4. Install the right crankcase half and tighten the cap nuts to the prescribed torque.

5. Install a soft iron gasket on the crankshaft and bolt the flywheel to crankshaft with 45 to 50 mkg (326 to 363 ft. lb.) torque.

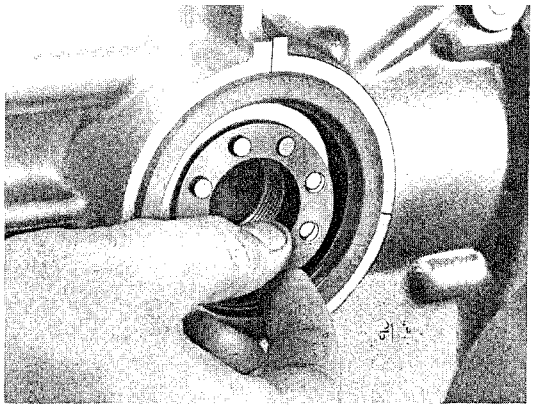

Fig. 4

6. Attach special tool P 17 and dial gauge to the crankcase flange so that the feeler of the dial gauge contacts the rim of the flywheel and travels parallel to the crankshaft.

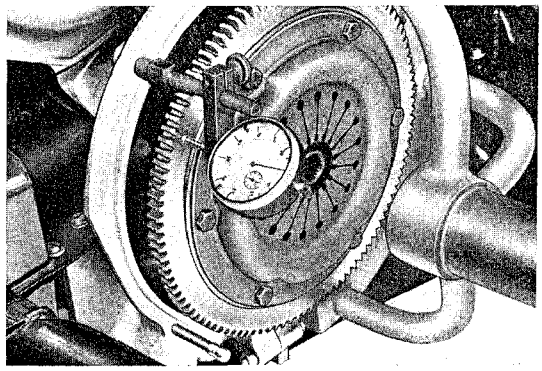

Fig. 5

7. Measure end play by moving the crankshaft axially in both directions. Correct the end play by installing a thinner or thicker thrust washer as required.

Removing and Installing Valves

Inspecting Valve Springs

A 5% deviation from the listed pressures is permissible in the case of used springs.
It is desirable that the valve springs of the 1600 S-90 engine have a pressure of at least 94 kg (208 lb.) at a compressed length of 30.15 mm.
These valve springs have been installed in all 356 B engines for some time and replace those mentioned in the basic manual having a free length of 47 mm. Only valve springs of the same type and free length should be installed in one engine due to their different spring characteristics.

Testing Installed Length

Note

The intake and exhaust valve springs are of equal length. The difference in the installed length is obtained by the use of spacer washers. All the valve springs of the 1600 S-90 engine have an additional 1.5 mm steel washer to increase the spring pressure.

Important

The valve springs must not bear on the shims but must always seat on the steel washer. The springs will damage the shims if they are not protected by the steel washer.

Free length	49 mm	1.929 in.	
Cross-section dia.	4,5 mm	.177 in.	
Pressure at 41 mm, 1.614 in. Compressed length	35 kg + 2,5 kg – 1.0 kg	77.3 lb.	+ 5.5 lb. – 2.2 lb.
Pressure at 30.15 mm 1.187 in. Compressed length	93 kg + 7 kg – 3 kg	205.5 lb.	+ 20 lb. – 6.6 lb.