Checking Pump Pressure

14 Fu

General

The pump pressure depends on how much the spring is compressed during the pump suction stroke. The spring is so balanced that fuel is forced to the carburetor via the pressure valve only if the float needle valve is open. In case the float needle valve closes with rising float, the pressure in the fuel line and pump housing increases while the pump working stroke decreases. Under normal conditions the diaphragm is moved only some fractions of an inch (approx. 2/100").

A hole is provided for venting the chamber below the diaphragm. This hole also permits draining of fuel which might have entered the lower chamber.

Checking

The pump pressure should amount to .13 to .18 atü with the float needle valve closed and the engine running at 1000 to 3000 r.p.m. The minimum amount of fuel delivery is 18 ltrs/h = 300 c.c. per minute at 4500 r.p.m.

To check the pump pressure use a pressure gauge which is connected to a fuel line between the pump and the carburetor by means of a T-fitting. The fuel line is fitted with a fuel shut-off cock behind the pressure gauge.

The specified pump pressure ist determined by the correct adjustment of the actuating rod stroke and the diaphragm spring tension.

Adjustment of the pump stroke is effected by fitting corresponding flange gaskets.

If the stroke adjustment does not give the desired result, replace the diaphragm spring. If the pump pressure is too low, the intermediate coils of the spring may be stretched apart, should this be necessary.

Too high a pump pressure will result in overflow of the carburetor and, consequently, in dilution of the engine oil. If it is too low, insufficient fuel will be delivered and an uneven running and missing of the engine at high speed as well as a decrease in performance will be the result.

Removing and Installing Fuel Pump

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Special Tools:
VW 126 a Fuel Pump Wrench
VW 328 a Fuel Pump Push Rod Gauge

Removal

1. Disconnect fuel lines from carburetors and fuel pump.
2. Remove retaining screws on pump flange (using fuel pump wrench VW 126 a).
3. Take off pump.

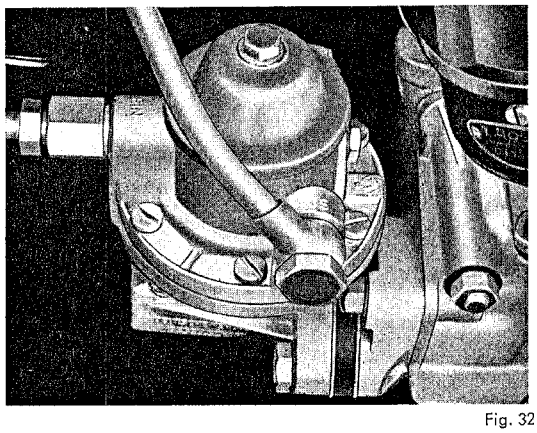

Fig. 32

4. Remove actuating rod, fibre flange and gaskets.

Adjusting Stroke of Fuel Pump

1. Place intermediate flange, actuating rod, and a gasket, which should be in perfect condition, on crankcase. The oil hole in the intermediate flange must face upwards. The convex end of the actuating rod must face toward the cam of the distributor drive shaft.
2. Attach gauge VW 328 a to the flange and tighten it to the same torque as for the fuel pump in order to compress the gaskets to their usual thickness. The actuating rod stroke of about .16" (4 mm) is determined by the cam on the distributor drive shaft. The stroke should move within a range of 2" (5 mm) which is marked on the gauge. The marks correspond to a length of 1.14" (29 mm) and 1.34" (34 mm) measured from the fuel pump contact flange (including gaskets) to the projecting actuating rod end. Crank the engine to check the pump stroke. The specified stroke can be adjusted by fitting an appro-