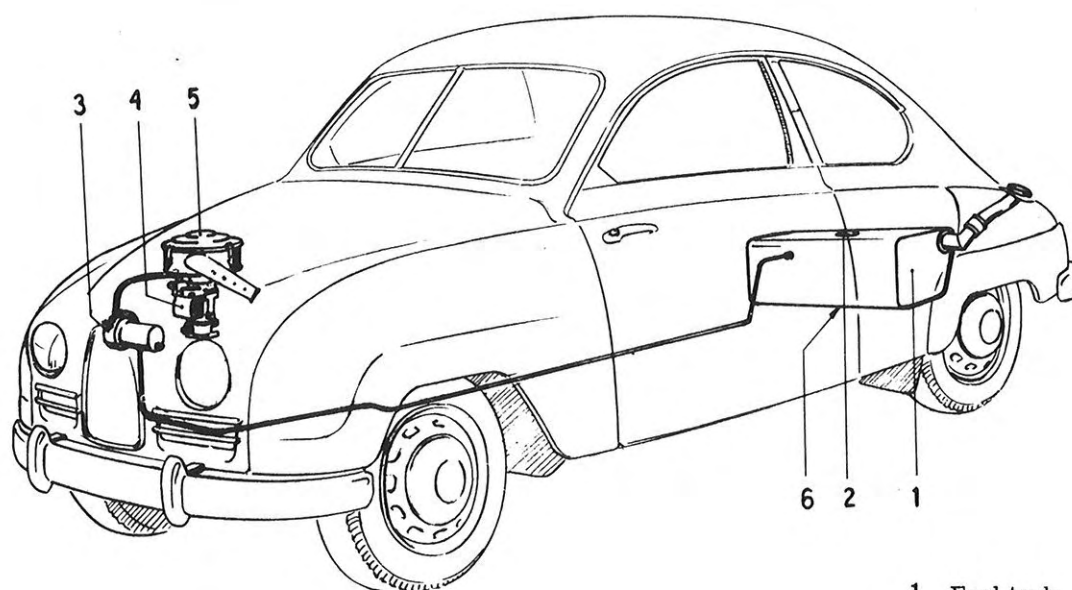


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1. Fuel tank
2. Float fitting
3. Fuel line
4. Fuel pump
5. Carburetor
6. Intake muffler with filter insert and air preheater connection

Fig. 1. Fuel system

1. DESCRIPTION

The car's fuel system consists of: tank, fuel line, pump with inbuilt filter, and carburetor. The layout of the system is shown in Fig. 1.

1.1. Fuel tank

As shown in Fig. 1, the tank is located at the rear of the car under the front part of the trunk. The tank is held in place by two clamp strips and is easily accessible if the front part of the floor in the luggage compartment is removed.

The capacity of the tank is about 36 litres (9 1/2 U.S. galls.). It is made of lead-plated sheet steel and has a baffle plate. A drain plug is provided in the bottom of the tank. The tank suction pipe is fixed in a plate which is brazed to the front wall of the tank, and the length of pipe projecting into the tank is such that small particles of dirt in the

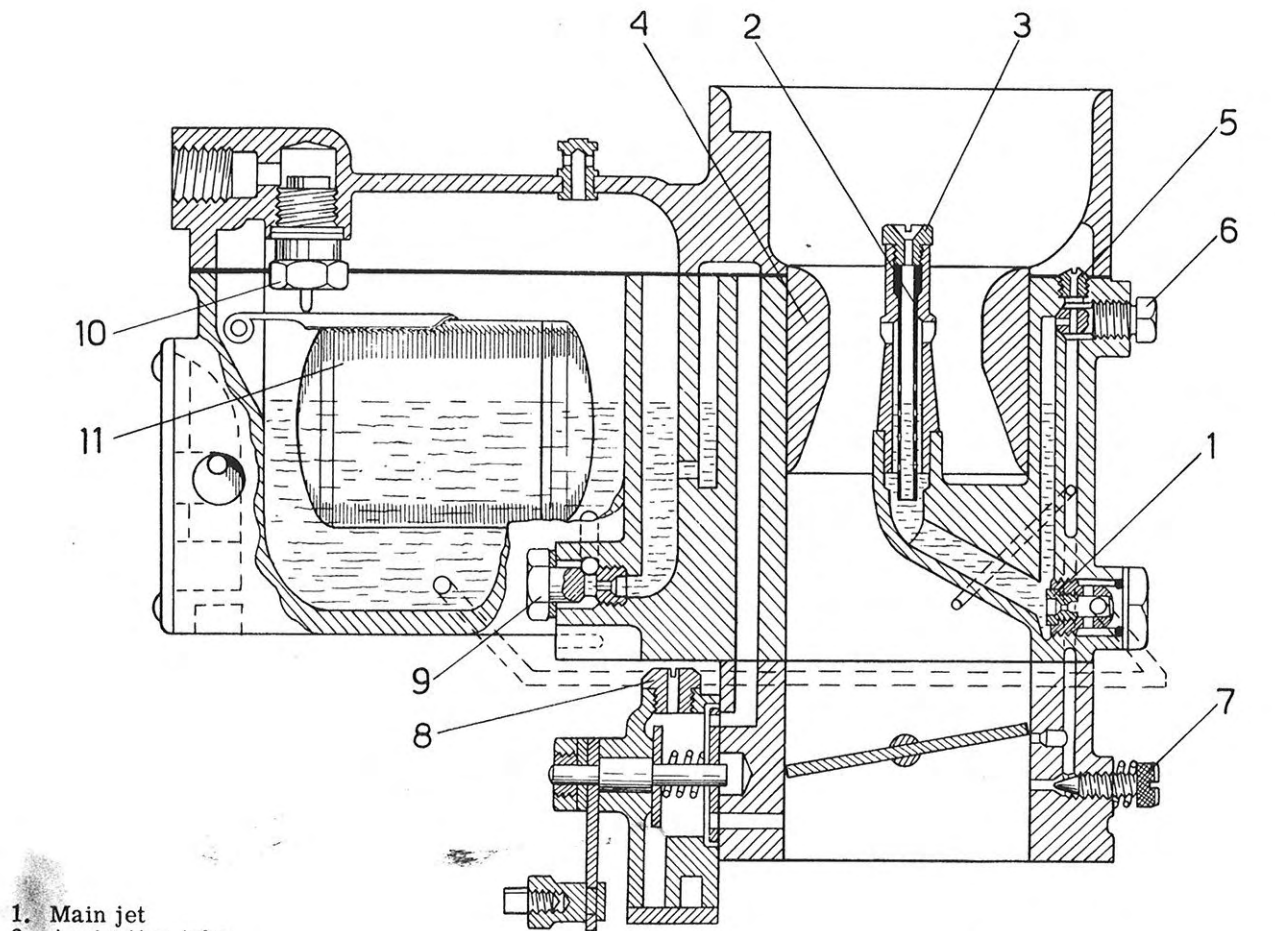
gasoline remain at the bottom of the tank. The tank contains a float with fittings for operation of the electric fuel gauge. The electric fitting is screwed to the top of the tank.

1.2. Fuel line

The fuel line is made of copper-plated steel tube, covered with a plastic sheath.

The fuel line is connected by means of a union to the suction pipe on the front of the tank. It then runs through the rear sloping wall down to the floor and forward in one of the floor corrugations, through the firewall and over the floor of the engine space up to the right-hand wheel housing wall, where it is connected to the fuel pump, which has an integral fuel filter.

4 FUEL SYSTEM



- 1. Main jet
- 2. Aspirating tube
- 3. Aspirating nozzle
- 4. Choke tube
- 5. Idling air jet
- 6. Idling jet
- 7. Idle mixture adjusting screw
- 8. Starting air jet
- 9. Starting jet
- 10. Float valve
- 11. Float
- 12. Adjusting screw, idling speed
- 13. Banjo union with filter
- 14. Float shaft

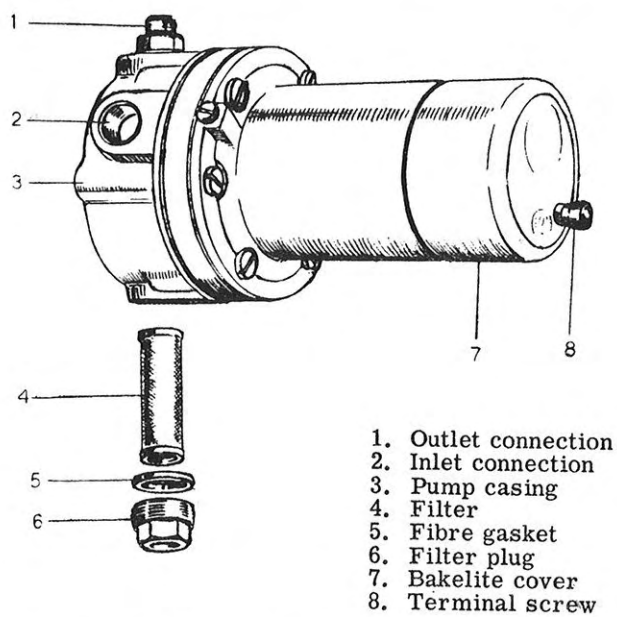


Fig. 2. Electric fuel pump with filter

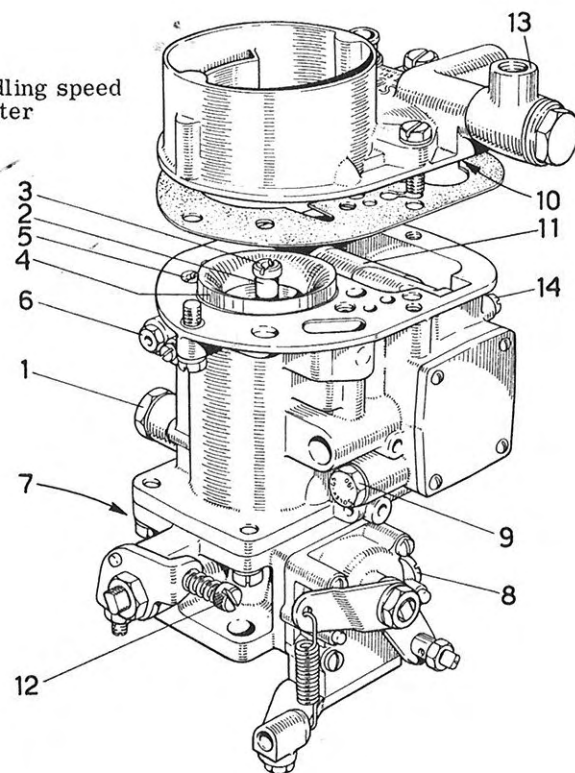


Fig. 3. 4. Carburetor, Solex 40 AI

1.3. Fuel pump and filter

The car is fitted with an SU electric fuel pump with inbuilt filter, see Fig. 2. The pump is attached to the right-hand wheel housing wall. For description of the pump, see Chapter 12.

1.4. Carburetor

The carburetor is a Solex downdraught carburetor of type 40 AI, fitted with a special cold-starting device, also called bistarter.

The bistarter is used for starting a cold engine and gives a richer fuel mixture than the main carburetor. Its mixture ration is determined by the air jet 8 and fuel jet 9, Fig. 3. The bistarter is operated by means of a control, which gives the correct mixture when pulled out. The throttle must be completely closed when the cold-starting device is in use, otherwise the bistarter will operate incorrectly or not at all.

The high-speed system consists of the main jet 1, the aspirating nozzles 3 and the aspiration tube 2, which give the carburetor correct compensation when suitably combined.

Idling is controlled by means of the air jet 5, fuel jet 6 and idle mixture screw 7. Backing of the idle mixture screw gives a richer mixture.

The carburetor is so designed that all jets except the idling air jet are accessible without dismantling the carburetor.

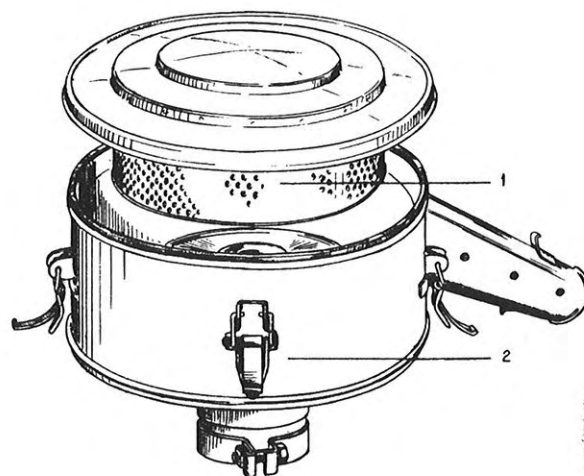
1.5. Intake muffler with air filter and preheater

The carburetor is fitted with a muffler with inbuilt air filter in order to reduce the noise made by the air as it is drawn in, see Fig. 5.

A device for preheating the air drawn into the carburetor is combined with the intake muffler and the exhaust manifold. See Fig. 6. The purpose of this device is to prevent the formation of ice in the carburetor, that could otherwise occur when the air temperature is between -5° and $+15^{\circ}\text{C}$ ($+23^{\circ}$ and $+59^{\circ}\text{F}$) and the relative humidity exceeds 55 %.

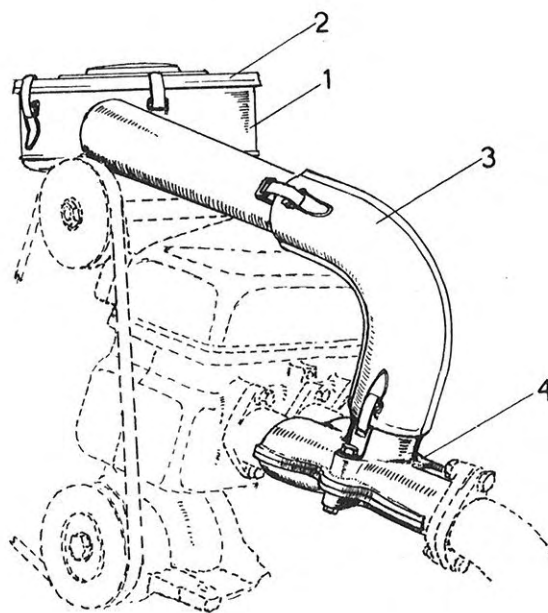
Formation of ice in the carburetor increases fuel consumption and may, in severe cases, cause a marked reduction in power output.

The preheater can easily be removed during the warm summer months.



1. Intake muffler
2. Air filter

Fig. 5. Intake muffler with air filter



1. Intake muffler
2. Cover with air filter
3. Preheater
4.

Fig. 6. Air preheater

2. TECHNICAL DATA

Carburetor: Solex 40 AI. Standard setting, gaso-
line:

Choke tube	mm	25
Main jet		130
Aspirating nozzle		240
Aspirating tube		1
Idling jet		40
Idling air jet		140
Starting jet		190
Starting air jet		3.5
Float valve		2.0

Float weight	grams	21
Float level for 60 mm fuel column	mm	20 \pm 1
Idle mixture adjusting screw opened approx.	turns	2

If the engine is difficult to start when warm, the float level can be lowered to 21 - 22 mm, see Fig. 8. This can be achieved by placing a fibre washer under the needle valve.

Fuel tank, capacity approx. 36 litres
(9 1/2 U.S. galls.)

Fuel pump: see Chapter 12, "Electric system".

3. WORK ON CAR

3.1. Cleaning of carburetor

1. Remove intake muffler.
2. Detach fuel line from carburetor.
3. Remove and clean filter in carburetor banjo union.
4. Remove the four screws in float-chamber cover and lift off cover.
5. Remove screw 14, Fig. 4, which acts as shaft for float lever.
6. Lift out float.
7. Remove main jet 1 (Fig. 3 and 4).
8. Remove idling jet 6.
9. Remove starting jet 9.

All the above-mentioned jets are screwed into place from outside and are easily accessible.

10. Clean float chamber, passages and jets with jet-air.
11. Reassemble carburetor, reversing above procedure.

3.2. Cleaning of intake muffler and air filter

1. Remove clamps holding intake muffler cover.
2. Remove cover, to which filter insert is attached.
3. Wash air filter in kerosene or the like, then clean it with an air-jet and leave to dry.
4. Dip the filter in engine oil and let all excess oil drain off.
5. Wipe out interior of intake muffler and check that the rubber and felt rings in contact with the filter and cover are undamaged. Then refit cover with filter and clamp in place.

3.3. Cleaning and adjustment of electric fuel pump

There is a hexagonal filter plug on the underside of the fuel pump, see Fig. 2. It is recommended to remove the plug and clean the filter every 12000 km (7500 miles) or whenever it is suspected that there is dirt in the fuel. Take care of the ring-shaped fibre gasket fitted between the plug

and the pump casing, and be sure to replace it when the plug is reinserted.

Check contact points in the breaker mechanism of the fuel pump every 12000 km (7500 miles). If the points require cleaning, proceed as described in Chapter 12.

3.4. Cleaning of fuel line and tank

1. Empty tank by removing drain plug in bottom of tank (accessible under car).
2. Remove front flooring in trunk.
3. Disconnect fuel line at tank.
4. Disconnect wire to float fitting.
5. Remove spare wheel.
6. Loosen lower hose clip at joint between upper and lower filler pipe. Note that when the pipes are separated the bleed tube inside the lower filler pipe also comes loose.
7. Loosen clamp strips at the front attachments. These attachments are accessible through the holes in the rear sloping wall after removing the seat back.
8. Remove the tank.
9. Remove float fitting to simplify cleaning of the tank.
10. Blow out the line and clean the tank.
11. Inspect the gasket for the float fitting. Coat the gasket and attachment screws with sealing compound when reassembling.
12. Install line and tank and check for leaks.

3.5. Checking and adjustment of carburetor

1. Remove intake muffler.
2. Disconnect fuel line.
3. Disconnect bistarter control.
4. Disconnect rubber bellows from plate on throttle-valve shaft of carburetor.
5. Remove nuts holding carburetor to intake manifold, and lift off carburetor.
6. Fill the float chamber until the needle valve closes, see Fig. 7.
7. Remove the float-chamber cover.
8. Check carburetor fuel level, see Fig. 8. The

distance between the upper face of the float chamber and the fuel level should be 20 ± 1 mm.

If the engine is difficult to start when warm, the float level can be lowered to 21 - 22 mm (see Fig. 8). This can be done by placing a fibre washer under the needle valve.

9. Check needle valve and its gasket.

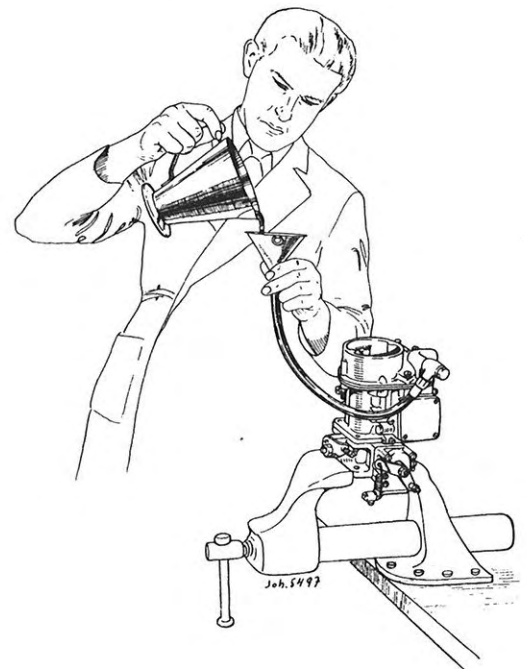


Fig. 7. Filling of float chamber

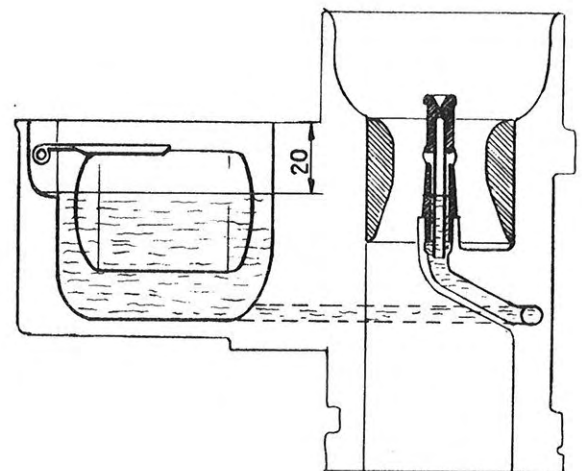


Fig. 8. Float level

4 FUEL SYSTEM

10. Check float lever and its shaft for bending, wear and binding.
11. Check the float (leakage?). Its weight should be 21 grams.
12. Check the main jet, idling jet and aspiration nozzle.
13. Check the slide valve for the cold-starting device (worn face?). Check its pawl, starting jet and starting air jet. Check positions of lever (return motion).
14. Check throttle-valve shaft for wear.
15. After inspection and adjustment, reassemble the carburetor and reinstall it in the car.
16. Start engine, warm it up to operating temperature, and adjust idling as follows.
17. Make sure that the idling regulator screw on the throttle-valve lever is screwed in so that the engine runs at forced idling speed.
18. Screw in the adjusting screw until it bottoms, then screw it out about 2 turns until optimum idling is obtained.
19. Screw out the screw on the throttle-valve lever until the desired idling speed is obtained.