

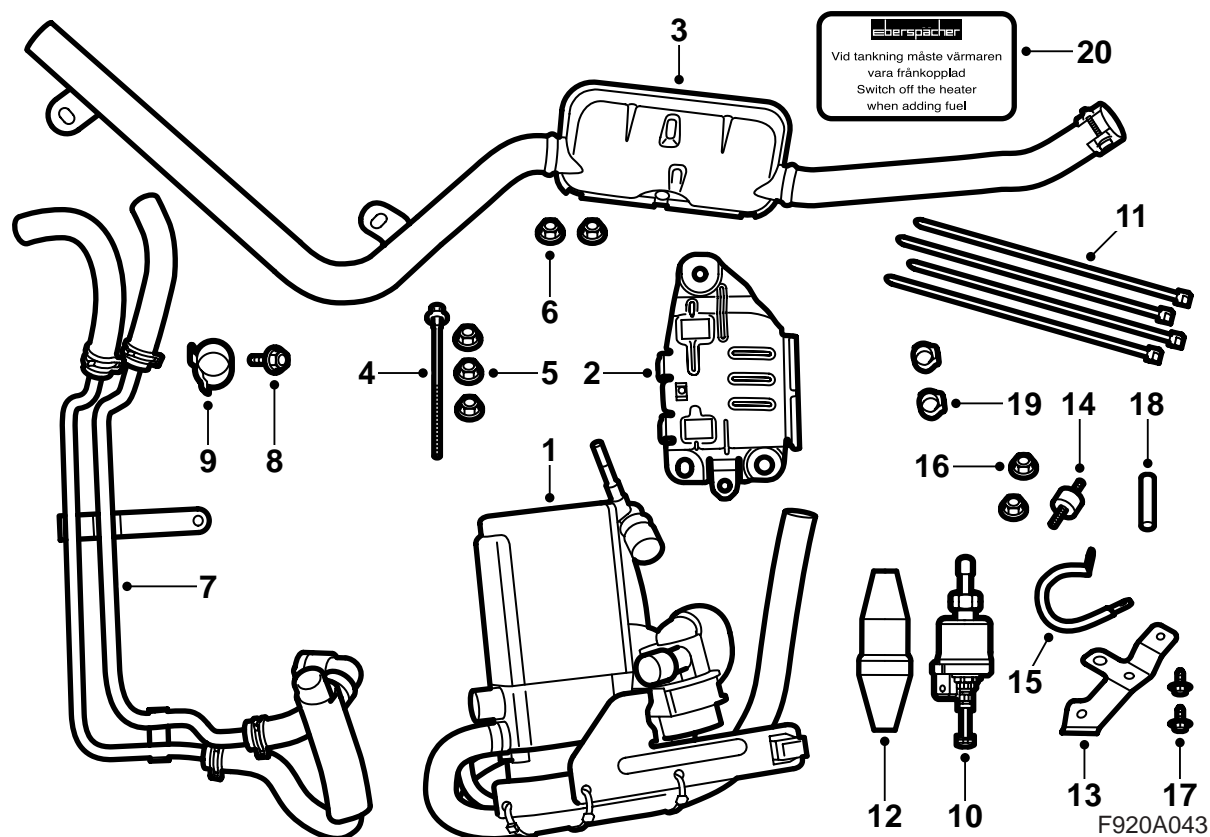


**MONTERINGSANVISNING · INSTALLATION INSTRUCTIONS
MONTAGEANLEITUNG · INSTRUCTIONS DE MONTAGE**

Saab 9-3 M03-M04

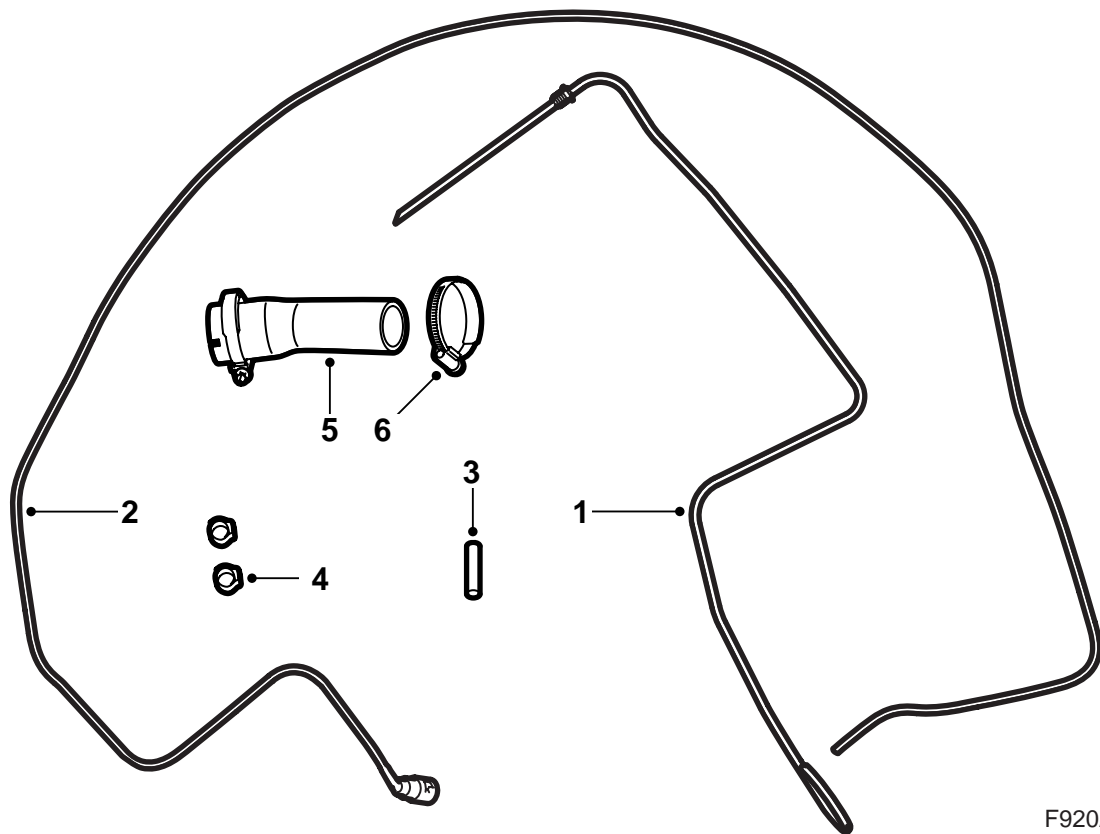
Engine/cabin heater

Accessories Part No.	Group	Date	Instruction Part No.	Replaces
12 804 143	9:87-42	May 04	12 788 928	12 788 928 Sep 03



Heater kit 12 804 321

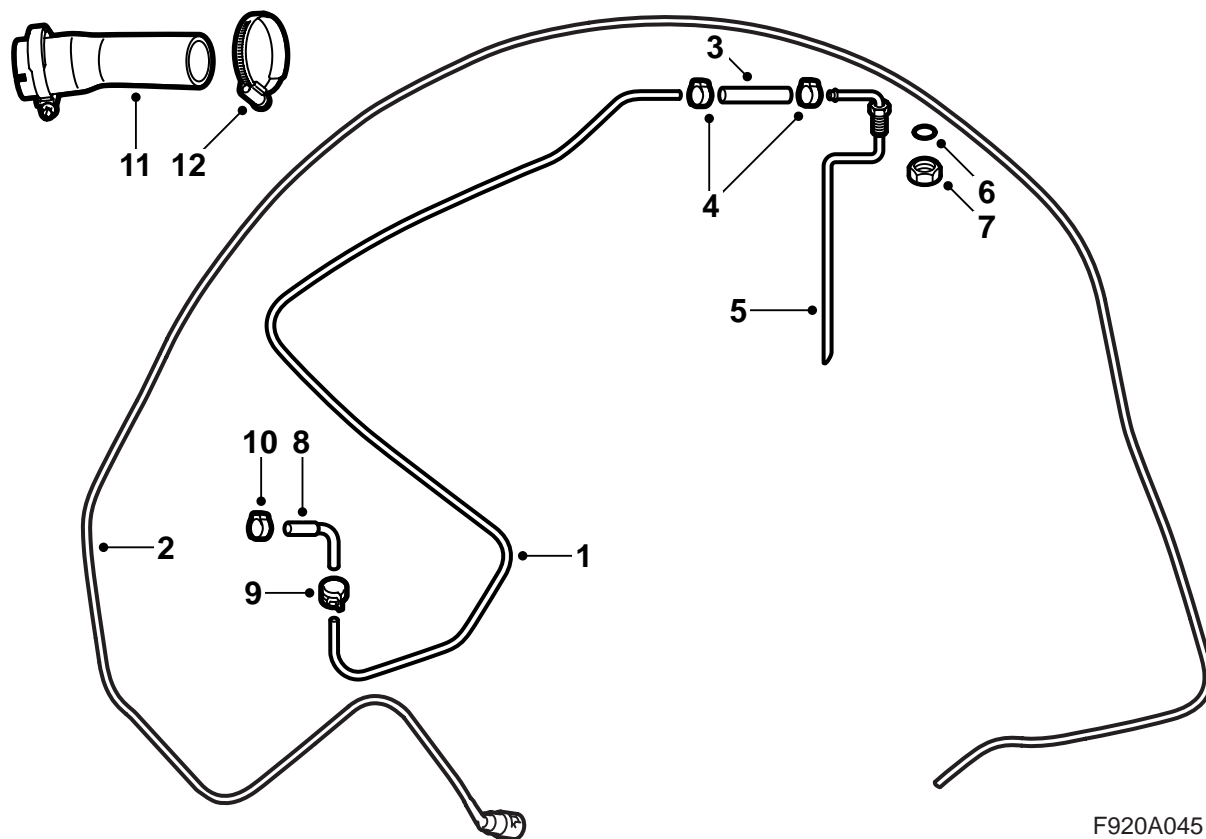
- 1 Petrol heater
- 2 Holder
- 3 Exhaust system
- 4 Bolt M6x100
- 5 Nut M8 (x3)
- 6 Nut M6 (x2)
- 7 Coolant hoses/pipes
- 8 Screw
- 9 Hose clip (x2)
- 10 Fuel Pump
- 11 Cable tie (x20)
- 12 Protective cover, fuel pump
- 13 Bracket, fuel pump
- 14 Vibration damper
- 15 Clamp
- 16 Nut M6 (x2)
- 17 Bolt (x2)
- 18 Junction hose
- 19 Hose clip, fuel line (x2)
- 20 Label



F920A044

**Fuel connection kit 12 804 145
(M03/CV M04-)**

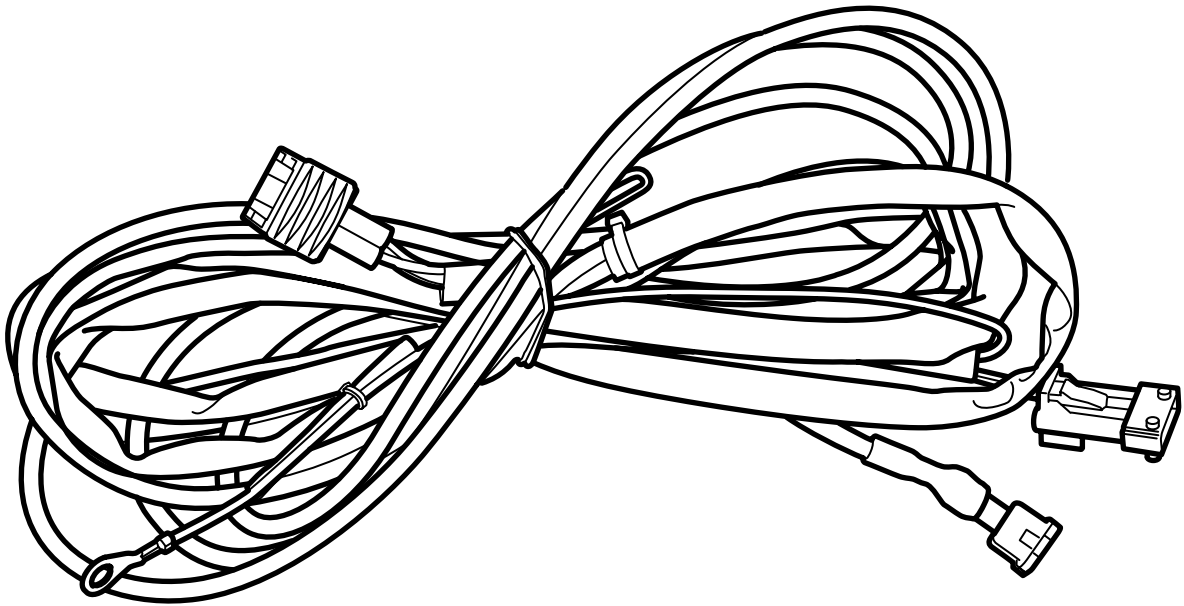
- 1 Fuel hose (tank-pump)
- 2 Fuel hose (pump-heater)
- 3 Junction hose
- 4 Hose clip, fuel line (x2)
- 5 Hose
- 6 Hose clip (x2) (One is mounted on hose (5))



F920A045

**Fuel connection kit 12 804 146
(4D M04-)**

- 1 Fuel hose (tank-pump)
- 2 Fuel hose (pump-heater)
- 3 Junction hose, straight
- 4 Hose clip, fuel line (x2)
- 5 Pipe
- 6 O-ring
- 7 Nut
- 8 Junction hose, angled
- 9 Hose clip
- 10 Hose clip
- 11 Hose
- 12 Hose clip (x2) (One is mounted on hose (11))



F920A013

Electrical connection kit

Wiring harness

Important

WARNING

Work on the heater involves dismantling the vehicle fuel system and emptying the fuel tank. When carrying out the work the following points should therefore be observed:

- Provide good ventilation! Use approved extractors for removing fuel fumes if they are available.
- Use protective gloves! Prolonged contact with fuel can cause skin irritation.
- Keep a class BE fire extinguisher close at hand. Observe the risk of sparks, e.g. in connection with breaking electrical circuits, short circuiting, etc.
- Smoking is absolutely forbidden.
- Use protective goggles.

Important

The flexible bellows on the forward section of the exhaust system must not be bent more than 5° from its neutral alignment. This means that if the forward section is hanging free, the bellows must not be bent further than the amount already caused by the weight of the system.

Excessive loading of the pipe can lead to residual deformations in the components which can cause noise, leakage and eventually failure.

Preparations

Reduction of fuel pressure

- 1 Let the engine idle.
- 2 Remove fuse No. 2 (fuel pump) from the electrical centre located in front of the battery in the engine compartment.
- 3 When the engine has stopped the ignition key must be turned to the OFF position.
- 4 Refit the fuse.

Emptying the fuel tank

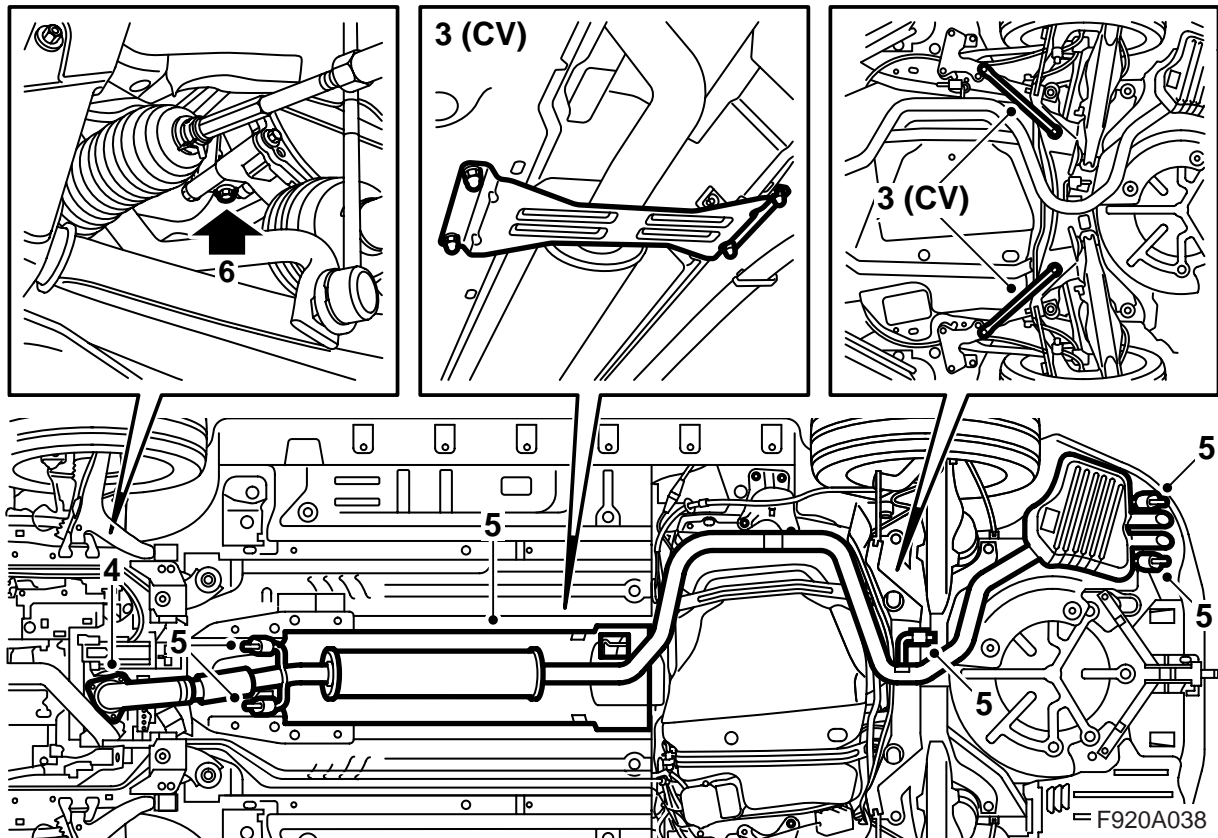
Important

Pay attention to cleanliness when working on the fuel system. Prevent dirt from entering the tank and fuel lines.

Be careful not to damage the non-return valve in the fuel tank when inserting and removing the suction pipe of the emptying unit.

The fuel tank is not fitted with a drain plug. Where work on the fuel system requires emptying of the fuel tank this is done with an emptying unit via the filler pipe.

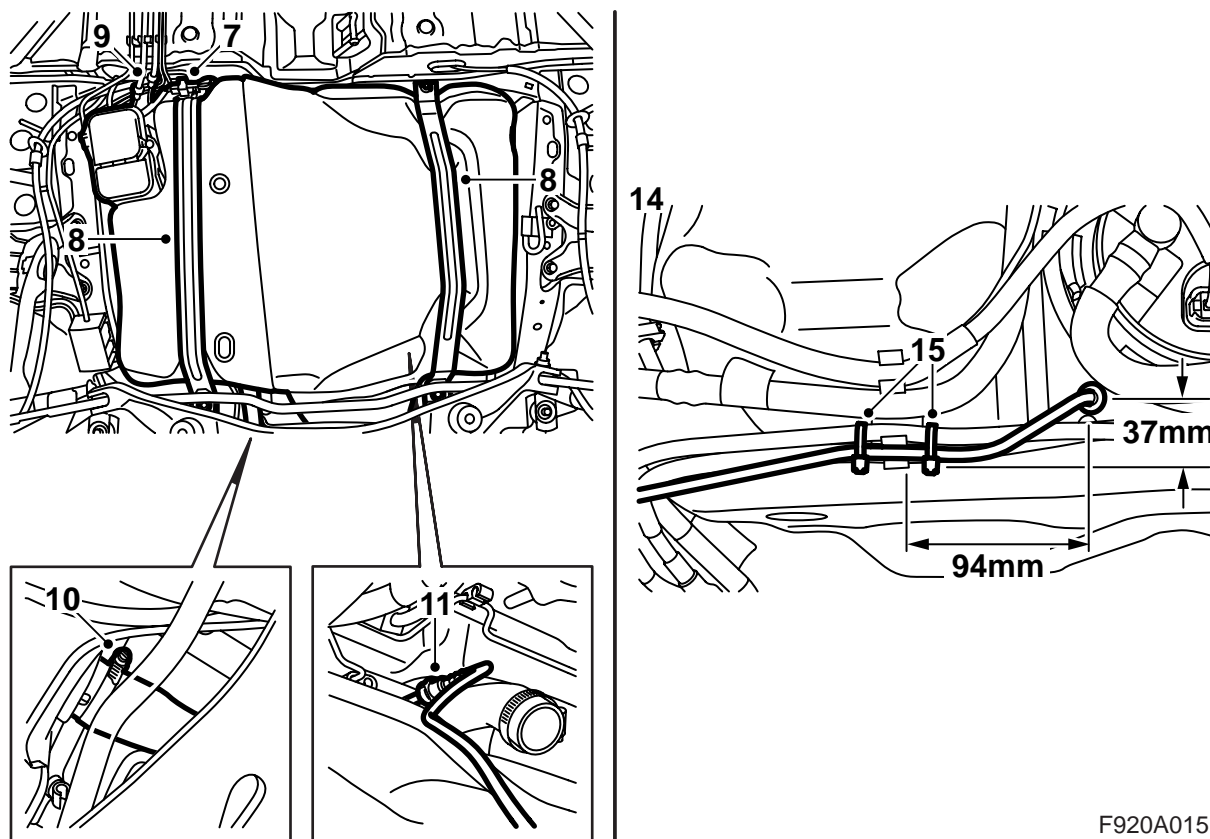
Before emptying read carefully through the instructions supplied with the emptying unit.



- 1 Disconnect the negative battery cable.
- 2 Remove the cap from the expansion tank.
- 3 Raise the car.
- CV:** Remove the tunnel reinforcement and the rear chassis reinforcements.
- 4 Remove the bolts from the forward section of the exhaust system.
- 5 Remove the exhaust system.
- 6 Place a receptacle under the engine, open the drain plug on the bottom of the coolant pump and drain the coolant.

M03/CV M04-: Continue with step 7.

4D M04-: Continue with step 20.



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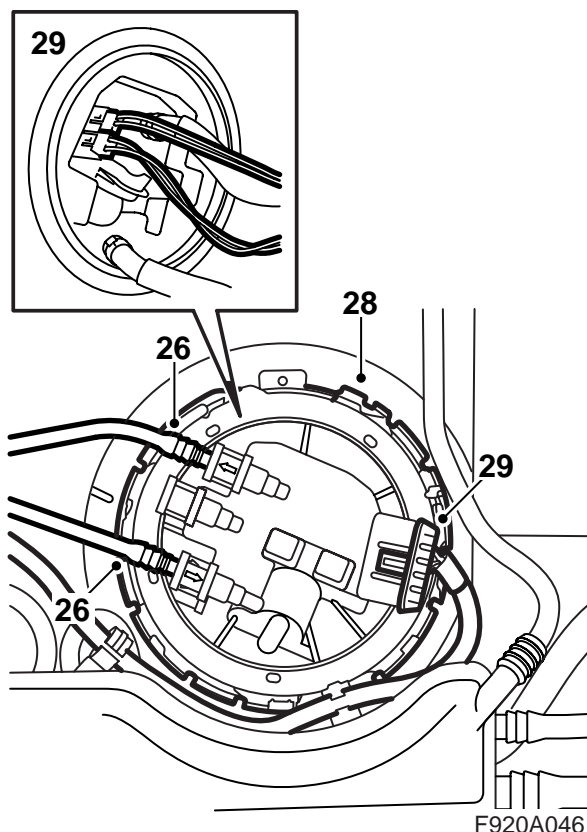
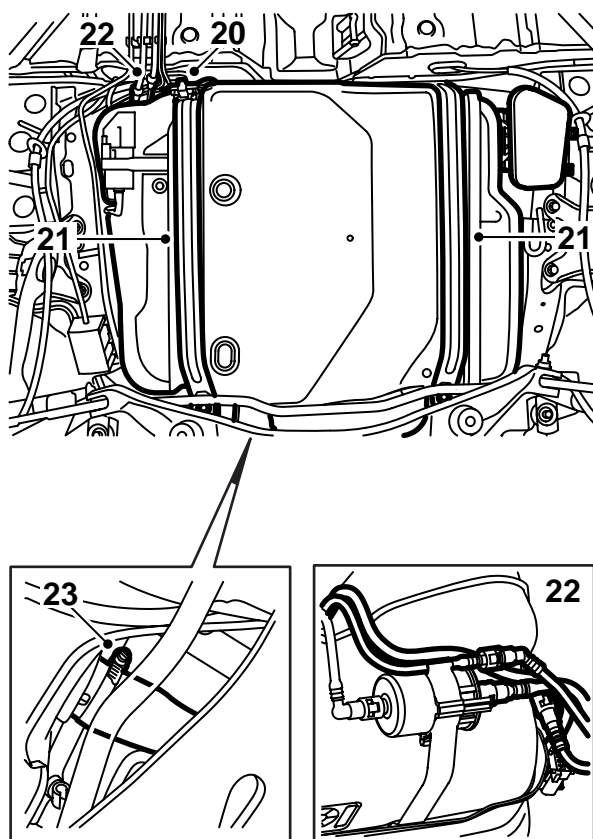
M03/CV M04-

- 7 Unplug the connector in front of the fuel tank and detach the wiring harness from its mounting.
- 8 Place a pillar jack under the fuel tank and undo the tank mounting straps.
- 9 Position a collection container under the fuel tank, separate the fuel lines using tool 83 95 261 and plug the fuel lines' tank connections so that they do not leak fuel.
- 10 Remove the filler pipe hose from the fuel tank.
- 11 Carefully lower the fuel tank until the joint in the evaporative emission canister vent hose becomes accessible. Separate the joint in the evaporative emission canister vent hose and the joint in the fuel filler vent hose.
- 12 Lower the fuel tank completely and lift it away to a workbench.
- 13 Mark the position of the hole where the heater fuel pipe is to be inserted.
- 14 Drill a 10.5 mm hole in the tank.

Important

Be careful to prevent drill filings from falling into the tank.

- 15 Push the fuel pipe into the tank until the seal locates against the tank and fasten the pipe to the other fuel lines with a cable tie on each side of the fuel line holder.
- 16 Remove the hose which is connected to the fuel filler pipe (the hose clip must be split with a saw) and fit the hose from the set.
Tightening torque 4 Nm (3 lbf ft)
- 17 Place the fuel tank on a pillar jack, lift the tank slightly and connect the fuel filler vent hose. Lift the fuel tank completely and connect the remaining fuel lines.
- 18 Fit the fuel tank mounting straps.
Tightening torque 24 Nm (18 lbf ft)
- 19 Plug in the connector in front of the fuel tank and fit the wiring harness into its mounting.
Continue with step 42.



4D M04-

- 20 Unplug the connector in front of the fuel tank and detach the wiring harness from its mounting.
- 21 Place a pillar jack under the fuel tank and undo the tank mounting straps.
- 22 Position a collection container under the fuel tank, separate the fuel lines using tool 83 95 261 and plug the fuel lines' tank connections so that they do not leak fuel.
- 23 Remove the filler pipe hose from the fuel tank.
- 24 Carefully lower the fuel tank until the joint in the evaporative emission canister vent hose becomes accessible. Separate the joint in the evaporative emission canister vent hose and the joint in the fuel filler vent hose.
- 25 Lower the fuel tank completely and lift it away to a workbench.
- 26 Remove the fuel line and return line snap-on couplings with fuel line tool 83 95 261 and plug the lines with plug 82 92 948.
- 27 Mark the fitting positions of the fuel line and the return line.

- 28 Remove the cover's circlip by turning it anti-clockwise.

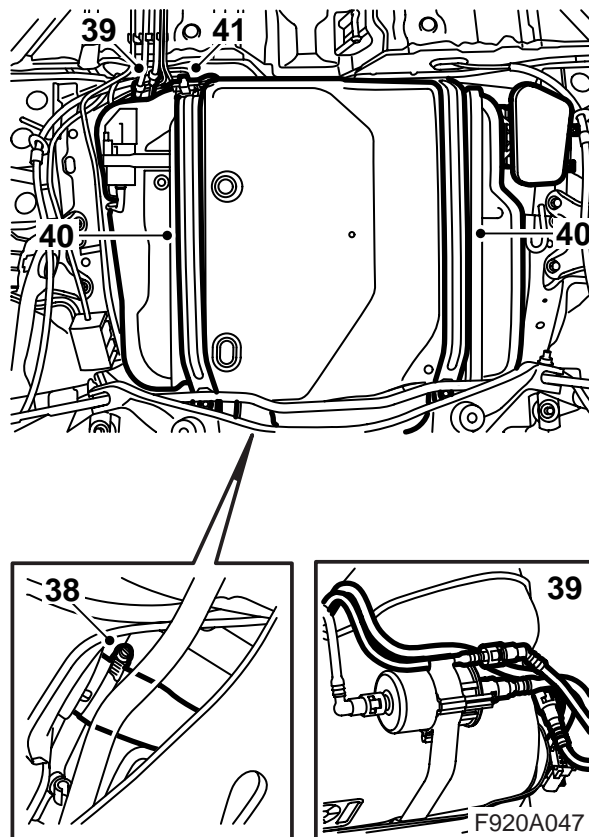
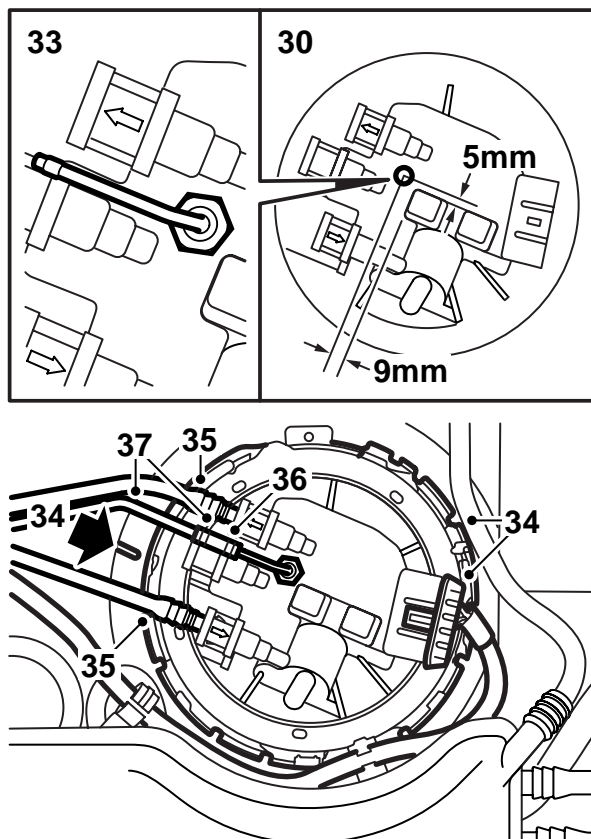
Important

Mark the cover's fitting position.

- 29 Remove the cover and remove the fuel pump connector from the cover. Cover the hole in the fuel tank to prevent dirt and filings entering the tank.

Important

The cover must only be removed for a short time in order to avoid the seal swelling and requiring replacement.

**4D M04-**

- 30 Mark the position in the cover for the hole that the pipe shall be guided into.
- 31 Drill a 10 mm hole in the cover.

Important

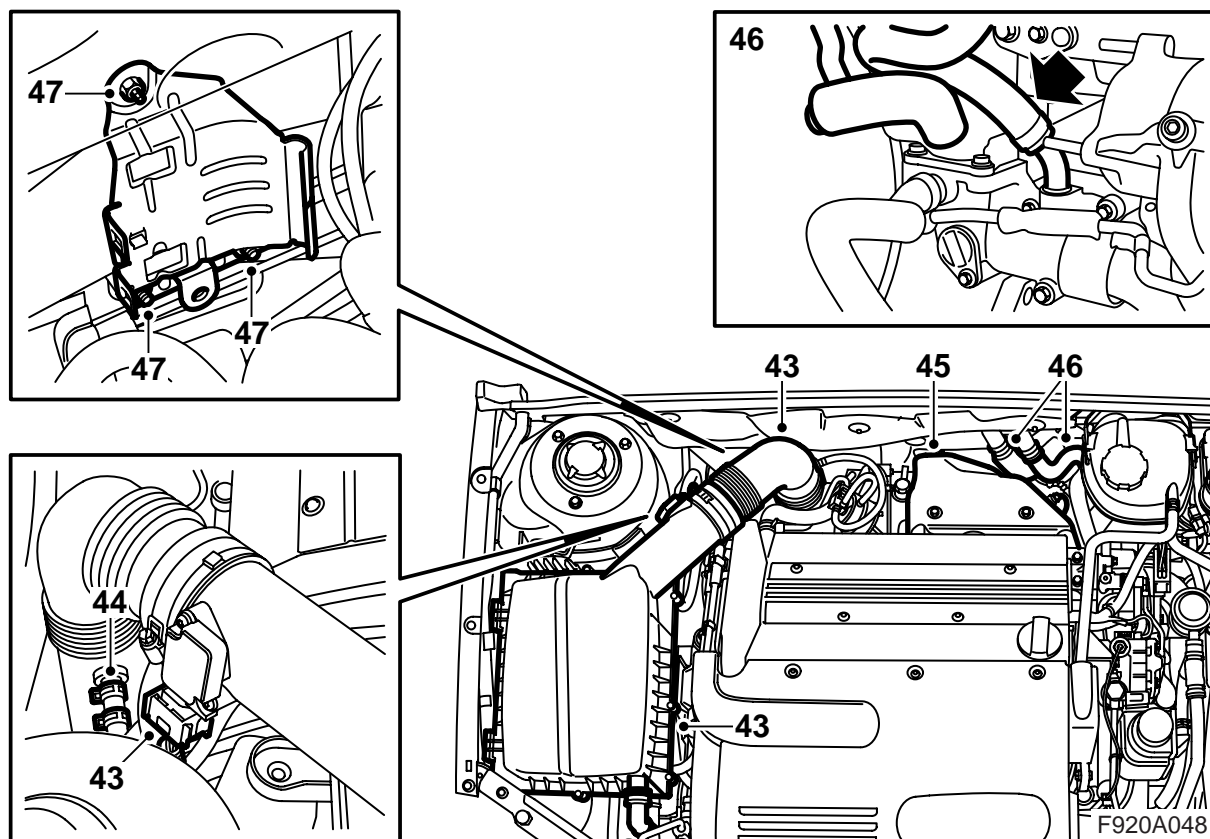
Be careful to prevent drill filings from falling into the tank.

- 32 Brush acid-free vaseline part no. 30 15 286 or equivalent on the O-ring and fit it to the screw which is fitted on the fuel pipe in the kit.
- 33 Guide the pipe into the cover and direct it to the top side of the cover so that it is parallel with the other fuel connections. Tighten the pipe's nuts.
- 34 Plug in the connector to the cover and fit the cover in accordance with the marked fitting positions. Fit the circlip by turning it clockwise.
- 35 Remove the plugs and connect the fuel lines and the connector.
- 36 Fit the straight junction hose from the fuel connection kit to the pipe and fit a hose clip.
- 37 Fit the fuel hose in the junction hose and fit a hose clip. Fit the fuse hose in the clip on the fuel tank.

- 38 Remove the hose which is connected to the fuel filler pipe (the hose clip must be split with a saw) and fit the hose from the set.

Tightening torque 4 Nm (3 lbf ft)

- 39 Place the fuel tank on a pillar jack, lift the tank slightly and connect the fuel filler vent hose. Lift the fuel tank completely and connect the remaining fuel lines.
- 40 Fit the fuel tank mounting straps.
- Tightening torque 25 Nm (18 lbf ft)**
- 41 Plug in the connector in front of the fuel tank and fit the wiring harness into its mounting.
- Continue with step 42.



42 Fit the drain plug on the under side of the coolant pump and lower the car to just above the floor.

43 Unplug the connector from the air mass sensor, separate the intake hose and remove the air filter cover. Remove the hose from the air filter cover (if such a hose is fitted).

44 Remove from the turbo intake pipe the small hose to the control valve (APC valve) and the hose to the carbon filter vent-valve. Remove the intake pipe.

45 Remove the heat shield from the turbo compressor (two screws and a catch).

46 Remove both coolant hoses from the connections for the heat exchanger on the bulkhead partition and remove from the thermostat housing the one hose which is connected to the pipe on the top side of the thermostat housing.

Important

Retain the hose clip, it is required for re-assembly.

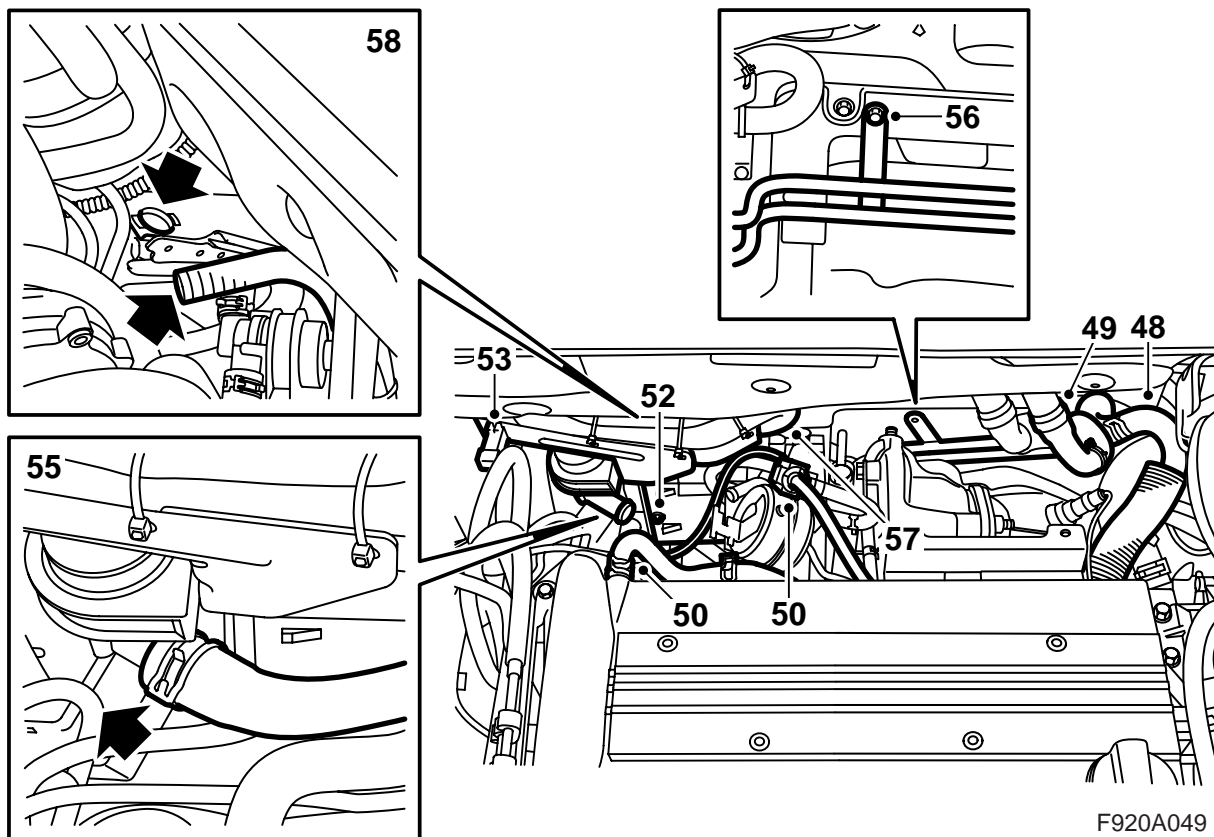
47 Fit the heater mounting bracket to the bulkhead.

Tightening torque 24 Nm (18 lbf ft)

Using benzine, clean an area between the suspension strut mounting bolts on the top of the right-hand suspension turret nearest to the engine. Remove the extra label from the heater and affix it to the cleaned area.

Important

Under no circumstances may this label conceal any part of another label or plate.



F920A049

- 48 Fit the hose clips (including the old clip) onto the new coolant hoses. Connect the hose/pipe assembly between the thermostat housing connection and the heat exchanger connection nearest to the expansion tank. Do not screw the assembly to the bulkhead.

Important

The heat shield on the hose should be slid towards the thermostat housing so that the hose clip fits into the cut-out in the heat shield.

- 49 Connect the other coolant hose to the heat exchanger connection.
- 50 Remove the control valve (APC valve) and remove the crankcase ventilation hose from the turbo compressor.
- 51 Remove the plugs from the heater inlet and outlet ports. Push aside the cable tie holding the heater connector and detach the connector from its mounting on the heater.

- 52 Protect the suspension turret and from above manoeuvre the heater into place on its mounting.

Note

The connector mounting can be bent slightly to facilitate assembly.

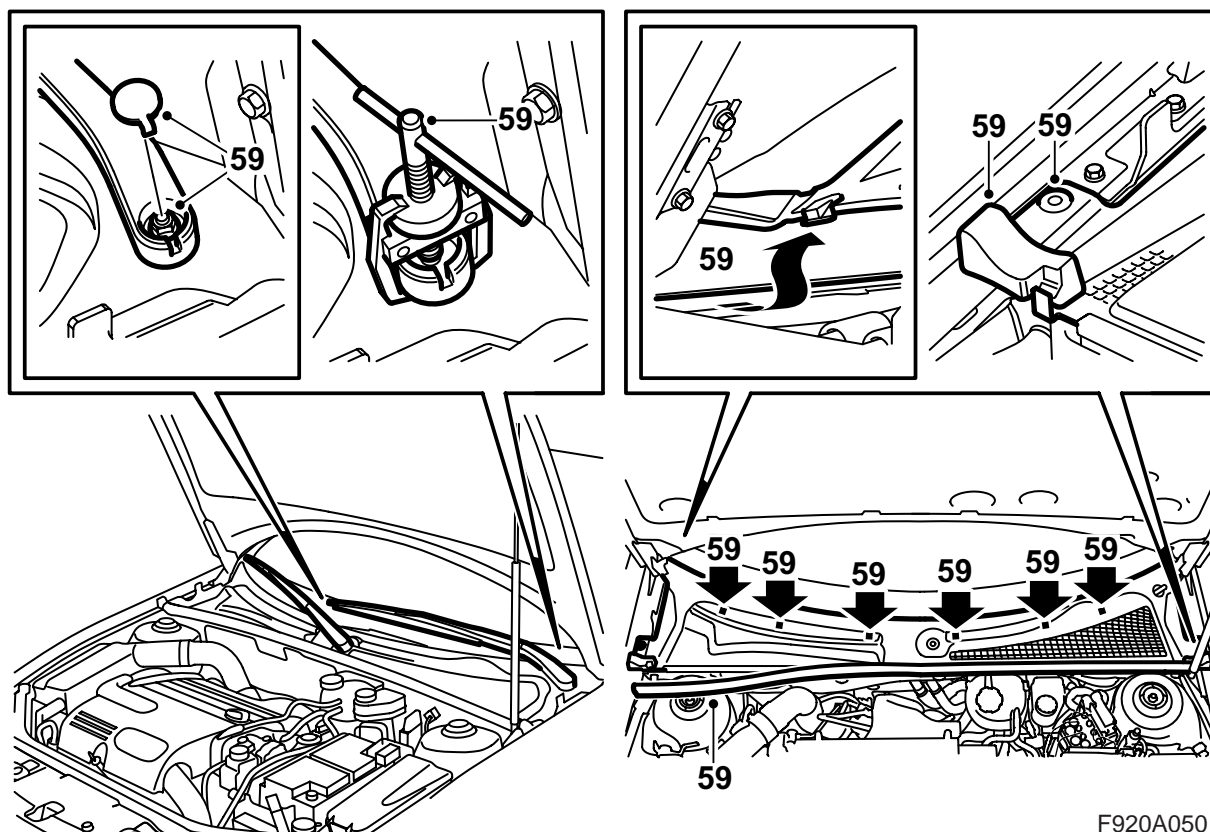
Tightening torque 9 Nm (6.5 lbf ft)

Bend the connector mounting back into its original shape.

- 53 Fit the connector into its mounting and reposition the cable tie around the connector.
- 54 Connect the lower coolant hose to the heater and tighten the hose clip.
- 55 Connect the upper coolant hose to the heater and tighten the hose clip.
- 56 Attach the coolant pipe mounting to the brake pipe cover plate on the bulkhead.
- 57 Connect the crankcase ventilation hose to the turbo compressor and fit the control valve (APC valve)
- 58 Connect the inlet hose of the heater to the fixing in the hole in the longitudinal frame member.

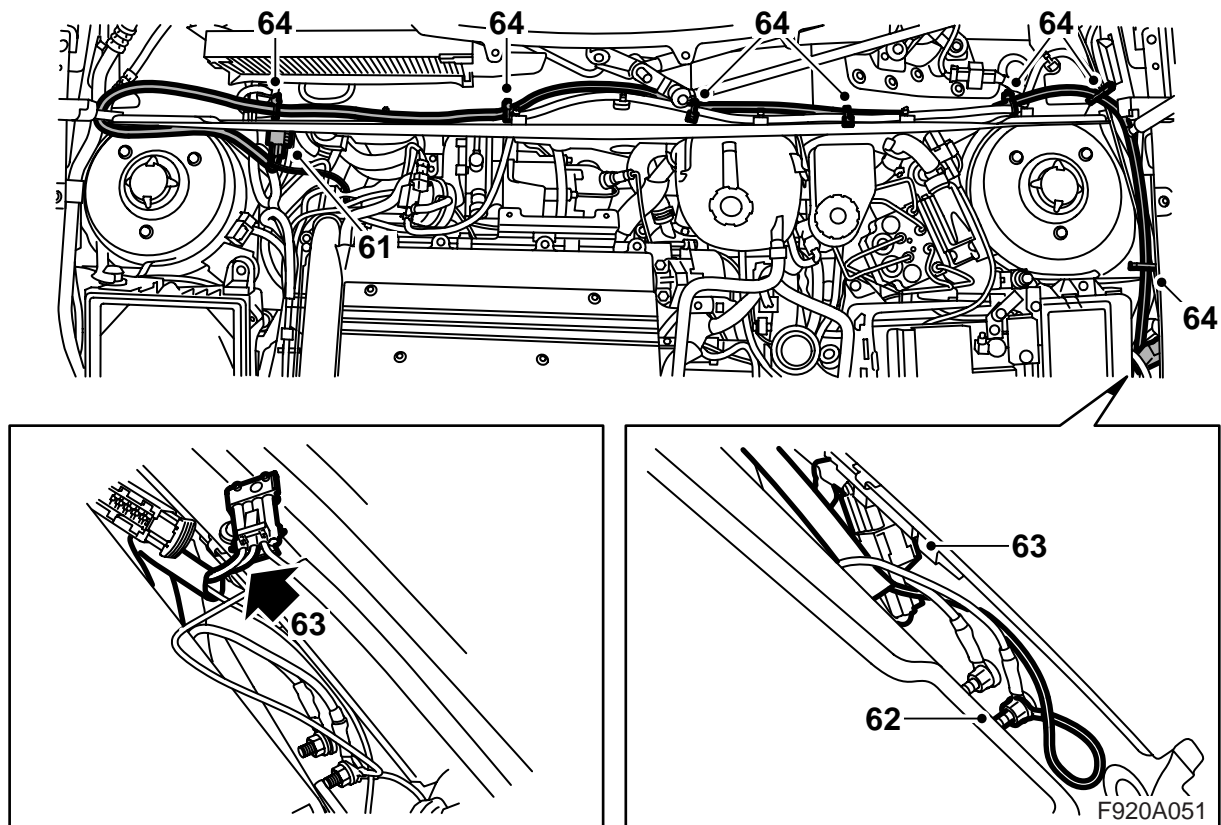
Important

Check that the drainage hose is free from the intake hose. If the wiring harness channel on the heater is severely bent the drainage can be affected.



F920A050

- 59 Remove the wiper arms using puller 85 80 144. Remove also the bonnet seal and the cover over the bulkhead space.



- 60 Locate the "Pre Acc" outlet between the engine bay main fuse box and the front wing and remove any adhesive tape or dummy connector.
- 61 Plug the wiring harness from the installation set into the connector on the heater and route it through the bulkhead space to the "Pre Acc" outlet adjacent to the engine compartment electrical centre.

Important

The wiring harness must be located in the seals by the front wings.

- 62 Connect the ground cable to the front grounding point (G30A) in the engine bay main fuse box.
- 63 Connect the wiring harness to the four pole "Pre Acc" outlet.

Note

If the four pole "Pre Acc" outlet is already used, connect into the existing connector as follows

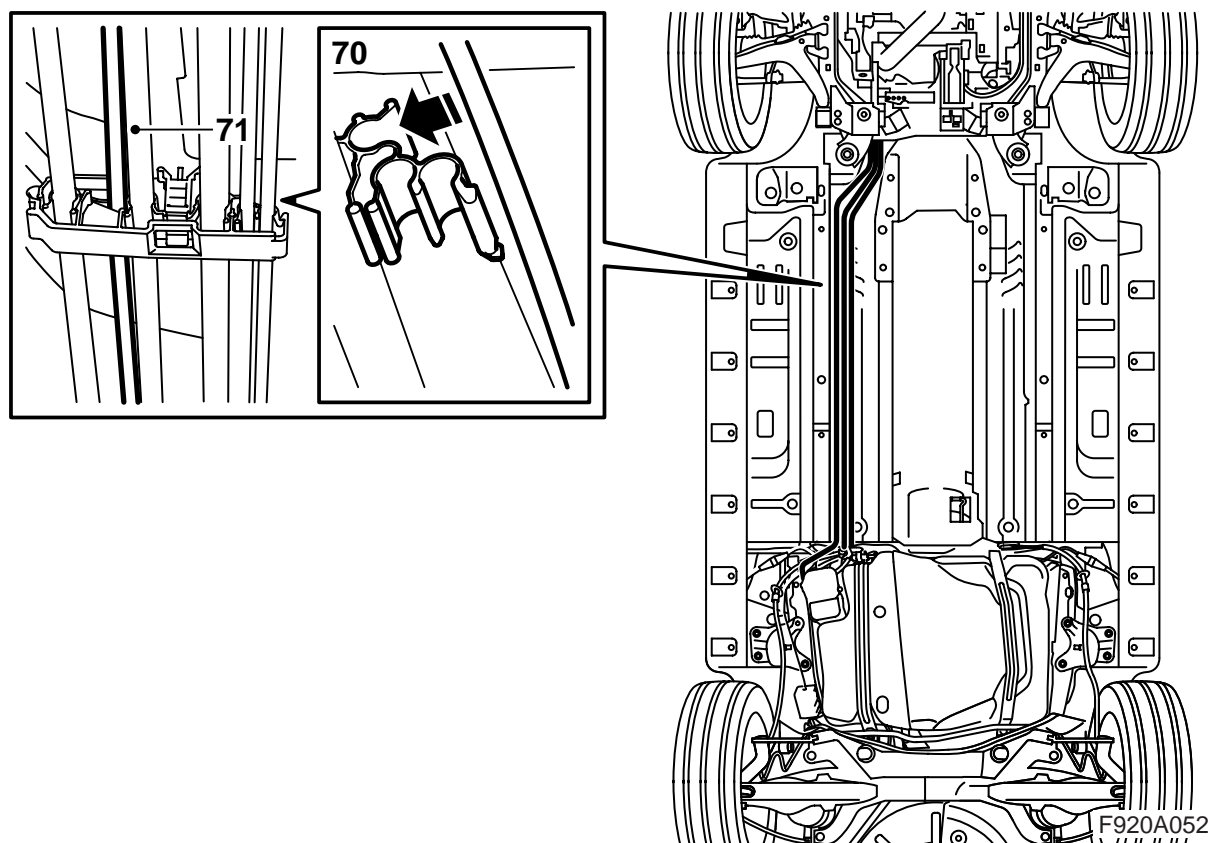
- Unplug "Pre Acc"
- remove the seal from the connector on the heater wiring harness and detach the cables from the connector block
- fit the cables into the connector which was plugged into "Pre-Acc", red cable (RD) in position 1 and green cable (GN) in position 2
- Plug in the connector to "Pre Acc".

- 64 Fasten the wiring harness with cable ties (x7) and position the "Pre-Acc" outlet between the wiring harness and the front wing.

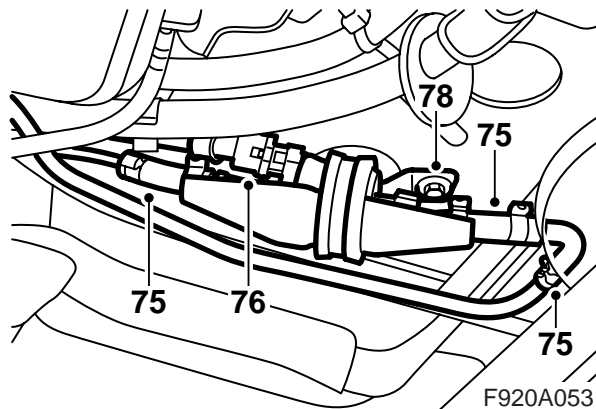
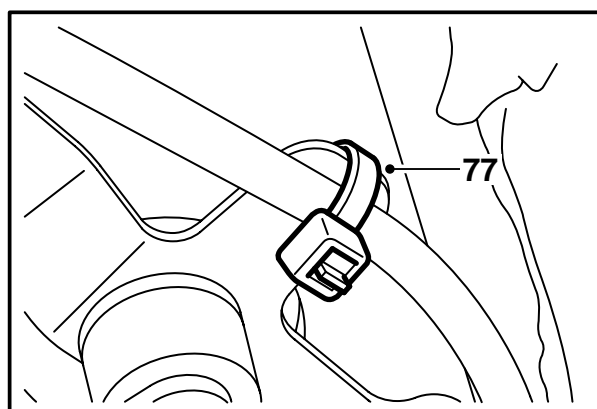
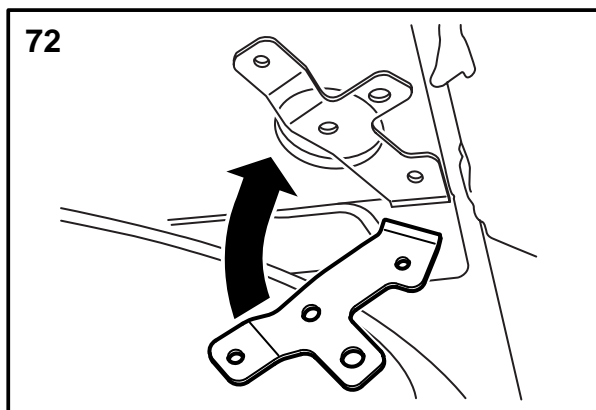
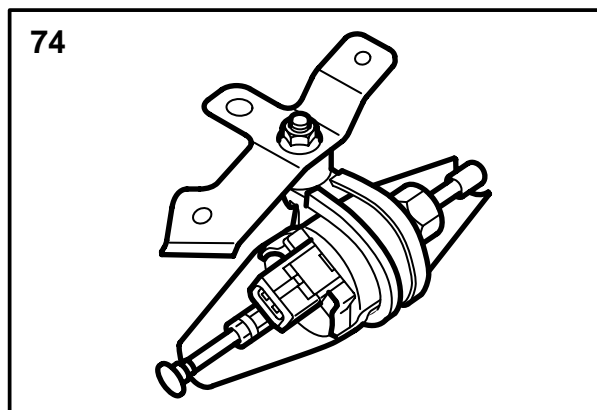
Important

Check that the drainage hose at the filter is correctly fitted.

- 65 Thread the fuel pump wiring harness down alongside the fuel lines against the back edge of the frame member.



- 66 Raise the car.
- 67 Pull down the fuel pump wiring harness.
- 68 Thread the fuel pump fuel line up between the heater and the longitudinal frame member.
- 69 Connect the fuel line to the heater.
- 70 Fit the fuel pump fuel line into the clips on the underside of the vehicle floor. The fuel line should be located in the upper groove of each clip.
- 71 Open the clips on the underside of the floor and locate the fuel line in the grooves. Close the clips and fasten the fuel line with cable ties (x7) between the clips.



- 72 Position the fuel pump bracket up against the vehicle floor, on the right-hand side in front of the fuel tank, and drill holes using a 3.5 mm drill.
- 73 Deburr the holes and remove loose swarf and paint particles. Clean with Teroson Cleaner FL and apply Standox 1K primer. Apply a finishing coat.
- 74 Fit the fuel pump with vibration damper and protective cover onto the bracket.

Important

The smaller diameter connection should point towards the centre of the car and slightly forwards. The protective cover should be positioned under the pump.

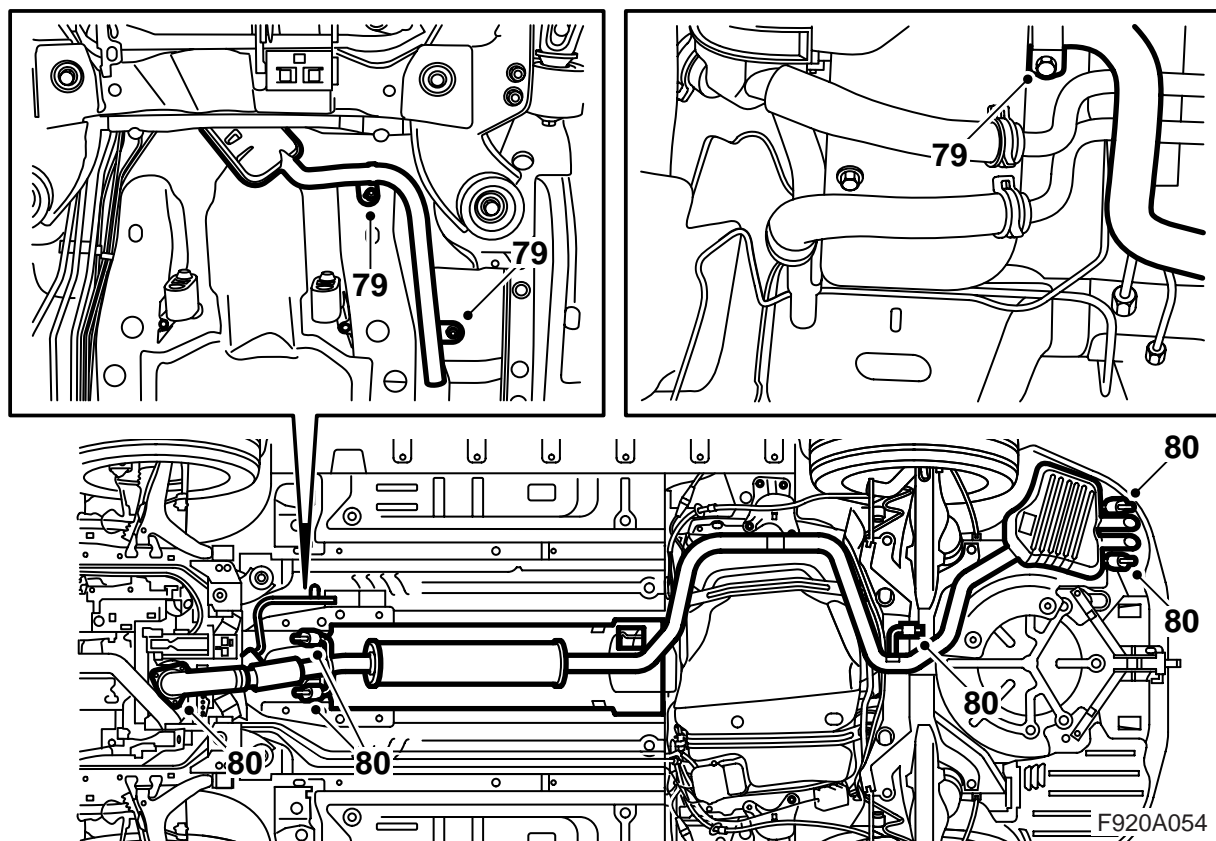
- 75 Connect the fuel lines to the fuel pump using a junction hose and two hose clips at each connection. The straight junction hose made with two different inner diameters must be fitted with the smaller inner diameter on the fuel pump's thin connection. A junction hose must be fitted on the fuel pump's thick connection in accordance with the following:

M03/CV M04-: A straight junction hose.

4D M04-: A junction hose bent at 90° angle and made with two different inner diameters must be fitted with the larger inner diameter on the fuel pump's thick connection.

All: Secure the long fuel line in the hole in the fuel pump bracket using a cable tie.

- 76 Connect the wiring harness to the fuel pump.
- 77 Attach the harness to the bracket using a cable tie.
- 78 Screw the bracket with the pump assembly onto the floor of the vehicle.



- 79 Manoeuvre the heater exhaust pipe up towards the heater and fit the end of the pipe onto the exhaust port of the heater. Fasten the exhaust pipe to the floor of the vehicle with the two nuts.

Tightening torque 5 Nm (3.5 lbf ft)

- 80 Fit the vehicle exhaust system.

Tightening torque 22 Nm (16.5 lbf ft)

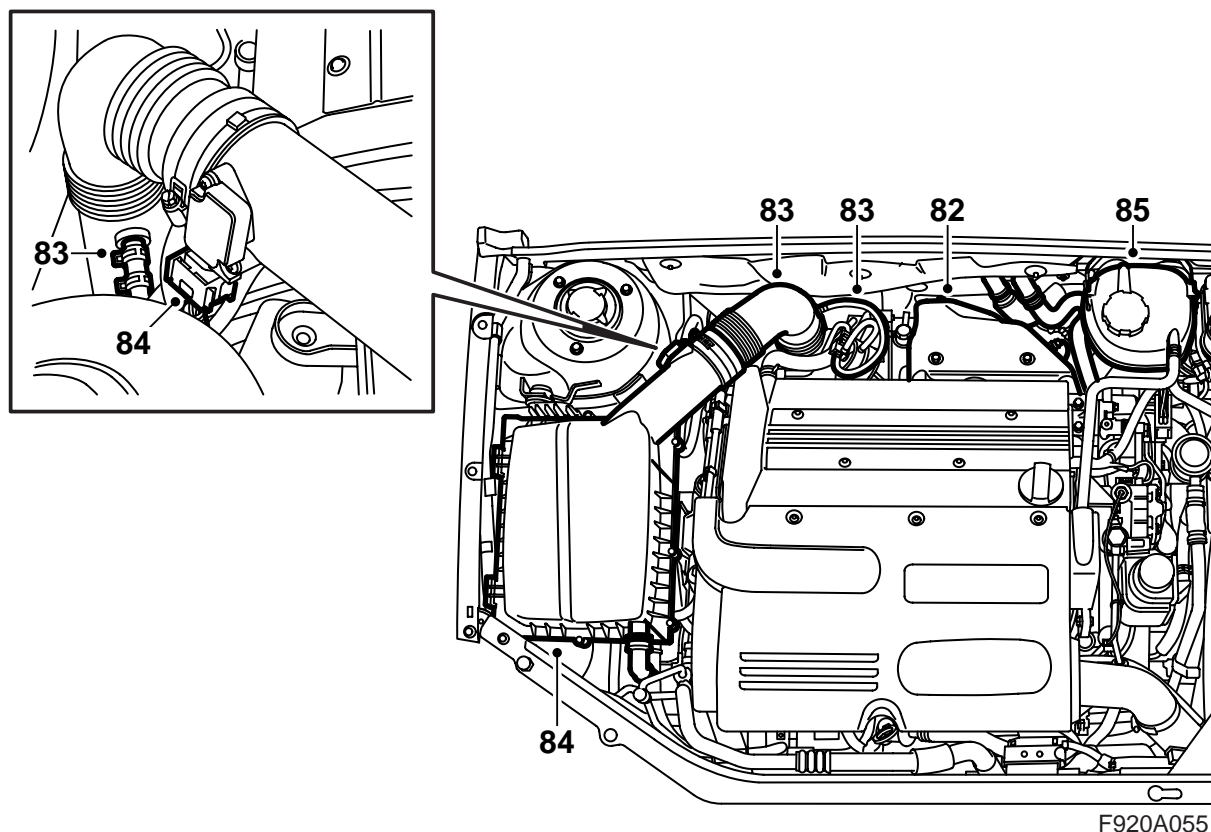
CV: Fit the tunnel reinforcement.

Tightening torque 18 Nm (13 lbf ft)

CV: Fit the rear chassis reinforcements.

Tightening torque 110 Nm (81 lbf ft)

- 81 Lower the vehicle until it is just over the floor.



- 82 Fit the heat shield to the turbo compressor (two screws and a catch).
- 83 Fit the turbo intake pipe and then connect to the pipe the small hose from the control valve (APC valve) and the hose from the carbon filter vent valve.
- 84 Fit the air filter cover and plug the connector into the air mass sensor. Attach the hose to the air filter cover (if such a hose is fitted).
- 85 Fill with coolant and check the system for leaks. Fit the expansion tank cap.
- 86 Connect the negative battery cable.
- 87 Synchronise remote control code by inserting the key into the ignition.

Important

This must be carried out with all remote controls, otherwise they will not work.

- 88 Activate window lift pinch protection function by operating the side windows up and down twice. An audible confirmation will sound when activation is complete.
- 89 **Cars with Vehicle Identification Number up to and including 41016523:** Connect the diagnostic tool, carry out SPS-programming and "Add" as follows:

Note

The diagnostic tool will on some occasions need to retrieve a security code in TIS. Information on what to do will be displayed on the diagnostic tool display.

– Cars with Vehicle Identification Number up to and including 41000076:

Carry out an SPS-programming of the control module, BCM (to latest software), then select "Add/Remove", select BCM and select "Add".

– Cars with ICM1 and Vehicle Identification Number up to and including 41016517:

Cars with ICM2 and Vehicle Identification Number up to and including 41016523:

Cars with ICM3 and Vehicle Identification Number up to and including 41016115:

Carry out an SPS-programming of the control module, ICM (to latest software), then select "Add/Remove", select ICM and select "Add".

- 90 Connect the diagnostic tool, select car and model year, select "All", select "Add/Remove", select the accessory and then "Add".

Note

The diagnostic tool will on some occasions need to retrieve a security code in TIS. Information on what to do will be displayed on the diagnostic tool display.

91 Bleed the cooling system in the following way:

Note

The A/C or ACC should be turned OFF.

- Fill the cooling system to MAX and close the cap on the expansion tank.
- Connect an exhaust hose, start the engine and run the engine briefly with varied engine speed.
- Check that there is a flow of coolant via the vent hose to the expansion tank.
- Carefully open the expansion tank cap and refill to MAX level. Close the cap.
- Run the engine with varied engine speed to thermostat opening (radiator fan has started).
- Switch off the engine and refill coolant if necessary to MAX level.

92 Start the heater by pushing the “CUSTOMIZE” button on the SIDC, select “Parking heater”, push “SET”, select “Manual control”, push “SET”, select “Heater on”, push “SET” and check that the heater starts (it has a delay of about 1 minute). If necessary top up the cooling system (engine switched off).

CV: If the heater does not start, carry out an SPS-programming of the BCM and the ICM in accordance with step 89 in these installation instructions.

93 Fit the cover over the bulkhead space, fit the bonnet seal and the wiper arms.

94 Clean an area in the centre of the fuel filler flap hinge with benzine. Remove the label from the kit, adjust the size of the label if necessary and affix the label to the cleaned area.

Important

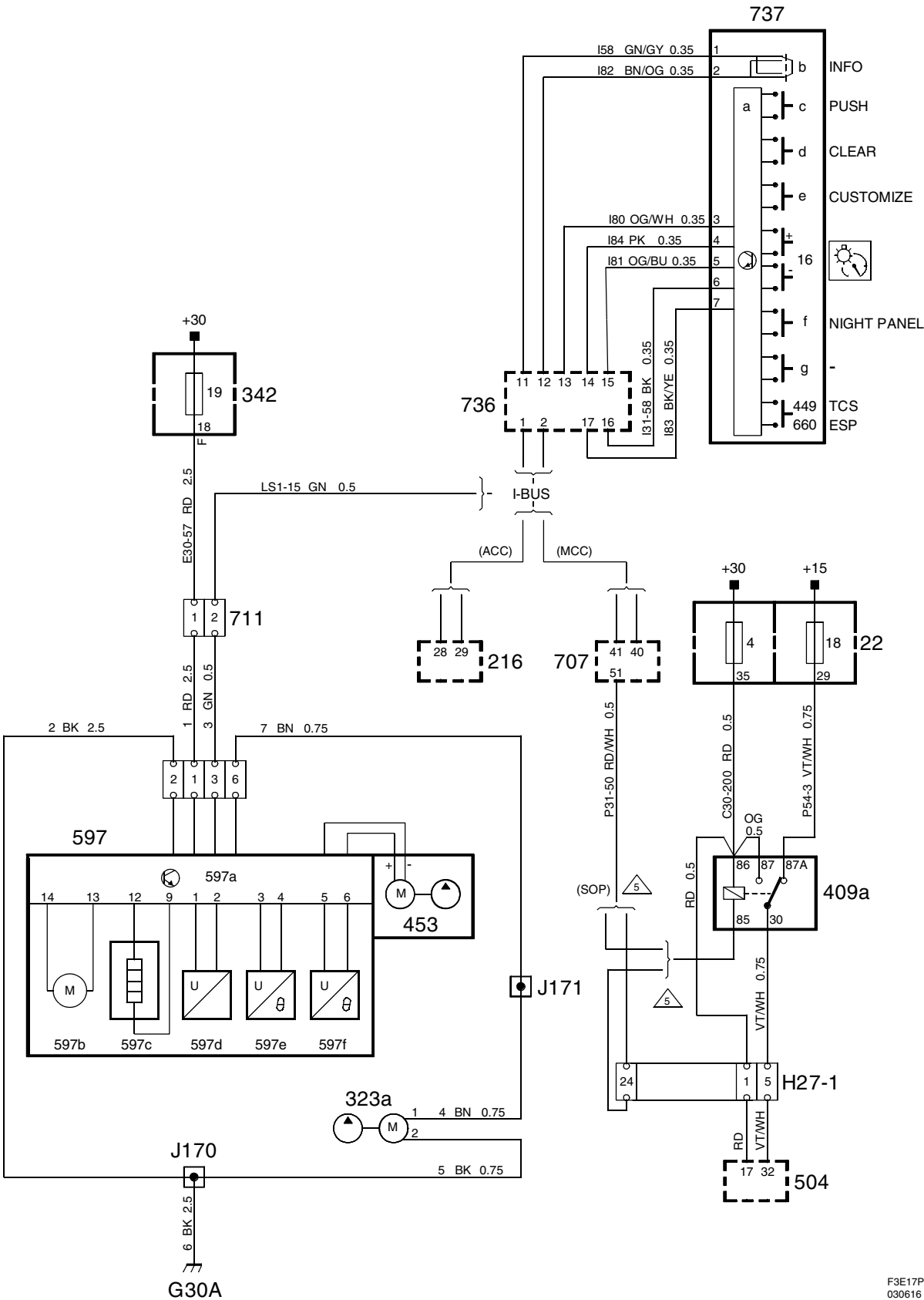
Under no circumstances may this label conceal any part of another label or plate.

95 Adjust the clock/date and continue with step 95.

96 **Programme the heater** Turn the ignition switch to the ON position, push the “CUSTOMIZE” button on the SIDC, select “Parking heater”, push “SET”, select “Manual control” and check that the heater starts or select “Timer setting”, “Timer”, select a timer; “A”, “B” or “C”, programme in a suitable time and push “SET”. Check that the heater starts at the programmed time.

Select “Manual control”, press “SET”, select “Heater off”, press “SET” and check that the heater stops. Select “Back”, press “SET”, select “Finish” and press “SET”.

Wiring diagram



F3E17P
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List of components

No.	Name position
Components	
22	Main dashboard fuse box, on the short side of the instrument panel near the left-hand door
216	Control module, ACC, in the centre of the dashboard
323a	Motor, fuel pump, parking heater, under the floor to the right in front of the fuel tank
342	Electrical distribution unit, engine bay, next to the battery
409a	Relay, parking heater, in the centre console on the dashboard support
453	Motor, pump, coolant circulation, on the parking heater
504	Control panel, heating&ventilation, in the centre of the dashboard
597	Parking Heater, in the engine bay on the right-hand side of the bulkhead partition
597a	Control module, parking heater, in the parking heater
597b	Motor, blower fan, parking heater, in the parking heater
597c	Glow plug, parking heater, in the parking heater
597d	Flame detector, parking heater, in the parking heater
597e	Temperature sensor, parking heater, in the parking heater
597f	Temperature sensor, parking heater, in the parking heater
707	Body Control Module, in the main dashboard fuse box
711	Connector, accessories, in the engine bay near the left suspension strut housing
736	Control panel, infotainment, under the SID

No.	Name position
737	Control panel, SID, on the dashboard next to the main instru- ment unit
27-pin connector	
H27-1	Near the MCC control module
Crimp connections	
J170	Approx. 60 mm from branching point parking heater towards grounding point G30A
J171	Approx. 30 mm from branching point parking heater towards grounding point G30A
Grounding points	
G30A	Front grounding point on the side panel above left-hand front wheel housing