

# 8. FINAL REDUCTION

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## FINAL REDUCTION

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## **8. FINAL REDUCTION**

### **SERVICE INFORMATION**

Specified Oil: SAE90#

At disassembly: 0.12 liter

At change: 0.1 liter

### **SPECIAL TOOLS**

Bearing remover set, 12mm

Bearing remover set, 15mm

Crankcase assembly collar

Crankcase assembly shaft

Bearing outer driver, 37x40mm

Bearing outer driver, 32x35mm

Bearing driver pilot, 17mm

Bearing driver pilot, 15mm

Bearing driver pilot, 12mm

Bearing outer driver handle A

### **TROUBLESHOOTING**

#### **Engine starts but motorcycle won't move**

- Damaged transmission
- Seized or burnt transmission

#### **Abnormal noise**

- Worn, seized or chipped gears
- Worn bearing

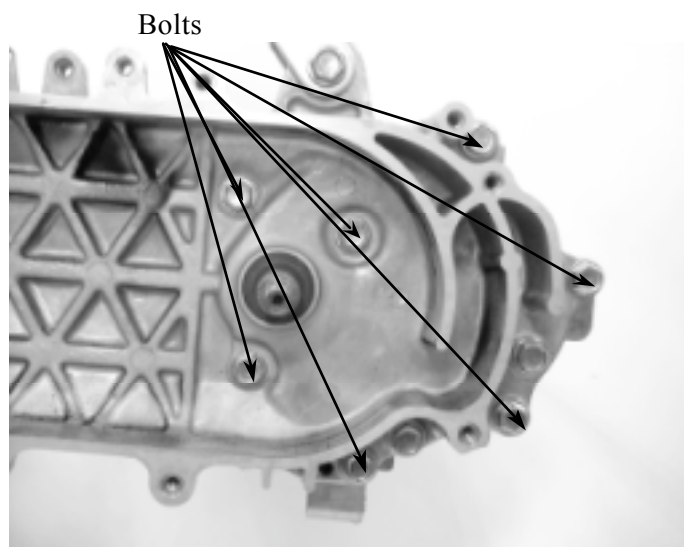
#### **Oil leaks**

- Oil level too high
- Worn or damaged oil seal

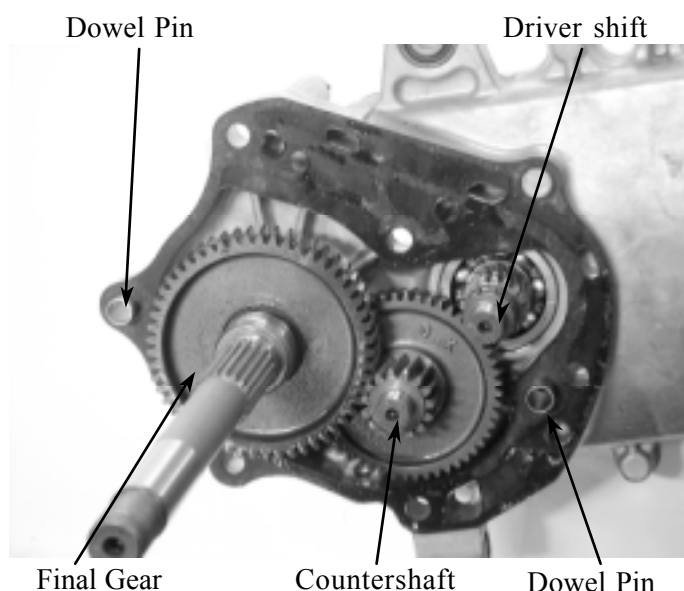
## 8. FINAL REDUCTION

### FINAL REDUCTION DISASSEMBLY

Remove the rear wheel. (⇒ 14-2)  
 Remove the left crankcase cover. (⇒ 7-2)  
 Remove the clutch/driven pulley. (⇒ 7-11)  
 Drain the transmission gear oil into a clean container.  
 Remove the transmission case cover attaching bolts.  
 Remove the transmission case cover.  
 Remove the gasket and dowel pins.



Remove the final gear and countershaft.



### FINAL REDUCTION INSPECTION

Inspect the countershaft and gear for wear or damage.

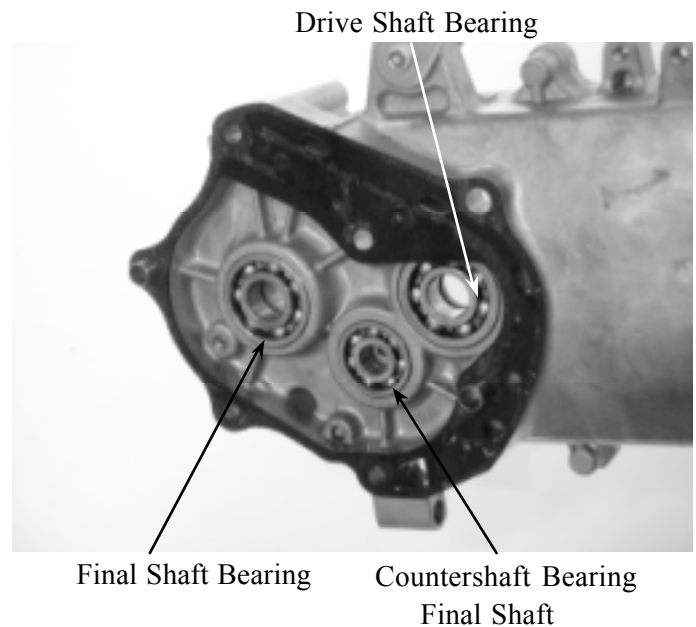


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Inspect the final gear and final shaft for wear, damage or seizure.

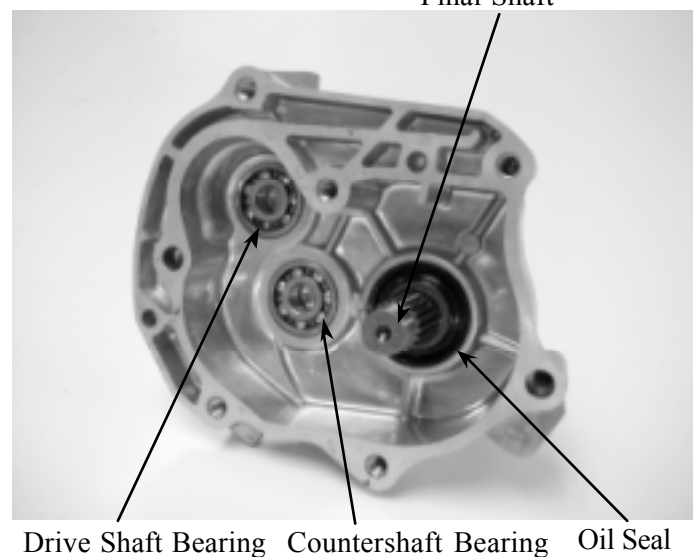


Check the left crankcase bearings for excessive play and inspect the oil seal for wear or damage.



Inspect the drive shaft and gear for wear or damage.  
Check the transmission case cover bearings for excessive play and inspect the final shaft bearing oil seal for wear or damage.

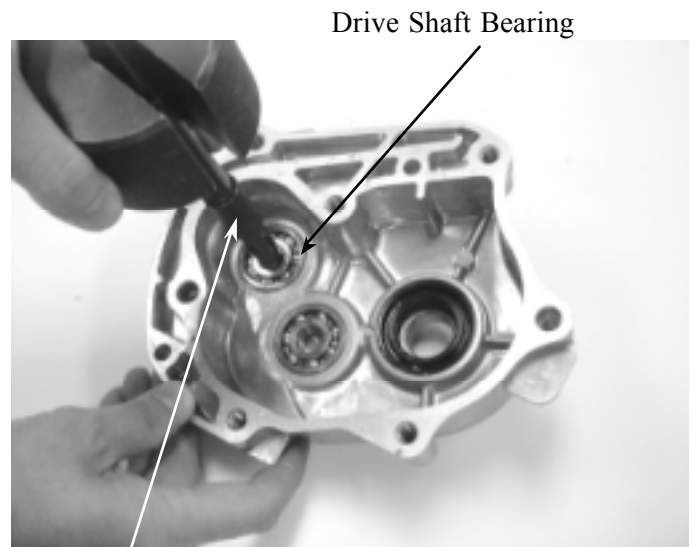
**\*** Do not remove the transmission case cover except for necessary part replacement. When replacing the drive shaft, also replace the bearing and oil seal.



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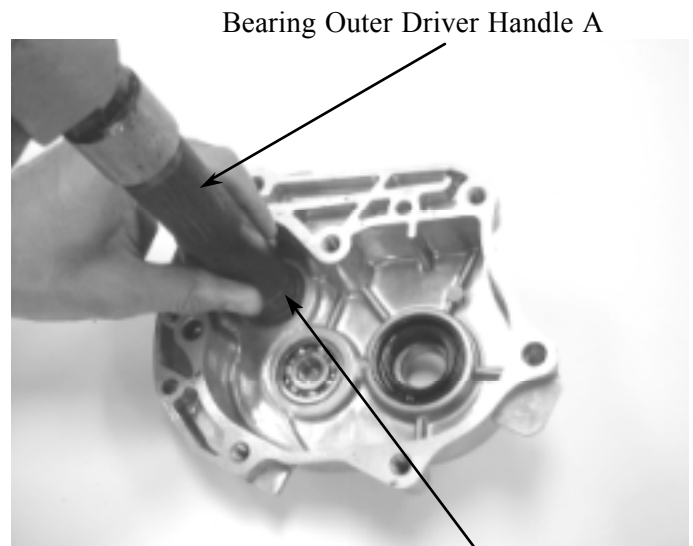
### BEARING REPLACEMENT (Transmission Case Cover)

Remove the transmission case cover bearings using the bearing remover.  
Remove the final shaft oil seal.



Bearing Remover Set

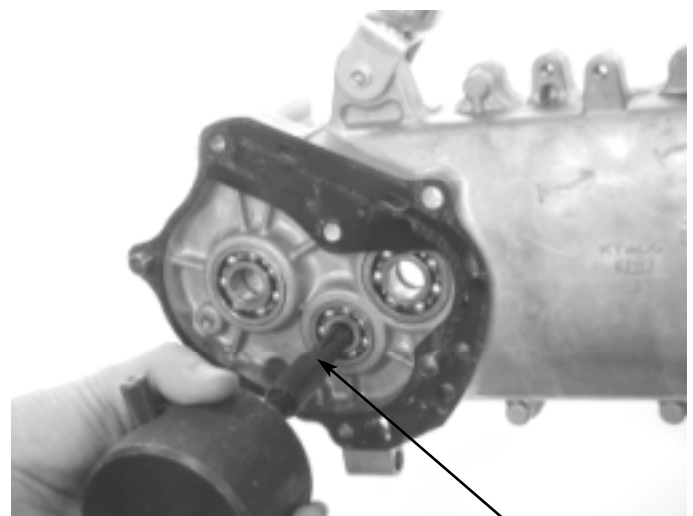
Drive new bearings into the transmission case cover.



Bearing Outer Driver

### BEARING REPLACEMENT (Left Crankcase Cover)

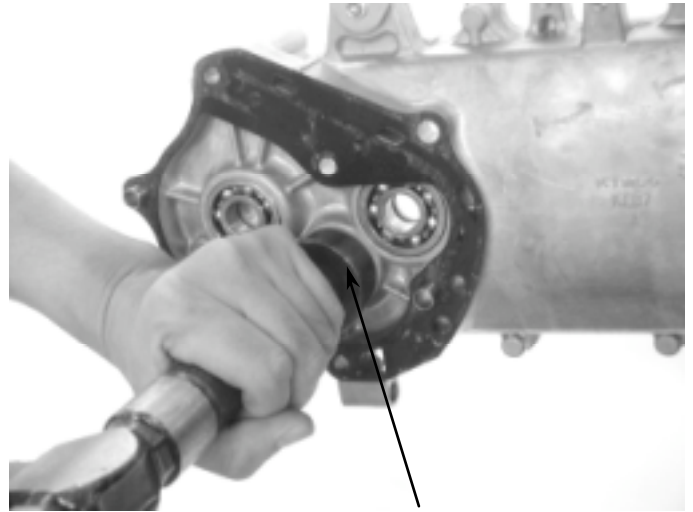
Remove the drive shaft.  
Remove the drive shaft oil seal.  
Remove the left crankcase bearings using the bearing remover.



Bearing Remover Set

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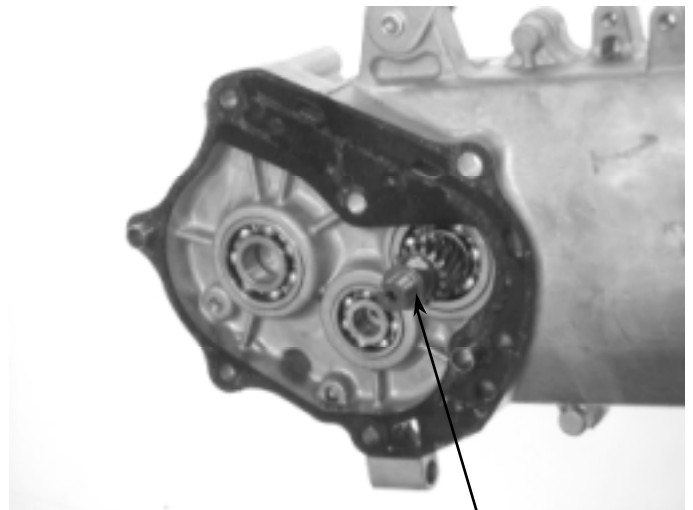
Drive new bearings into the left crankcase.  
Install a new drive shaft oil seal.



Bearing Outer Driver

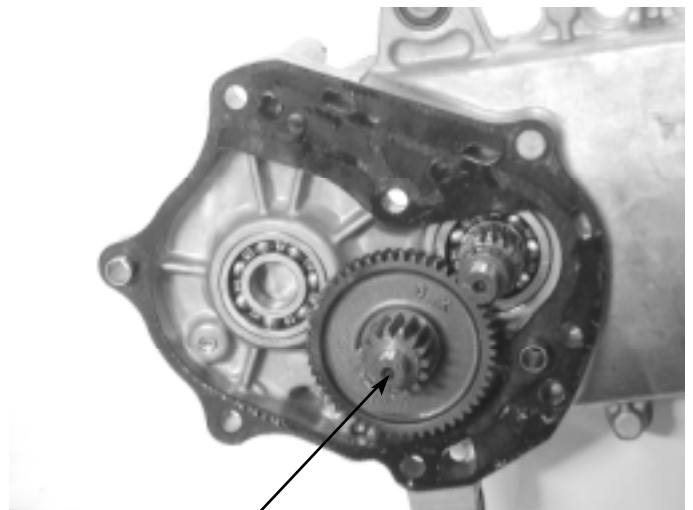
### FINAL REDUCTION ASSEMBLY

Install the drive shaft into the left crankcase.



Drive Shaft

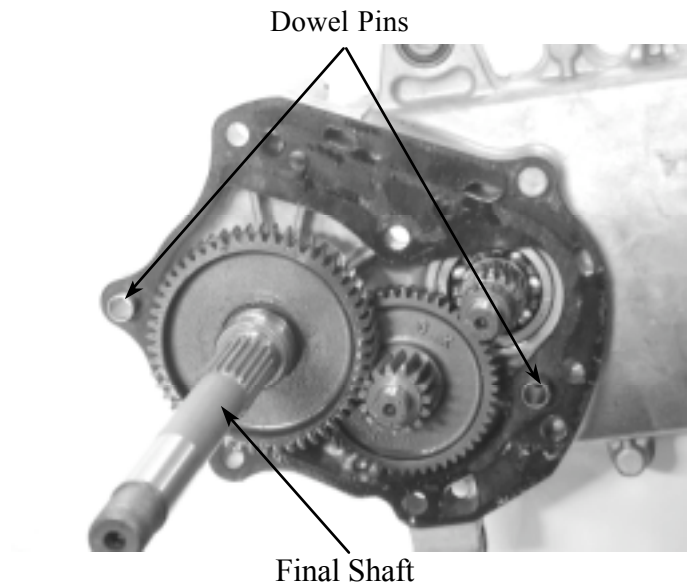
Install the countershaft gear into the left crankcase.



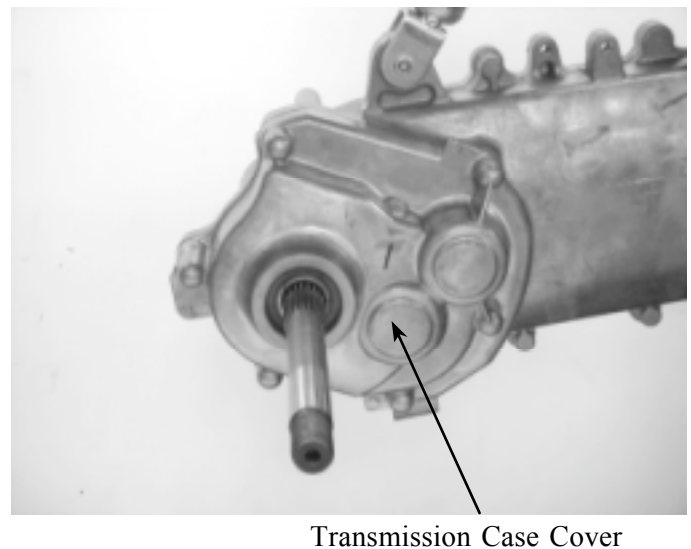
Countershaft Gear

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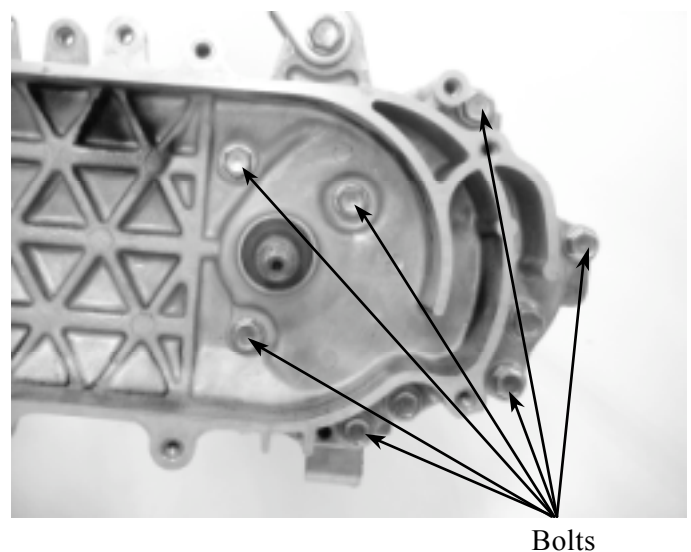
Install the final gear and final shaft into the left crankcase.  
Install the dowel pins and a new gasket.



Install the transmission case cover.



Install and tighten the transmission case cover bolts.  
Install the clutch/driven pulley. (⇒ 7-15)  
Install other removed parts in the reverse order of removal.





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After installation, fill the transmission case with the specified oil.

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- Place the motorcycle on its main stand on level ground.
- Check the sealing washer for wear or damage.

**Specified Gear Oil:** SAE90#

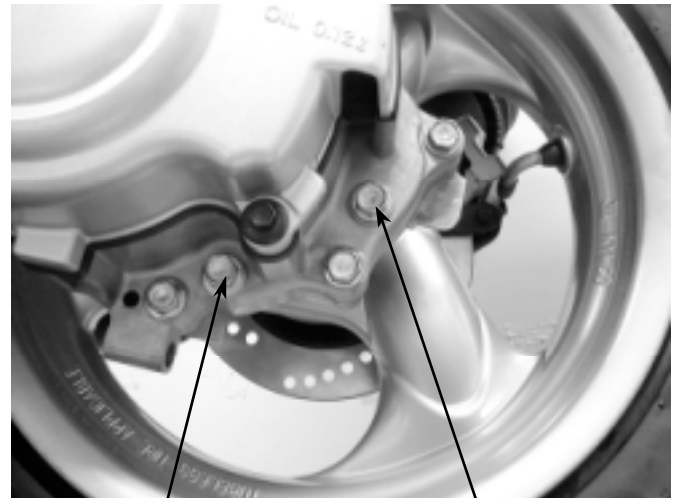
**Oil Capacity:** at disassembly: 0.12 liter  
at change: 0.1 liter

Install and tighten the oil check bolt.

**Torque:** 9.8\_ 14.7N-m

Start the engine and check for oil leaks.

Check the oil level from the oil check bolt hole and add the specified oil to the proper level if the oil level is low.



Drain Bolt

Oil Check Bolt Hole/Filler