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SERVICE INFORMATION

GENERAL INSTRUCTIONS

- This section covers removal and installation of the clutch, pulse generator and advancer, starting with the clutch cover.
- This operation can be accomplished with the engine in the frame.

TOOLS

Common

Universal Holder 07725-0030000

Special

Lock Nut Wrench 07916-4220000
Primary Gear Holder 07924-4250000

TORQUE VALUES

| | |
|-----------------------------|---------------------------------------|
| Clutch lock nut | 45–55 N·m (4.5–5.5 kg-m, 33–40 ft-lb) |
| Primary drive gear lock nut | 40–50 N·m (4.0–5.0 kg-m, 29–36 ft-lb) |
| Spark advancer | 10–12 N·m (1.0–1.2 kg-m, 7–9 ft-lb) |

SPECIFICATIONS

| | | STANDARD | SERVICE LIMIT | |
|-------------------------|------------------------------------|---|--|------------------|
| Clutch | Lever free play (at lever end) | 10–20 mm (3/8–3/4 in) | ————— | |
| | Spring free length | 35.1 mm (1.38 in) | 33.6 mm (1.32 in) | |
| | Spring preload/length | 18.3–20.1 kg/24.4–25.6 mm (40.34–44.31 lbs/0.96–1.01 in) | 17.0 kg/24.4–35.6 mm (37.48 lbs/0.96–1.01 in) | |
| | Disc thickness | A | 3.42–3.58 mm (0.135–0.141 in) | 3.1 mm (0.12 in) |
| | | B | 3.42–3.58 mm (0.135–0.141 in) | 3.1 mm (0.12 in) |
| | Plate warpage | ————— | 0.2 mm (0.01 in) | |
| | Clutch outer I.D. | 37.000–37.025 mm (1.4567–1.4577 in) | 37.06 mm (1.459 in) | |
| Clutch outer guide O.D. | 36.950–36.975 mm (1.457–1.4557 in) | 36.93 mm (1.454 in) | | |
| Oil pump drive system | Drive sprocket I.D. | 37.000–37.021 mm (1.4567–1.4575 in) | 37.1 mm (1.46 in) | |
| | Driven sprocket shaft O.D. | 12.966–12.984 mm (0.5105–0.5112 in) | 12.9 mm (0.51 in) | |
| Ignition timing | Refer to Section 3. | | | |

TROUBLESHOOTING

Clutch

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

Clutch Slips When Accelerating

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

Clutch Will Not Disengage

1. Too much free play
2. Plates warped

Motorcycle Creeps With Clutch Disengaged

1. Too much free play
2. Plates warped

Excessive Lever Pressure

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

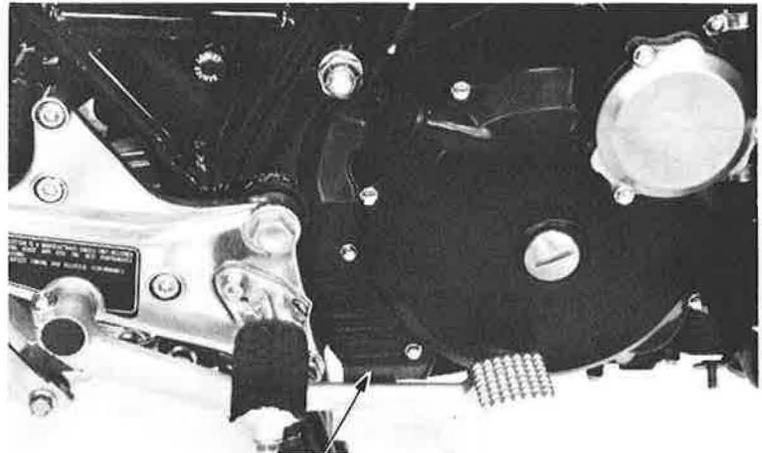
Clutch Operation Feels Rough

1. Outer drum slots rough



CLUTCH COVER REMOVAL

Remove the right leg shield.
 Remove the exhaust pipes.
 Remove the oil hose cover.



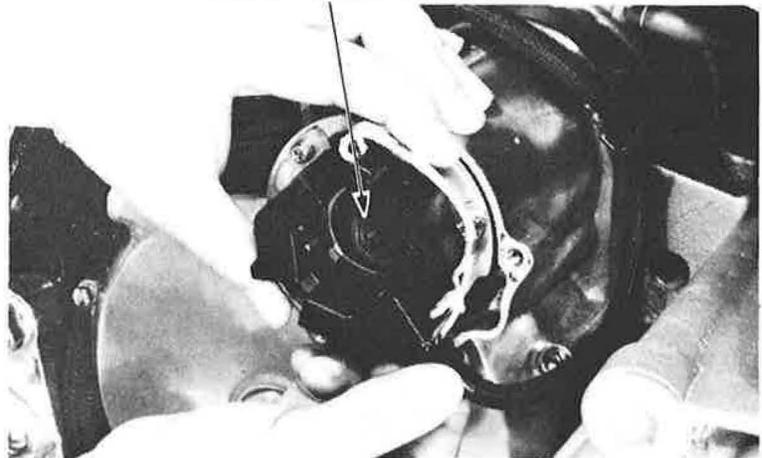
OIL HOSE COVER

NOTE

The clutch cover can be removed without removing the pulse generator and advancer. The pulse generator and advancer removal is shown here. If removal is unnecessary, the clutch cover can be removed by removing the cover bolts.

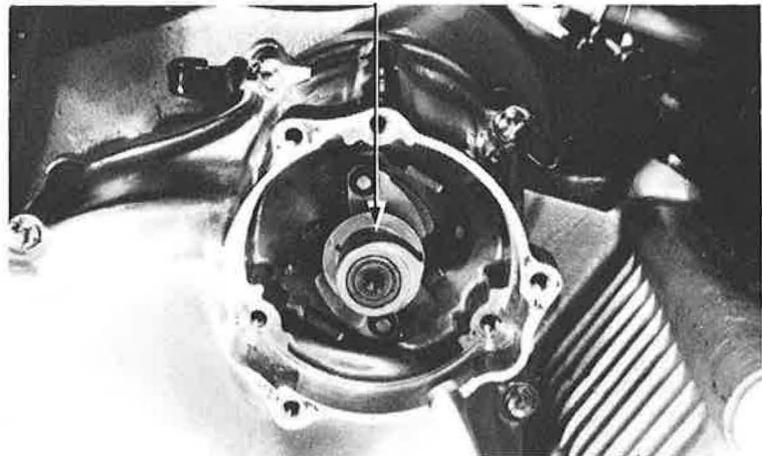
Remove the pulse generator cover.
 Loosen the center bolt and three screws.
 Then, remove the pulse generator.

PULSE GENERATOR



SPARK ADVANCER
 UNIT

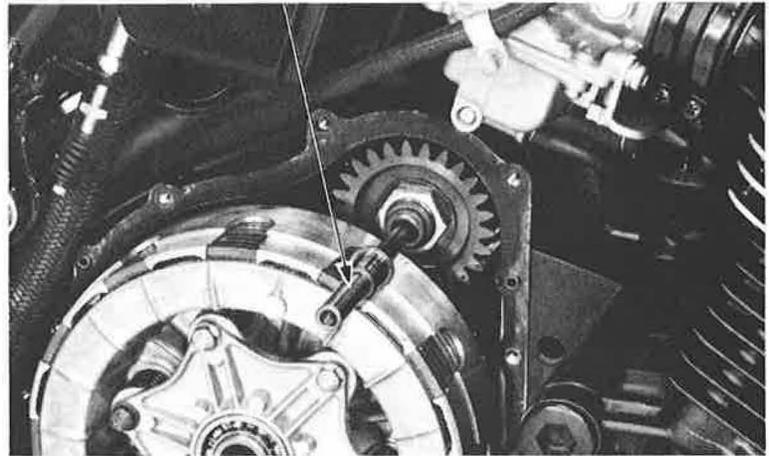
Remove the spark advancer unit.





Remove the clutch cover.
Remove the advancer shaft.
Remove the gasket and dowel pins.

ADVANCER SHAFT



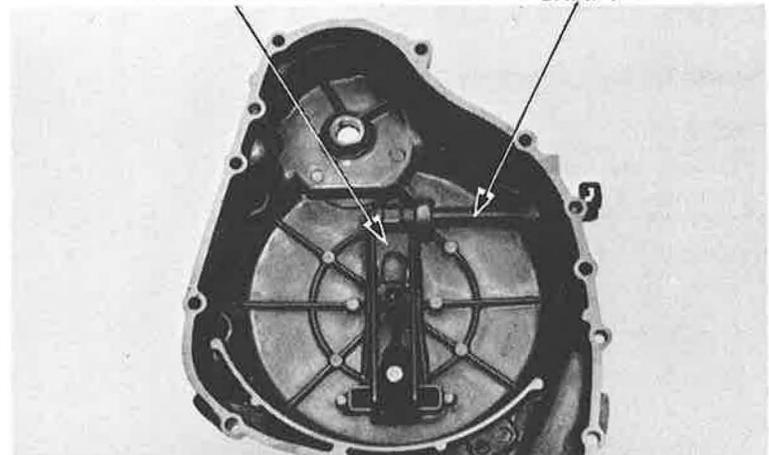
CLUTCH REMOVAL

CLUTCH LIFTER REMOVAL

Remove the clutch lifter shaft and adjusting arm.

ADJUSTING ARM

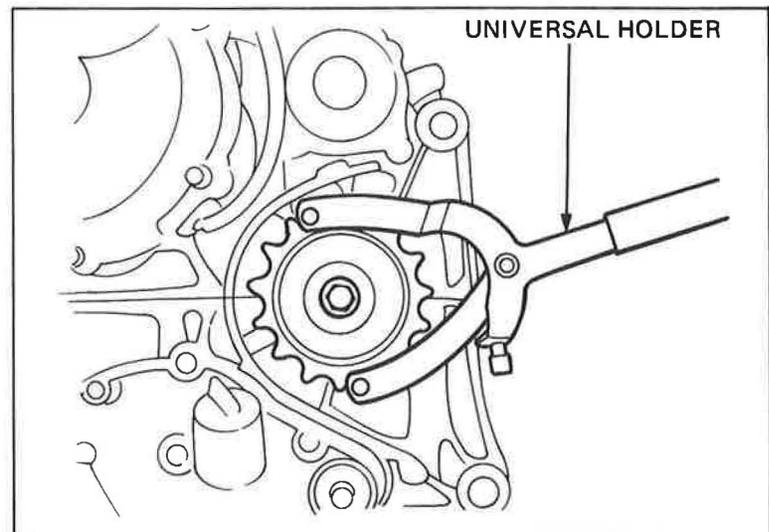
SHAFT



CLUTCH REMOVAL

Use the universal holder if the drive chain is removed.
Shift the transmission into gear to lock the counter-shaft and mainshaft.
Lock the drive sprocket to prevent it from turning.

UNIVERSAL HOLDER



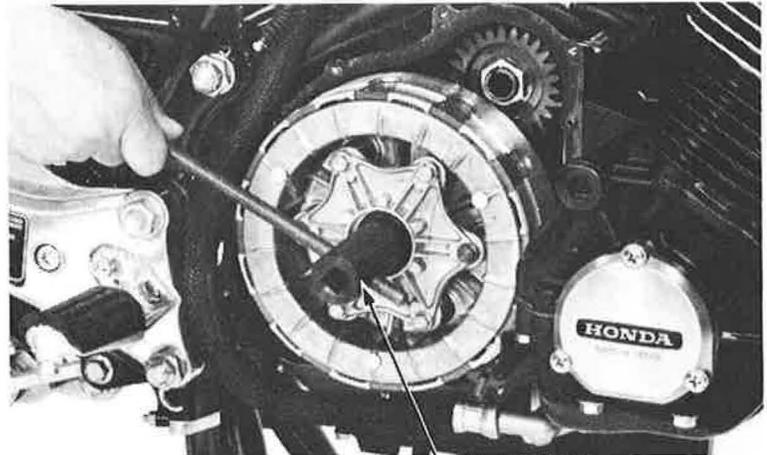


When servicing the clutch with the engine in the frame, shift the transmission into gear and press the brake pedal to lock the transmission.

Remove the clutch lifter guide.
Remove the release bearing.

Attach the lock nut wrench.
Remove the lock nut and washer.
The clutch can now be removed as a unit.

Remove the clutch disc assembly and thrust washer from the clutch outer.



LOCK NUT WRENCH
07916-4220000

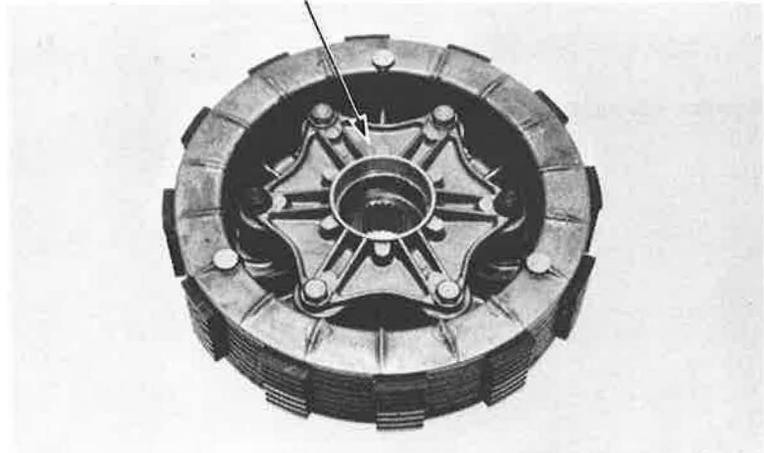
CLUTCH LIFTER PLATE REMOVAL

Remove the bolts, lifter plate and clutch springs.

NOTE

Loosen the bolts in a crisscross pattern in 2-3 steps.

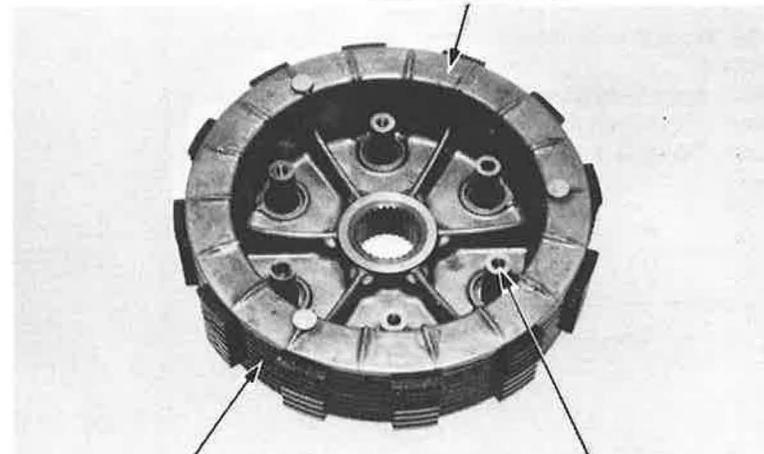
LIFTER PLATE



CLUTCH CENTER, PLATE AND DISC REMOVAL

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

CLUTCH CENTER



PLATES AND
DISCS A, B

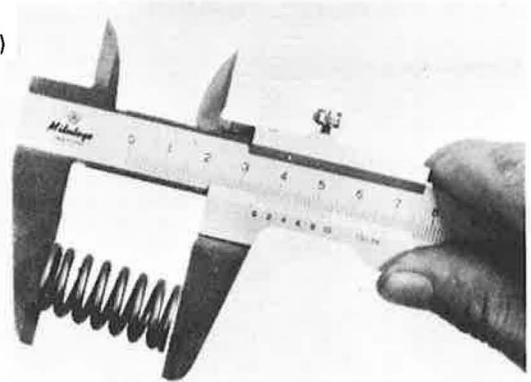
PRESSURE PLATE



CLUTCH SPRING INSPECTION

Measure the clutch spring free length.

SERVICE LIMIT:
33.6 mm (1.32 in)



CLUTCH DISC INSPECTION

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

SERVICE LIMIT:
3.1 mm (0.12 in)

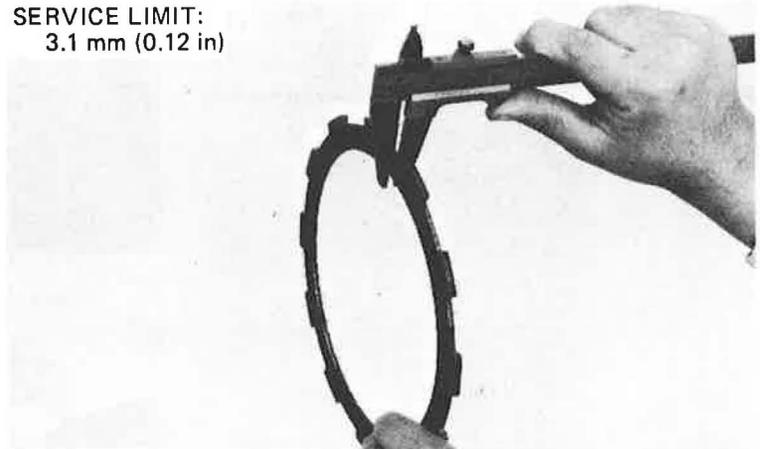
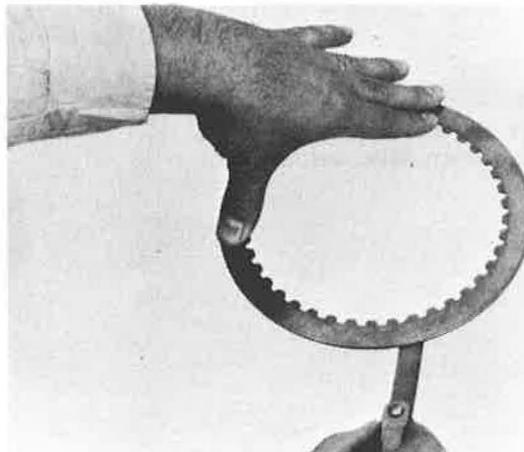


PLATE INSPECTION

Check for plate warpage on a surface plate.

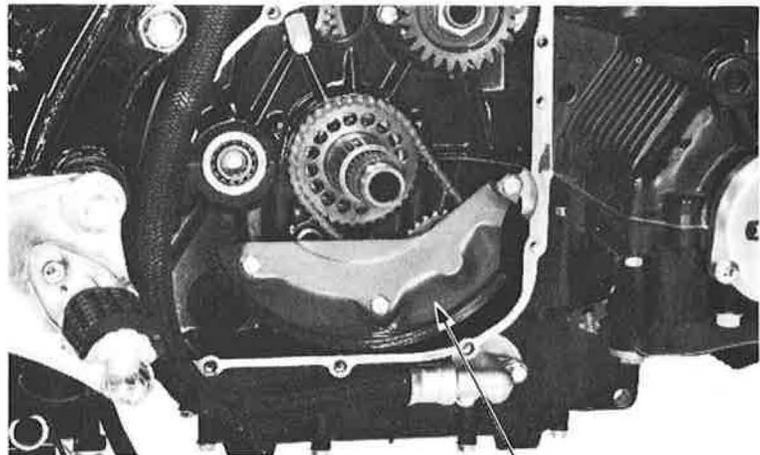
SERVICE LIMIT
0.2 mm (0.01 in)





OIL GUIDE PLATE REMOVAL

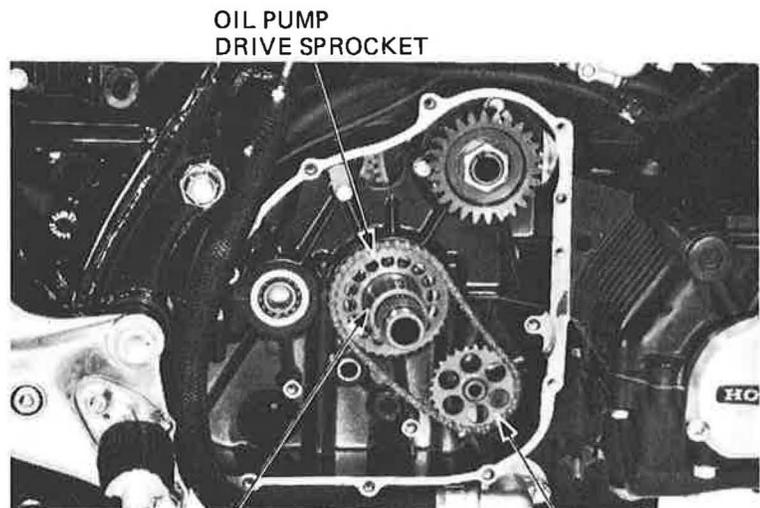
Remove the oil guide plate.



OIL GUIDE PLATE

OIL PUMP SPROCKETS AND CLUTCH OUTER GUIDE REMOVAL

Remove the oil pump drive and driven sprockets and clutch outer guide.



OIL PUMP
DRIVE SPROCKET

CLUTCH OUTER
GUIDE

OIL PUMP DRIVEN
SPROCKET

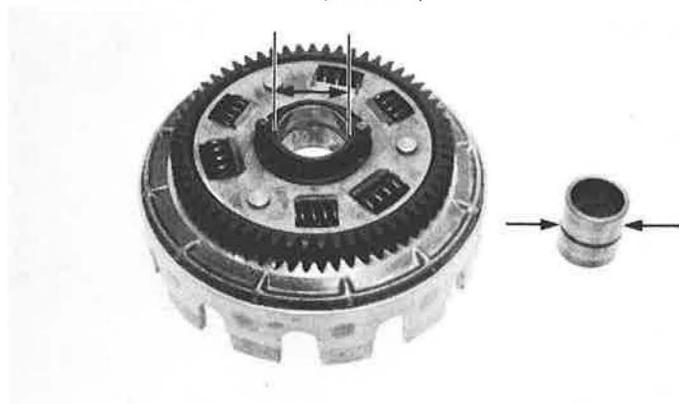
CLUTCH OUTER AND OUTER GUIDE INSPECTION

Check the slots in the outer drum for nicks, cuts or indentations made by the friction discs. Measure the I.D. of the clutch outer and the O.D. of the outer guide.

SERVICE LIMIT:

OUTER I.D. : 37.06 mm (1.459 in)

GUIDE O.D. : 36.93 mm (1.454 in)

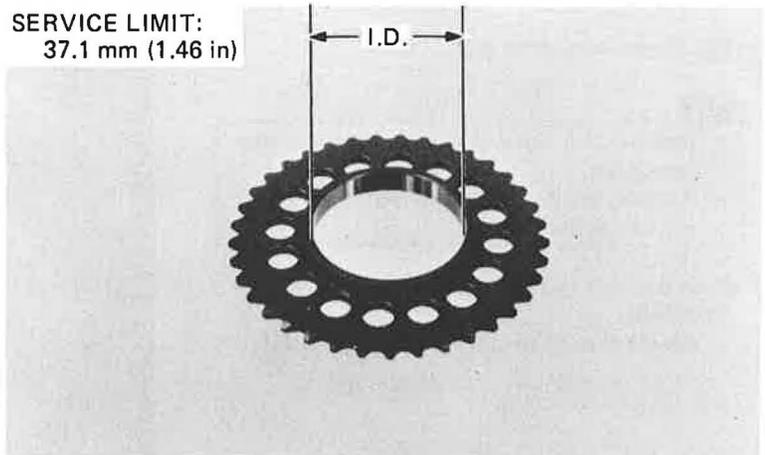




**OIL PUMP DRIVE SPROCKET AND
DRIVEN SPROCKET MEASUREMENT**

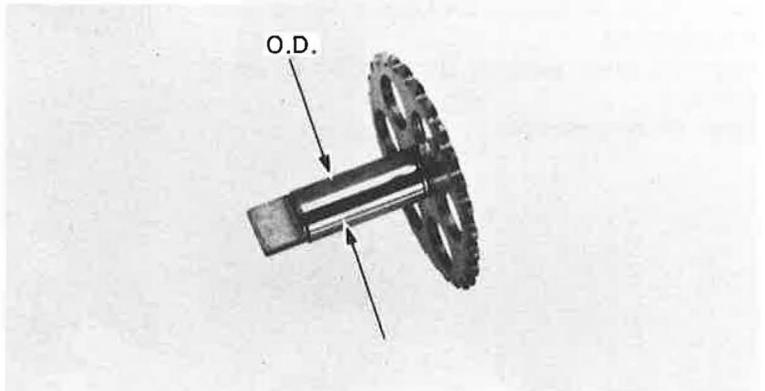
Measure the oil pump drive sprocket I.D.

SERVICE LIMIT:
37.1 mm (1.46 in)



Measure the oil pump driven sprocket shaft O.D..

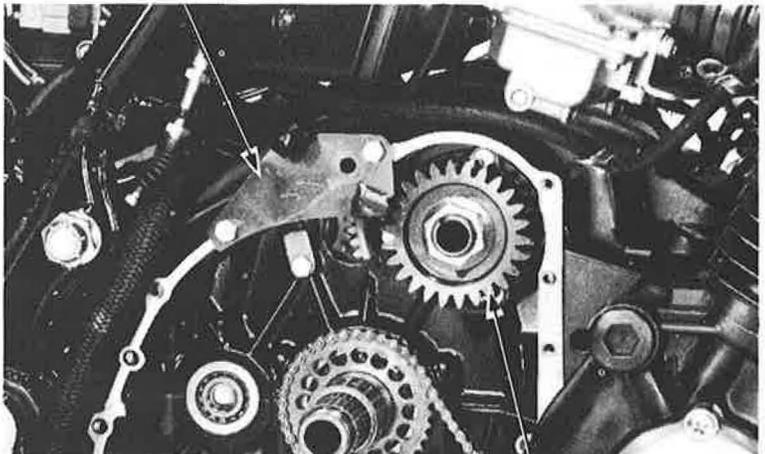
SERVICE LIMIT:
12.9 mm (0.51 in)



PRIMARY DRIVE GEAR REMOVAL

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

**PRIMARY GEAR
HOLDER 07924-4250000**



PRIMARY DRIVE GEAR



CLUTCH INSTALLATION

Install the primary drive gear.

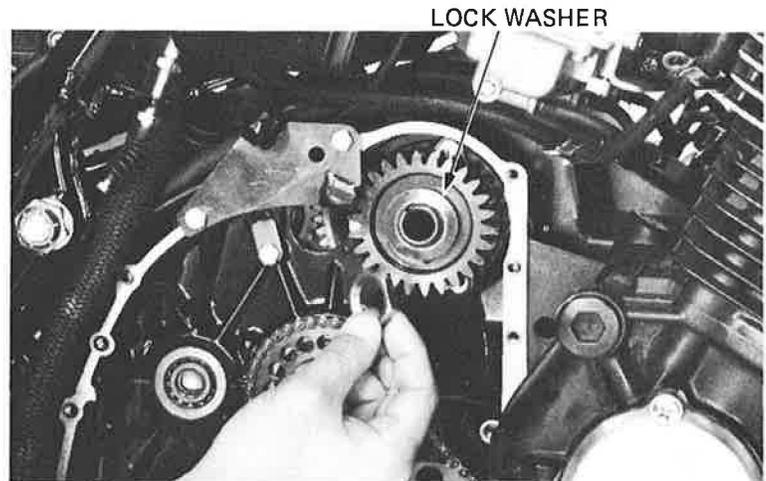
NOTE

- Position the drive gear with the large gear facing out.
- Position the mark "OUTSIDE" on the lock washer on the outside.

Tighten the lock nut to the specified torque.

TORQUE:

40–50 N·m (4.0–5.0 kg·m, 29–36 ft·lb)

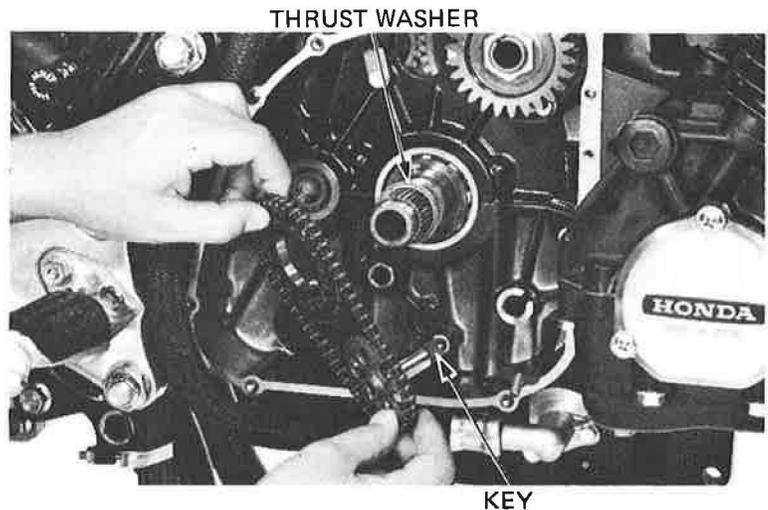


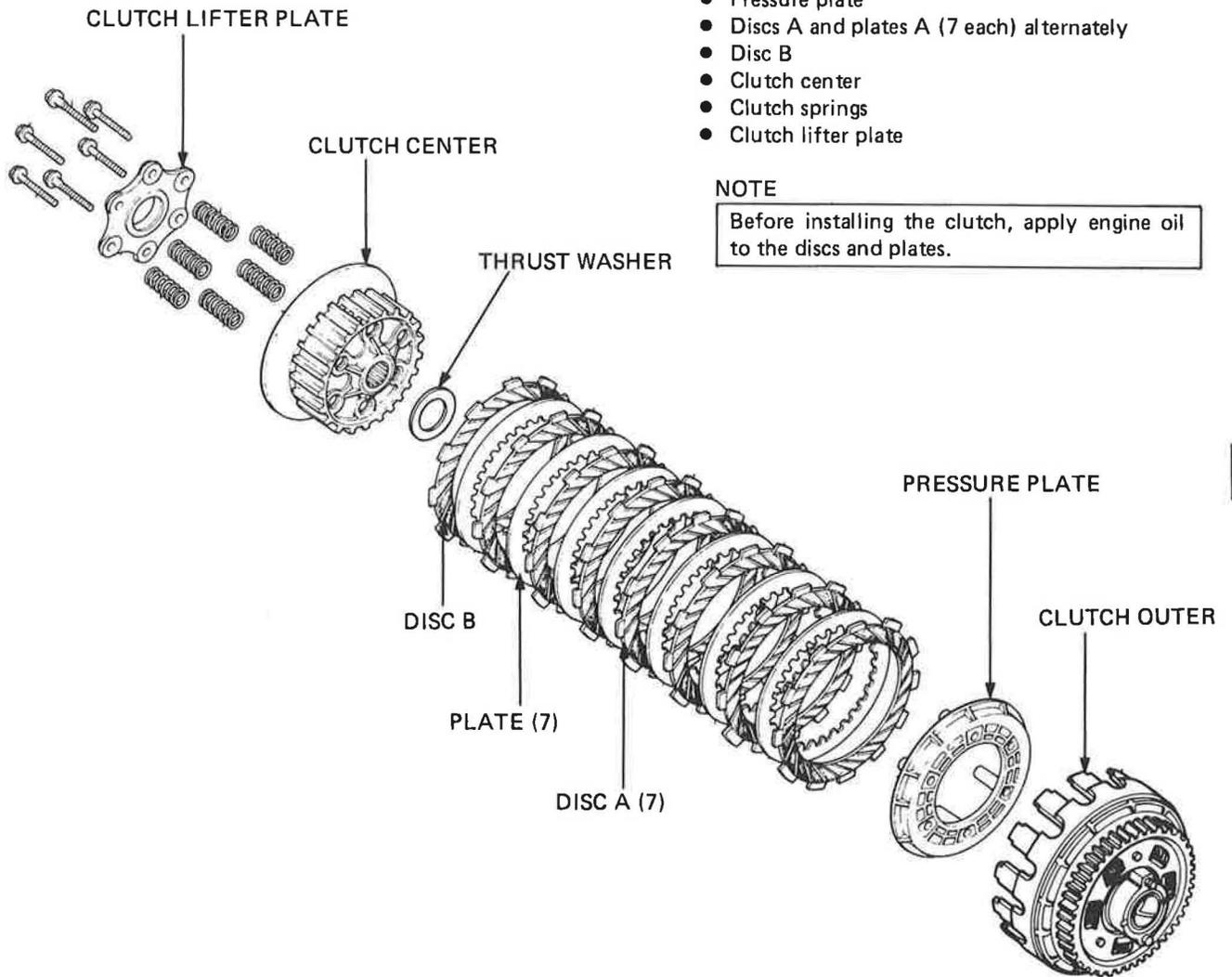
Install the thrust washer and clutch outer guide on the transmission mainshaft.

Install the oil pump drive sprocket, driven sprocket and drive chain.

Align the driven sprocket key with the oil pump shaft slot.

Install the oil guide plate.





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

- Pressure plate
- Discs A and plates A (7 each) alternately
- Disc B
- Clutch center
- Clutch springs
- Clutch lifter plate

NOTE

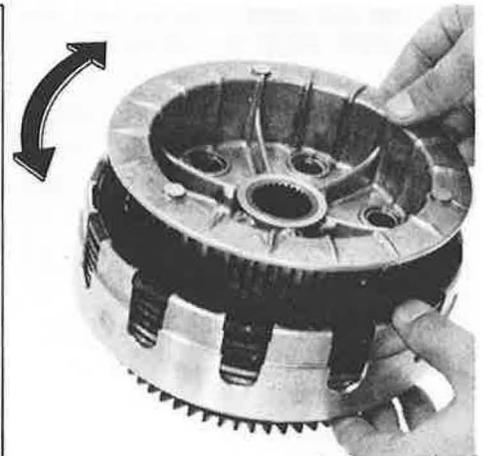
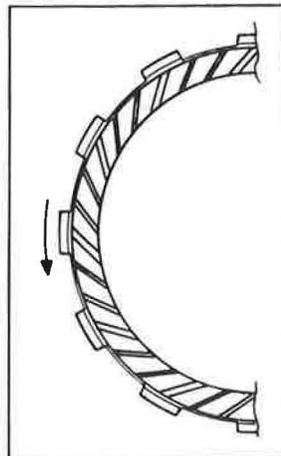
Before installing the clutch, apply engine oil to the discs and plates.

Install the discs with the grooves facing in the direction shown.

Align the splines by rotating the clutch center. Install the clutch springs, lifter plate and lifter plate bolts.

NOTE

Tighten the bolts in two or more steps and in a crisscross pattern.

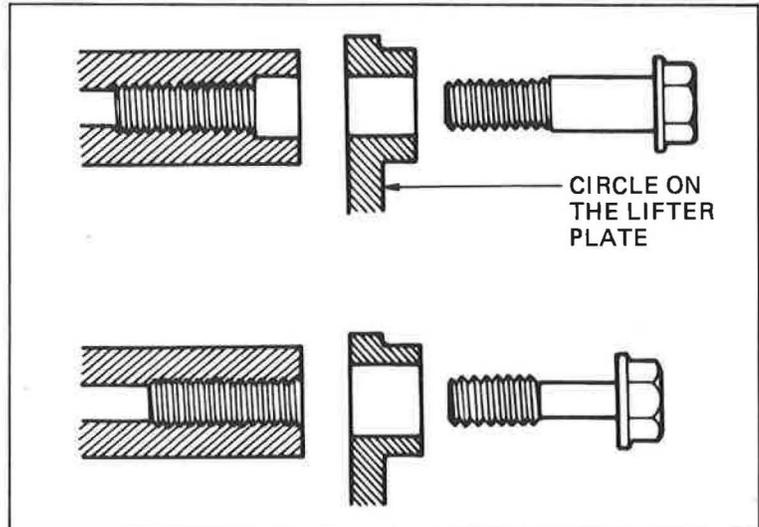




Tighten the lifter plate bolts.

NOTE

The lifter plate bolts are in two types. Tighten the pin-bolts first, then the 6 mm bolts.

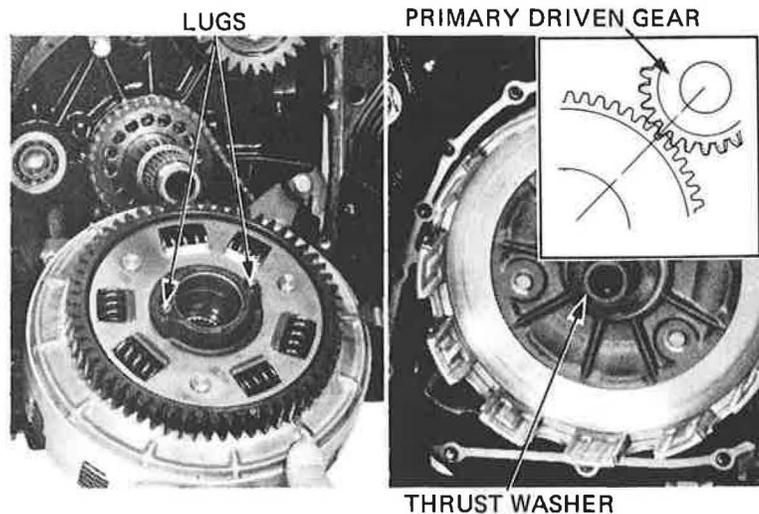


Turning the primary drive gear, find a pair of outer and inner gear teeth which are aligned.

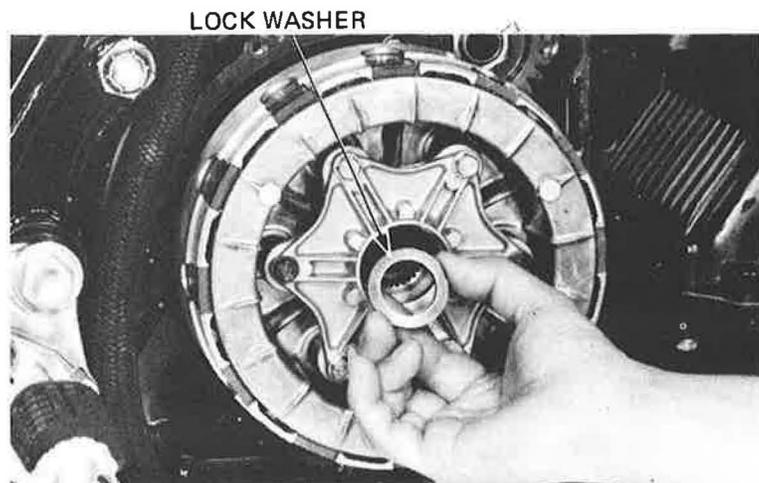
Assemble the clutch outer gear so it meshes with the aligned teeth and connect the clutch outer to the oil pump drive sprocket by putting the lugs into the holes.

Install the thrust washer on the mainshaft after the clutch outer is installed.

Install the clutch disc assembly.



Install the lock washer with the mark "OUT SIDE" facing out and install the lock nut.





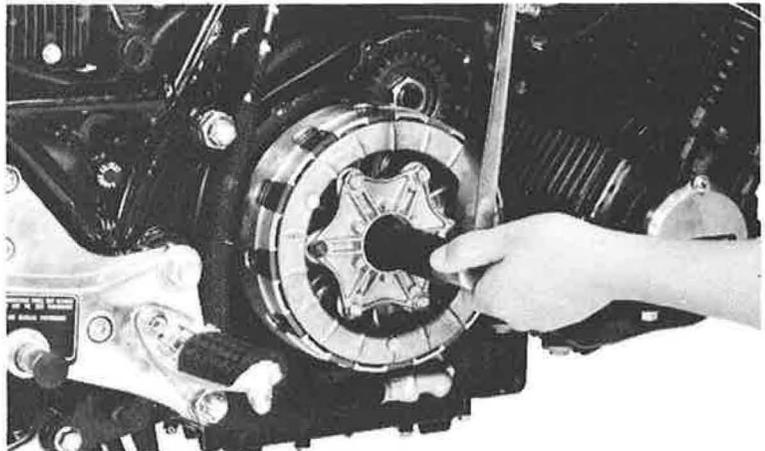
Tighten the lock nut to the specified torque.

TORQUE:

45–55 N·m (4.5–5.5 kg·m, 33–40 ft·lb)

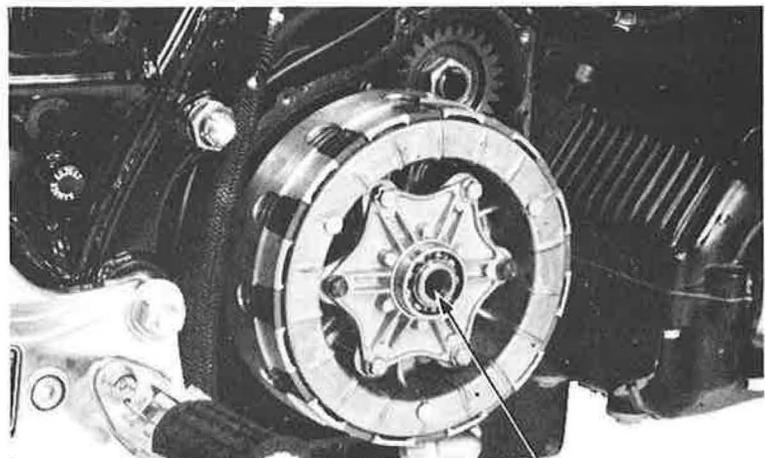
NOTE

With the transmission engaged, depress the rear brake pedal to lock the transmission or lock the drive sprocket with a universal holder.



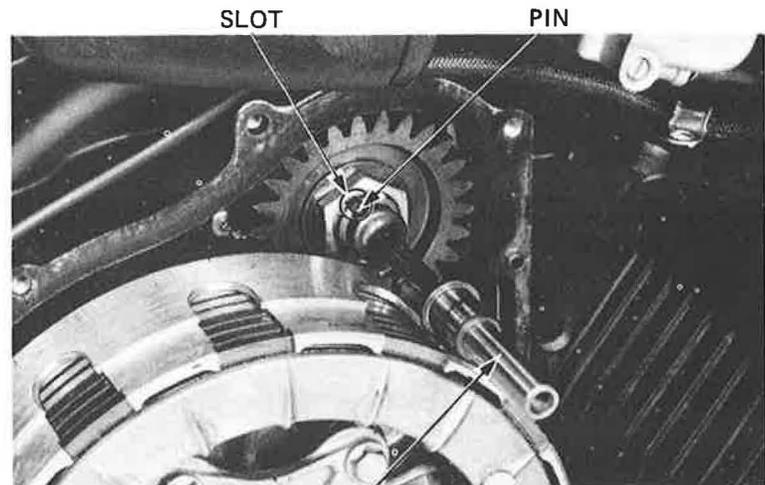
LOCK NUT WRENCH
07916–422000

Install the release bearing in the lifter plate.
Insert the clutch lifter guide.
Install the clutch lifter pin.



CLUTCH LIFTER GUIDE

Install the advancer shaft.
Make sure that the pin on the shaft is aligned with the slot in the primary shaft.



ADVANCER SHAFT



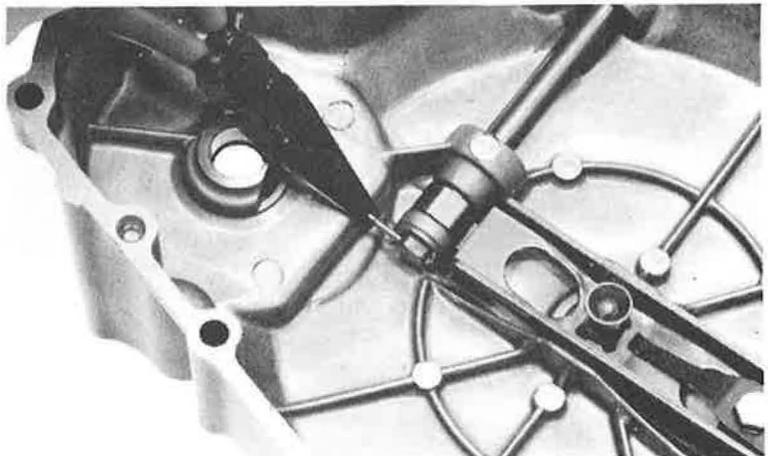
CLUTCH COVER INSTALLATION

Coat the advancer shaft oil seal with oil.
 Drive the oil seal with the proper rod until the top of the oil seal is flush with the advancer side surface of the clutch cover.



Install the clutch lifter cam and shaft.
 Insert the cotter pin and spread the ends.

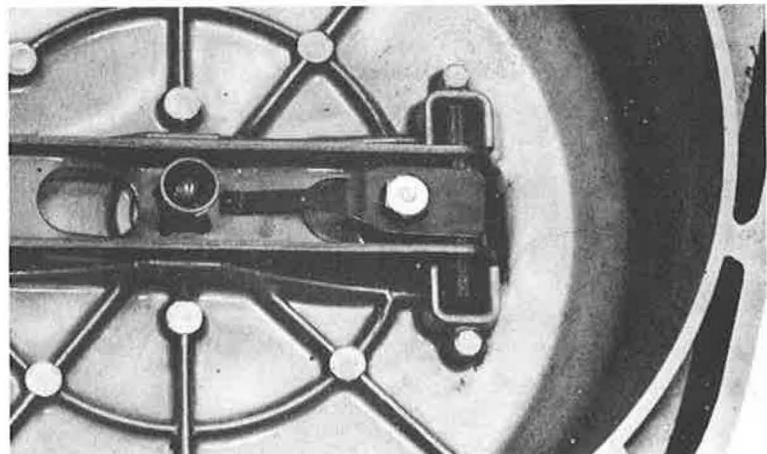
Apply molybdenum disulfide grease to the advancer shaft hole of the clutch cover.



Install the clutch adjusting arm and spring.
 Install the dowel pins and gasket.
 Install the clutch cover.

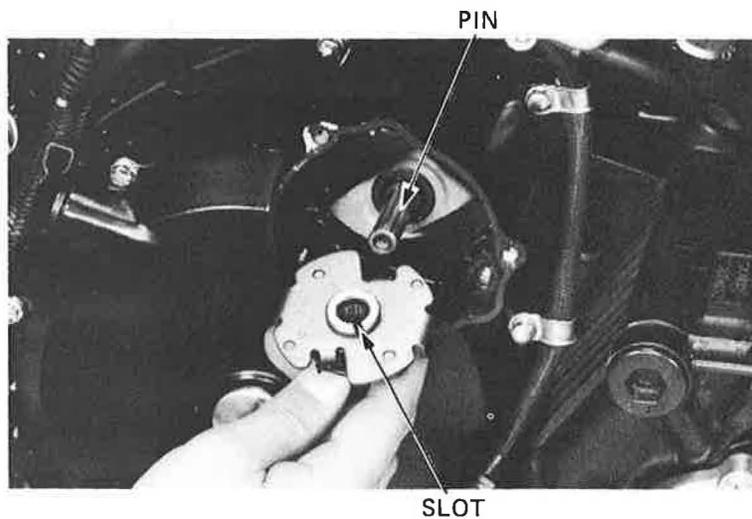
Adjust the clutch free play (Section 3).

Apply molybdenum disulfide grease to the clutch adjusting hole cap.





Install the advancer.
Align the slot on the spark advancer unit with the pin on the advancer shaft.
Tighten the advancer bolt.



Install the pulse generator.
Adjust the ignition timing, if necessary (Section 3).

