



Volvo Cars of North America, LLC

RECEIVED
NVS-215

2006 JUN 14 P 3: 14

OFFICE OF
DEFECTS INVESTIGATION

June 2006

TO: US and Canada Dealer Principals, Service Managers, Parts Managers and Sales Managers
RE: Recall R158 Volvo S40, V50 with T5 engine (MY2004.5 – 6) Fuel Line in Engine Bay

RECALL DESCRIPTION:

Volvo has decided that a possible defect related to motor vehicle safety exists in the Fuel Line of certain model year 2004.5, 2005 and 2006 Volvo S40 and V50 vehicles with the T5 engine.

The polyamide tube (PA12) in the fuel line is sensitive to the extreme temperatures that may occur in the area where turbo/exhaust manifold is located. This may potentially result in fuel line leakage after parking the vehicle. If this occurs, the customer may be unable to start the vehicle or may detect a fuel odor.

The remedy is to change the fuel line material to Teflon, a material that withstands the extreme temperatures

Note: This action affects approximately 16,175 vehicles in the US and 1,290 vehicles in Canada.

OWNER NOTIFICATION

Owner notification is scheduled to begin during the next two weeks. Vehicle owners will receive letters via first class mail. The letters will request that the owner of the vehicle take their vehicle to an authorized Volvo retailer for remedy.

RETAILER RESPONSIBILITIES

Retailers must perform this campaign on eligible vehicles regardless of miles/kilometers or vehicle age. All work performed under this Recall Campaign is free of charge to the owner.

In the event that a customer does not have a notification letter, the owner is not to be refused this important work. Your regional representative will follow up to ensure that this campaign is proceeding smoothly.

A complete description of the Recall Campaign requirements and claim submission procedures are attached. It is the retailer's responsibility to review the details provided in these materials with all involved personnel.

- Service Manager Bulletin 23-158
- Tech Net Note 23-158
- Parts Bulletin 23-158

Your cooperation in completing this important campaign is greatly appreciated.

Drive Safely,

Volvo Cars of North America, LLC and Volvo Cars of Canada Corporation

VOLVO				TITLE:		GROUP:	NO:	
				Recall 158 Replacing Fuel Line in Engine Bay		23	158	
Service Manager Bulletin				MODEL YEAR 2004.5 - 2006 S40 & V50 with T5 Engine		ISSUING DEPARTMENT: Warranty		
				REFERENCE BULLETINS: TNN# 23-158 PB 23-158 Supersedes SMB 23-158 dated 2006-05-02		CARMARKET: United States, Canada		
Service Person- nel: read and initial.	SERVICE MANAGER	SERVICE WRITER	WARRANTY ADMINISTRATOR	DATE:		YEAR	MONTH	DAY
				2006	06	02	Page 1 of 3	

BULLETIN REFERENCE

- A. RECALL CAMPAIGN 158 DESCRIPTION
- B. VEHICLES INVOLVED
- C. PARTS INFORMATION/PARTS RETURN
- D. OWNER NOTIFICATION
- E. VEHICLES IN RETAILER INVENTORY
- F. RETAILER RESPONSIBILITY
- G. CAMPAIGN REIMBURSEMENT PROCEDURES
- H. TECHNICIAN COMPETENCY REQUIREMENT
- I. RETAILER ALLOWANCE

A. RECALL CAMPAIGN 158 DESCRIPTION

Volvo has decided that a possible defect related to motor vehicle safety exists in the fuel line of certain model year 2004.5, 2005 and 2006 Volvo S40 and V50 vehicles with the T5 engine. The polyamide tube (PA12) in the fuel line is sensitive to the extreme temperatures that may occur in the area where the turbo/exhaust manifold is located. This may potentially result in fuel line leakage after parking the vehicle. If this occurs, the customer may be unable to start the vehicle or may detect a fuel odor. The remedy is to change the fuel line material to Teflon, a material that withstands the extreme temperatures.

Note: This action affects approximately 16,175 vehicles in the U.S. and 1,290 vehicles in Canada.

B. VEHICLES INVOLVED

NOTE: RETAILER MUST CONFIRM VEHICLE ELIGIBILITY PRIOR TO BEGINNING REPAIR FOR THIS CAMPAIGN.

Vehicle eligibility should be confirmed:

- Inquire via VEN or VRC² - Vehicle Warranty where the message "RECALL CAMPAIGN 158 INCOMPLETE" will appear for eligible vehicles.

"Fixed Right — First Time"



All vehicles should be checked for any other incomplete recalls or service campaigns or service upgrades. All open Recall, Service Campaign or Service Upgrade repairs should be completed.

RETAILER VEHICLE CAMPAIGN LIST

"A Retailer Campaign List" will be posted on VRC² in the Reports Menu under the Service Tab. This list details all affected vehicles that are on record as being retailed or currently in stock at your facility, and is updated monthly. Vehicle eligibility must be confirmed via VRC² prior to performing this service campaign.

C. PARTS INFORMATION / PARTS RETURN

PART#	DESCRIPTION	QTY
30751368	Delivery Pipe	1
30637438	Gasket	5
983750	Cable Tie	1

PARTS RETURN

Parts are not required to be returned for repairs done in accordance with this recall campaign.

D. OWNER NOTIFICATION

In June, Volvo will begin mailing announcement letters directly to the owners of the affected vehicles.

E. VEHICLES IN RETAILER INVENTORY

All vehicles in retailer's inventory and qualifying for this Recall Campaign should be repaired prior to a customer taking possession of the vehicle.

F. RETAILER RESPONSIBILITY

Retailers are to perform this campaign on eligible vehicles regardless of mileage/kilometers or vehicle age. The campaign work covered under Recall Campaign 158 is free of charge to the owner. If a customer presents a recall or service campaign letter for a vehicle that is not found via the VRC² inquiry function, please verify that the letter applies to the customer's vehicle and call the Warranty Assistance Desk at 1-800-807-7712 for instructions. If the Warranty Assistance Desk verifies that the vehicle qualifies for the Recall or Service Campaign, please perform the repair and place the recall or service campaign letter in the customer's file. Under no circumstances should a customer be denied the required service without a confirmation from VCNA/VCCL.

G. CAMPAIGN REIMBURSEMENT PROCEDURES

All claims should be submitted using the SHORT FORM application.

H. TECHNICIAN COMPETENCY REQUIREMENT

The technician competency requirement for this campaign repair is: Level 2.

I. RETAILER ALLOWANCE (SHORT FORM APPLICATION)

Labor reimbursement is effective at time of release and may change in the future.

<u>Claim Type</u>	<u>Repair Code</u>	<u>Repair Description</u>	<u>Labor Time</u>
R26007	02	Fuel Line Fuel Rail, Replace	1.7

Tech-Net Notes

"Fixed Right – First Time"

Volvo Technicians, Service and Parts Managers

NO: 23-158
DATE: 5-2-2006
MODEL/YEAR: S40 2004.5-2006 (Turbocharged engines) Engine code 68.
V50 2005-2006 (Turbocharged engines) Engine code 68.
CHASSIS: 544 0000001-0157396
545 0000001-0158012

NOTE: RETAILER MUST CONFIRM VEHICLE ELIGIBILITY IN VRC2 PRIOR TO BEGINNING RECALL CAMPAIGN REPAIRS.

SUBJECT: Recall 158 Replacing Fuel Line in Engine Bay.
REFERENCE: VIDA, SMB 23-158, PB 23-158

DESCRIPTION:

The polyamide tube (PA12) in the fuel line is sensitive to the extreme temperatures that may occur in the area where the turbo/exhaust manifold is located. This may potentially result in fuel line leakage after parking the vehicle.

SERVICE:

Follow the instructions below and replace the fuel line on all the affected vehicles.

MATERIAL AND TOOLING:

Material	Quantity	Part No.
Delivery pipe	1	30751368
Gasket	5	30637438
Cable tie	1	983750

Special tool	Part No.
Key	951 2666 or similar
Lifting brace	999 7103
Hook	999 5185

Note! Since the illustrations are used for different model years and/or model variants, there may be certain deviations. However, the essential information in the illustrations is always correct.

2.

Pressure reduction

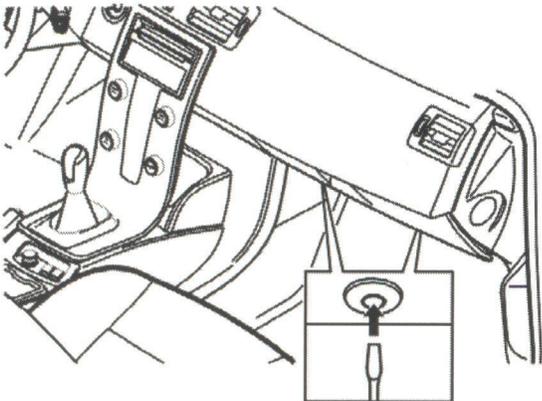
Caution! The fuel system remains under pressure for a long time after the ignition has been switched off. The fuel pressure must be released before beginning any repairs. Failure to follow the instructions can result in personal injury.

3.

Remove the passenger side soundproofing panel

Remove:

- the clips by pressing the lock pin in the center
- the soundproofing panel.



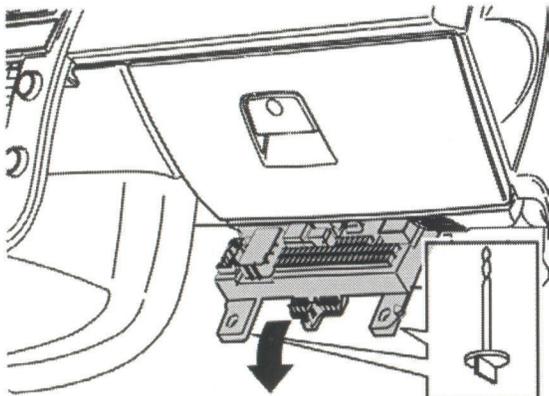
J3603157

4.

Remove central electronic module

Remove:

- the 2 x screws
- the control module/relay box. Fold down and pull towards you.



J3603159

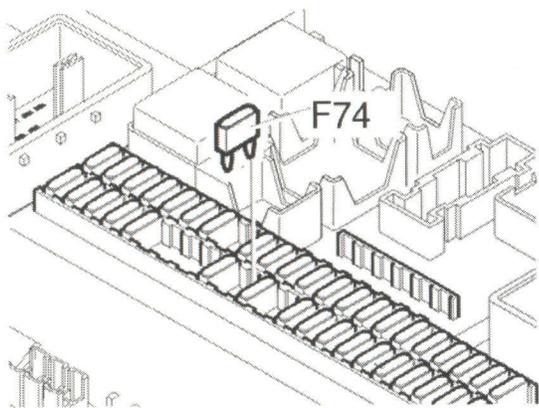
5.

Remove the fuse for the fuel pump (FP)

Remove the fuse for the fuel pump (FP). Start the engine and allow to idle until it stops.

Crank the engine using the starter motor for approximately 5 seconds until the pressure in the fuel rail has been reduced.

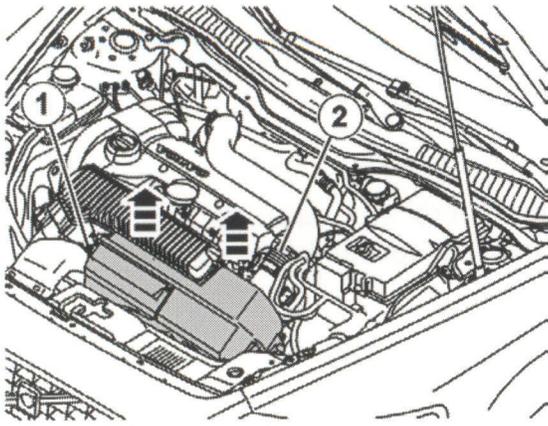
Install the fuse, the central electronic module (CEM) and soundproofing panel in reverse order.



J2303156

6.

Remove the fuel line

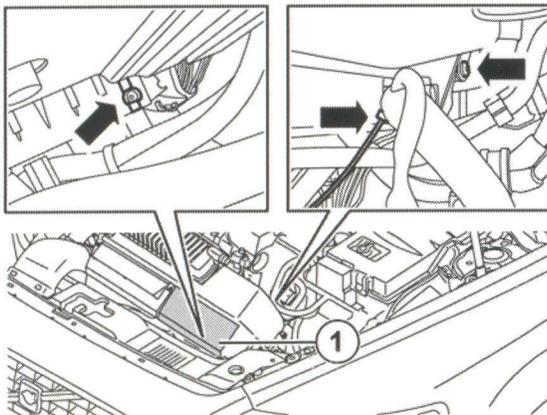


Remove:

- screws for the intake manifold in the front cover plate
- the intake manifold for the air cleaner (ACL) module (1)
- the hose for the mass air flow (MAF) sensor (2). Disconnect the connector for the mass air flow (MAF) sensor
- the brake vacuum hose from the intake manifold
- the brake vacuum hose from the vacuum pump. Move the hoses to one side.

J23033163

7.



Pull the protective cover (1) on the engine control module (ECM) straight up. Place the protective cover to one side.

Fold up the two red striker plates for the engine control module (ECM) connectors. Pull out the cable harness.

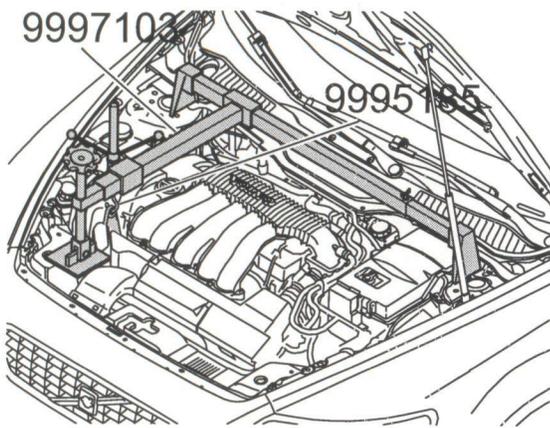
Remove the screw and cable tie at the rear edge of the air cleaner (ACL) housing assembly.

Remove the cable harness from the holder by the cable tie and depress the cable harness.

Pull out the cable harness mounting from the air cleaning (ACL) module.

i-239292

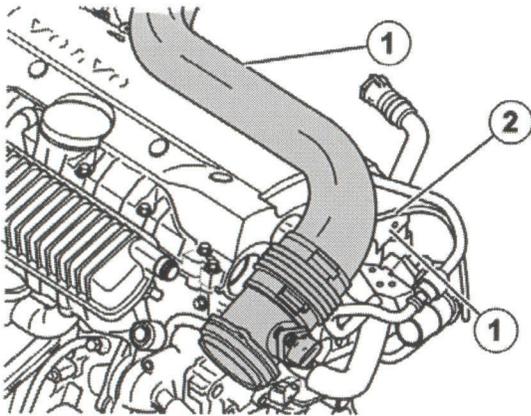
8.



J2200251

Install lifting brace 999 7103 together with hook 999 5185 and tighten the tool. Release the air cleaner (ACL) module from the rubber mountings by lifting it straight up. Then pull the module towards the left front fender. Lift out the module.

9.

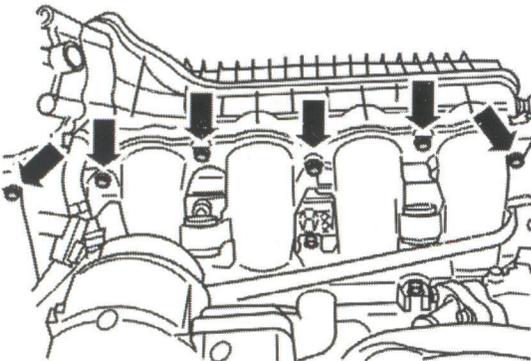


J2800639

Remove:

- the screws (1) for the intake manifold
- the hose clamp at the junction to the rubber hose for the turbocharger (TC)
- the EVAP canister hose (2) from the intake manifold
- the intake manifold

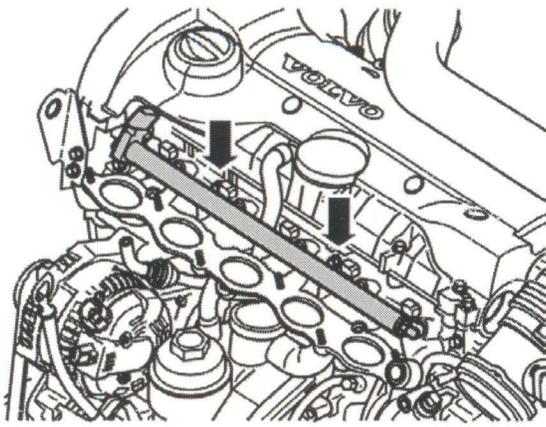
10.



i-240180

Remove the 6 x screws for the upper section of the intake manifold. Move the manifold to one side. Cover the bottom section of the intake manifold.

11.



Caution! Clean up any fuel spills using paper.

Remove the covers over the ignition coils/spark plugs.
Disconnect the connectors for the fuel pressure sensor and the connectors for the injectors. Remove the 2 x fuel rail mounting screws.

Spray universal oil or similar around the injector nozzle at the opening in the intake manifold.

Gently work the fuel rail and injector nozzles loose.

Disconnect the fuel line to the fuel rail. Press in the two blue clips on the fuel rail. Pull the fuel line out of the fuel rail.

Note! For vehicles with new coupling (catch), see next step.

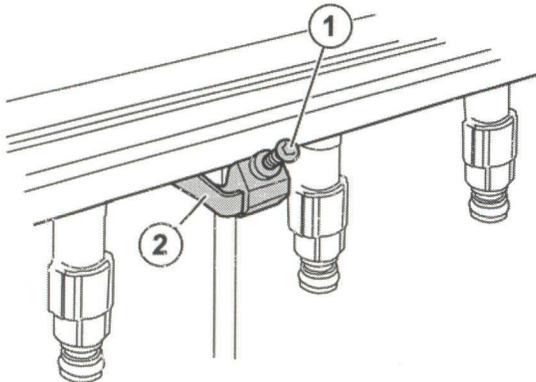
J2303175

12.

Vehicles with new coupling (catch)

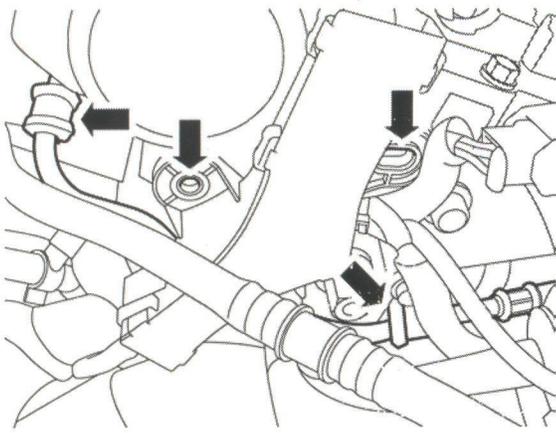
Note! During running production a new coupling (catch) has been introduced between the fuel line and fuel rail.

Unscrew the screw (1).
Bend out the secondary lock (2). Pull out the catch.
Remove the fuel rail.



i-240955

13.



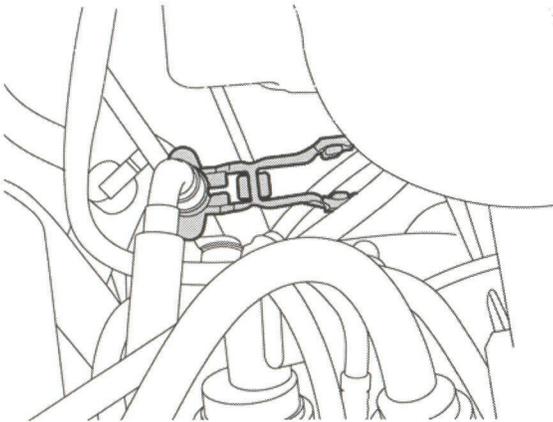
i-239295

Remove:

- the screws for the clamps on the fuel line
- the two screws for the cable duct. Pull out the cable duct as far as possible from the cylinder head and secure it.

Note! It is important that there is space behind the cable duct when installing the new fuel line.

14.



i-239293

Caution! Clean up any fuel spills using paper.

Disconnect the fuel lines. Use key 951 2666 or similar.

Caution! Note how the fuel line is routed.

Cut off the plastic section of the fuel line exactly behind the junction between the plastic pipe and the metal pipe and remove the fuel line.

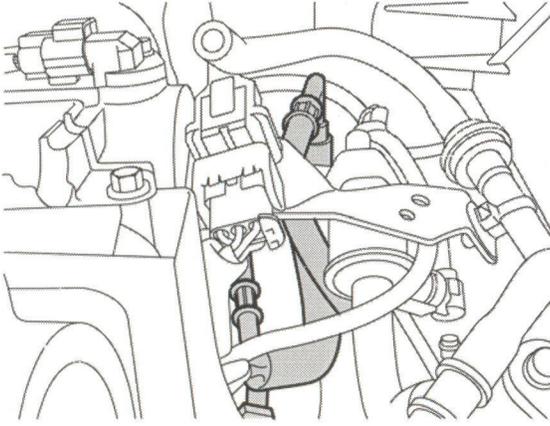
15.

Install new fuel line

Caution! Read this first.

The plastic section of the new fuel line is preformed but is softer than the old one. At installation it can be straightened and carefully threaded behind the cable duct.

Note! The hose must not be bent or kinked, i.e. there cannot be any sharp bends in the hose. If the hose is bent this can affect the shape of the hose restricting the flow of fuel.



Install the new fuel line.

The fuel line and the electric cable are marked in the figure.

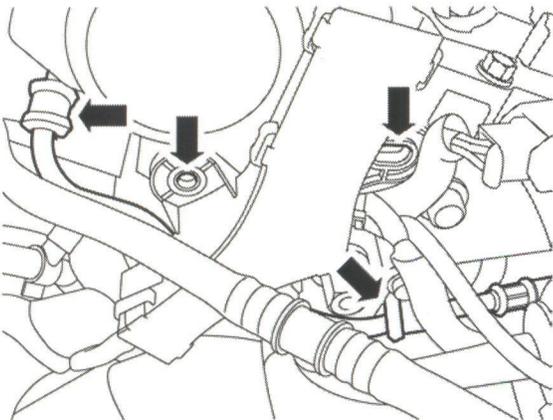
Thread the fuel line behind the cable duct further along under the electrical cable and up on the other side of the electrical cable, so that it is located between the electrical cable and the EVAP valve.

Install the fuel line's quick release connector to the fuel line from the tank. A click should be heard once it is locked.

Check that it is locked by pulling the coupling.

Check that the bend in the fuel line can be moved freely and is not pinched by surrounding components.

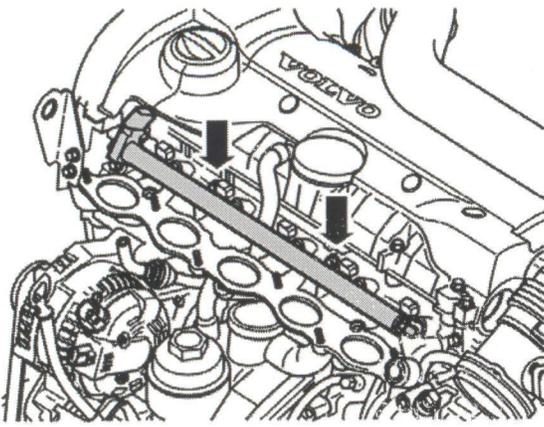
i-239294



i-239295

Install:

- the screws for the clamps on the fuel line. Tighten the screws.
- the screws for the cable duct. Tighten to 10 Nm (88.5 in/lb).



J2303175

Lubricate the injector O-rings using petroleum jelly.
Install the fuel rail. Ensure that all injectors sit correctly.
Press the quick-release connector together until a clicking sound is heard.

Note! For vehicles with new coupling (catch), see next step.

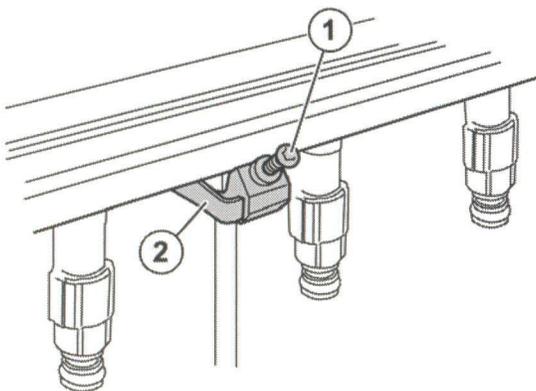
Install the screw for the fuel rail. Tighten to 10 Nm (88.5 in/lb).
Connect the connector for the injectors and the fuel pressure sensor.
Install the covers over the spark plugs/ignition coils.

19.

Vehicles with new coupling (catch)

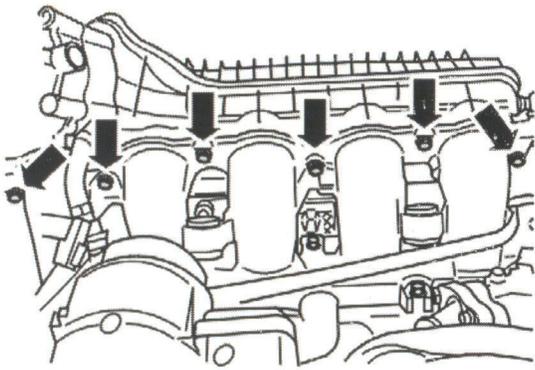
Note! Screw in the screw until it engages.

Install the fuel rail.
Press in the secondary lock (2).
Screw the screw (1) right in.



i-240955

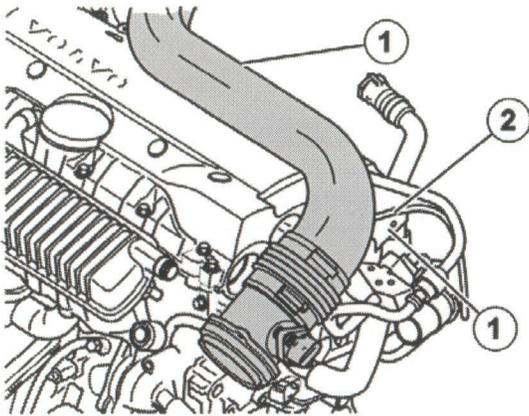
20.



i-240180

Remove the cover from the bottom section of the intake manifold.
Install new gaskets.
Insert the 6 x screws. Tighten to 10 Nm (88.5 in/lb).

21.

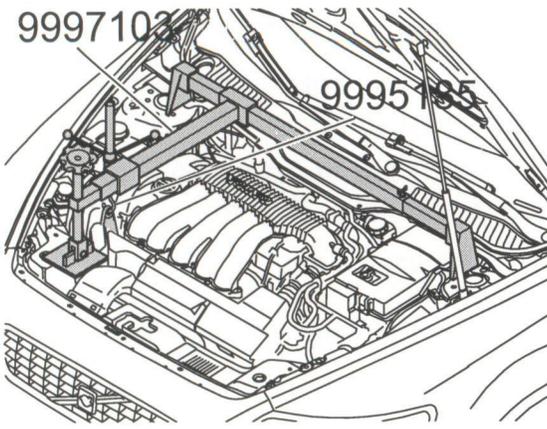


J2800639

Install:

- the intake manifold
- the screws (1) for the intake manifold. Tighten to 17 Nm (150 in/lb).
- the hose clamp at the junction to the rubber hose for the turbocharger (TC). Tighten the hose clamp
- the canister hose (2) for the intake manifold.

22.



J2200251

Caution! Ensure that all catches for the vacuum hoses are intact and secure.

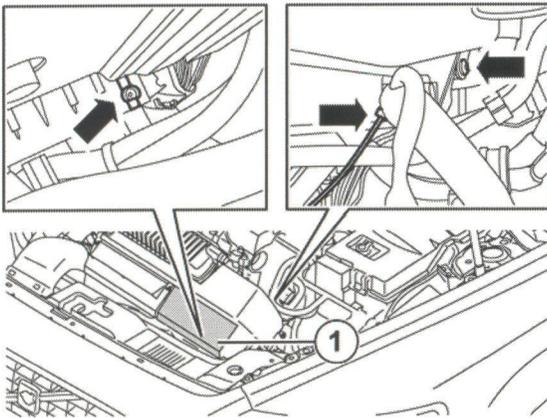
Tip: Lubricate the mounting hooks on the air cleaner (ACL) module using petroleum jelly or similar.

Hook the cable harness in the air cleaner (ACL) module before hooking into its mountings.

Install the air cleaner (ACL) module. Turn the module downwards and pull it towards the right front fender. Push the module straight down so that the catches engage.

Remove the tools.

23.



i-239292

Check that the cable harness is in its mounting on the front side of the air cleaner (ACL) module.

Install a cable tie in the clip.

Raise the cable harness and press it into its mounting.

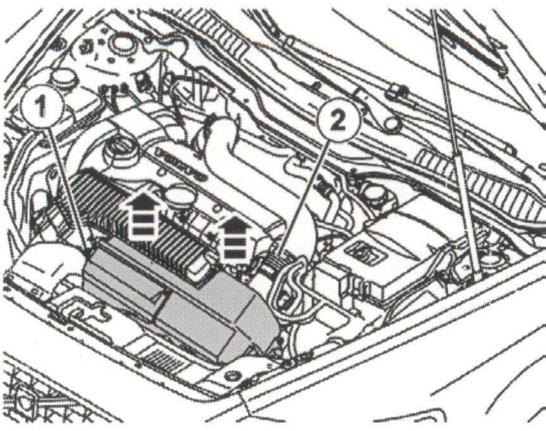
Insert the screw and tighten.

Tighten the tie strap around the cable harness.

Install the engine control module (ECM) connectors, 2 pcs.

Install the protective cover (1) on the engine control module (ECM).

24.



Install:

- the intake manifold for the air cleaner (ACL) module (1)
- screws for the intake manifold in the front cover plate. Tighten the screws
- the hose for the mass air flow (MAF) sensor (2). Connect the connector for the mass air flow (MAF) sensor
- the brake vacuum hose to the intake manifold
- the brake vacuum hose to the vacuum pump.

J23033163

25.

Follow-up work

Start the engine and check for leaks.
Check for and erase fault codes if set.

VOLVO for life,
Volvo Cars of North America, LLC
Technical Service

Please circulate, read and initial: _____ Svc Mgr _____ Parts Mgr

_____ TECHS

_____ Shop Foreman _____ Warranty Administrator

SUBJECT Parts Return: Recall Campaign 158 - Replacing Fuel Line in Engine Bay MY2004.5 S40, MY2005- V50 with T5 engine only				GROUP 23		NO 158	
				MARKET United States, Canada		PAGE 1 of 1	
COPY TO / CIRCULATIONS (PLEASE INITIAL)							
GENERAL MGR	PARTS MGR	SERVICEMGR	SALES MGR	DATE	YEAR	MONTH	DAY
					2006	05	02

Reference Bulletin SMB 23 -158, TNN 23 -158

Volvo Cars of North America, LLC and Volvo Cars of Canada Corp. (Volvo) have determined that in certain MY2004.5- S40, MY2005- V50 vehicles with T5 engine variants only, a defect related to motor vehicle safety exists in the fuel line. The polyamide tube (PA12) in the fuel line is sensitive to the extreme temperatures that may occur in the area where the turbo/exhaust manifold is located. This may potentially result in fuel line leakage after parking the vehicle. If this occurs, the customer may be unable to start the vehicle or may detect fuel odor.

The corrective action will be to replace the fuel line with one made of a Teflon material that will withstand more extreme engine temperatures.

Approximately 16,200 vehicles in the U.S. and 1,290 vehicles in Canada may be affected.

The following part numbers apply:

Part Number	Description	Qty
30751368	Delivery Pipe	1
30637438	Gasket	5
983750	Cable Tie	1

An initial allocation of fuel lines and gaskets, representing 15% of the vehicles retailed or in stock at your facility, will be made starting on or about the week of May 8th, 2006. After this one-time allocation you may order additional quantities using normal ordering procedures. Note - Please set your DMS to "Manual Order" on this part number so that you may monitor and limit your orders to actual demand.

"A Retailer Campaign List" will be posted on VRC² in the Reports Menu under the Service Tab. This list details all affected vehicles that are on record as being retailed or currently in stock at your facility, and is updated monthly. Vehicle eligibility must be confirmed via VRC² prior to performing this service campaign.

"Fixed Right — First Time"



IMPORTANT RECALL NOTICE

[RECALL 158: REPLACING FUEL LINE IN ENGINE BAY
SAMPLE OWNER NOTIFICATION LETTER
UNITED STATES]

June 2006

Dear Volvo Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

The reason for this campaign:

Volvo Cars of North America, LLC. (Volvo) has decided that a defect related to motor vehicle safety exists in the fuel line of certain model year 2004.5, 2005, 2006 S40 and 2005, 2006 V50 vehicles equipped with the T5 engine.

The polyamide tube (PA12) in the fuel line located in turbo/exhaust manifold may become sensitive due to extreme temperatures. In some cases, this may potentially result in fuel line leakage after parking the vehicle. If leakage occurs, the vehicle may be unable to start or you may detect a fuel odor. Fuel leakage, in the presence of an ignition source, could result in a fire.

The corrective action will be to replace the fuel line with a tube of a modified design, with a material that can withstand the extreme temperatures.

What you need to do:

Please call your authorized Volvo retailer as soon as possible to schedule an appointment. This procedure will be completed at no cost and will take approximately 2 hours. Due to service scheduling, your Volvo retailer may require your vehicle for a longer period of time.

If you previously paid to have this corrective action performed, your authorized Volvo retailer will honor your receipt with a refund. Please contact the Service Department for details.

Please contact:

If you have any questions, please contact your Volvo retailer. If your retailer is unable to answer your questions, please contact Volvo Customer Care Center at 7 Volvo Drive, Rockleigh, NJ 07647 or phone 1-800-458-1552, Monday through Friday, 8:30 A.M. to 7:00 P.M. Eastern Time. You may also e-mail us at customercare@volvoforlife.com.

We have advised the National Highway Traffic Safety Administration (NHTSA) that we are conducting this recall. If you are unable to have this procedure performed without charge and within a reasonable period of time, you may call the toll-free Vehicle Safety Hotline 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or contact the NHTSA Administrator at 400 Seventh Street SW, Washington, DC 20590.

Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days. Lessor means a person or entity that is the owner, as reflected on the vehicle title, of any five or more leased vehicles.

Your safety and continued satisfaction with your Volvo and the Volvo organization are very important to us. We apologize for any inconvenience this may cause and we appreciate your cooperation in arranging to have this important service completed as quickly as possible.

Sincerely,

Eunice Stern

Manager, Customer Care