

XC90 (-16), 2004, B6294T, 4T65 AWD, L.H.D

12/4/2026



PRINT

Sub-frame front, replacing

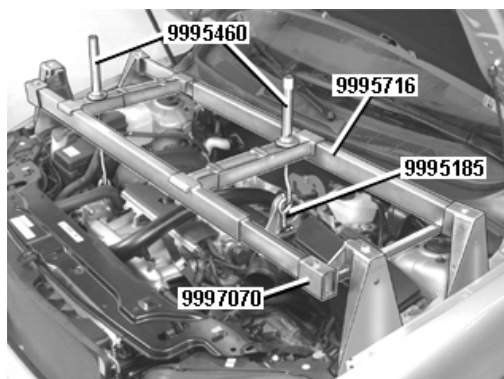
Special tools:

999 7018
999 5716
999 5460
951 2050
999 7062
999 7070

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.

Preparation

Loosen the ball joint pin from the link arm on both sides according to Ball joint, replacing



Install the lifting eye 999 7018 on the left side of the engine at the 2 screws.

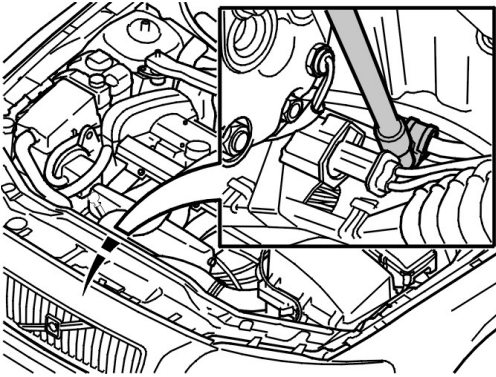
Lock the lifting lug using the snap ring.

Install lifting tool 999 5716 converted with kit 999 7070 and lifting hooks 999 5460 .

Lift the engine to relieve the load on the engine pads.

Remove the front wheels.

Removing the clamp for the servo pressure hose



Remove the clamp for the servo pressure line on the sub frame.

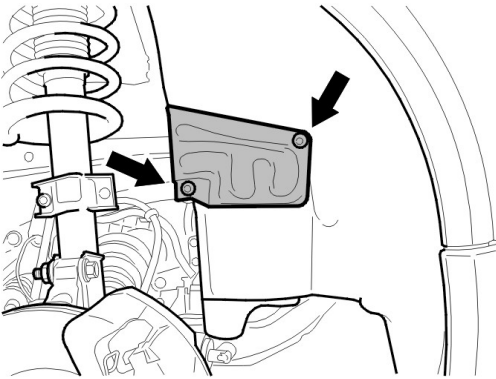
Removing the right engine mounting

Slacken off the right lower front part of the fender liner.

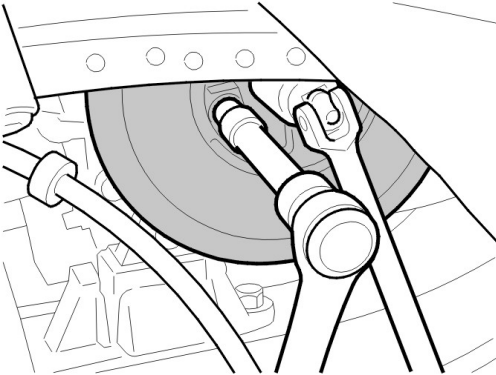
Remove:

- the plastic nuts on the fender liner
- the protective plate.

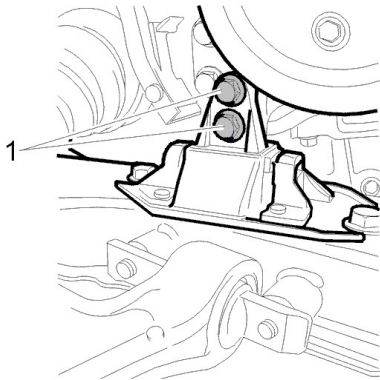
Bend out the fender liner.



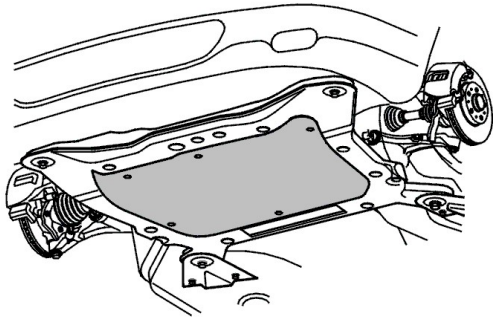
Remove the 4 screws for the vibration damper. Counterhold the crankshaft central nut. Remove the vibration damper.



Remove the 2 screws for the right hand engine mounting. (1)



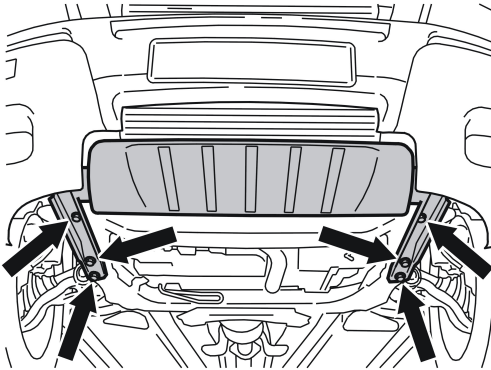
Removing the splash guard under engine



Remove the splash guard under the engine.

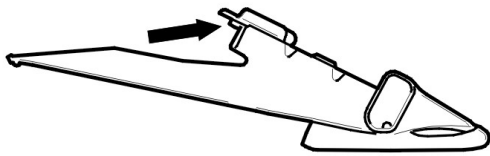
Removing the skid plate

Remove the 6 screws.



Lift and slide the splash guard forward.

Remove the protective plate.

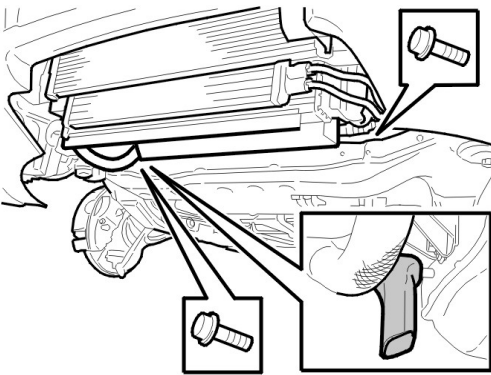


Note! There is a guide sleeve on the upper mounting for the plate. This must be lifted slightly so that the panel can be slid forward.

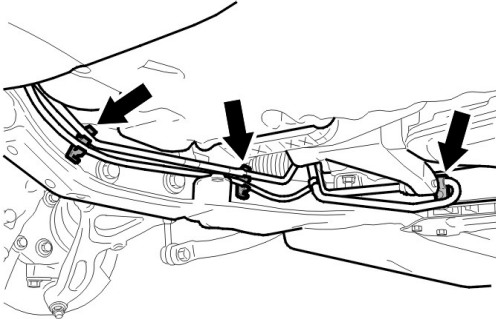
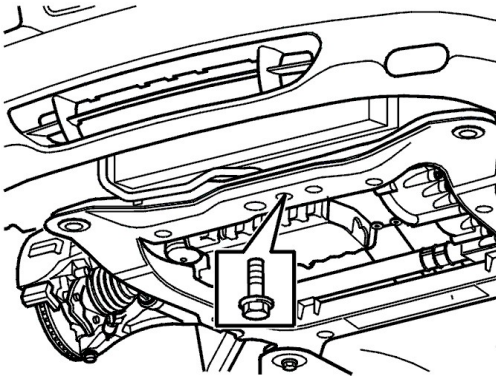
Exposing the sub-frame

Remove:

- the screw for the cable duct
- the screw for the ground lead.



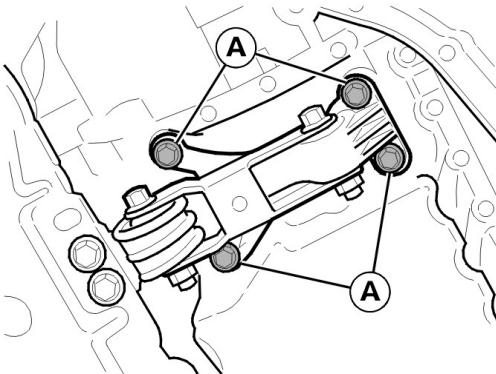
Remove the screw for the front engine pad.



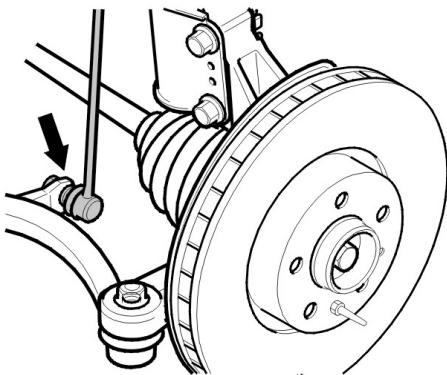
Remove:

- the oil pipe for the steering gear from the snap fasteners along the sub-frame
- the screw clip for the steering gear return line
- the fuel line for the engine block heater and the engine block heater (if applicable) on the left side of the sub-frame.

Remove the 4 screws holding the torque rod to the engine.

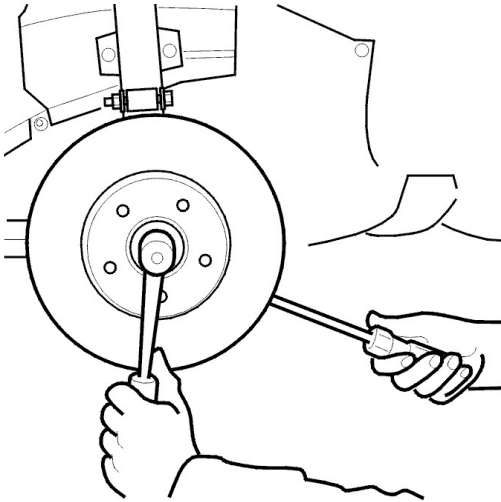


Remove the anti-roll bar links from the anti-roll bar on both sides. Counterhold using a Torx wrench so that the ball joint boot is not damaged.



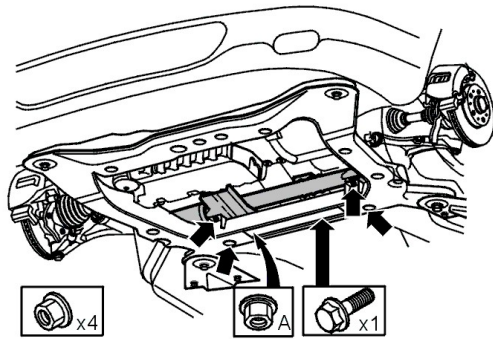
Removing the drive shaft

Remove the screw for the drive shaft. Use a screwdriver as a counterhold on the brake disc.



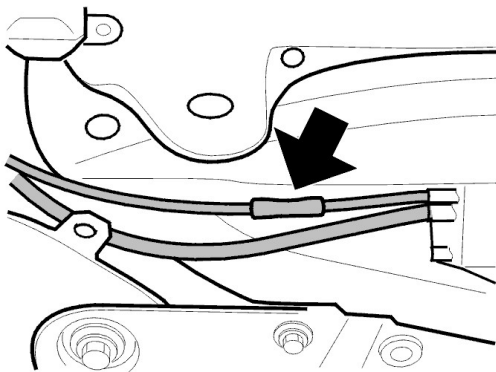
Knock the end of the drive shaft into the hub. Use a brass drift.

Loosen the ball joint pin from the link arm according to Ball joint, replacing .



Remove the 4 nuts and the screw holding the steering gear to the sub-frame.

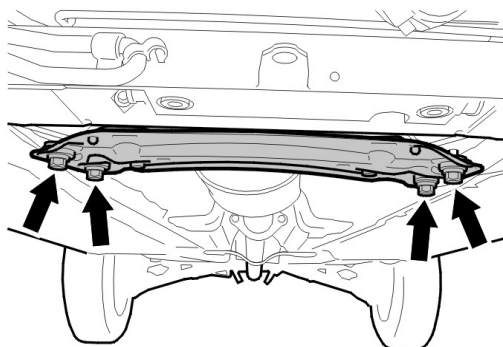
Remove the power steering line from the clips on the sub-frame.



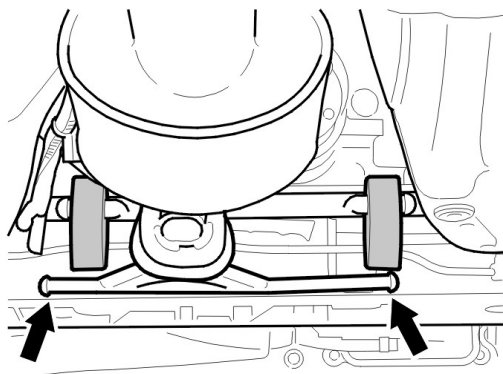
Remove the hose for the EVAP canister in the joint by pulling apart the hose. Route the hose under the anti-roll bar.

Remove:

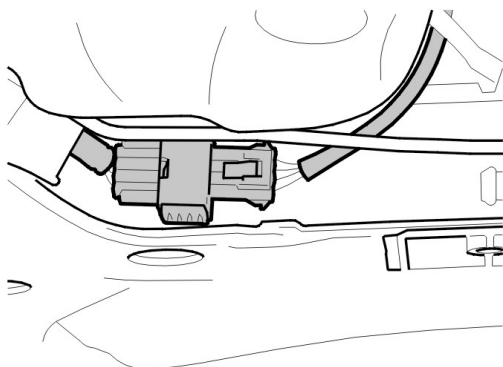
- the screw in the mounting for the front SIPS member
- the brake pipe from the snap fastener on the member
- The SIPS member.



Remove the rubber mountings for the exhaust pipe.



Remove the connector for the heated oxygen sensor (HO2S) from its mounting.



Removing the sub-frame

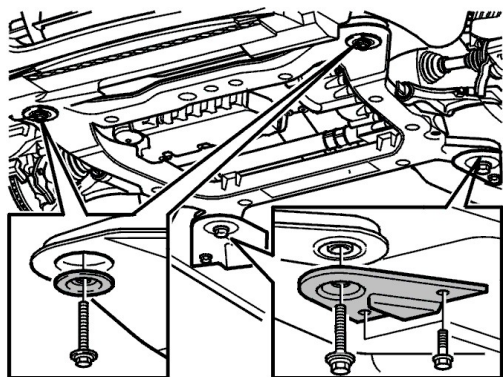
Position a lifting table under the sub-frame

Remove the following on both sides:

- the screws holding the sub-frame brackets in the bodywork
- the screw for the sub-frame mounting.

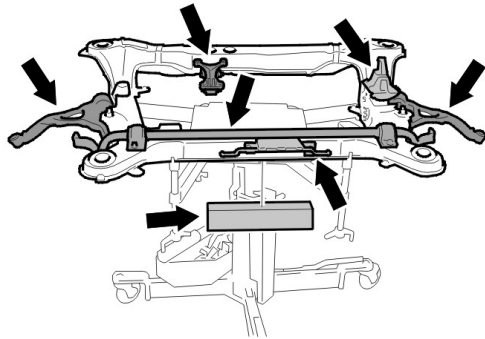
Carefully lower the sub-frame.

Note! Ensure that the brake pipe clears the exhaust pipe mounting when lowering the frame.



Note! Ensure that the steering gear screws release from the sub-frame.

Transferring components

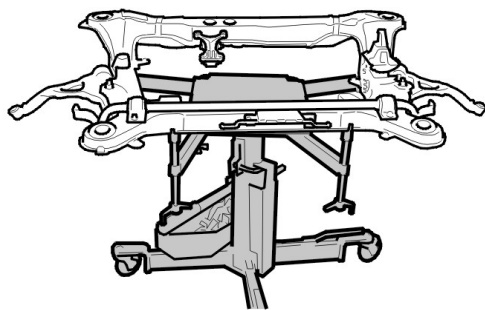


Transfer:

- the control arms. Use new screws and new nut. Tighten the front screws. Tighten to **65 Nm**. Angle-tighten **90°**. Use bevel protractor 951 2050. Tighten the rear screw. Tighten to **105Nm**. Angle-tighten **90°**
- the anti-roll bar. Tighten to **60 Nm**
- the right-hand engine mounting. Tighten the screws. Tighten to **65 Nm**. Angle-tighten **60°**
- the exhaust mounting bracket. Tighten to **50 Nm**
- the shock absorber Tighten to **50 Nm**
- lower torque rod. Tighten to **65 Nm**. Angle-tighten **90°**.

Install new pipe / hose holders.

Installing the sub-frame



Position the sub-frame on a lifting table.

Carefully lift the sub-frame.

Locate the control arms to the ball joints and the steering gear to its mountings.

Hint:

Lubricate the rubber coated clamp for the servo pressure pipe on the sub-frame using a soap solution. Install the screw before raising the sub-frame completely. Do not tighten the screw more than 2 turns as the pipe must be able to slide to the correct position in the clamp whilst raising the sub frame.

Note! Ensure that the brake pipe at the exhaust mounting is not trapped when raising the sub frame.

Lift the sub-frame up completely.
 Install the four screws in the sub-frame together with the sub-frame brackets and engine block heater, if applicable. Use new screws.
 Lubricate the screws.
 First tighten the screws on the left side of the sub-frame. Tighten to **105 Nm**. Angle tighten to **120°**.
 Then tighten the right-hand side to the same value.
 Finally tighten the screws for the brackets on both sides to **50 Nm**.

Installing removed components

Install:

- the heated oxygen sensor (HO2S) connector
- the rubber mountings for the exhaust pipe
- SIPS (side impact protection system) member
- the four screws for the SIPS (side impact protection system) member.
Tighten to **24 Nm**.

Route the hose for the EVAP canister to the correct position and press the joints together

Install the four nuts and the screw holding the steering gear. Use new nuts and a new screw. Tighten to **50 Nm**.

Clip the cable in position.

Install:

- the ball joints.
Use new nuts.
Tighten to **80 Nm** .
Counterhold using a Torx wrench so that the ball joint boot is not damaged
- the anti-roll bar links. Use new nuts. Tighten to **50 Nm**.
Counterhold using a Torx wrench so that the boot is not damaged.

Install:

- the lower torque rod.
Tighten the two screws. Tighten to **10 Nm**
- the oil pipe for the steering gear from the snap fasteners along the sub-frame
- the screw clip for the steering gear return line
- the engine block heater and the fuel line to the engine block heater if applicable
- the screw for the cable duct
- the screw for the ground lead.

Installing the drive shaft

Install new screws on both sides. Use a screwdriver as a counterhold. Tighten to **35Nm**. Angle-tighten **90°**. Use

bevel protractor 951
2050 .

Installing the skid plate

Move the skid plate up into the bumper wraparound. Press forwards until the mounting brackets engage in the sub frame. Install the screws. Tighten to **50 Nm**. Install the splashguard under the engine. Tighten to **24 Nm**.

Installing the right-hand engine mounting

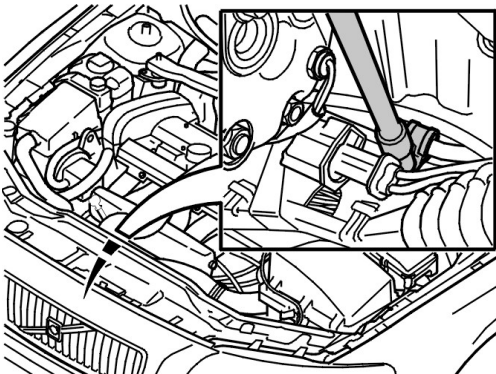
Install the right-hand engine mounting. Use new screws. Tighten to **35 Nm**. Angle-tighten **90°**. Fold the fender liner back into position.

Install:

- the skid plate
- the plastic nuts
- the front wheels. See Installing wheels

Installing the clamp for the servo pressure hose

Tighten the clamp for the servo pressure pipe on the sub frame. Tighten to **10 Nm**.



Removing lifting tools

Remove lifting tool
999 5716 , kit 999
7070 lifting hooks
999 5460 and lifting
lug 999 7018 .
Remove

Finishing

Align the wheels. See
Wheel alignment,
checking / adjusting .

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