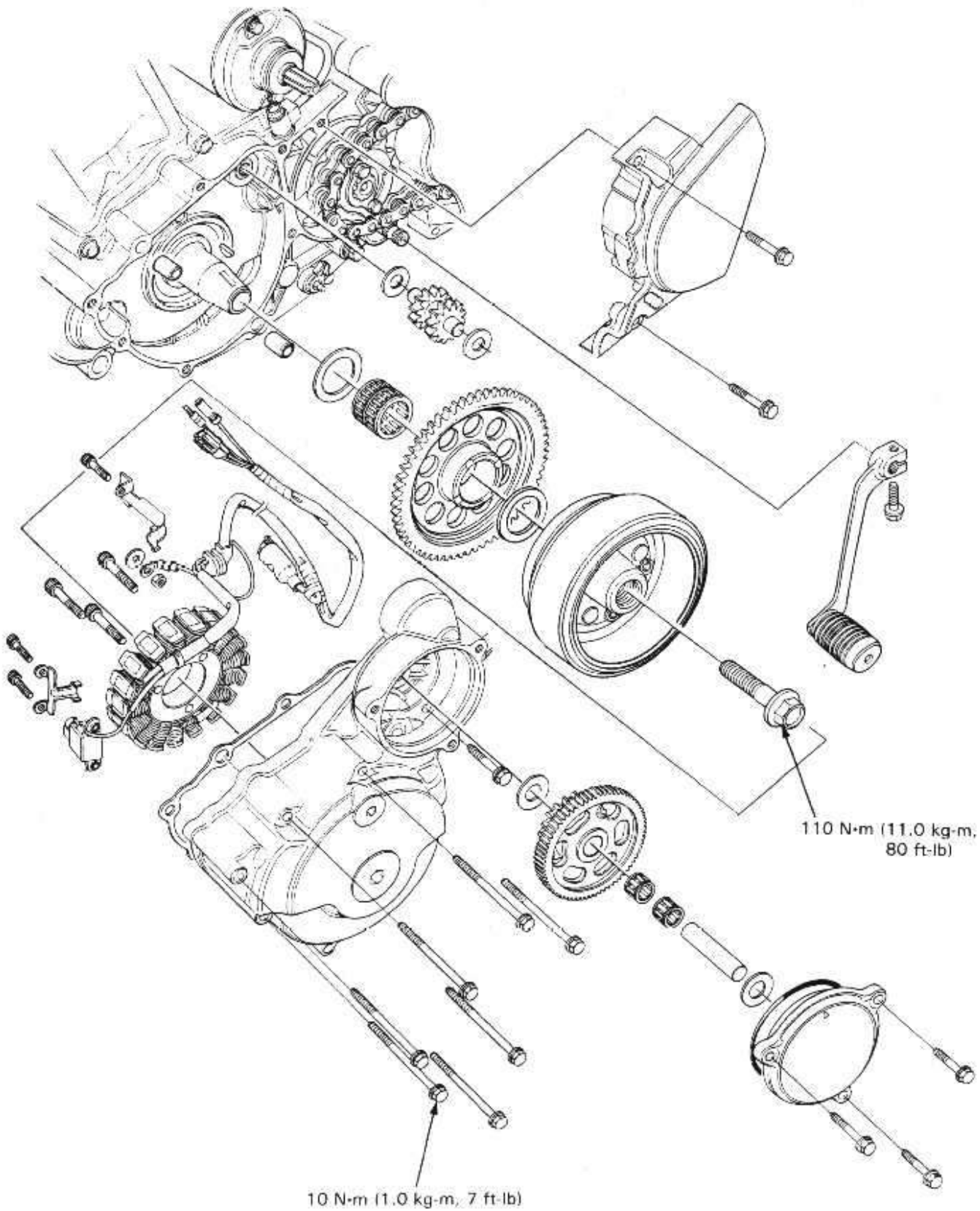


**ALTERNATOR/STARTER  
CLUTCH**

**ALTERNATEUR/ROUE LIBRE DE  
DE MARREUR**

**LICHTMASCHINE/KICKSTARTER**

ALTERNATOR/STARTER CLUTCH



## ALTERNATOR/STARTER CLUTCH

SERVICE INFORMATION	8-1	LEFT CRANKCASE COVER INSTALLATION	8-7
LEFT CRANKCASE COVER REMOVAL	8-2		
FLYWHEEL/STARTER CLUTCH	8-3		

## SERVICE INFORMATION

### GENERAL

- This section covers the removal and installation of the starter reduction gear, idle gear and starter clutch, flywheel and stator.
- For pulse generator removal and inspection, refer to section 17.

### TORQUE VALUES

Flywheel bolt	110 N·m (11.0 kg-m, 80 ft-lb)
Starter clutch outer bolt	16 N·m (1.6 kg-m, 12 ft-lb)

### TOOLS

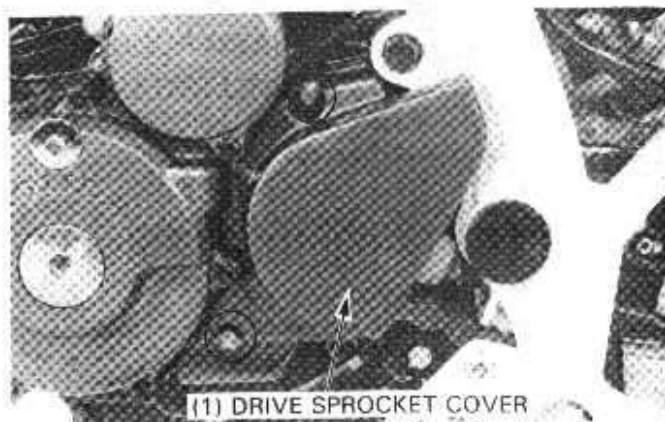
<b>Common</b>	
Flywheel holder	07725-0040000
Rotor puller	07733-0020001

## ALTERNATOR/STARTER CLUTCH

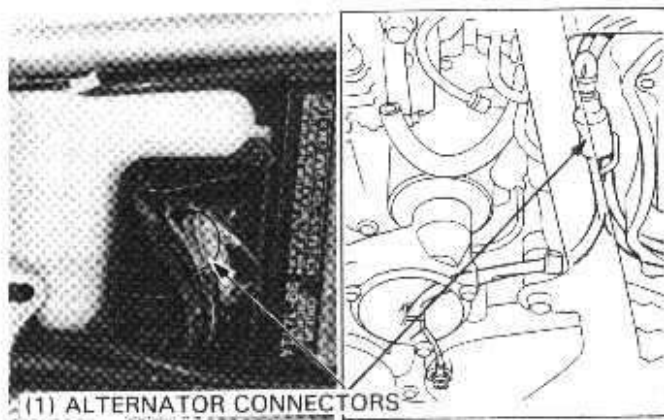
### LEFT CRANKCASE COVER REMOVAL

Remove the following:

- drive sprocket cover.
- skid plate (page 8-2).

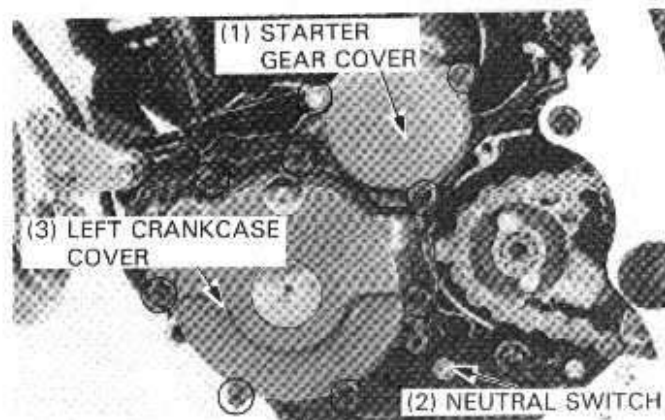


Disconnect the alternator 2P and 3P connectors.



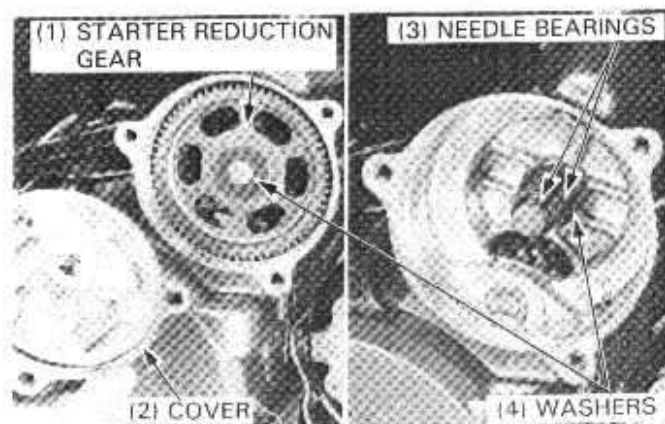
Disconnect the neutral switch wire from the switch terminal.

Remove the bolts from the left crankcase and starter reduction gear covers.



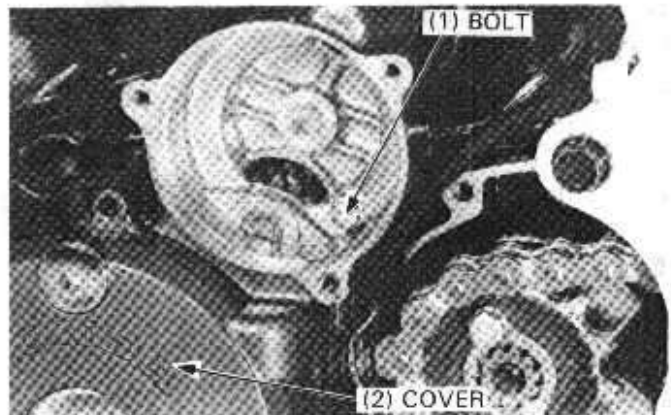
Remove the starter reduction gear cover, washer and gear.

Remove the needle bearings, washer and shaft.



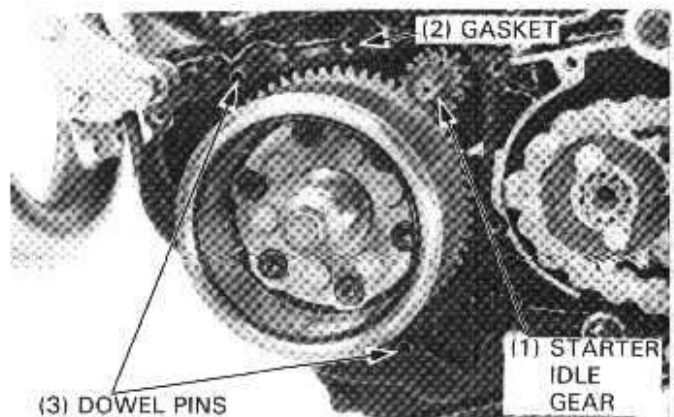
## ALTERNATOR/STARTER CLUTCH

Remove the left crankcase cover bolt located in the reduction gear housing, then remove the crankcase cover.



Remove the starter idle gear.

Remove the gasket and dowel pins.

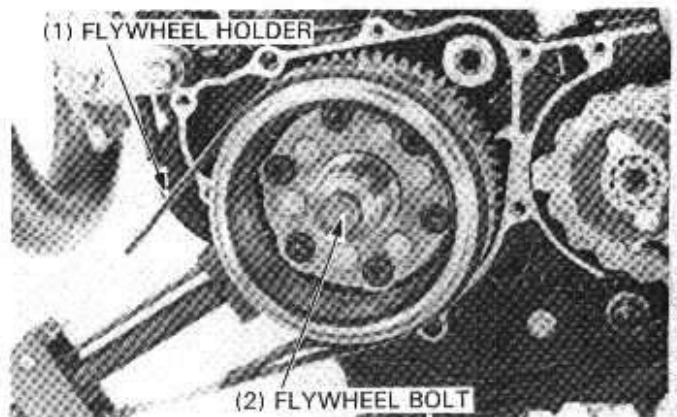


## FLYWHEEL/STARTER CLUTCH

### FLYWHEEL REMOVAL

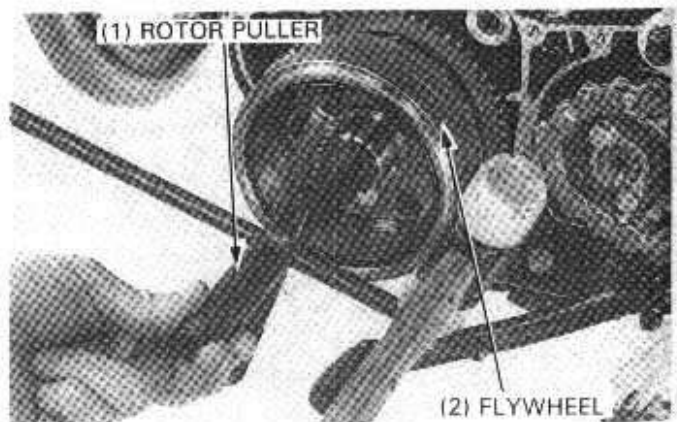
Hold the flywheel with the flywheel holder and remove the flywheel bolt.

TOOL: Flywheel holder                    07725-0040000



Remove the flywheel with the rotor puller.

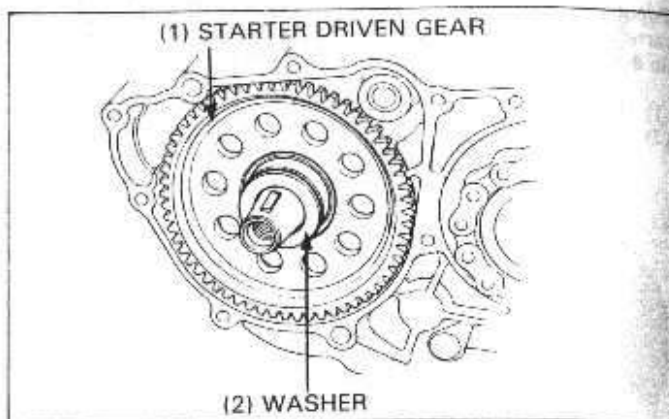
TOOL: Rotor puller                    07733-0020001



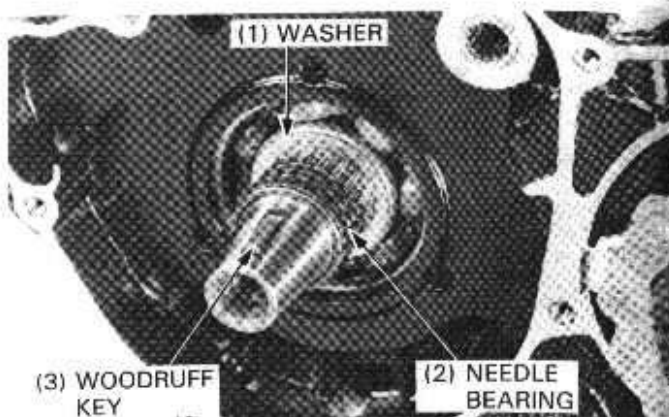
## ALTERNATOR/STARTER CLUTCH

### STARTER CLUTCH REMOVAL

Remove the washer and the starter driven gear.



Remove the needle bearing, washer and woodruff key.

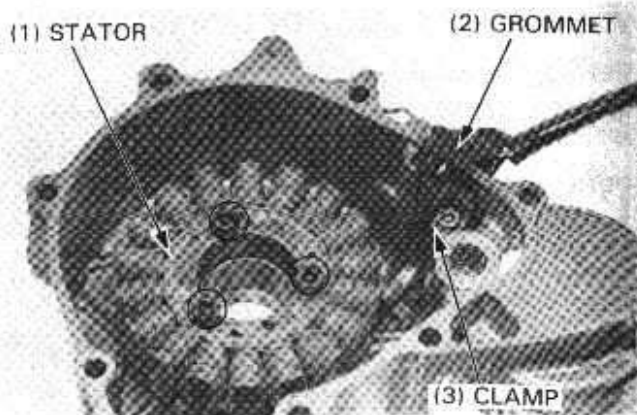


### ALTERNATOR REPLACEMENT

Remove the wire clamp by removing the bolt.  
Remove the three stator bolts and disconnect the wire terminal from the pulse generator (page 17-5).  
Remove the stator and wire grommets from the cover.

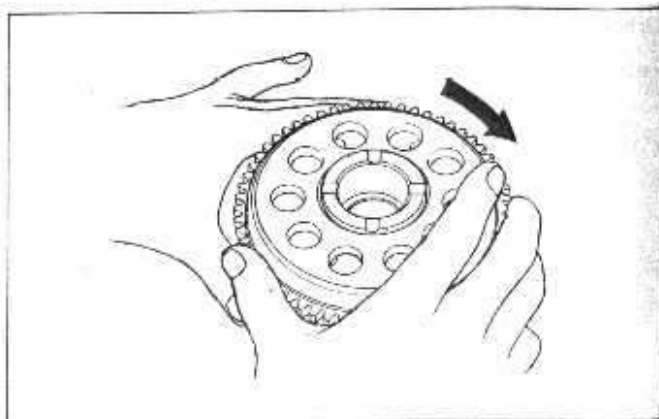
Insert the wire grommet into the groove in the cover. Apply a locking agent to the stator bolt and install and tighten the bolts.

Install the wire clamp and connect the wire to the pulse generator.



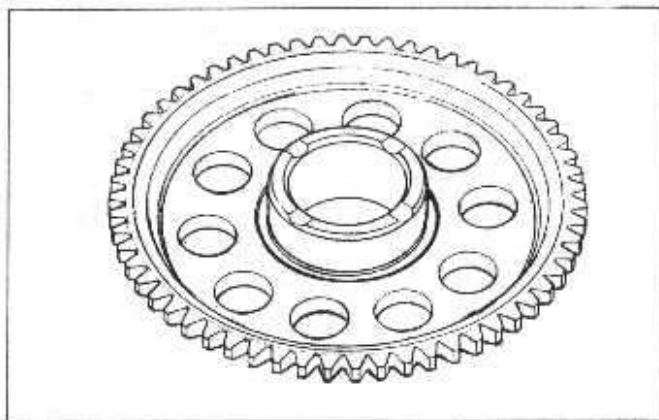
### STARTER CLUTCH INSPECTION/DISASSEMBLY

Check the operation of the one-way clutch by turning the driven gear. You should be able to turn the driven gear clockwise smoothly, but the gear should not turn counter-clockwise.



## ALTERNATOR/STARTER CLUTCH

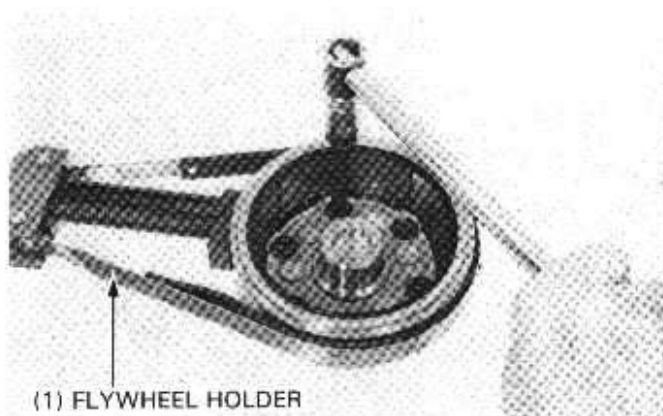
Inspect the starter driven gear teeth for damage or abnormal wear.



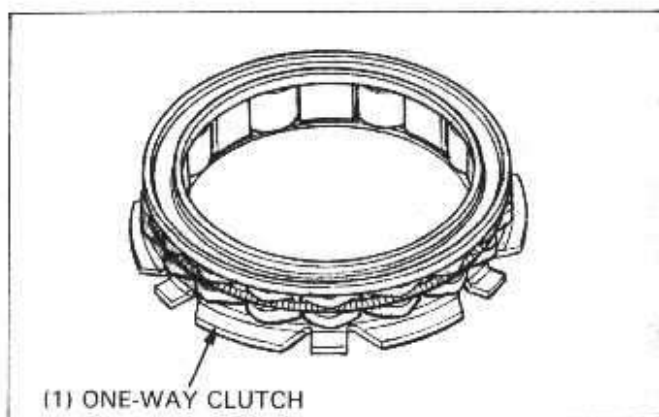
Hold the flywheel and remove the socket bolts, then remove the one-way clutch.

TOOL: Flywheel holder

07725-004000



Check the one-way clutch rollers for wear or damage.

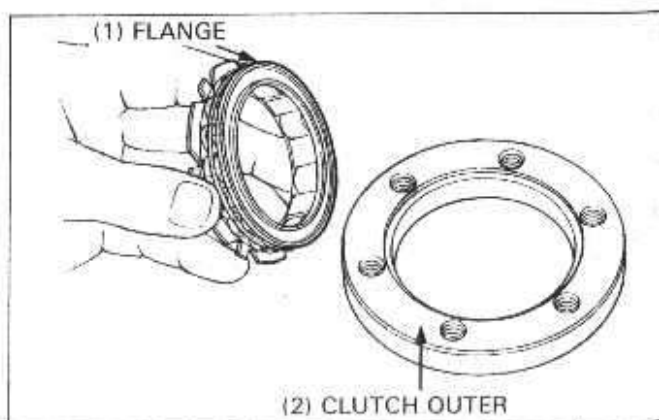


### ASSEMBLY

Apply oil to the one-way clutch rollers.  
Install the one-way clutch in the clutch outer.

#### NOTE

- Make sure the flange side of the one-way clutch is facing the flywheel.

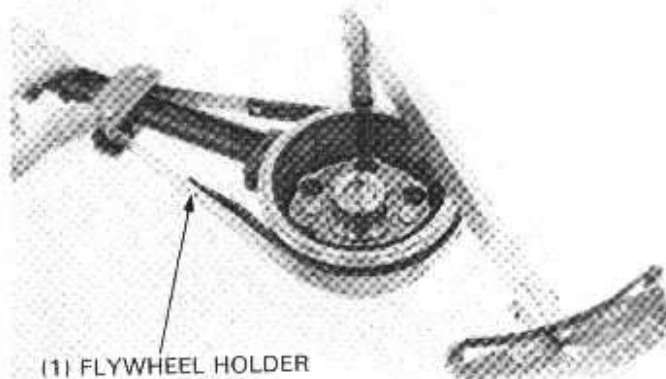


## ALTERNATOR/STARTER CLUTCH

Apply a locking agent to the socket bolt threads.  
Install and tighten the bolts.

TOOL: Flywheel holder 07725-0040000

TORQUE: 16 N·m (1.6 kg-m, 12 ft-lb)

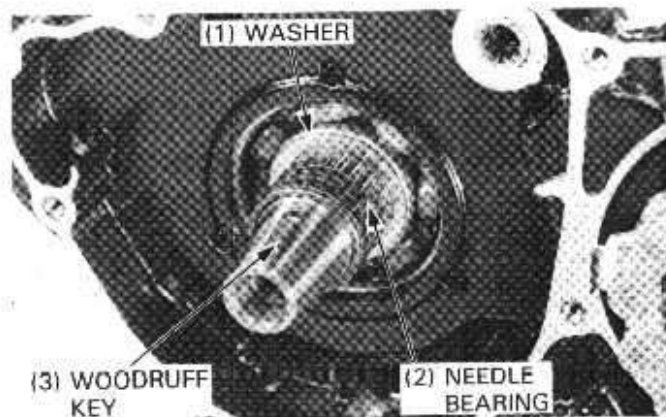


## STARTER CLUTCH/FLYWHEEL INSTALLATION

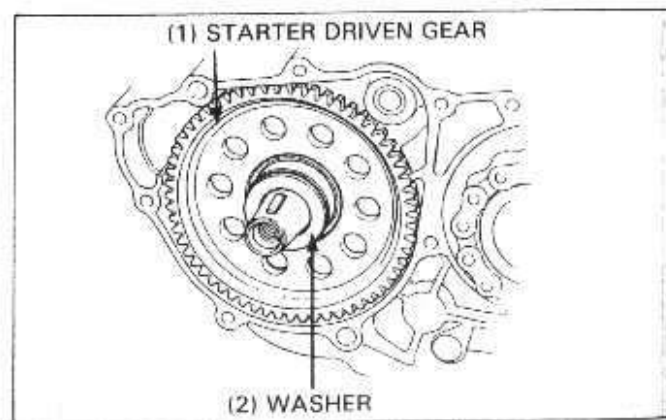
Clean any oil from the crankshaft.

Install the washer with its chamfered surface facing out.

Install the needle bearing and woodruff key.



Install the starter driven gear and washer.

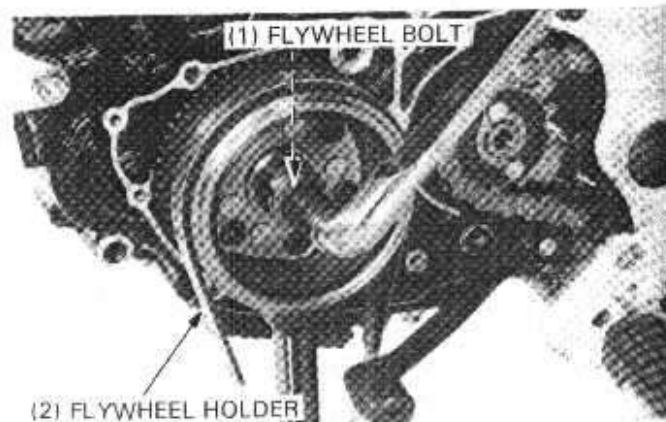


Install the flywheel with the one-way clutch, aligning the key way in the flywheel with the key on the crankshaft.

Install the washer and the flywheel bolt. Hold the flywheel and tighten the bolt.

TOOL: Flywheel holder 07725-0040000

TORQUE: 110 N·m (11.0 kg-m, 80 ft-lb)





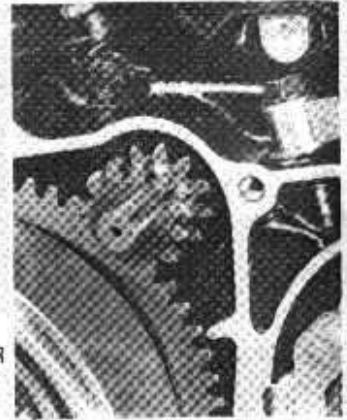
## ALTERNATOR/STARTER CLUTCH

Assemble the inner washer, starter idle gear and outer washer, then install them as shown.

(1) INNER WASHER

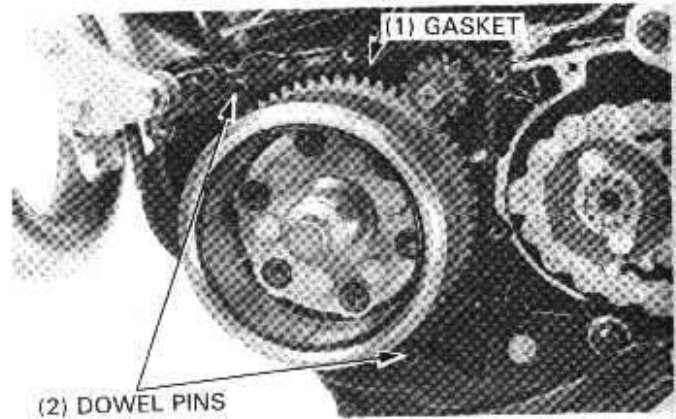
(2) STARTER  
IDLE GEAR

(3) OUTER WASHER

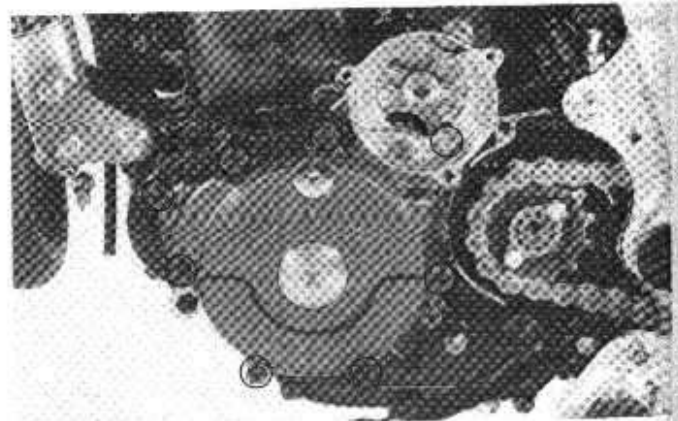


## LEFT CRANKCASE COVER INSTALLATION

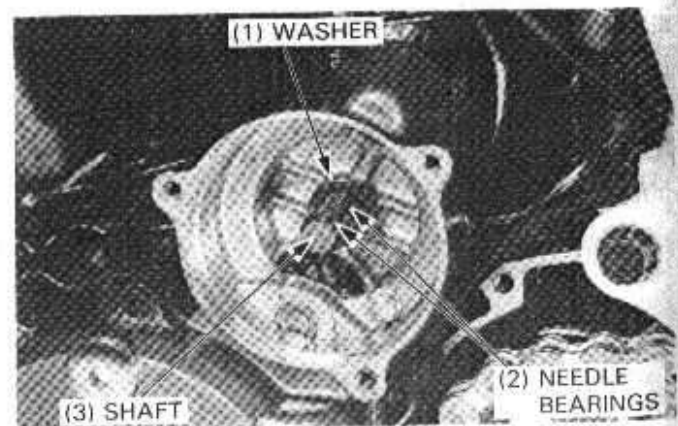
Install a new gasket and dowel pins.



Install the left crankcase cover.  
Tighten the cover bolts in 2 or 3 steps in a crisscross pattern.



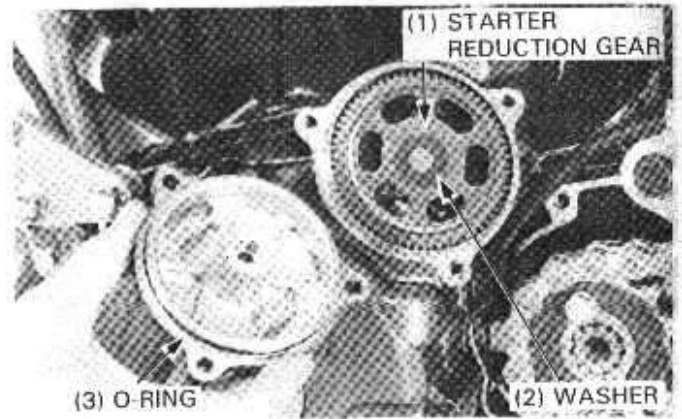
Install the shaft, washer and needle bearings.



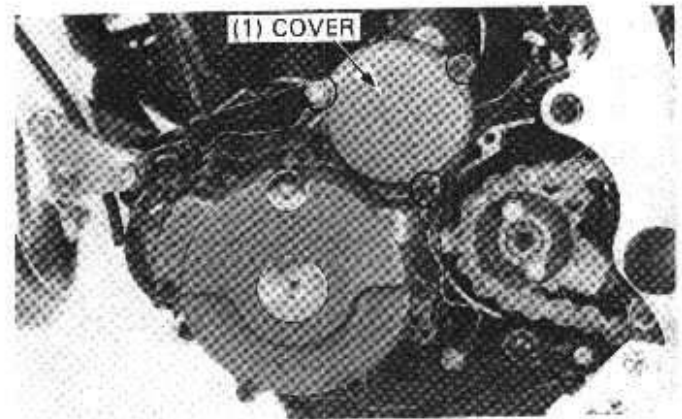
## ALTERNATOR/STARTER CLUTCH

Install the starter reduction gear and washer.

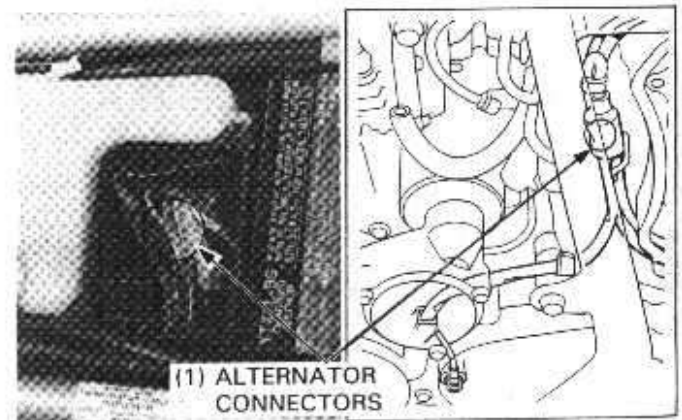
Install a new O-ring in the cover and install the cover.



Install the and tighten cover bolts.



Connect the alternator 2P and 3P connectors.



Connect the neutral switch wire and route it properly.

Install the drive sprocket cover.

Install the skid plate (page 7-11).

