



GENERAL MOTORS NORTH AMERICA
Structure & Safety Integration

RECEIVED
NVS-215

03V-019 ① or ⑩

January 27, 2003

2003 FEB -4 P 5 36

OFFICE OF
DEFECTS INVESTIGATION

Mr. Kenneth N. Weinstein
Associate Administrator for Safety Assurance
National Highway Traffic Safety Administration
400 Seventh Street, S.W., Room 5321
Washington, D.C. 20590

Dear Mr. Weinstein:

The following information is submitted pursuant to the requirements of 49 CFR 573.5 as it applies to a determination by General Motors of a safety defect involving certain 2003 model year 2500 Series Chevrolet Avalanche and Suburban, and GMC Yukon XL vehicles.

573.5(c)(1): Chevrolet and GMC Divisions of the General Motors Corporation.

573.5(c)(2)(3)(4): This information is shown on the attached sheet.

573.5(c)(5): General Motors has decided that a defect that relates to motor vehicle safety exists in certain 2003 model year 2500 Series Chevrolet Avalanche and Suburban, and GMC Yukon XL vehicles. During a 30 degree left angle frontal impact of sufficient severity, a tear could develop in the mid-frame cross member at its attachment to the left frame rail. If the mid-frame cross member tears during frontal impact and produces a sharp edge, contact of the sharp edge with the fuel tank may result in a puncture of the fuel tank and possible fuel leakage. If a sufficient amount of fuel were to leak out and if an ignition source were present, a vehicle fire could occur.

573.5(c)(6): General Motors conducted a 30-degree left frontal barrier test number C14143 as part of the 2004 fuel system validation activity on October 11, 2002. Technicians observed post test fuel leakage from the test vehicle. Tear down of the test vehicle revealed a mid-frame cross member metal tear with a sharp edge that punctured the fuel tank.

During October and November of 2002 Engineering was engaged in a detailed review of the results of the barrier test (C14143) and an evaluation of the overall vehicle performance. Design differences between 2004 and 2003 MY fuel system content were compared. Additionally, previous frontal barrier tests were researched to understand and verify that the tested vehicle was representative of design intent. Initial finite element analysis was performed in an attempt to understand the stresses acting on the cross member in the area of the tear. Various proposals for potential design solutions were identified in a series of Engineering meetings, as well as methods to evaluate the proposals. Engineering decided to use sled tests as the most controlled and repeatable method of understanding the issue and evaluating the design proposals.

A series of sled tests were conducted at Milford Proving Grounds in order to understand the issue and assess design resolutions. A total of eight tests were performed in December. The removal of a weld on the mid-frame bottom close off plate was determined to offer the most potential to correct the issue. A 30-degree left angle frontal barrier test (C14243) was conducted to evaluate the weld removal on the cross member close-off plate. The removal of the weld was effective in eliminating the metal tearing previously observed. There was no fuel tank damage as a result of the test.

Although this issue has not been demonstrated on a 2003 MY vehicle, the 2004 prototype was built from a 2003 production vehicle. After analysis of the test (C14143), and evaluations of the

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2004 design changes, it was determined that like model 2003 vehicles may perform in a similar manner to the 2004 validation test. Engineering recommended the implementation of a fuel tank shield for 2003 production as an added margin for fuel system performance during frontal barrier tests. Although the fuel tank shield was not required by design for barrier performance on the subject 2003 vehicles, experience with shields in similar applications indicates the shield does provide an added level of crashworthiness protection to the fuel tank.

The permanent production change will incorporate new frames with revised welding on the mid-frame cross member close-off plate. The 2004 barrier test vehicle (C14143) is the one documented report of the condition.

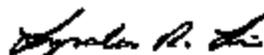
The condition was presented to the FPE Director on January 9, 2003. The GMNA Senior Management Committee reviewed the issue on January 17. The decision to conduct a safety recall was made on January 21, 2003.

573.6(c)(8): This information is included in the service procedure of the attached draft dealer bulletin.

Pursuant to 577.11(e), GM does not believe notification about reimbursement is required for this recall. GM is not aware of any occurrences of this condition in the affected vehicles. Because the condition can only occur in a severe crash of a particular type and because these are current model year vehicles it is highly unlikely that there will be a reimbursable claim.

573.6(c)(9): Draft copies of the dealer bulletin and the owner notification are attached. General Motors plans to begin this safety recall in February 2003. Final copies of the dealer bulletin and owner notification will be forwarded when available.

Sincerely,



Lyndon R. Lie
Director
Product Investigations

573.5(c)(2),(3),(4)

VEHICLES POTENTIALLY AFFECTED BY MAKE, MODEL, AND MODEL YEAR
PLUS INCLUSIVE DATES OF MANUFACTURE

<u>MAKE</u>	<u>MODEL SERIES</u>	<u>MODEL YEAR</u>	<u>NUMBER INVOLVED</u>	<u>INCLUSIVE MANUFACTURING DATES (FROM) (TO)</u>		<u>DESCRIPTIVE INFO. TO PROPERLY IDENT. VEH.</u>	<u>EST. NO. W/CONDITION</u>
Chevrolet	C/K	2003	3,193	4/02	1/03	Suburban	100%
Chevrolet	C/K	2003	1,283	4/02	1/03	Avalanche	"
GMC	C/K	2003	<u>1,258</u>	4/02	1/03	Yukon XL	"
Grand Total:			5,734				

2085 / 03002

03V-019 ③ of ⑩



Recall Bulletin

File In Section: Product Recalls
Bulletin No.: 03002
Date: February, 2003



03V-019 ④ of ⑩

PRODUCT SAFETY RECALL

SUBJECT: 03002 – MID-FRAME CROSS MEMBER TEAR

MODELS: 2003 CHEVROLET 2500 SERIES AVALANCHE, SUBURBAN
2003 GMC 2500 SERIES YUKON XL

CONDITION

General Motors has decided that a defect that relates to motor vehicle safety exists in certain 2003 model year 2500 Series Chevrolet Avalanche and Suburban, and GMC Yukon XL vehicles. During a 30 degree left angle frontal impact of sufficient severity, a tear could develop in the mid-frame cross member at its attachment to the left frame rail. If the mid-frame cross member tears during frontal impact and produces a sharp edge, contact of the sharp edge with the fuel tank may result in a puncture of the fuel tank and possible fuel leakage. If a sufficient amount of fuel were to leak out and if an ignition source were present, a vehicle fire could occur.

CORRECTION

Dealers are to install a fuel tank shield.

VEHICLES INVOLVED

Involved are certain 2003 model year 2500 Series Chevrolet Avalanche and Suburban, and GMC Yukon XL vehicles built within these VIN breakpoints:

YEAR	DIVISION	MODEL	PLANT	FROM	THROUGH
2003	Chevrolet	Avalanche	Silao	3G100016	3G204063
2003	Chevrolet	Suburban	Arlington	3R100009	3R201224
2003	Chevrolet	Suburban	Silao	3G100136	3G198682
2003	GMC	Yukon XL	Arlington	3R100002	3R198503
2003	GMC	Yukon XL	Silao	3G100020	3G203030

IMPORTANT: Dealers should confirm vehicle eligibility through **GMVIS** (GM Vehicle Inquiry System) or **GM Access Screen** (Canada only) or **DCS Screen 445** (IPC only) before beginning recall repairs. [Not all vehicles within the above breakpoints may be involved.]

Involved vehicles have been identified by Vehicle Identification Number. Computer listings containing the complete Vehicle Identification Number, customer name and address data have been prepared, and are being furnished to involved dealers with the recall bulletin. The Copyright 2003 General Motors Corporation. All Rights Reserved.

customer name and address data will enable dealers to follow up with customers involved in this recall. Any dealer not receiving a computer listing with the recall bulletin has no involved vehicles currently assigned.

These dealer listings may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any other purpose is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this listing to the follow-up necessary to complete this recall.

PARTS INFORMATION

Parts required to complete this recall are to be obtained from General Motors Service Parts Operations (GMSPO). Please refer to your "Involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Part Number	Description	Quantity/Vehicle
15752029	Shield, F/Tnk Lwr (RR)	1
11517560	Screw Assembly	4

SERVICE PROCEDURE

The following procedure is for installing a fuel tank shield on involved vehicles. Installation of the shield does NOT require draining or removal of the fuel tank or disconnecting of any fuel lines.

Important

The vehicle must be raised on a hoist that will allow unobstructed access to the bottom of the left frame rail along the entire length of the fuel tank.

1. Raise the vehicle on a suitable hoist and support as necessary.

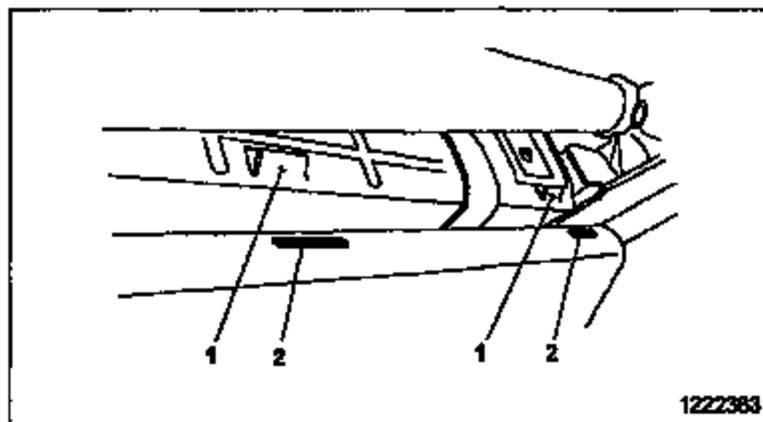
Important

Read steps 2, 3, and 4 before attempting to install the shield.

2. Position the fuel tank shield under the fuel tank and route the left rear corner of the shield up between the cables and the outboard side of the frame rail.

Important

The illustration below shows the shield being positioned under the fuel tank prior to attachment. Only two of the three slots (2) and tabs (1) are shown. The third slot and tab are located further to the rear of the shield.



3. Raise or lower the shield as necessary to hook the slots (2) located along the inboard edge of the shield onto the three metal tabs (1) located on the inboard side of the fuel tank.
4. Raise the outboard side of the shield up to the bottom of the left frame rail and support in place.
5. To attach the shield, install the three bolts through the holes in the shield and into the EXISTING holes in the BOTTOM of the frame rail. Tighten to 12 Nm (106 lb in).
6. Lower the vehicle as necessary to install the fourth bolt through the rear hole in the shield and into the existing hole in the outboard side of the frame rail behind the left rear tire. Tighten to 12 Nm (106 lb in).
7. Lower the vehicle.
8. Install the GM Recall Identification Label.

RECALL IDENTIFICATION LABEL – For US and IPC

Place a Recall Identification Label on each vehicle corrected in accordance with the instructions outlined in this Product Recall Bulletin. Each label provides a space to include the recall number and the five (5) digit dealer code of the dealer performing the recall service. This information may be inserted with a typewriter or a ball point pen.

Put the Recall Identification Label on a clean and dry surface of the radiator core support in an area that will be visible to people servicing the vehicle. When installing the Recall Identification Label, be sure to pull the tab to allow adhesion of the clear protective covering. Additional Recall Identification Labels for US dealers can be obtained from Dealer Support Materials by either ordering on the web from DWD Store, gm-dealerworld.com, or calling 1-866-700-0001 (Monday-Friday, 8:00 a.m. to 5:00 p.m. EST). Request Item Number 8-1015 when ordering.

Additional Recall Identification Labels for IPC dealers can be obtained from your Regional Marketing Office.



RECALL IDENTIFICATION LABEL – For CANADA

Place a Recall Identification Label on each vehicle corrected in accordance with the instructions outlined in this Product Recall Bulletin. Each label provides a space to include the recall number and the five (5) digit dealer code of the dealer performing the recall service. This information may be inserted with a typewriter or a ball point pen.

Put the Recall Identification Label on a clean and dry surface of the radiator core support in an area that will be visible to people servicing the vehicle. **Additional Recall Identification Labels for Canadian dealers can be obtained from DGN by calling 1-800-868-5539 (Monday-Friday, 8:00 a.m. to 5:00 p.m. EST). Ask for Item Number GMP 91 when ordering.**

**COURTESY TRANSPORTATION**

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranty. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product recall is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

CLAIM INFORMATION

Submit a Product Recall Claim with the information indicated below:

REPAIR PERFORMED	PART COUNT	PART NO.	PARTS ALLOW	CC-FC	LABOR OP	* LABOR HOURS
Install Fuel Tank Shield	5	---	**	MA-96	V0967	0.3
Courtesy Transportation	N/A	N/A	N/A	MA-96	***	N/A

- * For Program Administrative Allowance, add 0.1 hours to the "Labor Hours".
- ** The "Parts Allowance" should be the sum total of the current GMSPD Dealer net price plus applicable Mark-Up or Landed Cost Mark-Up (for IPC) for the fuel tank shield and screw assemblies needed to complete the repair.
- *** Submit courtesy transportation using normal labor operations for courtesy transportation as indicated in the GM Service Policies and Procedures Manual.

Refer to the General Motors WINS Claims Processing Manual for details on Product Recall Claim Submission.

CUSTOMER NOTIFICATION – For US and CANADA

03V-019 ⑧ of ⑩

Customers will be notified of this recall on their vehicles by General Motors (see copy of customer letter included with this bulletin).

CUSTOMER NOTIFICATION – For IPC

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act. For owners outside these areas, dealers should notify customers using the attached sample letter.

DEALER RECALL RESPONSIBILITY – For US and IPC (US States, Territories, and Possessions)

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

DEALER RECALL RESPONSIBILITY - ALL

All unsold new vehicles in dealers' possession and subject to this recall must be held and inspected/repaired per the service procedure of this recall bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. This could be done by mailing to such customers, a copy of the customer letter accompanying this bulletin. Recall follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the tools, equipment, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your dealer/retailer for information on whether your vehicle may benefit from the information.



We Support
Voluntary Technician
Certification

February, 2003 03V-019 ⑨ or ⑩

Dear General Motors Customer:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Reason For This Recall: General Motors has decided that a defect that relates to motor vehicle safety exists in certain 2003 model year 2500 Series Chevrolet Avalanche and Suburban, and GMC Yukon XL vehicles. During a 30 degree left angle frontal impact of sufficient severity, a tear could develop in the mid-frame cross member at its attachment to the left frame rail. If the mid-frame cross member tears during frontal impact and produces a sharp edge, contact of the sharp edge with the fuel tank may result in a puncture of the fuel tank and possible fuel leakage. If a sufficient amount of fuel were to leak out and if an ignition source were present, a vehicle fire could occur.

What Will Be Done: Dealers are to install a fuel tank shield. This service will be performed for you at no charge.

How Long Will The Repair Take? The length of time required to perform this service correction is approximately 20 minutes. Additional time may be required to schedule and process your vehicle. If your dealer has a large number of vehicles awaiting service, this additional time may be significant. Please ask your dealer if you wish to know how much additional time will be needed to schedule, process and repair your vehicle.

Contacting Your Dealer: Please contact your GM dealer as soon as possible to arrange a service date. Parts are available and instructions for making this correction have been sent to your dealer. Your GM dealer is best equipped to obtain parts and provide services to correct your vehicle as promptly as possible. Should your dealer be unable to schedule a service date within a reasonable time, you should contact the appropriate Customer Assistance Center at the listed number below:

Division	Number	Deaf, Hearing Impaired or Speech Impaired *
Chevrolet	1-800-222-1020	1-800-833-2438
GMC	1-800-462-8782	1-800-462-8583
GMODC	(905) 644-4112	
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	

* Utilizes Telecommunication Devices for the Deaf/Text Telephones (TDD/TTY)

If, after contacting the appropriate Customer Assistance Center, you are still not satisfied that we have done our best to remedy this condition without charge

and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590 or call 1-888-327-4236.

Customer Reply Card: The attached customer reply card identifies your vehicle. Presentation of this card to your dealer will assist in making the necessary correction in the shortest possible time. If you no longer own this vehicle, please let us know by completing the attached and mailing it in the postage paid envelope.

Courtesy Transportation: If your vehicle is within the New Vehicle Limited Warranty your dealer may provide you with shuttle service or some other form of courtesy transportation while your vehicle is at the dealership for this repair. Please refer to your Owner's Manual and your dealer for details on Courtesy Transportation.

We are sorry to cause you this inconvenience; however, we have taken this action in the interest of your safety and continued satisfaction with our products.

General Motors Corporation

Enclosure