

Gearshift mechanism

The gearshift mechanism is a linkage between the gear change pedal and the shift forks and includes a shift arm, a shift drum, a neutral stop, a drum stop, etc.

When the pedal is depressed for shifting, the shift spindle rotates, causing the arm to push the drum pins to rotate the drum. As the drum is so rotated, the fork is moved by the cam action of a groove cut in the drum to shift a gear. After shifting, the arm is returned to its original position by means of the return spring. The drum stop is provided to prevent unintentional gear engagement, shifting the gears smoothly. The drum is pressed by the # 10 steel ball to make it possible to shift into the neutral position properly.

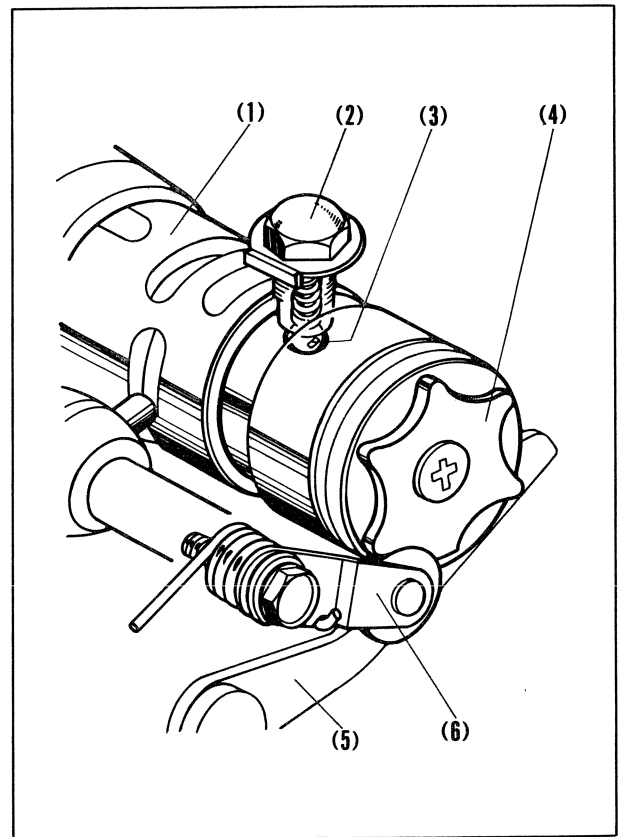


Fig. 2-12 (1) Gearshift drum (4) Drum stop cam plate
 (2) Neutral stop (5) Gearshift spindle arm
 (3) #10 steel ball (6) Shift drum stop

Crankshaft

The crankshaft serves to change the reciprocating motion of the piston into rotary motion in connection with the connecting rod. It also serves as a flywheel limiting the torque fluctuation. The crankshaft is supported at four places by antifriction bearings—two needle roller bearings on the inside and two ball bearings on the outside, increasing the load capacity and improving the strength and durability at high speeds.

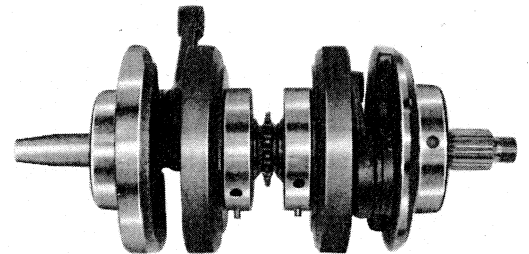


Fig. 2-13 Crankshaft

The crankshaft bearings are lubricated by oil from the oil pump. The oil enters from the upper crankcase, passes through the oil holes in the center bearing outer rings and lubricates the bearings. Then the oil collects into the notches in the sides of the crank weights and enters the crankpins to lubricate the big ends of the connecting rods.

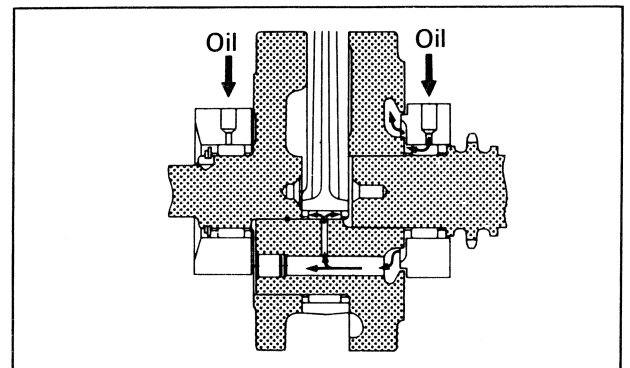


Fig. 2-14 Lubrication to crankshaft