U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE 04-036
Prompted By: OWNER COMPLAINTS
Date Opened: 04/12/2004
Principal Investigator: SCOTT SHADLE
Subject: DIESEL EXHAUST GAS INTRUSION

Manufacturer: FREIGHTLINER LLC
Products: 2003 FREIGHTLINER COLUMBIA
Population: 20000 ESTIMATED

Problem Description: Diesel exhaust gas intrusion into the vehicle's cab from leaks in vehicle's exhaust system between the engine and the turbocharger and/or in the vehicle's exhaust gas recirculation system.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	3	0	0
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0

Action: OPEN A PRELIMINARY EVALUATION

Engineer: *Scott Shadle* Date: *04/12/2004*
Div. Chief: *Richard Boyd* Date: *04/12/2004*
Office Dir.: *Kathleen C. DeMeter* Date: *04/12/2004*

Summary: ODI has received 3 complaints from drivers of 2003 Freightliner Columbia model trucks reporting the intrusion of diesel exhaust fumes into the truck's cab with two of the drivers reporting that they experienced nausea and/or headaches from breathing the fumes.

A Freightliner representative indicated that they are aware of the problem, having received similar complaints, and have found that leaks can occur in the high pressure portion of the vehicle's exhaust system which includes the exhaust manifold, the Exhaust Gas Recirculation (EGR) system, and the turbocharger system of the trucks. Freightliner also reported that the problem only existed with the Detroit Diesel series-60 engines equipped with the cooled EGR. Emissions control system. A temporary fix is available and a permanent fix is being developed. Freightliner and Detroit Diesel intend to address this problem as an emissions related problem, but are examining the potential for driver health and safety effects.

ODI contacted staff at the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) of the Centers for Disease Control to gather information on the physiological effects of exposure to diesel exhaust gases. Two of the major components of diesel exhaust fumes (carbon monoxide and nitric oxide) have Central Nervous System (CNS) effects that could impair a driver's ability to safely operate a vehicle, if the concentrations are high enough. Since no specific information exists on the concentrations of these gases to which the drivers were or could have been exposed, it is uncertain whether the drivers who complained to ODI may have had their driving abilities impaired. However, the NIOSH specialist indicated that concentrations of diesel exhaust fumes sufficient to result in headache and/or nausea may likely be sufficient to cause CNS effects that could impair driving ability.

unit function
4/13/04