U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation: PE 12-006
Date Opened: 03/14/2012 **Date Closed:** 08/17/2012
Investigator: Peter Kivett **Reviewer:** Bruce York-B
Approver: Scott Yon
Subject: Turbocharger Failure

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: John Deere
Products: Transit buses with John Deere 8.1 CNG engines
Population: 3,500 (Estimated)

Problem Description: Turbocharger failure on transit buses equipped with John Deere 8.1 L Compressed Natural Gas (CNG) engines.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	0	265	265
Crashes/Fires:	0	22	22
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	1	1	1**

***Description of Other:** Product improvement program (10RG264) submitted by John Deere.

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation is closed with a Safety Recall (12V-056)

Summary:

The Office of Defects (ODI) received a Product Improvement Program (10RG264) from John Deere in January 2011 concerning failed turbochargers on transit buses. This Product Improvement Program (PIP) was exclusive to their 8.1L compressed natural gas (CNG) engine. However, the PIP only covers transit busses in the state of California. John Deere indicated that in the event of a failure, the entire turbocharger was to be replaced as part of the repair.

The ODI contacted consumers (supplied by the manufacture as complainants) and most described a condition that once the turbo failed, the vehicle became stranded. One consumer detailed a failure where the cab started to fill up with smoke while the vehicle was stalled, subsequently the turbo was on fire. The fire was eventually extinguished however the vehicle was stranded and needed to be towed.

On June 11, 2012 ODI received John Deere's response to an ODI Information Request (IR) letter. From the responsive information it was determined that the risk of turbo fires as related to stalling/abandonment warranted an equipment safety recall. John Deere made ODI aware of 265 complaints and 22 possible vehicle fires for a population of approximately 3,500 vehicles. ODI notes that John Deere had not determined the exact number of affected vehicles, or a specific recall remedy at the closing of this investigation. However all vehicles (not just the vehicles located in California.) similarly configured and within the scope of this investigation will be recalled.

This investigation is closed with John Deer's announcement of a safety recall. The Product Improvement Program cited above can be reviewed online at http://www-odi.nhtsa.dot.gov/tsbs/ under the following NHTSA Item Number: 10034925. Updates on the recalled vehicle population and defect remedy can be viewed in the manufacture's 573

document online at http://www-odi.nhtsa.dot.gov/recalls/recallsearch.cfm under the following NHTSA Campaign ID Number: 12V056 (use the Document Search button to locate the 573 document).

RECEIVED
By Recall Management Division at 10:20 am, Jul 11, 2012

12E-026
(4 pages)

July 9, 2012

PART 573 Defect Report

This report serves as Deere & Company's (Deere) notification to the U.S. Department of Transportation, National Highway Traffic Safety Administration that a defect related to motor vehicle safety exists in certain John Deere 8.1L Compressed Natural Gas (CNG) engines.

I. Manufacturer and Other Chain of Distribution Information

Manufacturer's corporate name: Deere & Company

Identify by name, address and telephone number each vehicle manufacturer and equipment manufacturer who purchased that equipment: Not available at this time, but will supplement our response.

If this is a defective component that the above identified manufacturer did not manufacture, identify that component and provide the name, address and phone number of the manufacturer of the component: Engine Turbocharger;

Honeywell Turbo Technologies

Zandrie Wiersma

Applications Engineering Manager

2525 W. 190th Street

Torrance, CA 90504-6099

Phone: (424) 221-7546

Cell: (310) 251-5394

Name, address, email, and phone and fax numbers for the person(s) to whom inquiries about this report should be directed:

Kelly Van Veldhuizen

1 John Deere Place

Moline, IL 61265

VanVeldhuizenKellyB@johndeere.com

(309) 765-4842

Manufacturer's assigned campaign number: 12RG325

II. Identification of the Recall Population and Its Size

Type of equipment: Engine

Part/Model Number: 6081HFN04

Size and function: 8.1 Liter, primary propulsion

Inclusive dates of manufacture (month and year): June 2002 - January 2008

Other information necessary to describe this equipment: Will supplement as further analysis progresses.

Total number of these items of equipment: Unknown at this time but will supplement as further analysis progresses.

Percentage of the recall population you estimate actually contain the defect: Not all of the engines identified are expected to actually exhibit the behavior described in this report during normal operation. We will supplement this response as further analysis progresses.

Identify and describe how the recall population was determined: All 6081HFN04 engines with Urban Bus certification. The date range represents all production of the 6081HFN04 engines with the Urban Bus certification.

Describe how the recall population is different from any similar items of equipment not subject to this notification: Will supplement this answer after further analysis.

III. Description of the Defect and Chronology of Events

Describe the defect, including a summary and detailed description of the nature and physical location of the defect: Failures can occur within the engine turbocharger. The turbine or compressor wheel may fail, resulting in subsequent damage to the turbocharger.

Describe the cause of the defect: Causal or contributory factors include weld failure, foreign object damage or low cycle fatigue.

Describe the consequences of the defect: Consequences can include broken compressor wheel, broken turbine shaft, broken turbine wheel, turbocharger and

engine failure, poor performance, noise, fault code, exhaust smoke and low oil pressure. Turbine shaft failures may result in engine lubricating oil entering the exhaust system. Poor performance would be immediate. The vehicle would have low power and smoke heavily from the exhaust system.

Identify any warning(s) that may precede the defect: Poor performance would be immediate, with black or blue exhaust smoke from the exhaust system, noise, fault code or warning light and engine fuel de-rate.

For defects, provide a dated, chronological summary of the principle events that were the basis for the determination that the defect is related to motor vehicle safety, including a summary of all warranty claims, field or service reports, and other information such as numbers of crashes, injuries and fatalities:

17 November 10: Product Improvement Program 10RG264 released to provide turbocharger extended warranty coverage to California Urban Bus Customers.
01 December 10: Notification letter sent to NHTSA
14 January 11: Initial telephone contact by Larry Long (Safety Defects Specialist, NHTSA) in response to PIP 10RG264. List of questions provided.
28 January 11: Telephone call with Larry Long to provide responses to questions of 14 January 11.
5 March 12: Telephone call with Bruce York (Division Chief, Heavy Truck & Bus, Office of Defect Investigation, NHTSA), follow-up to questions of 14 January 11.
12 March 12: PE12-006 information received from Bruce York via FAX.
14 March 12: ODI Resume Investigation opened PE 11-042.
8 June 12: John Deere submits responses to PE12-006.
22 June 12: Recognition of NHTSA concern for quantity of thermal events reported in response to PE12-006.

We will supplement the summary of warranty claims and field or service reports after further analysis of the population. As reported in PE 12-006, there have been no crashes, injuries or fatalities.

IV. The Remedy Program and Its Schedule

Describe the program for remedying the defect, including the plan for reimbursing those owners and purchasers who may have incurred costs to remedy the defect before receiving the manufacturer's notification concerning that defect. Also include, where applicable, details with dates concerning any

production remedy that was conducted or will be conducted: Not available at this time but will supplement with a response.

Provide the estimated date(s) on which owner and purchaser notifications will be issued and the estimated date(s) for completion of those notifications: Not available at this time but will supplement with a response.

Provide the estimated date(s) on which dealer and distributor notifications will be issued and the estimated date(s) for completion of those notifications: Not available at this time but will supplement with a response.

Describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly: Not available at this time but will supplement with a response.