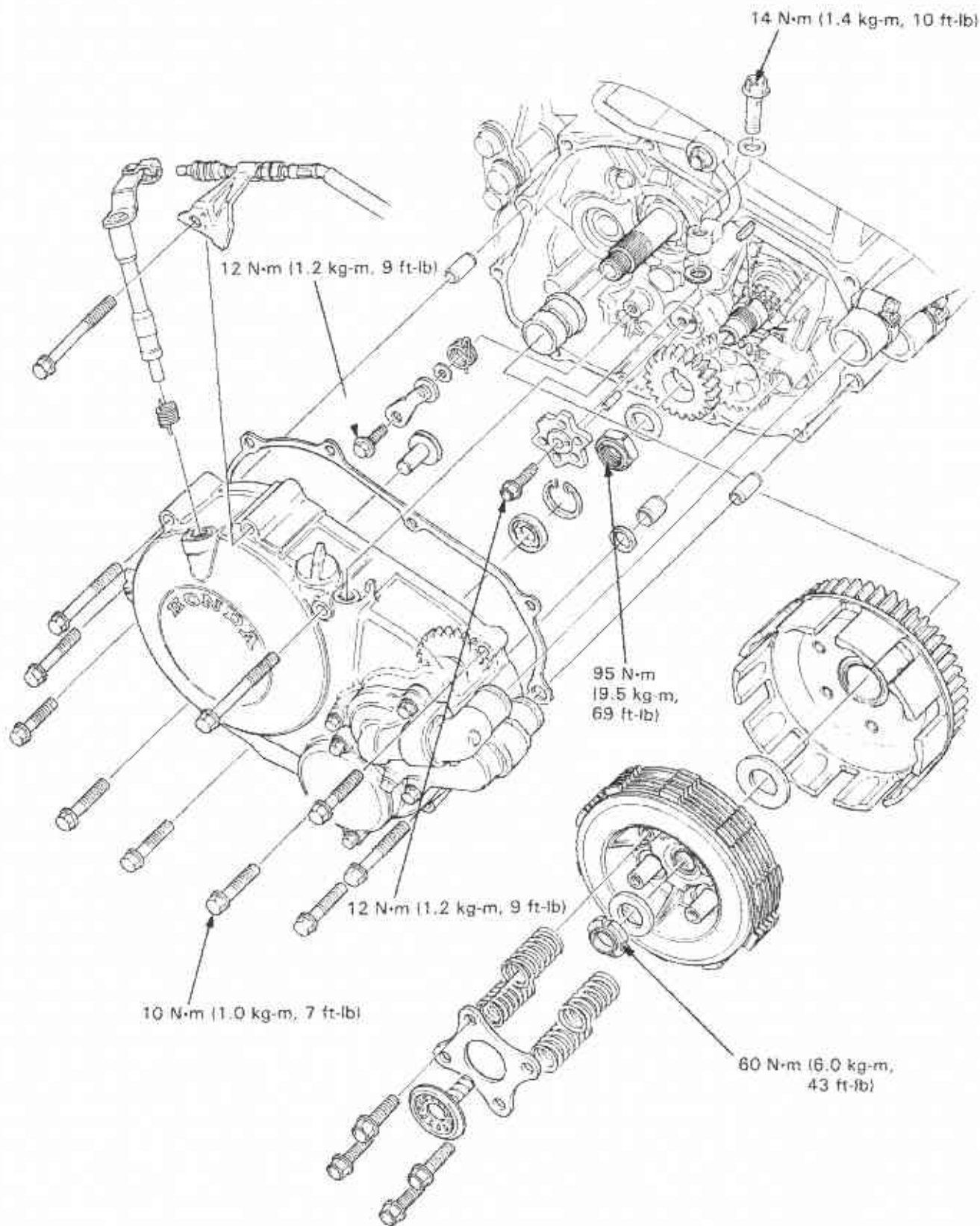


**CLUTCH**

**EMBAYAGE**

**KUPPLUNG**



7

## CLUTCH

SERVICE INFORMATION	7-1	PRIMARY DRIVE GEAR	7-8
TROUBLESHOOTING	7-2	GEARSHIFT LINKAGE	7-9
RIGHT CRANKCASE COVER REMOVAL	7-3	RIGHT CRANKCASE COVER	
CLUTCH	7-3	INSTALLATION	7-10

## SERVICE INFORMATION

### GENERAL

- This section covers removal and installation of the right crankcase cover, clutch primary drive gear and gearshift linkage.
- Clean the oil strainer whenever the right crankcase cover is removed (refer to page 2-3).
- When the clutch discs are replaced, coat new discs with engine clean oil prior to assembly.
- For oil pump service, refer to section 2.
- For water pump service, refer to section 5.

### SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Clutch	Spring free length	—	35.0 (1.38)
	Disc thickness	2.92–3.08 (0.115–0.121)	2.7 (0.12)
	Plate warpage	—	0.30 (0.012)
	Outer I.D.	25.000–25.021 (0.9843–0.9851)	25.25 (0.994)
	Outer guide O.D.	24.959–24.980 (0.9826–0.9835)	24.17 (0.952)

## TORQUE VALUES

Primary drive gear nut	95 N·m (9.5 kg-m, 69 ft-lb)
Clutch center lock nut	60 N·m (6.0 kg-m, 43 ft-lb)
Oil pipe bolt (8 mm)	14 N·m (1.4 kg-m, 10 ft-lb)
Cam plate bolt	12 N·m (1.2 kg-m, 9 ft-lb)
Stopper arm bolt	12 N·m (1.2 kg-m, 9 ft-lb)
Crankcase cover bolt	10 N·m (1.0 kg-m, 7 ft-lb)
Rear brake pedal bolt	18 N·m (1.8 kg-m, 13 ft-lb)

## TOOLS

### Special

Clutch center holder	07923-KE10000
----------------------	---------------

### Common

Lock nut wrench, 20 x 24 mm	07716-0020100
Gear holder	07724-0010100

## TROUBLESHOOTING

Faulty clutch operation can usually be corrected by adjusting the clutch lever free play.

### Clutch Slips When Accelerating

- No free play
- Discs worn
- Spring weak

### Clutch Will Not Disengage

- Too much free play
- Plates warped

### Motorcycle Creeps With Clutch Disengaged

- Too much free play
- Plates warped

### Excessive Lever Pressure

- Clutch cable kinked, damaged or dirty
- Lifter mechanism damaged

### Clutch Operation Feels Rough

- Outer drum slots rough

## CLUTCH

### RIGHT CRANKCASE COVER REMOVAL

Remove the skid plate.  
Drain the coolant (page 5-3).

Shift the transmission into neutral and drain the oil from the engine (page 2-2).

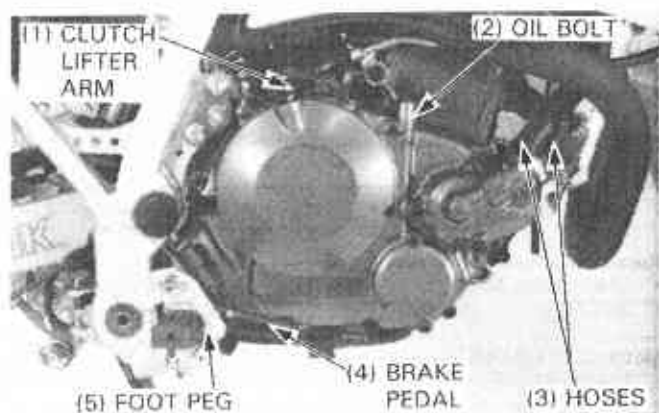


Remove the following:

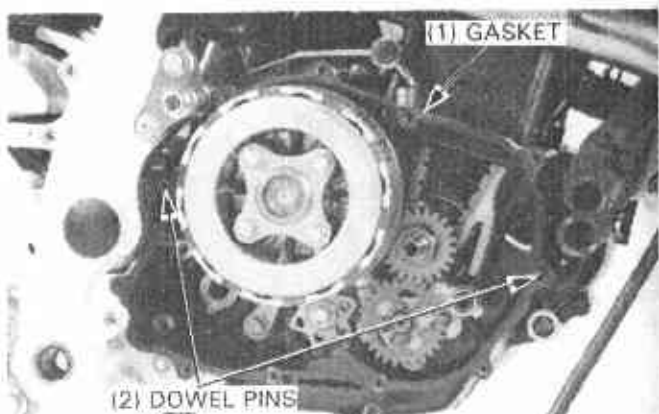
- oil bolt and two sealing washers from the cover.
- lower radiator hose and water hose from the water pump.
- right foot peg, rear brake pedal spring and pedal.

Disconnect the clutch cable from the lifter arm by removing the cable bracket bolt.

Remove the right crankcase cover bolts and cover.



Remove the gasket and dowel pins.



## CLUTCH

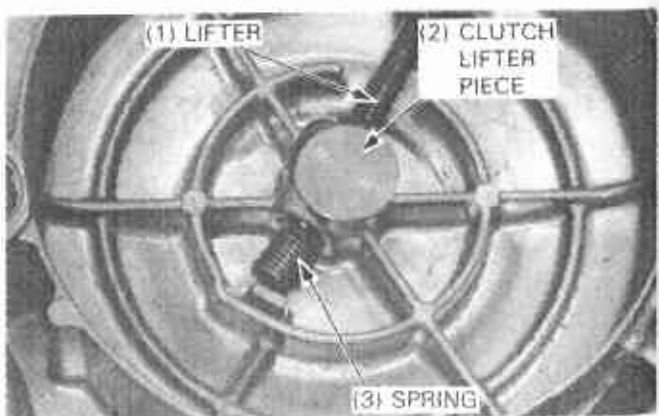
### CLUTCH LIFTER REMOVAL/INSPECTION

Remove the clutch lifter piece and spring, then remove the lifter from the cover.

Check the spring for fatigue or damage.

Check the needle bearings for damage or loose fit in the cover.  
Check the oil seal for wear or damage.

Apply grease to the oil seal lips and needle bearings.

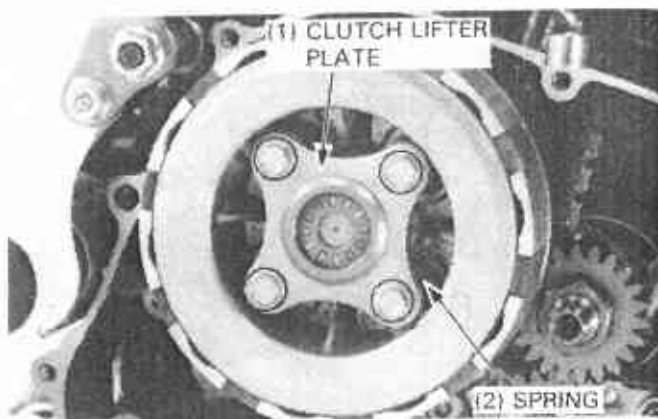


## CLUTCH

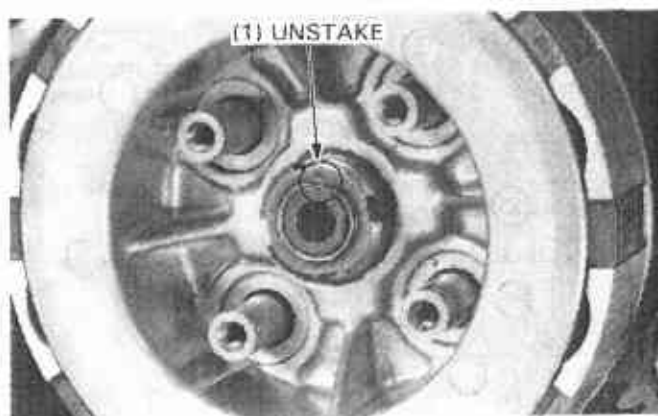
### CLUTCH REMOVAL

Remove the following:

- clutch bolts.
- springs.
- lifter plate.
- lifter bearing.



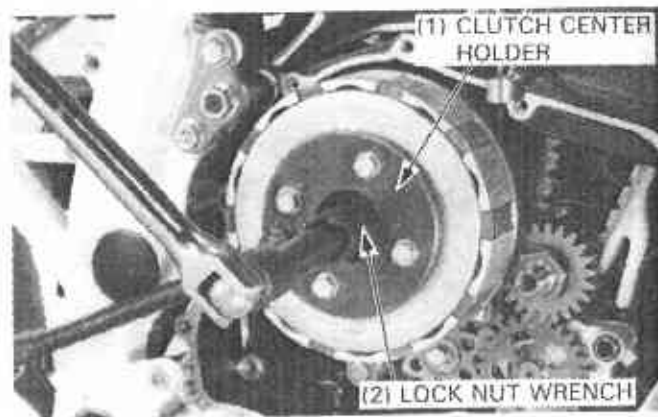
Unstake the lock nut.



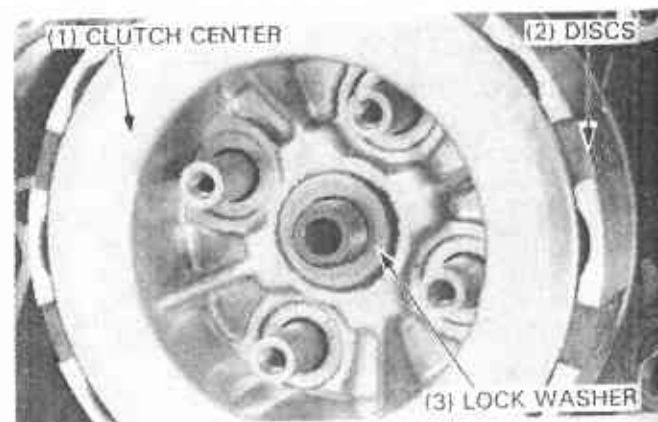
Install the clutch center holder as shown, and remove the clutch lock nut.

#### TOOLS:

- |                             |               |
|-----------------------------|---------------|
| Clutch center holder        | 07923-KE10000 |
| Lock nut wrench, 20 x 24 mm | 07716-0020100 |

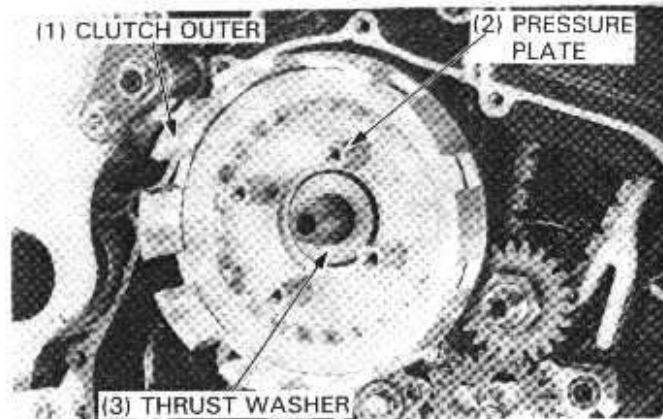


Remove the lock washer, clutch center and discs.



## CLUTCH

Remove the thrust washer, pressure plate and clutch outer.



Remove the clutch outer guide from the mainshaft.



## INSPECTION

Check the slots of the clutch outer for damage or wear caused by the clutch discs. Replace if necessary.

Measure the O.D. of the clutch outer guide.

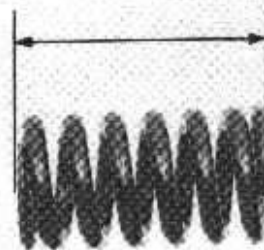
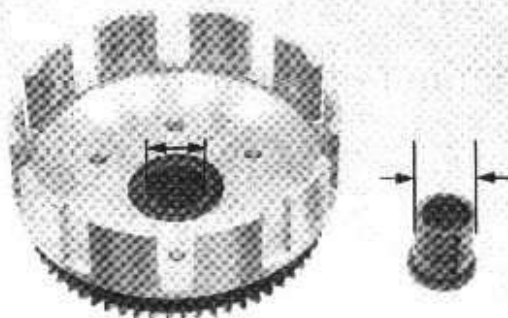
**SERVICE LIMIT: 24.17 mm (0.952 in)**

Measure the I.D. of the clutch outer.

**SERVICE LIMIT: 25.25 mm (0.994 in)**

Measure the spring free length.

**SERVICE LIMIT: 35.0 mm (1.38 in)**

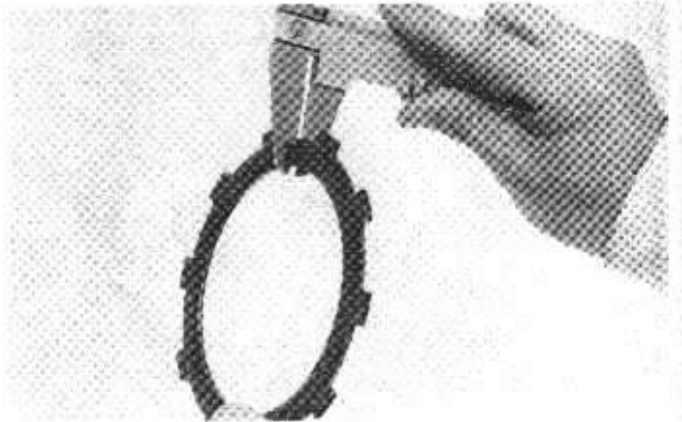


## CLUTCH

Replace the clutch discs if they show signs of scoring or discoloration.

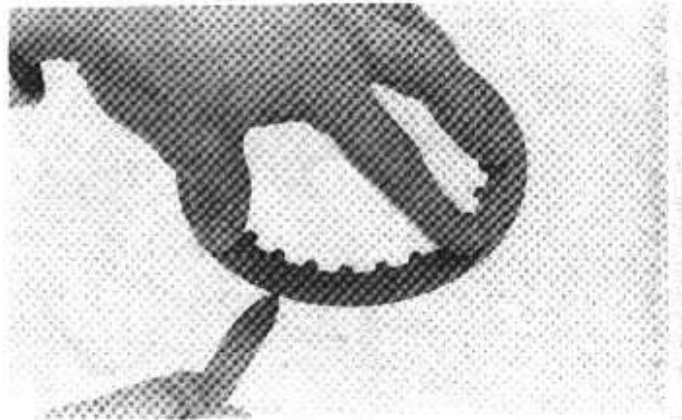
Measure the disc thickness.

**SERVICE LIMIT: 2.7 mm (0.12 in)**



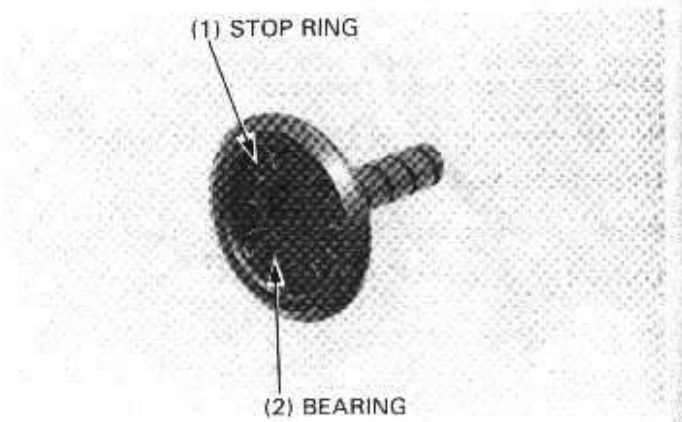
Check for plate and disc warpage on a surface plate using a feeler gauge.

**SERVICE LIMIT: 0.30 mm (0.012 in)**



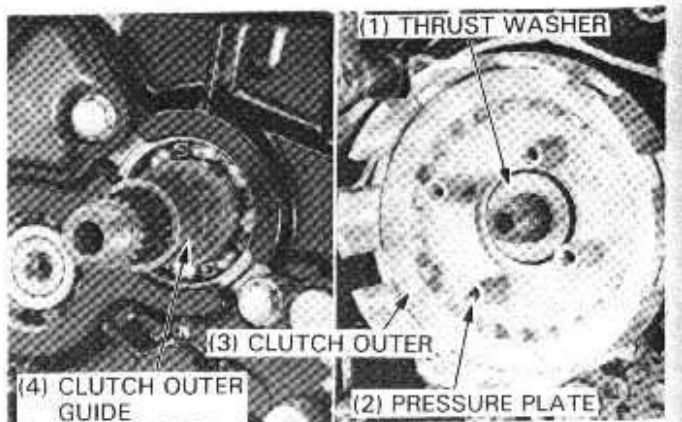
Check the lifter plate bearing for wear.

Remove the stop ring and replace the bearing with new one if necessary.



## INSTALLATION

Install the clutch outer guide, clutch outer, pressure plate and thrust washer.



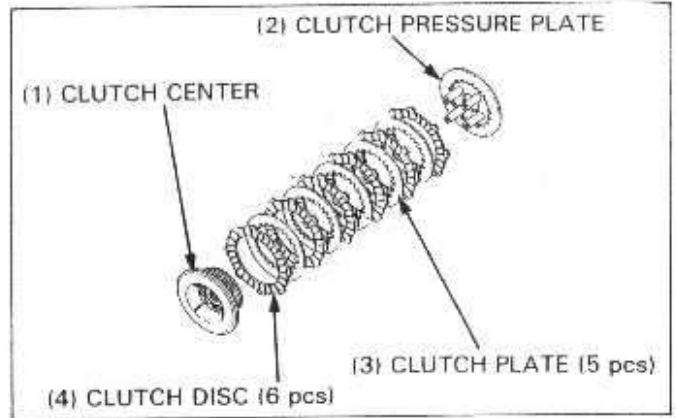


## CLUTCH

Assemble the clutch pressure plate, discs, plates and clutch center.

### NOTE

- Stack the discs and plates alternately.
- Coat new clutch discs with engine oil.



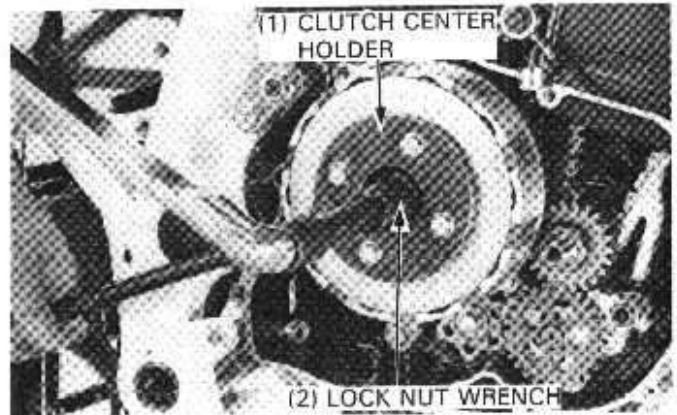
Install the lock nut washer and lock nut.

Hold the clutch center with the clutch center holder and tighten the lock nut.

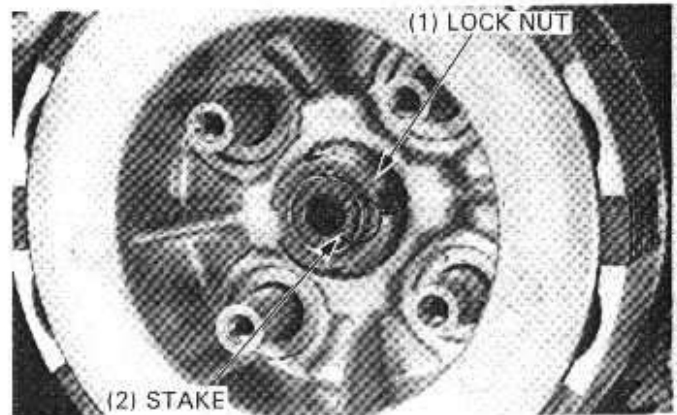
**TORQUE: 60 N·m (6.0 kg-m, 43 ft-lb)**

### TOOLS:

Clutch center holder            07923-KE10000  
Lock nut wrench, 20 x 24 mm    07716-0020100

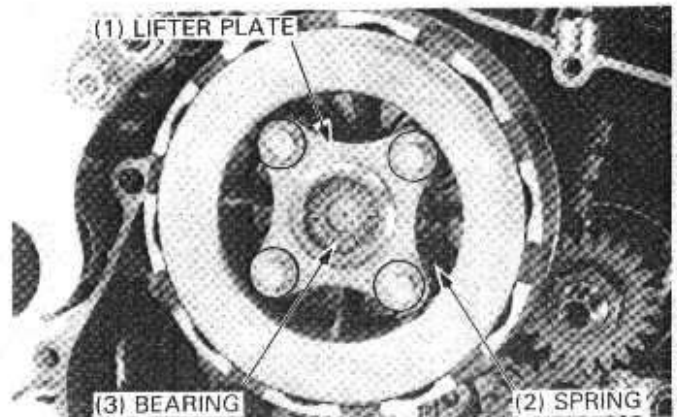


Stake the lock nut.



Install the clutch springs, lifter plate and bolts.  
Tighten the bolts in a crisscross pattern in 2 or 3 steps.

Install the clutch lifter bearing.

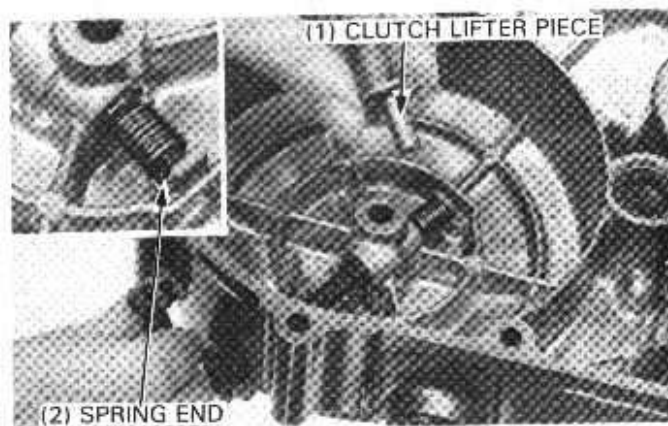


## CLUTCH

### CLUTCH LIFTER ASSEMBLY

Install the clutch lifter and spring, aligning the spring end with the hole in the lifter.

Install the clutch lifter piece.

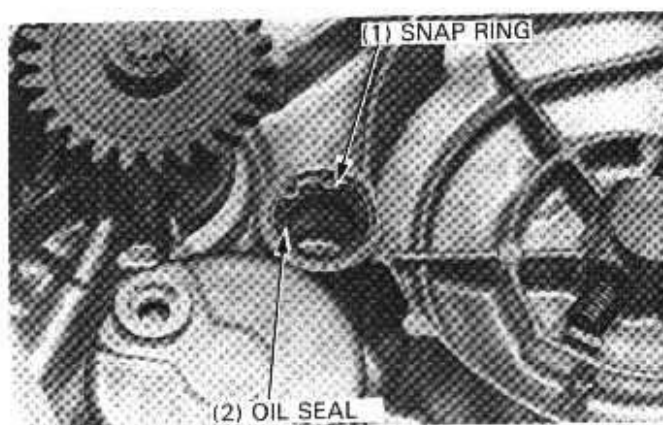


### PRIMARY DRIVE GEAR

Remove the right crankcase cover (page 7-3).

### CRANKSHAFT OIL SEAL

Remove the snap ring and oil seal from the cover.  
Install a new oil seal and snap ring.



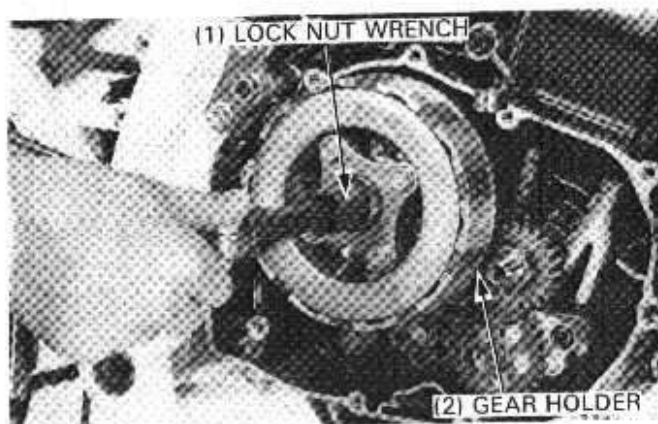
### REMOVAL

Remove the lifter plate bearing and unstake the clutch lock nut.

Install the gear holder as shown and remove the clutch lock nut using a lock nut wrench.

#### TOOLS:

Gear holder 07724-0010100  
Lock nut wrench, 20 x 24 mm 07716-0020100

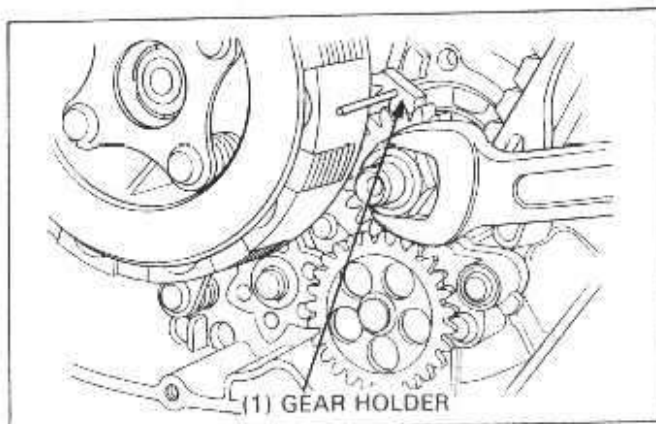


Remove the primary drive gear lock nut and washer.  
Remove the clutch assembly from the mainshaft.

Remove the woodruff key and the drive gear.

#### NOTE

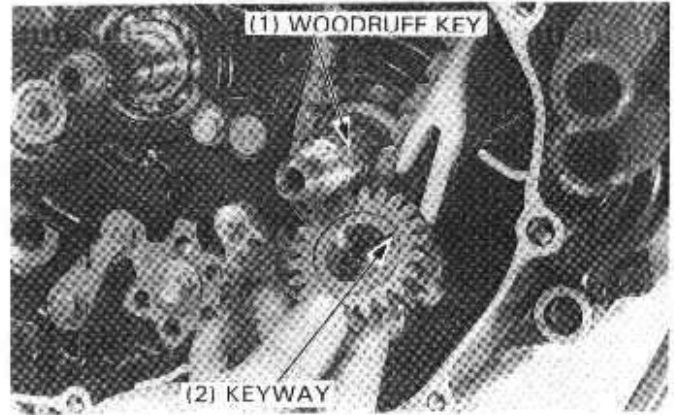
- Use care not to damage the shaft end when removing the drive gear.
- The shaft end has an oil seal in the case.



## CLUTCH

### INSTALLATION

Place the woodruff key into the crankshaft slot.  
Install the drive gear by aligning its keyway with the key in the crankshaft.



Install the washer and lock nut.  
Temporarily install the clutch, then install the gear holder as shown.

#### TOOL:

**Gear holder** 07724-0010100

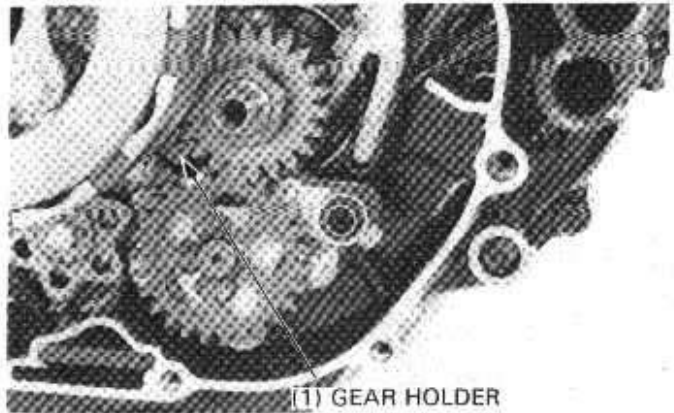
Tighten the drive gear lock nut.

**TORQUE: 95 N·m (9.5 kg-m, 69 ft-lb)**

Assemble the clutch, if the install the clutch lock nut washer and a new lock nut.

Tighten and stake the nut (see page 7-7), then install the lifter bearing.

Remove the gear holder.

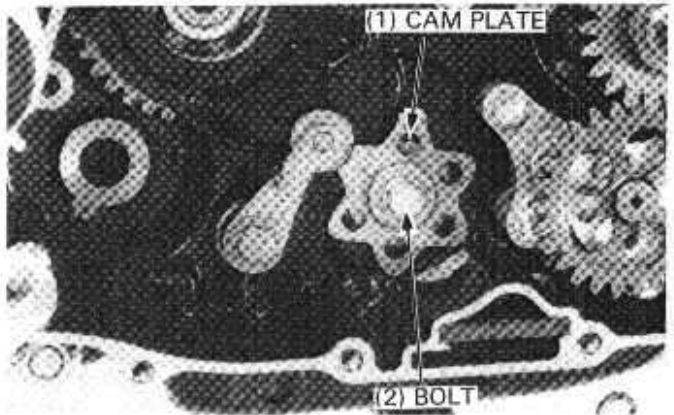


## GEARSHIFT LINKAGE

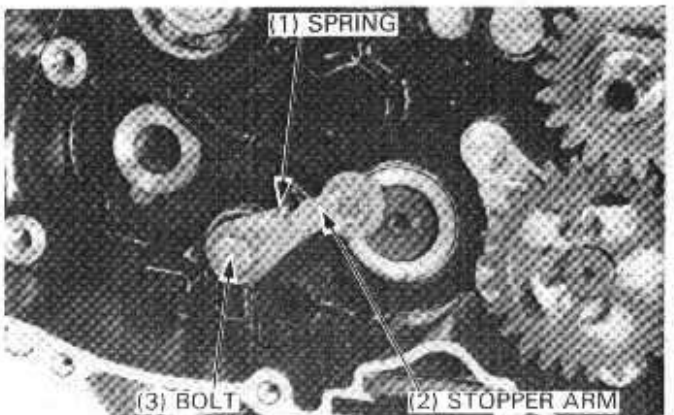
### REMOVAL/INSTALLATION

Remove the following:

- right crankcase cover (page 7-3).
- clutch (page 7-4).
- cam plate bolt and cam plate.



Remove the stopper arm bolt, spring washer and stopper arm.

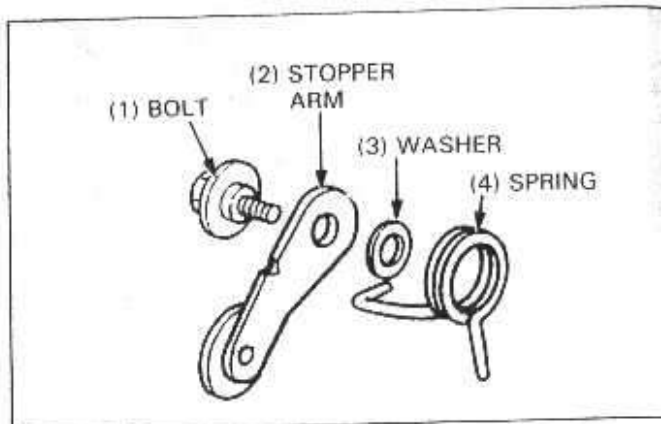


## CLUTCH

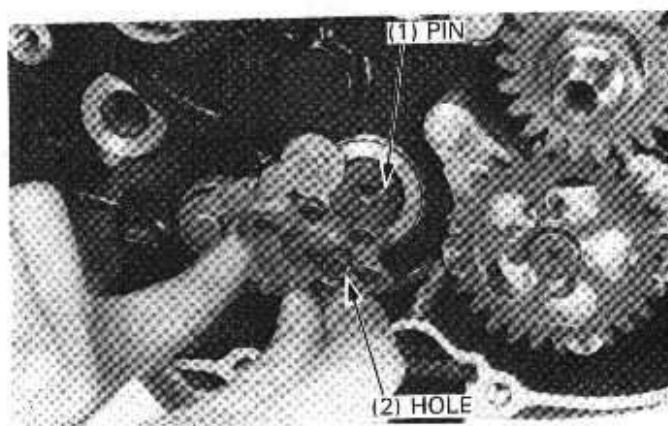
Assemble the stopper arm, bolt, washer and spring then install them in the case.

Tighten the bolt securely.

**TORQUE: 12 N·m (1.2 kg-m, 9 ft-lb)**



Pull up the stopper arm with your finger and install the cam plate by positioning its hole over the pin in the shift drum.

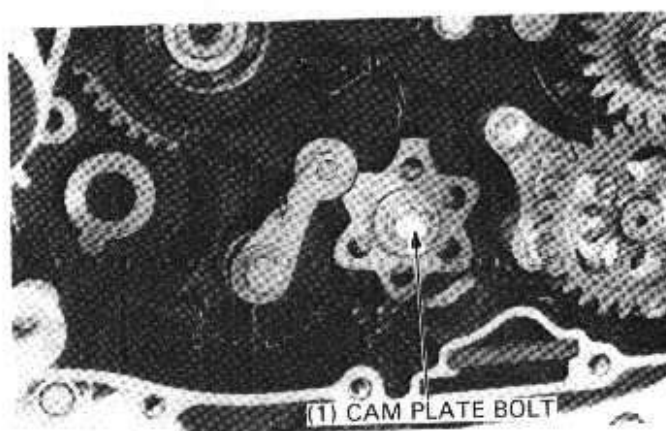


Apply locking agent to the cam plate bolt threads.

Install and tighten the bolt.

**TORQUE: 12 N·m (1.2 kg-m, 9 ft-lb)**

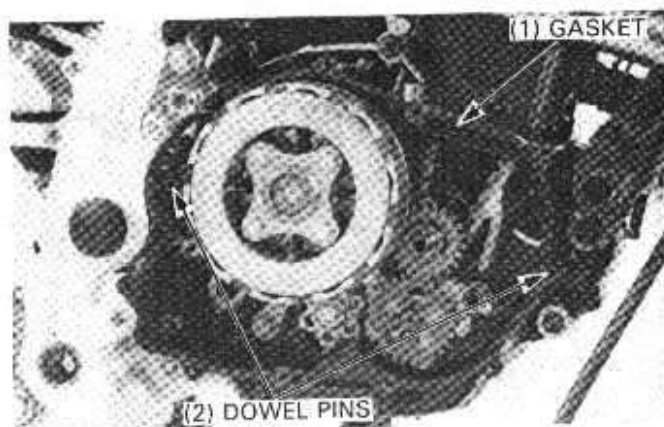
Install the clutch (page 7-6) and the crankcase cover.



## RIGHT CRANKCASE COVER INSTALLATION

Install a new gasket and dowel pins.

Install the right crankcase cover.



## CLUTCH

Install and tighten the crankcase cover bolts, except at the clutch cable holder, in 2 or 3 steps in a crisscross pattern.

**TORQUE: 10 N-m (1.0 kg-m, 7 ft-lb)**

Connect the clutch cable to the clutch lifter arm and install the cable holder on the cover with the bolt.

Install new sealing washers and oil pipe bolt.

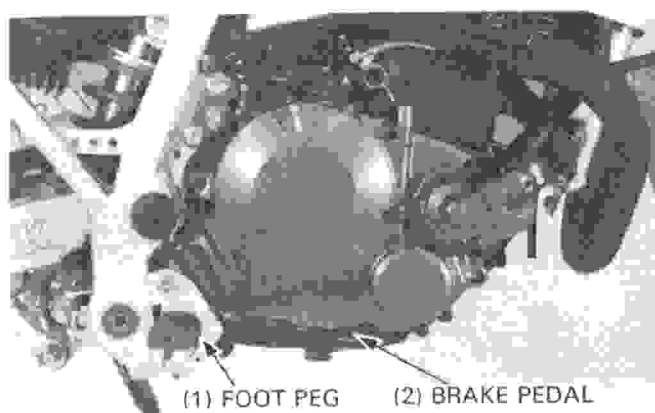
**TORQUE: 14 N-m (1.4 kg-m, 10 ft-lb)**



Install the right foot peg and rear brake pedal.

**TORQUE: Rear brake pedal bolt:  
18 N-m (1.8 kg-m, 13 ft-lb)**

Install the spring as shown.



Connect the lower radiator and water hoses.

Fill the engine with oil (page 2-3).  
Fill the cooling system (page 5-4).

Adjust the clutch cable free play (page 3-14).  
Check the clutch and gearshift pedals for smooth operation.  
Make sure there are no oil or coolant leaks.

