

# 9. FINAL REDUCTION

---

---

---

---

---

---

## FINAL REDUCTION

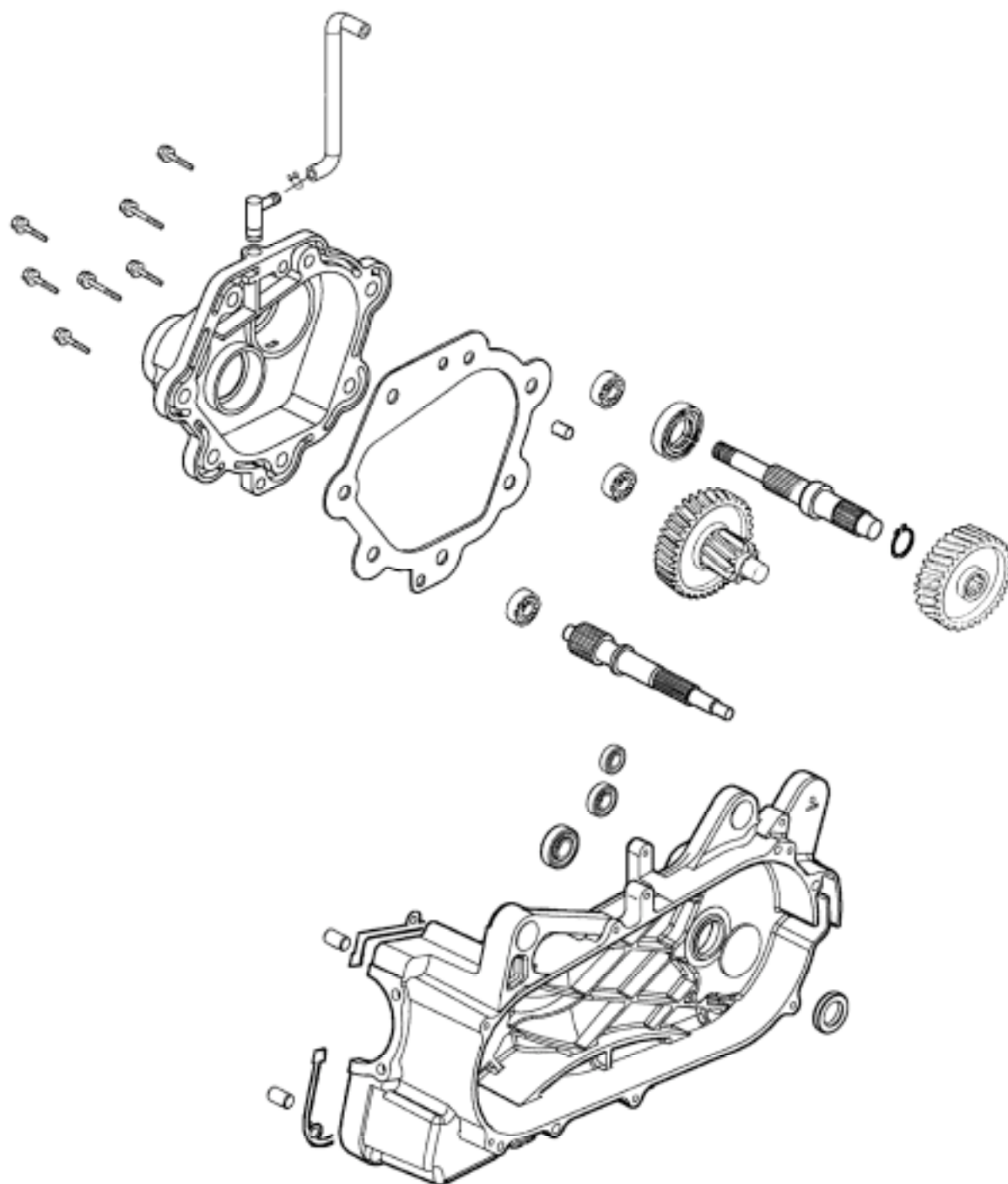
---

SCHEMATIC DRAWING -----	9-1
SERVICE INFORMATION -----	9-2
TROUBLESHOOTING -----	9-2
FINAL REDUCTION DISASSEMBLY -----	9-3
FINAL REDUCTION INSPECTION-----	9-3
FINAL REDUCTION ASSEMBLY -----	9-6

## 9. FINAL REDUCTION

---

### SCHEMATIC DRAWING



## 9. FINAL REDUCTION

---

### SERVICE INFORMATION

#### GENERAL INSTRUCTIONS

- The servicing operations of this section can be made with the engine installed.
- When replacing the drive shaft, use a special tool to hold the bearing inner race for this operation.

#### SPECIFICATIONS

Specified Oil: SAE 90#

Oil Capacity:

At disassembly : 0.2 liter

At change : 0.18 liter

#### TORQUE VALUES

Transmission case cover bolt    17.7\_    21.6N-m

Oil check bolt                      7.8\_    11.8N-m

#### SPECIAL TOOLS

Bearing remover, 12mm

Bearing remover, 15mm

Pilot, 12mm

Pilot, 15mm

### TROUBLESHOOTING

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

- Damaged transmission
- Seized or burnt transmission

#### Abnormal noise

- Worn, seized or chipped gears
- Worn bearing

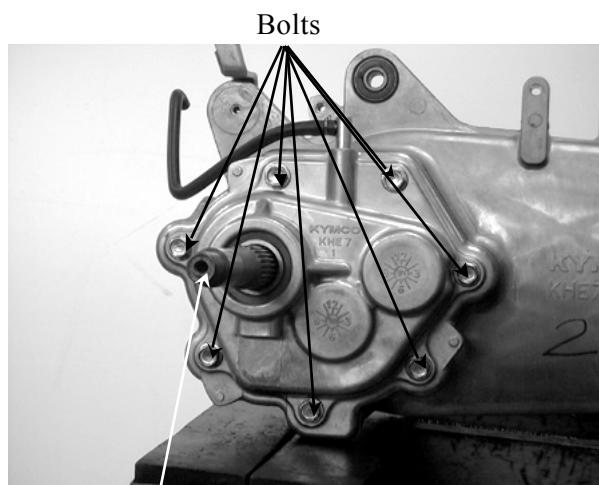
#### Oil leaks

- Oil level too high
- Worn or damaged oil seal

## 9. FINAL REDUCTION

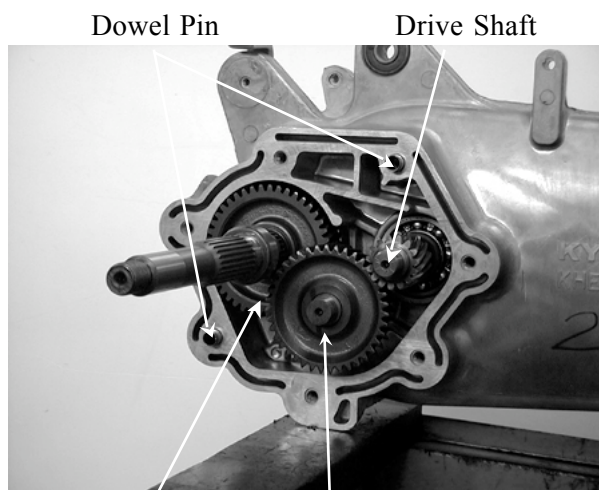
### FINAL REDUCTION DISASSEMBLY

Remove the exhaust muffler. (⇒2-6)  
 Remove the rear brake caliper. (⇒15-3)  
 Remove the right rear shock absorber.  
 (⇒15-5)  
 Remove the rear fork. (⇒15-4)  
 Remove the rear wheel. (⇒15-4)  
 Remove the left crankcase cover. (⇒8-3)  
 Remove the clutch/driven pulleys. (⇒8-4)  
 Drain the transmission gear oil into a clean  
 container.  
 Remove the transmission case cover  
 attaching bolts.



Final Shaft

Remove the transmission case cover.  
 Remove the gasket and dowel pins.  
 Remove the final gear and countershaft.



Final Gear Countershaft

### FINAL REDUCTION INSPECTION

Inspect the countershaft and gear for wear  
 or damage.



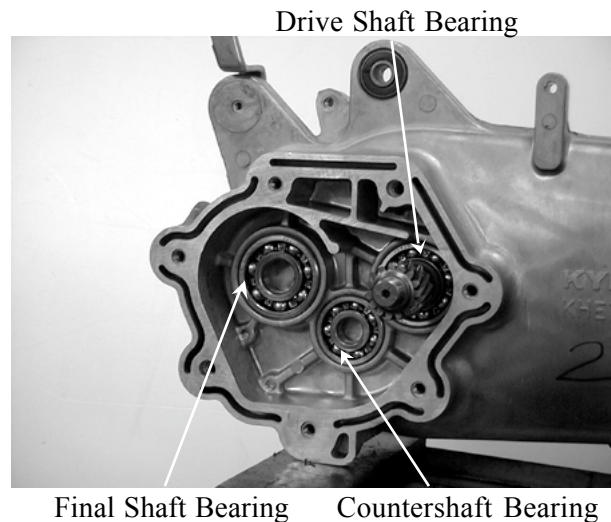
Countershaft

## 9. FINAL REDUCTION

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

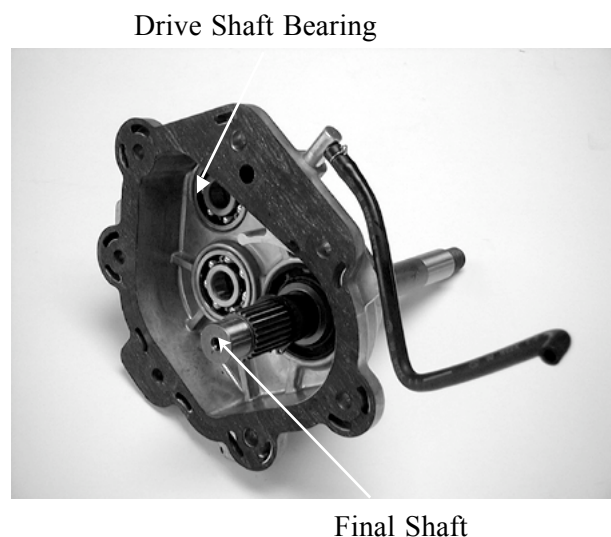


Check the left crankcase bearings for excessive play and inspect the oil seal for wear or damage.



Inspect the drive shaft and gear for wear or damage.  
Check the transmission case covers 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.



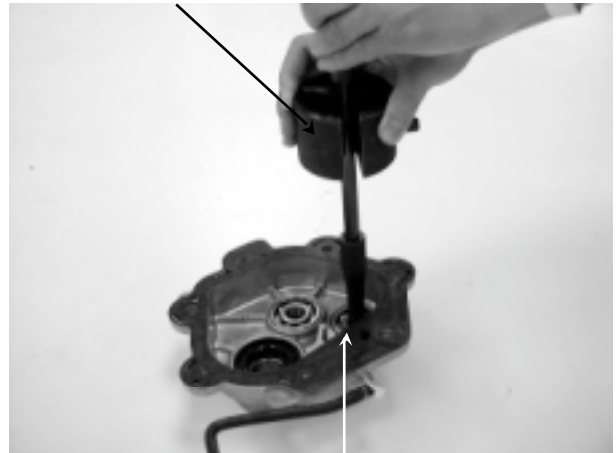
## 9. FINAL REDUCTION

---

### **BEARING REPLACEMENT (TRANSMISSION CASE COVER)**

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

Bearing Remover, 15mm



Drive Shaft Bearing

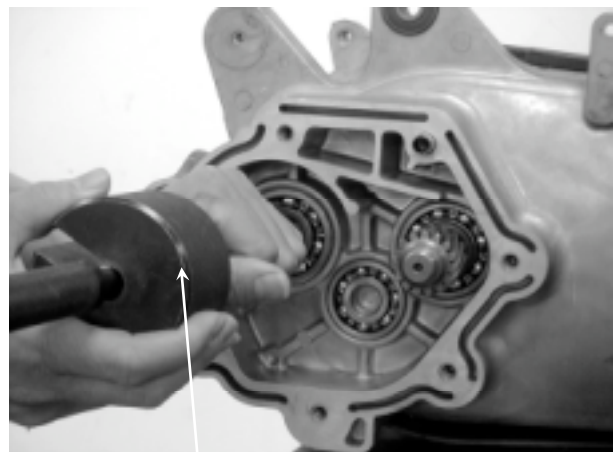
Drive new bearings into the transmission case cover.

Pilot, 15mm



### **BEARING REPLACEMENT (LEFT CRANKCASE COVER)**

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

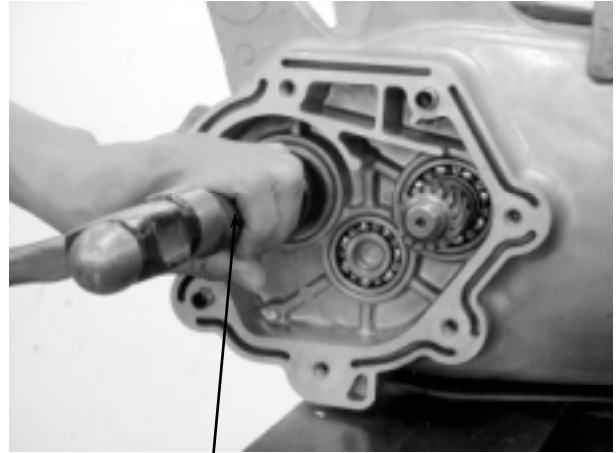


Bearing Remover

## 9. FINAL REDUCTION

---

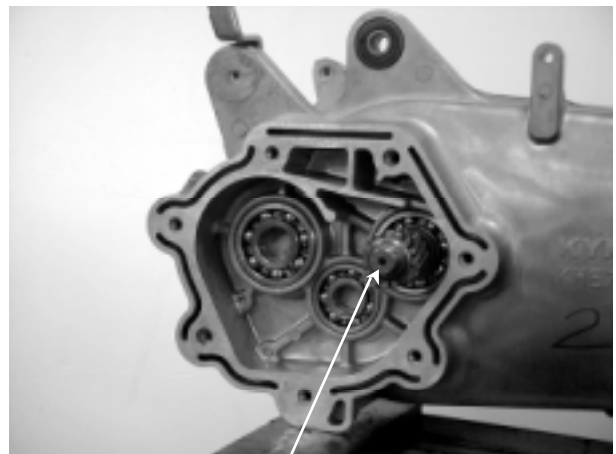
Drive new bearings into the left crankcase.  
Install a new drive shaft oil seal.



Pilot

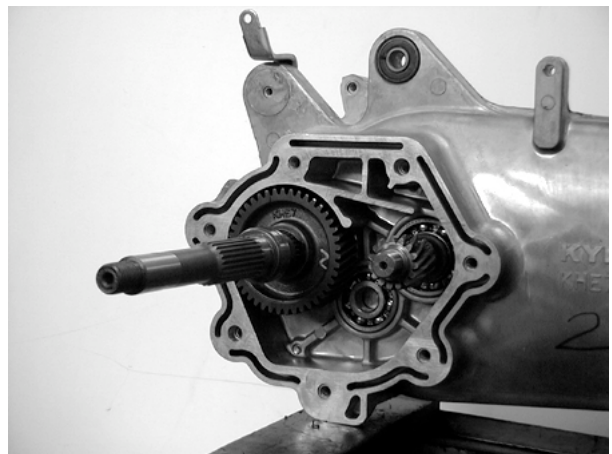
### FINAL REDUCTION ASSEMBLY

Install the drive shaft into the left crankcase.



Drive Shaft

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





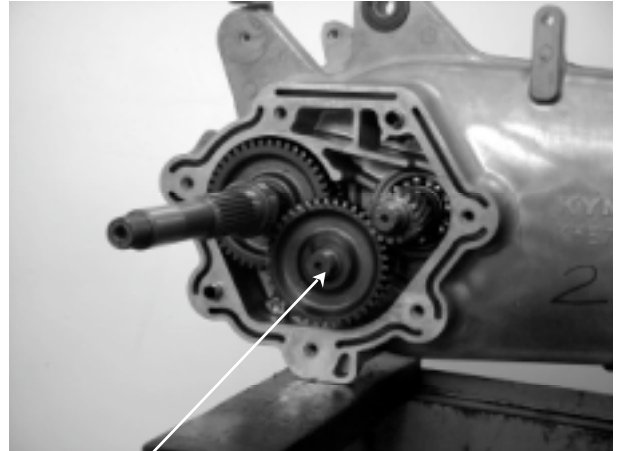
## 9. FINAL REDUCTION

---

Install the countershaft and gear into the left crankcase.

Install the resin washer onto the countershaft.

Install the dowel pins and a new gasket.



Countershaft

Install the transmission case cover.

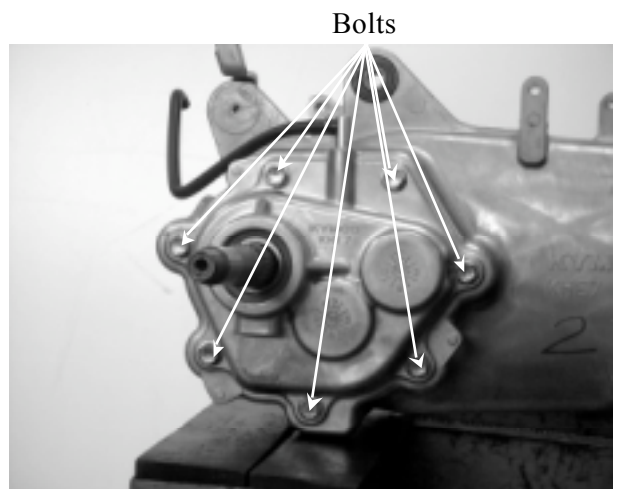


Transmission Case Cover

Install and tighten the transmission case cover bolts.

Install the clutch/driven pulley.

Install other removed parts in the reverse order of removal.



Bolts



## 9. FINAL REDUCTION

---

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

\*

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

**Specified Gear Oil:** SAE90#

**Oil Capacity:**

At disassembly : 0.2 liter

At change : 0.18 liter

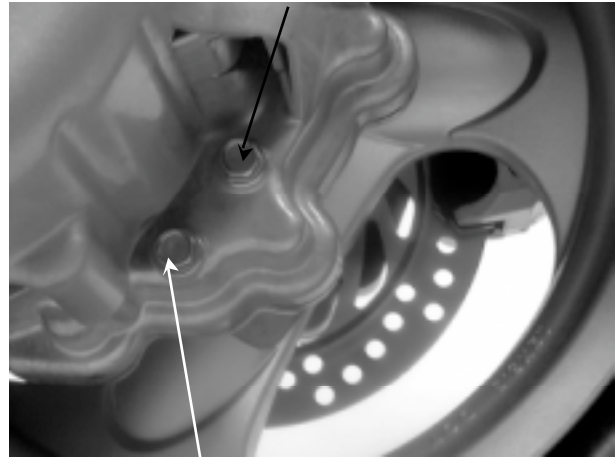
Install and tighten the oil check bolt.

**Torque:** 7.8\_ 11.8N-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.

Oil Check Bolt Hole/Oil Filler



Drain Bolt