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1. Use new packings, gaskets, O-rings and cotter pins whenever reassembling.
2. When tightening bolts or nuts for which sequence is not specified, begin on center or larger diameter bolts and tighten them in a criss-cross pattern to specified torque in two or more steps if necessary.
3. Use genuine HONDA parts and lubricants or those recommended by HONDA.
4. Use special service tool where use of such a tool is specified.
5. Clean engine parts in or with cleaning solvent upon disassembly. Apply lubricant to their sliding surfaces when reassembling.
6. Coat or fill parts with grease where specified as such.
7. Upon assembling, check every possible part for proper installation and movement or operation.
8. When working with others, try to give a signal or communicate for safety.

Precautions for Readers
1. The procedures for reassembling the engine and frame parts are not described. Follow the reverse of disassembling procedures carefully observing the titles "Reassembly" in each section.
2. All the service data for each component are compiled on the last pages of this manual.
II. INSPECTION AND ADJUSTMENT

This section describes the inspection and adjustment procedures for the important items of the periodical maintenance of the HONDA 350 Model CB 350F. Cross-refer to PERIODICAL MAINTENANCE SCHEDULE on page 74. For the items other than those described in this section, refer to "Inspection" of each part in this manual.

1. TAPPET

Inspection and adjustment of the tappet clearance should be made when the engine is cold.

1. Remove the fuel tank.

2. Remove the eight tappet hole caps. Remove the point cover.

3. Rotate the crankshaft clockwise at the special nut so as to align the mark "T" 1.4 with the matching mark.

4. Make sure if No. 1 piston is at the TDC position on compression stroke. If not, rerotate the crankshaft a full turn clockwise so as to make proper alignment.

5. Check and adjust the tappet clearance of the "O" valves. (Refer to the table below).

To adjust, loosen the lock nut and turn the adjusting screw.

<table>
<thead>
<tr>
<th>Tappet clearance</th>
<th>Intake valve 0.05 mm (0.002 in.)</th>
<th>Exhaust valve 0.05 mm (0.002 in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder</td>
<td>No. 1</td>
<td>No. 2</td>
</tr>
<tr>
<td>Intake valve</td>
<td>○</td>
<td>×</td>
</tr>
<tr>
<td>Exhaust valve</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

6. Rotate the crankshaft a full turn clockwise so as to align the mark "T" 1.4 with the matching mark (in this position, the No. 4 piston is at TDC of the compression stroke) and check the "×" valves for correct tappet clearance.

7. Upon completion of the inspection and adjustment of the tappet clearance, install the tappet hole caps and point cover.

8. Install the fuel tank. Check the fuel tube for proper connection.
2. BREAKER POINT GAP AND IGNITION TIMING

Breaker point gap
1. Remove the point cover.
2. Rotate the crankshaft clockwise at the special nut. Check the maximum gap of the points 1.4.
   Maximum gap: 0.3~0.4mm (0.012~0.016in.)
   To adjust the gap, loosen the screw “a” and move the breaker base 1.4.
3. Check the point gap of the points 2.3 in the same manner as for the points 1.4.
   To adjust, loosen the screw “b” and move the breaker base 2.3.

Ignition timing
Test and adjust using a stroboscopic timing light (Service Tester SRH500, Tool No. 07171-99900).
1. Make connection for the service tester as instructed by the tester manufacturer.
   Connect the timing light cord to the spark plug of the No. 1 or No. 4 cylinder.
2. Start the engine and set its idle speed to 1,200rpm. Illuminate the matching mark with the timing light and see if the mark “F” 1.4 is aligned with the matching mark. If not aligned, loosen the three screws “c” and move the breaker base plate “e” in either direction.
   Moving the plate to the right will advance the ignition timing and to the left retard the timing.
3. Increase the engine speed up to 2,500rpm and check the matching mark. If the mark stays between the advance marks, the ignition timing is correct.
4. Connect the timing light cord to the spark plug of the No. 2 or No. 3 cylinder. Idle the engine and see if the mark “F” 2.3 is aligned with the matching mark. If not aligned, loosen the two screws “d” and move the breaker base plate “f” in either direction.
5. Increase the engine speed up to 2,500rpm and see if the mark “F” 2.3 stays between the two advance marks.
3. CARBURETOR

Carburetor should be serviced after the engine is warmed up.

Checking idle engine speed
1. To set the engine to 1,200rpm, turn the throttle stop screw. Turning the screw clockwise (in direction "A") will increase the engine idle speed, and vice versa (in direction "B").

Checking synchronization
1. Remove the four screws from the intake manifolds of the carburetors. Install the attachment A (Tool No. 07068-30007) and B (Tool No. 07068-30012) and install the vacuum gauges (Tool No. 07064-30001).
2. Start the engine and read each gauge.
   Specified value: 16～24 cmHg

NOTE:
All the gauges should register the same value within the specification.

Adjusting synchronization
1. Remove the fuel tank from the machine. Connect a longer fuel tube of the carburetor to the tank.
2. Turn the throttle stop screw to adjust the distance (H) between the throttle lever and stay to 56 mm (2.205 in.). Turning the screw clockwise (in direction "A") will increase the distance (H), and vice versa (in direction "B").

3. Start the engine and see all the value within the specification. If out of the specification, loosen the lock nut and turn the adjusting screw to adjust. Turning the screw in direction "B" will increase the vacuum pressure, and vice versa (in direction "A").

NOTE:
Upon adjustment, tighten the lock nut securely and snap the throttle grip three or four times to recheck the synchronization.
Adjusting fast idle speed
The adjustment should be made during the engine warm-up after synchronization of the carburetors has been adjusted.
1. Place the choke lever in the full open position and check the clearance (δ) between the link plate and adjusting screw.
   Specified clearance: 0.3 mm (0.012 in.)
   To adjust the clearance, loosen the lock nut and turn the adjusting screw. Turning the screw clockwise (in direction "A") will decrease the clearance and, vice versa (in direction "B").
2. Start the engine. Slowly operate the choke lever up and down to find the maximum engine rpm.
   If within the specifications of 3,500~4,500 rpm, the fast idle speed is satisfactory. If not, adjust by means of the adjusting screw. Turning the screw clockwise (in direction "A") will increase the engine rpm, and vice versa (in direction "B").

Adjusting overtravel stopper
1. Return the throttle grip to the closed position. Loosen the lock nut and turn the link pin to adjust the clearance (H).
   Specified clearance: 2.0~2.1 mm (0.079~0.083 in.)

Adjusting throttle cable
1. Check the throttle grip for play.
   Specified play: approx. 10° around the grip
   To adjust the play, loosen the lock nuts and turn the adjusting nut. Turning the nut clockwise (in direction "A") will increase the play, and vice versa (in direction "B").
2. For fine adjustment, loosen the cable lock nut and turn the cable adjuster. Turning the adjuster clockwise (in direction "A") will decrease the play, and vice versa (in direction "B").
3. With the throttle grip in the fully closed position, see if the throttle lever contacts the link pin. Replace the throttle return cable, if the lever does not contact the pin.
4. CLUTCH

1. Align the matching mark on the clutch lever with that on the R. crankcase cover and loosen the lock nut. Turn the clutch adjuster counterclockwise until it becomes tight and back it off about 1/4 turn. Tighten the lock nut.

2. Check the tip of the clutch lever for free play. Specified play: 10~20 mm (0.4~0.8 in.)

3. To adjust the play, loosen the lock nut and turning the lower adjuster clockwise (in direction "A") will increase the play, and vice versa (in direction "B").

4. Fine adjustment can be made by means of the upper adjuster of the clutch cable. When adjusting, loosen the lock nut.

5. Upon adjustment, make sure the clutch operates properly.

5. CAM CHAIN

1. Start the engine.

2. Set the engine idle speed to 1,200 rpm. Loosen the lock nut and tensioner adjusting bolt using box wrench contained in tool kit.

3. Retighten the adjusting bolt and secure the lock nut.

NOTE: Do not pull or push the tensioner push bar since it is self-adjusting type.

6. ENGINE OIL

Checking oil level

1. Lower the main stand to support the machine. Insert the oil level gauge into the engine case, not screwed in, to check the oil level. Oil should be up to the upper level on the gauge.
Changing oil
1. Loosen the drain bolt and remove the oil filter by loosening its center bolt. Drain oil out of the crankcase.
2. Retighten the drain bolt and reinstall the oil filter.
3. Fill with recommended oil through the oil filter opening.
   Capacity: 3.5 fl (3.7 US qt., 3.11mp. qt.)
   Recommended oil: SAE 10 W-40 (All weather)
   SAE 20 W-50 (Above 59°F or 15°C)

7. FRONT BRAKE

Checking fluid level
1. Remove the fluid cup cap of the master cylinder.
2. Check to see the brake fluid level is up the level line inside the cup. If the level is low, add SAE DOT 3 brake fluid.

Adjusting calipers
1. Loosen the lock nut and turn the adjusting bolt counterclockwise until the pad B contacts the disc.
2. Turn the bolt clockwise 1/3 to 1/2 turn from this position and tighten the lock nut.

Bleeding
1. Fill the fluid cup with brake fluid up to the fluid level line.
2. Remove the bleeder cap and connect a vinyl hose to the bleeder valve.
3. Operate the brake lever several times until a resistance is felt. Loosen the bleeder valve about 1/4 turn using a spanner to bleed air. Retighten the bleeder valve and stop operating the brake lever. Repeat this procedure until no bubbles are contained in the fluid coming out of the valve.

NOTE:
Keep the fluid cup properly filled during the bleeding operation.

8. REAR BRAKE

1. To adjust the depressed-height of the rear brake pedal, loosen the lock nut and turn the adjusting bolt. Turning the bolt clockwise (in direction “A”) will decrease the height, and vice versa (in direction “B”).
2. To adjust the free travel at the tip of the pedal, turn the adjusting nut. Turning the nut clockwise (in direction "A") will decrease the free travel, and vice versa (in direction "B"). Specified free travel: 20~30 mm (0.8~1.2 in.)

9. AIR CLEANER

1. Open the seat.
2. Remove the tool tray and air cleaner cover.
3. Remove the set spring to remove the air cleaner element.
4. Lightly tap the element by hand and apply a blast of compressed air from inside.
5. Check the hole at the bottom of the air cleaner case for clogging.

10. DRIVE CHAIN

Checking drive chain tension
1. Check the chain tension by finger-depressing at a point half way between the sprockets and by measuring the sag.
Specified sag: 20 mm (3/4 in.)

2. To adjust, remove the cotter pin, loosen the axle nut and lock nut, and turn the adjusting nut in either direction.
Upon adjustment, align the index marks on the right and left drive chain adjusters with the same notches in the side scales. Tighten the axle nut and install the cotter pin.

11. FRONT FORK

Changing fork oil
1. Loosen the front fork bolts and drain bolts. Drain oil out of the fork cylinders.
2. Retighten the drain bolts and fill the front fork cylinders with any brand of automatic transmission fluid for motorvehicle.
Capacity: 105 cc (3.6 ozs.) per cylinder

NOTE:
* 125 cc (4.2 ozs.) oil will be required to fill one fork when disassembled.
* Torque the front fork bolt to the specification.
1. ON-VEHICLE SERVICING

<table>
<thead>
<tr>
<th>Parts to be serviced</th>
<th>Ref. pages</th>
</tr>
</thead>
<tbody>
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<td>Cylinder head and camshaft</td>
<td>12</td>
</tr>
<tr>
<td>Cylinder and pistons</td>
<td>12</td>
</tr>
<tr>
<td>Oil Pump and oil filter</td>
<td>18</td>
</tr>
<tr>
<td>Clutch</td>
<td>20</td>
</tr>
<tr>
<td>Kick starter</td>
<td>22</td>
</tr>
<tr>
<td>Gear shift mechanism</td>
<td>23</td>
</tr>
<tr>
<td>Cam chain tensioner</td>
<td>30</td>
</tr>
<tr>
<td>Carburetor</td>
<td>35</td>
</tr>
<tr>
<td>Electrical system (generator and contact points)</td>
<td>—</td>
</tr>
</tbody>
</table>

2. ENGINE REMOVAL AND INSTALLATION

The preliminary works for the engine removal are shown in the diagram below. Proceed in the numerical order shown. To install, reverse the removal order.

Use specified hanger bolts (10x75mm) at lower crankcase front. Be sure to install spring washer.
(1) Breather cover
(2) Breather tube
(3) Breather cover packing
(4) Cylinder head cover
(5) Sealing bolts (four)
(6) Cylinder head cover packing
(7) Valve rocker arms (eight)
(8) Rocker arm side springs (eight)
(9) Rocker arm shafts (four)
(10) Cam chain tensioner holder
(11) Cam sprocket
(12) Camshaft
(13) Valve cotters (sixteen)
(14) Valve spring retainer (eight)
(15) Outer valve springs (eight)
(16) Inner valve springs (eight)
(17) Outer seats (eight)
(18) Inner seats (eight)
(19) Valve stem seals (eight)
(20) Intake and exhaust valve guides (four each)
(21) O-rings (eight), 10x1.6
(22) Cam chain guide
(23) Intake and exhaust valves (four each)
(24) Tensioner dampers (two)
(25) Tensioner slipper
(26) Oil pipes (two)
(27) Cylinder head
(28) Cylinder head gasket
(29) Oil control orifice valves (two)
(30) Cylinder
(31) Cylinder packing
(32) Pistons (four)
Disassembly
1. Open the seat. Remove the fuel tank.
2. Remove the ignition coils.
3. Remove the breather cover.
4. Disconnect the tachometer cable.
5. Remove the eight tappet hole caps and loosen the rocker arm adjusting screws. Then remove the cylinder head cover. To remove the rocker arm shaft, remove the cap nut and screw a 10 mm (pitch 1.25 mm) bolt in the shaft.
6. Remove the muffler.
7. Remove the four spark plug caps and remove Nos. 2 and 3 spark plugs.
8. Remove the cam chain tensioner holder and remove the cam chain tensioner slipper.

9. Remove the point cover.
10. Hand-rotate the crankshaft at the special nut until one of the cam sprocket knock bolts comes upward, and remove the bolt. Further rotate the crankshaft a full turn to remove another bolt.

11. Remove the cam sprocket from the camshaft and remove the cam chain.
12. Pull out the camshaft from the right side.

NOTE:
Hold the cam chain with wire or the like to prevent the chain from falling in the crankcase.

13. Remove the air cleaner element and loosen the air cleaner chamber retaining screw.
14. Remove the carburetors.
15. Loosen the cylinder head securing bolts in a criss-cross pattern, starting at external one as shown in Fig. 3-8.
16. Take out the cam chain guide and remove the cylinder head.

1) Use valve lifter (Tool No. 07031-32901) to compress the valve spring and remove the valve cotters. Then remove the valve and valve spring.

2) Replacing valve guide
   Use valve guide remover (Tool No. 07046-32901) to remove the valve guide.
17. Remove the cylinder.

18. Remove the piston pin clips to pull out the piston pin. Remove the piston.

**NOTE:**
1. Put a waste cloth or the like under the piston not to fall the pin clips in the crankcase.
2. Take care not to damage the piston when removing the piston rings.

**Inspection**

**Camshaft and cylinder head**
1. Check the rocker arm-to-rocker arm shaft clearance.
2. Check the cylinder head camshaft bearing surfaces for scratches and excessive wear.
3. Measure the height of each cam.
4. Check the camshaft center journal for deflection.
5. Measure the valve seat width.
   Coat the valve seat with prussian blue thinly and uniformly. Hold the valve against the seat and rotate it one turn. If the prussian blue shows a band of uniform width all the way around both seat and valve, the valve contact is proper. In case the contact is improper, lap the valve and recheck. If still defective, reface the valve seat.

**NOTE:**
When using a valve seat grinder, be sure to follow the instructions given by the tool manufacturer.
6. Measure the outside diameter of the valve stem.
7. Check the valve-to-valve guide clearance.
8. Measure the free length of the valve spring.
9. Check the cylinder head surface for flatness.

**Cylinder and pistons**
1. Measure the inside diameter of each cylinder.
   Measure the inside diameter of cylinder with a cylinder gauge at the top, center and bottom, in parallel (X) with, and at right angles (Y) to, the center line of the cylinder.
2. Measure the outside diameter of the piston at its skirt.
3. Measure the inside diameter of the piston pin hole.
4. Measure the outside diameter of the piston pin.
5. Check the piston ring-to-piston pin groove clearance.
6. Check the piston ring end gap.
   Insert the cylinder skirt to make measurement of the gap using a thickness gauge.

**Reassembly**

**Piston rings**
1. Use the piston rings of the same make in a set. Install the rings to the piston with their markings facing upward.

<table>
<thead>
<tr>
<th>Marking</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>NIHON PISTON RING</td>
</tr>
<tr>
<td>R</td>
<td>RIKEN PISTON RING</td>
</tr>
<tr>
<td>T</td>
<td>TEIKOKU PISTON RING</td>
</tr>
</tbody>
</table>

![Fig. 3-13 Valve seat contact](image)

![Fig. 3-14 Checking valve-to-valve guide clearance](image)

![Fig. 3-15 Checking inside diameter of cylinder](image)

![Fig. 3-16 Checking piston ring end gap](image)

![Fig. 3-17 Marking](image)
III. ENGINE

2. When a new ring is used, check it for proper fit in the piston ring groove.

3. Position the rings so that their gaps of the top, second and oil rings are staggered 120°, each being apart from the direction at right angles to the piston pin.

Pistons
Install the piston with the arrow mark on the piston head toward the front (exhaust side) and “IN” mark toward the rear (intake side) of the engine.

Cylinder
1. Rotate the crankshaft so that all the four pistons will rise in a line and install the piston bases (Tool No. 07033–33301) to the pistons. Set the base in the groove below the piston boss. Then install the piston compressors (Tool No. 07032–33301) on the piston rings. Gradually lower the cylinder until all the piston rings enter the cylinder bores. Remove the piston bases and piston compressors.

NOTE:
Apply a coat of engine oil to the piston rings before installing the pistons into the cylinder.

2. Check the oil control orifice valve for clogging before installation.

Cylinder head
1. When installing a new valve guide, drive it in using valve guide driver (Tool No. 07047–32901) and ream with reamer (Tool No. 07008–20002).

2. Apply a coat of engine oil to the threads of the nut and tighten the nuts in a criss-cross pattern, starting at the internal one as shown in Fig. 3–20.

Torque specification:

\[200\text{kg-cm (14.5 ft-lbs)}\]

Valve timing
1. Rotate the crankshaft and align the mark “T” 1.4 on the spark advancer with the matching mark as shown in Fig. 3–21.
2. Install the cam chain to the cam sprocket so that the matching lines on the sprocket will be aligned with the upper surface of the cylinder head.
3. Install the cam sprocket to the camshaft with two knock bolts.

**Cylinder head cover**

1. Apply a liquid packing to the cylinder head cover packing groove. Install the packing in place. Replace packing if damaged.

2. Tighten the bolts securing the cylinder head cover in the sequence as shown in Fig. 3-24.
   Torque specification:
   70~110 kg-cm (5.1~8.0 lbs-ft)

**NOTE:**
The torque difference of each bolt should be within 20 kg-cm (1.5 lbs-ft).
4. OIL PUMP AND OIL FILTERS

- The oil pump is a double trochoid pump driven by the primary shaft.
- One oil filter uses a screen and the another, paper element to provide two-stage filtering.

---

**Fig. 3-25** Lubricating oil circuits

1. Oil strainer  
2. Oil pump  
3. Oil filter  
4. Oil control orifice valve  
5. Oil pipe
Disassembly

Oil pump
1. Remove the gear change pedal and left-hand side foot rest.
2. Remove the L. crankcase cover.
3. Disconnect the oil pressure switch cord.
4. Remove the oil pump.

Oil screen filter
1. Drain the crankcase.
2. Remove the oil pan.
3. Remove the oil screen filter.

Oil filter
1. Loosen the oil filter center bolt to remove the oil filter.

Inspection

Oil pump
1. Check the outer rotor-to-pump body clearance.
2. Check the inner rotor-to-outer rotor clearance.
3. Check the relief valve for dust entry and for operation.

Reassembly

1. Be sure to install O-rings in their proper locations as shown.
2. Check the oil level in the crankcase and add oil if necessary.
3. Make sure the oil filter is properly assembled. (See Fig. 3-28)
5. CLUTCH

Disassembly
1. Drain oil from the crankcase.
2. Remove the right-hand side foot rest and kick starter pedal.
3. Remove the R. crankcase cover.
4. Remove the clutch pressure plate.
5. Remove the 25 mm snap ring and remove the clutch assembly.
6. Remove the 92 mm special set ring from the clutch center. Disassemble the clutch plate B, clutch disc spring and disc spring seat.
7. Remove the clutch lever and clutch adjuster lever from the R. crankcase cover.
**Inspection**
1. Measure the thickness of the friction disc.
2. Check the clutch plate for distortion.
3. Measure the free length of the clutch spring.
4. Check the clutch center-to-clutch plate B clearance ($\delta$), and if beyond specified limit, replace clutch plate B.

**Reassembly**
1. Install the disc spring seat and clutch disc spring in proper direction as shown.

2. Be sure to install the 25mm thrust washer.
3. Alternately install the friction discs and clutch plates to the clutch outer, and finally install the 8mm friction disc (see $\Theta$, Fig. 3-30).
6. KICK STARTER

Disassembly
1. Drain oil from the crankcase.
2. Remove the R. foot rest and kick starter pedal.
3. Remove the R. crankcase cover.
4. Remove the kick starter spring and remove the kick starter assembly.

Inspection
1. Check the starter drive ratchet for smooth and proper operation.
2. Check the kick starter pinion-to-kick starter spindle clearance.

Reassembly
1. Insert the hair pin section of the starter pinion friction spring into the crankcase stopper groove in place.
2. Hook the end @ of the kick starter spring as shown, and install the kick starter assembly. Install the other end □ of the spring to the crankcase rib as shown.
3. Check to be sure the starter pinion gear is properly meshed with the low gear.
7. GEAR SHIFT MECHANISM

Disassembly

**Group A**

1. Drain oil from the crankcase.
2. Remove the R. foot rest and kick starter pedal.
3. Remove the gear change pedal.
4. Remove the R. crankcase cover.
5. Remove the gear shift spindle.
6. Disassemble the positive stopper, gear shift drum stopper and neutral stopper arm. Fig. 3-41 indicates the transmission gears in neutral.
7. Remove the contact breaker base and spark advance.
8. Remove the oil pump.
9. Remove the secondary drive gear from the primary shaft by removing the 12 mm bolt.

**Group B**
1. Dismount the engine from the machine and follow the steps 1 thru 9 above.
2. Pull out the primary shaft to the right.

3. Remove the 52 mm internal circlip, and disassemble the 6205 ball bearing and 25 mm collar.
4. Loosen the bolts securing the upper and lower crankcases to remove the lower crankcase.

5. Remove the transmission main shaft and the countershaft at the same time.

6. Remove the gear shift set plate, and pull out the shift fork guide shaft and gear shift drum.
Inspection
1. Measure the width of the gear shift fork finger.
2. Measure the outside diameter of the shift fork guide shaft.
3. Measure the inside diameter of the gear shift fork.
4. Check the gear shift fork guide-to-gear shift drum groove clearance.

Reassembly
1. Install the gear shift drum and gears in the neutral position.
2. Install the guide set plate, and bend the lug of the lock washer against the flat of the 8mm bolt.
3. Install the gear shift forks properly in their respective positions. They are provided with the marks "R", "C" and "L" for identification.
4. Check the gear shift drum stopper, neutral stopper arm and positive stopper are in their proper respective positions, and also check them for operation.
5. Move the gear shift spindle to check each related part for smooth operation.
6. Refer to pages 26~27 for the installation of the transmission.
7. Refer to page 34 for the installation of the upper and lower crankcases.

MEMO
8. TRANSMISSION

Disassembly
1. Remove the main shaft and countershaft from the upper crankcase. (See page 24)

Inspection
1. Check the gears for backlash.
2. Replace any gear if its lugs are excessively worn or damaged. Also check the gears for smooth sliding on the shaft splines.
3. Check each gear-to-its mounting shaft clearance.

Reassembly
Main Shaft
1. Install the 5205 HS ball bearing with its groove fitted with the 52mm bearing set ring in place.
2. Install the 20mm needle bearing with its pin hole fitted with the 6mm guide pin.
3. Install the oil seal with its dowel fitted into the pin hole in the upper crankcase.
Countershaft
1. Install the 20mm needle bearing with its pin hole fitted with the 6mm guide pin in the upper crankcase.
2. Install the 5205 ball bearing with its ring groove fitted with 50mm bearing set ring installed in the upper crankcase.
3. Install the oil seal with its dowel fitted into the pin hole in the upper crankcase.

Rotate the crankshaft to check each gear for smooth moving.

Fig. 3-51  ① 20 mm needle bearing
② 6 mm guide pin
③ 5205 ball bearing
④ 50 mm bearing set ring
⑤ Oil seal
⑥ Pin hole

MEMO
9. PRIMARY SHAFT

Fig. 3-52

1. Internal circlips (three), 52 mm
2. Ball bearings (two), 6205
3. Collar, 25×21.8
4. Primary drive chain
5. Primary driven sprocket
6. Rubber dampers (eight)
7. Driven sprocket hub
8. Clutch outer
9. Rollers (three), 10.2×9.5
10. Caps (three)
11. Springs (three)
12. Needle bearing
13. Starter driven gear
14. Primary shaft

Disassembly

1. Pull out the primary shaft. (See page 24)
2. Remove the primary driven sprocket and starter driven gear.

Fig. 3-53

1. Primary driven sprocket
2. Starter driven gear

3. Remove the driven sprocket hub from the primary driven sprocket.
4. Remove the rubber dampers.

Fig. 3-54

1. Primary driven sprocket
2. Driven sprocket hub
**Inspection**

1. Check the starting clutch and its related parts for wear or any other damage. Also check the rollers for smooth rolling.

2. Check the starter driven gear needle bearing for any damage.

**Reassembly**

1. When the clutch outer body has been disassembled, tighten three 6 mm flat screws to secure the driven sprocket hub to clutch outer body, and stake each screw head in two positions as shown.

2. After assembling the upper and lower crankcases insert the primary shaft into the crankcase from right side, and install the collar.

3. Drive the 6205 ball bearing into the primary shaft, and secure with the 25 mm internal circlip.

4. Tighten the crankcases with securing bolts. (See page 34)

5. Install the primary shaft lock washer with the mark "OUTSIDE" facing outward.
Disassembly

**Group A**
1. Remove the cam chain guide and tensioner slipper. (See pages 12–14)

**Group B**
1. Remove the lower crankcase. (See pages 23–24)
2. Remove the tensioner arm and tensioner push bar.

Inspection
1. Check the cam chain guide and tensioner slipper for wear.

Reassembly
1. Install the tensioner push bar with the mark facing upward as shown.
   Then finger-depress the push bar and secure it with tensioner adjusting bolt and lock nut.