

H. Measurement and Adjustment of Fuel Level and Injection Amount of Carburetor

Measurement and adjustment of fuel level:

1. Warm up engine (radiator temperature at least 70° C) and tighten up all pipe unions and screws on the carburetor.
2. If possible, place the vehicle on a perfectly horizontal floor.
3. Allow the engine to run for approx. 30 seconds at idle speed. This is in order to allow the fuel level to settle.

Note: This is particularly important if the manual lever of the fuel feed pump was previously used for filling the carburetor.

4. Switch off the ignition. Remove the air intake silencer, disconnect the fuel pipe at the carburetor and take off the carburetor cover.
5. Measure the fuel level with the aid of a depth gage inserted at the separating partition of the float chamber, the measured distance being between the upper face of the carburetor housing and the surface of the fuel (see Fig. 01—3/35).

Note: Measurement of the fuel level must be made **immediately** after switching off the

engine and after removing the carburetor cover because otherwise, when the engine is hot, the fuel will evaporate and a false reading will be obtained.

The measurement of the fuel level must be made directly against the separating partition (1).

6. The reading should be 19—21 mm.

The figures given take into account the fact that the surface tension causes the fuel to rise approx. 2 mm at the separating partition. Thus any measurement taken at other points would give a false fuel level adjustment.

7. Correct the fuel level if necessary. This can be done by adding a second sealing ring (1) for the float needle valve (2) or by carefully bending the float anchor strip (3) downward in order to make the fuel level lower (see Fig. 01—3/36).

This additional sealing ring takes the form of a fiber sealing ring of the appropriate thickness, inserted between the carburetor cover and the copper sealing ring of the float needle valve.

A further sealing ring of 0.5 mm thickness lowers the level of the fuel approx. 1 mm. The fuel level can be made higher by replacing the sealing ring (1) by a thinner sealing ring or by carefully bending the float anchor strip (3) upward (see Fig. 01—3/36).

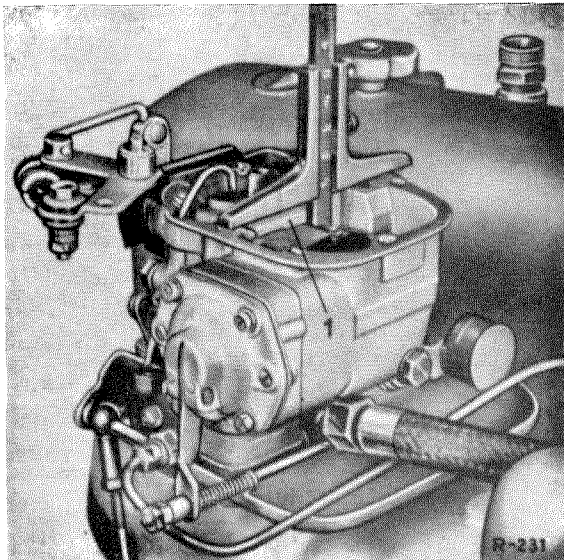
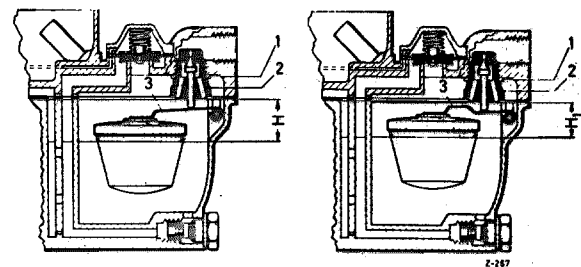


Fig. 01—3/35

1 Separating partition of float chamber



Fuel level unchanged.

Fuel level made higher by bending the float anchor strip upward.

Fig. 01—3/36

- | | |
|---------------------------------------|---------------------------------------|
| 1 Sealing ring 12×16×1 Cu | 3 Float anchor strip |
| 2 Float needle valve 2 mm (M 12×1.25) | H Fuel level unchanged |
| | H _i Fuel level made higher |

Measurement and adjustment of injection amount

8. Unscrew retaining screw of injection tube and remove injection tube.

9. Screw in a measuring tube in place of the injection tube.

A normal injection tube, the neck of which projects sideways over the edge of the carburetor housing, can be used as a measuring tube. After turning the arched neck of the tube, there must be no leakage at the collar when the injection is done. If necessary, seal the collar with Teroson plastic solder.

Under no circumstances must the injection tube normally fitted to the carburetor be turned outward and used to take the measurement.

10. Check the injection amount by repeating the injection five times. Use a suitable graduated tube or Graduated Tube (Burette) 000 589 31 21 (see Fig. 01—3/37).

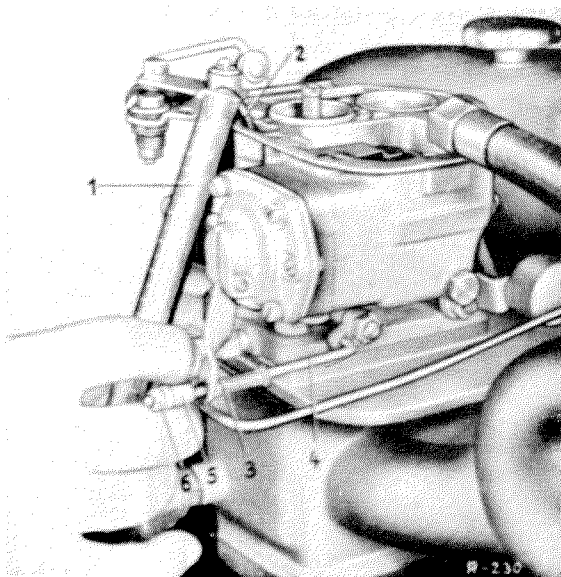


Fig. 01—3/37

- | | |
|----------------------------|------------------|
| 1 Graduated tube (Burette) | 4 Connecting rod |
| 2 Injection tube | 5 Shoulder nut |
| 3 Pump arm | 6 Hexagon nut |

The accelerator linkage must be moved evenly and smartly to the maximum position and only released when the injection is over.

Caution! Wait at least two to three seconds between the individual strokes as otherwise the full fuel amount will not pass into the diaphragm bowl and the graduated tube reading will be too low.

11. When the measurement of the injection amount is being made, the following points must be taken into account:

- a) The measuring tube must form a perfect seal with the collar.
- b) The pump arm of the diaphragm pump must be working properly.
- c) The slightest possible movement of the linkage from the idle position must produce an ample and even jet of fuel from the injection tube immediately.

12. **The injection amount should be 1.0 to 1.2 cm³/stroke.**

13. If necessary, correct the injection amount. The injection amount can be increased by screwing in the hexagon nut (5) on the connecting rod (4) and decreased by screwing it out (see Fig. 01—3/37). After adjusting, lock with hexagon nut (6). The nuts (5) and (6) on the connecting rod (4) must not be screwed in to the point where the pump arm (3) rises above the diaphragm shaft in the idle position (see Fig. 01—3/37). When the accelerator is depressed, the injection would not begin at once because the pump arm must first take up the clearance between its own contact surface and the end of the diaphragm shaft.

But it should be noted that immediate injection is necessary for smooth speed build-up and perfect acceleration.

14. Unscrew the measuring tube and fit the injection tube of the carburetor, using a new gasket.

Caution! The retaining screw of the injection tube must be tightened after at the most 500 km because the gasket tends to shrink after the first tightening and could cause leakage.

15. Make a further check of the injection.

16. Screw on the carburetor cover and connect up the fuel pipe. Fit the air intake silencer.

SUPPLEMENT

to Workshop Manual Type 190

Job-No.

01 — 3

Copper Sealings Rings for Float Needle Valve

For the adjustment of the fuel level, copper sealing rings are now available in various thicknesses as follows:

Part No. 000 997 81 40	0.5 mm thick
Part No. 000 997 28 40	1.0 mm thick (standard)
Part No. 000 997 82 40	1.5 mm thick
Part No. 000 997 83 40	2.0 mm thick

The fuel level can thus be corrected quite simply without bending the float anchor strip. An alteration of 0.5 mm in the thickness of the sealing ring is equivalent to an alteration in fuel level of approx. 1 mm (see also Job No. 01—3, Para. 7).