

**FREIGHTLINER**<sup>®</sup>  
LLC  
A DaimlerChrysler Company

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OFFICE OF  
DEFECTS INVESTIGATION

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Director  
Government Technical Affairs

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April 20, 2005

OSV-208 (5995)

Kenneth N. Weinstein  
Associate Administrator for Safety Assurance (NSA-01)  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

**Re: Defect Information Report FL-450, John Deere CNG Engine Throttle**

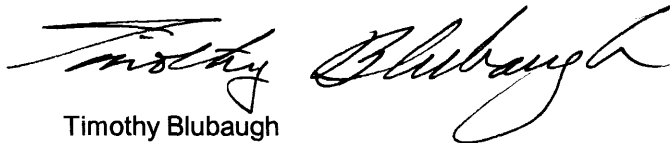
Mr. Weinstein:

In accordance with Part 573 of Title 49 of the Code of Federal Regulations, Freightliner LLC herewith reports a safety campaign to recall 153 Thomas Built Saf-T-Liner ER and ER Transit buses equipped with specific John Deere compressed natural gas engines.

Attached is a Defect Information Report and a copy of John Deere's Defect Information Report.

Please contact me if you have any questions.

Sincerely yours,

  
Timothy Blubaugh

Cc: Michael Mason, CAL-OSHA  
DOSH, Legal Unit  
10th Floor  
455 Golden Gate Avenue  
San Francisco, CA 94102

Enclosure

**Certified Mail Article Number:**

7002 3150 0004 1405 0464



A DaimlerChrysler Company

## Defect Information Report (Section 573.6)

April 20, 2005

**(c)(1) Manufacturer:** Thomas Built Buses, Inc.  
P.O. BOX 2450  
High Point, NC  
(336) 841-5924

**Brands:** Thomas Built

**(c)(2) Vehicles identification:**  
**Model(s) affected:** Saf-T-Liner ER School Bus and ER Transit Bus  
**Manufacture Dates:** November 2002 to February 2005  
**Basis for determining population:** Specific vehicles built with the subject engine  
**Component manufacturer if other than the vehicle manufacturer:**  
John Deere Power Systems  
P.O. Box 5100  
Waterloo, Iowa 50704-5100  
Tim Francis (319) 292-5713 Fax (319) 292-5844

**(c)(3) Total number of vehicles potentially affected:** 153

**(c)(4) Percentage of vehicles estimated to contain the defect:** 100%

**(c)(5) Description of the defect:** The engine may surge when the throttle is suddenly closed from a full power condition. See attached John Deere defect notification, campaign number 05RG149.

**(c)(6) Chronology of principal events:** Thomas was notified of the defect by John Deere Power Systems on April 5, 2005. See attached John Deere defect notification, campaign number 05RG149.

**(c)(7) Noncompliance-test or other data:** not applicable

**(c)(8) Remedial program:** Customers will be notified by John Deere Power Systems. See defect report from John Deere. John Deere has provided a list of subject engine serial numbers. Freightliner and Thomas Bus production records will be used to identify the vehicles.

**Estimated Owner Notification Date:** Customers will be notified by John Deere. See defect report from John Deere. Notification will be by first class mail using Thomas records to determine the customers affected. This will be completed approximately June 15, 2005

**Reimbursement Plan:** Customers will be notified by John Deere.

**(c) (9) Communications sent to dealers and owners:** Customers will be notified by John Deere. See defect report from John Deere.

**(c) (10) Copy of proposed owner notification letter:** Customers will be notified by John Deere. See defect report from John Deere.

**(c) (11) Manufacturer's campaign number:** FL-450



**JOHN DEERE**

John Deere Power Systems  
3801 West Ridgeway Ave., P.O. Box 5100  
Waterloo, IA USA 50704-5100  
Phone: 319-292-5541 Fax: 319-292-5006  
PlaseckiJohn@JohnDeere.com

**John Plasecki, Director**  
Worldwide Marketing, Sales, and Customer  
Support

Via Next-Day-Delivery U.S. Mail

30 March 2005

Associate Administrator for Enforcement  
National Highway Traffic Safety Administration  
Washington, DC 20590

**Re: John Deere HFN01 and HFN03 Compressed Natural Gas Engines**

Dear Associate Administrator for Enforcement:

This report is submitted pursuant to 49 C.F.R. § 573.6.

1. **Manufacturer's name:** Deere & Company ("Deere").
2. **Identification of items of motor vehicle equipment potentially containing the defect or noncompliance:** John Deere 8.1L compressed natural gas engine models HFN01 and HFN03 with serial numbers in the following range:

RG6081H108911 - RG6081H162677

[Note: Deere manufactures multiple engine types and models and assigns serial numbers to engines sequentially, as they are manufactured. As a result, this serial number range includes some engines other than the HFN01 and HFN03 compressed natural gas models.]

These engines were manufactured between May 2000 and November 2003.

The production range identified above is bounded, at the beginning, by introduction of a programmable engine controller for the engines in question and, at the end, by replacement of the HFN01 and HFN03 models with a new model (HFN04), which has a different engine controller and different controller software.

The engine control unit and throttle used by in production of the potentially affected engines were supplied to Deere by:

Woodward Governor Company ("Woodward")  
1000 East Drake Road  
Fort Collins, CO 80525  
tel. 970-482-5811

Almost all of the potentially affected engines were sold to the following vehicle manufacturers for use in their production:

Eldorado National  
9670 Galena St  
Riverside, CA 92509  
tel. 909-591-9557

Blue Bird Corporation  
402 Blue Bird Blvd.  
Fort Valley, GA 31030  
tel. 912-825-2021

Thomas Bus  
1408 Courtesy Rd.  
High Point, NC 27260-7248  
tel. 336-881-7248

A small number of the engines were sold to NGV Echotrans, of Los Angeles, California, for use by it in connection with vehicle assembly or conversion. It is Deere's understanding that Echotrans is no longer in business, but Deere does have information identifying the Echotrans customers who purchased potentially affected engines. The last known address and telephone number of Echotrans are: 2424 E. Olympic Blvd., Los Angeles, CA 90021-2902; tel. 213-627-3333.

Deere manufactured two other compressed natural gas engine models – the 6.8L HFN51 and the 8.1L HFN02 – contemporaneously with the potentially affected HFN01 and HFN03 models. The HFN51 and HFN02 models differ from the HFN01 and HFN03 models in terms of power range and controller software characteristics, and have not been the subject of reported incidents of unexpected surging. Nonetheless, Deere is testing the HFN51 and HFN02 models for the condition being reported and will report further on them if and to the extent either or both are determined to be affected by this condition.

3. **Total number of items of equipment potentially containing the defect or noncompliance:** 703 (486 model HFN01; 217 model HFN03).
4. **Percentage of the items of equipment identified in Paragraph 2, above, estimated to actually contain the defect or noncompliance:** Not all of the engines identified are expected to actually exhibit the behavior described below in normal operation, but Deere's best current estimate is that 100% of them are capable of exhibiting that behavior.
5. **Description of the defect or noncompliance:** The engine's air throttle may act erratically under a unique operating mode. The unique operating mode has been defined as moments in which the engine is going from full load to zero load very rapidly. Once the engine is taken from full to zero load, the engine may surge inappropriately, causing engine speed to

vary at idle. Since the engine configuration is coupled with an automatic transmission, the vehicle may also exhibit surging behavior. A vehicle exhibiting this condition may present a risk to motor vehicle safety, and is unlikely to comply with Federal Motor Vehicle Safety Standard No. 124.

Field testing indicates that shifting the engine into neutral will remove the surging condition. Field experience also indicates that the vehicle's braking system is sufficient to hold the vehicle stable during this condition.

6. **Chronology of all principal events that are the basis for the determination that the defect relates to motor vehicle safety:** In November 2004 Deere was contacted by a John Deere service center with a report of throttle surging. Deere obtained the throttle in question and returned it to Woodward for further analysis. In December Woodward reported that the throttle had passed its initial testing. At that time, Deere requested additional testing to identify any potential hardware issues. Woodward conducted additional testing and, on January 24, 2005, reported no physical problems with the throttle.

In early February four additional field reports were received. In addition to returning the hardware to Woodward for further analysis, Deere provided electronic data, outlined the additional reports, and requested guidance to help determine root cause. Deere received four additional field reports from mid to late February. On March 1 Deere provided Woodward with information regarding the latest reports and provided additional data for analysis. On March 4 Deere and Woodward representatives worked together in an attempt to identify the root cause of the condition. At that session, a Woodward representative manipulated the minimum governor gain calibration in the software package that controls throttle operation. He eventually reached a threshold minimum governor gain value at which he was able to toggle the condition on and off. Also on March 4 Deere received an additional field report. On March 5 Deere provided Woodward with additional data results from the work that was completed cooperatively the day before. Field hardware continued to be investigated by Woodward during this time. Woodward advises that its inspections of the hardware have not disclosed any hardware defects.

On March 10 representatives of Woodward and Deere worked together to compose a software revision, based upon the March 4 governor gain calibration testing, that would address this condition. New software was tested successfully on a limited number of suspect vehicles on March 10. On March 11 Deere's representative composed a field test plan to increase the testing sample size and provide further confidence in the proposed solution. Successful field testing on a population of seven units has continued since that time.

This matter was brought to the attention of Deere's Power Systems Product Safety Committee and reviewed by it on March 9. That Committee recommended that the matter be referred to Deere's Corporate Compliance Committee for its consideration. On March 18, following additional research into the condition, the matter was presented to the

Corporate Compliance Committee. On March 23 the Compliance Committee determined that the matter should be reported to NHTSA.

7. **Test results and other information that the manufacturer considered in determining the existence of the noncompliance:** Please refer to Paragraph 6, above.
8. **Description of the manufacturer's program for remedying the defect or noncompliance:** For each of the potentially affected engines, the engine control unit software will be updated so as to reduce the minimum governor gain calibration to a value that will eliminate the potential surging condition. These updates will be performed by our service network, our employees, or by contract workers.

Deere estimates that it will begin and complete sending notifications to owners, dealers, and distributors on or before April 22.

It is unlikely that any owner or purchaser will have incurred costs to obtain a remedy for this condition in advance of Deere's notification. However, Deere will plan to reimburse owners or purchasers for such costs in accordance with the following plan:

(A) **Period for reimbursement:**

beginning date: 30 March 2004

ending date: 10 calendar days after the date on which Deere mails the last of its notifications to owners pursuant to 49 C.F.R. part 577

(B) **Conditions:**

- (i) Reimbursement will be excluded for any costs incurred within the period during which Deere's original or extended warranty would have provided for a free repair of the problem addressed by the recall, without any payment by the owner or purchaser, unless a Deere dealer or authorized representative denied warranty coverage or the repair made under warranty did not remedy the problem addressed by the recall.
- (ii) Reimbursement will be excluded if (a) the pre-notification remedy was not of the same type as the recall remedy, (b) the pre-notification remedy did not address the defect or noncompliance that led to the recall or a manifestation of the defect or noncompliance, or (c) the pre-notification remedy was not reasonably necessary to correct the defect or noncompliance that led to the recall or a manifestation of the defect or noncompliance.
- (iii) Reimbursement will be excluded if the claimant does not submit adequate documentation of each of the following to Deere at the claim submission address designated below:
  - (a) name and mailing address of the claimant;
  - (b) identification (make, model, model year, and VIN) of the vehicle containing the engine that was recalled;
  - (c) identification of the recall (either the NHTSA recall number or Deere's recall number)
  - (d) identification of the owner or purchaser of the vehicle containing the recalled engine at the time that the pre-notification remedy was obtained;

- (e) a receipt (original or a copy) for the pre-notification remedy
    - (1) If reimbursement is sought for a repair, Deere will require that the receipt indicate that the repair addressed the defect or noncompliance that led to the recall or a manifestation of the defect or noncompliance, and state the total amount paid for the repair of that problem. Itemization of the amount for parts, labor, other costs, and taxes will be required if it is unclear on the face of the receipt that the repair for which reimbursement is sought addressed only the pre-notification remedy relating to the pertinent defect or noncompliance or manifestation thereof.
    - (2) If reimbursement is sought for the replacement of an engine part, Deere will require that the receipt identify the item and state the total amount paid for the item that replaced the defective or noncompliant item.
  - (f) If the pre-notification remedy was obtained at a time when the engine could have been repaired or replaced at no charge under Deere's warranty program, documentation indicating that Deere's dealer or authorized facility either refused to remedy the problem addressed by the recall under the warranty or that the warranty repair did not correct the problem addressed by the recall.
- (C) Amount of costs to be reimbursed for a pre-notification remedy:  
the lesser of:
- (i) the amount paid by the owner for the remedy, or
  - (ii) the cost of parts for the remedy (not to exceed Deere's list retail price for authorized parts), plus associated labor at local labor rates, miscellaneous fees such as disposal of waste, and taxes.
- (D) Address to which claimants may mail reimbursement claims:  
Claimants are to mail reimbursement claims to their nearest John Deere Natural Gas Engine Distributor, which can be identified by calling 1-800-JD-ENGINE.

Terms used in the foregoing reimbursement plan that also appear in 49 C.F.R. § 573.13 will, for purposes of Deere's reimbursement plan, have the same meaning as is given them in 49 C.F.R. § 573.13.

**9. Representative copies of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and are sent to more than one manufacturer, distributor, dealer, or purchaser: These will be supplied as they become available.**

**10: Copy of proposed owner notification letter: This will be supplied when it becomes available.**

**11. Manufacturer's campaign number: 05RG149.**

Associate Administrator for Enforcement  
National Highway Traffic Safety Administration  
30 March 2005  
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If further information is desired, please contact Tim Francis, Manager, Field Service, John Deere Engine Works, 3801 W. Ridgeway Avenue, Waterloo, IA 50701, tel. 319-292-5713.

Very truly yours,



John Piasecki  
Director, Worldwide Marketing, Sales, and Customer Support

JP/jl