

IV. Compound Cross-Draft Carburetor for Model 190 SL

A. General

Model 190 SL is equipped with two Solex carburetors Type 44 PHH. These horizontal compound carburetors are also known as cross-draft carburetors and have been developed for sports cars with high maximum speeds. They incorporate the latest advances in carburetor design (Figs. 07-0/28 and 07-0/29).

Solex Carburetor Type 44 PHH

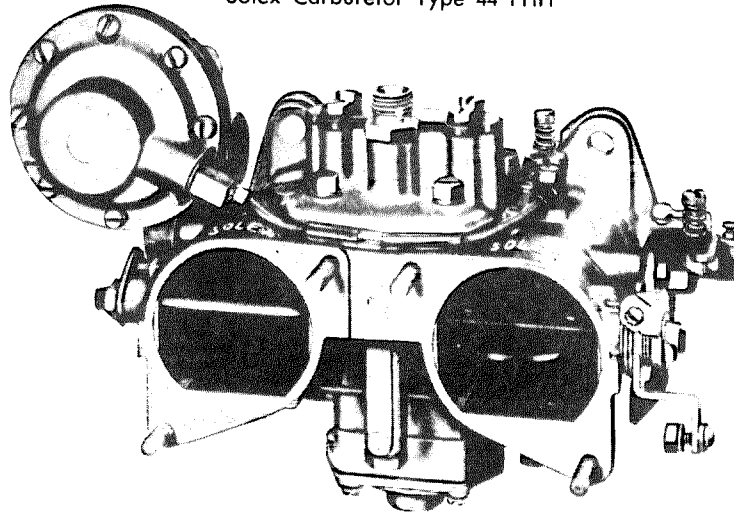


Fig. 07-0/28

Air suction-tube side

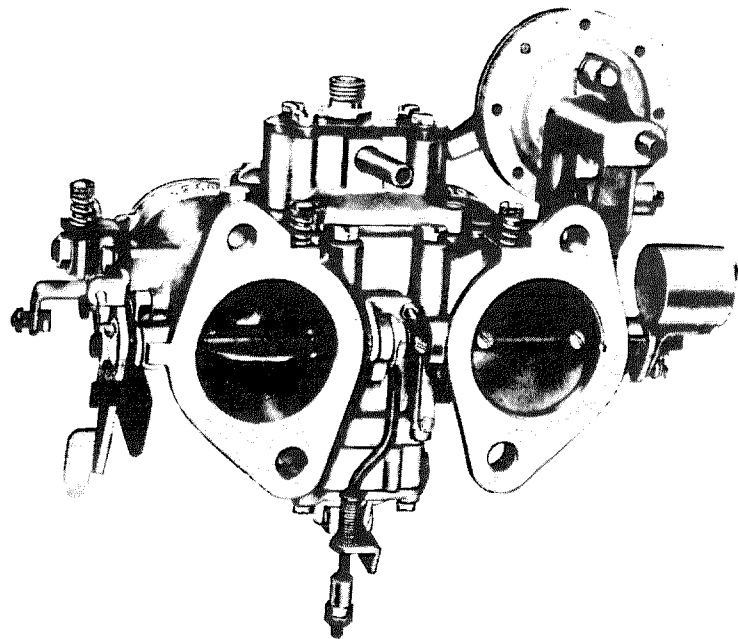


Fig. 07-0/29

Engine side

Two versions of this carburetor have been installed in cars of Model 190 SL. The 1st version has a sand-cast carburetor housing (installed up to Engine End No. 55 00708) and the 2nd version has a die-cast carburetor housing (installed as from Engine End No. 55 00709). The two versions of the carburetor work on the same principle (Figs. 07-0/30 and 07-0/31).

The subsequent installation of die-cast carburetors is described in Job No. 01-4.

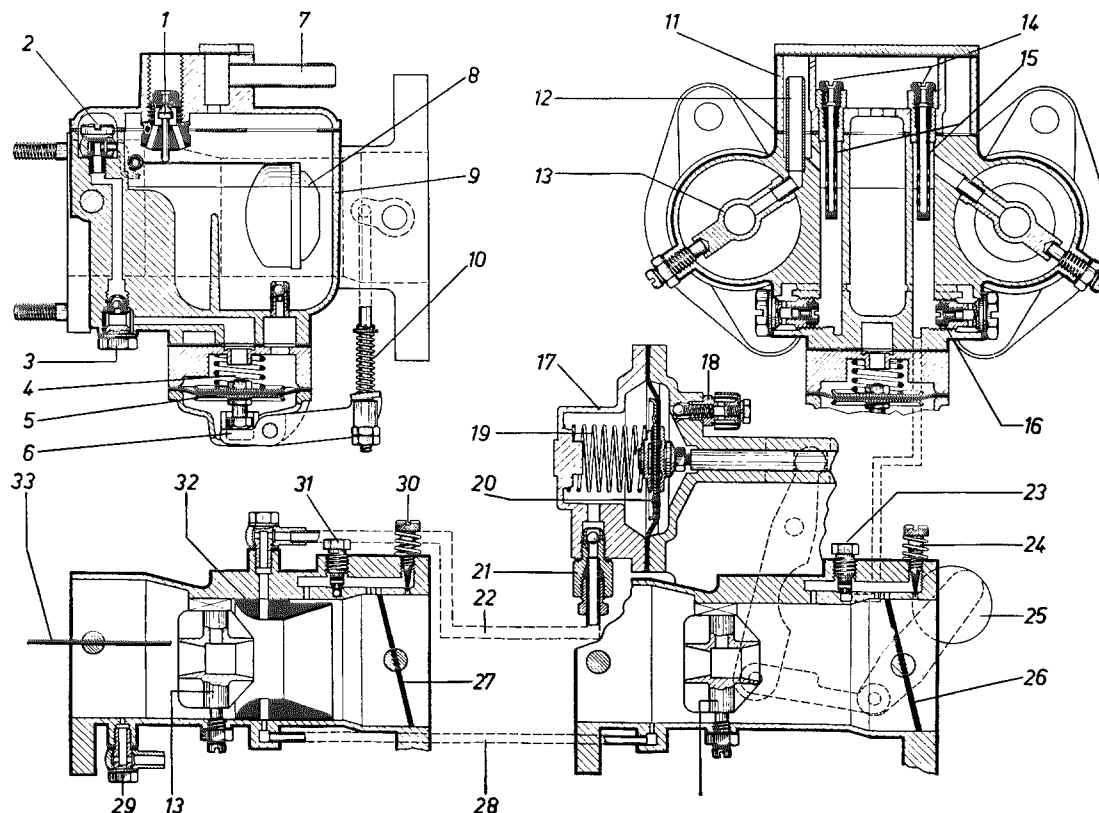


Fig. 07-0/30

Solex Carburetor Type 44 PHH

(Die-cast carburetor)

I Stage 1

II Stage 2

- | | | |
|---|--|--|
| 1 Float needle valve | 12 Overflow control tube | 23 Idle fuel jet of stage 2 |
| 2 Pump jet | 13 Diffuser | 24 Idle mixture adjustment screw of stage 2 |
| 3 Ball valve for accelerating pump | 14 Air correction jets | 25 Throttle valve, lever of stage 2 with counterweight |
| 4 Diaphragm spring | 15 Mixing tubes | 26 Throttle valve of stage 2 |
| 5 Pump diaphragm | 16 Main jet plug with main jets | 27 Throttle valve of stage 1 |
| 6 Pump arm | 17 Vacuum box | 28 Fuel suction line |
| 7 Connection for fuel overflow line and float chamber ventilation | 18 Ball valve (delay valve on atmosphere side) | 29 Union for fuel outlet line |
| 8 Float | 19 Diaphragm spring | 30 Idle mixture adjustment screw of stage 1 |
| 9 Float chamber | 20 Diaphragm | 31 Idle fuel jet of stage 1 |
| 10 Connecting rod with pressure spring and adjusting nuts | 21 Ball valve (delay valve on vacuum side) | 32 Air horn |
| 11 Carburetor cover | 22 Vacuum line | 33 Choke valve |

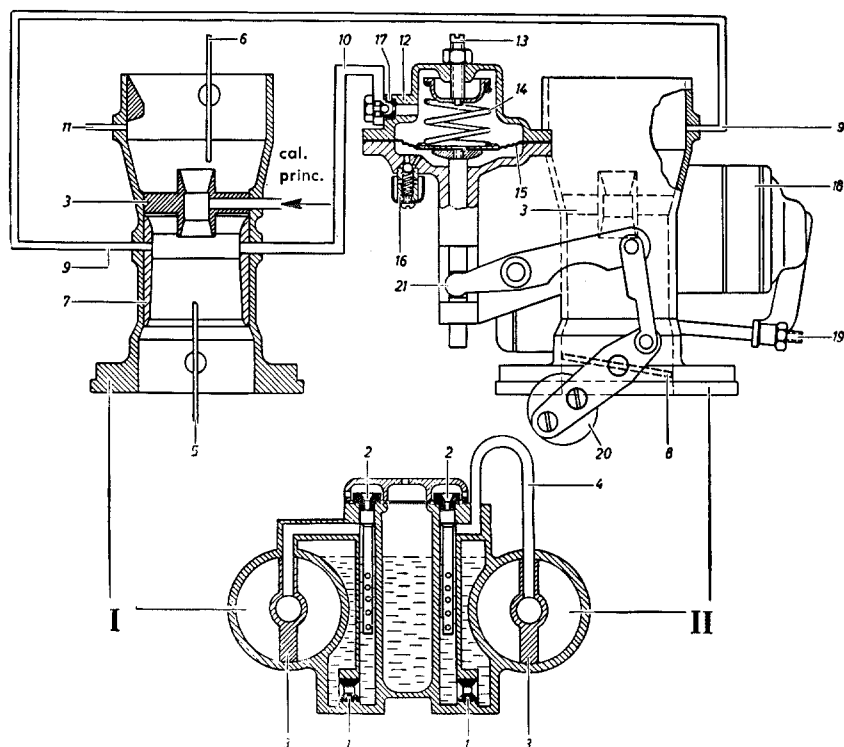


Fig. 07-0/31

Solex Carburetor Type 44 PHH

(Sand-cast carburetor)

I Stage 1

II Stage 2

- 1 Main jets
- 2 Air correction jets with mixing tubes
- 3 Diffuser
- 4 Overflow control tube
- 5 Throttle valve of stage 1
- 6 Choke valve
- 7 Air horn
- 8 Throttle valve of stage 2
- 9 Fuel suction line
- 10 Vacuum line to vacuum box
- 11 Fuel outlet line
- 12 Vacuum box
- 13 Adjusting screw

- 14 Diaphragm spring
- 15 Diaphragm with diaphragm rod
- 16 Ball valve (delay valve on atmosphere side)
- 17 Ball valve (delay valve on vacuum side)
- 18 Accelerating pump
- 19 Connecting rod with pressure spring and adjustment nuts
- 20 Throttle valve lever of stage 2 with counterweight
- 21 Relay lever

B. Arrangement and Function of the Throttle Valves

The compound cross-draft carburetor has two suction canals with one throttle valve each. Each suction canal forms one "stage" and there is no connection between the throttle valve (27) of stage 1 and the throttle valve (26) of stage 2 (see Fig. 07-0/30). Whereas the throttle valve shaft of stage 1 is actuated as usual via the throttle valve lever (38), the throttle valve of stage 2 is opened automatically via the vacuum box (17). The diaphragm (20) in the vacuum box is connected to the throttle valve lever (25) of stage 2 by means of the diaphragm rod (34), the relay lever (35) and the relay arm (36). In the "at rest" position the diaphragm (20) is pushed to the right by the diaphragm spring (19) and thus closes the throttle valve of stage 2.