

# **11. CRANKCASE/CRANKSHAFT**

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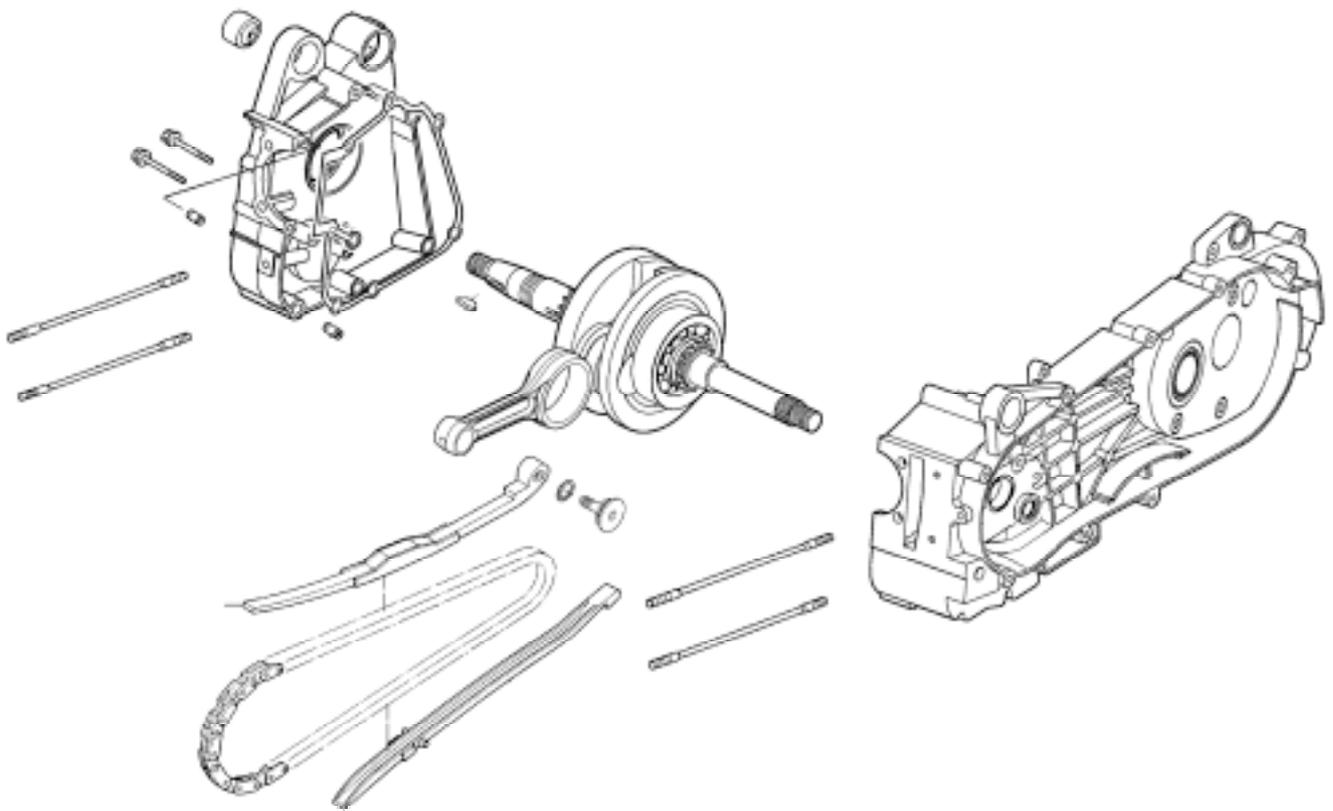
## **CRANKCASE/CRANKSHAFT**

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**SERVICE INFORMATION..... 11-2**  
**TROUBLESHOOTING ..... 11-2**  
**CRANKCASE SEPARATION ..... 11-3**  
**CRANKSHAFT INSPECTION..... 11-4**  
**CRANKCASE ASSEMBLY ..... 11-4**



# 11. CRANKCASE/CRANKSHAFT



# 11. CRANKCASE/CRANKSHAFT

## SERVICE INFORMATION

### GENERAL INSTRUCTIONS

- This section covers crankcase separation to service the crankshaft. The engine must be removed for this operation.
- The following parts must be removed before separating the crankcase.
  - Cylinder head (⇒ Section 7)
  - Cylinder/piston (⇒ Section 8)
  - Drive and driven pulleys (⇒ Section 9)
  - A.C. generator (⇒ Section 14)
  - Carburetor/air cleaner (⇒ Section 4)
  - Rear wheel/rear shock absorber (⇒ Section 13)
  - Starter motor (⇒ Section 16)
  - Oil pump (⇒ Section 4)

### SPECIFICATIONS

	Item	Standard (mm)	Service Limit (mm)
Crankshaft	Connecting rod big end side clearance	0.10    0.35	0.55
	Connecting rod big end radial clearance	0    0.008	0.05
	Runout	□	0.10

### TORQUE VALUES

Crankcase bolt	0.9kg-m
Cam chain cover bolt	0.9kg-m

### TROUBLESHOOTING

#### Excessive engine noise

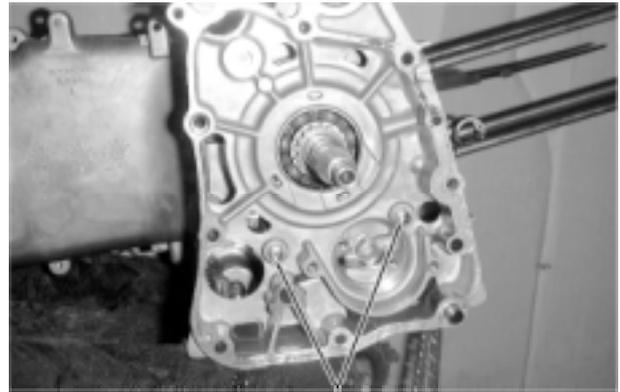
- Excessive bearing play
- Excessive crankpin bearing play

## 11. CRANKCASE/CRANKSHAFT

### CRANKCASE SEPARATION

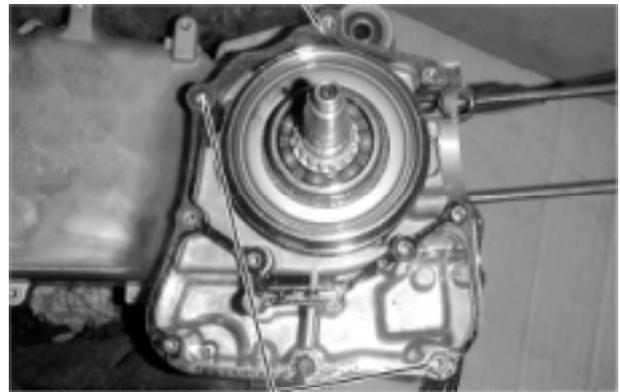
Remove the two crankcase attaching bolts.  
Separate the left and right crankcase halves.

- \* Do not damage the crankcase gasket surface.



Crankcase Bolts  
Gasket

Remove the gasket and dowel pins.



Dowel Pins

Remove the crankshaft from the left crankcase.



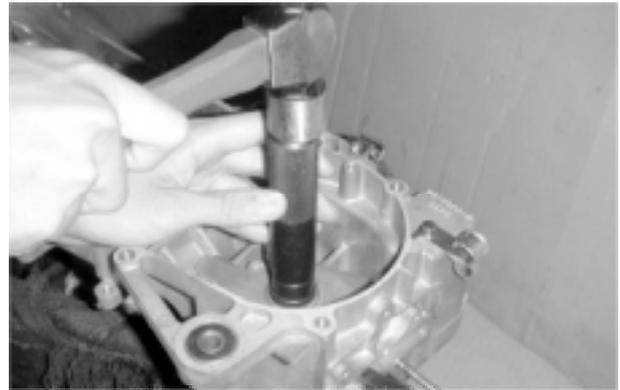
Clean off all gasket material from the crankcase mating surfaces.

- \* Avoid damaging the crankcase mating surfaces.



## 11. CRANKCASE/CRANKSHAFT

Remove the oil seal from the right crankcase.  
Check the oil seal lip for wear or deterioration.  
The installation sequence is the reverse of removal.



### CRANKSHAFT INSPECTION

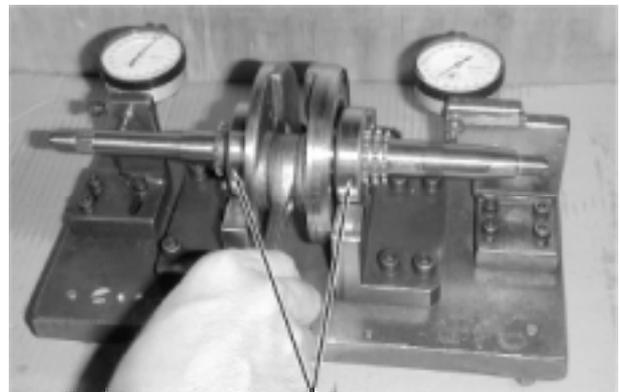
Measure the connecting rod big end side clearance.

**Service Limit:** 0.55mm replace if over



Connecting Rod Big End

Turn the crankshaft bearings and check for excessive play.  
If they do not turn smoothly, quietly or if they fit loosely in the crankshaft, replace the crankshaft as a set.



Crankshaft Bearings

### CRANKCASE ASSEMBLY

Install the crankshaft into the left crankcase.

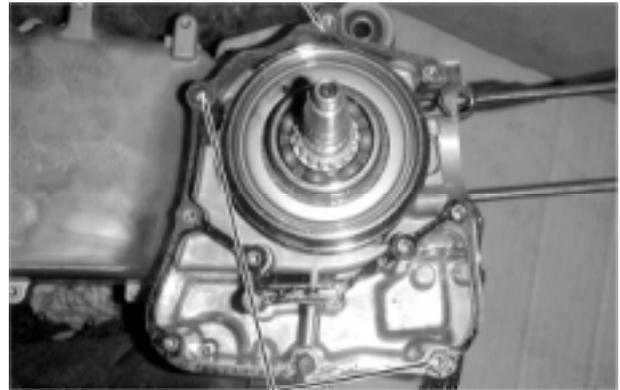


## 11. CRANKCASE/CRANKSHAFT

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

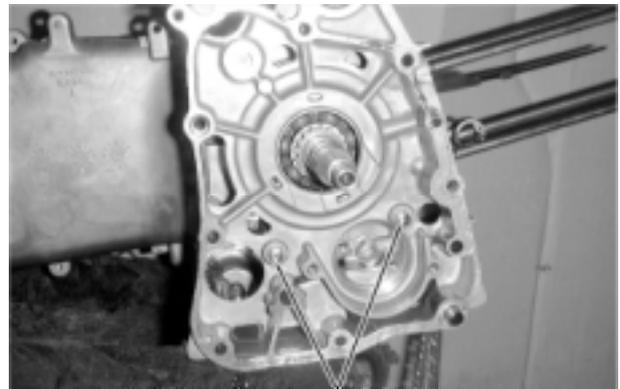
- \* Place the right crankcase over the crankshaft and onto the left crankcase.

Gasket



Dowel Pins

Tighten the two crankcase attaching bolts.  
**Torque:** 0.9kg-m



Crankcase Bolts