

much smoother and quieter. It is very suitable for high speed to enable the increase in power output. (Fig. 3. 28)

### 1. Valve Spring

Dual valve springs are used for extra strength and to prevent valve floating at high engine speed. They are arranged concentrically. The springs will require replacement if broken, deformed or have lost its strength.

#### (a) Outer valve spring (Fig. 3.29)

Item	Standard value	Serviceable limit
Free length	31.8 mm (1.253 in)	Replace if under 30.6 (1.207 in)
Spring pressure	27.8 mm/7.9~8.9 kg (1.095 in/17.38~19.58 lbs)	—
Spring pressure	22.3 mm/19~21 kg (0.879 in/41.8~46.2 lbs)	—
Tilt	—	Replace if over 1.5°

#### (b) Inner valve spring (Fig. 3.29)

Item	Standard value	Serviceable limit
Free length	26.5 mm (1.044 in)	Replace if under 25.5 (1.005 in)
Spring pressure	3.0~3.4 kg/23.9 mm (6.60~7.48 lbs/0.942 in)	—
Spring pressure	9.5~10.5 kg/18.4 mm (20.90~23.10 lbs/0.725 in)	—
Tilt	—	Replace if over 1.5°

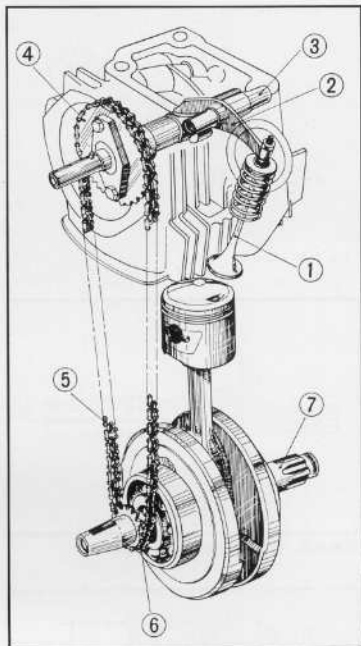


Fig. 3.28 Valve mechanism

- ① Valve
- ② Rocker arm
- ③ Rocker arm shaft
- ④ Cam sprocket
- ⑤ Cam chain
- ⑥ Timing sprocket
- ⑦ Crankshaft

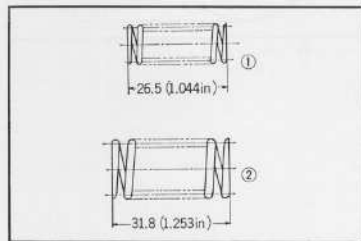


Fig. 3.29 Valve spring

- ① Inner spring
- ② Outer spring