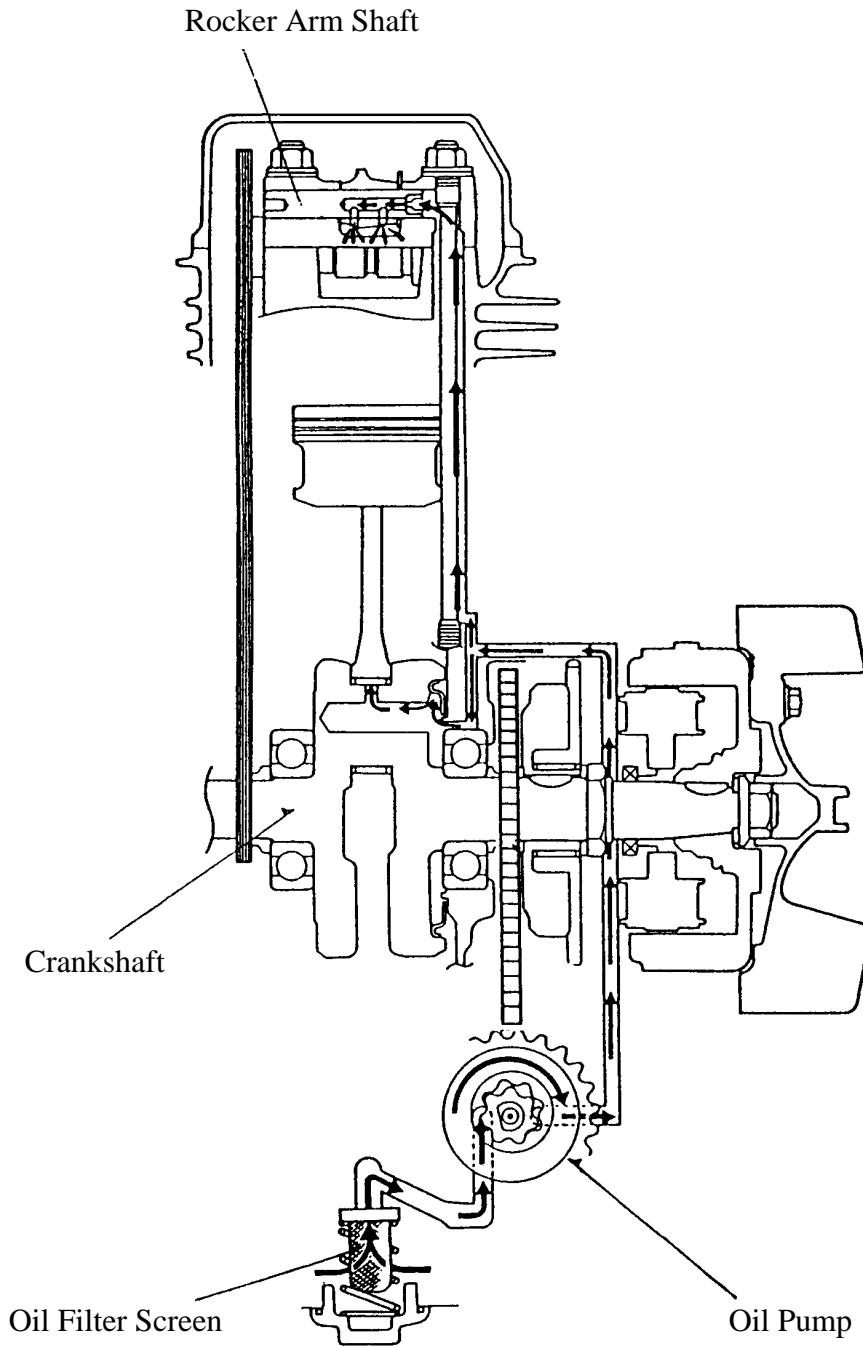


# 4. LUBRICATION SYSTEM

## LUBRICATION SYSTEM



**4**

# 4. LUBRICATION SYSTEM

SERVICE INFORMATION.....	4-1	ENGINE OIL/OIL FILTER .....	4-2
TROUBLESHOOTING .....	4-1	OIL PUMP.....	4-3

## SERVICE INFORMATION

### GENERAL INSTRUCTIONS

- The maintenance of lubrication system can be performed with the engine installed in the frame.
- Use care when removing and installing the oil pump not to allow dust and foreign matters to enter the engine and oil line.
- Do not attempt to disassemble the oil pump. The oil pump must be replaced as a set when it reaches its service limit.
- After the oil pump is installed, check each part for oil leaks.

### SPECIFICATIONS

Item		Standard (mm)	Service Limit (mm)
Oil pump	Inner rotor-to-outer rotor clearance	—	0.12
	Outer rotor-to-pump body clearance	—	0.12
	Rotor end-to-pump body clearance	0.05~0.10	0.2

## TROUBLESHOOTING

### Oil level too low

- Natural oil consumption
- Oil leaks
- Worn or poorly installed piston rings
- Worn valve guide or seal

### Poor lubrication pressure

- Oil level too low
- Clogged oil filter or oil passages
- Not use the specified oil

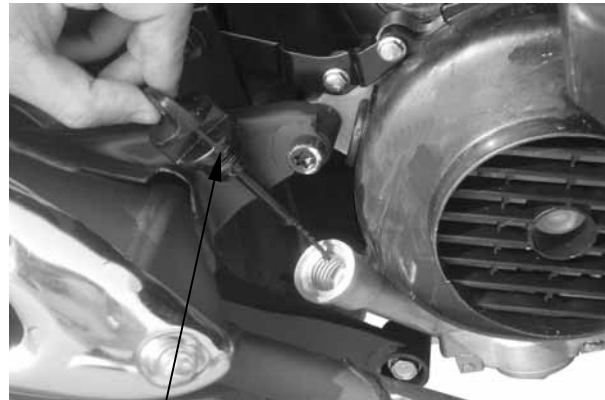
## 4. LUBRICATION SYSTEM

### ENGINE OIL/OIL FILTER

#### OIL LEVEL

- \* 
  - Place the motorcycle upright on level ground for engine oil level check.
  - Run the engine for 2~3 minutes and check the oil level after the engine is stopped for 2~3 minutes.

Remove the oil dipstick and check the oil level with the oil dipstick.  
If the level is near the lower level, fill to the upper level with the specified engine oil.



Oil Dipstick

#### OIL CHANGE

- \* 
 The engine oil will drain more easily while the engine is warm.

Remove the drain bolt to drain the engine oil thoroughly.  
Remove the oil filter screen cap and clean the oil filter screen with compressed air.



Oil Filter Screen Cap

Check the filter screen O-ring for damage and replace if necessary.  
Install the oil filter screen, spring and filter screen cap.

**Torque:** 1.0~2.0kgf-m



O-ring

Fill the crankcase with the specified engine oil to the proper level.

Oil Capacity: At disassembly : 0.85 liter

At change : 0.70 liter

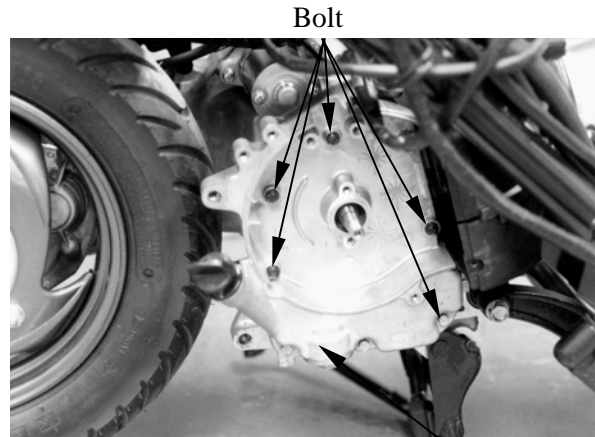
Check for oil leaks and then start the engine and let it idle for few minutes.  
Recheck the oil level.

# 4. LUBRICATION SYSTEM

## OIL PUMP

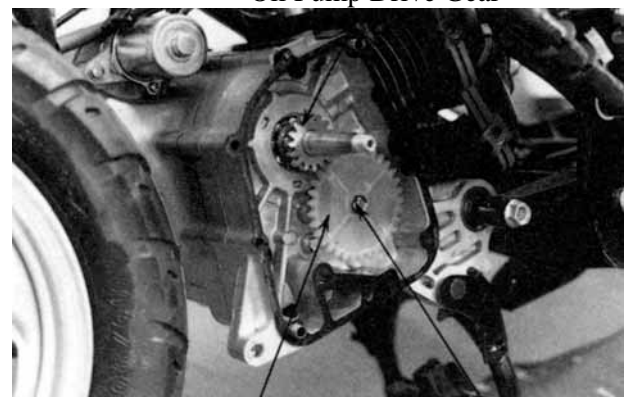
### REMOVAL

Remove the A.C. generator flywheel. (⇒14-7)  
 Remove the A.C. generator stator and pulsar coil. (⇒14-6)  
 Remove the eight right crankcase cover bolts and the right crankcase cover.



Bolt

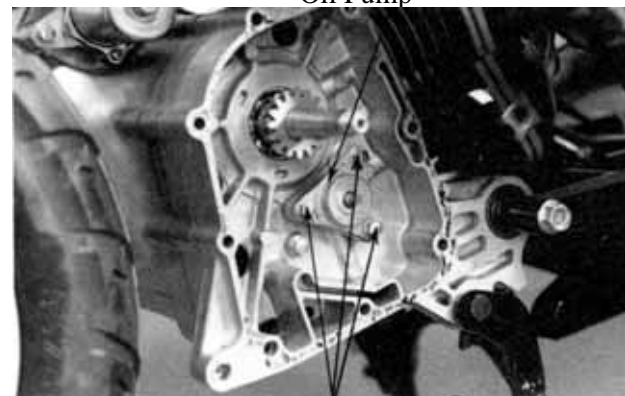
Remove the gasket and dowel pins.  
 Remove the oil pump drive gear circlip.  
 Remove the oil pump gear.


 Right Crankcase Cover  
 Oil Pump Drive Gear

Oil Pump Gear

Circlip

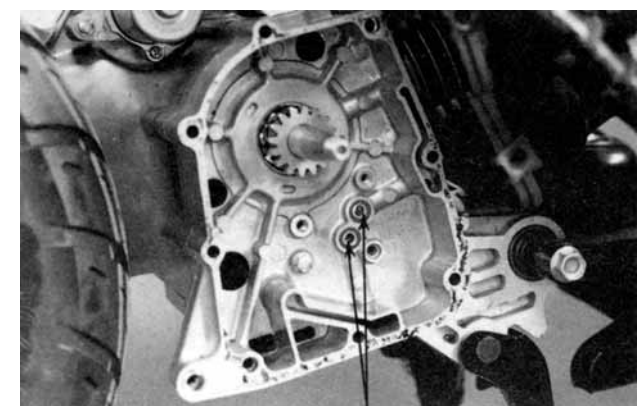
Remove the oil pump mounting bolts.  
 Remove the oil pump.



Oil Pump

Bolts

Remove the two O-rings.  
 Inspect the two O-rings for damage or deterioration.



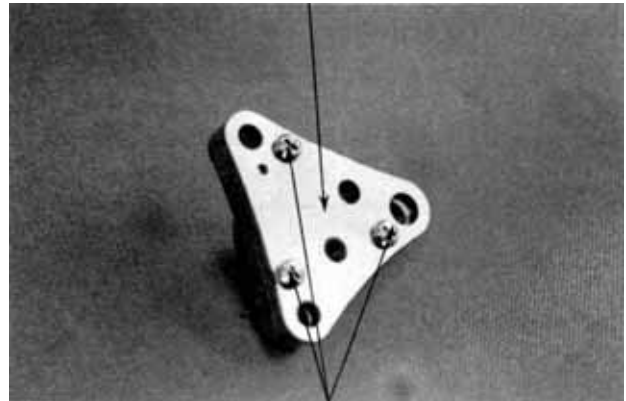
O-rings

## 4. LUBRICATION SYSTEM

### DISASSEMBLY

Remove the three oil pump boby screws.  
Disassembly the oil pump.

Oil Pump Bobby



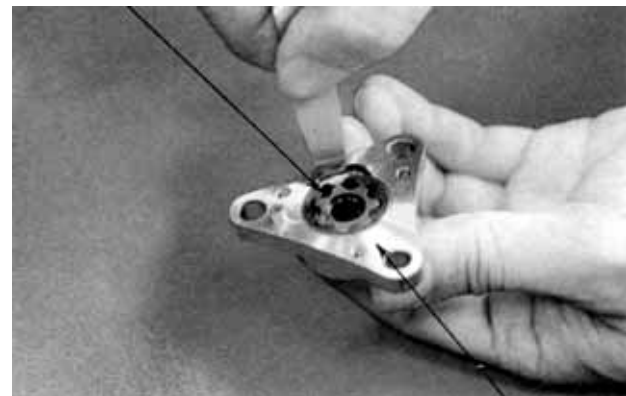
Screws

### INSPECTION

Measure the pump boby-to-outer rotor clearance.

**Service Limit:** 0.12mm

Outer Rotor

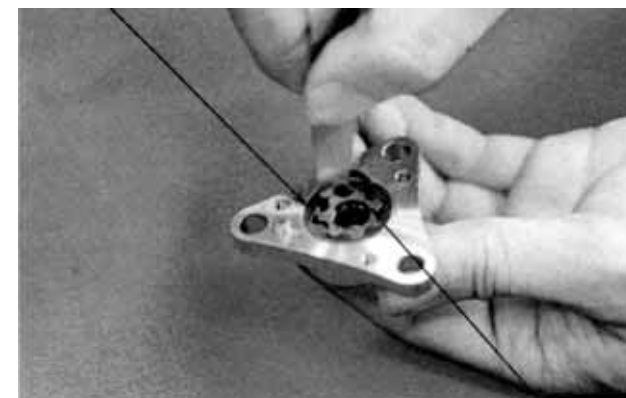


Oil Pump Bobby

Measure the inner rotor-to-outer rotor clearance.

**Service Limit:** 0.12mm

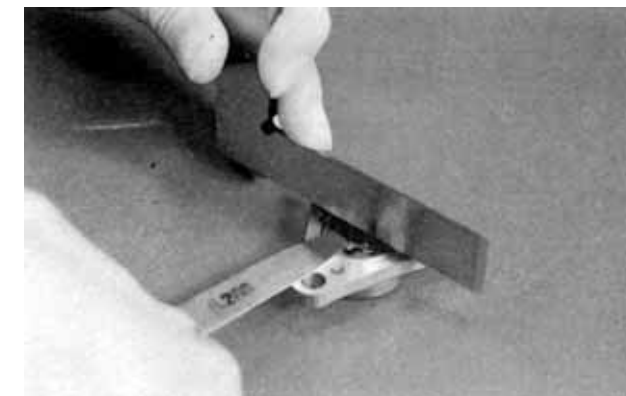
Outer Rotor



Inner Rotor

Measure the rotor end-to- pump boby clearance.

**Service Limit:** 0.2mm

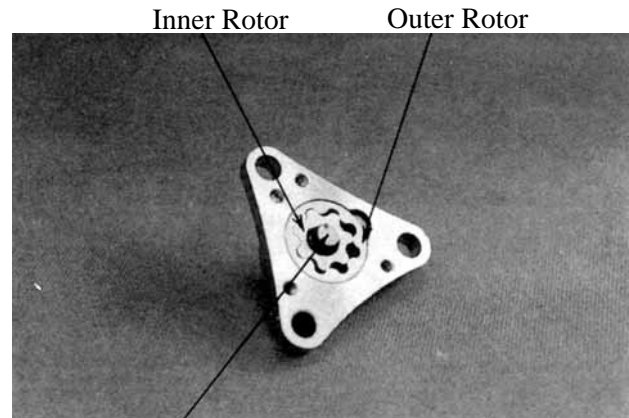


## 4. LUBRICATION SYSTEM

### ASSEMBLY

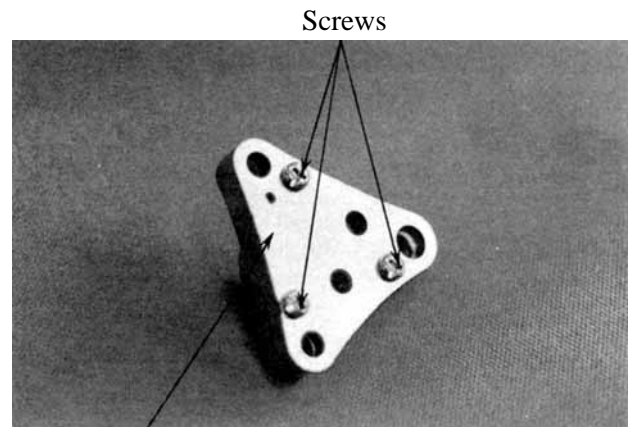
Install the outer rotor, inner rotor and pump shaft into the pump body.

- \* Install the pump shaft by aligning the flat on the shaft with the flat in the inner rotor.



Pump Shaft

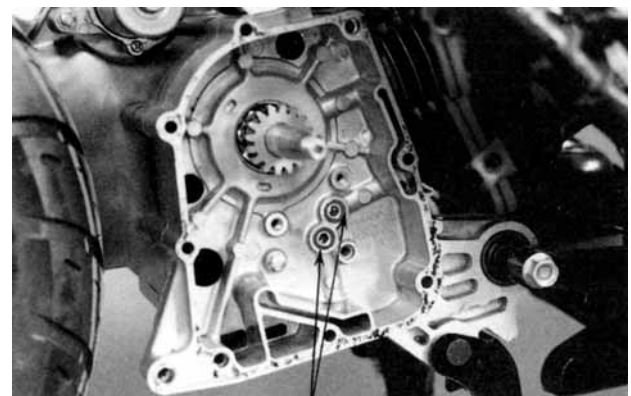
Install the pump cover and tighten the screws to secure the pump cover.



Pump Cover

### INSTALLATION

First install the two O-rings onto the oil pump base.

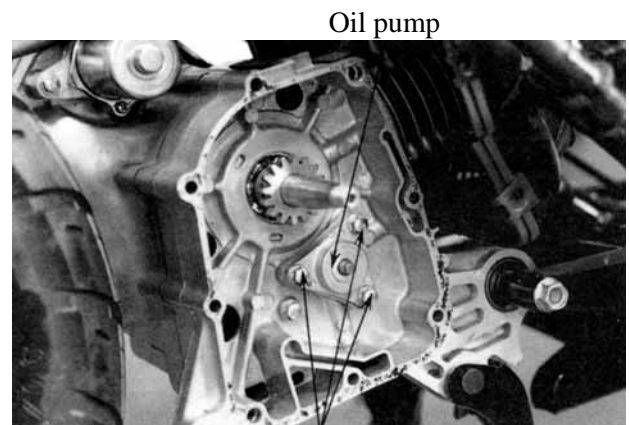


O-rings

Install the oil pump into the crankcase.

- \* Fill the oil pump with engine oil before installation.

After the oil pump is installed, tighten the three mounting bolts.



Bolts

## 4. LUBRICATION SYSTEM

Install the pump driven gear and secure it with the circlip.

**Torque:** 0.8~1.2kg-m

Pump Driven Gear



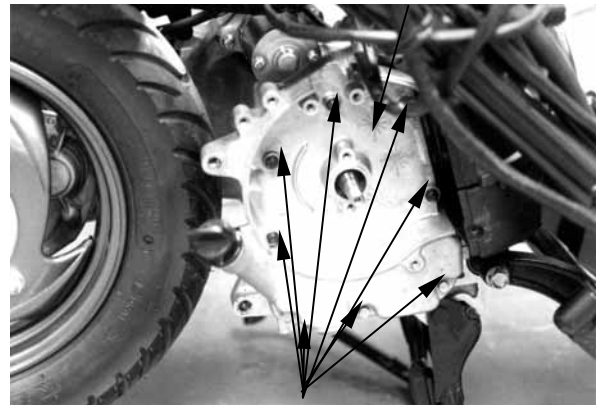
Circlip

Install the right crankcase cover and tighten the eight bolts.

**Torque:** 0.8~1.2kgf-m

\* Diagonally tighten the bolts in 2~3 times.

Right Crankcase Cover



Bolts