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GM SERVICE OPERATIONS  
DCS938  
URGENT - DISTRIBUTE IMMEDIATELY

02V-178

DATE: July 19, 2002  
SUBJECT: 02029 - Product Safety Recall  
Air bag sensing and diagnostic modules (SDM)  
MODELS: 2000 Chevrolet Silverado, Tahoe, and Suburban;  
GMC Sierra, Yukon, and Yukon XL  
TO: All Chevrolet and GMC Dealers  
ATTN: Service Manager, Parts Manager and  
Warranty Administrator

CONDITION

General Motors has decided a condition may occur in the air bag sensing and diagnostic modules that could interfere with the timing and sequence of air bag deployment signals in certain 2000 Chevrolet Silverado pickups and Tahoe/Suburban sports utility vehicles and GMC Sierra pickups and Yukon/Yukon XL sports utility vehicles. This could result in the driver and passenger side air bags failing to deploy during certain frontal collisions. Only full-size pickups and SUVs built between February 1999 and February 2000 are affected by this condition.

CORRECTION

Chevrolet and GMC dealers will program the sensing and diagnostic modules (SDM) with a new SDM calibration. This new calibration changes the crash detection sequence to remedy the condition. These repairs will be performed at no cost to the customers.

MAILING INFORMATION

The recall bulletin will be mailed to dealers tentatively begin on August 23, 2002.  
The mailing of customer notification letters will tentatively begin on August 30, 2002.

GM VEHICLE INQUIRY SYSTEM (GMVIS) INFORMATION

GMVIS information will be available the week of August 26, 2002.

SI 2000 AND CALIBRATION INFORMATION

SI 2000 information will be provided to dealers through a scheduled GM Access Broadcast on August 23, 2002. Calibration information will be available the week of August 26, 2002.

## ANTICIPATED QUESTIONS AND ANSWERS

Q1: How does the SDM work in a crash situation?

A1: There are sensors in the front of the truck that are connected to other sensors in the SDM. Basically there are a series of events that occur in the system when the front of the vehicle contacts a rigid object at a sufficient speed for air bag deployment. The front sensors detect accelerations high enough to command deployment and send the signal to the "safing sensor" within the SDM. The safing sensor calculates whether or not the crash warrants air bag deployment. If so, it allows an electrical current to flow to the inflators to deploy the air bags. The air bag sensing system is designed to provide electrical current to each inflator for at least 2 milliseconds to cause an air bag deployment. If not, the safing sensor cuts off the current flow and there is no deployment. The total time it takes from frontal contact until a signal is sent to deploy the air bag can range from 13 - 60 milliseconds, depending on the severity of the crash (0.013 - 0.060 seconds.)

Q2: What is the condition that prompted a safety recall?

A2: Some 2000 Chevrolet and GMC full-size pickups sport utility vehicles may have a condition in the air bag sensing and diagnostic modules (SDM) that could interfere with the timing and sequence of air bag deployment signals.

Q3: What might occur as a result of this condition?

A3: This could result in the driver's and passenger air bag failing to deploy during certain frontal collisions.

Q4: What caused this condition?

A4: Some of the SDMs that were designed and manufactured may have a combination of sensing components and software calibrations that could result in the cut off of the sequence of air bag deployment signals.

Q5: How was this condition discovered?

A5: The condition manifested itself when a full-size truck was undergoing a GM crash test in late 1999. This triggered an extensive and complex investigation to understand the cause of the condition.

Q6: Is there a reason why we should be concerned about this condition?

A6: This could result in the driver's and passenger air bag failing to deploy during certain frontal collisions when an air bag is needed.

Q7: Could this condition affect subject vehicles built after February 2000?

A7: We eliminated the possibility of this happening again by doing a calibration change on vehicles built after February 2000.

Q8: How would a vehicle owner realize the condition exists?

A8: There are no visual or audio cues that would alert the driver of this condition.

Q9: Where were these vehicles built?

A9: The pickups were built at the General Motors assembly plants in Fort Wayne, Indiana; Oshawa, Ontario; and Pontiac, Michigan. The full-size SUVs were built in Silao, Mexico; and Janesville, Wisconsin.

Q10: What will GM do to correct this condition on the subject vehicles?

A10: Chevrolet and GMC dealers will program the sensing and diagnostic modules (SDM) with a new SDM calibration. This new calibration changes the crash detection sequence to remedy the condition. These repairs will be performed at no cost to the customers.

END OF MESSAGE

GM SERVICE AND PARTS OPERATIONS



GENERAL MOTORS CORPORATION  
Renaissance Center, Detroit, Michigan 48265

NEWS

FOR RELEASE: August 19, 2002

## GENERAL MOTORS ANNOUNCES TWO RECALLS OF CARS AND TRUCKS

**DETROIT** August 19 -- General Motors today announced two separate recalls of cars and trucks that total nearly 720,000 vehicles.

The first is a recall of approximately 570,000 model year 2000 Chevrolet *Silverado* pickups and *Tahoe/Suburban* sports utility vehicles and GMC *Sierra* pickups and *Yukon/Yukon XL* sports utility vehicles. These vehicles may have a condition in the air bag sensing and diagnostic modules that could interfere with the timing and sequence of air bag deployment signals. This could result in the non-deployment of driver and passenger side air bags during certain frontal collisions. 021-178

Only full-size pickups and SUVs built between February 1999 and February 2000 are affected by this condition. During testing, GM discovered that some of the sensing and diagnostic modules in these vehicles might have a combination of sensing components and software calibrations that could interfere with the sequence of air bag deployment signals.

GM will ask owners of these vehicles to bring them in to their Chevrolet and GMC dealers. The sensing and diagnostic modules of the vehicles will be recalibrated. These repairs will be performed at no cost to the customers.

**(MORE)**

REVISED – AUGUST 13, 2002

The second recall involves approximately 150,000 model years 2002 and 2003 Buick, Cadillac, Chevrolet, GMC, Oldsmobile, and Pontiac cars and trucks built between May and July 2002. These vehicles may have driver's side air bag inflator modules that could fracture at a weld during deployment. Approximately 8,000 of these vehicles have inflator modules that will be replaced. There are no reports of crashes, injuries, or fatalities related to this condition.

02V-222

The vehicles involved are a varying number of 2002-03 Buick *LeSabre*, Cadillac *DeVille*, Chevrolet *Impala* and *Monte Carlo*, Oldsmobile *Aurora*, and Pontiac *Bonneville* passenger cars; Chevrolet *Venture*, Pontiac *Montana*, and Oldsmobile *Silhouette* minivans; Buick *Rendezvous*, Chevrolet *TrailBlazer*, GMC *Envoy*, and Oldsmobile *Bravada* sports utility vehicles. Only vehicles built between May and July 2002 have the inflator modules that will be inspected and replaced if necessary.

GM's suppliers experienced the condition during routine testing and then launched an investigation that discovered its cause.

GM will ask owners of these vehicles to bring them to their Buick, Cadillac, Chevrolet, GMC, Oldsmobile, and Pontiac dealers. The dealers will inspect the driver's side air bag modules and replace those containing the suspect inflators with another air bag module assembly. These repairs will be performed at no cost to the customers.

While there have been no reports of incidents involving vehicles with the suspect air bag inflator modules, it is possible that, in the event of a driver's air bag deployment, pieces of the inflators could enter the passenger compartment. Additionally, the air bag cushion would not fully inflate.

**(MORE)**

**REVISED – AUGUST 13, 2002**

General Motors (NYSE: GM), the world's largest vehicle manufacturer, designs, builds and markets cars and trucks worldwide, and has been the global automotive sales leader since 1931. More information on GM can be found at [www.gm.com](http://www.gm.com).

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