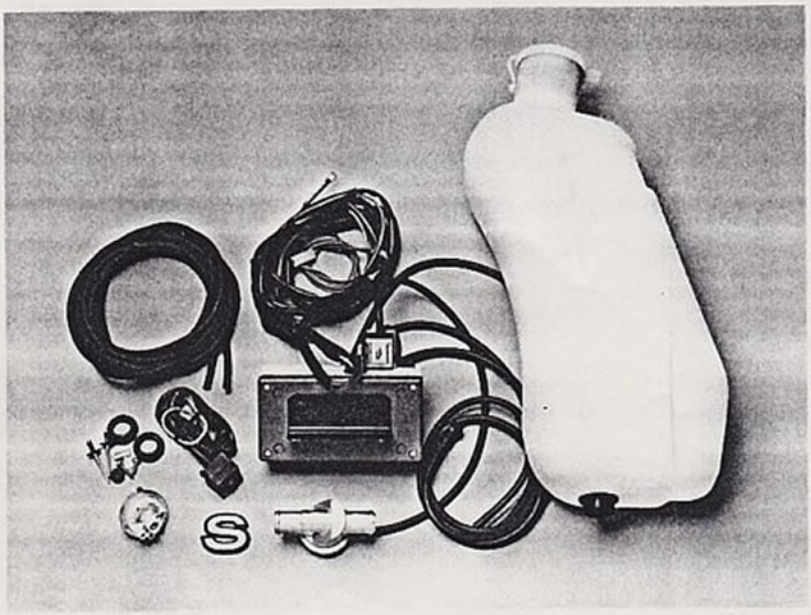
ACCESSORIES
ACCESSOIRES
ZUBEHÖR
TILLBEHÖR

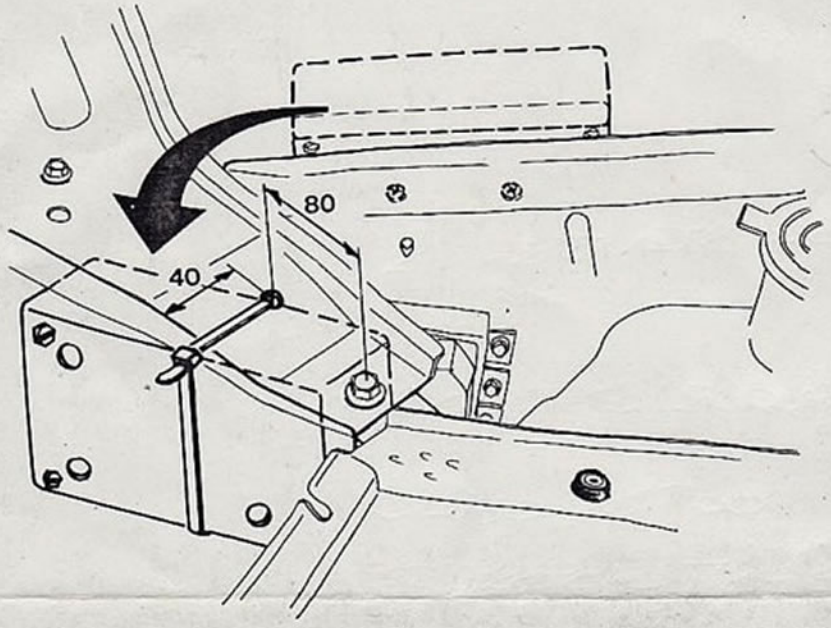
Water injection
Wassereinspritzung



Pos	Art.No.	Description	Bezeichnung	Model
		WATER INJECTION	**WASSEREINSPRITZUNG**	
		Features	**Produkteigenschaften**	
		• Complete water-injection tuning kit. • By injecting water into the intake manifold, the boost pressure is raised from 0.7 to 1.2 bar. • Engine output increase: from 145 to at least 160 bhp. • If fitted to the Saab 99, the wiring and hoses must be modified.	• Kompletter Tuningsatz in Form von Wassereinspritzung. • Durch Wassereinspritzung im Ansaugrohr wird der Ladedruck von 0,7 auf 1,2 bar erhöht. • Leistungserhöhung: von 145 auf min. 160 PS. • Bei Montage im Saab 99 müssen Kabelnetz und Schläuche modifiziert werden.	
		Benefits	**Vorteile für den Kunden**	
		• Improves the overall performance of the engine.	• Verbessert das Gesamtleistungsvermögen des Motors.	
		Fitting time (Saab 900): 2,3 hours	**Montagezeit (Saab 900):** 2,3 Stunden	
		Country of manufacture: Sweden	Hergestellt in Schweden	
	137 000 006	**Water injection equipment**	**Wassereinspritzung**	**Saab Turbo M78-80**
		SPARES	**ERSATZTEILE**	
	137 000 014	One control valve	Steuerventil, 1 St.	
	137 000 022	One diode assembly	Diode, komplett, 1 St.	
	137 000 030	One level transmitter	Niveaugeber, 1 St.	
	137 000 048	One bulb	Glühlampe, 1 St.	
	137 000 055	One pressure sensor, 1.35 (Orange)	Drucksensor 1,35 (Orange), 1 St.	
	137 000 063	One pressure sensor, 0.7 (Red)	Drucksensor 0,7 (Rot), 1 St.	
	137 000 071	One pressure sensor, 0.3 (Black)	Drucksensor 0,3 (Schwarz), 1 St.	
	137 000 089	One time-delay relay	Zeitrelais, 1 St.	
	137 000 097	One safety valve	Sicherheitsventil, 1 St.	
	137 000 105	One rubber bush (intake manifold)	Gummibuchse (Ansaugrohr), 1 St.	
	(10) 93 24 021	Two rubber bushes (by-pass)	Gummibuchse (By-pass), 2 St.	
	(10) 85 73 669	One delivery valve	Druckventil, 1 St.	

Note

I countries with a very warm climate like The Middle East, Australien etc, is it necessary to install the Regulator Box between the wheel housing plate and the front fender (in front of the water container).



- Disconnect left parking light
- Loosen the bracket from the regulator box
- Exchange the hose between the safety valve and the regulator box (length 800 mm)
- Exchange the hose between the pressure valve and the regulator box (length 700 mm)

  Note! The hoses cannot be joined
- Mark the positions for the holes and drill 6 mm holes in the front member (see drawing)
- Locate the regulatorbox with a strap
- Check the drawing of the hoses as wrinkles must be avoided

Material

1–Hose (10)	8560732	length 1500 mm
1–Strape (10)	7971906	

SAAB-SCANIA
Saab Personbilsdivisionen

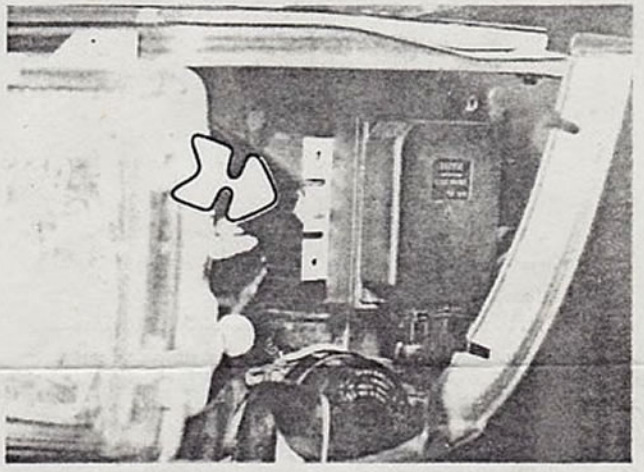
FITTING INSTRUCTION

Artikelnr 653162
Datum May 1981 | Utgåva 1 | Sida 1

Märke/Modell	Årsmodell	Produkt
Saab 900 Turbo	1979-80	Water injection (sport kit)
Saab 99 Turbo	1978–80	Artikelnr 24455

Included items

1 Regulator box with hoses
2 Safety valve
3 Water container with pump
4 Cover
5 Filter
6 Pressure monitor (1,3 bar)
7 Cable harness complete
8 Cable harness, level warning lamp
9 Level warning lamp with holder
10 Pressure valve
11 T-junction
12 Rubber bush quant. 2
13 Rubber bush quant. 1
14 Clips quant. 1
15 Self tapping screw quant. 2
16 Self tapping screw quant. 1
17 Strap quant. 2
18 Warning label
19 Emblem



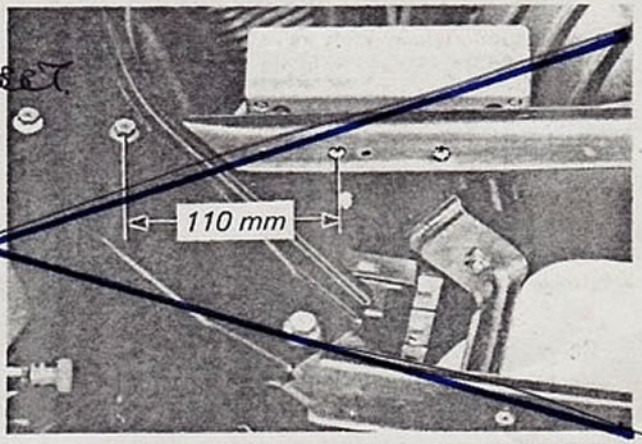
1 Move the electronic ignition box

– Disconnect ground connection from battery

– Remove L.H. indicator lamp assembly

Move the electronic ignition box forwards:
– Screw the back edge of the box in the holes previously used for the front edge

– Screw the front edge to the wheel housing via a clip and self tapping screw which grips the edge of the wheel housing



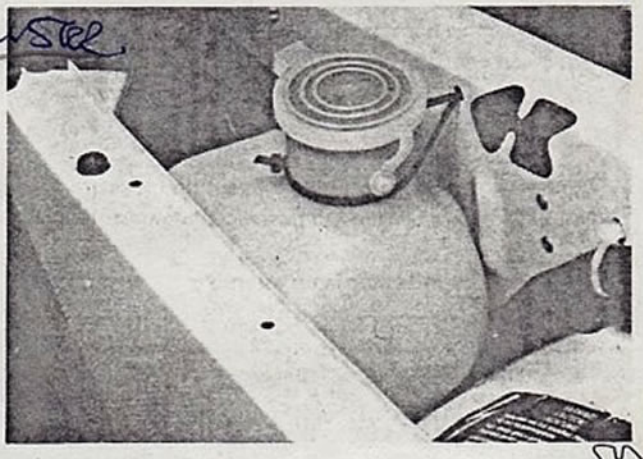
2 Fit the regulator box

– Disconnect hoses and wiring from the water container

Mark the positions of fixing holes in the edge of the inner wheel house behind the L.H. head lamp

– Drill 2 holes 6 mm dia (N.B. takes care not to damage cables, hoses, etc.)

– Screw down the box with 2 self tapping screws



3 Locate water container

– Locate the water container in the space in the L.H. wheel house

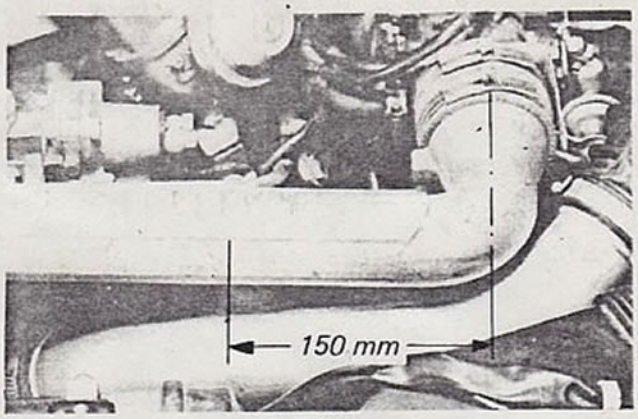
– Lead the wiring harness and pipe to the water container and connect to the relevant connections

– Fasten the water container by threading the strap through an existing hole in the wheel housing and tighten around the neck of the water container

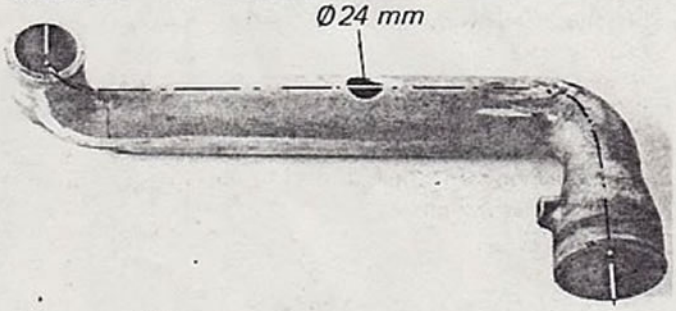
4 Fit the safety valve and pressure valve

– Mark the positions of the holes for safety and pressure valves as shown in the figure (mark so that the safety valve is positioned straight between the pipes when mounted)

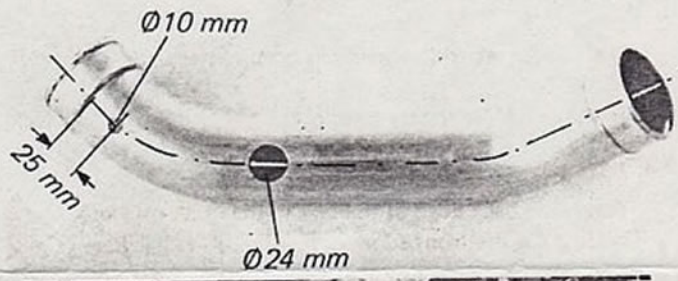
– Remove the pressure and suction pipes



– Drill a 24 mm dia hole in the pressure pipe and deburr the edges carefully



– Drill one 24 mm dia hole and one 10 mm dia hole (for the pressure valve) in the suction pipe – deburr the edges carefully



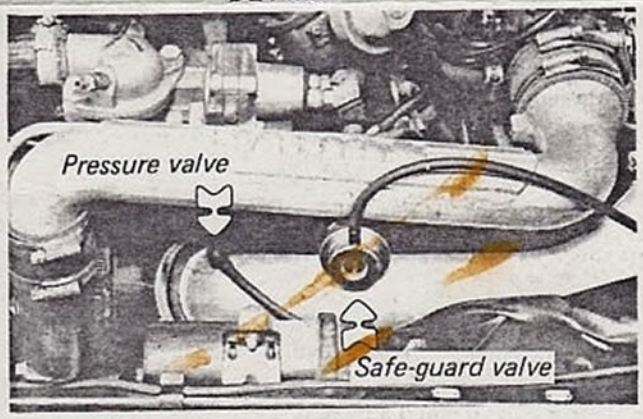
N.B. Blast the pipes clean throughly with compressed air before refitting!

– Push the rubber bushes into their respective holes

– Fit the suction pipe, safety valve and pressure pipe

– Fit the pressure valve

– Strap the hoses from the safety and pressure valves to the suction pipe with the strap from the kit



Connect hoses and wires

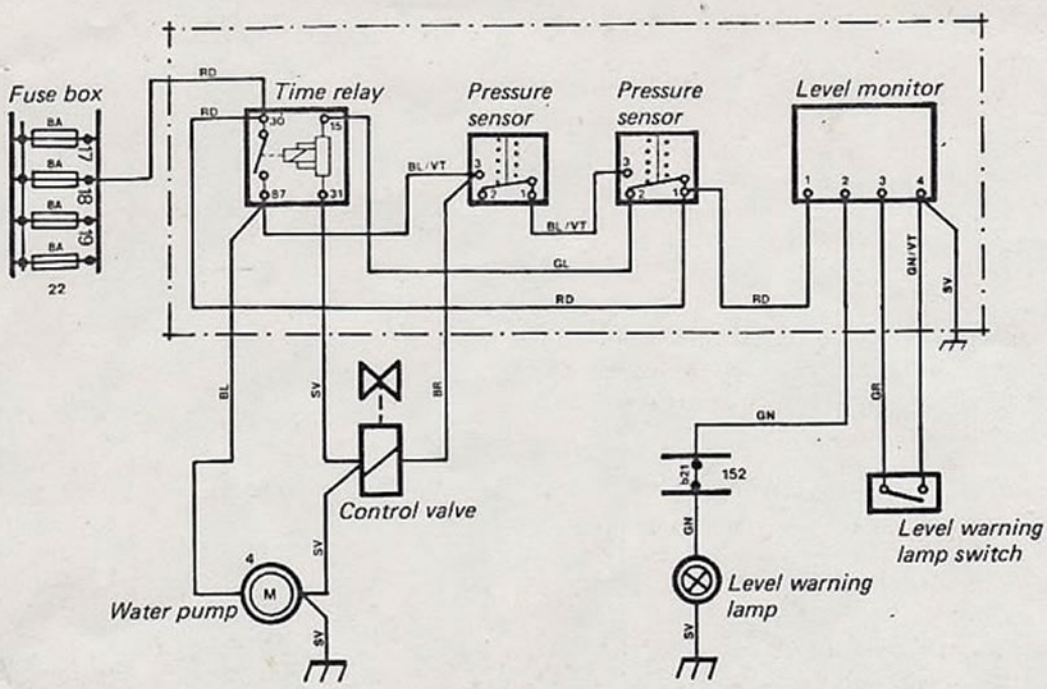
– Connect the ground connection for the regulator box to one of the electronic ignition units' mounting screws

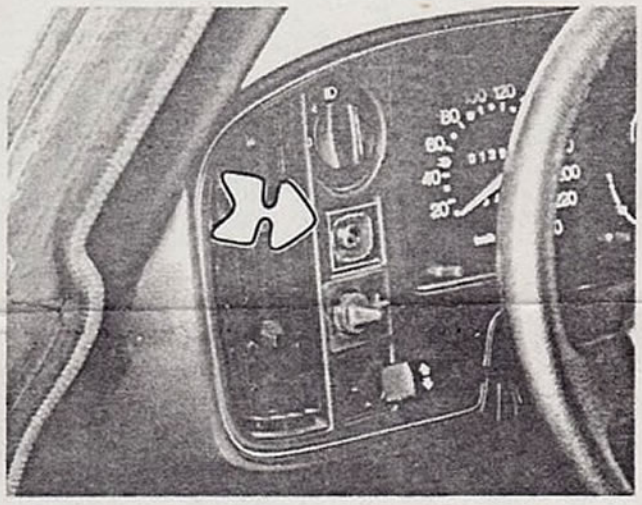
– Lead the cable harness for level warning lamp (red and green wires) into the fuse panel

– Connect red wire to fuse 19

– Connect green wire to center connection block (red) No. 21, for through feed to passenger compartment

– Refit the L.H. indicator lamp assembly





6 Fit level warning lamp

- Remove the lower part of the instrument panel
- Fit the warning lamp to the instrument panel
- Connect the black wire to chassis
- Connect the green wire to the centre connector block (red) No. 21 for through feed to fuse panel

7 Exchange turbo pressure monitor

- Exchange the existing pressure monitor for the one in the kit **(see Service information 291 – 124)**
- Refit the lower part of the instrument panel
- Cut the hose from the induction manifold to the turbo gauge, close to the brake servo, and insert the T-junction which is connected to the regulator box

8 Fill Water container

- In the summer normal tap water can be used
- In the winter or when a risk for sub-zero temperatures exist, Methylated spirit, (denatured wood alcohol) must be mixed with the water to avoid freezing

WARNING! Do not use regular anti-freeze, ethylen glycol or windscreen washer addative as an anti-freeze, as these can damage the motor severely. Take care to ensure a high degree of cleanliness when filling the container.

- Stick the included warning label onto the water container

Mixing table

Temp °C	Volyme of Meths.
-0°	1 L
-10°	1,5 L
-20°	2 L
-30°	2,5 L
	3 L

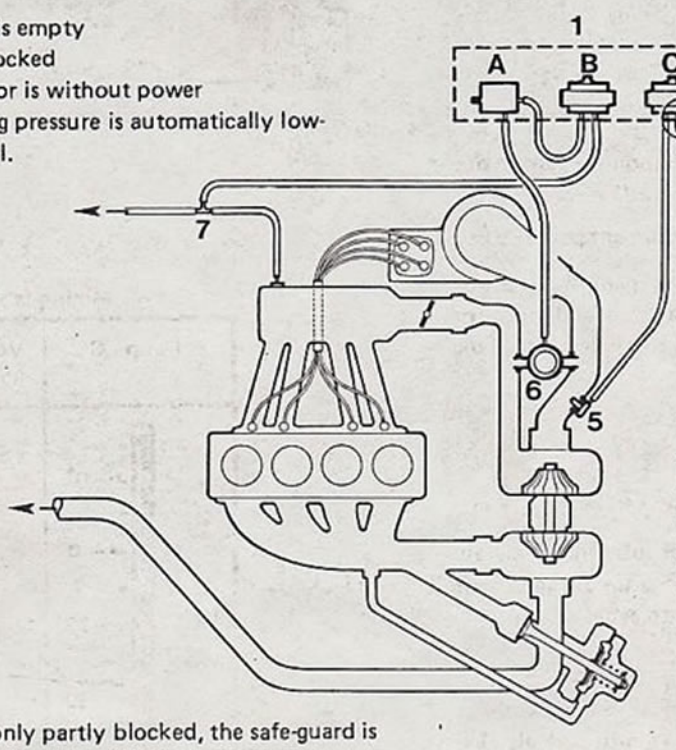
9 Increase charge pressure

– Open the cover to the charge pressure regulator membrane and tension the spring (basic setting: screw in the large nut fully and then undo one turn) so that the charging pressure rises to 1.15–1.20 bar. See workshop manual, section 291.

– While adjusting the charging pressure by trial and error, note if the motor "pinks" and check that the water injection is working. If pinking occurs at charging pressures up to 1.20 bar:
  – check water injection
  1. Start the motor and leave ticking over.
  2. Remove the hose from the pressure sensor at the T-piece (7) and connect instrument 8392813, together with a suitable pump, (eg: radiator tester) to the hose.
  3. Raise the pressure, using the radiator tester, and check that the water injection system starts working at approx. 0.7 bar.
  4. Water consumption should be 150 ml/minute.
  – If the system does not work, check that all connections are correctly made.

Fit the "s"-emblem to the right of the trunk door (loosen the "900 turbo"-emblem and move it a bit to the left).

The injection equipment has its own safe-guard which operates if the water pressure falls below approx. 0,3 bar. eg, when:
– The water container is empty
– the injection jet is blocked
– the pump has seized or is without power
In such a case the charging pressure is automatically lowered to an acceptable level.



1 Regulation unit
A Control valve
B Pressure sensor 0,7 bar
C Pressure sensor 0,3 bar
2 Water container
3 Water pump
4 Check valve
5 Pressure valve
6 Safety valve
7 T-piece
8 Calibrated jet
9 Filter

If the injection jet (8) is only partly blocked, the safe-guard is not triggered, but the motor starts pinking under load. Clean the jet (8) before loading the motor heavily again, so that sufficient water is obtained. If the water in the container drops below a certain level the warning lamp will light.

Leave this fitting instruction in the car after fitting!