Rcd 9/15/2010

Volvo Cars of North America, LLC

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September 14, 2010

Mr. D Scott Yon, Chief
Vehicle Integrity Division
Office of Defects Investigation

NVS-212pco
PE10-025

Mr. Yon,

This letter and its enclosures comprise the response of Volvo Cars of North America to your July 28, 2010 request for information relating to PE10-025. Enclosed is the information which was available to Volvo as of that date.

We have provided below and as separate enclosures (a combination of hardcopy and electronic documents) the answers to the questions raised by PE10-025. We have used the documentation and systems available to us that, in the normal course of business contain the type of information relevant to this request. Please note that for the purpose of PE10-025 we are using data up through and including July 28, 2010, which is the date on which we began our search for this information.

As requested, our answers follow a repeat of each question:

1. State within the body of the response letter, by model, model year and sunroof/moon roof option, the total number of subject vehicles Volvo has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by Volvo, state the following:

   a. Make;
   b. Model;
   c. Model Year;
   d. Vehicle identification number (VIN);
   e. Date of manufacture (in "yyyy/mm/dd" date format);
   f. Date warranty coverage commenced (in "yyyy/mm/dd" date format) or "Unsold" if not sold;
   g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease), and
   h. Sunroof option (include moon roof and other devices requiring drain tubes).

   Provide the detailed information in Microsoft Access 2007, or a compatible format, entitled "Q1_PRODATA.accdb".

Volvo response to Question 1:

The chart below describes the number of "Subject Vehicles" Volvo has produced for sale or lease within the United States and its Territories. The total number of vehicles is approx: 120,276
Detailed information containing the responses to questions 1a-1g can be found on the attached CD-ROM in the Microsoft Access database named "Volvo PE10-025" within the table entitled "Q1_PRODATA". The following abbreviations are used in the table:
DOB = Date of Build
WSD= Warranty Start Date

Make	Model	Model Year	# of Vehicles Produced
Volvo	XC90	2003	12,730
Volvo	XC90	2004	52,409
Volvo	XC90	2005	39,692
Volvo	XC90	*2006	15,445

* 2006, partial model year

2. State the number of each of the following owner report (OR), received by Volvo, or of which Volvo is otherwise aware, which relate to, or may relate to, the alleged defect in subject vehicles and, separately, in peer vehicles:

   a. Consumer complaints, including those from fleet operators;
   b. Field reports, including dealer field reports;
   c. Reports involving a fire, 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 vehicle, property damage claims, consumer complaints, or field reports;
   d. Property damage claims;
   e. Third-party arbitration proceedings where Volvo is or was a party to the arbitration; and
   f. Lawsuits, both pending and closed, in which Volvo is or was a defendant or codefendant.

   For subparts "a" through "d" state within the body of the response letter a summary table containing the total number of each item (e.g., consumer complaints, field reports, etc.) separately and by model and model year. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

   In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and Volvo's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f" identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Volvo Response to Question 2:

In order to identify reports or incidents which may be related to the alleged defect, Volvo collected information from databases where, in the normal course of business, the information is

collected and maintained. Below is a summary of each data source followed by the number of records Volvo is aware of. Additional data can be found on the enclosed CD-ROM within the Access Database titled "Volvo PE10-025", table named "RequestTwoData"

Request	*Count*
Consumer Complaints – "Customer Care"	*15*
Field Reports (including dealer reports)	*1,086*
Reports involving a crash, injury, or fatality based on:	
Clams - involving a death or injury	*0*
Notices - received by the manufacturer alleging or proving that a Death or Injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, Or field reports:	*0*
Property damage claims	*0*
Third-party arbitration proceedings	*0*
Lawsuits	**2*

* 1. *Joanne Neale and Keri Hay v Volvo Cars of North America, LLC and Volvo Car Corporation Served September 2, 2010, Case# 2:10-cv-04407-DMC-JAD*

2. *Kelley McGary and Svein Berg v Volvo Cars of North America, LLC and Volvo Car Corporation – Served September 2, 2010, Case# 2:10-CV-04461-DMC-JAD*

   Both cases involve an alleged defect with the sunroof drain. The Neale case involves MY 2000-Present of S40, V50, S60, S70, S80, V70 XC70 and XC90. The McGary case appears to limit the allegation to XC90. Essentially, it is alleged that the sunroof drains are defective and allow water to seep into the interior of the vehicle resulting in damage.

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. Volvo's file number or other identifier used;
   b. The category of the 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 mileage at time of incident;
   g. Incident date (in "yyyy/mm/dd" date format);
   h. Report or claim date (in "yyyy/mm/dd" date format);
   i. Whether a crash is alleged;
   j. Whether property damage is alleged;
   k. Number of alleged injuries, if any; and
   l. Number of alleged fatalities, if any.

   Provide this information in Microsoft Access 2007, or a compatible format, entitled "Q3_ORDATA.accdb.

Volvo Response to Question 3:

Volvo's data in response to this request can be found on the enclosed CD-ROM within the Microsoft Access database entitled "Volvo PE10-025" within the table named "Q3_ORDATA.

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 Volvo used for organizing the documents.

Volvo Response to Question 4

Electronic copies of each document included in Volvos response to Request No.2 can be found on the enclosed CD-ROM within the folder entitled "Response to Request 4"
A sub-folder for each type of data (i.e., Field report, Customer Complaint, etc.) has been created, the name for each file is also Volvo's "Unique" file number (source system record number)

5. State within the body of the response letter a summary table, by model and model year, a total count for each of the following categories of claims, that have been paid by Volvo to date that relate to, or may relate to, the alleged defect in subject vehicles and, separately in 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 should be identified within each claim.

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

   a. Volvo's claim number;
   b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
   c. VIN;
   d. Vehicle's model and model year;
   e. Repair date (in "yyyy/mm/dd" date format);
   f. Vehicle's mileage at time of repair;
   g. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
   h. Labor operation number;
   i. Problem code;
   j. Replacement part number(s) and description(s);
   k. Concern stated by customer; and
   l. Comment, if any, by dealer/technician relating to claim and/or repair.

   Provide the detailed information in Microsoft Access 2007, or a compatible format, entitled "Q5_WRNTDATA.accdb

Volvo Response to Question 5:

The following table is a summary describing "total count" of "claims" listed by model and model year. Additional detailed data may be found on the enclosed CD-ROM, within the Microsoft Access Database table named "Volvo PE10-025" "Q5_WRNTDATA.accdb" and "Response to Request 5".

Make	Model	Model Year	Count
Volvo	XC90	2003	41
Volvo	XC90	2004	565
Volvo	XC90	2005	852
Volvo	XC90	2006	154

6. Describe in detail the search criteria used by Volvo 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. 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. State, by make and model year, the terms of the new vehicle warranty coverage offered by Volvo on the subject and peer vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that Volvo offered for the subject and peer vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

Volvo Response to Question 6:

In order to respond to Request No. 5, Volvo utilized the "QW90" Warranty system, the search criteria used was the part numbers that were applicable to the alleged defect at the time of this response. As a result, the data return was manually read/filtered to only include data related to the alleged defect. Volvo did not utilize labor operation code and descriptions to source this data. However, as requested in 5g, h and I Volvo included the related codes to each claim.
It is important to note that "Warranty Claim" text is authored by non-technical retailer employees.
Relative part numbers used in as search criteria are as follows:

Part Numbers	
8678966	*30795115*
8678969	*30765643*
8697209	*30728539*
30657429	*30786476*
8696035	*30786579*
30682982	*30786890*
30728357	*31282455*
30765148	*8688436*
	30657629

The following information describes in detail, the terms of the warranty coverage offered by Volvo for the subject vehicles.

New Car Limited Warranty – U.S.

PARAMETERS/WARRANTY COVERAGE

The Volvo New Car Limited Warranty-U.S. and New Car Warranty - Canada applies to new Volvo passenger cars used for non-commercial purposes (i.e., personal/family use). The vehicle must have been originally invoiced and wholesaled by Volvo Cars of North America, Inc., and registered and normally operated in any of the 50 states of the U.S., the District of Columbia, or any of the provinces of Canada.

New Vehicles

Coverage

4 years/50,000 miles/80,000 Kilometers, whichever occurs first

Warranty Start Date

The warranty starts on the date the vehicle is sold /delivered to the first retail purchaser or put into service. Any remaining portion of the warranty is fully transferable to subsequent owners free of charge.

Retailer Demonstrator Vehicles

Coverage

Vehicles placed into retailer demonstrator or loaner service will receive the remainder of the New Car Limited Warranty period when retailed.

It is the selling retailer's responsibility to advise the first retail purchaser of the date the demonstrator was placed into service and the remaining New Car Warranty coverage.

Warranty Start Date

While used as a retailer demonstrator or loaner vehicle, the applicable New Car Warranty begins only if the retailer registers the vehicle with Volvo. If a demonstrator vehicle is not registered, warranty claims cannot be processed for credit.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles or peer vehicles that Volvo 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 communication that Volvo is planning to issue within the next 120 days.

Volvo Response to Request #7:

Electronic copies of each document included in Volvos response to Request No.7 can be found on the enclosed CD-ROM within the folder entitled "Response to Request 7" Volvo has included a table listing each of the 'documents', their relative number and title. In the case where multiple versions are present, this is due to document revisions or suppressions. The version with the highest version number is the most recent.

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 or peer vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, 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.

Volvo Response to Request #8:

Our response to this question can be found on the enclosed CD-ROM within the folder entitled "PE10-025 Response to Q8 and Q11-CONFIDENTIAL ".
Only information related to the alleged defect is being submitted in response to this question. Volvo has not included complete documentation related to the development and verification of the subject component. However, verification tests can be made available upon request.

9. Describe all modifications or changes including software/algorithm revisions made by, or on behalf of, Volvo in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles or 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, and if so, when;
   g. When the modified component was made available as a service component;
   h. Whether the modified component can be interchanged with earlier production components;
   i. The model and model year of the vehicles affected by the modification or change.

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

Volvo Response to Request #9
Volvo has divided the information in 3 subgroups depending on component type.
- CEM
- Plenum cover
- Sunroof drainage

10. Produce one each of the following:

a. Exemplar sample of each baseline subject component (and the drain tube assembly if applicable) of the subject vehicle;
b. Exemplar sample of each updated/modification components (and the drain tube assembly if applicable);
c. Field return sample of the subject component (and the drain tube assembly if applicable)exhibiting the relevant failure mode or its effects; and
d. Any kits that have been released, or developed, by Volvo for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

Volvo response to Request 10:

Volvo has shipped along with this response a package via Federal Express containing the components listed below. Dependent upon the vehicle variant, there may have been more than one part number available, however, the parts listed below and submitted provides the agency with an Exemplary sample of each updated/modified component as requested in 10b above. As part of the supersession process, certain components are discarded once replaced, as a result of this process Volvo cannot provide a 'baseline' component. In addition, the enclosed 'field return' sample, is that from VOQ 10344643 as requested by the Administration. Volvo has also included sample parts as request in 10d.

Part number	Description	Quantity
30657629	CEM	1
31282455	CEM	1
30728860	COVER	1
30775689	GROMMET	1
31270634	EXTENTION CABLE	1
31270635	EXTENTION CABLE	1
983750	CABLE TIE	2

11. Provide a detailed description of the vehicle's electrical functions as it relates to the central electronic module, including:

a. Functional block/flow diagram;
b. Electrical diagram,
c. Software and/or microprocessor logic/protocols,
d. Vehicle network/communication logic/protocols to other vehicle systems
e. Photographs/illustrations of the components and their locations in the vehicle;
f. Fault detection capabilities and fault retrieval capability (if any);
g. Owner warnings and/or notifications that a fault or failure is occurring; and
h. Central electronic module's susceptibility to moisture and/or liquid intrusion.

Volvo response to Request #11

Volvo has provided the information for a, b, and e for this request on the attached CD-ROM, within the folder titled "Response to Request 11". Information pertaining to d can also be found in a and b. Response to request c, f, g and h can be found below.

12. Furnish Volvo's assessment of the alleged defect in the subject vehicle, including:

a. The causal or contributory factor(s);
b. The failure mechanism(s) including water intrusion from the sunroof drain tubes if applicable;
c. The failure mode(s);
d. The risk to motor vehicle safety that it poses;
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
f. The reports included with this inquiry.

Volvo response to Request #12

Sincerely,

for Adam Kopstein

Adam Kopstein
Manager, North American Product Safety and Compliance

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