

INTERNATIONAL TRUCK AND ENGINE CORPORATION

3033 WAYNE TRACE, PO BOX 10068, FORT WAYNE, IN 46833-0068

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TRUCK GROUP

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OFFICE OF
DEFECTS INVESTIGATION

February 24, 2003

Associate Administrator for Enforcement
National Highway Traffic Safety Admin.
400 Seventh Street, S.W.
Washington, D.C. 20590

03V-062 ① of ③

Subject: Vehicle Defect Initial Information Report

Pursuant to Part 573.6, this Vehicle Defect Initial Information Report is submitted by International Truck and Engine Corporation and IC Corporation.

This report relates to the Zero Offset Pin Slide (ZOPS) hydraulic disc brakes manufactured by the Robert Bosch Corporation Automotive Group.

Kelth A. Kondratko
Manager, Product Quality
Bosch Braking Systems Corporation
401 North Bendix Drive
South Bend, Indiana 46628
Phone: 574-237-5778

- (1) INTERNATIONAL RECALL NUMBER ASSIGNED: **03602**.
- (2) VEHICLE MODELS INVOLVED: All bus models which include 3200, 3400, 3600, 3800, CE Bus, FE Bus, and RE Bus.
- (3) MODEL YEARS INVOLVED: 1999 through 2003.
- (4) OTHER IDENTIFICATION NECESSARY TO DESCRIBE VEHICLES:
Bus models built with hydraulic disc brakes.
- (5) VEHICLE MANUFACTURING DATES: The first vehicle built with the ZOPS brakes was 4/1/97 and the last built was 6/3/02.
- (6) VEHICLE POPULATION INVOLVED: Unknown at this time.
- (7) PORTION OF POPULATION ESTIMATED TO CONTAIN DEFECT:
Unknown at this time.

- (8) **DESCRIPTION OF DEFECT:** Bosch Zero Offset Pin Slide (ZOPS) hydraulic disc brakes may experience calipers sticking in the applied position, which can result in excessive or abnormal heat generation at one or more of the brakes.
- (9) **RISK TO MOTOR VEHICLE SAFETY:** In bus applications, the combination of the following factors may collectively result in an unreasonable risk to motor vehicle safety: potential fire at a wheel end, high incident rates of stuck calipers, and evacuation and containment concerns relating to multiple passengers.
- (10) **CHRONOLOGY OF PRINCIPAL EVENTS WHICH LED TO DETERMINATION OF A SAFETY DEFECT:**
- A. 06/02, International was verbally informed by the NHTSA Office of Defects Investigation that NHTSA had opened an investigation into the Bosch ZOPS brakes and were sending questionnaires to Bosch and Monaco Coach Corporation. Although International was working with Bosch to address customer complaints and warranty claims regarding rapid pad wear, stuck calipers, broken or loose pins, and caliper to piston bore binding since 08/00, International had not considered the issue as a potential safety defect as it was believed that the problem was maintenance related and did not cause extended stopping distances.
 - B. 07/02, International received inquiry PE02-046 regarding "alleged overheating of the Bosch ZOPS brakes". International began an internal investigation to determine what models were affected and the extent of the issue.
 - C. 08/02, International responded to PE02-046 stating that although numerous warranty claims and customer complaints were received, the information reviewed did not indicate an unreasonable risk to safety.
 - D. 10/02, International continued to have communications with NHTSA. NHTSA advised of the safety concern surrounding the combination of a potential fire at a wheel end, high incident rates of stuck calipers, and evacuation and containment concerns relating to multiple passengers. International reopened its investigation and began reanalyzing warranty and field service data.
 - E. 12/02, International was informed by ODI that the issue was being raised to an Engineering Analysis status.
 - F. 01/03, International met with Bosch to analyze warranty data and determine significant trends.
 - G. 02/11/03, International met with the NHTSA Office of Defects Investigation to review the extent of the problem and warranty trends found to date.
 - H. 02/18/03, International declared safety recall 03502.

- (11) **PROGRAM TO BE TAKEN TO REMEDY THE DEFECT:** The remedy has yet to be determined. International is working with Bosch to determine an appropriate remedy. An amended report will be submitted at a later date outlining the remedy and the schedule for implementation. Customer reimbursement will be as detailed in our Plan for reimbursement of Pre-notification Remedies, dated February 6, 2003.
- (12) **THE SCHEDULE FOR THIS RECALL IS:**

Notify field service	Unknown
Notify dealers	Unknown
Notify customer	Unknown

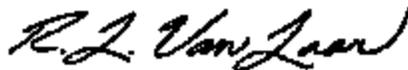
- (13) **PROCEDURE TO INFORM SECRETARY OF FAILURE TO REMEDY WITHOUT CHARGE:** The following sentences will be included in the owner notification letter. If you take your vehicle to your International dealer on a mutually agreed upon service date, and the dealer does not remedy this condition without charge on that date or within five days, you can obtain assistance by following the procedure described in the Owner Assistance Guide section in your Owner's Manual, or by calling toll free 1-800-448-7825. You may also wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, D.C., 20590, or call the Administration's toll-free Auto Safety Hot-Line at 1-888-327-4236 if your International dealer fails to repair or is unable to remedy this condition without charge or within a reasonable time.

- (14) **OWNER LETTER AND TECHNICAL LETTER:** Refer to number (12).

The undersigned should be contacted for any additional information regarding this recall on (260) 461-1890.

Very truly yours,

INTERNATIONAL TRUCK AND ENGINE CORPORATION



R. L. Van Laar
Compliance Manager

Sent Via E-mail
cc: M. D. Roeth



INTERNATIONAL TRUCK AND ENGINE CORPORATION
3033 WAYNE TRACE, P.O. BOX 10088, FORT WAYNE, IN 46850-0088

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TRUCK GROUP

January 29, 2004

Associate Administrator for Enforcement
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Subject: Revision to the Safety Recall 03502 (03V-062) Initial Information Report

Pursuant to Part 573.6, the attached is a revision to the Initial Information Report, submitted on February 24, 2003.

The Report has been completely revised to include International's declaration of Safety Recall 04501, which encompasses any trucks that are involved in this issue. Safety Recall 03502 (03V-062) affected busses only.

The undersigned should be contacted for any additional information regarding this recall at (260) 461-1890.

Very truly yours,

R. L. Van Laar
Compliance Manager
INTERNATIONAL TRUCK AND ENGINE CORPORATION



INTERNATIONAL TRUCK AND ENGINE CORPORATION
3033 WAYNE TRADE, FORT WAYNE, IN 46808-3958

TRUCK GROUP

January 29, 2004

Associate Administrator for Enforcement
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington D.C. 20590

Subject: Revised Vehicle Safety Defect Initial Information Report

Pursuant to Part 573.6 (c) (1), this revised Vehicle Safety Defect Initial Information Report is submitted to the National Highway Traffic Safety Administration by International Truck and Engine Corporation.

(1) IDENTIFICATION OF VEHICLES [Part 573.6 (c)(2)]

- Vehicle Models Involved:
 - All bus and certain medium duty truck models.
- Vehicle Manufacturing Dates:
 - 4/1/1997 thru 6/3/2002
- Other Identification Necessary to Describe Vehicles:
 - All buses with hydraulic disc brakes.
 - Only the following applications, or vocations of medium duty trucks with hydraulic brakes:
 - Fire/Pumper (Emergency)
 - Aerial/Ladder
 - Fuel Oil (Tank)
 - Compressed Gas
 - Ambulance
 - Tank (Emergency)
 - Rescue

(2) COMPONENT MANUFACTURER [Part 573.6 (e)(2)(iv)]

- This report does relate to a component supplied by a manufacturer other than International Truck and Engine Corporation. The Zero Offset Pin Slide (ZOPS) hydraulic disc brakes are manufactured by Robert Bosch Corporation Automotive Group.

- Contact information as follows:

- o Keith Kondratko
 Director, Product Warranty, Chassis Division
 Robert Bosch Corporation Automotive Group
 401 North Bendix Drive
 South Bend, IN 46628
 (574) 237-5778

(3) *VEHICLE POPULATION INVOLVED [Part 573.6 (a)(3)]*

Bus

<i>Model</i>	<i>U.S. Quantity</i>	<i>Canadian Quantity</i>	<i>Mexico Quantity</i>	<i>Export Quantity</i>
3000 FE	0	0	1	0
3000 RE	0	52	0	0
3200	19	3	0	0
3400	2,409	15	0	2
3600	245	2	0	0
3800	22,880	5,651	0	484
CE BUS	5,364	0	0	0
CE CMRCL	28	0	0	0
FE BUS	557	0	0	0
FE CMRCL	5	0	0	0
RE BUS	2,270	0	0	0
RE CMRCL	1	0	0	0
Totals	33,778	5,723	1	486

All of our bus models *EXCEPT* CE CMRCL, FE CMRCL, and RE CMRCL, can be considered school buses.

The following truck population is an estimate, based on our records of the applications defined in paragraph 1:

<i>Model</i>	<i>U.S. Quantity</i>	<i>Canadian Quantity</i>	<i>Mexico Quantity</i>	<i>Export Quantity</i>
1652	83	0	0	0
4200	3	0	0	0
4300	182	4	0	0
4400	28	1	0	0
4700 4X2	544	9	0	1
4700 GLR	2	0	0	0
4700 LP	414	7	0	0
4700 LPX	15	3	0	0
4900 4X2	25	3	0	0
Totals	1,296	27	0	1

- (4) **PERCENTAGE OF VEHICLES ESTIMATED TO CONTAIN DEFECT** [Part 573.6 (c)(4)]
- All will be inspected to determine the appropriate level of remedy.
- (5) **DESCRIPTION OF DEFECT** [Part 573.6 (c)(5)]
- Presence of corrosion in the vicinity of the caliper seal land can contribute to reduced piston mobility which may cause the brake caliper to stick in the applied position.
 - Presence of corrosion in the vicinity of the slide pin bore can contribute to reduced caliper mobility which may also cause the brake caliper to stick in the applied position.
 - In extreme cases, this may lead to overheated brake components. In bus, emergency, and flammable fluid applications, the combination of the following factors may collectively result in an unreasonable risk to motor vehicle safety: potential fire at a wheel end, high incident rates of stuck calipers, vehicle operating environment, and evacuation concerns relating to people transport.
- (6) **CHRONOLOGY OF PRINCIPAL EVENTS WHICH LED TO DETERMINATION OF A SAFETY DEFECT or TEST RESULTS THAT LED TO DETERMINATION OF NONCOMPLIANCE** [Part 573.6 (c)(6)(7)]
- 6/2002 International was verbally informed by the NHTSA Office of Defects Investigation that NHTSA had opened an investigation into the Bosch ZOPS brakes and were sending questionnaires to Bosch and Monaco Coach Corporation. Although International was working with Bosch to address customer complaints and warranty claims regarding rapid pad wear, stuck calipers, broken or loose pins, and caliper to piston bore binding since 8/2000, International had not considered the issue as a potential safety defect as it was believed that the problem was maintenance related and did not cause extended stopping distances.
 - 7/2002 International received inquiry PE02-046 regarding, "alleged overheating of the Bosch ZOPS brakes." International began an internal investigation to determine what models were affected and the extent of the issue.
 - 8/2002 International responded to PE02-046 stating that although numerous warranty claims and customer complaints were received, the information reviewed did not indicate an unreasonable risk to safety.
 - 10/2002 International continued to have communications with NHTSA. NHTSA advised of the safety concern surrounding the combination of a potential fire at a wheel end, high incident rates of stuck calipers, and evacuation and containment concerns relating to multiple passengers. International re-opened its investigation and began re-analyzing warranty and field service data.
 - 12/2002 International was informed by ODI that the issue was being raised to an Engineering Analysis Status (EA02-035).
 - 1/2003 International met with Bosch to analyze warranty data and determine significant trends.
 - 2/2003 International met with the NHTSA Office of Defects Investigation to review the extent of the problem and warranty trends found to date.
 - 2/2003 International declared Safety Recall 03502 for all hydraulic brake bus models. At the time, no remedy had been determined.

- 5/2003 International received a copy of the EA02-035 information request that NHTSA had sent to Bosch.
- 5/2003 International met with Monaco Coach Corporation to exchange information related to Bosch Pin Slide Brakes. It was found that the only common brake system component used in both International and Monaco vehicles was the Bosch brake caliper. Nearly all other components, i.e. ECU, EHCUC, master cylinder, rotors, etc... were unique to each company.
- 8/2003 International met with Bosch to review a Bosch proposed remedy.
- 9/2003 International submitted their review of Bosch's proposed remedy to Bosch for comment.
- 10/2003 International mailed an Interim Notice to all US and Canadian bus owners, in the suspect time frame, informing them their vehicle may be involved in Safety Recall 03502.
- 12/2003 International received a copy of Bosch's Defect Notice, dated 12/16/2003, that outlined their revised proposed remedy.
- 1/2004 International declared Safety Recall 04501 for only certain applications, or vocations, of hydraulic brake medium duty truck models.

(7) PROGRAM TO REMEDY DEFECT [Part 573.6 (a)(8)]

- For vehicles built between 4/1/1997 and 10/31/2001:
 - All calipers will be inspected for evidence of corrosion on the piston seal land area. If corrosion is found, the caliper will be replaced. If no corrosion is present, the pistons will be re-greased, and new seals installed.
 - All slide pins will be inspected for evidence of wear and corrosion. If any wear or corrosion is found, the pins will be replaced. If no corrosion is present, the pins and bores will be cleaned, re-greased, and re-installed.
- For Vehicles built between 10/31/2001 and 6/03/2002:
 - Only the slide pins will be inspected for evidence of wear and corrosion. If any wear or corrosion is found, the pins will be replaced. If no corrosion is present, the pins and bores will be cleaned, re-greased, and re-installed.

(8) PLAN FOR REIMBURSEMENT [Part 573.6 (c)(8)(i)]

- Some of the vehicles in this recall fall outside the warranty period; therefore, our plan for reimbursement of pre-notification remedies, on file and dated 2/6/2003 does apply and instructions will be included in the customer notification.

(9) SCHEDULE FOR RECALL NOTIFICATION [Part 573.6 (c)(8)(ii)]

- US and Canadian owners of suspect International busses were notified of Safety Recall 03502 by an Interim Notice on October 17, 2003. This notification stated a remedy was not available at that time and that when a remedy became available, the owners of affected vehicles would be notified of the actions they should take.
- Part availability for 03502 and 04501 is undetermined as of the date of this report. If parts do not become available within 60 days of the date of this report, dealers and suspect truck owners will receive an Interim Notice (04501) according to the following schedule:

- Notify International Dealers by: March 26, 2004
- Notify International Customers by: March 26, 2004

(10) INTERNATIONAL RECALL NUMBER [Part 573.6 (e)(1)]

- 03502 (NHTSA 03V-062) for Bus Models Only
- 04501 (NHTSA number not assigned yet) for Identified Truck Models Only

The undersigned should be contacted for any additional information regarding this recall on (260) 461-1890.

Very truly yours,



R. L. Van Leer
Compliance Manager
INTERNATIONAL TRUCK AND ENGINE CORPORATION