

THE DEFECT/NONCOMPLIANCE REPORT (PART 573) WAS SUBMITTED BY  
GENERAL MOTORS CORPORATION FOR ISUZU.



February 2, 2004

04V-061 ① of ③

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

RECEIVED  
NHTSA FEB - 4 10 11 02  
OFFICE OF  
SAFETY INVESTIGATIONS

Dear Mr. Weinstein:

The following information is submitted pursuant to the requirements of 49 CFR 573.6 as it applies to a determination by General Motors of a safety defect involving certain 2002-03 model year Chevrolet Trailblazer, GMC Envoy, Oldsmobile Bravada, and 2003 Isuzu Ascender model vehicles.

573.6(c)(1): Chevrolet, GMC, and Oldsmobile Divisions of General Motors Corporation and Isuzu Motors America, Inc.

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

573.6(c)(5): General Motors has decided to recall certain 2002 and 2003 model year Chevrolet Trailblazer, GMC Envoy, Oldsmobile Bravada, and 2003 Isuzu Ascender model vehicles. Some of these vehicles have windshield wiper systems that will not turn on, cease operation while in use, fail to turn off/on by themselves (moisture sensitive wiper system), or have continuous windshield washer pump operation because the presence of water within the wiper module can either cause a short circuit or can lead to the corrosion of components within the module. Depending on the occurrence and weather situation, driver visibility could be reduced.

573.6(c)(6): In September of 2003 a Product Investigations Investigator was assigned to track alleged windshield wiper failures in 2002 and 2003 TrailBlazer, Envoy and Bravada vehicles after ODI resume PE03-042 was received from NHTSA.

The investigation revealed that during the early GMT 360 builds prior to the start of saleable vehicles at Moraine assembly, the plant identified water ingestion in the windshield wiper module. GM Engineering determined the windshield wiper module cover was not sealing properly to the module housing due to voids in the butyl seal and cracks in the housing. There were also leaks in the connector due to a radius error. The windshield wiper module cover was retooled to fix the radius of the connector. The original mating electrical connector was redesigned from a single-lip to a triple-lip seal. The cracked covers were caused by an interference with the circuit board terminals that were 1 mm too long. In addition, to avoid water being pulled into the module due to a negative pressure in the module, the windshield wiper module vent hole was added.

Engineering's test simulations showed that GM's required 100% online one-minute water test and the random eight minute off-line audit water test done at the Moraine assembly plant exceeded the plenum's capability to divert water away from the wiper covered circuit board. After the noted changes were made, water test failures at the plant were eliminated.

In February 2002 the Moraine assembly plant observed a high number of windshield wiper motors being replaced. The wiper modules were inspected during the 100% warranty parts return process and evaluated by GM and the supplier (Valeo) to determine the root cause for this issue. By the end of February 2002, GM Engineering began a Red X study conducted to reduce warranty expense for front windshield wiper motors on the subject vehicles.

**Product Investigations**

Mail Code: 480-106-304 • 30500 Mound Road • Warren, MI 48090-9056  
Phone: (588) 966-8029 • Fax: (588) 947-2318  
2128-04005.073.doc



In November 2002 a new designed wiper module went into production for the GMT 380 Program that was initially pursued as a cost reduction project. In light of the Red X study findings, the new module was found to include a design feature that would also be directionally correct at reducing the potential for water intrusion.

On November 12, 2003 GM submitted a response to information request PE03-042 that was received by GM on September 29, 2003. In the response, GM indicated that the issue was still under investigation, and GM did not believe that the issue posed an unreasonable risk to motor vehicle safety because there were only two reported minor crashes and no injuries. On January 7, 2004 the NHTSA advised GM that PE03-042 would be upgraded to an EA.

On January 15, 2004 Product Investigations presented the issue to the FPE Director. The FPE Director reviewed the issue with the GMNA Senior Management Committee. GM continues to believe that there is no unreasonable risk to safety indicated with respect to this vehicle population. However, to acknowledge NHTSA's concern that windshield wipers are a safety system and to avoid prolonged confrontation over the issue, thereby promoting resolution of NHTSA's open investigation, on January 25, 2004 GM decided to mail owner letters containing statements required by 49 C.F.R. Part 577. The repairs will be made at no charge to the customer.

573.8(c)(8): This information will be included in the service procedure of the draft dealer bulletin.

Pursuant to 577.11(e), GM does not believe notification about reimbursement is required for this recall. Involved vehicles are covered by the new vehicle warranty.

573.6(c)(8): Draft and final copies of the dealer bulletin and owner notification will be forwarded when available. General Motors plans to begin this safety recall in the third quarter of 2004.

Sincerely,



Gay P. Kent  
Director  
Product Investigations

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

| MAKE       | MODEL SERIES | MODEL YEAR | NUMBER INVOLVED | INCLUSIVE MANUFACTURING DATES |       | DESCRIPTIVE INFO. TO PROPERLY IDENT. VEH. | EST. NO. IN CONDITION |
|------------|--------------|------------|-----------------|-------------------------------|-------|---|-----------------------|
|            |              |            |                 | (FROM)                        | (TO)  |   |                       |
| Chevrolet  | S/T          | 2002       | 277,126         | 10/00                         | 8/02  | TrailBlazer, TrailBlazer EXT              | *                     |
|            | S/T          | 2003       | 101,368         | 4/02                          | 11/02 | TrailBlazer, TrailBlazer EXT              | *                     |
| GMC        | S/T          | 2002       | 121,513         | 10/00                         | 8/02  | Envoy, Envoy XL                           | *                     |
|            | S/T          | 2003       | 48,403          | 4/02                          | 11/02 | Envoy, Envoy XL                           | *                     |
| Oldsmobile | S/T          | 2002       | 28,709          | 10/00                         | 8/02  | Bravada                                   | *                     |
|            | S/T          | 2003       | 3,788           | 4/02                          | 11/02 | Bravada                                   | *                     |
| Isuzu      | S/T          | 2003       | 492             | 4/02                          | 11/02 | Ascender                                  | *                     |
|            | Grand Total: |            |                 | 531,344                       |       |   |                       |

\* All involved vehicles will be corrected.