10E-025
(4 pages)

CATERPILLAR®

Caterpillar Inc.
100 NE Adams Street
Peoria, Illinois 61629-9240

June 22, 2010
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Dan Smith
Associate Administrator
Office of Defects Investigation Enforcement
National Highway Traffic Safety Administration
400 Seventh St. S.W.
Washington, D.C. 20590

Dear Mr. Smith,

In accordance with the requirements of the National Traffic and Motor Vehicle Safety Act and the procedure prescribed in 49 CFR 573, attached is our notification of a safety defect that may exist with the #5 & #6 Fuel Lines on the Common Rail High Pressure Fuel System used on certain Caterpillar C7 Diesel Engines.

Please contact me if there are additional requirements regarding this notification.

Very truly yours,

Thomas S. Lane
On-Highway Safety & Compliance Manager
Product Safety & Compliance

Phone (309) 675-6496
Fax (309) 636-2911

Attached: OEM Contact List

TSLane
Rev00 - 6-22-2010

1) MANUFACTURER

Caterpillar Inc.
100 N.E. Adams St.
Peoria, IL. 61629-9240

2) COMPONENT IDENTIFICATION

Model No.: C7 Diesel Engines produced by Caterpillar Inc.
Serial No. Prefixes: C7S
Manufacturing Build Dates: Mar 3, 2005 to Jan 6, 2009
Component Description: #5 & #6 Fuel Lines on the Common Rail High Pressure Fuel System of the 7L 6 cylinder turbocharged and air-to-air aftercooled diesel engine of 190 - 360 Horsepower.

3) NUMBER OF ENGINES POTENTIALLY CONTAINING DEFECT

5,920 total engines in the US (see the OEM Contact list for a detailed breakdown of the population including those engines remedied by a current campaign)

4) ESTIMATED PERCENTAGE OF ENGINES POTENTIALLY CONTAINING DEFECT

35% of the engine population (identified in 3 above) at 250,000 miles

5) DEFECT DESCRIPTION

The #5 and #6 fuel lines may crack at the fastening point to the common fuel rail and cause a fuel leak, which may result in a potential fire hazard.

6) PRINCIPAL EVENTS THAT WERE THE BASIS FOR MAKING RECALL DETERMINATION

a) In August 2008 a Continuous Product Improvement (CPI) Team was assembled to review and address #6 fuel line failures in C7S diesel engines. At that time, the data did not indicate there was an issue with fuel line #5 failures.
b) The CPI team determined that the clamping of the # 5 fuel line to the #6 fuel line and assembly stresses caused the #6 line failures. The remedy was to clamp fuel line #5 separately. The team identified three date ranges of engine assembly where #6 fuel line failures were clustered below 21, 000 miles, where an unidentified assembly process increased stress levels on the #6 fuel line.
c) Any fuel system service involving the fuel lines requires the respective fuel line(s) to be replaced. Thus, the remedy was to replace #5 and #6 fuel lines with higher strength fuel lines for the stresses at those joints and to add a new clamp to fuel line #5. Once parts stock was procured, a field campaign was issued on December 18, 2009. This campaign was issued as a Caterpillar Priority Improvement Program (PIP), which includes customer

notification. This was reported to NHTSA in Caterpillar's January 2010 TREAD Act notice report.

d) Caterpillar reviewed its claims data and incident reports prior to issuing the campaign, and determined that the claims were for fuel leaks and power loss. Notably, the fuel system is on the cold side of the engine; it is not near any engine hot exhaust system components, which, under the correct circumstances, could pose a fire hazard. At this time, Caterpillar was aware of three fire incidents in three Blue Bird buses. One was on an engine that was produced prior to the 2007 MY engines and with a different fuel system. Caterpillar's fire investigators inspected the other two, and the cause of origin was not identified to be a fuel system leak. Thus, the campaign was issued as a PIP, rather than a recall, and Caterpillar continued monitoring incident reports and warranty claims for any potential hazards.
e) On March 10, 2010 Caterpillar became aware of another Blue Bird bus fire incident, sent an investigator to inspect, but was denied access by the school district until April 19, after Sonny Murianka, NHTSA ODI, requested that Caterpillar be given access. Caterpillar's fire investigator was unable to pinpoint an exact origin, but did not find any evidence that the fire originated or was caused by loose or cracked fittings. The school district's investigator has since removed the fuel system.
f) On March 29, 2010, Mr. Murianka contacted Thomas Lane at Caterpillar regarding school bus fires, at which time Mr. Lane informed him of the PIP. Mr. Murianka was subsequently updated relative to the fire incidents.
g) On May 24, 2010, Mr. Lane was contacted by Blue Bird regarding a potential PE being opened by NHTSA against Blue Bird regarding bus fires.
h) On June 2, 2010, Blue Bird informed Mr. Lane of an additional fire incident of which Caterpillar was previously unaware.
i) On June 9, 2010, Blue Bird provided Caterpillar an informational spreadsheet of fire incidents and reported fuel leaks, and a conference call was held with Blue Bird's and Caterpillar's technical staffs. The implications of Blue Bird recall 09V-055 were also discussed at that time.
j) Caterpillar subsequently reviewed its updated claims data and the data sent by Blue Bird, and on June 15, 2010 verbally informed Mr. Murianka that the PIP would be converted to a safety recall. Caterpillar also informed Blue Bird of Caterpillar's intended action on the same date.
k) Subsequent Caterpillar analysis has also determined that fuel line #5 had stress applied by the original clamping arrangement to # 6. Although both fuel lines are replaced in the PIP population, the #5 failures are not clustered, as #6 were, nor at less than 21,000 miles. Thus, the entire C7S population will now have both fuel lines replaced and a new clamp added to #5.
l) The only fire incidents of which Caterpillar has knowledge are in Blue Bird buses and they represent 48% of the total C7S population.
m) Based on Caterpillar's incident inspection data, Caterpillar cannot guarantee that this action will mitigate the fire incidents experienced in Blue Bird buses, since cracks at the #5 and #6 fuel lines are not associated with the cause and origin of the fires investigated.

7) PROGRAM TO REMEDY DEFECT

The recall campaign to remedy the defect is as follows:

a) Caterpillar will issue the recall as a Safety PIP (the process used by Caterpillar) to replace the #5 and #6 fuel lines and add a new clamp to #5.
   i. The total volume of engines to be reworked has increased from 1,671 to 5,920 in the US.
   ii. Caterpillar needs to obtain 50% parts stock to be able to release the Safety PIP, and it will take approximately 8 weeks to procure the necessary quantity of lines.
   iii. Thus, the Safety PIP will be issued to dealers in approximately late August, with the projected date for customer notifications to begin near September 1, 2010.
   iv. Caterpillar will leave the existing PIP in place until the recall Safety PIP is issued.
   v. Caterpillar will cancel the existing PIP when the recall Safety PIP is issued.

b) Vehicle Manufacturers (OEMs) will be notified of the potential safety defect and planned recall.

c) Caterpillar will submit the customer notification letter to NHTSA for approval.

d) Caterpillar will provide a representative copy of the Safety PIP to NHTSA.