

Intake manifold / gasket, replacing

Special tools: [999 5723](#) , [951 2666](#)

Preparation

Disconnect the battery negative lead. First read [Note when disconnecting/connecting the battery lead](#) .

Drain the fuel line. See [Draining the fuel system](#) .



Remove

- the intake pipe between the air cleaner (ACL) housing and the electronic throttle module (ETM)
- the screw for the dip stick mounting on the intake manifold
- the hose from the canister purge (CP) valve at the intake manifold.

Mark up and remove the vacuum hoses from the upper intake manifold.

Disconnect the connector for the electronic throttle module.

Removing upper intake manifold

Remove the ten screws at the intake manifold mating flange.

Lift off the upper section of the intake manifold. Install guard [999 5723](#) .

Remove the injector connectors.

Remove the screws holding the fuel rail.

Spray universal oil or similar around the injector terminal on the intake manifold.

Gently work the fuel rail and injectors loose.

Separate the quick-release fuel line connector.

Use tool [951 2666](#) .

Note! Handle the injectors carefully to avoid damaging the nozzles and needles.

Removing lower intake manifold

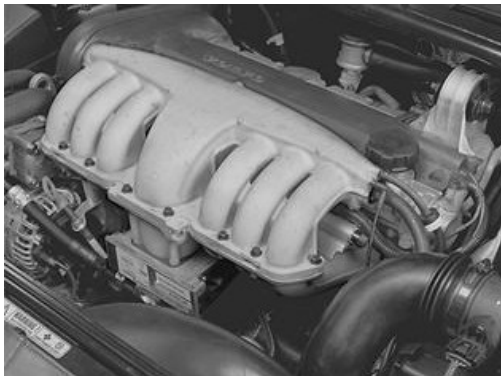
Mark up and remove the remaining vacuum hoses.

Remove the upper screws.

Remove the outer screws from the lower row.

Slacken off the remaining screws.

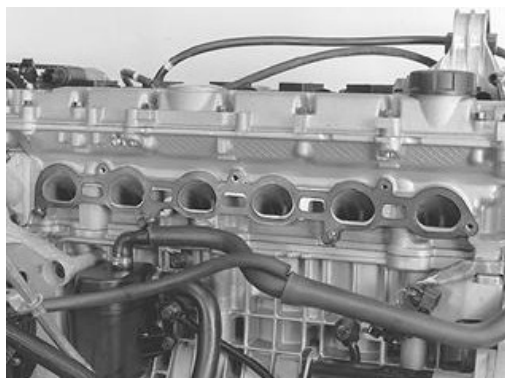
Lift up and remove the lower section of the intake manifold.





Replacing gasket

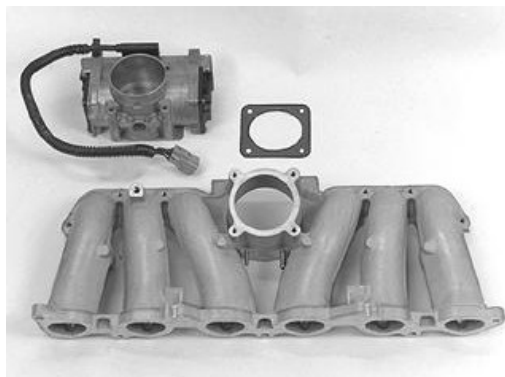
Remove the remaining screws and gasket.
Clean the gasket face.
Install a new gasket with the two centremost screws in the lower row.



Transferring components when replacing intake manifold

Transfer

- electronic throttle module (ETM). Use a new gasket. Tighten to 10 Nm.



Installing lower intake manifold

Install guard [999 5723](#) .
Lower the intake onto the three screws.
Install the remaining screws.
Tighten all screws. Tighten to 20 Nm.
Install both the vacuum hoses as marked earlier.





Install

- the fuel rail with new screws. Tighten to 10 Nm
- the quick-release fuel line connector

Note! Check that the connector is correctly installed.

- The injector connectors.

Installing the upper intake manifold

Remove guard [999 5723](#) .

Ensure that the gasket faces are clean.

Install a new gasket.

Hold the intake manifold in place and install all screws.

Tighten the screws. Tighten to 17 Nm.

Finishing

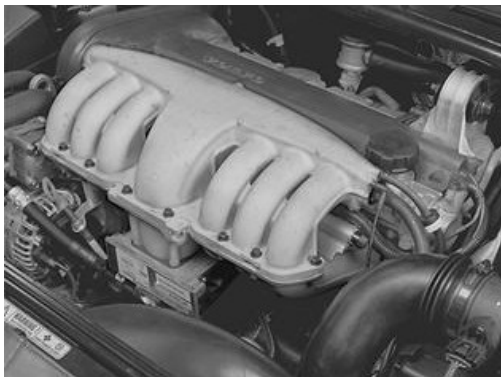
Connect the connector for the electronic throttle module.

Install

- the hoses for the crankcase ventilation, canister purge (CP) valve and servo unit
- the screw for the dip stick mounting on the intake manifold
- the intake manifold between air cleaner (ACL) housing and throttle body (TB)
- the battery negative lead.

First read [Note when disconnecting/connecting the battery lead](#) .

Test drive the engine.



Exhaust manifold / gasket, replacing

Special tools: [999 5972](#)

Preparation

Remove

- the screw for the engine stabiliser brace mounting on the engine
- the screws for the engine stabiliser brace mountings between the suspension turrets
- the air preheating hose from the heat deflector plate. Place to one side the heat deflector plate over the manifold.



- the heat deflector plate over the manifold.

Raise the car.



- the left front wheel
- the splash guard under the engine
- the rear SIPS member
- the nuts for the rear flange seal on the catalytic converter
- the nuts for the front flange seals on the catalytic converters.

Expose the heated oxygen sensor (HO2S) wiring. Disconnect the connectors.

Disconnect the brake pipe from the holders on the front SIPS member.



Position a mobile jack with universal plates [999 5972](#) under the catalytic converters.

Remove the screws for the front SIPS member. Pull back and lower the catalytic converters with their heat deflector plates.

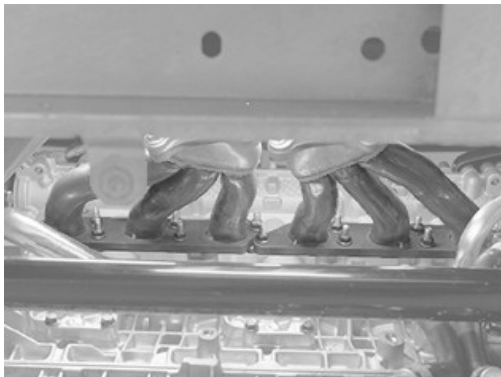
Note! The routing of the heated oxygen sensor (HO2S) wiring over the brake pipe.

Removing the manifold for cylinders 1,2,3

Note! Clean and spray the exposed threads with rustproofing agent before beginning removal.

Remove the manifold mounting nuts on the engine.

Pull off and lift up the manifold.



Removing the manifold for cylinders 4,5,6

Note! Clean and spray the exposed threads with

rustproofing agent before beginning removal.

Remove the manifold mounting nuts on the engine.

Pull off and lift up the manifold.

Replacing gasket

Remove the old gaskets.

Clean the gasket faces thoroughly. Use a razor blade or a plastic scraper. Clean around all exhaust ports.

Ensure that all the studs are tightened in the cylinder head. Tighten to 20 Nm.

Install new gaskets.

Installing the manifold

Installing the manifold

Lubricate the stud threads. Use paste, P/N: 116 1408. Avoid skin contact with the paste.

Install

- manifold for cylinders 4, 5, 6 with new nuts. Tighten to 25 Nm
- manifold for cylinders 1, 2, 3 with new nuts. Tighten to 25 Nm.



Raise the car.

Install the catalytic converter with heat deflector plate. Use new nuts and gaskets. Lubricate all the studs. Use paste, P/N: 116 1408. Avoid skin contact with the paste.

Connect the pipe to the engine. Use a mobile jack with universal plate [999 5972](#) as support.

Note! Ensure that the heated oxygen sensor (HO2S) wiring is above the brake pipe.

Press the brake pipe into place on the front SIPS member.

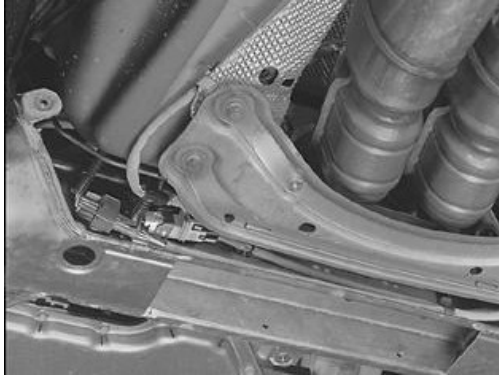
Connect to the rear exhaust pipe. Install all nuts loosely.

Install the screws for the front SIPS member.

Remove the mobile jack.

Tighten

- the nuts for the front flange seal. Tighten crosswise to 25 Nm
- the front SIPS member. Tighten to 25 Nm



- the nuts for the rear flange seal. Tighten to 25 Nm
- the rear SIPS member. Tighten to 25 Nm.

Connect the heated oxygen sensor (HO2S) wiring.

Secure the wiring at the rear edge of the sub-frame.

Install the splashguard under the engine.

Install the left front wheel. See [Installing wheels](#).

Lower the car.

Install

- the heat deflector plate with new screws. Tighten to 25 Nm
- the air preheating hose
- the engine stabiliser brace between the suspension turrets. Tighten the four screws. Tighten to 50 Nm
- a new screw for the engine stabiliser brace mounting at the bracket on the engine. Tighten to 80 Nm.

Final check

Test drive the engine.

Check for leakage.

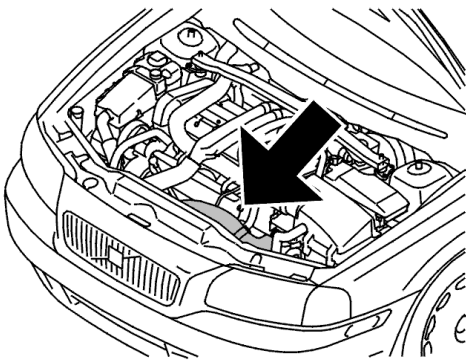
Throttle body (electronic throttle module (ETM)), replacing

Preparation

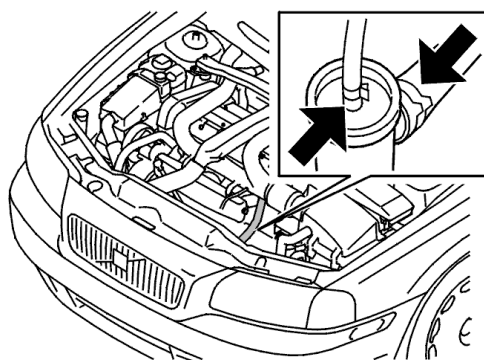
Remove the cable from the battery negative terminal. First read [Note when disconnecting/connecting the battery lead](#).

Applies only to B6xx4T

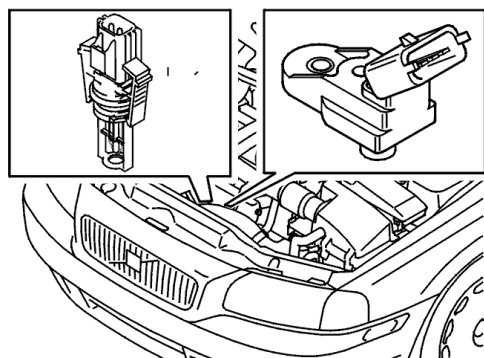
Remove the intake manifold between the front cover plate and air cleaner (ACL) housing. Disconnect the hose between the turbocharger (TC) and the charge air cooler (CAC) at its upper end. Push the hose to one side.



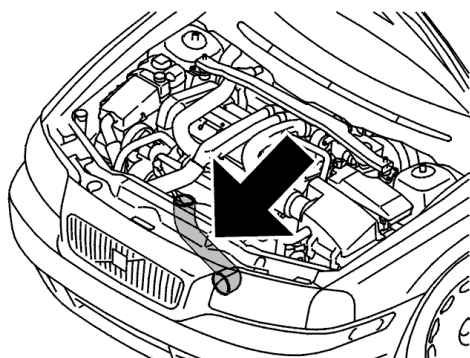
Disconnect the hoses for the bypass valve.



Disconnect the boost pressure sensor connectors and the charge air temperature sensor from the pipe between the charge air cooler and the throttle.

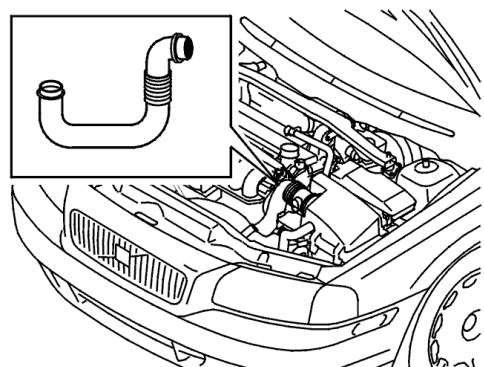


Remove the pipe between the throttle and the charge air cooler.



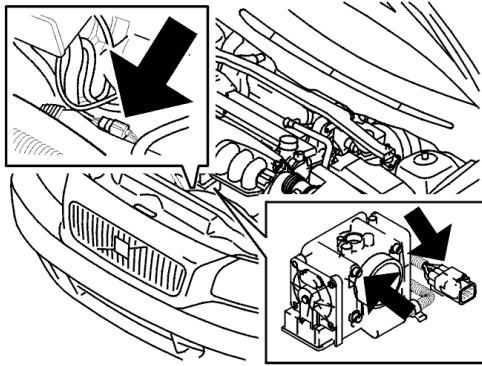
[Applies only to B6xx4S](#)

Remove the intake manifold between the throttle body (TB) and the air cleaner.



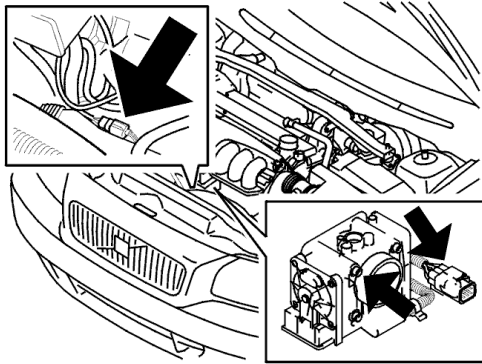
[Replacing the electronic throttle module \(ETM\)](#)

Disconnect the throttle body (TB) connector. Remove the mounting screws from the throttle body (TB). Lift up the throttle body (TB).



Installing the throttle body (electronic throttle module (ETM))

Clean the mating surfaces thoroughly.
Install the throttle body (TB). Use a new gasket.
Tighten to 17 Nm.
Connect the throttle body (TB) connector.



Finishing

Applies only to B6xx4T

Install

- the pipe between the charge air cooler (CAC) and the throttle
- the boost pressure sensor connectors and the charge air temperature sensor from the pipe between the charge air cooler and the throttle body (TB)
- the hoses to the bypass valve
- the hose between the charge air cooler (CAC) and the turbocharger (TC)
- the intake manifold between the front cover plate and the air cleaner (ACL) housing.

Applies only to B6xx4S

Install

- the intake manifold between the throttle body (TB) and the air cleaner.

Reconnect the battery negative lead. First read [Note when disconnecting/connecting the battery lead](#).

Ordering software

Order the software. See [Order SW](#) .

Programming the control module

Program the new control module. See [Load SW](#) .

Finishing

Check that no diagnostic trouble codes have been stored during the repair.

Test drive the car. Check the function of the engine.