

CRANKCASE SEPARATION

Refer to Service Information (page 11-1) for removal of the necessary parts before separating the crankcase.

Disconnect the following connectors and remove the engine sub-harness;

- Speed sensor 3P (Black) connector
- Oil pressure switch connector
- Neutral switch connector

Remove the speed sensor before separating the crankcase. Do not separate or assemble the crankcase with the speed sensor installed.

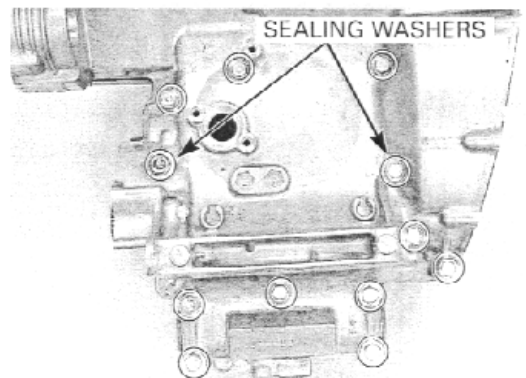
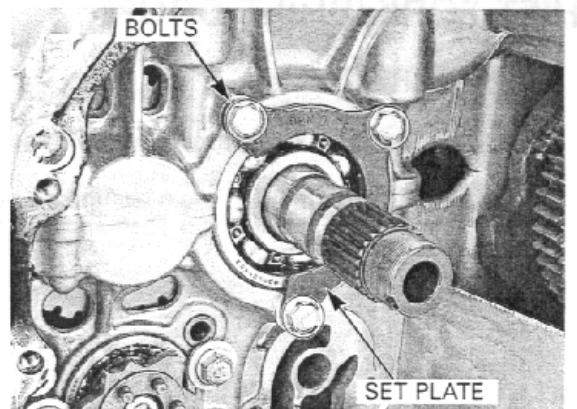
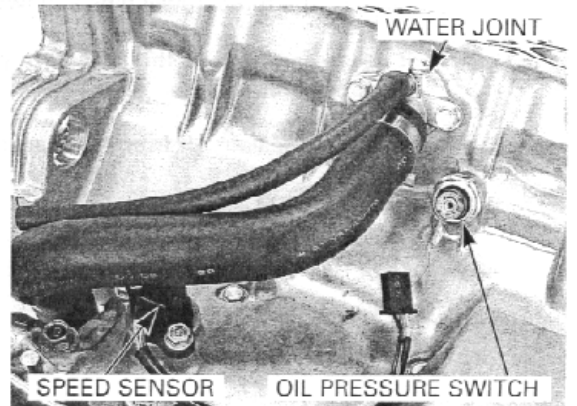
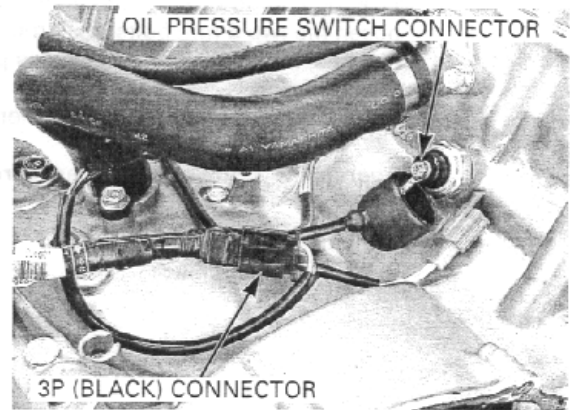
Remove the following:

- Oil pressure switch (page 19-16)
- Speed sensor (page 19-12)
- Cam chain tensioner/guide (page 8-21)

Remove the bolts and water hose joint.

Remove the mainshaft bearing set plate bolts and plate.

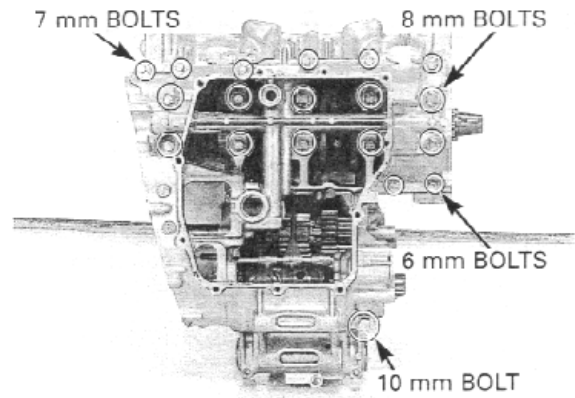
Loosen the seven 6-mm bolts and five 8-mm bolts in a crisscross pattern in two or three steps. Remove the bolts and sealing washers.



CRANKCASE/TRANSMISSION

Place the engine with the upper side down. Loosen the two 6-mm bolts, six 7-mm bolts, ten 8-mm bolts and 10-mm bolt in a crisscross pattern in two or three steps. Remove the bolts and sealing washers.

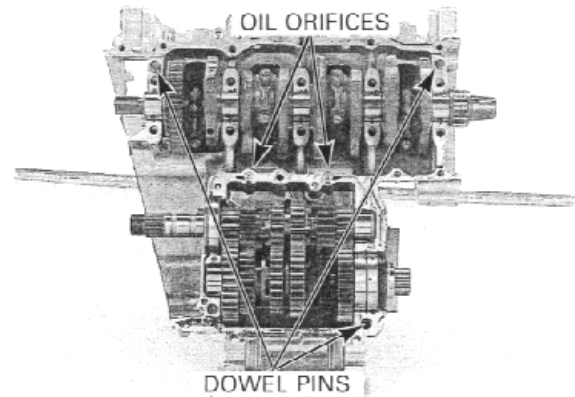
Separate the lower crankcase from the upper crankcase.



Remove the three dowel pins and two oil orifices.

If necessary, remove the swingarm pivot collar from the lower crankcase.

Clean any sealant off from the crankcase mating surface.

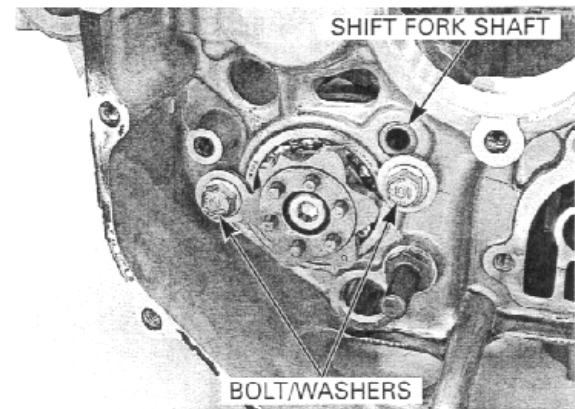


SHIFT FORK/SHIFT DRUM

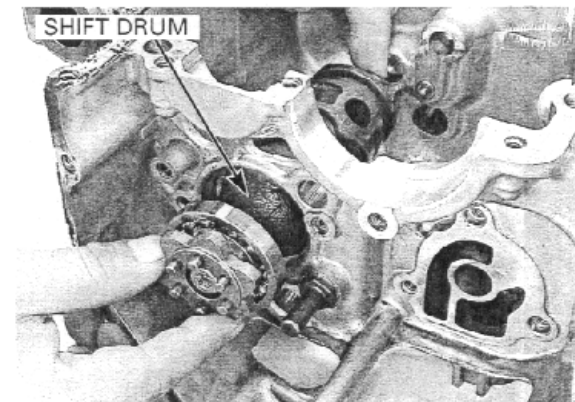
REMOVAL

Separate the crankcase halves (page 11-3).

Remove the shift drum bearing set plate bolt/washer. Remove the shift fork shaft and shift forks.



Remove the shift drum.



SHIFT DRUM/SHIFT FORK INSPECTION

Check the shift fork guide pin for abnormal wear or damage

Measure the shift fork I.D.

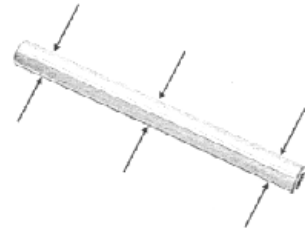
SERVICE LIMIT: 12.03 mm (0.474 in)

Measure the shift fork claw thickness.

SERVICE LIMIT: 5.9 mm (0.23 in)

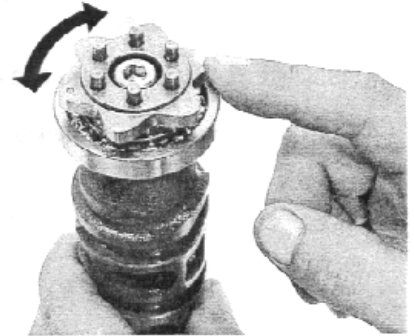
Measure the shift fork shaft O.D.

SERVICE LIMIT: 11.95 mm (0.470 in)



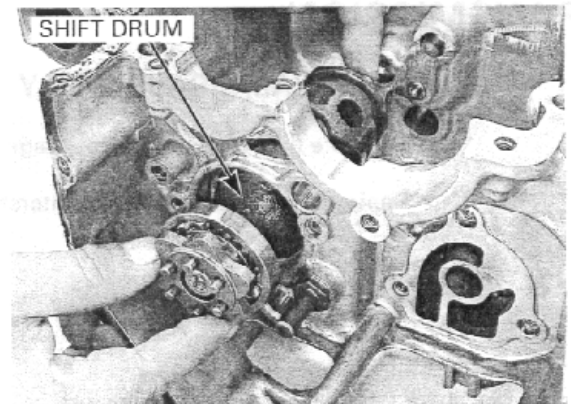
Inspect the shift drum guide grooves for abnormal wear or damage.

Turn the outer race of the shift drum bearing with your finger.
The bearing should turn smoothly and freely without excessive play.
If necessary, replace the bearing.



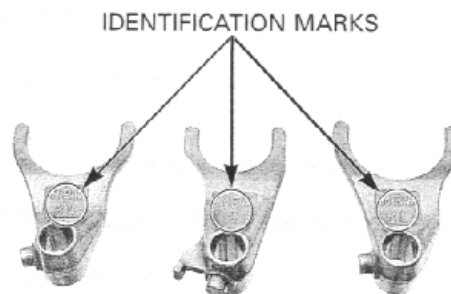
INSTALLATION

Install the shift drum into the lower crankcase.

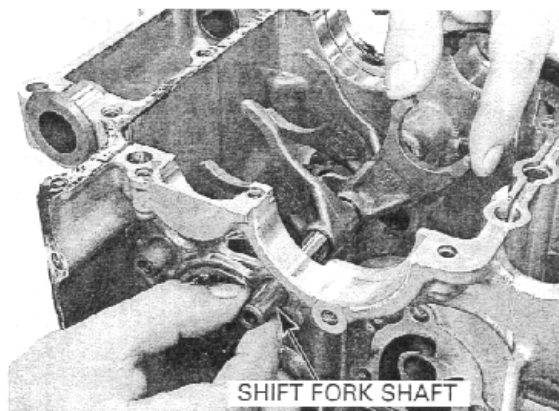


CRANKCASE/TRANSMISSION

The shift forks have the following location marks:
"RL" for right and left
"C" for center



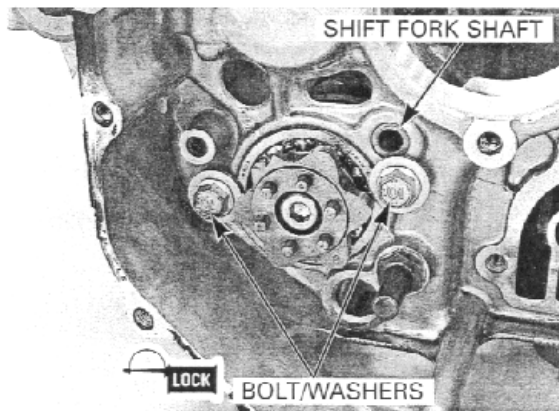
Install the shift forks into the shift drum guide groove with the identification marks facing toward the right side of the engine and insert the fork shaft.



Apply a locking agent to the threads of the bolt/washer.
Install the bolt/washer, then tighten them to the specified torque.

TORQUE: 12 N•m (1.2 kgf•m, 9 lbf•ft)

Assemble the crankcase halves (page 11-11).

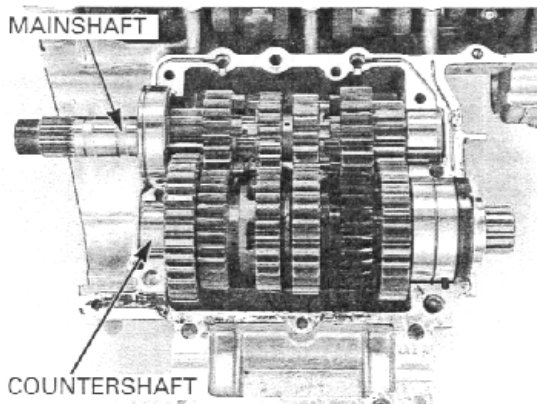


TRANSMISSION

REMOVAL/DISASSEMBLY

Separate the crankcase halves (page 11-3).

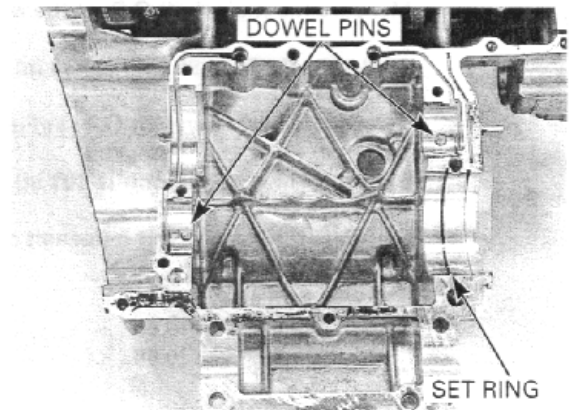
Remove the mainshaft and countershaft assemblies.



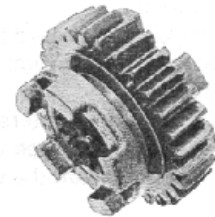
Remove the dowel pins and countershaft bearing set ring.

Disassemble the mainshaft and countershaft.
Clean all disassembled parts in solvent thoroughly.

Check the mainshaft and countershaft needle bearings for abnormal wear or damage.



Check the gear shifter groove for abnormal wear or damage.

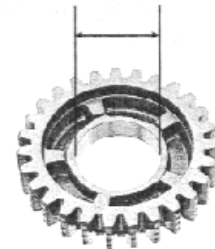


Check the gear dogs, dog holes and teeth for abnormal wear or lack of lubrication.

Measure the I.D. of each gear.

SERVICE LIMITS:

M5, M6: 28.04 mm (1.104 in)
C2, C3, C4: 31.04 mm (1.222 in)



Measure the O.D. of each gear bushing.

SERVICE LIMITS:

M5, M6: 27.94 mm (1.100 in)
C2: 30.94 mm (1.218 in)
C3, C4: 30.93 mm (1.218 in)

Calculate the gear-to bushing clearance.

M5, M6: 0.10 mm (0.004 in)
C2: 0.10 mm (0.004 in)
C3, C4: 0.11 mm (0.004 in)

Measure the O.D. of each gear bushing.

M5: 25.016 mm (0.9849 in)
C2: 28.021 mm (1.1032 in)



Check the mainshaft and countershaft for abnormal wear or damage.