

# Ford Motor Company

James P. Vondale, Director  
Automotive Safety Office  
Environmental & Safety Engineering

September 9, 2004

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

Dear Mr. Weinstein:

Subject: Ford Recall No. 04S22- Certain 2003-2004 model year Ford E-Series Vehicles equipped with an ABS brake system.

## Summary

- **Ford Action** – Ford Motor Company (Ford) is conducting a voluntary safety recall involving certain 2003-2004 model year E-Series vehicles to add a heat shield on the ABS - Electronic Control Module (ECU) and replace the ECU electrical protection fuse with a 30 amp fuse.
- **Number of Vehicles Involved** – Approximately 214,849 vehicles in the United States and Federalized Territories.
- **Affect on Vehicle Operation** – The supplier of the Zener diode, a component in the ECU, produced diodes with micro cracks or the propensity to crack. If a crack is present, a short between the electrical ground and power circuit in the module may occur. The short may cause an ABS malfunction that may illuminate the ABS warning light, or the short may overheat the module resulting in a burning odor, smoke, and/or a fire. This condition may occur while the vehicle is being driven or unattended. Ford is aware of 27 heat-related field reports alleging smoke, melting or fire with no known injuries or accidents.
- **Service Procedure** – Owners will be instructed to take their vehicles to a Ford or Lincoln-Mercury dealer to have a heat shield added to the ECU and the fuse replaced.

Attached is the detailed information required by the applicable portions of 48 CFR Part 573 – Defect and Non-Compliance Information Report.

Sincerely,

  
James P. Vondale

Attachment

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(3 pages)



**49 CFR Part 573 – DEFECT INFORMATION REPORT**  
**04S22 – 2003-2004 MODEL YEAR FORD E-SERIES VEHICLES**

Pursuant to Part 573 of Title 49 of the Code of Federal Regulations, Defect and Noncompliance Reports, Ford Motor Company (Ford) submits the following information concerning a safety recall action that it is voluntarily initiating.

**573.6 (c) (2) - Potentially Affected Vehicles**

Vehicles potentially affected are 2003-2004 model year E-Series vehicles built at the Lorain Assembly Plant (LAP) from April 23, 2002 through November 19, 2003.

Because these vehicles are not produced in VIN order, information as to the applicability of this action to specific vehicles can best be obtained by either calling Ford's toll-free line (1-800-392-3673) or by contacting a local Ford dealer who can obtain specific information regarding the vehicles from the Ford On-line Automotive Service Information System (OASIS) database

**573.6 (c) (3) - Estimated Population of Vehicles Potentially Affected**

Approximately 214,849 vehicles in the United States and Federalized Territories.

**573.6 (c) (4) - Estimated Percentage of Affected Vehicles with the Defect Condition**

Unknown

**573.6 (c) (5) - Description of the Defect**

The supplier of the Zener diode, a component in the ECU, produced a limited number of diodes with micro cracks or the propensity to crack. If a crack is present, a short between the electrical ground and power circuit in the module may occur. The short may cause an ABS malfunction that may illuminate the ABS warning light, or the short may overheat the module resulting in a burning odor, smoke, and/or a fire. This condition may occur while the vehicle is being driven or unattended. Ford is aware of 27 heat-related field reports alleging smoke, melting, or fires with no known injuries or accidents.

**573.6 (c) (6) - Chronology of Events**

On November 13, 2003 the Ford Critical Concern Review Group was notified that a 2004 model year E-350 was found emitting smoke from the under the hood at the Lorain Assembly plant. Analysis of the vehicle identified the ABS ECU unit as being damaged. Engineering was notified and conducted analysis of the design and returned ECU units. This led to the determination that the Zener diode had a crack, causing a short to ground internal to the module resulting in heat build up in the ECU module. Further analysis of supplier data led to an initial conclusion that a small number of Zener diodes used in ECU modules were produced with micro cracks or a propensity to crack. Of those few diodes that were initially believed to be affected, analysis indicated that most would result in an ABS warning lamp while a smaller number would exhibit some sort of heat-related symptoms or damage. Given the very small number of diodes believed to be affected, and since there was no ability to reliably sample modules, Ford closely monitored any field reports that could potentially relate to this condition. This regular monitoring and analysis of report data led to the final conclusion in August, 2004 that the number of modules with this condition was larger than originally indicated by the supplier production data. As of August 26, 2004, Ford is aware of 27 heat-related field reports alleging smoke, melting or fire with no known injuries or accidents.

**573.6 (c) (8) - Service Program**

Owners will be instructed to take their vehicles to a Ford or Lincoln-Mercury dealer to have a heat shield added to the ECU and the fuse replaced. There will be no charge to owners for this service. Mailing of owner notification letters will begin October 8, 2004 and be completed October 8, 2004.

Reimbursement for the cost of remedies for replacement of the ECU will be paid under an extended warranty coverage program as described in section 573.6 (c) (11) below.

Ford has notified dealers to not demonstrate or deliver the affected vehicles until the service procedure has been performed.

**573.6 (c) (9) - Press statement and Dealer/Owner Letters**

Ford does not at this time plan to make a statement to the media concerning the subject matter of this action. A copy of the notification letters to dealers and owners from Ford will be forwarded to the agency when available.

**573.6(c) (11) - Recall Number**

Ford has assigned recall number 04S22 to this action. In addition, Ford will notify all 2003-2004 model year E-Series owners of a customer satisfaction program (04N03) in which Ford will provide additional warranty coverage for replacement of ECU units that have a malfunction due to this condition for ten years or up to 150,000 total vehicle miles from original date of sale of a vehicle, whichever comes first. The 04N03 program will provide reimbursement for the cost of additional remedies paid by customers related to the ECU module.

**573.13 (c) (2) - Ending Date for Reimbursement Eligibility**

Not applicable for this safety program. Reimbursement will be offered under 04N03