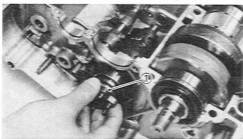


## 6. Install:

- Shift fork #1 ①
- Shift fork #2 ②
- Shift fork #3 ③
- Guide bar ④

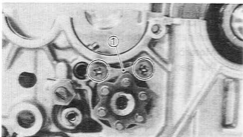
**NOTE:**

Each shift fork is identified by a number cast on its side. All the numbers should face right side.



## 7. Install:

- Shift cam ①



## 8. Install:

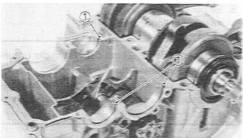
- Stopper plate ① (Shift cam)



**Screws (Stopper Plate):**  
 8 Nm (0.8 m•kg, 5.8 ft•lb)  
 Use LOCTITE®.

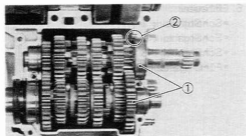
**NOTE:**

Be sure the stopper plate is fitted in the groove of the shift cam.



## 9. Install:

- Stopper rings ①



## 10. Install:

- Transmission assembly ①

**NOTE:**

- Align the bearing knock pin ② with the pin slot in the crankcase lower half.
- Be sure the stopper ring is fitted to the bearing and the stopper ring have been positioned in the ring groove.



## 11. Check:

- Shifter and transmission operation  
Unsmooth operation → Repair.



## CRANKSHAFT, PISTON AND PISTON RING

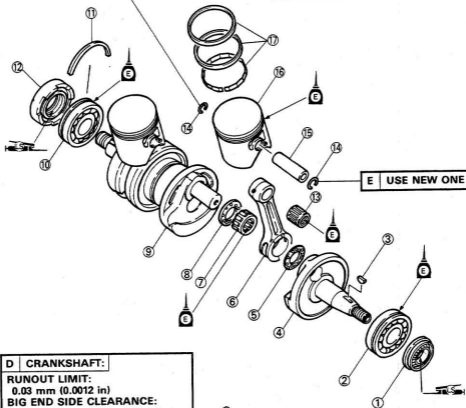
- |                   |                     |
|-------------------|---------------------|
| ① Oil seal        | ⑩ Bearing           |
| ② Bearing         | ⑪ Circlip           |
| ③ Woodruff key    | ⑫ Oil seal          |
| ④ Crank (Left)    | ⑬ Small end bearing |
| ⑤ Washer          | ⑭ Piston pin clip   |
| ⑥ Connecting rod  | ⑮ Piston pin        |
| ⑦ Big end bearing | ⑯ Piston            |
| ⑧ Washer          | ⑰ Piston ring set   |
| ⑨ Crank (Right)   |                     |

**A PISTON TO CYLINDER CLEARANCE:**  
 0.050–0.055 mm (0.0019–0.0021 in)  
 <LIMIT>  
 <0.1 mm (0.004 in)>

**B END GAP (INSTALLED):**  
 TOP RING  
 0.30–0.45 mm (0.012–0.018 in)  
 2nd RING  
 0.30–0.45 mm (0.012–0.018 in)

**C SIDE CLEARANCE:**  
 TOP RING  
 0.020–0.060 mm (0.0008–0.0024 in)  
 2nd RING  
 0.030–0.065 mm (0.0012–0.0026 in)

**E USE NEW ONE**



**E USE NEW ONE**

**D CRANKSHAFT:**

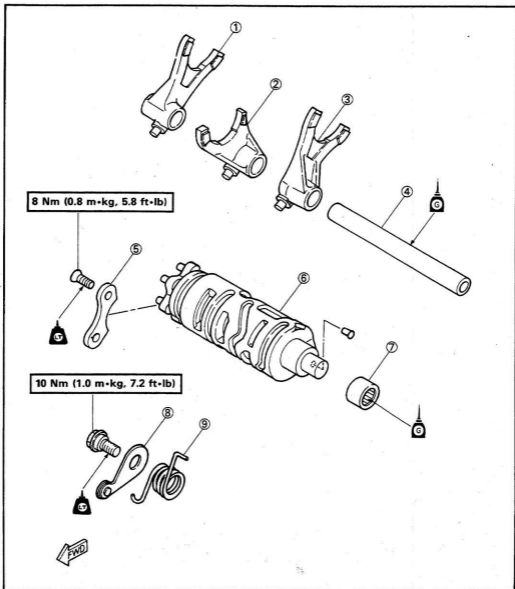
**RUNOUT LIMIT:**  
 0.03 mm (0.0012 in)  
**BIG END SIDE CLEARANCE:**  
 0.25–0.75 mm (0.01–0.03 in)  
**SMALL END FREE PLAY:**  
 0.4–0.6 mm (0.016–0.024 in)





## SHIFTER

- ① Shift fork #3
- ② Shift fork #2
- ③ Shift fork #1
- ④ Guide bar
- ⑤ Stopper plate
- ⑥ Shift cam
- ⑦ Bearing
- ⑧ Stopper lever
- ⑨ Return spring



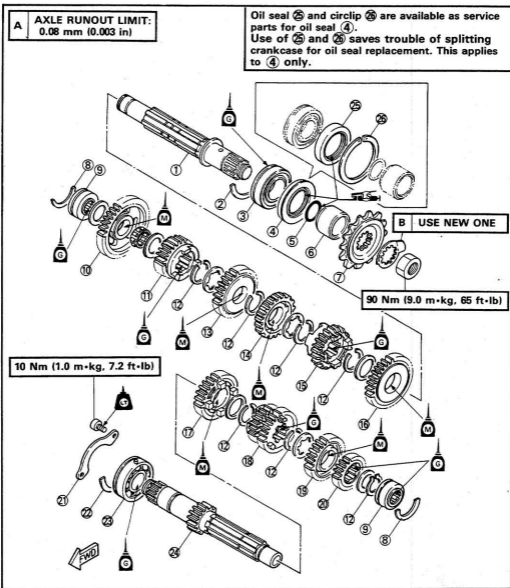


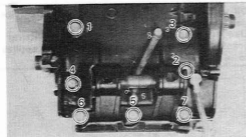
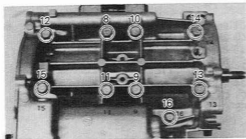
### TRANSMISSION

- |                  |                       |                   |
|------------------|-----------------------|-------------------|
| ① Drive axle     | ⑩ 1st wheel gear      | ⑲ 5th pinion gear |
| ② Stopper ring   | ⑪ 6th wheel gear      | ⑳ 2nd pinion gear |
| ③ Bearing        | ⑫ Circlip             | ㉑ Bearing holder  |
| ④ Oil seal       | ⑬ 3rd wheel gear      | ㉒ Stopper ring    |
| ⑤ O-ring         | ⑭ 4th wheel gear      | ㉓ Bearing         |
| ⑥ Collar         | ⑮ 5th wheel gear      | ㉔ Main axle       |
| ⑦ Drive sprocket | ⑯ 2nd wheel gear      | ㉕ Oil seal        |
| ⑧ Stopper ring   | ⑰ 6th pinion gear     | ㉖ Circlip         |
| ⑨ Bearing        | ⑱ 3rd/4th pinion gear |                   |

**A** AXLE RUNOUT LIMIT:  
0.08 mm (0.003 in)

Oil seal ㉕ and circlip ㉖ are available as service parts for oil seal ④.  
Use of ㉕ and ㉖ saves trouble of splitting crankcase for oil seal replacement. This applies to ④ only.




**CRANKCASE (UPPER)**

## 1. Install:


- Crankcase (Upper)

**Bolts tightening steps:**


- Temporarily tighten ① to ⑦ and next ⑧ to ⑮, in that order.
- Tighten ① to ⑦.

 **5 Nm (0.5 m·kg, 3.6 ft·lb)**


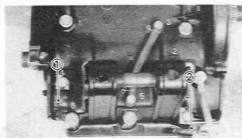
- Tighten ⑧ to ⑮.

 **10 Nm (1.0 m·kg, 7.2 ft·lb)**

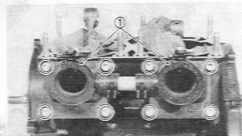
- Tighten ⑧ to ⑮.

 **24 Nm (2.4 m·kg, 17 ft·lb)**

- Tighten ① to ⑦ and ⑮.


 **10 Nm (1.0 m·kg, 7.2 ft·lb)**
**NOTE:**

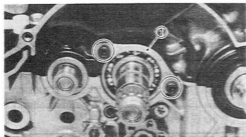
Install the clamp ① on the bolt No.4 and the clamp ② on the bolt No.7 as shown.



## 2. Install:

- Gaskets
- Spacers
- Reed valves
- Carburetor joints ①

 **Bolts (Carburetor Joint):  
10 Nm (1.0 m·kg, 7.2 ft·lb)**

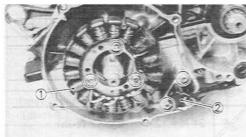


## 3. Install:

- Bearing holder ①



**Bolts (Bearing Holder):**  
 10 Nm (1.0 m•kg, 7.2 ft•lb)  
 Use LOCTITE®.



## C.D.I. MAGNETO

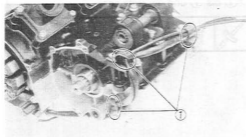
## 1. Install:

- Stator coil ①
- Pickup coil ②



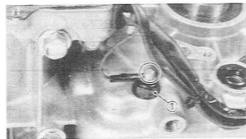
**Screws (Stator Coil):**  
 7 Nm (0.7 m•kg, 5.1 ft•lb)  
 Use LOCTITE®.

**Screws (Pickup Coil)**  
 5 Nm (0.5 m•kg, 3.6 ft•lb)  
 Use LOCTITE®.

**NOTE:**

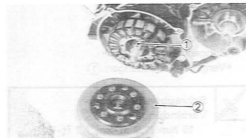
Clamp the C.D.I. magneto leads with the clamps

①



## 2. Install:

- Neutral switch lead ①

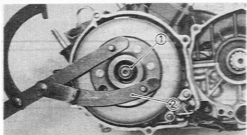


## 3. Install:

- Woodruff key ①
- Rotor ②

**NOTE:**

When installing the rotor, make sure the woodruff key is properly seated in the key way of the crankshaft. Apply a light coating of lithium soap base grease to the tapered portion of the crankshaft end.

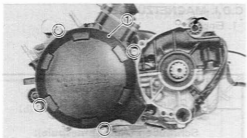


## 4. Tighten:

- Nut ① (Rotor)

**NOTE:**

Hold the rotor to tighten the nut by the Universal Rotor Holder ②.



**Universal Rotor Holder:**  
90890-01235



**Nut (Rotor):**  
80 Nm (8.0 m•kg, 58 ft•lb)

## 5. Install:

- A.C. generator cover ①



**Bolts (A.C. generator Cover):**  
5 Nm (0.5 m•kg, 3.6 ft•lb)



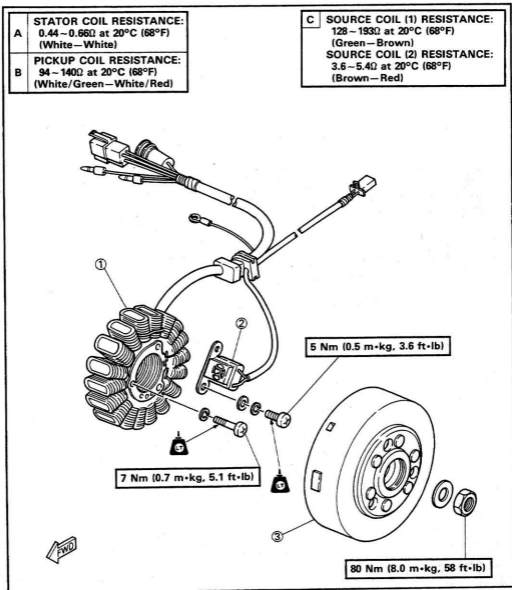


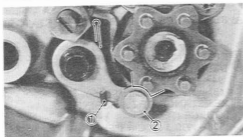
## C.D.I. MAGNETO

- ① Stator coil
- ② Pickup coil
- ③ Rotor

A	<b>STATOR COIL RESISTANCE:</b> 0.44 ~ 0.66Ω at 20°C (68°F) (White—White)
	<b>PICKUP COIL RESISTANCE:</b> 94 ~ 140Ω at 20°C (68°F) (White/Green—White/Red)

C	<b>SOURCE COIL (1) RESISTANCE:</b> 128 ~ 193Ω at 20°C (68°F) (Green—Brown)
	<b>SOURCE COIL (2) RESISTANCE:</b> 3.6 ~ 5.4Ω at 20°C (68°F) (Brown—Red)





## SHIFT SHAFT

1. Install:

- Return spring ①
- Stopper lever ②

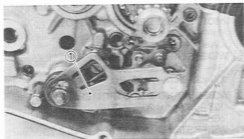
**Bolt (Stopper Lever):**

10 Nm (1.0 m·kg, 7.2 ft·lb)

Use LOCTITE®.

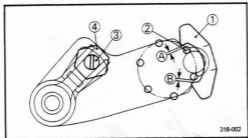
**NOTE:**

Mesh the stopper lever with the shift cam.



2. Install:

- Shift shaft ①



3. Check

- Change lever position
- Gap (A) and (B) are not equal → Adjust.

**Change lever position adjustment steps:**

- Straighten lock washer tab.
- Loosen lock nut ①.
- Turn adjuster ② in or out until gap (A) and (B) are equal.
- Tighten lock nut.

**Nut:**

30 Nm (3.0 m·kg, 22 ft·lb)

Use LOCTITE®.

- Bend lock washer tab.

- ③ Segment
- ④ Change lever