



January 25, 2009

VIA EXPRESS MAIL

Mr. Richard P. Boyd, Chief
Medium and Heavy Duty Vehicle Division
Office of Defects Investigation
U.S. Department of Transportation
National Highway Traffic Safety Administration
1200 New Jersey SE
Washington, D.C. 20590

Re: **PE08-069**
NVS- 214njs

Dear Mr. Boyd:

On behalf of Volvo Trucks North America and Mack Trucks Inc., I have provided responses to specific questions raised in your letter of December 11, 2008.

If you have any questions, then please don't hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim L. LaFon".

Tim L. LaFon
Manager, Regulatory Affairs
Volvo Truck North America a division of Volvo Group North America Inc.
Mack Trucks, Inc.
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1. State by model and model year, the number of subject and peer vehicles Mack and Volvo has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date, state the following:

- a. Vehicle identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Date of manufacture;
- f. Engine make and model;
- g. Air Compressor make and model;
- h. Date warranty coverage commenced; and
- i. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Response: Aggregate Information:

Make	Model	Mod Yr	Eng Make/Mod	Air Comp Make/ Model	Vehicle Count
Mack	CHU	2008	Mack/MP8	MERITOR/WABCO/3 18 (18.7 CFM)	2188
Mack	CHU	2008	Mack/MP8	MERITOR/WABCO/6 36 (37.4 CFM)	3
Mack	CXU	2008	Mack/MP8	MERITOR/WABCO/3 18 (18.7 CFM)	1166
Mack	CXU	2008	Mack/MP8	MERITOR/WABCO/6 36 (37.4 CFM)	23
Volvo	VHD	2008	Volvo/D13	MERITOR/WABCO/2 CYL. 900 L/MIN	292
Volvo	VNL	2008	Volvo/D13	MERITOR/WABCO/2 CYL. 900 L/MIN	2503
Volvo	VNM	2008	Volvo/D13	MERITOR/WABCO/2 CYL. 900 L/MIN	1108

Source of information: SAS Enterprise Guide (North America Division Product tables). The information was last gathered on January 9, 2009.

Specific information on the 2008 Model Year vehicles is included in the enclosed CD under the heading of "Production_Data".

2. State the number of each of the following, received by Mack or Volvo, or of which Mack or Volvo is otherwise aware of, which relate to, or may relate to, the alleged defect in the subject or peer vehicles:

- a. Consumer complaints, including those from fleet operators;
- b. Field Reports, including dealer field reports;
- c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject or peer vehicle, property damage claims, consumer complaints, or field reports;
- d. Reports involving a fire, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving a death or injury was caused by a possible defect in a subject or peer vehicle, property damage claims, consumer complaints, or field reports;
- e. Property damage claims;
- f. Third-party arbitration proceedings where Mack or Volvo is or was a party to the arbitration; and,
- g. Lawsuits, both pending and closed, in which Mack or Volvo is or was a defendant or codefendant.

Response: Aggregate information (Volvo and Mack Combined)

Type	Total Number
a. Consumer/ Fleet Complaints	35
b. Field Reports	29
c. Reports involving a crash, injury, or fatality	0
d. Reports involving a fire	0
e. Property damage claims	0
f. Third- party arbitration proceedings	0
g. Lawsuits	0

Source of information: Volvo and Mack's service database. The information was last gathered on January 8, 2009.

3. Separately for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:

- a. Mack/Volvo's file number or other identifier used;
- b. The category of each item, as identified in Request No. 2 (i.e. consumer complaint, field report, etc.);
- c. Vehicle owner or fleet name (and fleet contact person) , address, and telephone number;

- d. *Vehicle's VIN;*
- e. *Vehicle's make, model and model year;*
- f. *Vehicle's engine make and model;*
- g. *Vehicle's air compressor make and model;*
- h. *Incident date;*
- i. *Vehicle's mileage at time of incident;*
- j. *Report or Claim date;*
- k. *Whether a crash is alleged;*
- l. *Whether a fire is alleged;*
- m. *Whether property damage is alleged;*
- n. *Number of alleged injuries, if any; and*
- o. *Number of alleged fatalities, if any.*

Response: Specific information requested above is included in the access file in the table that is entitled "Request_Number_2_Data".

Source of information: Volvo and Mack's service database. The information was last gathered on January 8, 2009.

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method used for organizing the documents.

Response: Copies are included under tab 1. The documents are organized by category (i.e. customer satisfaction, field report), and within each category by make, and model.

5. State, by make, model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Mack or Volvo to date that relate to, or may relate to, the alleged defect in the subject and peer vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. *Mack/Volvo's claim number;*
- b. *Vehicle owner or fleet name (and fleet contact person) and telephone number;*
- c. *VIN;*
- d. *Vehicle's make, model, and model year;*
- e. *Vehicle's engine make and model;*
- f. *Vehicle's air compressor make and model;*
- g. *Repair date;*
- h. *Vehicle mileage at time of repair;*
- i. *Repairing dealer's or facility's name, telephone number, city and state or zip code;*
- j. *Labor operation number;*

- k. Problem code;
- l. Replacement part number(s) and description(s);
- m. Concern stated by customer; and
- n. Comment, if any, by dealer/technician relating to claim and/or repair.

Response: Aggregate Information:

WARRANTY				
Make	Model	MY - 2008	MY - 2009	Total
MACK	CHU	374	12	386
MACK	CXU	621	75	696
VOLVO	VHD	5	1	6
VOLVO	VNL	223	42	265
VOLVO	VNM	47	7	54
	Totals	1270	137	1407

Source of information: SAS Enterprise Guide (North America Division Product, Claims, and Comments tables). The information was last gathered on January 8, 2009.

Response: Specific information requested above is included in the access file in the table that is entitled "Warranty_Data".

6. Describe in detail the search criteria used to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used.

Response:

- Identified potential claims on 13 liter engines using the words "compressor" and "discharge"
- Read each claim to determine whether it was relevant (used causal part numbers along with the comments to determine relevancy).
- Reported all relevant claims.

Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject and peer vehicles

Response: Some claims contained problem codes, which are as follows:

- "FSB561 016", number assigned by Volvo for the field service bulletin.
- "SB531 014", number assigned by Mack for the field service bulletin.
- "FI0476", fleet improvement campaign.

State, by make, model and model year, the terms of the new vehicle warranty coverage offered on the subject vehicles (i.e. the number of months and mileage for which coverage is provided and the vehicle systems that are covered).

Response: Basic warranty coverage for the subject vehicles and components is twelve months, 100,000 miles. A copy of the warranty certificates which explain the coverage is provided under tab #2.

Describe any extended warranty coverage option(s) that Mack offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

Response:

Option	Model	Model Year	# of vehicles
PURC-01787	CXU	2008	2
PURC-02257	CXU	2008	76
PURC-02263	CHU	2008	25
PURC-02263	CXU	2008	49
PURC-02374	CXU	2008	1
PURC-02375	CXU	2008	3
PURC-02378	CXU	2008	1
PURC-02407	CXU	2008	1
PURC-02413	CXU	2008	1
PURC-02463	CXU	2008	1
PURC-02464	CHU	2008	1
PURC-02464	CXU	2008	2
PURC-02492	CHU	2008	105
PURC-02492	CXU	2008	32
PURC-02495	CXU	2008	1
PURC-02503	CHU	2008	2
PURC-02504	CHU	2008	1
PURC-02508	CXU	2008	1
PURC-02515	CXU	2008	1
PURC-02517	CHU	2008	1
PURC-02518	CXU	2008	10

Source of information: Mack's warranty database. The information was last gathered on January 22, 2009.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Mack has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communications that Mack is planning to issue within the next 120 days.

Response: Service Bulletin 531-014 and Fleet Improvement program FI0476 are included under tab #3.

Source of Information: Mack's dealer portal (SB531 014) and Fleet Service manager (FI0476). The information was last gathered on January 23, 2009.

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject and peer vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Mack or Volvo. For each such action, provide the following information:

- a. Action title or identifier;*
- b. The actual or planned start date;*
- c. The actual or expected end date;*
- d. Brief summary of the subject and objective of the action;*
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and*
- f. A brief summary of the findings and/or conclusions resulting from the action.*

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

Response:

- January 22, 2008, MQR #7582-330 issued by Mack
- January 22- 25, 2008, QJ #561-104 issued by Mack
- January 28, 2008, MQR #7581-770 issued by Volvo
- February 11-15, 2008, QJ#561-106 issued by Volvo

Copies are included under tab #4.

Source of Information: Volvo and Mack's Market Quality and Quality Journal Report databases. The information was last gathered on January 22, 2009.

9. Provide a detailed description of the subject components' installation process. If work instructions are used at the assembly plants' build stations provide a copy for each step, including in-house subassembly.

Response: A PowerPoint slide, describing the installation process at the air compressor, is included under tab #5. A copy of the installation requirements used by the factories is also included.

Source of Information: Volvo's Product Reliability group. The information was last gathered on January 22, 2009.

10. For each subject component part, provide the supplier's name, address, and appropriate point of contact (Name, title, and telephone number). Also, identify by make, model and model year, any other vehicles of which Mack is aware that contain the identical component, whether installed in production or in service and state the applicable dates of production or service usage.

Response:

Part Number	Description	Supplier
17QE371M (21065580)	Discharge Pipe	Spiral
63AM88 (990698)	Compressor Fitting	Parker

Identical components were used on the Volvo D13 model engine, which is available in VHD, VNL, and VNM model vehicles. A similar component (i.e. discharge pipe) was also used on the 16 liter engines (D13, MP10 models), which is available in the Volvo VNL, and VT models and the Mack Titan model. The discharge pipe and compressor fitting in question were introduced with the 2007 Model Year engines.

Source of Information: Volvo's Product Development Department. The information was last gathered on January 22, 2009.

Note: The supplier contact information is included under tab # 6.

11. Describe all modifications or changes made by, or on behalf of, Mack or Volvo in the design, material composition, manufacture, quality control, supply, or installation of the subject components, from the start of production to date, which relate to, or may relate to, the alleged defect, in the subject and peer vehicles. For each such modification or change, provide the following information:

- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
- b. A detailed description of the modification or change;
- c. The reason(s) for the modification or change;
- d. The part number(s)(service and engineering) of the original component;
- e. The part number(s)(service and engineering) of the modified component;
- f. Whether the original unmodified component was withdrawn from production and/or sale,

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and if so, when;

- g. When the modified component was made available as a service component; and,*
- h. Whether the modified component can be interchanged with earlier production components.*

Also, provide the above information for any modification or change that Mack is aware of which may be incorporated into vehicle production within the next 120 days.

Response:

One modification was made that relates to the alleged defect. The modification involved changing the end of the discharge pipe where it connects to the air compressor from a ferrule-type fitting to a 37 degree flare compression-type fitting.

The modification was made to address reports of leaks and separations that were received from the field.

The modified discharge pipe and fitting were introduced on vehicles at Volvo/Mack's manufacturing facilities in May 2008 and introduced as a service solution by Mack in May 2008 and Volvo in July 2008. The old parts were withdrawn from production and service at this time.

The part numbers of the original components were 21065580 (Volvo PN)/ 17QE371M (Mack PN), discharge pipe, and 990698 (Volvo PN)/ 63AM88 (Mack PN), fitting.

The part numbers of the modified components are 21206841, discharge pipe, and 21206950, 37 degree flare-type fitting. These parts are direct replacement parts for the original components and therefore can be used on earlier production model vehicles.

No further modifications are planned at this time.

12. State the number of each of the following that Mack has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale including the cut-off date for sales, if applicable:

- a. Subject Components; and*
- b. Any kits that have been released, or developed, by Mack for use in service repairs to the subject component/ assembly.*

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model, and model year, any other vehicles of which Mack is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

Response: Aftermarket sales information along with the supplier's name, address, and appropriate contact is included under tab #6. The parts would have been used on all 2008 model vehicles with a 13 liter engine.

Response: Aftermarket sales information along with the supplier's name, address, and appropriate contact is included under tab #6. The parts would have been used on all 2008 model vehicles with a 13 liter engine.

Information regarding "other vehicles" that contain the identical component was answered in question #10.

13. Furnish Mack's assessment of the alleged defect in the subject vehicle, including:

a. The causal or contributory factor(s);

Response: Discharge pipe size (designed using English units) used with metric sized fitting.

b. The failure mechanism(s);

Response: Air pressure pushing against the inner wall of the discharge pipe.

c. The failure mode(s);

Response: Leaks and possible disconnection from the air compressor.

d. The risk to motor vehicle safety that it poses;

Response: Disconnection of the discharge pipe would result in loss of a means to replenish the air system; however, it would not result in immediate complete loss of brakes. The air brake system is designed to preserve what air is stored in the air brake system if a leak occurs.

Additionally, the air system gauges and warning devices would alert the driver to the problem if a substantial leak or complete separation were to occur.

e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and

Response: Depends on the extent of the leak. For example, a small leak may not be discernable to the operator when doing pre and post trip inspection and through the air pressure gauges and low air pressure warning devices when operating the vehicle.

A complete disconnection however would result in loss of a means to replenish the air system; therefore, as air as used, the gauges and the low air pressure warning devises would engage and warn the operator.

f. The reports included with this inquiry.

Response: There were no reports included with this inquiry.