(7) Clutch spring S65 [ ] are for S50

| | Standard Value | Serviceable Limit |
|---|---|---|
| Free length | 19.2 (0.756 in.) [18.9] (0.744 in.) | Replace of under 18.2 (0.717 in.) |
| Spring force | 7.5±0.5 kg/12.8 mm (16.5±1.1 lb/0.504 in.) 13.2±0.8 kg/12.8 mm (29.0±1.75 lb/0.504 in.) | Replace if under 6.5 kg/12.8 mm (14.3 lb/504 in.) |

(8) Clutch spring (C50, C50M, C65, C65M)

| | Standard Value | Serviceable Limit |
|---|---|---|
| Free length | 19.6 (0.772 in.) | Replace if under 18.2 (0.720 in) |
| Spring force | 5.85 kg±0.3 kg/13.5 mm (12.8±0.66 lb/0.532 in.) | Replace if under 5.0 kg/13.5 (11.0 lb/0.532 in.) |

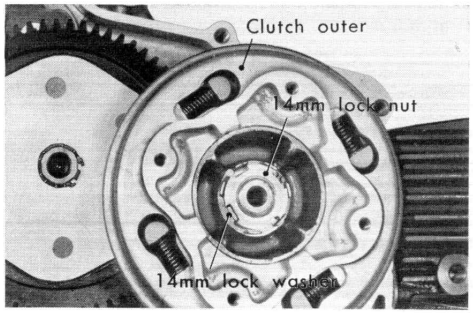


**Figure 3-70.** Bend up tab of lock washer

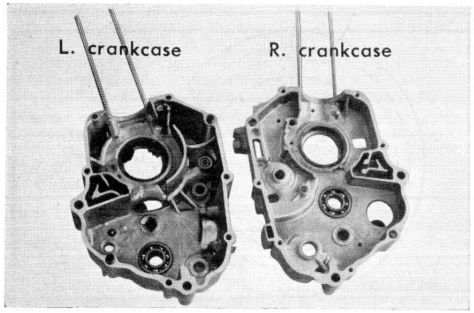


**Figure 3-71.** R & L crankcase

### c. Reassembly

(1) Reassemble the clutch in the reverse procedure of disassembly.

**(Note)**

The lock washer must be locked by bending the tab after tightening the nut; if the nut does not align with the tab, tighten the nut further to permit locking. **(Fig. 3-70)**

## 2. CRANKCASE

The crankcase, which is an integral part of the transmission, is an aluminum alloy die casting composed of right and left halves. A breather compartment and a breather passage is incorporated in the upper section of both crankcase halves to dissipate the pressure built up in the crankcase. **(Fig. 3-71)**

## 3. BREATHER

The interior of the crankcase is continually under varying pressure, built up by the reciprocating piston, in addition, the crankcase is filled with gases from the blow-by of the piston and the gases produced by the heat of the crankcase. For this reason, the decomposition of the oil is hastened. In addition, together with the rise in the crankcase internal pressure, the possibility of oil leaks at the case parting area is increased.

The breather is designed and incorporated in the case to exhaust the gases to the outside and also to maintain a constant pressure within the crankcase.



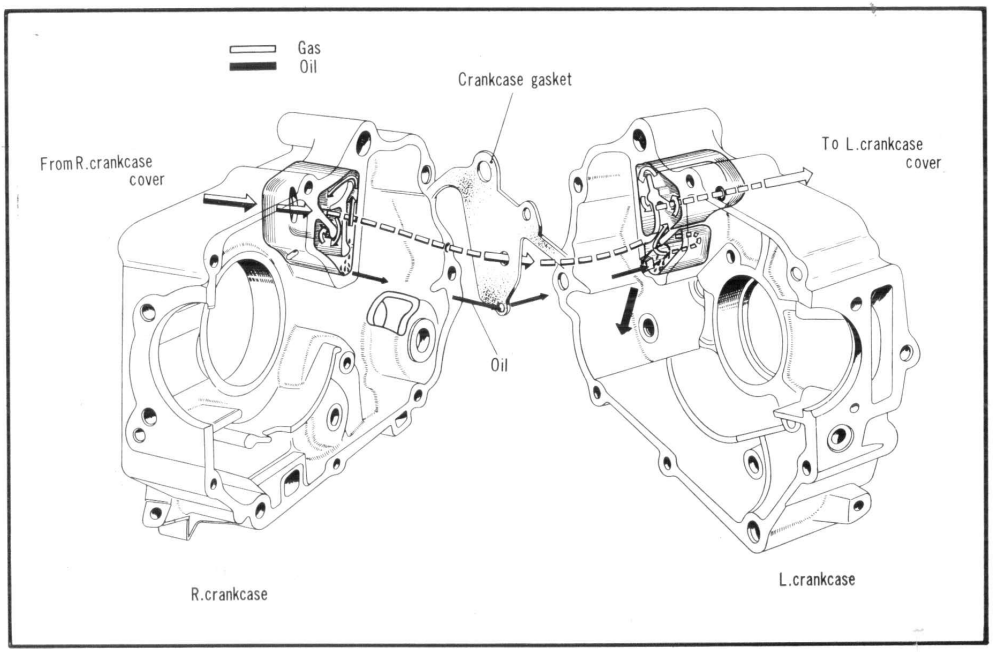


**Figure 3-72.** Breather functional diagram

## 3.4 CRANKSHAFT

The crankshaft is constructed of high strength carbon steel and together with the connecting rod, converts the reciprocating motion of the piston to the rotary motion and, in addition, performs the function of the flywheel by absorbing the fluctuating torque.

The pressurized oil from the pump passes from the right crankcase, through the right crankcase cover, into the crankshaft by the way of the centrifugal filter, and lubricates the large end of the connecting rod and clutch center guide. **(Fig. 3-73)**

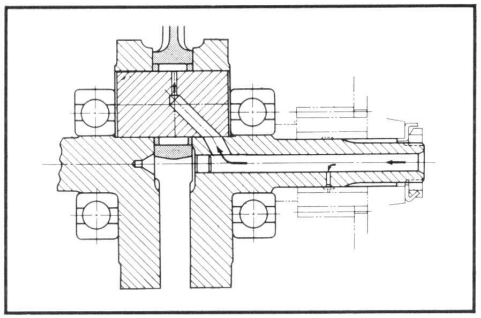

**Figure 3-73.** Crankshaft

### a. Disassembly

(1) Remove the clutch assembly as a unit.
(2) Draw out the gear shift spindle.
(3) Remove the kick starter spring.
(4) Remove the flywheel and stator assembly.
(5) Disassemble the cylinder head and cylinder.
(6) Remove the oil pump and after separating the right crankcase, the crankshaft assembly together