(1) Remove the foot peg and brake pedal.

(2) TORQUE CONVERTER CASE

(3) CASE CAP

(4) TORQUE CONVERTER ASSY.
Disassembly/Assembly, Page 8-3

To torque converter pump
From regulator valve
CHECK VALVE
PROTECTOR

C393545

• TORQUE CONVERTER REMOVAL

PULLER 07944-5790000

SHAFT PROTECTOR A No. 07934-3930000

BEARING DRIVER ATTACHMENT No. 07945-3710101

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CB750A

TORQUE CONVERTER

Lubricate all parts with oil before reassembly.

(4) TORQUE CONVERTER COVER
(3) PUMP
(1) TORQUE CONVERTER TURBINE
(2) STATOR ASSY.
Disassembly/Assembly,
Page 8–4

1.2–1.6 kg-m
(8.7–11.6 lbs-ft)

C393546

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Classic Cycles Technical Resources

8 DISASSEMBLY/ASSEMBLY

TORQUE CONVERTER

• STATOR

NOTE
Lubricate all parts with oil before reassembly.

SIDE PLATE
• Grooved side out

ONE-WAY CLUTCH

ROLLER
8 sets

CAM

SPRING

SIDE PLATE
• Grooved end out

Wide pitched end

HUB
• Splined side toward wide pitched side of stator.

STATOR

C393547

Insert the stator into the stator shaft and check the operation of the one-way clutch. The clutch should only turn in a counterclockwise direction.

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TORQUE CONVERTER

INSPECTION

- STATOR HUB O.D.
  39.975 - 39.991 mm (1.5738 - 1.5744 in.)
  Service Limit: 39.9 mm (1.571 in.)

- STATOR HUB I.D.
  26.000 - 26.033 mm (1.0236 - 1.0249 in.)
  Service Limit: 26.1 mm (1.028 in.)

- STATOR SIDE PLATE THICKNESS
  (A) 38 x 66 x 2 washer
  5.96 - 6.00 mm (0.2343 - 0.2362 in.)
  Service Limit: 5.9 mm (0.232 in.)

- THRUST WASHER THICKNESS
  (A) 1.95 - 2.00 mm (0.0768 - 0.0787 in.)
  Service Limit: 1.9 mm (0.075 in.)

  (B) 1.95 - 2.05 mm (0.0768 - 0.0807 in.)
  Service Limit: 1.9 mm (0.075 in.)

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8

INSPECTION

TORQUE CONVERTER

• BEARING CAP-TO-SHAFT CLEARANCE

(A) — (B)

0.022—0.06 mm (0.0009—0.0024 in.)
Service Limit: 0.08 mm (0.003 in.)

• TORQUE CONVERTER CASE CAP/FLUID CHECK VALVE SPRING

Check the inside surface for scoring or excessive wear

- Check for weakness
- Check for wear or excessive bushing-to-cap clearance
HONDA
CB750A

TORQUE CONVERTER

TESTING

TRANSMISSION OIL PRESSURE TEST

CAUTION
Do not rev up engine while testing to prevent gauge hose puncture.

OIL PRESSURE
4.0 – 8.0 kg/cm² (57 – 114 psi)
Service Limit: 3.0 kg/cm² (43 psi)
If out of limits, refer to TROUBLESHOOTING (page 3-12)

(1) Place the motorcycle on its center stand and apply the parking brake.
(2) Warm up the engine until the idle speed stabilizes.
(3) Connect an oil pressure gauge and tachometer.
(4) Start the engine.
(5) Keep the engine speed at 1,500 rpm.
(6) Check the oil pressure in “N” position.

ENGINE

FRAME

OIL PRESSURE GAUGE
No. 07506-3000000

ENGINE PRESSURE JOINT
No. 07510-3930100

Renew washer

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8-7
STALL SPEED TEST

**CAUTION**
- Do not perform the stall speed test for more than 10 seconds per test.
- Do not operate the shift pedal while the engine is being revved up.
- Do not connect oil pressure gauge.

2,500 – 2,900 rpm.
Service limit: 2,400 rpm.

If out of limits, refer to TROUBLE SHOOTING (page 3–12).

1. Place the motorcycle on its center stand and apply the parking brake.
2. Warm up the engine until the idle speed stabilizes.
3. Connect a tachometer.
4. Start the engine and shift into “LOW” range.
5. Hold the handlebars firmly and place your weight on the rear brake pedal.
6. Open the throttle fully and make sure that the engine speed is within the standard value.
7. Repeat the procedure in “DRIVE” range.
   If out of service limits, refer to TROUBLESHOOTING (page 3–12)
HONDA
CB750A

9. OIL PUMP/REGULATOR VALVE

SERVICE INFORMATION 9–1
OIL PUMP ASSEMBLY 9–3
TROUBLESHOOTING 9–1
REGULATOR VALVE 9–4
LUBRICATION DIAGRAM 9–2
INSPECTION 9–5
DISASSEMBLY/ASSEMBLY 9–3
ENGINE OIL PRESSURE TEST 9–6

SERVICE INFORMATION

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>OIL PUMP</td>
<td>Oil pump body to rotor radial clearance</td>
<td>0.15–0.22 (0.0059–0.0087)</td>
</tr>
<tr>
<td></td>
<td>Oil pump tip clearance</td>
<td>0.15 (0.0059) max.</td>
</tr>
<tr>
<td></td>
<td>Oil pump body to rotor clearance</td>
<td>0.02–0.06 (0.0008–0.0024)</td>
</tr>
<tr>
<td></td>
<td>Relief valve to body clearance</td>
<td>0.025–0.07 (0.001–0.0028)</td>
</tr>
</tbody>
</table>

TORQUE VALUE

Oil drain bolt 3.5–4.5 kg-m (25.3–32.5 lbs.-ft.)

TROUBLESHOOTING

SYMPTOM
(Engine)
Engine overheats

POSSIBLE CAUSE
Defective oil pump
Clogged oil passage
Clogged oil filter screen
Clogged oil strainer
Insufficient oil or use of improper oil

Engine stops suddenly
(Engine seized)

Defective oil pump (broken rotor pin or worn rotor)
Insufficient oil
Clogged oil strainer
Defective regulator valve (stuck or broken spring)

(Transmission)
Engine turns, but motorcycle will not start (in L and D)
Engine turns, but motorcycle will not start (in L and D) (starts slowly when throttle is opened)
Poor acceleration at start (in L and D) or high speed.
Engine revs up at quick start

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(1) Remove the three screws attaching the left side case and remove the case assembly.

(2) OIL PUMP ASSY

**NOTE**
Do not disassemble unless necessary.
**REGULATOR VALVE**

*NOTE*
Do not disassemble the regulator valve.

After installing the valve in the oil passage, install it to the lower crankcase.

---

**OIL PUMP/REGULATOR VALVE**

- **(1) DRAIN BOLT**
  - **(2) OIL PAN**
  - **(3) OIL PASSAGE BODY**
    - **(4) OIL PASSAGE BODY**
    - **(5) REGULATOR VALVE**

To drive clutch
To oil pump
From oil pump
To manual valve
To oil filter element
To oil pump
To low clutch
From manual valve
To mainshaft
From oil pump
To countershaft
To drive clutch

Replace when reassembling.

3.5–4.5 kg·m (25.3–32.5 lbs·ft.)

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OIL PUMP/REGULATOR VALVE

INSPECTION

- OIL PUMP BODY-TO-ROTOR RADIAL CLEARANCE
  0.15–0.22 mm (0.0059–0.0087 in.)
  Service Limit: 0.35 mm (0.0138 in.)

- OIL PUMP TIP CLEARANCE
  0.15 mm (0.0059 in.) max.
  Service Limit: 0.20 mm (0.0079 in.)

- OIL PUMP BODY-TO-ROTOR CLEARANCE

- RELIEF VALVE-TO-BODY CLEARANCE

  Straight Edge

  0.02–0.06 mm (0.0008–0.0024 in.)
  Service Limit: 0.08 mm (0.0031 in.)

  Oil Passage

  Relief Valve to Body Clearance

  0.025–0.070 mm (0.001–0.0028 in.)
  Service Limit: 0.1 mm (0.004 in.)

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OIL PRESSURE:
3.5–4.5 kg/cm² (50–64 psi) at 3,000 rpm.

1. Place the motorcycle on its center stand and apply the parking brake.
2. Warm up the engine until the idle speed stabilizes.
3. Connect an oil pressure gauge and tachometer.
4. Start the engine.
5. Keep the engine speed at 3,000 rpm.
6. Check the oil pressure in "N" position.
**SERVICE INFORMATION**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual valve to manual valve shaft clearance</td>
<td>0.015–0.045 (0.0006–0.0018)</td>
<td>0.1 (0.004)</td>
</tr>
</tbody>
</table>

**TORQUE VALUES**

- Ratchet guide tightening nut: 1.0–1.4 kg-m (7.2–10.1 lbs.-ft.)
- Shift pivot bolt: 2.3–2.7 kg-m (16.6–19.5 lbs.-ft.)

**TROUBLESHOOTING**

POSSIBLE CAUSE

- Broken shift valve pin
- Worn ratchet guide
- Defective clutch ("L" and "D")
- Broken return spring
- Shift spindle and case binding
- Defective neutral return mechanism

**SYMPTOM**

- Engine turns, but motorcycle will not start
- Hard shifting
- Shift pedal not returned
- Transmission jumping out of gears
DISASSEMBLY/ASSEMBLY

(1) Remove the shift pedal, neutral return arm and cover.

After assembling, adjust the neutral return arm. (See page 4-22)

2.3–2.7 kg-m
(16.6–19.5 lbs.-ft.)

1.0–1.4 kg-m
(7.2–10.1 lbs.-ft.)
INSPECTION

- MANUAL VALVE-TO-SHAFT CLEARANCE

(A) - (B) Difference between (A) and (B)
0.015–0.045 mm (0.0006–0.0018 in.)
Service Limit: 0.10 mm (0.004 in.)

- CHANGE SWITCH

Change switch inspection page 14–14.
11. TRANSMISSION/CLUTCH

SERVICE INFORMATION 11-1
TROUBLESHOOTING 11-1
DISASSEMBLY/ASSEMBLY 11-2
- CRANKCASE 11-2
- TRANSMISSION 11-3
- LOW/DRIVE CLUTCHES 11-4
INSPECTION 11-6

- SERVICE INFORMATION

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/D clutch initial clearance</td>
<td>0.5-0.8 (0.020-0.031)</td>
<td></td>
</tr>
<tr>
<td>Clutch return spring free length</td>
<td>39.7 (1.56)</td>
<td>36.0 (1.42)</td>
</tr>
<tr>
<td>Clutch disc thickness</td>
<td>1.95-2.05 (0.0768-0.0807)</td>
<td>1.9 (0.075)</td>
</tr>
<tr>
<td>Clutch plate thickness</td>
<td>1.95-2.05 (0.0768-0.0807)</td>
<td>1.9 (0.075)</td>
</tr>
<tr>
<td>Clutch end plate thickness</td>
<td>(1) 1.8 (0.071)</td>
<td>1.6 (0.063)</td>
</tr>
<tr>
<td></td>
<td>(2) 2.1 (0.083)</td>
<td>1.9 (0.075)</td>
</tr>
<tr>
<td></td>
<td>(3) 2.4 (0.094)</td>
<td>2.2 (0.087)</td>
</tr>
<tr>
<td></td>
<td>(4) 2.7 (0.106)</td>
<td>2.5 (0.098)</td>
</tr>
<tr>
<td></td>
<td>(No mark) 3.0 (0.118)</td>
<td>2.8 (0.110)</td>
</tr>
<tr>
<td></td>
<td>(6) 3.3 (0.130)</td>
<td>3.1 (0.122)</td>
</tr>
</tbody>
</table>

TORQUE VALUES

- Crankcase bolt (8 mm) 2.0-2.5 kg-m (14.5-18.1 lbs.-ft.)
- Crankcase bolt (6 mm) 1.0-1.4 kg-m (7.2-10.1 lbs.-ft.)

SPECIAL TOOL

CLUTCH SPRING COMPRESSOR 07960-6120000

- TROUBLESHOOTING

**SYMPTOM**

- Motorcycle will not start in "L" (start in "D")
- Motorcycle will not start in "D" (start in "L")
- Poor acceleration at start in "L"
- Poor acceleration at start in "D"

**POSSIBLE CAUSE**

- Damaged "L" gears
- Defective "L" clutch
- Damaged "D" gears
- Defective "D" clutch

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CRANKCASE

DISASSEMBLY/ASSEMBLY

CRANKCASE

(1) Remove the engine parts as shown.

(2) Remove the upper engine bolts as shown.

(3) Remove the lower engine bolts as shown.

NOTE
During reassembly, apply a coat of liquid sealant. Evenly coat the lower case surface.

TIGHTENING TORQUE

8 mm: 2.0–2.5 kg-m
(14.5–18.1 lbs.-ft.)
6 mm: 1.0–1.4 kg-m
(7.2–10.1 lbs.-ft.)
Lubricate all parts with oil before reassembly.
CLUTCH REMOVAL SEQUENCE

TRANSMISSION/CLUTCH

- LOW/DRIVE CLUTCHES

1. SNAP RING
2. END PLATE
3. CLUTCH PLATES
   (LOW : 4) (DRIVE: 6)
4. SNAP RING
5. RETURN SPRING
6. CLUTCH PISTON
7. CLUTCH DRUM

OIL SEAL RINGS

NOTE
Place the ring gaps 180° apart.

- REMOVE CLUTCH PISTON

1. Install the tool.
   CLUTCH SPRING COMPRESSOR
   No. 07960-6120000
2. Compress the clutch return spring.
   RETURN SPRING
3. Remove the snap ring.

- INSTALL CLUTCH PISTON

NOTE
Lubricate O-ring thoroughly prior to installing clutch piston.

4. Remove the clutch piston as shown.
   OIL PASSAGE HOLE
   COMPRESSED AIR HOSE VALVE

Apply pressure and rotate to ensure proper seating.

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**HONDA CB750A**

**TRANSMISSION/CLUTCH**

- **CLUTCH DISC PLATE ASSEMBLY**
  Measure clearance between the clutch end plate and top clutch disc.

**NOTE**
Take care not to damage the friction disc when measuring the clutch end clearance.

**Service Limit:** 0.5–0.8 mm (0.020–0.031 in.)

If not within service limit, select a new clutch end plate from the following table.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Plate No.</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>22561–612–000</td>
<td>1</td>
<td>1.8 mm (0.071 in.)</td>
</tr>
<tr>
<td>22562–612–000</td>
<td>2</td>
<td>2.1 mm (0.083 in.)</td>
</tr>
<tr>
<td>22553–612–000</td>
<td>3</td>
<td>2.4 mm (0.094 in.)</td>
</tr>
<tr>
<td>22554–612–000</td>
<td>4</td>
<td>2.7 mm (0.106 in.)</td>
</tr>
<tr>
<td>22555–612–000</td>
<td>no mark.</td>
<td>3.0 mm (0.118 in.)</td>
</tr>
<tr>
<td>22556–612–000</td>
<td>6</td>
<td>3.3 mm (0.130 in.)</td>
</tr>
</tbody>
</table>

Check the clutch engagement by directing air pressure to an oil passage in the clutch drum hub. Remove the air pressure and check that the clutch is released.
INSPECTION

NEEDLE BEARING
Inspect for galling, damaged rollers, and freedom of movement.

BALL BEARING

Replace if excessively worn.

MAINSHAFT/GEARS/STATOR SHAFT/
INPUT SHAFT/COUNTERSHAFT

Inspect gear teeth for wear, cracks, or scoring.

Check bearing surface for scoring, scratches or excessive wear.

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**TRANSMISSION/CLUTCH**

- **CLUTCH RETURN SPRING FREE LENGTH**
  - 39.7 mm (1.56 in.)
  - Service Limit: 36.0 mm (1.42 in.)

- **CLUTCH DISC THICKNESS**
  - 1.95–2.05 mm (0.0768–0.0807 in.)
  - Service Limit: 1.9 mm (0.075 in.)

- **CLUTCH PLATETHICKNESS**
  - 1.95–2.05 mm (0.0768–0.0807 in.)
  - Service Limit: 1.9 mm (0.075 in.)

- **CLUTCH END PLATE THICKNESS**

Check the teeth for wear.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Thickness</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.8 mm (0.071 in.)</td>
<td>1.6 mm (0.063 in.)</td>
</tr>
<tr>
<td>2</td>
<td>2.1 mm (0.083 in.)</td>
<td>1.9 mm (0.075 in.)</td>
</tr>
<tr>
<td>3</td>
<td>2.4 mm (0.094 in.)</td>
<td>2.2 mm (0.087 in.)</td>
</tr>
<tr>
<td>4</td>
<td>2.7 mm (0.106 in.)</td>
<td>2.5 mm (0.098 in.)</td>
</tr>
<tr>
<td>no mark</td>
<td>3.0 mm (0.118 in.)</td>
<td>2.8 mm (0.110 in.)</td>
</tr>
<tr>
<td>6</td>
<td>3.3 mm (0.130 in.)</td>
<td>3.1 mm (0.122 in.)</td>
</tr>
</tbody>
</table>

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CHECK VALVE
Inspect for looseness

Check oil passages for clogging or restriction
12. CRANKSHAFT/CONNECTING ROD/PRIMARY SHAFT/ KICK STARTER

SERVICE INFORMATION

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- MAIN BEARING 12-5

TROUBLESHOOTING

12-1

- PRIMARY SHAFT 12-6

- PRIMARY KICK 12-6

DISASSEMBLY/ASSEMBLY

- CONNECTING ROD BEARING 12-4

INSPECTION 12-7

SERVICE INFORMATION

SELECTION OF BEARING AND INSPECTION OF OIL CLEARANCE

1. Always check the oil clearance after installing a new bearing.
2. Use a chamois or lint-free cloth to clean the bearings.
3. When installing a bearing, align the tab with the groove in the crankcase.
4. Tighten the bearing cap in the correct sequence and to the correct torque.
5. Do not file or sand the crankshaft journals and crankpins.
6. When installing the bearings, apply clean engine oil or molybdenum disulfide base grease.
7. After installing the connecting rods and crankcase, check that the crankshaft rotates freely.
8. After assembling, check the engine idle speed.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Standard</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crankshaft runout</td>
<td>0.03 (0.0012)</td>
<td>0.05 (0.002)</td>
</tr>
<tr>
<td>Crankshaft journal out of round</td>
<td>0.005 (0.0002)</td>
<td>0.010 (0.0004)</td>
</tr>
<tr>
<td>Crankshaft journal taper</td>
<td>0.005 (0.0002)</td>
<td>0.010 (0.0004)</td>
</tr>
<tr>
<td>Crankshaft journal oil clearance</td>
<td>0.02–0.04 (0.0008–0.0016)</td>
<td>0.08 (0.0031)</td>
</tr>
<tr>
<td>Crankshaft journal O.D.</td>
<td>35.99–36.00 (1.4169–1.4173)</td>
<td>35.94 (1.415)</td>
</tr>
<tr>
<td>Crankpin O.D.</td>
<td>35.99–36.00 (1.4169–1.4173)</td>
<td>35.94 (1.415)</td>
</tr>
<tr>
<td>Connecting rod small end oil clearance</td>
<td>0.02–0.04 (0.0008–0.0016)</td>
<td>0.08 (0.0031)</td>
</tr>
<tr>
<td>Connecting rod side clearance</td>
<td>0.15–0.30 (0.0059–0.0118)</td>
<td>0.40 (0.0157)</td>
</tr>
</tbody>
</table>

TORQUE VALUES

Connecting rod nut 1.8–2.2 kg-m (13.0–15.9 lbs.-ft.)
A.C. generator rotor bolt 10.0–12.0 kg-m (72.3–86.81 lbs.-ft.)

SPECIAL TOOLS

BEARING DRIVER 07947–6340000

TROUBLESHOOTING

SYMPTOM

Engine starts but stops soon

Hard starting

Engine cranks but will not start

POSSIBLE CAUSE

Burnt main bearing
Burnt connecting rod
Main bearing worn or damaged
Connecting rod worn or damaged
Crankpin worn
Connecting rod not installed properly

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MAIN BEARING SIZE NUMBER LOCATION

The crankcase main bearing size numbers are punched on the rear side of the upper crankcase.
A, B, C are given from the left side of the crankcase.

CRANKPIN SIZE MARK LOCATION

The crankpin size marks are stamped on the side of the crankshaft weight which faces the drive sprocket.

(J) → Shows the crankshaft journals.
L. → Means that the marks A, B, C are given from the left side of crankshaft.
A. → Shows the size of the crankshaft journal located at the extreme left side.
A. → Shows the size of the second crankshaft journal from the left side.
B. → Shows the size of the third crankshaft journal from the left side.
B. → Shows the size of the fourth crankshaft journal from the left side.
C. → Shows the size of the crankshaft journal located at the extreme right side.

When replacing, select the correct size according to the chart below.
For Assembly of main bearing, refer to page 12-5.

Selection table of crankshaft bearing

<table>
<thead>
<tr>
<th>Color Identification</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Oil clearance 20–45μ)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crankcase allowance 35μ</td>
<td>O</td>
<td>-0.005</td>
<td>-0.005~0.010</td>
</tr>
<tr>
<td>Crankcase allowance 39μ</td>
<td>+0.024</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>+0.015</td>
<td>(BROWN)</td>
<td>(BROWN)</td>
</tr>
<tr>
<td></td>
<td>+0.015</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>+0.008</td>
<td>(GREEN)</td>
<td>(GREEN)</td>
</tr>
<tr>
<td></td>
<td>+0.008</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>(YELLOW)</td>
<td>(YELLOW)</td>
</tr>
</tbody>
</table>

NOTE
When assembling, use the main bearing having the same mark.
CRANKSHAFT/CONNECTING ROD/
PRIMARY SHAFT/KICK STARTER

- CRANKPIN INDEX MARK LOCATION

The crankpin index marks are stamped on the left side of the crankshaft weight and is located in the same position as the crankshaft journal size marks.

(P): Shows the crankpin
L: Means that the marks 3,4,4 are given from the left side of crankshaft.
3434: Shows the sizes of the crankpins from the left side.

- WEIGHT IDENTIFICATION OF CONNECTING RODS

If connecting rod replacement is necessary, determine and record each connecting rod weight mark. Then, select the connecting rod bearings having the same weight mark.

Weight I.D. mark

<table>
<thead>
<tr>
<th>MARK</th>
<th>PARTS NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>13204-300-000</td>
</tr>
<tr>
<td>F</td>
<td>13206-300-000</td>
</tr>
<tr>
<td>J</td>
<td>13208-300-000</td>
</tr>
</tbody>
</table>

- When replacing, select the same mark of the connecting rod and the proper metal according to the charts given below. For assembly of connecting rod bearing, refer to page 12-5.

Selection table of connecting rod bearing

<table>
<thead>
<tr>
<th>Crank pin allowance 36º</th>
<th>Connecting rod allowance 36º</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ~ 0.015</td>
<td>0 ~ 0.005</td>
<td>B (BROWN)</td>
<td>B (BROWN)</td>
<td>A (BLACK)</td>
</tr>
<tr>
<td>0.016 ~ 0.024</td>
<td>-0.010 ~ -0.015</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>0.008 ~ 0.018</td>
<td>C (GREEN)</td>
<td>C (GREEN)</td>
<td>C (GREEN)</td>
<td>B (BROWN)</td>
</tr>
</tbody>
</table>

CONNECTING ROD BEARING

Color identification

When assembling, use the connecting rod bearing having the same mark.
**12 DISASSEMBLY/ASSEMBLY**

**CRANKSHAFT/CONNECTING ROD/PRIMARY SHAFT/KICK STARTER**

**HONDA CB750A**

---

**DISASSEMBLY/ASSEMBLY**

1. Remove the lower crankcase.
2. Remove the cylinder and the pistons.
3. Remove the A.C. generator.

---

**NOTE**

Install with the alphabetical marks facing forward.

---

**CHART ITEMS**

- PRIMARY SHAFT
  - Disassembly/assembly, page 12-6
- PRIMARY CHAIN
- OIL FEED NOZZLE
- OIL CONTROL ORIFICE
- CHAIN GUIDE
- UPPER CRANKCASE

---

**NOTE**

When replacing the bearing, select the correct bearing so that the I.D. mark of the crankshaft corresponds to the connecting rod.

---

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**CONNECTING ROD BEARING ASSEMBLY**

(1) Remove the caps and bearings.
(2) Lay a strip of plastigage lengthwise on the crankpin.
(3) Install the cap and tighten the cap nuts to 1.8–2.2 kg-m (13.0–15.9 lbs-ft.)
(4) Remove the cap and measure the amount of widest flattening with the scale printed on the gauge bag.

<table>
<thead>
<tr>
<th>Bearing Clearance</th>
<th>Standard 0.02–0.04 mm (0.0008–0.0016 in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Limit</td>
<td>0.08 mm (0.0031 in.)</td>
</tr>
</tbody>
</table>

*If the bearing clearance is beyond the tolerance, check the connecting rod and crankpin for wear. If they are not worn, replace the bearings with the undersize bearing and recheck the clearance.*

---

**NOTE**
Do not rotate the crankshaft during the inspection and tighten connecting rod cap, to the specific torque.

---

**MAIN BEARING ASSEMBLY**

(1) Remove the caps and bearings.
(2) Lay a strip of plastigage lengthwise on the crankshaft journal.
    Install crankshaft.
(3) Install the lower crankcase.
    Install the crankcase bolts, tightening to 2.3–2.5 kg-m (16.6–18.1 lbs-ft.).
(4) Remove the lower crankcase and measure the amount of widest flattening with the scale printed on the gauge bag.

<table>
<thead>
<tr>
<th>Bearing Clearance</th>
<th>Standard 0.02–0.04 mm (0.0008–0.0016 in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Limit</td>
<td>0.08 mm (0.0031 in.)</td>
</tr>
</tbody>
</table>

* If the bearing clearance is beyond tolerance, check the crankcase and journal for wear. If they are not worn, replace the bearings with the undersize bearings and recheck the clearance.

---

**NOTE**
Do not rotate the crankshaft during the inspection and tighten each nut in X pattern to the specific torque.
**PRIMARY SHAFT**

- **PRIMARY KICK**
- **DISASSEMBLY**

- **ASSEMBLY**

**NOTE**

- Use special tool "BEARING DRIVER 07947–6340000" or 07945–8150000 to press fit the bearing.

**NOTE**

- Do not use over 100 lb. force.
HONDA
CB750A
CRANKSHAFT/CONNECTING ROD/PRIMARY SHAFT/KICK STARTER

**INSPECTION**

- **CRANKSHAFT RUNOUT**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.03 mm (0.0012 in.)</td>
<td>0.05 mm (0.002 in.)</td>
</tr>
</tbody>
</table>

- **CRANKSHAFT JOURNAL/CRANKPIN O.D.**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.99–36.00 mm (1.4169–1.4173 in.)</td>
<td>36.94 mm (1.415 in.)</td>
</tr>
</tbody>
</table>

- **CRANKSHAFT JOURNAL TAPER**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.005 mm (0.0002 in.)</td>
<td>0.010 mm (0.0004 in.)</td>
</tr>
</tbody>
</table>

- **CRANKSHAFT JOURNAL OUT OF ROUND**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.005 mm (0.0002 in.)</td>
<td>0.010 mm (0.0004 in.)</td>
</tr>
</tbody>
</table>

**CONNECTING ROD SIDE CLEARANCE**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Service Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.15–0.30 mm (0.0059–0.0118 in.)</td>
<td>0.40 mm (0.0157 in.)</td>
</tr>
</tbody>
</table>

Replace with a new one, if it is out of limit.

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13. CARBURETOR

SERVICE INFORMATION 13-1
- Float Height 13-5

TROUBLESHOOTING 13-1
- Accelerator Pump 13-6

DISASSEMBLY/ASSEMBLY 13-2
- Idle Mixture 13-7
- Altitude Adjustment 13-7

ADJUSTMENT 13-5
- Inspection 13-8

**SERVICE INFORMATION**

**CARBURETOR SETTING CHART**

<table>
<thead>
<tr>
<th>Item</th>
<th>'76 model</th>
<th>'77 model</th>
<th>'78 model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard main jet No.</td>
<td>PD44A</td>
<td>PD44B</td>
<td>PD43A</td>
</tr>
<tr>
<td>Standard slow jet No.</td>
<td>102</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Standard air jet No.</td>
<td>38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard slow air jet No.</td>
<td>150</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Standard jet needle setting</td>
<td>150</td>
<td>1st notch</td>
<td></td>
</tr>
<tr>
<td>Pilot screw opening</td>
<td>1 1/4 turn</td>
<td>1 turn</td>
<td>1 1/8 turn</td>
</tr>
<tr>
<td>Float height</td>
<td>14.5 mm (0.571 in.)</td>
<td>12.5 mm (0.492 in.)</td>
<td></td>
</tr>
<tr>
<td>Idle speed</td>
<td>950 ± 100 rpm/N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TROUBLESHOOTING**

- Engine Cranks But Won't Start
  1. No fuel in tank
  2. No fuel getting to cylinders
  3. Too much fuel getting to cylinders
  4. No spark at plugs — (ignition malfunction)
  5. Air cleaner clogged

- Engine Idles Roughly, Stalls, or Runs Poorly
  1. Idle speed incorrect
  2. Ignition malfunction
  3. Low compression
  4. Rich mixture
  5. Lean mixture
  6. Air cleaner clogged
  7. Air leaking into manifold
  8. Fuel contaminated
  9. Carburetors not synchronized

- Lean Mixture
  1. Carburetor fuel jets clogged
  2. Throttle valve stuck closed
  3. Fuel cap vent blocked
  4. Fuel filter clogged
  5. Fuel line kinked or restricted
  6. Float valve faulty
  7. Float level too low

- Rich Mixture
  1. Choke stuck closed
  2. Float valve defective
  3. Float level too high
  4. Carburetor air jets clogged
DISASSEMBLY/ASSEMBLY

(1) Remove the carburetor assembly.

NOTE
Replace with a new one, when disassembled.

(3) THROTTLE OPENER
NOTE
Never disassemble.

(2) THROTTLE RETURN SPRING

(10) No. 4 CARBURETOR

(11) No. 3 CARBURETOR

(4) REAR STAY

(6) TOP/LINK ARM

(8) No. 1 CARBURETOR

(9) No. 2 CARBURETOR

(7) CHOKE VALVE PLATE

(5) STAY PLATE

WARNING
Gasoline is flammable. Keep spark and open flame away from carburetor during disassembly/assembly.

NOTE
Clean carburetor body, jets and all parts with compressed air before assembling.

Perform the following inspections and adjustment after assembly:

- Choke and throttle valve operation check .................................................. Page 4-10, 13
- Throttle grip free play adjustment ............................................................. Page 4-10
- Carburetor synchronization ................................................................. Page 4-14

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CARBURETOR

1. Remove the choke valve and the setting screw of the link arm.
2. Remove the stay plate after removing the return spring.
3. Replace the choke valve set screws with bolts and lock washers.
4. Check the operation of the choke valve after assembling. Raise the tab of the lock washer.

NOTE
Note the installation direction.

Before loosening the screws, file off the staked areas and wipe clean.

NOTE
At time of assembly, replace.

No. 2 CARBURETOR INSTALLATION

NOTE
Do not forget to install.

Air through hole

NOTE
Bend the lever end after installing the cable.

NOTE
Do not forget to install.

No. 3 CARBURETOR REMOVAL

Drive the stopper pin out with a hammer and punch. Replace the stopper pin with a new one.

Remove the Carburetor after removing the throttle link stopper pin.

Place in V blocks.

Temporarily wind the spring one turn.

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**FLOAT CHAMBER**

Remove the carburetor assembly.

**THROTTLE VALVE**

Remove the carburetor assembly.

**SETTING STANDARD**

On '76 and '77 models:
Set the needle plate onto the center groove of jet needle.

**NOTE**

Jet needle should be replaced with needle jet as a set.

**NOTE**

Place the cut-away toward the air cleaner.

---

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CB750A
CARBURETOR

- FLOAT, FLOAT VALVE AND JETS
  1. Remove the carburetor.
  2. Remove the float chamber.
  3. Remove the throttle valve.

- ADJUSTMENT
  - FLOAT LEVEL INSPECTION AND ADJUSTMENT
    Place the carburetor as shown.
    If out of specification, adjust the float level by bending the float arm.

    | '76 model      | 14.5 mm (0.571 in.) |
    |----------------|---------------------|
    | '77 and '78 models | 12.5 mm (0.492 in.) |

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**ADJUSTMENT CARBURETOR**

**ACCELERATOR PUMP**

PUMP ROD—TO—PUMP ARM CLEARANCE

1. Remove the carburetor.
2. Close the throttle valve.
3. Measure the clearance.

(4) To adjust, bend the pump arm tongue.

---

PUMP ARM—TO—CARBURETOR STAY CLEARANCE

1. Remove the carburetor.
2. Close the throttle valve.
3. Measure the clearance.

(4) To adjust, bend the pump arm.

---

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PILOT SCREW INITIAL SETTING

Turn the pilot screw clockwise with a screwdriver until it seats lightly, and back it out to specified opening turns.

SPECIFIED OPENING:
'76 MODEL—1-1/4 TURNS OUT
'77 MODEL—1 TURN OUT
'78 MODEL—1-1/8 TURNS OUT

This is a preliminary setting prior to final Pilot Screw Adjustment.

CAUTION
Damage to the pilot screw seat will occur if the pilot screw is tightened against the seat.

PILOT SCREW ADJUSTMENT

(1) Place the motorcycle on its center stand and set the parking brake.
(2) Warm up the engine to operating temperature. Stop-and-go driving for approx. 10 minutes should be sufficient.
(3) Connect a tachometer.
(4) Adjust the idle speed with the throttle stop screw.
   IDLE SPEED: 950 ± 100 rpm (IN NEUTRAL)
(5) Turn the No. 2 carburetor pilot screw in or out to obtain the highest engine speed.
(6) Readjust the idle speed with the throttle stop screw.
(7) Perform steps (5) and (6) to remaining carburetors.
**INSPECTION**

**SOLENOID VALVE INSPECTION**

Check the operation of the solenoid. The solenoid is normal if there is air flow from (A) to (C), or there is no air flow from (C) to (B), when it is energized. No air should flow from (A) to (B), or air should flow from (B) to (C) when the solenoid is de-energized.

**CHECK VALVE**

Air should flow from (A) to (B).
No air should flow from (B) to (A).

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## 14. Electrical

<table>
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<th>Troubleshooting</th>
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<th>Battery Service</th>
<th>14-8</th>
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<td>Ignition System</td>
<td>14-3</td>
<td>Starting System</td>
<td>14-9</td>
</tr>
<tr>
<td>- Ignition System Diagram</td>
<td>14-3</td>
<td>- Starting System Diagram</td>
<td>14-9</td>
</tr>
<tr>
<td>- Inspection</td>
<td>14-3</td>
<td>- Disassembly/Assembly</td>
<td>14-10</td>
</tr>
<tr>
<td>Charging System</td>
<td>14-5</td>
<td>- Starter Motor Disassembly</td>
<td>14-11</td>
</tr>
<tr>
<td>- Charging System Diagram</td>
<td>14-5</td>
<td>- Inspection</td>
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<td>All Other Electrical Parts Inspection</td>
<td>14-15</td>
</tr>
<tr>
<td>- Inspection</td>
<td>14-6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Troubleshooting

**Ignition System**

Engine Cranks but Will Not Start:
- Engine stop switch OFF
- No spark at plugs
- Defective contact breaker
- A.C. generator faulty

No Spark at Plugs:
- Engine stop switch OFF
- Poorly connected, broken or shorted wires
- Defective ignition switch
- Defective ignition coil
- Defective condenser
- Defective A.C. generator
- Defective contact breaker

Engine Starts but Runs Poorly:
- Ignition primary circuit
  - Defective ignition coil
  - Loose or bare wire
  - Intermittent short-circuit in a switch
- Secondary circuit
  - Defective plug
  - Defective high tension cord
- Ignition timing
  - Defective contact breaker
  - Defective condenser

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