

Disassembly and Reassembly of Carburetor

Job-No.

07 — 3

Disassembly:

1. After removing the carburetor cover together with gasket, unscrew the float needle valve, together with gasket. Then remove the cover of the starter air valve, after loosening the 3 fixing screws, and take out the spring together with the diaphragm.
2. Take out the plastic float (2) together with the anchor and unscrew the injection tube (5), together with gasket (Fig. 07 — 3/1).
3. Unscrew the air correction jet (9) and the mixing tube of Stage 1 and also the air correction jet (10) and the mixing tube of Stage 2 (Fig. 07 — 3/1).

Note: The air correction jet and the mixing tube of Stage 2 are made in one piece.

4. Unscrew the idle air jet (6) of Stage 1 and the grub screw (13), which is installed instead of the idle air jet of Stage 2 (see Fig. 07 — 3/1).

Note: Use only a good screwdriver for unscrewing the jets; if necessary, grind the screwdriver.

5. Unscrew the fixing screws (4) of the Bowden cable bracket at the starter mechanism and also the hexagon nut by which the relay lever (1) is fixed. Then remove the linkage assembly for the start mechanism (Fig. 07 — 3/2).

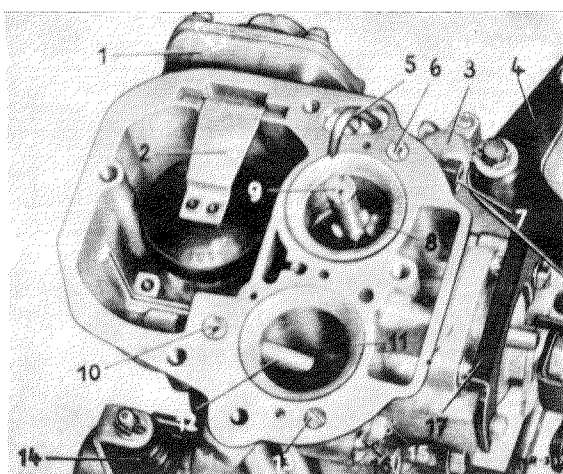


Fig. 07 — 3/1

- 1 Accelerating pump
- 2 Plastic float
- 3 Starter air valve
- 4 Relay lever to start mechanism
- 5 Injection tube
- 6 Idle air jet
- 7 Idle fuel jet
- 8 Air horn of Stage 1
- 9 Air correction jet of Stage 1
- 10 Air correction jet with mixing tube of Stage 2
- 11 Air horn of Stage 2
- 12 Mixture discharge tube of Stage 2
- 13 Grub screw
- 14 Oil shock-absorber
- 15 Retaining screw of air horn
- 16 Grub screw
- 17 Bowden cable bracket

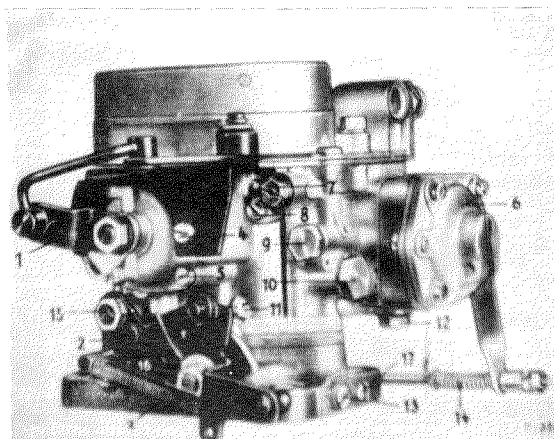


Fig. 07 — 3/2

- 1 Relay lever for operation of start mechanism
- 2 Linkage
- 3 Return spring
- 4 Fixing screw for relay lever
- 5 Fixing screw for start mechanism
- 6 Accelerating pump
- 7 Idle fuel jet of Stage 1
- 8 Retaining screw for air horn of Stage 1
- 9 Pump jet
- 10 Main jet plug with main jet of Stage 1
- 11 Idle adjustment screw
- 12 Ball valve with screen
- 13 Idle mixture adjustment screw
- 14 Connecting rod to accelerating pump
- 15 and 16 Fixing nuts for linkage
- 17 Union for vacuum ignition control

6. Loosen the 4 fixing screws of the start mechanism and remove the start mechanism.
7. Unscrew the main jet plug with main jet of Stage 1 (10), the pump jet (9), the idle fuel jet of Stage 1 (7) and the grub screw which is installed instead of the idle fuel jet of Stage 2 (Fig. 07 — 3/2).
8. Unscrew the main jet (6) of Stage 2 and the starter fuel jet (2) (Fig. 07 — 3/3).

Note: Before removing the main jet of Stage 2, the fixing screw (8) of the oil shock-absorber (7) must first be loosened since otherwise the rubber bellows (5) of the shock-absorber might be damaged.

9. Unscrew the hexagon nut with which the lever of the counterweight is fixed to the vacuum valve. Then remove the lever, together with counterweight and oil shock-absorber. If necessary, remove the cotter pin with which the oil shock-absorber is fixed to the lever of the counterweight, and take off the oil shock-absorber. (Be careful not to lose the two washers.) (Fig. 07 — 3/3.)

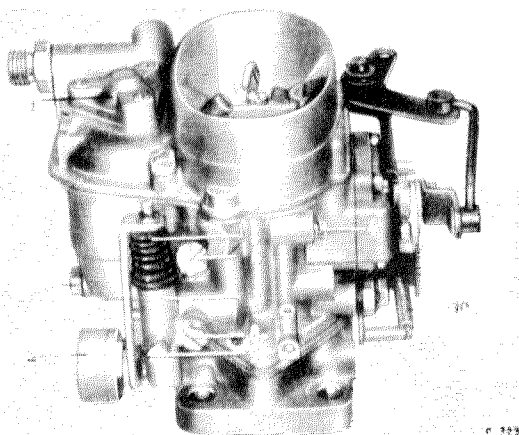


Fig. 07 — 3/3

- 1 Starter air valve
- 2 Starter fuel jet
- 3 Counterweight of vacuum valve
- 4 Grub screw
- 5 Bellows of oil shock-absorber
- 6 Main jet of Stage 2
- 7 Oil shock-absorber
- 8 Fixing screw of oil shock-absorber
- 9 Screw plug for open end of oil shock-absorber
- 10 Return spring for linkage

10. Unscrew the two nuts at the connecting rod and the 4 fixing screws with which the accelerating pump is fixed to the carburetor housing and then remove the accelerating pump. If necessary, disassemble accelerating pump. Unscrew ball valve with screen.
11. Unscrew the two hexagon nuts (15) and (16) with which the linkage is fixed. Then take off the linkage, together with washers, spacer sleeve and cam plate (see Fig. 07 — 3/2).
12. After unscrewing the retaining screws (1) and (2), take out air horns of Stages 1 and 2 (see Fig. 07 — 3/4).
13. Unscrew the 4 fixing screws with which the lower section of the carburetor (grey cast iron flange) is fixed to the carburetor and remove the lower section of the carburetor.
14. If necessary, unscrew the fixing screws of the throttle valves and pull out the throttle valves. Then pull out the throttle valve shafts.

Note: Use only a good screwdriver for loosening the fixing screws. The throttle valves should only be removed if their shafts are worn or bent.

15. Unscrew the idle mixture adjustment screw (13) and the union (17) for the vacuum pipe leading to the distributor (see Fig. 07 — 3/2).

Note: In Fig. 07 — 3/2, the union is shown closed by a grub screw.

Checking:

Note: For cleaning the parts of the carburetor, methylated spirits is particularly useful as it dissolves any residue. After cleaning, the parts should be rinsed in unused cleansing fluid, blown out with compressed air and dried. Do not use cotton waste. When rinsing and blowing out, care must be taken to ensure that every particle of dirt or residue is removed. Jets and bores must on no account be cleaned with wire or needles as otherwise the apertures will be enlarged.

16. Thoroughly clean and check all parts. Replace damaged or worn parts.

17. Replace float needle valve if damaged.

Note: To test the float needle valve for leakage, connect the valve up to a compressed air line with the aid of a threaded fitting. The closed valve must not leak at a pressure of as much as 1.5 atmospheres. Make the leakage test in a gasoline-filled container. In an emergency, the test can be carried out without pressure. To do this, connect a short hose line to the union of the carburetor cover and fill it with gasoline. The gasoline must remain in the hose.

18. Replace float needle valve gaskets if faulty.

19. Replace float if leaking or dented.

20. Check that the mixing tube holder is firmly seated in the float chamber.

Note: If necessary, the mixing tube holder can be tinned at the fitting surface and pressed in again.

21. Re-condition starter rotary slide valve and back plate individually (strictly necessary if the sliding surfaces show signs of wear or dark patches). Use straightening-plate and grade **100-grain** emery cloth.

22. Examine throttle housing closely for flaws.

23. Examine float chamber for flaws.

24. Examine all flange surfaces including the insulation flange and if necessary, true up or replace insulation flange.

25. Check bores of throttle shafts. If the bores are worn, replace throttle housing or float chamber. Do not attempt to repair.

Carefully grind throttle shafts if they bind.

26. Examine check valves in the diaphragm pump and check injection tube.

27. Examine diaphragms of starter air valve and diaphragm pump.

Reassembly:

Special attention should be paid to the following points when reassembling.

28. Lightly coat the gaskets with oil.

29. Fit the insulation flange with sealing compound.

Note: Apply sealing compound very thinly.

Caution: Care should be taken to ensure that none of the bores in the insulation flange, in the carburetor housing and in the throttle housing are stopped with sealing compound when the parts are pressed together.

30. The air horns should be seated firmly but not tightly in the carburetor; they are kept in position by the retaining screws.

31. **Fit the start mechanism with rotary slide valve into the lower part of the starter so that the fuel chamber (19) is at the top (Fig. 07 — 3/4).**

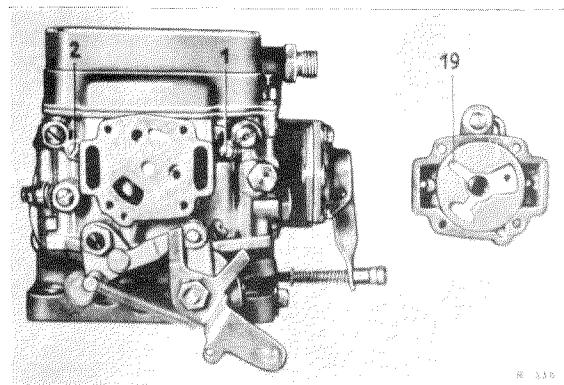


Fig. 07 — 3/4

- 1 Retaining screw for air horn of Stage 2
- 2 Retaining screw for air horn of Stage 1
- 19 Fuel chamber (see also Fig. 07—0/7)

Note: The starter rotary slide valve must not be distorted when fitting since otherwise the start mechanism will not operate.

32. Check all levers and throttle valves for ease of movement.

33. Check carburetor for leaks.

Note: The insulation flange between carburetor and grey cast iron flange can be checked for leakage in the following way:

Screw in the idle mixture adjustment screw as far as it will go and wet the joint at the insulation flange with gasoline. Then blow compressed air into the idle air jet (take off

carburetor cover for this operation). If the flange makes a perfect seal, no bubbles will form along it.

34. Before installing the carburetor in the vehicle, fill the oil shock-absorber with 1.2 ccs. SAE 10 W engine oil (see Servicing and Filling Instructions for Oil Shock-Absorber of Carburetor).

Servicing and Filling Instructions for Oil Shock-Absorber of Carburetor

35. In order to fill the oil shock-absorber (1), remove the slotted-head screw on shock-absorber, together with sealing.

36. Using a suitable oil can (2), inject SAE 10 W engine oil into the bore thus exposed until the oil runs out of the filler bore (Fig. 07 — 3/5).

39. Open the filler bore once more and again inject SAE 10 W engine oil until it overflows. The total capacity is approx. 1.2 ccs.

40. Re-install the slotted-head screw with sealing ring.

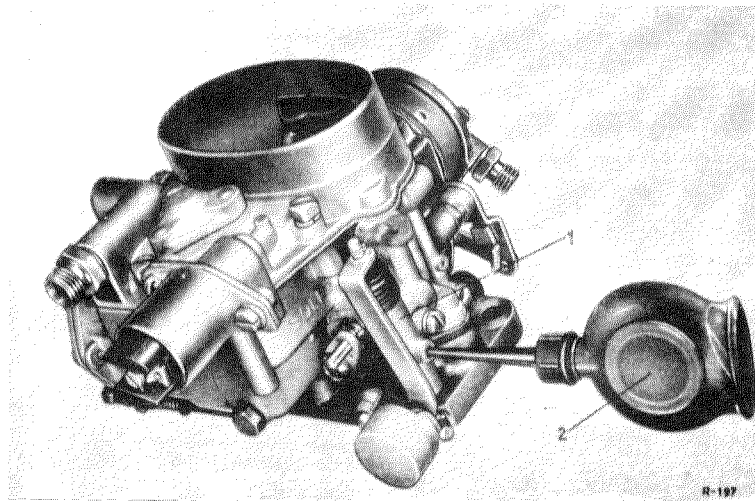


Fig. 07 — 3/5

1 Oil shock-absorber 2 Oil can

37. Re-install the slotted-head screw or stop the bore with the finger.

38. Now move the piston rod of the oil shock-absorber up and down until the air is removed from below the piston.

Note: The cushion effect must now be noticeable almost down to the end of the stroke.

41. The oil level in the oil shock-absorber must be checked after 500 km and then every 16.000 km.

Subsequent Installation of the Closing Plug for the Float Chamber Ventilation

The following procedure should be carried out when subsequently installing the graded closing plug (Part No. 121 997 00 35) (see also Job No. 07—0, Section F. Float Chamber Ventilation):

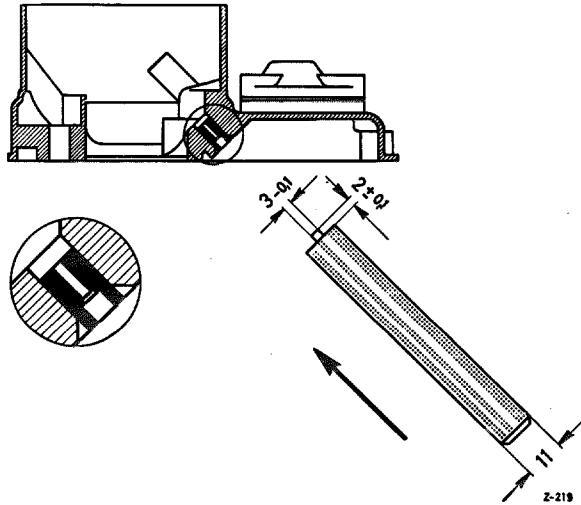


Fig. 07 — 3/6

42. Loosen and remove the air intake silencer, unscrew the fuel pipe and, after unscrewing the fixing nuts, take off the carburetor cover.
43. Knock in the graded closing plug from the float chamber side so that the countersunk face of the plug points toward the float chamber (Fig. 07—3/6).

Note: Use a stepped drift to knock in the closing plug (see Fig. 07—3/6) in order to avoid any damage to the bore which is graded 1.5 mm.

The drift can be made for this purpose in the workshop.

44. Re-install the carburetor cover, tighten up the fuel pipe and re-install the air intake silencer.

Note: After the initial warming-up of the engine, the fixing screws of the carburetor cover and the fuel pipe must once more be tightened.