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SERVICE INFORMATION

SPECIFICATIONS

Unit: mm (in.)

Item	Standard	Service Limit
OIL PUMP		
Oil pump body to rotor radial clearance	0.15-0.22 (0.0059-0.0087)	0.35 (0.0138)
Oil pump tip clearance	0.15 (0.0059) max.	0.20 (0.0079)
Oil pump body to rotor clearance	0.02-0.06 (0.0008-0.0024)	0.08 (0.0031)
Relief valve to body clearance	0.025-0.07 (0.001-0.0028)	0.1 (0.004)

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)

(Transmission)

Engine turns, but motorcycle will not start (in L and D)

Defective oil pump (broken rotor pin or worn rotor)

Engine turns, but motorcycle will not 🛰 start (in L and D) (starts slowly when

Insufficient oil

Poor acceleration at start (in L and D) -

or high speed.

throttle is opened)

Clogged oil strainer

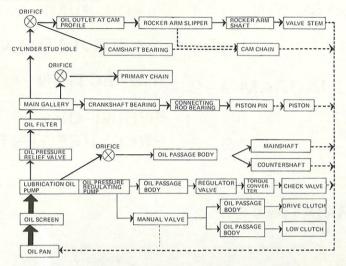
Defective regulator valve (stuck or broken spring)

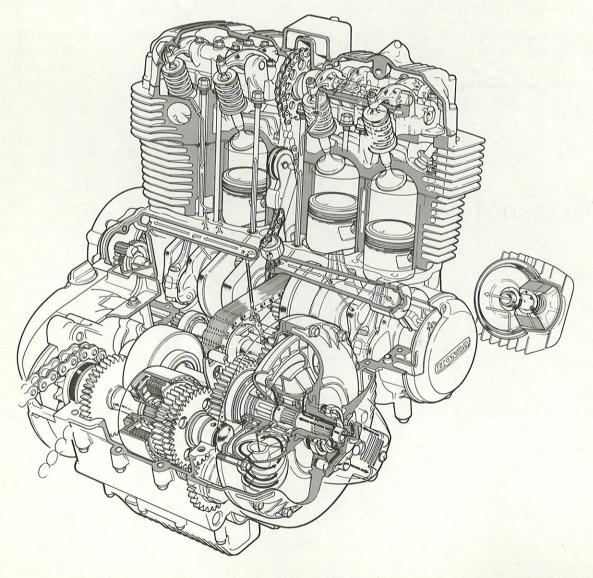
Engine revs up at quick start

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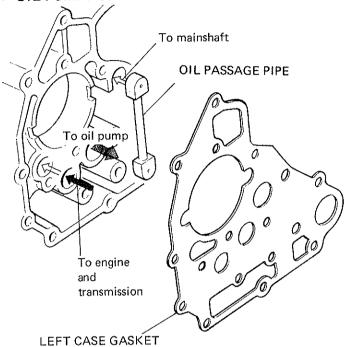
• LUBRICATION DIAGRAM



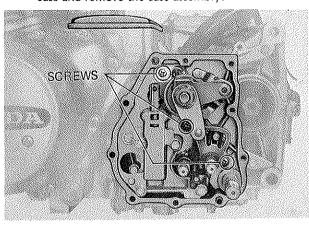


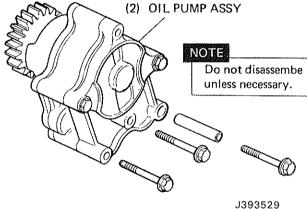
DISASSEMBLY/ASSEMBLY

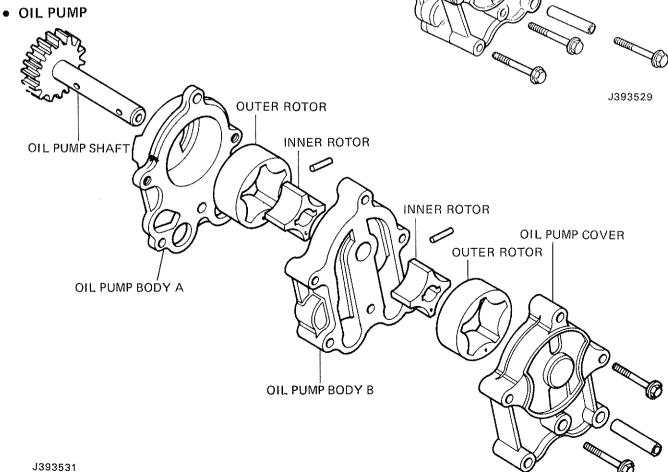
OIL PUMP ASSEMBLY



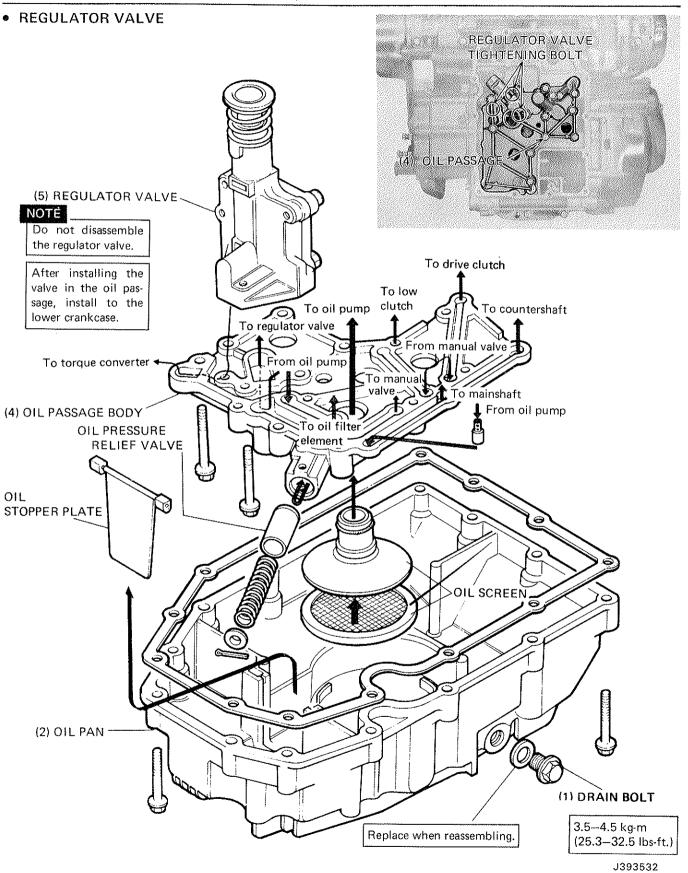
(1) Remove the three screws attaching the left side case and remove the case assembly.





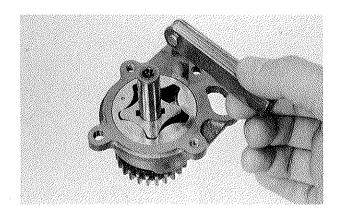


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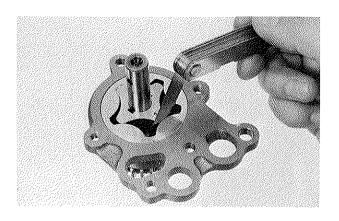


INSPECTION

• OIL PUMP BODY-TO-ROTOR RADIAL CLEARANCE

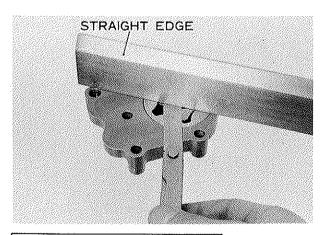


0.15-0.22 mm (0.0059-0.0087 in.) Service Limit: 0.35 mm (0.0138 in.) • OIL PUMP TIP CLEARANCE

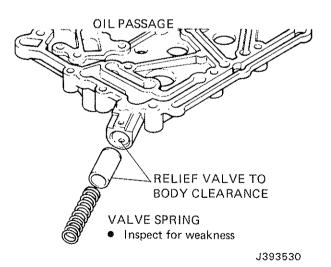


0.15 mm (0.0059 in.) max. Service Limit: 0.20 mm (0.0079 in.)

 OIL PUMP BODY-TO-ROTOR CLEARANCE



0.02-0.06 mm (0.0008-0.0024 in.) Service Limit: 0.08 mm (0.0031 in.) RELIEF VALVE-TO-BODY CLEARANCE



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



• ENGINE OIL PRESSURE TEST

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.



CB750A 10. VALVE SHIFT MECHANISM

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INSPECTION	10-3

SERVICE INFORMATION

SPECIFICATIONS

Unit: mm (in.)

ltem	Standard	Service Limit
Manual valve to manual valve shaft clearance	0.0150.045 (0.00060.0018)	0.1 (0.004)

TORQUE VALUES

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

TROUBLESHOOTING

SYMPTOM

Engine turns, but motorcycle will not start

Hard shifting

Shift pedal not returned

Transmission jumping out of gears

POSSIBLE CAUSE

Broken shift valve pin

Worn ratchet guide

Defective clutch ("L" and "D")

Broken return spring

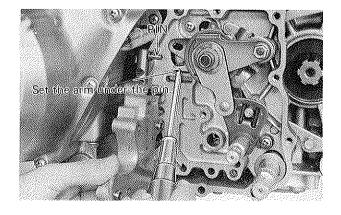
Shift spindle and case binding

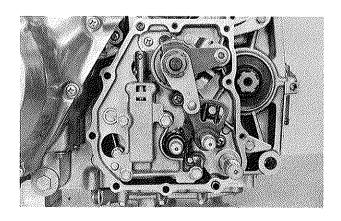
Defective neutral return mechanism

HONDA CB750A

DISASSEMBLY/ASSEMBLY

(1) Remove the shift pedal, neutral return arm and cover. CHANGE SWITCH 2.3-2.7 kg-m (16.6-19.5 lbs.-ft.) SHIFT PEDAL LEFT SIDE CASE RETURN ARM GEAR SHIF After assembling, adjust the neutral SHIFT STOPPE ARM return arm. (See page 4-22) 1.0-1.4 kg-m (7.2-10.1 lbs.-ft.) RATCHET GUIDE NEUTRAL GEAR SHIFT OUTER ARM A -GEAR SHIFT INNER SHIFT SPINDLE NEUTRAL KEEPING SPINDLE MANUAL VALVE

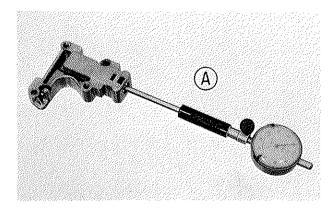


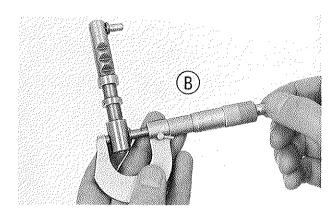


VALVE SHIFT MECHANISM

• 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.





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SERVICE INFORMATION

SPECIFICATIONS

Unit: mm (in.)

Item		Standard	Service Limit
L/D clutch initial clearance		0.5-0.8 (0.020-0.031)	2004
Clutch return spring free leng	th	39.7 (1.56)	36.0 (1.42)
Clutch disc thickness		1.95-2.05 (0.0768-0.0807)	1.9 (0.075)
Clutch plate thickness		1.95-2.05 (0.0768-0.0807)	1.9 (0.075)
Clutch end plate thickness	(1)	1.8 (0.071)	1.6 (0.063)
	(2)	2.1 (0.083)	1.9 (0.075)
	(3)	2.4 (0.094)	2.2 (0.087)
	(4)	2.7 (0.106)	2.5 (0.098)
	(No mark)	3.0 (0.118)	2.8 (0.110)
	(6)	3.3 (0.130)	3.1 (0.122)

TORQUE VALUES

SPECIAL TOOL

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.) CLUTCH SPRING COMPRESSER 07960-6120000

TROUBLESHOOTING

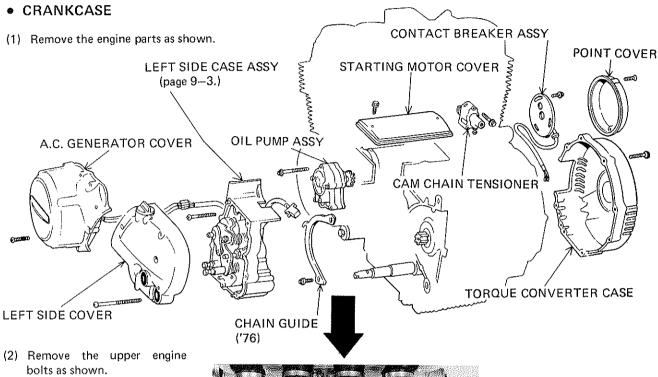
SYMPTOM Motorcycle will not start in "L" (start in "D") Motorcycle will not start in "D" (start in "L") Poor acceleration at start in "L" Damaged "D" gears Defective "D" clutch

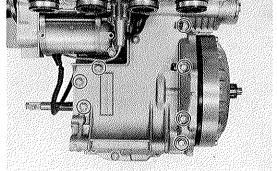
CRANKCASE

TRANSMISSION/CLUTCH



DISASSEMBLY/ASSEMBLY

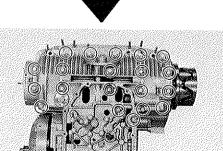




(3) Remove the lower engine bolts as shown.

NOTE

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

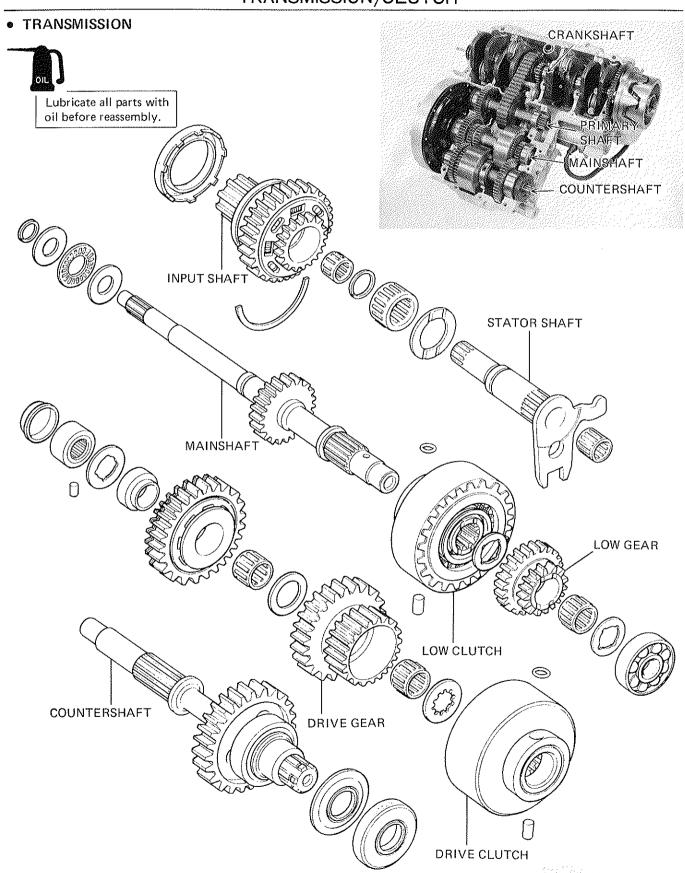


TIGHTENING TORQUE

8 mm: 2.0-2.5 kg-m (14.5-18.1 lbs.-ft.) 6 mm: 1.0-1.4 kg-m

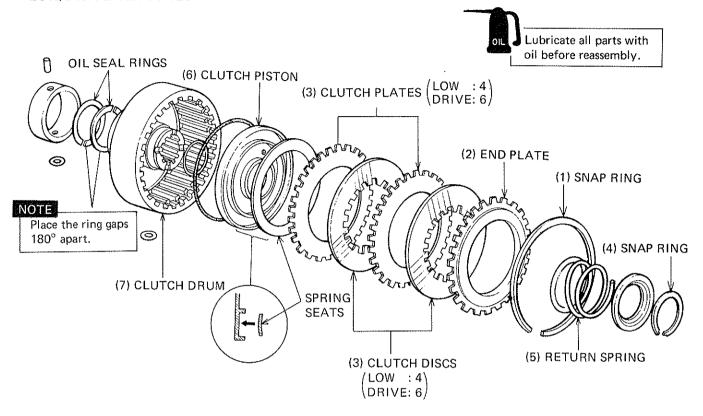
(7.2-10.1 lbs.-ft.)



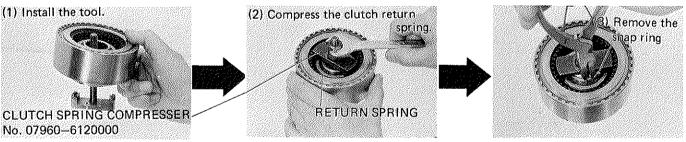


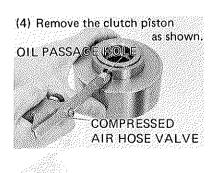


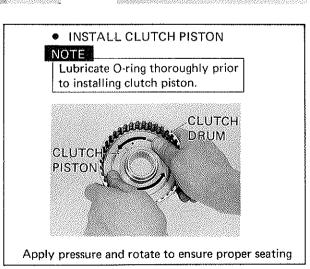
LOW/DRIVE CLUTCHES



REMOVE CLUTCH PISTON





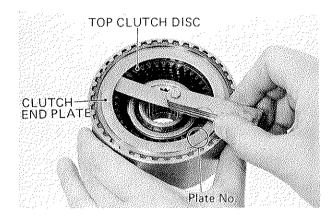


CLUTCH DISC PLATE ASSEMBLY

Measure clearance between the clutch end plate and top clutch disc.

NOTE

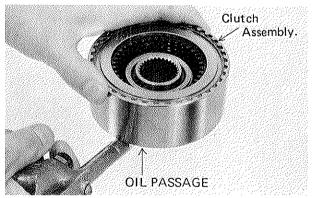
Take care not to damage the friction disc when measuring the clutch end clearance.



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.

Part No.	Plate No.	Thickness
22551612000	1	1.8 mm (0.071 in.)
22552-612-000	2	2.1 mm (0.083 in.)
22553-612-000	3	2.4 mm (0.094 in.)
22554612000	4	2.7 mm (0.106 in.)
22555-612-000	no mark.	3.0 mm (0.118 in.)
22556-612-000	6	3.3 mm (0.130 in.)



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.

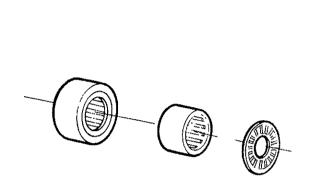


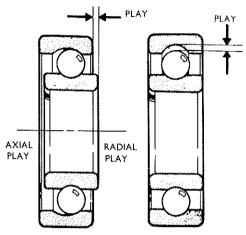
• INSPECTION

• NEEDLE BEARING

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

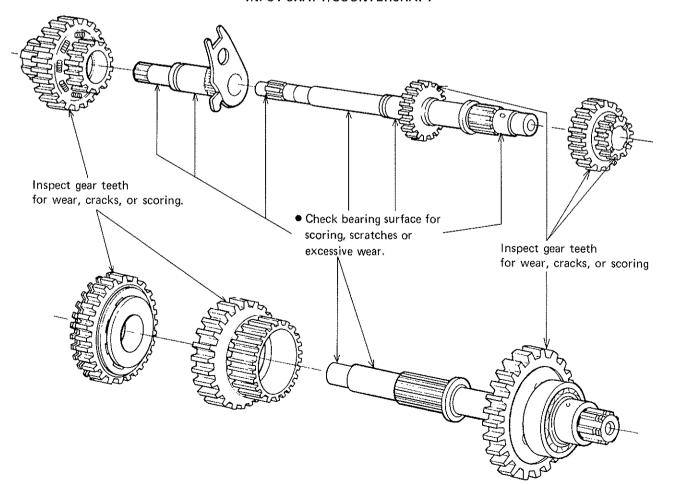
BALL BEARING





Replace if excesively worn.

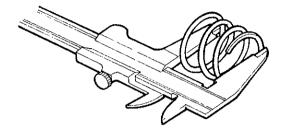
MAINSHAFT/GEARS/STATOR SHAFT/ INPUT SHAFT/COUNTERSHAFT

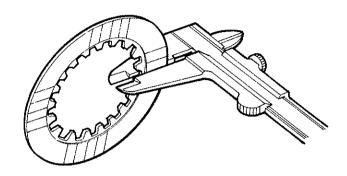




CLUTCH RETURN SPRING FREE LENGTH

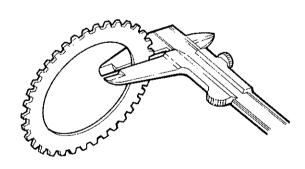
• CLUTCH DISC THICKNESS



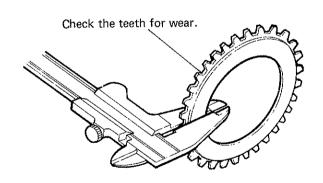


39.7 mm (1.56 in.) Service Limit: 36.0 mm (1.42 in.) 1.95-2.05 mm (0.0768-0.0807 in.) Service Limit: 1.9 mm (0.075 in.)

CLUTCH PLATE THICKNESS



• CLUTCH END PLATE THICKNESS



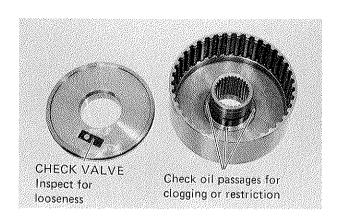
Part No.	Thickness	Service Limit
1	1.8 mm (0.071 in.)	1.6 mm (0.063 in.)
2	2.1 mm (0.083 in:)	1.9 mm (0.075 in.)
3	2.4 mm (0.094 in.)	2.2 mm (0.087 in.)
4	2.7 mm (0.106 in.)	2.5 mm (0.098 in.)
no mark	3.0 mm (0.118 in.)	2.8 mm (0.110 in.)
6	3.3 mm (0.130 in.)	3.1 mm (0.122 in.)

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

HONDA CB750A

TRANSMISSION/CLUTCH

• CLUTCH AND RELATED PARTS





12-1 SERVICE INFORMATION

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TROUBLESHOOTING

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DISASSEMBLY/ASSEMBLY

PRIMARY KICK 12-6

CONNECTING ROD

BEARING

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12-1

INSPECTION 12-7

SERVICE INFORMATION

SELECTION OF BEARING AND INSPECTION OF OIL CLEARANCE

- Always check the oil clearance after installing a new bearing.
- Use a chamois or lint-free cloth to clean the bearings.
- When installing a bearing, align the tab with the groove in the crankcase.
- Tighten the bearing cap in the correct sequence and to the correct torque.
- Do not file or sand the crankshaft journals and crankpins.
- 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.
- After assembling, check the engine idle speed.

SPECIFICATIONS

Unit:	mm	(in.)	
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Item	Standard	Service Limit
Crankshaft runout	0.03 (0.0012)	0.05 (0.002)
Crankshaft journal out of round	0.005 (0.0002)	0.010 (0.0004)
Crankshaft journal taper	0.005 (0.0002)	0.010 (0.0004)
Crankshaft journal oil clearance	0.02-0.04 (0.0008-0.0016)	0.08 (0.0031)
Crankshaft journal O.D.	35.99-36.00 (1.4169-1.4173)	35.94 (1.415)
Crankpin O.D.	35.99-36.00 (1.1469-1.4173)	35.94 (1.415)
Connecting rod small end oil clearance	0.02-0.04 (0.0008-0.0016)	0.08 (0.0031)
Connecting rod side clearance	0.15-0.30 (0.0059-0.0118)	0.40 (0.0157)

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

POSSIBLE CAUSE

Engine starts but stops soon

Burnt main bearing Burnt connecting rod

Hard starting

Main bearing worn or damaged Connecting rod worn or damaged

Engine cranks but will not start

Crankpin worn

Connecting rod not installed properly

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MAIN BEARING

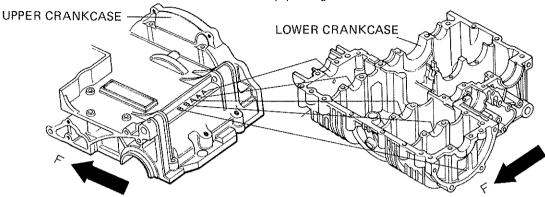
CRANKSHAFT/CONNECTING ROD/ PRIMARY SHAFT/KICK STARTER



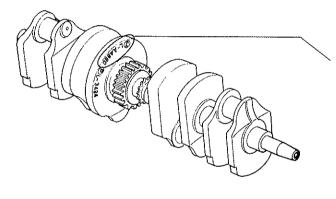
MAIN BEARING SIZE NUMBER LOCATION

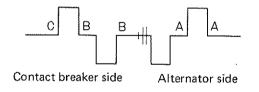
The crankcase main bearing size numbers are punched on the rear side of the upper crankcase.

A,B,C are given from the left side of the crankcase.



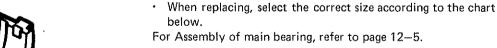
CRANKPIN SIZE MARK LOCATION





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.



Selection table of crankshaft bearing

(Oil clearance 20~46µ) Crankshaft c Journal 360 Crankcase -0.005~-0.010 -0.010~-0.015 allowance 39¢ +0.024 (BROWN) (BROWN) (BLACK) ± 0.016 +0.016(GREEN) (GREEN) (BROWN) +0.008+0.008 (YELLOW) (YELLOW) (GREEN)



MAIN BEARING

When assembling, use the main bearing having the same mark.

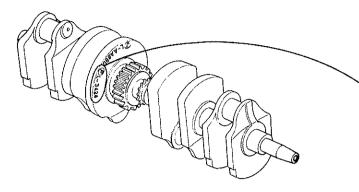
Color

identification



CONNECTING ROD 12 BEARING

CRANKPIN INDEX MARK LOCATION



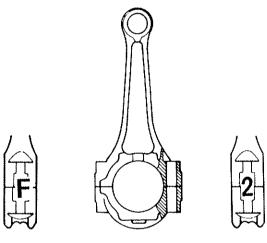
The crankpin index marks are stamped on the left side of the crankshaft weight and is located in the same position as the crankshaft journal size marks.

(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.

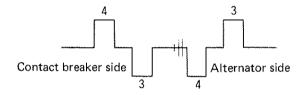
 WEIGHT IDENTIFICATION OF CONNECTING RODS



 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

MARK	PARTS NO.
D	13204-300-000
F	13206-300-000
J	13208300000



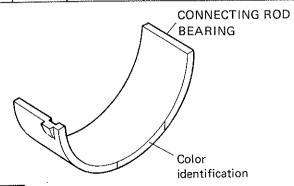
 When replacing, select the same mark of the connecting rod and the proper metal according to the charts given below.

For assembly of connecting rod bearing, refer to page 12-5.

Selection table of connecting rod bearing

(Oil clearance 20~46µ)

\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	renk pin aliowance 363	3	4	5
	ecting llowance 39¢	0 ~-0.005	-0.005~-0.010	-0.010~-0.015
3	+0.024 +0.016	B (BROWN)	B (BROWN)	A (BLACK)
2	+0.016 +0.008	C (GREEN)	C (GREEN)	B (BROWN)
1	+0.008	D (YELLOW)	D (YELLOW)	C (GREEN)

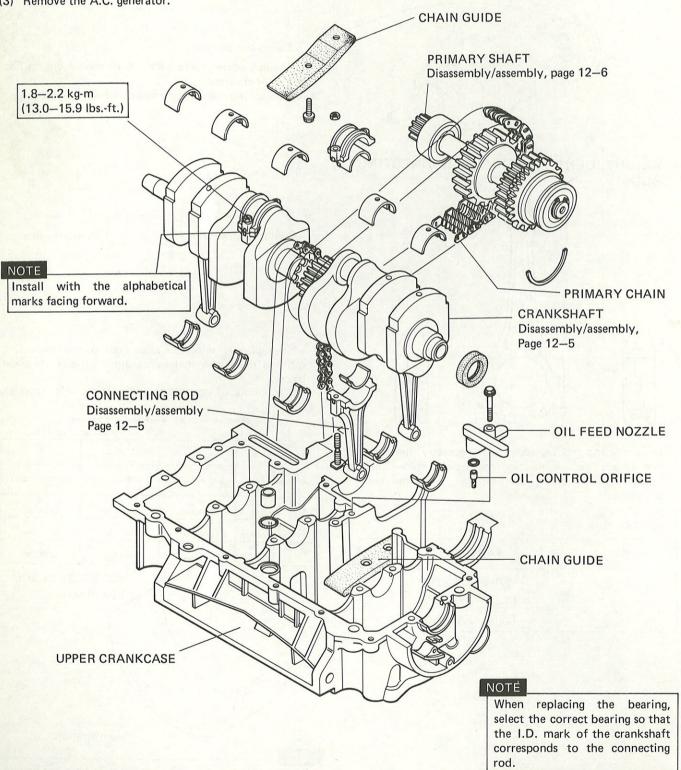


NOTÉ

When assembling, use the connecting rod bearing having the same mark.

• DISASSEMBLY/ASSEMBLY

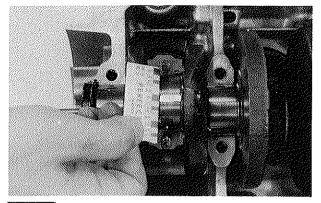
- (1) Remove the lower crankcase.
- (2) Remove the cylinder and the pistons.
- (3) Remove the A.C. generator.





BEARING ASSEMBLY

CONNECTING ROD BEARING ASSEMBLY



NOTE

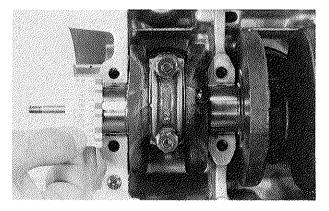
Do not rotate the crankshaft during the inspection and tighten connecting rod cap, to the specific torque.

- (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.

	Bearing Clearance	Standard 0.02-0.04 mm (0.0008-0.0016 in.)
		Service Limit 0.08 mm (0.0031 in.)

* 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.

MAIN BEARING ASSEMBLY



NOTE

Do not rotate the crankshaft during the inspection and tighten each nut in \boldsymbol{X} pattern to the specific torque.

- (1) Remove the caps and bearings.
- (2) Lay a strip of plastigage lengthwise on the crankshaft journal. Install cranshaft.
- (3)Install the lower crankcase.

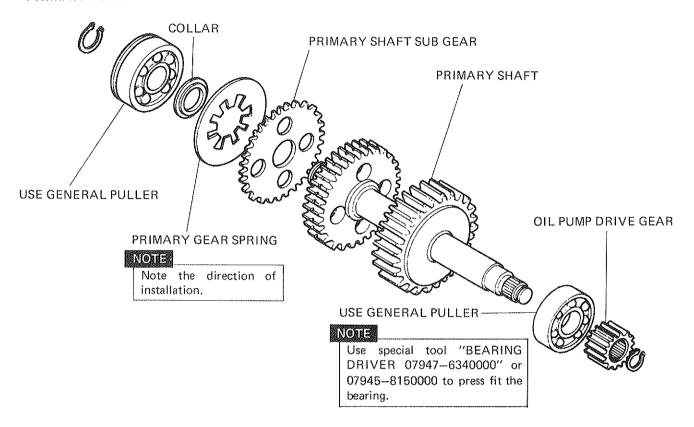
 Install the crankcase bolts, tightening to 2.3–2.5 kg-m (16.6–18.1 lbs-ft.).
- (4) Remove the lower crankcase and measure the amount of widest flattening with the scale printed on the gauge bag.

Bearing	Standard 0.02-0.04 mm (0.0008-0.0016 in.)
Clearance	Service Limit 0.08 mm (0.0031 in.)

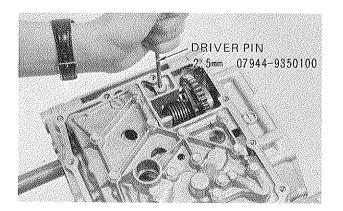
* If the bearing clearance is beyond tolerance, check the crankcase and journal for wear. If they are not worn, replace the bearings with the undersize bearings and recheck the clearance.



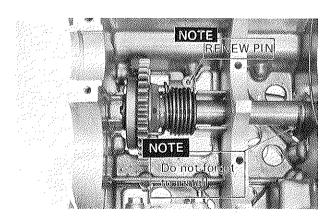
PRIMARY SHAFT



- PRIMARY KICK
- DISASSEMBLY



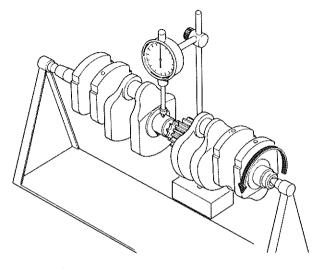
ASSEMBLY





INSPECTION

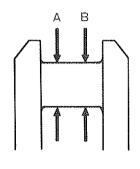
CRANKSHAFT RUNOUT

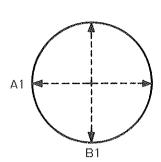


CRANKSHAFT RUNOUT

0.03 mm (0.0012 in.) Service Limit: 0.05 mm (0.002 in.) **TAPER**

OUT OF ROUND





CRANKSHAFT JOURNAL/CRANKPIN O.D.

35.99-36.00 mm (1.4169-1.4173 in.) Service Limit: 35.94 mm (1.415 in.)

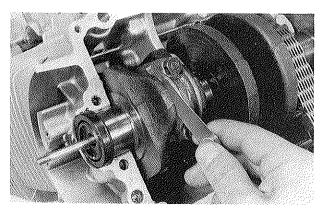
CRANKSHAFT JOURNAL TAPER

0.005 mm (0.0002 in.) Service Limit: 0.010 mm (0.0004 in.)

CRANKSHAFT JOURNAL OUT OF ROUND

0.005 mm (0.0002 in.) Service Limit: 0.010 mm (0.0004 in.)

CONNECTING ROD SIDE CLEARANCE



0.15-0.30 mm (0.0059-0.0118 in.) Service Limit: 0.40 mm (0.0157 in.)

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



SERVICE INFORMATION 13-1

13—1

DISASSEMBLY/

TROUBLESHOOTING

ASSEMBLY 13—2

ADJUSTMENT 13-5

●FLOAT HEIGHT 13—5

• ACCELERATOR PUMP 13-6

● IDLE MIXTURE 13—7

• ALTITUDE

ADJUSTMENT 13-7

INSPECTION 13—8

SERVICE INFORMATION

CARBURETOR SETTING CHART

	'76 model	'77 model	'78 model
Item Setting No.	PD44A	PD44B	PD43A
Standard main jet No.	102	108	<
Standard slow jet No.	38	<	
Standard air jet No.	150	200	200
Standard slow air jet No.	150	<	
Standard jet needle setting	3rd notch	<	
Pilot screw opening	1 1/4 turn	1 turn	1 1/8 turn
Float height	14.5 mm (0.571 in.)	12.5 mm (0.492 in.)	<
Idle speed	950 ± 100 rpm/N	←	

TROUBLESHOOTING

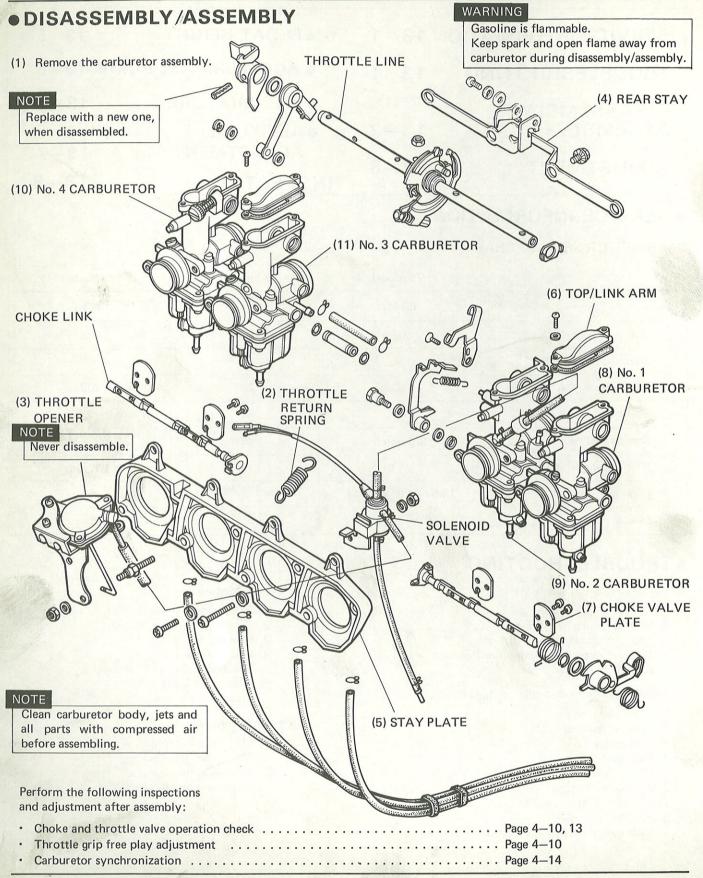
- Engine Cranks But Won't Start
 - 1. No fuel in tank
 - 2. No fuel getting to cylinders
 - 3. Too much fuel getting to cylinders
 - 4. No spark at plugs -- (ignition malfunction)
 - 5. Air cleaner clogged
- Engine Idles Roughly, Stalls, or Runs Poorly
 - 1. Idle speed incorrect
 - 2. Ignition malfunction
 - 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

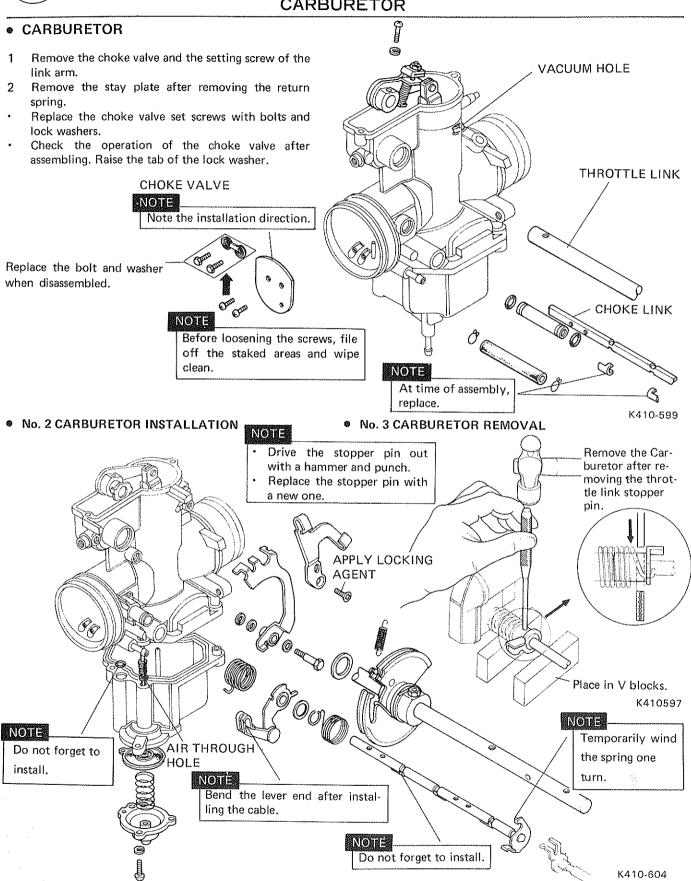
Lean Mixture

- 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

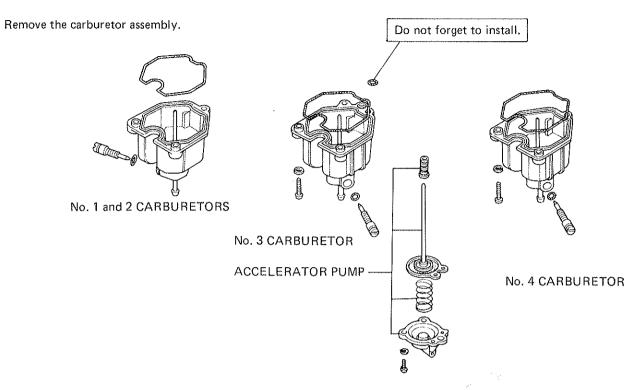
- 1. Choke stuck closed
- 2. Float valve defective
- 3. Float level too high
- 4. Carburetor air jets clogged





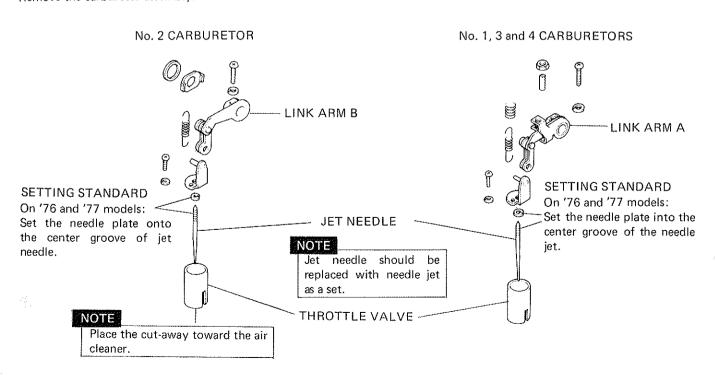


FLOAT CHAMBER



THROTTLE VALVE

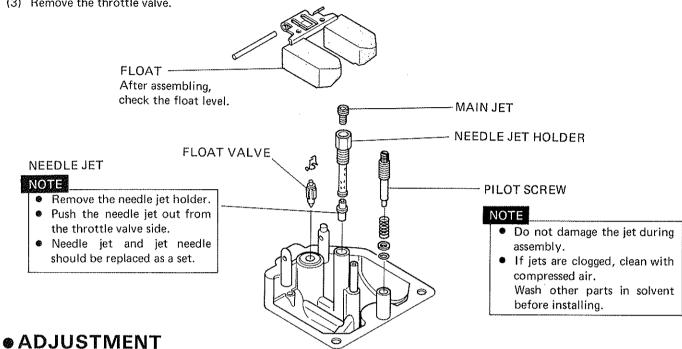
Remove the carburetor assembly.





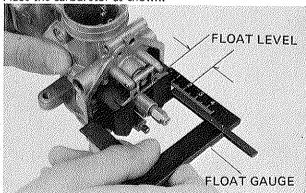
FLOAT, FLOAT VALVE AND JETS

- (1) Remove the carburetor.
- (2) Remove the float chamber.
- (3) Remove the throttle valve.



FLOAT LEVEL INSPECTION AND **ADJUSTMENT**

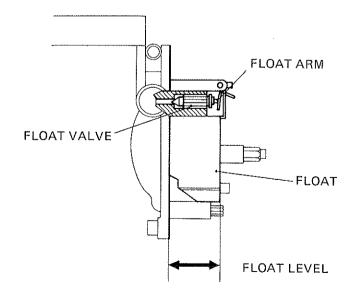
Place the carburetor as shown.



FLOAT LEVEL

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

If out of specification, adjust the float level by bending the float

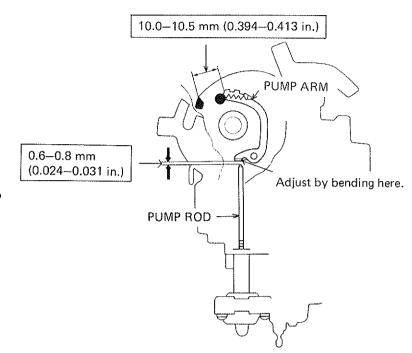


ACCELERATOR PUMP

PUMP ROD-TO-PUMP ARM CLEARANCE

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

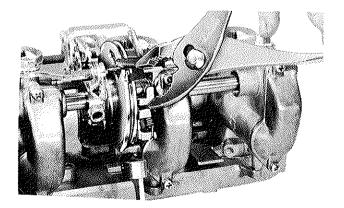
(4) To adjust, bend the pump arm tongue.



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.



• 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

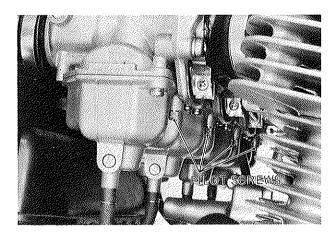
This is a preliminary setting prior to final Pilot Screw Adjustment.

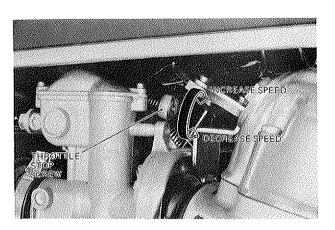
CAUTION

Damage to the pilot screw seat will occure 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. Stopand-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.



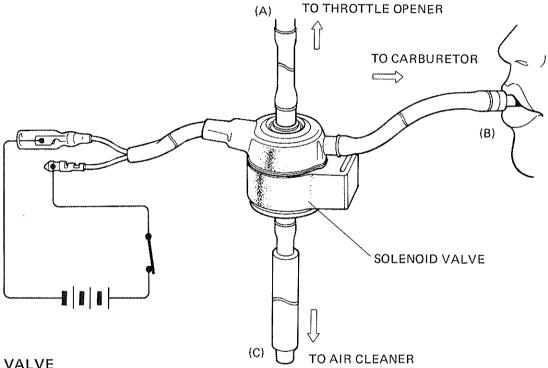




INSPECTION

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).

