General Motors Overseas Distribution Corporation (Singapore)

Mr. Daniel C. Smith
Associate Administrator for Enforcement
National Highway Traffic Safety Administration
Recall Management Division (NVS-215)
1200 New Jersey Avenue, SE – Room W45-306
Washington, D.C. 20590

07V-328
4 pages)

19 July 2007

Dear Mr. Smith:

Submission of Report 573

The following information is submitted pursuant to the requirements of 49 CFR 573.6 as it applies to a determination by GM Daewoo Auto & Technology Company of a safety defect involving certain 2006 and 2007 Chevrolet Optra model vehicles.

1. **Name of Manufacturer and Import**

   Manufacturer: **GM Daewoo Auto & Technology Company**

   Importer : **General Motors Overseas Distribution Corporation**

2. **Identification of Vehicles Potentially Involved**

   Affected vehicles are some 2006/2007 model year Chevrolet Optra passenger vehicle which is manufactured from May 6, 2005 to Dec.20, 2006

3. **Total Number of Vehicles Potentially Containing the Defect**

   Chevrolet Optra: 78 vehicles

   (Guam: 75 veh., Saipan 3 veh.)

4. **Percentage of Motor Vehicles Estimated to Contain the Defect in Guam/Saipan**

   100%

RECEIVED
2007 JULY -20 P 2:30
DEFECTS INVESTIGATION
RECALL MGMT DIV.

5. Description of Defect

The subject vehicles were produced with a seatbelt buckle with an improper ultrasonic weld of the spring rib and fixation rib of buckle undercover, in both frontal seatbelts. With this condition, a spring rib or fixation rib could break and remain inside buckle, and the seat belt tongue may not be inserted into buckle, or the push button may become stuck, resulting in an occupant not being able to unlatch the buckle. These buckle malfunctions could prevent a person from using the seat belt system, and risk of injury to an unbelted person in a crash would be increased.

6. Chronology of Principal Events

August 2006 - GMDAT began an investigation after receiving a field report from American Suzuki Motor Corporation.

December 2006 - The investigation resulted in a production change with the ultra sonic weld method used in producing the seat belt buckles.

January – June 2007- GMDAT, Suzuki, and TRW continued to monitor field claim part analysis from vehicles produced prior to the December production change.

June 2007- In June 2007 the field incident rate had reached a 7.2 IPTV and was projected to reach 46 IPTV at the end of 15 years. The GMDAT –FPERC recommended a Safety Recall.

July 13, 2007 - GMDAT EFADC decided a Product Safety Recall

7. Description of Corrective Action

GMDAT will conduct a product safety recall campaign to replace the front seat belt buckle. GMDAT plans to begin this safety recall in November 2007.

8. **Copy of Notices**

9. **GM Campaign Number**

Sincerely

Jimmy Ng
Aftersales Manager
GMODC Singapore

Copy :

Mr. J.S. Kim : GMDAT

PROBLEM ANALYSIS AND CORRECTION DOCUMENT

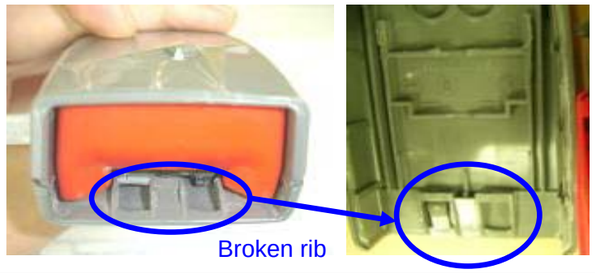
No.

Issuing date : Aug.29,2006	Designated date of submission	Date of report Jul.04, 2007	Section Responsible Supplier Quality Assurance Team

Model Name Forenza	Subject Forenza seat belt buckle not locking	Degree of important (R1), R2, F1, F2
Part No. LH : 96800899, RH : 96800982	Lot No.	
Part Name Buckle A-FRT Seat belt	Date of occurrence Aug.29,2006	
Date of sales	Place of occurrence Suzuki Warranty	
Date of manufacturing May.6, 2005 ~ Dec.20, 2006	VIN. KL5JJ56ZX6K999346 ~ KL5JD66Z37K596663	
Defective percentage 0.8%(678 cases of 84,895 vehicles)	Mileage	

Nature of Problem

- On some MY06/07 Suzuki Forenza/Chevrolet Optra vehicles, spring rib & fixation rib of buckle undercover in frontal seatbelts of driver and passenger may be broken upon continuous unusual usage. If such broken spring rib or fixation rib remains inside buckle, seat belt tongue may not be inserted into buckle or push button may be stuck with tongue.



Proposed by	Checked by	Approved by
H.C.Jeong		K.J.Kim

Supplier Name :
TRW Automotive

① Emergency Measures Result
(number of defects or repairs/total number)
. None

②Findings

1.Defective Parts→2.Process→3.Standards→4.Drawings→5.4M(man, machine, material, method)
→6.Reproduction Test→7.Records of Defective Parts or Defective Lot
→8.Forecast and reasons for frequent occurrence of the defects

- Defective parts
  . Buckle A-FRT Seat belt LH/RH
- Process: NOK
  . Stock Material(sub part) → Assembly base to function part → *Ultrasonic welding(lower cover to upper cover) → Inspection → Packing → Delivery to vehicle assembly line
  * Improper ultrasonic welding process made stress to base ribs in the lower cover.
- Standards: OK
  . No abnormal performance
- Drawings: OK
  . No remarkable fault
- 4M history : OK
  . There was no 4M change
- Reproduction Test: OK
  . Broken fixation rib were observed on a misuse test. Misuse test was newly designed to accelerate test.
- Forecast and reasons for frequent occurrence of the defects
  . 0.8% field incident rate from field vehicles.
  . 82% blocked button and 5% sticky button was observed from the 204 field claim parts.

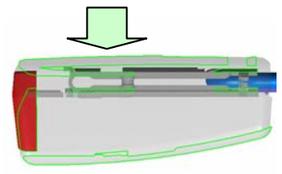
③ Causes for problem

- Improper ultrasonic welding process at supplier made stress to fixation rib & spring rib so that it could be broken by continuous stress during customer use.
  . Standard : Buckle upper cover must be positioned on lower cover
  . Actual : Buckle upper cover is located below lower cover

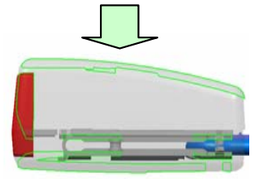
⑤ Countermeasures to prevent recurrence of the same problem

- Changed buckle Cover ultrasonic welding process.
  . Before : Buckle lower cover is on Buckle upper cover
  . After : Buckle upper cover is on Buckle lower cover
- Break point: Dec.20,2006 (KL5JD66Z07K597169~)

Before : Ultrasonic welding



After : Ultrasonic



⑦ Confirmation Effectiveness of Countermeasures:
: Same problem(Spring & fixation rib broken) was not recurred.

Checking method
: Visual check to the damage of buckle lower cover.

Result of Checking
: No damage was found from the new welding process produced buckle lower cover.

Checking date : Dec.12,2006

Checking person : Hyunchol Jeong

Parts to be replaced : Buckle A-FRT Seat belt

Delivery time :November, 2007

Delivery place : USA

Identification :Deleted spring and fixation rib

Quality checking plan for the parts From now on quality will be checked for ( ) lots ( ) months consecutively

④Causes why Problems were not prevented
. Insufficient FMEA for ultrasonic welding methods

⑥ Corrective measures to prevent the occurrence of the same problem

- Added 0.3 radius to prevent fixation rib broken : Apr.28, 2007
- Changed design of buckle lower cover : Jun.15, 2007
  (Spring rib & Fixation rib deleted)
  . To change part number for design change part by Sep.15,2007
  - Driver side: 96800899 → 96875272
  - Pass. side: 96800982 → 96875274

⑧ Reflection to Similar Parts / Similar Processes
. None

	Issuing Section				Quality Assurance				Comments by Quality Assurance
	Staff	Manager	S.Manager		Staff	Manager	S.Manager	Director	
Application				Approval		S.M Lee	I.H.Cho		. GMDAT EFADC authorized USA vehicles product safety recall to Suzuki on July 13, 2007. . Parts required for the recall will be supplied to the USA around November, 2007