



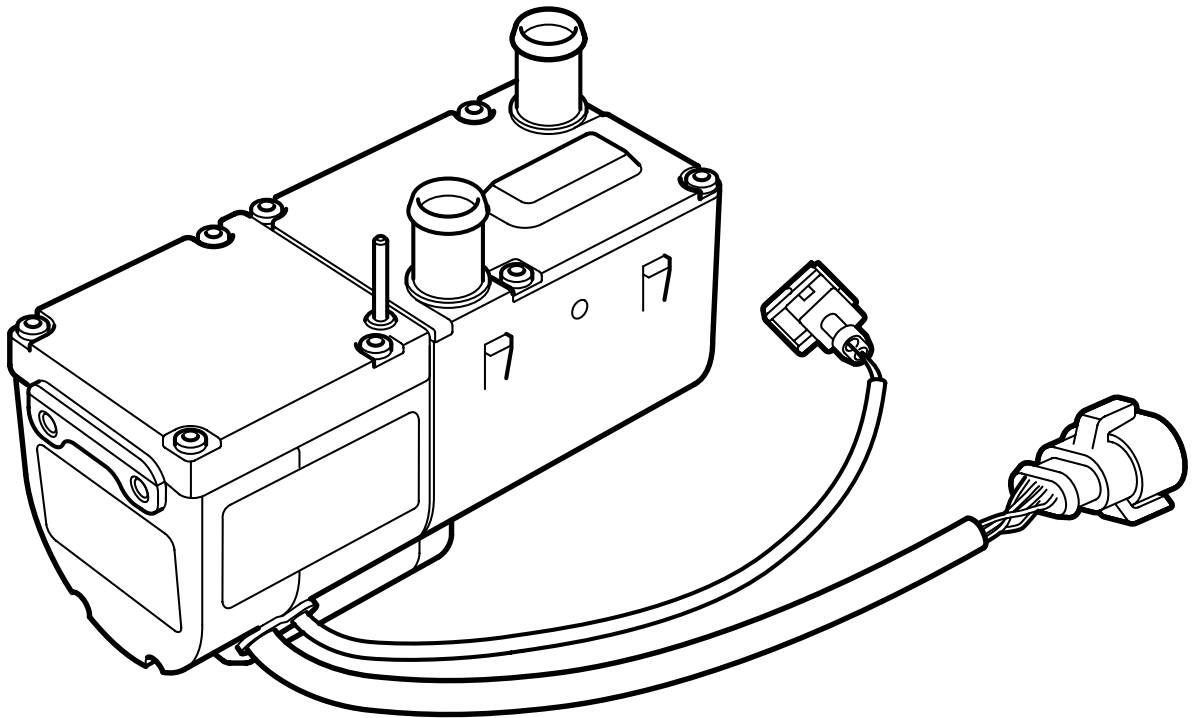
SAAB

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

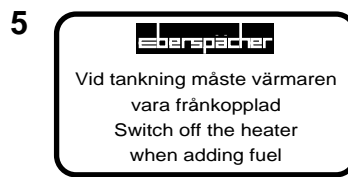
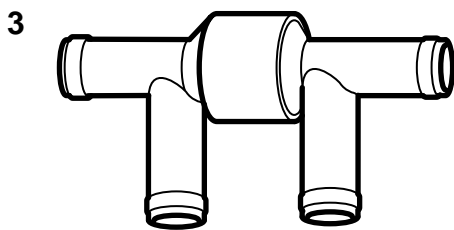
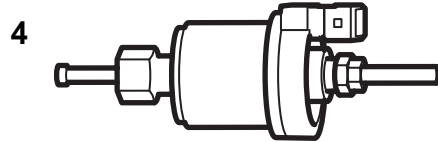
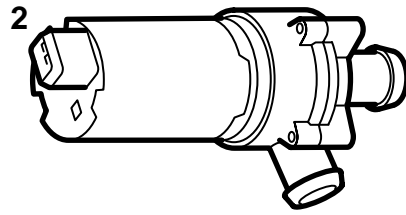
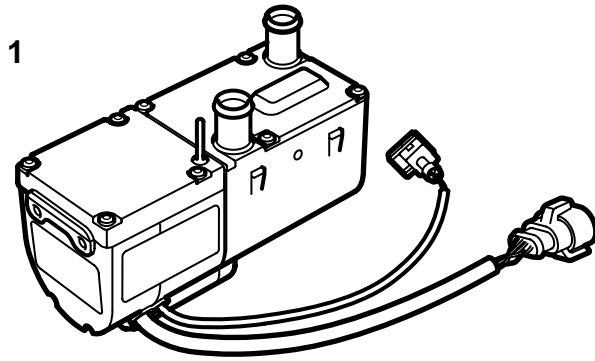
Saab 9-5 B308 M00-

Engine/cabin heater

| Accessories Part No. | Group | Date | Instruction Part No. | Replaces |
|--|---------|--------|----------------------|----------|
| 400 106 621 400 126 355 400 126 363 400 106 654 | 9:87-21 | Sep 99 | 51 91 051 | |



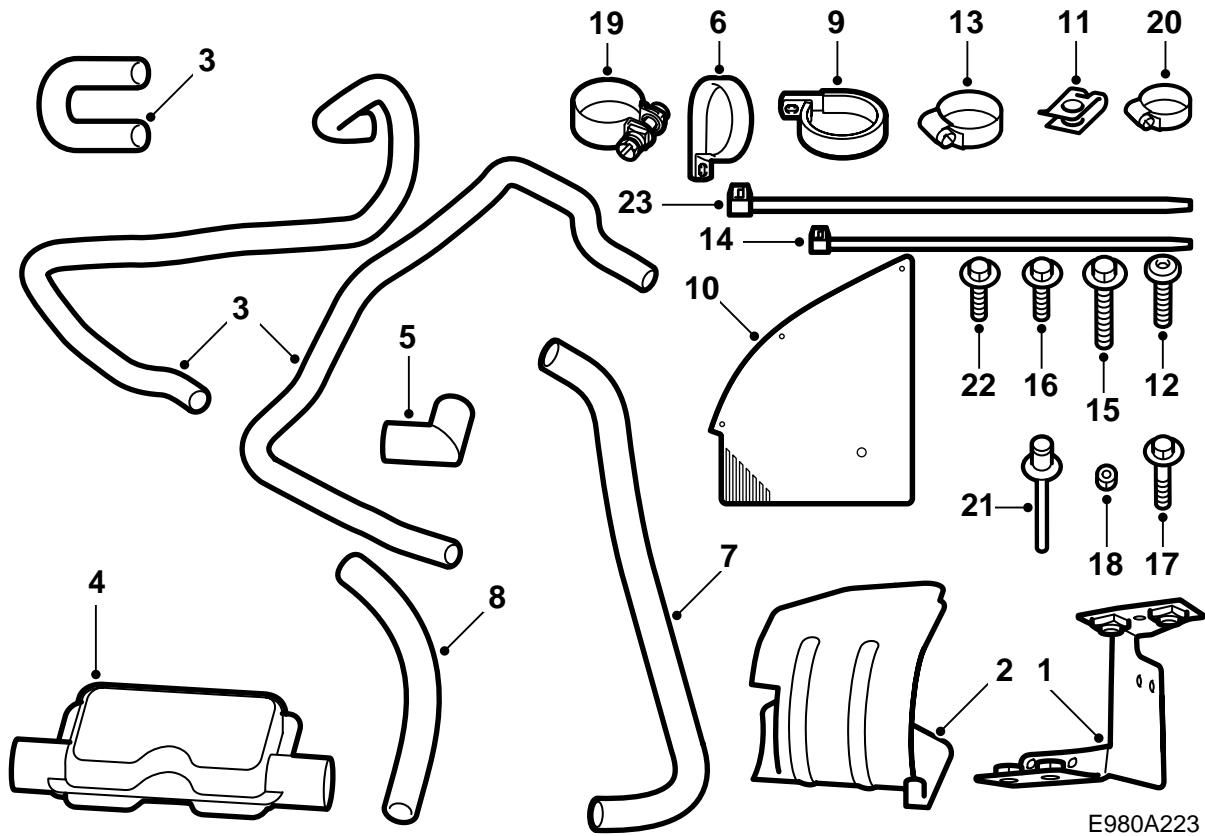
E980A220



E980A222

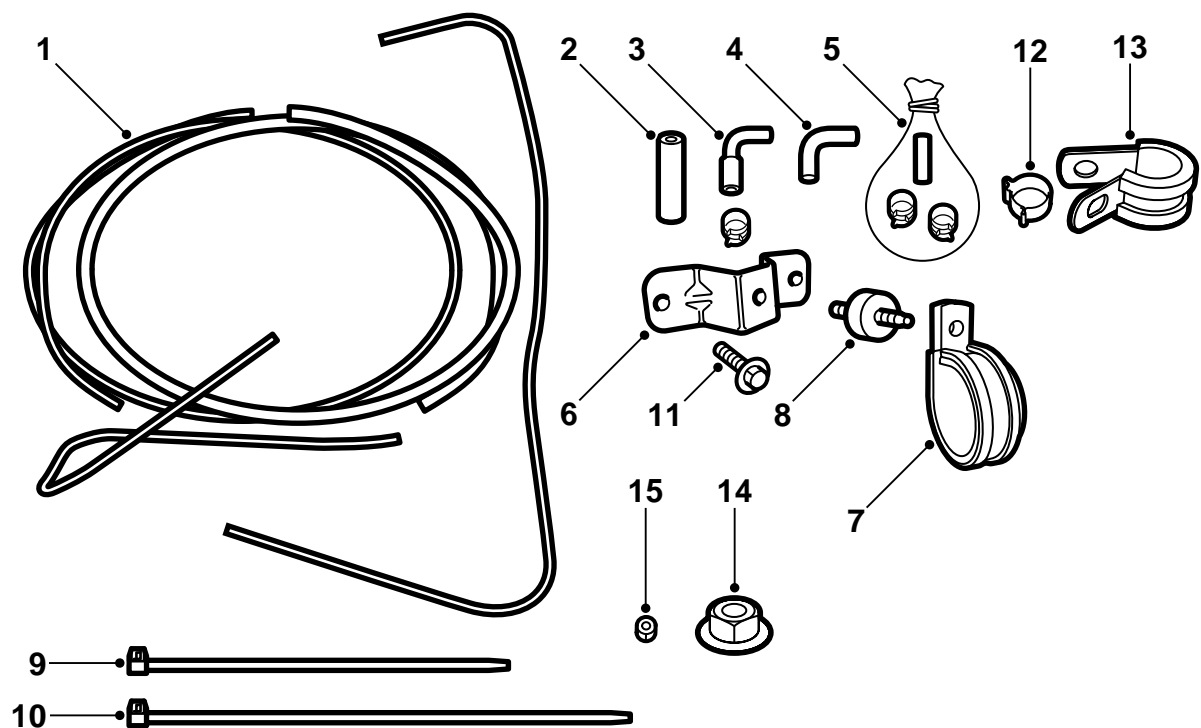
Heater kit 400 106 621 contains:

- 1 Petrol heater
- 2 Circulation pump
- 3 Non-return valve
- 4 Fuel pump
- 5 Label



Mounting kit 400 126 355 contains:

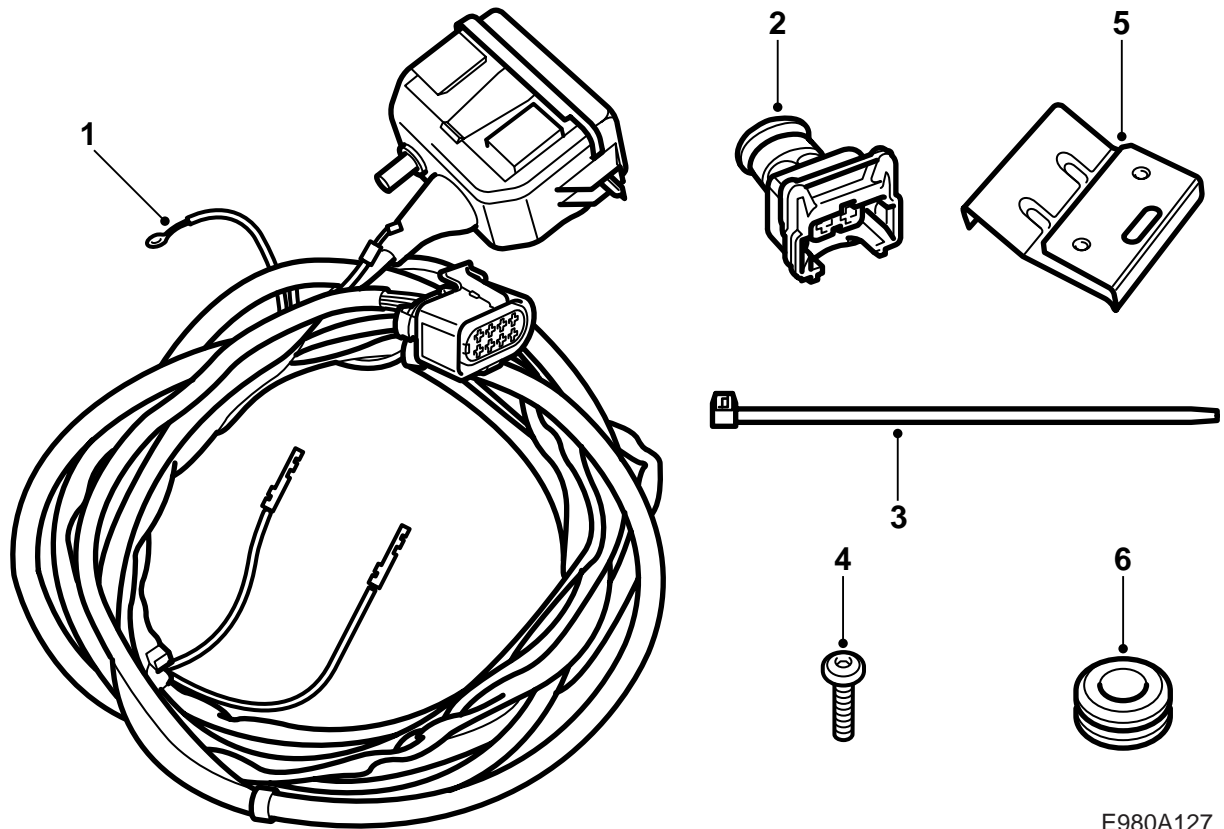
- 1 Bracket
- 2 Holder
- 3 Coolant hoses (3)
- 4 Silencer
- 5 Exhaust pipe, 90°
- 6 Clip (exhaust hose) (2)
- 7 Exhaust hose
- 8 Intake hose
- 9 Holder, coolant pump
- 10 Splash guard
- 11 Clips (4)
- 12 Screw (3)
- 13 Hose clip (8)
- 14 Cable tie (2)
- 15 Bolt, M6
- 16 Screw (9)
- 17 Bolt, M8 (4)
- 18 Nut, M6
- 19 Clamp (3) (exhaust pipe)
- 20 Clamp (intake)
- 21 Blind rivet (2)
- 22 Bolt, M6 (2)
- 23 Cable tie



E980A224

Fuel connection kit 400 126 363 contains:

- 1 Fuel line (2)
- 2 Junction hose, angled (2)
- 3 Clamp
- 4 Junction hose, angled
- 5 Fuel connection (tank)
- 6 Bracket, fuel pump
- 7 Clamp
- 8 Rubber spacer
- 9 Cable tie (10)
- 10 Cable tie
- 11 Screw (2)
- 12 Hose clip (4)
- 13 Clamp (3)
- 14 Nut (4)
- 15 Nut



E980A127

Electric connection kit 400 106 654 contains:

- 1 Wiring harness
- 2 Connector, 2-pin
- 3 Cable tie (11)
- 4 Screw (2)
- 5 Bracket
- 6 Grommet (2)

Safety regulations

 **WARNING**

Read all through the assembly instructions before starting work.

Installation of the heater entails modifying the car's fuel system. The following points should therefore be observed in connection with installation.

- Work in well ventilated areas. If approved ventilation equipment for the extraction of fuel vapours is present, use it.
 - Use protective gloves. Prolonged contact with fuel can give rise to skin irritation
 - Keep a class BE fire extinguisher near at hand. Be mindful of the danger of sparks occurring when making and breaking electric circuits, in the event of a short circuit, etc.
 - Absolutely no smoking.
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- The heater must be fitted by qualified personnel and in accordance with these assembly instructions.

Important

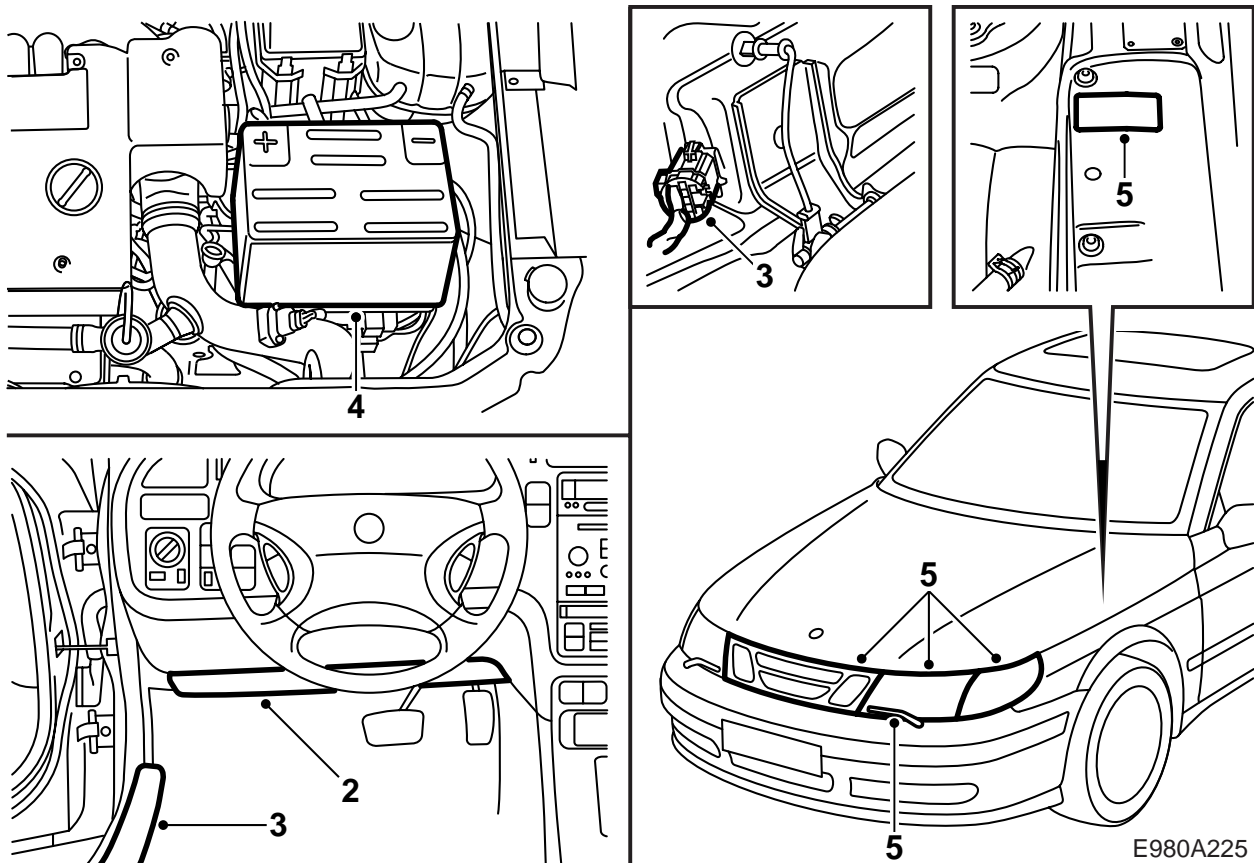
When joining the fuel lines in this kit, make sure that the ends are brought firmly together.

-
- Never turn on the heater in closed spaces like garages and repair shops without using the exhaust extraction equipment.
 - Always turn the heater off when stopping the car at petrol stations and the like.

Important

When the heater is used as a parking heater it consumes some of the battery's capacity. This is especially the case in cold weather when the battery is already in hard use. We therefore recommend driving the car for at least as long a time as the heater has been in operation at an ambient temperature of not below -20°. At lower temperatures we recommend using the heater for no longer than 30 minutes. In addition, the battery should be checked at regular intervals and recharged as necessary.

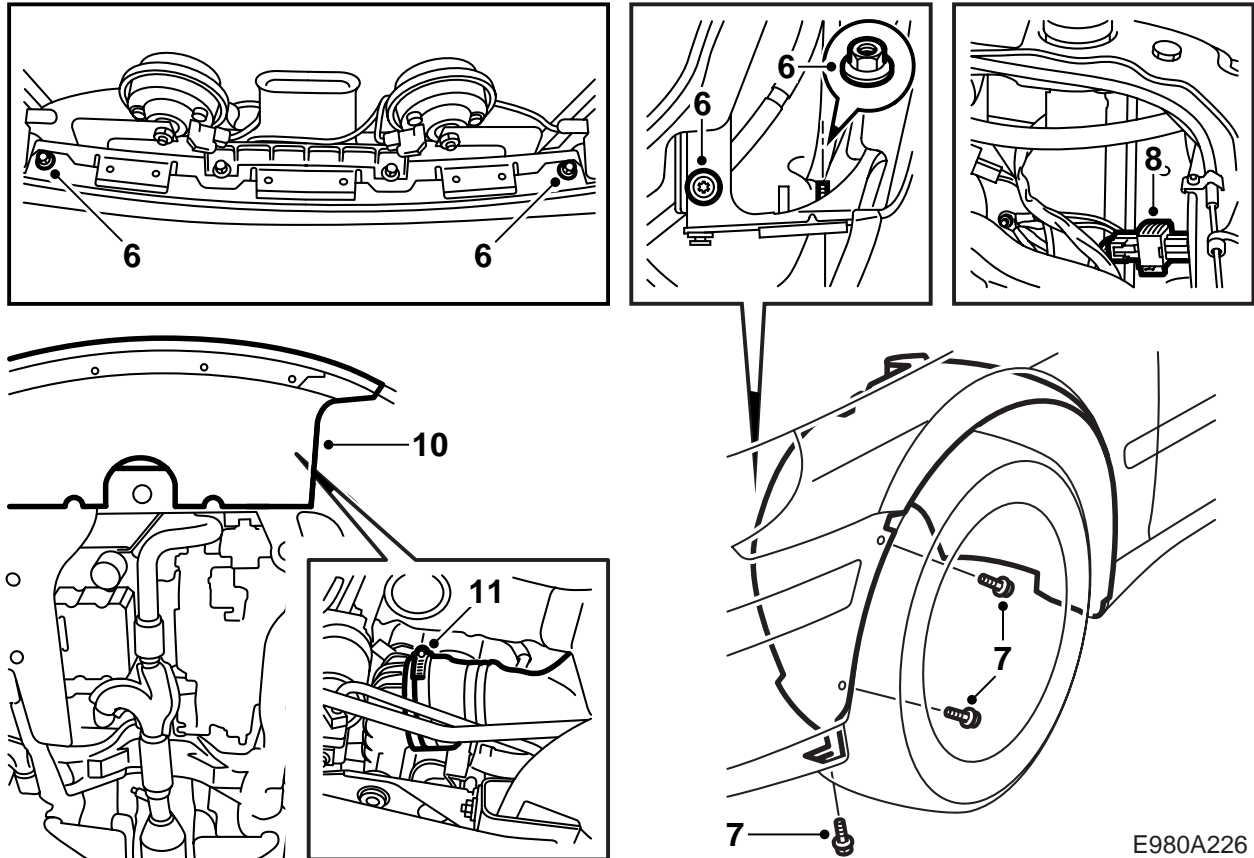
The heater should be activated at least once a month, even in the summer. This prevents unused fuel from evaporating and leaving behind deposits which could cause malfunctioning.



- 1 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 **LHD:** Remove the sound insulating baffle under the dashboard on the left-hand side, including the diagnostics socket and floor lighting, if fitted.
RHD: Remove the glove box.
- 3 Remove the front and rear scuff plates on the left-hand side, tip the rear seat cushions forward, unplug the connector from the left-hand rear seat's heating pad and lift out the left-hand rear seat. Fold back the carpet and remove the cover over the tank.
- 4 Remove the battery cover, battery cables and breather hose. Then remove the battery.
- 5 Remove the front grille, direction indicator lights, left-hand headlamp and headlamp wiper arms. Remove the left-hand headlamp's wiper motor. Use benzine to clean an area beside the chassis data plate on the left-hand front wing. Remove the extra label from the heater and affix it to the cleaned area.

Important

Under no circumstances should the label cover any other label or data plate, either fully or partially.



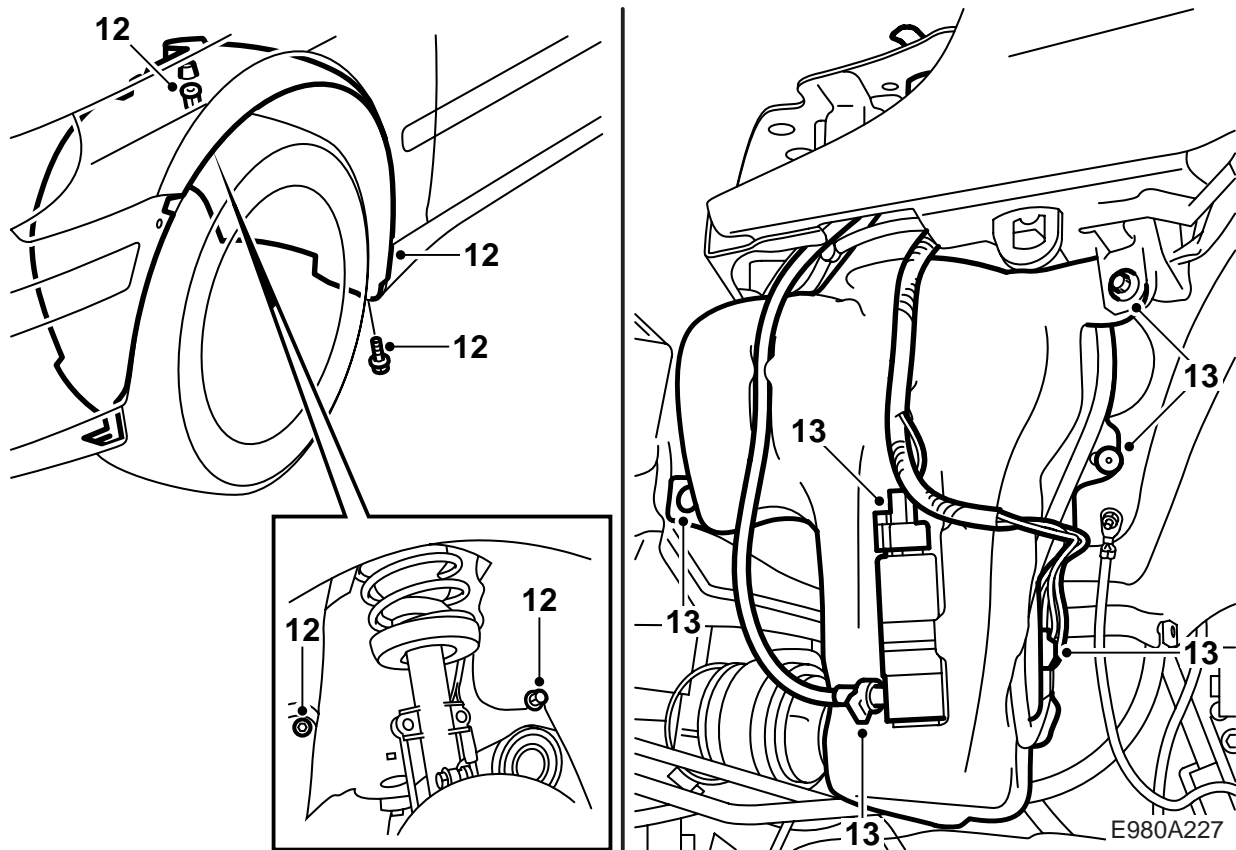
E980A226

- 6 Undo the four screws securing the bumper to the bumper member and remove the nuts securing the bumper to the front wing.
- 7 Undo the six screws securing the bumper to the wing liners.
- 8 Unplug the connector for the bumper's wiring harness and bend aside the wiring together with the battery's breather hose.
- 9 First undo the bumper's outer corners on both sides so that they clear the wings and wing liners. Then pull the bumper forwards.
- 10 Jack up the car and remove the air deflector.

⚠ WARNING

Position the right-hand rear jacking point as far out as possible to allow sufficient room for fitting the fuel pump.

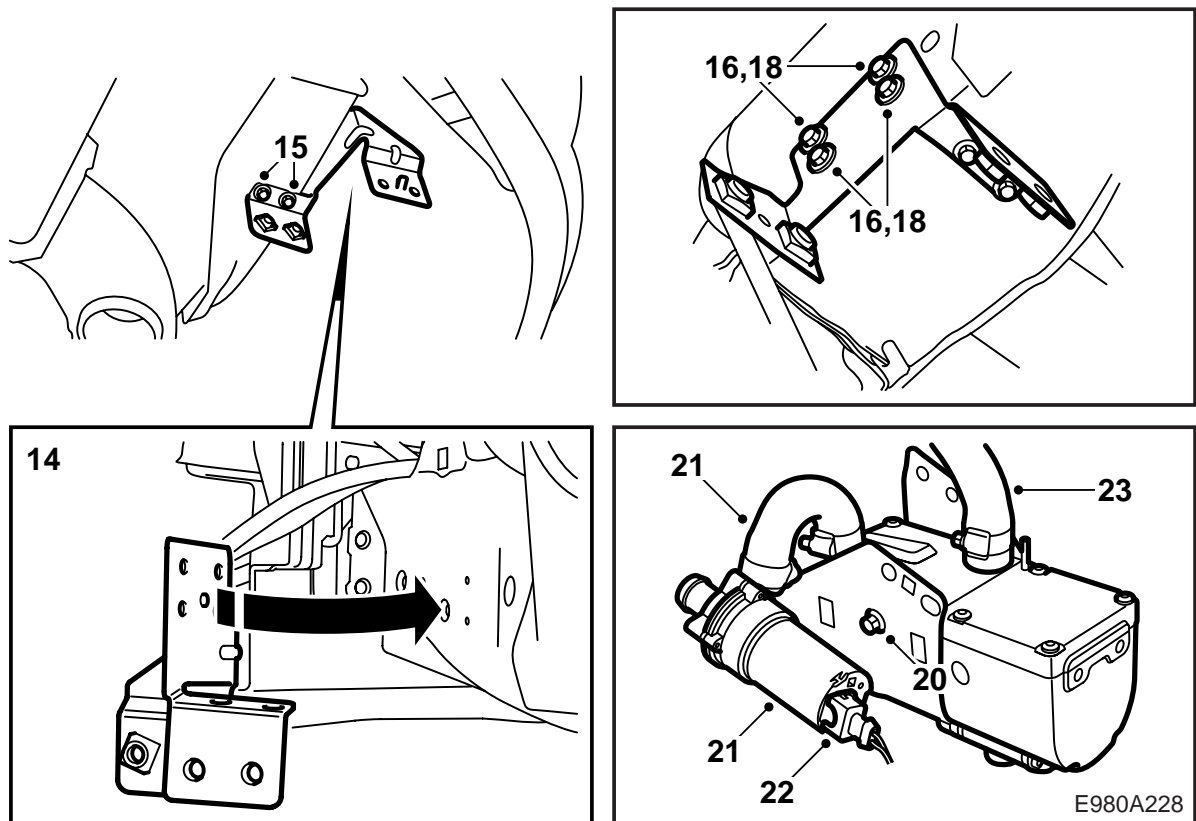
- 11 Detach the turbocharger delivery pipe from the charge air cooler and leave the hose clip hanging from the charge air cooler.



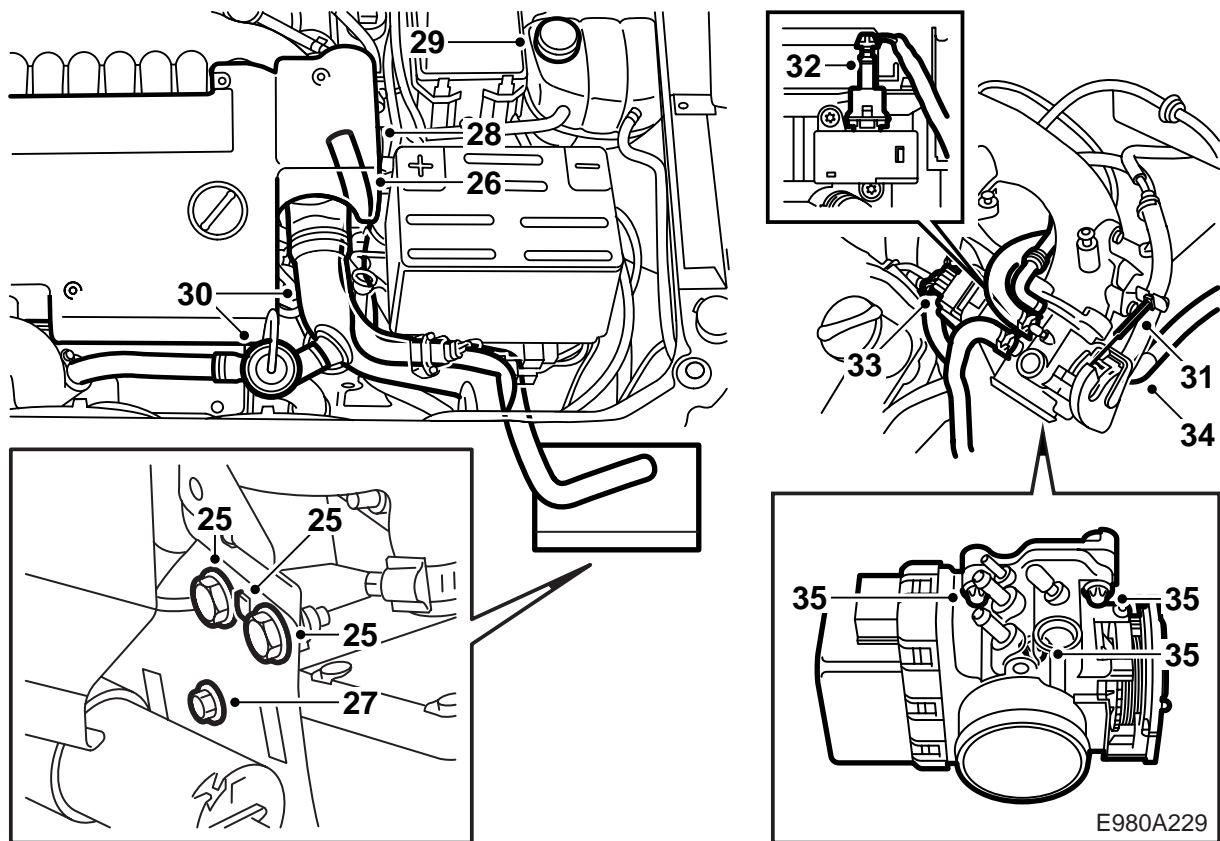
- 12 Remove the left-hand front wheel and left-hand wing liner.
- 13 Detach the pump and level sensor connections. Drain the washer fluid reservoir. If the reservoir is mounted in place with blind rivets, drill them out. Tap the rivet's centre pin in and drill out the rivet, first using a 4 mm drill bit and then a 5 mm bit. Unscrew the washer fluid reservoir and remove same.

Important

This method **must** be employed to prevent damaging the surrounding components.



- 14 Position the bracket in front of the structural plate's crease, see illustration, so that the ball on the bracket fits in the depression in the structural plate. Mark the positions for the two holes on the underside.
- 15 Drill two 3 mm holes in the underside for the bracket and screw it in place.
- 16 Drill four 3 mm holes from the side. Remove the bracket.
- 17 Deburr the holes and remove loose drillings and flakes of paint. Clean with Teroson FL Cleaner. Apply Stodox 1K Primer Filler. Apply finish paint.
- 18 Screw the bracket in place.
- 19 Position the heater in the holder so that the retaining lugs engage properly.
- 20 Fit the two screws that secure the heater in the holder.
- 21 Fit the circulation pump with hose and hose clips to the heater inlet, see illustration.
- 22 Plug the 2-pin connector from the heater into the circulation pump.
- 23 Fit the delivery hose's (49 68 921) slightly thicker connection onto the heater outlet, see illustration.
- 24 Introduce the delivery hose into the engine bay. It must be pushed up in front of the subframe's front mounting, see illustration.

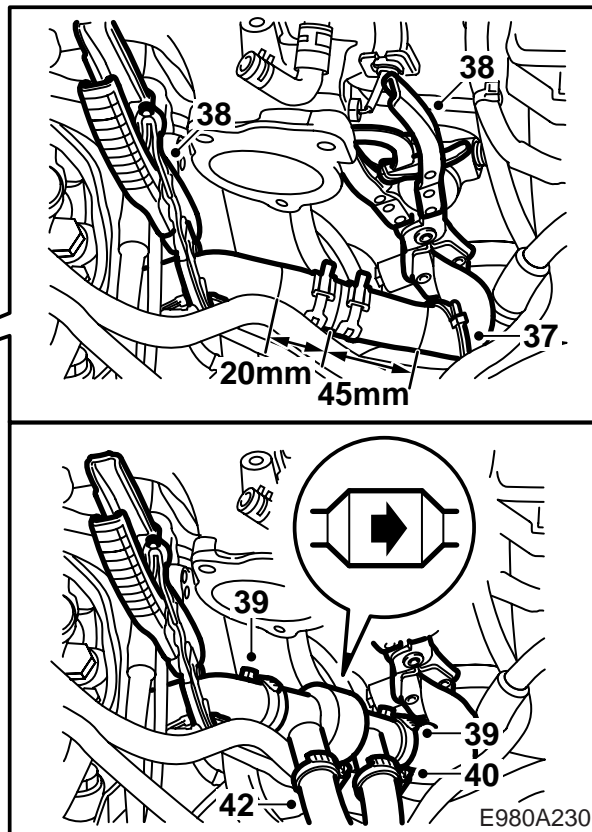
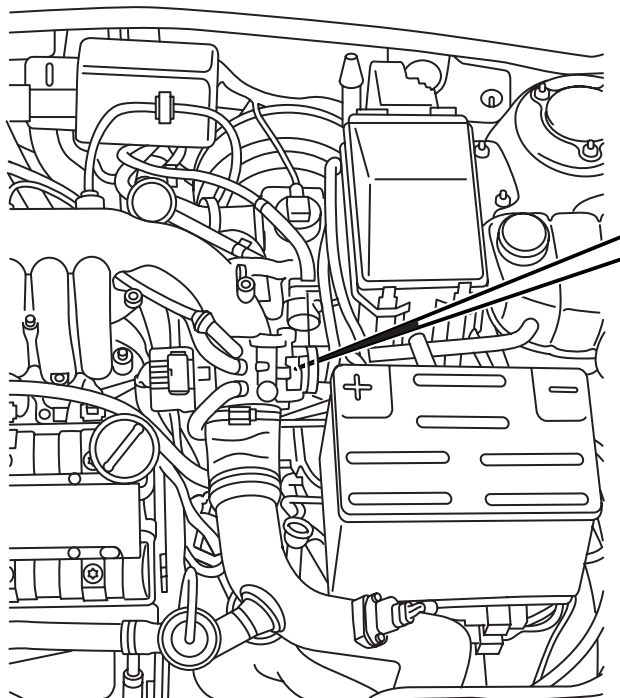


- 25 Suspend the holder with heater from the hook at the front of the bracket and screw the holder in place.
- 26 Run the delivery hose in the engine bay as shown in the illustration.
- 27 Tighten the two screws securing the heater to the holder.
- 28 Remove the engine cover.
- 29 Loosen the cap on the expansion tank to release any pressure in it and then tighten it down again.

⚠ WARNING

Take care if the engine is hot as the coolant will also be very hot. There is also a danger of getting burnt on the exhaust manifold.

- 30 Remove the bypass pipe with valve. Unplug the connector for the temperature/pressure sensor and turbocharger delivery pipe.
- 31 Detach the throttle cable from the throttle's pedal arm.
- 32 Unplug the limp-home solenoid's connector.
- 33 Unplug the throttle body's 10-pin connector.
- 34 Detach the vacuum hose and connection to the venting line under the limp-home solenoid.
- 35 Remove the throttle body's 3 retaining screws and move the throttle body aside.



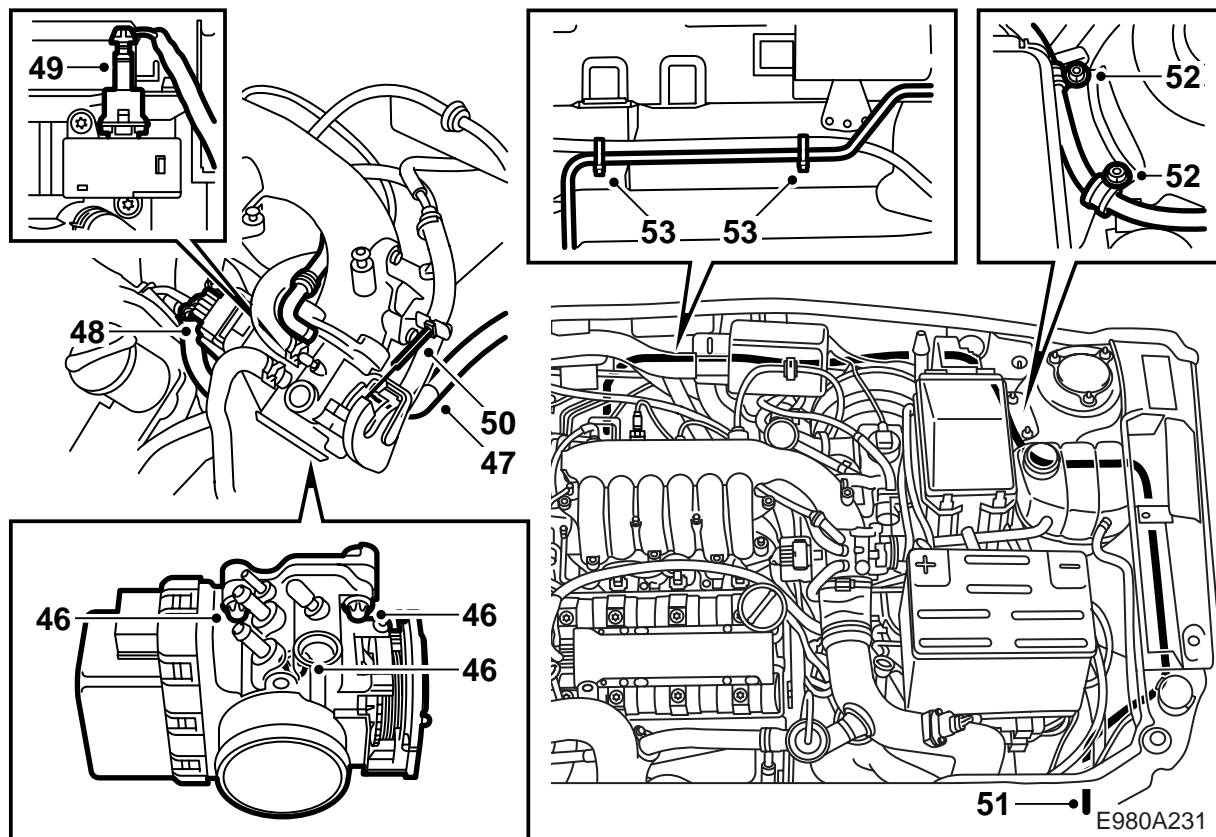
- 36 Run the thick end of the suction hose (49 68 939) from the engine bay towards the heater and attach it to the circulation pump's suction connection.
- 37 Snip the cable tie holding together the coolant hose and the hose running to the expansion tank.
- 38 Pinch off the coolant hoses using two hose-clamp pliers 30 07 739. Separate the hoses and measure and mark the parts that are to be cut off (37 mm of the hose from the engine and 37 mm of the hose from the heat exchanger, as shown).
- 39 Fit the cut hoses to the non-return valve, using two hose clips.

Important

The direction of flow in the non-return valve should be towards the heater unit, as shown in the illustration.

- 40 Connect the delivery hose (49 68 921) from the heater to the non-return valve, see illustration.
- 41 Insert a funnel in the suction hose (49 68 939). Hold up the hose and fill the heater circuit with coolant. Also fill the entire hose.
- 42 Remove the funnel. Pinch off the hose and attach it to the non-return valve with a hose clip, see illustration.
- 43 Remove the hose-clamp pliers, fill up with coolant and check system integrity using a pressure tester.

- 44 Make sure that the hoses are not kinked or twisted and that they are not in contact with hot or sharp components. If necessary, fix them in place by means of the supplied cable ties.
- 45 Use a cable tie to attach the expansion tank hose and the coolant hose to each other.



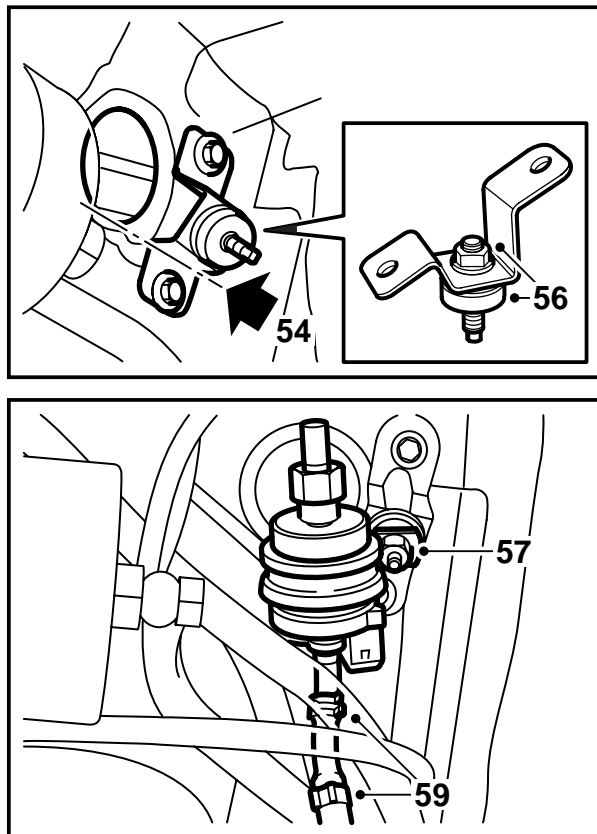
- 46 Move the throttle body back into position and screw it in place using the 3 retaining screws. Fit a new gasket if necessary, coating it sparingly with vaseline.
- 47 Fit the vacuum hose and the connection to the venting line under the limp-home solenoid.
- 48 Plug in the throttle body's 10-pin connector.
- 49 Plug in the limp-home solenoid's connector.
- 50 Attach the throttle pedal cable from the throttle body's pedal arm.
- 51 Run the fuel line between the secondary air injection pump's bracket and behind the expansion tank hose down to the heater.
- 52 Attach the hose to the structural member and suspension strut, using two of the rubber-covered clips.
- 53 Run the fuel hose behind the maxifuse holder, over the brake servo, behind the water shut-off valve, along the venting line and down alongside the brake pipes. Secure with cable ties, see illustration.

Important

Do not tighten the cable tie yet to make adjustment of the fuel hose easier.

WARNING

Take care to prevent the fuel hose from kinking and sustaining damage.



- 54 Raise the car, remove the cover over the fuel filter and hold the fuel pump bracket in front of the fuel filter.

Important

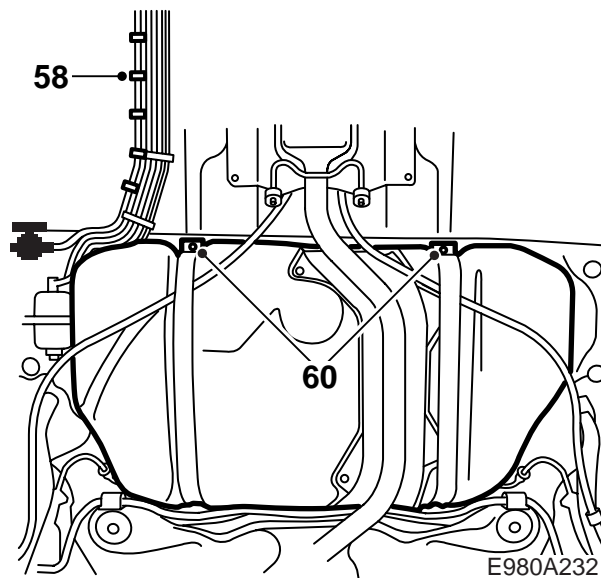
The bracket is angled. When correctly positioned, the corner of the angle should be in line with the edge of the hole, see illustration.

Drill two 3 mm holes in the floor, using the bracket as a template.

WARNING

Take care to avoid damaging the car's regular fuel hoses.

- 55 Deburr the holes and remove loose drillings and flakes of paint. Clean with Teroson FL Cleaner. Apply Standox 1K Primer Filler. Apply finish paint. Apply Terotex HV 400 or Mercasol 1 cavity sealer to internal surfaces.
- 56 Fit the rubber spacer on the bracket and screw it in place.
- 57 Fit the holder on the fuel pump and mount it on the bracket with the delivery side (the thinner connection) facing the left-hand side of the car, see illustration. The bracket must be mounted so that the pump's delivery connection (the smaller one) points upwards.

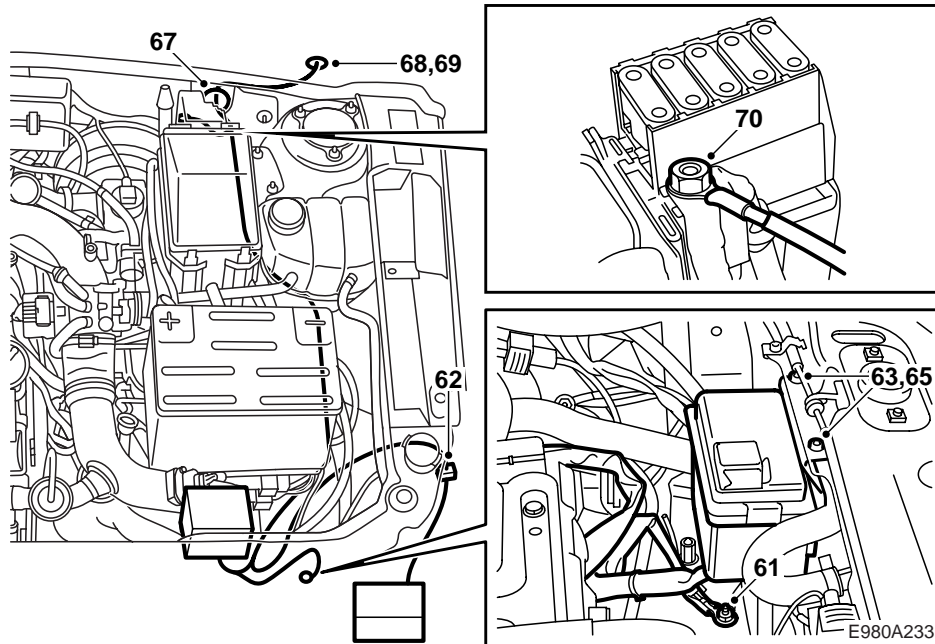


- 58 Fit fuel line 47 29 448 parallel with the fuel pipes that are present under the car, using 8 cable ties (do not tighten them too hard), see illustration.
- 59 Connect the angled line with junction hose and two clips to the delivery side of the fuel pump.

Important

Adjust the position of the pump as necessary so that its connector is not obstructed by surrounding components. Also make sure that there are no kinks in the hoses.

- 60 Lower the fuel tank by slackening the four bolts about 15 turns. This will lower the tank by about 15 mm.



- 61 Lower the car and connect the black cable with ring terminal to grounding point G2 in front of the battery tray.

Important

The 8-pin connector for the heater is sealed with tape. Remove this tape before plugging in the connector but do not on any account touch the connector pins.

- 62 Lower the 8-pin connector down between the body structure and left-hand front wing and plug it into the heater. Fix the cable as necessary so that it does not run too close to hot or sharp components.
- 63 Position the bracket for the heater's electrical distribution unit on the radiator member in line with the bonnet catch, see illustration. The distribution unit must not rest against the radiator hose. Drill two 5.5 mm holes using the bracket as a template.

Important

Mind the bonnet cable and venting hose from the radiator to the expansion tank.

- 64 Deburr the holes and remove loose drillings and flakes of paint. Clean with Teroson FL Cleaner. Apply Stadox 1K Primer Filler. Apply finish paint.
- 65 Hold the bracket under the radiator member, screw it in place and mount the electrical distribution unit.

- 66 Remove the windscreen wiper arms, using pulser 85 80 144, and remove the cover panel over the space between the bulkhead partitions.

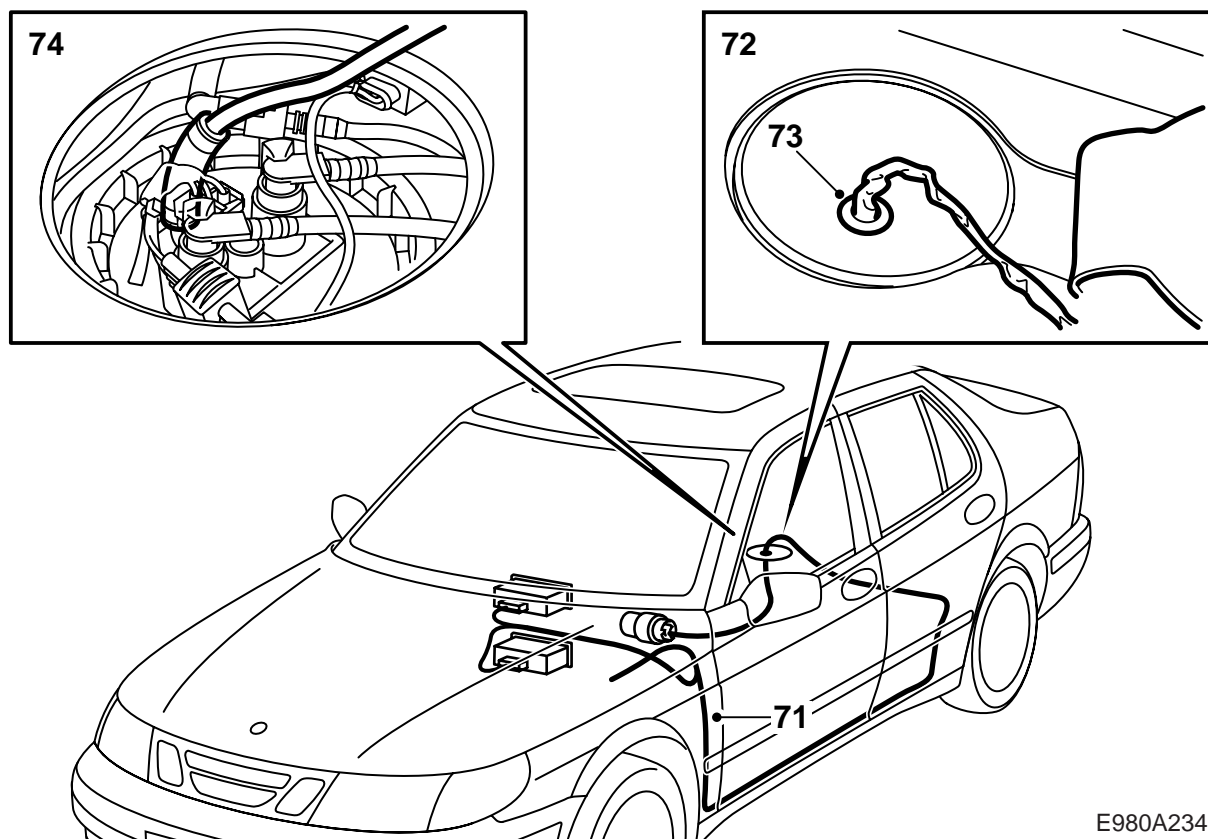
- 67 Cut a hole in the rubber grommet and run the leads to the cabin alongside the battery tray, under the expansion tank and along the cable duct via the grommet in the bulkhead partition adjacent to the maxifuse holder. The wiring harness should not be inserted so far into the grommet that the yellow marking comes inside it. Seal with Teroson T242 (part no. 30 15 781) or equivalent sealant.

RHD: Make a hole in the insulation and drill a 10 mm hole in the rubber plug.

Important

Avoid twisting the wiring.

- 68 Fit a grommet on the wiring harness.
- 69 **LHD:** Remove the plug to the left of the bonnet catch cable's lead-through, make a hole in the insulation and introduce the wiring harness into the cabin. Press the lead-through into place and seal with Teroson T242 (part no. 30 15 781) or equivalent sealant.
- RHD:** Remove that part of the insulating mat where the rubber plug is located (can be felt as a slight bump). Remove the rubber plug and make a hole in the insulation. Run the wiring harness into the cabin and press the lead-through into place. Seal with Teroson T242 (part no. 30 15 781) or the equivalent.
- 70 Connect the wiring harness's red cable (with ring terminal) to the terminal block on the maxifuse holder.



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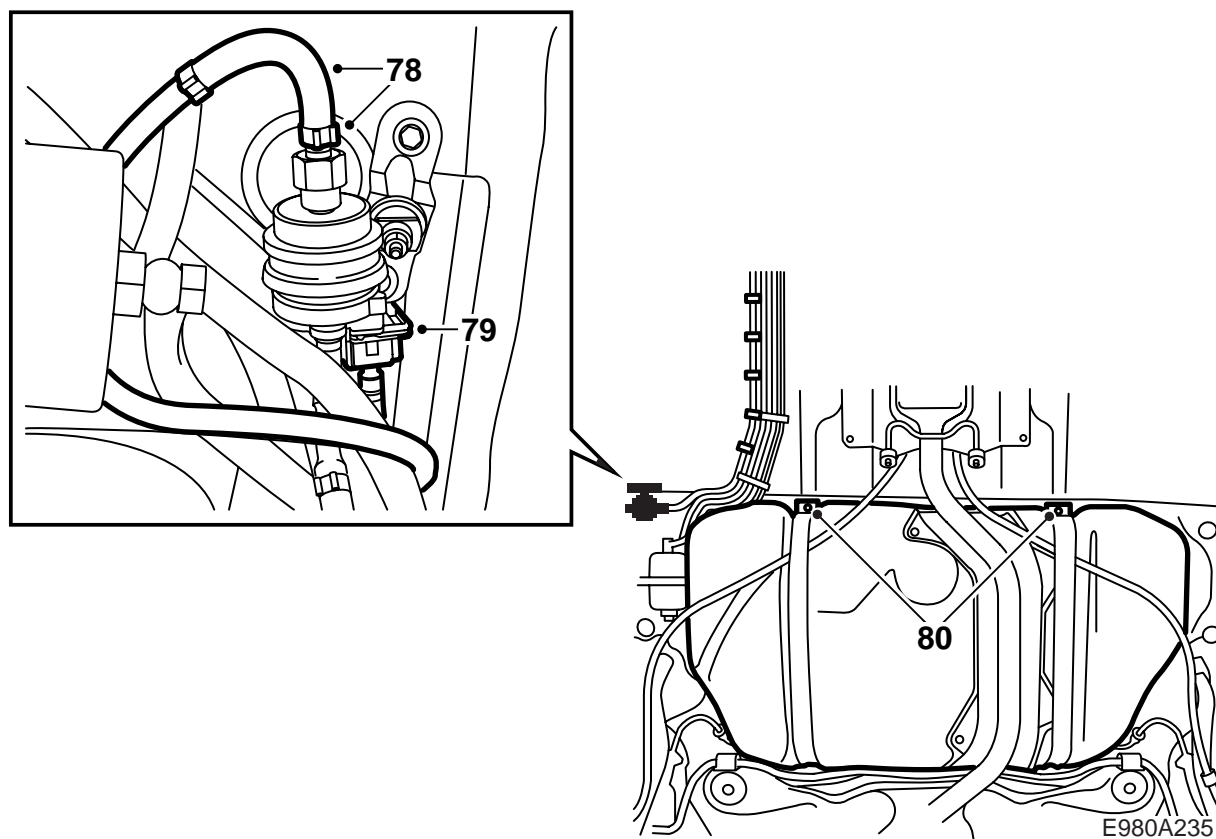
- 71 Run the cables for the fuel pump (VT/BK) from the bulkhead partition to the left-hand A pillar and from there through the plastic ducting in the left-hand sills, under the carpet and up to the hole under the rear seat.
- 72 Drill a 15 mm hole for the grommet in the cover over the fuel tank, see illustration.
- 73 Fit the grommet over the wiring harness and insert the wiring through the hole in the cover. Press the grommet into place.
- 74 Carefully drill a 6.2 mm hole, making sure the drill is perfectly perpendicular, in the connecting pipe in the car's fuel pump cover.
- 75 Manoeuvre a welding rod (about 1.5 m) into position alongside the fuel lines down towards the fuel filter and then on to the front of the top of the fuel tank.
- 76 Tape the end of the remaining fuel line to the fuel pump cables so that dirt cannot enter the fuel line and then fasten the fuel line and cables to the welding rod. Lower the car and pull the fuel line and cables down to the heater's fuel pump.

Important

The drill must not be angled as the tank connecting pipe could be damaged.

Remove the drillings.

- 75 Open the fuel connection kit's plastic bag and discard the fitting instructions inside the bag. Fit the larger end of the connecting hose on the tank's connecting pipe by means of a hose clip and slide the other clip over the other end of the connecting hose. Press the line with the chamfered end down so far that the bend meets the connecting hose. Fit the hose clips in their respective places.



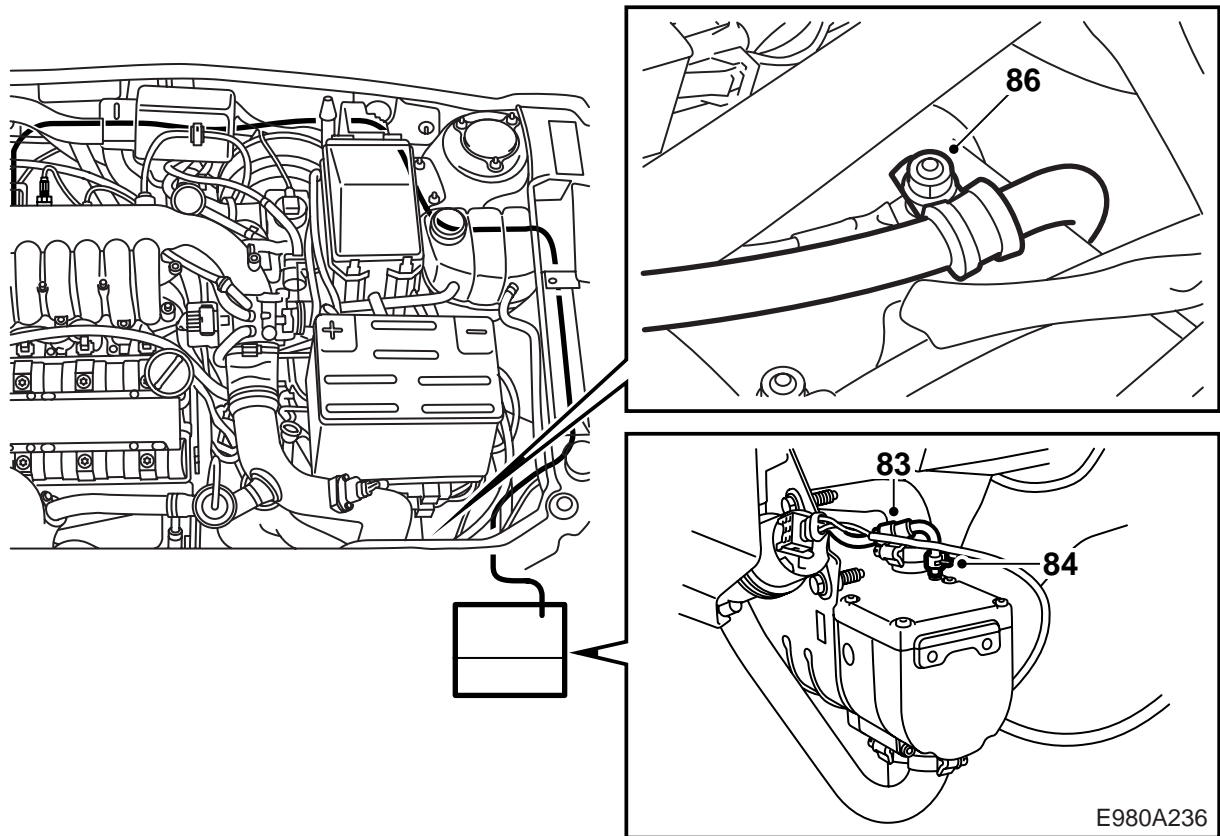
- 78 Connect the fuel line with junction hose and 2 clips to the suction side of the fuel pump.

Important

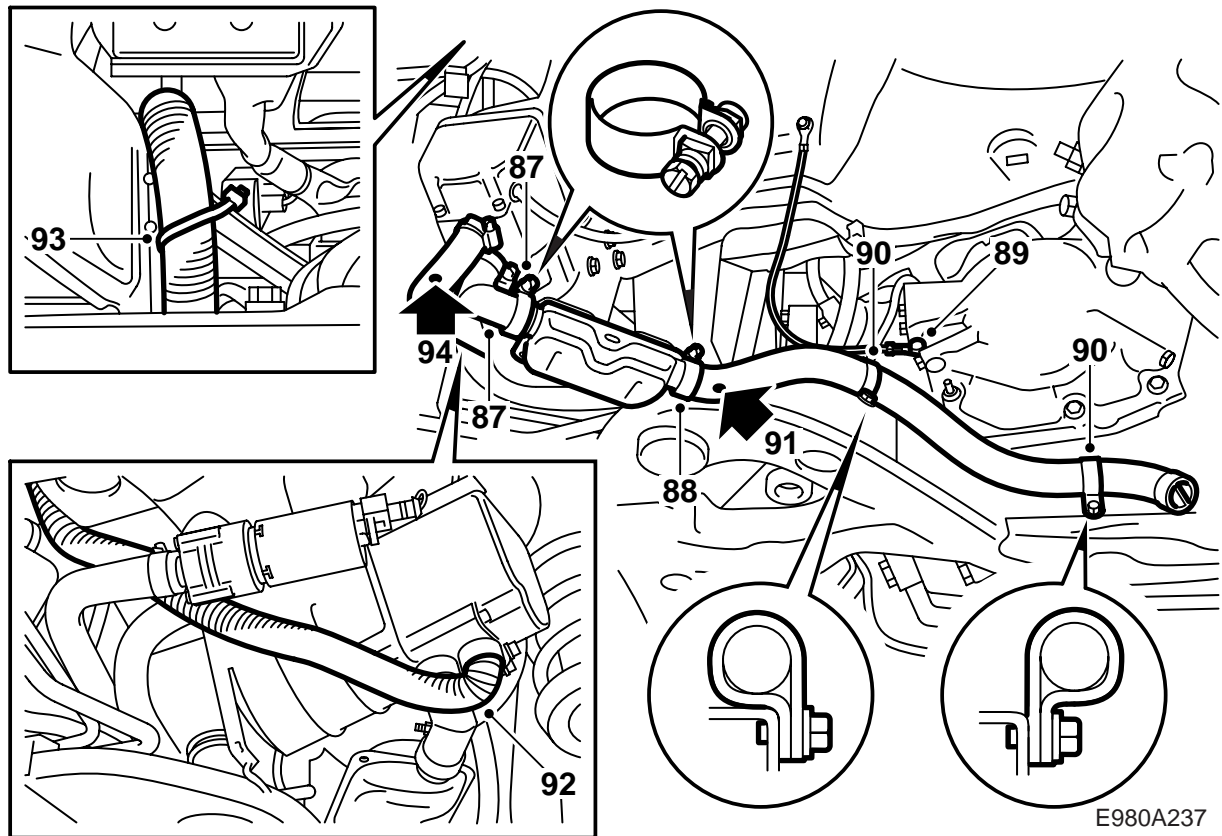
Shape the fuel line, connection to the fuel pump inlet (suction side), with your fingers (hand force) in such a way that the angle of the connecting 90-degree junction hose departs as little as possible from its original shape.

If the angle is too small, it is highly probable that the supply of fuel will be cut off, the hose will be damaged and malfunctioning of the heater will result.

- 79 Fit the connector on the fuel pump's wiring harness (polarity is of no importance) and plug it into the pump.
- 80 Raise the fuel tank and tighten the screws.
Tightening torque 25 Nm (18 lbf ft).
 Check that the leads and cables are not pinched or squeezed.
- 81 Secure the fuel line and wiring harness next to the heater's fuel pump. Refit the cover over the fuel filter.



- 82 Tighten the cable ties along the brake pipes, but not so hard as to damage the fuel line. Lower the car and also tighten the cable ties along the bulkhead partition.
- 83 Push the fuel line down to the heater and fit the angled connecting hose to the fuel line by means of a hose clip, see illustration, with the narrow part facing the heater.
- 84 Connect the hose to the heater's fuel connecting pipe by means of a hose clip.
- 85 Adjust the line so that it does not come into contact with hot or sharp components.
- 86 Adjust the fuel line in the engine bay and attach it to grounding point G2 by means of a rubber-covered clamp.



E980A237

87 Tighten the angled exhaust pipe on the heater's exhaust connecting pipe by means of a clip, attach the silencer (push the ends firmly together) and tighten it with a clip. Adjust the silencer so that it faces diagonally rearwards towards the subframe as shown in the illustration and tighten the clips.

Tightening torque 5 Nm (3.7 lbf ft).

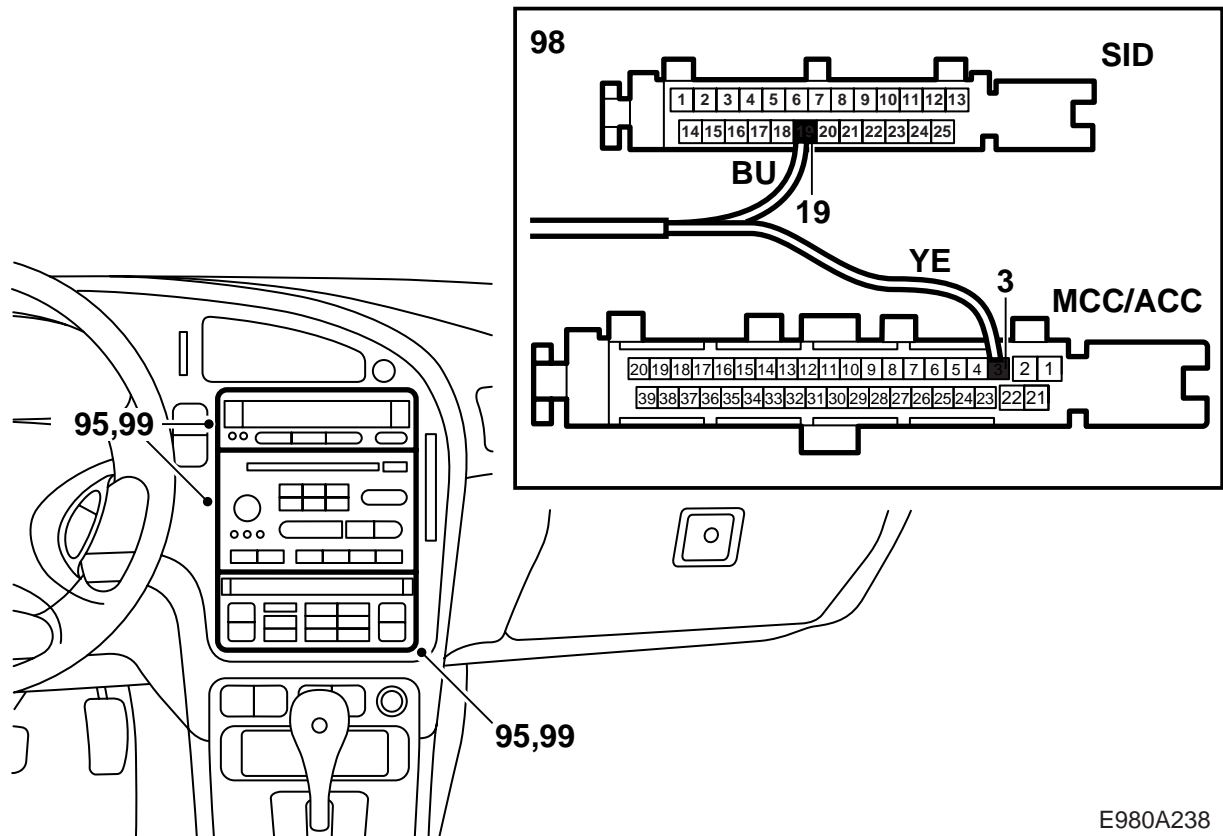
- 88 Fit the exhaust hose on the silencer and secure it with a clip.
- 89 Slide the holder onto the exhaust hose and shape the hose into the form of a bend over the subframe, see illustration, so that it cannot come into contact with the front wheel, wing liner, gearbox or subframe. Check that there is a clearance of at least 40 mm between the exhaust hose and ground cable. Adjust the ground cable's connection on the gearbox as necessary by turning the cable terminal.

Important

Check that the ground cable is mounted as shown in the illustration. If it is not, it must be repositioned.

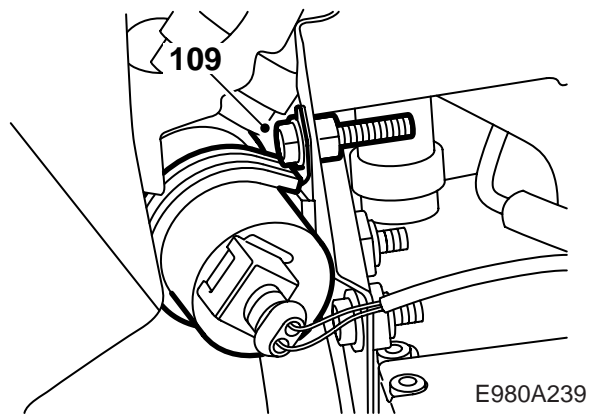
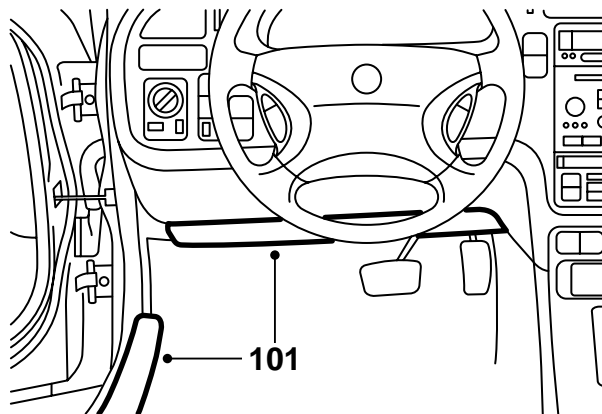
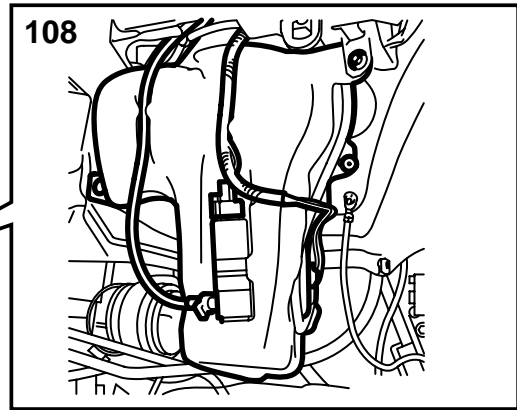
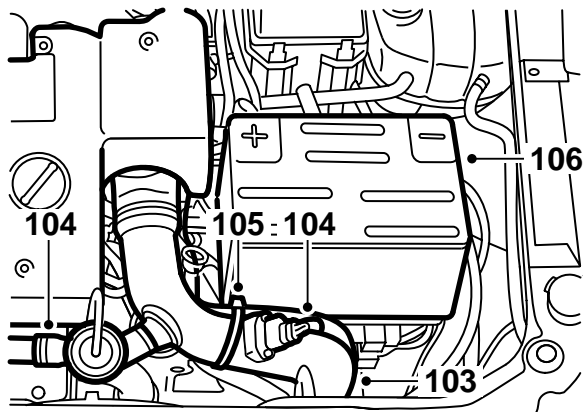
Tightening torque: 25 Nm (18 lbf ft)

- 90 Mark with a centre punch and drill two 4 mm holes in the subframe, see illustration. Tighten the exhaust hose's two holders to the subframe, see illustration, and bend the end of the hose down and out towards the wheel hub. Check that the exhaust hose cannot give rise to rattling or other unwanted sounds and that there is a clearance of at least 10 mm between the hose and the gearbox.
- 91 Drill a 3 mm drain hole in the exhaust hose at its lowest point adjacent to the silencer.
- 92 Bend one end of the intake hose 100° and attach it to the heater connecting pipe by means of a clip.
- 93 Push the hose up behind the left-hand headlamp and into the engine bay. Bend down the upper end 180° over the radiator member's reinforcement to prevent water entering the heater. The opening of the hose should face the left-hand headlamp so that the heater receives as cool a flow of combustion air as possible. Fix the hose in place.
- 94 Drill a 3 mm drain hole in the intake hose at its lowest point adjacent to the heater connection.



E980A238

- 95 Pull the radio, SID unit and climate control system's control panel out of the dashboard. Unplug the connectors from the climate control system's control panel and SID.
- 96 Run the blue (BU) and yellow (YE) cables to the centre console and fix them in place to avoid the risk of pinching.
- 97 Carefully slide the upper and lower halves of the connectors apart.
- 98 Connect the blue (BU) cable to position 19 in the SID unit's connector and the yellow (YE) cable to position 3 in the connector for the climate control system's control panel. Press the connectors together.
- 99 Plug in the connectors and refit the radio, SID unit and climate control system's control panel.
- 100 Fix the cables in place under the dashboard so that they run clear off moving parts and cannot give rise to rattling or other unwanted noise.



E980A239

101 **LHD:** Fit the sound insulating baffle under the dashboard and refit the scuff plates.

RHD: Fit the glove box and refit the scuff plates.

102 Fit the cover over the fuel tank, fold the carpet back into place, refit the rear seat cushions and tip them back into position.

Important

Don't forget to plug in the heating pad, if fitted.

103 Bring the turbocharger delivery pipe down into position and connect it to the charge air cooler. Also connect the throttle body and tighten the hose clip.

104 Fit the bypass pipe with valve and plug the connector into the temperature/pressure sensor.

105 Secure the heater coolant hoses to the turbocharger delivery pipe by means of cable ties, see illustration. Adjust as necessary to ensure that they are not pinched or otherwise likely to be damaged.

106 Refit the battery and connect the battery cables.

107 Jack up the car and check that the turbocharger delivery pipe is firmly connected to the charge air cooler. Tighten the hose clip.

108 Refit the washer fluid reservoir in the same way as it was before and plug the connectors into the pump and level sensor. Refit the wing liner.

109 Mount the holder on the circulation pump and bolt it to the bracket. Use a nut and bolt fitted through the upper hole in the bracket. Lower the car.

110 Bleed the cooling system:

Note

The A/C or ACC should be turned OFF.

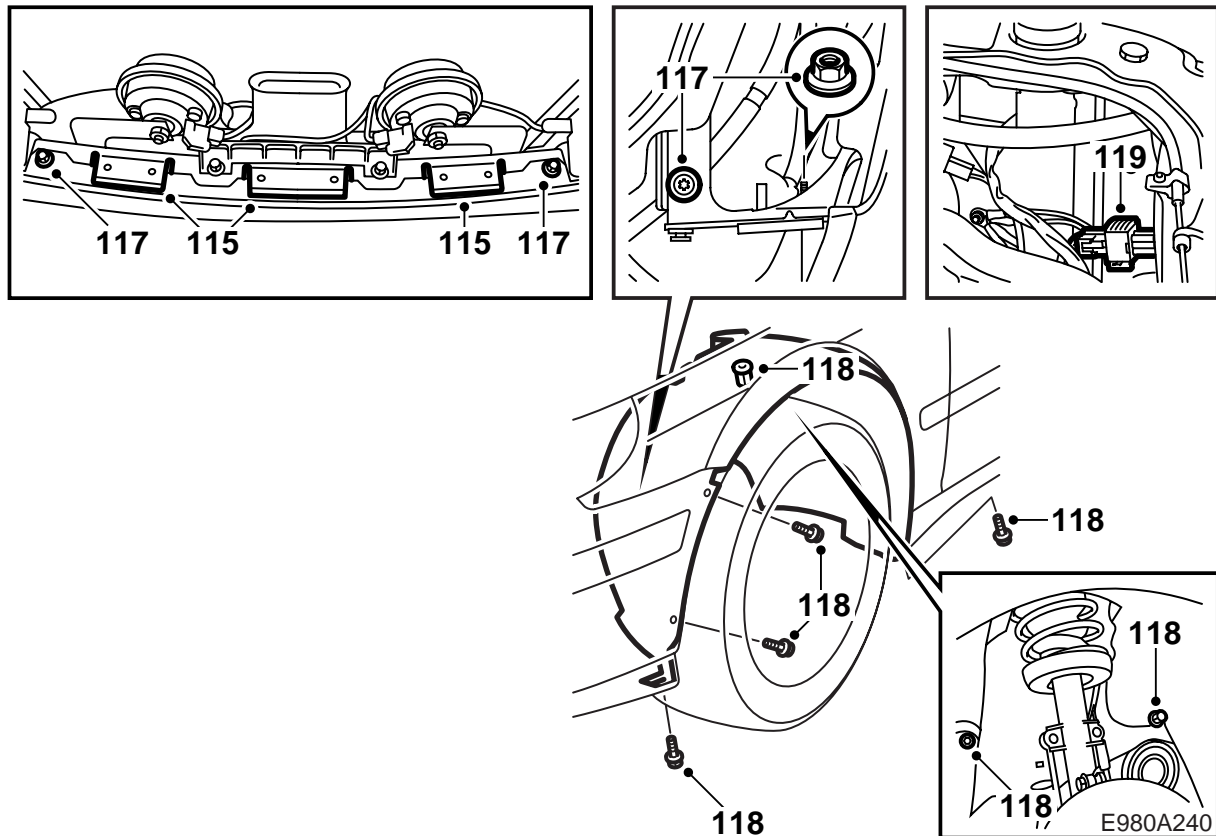
Fill up the system to the MAX level. Screw the cap on the expansion tank, start the engine and warm it up at varying rpm until the radiator fan starts. Carefully open the expansion tank cap and top up to the MAX level. Screw down the expansion tank cap and run the engine at varying rpm until the radiator fan has started three more times.

111 Switch off the engine and allow it to cool down. Check the coolant level and top up as necessary to the MAX level.

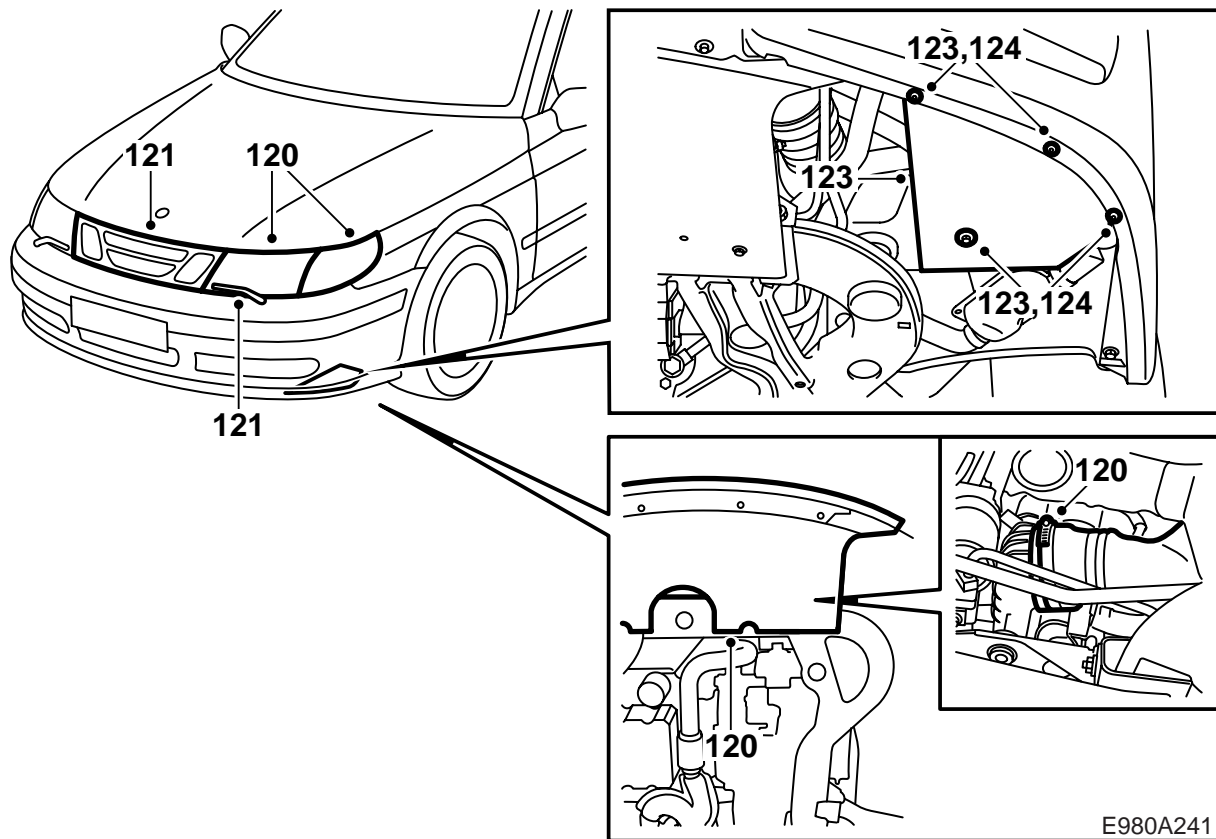
112 Program the SID unit using the diagnostics instrument.

113 First start the heater and then the engine. Keep them both running until there is no more air in the system.

114 Fit the cover over the bulkhead partition space and refit the windscreen wiper arms.



- 115 Inspect the metal lugs to make sure that none of them (9) is damaged or bent down.
- 116 Lift the bumper into position and press it onto the bumper member. Make sure that the stop for the wiper blade and the wiper motor shaft are correctly positioned.
- 117 Mount the bumper's steel reinforcement so that it comes between the wing and wing liner. Then mount the bumper cover over the wing liner and screw it in place
- 118 Fit the screws in the front wing, tighten them and attach the bumper cover to the bumper member. Refit the screws in the wing liner and check that the heater's exhaust hose does not rest against the liner.
- 119 Plug the connector into the bumper wiring harness and connect the battery breather hose. Fit the battery cover and engine cover.



120 Fit the air deflector, tighten the headlamp wiper motor retaining screws and refit the headlamp and direction indicator lights. Make sure that the plastic guides are correctly fitted in the headlamps and check that the headlamp drain hose hangs straight down and is not kinked.

121 Fit the headlamp wiper arms and refit the front grille. Check the functionality of the headlamp wipers.

122 Fit a clip nut on the heater bracket's mounting and three clip nuts on the splash guard (marked positions).

123 Mount the splash guard by means of a screw in the mounting on the bracket. Adjust its position against the bumper cover's lower flange. Mark the positions of the holes, remove the splash guard and drill the holes using a 4 mm drill bit.

124 Screw the splash guard in place using four screws.

⚠ WARNING

Check that it is not in contact with the heater's silencer.

125 Refit the wheel. When the wheel bolts are tightened the wheel must hang freely in the air.

Tightening torque 110 Nm (80 lbf ft).

126 Program the radio code, if any, and clock, including the date. If the car is equipped with an anti-theft alarm, press the remote control's locking/unlocking button 4 times.

ACC: Calibrate the ACC system also.

127 Test the start and stop functions as described in the user instructions on page 24.

128 Fill up with washer fluid.

129 Use benzine to clean the area in the middle of the inside of the fuel tank filler flap. Take the warning label from the kit, adjust the size of the label and affix it to the cleaned area.

Important

Under no circumstances should the label cover any other label, either fully or partially.

130 Place the fitting instructions in the car and inform the customer about the safety regulations. Also show the user section in the instruction manual.

ACC: Inform the customer that the ACC system can be programmed to function differently from its original programming when the heater is in operation. Refer the customer to the instruction manual's section on the ACC but also point out that higher fan speed will increase the drain on the battery.

User instructions

The car's side instrument (SID) has all the functions necessary for controlling the heater manually or by a built-in timer. The timer function can be used to program three (3) different starting times (A, B, and C). The running time is 60 minutes.

When the heater is activated the SID display shows "HEATER ON" and the remaining running time in minutes.

There are two SID versions, one (SID 1) with four keys (CLEAR, down arrow, up arrow and NIGHT PANEL) and the other (SID 2) with five keys (CLEAR, SET, -, + and NIGHT PANEL).

Note

If the heater is already activated when the engine is started, it will continue to run for the remaining running time unless it is stopped manually. See "Manual stopping when the engine is started". The heater will also stop if the ignition switch is turned to OFF.

Manual starting when the engine is not running (ignition switch in OFF position):

- 1 Press the down arrow, up arrow or + key on the SID unit. The display will light up.
- 2 Scroll to "MANUAL START" with the down arrow and up arrow keys or with the - and + keys.
- 3 Release the keys. The heater will start in a second or two and the SID display will show "HEATER ON 60" (remaining running time in minutes).

Manual stopping when the engine is not running (ignition switch in OFF position):

The heater is running and the display shows "HEATER ON" together with the remaining running time in minutes.

- 1 Scroll to "HEATER OFF" with the down arrow and up arrow keys or with the - and + keys.
- 2 Release the keys. The heater is now turned off.

Manual starting when the engine is running (ignition switch in ON position):

- 1 Simultaneously press the down arrow and up arrow keys or the - and + keys until an audible signal acknowledges the command.
- 2 Release the keys. The heater is now activated. "HEATER" is shown at the bottom of the SID display.

Manual stopping when the engine is started (ignition switch in ON position):

The word "HEATER" appears at the bottom of the SID display.

- 1 Simultaneously press the down arrow and up arrow keys or the - and + keys until an audible signal acknowledges the command.
- 2 Release the keys. The heater is now turned off and the word "HEATER" at the bottom of the SID display goes out.

Setting timer-controlled starting when the engine is not running (ignition switch in OFF position):

- 1 Press one of the down arrow and up arrow keys or - and + keys on the SID unit. The display will light up.
- 2 Scroll to "A --:-- HEAT" with the down arrow and up arrow keys or the - and + keys.
- 3 Keep the SET key or the CLEAR and down arrow keys depressed until an audible signal acknowledges the command. Flashing then indicates that the time can be entered.
- 4 Set the time by pressing the down arrow and up arrow keys or the - and + keys until the desired time is displayed.
- 5 Keep the SET key or the CLEAR and down arrow keys depressed until an audible signal acknowledges the command. The desired time is now stored in the memory.

If several starting times are desired, repeat points 2-5 for "B --:-- HEAT" and "C --:-- HEAT".

Activation of timer-controlled starting when the engine is not running (ignition switch in OFF position):

For activation of desired starting time A, B or C.

- 1 Press one of the down arrow and up arrow or - and + keys on the SID unit. The display will light up.
- 2 Scroll to "A (time) HEAT", "B (time) HEAT" or "C (time) HEAT" by means of the down arrow and up arrow or - and + keys.
- 3 "START" and the selected starting time will be displayed in a second or two and then the information will go out.

Starting times (A, B or C) can be changed or "HEATER OFF" can be selected by repeating steps 1 and 2.

Wiring diagram

