

SAAB

90

● **SERVICE**
● **MANUAL**

9 Accessories

M 1985-

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9 Accessories

M 1985-

921 Child restrainer

Child safety seat

Sunroof

931 Radio and loudspeakers

Extra lamps

932 Electrical engine heater

Car heater

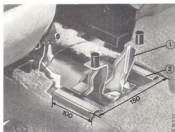
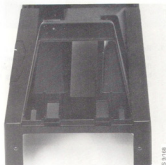
952 Tow-bar attachment

Child restrainer

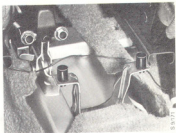
The child restrainer (part No. 124 107 004) is made of energy-absorbing steel, covered with cellular plastic backing and foam plastic. The child restrainer is secured to the same mounting as that retaining the seat-belt anchors.

To fit

1. Remove the gear lever console (to make this easier, the driver's seat may first be removed).
2. Saw out a relief along the embossing at the rear edge of the console.
3. Remove the seat-belt anchors (take care not to mix up the right-hand and left-hand anchors on refitting).
4. Remove the rear mounting (1) of the gear lever console. Cut an opening in the carpet, using a suitable knife. Remove the stiffening plate (2) of the carpet.



5. Refit the rear mounting of the gear lever console. Secure the seat-belt anchors using the bolts supplied with the kit.
6. Bolt the gear lever console into place.



7. Release the seat-belt anchors and slide the child restrainer between the seat-belt anchors and the floor panel. (Check that the cables in the seat-belt anchors have not been nipped during the fitting work).



8. Tighten the bolts with a torque of 3.5 kgf m.



9. Fit the cover to the opening in the gear lever console. Fit the cover flush with the bottom edge of the console (see arrow). Mark off and drill two 3.5 mm dia. holes. Use the black screws to secure the cover to the console.



Child safety seat

The child safety seat (Biltex Maxi, part No. 124 108 002, Klippan part No 124 110 008) fits onto the co-driver's seat, with its back against the fascia. The fittings are designed so that the seat can easily be fitted to and removed from the car.

The seat cover is removable to facilitate washing.



To fit

1. Attach the two side mountings on the child seat to the front passenger seat's front mountings. Loosen the Allen screws with an Allen key and insert the fitting between the floor member and the seat frame. Check that the belt is as near to the front edge of the seat as possible.



2. The child's seat belt for floor attachment runs backwards and should be threaded between the seat and squab of the front passenger seat and then attached to the floor immediately behind the rear edge of the front passenger seat. Mark the point on the floor.
3. Raise the carpet and drill a 12 mm hole in the floor panel.
4. Apply anti-rust oil around the hole.
5. Fit the bolt, washer and nut.

When the seat is not fitted in the car, blank off the hole in the floor with rubber plug 82 06 096(10).



Sunroof

This sunroof (part No. 105 400 006) is designed for Saab 90 cars which are not equipped with a sunroof as standard. The sunroof is made of shatter-proof, smoke-coloured glass.

Note:

In some countries, the relevant authorities must be informed after a car has been fitted with a sunroof.

Fitting the sunroof

1. Place a dust sheet over the front seats. Place the template on the roof of the car with the front line 320 mm from the rear edge of the rubber moulding at the top of the windshield.
2. Make sure that the template is central between the sides of the roof and tape it in position. Drill a hole for the saw.



3. Insert the saw blade in the hole and cut carefully along the line.



4. Remove the template and clean away the swarf using a compressed air line. Brush rustproofing agent onto the bare metal surfaces.

Cut away the rough edges on the inside of the roof. Cut the roof lining away along a line 5 mm away from the saw cut as shown in the picture.



5. Fit the sealing strip along the flange of the sunroof.



- Apply silicone compound to the groove along the inside of the sealing strip.



6. Fit the sunroof into the roof of the car, with the handle towards the rear.

Fit the internal surround, with the joint towards the rear of the car. Tighten the screws evenly all round, starting from the centre.



7. Press in the moulding which conceals the screws in the sunroof surround.

Check that the catch mechanism is working properly.

Clean out the inside of the car.



Radio and loudspeakers

In Saab 90 cars, the entire amplification system (radio and, where included, the booster/equalizer) is mounted in an accessory console (part No. 204 450 001) and fascia panel (part No. LMD 204 607 006, RMD 204 608 004). The speakers fit into the door panels and provision has also been made for speakers to be fitted in the parcel shelf.



Fitting the aerial

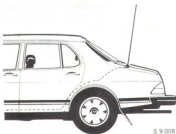
Clarion products are designed for aerials with an aerial cable impedance of 50 ohm. The Saab 50-ohm aerial has part No. 204 322 002.

Philips radios require aerials with an aerial cable impedance of 130 ohm. The Saab 130-ohm aerial has part No. 204 321 004.

1. Remove the rubber plug for the aerial. Scrape away the paint around the hole (about 5 mm) on the underside and **apply anti-corrosion agent**. Fit the aerial and line it up.
2. Run the aerial lead to the socket in the radio.

Important during fitting

- Check that the aerial mounting makes good contact with the body of the car.
- To prevent corrosion, remember to apply rustproofing agent around the hole before the aerial is fitted.
- To prevent interference, avoid running the aerial lead close to other cables in the electrical system.

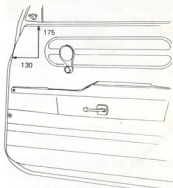


S 9 008

Fitting the door speakers

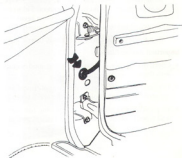
Maximum depth of speakers: 45 mm.

1. Mark out the position of the speaker and cut the opening.
2. Fit the plate nuts to the door trim panel.



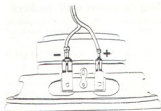
S 9/049

3. Fit the grommets to the front edge of the door and the door frame.
4. Thread the speaker leads out through the grommet in the door and fit the protective hose onto the leads.



5. Thread the leads into the interior. (On the left-hand side through the grommet for the choke cable and on the right-hand side through the cable harness grommet).
6. Fit the mounting frame.

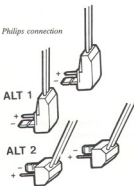
7. Connect the speaker and secure it in position (B8 x 16 mm screws).



S 9/001

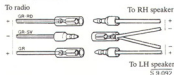
8. Press the grille into place.
9. Cut the leads to a suitable length and fit connectors for the appropriate radio.

Philips connection



S 9/093

Clarion connection



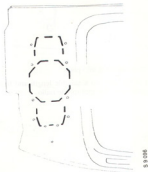
S 9/092

To eliminate the risk of vibration due to the speaker magnet touching the window guide rail, a spacer (e.g. part No. 82 47 777) or some type of sealing strip may be fitted to the guide rail.

Fitting the parcel shelf speakers

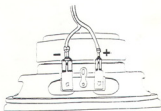
Provision has been made for fitting extra speakers in the parcel shelf, in addition to those fitted to the doors.

1. Open the luggage compartment lid and fold down the back seat.
2. Using a knife from the underside, cut an opening along the perforations. Cut out the smaller hole for 120 x 120 mm speakers and cut out the larger hole for oval/rectangular speakers (U.S. version).



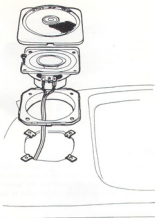
S 9 006

3. Press the plate nuts into the panel.
4. Connect the loudspeaker.

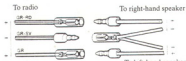


S 9 003

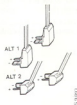
5. Fit the frame to the parcel shelf, with the "drip edge" towards the rear of the car.
6. Fit the speaker into the frame and tuft it so that the cable connections are towards the front of the car.



7. Line up the plate nuts with a suitable pointed tool and secure the speaker and the frame, (B8 x 16 mm screws).
8. Press the grille into place.
9. Thread the speaker leads behind the side trim in the luggage compartment and under the seat.
10. Mark the right-hand and left-hand speaker leads, using tape, for instance.
11. Remove the kick-plates on the right-hand side.
12. Run the speaker leads under the carpet up to the bulkhead and then to the radio socket.
13. Refit the kick plates.
14. Raise the back seat.
15. Cut the leads to a suitable length and fit the connectors for the appropriate radio.



Connections for Clarion radios.



Connections for Philips radios.

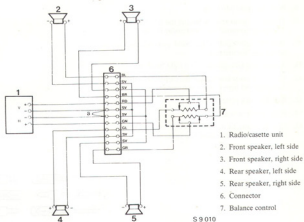
Balance control

If more than two speakers are fitted, a balance control for regulating the relative volume of the two sets of speakers should be fitted. When fitting the balance control, refer to the wiring diagram included in the installation kit.

Important during fitting

When a stereophonic system is being fitted, the speakers must be connected in phase. Follow carefully the wiring diagram included with the radio.

Cut the jumper A if the radio has separate outputs.

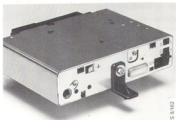


S 9 010

Wiring diagram for balance control (part No. 204 262 026)

Fitting the radio

Secure the rear bracket to the radio.



Secure the support rail to the radio console.



Radios with control knob spindles

If necessary, place spacer washers on the knob spindles (the number and thickness depends on the radio).

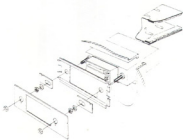
Place the support plate on the radio (if necessary, lock the plate by means of a nut).

Push the radio into place.

Fit the two locking tabs (by threading them in on the inside of the panel edge). Fit two washers, fit the nuts and tighten them.

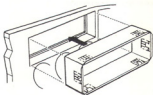
Fit the front panel and decorative frame, if any.

Fit the nuts, tighten them and fit the knobs into place.



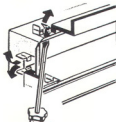
Radios with integrated front*Fit the mounting frame*

Slide the mounting frame into the radio opening. Prise out all metal tabs by means of a screwdriver.



Break away the tabs that cannot be prised out.

See also the fitting instructions for the appropriate radio.



Secure the angle bracket of the radio to the support rail.



Two to the underside of the fascia.



Extra lamps

Provision has been made on the Saab 900 for fitting two extra lamps to the front bumper.



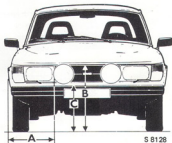
The extra lamps can be connected to operate simultaneously with the main beam of the standard headlamps, or as fog lamps, in which case they will come on instead of the dipped lights. In the latter case the dimensions must be as follows:

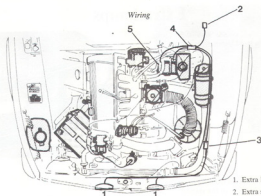
Dimension A must be less than 400 mm.

Dimension B must not exceed the corresponding height of the main headlamp.

Dimension C must be at least 300 mm when the car is unladen.

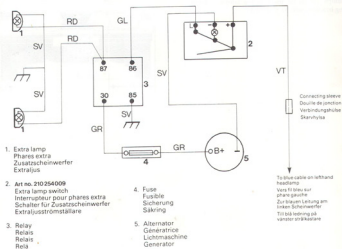
If the lamps are to be used as fog lamps, 2-point mounting brackets will be required.





1. Extra lamps
2. Extra switch for extra lamps
3. Relay
4. Fuse
5. Alternative

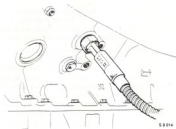
Wiring diagram
Schéma de connexion
Schaltplan
Kopplungsschema



Electrical engine heater

The engine heater should be fitted to the right-hand side of the engine block, below the exhaust manifold. The kit for the Saab 90 contains the heater element with a plug-in supply cable incorporating an external socket, and a connecting lead.

Carefully follow the instructions provided with the kit.

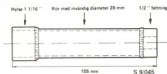


Important during fitting

- Make sure that the external socket is well earthed (see illustration).
- When fitting the heating element, seal the thread with sealing tape or the like.
- Before pouring the coolant back into the cooling system, make sure that it is free from oil and contaminants. If necessary, top up the system with new coolant.
- Pressure test the cooling system. Run the engine and make sure there are no leaks.



A special tool can be made as illustrated to facilitate fitting of the heater.



A kit for fitting a socket inside the passenger compartment for an electric heater inside the car is available as an accessory to the engine heater.

The engine heater can be connected to a timer fitted inside the car or in the engine compartment.

Car heater

The Eberspächer hot air heater B1L burns gasoline. It can be used whether or not the engine is running. The heater is started by means of a timer, which can be set up to 22 hours in advance (the green lamp will flash).

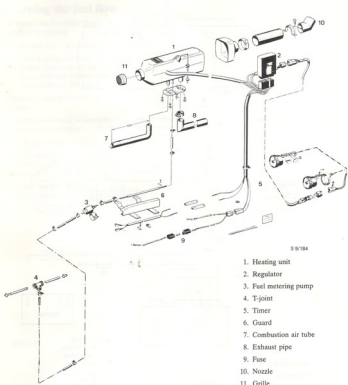
During startup, an indicating lamp lights and the combustion fans start. At the same time, the fuel pump feeds the right amount of fuel into the combustion chamber. The fuel and the air mix and the mixture are ignited by a glow-plug. The burning gases flow through a heat exchanger where a thermostat cuts off the glow-plug. Cold air is heated in the heat exchanger and fed via ducts into the car. When the heater turns off, the indicating lamp goes out, and the fans stop automatically once the heater has cooled off.

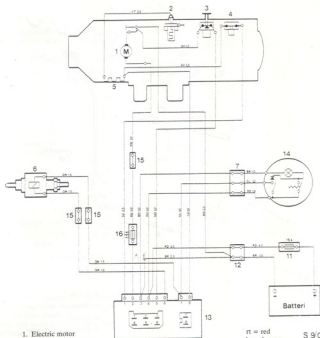
Technical Specifications

Heating capacity	1700 W \pm 10 %
Fuel	standard gasoline
Fuel consumption	0.24 l/h \pm 5 %
Power consumption	40 W \pm 10 %
Rated voltage	12 V (operatable between 10 and 14 V)
Hot air capacity	100 kg/h \pm 10 % (at rated voltage and without back-pressure)

Important

- Take care when cutting the gasoline line. Sharp edges or damaged line may cause air leaks when the T-joint has been attached.
- The fuel line must not come into contact with the brake lines.
- The outlet of the fuel metering pump must point upwards to allow any air bubbles to escape.
- Check that no dirt enters the fuel system and that all connections are completely tight.





1. Electric motor
2. Glow-plug
3. Overheating protector
4. Thermostat
5. Series resistor
6. Fuel metering pump
7. 3-pole connector
11. Main fuse, 16A
12. 2-pole connector
13. Regulator
14. Timer
15. Single-pole connector
16. 4A fuse

rt = red
 br = brown
 ws = white
 sw = black
 gn = green
 ge = yellow

S 9/087

Measuring the fuel flow

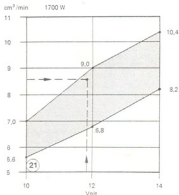
Let the heater run for about 10 minutes and then check the fuel flow as follows:

1. Disconnect the white cable from the glow plug.
2. Connect a voltmeter between 3 (-) and 4 (+) at the 6-pole connector of the regulator.
3 = pole with two brown cables.
4 = pole with two red cables.
3. Disconnect the fuel line from the underside of the heater.

Start the heater and measure the fuel collected in a beaker in 2 minutes.

Check the voltage while the heater is running.

4. Plot the measured voltage in the graph and check that the measured quantity of fuel is within the shaded area. If it is not, see the Service manual.
5. Connect the cable to the glow plug.
Connect the fuel line and tighten the clip.



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