



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 10-042
Date Opened: 11/04/2010
Investigator: Peter Kivett
Approver: Richard Boyd
Subject: 5th wheel frame bolts are failing

Reviewer: Bruce York-B

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: MACK TRUCKS, INC
Products: 2009 - 2010 MACK CXU trucks
Population: 5,000 (Estimated)
Problem Description: Bolts that clamp the 5th wheel mount to the frame of the subject trucks allegedly fail.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	2	0	2
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0

ACTION / SUMMARY INFORMATION

Action: This Preliminary Evaluation is open

Summary:

On October 3rd 2010 the Office of Defects Investigation (ODI) received two complaints on 2009 - 2010 MACK CXU612 and CXU trucks for failing bolts that clamp the 5th wheel to the frame of the truck. The bolts supplied by the manufacture are class 10.9; 16 mm fasteners that have a rated minimum clamping force of 142,200 psi.

ODI was made aware of several incidents concerning bolts that clamp the 5th wheel to the frame of the subject trucks allegedly failing in yield prior to reaching the specified torque requirement. Furthermore, the complainant alleges that during the preventive maintenance schedule of these trucks the bolts are often loose and once the technician tries to retighten the bolt it stretches. This failure also exacerbates in allowing the 5th wheel plate (once loose) to move on the truck frame. Pictures have been supplied to ODI showing this phenomenon as evidence to witness marks on the frame from the plate sliding back and forth; due to loose and sometimes missing bolts.

Per the Safety Motor Carrier Safety Regulations under ~ 393.70 Coupling devices and towing methods: "The lower half of a fifth wheel mounted on a truck tractor or converter dolly must be secured to the frame of that vehicle with properly designed brackets, mounting plates or angles and properly tighten bolts of adequate size and grade or devices that provide equivalent security. The installation must include a device for positively preventing the lower half of the fifth wheel from shifting on the frame to which it is attached."

ODI has taken possession of several bolts that were taken off subject vehicles that exhibit extreme fatigue and hourglass like stretching. After reviewing the testimonial(s), pictures from the field, physical evidence and considering the inherent risk of a coupling device failing on a 5th wheel truck, ODI has opened this Preliminary Evaluation.