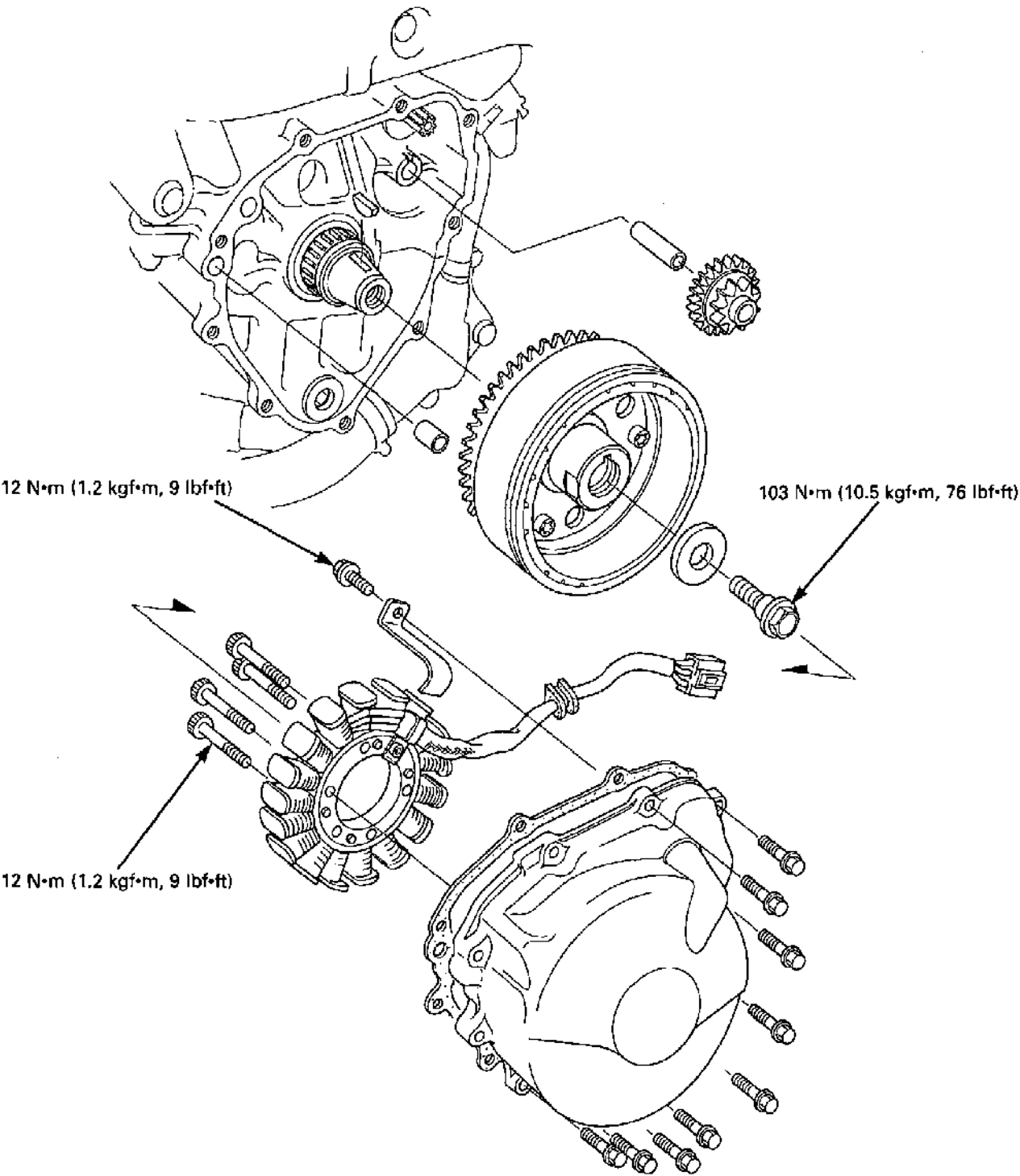


ALTERNATOR/STARTER CLUTCH



10. ALTERNATOR/STARTER CLUTCH

SERVICE INFORMATION	10-1	FLYWHEEL REMOVAL	10-3
TROUBLESHOOTING	10-1	STARTER CLUTCH	10-5
ALTERNATOR COVER REMOVAL	10-2	FLYWHEEL INSTALLATION	10-7
STATOR	10-2	ALTERNATOR COVER INSTALLATION	10-8

SERVICE INFORMATION

GENERAL

- This section covers service of the alternator stator, flywheel and starter clutch. All service can be done with the engine installed in the frame.
- Refer to section 16 for alternator stator inspection.
- Refer to section 18 for starter motor servicing.

SPECIFICATIONS

Unit: mm (in)

ITEM	STANDARD	SERVICE LIMIT
Starter driven gear boss O.D.	51.699 – 51.718 (2.0354 – 2.0361)	51.684 (2.0348)

10

TORQUE VALUES

Alternator stator socket bolt	12 N•m (1.2 kgf•m, 9 lbf•ft)	
Starter clutch outer socket bolt	16 N•m (1.6 kgf•m, 12 lbf•ft)	Apply a locking agent to the threads.
Flywheel flange bolt	103 N•m (10.5 kgf•m, 76 lbf•ft)	Apply oil to the threads.
Stator wire clamp flange bolt	12 N•m (1.2 kgf•m, 9 lbf•ft)	CT bolt.

TOOLS

Flywheel holder	07725-0040000	Equivalent commercially available in U.S.A.
Rotor puller	07733-0020001 or 07933-3950000	

TROUBLESHOOTING

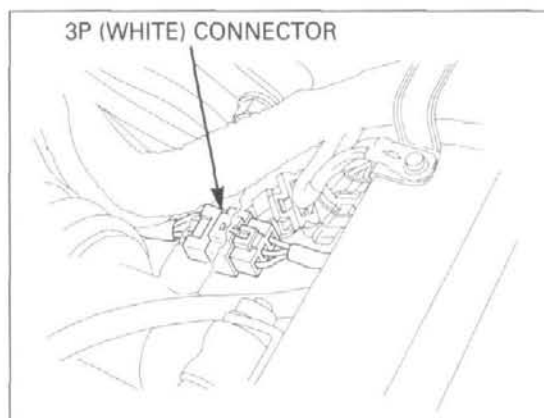
Engine does not turn

- Faulty starter clutch
- Damaged reduction gear/shaft

ALTERNATOR COVER REMOVAL

Remove the throttle body (page 5-62).

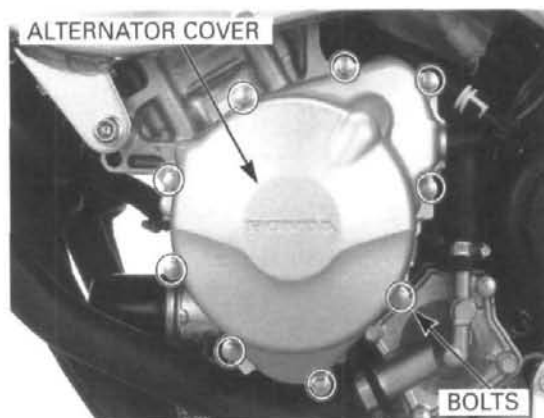
Disconnect the alternator 3P (Natural) connector.



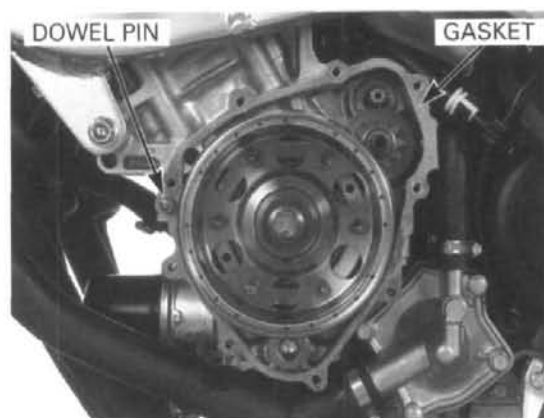
The alternator cover (stator) is magnetically attached to the flywheel, be careful during removal.

Remove the alternator cover SH bolts and alternator cover.

The engine oil will run out when the alternator cover is removed. Set a clean oil pan under the engine and add the recommended oil to the specified level after installation.



Remove the gasket and dowel pin.



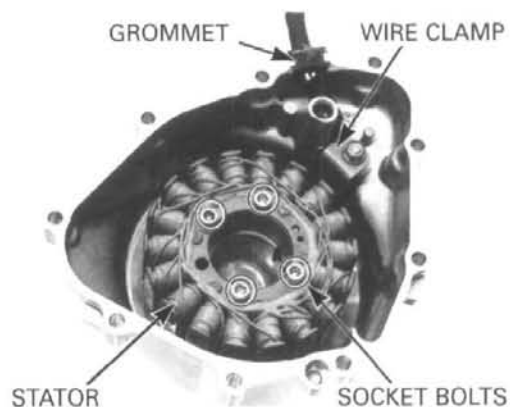
STATOR

REMOVAL

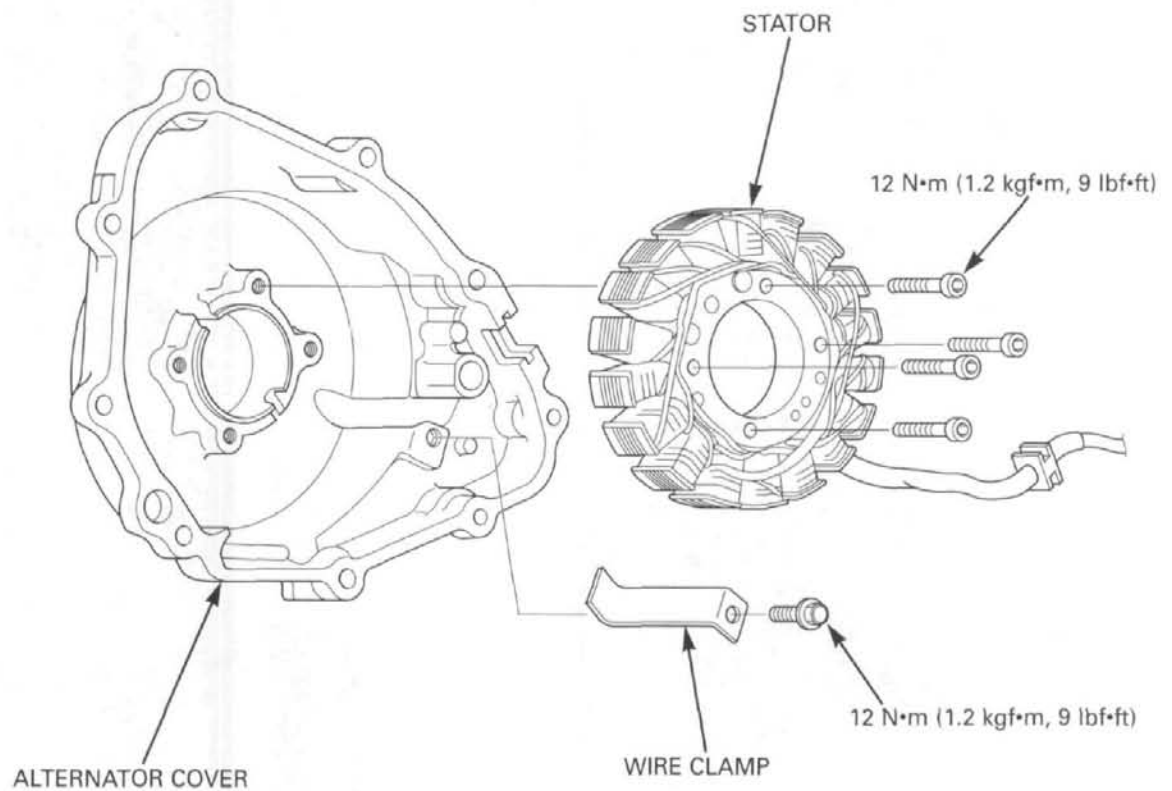
Remove the alternator wire grommet from the alternator cover.

Remove the socket bolt and stator wire clamp.

Remove the socket bolts and stator.



INSTALLATION



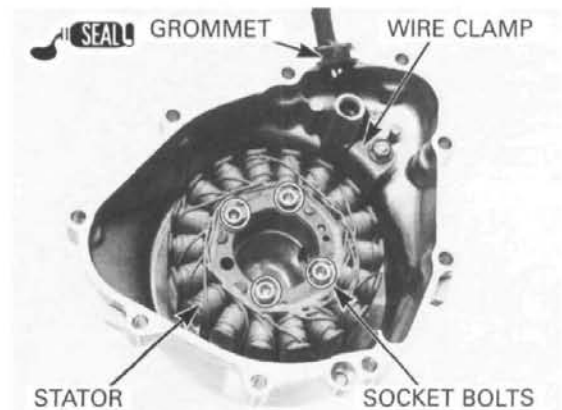
Install the stator into the alternator cover.

Apply sealant to the wire grommet, then install the wire grommet into the alternator groove securely. Install and tighten the stator mounting socket bolts to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)

Install the wire clamp and tighten the bolt to the specified torque.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)



FLYWHEEL REMOVAL

Remove the alternator cover (page 10-2).

Remove the starter reduction gear shaft and reduction gear.



ALTERNATOR/STARTER CLUTCH

Hold the flywheel using the flywheel holder, then remove the flywheel bolt.

TOOL:

Flywheel holder

07725-0040000
(equivalent commercially available in U.S.A.)

Remove the washer.

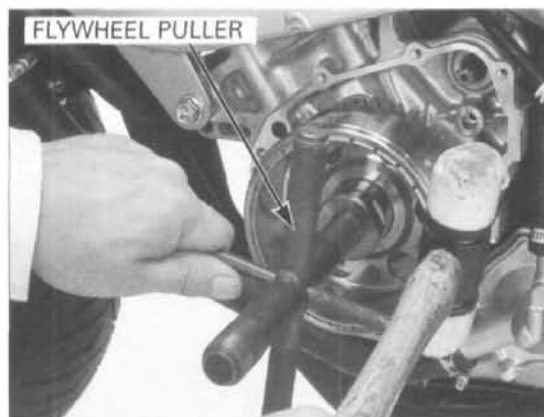


Remove the flywheel using the special tool.

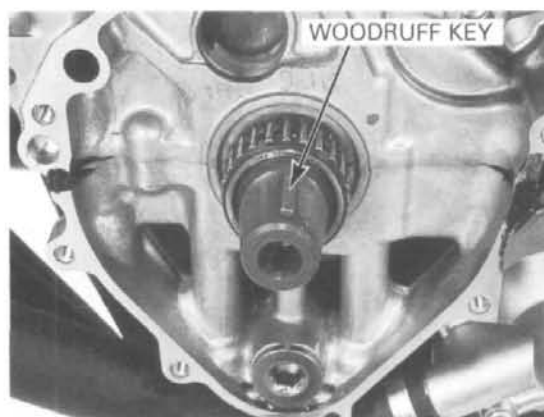
TOOL:

Rotor puller

07733-0020001 or
07933-3950000



Remove the woodruff key.



Check the starter reduction gear and shaft for wear or damage.



STARTER CLUTCH

INSPECTION

Check the operation of the one-way clutch by turning the driven gear.

You should be able to turn the driven gear counter-clockwise smoothly, but the gear should not turn clockwise.

DISASSEMBLY

Remove the starter driven gear by turning it counter-clockwise.

Hold the flywheel with a flywheel holder and remove the starter clutch mounting torx bolts.

TOOL:

Flywheel holder

07725-0040000
(equivalent commercially available in U.S.A.)

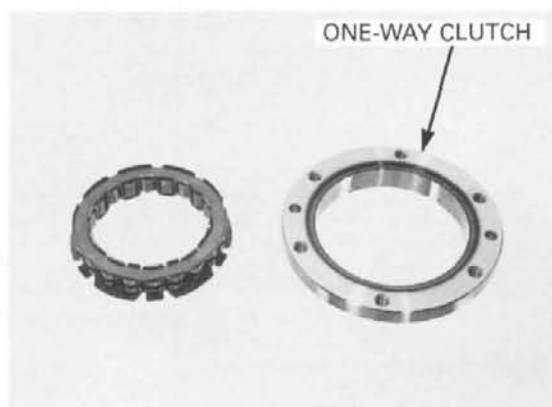
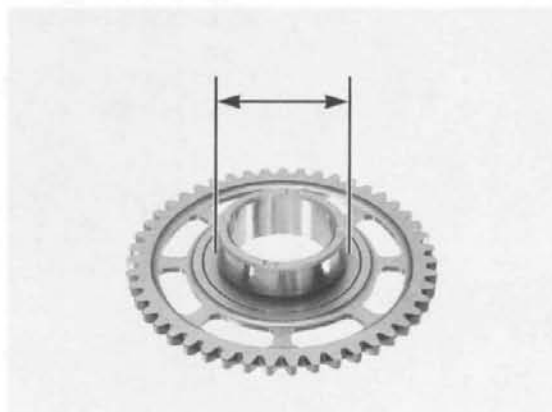
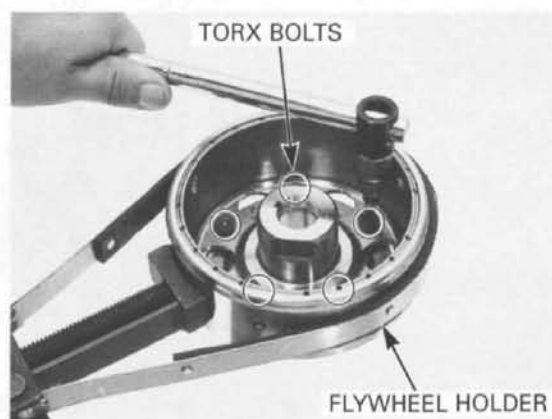
Remove the starter one-way clutch assembly.

Check the starter driven gear for abnormal wear or damage.

Measure the starter driven gear boss O.D.

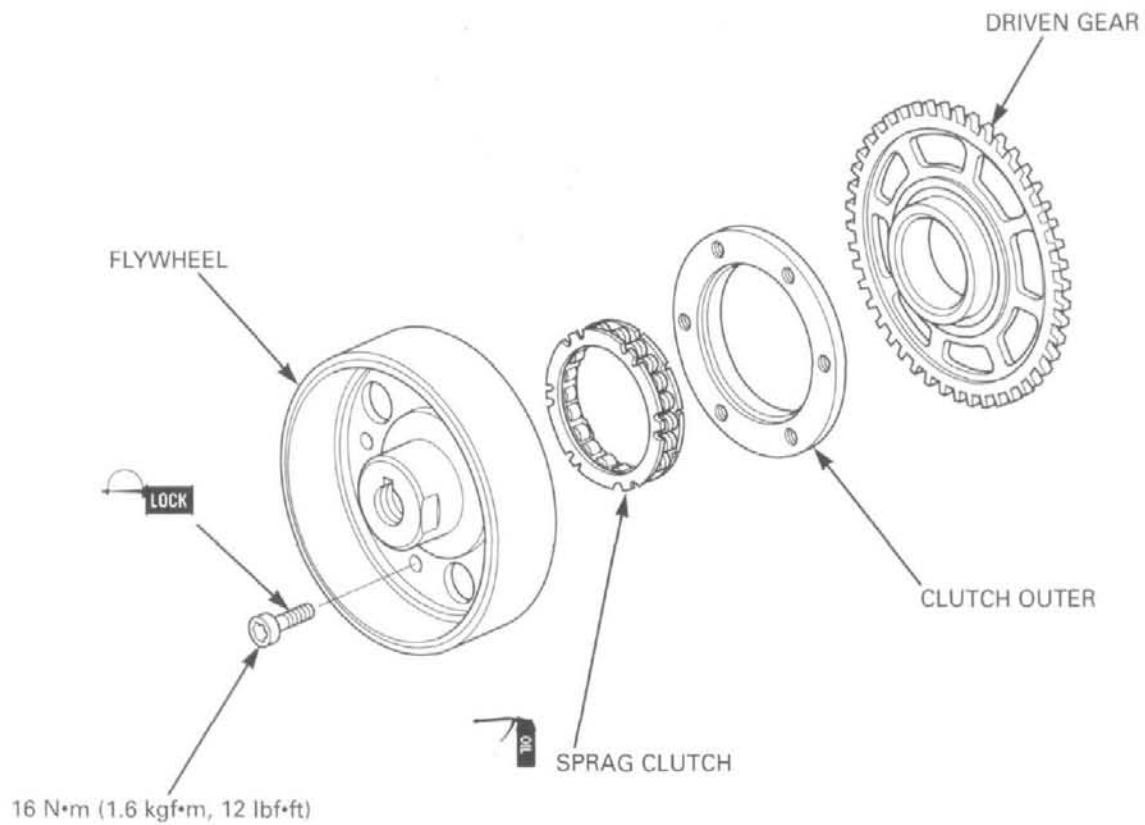
SERVICE LIMIT: 51.684 mm (2.0348 in)

Check the one-way clutch for wear or damage and replace if necessary.

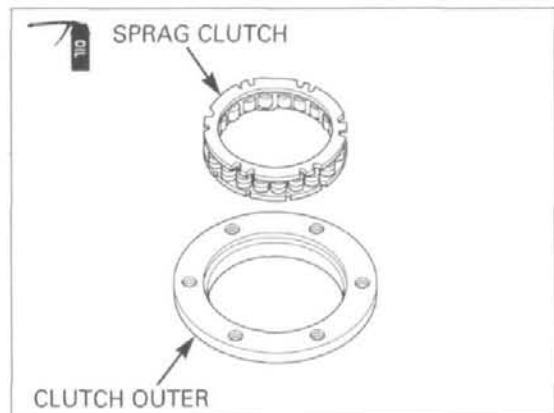


ALTERNATOR/STARTER CLUTCH

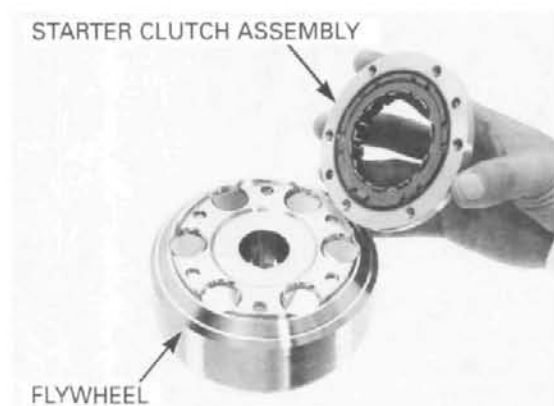
ASSEMBLY



Apply engine oil to the sprag clutch contacting surfaces.
Install the sprag clutch into the starter clutch outer with the flange side facing out.



Install the starter one-way clutch assembly onto the flywheel.



Apply a locking agent to the starter clutch outer mounting bolt threads.
Hold the flywheel with a flywheel holder and tighten the starter clutch mounting torx bolts.

TOOL:

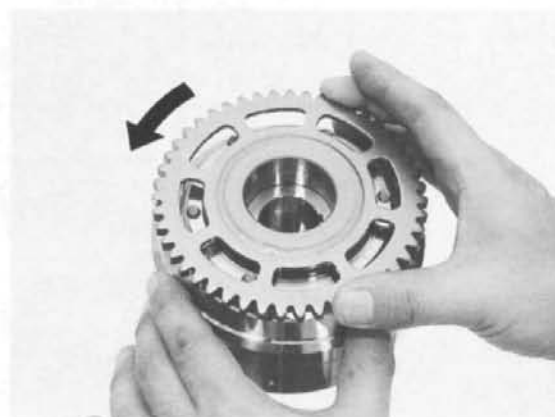
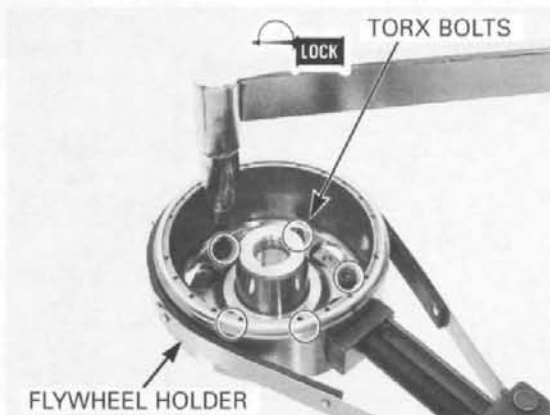
Flywheel holder

07725-0040000
(equivalent commercially available in U.S.A.)

TORQUE: 16 N·m (1.6 kgf·m, 12 lbf·ft)

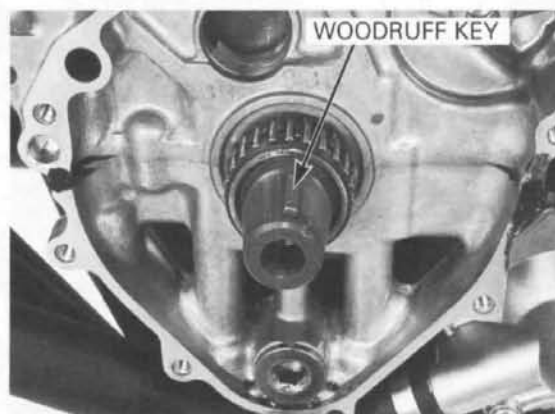
Install the starter driven gear into the one-way clutch while turning it counterclockwise.

Recheck the one-way clutch operation. You should be able to turn the driven gear counterclockwise smoothly, but the gear should not turn clockwise.



FLYWHEEL INSTALLATION

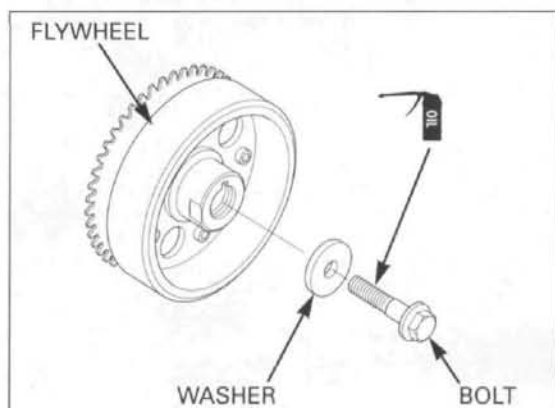
Clean any oil from the crankshaft taper.
Install the woodruff key into the groove in the crankshaft.



Install the flywheel aligning the key way in the flywheel with the woodruff key on the crankshaft.

Apply oil to the flywheel bolt threads and seating surface.

Install the washer and flywheel bolt.



ALTERNATOR/STARTER CLUTCH

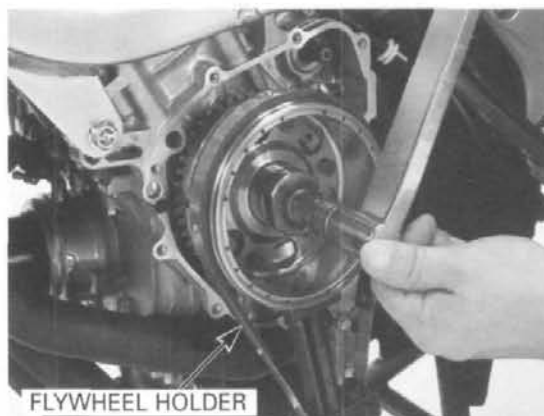
Hold the flywheel using the flywheel holder, then tighten the bolt to the specified torque.

TOOL:

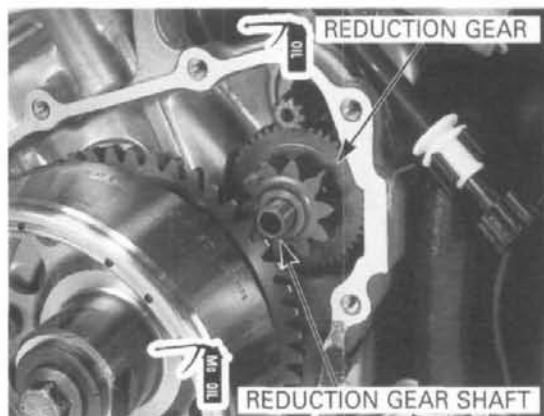
Flywheel holder

07725-0040000
(equivalent commercially available in U.S.A.)

TORQUE: 103 N·m (10.5 kgf·m, 76 lbf·ft)

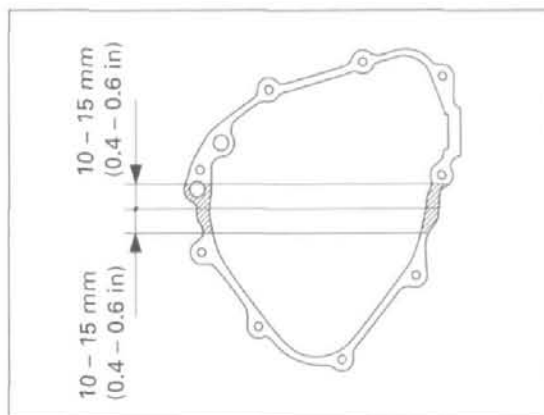


Apply molybdenum oil solution to the starter reduction gear shaft.
Apply oil to the starter reduction gear.
Install the starter idle gear and shaft onto the crankcase.

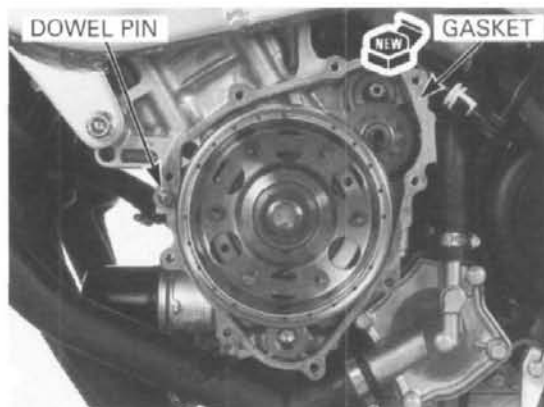


ALTERNATOR COVER INSTALLATION

Apply sealant to the mating surface of the crankcase as shown.



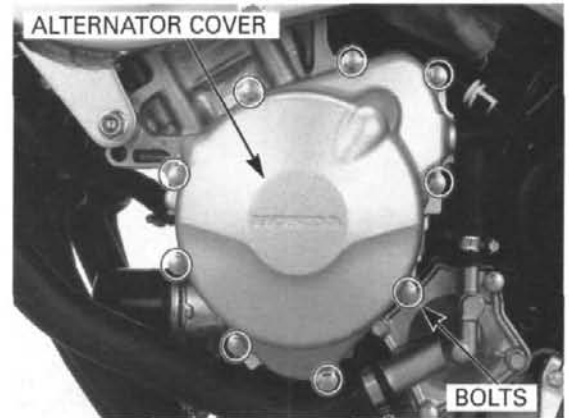
Install the dowel pin and new gasket.



The alternator cover (stator) is magnetically attached to the flywheel, be careful during installation.

Install the alternator cover.

Install and tighten the bolts securely.



Connect the alternator 3P (Natural) connector.

Install the throttle body (page 5-68)

