

4. LUBRICATION SYSTEM

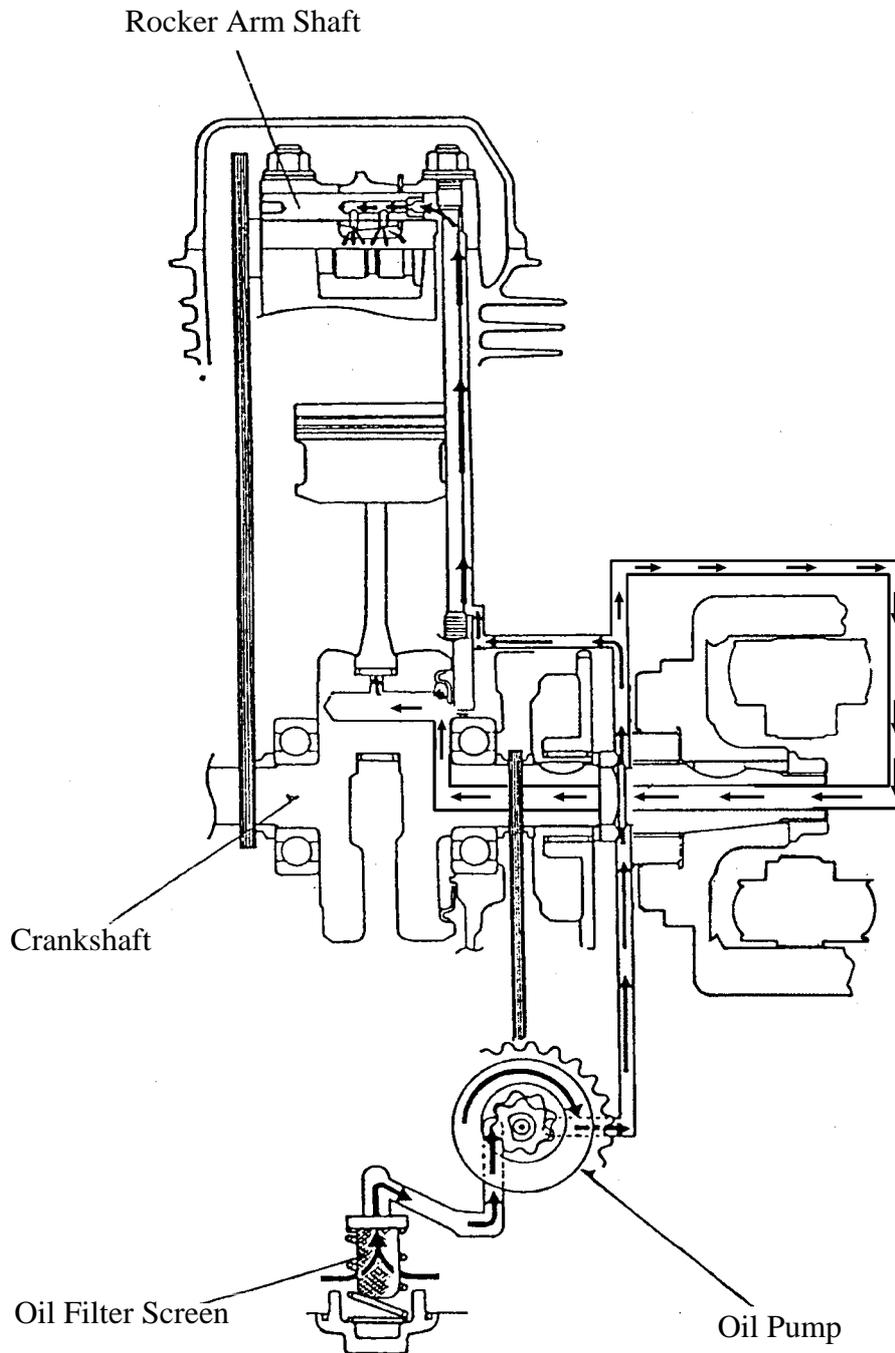
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LUBRICATION SYSTEM

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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

Unit: mm (in)

Item		Standard	Service Limit
Oil pump	Inner rotor-to-outer rotor clearance	0.15 (0.006)	0.2 (0.008)
	Outer rotor-to-pump body clearance	0.15~0.2 (0.006~0.008)	0.25 (0.01)
	Rotor end-to-pump body clearance	0.04~0.09 (0.0016~0.0036)	0.12 (0.0048)

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

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ENGINE OIL/OIL FILTER

OIL LEVEL AND OIL CHANGE

Refer to the “ENGINE OIL” section in the chapter 3 to check the oil level and replacement and oil filter cleaning.

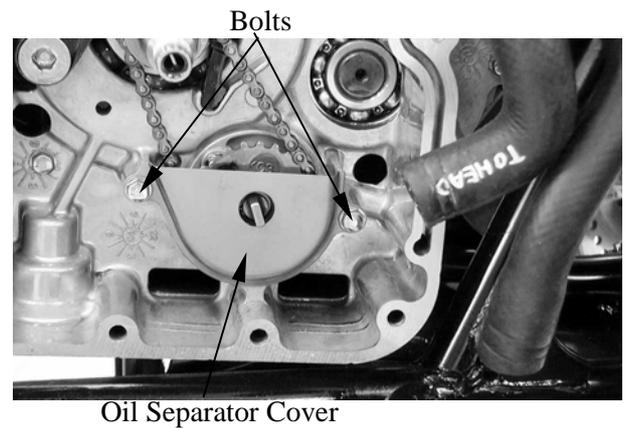
OIL PUMP

REMOVAL

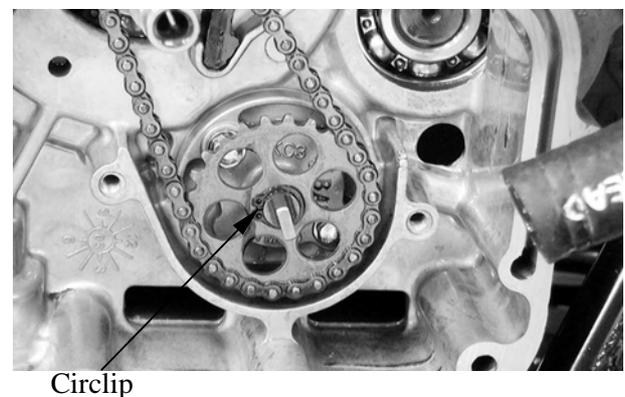
Remove the right crankcase cover and the A.C. generator flywheel. (Refer to the “A.C. GENERATOR/FLYWHEEL” section in the chapter 16)

Remove the starter clutch gear. (Refer to the “STARTER CLUTCH” section in the chapter 18)

Remove the two bolts and oil separator cover.



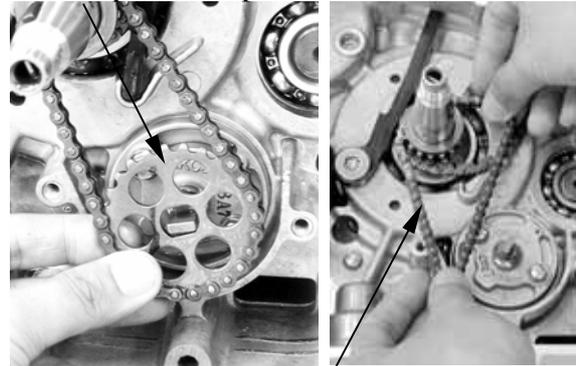
Pry off and remove the circlip from oil driven sprocket.



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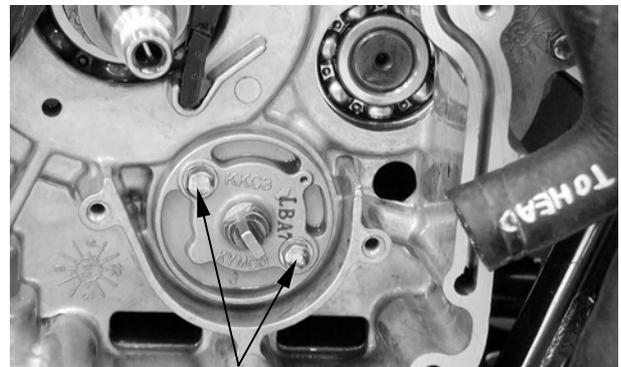
Remove the oil pump drive chain and oil driven sprocket.

Oil Pump Driven Sprocket



Oil Pump Drive Chain

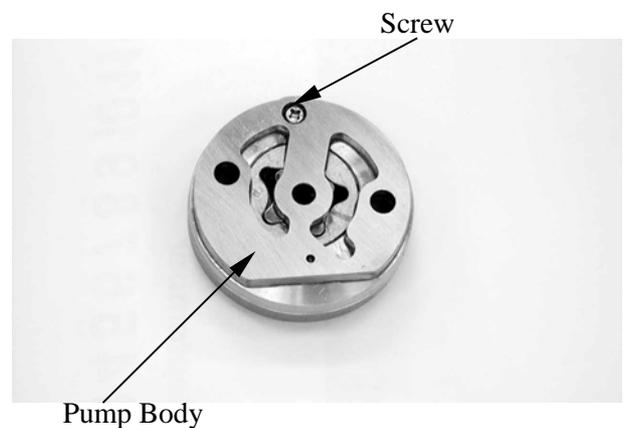
Remove the two oil pump bolts for remove the oil pump.



Oil Pump Bolts

OIL PUMP DISASSEMBLY

Remove the screw and disassemble the oil pump.



Pump Body

INSPECTION

Measure the rotor end-to-pump body clearance.

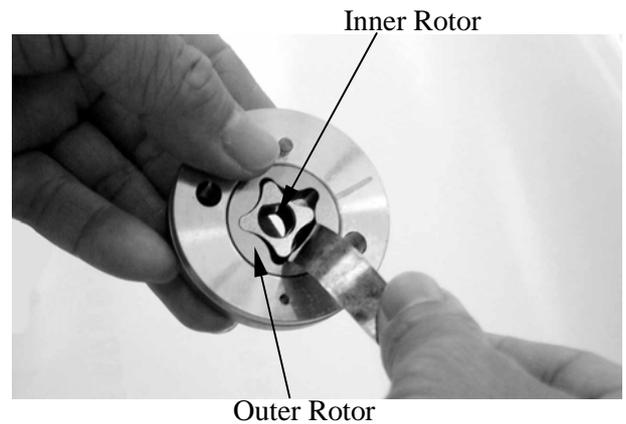
Service Limit: 0.12 mm (0.0048 in)



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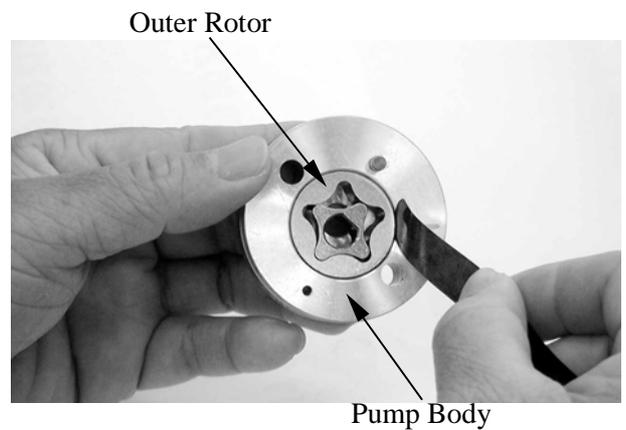
Measure the inner rotor-to-outer rotor clearance.

Service Limit: 0.2 mm (0.008 in)



Measure the pump body-to-outer rotor clearance.

Service Limit: 0.25 mm (0.01 in)



ASSEMBLY

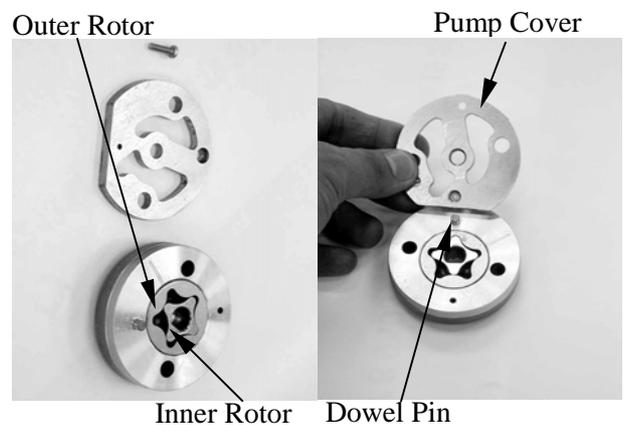
Install the outer rotor, inner rotor and pump shaft into the pump body.

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

Install the dowel pin.

Install the pump cover by aligning the hole in the cover with the dowel pin.

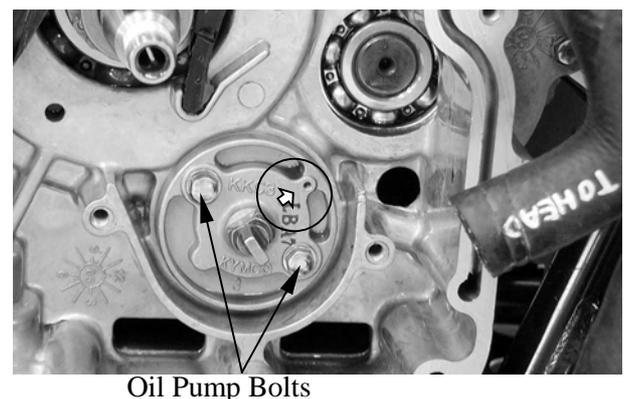
Tighten the screw to secure the pump cover.



INSTALLATION

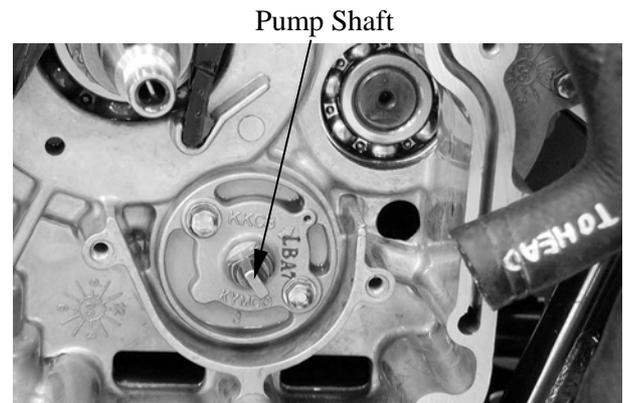
Reverse the "OIL PUMP REMOVAL" procedures.

- * Install the oil pump with the arrow on the pump body facing up and fill the oil pump with engine oil before installation.



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Make sure that the pump shaft rotates freely without binding.



Install oil pump driven sprocket and drive chain, circlip and oil separator cover.

