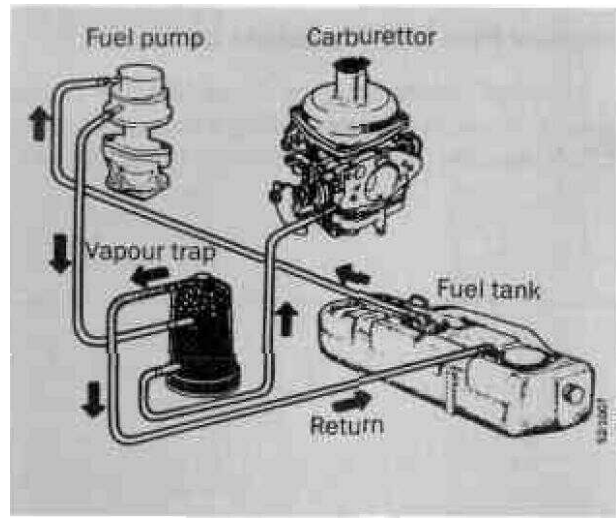


# Vapour trap

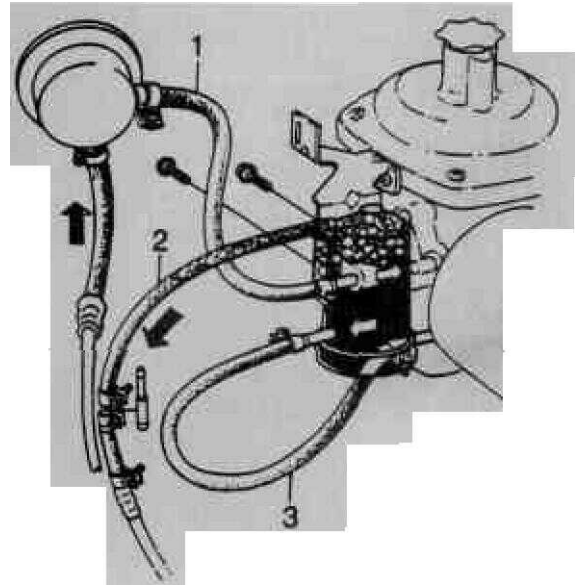
## Vapour trap 1986

Because of the increasing proportion of volatile substances in the fuel, there is now a greater likelihood of vapour locks occurring in the fuel system, resulting in erratic performance of the engine immediately after starting and at high ambient temperatures.

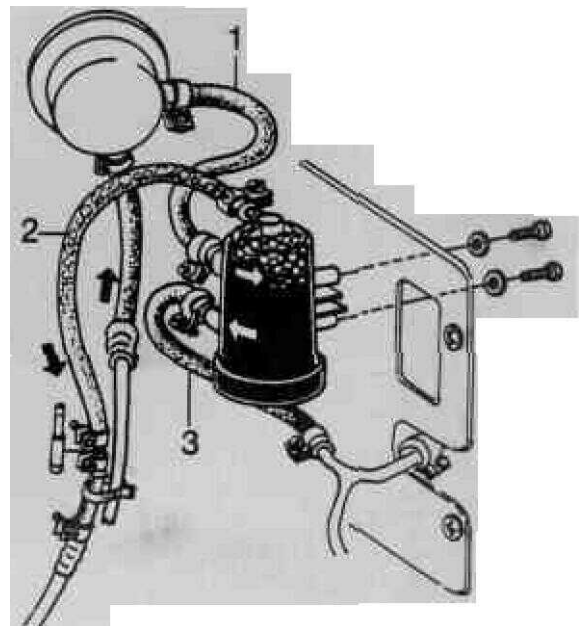
To overcome this problem, a vapour trap has been fitted in the line between the fuel pump and carburettor. Any bubbles in the fuel rise to the top of the vapour trap and then flow through a return line back to the fuel tank.



*Operating principle of vapour trap*



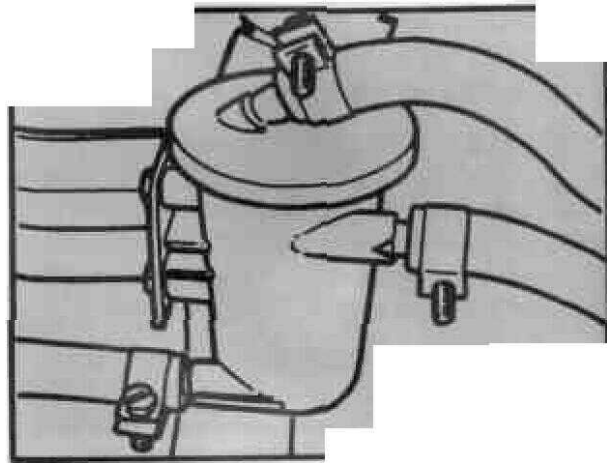
*Single carburettors*



*Twin carburettors*

## Vapour trap 1987 models onwards

A modified vapour trap, on which the fuel outlet is on the opposite side, is fitted to cars as from 1987 models.



# Induction system

Checking the preheater butterfly (-1985)	232-1
Checking the preheating system (1986-)	232-3

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Changing the bimetallic valve	232-3
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## Checking the preheater butterfly (-1985)

A rough check of the valve operation can be made by noting its movement when the cold air intake is removed.

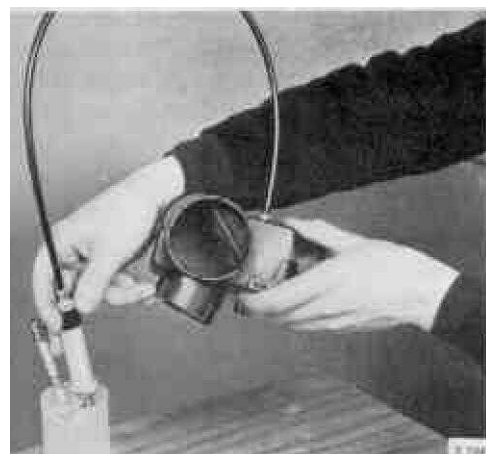
A more accurate check can be made by removing the valve body with the cable and the thermostat and immersing it in hot or cold water and checking the position of the valve from the figures below.

23°C (73°F) - preheated air only

37°C (99°F) - cold air only

### Note

When performing this check the cable should adopt approximately the same position as it has in the car.



## Checking the fit of the thermostat

A check should be made of the fit of the thermostat in all 1982 model cars with single or twin carburetors and 1983 model cars with chassis nos. up to and including AD 1013633, AD 20 05225 and AD 60 01036.

If the thermostat body can be rotated easily by hand, adjust it so that the distance between the plastic sleeve and the thermostat body is  $9 \pm 1$  mm ( $0.35 \pm 0.04$  in). Lock the thread with Loctite IS496, Saab part nr. 83 43 808.

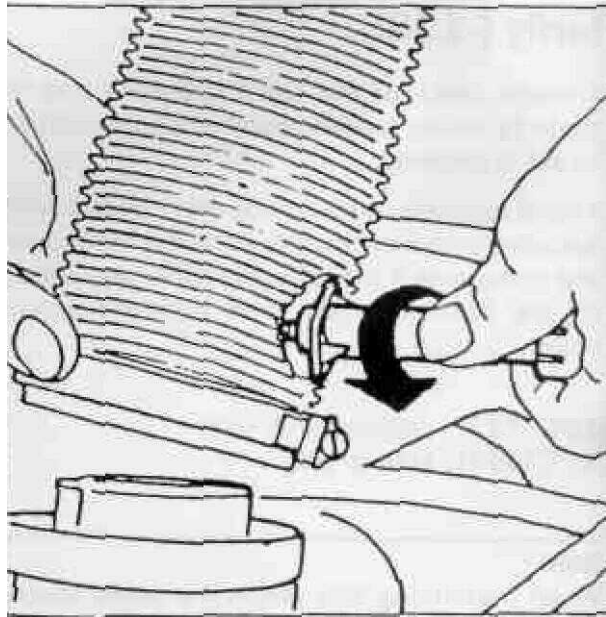
Even if no adjustment is made to the thermostat, apply Loctite to the thread.

### Note

After the valve and thermostat have been adjusted, check the carburetor for setting.

### To fit

Fit the thermostat first. Check that the valve closes the cold air intake at 20°C (68°F). If the valve is open, slacken the plastic nut for the cable sheath and turn it through 180°, in the direction it will go, to select a new position for fitting. **This** changes the direction in which the cable-tension acts, exerting a force on the valve in the direction of the cold air intake.

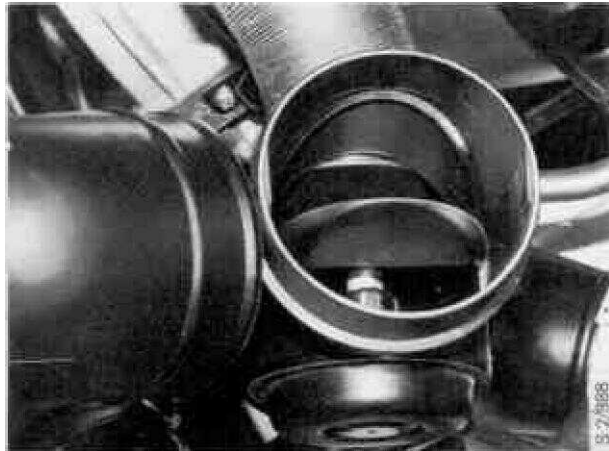


### Note

When fitting a new preheater valve body assembly, make sure that the thermostat is securely fitted.

## Checking the preheating system (1986 models onwards)

- 1 Detach the preheater valve body from the air cleaner so that the butterfly can be observed.



- 2 Detach the air intake hose from the carburettor to expose the bimetallic valve.
- 3 Start the engine and allow air at a minimum temperature of **30°C (86°F)** to be drawn through the bimetallic valve. Observe the butterfly and check that it closes the port for preheated air. Next allow air at a temperature below 20°C (68°F) to be drawn in through the bimetallic valve and this time make sure that the butterfly closes the cold-air port.

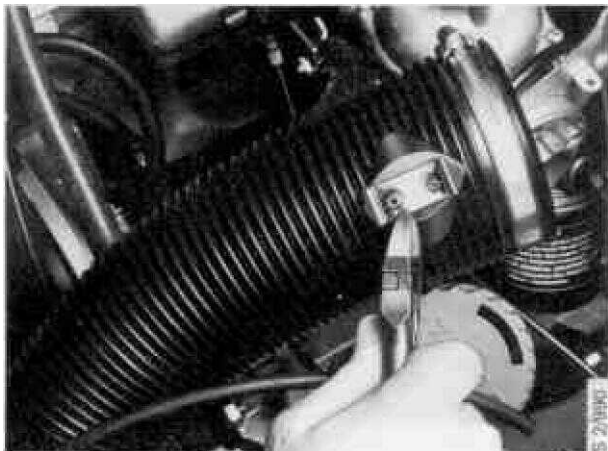


## To change the bimetallic valve

- 1 Detach the vacuum lines from the underside of the air intake hose at the carburettor.
- 2 Snip off the retaining clip for the bimetallic valve and remove the valve from the hose.

### Note

When fitting a new valve, always use a new clip.



# Fuel system

Removal	233-1
Refitting	233-1

Cleaning the fuel filter	233-2
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## To remove

Disconnect the fuel hoses from the pump. Remove the fixing bolts and washers, and then remove the pump and gasket. The pump cannot be dismantled and consequently cannot be overhauled in the event of damage to the diaphragm or valves; the entire unit must then be replaced.

Up to and including engine no. D052892:

The filter can be removed for cleaning or replacement with the pump in situ.

Remove the cover retaining screw and lift off the cover.

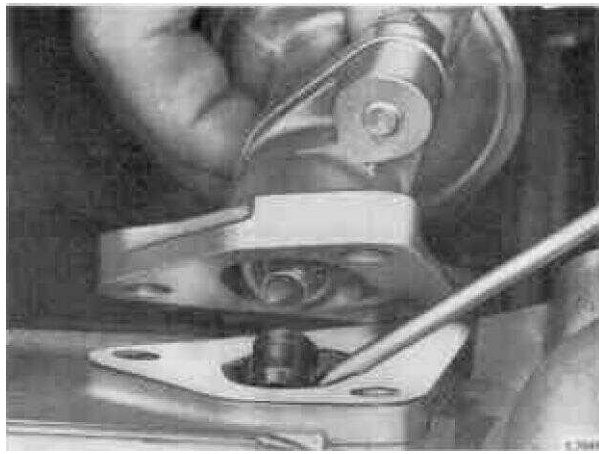
## To refit

Always fit a new gasket. If the fuel pump has been removed with the valve cover in situ, refit as follows.

- 1 Fit together the pump body and adaptor.
- 2 Apply sealant to the cylinder head flange and then fit a new gasket.
- 3 Guide the push-rod into the groove in the camshaft. Twist the push-rod to ensure that it has engaged in the groove.



- 4 Use a small screwdriver to hold the push-rod in position and guide the end of the pump link rod into the collar of the push-rod.



Press the pump against the flange and hold it there while fitting and tightening the three fixing bolts.



## Cleaning the filter

Remove the screw in the centre of the pump cover, liftoff the cover and remove the filter and seal. Clean the filter and cover.

Reassemble.

As from engine no. D052893, the filter is an integral part of the fuel pump and therefore cannot be dismantled for cleaning.



# Fuel tank and fuel lines

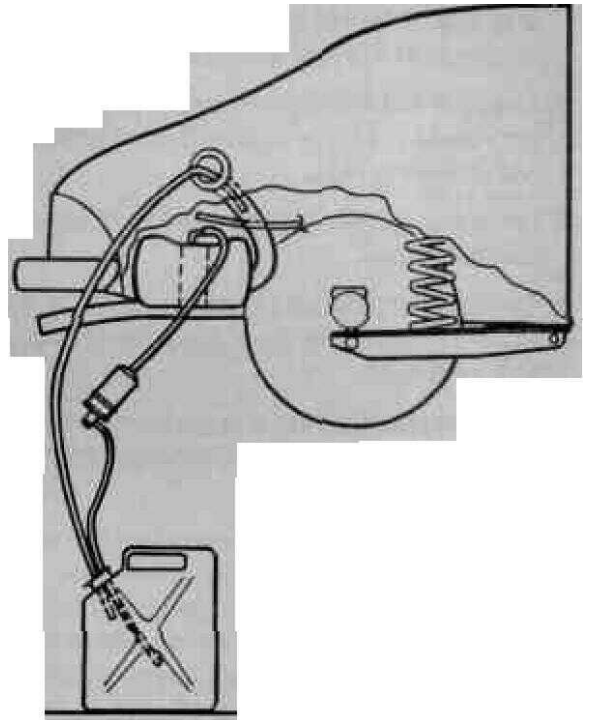
Removal of tank . . . . .	234-1	Replacing fuel lines inside car . . . . .	234-4
Refitting of tank . . . . .	234-2	Fuel gauge sender unit . . . . .	234-5
Fuel lines . . . . .	234-3	Replacing the roll-over valve . . . . .	234-6

## Fuel tank

### To remove

- 1 Disconnect the earth lead from the battery.
- 2 Jack up the rear of the car.
- 3 Drain the fuel tank. To prevent the emission of hydrocarbons into the workshop, drain the tank by means of a closed system.

Connect an electric fuel pump (designed for injection engines) to the inlet line of the fuel tank and pump the fuel through a hose into a container. The work should be done with the car jacked up.



- 4 Remove the rear floor panel in the luggage compartment.
- 5 Remove the fuel gauge sender unit plate.
- 6 Disconnect all electrical connections from the tank.



7 Disconnect the filler pipe and ventilation hoses from the fuel pump.

Disconnect the fuel line from the tank.

8 Remove the securing strap nuts under the tank.

9 Lower the tank.

## To fit

Check that the rubber seals are undamaged and that they are correctly fitted round the opening for the fuel gauge sender unit.

2 Check that the straps are properly mounted, and cover the filler and vent hose openings with masking tape.

3 Lift the tank into position and suspend it in the two straps.

4 Centre the tank and tighten the nuts. Remove the masking tape from the filler pipe and vent hose.

5 Connect the fuel line and the hose to the filler pipe. Make sure that the rubber grommet is in place.

6 Connect the vent hoses between the upper filler pipe section and top of the tank. Connect the cables to the fuel gauge sender unit and replace the access panel. Replace the floor panel and rear floor cover in the luggage compartment.

7 Lower the rear of the car.

8 Connect the battery earth lead.

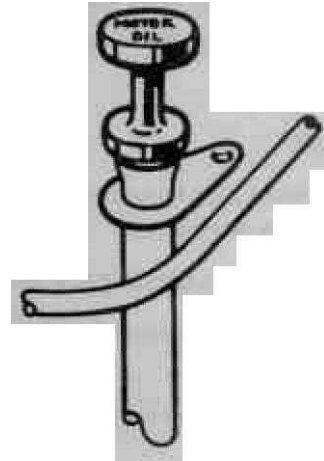
# Fuel pipes

## Fuel pipe runs

Fuel pipes should not come into contact with any object that could result in wear through chafing.

**The risk of wear from chafing is particularly great from contact with plastic components** subjected to engine vibrations (e.g. other fuel pipes, the dipstick pipe, throttle cable, etc.).

It is therefore of special importance when working in the engine compartment that all fuel pipes are run clear of such equipment. Sheath the pipes with PVC sleeves if contact is unavoidable.



## Checking fuel pipes

Follow the pipes and check to see if there is any evidence of wear through chafing.

Special care should be taken when checking pipes that touch or are run near plastic components.

Re-route the pipes and fit PVC sleeves if chafing is detected. If the wear is greater than half of the thickness of the pipe wall then the fuel pipe should be replaced.

## Checking pipe connections

Check fuel pipe connections for leaks.

# Replacing fuel lines inside the car

The fuel line from the tank to the engine compartment runs through the passenger compartment along the **left-hand** sill beam.

## To remove

- 1 Remove the kick plate and turn back the carpet from the sill beam.
- 2 Remove the tape holding the fuel line.
- 3 Remove the insulation felt from the bulkhead.
- 4 Disconnect the fuel line in the engine compartment.

Disconnect the connection at the fuel pump.

- 5 Undo the clip and disconnect the fuel line from the fuel tank.

## To fit

- 1 Clean the fuel line by blowing through with compressed air. Close the ends with masking tape.
- 2 Push the fuel line through the hole in the bulkhead and the spring link bracket and connect the line in the engine compartment.
- 3 Insert the rubber grommets in the hole in the **bulkhead** panel and in the front hole in the spring link bracket.
- 4 Push the fuel line into position and connect it at the rear where it passes through the body. Secure the line with tape in two places along the sill beam.
- 5 Fit the insulation felt to the bulkhead panel. Replace the carpet and kick plate.