



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

# ODI RESUME

Investigation: EA 03-008  
 Prompted By: PE03-003  
 Date Opened: 06/11/2003      Date Closed: 07/28/2004  
 Principal Investigator: John Abbott  
 Subject: Fuel Tank Leaks

Manufacturer: Volvo Cars of North America, LLC  
 Products: 1993 Through 1996 Volvo Model 850  
 Population: 187,759

Problem Description: Gasoline leaking from the fuel storage tank.

## FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	14	65	79
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	0	0

\*Description of Other:

Action: Close investigation. Volvo will conduct a safety recall (No. 04V368)

Engineer: John Abbott

Date: 07/28/2004

Div. Chief: Thomas Z. Cooper Tzc

Date: 07/28/2004

Office Dir.: Kathleen C. DeMeter

Date: 07/28/2004

Summary: This Engineering Analysis was opened on June 11, 2003, based on 54 reports of fuel tank leaks. The subject vehicles were model year (MY) 1993 through 1996 Model 850 vehicles. Model 850 was also produced in MY 1997 and was included in this investigation.

Analysis of the data reveals two distinct issues. First, the MY 1994 through 1997 vehicles stand out by accounting for 95 percent of the reported leaks. These vehicles share the same fuel tank design (pn 9142618). The MY 1993 vehicle uses a different fuel tank design (pn 9141101). Secondly, the failures occurred predominantly in hot climates, e.g., California, Arizona, Texas, Florida, Georgia, Louisiana, etc.

Testing of fuel tanks from consumer vehicles at the Vehicle Research and Test Center confirmed leaks through cracks in the fuel tank wall at a heat shield mounting attachment in the MY 1994 through 1997 fuel tanks (pn 9142618). Details of the tests are available in test report VRTC-dcd3060.

Volvo will conduct a safety recall on all MY 1994 through 1997 vehicles originally sold or registered in the following 17 hot states: CA, AZ, NM, TX, LA, MS, AL, GA, SC, FL, NC, TN, AR, OK, UT, NV, AND HI. All MY 1994 through 1997 vehicles in all other states will be remedied under a service campaign. The remedy for both the recall and service campaign is to install a new bushing at each heat shield attachment point (3 per tank). Also, all tanks (vehicles in all states) will be inspected for fuel seepage at the heat shield attachment points and Volvo will replace any tank showing signs of fuel seepage.

The new bushings will prevent heat shield stresses from being transferred to the three heat shield mounting attachments on the fuel tank.

The safety recall is filed under NHTSA safety recall number 04V368. This investigation is closed.

7-28-04  
Tzc