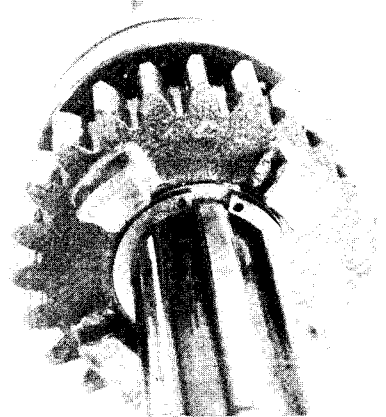


- Remove the 5th drive gear circlip and 5th drive gear.

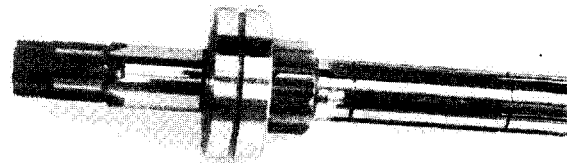


### COUNTERSHAFT REASSEMBLY

- Before installing the gears, coat lightly moly paste to the countershaft.

99000-25140	SUZUKI Moly Paste
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- When mounting the circlip, pay attention to the direction of the circlip. Fit it to the side where the thrust is as shown in the figure.



#### NOTE:

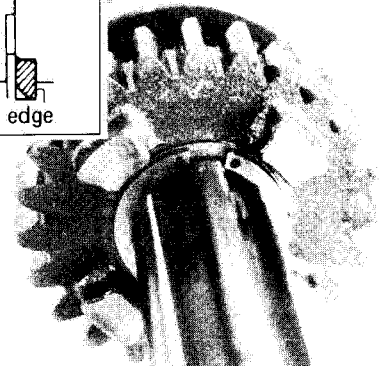
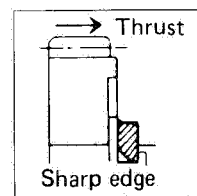
Always use new circlip.

#### CAUTION:

Never reuse a circlip. After a circlip has been removed from a shaft, it should be discarded and a new circlip must be installed.

When installing a new circlip, care must be taken not to expand the end gap larger than required to slip the circlip over the shaft.

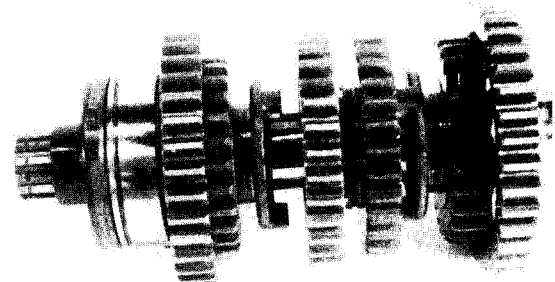
After installing a circlip, always insure that it is completely seated in its groove and securely fitted.



### DRIVESHAFT DISASSEMBLY

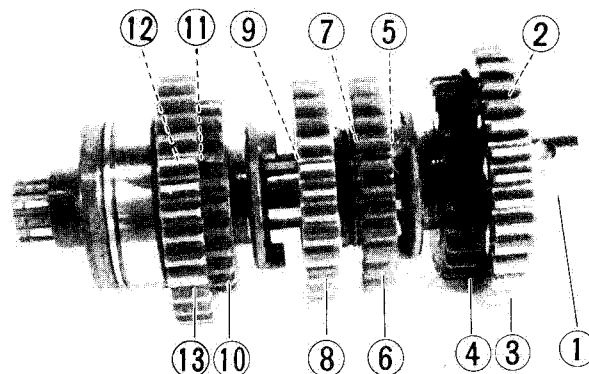
Each driven gear on the driveshaft is easily removed by using snapping pliers.

09900-06107	Snapping pliers
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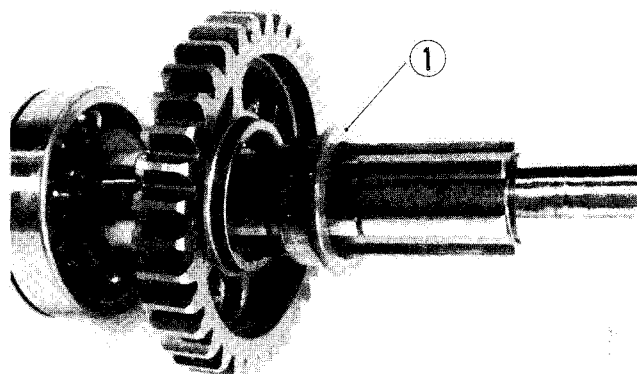
The order of disassembling is as follows;

- |                        |                   |
|------------------------|-------------------|
| ① Right end bearing    | ⑧ 3rd driven gear |
| ② Washer               | ⑨ Circlip         |
| ③ 1st driven gear      | ⑩ 6th driven gear |
| ④ 5th driven gear      | ⑪ Circlip         |
| ⑤ Circlip              | ⑫ Bushing         |
| ⑥ 4th driven gear      | ⑬ 2nd driven gear |
| ⑦ Pair of lock washers |                   |

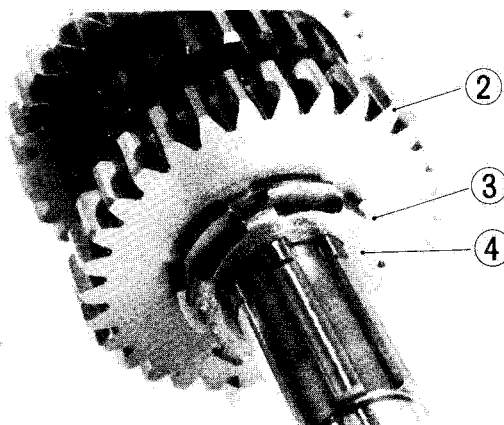


## DRIVESHAFT REASSEMBLY

- Install the 2nd driven gear bushing ①.



- After mounting the 3rd driven gear ②, install the washer ③ in the groove properly, then engage the washer ④ to the washer ③.



## ENGINE REASSEMBLY

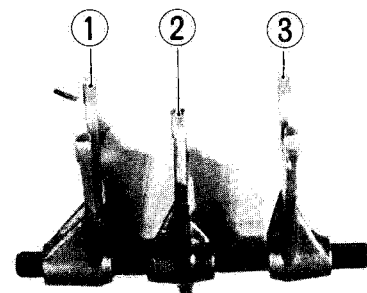
This engine is reassembled by carrying out the steps of disassembly in the reversed order, but there are a number of steps which demand special descriptions or precautionary measures.

### NOTE:

Apply engine oil to each running and sliding part before reassembling.

- Refer to the following figure in regard to the correct positions and orientations of the forks when installing these parts.

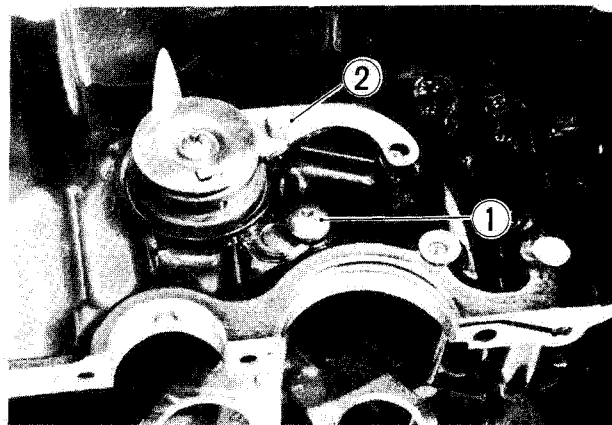
- ① : Gearshift fork for 5th driven gear.
- ② : Gearshift fork for 3rd/4th drive gears.
- ③ : Gearshift fork for 6th driven gear.



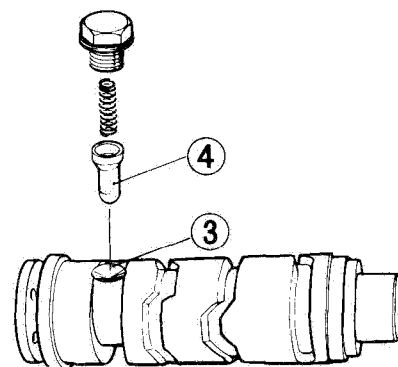
- Before driving in fork shaft stopper screw and washer ① and cam guide bolt ②, apply THREAD LOCK "1342" to their threads.

99000-32050

Thread lock "1342"

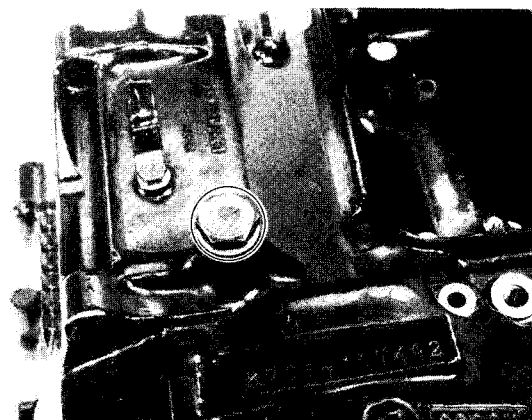


- Install the gearshifting cam with the dent for the neutral stopper directed downward, and meet the neutral stopper ③ with this dent ④.

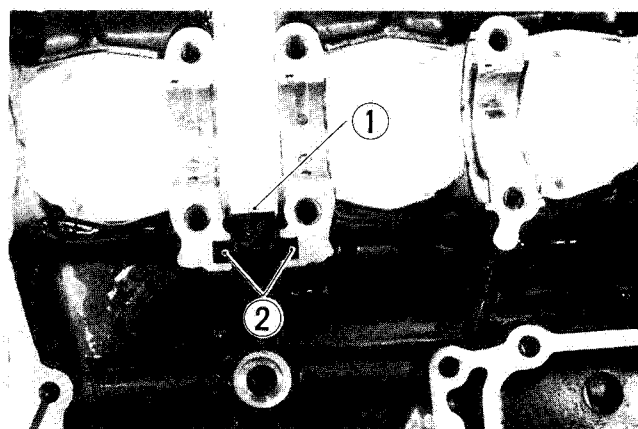
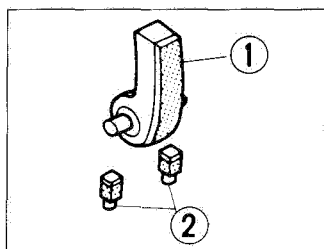


- Tighten the neutral stopper housing to the following torque value.

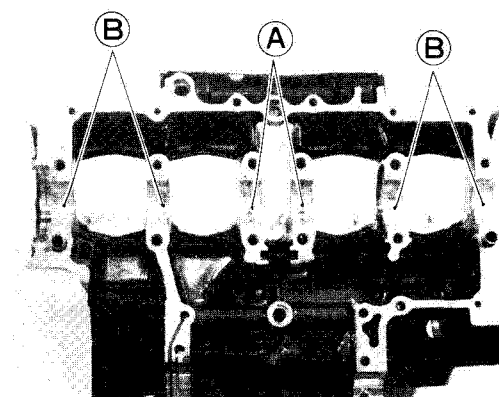
Tightening torque	18 – 28 N·m (1.8 – 2.8 kg·m)
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- Place cam chain guide ① properly, and fix two dampers ② so that the iron side faces to the chain guide pin (inside).



- Identify the two kinds of crankshaft journal bearings, one has an oil groove ③ and the other ④ has no oil groove on its surface. Grooved one should be fix to the lower crankcase and both side ① of chain cavity, and the other to the position ② of the upper crankcase as shown in the figure.



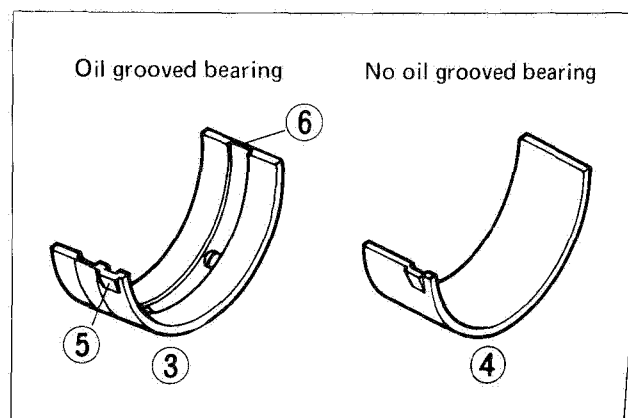
- Apply SUZUKI Moly Paste to each journal bearing lightly.

99000-25140	SUZUKI Moly Paste
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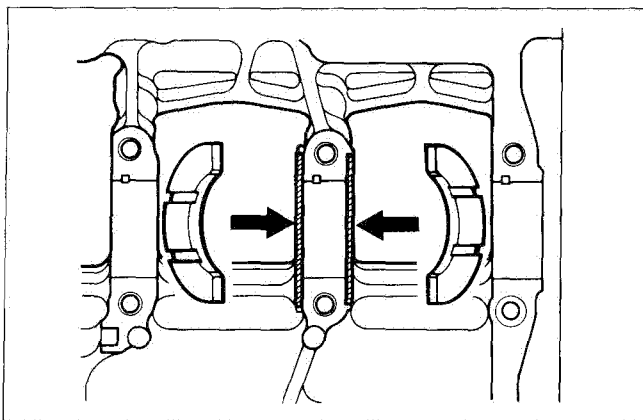
- When fitting the bearings to the crankcase, be sure to fix the stopper part ⑤ first and press the other end ⑥.

**CAUTION:**

Do not touch the bearing surfaces with your hands. Grasp by the edge of the bearing shell.



- Install the right and left-thrust bearings ① with the oil groove facing the crank web.
- Mount the crankshaft with cam drive chain to the upper crankcase.
- Apply SUZUKI super grease "A" to the lip of the crankshaft oil seal.



- Place two "C" rings ① and a knock pin ② and install drive and countershafts.

- Install the countershaft and driveshaft oil seals, positioning as shown.

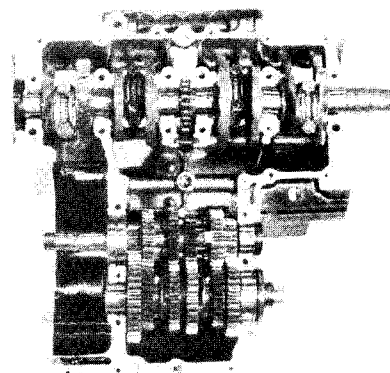
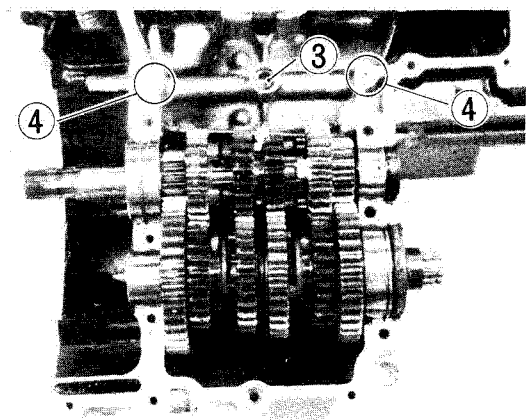
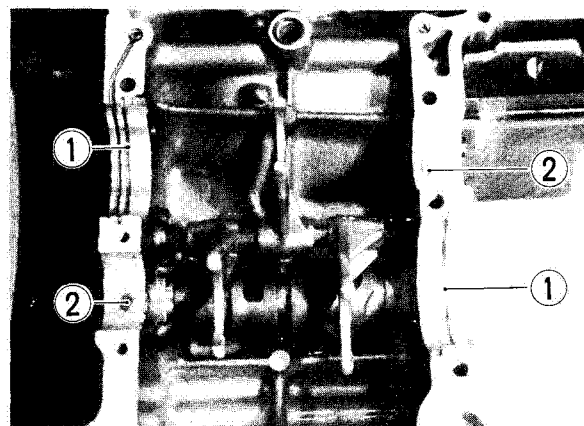
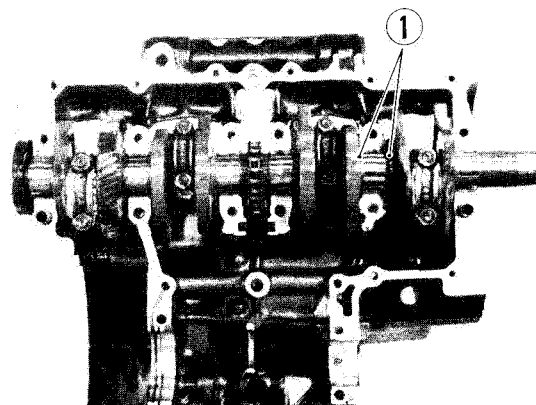
**NOTE:**

- \* Install the O-ring ③.
- \* Check the two oil jets ④ for clogging.

- Clean the mating surfaces of the crankcases before matching the upper and lower ones.
- Apply SUZUKI BOND No. 1207B to the mating surface of the lower crankcase in the following procedure.

99000-31140

SUZUKI Bond No. 1207B



**NOTE:**

Use of SUZUKI BOND No. 1207B is as follows:

- \* Make surfaces free from moisture, oil, dust and other foreign materials.
- \* Spread on surfaces thinly to form an even layer, and assemble the crankcases within few minutes.
- \* Take extreme care not to apply any bond No. 1207B to the bearing surfaces.
- \* Apply to distorted surface as it forms a comparatively thick film.

- Locate the two allen bolts at position ① and ten 8 mm bolts.

**NOTE:**

- \* Do not forget to tighten the 4-mm allen bolt ①.
- \* Install the gasket to the positions ⑨ and ⑪.

- When securing the lower crankcase, tighten the 8 mm bolts and the 6 mm bolts in the ascending order of numbers assigned to these bolts, tightening each bolt a little at a time to equalize the pressure. Tighten all the securing bolts to the specified torque values.

09914-25811

6 mm T-type hexagon

Tightening torque	Initial tightening		Final tightening	
	N·m	kg·m	N·m	kg·m
6 mm bolt	6	0.6	13	1.3
8 mm bolt	13	1.3	24	2.4

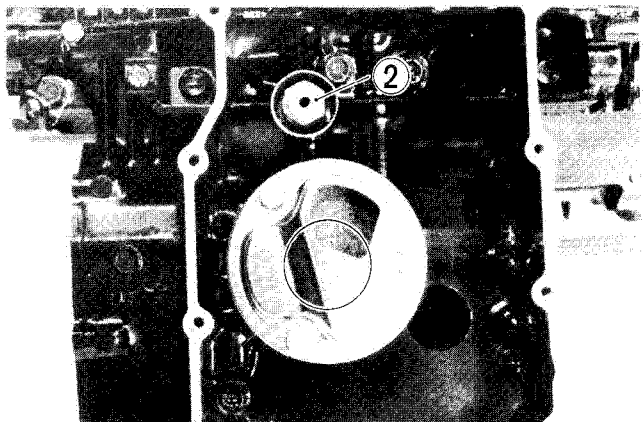
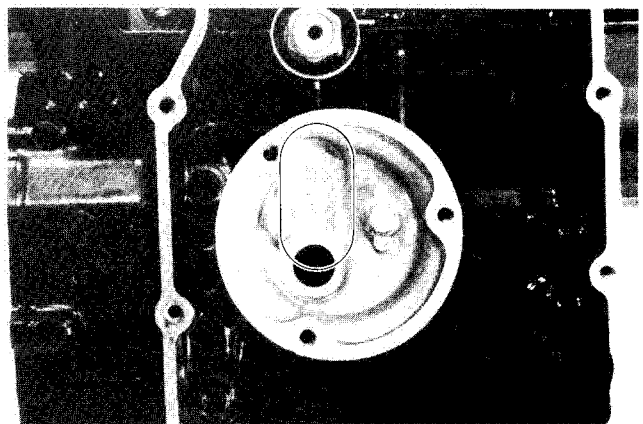
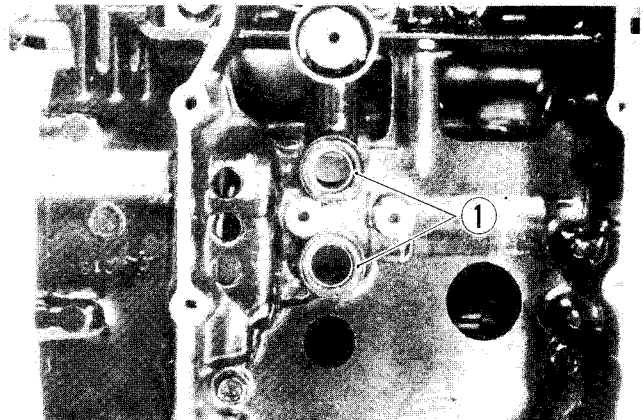
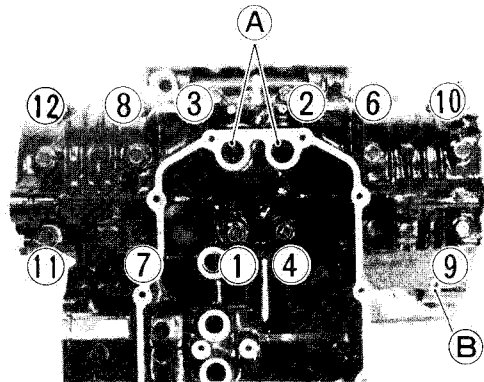
- Install the two O-rings ① and install the oil guide.
- Install the oil sump filter to face the oil inlet to the front.
- Apply thread lock "1342" to the three screws.

99000-32050

Thread Lock "1342"

- Seat the guide and tighten the oil pressure regulator ② with specified torque.

Tightening torque

25 – 30 N·m  
(2.5 – 3.0 kg·m)

- Locate a new gasket and oil pan, and tighten 6 mm bolts with specified torque.

Tightening torque	8 – 13 N·m (0.8 – 1.3 kg-m)
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**NOTE:**

Install the five clamps **(A)** for signal generator lead wire and two clamps **(B)** for oil level switch.

**(C)** : Clamp + Engine ground lead wire

- Install the engine ground wire **(C)**, and crankcase securing bolts **(1)** and **(2)**.

Tightening torque	8 – 12 N·m (0.8 – 1.2 kg-m)
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**NOTE:**

Install copper gasket to the bolts **(1)**.

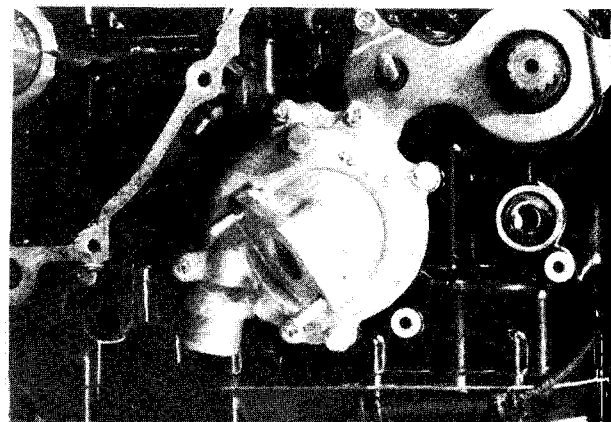
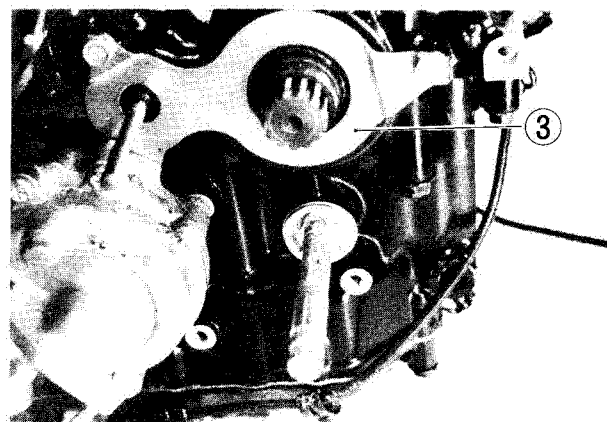
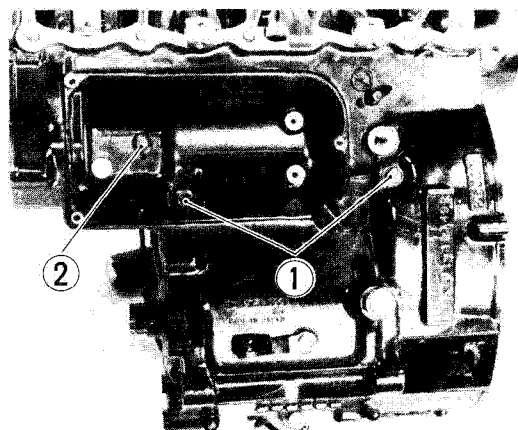
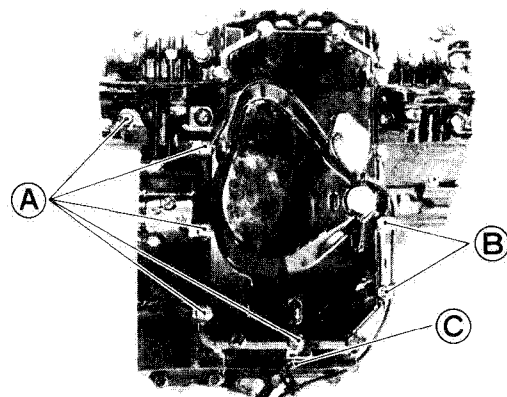
- Install the gear position indicator switch.

**NOTE:**

When installing gear position indicator switch, be sure to locate spring, switch contact, and O-ring.

- Install the driveshaft oil seal holder **(3)** and positively bend the lock portion of the holder.

- Install the water pump to the crankcase.

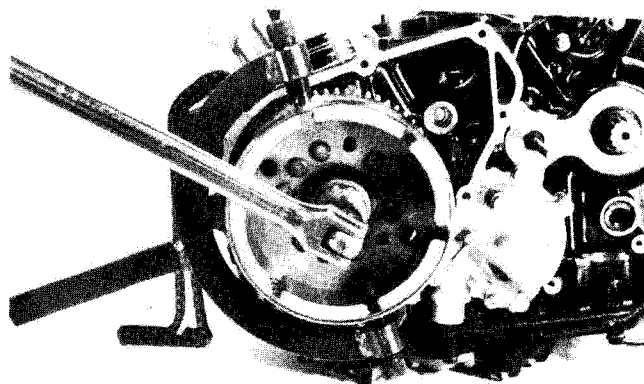
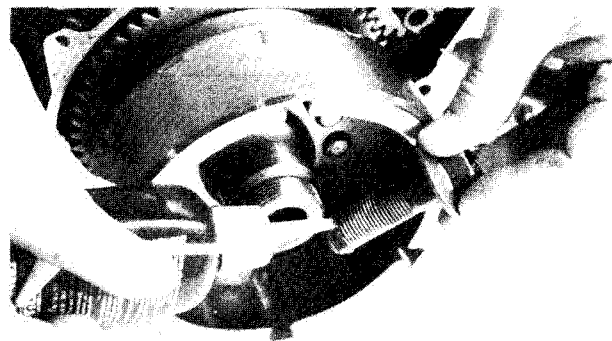


- Degrease the tapered portion of the rotor and also the crankshaft. Use nonflammable cleaning solvent to wipe off the oily or greasy matter to make these surfaces completely dry.
- After mounting the rotor, secure the rotor by tightening the center bolt to the specified torque value.

Tightening torque	140 — 160 N·m (14.0 — 16.0 kg-m)
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09930-44911	Rotor holder
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99000-32100	Thread Lock Super "1305"
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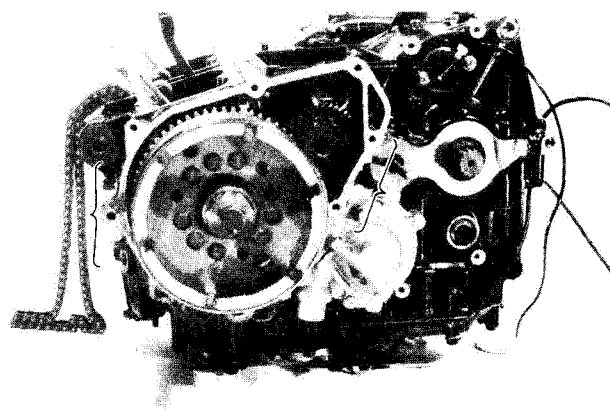


- Mount the starter motor, and route the lead wire properly.

99000-32050	Thread Lock "1342"
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- Install the starter idle gear and its shaft.
- Coat SUZUKI Bond No. 1207B lightly to the portion around mating surface between upper and lower crankcases as shown.

99000-31140	SUZUKI Bond No. 1207B
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- Pass the generator stator lead wire through gasket and upper crankcase. Route its lead wire properly.

**NOTE:**

Always use new gasket, and install a positioning pin.

- Tighten the generator cover bolts securely.

