

ENGINE**Cooling System - Removal, replacement and installation****CHARGE AIR COOLER (CAC) AND CONNECTIONS (2003-2007)****CHARGE AIR COOLER (CAC), REPLACING**

NOTE: As the illustrations in this service information are used for different model years and / or models, some variation may occur. However, the essential information in the illustrations is always correct.

PREPARATORY WORK**REMOVING THE BATTERY LEAD AND DRAINING THE AIR CONDITIONING (A/C) SYSTEM**

Disconnect the battery negative lead. See: **BATTERY, DISCONNECTING** .

Drain the air conditioning (A/C) system. See **REFRIGERANT, DRAINING** .

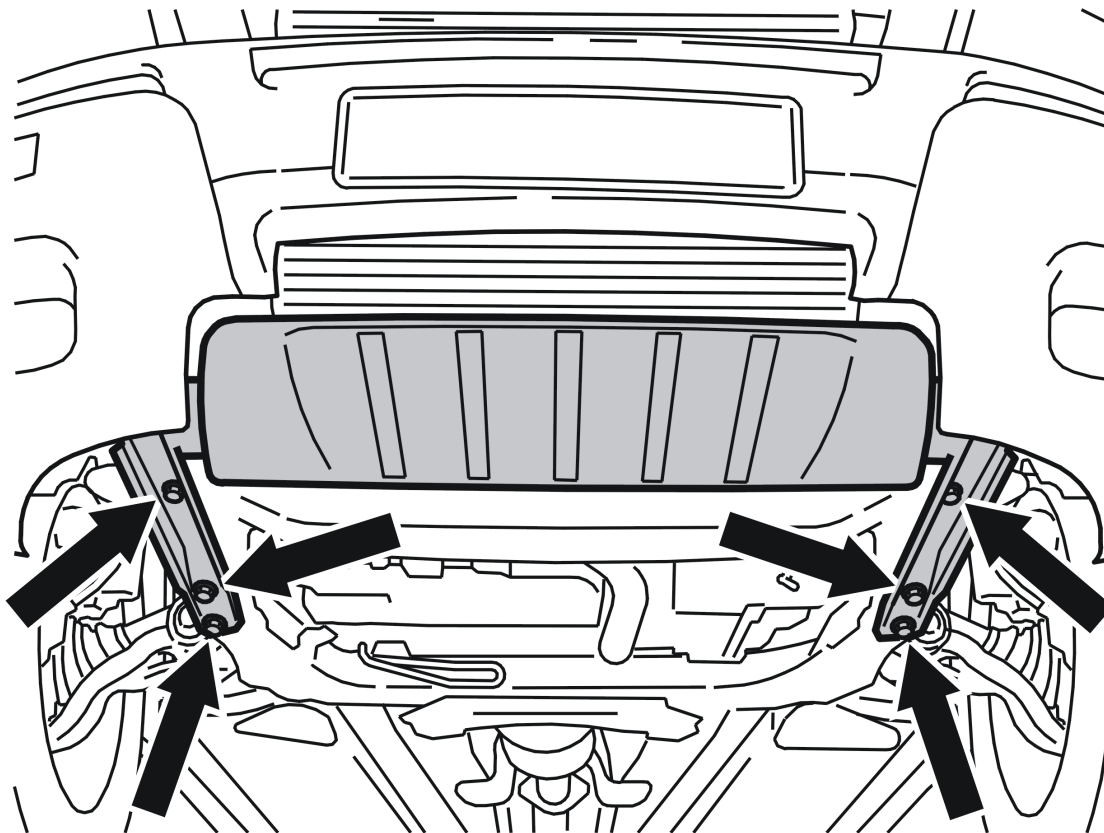
REMOVING THE SKIDPLATE

Fig. 1: Splash Guard, Protective Plate And Screws

Courtesy of VOLVO CARS CORPORATION

Remove the 6 screws.

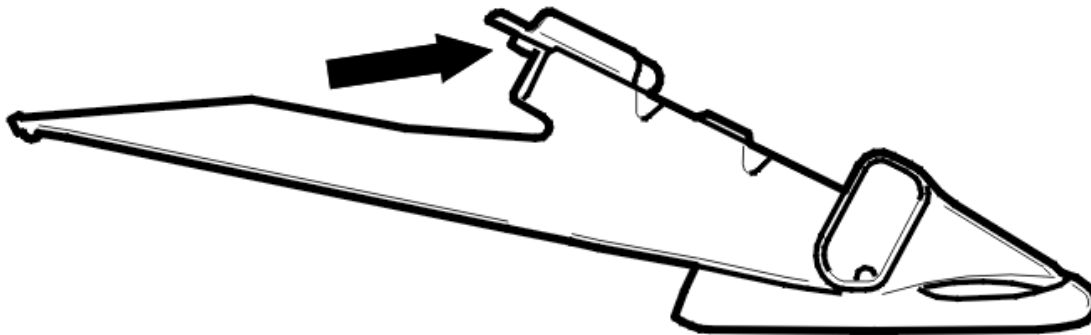


Fig. 2: Identifying Protective Plate

Courtesy of VOLVO CARS CORPORATION

Lift up and slide the plate forward.

Remove the splash guard.

NOTE: There is a guide sleeve on the upper mounting for the plate. This must be lifted slightly so that the panel can be slid forward.

DRAINING COOLANT

Block the lower hose with lock grip pliers.

Install a hose on the nipple at the radiator.

Feed the hose down to a container.

Open the nipple and drain off the coolant.

REMOVING THE CABLE DUCT AND AIR DUCT

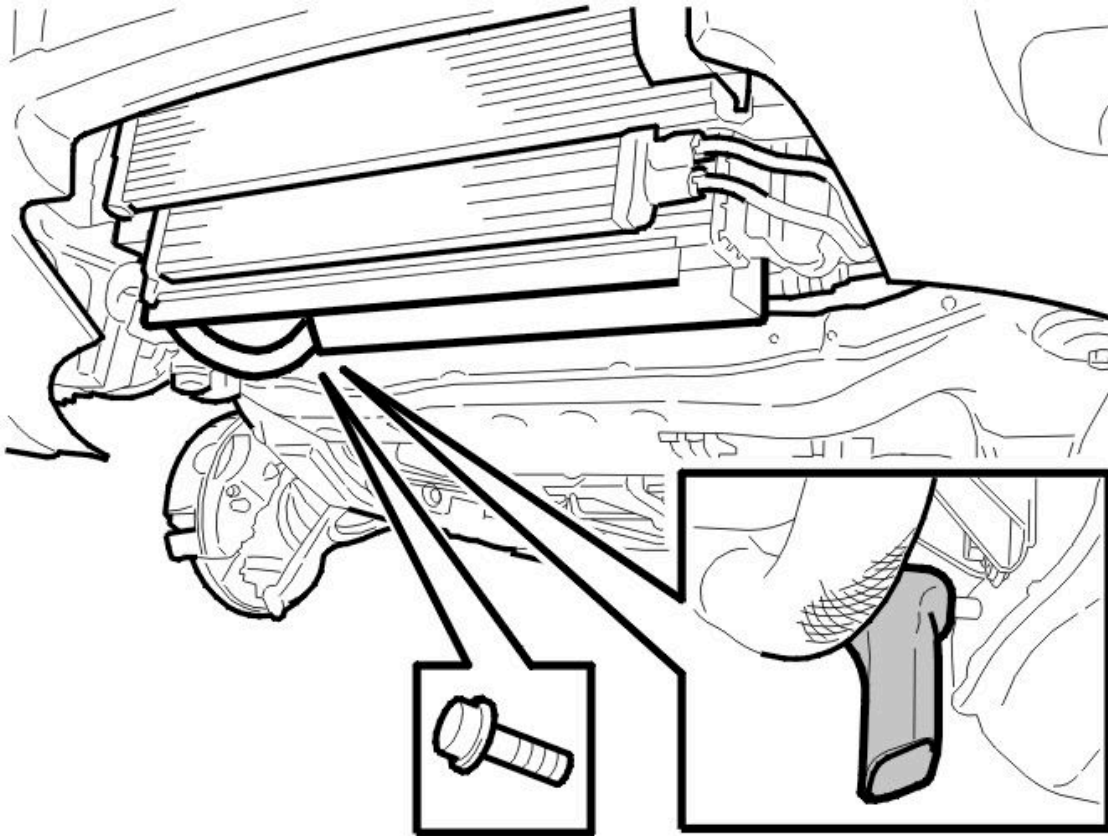


Fig. 3: Identifying Screw For The Cable Duct.
Courtesy of VOLVO CARS CORPORATION

Remove the screw for the cable duct. Place the cable duct on the sub-frame.

Pull the air duct from the clips on the sub-frame.

REMOVING THE OIL COOLER HOSES

Only applies to vehicles with automatic transmissions:

Remove the lower oil cooler hose from the air conditioning (A/C) aggregate.

Plug the openings in the hose and radiator.

NOTE: Collect the oil from the oil cooler in a container.

Lower the vehicle. Remove the upper oil cooler hose from the air conditioning (A/C) aggregate.

Plug the openings in the hose and radiator.

REMOVING THE CHARGE AIR PIPE/HOSE

Disconnect the charge air pipe from the charge air cooler (CAC) on the left-hand side. If necessary, use a hot air gun to facilitate removal.

Remove the clamp. Remove the charge air hose on the right-hand side from the charge air cooler (CAC).

REMOVING THE UPPER COOLANT HOSES**Remove:**

- the evacuation hose from the expansion tank and the clip mounting
- the upper radiator hose.

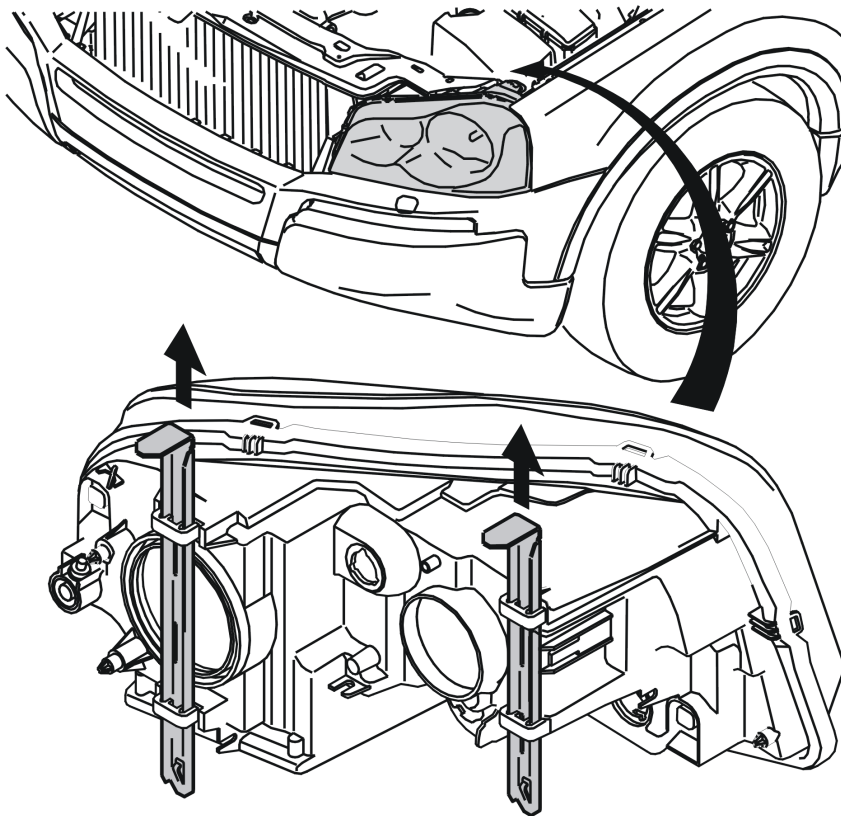
REMOVING THE RIGHT-HAND HEADLAMP

Fig. 4: Pulling Locking Plate Straight Up
Courtesy of VOLVO CARS CORPORATION

Pull the locking plate straight up.

Separate the connector.

Remove the headlamp.

REMOVING THE AIR CONDITIONING (A/C) PIPE

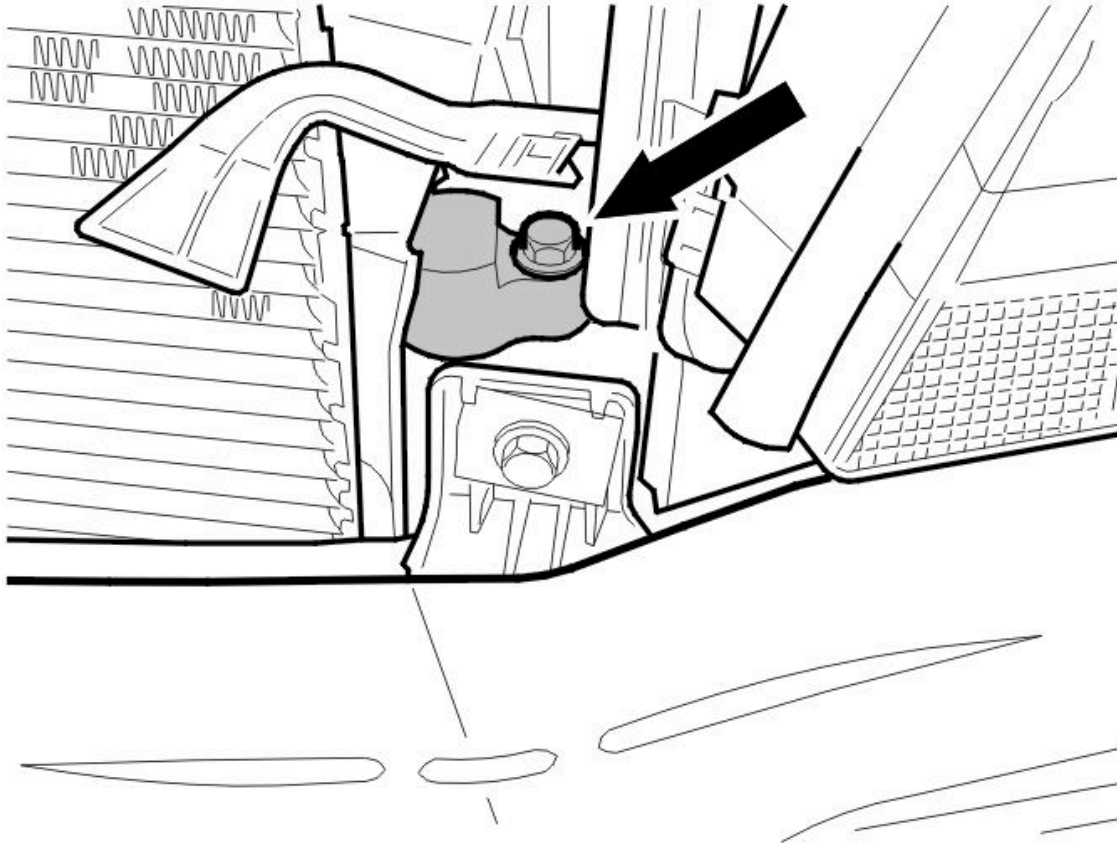


Fig. 5: Locating Air Conditioning Condenser Pipe
Courtesy of VOLVO CARS CORPORATION

Remove from the left-hand side:

- screw
- the air conditioning (A/C) pipe.

Seal the openings on the pipe and condenser.

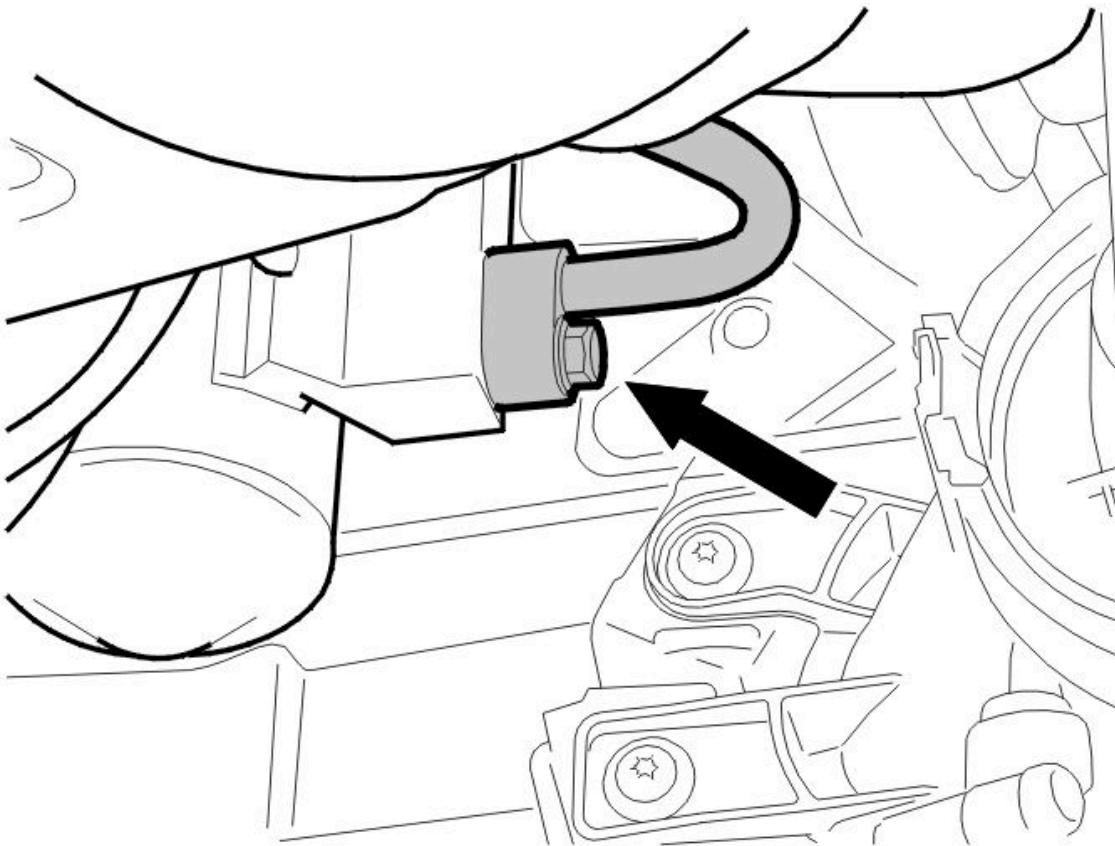


Fig. 6: Locating Air Conditioning Receiver Pipe
Courtesy of VOLVO CARS CORPORATION

Remove from the right-hand side:

- the connector

Raise the car

Remove:

- screw
- the air conditioning (A/C) pipe.

Seal the openings on the pipe and receiver.

HINT: Pull down and hang up the left-hand pipe so that the hose is positioned above the sub-frame.

REMOVING THE LOWER ENGINE COOLANT HOSE

Slacken off the hose clamp. Remove the hose from the radiator.

Fold the hose out of the way.

REMOVING THE RADIATOR ASSEMBLY

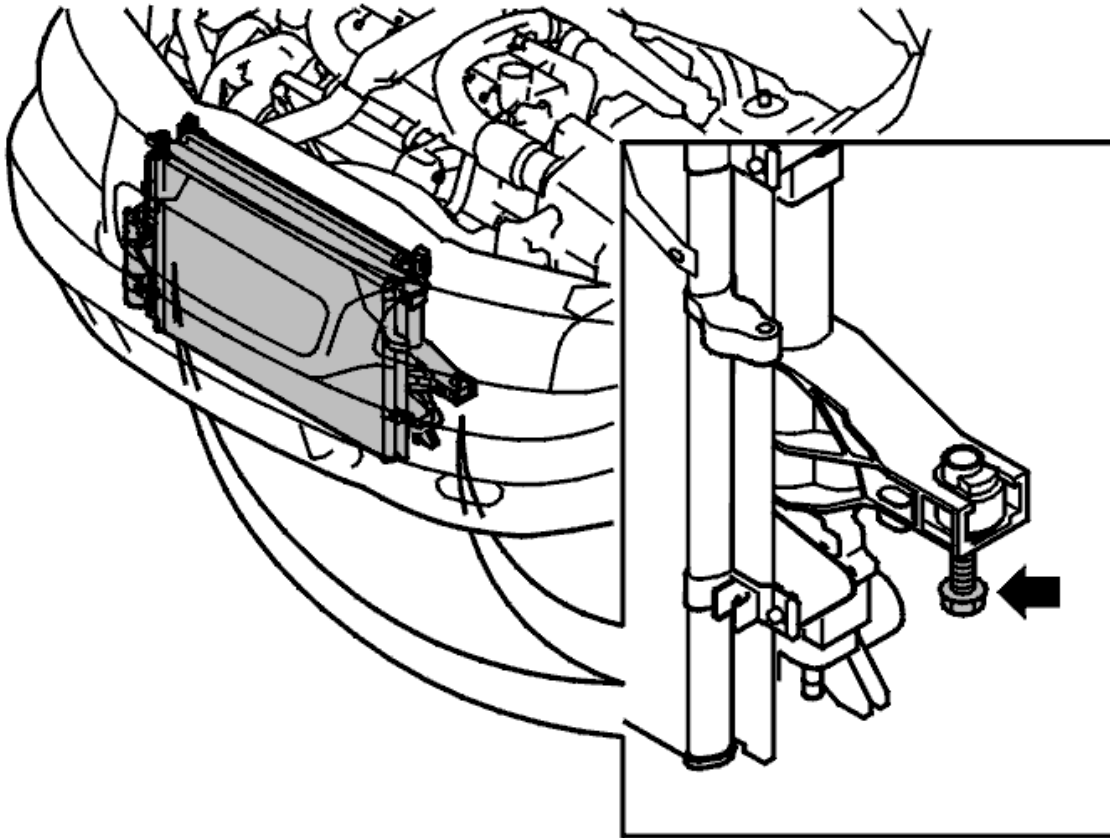


Fig. 7: Identifying Lower Mounting For Air Conditioning Aggregate
Courtesy of VOLVO CARS CORPORATION

NOTE: Two people are required for this procedure.

Hold up the air conditioning aggregate and slacken off the two mounting screws.

Carefully lower the air conditioning aggregate.

NOTE: Ensure that no hoses are trapped when removing the air conditioning aggregate.

REMOVING THE ENGINE COOLING FAN (FC)

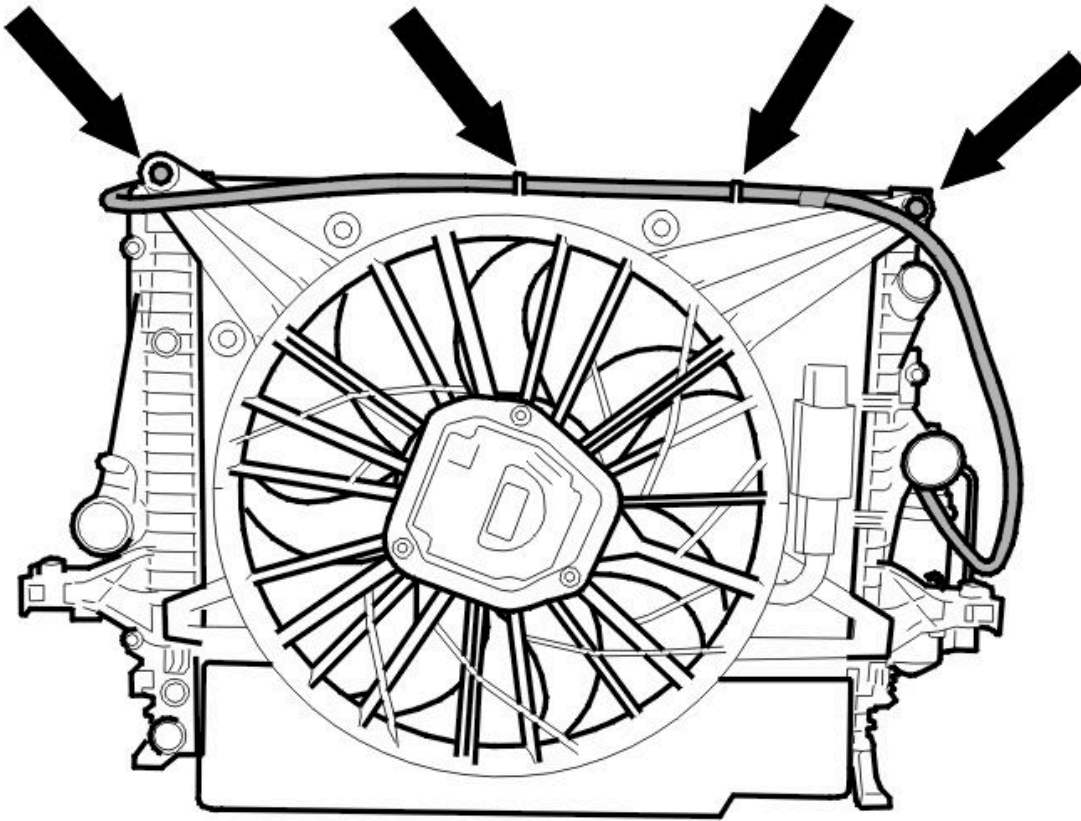


Fig. 8: Identifying Engine Cooling Fan
Courtesy of VOLVO CARS CORPORATION

Remove:

- the screws
- the evacuation hose from the clip mountings
- the engine cooling fan (FC).

REMOVING THE RADIATOR

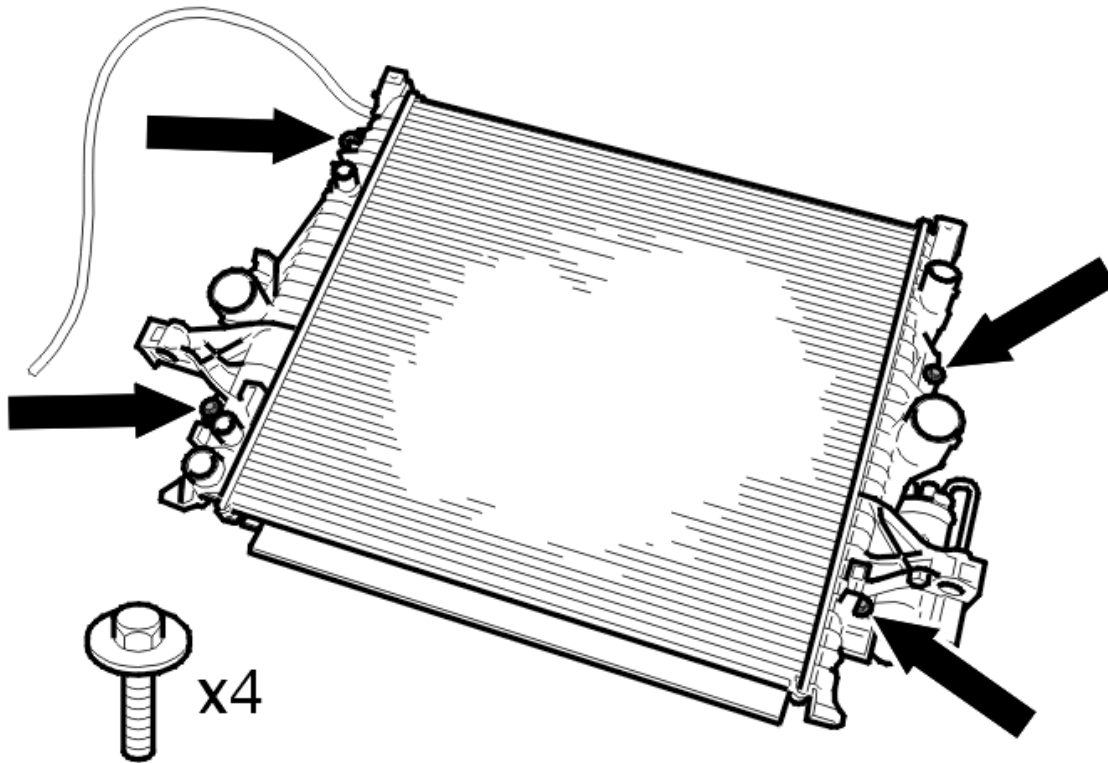


Fig. 9: Identifying The Air Conditioning Aggregate Screws
Courtesy of VOLVO CARS CORPORATION

Remove:

- the screws
- the air conditioning aggregate.

REMOVING THE CHARGE AIR COOLER (CAC)

Lift out the charge air cooler (CAC).

INSTALLING THE CHARGE AIR COOLER (CAC)

Position the charge air cooler (CAC) over the condenser.

INSTALLING THE RADIATOR

Position the radiator over the condenser and the charge air cooler (CAC).

Install the screws. Tighten to **10 Nm** .

INSTALLING THE ENGINE COOLANT FAN (FC)