax	$ 1147.90 @ 8.5000%	97.57
GRAND TOTAL		$ 1245.47
ADJUSTMENTS:		
Deductible		0.00
CUSTOMER PAY		$ 0.00
INSURANCE PAY		$ 1245.47

11/09/2001 at 08:20 AM Job Number:
69356

HUSTEDT CHEVY INC.
License #:R-1520016
"WE'RE NOT JUST CHEVY'S"
1815 MIDDLE COUNTRY RD
CENTEREACH, NY 11720
(631)585-2700x56 Fax: (631)738-8015

PRELIMINARY ESTIMATE

Written by: RICHIE WALTERS #
Adjuster:

Insured: Claim #
Owner: Policy #
Address: Deductible:
Date of Loss:
Day: Type of Loss:
Evening: Point of Impact:

Inspect
Location:

Insurance
Company: Days to Repair

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:
VIN: 1GNDT13W0Y2296756 Lic: Prod Date: Odometer:

Air Conditioning	Intermittent Wipers	Dual Mirrors
Privacy Glass	Luggage/Roof Rack	Clear Coat Paint
Power Steering	Power Brakes	Anti-Lock Brakes (4)
Driver Airbag	Passenger Airbag	4 Wheel Disc Brakes
Cloth Seats	Split Bench Seats	Rear Step Bumper
Aluminum Wheels		

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
1		FRAME				
2*	Rpr	Frame assy 4WD			8.0	
3#		BENCH SET &MEASURE	1		3.0	

11/09/2001 at 08:20 AM
69356

Job Number:

PRELIMINARY ESTIMATE

2000 CHEV BLAZER 4X4 LS 6-4.3L-TI 4D UTV Int:

NO.	OP.	DESCRIPTION	QTY EXT. PRICE	LABOR	PAINT
		Subtotals ==>	0.00	11.0	0.0

Parts		0.00
Body Labor	11.0 hrs @ $ 45.00/hr	495.00
SUBTOTAL		*495.00
Sales Tax	$ 495.00 @ 8.50000%	42.08
GRAND TOTAL		$ 537.08
ADJUSTMENTS:		
Deductible		0.00
CUSTOMER PAY		$ 0.00
INSURANCE PAY		$ 537.08

Estimate based on MOTOR CRASH ESTIMATING GUIDE. Unless otherwise noted all items are derived from the Guide ENLIGHT Database Date 8/2001 and the parts selected are OEM-parts manufactured by the vehicles Original Equipment Manufacturer. Asterisk (*) or Double Asterisk (**) indicates that the parts and/or labor information provided by MOTOR may have been modified or may have come from an alternate data source. Non-Original Equipment Manufacturer aftermarket parts are described as AM or Qual Repl Parts. Used parts are described as LKQ, Qual Recy Parts, RCT, or USED. Reconditioned parts are described as Recon. Recored parts are described as Recore. NAGS Part Numbers and Prices are provided from National Auto Glass Specifications, Inc. Pound sign (#) items indicate manual entries.

Pathways - A product of CCC Information Services Inc.

original

366711 105557

WARRANTY

HUSTEDT
CHEVROLET, INC.
1515 Middle Country Road
Centereach, New York 11720
(516) 585-5700

LK RONKONKOMA, NY
HOME:

PAGE 1

SERVICE ADVISOR: SO MATT BRACHIO

BK	00	CHEVROLET BLAZER	1GNDT13W0X2296756		23757/23757	
30OCT2001			17:00 16OCT01	80.00	CASH	08NOV2001

OPTIONS: STK:2385C DLR:02145

12:38 16OCT01 15:08 08NOV01

ATTN CHECK THOR AND BODY	QUTY	NET	TOTAL
CHECK			
99 W 0.00		0.00	0.00
SIDE ARM			
1 14029587 SEAL	6.95	4.16	4.16
1 12471599 CARRIER	447.92	313.54	313.54
1 12471595 BOOSTER	9.88	8.30	8.30
STEERING KNUCKLE			
1 18060557 KNUCKLE	208.00	172.20	172.20
1 15018807 ARM	184.33	129.64	129.64
11 W 1.10		85.80	85.80
11 W 0.60		46.80	46.80
1 15024511 LINK	5.55	4.66	4.66
SUB BRACKET			
1 19661507 ARM KIT,F	222.64	187.01	187.01
11 W 1.20		93.60	93.60
11 W 0.40		31.20	31.20
1 26055052 SHAFT KIT	473.56	331.49	331.49

SERVICE DEPT. HOURS 7:30 AM TO 6:00 PM MONDAY THRU FRIDAY OPEN SATURDAY 8:00 AM TO 4:00 PM BODY SHOP ON PREMISES GENUINE GM PARTS	WE AT HUSTEDT CHEVROLET THANK YOU FOR YOUR PATRONAGE	STATEMENT OF DISCLAIMER The factory warranty certificate of the manufacturer shall control in the case of any conflict. No warranty, either express or implied, and no implied warranty of merchantability or fitness for a particular purpose, shall be created or established by this document.	LABOR AMOUNT PARTS AMOUNT GAS, OIL, LUBE SUBLET AMOUNT MISC. CHARGES TOTAL CHARGES LESS INSURANCE SALES TAX PLEASE PAY THIS AMOUNT

CUSTOMER SIGNATURE

WARRANTY COPY

estimate

356711 105857 *WARRANTY*

atimen

HUSTEDT
CHEVROLET, INC.
1815 Middle Country Road
Centereach, New York 11720
(516) 585-2700

LK RONKONKOMA, NY PAGE 2
HOME:

SERVICE ADVISOR: 80 MATT BRACHO

[redacted]

BK	00	CHEVROLET BLAZER	[redacted]		21757/21757	
30JUL2001			17:00 16OCT01		80.00	CASH 08NOV2001

OPTIONS STK:2385C DLR:02145

12:28 16OCT01 15:08 08NOV01

LINE OPCODE	DESCRIPTION	QTY	PRT	TOTAL
1 9439878	BRACKET	45.50	31.85	31.85

125003 175003 PARTS

[redacted]

A C/E HEAD BOLTS AT L/F WHEEL FELL OFF(CONTAMINATED) NEEDS DRIVING

FL RELATED TO LINE "A"

1 15934547	BOLT A9	11.70	9.83	9.83
1 12471301	BOD KIT	83.23	69.92	69.92

18969 26584 TOTAL

[redacted]

CONT. SALE, & CONP TOTALS 173424 193567 0

SERVICE DEPT. HOURS 7:30 AM TO 8:00 PM MONDAY THRU FRIDAY OPEN SATURDAY 8:00 AM TO 4:00 PM BODY SHOP ON PREMISES GENUINE GM PARTS	WE AT HUSTEDT CHEVROLET THANK YOU FOR YOUR PATRONAGE	STATEMENT OF DISCLAIMER [illegible] CUSTOMER SIGNATURE	LABOR AMOUNT PARTS AMOUNT GAS, OIL, LUBE SUBLET AMOUNT MISC. CHARGES TOTAL CHARGES LESS INSURANCE SALES TAX PLEASE PAY THIS AMOUNT	865.80 2015.87 0.00 54.00 0.00 2935.67 0.00 0.00 [redacted]

WARRANTY COPY

GENERAL MOTORS CORPORATION
DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: DETROIT , MI
HOME PHONE:

CASE NUMBER:	05765482	VIN:	1GKCT18WXXK506781
		MODEL YEAR:	1999
DATE OPENED:	2001-10-29	SERIES:	UNKNOWN
DATE CLOSED:	2001-11-10	MILEAGE:	39000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	ART MORAN PONTIAC-GMC TRUCK
BRC PARENT:		DEALER ADDRESS:	29300 TELEGRAPH RD,,SOUTHFIELD,MI,48034,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin	Broken
0 REPAIR ATTEMPT(S)	DRIVER SIDE BALL JOINT BROKE IN HALF
S01 Service General	Other
0 REPAIR ATTEMPT(S)	WANTED TO KNOW DECISION ON REPAIR

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
Probe to identify failed item/component
Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.htm]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.htm]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link
RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.htm]]
BALL JOINT ON FRONT DRIVER'S SIDE BROKE IN HALF, TIRE CAME AWAY FROM THE BALL JOINT
**********WORK HISTORY**********

CUST STATES THAT WHILE COMING TO A SLOW STOP AT TRAIN CRSSING, THERE WAS A LOUD NOISE AND TIRE CAME AWAY FROM THE BALL JOINT. DLR DIAGNOSED THAT BALL JOINT BROKE IN HALF. CUST SEEKS 100% COST ASSISTANCE. CUST STATES ENGINEER FROM GM ADVISED HIM THAT THIS SHOULD NOT HAVE HAPPENED AND THE UNIVERSAL CUP IS LUBED AND THIS IS A MAJOR CONCERNS W/GM JIMMYS, BLAZERS, AND BRAVADOS. ENGINEER ADV THERE IS A RECALL. CRM RESEARCHED AND FOUND A RECALL ON THE 96 & 97 BLAZERS, JIMMYS & BRAVADOS. CRM CALLED DLR AND SPOKE W/MR. FARRIS, WHO STATES CUST HAS NOT COME IN FOR MAINTENANCE SINCE VEH PURCHASED AND HE WILL NOT GIVE COST ASSISTANCE ON REPAIR. CRM WILL CONTACT AVM FOR ASSISTANCE. CRM ADV I WOULD RESEARCH FURTHER AND WILL CALL HIM BACK AT

(WIFE, ALITA LYNN). CRM WILL CONTACT CUST TUESDAY, 4:00 P.M. CUST SATISFIED. SUSAN PAGE/TAMPA; 0; 99999
2001-10-29

RECALL NUMBER FOR 96 & 97 JIMMY IS CAMPAIGN # 01048A. CRM CALLED AND LEFT URGENT VM FOR DOUGLAS CAMPBELL, MODE 630092, MAILBOX #8240. CRM SET CALL BACK TO CUST FOR TUESDAY, 10/30 @ 4:00 P.M. SVC MGR, MR. FARRIS DENIED ALL COST ASSISTANCE BECAUSE DLR HAS NOT SEEN VEH SINCE PURCHASE. SUSAN PAGE/TAMPA; 0; 373217837
2001-10-30

CUST CALLED IN, CUST REQUESTED A CALL BACK FROM CRM SUSAN PAGE. CUST STATES SHE KNOWNS WHAT THIS IS CONCERNING. CUST STATES HE CAN BE REACH AT CRM ADVISE WILL FORWARD INFORMATION. DAVID ESPINOSA/CARS/TAMPA; 0; 373300892
2001-10-30

Cust states that he needs information asap. Cust states that he was advised by the previous CRM they would recieve a call back in one day.

CRM advised there is a set call back time of 4:00pm by the previous CRM. CRM advised that it was agreed to bythe cust yesterday.

Cure states he would wait for a response.

Corey Smith/CAC/Tampa/Level One Empowered; 0; 373303700
2001-10-30

CRM RECEIVED VM FROM DOUG CAMPBELL, AVM. ALL COST ASSISTANCE HAS BEEN DENIED DUE TO LACK OF MAINTENACE. MR. CAMPBELL STATES HE REVIEWED THE REPAIR AND FOUND THE CUP TO BE BONE DRY AND THE VEH IS NOT SELF LUBRICATING AS CUST WAS ADV AND CUST DID NOT HAVE BASIC MAINTENANCE PERFORMED ON VEH AS DIRECTED IN THE OWNERS MANUAL AND THAT IS WHY THE DAMAGE WAS SO SEVERE. AVM STATES HE WILL NOT AUTORIZE ANY GOODWILL AS THIS IS CAUSED BY CUST NEGLECT. CRM TRIED TO CALL CUST AT BOTH NUMBERS TO ADV OF DENIAL. NO ANSWER. CRM WILL CONTINUE TO TRY TO REACH CUST AS AGREED UPON, A 4:00 CALL BACK. PAGES/TAMPA; 0; 373317859
2001-11-01

CRM CALLED AND SPOKE W/WIFE, ALITA LYNN AT WORK NUMBER GIVEN BY HUSBAND. CRM ADV MRS. HUMES THAT WE COULD NOT ASSIST W/THE REPAIR OF VEH DUE TO LACK OF MAINTENANCE. CUST THANKED CRM. CRM CLOSING FILE SATISIFED AS UNDERSTOOD. SUSAN PAGE/TAMPA; 0; 373489230
2001-11-09

CUST STATES WANTS GM TO COVER BALL JOINT SEPERATION PROBLEM CUST SEEKS REIMBURSEMENT FOR BALL JOINT SEPARATION, CRM ADVISE CUST WE MUST STAND BY DEALER AND AVM'S POSITION ASKED CUST IF THERE WAS ANYTHING ELSE WE COULD DO,, ADVISED HIM TO FOLLOW MAINTENANCE AND LUBRICATION SCHEDULES , AND TO PLEASE CONTINUE TO CONSIDER US ON FUTURE VEHICLE PURCJASES , CUST SAID HE WILL STAY WITH GM JOE MARTINEZ/CRM/TAMPA; 0; 374195008

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:

INJURIES:

ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED:
INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: ETHICSVILLE ,
MI
HOME PHONE:

CASE NUMBER:	05869844	VIN:	1GNDT13W7Y2161192
		MODEL YEAR:	2000
DATE OPENED:	2001-11-14	SERIES:	UNKNOWN
DATE CLOSED:	2001-11-14	MILEAGE:	33000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	No	DEALER NAME:	GRAFF CHEVROLET INC
BRC PARENT:		DEALER ADDRESS:	3636 E WILDER RD,,BAY CITY,MI,48706,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin	Other
4 REPAIR ATTEMPT(S)	BROKEN
T04 General Information	Other
0 REPAIR ATTEMPT(S)	LEASE TERMINATION

Vehicle operation or design

INSTRUCTIONS TO CRM:
Pinpoint / understand concern
* Determine Customers expectation
* Validate feature is on vehicle
* Review owners manual with owner - [[Owners Manuals RUN C:\Progra-1\Plus!\Micros-1\Iexplore.exe http:\\carsweb\webknowledge]]. Click the Product Center Tab
* Review specific solutions [[SPECIFIC SOLUTIONS RUN C:\Progra-1\Plus!\Micros-1\Iexplore.exe http://carsweb/common/ProductCenter/GeneralInfo/content/CWC/SolutionsByComponentCode_Corepoint.htm]]
* Validate with dealership if necessary
* Coordinate with dealership to compare with another vehicle if necessary
* Schedule a follow up if issue is not resolved during call
Vehicle operation or design
**********WORK HISTORY**********

CUST STATES THAT HE LEASED VEH FROM GRAFF CHEV. CUST STATES THAT THE HAS A CONCERN WITH THE BALL JOINTS ON THE VEH. CUST STATES THAT THE VEH IS CURRENTLY AT THE DLR BEING REPAIRED. CUST STATES THAT THE BALL JOINT ON THE FRONT OF TH EVEH BRKE WHILE HEWAS DRIVING THAT THE TIRE FELL OFF OF THE VHE AND HE WAS ALMOST IN AN ACCIDENT. CUST STATES THAT THE VEH HAS BEEN INTO THE DLR 3 TIMES IN THE PAST FOR THIS CONCERN. CUST STATES THAT HE IS NOT CONFIDENT IN THE VEH AND THAT HE DOES NOT WANT THE KEEP THE VEH. CUST STATES THAT HE WANTS TO BE BOUGHT OUT OF HIS LEASE.
CRM ADVISED CUST THAT CHEV FIRST PRIORITY IS TO REPAIR THE VEH UNDER THE TERMS OF THE WARRENTY THAT THERE IS NO GAURENTEE OF REPURCHASE OR REPLACEMENT.
CRM CONTACTED GRAFF CHEV IN BAY CITY. CRM SPOKE WITH THE SERVICE DIRECTOR MIKE. HE STATES THAT THE CUST HAS CAME IN 2 TIMES IN THE PAST FOR THE BALL JOINTS. HE STATES THAT THE CUST CAME IN WITH A SQUEAK IN THE BALL JOINTS THAT THAT CUST HAD THE UPEER AND LOWER BALL JOINTS LUBRICATED.....; 0; 374612570
2001-11-14

..... (CONTIUNUED) THAT THE BALL JOINTS WERE NEVER REPLACED. HE STATES THAT THIS IS THE FIRST TIME THAT THE PART REQUIRED REPLACEMENT THAT THERE IS NOTHING THAT WOULD QUALIFY CUST FOR REPURCHASE. CUST VEH IS A LEASE VEH AS WELL REPURCHASE IS NOT

AN OPTION . CRM ADVISED CUST THAT CHEV WOULD NOT BUY OUT HIS LEASE THAT THE VEH IS BEING REPIARED WILL BE REPAIRED UNDER TERMS OF WARRENTY THAT IF HE WISHES TO TERMINATE HIS LEASE THAT HE WOULD NEED TO CONTACT GMAC AND THAT THEY CAN ADVISE HIM OF THE PENALTIES FOR EARLY TERMINATION. CUST STATS THAT HE WILL CONTACT ATTORNEY AND DISCONNECTED.
CRM IS CLOSING FILE DISSATISFIED SENDING BBB LETTER. MARCIE MEAD/PDX/CAC; 0; 374613416
2001-11-14

CRM HAS TM KATHY MOORE (WF) APPROVAL TO SEND BBB LETTER. MARCIE MEAD/PDX/CAC; 0;
374613451
2001-11-14

GL HAS REVIEWED FILE AND APPROVED LETTER MN0001. KATIE DESMOND/GL/PDX; 0; 374621994

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:

DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

05869844

November 14, 2001

Ethicsville, MI

Request: C05869844

Dear

We are sorry you continue to be dissatisfied with the decision made concerning your 2000 Chevrolet Blazer. We know you are sincere in the position you have taken, and hope you also understand our point of view.

General Motors, through the Better Business Bureau (BBB) Autoline, provides a service of mediation/arbitration for its customers regarding the new vehicle warranty. General Motors has committed itself to accept and abide by decisions made in this arbitration process.

The BBB Autoline is available to you at no cost. In certain circumstances, you may be required to use the BBB Autoline prior to participation in other resolution methods. This program is discussed in your vehicle's "Warranty and Owner Assistance Information Booklet."

Please call the Better Business Bureau at 1-800-955-5100 to utilize this service. They will provide you with full details of the program.

Thank you for the opportunity to review this matter.

Sincerely,

Marcie Mead
Customer Relationship Manager

MN0001-P/kld

GENERAL MOTORS CORPORATION
DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: URBANDALE ,
IA
HOME PHONE:

CASE NUMBER:	06064809	VIN:	1GKDT13W2W2569965
		MODEL YEAR:	1998
DATE OPENED:	2001-12-20	SERIES:	UNKNOWN
DATE CLOSED:	2002-02-02	MILEAGE:	35620
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	No	DEALER NAME:	HOLMES OLDSMOBILE-GMC TRUCK INC.
BRC PARENT:		DEALER ADDRESS:	11206 HICKMAN RD,,CLIVE,IA,50325,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin 1 REPAIR ATTEMPT(S)	Broken UPPER BALL JOINTS
A01 Open Campaign 1 REPAIR ATTEMPT(S)	Customer Satisfaction serv mgr said we have 01048
S01 Service General 0 REPAIR ATTEMPT(S)	Customer Satisfaction TOWING $45.50
[illegible] Reimbursement Requested [illegible] REPAIR ATTEMPT(S)	Customer Satisfaction $45.50
S86 CAC Resolved With Goodwill 0 REPAIR ATTEMPT(S)	CAC Resolved With Goodwil REIMBURSEMENT
A15 Special Policy 0 REPAIR ATTEMPT(S)	Special Policy 01049 ser mgr said we have

Vehicle operation or design

INSTRUCTIONS TO CRM:
*Pinpoint / understand concern
* Determine Customers expectation
* Validate feature is on vehicle
* Review owners manual with owner - [[Owners Manuals RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http:\\carsweb\webknowledge]]. Click the Product Center Tab
* Review specific solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/common/ProductCenter/GeneralInfo/content/CWC/SolutionsByComponentCode_Corepoint.htm]]
* Validate with dealership if necessary
* Coordinate with dealership to compare with another vehicle if necessary
* Schedule a follow up if issue is not resolved during call
Vehicle operation or design

**********WORK HISTORY**********

[illegible]ST STS DAUGHTER WAS DRIVING VEH RIGHT FRONT WHEEL FELL INWRAD VEH HAD TO BE TOWED TO DLR WHERE ALL SERVICING IS DONE HOLMES GMC. CUST STS SVC MGR RANDY DID GOODWILL (RO# 99335) UPPER BALL JOINTS WHICH WAS THE FAILURE OF THE VEH BEING TOWED TO DLR 1 WASBROKEN AND 1 WAS WORN. (DLR STS THERE IS A SP# 01049 & CAMPAIGN #01048A ON THE UPPER BALL JOINTS FOR ONLY 1996-1997 VEHS SAME PART NUMBER) CUST STS ALSO HAD LOWER BALL JOINTS RPLC'D ALONG WITH OTHER ITEMS SUCH AS LEFT FRT CV BOOT,SERPENTINE BELT,RADIATOR CAP,ALIGNMENT CUST PAID OUT OF

POCKET $749.45 DLR GOODWILL $226.06. CUST SEEKING REIM FOR TOWING $45.50. CRM ADVISED CUST ATER SPEAKING TO SVC MGR RANDY HE STS HE OVER LOOKED THE TOWING COST HE WOULD HAVE COV'D T AS WELL SINCE SVC MGR RANDY DID TAKE CARE OF CAUSE OF WHY VEH WAS AT DLR AND VEH WAS ED IN. DLR FEELS CUST SHOULD BE REIM FOR TOWING. DLR STS CUST IS SECOND OWNER OF VEH DOES HAVE VEH REGUALRLY MAINTAINED W/ DLR. CRM ADVISED CUST SUBMITT DOCS FOR POSSIBLE REIM FOR TOWING $45.50. MISTY KLINEFEL; 0; 377710455
2001-12-24

CRM REVIEWING FILE...WILL FORWARD BACK TO ORIGINAL CRM.....MARYANN TREVINO/CAC/ATX; 0; 378060346
2002-01-07

CRM REVIEWED FILE FORWARDED TO MISTY FLINEFELTER. KAREN BODE/ATX; 0; 379258771
2002-01-08

WHITE MAIL CORRESPONDENCE RECEIVED

CRM ATTACHING DOCS TO THIS REQ. #06064809 & FORWARDING BACK TO PREVIOUS CRM FOR FURTHER PROCESSING +++++++++++ CRM JOANIE MARTIN/CARS TAMPA/CORR TEAM +++++++++++++; 0; 379360821
2002-01-18

TM REVIEWING FILE.....CUST SEEKING REIMBURSEMENT FOR TOWING CHARGES OVERLOOKED BY DLR. CRM ADVISES THAT DLR ALREADY GOODWILLED THE REPAIRS THAT CORESPOND TO THE SPEC POL & CAMPAIGN LISTED IN PREV NOTES. DLR ADVISES THAT HE WOULD HAVE COVERED THAT ALSO BUT JUST MISSED IT. SEEKS REIMB FROM CAC AS DOCS WERE SENT TO US. VIN PROFILE DOES SUPPORT REPAIR INFO.....TM APROVES GOOSWILL REIMB $45.50 TO MAKE WHOLE SITATION RIGHT AND TO MAINTAIN CUST LOYALTY AND SATISFACTION. WILL HACE CRM FINISH PROCESSING.
STEPHEN SCHWAUSCH TM ATX CARS; 0; 380228267
2002-01-18

M FORWARDING REQUEST TO LIASON JONESD FOR GOODWILL REIM PROCESS. MISTY KLINEFELTER/ATAX/CAC; 0; 380228386
2002-01-21

liaison has reviewed this request and will submit for final approval. delia jones, liaison, austin,tx; 0; 380473258
2002-01-21

LIAISON IS REVIEWING. DELIA JONES, LIAISON, AUSTIN,TX; 0; 380475452
2002-01-21

CUST IS ORIGINAL OWNER OF VEH PURCHASED VEH FROM HOLMES OLDS. VEH IS REPAIRED ACCORDING TO CUST, CUST DOES NOT HAVE EXT SVC CONTRACT. CUST IS NOT WANTING TO PURCHASE ANOTHER VEH NO ABUSE OR MISUSE. VIN PROFILE DOES SHOW ON 12/19/01 @ 33,669 MI THE ARM BALL JOINT WAS RPLC'D THE CAUSE OF REPIAR IS VEH ARM BALL JOINT IS TO WEAK. GM HAS COME UP W/ ANOTHER PART NUMBER TO REPAIR VEH. MISTY KLINEFELTER/ATX/CAC; 0; 380476198
2002-01-21

CUST ACCEPTED OFFER FOR REIM $45.50 CRM VERIFIED CUST ADDRESS. MISTY KLINEFELTER/ATX/CAC; 0; 380476530
2002-01-21

LIAISON WILL PROCESS FINAL APPROVAL.....WILL CLOSE FILE SATISFIED.....SHERRY JOHNSON/LIAISON/ATX; 0; 380495183
2002-01-25

ck # 900492223, mailed 1/23/02, in the amt $45.50; 0; 380827231
02-02-02

Attaching docs for copy of check.
LARRY PARKER/CAC/TAMPA; 0; 381517614

**********PAR INFORMATION**********

IDENT DATE: INCIDENT TIME:
CIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
RRENT LOCATION OF VEHICLE:
TIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
LEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:

LEASE TERM:
DAMAGE:
[illegible]ER:
[illegible]ANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

[illegible]TERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

06064809

North American Operations
General Motors Corporation
Disbursements (2013)
PO Box 62530
Phoenix, AZ 85082-2530

CHECK No. 900492223

DATE 01/23/02

**********45 DOLLARS ****50 CENTS

AMOUNT **********45.50

North American Operations
General Motors Corporation
Disbursement Account

PAY TO THE ORDER OF

URBANDALE IA

SIGNATURE

The Chase Manhattan Bank, N.A.
Syracuse, New York

AUDIT

JAN 31 2002

⑈900492223⑈ ⑆021309379⑆ 601⑈2⑈62520⑈

North American Operations
General Motors Corporation
Disbursements (2013)
PO Box 62530
Phoenix, AZ 85082-2530

DETACH BEFORE DEPOSITING CHECK

VENDOR NUMBER RD 000490527 1

CHECK NO. 900492223

VENDOR NAME ED E. MALMANGER

PAYMENT DATE 01/23/02

REGISTER NO. DESCRIPTION	INVOICE DATE	DOC. REFERENCE NUMBER	% DISC.	INVOICE AMOUNT	DISC. AMOUNT	NET AMOUNT
	01/21/02	VR 000000000029430	00.0000	45.50	.00	45.50
1BLDT13W2W2559965	06064809	0440000000029430				

ACCEPTANCE OF THIS CHECK CONSTITUTES FULL RESOLUTION FOR REIMBURSEMENT\OR QUESTIONS CALL 800-462-5782

MS

TOTAL 45.50 .00 45

PM
31 DEC
2001

MISTY KLINEFELTER
GMC
P.O. BOX 33172
DETROIT, MI 48232-5172

JAN 08 2002

48232-5172

12-20-01

Misty Klinefelter
GMC
P.O. Box 33172
Detroit, MI 48232-5172

Dear, Misty,

Thank you for your time today. This has been a terrible experience for me and my daughter. I just can't understand how a wheel falls off a car with 33,669 miles on it. I appreciate that GMC has paid some of the bill but I am disappointed that GMC isn't paying all of the cost associated with the replacement of the ball joints.

I would ask your help in recovering the cost of the wrecker bill for $45.50. This would be greatly appreciated. If you need any additional information please contact me at work: 515-457-3080 ext. # 6 or at home: 515-270-6077.

Please find enclosed: 1) original repair bill from Holmes Oldsmobile GMC Truck

2) original payment receipt

3) copy of the registration

Your request # CO6064809

Please mail the check to:

Urbandale, IA

THANK YOU FOR YOUR ASSISTANCE!!!

Sincerely,

Ed Malmanger

HOLMES
OLDSMOBILE
GMC TRUCK

11206 HICKMAN ROAD
DES MOINES, IA 50325
515-253-3014
www.holmesauto.com

FOR YOUR CONVENIENCE

SERVICE DEPARTMENT HOURS:

7:00 A.M. - 5:30 P.M.

MONDAY - SATURDAY

150570	TODD FERGUSON 406	2605	12/20/01	GCC599335
	449FTL	33,665	PEWTER_META	64175
ORSANDALE, IA	98/GMC/JIMMY/4 DOOR UTILITY		09/29/98	0
	1GKDT13W2W2569965			
			12/19/01	

LABOR & PARTS

J# 1 45CLZ STEERING/SUSPENSION TECH(S):490
RF WHEEL FELL INWARD-ADVISE
LOWER BALL JOINTS-REPLACE
FOUND RF WHEEL UPPER BALL JOINT BROKEN. CHECKED ALL OTHER
BALL JOINTS, ALL BALL JOINTS BAD.
REPLACED BOTH LOWER BALL JOINTS.

PARTS	QTY	FP-NUMBER	DESCRIPTION	UNIT PRICE	
JOB # 1	2	22156008	STUD KIT 6.174	70.22	140.44
			JOB # 1 TOTAL PARTS		140.44
			JOB # 1 TOTAL LABOR & PARTS		377.24

J# 2 80CLZB 27 POINT INSPEC FREE TECH(S):499
27 PT. INSPECTION. FOUND VEHICLE DUE FOR A SERP BELT, AIR
FILTER, DUE FOR A ROTATE, RADIATOR CAP LEAKING.

PARTS	QTY	FP-NUMBER	DESCRIPTION	UNIT PRICE	
			JOB # 2 TOTAL PARTS		0.00
			JOB # 2 TOTAL LABOR & PARTS		0.00

J# 3+85CLZZ11 FRONT END ALIGNMENT TECH(S):499
ALIGN FRONT END
ALIGNED FRONT END.

PARTS	QTY	FP-NUMBER	DESCRIPTION	UNIT PRICE	
			JOB # 3 TOTAL PARTS		0.00
			JOB # 3 TOTAL LABOR & PARTS		41.00

J# 4+47CLZ AXLE/DIFFERENTIAL TECH(S):499
LF INNER DRIVE SHAFT BOOT-REPLACE
REPLACED LF INNER CV BOOT.

PARTS	QTY	FP-NUMBER	DESCRIPTION	UNIT PRICE	
JOB # 4	1	26089875	ABOOT KIT 6.061	38.46	35.46
			JOB # 4 TOTAL PARTS		[illegible]
			JOB # 4 TOTAL LABOR & PARTS		183.46

J# 5+110LZ ENGINE MINOR TECH(S):542
SERPENTINE BELT-REPLACE
REPLACED SERP BELT

PARTS	QTY	FP-NUMBER	DESCRIPTION	UNIT PRICE	
JOB # 5	1	12664763	BELT 1.000	44.71	44.71
			JOB # 5 TOTAL PARTS		44.71
			JOB # 5 TOTAL LABOR & PARTS		66.50

J# 6+03CLZZ13 REPLACE AIR FILTER TECH(S):542
REPLACED AIR FILTER

HOLMES OLDSMOBILE
11206 HICKMAN ROAD
DES MOINES, IA 50325
(515) 253-3014

ORIGINAL

TOTAL $889.54

ORIGINAL

CUSTOMER ACKNOWLEDGES RECEIPT OF GOODS AND/OR SERVICES IN THE AMOUNT OF THE TOTAL SHOWN HEREON AND AGREES TO PERFORM THE OBLIGATIONS SET FORTH BY THE CUSTOMER'S AGREEMENT WITH THE ISSUER

TOP COPY-MERCHANT SERVICE COPY-CUSTOMER

(CONTINUED ON NEXT PAGE) 07:30:48

HOLMES
OLDSMOBILE
GMC TRUCK

11206 HICKMAN ROAD
DES MOINES, IA 50325
515-253-3014
www.holmesauto.com

FOR YOUR CONVENIENCE
SERVICE DEPARTMENT HOURS:
7:00 A.M. - 5:30 P.M.
MONDAY - SATURDAY

150570	TODD FERGUSON	405	2605	12/20/01	GCC599335
		449ETL	33,669	PEWTER META	64175
URBANDALE, IA	98/GMC/1TNNV/4 DOOR UTILITY			09/29/98	0
	1GKDT13W2W2569865			12/19/01	

PARTS	QTY	PP-NUMBER	DESCRIPTION	UNIT PRICE	
JOB # 6	1	25098463	AIR FLTR 3.410	14.95	14.95
				JOB # 6 TOTAL PARTS	14.95
				JOB # 6 TOTAL LABOR & PARTS	21.95

JB 7-200LZ HEATING / COOLING TECH(S):499
RADIATOR CAP-REPLACE
REPLACED RADIATOR CAP.

PARTS	QTY	PP-NUMBER	DESCRIPTION	UNIT PRICE	
JOB # 7	1	15976605	CAP 1.203	12.60	12.60
				JOB # 7 TOTAL PARTS	12.60
				JOB # 7 TOTAL LABOR & PARTS	12.60

JB 8-450.203 SUSPENSION CONCERN TECH(S):499 *WARRANTY
RF WHEEL FELL TURNED
UPPER BALL JOINTS-REPLACE BOTH
REPLACED UPPER BALL JOINTS.

PARTS	QTY	PP-NUMBER	DESCRIPTION	UNIT PRICE	WARRANTY
JOB # 8	2	17987882	B/JNT 6.164	JOB # 8 TOTAL PARTS	0.00
				JOB # 8 TOTAL LABOR & PARTS	0.00

SUBLET	POS	VEND INVO	INV.DATE	DESCRIPTION	
JOB # 1	41941	80981	12/19/01	TOWING	45.50
				TOTAL - SUBLET	45.50

MISC	CODE	DESCRIPTION	CONTROL NO	
JOB # A	SS	SHOP SUPPLIES/HAZARDOUS DISPOSAL		14.95
			TOTAL - MISC	14.95

TOTALS

[ ] CASH [ ] CHECK CK NO. [ ]
[ ] VISA [ ] MASTERCARD [ ] DISCOVER
[ ] AMER XPRESS [ ] OTHER [ ] CHARGE

TOTAL LABOR....	456.95
TOTAL PARTS....	298.15
TOTAL SUBLET...	45.50
TOTAL S.O.E....	0.00
TOTAL MISC CHG.	14.95
TOTAL MISC DISC	0.00
TOTAL TAX.....	44.98
TOTAL INVOICE $	**860.54**

THANK YOU FOR YOUR BUSINESS!!

CUSTOMER SIGNATURE

ORIGINAL

PAID
DEC 1 4 2001

 CUSTOMER COPY ----- END OF INVOICE 07:30:46

TITLE NO. REG RENEWAL RECEIPT **EXPIRES 07-31-02
77-Y150101 8 POLK COUNTY VALID/YR. 77-X24121 02
ISSUE DATE 07-20-01 CODE 01 PLATE NO./YR. 449PTL

STATE OF IOWA

OWNER'S COPY

OR

URBANDALE IA

CODE V.I.N. 1GKDT13W2W2569965 RM. 07
TYPE A MAKE GMC YR. 1998 SERIES JMY MODEL TT10506

STYLE EV CYL. 06 COLOR GRY FUEL G WT. 04100 DB SR 09-00
LP 025900 POST 0.50 FEE 275.00
PR 77-J03043 OTHER FEES/PENALTY .00
YR. 01 SQ. FT. TOTAL 275.00
NEXT YR. 02 FEE 275.00 ANNUAL 275.00

CUMULATIVE DAMAGE OR DESIGNATION

17 00525 MARY MALONEY
COUNTY TREASURER

January 21, 2001

Urbandale, IA

Request: C06064809

Dear

We sincerely regret that you experienced a concern with your 1998 GMC Jimmy, which resulted in an unexpected repair expense to you.

We value you as a GMC owner and your satisfaction with our products is a high priority. As we discussed over the phone, we believe you are entitled to a reimbursement. We have enclosed a check in the amount of $45.50. We hope this goodwill adjustment will offset, to some degree, the inconvenience that this repair may have caused you.

We look forward to keeping you in our GMC family. If you have any future questions, please feel free to contact our GMC Customer Assistance Center at 1-800-462-8782 Monday through Friday between 8:00 a.m. and 11:00 p.m., Eastern Time. Please refer to your request number above and any of our Customer Relationship Managers will be happy to assist you.

Sincerely,

Misty Klinefelter
Customer Relationship Manager

RS0005-A/dnj

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: WALKILL , NY
HOME PHONE:

CASE NUMBER:	06189812	VIN:	1GNDT13WXY2230117
		MODEL YEAR:	2000
DATE OPENED:	2002-01-16	SERIES:	4-DOOR 4WD BLAZER BA
DATE CLOSED:	2002-01-17	MILEAGE:	50270
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	No	DEALER NAME:	HEALEY CHEVROLET-OLDSMOBILE INC
BRC PARENT:		DEALER ADDRESS:	410 FISHKILL AVE,,BEACON,NY,12508,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
0 REPAIR ATTEMPT(S) — FRONT PASSENGER SIDE

A12 Miscellaneous - Not Classified — Other
0 REPAIR ATTEMPT(S) — GMPP RESOLVED WITH GOODWILL

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
Probe to identify failed item/component
Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.html]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.html]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link
RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.html]]
Vehicle repair request - Repair not done
**********WORK HISTORY**********

CUST STATES THAT SHE IS THE ORIGINAL OWNER OF A 2000 CHEV BLAZER. CUST STATES THAT WHILE SHE WAS DRIVING DOWN THE ROAD, THE FRONT PASSENGER BALL JOINT FELL OFF OF HER VEH. CUST STATES THAT SHE HAS OWNED GM VEHS ALL HER LIFE AND HAS REFERRED ALL HER FAMILY TO HEALEY CHEV. CUST STATES THAT SHE HAS ALL HER MAINTENANCE DONE AT THE DLR. CUST SEEKS COST ASSISTANCE WITH REPAIR. CRM CONTACTED THE SERVICE MANAGER, DON, BUT WAS ADVISED THAT HE IS CURRENTLY ASSISTING A CUST AND WOULD NOT BE AVAILABLE TO ASSIST AT THE MOMENT. CRM SET A CALL BACK FOR 1030 AM EST. CRM ADVISED THE CUST THAT FURTHER RESEARCH NEEDS TO BE DONE. ANGELA HURTADO/CAC/TAMPA; 0; 380044007
2002-01-16

CRM CONTACTED THE DLR AND WAS ADVISED THAT HE IS IN A MEETING AND CAN BE REACHED IN A HALF-HOUR. ANGELA HURTADO/CAC/TAMPA; 0; 380047132
2002-01-16

CRM CONTACTED THE SERVICE MANAGER, DON STONE, AT 1200 PM EST. A SERVICE TECHNICIAN ADVISED THAT HE WAS NOT AVAILABLE AND THAT THE VEH HAS NOT BEEN DIAGNOSED YET. DLR ADVISED TO CONTACT TOMORROW AFTERNOON. CRM CONTACTED THE CUST AT 1211 PM EST TO ADVISE THAT VEH HAS NOT BEEN DIAGNOSED AND WOULD CONTACT TOMORROW. CUST SATISFIED. CRM SET A CALL BACK FOR 1/17/2002 BETWEEN 2-400 PM EST. ANGELA HURTADO/CAC/TAMPA; 0; 380052737
2002-01-17

CRM SPOKE TO SERVICE MANAGER AND WAS ADVISED THAT GMPP OFFERED THE CUST ASSISTANCE WITH THE REPAIR. CRM ATTEMPTED TO CONTACT THE CUST AT 310 PM EST TO VERIFY THE INFORMATION. CRM LEFT A MESSAGE FOR THE CUST TO CONTACT CAC WITH REQUEST NUMBER SHOULD SHE REQUIRE ASSISTANCE. CRM SPOKE TO GL, ALLEN PRESTON, ABOUT WHAT UCC TO USE FOR GMPP RESOLVING WITH GOODWILL. GL STATED TO USE A12 - OTHER - GMPP RESOLVED WITH GOODWILL. REQUEST CLOSED SATISFIED. ANGELA HURTADO/CAC/TAMPA; 0; 380150105

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
PURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:
**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DID OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1

COMPANY:

CONTACT TYPE:
CONTACT PHONE:

RESS:

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LANCING , MI
HOME PHONE:

CASE NUMBER:	06416051	VIN:	1GHDT13W5W2704331
		MODEL YEAR:	1998
DATE OPENED:	2002-02-25	SERIES:	BRAVADA
DATE CLOSED:	2002-02-28	MILEAGE:	60675
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	No	DEALER NAME:	CRIPPEN OLDSMOBILE-GMC TRUCK
BRC PARENT:		DEALER ADDRESS:	8300 W SAGINAW HWY,,LANSING,MI,48917,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
0 REPAIR ATTEMPT(S) — BALL JOINTS

Vehicle operation or design

INSTRUCTIONS TO CRM:
*Pinpoint / understand concern
* Determine Customers expectation
* Validate feature is on vehicle
* Review owners manual with owner - [[Owners Manuals RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http:\\carsweb\webknowledge]]. Click the Product Center Tab
* Review specific solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/common/ProductCenter/GeneralInfo/content/CMC/SolutionsByComponentCode_Corepoint.htm]]
* Validate with dealership if necessary
* Coordinate with dealership to compare with another vehicle if necessary
* Schedule a follow up if issue is not resolved during call
Vehicle operation or design

**********WORK HISTORY**********

CUST STATES THAT HE TOOK HIS VEH TO TOWN AND COUNTRY AN INDEPENDANT SERVICE DEPT B/C AND WAS TOLD THAT THE UPPER BALL JOINTS SNAPPED OFF AND THAT CAUSED A PROBLEM WITH THE AXLE. CUST STATES THAT HE WANTED TO TAKE IT TO AN OLDSMOBILE DEALER HOWEVER THIS DEALERSHIP WAS CLOSER. CUST SEEKS ASSISTANCE IN THE COST OF THIS REPAIR. CRM ADIVSED CUST TO TAKE VEH TO AN OLDS DEALER FOR DIAGNOSIS AND THEN TO CONTACT CAC FOR FURTHER ASSISTANCE. CRM SPOKE W/ LIZA @ DEALERSHIP TO GET NAME & NUMBER OF THE TOWING COMPANY THAT THEY USE (WALDO 627-2075) CUST FURTHER STATED THAT HE WILL TRY AND TAKE VEH IN TODAY. CRM WILL SUSPEND FILE PENDING FOLLOW UP W/ CUST.
KATHERINE PRINCE/ATX/CAC; 0; 383502177
2002-02-26

CRM REVIEWING FILE
CONTACTED DEALERSHIP NO UPDATES W/ CUST
KATHERINE PRINCE/ATX/CAC; 0; 383584276
2002-02-26

CUST STATES THAT HE HAS BEEN TOLD BY DLR THAT THE COST FOR TOW AND DIAGNOSIS IS $ 150.00. CUST STATES SINCE PREV CRM TOLD HIM BAD BALL JOINTS A COUPLE YEARS PRIOR HE FEELS THIS SHOULD BE TAKEN CARE OF BY OLDSMOBILE. CUST STATES THE PASSENGER BALL JOINTSHATTERED AND DRIVERS SIDE IS SHOT (AS DIAGNOSED BY DLR). CUST STATES THE ESTIMATE FOR REPAIRS IS HIGH AND HE IS SEEKING ASSISTANCE W/ COST FOR ESTIMATE AND REPAIR. CUST STATES HE WILL BE FIXING VEH AND SELLING AFTER AS HE IS NOT HAPPY W/ THIS VEH. CUST STATES HE HAS PUT 8000 MILES AND

OVER $1000 MAINTENANCE IN THIS VEH. CUST SEEKS CALL BACK FROM PREVIOUS CRM AT WK NUMBER ON 2/26/02 OR 2/27/02. HOLLY VARNER/CAC/PDX; 0; 383609229
2002-02-27

Cust stated princek didn't call him back. crm advised would send alarm and if no call back recieved crm to call cust back on 2-28-02 (1-3est). cust stated that this was a used veh that he bought at 50000 miles. cust stated that there are no service records available for the veh and that the service tech told him that the upper ball joint busted off. Deborah Berger - pdx- cac; 0; 383690400
2002-02-27

CRM REVIEWING FILE
KATHERINE PRINCE/ATX/CAC; 0; 383691120
2002-02-28

CUST CALLED IN STATING THAT HE HAS NOT GOTTEN A PHONE CALL BACK ONCE. CUST STATES HE IS GETTING FRUSTRATED. CUST SEEKS COST ASSISTANCE IN GETTING REPAIR PREFORMED ON VEH. CRM ADVSIED WOULD BE MORE THAN HAPPY TO ASSIST WITH CONCERNS. CRM CONTACTED SERVICE DEPT AND SPOKE WITH SERVICE MANAGER WHO CONFIRMED THAT VEH BALL JOINTS WERE VERY DRY AND USUALLY THAT IS DUE TO UNPROPER LUBRICATION TO BALL JOINTS. SERVICE MANGER STATES THAT HE DOE SNOT HAVE PREVIOUS MAINTENCE RECORDS ON VEH SO NO ASSISTANCE WILL BE AVAILABLE. SERVICE MANGER STATED THAT THE AVM HAS BEEN OUT TO LOOK AT VEH AND DENIED ASSISTANCE AS WELL. CRM ADVISED CUST THAT DUE TO NO MAINT RECORDS ON VEH AND TEH POOR LUBRIACATION OF VEH FREVIOUSLY NO ASSISTANCE WOULD BE AVAILABLE. CUST STATES HE WLL NEVER BUY A GM VEH AGAIN AND DISCONNECTED CALL. CASE CLOSED DISATISFIED PER TM EILEEN ABBOTT APPROVAL. NO BBB LETTER ANNIE GULOSH CAC/PDX; 0; 383780363

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
MILEAGE:
OWNER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:

PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
COMPANY:
ADDRESS:

CONTACT NUMBER: 1
CONTACT TYPE:
CONTACT PHONE:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: GRUNDY , VA
HOME PHONE:

CASE NUMBER:	06505848	VIN:	1GNDT13W5W2172804
		MODEL YEAR:	1998
DATE OPENED:	2002-03-12	SERIES:	BLAZER 4 DOOR 4WD
DATE CLOSED:	2002-05-13	MILEAGE:	57874
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	No	DEALER NAME:	COLE CHEVROLET-CADILLAC INC
BRC PARENT:		DEALER ADDRESS:	US 460 & RTE 598,,BLUEFIELD,WV,24701,USA

**********GENERAL CASE INFORMATION**********

S86 CAC Resolved With Goodwill — CAC Resolved With Goodwil
0 REPAIR ATTEMPT(S) — REIMBURSEMENT

F18 Front Ball Joints/Kingpin — Loose
1 REPAIR ATTEMPT(S) — BALL JOINT SEPERATION

S13 Reimbursement Requested — Customer Satisfaction
0 REPAIR ATTEMPT(S) — IN THE AMOUNT OF $111.29

hicle reimbursement or Goodwill decision - Repair already done

INSTRUCTIONS TO CRM:
* Identify sp Determine Customer's expectation
* Determine Customers expectation
* Determine if any manufacturer / parts warranty remains in effect
* Probe to determine if consumer has an "Extended Warranty" GMPP or other
* Reference WKC[[GOODWILL RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/Goodwill/Goodwill_Main.htm]] section on how to make decision, review warranty history, and other appropriate documents.
* Validate repair has already been performed and whether by dealer or independent
(If not repaired - Change call type to "Repair Request")
(If already repaired at Dealership - Review with Service management to determine cause of failure and consider reimbursement at dealership.)
(If already repaired at Independent - Review all relevant materials per SOG and P&P and make appropriate "Goodwill" decision.
(Note: Never make a "Final" commitment without appropriate documentation.)

* If necessary follow Dawin Wright letter "Goodwill" processing [[GOODWILL RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/Quickref/content/goodwill.htm]]
* If necessary follow SBS on "Contacting GM Field Personnel" [[Field Personnel RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/ContactingGMFieldPersonnel.htm]]
Vehicle reimbursement or Goodwill decision - Repair already done

**********WORK HISTORY**********

ST CALLED CAC WANTING TO SPEAK TO ALLENMEG RE DOCS THAT CUST SENT IN. CUST STATES THIS IS E ORIGINAL RO BUT IF ANYTHING FURTHER NEEDED SHE CAN FAX IT TO CAC. CRM FORWARDING FILE TO ALLENMEG.
KATHY BUTLER/CARS/TPA; 0; 389540720
2002-05-06

CRM NOTING CUST CALLED BACK IN. CRM AWAITING MSX DOC PULL FOR VERIFICATION OF R.O. BEING ORIGINAL. MEGAN ALLEN/ATX/CAC; 0; 389544078
2002-05-13

CRM TRANSFERED FILE TO SR #1-1376727. CRM CLOSED REQUEST SATISFIED. MEGAN ALLEN/ATX/CAC; 0; 390150654
2002-03-12

CUST STATES IS OWNER OF A 1998 CHEVROLET BLAZER. CUST STATES THAT VEH WAS REPAIRED FOR BALL JOINT SEPERATION. CUST STATES THAT TOOK VEH TO INDEPENDENT DLR COMTTON AUTOMOTIVE. CUST STATES THAT INDEPENDENT DLR CONTACTED DLR AND VERIFIED THAT CUST WAS INVOLVED IN SPECIAL POLICY #01049. CUST SEEKS REIMBURSEMENT. CRM CHECKED WKC AND CUST VEH IS NOT INVOLVED IN SPECIAL POLICY. HOWEVER, AS CUST EXPECTATIONS HAVE BEEN SET CRM ADVISED CUST TO SEND IN DOCS TO CAC. CRM WILL CONTACT DLR AND INDEPENDENT DLR ONCE RECEIVE DOCS TO REVIEW FOR REIMBURSEMENT. MEGAN ALLEN/ATX/CAC; 0; 384798520
2002-03-19

CORR DOCS RECEIVED. CRM FWD FILE TO CRM AWAITING DOCS. MILES MASON TAMPA CORR; 0; 385393222
2002-03-19

CRM NOTING THAT DOCS RECEIVED. CRM NOTING R.O. NOT ORIGINAL AND NO PROOF OF OWNERSHIP. CRM WILL REVIEW DOCS AND ADVISE CUST OF OTHER DOCS THAT ARE NECESSARY. MEGAN ALLEN/ATX/CAC; 0; 385403615
2002-04-02

CRM CLOSING FILE UNTIL DOCS RECEIVED. MEGAN ALLEN/ATX/CAC; 0; 386622754
2002-04-09

[illegible]E CUST STATES SEH HAS MAILED IN THE PROOF OF OWNERSHIP (REGISTRATION CARD) AND THE REPAIR [illegible]DER THAT WAS GIVNE HER BY THE REPAIR SHOP. THIS IS SAID TO NOT BE A COPY AS IT IS LABELD. THE CUST STATES SHE PAID CASH FOR THE REPAIR AND THIS CAN BE VERIFIEDBY CONTACTING THE REPAIR SHOP. CRM UPDATING FILE AND FORWARDING MESSAGE. YOLANDA JACKSON/TAMPA; 0; 387214324
2002-04-09

CRM NOTING DOCS RECEIVED. CRM WILL REVIEW FOR POTENTIAL GOODWILL. MEGAN ALLEN/ATX/CAC; 0; 387243494
2002-04-18

CRM STILL REVIEWING DOCS FOR GOODWILL. CRM WILL CONTACT DLR TO VERIFY INFO. MEGAN ALLEN/ATX/CAC; 0; 387982515
2002-04-24

Cust called requesting call back from crm (Allenmeg). Cust states she was req to send in additional docs reg reimbursement for ball joint under campaign. Cust request specifically to spk with previous crm. This crm attempted to assist, but cust would rather spk with Megan. DONNIEMCCRADIC/CAC/ATX; 0; 388498885
2002-04-25

cust called and req to speak to crm allenmeg and is waiting on c/b. crm adv cust to send in orig r/o b/c we have a copy and cust stated that she did send in the orig. cust stated that she wanted to speak to crm allenmeg so that she could take care of her. cust did not want this crm to assist her. cust will be waiting on c/b. forwarding file back to crm allenmeg. jessie mcneil...cars/tpa; 0; 388587047
2002-04-25

[illegible]M NOTING THAT CUST STATES THAT R.O. IS ORIGINAL. CRM WILL REVIEW DOCS FOR GOODWILL. MEGAN [illegible]LEN/ATX/CAC; 0; 388618442
2002-05-01

cust req to speak to megan allen. this crm seas working crm in file last week. this crm advised cust that working crm rsrchng issue and will rcv callback from working crm w/i 24

hours. cust states that the ro she sent in is the ro that she was given by svc rep. fwd to allenmeg for follow up. desiree sarver/cars/tampa; 0; 389121657
2002-05-02

CRM WILL PROCESS ASSUMING THAT R.O. IS ORIGINAL AS CUST STATES IS ONLY R.O. THAT WAS GIVEN TO HER BY DLR. MEGAN ALLEN/ATX/CAC; 0; 389193639
2002-05-02

BREAK-DOWN OF REPAIRS ($222.57)

LABOR: $110.00 (1/2 FOR ONLY UPPER BALL JOINTS)
PARTS: $102.36 (1/2 FOR ONLY UPPER BALL JOINTS)
MISC : $ 1.00
TAX : $ 9.21

TOTAL: $222.57 (FOR ONLY UPPER BALL JOINTS); 0; 389200802
2002-05-02

CRM CONTACTED INDEPENDENT DLR AT #276-963-5900 AND SPOKE TO SVC MGR RICK COMPTON. SVC MGR VERIFIES THAT CUST DID HAVE UPPER AND LOWER BALL JOINTS REPAIRED AT DLR. CRM VERIFIED MAKE/MODEL/YEAR AND VIN OF VEH. SVC MGR STATES THAT REPAIR WAS NOTHING CUST COULD HAVE CAUSED/PREVENTED. SVC MGR STATES THAT BALL JOINT CONCERN WAS AN EARLY FAILURE OF COMPONENT. SVC MGR STATES THAT CUST WAS MADE AWARE OF SP ON UPPER BALL JOINTS AND BELIEVES THAT THIS WAS VERIFIED BY CHEVROLET DLR. MEGAN ALLEN/ATX/CAC; 0; 389208675
2002-05-02

CRM CONTACTED CHEVROLET DLR AND SPOKE TO SVC ADVISOR PHILLIP CANDLER. SVC ADVISOR VERIFIES THAT CUST IS NOT SEEKING REIMBURSEMENT THROUGH DLR. SVC MGR WAS UNABLE TO VERIFY IF DLR HAD BEEN CONSULTED ABOUT CUST UPPER BALL JOINTS AND SP. MEGAN ALLEN/ATX/CAC; 0; 389208910
2002-05-02

CRM NOTES THAT SVC MGR AT INDEPENDENT DLR RICK COMPTON ALSO VERIFIED THAT CUST VEH WAS VERY WELL MAINTAINED AND WELL LUBED. SVC MGR STATED THAT LACK OF MAINTENANCE WAS NOT CAUSE OF FAILURE. MEGAN ALLEN/ATX/CAC; 0; 389209597
2002-05-02

CORRECTION OF BREAK-DOWN - ONLY OFFERING 50% OF TOTAL FOR A TOTAL REIMBURSEMENT OF $111.29. MEGAN ALLEN/ATX/CAC; 0; 389209662
2002-05-02

BUSINESS CASE FOR OFFERING GOODWILL ($111.29 REIMBURSEMENT)

1) CUST EXPERIENCED EARLY FAILURE OF UPPER BALL JOINTS THAT WAS NOT RELATED TO ACCIDENT, ABUSE, MISUSE OR LACK OF MAINTENANCE AND WAS NOTHING CUST COULD HAVE CAUSED/PREVENTED.
2) CUST HAD REPAIR PERFORMED AT INDEPENDENT AND DLR INFORMED OF SP ON UPPER BALL JOINTS
3) ALLEGES SHE WAS GIVEN CONFIRMATION BY CHEVROLET DLR THAT SHE WAS INVOLVED IN SP EVEN THOUGH IT WAS LATER CONFIRMED THAT SHE IS NOT.
4) CRM NOTES THAT CUST DOES NOT FALL WITHIN BREAK-POINTS OF SP, BUT EXPECTATATION HAS BEEN SET BY DLRS FOR REIMBURSEMENT.
5) TO RESTORE CUST CONFIDENCE IN VEH, DLR AND GM.

MEGAN ALLEN/ATX/CAC; 0; 389211918
2002-05-02

CRM VERIFIED W/ SVC MGR RICK COMPTON THAT CUST IS PAID IN FULL FOR REPAIR AS CUST PAID CASH. MEGAN ALLEN/ATX/CAC; 0; 389212481
2002-05-02

CRM SCHEDULED CALL BACK FOR 5/3/02 BETWEEN 1-3PM CENTRAL. MEGAN ALLEN/ATX/CAC; 0; 389212520
2002-05-02

CRM SUSPENDED AWAITING REVIEW BY GWL AND TM APPROVAL. MEGAN ALLEN/ATX/CAC; 0; 389212769
2002-05-02

CRM CONTACTED INDEPENDENT DLR AND SPOKE TO SVC MGR RICK COMPTON. SVC MGR VERIFIED THAT R.O. [illegible]ULD BE ORIGINAL AND THAT CUST IS PAID IN FULL (CUST PAID CASH). MEGAN ALLEN/ATX/CAC; 0; [illegible]214921
2002-05-02

CRM NOTES THAT SVC MGR AT INDEPENDENT WAS UNAWARE OF WHAT CAUSED FAILURE (SEPERATION) OF BALL JOINTS. MEGAN ALLEN/ATX/CAC; 0; 389215323
2002-05-02

CRM REVIEWED W/ GWL MMR. CRM AWAITING TM APPROVAL TO OFFER GOODWILL ($111.29 REIMBURSEMENT). MEGAN ALLEN/ATX/CAC; 0; 389215514
2002-05-02

DISCUSSED ORIGINAL R.O. W/ GWL. NEED TO VERIFY W/ MSX IF R.O. IS ORIGINAL OR NOT. MEGAN ALLEN/ATX/CAC; 0; 389216414
2002-05-09

MSX has confirmed that repair order is a laser printed original.
Isela Olivares/GW Liaison/ATX; 0; 389826374

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

[illegible]ER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
[illegible]ERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:

PAR STATUS:

**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

E:
PANY:

ADDRESS:

CONTACT NUMBER: 1
CONTACT TYPE:
CONTACT PHONE:

26505898

Grundy, VA

MAR 18 2002

Chevrolet
P.O. Box 33170
Detroit, MI. 48232-5170

Attention: Megan Allen

48232-5170

File # C065058 48

Grundy, VA.
Phon

Dear Megan Allen

I have recently had to have the upper and lower ball joints replaced in my 1996 Chevy Blazer V6 4DR. The company that did the work for me was Compton Automotive. (ase certified). The tech that did the work said that he talked to someone at Cole's Chevrolet about this problem and they told him I should be reimbursed for this work because the mileage and the year wasn't high.

I spoke with you on the phone and I have inclosed all the information you said you needed for my reimbursement.

Thank you,

File #C06505848

INVOICE NUMBER

182

Estimate ref # 99
Date Printed:3/8/2002
11:09:22AM

Compton Automotive
Rt 3 Box 1010
Cedar Bluff, VA 24609
Phone 540-963-5900 Fax 540-963-6260

ASE certified technicians on duty

INVOICE

Hat/Ref #

Promised Time: 3/8/2002 5:00:00PM

1998 CHEVROLET S10 BLAZER V6 4.3 W
VIN: 1GNDT13W5W2172804
License: 229416
Mileage: 57,874

Date Written: 3/8/2002 10:57:00AM
Written By: Heather Compton

Grundy, VA
Home :
Work:

Technician: Blain weaver

Save Old Parts: No

Description	Qty	List	Extended
upper and lower ball joints worn out— replaced upper and lower ball joints	5.50	$40.00	$220.00
No Part #: ball joints	2.00	$51.18	$102.36
No Part #: ball joints	2.00	$51.18	$102.36

COPY

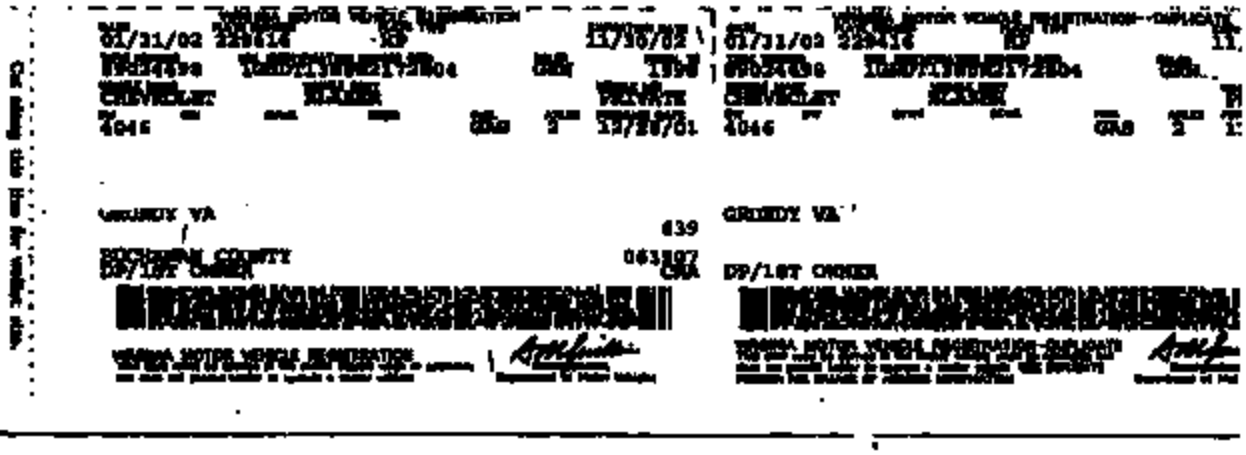
Parts	$204.72
Labor	$220.00
Discount	$0.00
HazMat	$1.00
Supplies	$0.00
Sublet	$0.00
Tax	$9.21
Total	**$434.93**

I hereby authorize the above repair work to be done along with the necessary material and hereby grant you and/or your employees permission to operate the car or truck herein described on street, highways or elsewhere for the purpose of testing and/or inspection. An express mechanic's lien is hereby acknowledged on above car or truck to secure the amount of repairs thereto.

Authorized By _____ Date _____ Time _____

Thank you for your patronage

File #C06505848



ORIGINAL

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:)
ADDRESS: PINEBUSH , NY
HOME PHONE: /

CASE NUMBER:	06713378	VIN:	1GNDT13W1Y2135879
		MODEL YEAR:	2000
DATE OPENED:	2002-04-15	SERIES:	4-DOOR 4WD BLAZER BA
DATE CLOSED:	2002-04-15	MILEAGE:	60000
SOURCE:	Phone	DELIVERY DATE:	
ERC TYPE:	No	DEALER NAME:	M & S OF PAWLING, INC.
ERC PARENT:		DEALER ADDRESS:	55 RTE 22,,PAWLING,NY,12564,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin	Broken
0 REPAIR ATTEMPT(S)	upper ball joints
A07 Referred to Dealer	Customer Satisfaction
0 REPAIR ATTEMPT(S)	TO HAVE VEH DIAGNOSED

Vehicle operation or design

INSTRUCTIONS TO CRM:
Pinpoint / understand concern
Determine Customers expectation
* Validate feature is on vehicle
* Review owners manual with owner - [[Owners Manuals RUN C:\Progra-1\Plus!\Micros-1\Iexplore.exe http:\\carsweb\webknowledge]]. Click the Product Center Tab
* Review specific solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros-1\Iexplore.exe http://carsweb/common/ProductCenter/GeneralInfo/content/CWC/SolutionsByComponentCode_Corepoint.html]]
* Validate with dealership if necessary
* Coordinate with dealership to compare with another vehicle if necessary
* Schedule a follow up if issue is not resolved during call
Vehicle operation or design

**********WORK HISTORY**********

CUST STS SHE WAS DRIVING ALONG ON SATURDAY, WHEN SHE LOST CONTROL OF THE VEH FOR A SHORT TIME.. CUST STS SHE THOUGHT A TIRE HAD BLOWN OUR.. CUST STS SHE PULLED OFF THE ROAD AND A HIGHWAY PATROL STOPPED AND STATED IT NEEDED TO BE TOWED.. CUST STS IT WAS TOWED TO THE NEAREST INDEPENDENT SHOP AND SHE WAS TOLD BY THIS INDEPENDENT DLR THAT THERE WAS A "RECALL" ON THIS.. CUST SKS TO VERIFY IF THIS IS CORRECT.. CRM RESEARCHED IN THE VIN PROFILE AND FOUND NO CAMP'S.. CRM THEN RESEARCHED IN WEBKNOWLEDGE AND FOUND NO SP PERTAINING TO THE 2000 BLAZER'S UPPER BALL JOINTS.. CRM ADVISED THE CUST OF THIS INFO.. CUST STS SHE STILL WANTS HER VEH REPAIRED.. CRM INFORMED THE CUST THAT IF SHE WERE SEEKING ASSISTANCE, THEN SHE WOULD NEED TO HAVE THE VEH DIAGNOSED BY A GM DLR AND THEN WE COULD RESEARCH HER CASE TO SEE IF COULD OFFER ASSISTANCE.. CUST STS THIS ISN'T RIGHT AND ASKED FOR THE CHEV ADDRESS.. CRM ADVISED THE CUST OF THE ADDRESS AND THE REQ # TO REFER TO.. CUST THANKED AND DISCONNECTED THE CALL..CRM CLOSING REQ; 0; 387739361
2002-04-15

DISSATISFIED.. RANGELT/ATX/CARS; 0; 387739370

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:

OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: CANTON , MI
HOME PHONE:

CASE NUMBER:	06730117	VIN:	1GNDT13W5Y2134864
		MODEL YEAR:	2000
DATE OPENED:	2002-04-17	SERIES:	4-DOOR 4WD BLAZER BA
DATE CLOSED:	2002-04-17	MILEAGE:	37300
SOURCE:	Phone	DELIVERY DATE:	
ERC TYPE:	No	DEALER NAME:	LOU LARICHE CHEVROLET, INC.
ERC PARENT:		DEALER ADDRESS:	40875 PLYMOUTH RD,,PLYMOUTH,MI,48170,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
1 REPAIR ATTEMPT(S) — BROKE AND WHEEL BROKE AND OTHER DAMAGE

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.htm]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.htm]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.htm]]
Vehicle repair request - Repair not done
**********WORK HISTORY**********

cust states leaing veh w/ 37000 miles on it. states wife was on hwy ramp going 30 to 40 when the upper ball joint broke and the wheel brke and there was other damage. also states veh at dlr 3 days to get oil line leaks fixed and that was out of wrrnty.cust seeing assist b/c veh is falling apaart just out of wrrnty. crm unable to reach svm, steve clement @ dlr but will try again and c/b cust.

[illegible] susp req
[illegible]ll frels/cac/atc; 0; 387918683
2002-04-17

crm contacted svm steve clement who states repairs are covered under gmpp. dlr replaced rt side upper balljoint and brake sensor. cust states dlr told him it would have been covered if still under orig wrrnty so cust feels he is being punished for having gmpp that he has to

pay deductible. crm adv cust svm meant it would be covered as goodwill b/c veh so closeto 36000. cust did not give crm to offer any consideration of any kind just hung up stating he [illegible]ld never buy gm again.

crm closing req cust dissatis
jill frels/cac/atx; 0; 387931506

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

[illegible]PERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

[illegible]ALER BAC:
[illegible]ALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:

ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
[illegible]EAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
[illegible]RP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
[illegible]TY/STATE: ,
[illegible]ONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: FAIRPORT , NY
HOME PHONE:

CASE NUMBER:	06788260	VIN:	1GNDT13W8Y2167549
		MODEL YEAR:	2000
DATE OPENED:	2002-04-29	SERIES:	4-DOOR 4WD BLAZER BA
DATE CLOSED:	2002-04-30	MILEAGE:	44000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	HOSELTON CHEVROLET INC
BRC PARENT:		DEALER ADDRESS:	909 FAIRPORT RD,,EAST ROCHESTER,NY,14445,USA

**********GENERAL CASE INFORMATION**********

F10 Front Suspension
0 REPAIR ATTEMPT(S)

Other
left upper ball joint failure

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.html]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.htm]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.htm]]
Vehicle repair request - Repair not done
**********WORK HISTORY**********

Cust and dealer notified of open campaigns
Jeff Fisher,CAC,FDX; 0; 388938719
2002-04-29

Cust states: Is the original owner of a 2000 Blazer with 44000 miles. Cust states that this past weekend, her left front upper ball joint failed, causing her to drive into a ditch (no injuries, no damage, no PAR) Vehicle is at dealer for repair
Cust seeks: Wrnty coverage for repairs
CRM advsd: Called dealer, spoke to svc mgr, Neil Vanderbout who states that there is no diagnosis at this time, but once he has one, he certainly will look into assistance for this cust.
CRM advsd cust that svc mgr is looking into it, that CRM will follow up 4/30/02 12:30-2:30

PM ET with some answr/resolution.
Jeff Fisher,CAC,PDX; 0; 388938783
2-04-30

CRM called dealer, spoke to Neil who states that repairs will be covered under wrnty, campaign will be completed as well.
CRM called and updated cust, cust is satisfied and will work with dealer to resolve issues
Request closed saitisfied
Jeff Fisher,CAC,PDX; 0; 389032760

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
PURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,

PHONE NUMBER:
PRODUCT CODE:
ENGINE TYPE:
MILEAGE @ BUY-BACK: 0
MSRP:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
ACCOUNT NUMBER:
INTEREST RATE:
ACCOUNT BALANCE:
LEGAL:
DEALER ADMINISTRATION:
RELEASE:
REPLACEMENT VIN:

FAX NUMBER:
BODY TYPE:
TRIM:
TRANSMISSION:
VEHICLE DRIVEABLE:
BRC WARRANTY DATE:
NADA: 0
SALES TAX:
NAME:
INTEREST PAID:
DEALER BUYOUT:
LEGAL TYPE:
LEMON LAW:
VEHICLE DESTINATION:
LIEN PAYOFF:
TITLE BRAND:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:
NAME:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
TYPE OF INJURY:
TREATED:

LOCATION:
RESTRAINT:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
TITLE NAMES:
BUSINESS:
ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
MILEAGE AT PURCHASE: 0
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

DATE:
% BUSINESS: 0
DATE OF ACCIDENT:
DATE OF PURCHASE/LEASE:
PURCHASE/LEASE AS:

**********BRC CONTACT INFORMATION**********

NAME:
COMPANY:
ADDRESS:

CONTACT NUMBER: 1
CONTACT TYPE:
CONTACT PHONE:

DI[redacted]HEVROLET CASE 000129930 TYPE: 1-1241
NA[redacted]MCCLINTON CHEVROLET COMPANY
YR/MDL: 1998/4X4 BLAZER

Base Case Information

OWNER:]
ADDRESS

CITY: ST. MARYS STATE: WV ZIP:
VIN: 1GNDT13W4W2198407 DELIVERY DATE: 05/30/1998
RESP DEALER: 00000
MILEAGE: 12000 CORPORATE CASE #:
YEAR/MODEL: 1998/4X4 BLAZER

CASE TYPE : 1-GM 1241 STATUS: C
OPEN DATE : 03/20/2000 ORIG OPEN DATE: 03/20/2000
REOPENED: N
LAST ACTIVITY DATE: 04/20/2000 BY: CHRIS GAPCZYNSKI
CLOSE DATE: 04/20/2000 SCRAP DATE: 12/31/9999
LITIGATION/RETENTION REQUIREMENT HOLDS:
LETTER 99-01, HANDLING/STABILITY/ROOF PERF.

CO[redacted]CT TYPE: OWNER
CONTACT METHOD: T-TELEPHONE
ORIGIN CODE:
TARGET AREA: SERV-SERVICE
SOURCE CODE:
LOCATION: 1241 OWNER DEMAND AMT: $0.00
WARRANTY: I (IN/OUT)
REPAIR ORDER: RO DATE:
SAFETY CASE: Y CUSTOMER SATISFACTION: D
LEGAL FILE: (Y/N) ARBITRATION LETTER : (Y/N)
REIMBURSED OWNER: ARBITRATION OFFERED: TRADEOUT:
WARRANTY CODE: I VEHICLE BUYBACK:

DEALER CONTACTED: N DEALER NUMBER: 09255
CONTACTED DATE: 04/10/2000 NAME: MCCLINTON CHEVROLET COMPANY
DEALER CLOSED : 04/10/2000 CITY: PARKERSBURG ST: WV

REQUEST CODES AND COMMENTS

CDE	#	CLOSE	DESC
A04	0		ACCIDENT
F18	0		BALL JOINT
T01	0		DLR INSTALLED NEW BALL JOINT THAT CAUSED ACCI

Certificates

No Certificates Data available for this case.

General Comments

COMMENT TYPE: I-1241A ENTERED DATE/TIME: 03/20/2000 00:00:01
X

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 03/20/2000 13:59:23
OWNER'S NAME -
VEH YR & MODEL - 1998 CHEVY BLAZER
VIN # - 1GNDT13W4W2198407
CURRENT MILEAGE - 12000
SERVICE DEALER - MCCLINTON CHEVY
CLAIMANT NAME -
ADDRESS - - ST. MARYS - WV -
HOME PHONE ONLY -
DATE OF INCIDENT - MARCH 09-00
TIME OF INCIDENT - 10:00AM
LOCATION OF INCIDENT - ROUTE 2 AND OHIO BRIDGE
PRESENT LOCATION OF VEH - MCCLINTON CHEVY
COMPLETE ADDRESS - 712 LIBERTY ST - PARKERSBERG - WV - 26101
**********CONTINUED ON NEXT PAGE**********
AFTER MARKET ITEMS - NONE
INSTALLED BY - N/A
REPAIRS OUTSIDE OF WARRANTY - NONE
WHERE - N/A
WHO WAS DRIVING AT THE TIME -
DATE OF BIRTH -
ROAD SURFACE - WET
ROAD CONDITION - CLOUDY AND WET
NUMBER OF PEOPLE IN VEH - ONE
BODILY INJURIES - SORE TUMMY AND CHEST
INJURED NAME -
DATE OF BIRTH -
SEAT BELT USE - YES
**********CONTINUED ON NEXT PAGE**********
ADDRESS - P.O. BOX 433 ST. MARYS - WV - 26170
TYPE OF INJURY - BRUISES AND HIT HEAD ON STEERING WHEEL
TREATED WHERE - CANDEM CLARK MEMORIAL HOSPITAL
HOSPITAL STAY - NO
OTHER VEH INVOLVED - NONE
PROPERTY DAMAGE - NONE
COMPONENT ALLEGED DEFECTIVE - BALL JOINT
POLICE REPORT - YES (GAVE CUST ADDRESS FOR HIM TO SEND COPY OF REPORT)
INSURANCE COMPANY - STATE FARM
EMMERSON AVE
PARKERSBERG, WV 26101
AGENT - GENE HANES (304-485-7561)

**********CONTINUED ON NEXT PAGE**********
CLAIMANT'S DESCRIPTION OF WHAT HAPPENED - CUST ' LAD HIS
BALL JOINT REPLACE 2 DAYS
BEFORE HIS WIFE'S ACCIDENT.
CUST STATES HIS WIFE (
) WAS TRYING TO TURN
TO GET ON OHIO BRIDGE. CUST
STATES THAT HIS WIFE COULD

NOT TURN THE VEH AND INS-
TEAD, SHE RAN INTO THE
DIVIDER.
CRM WILL NOW FORWARD THIS CASE TO PAR. CRM ADVISED CUST TO WAIT 48
TO 72 HOURS BEFORE HE HEARS FROM US.
GRACIE HAPPEL/PORTLAND

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 03/21/2000 13:26:31
FILE ASSIGNED TO TAMPA PAR CRM, SUE LE FOR REVIEW AND FOLLOWUP.

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 03/22/2000 10:40:06
PAR CRM CALLED CUST BUT NO ANSWER. CRM WILL TRY ANOTHER TIME

SUONG LE,TAMPA PAR 58509
PAR CRM SPOKE TO BILL, BODY SHOP MGR. MGR STATES THAT VEH IS BEING
REPAIRED. BILL STATES THAT BALL JOINT IS IN TACT AND THERE IS NOTHING
WRONG WITH BALL JOINT. CRM THANKED BILL FOR TIME

SUONG LE,TAMPA PAR 58509

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 03/30/2000 12:54:04
PAR CRM CALLED CUST. CUST WAS NOT HOME BUT DID LEAVE A MESSAGE
WITH WIFE TO HAVE CUST CALL CRM BACK

SUONG LE.TAMPA PAR 58509

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 03/31/2000 12:41:16
CRM RECEIVE MESSAGE FROM CUST. CRM WILL CALL LATER

SUONG LE. TAMPA PAR 58509

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 04/03/2000 10:03:03
PAR CRM CALLED AND SPOKE TO CUST. CRM ADVISED CUST THAT CRM SPOKE TO
BODYSHOP MGR AND BALLJOINT IS STILL IN TACT. CRM ADVISED CUST THAT
GM DOES NOT ASSUME RESPONSIBILITY FOR ALLEGATION. CRM ADVISED WILL
CLOSE CASE AND SEND CUST A LETTER

SUONG LE.TAMPA PAR 58509
SUMMARY: CRM RECEIVE CASE
CRM REVIEW CASE
CRM CONTACT DEALER
CRM ADVISED CUST THAT GM DOES NOT ASSUME RESPONSIBILITY FOR
ALLEGATION
CRM WILL CLOSE CASE AND SEND CUST A LETTER
SUONG LE.TAMPA PAR 58509

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 04/11/2000 15:27:28
MSX INDEX 000890309

SUONG LE.PAR

COMMENT TYPE: C-CLOSE ENTERED DATE/TIME: 04/20/2000 00:00:01
GM DOES NOT ASSUME RESPONSIBILITY FOR ALLEGATION
GM DOES NOT ASSUME RESPONSIBILITY FOR ALLEGATION
GM DOES NOT ASSUME RESPONSIBILITY FOR ALLEGATION

GM 1241

ALLEGATION DEFECT LOCATION:
ALLEGATION DEFECT PART:
ALLEGATION MADE BY: CUSTOMER
OPEN DATE: 04/03/2000 ASSIGNMENT DATE:
SENT TO DEALER: 04/10/2000
RECEIVED DATE: DUE DATE:
WHOM NOTIFIED: GRACIE HAPPEL
WHEN NOTIFIED: 032000
CLAIMENT SAME AS OWNER: N CLAIMENT ATTORNEY: N
DRIVER SAME AS OWNER: N
DRIVER DESCRIPTION:
LICENSE NUMBER: LICENSE STATE:
DRIVER INC: CUST STATES THAT THEY HAD BALL
JOINT REPLACED 2 DAYS PRIOR TO ACCIDENT. CUST STATES THAT WIFE WAS
TRYING TO MAKE A TURN AND COULD NOT SO SHE WENT INTO THE DIVIDER.

HOW AND WHEN: 04-03-00, PHONE, GM DOES NOT
ASSUME RESPONSIBILITY FOR ALLEGATION
NOTIFICATION BY: CAC
INCIDENT DATE: 03/09/2000 INCIDENT TIME: 00:00:01
INCIDENT LOCATION: ROUTE 2 AND OHIO BRIDGE

VEHICLE CAN BE SEEN AT: WITH CUSTOMER

INVESTIGATION DATE: 04/01/2000
INVESTIGATOR NAME: NA NA
FURTHER INVESTIGATION: DID NOT INSPECT AND GM DOES NOT ASSUME
RESPONSIBILITY FOR ALLEGATION

INJURY INDICATOR: Y
ROAD TYPE: A-ASPHALT ROAD CONDITION: D-DRY
SHOULDER TYPE: A-ASPHALT SHOULDER CONDITION: D-DRY
NATURE OF WEATHER:
VISION OBSTRUCTION: CLEAR
DRIVER SPOKEN TO: Y ESTIMATED VEHICLE SPEED: 1
POLICE REPORT MADE: N POSTED SPEED LIMIT: 01
WITNESS: N NUMBER OF WITNESSES: 000
OTHER VEHICLE INVOLVED: N NUMBER OF PEOPLE INVOLVED: 001
NUMBER OF VEHICLES INVOLVED: 00
PHOTOS TAKEN: N Quantity: 0 BY:
PRINCIPLE VEHICLE USE: REGULAR
FIRE IND: GENERAL COMMENTS ONLY:
VEHICLE TOWED: Y
TOWING DRIVER: NA
TOWING COMPANY: NA
ADDRESS: NA
TIRE CONDITION: LEFT FRONT: LEFT REAR:
RIGHT FRONT: RIGHT REAR:
TIRE SIZE AND BRAND: NA
REPAIR ORDER INDICATOR: N RO OCCURANCES: 0
REPAIR COST: 1
VEHICLE INSPECTED BY:
ESTIMATED SOURCE: CRM
DAMAGES:

NA
REPAIR DESCRIPTION: NONE

SPECIAL EQUIPMENT:

RO[illegible] OFFICE PREFIX/STATE: INSMI ROYAL OFFICE CODE: 001
REP[illegible]ENTATIVE NAME:
REPORT ATTACHED:
STATION OFFICE COMMENT:

VEHICLE INSPECTED: N VEHICLE TURNED OVER: N
VEHICLE TYPE: N NEW AXLE TYPE:
ENGINE TYPE: TRANSMISSION TYPE:
TRUCK: N PRODUCTION DATE:
CAMPAIGN PERFORMED: N
CAMPAIGN CODE: N
DESCRIPTION:

PART STATUS: PARTS REMOVED: N
PARTS CUSTOMER NAME:
DEFECTIVE COMPONENTS:
BALLJOINT
ZONE ASSIGNED:

GM 1241 A

CONTACT: PAR CRM SUONG LE
ADDRESS: 5701 E HILLSBOROUGH AVE SUITE 2300
TAMPA FL 33610-0000
COVER LETTER DATE: 04/10/2000 SUBMIT REPORT REASON: 1

INQUIRY TO: ACKNOWLEDGEMENT TO:
ACKNOWLEDGE: X

LETTER ENCLOSURES:

OTHER REASONS:

GM 1241 D

No GM 1241D Data available for this case.
GM 1241 X

No GM 1241X Data available for this case.
Reimbursements

No Reimbursement Data available for this case.
Arbitration / Mediation

No Arbitration / Mediation Data available for this case.

Product Liability / Breach

No Product Liability / Breach Data available for this case.

Related Documents

No Related Documents Data available for this case.

Parties Involved

TYPE: OWNER
NAME: MR
COMPANY:
ADDRESS:

CITY: ST. MARYS STATE: WV ZIP:
AGE: 000 HOME PHONE:
BUSINESS PHONE: ( ) - EXTENTION:
INDEMNIFICATION DECISION: DATE:
INDEMNIFICATION REQUEST: 0 DATE:

TYPE: INJ-PRTY
NAME: MS
COMPANY:
ADDRESS:

CITY: ST. MARYS STATE: WV ZIP:
AGE: 000 HOME PHONE: (000) 000-
BUSINESS PHONE: (000) 000- EXTENTION:
INDEMNIFICATION DECISION: DATE:
INDEMNIFICATION REQUEST: 0 DATE:

TYPE: DRIVER
NAME:
COMPANY:
ADDRESS:

CITY: ST. MARYS STATE: WV ZIP:
AGE: 057 HOME PHONE:
BUSINESS PHONE: ( ) - EXTENTION:
INDEMNIFICATION DECISION: DATE:
INDEMNIFICATION REQUEST: 0 DATE:

TYPE: CLAIMANT
NAME: MR
COMPANY:
ADDRESS:

CITY: ST. MARY STATE: WV ZIP:
AGE: HOME PHONE:
BUSINESS PHONE: ( ) - EXTENTION:
INDEMNIFICATION DECISION: DATE:
INDEMNIFICATION REQUEST: 0 DATE:

Injured Parties

T[illegible] INJ PART
DR[illegible]R NAME:
LOCATION: A-LEFT FRONT SEATING POSITION: DRIVER
COMMENTS: SORE ON STOMACH, BRUISES AND HIT HEAD ON STEERING WHEEL

CANDEM CLARK MEMORIAL HOSPITAL

Repurchase

No Repurchase Data available for this case.

DMAC Correspondence

No DMAC Correspondence Data available for this case.

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: Trumbull , CT
HOME PHONE:

CASE NUMBER:	1-1388545	VIN:	1GHDT13WXY2190415
		MODEL YEAR:	2000
DATE OPENED:	2002-05-13	SERIES:	Bravada
DATE CLOSED:	2002-05-30	MILEAGE:	66000.0000000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	N/AYes	DEALER NAME:	Crabtree Cadillac-Oldsmobile, Inc.
BRC PARENT:		DEALER ADDRESS:	405 Bridgeport Ave., Rte 8,Shelton,CT,06484-5303,

**********GENERAL CASE INFORMATION**********

F17 Control Arms / Bushings / Ball Joints
0 REPAIR ATTEMPT(S) Broken

**********WORK HISTORY**********

This is not a PAR case. There was no injuries, collission, or property damage.; ; 2002-05-15
2002-05-15

svc mgr Bill Briwm; ; 2002-05-15
2002-05-15

contacted cust; ; 2002-05-15
2002-05-15

LORRAINE hEINICKE NODE 914055 MAILBOX 8476 ON 5-15-02; ; 2002-05-16
2002-05-17

CALL LEAVE SECOND MESSAGE; ; 2002-05-22
2002-05-20

Asst denied; ; 2002-05-20
2002-05-20

Avm response; ; 2002-05-21
2002-05-29

crm left message on 5-2-02 will send call cac letter 1-1388545; ; 2002-05-29
2002-05-23

Service Request Ownership has changed FROM: O: 2002-05-23
2002-05-23

Inbound Call Customer; ; 2002-05-23
2002-05-23

Cu called back, prev CRM had left msg; ; 2002-05-30
2002-05-23

Call dlr on diagnosis of veh & what caused damage; ; 2002-05-23
2002-05-23

Service Request Ownership has changed FROM: TO: 2002-05-23
2002-05-23

Service Request Ownership has changed FROM: TO: ; 2002-05-23
2002-05-30

Service Request has been Closed Dissat-Won't Purchase GM Again.; ; 2002-05-30
2002-05-13

PAR; ; 2002-05-13
2002-05-13

pre-par form; ; 2002-05-14

**********PAR INFORMATION**********

INCIDENT DATE: 2002-05-10 INCIDENT TIME: 12:13:00.000000
INCIDENT LOCATION: Park Avenue and Liberty in Bridgeport, CT

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY: none

OWNER DESCRIPTION: Cust was driving 25 mph when the cust claims the upper ball joint failed on the vehicle causing over 1700.00 dollars worth of damage to vehicle

ALLEGED DEFECTIVE COMPONENT: upper ball joint

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: Dry ROAD SURFACE: Asphalt
NUMBER OF PEOPLE: 4 BODY INJURY: N
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION: Brake Automotive
CURRENT LOCATION OF VEHICLE: Crabtree Cadillac
NOTIFY NAME: Owner

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

[redacted]	Case Typ	V10	Extract Source	Central File	Central [redacted]	[redacted]	[redacted]
IN	OR	W	Central File	331975			1GHDT13W9W2730916
IN	OR	X	Legacy			489915714101	1GKDT13W9X2549925

GM RESTRICTED

331975

CASE NUMBER: 01724373 VIN: 1GHDT13W9W2730916

DATE OPENED: 09/28/00 MODEL YEAR: 1998

DATE CLOSED: 09/28/00 SERIES: BRAVADA

SOURCE: MILEAGE: 34000

CUSTOMER:

ADDRESS:

HOME PHONE: STATE: IL

BUS. PHONE:

DELIVERY DATE: DEALER NAME: WEIL OLDSMOBILE-CADILLAC, INC.

BRC PARENT: DEALER ADDRESS:1050 SOUTH MILWAUKEE AVE.,,LIBERTYVILLE,IL,60048,USA

**********GENERAL CASE INFORMATION**********

F10 Front Suspension 0 REPAIR ATTEMPT(S)	Broken LEFT FRONT BALL JOINT
T01 Product Allegation GM 1241 0 REPAIR ATTEMPT(S)	Other FRONT AXLE

PRODICT ALLEGATION
FRONT AXLE

**********WORK HISTORY**********

CUST STATES HE WAS DRIVING THE VEH AT ABOUT 10 MILES PER HOUR AND HE HIT A CURB AND THE LEFT FRONT BALL JOINT ASSEMBLY CAME APART AND HE HIT A FLAG POLE .. ...

CUST SEEKS SAFETY ISSUE DOCUMENTED .....
CRM ADVISED CUST THAT SOMEONE FROM PAR WILL CONTACT IN8 24 TO 48 HOURS ... RHONDA PROTHRO CARS TAMPA; 0; 99999

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:

GM RESTRICTED

331975

INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES:

PROPERTY DAMAGE:

WAS VEHICLE INSURED:
INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
FAR STATUS:

**********FAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:

G M RESTRICTED

331975

DEALER ADMINISTRATION:
RELEASE:

VEHICLE DESTINATION:
LIEN PAYOFF:
TITLE BRAND:

REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

Form Approved OMB No. 2127-0008

U.S. Department of Transportation
National Highway Traffic Safety Administration

DOT Auto Safety Hotline

Vehicle Owner's Questionnaire (VOQ)

NATIONWIDE 1-888-DASH-2-DOT
1-888-327-4238
www.nhtsa.dot.gov/hotline

FOR AGENCY USE ONLY 255

Date Received: 20-SEP-2000

Dd_or ____
rt_dt ____
ed_rt ____
up_ltr ____

Reference No. 732087

Work Number [redacted]
Home Number [redacted]

OWNER INFORMATION (Type or Print)

[redacted]

Do you authorize NHTSA to provide a copy of report to the manufacturer of your vehicle? ☐ YES ☐ NO
In the absence of an authorization, NHTSA WILL NOT provide your name and address to the vehicle manufacturer.

Signature of Owner _____ Date ___/___/___

VEHICLE INFORMATION

Vehicle Ident. No. (VIN.) (Located at bottom of windshield on driver's side)	Vehicle Make	Vehicle Model	Vehicle Year	Current Odometer Reading
1GHDT13W9W2730916	OLDSMOBILE TRI	BRAVADA	1998	

Purchase Date: 01-OCT-1999
☒ New ☐ Used

Dealer's Name _____
City _____ State _____ Zip Code _____

Engine Size (CID/CCA) _____
No Cylinders _____
☐ Turbo ☐ Diesel ☐ Gas ☐ Fuel Injection

Transmission Type	Antilock Brakes	Restraint System	Cruise Control	Drive Train	Vehicle Type	Body Style
☐ Manual ☐ Automatic	☒ Yes ☐ No	☒ 3-Point Belt ☐ Driverside Airbag ☐ Passengerside Airbag ☐ Motorbelt ☐ 2-Point Belt	☒ Yes ☐ No	☐ Front ☐ Rear ☒ 4-Wheel	☐ Car ☐ Van ☐ Minivan ☐ Other ☐ Sport Ut ☐ Truck ☐ Motorcycle	☐ 2-Door ☐ 4-Door ☐ Stationwagon ☐ Pick Up Truck ☒ Other

FAILED COMPONENT(S)/PART(S) INFORMATION

Component	Part Name(s)	Location	Failed Part(s)
62132000 61580000	SUSPENSION:INDEPENDENT FRONT CONTROL ARM:UNKNOWN T STEERING:LINKAGES:TIE ROD:END	☐ Left ☐ Front ☐ Right ☐ Rear	☐ Original ☐ Replacement

No of Failures		Failed Part(s) Available?	NHTSA Previously Contacted?
1	Date(s) of Failure(s) 17-SEP-2000 Mileage at Failure(s) 34000 Vehicle Speed at Failure(s) 10	☐ Yes ☐ No	☐ Yes ☐ No

APPLICATION INCIDENT INFORMATION

(Please describe in detail the Incident(s), Failure(s), Crash(es), and Injury(ies) on the back of this form)

Crash	Fire	Number of Persons Injured	Number of Fatalities	Estimated Property Damage	Reported to Police
☐ Yes ☐ No	☐ Yes ☒ No	0	0		☒ Yes ☐ No

NARRATIVE DESCRIPTION OF FAILURE(S), INCIDENT(S), INJURY(IES)

WHILE DRIVING INTO THE SETTING SUN IN A PARKING LOT I STRUCK A3 INCH CURBING AT APPROXIMATELY 10 MPH. A LARGE FLAG POLE WAS SLIGHTLY SCRAPED WITH THE LEFT FENDER CAUSING SOME MINOR DAMAGE. THE LEFT FRONT BALL JOINT SEPARATED FROM THE LOWER CONTROL ARM CAUSING THE TIE ROD END TO SNAP AND LEFT FRONT WHEEL TO COLLAPSE. THE CAR TRAVELED APPROXIMATELY 1 1/2 CAR LENGTHS BEFORE STOPPING WITHOUT USE OF THE BRAKES. THE ONLY SKID MARKS WERE FROM THE NOW SIDEWAYS TIRE AND FROM THE DRAGGING UNDERCARRIGE BOLTS. THERE IS NO REASON THAT THIS MINOR IMPACT SHOULD HAVE CUASED THIS TYPE OF DAMAGE. THE RIVETS CONNECTING THE BALL JOINTS HAD SHEARED OFF. THIS CAR HAS NEVER BEEN DRIVEN OFF ROAD OR ABUSED IN ANY WAY. IF THIS HAD OCCURED AT HIGHWAY S

The Privacy Act of 1974-Public Law 93-579 This information is requested pursuant to authority vested in the National Highway Traffic Safety Act and subsequent amendments. You are under no obligation to respond this questionnaire. Your response may be used to assist the NHTSA in determining whether a manufacturer should take appropriate action to correct a safety defect. If the NHTSA proceeds with administrative enforcement or litigation against a manufacturer, your response, or a statistical summary thereof, may be used in support of the agency's action.

GENERAL MOTORS CORPORATION
OLDSMOBILE DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LIBERTYVILLE , IL
HOME PHONE:

CASE NUMBER:	01732196	VIN:	1GHDT13W9N2730916
		MODEL YEAR:	1998
DATE OPENED:	2000-09-28	SERIES:	BRAVADA
DATE CLOSED:	2000-11-07	MILEAGE:	34000
SOURCE:		DELIVERY DATE:	
BRC TYPE:	PAR	DEALER NAME:	WEIL OLDSMOBILE-CADILLAC, INC.
BRC PARENT:	01724373	DEALER ADDRESS:	1050 S MILWAUKEE AVE,,LIBERTYVILLE,IL,60048,USA

**********GENERAL CASE INFORMATION**********

F10 Front Suspension 0 REPAIR ATTEMPT(S)	Broken FRONT BALL JOINT BROKE AFTER CUST HIT A CURVE AND A FLAG POLE
T01 Product Allegation GM 1241 0 REPAIR ATTEMPT(S)	Other FRONT AXLE
A04 Possible Safety Concern 0 REPAIR ATTEMPT(S)	Other par

PRODICT ALLEGATION
FRONT AXLE

**********WORK HISTORY**********

Crm received this file on 09/29/00, crm called the cust on 10/02/00 and a gentleman answered the phone and said the customers were out of town and will return next week. Crm asked if I could leave information for the cust to call me back with the gentleman, and stated he did not want to give me his name and advised me to call back next week. Karen Smith/tampa-par/ext.58548.; 0; 339369270
2000-10-11

Crm called the cust today and left a voice message with my name, and 800# with ext. 58548 also the file number, asking the cust to call me back as soon as possible. Karen Smith/Tampa-par/ext.58548.; 0; 340135008
2000-10-19

Crm called cust and spoke with his wife who gave me the phone number to her husbands work. Mrs. Furman states her husband did pickup the vehicle on 10/18/00, but he wants to talk to someone about the amount of damage that was done to the vehicle. advised me to call her husband at 3pm today. Karen smith/Tampa-par/ext. 58548.; 0; 340817108
2000-10-20

Crm called the cust who states he was driving and the vehicle and he clipped a curve because the sun was blinding him and his front end collapsed, and he wants to send me pictures of the vehicle. Crm did advise the cust of the p.o box address for oldsmobile. Crm was unable to find out if the cust's vehicle was repaired, due to him not having time to speak with me, because he was with a patient, cust is a doctor. Crm will try to call him back a another time. Karen SMith/Tampa-Par/ext.58548.; 0; 340929552
2000-11-07

Crm called the cust and was advised that his vehicle was repaired thru his insurance. Cust also states he wants to send us some photos he took of his vehicle after the accident. Crm [illegible] advise the cust of the mailing address. Crm also advised the custthat GM is declining this file due to insurance involvement. Karen Smith/Tampa-Par/ext.58548.; 0; 342469851
2000-11-07

BUSINESS SUMMARY: 1. Crm received this file on 09/29/2000. 2. Crm spoke with the cust. 3. Crm advised the cust that GM is declining this claim due to insurance involvement.
Karen Smith/Tampa-Par/ext.58548; 0; 342469913
FURMAN, RICHARD

**********PAR INFORMATION**********

INCIDENT DATE: 2000-09-17 INCIDENT TIME: 18:32:00
INCIDENT LOCATION: 20 TOWER CT

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY: NONE

OWNER DESCRIPTION: CUST STATES HE HIT A 3INCH CURB AND THE ENTIRE FRONT SUSPENSION FELL APART AND HE HIT A FLAG POLE

ALLEGED DEFECTIVE COMPONENT: FRONT AXLE

INCIDENT RESULT: 11/07/00--Crm advised the cust that GM is declining due to insurance involvement.
POLICE REPORT: Y ROAD CONDITION: Dry ROAD SURFACE:
NUMBER OF PEOPLE: 2 BODY INJURY: N
[illegible]URIES: N

WAS ANOTHER VEHICLE INVOLVED: N
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: Y INSURANCE COMPANY NAME: USAA
INSURANCE COMPANY ADDRESS: SAN ANTONIO
AGENT NAME: NONE
AGENT PHONE NUMBER: 18005318111
MORE INFORMATION: CONTACT CUST OCT 9TH HE WILL BE GONE TIL THEN
MAINTENANCE LOCATION: WEIL OLSDMOBILE
CURRENT LOCATION OF VEHICLE: GERBER AUTO BODY ROUND LAKE , IL
NOTIFY NAME:

WAS VEHICLE INSPECTED: N INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED: N
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS: Accepted
**********PAR INFORMATION**********

[illegible]URCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:

DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE: Claimant
CONTACT PHONE:
ADDRESS:

LIBERTYVILLE, IL

DI[illegible]MC CASE 9915714101 TYPE: X-1241X
NA[illegible] SHERIDAN MOTORS, INC.
YR/MDL: 1999/S-JIMMY 4WD

Base Case Information

OWNER:
ADDRESS:

CITY: JOLIET STATE: IL ZIP:
VIN: 1GKDT13W9X2549925 DELIVERY DATE: 05/30/1999
RESP DEALER: 30514
MILEAGE: 1700 CORPORATE CASE #:
YEAR/MODEL: 1999/S-JIMMY 4WD

CASE TYPE : X-GM1241 STATUS: C
OPEN DATE : 07/19/1999 ORIG OPEN DATE: 07/19/1999
REOPENED: N
LAST ACTIVITY DATE: BY: NANCY KLOTZ
CLOSE DATE: 08/04/1999 SCRAP DATE: 08/04/2000
LITIGATION/RETENTION REQUIREMENT HOLDS:
LETTER 99-01, HANDLING/STABILITY/ROOF PERF.

CO[illegible]CT TYPE: OWNER
CONTACT METHOD: T-TELEPHONE
ORIGIN CODE: P PHONE
TARGET AREA:
SOURCE CODE: 00 OWNER
LOCATION: OWNER DEMAND AMT: $0.00
WARRANTY: (IN/OUT)
REPAIR ORDER: RO DATE:
SAFETY CASE: Y CUSTOMER SATISFACTION: S
LEGAL FILE: N(Y/N) ARBITRATION LETTER : (Y/N)
REIMBURSED OWNER: ARBITRATION OFFERED: N TRADEOUT:
WARRANTY CODE: VEHICLE BUYBACK:

DEALER CONTACTED: N DEALER NUMBER: 30514
CONTACTED DATE: NAME: SHERIDAN MOTORS, INC.
DEALER CLOSED : CITY: INTERNATIONAL FALLS ST: MN

REQUEST CODES AND COMMENTS

CDE	#	CLOSE	DESC
F10	0		FRONT SUSPENSION (GENERAL)
F18	0		BALL JOINTS/KINGPIN
T01	0		PRODUCT ALLEGATION
T95	0		TAMPA TRANSFER TO TIER 2

Certificates

No Certificates Data available for this case.

General Comments

COMMENT TYPE: 8-COMPLAINT ENTERED DATE/TIME: 07/19/1999 00:00:01
FRONT END
PRODUCT CONCERN
TIE ROD ENDS
TRANSFER

COMMENT TYPE: O-OPENING ENTERED DATE/TIME: 07/19/1999 00:00:01
THE CUST CLAIMS HE WAS DRIVING DOWN THE ROAD AND SOMETHING HAPPENED, THE WHEELS WENT DIFFERENT WAYS. CUST IS SEEKING TO HAVE VEHICLE REPAIRED UN DER THE WARRANTY.
CUST STATES BALL JOINTS SNAPPED. CUST STATES DEALER SAID HE MUST CALL CUSTOMER SERVICE BEFORE THEY CAN FIX. CUST SEEKS VEHICLE TO BE FIXED FREE OF CHARGE.
CUST CLAIMS FRONT WHEELS WENT SEPARATE WAYS WHEN DRIVING DOWN A ROAD.
CUST IS SEEKING REPAIRS UNDER THE WARRANTY.
FILE OPENED AS TRANSFER FROM TAMPA CENTER.

COMMENT TYPE: R-REGION ENTERED DATE/TIME: 07/19/1999 00:00:01
CRM ADVISED TRANSFER TO TIER II.
UC CODE FOR TRACKING PURPOSES ONLY.

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 07/19/1999 13:15:00
THE CUST CLAIMS DRIVING DOWN THE GAPPA ROAD NEAR RAY MN, SOMETHING HAPPENED AND THE FRONT WHEELS WENT DIFFERENT WAYS. IT WAS WAY OUT IN THE COUNTRY. HE DID NOT NOTIFY THE POLICE. HE DID NOT HAVE AN AMBULANCE. HE STATED HE CALLED ROADSIDE ASSSITANCE. HE STATED HIS RIBS HURT AND HE HAS NOT BEEN TO A DOCTOR. HE IS SEEKING REPAIRS UNDER THE WARRANTY. MARION WILLIAMS/ PHOENIX CENTER
CUST STATES FRONT BALL JOINTS SNAPPED WHILE DRIVING. CUSTOMER SEEKS REPAIR UNDER WARRANTY. CRM ADVISED TRANSFER TO TIER II. NAADHIRAH AL-MUMARRIDHAH/ TAMPA.
THIS HAPPENED JULY 16, FRIDAY THE CUSTOMER STATED. THE VEHICLE IS AT THE DEALER. I CALLED THE SERVICE MANAGER, AND SPOKE TO ERIC. HE STATED THEY CANNOT TOUCH IT UNTIL SOMEONE FROM GMC CALLS. I CALLED PAR AND WAS TOLD THIS DID NOT NEED TO HANDLE AS AN ALLEGED ACCIDENT. I CALLED ERIC AT THE DEALER AGAIN AND TOLD HIM TO INSPECT THIS VEH. IF IT IS AS THE CUST STATED THE DEALER IS TO REPAIR UNDER THE WARRANTY. IF THE VEH APPEARS TO HAVE HIT SOMETHING, HE IS TO CALL ME. I GAVE HIM THE FILE NUMBER AND MY PHONE NUMBER. MARION WILLIAMS/PHOENIX CENTER

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 07/21/1999 07:51:00
THE SERVICE MANAGER LEFT ME A VOICE MAIL MESSAGE ASKING ME TO CALL HIM. I CALLED AND HE IS NOT IN YET THIS MORNING. I WILL CALL AGAIN. MARION WILLIAMS/PHOENIX CENTER
I CALLED PAT HARRIS AT THE DEALER AND HE STATED BOTH FRONT TIRES ARE BLOWN OUT AND THE FRAME IS BENT BAD. HE STATED THE TIE ROD END IS SEPARATED AND BROKEN. THERE IS NO EVIDENCE OF HITTING ANYTHING. HE STATED HE WOULD GO OUT AND LOOK AT THE LOCATION WHERE THIS HAPPENED. HE STATED HE WILL CONTACT THE AREA SERVICE MANAGER TO SEND SOMEONE OUT TO INSPECT THIS VEH AS SO FAR THE ESTIMATE FOR REPAIRS IS $7200. THE VEHICLE HAS ONLY 1700 MILES ON IT. I WILL FOLLOW UP. MARION WILLIAMS/PHOENIX CENTER
CRM CONFERENCED ASM WITH MS. WILLIAMS.
HUGH JOHNSON/PHOENIX CENTER

THE AREA SERVICE MANAGER, MICHAEL POPOVICH, CALLED STATING THE SERVICE MANAGER IS NOT CONFORTABLE WITH REPAIRING THIS VEHICLE. HE STATED HE WI[illegible] THE PAR GROUP TO SEND OUT AN INSPECTOR TO INSPECT THIS VEHICLE.
I SPOKE TO PAM M. AND SHE STATED SINCE THE ESTIMATE FOR REPAIRS IS SO HIGH DO SET UP AS A PAR CASE. I CALLED THE AREA SERVICE MANAGER AND TOLD HIM IT WILL BE AN ALLEGED ACCIDENT CASE AND THEY WILL SEND SOMEONE TO INSPECT THIS VEHICLE. MARION WILLIAMS/PHOENIX CENTER
I CALLED OWNER REGARDING CONCERN. OWNER STATED THAT THERE ARE NO AFTERMARKET ITEMS ON VEHICLE. OWNER STATED THAT HE WAS GOING UP A HILL AT 30 MPR WHEN HE HEARD A NOISE AND VEHICLE SLOW DOWN TO A STOP. OWNER CLAIMS THAT THE BALL JOINT IS BROKEN OFF THE DRIVER SIDE WHEEL AND BOTH WHEELS ARE AT A 45 DEGREE ANGLE.
I ADVISED OWNER THAT GM WOULD LIKE TO INSPECT VEHICLE AND THAT I WOULD CALL HIM WITH RESULTS IN 2 WEEKS.
OWNER THANKED ME.
I CALLED DLR AND SPOKE TO PAT HARRIS. I ADVISED PAT THAT EAA WAS GOING TO BE SENT OUT. I ADVISED PAT NOT TO START ANY REPAIRS UNTIL VEHICLE IS REPAIRED.
*****FILE FAXED TO EAA FOR INSPECTION.
BRUCE SHELLNUT/P.A.R.T.
X44171

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 07/29/1999 14:17:00
CUST CALLED IN STATING HE WANTED AN UPDATE ON HIS CASE. CRM ADVISED TRANSFER TO MR. SHELLNUT. LISA EHL/TAMPA
RECEIVED VME FROM MR. MONROE, EAA, THAT HE HAS COMPLETED INSPECTION AND WILL SEND FILE TODAY.
BRUCE SHELLNUT/P.A.R.T
X44171

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 08/02/1999 15:35:00
RECEIVED INSPECTION REPORT. I ATTEMPTED TO CALL OWNER, NOT AVAILABLE.
I LEFT A MESSAGE ON OWNERS ANSWERING MACHINE TO CALL ME BACK.
BRUCE SHELLNUT/P.A.R.T
248-874-4171/OWNER IS NOT TO BE GIVEN MY DIRECT LINE.
OWNER CALLED ME BACK. I ADVISED OWNER THROUGH OUR INVESTIGATION, NO DEFECTS WERE FOUND. I ADVISED THAT NO RECALL WAS ON VEHICLE EITHER. I ADVISED OWNER THAT HE SHOULD CONTACT INSURANCE COMPANY FOR HANDLING.
OWNER ASKED WHY WARRANTY WOULD NOT COVER.
I ADVISED OWNER THAT THIS IS AN INSURANCE ISSUE, WARRANTY WOULD BE FOR VEHICLE DEFECTS WHICH NONE WERE FOUND.
OWNER STATED THAT HE WILL CONTACT INSURANCE COMPANY.

COMMENT TYPE: R-REGION ENTERED DATE/TIME: 08/03/1999 00:00:01
PER EAA INVESTIGATIONS, NO DEFECTS FOUND. OWNER ADVISED TO CONTACT INS. COMPANY FOR HANDLING
PER EAA. NO DEFECTS FOUND. OWNER ADVISED TO CONTACT INS. COMPANY FOR HANDLING.

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 08/03/1999 10:23:00
FILE CLOSE AND FORWARD TO ESIS
BRUCE SHELLNUT/P.A.R..T

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 08/04/1999 11:40:00
FORWARDING FILE TO ESIS AND SAFETY.
.
RECEIVED PHONE CALL FROM PAT-PARTS AND SERVICE DIRECTOR
PAT STATED HE NEEDED TO GET IN CONTACT WITH BRUCE DUE TO FACT THAT SOMEONE F ROM CUST INSURANCE IN CLAIMS DEPARTMENT FROM OUT OF TOWN HAS COME TO LOOK AT VEHICLE
PAT STATES LAST TIME HE TALKED TO BRUCE HE WAS ADVISED TO NOT LET ANYONE TOU CH VEHICLE

CRM TRIED TO GET IN CONTACT WITH BRUCE AND WAS UNSUCCESSFUL
CRM GAVE PAT BRUCE DIRECT LINE NUMBER TO TRY TO GET IN CONTACT WITH BRUCE LA
TE[illegible]RM RECIEVED PERMISSION FROM MANGER TRACEY AND PERCELL BEFORE DOING SO.
RO[illegible]TO ANDERSON,TAMPA
I RECEIVED A PHONE CALL FROM THE TAMPA PERSON ASKING ME TO CALL THE SVC
MGR, PAT HARRIS. I CALLED HIM AND I TOLD HIM I HAD NOT AUTHORIZED A RENTAL
FOR THIS CUST. HE ALSO READ MY COMMENTS WHEN I SPOKE TO ERIC AT THE DLR.
HE IS TO COLLECT THE RENTAL VEH MONEY FROM THE CUST HE STATED. MARION
WILLIAMS/PHOENIX CENTER
SERVICE MANAGER PAT HARRIS TELEPHONED AND HE IS REQUESTING TO SPEAK WITH
MARIAM WILLIAMS. MARIAM IS AT THE PHOENIX CALL CENTER. SERVICE MANAGER
STATES SHE AUTHORIZED RENTAL CAR FOR THE CUSTOMER. S/M STATES HE IS HAVING
A HARD TIME GETTING GM TO HONOR THE REQUEST FOR RENTAL ASSISTANCE.
CRM CALLED PHOENIX AND MARIAM ANSWERED THE CALL...CRM THEN GAVE HER S/M
CONTACT NUMBER AND ASK THAT SHE CONTACT S/M ASAP..RAYGINA CALHOUN/TAMPA

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 08/12/1999 12:00:00
MARK FROM DARSEY GMC (DEALER) CALLED IN TO FIND OUT WHAT IS GOING
ON WITH THE CASE. THIS IS THE DEALER WHERE THE CUST BOUGHT THE CAR.
CRM READ NOTES TO DEALER. HE WANTED TO KNOW WHAT CAUSED THIS TO
HAPPEN. CRM ADVISED TO CALL THE OTHER DEALER SINCE THEY DID THE
INSPECTION. JOHN NORKAS/TAMPA
ASSIGN ONLY DOC 199922400097 DOC IS LEGAL PAPERWORK.

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 10/14/1999 14:36:00
DOC#992870485

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 11/04/1999 14:10:00
CO[illegible]RSATION WITH CUSTOMER-LARRY DICKERSON-GM-9/28/1999
MR[illegible]ICKERSON SPOKE WITH AND EXPLAINED WE HAD
TAKEN TWO REVIEWS OF HE FACTS IN THIS CASE AND COULD FIND NO
EVIDENCE OF A PRODUCT FAILURE LEADING TO THE CAUSE OF THE INCIDENT.
THEY ARE NOT PLEASSED WITH THE RESULT.
NANCY KLOTZ/TAMPA PAR X 58184 (WARM TRANSFER)

COMMENT TYPE: G-GENERAL ENTERED DATE/TIME: 11/08/1999 13:16:00
DOC # 9931209170 MSX INDEX

GM 1241

No GM 1241 Data available for this case.

GM 1241 A

No GM 1241A Data available for this case.

GM 1241 D

No GM 1241D Data available for this case.

GM 1241 X

No GM 1241X Data available for this case.

Reimbursements

No Reimbursement Data available for this case.

Arbitration / Mediation

No Arbitration / Mediation Data available for this case.

Product Liability / Breach

No Product Liability / Breach Data available for this case.
Related Documents

9931209170

Parties Involved

TYPE: OWNER
NAME:
COMPANY:
ADDRESS:

CITY: JOLIET STATE: IL ZIP:
AGE: HOME PHONE:
BUSINESS PHONE: (000) 000-0000 EXTENTION: 0000
INDEMNIFICATION DECISION: DATE:
INDEMNIFICATION REQUEST: 0 DATE:

Injured Parties

No Injured Party Data available for this case.

Repurchase

No Repurchase Data available for this case.

DMAC Correspondence

No DMAC Correspondence Data available for this case.

Form Approved: OMB No. 2127-0039

U.S. Department of Transportation
National Highway Traffic Safety Administration

Auto Safety Hotline

Vehicle Owner's Questionnaire

NATIONWIDE 1-800-424-9393
DC METRO AREA (202) 366-0123
INTERNET: http://www.nhtsa.dot.gov

FOR AGENCY USE ONLY 118

Date Received: 16-AUG-1999

Reference No. 845098

OWNER INFORMATION (Type or Print)

JOLIET IL

Work Number

Home Number

Do you authorize NHTSA to provide a copy of report to the manufacturer of your vehicle? ☒ Yes ☐ No
In the absence of an owner name and address to the vehicle manufacturer.
Signature of Owner ____ Date 8-12-99

VEHICLE INFORMATION

Vehicle Ident. No. (VIN)	Vehicle Make	Vehicle Model	Vehicle Year	Current Odometer Reading
1GKDT13WsX2549925	GMC	JIMMY	1999	

Purchase Date: ☒ New ☐ Used

Dealer Name: Murray Olds.
City: Joliet State: IL Zip Code: 60435

Engine Size (CID/CCA): ____ No Cylinders: 6
☐ Turbo ☐ Diesel ☐ Gas ☒ Fuel Injection

Transmission Type: ☐ Manual ☒ Automatic

Antilock Brakes: ☒ Yes ☐ No

Restraint System: ☒ 3-Point Belt ☐ Motorized 3-Point Belt ☒ Driverside Airbag ☒ Passengerside Airbag

Cruise Control: ☒ Yes ☐ No

Drive Train: ☐ Front ☐ Rear ☒ 4-Wheel

Vehicle Type: ☐ Car ☐ Van ☐ Minivan ☐ Other ☒ Sport Ut. ☐ Truck ☐ Motorcycle

Body Style: ☐ 2-Door ☒ 4-Door ☐ Station Wagon ☐ Pick Up Truck ☐ Other

FAILED COMPONENT(S)/PART(S) INFORMATION

Component: 5100000 52102000

Part Name(s): STEERING LINKAGE:TIE ROD END
SUSPENSION:INDEPENDENT FRONT CONTROL ARM:LOWER T

Location: ☐ Left ☒ Right ☒ Front ☐ Rear

Failed Part(s): ☒ Original ☐ Replacement

No. of Failures

Date(s) of Failure(s): 7-16-99
Mileage of Failure(s): 1300
Vehicle Speed at Failure(s): 30

Failed Part(s) Available? ☒ Yes ☐ No

NHTSA Previously Contacted? ☐ Yes ☒ No

APPLICATION INCIDENT INFORMATION
(Please describe in detail the Incident(s), Failure(s), Crash(es), and Injury(ies) on the back of this form)

Crash	Fire	Number of Persons Injured	Number of Fatalities	Estimated Property Damage	Reported to Police
☐ Yes ☒ No	☐ Yes ☒ No	1	-0-	1500.00	☐ Yes ☒ No

NARRATIVE DESCRIPTION OF FAILURE(S), INCIDENT(S), INJURY(IES)

WHILE THE DRIVING 30-35 MPH, THE TIRE ROD AND THE BALL JOINT ON THE FRONT AXLE BROKE, CAUSING THE FRONT END OF THE TRUCK TO FALL. THE CONDITION WAS REPORTED TO GMC. THE TRUCK WILL BE REPAIRED AT OWNER'S EXPENSE. PLEASE PROVIDE ANY FURTHER DETAILS.

CONTINUE ON BACK IF NEEDED

The Privacy Act of 1974-Public Law 93-579 This information is requested pursuant to authority vested in the National Highway Traffic Safety Act and subsequent amendments. You are under no obligation respond to this questionnaire. Your response may be used to assist the NHTSA in determining whether a manufacturer should take appropriate action to correct a safety defect. If the NHTSA proceeds with administrative enforcement or litigation against a manufacturer, your response, or a statistical summary thereof, may be used in support of the agency's action.

GM632
RQ02-012

ATTACHMENT "2B"

G M R E S T R I C T E D

371166

CASE NUMBER: 05438567 VIN: 1GNDT13W4Y2197521

DATE OPENED: 08/31/01 MODEL YEAR: 00

DATE CLOSED: 08/31/01 SERIES: 4-DOOR 4WD BLAZER BA

SOURCE: YES MILEAGE: 30000

CUSTOMER:

ADDRESS:

HOME PHONE: STATE: WI

BUS. PHONE:

G E N E R A L M O T O R S C O R P O R A T I O N
C H E V R O L E T D I V I S I O N
G M R E S T R I C T E D

CUSTOMER:
ADDRESS: MILWAUKEE ,
WI

HOME PHONE:

CASE NUMBER: 05438567 VIN: 1GNDT13W4Y2197521
MODEL YEAR: 2000
DATE OPENED: 2001-08-31 SERIES: 4-DOOR 4WD BLAZER BA
DATE CLOSED: 2001-08-31 MILEAGE: 30000
SOURCE: Phone DELIVERY DATE:
BRC TYPE: Yes DEALER NAME: ANDREW CHEV INC
BRC PARENT: DEALER ADDRESS:1500 W SILVER SPRING
DR,,GLENDALE,WI,53209,USA

**********GENERAL CASE INFORMATION**********

F33 Rear Control Arms/Ball Joints/Linkage/Stabilizer - Torsion Broken
0 REPAIR ATTEMPT(S) DRY BALL JOINT CAUSED TIRED TO CAVE IN UNDER VEH

S55 Warranty Clarification Customer Satisfaction
0 REPAIR ATTEMPT(S) CUST FEELS BALL JOINT DAMAGE SHOULD BE COVERED UNDER WARRANTY

Basic warranty coverage questions.

INFORM THE CALLER OF WARRANTY COVERAGE:
* NOTE: Please reference the VIN Profile Tab to answer customer basic warranty questions.

GENERAL INFORMATION:
Base Warranty: Includes everything on the vehicle for manufacturer's defects in materials and workmanship.
Coverage: Most GM Vehicles: 3 years/36,000 miles, whichever comes first.
Oldsmobile Aurora and all Cadillac models: 4 years/50,000 miles, whichever comes first.
Sheet Metal Rust-Through: 6 years/100,000 miles, whichever comes first.
Catalytic Converter and Powertrain Control Module: Most years are 8 years/80,000 miles,

[illegible]hever comes first. Please check warranty manual of specific year for exact warranty perimeters.
California Emissions:
Defect and Performance: Most years it is 3 years/50,000 miles, whichever comes first. Please check warranty manual of specific year for exact warranty perimeters.

Specified Components: Most years it is 7 years/70,000 miles, whichever comes first (see warranty booklet for listing for specific component coverage). Please check warranty manual of specific year for exact warranty perimeters.
Common Exclusions: Damage due to any of the following:
¢ Accident
¢ Misuse
¢ Alterations
¢ Environment
¢ Chemical Treatments
¢ Aftermarket Products
¢ Improper Maintenance

Normal maintenance items include tire damage or wear, and incidental expenses.
*For additional information, the CRM can go to the [[Policy and Procedure Manual RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/WEBKNOWLEDGE/Manuals/pnp/1_2.pdf]] that is located on the Webknowledge Center.
Basic warranty coverage questions.
**********WORK HISTORY**********

CUST STATES HER TIRE CAVED IN UNDERNEATH THE VEH AND CAUSED HER TO FISH TAIL AND HIT A GARBAGE CAN. CUST STATES VEH WAS TOWED TO DLR AND THEY HAVE ADVISED HER THAT THE TIRE [illegible]ED IN BECAUSE THE BALL JOINTS WERE COMPLETELY DRY. CUST SEEKS TO HAVE REPAIRCOVERED UNDER WARRANTY DUE TO THE FACT THAT SHE HAD REGULAR MAINTENANCE PERFORMED. CRM CONTACTED BRIAN RANSOM - SVC MGR AND HE SAYS THAT EVERY LUBE MAINTENANCE SHOULD LUBRICATE THE BALL JOINTS AT ANY OIL CHANGE AND THAT WE WILL NOT BE ABLE TO COVER THE REPAIR UNDER WARRANTY. CRM ASKED SVC MGR IF THE CUST COULD PROVIDE PROOF OF MAINTENANCE IF WE COULD ASSIST HER WITH THE REPAIR. SVC MGR SAYS NO - HE SAYS CUST WOULD EITHER NEED TO SEEK ASSIST FROM INSURANCE OR FROM THE LUBE PLACE THAT DID NOT PROPERLY DO THE MAINTENANCE THAT SHE PAID FOR. CRM ADVISED CUST AND SHE IS VERY UPSET. CRM FILLED OUT PAR FOR THE INCIDENT AND ADVISED HER THAT SOMEONE FROM THAT DEPARTMENT WILL BE CONTACTING HER WITHIN 48 HOURS.
TINA HINOJOSA/CAC/ATX; 0; 368136065
2001-08-31

CUST STATES VERY LITTLE DAMAGE, JUST A CRACK IN THE FIBERGLASS BUMPER.
TINA HINOJOSA/CAC/ATX; 0; 368136088

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

[illegible]GED DEFECTIVE COMPONENT:

INCIDENT RESULT:

GM RESTRICTED

371166

VEHICLE REPORT:
NUMBER OF PEOPLE: 0
INJURIES:

ROAD CONDITION:
BODY INJURY:

ROAD SURFACE:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED:

INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

INSPECTORS NAME: INSPECTION DATE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
[illegible] STATUS:

**********PAR INFORMATION**********

SOURCE:
REQUEST TYPE:
REPURCHASE REASON:

TRANSACTION:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
PRODUCT CODE:

FAX NUMBER:
BODY TYPE:
TRIM:

ENGINE TYPE:

TRANSMISSION:
VEHICLE DRIVEABLE:

MILEAGE @ BUY-BACK: 0
MSRP:

SRC WARRANTY DATE:
NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
ACCOUNT NUMBER:
INTEREST RATE:

NAME:

INTEREST PAID:
DEALER BUYOUT:

ACCOUNT BALANCE:

GM RESTRICTED

371166

AL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
CHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
LEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

[illegible] copy of this Shipping Label (using the PRINT feature from yo[illegible]owser) and place it in you Page 1 of 1

From: TAMMY HOLCOMB (813)[illegible]-4129
GN CUST SERV GROUP/TAMPA
5701 E HILLSBOROUGH AVE
SUITE 2200
TAMPA, FL, 33619

REVENUE BARCODE

FedEx.

To: MSX International (800)231-1941

1464 John A. Papalas Drive

Lincoln Park, MI, 48146

SHIP DATE: 07NOV01
WEIGHT: 30 LBS

Ref: per files

TRK # 7911 5942 6569

FedEx PRIORITY OVERNIGHT

48146-MI-US

DTW

XH NFBA

THU
A1

Deliver by:
08NOV01

PAR

RECEIVED
NOV 9 2001

BRC PAR

COREPOINT REQUEST

FILE

05438957

Please Auto-Link

GENERAL MOTORS CORPORATION

BRAND: Chevrolet

DATE: 10/3/01

RE: Claimant:

Date of Incident: 8/30/01

File Number: 05438937

EMS/GM Central Claims
300 Renaissance Center
Mail Code 482 C20 D71
Detroit, MI 48265-3000

Gentlemen:

Attached is a PAR report with information on the above captioned incident. This Report of Preliminary Investigation is submitted to you for the reason(s) indicated below:

1. (X) The attached report is for your information and record.
2. ( ) We believe this claim may deserve further investigation by you.
3. ( ) Other:

We have checked the above items based upon the information we have at this time. If you do not agree, or if subsequent facts come to your attention indicating the advisability of a different approach, we would appreciate being advised promptly.

Please Contact:

Customer Relationship Manager
General Motors Corporation
4701 E. Hillsborough Avenue
Suite 2300
Tampa, FL 33610

Further inquiries regarding this claim should be directed to the undersigned.

Sincerely,

Myrna Vasquez-Ham
Customer Relationship Manager
General Motors Corporation
Product Allegation Resolution Team

Enclosures:

- [ ] Customer File
- [ ] VIN Profile
- [x] Inspection Report
- [ ] Pictures
- [x] Estimates
- [ ] Police or Fire Report
- [x] Repair Orders
- [ ] Burn Tape
- [x] Other: CAC FDe

R 7/26/00

GENERAL MOTORS BUSINESS RESOURCE CENTER

10/03/01

Milwaukee, WI

RE: File Number: 05438957
Vehicle Identification Number: 1GNDT13W4Y2197521

Dear Ms. Schaal:

Thank you for allowing us the opportunity to review the product allegation involving your 2000 Chevrolet Malibu.

Our investigation revealed no evidence to support the product allegation. Therefore, General Motors is unable to assume responsibility for damages and we suggest that you resolve this matter through your insurance carrier.

Sincerely,

Myrna Vasquez-Ham
Customer Relationship Manager
Product Allegation Resolution Team

11.13.00 Declination. Doc.-9

GENERAL MOTORS BUSINESS RESOURCE CENTER

09/18/01

Milwaukee, WI

RE: File Number: 05438957
Vehicle Identification Number: 1GNDT13W4Y2197521

Dear

Thank you for allowing us the opportunity to review the product allegation involving your 2000 Chevrolet Blazer. Unfortunately our attempts to reach you by phone on 9/18/01, at (414)406- 1246, and we were unsuccessful.

Therefore, we will not be able to take any further action regarding your concern until we have an opportunity to discuss this with you. We will continue to hold your file open for 10 days. You can reach me at 1-800-231-1841 extension 58592 for further review.

Sincerely,

Myrna Vasquez-Ham
Customer Relationship Manager
Product Allegation Resolution Team

11.14.00 Unable Reach.doc.-tk

PAR CASE INFORMATION

Problem ID: 05438957

CONTACT INFORMATION

Name:
Address:
Milwaukee, WI
Phone:

VEHICLE INFORMATION

VIN: 1GNDT13W4Y2197521
MAKE: CHEVROLET
MODEL: 4-DOOR 4WD BLAZER BA
YEAR: 2000
ODOMETER: 30,052

BRC CONTACT INFORMATION

NAME:
COMPANY:
ADDRESS:
PHONE:
TYPE: Claimant

ACCOUNT/POLICY:
SERVICE DEALER: BRAEGER CHEV INC
CONTRACT: KEITH
SELLING DEALER: ANDREW CHEV INC
CONTRACT:
PAYEE: No

PAR DETAILS

CONTACT ID: C0000029323602
DRIVER NAME:
DRIVER AGE: 32
DISABILATIES: NO
ROAD SURFACE: Asphalt
ROAD CONDITION: Dry
PEOPLE IN VEHICLE: 1
INJURIES: No
OTHER VEHICLES INVOLVED: No
NUMBER INVOLVED:
DEFECTIVE COMPONENT: BALL JOINTS - TIRE CAVED I
POLICE REPORT: No
INSURANCE: No
INSURNCE COMPANY:
INSURANCE COMPANY ADDR:
INSPECTION: Yes
INSP NAME: BOB MESICH/BRAEGER CH
INSP DATE: 9/28/01
INSP MILES: 30,052
INSP DONE: checked ball joints
PROPERTY DAMAGE:
INCIDENT LOCATION: EAST CAPITOL DRIVE
INCIDENT RESULT: declined 10/3/01
VEHICLE LOCATION: CUSTOMER HOME
MAINTENANCE LOCATION: INDEPENDANT LUBE
OWNER DESC: CUST TIRE CAVED UNDER VEHICLE AND SHE HIT GARBAGE CAN. NO DAMAGE TO ANYTHING EXCEPT A CRACK IN
MORE INFO: FIBERGLASS BUMPER

BODY INJURY: No
COLLISION: Yes
PROPERTY DMG: No
NON COLL: No
DMB ABV K: No
NOTIFY NAME:
AGENT NAME:
STATUS: Accepted
REJECT REASON:
ROAD TEST: No
ROAD TEST DESC:
ROAD TEST RESULT:
COMP INSPECTED: BALL JOINTS
INVEST SUMMARY: see inspection
AGENT PHONE:
INCIDENT DATE & TIME: 08/30/2001 06:30:00 AM

REIMBURSEMENT INFORMATION

ID:
PAYEE:
ADDRESS:

COMPANY:
AMOUNT:
ACCT_TYPE:
ACCT_NUM:
TAX_ID:
ISSUE_1099:
POLICY NUM:

PAR CASE INFORMATION

Problem ID: 05436957

[redacted]

DESCRIPTION:	
SOLUTION:	
COMPONENT CODE 1:	F33
COMPONENT DESCRIPTION 1:	DRY BALL JOINT CAUSED TIRED TO CAVE IN UNDER VEH
COMPLAINT CODE 1:	Broken
COMPLAINT DESCRIPTION 1:	Rear Control Arms/Ball Joints/Linkage/Stabilizer - Torsion
REPAIR ATTEMPTS 1:	0
COMPONENT CODE 2:	A04
COMPONENT DESCRIPTION 2:	ball joints
COMPLAINT CODE 2:	Other
COMPLAINT DESCRIPTION 2:	Possible Safety Concern
REPAIR ATTEMPTS 2:	0
COMPONENT CODE 3:	T01
COMPONENT DESCRIPTION 3:	ball joints
COMPLAINT CODE 3:	Other
COMPLAINT DESCRIPTION3:	Product Allegation GM 1241
REPAIR ATTEMPTS 3:	0
COMPONENT CODE 4:	
COMPONENT DESCRIPTION 4:	
COMPLAINT CODE 4:	
COMPLAINT DESCRIPTION 4:	
REPAIR ATTEMPTS 4:	
COMPONENT CODE 5:	
COMPONENT DESCRIPTION 5:	
COMPLAINT CODE 5:	
COMPLAINT DESCRIPTION 5:	
REPAIR ATTEMPTS 5:	
COMPONENT CODE 6:	
COMPONENT DESCRIPTION 6:	
COMPLAINT CODE 6:	
COMPLAINT DESCRIPTION 6:	
REPAIR ATTEMPTS 6:	

PAR CASE INFORMATION

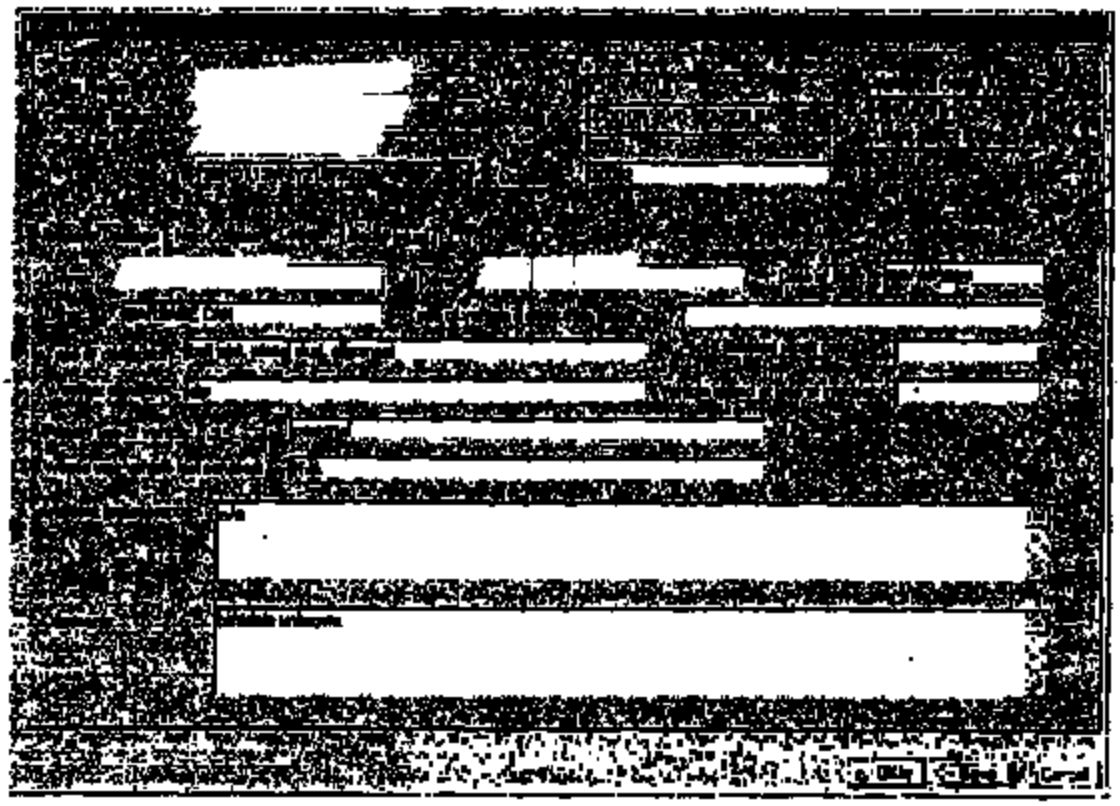
Problem ID: 05438957

09/06/2001 - 04:11:22 AM	DESCRIPTION OF INCIDENT CUSTOMER STATES SHE WAS DRIVING THE VEHICLE AND THE TIRE CAVED IN, CUSTOMER STATES SHE THEN HIT A GARBAGE CAN, CUSTOMER STATES THERE WAS SOME DAMAGE TO THE BACK BUMPER AS WELL AS THE FRONT DRIVERS SIDE TIRE. CUSTOMER STATES SHE WAS TOLD BY TWO DEALERSHIPS THAT THE BALL JOINTS BROKE. CUSTOMER STATES SHE WAS TOLD THAT IT WAS DUE TO NOT MAINTAING HER VEHICLE PROPERLY. CUSTOMER STATES SHE ALWAYS HAS OIL CHANGES, AND THAT SHE HAS RECIEPTS FOR THE MAINTENACE. CUSTOMER STATES SHE FIRST HAD THE VEHICLE TOWED TO ANDREW CHEV, CUSTOMER STATES THAT WAS THE CLOSEST DEALERSHIP. CUSTOMER STATES SHE THEN HAD IT TOWED TO WHERE SHE BOUGHT THE VEHICLE AT BRAEGER CHEV. CUSTOMER STATES SHE RECEIVED ESTIMATES. CRM ADV TO FAX ESTIMATES TO CRM. CRM ADV WILL CONTACT BRAEGER CHEV AND SPEAK WITH THE SVC MGR. CRM ADV WILL CALL HER BACK.
09/06/2001 - 05:35:17 AM	CRM TRIED TO CONTACT DELAER NO ANSWER, CRM WILL TRY AGAIN DURING BUSINESS HOURS...
09/07/2001 - 03:20:34 AM	CUSTOMER CALLED IN, CUSTOMER STATES SHE FAXED INFO TO CRM, CRM ADV DID NOT RECEIVE ALL PAPERS, CUSTOMER STATES SHE WILL FAX INFO AGAIN, CUSTOMER STATES SHE WILL FAX 4 SHEETS....
09/18/2001 - 03:31:27 AM	CRM CONTACTED SVC MGR KEITH OF BRAEGER, CRM ADV HIM CUSTOMERS CONCERN, CRM ADV WOULD LIKE HIM TO INSPECT THE VEHICLE, SVC MGR STATES HE WILL INSPECT, CRM ADV WILL CONTACT CUSTOMER AND CALL HIM BACK, CRM ADV WILL FAX INSPECTION REORT TO HIM,
[illegible]/2001 - 02:46:43 AM	crm sent inspection report to svc mgr.
09/18/2001 - 03:33:31 AM	crm will send letter .....advising unable to reach.
09/18/2001 - 02:30:59 AM	crm tried to contact customer, operator states number is not in service.
09/25/2001 - 12:04:18 AM	crm received a message from customer, crm was adv to contact her at .crm tried to contact customer, crm adv customer would like braeger chev to inspect. crm adv to contact crm when she receives the info. mvh/58592
09/26/2001 - 01:53:09 AM	crm tried to contact svc mgr keith, crm would like and update on inspection, crm was unable to reach svc mgr. crm left a message to contact crm asap. mvh/58592
09/26/2001 - 03:49:38 AM	crm received call from customer. customer state she could be reached kdg.
09/27/2001 - 08:16:36 AM	CRM SPOKE TO SVC MGR KEITH, HE STATES CUSTOMER HAS AUTHORIZED REPAIRS, SVC MGR STATES HE IS NOT SURE WHO IS PAYING FOR THE REPAIRS, SVC MGR STATES SHE JUST AUTHORIZED THE MECHANICAL REPAIRS, SVC MGR STATES HE HAS NOT FINISHEED WRITING UP THE REPORT, CRM ADV TO PLEASE FINSIH REPORT AND FAX TO CRM ASAP. MVH/58592
09/27/2001 - 09:49:16 AM	CUSTOMER STATES SHE AUTHORIZED REPAIRS, CUSTOMER STATE NO ONE HAS PAID FOR REPAIRS, CUSTOMER STATES SHE DID NOT KNOW WHAT ELSE TO DO, CUSTOMER STATES SHE IS PREGNANT AND SHE IS JUST TRYING TO GET THINGS ROLLING. CUSTOMER STATES SHE WAS TOLD THAT THEY FOU : ND THE BALL JOINTS DRY, CUSTOMER STATES SHE HAS ALWAYS TAKEN THE VEHICLE IN FOR MAINTENANCE, CUSTOMER STATES SHE HAS THE RECEIPTS, CUSTOMER STATES THE MAINTENANCE WAS DONE AT VARIOUS PLACES, CUSTOMER STATES SHE WOULD LIKE TO KNOW WHAT GM PLANS, CRM ADV NEED TO WAIT ON INSPECTION REPORT, CRM ADV SHOULD BE FAXED TOCRM TODAY,

PAR CASE INFORMATION

Problem ID: 05438957

[illegible]001 - 09:08:18 AM	crm contact svc mgr, he states they did finish the inspection. svc mgr states he thought someone faxed it over, svc mgr states will fax it again. mvh/58592
10/01/2001 - 03:15:33 AM	crm spoke to svc mgr he states he does not fax them, svc mgr states he will go and see if it has been faxed, crm adv customer keeps calling looking for an answer, crm adv would not be able to let her know until crm has received inspection report. keith states he will check on it and make sure it was faxed. mvh/58592
10/03/2001 - 11:22:55 AM	crm spoke to svc mgr keith, he states he has tried to fax crm the info. crm provided him with alt fax# crm adv will look for info. mvh58592
10/03/2001 - 02:34:55 AM	business summary crm reviewed file, crm contacted customer and reviewed per facts, customer authorized inspection., dealer submitted results, gm will decline responsibility, no offer of repairs/ repurchase made, crm closing file forwarding to cals. mym a vasquez-ham/par/lpa/58592
10/03/2001 - 02:25:49 AM	crm received inspection report, crm received a call from customer, crm adv customer gm will decline responsibility, customer states she should not be responsible, customer states she is not happy with the decision, crm adv gm can't warrant a non gm faci lity. customer states she is not going to pay for the repairs, crm adv at this time gm will decline responsibility and will not assist with repairs. customer states she will speak with her attorney, crm adv if an attorney is retained then have him or her contact crm...mvh/58592



GM Vehicle Inquiry System
Summary

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNET13W4Y2197521

VEHICLE INFORMATION

Merchandising Model:	CT10506 - 2000 4-DOOR 4WD BLAZER BASE	Warranty Start Date:	11/30/1999
BARS Order Type:	70 - RETAIL - STOCK		
Delivering Dealer:	BRAEGER CHEVROLET, INC. 4100 S 27TH ST MILWAUKEE, WI 53221-1830 (414) 281-5000	Selling Source:	13 - CHEVROLET
		Site Code:	47062
		Business Associate Code:	113332

Service Contract:	No	Branded Title:	No	Warranty Block:	No	PDI Status:	Paid

CAMPAIGN ELIGIBILITY

Campaign Number	Description	Owner Notified	Campaign Status
00063	CERTIFICATION LABEL PAYLOAD INFORMATION INCORRECT	N/A	Open

APPLICABLE WARRANTIES

Description	Effective Date	Effective Odometer	End Date	End Odometer
36/36 BUMPER TO BUMPER - NO DEDUCTIBLE	11/30/1999	22 miles	11/30/2002	36022 miles
72/100 SHEET METAL RUST-THROUGH	11/30/1999	22 miles	11/30/2005	100022 miles
36/36 CORROSION	11/30/1999	22 miles	11/30/2002	36022 miles
96/80 PCM/CC EMISSIONS	11/30/1999	22 miles	11/30/2007	80022 miles
36/36 FEDERAL EMISSIONS	11/30/1999	22 miles	11/30/2002	36022 miles

CLAIM HISTORY

R.O. Date	R.O. Number	Type	Labor Operation	Odometer Reading
08/30/2001	165587	#	T2020 - WARRANTY TOWING	3005 miles
11/01/1999	297521	I	Z7000 - NEW VEHICLE INSPECTION ALLOWANCE	0 miles

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CAC - CASE PRINT

Request Date: 10/03/2001

PROBLEM ID	08438487	VIN NUMBER	1GNDT13W4Y2197621
CONTACT NAME		MAKE	CHEVROLET
ADDRESS		MODEL	4-DOOR 4WD BLAZER BA
CITY, STATE	Milwaukee, WI	YEAR	2000
ZIP		VEHICLE MILAGE	30,000
COUNTRY	USA		
PHONE NUMBER			

COMPONENT CODE 1	F33
COMPONENT DESCRIPTION 1	DRY BALL JOINT CAUSED TIRED TO CAVE IN UNDER VEH
COMPLAINT CODE 1	Broken
COMPLAINT DESCRIPTION 1	Rear Control Arms/Ball Joints/Linkage/Stabilizer - Torsion
COMPONENT CODE 2	S68
COMPONENT DESCRIPTION 2	CUST FEELS BALL JOINT DAMAGE SHOULD BE COVERED UNDER WARRANTY
COMPLAINT CODE 2	Customer Satisfaction
COMPLAINT DESCRIPTION 2	Warranty Clarification
COMPONENT CODE 3	
COMPONENT DESCRIPTION 3	
COMPLAINT CODE 3	
COMPLAINT DESCRIPTION3	
COMPONENT CODE 4	
COMPONENT DESCRIPTION 4	
COMPLAINT CODE 4	
COMPLAINT DESCRIPTION 4	
COMPONENT CODE 5	
COMPONENT DESCRIPTION 5	
COMPLAINT CODE 5	
COMPLAINT DESCRIPTION 5	
COMPONENT CODE 6	
COMPONENT DESCRIPTION 6	
COMPLAINT CODE 6	
COMPLAINT DESCRIPTION 6	

08/31/01 CUST STATES HER TIRE CAVED IN UNDERNEATH THE VEH AND CAUSED HER TO FISH TAIL AND HIT A GARBAGE CAN. CUST STATES VEH WAS TOWED TO DLR AND THEY HAVE ADVISED HER THAT THE TIRE CAVED IN BECAUSE THE BALL JOINTS WERE COMPLETELY DRY. CUST SEEKS TO HAVE REPAIR
COVERED UNDER WARRANTY DUE TO THE FACT THAT SHE HAD REGULAR MAINTENANCE PERFORMED. CRM CONTACTED BRIAN RANSOM - SVC MGR AND HE SAYS THAT EVERY LUBE MAINTENANCE SHOULD LUBRICATE THE BALL JOINTS AT ANY OIL CHANGE AND THAT WE WILL NOT BE ABLE TO COVER THE REPAIR UNDER WARRANTY. CRM ASKED SVC MGR IF THE CUST COULD PROVIDE PROOF OF MAINTENANCE IF WE COULD ASSIST HER WITH THE REPAIR. SVC MGR SAYS NO - HE SAYS CUST WOULD EITHER NEED TO SEEK ASSIST FROM INSURANCE OR FROM THE LUBE PLACE THAT DID NOT PROPERLY DO THE MAINTENANCE THAT SHE PAID FOR. CRM ADVISED CUST AND SHE IS VERY UPSET. CRM FILLED OUT PAR FOR THE INCIDENT AND ADVISED HER THAT SOMEONE FROM THAT DEPARTMENT WILL BE CONTACTING HER WITHIN 48 HOURS.
TINA HINOJOSA/CAC/ATX

08/31/01 CUST STATES VERY LITTLE DAMAGE, JUST A CRACK IN THE FIBERGLASS BUMPER.
TINA HINOJOSA/CAC/ATX

CAC - CASE PRINT

Request Date: 10/03/2001

PROBLEM ID	65809042	VIN NUMBER	1GNDT13W4Y2187521
CONTACT NAME		MAKE	CHEVROLET
ADDRESS		MODEL	UNKNOWN
CITY, STATE	Milwaukee, WI	YEAR	2000
ZIP		VEHICLE MILAGE	30,000
COUNTRY	USA		
PHONE NUMBER			

COMPONENT CODE 1	F19
COMPONENT DESCRIPTION 1	broken,
COMPLAINT CODE 1	Other
COMPLAINT DESCRIPTION 1	Front Ball Joints/Kingpin
COMPONENT CODE 2	
COMPONENT DESCRIPTION 2	
COMPLAINT CODE 2	
COMPLAINT DESCRIPTION 2	
COMPONENT CODE 3	
COMPONENT DESCRIPTION 3	
COMPLAINT CODE 3	
COMPLAINT DESCRIPTION3	
COMPONENT CODE 4	
COMPONENT DESCRIPTION 4	
COMPLAINT CODE 4	
COMPLAINT DESCRIPTION 4	
COMPONENT CODE 5	
COMPONENT DESCRIPTION 5	
COMPLAINT CODE 5	
COMPLAINT DESCRIPTION 5	
COMPONENT CODE 6	
COMPONENT DESCRIPTION 6	
COMPLAINT CODE 6	
COMPLAINT DESCRIPTION 6	

10/01/01 CRM has rec'd CCF, cust seeking ball joint repaired. Anissa Walters-Johnson/ADR BRC/X57065/TPA

10/01/01 CRM has contacted cust at number provided. CRM advised cust that since she has aPAR file, that file takes precednet ove rher BBB file. CRM also read the program summary section in regards to filing product allegation resulting in an accident, and damages
to the veh. Cust stated what is seh to do. Cust states that she believes the ball joints (dry) have been this way since purchase. CRM advised her that IF that were true they would have broken long before now (30,000 miles later). Cust states that she has a 3/36 warranty on the veh. CRM advised her that the warranty is for manufacturer defects and workanwship, not maintenence issues. CRM advised her that the ball joints must be lubed as part of regular, normal maint per the owner's manual. Cust states that when she takes her veh for oil hoange she doesn't know what they due. CRM inquired as she ever read her invoice from the dirhslp. Cust states that she doesn't get the work performed at the dirhslp. Anissa Walters-Johnson/ADR BRC/X57065/TPA

10/01/01 CRM has also e-mailed M. Verto/BBB REP to advise her of the cust allegation. Anissa Walters-Johnson/ADR BRC/X57065/TPA

10/01/01 CRM has found another open request for this cust. Cust currently has an open request in the PAR dept.
CRM has spoken with PAR CRM/ Myrna Hem. Myrna stated that she is currently waiting for the inspection report, however the srvce mngr at Brieger has co
nfirmed that the ball joints were dry and this contributed to the accident. Myrna stated that the srvce mngr also stated that the ball joints must be lubed every 5,000 miles and thisis using done with the oil changes. CRM thanked Myrna for her assistance. CRM will contact dirhslp for further clarification and the AVM. Anissa Walters-Johnson/ADR BRC/X57065/TPA

FAX COVER SHEET

BRAEGER CHEVROLET INC
4100 So. 27th Street
Milwaukee, WI. 53221
Phone 414-281-5000
Fax 414-281-5015

SEND TO	
Company name: GM Pop	From: Keith
Attention: Myrna-Vasquez-Hoyt	Date:
Office location:	Office location: Braeger Chev
Fax number: 813-635-4071	Phone number: 414-281-5015

☐ Urgent ☐ Reply ASAP ☐ Please comment ☐ Please review ☐ For your information

Total pages, including cover: _____

COMMENTS

Myrna I thought I would send you a copy of the Repair order. It explains it all.

Thanks

Keith

Please Read This, If You Have ANY Questions PLEASE CALL ME !!

The information contained in this facsimile may contain privileged and/or confidential information intended only for the use of the individual listed below. If the reader of this transmission is not the intended recipient, you are hereby notified that any dissemination or copying of this transmission is strictly prohibited. If you have received this transmission in error, please immediately notify this sender by telephone and return the original of this transmission to the sender at the address below via regular United States Mail without making a copy. Thank you.

To: SVC. MGR. Keith
Department: SERVICE
Phone:
Fax: (414) 281-5015

From: MYRNA VASQUEZ-HAM
Phone: (800) 231-1841 EXT. 58592
Fax: 813-635-4071

DATE: 9/18/01
Pages including this cover page:
File Number: 05438957
Owner's Name:

The following Material is being forwarded to aid in obtaining facts, measurements, and photo documentation that will assist General Motors in a product investigation. Please use the enclosed section(s) from the GM PAR Investigation Forms.

If you have a question, before or during the inspection, please contact the individual sending this document at the number listed. Please call when you have completed the inspection, before the vehicle is removed from the shop, for final review. Do not under any circumstances, remove or replace parts from this vehicle unless instructed to do so.

No opinions or conclusions should be drawn or communicated to the customer. It will be G&FS responsibility to give a position directly to the customer.

Using 2-Day Priority Mail, please return completed investigation packet to:

General Motors
Product Allegation Resolution Team
5701 E. Hillsborough Ave.
Suite 2300
Tampa, Florida 33610
Attn: Myrna Vasquez-Ham
Customer Relationship Manager

GM appreciates your assistance in this matter, as our greatest concern is the safety and satisfaction of our customers'.

BRAEGER CHEVROLET, INC.
4100 S. 27th Street
MILWAUKEE, WISCONSIN 53221
(414) 281-5000
www.braeger.com

5781161 302948

INVOICE

MILWAUKEE, WI PAGE 1
HOME:

SERVICE ADVISOR: 278 BOB MESICH

11	00	CHEVROLET BLAZER	1GNDT13W4Y2197521		30052/30053	T2646

08NOV1999		08NOV2001	04SEP01		0.00	CASH	26SEP2001

OPTIONS: DDR:47062-ENG:4.3 Liter V6 CPI 90 Deg.
TRN:M30

13:46 01SEP01 09:36 26SEP01

LINE OPCODE TECH TYPE HOURS	LIST	NET	TOTAL
A CUST REPORTS BROKEN BALL JOINT			
522C INSPECT FRT SUSPENSION-FOUND LEFT UPPER BALL JOINT SEPARATED DUE TO LACK OF LUBRICATION-OTHER 3 BALL JOINTS WORN OUT-ALL GREASE FITTINGS ARE			
410 CPT		390.00	390.00
1 17980952 B/JNT	82.59	82.59	82.59
1 17980952 B/JNT	82.59	82.59	82.59
2 22156908 STUD KIT	63.43	63.43	126.86
522C SIEZED SHUT FROM NEVER BEING GREASED-INSTALL BOTH UPPER & LOWER BALL JOINTS & LUBE			
410 CPT		0.00	0.00
522C REPLACE LEFT FRT WHEEL SPEED SENSOR - BROKE IN TWO [illegible] JOINT BROKE			
410 [illegible]		[illegible]	75.00
1 159[illegible] SENSOR	54.75	54.75	54.75
522C LEFT [illegible] CV JOINT MISSING 1 ROLLER & ALL [illegible] BEARINGS-JOINT BROKE & BOOT TORE OPEN [illegible] BALL [illegible] BROKE			
[illegible]		[illegible]	120.00
[illegible]	351.58	[illegible]	351.58
522C REPLACE CV JOINT & BOOT			
410 CPT		0.00	0.00
522C REPLACE WHEEL STUD AND NUT - NOT SIEZED TO STUD			
410 CPT		15.00	15.00
1 9591978 BOLT/SCRW	2.94	2.94	2.94
1 10028615 NUT	4.64	4.64	4.64
24D WHEEL BALANCE			
410 CPT		39.95	39.95
24E FRONT END ALIGNMENT			
410 CPT		49.95	49.95
LW PARTS WITH (W-) IN FRONT OF DESCRIPTION HAVE A LIMITED LIFETIME WARRANTY			

DISCLAIMER OF WARRANTIES

The dealer is not a party to any Manufacturer's warranty on parts or service contained herein. THE DEALER HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY PARTS, LABOR OR DIAGNOSTIC SERVICES FURNISHED UNDER THIS ORDER.

WE SERVICE CHEVROLET -GEO AND MOST GENERAL MOTORS CARS AND TRUCKS

SERVICE DEPT. HOURS	PARTS DEPT. HOURS
MONDAY-THURSDAY	MONDAY - THURSDAY
7:00 am - 9:00 pm	7:30 am - 9:00 pm
FRIDAY	FRIDAY
7:00 am - 9:00 pm	7:30 am - 9:00 pm
SATURDAY	SATURDAY
8:00 am - 5:00 pm	8:00 am - 5:00 pm

SERVING MILWAUKEE MOTORISTS SINCE 1923

"Dealer whose repair practices are regulated by chapter ATCP 132, Wis. Adm. Code, corrugated by the Bureau of Consumer Protection, Wisconsin Dept. of Agriculture, Trade and Consumer Protection, P.O. Box 8911, Madison, Wisconsin 53708-8911."

DESCRIPTION	TOTALS
LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

OCT 23 2001 11:51 4142810395 PAGE.03

5781161 302948

INVOICE

BRAEGER CHEVROLET, INC.
4100 S. 27th Street
MILWAUKEE, WISCONSIN 53221
(414) 281-5000
www.braeger.com

MILWAUKEE, WI
HOME:

PAGE 2

SERVICE ADVISOR: 278 BOB MEDICH

COLOR	YEAR	MAKE/MODEL	VIN	LICENSE	MILEAGE IN/OUT	TAG
11	00	CHEVROLET BLAZER	1GNDT13W4Y2197521		30052/30053	T2646

DEL DATE	SERVICE DATE	WARR. EXP.	PROMISED	PO NO.		PAYMENT	INV. DATE
08NOV1999		08NOV2001	04SEP01		0.00	CASH	26SEP2001

DATE/TIME RECEIVED	CUSTOMER NOTIFIED DATE	OPTIONS: DLR:47062 ENG:4.3 Liter V6 CPI 90 Deg. TRN:M30
13:46 01SEP01	09:36 26SEP01	

LINE OPCODE TECH TYPE HOURS	LIST	NET	TOTAL
999 CPT		0.00	0.00

PARTS: 705.95 LABOR: 689.90 OTHER: 0.00 TOTAL LINE A: 1395.85

****

SUBL ROAD PATROL 128148 PO24858 CPT	88.50	88.50
ENVIRONMENTAL RECYCLE, RECLAMATION, SHOP SUPPLY		9.88

DISCLAIMER OF WARRANTIES

The dealer is not a party to any Manufacturer's warranty on parts or service contained herein. THE DEALER HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ANY PARTS, LABOR OR DIAGNOSTIC SERVICES FURNISHED UNDER THIS ORDER.

WE SERVICE CHEVROLET -GEO AND MOST GENERAL MOTORS CARS AND TRUCKS

SERVICE DEPT. HOURS	PARTS DEPT. HOURS
MONDAY-THURSDAY 7:00 am - 5:00 pm	MONDAY - THURSDAY 7:30 am - 5:00 pm
FRIDAY 7:00 am - 5:00 pm	FRIDAY 7:30 am - 5:00 pm
SATURDAY 8:00 am - 5:00 pm	SATURDAY 8:00 am - 5:00 pm

SERVING MILWAUKEE MOTORISTS SINCE 1923

Where vehicle repair practices are regulated by chapter ATCP 132, Wis. Adm. Code, administered by the Bureau of Consumer Protection, Wisconsin Dept. of Agriculture, Trade and Consumer Protection, P.O. Box 8911, Madison, Wisconsin 53708-8911.

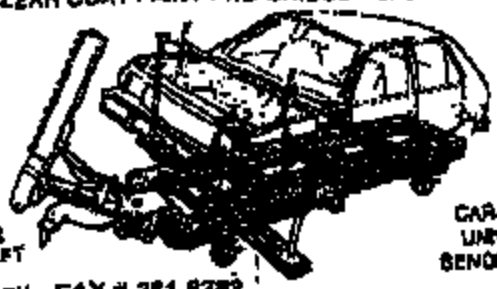
DESCRIPTION	TOTALS
LABOR AMOUNT	689.90
PARTS AMOUNT	705.95
GAS, OIL, LUBE	0.00
SUBLET AMOUNT	88.50
MISC. CHARGES	9.88
TOTAL CHARGES	1494.23
LESS INSURANCE	0.00
SALES TAX	83.68
PLEASE PAY THIS AMOUNT	[illegible]

OCT 03 2001 11:52 4142810395 PAGE.04

CLEAR COAT PAINT AND UNIBODY SPECIALISTS

Braeger

Chevrolet Jeep Geo Eagle



JONG AIR DOWN DRAFT BAKING SPRAY BOOTH

CAR-O-LINER UNIVERSAL BENCH SYSTEM

4100 S. 27th St. • MILWAUKEE, WI. 53221
TELEPHONE (414) 281-5000 FAX # 281-8383

NAME: DATE: 9-3-01 PHONE:
ADDRESS: PHONE:
CITY: Milw VEHICLE DESCRIPTION: COLOR: LICENSE: MODEL: MILEAGE: 1Tk in dT L 3 W 4 H 2

No. Item	Est. Place	DETAILS OF REPAIRS AND/OR REPLACEMENTS	LABOR		PARTS		MATERIAL	
	X	upper and lower Ball joints	390	00	29	00		
	X	Wheel Speed Sensor	75	00	55	00		
	X	Inner C.V. Boot	75	00	35	00		
	X	Wheel Stud	15	00	8	00		
		Align	40	95				

THE ABOVE IS AN ESTIMATE BASED ON OUR INSPECTION AND DOES NOT COVER ANY ADDITIONAL PARTS OR LABOR FOUND TO BE WORN OR DAMAGED WHICH IS NOT EVIDENT ON THE FIRST INSPECTION. NATURALLY SUCH ITEMS COULD NOT HONESTLY BE INCLUDED HERE, BUT WILL BE CALLED TO YOUR ATTENTION AND REASONABLY CHARGED FOR IN ADDITION TO PRICE QUOTED.

THANK YOU FOR ALLOWING US TO PREPARE A DAMAGE ESTIMATE FOR YOU. WE HOPE YOU WILL ASK FOR US TO REPAIR YOUR VEHICLE.
TIN 39-0394520

ESTIMATE PREPARED BY _____

TOTALS	604 95	39 00
TOTAL ESTIMATE	964.	95
TOW & ADV. CHGS.	98.	50
SUBTOTAL	1063.	45
SALES TAX	61.	23
GRAND TOTAL	1124.	68

BRAEGER - THE NAME THAT MEANS CHEVROLET IN MILWAUKEE SINCE 1923

FROM : [illegible] CONTRACTORS

PARTS QUOTE MEMO

Model | V.I.N. | R.O. No. 36180 | Date 8/3/2

Year	Make	Description / Part Number	Availability	Cost	Retail	F.R. Time	Total
00	[illegible]						
1	[illegible]	124130 U5	47-F		452.00	1.5	566.00
2	[illegible]	17980452	47-G		198.20	5.5	769.20
2	[illegible]	22156908	47-C		153.00		
	Alignment						69.95
							1405.20

Service Advisor: [signature]

Parts Counter Person: [signature]

Technician: [signature]

EQUIPMENT / ADDITIONAL VEHICLE INFORMATION / COMMENTS

In an amount not to exceed $ _____ if the repairs exceed the amount stated, I can be contacted for verbal approval of the difference at Phone: _____

✓PLEASE SIGN HERE _____ DATE _____

OR I prefer to [illegible] and I will come to your dealership during regular [illegible] date.

PLEASE SIGN [illegible]

ADAMM #35

CORRECTION:

SE OF FAILURE:

TIME CLOCK

EST

STOP

START

TOTAL

SEP 27 2001 15:07 414 9649304 PAGE.02

Braeger

Chevrolet Jeep Eagle Geo

4100 S. 27th St. - MILWAUKEE, WI. 53221

TELEPHONE (414) 281-5000

CLEAR COAT PAINT AND UNIBODY SPECIALISTS

JONG AIR DOWN DRAFT BAKING SPRAY BOOTH FAX # 281-9363

CAR-O-LINER UNIVERSAL BENCH SYSTEM

DATE 9-3-01

CITY Milw WI

RE-PAIR	RE-PLACE	DETAILS OF REPAIRS AND/OR REPLACEMENTS	LABOR	PARTS	MATERIAL
	X	uper and lower Ball joints	390.00	250.00	
	X	Wheel speed Sensor	75.00	55.00	
	X	Inner C.V Boot	75.00	35.00	
	X	Wheel stud	15.00	8.00	
		Align	49.95		

SEP 07 2001 14:58 414 9645304 PAGE.01

302947

NISSAN

SERVICE ADVISOR

07:35 31AUG01 17:02 31AUG01

LINE OPCODE TECH TYPE HOURS

A TOWED IN, LEFT FRONT TIRE TILTED IN - ADVISE

C55 TOWED IN & INSPECT. LEFT UPPER BALL-JOINT FELL APART. JOINT WAS RUSTY & HAD NO GREASE. ALL JOINTS ARE DRY. SPEED SENSOR HARNESS TORN OFF. (N/C)

3235 ISA 0.50

NEEDS LEFT FRONT HUD/SENSOR, 4 BALL JOINTS & ALIGNMENT = $1405.00.

CUSTOMER HAVING TOWED TO FIRESTONE. THEY WERE DOING PREVIOUS SERVICE

****

WE AT ANDREW WANT TO THANK YOU FOR THE OPPORTUNITY TO SERVICE YOUR VEHICLE. THE GOAL OF OUR TEAM OF PROFESSIONA[illegible] IS YOUR COMPLETE SATISF[illegible] ANY QUESTIONS, PLEASE [illegible] MANAGER, BRIAN RANSOM, [illegible] GER, STEVE MAREK.

PAID

CASH VISA CK TNG CK

MC DISC

SERVICE AND PARTS DEPARTMENT HOURS
MONDAY & WEDNESDAY
7:00 A.M. - 5:00 P.M.
TUESDAY - THURSDAY - FRIDAY
7:00 A.M. - 5:00 P.M.
SATURDAYS
8:00 A.M. - 1:00 P.M.

Everyone at Andrew Chevrolet-Nissan, Inc. is totally dedicated to 100% customer satisfaction.

If for any reason you are not completely satisfied, please contact our Service Director.

THANK YOU FOR YOUR BUSINESS!

LARGE AMOUNT	
PARTS AMOUNT	0.00
GAS/OIL/LUBE	0.00
SUBLET	0.00
MISC.	0.00
TOTAL SERVICES	0.00
LESS INS./COUP.	0.00
SALES TAX	
PLEASE PAY THIS AMOUNT	

CUSTOMER COPY

CLEAR COAT PAINT AND UNIBODY SPECIALISTS

VROLET BLAZER

17 AUG 31 AUG

OPTIONS: DEPRESSITZ, ENG

PEAK

102 31AUG01

TYPE HOURS

FRONT TIRE [illegible] IN ADVISE

& INSPECT. LEFT UPPER BALL JOINT

PART. JOINT WAS RUSTY & HAD NO GREASE.

INTS ARE DRY. SPEED SENSOR HARNESS

IBA 0.50

HUD/SENSOR. 4 BALL JOINTS & ALIGNMENT [illegible]

DOWED TO FIRESTONE. THEY WERE DOING FREE OUR SERVICE

WE AT ANDREW WANT TO THANK YOU FOR THE OPPOR-
TUNITY TO SERVICE YOUR VEHICLE. THE GOAL OF
OUR TEAM OF PROFESSIONAL SERVICE [illegible] YOU HAVE
IS YOUR COMPLETE SATISFACTION. [illegible] SERVICE
ANY QUESTIONS. PLEASE [illegible]
MANAGER, BRIAN RANSOM. [illegible]
GER, STEVE MARCK.

SERVICE AND PARTS
DEPARTMENT HOURS
MONDAY & WEDNESDAY
7:00 A.M. - 6:00 P.M.
TUESDAY - THURSDAY - FRIDAY
7:00 A.M. - 6:00 P.M.
SATURDAYS
8:00 A.M. - 1:00 P.M.

THANK YOU FOR YOUR BUSINESS

PLEASE PAY THIS AMOUNT

CUSTOMER COPY

PAGE.01

SEP 07 2001 13:22

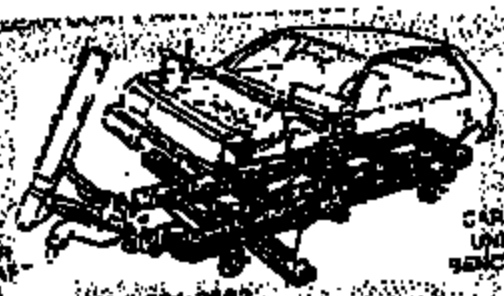
INVOICE

SERVICE ADVISOR

raeger

Jeep

Eagle



27th St. - MILWAUKEE, WI. 53221

PHONE (414) 281-5000

JONG AIR DOWN DRAFT BAKING SPRAY BOOTH

FAX # 281-8363

CAR-O-LINER UNIVERSAL BENCH SYSTEM

9-3-01

WI

DETAILS OF REPAIRS AND/OR REPLACEMENTS	LABOR	PARTS	MATERIAL
per and lower Ball joints	390.00	250.00	
Wheel Speed Sensor	75.00	55.00	
Inner C.V. Boot	75.00	35.00	
Wheel Stud	15.00	8.00	
Alisn	49.95		

TOTALS 604.95 390.00

TOTAL ESTIMATE	994.95
TOW & ADV CHGS.	98.50
SUB-TOTAL	1093.45
SALES TAX	61.23
GRAND TOTAL	1154.68

...AN ESTIMATE BASED ON OUR INSPECTION AND DOES NOT COVER ...AL PARTS OR LABOR FOUND TO BE WORN OR DAMAGED WHICH IS ... ON THE FIRST INSPECTION. NATURALLY SUCH ITEMS COULD NOT ... INCLUDED HERE, BUT WILL BE CALLED TO YOUR ATTENTION AND CHARGED FOR IN ADDITION TO PRICE QUOTED

...OR ALLOWING US TO PREPARE A DAMAGE ESTIMATE FOR YOU, ...J WILL SELECT US TO REPAIR YOUR VEHICLE.

...BY

...MILWAUKEE SINCE 1923

SEP 07 2001 13:24

PARTS QUOTE MEMO Andrew

Maker	Model	V.I.N.	R.O No.	Date
[illegible]			36180	8/3

Description / Part Number	Availability	Cost	Retail	F.R. Time	Total
[illegible]					
12413045	47-F		452.00	1.5	546.00
[illegible] 17980952	47-G		198.20		
22156908	49-P		153.00	5.5	769.00
Alignment					69.95
					1405.00

Service Advisor

Counter Person

Technician

EQUIPMENT / ADDITIONAL VEHICLE INFORMATION / COMMENTS

COMPLETION

SE OF FAILURE

If an amount not to exceed $ _____ if the repairs exceed the amount listed, I can be contacted for verbal approval of the difference at Phone: _____

✓PLEASE SIGN HERE: _____ DATE _____

OR I prefer to I
during regular I

If come to your dealership

PLEASE SIGN

ADAMM #

TOTAL P.03
PAGE.03

SEP 07 2001 13:27

CASE NO: 99-0515367
DATE OPENED: 09/21/1999
DATE CLOSED: 09/24/1999
SOURCE: PHONE
CUSTOMER:
ADDRESS:
HOME PHONE:

VIN: GC E13 W
MODEL YR: 98
SERIES: T1 4X4 S-SERIES
MILEAGE: 053000
STATE: MA
SPENCER MA
BUS. PHONE: :

********** GENERAL COMMENTS **********

CUSTOMER STATES SHE WAS DRIVING ALONG ABOUT 15 OR 20 MPH WHEN ALL OF A SUDDEN HER VEHICLE BECAME VERY DIFFICULT TO CONTROL. TO REALIZE LATER THAT HER FRONT BALL JOINT HAD FAILED. SHE SAYS GM IS LUCKY SHE WAS NOT KILLED. CUSTOMER SEEKS GM TO REIMBURSE FOR THE REPAIR BECAUSE SHE FEELS THAT WAS A DEFECTIVE PART. CRM ADVISED TRANSFER TO TIER2.
CRM:ANNIE JACKSON/AUSTIN, TX
TIER2/LAURA/AUSTIN,TX

CALL WAS TRANSFERRED FROM TIER 1... CUSTOMER STATES THAT THE FRONT BALL JOINT IN HER VEHICLE BROKE IN HALF AND STATES THAT SHE FEELS THAT SHE COULDVE HAVE BEEN KILLED CUSTOMER STATES THAT THIS HAS GOT TO BE A MANUFACTURERS DEFECT AND IS OUT OF WARRANTY CUSTOMER STATES SHE HAS BEEN A LOYAL CHEVROLET CUSTOMER AND SHE IS THE ORIGINAL OWNER OF THE VEHICLE CUSTOMER IS OUT OF WARRANTY AND IS SEEKING GOODWILL ASSISTANCE CRM ACKNOWLEDGED THE INFORMATION AND AFTER SEVERAL ATTEMPTS TO GET IN CONTACT WITH THE DEALERSHIP I WAS NOT ABLE TO GET A HOLD OF ANYBODY AT THE DEALERSHIP CRM WILL FOLLOW UP
LAURA TELLEZ/AUSTIN

CRM MADE SEVERAL ATTEMPTS TO GET A HOLD OF SERVICE MANAGER AT THE DEALERSHIP THROUGHOUT THE DAY BUT WAS UNSUCCESSFUL CRM TRIED CALLING CUSTOMER BACK TO LET HER KNOW THAT CRM WAS STILL TRYING TO RESEARCH THE INFORMATION BUT CUSTOMER WAS NOT AT THE OFFICE CRM LEFT MESSAGE ON ANS MACH
LAURA TELLEZ/AUSTIN

********** REQUEST CODE AND COMMENTS **********

CDE #	DESC	CDE COMMENTS
F16	G	FR BALL JOINT FAILED CASE CLOSED BY SYSTEM

GM RESTRICTED

373880

CASE NUMBER: 05183733 VIN: 1GNDT13W7Y2193656

DATE OPENED: 08/03/01 MODEL YEAR: 00

DATE CLOSED: 08/16/01 SERIES: 4-DOOR 4WD BLAZER BA

SOURCE: PAR YES MILEAGE: 23000

CUSTOMER:

ADDRESS:

HOME PHONE: STATE: PA

BUS. PHONE:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: OLD FORGE ,
PA

HOME PHONE:

CASE NUMBER:	05183733	VIN:	1GNDT13W7Y2193656
		MODEL YEAR:	2000
DATE OPENED:	2001-08-03	SERIES:	4-DOOR 4WD BLAZER BA
DATE CLOSED:	2001-08-16	MILEAGE:	23000
SOURCE:		DELIVERY DATE:	
BRC TYPE:	PAR Yes	DEALER NAME:	SUN CHEVROLET, INC.
BRC PARENT:	04774193	DEALER ADDRESS:	927 N STATE ST,,CLARKS SUMMIT,PA,18411,USA

**********GENERAL CASE INFORMATION**********

T22 CSI Reply — Other
0 REPAIR ATTEMPT(S) — product allegation

F18 Front Ball Joints/Kingpin — Other
0 REPAIR ATTEMPT(S) — product allegation

A04 Possible Safety Concern — Other
0 REPAIR ATTEMPT(S) — product allegation

T01 Product Allegation GM 1241 — Other
0 REPAIR ATTEMPT(S) — product allegation

CSI REC'D 7/2

**********WORK HISTORY**********

CRM received PAR.
Robert st. pierre / PAR / Tampa 58420; 0; 365980690
2001-08-06

Mathe Boyce investigated in this phone call. Description of incident: Customer states the weather was overcast, hot, and no rain. There was a ski rack added to the vehicle.

GM RESTRICTED

373880

customer is the original owner. The vehicle has been maintained at Sun Chevrolet and Tom Hester Cheverolet. The vehicle has been repaired under warranty. Customer sustained a cervical sprain on her right shoulder and neck. Customer states she was driving 35 mph downhill when the wheel caved in. The vehicle slid to a stop and did not collide with anything. The sudden jolt to a stop caused her bodily injury. Customer seeks a new vehicle of the same make, model, year, and value till the end of her lease and medical compensation with 5 hours of pay loss included.
Customer agreed to a call back by this CRM for research purposes.
Robert st. pierre / PAR / Tampa 58420; 0; 365983957
2001-08-16

PAR CRM RECEIVED CALL FROM CUST. CUST SEEKS TO AN UPDATE ON FILE. CRM REVIEWED FILE AND ADVISED CUST THAT ROBERT IS OUT TODAY. CRM ADVISED CUST THAT DUE TO CUST SEEKING MEDICAL COMPENSATION AND LOST WAGES THAT CRM WILL CLOSE FILE IN PAR AND FORWARD TOESIS FOR FURTHER REVIEW. CUST AGREED.; 0; 366846212
2001-08-16

SUMMARY: REVIEWED FILE, CONTACTED CUST, FORWARD FILE TON ESIS FOR FURTHER REVIEW DUE TO MEDICAL COMPENSATION AND LOST WAGES, CRM WILL CLOSE FILE, NO OFFERS MADE TO CUST; 0; 366846289
FRET, EDMOND

**********PAR INFORMATION**********

INCIDENT DATE: 2001-08-01 INCIDENT TIME: 08:30:00
INCIDENT LOCATION: moosic rd & louis industrial dr

VER NAME: DRIVER AGE:
DRIVER DISABILITY: no

OWNER DESCRIPTION: cust sts that veh wheel bent in causing cust to skid across road and ended up w/cervical sprain

ALLEGED DEFECTIVE COMPONENT: BALL JOINTS AND IDLER ARM

INCIDENT RESULT: ESIS, PHONE, 08-16-01
POLICE REPORT: N ROAD CONDITION: Dry ROAD SURFACE:
NUMBER OF PEOPLE: 1 BODY INJURY: Y
INJURIES: Y

WAS ANOTHER VEHICLE INVOLVED: N
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: Y INSURANCE COMPANY NAME: KEYSTONE INSURANCE
INSURANCE COMPANY ADDRESS: 2040 MARKET ST
PHILADELPHIA PA 19103
AGENT NAME: N/A
AGENT PHONE NUMBER: 800-222-4357
MORE INFORMATION: cust was treated by a dr armando sallvanti@ 570-457-8364
MAINTENANCE LOCATION: TOM HESSER CHEVROLET & SUN CHEVROLET
CURRENT LOCATION OF VEHICLE: OWNER'S POSSESSION
IFY NAME: CUSTOMER

WAS VEHICLE INSPECTED: N INSPECTORS NAME: INSPECTION DATE:

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373880

MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED: N
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY: NONE
PAR STATUS: Accepted

**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRES
CITY/STATE: OLD FORGE, PA
PHONE NUMBER:
SEATING POSITION: UPRIGHT
RESTRAINT: SEATBELT
TYPE OF INJURY: CERVICAL SPRAIN
TREATED: Y
IF SO, WHERE: 315 S.MAIN ST OLD FORGE PA 18518

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373880

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: CONTACT NUMBER: 1
COMPANY: CONTACT TYPE: Claimant
CONTACT PHONE:

ADDRESS:

OLD FORGE, PA

PAR CASE INFORMATION

373880

Problem ID: 05183733

CONTACT INFORMATION

Name:
Address: /
OLD FORGE, PA
Phone:

VEHICLE INFORMATION

VIN: 1GNDT13W7Y2198668
MAKE: CHEVROLET
MODEL: 4-DOOR 4WD BLAZER BA
YEAR: 2000
ODOMETER: 28,000

REC CONTACT INFORMATION

NAME: FRIET, EDMOND
COMPANY:
ADDRESS: 407 CARTER ST

PHONE:
TYPE: Claimant

ACCOUNT/POLICY:
SERVICE DEALER: TOM HESSER CHEVROLET INC
CONTRACT: NA
BILLING DEALER: TOM HESSER CHEVROLET INC
CONTRACT: NA
PAYEE: No

PAR DETAILS

CONTACT ID: C0000000218577
DRIVER NAME:
DRIVER AGE: 48
DISABILATIES: no
ROAD SURFACE: Asphalt
ROAD CONDITION: Dry
PEOPLE IN VEHICLE: 1
INJURIES: Yes
OTHER VEHICLES INVOLVED: No
NUMBER INVOLVED:
DEFECTIVE COMPONENT: BALL JOINTS AND IDLER AR
POLICE REPORT: No
INSURANCE: Yes
INSURNCE COMPANY: KEYSTONE INSURANCE
URANCE COMPANY ADDR: 2048 MARKET ST
INSPECTION: No
INSP NAME:
INSP DATE:
INSP MILES:
INSP DONE:
PROPERTY DAMAGE:
INCIDENT LOCATION: nocolo rd & louis industrial dr
INCIDENT RESULT: ESIS, PHONE, 06-15-01
VEHICLE LOCATION: OWNER'S POSSESSION
MAINTENANCE LOCATION: TOM HESSER CHEVROLET & SUN CHEVROLET
OWNER DESC: cust sts that veh wheel bent in causing cust to skid across road and ended up w/cervical sprain
MORE INFO: cust was treated by a dr armando [illegible] 570-457-6364

BODY INJURY: Yes
COLLISION: No
PROPERTY DMG: No
NON COLL: Yes
DMG ABV K: No
NOTIFY NAME: CUSTOMER
AGENT NAME: N/A
STATUS: Accepted
REJECT REASON:
ROAD TEST: No
ROAD TEST DESC:
ROAD TEST RESULT:
COMP INSPECTED:
INVEST SUMMARY: NONE
AGENT PHONE: 800-222-4357
INCIDENT DATE & TIME: 06/01/2001 08:30:00 AM

REIMBURSEMENT INFORMATION

ID:
PAYEE:
ADDRESS:

COMPANY:
AMOUNT:
ACCT_TYPE:
ACCT_NUM:
TAX_ID:
ISSUE_1099:
POLICY NUM:

PAR CASE INFORMATION

Problem ID: 06183733

UCC CODE INFORMATION

DESCRIPTION:
SOLUTION:
COMPONENT CODE 1: T22
COMPONENT DESCRIPTION 1: product allegation
COMPLAINT CODE 1: Other
COMPLAINT DESCRIPTION 1: CSI Reply
REPAIR ATTEMPTS 1: 0

COMPONENT CODE 2: F18
COMPONENT DESCRIPTION 2: product allegation
COMPLAINT CODE 2: Other
COMPLAINT DESCRIPTION 2: Front Ball Joints/Knocks
REPAIR ATTEMPTS 2: 0

COMPONENT CODE 3: A04
COMPONENT DESCRIPTION 3: product allegation
COMPLAINT CODE 3: Other
COMPLAINT DESCRIPTION3: Possible Safety Concern
REPAIR ATTEMPTS 3: 0

COMPONENT CODE 4: T01
COMPONENT DESCRIPTION 4: product allegation
COMPLAINT CODE 4: Other
COMPLAINT DESCRIPTION 4: Product Allegation GM 12/1
REPAIR ATTEMPTS 4: 0

COMPONENT CODE 5:
COMPONENT DESCRIPTION 5:
COMPLAINT CODE 5:
COMPLAINT DESCRIPTION 5:
REPAIR ATTEMPTS 5:

COMPONENT CODE 6:
COMPONENT DESCRIPTION 6:
COMPLAINT CODE 6:
COMPLAINT DESCRIPTION 6:
REPAIR ATTEMPTS 6:

WORK HISTORY

06/06/2001 - 03:28:08 AM
CRM received PAR.
Robert st. pierre / PAR / Tampa 58420

06/06/2001 - 04:31:57 AM
Rollie Boyce investigated in this phone call. Description of incident: Customer states the weather was overcast, hot, and no rain. There was a ski rack added to the vehicle. The customer is the original owner. The vehicle has been maintained at Sun Ch
evrolet and Tom Hester Chevrolet. The vehicle has been repaired under warranty. Customer sustained a cervical sprain on her right shoulder and neck. Customer states she was driving 35 mph downhill when the wheel caved in. The vehicle slid to a stop and did not collide with anything. The sudden jolt to a stop caused her bodily injury. Customer seeks a new vehicle of the same make, model, year, and value till the end of her lease and medical compensation with 5 hours of pay loss included.
Customer agreed to a call back by this CRM for research purposes.
Robert st. pierre / PAR / Tampa 58420

06/16/2001 - 08:49:07 AM
PAR CRM RECEIVED CALL FROM CUST. CUST SEEKS TO AN UPDATE ON FILE. CRM REVIEWED FILE AND ADVISED CUST THAT ROBERT IS OUT TODAY. CRM ADVISED CUST THAT DUE TO CUST SEEKING MEDICAL COMPENSATION AND LOST WAGES THAT CRM WILL CLOSE FILE IN PAR AND FORWARD TO
ESIS FOR FURTHER REVIEW. CUST AGREED.

06/16/2001 - 03:51:29 AM
SUMMARY: REVIEWED FILE, CONTACTED CUST, FORWARD FILE TON ESIS FOR FURTHER REVIEW DUE TO MEDICAL COMPENSATION AND LOST WAGES, CRM WILL CLOSE FILE, NO OFFERS MADE TO CUST

GM Vehicle Inquiry System
Summary

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W7Y2193656

VEHICLE INFORMATION

Merchandising Model:	CT10506 - 2000 4-DOOR 4WD BLAZER BASE	Warranty Start Date:	11/20/1999
BARS Order Type	70 - RETAIL - STOCK		
Delivering Dealer :	TOM HESSER CHEVROLET, INC. 1001 N WASHINGTON AVE SCRANTON, PA 18509-2917 (570) 343-1221	Selling Source:	13 - CHEVROLET
		Site Code:	15133
		Business Associate Code:	113942

Service Contract:	Yes	Branded Title:	No	Warranty Block:	No	PDI Status:	Paid

CAMPAIGN ELIGIBILITY

Campaign Number	Description	Owner Notified	Campaign Status
00063	CERTIFICATION LABEL-PAYLOAD INFORMATION INCORRECT	N/A	Open

APPLICABLE WARRANTIES

Description	Effective Date	Effective Odometer	End Date	End Odometer
36/36 BUMPER TO BUMPER - NO DEDUCTIBLE	11/20/1999	7 miles	11/20/2002	36007 miles
72/100 SHEET METAL RUST-THROUGH	11/20/1999	7 miles	11/20/2005	100007 miles
36/36 CORROSION	11/20/1999	7 miles	11/20/2002	36007 miles
96/80 PCM/CC EMISSIONS	11/20/1999	7 miles	11/20/2007	80007 miles
36/36 FEDERAL EMISSIONS	11/20/1999	7 miles	11/20/2002	36007 miles

CLAIM HISTORY

R.O. Date	R.O. Number	Type	Labor Operation	Odometer Reading
06/13/2001	197304	#	E7960 - STEER IDLER ARM RPL	23468 miles
06/07/2001	104997	S	B0431 - TIRE - REPLACE (GOODYEAR)	22000 miles
06/05/2001	197187	#	E7960 - STEER IDLER ARM RPL	22982 miles
05/07/2001	103813	#	J5485 - THROTTLE GSKT RPL	21790 miles

05/07/2001	103813	#	Z7901 - COURTESY TRANSPORTATION DAY 1	21790 miles
01/05/2000	083526	#	H0431 - LR BRAKE PLATE RPL	1729 miles
01/05/2000	083526	#	H0131 - LR DISC R&R/RPL	1729 miles
01/05/2000	083526	#	Z7902 - COURTESY TRANSPORTATION DAY 2	1729 miles
10/28/1999	293656	I	Z7000 - NEW VEHICLE INSPECTION ALLOWANCE	0 miles

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GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
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CUSTOMER:
ADDRESS: OLD FORGE ,
PA
HOME PHONE:

CASE NUMBER:	05183733	VIN:	1GNDT13W7Y2193656
		MODEL YEAR:	2000
DATE OPENED:	2001-08-03	SERIES:	4-DOOR 4WD BLAZER BA
DATE CLOSED:	2001-08-16	MILEAGE:	23000
SOURCE:		DELIVERY DATE:	
BRC TYPE:	PAR Yes	DEALER NAME:	SUN CHEVROLET, INC.
BRC PARENT:	04774193	DEALER ADDRESS:	927 N STATE ST,,CLARKS SUMMIT,PA,18411,USA

**********GENERAL CASE INFORMATION**********

T22 CSI Reply 0 REPAIR ATTEMPT(S)	Other product allegation
F18 Front Ball Joints/Kingpin 0 REPAIR ATTEMPT(S)	Other product allegation
A04 Possible Safety Concern 0 REPAIR ATTEMPT(S)	Other product allegation
[illegible] Product Allegation GM 1241 [illegible]EPAIR ATTEMPT(S)	Other product allegation

CSI REC'D 7/2
**********WORK HISTORY**********

CRM received PAR.
Robert st. pierre / PAR / Tampa 58420; 0; 365980690
2001-08-06

Ruthe Boyce investigated in this phone call. Description of incident: Customer states the weather was overcast, hot, and no rain. There was a ski rack added to the vehicle. The customer is the original owner. The vehicle has been maintained at Sun Chevrolet and Tom Hester Cheverolet. The vehicle has been repaired under warranty. Customer sustained a cervical sprain on her right shoulder and neck. Customer states she was driving 35 mph downhill when the wheel caved in. The vehicle slid to a stop and did not collide with anything. The sudden jolt to a stop caused her bodily injury. Customer seeks a new vehicle of the same make, model, year, and value till the end of her lease and medical compensation with 5 hours of pay loss included.
Customer agreed to a call back by this CRM for research purposes.
Robert st. pierre / PAR / Tampa 58420; 0; 365983957
2001-08-16

PAR CRM RECEIVED CALL FROM CUST. CUST SEEKS TO AN UPDATE ON FILE. CRM REVIEWED FILE AND ADVISED CUST THAT ROBERT IS OUT TODAY. CRM ADVISED CUST THAT DUE TO CUST SEEKING MEDICAL [illegible]MPENSATION AND LOST WAGES THAT CRM WILL CLOSE FILE IN PAR AND FORWARD TOESIS FOR FURTHER [illegible]VIEW. CUST AGREED.; 0; 366846212
2001-08-16

SUMMARY: REVIEWED FILE, CONTACTED CUST, FORWARD FILE TON ESIS FOR FURTHER REVIEW DUE TO MEDICAL COMPENSATION AND LOST WAGES, CRM WILL CLOSE FILE, NO OFFERS MADE TO CUST; 0;
[redacted]846289
[redacted]T, EDMOND

**********PAR INFORMATION**********

INCIDENT DATE: 2001-08-01 INCIDENT TIME: 08:30:00
INCIDENT LOCATION: moosic rd & louis industrial dr

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY: no

OWNER DESCRIPTION: cust sts that veh wheel bent in causing cust to skid across road and anded up w/cervical sprain

ALLEGED DEFECTIVE COMPONENT: BALL JOINTS AND IDLER ARM

INCIDENT RESULT: ESIS, PHONE, 08-16-01
POLICE REPORT: N ROAD CONDITION: Dry ROAD SURFACE:
NUMBER OF PEOPLE: 1 BODY INJURY: Y
INJURIES: Y

WAS ANOTHER VEHICLE INVOLVED: N
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

[redacted] VEHICLE INSURED: Y INSURANCE COMPANY NAME: KEYSTONE INSURANCE
INSURANCE COMPANY ADDRESS: 2040 MARKET ST
PHILADELPHIA PA 19103
AGENT NAME: N/A
AGENT PHONE NUMBER: 800-222-4357
MORE INFORMATION: cust was treated by a dr armando sallvanti@ 570-457-8364
MAINTENANCE LOCATION: TOM HESSER CHEVROLET & SUN CHEVROLET
CURRENT LOCATION OF VEHICLE: OWNER'S POSSESSION
NOTIFY NAME: CUSTOMER

WAS VEHICLE INSPECTED: N INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED: N
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY: NONE
PAR STATUS: Accepted
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
[redacted]LER NAME:
[redacted]ALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:

PRODUCT CODE:
BODY TYPE:
TRIM:
[illegible]INE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

[illegible]E:
LOCATION:
[illegible]DRES
CITY/STATE: OLD FORGE, PA
PHONE NUMBER:
SEATING POSITION: UPRIGHT
RESTRAINT: SEATBELT
TYPE OF INJURY: CERVICAL SPRAIN
TREATED: Y
IF SO, WHERE: 315 S.MAIN ST OLD FORGE PA 18518

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME: FRET, EDMOND
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE: Claimant
CONTACT PHONE: 5704511347
[illegible]RESS: 407 CARTER ST

OLD FORGE, PA 185182126

GM RESTRICTED

380397

CASE NUMBER:	05695543	VIN:	1GNDT13W0Y2296756
DATE OPENED:	10/16/01	MODEL YEAR:	00
DATE CLOSED:	10/17/01	SERIES:	UNKNOWN
SOURCE:	YES	MILEAGE:	22000
CUSTOMER:			
ADDRESS:			
HOME PHONE:		STATE:	NY
BUS. PHONE:			

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LAKE RONKONKOMA
NY
HOME PHONE:

CASE NUMBER:	05695543	VIN:	1GNDT13W0Y2296756
		MODEL YEAR:	2000
DATE OPENED:	2001-10-16	SERIES:	UNKNOWN
DATE CLOSED:	2001-10-17	MILEAGE:	22000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	HUSTEDT CHEVROLET INC
BRC PARENT:		DEALER ADDRESS:	1815 MIDDLE COUNTRY

RD,,CENTEREACH,NY,11720,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin — Broken
0 REPAIR ATTEMPT(S) — DRIVER'S FRONT BROKE OFF

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/Products/general/SolutionsByComponentCode.htm]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN
C:\Progra~1\Plus!\Micros~1\Iexplore.exe
http://carsweb/webknowledge/carscp/sbs/html/chronic repair.htm]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss

3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/carscp/sbs/html/sbs customer requests vehicle repurchase.htm]]
Vehicle repair request - Repair not done L/F Ball Joint failed.
**********WORK HISTORY**********

CUST STATES SECOND OWNER ON A VEH WITH 22,000 MILES HAD A WHEEL FALL OFF. CUST INITALLY SEEKS 1) THE VEH BOUGHT BACK, 2) 4 NEW TIRES ON THE VEH. 3) CONFIDENCE REBUILT WITH THE VEH AND CHEV. CRM CONTACTED TOM, ASST SRV MGR, AT HUSTEDT. TOM STATES THATCURRENTLY THE ISSUE IS ENTIRELY TOO NEW TO ASSESS THE REASONS OF THE FAILURE, AND THE WRNTABLE REPAIRS. TOM STATES THE VEH SHOULD QUALIFY FOR A LOANER VEH. CRM RETURNED TO CUST TO ADVISE THAT THE FAILURE OF THE BALLJOINT IS CURRENTLY UNDIAGNOSED. CRM ADVISED THAT THERE IS NO HISTORY OF ANY WNRTABLE CLAIMS ON THE VEH, SO THE REQUEST FOR THE REPURCHASE IS DENIED, CUST UNDERSTANDS, CUST STILL SEEKS FAITH RESTORED IN THE VEH, AND IT BE REPAIRED PROPERLY. CRM APLOGIZED FOR THE FAILURE AND ASSUERED THAT THIS IS NOT A "COMMON FAILURE" CRM ADVISED THAT A CALL IS SET FOR 10/17/01 AT PRIMARY # 1:30 - 2:30 PM EST. KEN PETERSEN/CAC/PDX; 0; 372109552
2001-10-17

please discontinue working the file. PAR has taken ownership of customer's concerns at the request of the AVM.

Amber Clark/tampa/par/57148; 0; 372187196

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:

GM RESTRICTED

380397

MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 ERC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:

DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,

NE NUMBER:
SEATING POSITION:
TYPE OF INJURY:
TREATED:

RESTRAINT:

IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
TITLE NAMES:
BUSINESS:
ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
MILEAGE AT PURCHASE: 0
DOES OWNER HAVE POSSESSION OF VEHICLE:
RESOLUTION SOUGHT:

DATE:

% BUSINESS: 0
DATE OF ACCIDENT:

DATE OF PURCHASE/LEASE:
PURCHASE/LEASE AS:

**********BRC CONTACT INFORMATION**********

NAME:
COMPANY:

ADDRESS:

CONTACT NUMBER: 1
CONTACT TYPE:
CONTACT PHONE:

From: TAMMY HOLCOMB [illegible]
[illegible] CUSTOMS GROUP/TAMPA
[illegible] E HILLSBOROUGH AVE
SUITE [illegible]
TAMPA, FL [illegible]

To: GM/SITEL (248)475-7314
c/o MSX International
1426 Pacific Drive

Auburn Hills, MI, 48326

FedEx

TRK # 7924 8275 4057

48326-MI-US

FI MTCA

DTW

FEB 14 2002

THU
AA
Delivery
07FEB02

PAR CASE INFORMATION

Problem ID: 05702695

CONTACT INFORMATION	VEHICLE INFORMATION
Name:	VIN: 1GNDT13W0Y2296756
Address:	MAKE: CHEVROLET
LAKE RONKONKONA, NY 11776-	MODEL: UNKNOWN
Phone:	YEAR: 2000
	ODOMETER: 23,757

SRC CONTACT INFORMATION

NAME:		ACCOUNT/POLICY:	
COMPANY:		SERVICE DEALER:	HUSTEDT CHEVROLET INC
ADDRESS:		CONTRACT:	GEORGE SHEA, SVM
		SELLING DEALER:	HUSTEDT CHEVROLET INC
PHONE:		CONTRACT:	N/A
TYPE:	Claimant	PAYEE:	No

PAR DETAILS

CONTACT ID:	C0000031057896	BODY INJURY:	No
DRIVER NAME:		COLLISION:	No
DRIVER AGE:	0	PROPERTY DMG:	No
DISABILATIES:	unknown	NON COLL:	Yes
ROAD SURFACE:	Asphalt	DMB ABV K:	No
ROAD CONDITION:	Dry	NOTIFY NAME:	
# PEOPLE IN VEHICLE:	1	AGENT NAME:	
INJURIES:	No	STATUS:	Accepted
OTHER VEHICLES INVOLVED:	No	REJECT REASON:	
NUMBER INVOLVED:		ROAD TEST:	No
DEFECTIVE COMPONENT:	LOWER BALL JOINT	ROAD TEST DESC:	
POLICE REPORT:	No	ROAD TEST RESULT:	
INSURANCE:	No	COMP INSPECTED:	FRONT SUSPENSION
INSURNCE COMPANY:		INVEST SUMMARY:	SEE HISTORY
INSURANCE COMPANY ADDR:		AGENT PHONE:	
INSPECTION:	Yes	INCIDENT DATE & TIME:	10/15/2001 12:00:00 AM
INSP NAME:	EAA		
INSP DATE:	10/29/01		
INSP MILES:	23,757		
INSP DONE:	VISUAL INSPECTION OF FRONT SUSPENSION		
PROPERTY DAMAGE:			
INCIDENT LOCATION:	PARKING LOT		
INCIDENT RESULT:	REPAIR, 11/06/01, 1099 HRS		
VEHICLE LOCATION:	HUSTEDT CHEVROLET INC, 1815 MIDDLE COUNTRY RD, CENTEREACH, NY 11729-3534,		
MAINTENANCE LOCATION:	DEALERSHIP		
OWNER DESC:	CUST STATES SHE PULLED INTO PARKING LOT AND THE FRONT WHEEL CAME LOOSE. VEH THEN STRUCK A LIGHT POLE		
MORE INFO:	AVM INTIATED PAR FILE		

REIMBURSEMENT INFORMATION

ID:	
PAYEE:	
ADDRESS:	
COMPANY:	
AMOUNT:	
ACCT_TYPE:	
ACCT_NUM:	
TAX_ID:	
ISSUE_1099:	
POLICY NUM:	

PAR CASE INFORMATION

Problem ID: 06702695

DESCRIPTION:	
SOLUTION:	
COMPONENT CODE 1:	T01
COMPONENT DESCRIPTION 1:	lower ball joint
COMPLAINT CODE 1:	Other
COMPLAINT DESCRIPTION 1:	Product Allegation GM 1241
REPAIR ATTEMPTS 1:	0
COMPONENT CODE 2:	A04
COMPONENT DESCRIPTION 2:	lower ball joint
COMPLAINT CODE 2:	Other
COMPLAINT DESCRIPTION 2:	Possible Safety Concern
REPAIR ATTEMPTS 2:	0
COMPONENT CODE 3:	F18
COMPONENT DESCRIPTION 3:	lower ball joint
COMPLAINT CODE 3:	Other
COMPLAINT DESCRIPTION3:	Front Ball Joints/Kingpin
REPAIR ATTEMPTS 3:	0
COMPONENT CODE 4:	
COMPONENT DESCRIPTION 4:	
COMPLAINT CODE 4:	
COMPLAINT DESCRIPTION 4:	
REPAIR ATTEMPTS 4:	
COMPONENT CODE 5:	
COMPONENT DESCRIPTION 5:	
COMPLAINT CODE 5:	
COMPLAINT DESCRIPTION 5:	
REPAIR ATTEMPTS 5:	
COMPONENT CODE 6:	
COMPONENT DESCRIPTION 6:	
COMPLAINT CODE 6:	
COMPLAINT DESCRIPTION 6:	
REPAIR ATTEMPTS 6:	

PAR CASE INFORMATION

Problem ID: 05702695

10/17/2001 - 11:17:47 AM	The customer has been provided alternate transportation by the dealership. The vehicle is currently located at the dealer. Please review CAC file 05701455. Amber Clark/tampa/par/57148
10/18/2001 - 01:08:10 AM	CRM RECEIVED AND REVIEWED FILE FOR LOWER BALL JOINT ALLEGATION. CRM PRINTED CAC FILE AND VEH HISTORY. DON LATIMER/PAR/57748
10/18/2001 - 02:02:23 AM	CRM CONTACTED THE CUST AND CUST RELATED THE FOLLOWING DESCRIPTION OF THE INCIDENT: CUST STATES SHE HAD JUST PULLED INTO A PARKING LOT WHEN HER LEFT FRONT WHEEL CAME LOOSE CAUSING HER TO LOSE CONTROL OF HER VEH. CUST STATES THE NIGHT BEFORE THE INCIDE NT SHE NOTICED THAT WHEN SHE ACCELERATED FROM A STOP THERE WAS A KNOCKING SOUND COMING FROM THE LEFT FRONT. CUST GAVE HER PERMISSION TO INSPECT HER VEH. CUST SEEKS TO GET HER VEH REPAIRED. CRM ADVISED ADDITIONAL RESEARCH WOULD BE NEEDED AND SHE WOULD BE CONTACTED ASAP.
10/18/2001 - 01:47:38 AM	CRM LEFT VME FOR AVM, MR FRANK ANGELICO. DON LATIMER/PAR/57748
10/22/2001 - 09:16:44 AM	CRM CONTACTED THE DLR, HUSTEDT CHEVROLET INC, 1815 MIDDLE COUNTRY RD, CENTEREACH, NY 11720-9534, Phone: (631) 585-2700 , Fax: (631) 585-3414 , AND SPOKE W/MR GEORGE SHEA, SVM. MR SHEA AGREED TO INSPECT THE VEH AT HIS DLRSHIP. CRM FORWARDING REQUEST FOR INSPECTION. DON LATIMER/PAR/57748
10/23/2001 - 10:58:31 AM	CRM WAS CONTACTED BY THE AVM, MR FRANK ANGELICO ON 10-19-2001. AVM ADVISED HE HAD BRIEFLY LOOKED AT THE VEH AND BASED ON HIS FINDINGS HE WOULD LIKE TO HAVE AN INDEPENDENT INSPECTOR LOOK AT THE VEH. CRM ADVISED AN INDEPENDENT INSPECTOR WOULD BE REQUESTE D. DON LATIMER/PAR/57748
10/23/2001 - 03:09:39 AM	CRM RECEIVED A CALL FROM AVM, MR FRANK ANGELICO. CRM ADVISED MR ANGELICO OF THE REQUEST FOR AN INDEPENDENT INSPECTOR. DON LATIMER/PAR/57748
10/23/2001 - 11:18:40 AM	CRM REQUESTING EAA INSPECTION. DON LATIMER/PAR/57748
10/23/2001 - 11:08:32 AM	CRM CONTACTED THE AVM AND LEFT VME. CRM CONTACTED THE DLR AND SPOKE W/MR GEORGE SHEA, SVM, AND ADVISED HIM TO CANCEL THE REQUEST FOR THE INSPECTION. DON LATIMER/PAR 57748
10/24/2001 - 11:38:59 AM	CRM RECEIVED CALL FROM INSPECTOR. THE INSPECTOR ADVISED HE HAS RECEIVED THE REQUEST, HOWEVER, HE WILL NOT BE ABLE TO LOOK AT THE VEH UNTIL 10-30-2001. DON LATIMER/PAR/57748
10/29/2001 - 01:11:46 AM	CRM RECEIVED VME FROM CUST. CRM RETURNED CALL AND CUST HAD BEEN SEEKING A STATUS ON THE FILE, HOWEVER, CUST ADVISED SHE HAD JUST CONTACTED THE DLR AND HAD BEEN ADVISED THE INSPECTOR WAS LOOKING AT THE VEH. CUST ALSO REQUESTED ASST W/A TEN DOLLAR A DAY RENTAL CHARGE. CRM ADVISED THE INSPECTION WOULD NEED TO BE RECEIVED AND REVIEWED AND ANY ADDITIONAL COMP COULD BE ADDRESSED AT THE TIME A DECISION WAS MADE. DON LATIMER/PAR/57748
10/30/2001 - 01:07:53 AM	CUST CALLED SEEKING STATUS. CRM ADVISED THE INSPECTION REPORT HAS NOT BEEN RECEIVED. CRM ADVISED CUST SHE WOULD BE CONTACTED ASAP. DON LATIMER/PAR/57748
11/01/2001 - 03:26:31 AM	CUST CALLED SEEKING STATUS OF FILE. CRM ADVISED PRELIMINARY REPORT HAS BEEN RECEIVED AND ADDITIONAL RESEARCH IS REQUIRED. DON LATIMER/PAR/57748

PAR CASE INFORMATION

Problem ID: 05702695

11/05/2001 - 09:04:56 AM	CRM RECEIVED VMS FROM INSPECTOR MAC ANENEY. CRM CONTACTED MR MAC ANENEY AND WAS ADVISED HE HAD RESOLVED HIS QUESTION AND HIS REPORT HAD BEEN SUBMITTED. DON LATIMER/PAR/57748
11/06/2001 - 02:09:49 AM	CRM RECEIVED MSG TO CONTACT MR FRANK ANGELICO, AVM, AT 631-265-6200. MR ANGELICO WAS SEEKING STATUS ON THE FILE. CRM ADVISED WE WERE AWAITING THE INSPECTOR'S REPORT. CRM DON LATIMER/PAR/TAMPA
11/06/2001 - 04:09:18 AM	CUST CALLED REQUESTING STATUS. CRM ADVISED THE INSPECTION REPORT HAS NOT BEEN RECEIVED. CRM AND CUST AGREED TO A CALLBACK FOR 11-8-2001 BETW 9:30 AM-1:30 PM ET. DON LATIMER/PAR/57748
11/07/2001 - 04:45:54 AM	CRM RECEIVED INSPECTION REPORT. DON LATIMER/PAR/57748
11/08/2001 - 10:33:43 AM	CRM REVIEWED INSPECTION REPORT W/TM G DEPALMA. IT WAS DETERMINED THERE WAS NO CLEAR INDICATION OF MFG'S CONCERN. BASED ON CUST DESCRIPTION OF THE INCIDENT REVIEW OF THE FACTS IN THE INSPECTION REPORT CRM WILL OFFER TO REPAIR THE CUST'S VEH. CRM CONT ACTED THE CUST AND CUST AGREED W/GM DECISION. DON LATIMER/PAR/57748
11/08/2001 - 10:51:09 AM	CRM CONTACTED THE DLR AND SPOKE W/MR GEORGE SHEA, SVM. CRM REQUESTED A COMPLETE RO. MR SHEA ADVISED HE WOULD FORWARD AN RO ASAP. DON LATIMER/PAR/57748
11/12/2001 - 03:35:29 AM	CUST STATES THAT SHE IS GETTING GMR VOICE MAIL. CUST SEEKS TO SPEAK W/ HIM IN REGARDS TO THIS CASE. CRM ADVISED THAT WOULD TAKE MSG AND GIVE IT TO HIM AND ONCE HE IS AVAIL HE WILL CONTACT HER BACK. VON KILPATRICK/PAR 57552
11/13/2001 - 08:23:20 AM	CRM CONTACTED THE MR SHEA, SVM, AND REQUESTED STATUS ON THE REPAIR EST. MR SHEA REQUESTED A COPY OF THE ORIG EST BE FAXED TO HIM. MR SHEA ADVISED HE WOULD HAVE A REVISED REPAIR EST COMPLETED THIS DATE. DON LATIMER/PAR/57748
11/13/2001 - 09:38:47 AM	CRM ATTEMPTED TO RETURN CALL TO CUST AT WORK. CRM WAS ADVISED THE CUST WOULD NOT BE IN UNTIL 9:30 AM ET.
11/15/2001 - 03:02:56 AM	CRM RECEIVED ESTIMATES. CRM AUTHORIZING REPAIRS FOR BODY AND MECHANICAL ACCORDING TO THE SUBMITTED ESTIMATES. DON LATIMER/PAR/57748
11/15/2001 - 03:11:56 AM	BUSINESS SUMMARY-1-CRM reviewed file. 2-CRM contacted customer and reviewed PAR Note. 3-CRM received customers authorization for inspection. 4-CRM initiated EAA inspection. 5-CRM reviewed inspection report. 6-CRM advising all concerned parties tha t GM will repair vehicle. 7- customer accepts repairs 8-CRM closing file and forwarding to ESIS. Don Latimer/PAR/57748
11/16/2001 - 09:03:07 AM	**********FTT, BUE LE, TAMPA PAR 56509**********
11/16/2001 - 09:02:08 AM	1. CRM CALLED AND SPOKE WITH SVM, GEORGE SHEA 631-585-2700 / FAX 609-799-8018. GEORGE STATES HE WILL TRY TO HAVE VEH FINISH BY THIS WEEKEND. CRM ADVISED SVM TO FAX RO AND RECEIPTS WHEN COMPLETED. CUST IS IN A RENTAL.
12/06/2001 - 04:12:03 AM	CUST CALLED SEEKING REIMBURSEMENT FOR ONE MONTHS VEH PAYMENT AND INSURANCE. CRM REFERRED CUST TO GMAC. DON LATIMER/PAR/57748
12/13/2001 - 10:14:09 AM	2. GMWA Z1242 / DLR CODE 13-02145 / RO 105657 / $7495.32 / AUTH WGP / CRM ADVISED ELIZABETH WHEN AND HOW TO SUBMIT. CRM WILL CLOSE CASE
1/09/2002 - 10:16:06 AM	3. CRM RECEIVED A MESSAGE FROM SVM TO CALL CRM BACK. CRM CALLED BUT ELIZABETH IS NOT IN YET. GEORGE SHEA IS IN A MEETING. CRM WILL CALL BACK LATER

PAR CASE INFORMATION

Problem ID: 05702695

[illegible]/10/2003 - 12:05:11 AM

4. CRM CALLED AND SPOKE WITH LIZ. LIZ ADVISED THAT SHE IS TAKING THE REST OF THE TAX OUT (TOTAL OF $18.05). TOTAL AMOUNT FOR RENTAL IS $2072.90. CRM WILL RESUBMIT GMWA Z1242 FOR $1420.27. CRM ADVISED LIZ WHEN TO SUBMIT IT. CRM CLOSING CASE

LIGHT POLE

DUST STATED LEFT LOWER BALL JOINT FAILED CAUSING VEH TO STRIKE POLE.

2300

LEFT FRONT

DRY

10 MPH

PERSONAL

UNK

NONE

Customer Info

Cabin Name:

Customer Name:

Phone:

VIN: 1GNDT13W[illegible]

Property Damage: Non-Collision | Collision | [illegible]

Type of damage:

Primary use of vehicle: PERSONAL

Weather condition: CLEAR/DRY

Incident (police) report: NONE

Comments: CUST STATED LEFT LOWER BALL JOINT FAILED CAUSING VEH TO STRIKE POLE.

Special equipment and features:

Okay | Save | Cancel

CAC - CASE PRINT

Request Date: 10/18/2001

PROBLEM ID	05701445	VIN NUMBER	1GNDT13W0Y2256756
CONTACT NAME		MAKE	CHEVROLET
ADDRESS		MODEL	UNKNOWN BLAZER
CITY, STATE	LAKE RONKONKOMA, NY	YEAR	2000
ZIP		VEHICLE MILAGE	23,000
COUNTRY	USA		
PHONE NUMBER			

COMPONENT CODE 1	T01
COMPONENT DESCRIPTION 1	lower ball joint
COMPLAINT CODE 1	Other
COMPLAINT DESCRIPTION 1	Product Allegation GM 1241
COMPONENT CODE 2	A04
COMPONENT DESCRIPTION 2	lower ball joint
COMPLAINT CODE 2	Other
COMPLAINT DESCRIPTION 2	Possible Safety Concern
COMPONENT CODE 3	F18
COMPONENT DESCRIPTION 3	lower ball joint
COMPLAINT CODE 3	Other
COMPLAINT DESCRIPTION3	Front Ball Joints/Kingpin
COMPONENT CODE 4	
COMPONENT DESCRIPTION 4	
COMPLAINT CODE 4	
COMPLAINT DESCRIPTION 4	
COMPONENT CODE 5	
COMPONENT DESCRIPTION 5	
COMPLAINT CODE 5	
COMPLAINT DESCRIPTION 5	
COMPONENT CODE 6	
COMPONENT DESCRIPTION 6	
COMPLAINT CODE 6	
COMPLAINT DESCRIPTION 6	

10/17/01 AVM, Frank Angelico called to initiate PAR. He stated that the customer had an accident on 10/15/01. The cust called the dlr and had the vehicle towed in. The dealer notified their Areas Service Manager and he called to initiate PAR. AVM states that the left lower ball joint. rivet sheared off lower control arm. he has looked at the vehicle and he states that he has looked at the rivets on the ball joint and that the metal is clean (not exposed to moisture and air causing it to discolor). Bumper is bent at the middle and the left side is creased inward. he states that too many things don't add up and that he would like PAR to investigate. used vehicle bought from the dealer. sold to the customer in July 2001. no injuries. estimate currently unknown. front differential case is cracked. needs c/ joint, lower control arm, tire, etc. minimum $1500-$2500. AVM can be reached at his voice mail 1-800-321-0164 box 6480. Service manager is George Shea. he can be reached at 631-585-2700 extension 50. number on file is the customer's work number. their home number i[illegible] vehicle is currently located at the dealership. crm reviewed CAC for a file 05695543. CAC has not initiated PAR. scheduled call back time for today. crm advised the AVM that the CAC crm would be advised to discontinue working with the customer. PAR has taken ownership of the file. crm will call back the service manager to advise him of the PAR file number. crm advised AVM of 800# and extension for this crm. crm advised that a courtesy call would be made to the customer to advise that the AVM has initiated PAR for the customer that someone will be contacting them within 48 hours.

Amber Clark/tampa/per/57146

GM Vehicle Inquiry System
Summary

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W0Y2296756

VEHICLE INFORMATION

Merchandising Model:	CT10506 - 2000 4-DOOR 4WD BLAZER BASE	Warranty Start Date:	03/08/2000
BARS Order Type	50 - FLEET		
Delivering Dealer :	H. B. CHEVROLET 105-20 QUEENS BLVD FOREST HILLS, NY 1137564247 (718) 263-7700	Selling Source:	13 - CHEVROLET
		Site Code:	02199
		Business Associate Code:	111258

Service Contract:	Yes	Branded Title:	No	Warranty Block:	No	PDI Status:	Paid

CAMPAIGN ELIGIBILITY

Vehicle Has No Current Record Of Outstanding Campaigns.

APPLICABLE WARRANTIES

Description	Effective Date	Effective Odometer	End Date	End Odometer
36/36 BUMPER TO BUMPER - NO DEDUCTIBLE	03/08/2000	10 miles	3/8/2003	36010 miles
72/100 SHEET METAL RUST-THROUGH	03/08/2000	10 miles	3/8/2006	100010 miles
36/36 CORROSION	03/08/2000	10 miles	3/8/2003	36010 miles
96/80 PCM/CC EMISSIONS	03/08/2000	10 miles	3/8/2008	80010 miles
36/36 FEDERAL EMISSIONS	03/08/2000	10 miles	3/8/2003	36010 miles

CLAIM HISTORY

R.O. Date	R.O. Number	Type	Labor Operation	Odometer Reading
03/02/2000	296756	I	Z7000 - NEW VEHICLE INSPECTION ALLOWANCE	0 miles

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GM Vehicle Inquiry System
Claim History

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W0Y2296756

CLAIM HISTORY

Repair Order Date:	03/02/2000	Repair Order Number:	296756	Odometer Reading:	0 miles

Serviced By:	H. B. CHEVROLET 105-20 QUEENS BLVD FOREST HILLS, NY 11375-4247 (718) 263-7700	Selling Source:	13 - CHEVROLET
		Site Code:	02199
		Business Associate Code:	111258

Cycle Date	Cycle Nbr	Case	Type	Labor Operation	Part	Comments
03/07/2000	45	01	1	Z7000 - NEW VEHICLE INSPECTION ALLOWANCE	N/A	N

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GM Vehicle Inquiry System
Vehicle Build

Home - Summary - Claim History - Vehicle Build - Vehicle Component - Delivery Information - Dealer Information - Service Contract - Warranty Block - Branded Title

Help

VIN:	1GNDT13W0Y2296756

VEHICLE BUILD

Merchandising Model:	CT10506 - 2000 4-DOOR 4WD BLAZER BASE		
Gross Vehicle Weight Rating:	2429 kg (5356 lb)	Order Number:	CFORD1
Build Date:	03/02/2000	Build Plant:	1Y206 - MORIANE ASSY. PLANT

OPTION CODES

AJ1 - DEFOGGER	AU3 - POWER DOOR LOCK SYSTEM
AV5 - BUCKET SEATS W/VALUE CLOTH	AXP - MPV VIN IDENT POSITION
A31 - POWER WINDOWS	B30 - WHEELHOUSING & FLOOR CARPETING
B84 - BODY SIDE MOLDINGS	C1U - FLT--ENTERPRISE RAC
C25 - REAR WINDOW WIPER SYSTEM	C3T - GVW RATING - 5350 LBS
C49 - ELECTRIC REAR WINDOW DEFOGGER	C60 - AIR CONDITIONING-FRONT
DAY - ASSEMBLY PLANT MORAINE, OHIO	DH6 - LIGHTED LH & RH VISOR MIRRORS
DK2 - ELECTRIC OSRV MIRROR W/DEFOGGER	DK7 - CUSTOM INTERIOR ROOF CONSOLE
D55 - CONSOLE	EVA - EVAP EMISSION REQUIREMENT
FK2 - TORSION BAR SPRING ADJUSTMENT	FK3 - TORSION BAR SPRING ADJUSTMENT
FLT - FLEET PROCESSING OPTION	GU6 - REAR AXLE 3.42 RATIO
JC1 - FOUR WHEEL DISC BRAKES	K18 - ELECTRIC AIR INJECTION SYSTEM
K34 - WITH RESUME SPEED	K60 - 100 AMP DELCOTRON GENERATOR
L35 - VORTEC 4300 V6 SFI ENGINE	M30 - 4 SPEED ELECTRONIC AUTOMATIC
NC1 - CALIFORNIA EMISSIONS LEV	NG1 - CALIFORNIA/NEW YORK EMISSIONS
NP1 - ELECTRONIC SHIFT TRANSFER CASE	N33 - COMFORTILT STEERING WHEEL
N40 - POWER STEERING	N90 - 5-SPOKE ALUMINUM WHEELS
QBF - P235/70R 15 ALL SEAS BW TIRES	RSA - PASSIVE AUTO FRT SEAT RESTRAINT
TB4 - LIFTGATE	TFD - RETAIL AMENITY DELETE
T61 - DAYTIME RUNNING LIGHTS	UL0 - ATC, THEFT LOCK, SPEED COMP VOL

UP4 - STEREO RADIO PROVISIONS	U16 - TACHOMETER
U73 - FIXED MAST ANTENNA	U69 - WIRING HARNESS - 5 LEAD
VQ2 - FLEET ORDERING & ASSIST. PROG.	VXS - COMPLETE VEHICLE LABEL
VX7 - LONG TERM DAILY RENTAL PROGRAM	V54 - BLACK ROOF LUGGAGE CARRIER
V73 - STATEMENT OF VEHICLE CERT.-U.S.	XBF - STEEL BELT BLACKWALL
X88 - CHEVROLET CONVERSION	YBF - REAR TIRES P235/70R 15
YD3 - BASE EQUIP FOR SCH GVW PL-FT AX	YD5 - BASE FRONT SPRING
YD6 - BASE REAR SPRING	ZBF - P235/70R 15 BW SPARE TIRE
ZM8 - REAR WINDOW DEFOGGER	ZQ3 - TILT WHEEL & SPEED CONTROL
ZQ6 - * CONTENT THEFT PROTECTION	ZY1 - SOLID PAINT
Z85 - INCREASED CAPACITY CHASSIS PACK	1SC - AUTO TONE CONTROL, CASSETTE
1SZ - GROUP SAVINGS IS RESTRICTED	12H - GRAPHITE SPORT CLOTH
12I - GRAPHITE INTERIOR TRIM	41U - BLACK
6WJ - FRONT SUSPENSION	7WJ - FRONT SUSPENSION

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PRODUCT ALLEGATION RESOLUTION
PRELIMINARY INSPECTION
STEERING, SUSPENSION, AXLE, TIRE & WHEEL SYSTEMS

Division: CHEVROLET	Ref# 05702695	VIN: 1GNDT13W0Y2296756
Claimant's Name (LAST, First):		

Inspected By: JACK MAC ANENEY Organization: E.A.A.
Phone: 631) 754 x3728 Inspection Date: 10-29-01 Mileage at Inspection: 23757

I INSPECTION SUMMARY

Following the inspection, summarize the tests and observations: SEVERAL POINTS ARE INTERESTING. FIRST THERE IS LITTLE EVIDENCE OF ROAD SURFACE CONTACT WITH THE SUSPENSION, SECOND THE LEFT LOWER BALL JOINT MOUNTING SHOWS THAT THERE ARE TWO CLEAN SHEARED RIVETS AND TWO EMPTY RUSTED HOLES WHERE RIVETS SHOULD BE. SEE PICTURE NO.14. THIRD, THE LEFT FRONT BUMPER END RUB STRIP SHOWS ABRASION BUT IT WAS HARD ENOUGH TO BEND THE BUMPER SEE PICTURE NO.20. THE LARGE INNER LEFT FRONT TIRE CUTS APPEAR TO COME FROM THE UPPER CONTROL ARM, THERE IS LITTLE WHEEL DAMAGE. SEE PICTURE NO13AND 14

II INTERVIEW - VEHICLE HISTORY

Note to the Inspector: In questions 3-6 below, document only the information which relates to the incident/allegation.

1. *Name, address & phone number of person being interviewed:* LAKE RONKONKOMA, N.Y. 11776

2. *Prior collision damage* (date, description, etc.) NONE

Repaired by:

3. Describe *existing vehicle conditions* at the time of the incident(e.g. warning lights "On", tires worn, etc.): NORMAL VEHICLE OPERATION.

4. *Repairs* outside of warranty (what, when, by whom?): NONE

5. Other *vehicle history* information (from person being interviewed or GM Warranty History)? NONE

6. *Last maintenance* (date, description, by whom?): RECENT PURCHASE FROM DEALER

If vehicle is a truck, or a car trailering cargo at the time of the incident, estimated total weight of cargo and trailer: ____ lbs. Load description: ____
Load location: ____

Describe the following:	Before the incident	At the Beginning* and During the Incident
Steering (normal, other)	NORMAL	
Suspension (normal, other)	NORMAL	
Engine (normal, other)	NORMAL	
Transmission (normal, other)	NORMAL	
Electrical (normal, other)	NORMAL	
Warning lights/messages	NORMAL	
Unusual noises (from where?)	OWNER STATES THAT THE DAY BEFORE I HEARD NOISE FROM LEFT FRONT,LIKE THUMPING	
Smoke/steam (from where?)	NOTHING	
Other	NOTHING	

*The beginning of the incident is the start of the sequence which resulted in the incident.

Exact incident location: SHOPPING MALL ON SUNRISE HWAY IN PATCHOGUE, N.Y.

Surface where incident occurred:
Type: Concrete, Asphalt, Gravel, Crushed Rock, Dirt, or Other? A Describe: ____

Condition: Wet, Dry, Icy, or Other? D If other, specify: ____

Estimated vehicle speed 10 MPH Source of estimate: DRIVER

Incident occurred while: Accelerating, Turning, Braking, Coasting, Driving normally: T-TURNING

What did you do after you realized something was wrong? Describe: I BECAME VERY NERVOUS. I GOT OF THE CAR. PHONED MY JOB VERY QUICKLY. CALLED DEALER AND THEY PICKED THE CAR UP AND BROUGHT IT TO THE DEALER.

Any other comments or observations that have not been covered? NO.

IV VEHICLE INSPECTION

The vehicle inspection documents the physical evidence via color photographs and written observations. By recording your observations in the following section, you will be following a methodical inspection format.

Take color photographs of the following:

A. Exterior:
- Front
- Right side
- Rear
- VIN
- Left side

Comments: SEE PHOTO LOG. PICTURES 23 AND 24 ARE THE AREAS OF CONCERN

B. Corner assemblies, if applicable:
- Struts/shocks
- Springs
- Control arms
- Ball joints
- Steering knuckles
- Axle assemblies

Comments: THE ABOVE ASSEMBLIES ARE DAMAGED. THE SPRING AND SHOCK ARE OUT OF POSITION AND REQUIRE REMOVAL FOR VERIFICATION. THE KNUCKLE APPEARS TWISTED. PRELIMINARY PARTS LIST ATTACHED TO THIS REPORT

C. Interior:
- Instrument panel & odometer

Comments: NO INCIDENT RELATED DAMAGE.

D. Underhood:
- Engine compartment
- Steering linkage
- Steering
- Power steering lines/hoses, connections/clamps

Comments: START ENGINE. CHECK STEERING FLUID BOTH RUNNING AND OFF. FLUID AT FULL MARK. THE ENGINE ASSY. IS INTACT, LEFT SIDE TIE ROD END, KNUCKLE THERE ARE OTHER RELATED LEFT SIDE SUSPENSION PARTS LISTED ON THE ATTACHED PRELIMINARY PARTS LIST.

E. Underbody:
- Steering linkage
- Scrapes or impact damage on the following:
  - Fuel tank
  - Tires/Wheels
  - Etc.

Comments: NO FUEL TANK DAMAGE-LEFT FRONT TIRE IS DESTROYED, SEE TIRE SECTION SPARE IS MISSING. THE FRONT CROSS MEMBER IS BENT AND THE COVER PLATE IS TORN. BODY SHOP ESTIMATE IS INCLUDED IN THIS REPORT.

F. General Observations (Take photographs if applicable):

Anything on vehicle which is after-market: NOTHING

Anything on vehicle which is a modification: NOTHING

Anything on vehicle which is unusual, out-of-place, etc.: NOTHING

Other relevant information: I CONTACTED THE OWNER(DRIVER) FOR ADDITIONAL INFORMATION AS TO SITE, SPEED, AND PRE INCIDENT INFORMATION. THIS WAS NOT LISTED ON THE PAR REQUEST BUT I FELT THAT IT WAS NECESSARY.

V CHASSIS INSPECTION

Record your observations and measurements for the sections and questions which relate to the incident and items which were inspected. Write N/A for sections and questions unrelated to the customer allegation.

A. STEERING, SUSPENSION, WHEELS, AXLES:

Use the following table to identify what you did and what you found during the inspection. Identify the tests and test results for the applicable items. Describe anything relevant to the allegation that is not in normal working condition, does not function properly or is a non production part. Take appropriate photographs, and indicate whether or not a photograph was taken.

	OBSERVATIONS/TEST RESULTS
Steering system	STEERING OPERATES TO THE RIGHT NORMALLY. DAMAGE IS TO THE LEFT SIDE
Steering linkage	PRELIMINARY INVESTIGATION LISTS, TIE ROD END, CONTROL ARMS STABILIZER LINK, KNUCKLE
Gear/rack and pinion	APPEARS TO BE INTACT
Steering column, ignition switch, intermediate shaft	APPEARS TO BE INTACT
Steering pump, drive, hoses, connections, flow, pressure	NO EVIDENCE OF LOW PRESSURE OR POWER STEERING FLUID LEAK
PS fluid level and condition	FULL AND CLEAN.
Steering knuckle	BENT
Suspension components - LF	HEAVY DAMAGE TO THE LEFT FRONT SUSPENSION AND CROSS MEMBER. PARTIAL PARTS LIST INCLUDED IN REPORT
RF	NOT INVOLVED
LR	NOT INVOLVED
RR	NOT INVOLVED
Rear axle assembly	NOT INVOLVED
Deformation to the frame	FRONT CROSS MEMBER IS DAMAGED FROM A FRONT IMPACT. SEE PICTURE NO.17

	OBSERVATIONS/TEST RESULTS
Describe evidence of axle/ suspension/ tire contact with frame, body or components	IT APPEARS THAT THE LEFT FRONT TIRE MADE CONTACT WITH THE LEFT FRONT UPPER CONTROL ARM-THERE ARE SEVERAL LARGE RIPS IN THE TIRE. PICTURE NO. 20
Describe contact of the under-carriage with the road surface (road, shoulder, curb, or grass)	THE FRONT CROSS MEMBER APPEARS TO HAVE BEEN DAMAGED BY CURB OR ROAD CONTACT. SEE PICTURE NO.17.
Electronic level control system/components	Not equipped
Engine (normal, other)	NORMAL-BATTERY LOW AT INSPECTION
Electrical (normal, other)	NORMAL
Warning lights/messages	NONE
Wheels (damage/impact marks)	LEFT FRONT WHEEL HAS SMALL ABRASION AND SCRAPE MARKS BUT NOT ENOUGH TO CAUSE THAT MUCH TIRE DAMAGE
Codes/numbers for failed components. Describe	NONE
Other	

B. ECM/PCM

Stored codes? (Y/N) Y If yes, list code number and description.

CODE	COUNTS	DESCRIPTION
0287	-	STOP LAMP CIRCUIT IN HISTORY

Other comments: FUSE #2-15AMP.OPEN CIG FUSE
MALFUNCTION LAMPS ARE OPERATING CORRECTLY.

C. ROAD-SENSING SUSPENSION/SPEED-SENSITIVE SUSPENSION (Fill out this section for suspension allegations on vehicles equipped with road-sensing suspensions/speed-sensitive suspensions)

1. Enter Diagnostics per the service manual and record any current or history codes. (Enter "none" if no codes are present)

CURRENT CODE	DESCRIPTION
	NOT EQUIPPED

HISTORY CODE	DESCRIPTION
	NOT EQUIPPED

Follow the procedures in the service manual to determine the cause of the stored codes which relate to the allegation. State which procedures were followed, record the results of each test, and state the root cause of the code. Do not conduct tests which require disassembly of components. Follow the procedure in the General Guidelines for parts which need to be disassembled for evaluation.

2. Inspect the system wiring, connections, and components for damage. Indicate whether the damage was the result of the incident. Comments: NOT INCIDENT RELATED

3. Other comments:

D. TIRE INSPECTION

1. IDENTIFICATION:

	TIRE BRAND (Goodyear)	TIRE TYPE (Eagle GA)	TIRE SIZE (P205/70R15)	PRESSURE (psi)	AVE. TREAD DEPTH 32nds of inch
LF	UNI-ROYAL	LAREDO	P235/70R15	DESTROYED	9/32
RF	"	"	"		8/32
LR	"	"	"		9/32
RR	"	"	"		8/32

Describe any damage to tires, such as scrapes, marks due to impact, cuts, tread separation, flat spots etc.

LF CUTS IN TWO PLACES-APPEARS TO BE CAUSED BY CONTROL ARM

RF

LR

RR

2. TIRE PLACARD DATA:
Record the following data: (located on driver's door edge or inside the deckid)

	SIZE	PRESSURE (psi)	PRESSURE AT MAXIMUM LOAD(psi)
TIRES	P235/70R15		
SPARE TIRE	MISSING		

VI SITE INSPECTION

Make a diagram of the incident scene showing where the vehicle started, the path of the vehicle, and all points of impact. Make measurements and record on the diagram. Inspect the scene for tire marks. Take color pictures and enter comments below. If significant other vehicle or property damage occurred, take pictures of the damage, if possible, and make notes as necessary.

Comments: INFORMATION SUPPLIED AS TO LOCATION.

PRELIMINARY PAR INSPECTION
FIELD PHOTOGRAPHIC NOTES

Division: CHEVROLET	Claim: 05702695	VIN: 1GNDT13W0Y2296756
Claimant's Name (LAST, First)		

Inspected By: JOHN MAC ANENEY Organization: E.A.A.

Phone: (631) 754-3728 x____ Inspection Date: 10 /29 / 01 Mileage at Inspection: 23757

Roll Number ONE

No.#	Description
0	NO PICTURE
1.	FILE NO. AND VEHICLE IDENT. NO.
2.	BACK UP PICTURE OF ABOVE
3.	MFG. LABEL
4.	TRIED TO GET MILAGE-SEE LATER PICTURE
5.	LEFT FRONT WHEEL-TOP LAID IN.
6.	LEFT REAR 1/4 AND WHEEL-NO DAMAGE
7.	REAR VIEW-NO DAMAGE
8.	RIGHT REAR-NO DAMAGE
9.	RIGHT FRONT-NO DAMAGE
10.	POOR PICTURE OF LEFT FRONT FENDER BINDING INTO LEFT FRONT DOOR
11.	RIGHT FRONT FENDER TO RIGHT FRONT DOOR-PROPER CLEARENCE-SEE #10
12.	LEFT FRONT WHEEL CONTACT AREA WITH LEFT FENDER
13.	LEFT FRONT TIRE CUTS OR RIPS POSSIBLY CAUSED BY CONTROL ARM
14.	LEFT BALL JOINT MOUNTING-TWO RIVETS SHEARED OFF AND TWO MISSING
15.	LEFT AXLE PULLED OUT OF DIFFERENTIAL
16.	CRACKED DIFFERENTIAL ASSY.
17.	FRONT CHASSIS RAIL DAMAGED AND BENT
18.	LEFT SIDE UPPER CONTROLARM BUMPER BROKEN OFF
19.	LEFT SIDE UPPER CONTROL ARM BENT
20.	LEFT FRONT TIRE RIPS AND POSSIBLE CONTROL
21.	DASH PANEL IGN ON-ODOMETER 23757 MI.
22.	POWER STEERING FLUID AT FILL MARK
23.	LEFT FRONT BUMPER DAMAGE
24.	FULL VIEW OF DAMAGE AREA.
25.	
26.	
27.	
28.	
29.	
30.	
31.	
32.	
33.	
34.	
35.	
36.	
37.	

PHOTO.DOC

Outer Tie Rod End 12471300 — 7308

L/ Lower Control Arm 15018807 — 15433
DS- 22156708 — 6343

L/ Hub Bearing 7470607 — 45200

L/ Upper Arm 15661507 — 22264

15024511-555 Stibilizer Link — Stabilizer May Be Bent 15010348 — 15800

Leave Poss

26059675 3460 /C/V Boot Inner Steering Knuckle 20500 — Open — CV Dammy 26059677 — 351.58

15704493 Ft. Diff Housing 12471599 — 44792

2- 26022006 — 7425

1- 12471587 1753
1- 12471585 lbs. 988
1- 3974098 668
1- 14021587 — 495
1- 9439871 4530
1- 9487784 4x4 — 3450 Actuator out of Shape. Leak -

1 — P235 70 15 Uniroyal Channels

History 0281 Stop Lamp

Fender Dammage
Ft. Crossmember Bent

HINGTGIT
CHEVROLET INC.
1815 Middle Country Road
Centereach, New York 11720
(516) 585-2700
N.Y.S. REPAIR SHOP NO. R 182 0016
FAX PHONE # (516) 585-3414

FAX COVER SHEET

DATE 11/9/01

TO: Don Latimer

THIS IS PAGE ONE OF 5 PAGES-INCLUDING THIS COVER SHEET.

FROM: George Shea

MESSAGE: File # 05702695
Please contact George Shea at
631-585-2700 ex 50 in ref to the
Repairs on the Blazer. Please FAX BACK
the body ESTIMATE WE LOST OURS OUT OF OUR
DATA Base @ 631-738-8015

**** THANK YOU AND HAVE A NICE DAY ****

10/24/2001 at 10:21 AM Job Number:
69356

Black Blazer

"WE'RE NOT JUST CHEVY'S"

PRELIMINARY ESTIMATE

Written by: RICHIE WALTERS #
Adjuster:

Insured: Claim #
Owner: Policy #
Address: Deductible:
Date of Loss:
Day: Type of Loss:
Evening: Point of Impact:

Inspect
Location:

Insurance
Company: Days to Repair

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:
VIN: 1GNDT13W0Y2296756 Lic: Prod Date: Odometer:

Air Conditioning	Intermittent Wipers	Dual Mirrors
Privacy Glass	Luggage/Roof Rack	Clear Coat Paint
Power Steering	Power Brakes	Anti-Lock Brakes (4)
Driver Airbag	Passenger Airbag	4 Wheel Disc Brakes
Cloth Seats	Split Bench Seats	Rear Step Bumper
Aluminum Wheels		

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
1		FRONT BUMPER				
2		O/H front bumper			1.6	
3		Repl Bumper chrome w/decor package	1	274.00	Incl.	

10/24/2001 at 10:21 AM Job Number:
69356

PRELIMINARY ESTIMATE

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
4	Repl	Impact strip	1	24.40	Incl.	
5*	Repl	Deflector w/decor pkg	1	300.00	Incl.	0.0
6		FENDER				
7*	Rpr	LT Fender w/o high wider			3.0	2.2
8		Add for Clear Coat				0.9
9		FRONT DOOR				
10*	Rpr	RT Door shell			0.5	2.2
11		Overlap Major Non-Adj. Panel				-0.2
12		Add for Clear Coat				0.4
13	R&I	LT Mirror w/o electric mirror			0.3	
14	R&I	LT Lower molding Blazer			0.3	
15	R&I	LT Handle			0.2	
		Subtotals ==>		598.40	5.9	5.5

Parts		598.40
Body Labor	5.9 hrs @ $ 40.00/hr	236.00
Paint Labor	5.5 hrs @ $ 40.00/hr	220.00
Paint Supplies	5.5 hrs @ $ 17.00/hr	93.50
SUBTOTAL		$ 1147.90
Sales Tax	$ 1147.90 @ 8.5000%	97.57
GRAND TOTAL		$ 1245.47
ADJUSTMENTS:		
Deductible		0.00
CUSTOMER PAY		$ 0.00
INSURANCE PAY		$ 1245.47

11/09/2001 at 08:20 AM
69356

Job Number:

HUSTEDT CHEVY INC.
License #:R-1520016
"WE'RE NOT JUST CHEVY'S"
1815 MIDDLE COUNTRY RD
CENTEREACH, NY 11720
(631)585-2700x56 Fax: (631)738-8015

PRELIMINARY ESTIMATE

Written by: RICHIE WALTERS #
Adjuster:

Insured:
Owner:
Address:

Day:
Evening:

Inspect
Location:

Insurance
Company:

Claim #
Policy #
Deductible:
Date of Loss:
Type of Loss:
Point of Impact:

Days to Repair

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:
VIN: 1GNDT13W0Y2296756 Lic: Prod Date: Odometer:

Air Conditioning	Intermittent Wipers	Dual Mirrors
Privacy Glass	Luggage/Roof Rack	Clear Coat Paint
Power Steering	Power Brakes	Anti-Lock Brakes (4)
Driver Airbag	Passenger Airbag	4 Wheel Disc Brakes
Cloth Seats	Split Bench Seats	Rear Step Bumper
Aluminum Wheels		

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
1		FRAME				
2*	Rpr	Frame assy 4WD			8.0	
3#		BENCH SET &MEASURE	1		3.0	

11/09/2001 at 08:20 AM Job Number:
69356

PRELIMINARY ESTIMATE

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
		Subtotals ==>		0.00	11.0	0.0

Parts		0.00
Body Labor	11.0 hrs @ $ 45.00/hr	495.00
SUBTOTAL		*495.00
Sales Tax	$ 495.00 @ 8.5000%	42.08
GRAND TOTAL		$ 537.08
ADJUSTMENTS:		
Deductible		0.00
CUSTOMER PAY		$ 0.00
INSURANCE PAY		$ 537.08

Estimate based on MOTOR CRASH ESTIMATING GUIDE. Unless otherwise noted all items are derived from the Guide DMIGF95 Database Date 9/2001 and the parts selected are OEM-parts manufactured by the vehicles Original Equipment Manufacturer. Asterisk (*) or Double Asterisk (**) indicates that the parts and/or labor information provided by MOTOR may have been modified or may have come from an alternate data source. Non-Original Equipment Manufacturer aftermarket parts are described as AM or Qual Repl Parts. Used parts are described as LKQ, Qual Recy Parts, RCY, or USED. Reconditioned parts are described as Recon. Recored parts are described as Recore. NAGS Part Numbers and Prices are provided from National Auto Glass Specifications, Inc. Pound sign (#) items indicate manual entries.

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11/08/2001 21:23 8317386815 HARRY PAGE 02

estimate

366711 105557

on Latimer *WARRANTY*

HUSTEDT CHEVROLET, INC.
1515 Middle Country Road
Centereach, New York 11720
(516) 585-2700

LK RONKONKOMA, NY
HOME: BUS:

PAGE 1

SERVICE ADVISOR: 80 MATT BRACHIO

BK	00	CHEVROLET BLAZER	1GNDT13W0Y2296756		23757/23757	
30JUL2001			17:00 16OCT01	80.00	CASH	08NOV2001

OPTIONS: STK:2385C DLR:02145

12:38 16OCT01 15:08 08NOV01

LINE OPCODE TECH TYPE HOURS	LIST	NET	TOTAL
CAUSE:			
99 W 0.00		0.00	0.00
SIDE AXLE			
1 14039587 SEAL	4.95	4.16	4.16
1 12471599 CARRIER	447.92	313.54	313.54
1 12471585 HOUSING	9.88	8.30	8.30
STEERING KNUCKLE			
1 18060557 KNUCKLE	208.00	172.20	172.20
1 15018807 ARM	154.33	129.64	129.64
11 W 1.10		85.80	85.80
11 W 0.60		46.80	46.80
1 15024511 LINK	5.55	4.66	4.66
HUB BEARING			
1 15661507 ARM KIT,F	222.64	187.01	187.01
11 W 1.20		93.60	93.60
11 W 0.40		31.20	31.20
1 26055052 SHAFT KIT	473.56	331.49	331.49

SERVICE DEPT. HOURS
7:30 AM TO 6:00 PM
MONDAY THRU FRIDAY
OPEN SATURDAY
8:00 AM TO 4:00 PM
BODY SHOP ON PREMISES
GENUINE GM PARTS

WE AT HUSTEDT CHEVROLET THANK YOU FOR YOUR PATRONAGE

STATEMENT OF DISCLAIMER

CUSTOMER SIGNATURE

LABOR AMOUNT	
PARTS AMOUNT	
GAS, OIL, LUBE	
SUBLET AMOUNT	
MISC. CHARGES	
TOTAL CHARGES	
LESS INSURANCE	
SALES TAX	
PLEASE PAY THIS AMOUNT	

WARRANTY COPY

11/08/2001 21:23 6317290015 HARRY PAGE 03

estimate

365711 105557

Latimer *WARRANTY*

HUSTEDT CHEVROLET, INC.
1415 Middle Country Road
Centereach, New York 11720
(516) 585-2700

LK RONKONKOMA, NY
HOME: BUS:

PAGE 2

SERVICE ADVISOR: 60 MATT BRACHIO

BK	00	CHEVROLET BLAZER	1GNDT13W0Y2296786		23757/23757	
30JUL2001			17:00 16OCT01	80.00	CASH	08NOV2001

OPTIONS: STK:2385C DLR:02148

12:38 16OCT01 15:08 08NOV01

LINE OPCODE TECH TYPE HOURS	LIST	NET	TOTAL
1 9439879 HEARING	45.50	31.85	31.85
125003 175003 TPARTS			
[illegible]			
B C/S HEARD NOISE AT L/F WHEEL FELL OFF(COLLAPSED) WHILE DRIVING			
RL RELATED TO LINE "a"			
1 15956547 BUMPER AS	11.70	9.83	9.83
1 12471301 MOD KIT	83.23	69.92	69.92
18988 26584 TPARTS			

CONT. SALE, & COMP TOTALS 173424 293567 0

SERVICE DEPT. HOURS	WE AT HUSTEDT CHEVROLET THANK YOU FOR YOUR PATRONAGE	STATEMENT OF DISCLAIMER		
7:30 AM TO 6:00 PM MONDAY THRU FRIDAY			LABOR AMOUNT	865.80
OPEN SATURDAY 8:00 AM TO 4:00 PM			PARTS AMOUNT	2015.87
			GAS, OIL, LUBE	0.00
BODY SHOP ON PREMISES GENUINE GM PARTS			SUBLET AMOUNT	54.00
			MISC. CHARGES	0.00
			TOTAL CHARGES	2935.67
			LESS INSURANCE	0.00
			SALES TAX	0.00
		CUSTOMER SIGNATURE	PLEASE PAY THIS AMOUNT	

WARRANTY COPY

CHEVROLET HUGTEDT CHEVROLET INC. GEO
1815 Middle Country Road
Centereach, New York 11720
(516) 585-2700
N.Y.S. REPAIR SHOP NO. R 152 0016
FAX PHONE # (516) 585-3414

FAX COVER SHEET

DATE 11/9/01

TO: Don Latimer

THIS IS PAGE ONE OF 5 PAGES-INCLUDING THIS COVER SHEET.

FROM: George Shea

MESSAGE: File # 05702695
Please contact George Shea at
631-585-2700 ex 50 in ref to the
Repairs on the blazer. Please FAX BACK
the body ESTIMATE WE LOST OURS OUT OF OUR
DATA Base @ 631-738-8015

**** THANK YOU AND HAVE A NICE DAY ****

366711 105557

n latimer

WARRANTY

HUSTEDT CHEVROLET, INC.
1818 Middle Country Road
Centereach, New York 11720
(516) 588-5700

LK RONKONKOMA, NY
HOME: BUS:

PAGE 1

SERVICE ADVISOR: 80 MATT BRACHTO

BK	00	CHEVROLET BLAZER	1GNDT13W0Y2296756		23757/23757	
30JUL2001			17:00 16OCT01	80.00	CASH	06NOV2001

OPTIONS: STK:2385C ILR:02145

12:38 16OCT01 15:08 06NOV01

LINE OPCODE TECH TYPE HOURS	LIST	NET	TOTAL
CAUSE:			
99 W 0.00		0.00	0.00
SIDE AXLE			
11 W 5.20		405.60	405.60
1 14039587 SEAL	4.95	4.16	4.16
1 [illegible]	[illegible]	[illegible]	[illegible]
1 12471599 CARRIER	447.92	313.54	313.54
1 [illegible]	[illegible]	[illegible]	[illegible]
1 12471585 HOUSING	9.88	8.30	8.30
[illegible]			
STEERING KNUCKLE			
11 W 2.70		232.60	232.60
1 18060557 KNUCKLE	205.00	172.20	172.20
1 [illegible]	[illegible]	[illegible]	[illegible]
1 15018607 ARM	154.33	129.64	129.64
11 W 1.10		85.80	85.80
11 W 0.60		46.80	46.80
1 15024811 LINK	5.55	4.66	4.66
HUB BEARING			
11 W 0.90		70.20	70.20
1 15661507 ARM KIT,F	222.64	187.01	187.01
11 W 1.20		93.60	93.60
11 W 0.40		31.20	31.20
1 26055052 SHAFT KIT	473.56	331.49	331.49

SERVICE DEPT. HOURS 7:30 AM TO 6:00 PM MONDAY THRU FRIDAY OPEN SATURDAY 8:00 AM TO 4:00 PM BODY SHOP ON PREMISES GENUINE GM PARTS	WE AT HUSTEDT CHEVROLET THANK YOU FOR YOUR PATRONAGE	STATEMENT OF DISCLAIMER [illegible] CUSTOMER SIGNATURE	LABOR AMOUNT PARTS AMOUNT GAS, OIL, LUBE SUBLET AMOUNT MISC. CHARGES TOTAL CHARGES LESS INSURANCE SALES TAX PLEASE PAY THIS AMOUNT

WARRANTY COPY

366711 105557

Don Latimer

WARRANTY

HUSTEDT CHEVROLET, INC.
1815 Middle Country Road
Centereach, New York 11720
(516) 585-2700

LK RONKONKOMA, NY PAGE 2
HOME: BUS:

SERVICE ADVISOR: 80 MATT BRACHIO

BK	00	CHEVROLET BLAZER	1GNDT13W0Y2296756		23757/23757	
30JUL2001			17:00 16OCT01	80.00	CASH	08NOV2001

OPTIONS: STK:2385C DLR:02145

12:38 16OCT01 15:08 08NOV01

LINE OPCODE TECH TYPE HOURS	LIST	NET	TOTAL
1 9439879 BEARING	45.50	31.85	31.85
125003 175003 TPARTS			
[illegible]			
SUBL TOW IN TO SHOP			
B C/S HEARD NOISE AT L/F,WHEEL FELL OFF(COLLAPSED) WHILE DRIVING			
RL RELATED TO LINE "a"			
1 15956547 BUMPER AS	11.70	9.83	9.83
[illegible]	[illegible]	[illegible]	[illegible]
1 12471301 ROD KIT	83.23	69.92	69.92
[illegible]			
18988 26584 TPARTS			
[illegible]			

COST, SALE, & COMP TOTALS 173424 293567 0

SERVICE DEPT. HOURS	WE AT HUSTEDT CHEVROLET THANK YOU FOR YOUR PATRONAGE	STATEMENT OF DISCLAIMER		
7:30 AM TO 6:00 PM MONDAY THRU FRIDAY		The factory warranty constitutes all of the warranties with respect to the sale of this merchandise. The Seller hereby expressly disclaims all warranties either express or implied, including any implied warranty of merchantability or fitness for a particular purpose. Seller neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of this merchandise.	LABOR AMOUNT	865.80
OPEN SATURDAY 8:00 AM TO 4:00 PM			PARTS AMOUNT	2015.87
			GAS, OIL, LUBE	0.00
			SUBLET AMOUNT	54.00
			MISC. CHARGES	0.00
			TOTAL CHARGES	2935.67
			LESS INSURANCE	0.00
			SALES TAX	0.00
BODY SHOP ON PREMISES GENUINE GM PARTS		CUSTOMER SIGNATURE	PLEASE PAY THIS AMOUNT	

WARRANTY COPY

11/09/2001 at 08:20 AM Job Number:
69356

EASTERN CHEVY INC.
License #:R-1520016
"WE'RE NOT JUST CHEVY'S"
1815 MIDDLE COUNTRY RD
CENTEREACH, NY 11720
(631)585-2700x56 Fax: (631)738-8015

PRELIMINARY ESTIMATE

Written by: RICHIE WALTERS #
Adjuster:

Insured:	Claim #
Owner:	Policy #
Address:	Deductible:
	Date of Loss:
Day:	Type of Loss:
Evening:	Point of Impact:
Inspect Location:	
Insurance Company:	Days to Repair

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:
VIN: 1GNDT13W0Y2296756 Lic: Prod Date: Odometer:

Air Conditioning	Intermittent Wipers	Dual Mirrors
Privacy Glass	Luggage/Roof Rack	Clear Coat Paint
Power Steering	Power Brakes	Anti-Lock Brakes (4)
Driver Airbag	Passenger Airbag	4 Wheel Disc Brakes
Cloth Seats	Split Bench Seats	Rear Step Bumper
Aluminum Wheels		

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
1		FRAME				
2*	Rpr	Frame assy 4WD			8.0	
3#		BENCH SET &MEASURE	1		3.0	

11/09/2001 at 08:20 AM Job Number:
69356

PRELIMINARY ESTIMATE

2000 CHEV BLAZER 4X4 LS 6-4.3L-FI 4D UTV Int:

NO.	OP.	DESCRIPTION	QTY	EXT. PRICE	LABOR	PAINT
		Subtotals =>		0.00	11.0	0.0

Parts		0.00
Body Labor	11.0 hrs @ $ 45.00/hr	495.00
SUBTOTAL		$ 495.00
Sales Tax	$ 495.00 @ 8.5000%	42.08
GRAND TOTAL		$ 537.08
ADJUSTMENTS:		
Deductible		0.00
CUSTOMER PAY		$ 0.00
INSURANCE PAY		$ 537.08

Estimate based on MOTOR CRASH ESTIMATING GUIDE. Unless otherwise noted all items are derived from the Guide ORIGN95 Database Date 8/2001 and the parts selected are OEM-parts manufactured by the vehicles Original Equipment Manufacturer. Asterisk (*) or Double Asterisk (**) indicates that the parts and/or labor information provided by MOTOR may have been modified or may have come from an alternate data source. Non-Original Equipment Manufacturer aftermarket parts are described as AM or Qual Repl Parts. Used parts are described as LKQ, Qual Recy Parts, RCY, or USED. Reconditioned parts are described as Recon. Recored parts are described as Recore. NAGS Part Numbers and Prices are provided from National Auto Glass Specifications, Inc. Pound sign (#) items indicate manual entries.

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GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LAKE RONKONKONA ,
NY

HOME PHONE:

CASE NUMBER:	05701455	VIN:	1GNDT13W0Y2296756
		MODEL YEAR:	2000
DATE OPENED:	2001-10-17	SERIES:	UNKNOWN
DATE CLOSED:	2001-10-17	MILEAGE:	23000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	HUSTEDT CHEVROLET INC
BRC PARENT:		DEALER ADDRESS:	1815 MIDDLE COUNTRY RD,,CENTEREACH,NY,11720,USA

**********GENERAL CASE INFORMATION**********

T01 Product Allegation GM 1241 — Other
0 REPAIR ATTEMPT(S) — lower ball joint

A04 Possible Safety Concern — Other
0 REPAIR ATTEMPT(S) — lower ball joint

F16 Front Ball Joints/Kingpin — Other
0 REPAIR ATTEMPT(S) — lower ball joint

product allegation

**********WORK HISTORY**********

AVM, Frank Angelico called in initiate PAR. He states that the customer had an accident on 10/15/01. The cust called the dlr and had the vehicle towed in. The delaer notified their Arear Service Manager and he called to intiate PAR. AVM states thatthe left lower ball joint. rivet sheered off lower control arm. he has looked at the vehicle and he states that he has looked at the rivets on the ball joint and that the metal is clean (not exposed to moisture and air causing it to discolor). Bumper is bent at the middle and the left side is creased inward. he states that too many things don't add up and that he would like PAR to investigate. used vehicle bought from the dealer. sold to the customer in July 2001. no injuries. estimate currently unknown. front differential case is cracked. nedds cv joint, lower control arm, tire, etc. minimum $1500-$2500. AVM can be reached at his voice mail 1-800-321-0164 box 8480. Seervice manager is George Shea. he can be reached at 631-585-2700 extension 50. number on file is the customer's work number. their home number is 631-981-6584. vehicle is currently located at the dealership. crm reviewed CAC for a file 05695543. CAC has not intiated PAR. scheduled call back time for today. crm advised the AVM that the CAC crm would be advised to discontinue working with the customer. PAR has taken ownership of the file. crm will call back the service manager to advise him of the PAR file number. crm advised AVM of 800# and extension for this crm. crm advised that a courtesy call would be made to the customer to advise that the AVM has intitated PAR for the customer that someone will be contacting them within 48 hours.

Amber Clark/tampa/par/57148; 0; 99999

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:

DRIVER DISABILITY:

ER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:
**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
ERMARKET:
SE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:

DEALER BUYOUT:
ACCOUNT BALANCE:
BAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LAKE RONKONKONA
NY

HOME PHONE:

CASE NUMBER:	05702695	VIN:	1GNDT13W0Y2296756
		MODEL YEAR:	2000
DATE OPENED:	2001-10-17	SERIES:	UNKNOWN
DATE CLOSED:	2002-01-10	MILEAGE:	23757
SOURCE:		DELIVERY DATE:	
ERC TYPE:	PAR Yes	DEALER NAME:	HUSTEDT CHEVROLET INC
ERC PARENT:	05701455	DEALER ADDRESS:	1815 MIDDLE COUNTRY RD.,CENTEREACH,NY,11720,USA

**********GENERAL CASE INFORMATION**********

T01 Product Allegation GM 1241 — Other
0 REPAIR ATTEMPT(S) — lower ball joint

A04 Possible Safety Concern — Other
0 REPAIR ATTEMPT(S) — lower ball joint

F18 Front Ball Joints/Kingpin — Other
0 REPAIR ATTEMPT(S) — lower ball joint

product allegation

**********WORK HISTORY**********

The customer has been provided alternate transportation by the dealership. The vehicle is currently located at the dealer. Please review CAC file 05701455.

Amber Clark/tampa/par/57148; 0; 372187140
2001-10-18

CRM RECEIVED AND REVIEWED FILE FOR LOWER BALL JOINT ALLEGATION. CRM PRINTED CAC FILE AND VEH HISTORY.
DON LATIMER/PAR/57748; 0; 372280166
2001-10-18

CRM LEFT VME FOR AVM, MR FRANK ANGELICO. DON LATIMER/PAR/57748; 0; 372282538
2001-10-18

CRM CONTACTED THE CUST AND CUST RELATED THE FOLLOWING DESCRIPTION OF THE INCIDENT:
CUST STATES SHE HAD JUST PULLED INTO A PARKING LOT WHEN HER LEFT FRONT WHEEL CAME LOOSE CAUSING HER TO LOSE CONTROL OF HER VEH. CUST STATES THE NIGHT BEFORE THE INCIDENT SHE NOTICED THAT WHEN SHE ACCELERATED FROM A STOP THERE WAS A KNOCKING SOUND COMING FROM THE LEFT FRONT. CUST GAVE HER PERMISSION TO INSPECT HER VEH.
CUST SEEKS TO GET HER VEH REPAIRED.
CRM ADVISED ADDITIONAL RESEARCH WOULD BE NEEDED AND SHE WOULD BE CONTACTED ASAP.; 0; 372283694
2001-10-22

CRM CONTACTED THE DLR, HUSTEDT CHEVROLET INC, 1815 MIDDLE COUNTRY RD, CENTEREACH, NY 11720-3534, Phone: (631) 585-2700 , Fax: (631) 585-3414 , AND SPOKE W/MR GEORGE SHEA, SVM. MR SHEA AGREED TO INSPECT THE VEH AT HIS DLRSHP. CRM FORWARDING REQUEST FORINSPECTION. DON LATIMER/PAR/57748; 0; 372612215
2001-10-23

CRM WAS CONTACTED BY THE AVM. MR FRANK ANGELICO ON 10-19-2001. AVM ADVISED HE HAD BRIEFLY LOOKED AT THE VEH AND BASED ON HIS FINDINGS HE WOULD LIKE TO HAVE AN INDEPENDENT INSPECTOR LOOK AT THE VEH. CRM ADVISED AN INDEPENDENT INSPECTOR WOULD BE REQUESTED. DON LATIMER/PAR/57748; 0; 372704884
2001-10-23

CRM CONTACTED THE AVM AND LEFT VME.
CRM CONTACTED THE DLR AND SPOKE W/MR GEORGE SHEA, SVM, AND ADVISED HIM TO CANCEL THE REQUEST FOR THE INSPECTION. DON LATIMER/PAR 57748; 0; 372705006
2001-10-23

CRM REQUESTING EAA INSPECTION. DON LATIMER/PAR/57748; 0; 372705364
2001-10-23

CRM RECEIVED A CALL FROM AVM, MR FRANK ANGELICO. CRM ADVISED MR ANGELICO OF THE REQUEST FOR AN INDEPENDENT INSPECTOR. DON LATIMER.PAR/57748; 0; 372722464
2001-10-24

CRM RECEIVED CALL FROM INSPECTOR. THE INSPECTOR ADVISED HE HAS RECEIVED THE REQUEST, HOWEVER, HE WILL NOT BE ABLE TO LOOK AT THE VEH UNTIL 10-30-2001. DON LATIMER/PAR/57748; 0; 372793262
2001-10-29

CRM RECEIVED VME FROM CUST. CRM RETURNED CALL AND CUST HAD BEEN SEEKING A STATUS ON THE FILE, HOWEVER, CUST ADVISED SHE HAD JUST CONTACTED THE DLR AND HAD BEEN ADVISED THE INSPECTOR WAS LOOKING AT THE VEH. CUST ALSO REQUESTED ASST W/A TEN DOLLAR A DAYRENTAL CHARGE.
CRM ADVISED THE INSPECTION WOULD NEED TO BE RECEIVED AND REVIEWED AND ANY ADDITIONAL COMP WOULD BE ADDRESSED AT THE TIME A DECISION WAS MADE. DON LATIMER/PAR/57748; 0; 373231171
2001-10-30

CUST CALLED SEEKING STATUS. CRM ADVISED THE INSPECTION REPORT HAS NOT BEEN RECEIVED. CRM ADVISED CUST SHE WOULD BE CONTACTED ASAP. DON LATIMER/PAR/57748; 0; 373316924
2001-11-01

CUST CALLED SEEKING STATUS OF FILE. CRM ADVISED PRELIMINARY REPORT HAS BEEN RECEIVED AND ADDITIONAL RESEARCH IS REQUIRED. DON LATIMER/PAR/57748; 0; 373494448
2001-11-05

CRM RECEIVED VME FROM INSPECTOR MAC ANENEY. CRM CONTACTED MR MAC ANENEY AND WAS ADVISED HE HAD RESOLVED HIS QUESTION AND HIS REPORT HAD BEEN SUBMITTED. DON LATIMER/PAR/57748; 0; 373817190
2001-11-06

CRM RECEIVED MSG TO CONTACT MR FRANK ANGELICO, AVM, AT 631-265-8200. MR ANGELICO WAS SEEKING STATUS ON THE FILE. CRM ADVISED WE WERE AWAITING THE INSPECTOR'S REPORT. CRM DON LATIMER/PAR/TAMPA; 0; 373925047
2001-11-06

CUST CALLED REQUESTING STATUS.
CRM ADVISED THE INSPECTION REPORT HAS NOT BEEN RECEIVED. CRM AND CUST AGREED TO A CALLBACK FOR 11-8-2001 BETW 9:30 AM-1:30 PM ET. DON LATIMER/PAR/57748; 0; 373932304
2001-11-07

CRM RECEIVED INSPECTION REPORT. DON LATIMER/PAR/57748; 0; 374021151
2001-11-08

CRM REVIEWED INSPECTION REPORT W/TM G DEPALMA. IT WAS DETERMINED THERE WAS NO CLEAR INDICATION OF MFG'S CONCERN. BASED ON CUST DESCRIPTION OF THE INCIDENT REVIEW OF THE FACTS IN THE INSPECTION REPORT CRM WILL OFFER TO REPAIR THE CUST'S VEH.
CRM CONTACTED THE CUST AND CUST AGREED W/GM DECISION. DON LATIMER/PAR/57748; 0; 374085802

2001-11-08

CONTACTED THE DLR AND SPOKE W/MR GEORGE SHEA, SVM. CRM REQUESTED A COMPLETE RO. MR SHEA ADVISED HE WOULD FORWARD AN RO ASAP. DON LATIMER/PAR/57748; 0; 374086552
2001-11-12

CUST STATES THAT SHE IS GETTING CNR VOICE MAIL. CUST SEEKS TO SPEAK W/ HIM IN REGARDS TO THIS CASE. CRM ADVISED THAT WOULD TAKE MSG AND GIVE IT TO HIM AND ONCE HE IS AVAIL HE WILL CONTACT HER BACK. VON KILPATRICK/PAR 57552; 0; 374444752
2001-11-13

CRM CONTACTED THE MR SHEA, SVM, AND REQUESTED STATUS ON THE REPAIR EST. MR SHEA REQUESTED A COPY OF THE ORIG EST BE FAXED TO HIM. MR SHEA ADVISED HE WOULD HAVE A REVISED REPAIR EST COMPLETED THIS DATE. DON LATIMER/PAR/57748; 0; 374509514
2001-11-13

CRM ATTEMPTED TO RETURN CALL TO CUST AT WORK. CRM WAS ADVISED THE CUST WOULD NOT BE IN UNTIL 9:30 AM ET.; 0; 374514027
2001-11-15

CRM RECEIVED ESTIMATES. CRM AUTHORIZING REPAIRS FOR BODY AND MECHANICAL ACCORDING TO THE SUBMITTED ESTIMATES. DON LATIMER/PAR/57748; 0; 374706589
2001-11-15

BUSINESS SUMMARY-1-CRM reviewed file. 2-CRM contacted customer and reviewed PAR facts. 3-CRM received customers authorization for inspection. 4-CRM initiated EAA inspection. 5-CRM reviewed inspection report. 6-CRM advising all concerned parties that GM will repair vehicle. 7- customer accepts repairs 8-CRM closing file and forwarding to ESIS. Don Latimer/PAR/57748; 0; 374706685
2001-11-16

**********FTT, SUE LE, TAMPA PAR 58509**********; 0; 374771131
2001-11-28

1. CRM CALLED AND SPOKE WITH SVM, GEORGE SHEA 631-585-2700 / FAX 608-738-8015. GEORGE STATES HE WILL TRY TO HAVE VEH FINISH BY THIS WEEKEND. CRM ADVISED SVM TO FAX RO AND RECEIPTS WHEN COMPLETED. CUST IS IN A RENTAL.; 0; 375809551
2001-12-06

CUST CALLED SEEKING REIMBURSEMENT FOR ONE MONTHS VEH PAYMENT AND INSURANCE. CRM REFERRED CUST TO GMAC. DON LATIMER/PAR/57748; 0; 376524733
2001-12-13

2. GMNA Z1242 / DLR CODE 13-02145 / RO 105557 / $7438.32 / AUTH WGP / CRM ADVISED ELIZABETH WHEN AND HOW TO SUBMIT. CRM WILL CLOSE CASE; 0; 377108011
2002-01-09

3. CRM RECEIVED A MESSAGE FROM SVM TO CALL CRM BACK. CRM CALLED BUT ELIZABETH IS NOT IN YET. GEORGE SHEA IS IN A MEETING. CRM WILL CALL BACK LATER; 0; 379440864
2002-01-10

4. CRM CALLED AND SPOKE WITH LIZ. LIZ ADVISED THAT SHE IS TAKING THE REST OF THE TAX OUT (TOTAL OF $18.05). TOTAL AMOUNT FOR RENTAL IS $2072.20. CRM WILL RESUBMIT GMNA Z1242 FOR $7420.27. CRM ADVISED LIZ WHEN TO SUBMIT IT. CRM CLOSING CASE; 0; 379533876
MILLER, KARYN B

**********PAR INFORMATION**********

INCIDENT DATE: 2001-10-15 INCIDENT TIME: 12:00:00
INCIDENT LOCATION: PARKING LOT

DRIVER NAME: KARYN MILLER DRIVER AGE:
DRIVER DISABILITY: unknown

OWNER DESCRIPTION: CUST STATES SHE PULLED INTO PARKING LOT AND THE FRONT WHEEL CAME LOOSE. [illegible] THEN STRUCK A LIGHT POLE

ALLEGED DEFECTIVE COMPONENT: LOWER BALL JOINT

INCIDENT RESULT: REPAIR, 11/08/01, 1056 HRS
POLICE REPORT: N
ROAD CONDITION: Dry
ROAD SURFACE:
NUMBER OF PEOPLE: 1
BODY INJURY: N
INJURIES: N

WAS ANOTHER VEHICLE INVOLVED: N
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: N
INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:
MORE INFORMATION: AVM INTIATED PAR FILE
MAINTENANCE LOCATION: DEALERSHIP
CURRENT LOCATION OF VEHICLE: HUSTEDT CHEVROLET INC, 1815 MIDDLE COUNTRY RD, CENTERBACH, NY 11720-3534,
NOTIFY NAME: MILLER, KARYN B

WAS VEHICLE INSPECTED: Y
INSPECTORS NAME: EAAINSPECTION DATE: 2001-10-29
MILEAGE AT INSPECTION: 23757
[illegible]RE WAS INSPECTION DONE: VISUAL INSPECTION OF FRONT SUSPENSION

WAS VEHICLE ROAD TESTED: N
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED: FRONT SUSPENSION
INVESTIGATIVE SUMMARY: SEE HISTORY
PAR STATUS: Accepted
**********PAR INFORMATION**********

SOURCE:
TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER:
FAX NUMBER:
PRODUCT CODE:
BODY TYPE:
TRIM:
ENGINE TYPE:
TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
MSRP:
NADA: 0
SALES TAX:

DEPRECIATION:
[illegible]RADE:
[illegible]ERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:

INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
AMOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE: Claimant
CONTACT PHONE:
ADDRESS:

LAKE RONKONKOMA, NY

GENERAL MOTORS CORPORATION
CHEVROLET DIVISION
GM RESTRICTED

CUSTOMER:
ADDRESS: LAKE RONKONKOMA ,
NY
HOME PHONE:

CASE NUMBER:	05695543	VIN:	1GNDT13W0Y2296756
		MODEL YEAR:	2000
DATE OPENED:	2001-10-16	SERIES:	UNKNOWN
DATE CLOSED:	2001-10-17	MILEAGE:	22000
SOURCE:	Phone	DELIVERY DATE:	
BRC TYPE:	Yes	DEALER NAME:	HUSTEDT CHEVROLET INC
BRC PARENT:		DEALER ADDRESS:	1815 MIDDLE COUNTRY RD,,CENTERREACH,NY,11720,USA

**********GENERAL CASE INFORMATION**********

F18 Front Ball Joints/Kingpin Broken
0 REPAIR ATTEMPT(S) DRIVER'S FRONT BROKE OFF

Vehicle repair request - Repair not done

INSTRUCTIONS TO CRM:
*Probe to identify failed item/component
* Determine Customers Expectation
* Using delivery date, establish if vehicle is within any warranty coverage
* Listen carefully to evaluate cause of failure - defect or damage
(If damage, consider explaining the consumers responsibility)
* Review Specific Solutions [[SPECIFIC SOLUTIONS RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/ProductCenter/GeneralInfo/content/SolutionsByComponentCode.htm]]
* Identify if earlier repairs have been attempted? -[[Possible Chronic Rep RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/ChronicAlerts.htm]]
(1st attempt - offer to coordinate repair at a dealership)
(Previous repairs)
1) Review warranty history on "VIN Profile" tab
2) Contact appropriate Service dealership to discuss
3) Determine if TAC was previously contacted or is now necessary
4) Establish & document a diagnosis and repair plan
* Coordinate with dealership to assist with customer's repair request
* Be prepared to answer "I don't want my car anymore / repurchase"[[Vehicle Repurchase Link RUN C:\Progra~1\Plus!\Micros~1\Iexplore.exe http://carsweb/webknowledge/CARSCP/SBS/html/CustomerRequestsVehicleRepurchase.htm]]
Vehicle repair request - Repair not done L/F Ball Joint failed.

**********WORK HISTORY**********

CUST STATES SECOND OWNER ON A VEH WITH 22,000 MILES HAD A WHEEL FALL OFF. CUST INITALLY SEEKS 1) THE VEH BOUGHT BACK, 2) 4 NEW TIRES ON THE VEH. 3) CONFIDENCE REBUILT WITH THE VEH AND CHEV. CRM CONTACTED TOM, ASST SRV MGR, AT HUSTEDT. TOM STATES THATCURRENTLY THE ISSUE IS ENTIRELY TOO NEW TO ASSESS THE REASONS OF THE FAILURE, AND THE WRNTABLE REPAIRS. TOM STATES THE VEH SHOULD QUALIFY FOR A LOANER VEH. CRM RETURNED TO CUST TO ADVISE THAT THE FAILURE OF THE BALLJOINT IS CURRENTLY UNDIAGNOSED. CRM ADVISED THAT THERE IS NO HISTORY OF ANY WNRTABLE CLAIMS ON THE VEH, SO THE REQUEST FOR THE REPURCHASE IS DENIED, CUST UNDERSTANDS, CUST STILL SEEKS FAITH RESTORED IN THE VEH, AND IT BE REPAIRED PROPERLY. CRM APLOGIZED FOR THE FAILURE AND ASSURED THAT THIS IS NOT A "COMMON FAILURE" CRM ADVISED THAT A CALL IS SET FOR 10/17/01 AT PRIMARY # 1:30 - 2:30 PM EST. KEN PETERSEN/CAC/PDX; 0;
372109552
2001-10-17

Please discontinue working the file. PAR has taken ownership of customer's concerns at the request of the AVM.

Amber Clark/tampa/par/57148; 0; 372187196

**********PAR INFORMATION**********

INCIDENT DATE: INCIDENT TIME:
INCIDENT LOCATION:

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY:

OWNER DESCRIPTION:

ALLEGED DEFECTIVE COMPONENT:

INCIDENT RESULT:
POLICE REPORT: ROAD CONDITION: ROAD SURFACE:
NUMBER OF PEOPLE: 0 BODY INJURY:
INJURIES:

WAS ANOTHER VEHICLE INVOLVED:
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: INSURANCE COMPANY NAME:
INSURANCE COMPANY ADDRESS:
AGENT NAME:
AGENT PHONE NUMBER:

MORE INFORMATION:
MAINTENANCE LOCATION:
CURRENT LOCATION OF VEHICLE:
NOTIFY NAME:

WAS VEHICLE INSPECTED: INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED:
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS:

**********PAR INFORMATION**********

SOURCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:
DEALER ADDRESS: , ,
CONTACT: ,
PHONE NUMBER: FAX NUMBER:
PRODUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:

VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0
BRC WARRANTY DATE:
P:
NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH:
NAME:
ACCOUNT NUMBER:
INTEREST RATE:
INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL:
LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION:
VEHICLE DESTINATION:
RELEASE:
LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

NUMBER OF INJURIES: 0
COMMENTS:

NAME:
LOCATION:
ADDRESS: ,
CITY/STATE: ,
NE NUMBER:
TING POSITION:
RESTRAINT:
TYPE OF INJURY:
TREATED:
IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER:
DATE:
TITLE NAMES:
BUSINESS:
% BUSINESS: 0
ACCIDENT:
DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0
DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0
PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

NAME:
CONTACT NUMBER: 1
COMPANY:
CONTACT TYPE:
CONTACT PHONE:
ADDRESS:

TECHNICAL ASSISTANCE SYSTEM

*** GM RESTRICTED ***

Case No:	*5300411*	*VIN Number:*	*1GNCT18W7XK175032*
Date Opened:	*12/27/2001*	*Model Year:*	*99*
Date Closed:	*12/27/2001*	*Series:*	*Blazer 4X4 2DR*
Dealer Code:	*E86395*	*Mileage:*	*44478*
Address:	*ADAM AUTOMOBILES INCCOATICOOK*	*State:*	*PQ*
Dealer Phone:			

SYMPTOM ABSTRACT--- FRONT JOINT RIGHT TOP BROKEN UPPER BALL-JOINT

RESOLUTION ABSTRACT- ARM BALL JNT RPL BH

UCC CODE 1-----

UCC-1 DESCRIPTION-- SUSPENSION

UCC CODE 2-----

UCC-2 DESCRIPTION--

UCC CODE 3-----

UCC-3 DESCRIPTION--

12/27/2001 14:54:03 SBD TEMPLATE - AUDET

STRATEGY BASED DIAGNOSTICS (LIST DETAILS IN TEXT 2 BOX)

__ NUMBER OF TIMES IN FOR THE SAME CONDITION

__ NUMBER OF DAYS VEHICLE IN DEALERSHIP FOR SAME CONDITION

__ (Y/N) IS THE VEHICLE IN THE DEALERSHIP

__ (Y/N) IS THE VEHICLE MODIFIED/NON-PRODUCTION ACCESSORIES

__ (Y/N) CAN COMPLAINT BE DUPLICATED

__ (Y/N) HAVE YOU COMPARED THIS WITH AN IDENTICAL VEHICLE

__ (Y/N) CAN YOU ISOLATE THE AREA OF THE CUSTOMERS COMPLAINT

__ (Y/N) SERVICE INFORMATION SEARCH COMPLETED

__ (Y/N) BULLETIN OR PI SEARCH PERFORMED

__ (Y/N) IS THE CUSTOMER CONCERN THE SAME AS SYMPTOM DESCRIPTION

__ (Y/N) ARE THERE ANY DTC'S

__ (Y/N) HAVE ANY REPAIRS BEEN MADE OR PARTS REPLACED

12/27/2001 14:54:03 HISTORY - AUDET

CUST CONCERN;

RT UPPER BALL-JOINT BROKE OFF WHILE TURNING AT LOW SPEED.

HIST;

DLR REPORT VEH WAS TOWED IN UPPER RT FRT BALL-JOINT HAS BROKE OFF AND DAMAGE OTHER COMPONENTS.

SUGG;

ADV DLR TO REPAIR VEH AS NECESSARY AND REPORT.

TECHNICAL ASSISTANCE SYSTEM

*** GM RESTRICTED ***

Case No:	*5636172*	*VIN Number:*	*1GNDT13W0X2225863*
Date Opened:	*05/30/2002*	*Model Year:*	*99*
Date Closed:		*Series:*	*Blazer 4X4 4DR*
Dealer Code:	*B16039*	*Mileage:*	*54233*
Address:	*RANSON CHEVROLET-OLDHILLSVILLE*	*State:*	*VA*
Dealer Phone:			

SYMPTOM ABSTRACT— SUSPENSION LOWER BALL JOINT
RESOLUTION ABSTRACT-
UCC CODE 1———
UCC-1 DESCRIPTION— SUSPENSION
UCC CODE 2———
UCC-2 DESCRIPTION—
UCC CODE 3———
UCC-3 DESCRIPTION—

05/30/2002 10:43:02 SBD TEMPLATE - ST.DENIS
STRATEGY BASED DIAGNOSTICS

_1_ NUMBER OF TIMES IN FOR THE SAME CONDITION
_1_ NUMBER OF DAYS VEHICLE IN DEALERSHIP FOR SAME CONDITION
_N_ Y / N IS THE VEHICLE MODIFIED/NON-PRODUCTION ACCESSORIES (LIST BELOW)

CALLER'S NAME (FIRST, LAST, AND POSITION)FRANKIE HILL TECH

CUSTOMER CONCERN LOWER BALL JOINT SEPARATION

DEALER COMMENTS/DIAGNOSIS -(DTC'S, PARTS, REPAIRS, DUPLICATED, SI SEARCH, COMPARE TO LIKE VEHICLE?)
DLR STATES OWNER WAS DRIVING TRUCK WHEN LOWER FRT BALL JOINT BROKE , CAUSING TIRE TO FLOP OVER , DLR STATES THERE WAS NO OTHER VEHICLE INVOLVED , NO DAMAGE OR INJURIES OTHER THAN DAMAGE TO WHL , BALL JOINT & BRAKE HOSE .
TAC SUGG NO OTHER LIKE CASES , TAC SUGG REPAIR CAR AS NORMAL , CONTACT AVM ON ANY AUTHORIZATION CONCERNS .RD.
DLR TO ADVISE .
TAC RECOMMENDATION -
05/30/2002 10:43:02 HISTORY - ST.DENIS

TECHNICAL ASSISTANCE SYSTEM

*** GM RESTRICTED ***

Case No:	5678689	**VIN Number:**	1GNDT13W6Y2169316
Date Opened:	06/18/2002	**Model Year:**	00
Date Closed:	06/18/2002	**Series:**	Blazer 4X4 4DR
Dealer Code:	B14443	**Mileage:**	46000
Address:	OURISMAN CHEVROLET CMARLOW HEIG	**State:**	MD
Dealer Phone:			

SYMPTOM ABSTRACT— JOINT VME AVM JZDFCF UPPER LEFT FRONT BALL JO
RESOLUTION ABSTRACT- FIELD PRODUCT REPORT CLOSING
UCC CODE 1———
UCC-1 DESCRIPTION— SUSPENSION
UCC CODE 2———-
UCC-2 DESCRIPTION—
UCC CODE 3———-
UCC-3 DESCRIPTION—

06/18/2002 14:34:43 SBD TEMPLATE - CLIFFORD
FIELD PRODUCT REPORT

DATE 6/18/02
FPR ORIGINATOR BOB CAMPBELL AVM
LOCATION WEST

WHO WAS CONTACTED DAN ODEN
MATRIX GROUP ST BOM

ENGINE
TRANS
AXLE

COMPLAINT: LEFT UPPER FRONT BALL JOINT SEPARATED

CAUSE: UNKNOWN

CORRECTION: DAMAGE TO VEHICLE'S SUSPENSION, ROTO, AXLE SHAFT, AND BACKING PLATE

TYPE OF VEHICLE USE (I.E. MAIL DELIVERY)

__ (Y/N) UPFITTED VEHICLE

BUILDER

__ (Y/N) MODIFIED FROM PRODUCTION STANDARDS

SPECIAL GM RPO CODES

ADDITIONAL VINS (LIST BELOW)

PART NUMBER

PART DISPOSITION

PART DATE CODES

__ (Y/N) PHOTO TAKEN

LABOR OPERATION

__ (Y/N) SAFETY APPLICABLE

TYPE OF ISSUE, SELECT ONE

__ ENGINEERING

__ SERVICE

__ PLANT

__ SUPPLIER

08/18/2002 14:34:43 HISTORY - CLIFFORD

TECHNICAL ASSISTANCE SYSTEM

*** GM RESTRICTED ***

Case No:	*5768987*	*VIN Number:*	*1GKDT13W8Y2161462*
Date Opened:	*07/28/2002*	*Model Year:*	*00*
Date Closed:	*07/28/2002*	*Series:*	*Jimmy 4X4 4DR*
Dealer Code:	*P08075*	*Mileage:*	*28733*
Address:	*MCGUIRE PONTIAC BUICLITTLE FALLS*	*State:*	*NJ*
Dealer Phone:			

SYMPTOM ABSTRACT---- PERFORMANCE SUSPENSION L/F UPPER BALL JOINT C
RESOLUTION ABSTRACT- LT ARM BALL JNT RPL
UCC CODE 1--------
UCC-1 DESCRIPTION--- SUSPENSION
UCC CODE 2-------
UCC-2 DESCRIPTION---
UCC CODE 3--------
UCC-3 DESCRIPTION---

07/28/2002 10:38:05 SBD TEMPLATE - WALIGROSKI
STRATEGY BASED DIAGNOSTICS

__ NUMBER OF TIMES IN FOR THE SAME CONDITION
__ NUMBER OF DAYS VEHICLE IN DEALERSHIP FOR SAME CONDITION
__ Y / N IS THE VEHICLE MODIFIED/NON-PRODUCTION ACCESSORIES (LIST BELOW)

CALLER'S NAME (FIRST, LAST, AND POSITION)

CUSTOMER CONCERN -

DEALER COMMENTS/DIAGNOSIS -(DTC'S, PARTS, REPAIRS, DUPLICATED, SI SEARCH, COMPARE TO LIKE VEHICLE?)

TAC RECOMMENDATION -
07/28/2002 10:38:05 HISTORY - WALIGROSKI
FIELD PRODUCT REPORT

N__ (Y/N) RESPONSE REQUESTED BY FIELD ENGINEER
VME # AND NODE

DATE 07/28/2002
FPR ORIGINATOR T.J.WALIGROSKI

LOCATION NEW YORK

WHO WAS CONTACTED SUE ANDERSON
MATRIX GROUP BQM T TRUCK

ENGINE 4.3L
TRANS
AXLE

COMPLAINT: LEFT FRONT WHEEL FALLING OFF

CAUSE: L/FRONT UPPER BALL JOINT FELL APART. THIS WAS A REPLACEMENT BALL JOINT

CORRECTION: REPLACE L/F UPPER BALL JOINT TO CORRECT

TYPE OF VEHICLE USE (I.E. MAIL DELIVERY) PLEASURE
N__ (Y/N) UPFITTED VEHICLE
BUILDER

_N_ (Y/N) MODIFIED FROM PRODUCTION STANDARDS
SPECIAL GM RPO CODES

ADDITIONAL VINS (LIST BELOW)

PART NUMBER 1798952
PART DISPOSITION AT DLR/SHIP
PART DATE CODES
_N_ (Y/N) PHOTO TAKEN
LABOR OPERATION E2921
__ (Y/N) SAFETY APPLICABLE

TYPE OF ISSUE, SELECT ONE
__ ENGINEERING
__ SERVICE
__ PLANT
_XX_ SUPPLIER

G E N E R A L M O T O R S C O R P O R A T I O N
O L D S M O B I L E D I V I S I O N
G M R E S T R I C T E D

CUSTOMER:
ADDRESS: LIBERTYVILLE ,
IL

HOME PHONE:

CASE NUMBER:	01732196	VIN:	1GHDT13W9W2730916
		MODEL YEAR:	1998
DATE OPENED:	2000-09-28	SERIES:	BRAVADA
DATE CLOSED:	2000-11-07	MILEAGE:	34000
SOURCE:		DELIVERY DATE:	
BRC TYPE:	PAR	DEALER NAME:	WEIL OLDSMOBILE-CADILLAC, INC.
BRC PARENT:	01724373	DEALER ADDRESS:	1050 S MILWAUKEE AVE,,LIBERTYVILLE,IL,60048,USA

**********GENERAL CASE INFORMATION**********

F10 Front Suspension — Broken
0 REPAIR ATTEMPT(S) — FRONT BALL JOINT BROKE AFTER CUST HIT A CURVE AND A FLAG POLE

T01 Product Allegation GM 1241 — Other
0 REPAIR ATTEMPT(S) — FRONT AXLE

A04 Possible Safety Concern — Other
0 REPAIR ATTEMPT(S) — par

PRODICT ALLEGATION
FRONT AXLE
**********WORK HISTORY**********

Crm received this file on 09/29/00, crm called the cust on 10/02/00 and a gentleman answered the phone and said the customers were out of town and will return next week. Crm asked if I could leave information for the cust to call me back with the gentleman, and stated he did not want to give me his name and advised me to call back next week. Karen Smith/tampa-par/ext.58548.; 0; 339369270
2000-10-11

Crm called the cust today and left a voice message with my name, and 800# with ext. 58548 also the file number, asking the cust to call me back as soon as possible. Karen Smith/Tampa-par/ext.58548.; 0; 340135008
2000-10-19

Crm called cust and spoke with his wife who gave me the phone number to her husbands work. states her husband did pickup the vehicle on 10/18/00, but he wants to talk to someone about the amount of damage that was done to the vehicle. Mrs.Furman advised me to call her husband at 3pm today. Karen smith/Tampa-par/ext. 58548.; 0; 340817108
2000-10-20

Crm called the cust who states he was driving and the vehicle and he clipped a curve because the sun was blinding him and his front end collapsed, and he wants to send me pictures of his vehicle. Crm did advise the cust of the p.o box address for oldsmobile. Crm was unable to find out if the cust's vehicle was repaired, due to him not having time to speak with me, because he was with a patient, cust is a doctor. Crm will try to call him back @ another time. Karen SMith/Tampa-Par/ext.58548.; 0; 340929552
2000-11-07

Crm called the cust and was advised that his vehicle was repaired thru his insurance. Cust also states he wants to send us some photos he took of his vehicle after the accident. Crm [illegible] advise the cust of the mailing address. Crm also advised the custthat GM is declining this file due to insurance involvement. Karen Smith/Tampa-Par/ext.58548.; 0; 342469851
2000-11-07

BUSINESS SUMMARY: 1. Crm received this file on 09/29/2000. 2. Crm spoke with the cust. 3. Crm advised the cust that GM is declining this claim due to insurance involvement.
Karen Smith/Tampa-Par/ext.58548; 0; 342469913
FURMAN, RICHARD

**********PAR INFORMATION**********

INCIDENT DATE: 2000-09-17 INCIDENT TIME: 18:32:00
INCIDENT LOCATION: 20 TOWER CT

DRIVER NAME: DRIVER AGE:
DRIVER DISABILITY: NONE

OWNER DESCRIPTION: CUST STATES HE HIT A 3INCH CURB AND THE ENTIRE FRONT SUSPENSION FELL APART AND HE HIT A FLAG POLE

ALLEGED DEFECTIVE COMPONENT: FRONT AXLE

INCIDENT RESULT: 11/07/00--Crm advised the cust that GM is declining due to insurance involvement.
POLICE REPORT: Y ROAD CONDITION: Dry ROAD SURFACE:
NUMBER OF PEOPLE: 2 BODY INJURY: N
[illegible]URIES: N

WAS ANOTHER VEHICLE INVOLVED: N
NUMBER OF VEHICLES: 0

PROPERTY DAMAGE:

WAS VEHICLE INSURED: Y INSURANCE COMPANY NAME: USAA
INSURANCE COMPANY ADDRESS: SAN ANTONIO
AGENT NAME: NONE
AGENT PHONE NUMBER: 18005318111
MORE INFORMATION: CONTACT CUST OCT 9TH HE WILL BE GONE TIL THEN
MAINTENANCE LOCATION: WEIL OLSDMOBILE
CURRENT LOCATION OF VEHICLE: GEEBER AUTO BODY ROUND LAKE , IL
NOTIFY NAME: RICHARD FURMAN

WAS VEHICLE INSPECTED: N INSPECTORS NAME: INSPECTION DATE:
MILEAGE AT INSPECTION:
WHERE WAS INSPECTION DONE:

WAS VEHICLE ROAD TESTED: N
ROAD TEST DESCRIPTION:
ROAD TEST RESULT:
COMP INSPECTED:
INVESTIGATIVE SUMMARY:
PAR STATUS: Accepted
**********PAR INFORMATION**********

[illegible]URCE: TRANSACTION:
REQUEST TYPE:
REPURCHASE REASON:

DEALER BAC:
DEALER NAME:

DEALER ADDRESS: , ,
CONTACT: ,
[illegible]NE NUMBER: FAX NUMBER:
[illegible]DUCT CODE: BODY TYPE:
TRIM:
ENGINE TYPE: TRANSMISSION:
VEHICLE DRIVEABLE:
MILEAGE @ BUY-BACK: 0 BRC WARRANTY DATE:
MSRP: NADA: 0
SALES TAX:
DEPRECIATION:
UPGRADE:
AFTERMARKET:
LEASE TERM:
DAMAGE:
OTHER:
BRANCH: NAME:
ACCOUNT NUMBER:
INTEREST RATE: INTEREST PAID:
DEALER BUYOUT:
ACCOUNT BALANCE:
LEGAL: LEGAL TYPE:
LEMON LAW:
DEALER ADMINISTRATION: VEHICLE DESTINATION:
RELEASE: LIEN PAYOFF:
TITLE BRAND:
REPLACEMENT VIN:

**********BODILY INJURY**********

[illegible]BER OF INJURIES: 0
[illegible]MENTS:

NAME: LOCATION:
ADDRESS: ,
CITY/STATE: ,
PHONE NUMBER:
SEATING POSITION: RESTRAINT:
TYPE OF INJURY:
TREATED: IF SO, WHERE:

**********ADR INFORMATION**********

EXTERNAL CASE NUMBER: DATE:
TITLE NAMES:
BUSINESS: % BUSINESS: 0
ACCIDENT: DATE OF ACCIDENT:
DESCRIPTION OF DAMAGE:
PURCHASE/LEASE: 0 DATE OF PURCHASE/LEASE:
MILEAGE AT PURCHASE: 0 PURCHASE/LEASE AS:
DOES OWNER HAVE POSESSION OF VEHICLE:
RESOLUTION SOUGHT:

**********BRC CONTACT INFORMATION**********

[illegible]E: CONTACT NUMBER: 1
[illegible]PANY: CONTACT TYPE: Claimant
CONTACT PHONE:
ADDRESS:

LIBERTYVILLE, IL

Customer & Relationship Services Group
P.O. Box 436008
Pontiac, Michigan 48343-6008

General Motors

Customer & Relationship
Services Group

11-15-00PD1:10 RCVD

MSX International
1464 John A. Papalas Dr.
Lincoln Park, MI 48146

01732196

GENERAL MOTORS CORPORATION

BRAND: Oldsmobile
11/07/00 11/8/00

ESIS/GM Central Claims

RE: Claimant:

Mail Code 482 C20 D71

Date of Incident: 09/17/2000

File: 01732196

Gentlemen: ATTENTION:

Attached is a PAR report with information on the above captioned incident. This Report of Preliminary Investigation is submitted to you for the reason(s) indicated below:

1. (✓) The attached report is for your information and record.
2. ( ) We believe this claim may deserve further investigation by you.
3. ( ) Other:

We have checked the above items based upon the information we have at this time. If you do not agree, or if subsequent facts come to your attention indicating the advisability of a different approach, we would appreciate being advised promptly.

Please Contact:

Customer Relationship Manager
General Motors Corporation
5701 E. Hillsborough Avenue
Suite 2300
Tampa, FL 33610

Further inquiries regarding this claim should be directed to the undersigned.

Sincerely,

Karen Smith

Karen Smith
Customer Relationship Manager
General Motors Corporation
Product Allegation Resolution Team

Enclosures:

- [✓] Customer File
- [✓] VIN Profile
- [ ] Inspection Report
- [ ] Pictures
- [ ] Estimates
- [ ] Police or Fire Report
- [ ] Repair Orders
- [ ] Dern Tape
- [ ] Other:

R 7/20/99

GENERAL MOTORS BUSINESS RESOURCE CENTER

November 7, 2000

Libertyville, IL

RE: File Number: 01732196
Vehicle Identification Number: 1GHDT13W9W2730916

Dear

Thank you for allowing us the opportunity to review the product allegation involving your 1998 Oldsmobile Bravada.

Our review of your file has revealed that you have already received a settlement from your insurance company regarding this matter. Therefore, General Motors is unable to assume responsibility for damages.

Sincerely,

Karen Smith

Karen Smith
Customer Relationship Manager
Product Allegation Resolution Team

7.19.00 Ins. Setl. Doc.

PAR CASE INFORMATION

Problem ID: 01732196

CONTACT INFORMATION

Name:
Address:
LIBERTYVILLE, IL
Phone:

VEHICLE INFORMATION

VIN: 1GHDT13W9W2730916
MAKE: OLDSMOBILE
MODEL: BRAVADA
YEAR: 1998
ODOMETER: 34,000

BRC CONTACT INFORMATION

NAME:
COMPANY:
ADDRESS:
PHONE:
TYPE: Claimant

ACCOUNT/POLICY:
SERVICE DEALER: WEIL OLDSMOBILE-CADILLAC, I
CONTRACT: /A
SELLING DEALER: WEIL OLDSMOBILE-CADILLAC, I
CONTRACT: N/A
PAYEE: No

PAR DETAILS

CONTACT ID: C0000039013401
DRIVER NAME:
DRIVER AGE: 48
DISABILATIES: NONE
ROAD SURFACE: Concrete
ROAD CONDITION: Dry
PEOPLE IN VEHICLE: 2
INJURIES: No
OTHER VEHICLES INVOLVED: No
NUMBER INVOLVED:
DEFECTIVE COMPONENT: FRONT AXLE
POLICE REPORT: Yes
INSURANCE: Yes
INSURNCE COMPANY: USAA
INSURANCE COMPANY ADDR: SAN ANTONIO
INSPECTION: No
INSP NAME:
INSP DATE:
INSP MILES:
INSP DONE:
PROPERTY DAMAGE:

BODY INJURY: No
COLLISION: Yes
PROPERTY DMG: No
NON COLL: No
DMB ABV K: No
NOTIFY NAME:
AGENT NAME: NONE
STATUS: Accepted
REJECT REASON:
ROAD TEST: No
ROAD TEST DESC:
ROAD TEST RESULT:
COMP INSPECTED:
INVEST SUMMARY:
AGENT PHONE: 18005318111
INCIDENT DATE & TIME: 08/17/2000 08:32:00 AM

INCIDENT LOCATION: 20 TOWER CT
INCIDENT RESULT: 11/07/00--Crm advised the cust that GM is declining due to insurance involvement.
VEHICLE LOCATION: GERBER AUTO BODY ROUND LAKE , IL
MAINTENANCE LOCATION: WEIL OLSDMOBILE
OWNER DESC: CUST STATES HE HIT A 3INCH CURB AND THE ENTIRE FRONT SUSPENSION FELL APART AND HE HIT A FLAG POLE
MORE INFO: CONTACT CUST OCT 9TH HE WILL BE GONE TIL THEN

REIMBURSEMENT INFORMATION

ID:
PAYEE:
ADDRESS:
COMPANY:
AMOUNT:
ACCT_TYPE:
ACCT_NUM:
TAX_ID:
ISSUE_1099:
POLICY NUM:

PAR CASE INFORMATION

Problem ID: 01732196

CODE INFORMATION

DESCRIPTION:	
SOLUTION:	
COMPONENT CODE 1:	F10
COMPONENT DESCRIPTION 1:	FRONT BALL JOINT BROKE AFTER CUST HIT A CURVE AND A FLAG POLE
COMPLAINT CODE 1:	Broken
COMPLAINT DESCRIPTION 1:	Front Suspension
REPAIR ATTEMPTS 1:	0
COMPONENT CODE 2:	T01
COMPONENT DESCRIPTION 2:	FRONT AXLE
COMPLAINT CODE 2:	Other
COMPLAINT DESCRIPTION 2:	Product Allegation GM 1241
REPAIR ATTEMPTS 2:	0
COMPONENT CODE 3:	A04
COMPONENT DESCRIPTION 3:	per
COMPLAINT CODE 3:	Other
COMPLAINT DESCRIPTION3:	Possible Safety Concern
REPAIR ATTEMPTS 3:	0
COMPONENT CODE 4:	
COMPONENT DESCRIPTION 4:	
COMPLAINT CODE 4:	
COMPLAINT DESCRIPTION 4:	
REPAIR ATTEMPTS 4:	
COMPONENT CODE 5:	
COMPONENT DESCRIPTION 5:	
COMPLAINT CODE 5:	
COMPLAINT DESCRIPTION 5:	
REPAIR ATTEMPTS 5:	
COMPONENT CODE 6:	
COMPONENT DESCRIPTION 6:	
COMPLAINT CODE 6:	
COMPLAINT DESCRIPTION 6:	
REPAIR ATTEMPTS 6:	

PAR CASE INFORMATION

Problem ID: 01732196

WORK HISTORY

10/02/2000 - 03:25:02 AM	Crm received this file on 09/29/00, crm called the cust on 10/02/00 and a gentleman answered the phone and said the customers were out of town and will return next week. Crm asked if I could leave information for the cust to call me back with the gentle man, and stated he did not want to give me his name and advised me to call back next week. Karen Smith/tampa-parfext.58548.
10/11/2000 - 12:01:47 AM	Crm called the cust today and left a voice message with my name, and 800# with ext. 58548 also the file number, asking the cust to call me back as soon as possible. Karen Smith/Tampa-parfext.58548.
10/19/2000 - 09:36:46 AM	Crm called cust and spoke with his wife who gave me the phone number to her husbands work. states her husband did pickup the vehicle on 10/16/00, but he wants to talk to someone about the amount of damage that was done to the vehicle. Mrs. Furman advised me to call her husband at 3pm today. Karen smith/Tampa-parfext. 58548.
10/26/2000 - 04:39:25 AM	Crm called the cust who states he was driving and the vehicle and he clipped a curve because the sun was blinding him and his front end collapsed, and he wants to send me pictures of his vehicle. Crm did advise the cust of the p.o box address for oldsmo bile. Crm was unable to find out if the cust's vehicle was repaired, due to him not having time to speak with me, because he was with a patient, cust is a doctor. Crm will try to call him back @ another time. Karen Smith/Tampa-Parfext.58548.
11/07/2000 - 12:37:17 AM	Crm called the cust and was advised that his vehicle was repaired thru his insurance. Cust also states he wants to send us some photos he took of his vehicle after the accident. Crm did advise the cust of the mailing address. Crm also advised the cust that GM is declining this file due to insurance involvement. Karen Smith/Tampa-Parfext.58548.
11/07/2000 - 12:38:32 AM	BUSINESS SUMMARY: 1. Crm received this file on 09/29/2000. 2. Crm spoke with the cust. 3. Crm advised the cust that GM is declining this claim due to insurance involvement. Karen Smith/Tampa-Parfext.58548

Customer Info

Calls Name:

Customer Name:

Phone

VIN: 1BHDT13WFW2738816

Make: OLDSMOBILE

Model: BRAVADA

Year: 1998

Odometer: 34000

Originating Agent ID: PROTHCOR

Current Agent ID: KSMITH

Property Damage | Non-Collision | Collision | Bodily Injury

Owner

Driver

Date of Birth: cm/dd/yyyy

Other

Type of vehicle if other than owner's

Type of damage: front end

Estimated repair costs:

Weather condition: dry

Vehicle speed at time of incident: unknown

Primary use of vehicle: personal

Where was vehicle last serviced: UNKNOWN

Incident (police) report: no police report

Comments: court states his vehicle was repaired under his insurance.

OK | Save | Cancel

NEXT: GM WARRANTY HISTORY INQUIRY PAGE 01 OF 03
(UPDATED THRU 20001103) DIV: OLDSMOBILE

VEHICLE-ID-NUMBER	DESCRIPTION	ODM	DEL-DLR	DEL-DATE	DEL-ODOM	PDI-ELIG	CLM
1HDT13W9W2730916	BRAVADA	M	0000000	19981031	0	PAID	1

PROD-DTE: 19980908 DELWAR-DATE: WARBLK-DTE:
INV-DTE : N/A DELWAR-ODOM: WARBLK-TYP:
INV-DLR : 1510930 SHIP-TO-DLR: 1510930

	C T	RODLR	CYCLE NO.	RODATE	RO-NO.	DOC-NO	LN	LBROP	LN-TOTAL	ODOMETER	AUTH ID	AUTH CODE
001	I	1510930	888	19980908	A30916	730916	01	Z7000	112.00	0		

PASSENGER CAR AND TRUCK NVI

---------- NO MORE CLAIMS FOR THIS VIN ----------

PF1:HELP PF2:OPT PF3:CHG-DIV PF4:MAIN MENU PF5:DESC PF6:PRINT
PF7:BACK PF8:FWRD PF9:GOTO PF10:LOGOFF
RECORD FOUND

WARRANTY-RELATED OPTIONS/VEHICLE INFORMATION DIV: OLDSMOBILE

VIN: 1GHDT13W9W2730916 ORD-TYPE: 070 SERV-TYPE: 000 DEL-TYPE: 000

RPO	DESCRIPTION	RPO	DESCRIPTION
	T BODY		4 DOOR
	S/T JIMMY/BLAZER		SERIES 1 - 1/2 TON
	OLDSMOBILE		V6 ENGINE
L35	4.3 LITRE V6 CPI		FEDERAL EMISSIONS
	AUTO TRANS	M30	4L60 AUTO TRANS
UH8	INSTRUMENT CLUSTER	AK5	INFLAT RESTRAINT DR/PAS
TB4	ONE-PIECE REAR LIFTGATE	GT4	3.73 REAR AXLE RATIO
	ANTILOCK BRAKE		ALUMINUM WHEEL
C68	ELECT AIR CONDITIONING	U16	TACHOMETER, ENGINE
	FRT D/P ST BK MAN RECLI		TRAILERING PACKAGE
	POWER STEERING		TILT STEERING COLUMN
DK2	DR/PASS REMOTE ELEC	U73	FIXED ANTENNA
UP0	RADIO AM/FM CASS,CD	CF5	ELECTRIC SUNROOF-GLASS
	FLOOR CONSOLE		POWER WINDOW
AU6	REMOTE ELECT TGATE LOCK		KEYLESS ENTRY SYSTEM
	CRUISE CONTROL		LUGGAGE CARRIER

OPTIONS CONTINUED

WARRANTY-RELATED OPTIONS/VEHICLE INFORMATION DIV: OLDSMOBILE

VIN: 1GHDT13W9W2730916

RPO	DESCRIPTION	RPO	DESCRIPTION
	FOG LAMPS	C25	T/GATE WINDOW WIPER
P16	SPARE TIRE CARRIER		

---------- END OF OPTIONS ----------

PF1:HELP PF2:OPT PF3:CHG-DIV PF4:MAIN MENU PF5:DESC PF6:PRINT
PF7:BACK PF8:FWRD PF9:GOTO PF10:LOGOFF

GM632
RQ02-012

ATTACHMENT "6A"

DELPHI
Automotive Systems

Dry dirt fro[illegible]nside
ball joint seal

Date Code:Oct. 10, 1996

DELPHI
Automotive Systems
DECLASSIFIED

DELPHI CONFIDENTIAL

DELPHI ENERGY & CHASSIS

-CL-02-023-034

DELPHI
Automotive Systems

ENERGY & CHASSIS SYSTEMS MATERIALS ENGINEERING LABORATORY REPORT

LAB. NO: 01M056
EWR: 11197-059
DATE LOGGED-IN: 05JA01
DATE COMPLETED: 02MR01

REQUESTER: Chuck Eifert
REPORT DISTRIBUTION: Chuck Eifert
MATERIALS ENGR.: Tom Hewer
LAB. ASSIGNMENTS: G. Jackson, C. King
PRODUCT: Ball Joint
PRODUCT CODE: 302
PLANT: Vandalia
PART NO. / NAME: Sockets and Bearings
MATERIAL / PROCESS SPEC: N/A
DISPOSITION OF SAMPLES: Return to Requester.

SUBJECT / PURPOSE / BACKGROUND:. Analyze the wear on the bearing and socket from (3) submitted T-truck warranty returns. Examine the pitted areas for probable cause.

EQUIPMENT USED: Scanning Electron Microscope (MEM 047), Metallograph (MEM 043)

TESTS AND PROCEDURES: N/A

RESULTS: Examination of wear areas on the sockets adjacent to pitted areas reveal heavy abrasion (see pages 3-4). Non-worn areas of the socket exhibit a fairly uniform zinc phosphate layer with some holes (see page 5). Pitted areas are contained within the heavy wear areas, but do not exhibit wear marks. Their appearance is more typical of a corroded surface (see page 4). X-ray spectrum from the various areas reveal the pitted areas are iron only (see page 6) while the non-worn areas contain phosphorus, antimony, zinc and iron indicative of zinc phosphate plus lubricant (see page 7). Photomicrographs from cross-sections through the pitted areas show no anomalies. Copper could not be detected on bearings examined by SEM.

CONCLUSIONS: Pitted areas in sockets are due to corrosion. Nothing could be detected in these areas as to the cause of the corrosion.

CL02-023-239

LAB NO. 01M056 **ENGINEERING WORK REQUEST** 2001-0024
PAGE 2 of 8

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Expediter ☐ Vehicle Test ☐ Laboratory
☐ Analysis ☒ Materials Engineering ☐ Instrumentation Lab ☐ Procurement ☐ Other
Due Date
Attention: TOM HEWER / DAN GEELS

PROJECT 11197-059
DEPT. NO. 573
DATE 05JAN00
CUSTOMER GMTG
PLATFORM/YR ~~GMT 60/2001 ST-TRK~~ (DE 08JAN00)
VEHICLE NO. SEE BELOW

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other
Due Date

QTY 3 Due Date 12JAN00
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
GP-11 Required ☐ Yes ☒ Waived
A/D/V Required ☐ Yes ☒ No
Specific Inspection ☐ Yes ☒ No
(List Details in REQUIREMENTS Section below)
Material Verification ☐ Yes ☒ No
Customer P.O. #
General Ledger Number:

☐ Validation ☒ Other
INFO ONLY

RETURN TO REQUESTOR

N/A

N/A

REQUIREMENTS

SEM/WEAR ANALYSIS OF SOCKETS/BEARINGS

INSTRUCTIONS

PLEASE ANALYZE THE BEARING AND SOCKET OF THREE (3) T-TRK UPPER BALL JOINT WARRANTY RETURNS (96U, 112U, 270U). PLEASE COMPARE THE WEAR SURFACES AND CORROSION TO DETERMINE WHETHER PITTING OF SOCKET WAS DUE TO CORROSION OR SOME OTHER CAUSE. PROVIDE SEM PHOTOGRAPHS. ADDITIONAL ANAYSIS IS APPRECIATED.

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V57 Phone # 8355
Authorized [signature] Date 08JAN00 FAX # 8342

Completed by [signature] Date 2/11/01 Supervisor Date
Reviewed Date Reviewed Date
(reliability/test eng.)

CL02-023-240

IMAGE03.PCI

LAB NO. 01A05L

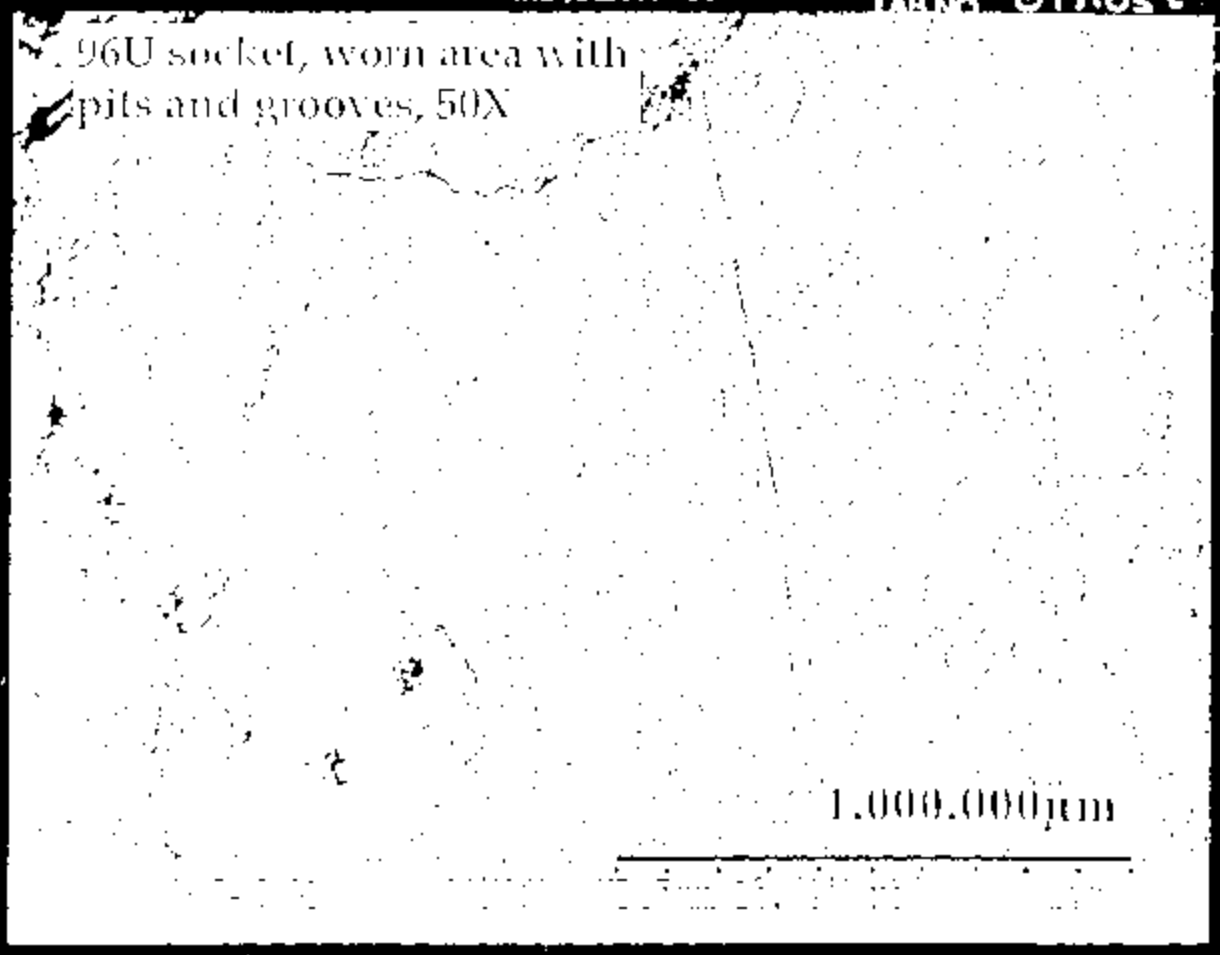
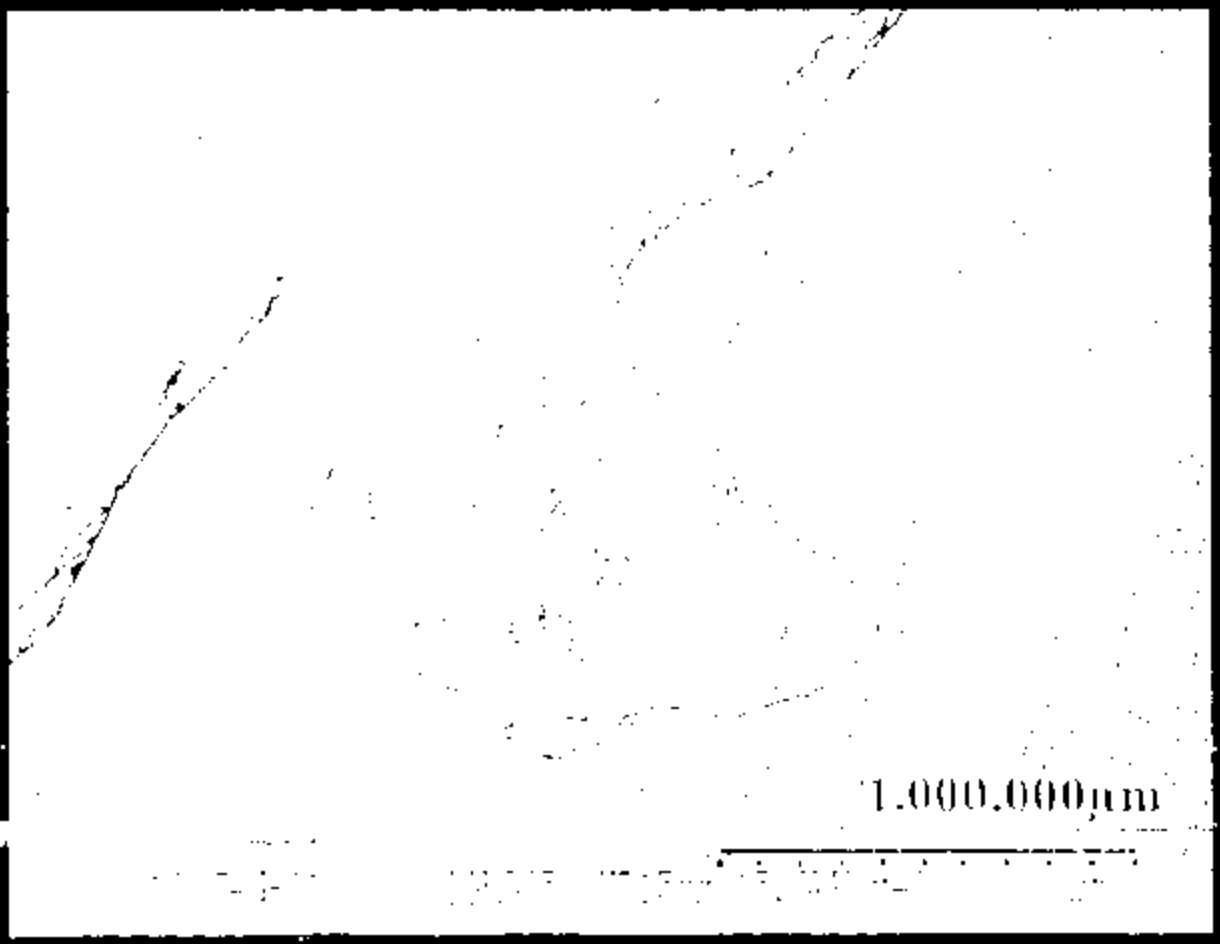


IMAGE04.PCI



CL02-023-241

IMAGE01.PCI LAB NO. 01 A056

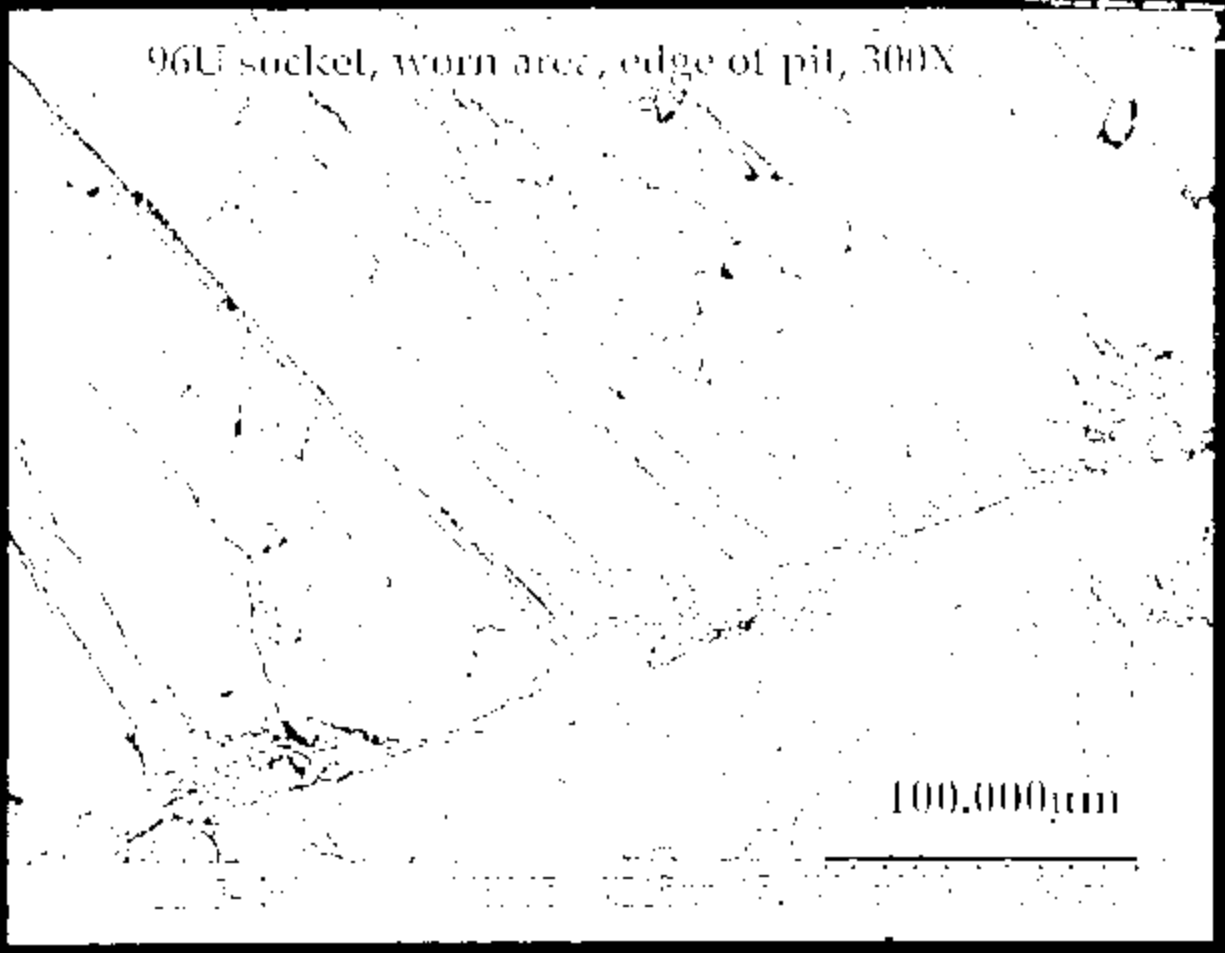
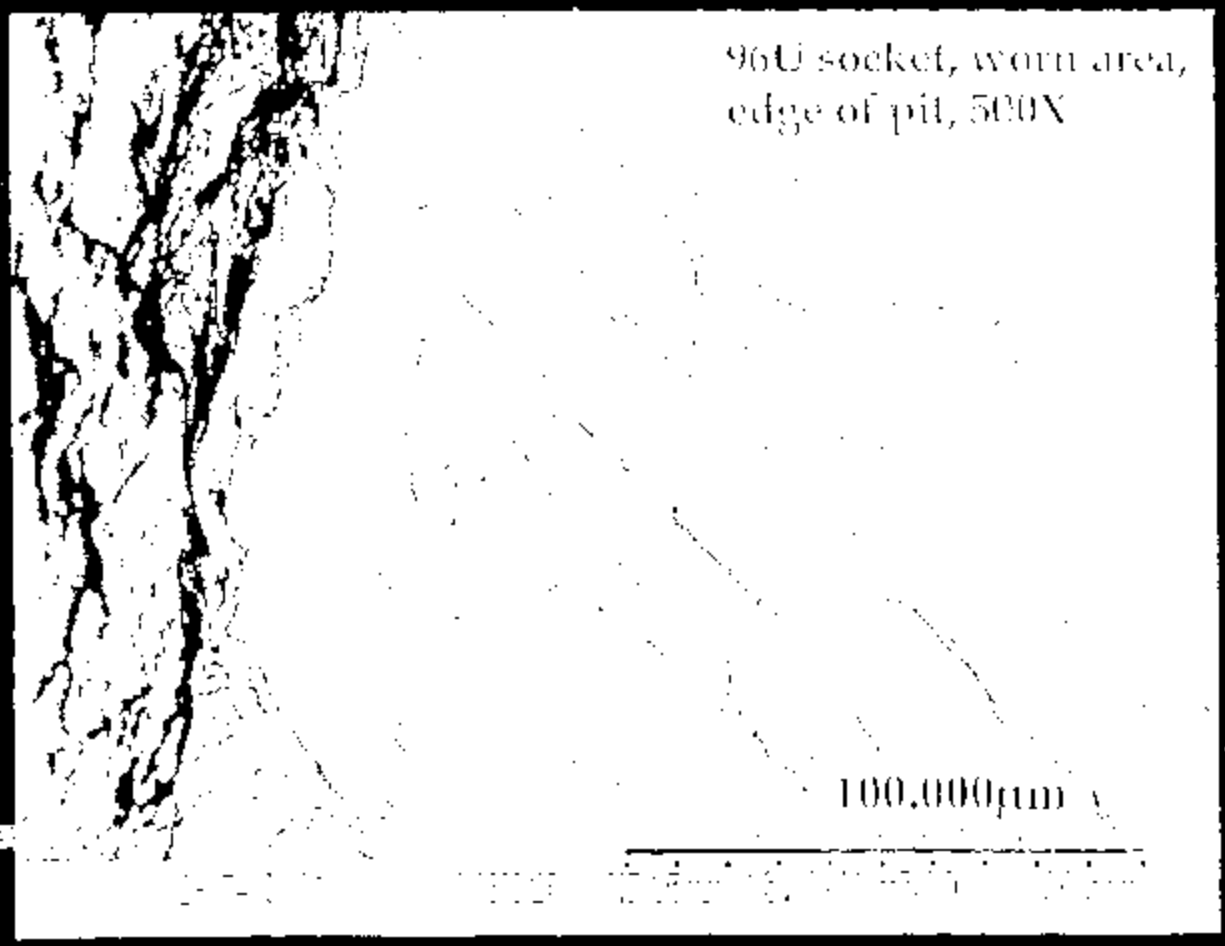


IMAGE02.PCI



CL02-023-242

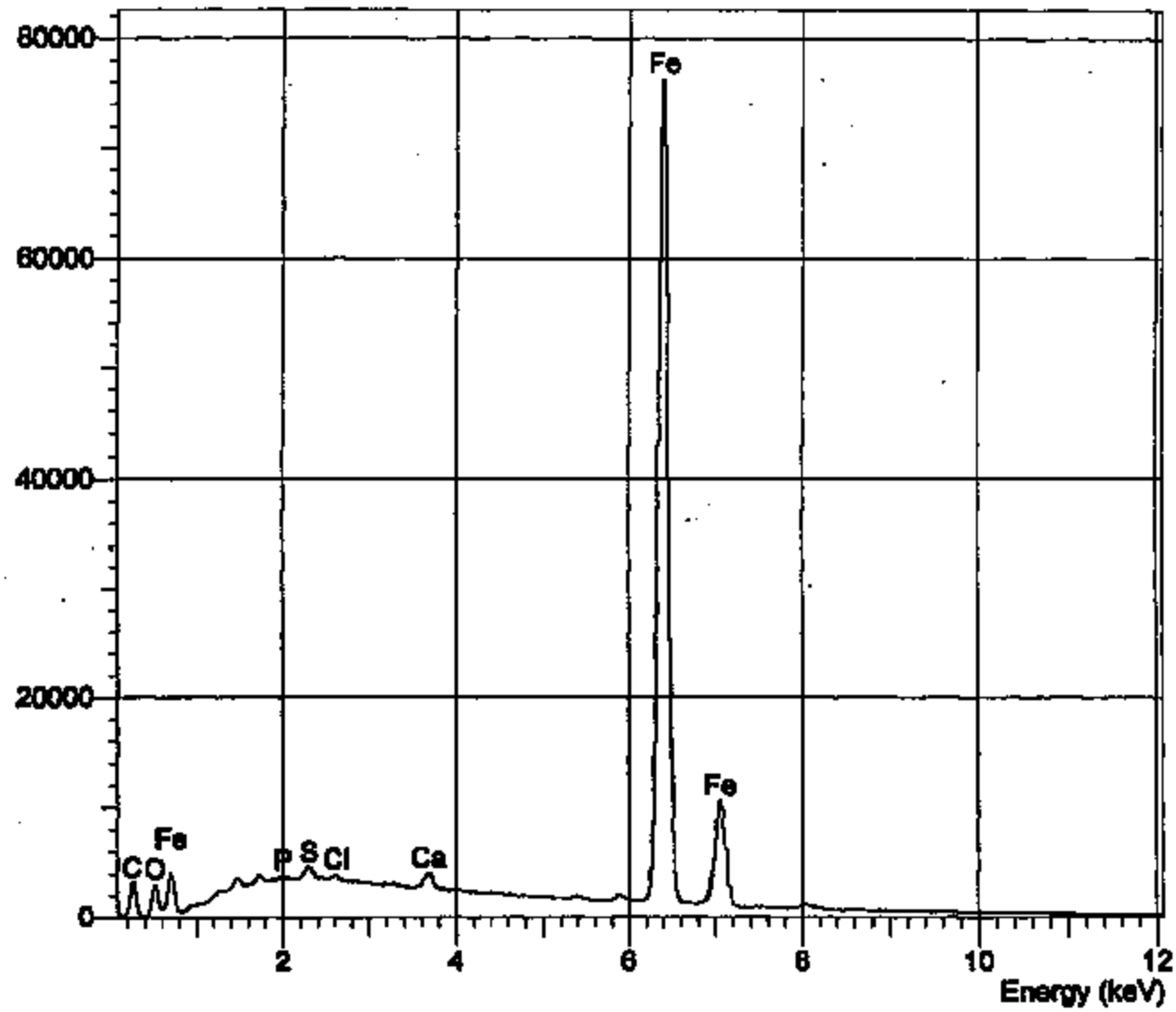
LAB NO. 01n056
PAGE 5 OF 8

C:\PCI3\IMAGES\PRODUCTS\BALL_JOI\11197059\IMAGE05.PCI

Phos hole in lube layer

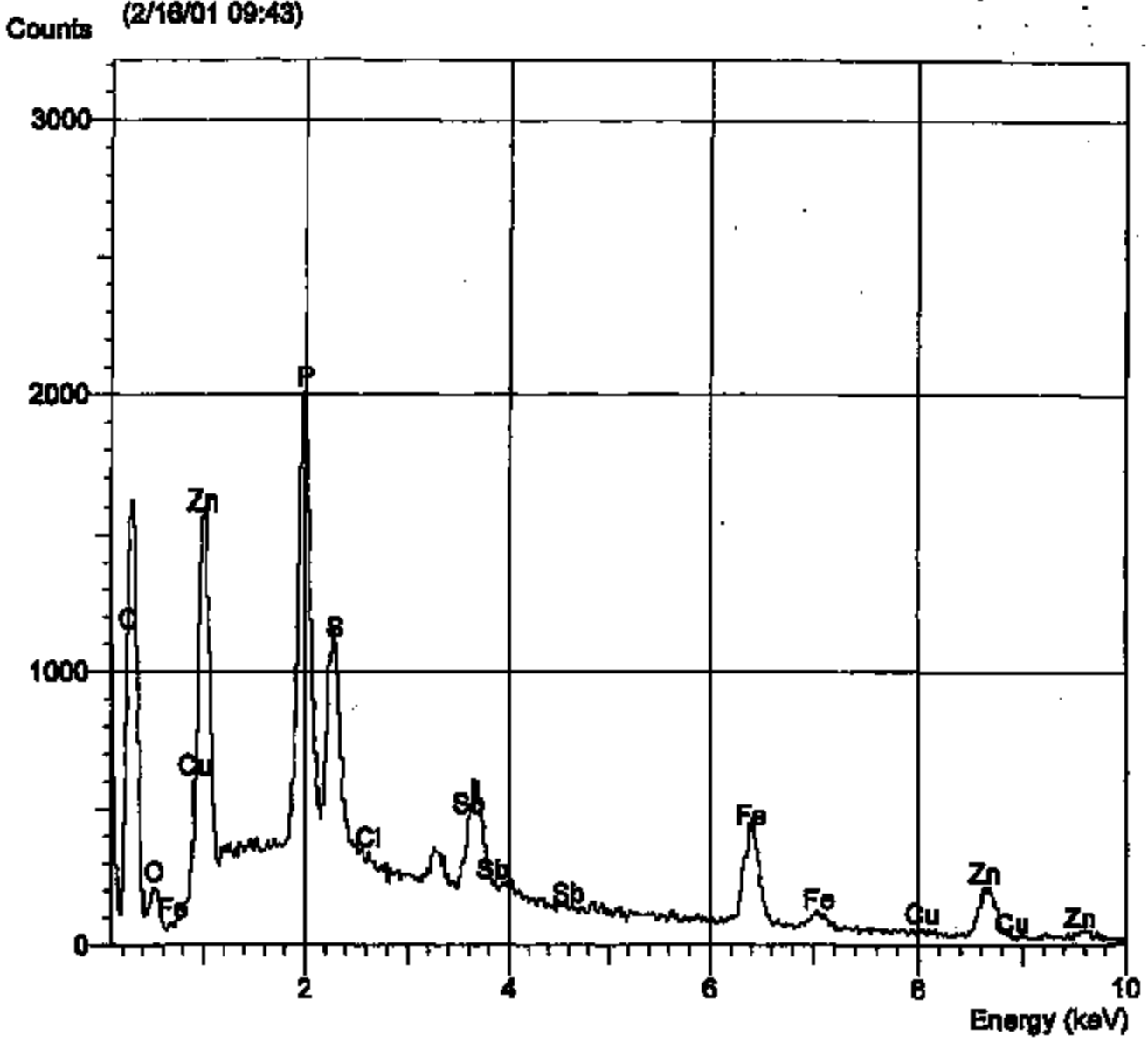
CL02-023-243

Operator : Garry
Client : none
Job : EWR 11197-059 T-truck ball joints
Pit in bare steel area (2/19/01 07:32)



LAB NO. 01M06
PAGE 7 OF 8

Operator : Garry
Client : none
Job : EWR 11197-059 T-truck ball joints
(2/16/01 09:43)



CL02-023-245

01-02-T055

ENGINEERING WORK REQUEST

GENERAL INFORMATION

To: ☒ Design ☐ Model Shop ☐ Expediter ☐ Vehicle Test ☒ Laboratory

☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Procurement ☐ Other

Due Date

Attention: Rob Ross

PROJECT 11197-080
DEPT. NO. 583
DATE Mar 22-01
CUSTOMER GMTG
PLATFORM/YR GMTG T Truck
VEHICLE NO. N/A

Product Name Ball Joints Part number 17980735 Rev Level

Sheet Attachments (For multiple entries, list below)

Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☐ Not Applicable

DEPARTMENTAL INFORMATION

DESIGN

☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other
Due Date

QTY 239 Due Date Mar-31
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

ADDITIONAL MODEL PROCUREMENT

Customer Order	☐ Yes	☒ No
GP-11 Required	☐ Yes	☒ Waived
A/D/V Required	☐ Yes	☒ No
Specific Inspection	☐ Yes	☒ No

(List Details in REQUIREMENTS Section below)

Material Verification	☐ Yes	☒ No

Customer P.O. #
General Ledger Number:

☐ Validation ☐ Other

Info Only

DISPOSAL REQUIREMENTS

N/A

REPORT DISTRIBUTION

N/A

Conforming Parts:

REQUIREMENTS

T 195 Liftloads up to 1000lbs - Plot graph
T 429 Rotating & Oscillating Torques
T 536 Radial Elasticity

INSTRUCTIONS

Parts 412 thru Spec 591U Except 475,569
T-195 Liftloads up to 1000lbs
T-429 - Rotating Oscillating Tourques
T-536 Radial Elasticity

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V57 Phone # 8355
Authorized [signature] Date 22 MAR 01 FAX # 8342

Completed by [signature] Date 29 MAY 01 Supervisor Date
Reviewed Date Reviewed Date
(reliability/test eng.)

CL02-023-229

ENGINEERING WORK REQUEST

2001-0171

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Expediter ☐ Vehicle Test ☐ Laboratory
☐ Analysis ☒ Materials Engineering ☐ Instrumentation Lab ☐ Procurement ☐ Other
Due Date
Attention: GABE/GARY JACKSON

PROJECT 11197-079
DEPT. NO. 583
DATE 02 MAR 01
CUSTOMER GMTC
PLATFORM/YR T-TRUCK 1996
VEHICLE NO. N/A

Product Name BEARINGS Part number 9769877 Rev Level N/A
Sheet Attachments 0 (For multiple entries, list below)
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☐ Other

☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other
Due Date

QTY 3 Due Date 02 APR 01
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
GP-11 Required ☐ Yes ☒ Waived
A/D/V Required ☐ Yes ☒ No
Specific Inspection ☐ Yes ☒ No
(List Details in REQUIREMENTS Section below)
Material Verification ☐ Yes ☒ No
Customer P.O. #
General Ledger Number:

SEM. PHOTOGRAPHS

N/A PLEASE RETURN

N/A

N/A

REQUIREMENTS

SEM PHOTOGRAPHS AT 1000 & 2500 MAGNIFICATION

INSTRUCTIONS

SEM PHOTOGRAPHS AT 1000 & 2500 MAGNIFICATION OF 3 BEARINGS

AR, R24, P - FROM GMB

PHOTOGRAPHS IN AREAS THAT STILL SHOW COPPER PLATING, AS WELL AS AREAS THAT HAVE NONE LEFT

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by MATT MATZEK Mail Loc VE7 Phone # 9441
Authorized Date 3-20-01 FAX # 9342
Completed by Date 4-30-01 Supervisor Date
Reviewed Date Reviewed (reliability/test eng.) Date

CL02-023-230

DELPHI
Automotive Systems

Analytical Chemistry Laboratory Report

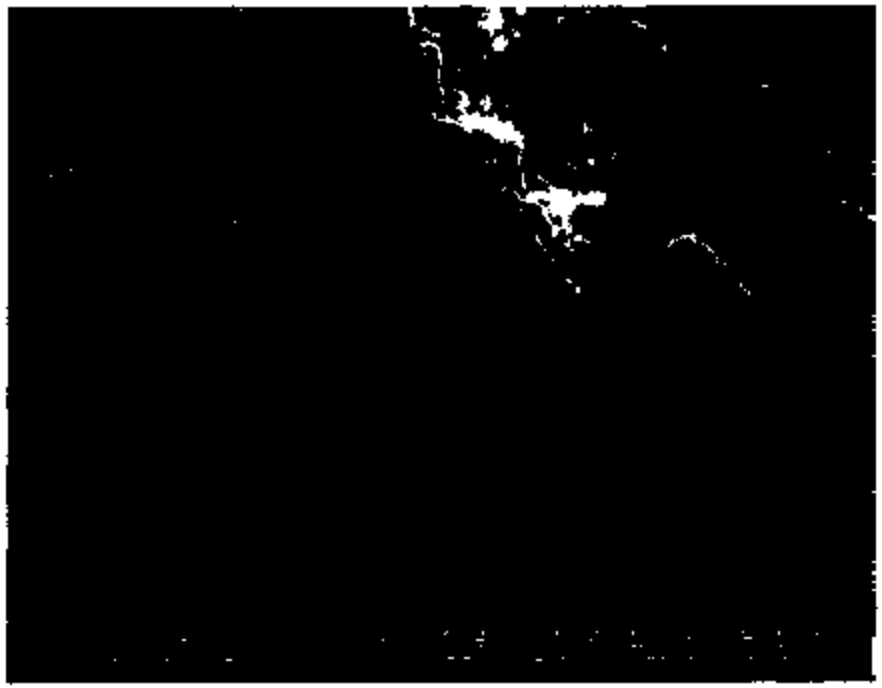
ACL #: 2001-0171
EWR #:11197-079

Three ball joints, labeled AR, R241 and P were submitted for SEM photographs at 1000x and 2500x to show the copper plated areas and the areas where the copper plating has been removed. The bearings were cut into two parts and a segment of each bearing was exhaustively extracted for two days with hexane to remove the oil. After drying, they were examined by SEM / energy dispersive X-ray emission with no further preparation.

The copper areas were readily visible to the unaided eye and extensive mapping was not needed to focus on the high copper areas. Images at 1000x and 2500x of the copper and non-copper areas were taken of the three sections and provided to the submitter via Lotus Notes. All photos show etching and pitting of the copper and non-copper areas.

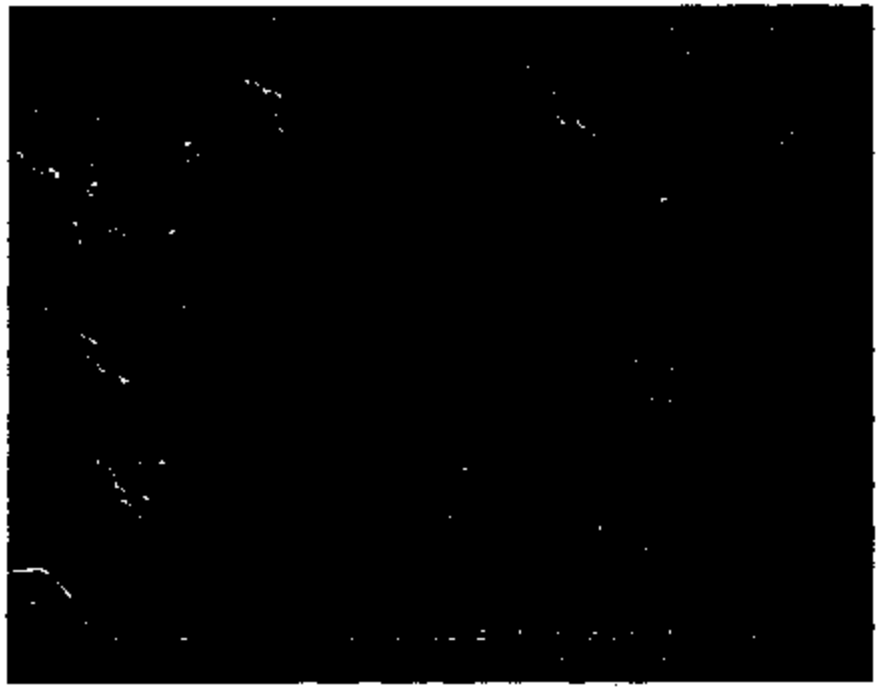
Garry Jackson
4-5-2001

Greg Lanchman

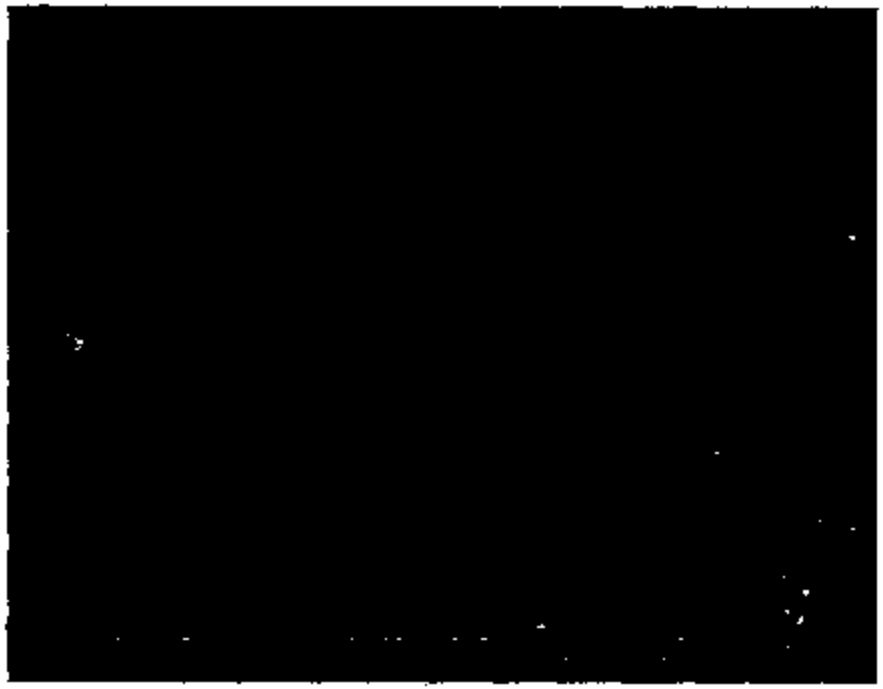


AR Copper area 1000x

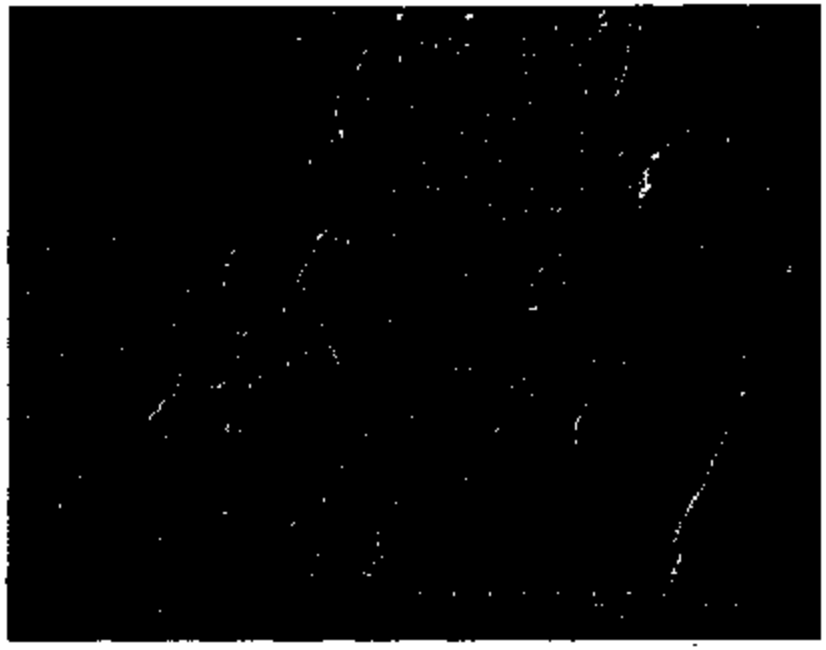
AR Copper area 2500x



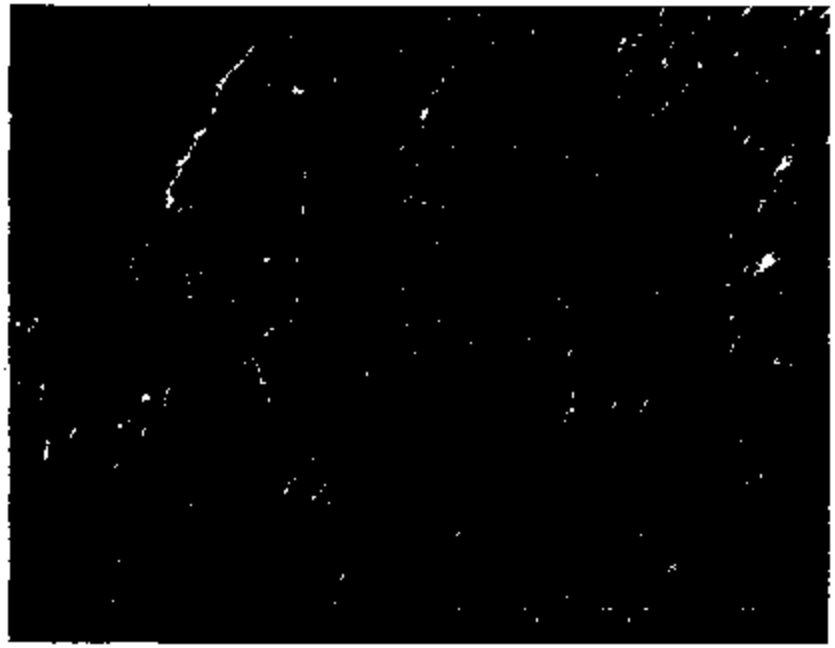
AR Non-copper area 1000x



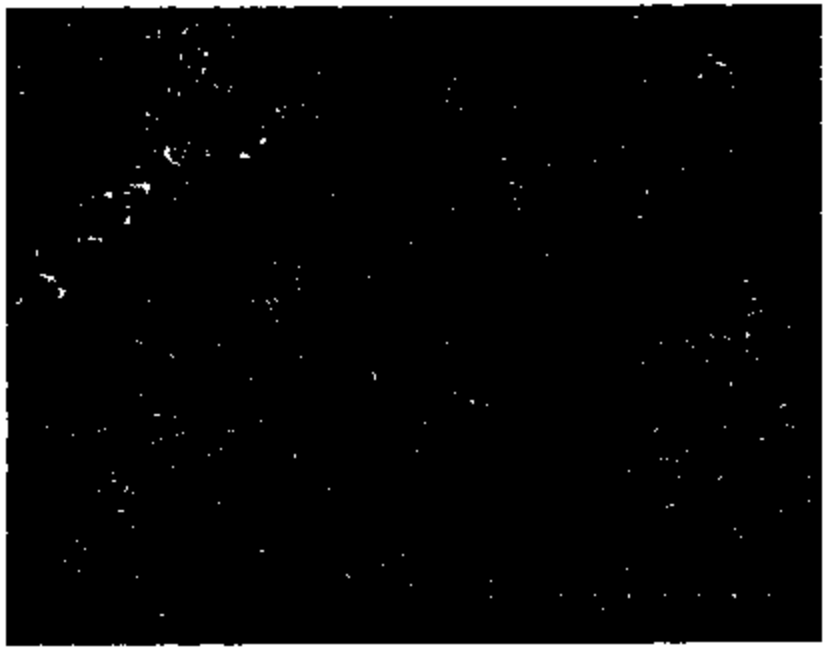
AR Non-copper area 2500x



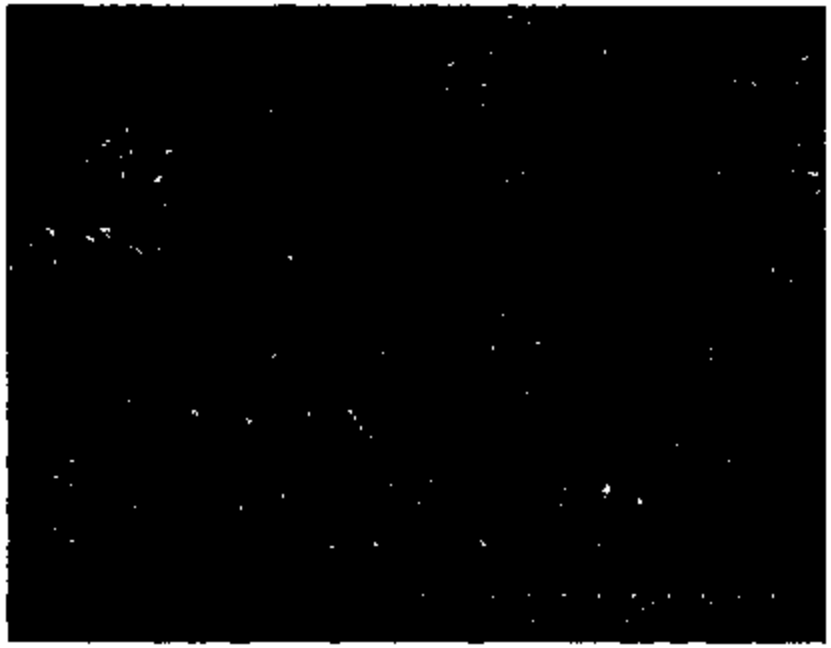
P Copper area 1000x



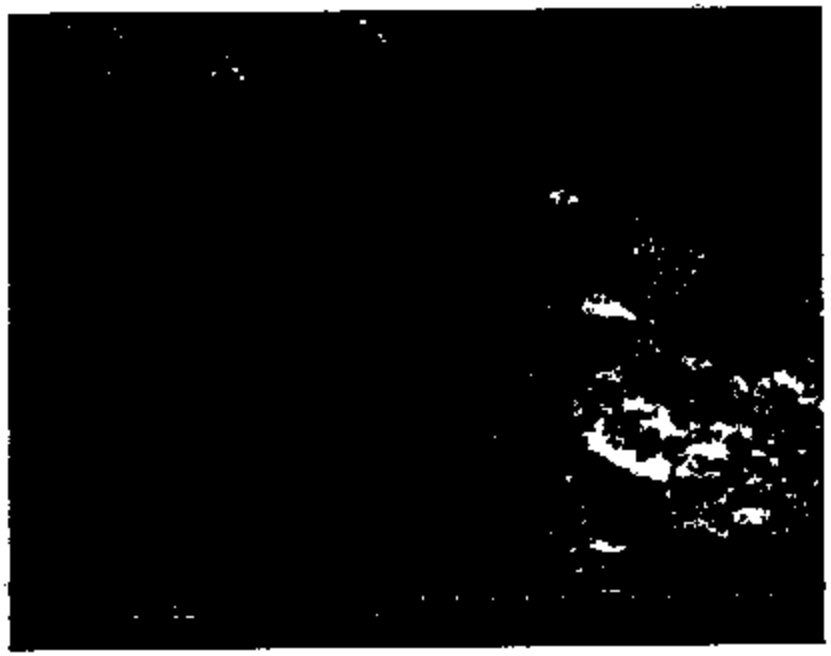
P Copper area 2500x



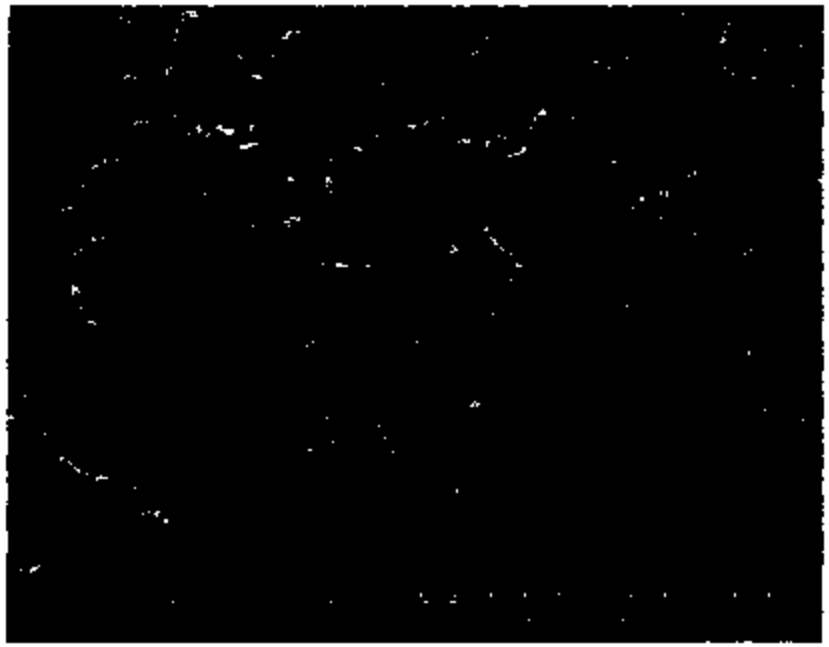
P Non-copper area 1000x



P Non-copper area 2500x

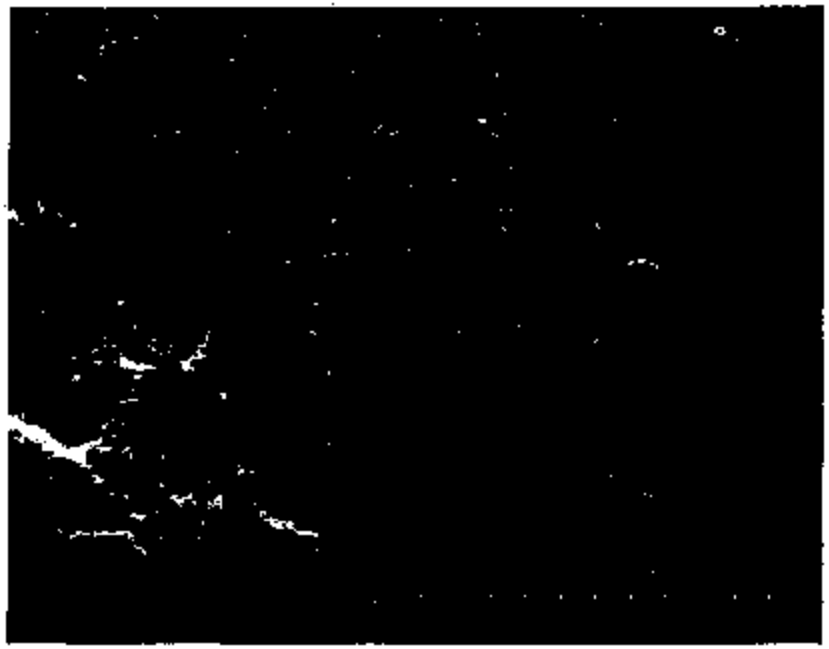


P Both areas 1000x

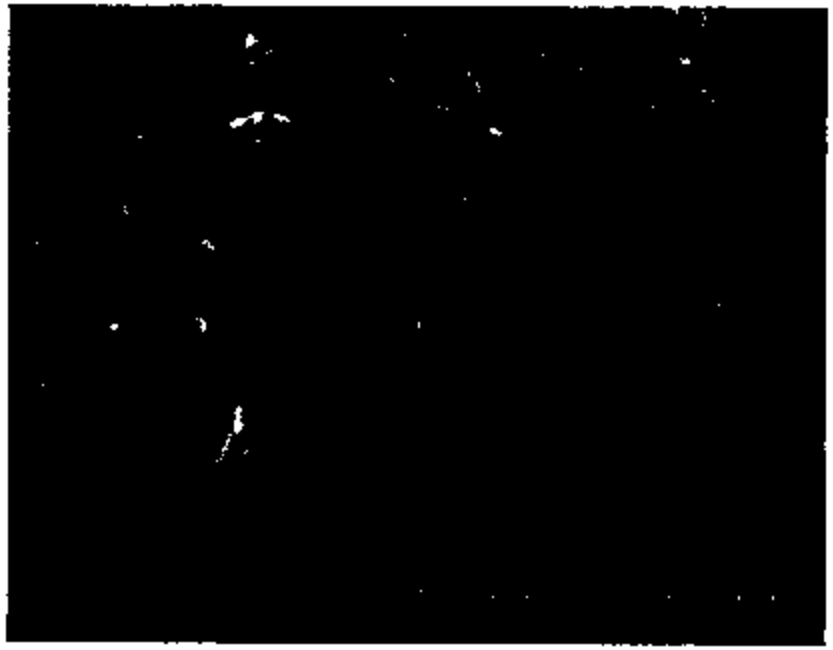


R241 Copper area 1000x

R241 Copper area 2500x



R241 Non-copper 1000x



R241 Non-copper 2500x

298

3/5/01

D. GAY,

INCLUDED ARE TWO (2) BOB AND TWO (2) WDW BEARINGS FOR YOUR ANALYSIS. I WOULD HAVE PREFERRED TO GIVE YOU ALL BEARINGS WITHOUT OXIDATION BUT UNFORTUNATELY THAT WASN'T POSSIBLE OUT OF THE PARTS I TORE DOWN. PLEASE CALL W/ QUESTIONS/COMMENTS.

THANKS

CHUCK EIFERT
937-455-8355

CHUCK

Give me a call when you Receive this & have a few minutes to DISCUSS

Dave

CL02-023-073

Ball Joint Density Analysis

Lot #304 (Better)

As Produced	6.473
Top Section	6.335
Middle Section	6.528
Bottom Section	6.528
Incorporated Sections	Extracted Sections
6.38	6.37
[redacted]	
6.33	6.31
[redacted]	
6.44	6.43
[redacted]	
6.45	6.44
[redacted]	
6.44	6.43
[redacted]	
6.40	6.40

White, Gray, Blue, Red, Yellow, Green, White, Gray, Blue, Red, Yellow, Green, White, Gray, Blue, Red, Yellow, Green

Lot #326 (Worse)

As Produced	6.509
Top Section	6.381
Middle Section	6.509
Bottom Section	6.502
Incorporated Sections	Extracted Sections
6.39	6.39
[redacted]	
6.53	6.46
[redacted]	
6.46	6.49
[redacted]	
6.48	6.47
[redacted]	
6.46	6.45
[redacted]	
6.54	6.53

Lot #500 (1% Treated)

As Produced	6.391
Top Section	6.237
Middle Section	6.372
Bottom Section	6.445
Incorporated Sections	Extracted Sections
6.35	6.06
[redacted]	
6.20	6.22
[redacted]	
6.35	6.38
[redacted]	
6.40	6.38
[redacted]	
6.40	6.44
[redacted]	
6.42	6.39

Lot # (Tumbled)

As Produced	6.352
Top Section	6.24
Middle Section	6.381
Bottom Section	6.459
As Rec'd Sections	
1 6.20	
2 [redacted]	
3 [redacted]	
4 [redacted]	
5 6.08	
6 [redacted]	
7 6.30	
8 [redacted]	
9 [redacted]	
10 [redacted]	
11 6.29	
12 [redacted]	
13 6.53	
14 [redacted]	
15 [redacted]	
16 [redacted]	
17 6.35	
18 [redacted]	

Section Weight Analysis (grams)

Lot #304

Incorporated Sections	Extracted Sections
1) 1.155	1) 1.151
[redacted]	
5) 1.091	5) 1.071
[redacted]	
7) 2.269	7) 2.252
[redacted]	
11) 2.602	11) 2.590
[redacted]	
13) 2.916	13) 2.927
[redacted]	
17) 2.864	17) 2.844

White, Gray, Blue, Red, Yellow, Green, White, Gray, Blue, Red, Yellow, Green, White, Gray, Blue, Red, Yellow, Green

Lot #326

Incorporated Sections	Extracted Sections
1) 1.179	1) 1.174
[redacted]	
5) 1.201	5) 1.198
[redacted]	
7) 2.637	7) 2.610
[redacted]	
11) 2.613	11) 2.601
[redacted]	
13) 2.603	13) 2.588
[redacted]	
17) 2.629	17) 2.604

Lot #500

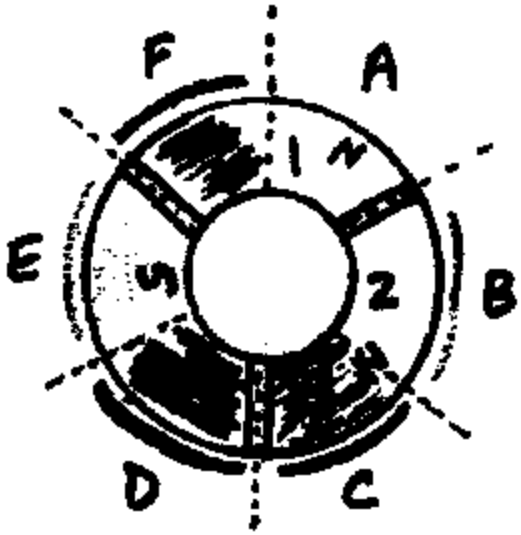
Incorporated Sections	Extracted Sections
1) 1.083	1) 1.077
[redacted]	
5) 1.132	5) 1.123
[redacted]	
7) 2.469	7) 2.453
[redacted]	
11) 2.589	11) 2.582
[redacted]	
13) 2.608	13) 2.602
[redacted]	
17) 2.606	17) 2.600

Section A=White; Section B=Grey; Section C=Blue; Section D=Red; ; Section F=Green

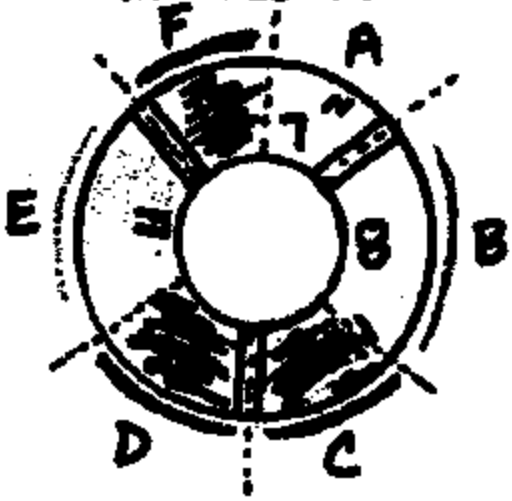
CL02-023-074

BOTTOM VIEW

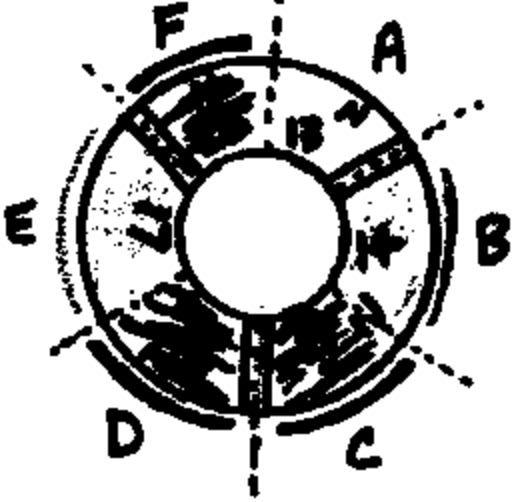
TOP SECTION



MIDDLE SECTION



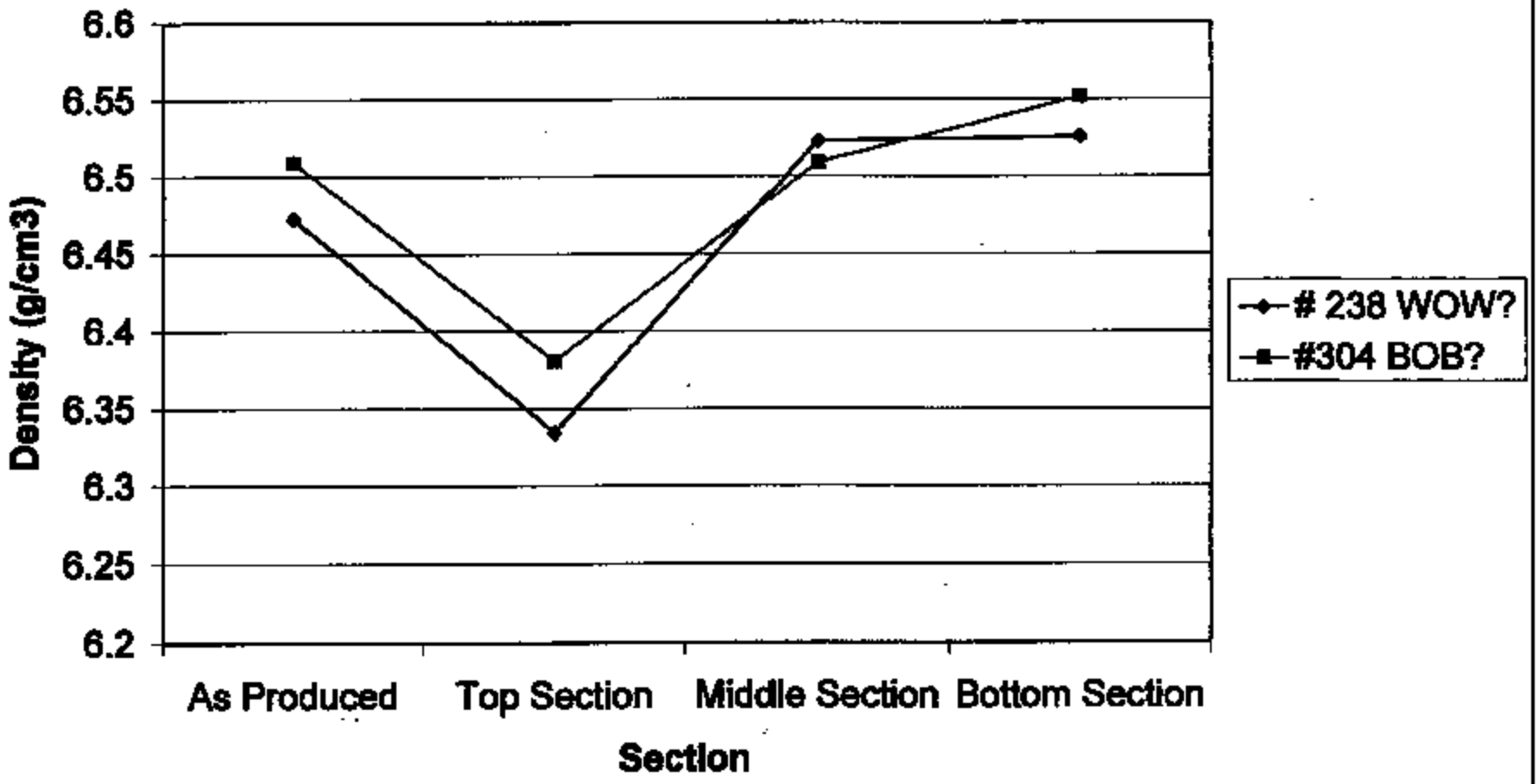
BOTTOM SECTION



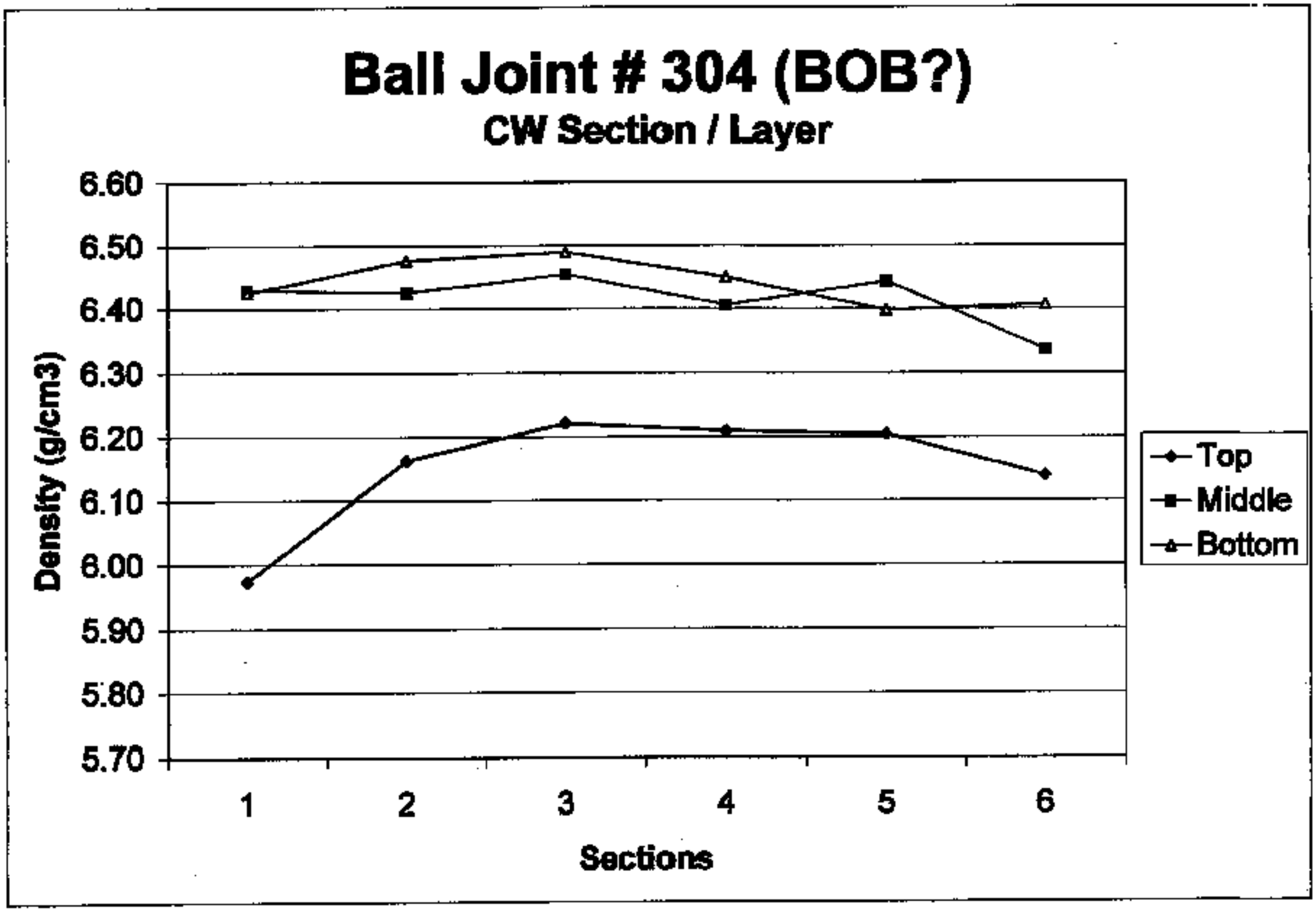
CL02-023-075

Ball Joint Problem

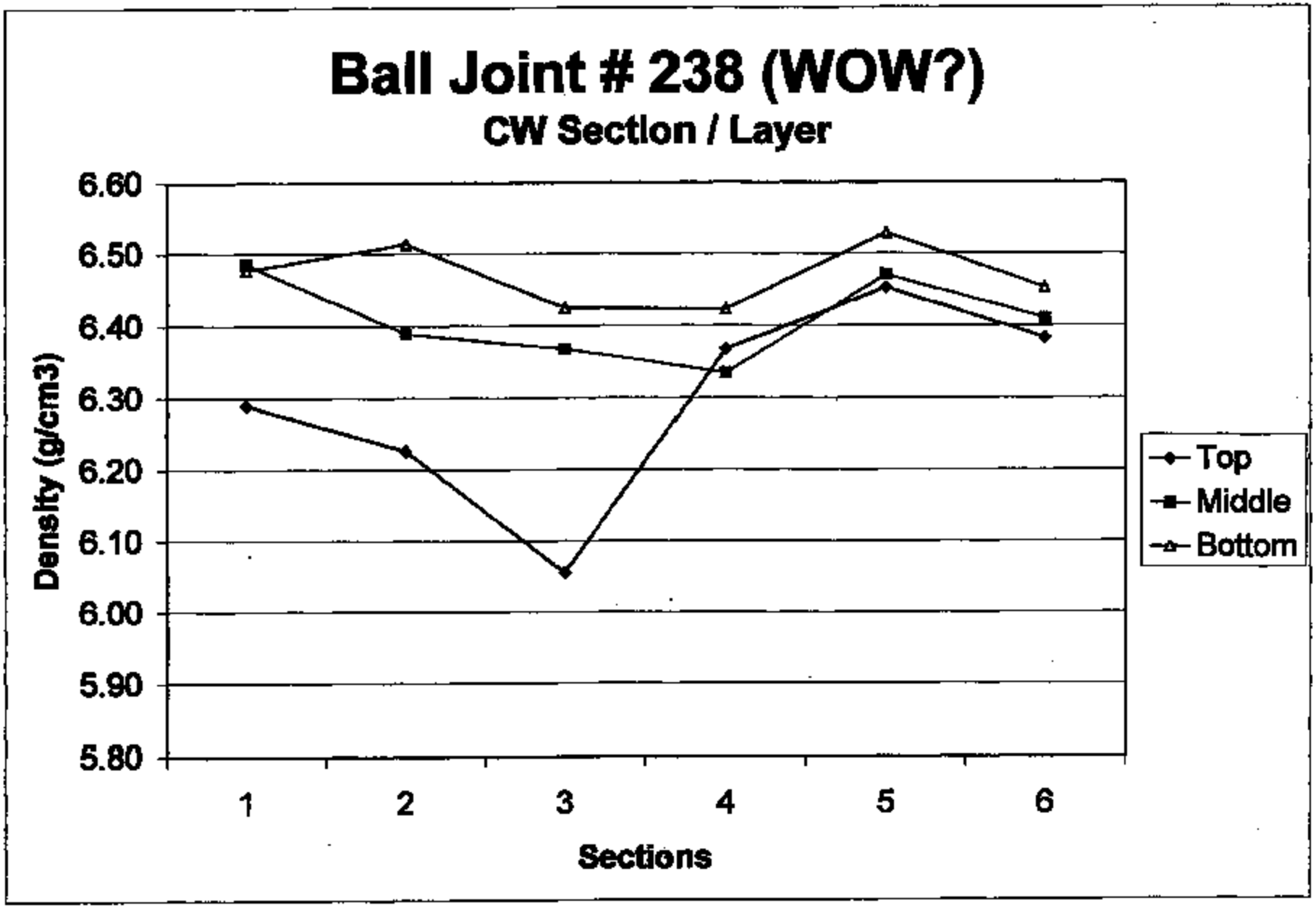
Sliced 1/3 Horizontally



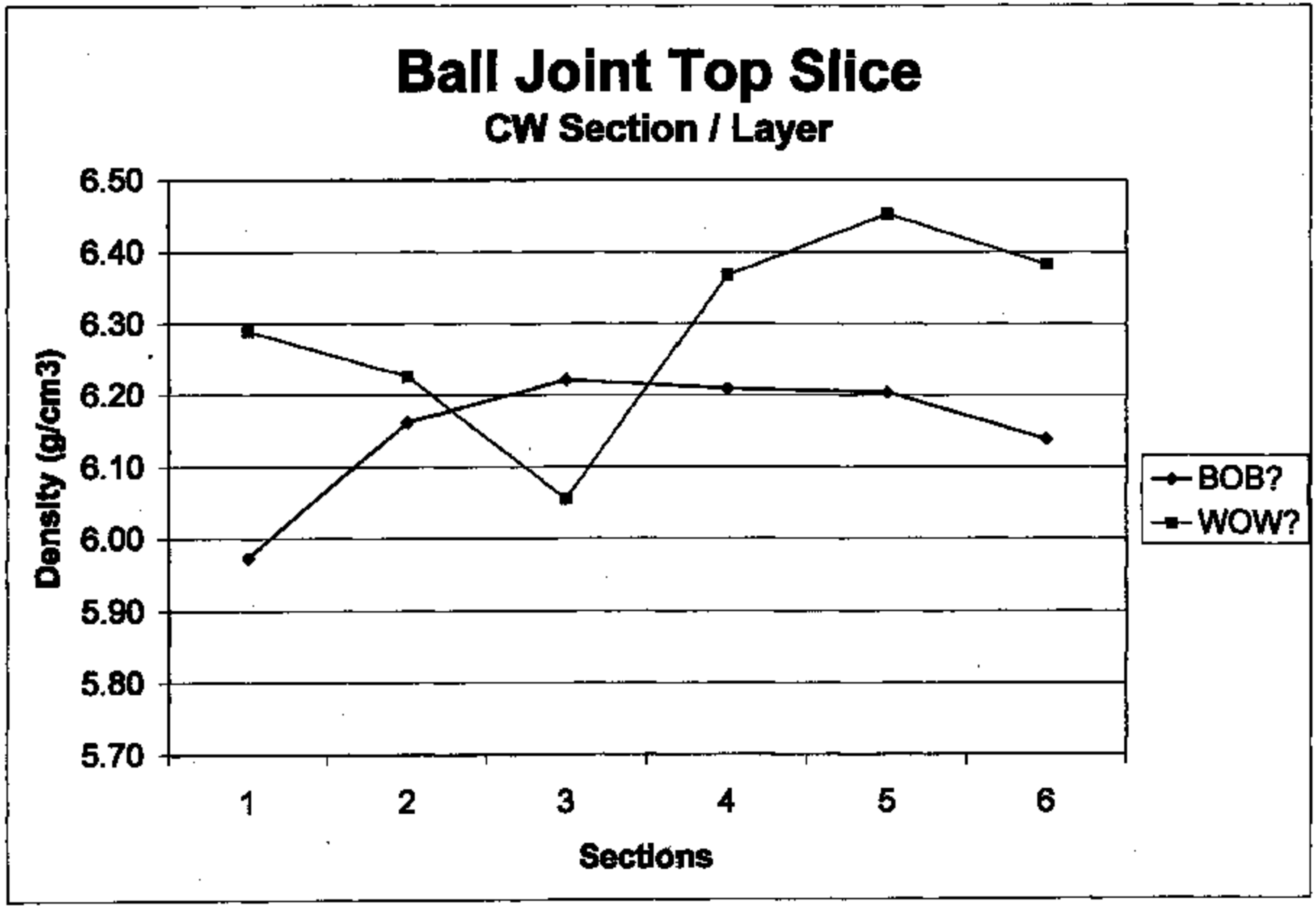
CL02-023-076


Ball Joint # 304 (BOB?)
CW Section / Layer
Density (g/cm3)
6.60
6.50
6.40
6.30
6.20
6.10
6.00
5.90
5.80
5.70
1
2
3
4
5
6
Sections
Top
Middle
Bottom

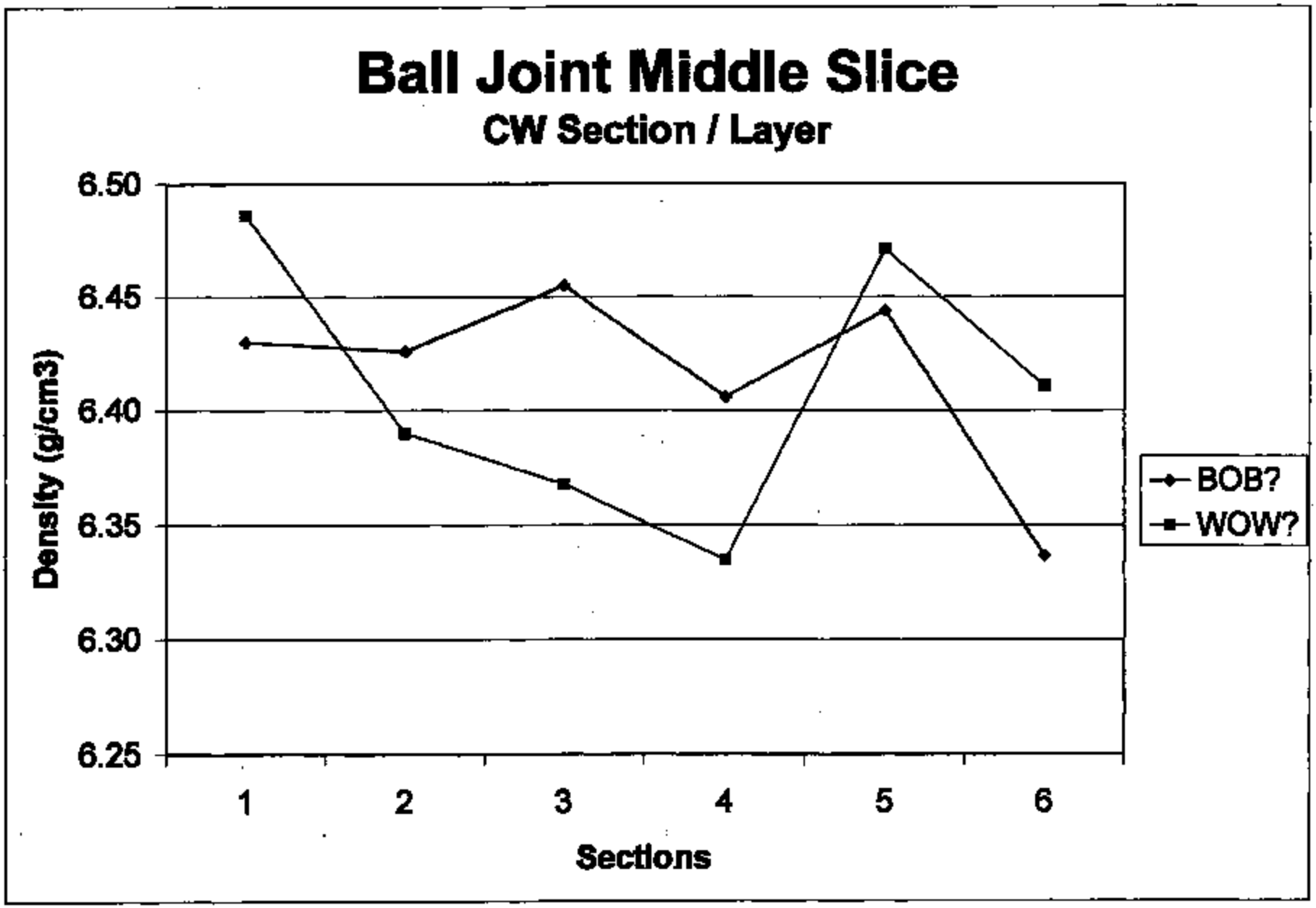
CL02-023-077


Ball Joint # 238 (WOW?)
CW Section / Layer
Density (g/cm3)
6.60
6.50
6.40
6.30
6.20
6.10
6.00
5.90
5.80
1
2
3
4
5
6
Sections
Top
Middle
Bottom

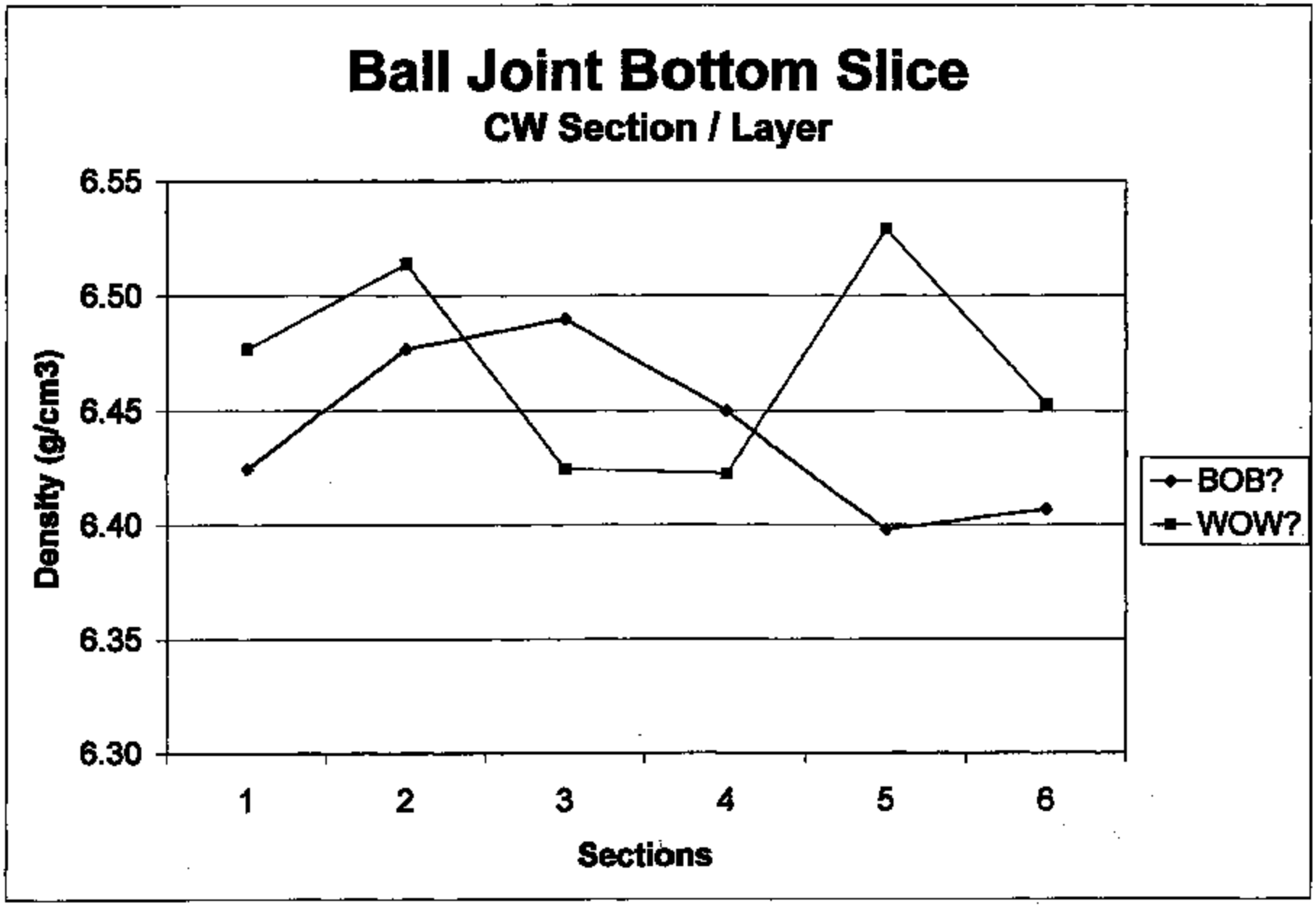
CL02-023-078


Ball Joint Top Slice
CW Section / Layer
Density (g/cm3)
6.50
6.40
6.30
6.20
6.10
6.00
5.90
5.80
5.70
1
2
3
4
5
6
Sections
BOB?
WOW?

CL02-023-079


Ball Joint Middle Slice
CW Section / Layer
Density (g/cm3)
6.50
6.45
6.40
6.35
6.30
6.25
1
2
3
4
5
6
Sections
BOB?
WOW?

CL02-023-080


Ball Joint Bottom Slice
CW Section / Layer
6.55
6.50
6.45
6.40
6.35
6.30
Density (g/cm3)
1
2
3
4
5
6
Sections
BOB?
WOW?

CL02-023-081

TEST DATA

ENGINEERING WORK REQUEST 02-02-T034

GENERAL INFORMATION

To: ☐ Design ☐ Analysis
☐ Model Shop ☐ Materials Engineering
☐ Procurement ☐ Instrumentation Lab
☐ Vehicle Test ☐ Other
☒ Laboratory

EWR NUMBER 11197 - 093
DEPT. NO. 583
DATE 12-Mar-2002

CUSTOMER NATG
PLATFORM/YR T-Truck/2002
VEHICLE NO. N/A

Attention: Rob Ross
Targeted Due Date(s): 15-Apr-2002

Product Name Ball Joint Part number 17980735 Rev Level N/A
Sheet Attachments 0 (For multiple entries, list below)
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other

Quantity 6
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
Customer P.O. #
Specific Inspection ☐ Yes ☒ No
(List Details in INSTRUCTIONS Section below)

Information Only

Return to Requestor

N/A

INSTRUCTIONS

T-195 – Pre & Post Durability Liftloads
T-429 – Pre & Post Durability Torques
T-467 – SLAW

1) Torque and Liftload all 6 pieces
2) Utilize 2 Highest and 2 Lowest Torque Assemblies to run SLAW test (Reference 11197-082 SLAW Test 01-02-T143)
   A) Lateral Side Load – ~~480~~ 200 lb Outboard to 1800lb Inboard, Sinusoidal @ 0.33 Hz – Per C. Eifert RR 26-JUL-02
   B) Axial Load – Sinusoidal +/- 340lb @ 0.33 Hz
   C) Rotation +/- 15 degrees @ 0.5 Hz
   D) Oscillation +/- 10 degrees @ 1.0 Hz

W B W B B W
Parts are labeled 60, 121, 180, 214, 291, & 624

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by Patrick Kerrigan Mail Loc V-57 Phone # 8441
Authorized [signature] Date 12-Mar-2002 FAX # 8342
Initial Validation Analysis Review Not Required Date
Test Supervisor Review Date

CL02-023-083

Completed by R. Ross Date 26JUL02 Test Supv. [signature] Date 26JUL02
Reviewed Date Reviewed Not Required (validation analysis eng.) Date

DELPHI Chassis Systems

PHYSICAL TEST LABORATORIES

EWR 11197 – 093
Date 26 JUL 02
Technician R. Ross
Page 1 of 16

CALIBRATION INFORMATION

EQUIP. IDENT. NO. (ID)	DESCRIPTION	LAST CALIBRATION DATE	NEXT CALIBRATION DUE DATE
TM-371-1	T-467 – SLAW '1'	30 OCT 01	15 JUL 02
TM-388	INSTRON (LIFT-LOADS)	20 FEB 02	15 JAN 03
TM-196-13	TORQUE WRENCH (IN/LBS)	14 JUN 02	14 DEC 02

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR	11197-093
Date	26 JUL 02
Tech.	Rob Ross
Page	2 of 16

Data Report Summary

Part Number	17980735	Part Description	2002 T-Truck
Number of Samples	6	Serial Number	#60, 121, 180, 214, 291, 624

Fixture(s)	Test Instruction(s)	Revision Date(s)
LF-6416 (LL)	T-195	8 MAY 80
LF-6640 (LL)	T-429	21 OCT 76
LF-4146 (TQ)	T-467	19 MAY 89
LF-6090-26 (top)		
LF-6554 (bottom)		

Results, Observations, and Comments :
Test was run according to EWR.

The load was applied to the top of the ball stud, on the Instron machine till a load of 4,500 N was reached.
A graph of ball joint stud's range of movement was constructed during lift-load test.
The results of the pre and post lift-load tests were printed on a sheet of paper and included in this report.

The part was also manually rotated and oscillated and it's rock torque and rotation torque recorded in in/lbs.

Lift-loads and manual torques were done on each part. Two parts with the highest torques and two parts with the lowest torques were selected for slaw testing. The first part (#121) put on test broke when the screws holding it in the fixture failed. Another part (#60) was chosen to take it's place and the test was moved from SLAW #2 to SLAW #1. After testing, lift-loads and manual torques were done a 2nd time.

The SLAW parameters were set as follows:

SIDELOAD =	+1800 lbf / -200 lbf
AXIAL =	+340 lbf / -340 lbf
ROTATE =	+/- 15 deg
ROCK =	+/- 10 deg
AXIAL CPM =	20
SIDE CPM =	20
ROTATE CPM =	30
ROCK CPM =	60

Data Plots : See Page(s)
Photographs : See Page(s)

Reported By : Rob Ross Date : 26 JUL 02

CL02-023-085

SLAW#2

Test 02-02-T034
Project# 11197-093
Test Mech # TM-371-2

02T-TRKSLAW2-093.000

Page 3 16
Date 26 JUL 02
Tech R Ross

		LIMITS		Max / Min	Max / Min	Max / Min	Max / Min	Max / Min			
				.25/-.25	1000/-1000	16/-16	12/-12	2000/-2000	New	New	
SPECIMEN	DATE	TIME	TECH	Stroke mm	Axial Load Kn	Rotation Deg	Rock Deg	Side Load Kn	Axial Load Kn	Side Load Kn	Comments
1034_093_121	5-9-02	00:06:	RR	.012/-.024	360/-306	15/-15	10/-10	346/-3627	393/-366	419/-3627	200 Rot Cyc. Stop Reset
"	"	00:10:	RR	.011/-.020	440/-456	15/-15	10/-10	2471/-820	377/-369	2225/-613	315 Rot Cyc.
"	5-10-02	4:25:	RR	2.10/-.016	468/-1011	—	—	2227/-666			8057 Rot Cyc. Jacket at
"	"	4:31:	RR	.008/-.025	382/-364	15/-15	10/-10	2348/-748	333/-375	2308/-713	base broke loose
											→ 8125 Rot Cyc.
"	5-13-02	7:15am	RR	2.10/-.027	382/-392	—	—	2360/-763	—	—	124047 Rot Cyc. Stud
											broke on Ball Joint 60T

CL02-023-086

02-02-T034 SLAW #1

Test # ~~11197-093~~
Project # 11197-093
Test Mach # _____

02T-TRKSLAW1_093.000

Page 4 of 16
Date 26 JUL 02
Tech R. Ross

SPECIMEN	DATE	LIMITS TIME	TECH	Max / Min .25 / -.25 Stroke mm	Max / Min 1000 / -1000 Axial Load Kn	Max / Min 15 / -16 Rotation Deg	Max / Min 12 / -12 Rock Deg	Max / Min 2500 / -1000 Side Load Kn	New Axial Load Kn	New Side Load Kn	Comments
1034_093_60	6-18-02	ok	RR								Start ok
	6-19-02	ok	RR								
	6-20-02	00:11:55	RR	.015/-.034	364/-456	15/-15	10/-10	1954/-379	346/-381	1850/-187	72,375 Rot Cyc.
	6-20-02	06:03:55	RR	.015/-.032	361/-461	15/-15	10/-10	1907/-377	354/-337	1824/-314	82,955 Rot Cyc.
	6-21-02	04:04:00	RR	.015/-.031	360/-470	15/-15	10/-10	1909/-391	336/-287	1900/-387	115,300 Rot Cyc
	6-21-02	07:26:30	RR	.014/-.031	361/-457	—	10/-10	1911/-396	—	—	250,000 Rock Cyc
1034_093_160	6-21-02	00:04:33	RR	.007/-.026	350/-374	15/-15	10/-10	1860/-328	354/-382	1906/-393	260 Rock Cyc.
	6-24-02	04:15:30	RR	.014/-.037	365/-467	15/-15	10/-10	1918/-404	334/-296	1900/-400	231,320 Rock Cyc.
	6-24-02	07:28:30	RR	.014/-.032	364/-453	~~15/-15~~	10/-10	1909/-401	—	—	250,000 Rock Cyc
1034_093_291	6-25-02	00:02:40	RR	.017/-.023	393/-417	15/-15	10/-10	1958/-410	299/-281	1767/-95	210 Rock Cyc.
	6-25-02	02:37:00	RR	.022/-.026	399/-428	15/-15	10/-10	1925/-469	310/-282	1759/-68	9500 Rock Cyc
	6-26-02	22:04:00	RR	.025/-.026	394/-429	15/-15	10/-10	1928/-480	341/-291	1885/-148	79,475 Rock Cyc.
	6-26-02	25:37:40	RR	.019/-.030	392/-465	15/-15	10/-10	2131/-454	351/-370	1899/-268	103,125 Rock Cyc
	6-27-02	47:00:00	RR	.020/-.027	366/-469	15/-15	10/-10	1912/-406	357/-371	1875/-270	169,500 Rock Cyc
	6-27-02	53:43:00	RR	.016/-.026	363/-466	15/-15	10/-10	1908/-405	355/-277	1872/-375	193,470 Rock Cyc.
	6-28-02	67:26:28	RR	.017/-.028	364/-471	—	10/-10	1911/-409	—	—	250,000 Rock Cyc.
1034_093_624	7-15-02	00:02:45	RR	.009/-.035	387/-477	15/-15	10/-10	2099/-256	393/-292	1950/-348	150 Rock Cyc.
"	7-16-02	12:52:00	RR	.011/-.035	380/-480	15/-15	10/-10	1950/-415	352/-271	1905/-398	64,350 Rock Cyc.
	7-16-02	15:40:00	RR	.011/-.035	380/-469	15/-15	10/-10	1913/-406	355/-275	1903/-401	92,425 Rock Cyc.
	7-17-02	46:12:00	RR	.011/-.036	371/-472	15/-15	10/-10	1921/-465	351/-458	1757/-123	156,000 Rock Cyc.
	7-18-02	65:45:00	RR	.011/-.036	377/-497	15/-15	10/-10	1915/-407	347/-416	1876/-219	236,750 Rock Cyc
	7-18-02	67:26:30	RR	.011/-.035	373/-494	—	10/-10	1916/-393	—	—	250,000 Rock Cyc.

Hear a hammering sound when part is finishing up.

CL02-023-087

DELPHI

Chassis Systems

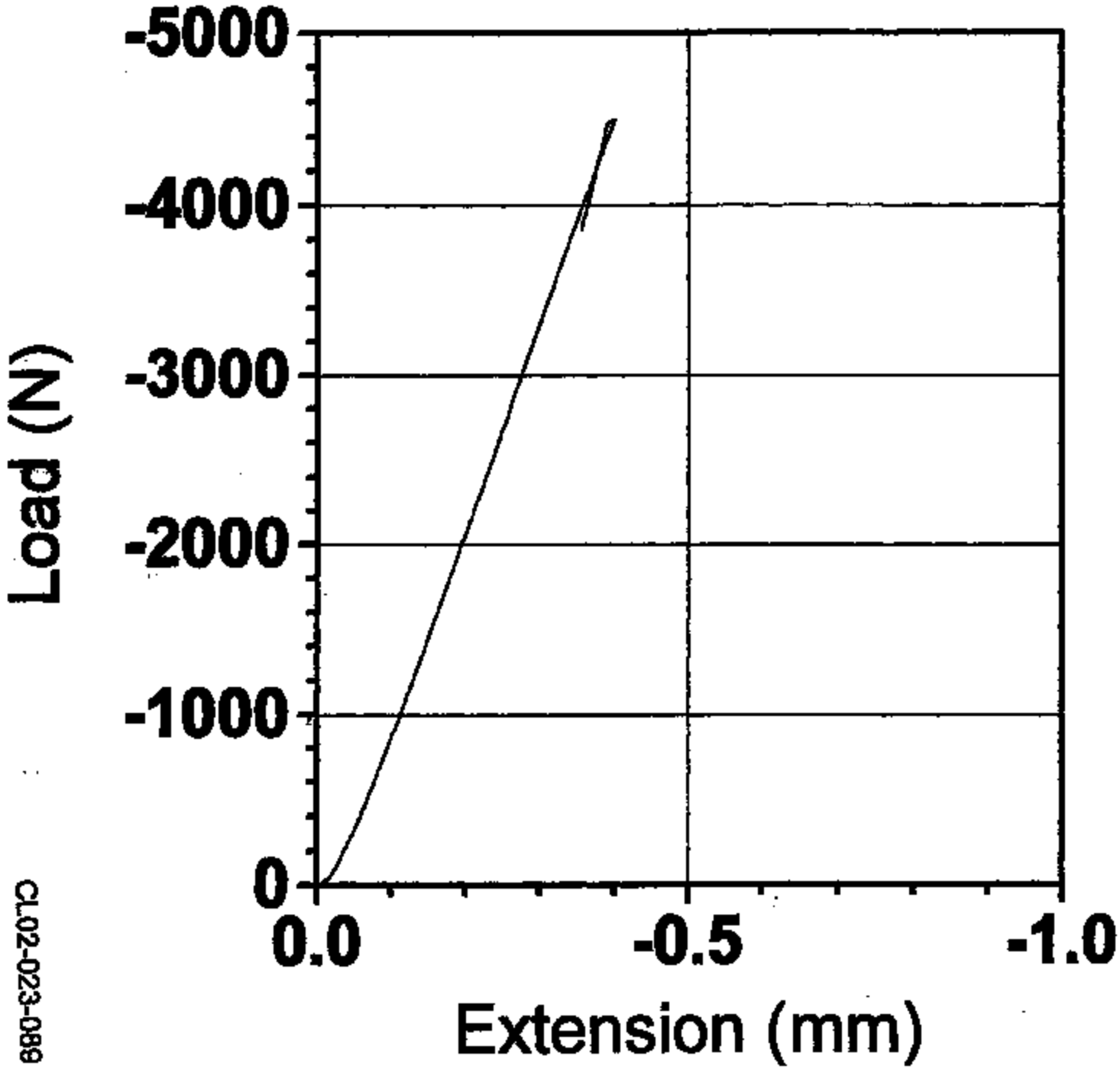
Project #: 11197-093
Test #: 02-02-T034
Date: 26 JUL 02
Tech: R. Ross
Page: 5 of 16

Manual Torque Data Log

Place #	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
60	70		50	
121	90		60	1 High
180	70		50	2 Low
214	70		50	
291	60		55	1 Low
624	70		60	2 High
Post-Test Torques				
60	45		30	
121	Stud Broke due to fixture failure RR 7-26-02			
180	40		30	2L
214	55		40	
291	40		30	1L
624	45		35	1H

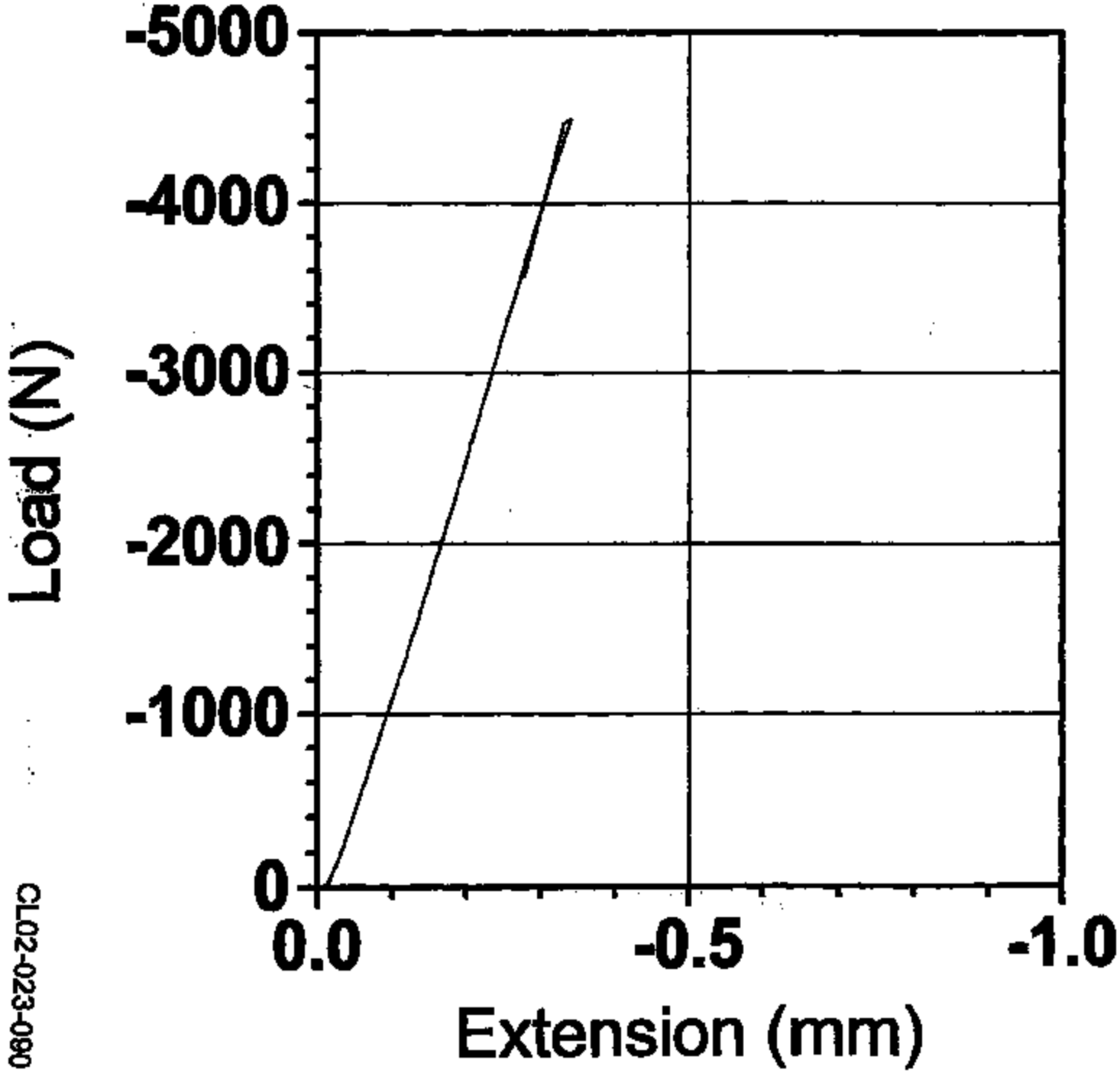
CL02-023-088

Liftl d #60 T-TRK. UPR. 11197-0 3 T-034 21 MAR 02



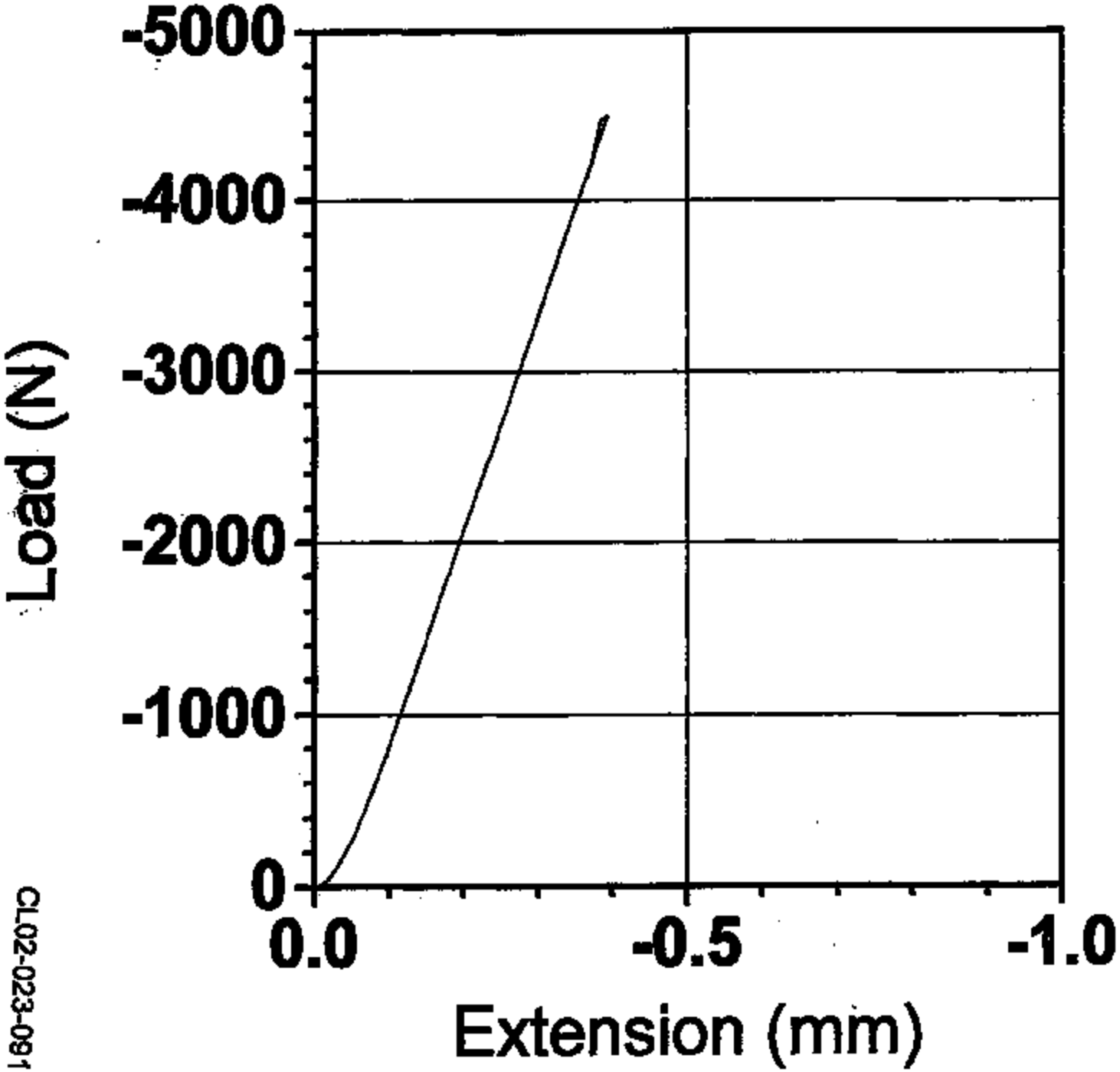
CL02-023-088

Liftlo[illegible]d #121 T-TRK. UPR. 11197-[illegible]3 T-034 21 MAR 02



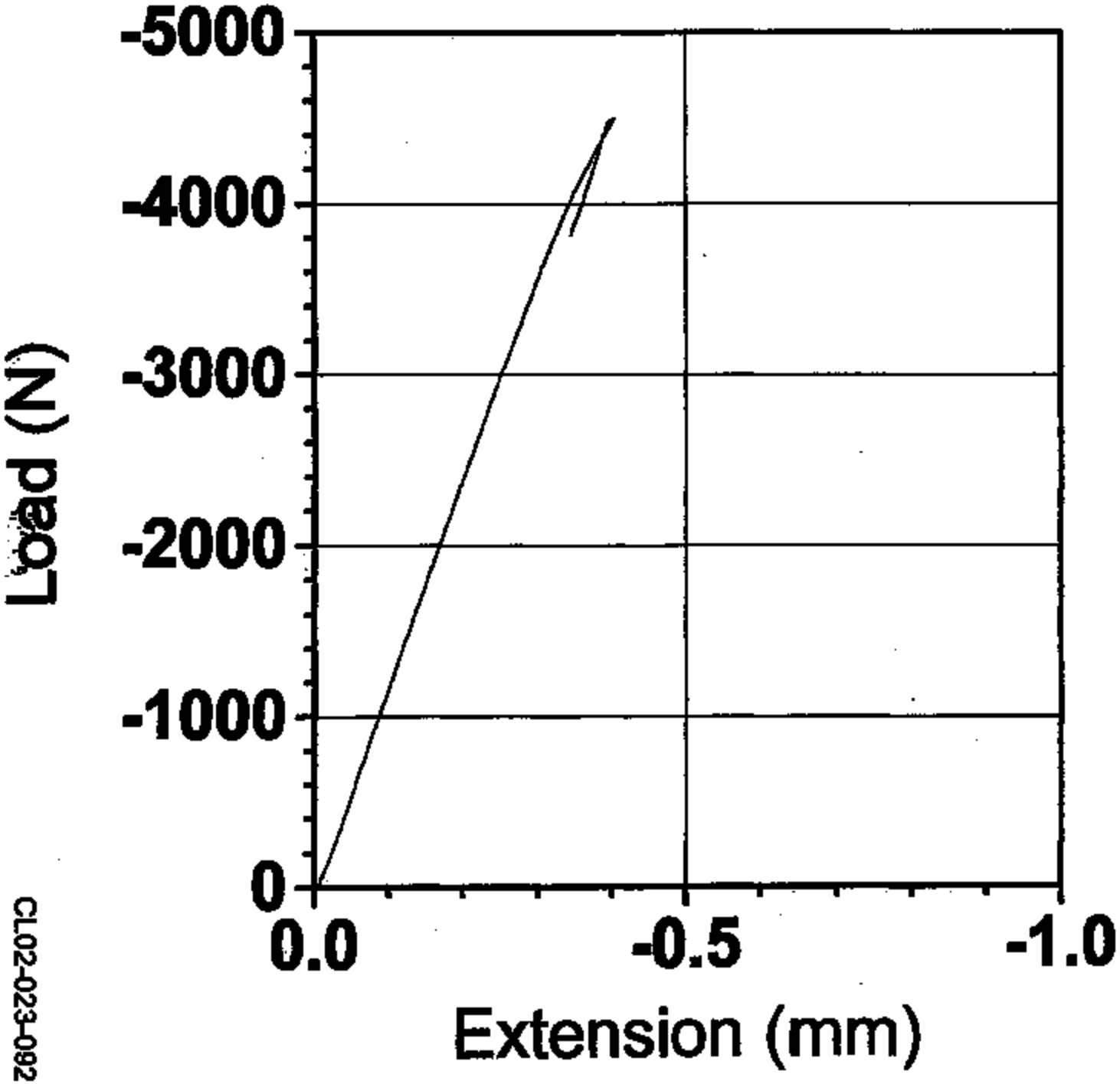
CL02-023-090

Liftlo[illegible]d #180 T-TRK. UPR. 11197-[illegible]3 T-034 21 MAR 02



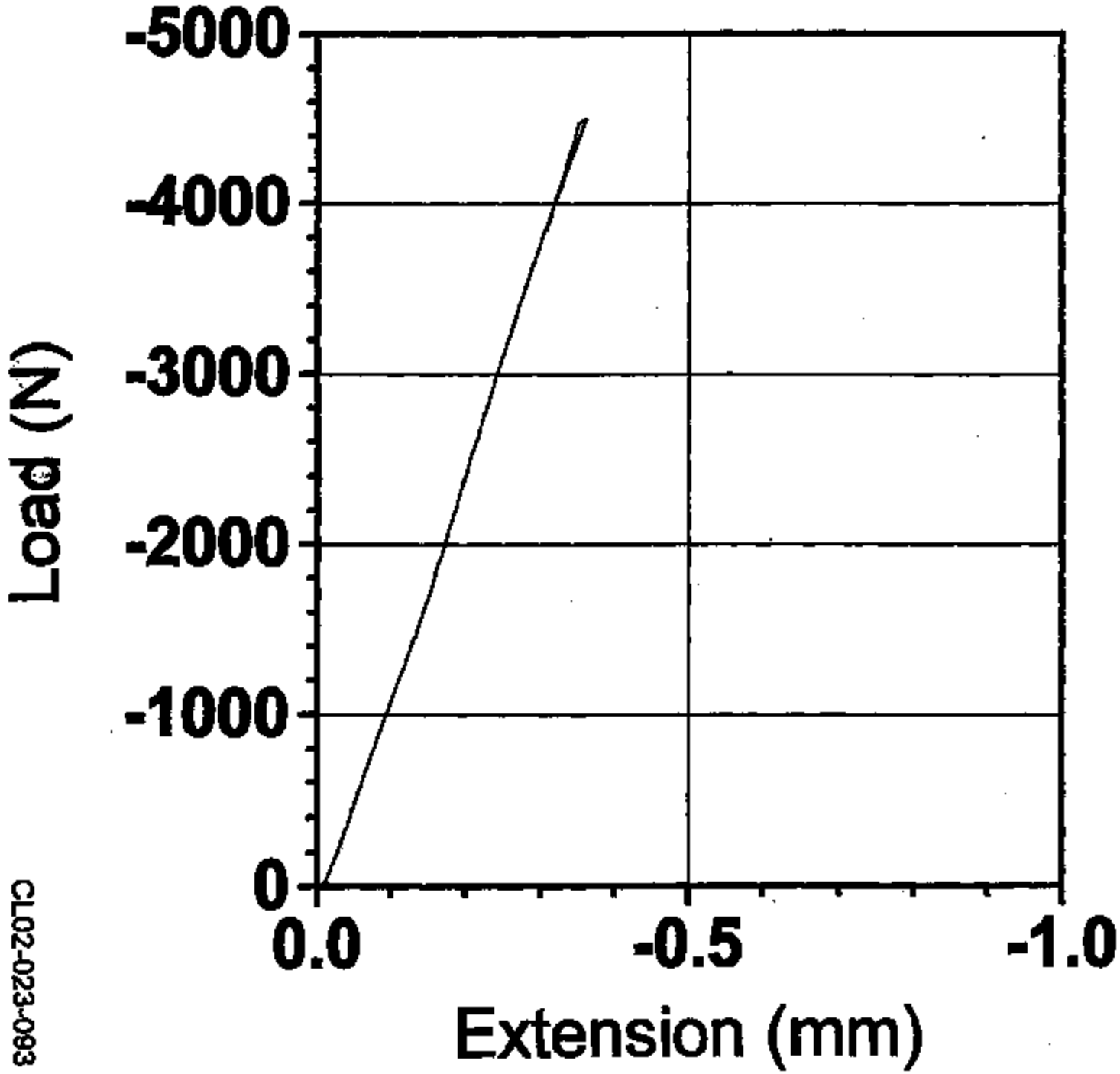
CL02-023-091

Liftlo d #214 T-TRK. UPR. 11197-093 T-034 21 MAR 02



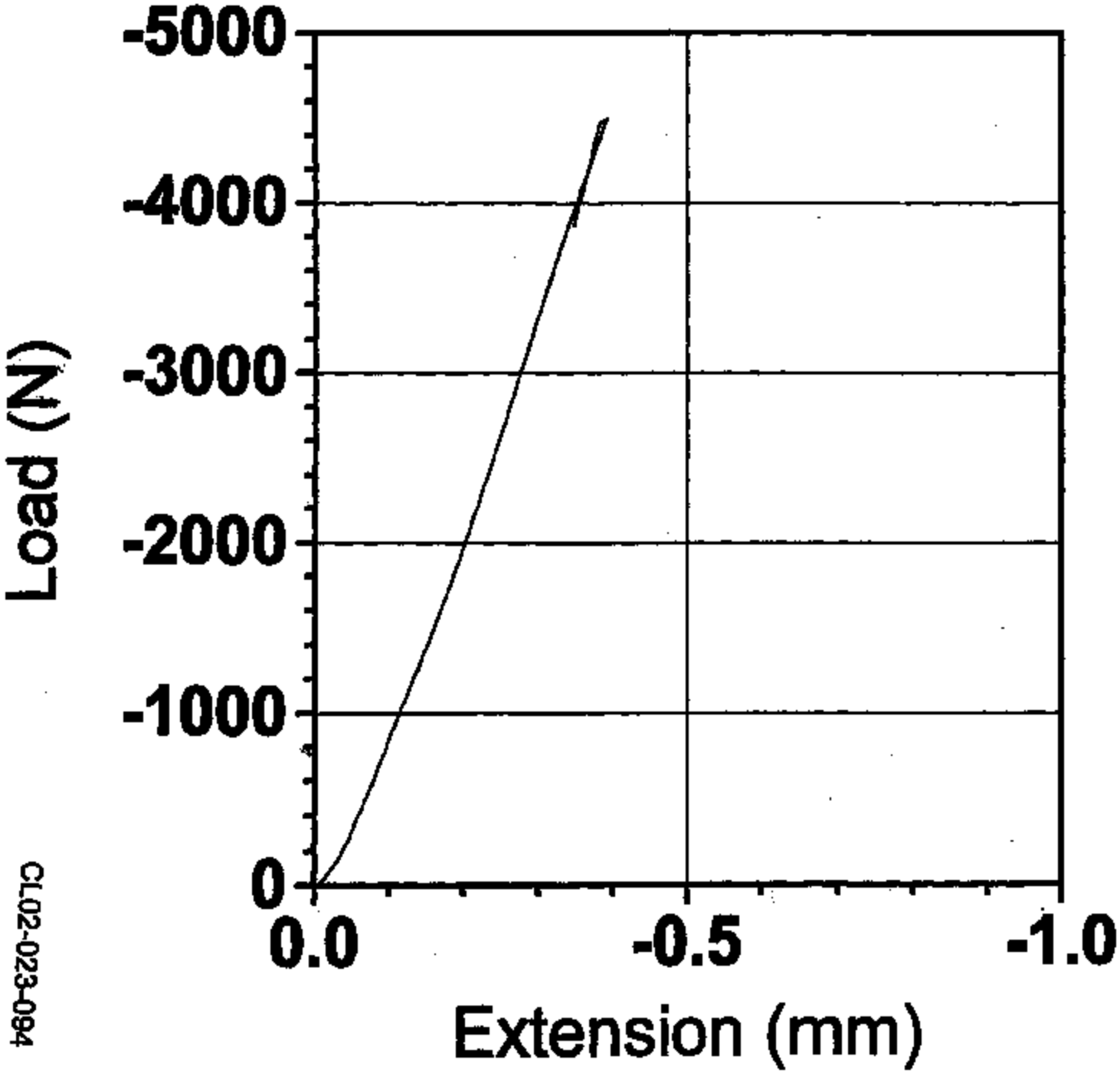
CL02-023-092

Liftlo[illegible]d #291 T-TRK. UPR. 11197-[illegible]3 T-034 21 MAR 02



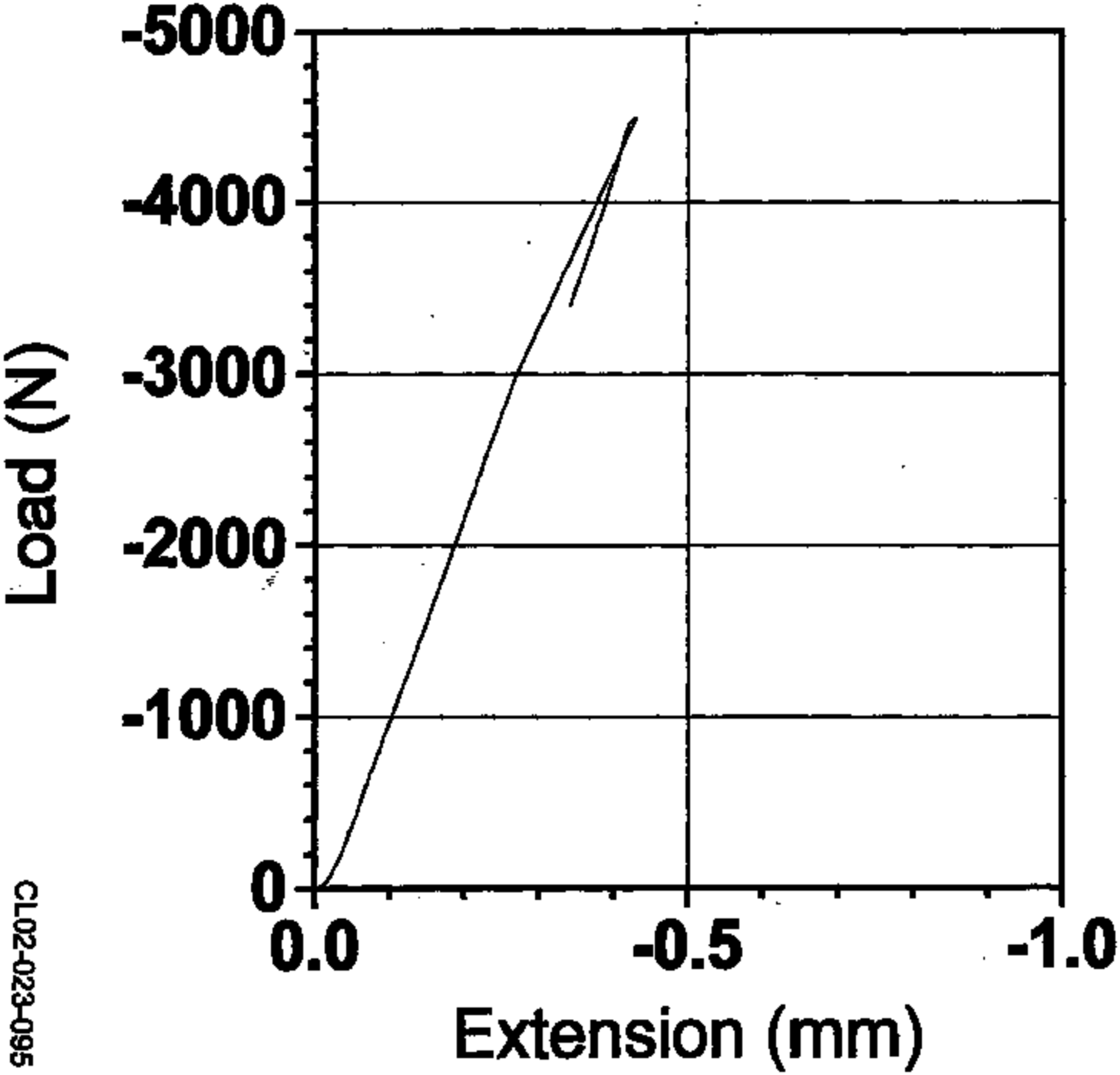
CL02-023-093

Liftlo[illegible]d #624 T-TRK. UPR. 11197-[illegible]3 T-034 21 MAR 02



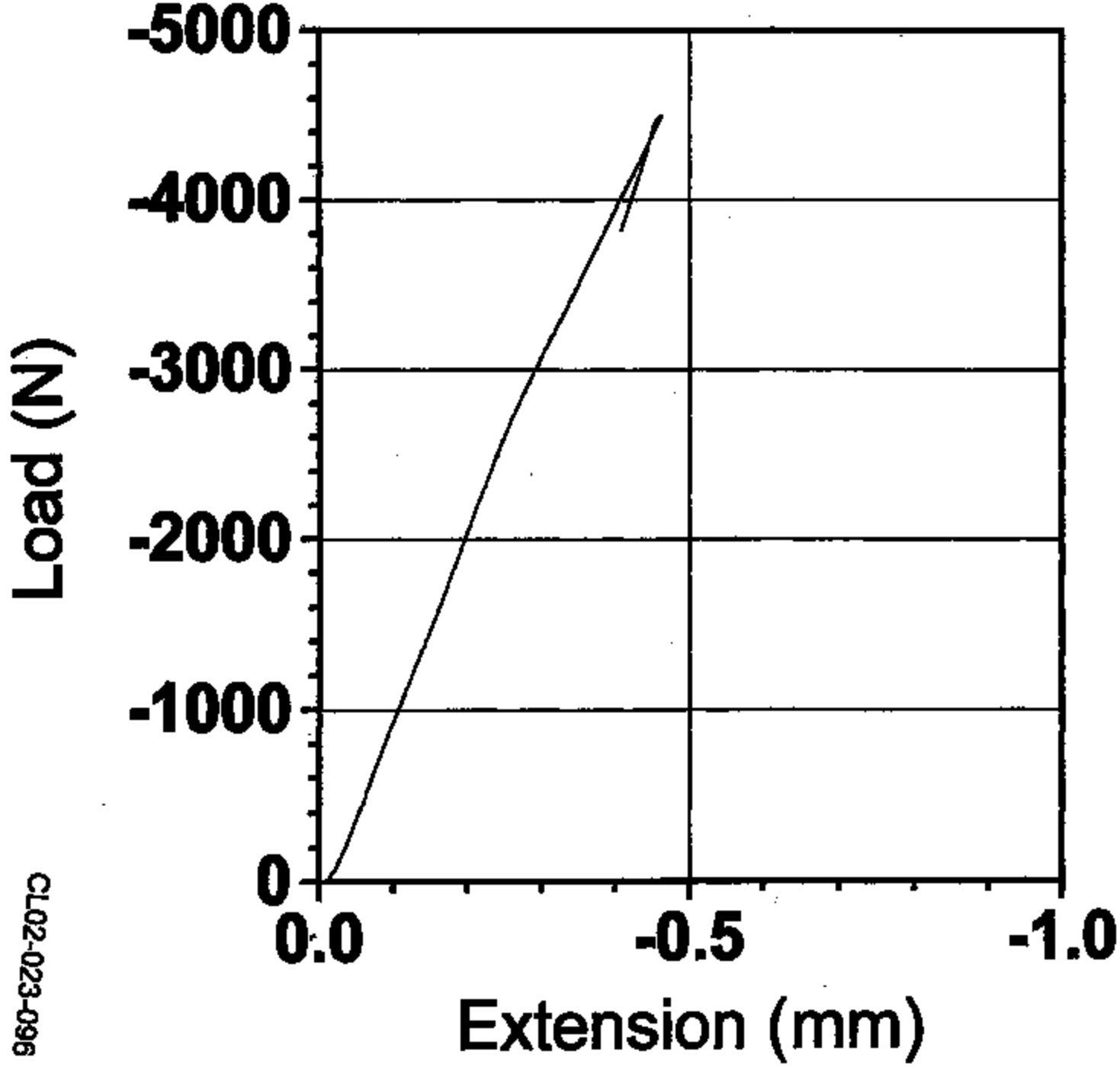
CL02-023-094

Liftlo[illegible]d #060 T-TRK. UPR. 11197-[illegible]3 T-034 25 JUL 02



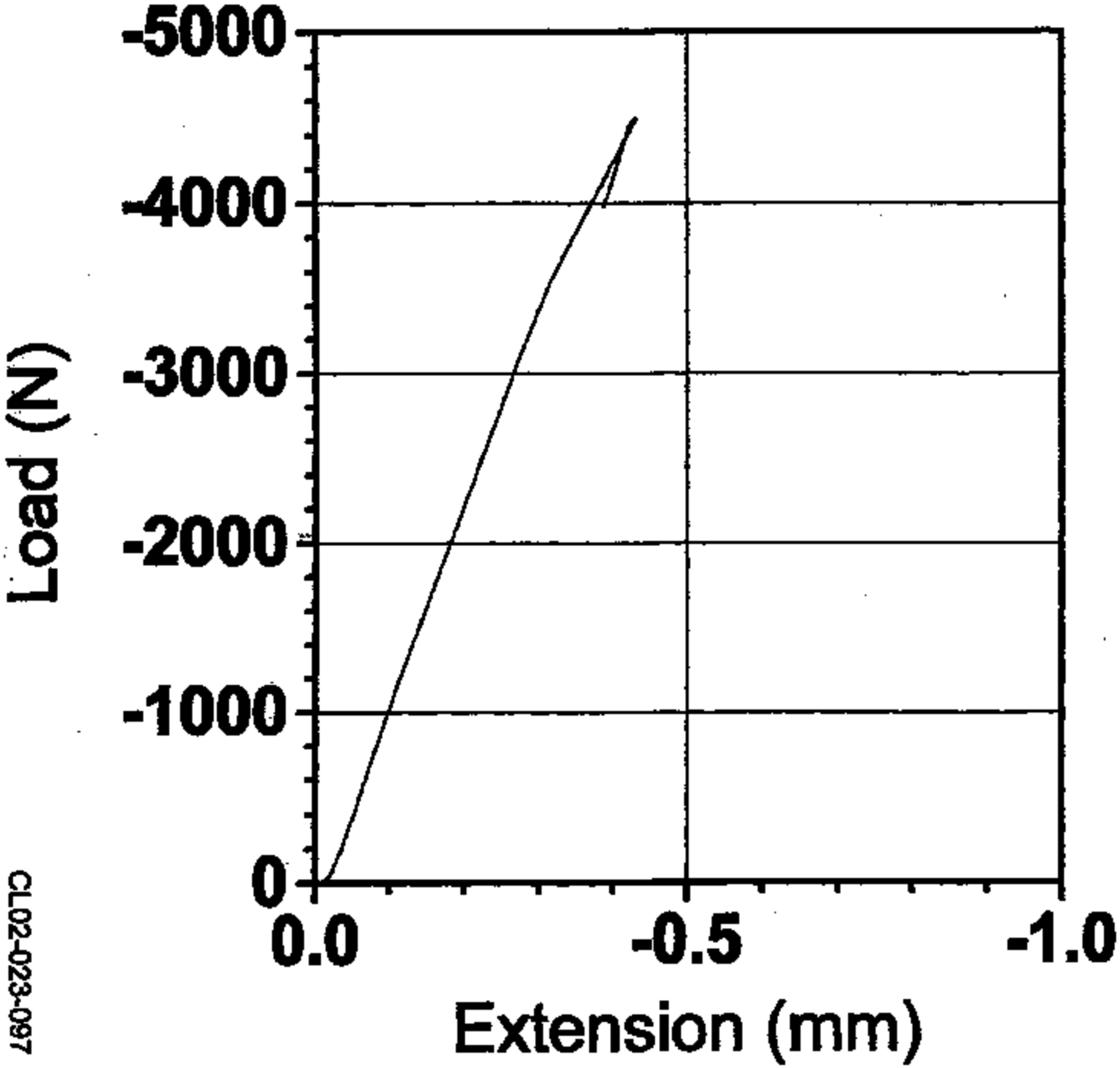
CL02-023-095

Liftl[illegible]d #180 T-TRK. UPR. 11197-[illegible]93 T-034 25 JUL 02



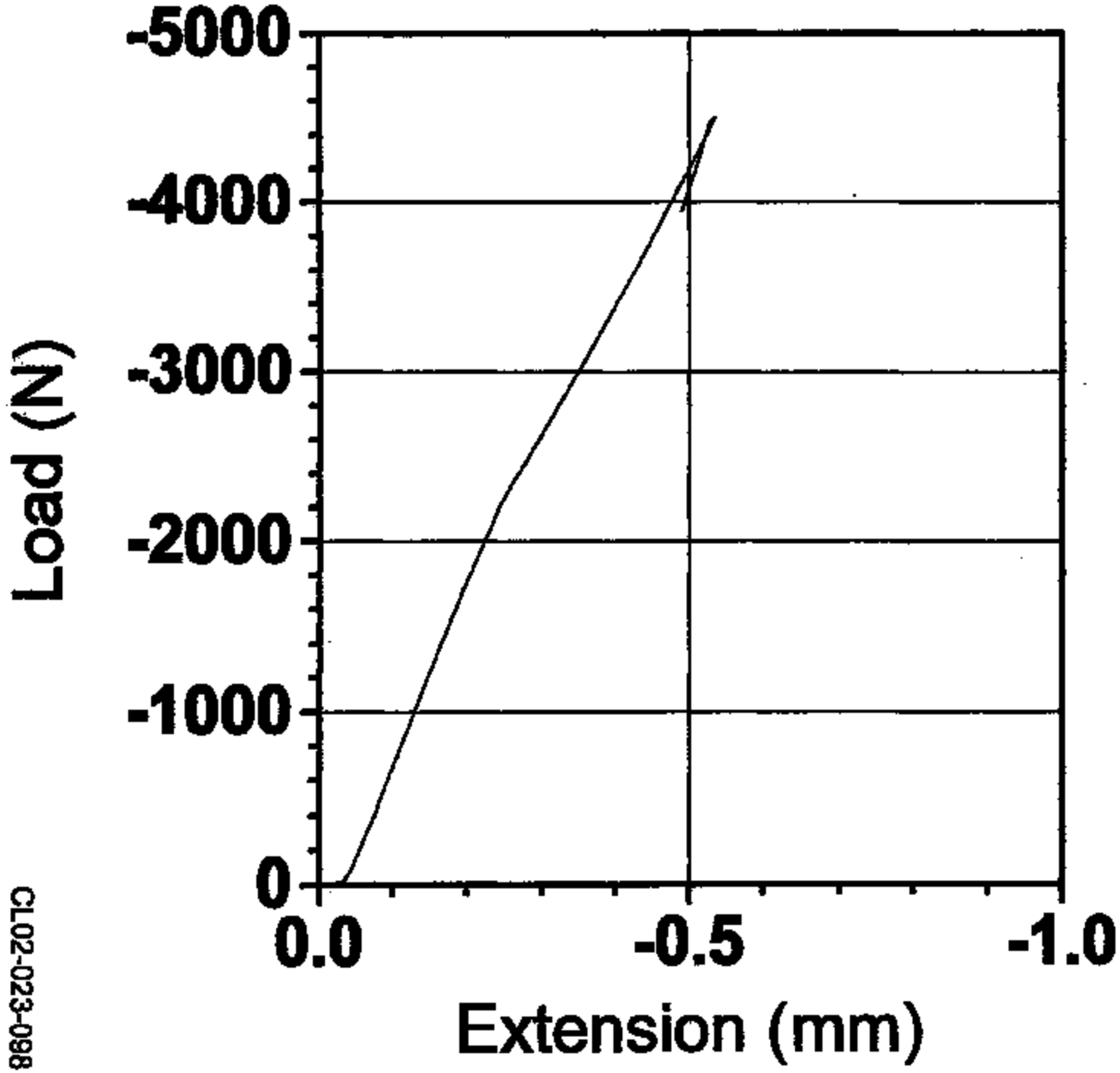
CL02-023-096

Lifted #214 T-TRK. UPR. 11197-93 T-034 25 JUL 02



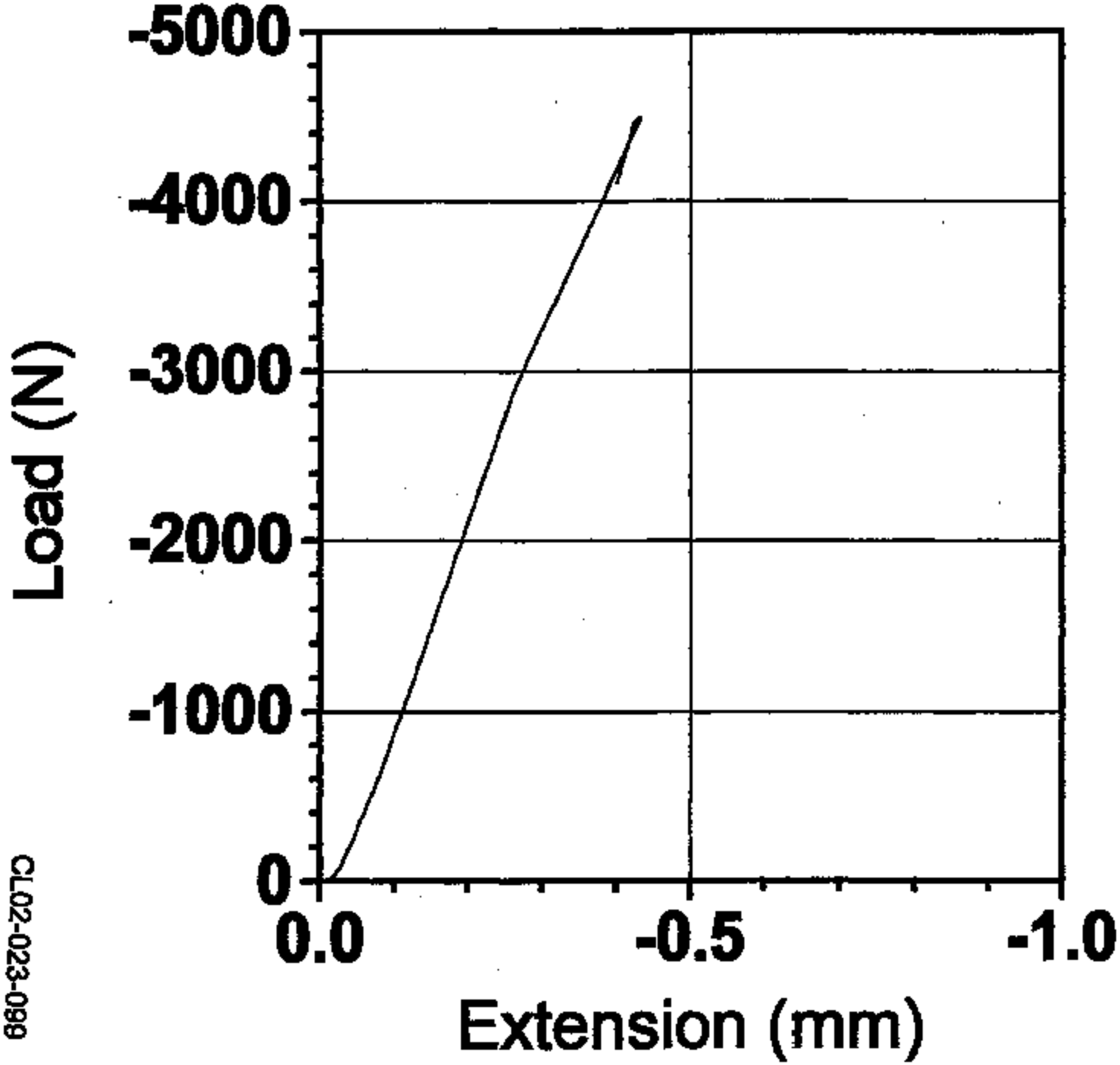
CL02-023-097

Liftlad #291 T-TRK. UPR. 11197-93 T-034 25 JUL 02



CL02-023-098

Liftl[illegible]d #624 T-TRK. UPR. 11197-[illegible]93 T-034 25 JUL 02



CL02-023-099

01-02-T107

ENGINEERING WORK REQUEST

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Expediter ☐ Vehicle Test ☒ Laboratory ☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Procurement ☐ Other

Due Date

Attention: ROB ROSS

PROJECT 11197 - 081
DEPT. NO. 583
DATE 31MY01
CUSTOMER NATG
PLATFORM/YR GMTG T-TRUCK
VEHICLE NO. N/A

Product Name BALL JOINTS
Part number 17980735 (For multiple entries, list below)
Rev Level N/A
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☐ Not Applicable

DEPARTMENTAL INFORMATION

DESIGN
☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other
Due Date

MODEL SHOP
QTY 99
Due Due Date
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

ADDITIONAL MODEL SHOP PROCUREMENT INFO
Customer Order ☐ Yes ☒ No
GP-11 Required ☐ Yes ☒ Waived
A/D/V Required ☐ Yes ☒ No
Specific Inspection ☐ Yes ☒ No
(List Details in REQUIREMENTS Section below)
Material Verification ☐ Yes ☒ No
Customer P.O. #
General Ledger Number:

PURPOSES ☐ Validation ☒ Other

INFO ONLY

DISPOSAL REQUIREMENTS

RETURN TO REQUESTOR

REPORT DISTRIBUTION

N/A

Non-Conforming Parts

N/A

REQUIREMENTS

WARRANTY RETURN ANALYSIS - TORQUES, LIFTLOADS, RADIAL ELASTICITY

INSTRUCTIONS

59U THRU 699U - EXCEPT 696U
~~674U~~
665U
664U
663U
662U
661U
660U
659U
658U
657U
656U
~~[illegible]~~
~~[illegible]~~

T-195 LIFTLOADS UP TO 1000 lbs

T-429 ROTATING/OSCILLATING TORQUES

T-536 RADIAL ELASTICITY

99 PCS.

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by
Authorized
Mail Loc V-57
Date 31MY01
Phone # 8355
FAX # 8342

Completed by Date 7/16/01
Reviewed Date 7/16/01
Supervisor Date
Reviewed (reliability/test eng.) Date

CL02-023-228

DELPHI Chassis Systems

PHYSICAL TEST LABORATORIES

EWR 11197-089
Date 9 JAN 02
Technician R. Ross
Page 1 of 17

CALIBRATION INFORMATION

EQUIP. IDENT. NO. (ID)	DESCRIPTION	LAST CALIBRATION DATE	NEXT CALIBRATION DUE DATE
TM-388	INSTRON (LIFT-LOADS)	16 FEB 01	15 JAN 02
TM-196-13	TORQUE WRENCH (3/8" DRIVE IN/LB)	14 AUG 01	15 JAN 02
TM – 209	GRAY MUD	13 FEB 01	15 JAN 02
TM-371-1	T-467 – SLAW '1'	30 OCT 01	15 JUL 02

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR	11197-089
Date	9 JAN 02
Tech.	Rob Ross
Page	2 Of 17

Data Report Summary

Part Number	17980735	Part Description	T – TRK/2002
Number of Samples	6	Serial Number	#089-(1-6)

Fixture(s)	Test Instruction(s)	Revision Date(s)
LF-6212	T-195	8 MAY 80
LF-4146	T-429	21 OCT 76
LF-6554	T-467	19 MAY 89
LF-6090-26	T-388	8 DEC 87
LF-6538		
LF-6124 det 58		
LF-7675-1		

Results, Observations, and Comments :
Test was run according to EWR.

The load was applied to the top of the ball stud, on the Instron machine till a load of 4,500 N was reached.
A graph of ball joint stud's range of movement was constructed during lift-load test.
The results of the pre and post lift-load tests were printed on a sheet of paper and included in this report.

The part was also manually rotated and oscillated and it's rock torque and rotation torque recorded in in/lbs.
The results are also included in this report.

After 4,282 cycles in the Mud Machine parts had to be lubed to continue running. At 100,000 cycles parts 2, 3, and 5 were removed from the Mud Machine and fully lubed. Parts 2 and 5 were placed in Slaw'1' for 250,000 more rock cycles. Parts 1, 4, and 6 stayed in the Mud Machine for 300,000 total cycles. After these tests all of the parts were checked for Lift-load and Torque and testing stopped.

Slaw'1' settings:

SIDELOAD	=	+ 400 lbf	-900lbf	sinusoidal @ 0.33 Hz
AXIAL	=	+/- 340 lbf		sinusoidal @ 0.33 Hz
ROTATE	=	+/- 18 deg		sinusoidal @ 0.5 Hz (18-20 deg is maximum machine capability)
ROCK	=	+/- 15 deg		sinusoidal @ 1.0 Hz

Data Plots : See Page(s)
Photographs : See Page(s)

Reported By : Rob Ross Date : 9 JAN 02

CL02-023-118

Test # 01-02-T167 SLAW #1 Ch.1
Project # 11197-089
Test Mach # TM-37M

02T-TRK SLAW1-089.000 - from T162 program changed Loads

Page 3 of 17
Date 9 JAN 02
Tech Rob Rost

SPECIMEN	DATE	LIMITS TIME	TECH	Max / Min Stroke mm	Max / Min Axial Load Kn	Max / Min Rotation Deg	Max / Min Rock Deg	Max / Min Side Load Kn	New Axial Load Kn	New Side Load Kn	Comments
				/	/	/	/	/			
+167-089-2	12-14-01	06:09:	RR	-.017/-.066	379/-435	±20	±15	1168/-1673	310/-353	1111/-1592	530 Rock cyc [illegible]
"	12-18-01	00:13:	RR	-.005/-.066	419/-379	±18	±15	472/-955	299/-333	449/-947	925 Rock cyc
"	12-19-01	21:51:00	RR	.0000/-.075	54/-437	±18	±15	511/-992	360/-378	434/-944	79,000 Rock cyc
"	12-20-01	40:17:	RR	-.001/-.080	396/-447	±18	±15	503/-977	392/-301	956/-942	145,200 Rock cyc
"	12-21-01	66:41:	RR	-.002/-.083	398/-449	±18	±15	503/-967	340/-239	458/-949	290,200 Rock cyc
"	12-26-01	69:26:17	RR	-.002/-.083	387/-441	—	±15	488/-958	—	—	250,000 Rock cyc EOT
+167-089-5	12-26-01	00:03:00	RR	.009/-.053	402/-364	±18	±15	578/-1062	193/-292	500/-995	200 Rock cyc
"	1-3-02	69:26:28	RR	.016/-.104	541/-502	—	±15	632/-995	—	—	250,000 Rock cyc EOT

CL02-023-119

DELPHI

Chassis Systems

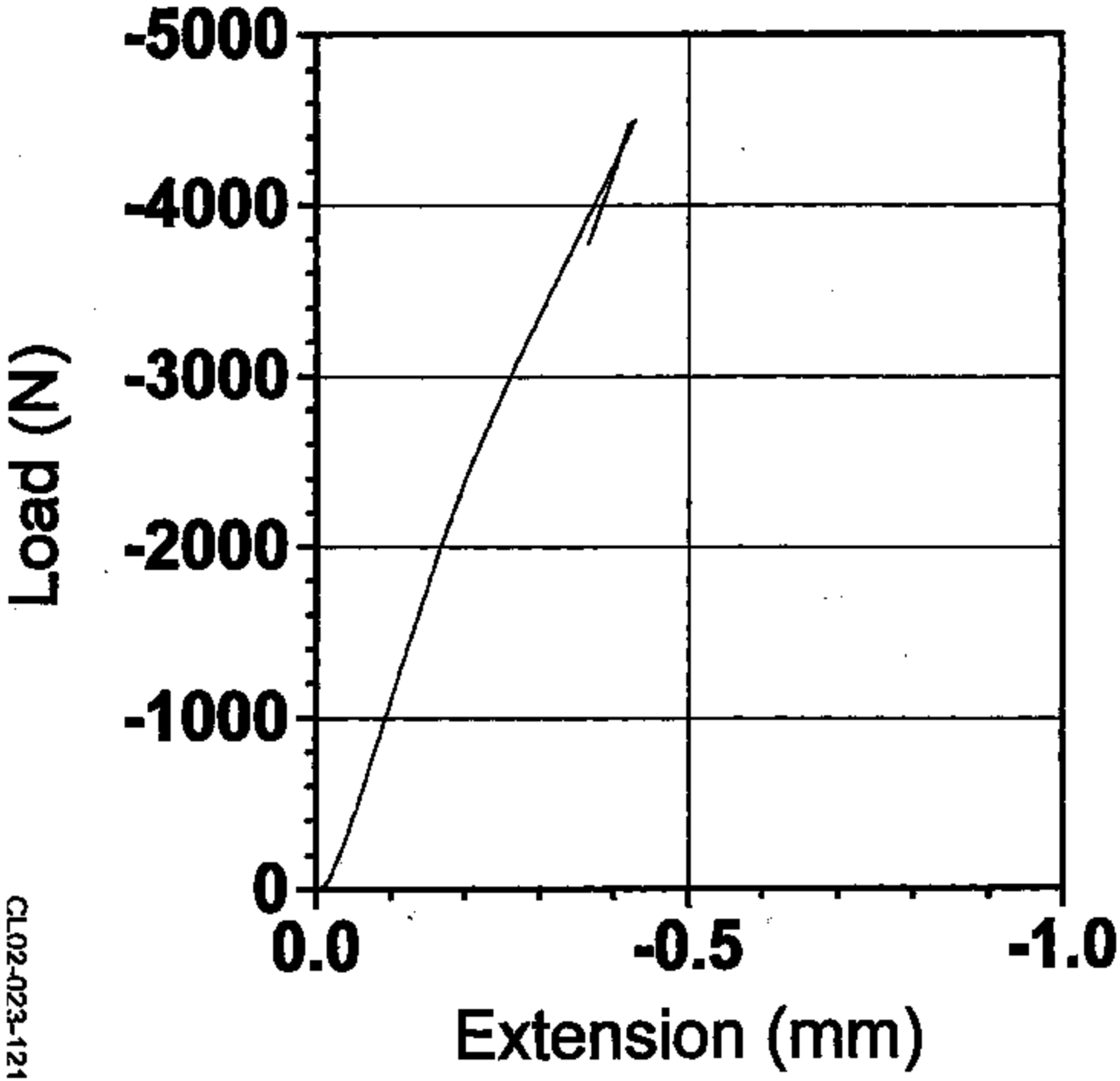
Project #: 11197-089
Test #: 01-02-T167
Date: 07DE01
Tech: D. Acuna
Page: 4 of 17

Manual Torque Data Log

	Piece #	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
	089-1	82		40	PRE-TEST
	089-2	67		45	"
	089-3	95		45	"
	089-4	87		48	"
	089-5	85		45	"
	089-6	78		45	"
	089-1	20		10	Post-Test
SLAW -	" -2	20		5	"
	" -3	10		0	"
	" -4	20		20	"
SLAW -	" -5	0		0	"
	" -6	0		0	"

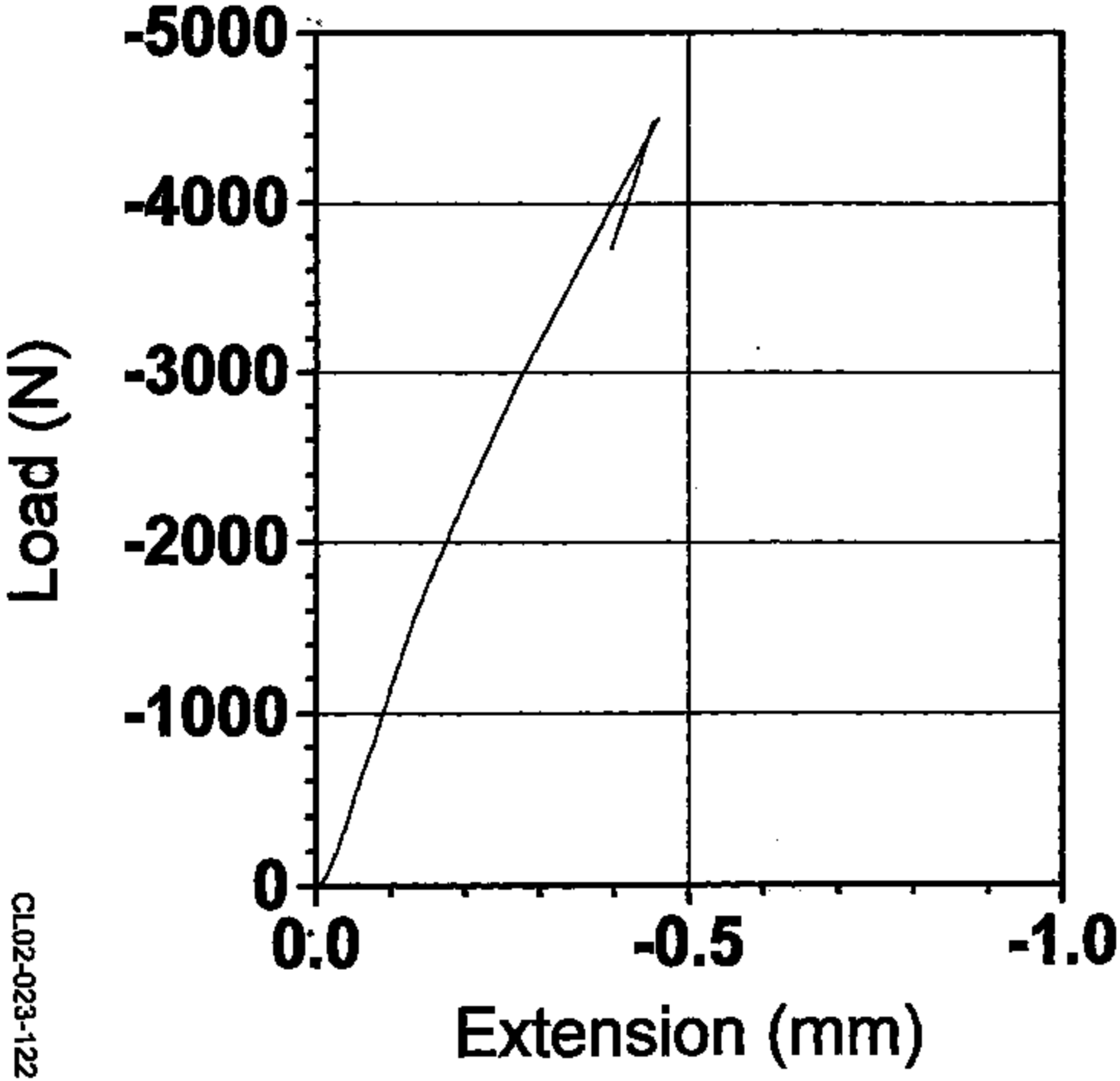
CL02-023-120

Liftlo[illegible] #089-1 T-TRK UPR 11197[illegible]89 11 DEC 01 Pre-Test R. [illegible]oss



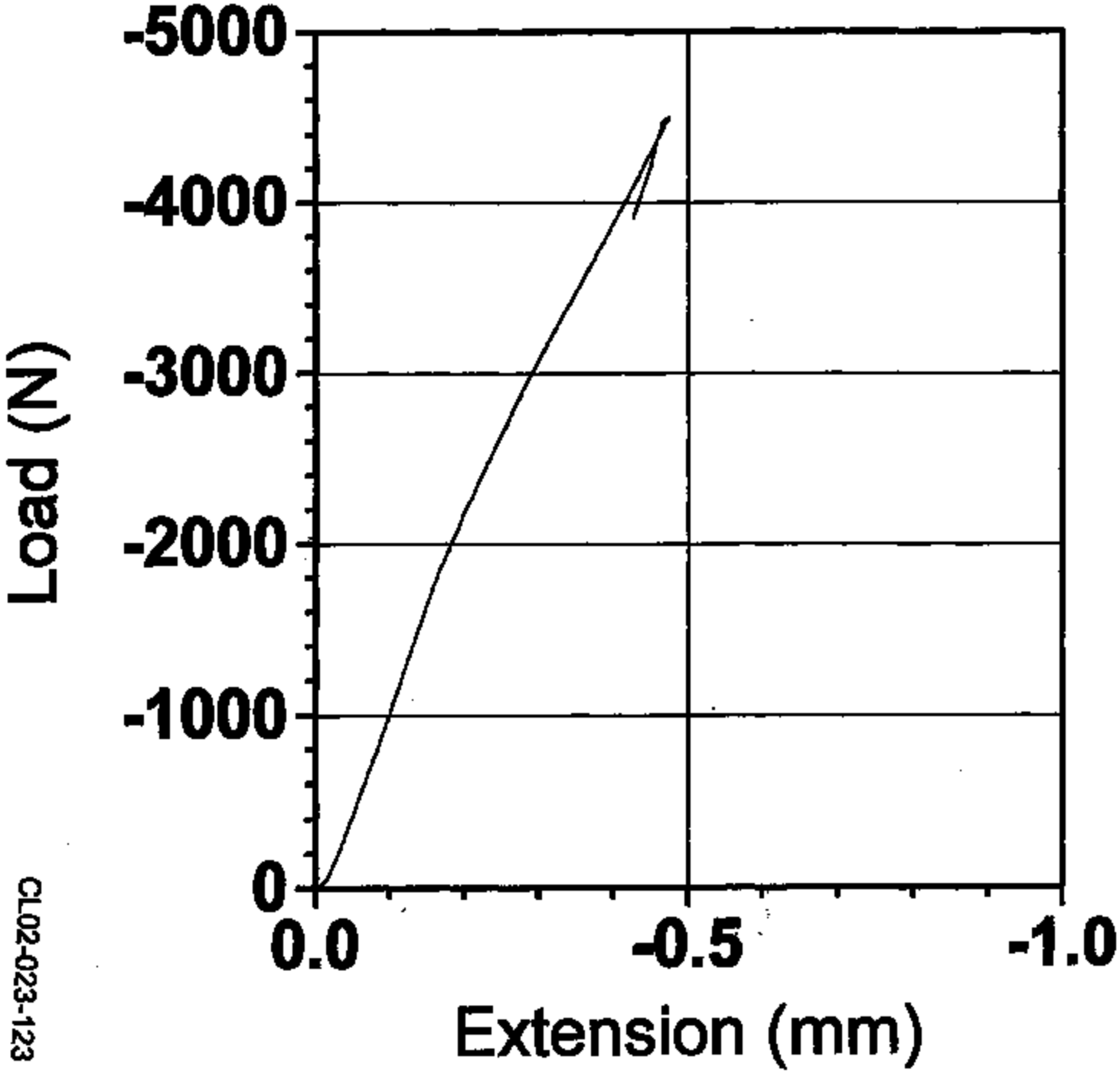
CL02-023-121

Liftlo[illegible] #089-2 T-TRK UPR 11197[illegible]089 11 DEC 01 Pre-Test R. [illegible]oss



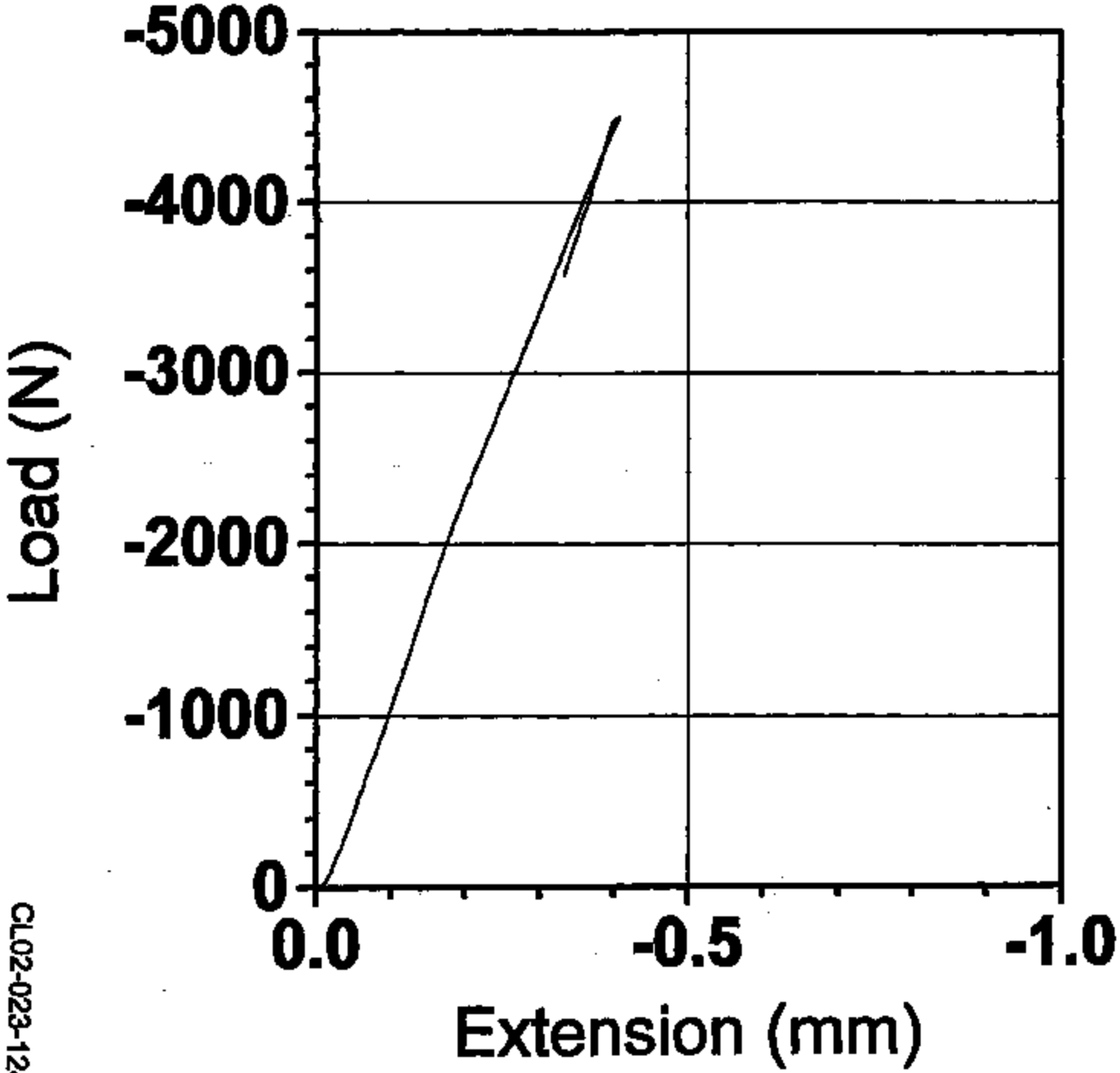
CL02-023-122

Liftlo d #089-3 T-TRK UPR 11197 089 11 DEC 01 Pre-Test R. oss



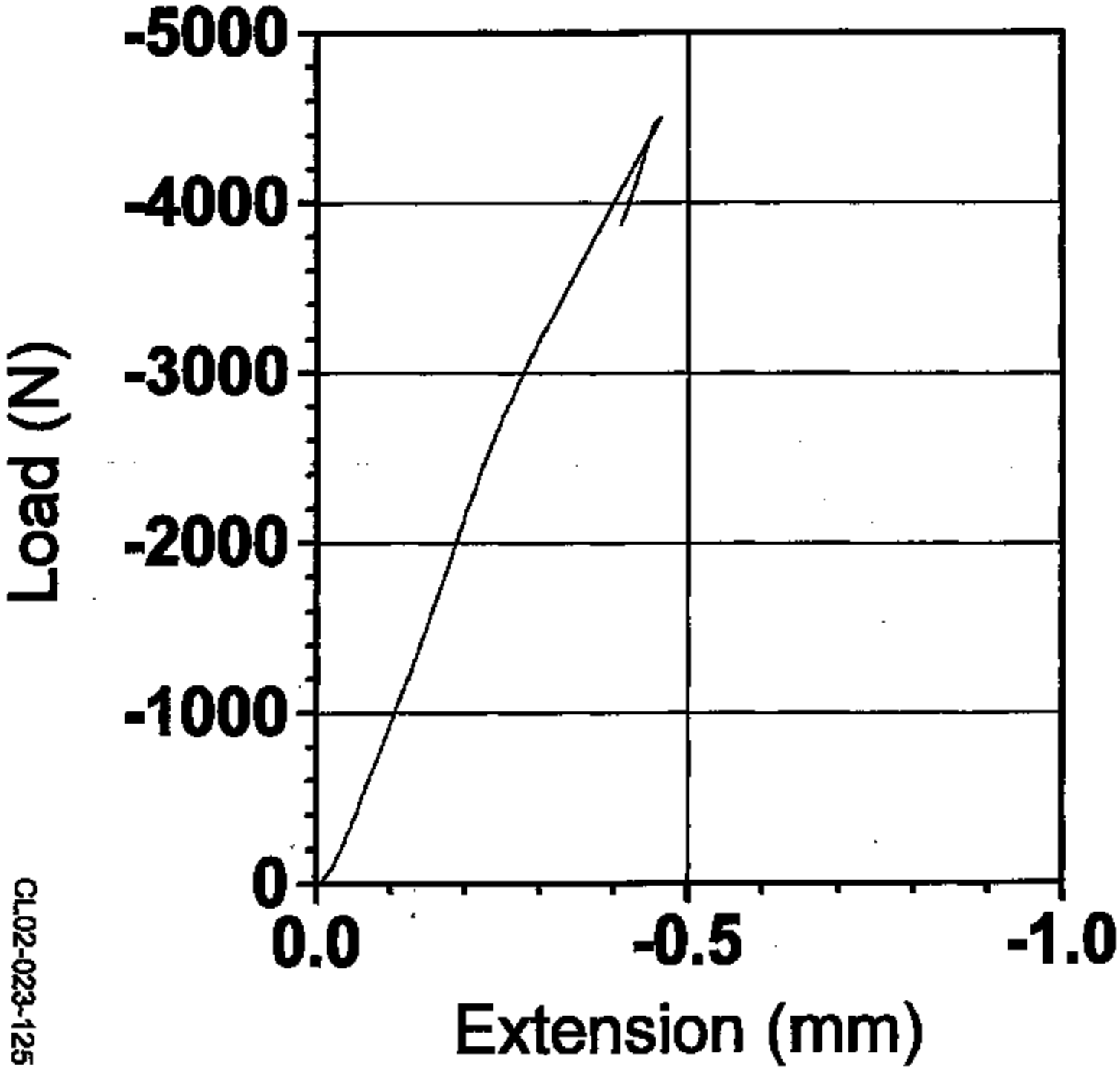
CL02-023-123

Liftlo[illegible] #089-4 T-TRK UPR 11197[illegible]89 11 DEC 01 Pre-Test R. [illegible]oss

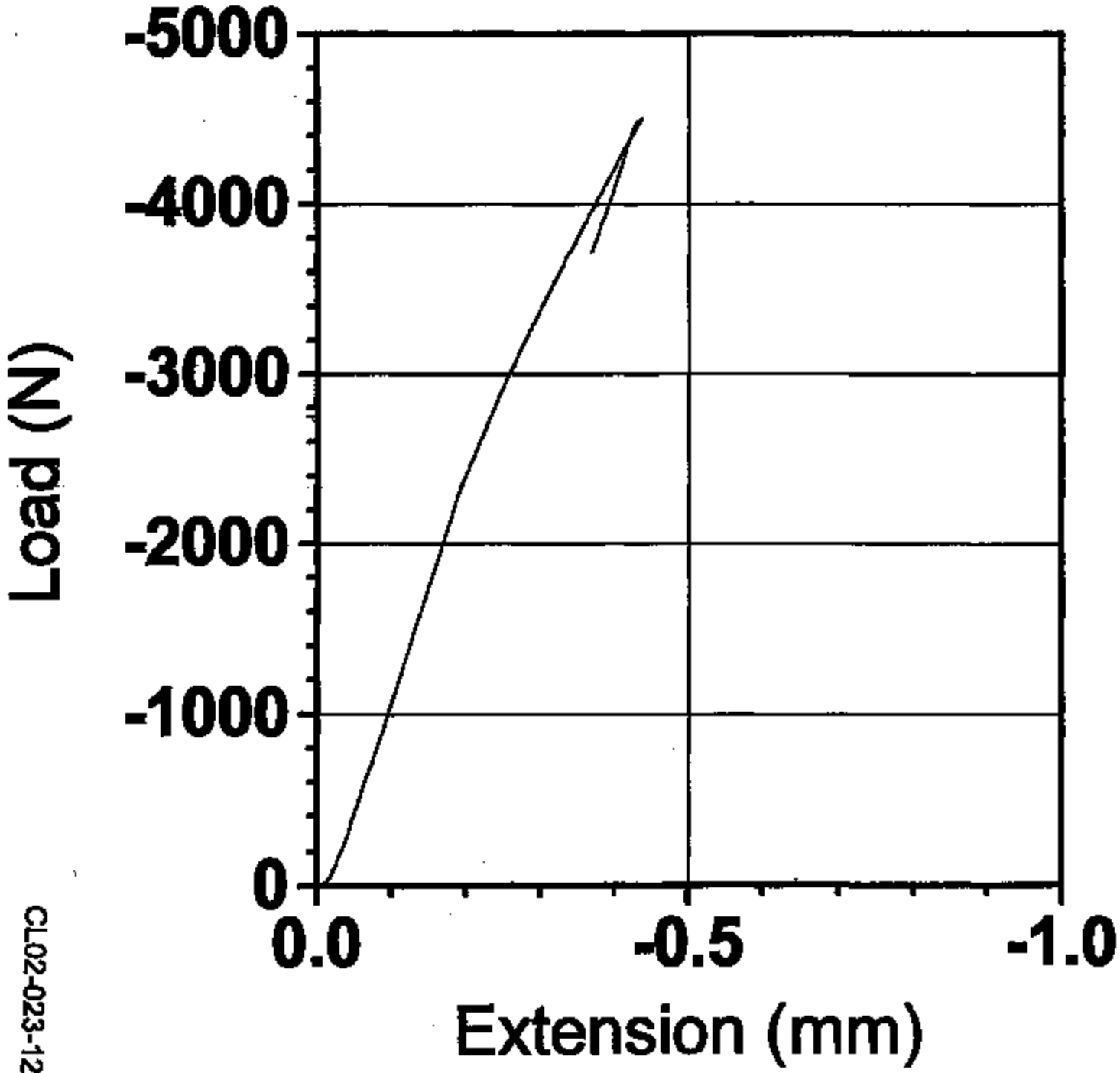


CL02-023-124

Liftlo[illegible]l #089-5 T-TRK UPR 11197[illegible]89 11 DEC 01 Pre-Test R. [illegible]oss



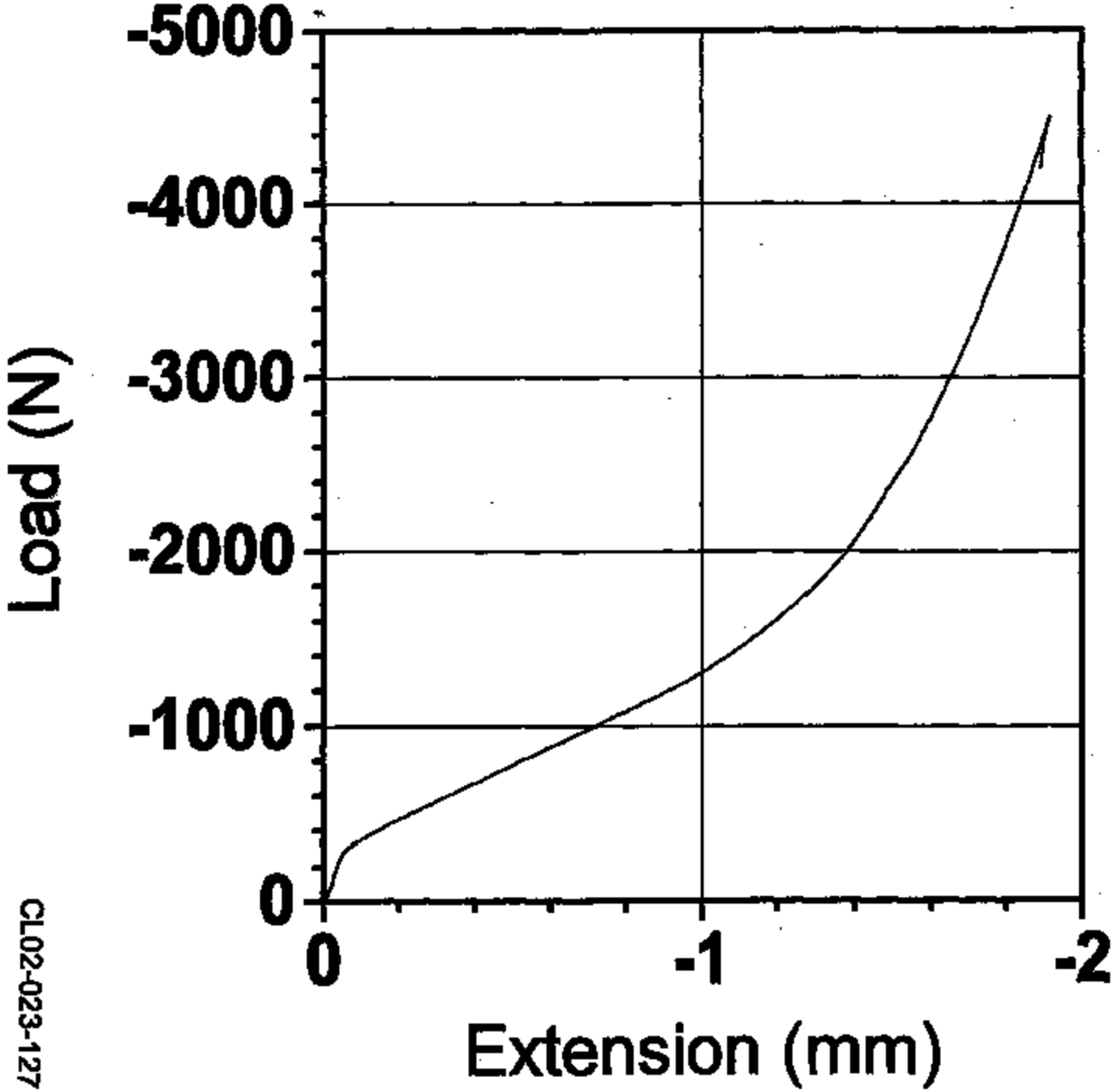
Liftload #089-6 T-TRK UPR 11197-089 11 DEC 01 Pre-Test R. Moss



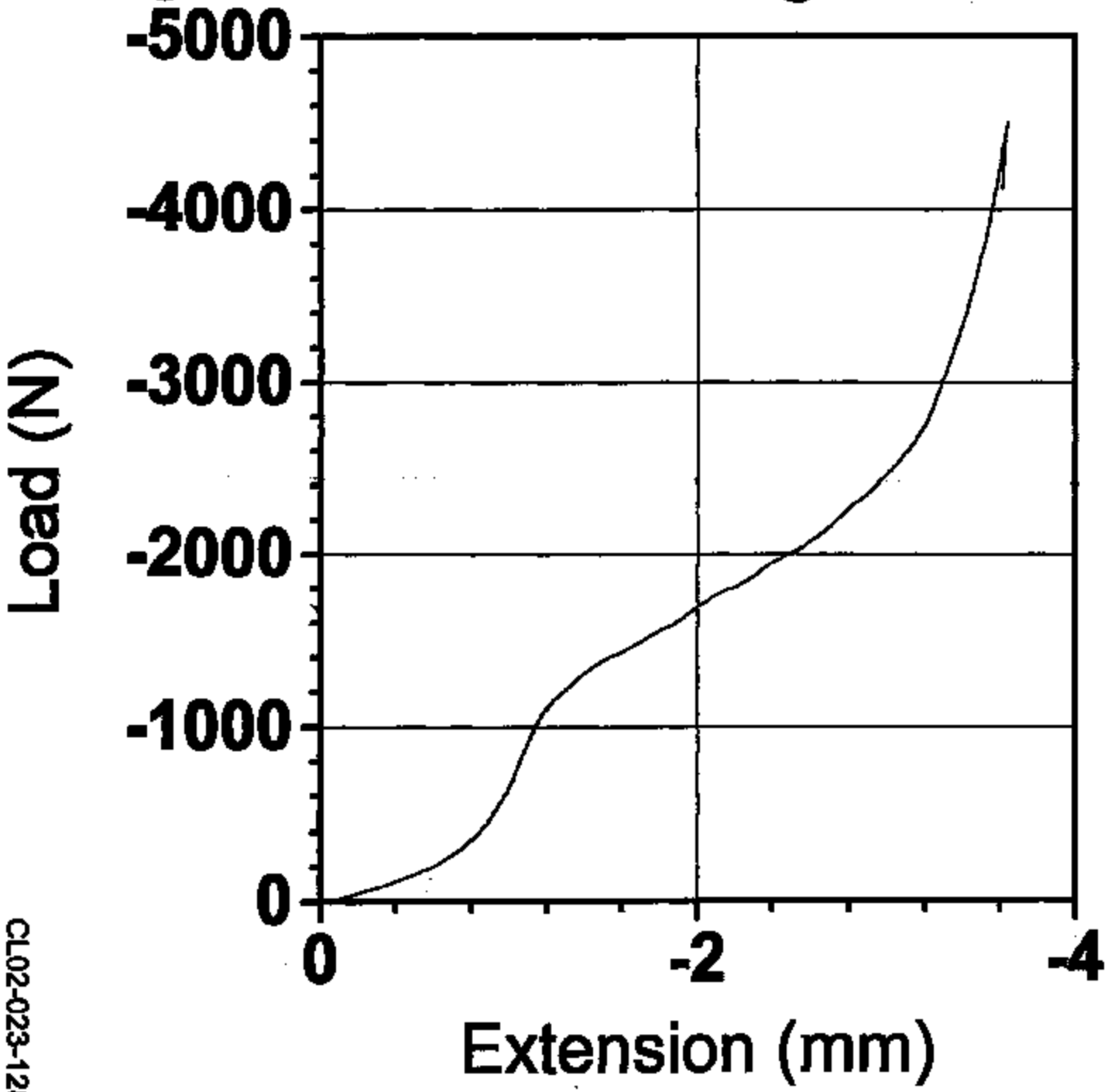
CL02-023-126

.iftload 089-1 T-TRK UPR 11197-0 19DEC01 D. A. (First Mud)

R. Rm

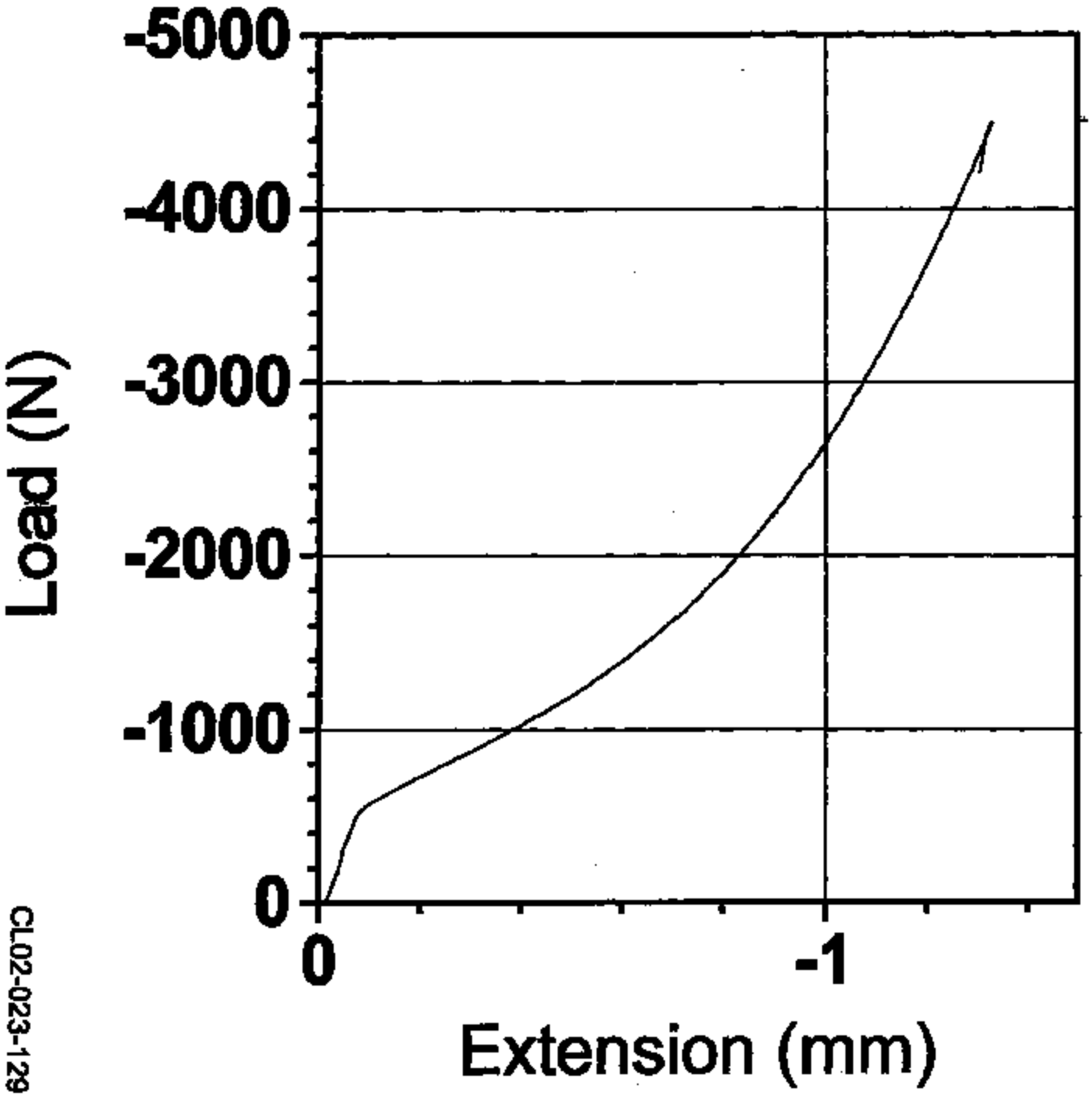


_iftload #089-3 T-TRK UPR 11197-089 19DEC01 D. A. (First Mud)



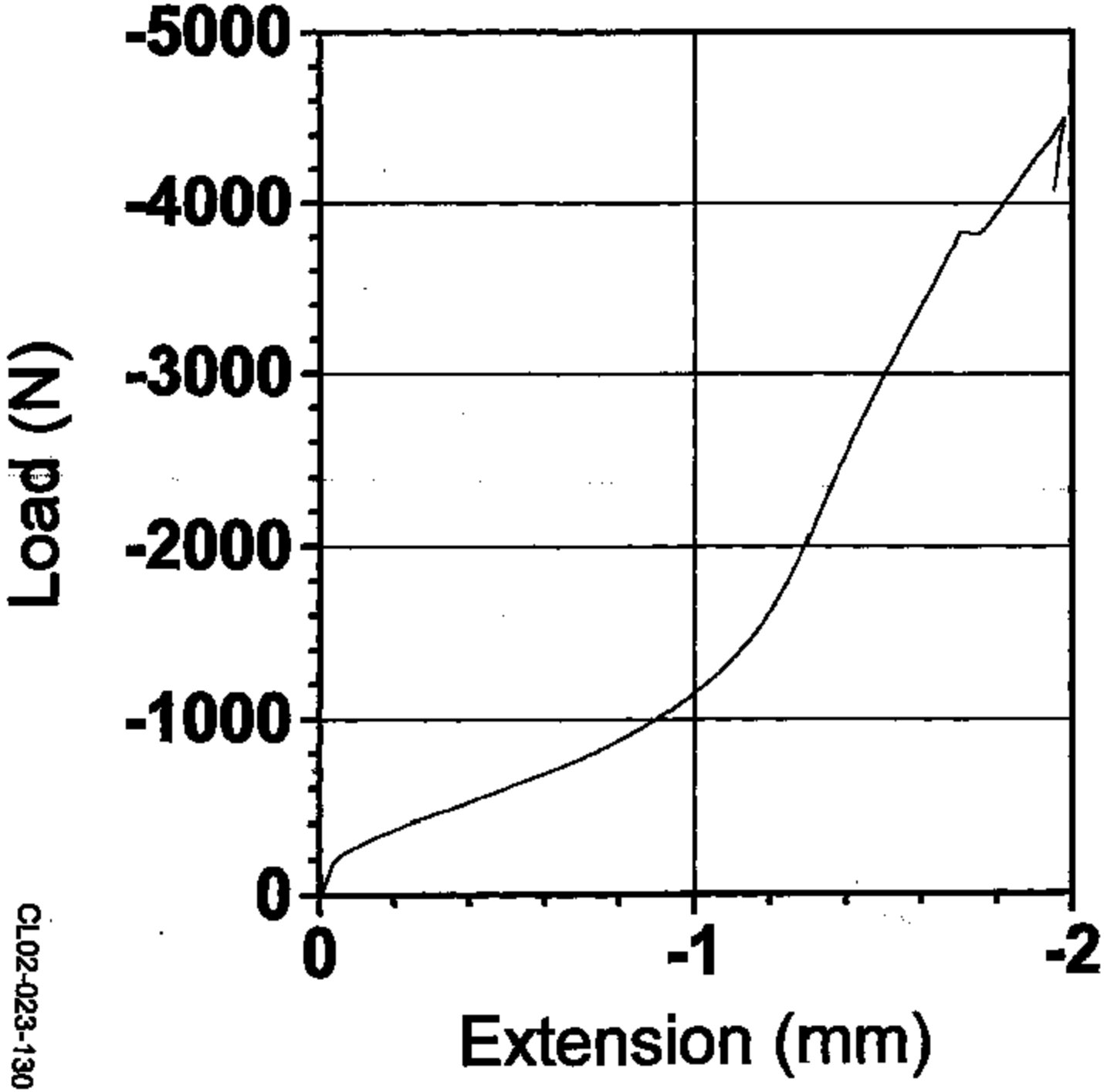
.iftload #089-4 T-TRK UPR 11197-0[illegible] 19DEC01 D. A. (First Mud)

K. [illegible]



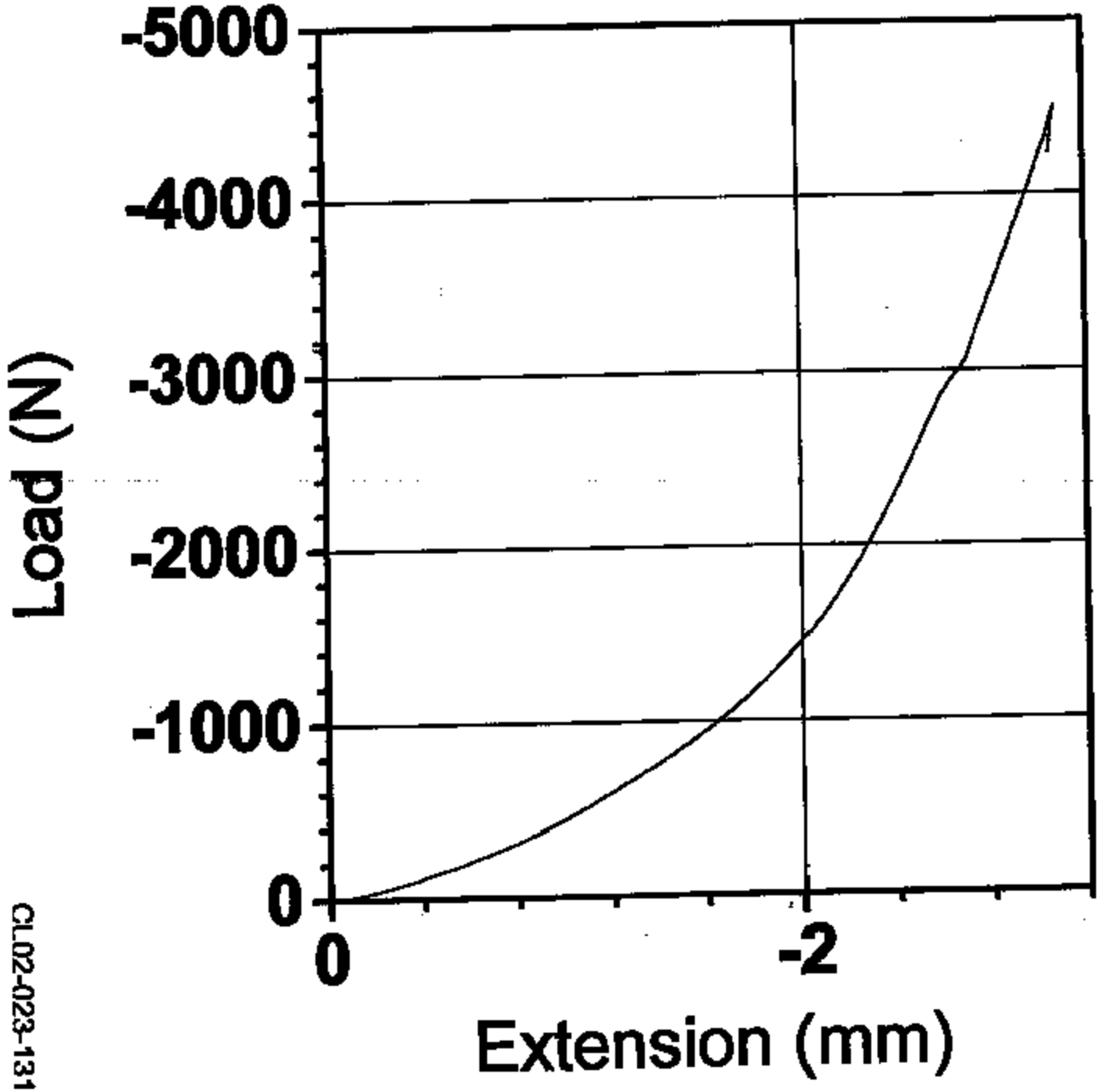
CL02-023-129

.iftload 089-5 T-TRK UPR 11197-08 19DEC01 D. A. (First Mud)



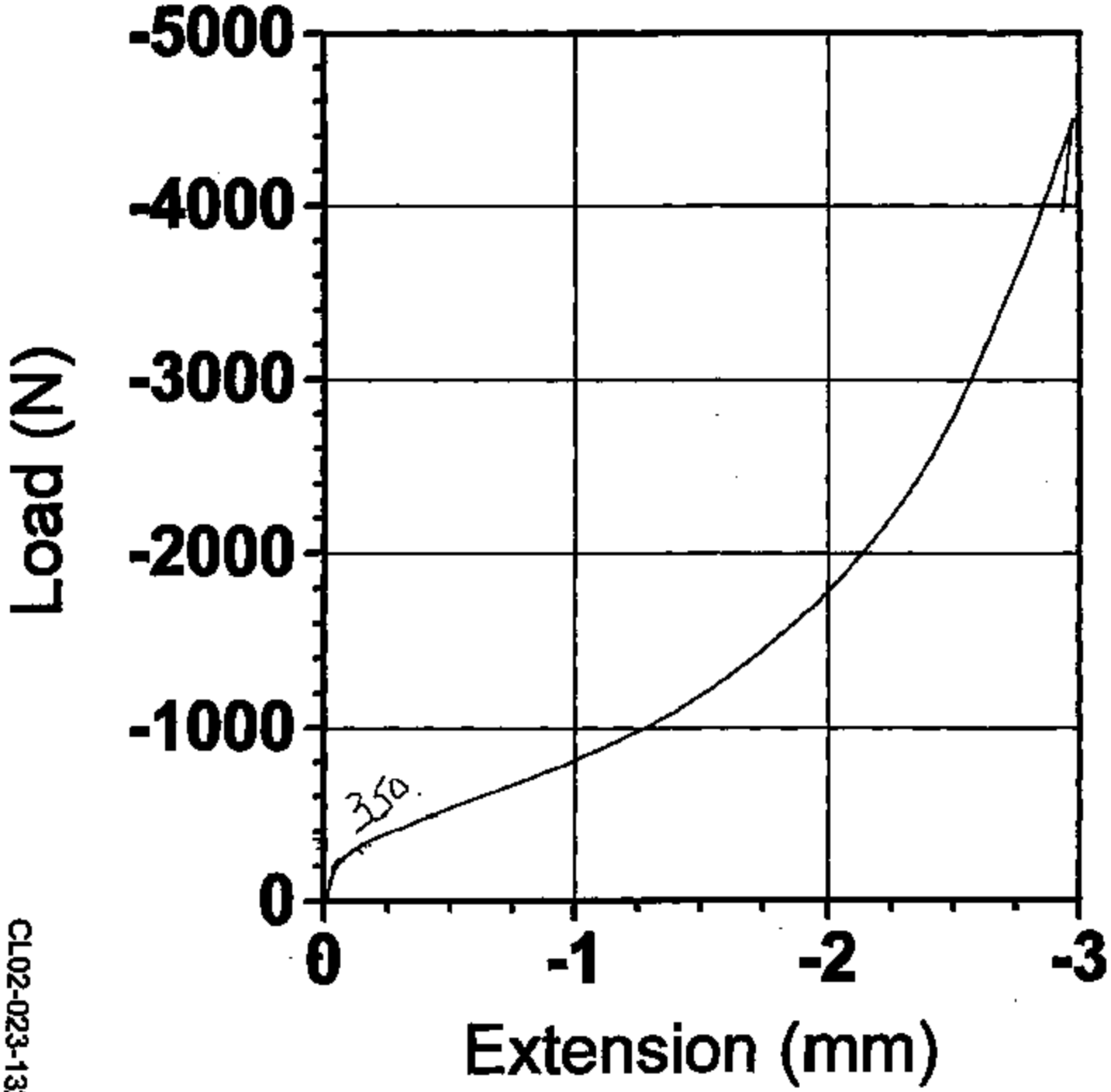
CL02-023-130

.iftload 089-6 T-TRK UPR 11197-0 19DEC01 D. A. (First Mud)



CL02-023-131

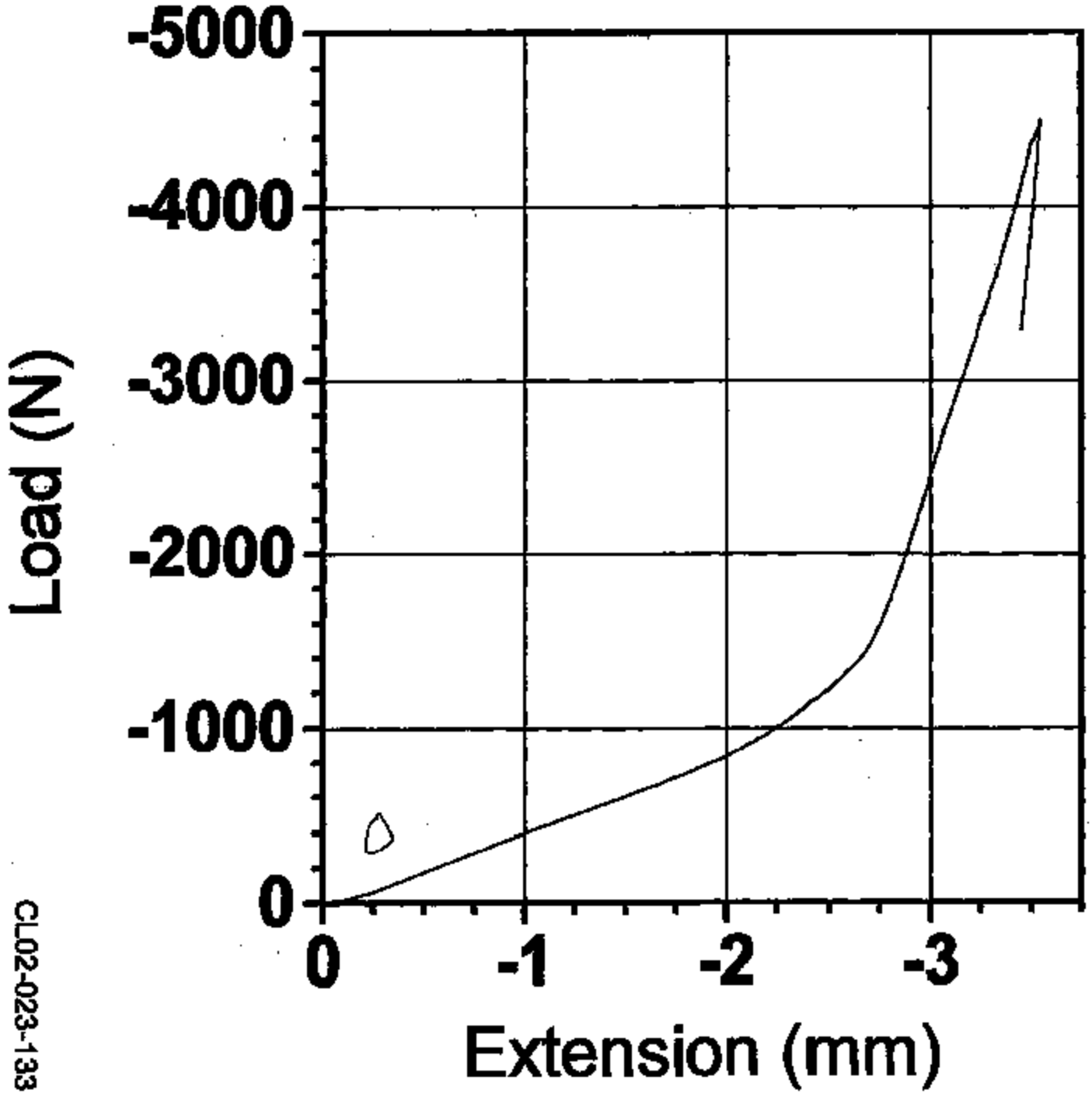
Liftlo[illegible]d #089-2 2002 T-TRK 1119[illegible]089 9 JAN 02 Post-slaw



PAGE NO. 16 OF 17

CL02-023-132

Liftlo[illegible]d #089-5 2002 T-TRK 1119[illegible]089 9 JAN 02 Post-slaw



CL02-023-133

ENGINEERING WORK REQUEST 2002-0021

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Procurement ☐ Vehicle Test ☒ Laboratory
☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Other

EWR NUMBER 11197-092
DEPT. NO. T83
DATE 09JA02
CUSTOMER NATO
PLATFORM/YR T-Truck / 1996
VEHICLE NO. VARIOUS

Attention: Greg Larchman
Targeted Due Date(s): 22 JA 02

Product Name Ball Joint - Bearing Part number 4761377 Rev Level N/A
Sheet Attachments 0 (For multiple entries, list below)
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other

Quantity 6
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No
Customer Order ☐ Yes ☐ No
Customer P.O. # ____
Specific Inspection ☐ Yes ☐ No
(List Details in INSTRUCTIONS Section below)

Info Only

Return to Requestor

N/A

INSTRUCTIONS

1) Extract oil from Bearing

2) Examine by SEM
- Provide 2500 x Photographs of each bearing

Parts Supplied - 121, 214, 291, 180, 60, + 624

B (B) (B) B (W) (W)

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by Chuck Eifert / Patrick Kerr Mail Loc V-57 Phone # 8356 / 8441
Authorized [signature] Date 09JA02 FAX # 8392
Initial Validation Analysis Review ____ Date ____
Test Supervisor Review ____ Date ____
Completed by [signature] Date 18JA02 Test Supv. ____ Date ____
Reviewed ____ Date ____ Reviewed ____ Date ____
(validation analysis eng.)

CL02-023-100

DELPHI
Automotive Systems

Analytical Chemistry Laboratory Report

ACL #: 2002-0021
EWR # 11197-092

Ball joint bearings, part number 9769877, were submitted to the chemistry laboratory for evaluation.

SEM images were obtained at 2500x from the grease groove on each of the ball joint bearings. Images were also obtained at 1000x from the grease grooves for reference.

Images were sent to the submitter via attachments to Outlook.

Garry Jackson
1-18-2002

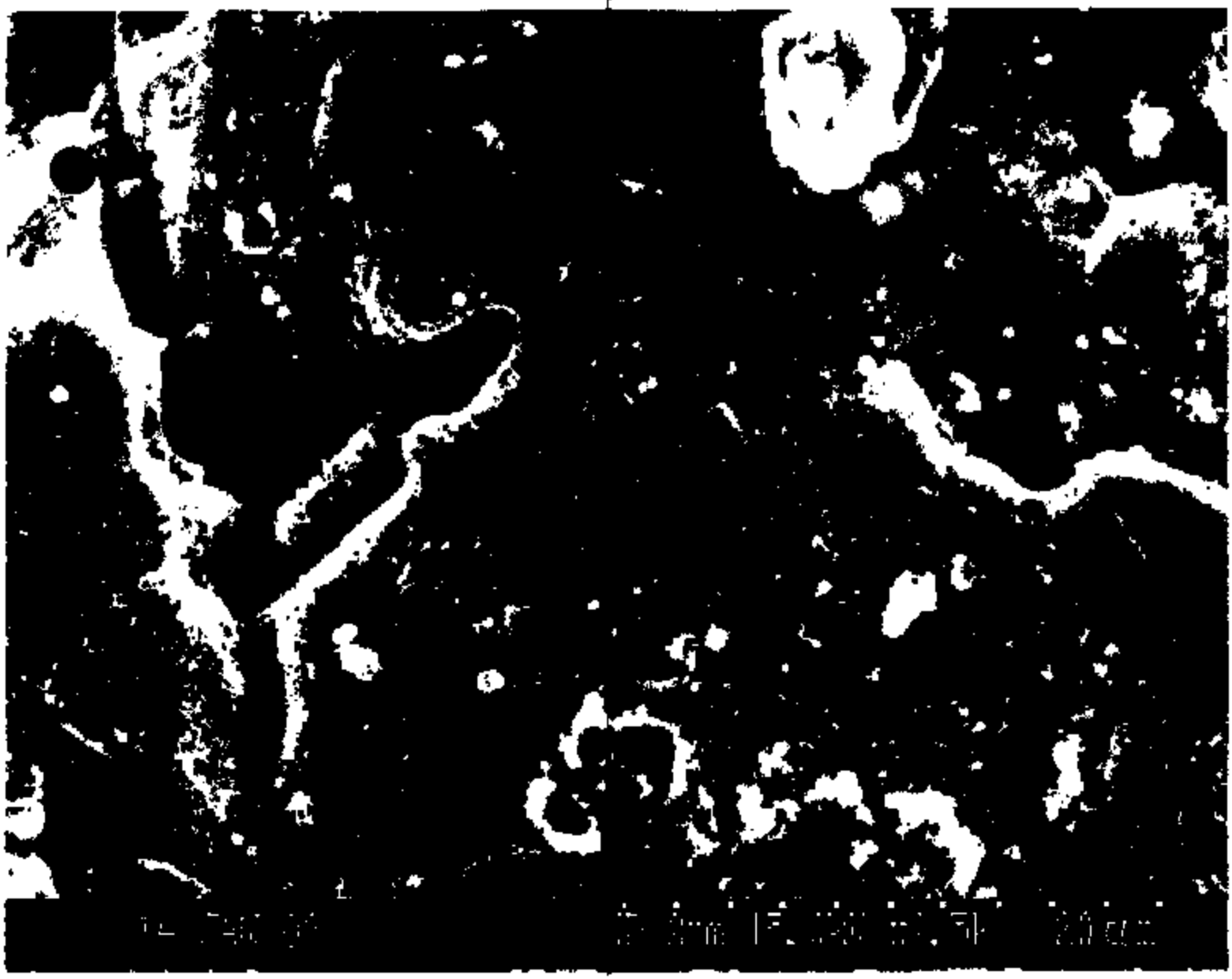
Greg Lanchman

Elfert, Charles D

From: Jackson, Garry L
Sent: Friday, January 18, 2002 2:03 PM
To: Elfert, Charles D
Cc: Lanchman, Gregory J
Subject: Ball joint bearings

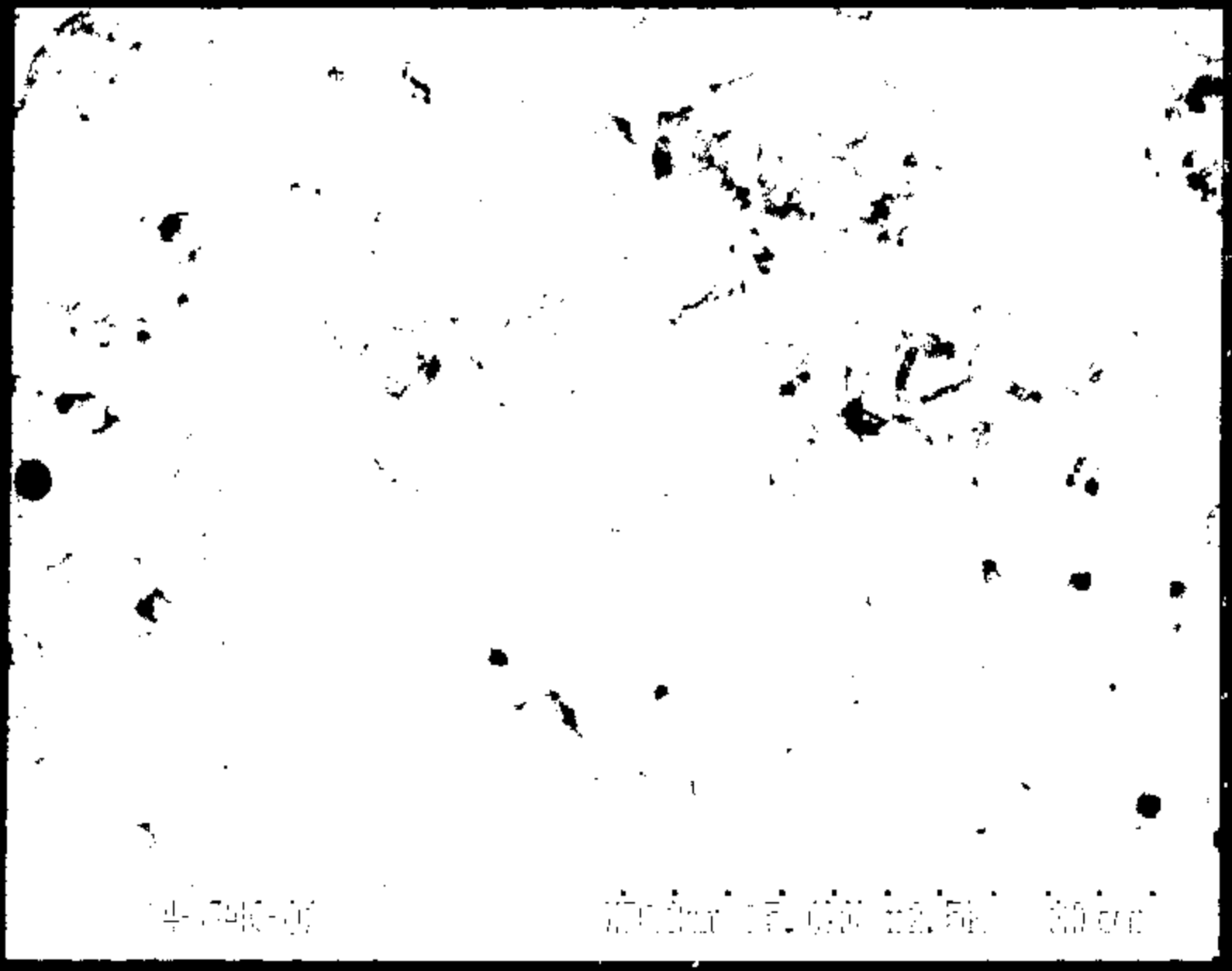
Attached are images obtained at 2500x from ball joint parts 121, 214, 291, 180, 60 and 624 submitted on EWR 11197-092.

121 at 2500x.tif
180 at 2500x_3.tif
214 at 2500x.tif
214 at 2500x_4.tif
291 at 2500x_3.tif
291 at 2500x_4.tif
60 at 2500x_2.tif
60 at 2500x_3.tif
624 at 2500x_3.tif
624 at 2500x_4.tif



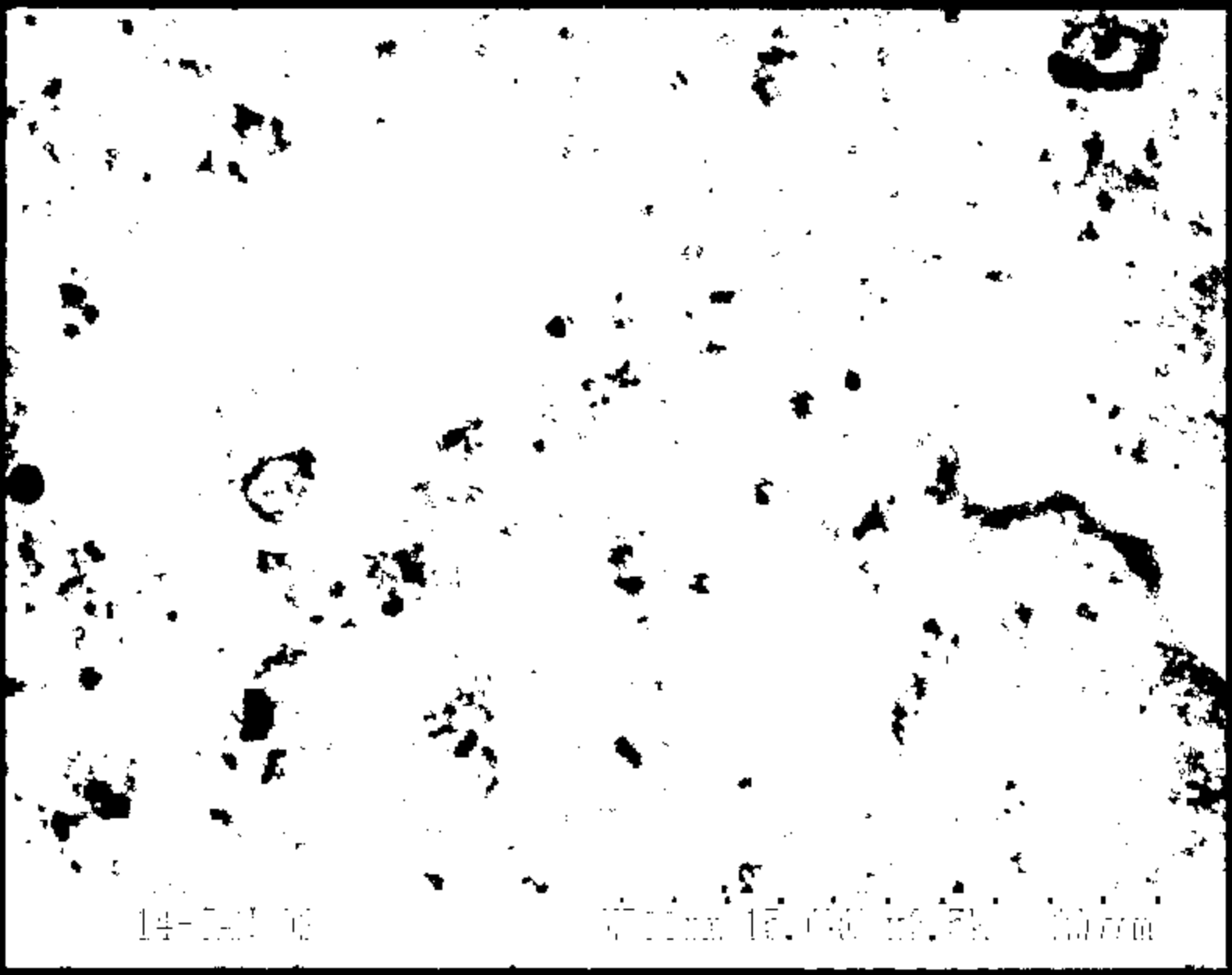
121 @ 2500

CL02-023-103



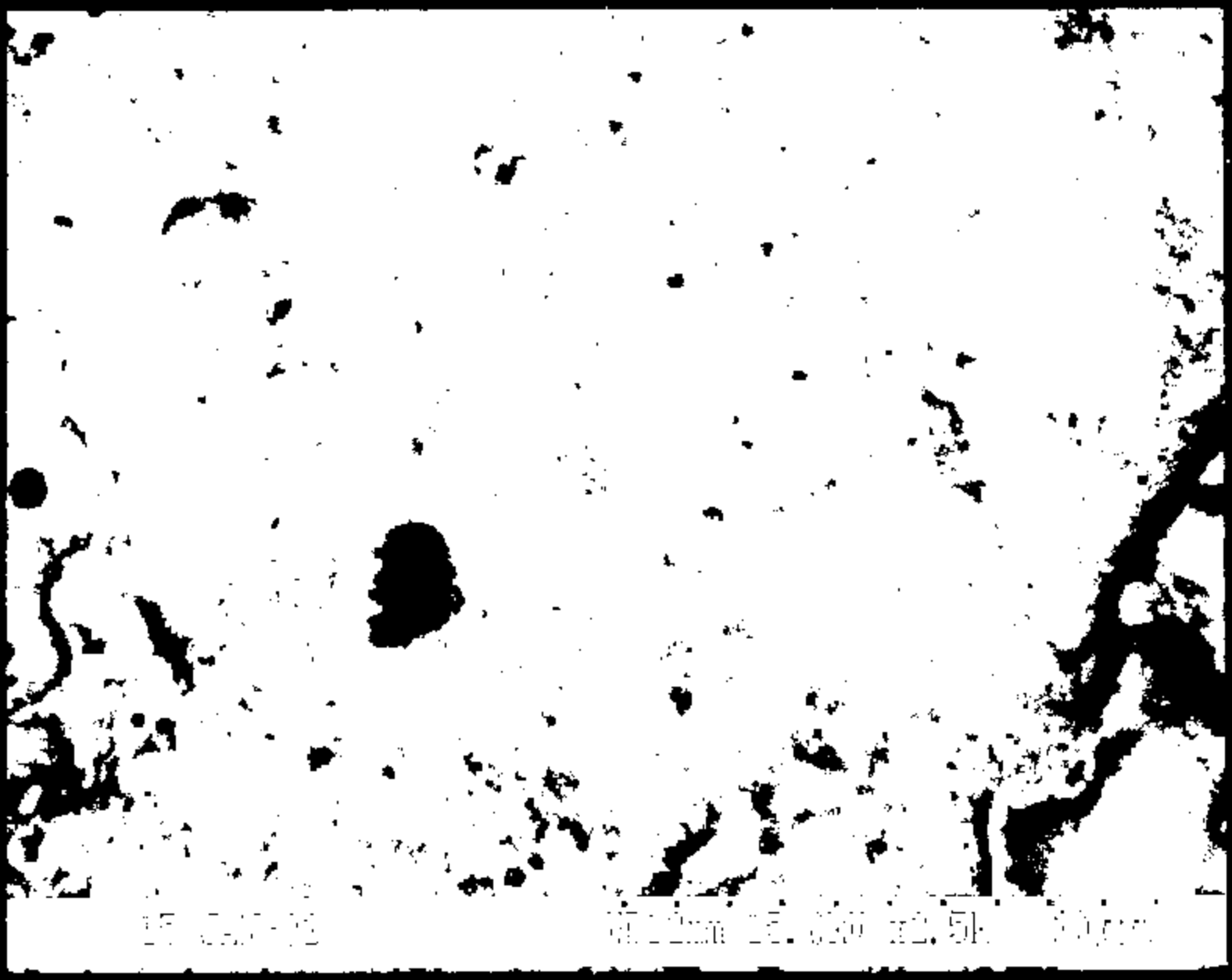
180 @ 2500

CL02-023-104



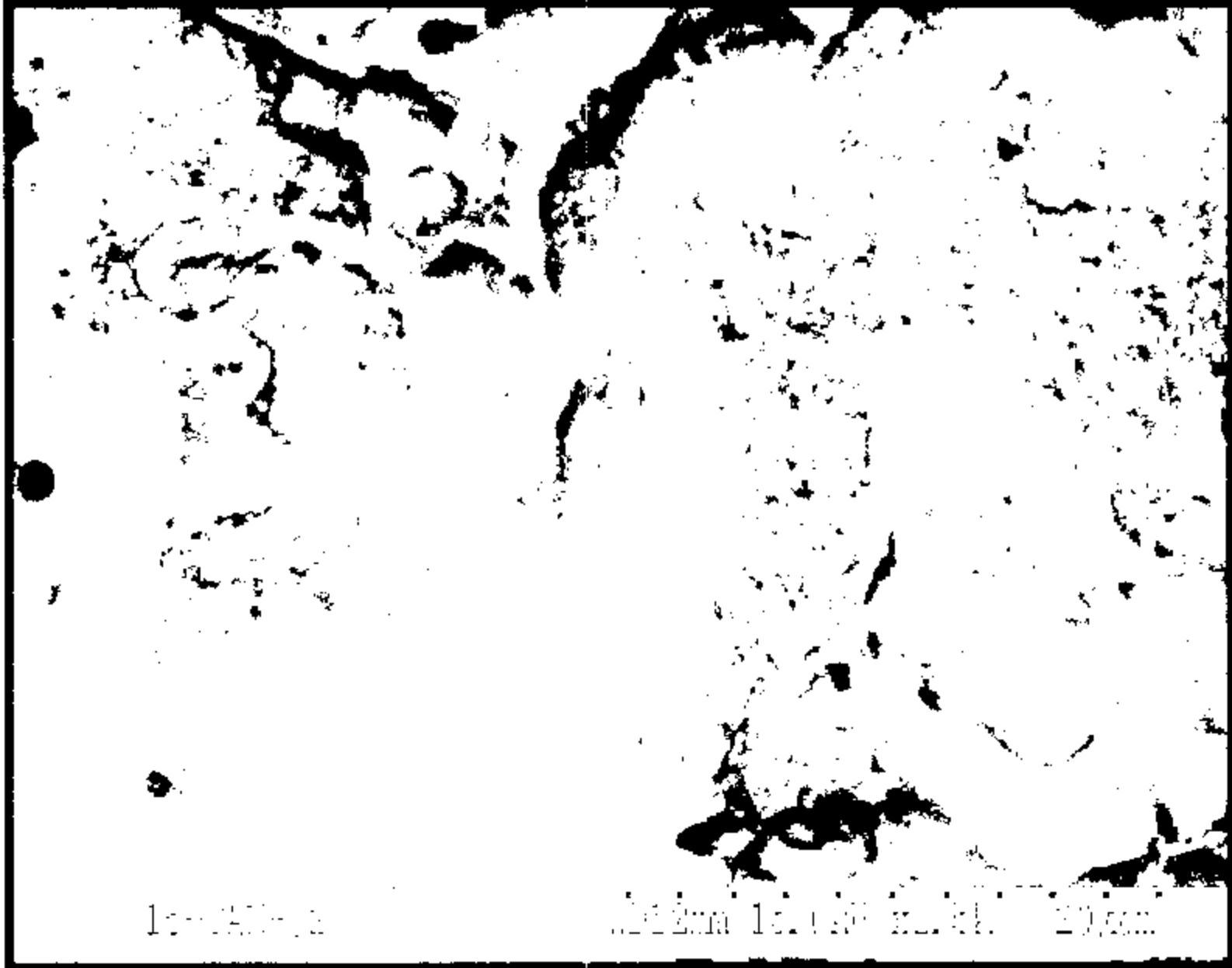
214 @ 2500

CL02-023-105



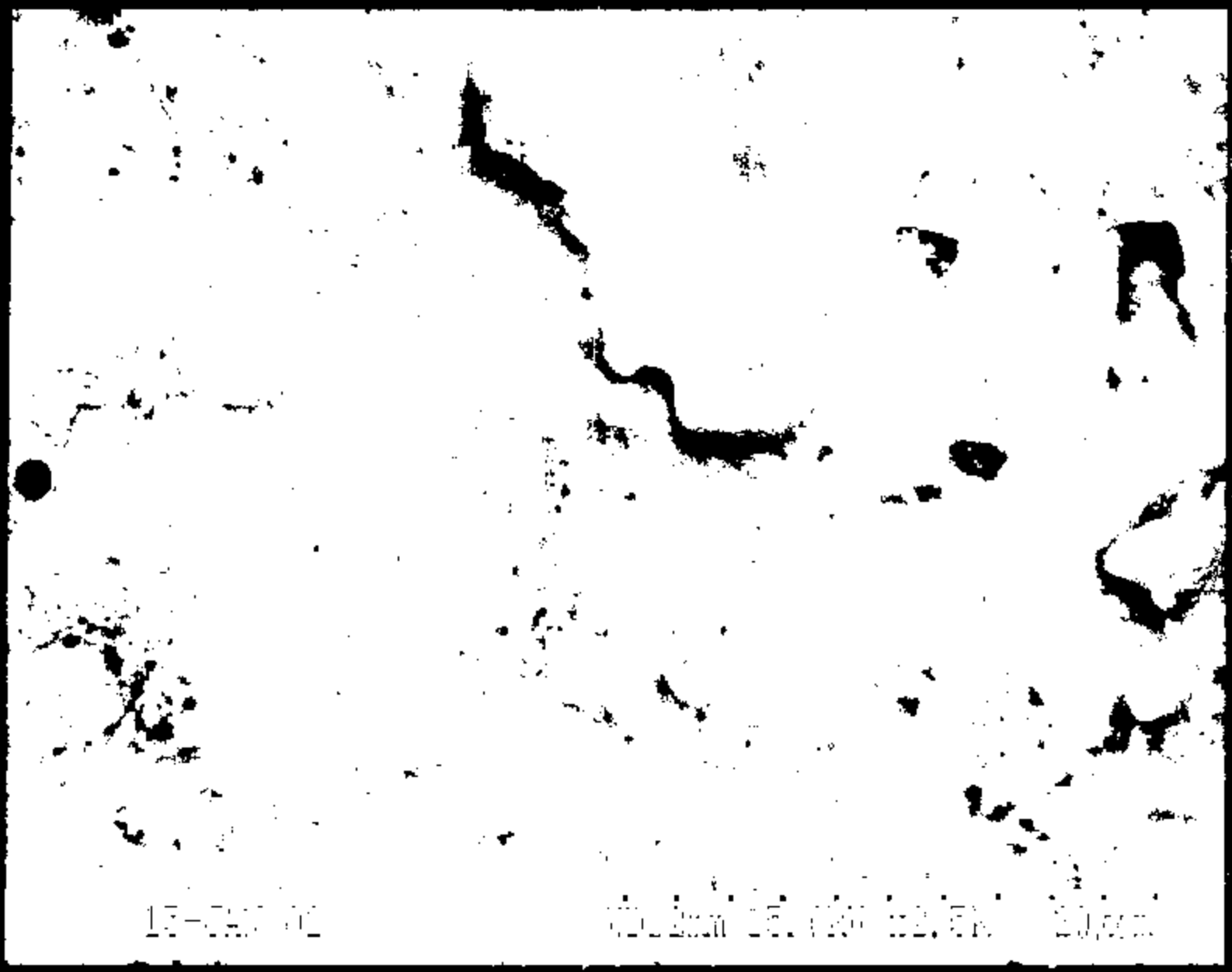
214 @ 2500x

CL02-023-106



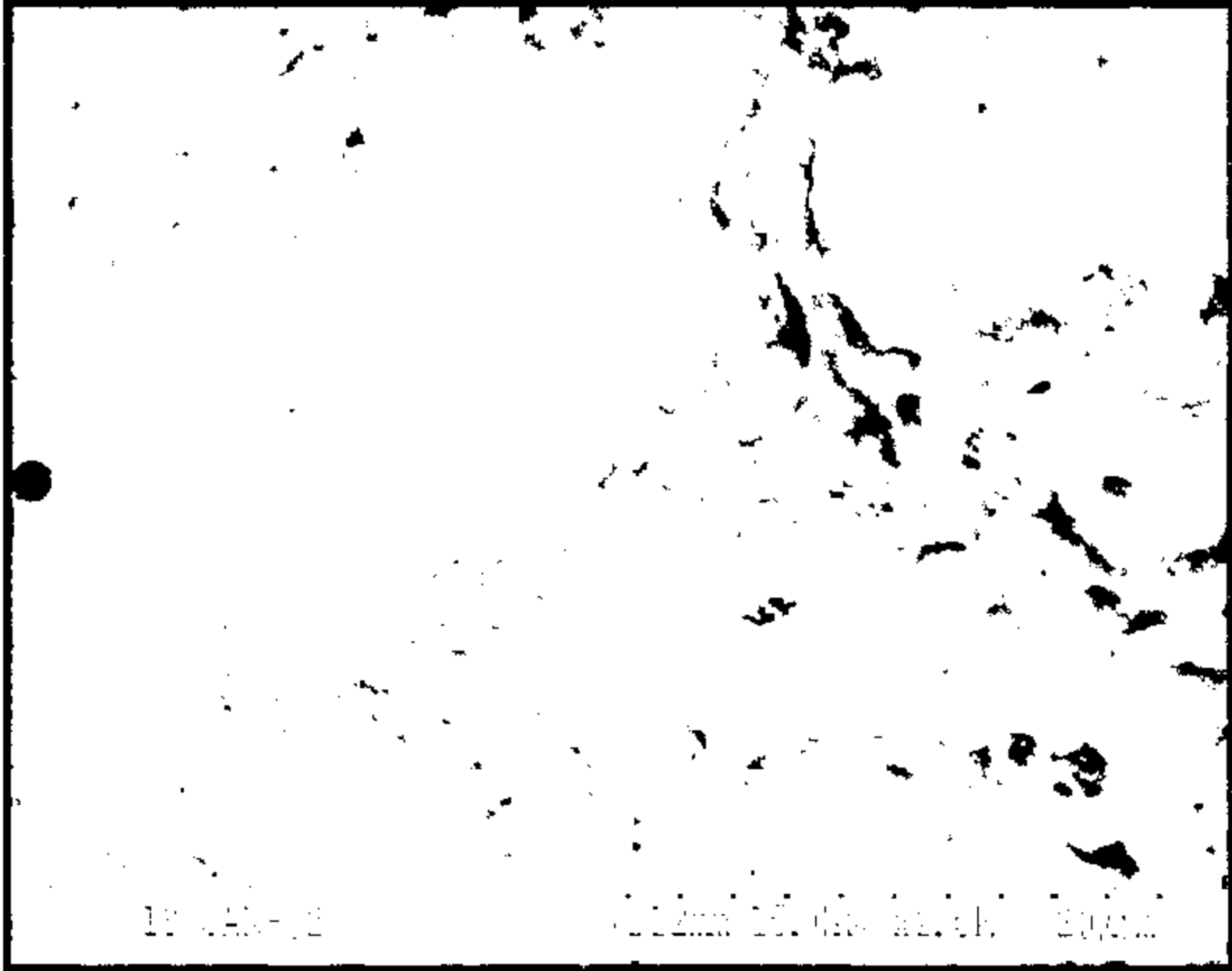
291 @ 2500

CL02-023-107



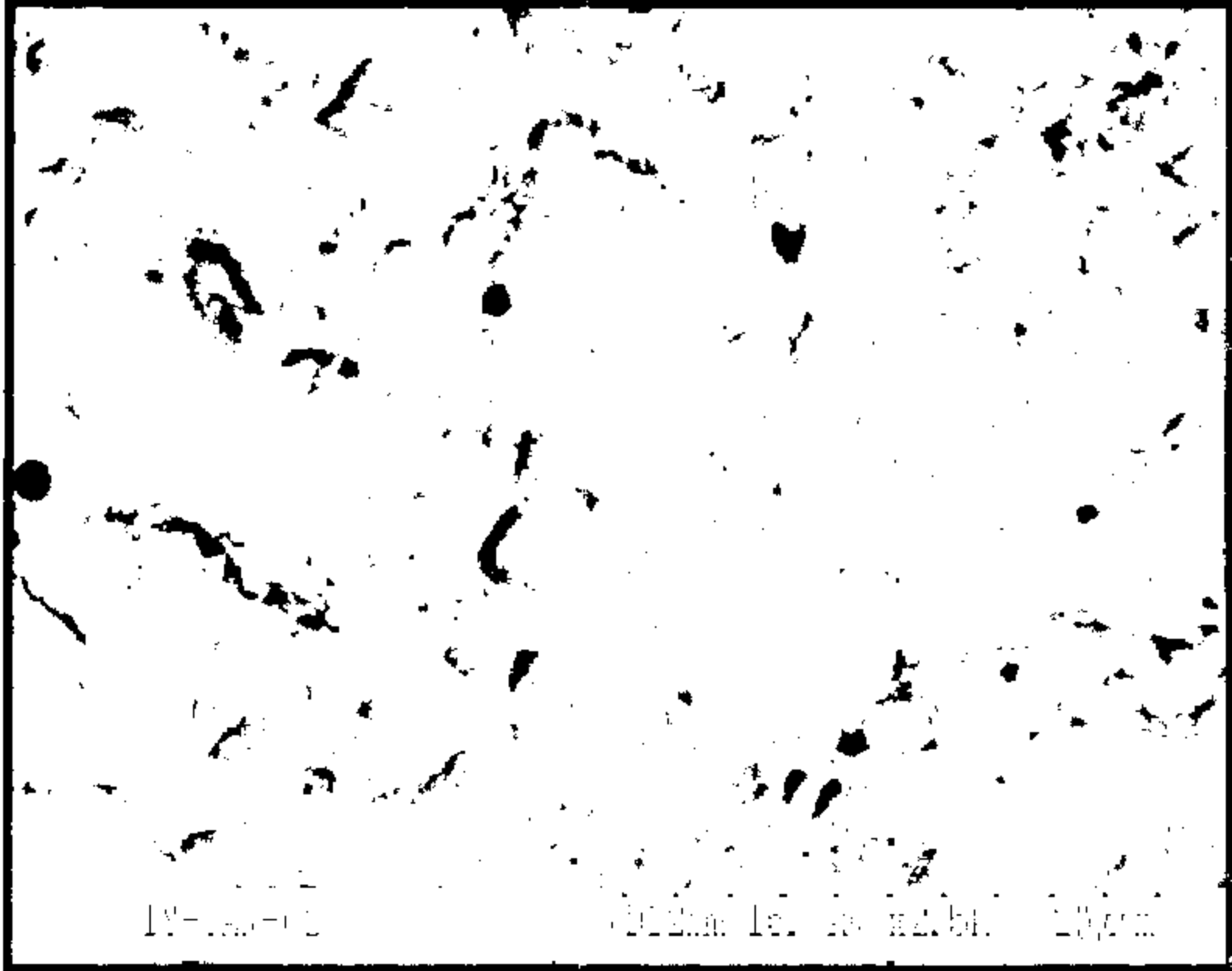
291 @ 2500x

CL02-023-108



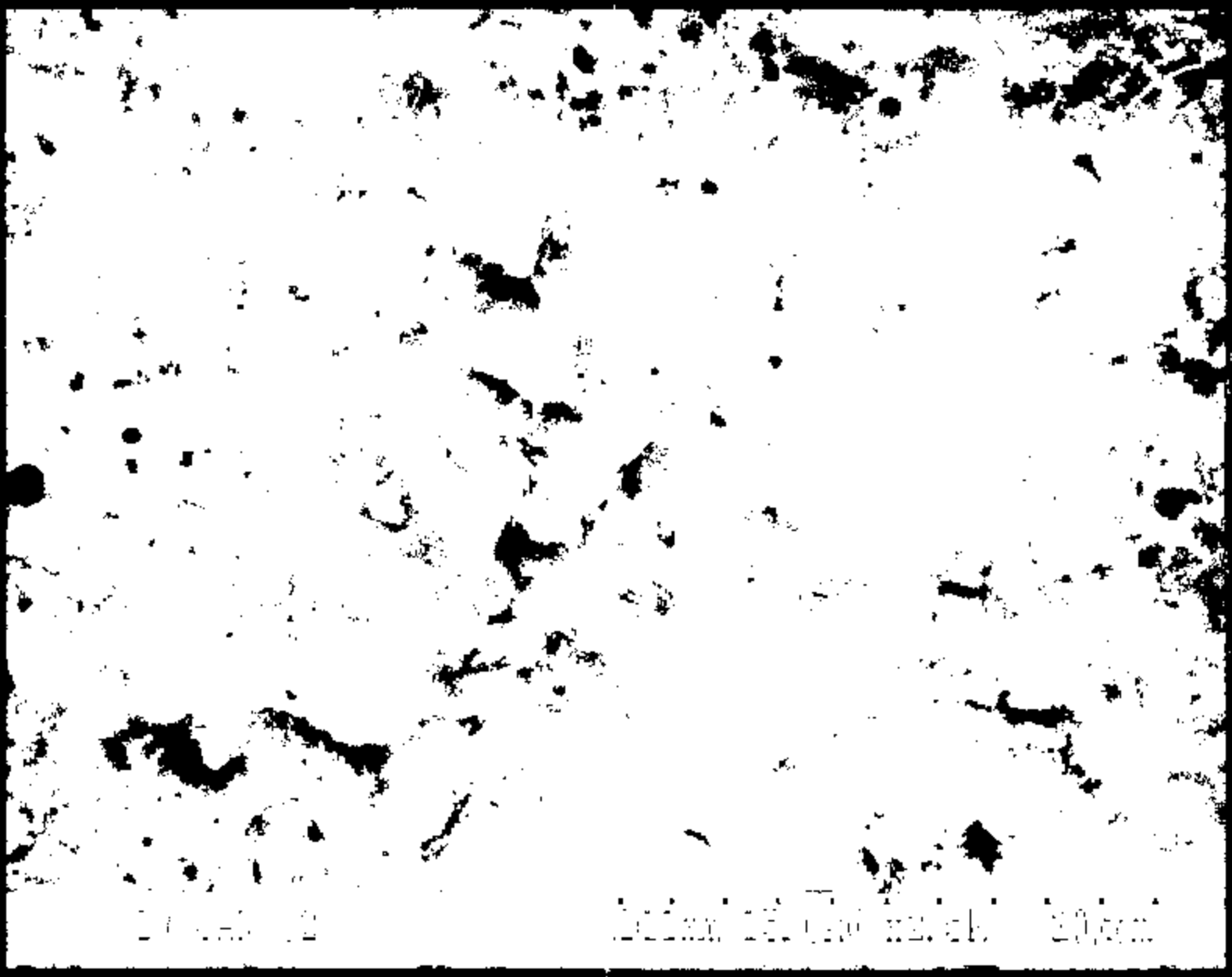
60 @ 2500

CL02-023-109



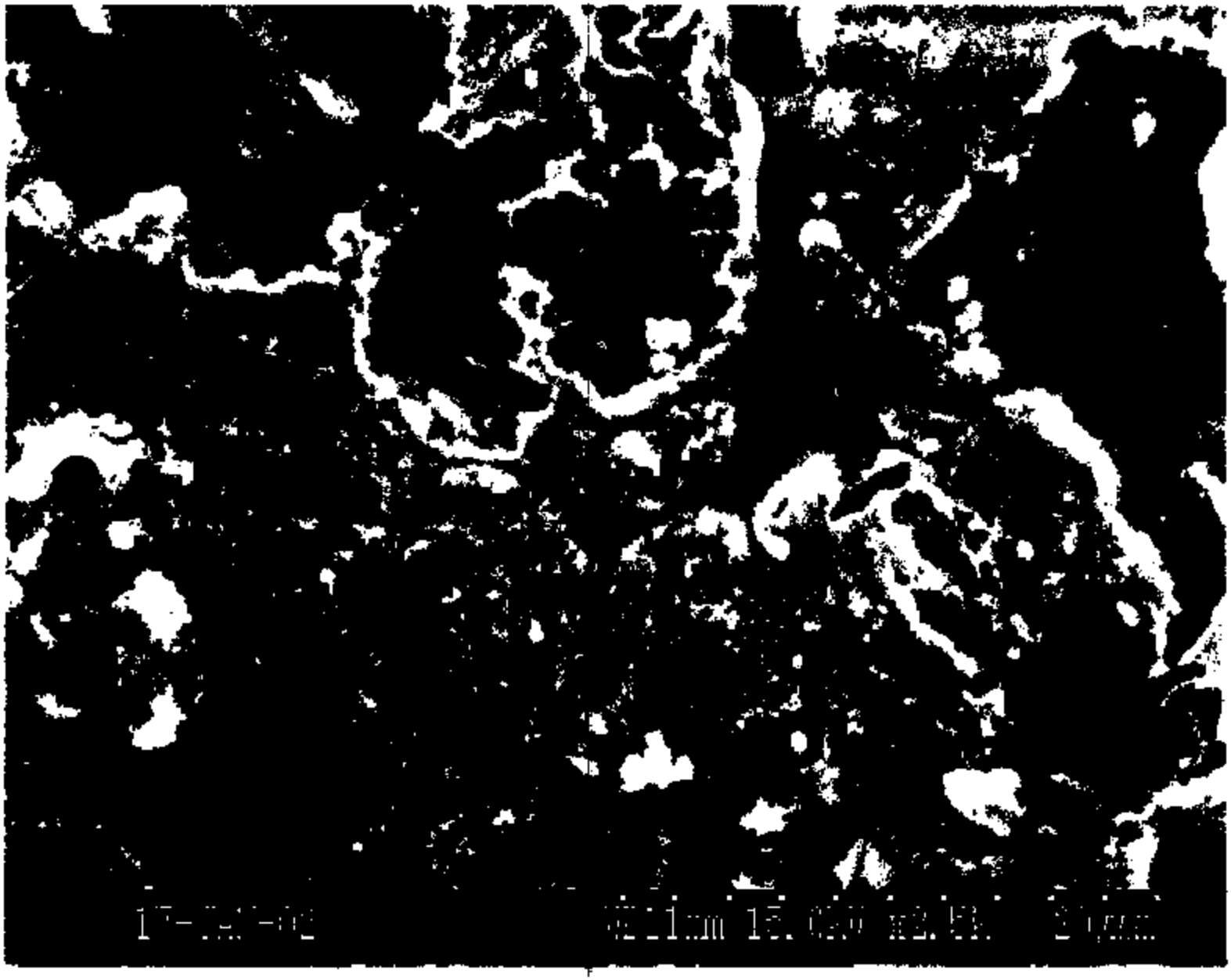
60 @ 2500X

CL02-023-110



624 @ 2500 x

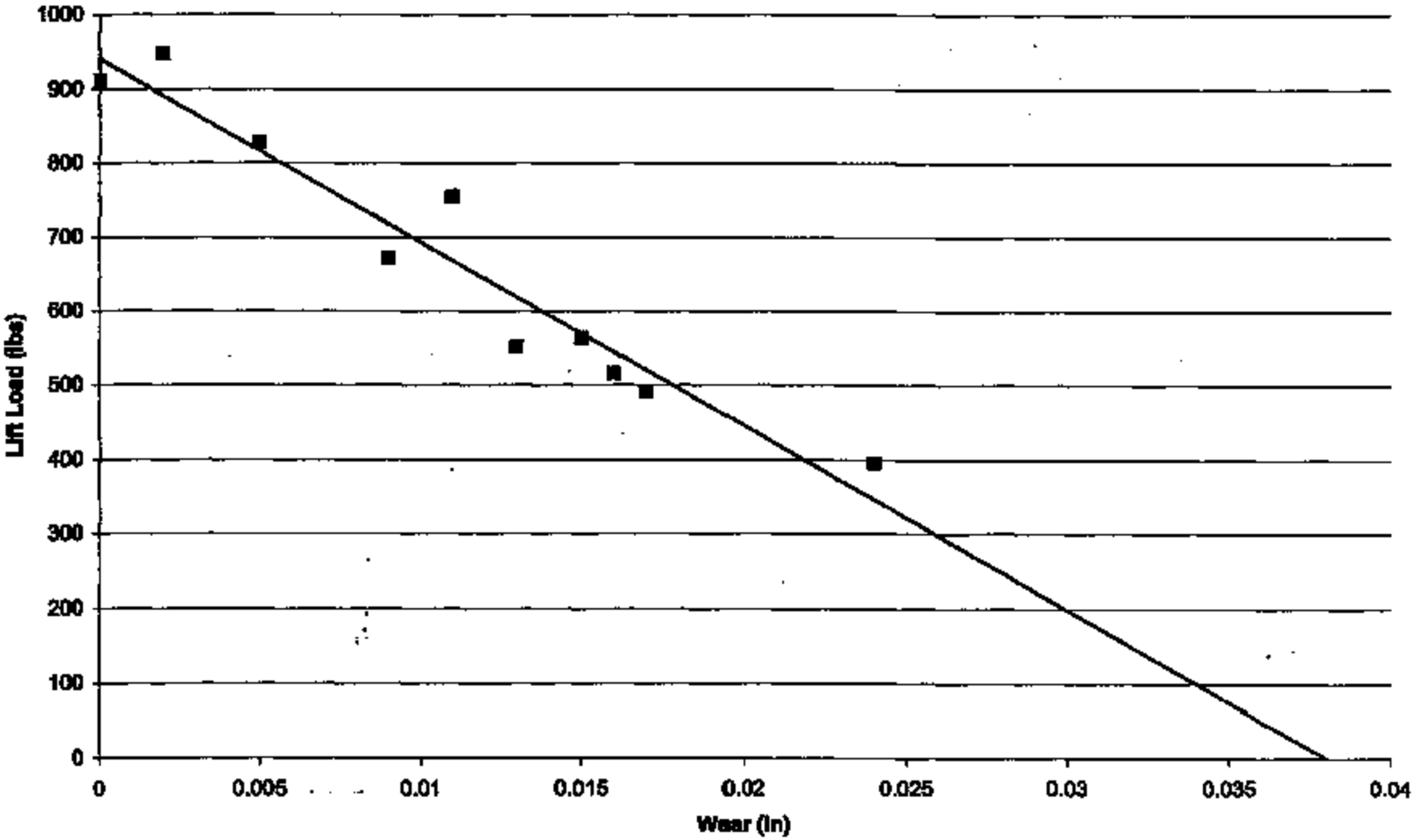
CL02-023-111



624 @ 2500 x

CL02-023-112

T-Truck Upper : Effects of Stud Shoulder Wear on Lift Loads
(Stud Machined on shoulder and built into assemblies to simulate wear)

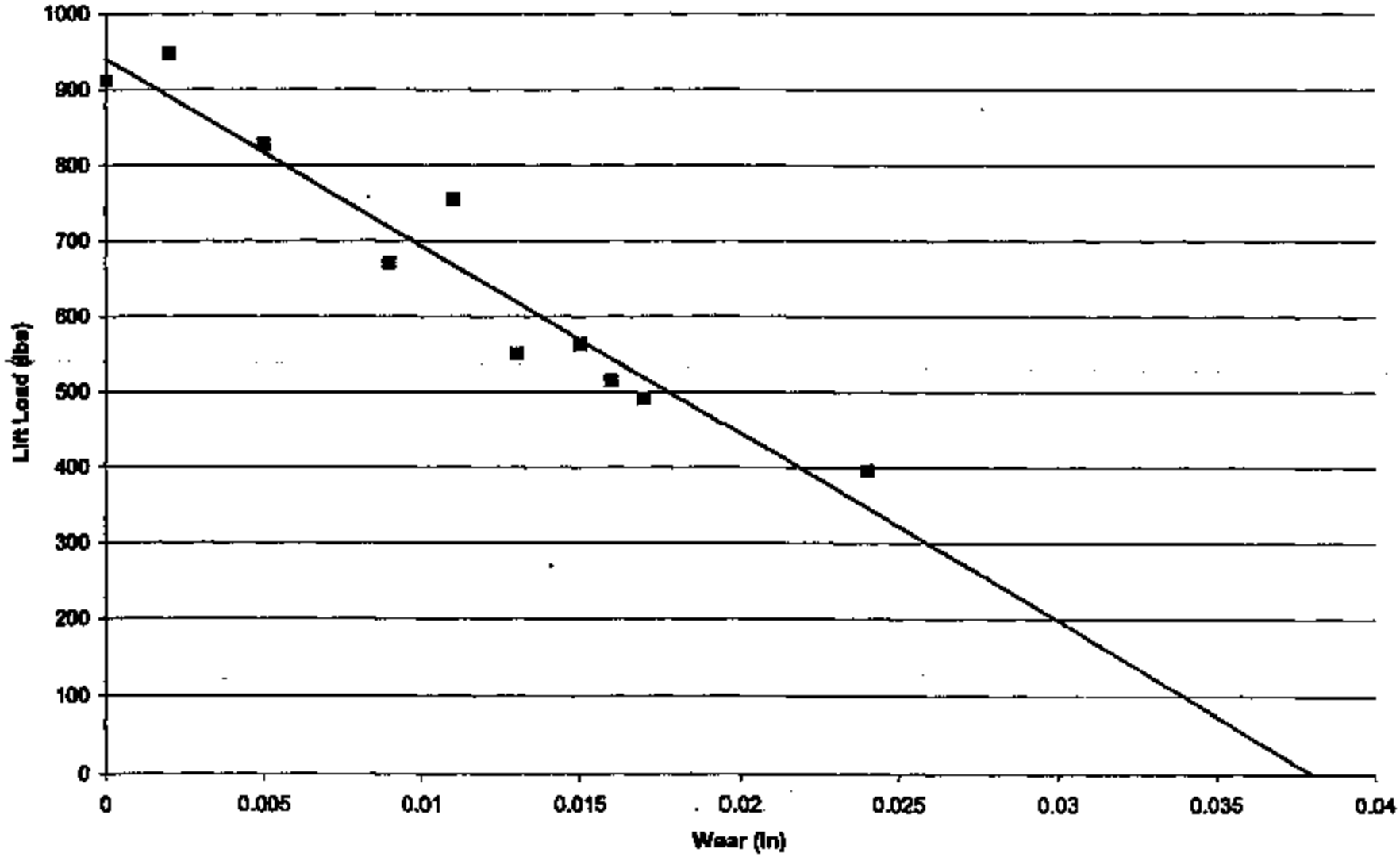


04/05/2001

machined shoulder lift loads.xls

CL02-023-031

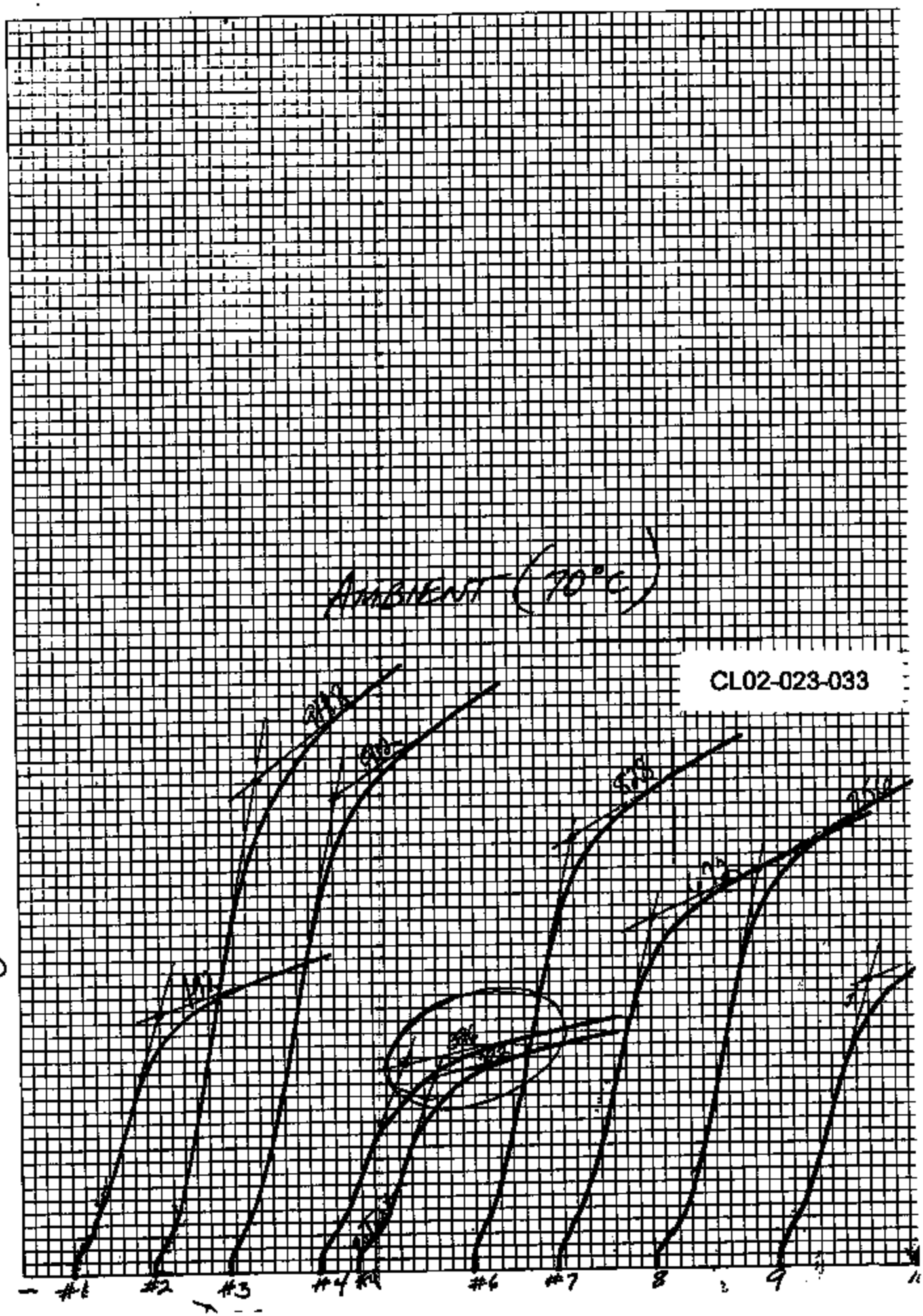
T-Truck Upper : Effects of Stud Shoulder Wear on Lift Loads



01/22/2001

machined shoulder lift loads.xls

CL02-023-032



47 0700
K+E 10 X 10 TO THE INCH • 10 X 15 INCHES KEUFFEL & ESSER CO. MADE IN U.S.A.

ENGINEERING WORK REQUEST 01-02-T143

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Expediter ☐ Vehicle Test ☒ Laboratory
☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Procurement ☐ Other
Due Date

Attention: ROB ROSS

PROJECT 11197.082
DEPT. NO. 583
DATE 30AUG01
CUSTOMER NATG
PLATFORM/YR T-TRK / 2002
VEHICLE NO. N/A

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

DESIGN

☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other
Due Date

QTY 2 Due Date 20SEP01
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
GP-11 Required ☐ Yes ☒ Waived
A/D/V Required ☐ Yes ☒ No
Specific Inspection ☐ Yes ☒ No
(List Details in REQUIREMENTS Section below)
Material Verification ☐ Yes ☒ No
Customer P.O. #
General Ledger Number:

☐ Validation ☒ Other
INFO ONLY

RETURN TO REQUESTOR

N/A

N/A

REQUIREMENTS

T195 - PRE AND POST DURABILITY LIFTLOADS
T429 - PRE AND POST DURABILITY TORQUES
~~ROAD SIMULATOR~~ - PRESET LOADS

BALL JOINTS HAVE NO GREASE

INSTRUCTIONS

RUN ~~ROAD SIMULATOR~~ SLAW UP/DOWN UNDER THE FOLLOWING CONDITIONS:

1) LATERAL SIDE LOAD - CYCLICAL (SINUSOIDAL) FROM 400 lb OUTBOARD TO 3600 lb INBOARD (FLAT SIDE OF SOCKET FLANGE) @ .33 Hz
2) AXIAL LOAD - CYCLICAL (SINUSOIDAL) ± 340 lb @ 0.33 Hz
3) FORE-AFT SIDE LOAD ± 300 lb SINUSOIDAL @ 0.25 Hz
4) ROTATION ± 15° @ 0.5 Hz
5) OSCILLATION ± 10° @ ~~2 Hz~~ CDE 30AUG01 1 Hz

RUN EACH PART 250,000 OSCILLATION CYCLES

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc 1-57 Phone # 8355
Authorized [signature] Date 30AUG01 FAX # 8342

Completed by R. Ross Date 12OCT01 Supervisor [signature] Date 10/12/01
Reviewed Date Reviewed (reliability/test eng.) Date

F202.1 Page 1 of 1 for EWR Revision: 12/15/98

CL02-023-223

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR 11197-082
Date 12 OCT 01
Technician R. Ross
Page 1 of 5

CALIBRATION INFORMATION

EQUIP. IDENT. NO. (ID)	DESCRIPTION	LAST CALIBRATION DATE	NEXT CALIBRATION DUE DATE
TM-371-2	T-467 – SLAW '2'	JUL 00	15 JUL 01
TM-388	INSTRON (LIFT-LOADS)	16 FEB 01	15 JAN 02
TM-196-6	TORQUE WRENCH (IN/LBS)	14 AUG 01	15 JAN 02

DM-2475 REV. 1/21/98

CL02-023-224

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR	11197 - 082
Date	12 OCT 01
Tech.	R. Ross
Page	2 of 5

Data Report Summary

Part Number	17980735	Part Description	GMTG T – TRK/2002
Number of Samples	2	Serial Number	PART# 1 & 2

Fixture(s)	Test Instruction(s)	Revision Date(s)
LF-4146	T-467 SLAW #2	19 MAY 89
LF-6522	T-429 MANUAL TQ TEST	21 OCT 76
LF-6554	T-195 LIFT LOADS	8 MAY 80
LF-6112		
LF-6640		
LF-6607		

Results, Observations, and Comments :

Test was run according to EWR.

Parts were manually rocked and rotated on the bench, their values logged , and the log sheets included in this report.

The load was applied to the top of the ball stud, on the Instron machine till a load of 4,500 N was reached.
A graph of the ball joint stud's range of movement was constructed during the lift-load test.

The graph of each ball joint range of movement was constructed and included in this report.
Post-test lift-loads and torques were not done due to ball-joint destruction.

Loads Applied were:

Lateral Side Load	+400 lbf.(Outboard) to -3600 lbf. (Inboard)		sinusoidal @ .33Hz
Axial Load	+340 lbf.	to - 340 lbf.	sinusoidal @ .33Hz
Rotation	+/- 15 deg. @ 0.5Hz		
Oscillation	+/- 10 deg. @ 1Hz		

Each part was to run 250,000 Oscillation cycles.

Part #1 ran for 500,000 oscillation cycles (slaw machine did not stop over weekend when part broke)
Part #2 ran for 62,922 oscillation cycles before cracking

Data Plots : See Page(s)
Photographs : See Page(s)

Reported By : Rob Ross Date : 12 OCT 01

DELPHI

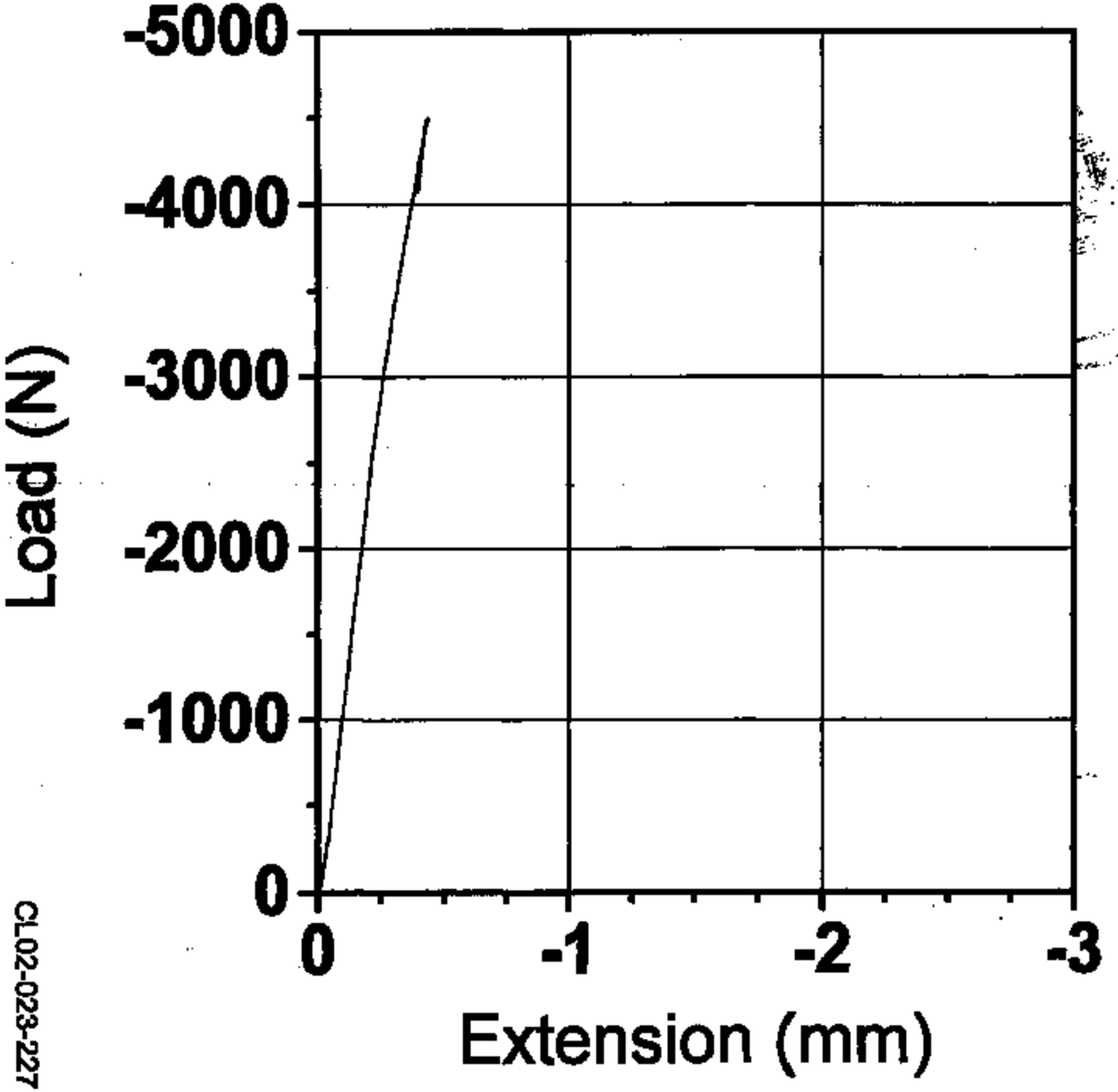
Chassis Systems

Project #: 11197-082
Test #: 01-02-T143
Date: 12 OCT 01
Tech: R. Ross
Page: 3 of 5

Manual Torque Data Log

Piece #	Rock Torque Measured (IN. LB.)	~~Rock Torque Actual (IN. LB.)~~	Rotate Torque (IN. LB.)	Observations
82-1	55		45	
82-2	75		75	

Liftl d #082-2 T-TRK Upr 11197 82 18 SEP 01 By: R. Ross



CL02-023-227

ENGINEERING WORK REQUEST 01-02-T145

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Expediter ☐ Vehicle Test ☒ Laboratory
☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Procurement ☐ Other
Due Date
Attention: Rob Ross

PROJECT 1197-083
DEPT. NO. 383
DATE 05SE01
CUSTOMER NATG
PLATFORM/YR T-TRK / 1996-2000
VEHICLE NO. Various

Product Name BALL JOINTS
Part number 17980735
Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other
Due Date

QTY 133 Ass. Due Date 14SE01
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
GP-11 Required ☐ Yes ☒ Waived
A/D/V Required ☐ Yes ☒ No
Specific Inspection ☐ Yes ☒ No
(List Details in REQUIREMENTS Section below)
Material Verification ☐ Yes ☒ No
Customer P.O. #
General Ledger Number:

☐ Validation ☒ Other
INFO ONLY

RETURN TO REQUESTOR

N/A

N/A

REQUIREMENTS

T195 - LIFT LOADS
T536 - RADIAL ELASTICITY
T429 - UNLOADED TORQUES

INSTRUCTIONS

T195 - LIFTLOADS UP TO 1200 lb
T536 - RADIAL ELASTICITY
T429 - UNLOADED ROTATING/OSCILLATING TORQUES
PC 656 THRU 665

PC 700 U THRU 826
EXCEPT 751,803

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by
Mail Loc V-57
Phone # 8333
Authorized
Date 05SE01
FAX # 8342
Completed by
Date 18SE01
Supervisor
Date
Reviewed
Date
Reviewed
Date
(reliability/test eng.)

F202.1 Page 1 of 1 for EWR - Revision: 12/15/98

CL02-023-222

20

ENGINEERING WORK REQUEST

308856

GENERAL INFORMATION

To: ☐ Design ☒ Model Shop ☐ Expediter ☐ Vehicle Test ☐ Laboratory

☐ Analysis ☐ Materials Engineering ☐ Instrumentation ☐ Procurement ☐ Other

Due Date 27SE01

RECEIVED 01 OCT -3 PM 3:07 HOME AVE MODEL SHOP

PROJECT 11197.084
DEPT. NO. 583
DATE 24SE01
CUSTOMER NATG
PLATFORM/YR T-TRK / 1996-2000
VEHICLE NO. VARIOUS

Attention:

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 2
Prints Supplied ☐ Production ☐ Experimental ☒ Marked ☐ Sketch ☐ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix

☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers

☐ Other

Due Date

QTY 2 Due Date 27SE01
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
GP-11 Required ☐ Yes ☒ Waived
A/D/V Required ☐ Yes ☒ No
Specific Inspection ☐ Yes ☒ No
(List Details in REQUIREMENTS Section below)
Material Verification ☐ Yes ☒ No
Customer P.O. # N.A.
General Ledger Number: H4V 946 10 1

INFO. ONLY

RETURN TO REQUESTOR.

N/A

N/A

REQUIREMENTS

RE-DRILL MOUNTING HOLES INTO SUPPLIED CONTROL ARMS PER ATTACHED PRINTS.

INSTRUCTIONS

CONTROL ARM "A"
DRILL 4EA. .265/.271 DIA. HOLES USING A 2.490 DIA. BOLT CIRCLE, AND AT A .885 FROM ℄

CONTROL ARM "B"
DRILL 4EA. .265/.271 DIA. HOLES USING A 2.490 DIA BOLT CIRCLE, AND A .850 FROM ℄.

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by Donald Adamson / Chuck Eitzer Mail Loc V-57 Phone # 8355
Authorized [signature] Date 9/24/01 FAX # 8342

Completed by [signature] Date 10.5.01 Supervisor M.C. Date 10.11.01
Reviewed Date Reviewed (reliability/test eng.) Date

F202.1 Page 1 of 1 for EWR Revision: 12/15/98

CL02-023-220

DELPHI

Chassis Systems

Project # :
Test # :
Date : 09 OC 01
Tech : D. Arcuro
Page : 1 of 1

Mount Bolt
TQ = 25N

Manual Torque Data Log

~~Piece~~ # Control Arm:	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
	SAMPLE #2 FROM EWR #11197-086			
FREE	85		55	
A	83		57	
B	88		60	
	SAMPLE #4 FROM E.W.R. #11197-086			
FREE	40		15	
A	30		5	
B	32		13	

CL02-023-221

#6

CONTROL ARM
STUDIES

CL02-023-002

DELPHI

Chassis Systems

Project # :
Test # :
Date : 24 SEP 01
Tech :
Page : of

Manual Torque Data Log

~~Plate~~ TEST #	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
1	65-70		50	NO TORQUE ON MOUNTING BOLTS.
2	75-80		50	EQUAL TQ ON ALL 4 BOLTS 100 IN LB +
3	70		45	WASHER BETWEEN BOLT #1
				& #2, PINCHED BETWEEN
				B/S & C/A.
4	70	THIN	45	MOVE WASHER TO BE-
		WASHER		TWEEN BOLT #1. & #4
				TQ = 100 IN LB +
5	65		50	MOVE WASHER TO BE-
				TWEEN #4 & #3
				TQ = 100 IN LB. +
6	70		47	MOVE WASHER TO BE-
				TWEEN BOLT # 2 & #3
				TQ = 100 IN. LB. +
7	70		50	WASHER BETWEEN BOLT #1
				& #2 TQ = V. HIGH
8	70	THICK	45	BOLT #1 & #4
		WASHER		
9	72		50	BETWEEN BOLT #3 & #4
				" "
10	70		43	" " #2 & #3
11	60		43	NO TQ ON MOUNTING
				BOLTS

CL02-023-036

B/J ID: 4R INITIAL INSTALL INTO C.A., 3 COMPLETE ROTATIONS + 3 ~ O.C.

Bolt/Nut	Torque (in-lb)		Rot (in-lb)	OC (in-lb)
1	0		39.4	75.9
2	0			
3	0			
4	0			
1	120	120.4	40.3	81.2
2	120	119.9		
3	120	120.0		
4	120	120.2		
1	120	120.4	37.5	84.3
2	150	149.8		
3	150	150.1		
4	120	120.2		
1	180	180.3	38.8	84.8
2	150	149.8		
3	150	150.1		
4	180	182.5		
1	120	120.3	39.1	70.7
2	224	225.2		
3	150	150.1		
4	210	210.2		
1	225	225.0	39.2	81.4
2	225	225.2		
3	225	225.7		
4	225	221.6		
1	0		37.9	77.3
2	0			
3	0			
4	0			
WASHER ADDED 1	225	225.4	39.2	85.9
2	225	224.8		
3	225	224.9		
4	225	225.7		
1	0		39.2	73.2
2	0			
3	0			
4	0			

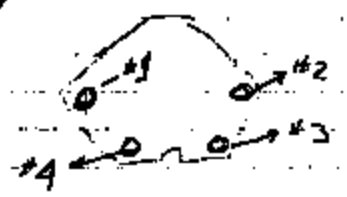
CL02-023-037

4/12/01

① B/J I.D. = 1 L, Loose

ROT	OC
40.8	88.7

② Install in to C.A., Bolted.



Bolt #	Torque	ROT	OC
1	120 in lb	54.7	112.1
2	"		
3	"		
4	"		
1	120	52.2	121.3
2	150		
3	150		
4	120		
1	180	50.9	121.0
2	150		
3	150		
4	180		
1	180	50.1	112.8
2	224		
3	150		
4	210		
1	224	47.4	104.8
2	224		
3	150		
4	210		
1	225.6	47.4	112.6
2	225.7		
3	225.1		
4	227.1		
1	ϕ	44.9	100.8
2	ϕ		
3	ϕ		
4	ϕ		
Washer Add 1	225 226.0	52.0	104.1
2	225 225.8		
3	225 224.3		
4	225 225.0		

Hand Tighten All 4, with washer, torque, unknown 50.8 108.6

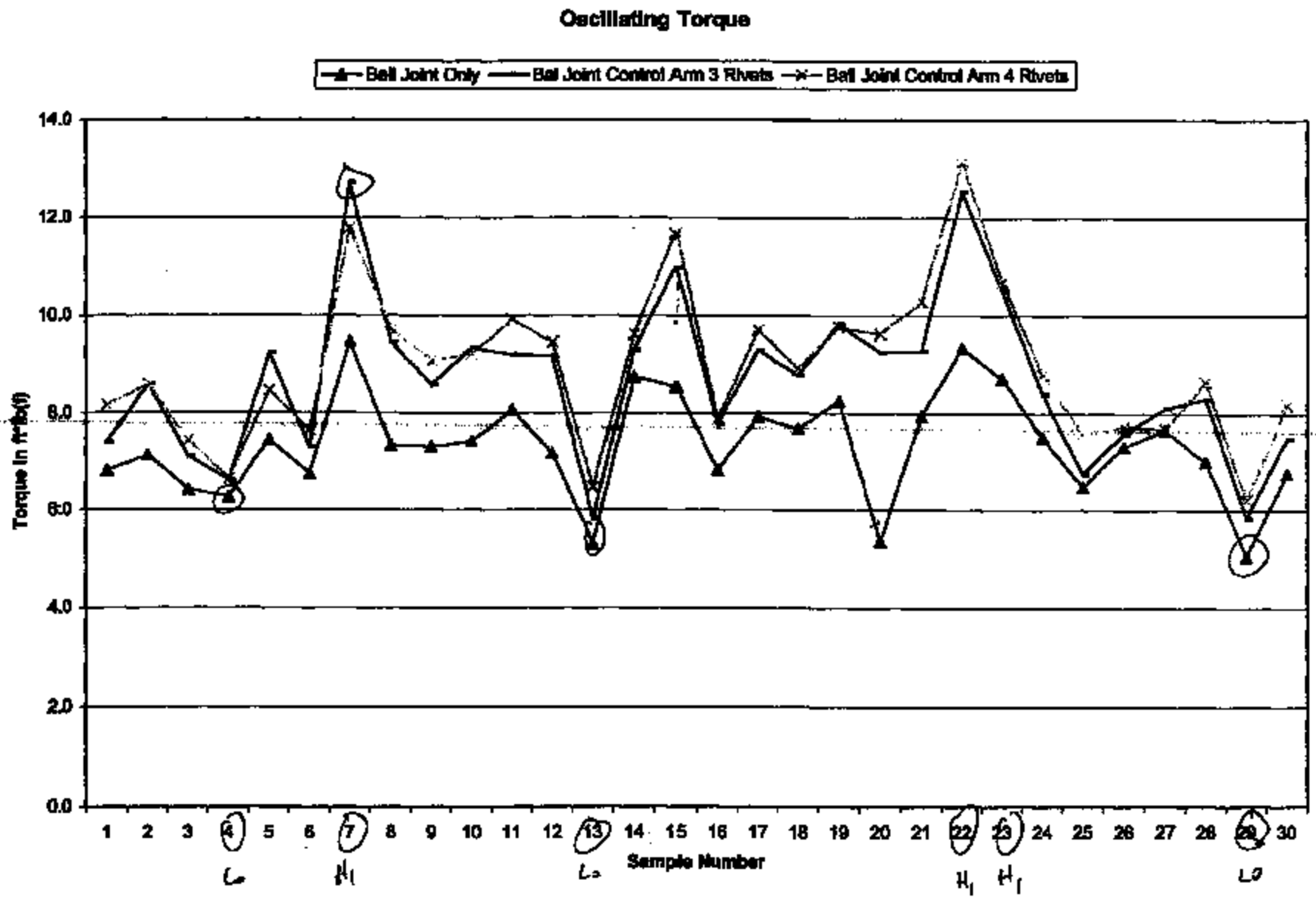
CL02-023-038

1/12/01

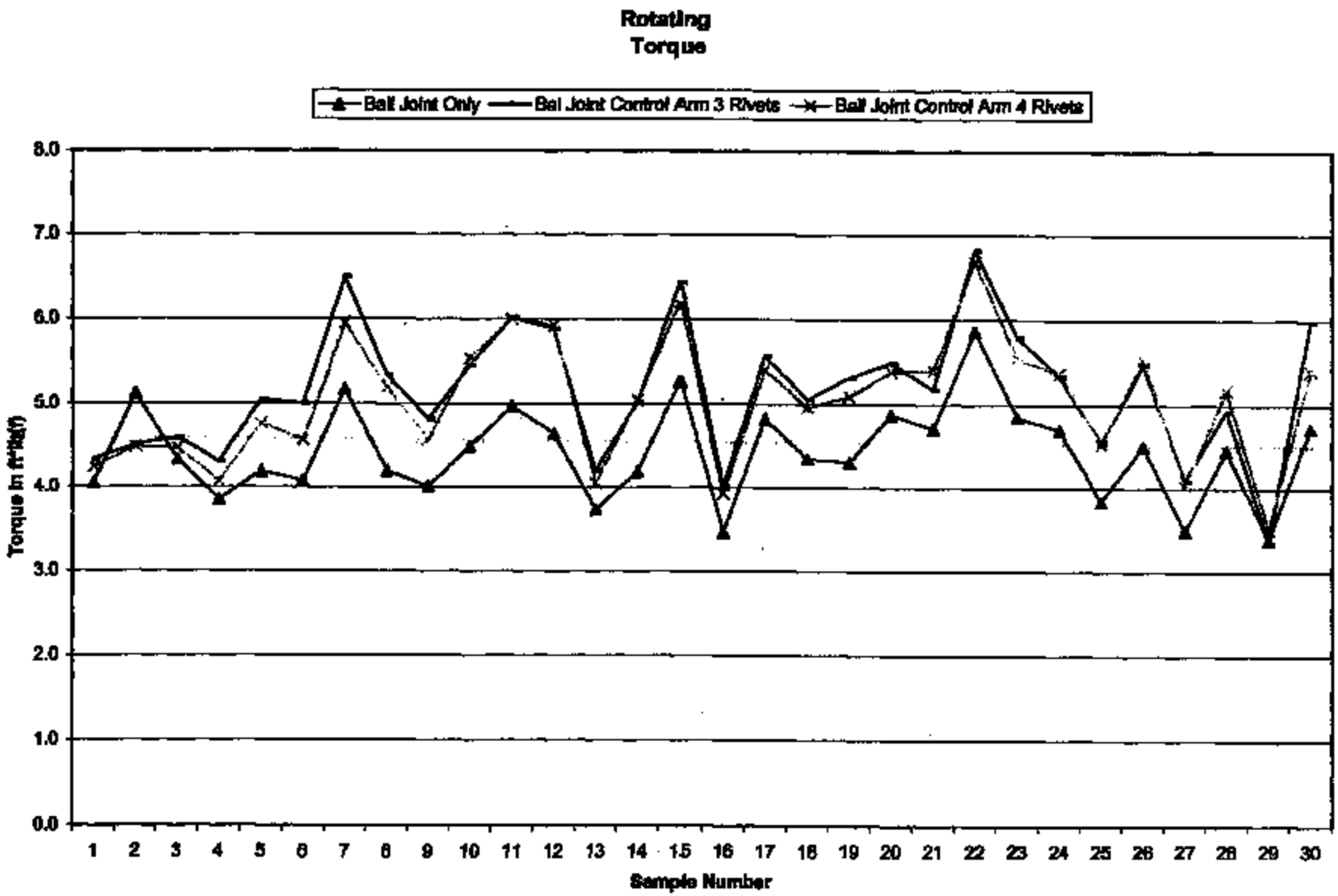
SAMPLE	TORQUE (IN.LB) TARGET	ACTUAL	ROT.	OC
2R1	120	122.0	59.1	127.1
	150	150.6	62.3	130.7
	180	180.7	58.8	116.2
	220	222.6	56.0	123.3
2R2	120	121.3	65.9	164.9
	150	151.9	69.3	159.4
	180	180.1	66.0	166.9
	220	224.7	62.9	173.2
2R3	120	121.3	44.0	107.5
	150	150.6	48.1	98.3
	180	181.8	40.8	95.3
	220	220.5	39.5	99.2
3R1	120	120.6	53.3	130.5
	150	150.1	53.3	109.4
	180	180.0	55.4	115.0
	220	223.4	53.6	118.8
3R2	120	122.6	50.9	133.4
	150	150.4	51.9	127.1
	180	181.0	52.3	117.2
	220	222.1	50.5	121.7
3R3	120	120.6	37.0	85.9
	150	151.2	37.7	84.8
	180	181.4	37.1	88.4
	220	221.4	39.1	89.6
8R1	120	121.4	89.4	223.7
	150	151.1	88.0	209.7
	180	180.3	91.7	219.1
	220	220.5	89.8	198.7
8R2	120	121.0	57.7	130.6
	150	150.4	51.6	129.1
	180	180.7	53.2	118.8
	220	219.9	51.5	116.1
8R3	120	120.9	84.5	170.4
	150	151.6	85.9	184.2
	180	180.7	85.5	194.6
	220	220.9	75.2	182.5

	Ball Joint Before Riveting to Control Arm Osc in*lb(f	Rot in*lb(f)	Ball Joint In Control Arm with 3 Rivets Osc	Rot
One Blue Mark Top 2R1	71.5	42.2	138.0	53.1
Two Blue Marks Side 2R2	103.5	50.9	164.1	65.2
One Blue Mark - Left 2R3	68.4	34	103.4	39.5
One Blue Mark Top 3R1	76.6	38.8	124.1	50.5
Two Blue Marks Side 3R2	99.3	44	136.0	56.0
One Blue Mark - Left 3R3	61.1	31.3	92.9	35.9
One Blue Mark Top 8R1	127.2	65.1	209.1	80.2
Two Blue Marks Side 8R2	75	41	123.1	49.3
One Blue Mark - Left 8R3	109.6	54.3	180.9	69.2

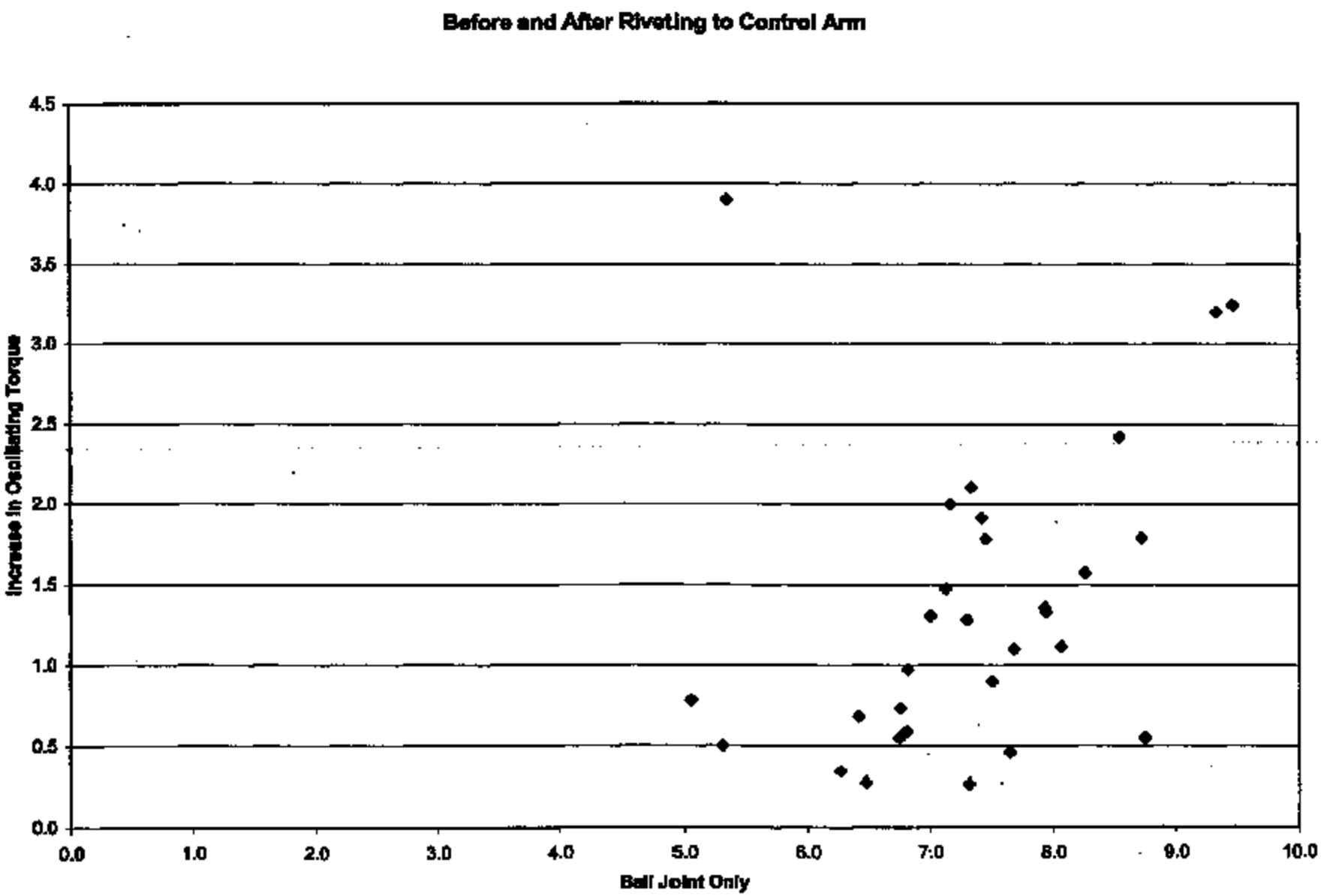
SPEC: OSC = 2.5 — 13 Lbs Ft 30 → 136
ROT = 2.0 — 7.0 " " 24 → 84


Oscillating Torque
Ball Joint Only
Ball Joint Control Arm 3 Rivets
Ball Joint Control Arm 4 Rivets
Torque in ft*lb(f)
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Sample Number
Lo
Hi
Lo
Hi
Hi
Lo

CL02-023-041


Rotating
Torque
Ball Joint Only
Ball Joint Control Arm 3 Rivets
Ball Joint Control Arm 4 Rivets
Torque in ft*lb(f)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Sample Number

CL02-023-042


Before and After Riveting to Control Arm
Increase in Oscillating Torque
Ball Joint Only
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0

CL02-023-043

Ball Joint in Control Arm with 3 rivets

	Osc in*/lb(f	Rot in*lb(f)
13	73.1	47.9
29	72	37.7
22	153.5	78.4
4	81.2	49.1
7	132.4	72.4
23	124.8	67.2

CHECK HIGH WEAR/SEP'S FOR #RIVE

4 rivets

	Ball Joint Before Riveting to Control Arm				Ball Joint In Control Arm with 3 Rivets				
	Osc in*/lb(f	Rot in	Osc ft*/lb(f	Rot ft*lb(f)	Osc in*/lb(f	Rot in	Osc ft*/lb(f	OSC.	ROT
1	81.7	48.6	6.8	4.1	86.8	52	7.4		
2	85.5	61.4	7.1	5.1	103.2	54	8.6		
3	77	51.9	6.4	4.3	86.2	55.1	7.1		
4	75.2	46.2	6.3	3.9	79.3	51.6	6.6	93.9	4.6
5	89.4	50.2	7.5	4.2	110.8	60.6	9.2		
6	81	48.9	6.8	4.1	87.6	60	7.3		
7	113.6	62.1	9.5	5.2	152.5	78.1	12.7	172.2	62.4
8	88	50.3	7.3	4.2	113.3	64.1	9.4		
9	87.6	48.1	7.3	4.0	103	57.8	8.6		
10	89	53.8	7.4	4.6	112	65.5	9.3		
11	96.8	59.6	8.1	5.0	110.2	72.2	9.2		
12	86	55.7	7.2	4.6	110	70.6	9.2		
13	63.7	44.6	5.3	3.7	69.7	50.3	5.8	89.9	43.6
14	105	50.2	8.8	4.2	111.6	60.3	9.3		
15	102.5	63.2	8.5	5.3	131.6	77.3	11.0		
16	81.6	41.6	6.8	3.5	93.5	48.2	7.8		
17	95.2	57.9	7.9	4.8	111.5	66.8	9.3		
18	92.2	52.1	7.7	4.3	105.4	60.7	8.8		
19	99.1	51.6	8.3	4.3	118	63.8	9.8		
20	64.2	58.5	5.4	4.9	111	65.9	9.3		
21	95.3	56.5	7.9	4.7	111.3	62.1	9.3		
22	112	70.4	9.3	5.9	150.4	81.9	12.5	185.9	74.1
23	104.6	58.2	8.7	4.9	126.1	69.6	10.5	139.9	58.4
24	90.1	56.4	7.5	4.7	100.9	64.1	8.4		
25	77.7	46.1	6.5	3.8	81	54.5	6.8		
26	87.8	54	7.3	4.5	91	65.8	7.6		
27	91.8	41.9	7.7	3.5	97.3	49.1	8.1		
28	84	53.4	7.0	4.5	99.7	59.2	8.3		
29	60.6	40.6	5.1	3.4	70	40.3	5.8	88.4	38.1
30	81.1	56.6	6.6	4.7	89.9	71.8	7.5		

			Ball Joint In Control Arm with 4 Rivets			
Rot ft*lb(f)	Change In	Change In Rot ft*lb(f)	Osc in*/lb(f	Rot In Osc ft*/lb(f	Rot ft*lb(f)	
4.3	0.6	0.3	98	50.9	8.2	4.2
4.5	1.5	-0.6	103	53.7	8.6	4.5
4.6	0.7	0.3	89.2	53.5	7.4	4.5
4.3	0.3	0.5	79.7	48.8	6.6	4.1
5.1	1.8	0.9	101.6	57.1	8.5	4.8
5.0	0.6	0.9	91.9	54.7	7.7	4.6
6.5	3.2	1.3	141.4	71.4	11.8	6.0
5.3	2.1	1.2	116.5	62.3	9.7	5.2
4.8	1.3	0.8	108.8	54.8	9.1	4.6
5.5	1.9	1.0	110.5	66.5	9.2	5.5
6.0	1.1	1.1	119	72	9.9	6.0
6.9	2.0	1.2	113.4	71.1	9.5	5.9
4.2	0.5	0.5	77.6	48.8	6.5	4.1
5.0	0.5	0.8	115.5	60.6	9.6	5.1
6.4	2.4	1.2	140.1	74.3	11.7	6.2
4.0	1.0	0.6	94.6	47.1	7.9	3.9
5.6	1.4	0.7	116.5	64.9	9.7	5.4
5.1	1.1	0.7	107	59.5	8.9	5.0
5.3	1.6	1.0	117.2	61.1	9.8	5.1
5.5	3.9	0.6	115.5	64.7	9.6	5.4
5.2	1.3	0.5	123.3	64.8	10.3	5.4
6.8	3.2	1.0	157.7	80.3	13.1	6.7
5.8	1.8	0.9	128.2	66.5	10.7	5.5
5.3	0.9	0.6	105.6	64.5	8.8	5.4
4.5	0.3	0.7	91.1	54.3	7.6	4.5
5.5	0.3	1.0	92.8	66.5	7.7	5.5
4.1	0.5	0.6	92.3	48.3	7.7	4.0
4.9	1.3	0.5	103.9	62.1	8.7	5.2
3.4	0.8	0.0	74.6	42.2	6.2	3.5
6.0	0.7	1.3	98.2	64.8	8.2	5.4

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Automotive Systems

Memo From:

John Ellerman
Sr. Statistical Engineer
(937)455-3163
Fax (937)455-3286
John.f.ellerman@delphiauto.com
M/C F4-4

Date: August 31, 2001

To: Chuck Eifert 5-8342 FAX

Subject: T-Truck Multi-Vari information to Dennis Mouser

Chuck:

This is the information from the Multi-Vari that I think we should sent to Dennis Mouser. Look it over. Should we info Mike McKale we are sending.

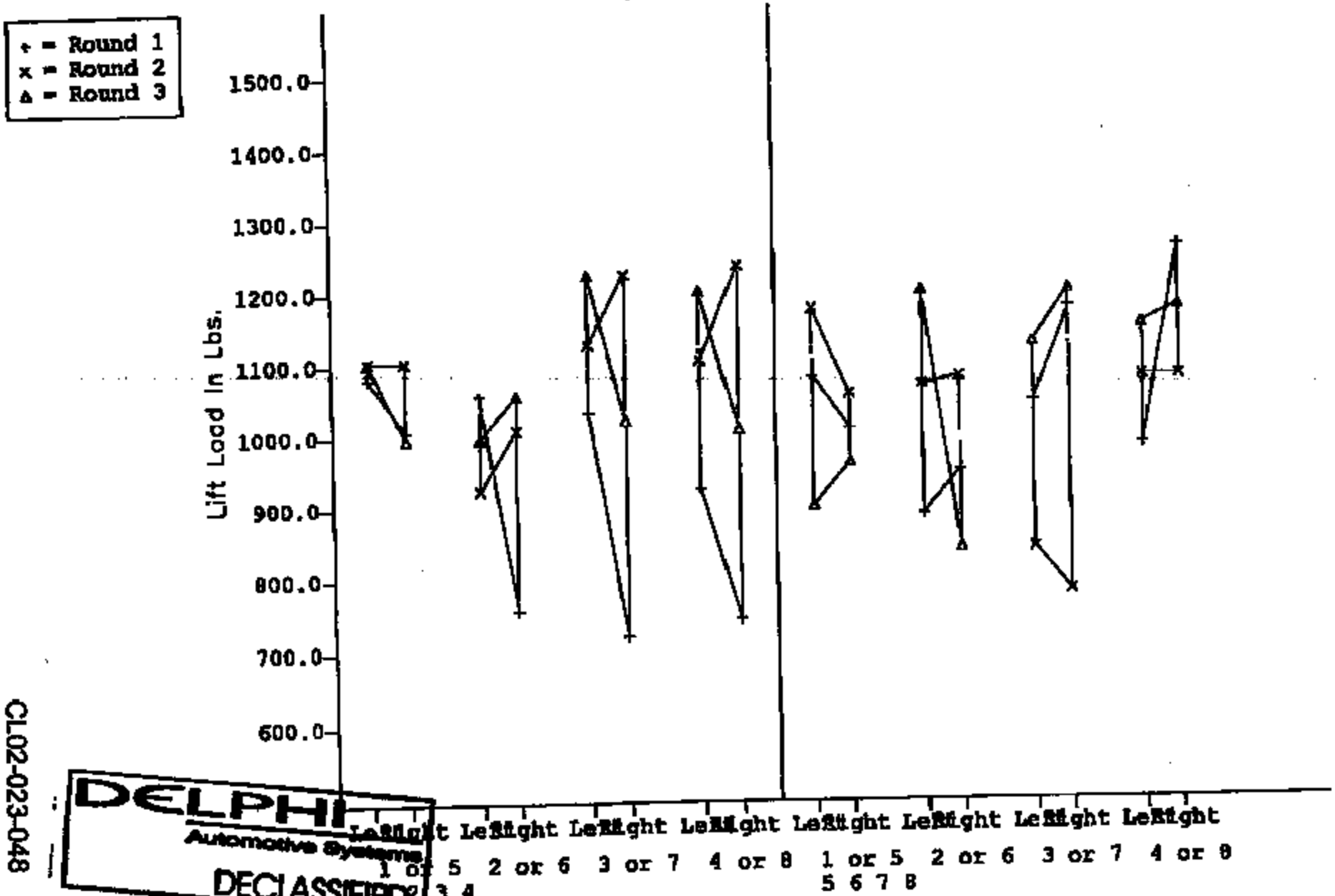
Thanks

This plus 8 pages

DELPHI Automotive Systems

Page 1

T Truck Ball Joint
Lift Load Multi Vari
8/29/01



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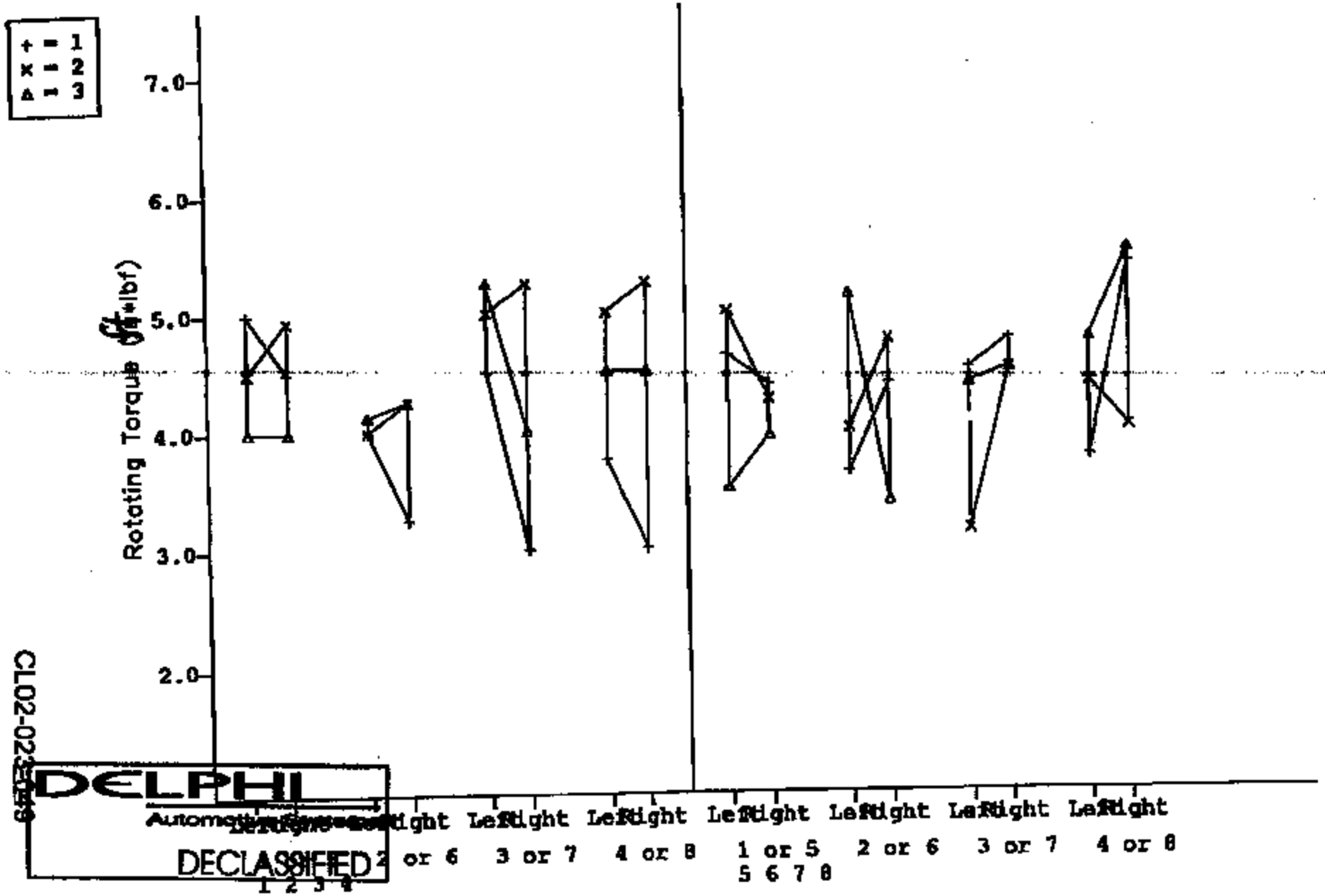
Page 1

T Truck Ball Joint
Rotating Torque Multi Vari
8/29/01



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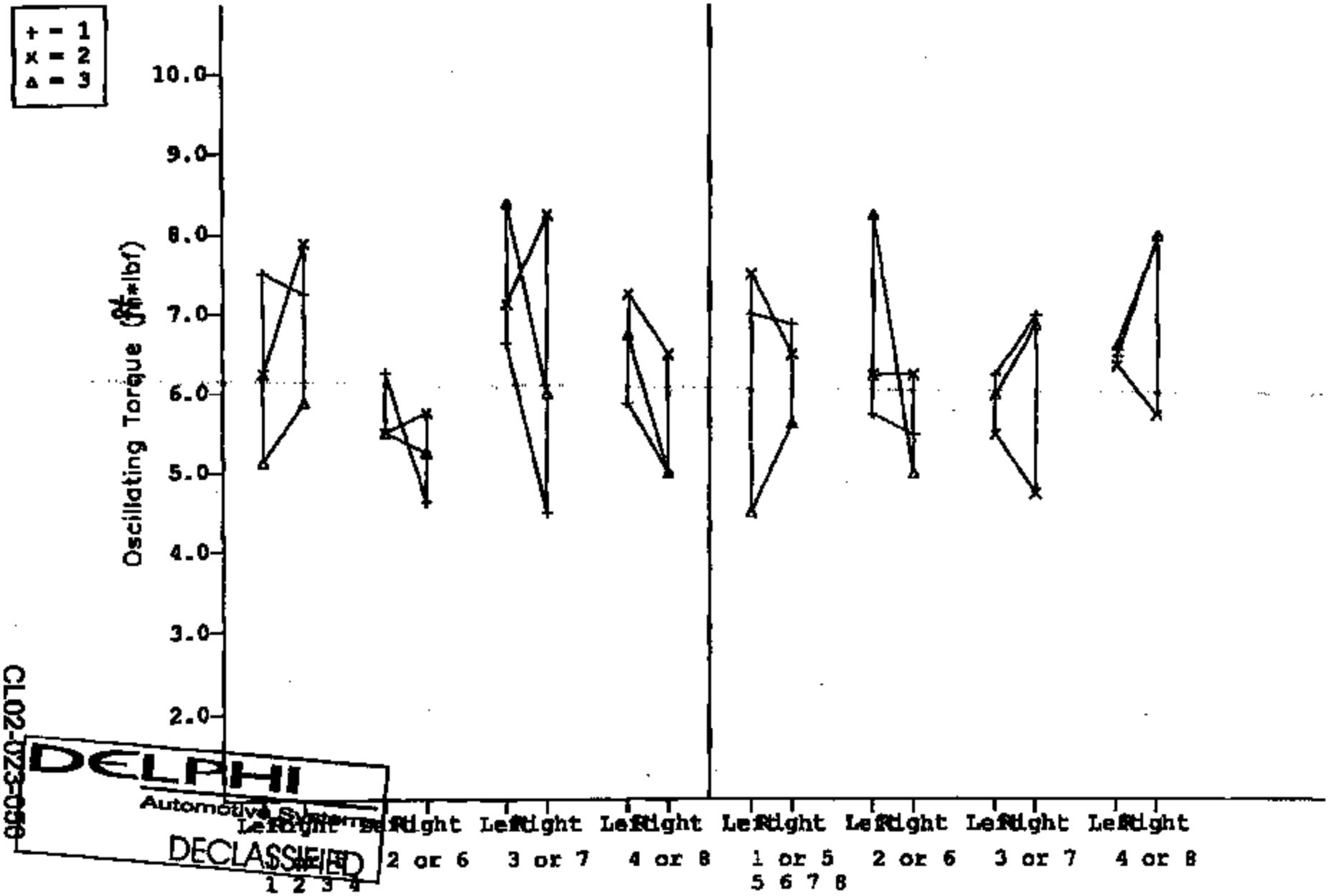
T Truck Ball Joint
Oscillating Torque Multi Vari
8/29/01



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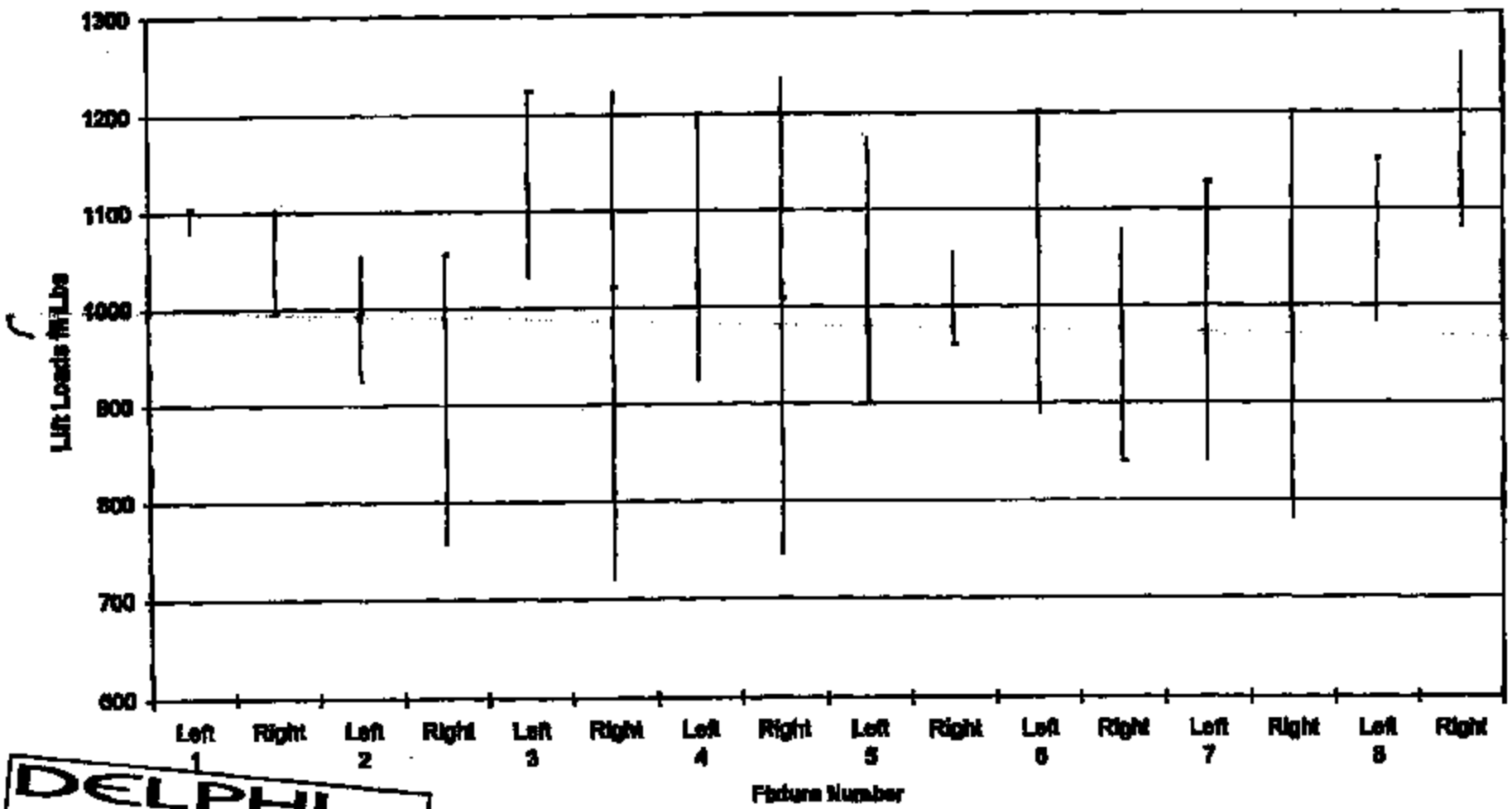
Lift Loads

Samples Taken From Production 8-24-01
Samples Tested In Vandalia Week of 8-27-01



Round 1 2 - 3

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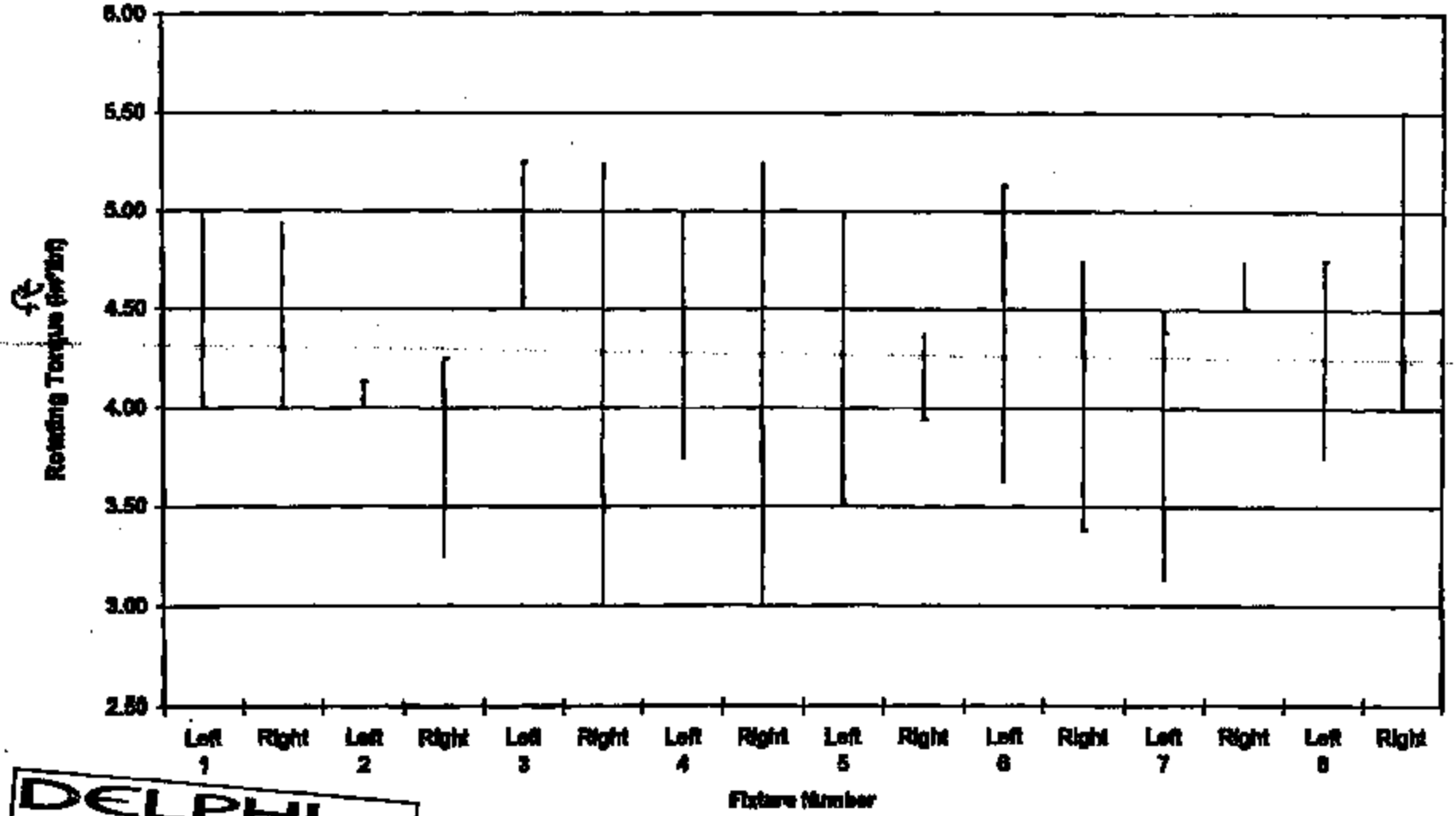
Rotating Torque

Samples Taken From Production 8-24-01
Samples Tested in Vandalia Week of 8-27-01



Round 1 2 - 3

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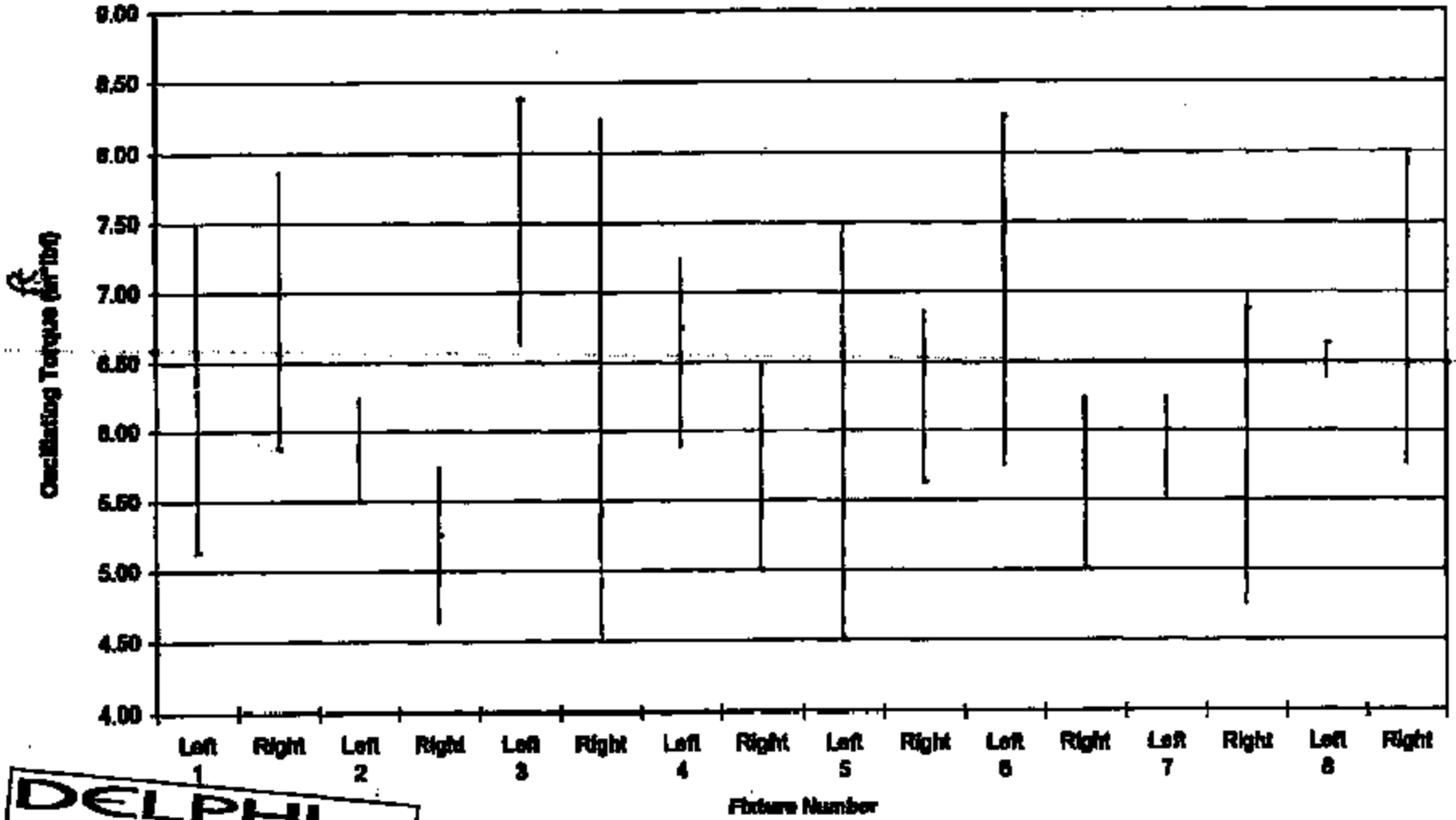
Oscillating Torque

Samples Taken From Production 8-24-01
Samples Tested in Vandalia Week of 8-27-01



Round 1 2 - 3

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CL02-023-053

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T-Truck Upper Ball Joints - Lift Loads, Oscillating Torques and Rotating Torques

Average of Lift Load		Round			
Fixture	L/R	1	2	3	Grand Total
1	Left	1060	1104	1104	1096
	Right	1008	1104	996	1036
2	Left	1056	924	996	992
	Right	756	1008	1056	940
3	Left	1032	1128	1224	1128
	Right	720	1224	1020	988
4	Left	924	1104	1200	1076
	Right	744	1236	1008	996
5	Left	1080	1176	900	1052
	Right	1008	1056	960	1008
6	Left	888	1056	1200	1052
	Right	948	1080	840	956
7	Left	1044	840	1128	1004
	Right	1176	780	1200	1052
8	Left	864	1080	1152	1072
	Right	1260	1080	1176	1172
Grand Total		951.8	1052	1073	1036.76

Highest Average
Fixture 8 Right
1172

Lowest Average
Fixture 2 Right
940

Largest Range
Fixture 3 Right
504

Average of Oscillating		Round			
Fixture	L/R	1	2	3	Grand Total
1	Left	7.50	8.25	5.13	6.29
	Right	7.25	7.66	6.88	7.00
2	Left	6.25	5.50	5.50	5.75
	Right	4.63	5.75	5.25	5.21
3	Left	6.65	7.13	6.38	7.38
	Right	4.50	8.25	6.00	6.25
4	Left	6.65	7.25	6.75	6.63
	Right	5.00	5.50	5.00	5.50
5	Left	7.00	7.50	4.50	6.33
	Right	6.65	6.50	5.63	6.34
6	Left	5.75	8.25	6.25	6.75
	Right	5.50	8.25	6.00	6.50
7	Left	6.25	5.50	6.00	5.92
	Right	7.00	4.75	6.88	6.21
8	Left	6.50	6.38	6.88	6.58
	Right	8.00	5.75	8.00	7.25
Grand Total		6.25	6.48	6.17	6.31

Highest Average
Fixture 3 Left
7.38

Lowest Average
Fixture 2 Right
5.21

Largest Range
Fixture 3 Right
3.75

Average of Rotating		Round			
Fixture	L/R	1	2	3	Grand Total
1	Left	5.00	4.50	4.00	4.69
	Right	4.50	4.94	4.00	4.48
2	Left	4.00	4.00	4.13	4.08
	Right	3.25	4.25	4.25	3.92
3	Left	4.50	5.00	5.25	4.98
	Right	3.00	5.25	4.00	4.08
4	Left	3.75	5.00	4.50	4.42
	Right	3.00	5.25	4.50	4.25
5	Left	4.63	5.00	3.50	4.38
	Right	4.38	4.25	3.94	4.19
6	Left	3.63	4.00	5.13	4.25
	Right	4.38	4.75	3.38	4.17
7	Left	4.50	3.13	4.38	4.00
	Right	4.75	4.50	4.50	4.58
8	Left	3.75	4.38	4.75	4.29
	Right	5.00	4.00	5.00	4.60
Grand Total		4.16	4.51	4.36	4.34

Highest Average
Fixture 8 Left
4.98

Lowest Average
Fixture 2 Right
3.92

Largest Range
Fixture 3 Right
2.26

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Prepared BY John Ellerman

08/31/2001

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Round	Fixture	L/R	Lift Load	Oscillating	Rotating torque (in*lbf) ft
1		1 Right	1008	7.25	4.50
1		1 Left	1080	7.50	5.00
1		2 Right	756	4.63	3.25
1		2 Left	1056	6.25	4.00
1		3 Right	720	4.50	3.00
1		3 Left	1032	6.63	4.50
1		4 Right	744	6.00	3.00
1		4 Left	924	5.88	3.75
1		5 Right	1008	6.88	4.38
1		5 Left	1080	7.00	4.63
1		6 Right	948	5.50	4.38
1		6 Left	888	5.75	3.63
1		7 Right	1176	7.00	4.75
1		7 Left	1044	6.25	4.50
1		8 Right	1260	8.00	5.38
1		8 Left	984	6.50	3.75
2		1 Right	1104	7.88	4.94
2		1 Left	1104	6.25	4.50
2		2 Right	1008	5.75	4.29
2		2 Left	924	5.50	4.00
2		3 Right	1224	8.25	5.25
2		3 Left	1128	7.13	5.00
2		4 Right	1236	8.50	5.25
2		4 Left	1104	7.25	5.00
2		5 Right	1056	6.50	4.25
2		5 Left	1176	7.50	5.00
2		6 Right	1080	6.25	4.75
2		6 Left	1068	6.25	4.00
2		7 Right	780	5.75	4.50
2		7 Left	840	5.50	3.13
2		8 Right	1080	5.75	4.00
2		8 Left	1080	6.38	4.38
3		1 Right	996	6.88	4.00
3		1 Left	1104	6.13	4.00
3		2 Right	1056	6.25	4.25
3		2 Left	996	5.50	4.13
3		3 Right	1020	6.00	4.00
3		3 Left	1224	6.38	5.25
3		4 Right	1008	6.00	4.50
3		4 Left	1200	6.75	4.50
3		5 Right	960	5.63	3.94
3		5 Left	900	4.50	3.50
3		6 Right	840	5.00	3.38
3		6 Left	1200	6.25	5.13
3		7 Right	1200	6.88	4.50
3		7 Left	1128	6.00	4.38
3		8 Right	1176	6.00	5.50
3		8 Left	1152	6.63	4.75

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CL02-023-055

DELPHI
Chassis Systems

Delphi Chassis Systems
Home Ave/Vandalia Operations
2701 Home Avenue
Post Office Box 1224
Dayton, Ohio 45401-1224

Area Code 937

TELEFAX

DATE: 9/5/01	Pages (including cover): 10
ATTENTION: MIKE McKALE	FROM: Chuck Elfert Delphi Chassis Systems 480 North Dixie Hwy. Vandalia, Ohio 45377
Telephone No.	Telephone No. 937-455-8355 or GM 8-275-8355
Telefax No. 248-813-3445	Telefax No. 937-455-8342 or GM 8-275-8342

MIKE,

OK TO PASS THESE ALONG TO DENNIS MOUSER @ GM?

Ch

OK PER MIKE 9/5/01 @ 11:20 AM

CL02-023-056

DELPHI

Automotive Systems

Memo From:

John Ellerman
Sr. Statistical Engineer
(937)455-3163
Fax (937)455-3286
John.f.ellerman@delphiauto.com
M/C F4-4

Date: August 29, 2001

To: Myself

Subject: Fixtures to Continue Multi-Vari

For the T-Truck Multi-Vari use the following rivet line fixtures

Fixture 2 right side represents the lowest average lift loads, oscillating and rotating torques

Fixture 3 right had the biggest range for these three green y's

Use Fixture 8 right – it had the highest average lift load and rotating torques and the second highest average for oscillating

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Automotive Systems

Memo From:

John Ellerman
Sr. Statistical Engineer
(937)455-3163
Fax (937)455-3286
John.f.ellerman@delphiauto.com
M/C F4-4

Date: August 29, 2001

To: Paul Estes

Cc: Chuck Eifert

Subject: Continuation of Multi-Vari on T-Truck

Paul:

First, thank you for you efforts to complete the first step in the multi-vari study on the T-Truck upper rivet line. Now on to step two.

I have selected to following fixtures for further study: Fixture 2 right side, Fixture 3 right side and fixture 8 right side.

Please collect parts several times a day from each of these fixtures (lets say four time each day say 7 AM 9 AM 11 AM and 1PM) and submit for lift loads, oscillating torque and rotating torque. Continue this for five days.

Once again thanks so much.

Date	Time	Fixture	Lift Load	Oscillating	Rotating
	7	2 Right			
	9	3 Right			
	11	8 Right			
	1	2 Right			
	7	3 Right			
	9	8 Right			
	11	2 Right			
	1	3 Right			
	7	8 Right			
	9	2 Right			
	11	3 Right			
	1	8 Right			
	7	2 Right			
	9	3 Right			
	11	8 Right			
	1	2 Right			
	7	3 Right			
	9	8 Right			
	11	2 Right			

Chuck C.

Paul:

As a result of the visit last Thursday and Friday by Dennis Mouser, GM we would like to perform a Multi-Vari study on the T-Truck Rivet process.

Specifically we would like to sample three complete rounds of the rotary table and check for lift loads and torques – oscillating and rotating.

Can you help?

The table contains eight fixtures and each fixture has two positions.
Please identify each fixture one to eight and each position as A or B.
Starting with fixture one obtain samples from three rounds of the table.
You should come up with a total of 48 pieces.
Please ID the pieces with a three character ID where the first character is the round number, the second is the fixture number and the third is the position number.
Randomize the samples through the seal and grease line
Have each part tested for lift loads, rotating torque and oscillating torque.
Please report the data in Excel. A file called "T Truck Multi Vari has been set up on the S:Drive /BallJnts/T Truck

Completed 8-29-01

CL02-023-060

Lift Loads

Position	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
R - A	1008	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
L - B	1080	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Round # 2
Fixture Number

Position	1	2	3	4	5	6	7	8
A	1104	1008	1224	1236	1056	1080	780	1080
B	1104	924	1128	1104	1176	1068	840	1080

Position	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
B	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

No Grease Sample = 1140

Rotating Torques

[redacted]

Round # 2
Fixture Number

Position	1	2	3	4	5	6	7	8
A	4.94	4.25	5.25	5.25	4.25	4.75	4.50	4.00
B	4.50	4.00	5.00	5.00	5.00	4.00	3.13	4.38

[redacted]

No Grease Sample = 4.75

Oscillating Torques

Position

R = A

L = B

Round # 2

Fixture Number

Position	1	2	3	4	5	6	7	8
A	7.88	5.75	8.25	7.00	6.50	6.25	4.75	5.75
B	6.25	5.50	7.13	7.25	7.50	6.25	5.50	6.38

Position

A

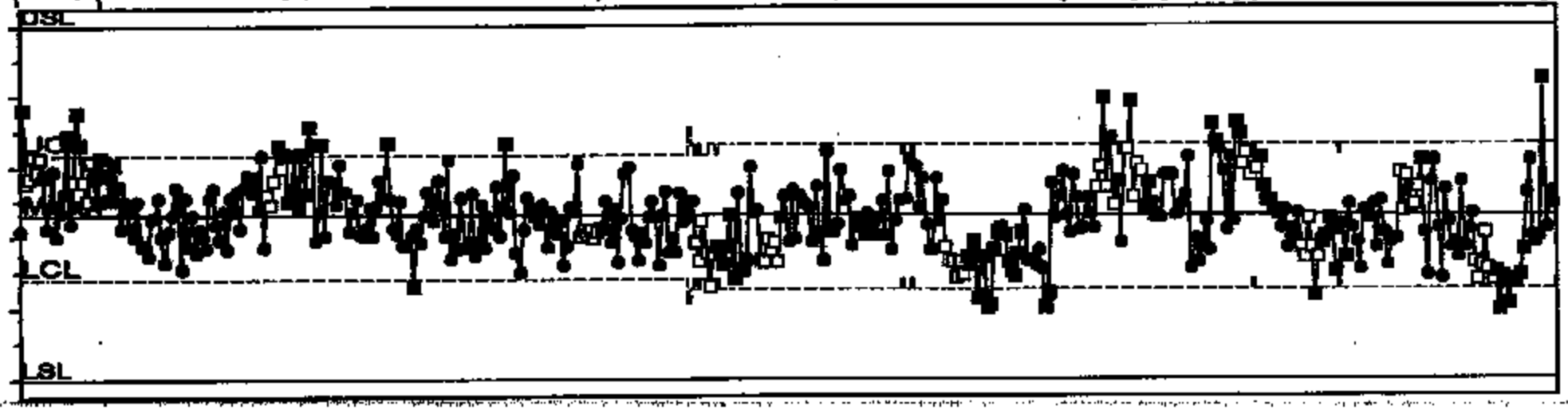
B

No Grease Sample = 6.00

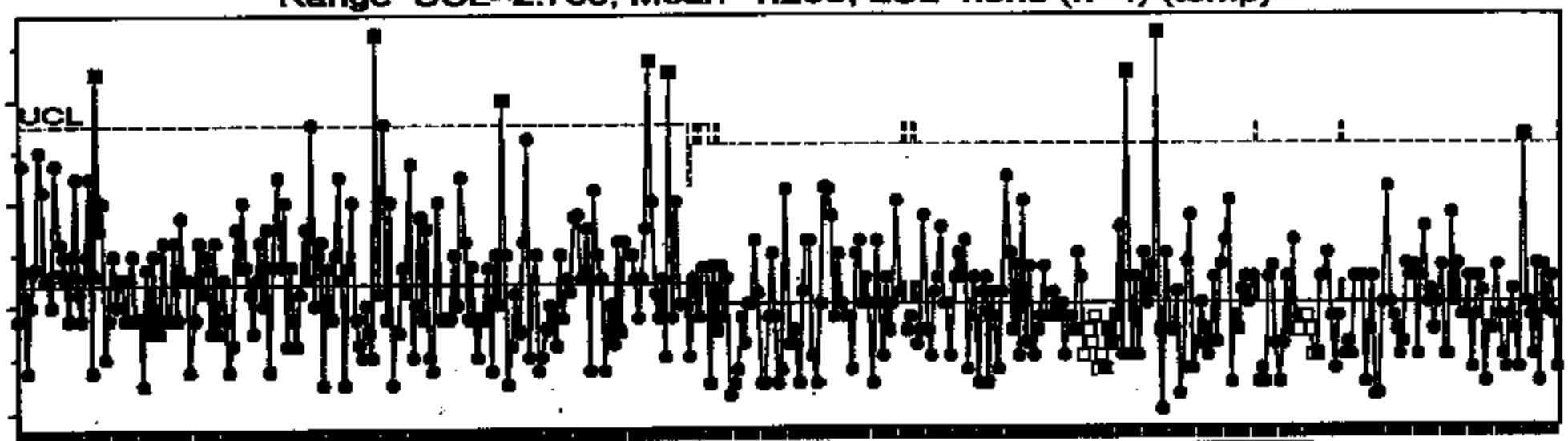
17980735

[illegible]ntrol Chart		Measure	[illegible] Torque	Chart	[illegible]
[illegible]oduct	T TRK UPPER	Process	ASSEMBLY	Specs	2 TO 7
[illegible]er	JERI	Location	A-13	Device	TORQUE MACHINE
Units	FT. LBS.				

1-9-99 X-bar UCL=5.177, Mean=4.297, LCL=3.416 (n=4) (temp) 8-28-01



Range UCL=2.758, Mean=1.209, LCL=none (n=4) (temp)

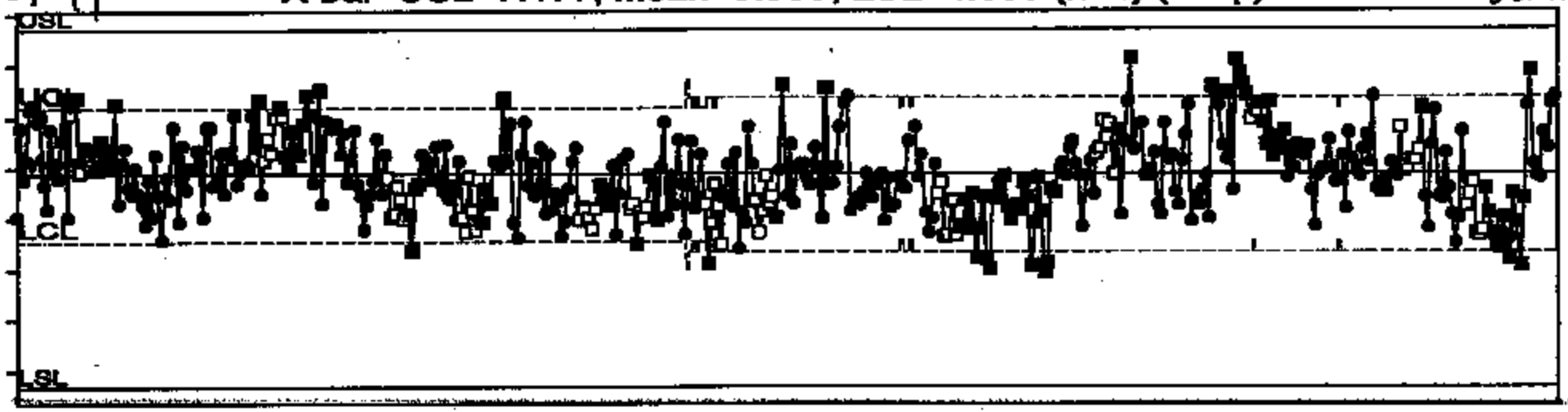


CL02-023-064

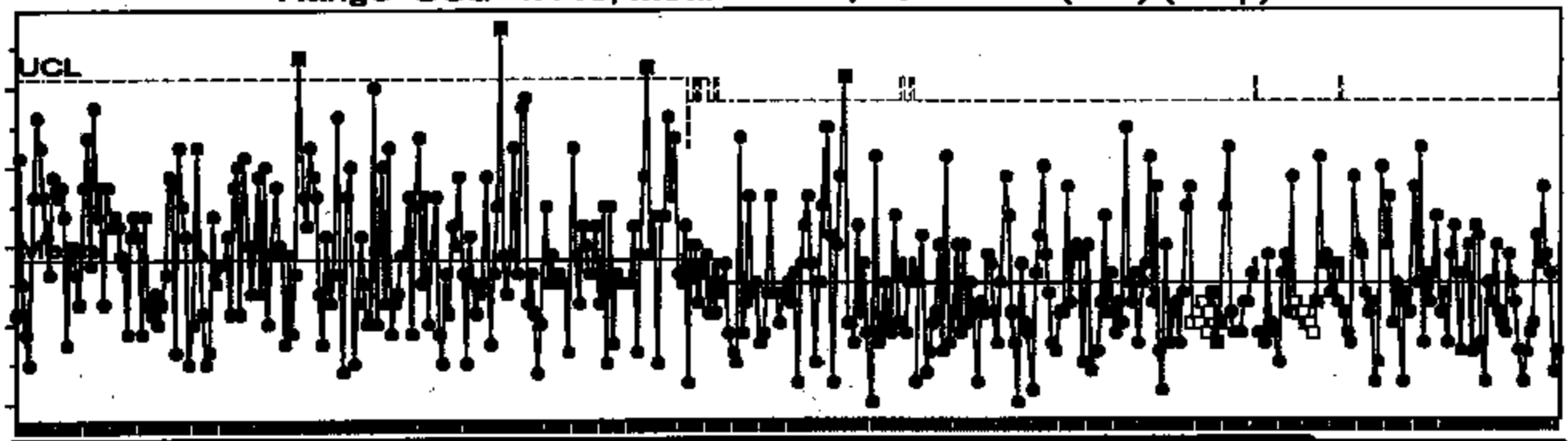
17980735

[redacted]ntrol Chart	Measure [redacted] Torque		Chart [redacted]
oduct T TRK UPPER	Process ASSEMBLY		Specs 1.68 TO 8.72
er JERI	Location A-13	Device TORQUE MACHINE	Units FT. LBS.

-9-99 X-bar UCL=7.177, Mean=5.855, LCL=4.533 (n=4) (temp) 8-27-01



Range UCL=4.140, Mean=1.814, LCL=none (n=4) (temp)



[redacted]

CL02-023-065

BEARING STUDIES

Jon T. Carter@GM on 09/13/2001 08:31:16 AM

To: Charles D. Elfert
Subject: Bearing microscopy

We have enlisted the help of Don Lincoln of the GMNA Materials Lab here in Warren to do SEM examination of the experimental T-truck ball joint bearings recently made by Norwalk Powder Metals. These have intentionally different combinations of %sponge, density, and plating time. He will also examine some WOW (high wear) bearings to look for grease groove appearance similar to experimental ones. We have discussed with him the results of Vjekoslav's work, and will meet with him tomorrow to review his findings.

Norwalk Powdered Metals, Inc.

MULLER PARK • NORWALK, CT 06851 • 203-847-4537 • FAX 203-849-1876

Friday, July 13, 2001

Chuck Eifert
Delphi Chassis Division, ACG
480 North Dixie Drive
Vandalia, OH 45377

Dear Chuck:

Here is a list of the samples, materials, densities, etc.

Lot #1	50 Sponge / 50 Atomized	Density 6.60 Gm/cc
Lot #2	80 Sponge / 20 Atomized	Density 6.35 Gm/cc
Lot #4	50 Sponge / 50 Atomized	Density 6.50 Gm/cc
Lot #5	80 Sponge / 20 Atomized	Density 6.07 Gm/cc
Lot #6	50 Sponge / 50 Atomized	Density 6.02 Gm/cc
Lot #7	20 Sponge / 80 Atomized	Density 6.86 Gm/cc
Lot #8	20 Sponge / 80 Atomized	Density 6.60 Gm/cc
Lot #9	20 Sponge / 80 Atomized	Density 6.48 Gm/cc

Three samples of 50 pcs each for each lot. 24 Boxes. Each box is marked with the different plating cycles. Standard, rinse only, and 30 minutes.

Sincerely,

Richard Webb
VP, Engineering & Sales

CL02-023-068

Jon T. Carter@GM on 03/15/2001 03:47:44 PM

TASHA KELLY - DELPHI LAB INDIANAPOLIS

cc: Charles D. Elfert
Subject: Re: T Truck PM Bearing Review: discussion topic for 3-15-2001

At the Feb. 21, 2001 meeting, John Z. requested that we (Vjekoslav, David, and myself) propose a matrix of bearings to be manufactured, assembled into ball joints, then wear tested in a laboratory. (Actually, bearings will be examined microscopically, then selected ones will be assembled and wear tested.) The three (controlled) variables in bearing manufacture were to be: % of sponge iron in the blend of sponge and atomized iron powders, density of the pressed bearing, and duration/concentration/temperature of the immersion copper plating. Here are proposed levels of each of the three variables:

% Sponge: 20, 50, and 80. (50 is the spec. Metallography and wet-chemical analysis for Mn revealed approx. 90% sponge in one bearing.)

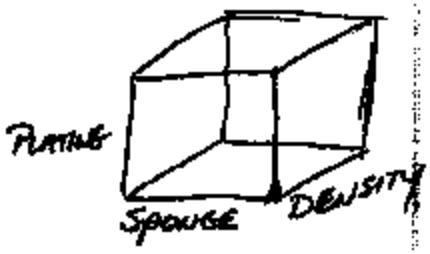
Density: 5.8, 6.4, and 7.0 gm/cc. (6.4 is the spec. Density measured by immersion techniques in other labs are typically 6.3-6.6. Our measurements of local density by automatic image analysis of polished sections range from 6.4-7.4. Tasha is mapping density as a function of location within some bearings.)

Plating: 0.25 minutes/std. bath/std. temperature (the spec ?) 15-20
30 minutes/std. bath/std. temperature
unplated (still give it the normal rinse and spin dry ?)
~~30 minutes/concentrated bath/std. temperature.~~

30 pc/ea

We'll need to see if these can be made and heat treated in reduced lot sizes in a way that is representative of full-lot processing, without mixing them with each other or with regular production bearings.

Diagnostics



- CHEMICAL ADDED TO TUMBLING OPERATION - NEED SPEC SHEET

DUE 01MY01 - DICK WEBB - PROCESSING ALL GROUPS NEED MORE TIME
11JN01 - SHOULD SHIP IN NEXT 2 DAYS
30JL01 - BEARINGS SHIPPED ?

CL02-023-069

01-02-T152

ENGINEERING WORK REQUEST

GENERAL INFORMATION

To: ☐ Design ☐ Analysis
☐ Model Shop ☐ Materials Engineering
☐ Procurement ☐ Instrumentation Lab
☐ Vehicle Test ☐ Other
☒ Laboratory

EWR NUMBER 11197.086
DEPT. NO. 583
DATE 030001

CUSTOMER NATG
PLATFORM/YR T-TRUCK/2002
VEHICLE NO. N/A

Attention: ROB ROSS
Targeted Due Date(s): 09N001

Product Name BALL JOINTS
Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other

Quantity 6
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☐ No
Customer P.O. #
Specific Inspection ☐ Yes ☐ No
(List Details in INSTRUCTIONS Section below)

INFO ONLY

RETURN TO REQUESTER

N/A

INSTRUCTIONS

T195 – PRE & POST DURABILITY LIFTLOADS
T429 – PRE & POST DURABILITY TORQUES
T467 – SLAW

ASSEMBLIES COINED TO INCREASE/DECREASE LIFTLOAD & TORQUE

1) TORQUE & LIFTLOAD ALL 6 PIECES (3 HI, 3 LOW)
2) UTILIZE 2 HIGHEST & 2 LOWEST TORQUE ASSEMBLIES TO RUN S.L.A.W. TEST (REFERENCE 1197-082 SLAW TEST)
   A) LATERAL SIDE LOAD – 400 lb OUTBOARD TO 1800 lb INBOARD SINUSOIDAL @ 0.33 Hz
   B) AXIAL LOAD – SINUSOIDAL ± 340 lb @ 0.33 Hz
   C) ROTATION ±15° @ 0.5 Hz
   D) OSCILLATION ±10° @ 1.0 Hz

RUN EACH PART 250,000 OSCILLATION CYCLES

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V-57 Phone # 8355
Authorized [signature] Date 030001 FAX # 8342
Initial Validation Analysis Review ____ Date ____
Test Supervisor Review ____ Date ____

Completed by [signature] Date 15 NOV 01 Test Supv. [signature] Date 11/15/01
Reviewed ____ Date ____ Reviewed ____ (validation analysis eng.) Date ____

CL02-023-144

DELPHI

PHYSICAL TEST LABORATORIES

EWR 11197-086
Date 13 NOV 01
Technician R. Ross
Page 1 of 16

CALIBRATION INFORMATION

EQUIP. IDENT. NO. (ID)	DESCRIPTION	LAST CALIBRATION DATE	NEXT CALIBRATION DUE DATE
TM-371-2	T-467 – SLAW '2'	30 OCT 01	15 JUL 02
TM-388	INSTRON (LIFT-LOADS)	16 FEB 01	15 JAN 02
TM-196-6	TORQUE WRENCH (IN/LBS)	14 AUG 01	15 JAN 02

DM-2475 REV. 1/21/98

CL02-023-145

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR	11197 - 086
Date	13 NOV 01
Tech.	R. Ross
Page	2 of 16

Data Report Summary

Part Number	17980735	Part Description	GMTG T - TRK/2002
Number of Samples	6	Serial Number	PART# 1 - 6

Fixture(s)	Test Instruction(s)	Revision Date(s)
LF-4146	T-467 SLAW #2	19 MAY 89
LF-6522	T-429 MANUAL TQ TEST	21 OCT 76
LF-6554	T-193 LIFT LOADS	8 MAY 80
LF-6112		
LF-6640		
LF-6607		

Results, Observations, and Comments :
Test was run according to EWR.

Parts were manually rocked and rotated on the bench, their values logged , and the log sheets included in this report.

The load was applied to the top of the ball stud, on the Instron machine till a load of 4,500 N was reached.
A graph of the ball joint stud's range of movement was constructed during the lift-load test.

The graph of each ball joint range of movement was constructed and included in this report.
Post-test lift-loads and torques were also done.

Loads Applied were:

Lateral Side Load	+400 lbf.(Outboard) to -1800 lbf. (Inboard)		sinusoidal @ .33Hz
Axial Load	+340 lbf.	to - 340 lbf.	sinusoidal @ .33Hz
Rotation	+/- 15 deg. @ 0.5Hz		
Oscillation	+/- 10 deg. @ 1Hz		

Each part was to run 250,000 Oscillation cycles.

Part #1 ran for 558,891 oscillation cycles, and had no pre-test lift-loads recorded.
Part #2,3,4,&6 each ran for 250,000 oscillation cycles.
The bands holding the bottom of the seals on part # 2,3,&4 cracked or pulled loose during the slaw test.

Data Plots : See Page(s)
Photographs : See Page(s)

Reported By : Rob Ross

Date : 13 NOV 01

CL02-023-146

DELPHI

Chassis Systems

Project #: 11197-086
Test #: 01-02-F152
Date: 080C01 / 13 Nov 01
Tech: D. Acquaro / Rob Ross
Page: 3 of 16

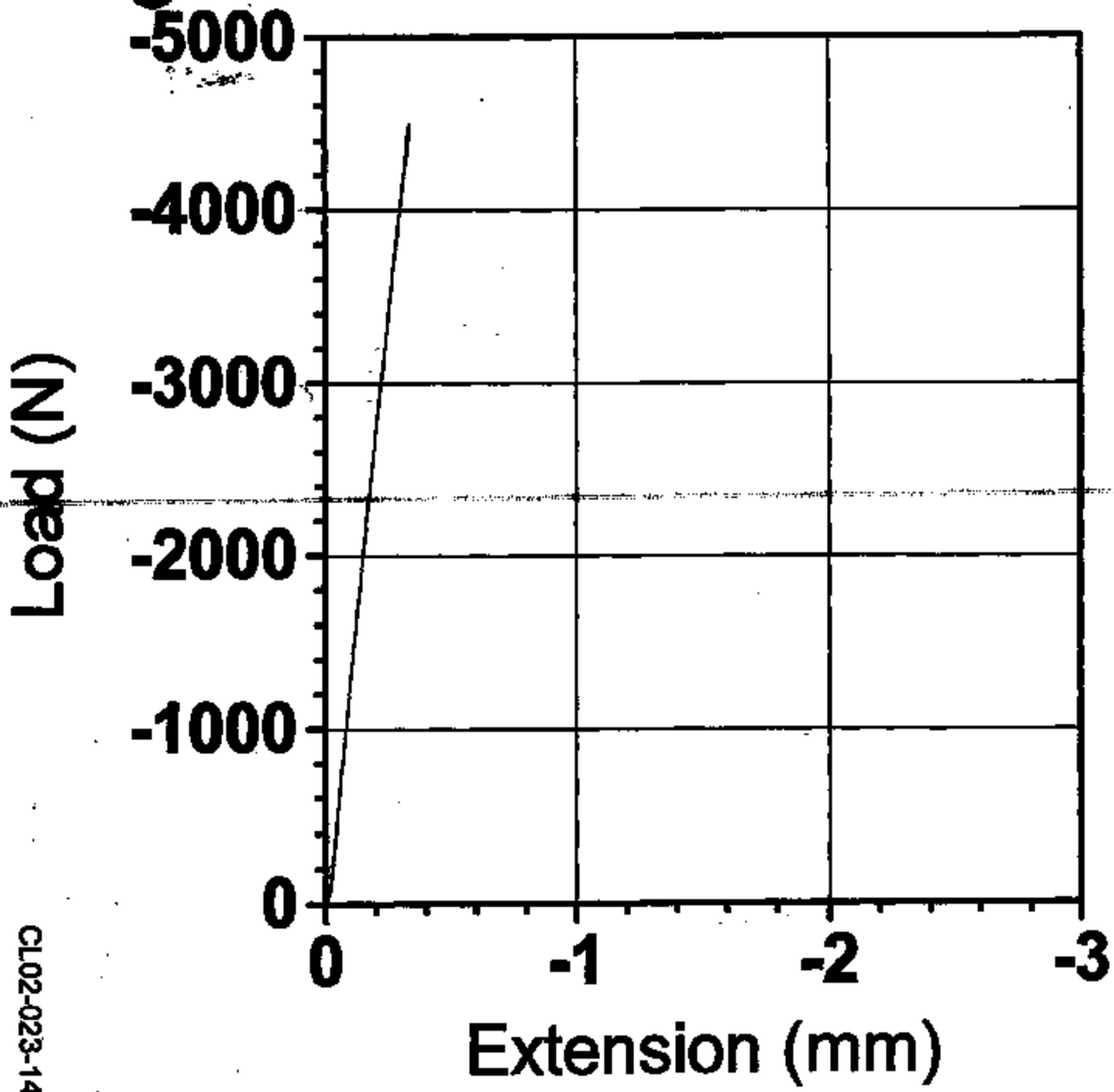
TM-196-13 15 Jan 02

Manual Torque Data Log

Piece #	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
1	43		18	Low 2
2	85		55	HIGHEST
3	28		20	New Low 2
4	40		15	LOWEST
5	65		40	
6	77		48	High 2
	Post Test Torques			
1	24		12	
2	20		15	
3	30		45	
4	20		15	
5	55		35	Not Run
6	40		32	

CL02-023-147

Liftlead #2 T-TRK UPR 11197-08[illegible] Pre. SLAW 10OC01

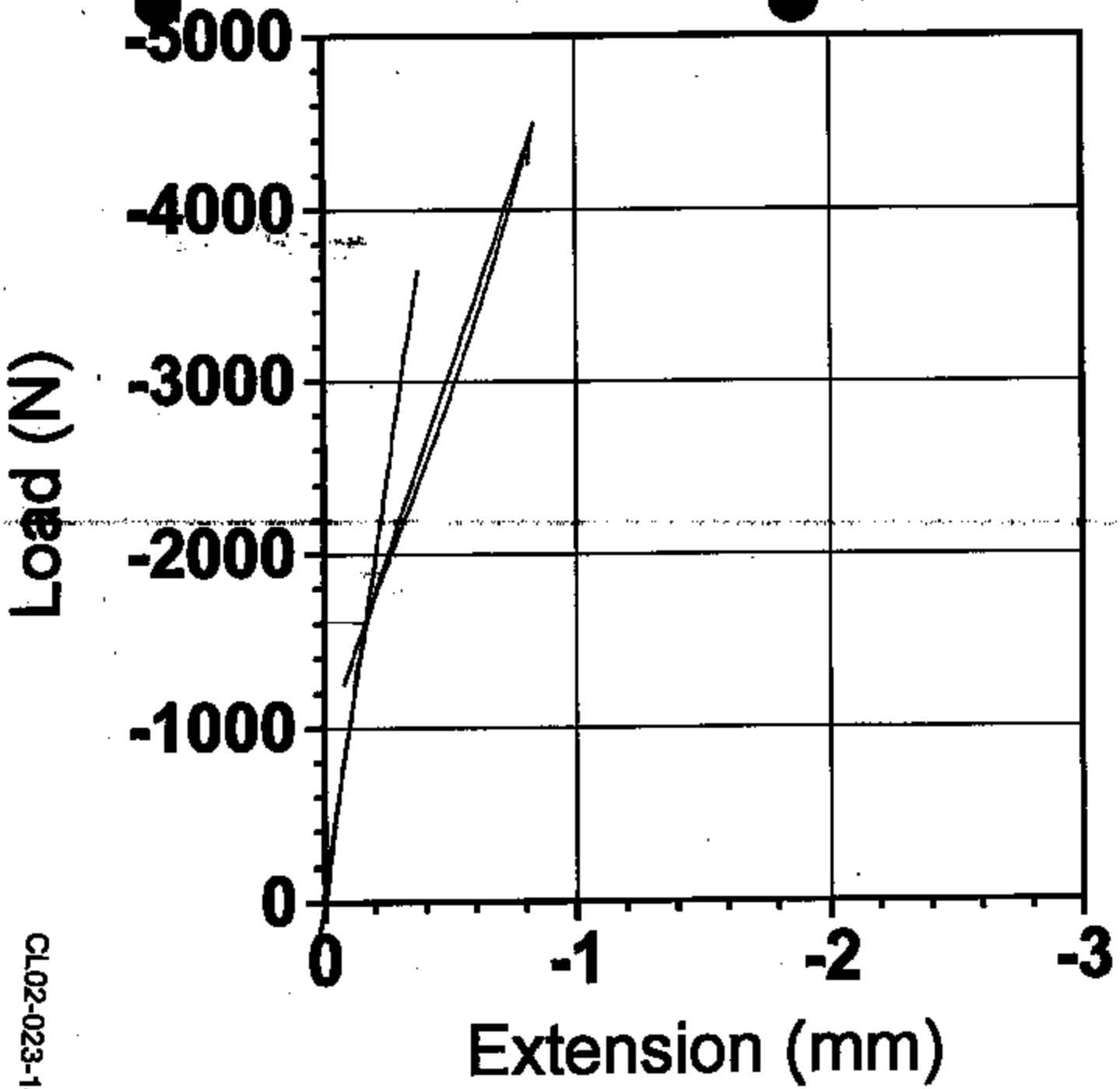


+ 4500

PAGE NO. 4 OF 16

CL02-023-148

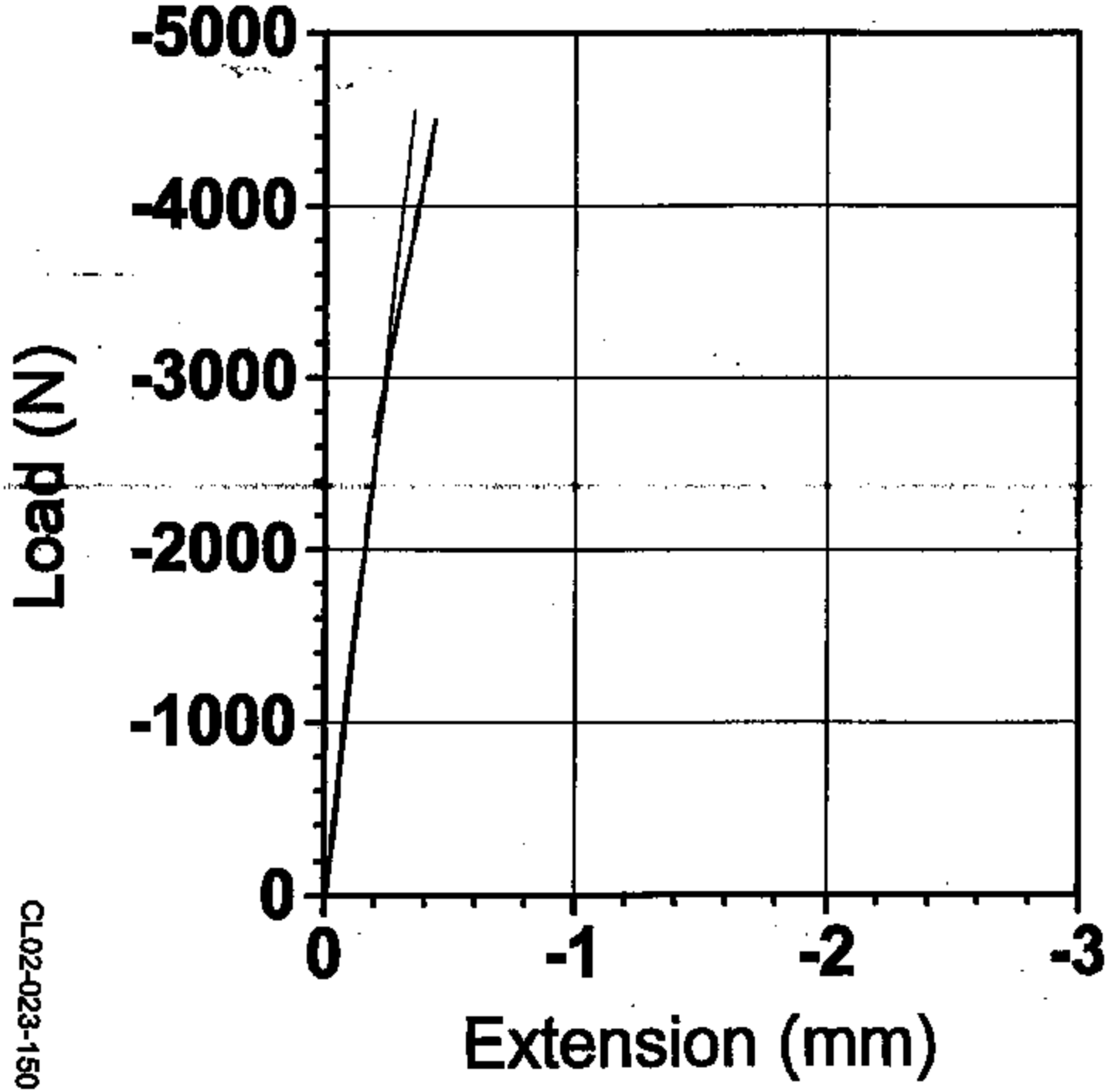
Liftload #3 T-TRK UPR 11197-086 Pre. SLAW 10OC01



1600 N

CL02-023-149

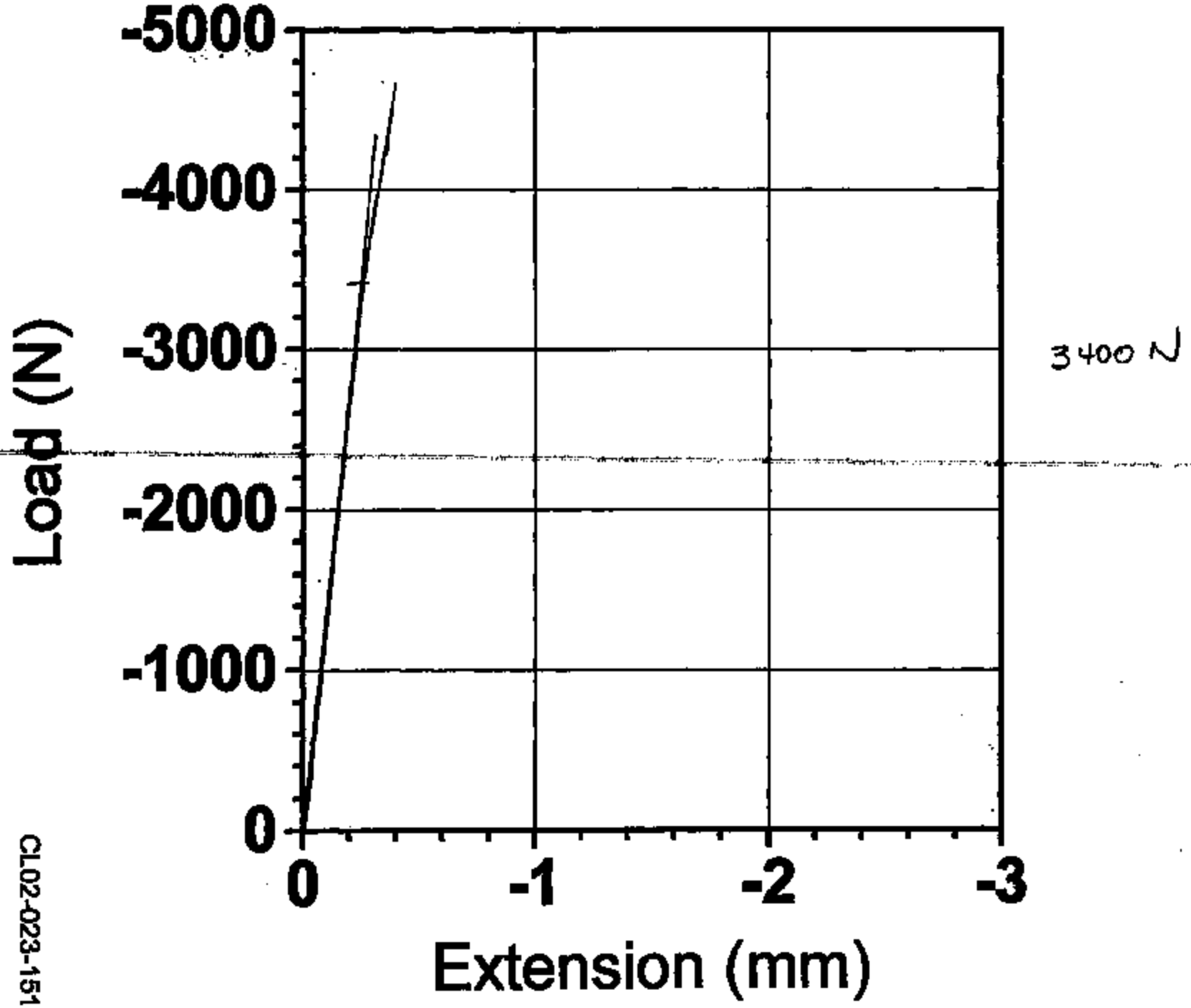
Liftl[illegible]d #5 T-TRK UPR 11197-08[illegible] Pre. SLAW 10OC01



3000 N

CL02-023-150

Liftl[illegible]d #6 T-TRK UPR 11197-08[illegible] Pre. SLAW 10OC01

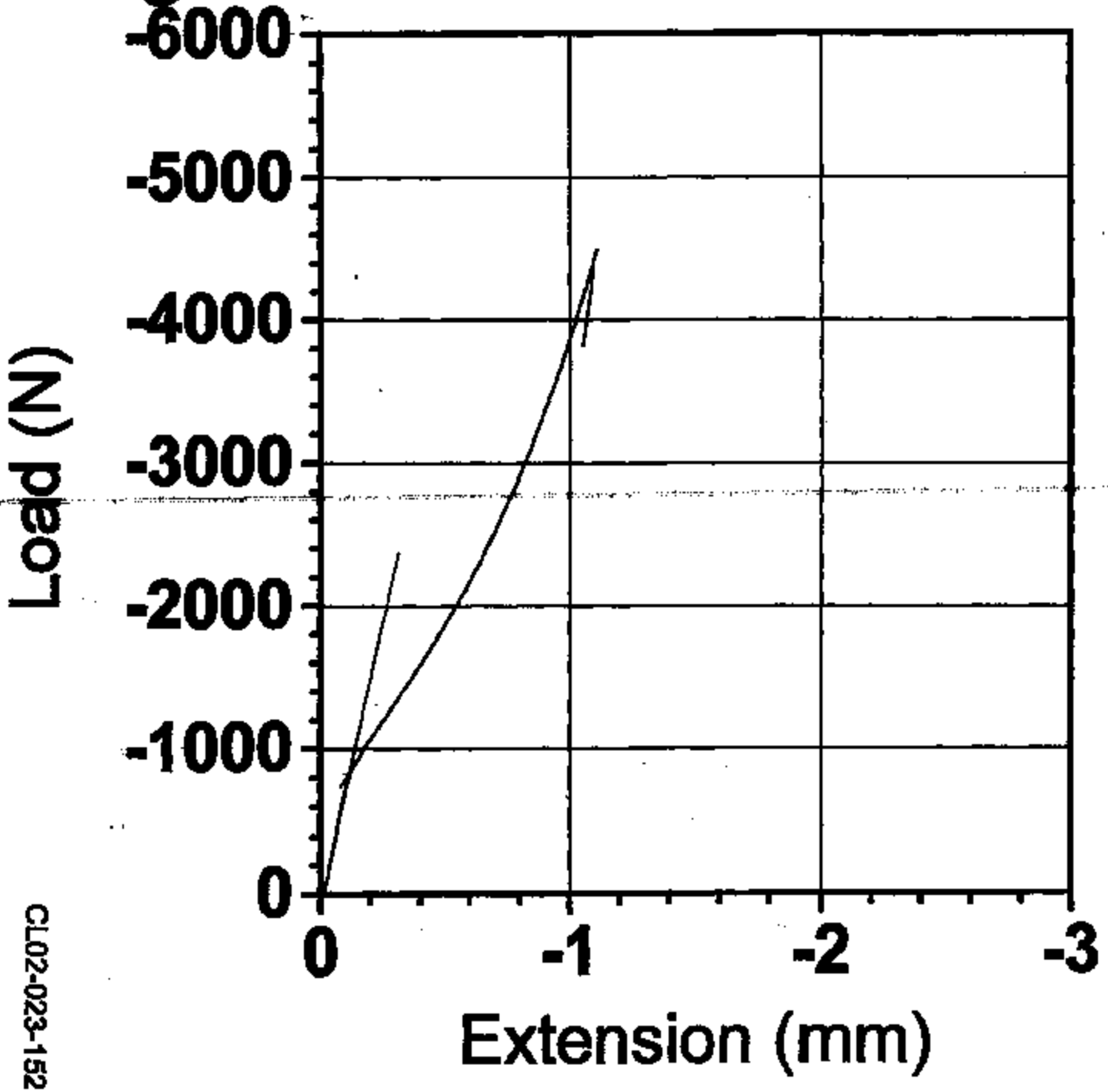


3400 N

CL02-023-151

Liftload #1 T-TRK UPR 11197-086 13NOV01 Post-Test

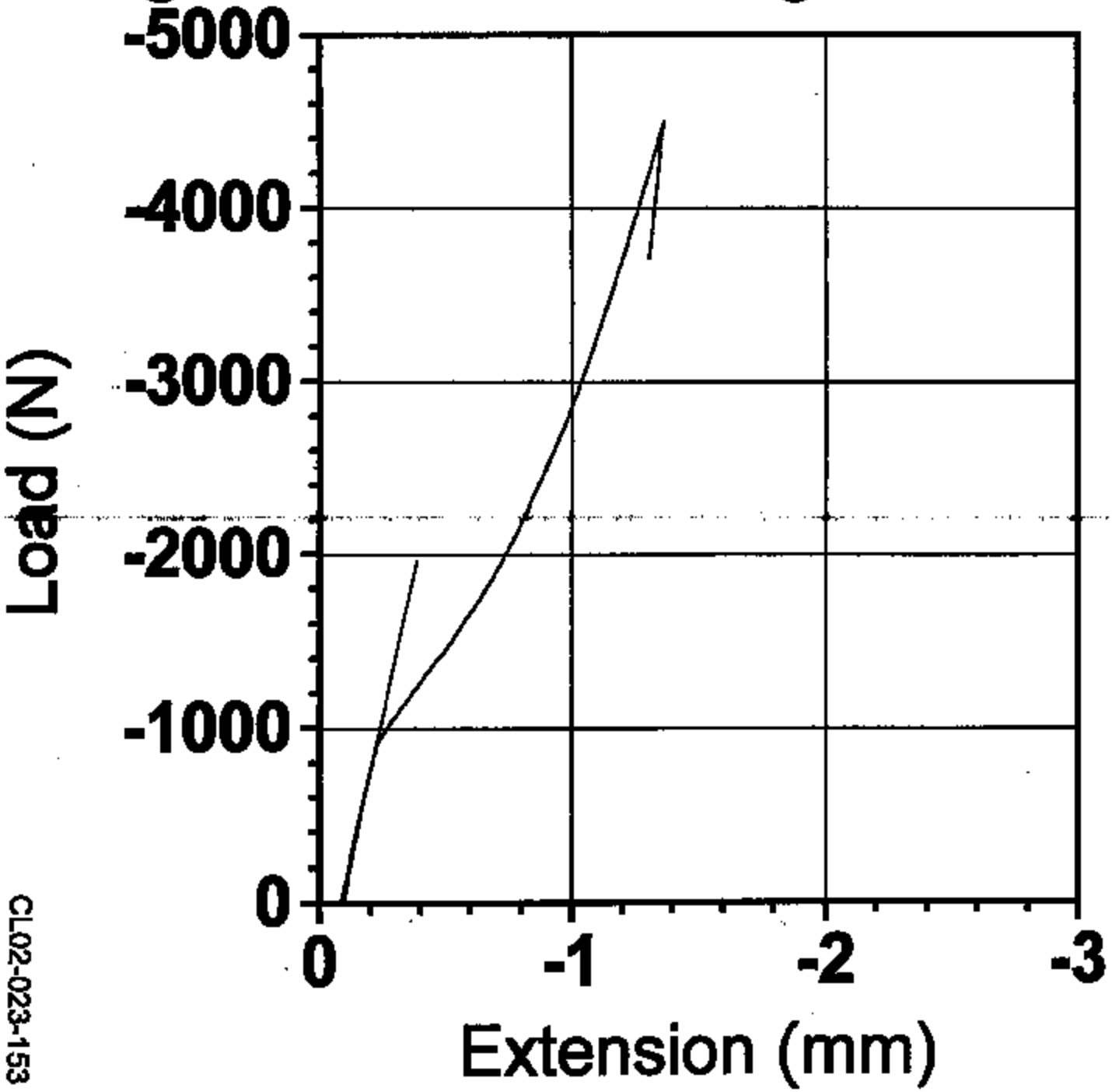
R. Ross



800 N

CL02-023-152

Lifload #1 T-TRK UPR 11197-086 13NOV01 Post-Test



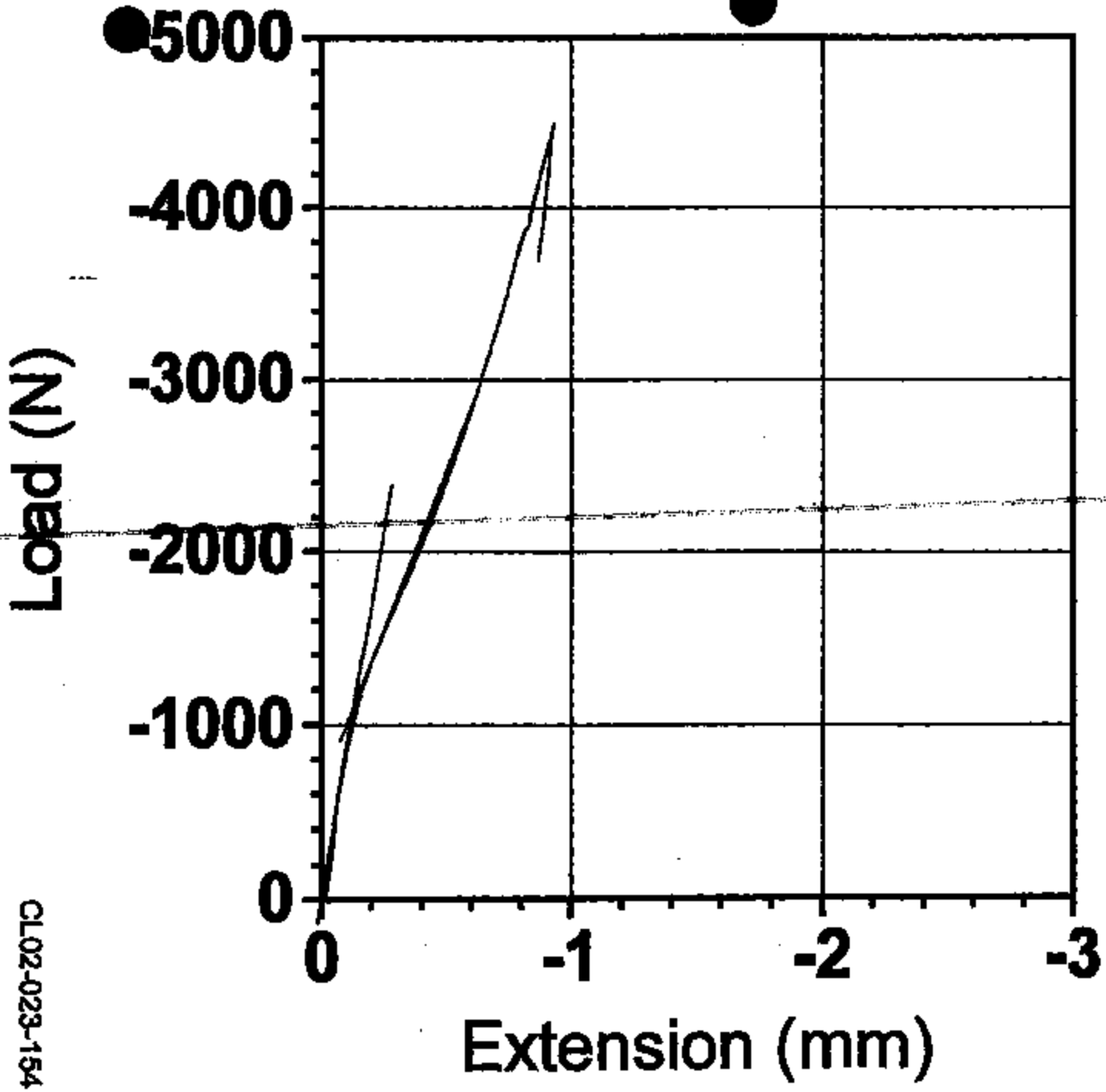
R. Ross

900 N

CL02-023-153

Liftload #3 I-TRK UPR 11197-086 13NOV01 Post-Test

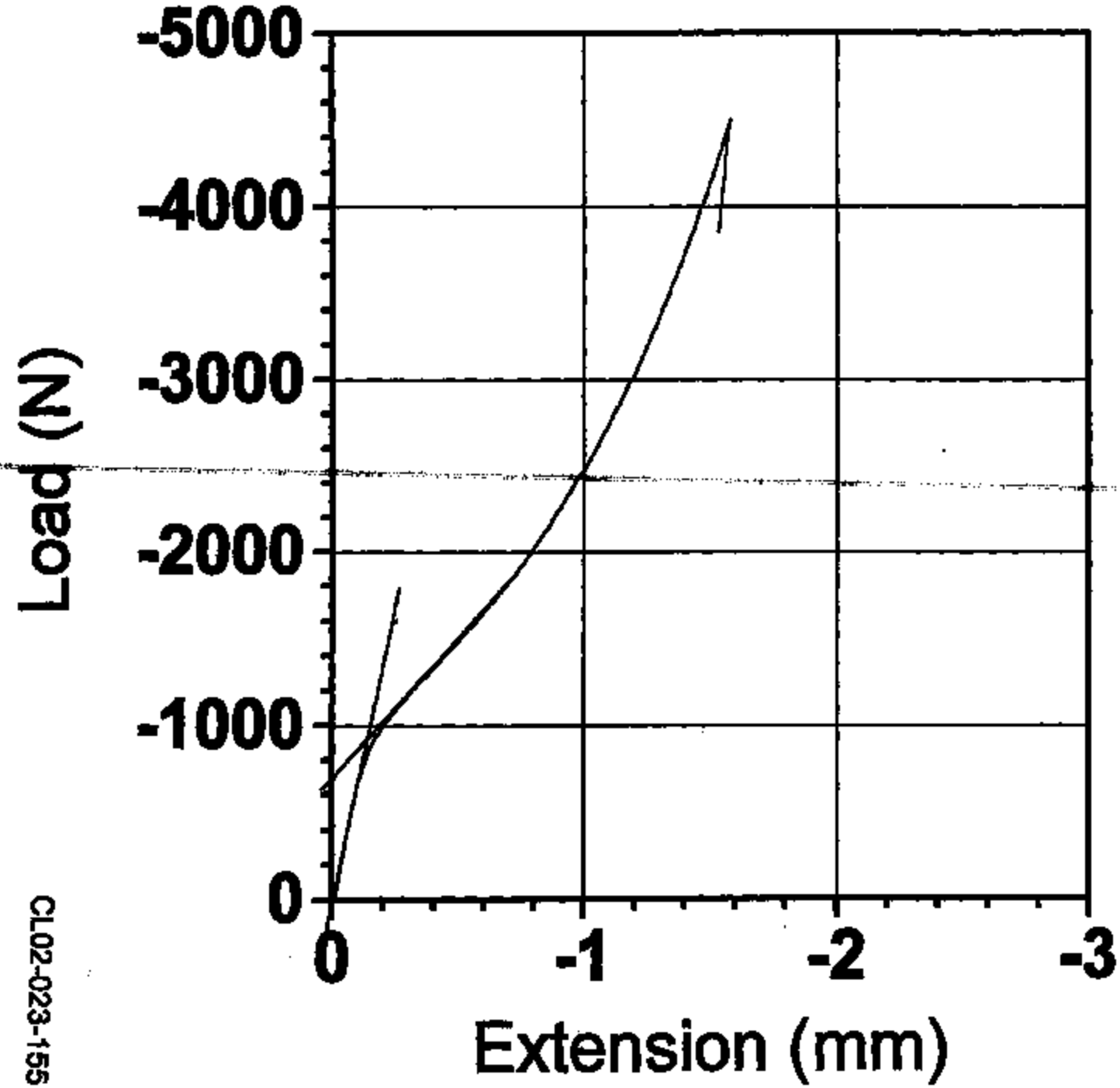
R. Ross



1100 N

CL02-023-154

Li[illegible]oad #4 T-TRK UPR 11197-[illegible]6 13NOV01 Post-Test



R. Ross

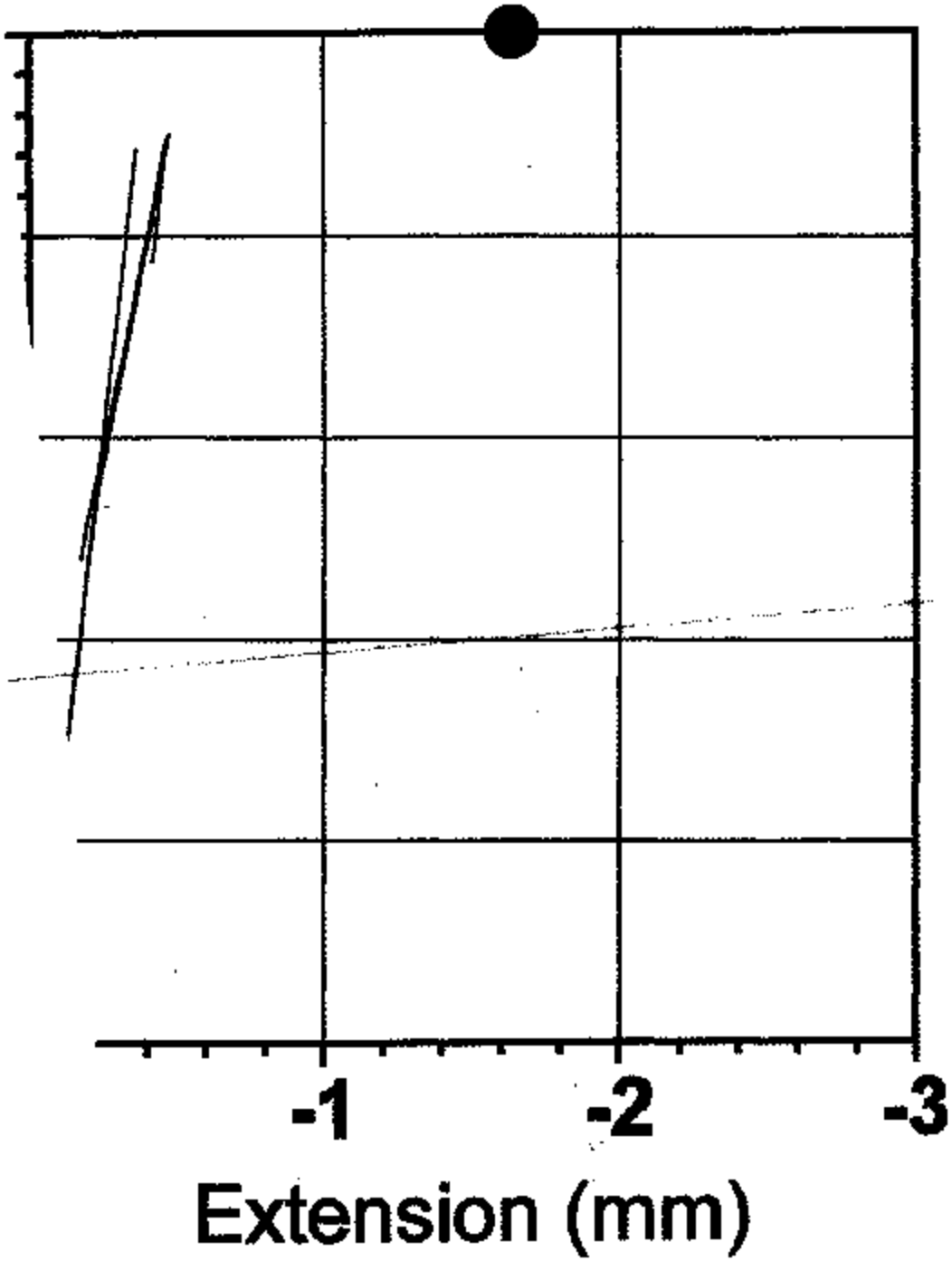
900 N

CL02-023-155

13NOV01 Post-Test

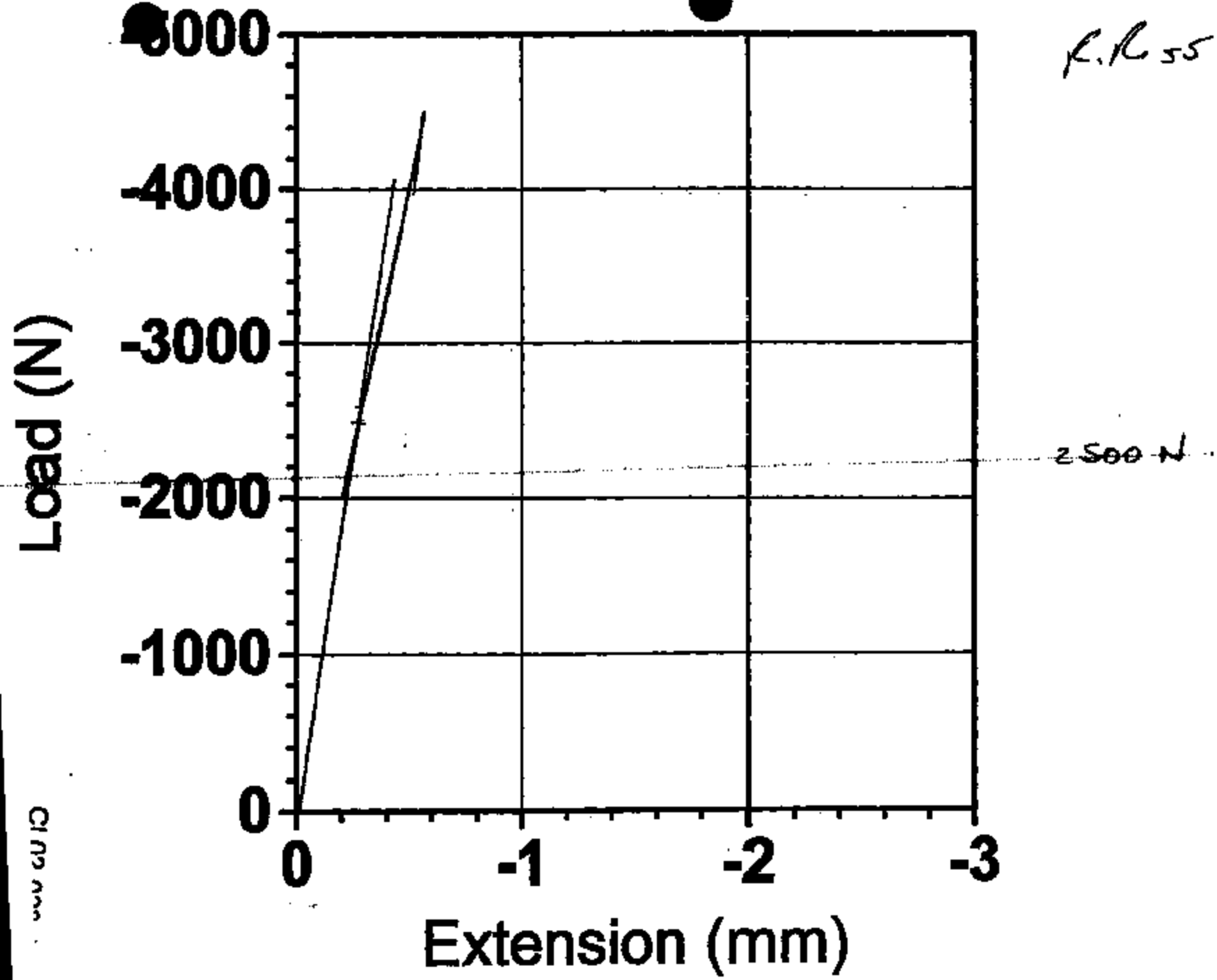
Run(Te.

R. Ross



3000 N

Littload #6 T-TRK UPR 11197-086 13NOV01 Post-Test



R.R 55

Test # 01-02-T152
Project # 11197-086
Te[illegible]ach # TM-371-2

SLAW #2 02T-T[illegible]SLAW2-086.000

Page 15 [illegible] 16
Date 13 N[illegible]01
Tech R. Ross

SPECIMEN	DATE	LIMITS TIME	TECH	Max / Min 12 / -.2 Stroke mm	Max / Min 900 / -900 Axial Load Kn	Max / Min 16 / -16 Rotation Deg	Max / Min 20 / -20 Rock Deg	Max / Min 1800 / 4000 Side Load Kn	New Axial Load Kn	New Side Load Kn	Comments
#152.086.16	10-9-01	3:45	RR	.008/-.031	429/-507	± 15	± 10	1284/-2416			455 Rot Cyc
"	10-10-01		RR	.010/-.025	389/-408	± 15	± 10	893/-2282			34,470 Rot Cyc
"	10-11-01		RR	.010/-.030	388/-404	± 15	± 10	887/-2277			72,400 Rot Cyc
"	10-16-01		RR	.010/-.030	391/-401	± 15	± 10	2050/2618	327/-539	1235/-2591	279,450 Rot Cyc
											558,891 Rock Cyc
											? (Oscillation)
#152.086.421	10-11-01	9:45 am	RR	.035/-.010	446/-403	± 15	± 10	875/-2316			
Continued next Page.											160 Rock Cyc.

Test # 01-02-T152
Proj[redacted] 11197-086
Test Mach # TM-371-2

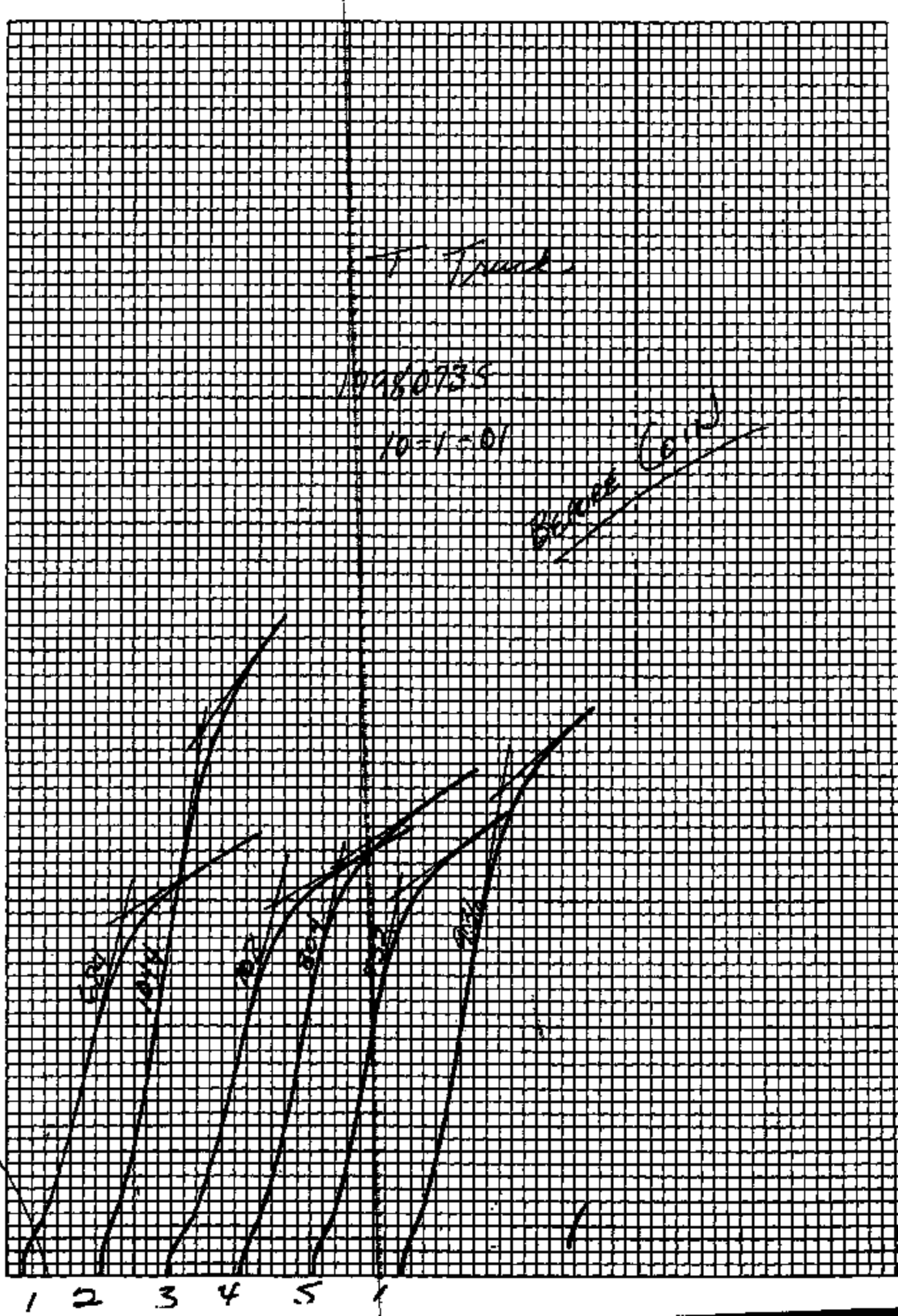
SLAW#2 027-TRK SLAW2-086,000

Page 16 [redacted]16
Date 13 Nov 01
Tech R. [illegible]

SPECIMEN	DATE	LIMITS TIME	TECH	Max / Min .2 / -.2 Stroke mm	Max / Min 900 / -900 Axial Load Kn	Max / Min 16 / -16 Rotation Deg	Max / Min 20 / -20 Rock Deg	Max / Min 1800 / -4000 Side Load Kn	New Axial Load Kn	New Side Load Kn	Comments
T152_086_[illegible]	10-23-01	3:00 p	RK	.048/-.009	980/-418	± 15	± 10	856/-2261	406/-361	819/-2219	86,550 Rock Cyc
"	10-24-01	3:20 p	RK	.057/-.001	524/-466	± 15	± 10	1686/-3006	265/-366	822/-2227	111,670 " "
	10-25-01	10:00 a	RK	.054/-.063	404/-374	—	—	884/-2236	—	—	125,000 Rock Cyc EOT
											250,000 Rock Cyc Tot
T152_086_2H1	10-28-01	2:15 p	RK	.021/-.025	402/-384	± 15	± 10	881/-2269	328/-304	854/-2255	500 Rock Cyc
"	10-29-01	8:40 a	RK	.045/-.025	412/-400	± 15	± 10	889/-2287	306/-366	872/-2263	2430 80 Rock Cyc
"	10-30-01		RK	.041/-.003	405/-372			875/-2269			250,000 Rock Cyc EOT
T152_086_3H2	10-31-01	12:35 p	RK	.023/-.007	384/-341	± 15	± 10	819/-2217	377/-372	819/-2225	1420 Rot Cyc
"	11-1-01	9:00 a	RK	.028/-.010	404/-378	± 15	± 10	828/-2231	400/-366	814/-2205	~~36,850~~ 73,700 Rock Cyc
	Change Side Load to										
"	11-1-01	3:30 p	RK	.027/-.008	407/-378	± 15	± 10	827/-2227	383/-344	791/-2193	96,900 Rock Cyc
"	11-2-01	9:50 a	RK	.039/-.008	406/-380	± 15	± 10	822/-2213	335/-366	812/-2211	~~162,650 Rock Cyc~~
"	11-5-01	8:15 a	RK	.043/-.001	405/-376	—	± 10	845/-2239	—	—	250,000 Rock Cyc. EOT
T152_086_6H2	11-5-01	12:40 p	RK	.018/-.014	352/-394	± 15	± 10	839/-2233	386/-353	834/-2221	215 Rock Cyc
"	11-6-01	9:30 a	RK	.025/-.014	387/-386	± 15	± 10	863/-2266	341/-371	857/-2261	75,475 Rock Cyc.
"	11-6-01	3:00 p	RK	.024/-.011	387/-374	± 15	± 10	857/-2261	313/-366	840/-2238	95,000 Rock Cyc.
"	11-7-01	12:35 p	RK	.025/-.010	386/-323	± 15	± 10	848/-2250	371/-360	833/-2234	173,500 Rock Cyc
"	11-8-01	7:45 a	RK	.025/-.010	385/-375	± 15	± 10	842/-2245	338/-301	826/-2225	241,850 Rock Cyc.
"	11-8-01	11:30 a	RK	.025/-.009	384/-370	± —	± 10	837/-2243	—	—	250,000 Rock Cyc.

Hrs 125,000 [illegible]

CL02-023-159



K+E 10 X 10 TO THE INCH 18 X 25 INCHES
47 0700

TEST DATA

ENGINEERING WORK REQUEST 01-02-T150

GENERAL INFORMATION

To: ☐ Design ☐ Analysis ☐ Model Shop ☐ Materials Engineering ☐ Procurement ☐ Instrumentation Lab ☐ Vehicle Test ☐ Other ☒ Laboratory

EWR NUMBER 11197.085
DEPT. NO. 583
DATE 01 OC 01

CUSTOMER NATG
PLATFORM/YR T-TRK/1996-2000
VEHICLE NO. VARIOUS

Attention: DONALD ACCURSO
Targeted Due Date(s): 15 OC 01

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____

☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers

☐ Other

Quantity 2 ea.
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
Customer P.O. # ____
Specific Inspection ☐ Yes ☒ No
(List Details in INSTRUCTIONS Section below)

INFO. ONLY

RETURN TO REQUESTOR

N/A

INSTRUCTIONS

T-195 - LIFTLOADS UP TO 1200 LB.
T-536 - RADIAL ELASTICITY
T-429 - UNLOADED ROTATING/OSCILLATING TORQUE.
S/N: 827u — 854u

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V-57 Phone # 8355
Authorized [signature] Date 010C01 FAX # 8342
Initial Validation Analysis Review ____ Date ____
Test Supervisor Review ____ Date ____
Completed by [signature] Date 05DC01 Test Supv. [signature] Date 10/9/01
Reviewed ____ Date ____ Reviewed ____ (validation analysis eng.) Date ____

CL02-023-162

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR 11197-085
Date 8 OCT 01
Technician D. Accurso
Page 1 of 59

CALIBRATION INFORMATION

EQUIP. IDENT. NO. (ID)	DESCRIPTION	LAST CALIBRATION DATE	NEXT CALIBRATION DUE DATE
TM-388	INSTRON (LIFT-LOADS)	16 FEB 01	15 JAN 02
TM-196-6	TORQUE WRENCH (IN/LBS)	14 AUG 01	15 JAN 02
TM-388	INSTRON R/A	16 FEB 01	15 JAN 02

DM-2475 REV. 1/21/98

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR	11197 - 085
Date	8 OCT 01
Tech.	Donald Accurso
Page	2 of 39

Data Report Summary

Part Number	17980735	Part Description	GMTG T TRUCK
Number of Samples	28	Serial Number	PART# 827u – 854u

Fixture(s)	Test Instruction(s)	Revision Date(s)
LF-4146	T-429 MANUAL TQ TEST	21 OCT 76
LF-6522	T-536 RADIAL ELASTICITY	8 JUL 87
LF-4772	T-195 LIFT LOADS	8 MAY 80
LF-7870		
LF-6640		
LF-6607		

Results, Observations, and Comments :
Test was run according to EWR.

Parts were manually rocked and rotated on the bench, their values logged , and the log sheets included in this report.

The radial load was applied to the ball joint, on the Instron machine to a load of +/-6,000 N.
A graph of the ball joint stud's range of movement was constructed during the radial elasticity test.

The load was applied to the top of the ball stud, on the Instron machine till a load of 4,500 N was reached.
A graph of the ball joint stud's range of movement was constructed during the lift-load test.

The graph of each ball joint range of movement was constructed and included in this report.

Data Plots : See Page(s)
Photographs : See Page(s)

Reported By : Donald Accurso

Date : 8 OCT 01

CL02-023-164

DELPHI

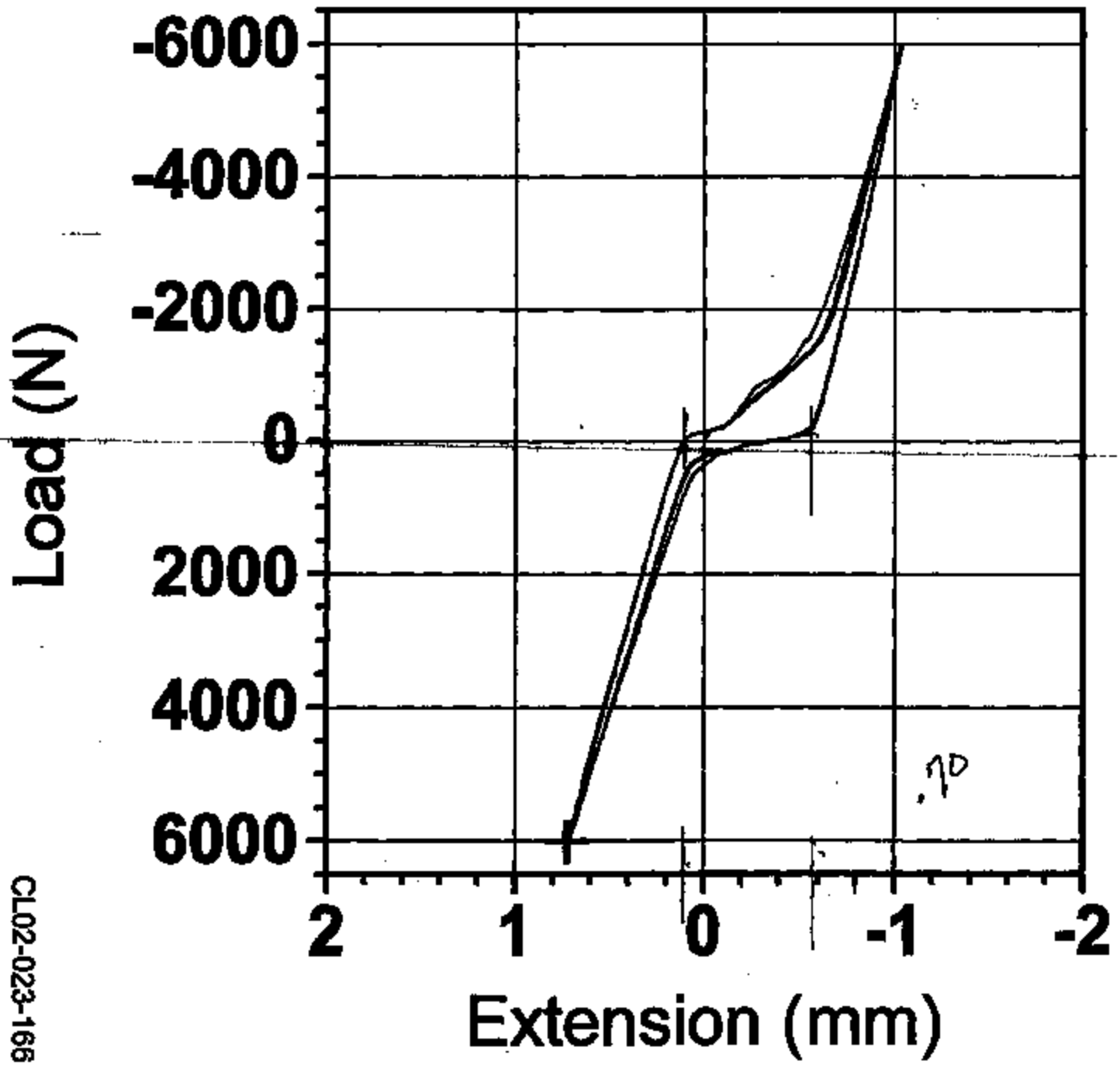
Chassis Systems

Project #: 01-02-T150
Test #: 11197-085
Date: 01 OC 01
Tech: D. Assunto
Page: 3 of 59

Manual Torque Data Log

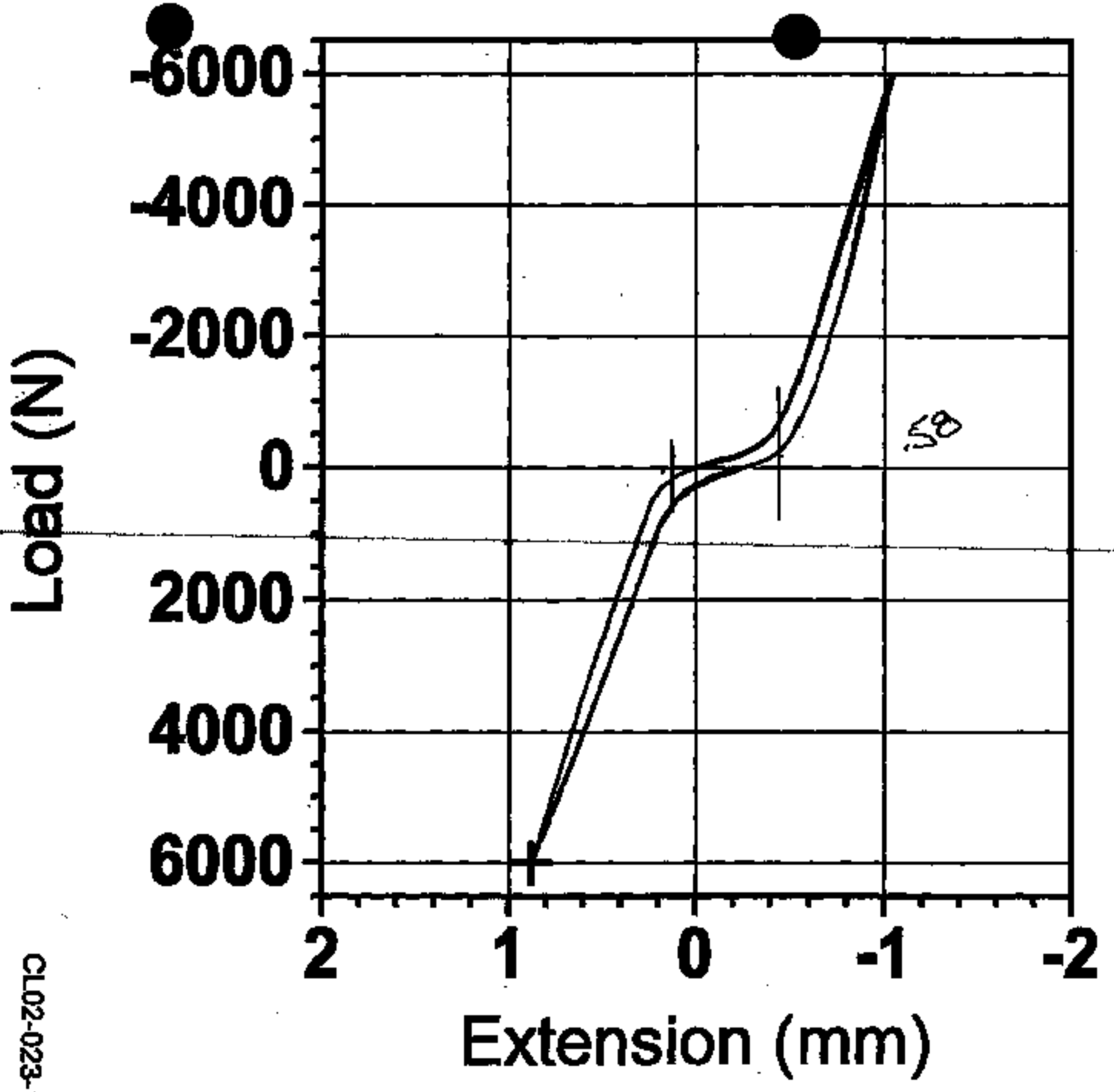
Piece #	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
827u	100		30	
828u	25		25	
829u	50		30	
830u	45		27	
831u	50		40	
832u	25		10	
833u	25		15	
834u	30		20	
835u	35		25	
836u	40		20	
837u	40		25	
838u	30		15	
839u	35		15	
840u	50		35	
841u	60		30	
842u	100+		50	
843u	30		30	
844u	60		35	
845u	50		35	
846u	55		40	
847u	40		20	
848u	60		25	
849u	20		10	
850u	40		30	
851u	40		28	
852u	35		25	
853u	25		15	
854u	35		20	

RADIAL #827 T-TRK. U[redacted]R. 11197-085 03OC01 D. Ac[redacted]rso



CL02-023-166

RADIAL #628



CL02-023-167

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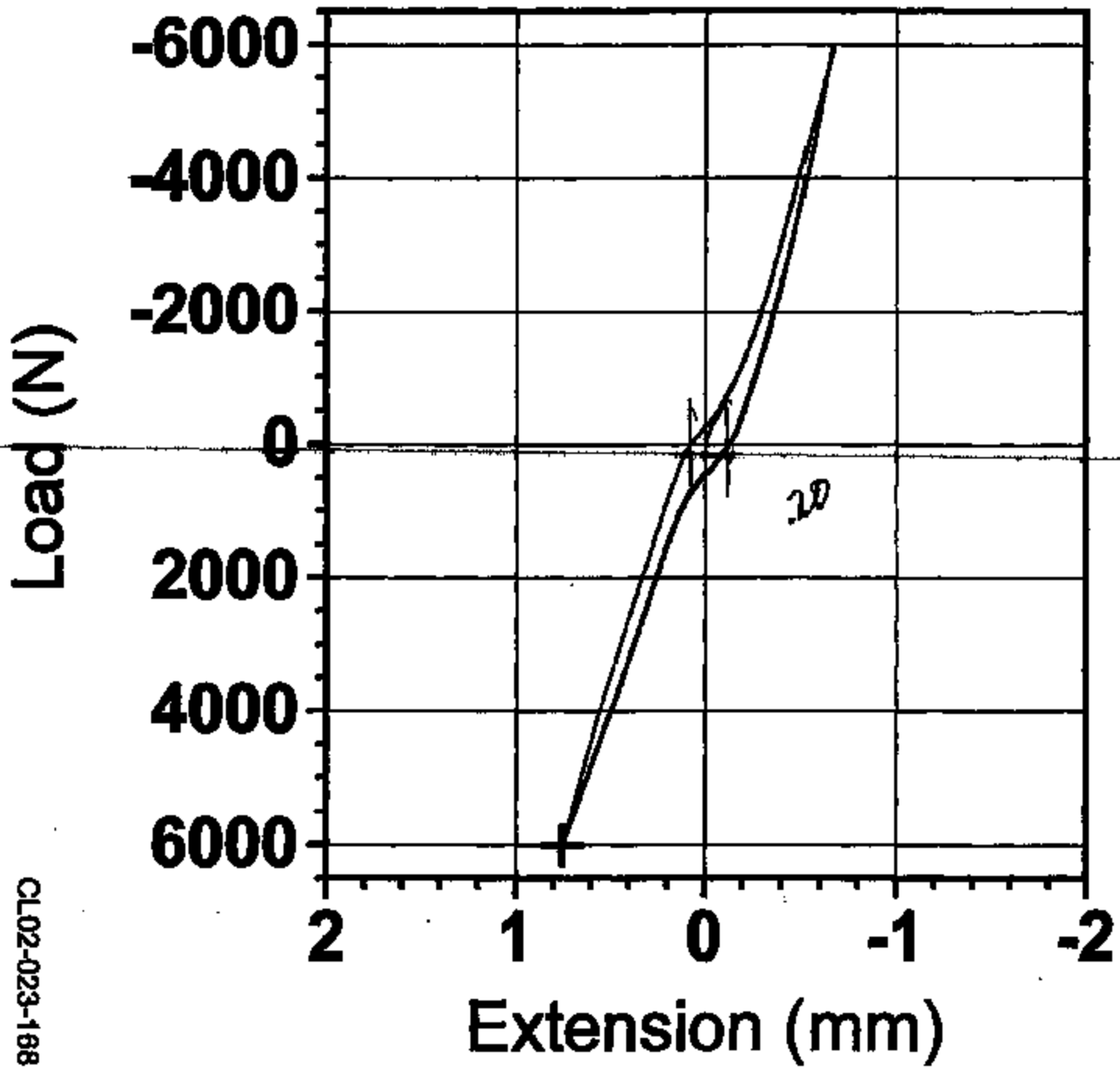

CL02-023-168

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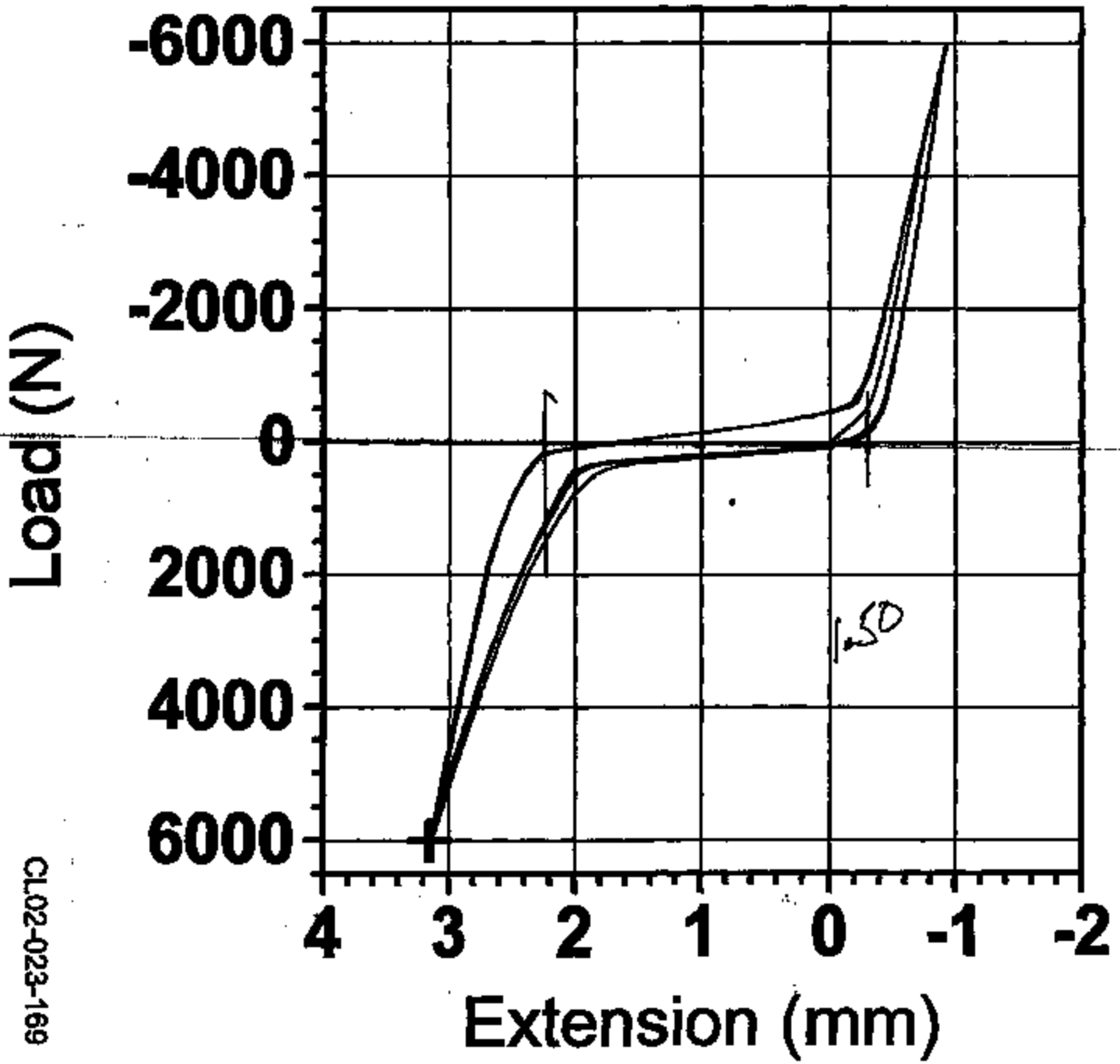

CL02-023-169

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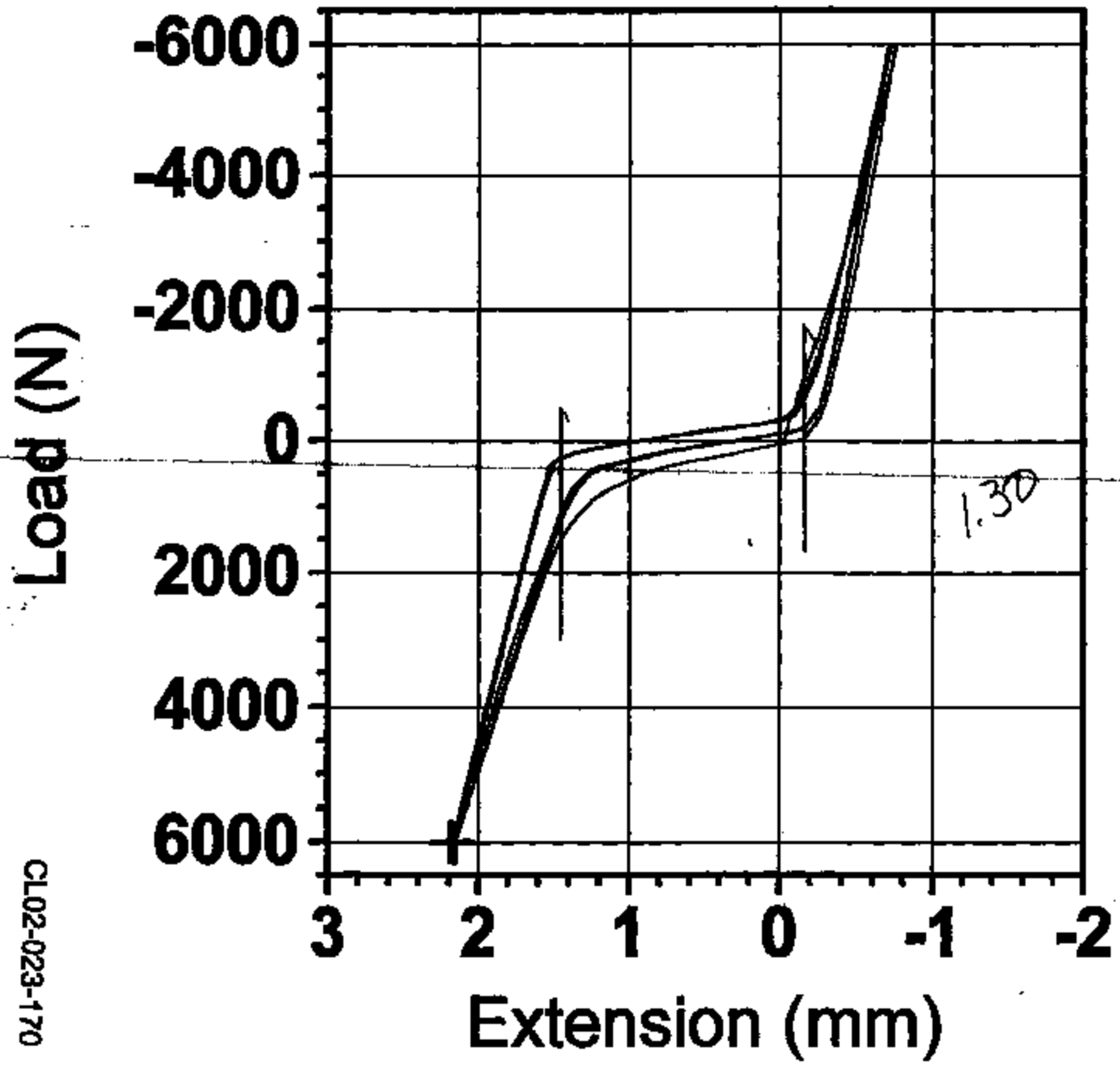

CL02-023-170

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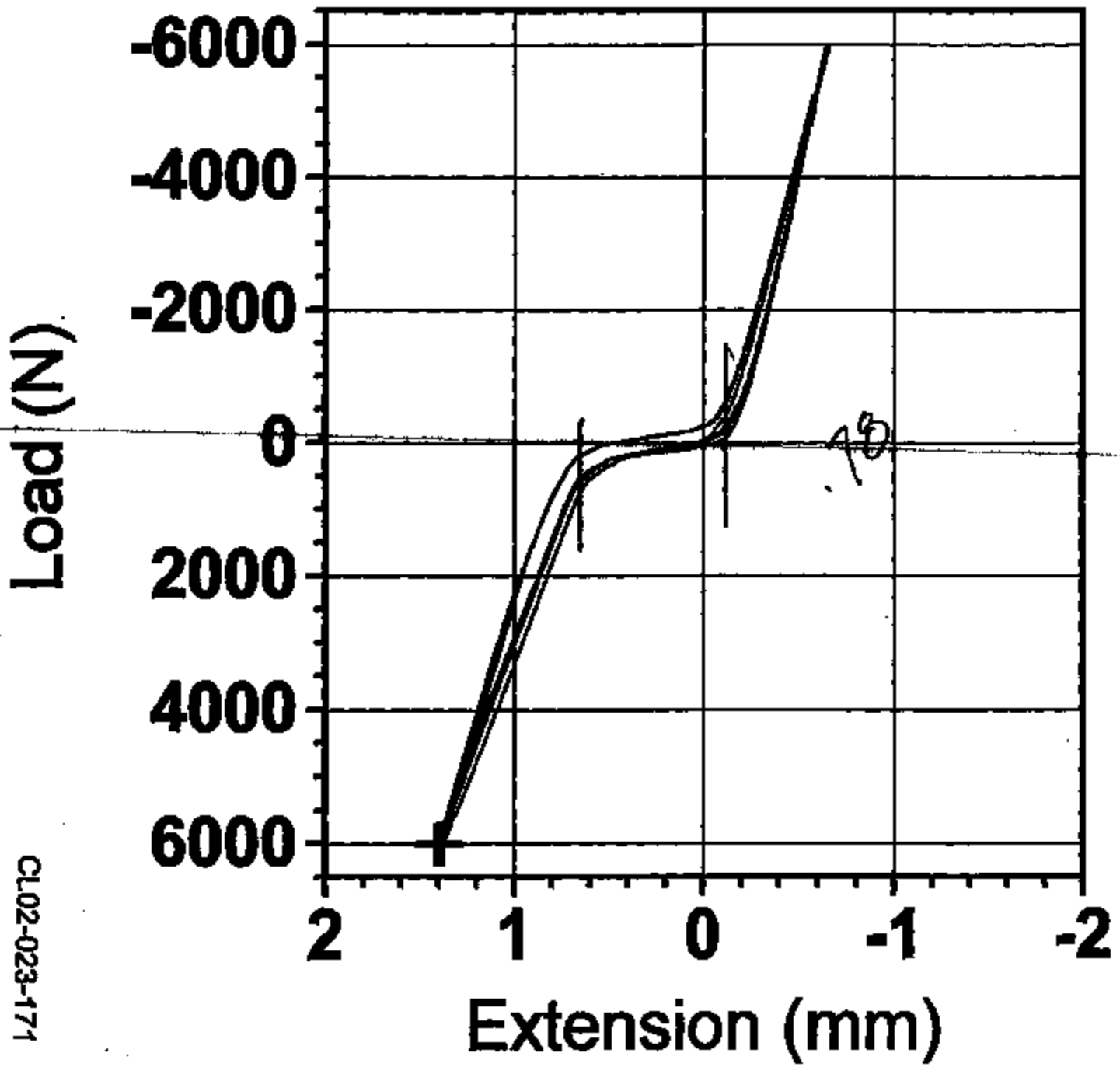

CL02-023-171

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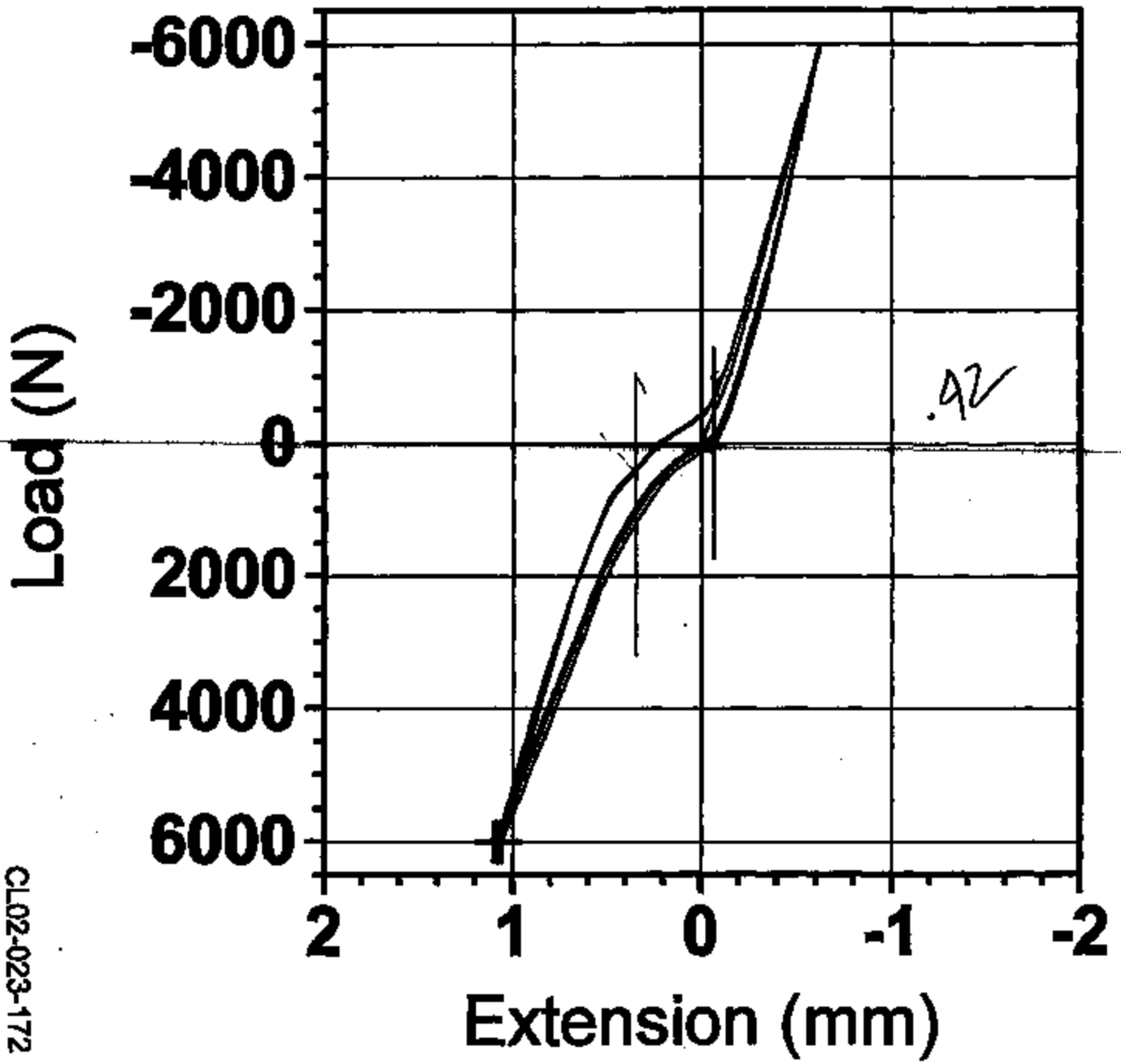

CL02-023-172

PAGE NO. 72 OF 59

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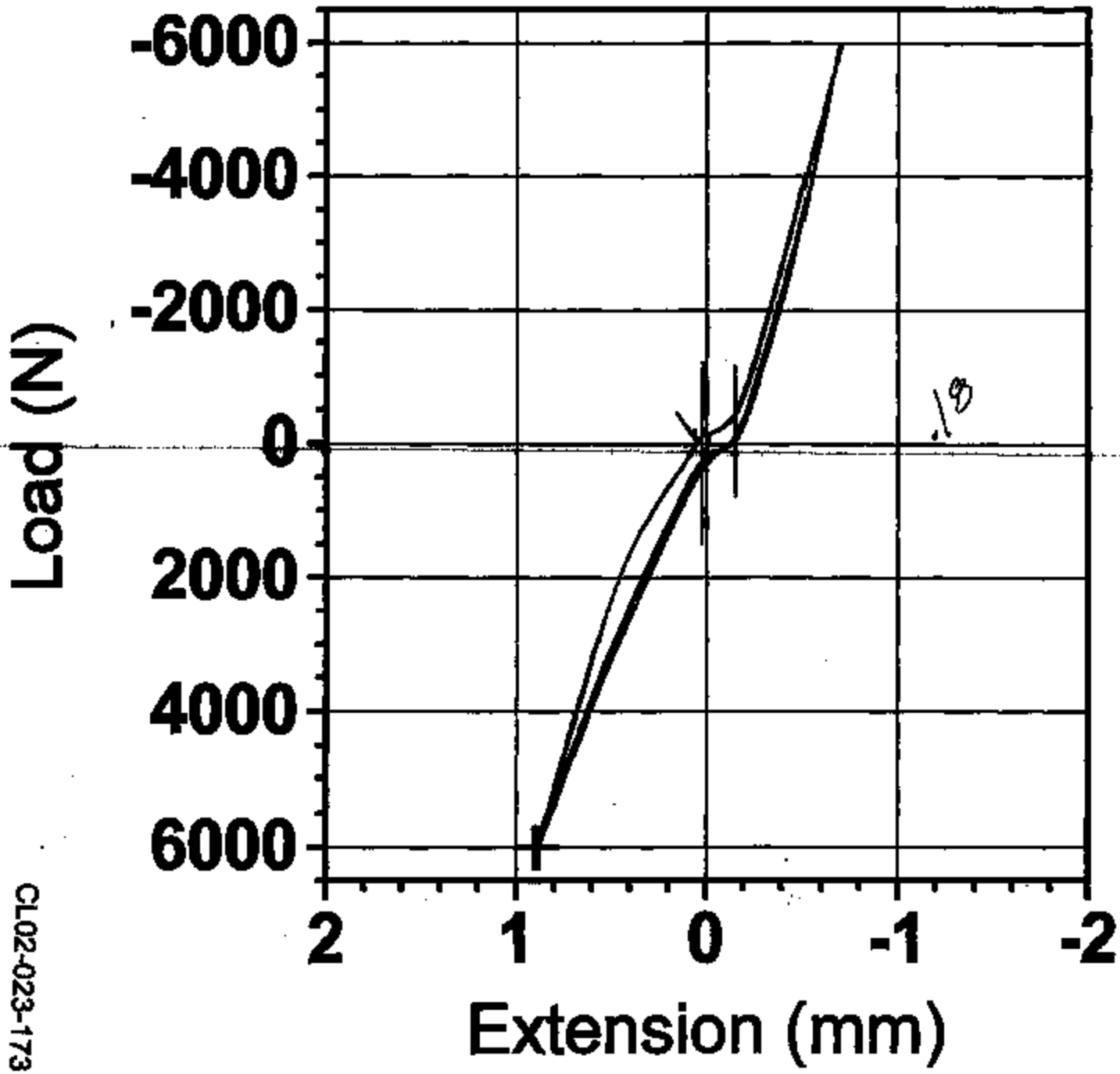

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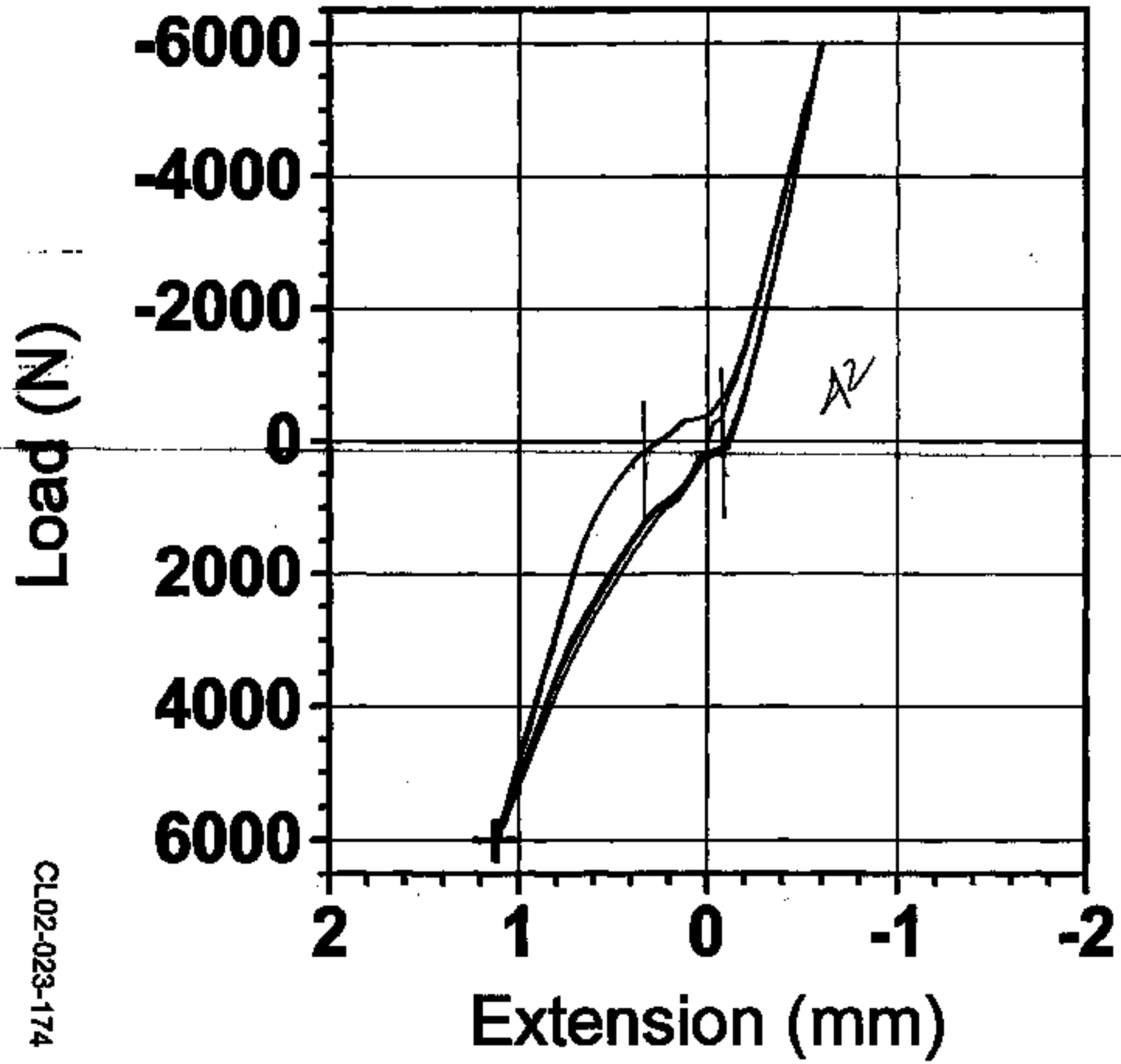

CL02-023-174

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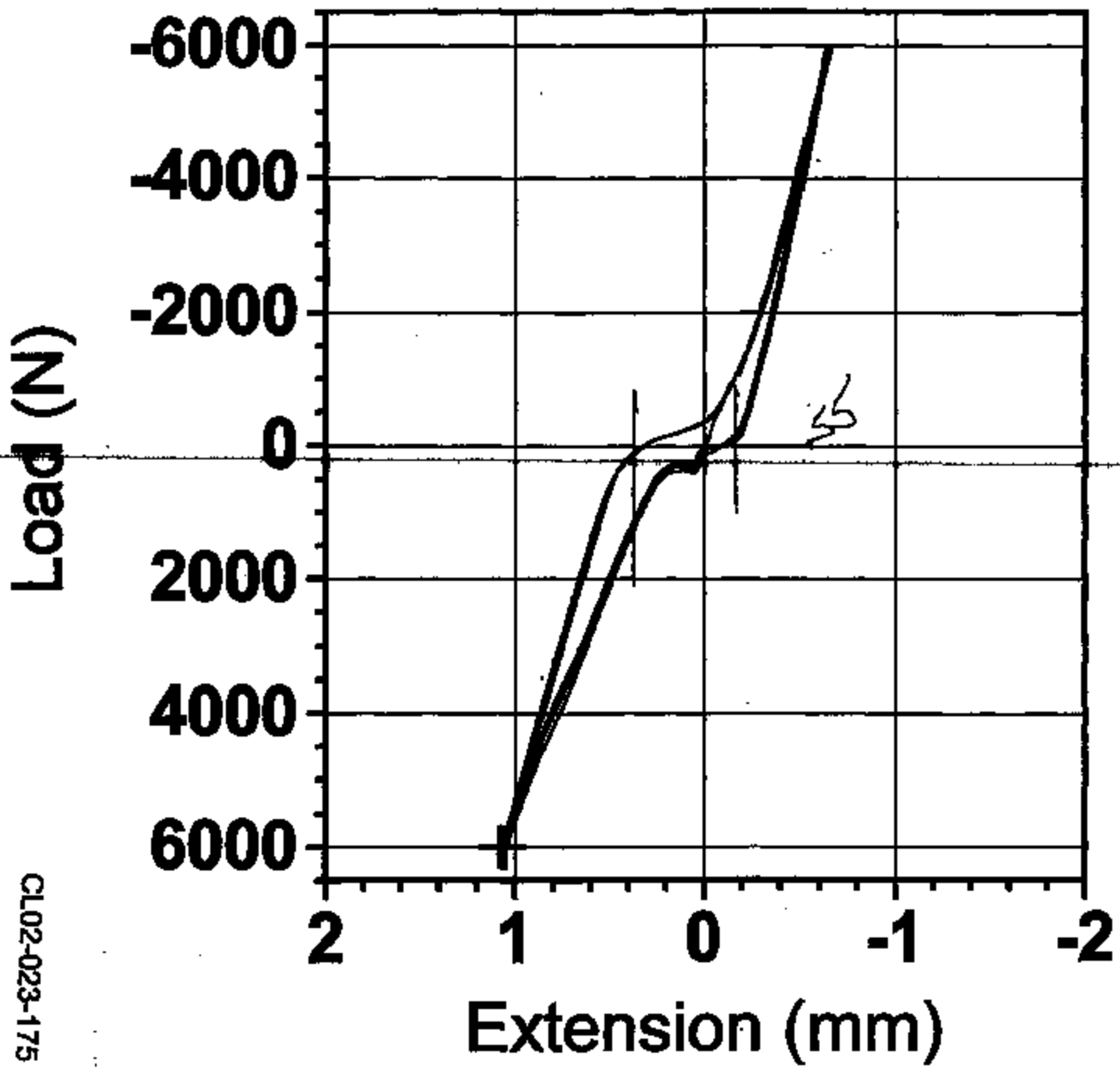

CL02-023-175

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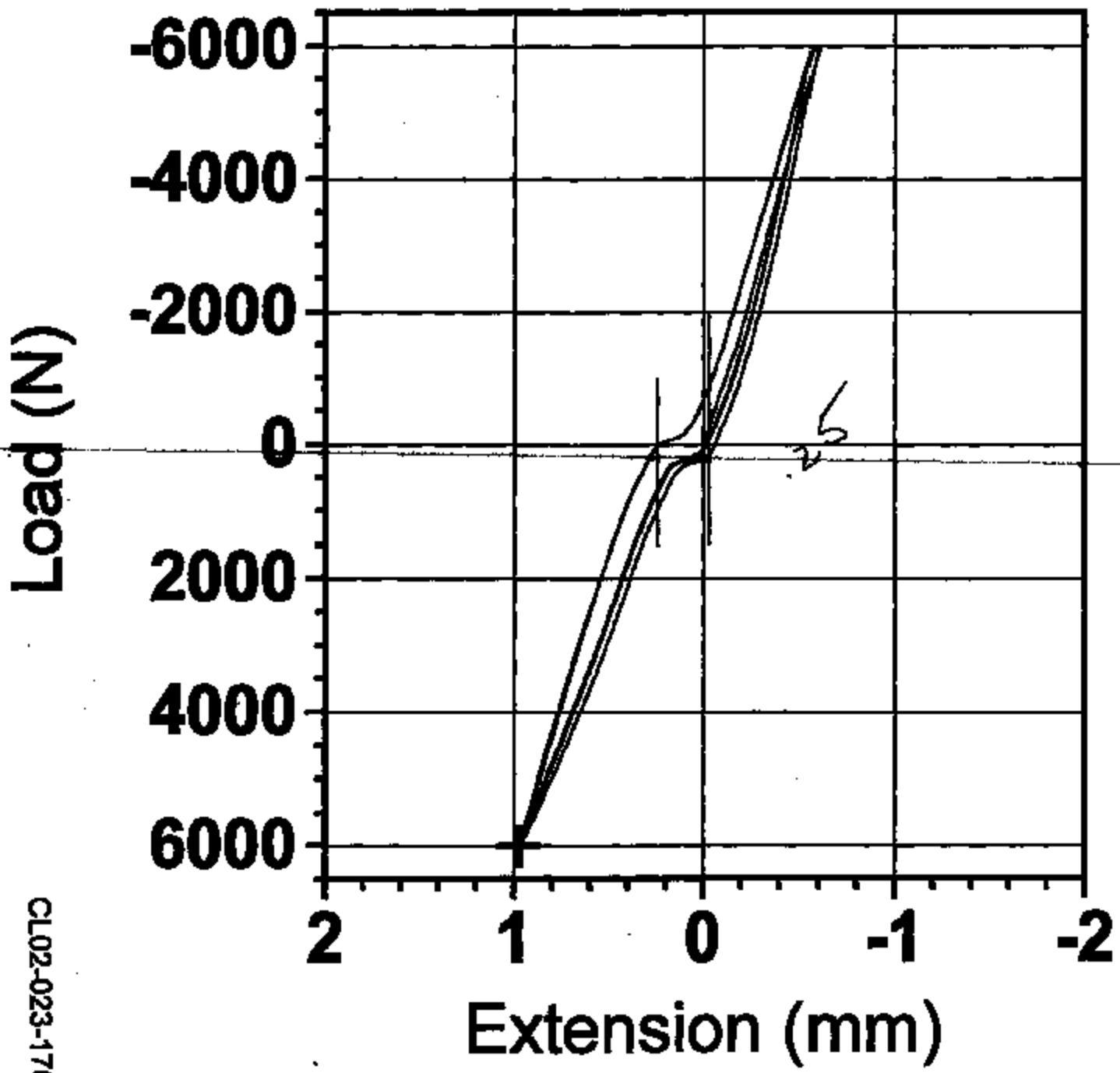

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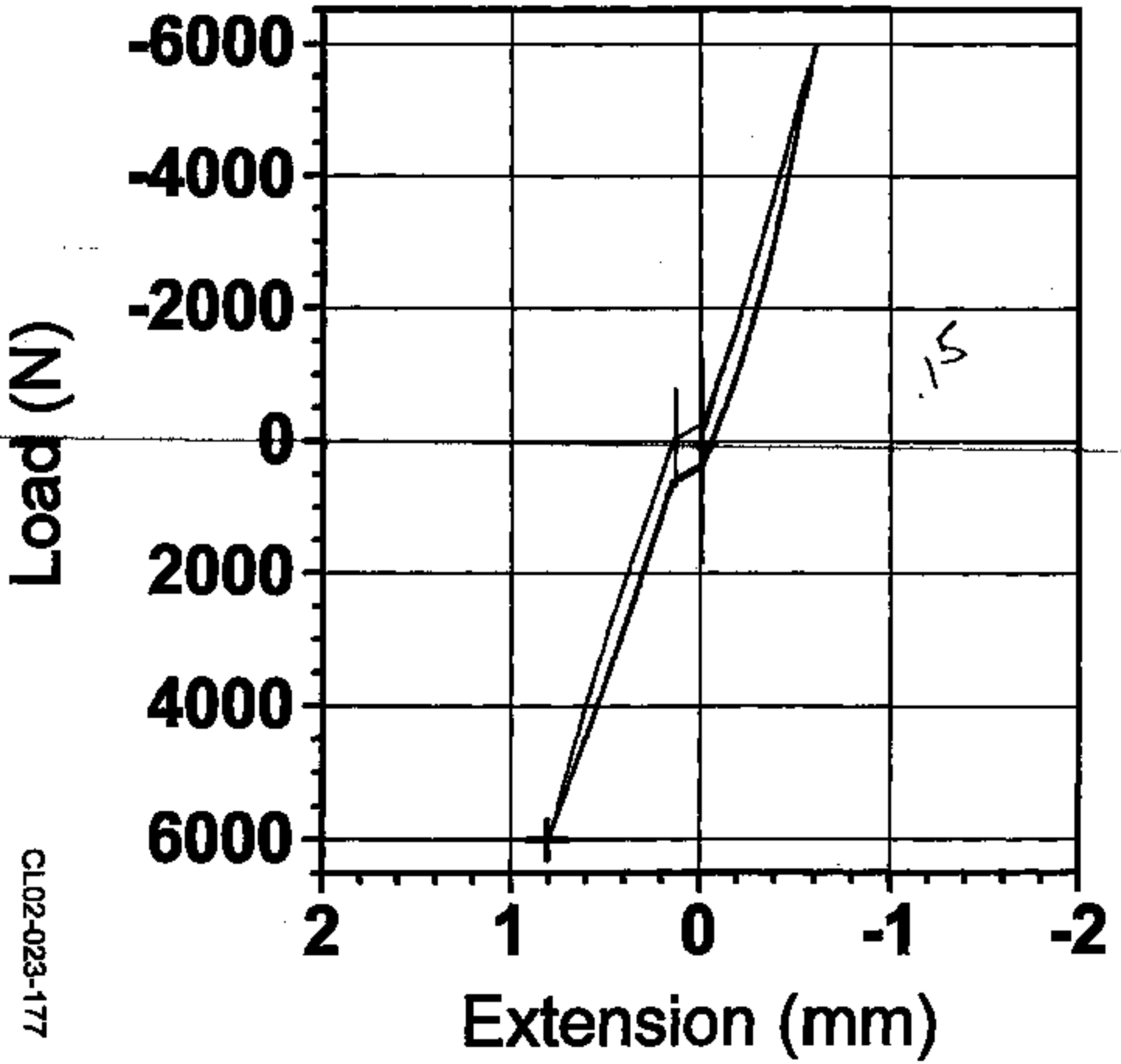

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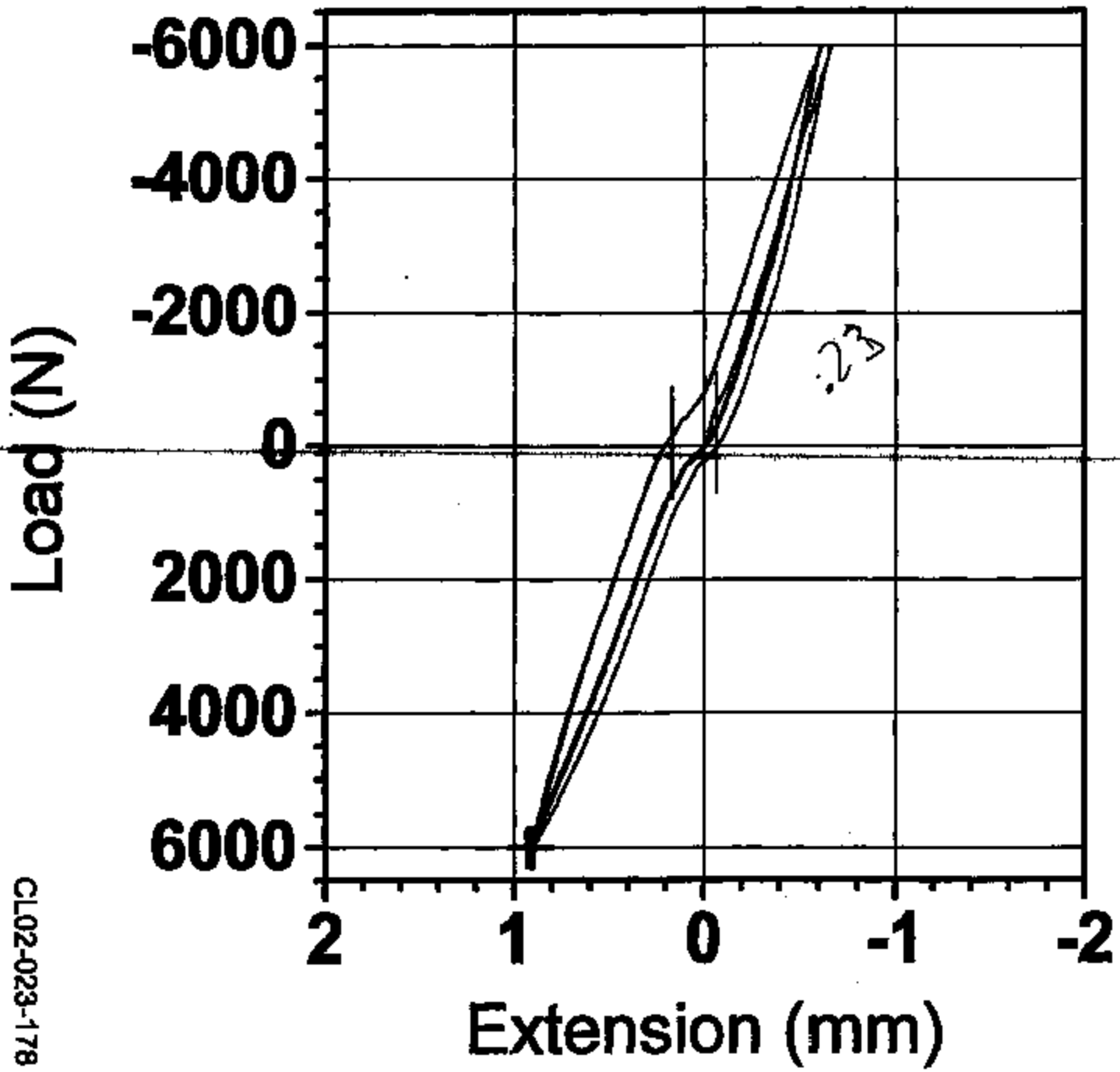

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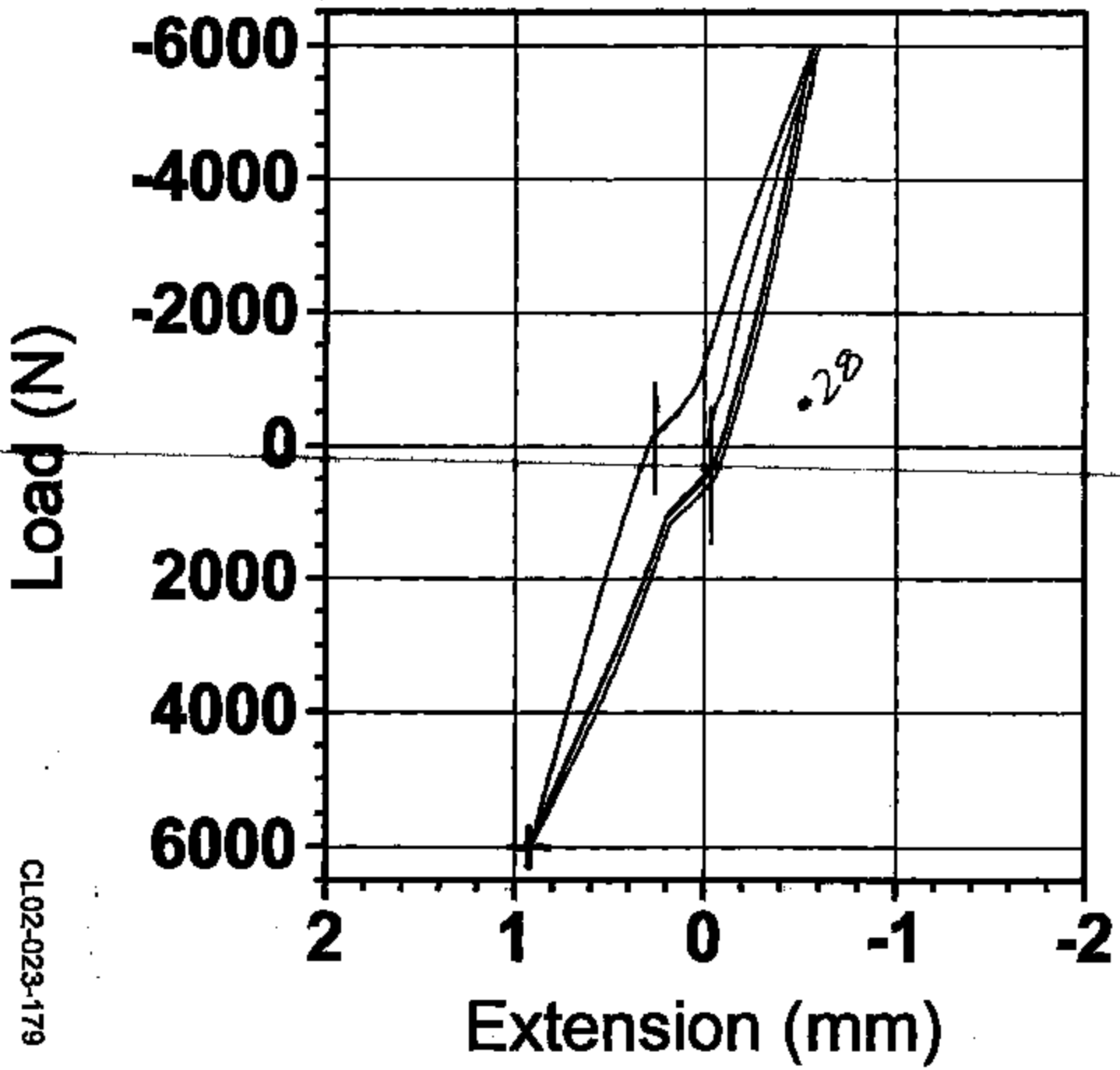

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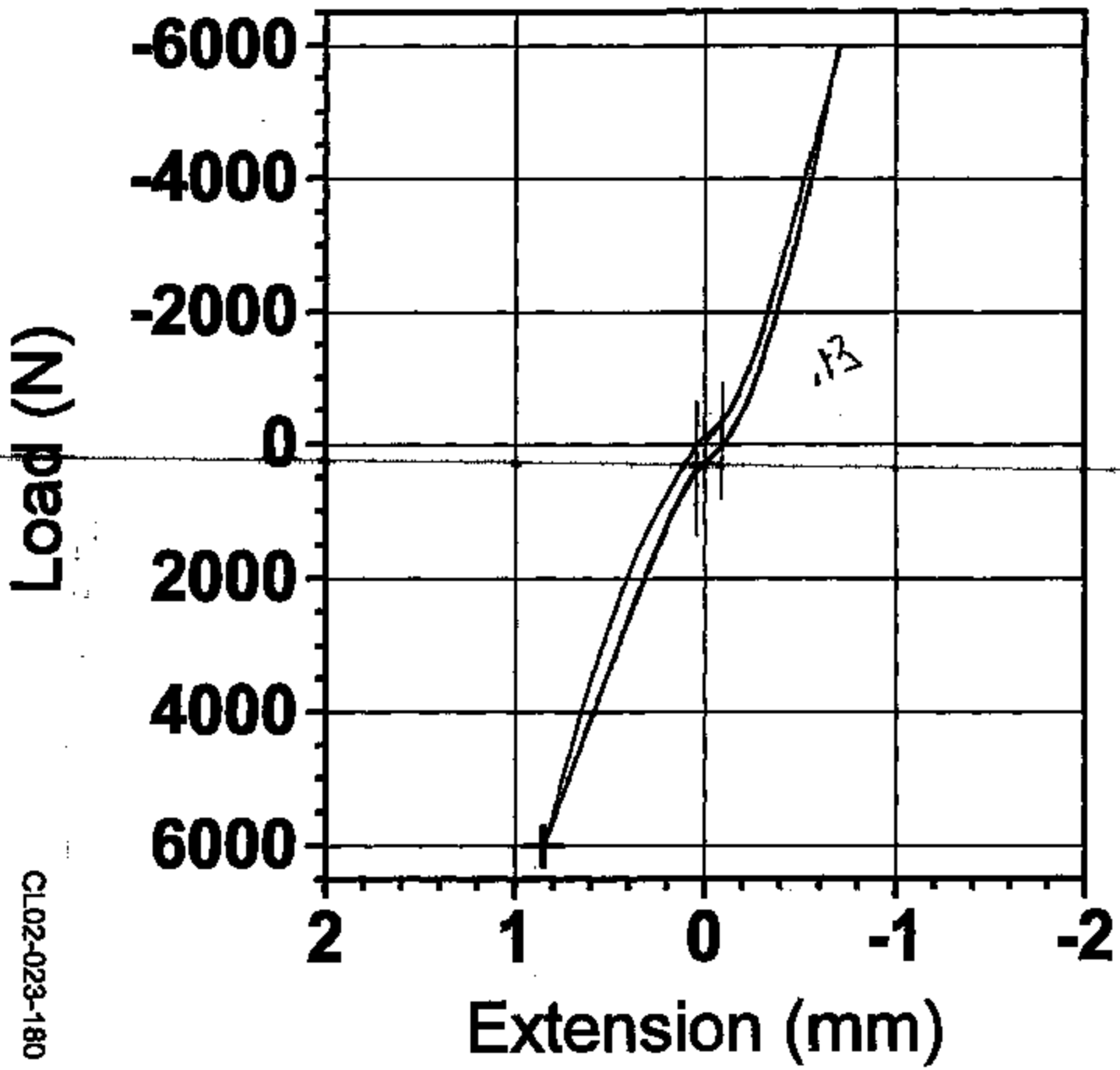

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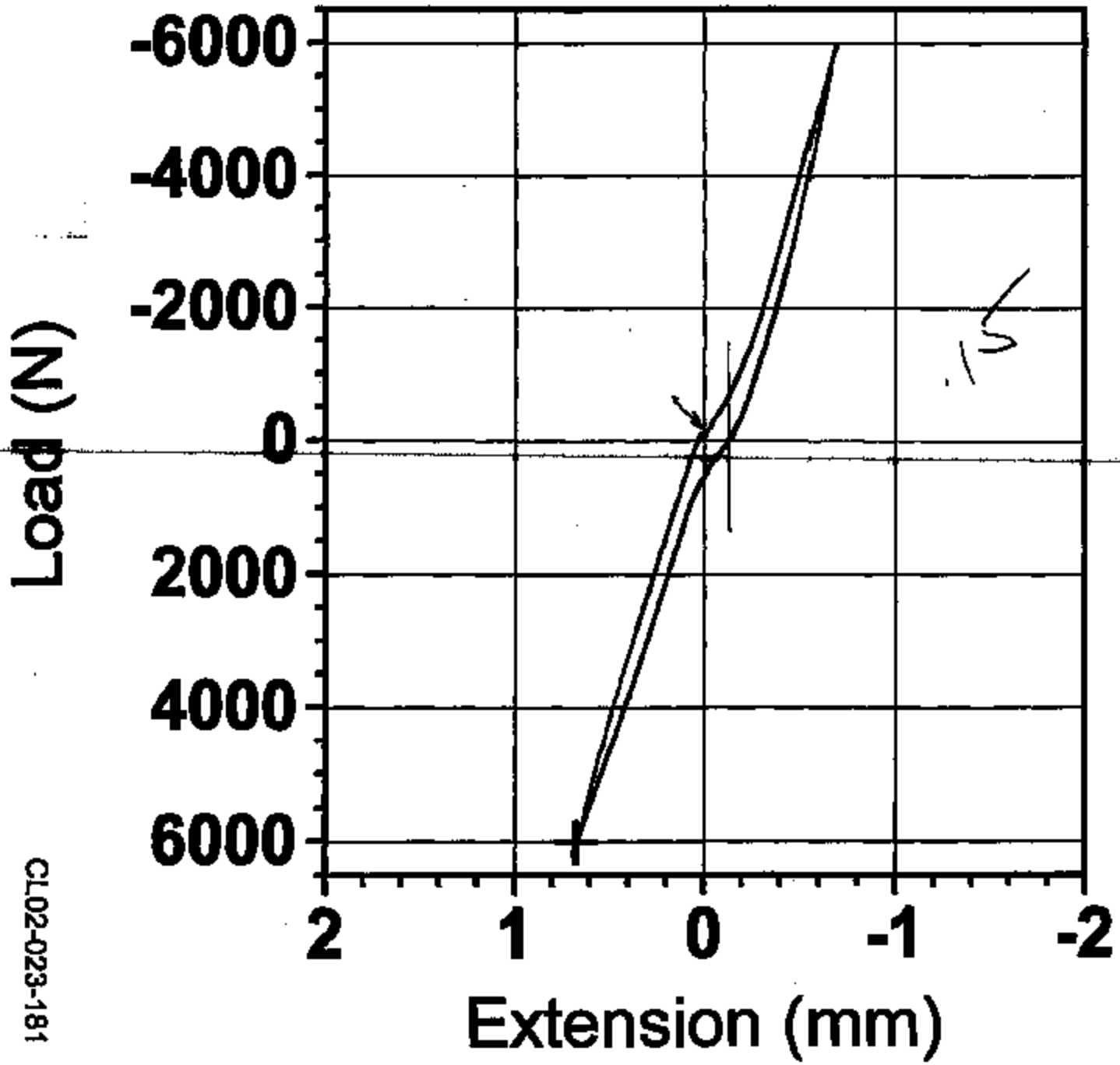

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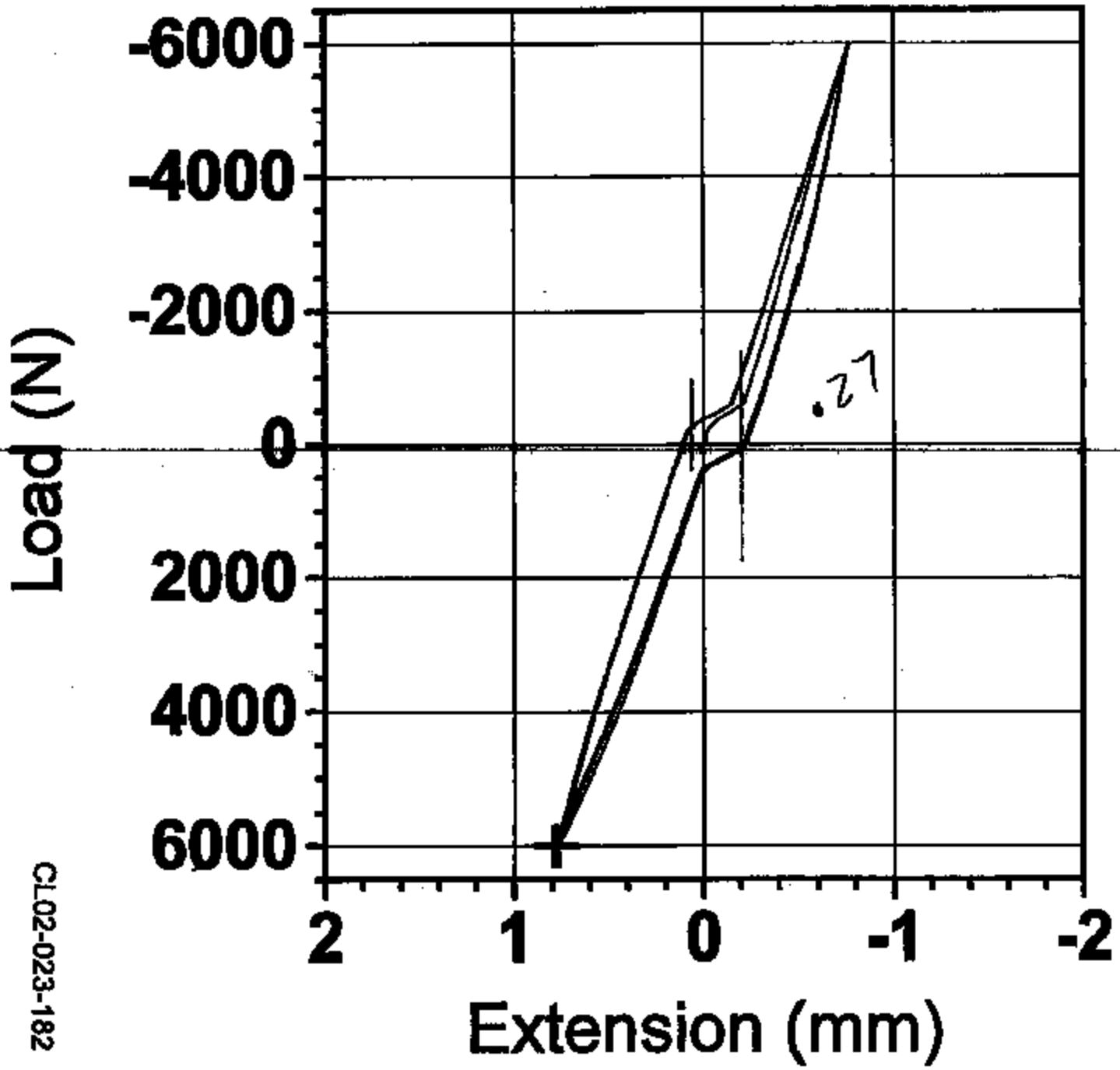

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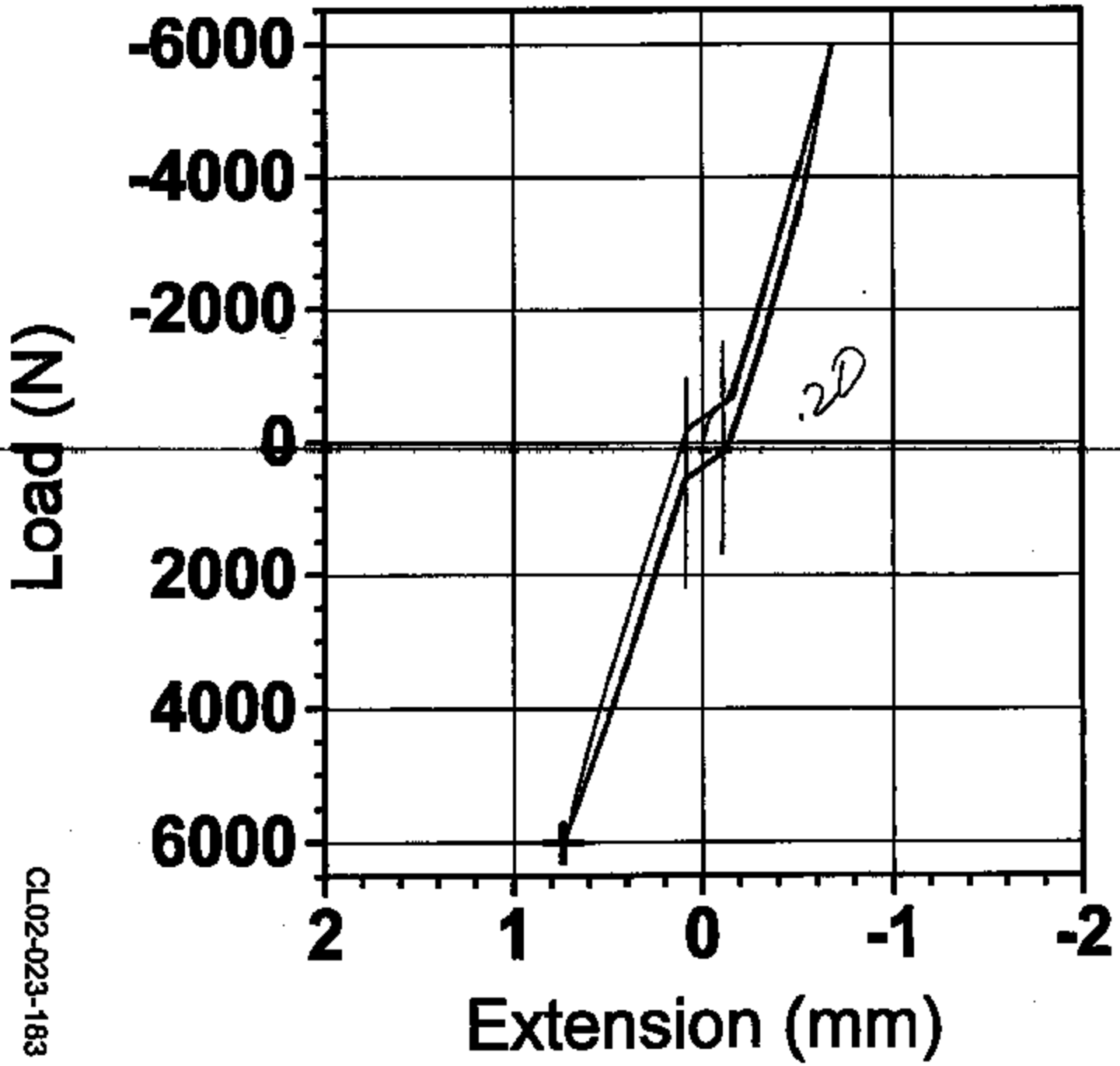

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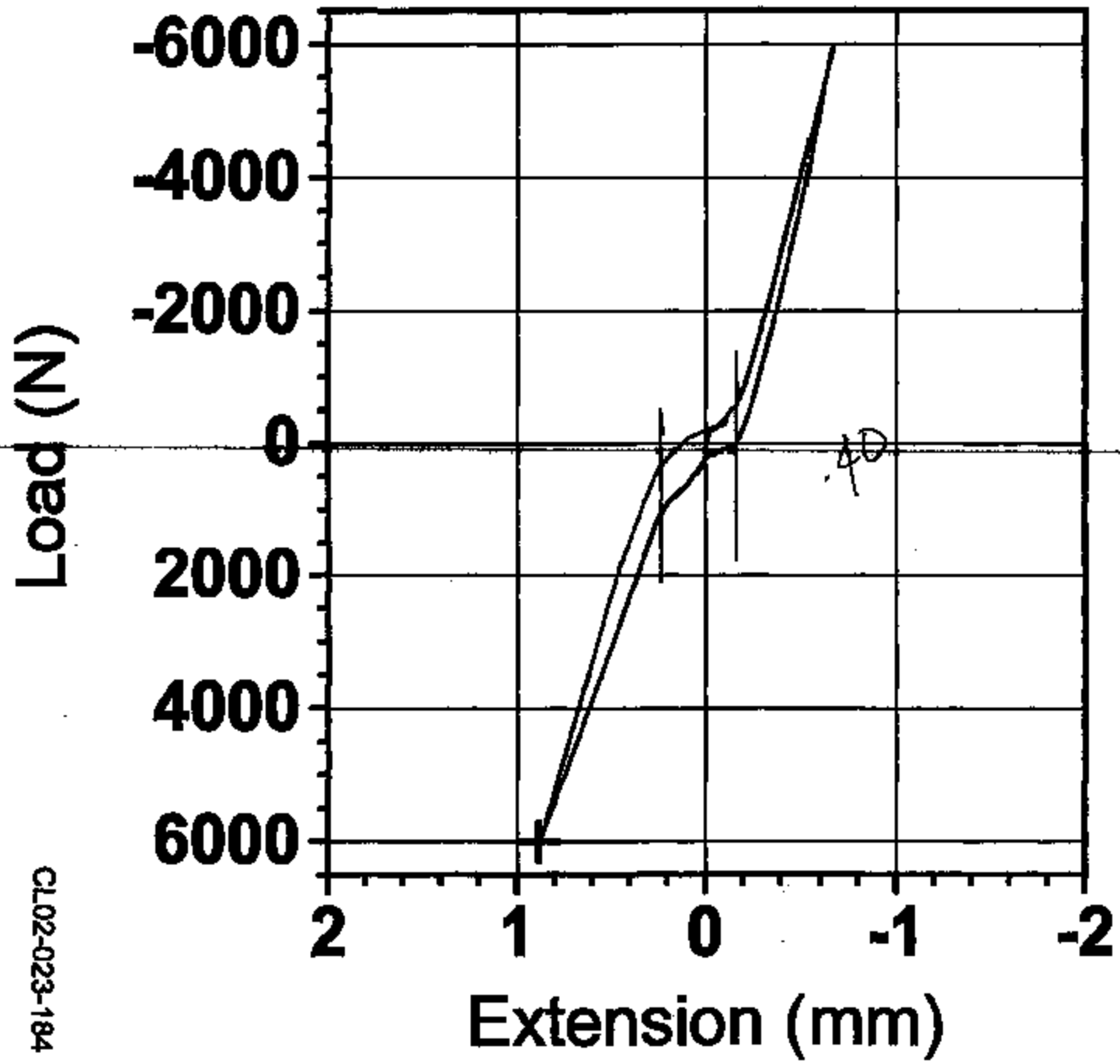

CL02-023-184

PAGE NO. 24 OF 57

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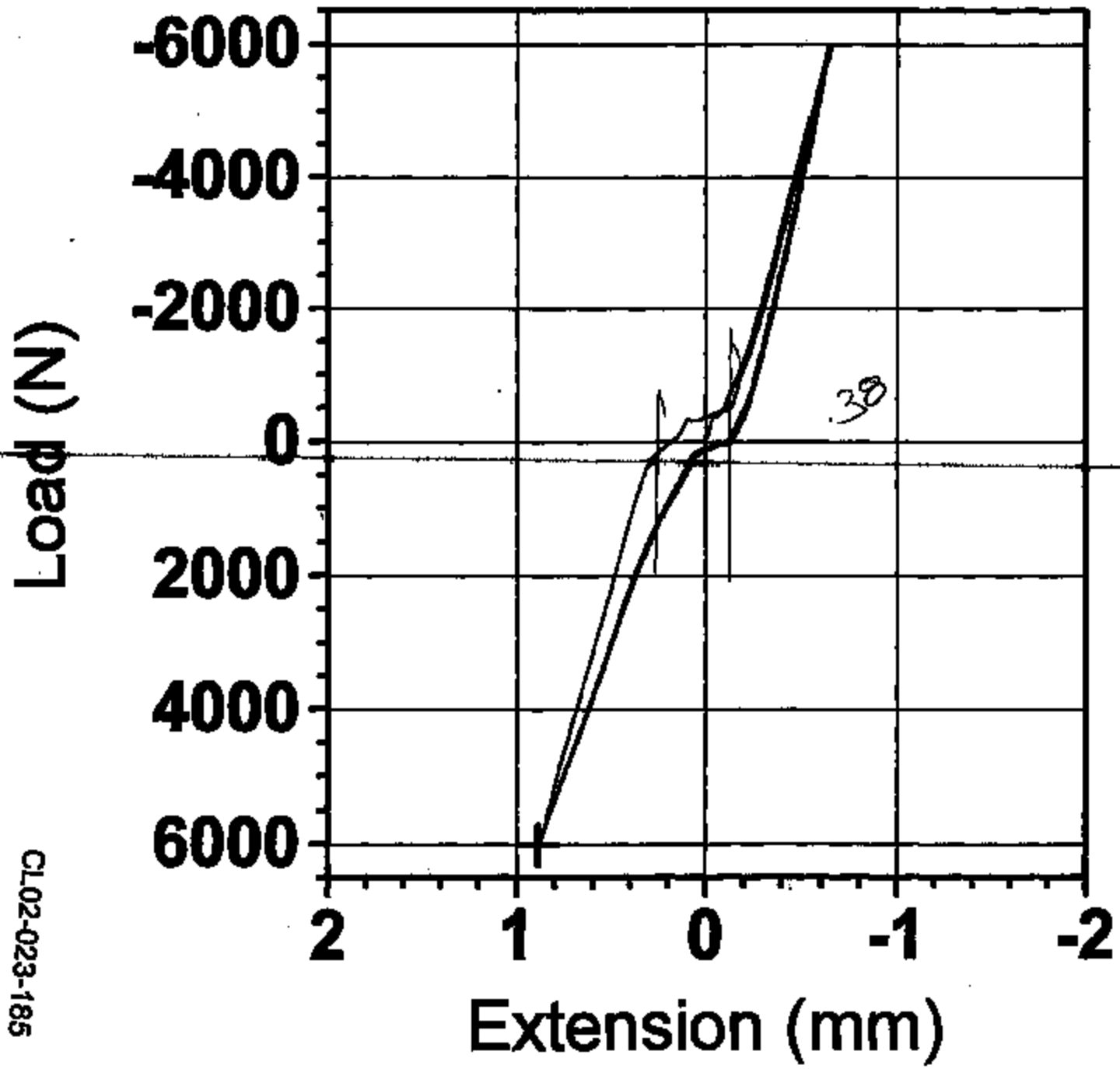

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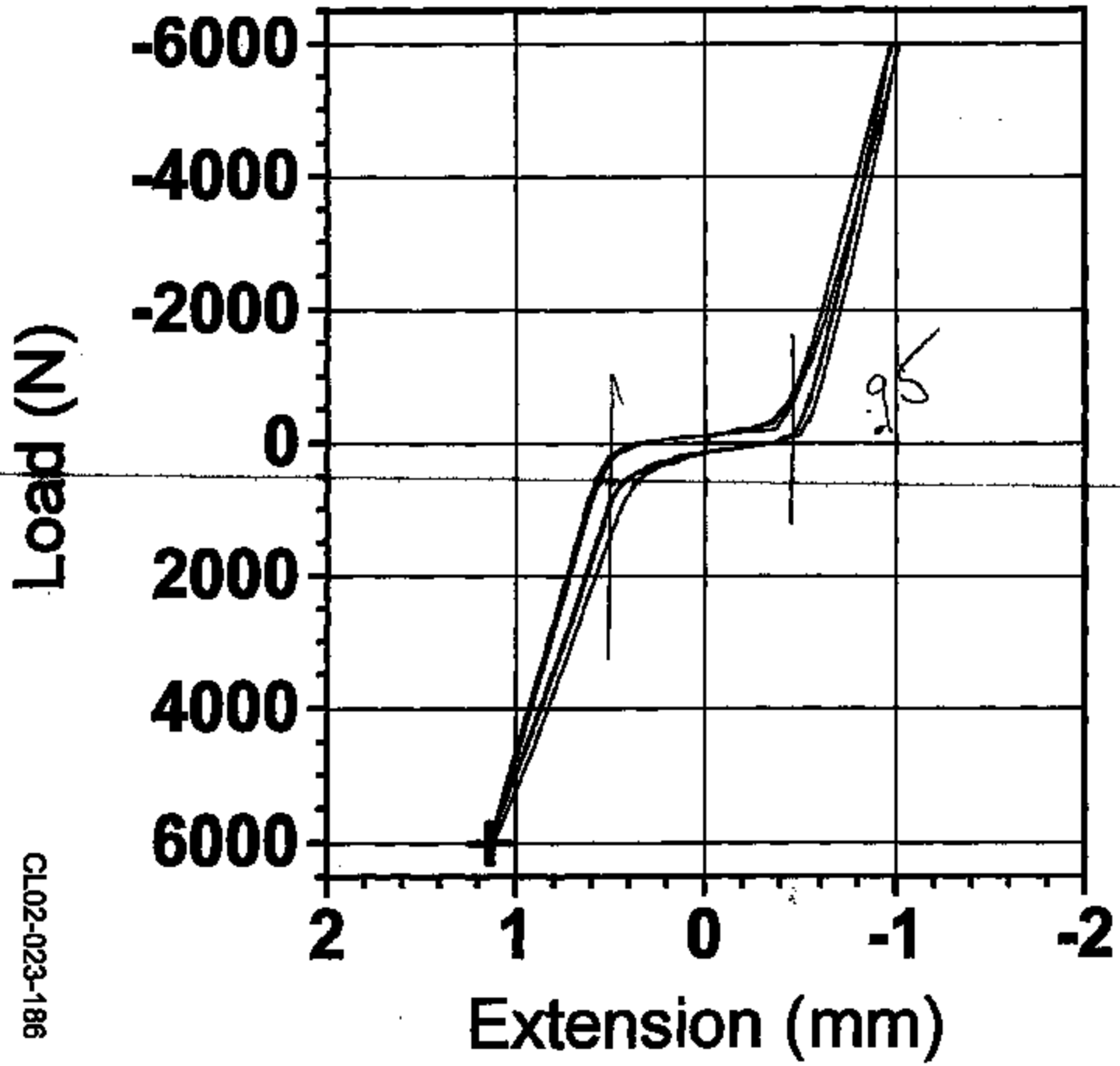

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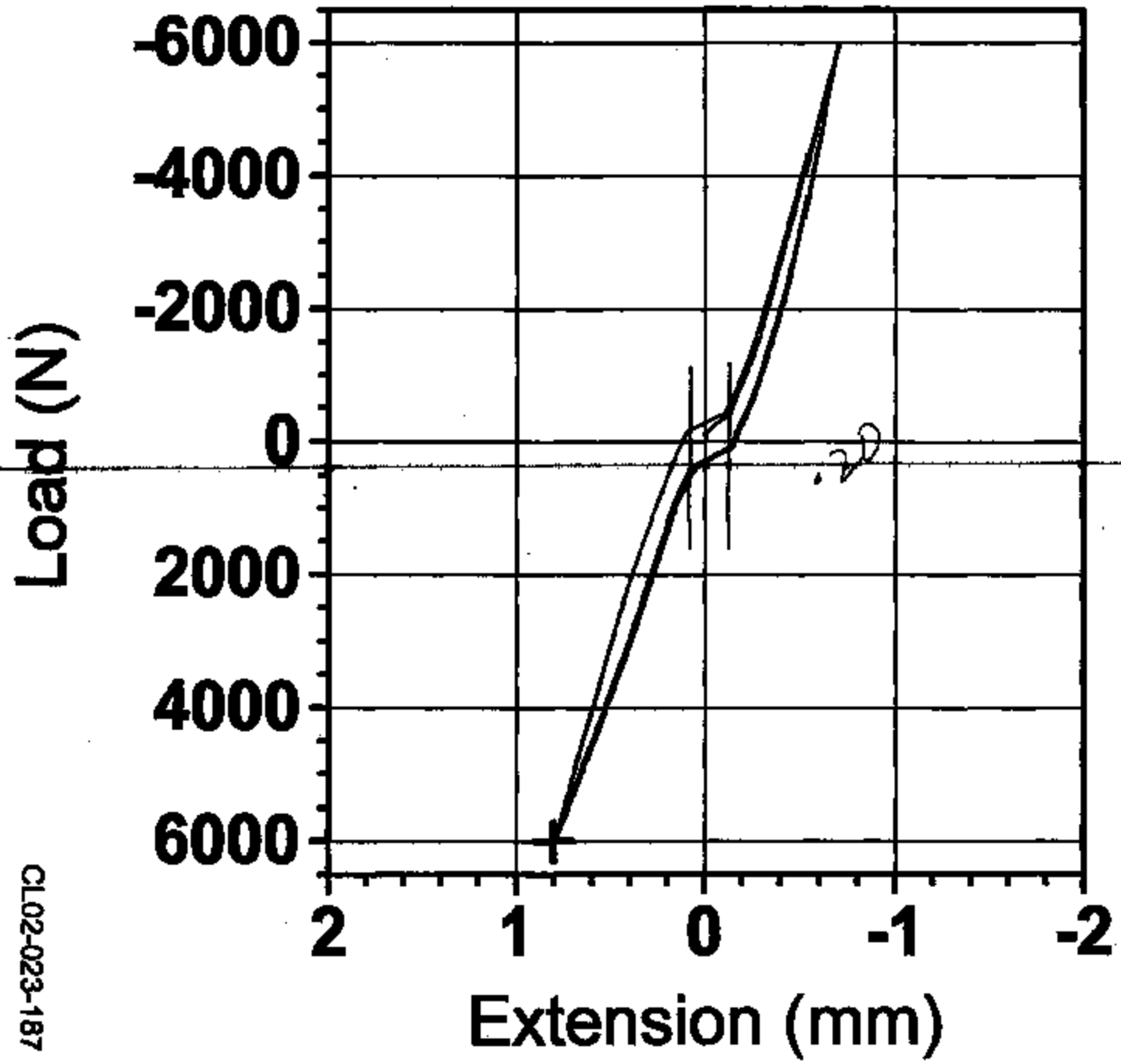

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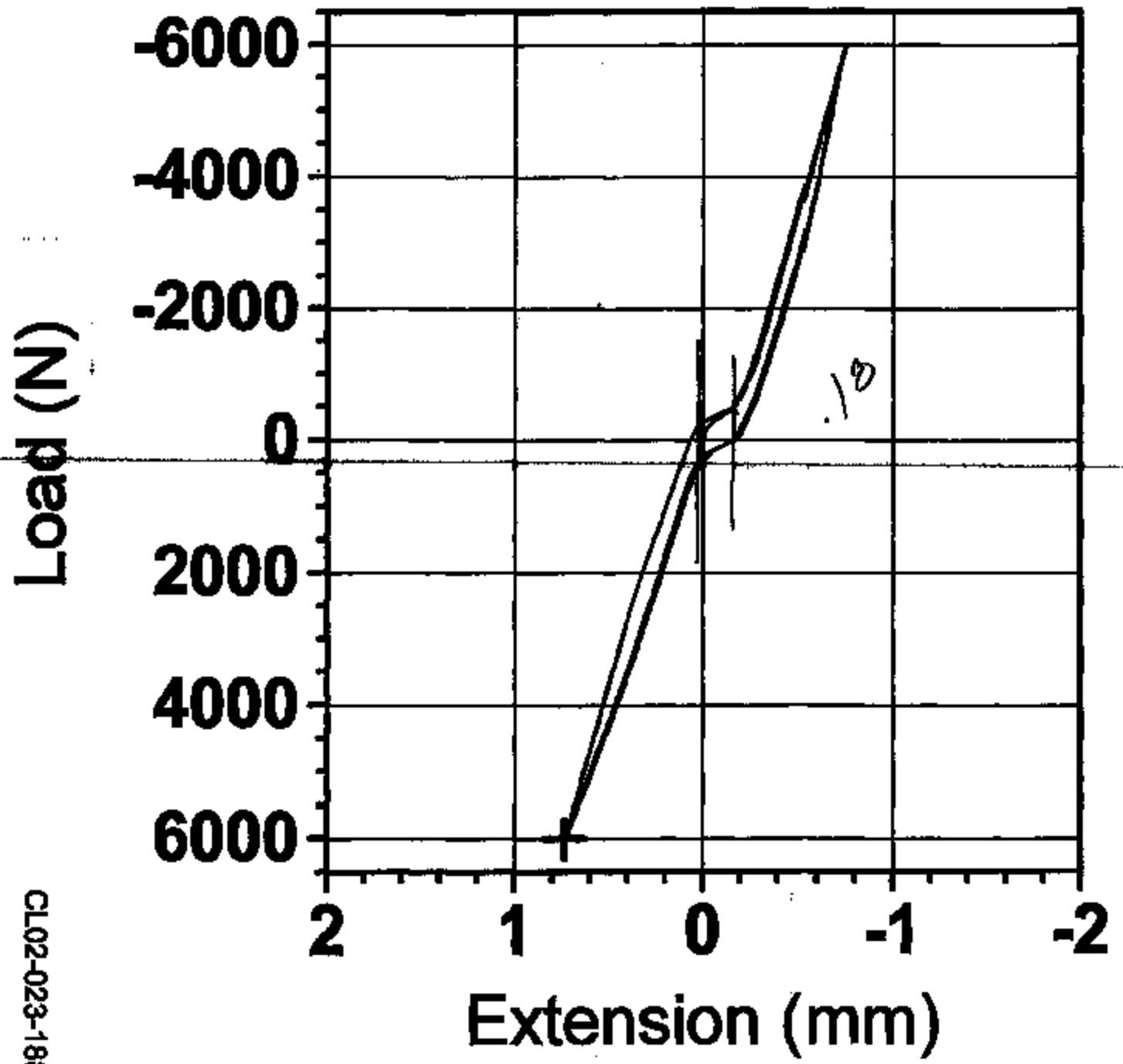

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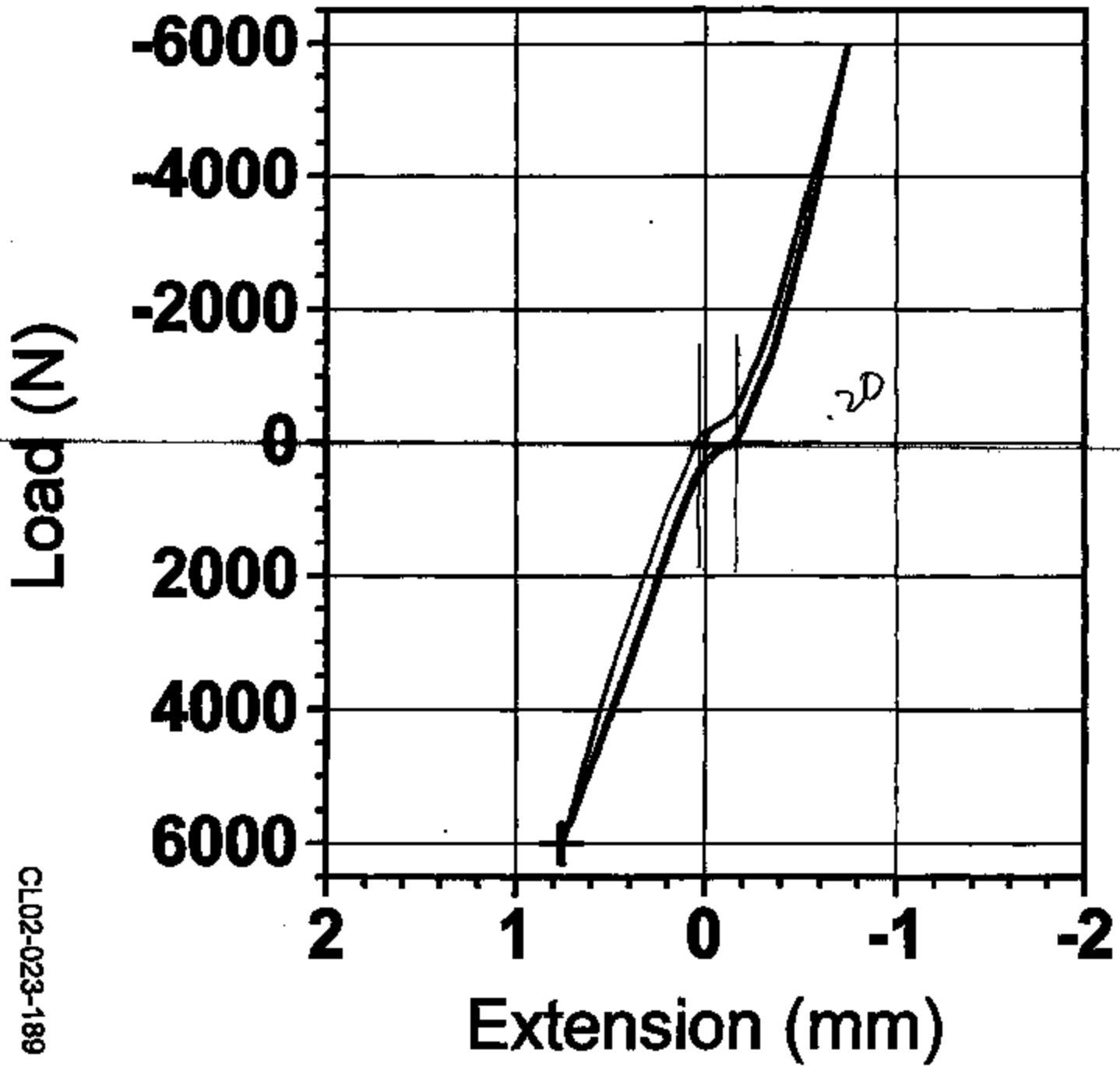

CL02-023-189

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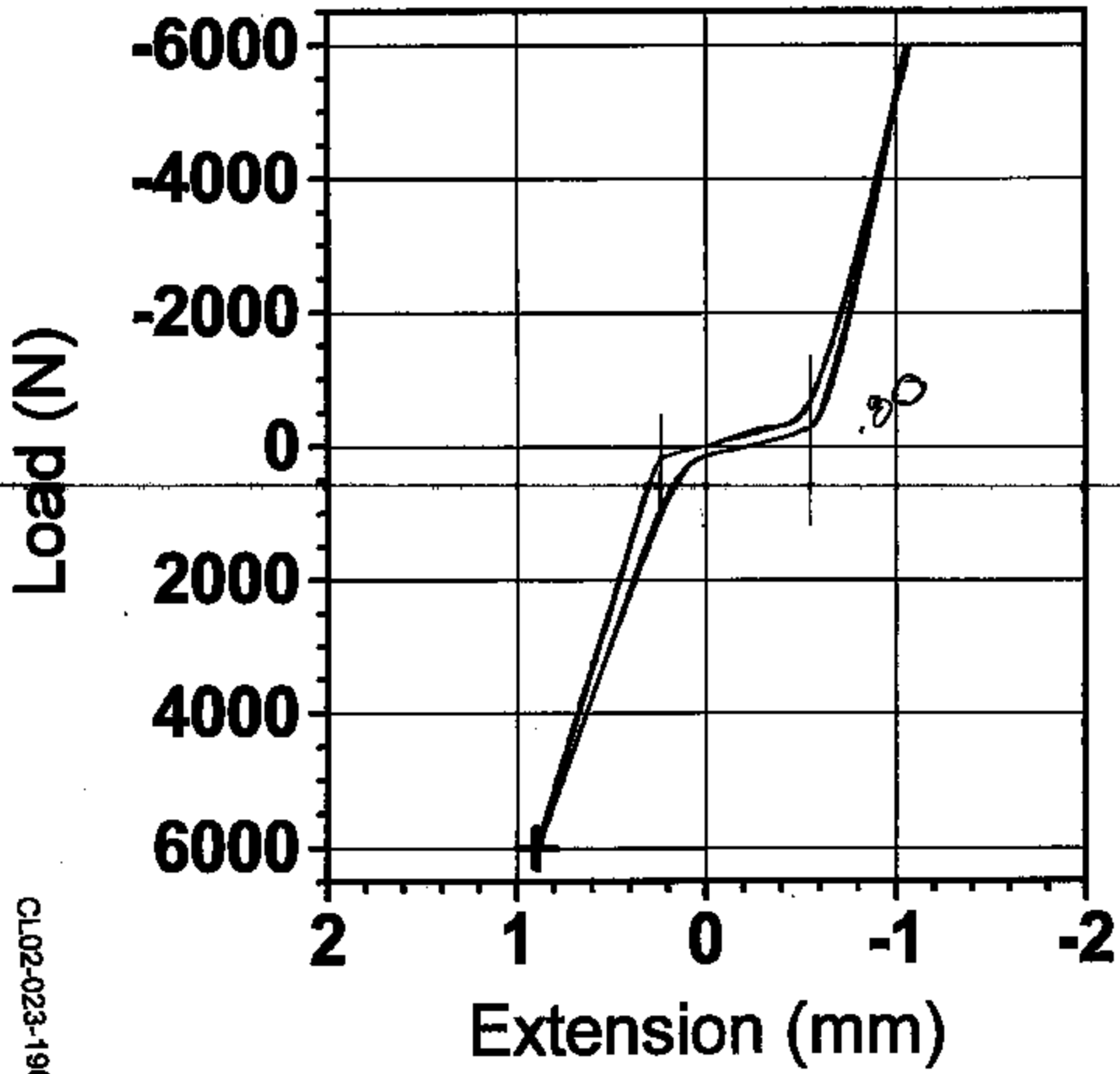

CL02-023-190

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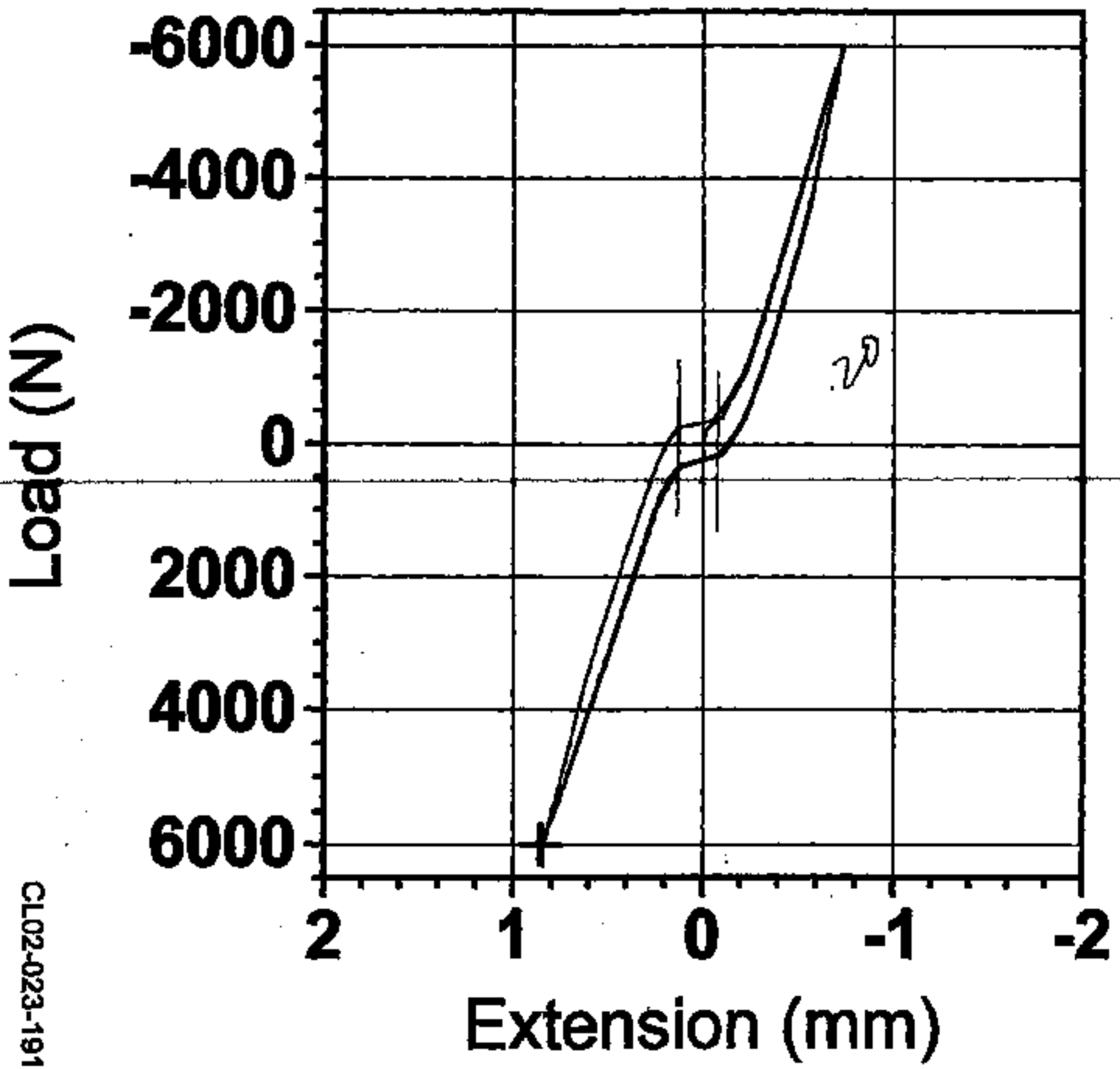

CL02-023-191

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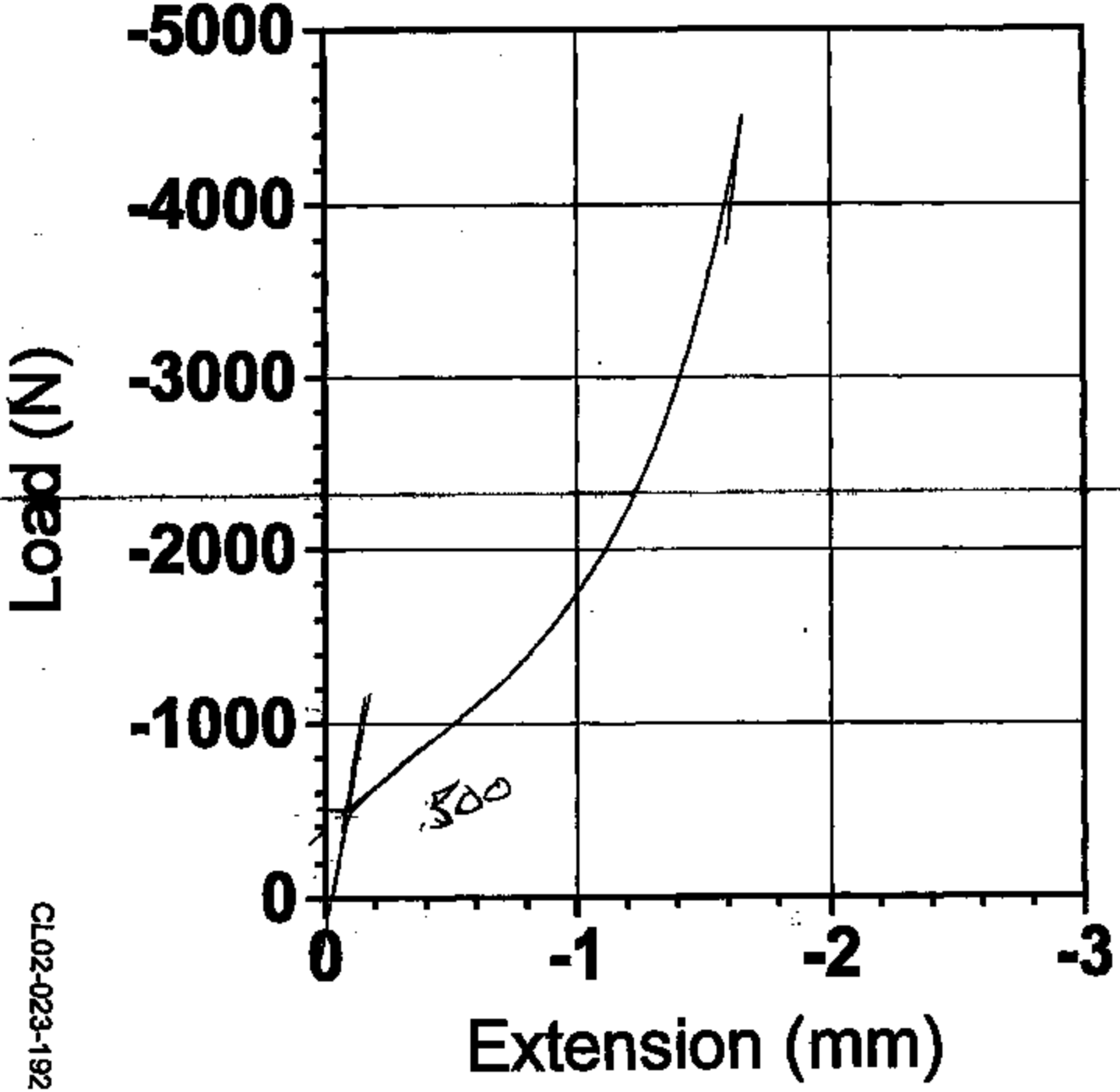

CL02-023-192

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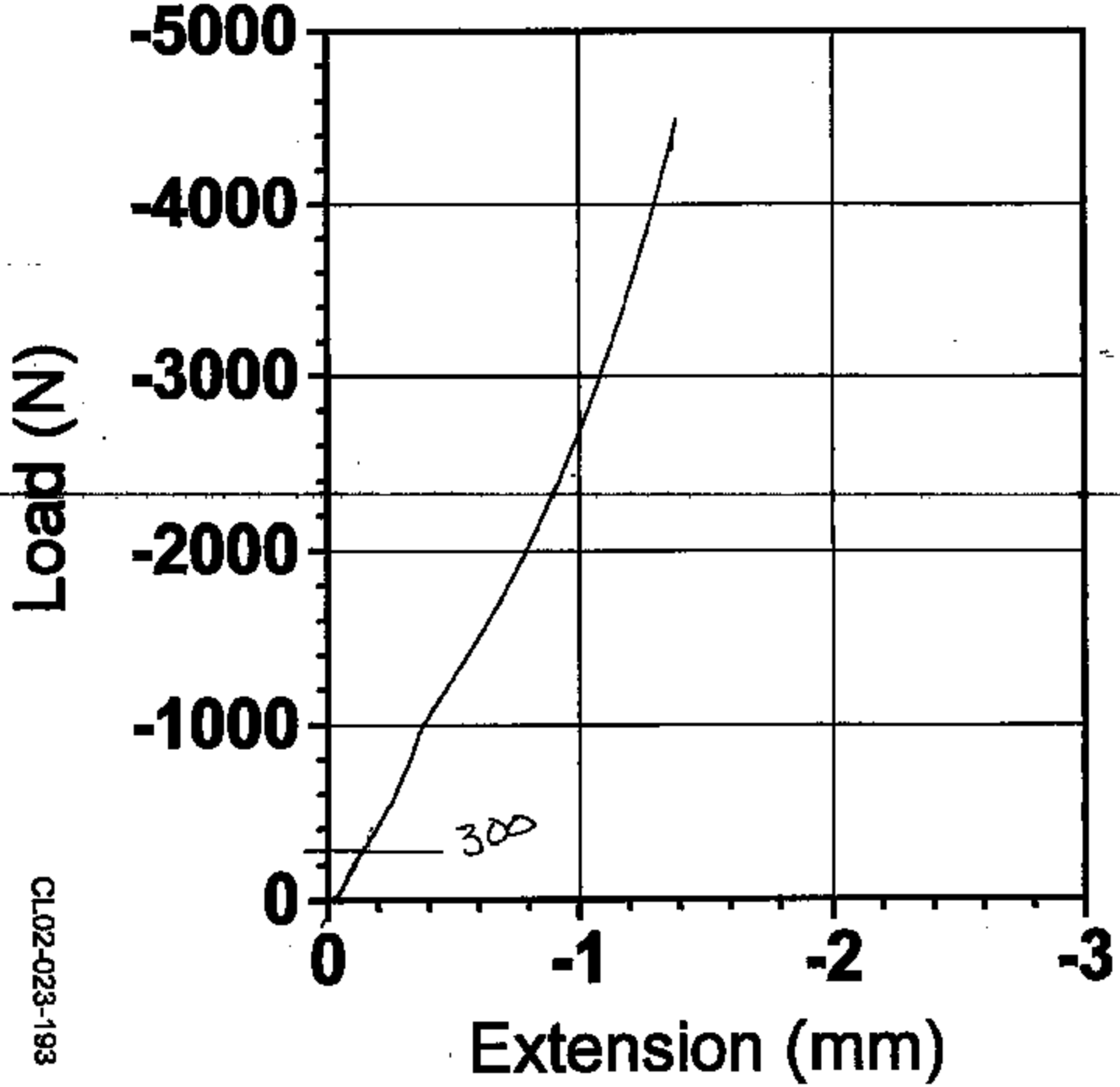

CL02-023-193

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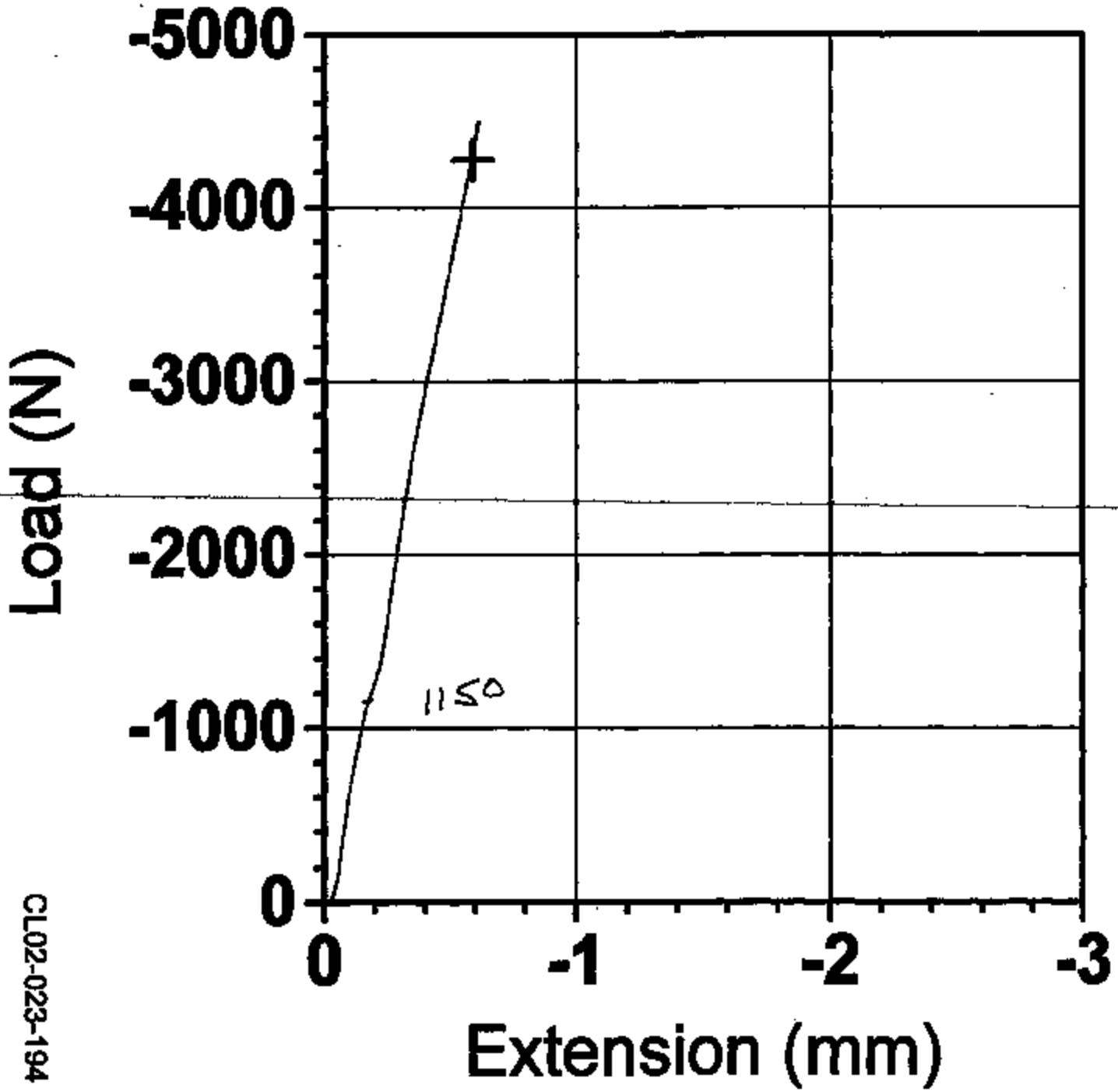

CL02-023-194

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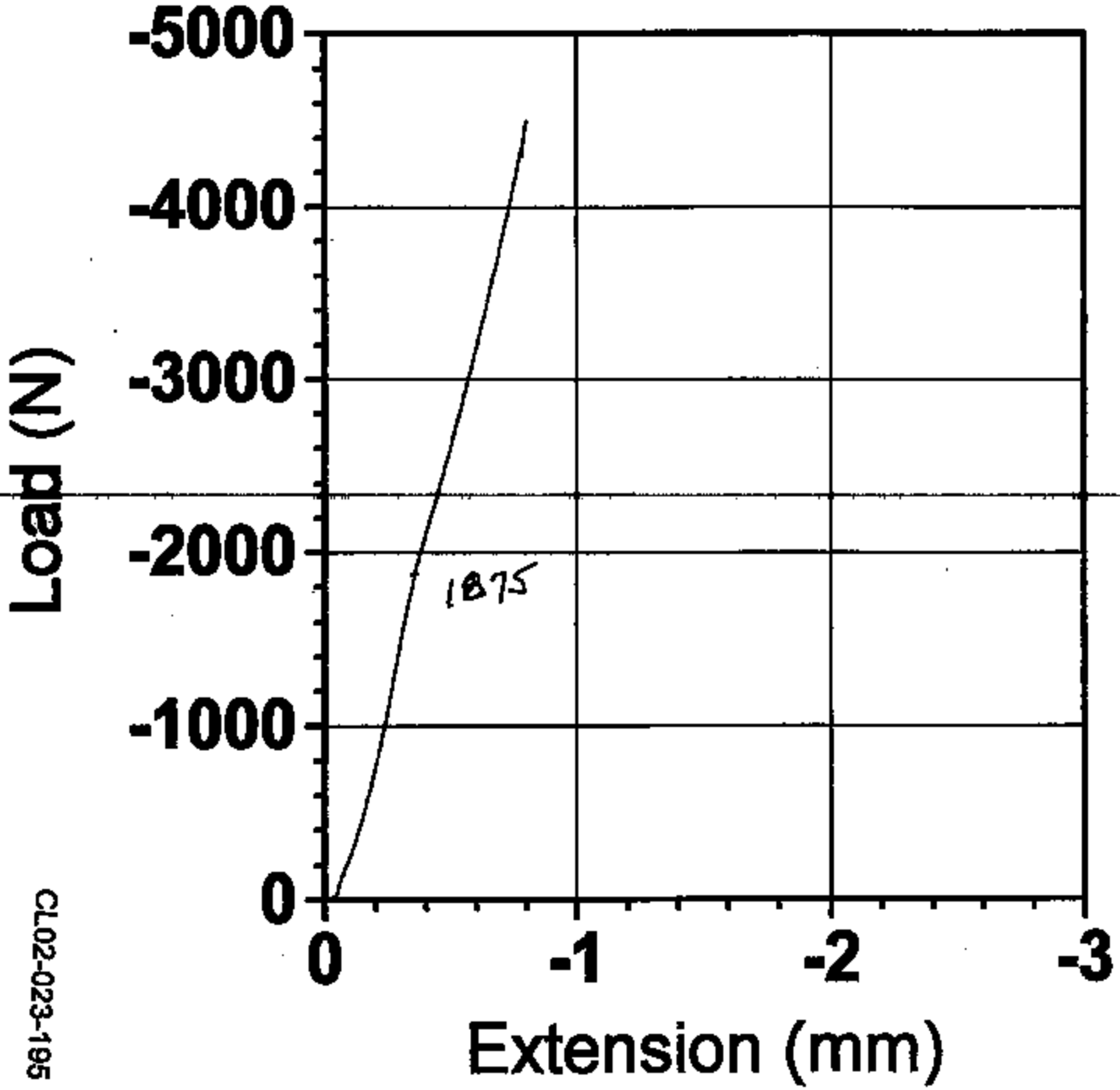

CL02-023-195

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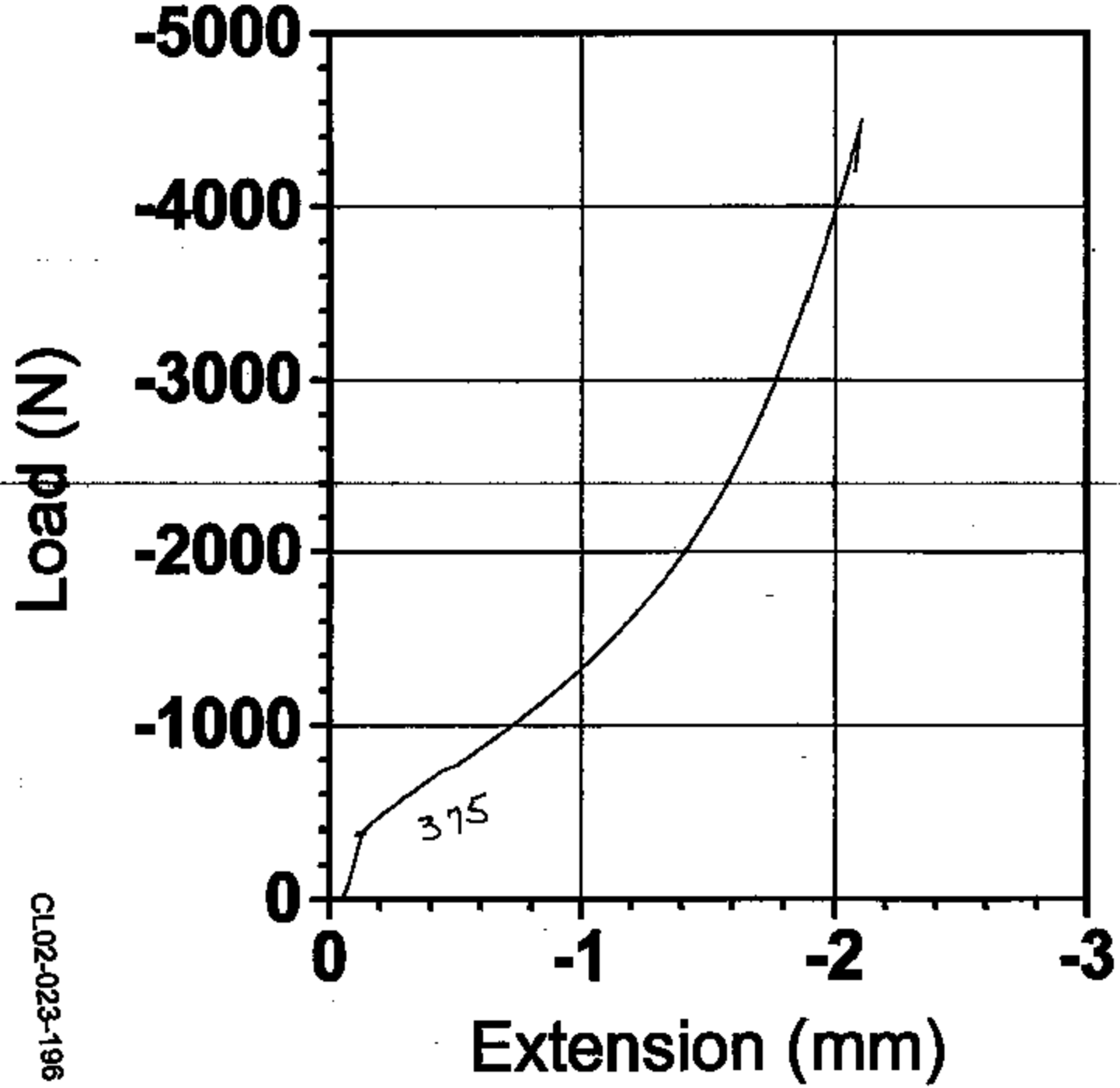

CL02-023-196

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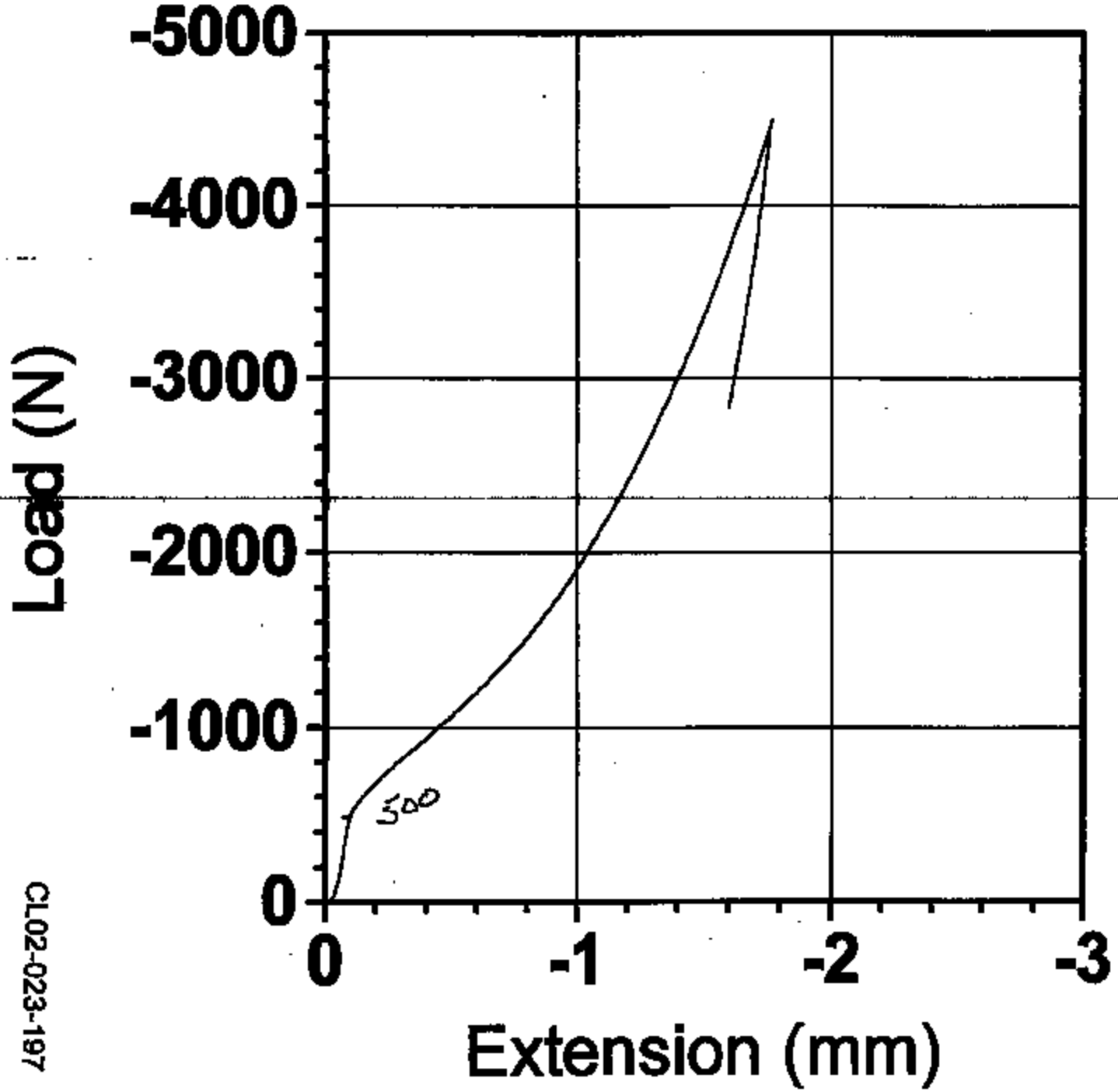

CL02-023-197

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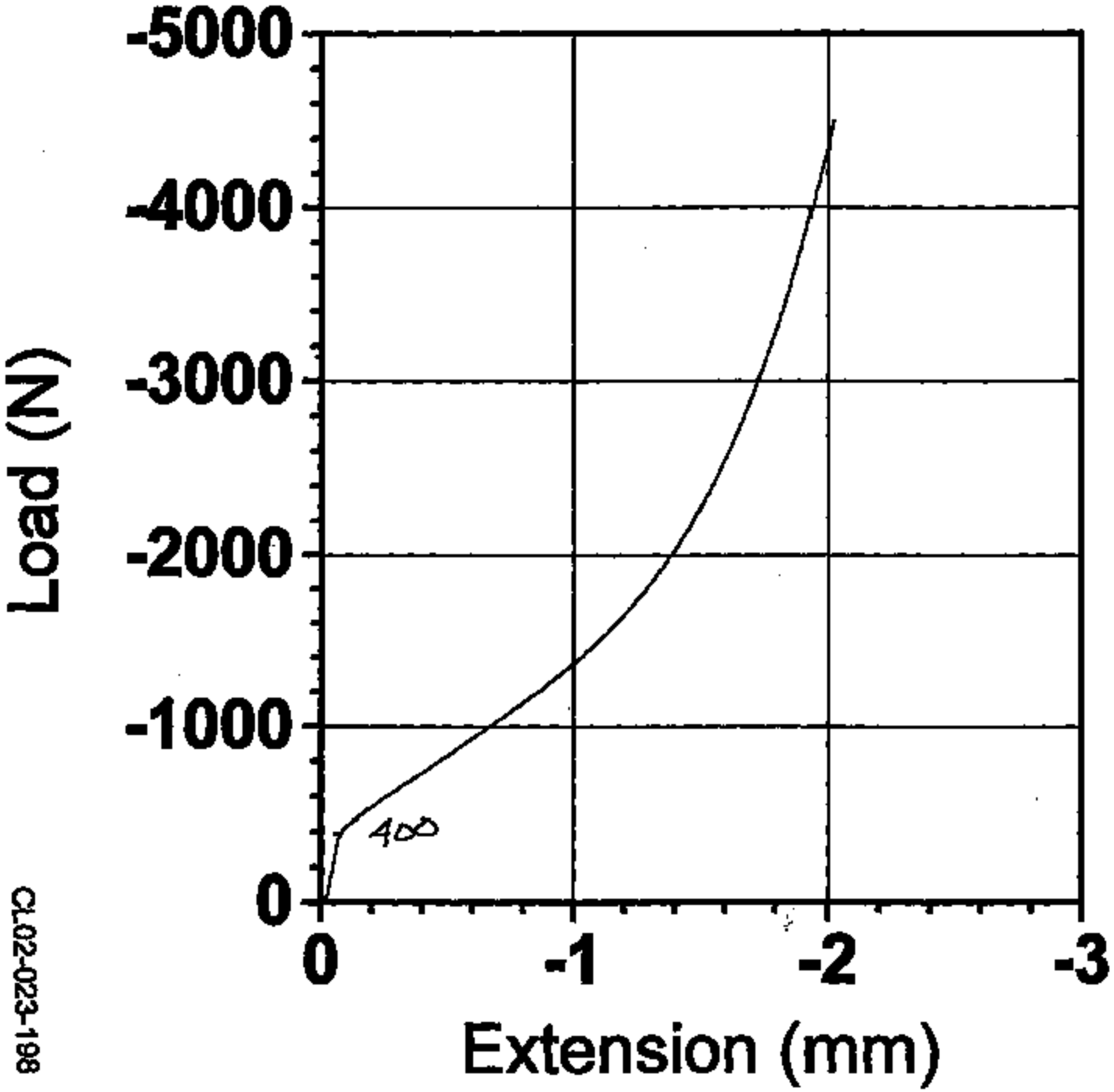

CL02-023-198

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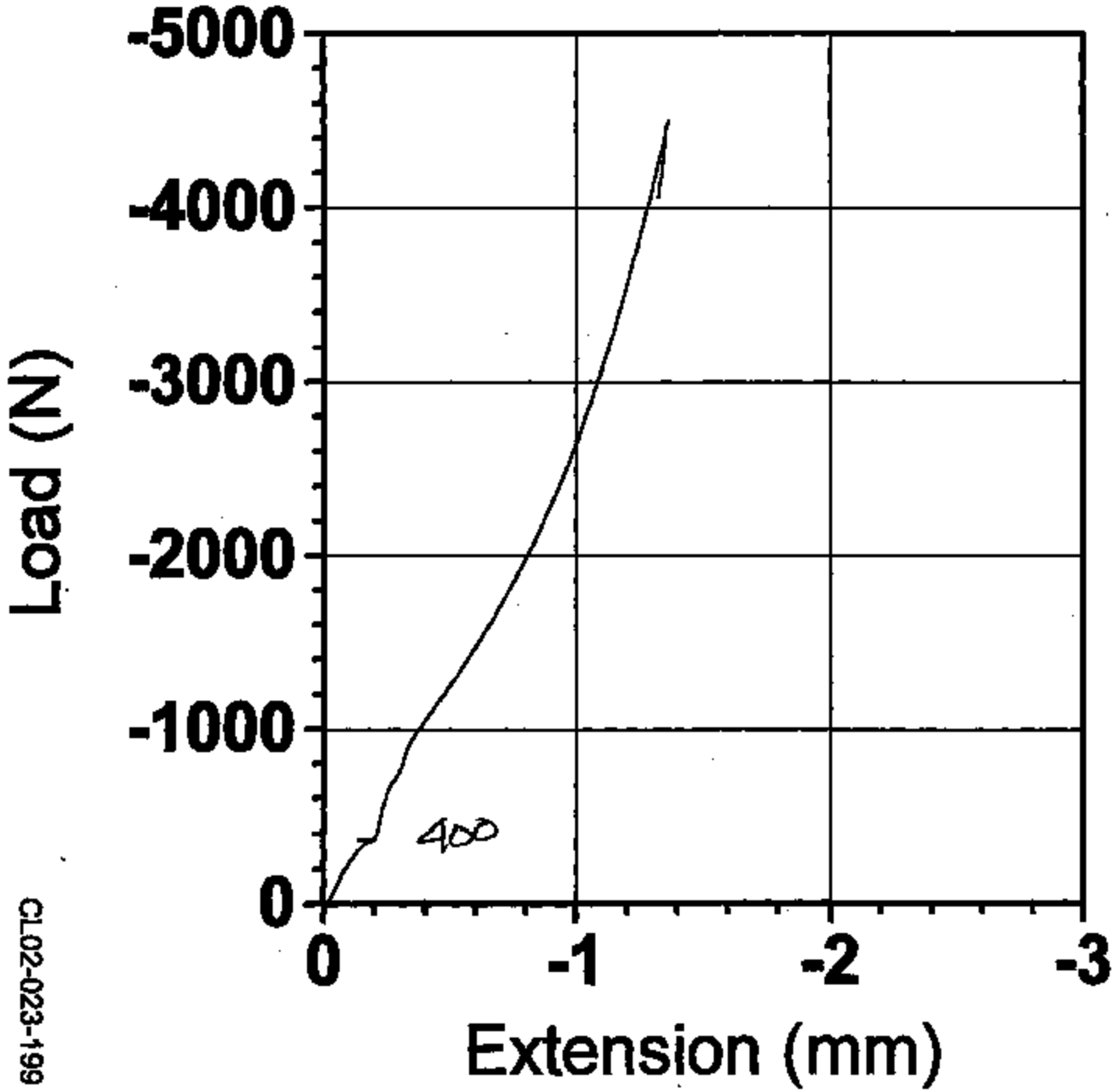

CL02-023-199

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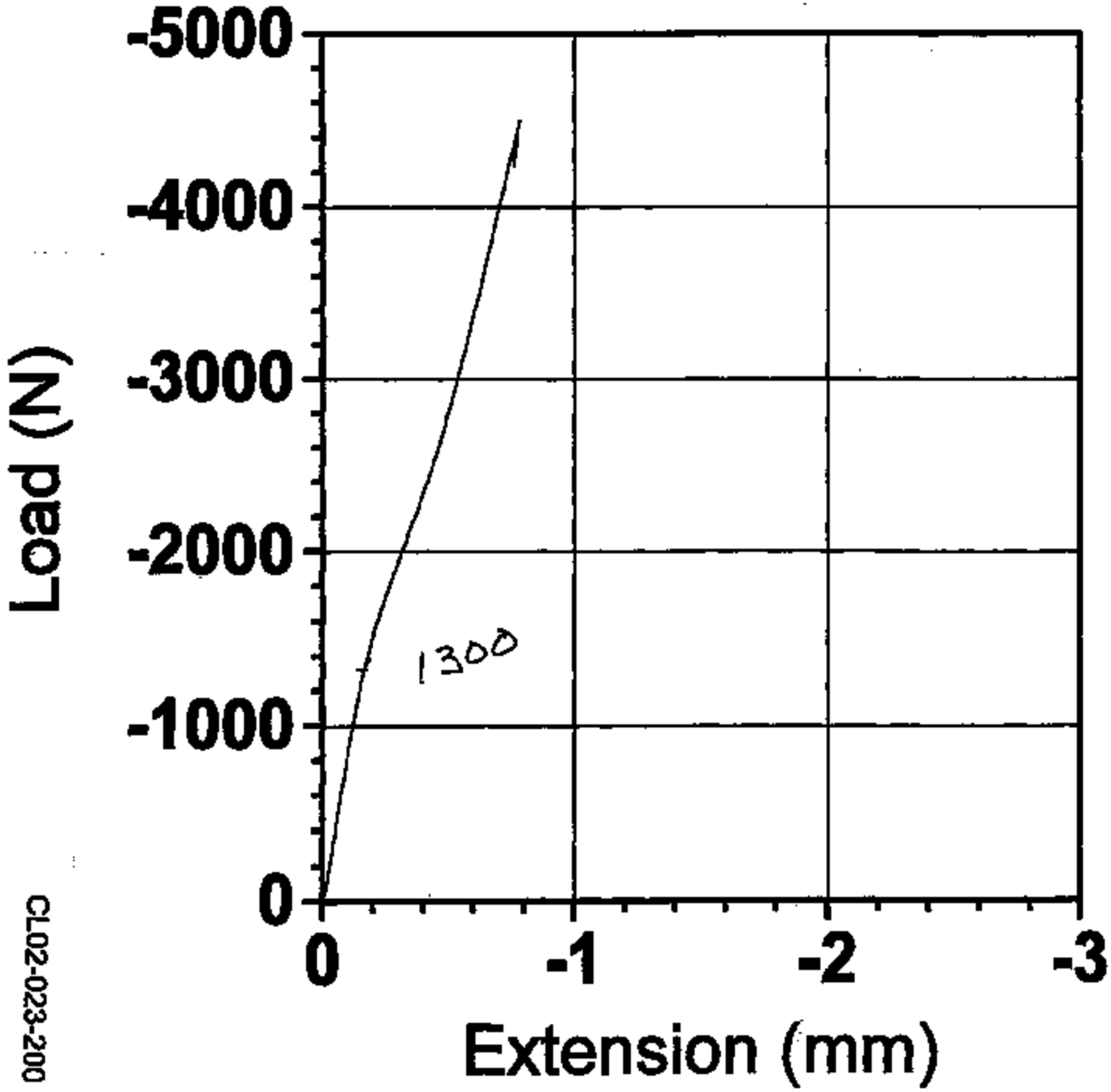

CL02-023-200

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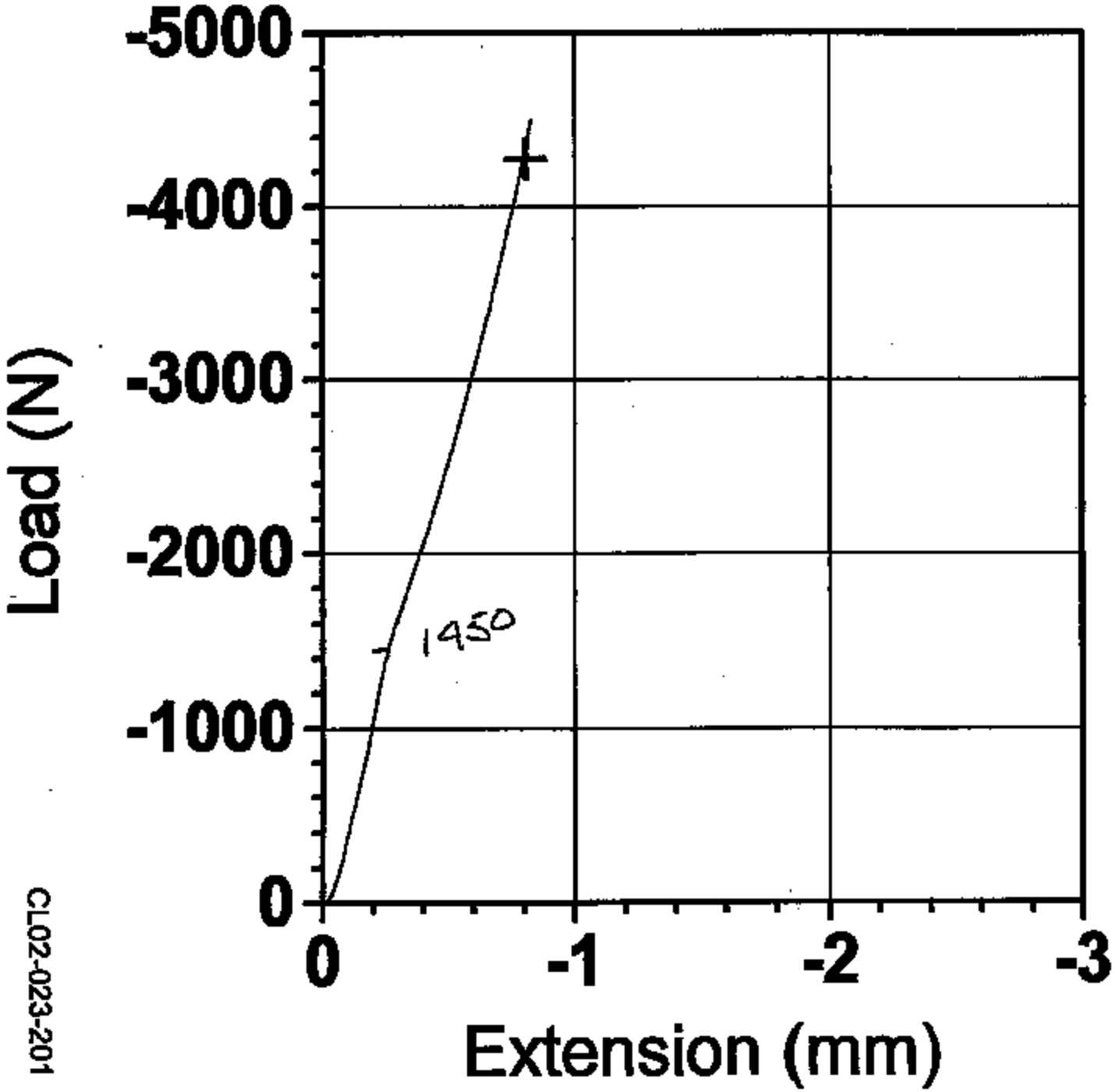
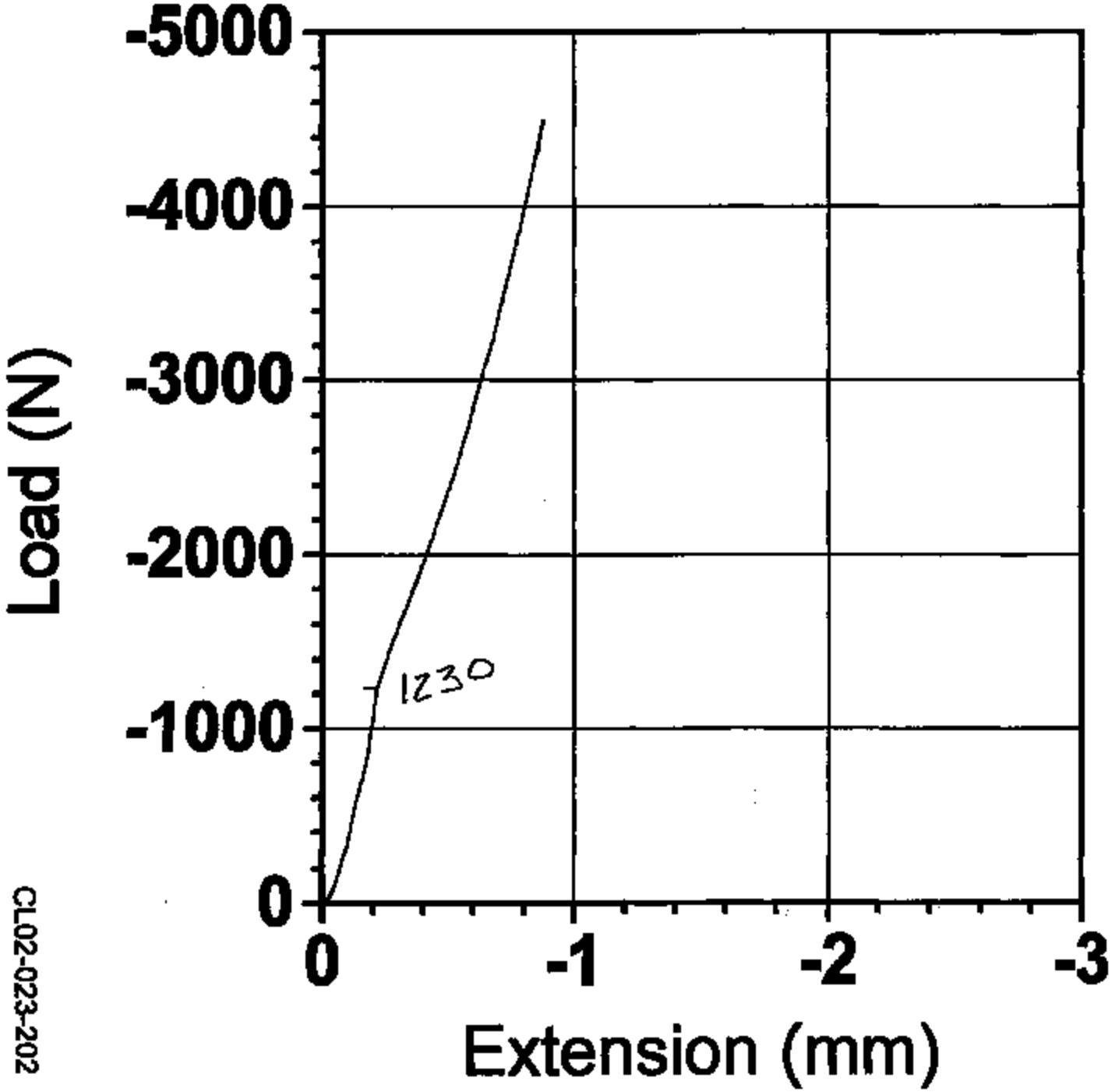


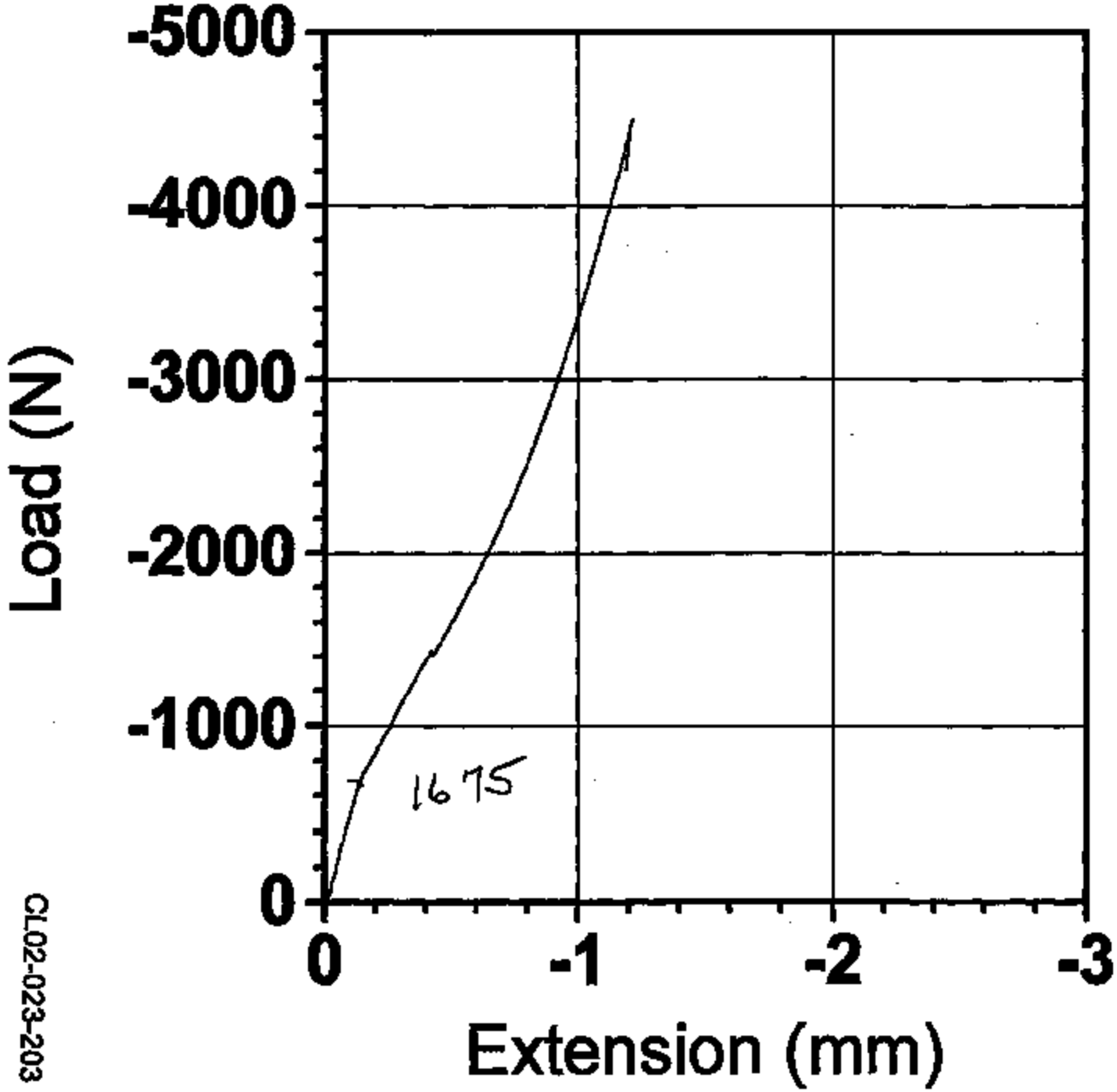
CL02-023-201

Liftl[illegible]d #837 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



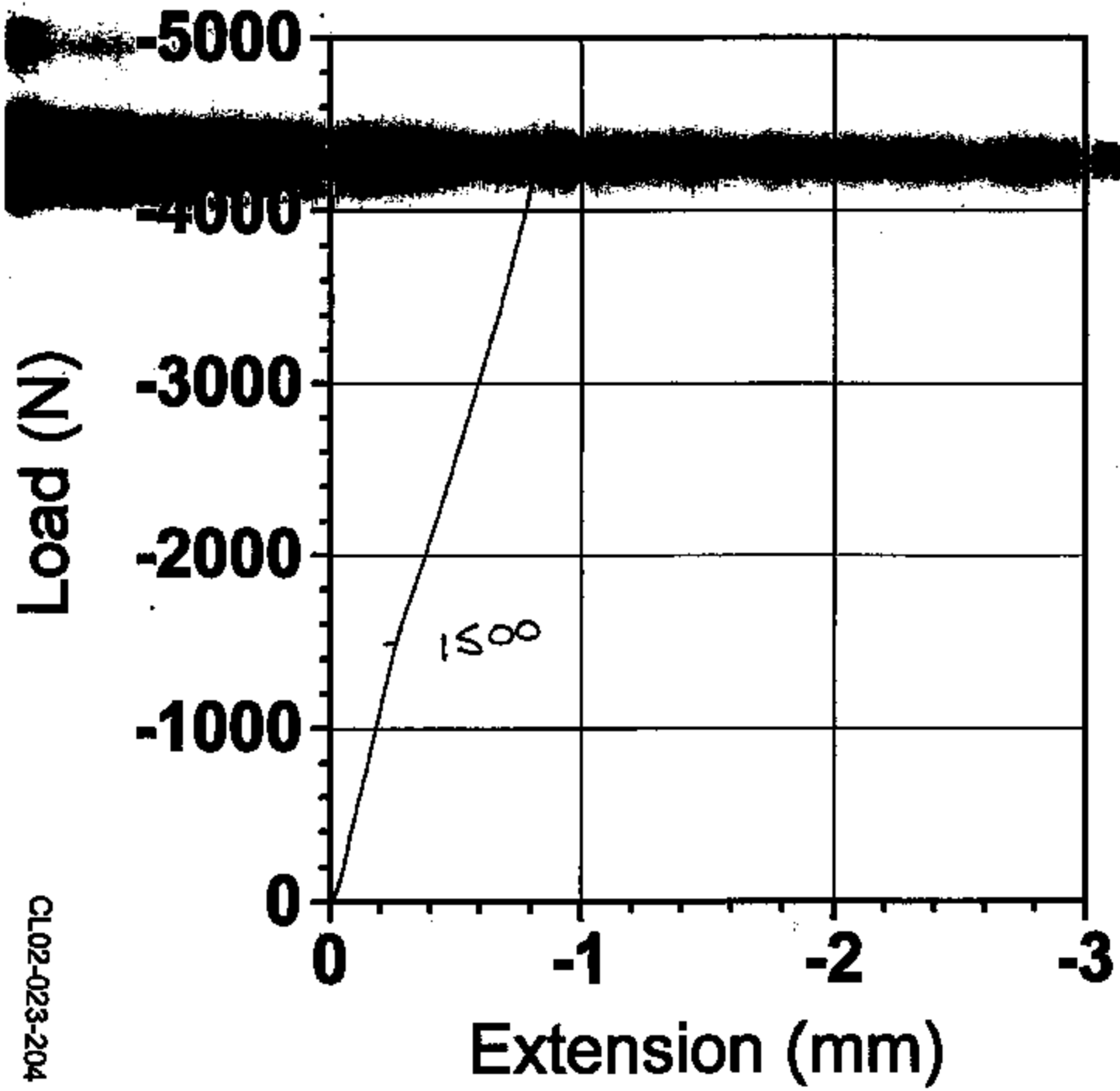
CL02-023-202

Liftl[illegible]d #838 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



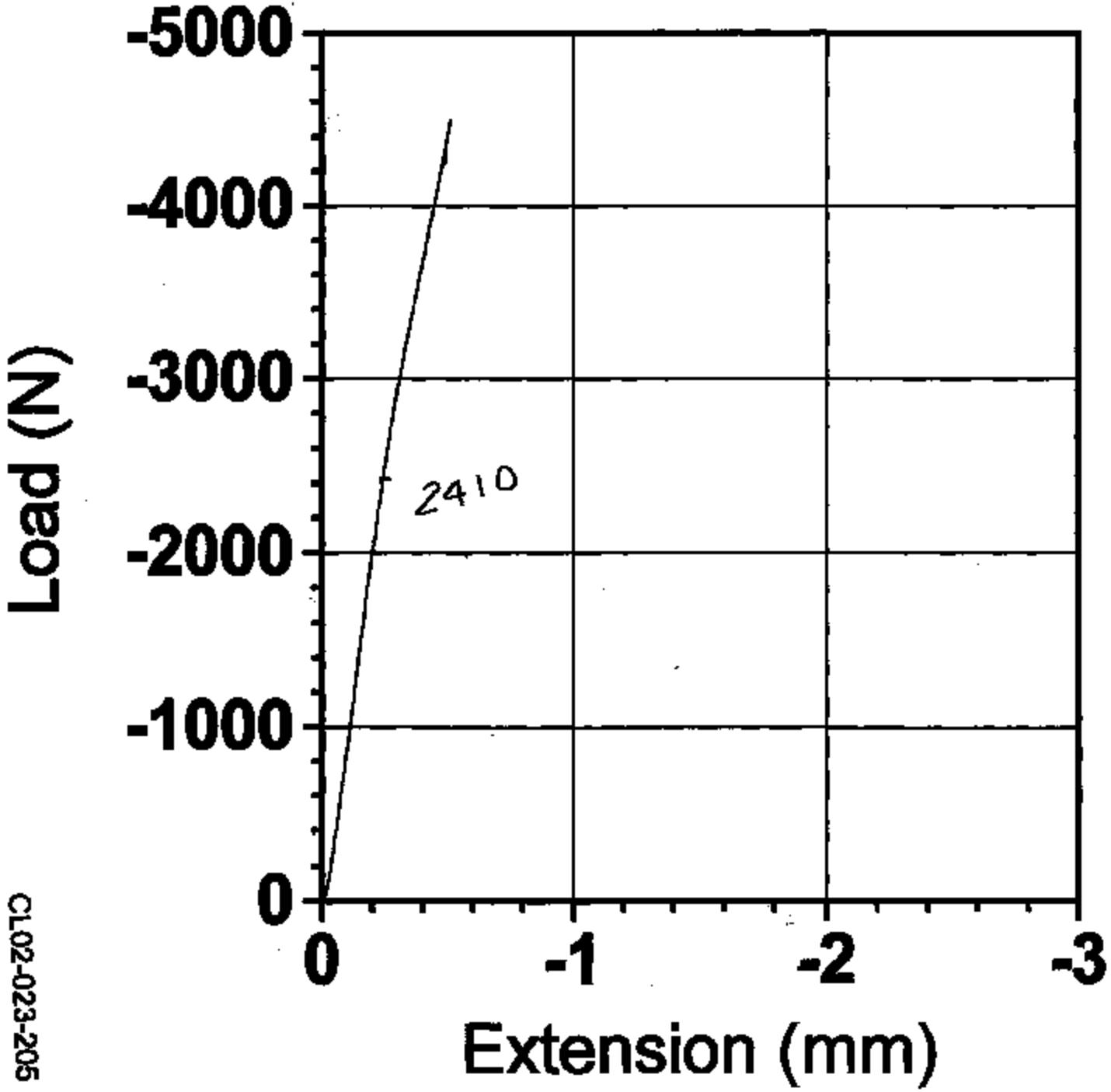
CL02-023-203

Liftl[illegible]d #839 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



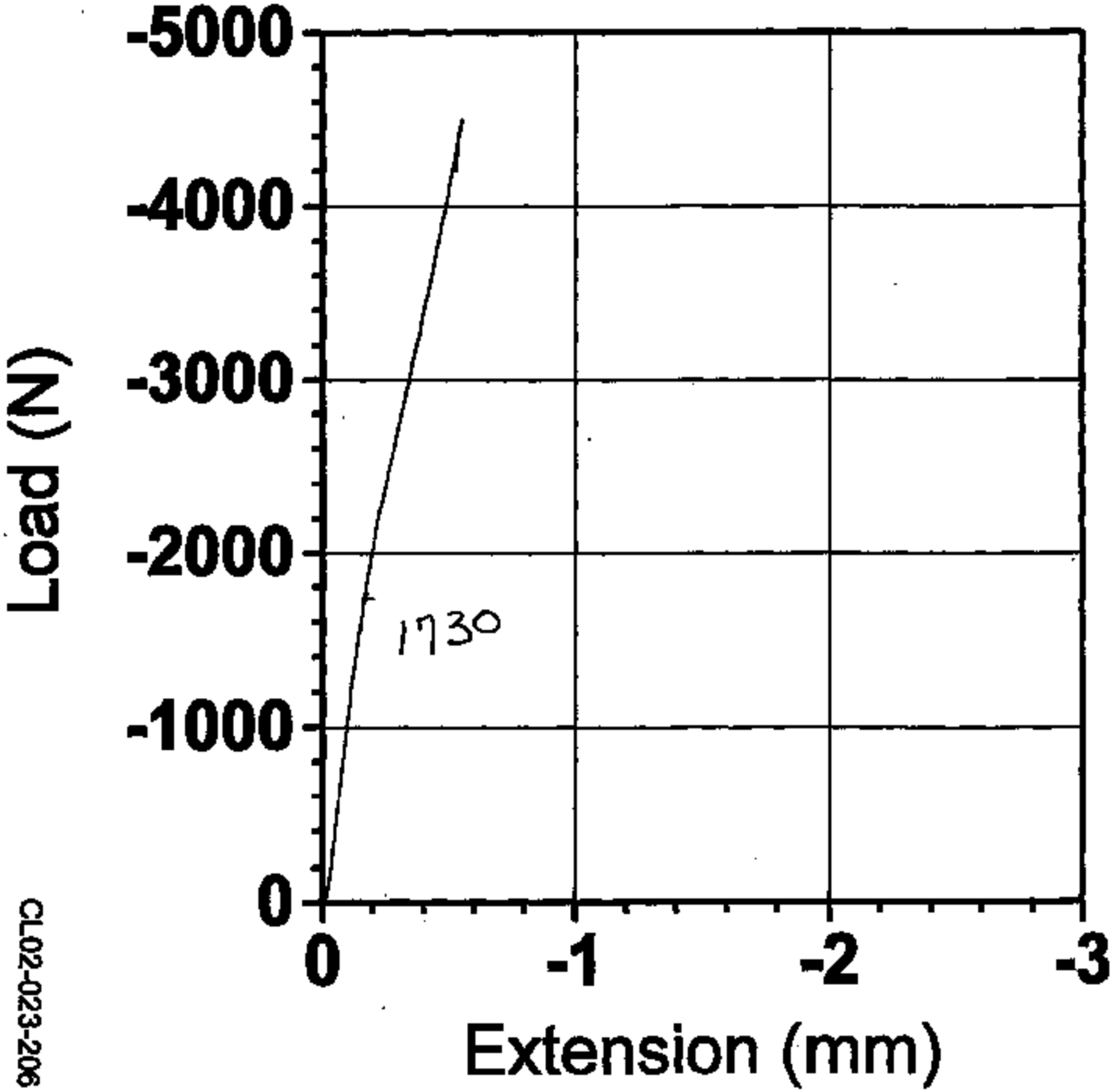
CL02-023-204

Liftl[illegible]d #840 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



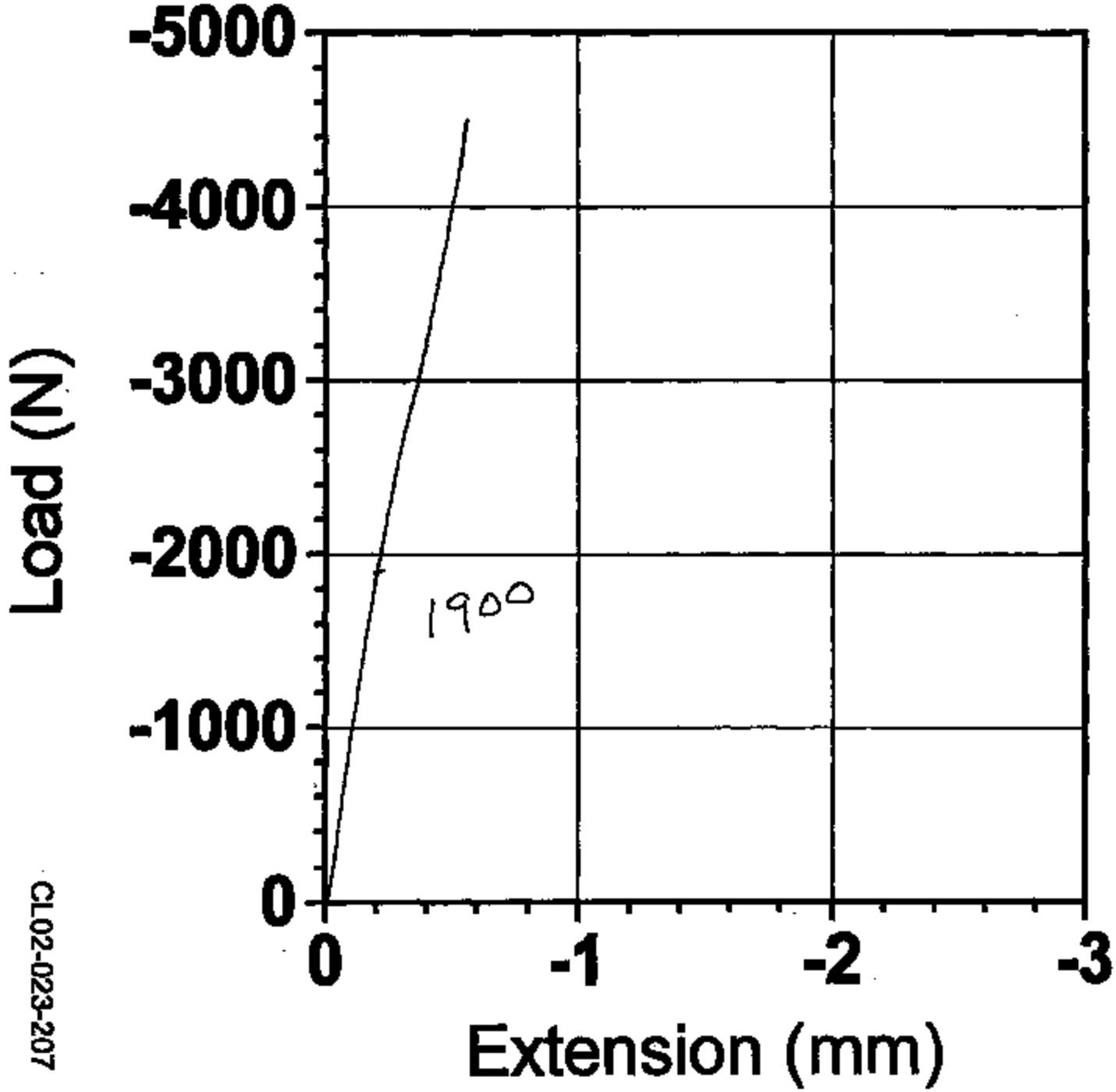
CL02-023-205

Liftlo[illegible]d #841 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



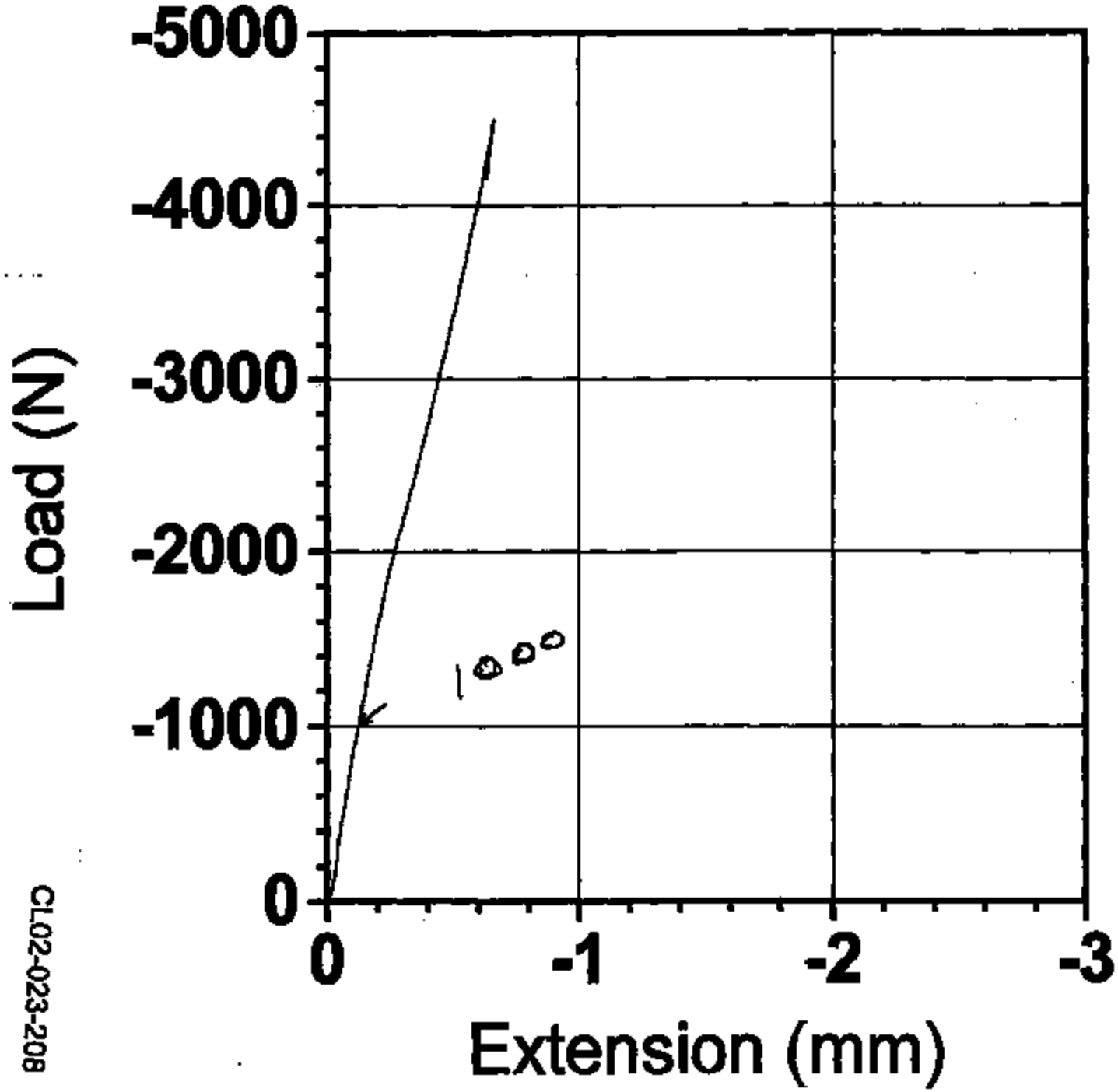
CL02-023-206

Liftl[illegible]d #842 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



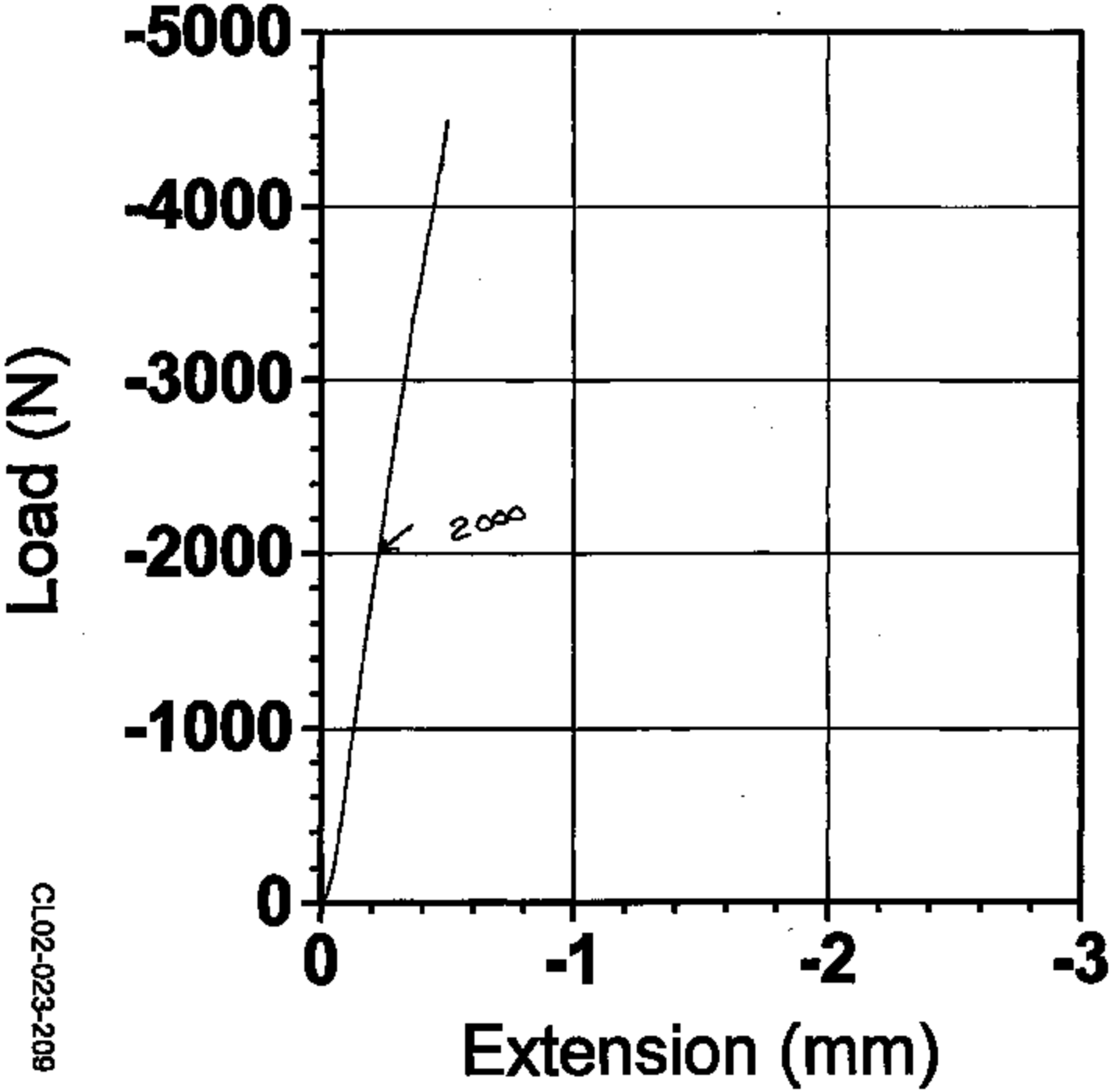
CL02-023-207

Liftl[illegible]d #843 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



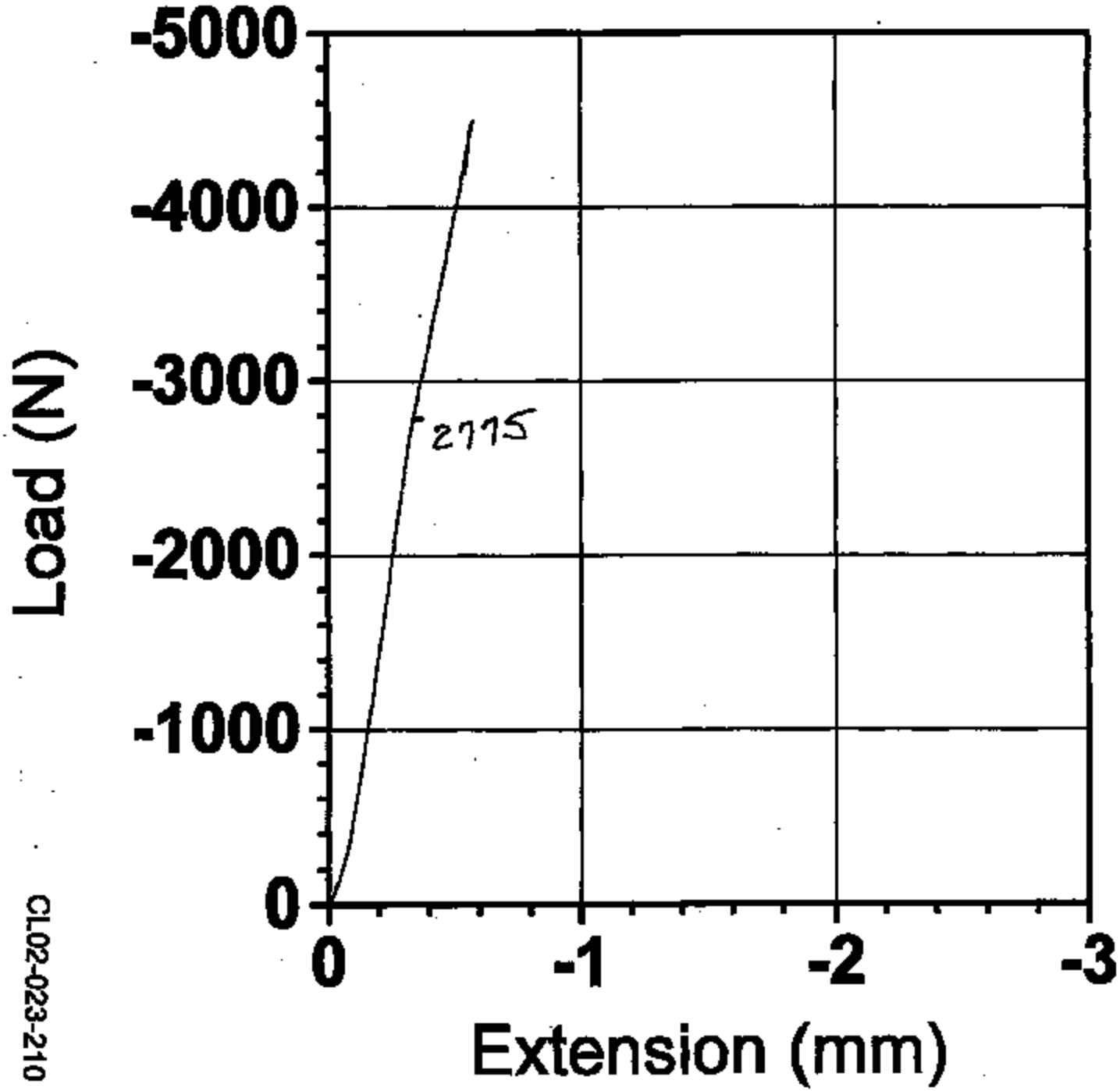
CL02-023-208

Liftl[illegible]d #844 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



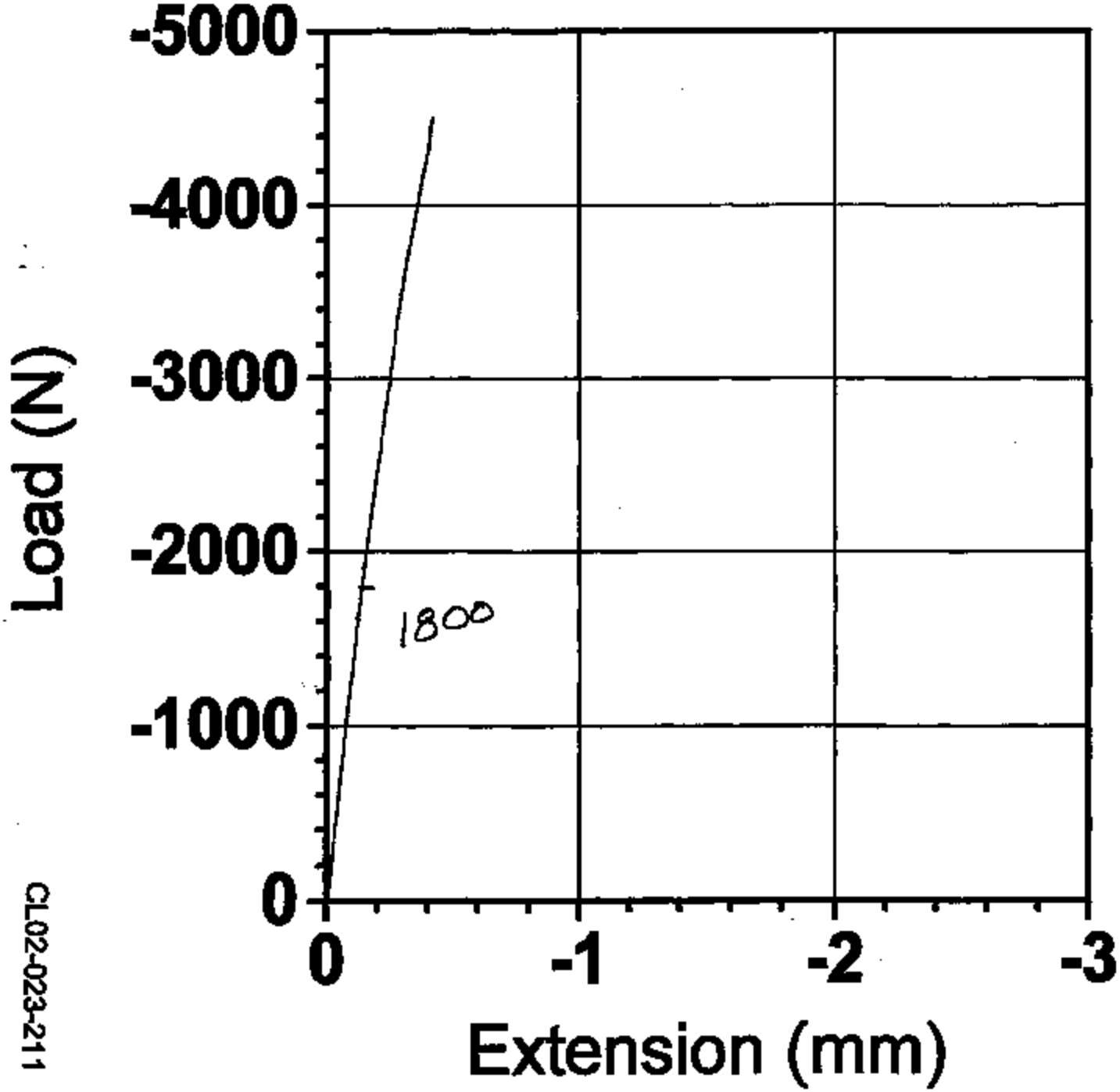
CL02-023-209

Liftl[illegible]d #845 T-TRK Upr 11197-0[illegible]5 05OC01 By: D. Accurso



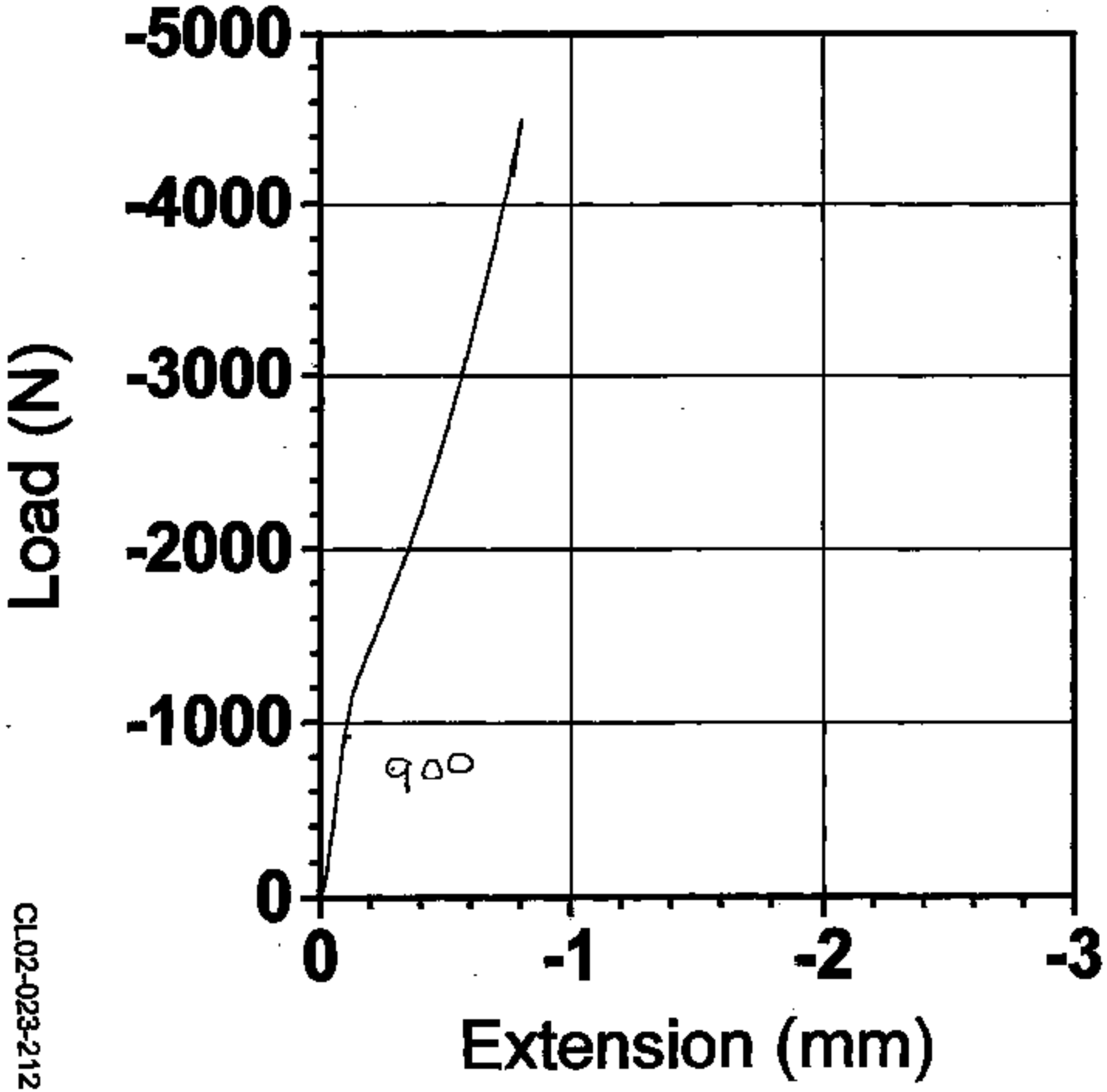
CL02-023-210

Liftl[illegible]d #846 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



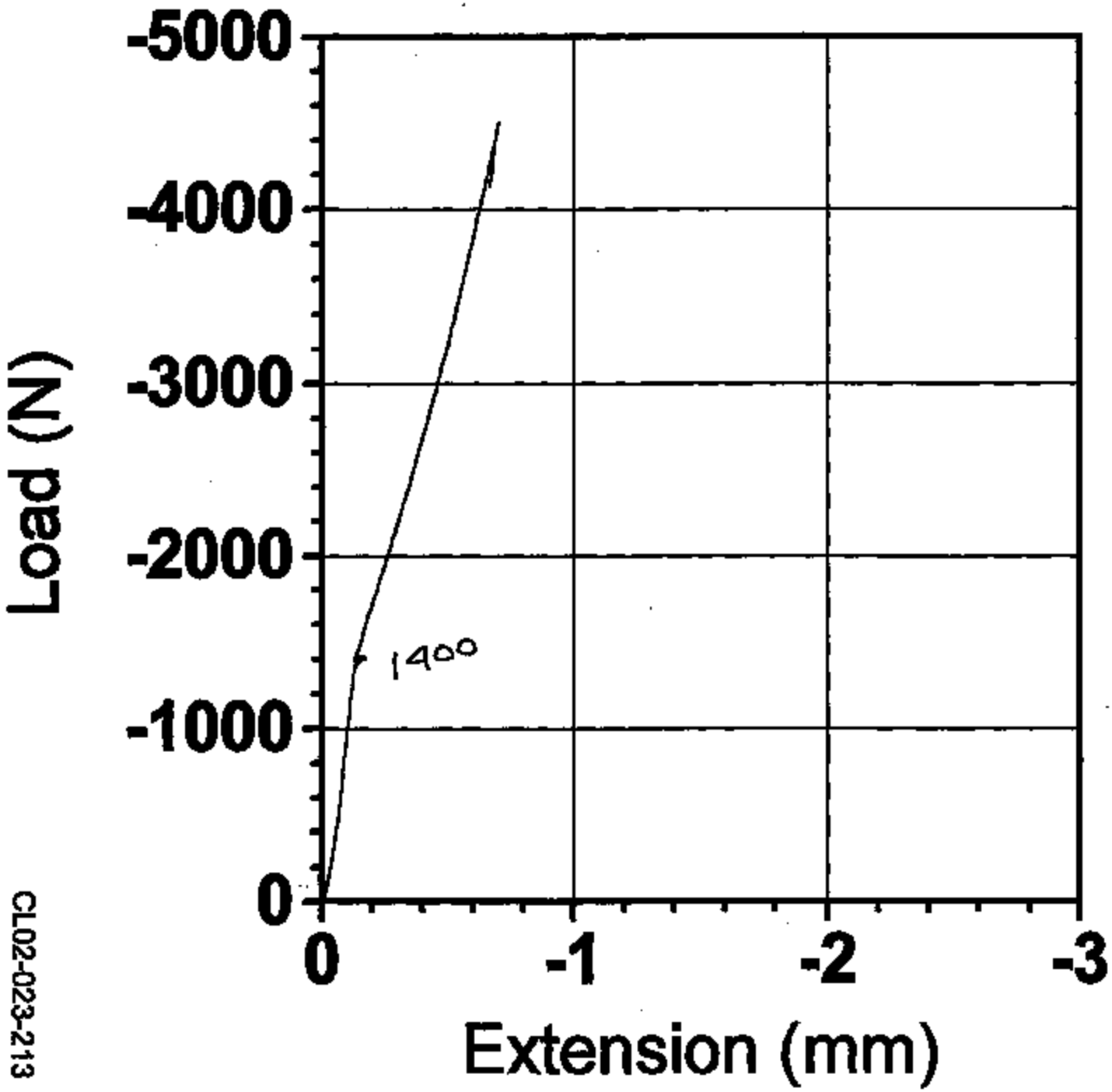
CL02-023-211

Liftl[illegible]d #847 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



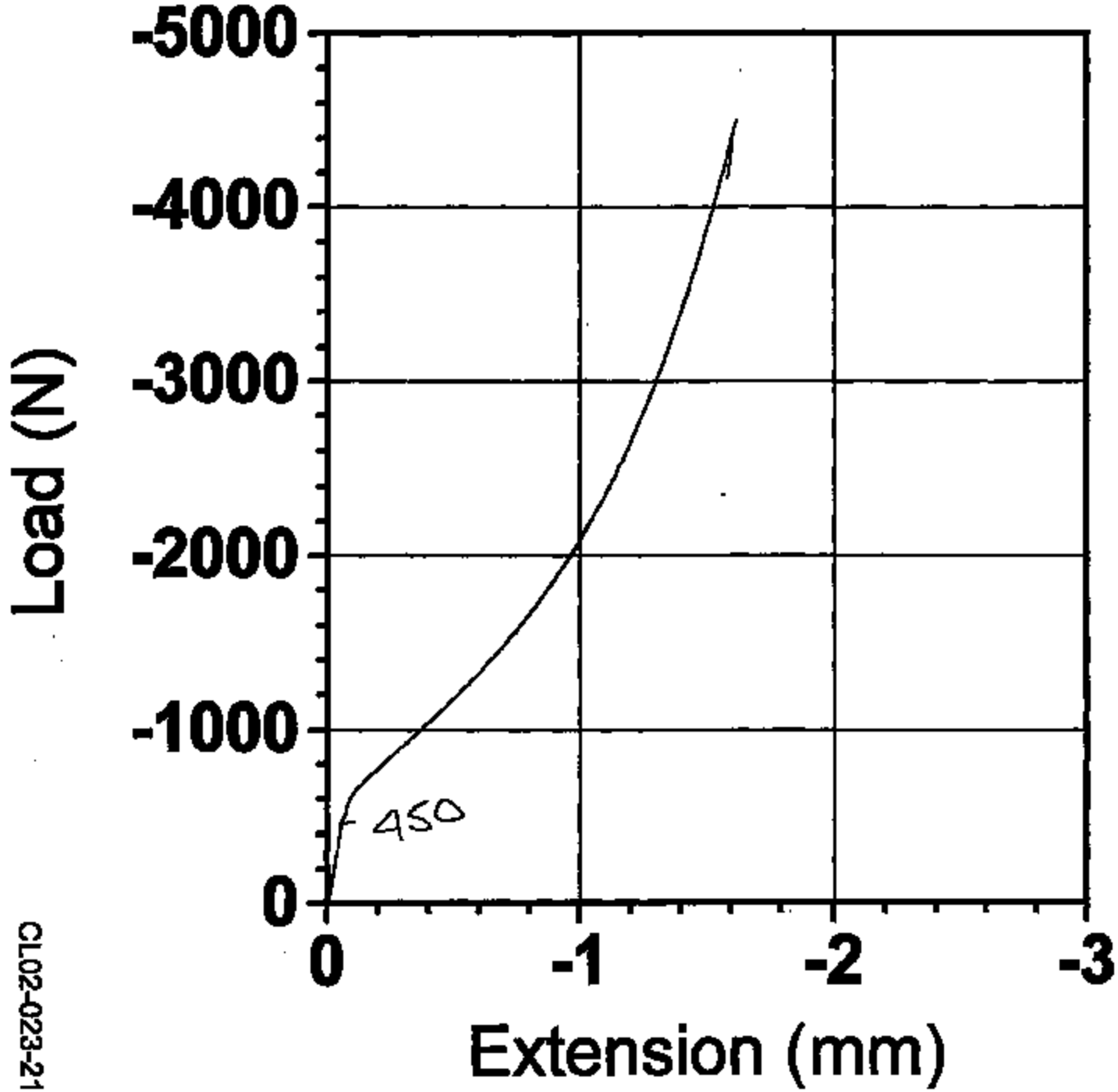
CL02-023-212

Liftlord #848 T-TRK Upr 11197-0 05OC01 By: D. Accurso



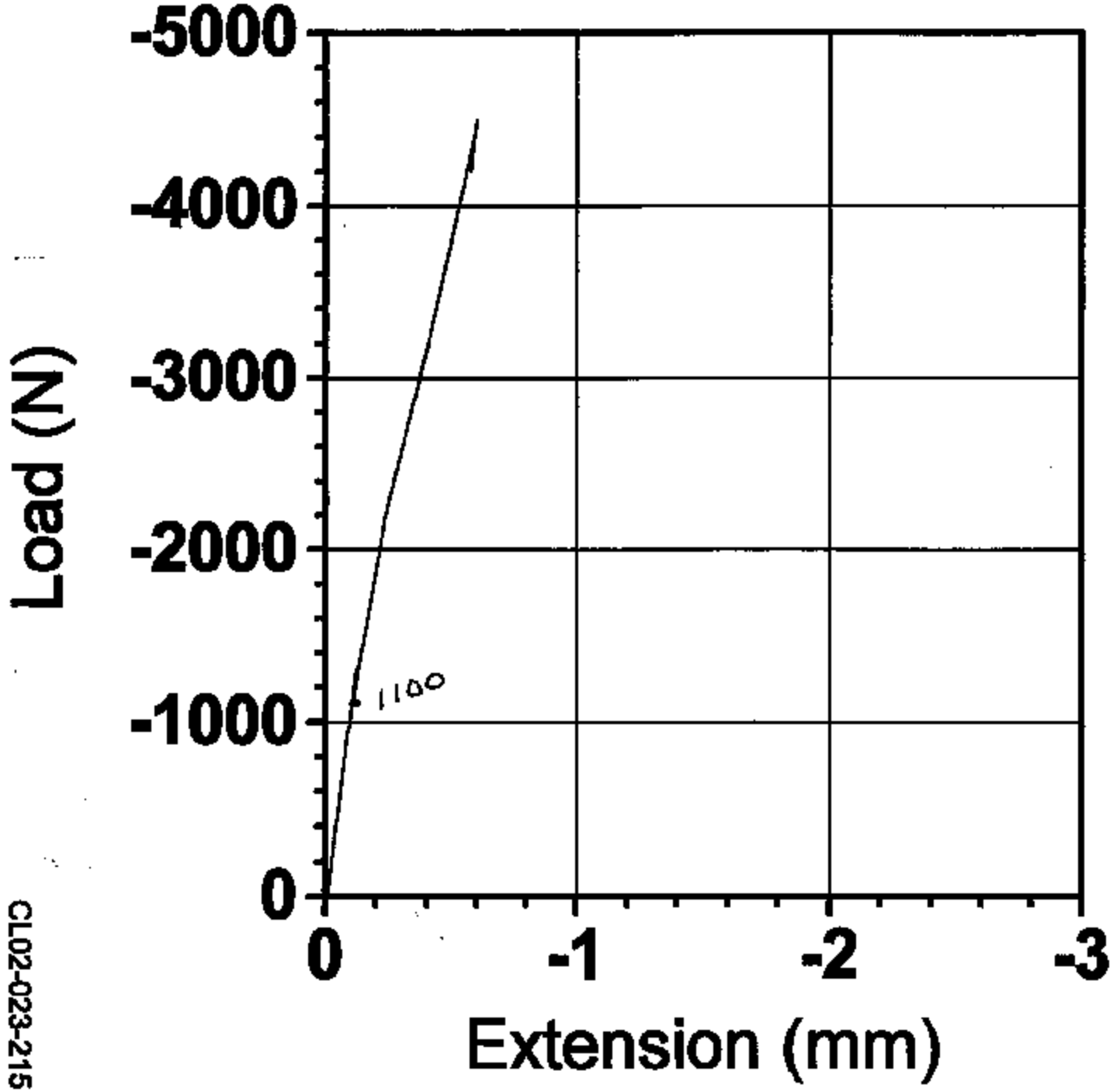
CL02-023-213

Liftl[illegible]d #849 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



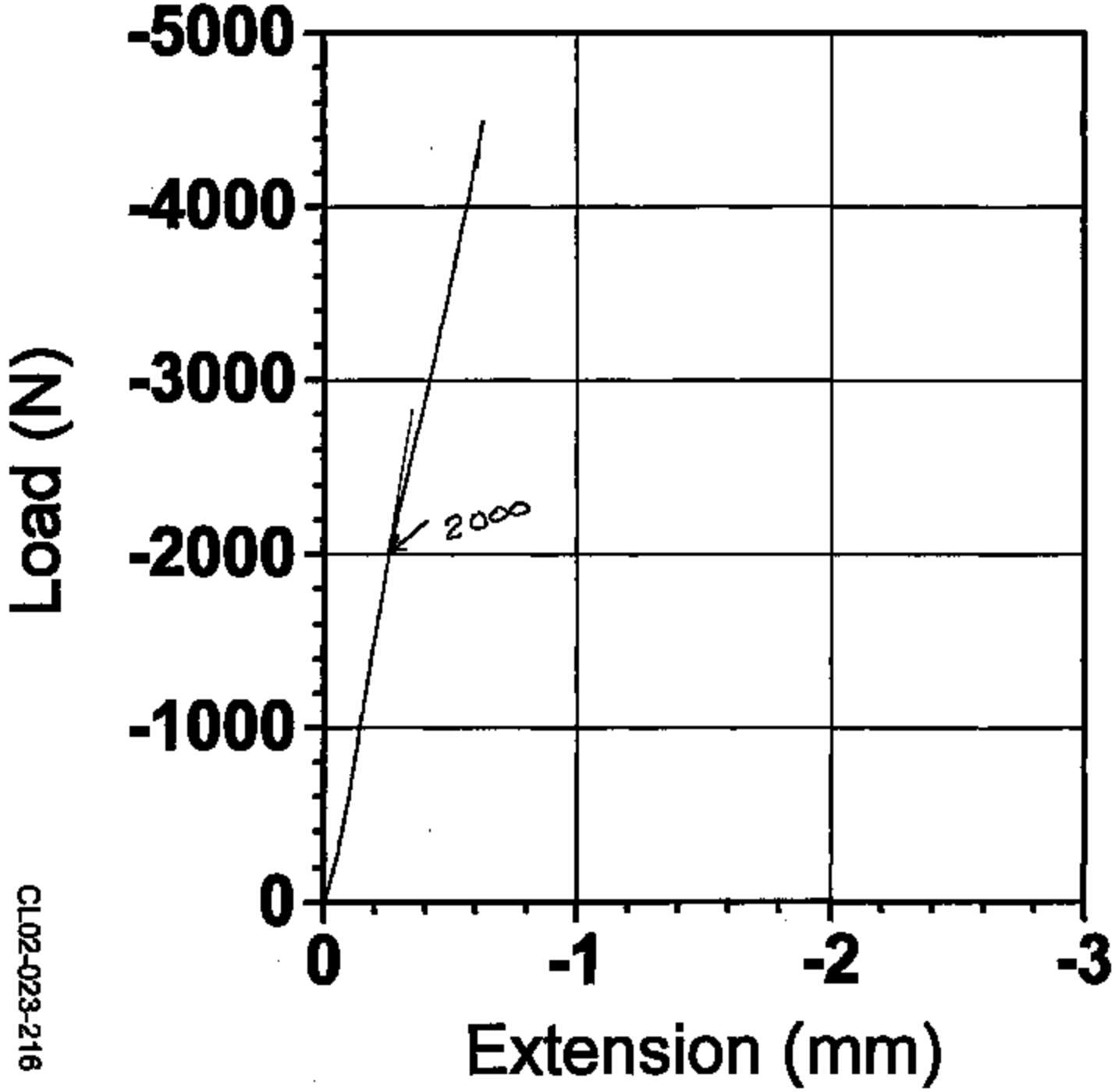
CL02-023-214

Lift[illegible]d #850 T-TRK Upr 11197-0[illegible]5 05OC01 By: D. Accurso



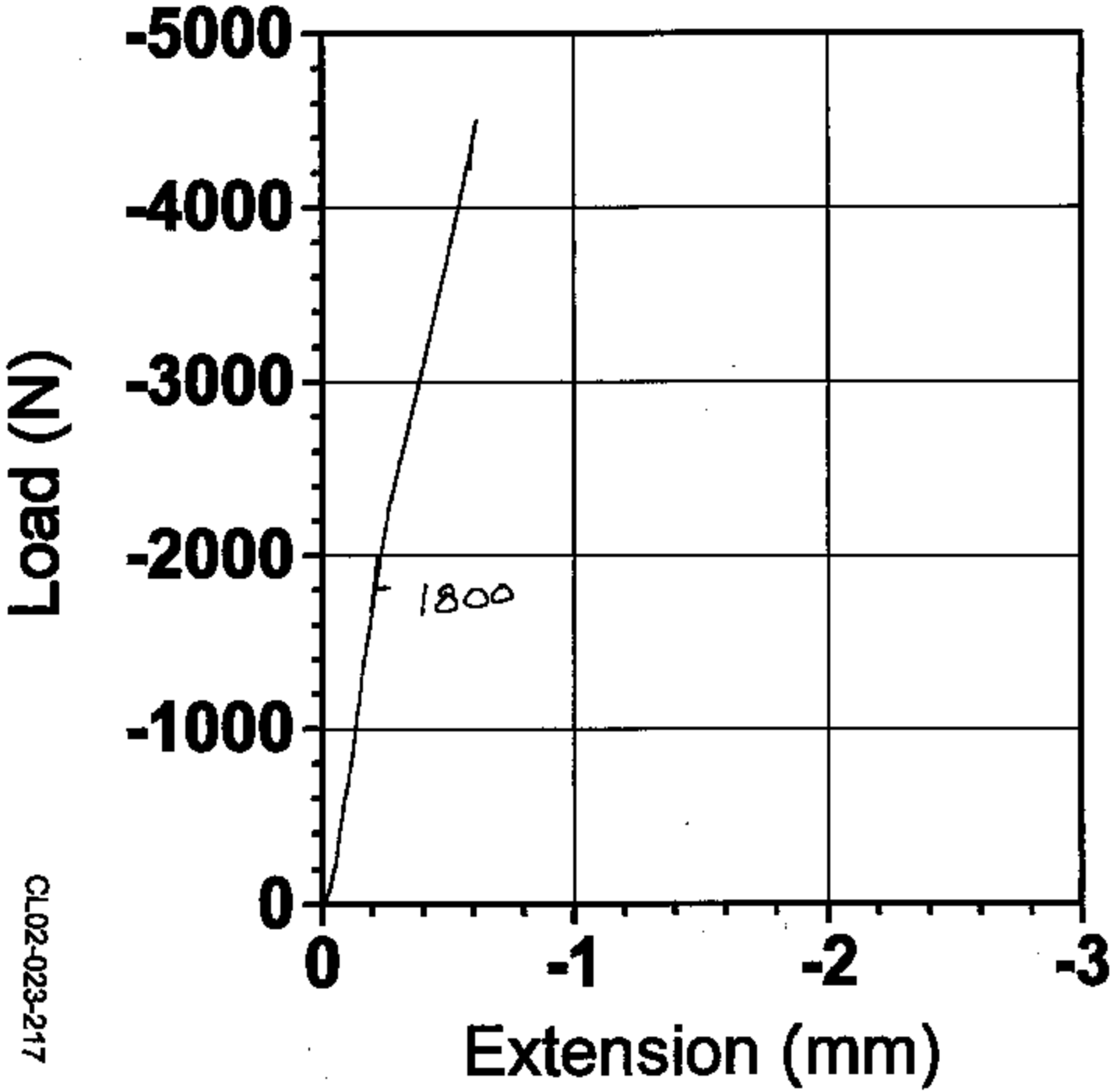
CL02-023-215

Liftl[illegible]d #851 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



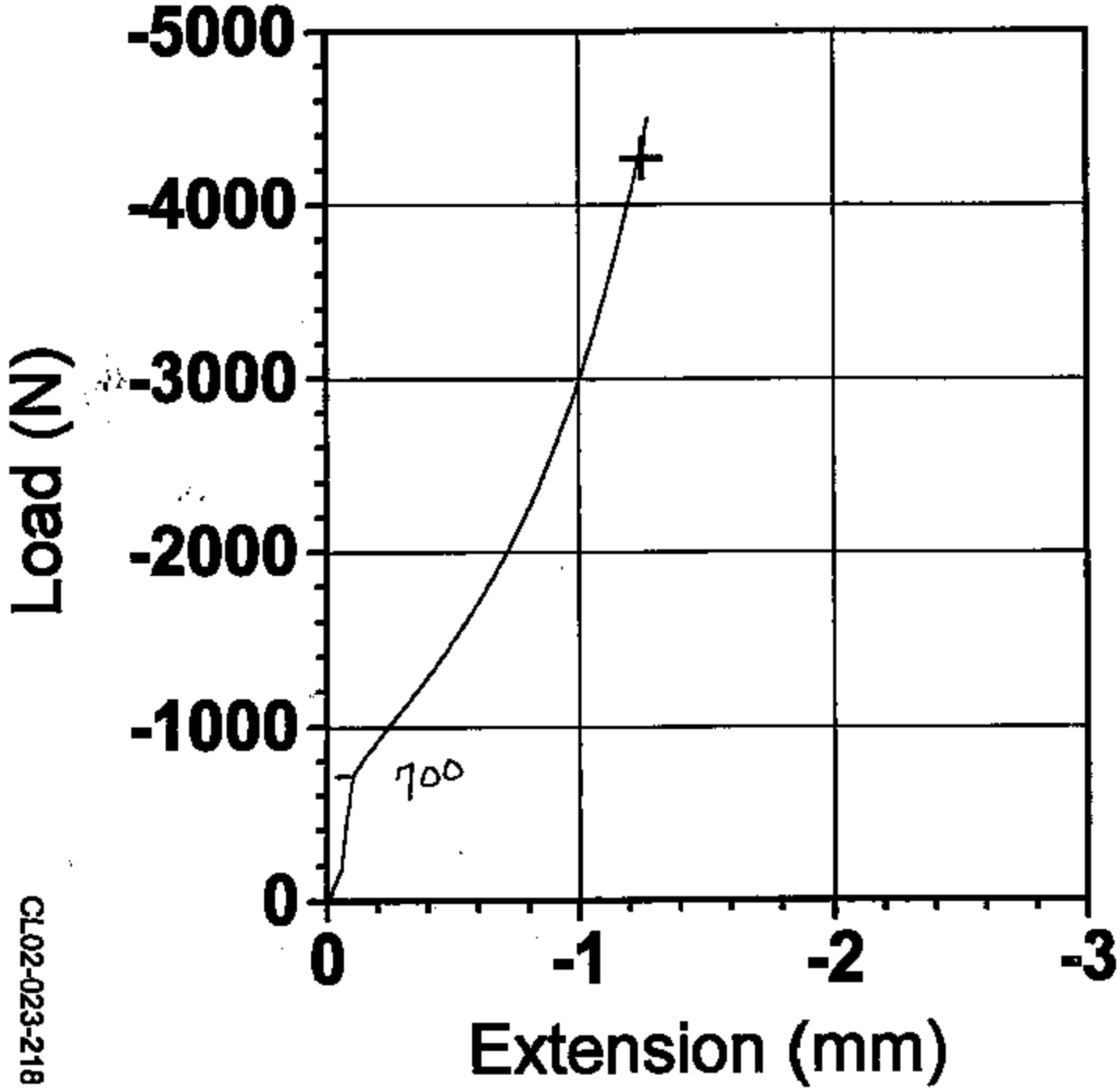
CL02-023-216

Liftl[illegible]d #852 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



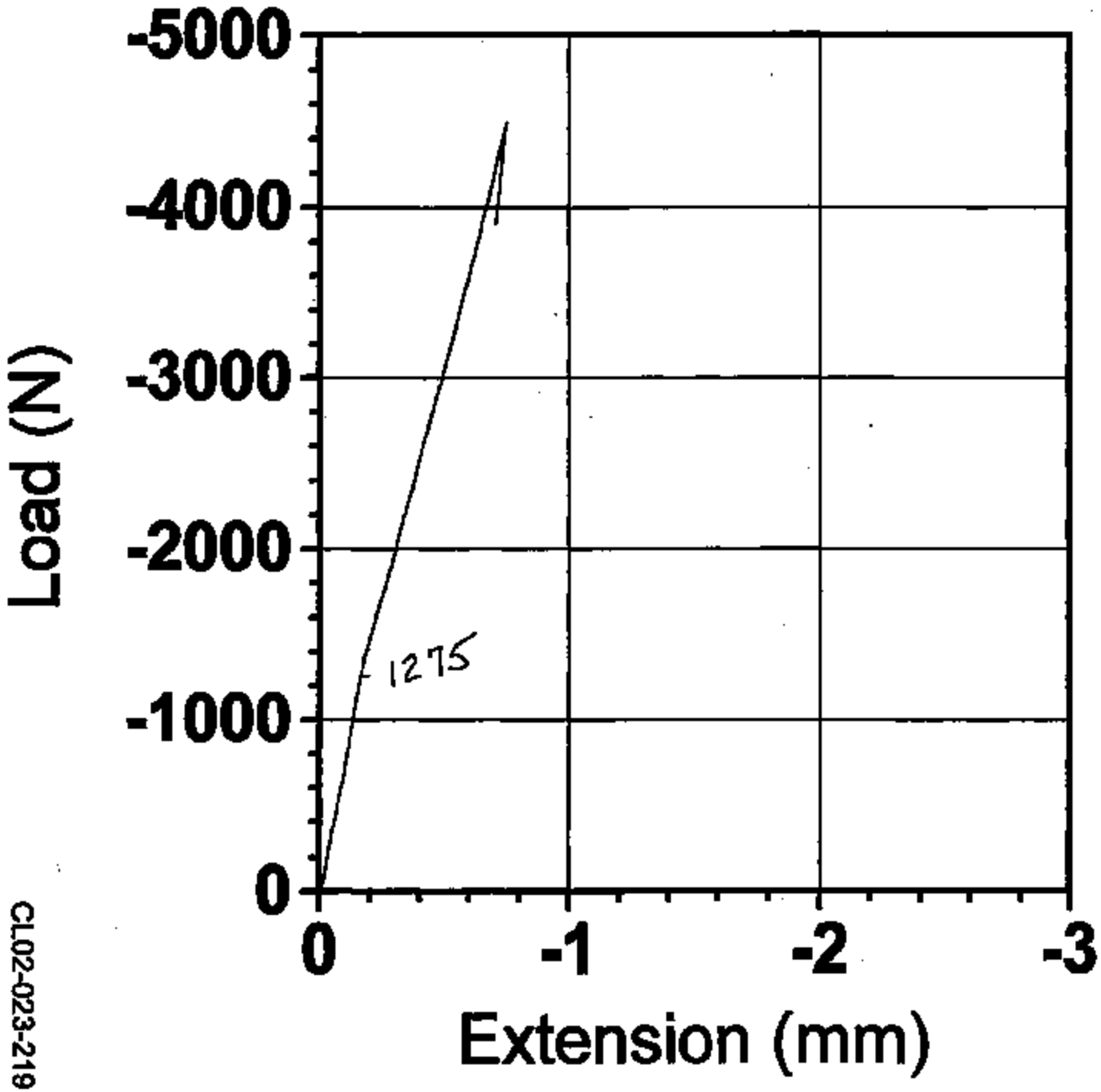
CL02-023-217

Liftlo[illegible]d #853 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



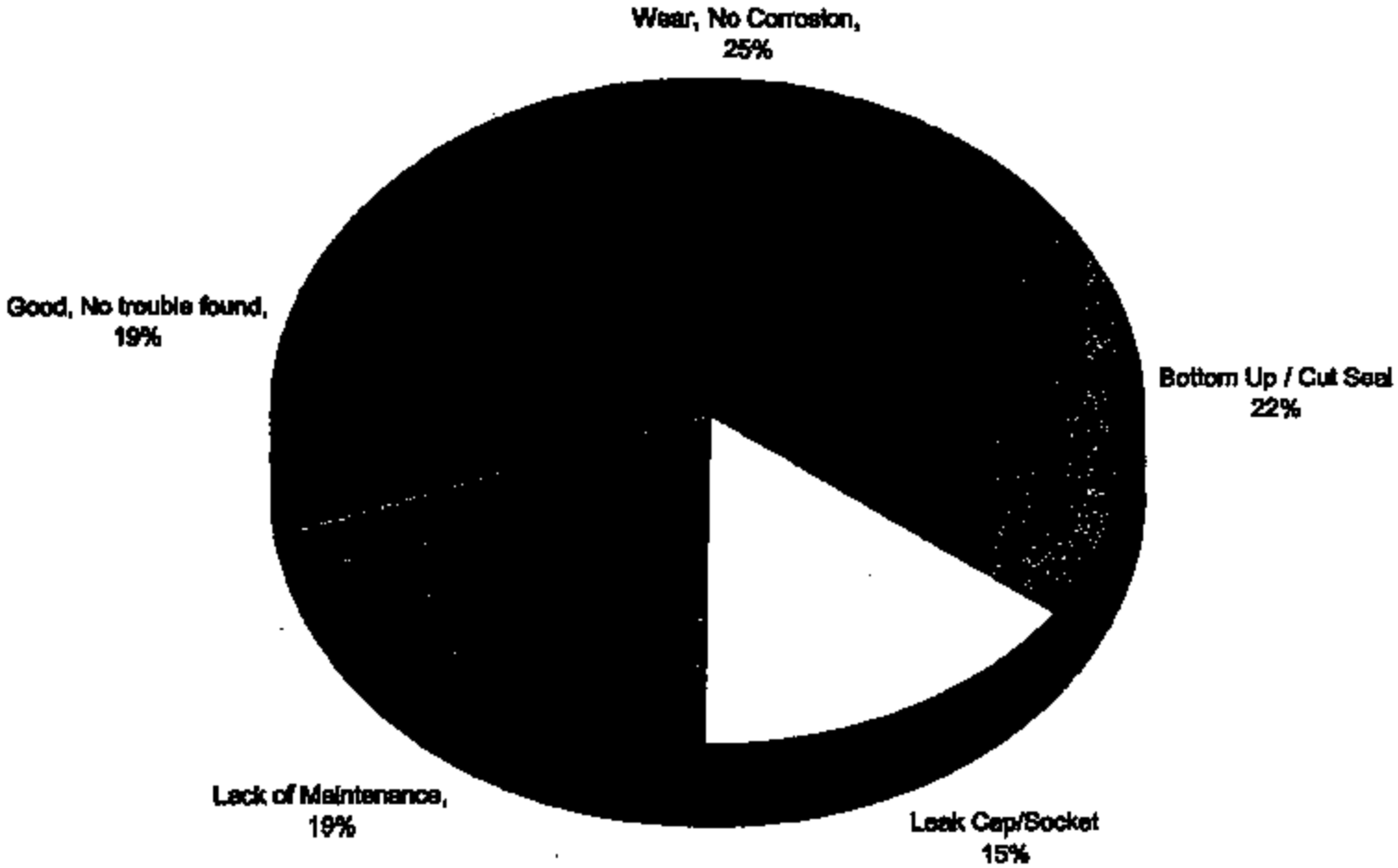
CL02-023-218

Liftlo[illegible]d #854 T-TRK Upr 11197-0[illegible] 05OC01 By: D. Accurso



CL02-023-219

T-Truck Upper Warranty Returns --TORN DOWN and Analyzed Wear Mode From Spike Time Frame (105 pc.'s)-- Date Code SE95 to DE96

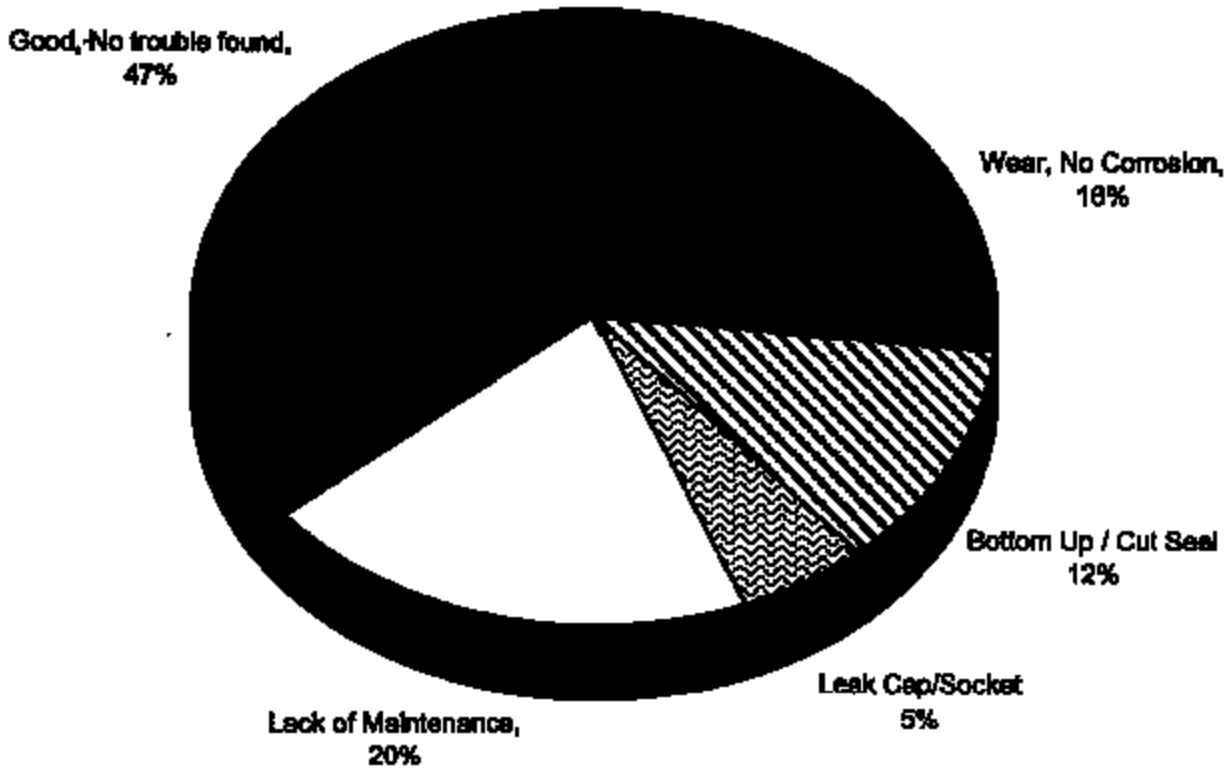


Don-T-Truck teardown anlysis.xls

10/16/2001

CL02-023-023

T-Truck Upper Warranty Returns -- TORN DOWN and Analyzed
Wear Mode Outside Spike Time Frame (75 pc.'s)
(Ball Joint date code from AU92 to AU95 and from JA98 to MA00)



'T' Truck Upper Ball Joint Tear Down Analysis (Warranty returns disassembled to evaluate the wear mechanism.)

[redacted]						Description, 0=Good, no trouble, 1=Wear w/o corrosion, 2=Bottom Up Cut Boot, 3=Lack Grease/Dirt, 4=No Wear	Wear Dam. 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Dam. 1=None, 2=Moderate, 3=Poor, 4=Severe(pitting)	[redacted]	Corrosion Dam. 1=None, 2=Moderate, 3=Poor, 4=Severe(pitting)	Wear Dam. 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Dam. 1=None, 2=Moderate, 3=Poor, 4=Severe(pitting)	Concentricity Rating 1=Very Good, 2=Good, 3=Fair, 4=Poor	YM	Mark Dam. # of marks = 0,1,2,or 3 R=Rer F=Fold	XXX-X	[redacted]
							Socket		Bearing		Seat		Protector Ring					
Serial Number	Vehicle Miles	State	S.J Date Code	LIR Load	LIR Load x Mileage	Wear Mode	Wear, (in)	Corrosion	Wear	Corrosion	Wear	Corrosion	Concentricity	Cut Start	# of Marks	mold #	Comments
[redacted]																	
[redacted]	[redacted]	MI	3144	2250	[redacted]	1	[redacted]	1	1	1	1	1	1	N	2	149-1	
[redacted]	[redacted]	MI	3014	[redacted]	[redacted]	0	[redacted]	1	1	1	1	1	1	N	2	149-1	
[redacted]																	
[redacted]	45,007	MI	0147	825	[redacted]	2	[redacted]	2	1	1	1	1	2	N	2	165-1	high wear with low corrosion
[redacted]	44,330	PQ	[redacted]	375	[redacted]	2	[redacted]	2	2	2	1	2	2	N	2	160-1	tat boot
[redacted]	46,027	MA	[redacted]	200	[redacted]	2	[redacted]	4	3	3	3	4	3	180 deg.	0	164-1	Corrosion and contaminants
[redacted]	46,027	MA	[redacted]	100	4,602,700	2	0.0375	3	3	4	4	3	2	180 deg.	2	65-1	tat boot
[redacted]	[redacted]	NY	[redacted]	0	-	3	3,4	3	missing	missing	3	4	2	30 deg	0	25-4	
[redacted]	[redacted]	PQ	[redacted]	[redacted]	[redacted]	1	[redacted]	1	1	1	1	1	2	30 deg	0	19-1	
[redacted]																	
[redacted]	38,441	ND	7347	1800	[redacted]	1	0.002	1	1	1	1	1	1	N	3	117-1	
[redacted]	[redacted]	TN	[redacted]	2800	[redacted]	0	0.007	1	1	1	1	1	1 loosy/stick	180 deg not like	3	37-1	"NOS"
[redacted]	17,400	IL	[redacted]	2000	[redacted]	2	0.031	1	3	2	1	1	N	Y	0	149-1	uniform lock bph
[redacted]																	
[redacted]	[redacted]	[redacted]	6127	[redacted]	[redacted]	0	0.005	1	1	1	1	1	2	N	2	165-1	Minimal Wear
[redacted]																	
[redacted]	32,671	IL	[redacted]	600	[redacted]	4	2	4	3	4	3	4		Y			missing
[redacted]																	
[redacted]	31,191	PM	[redacted]	[redacted]	[redacted]	0	0.019	1	1	1	2x3	2	Y	N	0	165-1	outboard lock lock
[redacted]																	
[redacted]	[redacted]	QBC	2227	0	-	4	4	4	missing	missing	1	2	2	45 deg	0	160-1	
[redacted]	82,465	KY	4125	1250	[redacted]	0	[redacted]	1	2	1	2	1	2	N	1	165-1	

CL02-023-025

"T" Truck Upper Ball Joint Tear Down Analysis (Warm[illegible] returns disassembled to evaluate the wear mechanism)

						Bearing Rm. 0=Good, no trouble 1=Poor w/o corrosion 2=Severe Up Cut Dust 3=Lack Cap/Socket 4=No Hole	Wear Desc. 1=Normal 2=Moderate 3=Severe 4=Separation	Corrosion Desc. 1=None 2=Moderate 3=Poor 4=Severe(pitting)	Wear Desc. 1=Normal 2=Moderate 3=Severe 4=Separation	Corrosion Desc. 1=None 2=Moderate 3=Poor 4=Severe(pitting)	Wear Desc. 1=Normal 2=Moderate 3=Severe 4=Separation	Corrosion Desc. 1=None 2=Moderate 3=Poor 4=Severe(pitting)	Concentricity Rating 0=Very Good 2=Good 3=Poor 4=Poor	TIN	Skirt Desc. # of marks = 0,1,2 or 3 R=Rigid P=Pold	XXX-R	
							Socket		Bearing		Seat		Pressure Ring				
Serial Number	Vehicle Miles	State	BJ Date Code	Lift Load	Lift Load x Mileage	Wear Mode	Wear, (in)	Corrosion	Wear	Corrosion	Wear	Corrosion	Concentricity	Cut Skirt	# of Marks	mold #	Comments
08HU-R	52,405	KY	Q184	1600	52,405,000	0	0.001	1	2	1	2	1	3	N	1	104-1	
08FU-L	19,731	CT	0187	1200	26,413,750	1	0.007	1	2	1	1	1	1	10 deg	0	120-1	
10HU-R	31,[illegible]	MI	1077	1500	57,[illegible]	2	0.011	2	2	2	1	2	2	45 deg.	1R	30-1	[illegible]
11HU-L	27,[illegible]	WV	1067	2200	62,[illegible]	1	[illegible]	1	1	1	1	1	2	N	3	147-1	[illegible]
14HU-L	34,810	IN	2107	2200	70,[illegible]	1	0.01	1	2	1	1	1	2	N	2	80-1	
14HU-L	[illegible]	OM	[illegible]	500	[illegible]	4	0.005	3	3	4	3	2	1	N	2	1-1	No seat
15HU-R	47,497	MI	2000	1500	73,[illegible]	0	[illegible]	1	1	1	1	1	2	N	3	17-1	[illegible]
15HU-L	67,[illegible]	MI	1205	1200	104,[illegible]	0	0.005	1	1	1	1	1	3 lot lip seal	N	3	1-1	[illegible]
15HU-L	[illegible]	NC	7215	[illegible]	[illegible]	2	0.022	2	1	3	2	3	Y	N	0	[illegible]	
16HU-R	14,[illegible]	NO	[illegible]	1200	16,[illegible]	0	0.001	1	[illegible]	1	1	1	4	5 deg	1	110-1	[illegible]
			[illegible]	[illegible]												62-1	[illegible]

CL02-023-026

'T' Track Upper Ball Joint Tear Down Analysis (Warranty items disassembled to evaluate the wear mechanism.)

						Socket			Bearing		Seat			Pressure Ring			
						Wear Mode	Wear, (in)	Corrosion	Wear	Corrosion	Wear	Corrosion	Concentricity	Cut (Y/N)	# of Marks	mold #	Comments
1RTU-R	[redacted]	IL	2197	2100	[redacted]	1	[redacted]	1	1	1	1	1	1	210 deg.	2	30-1	[redacted]
2RTU-R	[redacted]	NJ	1217	2600	[redacted]	5	0.003	1	1	1	1	1	1	N	2	160-1	
3RTU-R	[redacted]	VA	2007	600	[redacted]	4	3,4	4	3,4	4	missing	missing	1	N	5	80-1	
21RU-R	70,[redacted]	OH	7246	1700	[redacted]	3	0.0015	1	1	1	2	2	4	N		107-1	[redacted]
21RU-R	70,[redacted]	OH	6189	1300	[redacted]	4	0.013	1	1	1	2	2	4	Y/N		135-1	[redacted]
21TU-L	[redacted]	OH	7175	600	[redacted]	1	0.009	1	2	1	2	1	1	N		130-1	[redacted]
22RU-R	[redacted]	MN	1037	0	-	1	4	5	3,4	4	1	1	1	100 deg	0	48-1	
								1									
								3									
								1									
								2									
3RTU-L	[redacted]	OHIO	4070	1700	[redacted]	1	[redacted]	1	2	2	2	1	1	N	0	52-1	Cor. Thru Switchbp
24RU-L	[redacted]	NY	0197	0	-	3	4	4	3,4	4	missing	missing	4	360 deg	0		

'T' Truck Upper Ball Joint Tear Down Analysis (Wa[illegible] [illegible]forms disassembled to evaluate the wear mechanism.)

						Wear Mode	Seal Wear, (in)	Seal Corrosion	Bearing Wear	Bearing Corrosion	Seal Wear	Seal Corrosion	Concentricity	Cut Mkt	# of Marks	mold #	Comments
						Wear Mode: 1=Normal 2=Moderate 3=Severe 4=Separation	Wear Deco. 1=Normal 2=Moderate 3=Severe 4=Separation	Corrosion Deco. 1=None 2=Moderate 3=Poor 4=Severe(pitting)	Wear Deco. 1=Normal 2=Moderate 3=Severe 4=Separation	Corrosion Deco. 1=None 2=Moderate 3=Poor 4=Severe(pitting)	Wear Deco. 1=Normal 2=Moderate 3=Severe 4=Separation	Corrosion Deco. 1=None 2=Moderate 3=Poor 4=Severe(pitting)	Concentricity Rating 1=Very Good 2=Good 3=Fair 4=Poor	YIN	Mark Deco. # of marks = 0,1,2,or 3 R=Poor P=Paid	XXX-X	
							Seal		Bearing		Seal		Pressure Ring				
Serial Number	Vehicle Miles	State	BJ Date Code	Lift Load	Lift Load x Mileage	Wear Mode	Wear, (in)	Corrosion	Wear	Corrosion	Wear	Corrosion	Concentricity	Cut Mkt	# of Marks	mold #	Comments
[illegible]	[illegible]	MN	[illegible]	6	-	2	4	3	3,4	4	3,4	2	missing	missing	missing	missing	missing press. Ring
[illegible]	[illegible]	IL	[illegible]	6	-	4	4	4	3,4	4	3,4	4	missing	missing	missing	missing	missing press. Ring
[illegible]	[illegible]	QUE	1147	[illegible]	[illegible]	4	[illegible]	4	3	4	3	4	4	6 deg	1	13-1	No seal. P.R. badly [illegible]
[illegible]	[illegible]	OH	[illegible]	[illegible]	[illegible]	4	[illegible]	1	1	1	1	1	2	N	2	101-1	
[illegible]	[illegible]	IL	[illegible]	2800	[illegible]	0	[illegible]	1	1	1	1	1	N	N	0	34-1	inboard corr
[illegible]	[illegible]	OH	[illegible]	2200	[illegible]	0	0.002	1	1	1	1	1	N	N	0	[illegible]-1	like new
[illegible]	[illegible]	OH	[illegible]	[illegible]	[illegible]	0	[illegible]	1	1	1	1	2	N	N	0	52-1	outboard corr
[illegible]	[illegible]	OH	2277	[illegible]	[illegible]	0	[illegible]	1	1	1	1	2	N	N	1	23-1	uniform bob

CL02-023-028

'T' Truck Upper Ball Joint Tear Down Analysis (Warranty returns disassembled to evaluate the wear mechanisms.)

						Condition, 0=Good, no leaks, 1=Wear w/o compl, 2=Bottom Up Cut Boot, 3=Lost Grease/Boot, 4=Lots Metal	Wear Desc. 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Desc. 1=None, 2=Moderate, 3=Poor, 4=Severe(Pitting)	[redacted]	Corrosion Desc. 1=None, 2=Moderate, 3=Poor, 4=Severe(Pitting)	Wear Desc. 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Desc. 1=None, 2=Moderate, 3=Poor, 4=Severe(Pitting)	Concentricity Rating 1=Very Good, 2=Good, 3=Fair, 4=Poor	Y/N	Mark Desc. # of marks = 0,1,2,or 3 Refer Fatal	XXX-X	
							Socket		Bearing		Seat		Preparer Ring					
Serial Number	Vehicle Miles	State	SJ Date Code	LIB Load	LIB Load & Mileage	Wear Mode	Wear, (in)	Corrosion	Wear	Corrosion	Wear	Corrosion	Concentricity	Cut Skirt	# of Marks	mold #	Comments
[redacted]																	
366U-L	62,700	OH	3857	1300	72,100,000	4	0.0065	1	1	1	1	1	N	N	0	53-1	flip new
367U-R	67,700	OH	3877	500	28,000,000	0	0.0018	1	1	1	1	1	N	N	0	97-1	
374U-L	102,000	OH	1386	700	70,000,000	0	0.003	1	1	1	1	1	1	N	0	188-1	
399U-L	68,700	OH	2197	2000	134,000,000	0	0.003	2	1	2	1	1	N	Y	1	40-1	
[redacted]																	
398U-R	60,000	OH	1218	1600	145,000,000	0	0.0035	1	1	1	1	1	N	N	1	48-1	flip new
[redacted]																	
399U-L	84,700	OH	1097	1600	136,000,000	0	0.0035	1	1	1	1	1	N	Y	1	13-1	bellows cpr
400U-R	84,700	OH	4247	1600	151,000,000	0	0.009	2	1	1	1	1	N	N	0	188-1	
408U-L	71,204	MI	3187	2100	148,000,000	0	0.001	1	1	1	1	1	N	N	0	154-1	bellows cpr
409U-R	71,204	MI	2215	1700	134,747,000	0	0.0035	1	1	1	1	1	N	N	0	178-1	
[redacted]																	
447U-L	88,000	NE	5019	2300	[illegible]	0	0.005	1	2	1	1	1	1	N	0	5-1	
[redacted]																	
[redacted]	48,000	OH	4087	300	13,000,000	4	0.110	4	3	4	3	4	2	N	0	99-1	water in seal
[redacted]	48,000	OH	3178	300	13,000,000	4	0.110	4	3	4	3	4	1	180 deg	0	69-1	water in seal
[redacted]	47,000	MA	3158	2800	134,000,000	1	0.004	1	2	1	1	1	2	N	0	30-1	
[redacted]																	
634U-L	57,000	NY	4098	2800	160,000,000	0	0.009	1	1	1	1	1	1	N	1	143-1	
635U-R	57,000	NY	4098	2300	160,000,000	0	0.009	1	1	1	1	1	1	N	0	15-1	
636U-L	30,000	WI	missing	800	10,000,000	4	0.035	4	3	4	2	2	1	N	0	161-1	high wear and corrosion
[redacted]																	

CL02-023-029

"T" Truck Upper Ball Joint Tear Down Analysis (Wear [illegible] returns disassembled to evaluate the wear mechanisms.)

[illegible]						Description: 0=Good, no trouble, 1=Wear w/o corrosion, 2=Bottom Up Cut Boot, 3=Lost Cap/Socket, 4=No Metal	Wear Desc.: 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Desc.: 1=None, 2=Moderate, 3=Poor, 4=Severe(pitting)	[illegible]: 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Desc.: 1=None, 2=Moderate, 3=Poor, 4=Severe(pitting)	Wear Desc.: 1=Normal, 2=Moderate, 3=Severe, 4=Separation	Corrosion Desc.: 1=None, 2=Moderate, 3=Poor, 4=Severe(pitting)	Concentricity Rating: 1=Very Good, 2=Good, 3=Fair, 4=Poor	Y/N	Stark Desc. # of marks = 0,1,2,or 3 R=Rev F=Fold	XXX-X	[illegible]
							Socket		Bearing		Seat		Pressure Ring				
Serial Number	Vehicle Miles	State	BJ Date Code	Lift Load	Lift Load x Mileage	Wear Mode	Wear, (in)	Corrosion	Wear	Corrosion	Wear	Corrosion	Concentricity	Cut Skirt	# of Marks	mold #	Comments
[illegible]																	
[illegible]	[illegible]	PA	[illegible]	1800	42,[illegible]	1	0.004	4	2	2	1	2	1	N	1	169-1	dust in cap
[illegible]	[illegible]	MI	[illegible]	1800	116,[illegible]	1	0.007	1	1	1	1	1	1	N	0	61-1	
[illegible]	42,[illegible]	OH	[illegible]	3000	127,[illegible]	0	0.003	1	1	1	1	1	1	N	0	24-1	
[illegible]	52,[illegible]	CAN	[illegible]	2300	121,[illegible]	0	0.008	1	2	1	1	1	2	45 Deg	1	166-1	
[illegible]	83,[illegible]	MI	[illegible]	2360	195,[illegible]	0	0.008	1	1	1	1	1	1	N	0	88-1	
[illegible]	32,[illegible]	MI	[illegible]	1700	37,[illegible]	4	0.028	4	3	4	3	4	1	N	1	25-1	no lube.
[illegible]	32,[illegible]	MI	[illegible]	700	15,[illegible]	3	0.014	4	3	4	2	2	2	N	0	100-1	
[illegible]	45,[illegible]	VA	[illegible]	300	13,[illegible]	2	0.028	4	3	4	3	2	1	120 deg	0	108-1	seal leak @ stud.
[illegible]																	
724U-L	110,[illegible]	MI	[illegible]	100	11,[illegible]	4	0.0715	4	3	4	3	4	2	90 deg	0	73-1	lube hole is seat closed
738U-L	34,[illegible]	CT	[illegible]	100	3,[illegible]	4	0.[illegible]	4	3	4	3	4	2	N	0	[illegible]-1	junk
761U-L	47,[illegible]	MI	[illegible]	300	14,[illegible]	NA	0.018	4	3	4	3	2	2	N	1	114-1	lube with corrosion.
762U-R	47,[illegible]	MI	[illegible]	600	35,[illegible]	4	0.004	4	2	4	2	3	2	45 deg	0	136-1	no lube.
778U-L	35,[illegible]	NH	[illegible]	1200	34,[illegible]	NA	0.001	2	2	2	1	2	1	0	0	26-1	lube with corrosion.
780U-R	22,[illegible]	NC	[illegible]	1000	22,[illegible]	5	0.001	1	1	1	1	1	1	20 deg	1	112-1	
788U-L	35,[illegible]	NH	[illegible]	1450	51,[illegible]	NA	0.0025	4	2	4	1	2	2	N	0	134-1	lube with corrosion.
789U-R	35,[illegible]	NH	[illegible]	600	17,[illegible]	6	0.001	4	1	2	1	1	2	10 deg	0	165-1	
804U-L	32,[illegible]	IL	[illegible]	600	16,[illegible]	4	0.0125	4	2	4	2	3	2	10 deg	2	82-1	
805U-R	32,[illegible]	IL	[illegible]	600	16,[illegible]	4	0.009	4	3	4	1	2	1	N	0	53-1	Bearing fence to stud.
810U-R	32,[illegible]	MD	[illegible]	450	14,[illegible]	6	0.008	1	1	1	1	1	2	N	0	128-1	
					-												
					-												
					-												
					-												

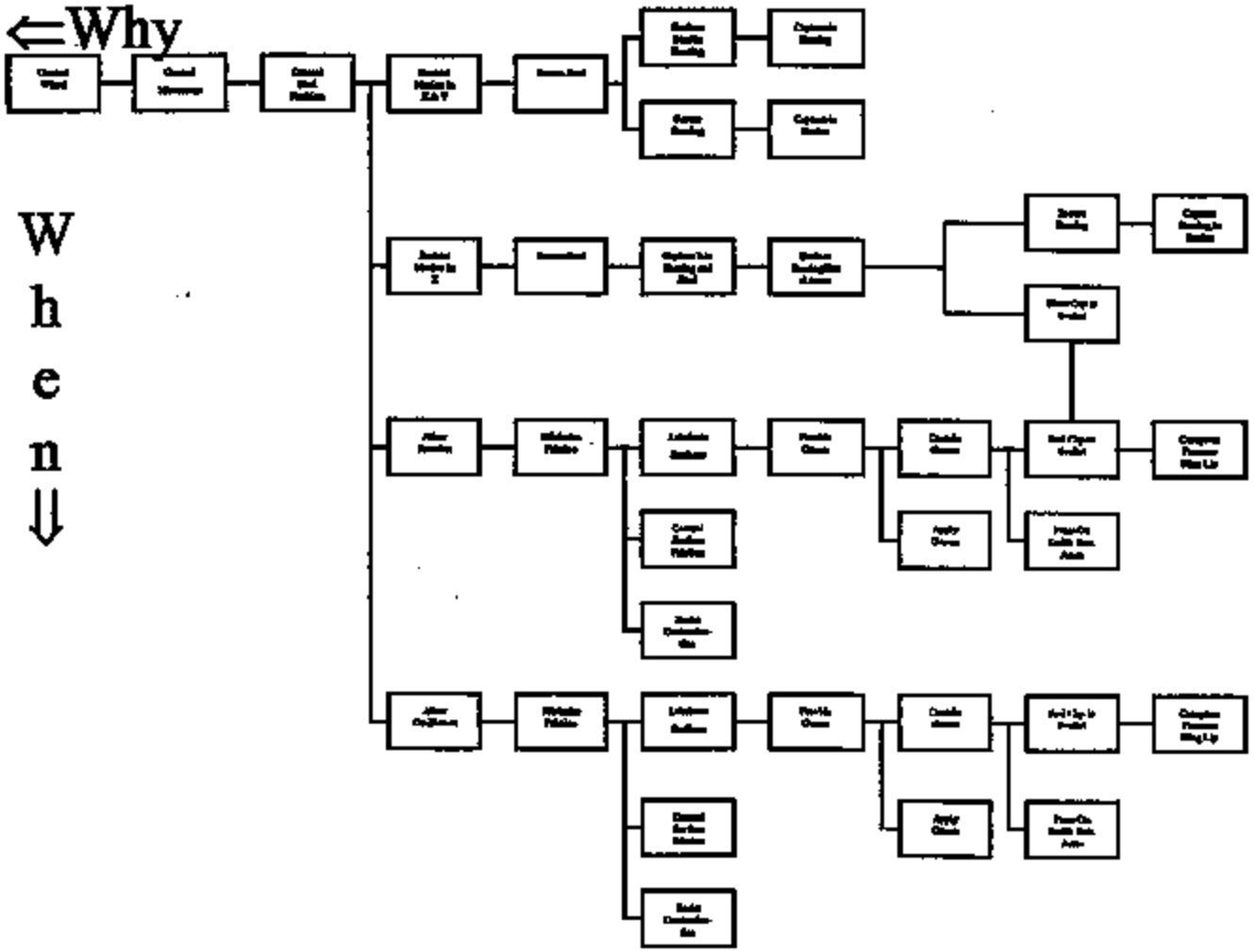
CL02-023-030

T-Truck Upper Ball Joint Product Function Model

⇐Why

How ⇒

When ⇓



DELPHI
Automotive Systems
Delphi Automotive Confidential
DECLASSIFIED

Prepared By John Eilerman 10/30/01

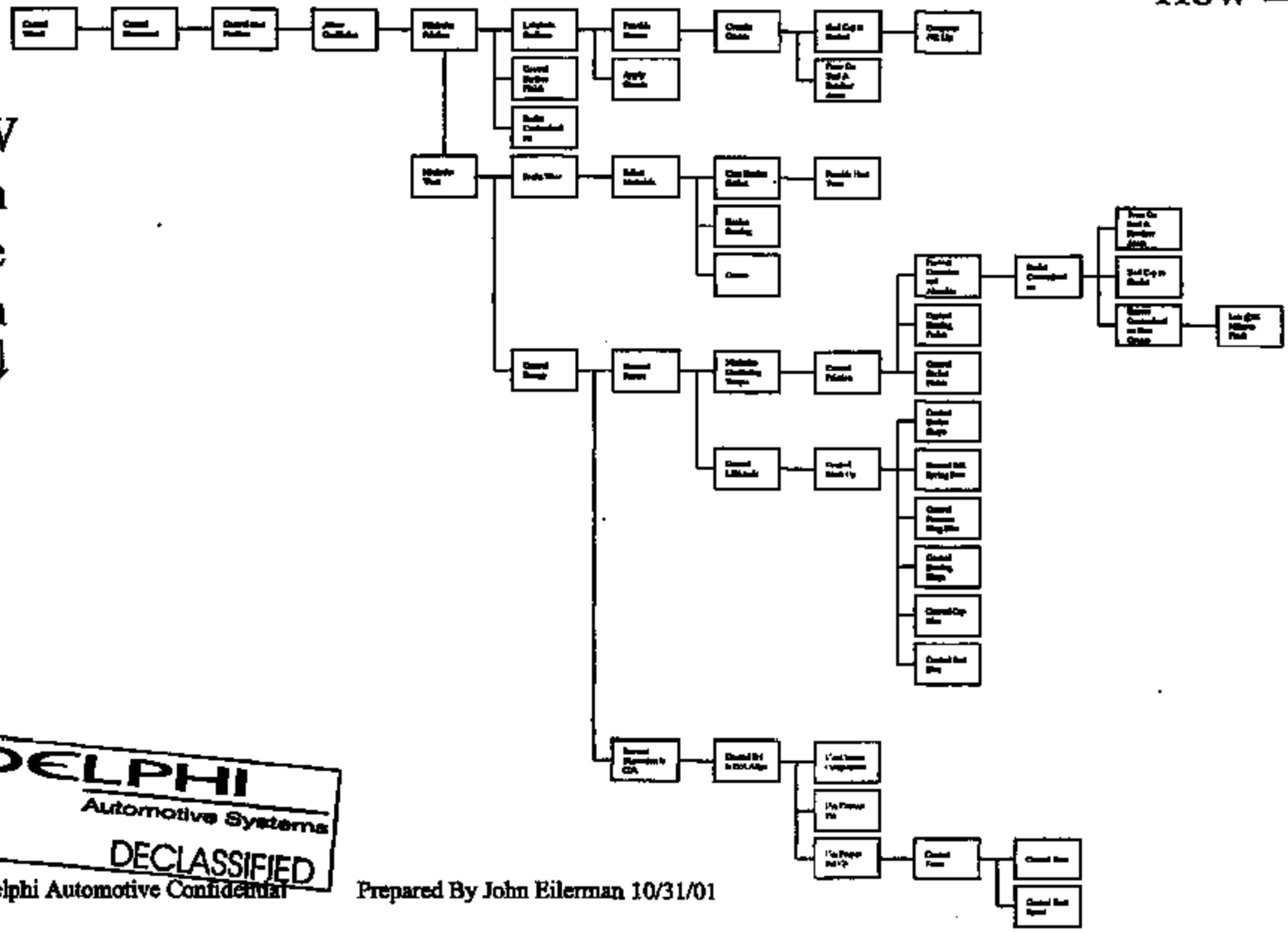
CL02-023-021

T-Truck Upper Ball Joint Product Function Model

⇐Why

How ⇒

When ⇓



DELPHI
Automotive Systems
DECLASSIFIED

Delphi Automotive Confidential

Prepared By John Eilerman 10/31/01

CL02-023-022

ENGINEERING WORK REQUEST 01-02-T158

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Procurement ☐ Vehicle Test ☒ Laboratory
☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Other

EWR NUMBER 11197 - 065 Rev
DEPT. NO. 853
DATE 30-Oct-2001

CUSTOMER NATG
PLATFORM/YR T-TRK. /1996-2000
VEHICLE NO. VARIOUS

Attention: Rob Ross
Targeted Due Date(s): 02-Nov-2001

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
Sheet Attachments 0 (For multiple entries, list below)
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____

☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers

☐ Other

Quantity 57 PCS.
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
Customer P.O. #
Specific Inspection ☐ Yes ☒ No
(List Details in INSTRUCTIONS Section below)

INFORMATION ONLY

N. A.

RETURN TO REQUESTOR.

INSTRUCTIONS

Specific Inspection Details:

T-196 LIFTLOADS UP TO 11200 LB.

T-536 RADIAL ELASTICITY

T-429 UNLOADED ROTATING/ OSCILLATING TORQUES.

SERIAL NUMBERS:855U THROUGH 912U, EXCEPT 883U

DATA ENTERED INTO SPIRAL SAT D.F.

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by CHARLES EIFERT Mail Loc V-57 Phone # 5-8355
Authorized Charles M Eifert Date FAX # 5-8342
Initial Validation Analysis Review Not Required Date
Test Supervisor Review Date

CL02-023-143

Completed by Donald Hawkins Date 05/2001 Test Supv. Date 11/5/01
Reviewed Date Reviewed Not Required (validation analysis eng.) Date

Delphi Automotive Systems

HOME AVENUE/VANDALIA OPERATIONS
PROCEDURE MANUAL

Sheet 1 of 2

PART NUMBER: 9769977

LOG NUMBER: 3385

[redacted] d By: Sample Inspection Report Patrick Johnson Form Format Approved By: Jim Thompson (int)	Document No.: F-INV-2.4-1 Revision: 5 Date: 12/7/98

PART DESCRIPTION: BEARING

MFG LOCATION: NORWALK POWERED METALS INC. DELPHI CHASSIS CHANGE LEVEL: 98219

CHART NUMBER: NONE DELPHI CHASSIS CHART CHANGE LEVEL: NONE

OUTLINE NUMBER: NONE DELPHI CHASSIS OUTLINE CHANGE LEVEL: NONE

BODY STYLE: I-truck SUBMISSION REASON: INFO ONLY

SUBMITTED ON: 19-Nov-01 REQUEST DATE: 21-Nov-01 WEIGHT #1: AVG. WEIGHT:

SUBMITTER: C. EIFERT PHONE: 8365 NUMBER OF PARTS: 10

TOOL NO.: n/a MOLD NO.: n/a CAVITY NO.: n/a COMPOUND NO.: n/a

WORK ORDER NUMBER: H4w446100 LETTER NUMBER: n/a

DEPARTMENT CHARGE: H4w446100

CHECKING INSTRUCTIONS: Check concentricity of I.D. thru hole (.870/.867) to O.D. of Sphere (1.313/1.309) in X-Y planes

SETUP INSTRUCT: "INFO ONLY"

CHECKED BY: BRUCE BUSH DATE CHECKED: 20-Nov-01

REPORT STATUS LEGEND:
A-FULL APPROVAL I-INTERIM APPROVAL R-REJECTED N-NOT SUBMITTED
Report: Sample Inspection Report

CL02-023-070

Delphi Automotive Systems

SHEET 2 OF 2

HOME AVENUE/VANDALIA OPERATIONS FORM NO. F-HV2.4-5

Page 1 of 1

DIMENSIONAL REPORT FORM

Issue Date: 7/19/00

PART NUMBER:	DATE:	Prepared by: Noreen Campbell Revised by: Winona Palmer	Form Format Approved by: Jim Thompson (sof)
9769877	11/20/01		

* = Out of specification

ITEM	SPECIFICATION	RESULTS	VARIATION *
	⊚ Ø.667/.670 TO 1.307/1.313	120 .0019	
	SPHER. DIA	229 .0020	
		259 .0027	
		260 .0013	
		261 .0011	
		291 .0015	
		292 .0024	
		371 .0016	
		624 .0010	
		625 .0009	
	CONCENTRICITY		

CL02-023-071

Delphi Automotive Systems

SHEET 2 OF 2

HOME AVENUE/VANDALIA OPERATIONS FORM NO. F-HV2.4-5

Page 1 of 1

DIMENSIONAL REPORT FORM

Issue Date: 7/19/00

PART NUMBER:	DATE:	Prepared by: Noreen Campbell Revised by: Winona Palmer	Form Format Approved by: Jim Thompson (sof)
9769877	11/20/01		

* = Out of specification

ITEM	SPECIFICATION	RESULTS		VARIATION SOCKET WEAR
	◎ Ø.667/.670 TO 1.309/1.313	120	.0019	.011
	SPHER. DIA	229	.0020	.043
		259	.0027	.020
		260	.0013	.010
		261	.0011	.006
		291	.0015	.004
		292	.0024	.028
		371	.0016	.009
		624	.0010	.028
		625	.0009	.127
	CONCENTRICITY	RANK ORDER		RANK ORDER
	BEST	625		291
		624		261
		261		371
		260		260
		291		120
		371		259
		120		292
		229		624
		292		229
	WORST	259		625

X-OUT STRATEGY/©

CL02-023-072

ENGINEERING WORK REQUEST 01-02-T162

GENERAL INFORMATION

To: ☐ Design ☐ Analysis
☐ Model Shop ☐ Materials Engineering
☐ Procurement ☐ Instrumentation Lab
☐ Vehicle Test ☐ Other
☒ Laboratory

EWR NUMBER 11197-088
DEPT. NO. 583
DATE 19NOV01

CUSTOMER NATG
PLATFORM/YR T-TRK 12001
VEHICLE NO. N/A

Attention: ROB ROSS
Targeted Due Date(s): 19DEC01

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____

☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers

☐ Other

Quantity 2
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☐ No
Customer P.O. #
Specific Inspection ☐ Yes ☐ No
(List Details in INSTRUCTIONS Section below)

INFO ONLY

RETURN TO REQUESTER

N/A

INSTRUCTIONS

T195 - PRE & POST DURABILITY LIFTGRADS
T429 - PRE & POST DURABILITY TORQUES
T467 - SLAW

A) LATERAL SIDE LOAD - 400 lb OUTBOARD TO 1800 lb INBOARD SINUSOIDAL @ 0.33 HZ
B) AXIAL LOAD - SINUSOIDAL ±340 lb @ 0.33 HZ
C) ROTATION ±15° @ 0.5 HZ
D) OSCILLATION ±10° @ 1.0 HZ

STEP 1 — RUN EACH PART 10,000 CYCLES WITHOUT GREASE
STEP 2 — [redacted]TE EACH PART W/ 3631019 GREASE - UNTIL GREASE PURGES
STEP 3 — [redacted] EACH PART AN ADDITIONAL 240,000 CYCLES

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V-57 Phone # 8355
Authorized [signature] Date 19NOV01 FAX # 8342
Initial Validation Analysis Review ____ Date ____
Test Supervisor Review ____ Date ____

CL02-023-134

Completed by [signature] Date 3 DEC 01 Test Supv. [signature] Date 12/3/01
Reviewed ____ Date ____ Reviewed ____ Date ____
(validation analysis eng.)

DELPHI Chassis Systems

PHYSICAL TEST LABORATORIES

EWR 11197 – 088
Date 3 DEC 01
Technician R. Ross
Page 1 of 8

CALIBRATION INFORMATION

EQUIP. IDENT. NO. (ID)	DESCRIPTION	LAST CALIBRATION DATE	NEXT CALIBRATION DUE DATE
TM-371-1	T-467 – SLAW '1'	30 OCT 01	15 JUL 02
TM-388	INSTRON (LIFT-LOADS)	16 FEB 01	15 JAN 02
TM-196-13	TORQUE WRENCH (IN/LBS)	14 AUG 01	15 JAN 02

DELPHI
Chassis Systems

PHYSICAL TEST LABORATORIES

EWR	11196-387
Date	3 DEC 01
Tech.	Rob Ross
Page	2 Of 8

Data Report Summary

Part Number	17980735	Part Description	T – TRK/2001
Number of Samples	2	Serial Number	#1 & 2

Fixture(s)	Test Instruction(s)	Revision Date(s)
LF-6212	T-195	8 MAY 80
LF-4146	T-429	21 OCT 76
LF-6554	T-467	19 MAY 89
LF-6090-26		

Results, Observations, and Comments :
Test was run according to EWR.

The load was applied to the top of the ball stud, on the Instron machine till a load of 4,500 N was reached.
A graph of ball joint stud's range of movement was constructed during lift-load test.
The results of the pre and post lift-load tests were printed on a sheet of paper and included in this report.

The part was also manually rotated and oscillated and it's rock torque and rotation torque recorded in in/lbs.
The results are also included in this report.

SIDELOAD =	+	400 lbf -1800lbf
AXIAL =	+/-	340 lbf
ROTATE =	+/-	15 deg
ROCK =	+/-	10 deg
AXIAL CPM =		0.33
SIDE CPM =		0.33
ROTATE CPM =		0.5
ROCK CPM =		1.0

Each part was run for 10,000 rock cycles ungreased then another 240,000 rock cycles with grease provided.

Data Plots : See Page(s)
Photographs : See Page(s)

Reported By : Rob Ross Date : 3 DEC 01

Test # 01-02-T162 ch. 1
Project # 11197-088
Test Mach # _____

OZT-TRK SLAW 2-086.000

Date 12-3-01
Tech R. Ross

CL02-023-137

SPECIMEN	DATE	TIME	TECH	Stroke Min	Axial Load Kn	Rotation Deg	Rock Deg	Side Load Kn	Axial Load Kn	Side Load Kn	Comments
		LIMITS		Max / Min .105 / -.05	Max / Min 1000 / -1000	Max / Min 16 / -16	Max / Min 12 / -12	Max / Min 1000 / -2594	New	New	
T162.088_1	11-21-01	00:05	RK	.1004/-.036	415/-390	± 15	± 10	579/-1881	398/-304	620/-1872	550 Rock Cyc
"	11-26-01	2:46:41	RK	.1007/-.035	395/-421	~~	± 10	598/-1893	—	—	10,000 Rock Cyc End Stage 1
T162.088_2	11-26-01	00:01	RK	.1014/-.027	375/-422	± 15	± 10	455/-1871	314/-315	480/-1848	750 Rock Cyc
"	11-26-01	2:46:43	RK	.1015/-.027	398/-460	± ?	± 10	507/-1872	—	—	10,000 Rock Cyc End Stage 1
Reversed.											
T162.088_1	11-27-01	00:07:	RK	.1001/-.034	392/-402	± 15	± 10	519/-1933	380/-381	312/-1789	550 Rock Cyc
"	11-28-01	21:41:	RK	.1008/-.033	425/-447	± 15	± 10	522/-1874	319/-392	521/-1868	78,125 Rock Cyc
"	11-28-01	25:12:	RK	.1007/-.031	418/-499	± 15	± 10	527/-1873	407/-426	535/-1775	101,000 Rock Cyc
"	11-29-01	48:29:	RK	.1008/-.032	417/-456	± 15	± 10	528/-1880	311/-387	516/-1865	179,600 Rock Cyc
"	11-30-01	66:59	RK								240,000 Rock Cyc. EOT
T162.088_2	11-30-01	00:02:	RK	.1001/-.039	381/-368	± 15	± 10	513/-1990	314/-339	482/-1850	170 Rock Cyc
"	12-3-01	66:19	RK	.1003/-.045	422/-453	± 15	± 10	533/-1875	379/-415	417/-1829	238,800 Rock Cyc

DELPHI

Chassis Systems

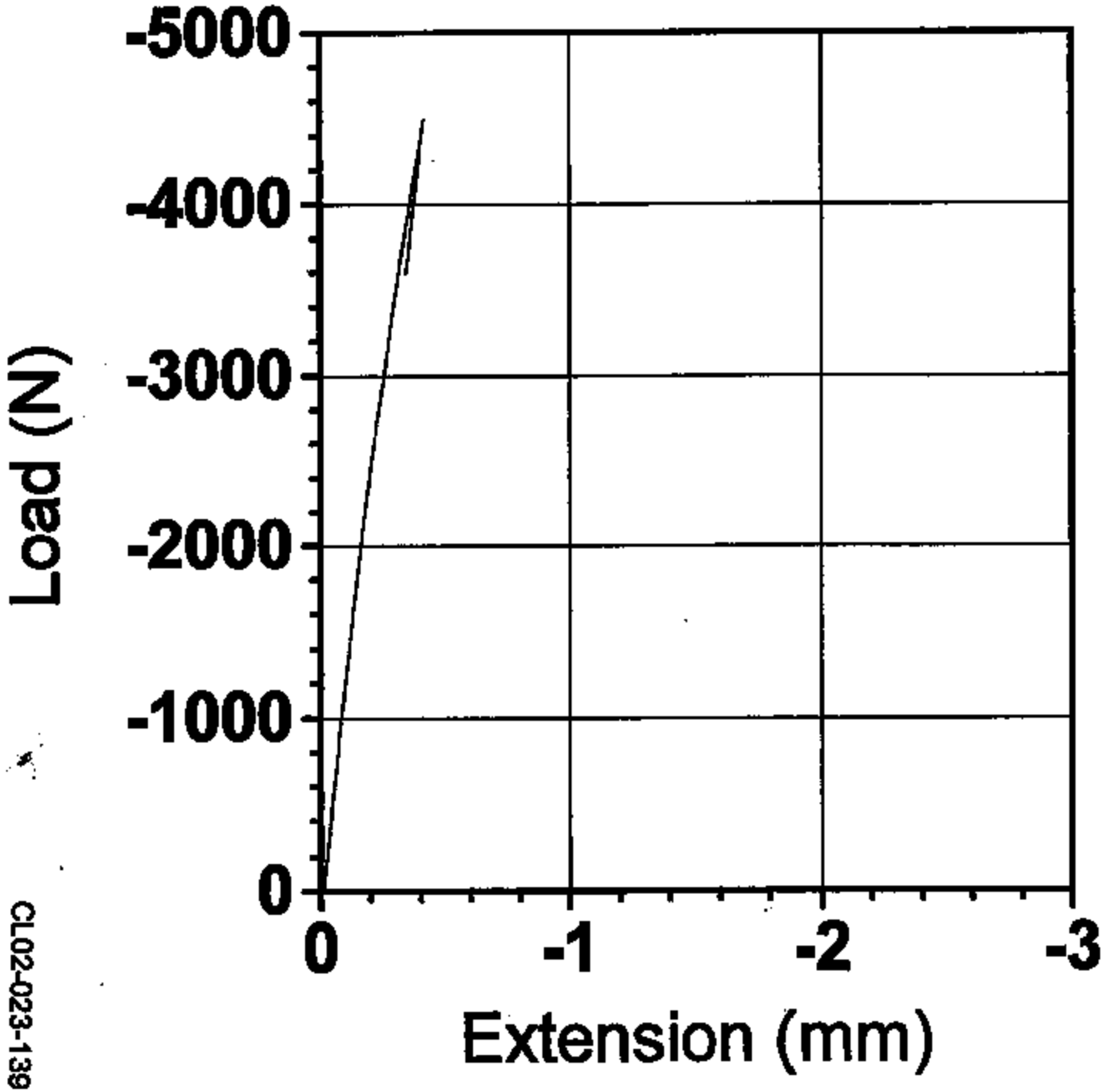
Project #: 11197-088
Test #: 01-02-7162
Date: 11-20-01
Tech: R. Ross
Page: 4 of 8

Manual Torque Data Log

Place #	Rock Torque Measured (IN. LB.)	Rock Torque Actual (IN. LB.)	Rotate Torque (IN. LB.)	Observations
#1	75		60	
			~~35~~	
#2	40		35	
Post Durability Torques				
#1	30		10	
#2	30		10	

CL02-023-138

Liftlo[illegible]d #1 T-TRK ~~LWR~~ UPR 11197-08[illegible] 20 NOV 01 R. Ross

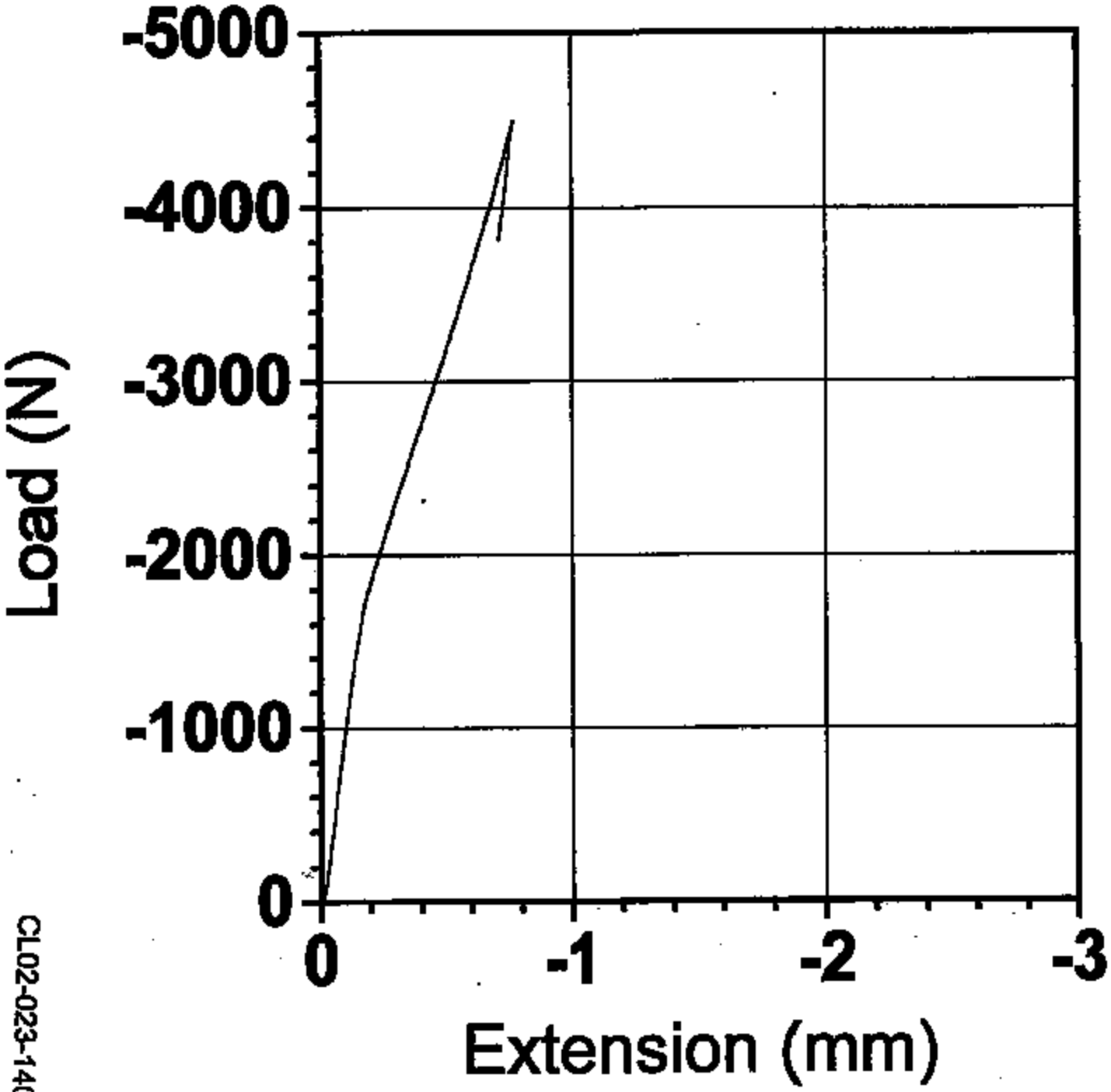


CL02-023-139

PAGE NO. 5 OF 8

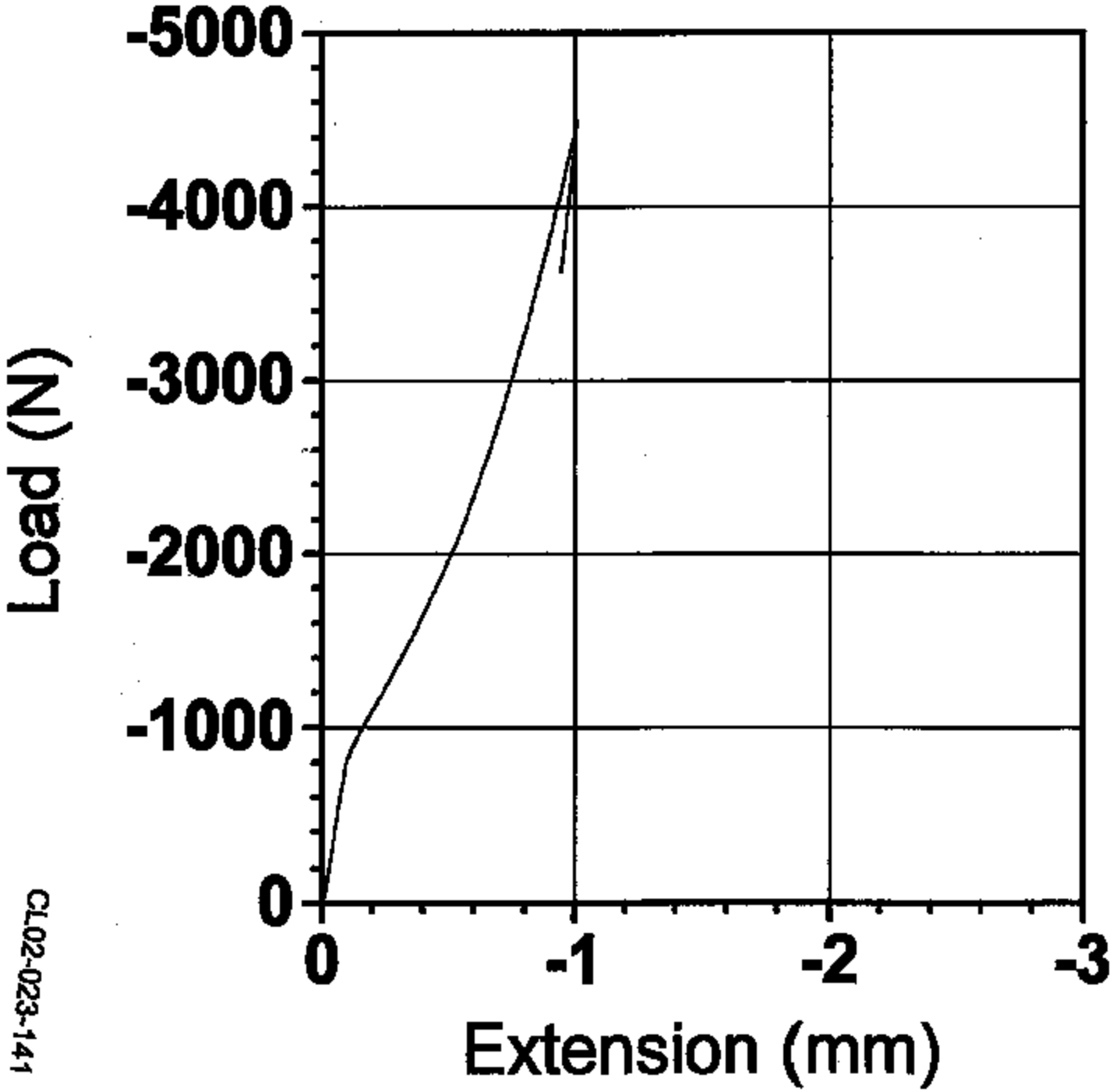
UPR RK 30EC01

Liftload #2 T-TRK ~~LWR~~ 11197-088 20 NOV 01 R. Ross



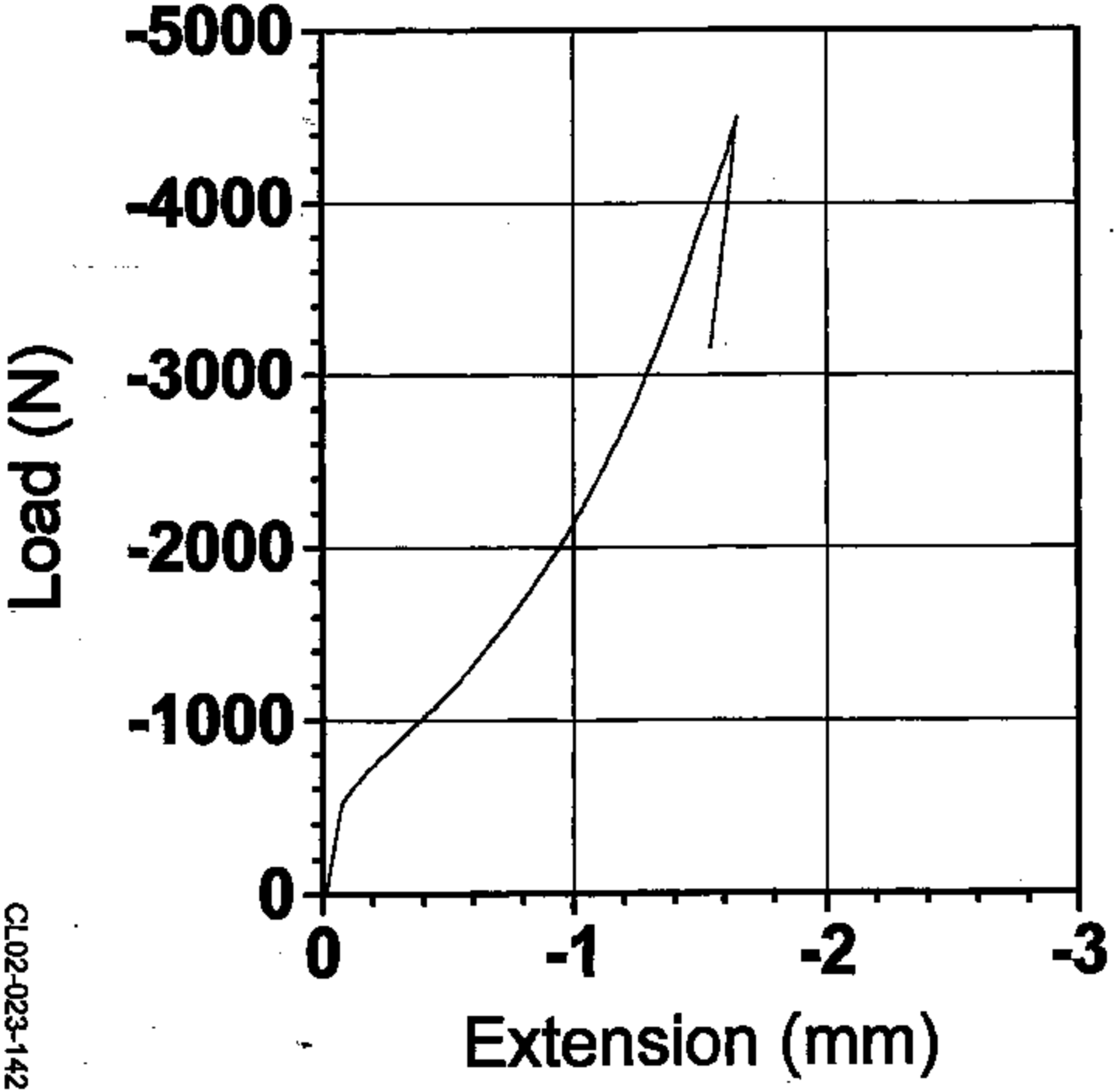
CL02-023-140

Liftl[illegible]d #1 T-TRK UPR 11197-08[illegible]3 DEC 01 R. Ross



CL02-023-141

Liftl[illegible]d #2 T-TRK UPR 11197-08[illegible]3 DEC 01 R. Ross



CL02-023-142

ENGINEERING WORK REQUEST 01-02-T167

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Procurement ☐ Vehicle Test ☒ Laboratory ☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Other

EWR NUMBER 11197-089
DEPT. NO. 583
DATE 05DE01
CUSTOMER NATG
PLATFORM/YR 2002/T-TRUCK
VEHICLE NO. N/A

Attention: ROB ROSS
Targeted Due Date(s): ~~21DE01~~ 11JA02 [illegible]

Product Name BALL JOINTS Part number 17980735 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix ____

☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers

☐ Other

Quantity 6
Prototype Control Plan ☐ Yes ☐ No
Hazardous Material ☐ Yes ☐ No

Customer Order ☐ Yes ☐ No
Customer P.O. # ____
Specific Inspection ☐ Yes ☐ No
(List Details in INSTRUCTIONS Section below)

INFO ONLY - NO LUBE

RETURN TO REQUESTER

N/A

INSTRUCTIONS

T195 - PRE & POST LIFTLOADS
T429 - PRE & POST TORQUES

T388 - ALL 6 BALL JOINTS ONTO MUD MACHINE
2 PARTS - 100,000 CYCLES THEN LUBE & SLAW TEST
4 PARTS - 300,000 CYCLES THEN LIFTLOAD & TORQUE
(LUBE & RE-INSTALL FOR ADDITIONAL 300,000 CYCLES IF LIFTLOAD > 1800N ← 1st MUD)

T467 - SLAW - LUBRICATE W/ 3631019 GREASE PRIOR TO TEST
A) LATERAL SIDE LOAD - 400 lb OUTBOARD TO 900 lb INBOARD SINUSOIDAL @ 0.33 Hz (FLAT SIDE)
B) AXIAL LOAD - SINUSOIDAL ±340 lb @ 0.33 Hz
C) ROTATION ±35° @ 0.5 Hz
D) OSCILLATION ±15° @ 1.0 Hz
E) RUN TEST TO 250,000 ROCK CYCLES

* NOTE CHANGE IN LATERAL SIDE LOAD

CL02-023-116

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V-57 Phone # 8355
Authorized [signature] Date 06DE01 FAX # 8342
Initial Validation Analysis Review ____ Date ____
Test Supervisor Review ____ Date ____

Completed by [signature] Date 9 JAN 02 Test Supv. [signature] Date 1/9/02
Reviewed ____ Date ____ Reviewed ____ Date ____
(validation analysis eng.)

ENGINEERING WORK REQUEST

2001-0675

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Procurement ☐ Vehicle Test ☒ Laboratory ☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Other

EWR NUMBER 11197-090
DEPT. NO. 583
DATE 06DEC01

CUSTOMER NATG
PLATFORM/YR T-TRK/2000-1996
VEHICLE NO. VARIOUS

Attention: GREG LANCHMAN
Targeted Due Date(s): 19DEC01

Product Name BALL JOINTS - GREASE Part number 3631019 Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix
☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers
☐ Other

Quantity 13
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☐ No
Customer P.O. #
Specific Inspection ☐ Yes ☐ No
(List Details in INSTRUCTIONS Section below)

INFO ONLY

RETURN UNUSED PORTIONS TO REQUESTOR

INSTRUCTIONS

ANALYZE GREASE SAMPLES FOR % CONTAMINANTS PER T-319

T-TRUCK WARRANTY RETURNS - SAMPLE I.D.:

429	558	634	565
463	560	635	
464	~~677~~ 653	666	
546	624	667	

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by [signature] Mail Loc V-57 Phone # 8355
Authorized [signature] Date 06DEC01 FAX # 8342
Initial Validation Analysis Review Date
Test Supervisor Review Date

CL02-023-114

Completed by [signature] Date 12/12/01 Test Supv. Date
Reviewed Date Reviewed Date
(validation analysis eng.)

DELPHI
Automotive Systems

Analytical Chemistry Laboratory Report

ACL #: 2001-0675
EWR# 11197-090

Thirteen ball joint greases were submitted contaminant analysis using the T-319 procedure.

The following table summarizes the results of the T-319 procedure for ash and dirt contents:

SAMPLE ID	ASH	DIRT
	(Wt. %)	
429U	37.8	0.06
463U	59.0	0.01
464U	62.5	0.12
546	12.0	<0.01
558U	5.45	<0.01
560U	59.2	0.91
565U	8.67	0.08
611U	6.12	0.02
624U	21.9	0.02
634U	6.52	0.36
635U	7.10	0.04
666U	67.6	0.20
667U	8.64	0.02

G. Lanchman
12/12/2001

01-02-T168

ENGINEERING WORK REQUEST

GENERAL INFORMATION

To: ☐ Design ☐ Model Shop ☐ Procurement ☐ Vehicle Test ☒ Laboratory ☐ Analysis ☐ Materials Engineering ☐ Instrumentation Lab ☐ Other

EWR NUMBER 11197 - 091
DEPT. NO. 853
DATE 06-Dec-2001
CUSTOMER NATG
PLATFORM/YR S & T Trk./1996-2000
VEHICLE NO. VARIOUS

Attention: Rob Ross, and Donald Accurso
Targeted Due Date(s): 12-Dec-2001

Product Name BALL JOINTS Part number See below. Rev Level N/A
(For multiple entries, list below)
Sheet Attachments 0
Prints Supplied ☐ Production ☐ Experimental ☐ Marked ☐ Sketch ☒ Not Applicable

DEPARTMENTAL INFORMATION

☐ Validation ☒ Other

☐ Revise Existing Design
☐ New Suffix

☐ New Design
☐ Similar to existing
☐ Part numbers supplied
☐ Acquire part numbers

☐ Other

Quantity ~~[illegible]~~ 135 pcs. D.A.
Prototype Control Plan ☐ Yes ☒ No
Hazardous Material ☐ Yes ☒ No

Customer Order ☐ Yes ☒ No
Customer P.O. #
Specific Inspection ☐ Yes ☒ No
(List Details in INSTRUCTIONS Section below)

INFORMATION ONLY

N. A.

RETURN TO REQUESTOR.

INSTRUCTIONS

Specific Inspection Details:

T-195 LIFTLOADS UP TO 5000 N

T-536 RADIAL ELASTICITY

T-429 UNLOADED ROTATING/ OSCILLATING TORQUES.

PART NUMBERS:17960735 S/N: 913u through 943u, 944u through 1002u, except 948u, 999u
9766435 S/N: 001s through 033s, 034s through 045s. D.A.

AUTHORIZATION FOR REQUEST AND APPROVAL

Requested by CHARLES EIFERT Mail Loc V-57 Phone # 5-8356
Authorized [signature] Date FAX # 5-8342
Initial Validation Analysis Review Not Required Date
Test Supervisor Review Date

CL02-023-113

Completed by Date Test Supv. [signature] Date 1/15/02
Reviewed Date Reviewed Not Required (validation analysis eng.) Date

DELPHI
Chassis Systems

480 North Dixie Hwy.
Vandalia, Ohio 45377
Area Code 937

TELEFAX

DATE: 25JN02	Pages (including cover): 9
ATTENTION: Dennis Mouser	FROM: Chuck Elfert Delphi Chassis Systems 480 North Dixie Hwy. Vandalia, Ohio 45377
Telephone No.	Telephone No. 937-455-8355
Telefax No. 248-753-7916	Telefax No. 937-455-8342

Dennis, Paul,

I spent a couple of hours today reviewing past work on bearing hardness and socket hardness studies. It is hard for me to remember all of the work that was performed during this investigation.

First, the socket hardness:
Page 2 – 4 – when the first separation occurred in 1997 the initial focus was the socket. The attached graphs were studies conducted on high wear and low wear sockets to see if there was any correlation. As you can see the socket hardness was consistent in part to part (both BOB's and WOW's) and within the part.

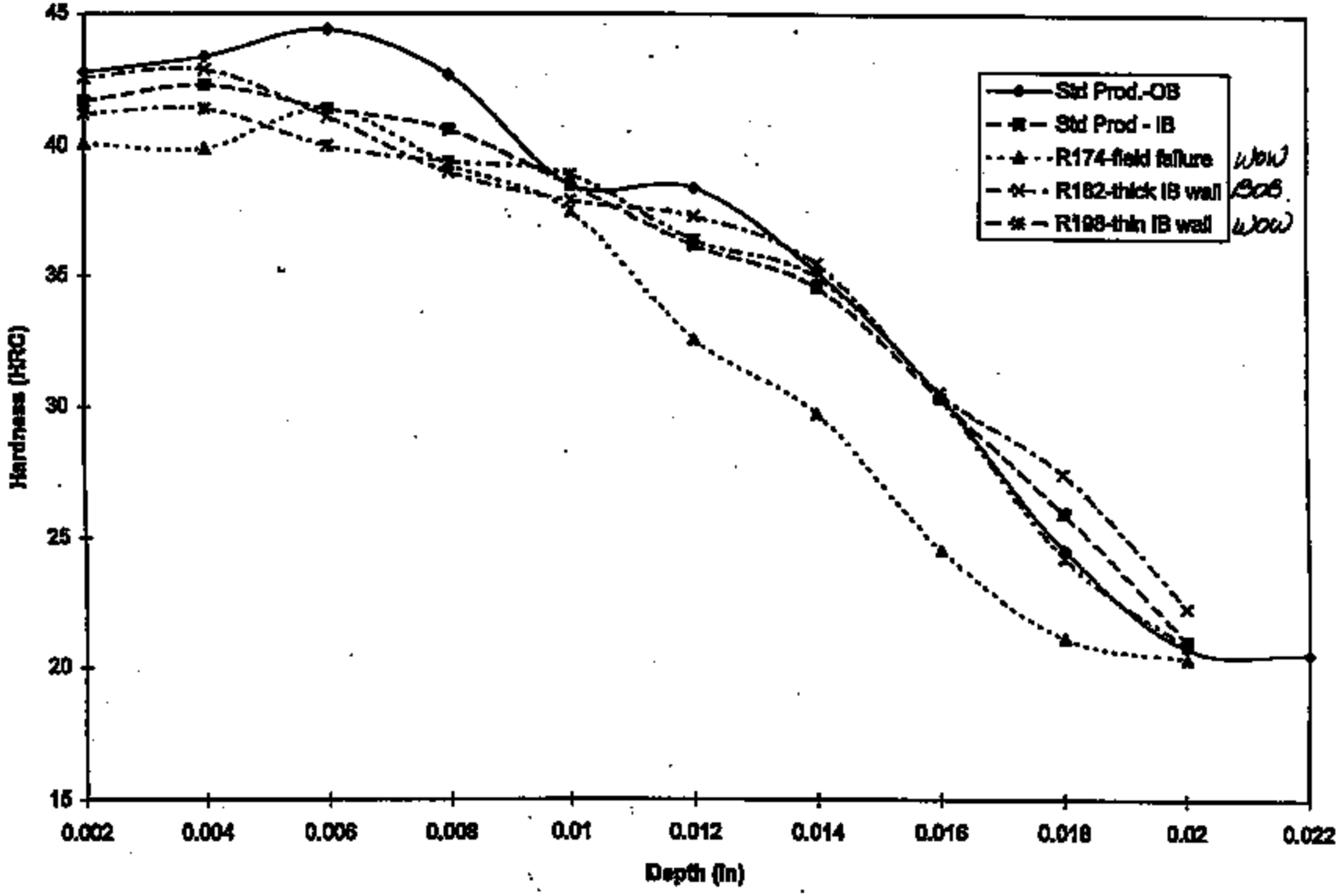
Pages 5-9 – These are excerpts from various reports (GM Research, Vertech, Powder Tech, etc.) that focused on the bearing hardness and any correlation to wear conditions. There was a lot of overlap and it was concluded there was no correlation between the bearing hardness and the wear on the socket.

I realize that this data does not rule out some sort of interaction as we discussed on 12JN02, but I wanted to make sure you were aware of previous studies performed before I proceed in procuring samples with high and low hardness. I'm sorry I couldn't dig out this data when you were here on the 12th.

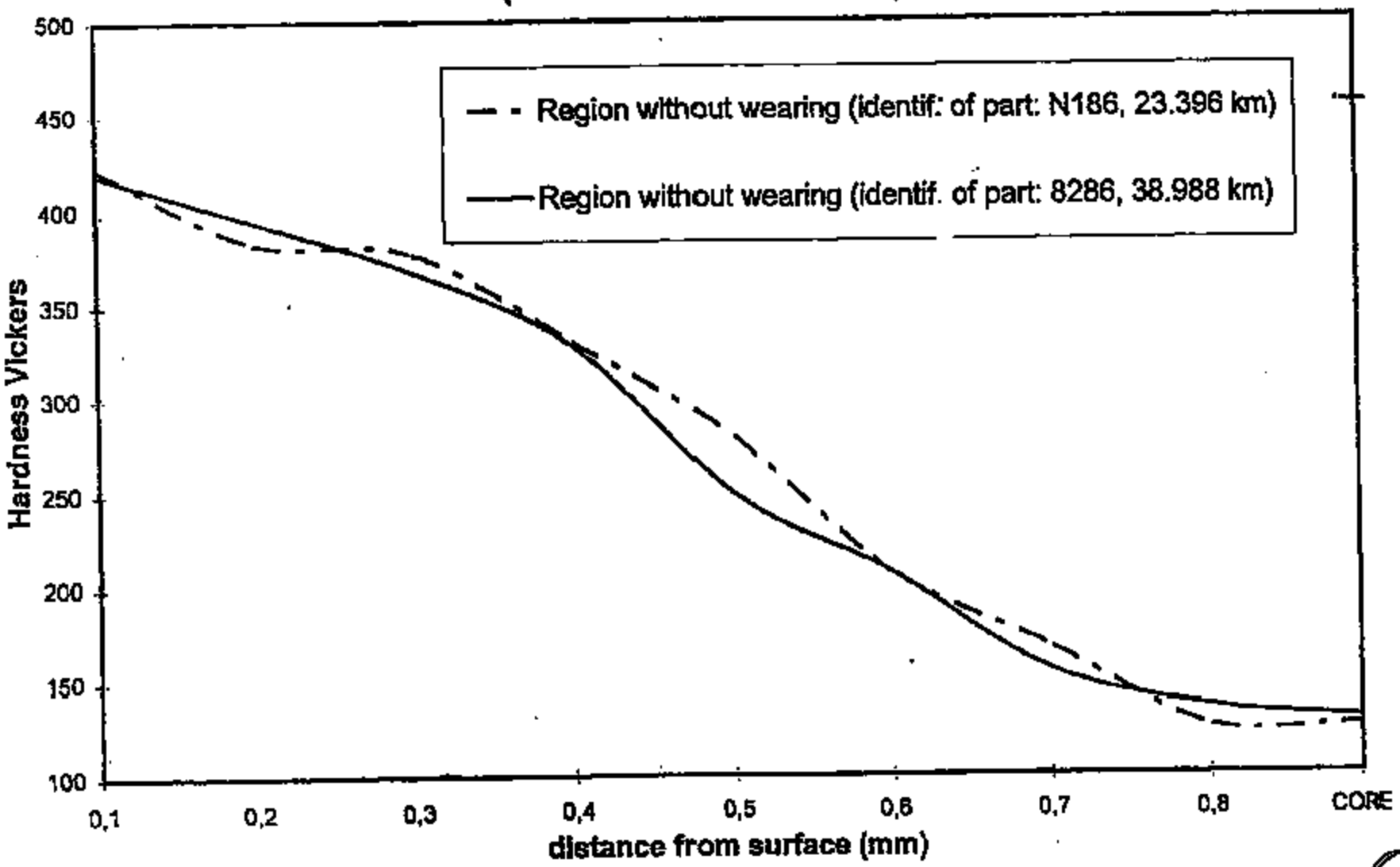
Thanks,

Chuck

Figure 1. Case Depth of 17980737 Sockets



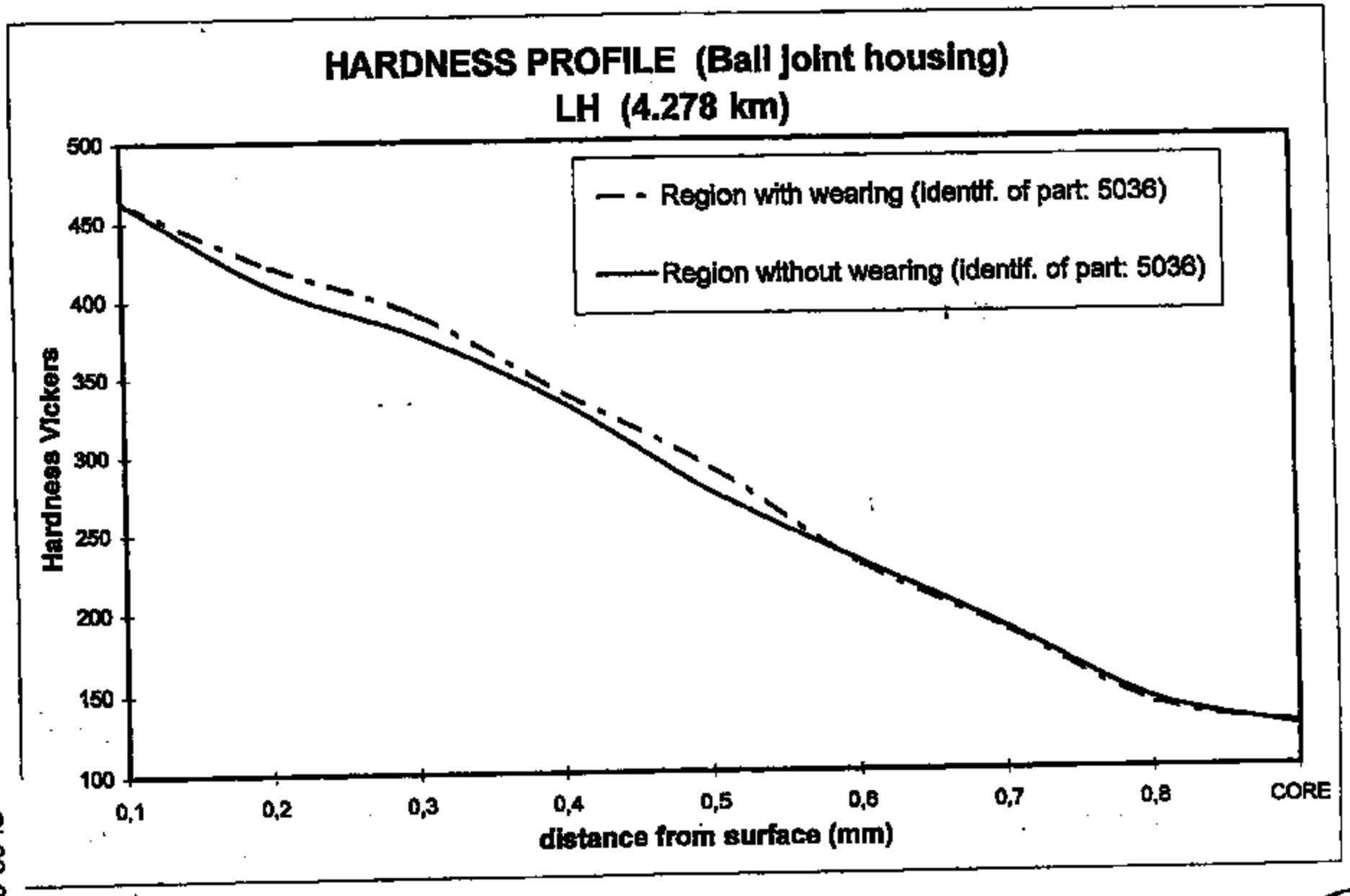
HARDNESS PROFILE (Ball joint housing)
(Parts: N186 and 8286)



3

attachment A - EMME 268/98

CL02-023-014



4

CL02-023-015

Results of Particle Hardness (DPH_{100}/ HRC)

	Samples	surface	Ave.	core	Ave.
WOW	R304	792, 772, 782, 762, 724	(766/ 62.5)	342,274,336	(317 / 32)
WOW	R325	707,762, 813,824, 803	(782/ 63.3)	383,572,579	(511 / 50)
WOW	R295	762,813,824,813,792	(800 / 64)	322 417,373	(370/ 38)
BOB	R336	622, 592, 665, 681, 707	(653 / 58)	327,309,274	(303 / 30)
BOB	R288	698, 642, 657, 627,649	(655 / 58)	258, 314,383	(318 /31)
BOB	R240	772, 813, 734, 752, 762	(767 / 63)	258,274, 274	(269 /26)

It appeared that the bearing samples were case hardened. However, core hardness of samples R 325 and R295 was higher which might suggest that surface pores were not sufficiently sealed.

Microstructure analysis The polished sample was etched using 3% nital reagent. The structure showed tempered martensite near the surface for all six bearing samples, see Figure 13. Figure 14 showed the typical microstructure in the core region which was pearlitic structure. With the results of particle hardness, it appeared that the bearing samples were properly heat treated.

Density Measurement The density of baked bearing samples was measured using Archimedes' principle. The results can be summarized as follows:

Samples	R240	R336	R288	R295	R325	R304
Density (gm/cc)	6.40	6.42	6.39	6.40	6.39	6.37

The results of density measurement appeared to indicate that the bearing density was around 6.4 cc / gm. Under this density level, the percentage of interconnected porosity must be high. However, the fact that there was a case during heat treating suggested that the bearing samples must have been coined.

surrounding a large particle which looks about ready to fall out. The etched structures are shown in Figure 22. We see essentially all martensite out at the surface with no significant white layer. The presence of the surface cracking and the corrosion in the pores, suggests to us that this sample was causing a problem to the opposing member.

Summary and Conclusions

Because we do not know which samples caused problems and which did not, it is difficult for us to reach specific conclusions about these parts. However, there are significant variations in microhardness from 47 up to 62, and this may possibly correlate with wear of the opposing member. The sponge iron content is the same, except for sample 151, and does not look to us to be a causative factor. Densities are all in the range of 6.29 up to 6.56 g/cm³. That is not a very large variation, and we do not think that that will correlate well with the observed problem.

The samples when originally supplied by the manufacturer of the sintered part, probably did not have any corrosion in the pores, surface cracking, or wear debris in the pockets. All of these came during the process of failure. If we had information as to which samples were successful and which were problematic, it is possible that additional thought could be given to the results, or that possibly additional more thorough testing might be done.

Leander Pease

Leander F. Pease III, Sc.D.

LFP:p

TABLE I

SUMMARY OF OBSERVATIONS

	IDENTITY	RECEIVED DENSITY g/cm³ B328*	% SPONGE	MICRO-HARDNESS HRC**	SURFACE CRACKING	CORROSION IN PORES	WEAR DEBRIS POCKETS	LIGHT SURFACE LAYER	DENSITY IMAGE ANALYSIS g/cm³
WOW	57	6.47	50	61.5	N	N	N	Y	NA
WOW	58	6.56	50	60	N	Y	N	N	NA
WOW	BRAZ	6.36	55	62	Y	N	Y	N	6.45
NEW	UNPL	6.52	50	57	N	N	N	?	6.69
BOB	5	6.31	50	55	N	N	N	?	6.61
WOW	43	6.31	50	59	N	N	N	?	6.70
BOB	151	6.43	90	60	N	N	N	Y	6.71
WOW	213	6.29	50	55	N	Y	N	N	6.40
BOB	218	6.29	50	58	N	N	N	N	6.53
BOB	219	6.37	50	47	N	N	N	N	6.54
WOW	258	6.31	50	58	Y	Y	N	N	6.48

* Includes any oil or corrosion products in pores

** Average of 3 readings, converted from 100g Knoop

CL02-023-018

7

Summary and Conclusions

We are surprised that all of the tests that we have done have not shown any significant difference between the two bearings. They have essentially the same density and oil content. They show similar corrosion products and roughening, in the bottom of the oil grooves and on the external surface. The degree of hardening is the same for each, with the surface being essentially all martensite with no fine pearlite or other phases present. The microhardnesses within .002" of the surface of the samples are identical.

If any further work is to be done, it should be related to the mating member, to see they are, in fact, essentially identical. The use of the scanning electron microscope would allow the identification of the corrosion products and the metal debris found in the high wear sample.

Leander Pease

Leander F. Pease III, Sc.D.

WOW TABLE I BOB

MICROHARDNESS 100g KNOOP CONVERTED TO HRC

HIGH WEAR		LOW WEAR	
DIST. IN	HRC	DIST. IN	HRC
.002	62	.002	61
.002	62	.002	61
.004	57	.002	62
.002	61	.002	62
.002	62	.002	62
av.	61	av.	61.5

Hardness testing The hardness profile of steel cap and particle hardness of P/M bearing were conducted the polished samples. The results were summarized as follows:

The hardness profile of steel cap

	Distance from surface		.002"	.005"	.008"	.010"	.015"	.020"	core
BOB	R212	I.D.	409	413	373	351	294	210	133
		O.D.	417	405	387	366	285	219	128
WOW	R214	I.D.	455	455	413	380	360	253	124
		O.D.	450	429	405	401	348	294	126
	worn area	I.D.	146	138	141	154			209
		O.D.	421	421	405	397			181

Above results indicated that both R212 and R214 steel cap were case hardened and the case hardness and depth were almost identical. The microhardness profile of worn area suggested that the case was almost removed after 12,037Km.

The particle hardness of P/M bearing (DPH$_{100}$)

BOB	R212	surface	724, 782, 752, 762, 685, 698, 707, 752
		core	643, 681, 642, 724, 634
		core**	297, 322, 292, 351, 336
WOW	R214	surface	882, 870, 846, 847, 870, 858, 894
		core	762, 724, 698, 772, 752
		core**	455, 383, 297, 351, 287

** near the base of bearing which was thicker

The above results suggested that the particle hardness of R214 P/M bearing showed consistently higher on the surface and in the core.

Microstructure Analysis of P/M Bearing The polished samples were etched with 3% nital solution. The structure in the core and surface was all martensite, suggesting the part was through hardened. Comparing the structure and porosity distribution, it showed no significant difference between R212 and R214 P/M bearing. The typical microstructure for R 212 and R214 sample was shown in Figures 13 and 14, respectively.

Elfert, Charles D

To: Allen, Greg ; michael.j.french@gm.com; dennis.o.mouser@gm.com
Cc: McKale, Michael J
Subject: T-Trk upper ball joint campaign

10/15/2002

Mike, Greg, Dennis,

Per our phone conversation yesterday to close this T-truck upper ball joint issue I have attached several documents concerning the tests that were performed in trying to identify the root cause of the ball joint separations. The action list is probably the best summary but was not initiated until after several years of investigation. The T-Truck test table is a summary of several tests that were run at GM. I have also included the project definition tree per Dennis Mouser's request.

Action List T-Upper.xls | Project Definition Tree.ppt | T-Truck test Table.doc

Thanks,
Chuck Elfert

Delphi Automotive
Ball Joint Product Engineering
937 - 455 - 8355
charles.d.elfert@delphiauto.com

CL02-023-002

Action Items
T-Truck Upper Ball Joint Investigation

Number	Start Date	Item	Status	Champion
[redacted]				
2	12/07/2000	Pick BOB's & WOW's (Lifload X Mileage) in spike time frame Warranty Returns - BOB/WOW specific vehicles and states	Need to understand what the BOB-WOW differences are to choose the right Green Y No parts received from SE states (BOB's)	J. Eberman B. Gross
[redacted]				
12	12/08/2000	Compare loads data from vehicles 1994, 1994, 1995 (S & T)		Yih Chen Shau Steve N.
[redacted]				
16	12/14/2000	Ball Joint Torques - Before and After Installation into Control Arm	John Z. to forward data to Delphi Distortion Test Ran 06BE01 Increase in Torque 0 - 70 %	R. Rockold
[redacted]				

CL02-023-003

Action Items
T-Truck Upper Ball Joint Investigation

Number	Start Date	Item	Status	Champion
[redacted]				

CL02-023-004

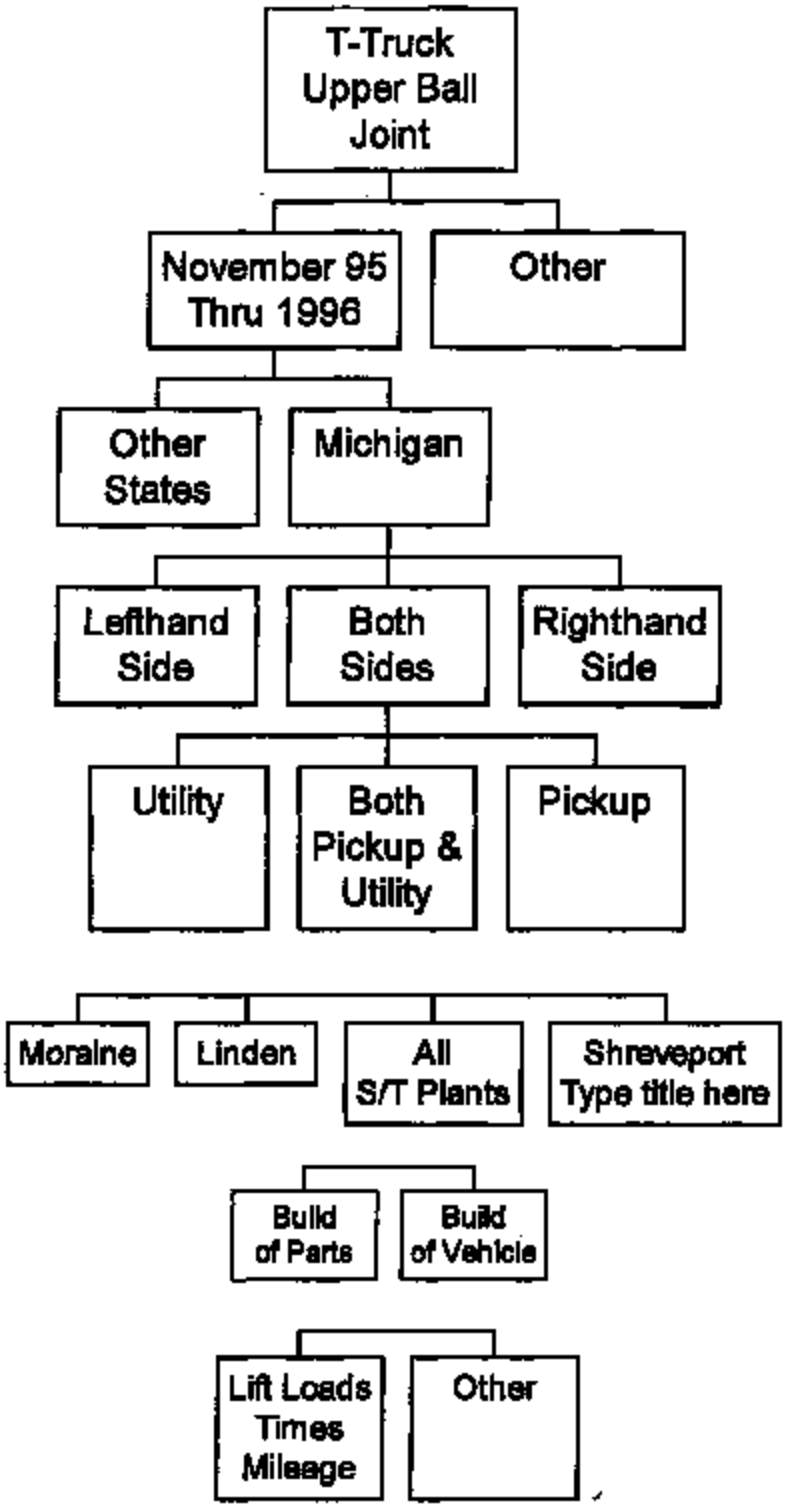
Action Items
T-Truck Upper Ball Joint Investigation

Number	Start Date	Item	Status	Champion
[redacted]				
68	10/01/2001	Request for Warranty returns - Control Arms	Request Submitted - No parts received through GM warranty parts center	Ellert
[redacted]				
74	08/26/2002	Hard/Soft Bearings built into Hard/Soft sockets - B vs. C Durability	Not run - No correlation to high wear warranty returns or separations	Ellert

CL02-023-005

Project Definition Tree

GMT325/330 T-Truck Ball Joint Separation



Rationale

- Problem as GM sees it (11-27-00).
- Focus Split (12-7-00) Based on warranty data.
- Focus Split (12-7-00) Based on pareto, warranty data shows Michigan has the highest number occurrences
- Focus Split (12-7-00) WOW ball joints occur on both right and left-hand sides.
- Focus Split (12-7-00) WOW ball joints occur on both utilities and pickups.

GM Confidential

T-Truck Upper Ball Joint Test Samples

Part Description	Test Description	Cycles	Date Started	Pre Liftload Post Liftload (N)	Post Radial Deflection	Socket Wear Up/Down
Low Preload Pc.#1	Two Poster – NATG	2,000,000	26JA01	450 200	1.2 mm	0.005" I
Low Preload Pc.#3	Two Poster – NATG	2,000,000	26JA01	450 250	1.2 mm	0.004" I
Low Preload pc.#1	Road Simulator – Hi Frequency	1,500,000	30JA01	900 700	0.85	0.005" O
Low Preload pc.#2	Road Simulator – Hi Frequency	1,500,000	30JA01	800 600	0.85	0.004" O
0.005" looseness (Reduced height Pressure ring)	Two Poster – NATG	2,000,000	26FE01	N/A	N/A	0.005" I
0.005" looseness (Reduced height Pressure ring)	Two Poster – NATG	2,000,000	26FE01	N/A	N/A	0.003" O
Corroded Bearings from batch 14	Road Simulator – Hi Frequency	1,500,000	23MR01			
Corroded Bearings from batch 14	Road Simulator – Hi Frequency	1,500,000	23MR01			
Corroded Bearings from batch 14	Road Simulator – Hi Frequency	1,500,000	23MR01			

CL02-023-007

MULTI-VARI STUDY

Round	Fixture	L/R	Lift Load	Oscillating	Rotating
1	1	Right	1008	7.25	4.50
1	1	Left	1080	7.60	5.00
1	2	Right	756	4.63	3.25
1	2	Left	1056	6.25	4.00
1	3	Right	720	4.50	3.00
1	3	Left	1032	6.63	4.50
1	4	Right	744	5.00	3.00
1	4	Left	924	5.88	3.75
1	5	Right	1008	6.88	4.38
1	5	Left	1080	7.00	4.83
1	6	Right	948	5.50	4.38
1	6	Left	888	5.75	3.63
1	7	Right	1176	7.00	4.75
1	7	Left	1044	6.25	4.50
1	8	Right	1260	8.00	5.38
1	8	Left	984	6.50	3.75
2	1	Right	1104	7.88	4.94
2	1	Left	1104	6.25	4.50
2	2	Right	1008	5.75	4.25
2	2	Left	924	5.60	4.00
2	3	Right	1224	8.25	5.25
2	3	Left	1128	7.13	5.00
2	4	Right	1236	6.50	5.25
2	4	Left	1104	7.25	5.00
2	5	Right	1056	6.50	4.25
2	5	Left	1176	7.50	5.00
2	6	Right	1080	6.25	4.75
2	6	Left	1068	6.25	4.00
2	7	Right	780	4.75	4.50
2	7	Left	840	5.50	3.13
2	8	Right	1080	5.75	4.00
2	8	Left	1080	6.38	4.38
3	1	Right	996	6.88	4.00
3	1	Left	1104	5.13	4.00
3	2	Right	1056	5.25	4.25
3	2	Left	996	5.50	4.13
3	3	Right	1020	6.00	4.00
3	3	Left	1224	6.38	5.25
3	4	Right	1008	5.00	4.50
3	4	Left	1200	6.75	4.50
3	5	Right	960	5.63	3.94
3	5	Left	900	4.50	3.50
3	6	Right	840	5.00	3.38
3	6	Left	1200	8.25	5.13
3	7	Right	1200	6.88	4.50
3	7	Left	1128	6.00	4.38
3	8	Right	1176	8.00	5.50
3	8	Left	1152	6.63	4.75

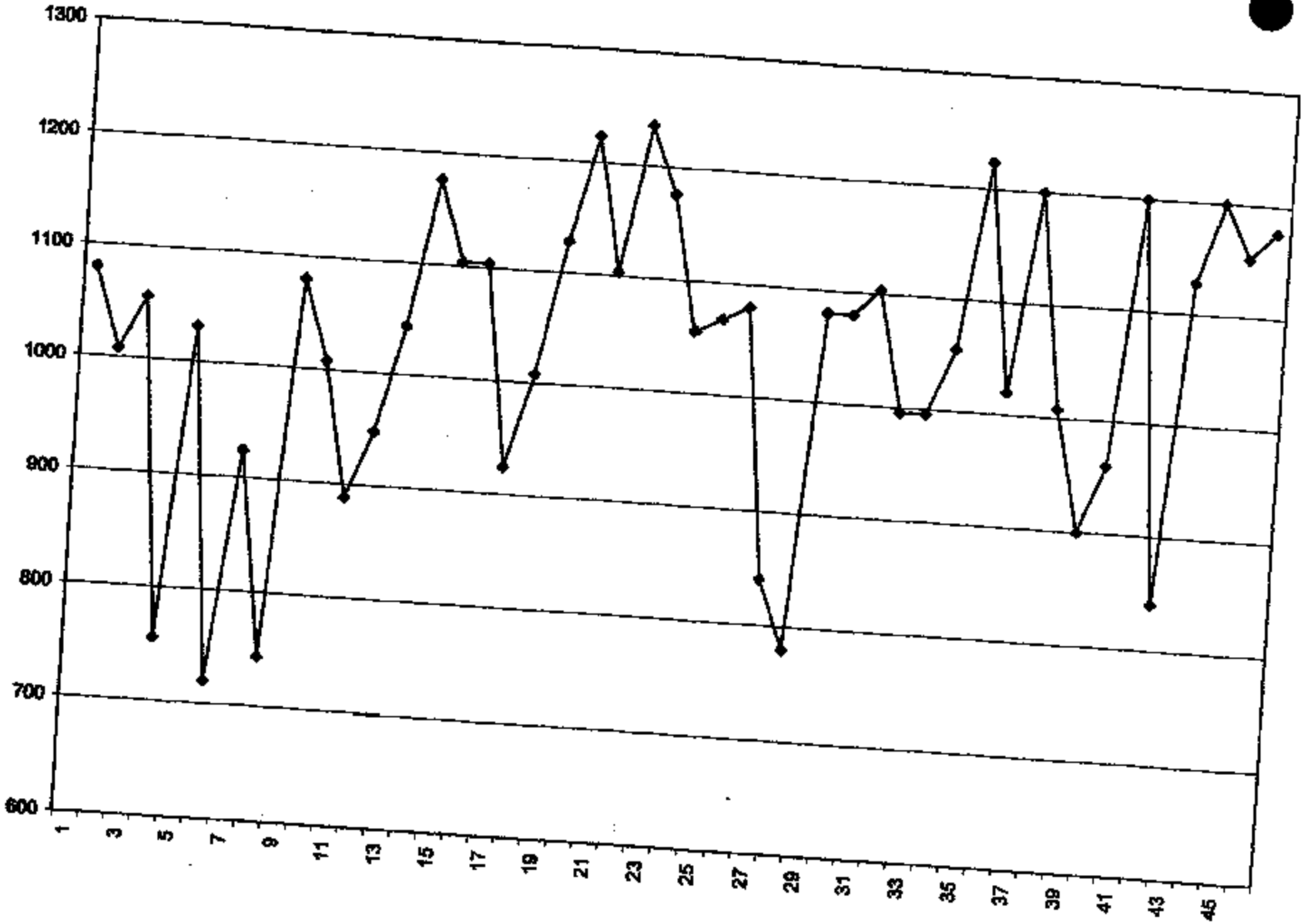
Average of Lift Load		Round			
Fixture	L/R	1	2	3	Grand Total
1	Left	1080	1104	1104	1096
	Right	1008	1104	996	1036
2	Left	1056	924	996	992
	Right	756	1008	1056	940
3	Left	1032	1128	1224	1128
	Right	720	1224	1020	988
4	Left	924	1104	1200	1076
	Right	744	1236	1008	996
5	Left	1080	1176	900	1052
	Right	1008	1056	960	1088
6	Left	888	1056	1200	1052
	Right	948	1080	840	988
7	Left	1044	840	1128	1004
	Right	1176	780	1200	1052
8	Left	864	1080	1152	1072
	Right	1260	1080	1176	1172
Grand Total		981.8	1082	1073	1038.75

Average of Oscillating		Round			
L/R	Fixture	1	2	3	Grand Total
Left	1	7.50	6.25	5.13	6.29
	2	6.25	5.50	5.50	5.75
	3	6.63	7.13	6.38	7.38
	4	5.88	7.25	6.75	6.63
	5	7.00	7.50	4.50	6.33
	6	5.75	6.25	6.25	6.75
	7	6.25	6.50	6.00	6.92
	8	6.50	6.38	6.63	6.50
Right	1	7.25	7.88	5.88	7.00
	2	4.63	5.75	5.25	5.21
	3	4.50	6.25	6.00	6.25
	4	5.00	6.50	5.50	5.50
	5	6.66	6.50	5.63	6.34
	6	5.50	6.25	6.00	5.88
	7	7.00	4.75	6.88	6.21
	8	6.00	5.75	6.00	7.25
Grand Total		6.28	6.48	6.17	6.31

Average of Rotating	Fixture	L/R																	
	1		2		3		4		5		6		7		8		Grand Total
Round	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	Left	Right	
1	5.00	4.50	4.00	3.25	4.50	3.00	3.75	3.50	4.63	4.38	3.63	4.38	4.50	4.75	3.75	5.88	4.18
2	4.50	4.94	4.00	4.25	5.00	5.25	5.00	5.25	5.00	4.25	4.00	4.75	3.13	4.50	4.38	4.00	4.51
3	4.00	4.00	4.13	4.25	5.25	4.00	4.50	4.50	3.60	3.94	5.13	3.38	4.38	4.50	4.75	5.00	4.38
Grand Total	4.50	4.48	4.04	3.92	4.92	4.08	4.42	4.25	4.38	4.19	4.25	4.17	4.00	4.58	4.29	4.96	4.34

Average of Oscillating		Round			
Fixture	L/R	1	2	3	Grand Total
1	Left	7.50	6.25	5.13	6.29
	Right	7.25	7.88	5.88	7.00
2	Left	6.25	5.50	5.50	5.75
	Right	4.63	5.75	5.25	5.21
3	Left	6.63	7.13	6.38	7.38
	Right	4.50	6.25	6.00	6.25
4	Left	5.88	7.25	6.75	6.63
	Right	5.00	6.50	5.50	5.50
5	Left	7.00	7.50	4.50	6.33
	Right	6.25	6.50	5.63	6.34
6	Left	5.75	6.25	6.25	6.75
	Right	5.50	6.25	6.00	5.88
7	Left	6.25	5.50	6.00	6.92
	Right	7.00	4.75	6.88	6.21
8	Left	6.50	6.38	6.63	6.50
	Right	6.00	5.75	6.00	7.25
Grand Total		6.28	6.48	6.17	6.31

CL02-023-009


1300
1200
1100
1000
900
800
700
600
1
3
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7
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11
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19
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27
29
31
33
35
37
39
41
43
45

Eifert, Charles D

To: dennis.o.mouser@gm.com
Ellerman, John F
Subject: T-Truck Upper Ball Joint Investigation

Dennis,

Hope you and your family are doing well!

The SLAW durability test (11197-093) was completed last week. I am still trying to refresh my memory as to why we submitted this test the way we did (submitted 12MR02). We built 6 ball joints - 3 with BOB bearings and 3 with WOW bearings. The test request then asked to measure all the parts for torque and put the two highest and two lowest onto durability. We must have been trying to verify an interaction because the last B vs. C test we ran (11197-086) was to compare high and low torque assemblies.

Unfortunately the first part on test came loose from the fixture and the stud was damaged so it was replaced by the next highest torque assembly.

The liftloads all looked about the same, so this morning we dis-assembled the parts to look at the socket wear. The wear in the socket was minimal and the part with the worst wear was the assembly that came loose from the fixture and was stopped at 124,000 cycles. If I was to rank order the sockets by wear from most to least:

121	BOB bearing	highest torque (discontinued at 124,000 cycles)
624	WOW bearing	2nd highest torque
291	BOB bearing	lowest torque
180	WOW bearing	2nd lowest torque
60	WOW bearing	3rd lowest torque
214	BOB bearing	(no wear because no test cycles)

The results seem to indicate the BOB and WOW bearings had very little affect on the wear.

The torque may have had an affect on the wear but there appears to be overlap and the assembly torques did not vary much from highest to lowest (35%). We know that the higher the torque, the higher the friction and the more it will wear. By the way, **Has any additional work been done to analyze the affect of the control arm?** (We saw torque increases of over a 100% after the ball joint was assembled into a control arm and that was on a normal day of production. Wasn't someone going to look into getting a vehicle so that parts could be tested in a control arm?)

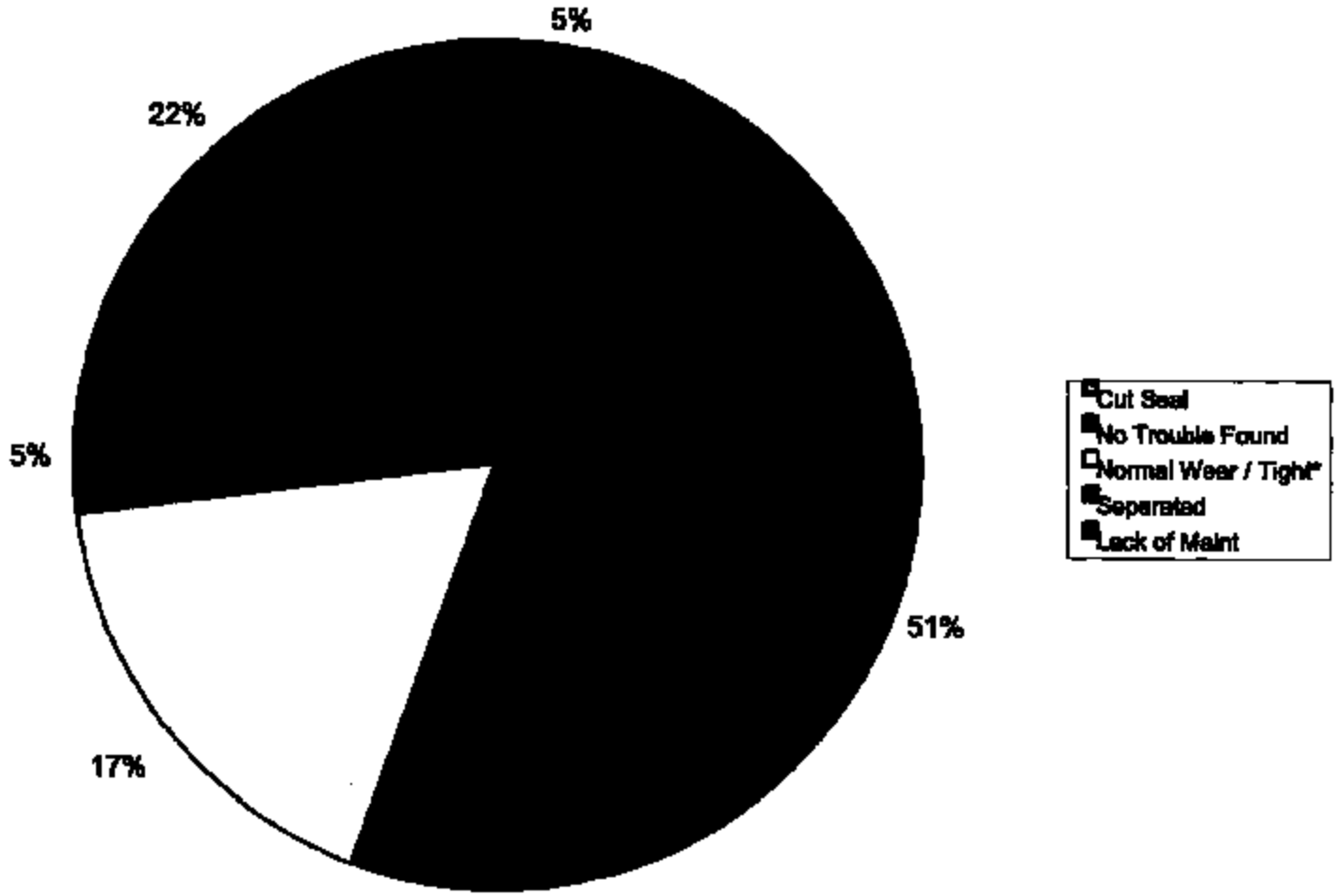
With regard to running the next test - hard bearings/soft sockets - we would like to discuss it further. In all the BOB and WOW assemblies we analyzed and loredown we saw no correlation to either the hardness of the bearing or socket. We can run the test but what will we be able to conclude? Even if the test shows complete separation of the data it still doesn't correlate to the parts from the field.

Please give me a call at your convenience so that we can discuss further or feel free to stop in and look at the parts and we can decide what to do next. In the interim I will put together a spreadsheet of all of the tests we have run - I think we are starting to re-run tests.

Thanks,

Chuck Eifert
Delphi Automotive
Ball Joint Product Engineering
937 - 455 - 8355

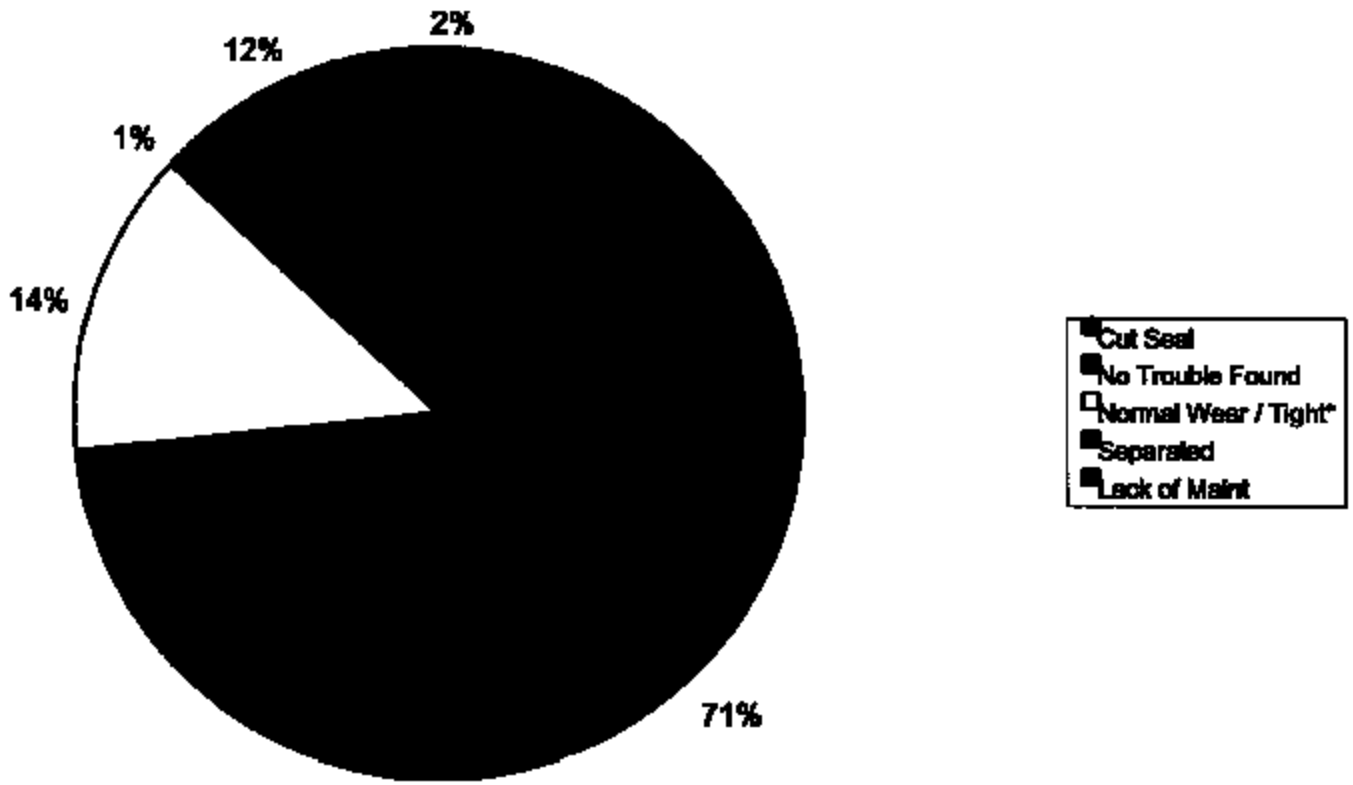
Model Year 96 and 97 T-Truck Warranty Returns
(Evaluated by Analysis Code - 406 Total Pieces)



* Parts show wear but are completely functional

CL02-023-253

Model Years 1998-2000 T-Truck Warranty Returns
(Evaluated by Analysis Code - 491 Total Pieces)



* Parts show wear but are completely functional

CL02-023-253

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

[illegible]	[illegible]	Date Code	Location	Overall Condition	Cause for Replacement at Dealer or Repair Order	Bearing Condition	External Corrosion	Seal Condition	Product Wear (in)	Grease Condition	Analysis Code *	Oscillating Torque	Running Torque	Radial Elasticity	LH Load	Miles	LH Load X Miles	[illegible]	VIN
[illegible]	[illegible]	[illegible]	MI	[illegible]	Noise	1.1	Low	3	[illegible]		2	31	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	Noise	1.1	Low	3	[illegible]		2	31	32		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CT	Tight - Low Wear [illegible]	[illegible]	1.1	Low	3			2	34	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear - [illegible] SMOOTH	[illegible]	1.1	Low	1A	[illegible]		1A	[illegible]	[illegible]	1.0	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear [illegible]	[illegible]	1.1	Medium	3	[illegible]	[illegible]	2	23	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	Loose	[illegible]	Medium	3			4					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear [illegible]	[illegible]	1.1	Low	3			2	33	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear [illegible]	[illegible]	1.1	Low	3			2	40	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight - Min. Wear [illegible]	[illegible]	1.1	Low	3	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight - Low Wear [illegible]	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight - Low Wear [illegible]	[illegible]	1.1	Low	3			2	47	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PQ	Tight - Min. Wear [illegible]	[illegible]	[illegible]	High	1A	[illegible]		1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear SMOOTH	[illegible]	1.1	Low	3			2	17	14	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight - Low Wear SMOOTH	Noise	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	[illegible]	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight - [illegible]	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight - Low Wear SMOOTH	Noise - [illegible]	1.1	Low	3			2	[illegible]	27		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight - Low Wear SMOOTH	Noise - [illegible]	1.1	Medium	3			2	40	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	Loose	[illegible]	High	1A	[illegible]		1A	[illegible]	7		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	Loose	[illegible]	Medium	1A	[illegible]		1A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	TN	Tight - Low Wear SMOOTH	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Tight - Low Wear SMOOTH	[illegible]	1.1	Low	3			2	42	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear SMOOTH	[illegible] Noise	1.1	High	3			2	41	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear SMOOTH	[illegible] Noise	1.1	High	3			2	40	32		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	[illegible]	[illegible]	[illegible]	High	3			2	27	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]	[illegible]	High	1A	[illegible]		1A	7	6	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]	[illegible]	High	1A	[illegible]		1A	1	1		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Min. Wear [illegible]	Noise	[illegible]	Medium	3	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	Noise	[illegible]	Medium	3	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	1.1	Medium	[illegible]			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	1.1	High	[illegible]			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]	[illegible]	High	1A			1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear SMOOTH	Loose	1.1	Medium	3			2	47	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight - Low Wear SMOOTH	Loose	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PQ	Tight - Low Wear - [illegible]	[illegible]	1.1	Medium	[illegible]	[illegible]		2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear - [illegible]	[illegible]	1.1	High	[illegible]			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	VT	[illegible]	[illegible]	[illegible]	High	3	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	VT	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear SMOOTH	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3			2	37	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Tight - Low Wear SMOOTH	[illegible]	1.1	Low	[illegible]			2	[illegible]	21		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ND	[illegible] - Tight - Low Wear [illegible]	[illegible]	1.1	Low	[illegible]	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible] - Min. Wear [illegible]	[illegible]	1.1	High	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]	1.1	Low	3	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3			4	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible] - Tight - [illegible]	[illegible]	[illegible]	Medium	3	[illegible]		[illegible]	14	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	ONT	[illegible]	[illegible]	[illegible]	[illegible]	3	[illegible]		[illegible]	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	[illegible]	Low	3	[illegible]		2	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight - Low Wear [illegible]	[illegible]	1.1	Low	3	[illegible]		2	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Low	3	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	[illegible]	High	1A	[illegible]	[illegible]	1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	[illegible]	High	1A	[illegible]		1A					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	WV	[illegible]	[illegible]	[illegible]	Medium	3	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WV	[illegible]	[illegible]	[illegible]	Medium	3	[illegible]		[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	[illegible]	High	3	[illegible]		[illegible]	[illegible]	1		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	[illegible]	High	3	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight - Low Wear SMOOTH	[illegible]	1.1	Medium	3	[illegible]	[illegible]	2	37	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

[illegible]	[illegible]	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	[illegible] Condition	External Corrosion	Seal Condition	[illegible] Wear (in)	[illegible] Condition	Analysis Date*	Oscillating Torque (in-lbs)	Rotating Torque (in-lbs)	[illegible] Elasticity (mm)	Lift Load (lb)	Mileage	Lift Load X Mileage	parts torn down?	VIN
[illegible]	[illegible]	3144	MI	Tight-low wear-smooth	Noise	1.1	Low	3	[illegible]		2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	3144	MI	Tight-low wear-smooth	Noise	1.1	Low	3	[illegible]		2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CT	Tight - Low Wear-smooth	Seal Cut - [illegible]	1.1	Low	3			2	34	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear - [illegible] SMOOTH	[illegible]	1.1	Low	1A	[illegible]		1A	[illegible]	[illegible]	1.8	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	4170	PA	Tight - Low Wear-smooth	[illegible]	1.1	Medium	3	[illegible]	0.48	3	[illegible]	[illegible]		1960	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - [illegible] Wear-smooth	Loose	0.8	Medium	3			2					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear-Smooth	Clunk	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear-smooth	Clunk	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	C197	MN	Tight - Min. Wear-Smooth	Pulls to Right	1.1	Low	3	[illegible]	<0.01	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	C197	MN	Tight - Low Wear-Smooth	Pulls to Right	1.2	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight-low wear-smooth	Pulls to Right / Clunk	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight - Low Wear-Smooth	Pulls to Right / Clunk	1.1	Low	3			2	47	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PO	Tight - Min. Wear, Rubber Compound - Corrosion Inside	Excessive Play	2.2	High	1A	0.020		1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear-SMOOTH	[illegible]	1.1	Low	3			2	17	14	[illegible]	1150	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight - Low Wear-SMOOTH	Noise	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight-low wear-smooth	Clicking Noise	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight - Some Wear-smooth	Clicking Noise	1.2	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight - Low Wear-SMOOTH	Noise - Hard Right	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight - Low Wear-SMOOTH	Noise - Hard Right	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	Loose	3.4	High	1A	[illegible]		1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	D119	NY	[illegible]	Loose	3.4	Medium	1A	[illegible]		1A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	TN	Tight - Low Wear-SMOOTH	Rattle	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Tight - Low Wear-SMOOTH	[illegible]	1.1	Low	3			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear-SMOOTH	[illegible] Noise	1.1	High	3			2	41	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear-SMOOTH	[illegible] Noise	1.1	High	3			2	40	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight - Low Wear-SMOOTH	Excessive Play	1.1	Medium	3			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight - Low Wear-SMOOTH	Excessive Play	1.4	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	Tight - Low Wear-SMOOTH	Rattle	1.3	Medium	3			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	Tight-low wear-smooth	Rattle	3.4	High	3			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Full of Dirt [illegible]	Excessive Play	[illegible]	High	1A	[illegible]		1A	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MA	Full of Dirt [illegible]	Excessive Play	3.4	High	1A	[illegible]		1A	1	1		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Min. Wear-Smooth [illegible]	Noise	2.2	Medium	3	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Min. Wear [illegible]	Noise	[illegible]	Medium	3	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Seal Cut - [illegible]	[illegible]	1.3	Medium	[illegible]			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Seal Cut - Min. Wear-smooth	[illegible]	[illegible]	High	[illegible]			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Seal [illegible] - Some Wear - [illegible]	[illegible]	3.4	High	1A			1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear-SMOOTH	Loose	1.1	Medium	3			[illegible]	47	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight - Low Wear-SMOOTH	Loose	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PO	Tight - Low Wear - Seal [illegible]	Inspection	1.1	Medium	1A	[illegible]		2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight - Low Wear - Seal [illegible]	Inspection	1.2	High	[illegible]			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	VT	Tight - No Grease - [illegible]	[illegible]	3.4	High	3	[illegible]		1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	VT	Tight - Low Wear-SMOOTH	[illegible]	1.1	Medium	3	[illegible]	[illegible]	2	[illegible]	14		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear-SMOOTH	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight - Low Wear-SMOOTH	[illegible]	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Tight - Low Wear-SMOOTH	[illegible]	1.1	Low	3			2	[illegible]	21		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	No Seal - [illegible] - Tight - Low Wear-smooth	[illegible]	1.1	Low	[illegible]	[illegible]	0.11	[illegible]	30	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WI	Seal Cut - Min. Wear-smooth	Clunk	1.1	High	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Low Wear-smooth	Clunk	1.4	Low	3	[illegible]	0.12	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight - Low Wear-SMOOTH	[illegible] Noise	1.1	Medium	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CT	Cut Seal - Tight - Some Wear - [illegible]	[illegible]	[illegible]	Medium	3	[illegible]		[illegible]	14	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ONT	[illegible]	Excessive Play	3.4	High	3	[illegible]		[illegible]	7	[illegible]	3.0	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	Heavy Wear - [illegible]	[illegible]	3.4	Low	3	[illegible]		2	9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight - Low Wear-Smooth	Excessive Play	1.1	Low	3	[illegible]		[illegible]	21	[illegible]	1.0	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WA	Some Wear - Min Grease-smooth	Noise / Excessive Play	1.1	Low	3	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	Heavy Corrosion - [illegible] - Seal Cut	Rattle	[illegible]	High	1A	[illegible]	<0.01	1A	[illegible]	14		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible] - Seal Cut - [illegible]	Rattle	[illegible]	High	1A	[illegible]		1A					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	WV	Heavy Wear - Little Grease - [illegible]	[illegible] Noise	[illegible]	Medium	3	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WV	Heavy Wear - Little Grease - [illegible]	[illegible] Noise	[illegible]	Medium	3	[illegible]		[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible] Out of Seal [illegible]	Excessive Play	[illegible]	High	3	[illegible]		[illegible]	2	1		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	Excessive Play	3.4	High	3	[illegible]		2	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Tight - Low Wear-SMOOTH	[illegible]	1.1	Medium	3	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Plant #	RGA #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Sample Condition	Exhaust Corrosion	Seal Condition	Socket Wear Gel	Grease Condition	Analysis Code *	Oscillating Torque	Rotating Torque	Radial Elasticity	LR Load	Mileage	LR Load X Mileage	parts two clean?	VIN
[illegible]	[illegible]	[illegible]	[illegible]	Tight - Low Wear-SMOOTH	[illegible]	1.1	Medium	3			2	27	24		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Heavy Corrosion - Heavy Wear - [illegible]	Clunk	2.2	High	3	[illegible]	[illegible]	[illegible]	[illegible]	14		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Heavy Corrosion - Heavy Wear - [illegible]	Clunk	4.4	High	3	[illegible]	[illegible]	[illegible]	12	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.4	High	3			[illegible]	8	6	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.4	High	3			[illegible]	8	0		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Some Wear - Tight - [illegible]	Clunk	1.1	High	3	0.018		[illegible]	[illegible]	[illegible]	1.4	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Low Wear - Tight-smooth	Clunk	1.1	High	3	[illegible]	[illegible]	2	22	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.3	Medium	3	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Corroded	High	3	[illegible]		[illegible]					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1	Low	3		1.32	3	16	17		1100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Medium	3	[illegible]		3	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.4	Medium	3	[illegible]		[illegible]	11	11	1.40	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Corroded	Medium	3	[illegible]		[illegible]					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Low	3			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Tight - Low Wear-SMOOTH	Clunk	1.1	Low	3	[illegible]		2	22	22	0.80	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Tight - Low Wear-SMOOTH	Clunk	2.1	Low	3	[illegible]		2	18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Low	2			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	NO VIN
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Low	2			2	11	[illegible]		[illegible]	[illegible]	[illegible]	NO	NO VIN
[illegible]	[illegible]	[illegible]	KY	[illegible]	[illegible]	2.1	Medium	3	[illegible]		[illegible]	[illegible]	17		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	KY	[illegible]	[illegible]	2.1	Low	3	[illegible]		2	18	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Low Wear - Tight-smooth	[illegible]	1.1	Low	2			2	34	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	[illegible]	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	[illegible]	[illegible]	2.1		3	[illegible]		3	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Low Wear - Tight-smooth	[illegible]	1.1	Low	3	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Low	3	[illegible]		2	17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1	Low	2			3	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1	Low	2			2	20	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Clunk	2.1	Medium	1A	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2	Medium	3	[illegible]		2	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.3	High	3	[illegible]		[illegible]	13	1		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Corroded	High	1A	[illegible]	2.77	[illegible]					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	2.2	High	3	[illegible]		[illegible]	8	4		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	3.4	High	3	[illegible]		[illegible]	8	4		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.3	High	3	[illegible]	[illegible]	[illegible]	7	5		450	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Medium	3			[illegible]	[illegible]	[illegible]	1.25	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1	Medium	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	ONT	[illegible]	[illegible]	3.4	High	3	[illegible]		[illegible]	[illegible]	11	1.20	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	YT	[illegible]	[illegible]	1.1	Low	3			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	YT	[illegible]	[illegible]	1.1	Low	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		1250	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Contaminated	High	1A	[illegible]	[illegible]	[illegible]					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.1	Medium	3	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2	Medium	3			[illegible]	[illegible]	[illegible]	1.20	[illegible]	[illegible]	[illegible]	NO	NO VIN
[illegible]	[illegible]	[illegible]	NY	Tight - Low Wear-SMOOTH	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight - Low Wear-SMOOTH	[illegible]	1.1	Low	3			2	21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]	3.4	High	1A	[illegible]		[illegible]	5	4	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]	1.1	High	3	[illegible]		2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Low Wear-smooth	[illegible]	1.1	Low	3	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.4	High	1A	[illegible]		[illegible]	8	7	1.80	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.2	Low	3	[illegible]		3	11	8	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	Heavy Corrosion	High	1A			[illegible]					[illegible]	0	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	1.1	Low	3			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.1	Medium	1A			[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Claim #	ROS	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Bearing Condition	External Corrosion	Seal Condition	Socket Wear (in)	Grease Condition (% DSC)	Analysis Code *	Oscillating Torque (in-lb)	Rotating Torque (in-lb)	Radial Elasticity (mm)	Lift Load (lb)	Mileage	Lift Load X Mileage	parts here done?	VIN
[illegible]	[illegible]	[illegible]	VT	[illegible]	[illegible]	1.1	Low	1A		1.13	1A	[illegible]	21		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OSC	[illegible]	[illegible]	3.4	High	1	[illegible]		3A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OSC	[illegible]	[illegible]	3.4	High	1	[illegible]		3A	[illegible]	[illegible]	1.1	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	TN	[illegible]	[illegible]	1.1	Low	1	[illegible]	[illegible]	2	17	15		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	TN	[illegible]	[illegible]	1.1	Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[redacted]																			
[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]	1.1	Medium	1A			1A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ND	[illegible]	[illegible]	3.4	High	1A			1A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]	3.4	Medium	1			3A	[illegible]	27	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]	3.4	Medium	1			3A	[illegible]	[illegible]	1.1	[illegible]	[illegible]	[illegible]	NO	[illegible]
[redacted]																			
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]	[illegible]	Low	1A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]	3.4	Medium	1A			1A	0	0		0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]	3.4	Medium	1A			1A	17	27	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]	3.4	Medium	1	[illegible]		3A	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]	1.1	Medium	1			1	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	NO VIN
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]	3.4	Medium	2		[illegible]	3A	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]	Missing	Medium	missing		[illegible]	missing	40	[illegible]			[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	VT	[illegible]	[illegible]	1.1	High	2		[illegible]	2			[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	[illegible]	[illegible]		Medium	[illegible]			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]		Low	[illegible]			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	NO VIN
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]		Low	1			1	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]		Low	[illegible]			2	30	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[redacted]																			
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]			2			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	[illegible]	[illegible]	3.1	Low	1	[illegible]	[illegible]	2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	4.4	Medium	1	[illegible]	[illegible]	3A	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	3.4	High	1	[illegible]	[illegible]	1	30	20	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		Low	2			2	30	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]	[illegible]	Low	2			2	30	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[redacted]																			
[illegible]	[illegible]	[illegible]	TX	[illegible]	[illegible]	1.1	Medium	2	[illegible]	[illegible]	missing	[illegible]	[illegible]			[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]	1.1	Medium	1	[illegible]	[illegible]	1	30	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]	1.1	Medium	1	[illegible]	[illegible]	1	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Low	2			2	[illegible]	40		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		Low	[illegible]			2	40	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NC	[illegible]	[illegible]	1.1	Medium	1	[illegible]	[illegible]	1	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[redacted]	NC	[illegible]	[illegible]	1.1	Medium	1	[illegible]	[illegible]	2	10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		Low	1			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		Low	1			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]	2.1	Medium	1A	[illegible]	[illegible]	1	10	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]	1.1	Medium	1	[illegible]	[illegible]	1	30	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NE	[illegible]	[illegible]	3.4		1		[illegible]	3A			[illegible]		[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NE	[illegible]	[illegible]	3.4	Medium	1		[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	[illegible]	[illegible]	Low	1		[illegible]	2			[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	[illegible]	Missing	Low	1			[illegible]				[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	1.1	Low	2		[illegible]	2	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]		Low	2			2	40	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NV	[illegible]	[illegible]		Low	1			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	AZ	[illegible]	[illegible]	1.1	Medium	1	[illegible]		2	30	[illegible]		[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]		Medium	1A		[illegible]	2	30	[illegible]			[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]	3.4	Medium	2		1	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]	3.4	Low	2	[illegible]		[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]	2.4	High	1A	[illegible]	[illegible]	[illegible]	15	[illegible]			[illegible]	[illegible]	YES	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Plant #	RO #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Overlap Condition	External Corrosion	Seal Condition	Vented Water Bal	Closure Condition (R, D/O)	Analysis Code *	Oscillation Torque (N*M)	Rotating Torque (N*M)	Radial Stability (mm)	UR Lock (N)	Allowance	UR Lock X Allowance	pole has down ?	VIN
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	NO VIN
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	NO VIN
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	NO VIN
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Year	Model	Date Code	Location	Overall Condition	Cause for Replacement as Noted on Repair Order	Service Condition	Relevant Operation	Seat Condition	Seated Wear Est.	Grease Condition (% Dirty)	Analysis Code *	Oscillating Torque (N-m)	Rotating Torque (N-m)	Radial Elasticity (mm)	Lift Load (N)	Mileage	Lift Load Mileage	passes the check ?	VIN
[redacted]																			
[redacted]	[redacted]	[redacted]	NY	Toilet: Good Condition	Leaks	Wear, no operation	Low	2	0.0438	0.07	2			1.8		6877	0	YES	[redacted]
[redacted]	[redacted]	[redacted]	NY	Toilet: Bad Trip	Leaks	Until wear, complete	Low	3		0.07	2			5.45		6977	0	NO	[redacted]
[redacted]	[redacted]	[redacted]	NY	Toilet: Good Condition	Polyber Leaks		Medium	3			3					[redacted]	0	NO	[redacted]
[redacted]	[redacted]	[redacted]	NY	Toilet: Good Condition	Plastic pins		High	3			2					[redacted]	0	NO	[redacted]
[redacted]	[redacted]	[redacted]	IN	Life saw	Leaks		Low	3			2					[redacted]	0	NO	[redacted]
[redacted]	[redacted]	[redacted]	IN	Life saw	Leaks		Low	3			2					[redacted]	0	NO	[redacted]
[redacted]	[redacted]	[redacted]	IL	Mouth: which recorded	Leaks	1.1	Medium	2	0.07	0.1	3	38	6	3.69	400	[redacted]	[redacted]	YES	[redacted]
[redacted]	[redacted]	[redacted]	IL	and damage bolt	Leaks		Low	3			3	49	24		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	MI	Toilet: smooth and damage	Leaks	1.1	Medium	2	0.013	0.07	3	38	18	0.69	1480	6714	[redacted]	YES	[redacted]
[redacted]	[redacted]	[redacted]	MI	Toilet: smooth and damage	Leaks	Until wear, complete	Low	2		0.07	MISSING	48	18	0.65	1380	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	MI	Toilet: smooth and condition	Leaks		Low	3			2	39	24		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	MI	Heavy corrosion	Leaks	3.4	High	2			3	30	18	0.65	880	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	MI	Heavy corrosion	Leaks	3.2	High	3	0.013	2.75	3	39	18	4.75	780	[redacted]	[redacted]	YES	[redacted]
[redacted]	[redacted]	[redacted]	OUT	Toilet smooth	Leaks	3.2	Medium	3	0.009		2	39	18		1780	[redacted]	[redacted]	YES	[redacted]
[redacted]	[redacted]	[redacted]	OUT	Toilet smooth	Leaks		Medium	3			2	48	24		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	MI	and damage	Leaks	3.4	High	3		0.26	3	30	20	3.69	270	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]																	
[redacted]	[redacted]	[redacted]																	
[redacted]	NA	1000X	IN	and damage mark: oxid	Leaks		Low	18			3	30	18		300	[redacted]	[redacted]	NO	NO VIN
[redacted]	NA	[redacted]	IN	Toilet: low condition	Leaks		Medium	3			2	38	24		[redacted]	[redacted]	[redacted]	NO	NO VIN
[redacted]																			
[redacted]	[redacted]	[redacted]	NY	corrosion: toilet: mark: oxid	Leaks	Wear and corrosion	Medium	2			MISSING	18	10	3.69		[redacted]		NO	[redacted]
[redacted]	[redacted]	[redacted]	NY	low corrosion: heavy: mark	Leaks		High	18			3	30	20		300	[redacted]	[redacted]	NO	[redacted]
[redacted]	GRANTZ	[redacted]	MI	rust mark: oxid	Leaks		High	3			3	38	18		[redacted]	[redacted]	[redacted]	NO	NO VIN
[redacted]	[redacted]	[redacted]	OUT	low corrosion: heavy: mark	Leaks	Wear and corrosion	High	3		0.0	[redacted]	18	18	1.65	400	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	IN	Toilet: seal: bolt: corroded	Leaks	4.4	Low	3	0.013	0.24	3	38	18		280	[redacted]	[redacted]	YES	[redacted]
[redacted]	[redacted]	[redacted]	IN	Toilet: seal: bolt: corroded	Leaks	3.3	Low	3	0.008	0.14	3	40	20	0.69	980	[redacted]	[redacted]	YES	[redacted]
[redacted]	NA	[redacted]	OH	Toilet: seal: bolt: clean	Leaks	2.1	Low	3	0.019	0.1	2	38	18		1480	[redacted]	[redacted]	YES	[redacted]
[redacted]	NA	[redacted]	OH	Toilet: good: bolt: clean	Leaks	2.1	Low	3	0.008	0.07	2	30	15		1200	[redacted]	[redacted]	YES	[redacted]
[redacted]	NA	[redacted]	MA	corrosion: oxid: bolt	Leaks		Medium	3			2	30	38		1480	[redacted]	[redacted]	NO	[redacted]
[redacted]	TEST	[redacted]	IL	Toilet: corrosion	Leaks		Low	3			2					[redacted]		NO	[redacted]
[redacted]	[redacted]	Coach	IL	Toilet: corrosion	Leaks		Low	3			MISSING					[redacted]		YES	[redacted]
[redacted]	NA	[redacted]	OH	Toilet: bolt condition	Leaks	3.4	Low	3	0.008	0.16	2	30	20		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	NA	[redacted]	OH	Toilet: bolt condition	Leaks	whole	Low	2			MISSING	30	18		[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	[redacted]	[redacted]	KY	Toilet: bolt condition	leaks	whole	Low	2			MISSING	38	38	1.69	980	[redacted]	[redacted]	NO	[redacted]
[redacted]	[redacted]	[redacted]	OUT	Lower: whole: leaks	Leaks	3.4	High	2	0.013	0.26	NA	18	18	0.79	300	[redacted]	[redacted]	YES	[redacted]
[redacted]	DFL	[redacted]	OH	Toilet: seal condition	Installation	3.4	Low	2	0.004		3	40	20	3.79	[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	DFL	[redacted]	OH	Toilet: seal condition	Installation	1.1	Medium	3	0.005	0.02	2	30	25		[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	BRAND	[redacted]	OH	Toilet: seal condition	Installation		Medium	3			2	30	18		[redacted]	NA		NO	[redacted]
[redacted]	BRAND	[redacted]	OH	Toilet: seal condition	Installation	2.1	Low	3		-0.01	2	38	20	0.69	[redacted]	NA		NO	[redacted]
[redacted]	DFL	[redacted]	OH	Toilet: seal condition	Installation	whole	Low	3		0.05	MISSING	30	15		[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	DFL	[redacted]	OH	Toilet: seal condition	Installation	2.1	Low	3	0.014		3	18	30		[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	DFL	[redacted]	OH	Toilet: seal condition	Installation	1.2	Low	3	0.008	0.01	2	30	18	1.69	[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	DFL	[redacted]	OH	Toilet: seal condition	Installation	1.1	Low	3	0.013	0.02	2	38	18	1.69	[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	Lapp	[redacted]	OH	Toilet: seal condition	Installation	2.2	Medium	3	0.013	0.09	3	30	18	1.6	[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	Lapp	[redacted]	OH	Toilet: seal condition	Installation	1.1	Medium	3	0.005		3	30	20	3.38	[redacted]	[redacted]	[redacted]	YES	[redacted]
[redacted]	DAWELL	[redacted]	OH	Toilet: seal condition	Installation	1.1	Low	3		0.05	2	30	15	0.75	[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	DAWELL	[redacted]	OH	Toilet: seal condition	Installation	1.1	Medium	3		0.1	3	30	18	1.69	[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	DAYTON	[redacted]	OH	Toilet: seal condition	Installation		Medium	3			3	28	15		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	DAYTON	[redacted]	OH	Toilet: seal condition	Installation	1.1	Low	3		0.07	2	30	15	0.69	[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	DAVIES	[redacted]	OH	Toilet: seal condition	Installation		Low	3			3	30	15		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	DAVIES	[redacted]	OH	Toilet: seal condition	Installation		Low	3			3	30	20		[redacted]	[redacted]	[redacted]	NO	[redacted]
[redacted]	Lapp	[redacted]	OH	Toilet: seal condition	Installation	1.1	Low	3		0.01	2	38	18	1.6	[redacted]	NA	[redacted]	NO	[redacted]
[redacted]	Lapp	[redacted]	OH	Toilet: seal condition	Installation		Low	3	0.008		3	30	15		[redacted]	NA	[redacted]	NO	[redacted]
[redacted]	DFL	[redacted]	OH	Installation: Toilet: condition	Installation		Low	18			2	30	20		[redacted]	[redacted]	[redacted]	NO	NO VIN
[redacted]	DFL	[redacted]	OH	Installation: Toilet: condition	Installation	1.1	Low	3	0.008		2	28	18		[redacted]	[redacted]	[redacted]	YES	NO VIN

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Failed	RO #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Sealing Condition	Exhaust Corrosion	Seal Condition	Socket Wear (in)	Grease Condition (% Dirt)	Analysis Code*	Cushioning Torque (in*lb)	Rotating Torque (in*lb)	Radial Elasticity (mm)	LB Load (N)	Mileage	LB Load X Mileage	grade less than class ?	VIN
[illegible]	DPL	[illegible]	OH	[illegible]	Investigation		Low	[illegible]			3	[illegible]	[illegible]		[illegible]	0	0	NO	NO VIN
[illegible]	DPL	[illegible]	OH	[illegible]	Investigation		Low	2			1	[illegible]	[illegible]		[illegible]	0	0	NO	NO VIN
[illegible]	[illegible]	[illegible]	PA	[illegible]	Excessive Play	1.1	Low	3	[illegible]	[illegible]	2	[illegible]	[illegible]	1	[illegible]	[illegible]	43,224,000	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	Excessive Play	1.1	Low	3	[illegible]	[illegible]	3	[illegible]	[illegible]	1.15	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	Excessive Play	1.1	Low	2			3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	Excessive Play	1.1	Low	2		[illegible]	2	[illegible]	30	[illegible]	[illegible]	[illegible]	114,736,380	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	NOISE IN FRONT		Medium	2			1	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	Loose	1.1	Medium	2	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	1.1	Low	2		[illegible]	2	30	[illegible]	[illegible]	[illegible]	47342	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	1.1	Low	2	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	7174	OH	[illegible]	Loose	2.1	Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	[illegible]	Low	[illegible]			2	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	1.1	Low	2		[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	NA	#VALUE!	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	1.1	Low	2		[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	NA	#VALUE!	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Investigation	1.1	Medium	3	[illegible]		3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Investigation	1.1	Medium	2	[illegible]	[illegible]	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Investigation	1.1	Low	2	[illegible]		3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Investigation	1.1	Low	2	[illegible]		3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	ALIGNMENT		High	2			2	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	ALIGNMENT		High	10			2	[illegible]	30		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	NOISE IN FRONT	2.1	[illegible]	2			3	30	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	NOISE IN FRONT	2.1	High	2		1.7	3	30	30	1.40	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	NOISE IN FRONT		High	2			2	[illegible]	30		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	NOISE IN FRONT		High	2			2	[illegible]	10		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	FAIL INSPECTION		Low	2			2	[illegible]	35		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	FAIL INSPECTION		Low	10			2	30	30		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	POPPING NOISE		Medium	2			2	30	35		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	POPPING NOISE		Medium	2			1	30	35		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	POPPING NOISE		Low	2			2	40	[illegible]		[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	POPPING NOISE		Low	2			1	[illegible]	[illegible]			[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	Loose	[illegible]	High	3	[illegible]		3	30	10	1.40	450	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Loose	1.1	High	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Loose		High	10			2	[illegible]	[illegible]	[illegible]	1200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	ALIGNMENT		Medium	2			1	30	20	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	ALIGNMENT		Medium	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NOISE IN FRONT	[illegible]	Medium	2	[illegible]		2	40	30	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	Loose	[illegible]	Low	2			[illegible]	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	Loose		Medium	2			2	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NOISE IN FRONT	1.1	Medium	2	[illegible]		2	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CT	[illegible]	Loose		Low	[illegible]			3	5	0	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	FAIL INSPECTION	[illegible]	Low	2			[illegible]	11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	FAIL INSPECTION		Medium	2			3	30	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Loose		Medium	2			2	30	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Loose		Low	2			2	30	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	NOISE IN FRONT	[illegible]	Low	2			[illegible]					[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	NOISE IN FRONT		High	10			3	30	10	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Loose		High	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Loose		Low	2			2	[illegible]	[illegible]	0.75	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	[illegible]	[illegible]		Low	2			2	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	1.1	Low	3	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[redacted]																			
[illegible]	NA	[illegible]	OH	[illegible]	Loose		Low	2			2	30	20	1.4	[illegible]	NA	#VALUE!	NO	
[illegible]	NA	[illegible]	OH	[illegible]	NOISE IN FRONT		Low	2			2	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	
[illegible]	NA	[illegible]	OH	[illegible]	NOISE IN FRONT	1.1	Low	2	[illegible]		2	30	30	[illegible]	[illegible]	[illegible]	[illegible]	YES	
[illegible]	NA	[illegible]	OH	[illegible]	Loose		Low	2			3	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	NO	
[illegible]	NA	[illegible]	OH	[illegible]	Loose		Low	2			2	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	
[illegible]	NA	[illegible]	OH	[illegible]	Loose		Low	2			1	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	
[illegible]	NA	[illegible]	OH	[illegible]	Loose	1.1	Low	2	[illegible]		2	30	30	[illegible]	[illegible]	[illegible]	[illegible]	YES	
[illegible]	[illegible]	[illegible]	OH	[illegible]	Loose	1.1	Low	10	[illegible]		2	40	30	[illegible]	[illegible]	[illegible]	[illegible]	YES	
[illegible]	NA	[illegible]	[illegible]	[illegible]	Loose		Medium	2			2	30	[illegible]		[illegible]	[illegible]	[illegible]	NO	
[illegible]	[illegible]	[illegible]	OH	[illegible]	Investigation	1.1	Medium	2	[illegible]		[illegible]	30	10	[illegible]	[illegible]	[illegible]	[illegible]	YES	
[illegible]	[illegible]	[illegible]	OH	[illegible]	Investigation		Medium	2			2	30	30		[illegible]	[illegible]	[illegible]	NO	

CL02-023-261

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Plant #	RO #	Date Code	Location	Overall Condition	Cause for Replacement as Noted on Repair Order	Bearing Condition	Retainer Condition	Seal Condition	Bearing Wear Out	Grease Condition (% Dirt)	Analysis Code *	Operating Torque (in lbs)	Rotating Torque (in lbs)	Radial Stability (mm)	Lift Load (lb)	Miles	Lift Load X Miles	potential down ?	VIN
300U-L	RWER	2108	OH	Retained condition	Investigation		Low	3			2	19	10	1.85	1200	79000	[illegible]	NO	
300U-R	RWER	2108	OH	Retained condition	Investigation		Low	3			3	30	30	1.15	1000	79000	[illegible]	NO	
300U-L	RWER	0179	OH	Retained condition	Investigation	2.2	Low	3	0.027		2	20	10	1.80	400	43000	16,147,000	YES	
300U-R	RWER	1918	OH	Retained condition	Investigation		Low	3			3	30	30	1.80	400	43000	[illegible]	NO	
300U-L	RWER	3007	OH	Retained condition	Investigation		Low	3			2	30	80	1.80	1400	[illegible]	[illegible]	NO	
300U-R	RWER	3007	OH	Retained condition	Investigation		Low	3			3	30	30	1.10		[illegible]	0	NO	
300U-L	RWER	1307	OH	Retained condition	Investigation		Low	3			3	30	30	1.10	2100	41001	[illegible]	NO	
300U-R	RWER	1307	OH	Retained condition	Investigation		Low	3			3	30	30	1.10	1400	41001	[illegible]	NO	
300U-L	RWER	4109	OH	Retained condition	Investigation		Low	3			2	30	30	1.40	2100	[illegible]	[illegible]	NO	
300U-R	RWER	4109	OH	Retained condition	Investigation		Low	3			3	30	30	1.40	1400	[illegible]	[illegible]	NO	
300U-L	RWER	2177	OH	Retained condition	Investigation		Low	3			3	30	30	1.80	800	[illegible]	[illegible]	NO	
300U-R	RWER	2197	OH	Retained condition	Investigation		Low	3			3	30	30	1.80	800	[illegible]	[illegible]	NO	
300U-L	RWER	1906	OH	Retained condition	Investigation		Low	3			3	40	30	1.10	800	[illegible]	[illegible]	NO	
300U-R	RWER	0906	OH	Retained condition	Investigation		Low	3			3	30	30	1.80	800	[illegible]	[illegible]	NO	
300U-L	RWER	4007	OH	Retained condition	Investigation	1.1	Low	3	0.003		2	30	10	1.10	1000	57700	[illegible]	YES	
300U-R	RWER	4007	OH	Retained condition	Investigation	1.1	Low	3	0.006		2	30	10	2.05	800	57700	[illegible]	YES	
300U-L	RWER	1110	OH	Retained condition	Investigation		Low	3			3	30	30	1.00	200	30700	[illegible]	NO	
300U-R	RWER	1910	OH	Retained condition	Investigation		Low	3			2	35	30	1.05		30700	0	NO	
300U-L	RWER	3016	OH	Retained condition	Investigation	1.1	Low	3	0.040		2	30	10	1.00	1000	[illegible]	[illegible]	YES	
300U-R	RWER	[illegible]	OH	Retained condition	Investigation	1.1	Low	3	[illegible]		2	30	10	1.10	1000	30773	[illegible]	YES	
300U-L	RWER	2006	OH	Retained condition	Investigation		Low	3			2	30	30	1.10	1400	[illegible]	[illegible]	NO	
300U-R	RWER	1906	OH	Retained condition	Investigation		Low	3			2	30	30	1.00	600	[illegible]	[illegible]	NO	
300U-L	RWER	1906	OH	Retained condition	Investigation		High	3	0.000		2	30	10	1.00	100	[illegible]	[illegible]	YES	
300U-R	RWER	1906	OH	Retained condition	Investigation		High	3			2	30	30			130073	0	NO	
300U-L	RWER	4107	OH	Retained condition	Investigation		Low	3			3	30	30	1.00	1000	34073	[illegible]	NO	
300U-R	RWER	4107	OH	Retained condition	Investigation		Low	3			2	40	30	0.80	2000	34073	[illegible]	NO	
300U-L	RWER	4007	OH	Retained condition	Investigation		Low	3			2	30	30		800	34074	[illegible]	NO	
300U-R	RWER	4007	OH	Retained condition	Investigation		High	3			2	30	10	0.80	1300	30400	[illegible]	NO	
300U-L	RWER	2107	OH	Retained condition	Investigation		Low	3			2	30	30	1.00	800	30700	[illegible]	NO	
300U-L	RWER	3107	OH	Retained condition	Investigation	1.2	Low	3	0.000		2	30	30	1.05	2000	30700	[illegible]	YES	
300U-R	RWER	0106	OH	Retained condition	Investigation	1.1	Medium	3	0.000		2	30	10	1.05	1000	30074	[illegible]	YES	
300U-L	RWER	0300	OH	Retained condition	Investigation	3.0	Medium	3	0.027		2	30	10	2.40	800	30074	[illegible]	YES	
300U-L	RWER	2007	OH	Retained condition	Investigation		Low	3			2	30	30	1.00	1400	[illegible]	113,171,000	NO	
300U-R	RWER	1910	OH	Retained condition	Investigation	1.1	Low	3	0.000		2	30	30	0.80	1000	[illegible]	[illegible]	YES	
300U-L	RWER	0900	OH	Retained condition	Investigation		Medium	3			2	30	30	0.80	1000	[illegible]	[illegible]	NO	
300U-R	RWER	0910	OH	Retained condition	Investigation		Medium	3			3	30	30	1.00	800	[illegible]	21,212,000	NO	
300U-R	3006	4007	MI	Retrograded	[illegible]		Medium	3			2	30	30	1.00	2100	30407	[illegible]	NO	
300U-L	3006	4007	MI	Retrograded	[illegible]		Medium	3			2	30	30	1.10	2100	30407	[illegible]	NO	
300U-R	[illegible]	3010	OH	Lost pilot	Investigation		Low	3			2	30	30	1.0		[illegible]	[illegible]	NO	
300U-L	[illegible]	3010	OH	Lost pilot	Investigation		Low	3			2	40	30	1.05	2100	[illegible]	[illegible]	NO	
300U-R	[illegible]	[illegible]	WI	Retrograded	Wear		High	3			3	30	30	1.10	1000	[illegible]	[illegible]	NO	
300U-L	[illegible]	[illegible]	WI	Retrograded	Wear	2.4	High	1A	REP		4	0	0	0.00	300	[illegible]	[illegible]	YES	
300U-L	0073	MI	NY	Retrograded	Wear	[illegible]	Medium	3			[illegible]					[illegible]	0	NO	
300U-R	[illegible]	1007	NY	Retrograded premature	Wear		Medium	3			2	30	30	2.00	1300	[illegible]	[illegible]	NO	
300U-L	[illegible]	[illegible]	MI	Retrograded	[illegible]		Medium	1B			2	30	30	1.0	3000	4003	[illegible]	NO	
300U-R	RWER	4007	OH	Retrograded	Investigation		Medium	3			2	30	30	1.00	1000	37142	[illegible]	NO	
300U-L	RWER	4007	OH	Retrograded	Investigation		Medium	3			2	30	30	1.30	2300	37142	[illegible]	NO	
300U-L	3007	4007	OH	Retrograded condition	Wear	1.1	Low	3	0.006		3	30	30	0.80	1000	34715	[illegible]	YES	
300U-R	3007	1007	OH	Retrograded condition	Wear	2.1	Low	3	0.000		2	30	30	0.80	1000	31715	[illegible]	YES	
300U-R	RWER	7000	OH	Retrograded condition	Investigation		Low	3			2	30	30	1.10	1000	44000	[illegible]	NO	
300U-L	RWER	1007	OH	Retrograded condition	Investigation		Low	3			2	30	30		1000	44000	[illegible]	NO	
300U-R	3000	4007	MI	Retrograded condition	prematurely stay		Medium	3			2	30	30	0.70	2000	79000	[illegible]	NO	
300U-R	3000	4007	MI	Retrograded condition	prematurely stay	[illegible]	Medium	2			[illegible]	30	30			79000	0	NO	
300U-L	[illegible]	2008	MI	Retrograded condition	Wear	1.1	Low	10	0.004		3	35	30	0.80	2100	71004	[illegible]	YES	
300U-R	[illegible]	2015	MI	Retrograded condition	Wear	1.1	Low	3	0.004		2	30	10	0.70	1700	77004	[illegible]	YES	
300U-R	[illegible]	2008	CT	Retrograded condition	Investigation		Low	10			3	30	30	1.10	800	45331	[illegible]	NO	
300U-L	[illegible]	[illegible]	MN	Retrograded condition	Investigation	3.4	Low	3	0.000		3	30	30	1.00	700	[illegible]	[illegible]	YES	
300U-R	[illegible]	3136	OH	Retrograded condition	Investigation		Low	10			3	30	30	0.80	700	44000	[illegible]	NO	
300U-L	RWER	4007	OH	Retrograded condition	Investigation		Low	3			2	35	30			[illegible]	0	NO	
300U-R	RWER	4007	OH	Retrograded condition	Investigation		Low	3			2	30	30	1.10	2000	[illegible]	[illegible]	NO	
410U-L	NA	4107	Alberta	Rust, wear card.	Leaks		Medium	3			2	30	40	0.01	1000	[illegible]	[illegible]	NO	[illegible]
410U-R	NA	4107	Alberta	Rust, wear card, End damage	Leaks		Medium	10			2	30	40	0.30	1000	[illegible]	[illegible]	NO	[illegible]
410U-R	[illegible]	0179	NY	Rust, bit wear, Pin rust	Leaks		Medium	10			2	30	30	0.30	2000	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

[illegible]	[illegible]	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Bearing Condition	Relevant Corrosion	Seal Condition	[illegible] (in)	Grease Condition (% Fill)	Analysis Code *	Clockwise Torque	Running Torque	Axial Endplay	LF Load	Mileage	LF Load X Mileage	[illegible]	VIN
[illegible]	[illegible]	[illegible]	NY	Matl, fair cond.	Loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MS	Life exp.	wear		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Life exp.	wear	3.1	Low	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	noise	3.2	Medium	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	—	Matl, good cond.	Investigation		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	NA
[illegible]	[illegible]	[illegible]	—	Matl, good cond.	Investigation		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	NA
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Matl, good cond.	loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Matl, good cond.	loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NY	Matl, good cond.	loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NY	Matl, good cond.	loose		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Axial play		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	Matl, good cond.	Axial play		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Investigation	3.4	Medium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Investigation		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	noise		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Matl, good cond.	noise		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	noise		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Matl, good cond.	noise		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Wear		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	Matl, good cond.	Wear		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Investigation		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Investigation		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OT	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	Matl, good cond.	Wear		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	Wear		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	SD	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	SD	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ND	Matl, good cond.	play		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ND	Matl, good cond.	play		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	SD	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	SD	Matl, good cond.	loose		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	noise		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	noise		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	Matl, good cond.	ALIGNMENT		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Matl, good cond.	ALIGNMENT		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Matl, good cond.	noise	3.2	Medium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	Matl, good cond.	noise	3.4	Medium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WA	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WA	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Matl, good cond.	noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Matl, good cond.	Wear		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Matl, good cond.	Wear		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NC	Matl, good cond.	Wear		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NC	Matl, good cond.	Wear		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	Wear		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Matl, good cond.	Wear		Medium	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OK	Life exp.	Damage		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OK	Life exp.	Damage		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Plant #	PO #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Service Condition	Internal Corrosion	Seal Condition	Socket Wear (%)	Electric Condition (% Dirt)	Analysis Code *	Oscillating Torque (in*lb)	Rotating Torque (in*lb)	Radial Stability (mm)	"LE" Load (N)	Mileage	LE Load K Mileage	pulse test done ?	VIN
[illegible]	[illegible]	[illegible]	VT	Complete Thrt	Noise		High	3			3	38	49	30	1300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	VT	Complete Thrt	Noise		High	18			2	18	19	26	1300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Complete Thrt	Noise		Medium	2			3	28	38	36	600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Complete Thrt	Noise		Medium	6			2	32	38	36	1900	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Good condition Thrt	Excessive Play	1.1	Medium	2			3	38	38	26	600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Worf condition Thrt	Excessive Play	1.1	Medium	2			3	18	4	28	200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Good condition Thrt	Noise		Medium	18			2	48	38	26	1900	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good condition Thrt	Noise		High	3			2	48	38	36	1600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good condition Thrt	Noise		High	3			3	38	48	27	2000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Fair condition Thrg	Failed Inspection	1.1	High	18			3	30	28	27	600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Fair condition Thrt	Failed Inspection		High	18			3	30	38	28	1300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Complete Thrt	Noise		High	3			2	40	38	36	2400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Complete Thrt	Noise		High	3			3	30	28	36	2000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Good condition Thrt	Noise		Low	3			2	40	48	27	2600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Good condition Thrt	Noise		Low	3			3	60	38	27	2000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Medium	3			3	26	32	36	800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MT	Complete Thrt	Noise		Medium	3			3	40	30	38	600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MT	Complete Thrt	Noise		Medium	3			2	38	30	28	2000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			3	28	40	28	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			2	48	48	38	1800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			3	38	40	48	800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			3			30	600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Complete Thrt	Noise		Low	3			2	38	30	30	300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Complete Thrt	Noise		Low	3			3	38	48	36	0	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			2	48	38	20	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			3	48	30	30	600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Good condition Thrt	Noise		Low	18			2	40	38	27	200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Good condition Thrt	Noise		Low	3			3	48	38	38	200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			3	30	48	38	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			2	40	38	38	1700	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Good condition Thrt	Loose		Medium	3			2	30	48	38	1600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Good condition Thrt	Loose		Medium	3			3	38	48	38	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			38	48	38	28	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition Thrt	Noise		Low	3			38	38	38	48	0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Medium	3			3	40	38	24	700	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Medium	18			3	30	38	28	2000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Medium	3			3	38	38	38	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			3	40	48	38	1800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			2	40	38	35	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			2	38	30	37	1600	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			3	48	40	37	300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			2	48	30	37	1200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	16			38	38	40	32	800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good condition Thrt	Noise		Low	3			3	38	48	24	800	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Piece #	NCal	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Bearing Condition	External Corrosion	Seal Condition	Radial Wear (in)	Grease Condition (% Oil)	Analysis Code*	Oscillating Torque (in-lbs)	Rotating Torque (in-lbs)	Radial Elasticity (mm)	Lift Level	Mileage	Lift Level X Mileage	parts have play?	VIN
[illegible]	[illegible]	[illegible]	MI	Good condition: Tight	Noise		Low	2			1	[illegible]	[illegible]	[illegible]	0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Compliant: Tight	Loose		Low	2			2	40	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Compliant: Tight	Loose		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Compliant: Tight	Loose		Low	2			2	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Compliant: Tight	Loose		Low	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TX	Tight, missing seal	Loose	1.1	Low	2	[illegible]	<0.01	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good condition: Tight	Noise		Low	2			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good condition: Tight	Noise		Low	2			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Good condition: Tight	Noise		Low	10			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Good condition: Tight	Noise	1.1	Low	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good condition: Tight	Noise		Low	2			2	[illegible]	50	.27	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good condition: Tight	Noise		Low	2			1	[illegible]	[illegible]	[illegible]	0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Compliant: Tight	Noise		Low	2			[illegible]	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	Compliant: Tight	Noise		Low	15			2	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Good condition: Tight	Noise		Low	2			2	40	40	.27	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Good condition: Tight	Noise		Low	10			1			.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Compliant: Tight	Noise	1.1	Low	2	[illegible]		1	[illegible]	[illegible]	.17	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[redacted]	WI	Compliant: Tight	Noise	2.2	Low	2	[illegible]	<0.01	2	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Compliant: Tight	Noise	[illegible]	Low	2	[illegible]		[illegible]	[illegible]	[illegible]	LOOSE	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Compliant: Tight	Noise	[illegible]	Low	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MA	Good condition: Tight	Loose		Low	2			4A	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Good condition: Tight	Loose		Low	2			4A	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Compliant: Tight	Loose		Low	2			2	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Tight, missing seal	Loose	1.1	Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Good condition: Tight	Loose	2.1	Low	2	0.004	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Noise		Medium	2			2	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Noise		Medium	2			[illegible]	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Failed Inspection		Medium	2			2	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Failed Inspection		Medium	2			2	[illegible]	[illegible]	[illegible]	0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Good Condition: Tight	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Wear		Low	2			1	[illegible]	[illegible]	30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good Condition: Tight	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Good Condition: Tight	Wear		Low	2			2	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Good Condition: Tight	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MD	Good Condition: Tight	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	MI	Compliant: Tight	Noise		Low	2			2	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	WI	Compliant: Tight	Noise		Low	2			4A	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Noise		Low	2			2	[illegible]	30	[illegible]	0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	0	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Good Condition: Tight	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Noise		Low	10			2	[illegible]	[illegible]	[illegible]	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Noise		Low	10			2	[illegible]	[illegible]	[illegible]	1100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Good Condition: Tight	Wear		Low	2			2	[illegible]	[illegible]	.4	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	Good Condition: Tight	Alignment		Low	2			4A	20	[illegible]	.47	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	Good Condition: Tight	Alignment		Low	2			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	IL	Compliant: Tight	Noise		Low	2			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, corroded	Wear		High	2			[illegible]	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, corroded	Wear		High	2			[illegible]	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	Defective		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	1117	IL	Tight, corroded	Wear		High	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight, good condition	Wear		Medium	2			[illegible]	[illegible]	[illegible]	.47	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight, good condition	Wear		Medium	2			[illegible]	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, corroded	Noise		Medium	2			[illegible]	[illegible]	10	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, corroded	Noise		Medium	2			[illegible]	70	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NC	Tight, good condition	Noise		Low	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NC	Tight, good condition	Noise		Low	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight, good condition	Noise		Low	1			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition	Noise		Low	2			2	60	[illegible]	.40	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Name #	mfg #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Bearing Condition	External Corrosion	Seal Condition	Socket Wear (in)	Grease Condition (% Gms)	Analysis Code *	Oscillating Torque (in*lbf)	Rotating Torque (in*lbf)	Radial Elasticity (mm)	LB Load (lb)	Mileage	LB Load X Mileage	parts [illegible] down?	VIN
[illegible]	[illegible]	NA	WI	This good condition	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This good condition	Noise		Low	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	This good condition	Noise		Medium	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	This good condition	Noise		Medium	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	This good condition	Noise		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	NA	WI	This good condition	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	NA	WI	This good condition	Wear		Low	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	This good condition	Wear	1.1	Medium	2	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MA	This corroded	Wear		Medium	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IN	This corroded	Wear		Medium	3			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	AL	This corroded	Wear		Medium	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	MI	This corroded	Wear		Medium	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Loose		Medium	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Loose		Medium	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Wear		Medium	3			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Wear		Medium	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OR	This corroded	Loose		Medium	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	DE	This corroded	Loose		Medium	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	This corroded	Wear		Medium	2			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	This corroded	Wear		Medium	3			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	PA	This corroded	Loose	2.4	Medium	3	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	NA
[illegible]	n/a	[illegible]	PA	This corroded	Loose	2.4	Medium	2	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	NA
[illegible]	n/a	[illegible]	MN	This corroded	Loose		Medium	10			2	110	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	MN	This corroded	Loose		Medium	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Loose		Medium	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Loose		Medium	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This corroded	Loose		Medium	10			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This corroded	Loose		Medium	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Loose		Low	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	This corroded	Loose		Low	2			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	This good condition	Loose	1.1	Low	2	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NY	This good condition	Loose	1.1	Low	3	[illegible]	[illegible]	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	n/a	[illegible]	WI	This corroded	Loose	2.4	Medium	2	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	n/a	[illegible]	WI	This corroded	Loose	2.4	Medium	3	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	IL	This corroded	Loose		Medium	3			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	This corroded	Loose		Medium	3			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	OH	Like new	Loose	1.1	Low	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This good condition	Loose		Medium	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	GA	This good condition	Play		Medium	3			3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	GA	This good condition	Play		Medium	1			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NH	This good condition	Loose		Medium	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NH	This good condition	Loose		Medium	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This good condition	Loose		Medium	1			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This good condition	Loose		Medium	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	This corroded	Loose		Medium	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	Loose	3.1	Light	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	n/a	[illegible]	MI	This good condition	Loose		Light	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	This fair condition	Alignment		Light	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	This fair condition	Alignment		Light	10			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	This good condition	[illegible]		Light	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	This good condition	Inspection		Light	3			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This good condition	Loose		Light	2			3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	This good condition, smooth	[illegible]		Light	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	This good condition, smooth	[illegible]		Light	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	This good condition, smooth	Unknown		Light	10			2	[illegible]	[illegible]	[illegible]	[illegible]	NA	0	NO	NA
[illegible]	[illegible]	[illegible]	PA	This good condition, smooth	UNKNOWN		Light	10			2	[illegible]	[illegible]	[illegible]	[illegible]	NA	0	NO	NA
[illegible]	[illegible]	[illegible]	VT	This good condition, smooth	Excessive play		Moderate	1			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	VT	This good condition, smooth	Excessive play		Moderate	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	This good condition, smooth	[illegible]		Heavy	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	This good condition, smooth	[illegible]		Heavy	3			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	This good condition, smooth	Excessive play		Moderate	2			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TN	This good condition, smooth	Excessive play		Moderate	10			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	This good condition	Inspection	3.4	Light	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.20	[illegible]	[illegible]	[illegible]	YES	[illegible]

CL 02 023 266

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Claim #	RO #	Date Code	Location	Overall Condition	Claim for Replacement as Stated on Repair Order	Service Condition	Outboard Corrosion	Seal Condition	Socket Wear (in)	Grease Condition At Disk	Analysis Code *	Oscillating Torque (in*lbs)	Rotating Torque (in*lbs)	Radial Elasticity (in/lb)	Lift Load (lb)	Mileage	Lift Load X Mileage	parts torn down ?	VIN
[illegible]	[illegible]	[illegible]	WI	Tight good condition	Inspection	2.2	Light	2	0.002	0.00	Z	35	15	.20	1050	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight good condition	Noise	2.2	Light	3	0.002		NA	50	30	.20	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight good condition	Noise		Light	3			2	70	40	.16	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight good condition	Inspection		Light	3			Z	[illegible]	25	.14	1050	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight good condition	Inspection		Light	3			1	50	30	.12	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight corroded	Inspection		Light	3			NA	40	30	[illegible]	1150	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight good condition	Noise		Light	2			Z	70	30	[illegible]	1700	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight good condition	Noise		Light	3			2	[illegible]	40	.20	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise	1.1	Light	3	[illegible]		1	60	30	1.10	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise		Light	3			2	45	15	.45	1150	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	MI	Tight corroded	Excess play		Medium	2			1	41	15	[illegible]	1150	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	[illegible]	Tight corroded	Excess play		Medium	2			1	41	30	.25	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight corroded	Inspection		Medium	1			2	50	30	.21	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight corroded	Inspection		Medium	1			[illegible]	40	30	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight corroded	Noise		Heavy	3			1	40	15	.25	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight corroded	Noise		Heavy	3			Z	50	20	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight no seal	Noise		Light	10			2	60	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight good condition	Inspection		Light	3			2	40	30	.40	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight good condition	Noise	1.1	Light	3	[illegible]		1	75	40	.12	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight corroded	Excess play	2.1	Medium	2	[illegible]		1	25	30	.22	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight corroded	Excess play		Medium	3			NA	[illegible]	30	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight corroded	Excess play		Light	3			NA	50	30	.25	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight good condition	Noise		Light	10			1	70	40	1.0	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise	1.1	Light	1	[illegible]		2	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise		Light	3			1	[illegible]	[illegible]	.20	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise		Light	3			NA	30	30	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise		Light	3			NA	[illegible]	30	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise	3.4	Light	2	[illegible]		NA	30	20	1.40	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight good condition	Noise	3.4	Light	3	[illegible]		NA	[illegible]	70	1.40	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	VA	Tight good condition	NA	3.4	Light	3	[illegible]		1	[illegible]	5	1.27	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	NA	[illegible]	NA	Tight good condition	NA		Light	3			NA	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NA	Tight good condition	NA		Light	3			NA	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Loose, good condition, smooth.	Investigation		Moderate	[illegible]	[illegible]		2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	Clunking noise		Moderate	[illegible]			1	50	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	Clunking noise		Moderate	[illegible]			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Clunking noise		Heavy	3			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth. Minimal 2nd.	Clunking noise		Heavy	[illegible]			1	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	Clunking noise		Moderate	[illegible]			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	Clunking noise		Moderate	[illegible]			Z	[illegible]	25	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Like new	Broken Zerk fitting		Light	[illegible]			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Model of vehicle doesn't match build date of BJ.	Clunking noise		Heavy	[illegible]			NA	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Model of vehicle doesn't match build date of BJ.	Clunking noise		Heavy	[illegible]	[illegible]		NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	Clunking noise		Moderate	3			1	30	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	Clunking noise		Light	3			Z	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Clunking noise, RF		[illegible]	[illegible]			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	Clunking noise, LF		Heavy	3			NA	40	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Joint doesn't match the vehicle.	Clunking noise, LF		Heavy	3			NA	[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NA	Very tight, good condition.	NA		Light	[illegible]			Z	N.A.	N.A.	N.A.	[illegible]	NA	[illegible]	NO	[illegible]
[illegible]	NA	[illegible]	NA	Tight, good condition, smooth.	NA		Light	[illegible]			2	N.A.	N.A.	N.A.	[illegible]	NA	0	NO	[illegible]
[illegible]	[illegible]	[illegible]	TX	Tight, good condition, smooth.	Squeaking noise	1.1	Heavy	[illegible]	[illegible]		NA	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	TX	Tight, good condition, smooth.	Squeaking noise	1.1	Heavy	[illegible]	[illegible]		NA	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	NA	[illegible]	NA	Loose, good condition, smooth.	NA		Moderate	[illegible]			1	[illegible]	[illegible]	[illegible]	[illegible]	NA	0	NO	NA
[illegible]	[illegible]	[illegible]	CA	Loose, good condition, smooth.	Looseness in F.A.		Moderate	[illegible]			Z	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CA	Loose, good condition, smooth.	Looseness in F.E.		[illegible]	1			2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Loose, good condition, smooth.	F.E.A.		Light	1			1	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Loose, good condition, smooth.	F.E.A.		Light	[illegible]			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Very tight, No lube.	Safety Insp.		Heavy	2	[illegible]		NA	[illegible]	[illegible]	1.40	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	Very tight, No lube.	Safety Insp.		Heavy	3			NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Noise		Moderate	3			1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Noise		Moderate	3			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Excessive play		Heavy	3			2	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Excessive play		Heavy	[illegible]			Z	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Piece #	RO #	Date Code	Location	Overall Condition	Cause for Replacement At Repair or Rework Order	Junction Condition	Exhaust Discoloration	Seal Condition	Socket Wear	Grease Condition	Analysis Code *	Oscillating Torque	Rotating Torque	Radial Elasticity	LE Load	Mileage	LE Load X Mileage	parts turn down?	VIN
[illegible]	[illegible]	[illegible]	NC	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MN	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	UT	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	UT	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NJ	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NH	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NH	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	FL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	VT	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	VT	[illegible]	[illegible]		[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Part #	RO #	Date Code	Location	Overall Condition	Cause for Replacement on Warranty Repair Order	Bearing Condition	External Corrosion	Seal Condition	Bracket Wear Gel?	Grease Condition (% Dist)	Analysis Code *	Oscillating Torque (in*lbf)	Rotating Torque (in*lbf)	Radial Stiffness (mm)	Lift Load (lb)	Mileage	Lift Load X Mileage	parts torn down?	VIN
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Unknown		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Unknown		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NC	Very tight, like new condition.	Looseness in F.E.		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Very tight, like new condition.	Looseness in F.E.		Light	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Tight, good condition, smooth.	Noise when hitting bumps.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Tight, good condition, smooth.	Noise when hitting bumps.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NH	Tight, good condition, smooth.	Clunking noise in Front End.		Moderate	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NH	Tight, good condition, smooth.	Clunking noise in Front End.		Moderate	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Pulling to right.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth. [illegible]	Pulling to right.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	Clunking noise in Front End.		Moderate	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	Clunking noise in Front End.		Moderate	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	Noise at left front.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	Noise at left front.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth. Zerk [illegible]	Clunking noise in Front End.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth. Zerk [illegible]	Clunking noise in Front End.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	AR	Tight, good condition, smooth. Looks new.	Knocking noise in Front End.		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	AR	Tight, good condition, smooth. Looks new.	Knocking noise in Front End.		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Tight, good condition, smooth.	Pulls right		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	Tight, good condition, smooth.	Pulls right		Light	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	YES	[illegible]
[illegible]	[illegible]	[illegible]	NM	Tight, good condition, smooth.	Clunking noise.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight, good condition, smooth.	Popping noise in Front End.		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight, good condition, smooth.	Popping noise in Front End.		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	Vibration		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Clunking noise when passing over bumps.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight, good condition, smooth.	Clunking noise when passing over bumps.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Pulsation		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Pulsation		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	Noise in L/F		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight, good condition, smooth.	Vibration		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight, good condition, smooth.	Vibration		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Clunk		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Tight, good condition, smooth.	Clunk		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Very tight, good condition. Rough.	Rattle in Front End.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Moderately Tight, good condition, smooth.	Rattle in Front End.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight, good condition, smooth.	Excessive play.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WV	Tight, good condition, smooth.	Excessive play.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Very Tight, good condition, smooth.	Clunking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Rough. Moderately loose.	Squeak in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Moderately Tight, good condition, smooth.	Knocking noise.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, good condition, smooth.	Clunking noise in F.E.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Moderately Tight, good condition, smooth.	Excessive play.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	Clunking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Moderately Tight, good condition, smooth.	Noise		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Moderately Tight, good condition, smooth.	Noise		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Squeak in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MS	Very Tight, good condition, smooth.	Inspection		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Very Tight, good condition, smooth.	Inspection		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Very Tight, smooth. Broken Zerk.	Clunking noise over bumps.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Knocking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	Knocking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TX	Very Tight, good condition, smooth.	Squeak but after [illegible]		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	TX	Very Tight, good condition, smooth.	Squeak but after [illegible]		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	Clunking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	Clunking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Moderately Tight, good condition, smooth.	Clunking noise in F.E.		Heavy	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, good condition, smooth.	Ball seat		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, good condition, smooth.	Ball seat		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Slightly Tight, good condition, smooth.	[illegible]		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	Tight, good condition, smooth.	Clunking noise in F.E.		Moderate	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight. Very good condition, smooth.	Excessive play.		Light	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WA	Tight, good condition, smooth.	Noise		Low	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Plant #	RO #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Bearing Condition	External Corrosion	Seal Condition	Socket Wear	Groove Condition	Analysis Code *	Oscillating Torque	Rotating Torque	Radial Elasticity	Lift Load	Mileage	Lift Load X Mileage	parts from same T	VIN
[illegible]	[illegible]	[illegible]	MA	Tight, good condition, smooth.	[illegible] in front end.		Low	3			2	25	40	.40	920	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	D300	MA	Tight, good condition, smooth.	[illegible] in front end.		Low	3			2	38	38	.40	1050	12030	[illegible]	NO	[illegible]
[illegible]	[illegible]	4129	MI	Tight, good condition, smooth.	[illegible]		Moderate	3			2	47	32	.31	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	D109	NY	Tight, good condition, smooth.	Noise in [illegible] front.		Moderate	3			1	41	18	.36	1180	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	Noise in [illegible] front.		Moderate	10			2	41	26	.22	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	3109	CAN	Popping noise when cycled, tight.	[illegible]		Yellow	3			[illegible]	38	12	1.18	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	T109	ME	Smooth, [illegible]	[illegible] in F.E. [illegible]		Moderate	10			[illegible]	41	[illegible]	[illegible]	1200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ME	Smooth, [illegible]	[illegible] in F.E. [illegible]		Moderate	10			[illegible]	78	26	.32	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Loose, smooth, [illegible]	[illegible] loose.		Moderate	10			10	32	30	.80	1100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Very loose, [illegible]	[illegible] loose.		Moderate	10			[illegible]	0	0	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	0109	SD	Tight, good condition, smooth.	Loose.		Moderate	10			2	[illegible]	38	.34	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	SD	Tight, good condition, smooth.	Loose.		Moderate	3			[illegible]	40	36	.30	1120	27700	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	Tight, good condition, smooth.	[illegible]		Moderate	3			14	[illegible]	17	.29	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	[illegible] in front end.		Moderate	10			2	80	40	.25	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Tight, good condition, smooth.	[illegible] in front end.		Moderate	10			2	78	49	.14	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible] noise in [illegible] front.		Low	10			3	41	27	.27	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	[illegible] noise in front end.		Low	10			2	62	30	.17	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	[illegible] noise in front end.		Low	10			2	74	27	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ND	[illegible] smooth, tight.	[illegible] noise in [illegible] front.		Moderate	3			3	[illegible]	30	[illegible]	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ND	Tight, good condition, smooth.	[illegible] noise in [illegible] front.		Moderate	3			3	35	12	.34	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible] smooth, tight.	[illegible] noise in [illegible] front.		Moderate	3			3	[illegible]	37	.23	1105	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible] noise in [illegible] front.		Moderate	3			2	50	38	.38	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	[illegible] noise over bumps.		Moderate	3			3	41	34	.30	2100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	IL	Tight, good condition, smooth.	[illegible] noise over bumps.		Moderate	3			2	35	15	.18	1100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	C109	MI	Like new, [illegible]	[illegible]		None	3			2	73	42	.18	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	[illegible] noise in [illegible] front.		Moderate	3			2	[illegible]	38	.17	1250	20714	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	[illegible] noise in [illegible] front.		Moderate	10			2	[illegible]	29	.18	[illegible]	20714	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, good condition, smooth.	[illegible] noise in [illegible] front.		Moderate	3			2	[illegible]	27	.42	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	Tight, corroded, smooth.	[illegible] noise in [illegible] front.		Moderate	3			2	[illegible]	38	.18	1100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible]		Low	14			1A	38	20	.27	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible]		Low	3			3	41	28	.30	2800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	Some roughness, good condition.	Noise in front end.		Low	3			2	78	34	.30	2500	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	ME	Very tight, good condition, smooth.	[illegible]		Low	3			3	49	50	.18	[illegible]	[illegible]	61,370,400	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	[illegible]		Very low	1A			1A	70	35	.22	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	[illegible]		Very low	1A			1A	40	35	.17	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	1001	MA	Like new, [illegible]	[illegible]		None	1A			1A	40	67	.31	2400	0	0	NO	[illegible]
[illegible]	[illegible]	D067	KY	Tight, good condition, smooth.	[illegible]		Moderate	10			3	38	33	.38	[illegible]	22240	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	KY	Tight, good condition, smooth.	[illegible]		Moderate	3			2	35	28	.19	[illegible]	22240	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight, good condition, smooth.	[illegible] noise in front end.		Moderate	3			3	40	35	.15	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	Tight, good condition, smooth.	[illegible] noise in front end.		Moderate	3			2	41	37	.28	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CA	Tight, good condition, smooth, missing [illegible]	[illegible] noise in left front.		None	3			2	62	35	.18	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, good condition, smooth.	[illegible]		Low	1A			1A	45	22	.31	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Tight, good condition, smooth.	[illegible]		Low	1A			1A	22	23	.38	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NJ	Loose, good condition, smooth.	[illegible] noise in front end.		Moderate	3			3	38	32	.40	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible]		Low	3			2	41	38	.28	1800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	3109	MI	Tight, good condition, smooth.	[illegible]		Low	3			2	[illegible]	23	.38	2000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Loose, smooth, heavy corrosion.	[illegible]		Heavy	3			1A	38	10	.47	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CAN	Loose, smooth, heavy corrosion.	[illegible]		Heavy	1A			1A	31	11	1.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible] noise in front end.		Moderate	3			2	41	27	.28	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Popping noise when [illegible]	[illegible] noise in front end.		Moderate	1A			1A	40	20	.48	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Smooth, [illegible]	[illegible] noise in front end.		Moderate	3			2	38	30	.18	1275	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	D013	NY	Smooth, [illegible]	[illegible] noise in front end.		Moderate	3			2	50	30	.28	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible]		Heavy	3			3	41	30	.18	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible]		Heavy	3			3	40	18	.33	750	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible] noise in front end.		Heavy	1A			1A	100+	42	1.28	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	Tight, good condition, smooth.	[illegible] noise in front end.		Heavy	10			3	35	23	.22	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	3170	WY	Tight, good condition, smooth.	[illegible]		Moderate	3			2	38	18	.34	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	PA	Loose, smooth.	[illegible]		Moderate	10			[illegible]	18	12	1.50	250	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	[illegible] in FE		Heavy	3			3	78	18	.28	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	Tight, good condition, smooth.	[illegible] noise in FE		Moderate	3			3	48	28	.38	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NH	Tight, good condition, smooth.	FE [illegible]		Moderate	3			2	22	13	.48	500	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NH	Tight, good condition, smooth.	FE [illegible]		Heavy	3			[illegible]	33	28	.37	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Place #	RO #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Bearing Condition	Exhaust Corrosion	Seal Condition	Socket Wear (NO)	Grease Condition (% Dirt)	Analysis Date *	Conditioning Torque (in*lb)	Rotating Torque (in*lb)	Radial Elasticity (mm)	Lift Load (N)	Mileage	Lift Load X Mileage	parts torn down?	VIN
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	2			2	45	45	.30	490	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	2			2	[illegible]	[illegible]	[illegible]	590	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	50	18	.38	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	18	18	.48	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	30	18	.37	940	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	35	12	.38	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	32	18	.47	1130	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	[illegible]	28	.35	730	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	[illegible]	[illegible]		Light	2			2	30	18	.48	1480	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	CT	[illegible]	[illegible]		Moderate	2			2	25	25	.47	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	38	18	.38	1370	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	45	18	.40	940	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	30	12	.40	840	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	45	20	.30	1700	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	1B			1	<5	<5	2.15	10	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	[illegible]	Check FE		Heavy	2			3B	18	7	.77	340	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MN	[illegible]	Check FE		Heavy	1A			3B	38	17	.80	310	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	28	18	.36	1100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	10	<5	1.89	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	25	18	.18	750	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	38	4	.48	490	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		Moderate	1A			3B	28	18	NA	760	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		Moderate	2			2	48	20	.30	2400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	[illegible]	[illegible]		Light	2			2	38	12	.19	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MO	[illegible]	[illegible]		Light	2			3B	18	18	.27	490	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		[illegible]	1A			2	35	22	.46	270	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		Heavy	2			3B	28	28	.30	370	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			2	38	12	.47	490	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			2	45	20	.16	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	NY	[illegible]	New York Safety Inspection		Moderate	2			3B	18	18	.48	790	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	2			2	48	22	.21	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	1B			2	[illegible]	20	.18	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]		Moderate	2			2	75	22	.18	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MA	[illegible]	[illegible]		Moderate	2			2	78	22	.17	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		Heavy	2			3B	NA	NA	NA	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		Heavy	1B			3B	23	18	.41	390	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			3B	17	8	1.01	110	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	[illegible]			3B	30	18	.52	720	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	2			2	48	25	.22	1700	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	2			2	22	12	.85	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	1B			3B	15	10	2.30	140	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Heavy	2			3B	25	5	1.88	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	48	15	.21	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	[illegible]			2	27	10	.44	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		Moderate	2			3B	38	10	3.30	170	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	WI	[illegible]	[illegible]		Moderate	2			3B	45	18	.17	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			1	25	15	.30	1200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			1	25	15	.30	1300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			2	30	32	.78	1300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	40	30	.52	1200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	1B			2	[illegible]	18	.37	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	2			2	20	10	.40	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	35	18	.38	1200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1A			1	8	8	2.85	4	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	OH	[illegible]	[illegible]		Light	1			2	78	45	.18	370	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Light	1B			3B	25	18	.48	430	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			3B	30	20	.48	875	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			2	30	15	.38	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	1B			1A	12	5	.32	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	30	17	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			2	30	12	.30	[illegible]	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	MI	[illegible]	[illegible]		Moderate	2			[illegible]	40	18	.48	[illegible]	[illegible]	[illegible]	NO	[illegible]

T-Truck Upper Warranty Return Parts (and Vehicles Procured for Analysis *)

Flow #	RO #	Date Code	Location	Overall Condition	Cause for Replacement as Stated on Repair Order	Repair Condition	Tearout Condition	Seal Condition	Vented Plug (Y)	Bearing Condition (N, DIS)	Analysis Code *	Unlocking Torque (in*lb)	Locking Torque (in*lb)	Rotor Elasticity (mm)	Lift Load (N)	Hours	Lift Load X Hours	parts ten sheet 7	VIN
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore, good condition.	Recall 01848		Moderate	3			2	30	16	.49	875	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore, good condition.	Recall 01848		Moderate	3			3	66	17	.17	78	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore, good condition.	Recall 01848		Moderate	10			3	35	30	.37	790	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore, good condition.	Noisy in FR		Moderate	3			3	29	11	.29	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore, good condition.	Noisy in FR		Moderate	3			3	36	20	.46	1400	[illegible]	[illegible]	NO	[illegible]
[illegible]	34470	[illegible]	[illegible]	Smooth, bore, good condition.	Recall 01848		Moderate	15			3	30	11	.31	1000	[illegible]	[illegible]	NO	[illegible]
[illegible]	34470	[illegible]	[illegible]	Lower, bore with flaws.	Recall 01848		Heavy	10			3	22	10	.31	700	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, dirty, [illegible] condition.	Rumble when boarding		Light	10			2	43	40	.32	2100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, dirty, [illegible] condition.	Rumble when boarding.		Light	3			2	65	36	.26	3300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore, good condition.	Recall 01848		Moderate	3			2	13	19	.33	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, bore ordin.	Recall 01848		Moderate	3			2	29	19	1.84	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Smooth, dirty, good condition.	Recall 01848		Moderate	3			2	38	16	.35	1300	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Fine, some condition.	Recall 01848		Moderate	3			3	25	12	.41	900	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Fair, pitted, rust condition.	Recall 01848		Moderate	10			84	140 +	36	1.00	100	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Fair, valve condition.	Recall 01848		Moderate	3			09	30	11	.37	800	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Dark, smooth, good condition.	Spontaneously emitted [illegible] noise.		Moderate	3			2	39	16	.23	1310	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Dark, smooth, good condition.	Spontaneously emitted [illegible] noise.		Moderate	3			2	38	16	.33	910	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Pitted, smooth, good condition.	Difficulty [illegible] [illegible]		Moderate	10			3	31	12	.35	200	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Pitted, some [illegible].	Clunking noise in FR over bumps.		Heavy	3			84	66	10	1.33	400	[illegible]	[illegible]	NO	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	Lower, smooth, good condition.	Clunking noise in FR over bumps.		Heavy	3			08	32	10	.49	300	[illegible]	[illegible]	NO	[illegible]

CL02-023-272

GM632
RQ02-012

ATTACHMENT "6B"

ball joints 1.doc 12-4-00

Thought after JTC's 12-1-00 visit to Vandalia:

See the reports by Vertech (sp?) Lab (appearance of grease grooves and wear areas)

- Original suggestion of roughness due to acid etching on Cu-plated bearings.
- B vs. C test of bearings which were plated for long and short times, then assembled into ball joints and tested in road simulator.
- "Different" appearance of high-wear bearings from North American vehicles. Was there sign of corrosion-induced roughening ?

Examine the bearings and sockets from the B vs. C test which "failed" to show difference between socket wear by bearings which were plated for long and short times, then assembled into ball joints and tested in road simulator. Two of the three long-plating-time joints separated. We should compare the sockets of all three (all six ?) to see why the third one did not wear/separate. Also, by SEM comparison of the worn surfaces on all six bearings and sockets we might learn more about the operative wear mechanisms. Also, by studying the variation in wear scar appearance with position in high-wear sockets we might learn something.

The intended motions are (1) stud rotation within bearings, and (2) bearing oscillation within sockets. Does the stud ever seize/weld to the bearing ID, thereby forcing the bearing to rotate against the socket ? What would be the implications of such motion for grease distribution, wear debris removal, ?

What are the effects of long immersion time of bearing in the plating bath ?

- Greater 'coverage' of the PM iron. Might reduce interaction with chemistry-specific additives (?) in grease. Or, might block pores, thereby preventing oil from wicking out.
- Larger diameter.
- Shallower grease grooves.
- Greater roughness due to corrosion or nature of Cu deposit.
- More penetration of plating bath into the oil-infiltrated pores. Might displace, dilute, or contaminate the oil.

This joint has been installed on vehicles built over the last 10-15 years. Why didn't fast-wear appear in warranty system earlier ? (Recall that Blazer had major change in appearance in MY95 or MY96)

Do the wear mechanisms change with time/depth in both the slow-wear and fast-wear sockets ? Are the initial wear mechanisms critical in determining the subsequent wear mechanisms ? If so, is there some way to assure that the initial wear mechanism is not the one which "leads to" the very fast mechanism ? (The MoS_2 should help.) Can we run short tests on the road simulator to see how wear progresses with time, with both slow-wear and fast-wear ball joints ?

Any value in running hardware in reciprocating sliding tests on Cameron Plint machine ?

Study (hard copies) of Chuck's transparencies and Delphi Materials Specs, then discuss problem with Tom and others in Met Lab.

Involve "Plating and Electrochemistry" people from GM R&D ?

ball joint bearings SEM1 letter.doc

GM Materials & Processes Lab, mail code 480-106-212
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From: Vjekoslav Franetovic, Jon Carter

Date: 12-22-00

Subject: SEM examination of whole and half bearings.

Vjekoslav and I have examined four of the bearings which were received on Monday: Unplated Bearing Dec.1998, Brazilian Separation H, 57U, and 58U. The first two were supplied as complete bearings. Only half of each of the latter two were supplied. (Were these cut to include part of both the inboard and outboard regions ? I recall that the sockets wear primarily on the inboard side.) Per John Z., 57U appears clean, but came from a high-wear ball joint. 58U was classified as one of the smoothest looking bearings in the third Vertech report, and, therefore, presumably, would be expected to cause little wear in a ball joint. More details will come next year, but here are some preliminary impressions based on SEM examination of the "OD" surface of bearings, mostly in the load carrying face rather than in the grooves.

1. Generally speaking, we have seen features like those presented in the Vertech reports, and have not yet seen anything which is at odds with the Vertech data. (There may be some difference on interpretation of the data.)

2. There is a tremendous differences in appearance between bearings, and sometimes between faces on one bearing. Some of these differences we believe are present in the as-manufactured part. Others probably develop in service.

3. The Unplated bearing appears very uniform face to face in terms of pore distribution. By contrast, some pores within the grease grooves appear to be aligned in rows. The PM origin is evident from the individual particles which are readily visible, apparently due to atomized iron.

4. The Brazil H bearing appearance varies greatly from the Unplated, and from face to face on itself. The former appears to show relatively more sponge particles and less atomized. It lacks the "characteristic PM pores" which are evident in the Unplated, but does show other surface relief features which we attribute to wear and/or corrosion. The Unplated bearing has a more uniform, microscopically flatter, appearance than Brazil H. The six faces on the Brazil H vary in appearance, with two adjacent ones being somewhat similar to each other, and the other four being similar. Some faces and grooves show evidence of the "acid attack" mentioned by

Vertech. We have identified several types of surface features ("PM pores", "acid attack", "worn areas", and "depressions"), and later will summarize their occurrence on each face and/or each bearing.

4. 57U shows has a large area fraction of smooth surface, and evidence of atomized iron. ("Like" Unplated)

5. 58U shows an even larger area fraction of even glossier surface, and no direct sign of being a powder metallurgy product ! ("Like" Brazil H) Although there were many shallow depressions (typ. less than 0.1 mm across) evident on the surface, there was none of the PM-type of porosity seen on the other bearings, or clear outlines of particles. If the ball joint from which bearing 58U was taken had a low wear rate, then it might be wise to try for more thorough compaction/sintering/coining of bearings.

Future work:

1. Metallographic examination to compare internal structures. Some additional samples which have fewer unknown variables might help us learn. For instance: two bearings from the same box, one unused, the other used in the road simulator test, and then marked to identify the inboard side.

EXAMINATION OF P/M IRON BEARINGS FROM BALL JOINTS

Technical Report 1 (text only, no figures) **February 19, 2001**

Vjekoslav Franetovic and Jon T. Carter

1. PURPOSE

To determine the differences between four powder metal ball joint bearings, especially differences which might influence the wear rate of ball joint sockets.

2. SUMMARY

Four bearing samples were supplied by Chuck Eifert of the Delphi - Vandalia, Ohio, plant. They were identified as follows:

1. New, unplated bearing, Dec. 1998. (whole bearing)
2. Used, Brazilian separation "H". (whole bearing, high wear, "clean")
3. Used, 57U. (half bearing, high wear, "clean")
4. Used, 58U. (half bearing, high wear, "environmental corrosion")

These samples were cleaned ultrasonically in acetone, then examined via scanning electron microscopy of the surfaces and metallographic sections, and optical microscopy of metallographic sections. The major conclusions are:

1. The four samples are significantly different in terms of composition (relative amounts of atomized iron and sponge iron), porosity, microstructure, and surface appearance.

2. Based on surface appearance (pore type), the New and 57U samples are similar. Also, the Brazil H and 58U samples are similar.

3. Based on metallographic-section appearance, Brazil H, 57U, and 58U have similar distribution of phases, density of pores, and relative amounts of atomized iron and sponge iron. (Brazil H is most similar to 57U, and slighty less so to 58U). These three are significantly different from New.

4. These differences might be related to the reported differences in socket wear rates, but the active wear mechanisms are not known.

Pieces of each of these four bearings have been sent to Powder-Tech Associates, Inc., for metallographic examination to determine the relative amounts of atomized iron and sponge iron. Also, pieces have been submitted at GM R&D for chemical analysis for %Mn, also to determine the relative amounts of sponge and atomized.

3. RECOMMENDATIONS

1. Find a method of determining the relative amounts of atomized- and sponge iron powders in finished bearings. Chemical analysis for Mn and Si might work because sponge iron has higher concentrations of these elements than does atomized iron. Alternatively, image analysis of metallographic sections might work because sponge particles contain many small pores, but atomized particles do not.

2. Apply the method found above to low- and high wear-rate bearings, then check for correlation between sponge/atomized ratio and wear rate.

3. If the correlation mentioned above is found, then intentionally make some bearings with low and high sponge/atomized ratios (maybe 25/75 and 75/25), then run them in ball joint wear tests to confirm the correlation.

4. Check the powder mixing and handling procedures to for possible causes of inhomogeneous mixing, or segregation after mixing.

5. Check plant records to determine consistency of sponge/atomized ratio used in the bearing powder mixture. Also, check other processing records in attempt to find the cause of the observed variation in porosity levels.

6. Examine via SEM the surface of bearings after each step in manufacturing: sintering, sizing, heat treating, tumbling.

7. Examine bearings and sockets from low- and high-wear ball joints via SEM to help determine the active wear mechanisms.

8. Correlate all findings with lubrication studies.

4. INTRODUCTION

Delphi and GM Truck have noted significant differences in the wear rates of steel sockets in ball joints on some models of trucks and sport utility vehicles. The Delphi/Truck work done to date suggests that those differences are due to differences in the powder-metal steel bearing which rubs on the grease-lubricated socket, rather than due to differences in the sockets themselves. i.e., fast wear of sockets is thought to be due to the bearing being too "aggressive" rather than the socket being too "soft". Previous Delphi/Truck work also suggests that the critical difference in bearings is not macroscopic shape or dimensions, but something microscopic.

The Vertech Laboratory (Milford, CT) examined several bearings for Delphi in the 1997-1999 timeframe, and noted differences in corrosion/roughness, edge integrity, and particle hardness. (The Powder Tech Lab examined several bearings and reported no significant differences !) It was suggested that the corrosion-induced roughness on the bearing surface can increase the wear rate of the socket. Figures in one of the Vertech reports suggested to one of the authors (JTC) that the corrosion ("acid attack") was associated with the sponge-iron component of the bearings rather than with the atomized iron component.

The bearing, part no. 9769877, is manufactured by Norwalk Powdered Metals (Norwalk, CT) via the following process:

1. Blend 3000 lbs of powder. 48.5% Pyron sponge iron, 48.5% Kobelco atomized iron, 2.5% Cu, 0.5% Acrawax. This is enough powder to make approx 30,000 bearings @ 45 grams each. (Pyron sponge is made by hydrogen reduction of mill scale, rather than carbon reduction of ore, and therefore has different structure and chemical composition.)

2. Cold press bearings, one at a time, approx 800 times per hour.

3. Sinter in a controlled-atmosphere furnace.

4. Lubricate with soap/alcohol mixture.

5. Coin/size the outside diameter near the big end of the bearing, by an axial strike. Bearing is supported in a hemispherical die without grease groove ridges.

6. Heat treat (2080 deg F) in a nitriding (carbonitriding ?) atmosphere, then oil quench. (Each bearing absorbs approximately 1 gram of oil, which might contribute to lubrication in service.)

7. Vibratory tumble (part-on-part, without abrasive media) to remove "flash" and burrs. A liquid addition (oakite ??) is used to increase the brightness of the finished parts.

8. Eddy current test to confirm heat treatment.

5. EXPERIMENTAL

The four bearing samples supplied were examined with a low-magnification optical microscope, cleaned ultrasonically with acetone, then examined via the following methods.

1. SEM and EDS examination of the spherical load-bearing surfaces and the grease grooves.

2. SEM of polished radial sections, particularly inside pores. For this method and the next two, samples were mounted in "bakelite" via hot compression molding, then ground and polished using automated equipment.

3. Metallography of both polished and etched radial sections of bearings.

4. Image analysis on polished radial sections to determine the % porosity.

6. RESULTS AND DISCUSSION

6.1 Bearing Surfaces (SEM/EDS of surfaces)

SEM analysis covered both the load-bearing surface and the grease grooves, but focused on the part of the former near where the grease groove changes from straight longitudinal to curved helical. The most obvious surface features observed were pores. Pore distribution on the sample surfaces was highly non-uniform in all samples, with the grease grooves showing the highest local porosity. The

load-bearing surfaces showed a gradient of porosity from low at the large- diameter end to high at the small end. Several types of pores and other less-frequently-observed features were observed, and will be described below prior to discussion of the details of each sample.

Powder metallurgy (PM) pores: "PM pores" are the spaces which remain between the compacted particles after sintering. As such, they reveal the nature of the powder type (atomized or spongy or mixed) used, untouched by wear processes. The PM pores observed appeared to have a bi-modal size distribution: Large, deep pores which were relatively few in number, and concentrated toward the small end of the bearing, and smaller, shallower ones which were found all over the surface. (The smaller ones are still much larger than the pores which are found within individual sponge-iron particles.)

Flowery pores: Flowery pores look like "acid attacked" material with very sharp features, which distinguish them from the globular, rounded appearance of PM pore walls. They appear to be the corroded regions reported by Vertech, and tend to be larger and shallower than PM pores.

Depressions: Depressions are shallow dimples, sometimes corroded (flowery pore inside depression) mostly in its deeper part. Often, depressions appear to be lined with "leaves", which look like solidified liquid. They appear glossy, flat or slightly curved, and sometimes cracked. It is hypothesized that the origin of the leaves is the copper powder which is blended with the iron, then melted during sintering and heat treating.

Striations and Flat Patches: Observed striations and flat patches are attributed to part processing. However, no striations in the wear directions had been observed in any sample.

6.1.1 New: The SEM surface examination showed evidence of atomized iron (ball particles) in the PM pores. Pores were pretty much uniformly distributed across the load-bearing surfaces, but much more concentrated and sometimes aligned within the grease grooves. Each of the six load-bearing surfaces appeared similar to one another, in terms of pore distribution.

6.1.2 Brazil H: The Brazil H bearing surface appearance varies greatly from the New one, and from face to face on itself. It showed much rougher surface with overall more pores compared to uniform microscopically flatter appearance of New. There were also more flowery patches ("acid attack" pores) in the Brazil H. Since these corroded pores were observed also in the grooves, which do not slide against the socket it is believed that they were not caused by the wear although they might have formed in service. There is also less evidence of ball particles (atomized iron) but more spongy particles compared to New. This could indicate that these bearings were made with different ratios of atomized and spongy iron powders. Face-to-face variation in surface roughness and number of flowery pores suggests non-uniform load and lubrication conditions during service.

6.1.3 57U: 57 show a some large areas of smooth surface and more evidence of atomized iron in PM pores, similar to New. Therefore, based on SEM surface examination results, 57U might be grouped with New. (However, as discussed below, results of porosity measurement on metallographic sections suggest that 57U is more like Brazil H than like New.) No surface features other than those previously mentioned were observed.

6.1.4 58U: 58 showed an even larger area fraction of even glossier surface, and no PM pores, and therefore could not be recognized as PM product at all from this surface examination. It is unknown,

though, how much smearing and/or covering of PM pores occurred during manufacture or service. Instead of PM pores, the surface contained many shallow depressions (typ. less than 0.1 mm across) and none of the ball or spongy particles. Deeper depressions were sometimes corroded (flowery pores). Sometimes they contained the leaf-like feature described above. Considering the absence of PM pores, this work indicates that 58U is more like Brazil H than like New. However, the leaf-like feature is unique to 58U.

6.2 Nature of Pores (SEM of polished radial sections, esp. in pores)

Radial sections were cut from exactly the same location, relative to a grease groove, from each sample, then examined metallographically in order to characterize bearing material which had not been altered by surface wear or corrosion. SEM imaging inside pores in these sections revealed the atomized or sponge nature of the particles, and supported the finding of the surface examination that the bearings differ in relative amounts of atomized and sponge iron content. More specifically, New and 57U were high in atomized, and Brazil H was high in sponge. 58U had no evidence of round particles, but instead showed the leaf-like features revealed during the surface investigation. Again, this work on polished sections confirmed the findings of the surface examination, free of the surface effects of wear and corrosion. Considering this result, 57 could be grouped with "New" sample as having the similar PM origin (ratio of atomized and sponge iron).

6.3 Pore Density (Metallography of polished radial sections.)

Metallography of the radial sections showed that pores were nonhomogeneously distributed with the highest density of pores occurring near the grease grooves. It also revealed a much lower pore density in New compared to Brazil H, and different pore size distributions, with Brazil H having more small pores. These observations support the idea that Brazil H is relatively rich in sponge particles because those particles each contain many small holes themselves. 57U and 58U were similar to Brazil H in terms of pore density, 57U showed a slight indication of having many small pores. Consequently, considering this visual assessment of pore density, Brazilian H, 57U, and 58 could be grouped together, and distinguished from New.

Digital image analysis was done on the same locations on all samples and same locations on which the SEM and metallographic examination was done, that is, near the bottom part of the samples (thicker part of bearing). It showed 3.6% pores in New, 9.9% in Brazilian H, 8.9% in 57U, and 11.6% in 58U. These data correlate well with the metallographic examination. (They are low compared to the nominal porosity this bearing of approximately 20%, but are still considered good for comparison purposes because the sampling and analysis procedures were the same for all four bearings. Note, that the pore density throughout the sample is nonhomogeneously distributed, being much higher in the groove region. Yet, the calculation was done always from comparable locations in the bearing and therefore such obtained pore density could be correlated (not compared) to the average pore density of the whole bearings. Considering pore density, Brazil H, 57, and 58 are similar.

6.4 Microstructure (Metallography of etched radial sections.)

To reveal grain and/or particles boundaries and microstructural constituents, the samples were etched in 2% nitric acid in ethanol. Three different constituents (white, blue and purple "phases") and, rarely, small inclusions could be distinguished in all 4 samples. Hardened case of radial sections was less attacked (by the etchant) than was the core in all samples. Hardened case was 2 times deeper on

Brazilian H and 58 compared to New and 57. White constituent was much finely distributed (dispersed) in New than in Brazil H, being more patchy in Brazil H. White constituent had a grainy structure, 3 to 12 μm in size, only in New sample. Particle boundaries could be somewhat recognized in Brazil H but not in New. Average particle size was 20 μm. In conclusion, general revealed microstructure is significantly different in New compared to Brazil H, being much coarser in Brazil H.

57 and 58 had a similar microstructure with the following slight differences: 57 had slightly finer microstructure with white constituent more homogeneously distributed throughout the sample. 57 had less pores compared to 58 while there were more of small pores in 58. Also 57 showed some indication of grainy structure (observed in New) and less evidence of particles boundaries. In conclusion, from the microstructural point of view, both 57 and 58 are not significantly different from H, noting that 57 is somewhat closer to H (pores, white constituent).

6.5 Additional Observations

Weight of whole examined bearings (New and H) was measured (57 and 58 were half of bearings). "New" had 45.115 g and H had 45.397g. This was within the production tolerance 44.5 to 45.7g and could not provide us with any additional conclusion.

One noticed difference between the samples was the amount of extracted oil during many different sequences of sample preparation (grinding, polishing, cleaning) and time during which samples were in high vacuum chamber (SEM). Samples H and 57 always showed (after many steps of preparation and observation) extracted oil on their surface, while New and 58 were relatively easy to observe and clean (no oil on the surface). We suspect that the high pressures and temperatures encountered during compression molding in Bakelite play a role in the subsequent exudation of oil.

In conclusion examined samples could be grouped in two main groups: New versus H, 57, and 58 and two sub-groups: New and 57 versus H and 58. It remains to be determined on the basis of recommended experiments how much particular differences could be critical for the wear behavior and finally the failure of ball joints.

NOTES:

Interconnected porosity at surface: ability to supply oil or absorb debris ? absorb grease ?

Wear as 2-body or 3-body abrasion ?

Pyron P-100 made from mill scale: Residual oxide content ?

See ASM Metals Handbook, red edition, volume 9, page 518, for micrographs of Cu-bearing PM parts. Are the "copper flecks" and/or "leafy depressions" we've seen indicative of inadequate sintering or h.t. temperatures, excess local Cu, both, or something else

GM Evaluation Report

Platform	Project/ENO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Repeat No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05683

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

Date: 8/16/2001

Title: Report for STR # 05683

Hours: 23.0

To: (Requestor) Frank Tryska

From: Don Lincoln

☒ Final

☐ Interim No.

☐ Reissue Date of Reissue:

Date of Request: 08/06/2001

Dates of Evaluation: 8/9/2001 - 8/16/2001

- The results published within this report relate only to the items tested.
- This report shall not be reproduced except in full, without the written approval of the laboratory manager or his/her designate.
- Tests identified with an asterisk are not included in the laboratory's current A2LA scope of accreditation.

Objective:
Provide an incident analysis on the submitted S/T Truck ball joint assembly.

Conclusions:
1. Excessive wear to the inside surface of the ball joint socket caused a gradual loss of wall thickness, and ultimately led to separation of the assembly during operation.
2. The wear pattern observed on the inside wall of the socket indicated that the bearing surface was rotating in an upward and downward direction, consistent with the expected normal movement of the stud, and was also turning around the axis of the center hole.
3. Lubrication was not present in critical areas of the assembly during a significant portion of its service life, which directly contributed to abrasion of the socket wall.
4. The rubber boot seal of the assembly was observed as torn at part submission, however a determination of whether the tear occurred during operation or during subsequent disassembly of the ball joint could not be made.
5. Material specifications were not provided and could not be located, so determination of the components' conformance to requirements could not be made.

Design Evaluated: FRT Suspension GMUTS Rating: n/a Veh. Mileage:

Part/Test Object Name(s)	Veh/Buck/PT/Part No./RPO	Revision Date/Level
Control Arm	17980736	n/a
Material		
Unknown		

Distribution:

Name: Frank Tryska Loc: 480-205-161
Name: Dennis O. Mouser Loc: 480-992-241
Name: Jon Carter Loc: 480-106-212
Name: Loc:
Name: Loc:

cc.

Author: Don Lincoln Date: 8/16/2001
(Title/Phone) Lead Analyst / (810) 947-5975 8-227
(Location) GMNA Materials Lab – Warren

Approver: Robert Stefan Date:
(Title) Laboratory Supervisor
(Location) GMNA Materials Lab – Warren

Approver: Dan Kardasz Date:
(Title) Laboratory Manager
(Location) GMNA Materials Lab – Warren

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05883

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

Requirements:
None Provided

Background:

Sample Condition as received:
Customer return

Sample History:
Field Incident - unknown mileage, but may be available if necessary.

Unusual Circumstances:
None noted.

Previous Performance:
None noted.

Equipment:
Measuring Case Depth J423-2/98 was accomplished utilizing T-1143 Nikon Metallograph W/Digital Camera.
Metallography was accomplished utilizing T-1143 Nikon Metallograph W/Digital Camera.
Microhardness of Materials ASTM E384-99 was accomplished utilizing T-901 Wilson Semi-Automatic Micro Hardness Tester.
SEM was accomplished utilizing T-1134 Amray 1830 SEM.

Procedure/Method:
Fracture Analysis was done by Don Lincoln.
Measuring Case Depth J423-2/98 was done by Don Lincoln.
Metallography was done by Don Lincoln.
Microhardness of Materials ASTM E384-99 was done by Don Lincoln.
Other Unlisted Metallurgy Testing (List in Detailed Test Instructions) was done by Don Lincoln.
Photography (Metallurgy) was done by Don Lincoln.
Preparation of Metallographic Specimens ASTM E3-95 was done by Don Lincoln.
Report Preparation (Metallographic) was done by Don Lincoln.
SEM was done by Don Lincoln.

Detailed Test Instructions: Please determine the cause of failure. Check hardness for conformance to print specs. Analyze wear surfaces for presence of debris that may indicate lack of lubrication, and provide EDS of any particles observed. Get chemistry of each half of assembly. Measure wall thickness. Call Dennis Mouser for further instructions or clarifications - (248) 528-5576.

NOTE: The specific procedure followed for each test is that described in the relevant GMNA Materials Laboratory test instruction. When standard test methods have been modified, the specific nature of such modifications is stated in the test instructions.

GM Evaluation Report

Platform	Project/BWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

Results:

Macro Examination:

Figure 1 shows the ball joint assembly components that were submitted for analysis. The following observations were made during visual examination of the component pieces upon submission:

- Macroscopic evidence of wear and polishing were present on the ID wall of the socket, and approximately 30-35% of the wall material was not present (presumably worn away during operation).
- Possible red corrosion was present on the ID wall of the socket at a location opposite of the missing wall material (see figure 2).
- The OD surface of the hemispherical bearing appeared to be heavily worn and eroded, with the locations of the lubricant grooves nearly indiscernible (see figure 3).
- The rubber boot seal that surrounded the ball joint assembly and was designed to retain the lubricant was torn in several locations, and was worn away at the stud end (see figure 4). The tears may have occurred during removal from the vehicle and/or disassembly of the ball joint, however the wear on the stud end of the boot most likely occurred during operation.
- The stud was heavily eroded and polished in some locations, particularly at the surface where it mates with the hemispherical bearing (see figure 5).

Scanning Electron Microscopic Examination:

Sections of the bearing surface and the inner socket wall were evaluated using the Scanning Electron Microscope in order to characterize the worn areas. Figure 6 shows representative SEM photographs of the features observed on the OD surface of the bearing. Among the observations were areas of heavy wear and erosion of the surface material, as well as polishing and smearing in adjacent regions.

The representative features observed on the ID wall of the socket are shown in the photos in figure 7. The heavily worn areas displayed grooves running in both the longitudinal as well as the lateral directions, suggesting that in addition to the bearing pivoting in the expected manner during loading of the stud, it was also turning around the axis of its center hole. The presence and direction of the polishing observed on the mating surface of the stud OD confirmed this condition as well. The small debris particles observed in the grooved region of the socket walls could not be positively identified, but X-ray analyses were consistent with iron oxide, and possibly eroded material from the surface of the bearing.

The area of the socket that appeared to contain red corrosion products was positively identified as such through Energy-Dispersive X-ray Analysis (EDS). See figure 8. An adjacent area that appeared to be coated with a dried organic substance was also analyzed utilizing EDS (figure 9). Although the resulting spectrum was inconclusive, the substance X-ray may be consistent with that of grease.

Metallographic Examination:

Cross-sections of both the hemispherical bearing and the socket were prepared metallographically for examination of the microstructures and surface features. Figures 10-12 show a series of photomicrographs at increasing magnifications of the polished cross-section of the bearing surface. Note the corrosion products present, as well as the presence of what appeared to be small particles of copper within the corroded regions. These corroded areas were roughly located in the lubricant grooves.

Figures 13 and 14 show representative photomicrographs of the etched structures observed in the core and in the remaining hardened regions. The material type and grade is unknown, however the structures observed are roughly consistent with the Fe-Cu-C sintered steels. The depth of the remaining case varied too greatly to approximate.

The remaining hardened areas of the socket, which were located closest to the seat, averaged approximately .4 mm in depth. See figures 15-17 for representative photomicrographs of the etched structure observed in the case and

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/MAUPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

core regions. The case region was completely worn away in some areas, as shown in figure 18. The material type or grade was not known, so conformance to microstructural requirements could not be determined.

Hardness:
Knoop microhardness indentations were measured in the case and core regions of both the socket and the hemispherical bearing, and then converted to Rockwell B or Rockwell C, as appropriate. Print specifications for hardness were not provided, so conformance to requirements could not be determined. The results are summarized in the following table:

Location	Indentation #	Knoop Hardness	Converted Hardness	Converted Average
Socket Core	1	138.4	69 HRB	67 HRB
	2	130.7	66 HRB	
	3	132.8	67 HRB	
Socket Case	1	436.6	43 HRC	42 HRC
	2	410.9	41 HRC	
	3	426.0	42 HRC	
Bearing Core	1	191.5	88 HRB	89 HRB
	2	182.5	87 HRB	
	3	214.0	93 HRB	
Bearing Case	1	357.0	36 HRC	32 HRC
	2	311.3	30 HRC	
	3	303.9	29 HRC	

References/File Storage:
All raw data files are stored in the laboratory and can be made available upon request.

Micros: Micro #2717 – Cross-sections of bearing and socket.

Calibration Report Information:

All relevant calibration records are available in the laboratory and can be provided upon request. For specific information please contact the Laboratory Quality Manager.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VIP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	06663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

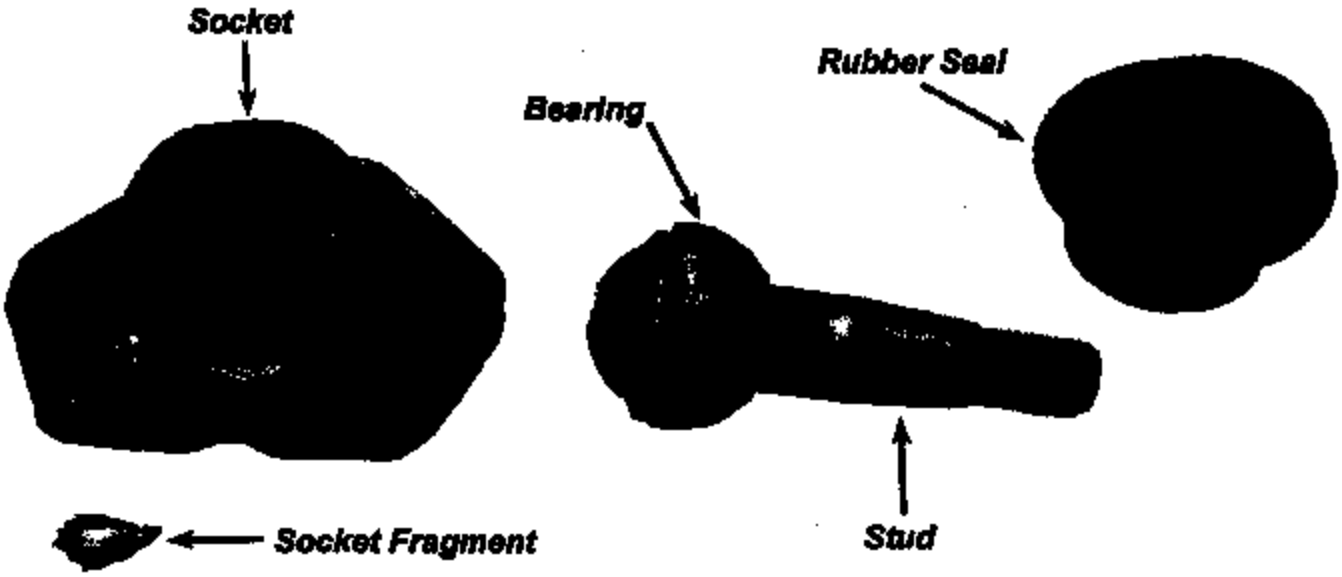


Figure 1: Photograph of the submitted parts as-received. Image #05663A.

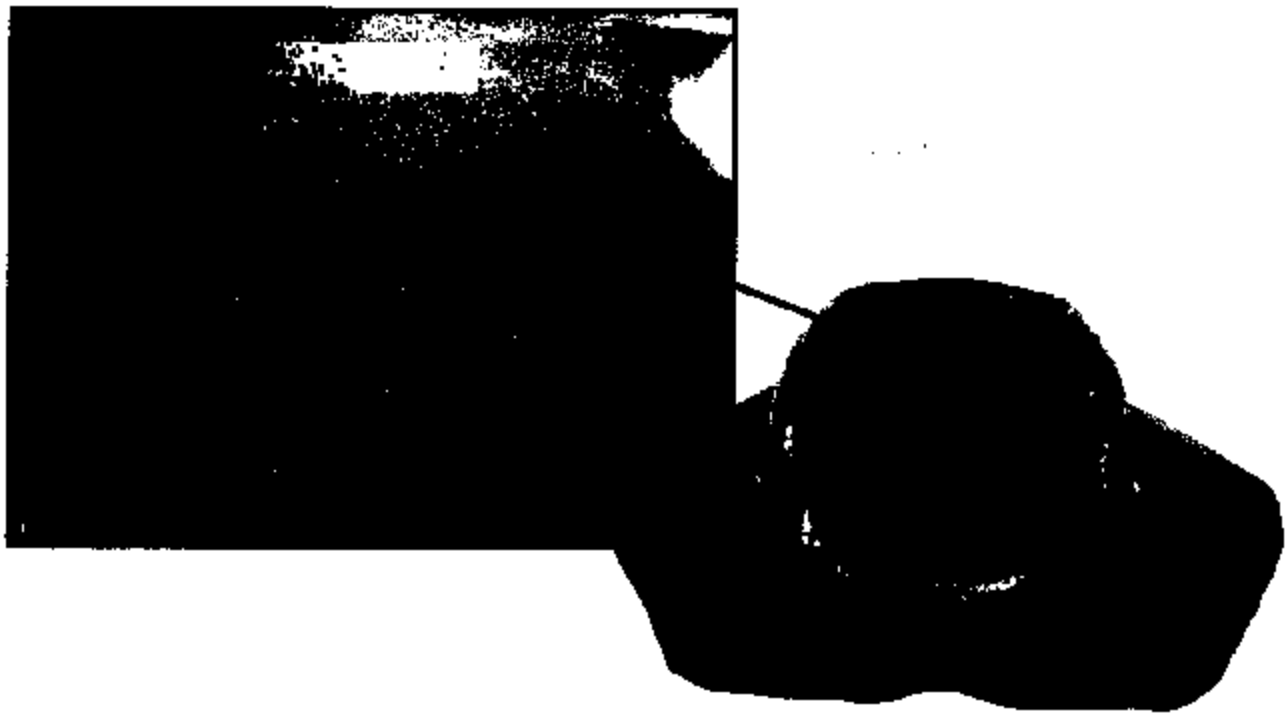


Figure 2: Photograph of the worm socket, with the inset detailing the corrosion observed on the inner wall. Image #05663C,F.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

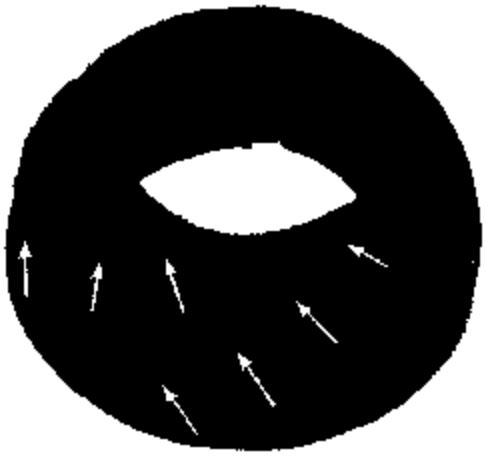


Figure 3: Photograph of the hemispherical bearing, with the arrows indicating the locations of some of the heavily-eroded lubricant grooves. Image #05663D.

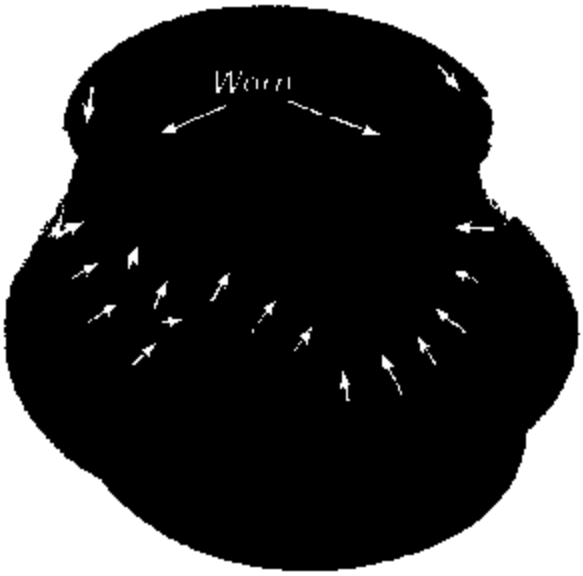


Figure 4: Photograph detailing the boot seal, with the arrows showing the tears observed. Not also the worn rubber material located at the stud end of the seal. Image #05663AD.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Be

Figure 5: Photograph of the stud after removal of the bearing. Note the polished material on the shank below the head of the stud. Image #05663AC.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/WAIPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05863

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

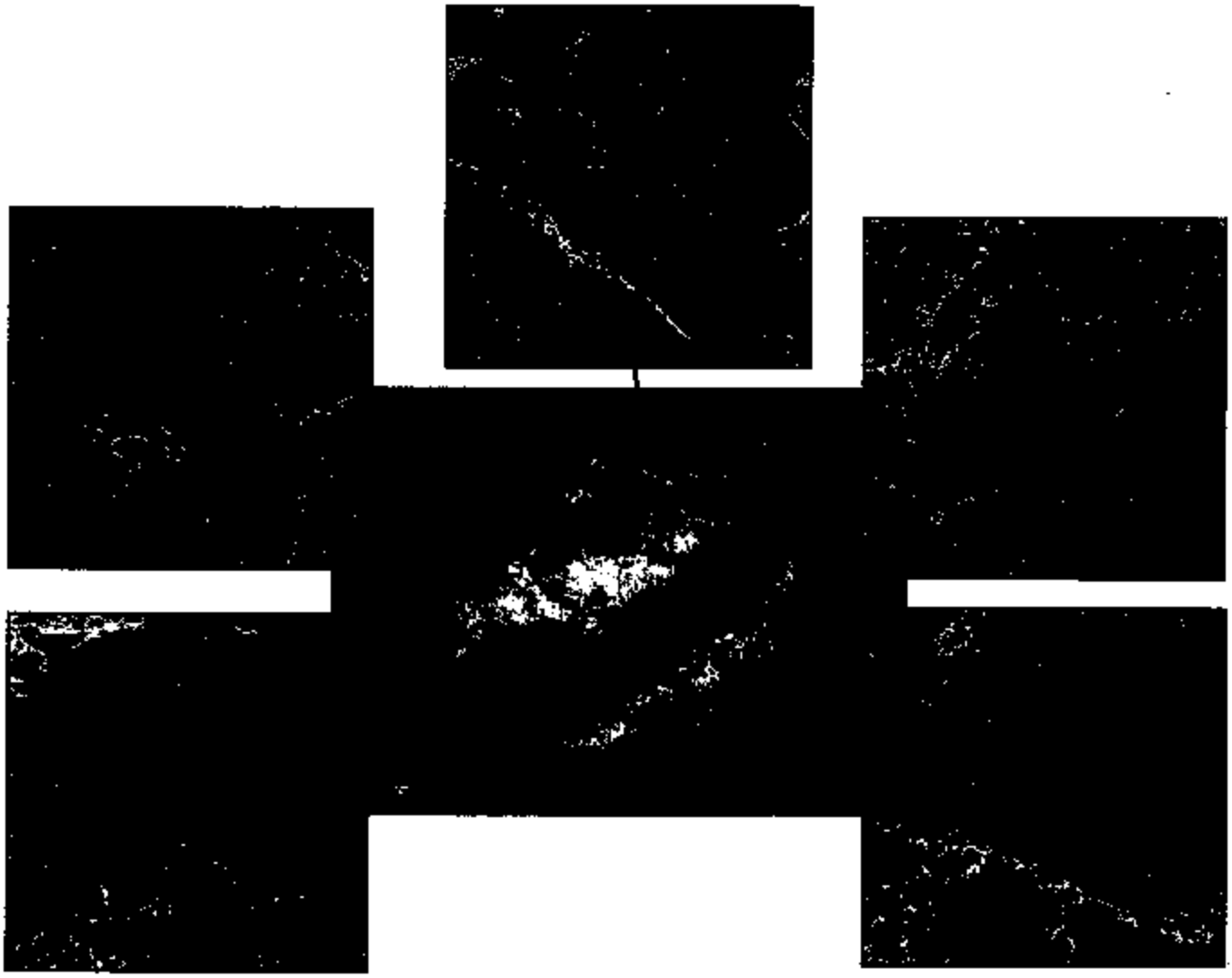


Figure 6: Series of SEM photographs detailing the representative surface features observed. Clockwise from upper left: Polished material; heavily smeared surface material; eroded material; higher magnification view of eroded material; and apparent corrosion products. Image #05863E,H,I,JL,M.

GM Evaluation Report

Platform	Project/BWO No.	Requirement No.	Procedure No.	VPP/MA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05863

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

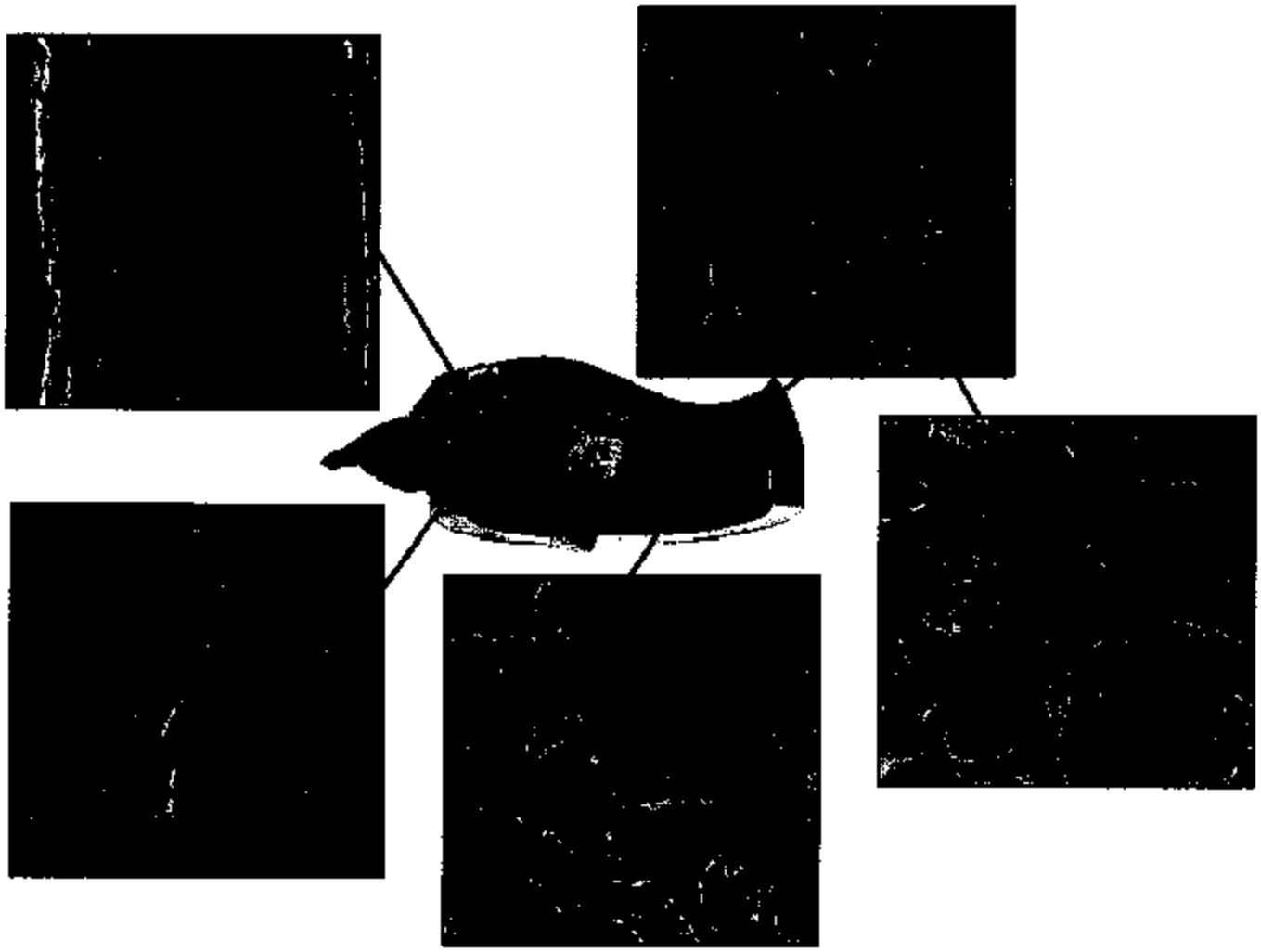


Figure 7: Representative SEM photographs of the ID surface features observed on the socket. Clockwise from lower left: Multi-directional wear marks; debris observed in grooved areas; corrosion; higher magnification view of corrosion; and a coating of some type of apparent dried organic substance. Image #05863N,O,P,Q,R,S.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

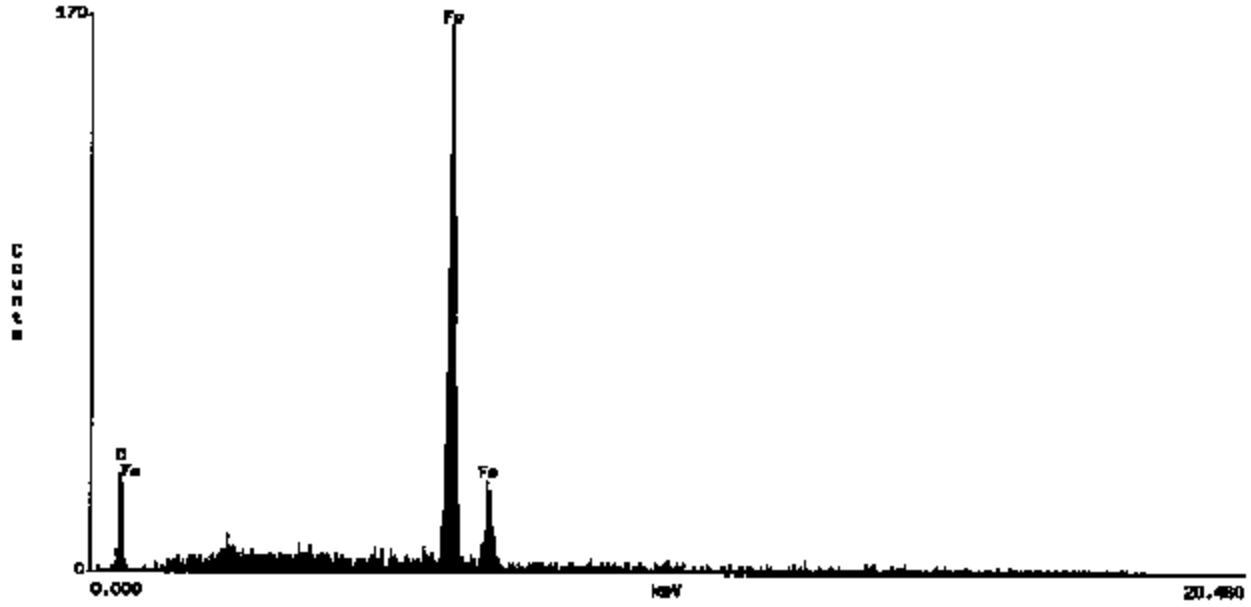


Figure 8: EDS spectrum of the corrosion region observed on the ID wall of the socket.

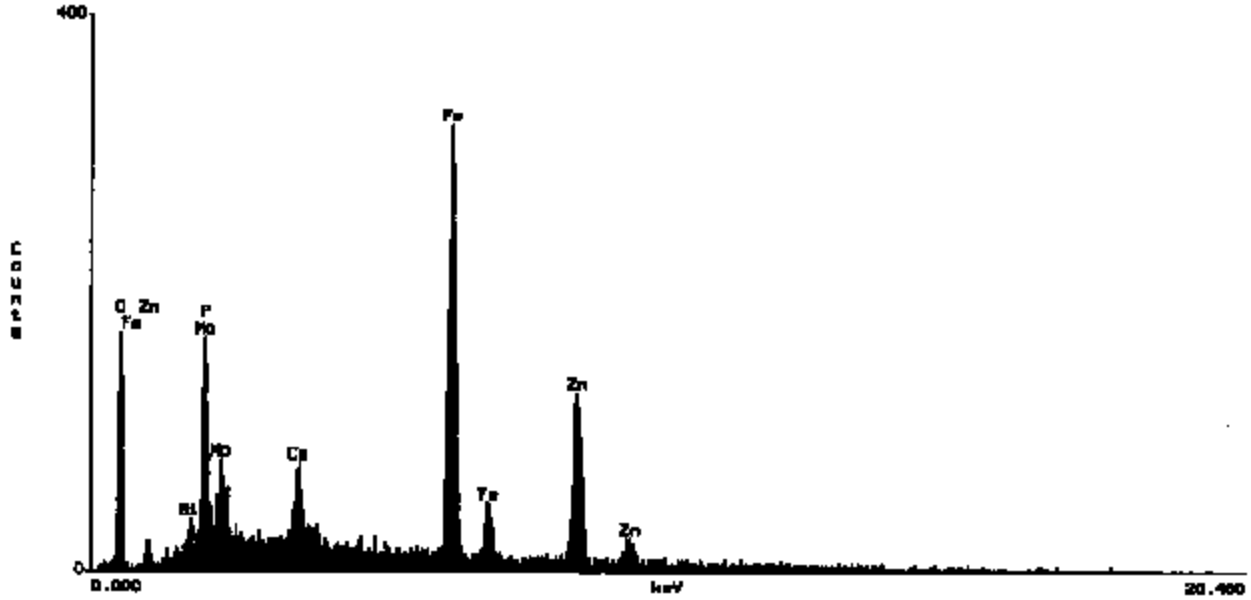


Figure 9: EDS spectrum of the dried coating observed on the ID wall of the socket.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

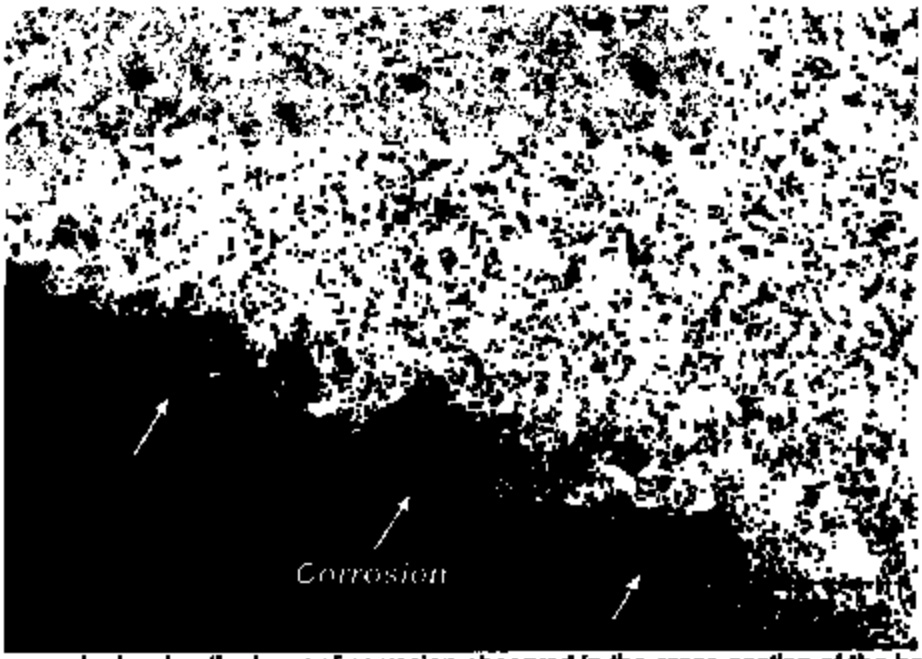


Figure 10: Photomicrograph showing the layer of corrosion observed in the cross-section of the bearing surface. Magnification 38X. Image #05663U.

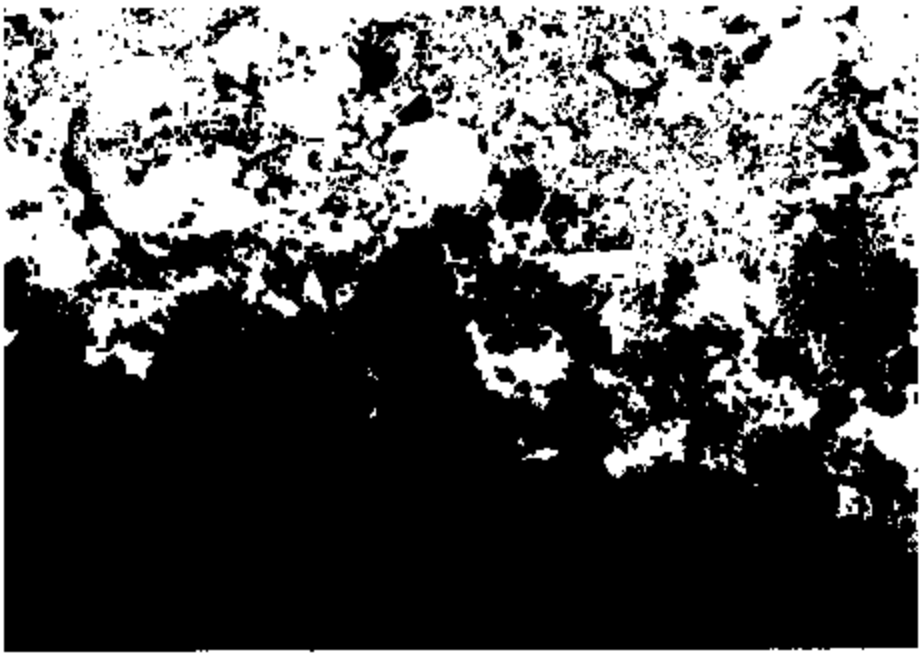


Figure 11: Higher-magnification view of the corrosion observed on the bearing surface. Magnification 150X. Image #05663T.

GM Evaluation Report

Platform	Project/EMO No.	Requirement No.	Procedure No.	VPP/VIA/IPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

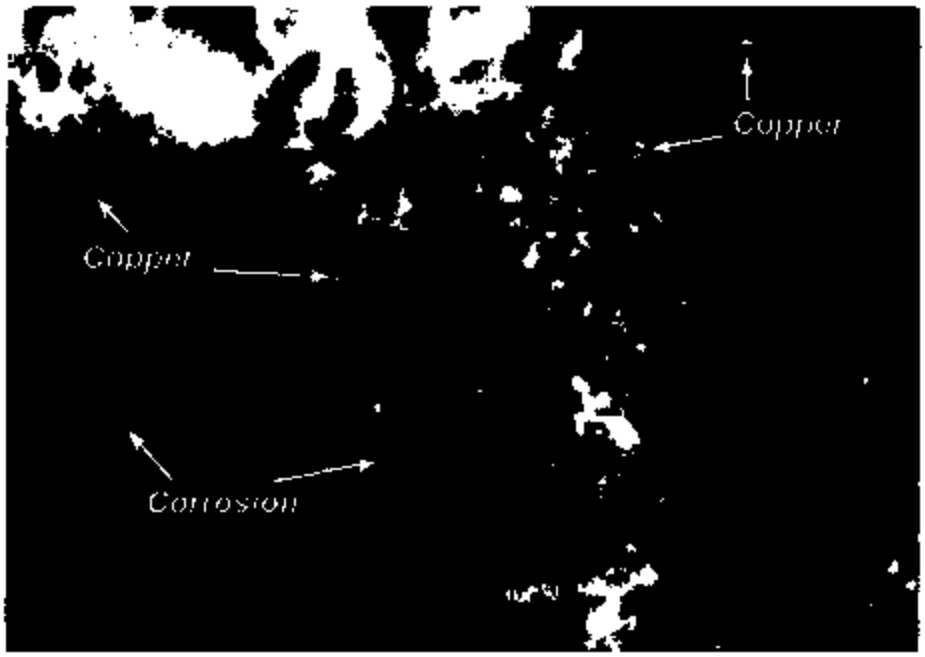


Figure 12: Photomicrograph showing some of the copper-like particles that were observed within the corroded material of the bearing lubricant grooves. Magnification 750X. Image #05663Y.

Figure 13: Photomicrograph of the core structure of the powder metal bearing. Magnification 750X. Image #05663W.

GM Evaluation Report

Platform	Project/EMO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

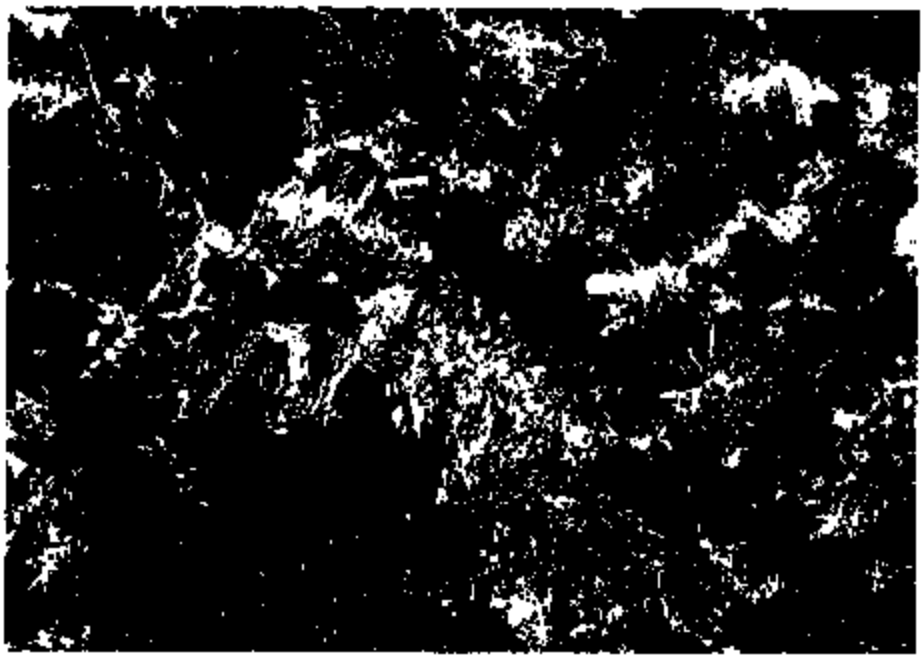


Figure 14: Photomicrograph of the etched core structure observed. Magnification 750X. Image #05663AA.

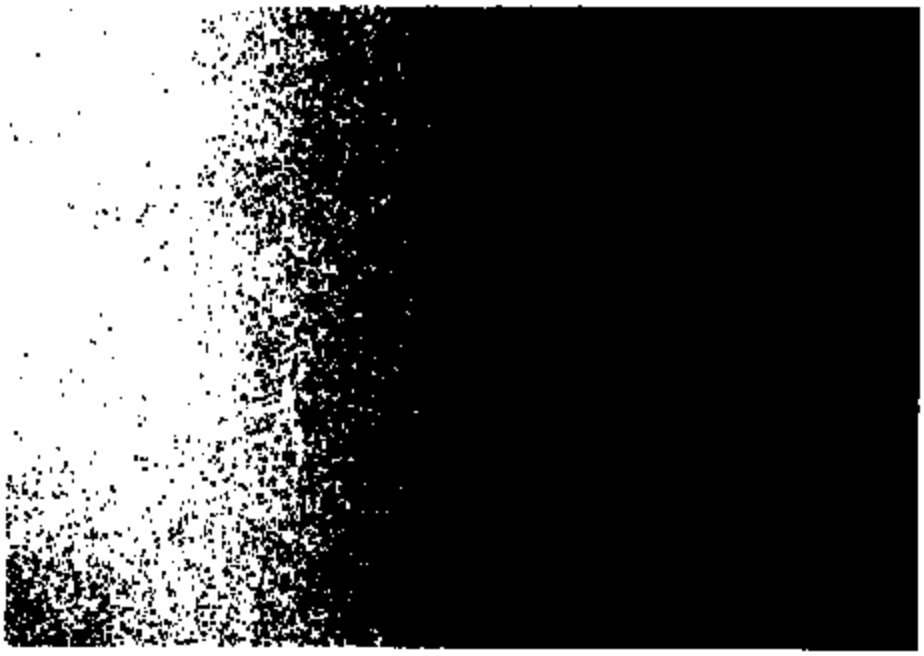


Figure 15: Photomicrograph showing the hardened region of the socket cross-section, which averaged approximately 0.4 mm in depth. Magnification 75X. Image #05663V.

GM Evaluation Report

Platform	Project/EWO No.	Requirement No.	Procedure No.	VPP/VIA/UPC	Model Year	Model No.	PER/Report No.
S/T Current Product Support	n/a	n/a	n/a	n/a	2000	n/a	05663

Reference Issue Report (IR) No. n/a

Category: MAT
Function x Development Validation
Method: Math Based x Hardware Based

Figure 16: Representative photomicrograph of the etched structure observed in the core of the socket material. Magnification 750X. Image #05663Z.

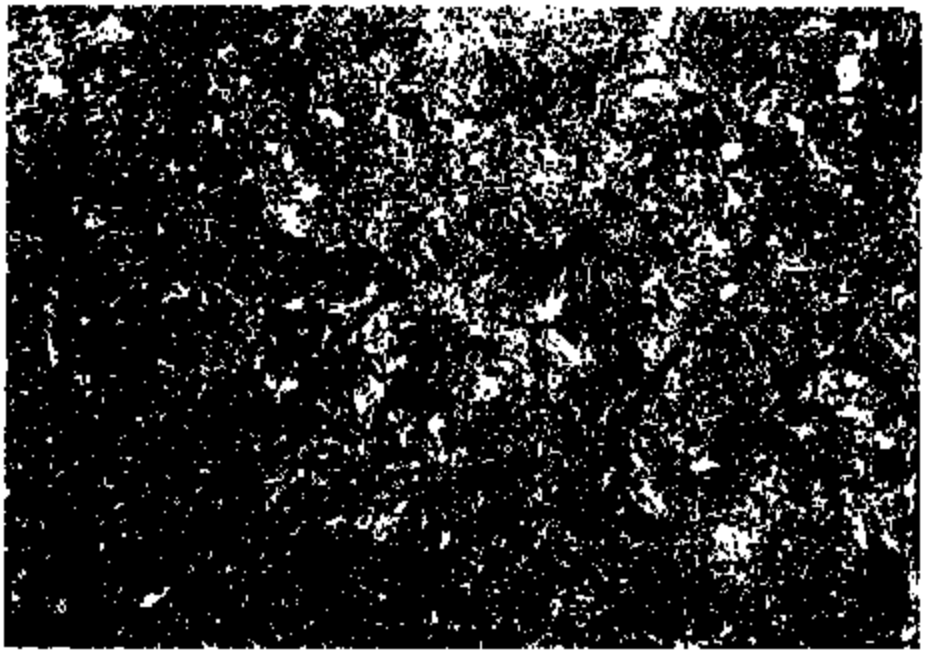


Figure 17: Representative photomicrograph of the etched structure observed in the hardened case of the socket material. Magnification 750X. Image #05663AB.

8/28/01

To: JOHN FILGERMAN (FX) 957-455-3286
CHARLES D. EIFERT -8342

From: DENNIS MOUSER

Hi Guys,

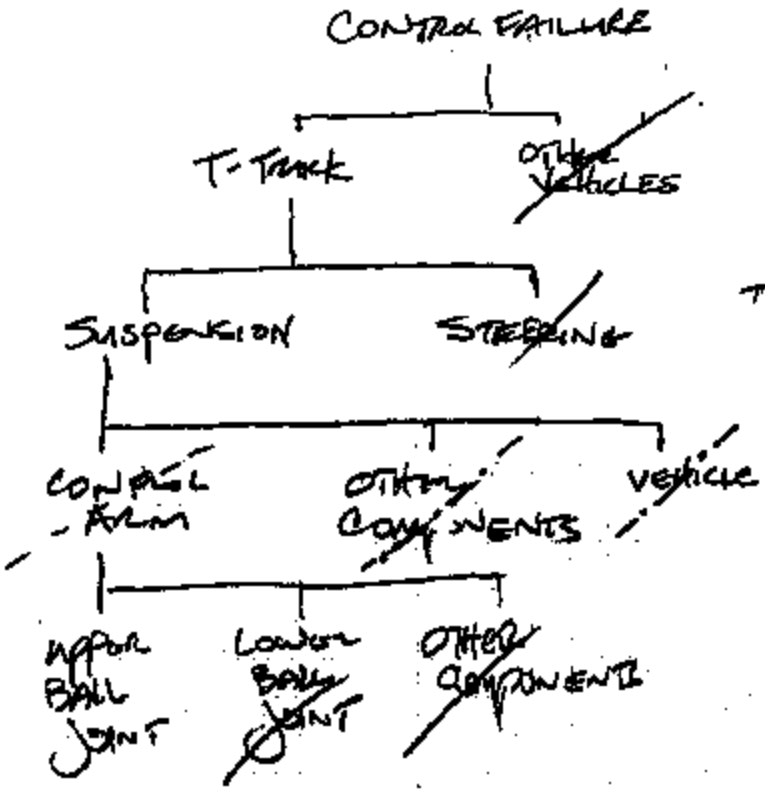
Per my voicemail, attached skeleton concept of project. NOT for publication. How does next week look for reviewing cont, arm ass'y, will we have parts to leverage??

Attached 8 pages including this cover.

8/28/01
DENNIS MOUSER

8-16-01

UNDERSTANDING THE FAILURE MODE
CONTRASTING BOB'S AND WOW'S



WARRANTY SAKE ALARM ON T-TRUCK

THE SUSPENSION SYSTEM FAILS AND NOT THE STEERING SYSTEM

THE EFFECTS OF THE VEHICLE -AND- OTHER COMPONENTS ARE UNKNOWN

FIND THE RED X THAT IS CAUSING THE UPPER BALL JOINT TO FAIL

THE GREEN Y IS BALL JOINT SEPERATION
THE RED X IS NOT LIVING

HERE AND NO WHERE ELSE

BALL JOINT SEPERATES FROM HOUSING

- NON-RANDOM WRT LOCATION
- ~~RANDOM~~

SEPERATES TOWARD THE INSIDE OF THE VEHICLE, THE ARTICULATION OF THE BALL JOINT IN THE SUSPENSION MAKES THE POINT THE WEAKEST. WE WOULD EXPECT THE STUD TO COME OUT OF THE SOCKET HERE.

- 30,000 MI
- ~~3,000~~

SEPERATION OCCURS AFTER BEING IN THE FIELD.

NOTE: THE "BRAELIN" SPILL AT LOW MILEAGE WAS A SEPERATE SPIKE, PRIOR TO THIS ALARM

PARETO ANALYSIS OF RETURNS

- EXCESSIVE WEAR 19%
- CORROSION 26%
- INADEQUATE MAINTENANCE 18%
- LEAK CAP/SOCKET 16%
- CUT SEAL BOTTOM MP 21%
- NTF 19%

ALL FAILURE MODES CAN BE EXPLAINED EXCEPT EXCESSIVE WEAR

CORROSION ACTS AS AN AGGRENATOR OF SUSPECT

THE TECHNOLOGY IS NOT NEW
IF THE PROCESSES ARE CONTROLLED
AND
THE BALL JOINT IS PROPERLY LUBRICATED
THE BALL JOINT CAN EASILY EXCEED 100,000 MILES OF USE
PROVIDED THERE IS NO ABUSE

UNDERSTAND THE FAILURE MODE
CONTRAST BOB'S AND WOW'S

- BALL JOINT SEPARATES FROM HOUSING
- SOCKET HAS EXCESSIVE WEAR FOR THE AMOUNT OF MILEAGE THAT THE VEHICLE HAS SEEN

- WHAT WOULD CAUSE THE SOCKET TO WEAR OUT PREMATURELY AND ALLOW THE STUD TO SEPERATE FROM THE SOCKET?

EXCESSIVE SIDE PLAY | MATING CONTOURS DON'T MATCH | SOFT SOCKET | HARD BEARING | MATING PRESSURE | INSUFFICIENT LUBRICATION | SIDE LOAD

LEVERAGE!!

BALL JOINTS BEFORE EVENT!!

PAIR #624] 18,000 MILES
#625] EXCESSIVE WEAR
LH SIDE HAS WEAR W/NO CORROSION
RH SIDE HAS MORE WEAR W/CORROSION

COMPARE WEAR PATTERNS ON THESE TO RESULTS OF FUTURE TEST/EXPERIMENTS

UNDERSTAND THE FAILURE MODE
CONTRAST BOB'S [illegible] WOW

(4)

PRE-MATURE WEAR

- ASSEMBLY TO CONTROL ARM
  - EFFECTS OF ASSEMBLY
- MATING CONTOUR DON'T MATCH
  - ANY MISMATCH CAUSING MORE CONTACT OR EXCESSIVE "PLAY" SHOULD CAUSE FAILURE ????
- SOFT SOCKET
  - X-SECTIONS OF OPPOSITE SIDE OF FAILED SOCKET DIDN'T SHOW ANYTHING
- HARD BEARING
  - ANALYSIS OF RETURNS SHOW NOTHING
- MATING PRESSURE
  - LIFT LOAD TORQUE
- INSUFFICIENT INITIAL LUBRICATION
  - KNOWN AGGREGATOR
- SIDE LOADS
  - EFFECT OF VEHICLE

CLUE LIST

??

1. DOES ASSEMBLY TO THE CONTROL ARM MATTER - CHECK VARIABLES BEFORE & AFTER
2. DOES LIFT LOAD - SELECT HI, LO LIFT LOADS FROM MULTI-VARI FOR FACTORIAL
3. DOES TORQUE - SAME STRATEGY AS #2
4. DOES RADIAL MOVEMENT -
5. DOES MATING CONTOUR
6. DO WE GET SOFT SOCKETS -
7. DO WE GET HARD BEARINGS -
8. HAVE WE HAD NO GREASE, INITIALLY
9. CAN SIDE LOADS AFFECT PRG. MATURE WEAR

CONDUCT FACTORIAL FROM SELECTIONS

CONDUCT ADDITIONAL MULTI-VARIES AND FACTORIALS AS REQUIRED !!

MULTI-VAR
LIFT LOAD / TORQUE / RADIAL MOVEMENT

3 CONSECUTIVE SETS OF STATIONS - SELECT

AVG HIGH → STATION A
AVG LOW → STATION B
GREATEST RANGE → STATION C

3 CONSECUTIVE STATIONS A, B, C @ TIME 1 THROUGH n, CROSSING SHIFT, DAYS MEASURE LIFT LOAD, TORQUE, RADIAL MOVEMENT

WHERE DOES LARGEST FAMILY OF VARIATION LIVE
AND
CAN WE FIND CONTRASTING LEVERAGE FOR FACTORIAL

FACTORIAL

		B⁻		B⁺	
	C⁻	A⁻ (1)	A⁺ a	A⁻ b	A⁺ ab
D⁻	C⁺	c	ac	bc	abc
D⁺	C⁻	d	ad	bd	abd
	C⁺	cd	acd	bcd	abcd

A - Hi, Lo LIFT LOAD
B - Hi, Lo TORQUE
C - Hi, Lo RADIAL MOVEMENT
D - WITH, WITHOUT GREASE

RUN AT LAB LEVEL AS AN AGGRAVATOR TO SIMULATE FIELD CONDITIONS

UNDERSTANDING THAT THERE IS AN ABSENCE OF CORROSION

!! ** CHECK FOR WEAR EVERY XX CYCLES.

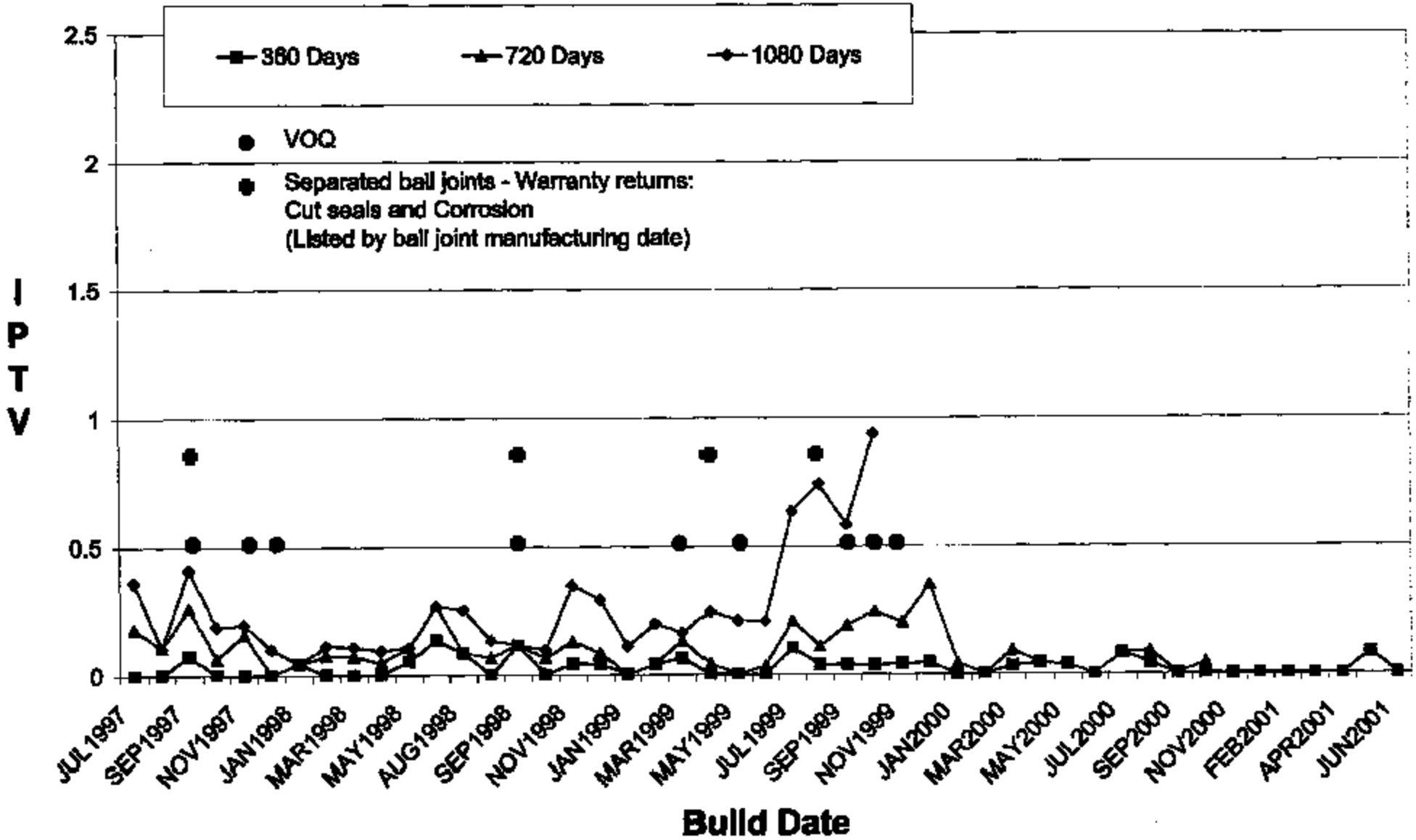
9-14-01 Don had examined bearings from lot 4, both unplated and standard-production-time plated, and showed them both to us in the SEM. We examined the grease grooves on both: (1) P/M pores were quite evident on both, but they appear to be surrounded by only atomized iron, no sponge. We expected to see some of both due to the nominal 50/50 composition of this lot. (2) The Cu plating was evident on one, but different from what VF reported for the same nominal plating time of 0.25 min (regular production). i.e., patchier coverage, more granular/less smooth.. (3) Don reported no difficulty in cleaning via ultrasound + solvent, and little discoloration of the solvent by extracted oil. This made me wonder if the part had been oil-quenched following heat treatment.

TABLE II
SUMMARY OF OBSERVATIONS – High versus low wear samples

SAMPLE	Cu plated ?	WEAR	SURFACE (SEM/EDS)					INTERIORS (metallography; image and chem. analysis)		NOTE
			CORROSION	sponge vs atomized particles	PM pores	Additional features	EDS Average from faces	% pore/area (radial sections)	Mn (%)	
5		Low	No	Not determined	Yes	Higher surf. porosity comp. with 218			0.24	PM pores, only; H-sponge noticed
151		Low	No	Much more sponge	Yes	Open blisters (minor)		6.3	0.35	
218		Low	No	Not determined	Yes	Open blisters (minor)		10.2	0.25	Oily; baked
219		Low	No	No preference	Yes	Deposited flakes (minor)			0.22	PM pores, only; baked
43		High	No	Not determined	Yes	Depressions; higher surf. porosity (worn features)		7.7	0.24	Poor compaction; connected pores in chains
213		High	Yes	Not determined	No	NA			0.21	Gross corrosion
258		High	Yes	NA	Barely visible	NA		19.3	0.20	Gross corrosion
New, unplated		NA	No	More atomized	Yes		2.5- 3.5 % Cu; 2-2.6 O	3.6		PM pores, only. No significant diff. Between faces.
Brazil separation "H"		High	Yes	More sponge	Yes		1.7-2.4%Cu 3.9-6.1 O	9.9		Gross corrosion; Flowery pores; Varies greatly from face to face on itself; oily
57		High	little	More atomized	Yes	NA, pretty flat surface		8.9		57 and 58 look significantly different; oily. 57 is similar to new
58		High	Yes	More sponge	No	Depressions, Leaf-like (Cu)	Cu ident. by EDS	11.6		Deeper depr. were corroded (flowery)

For last 4 samples SEM of metal. sections was combined with SEM of surface to determine ratio of atomized and sponge particles.

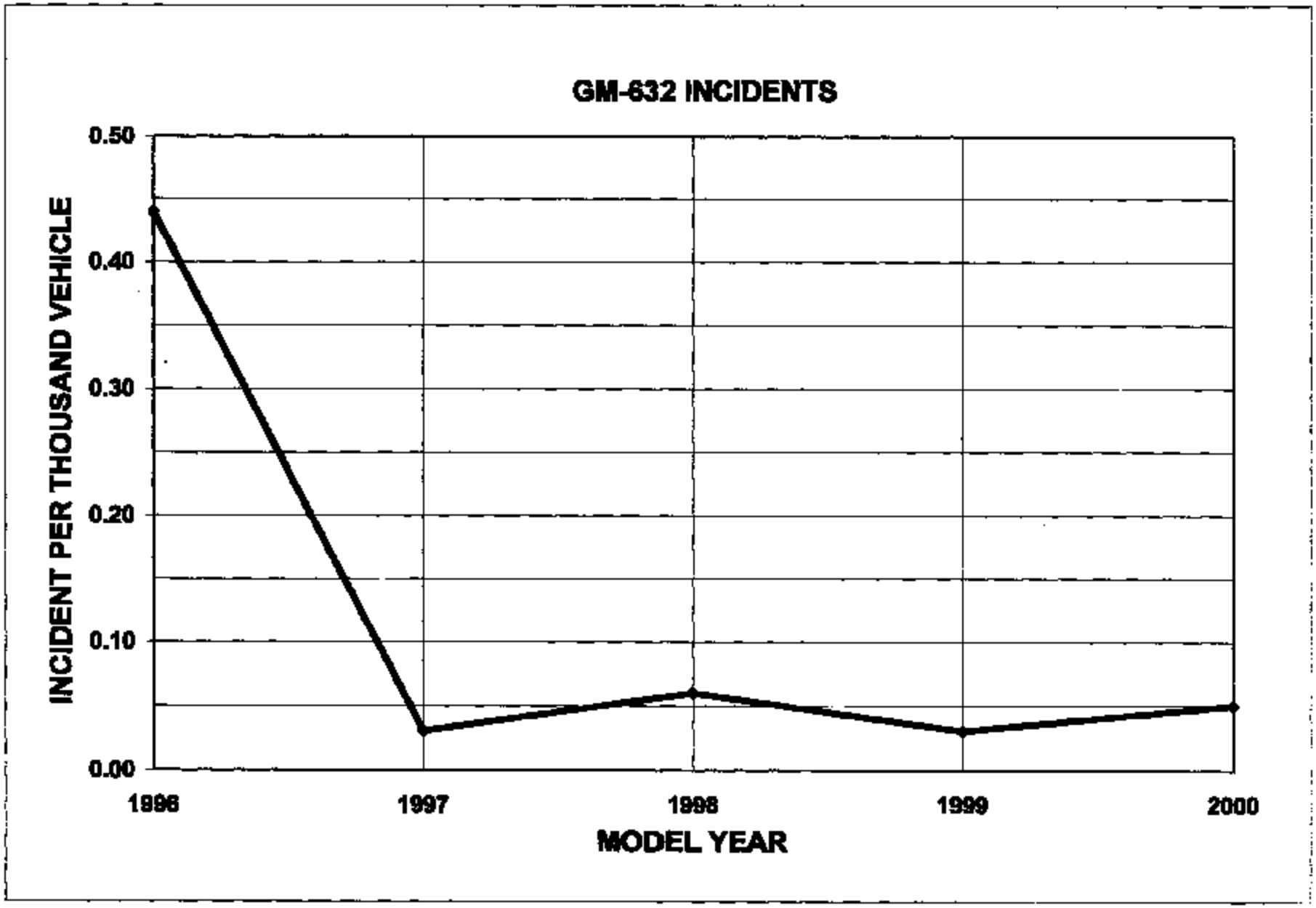
T Utilities Growth Pattern



Labor Codes: E2920, E2921, E2927
Trouble Code: Broken (1D)

GM Confidential

Data as of October 25, 2002
Author Jim Alt


GM-632 INCIDENTS
INCIDENT PER THOUSAND VEHICLE
0.50
0.40
0.30
0.20
0.10
0.00
1996
1997
1998
1999
2000
MODEL YEAR