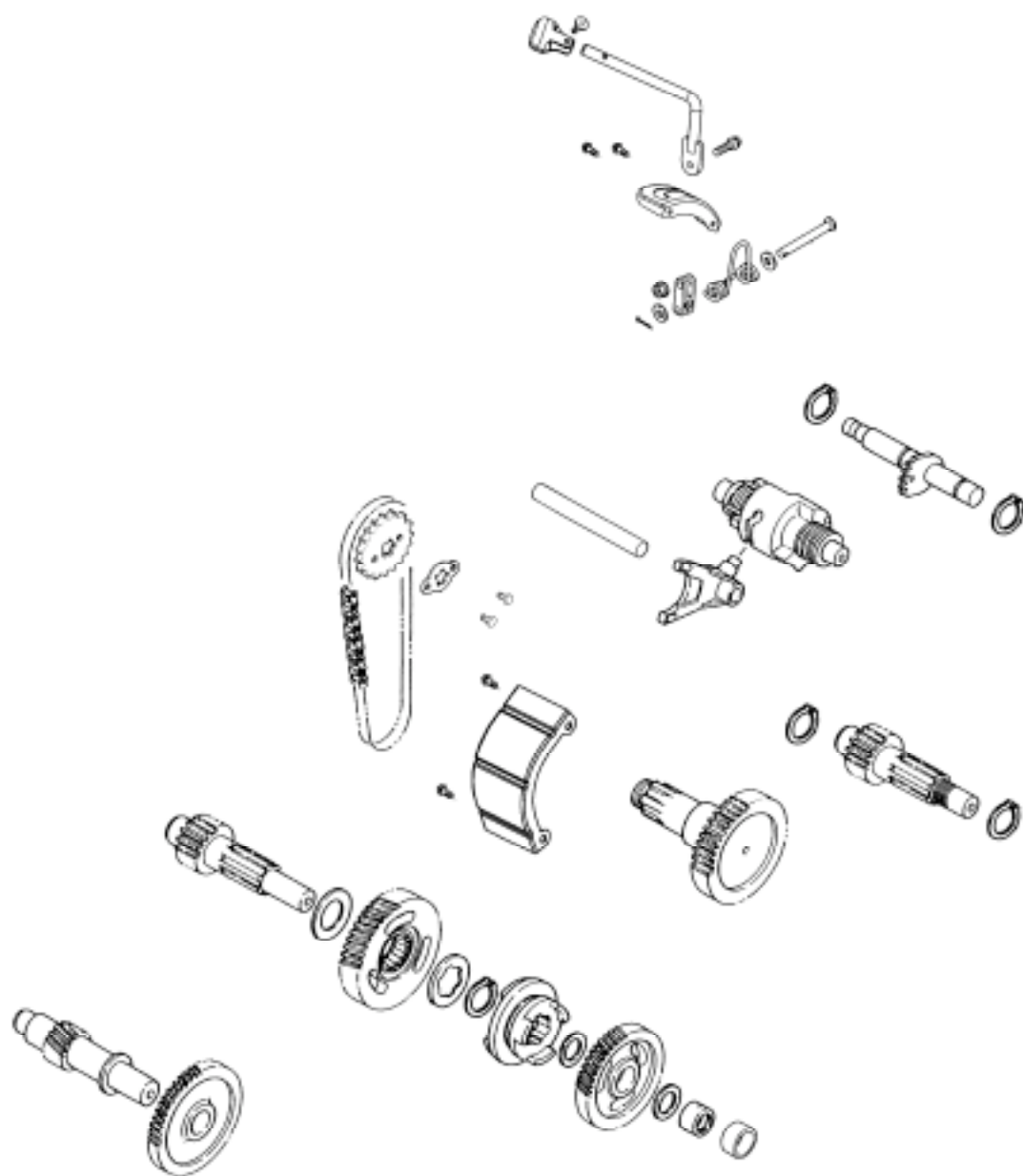

FINAL REDUCTION/TRANSMISSION SYSTEM

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10. FINAL REDUCTION/ TRANSMISSION SYSTEM

KYMCO
MX'er SYSTEM



10. FINAL REDUCTION/ TRANSMISSION SYSTEM

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- When replacing the drive shaft, use a special tool to hold the bearing inner race for this operation.

SPECIFICATIONS

Specified Oil: GEAR OIL SAE 90#

Oil Capacity: At change : 0.2 liter
 At disassembly : 0.4 liter

TORQUE VALUES

Transmission case cover bolt 0.8_ 1.2kgf-m

SPECIAL TOOLS

Flywheel holder	E021
Flywheel puller	E005
Lock nut socket wrench	E009

TROUBLESHOOTING

Engine starts but motorcycle won't move

- Damaged transmission
- Seized or burnt transmission

Oil leaks

- Oil too rich
- Worn or damaged oil seal

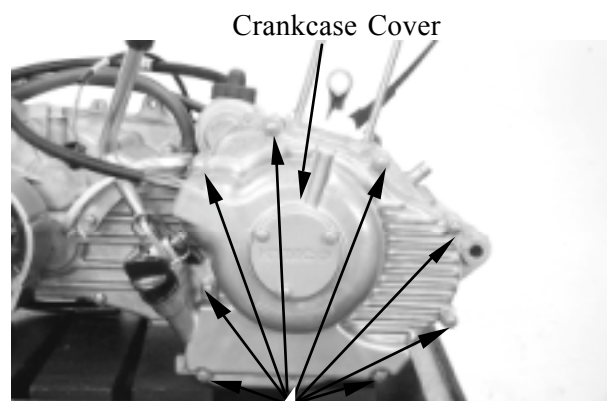
10. FINAL REDUCTION/ TRANSMISSION SYSTEM

FINAL REDUCTION DISASSEMBLY

Drain engine oil and transmission gear oil into a clean container.

Remove the engine.

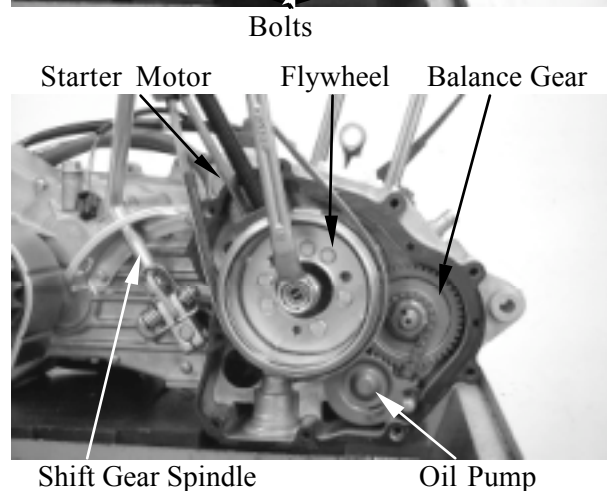
Remove the right crankcase cover.



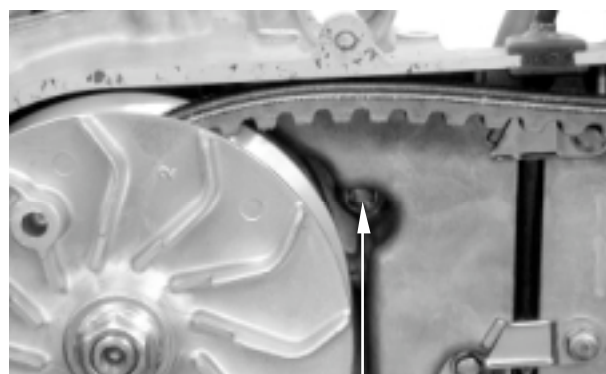
Remove the shift gear spindle.

Remove the flywheel and starter clutch.

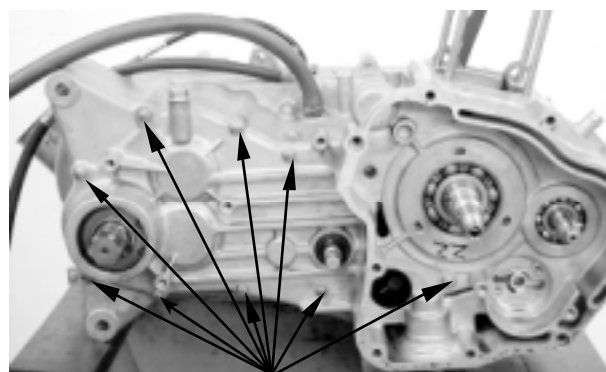
Remove the balance gear oil pump and starter motor.



Remove the left case bolt.

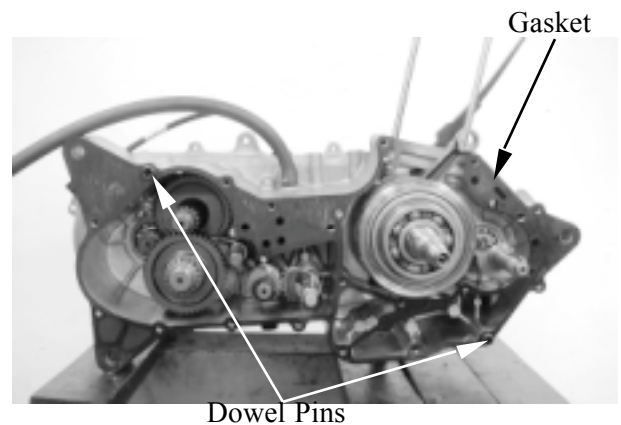


Remove the transmission case cover attaching bolts.



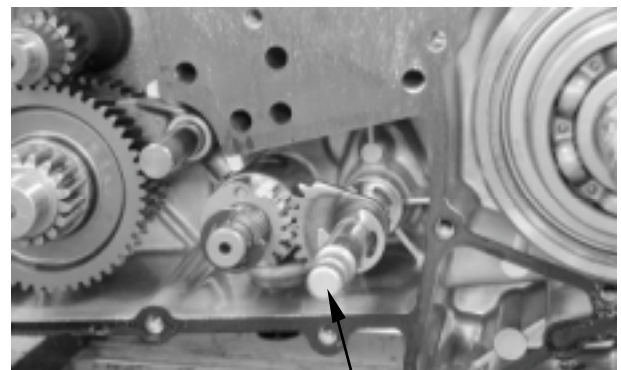
10. FINAL REDUCTION/ TRANSMISSION SYSTEM

Remove gasket and two dowel pins.



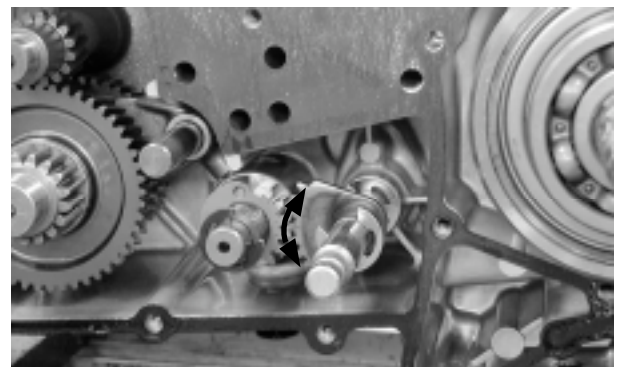
FINAL REDUCTION/ TRANSMISSION INSPECTION

Inspect the change gear shaft for wear, damage or seizure.



Change Gear Shaft

Check the transmission operation.
Repair if unsmooth operation.

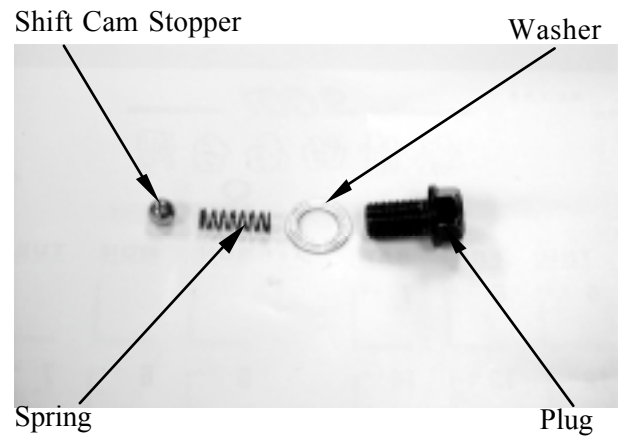


Remove the plug.

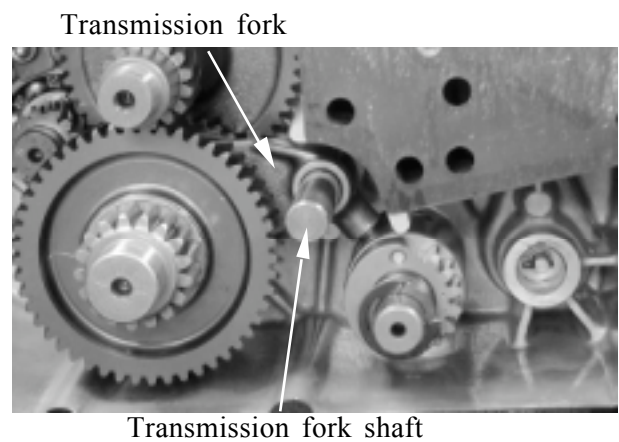


10. FINAL REDUCTION/ TRANSMISSION SYSTEM

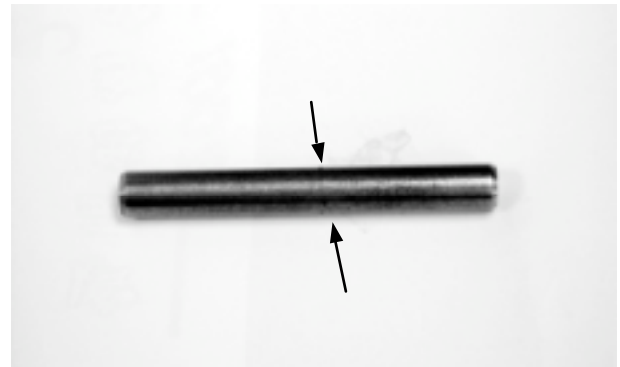
Remove spring, washer and shift cam stopper.



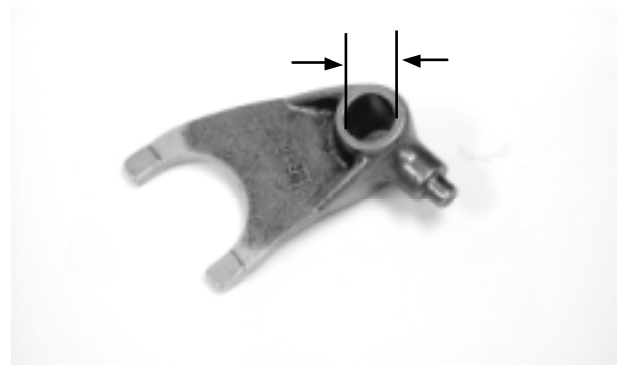
Remove the transmission fork shaft and transmission fork.



Measure the transmission fork shaft O.D.
Service Limit: 11.936



Measure the transmission fork shaft hole I.D.
Service Limit: 12.058



10. FINAL REDUCTION/ TRANSMISSION SYSTEM

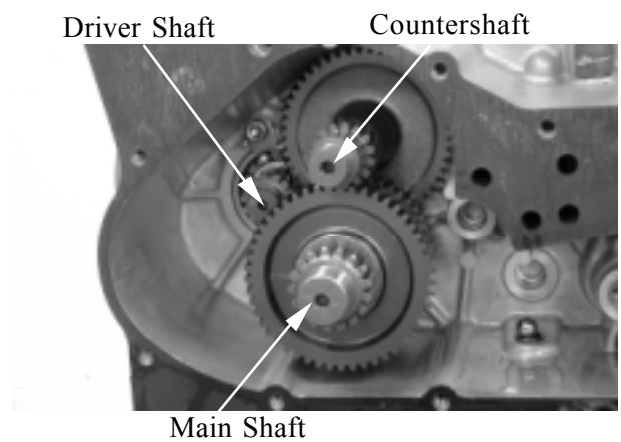
Check the shift cam groove and shift cam gear.

Replace if wear or damage.



TRANSMISSION GEARS/ CRANKSHAFT REMOVAL

Remove the final gear and main shaft.

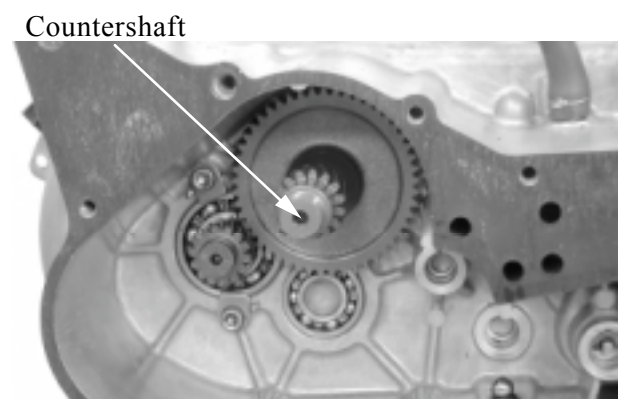


GEAR/SHAFT COLLAR INSPECTION

Check each gear and gear teeth for wear, damage, or poor lubrication.



Remove the counter shaft.



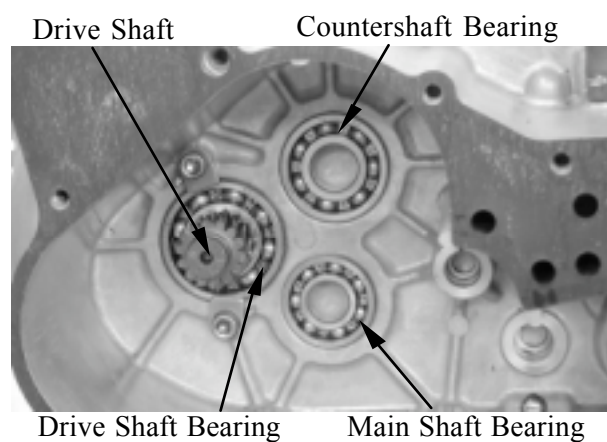
10. FINAL REDUCTION/ TRANSMISSION SYSTEM

FINAL REDUCTION INSPECTION

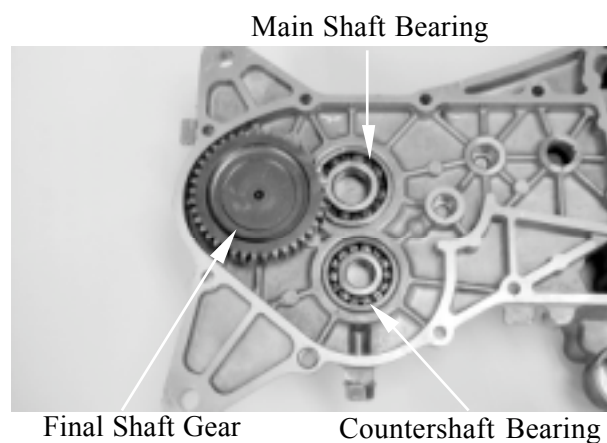
Inspect the countershaft and gear for wear or damage.



Inspect the drive shaft and gear for wear or damage.
Check the left crankcase bearings for excessive play and inspect the oil seal for wear or damage.

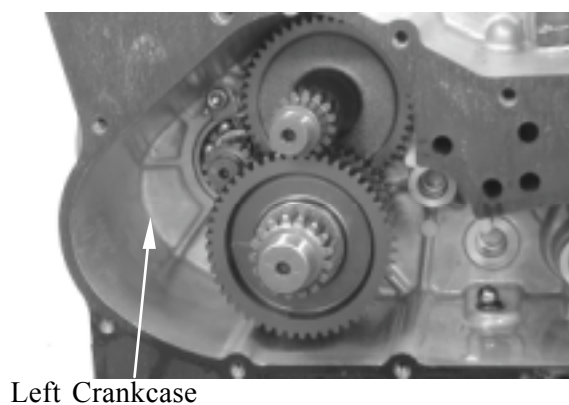


Inspect the final shaft gear for wear or damage.
Check the right crankcase bearings for excessive play and inspect the oil seal for wear or damage.



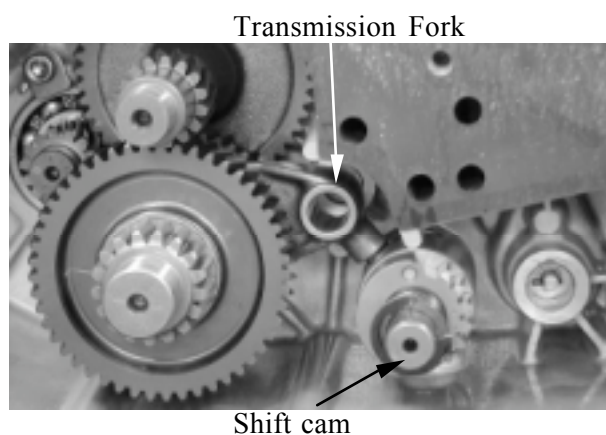
FINAL REDUCTION INSTALLATION

Install the final gear and final shaft into the left crankcase.
Install the countershaft and gear into the left crankcase.
Install the main shaft and gear into the left crankcase.

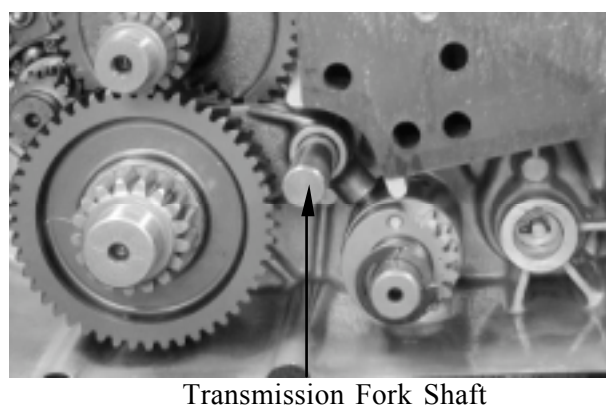


10. FINAL REDUCTION/ TRANSMISSION SYSTEM

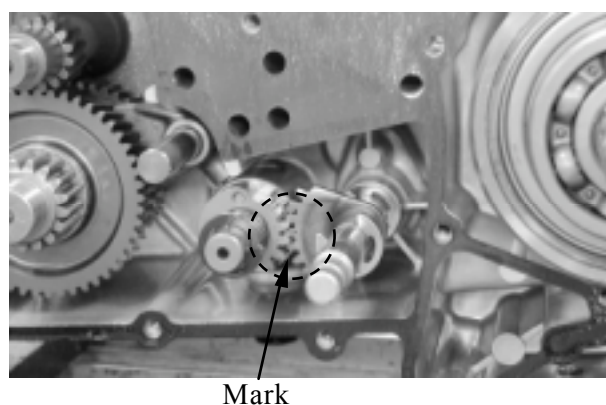
Install the shift cam into the left crankcase.
Install the transmission fork to the main shaft gear and install the transmission fork guide pin into the shift cam groove.



Install the transmission fork shaft into the left crankcase.



Install the change gear shaft by aligning the punch mark between with the punch mark of the shift cam gear.



Install shift cam stopper, spring, washer and plug and tighten the plug.

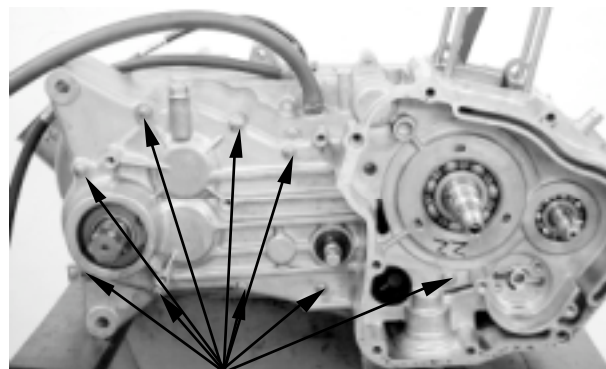


10. FINAL REDUCTION/ TRANSMISSION SYSTEM

Install the dowel pins and a new gasket onto the right crankcase.

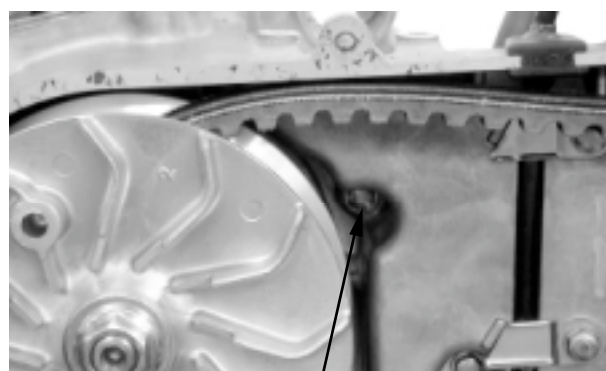
Tighten the crankcase attaching bolts.

Torque: 0.8_ 1.2kgf-m



Bolts

Tighten the left crankcase attaching bolt.



Bolts

Install the shaft gear, balance gear, oil pump, starter clutch and flywheel.

Install and tighten the right case cover bolt.

Install the shift gear spindle.

Install the cylinder.

Specified Gear Oil:

KYMCO SIGMA GEAR OIL 90#

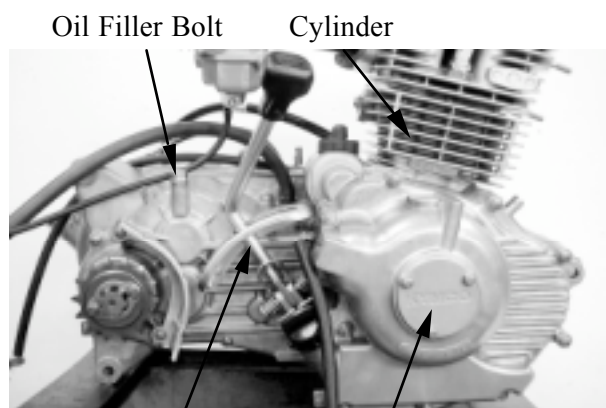
Oil Capacity:

At disassembly : 0.4 liter

At change : 0.2 liter

Install and tighten the oil check bolt.

Torque: 0.8_ 1.2kgf-m



Oil Filler Bolt

Cylinder

Shift Gear Spindle

Right Case Cover