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SERVICE INFORMATION

GENERAL INSTRUCTIONS

This section covers removal and installation of the clutch and starter clutch.
 This operation can be accomplished with the engine in the frame.

SPECIAL TOOLS

Special Tool

Primary Gear Holder 07924-4250000

Common Tools

Lock Nut Wrench 07716-0020100

Universal Holder 07725-0010101

Handle 07716-0020500

TORQUE VALUES

Clutch lock nut	4.5-5.5 kg-m (33-40 ft-lb)
Primary drive gear lock bolt	8.0-10.0 kg-m (60-72 ft-lb)
Starter clutch locking bolt	2.6-3.0 kg-m (19-22 ft-lb)
Spark advancer bolt	3.3-3.7 kg-m (24-27 ft-lb)

SPECIFICATIONS

			STANDARD	SERVICE LIMIT
Clutch	Lever free play (at lever end)		10-20 mm (3/8-3/4 in)	
	Spring free length		34.2 mm (1.35 in)	32.8 mm (1.29 in)
	Spring preload/length		16.6-18.4 kg/25.0 mm (36.60-40.57 lbs/0.98 in)	14.9 kg/25.0 mm (37.85 lbs/0.98 in)
	Disc thickness	A	3.72-3.88 mm (0.146-0.153 in)	3.4 mm (0.13 in)
		B	3.72-3.88 mm (0.146-0.153 in)	3.4 mm (0.13 in)
	Plate warpage			0.3 mm (0.012 in)
Starter clutch	Drive gear O.D.		42.275-42.300 mm (1.6644-1.6654 in)	42.255 mm (1.6636 in)
Ignition timing	Refer to Section 3.			



TROUBLESHOOTING

Clutch

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

Clutch slips

1. No free play
2. Discs worn
3. Springs weak

Motorcycle creeps with clutch disengaged

1. Too much free play
2. Plates warped

Clutch will not disengage

1. Too much free play
2. Plates warped

Excessive lever pressure

1. Clutch cable kinked, damaged or dirty
2. Lifter mechanism damaged

Clutch operation feels rough

1. Outer drum slots rough



CLUTCH COVER REMOVAL

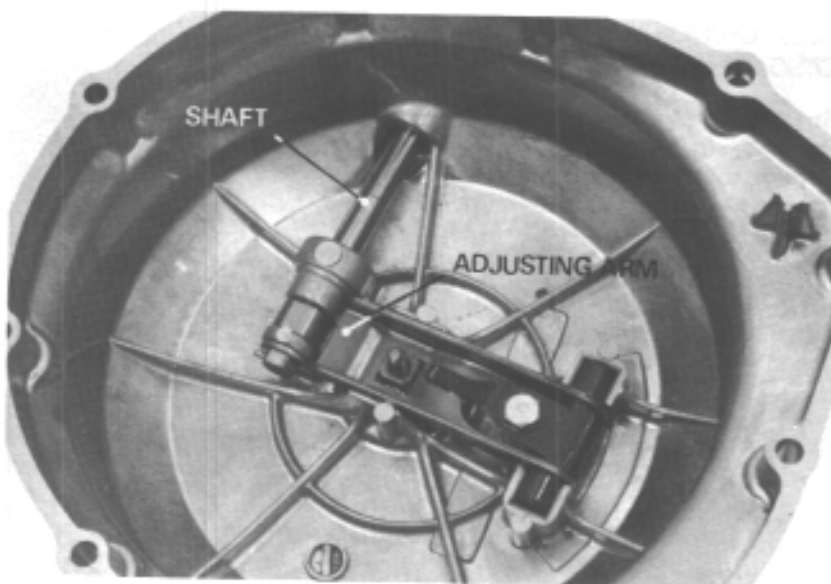
Drain the engine oil thoroughly.
Disconnect the clutch cable at the lower adjuster.
Remove the rear brake pedal.
Remove the clutch cover.
Remove the gasket and dowel pins.



CLUTCH REMOVAL

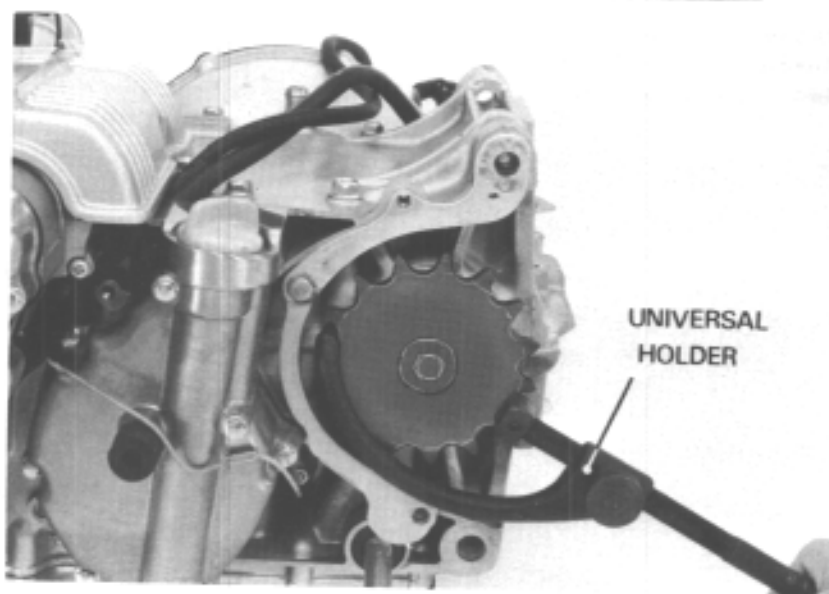
CLUTCH LIFTER REMOVAL

Remove the clutch lifter shaft and adjusting arm.



CLUTCH REMOVAL

Use the universal holder if the drive chain is removed.
Shift the transmission into gear to lock the countershaft and mainshaft.
Block the drive sprocket to prevent it from turning.





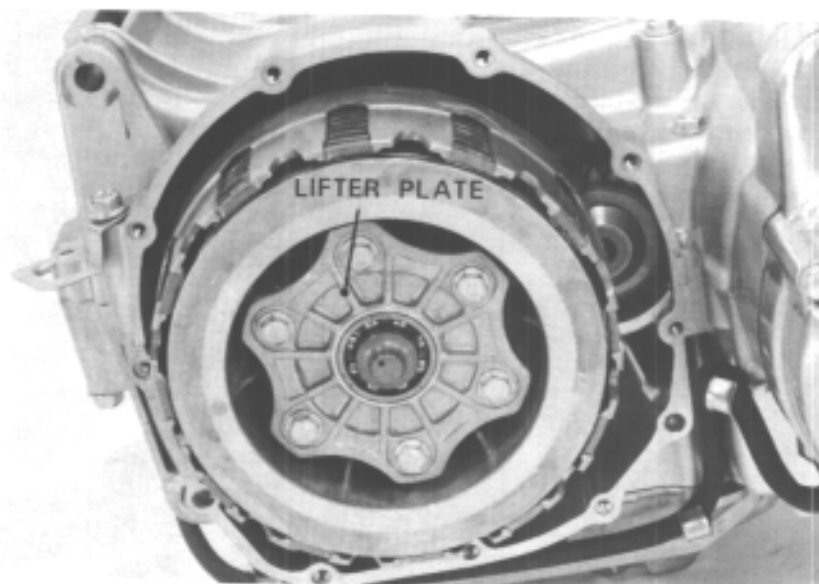
When servicing the clutch in the frame, shift the transmission into gear and press the brake pedal to lock the transmission gear shafts.

CLUTCH LIFTER PLATE REMOVAL

Remove the bolts and lifter plate with the clutch lifter guide and release bearing.

NOTE

Loosen the bolts in a criss cross pattern in 2-3 steps.



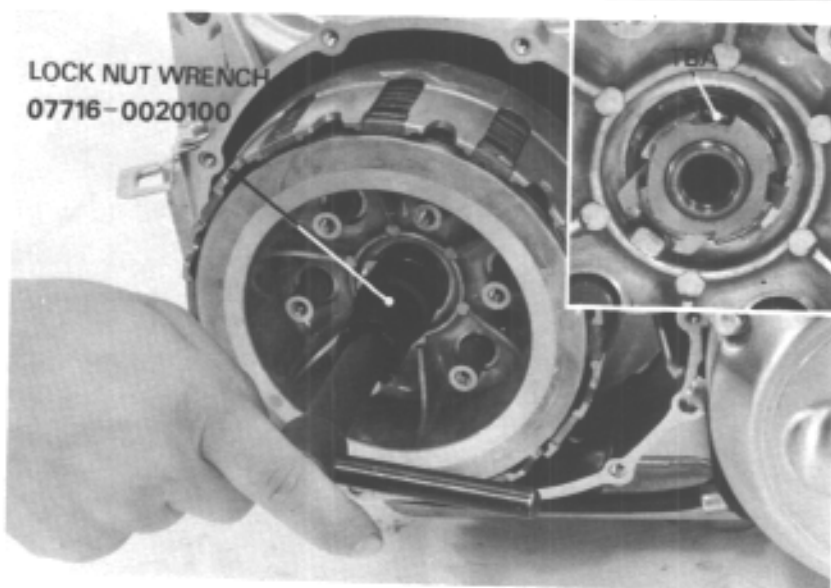
CLUTCH CENTER PLATE AND DISC REMOVAL

Straighten the lock washer tab.

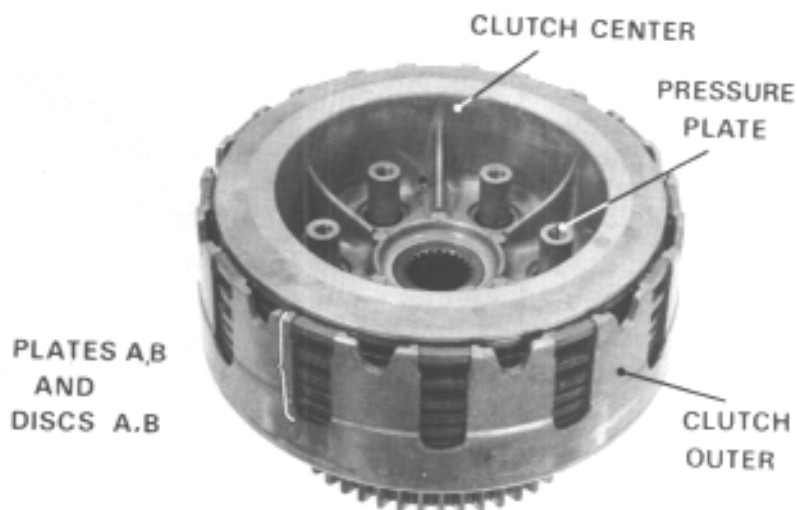
Attach the lock nut wrench.

Remove the lock nut, lock washer and washer.

The clutch can then be removed as a unit.



Remove the clutch center.
 Remove discs A and B, and plate A.
 Remove the pressure plate.

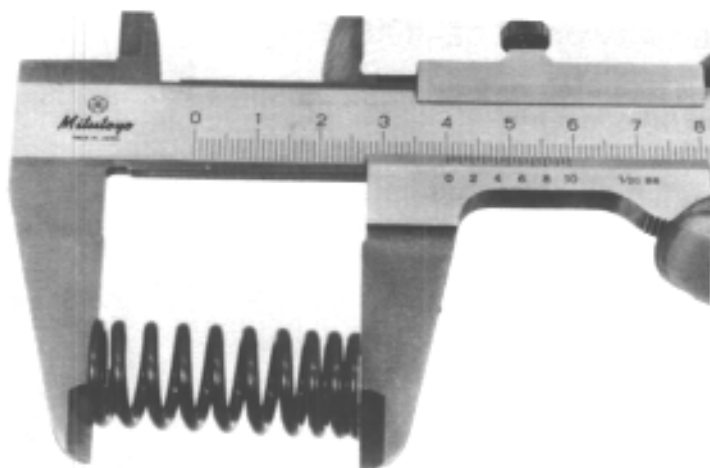




CLUTCH SPRING INSPECTION

Check spring free length.

SERVICE LIMIT: 32.8 mm (1.29 in)



CLUTCH DISC INSPECTION

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

SERVICE LIMIT: 3.4 mm (0.13 in)

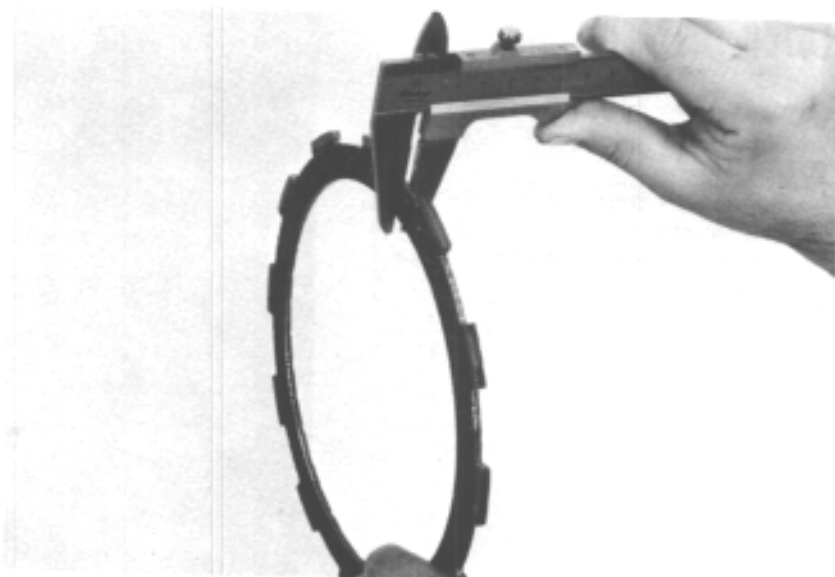
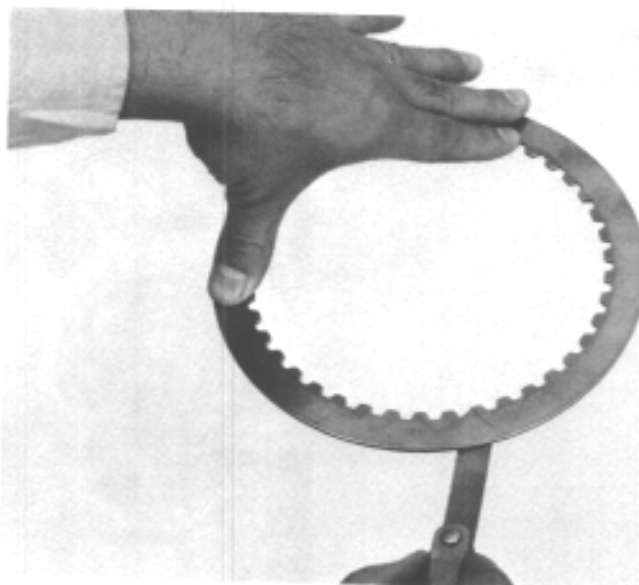


PLATE INSPECTION

Check for plate warpage on a surface plate, using a feeler gauge.

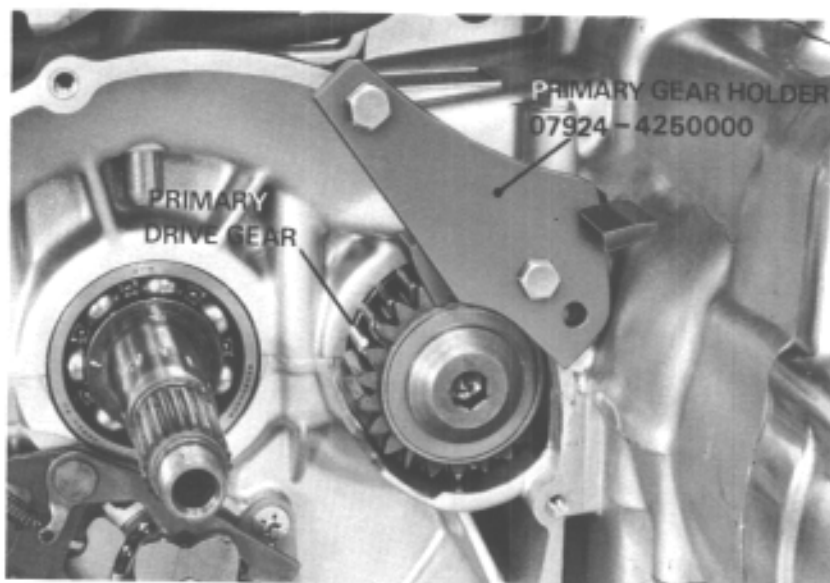
SERVICE LIMIT: 0.3 mm (0.012 in)





PRIMARY DRIVE GEAR REMOVAL

Hold the primary drive gear with the primary gear holder as shown.
Loosen the lock bolt.

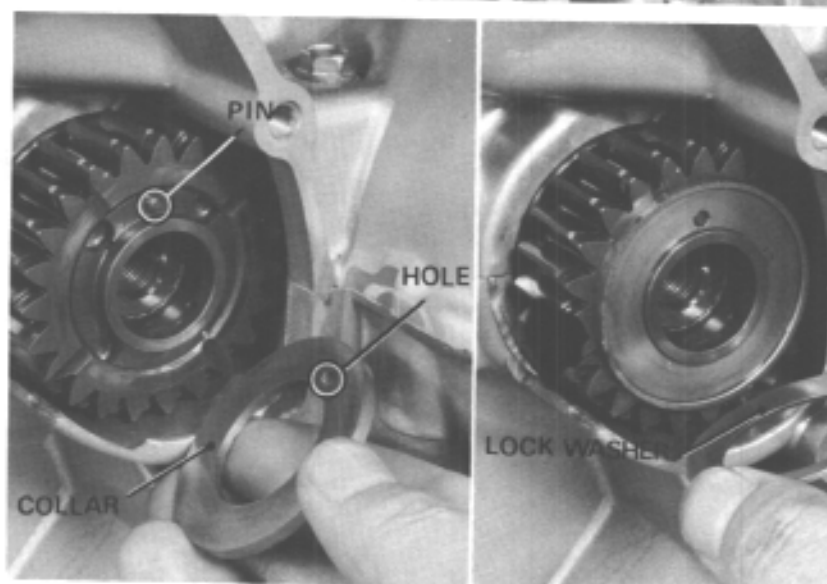


CLUTCH INSTALLATION

Install the primary drive gear.

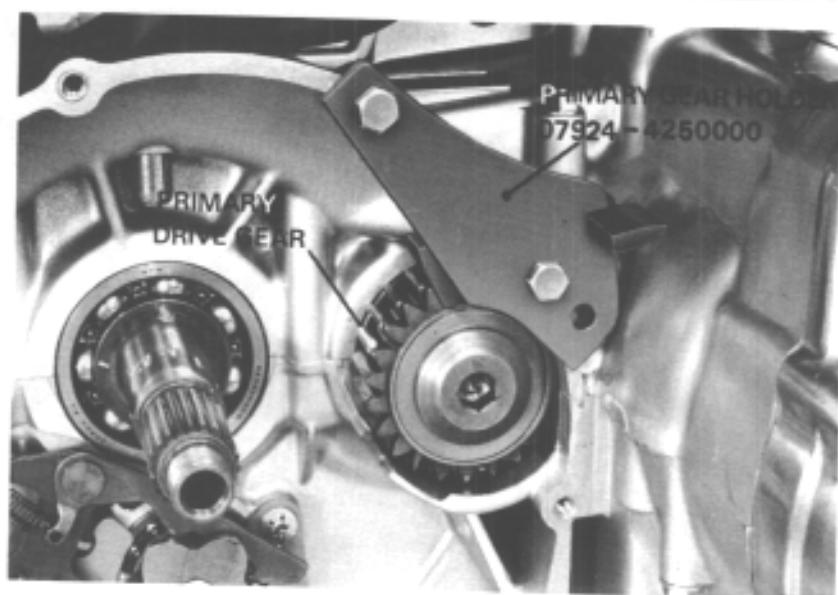
NOTE

- Position the drive gear with the large gear facing out.
- Position the collar and lock washer as shown.



Tighten the lock bolt.

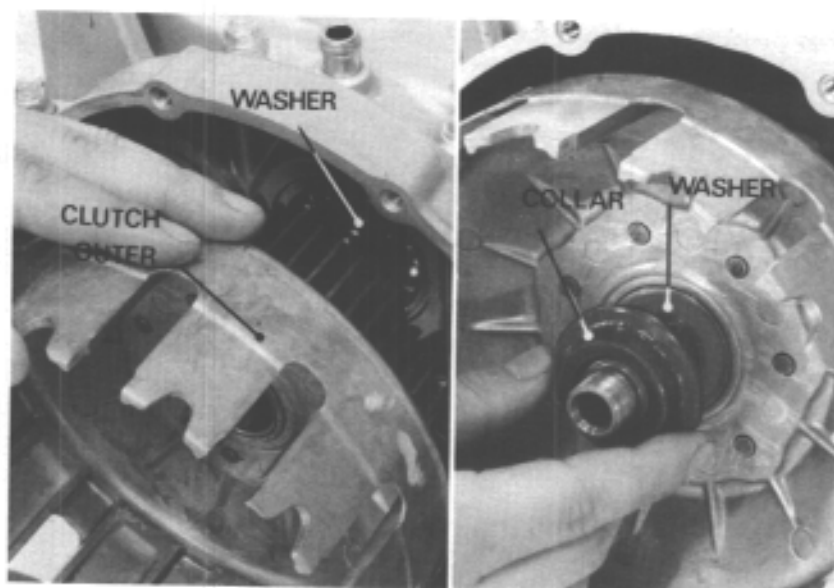
TORQUE: 8.0–10.0 kg-m (60–72 ft-lb)





Install the washer and clutch outer.

Install the washer and collar.

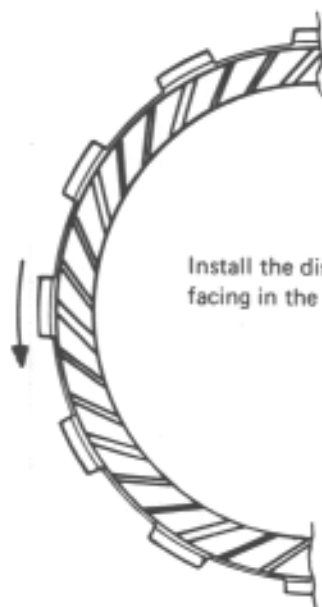
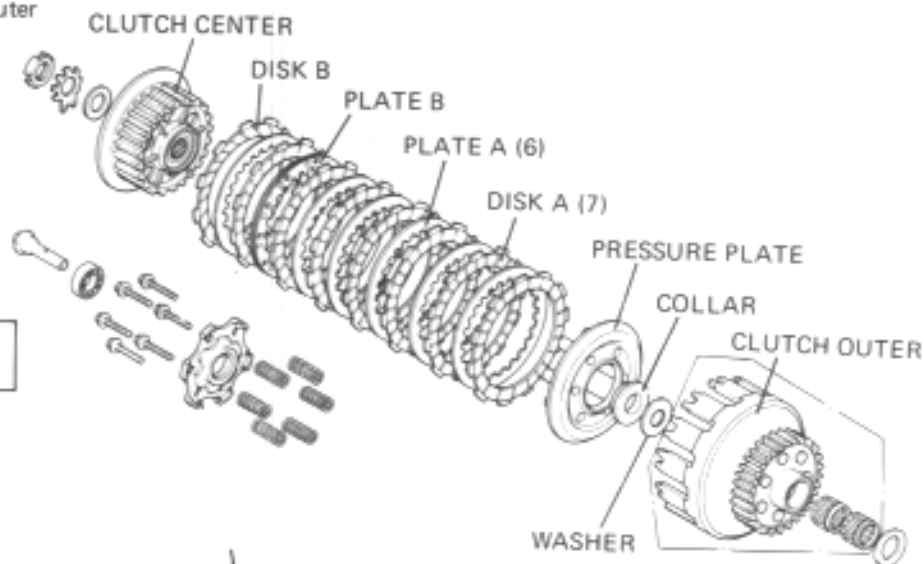


Install the following parts in the clutch outer in the order listed.

- Washer and collar
- Pressure plate
- Discs A (6) and plates A (5) alternately
- PLATE B (spring plate)
- Disc A and plate A
- Disc B
- Clutch center

NOTE

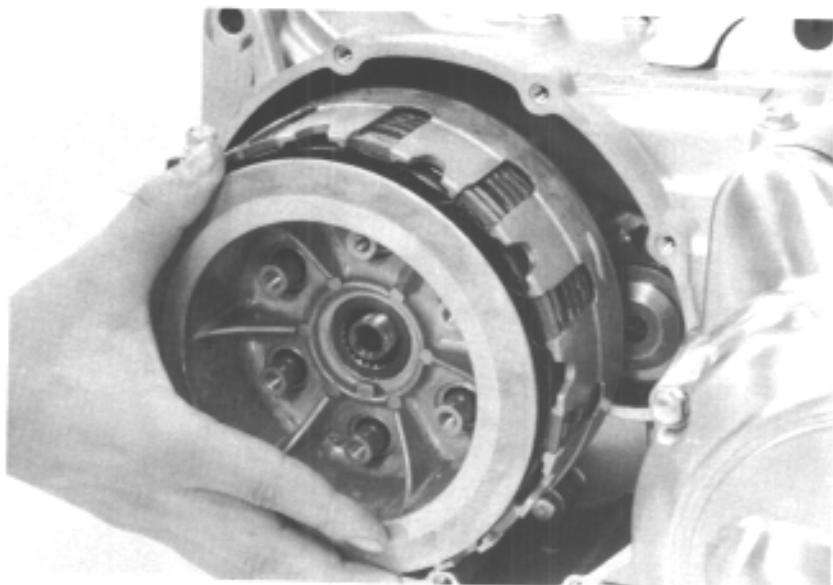
Before installing the clutch, coat the discs and plates with engine oil.



Install the disc B with the groves facing in the direction shown.



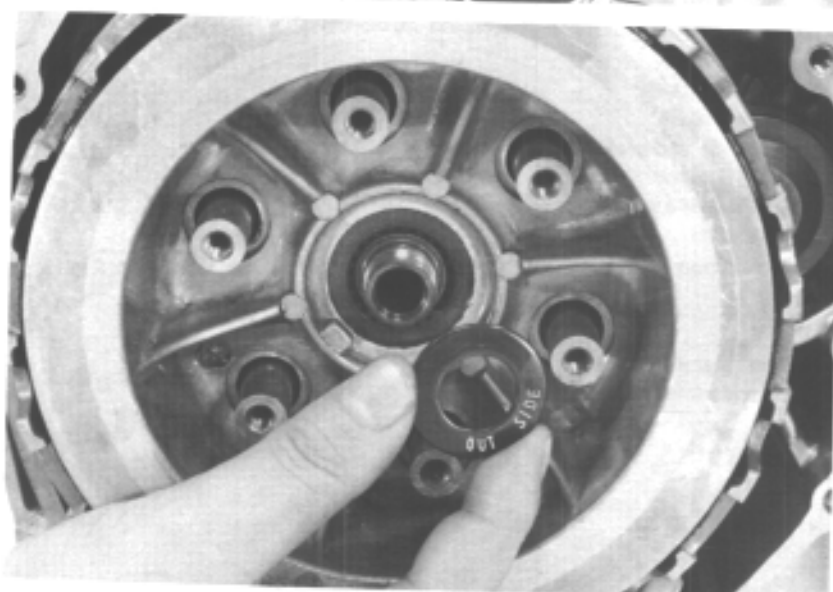
Align the splines by rotating the clutch center.



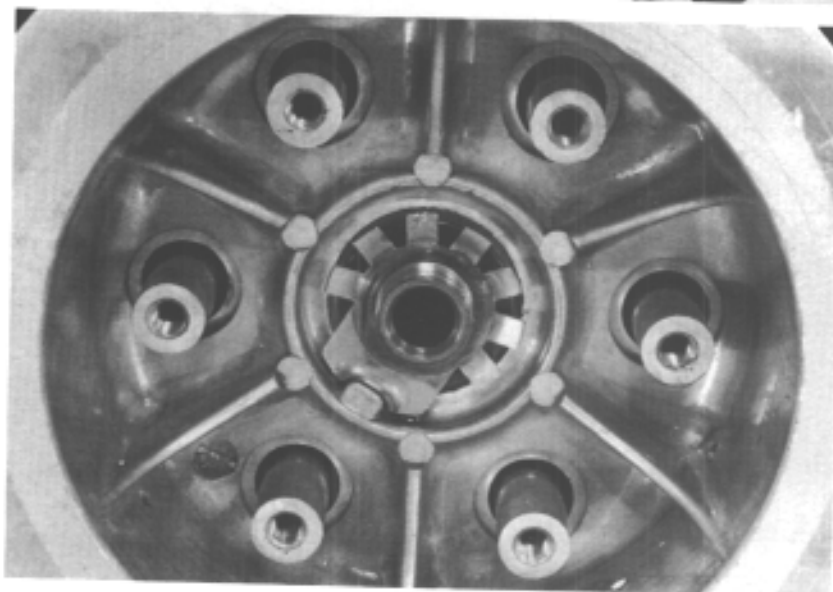
Install the washer.

NOTE

Position the mark "OUTSIDE" on the lock washer facing out.



Position the washer as shown and install it.

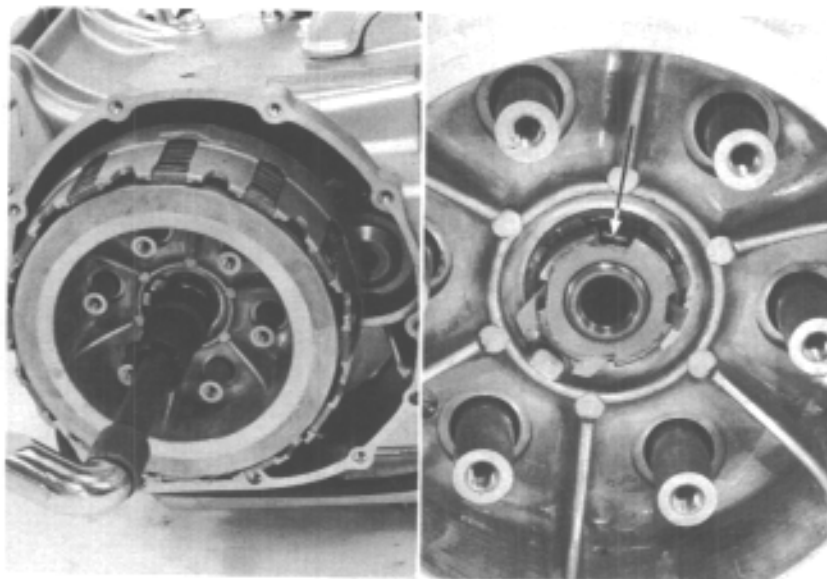




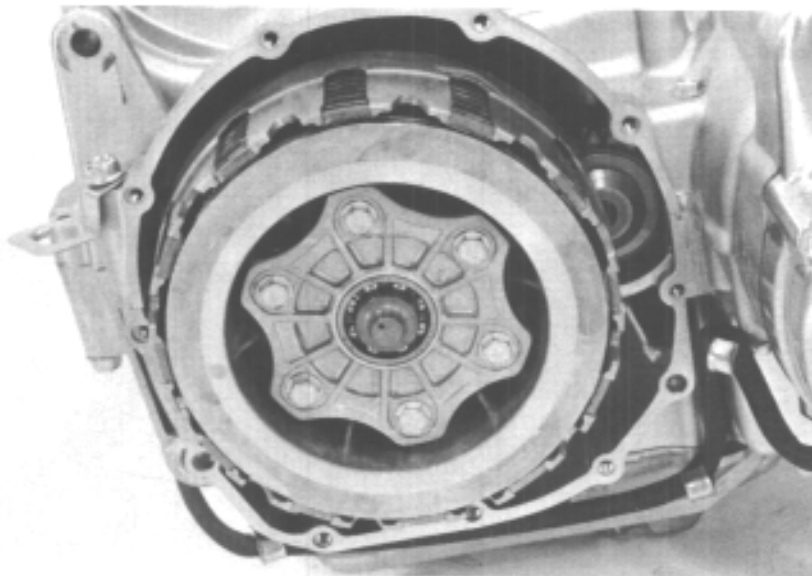
Tighten the lock nut.

TORQUE: 4.5–5.5 kg-m (33–40 ft-lb)

Bend the lock washer tab-up.

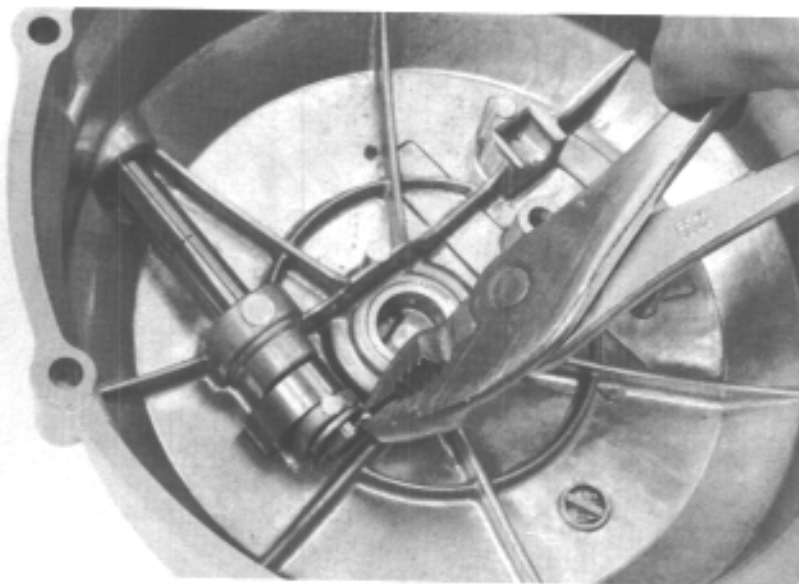


Install the lifter plate with the clutch lifter guide and release bearing. Tighten the bolts.



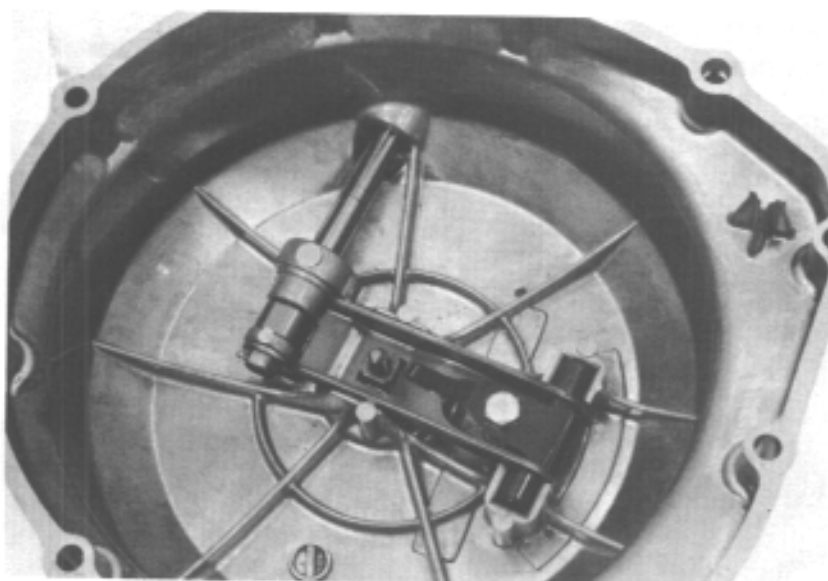
CLUTCH COVER INSTALLATION

Install the clutch lifter cam and shaft washer.
Insert the cotter pin and spread the ends.
Apply molybdenum disulfide grease to the
advancer shaft hole.

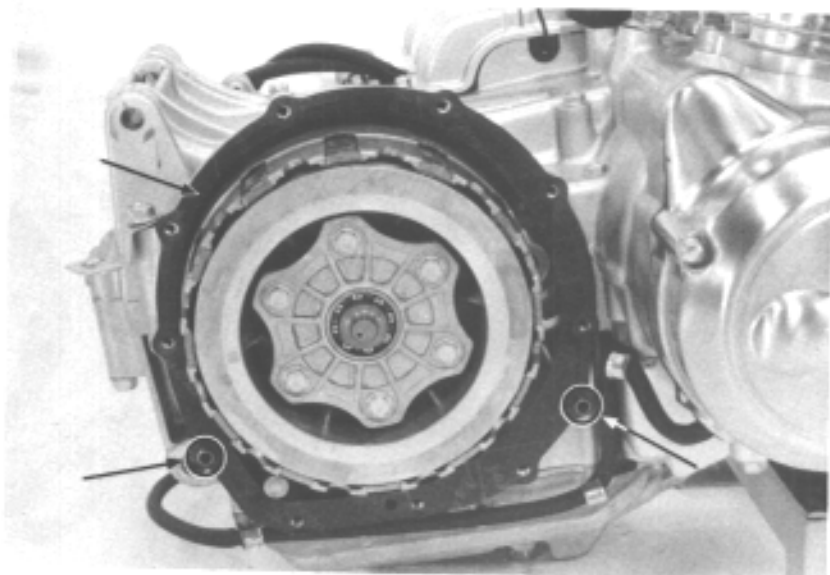




Install the adjusting arm and spring.



Install the dowel pins and gasket, and then install the cover.



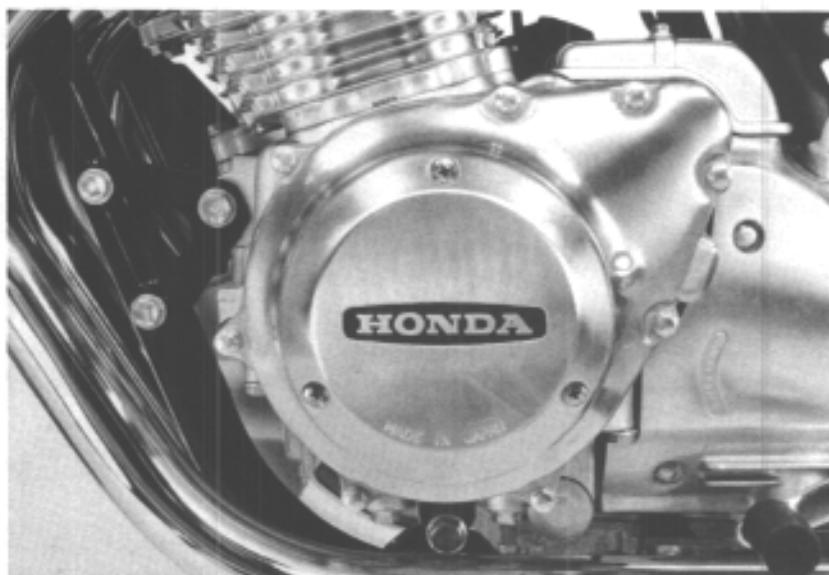
Adjust the clutch free play (page 3-20).
Apply molybdenum disulfide grease to the
adjusting hold cap.



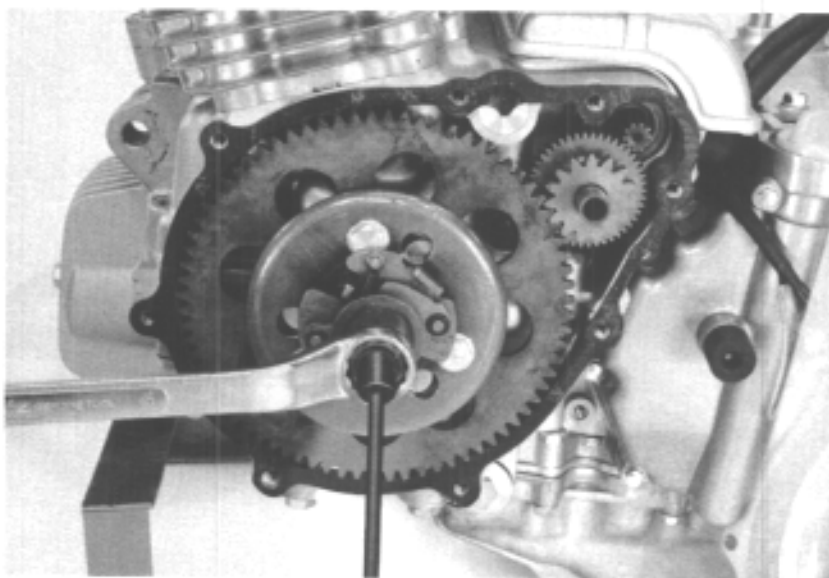
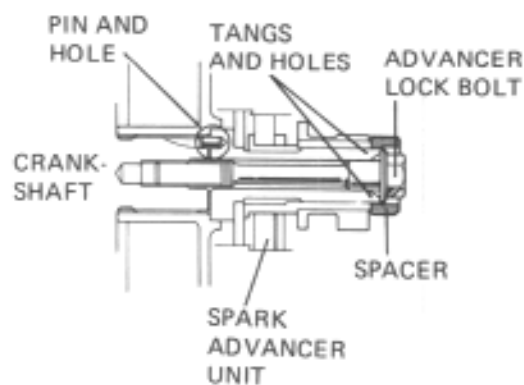


STARTER CLUTCH DISASSEMBLY

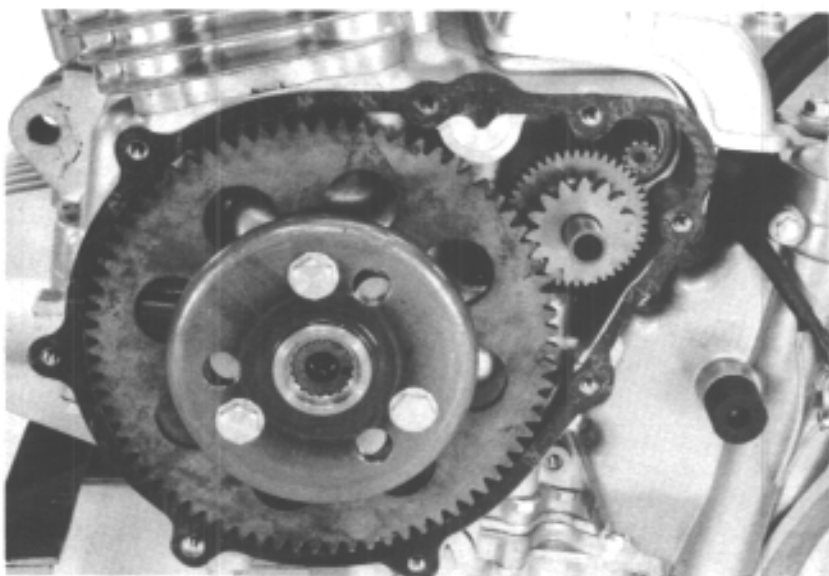
Remove the left crankcase cover with the pulser generator assembly.



Remove the spark advancer unit.

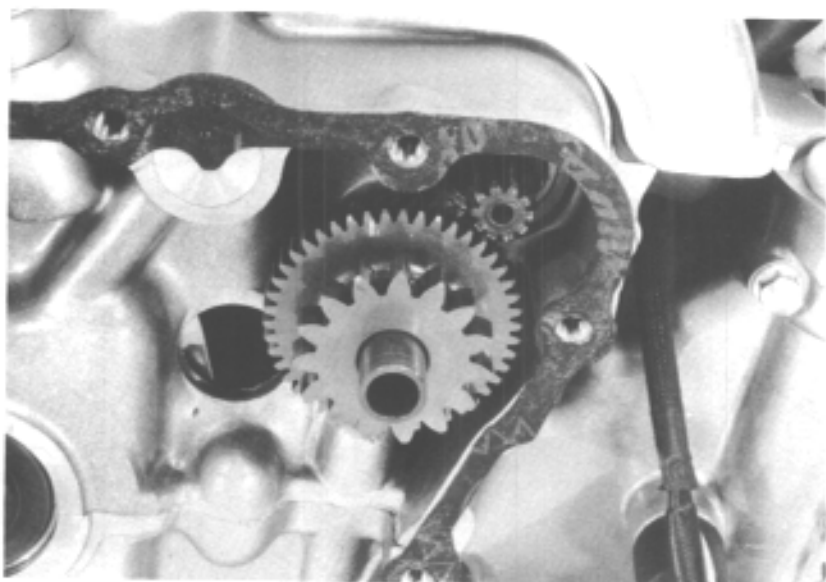


Remove the starter clutch assembly.



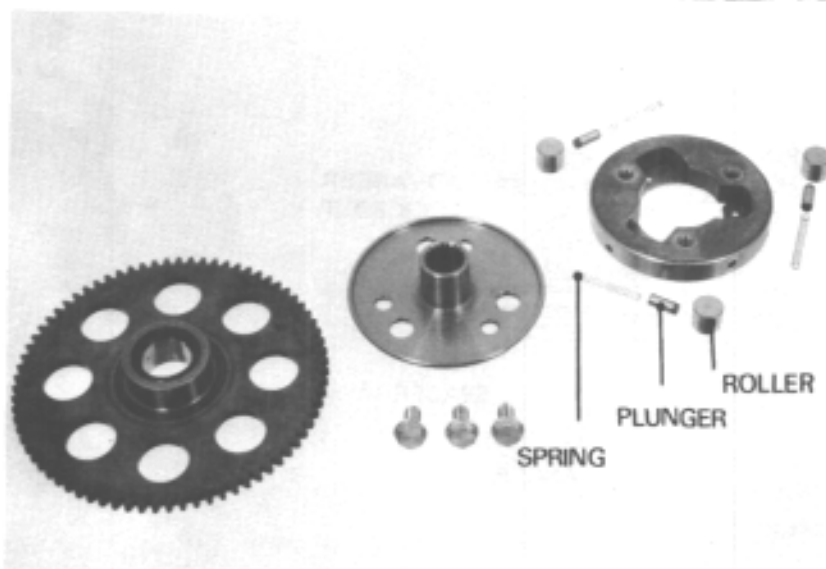


Remove the starter driven gear and shaft.



STARTER CLUTCH DISASSEMBLY

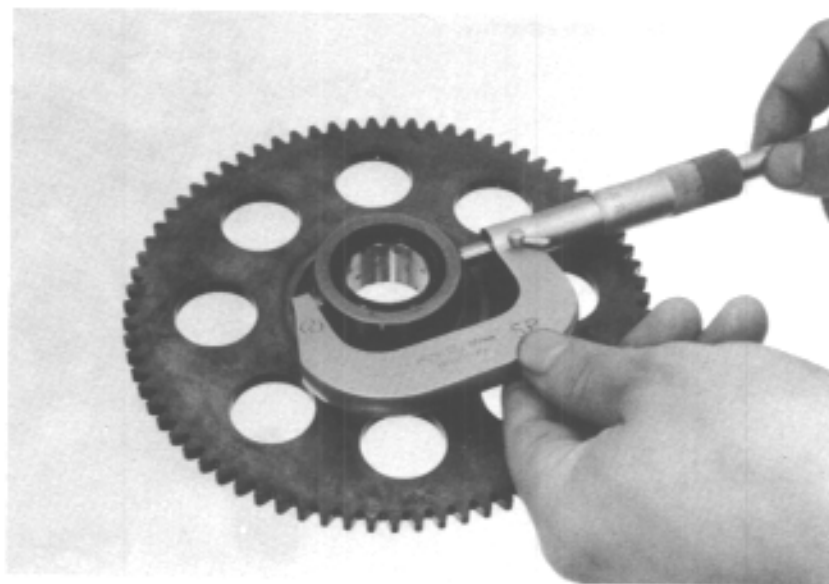
Inspect the rollers for smooth operation.
 Remove the rollers and check for excessive wear.
 Clean all parts with non-flammable or high flash point solvent.



STARTER DRIVE GEAR INSPECTION

Inspect the drive gear for damage or excessive wear.
 Measure the O. D.,

SERVICE LIMIT: 42.255 mm (1.6636 in)





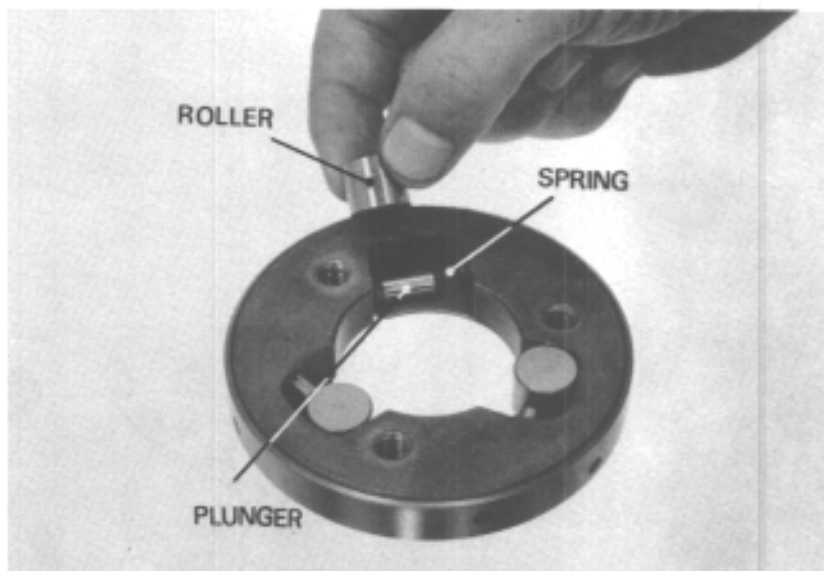
STARTER CLUTCH ASSEMBLY

Install the springs, plungers and rollers.
Tighten the locking bolts to the specified torque.

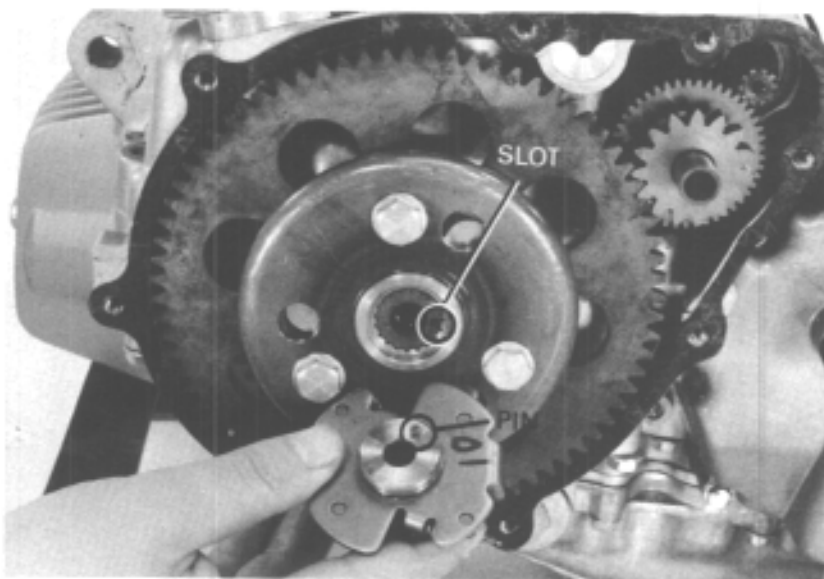
TORQUE: 2.6–3.0 kg-m (19–22 ft-lb)

NOTE

Apply a locking agent to the locking bolt's threads.



Install the advancer assembly.
Align the pin on the spark advancer unit with the slot on the crankshaft.



Install the spacer aligning the tangs with the holes, and tighten the advancer lock bolt to the specified torque.

TORQUE: 3.3–3.7 kg-m (24–27 ft-lb)

Install the left crankcase cover.

