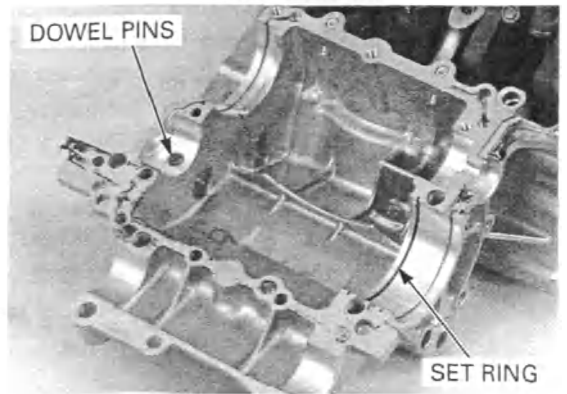
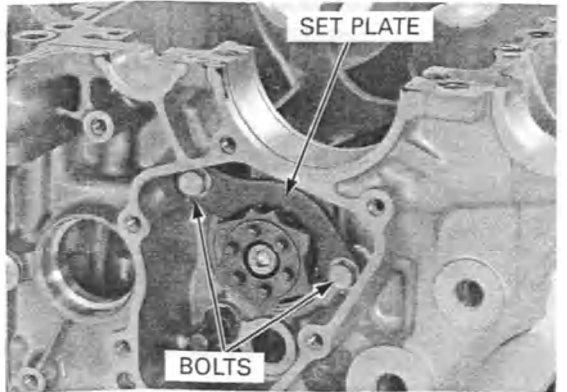


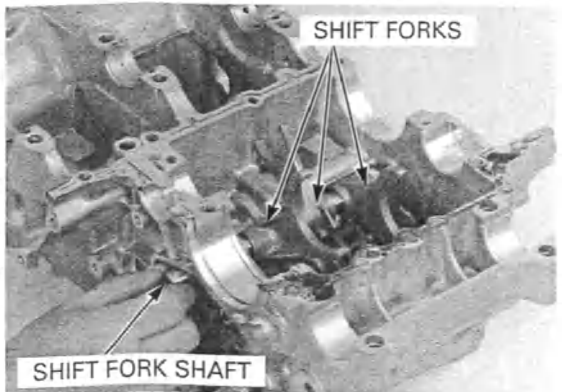
Remove the dowel pins and countershaft bearing set ring.



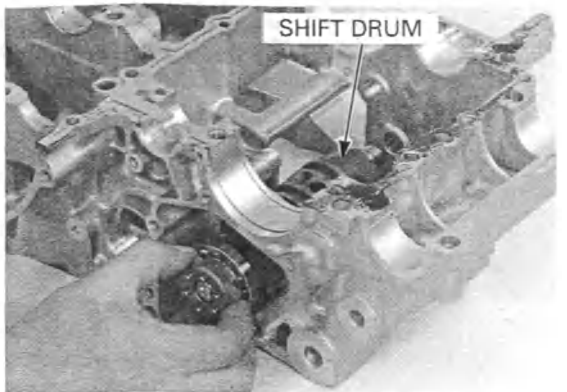
Remove the bolts and shift drum bearing set plate.



Remove the shift fork shaft and shift forks.



Remove the shift drum assembly.



INSPECTION

Disassemble the mainshaft and countershaft.

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

Measure the I.D. of each gear.

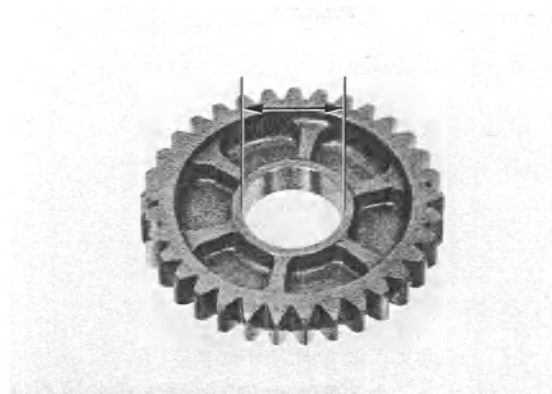
SERVICE LIMITS:

M5, M6: 28.04 mm (1.104 in)

C1: 26.04 mm (1.025 in)

C2, C3, C4: 31.04 mm (1.222 in)

Check the shift fork groove of the shifter gear for excessive wear or damage.



Measure the O.D. of each gear bushing.

SERVICE LIMITS:

M5, M6: 27.94 mm (1.100 in)

C2: 30.95 mm (1.219 in)

C3, C4: 30.93 mm (1.218 in)

Measure the I.D. of each gear bushing.

SERVICE LIMITS:

M5: 25.03 mm (0.985 in)

C2: 28.04 mm (1.104 in)

Calculate the gear-to-bushing clearance.

STANDARDS:

M5, M6: 0.020 – 0.062 mm (0.0008 – 0.0024 in)

C2: 0.005 – 0.055 mm (0.0002 – 0.0022 in)

C3, C4: 0.025 – 0.075 mm (0.0010 – 0.0030 in)

Check the mainshaft and countershaft for abnormal wear or damage.

Measure the mainshaft O.D. at the M5 gear.

SERVICE LIMIT: 24.95 mm (0.982 in)

Measure the countershaft O.D. at the C2 gear.

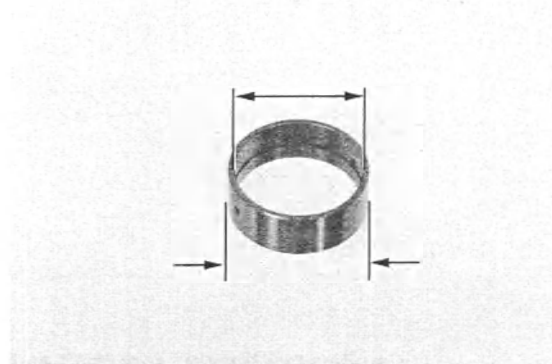
SERVICE LIMIT: 27.96 mm (1.101 in)

Calculate the gear bushing-to-shaft clearance.

STANDARDS:

M5: 0.005 – 0.047 mm (0.0002 – 0.0019 in)

C2: 0.020 – 0.054 mm (0.0008 – 0.0021 in)

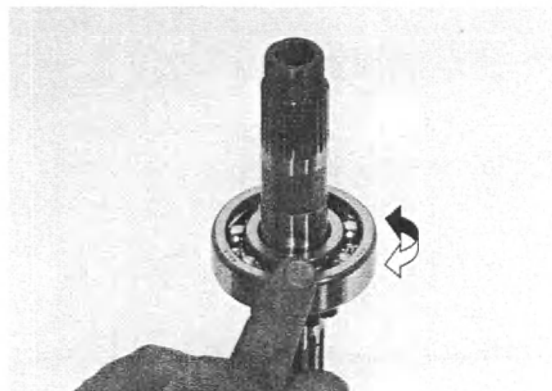
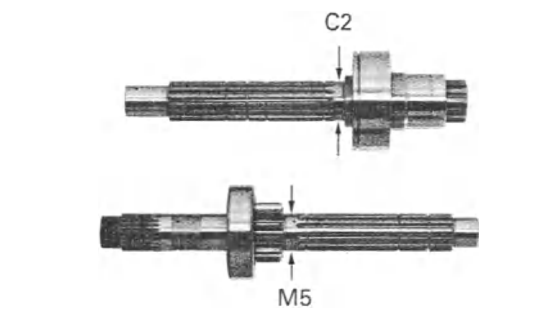


Turn the outer race of each bearing with your finger. The bearings should turn smoothly and quietly.

Also check that the bearing inner race fits tightly on the shaft.

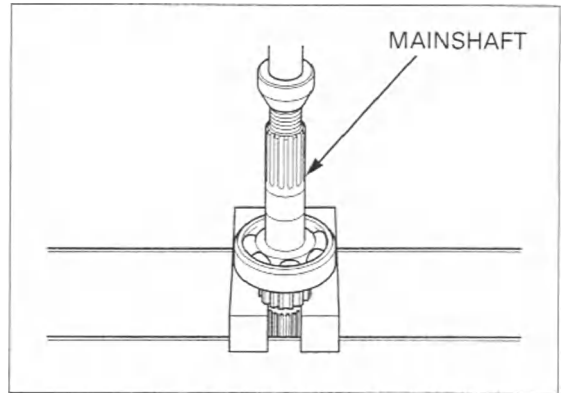
Remove and discard the mainshaft bearing, if the race does not turn smoothly, quietly, or fits loosely on the mainshaft.

Replace the countershaft, collar, and bearing as an assembly, if the race does not turn smoothly, quietly, or fits loosely on the countershaft.



Mainshaft bearing replacement

Press out the mainshaft from the bearing using a hydraulic press.



Install with the groove side facing up.

Install a new mainshaft bearing onto the mainshaft by pressing the mainshaft bearing inner race using the special tools.

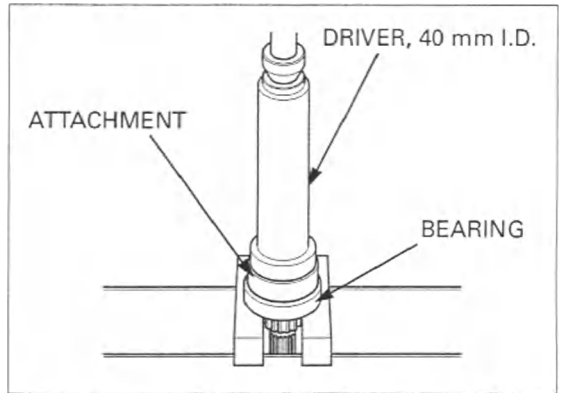
TOOLS:

Inner driver C

07746-0030100

Attachment, 25 mm I.D.

07746-0030200



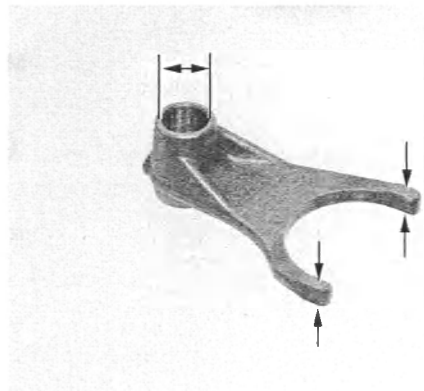
Check the shift fork guide pin for abnormal wear or damage

Measure the shift fork I.D.

SERVICE LIMIT: 14.03 mm (0.552 in)

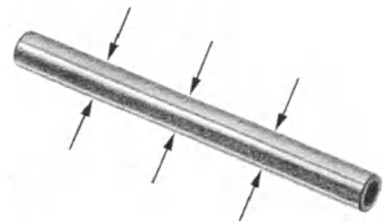
Measure the shift fork claw thickness.

SERVICE LIMIT: 6.40 mm (0.252 in)



Measure the shift fork shaft O.D.

SERVICE LIMIT: 13.965 mm (0.5498 in)

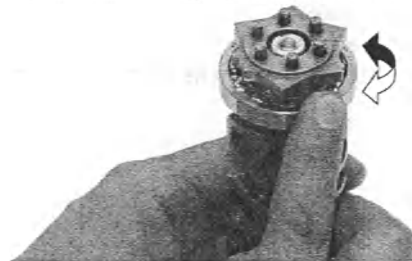


CRANKCASE/TRANSMISSION

Inspect the shift drum grooves for wear or damage.

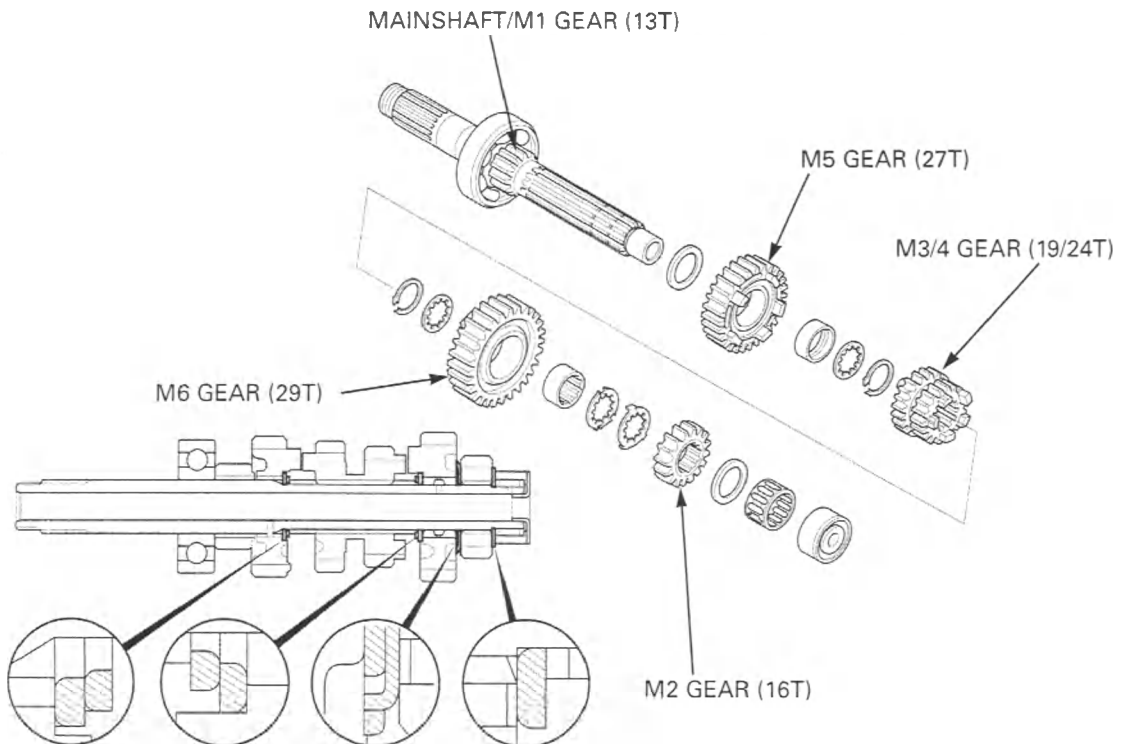


Turn the outer race of the shift drum bearing with your finger.
The bearing should turn smoothly and freely without excessive play.
If necessary, replace the bearing.

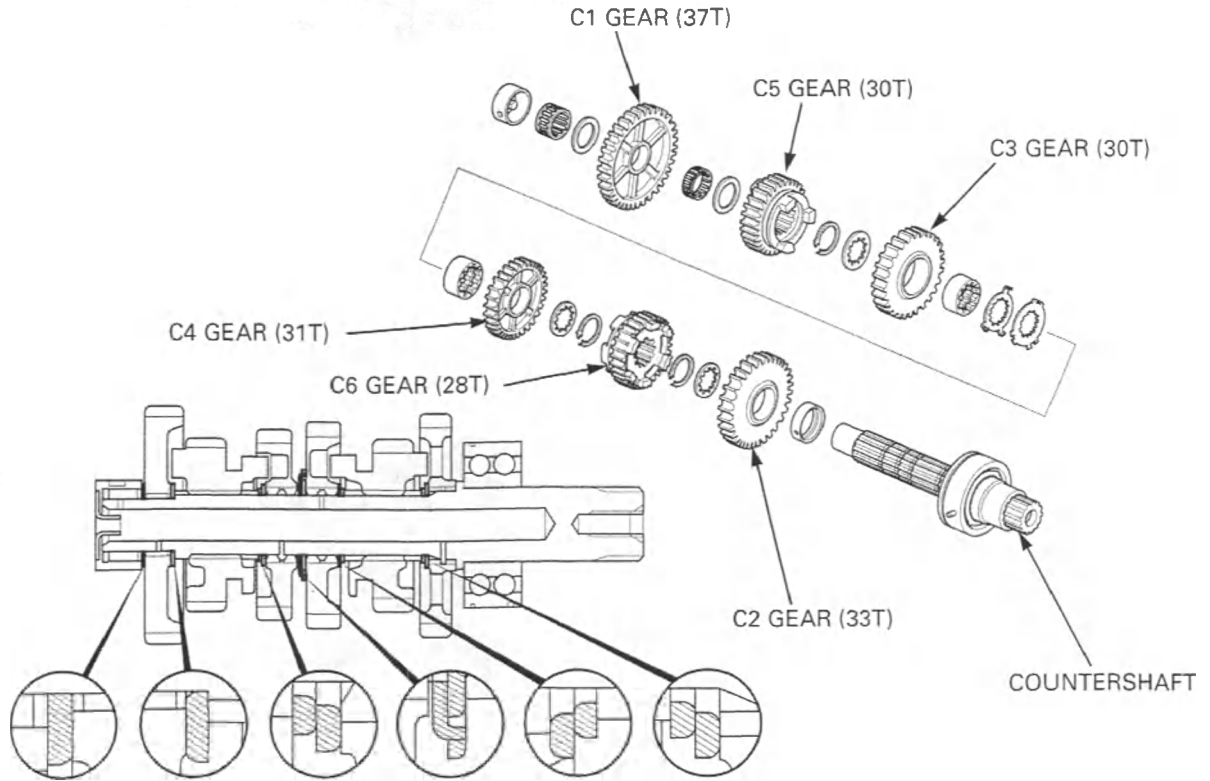


ASSEMBLY

Mainshaft:

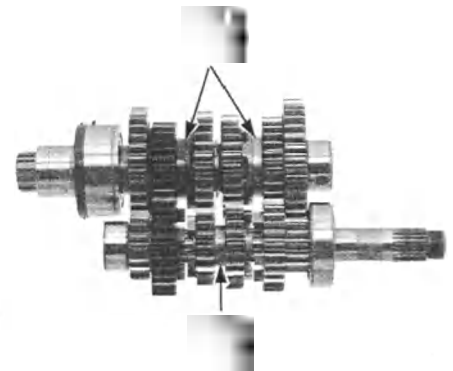


Countershaft:



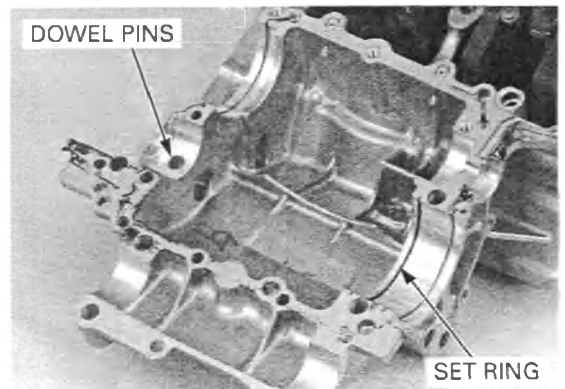
Assemble the transmission gear and shafts.
Coat each gear with clean engine oil and check for smooth movement.

Apply molybdenum disulfide oil to the shift fork grooves in the M3/4, C5 and C6 gear.



INSTALLATION

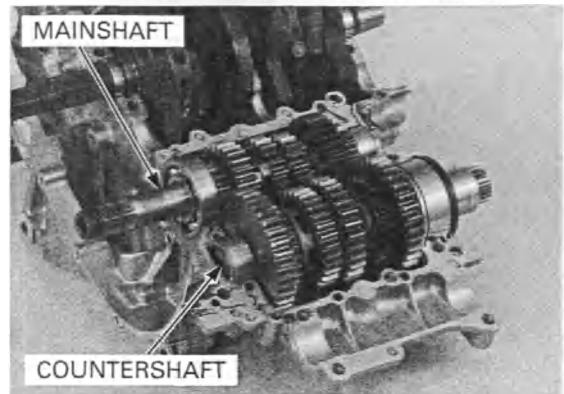
Install the dowel pins in the upper crankcase holes.
Install the countershaft bearing set ring into the upper crankcase groove.



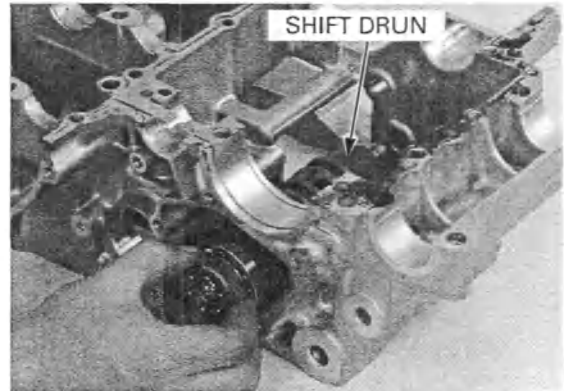
CRANKCASE/TRANSMISSION

Install the mainshaft and countershaft by aligning the countershaft bearing groove with the set ring on the crankcase, and aligning the bearing cap holes with the dowel pins.

Also align the countershaft bearing stopper pin with the groove in the crankcase.

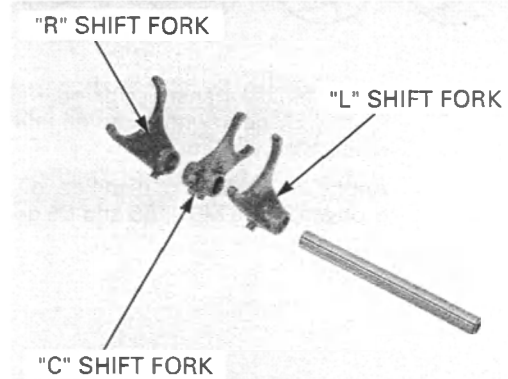


Install the shift drum and shift drum bearing into the lower crankcase.



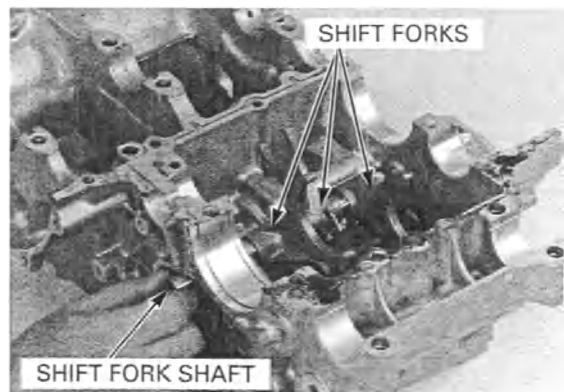
The shift forks have location marks.

- "R" for right
- "C" for center
- "L" for left



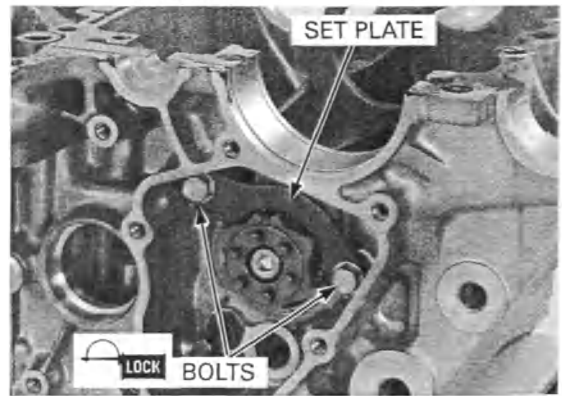
Face the shift fork identification marks to the clutch side.

Install the shift forks and shift fork shaft.



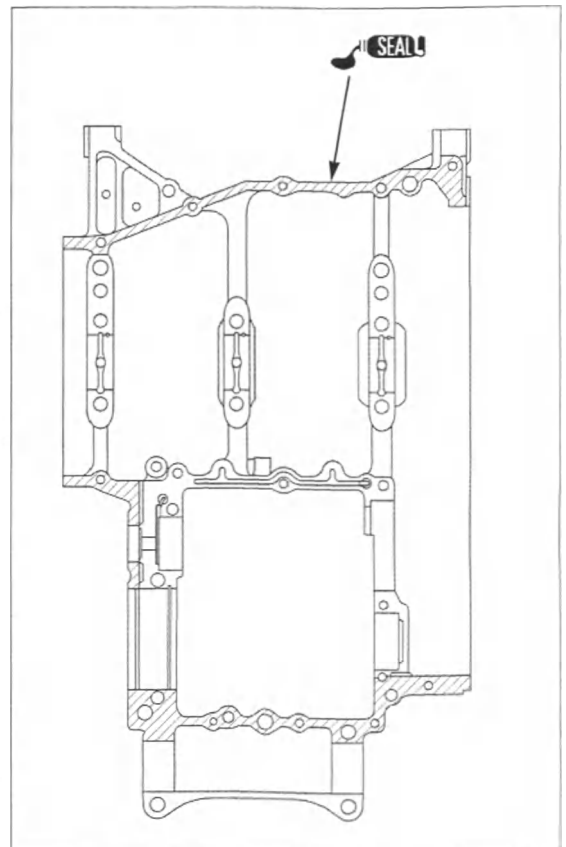
Apply a locking agent to the shift drum bearing set plate bolt threads.
Install the shift drum bearing set plate and tighten the bolts securely.

Assemble the crankcase halves (page 11-13).



CRANKCASE ASSEMBLY

Apply a light, but thorough, coating of liquid sealant to the crankcase mating surface except to the main bearing journal bolt (lower crankcase bolt, 9 mm) area and the oil passage area as shown.



Install the two 10 X 16 mm dowel pins and 8 X 14 mm dowel pin.
Install the swingarm pivot collars.

