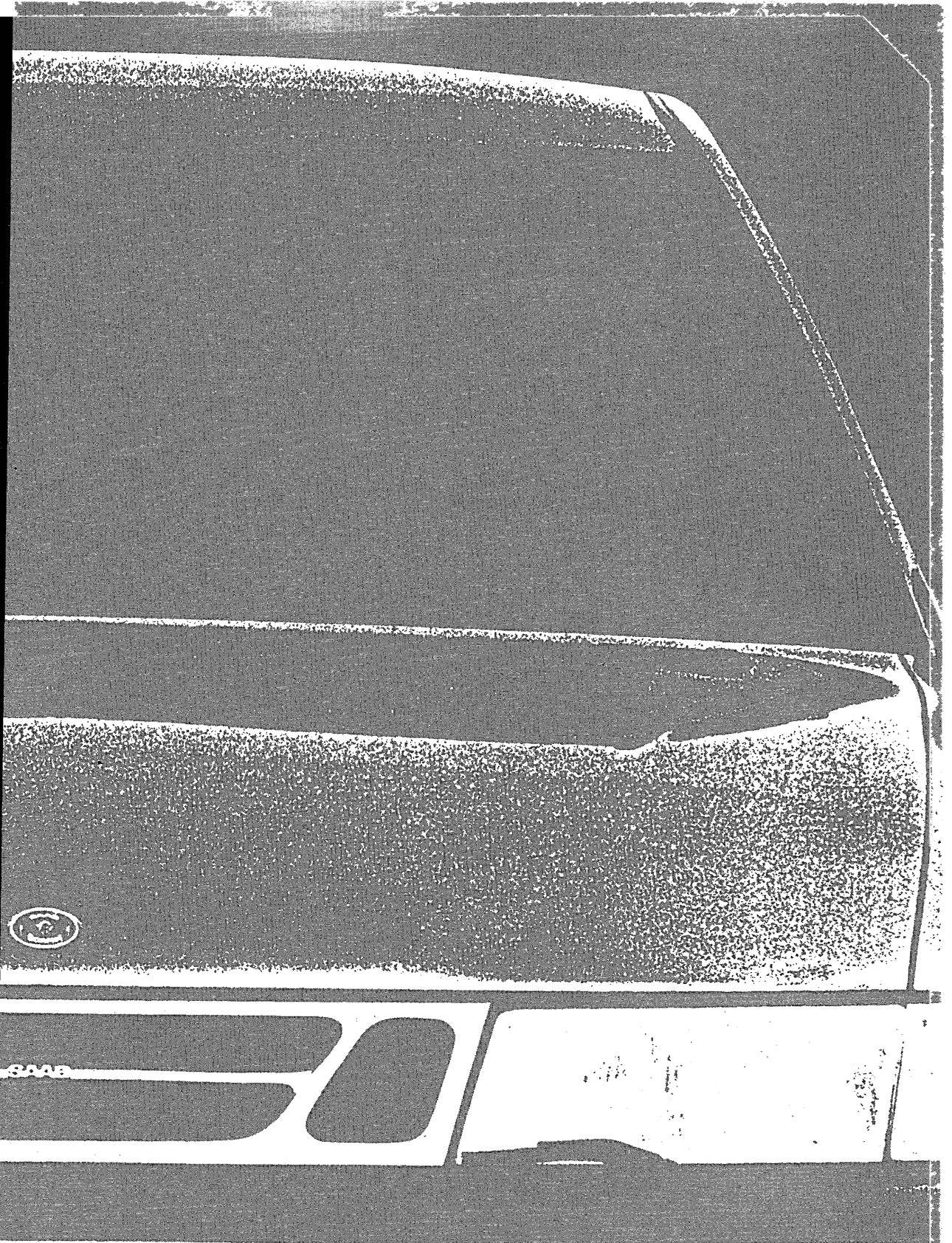


Saab 900



Service Manual

# I Service

M1994-98

ENG



**SAAB**

# Saab 9000

## SERVICE MANUAL

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### 1 Service

#### Foreword

This manual contains descriptions of the acceptance inspection of new cars, in-storage car care, pre-delivery service and the Saab Original Service programme for the Saab 9000, model years 1994-1998.

It is intended to be used as a service manual as well as a workbook for training instructors and mechanics.

We reserve the right to introduce changes without prior notice.

#### Saab Automobile AB

This service manual replaces:

Service Manual 1 Service M1994-1997

Service information 100-1782

Service information 113-1708

Service information 210-1705



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**SAAB**

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# **SAAB ORIGINAL SERVICE**

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# Service

## Service programmes

### General

This Service Manual, 1 Service, contains our recommendations for pre-delivery and maintenance service on Saab 9000 cars, model years 1994-1998.

These recommendations are based on design constraints, the requirements of the authorities and practical usage. The mileage intervals for inspecting and replacing consumable items are based on this. However, due to the time/ mileage relationship, some operating conditions will make annual service more suitable.

The owner is provided with a service logbook containing a service card on which the service points are arranged in groups.

### Contents

The Service Manual begins with instructions for acceptance inspection of a new car and in-storage car care. This is followed by a run-down of the pre-delivery and maintenance programmes, which are covered point by point in methodical order. After the service programmes comes a description of the methods and relevant technical data for each service point.

### Important

In all service work it is essential to follow the service schedule to be sure of carrying out the right service points at the recommended service interval. The service schedule for the car's indicated mileage is itemized in the car's service logbook.

### Acceptance and storage of a new car

When a car is received at the workshop, its specification should be checked. The car should also be inspected for damage. Defects and departures from the specification must be reported in accordance with special procedures. Following this, the car must be inspected and safely parked to be sure that it is well looked after while waiting for its owner.

### Pre-delivery service

Customers base their opinions of Saab and you as a dealer on the condition of the car when it is collected. So pay attention to even the smallest details, such as making sure that there are no oil stains or smudges of dirt anywhere on the car, that the clock shows the right time, and so on.

All inspection, checking and adjustment points must be carried out conscientiously. Apart from this, unforeseeable defects may have been caused during transport and storage. These are to be regarded as repairs.

### Maintenance programmes

The programmes consist of service measures that must be carried out to maintain the car's high standard of safety and prevent faults from arising. They are also designed to ensure that the car will conform to exhaust emission control regulations, maintain a high standard of roadworthiness and be economical in use.

For optimum maintenance of the car, operating conditions should be taken into consideration when choosing an appropriate grade of oil for the engine.

### Important

More frequent oil changes may be necessary if the car is driven under one or several of the following conditions:

- frequent idling
- repeated starting and stopping, including frequent and predominant city driving
- short distances in cold climate without enough time for the engine to warm up

If the car is driven under the above specified conditions, we recommend oil change every 10 000 km.

## 4 Service

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### **Saab Original Service Programmes**

The service programmes have been drawn up with a view to typical operating conditions in the market. To ensure that the car receives the correct service, the customer's service card is marked beside the part number.

For optimum maintenance, there are three maintenance programmes at different levels. Each level is for a different market.

- **Saab Original Service programme EU**  
Recommended after the first 10,000 km (6,000 miles) and then at 20,000 km (12,000 mile) intervals, i.e. at odometer readings of 30,000 km (18,000 miles), 50,000 km (30,000 miles)
- **Saab Original Service programme PA**  
Recommended after the first 15,000 km and then at 15,000 km intervals
- **Saab Original Service programme FE/ME**  
Recommended after the first 10,000 km (6,000 miles) and then at 10,000 km (6,000 mile) intervals.

### **Service programme USA, CA**

The service manual includes a service programme developed by Saab Cars USA intended for the markets in USA and Canada.

### **Annual service**

Annual service is recommended when the service interval mileages are not attained. The next service should then be carried out as indicated by the appropriate rubber-stamp space in the Service Log-book.

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### **Important**

Inspection points and the replacement of consumable items which are subject to legal requirements should be carried out at the specified mileages only. These are marked with an asterisk (\*) in the service programme.

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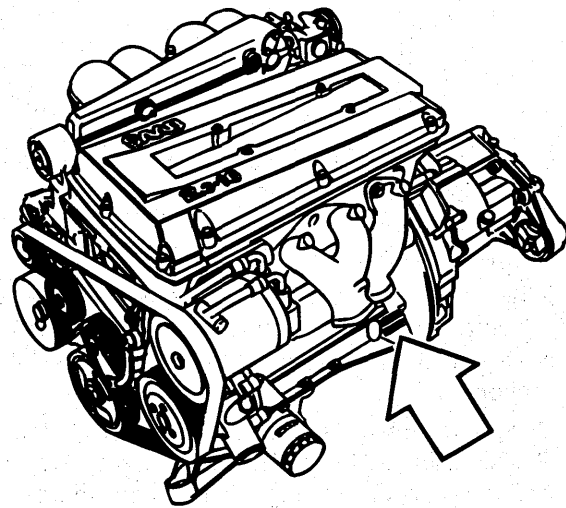
## Acceptance inspection of a new car

Acceptance inspection of a new car is obligatory for all Saab cars. See Policies and Procedures (P & P).

Carry out the necessary inspection and confirm it with your signature on the inspection sheet. Inspection sheet, see page 9.

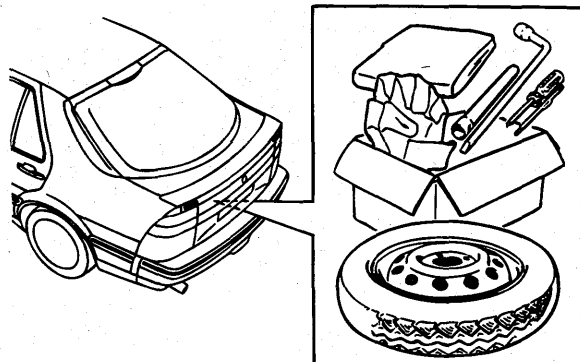
A new car should be inspected as soon as possible after acceptance. The person responsible for acceptance must ensure that defects and departures from specification are reported in accordance with applicable procedures (see P & P).

- 1 Check that the specification of the car coincides with the order form. This also applies to optional equipment.



C100M601

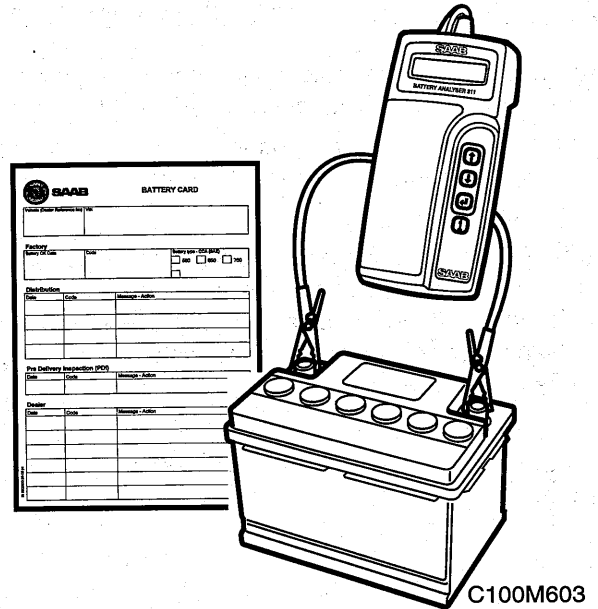
- 2 Check that the spare wheel, tools and other equipment supplied with the car are present.



C100M602

## 6 Service

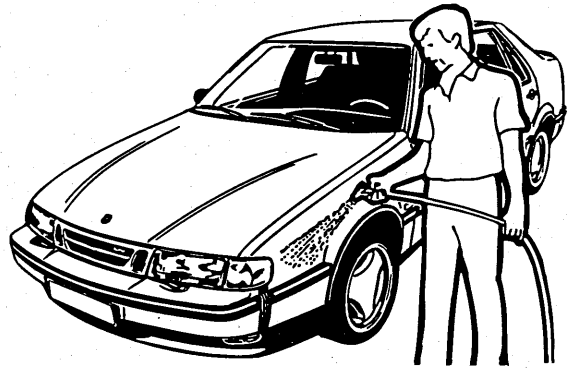
- 3 Check the battery voltage, see the section headed "Battery test" on page 75.



- 4 Clean the car in preparation for the paint and damage inspection. Washing the car with strong alkaline detergent may affect the paint finish. Use as little chemicals as possible when washing the car.

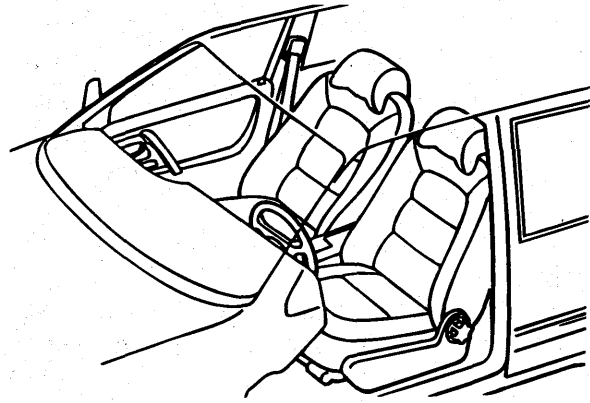
If the car is to be put in storage, wash off dirt and dust in preparation for the inspection without using removing agent Tempro 75 (the paint protector will then be preserved).

Cars with RAPGARD paint protector: If the RAPGARD paint protector has been damaged, undo it and look for any damage. Then store the car under cover or apply Acrylate Latex paint protector.



C100M604

5 Inspect the car internally and externally for damage.



C100M605

6 Make a note of any damage and report it together with other observations.

Two forms titled 'Acceptance Inspection' are shown, tilted at an angle. The top form is smaller and contains a few rows of text boxes. The bottom form is larger and contains a table with multiple rows and columns, including checkboxes. Both forms have some areas filled with grey, representing redacted information.

C100M606

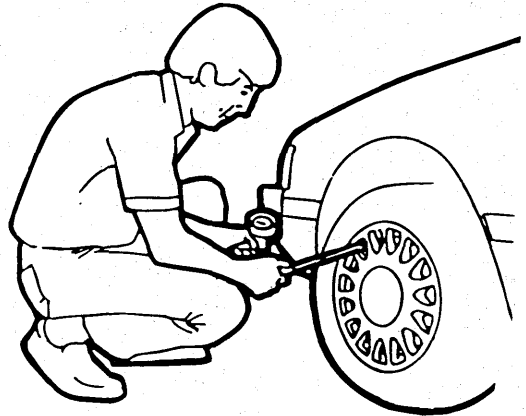
### Measures to take if the car is to be put in storage

- 1 Check and if necessary adjust the tyre inflation pressures to min. 3.5 bar (50 psi). Spare tyre T115/70 R16 = 4.2 bar (60 psi), spare tyre 175/70 R15 = 2.5 bar (36 psi).

#### Important

If the car is parked for lengthier periods with underinflated tyres, a flat area will be formed on them where they rest on the ground. This gives rise to vibration and makes wheel balancing more difficult.

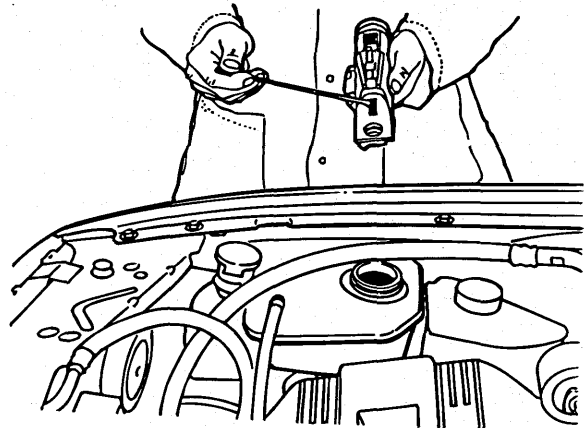
- 2 If the car is parked in a place where the ambient temperature is above +20°C, fill the fuel tank two-thirds full. If this is not done, the functionality of the fuel pump could be impaired due to corrosion.



C100M609

### Additional measures if the car is to be stored outdoors

- 1 Check the level of the coolant and antifreeze. The coolant should be able to withstand at least -30°C (-22°F). It will then also provide maximum corrosion protection. In certain climates, it is necessary for the coolant to withstand even lower temperatures. If necessary, top up with a 1:1 mixture of Saab Original Antifreeze and water.
- 2 If the car has been dewaxed or if its RAPGARD paint protector has been removed, the car must be parked in a roofed-over area or have Acrylate Latex applied to it.
- 3 Drive the car to the storage car park, applying the brakes briefly and repeatedly so that the brake discs will be clean and dry.
- 4 Open the bonnet.
- 5 Check the protective plastic on the seats and adjust if necessary.
- 6 Make sure that:
  - The handbrake lever is released to the off position.
  - Manual gearbox, engage reverse gear
  - Automatic transmission, move the selector lever to P
  - All windows, doors and boot lid or tailgate are properly closed
- 7 Lock the car.
- 8 Disconnect the positive cable from the battery or remove the battery for charging. Close the bonnet.



C100M607

## “Acceptance inspection” form

This form is to be used for acceptance inspection of the car with the specified chassis number.  
Fill in the form and keep it in the car until the car is made ready for delivery.

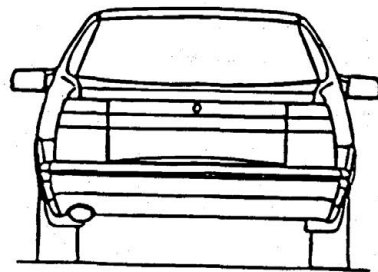
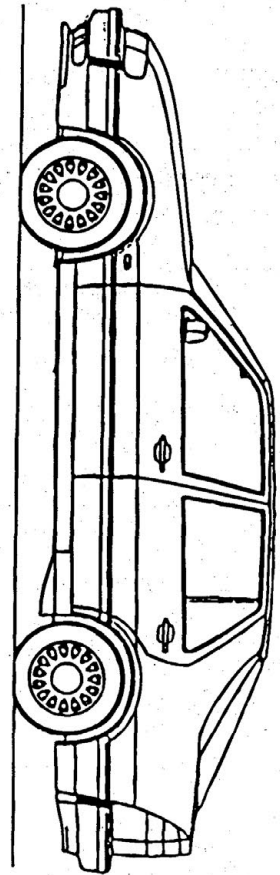
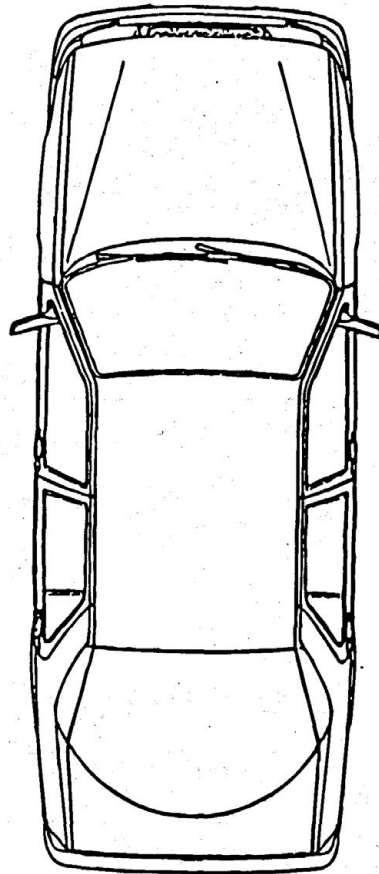
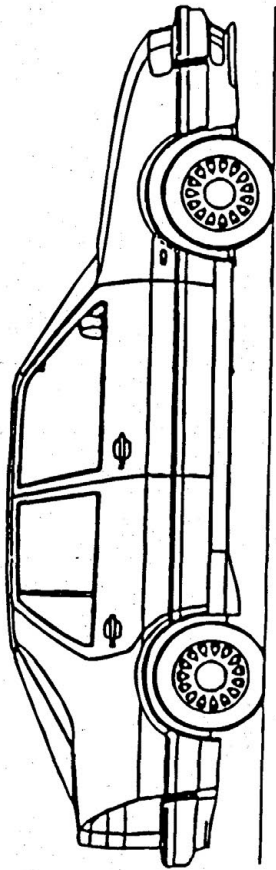
VIN:	Mileage (odometer reading):
Acceptance inspection date:	Signature:
Dealer:	Dealer number:

### Acceptance inspection

1 Check that the specification of the car coincides with the order form (this also applies to optional equipment).	Nothing to report	Signature:
	Differences:	Signature:
2 Check that the spare wheel, tools and other equipment supplied with the car are present.	Nothing to report	Signature:
	Missing:	Signature:
3 Check the battery voltage. See instructions.	GOOD BATTERY ..... GOOD - RECHARGE ..... REPLACE BATTERY .....	Signature:
4 Clean the car and inspect it for paintwork and bodywork damage. *) Make a note of any damage found, see illustration. 0 = Bodywork damage X = Paintwork damage	Nothing to report	Signature:
	Make a note of the damage:	Signature:
5 Check the interior of the car for damage.	Nothing to report	Signature:
	Make a note of the damage:	Signature:
6 If paint protector has been removed, apply new paint protector if the car is to be stored outdoors.	Indoor storage	Signature:
	Paint protector applied:	Signature:

\*) If Saab Automobile AB transit damage insurance is to be used, a transit damage report must be completed.





C100M608

## In-storage car care

In-storage car care is obligatory for all Saab cars at intervals of not more than 60 days until the car is sold. See Policies and Procedures (P & P).

Carry out the necessary inspection and confirm it with your signature on the inspection sheet. Inspection sheet, see page 14.

Refer to service information and procedures when rectifying faults.

### Inspection and rectification points

- 1 Check that the paint protector is intact. If it needs making good, the car must first be washed so that dust and dirt will not be enclosed. Inspect the paintwork, make a note of any damage and apply fresh paint protector.

#### Important

Paint protector hardens when exposed to UV radiation and heat. It must therefore be replaced at intervals of three to six months. Six month intervals can most probably **only** be applied in winter climate.

RAPGARD paint protector must only be left on for a maximum of 3 months and must then be removed. For removing, see the section "Final dismantling and finishing measures."

Before applying fresh paint protector, see the section headed "Applying paint protector" on page 15.

- 2 Pour in about 2 litres of fuel to prevent dry running of the fuel pump.

#### Important

A low fuel level which causes the engine to misfire can quickly damage the catalytic converter.

The car must never be driven if the engine misfires.

- 3 Check the battery voltage, see the section headed "Battery test" on page 75.



## 12 Service

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- 4 Warm up the engine until the radiator fan cuts in. At **idling speed**, turn on the A/C or ACC.
- 5 Check and if necessary adjust the tyre inflation pressures to min. 3.5 bar (50 psi). Spare tyre T115/70 R16 = 4.2 bar (60 psi), spare tyre 175/70 R15 = 2.5 bar (36 psi).

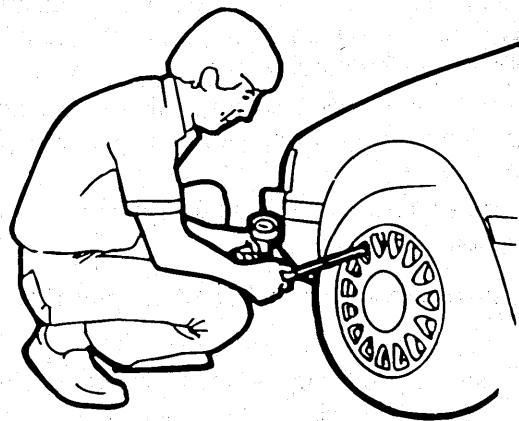
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### Important

If the car is parked for lengthier periods with underinflated tyres, a flat area will be formed on them where they rest on the ground. This gives rise to vibration and makes wheel balancing more difficult.

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- 6 Check the level of the coolant.
- 7 Drive the car for at least 200 metres, applying the brakes briefly and repeatedly so that the brake discs will be clean and dry.
- 8 Park the car facing in the opposite direction to equalize the effect of sunlight on it.
- 9 Open the bonnet to cool the engine down more rapidly.
- 10 Check the protective plastic on the seats and adjust if necessary.
- 11 Make sure that:
  - The handbrake lever is released to the off position.
  - Reverse gear is engaged (manual gearbox)
  - The selector lever is in position P (automatic transmission)
  - All windows, doors and boot lid or tailgate are properly closed
- 12 Lock the car.



C100M609

- 13 Inspect the engine bay for incipient corrosion, especially on aluminium. Treat corrosion with Teroson Skyddsvax (protective wax), part number 30 15 914. Apply a covering film of wax without any surplus (10-15 µm when dry). Pay special attention to aluminium surfaces.

---

**Important**

The protective wax may well be left on as engine bay protection when the car is delivered to a customer. If the customer will not accept the waxed surface, it must of course be washed off.

---

**WARNING**

Bear in mind the danger of fire.

Make sure that the engine bay temperature has gone down

Do not spray onto the sides of the generator, the turbocharger, exhaust manifold or exhaust pipe.

- 14 Disconnect the positive cable from the battery or remove the battery for charging.  
Close the bonnet.

## “In-storage car care” form

This form is to be used for in-storage care of the car with the specified VIN.  
 Fill in the form and keep it in the car until the car is made ready for delivery.

VIN:	Mileage (odometer reading):
Dealer:	Dealer number:

### IN-STORAGE CAR CARE

1 In-storage car care date:		Signature:
Check the battery voltage. (Mark with a cross as appropriate.)	GOOD BATTERY ..... GOOD - RECHARGE ..... REPLACE BATTERY .....	Signature:
Car dewaxed and paint protector applied:		Signature:

2 In-storage car care date:		Signature:
Check the battery voltage. (Mark with a cross as appropriate.)	GOOD BATTERY ..... GOOD - RECHARGE ..... REPLACE BATTERY .....	Signature:
Car dewaxed and paint protector applied:		Signature:

3 In-storage car care date:		Signature:
Check the battery voltage. (Mark with a cross as appropriate.)	GOOD BATTERY ..... GOOD - RECHARGE ..... REPLACE BATTERY .....	Signature:
Car dewaxed and paint protector applied:		Signature:

4 In-storage car care date:		Signature:
Check the battery voltage. (Mark with a cross as appropriate.)	GOOD BATTERY ..... GOOD - RECHARGE ..... REPLACE BATTERY .....	Signature:
Car dewaxed and paint protector applied:		Signature:



## Applying paint protector

### Acrylate Latex

Paint protector: Part number 30 02 516.

Water-based Acrylate Latex containing solvent.

Apply the liquid by means of an airless low-pressure spray gun or paint sprayer.

Spray a covering layer without any surplus on all vertical surfaces.

### Important

Apply the paint protector without any surplus (5-10 µm dry coat). A thick coat will make it extremely difficult to remove the paint protector.

Drying time: Apply a couple of drops of water to the paint protector. If it turns white, the car must be left to dry somewhat longer before it is driven out to the storage area.

Do not apply paint protector in the rain or in direct sunlight.

### Directions



#### WARNING

Wear suitable protective equipment, such as a respirator or face mask, gloves, goggles and boots.

Make sure the area is well ventilated.

### First aid

#### Inhalation:

Take the person out into the fresh air and give respiratory aid if necessary.

Do **not** give the person anything to drink!

Call a doctor.

#### Splashes in eyes:

Hold the eyelids open and rinse with clean water for **at least** 10 minutes.

#### Skin contact:

Take off contaminated clothing. Wash the affected skin area thoroughly with soap and clean water.

Do **not** use solvents.

#### Swallowed liquid:

Lay the person down in a position of rest. Call a doctor.

**Do not** provoke vomiting!

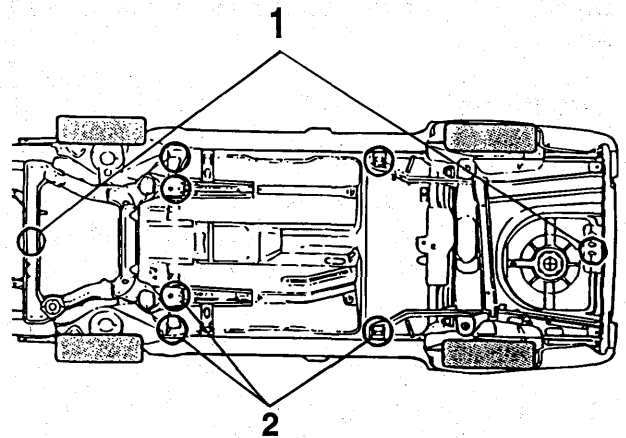
### Summary of materials

Protective wax for the engine bay. Part number: 30 15 914, 300 ml spray container.

Paint protector. Part number: 30 02 516. Quantity: 10 litres.

## Pre-delivery service

- 1 Washer fluid, top up
- 2 Fuses, fitting
- 3 Anti-theft alarm, programming. Anti-theft alarm labels, mounting
- 4 **US/CA only:** OBD II specification car: Connect TECH2, clear any diagnostic trouble codes in the engine management system.
- 5 ACC unit, programming
- 6 Set the clock. Audio system security code, programming
- 7 Check functionality of wash-wipe systems
- 8 Check and adjust tyre pressures (including spare wheel)
- 9 Check oil and fluid levels, inspect for leaks, top up. Engine, automatic transmission and power steering
- 10 Check coolant and fluid levels, inspect for leaks, top up. Cooling system, brake and clutch systems
- 11 **Turbo:** Connect the electric lead to the boost pressure control valve
- 12 Cylinder head bolts, retightening
- 13 Jack up the car and inspect the underbody for transit damage  
Important! The corrosion protection must be intact.  
Illustration:
  - 1 Lifting points for garage jack
  - 2 Lifting points for car hoist
- 14 **Certain markets only:** Brake disc transit protection, removal
- 15 Body mounting points at front assembly, checking bolted joints
- 16 Body mounting points at rear suspension, checking bolted joints
- 17 Transit mountings, removal
- 18 Equipment supplied, fitting
- 19 **(Europe market only):** Place the "Certificate of Conformity" into the owner's service logbook
- 20 **Sweden and Finland only:** Label prohibiting installation of a child safety seat in the front seat of cars with an airbag on the passenger side, fitting
- 21 Road test
- 22 **US/CA only:** OBD II specification car: Connect TECH2, check that no fresh diagnostic trouble codes have been detected in the engine management system after the road test.
- 23 Cleaning



C100M6

### **WARNING**

Lengthy and repeated contact with mineral oil removes the natural oils from your skin, drying it out and causing irritation. If oil has been swallowed, do not provoke vomiting. Call a doctor.

## Saab Original Service programme EU

This service programme is adapted to operating conditions in Europe and other parts of the world where conditions are comparable.

There is a mark on the owner's service card adjacent to the card's part number. If this mark is EU, this service programme should be followed.

### WARNING

Lengthy and repeated contact with mineral oil removes the natural oils from your skin, drying it out and causing irritation. If oil has been swallowed, do not provoke vomiting. Call a doctor.

Waste oil may contain harmful impurities which can cause skin cancer. Always use suitable protection and thoroughly wash your hands and other areas of bare skin that have come into contact with the oil.

Avoid lengthy and repeated contact with oil, grease, etc., especially waste oil.

Wear protective clothing, including impermeable gloves, if possible.

Do not put oily rags in your pockets.

Do not wear clothes that have been soiled by oil, especially items of underwear. Clothes must be washed at regular intervals.

Do not wear oily shoes.

Clean open sores immediately and cover them with an adhesive bandage, sticking plaster, etc.

Use a softening barrier cream (part No. 30 04 397). Apply it to your exposed skin before each workshift so that it will be easier for you to wash oil and grease off afterwards.

Remove oil from your face and hands, etc. by washing them thoroughly with soap and water (special skin cleansers and a nailbrush will help). Preparations containing lanolin will restore the skin's natural moisture.

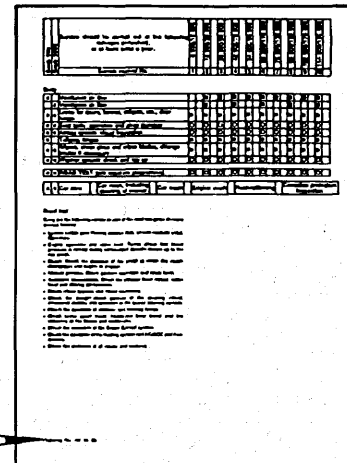
Do not use petrol, paraffin, diesel oil, thinner or solvents to remove oil from any part of your body.

If you notice any changes in your skin, consult a doctor without delay.

If possible, clean the parts before starting work.

If there is a danger of oil getting into your eyes, wear protective goggles, a visor or a facemask. Eye-washing equipment must also be readily available.

**EU**



The image shows a technical service card with a grid of checkboxes. A callout box labeled 'EU' points to a specific cell in the grid. The card contains various technical specifications and instructions.

C100M610

### Important

Avoid protruding sharp objects or keeping tools in your pockets.

Avoid wearing a belt with sharp buckles or rivets.



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Seat belts: operation and strap damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toe-in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbag system: visual inspection of airbag module(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road test (see separate road test programme)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1	2	3	4	5	6	7	8	9	10

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## Saab Original Service programme PA

This service programme is adapted to operating conditions in the Pacific Region and other parts of the world where conditions are comparable.

There is a mark on the owner's service card adjacent to the card's part number. If this mark is PA, this service programme should be followed.

**⚠ WARNING**

Lengthy and repeated contact with mineral oil removes the natural oils from your skin, drying it out and causing irritation. If oil has been swallowed, do not provoke vomiting. Call a doctor.

Waste oil may contain harmful impurities which can cause skin cancer. Always use suitable protection and thoroughly wash your hands and other areas of bare skin that have come into contact with the oil.

Avoid lengthy and repeated contact with oil, grease, etc., especially waste oil.

Wear protective clothing, including impermeable gloves, if possible.

Do not put oily rags in your pockets.

Do not wear clothes that have been soiled by oil, especially items of underwear. Clothes must be washed at regular intervals.

Do not wear oily shoes.

Clean open sores immediately and cover them with an adhesive bandage, sticking plaster, etc.

Use a softening barrier cream (part No. 30 04 397). Apply it to your exposed skin before each workshift so that it will be easier for you to wash oil and grease off afterwards.

Remove oil from your face and hands, etc. by washing them thoroughly with soap and water (special skin cleansers and a nailbrush will help). Preparations containing lanolin will restore the skin's natural moisture.

Do not use petrol, paraffin, diesel oil, thinner or solvents to remove oil from any part of your body.

If you notice any changes in your skin, consult a doctor without delay.

If possible, clean the parts before starting work.

If there is a danger of oil getting into your eyes, wear protective goggles, a visor or a facemask. Eye-washing equipment must also be readily available.

**PA**

C100M611

**Important**

Avoid protruding sharp objects or keeping tools in your pockets.

Avoid wearing a belt with sharp buckles or rivets.



## 22 Service

Washer systems: check and top up	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wipers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fresh-air filter		X		X		X		X		X		X		X
Doors, bonnet, boot lid, etc. and door keeps		I		I		I		I		I		I		I
Tailgate hinges		I		I		I		I		I		I		I
Seat belts: operation and strap damage		0		0		0		0		0		0		0
Toe-in	0			0		0		0		0		0		0
Airbag system: visual inspection of airbag module(s)		0		0		0		0		0		0		0
Road test (see separate road test programme)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

## Saab Original Service programme FE/ME

This service programme is adapted to operating conditions in the Middle East and other parts of the world where conditions are comparable.

There is a mark on the owner's service card adjacent to the card's part number. If this mark is FE/ME (or Heavy Duty on earlier service cards), this service programme should be followed.

### WARNING

Lengthy and repeated contact with mineral oil removes the natural oils from your skin, drying it out and causing irritation. If oil has been swallowed, do not provoke vomiting. Call a doctor.

Waste oil may contain harmful impurities which can cause skin cancer. Always use suitable protection and thoroughly wash your hands and other areas of bare skin that have come into contact with the oil.

Avoid lengthy and repeated contact with oil, grease, etc., especially waste oil.

Wear protective clothing, including impermeable gloves, if possible.

Do not put oily rags in your pockets.

Do not wear clothes that have been soiled by oil, especially items of underwear. Clothes must be washed at regular intervals.

Do not wear oily shoes.

Clean open sores immediately and cover them with an adhesive bandage, sticking plaster, etc.

Use a softening barrier cream (part No. 30 04 397). Apply it to your exposed skin before each workshift so that it will be easier for you to wash oil and grease off afterwards.

Remove oil from your face and hands, etc. by washing them thoroughly with soap and water (special skin cleansers and a nailbrush will help). Preparations containing lanolin will restore the skin's natural moisture.

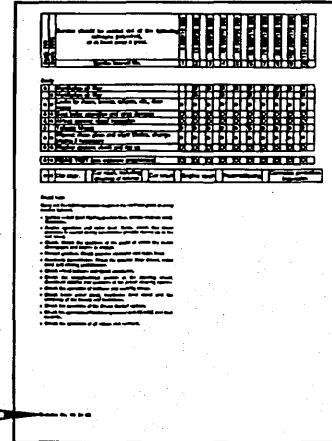
Do not use petrol, paraffin, diesel oil, thinner or solvents to remove oil from any part of your body.

If you notice any changes in your skin, consult a doctor without delay.

If possible, clean the parts before starting work.

If there is a danger of oil getting into your eyes, wear protective goggles, a visor or a facemask. Eye-washing equipment must also be readily available.

FE/ME



The image shows a technical service card. At the top, there is a grid with columns for various engine components and rows for different service intervals. Below the grid, there is a list of items with checkboxes. A callout box labeled 'FE/ME' points to a specific cell in the grid, indicating that this service programme should be followed for that component.

C100M612

### Important

Avoid protruding sharp objects or keeping tools in your pockets.

Avoid wearing a belt with sharp buckles or rivets.

## Saab Original Service programme FE/ME

### Key to table

O = inspection/adjustment  
 X = replacement  
 I = inspect/adjust/clean/lubricate

**Service interval/Mileage:**  
 1 = 10 000 km (6 000 miles)  
 2 = 20 000 km (12 000 miles)  
 3 = 30 000 km (18 000 miles)  
 and so on.

	Service interval (See Service Logbook for correct mileage)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Read warnings and respective method before commencing work</b>															
Lighting (headlamps and other lights), alignment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Oil leakage, top/bottom	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Engine oil and oil filter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Automatic transmission, fluid and filter			X				X				X				X
Manual gearbox, oil level			O				O				O				O
Fuel filter					X						X				
Brake system, pads/discs, wear and condition	O		O		O		O		O		O		O		O
Brake lines and hoses: damage and leaks			O		O		O		O		O		O		O
Dampers and bushes: integrity and condition			O				O				O		O		O
Gaiters, inboard and outboard drive-shaft universal joints			O		O		O		O		O		O		O
Exhaust system and mountings, integrity and damage			O		O		O		O		O		O		O
Retighten front assembly and rear suspension threaded joints	O														
Play in steering joints and ball joints, gaiter integrity			O		O		O		O		O		O		O
Tyres: inflation pressures, condition, tread depth and wear pattern (incl. spare wheel)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Fuel system, incl. tank: leaks and damage			O		O		O		O		O		O		O
Coolant. (Max. 3-year intervals)									X						
Cooling system: condition of hoses, coolant level and freezing point.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Brake fluid, level. Change (Max. 1-year intervals)	O	O	O	O	X	O	O	O	X	O	O	O	X	O	O
Automatic transmission, fluid level					O				O				O		
Power steering, fluid level	O		O		O				O			O		O	
Cleaning of throttle body (not B308)	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Spark plugs, unleaded petrol					X						X				
Spark plugs, leaded petrol		X		X		X		X		X		X		X	
Air cleaner filter element	O		O		X		O		O		X		O		O
Drive belts: condition, tension, incl. automatic tensioner. Replace as necessary	O		O		O		O		O		O		O		O
Camshaft drive, drive belt (B308) (M1994-96)					X						X				

Camshaft drive, drive belt (B308) (M1997)										X						
Battery: check voltage, electrolyte level, ground cable, clean and grease terminals and mounting																
Washer systems: check and top up	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Wipers	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Fresh-air filter			X				X				X					X
Doors, bonnet, boot lid, etc. and door keeps																
Tailgate hinges																
Seat belts: operation and strap damage	o		o		o		o		o		o		o		o	
Toe-in	o		o		o		o		o		o		o		o	
Airbag system: visual inspection of airbag mod- ule(s)	o		o		o		o		o		o		o		o	
Road test (see separate road test programme)	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

## Saab Original Service programme, US/CA

This service programme has been drawn up by Saab Cars USA and is intended for the USA and Canada markets.

 **WARNING**

Lengthy and repeated contact with mineral oil removes the natural oils from your skin, drying it out and causing irritation. If oil has been swallowed, do not provoke vomiting. Call a doctor.

Waste oil may contain harmful impurities which can cause skin cancer. Always use suitable protection and thoroughly wash your hands and other areas of bare skin that have come into contact with the oil.

Avoid lengthy and repeated contact with oil, grease, etc., especially waste oil.

Wear protective clothing, including impermeable gloves, if possible.

Do not put oily rags in your pockets.

Do not wear clothes that have been soiled by oil, especially items of underwear. Clothes must be washed at regular intervals.

Do not wear oily shoes.

Clean open sores immediately and cover them with an adhesive bandage, sticking plaster, etc.

Use a softening barrier cream (part No. 30 04 397). Apply it to your exposed skin before each workshift so that it will be easier for you to wash oil and grease off afterwards.

Remove oil from your face and hands, etc. by washing them thoroughly with soap and water (special skin cleansers and a nailbrush will help). Preparations containing lanolin will restore the skin's natural moisture.

Do not use petrol, paraffin, diesel oil, thinner or solvents to remove oil from any part of your body.

If you notice any changes in your skin, consult a doctor without delay.

If possible, clean the parts before starting work.

If there is a danger of oil getting into your eyes, wear protective goggles, a visor or a facemask. Eye-washing equipment must also be readily available.

---

### Important

Avoid protruding sharp objects or keeping tools in your pockets.

Avoid wearing a belt with sharp buckles or rivets.

---





R	Toe-in					O			O			O	
R	Ventilation air filter					X			X			X	
R	Door hinges, keeps and locks					I			I			I	
R	Airbag system, SRS warning lamp, visual inspection	O	O	O	O	O	O	O	O	O	O	O	O
R	Seat belts: operation and visual inspection of straps for tears or fraying	O	O	O	O	O	O	O	O	O	O	O	O
R	Wipers: clean glass and wiper blades, check blades	O	O	O	O	O	O	O	O	O	O	O	O
R	Washer system: check and top-up	O	O	O	O	O	O	O	O	O	O	O	O
	<b>Road Test</b>												
R	Check performance of drive train, steering and brakes and verify tyre balance. Check operation of instruments and controls, including horn, windscreen wipers, cruise control and climate control system. Note any noises or problems for correction.	O	O	O	O	O	O	O	O	O	O	O	O

\*For vehicles certified for sale and registered in California, these are the minimum required Emission Control System maintenance steps. Saab urges that all recommended maintenance procedures be followed according to this programme.

(a.) Engine oil and filter should be changed at least once a year. Intermediate oil and filter changes (halfway between indicated intervals) suggested for cars primarily used for driving in dense city traffic or for repeated short trip operation without sufficient engine warm-up.

(b.) Change automatic transmission fluid and filter at more frequent intervals (20,000, 50,000, 80,000 miles, etc.) if car is driven in dense city traffic where the outside temperature regularly reaches 90°F or higher, or if car is used in a mountainous/high altitude area or for trailer towing.

(c.) Check wheel alignment if irregular or premature tire wear is apparent.

**\*\*Service Intervals:** Refer to the Warranties & Service Record Book for service intervals beyond 105,000 miles (168,000 km).

**\*\*\*Camshaft drive belt replacement (V6)** prior to 100,000 miles (160,000 km) will be performed at no charge by an authorized U.S. or Canadian Saab dealer.

xx\* 1994-96 models require camshaft drive belt (V6) change at 35 000, 65 000 and 95 000 mile intervals.

**Application/type of service (col. 1)**

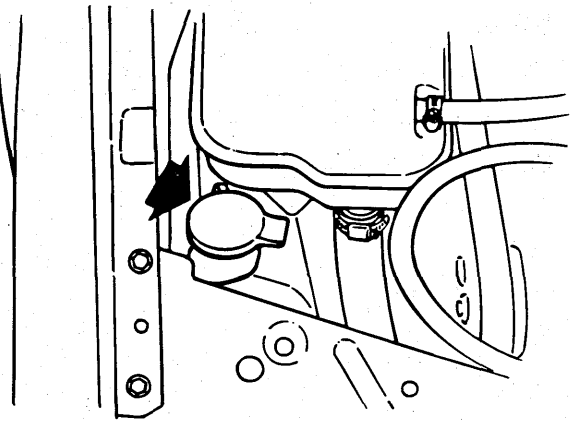
E = emission service

R = regular maintenance

# Pre-delivery service

## Washer fluid

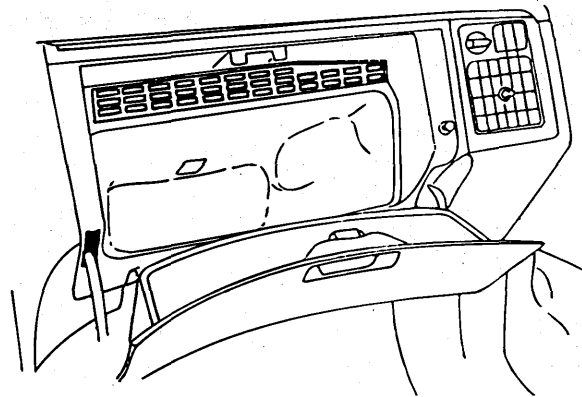
Top up the washer fluid reservoir with washer fluid and water (in accordance with the recommendations on the packaging).



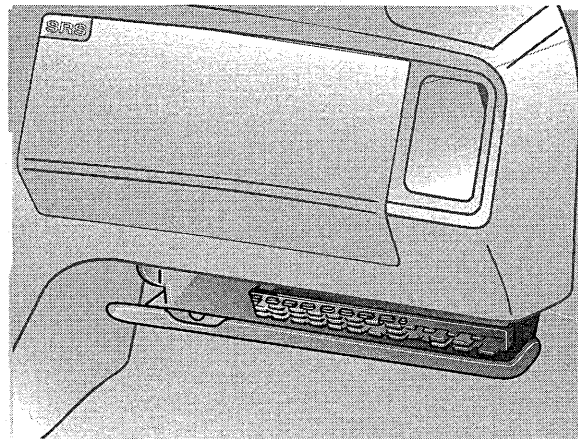
C100M615

## Fuses

Fit the fuses for the electric aerial/radio/anti-theft alarm, interior lighting/central locking system, electrically adjustable seats and clock.



C100M616

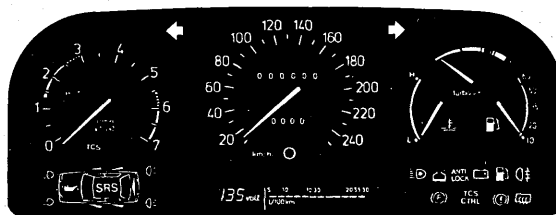


C100M617

## Interior equipment

Check:

- Warning and indicator lamps with the ignition switch in the diagnostic test mode
- Horn
- Cigarette lighter
- Instrument lighting
- Setting clock



C100M620

## Anti-theft alarm

### Affixing labels (not for US/CA)

On cars equipped with an anti-theft alarm, both remote controls should be labelled. Select the right label for the market in question and affix it to the flat surface of each remote control.



C100M619

94.0350.K.P BAKOM <b>4618807 CH</b>	BG113 Z T 412E <b>4618815 DE</b>	F+G MEGAMOS Typnr: FM-433 S Tilbodelsno: ALR 9427 Teleslyelsen <b>4618823 DK</b>
Typgodkänd av Post och Teleslyelsen Un 940166 F+G MEGAMOS FM 433 S 433.92 MHz <b>4618955 SE</b>	F+G MEGAMOS FM 433 S rcd NL KVO: 430 9517-A <b>4618963 NL</b>	SAAB FM 433 S MPT 1340 W.T. LICENCE EXEMPT. <b>4618989 GB</b>
PRÉS F+G MEGAMOS FM 433 S AGR 94 0270 PPL 0 DATE 9410 <b>4618997 FR</b>	F+G MEGAMOS FM 433 S 433.92 MHz <b>4619011 NO</b>	<b>RTT/D/X1026</b> <b>4619409 BE</b>
F+G MEGAMOS FM 433 S 83G00945 <b>4619557 TW</b>		F+G MEGAMOS FM 433 S 433.92 MHz <b>4619037 FI</b> <b>4619417</b>

C100M618

## Affixing labels (for Sweden)

For the Sweden market the following should be fitted in addition to the above-mentioned labels, see illustration.

Affix one SSF label on the windscreen and one on each of the front door windows.

Affix the ATA label on the inside of the lid of the storage compartment between the front seats.

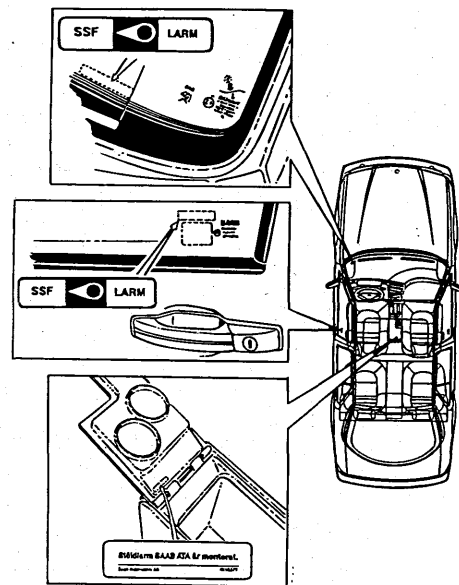
## Programming

### Anti-theft alarm **without** VSS

No programming is necessary in connection with pre-delivery service. For information on the anti-theft alarm, see Service Manual 3:5.

### Anti-theft alarm **with** VSS (GB, NL, CH only)

On cars equipped with an anti-theft alarm with VSS it will be programmed at the factory to the specification for Germany. For the GB, NL and CH markets the alarm must be programmed with TECH 2. Select the appropriate country code and reprogram the alarm. For further information on the anti-theft alarm, see Service Manual 3:5.

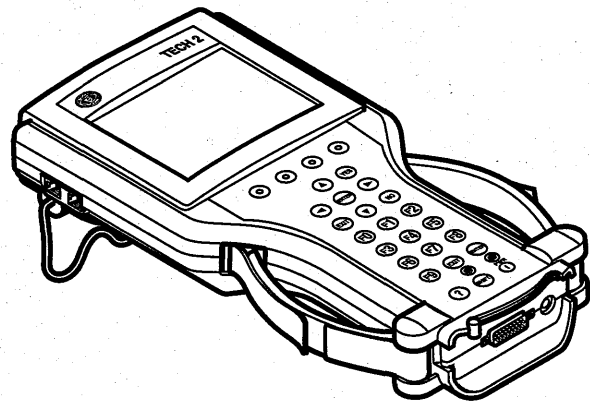


C100M621

## Clear diagnostic trouble codes (US/CA only)

For OBD II specification cars:

- Connect TECH 2
- Clear any diagnostic trouble codes in the engine management system



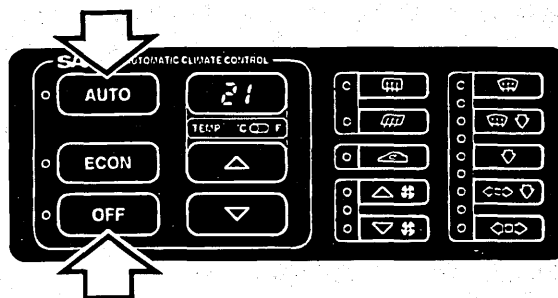
C100M613

## ACC unit

### Programming

On cars equipped with ACC, the ACC unit must be programmed from the OFF position to the AUTO position (the transport safety devices should be fitted).

- Turn the ignition switch to the ON position. The ACC unit will display OFF
- Carry out programming by pressing the AUTO and OFF buttons simultaneously. The ACC unit now shows AUTO mode
- Turn the ignition switch to the OFF position



C100M623

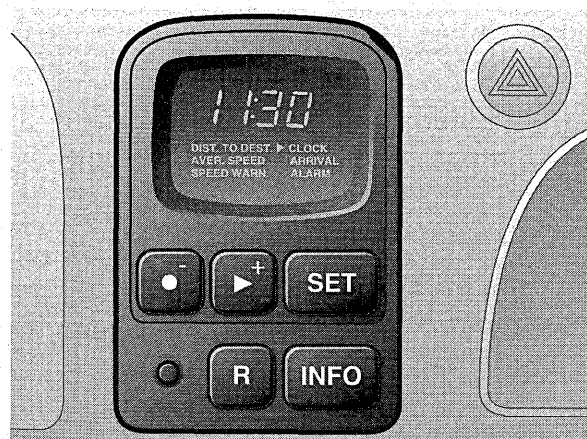
## Clock and radio

### Analogue clock

Set the clock with the button in the centre of the clock face.

### Digital clock

- Select CLOCK with the + button.
- Press the SET button for 2 seconds (the digits start flashing)
- Set the desired time with the - or + button. Press briefly to change one unit at a time. Press longer to change more rapidly
- On completion of setting the clock, press the SET button briefly



C100M624

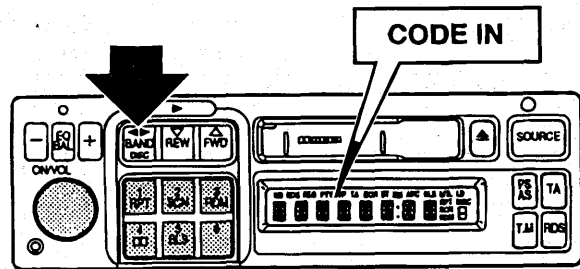
## Radio

- 1 Switch on the radio. The display shows CODE IN.
- 2 Enter the correct code with the six preset station buttons.

If the wrong code is entered, the display will show the wrong code.

In this case, press the BAND button for more than 3 seconds. The display will show CODE IN again.

Enter the code afresh.



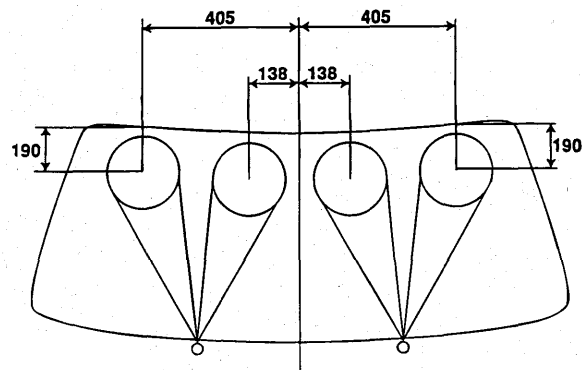
## Important

If the right code is not entered after three attempts, the display will again show CODE IN. It will then be necessary to wait 1 hour with the radio switched on before a fresh attempt to enter the code can be made.

C100M625

## Wipers and washers

Check the windscreen and headlamp wash/wipe systems. Adjust the jets as necessary. If the car is equipped with a rear window wash/wipe system, check that also.



C100M626

## Tyres

<b>Tyre size</b>	<b>Number of occupants</b>	<b>Speed km/h (mph)</b>	<b>Tyre pressures bar/psi</b>
195/65 R15 91T/HV	1-3	0-160 (0-100)	2.2/32
205/55 ZR16	1-3	0-190 (0-120)	2.4/35
205/60 ZR15	1-3	0-190 (0-120)	2.2/32
205/55 R16V	1-3	0-190 (0-120)	2.2/32
205/55 R16W	1-3	0-190 (0-120)	2.4/35
<b>Spare wheel</b>			
T115/70 R16		max. 80 (50)	4.2/60
175/70 R15T		max. 80 (50)	2.5/36

For other tyres, speeds and loads, see Service Manual  
0:2 Technical data.

## Check oil level, leaks, top up as necessary

### Oil level, engine

Check the level while the engine is still warm, 2-5 minutes after switching off.

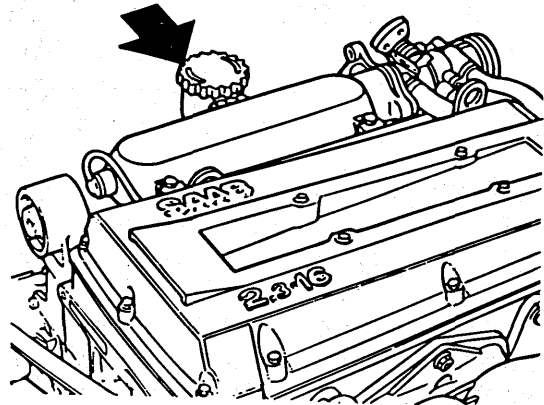
Top up with oil to the MAX mark on the dipstick. The distance between the MAX and MIN marks corresponds to 1 litre (1.05 qts).

### Oil type

Saab Turbo engine oil or alternative engine oil to specification API SG/SH and ACEA A2-96/A3-96, including the expiring specification CCMC G4/G5.

We advise against the use of additional additives.

Illustration: B204, B234 engines



C100M627

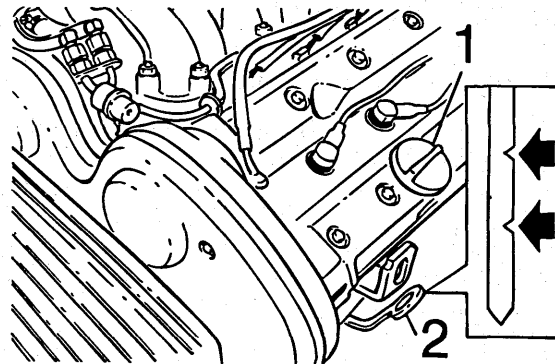
### Viscosity

SAE 10W/30 or 10W/40. On markets where these viscosities are not available, 15W/40 may be used.

At constant temperatures of  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or below, use 5W-30 or 5W-40. These must be fully synthetic or synthetic based.

At constant temperatures of  $+15^{\circ}\text{C}$  ( $+59^{\circ}\text{F}$ ) or above, use 15W-50 or 20W-50.

Illustration: B308 engine. 1 Filler cap, 2 Dipstick



C100M628

### WARNING

Make sure that the filler cap, pos. 1, is screwed down hard after topping up with oil. Oil on the exhaust manifold could cause a fire.



### Fluid level, automatic transmission

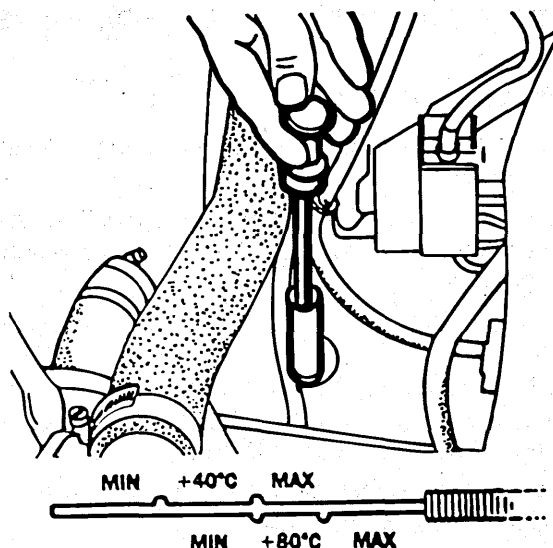
 **WARNING**  
Keep the brake pedal depressed.

Apply the handbrake. Start the engine and run it at idling speed. Select D and wait at least 15 seconds. Then select R and wait another 15 seconds. Repeat in position P.

Check the fluid level (engine running at idling speed and selector lever in P). Top up as necessary.

#### Important

The dipstick has two sets of level marks, one set for hot oil and one for cold oil. The amount of fluid between the maximum and minimum marks is about 0.4 litres (0.4 qts).



C100M629

#### Oil type (not ME):

Dexron II transmission fluid.

#### Oil type (ME only):

Dexron IIE transmission fluid.

### Fluid level, power steering

Check the level and top up as necessary. If the fluid level is low, investigate the cause.

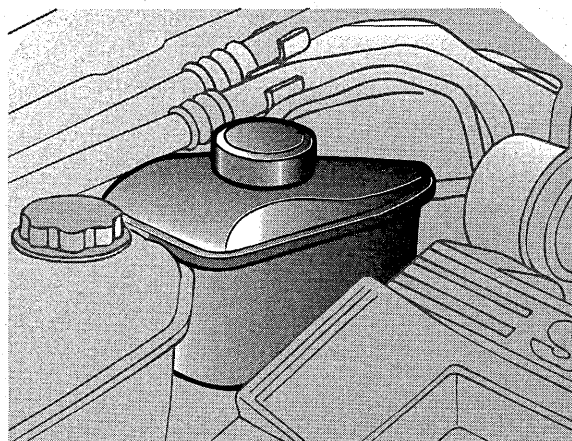
#### Important

Two types of power steering fluid are used. They must **not** be mixed.

#### Oil type:

Saab 9000 up to and including chassis number V1014201: Saab Power Steering fluid PS 4634, part No. 30 09 800 - 0.75 litres.

Saab 9000, as from chassis number V1014202: Power steering fluid CHF11S, part No. 30 32 380 - 1 litre.



C100M679

 **WARNING**  
Fluid spilled on hot parts could cause a fire.

## Check fluid level

### Coolant

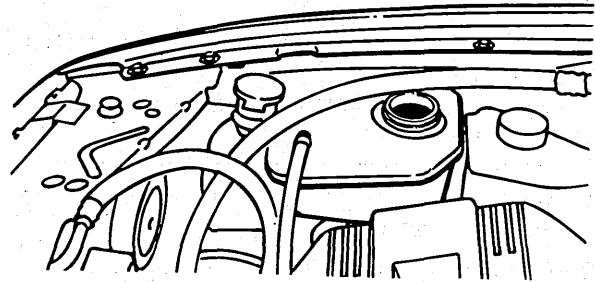
Check the level and top up as necessary with equal amounts of SAAB Original Coolant and water (half and half).

This mixture also provides effective corrosion protection.

Avoid mixing different types of coolant.

Do not fill up above the MAX mark.

In the event of coolant loss, investigate the cause.



C100M631

### Important

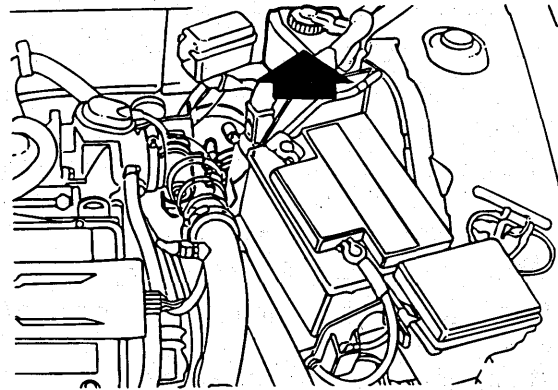
Screw the filler cap down hard or the system will not be pressurized, resulting in a lower boiling point and loss of coolant.

### Brakes, clutch

Check the level and top up as necessary.

#### Brake fluid:

Grade to DOT 4 specification.



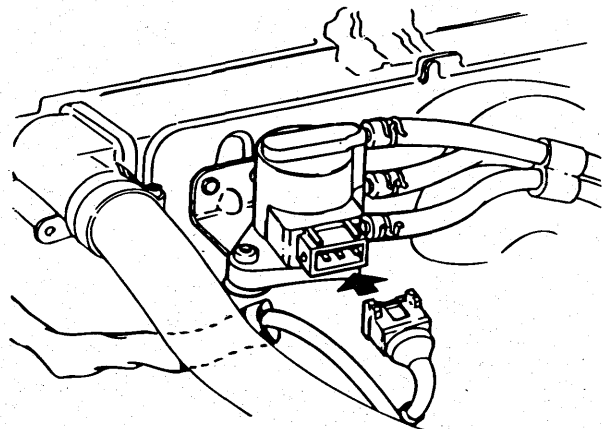
C100M632

### Boost pressure control valve (Turbo only)

Plug the connector into the control valve.

### Important

OBD II related function.



C100M633

## Retightening of cylinder head bolts (4-cyl. engine)

### Important

It is extremely important to tighten the bolts exactly as described.

- 1 Remove the ignition discharge module or the cover over the spark plugs.
- 2 Remove the camshaft cover and tighten the bolts as follows:
- 3 Slacken bolt number 1 and tighten it. Do this with all the bolts in the order shown.

**Tightening torque: 40 Nm (30 lbf ft).**

- 4 Tighten bolt number 1 to **60 Nm (44 lbf ft)**.  
Repeat this on the other bolts in the order shown, see illustration.

- 5 Tighten bolt number 1 a further **90°**. Repeat this on the other bolts in the order shown, see illustration.

- 6 Tighten the timing cover retaining bolts.

**Tightening torque: 22 Nm (16 lbf ft).**

- 7 Inspect the camshaft cover gasket and change it if necessary.

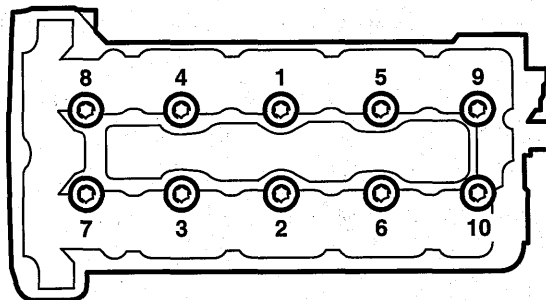
- 8 Fit the camshaft cover and tighten the bolts, starting with bolts 1 and 2 at the open end. Then continue with the other bolts in the order shown.

**Tightening torque: 15 Nm (11 lbf ft).**

- 9 Fit the ignition discharge module or cover over the spark plugs.

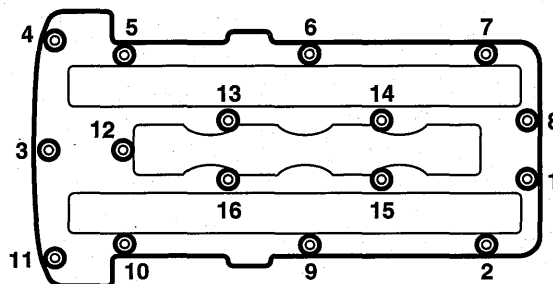
**Tightening torque: 11 Nm (8 lbf ft).**

3,4,5



C100M687

8



C100M688

## Underbody

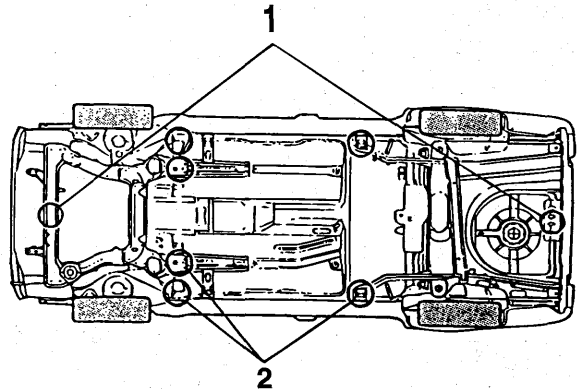
Raise the car and inspect the brake system, suspension, exhaust system and underbody for transit damage.

The anti-corrosion sealant should be intact. Make good as necessary.

Illustration

1 Lifting points for garage jack

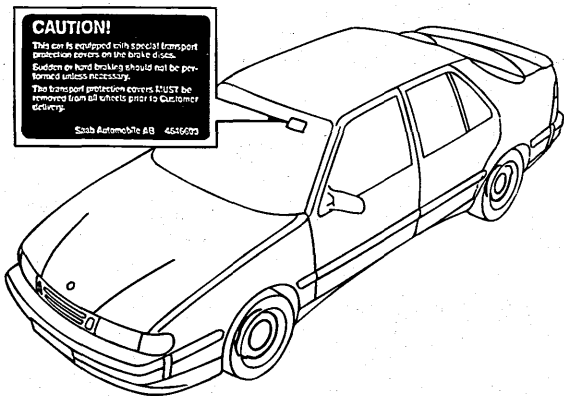
2 Lifting points for car hoist



C100M614

## Brake discs, transit protection (certain markets only)

Remove the transit protection from the brake discs. Separate the protection by pulling the wire with a pair of pliers. Remove the protection from the inside of the wheels without removing the wheels.



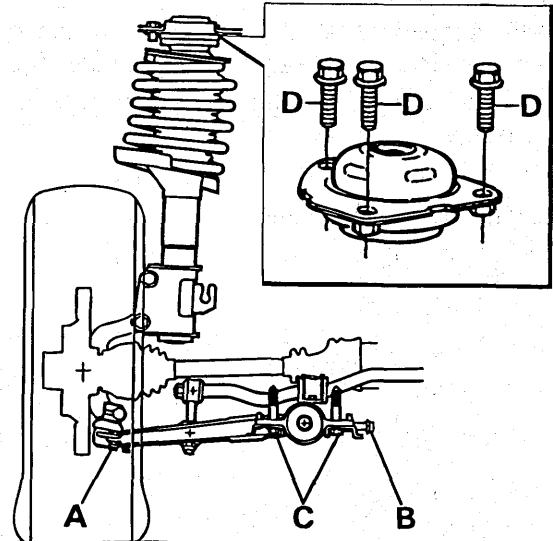
C100M634

## Body mounting, front assembly

Tighten the indicated bolts to the prescribed torque.

**⚠ WARNING**  
Never overload the bolts in a joint by tightening them harder than to the specified torque.

- A Suspension arm ball joint to suspension arm 30 Nm (22 lbf ft)
- B Front bearing, suspension arm to subframe 50 Nm (37 lbf ft)
- C Rear bearing, suspension arm to subframe 50 Nm (37 lbf ft)
- D MacPherson strut bearing to body 47 Nm (35 lbf ft)



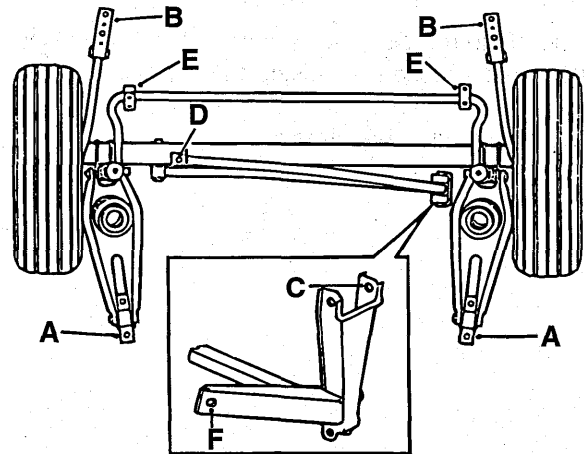
C100M635

## Body mountings, rear suspension

Tighten the indicated bolts to the prescribed torque.

**⚠ WARNING**  
Never overload the bolts in a joint by tightening them harder than to the specified torque.

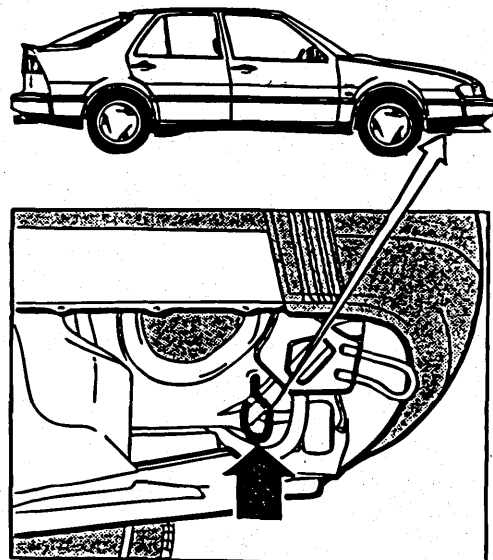
- A Spring link to body 47 Nm (35 lbf ft)
- B Torque arm to body 24 Nm (18 lbf ft)
- C Panhard rod bracket to body 47 Nm (35 lbf ft)
- D Cross brace, Panhard rod bracket to body 55 Nm (41 lbf ft)
- E Anti-roll bar link to body (2) 24 Nm (18 lbf ft)
- F Panhard rod bracket support to body 18 Nm (14 lbf ft)



C100M636

## Transit mountings

Remove the mountings. Extract the locking pin and remove the mounting on left and right sides.

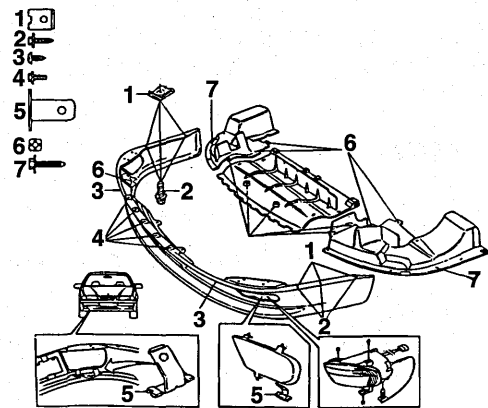


C100M637

## Equipment supplied

Fit all the separate equipment supplied in the delivery box. The contents of the box may vary, depending on the market and model variant.

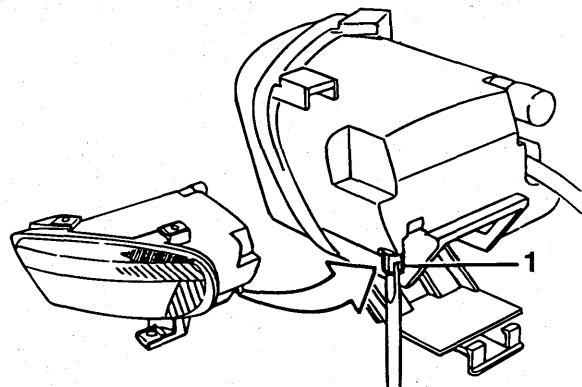
The illustration applies to the 9000 CS and 9000 CD M1995-



C100M638

### Fog lights, all 9000 CS and 9000 CD M1995-

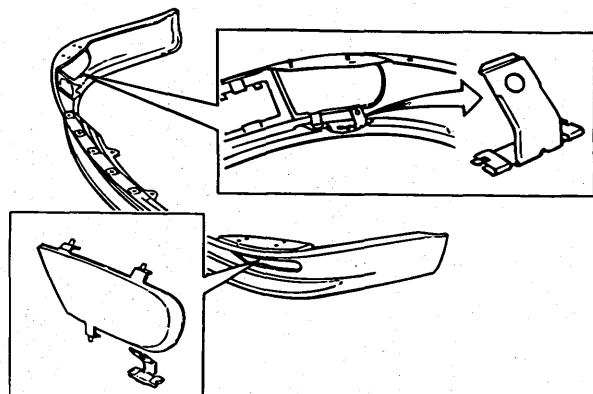
The adjusting screw (1) for the lights is accessible through a hole in the lower section of the spoiler.



C100M639

### Access cover in front spoiler, all 9000 CS and 9000 CD M1995-

On cars with no fog lights installed, the supplied cover panels and clips should be mounted. To ensure that the cover panels remain firmly in place, it is important to fit the clips as shown in the illustration.



C100M640

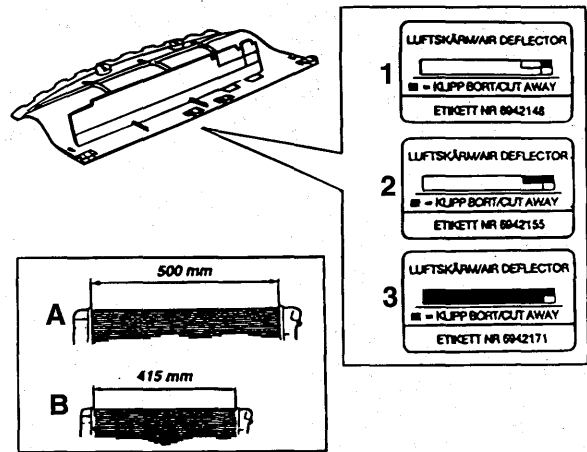
### Air deflector

Using a knife, cut out according to the instructions on the label. The illustration shows the different cut-out variants that occur.

- 1 Cars with 20 dm<sup>2</sup> radiator **without** oil cooler for **auto-matic transmission**.
- 2 Cars with 16.7 dm<sup>2</sup> radiator.
- 3 Cars with 20 dm<sup>2</sup> radiator **with** oil cooler for **automat-ic transmission**.

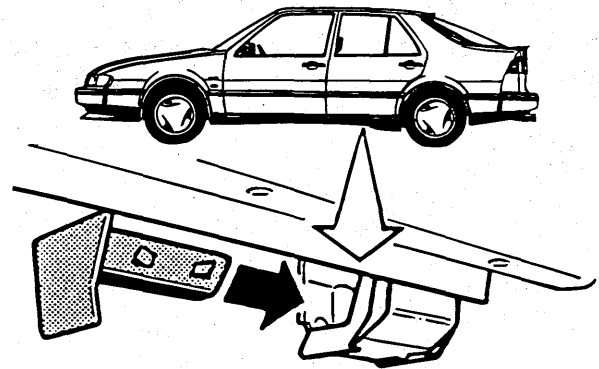
A = 20 dm<sup>2</sup> radiator

B = 16.7 dm<sup>2</sup> radiator



C100M641

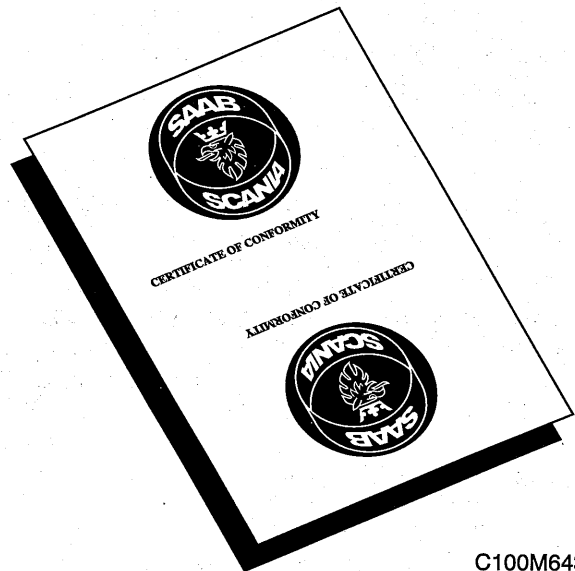
Fit the stone damage guards in the rear jacking points.



C100M642

## Certificate of Conformity

**Cars for the European market:** In the spare wheel well is a "Certificate of Conformity". Fold this document and place it in the plastic pocket at the back of the car's Service Logbook on the inside.



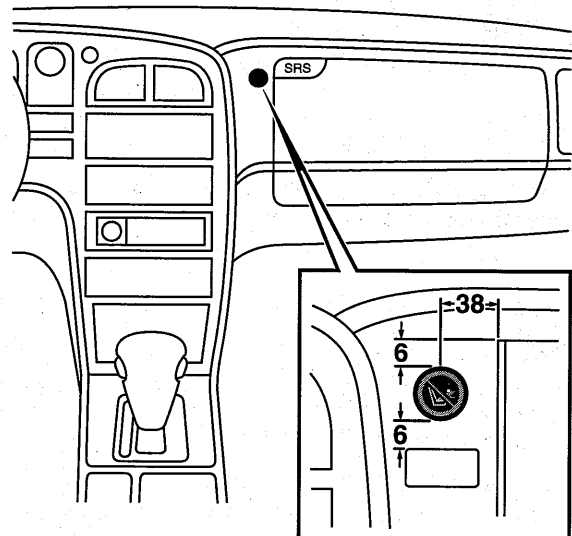
C100M643

## Child seat warning label

A label warning against installing a child safety seat in the front seat of a car with an airbag on the passenger side is supplied with the car.

**Sweden and Finland only:** Affix the self-adhesive label as shown.

Other markets: Discard the self-adhesive label.



C100M644

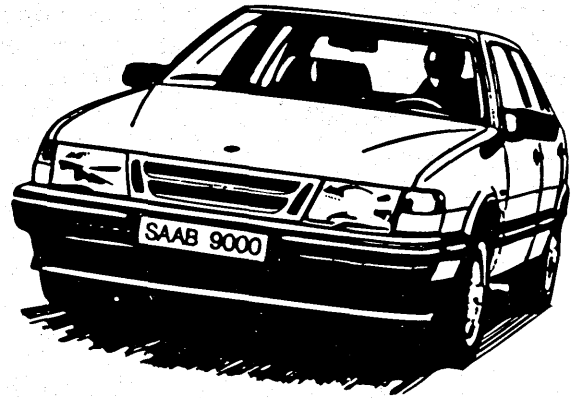


### Road test

The road test is an important part of the service programme. Check the functionality of the various components and systems as described below.

**US/CA only.** OBD II specification car: Check that there are no remaining faults that could cause the CHECK ENGINE warning to come on.

- Road testing should continue for at least 15 minutes at varying engine loads.
- Finish the road test by running the engine at idling speed with the selector lever in the N position and without any load from the A/C compressor or generator (all current-consuming components and A/C switched off) for 30-60 seconds.



C100M645

### Functionality checks

- Ignition switch:  
Check the operation of the steering column lock and that the ignition key can be inserted and removed with ease.  
Check the parking position lock on cars with automatic transmission (certain markets only).
  - Engine:  
Check functionality and noise level. Turbo: Check that boost pressure is normal during acceleration (the needle moves up towards the red sector).
  - Clutch:  
Check declutching and engagement point.
  - Manual gearbox:  
Check functionality and noise level.
  - Automatic transmission:  
Check the starter motor interlock, i.e. that the engine can only be started with the selector lever in P or N, the noise level and shifting performance.
  - Wheels:  
Check wheel balance and wheel roundness.
  - Steering assembly:  
Check the straight-ahead position of the steering wheel, directional stability and operation of the power steering system.
  - Instruments and indicator lamps:  
Check the functionality of instruments and indicator lamps.
  - Brakes:  
Check brake pedal travel, handbrake lever travel (4-5 notches) and the efficiency of the brakes and handbrake.
-

- Cruise control:  
Check functionality.
- Heating and ventilation unit:  
Check the functionality of the ventilation system and the A/C system as well as their controls. When the outside temperature prevents turn-on of the A/C, check the system indoors.
- Airbag:  
Inspect the surface of the steering wheel pad and the passenger airbag, if fitted, for external damage.
- Wiper and washer functionality:  
Check the washer jet pattern on the windscreen and operation of the wipers. Where appropriate, also check rear window wiper and washer operation.
- Check that the clock shows the right time.

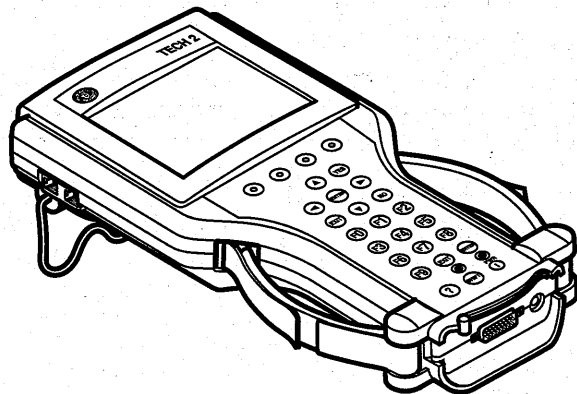
**Bear in mind the customer's expectations!**

Wipe the steering wheel and gear lever clean and make sure that all other traces of pre-delivery inspection and service work have been removed.

## Diagnostic trouble codes after a road test (US/CA only)

For OBD II specification cars:

- Connect TECH 2
- Clear any diagnostic trouble codes in the engine management system that have been generated during the road test
- Carry out the necessary diagnostic procedure



C100M613

## Final dismantling and finishing measures

### Cleaning, Acrylate Latex (Not US/CA)

 **WARNING**

**Safety information**

Make sure that the room is adequately ventilated. Avoid contact with skin or mucous membranes. Use protective gloves. It is wise and recommended to use safety goggles. It is absolutely forbidden to apply detergent using a spray gun as this produces a mist. Never store detergent in bottles or containers without labelling them first with information on the manufacturer and type of detergent.

**Remedial action if detergent gets into eyes**

Wash out the detergent immediately. Keep the eyelids apart as much as possible. Rinse the eyes with plenty of water for at least 15 minutes. Then see a doctor immediately.

**Poisonous substance when swallowed**

If the substance has been swallowed and the person is conscious: Give the person large amounts of water to drink or a couple of glasses of milk. **Do not** provoke vomiting. See a doctor immediately.

**Remedial action if splashed on skin**

Take off clothing that has been splashed. Wash the skin thoroughly with soap and plenty of water.

### Washing - dewaxing

The protective film for the paintwork (paint protector) must be removed by dissolving it with a special detergent, Tempro 75 Remover.

### Materials

- Tempro 75 Remover  
10 litres - 30 02 482  
25 litres - 30 02 490
- High-pressure power washer
- Spray gun

Consumption per car wash is about 0.3-0.5 litres of concentrated Tempro 75 Remover, equivalent to about 3-5 litres of diluted detergent.

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## Instructions for use

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### Important

Tempro 75 Remover is a high-alkaline product (high pH). It should be used only on bodywork surfaces to which paint protector has been applied.

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- 1 Mix Tempro 75 Remover with hot water to a concentration of 2-4%. If water having a lower temperature is used to rinse off Tempro 75 Remover and the paintwork protector (see point 5), the concentration should be higher (but not more than 15%).
  - 2 Flush loose dirt off the car with a high-pressure power washer.
  - 3 Wet all parts of the bodywork covered by paint protector with Tempro 75 Remover, using a spray gun or the high-pressure power washer. The car should be at room temperature to ensure that the paint protector will be dissolved.
  - 4 Allow Tempro 75 Remover to act for about three minutes. Note that it must not be allowed to dry. If it does, apply additional Tempro 75 Remover.
  - 5 Rinse off the Tempro 75 Remover and the paint protector under high pressure with hot water (but not hotter than +60° C).
  - 6 Remove any remaining paint protector using a sponge and Tempro 75 Remover.
  - 7 Wash the car, using a car shampoo.
-

## Cleaning, Rapgard

### General

RAPGARD paint protector may be left on the car for a maximum of three months and then it must be removed.

The date of manufacture of the car is on the vehicle card (422 indicates week 42 day 2), see illustration.

Illustration: Vehicle card

### Removing

Removal of the RAPGARD paint protector must be carried out within a temperature range of 0 to +35°C, +20°C being the most suitable temperature. If the body and the ambient temperature is above +35°C, park the car in the shade or cool it down with water until the body has reached a suitable temperature.

### Important

Adhesive residue may fasten to the paintwork at high temperatures.

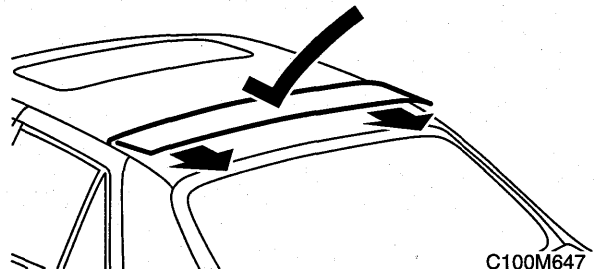
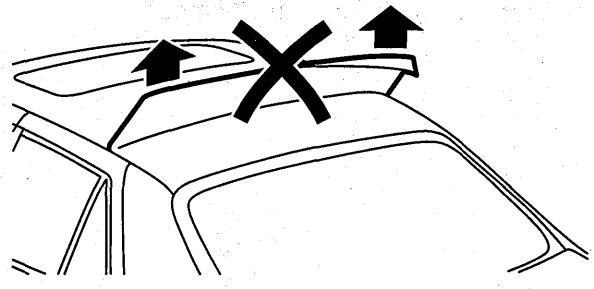
The Rapgard paint protector must be removed at least 48 hours before the car is shown to a customer so that any swelling has time to go down.

- 1 Loosen the corners of the plastic film. Use hands only, **no tools**.
- 2 Grip the plastic film as close as possible to the bodywork.
- 3 Pull off parallel to the body surface at an even rate, **do not pull suddenly**.
- 4 Wash the car with water and dry it.
- 5 Make sure there is no adhesive residue remaining. If there is, remove it with petroleum spirit (low-aromatic petroleum hydrocarbon) or Iso propanol (Iso propyl alcohol). Use these sparingly and for short periods only.

When the plastic film and any adhesive residue has been removed the paintwork may have swelled. This is normally temporary and will disappear within 48 hours.



CC100M646



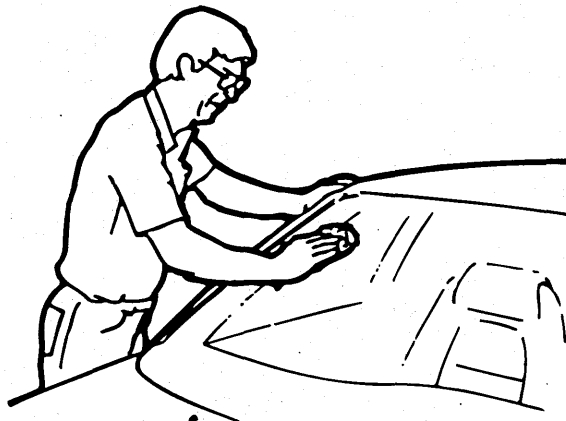
C100M647

## Washing

- 1 Wash the car.
- 2 Use concentrated washer fluid to clean all the windows and remove all residual grease from the windscreen and wiper blades.
- 3 Remove transit and storage protection from doors, floor and seats. Inspect the interior of the car for spots and stains and remove any you find.

**⚠ WARNING**

The protective plastic film and protective cardboard **must** be removed before the car is handed over to the customer as they do **not** meet the requirement of combustibility (as required by law).



C100M648

**⚠ WARNING**

Check that the rear seat backrests and seat cushions are properly secured in place.

Clean any dirt spots on plastic surfaces with soap and lukewarm water. Rinse the surfaces with clean water before drying.

### Important

Vinyl sprays and the like must never be used as they could be the cause of a film forming on the windscreen and seriously reducing visibility.

- 4 Clean rubber mouldings, tyre sidewalls and bumpers.
- 5 Inspect the car, remove spots and stains. If necessary, polish the car.



C100M649

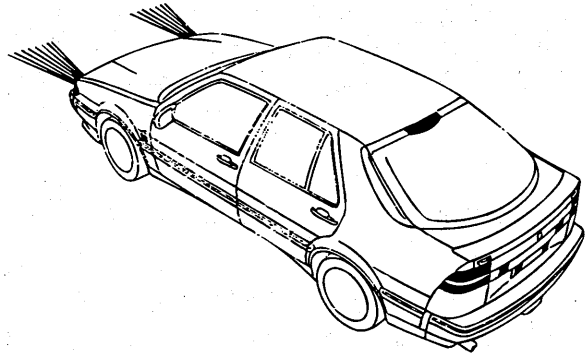


# Saab Original Service

## Lighting

### Headlamps and other lights

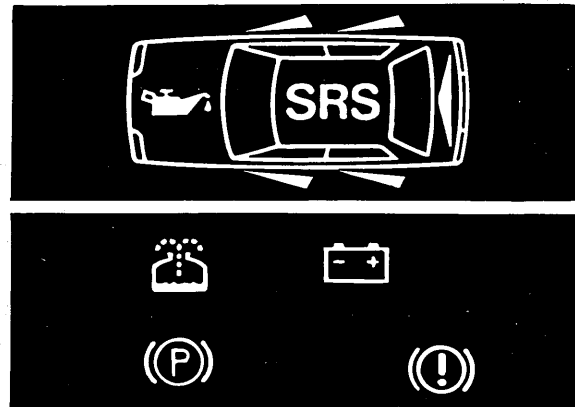
Check the front and rear lighting systems, direction indicators, brake lights, high-level brake light, reversing lights, rear fog lights and number plate illumination.



C100M650

### Indicator and warning lamps

Turn the ignition switch to the diagnostic test mode and check that the indicator and warning lamps are in working order. Check the pictogram when the doors and tailgate/boot lid are open.



100M651



## Headlamps and fog lights

Check the condition and alignment of the headlamps and fog lights.

1 Horizontal

2 Vertical

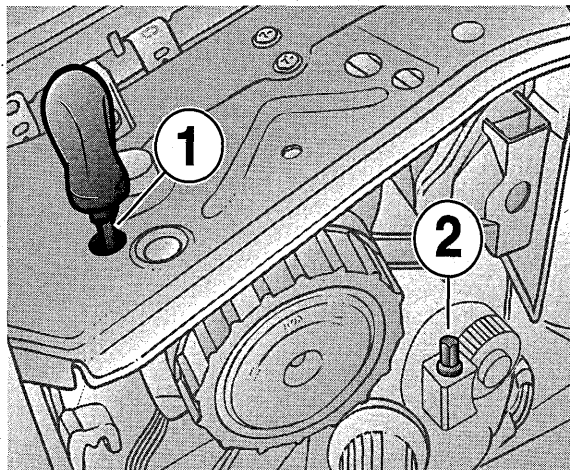
### Important

If the car is equipped with a headlamp beam adjustment switch, always set the switch to 0 before checking and adjusting headlamp alignment.

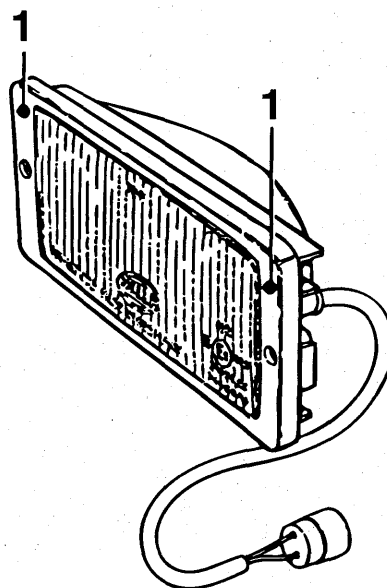
Before adjustment:

- Check that all tyres are inflated to the correct pressure.
- Make sure there is no luggage in the car
- Check the fuel level.  
Compensate with a load in the luggage compartment,  
tank half full - 25 kg  
tank empty - 50 kg
- One person or a 75 kg load should be placed in the driver's seat.
- The car must be clear of snow and ice
- Position the car on a level surface.
- Stabilize the suspension by rocking the car

Illustration: Adjusting screws for headlamp alignment, 9000 CD M1994

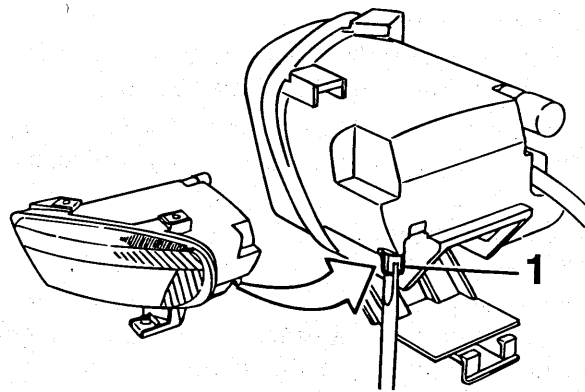


C100M652



C100M653

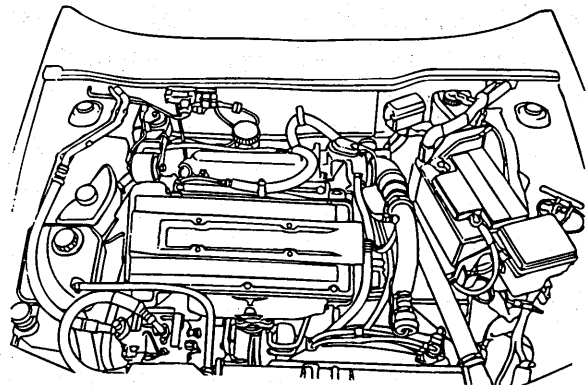
Illustration: 1. Adjusting screw for headlamp alignment, 9000 CS and 9000 CD M1995-



C100M654

## Oil leakage

Check that there is no oil leakage at the top or bottom of the engine/gearbox or in the hydraulics of the power steering system.



C100M655

## Engine oil and oil filter

### Engine oil

Change oil.

### Oil capacity

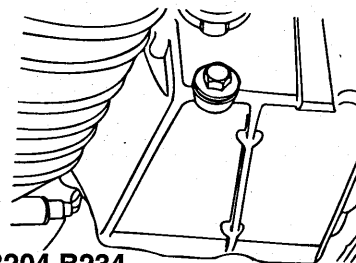
B204, B234: 4.7 litres (5.0 qts), including filter

B308: 4.5 litres (4.7 qts), including filter

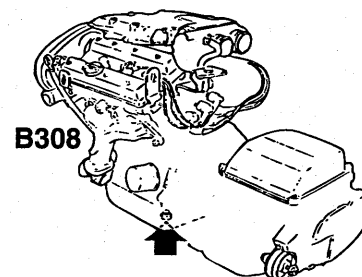
### Oil type

Saab Turbo engine oil or alternative engine oil to specification API SG/SH and ACEA A2-96/A3-96, including the expiring specification CCMC G4/G5.

We advise against the use of additional additives.



B204, B234



B308

C100M656

**Viscosity:**

SAE 10W/30 or 10W40. On markets where these viscosities are not available, 15W40 may be used.

At constant temperatures of  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or below, use 5W-30 or 5W-40. These must be fully synthetic or synthetic based.

At constant temperatures of  $+15^{\circ}\text{C}$  ( $+59^{\circ}\text{F}$ ) or above, use 15W-50 or 20W-50.

In markets where the only 5W oil obtainable is of mineral type, such oil may be used provided that it meets the standards of quality specified above.

**Drain plug, tightening torque:**

**B204, B234: 27 Nm (20 lbf ft)**

**B308: 55 Nm (41 lbf ft)**

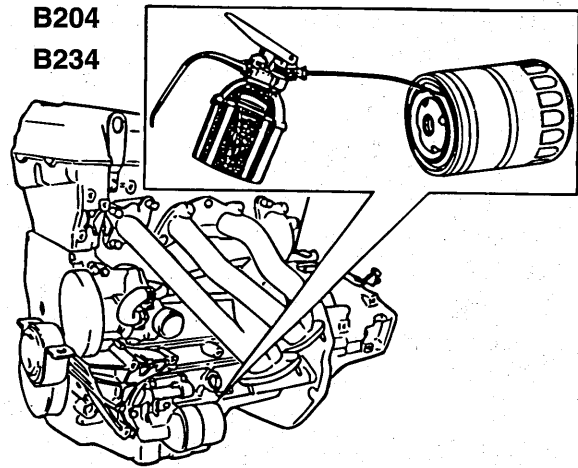
Check the oil level after changing engine oil and oil filter.

**WARNING**

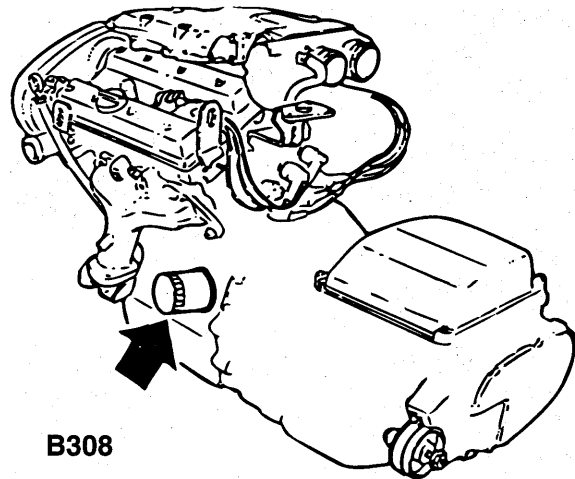
Make sure that the filler cap is screwed down hard after topping up with oil. Oil on the exhaust manifold could cause a fire.

## Oil filter

- 1 Loosen the oil filter with the filter wrench and unscrew it. Clean the sealing surface on the engine.
- 2 Oil in the rubber gasket on the new oil filter and fit it.  
**Tightening torque: 10 Nm (7.4 lbf ft).**
- 3 Start the engine and check the filter for leaks.



C100M657



C100M658

## Automatic transmission

Change the automatic transmission fluid  
 Change the filter element  
 Change O-rings  
 Fluid capacity: 3.0-3.5 l (3.1-3.7 qts)

### Oil type (not ME):

Dexron II transmission fluid.

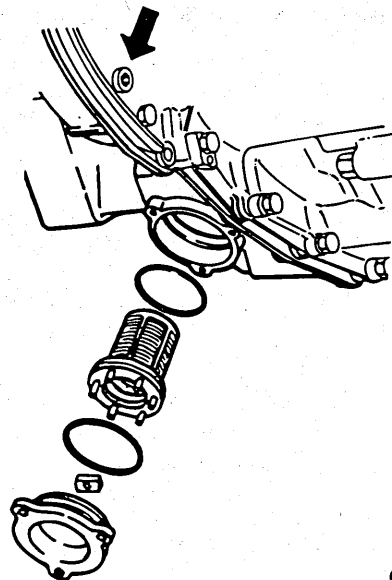
### Oil type (ME only)

Dexron IIE transmission fluid.

The drain plug should be removed to ensure that all the fluid runs out of the transmission.

### Drain plug, tightening torque:

**8 Nm (5.8 lbf ft)**



C100M659

## Oil level, manual gearbox

Remove the level plug. The oil level should reach the bottom edge of the hole.

- 1 Filler plug
- 2 Level plug
- 3 Drain plug

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### Important

Two types of oil are used. They must **not** be mixed.

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### Saab synthetic manual gearbox oil

A synthetic gearbox oil, part No. 87 48 733, was introduced during model year 1997. This oil must not be mixed with any other type of oil.

To distinguish this oil, the filler plug is marked: **USE ONLY SAAB OIL NO 87 48 733.**

### Gearbox oil of mineral type

#### Oil type (not ME)

Motor oil (mineral oil) API-service SF/CC, SF/CD

#### Viscosity

10W30 or 10W40

#### Oil type (ME only)

SHPD B.P. Vanellus F.E.

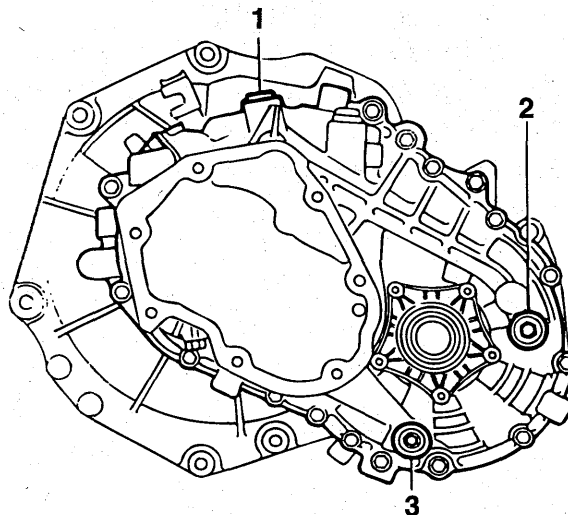
#### Viscosity

10W30 or 15W40

#### Oil capacity

When changing: 1.8 litres

**All plugs, tightening torque: 50 Nm (37 lbf ft)**



C100M660

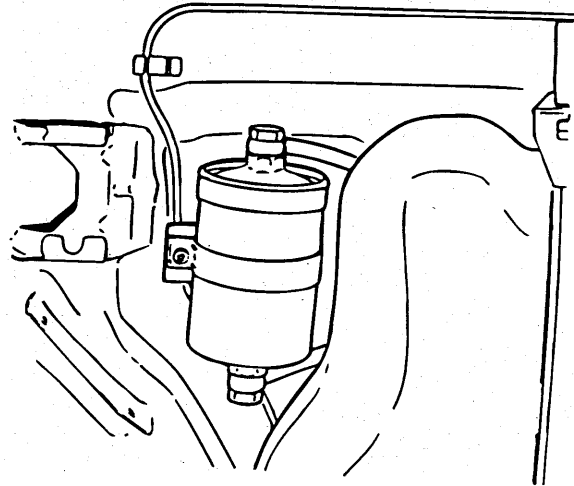
## Fuel filter

Change the fuel filter and sealing rings at the hose nipples. The fuel filter is located adjacent to the fuel tank.

### WARNING

Removing the fuel filter entails dismantling part of the car's fuel system. Therefore, pay attention to the following points:

- Maintain good ventilation! If an approved ventilation system for fuel vapour is available, make sure it is used.
- Used protective gloves! Prolonged contact with fuel can cause skin irritation.
- Keep a class BE fire extinguisher nearby! Watch out for sparks in connection with breaking power circuits, short-circuits, for example.
- Smoking is strictly prohibited.
- Use protective goggles.



C100M661

## Brake system: pads and discs

### Brake pads and brake discs

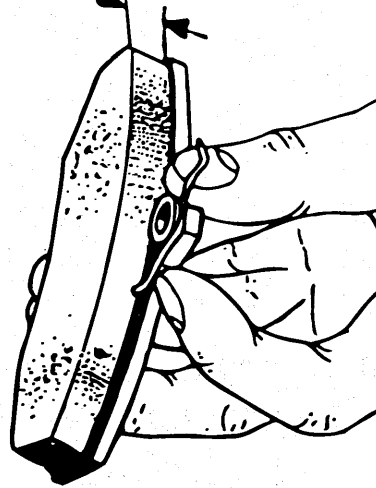
- Remove the wheels
- Check the thickness of the pads and the condition of the discs
- Changing the brake pads is recommended when they are worn down to a thickness of 4 mm (0.16 in)
- Tighten the wheel bolts to 120 Nm (89 lbf ft)

### Important

Tightening to the correct torque must only be carried out using a torque wrench.

The first time **new aluminium wheels** are fitted, the wheel bolts should be tightened to 135 Nm (100 lbf ft).

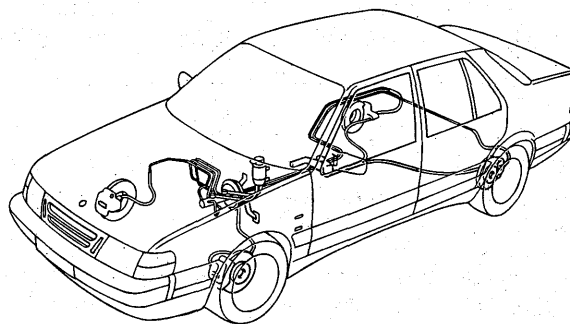
Min 4 mm



C100M662

## Brake lines and hoses

Check for leakage, inspect mounting points and general condition.



C100M663

## Shock absorbers and bushings

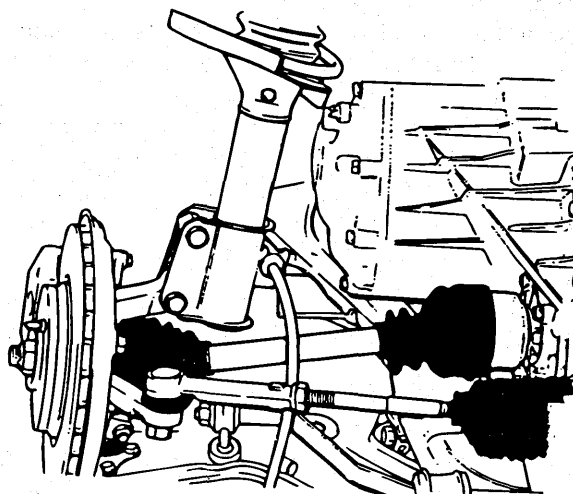
Inspect for leakage and check their general condition.



C100M664

## Gaiters, inboard and outboard drive-shaft universal joints

Check the rubber gaiters of the drive shaft universal joints for wear, integrity and attachment.

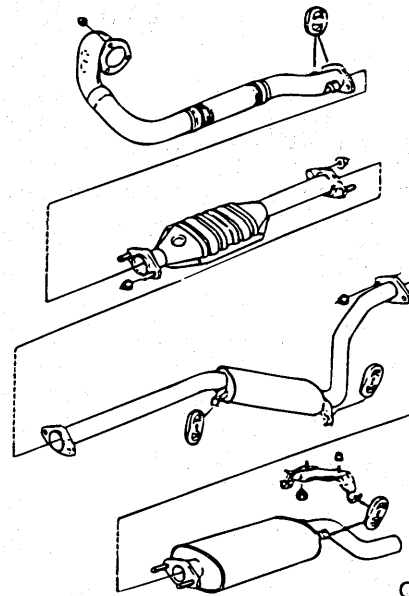


C100M665

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## Exhaust system

Check suspension arrangements, integrity and general condition.



C100M666

## Retighten threaded joints

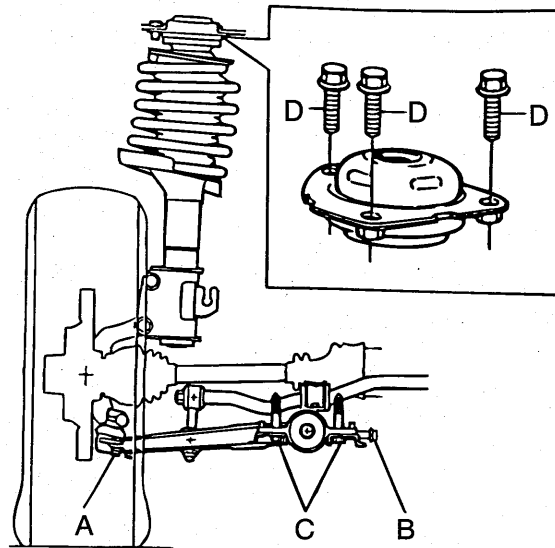
Tighten the indicated bolts to the prescribed torque.

**⚠ WARNING**

Never overload the bolts in a joint by tightening them harder than to the specified torque.

### Front assembly

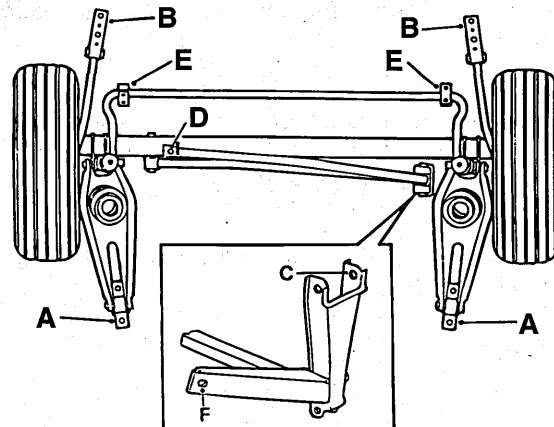
- A Suspension arm ball joint to suspension arm 30 Nm (22 lbf ft)
- B Front bearing, suspension arm to subframe 50 Nm (37 lbf ft)
- C Rear bearing, suspension arm to subframe 50 Nm (37 lbf ft)
- D MacPherson strut bearing to body 47 Nm (35 lbf ft)



C100M667

### Rear suspension

- A Spring link to body 47 Nm (35 lbf ft)
- B Torque arm to body 24 Nm (18 lbf ft)
- C Panhard rod bracket to body 47 Nm (35 lbf ft)
- D Cross brace, Panhard rod bracket to body 55 Nm (41 lbf ft)
- E Anti-roll bar link to body (2) 24 Nm (18 lbf ft)
- F Panhard rod bracket support to body 18 Nm (14 lbf ft)



C100M668

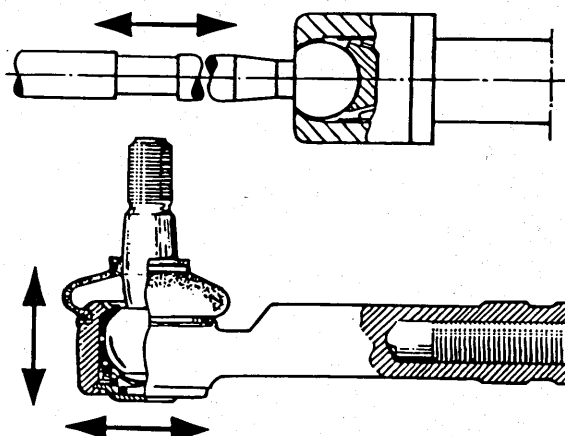


## Tie-rod ends, ball joints and gaiters

### Track-rod ends and rubber gaiters

Check the wear on the inner and outer ball joints. There should be no free play.

Inspect the gaiters.

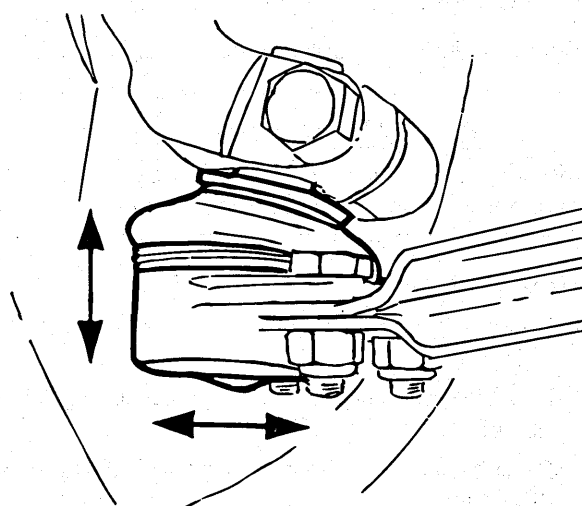


C100M669

### Suspension ball joints and rubber gaiters

Check the wear on the ball joints. There should be no free play.

Inspect the gaiters.



C100M670

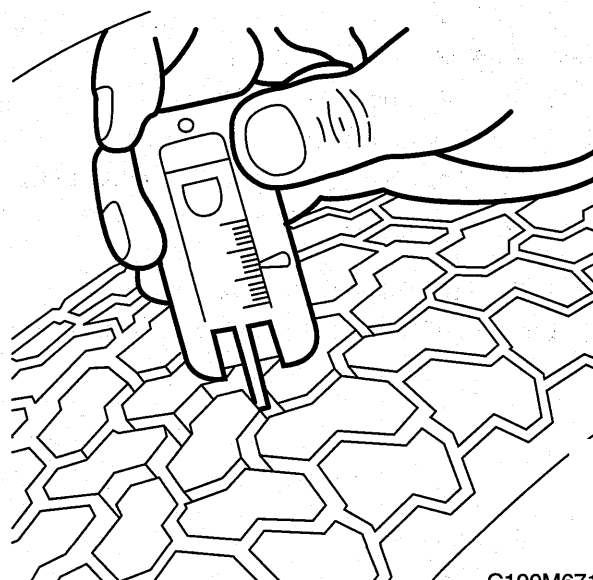
## Tyres

Measure the depth of tread and check the pattern of wear. Check/adjust inflation pressures (including the spare wheel).

If wear is uneven, check/adjust toe-in.

The tyres incorporate a wear warning. When the tread is worn down to a depth of 1.6 mm, transverse bands without a tread pattern appear. The tyres should then be changed.

Make sure you are familiar with the national regulations on tread depth.



C100M671

## Fuel system

Check the fuel lines and fuel tank for damage and leaks. Inspect the mounting points.

## Coolant, changing

Change the coolant (max. 3-year intervals).

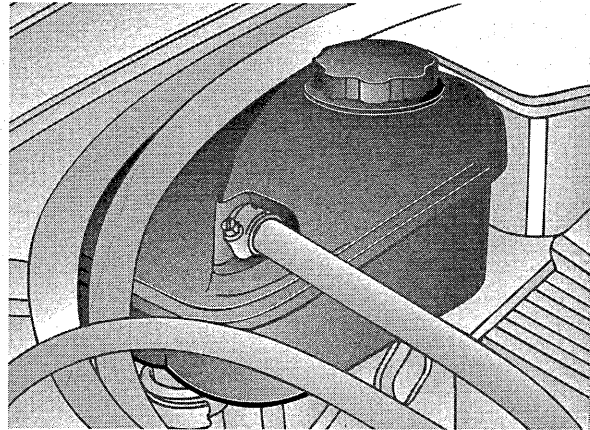
Fill the system up to, but not above, the MAX level mark when the engine is cold. Check the level and adjust as necessary after warming up the engine (thermostat opening).

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### Important

Screw the filler cap down hard or the system will not be pressurized, resulting in a lower boiling point and loss of coolant.

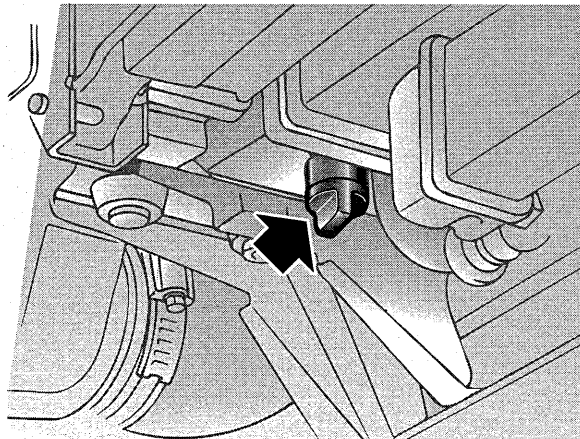
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C100M672

## Bleeding

- 1 Start the engine, A/C or ACC turned OFF, and run it at idling speed until the radiator fan has started once (4-cyl.) or three times (6-cyl.).
- 2 If the car is equipped with a petrol-driven heater it should be bled by detaching the upper coolant hose. If air is present in the heater when it is started, it could be damaged. Start the heater and allow it to run for a while when the radiator fan has started.



C100M673

## Cooling system

### Important

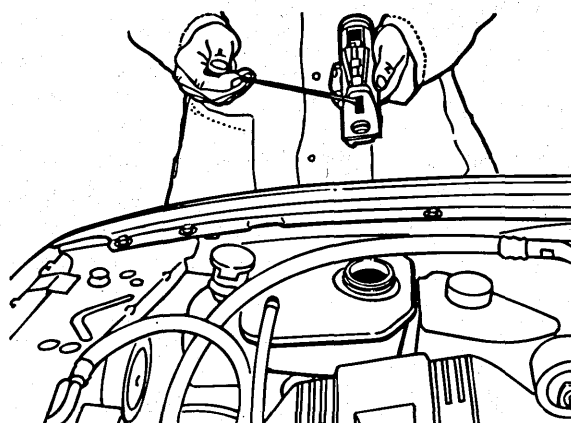
Screw the filler cap down hard or the system will not be pressurized, resulting in a lower boiling point and loss of coolant.

Check the mixture proportions. The coolant should be capable of withstanding temperatures down to between -30°C and -35°C (-22°F and -31°F) without freezing. Top up as necessary with 50% SAAB Original Coolant and 50% water. **This mixture also provides effective corrosion protection.**

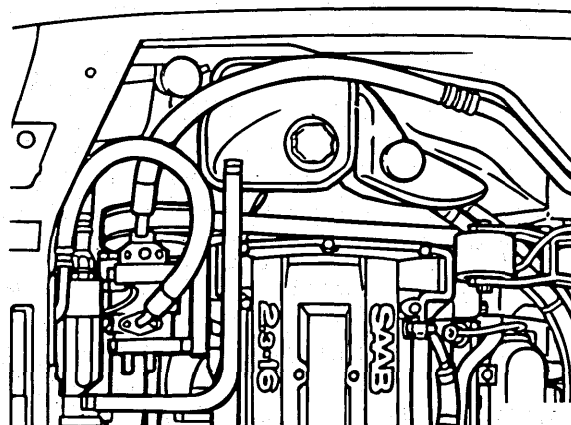
Avoid mixing different types of coolant.

Fill the system up to, but not above, the MAX level mark when the engine is cold. Check the level and adjust as necessary after warming up the engine (thermostat opening).

Check the condition of the hoses.



C100M674



C100M675

## Brake/clutch fluid

### Inspection

Check the level and top up as necessary.

### Brake fluid

Grade to DOT 4 specification,

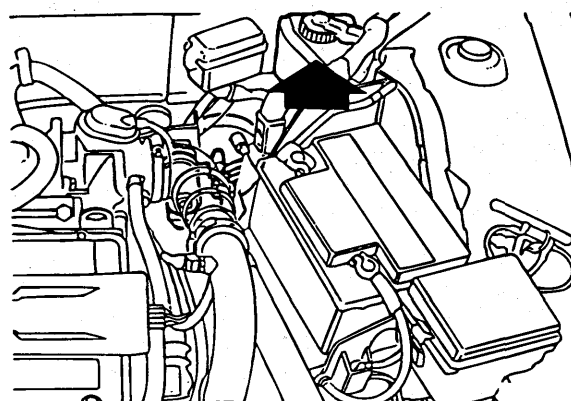
### Change

Change fluid according to the interval in the service programme.

Never use brake fluid which has been stored in an open container.

### Important

See Service Manual 5:1 for special safety instructions.




C100M676

Fill out the "BRAKE FLUID exchanged" label, part number 30 70 17. Affix it in a suitable place on the front structure beside the brake fluid reservoir.

Ord. No 307017	<b>BRAKE FLUID exchanged !</b>
	Fluid in acc. with spec. DOT 4 refilled.
	Mileage ..... miles/km
	Date .....
	Dealer No .....

C100M677

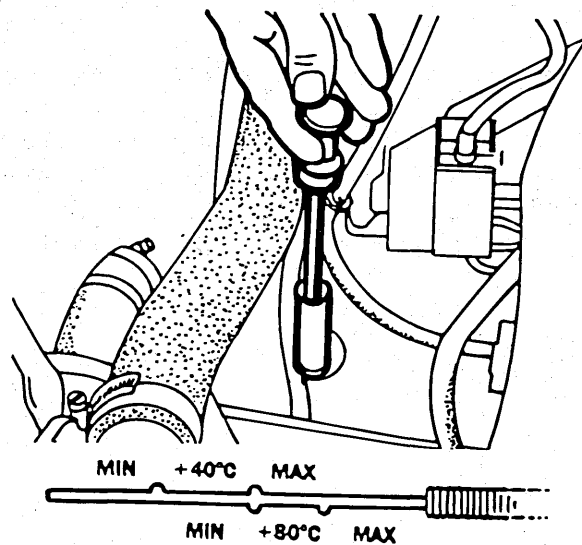
## Automatic transmission, fluid level

 **WARNING**  
Keep the brake pedal depressed.

Apply the handbrake. Start the engine and run it at idling speed. Select D and wait at least 15 seconds. Then select R and wait another 15 seconds. Repeat in position P.

Check the fluid level (engine running at idling speed and selector lever in P). Top up as necessary.

Carefully note the appearance and odour of the fluid. If it is turbid/discoloured and/or smells burnt, a change of fluid is recommended even if nothing has been said about poorer shifting performance or unusual noise.



C100M678

### Important

The dipstick has two sets of level marks, one set for hot oil and one for cold oil. The amount of fluid between the maximum and minimum marks is about 0.4 litres (0.4 qts).

### Oil type (not ME):

Dexron II transmission fluid.

### Oil type (ME only):

Dexron IIE transmission fluid.

## Power steering, fluid level

Check the level and top up as necessary. If the fluid level is low, investigate the cause.

### Important

Two types of power steering fluid are used. They must **not** be mixed.

### Oil type:

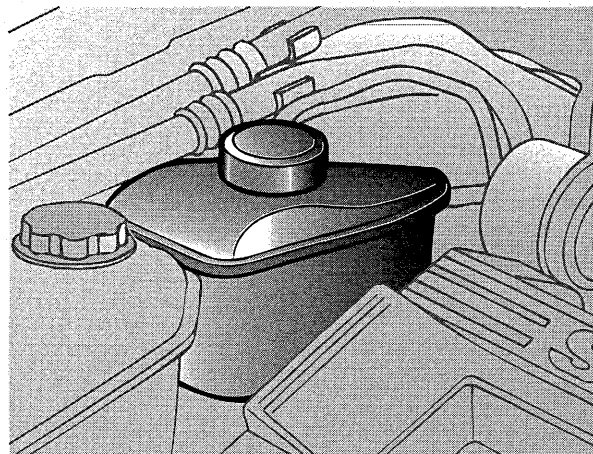
Saab 9000 up to and including chassis number V1014201: Saab Power Steering fluid PS 4634, part No. 30 09 800 - 0.75 litres.

Saab 9000, as from chassis number V1014202: Power steering fluid CHF11S, part No. 30 32 380 - 1 litre.



### WARNING

Fluid spilled on hot parts could cause a fire.

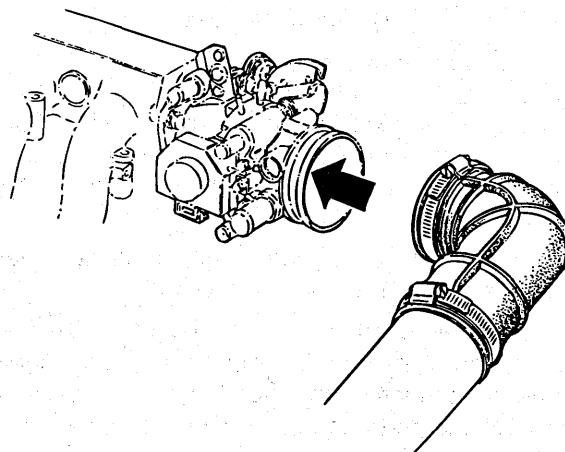


C100M679

## Throttle body (not B308)

Detach the throttle body's intake hose, open the butterfly and dry out the body using a cloth moistened with a solvent.

To be done if idling is lumpy or engine will not idle.



C100M680

## Spark plugs

Engine	Designation	Electrode gap, mm (in)
2.0 I injection	NGK BCPR 6ES	1.0 - 1.1 (0.039 - 0.043)
2.0 I Turbo	NGK BCPR 7ES	1.0 - 1.1 (0.039 - 0.043)
2.3 I injection	NGK BCPR 6ES	1.0 - 1.1 (0.039 - 0.043)
2.3 I Turbo	NGK BCPR 7ES	1.0 - 1.1 (0.039 - 0.043)
V6 injection	Bosch FR 8 LDC (normal driving) Bosch FR 7 LDC (hard driving)	0.7 - 0.9 (0.027 - 0.035)

### Electrode gap

The spark plug electrode gap, pos. 2, should be measured with a wire gauge

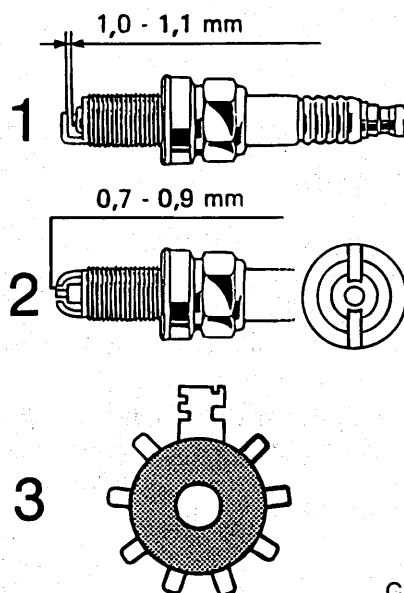
**Tightening torque: 27 Nm (20 lbf ft)**

Illustration

1 With Trionic

2 With Motronic, V6

3 Wire gauge



C100M681

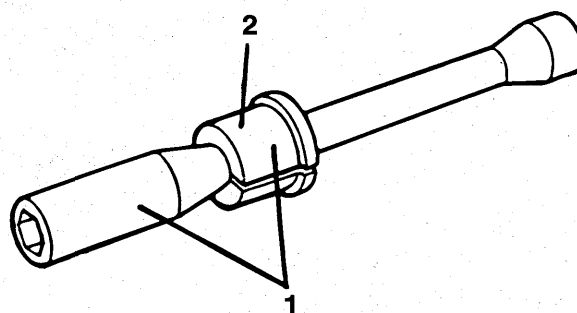
### Important

Use tool 83 94 785 to avoid the risk of breaking the V6 engine's spark plugs.

Illustration

1 Tool 83 94 785, complete

2 Sleeve 83 94 843

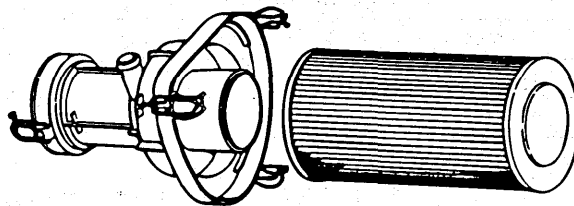


C100M682

## Air cleaner

- Change the filter element.
- Clean the interior of the filter housing.

If the car is used in an extremely polluted environment, it is advisable to change the filter element at more frequent intervals.



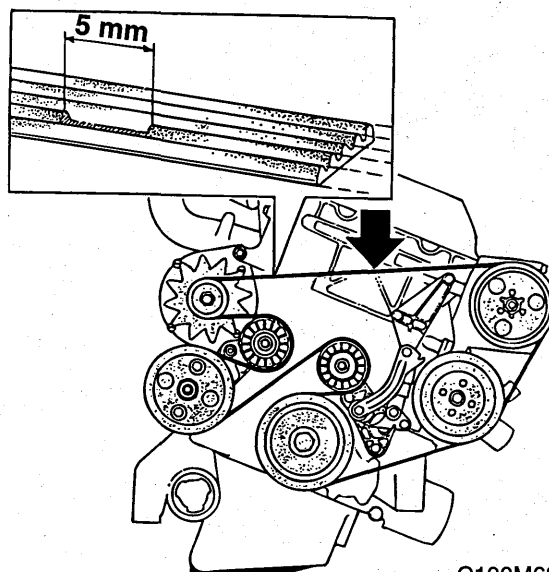
C100M683

## Drive belt, driving of auxiliary equipment

Check the operation and condition of the belt tensioner by pressing on the belt. The belt should return to the tensioned position with even force.

**Testing pressure on the drive belt: at least 170 N (40 lbf).**

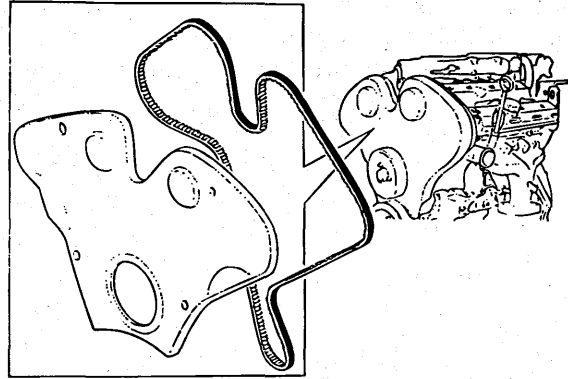
Check the condition of the belt. It should be changed when loss of material (N.B. not just cracks) is greater than 5 mm in the lengthwise direction of the V-belt or if other damage has occurred.



C100M684

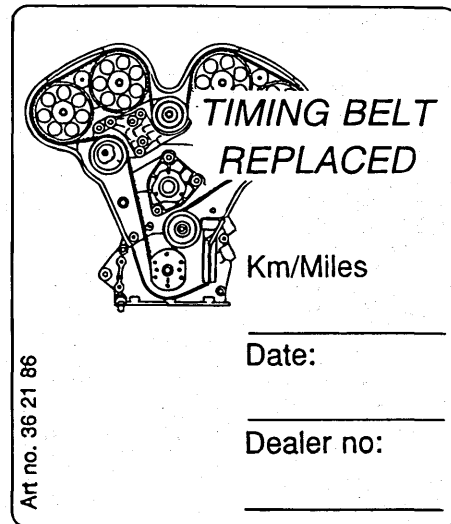
## Camshaft drive (B308)

For replacement, see Service Manual 2:1 Basic engine B308.



C100M685

Complete the "TIMING BELT REPLACED" label. Place it on the front of the timing cover.



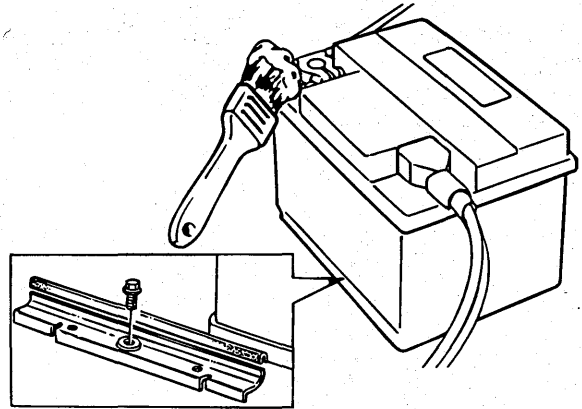
C100M686



## Battery

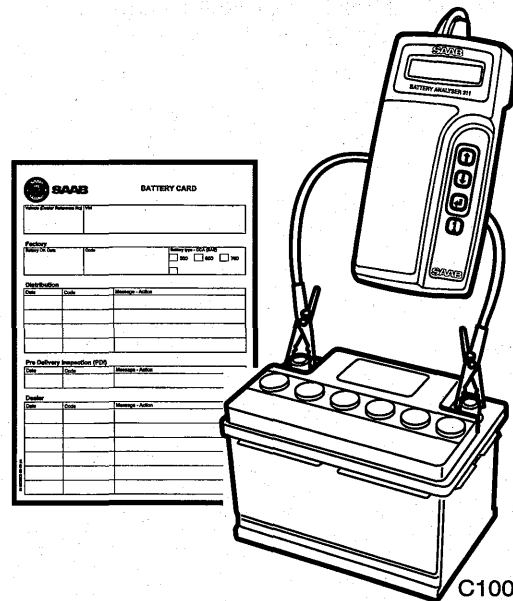
Inspect and clean the battery's terminals and mounting. Smear the terminals with Vaseline. It is important to ensure that the battery is firmly mounted.

Check/adjust the electrolyte level.



C100M689

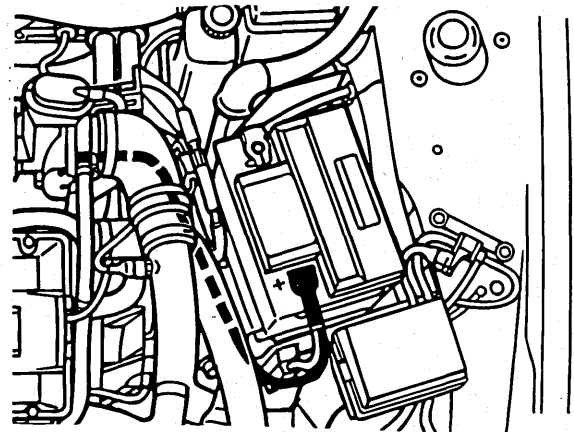
Check the battery voltage, see the section headed "Battery test" on page 75.



C100M603

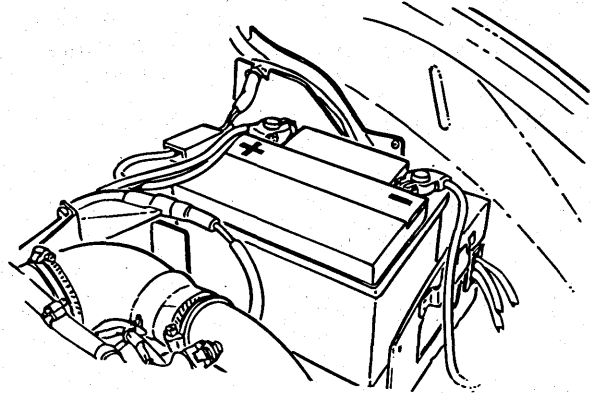
Check the battery's positive and negative cables and their connection points for damage.

Illustration: Position of battery terminals, M1994



C100M691

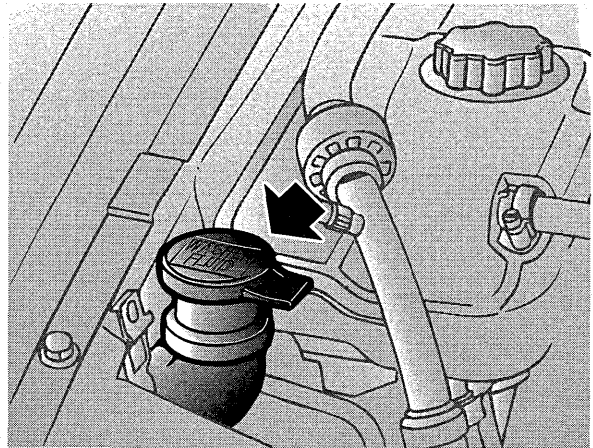
Illustration: Position of battery terminals, M1995-



C100M692

## Washer systems

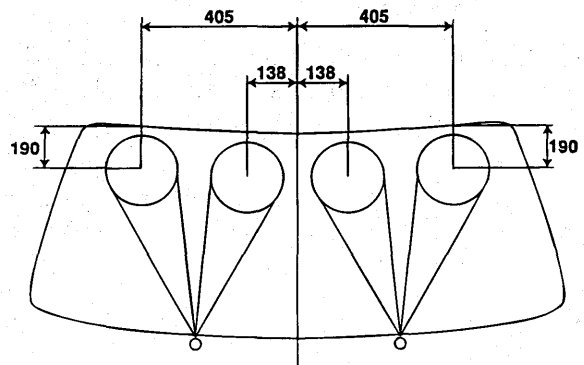
Check the level of the fluid in the reservoir and top up as necessary with a mixture of washer fluid and water according to the table of recommendations on the packaging.



C100M693

## Washer jets

Clean and adjust the washer jets as necessary.



C100M626

## Wipers

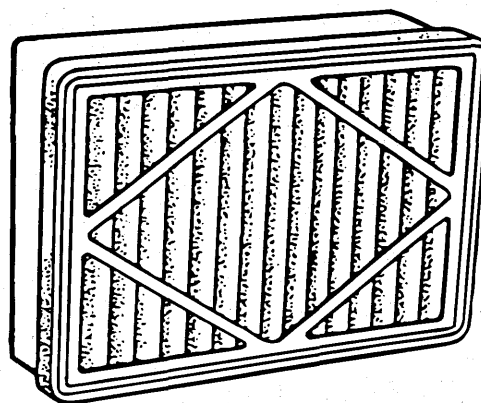
- 1 Lubricate the wiper arm hinges with Gleitmo 805 (white grease), part No. 30 06 442 or Gleitmo 880 (spray), part No. 30 06 582.
- 2 Check the condition of all wiper blades.



## Fresh-air filter

Change the filter element.

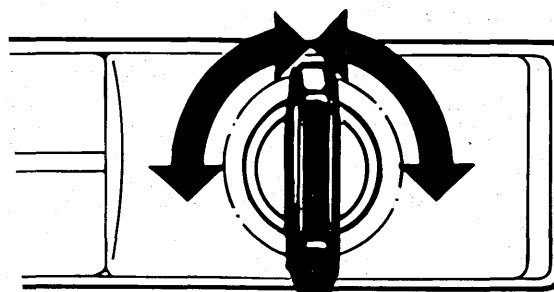
When driving in exceptionally dusty or polluted environmental conditions, or in the case of susceptibility to allergic disorders, changing the filter element at more frequent intervals is recommended.



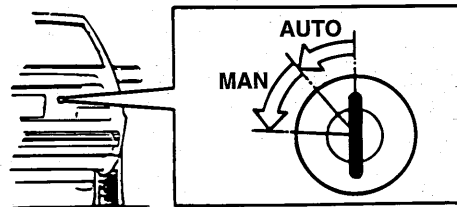
## Doors, bonnet, boot lid, etc. and door keeps

Check the functionality of all door locks, the child safety catches on the rear doors, the boot lid and fuel filler flap. Also check the functionality of the bonnet lock and its safety catch.

The central locking system is operated from both front doors and also by a switch on the central console.



Open the tailgate/boot lid on 9000 CD and CS models from outside with the key and with the switch on the inside of the driver's door.

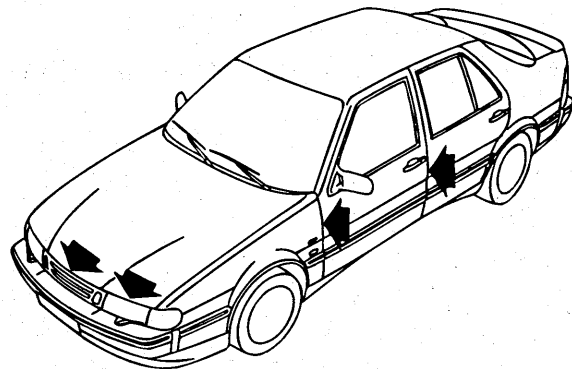


C100M698

### Lubrication

Grease the door keep arms with Gleitmo 880, part No. 30 06 582

Lubricate the bonnet catches, striker pins and springs with Gleitmo 805, part No. 30 06 442



C100M699

### Seat belts

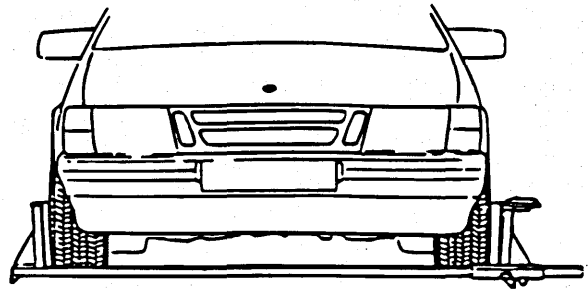
Check the locking function and inspect the straps for damage. Also check that the straps are not twisted at the locking device.



C100M700

## Toe-in

Proceed as follows when checking/adjusting toe-in using special tool No. 88 19 013:

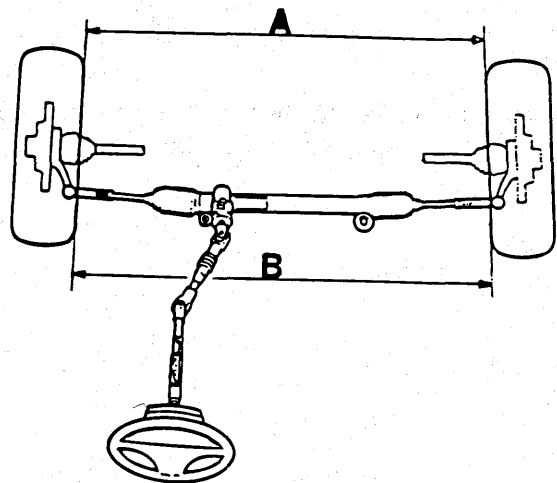


C100M701

Check/adjust the tyre pressures.

Toe-in  $1.5 \pm 0.5$  mm ( $0.06 \pm 0.02$  in).

**Tightening torque: Tie-rod end locknuts 70 Nm (50 lbf ft).**



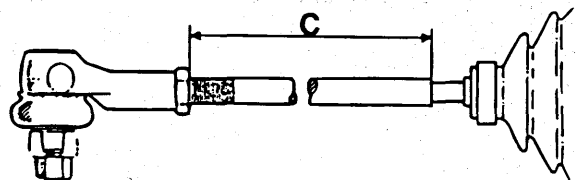
C100M702

### Important

After adjustment of toe-in, dimension C between the locknut and the edge of the groove in the tie rod should under no circumstances exceed 140 mm (5.5 in).

Compared with the opposite tie rod, the difference between dimensions C must not exceed 2 mm (0.08 in).

Check that the steering gear gaiters are not twisted.



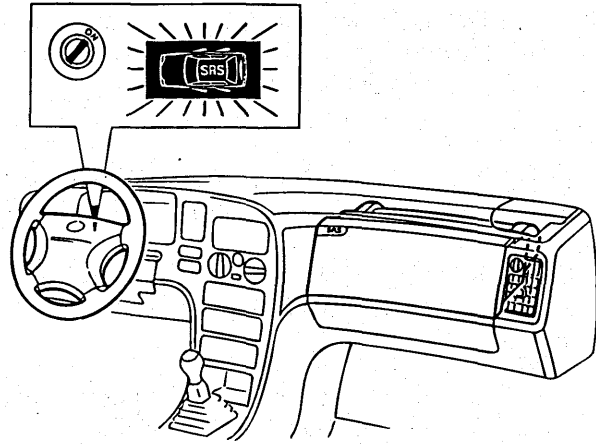
C100M703

## Airbag system

Check that the SRS warning lamp comes on for 6 seconds (3-4 seconds for model years 1995-) when the ignition switch is turned to the drive position and then goes out. If a fault is indicated, read the diagnostic trouble code and rectify the fault, see Service Manual 8:6 Airbag.

Check that the surface of the steering wheel pad/passenger airbag is undamaged and has no prick marks.

Check that nothing is mounted in such a way that it could be flung through the air and injure the driver/passenger or damage the airbag in the event of an airbag being triggered. Pay particular attention to the area round the passenger airbag.

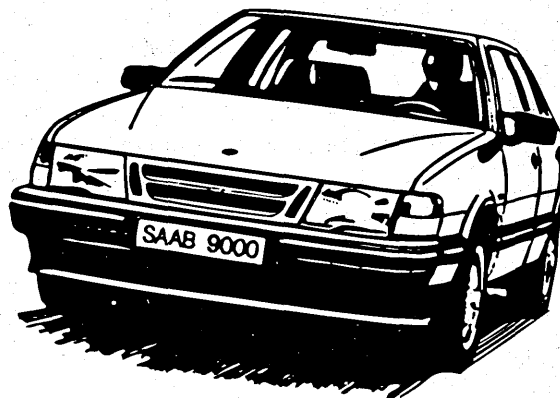


C100M704

### Road test

The road test is an important part of the service programme. Check the functionality of the various components and systems as described below.

- Ignition switch:  
Check the operation of the steering column lock and that the ignition key can be inserted and removed with ease.  
Check the parking position lock on cars with automatic transmission (certain markets only).
- Engine:  
Check functionality and noise level. Turbo: Check that boost pressure is normal during acceleration (the needle moves up towards the red sector).
- Clutch:  
Check declutching and engagement point.
- Manual gearbox:  
Check functionality and noise level.
- Automatic transmission:  
Check the starter motor interlock, i.e. that the engine can only be started with the selector lever in P or N, the noise level and shifting performance.
- Wheels:  
Check wheel balance and wheel roundness.
- Steering assembly:  
Check the straight-ahead position of the steering wheel, directional stability and operation of the power steering system.
- Instruments and indicator lamps:  
Check the functionality of instruments and indicator lamps.
- Brakes:  
Check brake pedal travel, handbrake lever travel (4-5 notches) and the efficiency of the brakes and handbrake.
- Cruise control:  
Check functionality.
- Heating and ventilation unit:  
Check the functionality of the ventilation system and the A/C system as well as their controls. When the outside temperature prevents turn-on of the A/C, check the system indoors.
- Wiper and washer functionality:  
Check the washer jet pattern on the windscreen and operation of the wipers. Where appropriate, also check rear window wiper and washer operation.
- Check that the clock shows the right time.



C100M645

#### **Bear in mind the customer's expectations!**

Wipe the steering wheel and gear lever clean and make sure that all other traces of pre-delivery inspection and service work have been removed.

---

## Battery test

### Test procedure

Use the arrow buttons on the battery analyzer to select the right option in the appropriate menu.

Use the "↵"-key to confirm a selection. Selections will be retained as menu defaults the next time the analyzer is activated.

- 1 Check the battery electrolyte level and top up as necessary (especially in hot-climate markets). If the battery has been used for some time with a low electrolyte level it should be topped up with distilled water and charged before a battery test is performed.

### Important

A low battery electrolyte level over an extended period will permanently damage the battery and shorten its useful life.

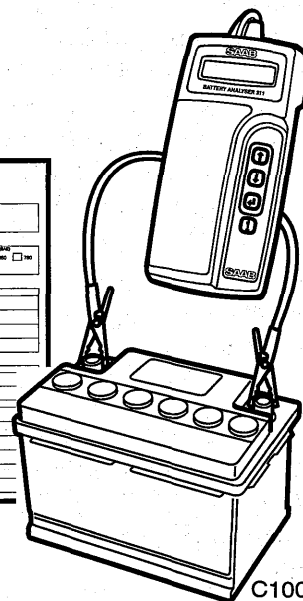
- 2 Clean the battery terminals.
- 3 Connect the red cable clamp to the positive terminal (+). (Reversed polarity will not damage the analyzer.)
- 4 Connect the black cable clamp to the negative terminal (-). When both clamps are connected the analyzer is activated automatically and starts a self-test. If the analyzer is faulty, the text "INTERNAL ERROR SERVICE REQUIRED" will be displayed.
- 5 Take care to ensure that the cable clamps make as good contact as possible.

### Important

Testing can be also be carried out with the battery connected to the car's electrical system. In such case the ignition key must be removed. If the analyzer registers interference from the car's electrical system, the message "SYSTEM NOISE" will be displayed continuously until the source of interference is eliminated.

- 6 If the battery is connected to the car's electrical system, select "IN-VEHICLE" in response to "SELECT TEST". Otherwise select "OUT-OF-VEHICLE".

SAAB		BATTERY CARD	
Customer Name: _____			
Address: _____	City: _____	Phone: _____	
Identification			
Date: _____	Code: _____	Message: _____	Author: _____
Pre-Delivery Inspection (PDI)			
Date: _____	Code: _____	Message: _____	Author: _____
Order			
Date: _____	Code: _____	Message: _____	Author: _____



C100M603



- 7 Under "BATTERY TYPE", select whether the battery is works-fitted ("SAAB BATTERY") or a replacement battery from another manufacturer ("NON-SAAB").
- 8 Confirm with "SELECT TEST BY SAE(A)" if the battery's cold starting current is specified according to CCA (SAE) standard. For batteries specified according to DIN, select and confirm with "SELECT TEST BY DIN (A)".

### Important

For Saab's factory-fitted batteries, CCA(SAE) is always applicable.

DIN standard can be selected when the analyzer is to be used for testing replacement batteries which are not to SAE specification.

- 9 Specify the cold starting current for the battery in question.

The following table indicates the CCA (SAE) values of factory-fitted batteries from model year 1994 and onwards. These values are to be used when testing the relevant battery with Battery analyzer 311.

Manu- facturer	Part number	Car variant	Ah	CCA (SAE)
Varta	4231775	900/9000	60	520 A
Varta	4813804	900/9000	60	520 A
Varta	4947065	900/9000/9-5	60	520 A
Varta	4812921	900/9000/ 9-3/9-5	60	580 A
Jungfer	4354908	900/9000	60	520 A
Bären	4813812	900/9000	60	600 A
Bären	4231783	900 V6 9000	70	570 A
Bären FIAMM	4813820	900 V6 9000/9-5	70	650 A
FIAMM	5107354	900 V6 9000/9-5	70	650 A

### Important

If the battery's cold starting current specification cannot be identified, the standard values below should be used.

9000 and 9-5 with A/C	640 CCA (SAE)
9000 and 9-5 without A/C	570 CCA (SAE)

After selection and value confirmation, the actual battery test starts automatically.

The analyzer may then request more information before presenting the results.

A "BATTERY TEMP"

Under certain conditions the analyzer needs to know whether the **battery's** temperature is above or below 0°C (32°F) to assess the condition of the battery correctly. This may happen if the battery is tested at room temperature. A fresh test is started by selecting and confirming the correct value.

B "SURFACE CHARGE DETECTED"

Under certain conditions the charge may deposit a surface layer on the battery plates. This gives a comparatively high voltage but contains no useful starting energy.

In order to make a correct assessment of the battery in these cases, the analyzer requests the operator to turn the ignition switch to ON and switch on the headlamps for a few seconds with the message "TURN KEY ON HEADLAMPS ON".

The analyzer then indicates when the load can be disconnected with the message "TURN KEY OFF HEADLAMPS OFF". A fresh battery test starts automatically when this has been done.

If the analyzer does not sense that the load has been connected or disconnected, the message "WARNING" is first displayed and then followed by "LOAD ON NOT DETECTED" or "LOAD OFF NOT DETECTED" as the case may be.

C "SELECT MODE BEFORE CHARGE"

"SELECT MODE AFTER CHARGE"

In certain relationships between measured voltage and conductance, the analyzer will need to know whether testing takes place before or after battery charging, if any, so that a correct assessment of the battery can be made.

---

**Important**

Make a habit of checking the electrolyte level before each battery test. This is especially important in a hot climate.

---

After answering the question/s, the analyzer will display the result of the test in one of the following ways:

Message	Meaning
GOOD BATTERY	Fully charged. No action.
GOOD - RECHARGE	Recharge the battery, connect and put in operation.
CHARGE & RETEST	Charge the battery and then repeat the test. If the message persists after charging - change the battery.
REPLACE BATTERY	Replace the battery.
BAD CELL-REPLACE	Replace the battery.

When the messages "GOOD BATTERY" and "GOOD - RECHARGE" are shown, the display alternates between the message and the degree of charge in steps of 25%, e.g. "STATE OF CHARGE: 0-25%". This value provides a clear indication of the current state of the battery.

If the analyzer indicates that the battery needs changing within the warranty period, an extra test with the battery removed from the car is recommended. The test code from this test should then be forwarded together with the claim under warranty.

---

### Important

Also test the replacement battery with Battery analyzer 311 before fitting it in the car. If the cold starting current of the replacement battery is not to SAE standard specification, testing according to DIN standard can be selected at point 7 above.

---

## Lubrication, lubricants

### Lubrication in conjunction with service work

Pos.	Lubrication point	Lubricant
1	Locking pins, safety latch and bonnet lock	Gleitmo 805, part no. 30 06 442
2	Battery terminals	Vaseline, part no. 30 06 665
3	Manual gearbox	<b>M1994 - current M1997:</b> Gearbox oil of mineral type: <b>Not ME:</b> Motor oil (mineral oil) to API service SF/CC, SF/CD Viscosity: 10W30 or 10W40 <b>ME only:</b> SHPD B.P. Vanellus F.E. Viscosity: 10W30 or 15W40 <b>Current M1997-:</b> Saab synthetic manual gearbox oil, part No. 87 48 733 <b>Synthetic motor oil must not be used.</b>
4	Automatic transmission	<b>Not ME:</b> ATF DEXRON II <b>ME only:</b> ATF DEXRON IIE
5	Outer drive-shaft universal joint	Molycote VN 2461C part no. 87 81 676
6	Inner drive-shaft universal joint	Shell Stamina grease 0233, part No. 87 92 624
7	Brake system	Brake fluid, grade to DOT 4 specification
8	Hydraulic clutch operation	Brake fluid, grade to DOT 4 specification
9	Brake light switch	Vaseline, part no. 30 06 665
10	Door switch, interior lighting	Vaseline, part no. 30 06 665
11	Horn, slip ring and contact fingers	Gleitmo 585-K, part No. 82 93 243
12	Seat rails	Shell Stamina grease 0233, part No. 87 92 624 (sparingly)
13	Handbrake cables	Shell Stamina grease 0233, part No. 87 92 624
14	Boot lid lock mechanism	Thin penetrating oil
15	Rear anti-roll bar bushings	Molycote 33 medium, part no. 30 20 476
16	Gear lever housing	Gleitmo 980 spray, part No. 30 06 954, allow to dry for about 15 minutes and then coat with Gleitmo 750 grease, part No. 30 07 309 paste
17	Windscreen wiper arm	Gleitmo 805 (white grease), part No. 30 06 442 or Gleitmo 880 (spray) part No. 30 06 582
18	Door keeps	Gleitmo 880, part no. 30 06 582
19	Bonnet hinge	Vaseline, part No. 30 06 665 or Gleitmo 805 part No. 30 06 442
20	Power steering	Up to and including chassis No. V 1014201: Saab Power Steering fluid PS 4634, part No. 30 09 800 - 0.75 litres. As from chassis No. V 1014202: Power steering fluid CHF 11S, part No. 30 32 380 - 1 litre.
21	Front anti-roll bar bushings	Molycote 33 medium 30 20 476
22	Input shaft splines	Molycote Rapid G part no. 87 81 684
23	Engine	<b>Grade:</b> Saab Turbo engine oil or alternative engine oil to specification API SG/SH and ACEA A2-96/A3-96, including the expiring specification CCMC G4/G5. We advise against the use of additional additives. <b>Viscosity:</b> SAE 10W/30 or 10W40. On markets where these viscosities are not available, 15W40 may be used. At constant temperatures of -20°C (-4°F) or below, use 5W-30 or 5W-40. These must be fully synthetic or synthetic based. At constant temperatures of +15°C (+59°F) or above, use 15W-50 or 20W-50.

## Lubrication to prevent seizing

Threaded joints subjected to wide temperature fluctuations may tend to seize and will then be difficult to unscrew on the next service occasion.

Typical threaded joints of this type are:

Exhaust gas recirculation valve connection

Oxygen sensor

Retaining nuts for the exhaust manifold and turbocharger

Recommended lubricants: MOLYCOTE 1000 30 20 971  
or NEVER SEIZE.



**SAAB**

Saab Automobile AB, Trollhättan, Sweden

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