



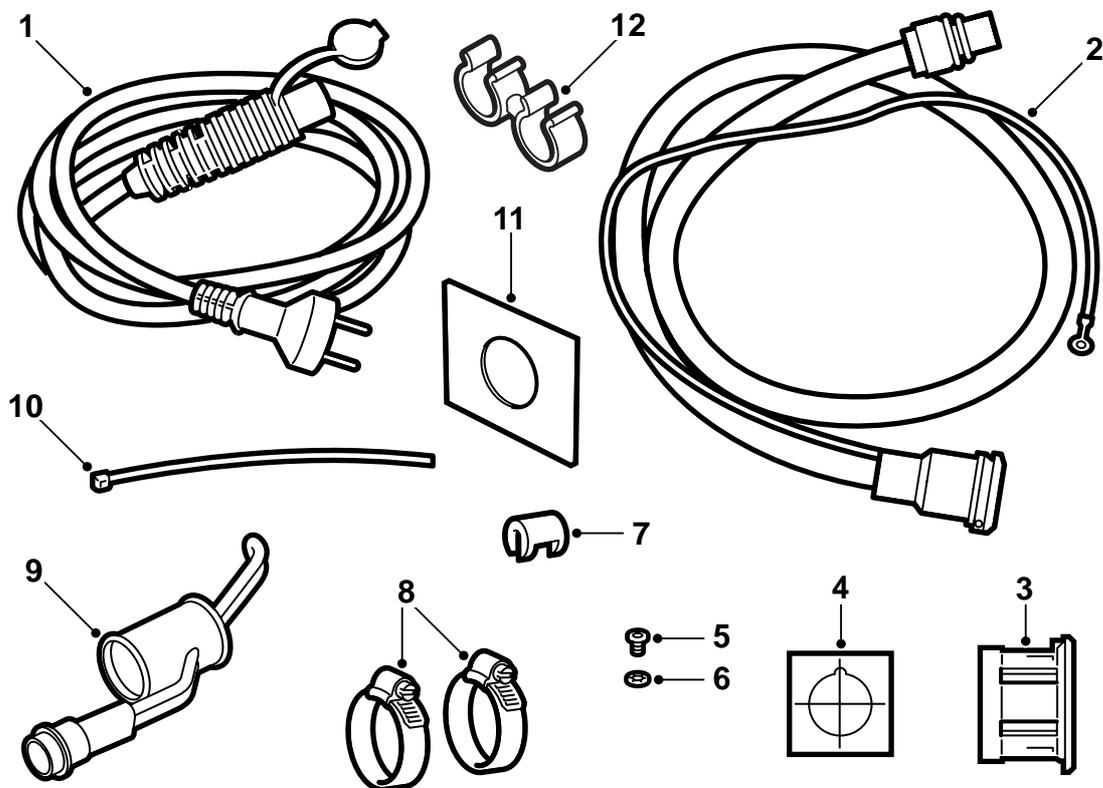
SAAB

**MONTERINGSANVISNING · INSTALLATION INSTRUCTIONS
MONTAGEANLEITUNG · INSTALLATIONS DE MONTAGE**

Saab 9-5 B308 M00-

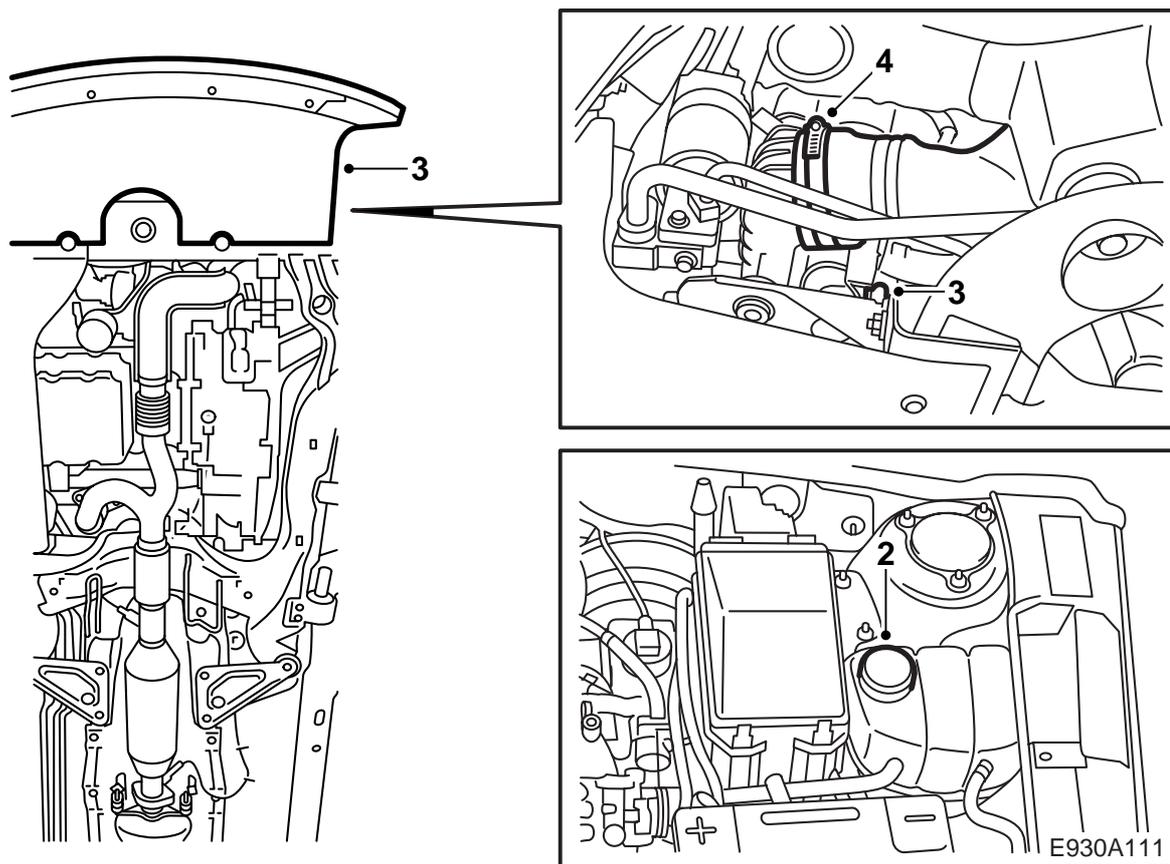
Engine block heater

Accessories Part No.	Group	Date	Instruction Part No.	Replaces
400 126 660	9:87-22	Dec 99	51 92 653	51 92 653 Oct 99



E930A121

- 1 Extension cable
- 2 Connector plug and connector cable
- 3 Expanding sleeve
- 4 Self-adhesive template
- 5 Screw
- 6 Star washer
- 7 Locking clip
- 8 Hose clip (2 pcs.)
- 9 Heating element
- 10 Cable tie (5 pcs.)
- 11 Reinforcing plate
- 12 Double clip



- 1 Read through the installation instructions thoroughly and make sure all the components are present in the kit.

Note

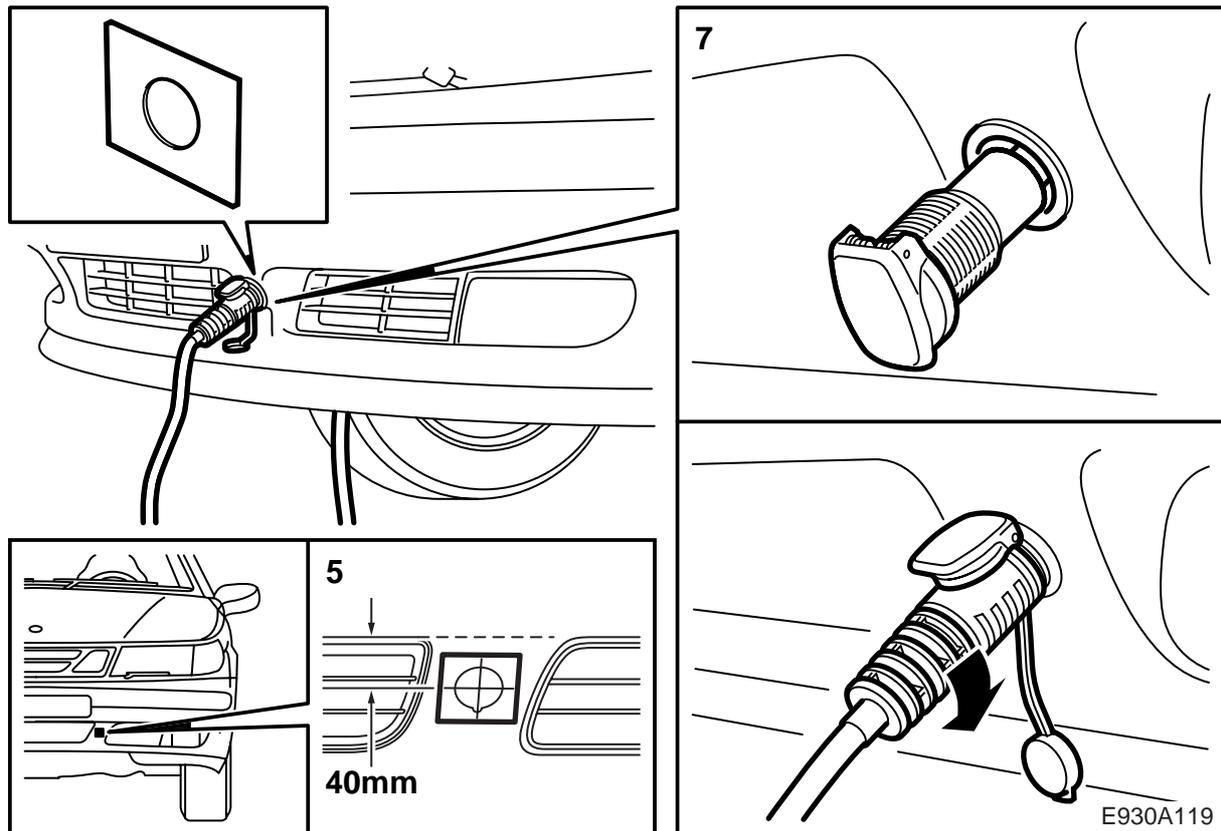
Check the radio code and make a note of it if the car is equipped with a radio other than the Saab Audio System.

- 2 Put covers over the wings and remove the cap on the cooling system expansion tank.

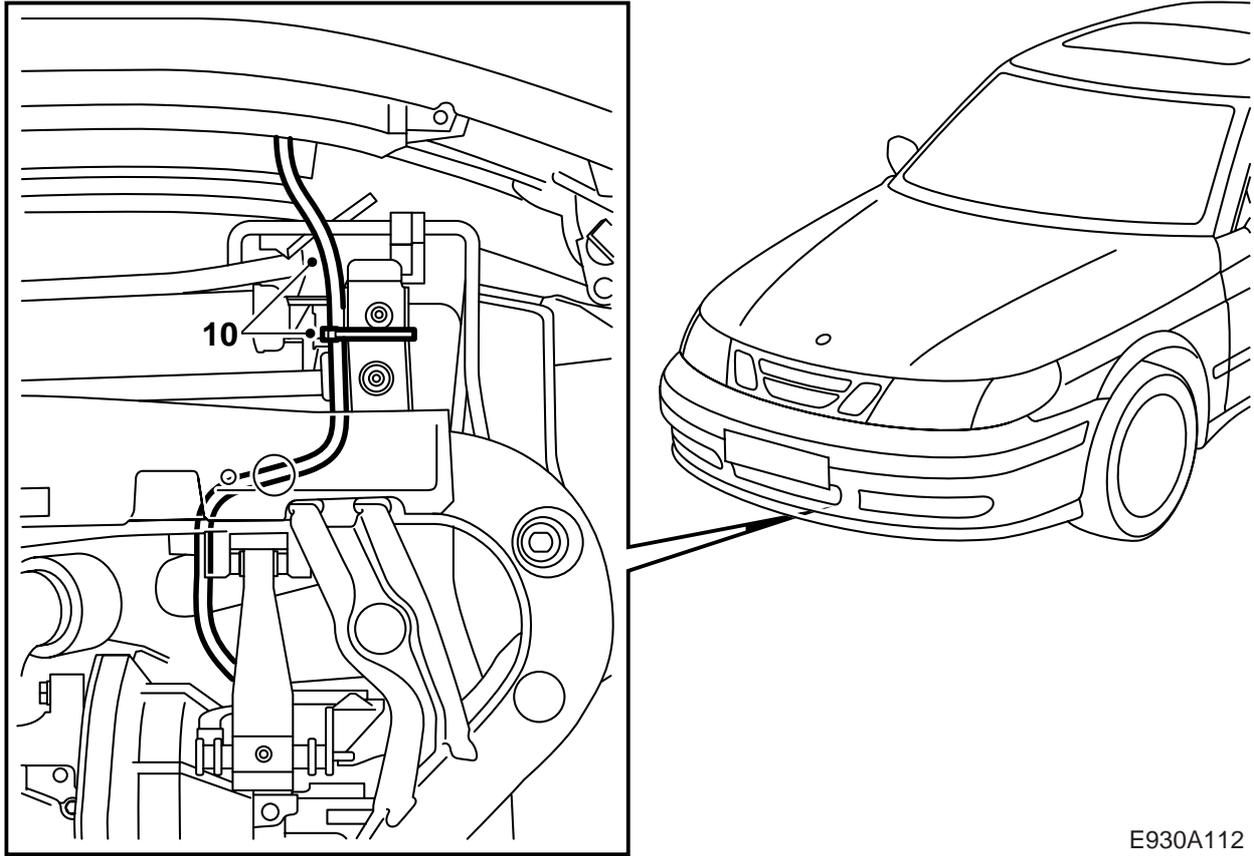
WARNING

Take care in case the car engine is hot. Engine coolant is hot. There is also a risk of burns on the manifold.

- 3 Raise the car. Place a receptacle under the car to collect the coolant. Remove the air shield behind the bumper, connect a hose, open the drain plug and drain the coolant.
- 4 Undo the hose clip on the turbo delivery pipe from the charge air cooler. Leave the hose clip hanging on the charge air cooler.

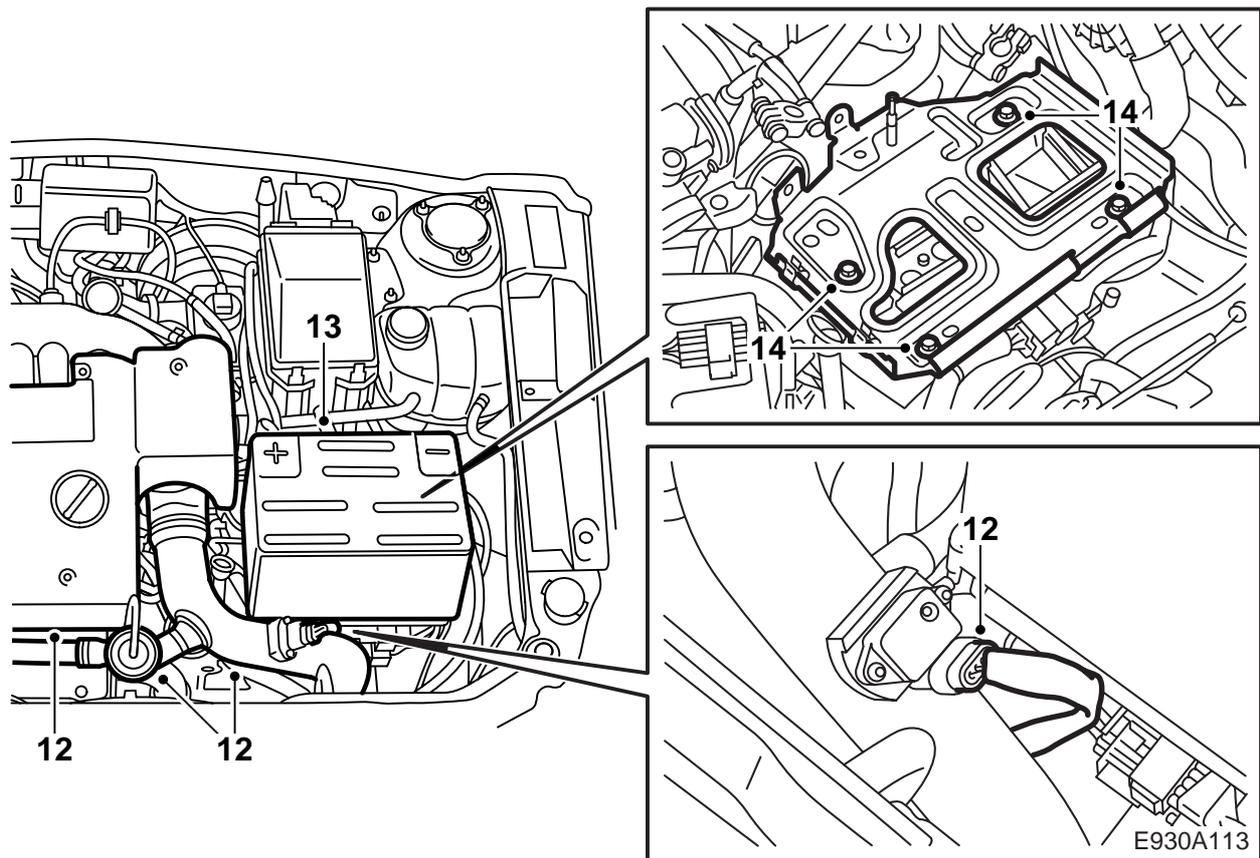


- 5 Lower the car to a suitable working height for fitting the connector plug to the bumper shell.
- 6 Mark out the location for the connector plug using the self-adhesive template. Place a ruler or a piece of tape above the openings in the bumper and measure out where the template is to be affixed. See illustration.
- 7 Carefully make a hole with a **30 mm** hole saw. Drill a hole with the same diameter as the guide pin on the hole saw first. Remove any burrs from the hole and file out a recess with a 4 mm round file. Remove the template.
- 8 Fit the connector plug expanding sleeve from the front and the reinforcing plate from behind the bumper. Fit the heater plug. Use the extension cable to tighten the connector plug. Turn clockwise until the plug is secure.
- 9 Raise the car and tighten the drain plug on the radiator.



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- 10 Run the connecting cable between the radiator and the subframe. Place the connecting cable connector on top of the gearbox and secure the cable as illustrated.
- 11 Fit the air shield and lower the car.

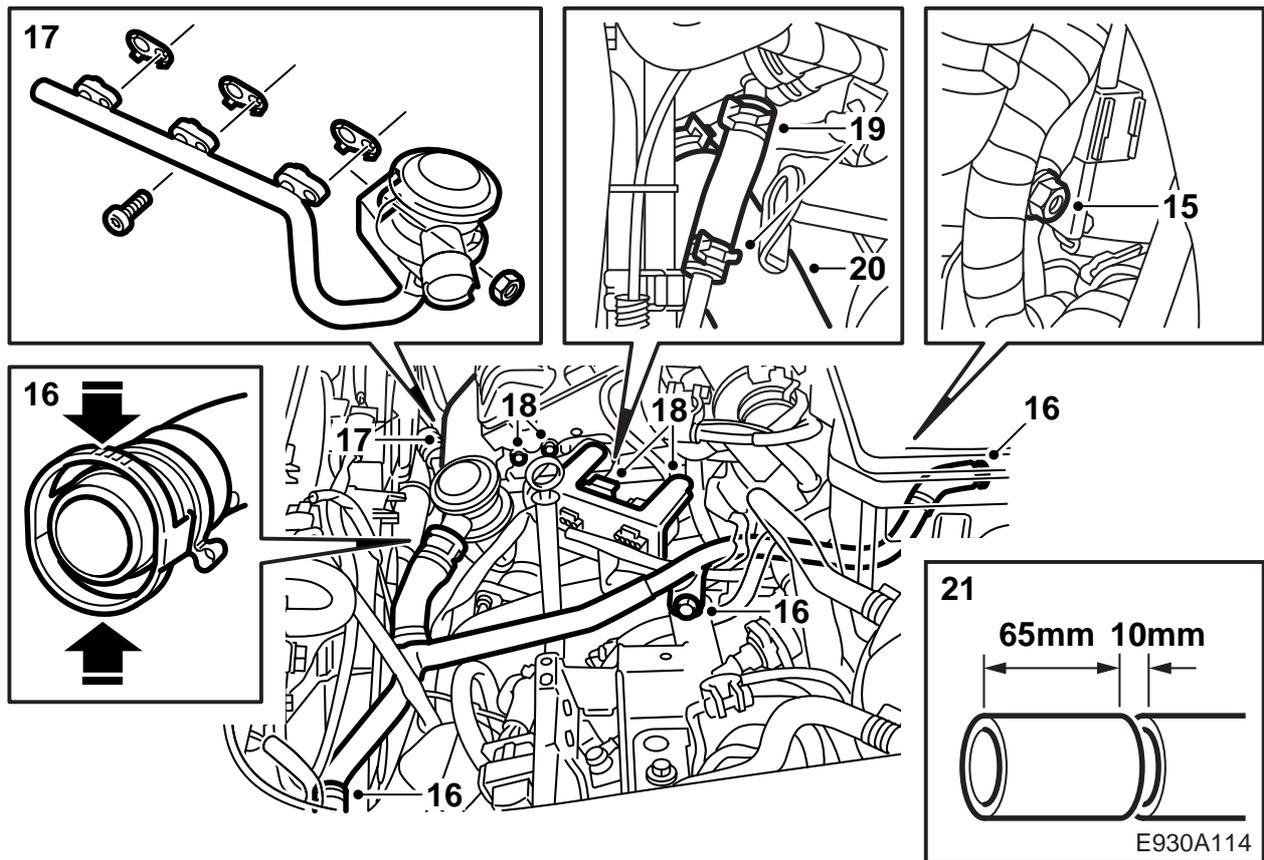


12 Remove the engine cover and bypass pipe with valve and plug the pipe inlet in the turbo inlet pipe.

Unplug the connector for the temp/pressure sensor and remove the turbo delivery pipe.

13 Remove the cover over the battery, disconnect the battery cables and vent hose, remove the battery.

14 Remove the battery tray.

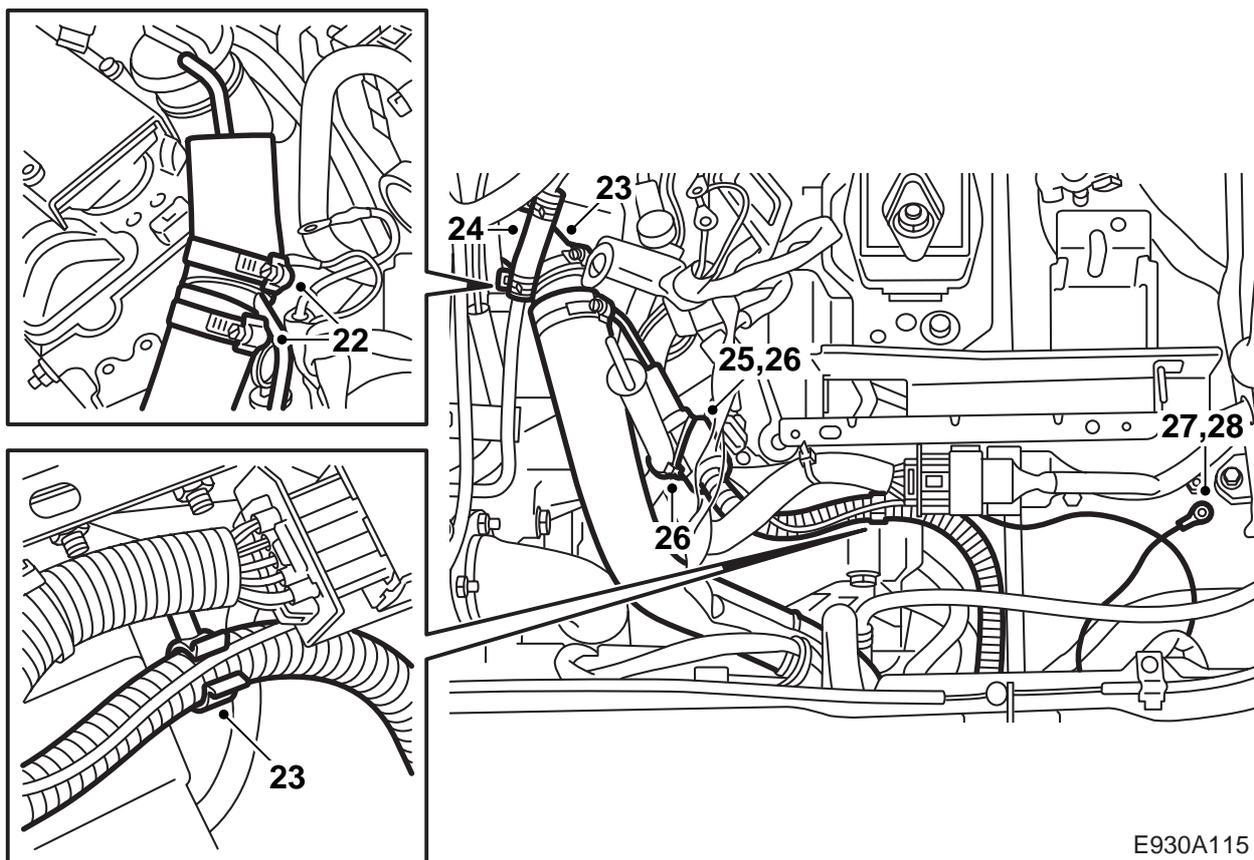


- 15 Detach and unplug the connectors from the mounting between the engine and the gearbox.
- 16 Undo the air injection pipe from the valves and the intake hose. Undo the mounting and remove the air injection pipe.
- 17 Remove the heat shield and the valve with pipe.

Important

Discard the three gaskets, as they must **always** be replaced with new ones when the pipe has been removed.

- 18 Undo the mounting with wiring harness on the engine and gearbox and the ground connection on the cylinder head. Put the mounting to one side.
- 19 Detach the turbo junction hose from the coolant pipes.
- 20 Undo the coolant hose on the pipe end.
- 21 Mark with tape or similar and cut off the coolant hose 65 mm from the coolant inlet on the engine and remove about 10 mm as illustrated.



E930A115

22 Fit the heater to the hose with the two hose clips. Check their position in the hose and make sure the heating element is not resting against anything. The hose clips must be positioned so that it is possible to adjust later.

23 Fit the coolant hose to the pipe end and secure the connecting cable to the gearbox cable with double clips and to the left-hand structural member with a cable tie.

24 Fit the junction hose on the coolant pipe to the turbo.

25 Pull forward the connection cable and lubricate the O-ring with acid-free petroleum jelly. Connect the connection cable to the heater.

26 Fit the locking clip over the connection. A click should be heard when the locking clip is in position.

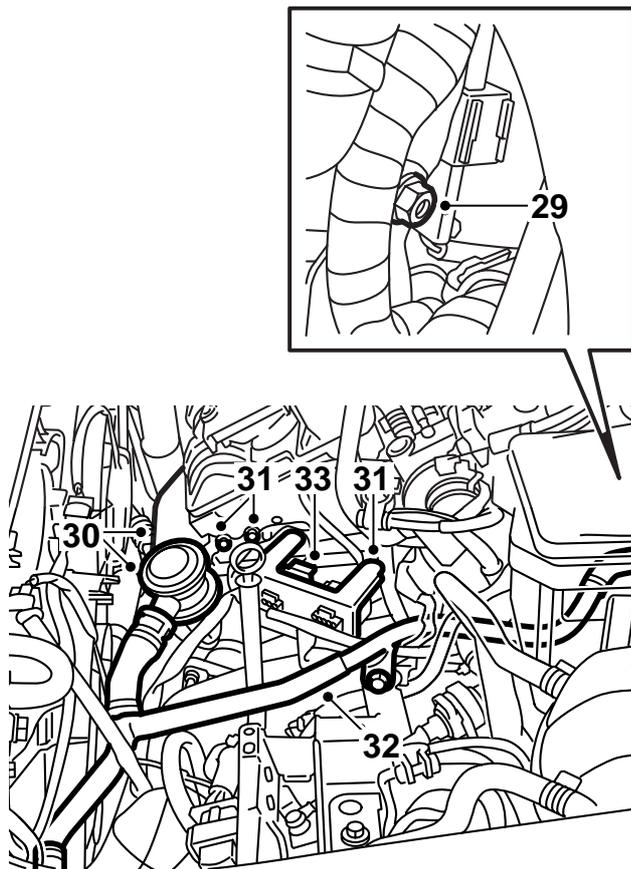
Secure the cable to the gearbox dipstick pipe with cable ties.

⚠ WARNING

Make sure the cable is not resting on moving parts, sharp edges or hot surfaces. Secure the cable with cable ties.

27 Drill a 3.5 mm hole on the left-hand structural member for the ground cable.

28 Clean away paint to ensure a good ground connection and run the ground cable along the connection cable, secure the ground cable with a screw and star washer (place the star washer between the lug on the ground cable and the body). Apply thin-bodied corrosion protection, part no. 30 15 971.



- 29 Put back the mounting.
30 Fit the valve with pipe.

Important

Always fit new gaskets when the valve with pipe has been removed.

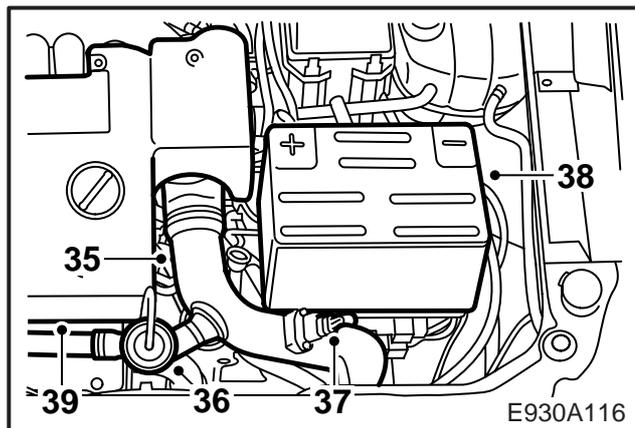
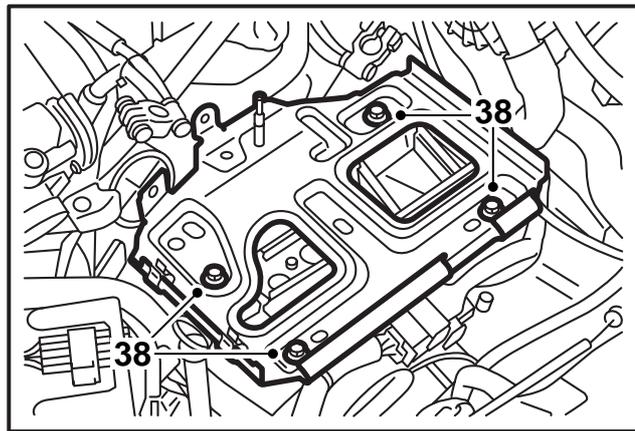
Fit the heat shield.

- 31 Fit the mounting with cable harness. Screw on the ground cables.
32 Fit the air injection pipe to the valves, the mounting and the intake hose.

Important

Make sure the pipe is connected correctly to the valves, see illustration.

- 33 Fit the connectors to the mounting and plug them in.
34 Check the ground connection between the ground pin on the connector plug, the heater casing and the car body.
35 Lower the turbo delivery pipe and connect it to the charge air cooler and throttle body. Raise the car and make sure the pipe is connected correctly. Tighten the hose clip on the charge air cooler and the turbo delivery pipe. Lower the car.



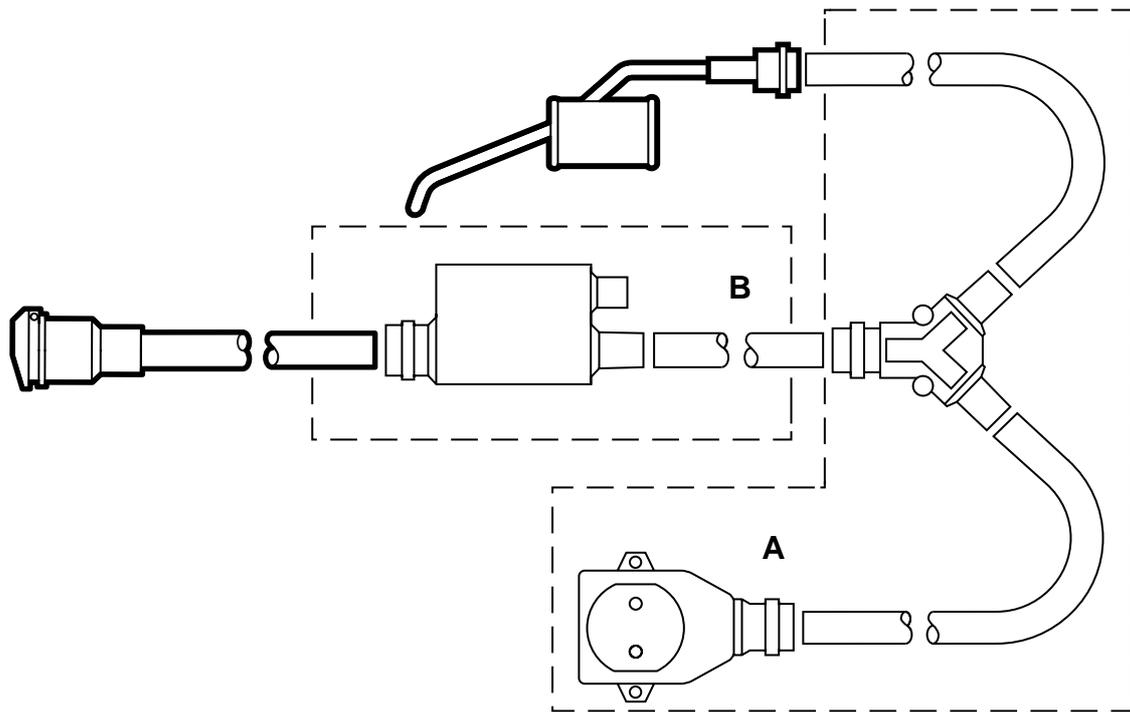
- 36 Remove the plug and fit the bypass pipe with valve. Fit the engine cover.
37 Plug in the connector to the temp/pressure sensor on the turbo delivery pipe.
38 Fit the battery tray and the battery. Connect the battery and refit the battery cover.
39 Fill up with coolant and check the system for leaks.
40 Bleed the system in the following way:

Note

AC/ACC must be OFF.

Fill the system to MAX, close the cap on the expansion tank, start the engine and warm it up at varying engine speeds until the radiator fan starts. Carefully open the cap on the expansion tank and let the engine run at varying accelerator position until the radiator fan has started three more time. Stop the engine and top up to MAX as necessary. Check the function of the heater.

- 41 Adjust the time and date on the car clock and program the radio code where applicable.
42 Place the installation instructions in the car and draw the customer's attention to the user instructions.



E930A082

A Branch cable set
B Timer kit

User instructions

- The extension cable must be made of oil-resistant rubber and approved for outdoor use with a cross-sectional area of at least 3x1.5 mm².
- The engine heater must be connected to a grounded outlet only.
- Handle all cables with care. Pay particular attention to the risk of pinching between the bonnet and the body of the car and the risk of cuts on sharp metal components.

 **WARNING**

Check regularly the ground connection between the ground pin in the connector plug, the heater casing and the car body.

- Inspect regularly the extension cable for damage or ageing. Damaged cables must be renewed immediately.

Note

The function of the heater will be at risk if:

- there are impurities in the coolant
- the coolant level is too low or if there is air in the system
- there is ice slush in the system
- radiator sealant is used