

SAAB

900

**SERVICE
MANUAL**

9 **Accessories**

M 1979-83

Contents

9 Accessories

M 1979-83

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Air conditioning

Installation front seat backrests

An air conditioning unit is fitted as an accessory for all markets. However, some models for the USA, Canada and some other markets can be supplied with factory-installed air conditioning.

To install the unit follow the instructions enclosed with each air conditioning set.

Group 8, section 854 on Air Conditioning in the Service Manual contains a description of the functions, fault diagnosis and repair procedures.

Installation 1979-1980 models

1. Fold back the carpet from the floor-mounted seat belt latch.
2. Remove the latch from its mounting bracket.
3. Remove the mounting bracket from the floor (the mounting bracket will not be refitted).
4. Remove the cover from the handbrake adjusting screws (the cover will not be refitted).
5. Fit the child restrainer and the seat belt latch with the restrainer mounting plate nearest the floor of the car. Use the 2 longest of the 3 existing bolts.
6. Tighten the bolts with a torque of 25 ft. lb (3.5 kgfm) and replace the carpet.

Installation 1981-1982 models

1. Fold back the carpet from the floor-mounted seat belt latch.
2. Remove the latch.
3. Fit the child restrainer and the seat belt latch with the restrainer plate nearest the floor of the car. Use the bolts provided in the kit. Once the latch buckle has been refitted, the plastic cover that hides the bolt heads must be moved up the upright slightly.
4. Tighten the bolts with a torque of 25 ft. lb. (3.5 kgfm).

Installation as from 1983 models

Information concerning the installation of the child restrainer as from 1983 models will be distributed as Service Information.



Safety seat for children

The safety seat for children (part no. 124 108 002 or 124 110 008) is fitted to the front passenger seat, with its back against the instrument panel. The fittings are so designed that the seat is easily fitted and removed from the car.

The upholstery is removable to facilitate washing.

- Disconnect the electrical wiring from the brake light switch.
- Remove the collar plate from the clutch and brake pedals.
- Remove the springs.
- Remove the pedal assembly.



Installation as from 1979 model

1. The two side mountings on the child's seat are attached 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 passenger seat frame. Check that the belt is positioned as near to the front edge of the passenger seat as possible.

- Fit the bolts and nuts loosely.
- Refit the brake and clutch pedal collar pins.
- Refit the brake pedal linkage.
- Tighten all nuts.



2. The child's seat strap for floor attachment runs backwards and should be threaded between the seat and backrest of the front passenger seat and then attached to the floor immediately behind the rear 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.

- Fit the right-hand bearing.
- Refit the cable.
- Install the pedal stop in the right-hand pedal assembly.
- Drill the holes and fit the bolts.

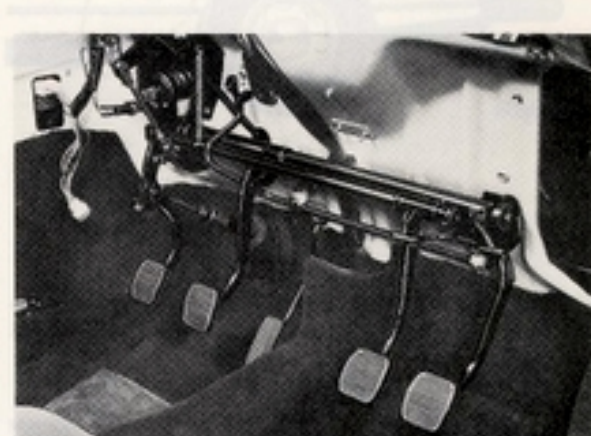
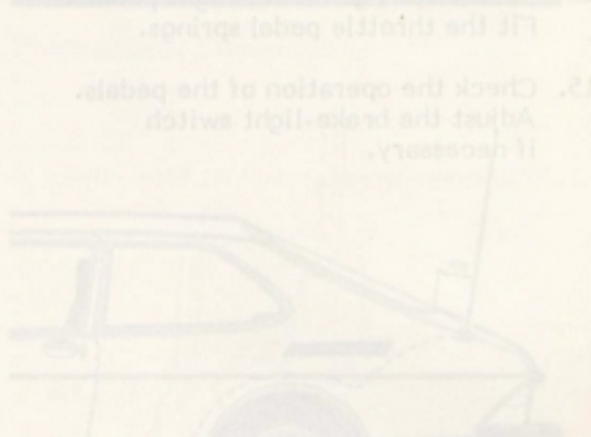
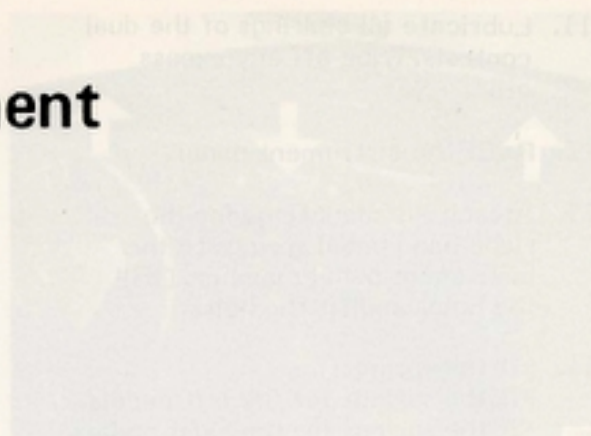
6. Re-position the brake-light switch and connect the wiring.



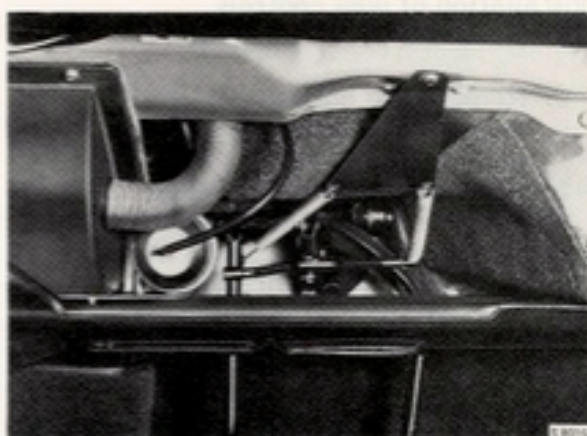
Dual controls/ Driving school equipment

Installation of dual controls
Part no. 118 500 008 (type 40)

1. Remove the entire instrument panel (see Group 8, Section 853, Interior Equipment).
2. Remove the pedal assembly:
Remove the speedometer cable.
Disconnect the electrical wiring from the brake light switch.
Remove the cotter pins from the clutch and brake pedals.
Remove the springs.
Remove the pedal assembly.
3. Remove the throttle control:
Remove the throttle cable.
Remove the spring.
Remove the throttle controls.
4. Remove the 3 rubber plugs on the right side.
5. Remove the dual controls from the packaging.
6. Position the dual controls in the car.
Fit the bolts and nuts loosely.
Refit the brake and clutch pedal cotter pins.
Refit the brake pedal linkage.
Tighten all nuts.
7. Fit the support bearing retainer between the brake pedal and the bulkhead.
Drill the holes and fit the bolts.
The bearing should rest against the right-hand pedal connection sleeve.
8. Refit the throttle control:
Fit the right-hand bearing.
Refit the cable.
9. Install the pedal stop in the right-hand pedal assembly.
Drill the holes and fit the bolts.
10. Re-position the brake-light switch and connect the wiring.



11. Lubricate all bearings of the dual controls. Wipe off any excess oil.
12. Refit the instrument panel.
13. Attach the mountings for the right-hand pedal springs to the instrument panel member. Drill the holes and fit the bolts.
14. Fit the springs:
 - Fit the springs for the left pedals.
 - Fit the springs for the right pedals.
 - Fit the throttle pedal springs.
15. Check the operation of the pedals. Adjust the brake-light switch if necessary.



1. Remove the throttle control cable.
2. Remove the throttle cable.
3. Remove the spring.
4. Remove the throttle control.
5. Remove the dual controls from the packaging.
6. Position the dual controls in the car.
7. Fit the bolts and nuts loosely.
8. Refit the brake and clutch pedal roller pins.
9. Refit the brake pedal linkage.
10. Tighten all nuts.
11. Fit the support bearing roller between the brake pedal and the clutch pedal.
12. Drill the holes and fit the bolts. The bearing should rest against the right-hand pedal connection sleeve.
13. Refit the throttle control.
14. Fit the right-hand bearing. Refit the cable.
15. Refit the pedal stop in the right-hand pedal assembly.
16. Drill the holes and fit the bolts.
17. Re-position the brake-light switch and connect the wiring.

Radio and loudspeakers

Space for the radio is provided in the instrument panel and space for the loudspeakers is available in the defroster and loudspeaker grilles above the instrument panel.



Fitting the antenna

Clairon products are designed for the antennas with an antenna cable impedance of 50 ohms. The part no. of the Saab 50-ohm antenna is 204 320 006.

A Philips radio requires an antenna with an antenna cable impedance of 130 ohms. The part no. of the Saab 130-ohm antenna is 204 318 000.

1. (Saab 900 3/5-door)

Drill a hole on the left-hand side for the antenna. On the 1983 models, a hole is already provided. Scrape away about 3/16 in (5 mm) of the paint around the hole on the underside and apply anti-corrosion agent. Fit the antenna.

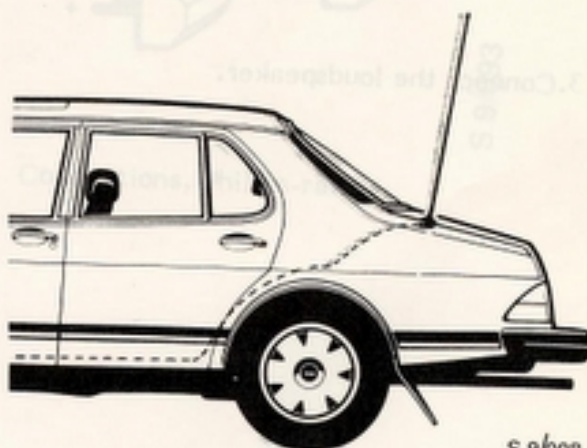
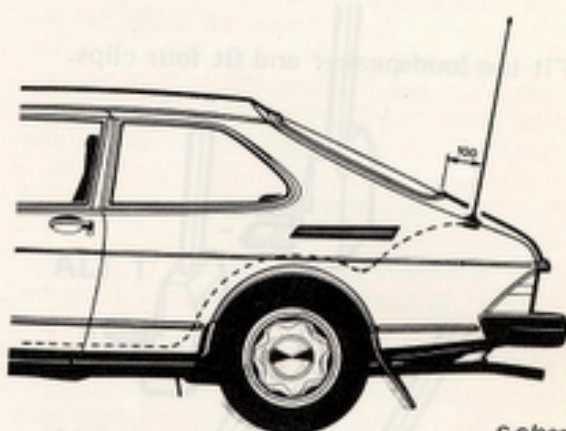
(Saab 900, 4-door)

Remove the rubber plug from the hole for the antenna. Scrape away about 3/16 in (5 mm) of the paint around the hole on the underside and apply anti-corrosion agent. Fit the antenna and align it.

2. Run the antenna cable to the radio.

Important

- Make sure that the antenna base is properly grounded (earthed).
- To prevent corrosion, apply anti-corrosion oil around the hole before fitting the antenna.
- To prevent radio interference, avoid running the antenna cable together with the ordinary wiring of the car.

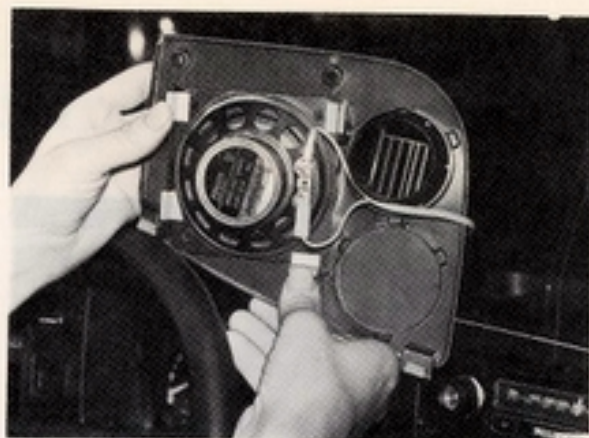


Fitting the loudspeakers

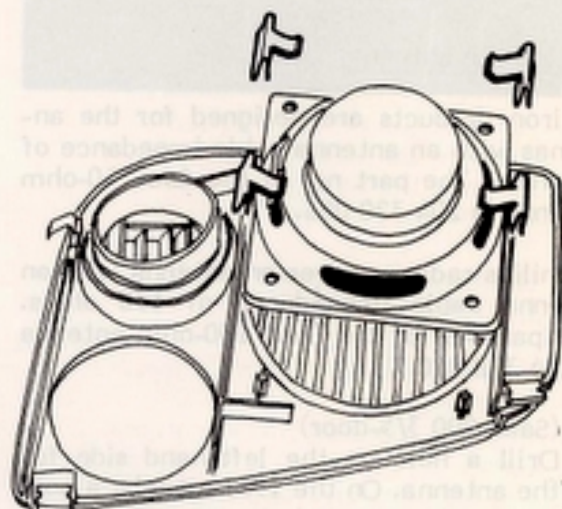
As from the 1981 models, provision is made on the right-hand and left-hand sides of the parcel shelf for fitting extra loudspeakers, in addition to the two fitted in the instrument panel (the defroster grilles). In 1979 and 1980 models cars, fit the loudspeakers on top of the parcel shelf.

Fitting in the instrument panel

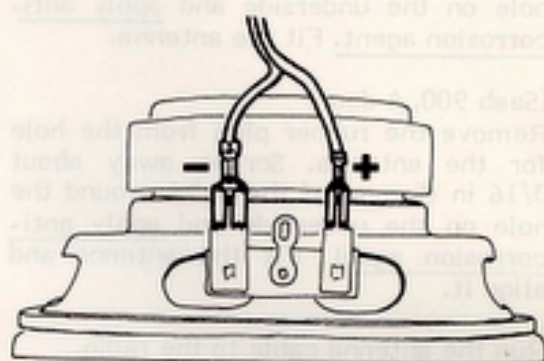
1. Remove the defroster/loudspeaker grilles at the top of the instrument panel.



2. Fit the loudspeaker and fit four clips.



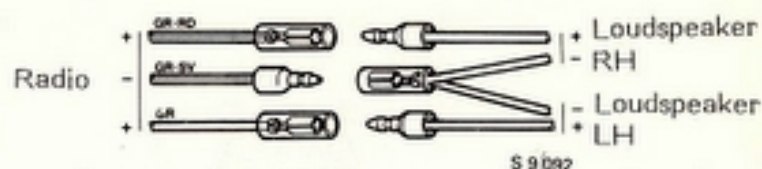
3. Connect the loudspeaker.



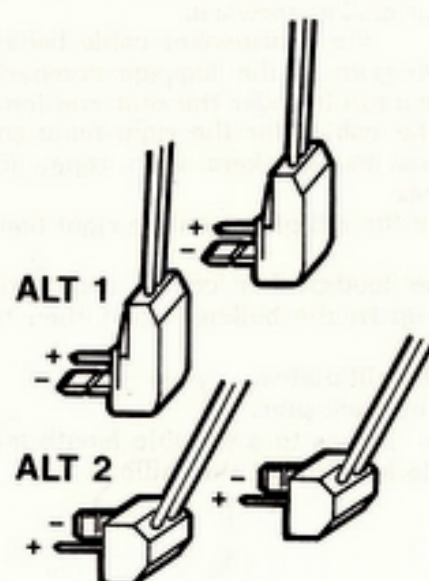
4. Run the cables to the radio.

5. Cut the cables to a suitable length and fit cable lugs to suit the radio.

6. Fit the grilles. Make sure that the defroster hoses are in the correct position.



Connections, Clarion-radio



S 9/093

Connections, Philips-radio

Fitting at the parcel shelf

As from the 1981 models.

1. Fold down the back seat.
2. Remove the paper protection under the loudspeaker grille (applies only as from the 1983 model).

3. Press four clip nuts into the bracket for each loudspeaker.

4. Connect the loudspeaker.

5. Secure the loudspeaker in position by means of two self-tapping screws (B8 x 16 mm). Turn the cable connection of the loudspeaker forward.

6. Thread in the loudspeaker cable behind the side trim in the luggage compartment and run it under the seat cushion.

7. Mark the cables for the right-hand and left-hand loudspeakers with tape, for instance.

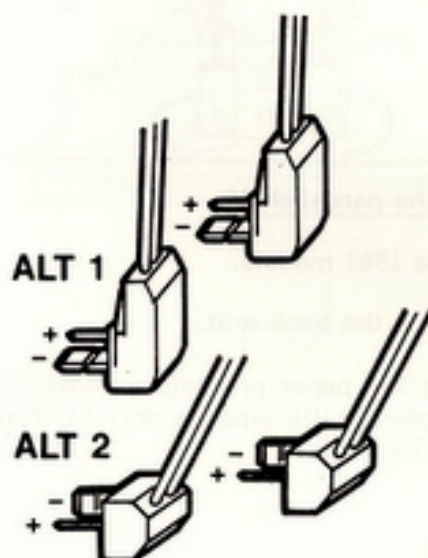
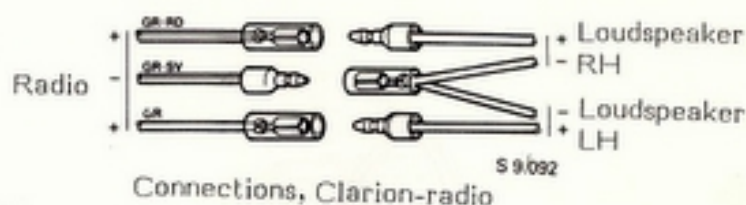
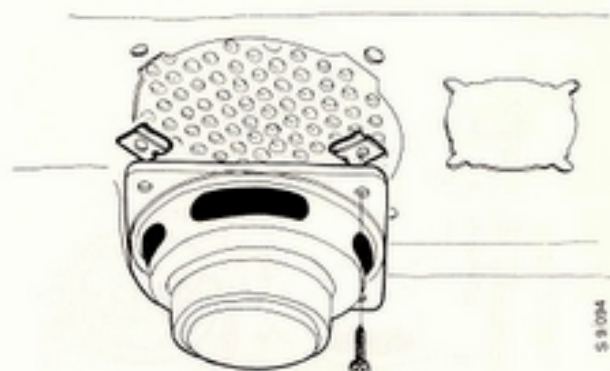
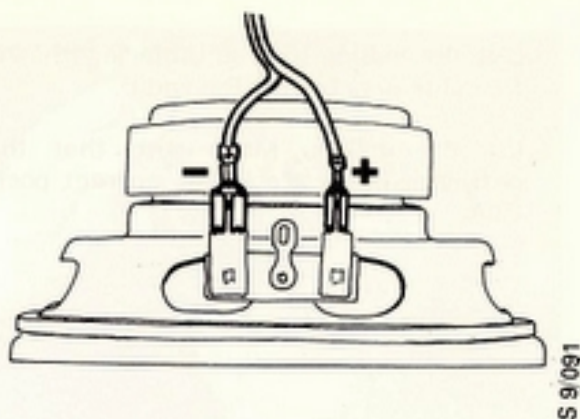
8. Remove the sill plates on the right hand side.

9. Run the loudspeaker cables under the carpet up to the bulkhead and then to the radio.

10. Refit the sill plates.

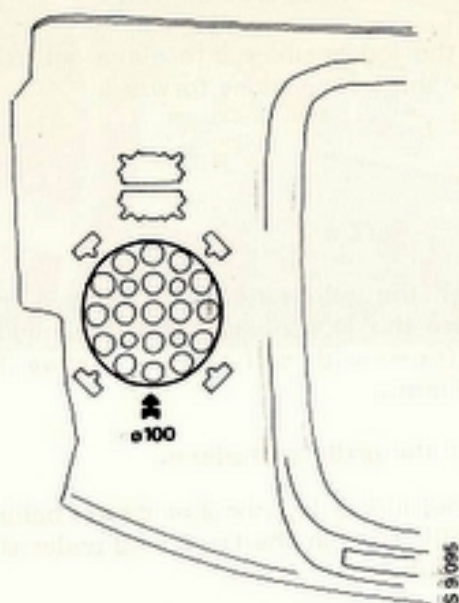
11. Raise the back seat.

12. Cut the cables to a suitable length and fit cable lugs to suit the radio.

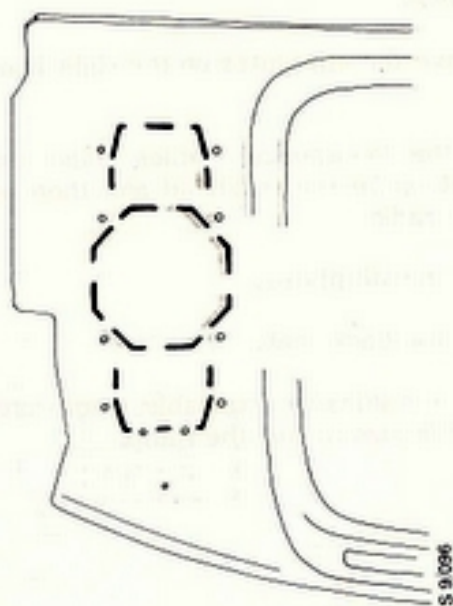


Fitting to 4-door cars as from the 1981 model

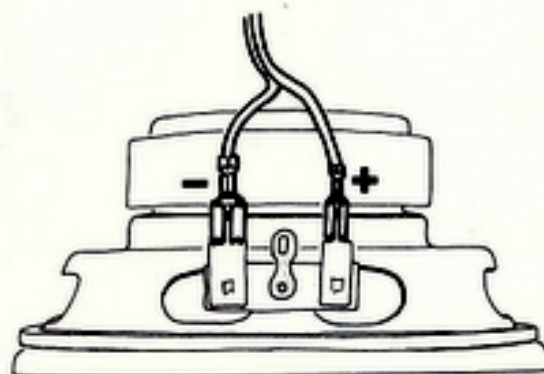
1. Open the trunk lid, and fold down the back seat.
2. On 1981 and 1982 models:
Using a knife from the underside, cut a 4 in (100 mm) hole.



As from the 1983 model:
Using a knife from the underside, cut a hole along the perforation. Cut out the smaller hole for 120 x 120 mm loudspeakers and the larger hole for oval/rectangular loudspeakers (USA version).



3. Press the clip nuts into place in the panel.
4. Connect the loudspeaker.



5. Place the mounting frame on the parcel shelf. Turn the "drip protection edge" of the frame towards the rear.

6. Fit the loudspeaker into place and turn the cable connections forward.

7. Enter the clip nuts using an awl and secure the loudspeaker and the mounting frame with self-tapping screws (B8 x 16 mm).

8. Press the grille into place.

9. Thread in the loudspeaker cables behind the side trim in the trunk and under the seat cushion.

10. Mark the cables for the right-hand and left-hand loudspeakers with tape, for instance.

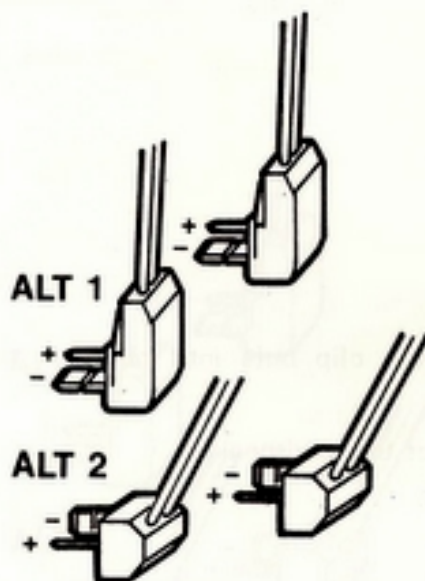
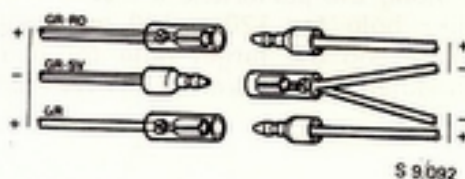
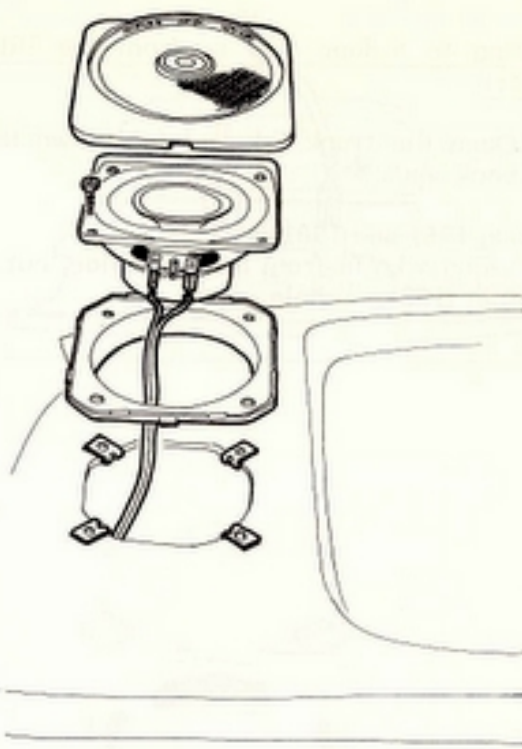
11. Remove the sill plates on the right hand side.

12. Run the loudspeaker cables under the carpet up to the bulkhead and then up to the radio.

13. Refit the sill plates.

14. Raise the back seat.

15. Cut the cables to a suitable length and fit cable lugs to suit the radio.



Balance Control

A balance control should be installed if more than 2 speakers are fitted. This will enable the volume between the front and rear pairs of speakers to be regulated. Space has been provided to the left of the radio for the installation of a balance control.

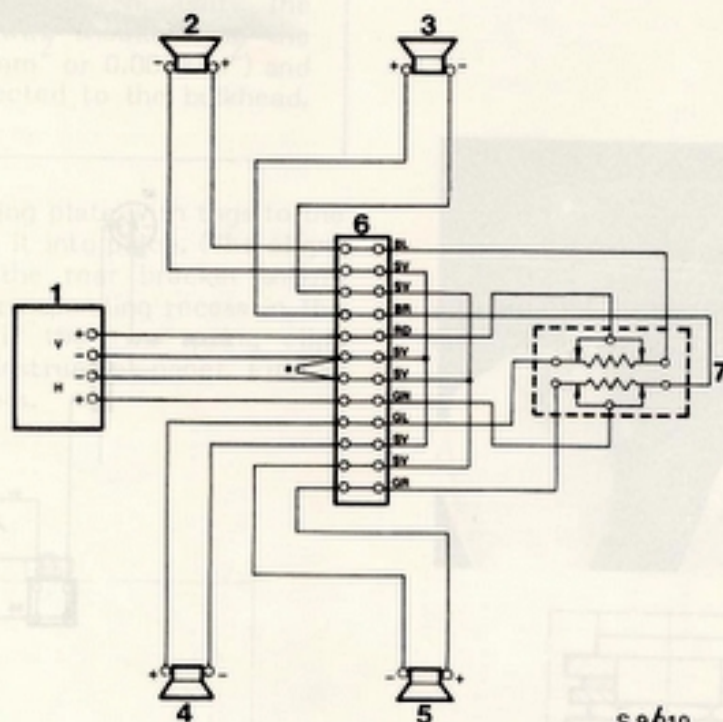
Find the correct hole in the switch panel and then cut away the protective casing. Follow the wiring diagram provided with the balance control kit when connecting the unit.



Important

If stereo is being installed, it is important that the speakers are connected in phase. Follow the wiring diagram carefully.

Cut the jumper "a" if the stereo unit has separate outputs.



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

1. Stereo unit
2. Front speaker, left side
3. Front speaker, right side
4. Rear speaker, left side
5. Rear speaker, right side
6. Connector
7. Balance control

Fitting the radio (1979-1982 models)

1. Remove the compartment where the radio is to be fitted.

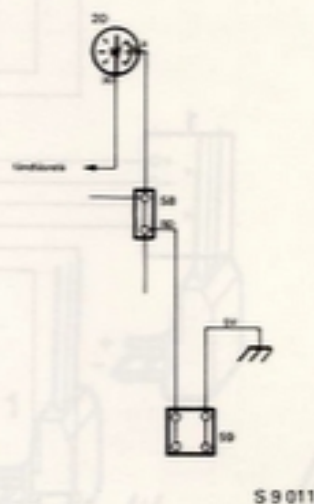


2. Fit the rear bracket to the radio. A different bracket may be necessary for certain radios (part no. 204 680 011).
3. Connect the positive (+) and negative (-) leads (2-pole connector factory-fitted in car) and the antenna and loud-speaker leads to the radio.



Connection on 1979 models

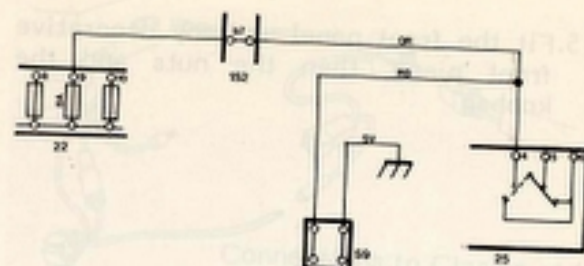
The connection is only energized with the ignition switch in position G or K. The circuit has no fuse.



2-pole connector for radio

Alternative connection for 1979 models

- Remove the insulation on the two radio wires provided.
- Cut off the red wire as far from the 2-pole connector as possible.
- Insulate the live end.
- Connect the red (cut-off) piece of wire to wire 70 OR on the switch for the hazard warning lights. Use bridge 85 21 668.
- This connection is provided with a fuse (fuse no. 9) and is always energized regardless of the ignition switch position.



S 9 012

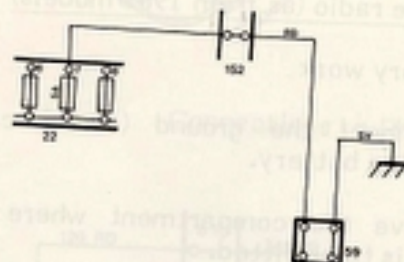
2-pole connector for radio

Connection as from 1980 models

The connection is provided with a fuse (fuse no. 7) and is always energized, regardless of the ignition switch position.

Important

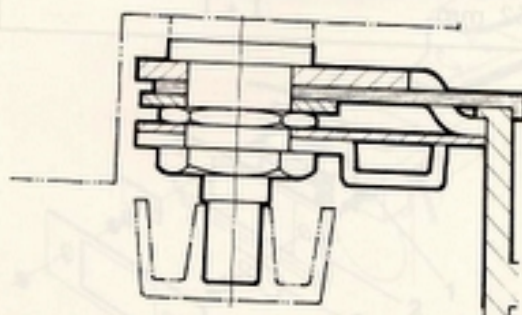
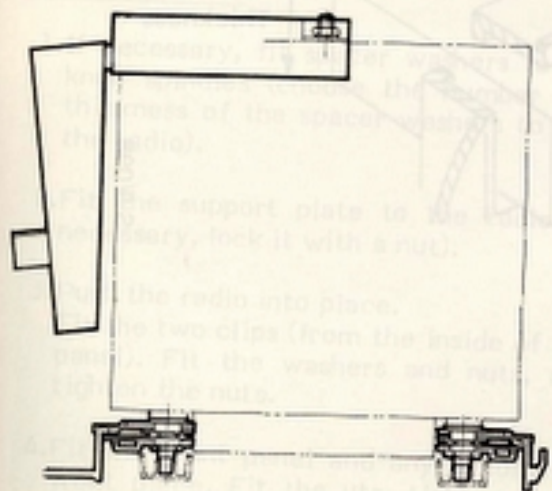
If larger power consumers are fitted, such as an equalizer or a booster, a separate, fused 2.5 mm² (0.0039 in²) wire should be provided between the battery and the relevant unit. The ground (earth) wire should be of the same size (2.5 mm² or 0.0039 in²) and should be connected to the bulkhead, for instance.



S 9 013

2-pole connector for radio

4. Fit the mounting plate with tags to the radio and slide it into place. (The alignment pin in the rear bracket should engage the corresponding recess in the guide bar.) Fit the two spring clips inside of the instrument panel. Fit the washers and nuts.



S 9 014

5. Fit the front panel and any decorative front piece, then the nuts and the knobs.



Fitting the radio (as from 1983 models)

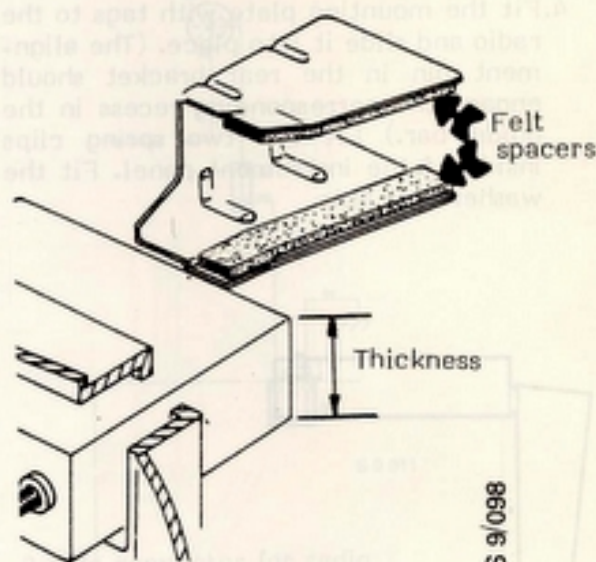
Preparatory work

1. Disconnect the ground (earth) cable from the battery.
2. Remove the compartment where the radio is to be fitted.
3. Fit the antenna and run the antenna cable to the radio.
4. Fit the loudspeakers and balance control, if any (space is provided for the balance control on the left-hand side of the opening for the radio).
Run the loudspeaker cables to the radio.

Fitting felt spacers

1. Measure the thickness of the radio.
2. Fit felt spacers to the support bar as follows (felt thickness of 5/32 in or 4 mm):

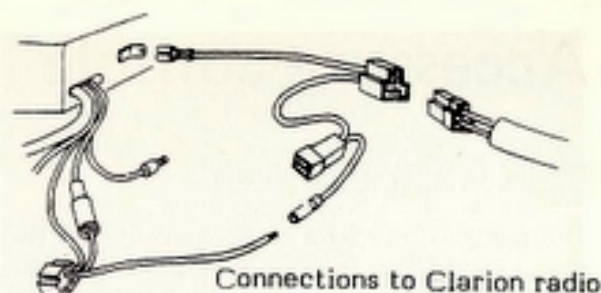
Thickness of radio	Number of spacers
44 mm	2 + 2
50-52 mm	1 + 1



Connect the radio

1. Connect the loudspeaker cables.
2. Connect the antenna cable.

3. Connect the positive (+) and negative (-) cables of the electrical system to the radio.
4. Connect the 2-pole connector of the harness to the existing connector of the car.



Connections to Clarion radio



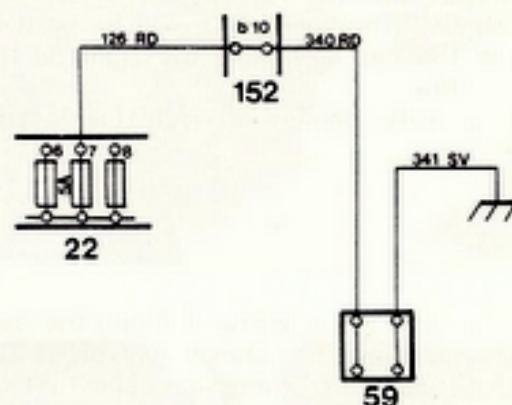
S 9/099

Connections to Philips radio

The supply cable is fused across fuse no. 7 and is always energized, regardless of the ignition switch position.

Important

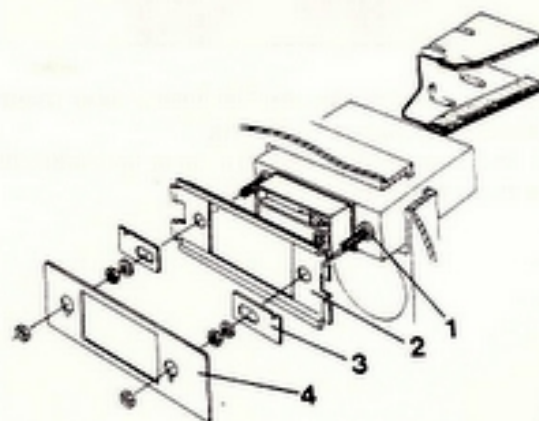
If larger power consumers are fitted, such as in equalizer or booster, a separate, fused 2.5 mm² (0.0039 in²) wire should be provided between the battery and the relevant unit. The ground (earth) wire should be of the same size 2.5 mm² (0.0039 in²) and should be connected to the bulkhead, for instance.



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Fitting the radio

1. If necessary, fit spacer washers to the knob spindles (choose the number and thickness of the spacer washers to suit the radio).
2. Fit the support plate to the radio (if necessary, lock it with a nut).
3. Push the radio into place. Fit the two clips (from the inside of the panel). Fit the washers and nuts, and tighten the nuts.
4. Fit the front panel and any decorative front piece. Fit the nuts, tighten them and then fit the knobs.



S 9/101

Accessory console

Fitting to 1979-1982 models

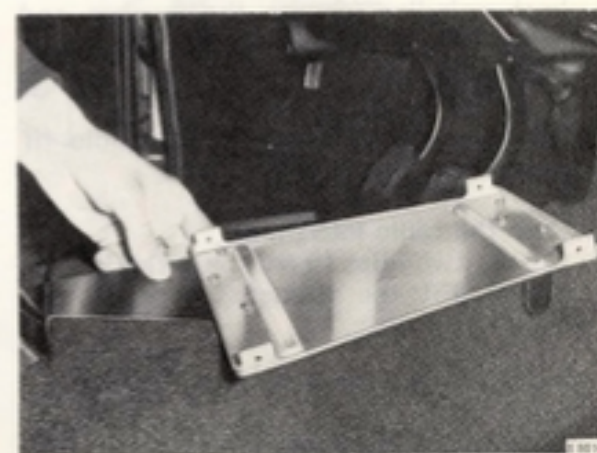
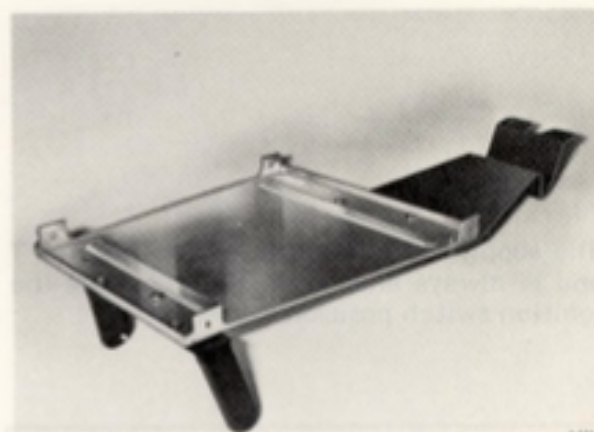
The radio is intended to be installed in the space provided in the instrument panel. The surplus storage compartment from the panel can then be moved down to the console.

Fit the accessory console (part no. 204 603 005) as follows:

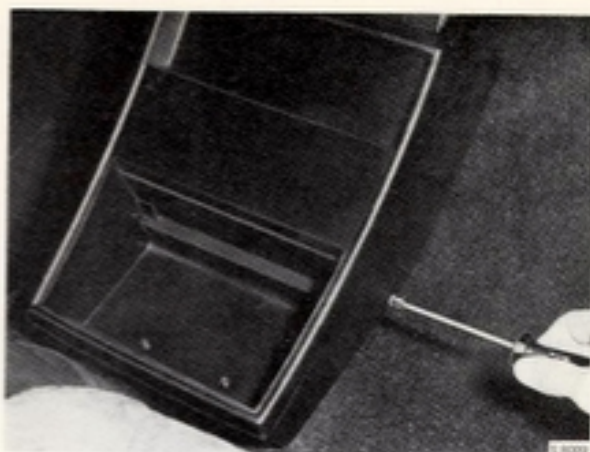
Assemble the base plate, front support and rear mounting using the short screws. On left-hand drive cars the front support (U-shaped) and the rear mounting are fitted so that the base plate will be positioned in the car as far to the right as the holes allow. The opposite applies to right-hand drive cars.

Remove the three screws holding the gear lever cover and the choke control, if fitted. (Automatic transmission cars: first remove the small upper cover).

Lift the front edge of the cover and insert it under the rear mounting. Fit the screws through the gear lever cover and the rear mounting.

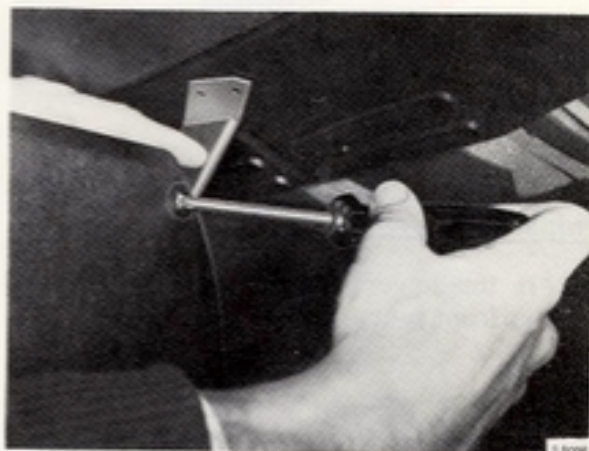


Screw the centre bracket onto the base plate.



Press the centre bracket down onto the gear shift tunnel and fit the two angle brackets to the top of the console. The angle bracket with the four holes should face the console.

Secure other angle bracket to the air duct under the instrument panel. Make a hole with an awl. On some models, the left angle bracket requires bending to obtain a good fit on the air duct.



Drill a 3.5 mm hole at the place indicated in the bottom of the storage compartment (to the left on left-hand drive cars, to the right on right-hand drive cars).

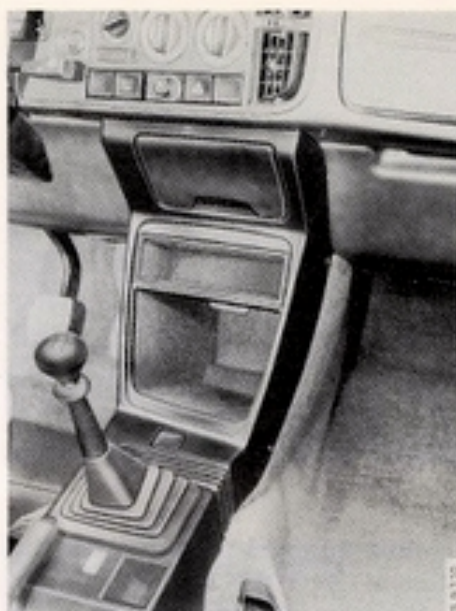
Fit one screw.



Fitting (as from 1983 models)

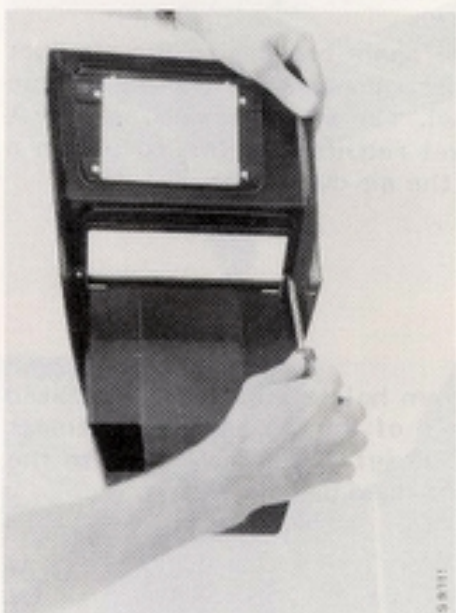
On certain models (GLE and Turbo), the accessory console is fitted as standard.

The console consists of two units, i.e. the front piece with fitting kit (part. no. 204 605 000 for left-hand drive cars and part no. 204 606 008 for right-hand drive cars), and loose casings of the same colour as the carpet.

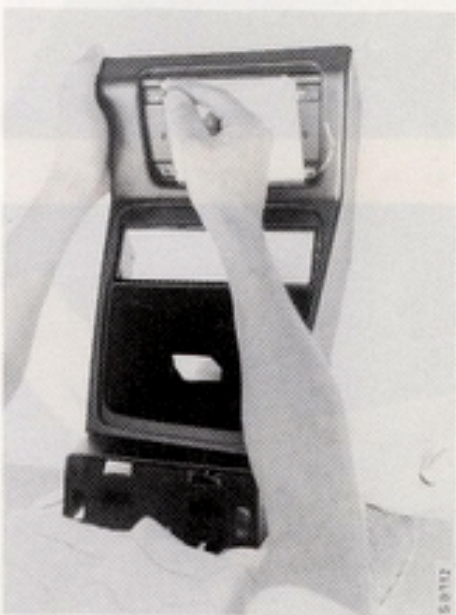


Preparatory work on the console

1. Fit the lower storage compartment to the front piece.



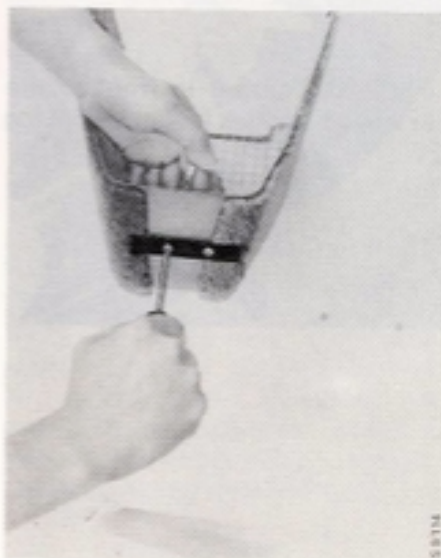
2. Fit four clip nuts (the smallest) for the ashtray bracket.



3. Place four clip nuts on the casing.



4. Secure the front support to the casing by means of screws, washers and nuts.



Preparatory work on the panel base

1. Remove the ashtray and drill out the pop rivets for the bracket. Remove the ashtray bracket.



2. Remove the flanged bolt.

3. Secure the spacer.



Fitting

1. Make a cut in the carpet in front of the gear lever cover for the lower mounting bracket.



2. Place the casing in the front piece and lower the entire console diagonally at the front edge over the ventilation tunnel and guide in the front support.



3. Assemble the front piece with the casing.
4. Connect the lighting to the ashtray bracket.
5. Secure the console in position and fit the flanged bolt.



6. Fit the self-tapping screw with washer to the lower mounting and to the mounting bracket under the carpet. Fit the screws.
7. Press the intermediate piece into place.
8. Fit the blanking-off button and the upper storage compartment.



The extra headlights can either be connected to be switched on with the main beam of the ordinary headlights or to serve as fog lights, whereby replacing the dipped headlights. The following dimensions should be used for the latter alternative.

A must be less than 16 in (400 mm).
B should not exceed the corresponding dimension for the headlights.
C should be at least 13 in (300 mm) with the vehicle unloaded.

Stays for 5-point mountings are required for fog light mounting.



If larger diameter headlights (100 or 125 mm) are fitted, the hood may be adapted. If the hood is not adapted, the hood stop should be fitted. See illustration.

Extra headlights

Saab 900 models have been provided with mountings on the front bumper for 2 extra headlights, part no. 23556 (19), or 23176 (19).



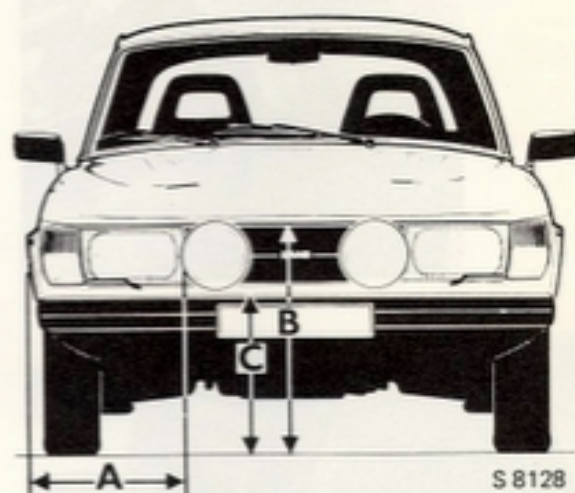
The extra headlights can either be connected to be switched on with the main beam of the ordinary headlights or to serve as fog lights, entirely replacing the dipped headlights. The following dimensions should be used for the latter alternative.

A must be less than 16 in (400 mm)

B should not exceed the corresponding dimension for the headlights.

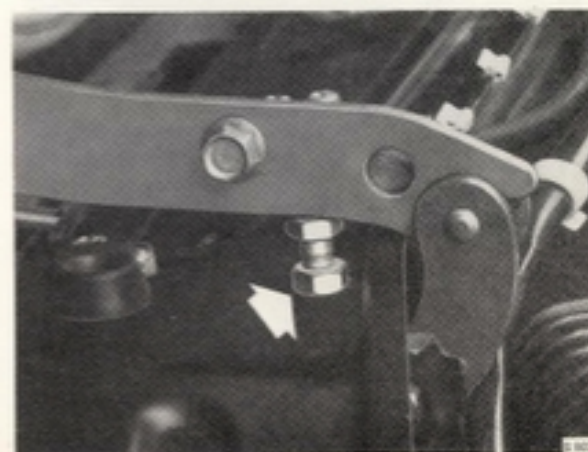
C should be at least 12 in (300 mm) with the vehicle unloaded.

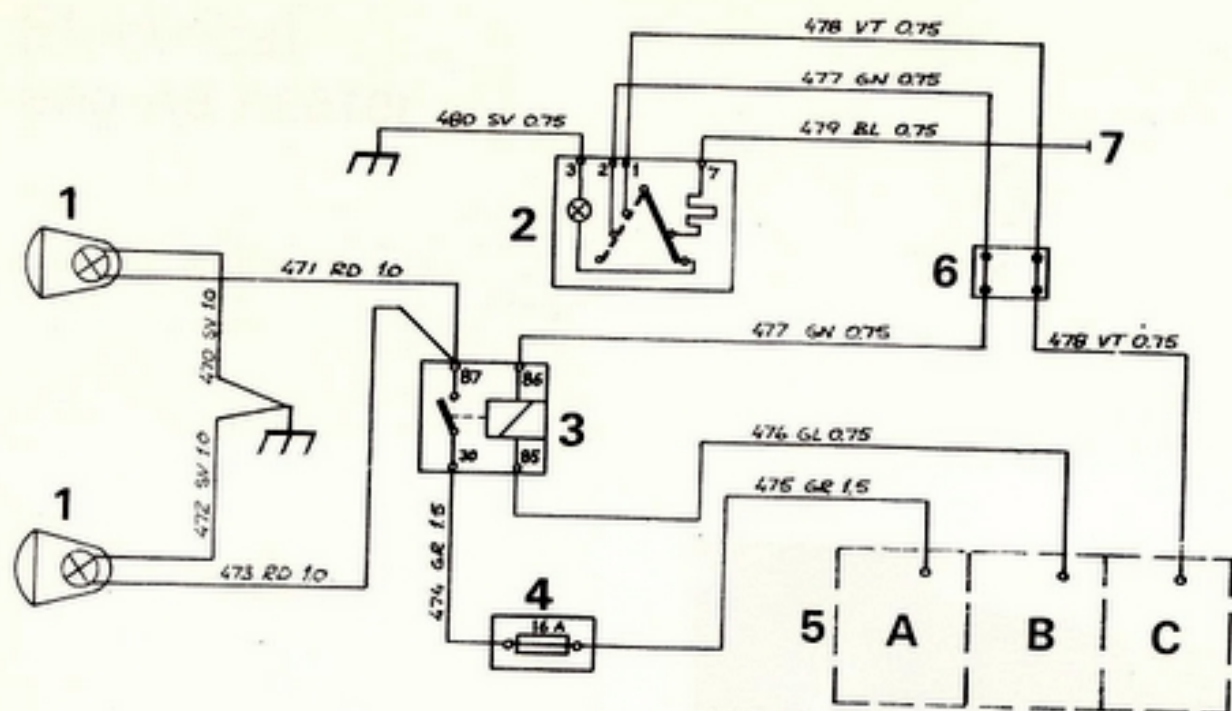
Stays for 2-point mountings are required for fog light installation.



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If larger diameter headlights (Bosch 190 or Hella 192 models) are fitted to Saab 900 models, the hood may be damaged if opened carelessly. If the hood - headlight clearance is not sufficient, a hood stop should be fitted. See illustration.





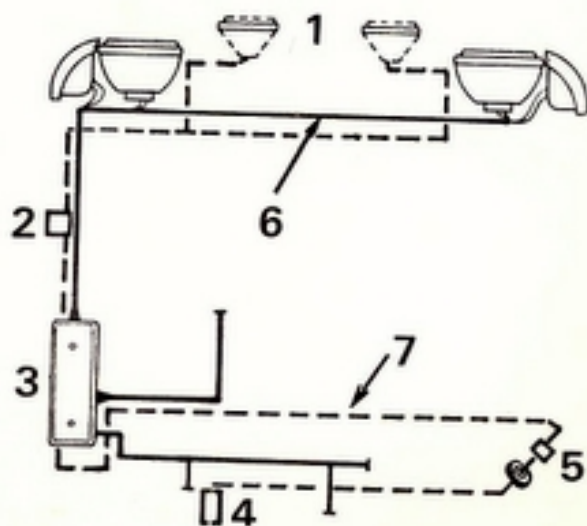
Wiring diagram,

as from 1979 models

1. Extra headlights
2. Switch for extra headlights
3. Relay for extra headlights
4. Line fuse
5. Distribution panel
 - a fuse 5-10, 30⁰+
 - b fuse 3-4, (18 GL 1,5)
 - c light relay, item 86 (31 GL 1.0)
6. 2-pole connector
7. To cigar lighter (214 BL 0,75)

Installation instructions, wiring harness,
as from 1979 models

1. Extra headlight
2. Relay for extra headlights
3. Distribution panel
4. Switch for extra headlights
5. 2-pole connector
6. Ordinary harness
7. Harness for extra headlights



Electrical engine heater

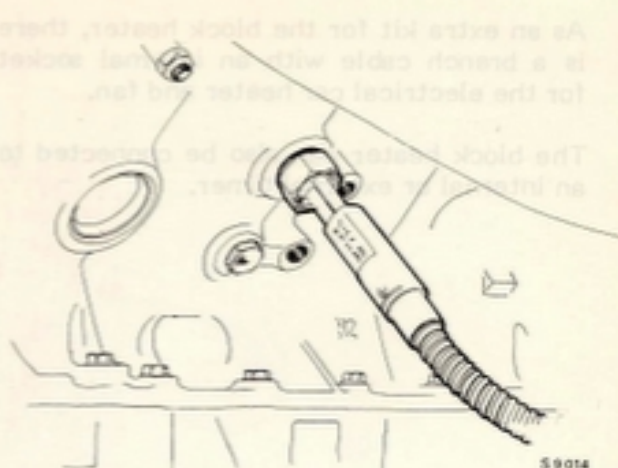
The engine heater should be fitted to the right side of the engine block under the exhaust manifold. The kit for the Saab 900 contains an engine block heater, a plug-in type lead-in cable (with external socket) and a connecting cable.

The instructions and recommendations included in the installation kit should be followed when fitting the engine heater.

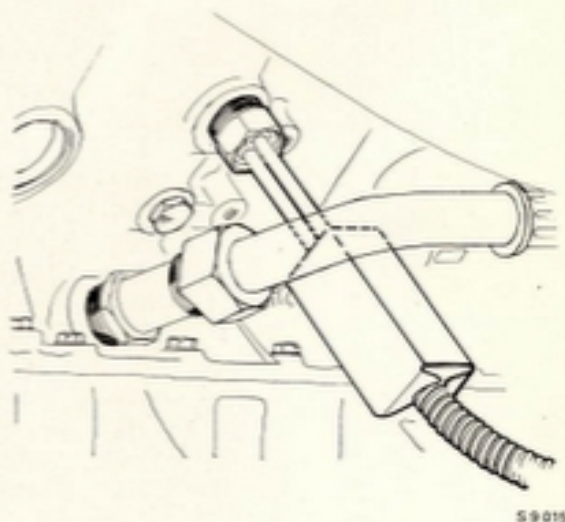
Important

- The external socket must be installed so that it is well grounded to the chassis. See illustration.
- Use plumber's tape or some other sealant when installing the block heater.
- Check that the coolant is not contaminated with oil before refilling the cooling system. Use new coolant if necessary.
- Pressure test the cooling system. Run the engine and check that there are no leaks.

On the Saab 900 Turbo and other cars frequently towing heavy loads, a heat shield must be mounted on the plug-in socket of the block heater. (Applies to the Calix heater).



Saab 900 with front spoiler.



As an extra kit for the block heater, there is a branch cable with an internal socket for the electrical car heater and fan.

The block heater can also be connected to an internal or external timer.



Important:

- The external socket must be installed so that it is well grounded to the chassis. See illustration.
- Use plumber's tape on any other joints when installing the block heater.
- Check that the coolant is not contaminated with oil before refilling the cooling system. Use new coolant if necessary.
- Pressure test the cooling system. Run the engine and check that there are no leaks.

On the 900 Turbo and other cars frequently towing heavy loads, a heat shield must be mounted on the plug-in socket of the block heater. (Applies to the Callix heater.)



Step 900 with front spoiler.



Car heater

The Eberspächer B1L hot air heater burns gasoline. It can be used regardless of 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 indicating lamp will then flash.)

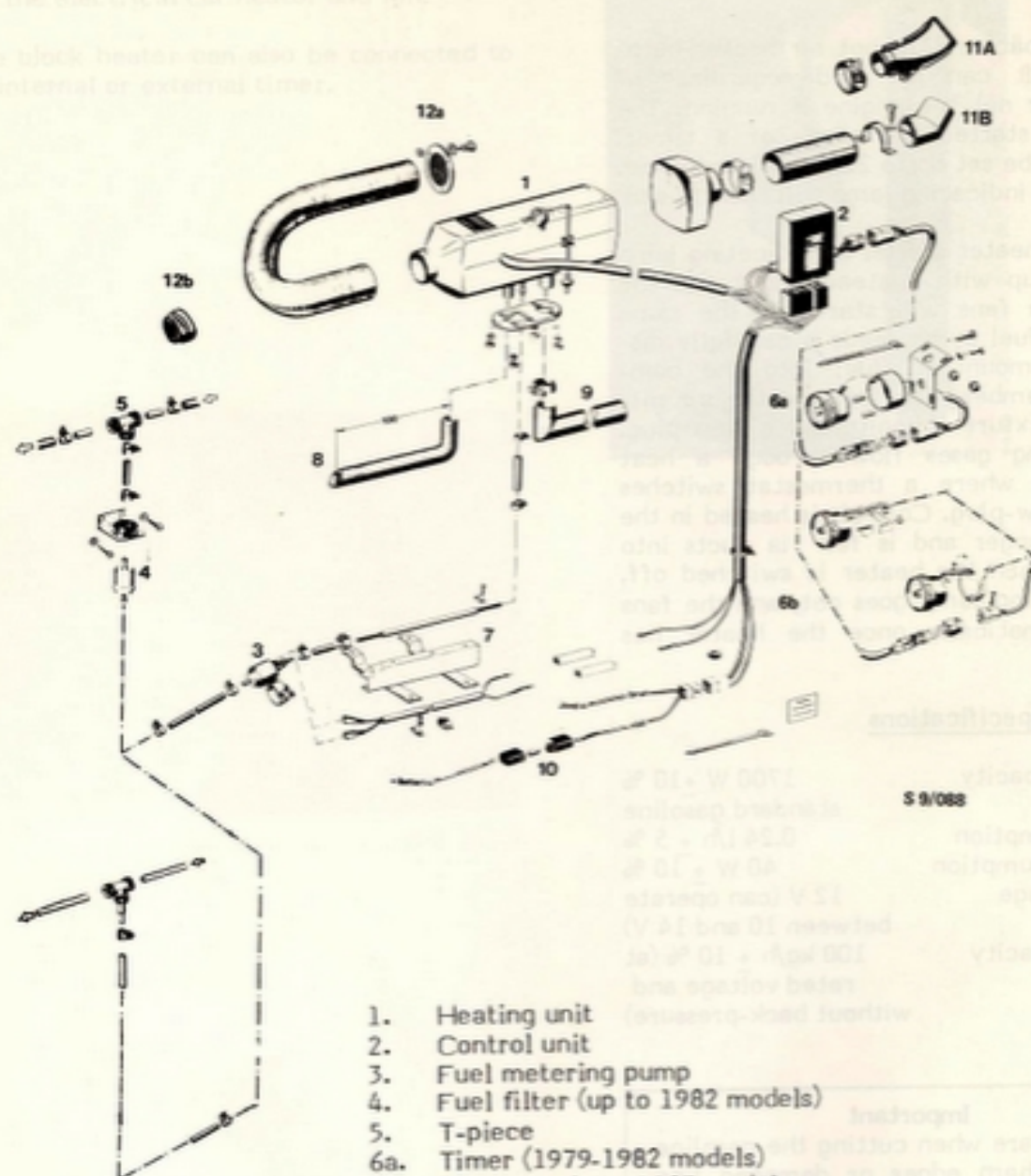
When the heater starts, an indicating lamp will light up with a steady light and the combustion fans will start. At the same time, the fuel pump feeds a carefully distributed amount of fuel into the combustion chamber. The fuel and the air mix and the mixture is ignited by a glow-plug. The burning gases flow through a heat exchanger, where a thermostat switches off the glow-plug. Cold air is heated in the heat exchanger and is fed via ducts into the car. When the heater is switched off, the indicating lamp goes out, and the fans stop automatically once the heater has cooled off.

Technical specifications

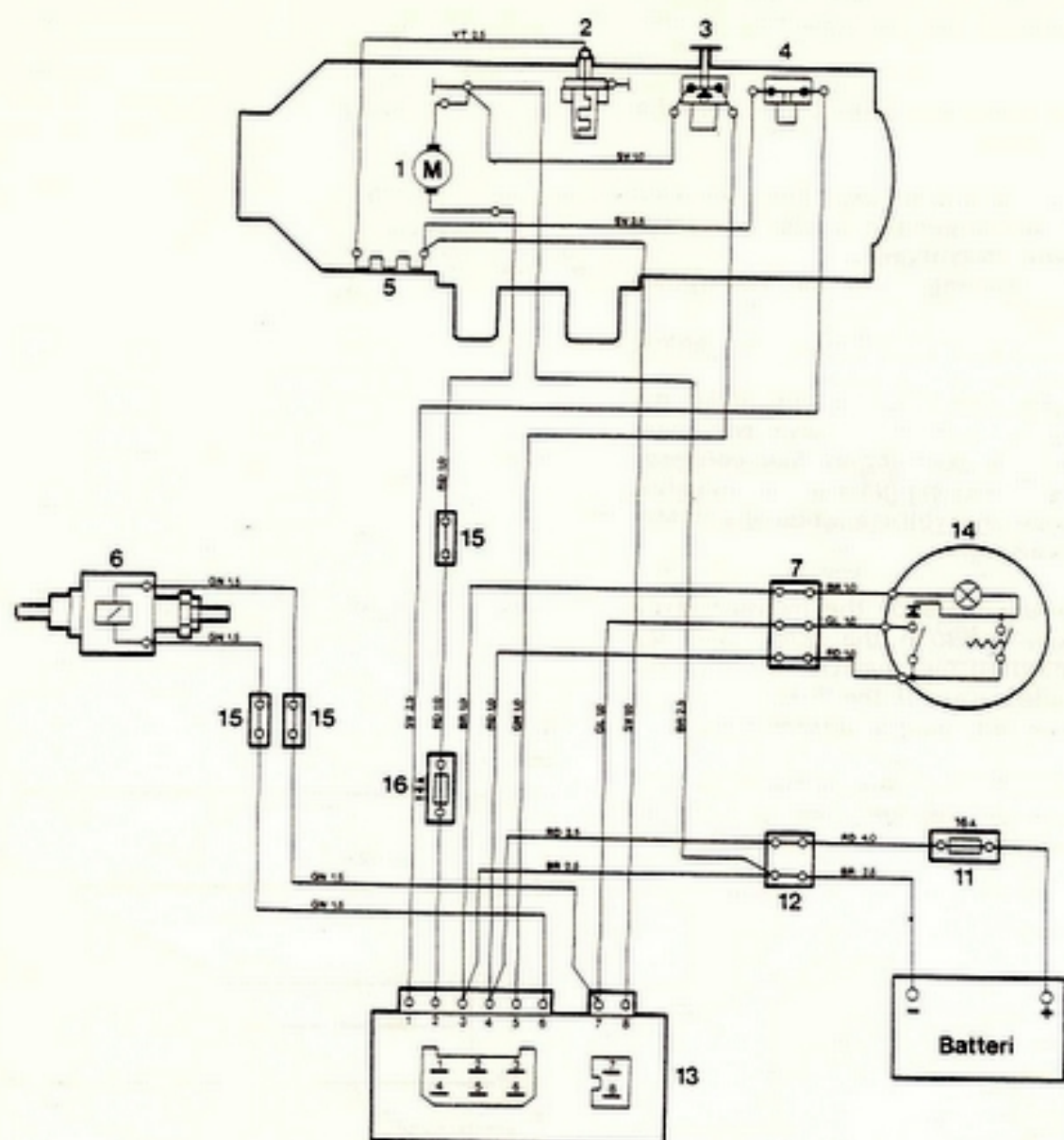
Heating capacity	1700 W $\pm 10\%$
Fuel	standard gasoline
Fuel consumption	0.24 l/h $\pm 5\%$
Power consumption	40 W $\pm 10\%$
Rated voltage	12 V (can operate between 10 and 14 V)
Hot air capacity	100 kg/h $\pm 10\%$ (at rated voltage and without back-pressure)

Important

- Take care when cutting the gasoline line. Sharp edges or damaged line may cause air leaks when the T-piece has been fitted.
- The fuel line must not be in 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. Heating unit
2. Control unit
3. Fuel metering pump
4. Fuel filter (up to 1982 models)
5. T-piece
- 6a. Timer (1979-1982 models)
- 6b. Timer, as from 1983 model
7. Guard
8. Combustion air tube
9. Exhaust pipe
10. Fuse
- 11a. Nozzle, 1979 to 1980 models
- 11b. Nozzle, as from 1981 models
- 12a. Protective grille, 1979-1982 models
- 12b. Protective grille, as from 1983 model



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Wiring diagram, Eberspächer B1L

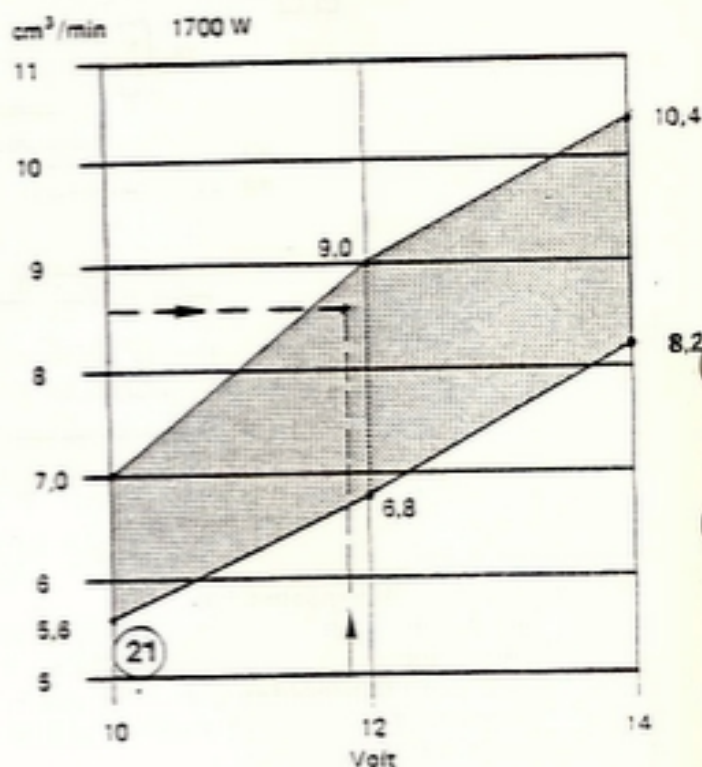
1. Fan motor
2. Glow-plug
3. Overheating protection
4. Thermostat
5. Series resistor
6. Fuel metering pump
7. 3-pole-connector
11. Main fuse, 16A
12. 2-pole-connector
13. Control unit
14. Timer
15. 1-pole connector
16. Fuse, T4A (as from 1983 model)

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

Measuring the fuel quantity

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

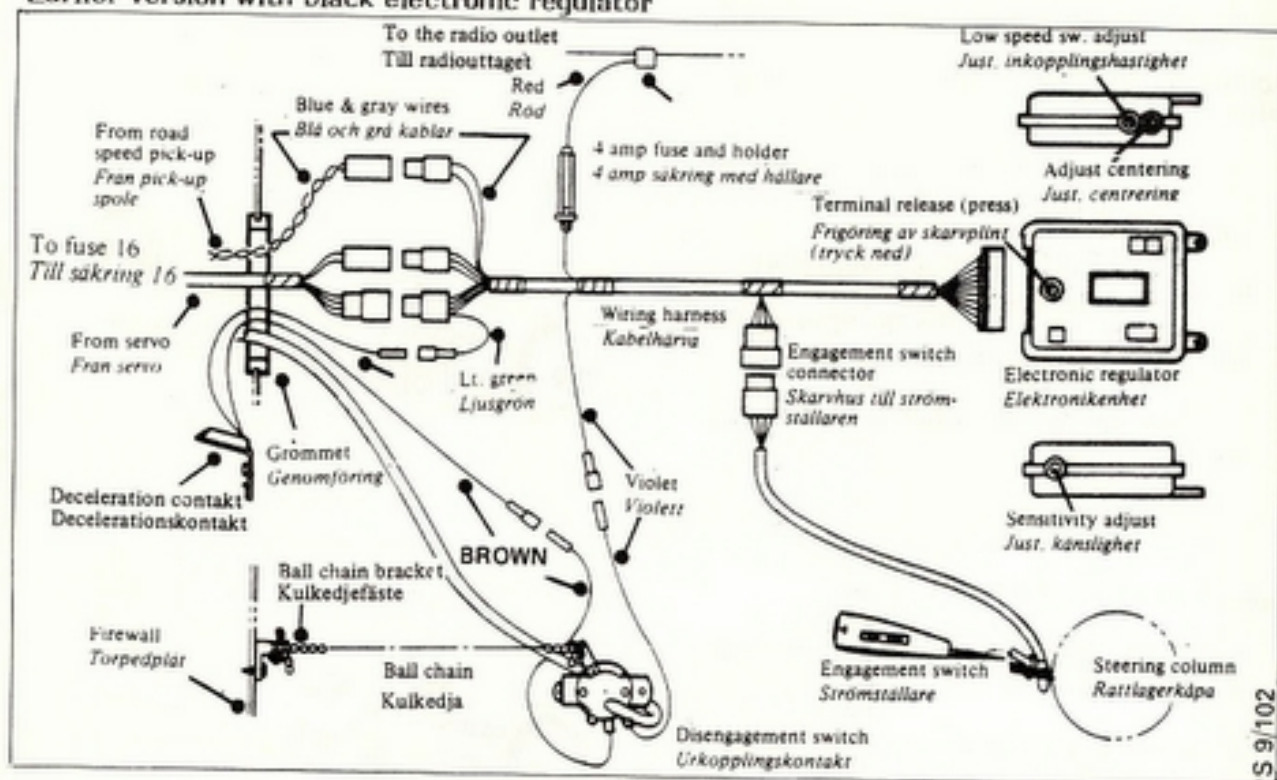
1. Disconnect the white cable from the glow-plug.
2. Connect a voltmeter between 3 (-) and 4 (+) and the 6-pole connector of the control unit.
3 = the pole with the two brown cables.
4 = the pole with the two red cables.
3. Disconnect the fuel line under the heater. Start the heater and measure the quantity of fuel collected in a measuring glass in two minutes. Check the voltage while the heater is running.
4. On the basis of the measured voltage, check in the graph that the measured fuel quantity is within the shaded area. If the fuel quantity is incorrect, see the service manual.
5. Connect the cable to the glow-plug. Connect the fuel line and tighten the clip.



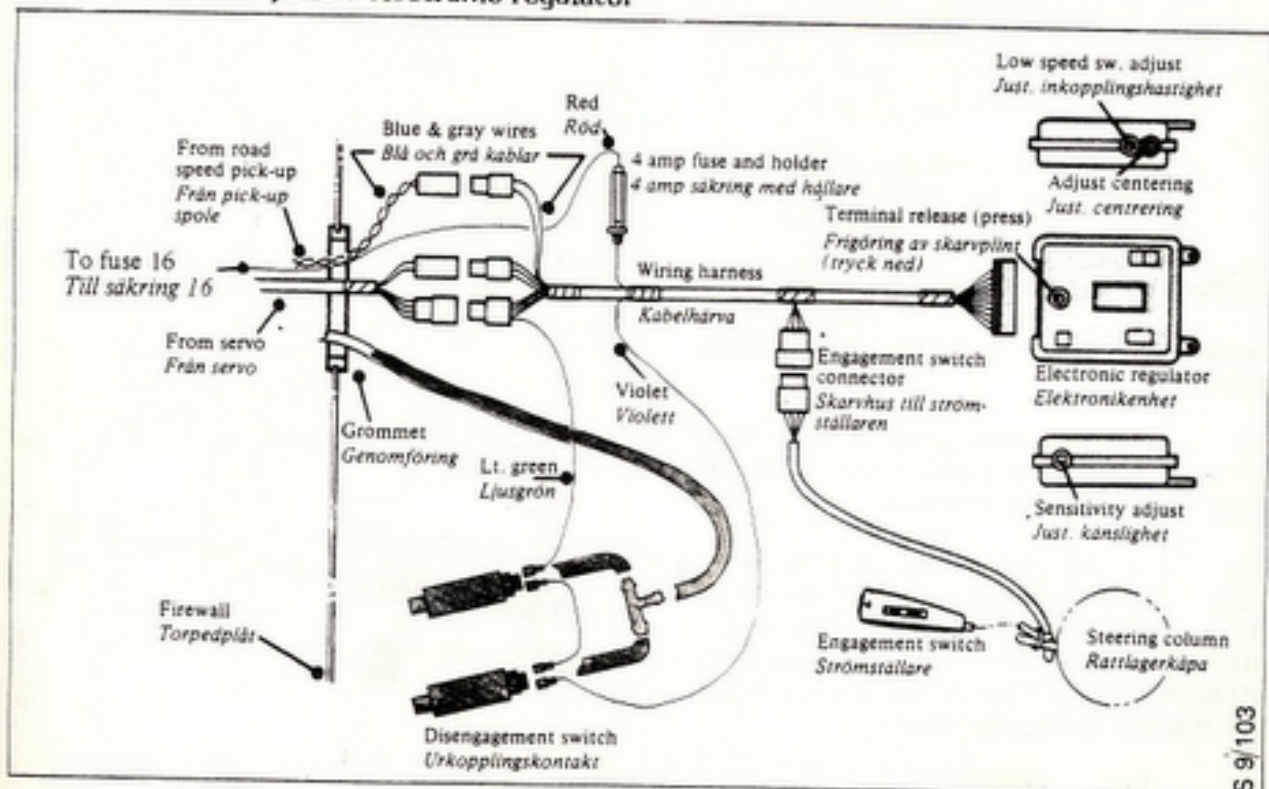
Cruise control/Speed control

Cruise Control/Speed Control is available as an accessory and can be installed in cars with fuel injection or carburetor engines. Detailed installation instructions accompany the kits.

Earlier version with black electronic regulator



Later version with yellow electronic regulator



To adjust

Adjustment is made on the three adjustment screws on the electronic regulator.

- For reasons of safety road testing should be conducted with a passenger who makes the necessary adjustments.

I To set the minimum engagement speed

Applies only to the yellow electronic regulator.

- Set the control to ON, drive the car at a speed of about 45 mph (70 km/h) and depress the SET/COAST button. When the accelerator pedal is released, the speed will be automatically controlled and will be stored in the memory of the electronic regulator.
- Reduce the speed to below 15 mph (25 km/h).



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Applies to all regulators.

- Move the control to RESUME and hold it in this position.
- Accelerate the car slowly. At a certain speed, Cruise Control will be engaged and the car will accelerate without the driver depressing the accelerator pedal. This is the lowest engagement speed, which should be 27 - 33 mph (44 - 53 km/h).
- The engagement speed can be adjusted on the electronic regulator. Use a small screwdriver to carry out adjustments.



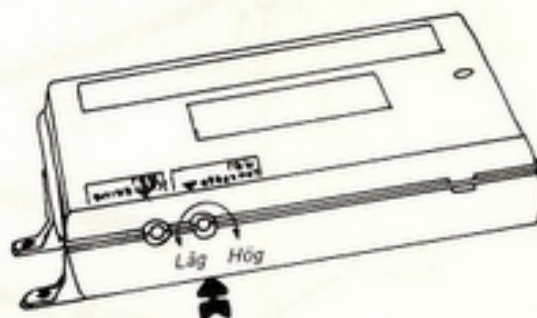
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Clockwise = Higher engagement speed

Counter-clockwise = Lower engagement speed

Note If the engagement speed is lower than 27 mph (44 km/h), the upper control limits of the system will be reduced.

Example: If the lowest engagement speed is 20 mph (32 km/h), the upper limit will be 63 mph (101 km/h) $32 \text{ km/h} \times 3.15$. If the setting is 30 mph (48 km/h), the upper limit will be 94 mph (151 km/h) $(48 \text{ km/h} \times 3.15)$. 3.15 is a calculation constant.



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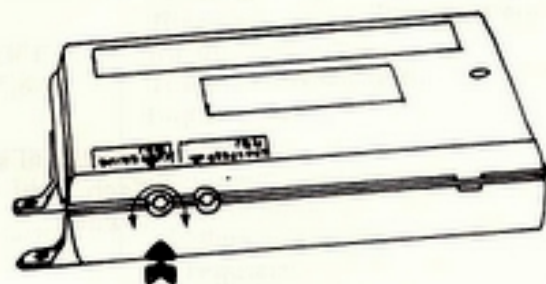
II Centering adjustment

Checking and adjustment should be carried out on a level road.

- Set the control to ON.
- Drive the car at about 45 mph (70 km/h) and depress the SET COAST control.
- The actual speed must not deviate from the engagement speed by more than ± 2 mph (3 km/h).
- If necessary, adjust the centering on the electronic regulator.
Turn carefully clockwise if the speed drops more than 2 mph (3 km/h) or counter-clockwise if the speed increases more than 2 mph (3 km/h).
- Check that the centering agrees at 55 mph (90 km/h).



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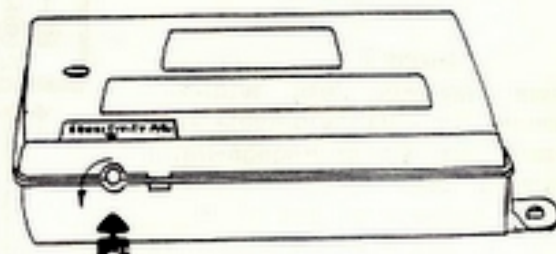


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III Sensitivity adjustment

On delivery, the Cruise Control is set to maximum sensitivity, which is the normal setting. However, it can be adjusted to a lower sensitivity, which will give somewhat smoother control.

- If necessary, the sensitivity can be adjusted on the electronic regulator.
- Use a small screwdriver and turn the adjustment **COUNTER-CLOCKWISE FOR LOWER SENSITIVITY**. However, the speed should never fluctuate more than ± 2 mph (3 km/h) around the set speed.



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Note

If the sensitivity has been adjusted, centering (Section II above) should be checked again and, if necessary, adjusted.

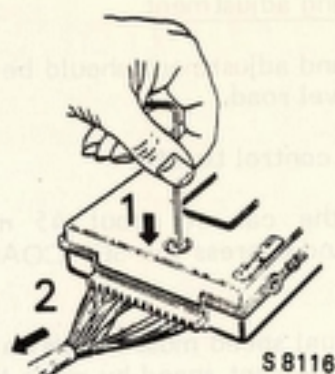
IV Check

- After checking and any adjustments in accordance with I - III above, all functions of the system should be checked.

Checking/fault diagnosis on electrical functions by means of the system tester

To remove the terminal from the electronic regulator:

1. Press
2. Pull
3. Remove the electronic regulator from the terminal (see above. Check that the electric wires are correctly fitted to the terminal.
4. Fit the system tester.



Electrical system tester

Each light checks the following.

Light 1

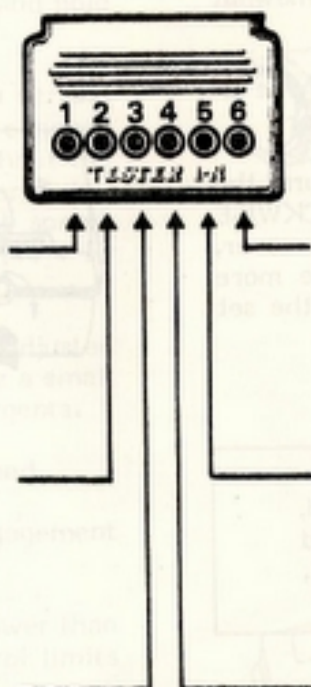
Power source, fuse and ground. "On-Off" and "Set-Speed" position of engagement switch.

Light 2

Road speed pick-up, associated wiring harness terminals and connectors.

Light 3

Disengagement switch adjustment, deceleration switch and associated wiring harness terminals and connectors.



Light 6

Servo charge valve. "Resume" contacts of the engagement switch and associated wiring harness terminals and connectors.

Light 5

servo vent valve, "resume" contacts in the engagement switch and associated wiring harness terminals and connectors.

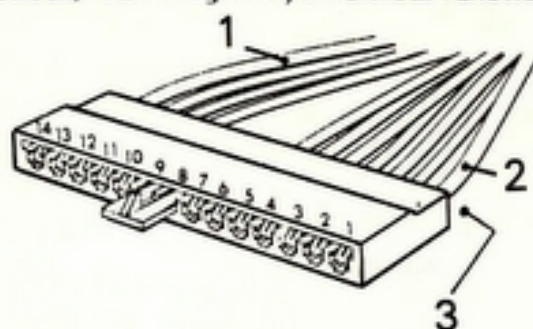
Light 4

Throttle position feedback and associated wiring harness terminals and connectors.

To Test, Disconnect Harness From Regulator And Connect To Tester

Test No. and Condition	Correct Response	Trouble Shooting For Incorrect Response
1. Correct power source: Ignition switch "off" Engagement switch "on"	All lights off:	Any light on Red wire connected directly to constant power source
2. System's electrical continuity: Ignition switch "on" Engagement switch "on"	Lights ON OFF 1,2,3,4 5,6	These are checks to make for incorrect lights in Tests 2 thru 5 Light 1 - off Check red, brown, and green wires at engagement switch connector, and 14 (dark green wire) at regulator connector for good connections. Light 2 - off Check road speed pick-up coil continuity; blue and gray wire connections; 2, 3, 5 and 7 terminals (black, blue, brown and brown wire) at regulator connector. Light 3 off Check disengagement switch adjustment; deceleration switch angle (see owner's manual); all brown, violet, and light green wire connections. Light 4 - off Check terminals 2 and 11 (black and tan wire) at regulator connector; continuity of throttle position feedback rheostat of servo (see circuit diagram). Light 5 - off Bad connection at terminal 6 (white wire) or terminal 12 (orange wire); bad servo. Light 6 - off Bad connection at terminal 4 (maroon wire) or terminal 12 (orange wire); bad servo All lights - off After pushing "set speed" or "resume" (test 3 or 5): blown fuse; red or white wires shorted; bad servo.
3. Servo valve continuity: Ignition switch "on" Engagement switch "on" Push and hold set speed button Important If engine is running servo will pull throttle to full open	Lights ON OFF 2,3,4,5,6 1 Light 4 will dim When servo pulls to full throttle if engine is running	
4. Disengagement and deceleration switch continuity: Ignition switch "on" Engagement switch "on" Push and hold brake pedal	Lights ON OFF 1,2,4 3,5,6 Release brake pedal and light 3 will go "on"	
5. "Resume" position of Engagement switch: Ignition switch "on" Engagement switch "on" Slide and hold on "off" Switch to "resume" Important If engine is running, servo will pull throttle to full open .	All lights - ON Light 4 will dim when servo pulls to full throttle	

Check/fault diagnosis, electrical functions



1. Dark green
2. Light green
3. Numbers appear on the back of the terminal. Use a 12 volt test lamp for other special testing instrument.



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Removing the terminal from the electronic regulator.

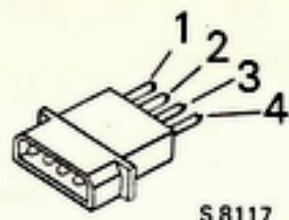
1. Press
2. Pull

Remove the electronic regulator from the terminal (see above). Check that the electrical wires are correctly positioned in the terminal.

Condition	Result	Reason/Remedy
Ignition off. Engagement switch Control "ON".	None of the wires cause the lamp to light up	System OK
Check between all the terminal wires and earth.	Lamp highs up for 5,7	+ supply fault. Should be connected where the wiring is dead when the ignition is switched off.
Ignition on. Engagement switch control "ON".	Lamp lights up for 5,7 and 14	System OK
Check between all the terminal	None of the wires cause the lamp to light up.	Blown fuse. Check + supply. Check ground (earth) at servo (light green)
Ignition on. Engagement switch control "ON".	Lamp does not light up.	System OK
Depress and hold "Set Speed". Check between 14 and ground.	Lamp highs up	See engagement switch fault diagnosis
Ignition on. Engagement switch control "ON".	Lamp lights up for both 10 and 14.	System OK
Ser control to "RESUME" and hold it there. Check between ground and 10 and 14 (individually)	Lamp does not light up for 10 or 14.	See engagement switch fault diagnosis.
Ignition on. Engagement switch control "ON". Check between 5 and 13	Lamp lights up Depress brake pedal Lamp goes out	System OK
	Lamp does not light	Adjust brake pedal switch so that the lamp lights up and goes out respectively when the brake or clutch pedal is depressed.

Check/fault diagnosis, engagement switch

Disconnect the engagement switch connector from the electrical system. Connect 12 volt supply to the red wire in the engagement switch connector.



1. Yellow
2. Green
3. Brown
4. Red

Condition	Result	Remedy
Engagement switch control "OFF". Check with grounded test lamp: Brown wire Green wire Yellow wire	Lamp does not light up Lamp does not light up Lamp does not light up	Lights up replace engagement switch Lights up replace engagement switch Lights up replace engagement switch
Engagement switch control "ON". Check with grounded test lamp: Brown wire Green wire Yellow wire	Lamp light ups Lamp light ups Lamp does not light up	Does not light up, replace engagement switch Does not light up, replace engagement switch Lights up replace engagement switch
Engagement switch control "ON". Depress "Set Speed" and hold it there. Check with grounded test lamp: Brown wire Green wire Yellow wire	Lamp light ups Lamp does not light up Lamp light ups	Does not light up, replace engagement switch Lights up, replace engagement switch Does not light up, replace engagement switch.
Engagement switch control "ON". Activate "RESUME" and hold it there. Check with grounded test lamp: Brown wire Green wire Yellow wire	Lamp light ups Lamp light ups Lamp light ups	Does not light up, replace engagement switch Does not light up, replace engagement switch Does not light up, replace engagement switch.

Fault diagnosis, other functions

Condition	Possible cause	Remedy
Blown fuse	Open-circuit or short-circuit in electrical system	Perform checks as per fault diagnosis chart. Replace fuse (max. 5 A)
Engagement switch control "ON" - No reaction	No current on brown wire at electronic regulator	Repair electrical system or check connection to terminal. Check adjustment of disengagement switch.
	Poor vacuum or no vacuum	Check vacuum hose connections. Check vacuum tank for leaks.
	Vacuum leak	Repair leak.
	Electrical fault	See fault diagnosis, electrical system.
	Faulty terminals or vacuum hose connections	Check/repair
	Faulty engagement switch	See fault diagnosis, engagement switch
	Pick-up coil incorrectly installed or magnet fault	Adjust the gap to 19-32 mm. Check the magnets.
	Faulty electronic regulator	Replace
"RESUME" not functioning	Poor grounding	Correct grounding at servo (light green)
Disengagement switch does not break the circuit when the brake/clutch pedal is depressed	Incorrectly set switch	Adjust
Idling speed does not return to normal	Faulty servo linkage	Adjust
	Stiff throttle control cam	Adjust
Pulsing acceleration	Sensitivity set too high	Adjust. See "Sensitivity adjustment"
Speed setting fluctuates more than ± 2 mph (3 km/h).	Centering incorrectly set	Adjust. See "Centering adjustment"

Condition	Possible cause	Remedy
Engine speed increases on starting	No throttle control clearance	Adjust gap to 2 mm min.
	Servo vacuum hoses incorrectly installed	Check
	Faulty servo	Replace servo
Speed Control stops working when the car is driven without pressing the brake pedal	Loose wire	Check
	Faulty deceleration switch	Replace the switch
	Vacuum hose loosened	Check
	Faulty servo linkage	Repair
	Incorrectly set disengagement switch	Adjust
Generally faulty operation	Pick-up coil gap too wide	Set to 19-32 mm
	One of the magnets has worked loose	Check/repair
Car continues to accelerate with the engagement switch control at "Set Speed".	Faulty servo	Replace
	Faulty electronic regulator	Replace
The system works, but the speed slowly increases and decreases.	Vacuum leak at disengagement switch	Check/adjust the switch

Tow hitch

Installation, 1979 - 1980 models

Tow hitches for Saab 900, part no. 117 175 000 and 117 176 008 (retractable), are designed for a trailer weight of 3 300 lb (1 500 kg). Mounting holes are provided in the car body and the kit contains all the necessary parts.

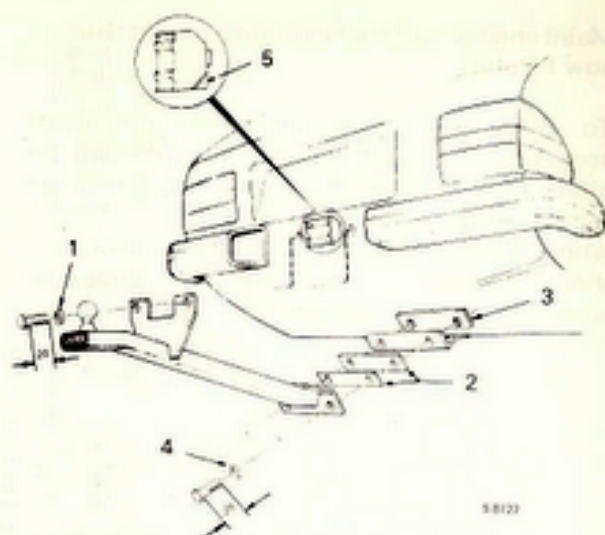
To fit

1. Remove the jack support member bolts.
Note. Scrape away the underseal from all contact surfaces between the tow hitch and the body.
2. Offer up the tow hitch, and fit the bolts, lock washers and anchor plate. If the gap at the jacking point exceeds 2 mm, spacers should be fitted between the tow hitch and the jacking point.
3. The bolts should not be tightened initially to facilitate adjustment of the tow hitch.
4. Tighten all mounting bolts.

N.B

Cars with automatic transmission used for towing a trailer heavier than 800 kg must be equipped with an air cooler for the transmission. The factory-fitted water oil cooler must then be reconnected for cooling the engine oil. (Applies to 1979-1980 models only).

An important complement to the tow hitch is the strengthening of the rear springs by fitting pneumatic auxiliary springs.



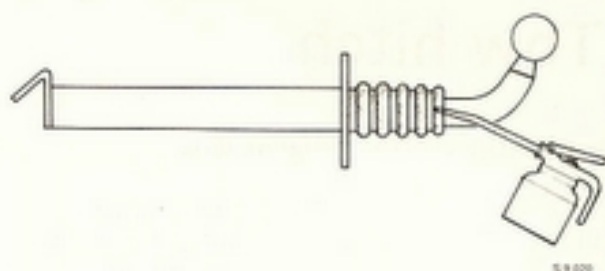
Tow hitch

1. Lock washer
2. Spacers
3. Anchor plate
4. Lock washer
5. Rubber section that must be cut off.

Maintenance instructions for retractable tow hitches

To ensure that the tow hitch will work properly, the ball towing bar should be oiled with standard engine oil, once or twice yearly.

When lubricating the hitch, the tow bar should be pushed in and out a few times to work the oil into the hitch.

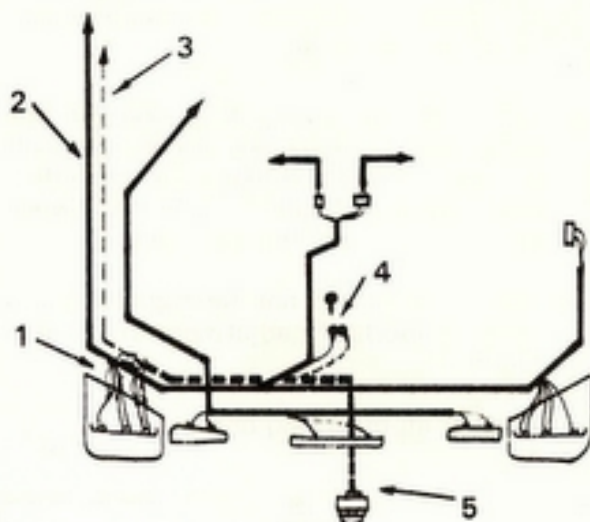


Electrical wiring harness for trailer socket

The wiring harness (part no. 117 104 000) is connected to the car's electrical system using connectors. The trailer socket is grounded to the chassis using a lug and a self-tapping screw.

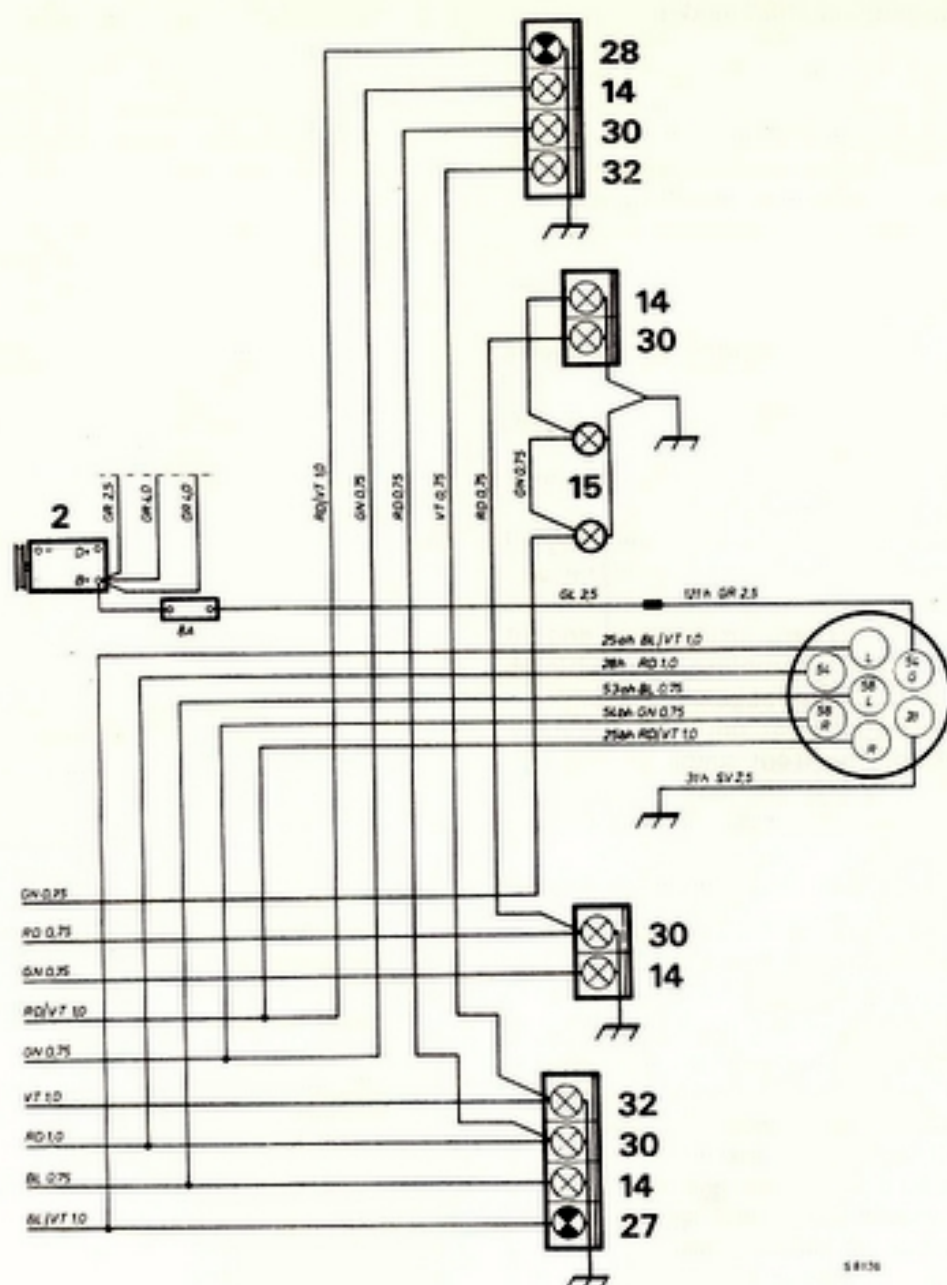
Important

Holes must not be drilled in the rear panel. Make a hole in the bottom part of the rubber block (located between the bumper and the rear panel) for the wires. An extra wiring kit (part no. 117 105 007) is available for supplying electricity to a mobile home for lighting or other purposes.



Wiring harness connections, 1979-1980 models

1. Wiring connection
2. Existing wiring harness
3. Yellow wire to alternator (supplementary part no. 117 105 007)
4. Ground connection
5. 7-pole connector with wiring



Wiring diagram, 1979 - 1980 models

- 2. Alternator
- 14. Rear lights
- 15. Number plate illumination
- 27. Direction indicator light, left
- 28. Direction indicator light, right
- 30. Brake lights
- 32. Reversing lights
- Supplementary part no. 117 105 007.

Colour code

BL	Blue
GL	Yellow
GN	Green
GR	Grey
RD	Red
SV	Black
VT	White
BL/VT	Blue/White
GN/VT	Green/White
RD/VT	Red/White
BL/RD	Blue/Red

Installation, as from 1981 model

Tow hitch no. 117 183 004 and hitch no. 117 184 002 (retractable) are designed for trailer weights up to a maximum of 1500 kg (3 300 lb). Holes for installation have been factory-drilled into the chassis, and the kit contains all the necessary parts.

To fit

1. Loosen the bolts of the jack support member.

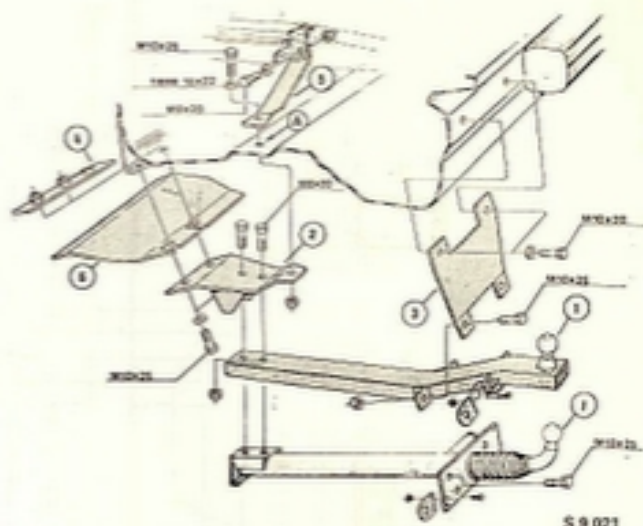
Note Scrape off the underseal at the jack support and at hole "A".

2. Fit the front support (2) and the rear support (3) to the tow bar (1).
3. Lift the tow hitch. Fit the angled bracket (5), bolts washers and the anchor plate (4). Drill a 5/16 in (9 mm) hole in the beam, using the angled bracket (5) as a template. Assemble as shown in the illustration.
4. Slide the guard (6) between the jack support and the front support (2).
5. At first, tighten the bolts only finger tight to facilitate the fitting of the tow bar (1).
6. Tighten all the bolts using a torque wrench.

Important

The 1981 model of the Saab 900 with automatic transmission is equipped with an improved water/oil cooler with a considerably higher capacity. An air/oil cooler for the transmission has therefore not been produced for the 1981 model. This also applies to a small number of 1980 model cars with the type 37 automatic transmission.

An important complement to the trailer hitch is reinforcing the rear springs of the car by installing pneumatic auxiliary spring.



Trailer hitch

1. Towing bar
2. Front support
3. Rear support
4. Anchor plate
5. Angled bracket
6. Guard

Maintenance instructions for retractable tow, hitches

To ensure that the tow hitch will work properly, the ball towing bar should be oiled with standard engine oil, once or twice yearly.

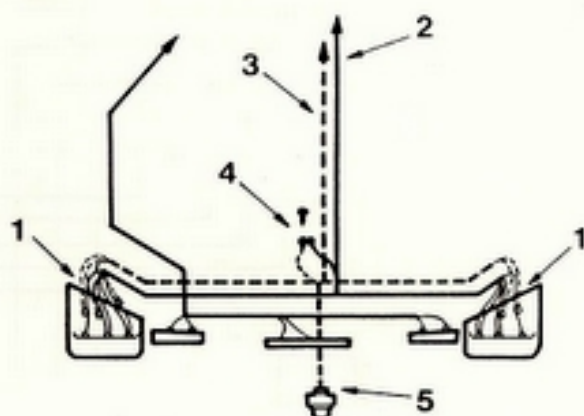
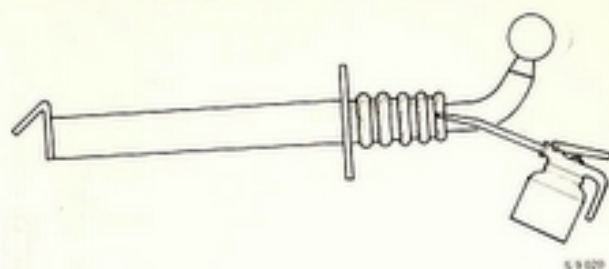
When lubricating the hitch, the tow bar should be pushed in and out a few times to work the oil into the hitch.

Electrical wiring harness for trailer socket

The wiring harness (part no. 117 104 000) is connected to the car's electrical system using connectors. The trailer socket is grounded to the chassis using a lug and a self-tapping screw.

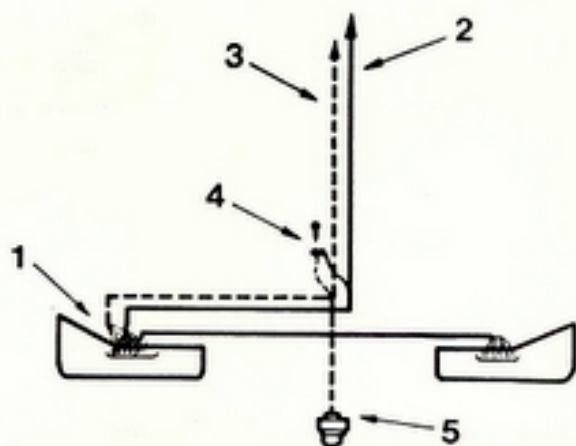
Important

Holes must not be drilled in the rear panel. Make a hole in the bottom part of the rubber block (located between the bumper and the rear panel) for the wires. An extra wiring kit (part no. 117 105 007) is available for supplying electricity to a mobile home for lighting or other purposes.



S 9 022

Saab 900, 3/5-door model

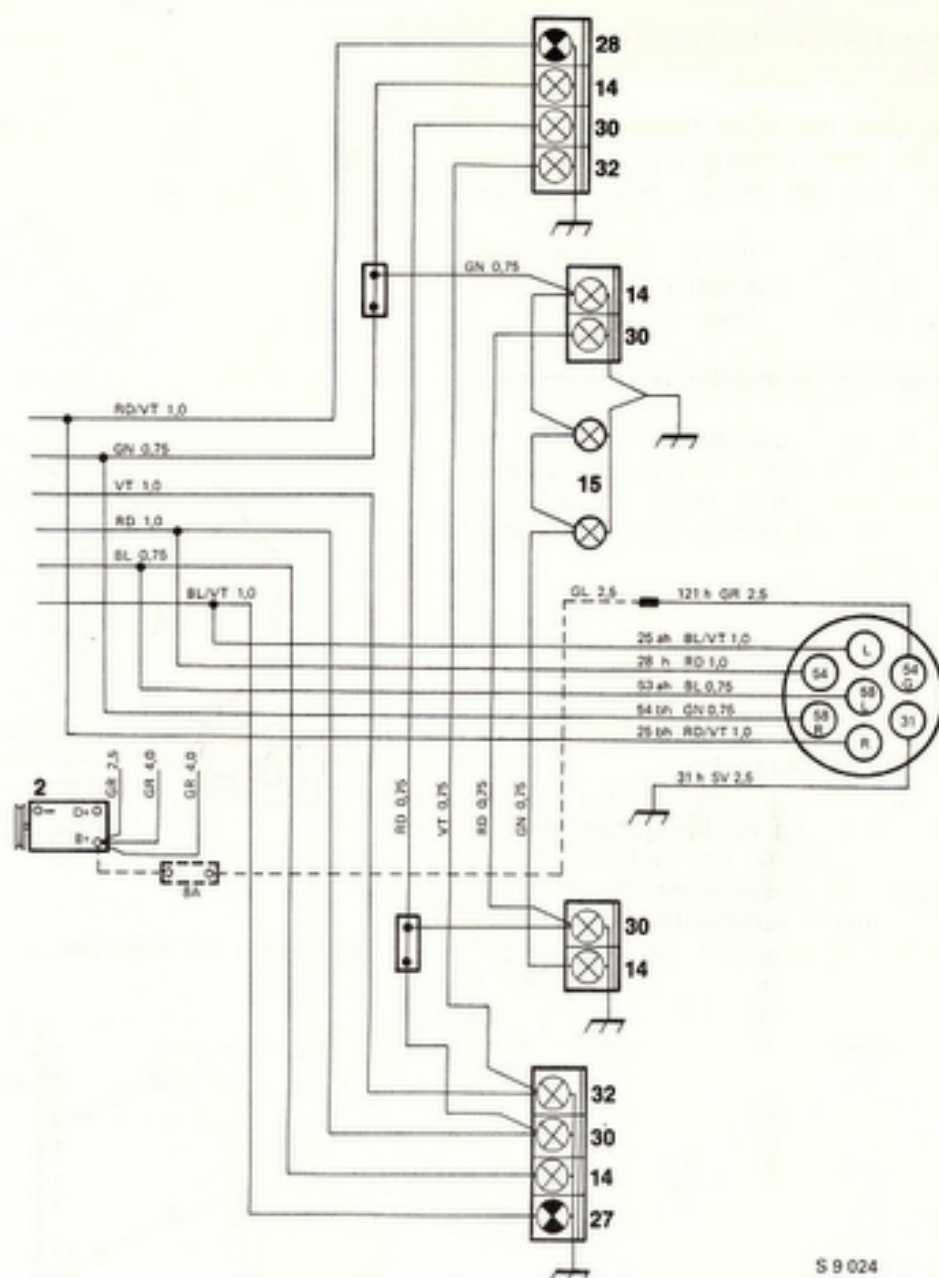


S 9 023

Saab 900, 4-door model

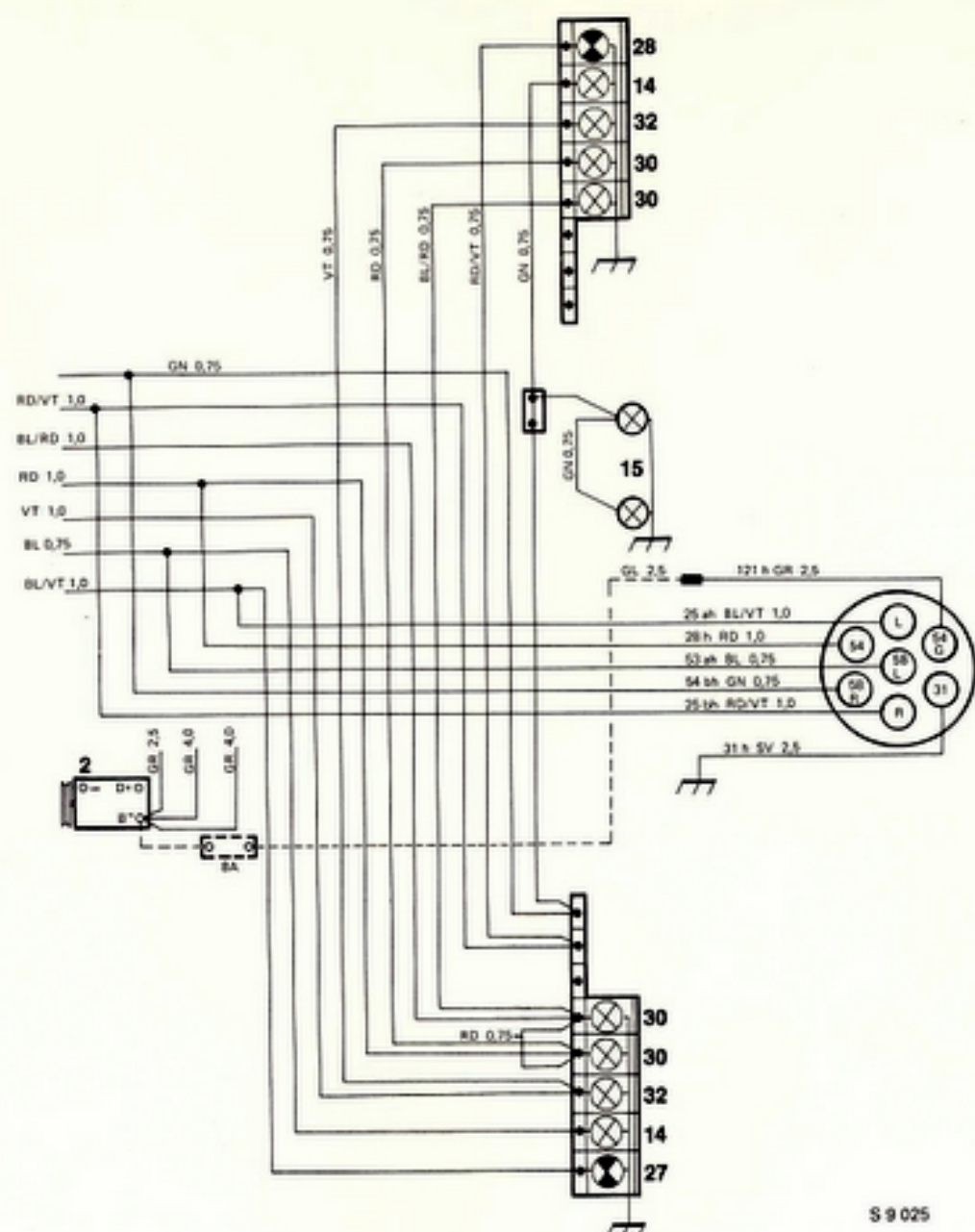
Wiring harness connections, as from 1981 models

1. Wiring connection
2. Existing wiring harness
3. Yellow wire to alternator (supplementary part no. 117 105 007)
4. Ground connection
5. 7-pole connector with wiring



Wiring diagram, as from 1981 models,
Saab 900, 3/5-door models

- 12. Alternator
 - 14. Rear lights
 - 15. Number plate illumination
 - 27. Direction indicator light, left
 - 28. Direction indicator light, right
 - 30. Brake lights
 - 32. Reversing lights
- Supplementary part no. 117
105 007.



Wiring diagram, as from 1981 models,
Saab 900, 4-door models

Colour code

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