



HONDA

SHOP MANUAL

NC 50



**HONDA
NC50**

FOREWORD

This shop manual describes the technical features and servicing procedures for the HONDA NC50.

This shop manual employs a new approach to servicing and repair instruction. Instead of employing step-by-step descriptions of procedures, illustrations are used to set forth procedures. Commonly known information is excluded as much as possible from the manual and written instructions are concise.

Illustrations and explanations are closely interrelated so that the reader can grasp the meaning rapidly and clearly.

We invite your questions or comments concerning this new approach to shop manual preparation.

HONDA MOTOR CO., LTD.
Service Publications Office

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HONDA
NC50



MEMO

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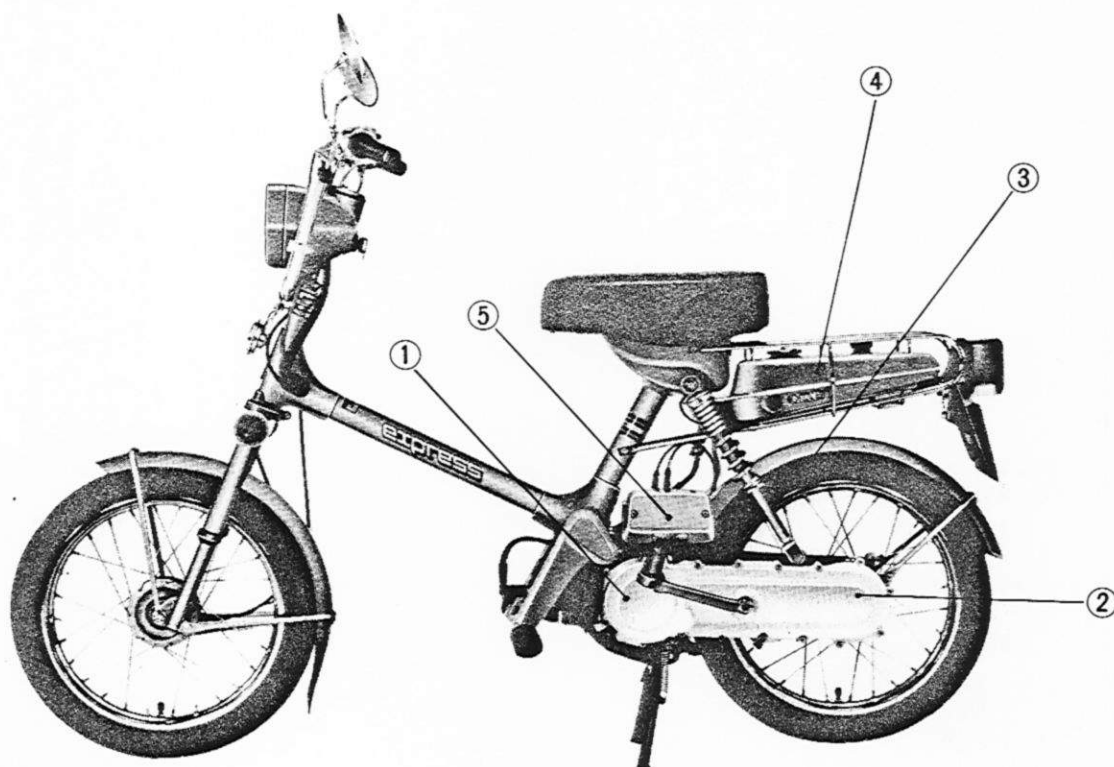


The Honda NC 50 is powered by a 2-stroke, 49 cc, crankcase scavenged gasoline engine with two reed valves incorporated in the intake port.

Limited maintenance items and simplified service procedures provided a "maintenance-free" model design.

A new starting mechanism design simplifies starting.

- ① Starting is made easier with the use of a starting spring which stores power for cranking the engine.
- ② The power train is enclosed in the left crankcase with an oil bath to lubricate the components. The engine and L crankcase swing up and down as a unit, with a pivot in the pipe frame.
- ③ The rear wheel is suspended by one rear shock absorber on the left side combined with the L crankcase.
- ④ Since an independent lubrication system is employed, fuel and oil are separately filled in to the gasoline tank.
- ⑤ A high-performance plunger type pump is utilized for lubrication purposes.



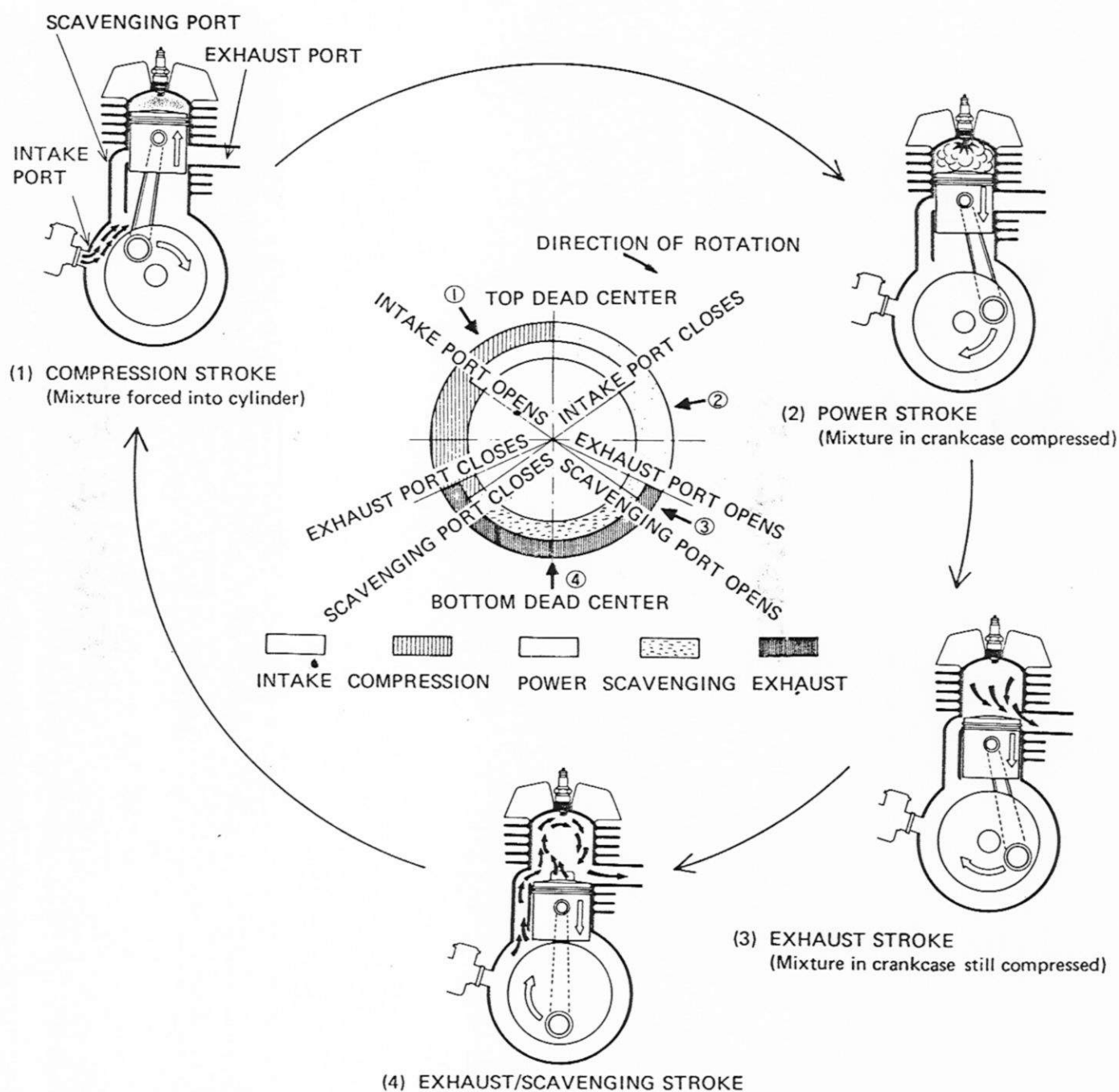
(U. S. A. type)



2-STROKE ENGINE FUNDAMENTAL

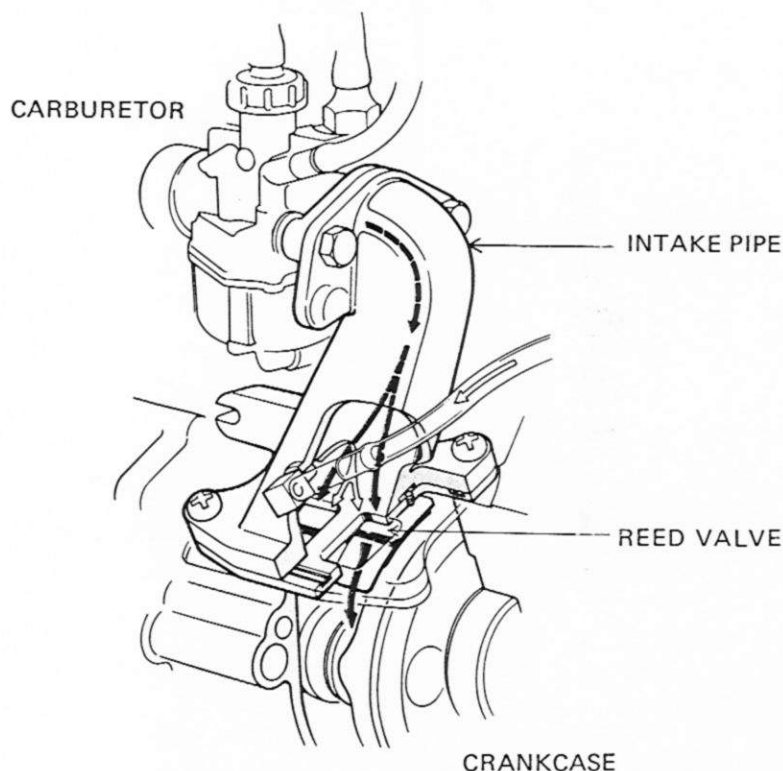
In most 2-stroke engines, the mixture is drawn first into the crankcase and then forced into the cylinder by the pressure build-up which results from the down movement of the piston. This forces the exhaust gases out through the exhaust port. Unlike a 4-stroke engine, when firing occurs in the cylinder, some of the exhaust gases remain mixed in the fuel mixture. Therefore, the performance of a 2-stroke engine is dependent upon the timing of absorbing the mixture into the crankcase and the scavenging efficiency of the exhaust gases by the pressurized fuel mixture.

(2-STROKE CYCLE PRINCIPLE)

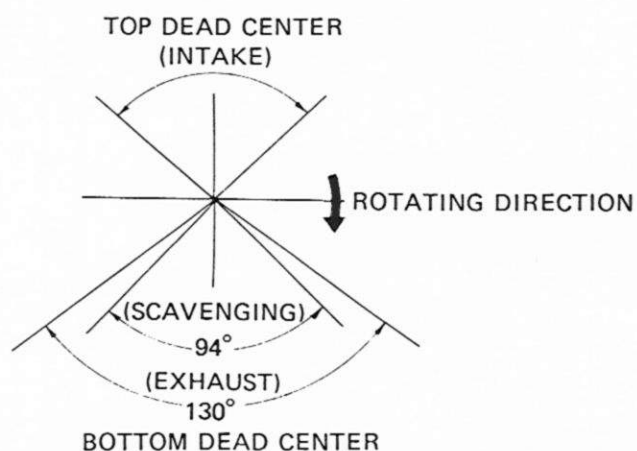
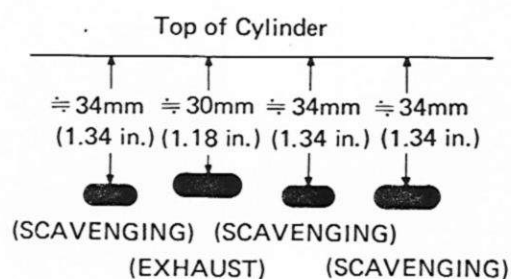


**(PORT TIMING)**

Two -cycle port timing is determined by the port locations in the cylinder. On the NC50, the intake port is provided with a pair of reed valves shaped to give optimum port timing throughout the speed range. Reed valve use prevents a reverse flow of mixture from the crankcase into the carburetor and assures improved performance even at moderate and low speeds.

(REED VALVE CONSTRUCTION)**(LOCATION OF PORTS IN CYLINDER)****— NC50 TWO-STROKE PORT AND VALVE TIMING —**

Opening and closing crankshaft angles are given below:

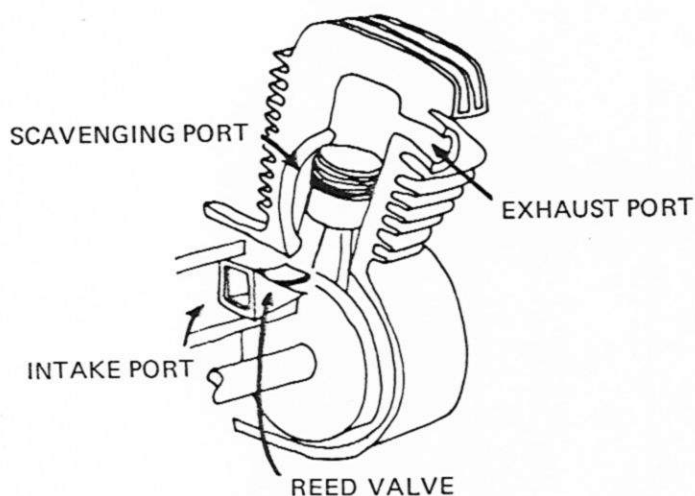




1. 2-STROKE PORT AND VALVE ARRANGEMENT

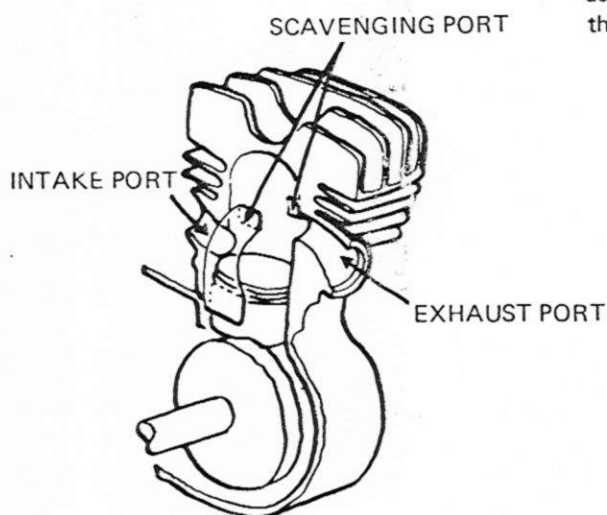
2-stroke port and valve arrangement are: 1) Reed valve, 2) Piston valve, and 3) Rotary valve. On the NC50, a pair of thin reed valves is utilized for each intake port. Opening and closing of the exhaust ports is actuated by the up and down movement of the piston in the cylinder.

NC50 PORT AND VALVE ARRANGEMENT



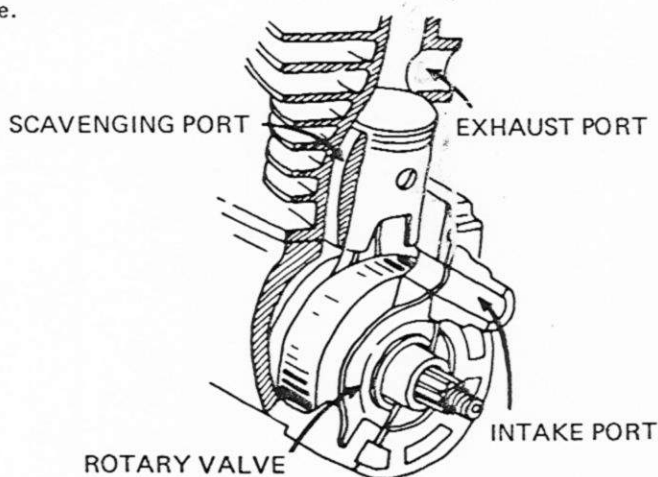
(1) REED VALVE TYPE

A thin plate opens and closes the intake port when differential pressure takes place across the intake passage and the engine crankcase.



(2) PISTON VALVE TYPE

The intake ports in the cylinder wall are opened and closed by the piston as it moves up and down.



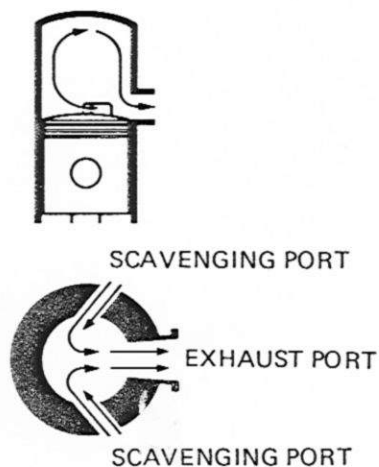
(3) ROTARY VALVE TYPE

A rotary disc plate with a slot closes and opens the intake port in the crankcase wall. In some installations, the crank web is used to open and close the port.



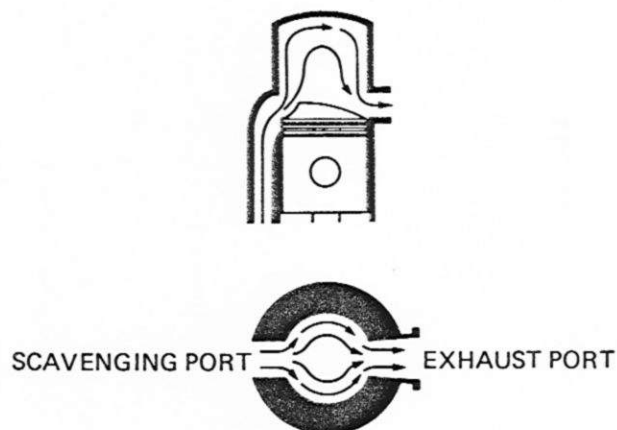
2. SCAVENGING

Three methods of scavenging are commonly used. The NC50 utilizes loop scavenging with three scavenging ports.



(1) LOOP TYPE SCAVENGING

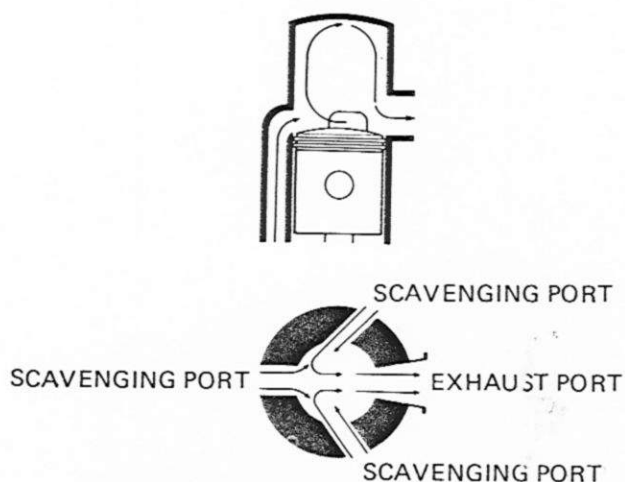
The Schnuerle type, the mixture discharged into the cylinder through the scavenging ports is, by the angle of the port outlets, thrown against the wall opposite the exhaust port and bounced back, thus forcing the exhaust gas out of the port.



(2) CROSS SCAVENGING TYPE

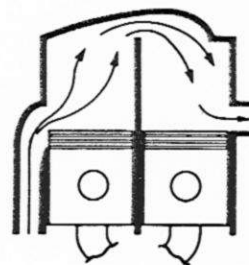
The specially designed piston crown or deflector acts as a guide to allow the mixture to flow up and then down to the exhaust port in the opposite side of the cylinder.

NC 50 SCAVENGING



NOTE

HONDA NC50 EMPLOYS THE SCHNUERLE TYPE, ONE OF THE LOOP METHODS, BUT THREE SCAVENGING PORTS INSTEAD OF TWO ARE PROVIDED IN ORDER TO ASSURE STEADY SCAVENGING EFFECT.



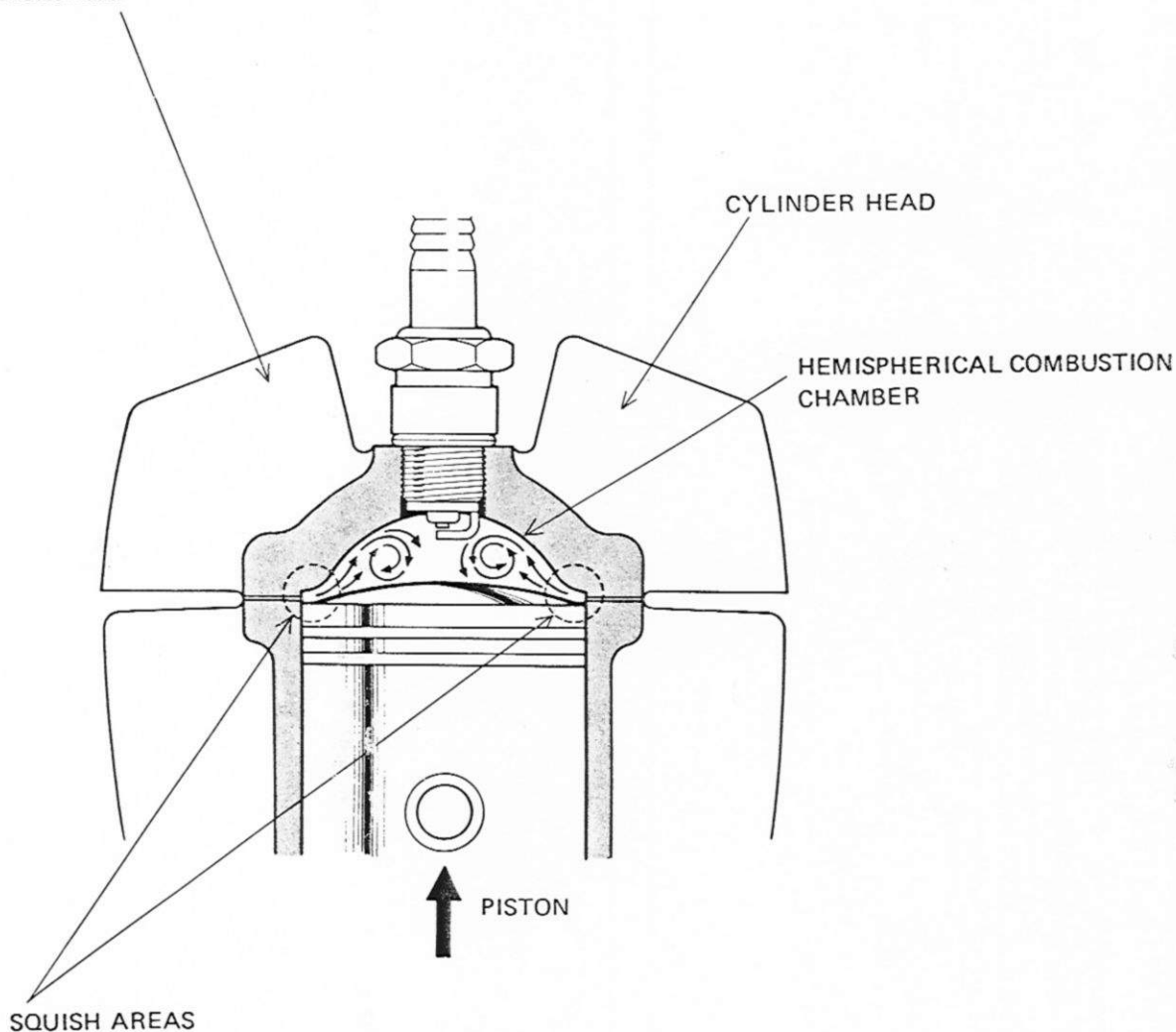
(3) UNIFLOW TYPE SCAVENGING

One opening interconnects the two combustion chambers at the top. Scavenging port is provided in one cylinder and an exhaust port in the other cylinder so that the scavenging flow runs in one way without entanglement.



1. CYLINDER HEAD

Two-cycle engines run hotter than four-cycle engines since each upward movement of the piston is a compression stroke and each downward movement is a power stroke. The cylinder is a sturdy, one-piece aluminum casting with rows of fins to dissipate excess heat.

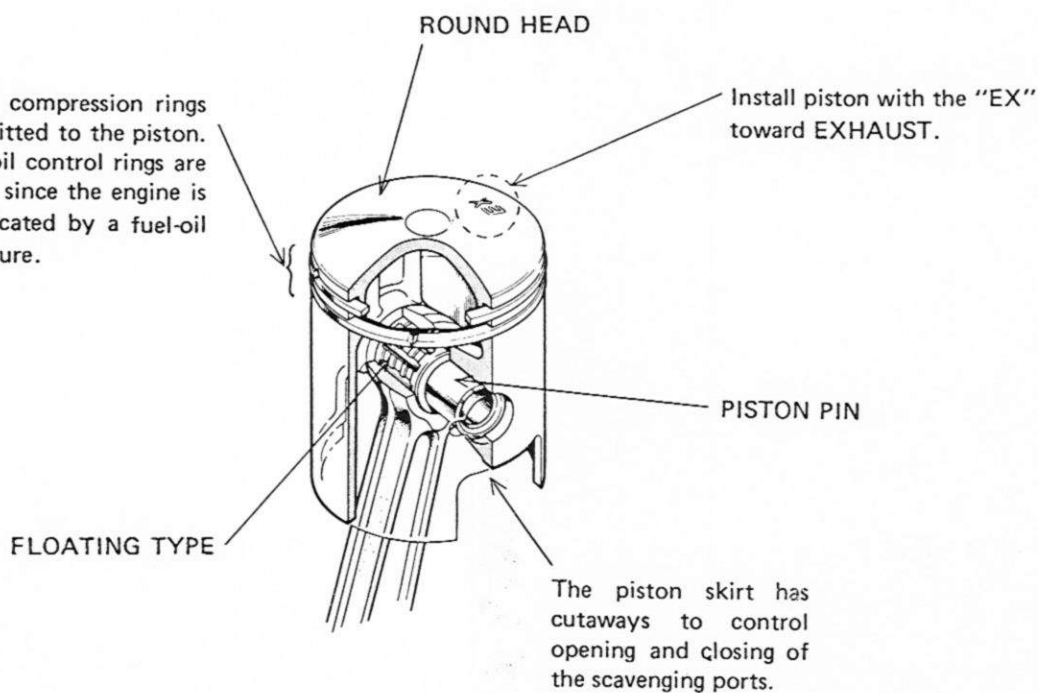


A clearance, called a squish area, is provided all along the chamber circumference between the piston at TDC and the cylinder head, where the mixture is under higher pressure than the other area. This causes the mixture in the squish area to rush toward the center, making the burning steadier, assuring high burning efficiency and minimizing carbon formation.



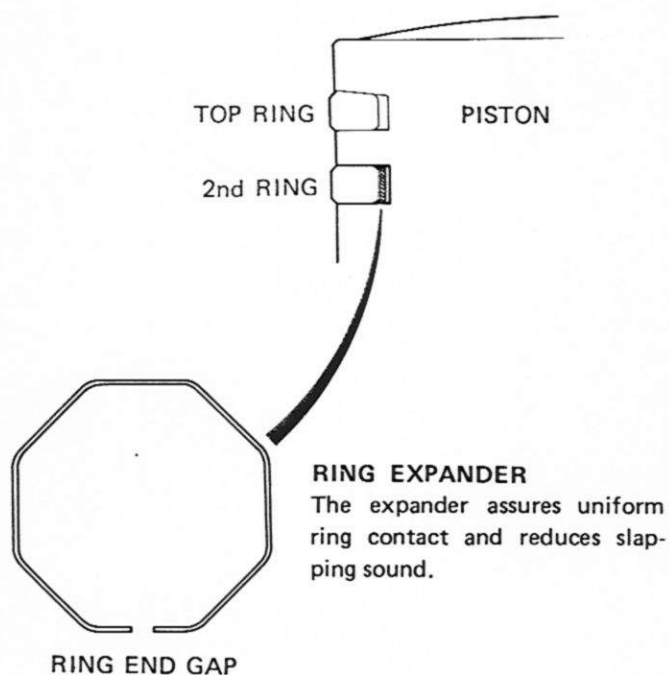
2. PISTON

Two compression rings are fitted to the piston. No oil control rings are used since the engine is lubricated by a fuel-oil mixture.



PISTON RING DOWEL

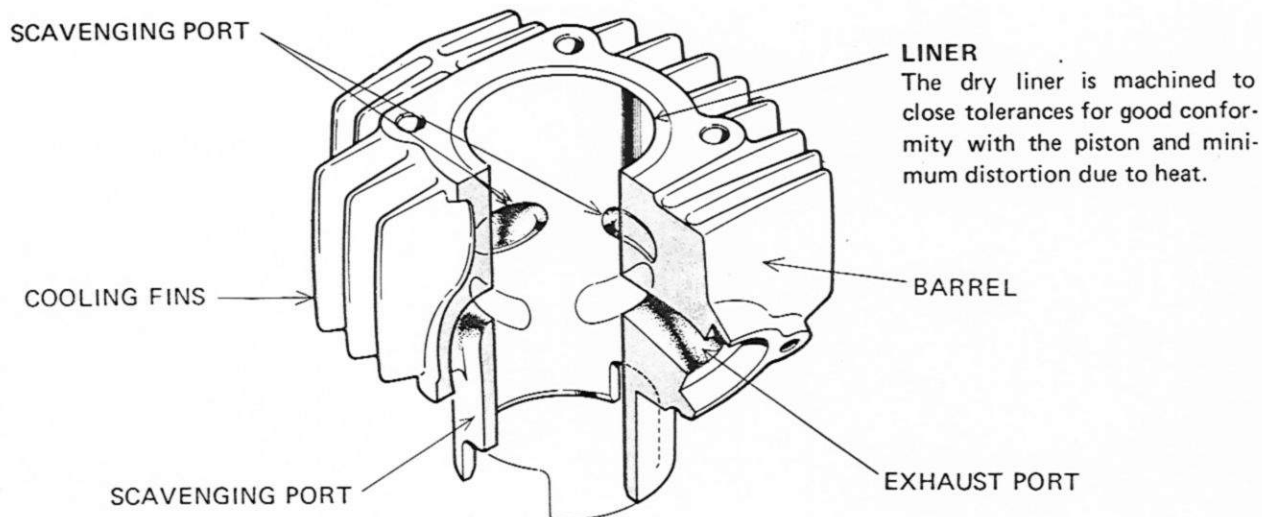
A piston ring dowel is press fitted to each ring groove to set the ring in place. After fitting the ring in the ring groove, check that the dowel engages the ring end gap properly.





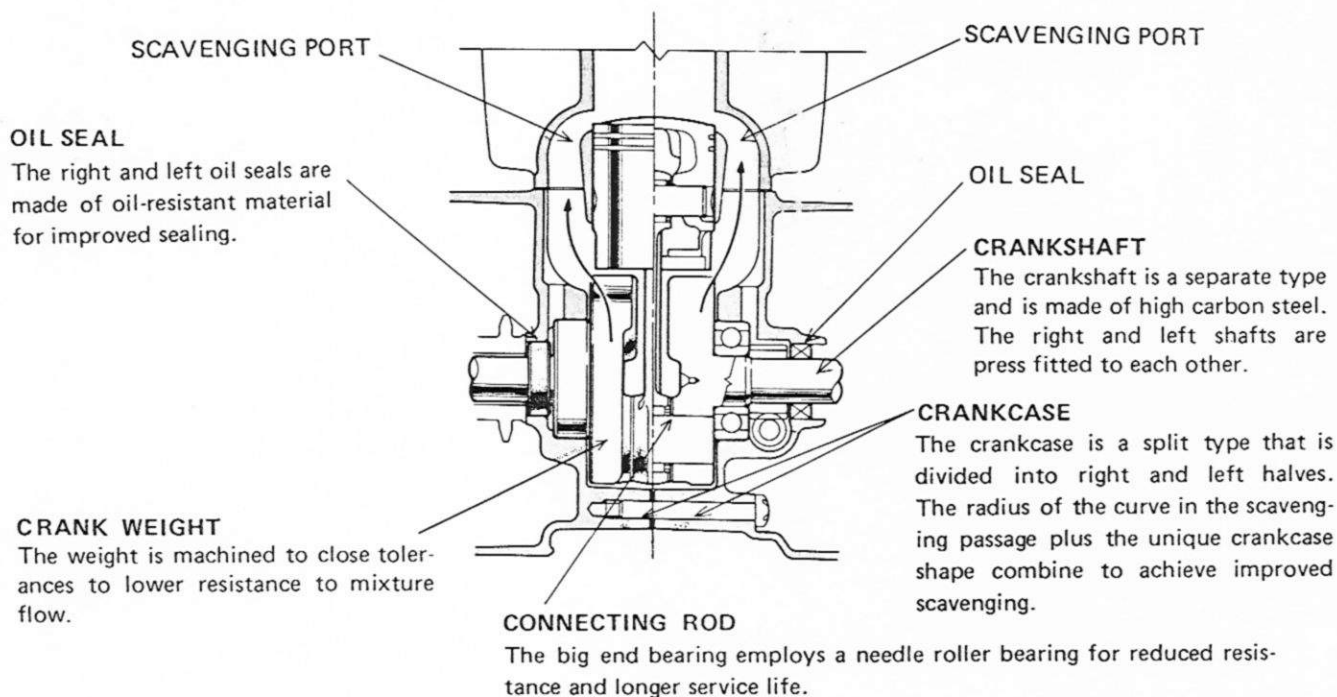
3. CYLINDER

The cylinder block is designed so that maximum rigidity with minimum distortion characteristics are accomplished in an aluminum casting. The block employs a dry liner which is in full-face contact with the block for good heat conduction. The cylinder ports are arranged to provide the most effective breathing and easiest exhaust gas explosion.



4. CRANKSHAFT/CRANKCASE

The crankcase is of airtight construction with less resistance to mixture flow. It is designed to offer effective scavenging to blow remaining exhaust gases out in the cylinder and to provide an effective mixture for the next cycle.





STARTING SYSTEM / POWER TRANSMISSION SYSTEM

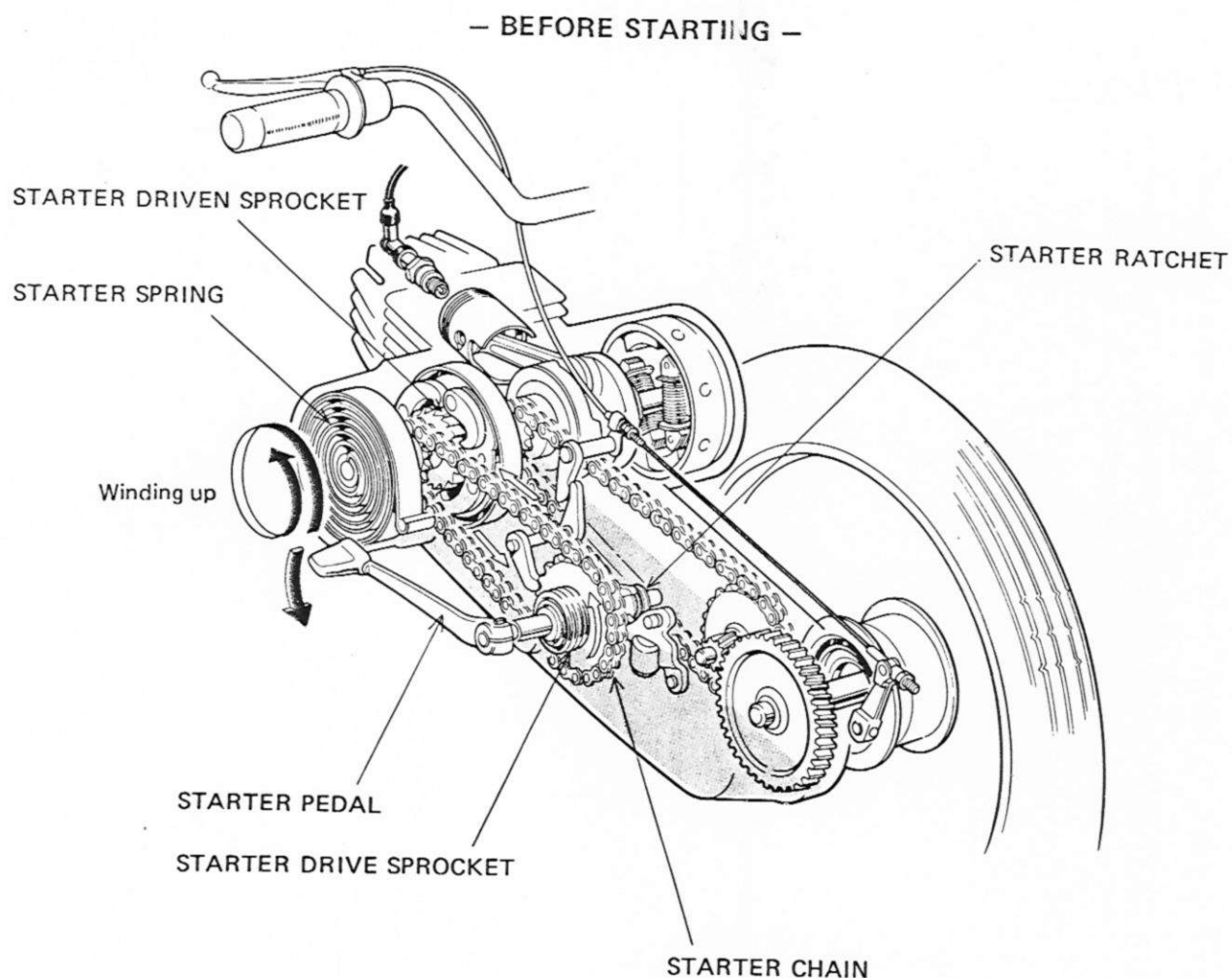
The NC50 is not equipped with a transmission. Starting is accomplished by a foot pedal located at the left side of the motorcycle. The entire starting system consists of the foot pedal, starter spring, starter drive and driven sprockets and starter chain. These are bathed in oil in a sealed case.

(BEFORE STARTING)

Starter pedal → Starter ratchet → Starter drive sprocket → Starter chain → Starter driven sprocket → Starter spring → Energy stored in starter spring (motorcycle is ready for starting)

(STARTING)

Rear brake lever → Brake cable → Starter lever → Starter arm → Starter spring (releasing stored energy) → Starter driven sprocket → Drive plate → Engine crankshaft → Start

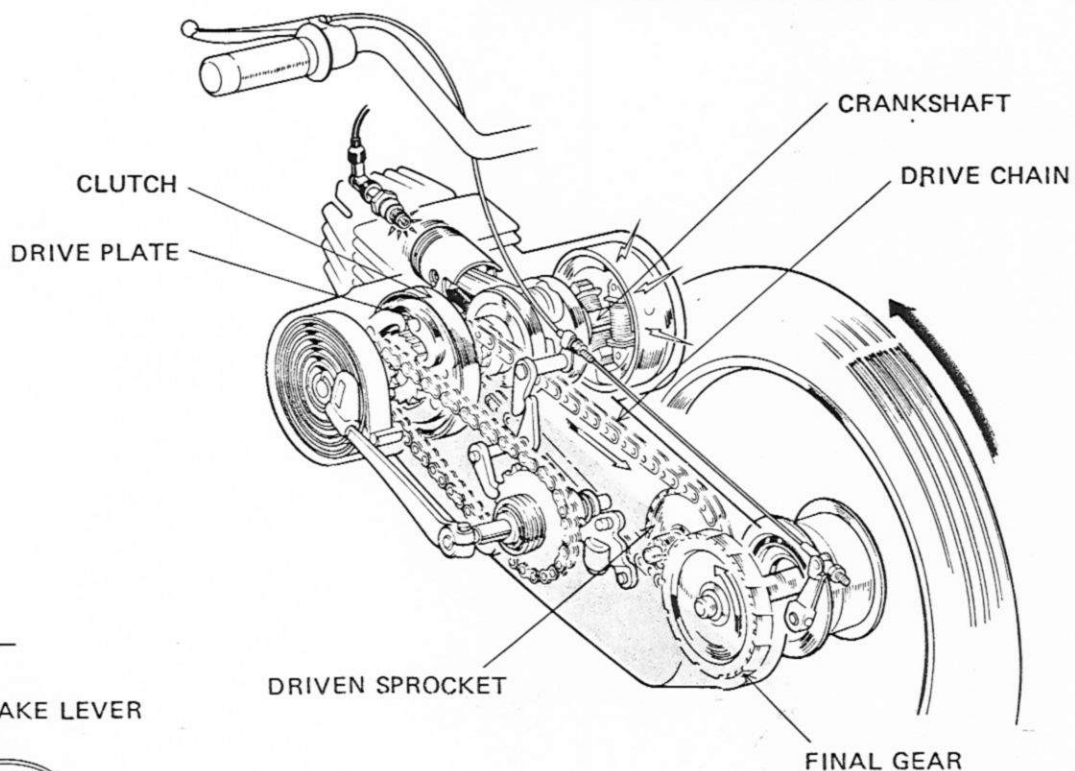




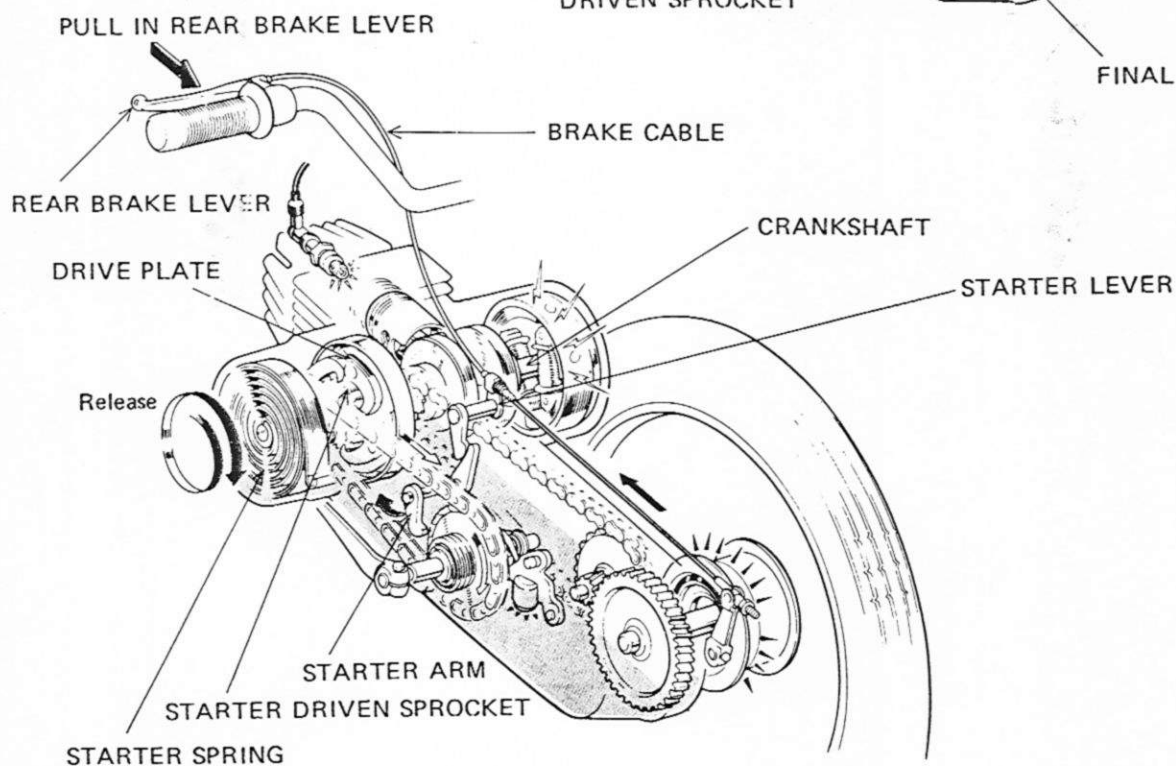
(POWER TRANSMITTING SYSTEM)

Crankshaft → Drive plate → Clutch → Drive chain → Driven sprocket → Final Gear → Rear wheel

— POWER TRANSMITTING SYSTEM —



— STARTING —



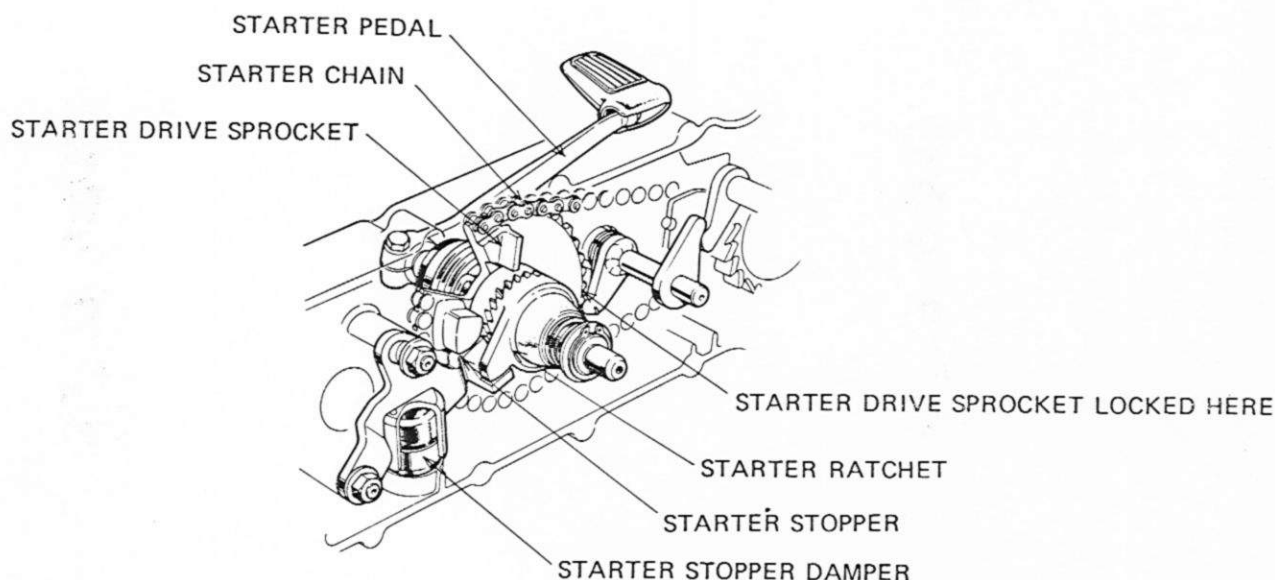


1. STARTER DRIVE SPROCKET

The starter drive sprocket transmits energy to the starter spring through the starter chain. It also keeps the spring compressed until the rear brake lever is pulled in for starting.

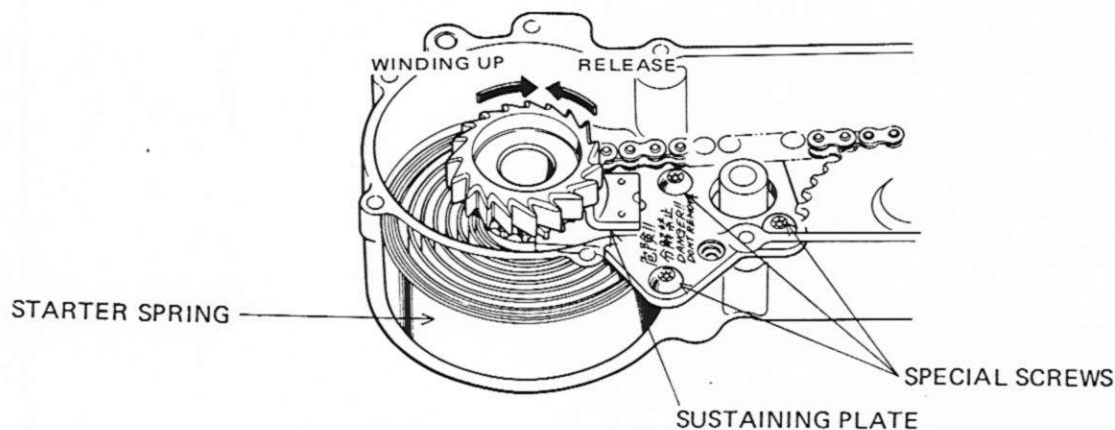
(OPERATION)

Pressure on the starter pedal is transmitted to the starter drive sprocket as described above. The starter ratchet then holds the spring compressed even if the pedal is released. The purpose of the starter drive sprocket is twofold: 1) To transmit energy to the starter spring through the ratchet, and 2) to keep the spring compressed until the rear brake lever is pulled in. As the starter spring is released, it causes the starter drive sprocket to turn until it bears against the stopper. The starter stopper damper absorbs shock on the stopper when the spring is released.



2. STARTER SPRING

On the NC50, the engine is started by releasing energy stored in the starter spring. The spring is held in place with a sustaining plate and special screws and cannot be disassembled in the field. Note that the spring will pop out when disassembled.





3. CLUTCH

A wet, centrifugal clutch with a drive plate couples and uncouples the engine to and from the power train. The drive plate incorporates a set of ratchet pawls and clutch weights to which the shoes are attached.

(OPERATION)

To start the engine, the starter pedal should be depressed several times. Thus, when the rear brake lever is pulled in, this action releases energy stored in the starter spring, causing the driven sprocket to rotate.

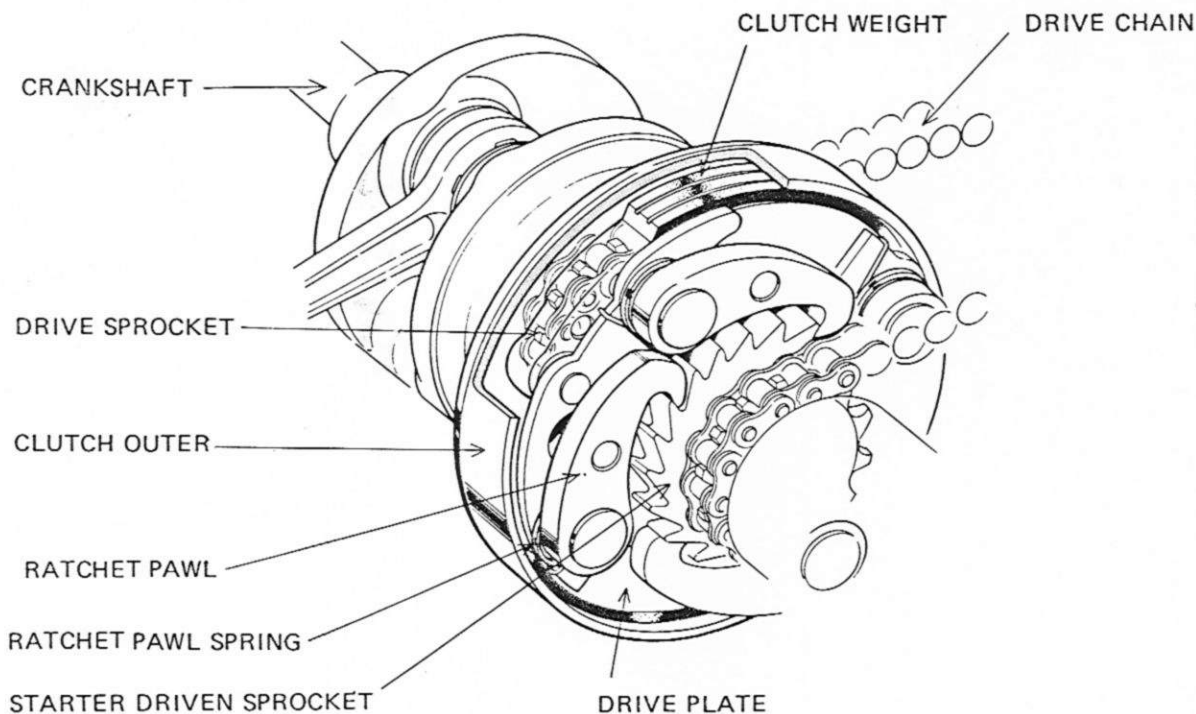
When the driven sprocket turns, the ratchet pawls engage the sprocket teeth. Since the drive plate is a tight taper fit to the stub end of the crankshaft, the crankshaft is rotated as the pawls engage the sprocket teeth; that is, the engine is started.

As the engine starts, centrifugal force on the ratchet pawls causes them to fly out and away from the drive sprocket. An equilibrium between the centrifugal force and the spring force is reached when the engine rotates at about 600 rpm, keeping the clutch off when idling.

As the crankshaft rotates, the clutch weights are also flung radially outward and come into contact with the clutch outer. Power from the starter spring is then transmitted to the drive chain via the drive sprocket.

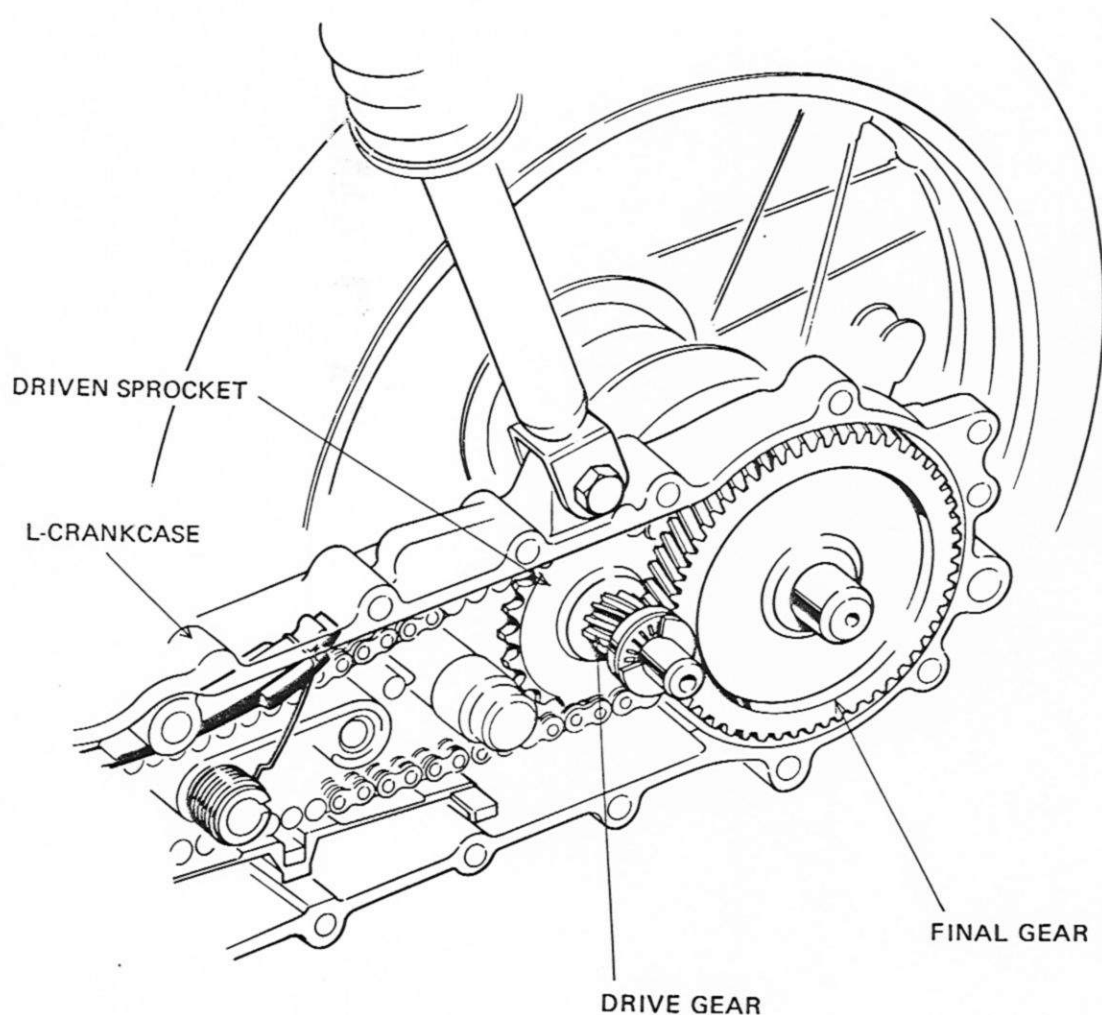
PERFORMANCE	IN	2,700 rpm
	LOCK	3,400 – 3,600 rpm
	OFF	2,500 rpm

* IDLE SPEED 1,800 rpm





4. The drive and final gears are of helical design for smoother, quieter operation over the entire speed range and engine loads (Reduction ratio: 73/11). The gears are bathed in oil stored in the L-crankcase. The case also serves as a rear fork that is integrated with the engine and is capable of swinging up and down to absorb shocks or vibrations when the rear wheel encounters bumps or irregularities in the road.





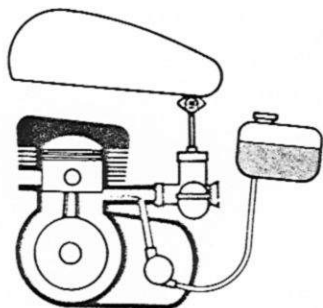
LUBRICATION SYSTEM

1. LUBRICATION SYSTEM OF 2-CYCLE ENGINE

Two-cycle crankcase scavenged engines have no storage space to hold the oil that is to be circulated (wet sump).

The lubricating system most commonly used on two-cycle crankcase scavenged engines may be dependent on "mixed" lube oil with fuel or on oil supplied through an independent channel into the crankcase.

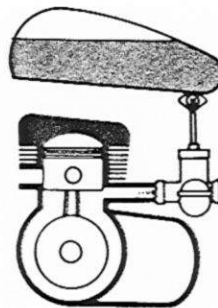
All bearings and moving parts are supplied with oil fed into the crankcase from a separate tank.



(1) SEPARATE LUBRICATION

All bearings and moving parts are lubricated by oil fed into the crankcase from an independent oil tank.

Oil pumps are used to force oil from the oil tank into the crankcase and to control the amount.

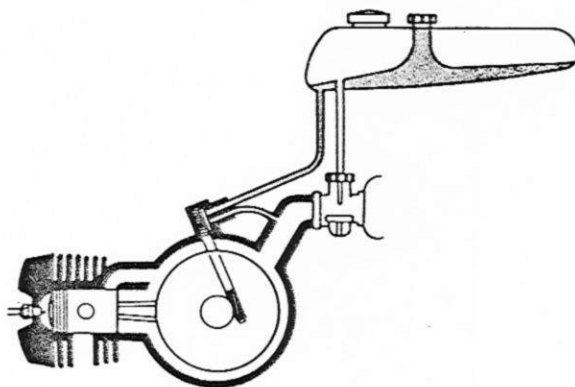


(2) "MIXED" LUBRICATION

Lube oil is mixed with fuel in the fuel tank in a designated proportion (usually 15:1 to 25:1). The oil-fuel mixture mixes with the air moving through the carburetor to form the final air-fuel mixture. The mixture containing air is forced into the crankcase and passes through the crankcase bearings, connecting rod large ends and cylinder, lubricating each component.

2. NC50 LUBRICATION SYSTEM

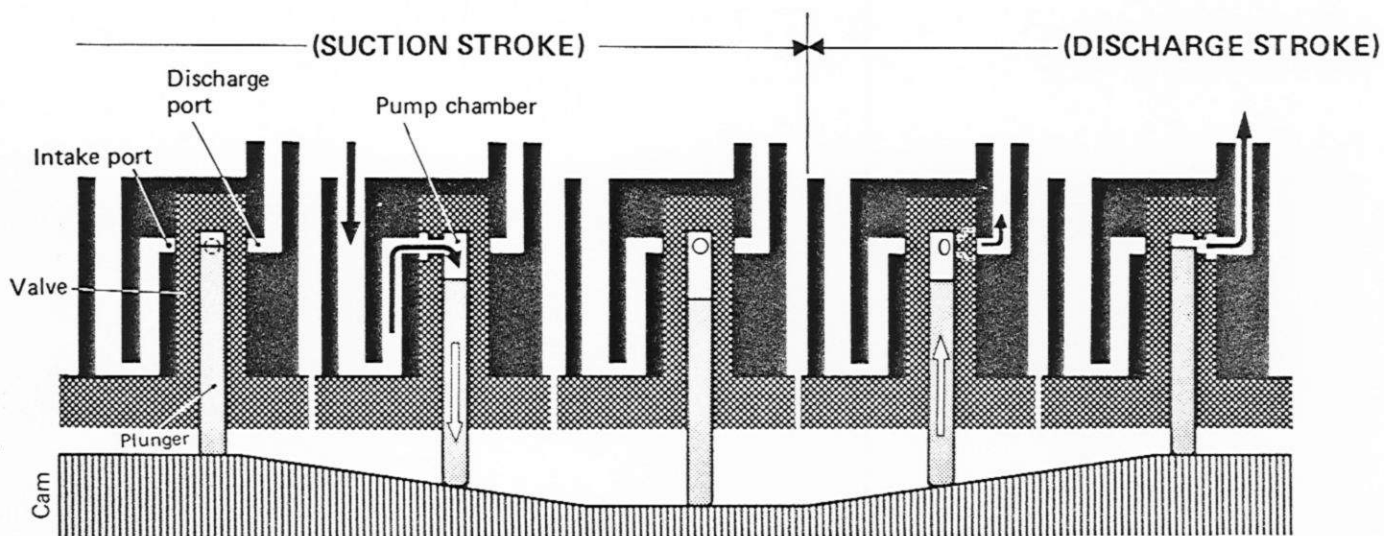
The separate lubrication system used on the NC50 is operated by a crankshaft driven plunger pump. The pump forces oil from the oil tank into the crankcase in exact proportion to the engine speeds and loads. This reduces oil consumption and carbon build-up in the combustion chamber.





LUBRICATION SYSTEM

OPERATION



①

Oil pump gear drives valve. Plunger is at TDC.

②

Valve intake is uncovered and indexes with oil intake port. Oil is drawn into pump chamber as plunger goes down.

③

Valve intake is covered and oil is kept in pump chamber. Plunger goes down to BDC.

④

Valve outlet indexes with oil discharge port. Oil starts to flow out through discharge port.

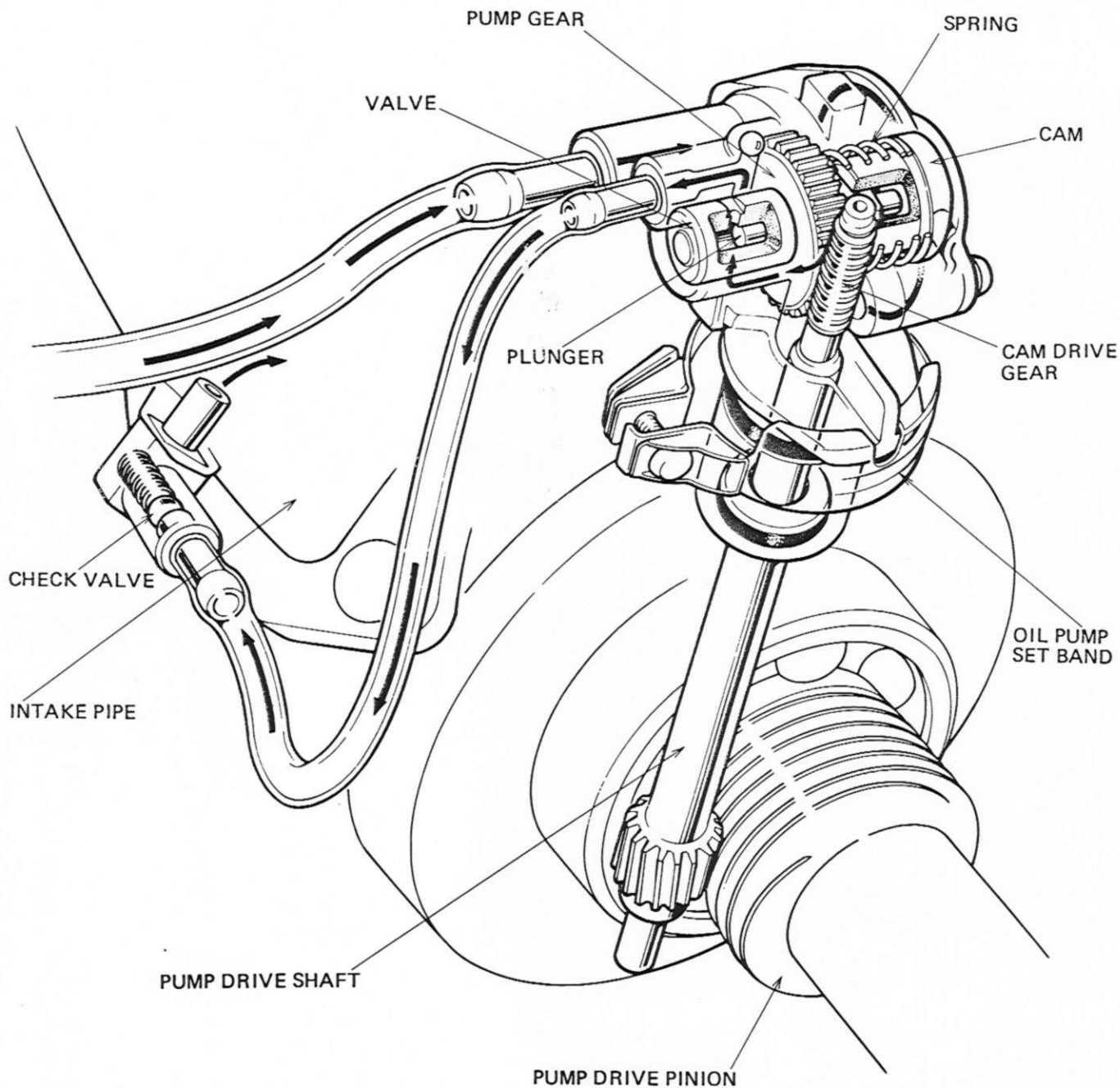
⑤

Oil is forced out until plunger is at TDC. Check valve regulates pressure.



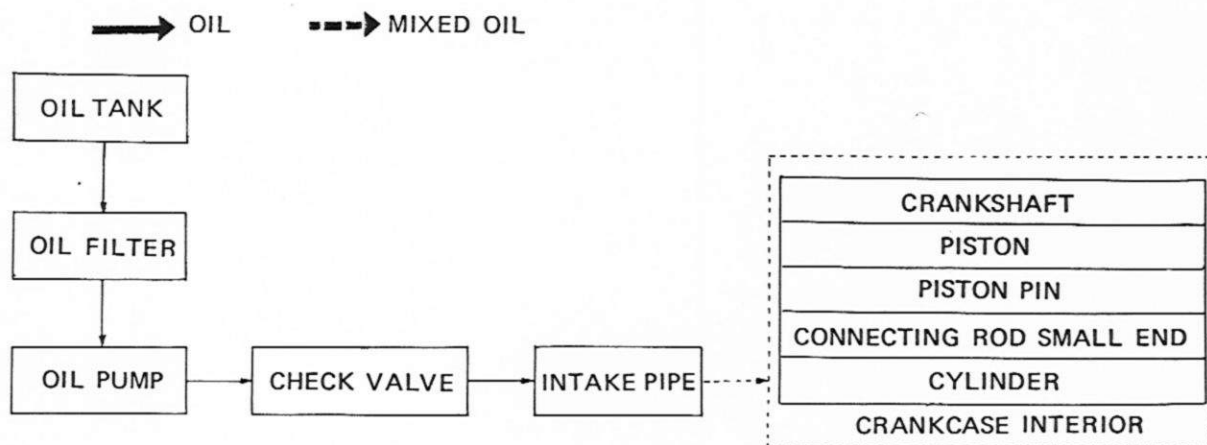
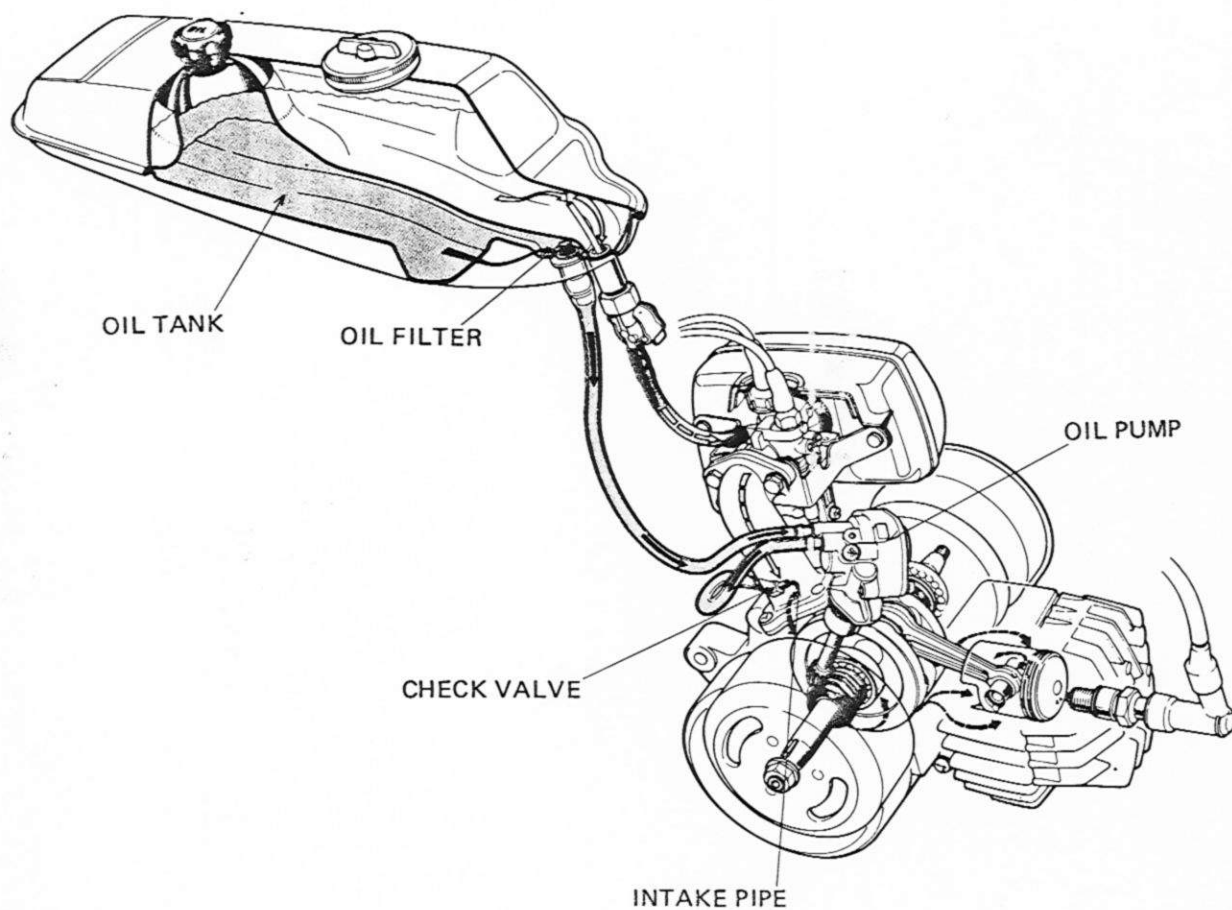
3. OIL PUMP

The oil pump is of a plunger type and is mounted on top of the right crankcase with set band. The pump drive pinion is integrated with the crankshaft so they turn together as a unit when the engine turns. Rotation of the drive pinion is transmitted through the drive shaft and cam drive gear to the pump gear. The plunger is housed in the pump gear whereas the cam is pressed against the pin with a spring. As the cam is rotated, the plunger reciprocates up and down, taking up oil from the oil pan and circulating it through the engine.





(LUBRICATING OIL FLOW)



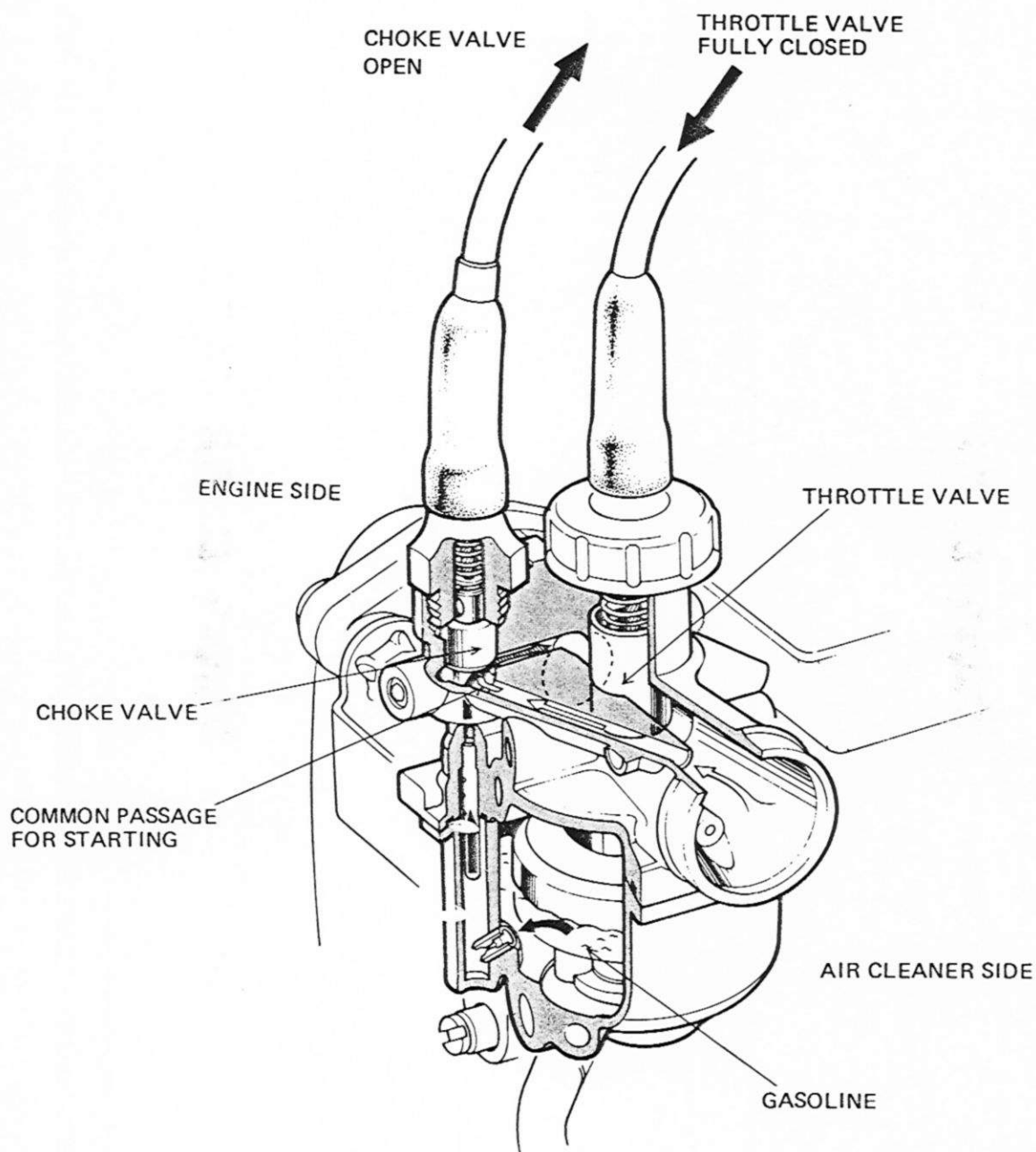


CARBURETOR

The carburetor is a piston type equipped with a choke valve. The choke valve provides a rich mixture when the engine is being cranked.

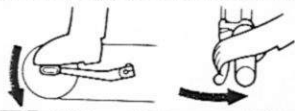
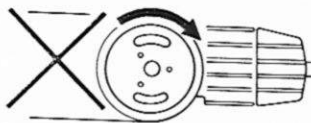
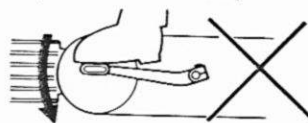

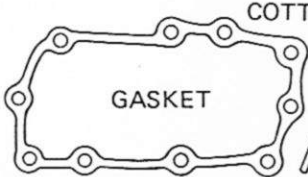

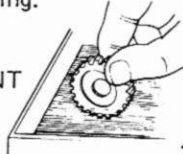

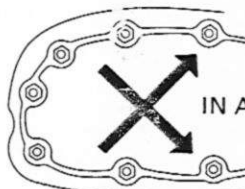
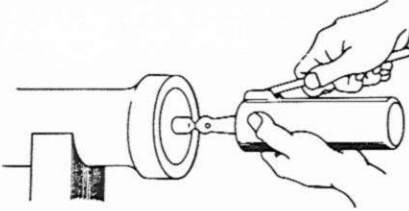
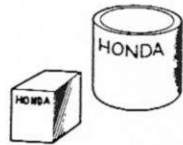
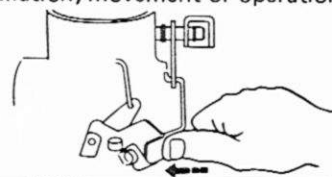


(CHOKE CIRCUIT)

Pulling the choke lever in opens the choke valve. Thus, when the engine is started with the throttle valve fully closed, a high vacuum is developed in the air horn on the engine side of the throttle valve. This vacuum causes the choke valve to discharge a heavy stream of fuel to produce the rich air-fuel mixture needed to starting the engine.



SERVICE PRECAUTIONS

HONDA
NC50

<p>■ Never fail to obey the following cautions during service operation, since the starter spring may cause hazard.</p> <p>(1) Before servicing, make sure that the starter spring is released by depressing the pedal and squeezing the rear brake lever.</p> 				<p>(2) Do not hand-rotate generator rotor clockwise.</p> 		<p>(3) Do not depress the starter pedal unless necessary.</p> 	
<p>■ Always replace when reassembling.</p> <p>O-RING</p>  <p>GASKET</p>  <p>COTTER PIN</p> 				<p>■ Wash clean engine parts with solvent, Lubricate their sliding surfaces with 2-cycle oil when disassembling.</p> <p>SOLVENT</p>  <p>OIL</p> 			
<p>■ Tighten fasteners to specs, beginning with the center or larger dia. bolts in a X pattern where the sequence is not specified.</p>  <p>IN A X PATTERN</p>				<p>■ Grease by coating or filling where specified.</p> 			
<p>■ Use HONDA or HONDA-recommended parts and lubricants.</p> 				<p>■ After reassembling, check every part for proper installation, movement or operation.</p> 			
<p>■ Use special tool where specified.</p> 				<p>■ Always check mutual safety when working with partner.</p> 			

— SYMBOLS —

These symbols are used throughout the manual to show specific kinds of operation, sequence of service procedures, etc.

①, ②, ③ : Indicates sequence of service operations.



: Apply oil.

GREASE

: Apply grease.

WARNING

: Means the possibility of personal injury to yourself or others.

CAUTION

: Means the possibility of damage to the machine.

NOTE

: Provides torque values and special information for more efficient and convenient servicing.

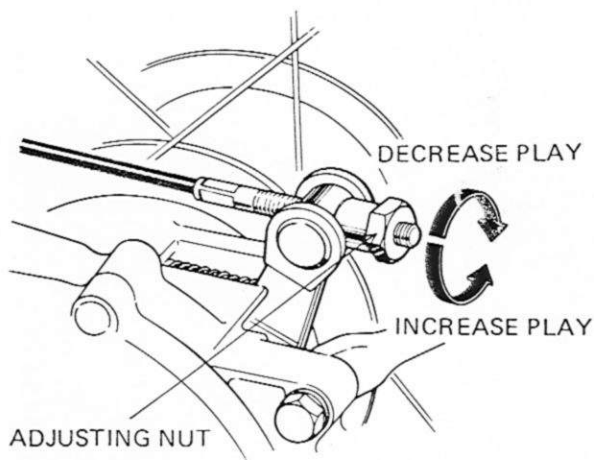
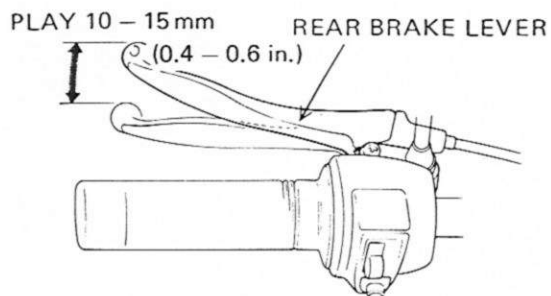


INSPECTION/ADJUSTMENT

(BRAKE LEVER ADJUSTMENT)

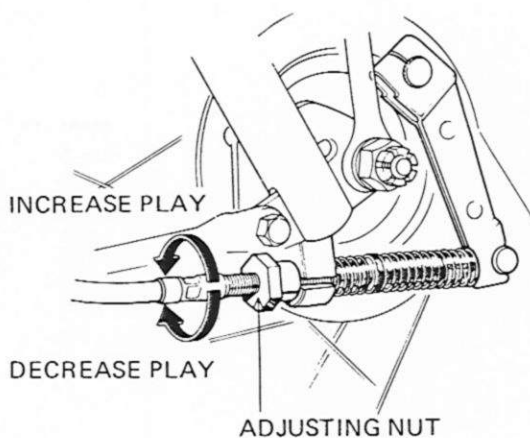
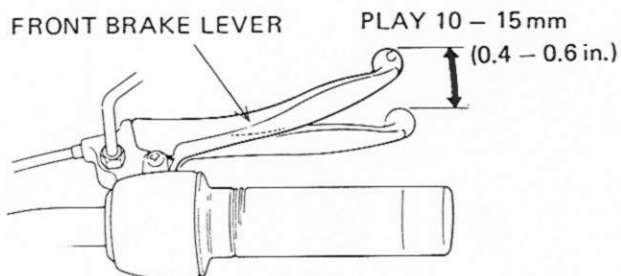
Check brake lever free play at lever tip. If out of specs, adjust by turning the adjusting nut.

(REAR)



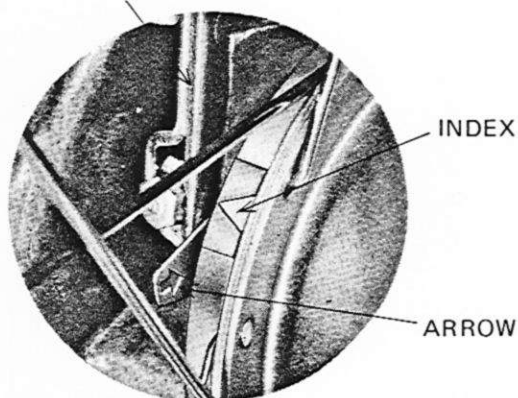
To reset the brake arm, refer to page 17-2 (front brake), page 18-1 (rear brake).

(FRONT)



BRAKE ARM

(BRAKE SHOE INSPECTION)



Replace shoe if arrow mark on the brake indicator aligns with the index mark, when the lever is pulled in all the way.

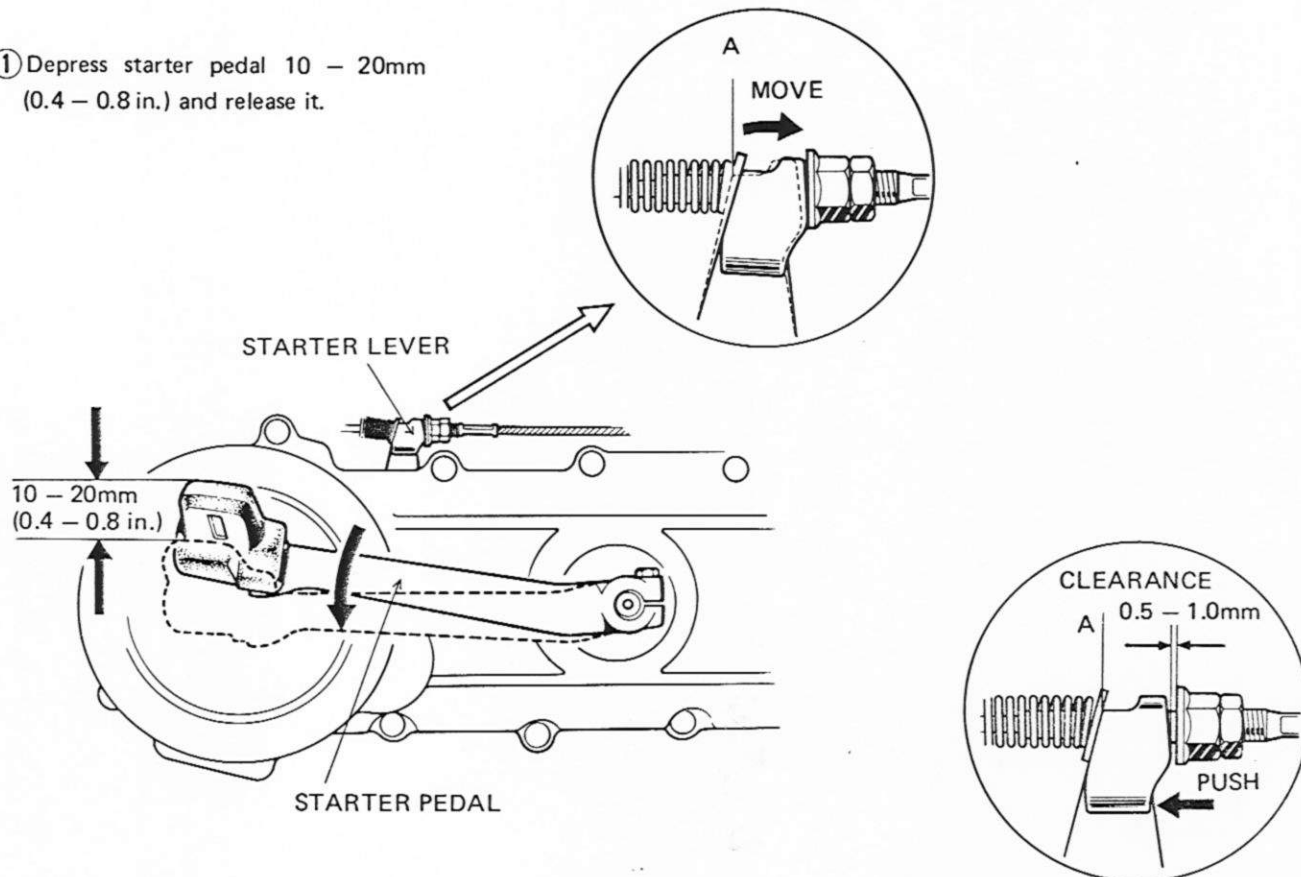
After adjusting rear brake lever free play (page 8-2). Check the proper starter spring operation.



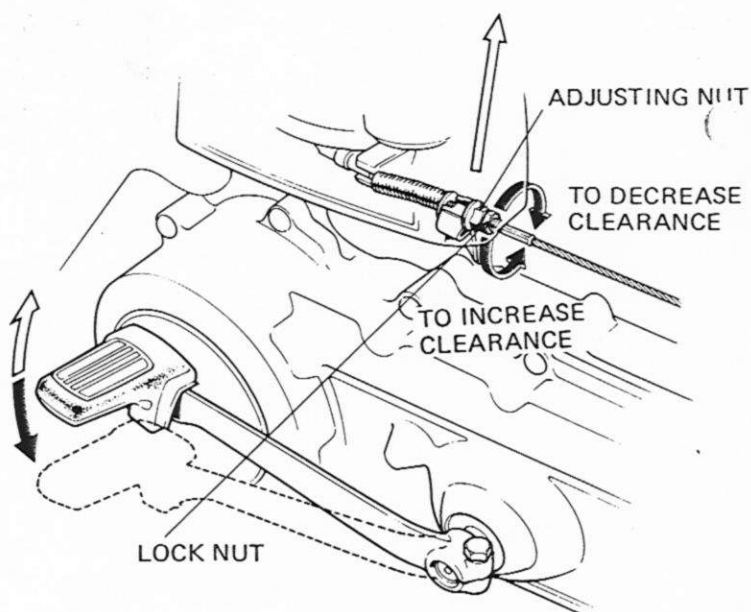
(STARTER LEVER ADJUSTMENT)

This adjustment is essential to achieve proper starter spring operation. Prior to this adjustment, check rear brake lever free play and adjust if necessary (page 8-1).

- ① Depress starter pedal 10 – 20mm (0.4 – 0.8 in.) and release it.



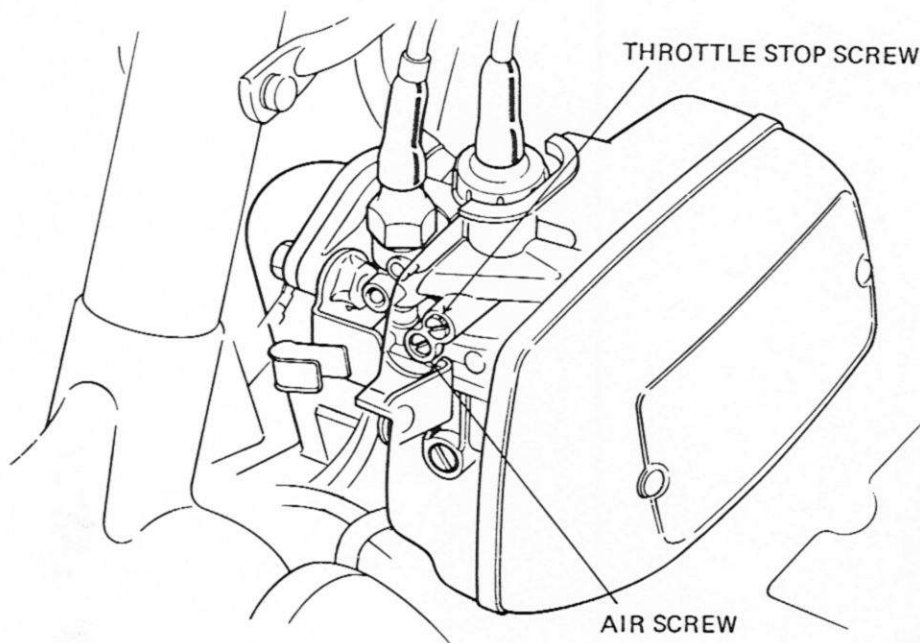
- ② Adjust lever-to-nut clearance to 0.5 – 1.0mm (0.02 – 0.04 in.) from upper most forward position (A).



- ③ Start and stop the engine a few times (more than five times with the new rear brake cable) and check that the clearance has not changed. If necessary, repeat steps ① and ② above.



(IDLE ADJUSTMENT)

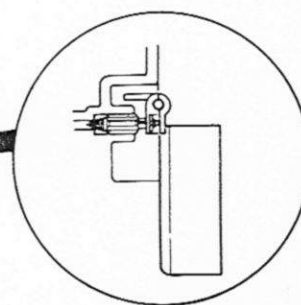
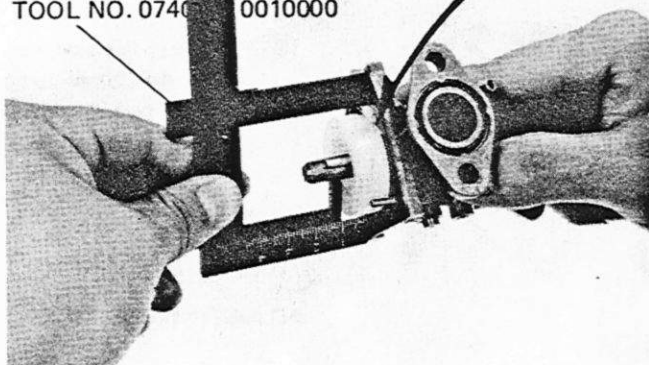


- ① Start the engine and set it at lowest idle speed by turning the throttle stop screw.
- ② Turn the air screw either in or out to obtain the highest idle speed.
- ③ Turn the air screw in 1/8 – 1/4 turns. Need correct air screw setting.
- ④ Adjust the throttle stop screw to allow the engine to run at idle speed. Rotation of the stop screw in a clockwise direction increases idle speed. Rotating it counterclockwise decreases idle speed.

IDLE SPEED: 1,800 rpm.

(FUEL LEVEL)

FLOAT GAUGE
TOOL NO. 0740 0010000



Measure the float level with the float arm just contacting the float valve.

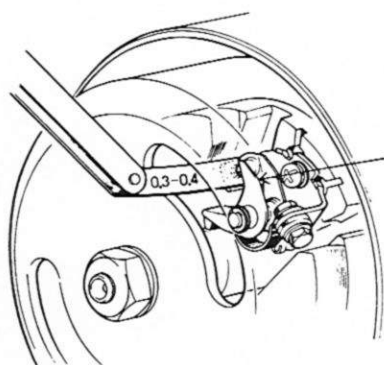
Float height:

Carburetor Setting No.	Float height
PA08B [A]	10.0 mm (0.394 in)
PA08B [B]	10.2 mm (0.402 in)

The float level is non-adjustable. To adjust the float level, replace the carburetor float or float valve.



(CONTACT BREAKER POINT GAP)



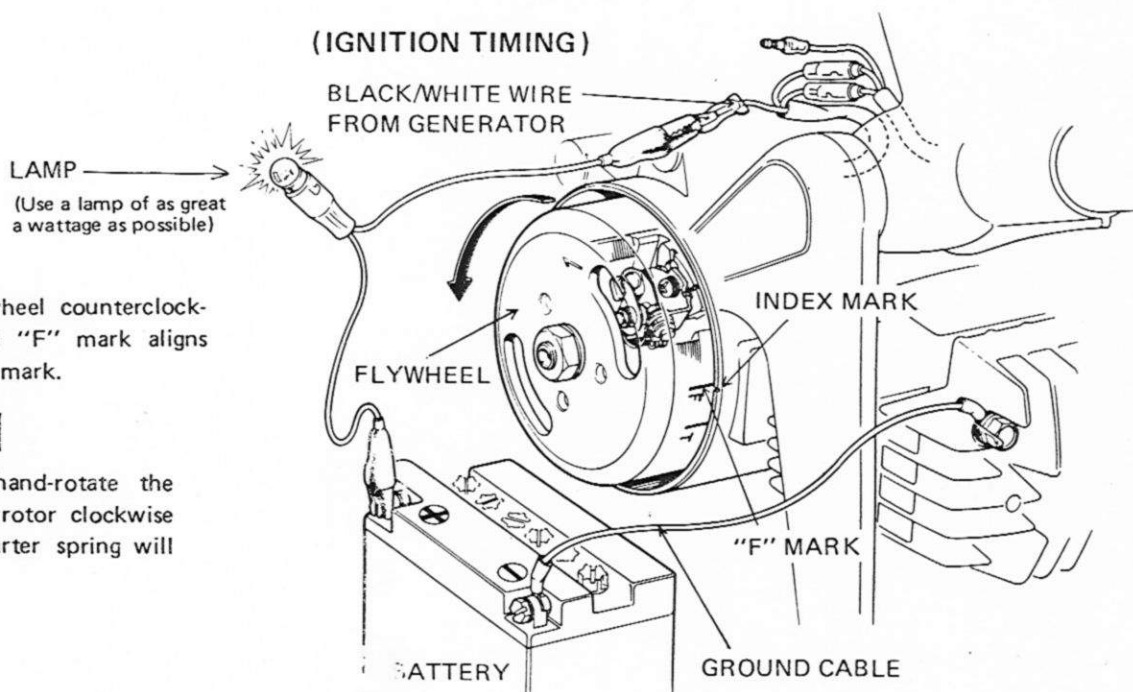
① Insert a feeler gauge through the rotor hole.

② Check point gap.

Replace the if out of specs.

POINT GAP
0.3 – 0.4mm
(0.012 – 0.016 in.)

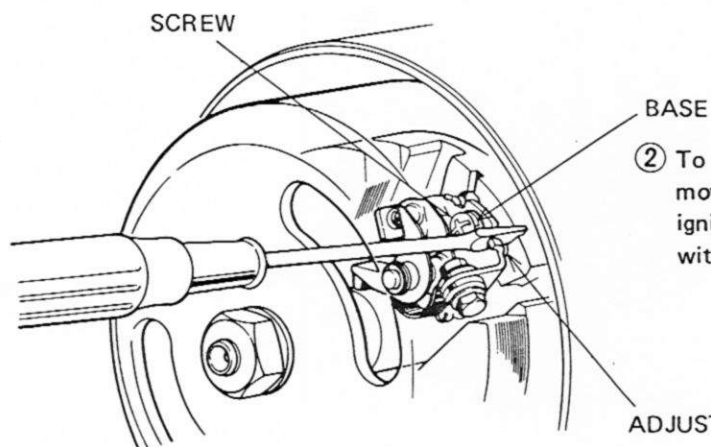
(IGNITION TIMING)



- ① Turn the flywheel counterclockwise until the "F" mark aligns with the index mark.

WARNING

Do not hand-rotate the generator rotor clockwise as the starter spring will wind.

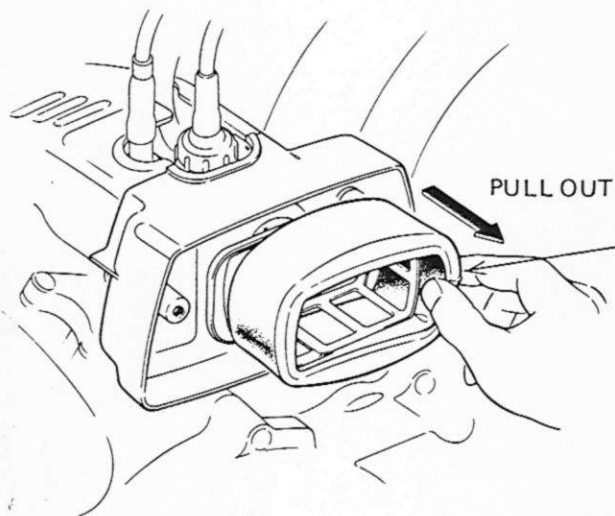


- ② To adjust, loosen the base screw and move the base to get the correct ignition timing where the lamp dims with the marks aligned.



INSPECTION/ADJUSTMENT

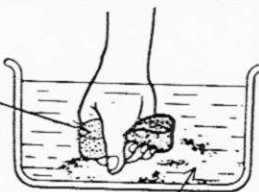
(AIR CLEANER ELEMENT)



CAUTION

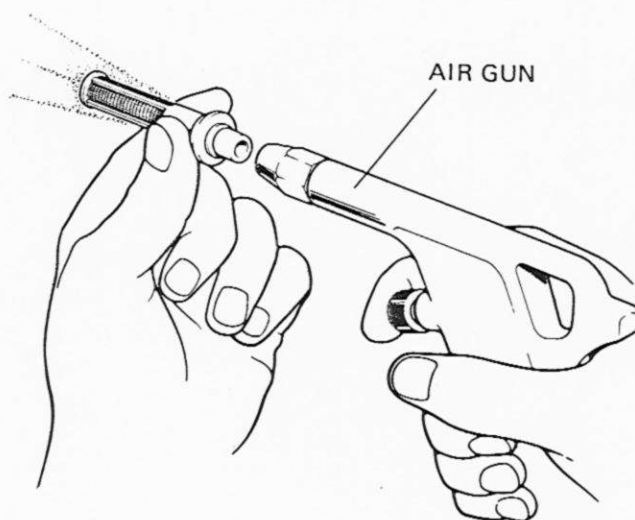
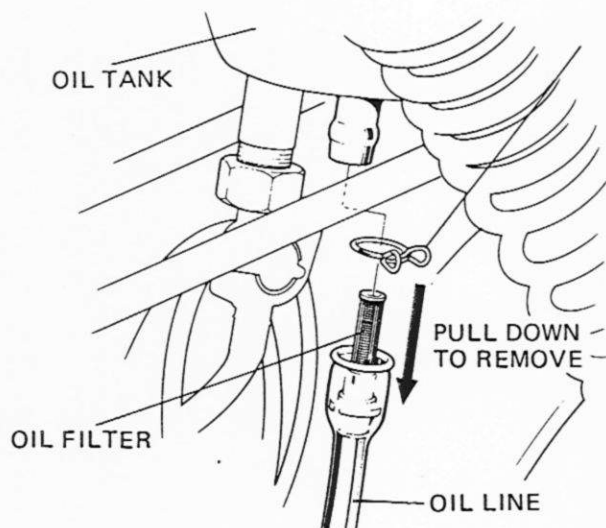
- ① Remove air filter element.
- ② Wash air filter element in clean stoddard solvent and allow to dry thoroughly.
- ③ Soak air filter element in clean gear oil (No. 80—No. 90) until saturated, then squeeze excess oil out.
- ④ Reinstall air filter element.

ELEMENT



GEAR OIL (SAE80 — SAE90)

(OIL FILTER CLEANING)



CAUTION

- Empty the oil tank before cleaning.
- Fill the oil tank with oil and bleed the air from the oil line and oil pump after cleaning the oil filter. Page 8 — 7.



(SPARK PLUG)

To clean, use a plug cleaner or steel wire.

0.6 – 0.7mm
0.024 – 0.028 in.

Replace plugs with a burnt tip and/or a blistered insulator

Check: gap
: deposit
: electrode erosion

Check:
gasket for sealing

Always use specified spark plugs:

U.S.A. '77 MODEL

BP6HS (NGK)

BP5HS (NGK)

W20FP (ND)

W16FP (ND)

U.S.A. '78 MODEL

BP5HS (NGK)

BP4HS (NGK)

W16FP (ND)

W14FP-L (ND)

U.K. '78 MODEL

BPR4HS (NGK)

W14FPR-L (ND)

Optional spark plug:

BPR5HS, BPR2HS (NGK)

W16FPR, W9FPR (ND)

(BATTERY ELECTROLYTE LEVEL CHECK/REPLENISHMENT)

SEAT

UPPER LINE

LOWER LINE

Use distilled water to raise electrolyte level

CAP

PULL UP

- READING SPECIFIC GRAVITY OF ELECTROLYTE -

HYDROMETER

ELECTROLYTE

NORMAL S.G.

1.260 – 1.280/20°C (68°F)

WARNING

- Do not service the battery while the engine is running. Keep the battery away from open flames or sparks.
- Avoid overfilling the battery. Sulfuric acid is corrosive.



(BLEEDING OIL PUMP)

The oil pump and the oil line must be bled to eliminate air when:

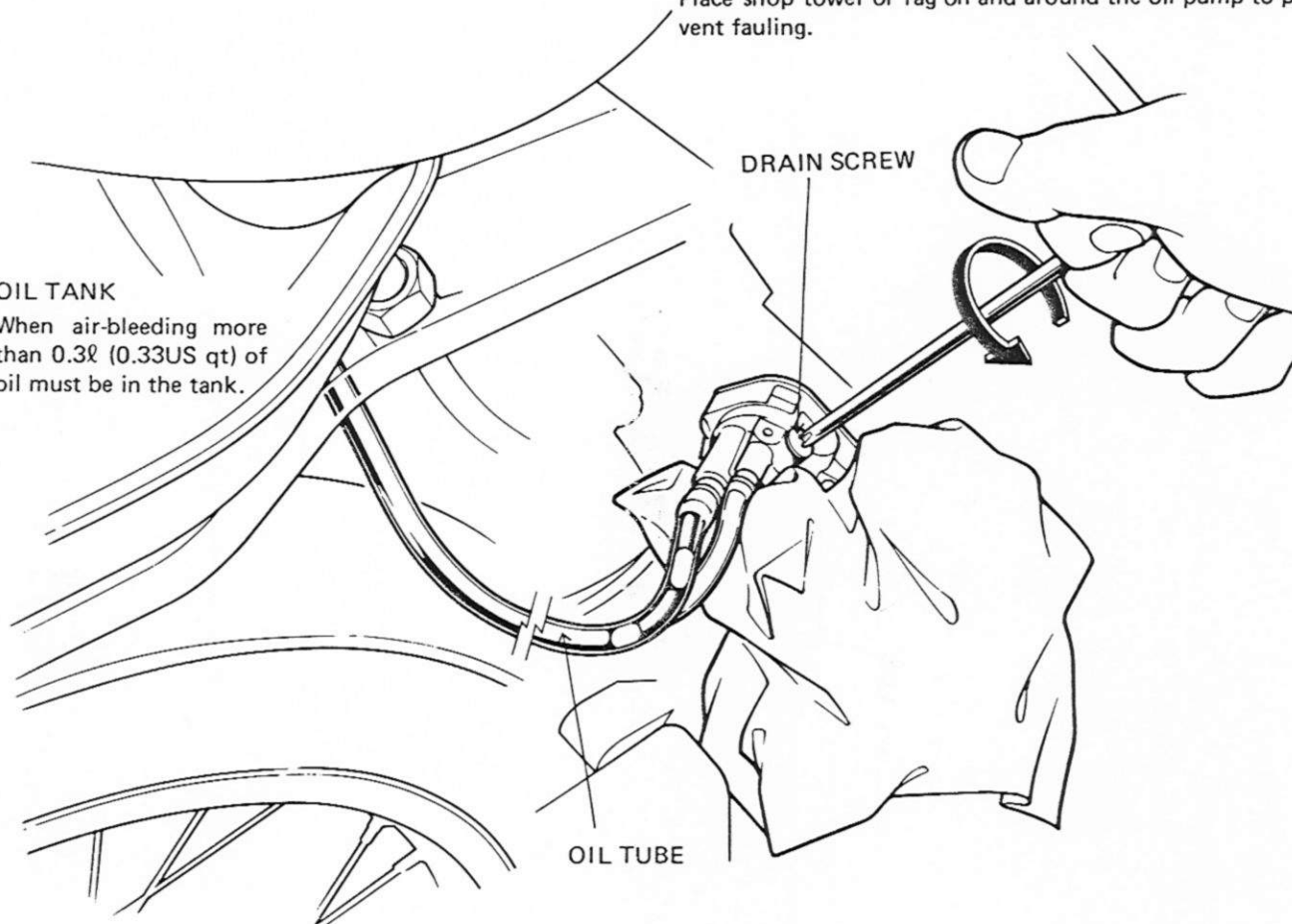
- The oil line is disconnected.
- The oil supply is empty.
- The engine is removed.

AIR BLEEDING

Loosen the air bleeder screw and bleed the system. Continue bleeding until oil which is flowing out becomes free of air bubbles. Check the oil level often while bleeding the system to keep 0.3 liters (0.33 US qt) of oil in the tank. Place shop towel or rag on and around the oil pump to prevent fouling.

OIL TANK

When air-bleeding more than 0.3ℓ (0.33US qt) of oil must be in the tank.



(L. COVER OIL REPLACEMENT/LEVEL CHECK)

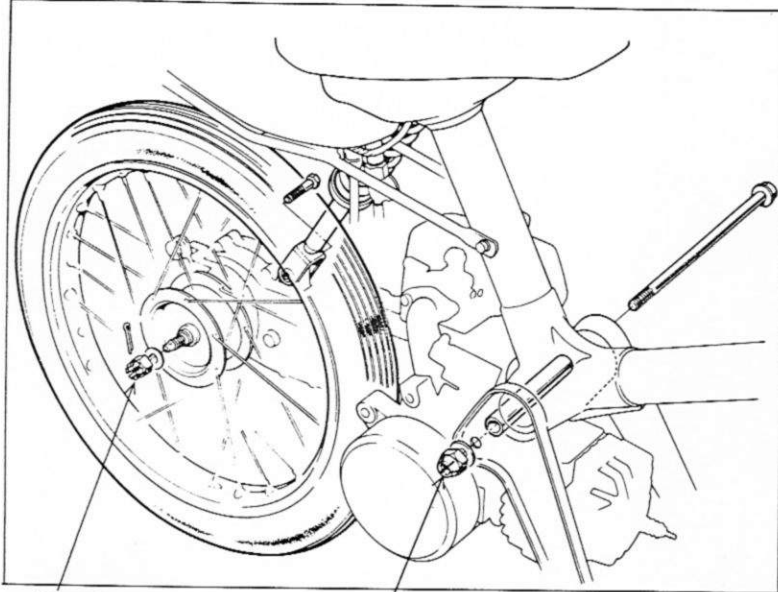
PAGE 13 - 2



ENGINE REMOVAL/ INSTALLATION

All service operations except crankshaft work may be performed with the engine in the frame.

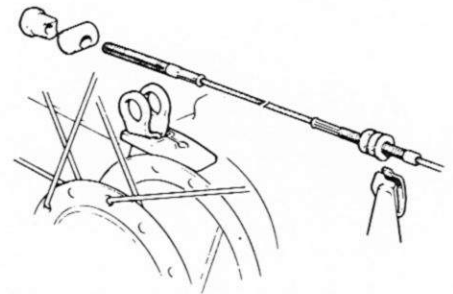
- ⑪ REAR SHOCK ABSORBER BOLT/ENGINE MOUNTING BOLT/
REAR WHEEL/MAIN STAND


NOTE

400 – 500 kg · cm
(28.9 – 36.2 ft · lbs)

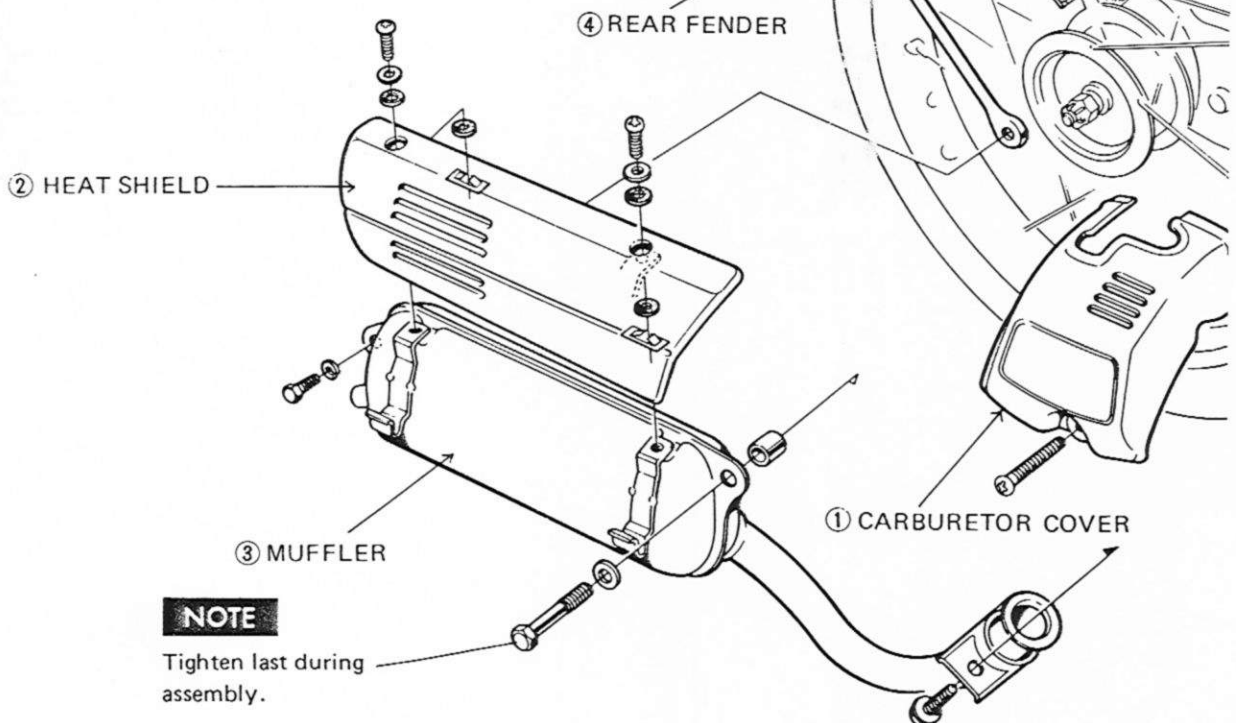
NOTE

300 – 400 kg · cm
(21.7 – 28.9 ft · lbs)

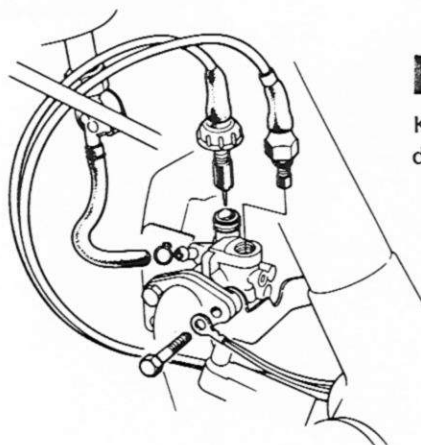


- ⑩ REAR BRAKE CABLE

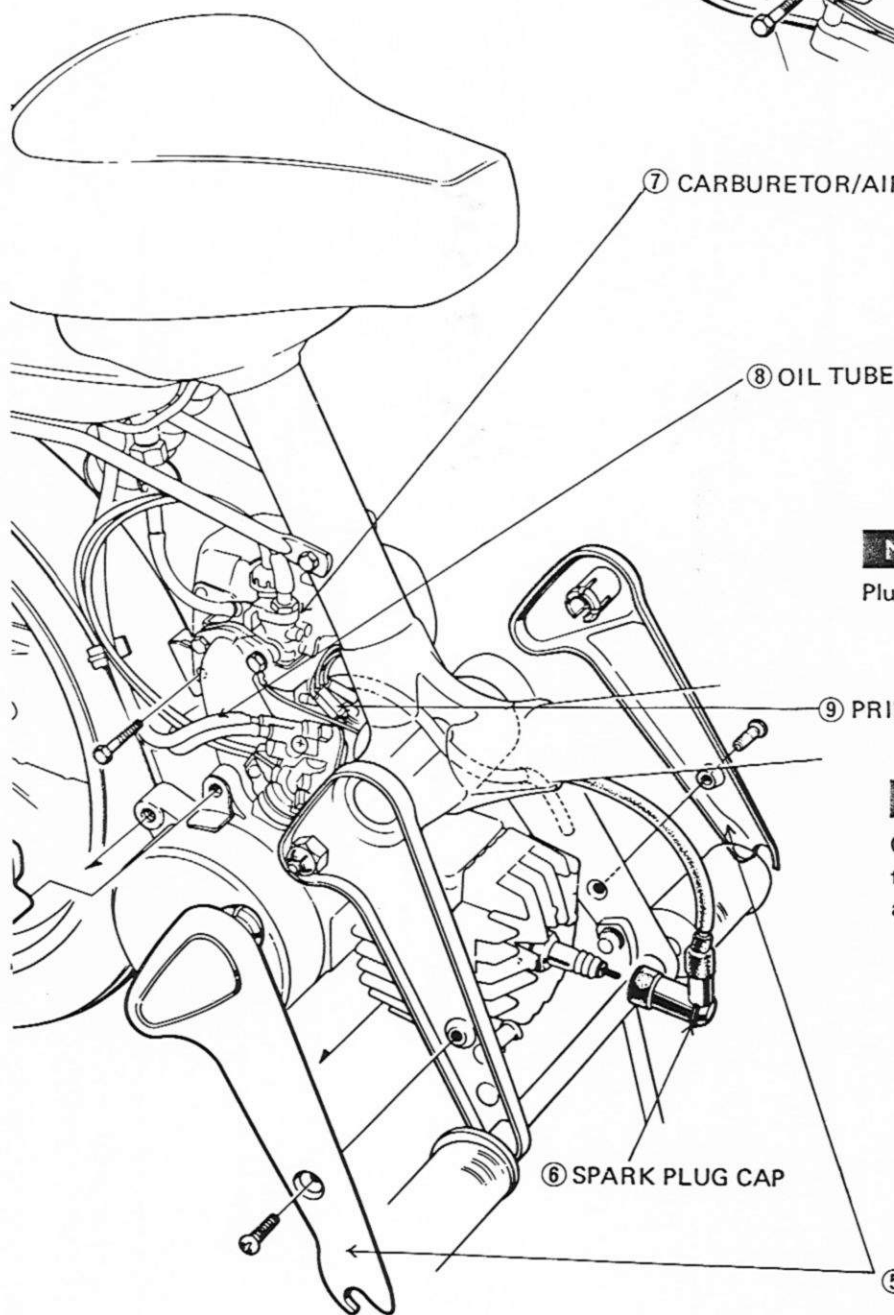
Adjustment: Pages 8 - 1 and 8 - 2.


NOTE

Tighten last during
assembly.

**NOTE**

Keep fuel valve closed during disassembly.

**CAUTION**

Bleed air after assembly.

Page 8 - 7 "BLEEDING OIL PUMP."

NOTE

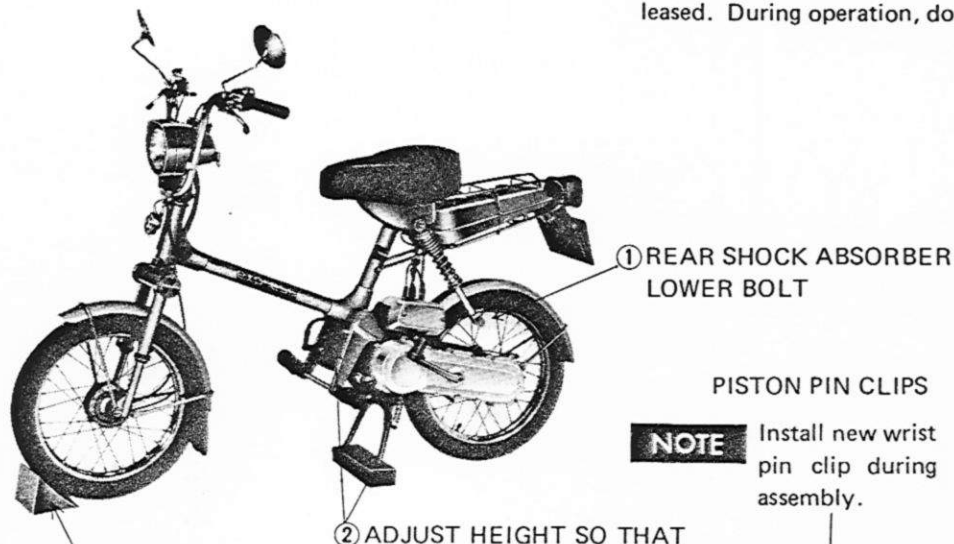
Plug tube end.

NOTE

Connect color-to-color on re-assembly.

**WARNING**

Before operation, make sure that the starter spring is released. During operation, do not depress it.



① REAR SHOCK ABSORBER
LOWER BOLT

② ADJUST HEIGHT SO THAT
CYLINDER HEAD CAN BE
REMOVED.

NOTE

Place block here to
avoid rolling.

PISTON PIN CLIPS

NOTE

Install new wrist
pin clip during
assembly.



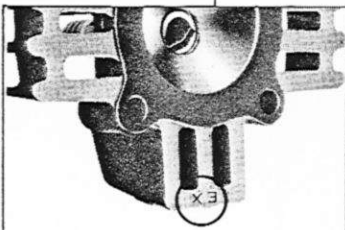
⑤ PISTON

④ CYLINDER

③ CYLINDER HEAD

NOTE

90 – 120 kg - cm
(6.5 – 8.7ft-lbs)



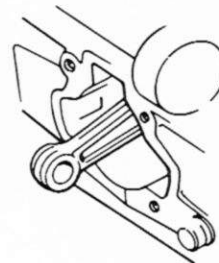
Install cylinder head with the
"EX" toward EXHAUST.

NOTE

Be sure that the piston rings move freely
before installing the piston into the
cylinder.

**NOTE**

Replace when
disassembled.



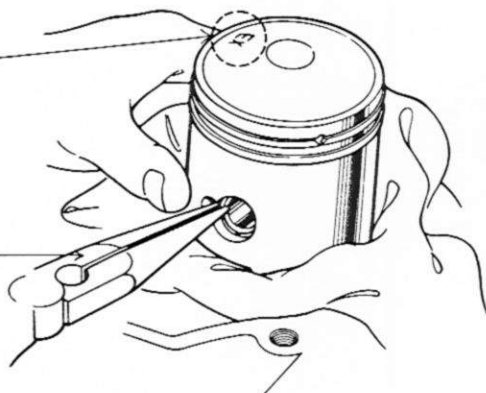


(PISTON)

• DISAASSEMBLY/ASSEMBLY

Install the piston with the "EX" mark facing toward the EXHAUST PORT.

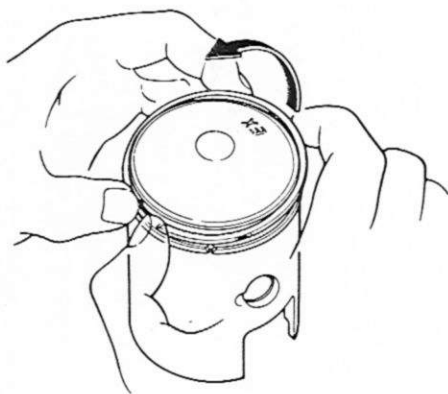
Place a rag over the crankcase opening to prevent the wrist pin clip from falling into the crankcase.



CAUTION

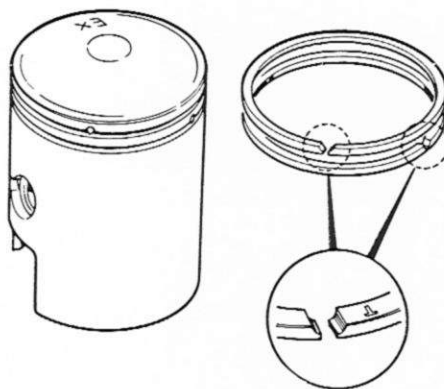
Avoid scoring or scratching the piston.

(PISTON RING)



• DISASSEMBLY

Always remove the piston ring as shown above.



• ASSEMBLY

Install the piston rings with their markings facing up. When the rings are replaced, make sure that the proper rings are installed.

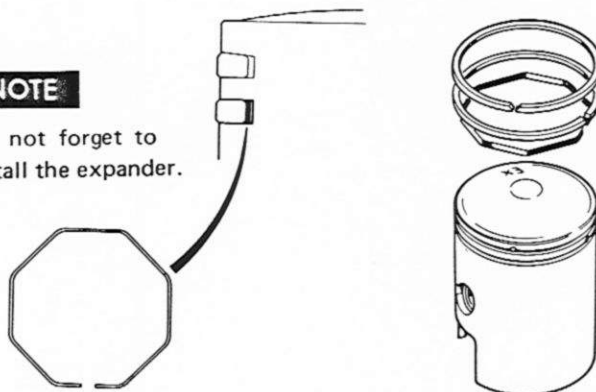
N: NIPPON PISTON RING
T: TEIKOKU PISTON RING
Top ring: 1N or 1T
2nd ring: 2N or 2T

CAUTION

Do not damage the piston during this operation.

NOTE

Do not forget to install the expander.

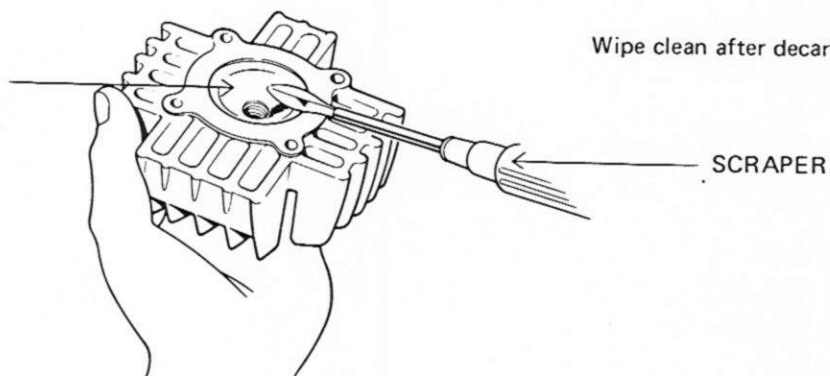




(CYLINDER HEAD DECARBONIZING)

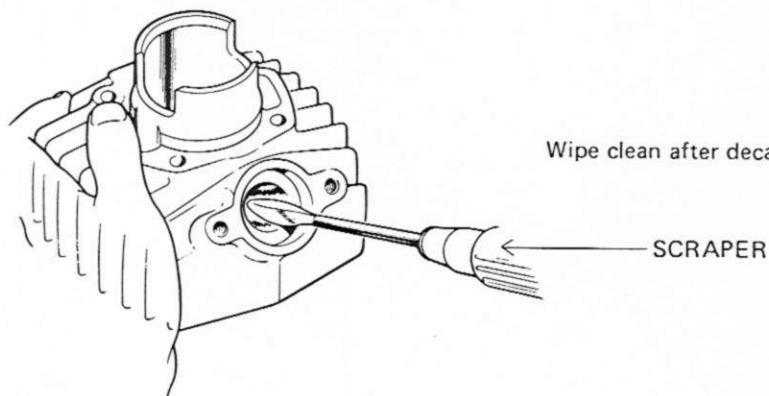
CAUTION

Avoid scratching
the inside surfaces.



Wipe clean after decarbonizing.

(EXHAUST PORT DECARBONIZING)



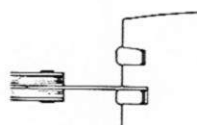
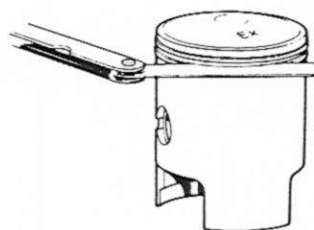
Wipe clean after decarbonizing.

(PISTON/PISTON RING CLEARANCE)

2nd Ring

0.025 – 0.055mm (0.0010 – 0.0022 in.)

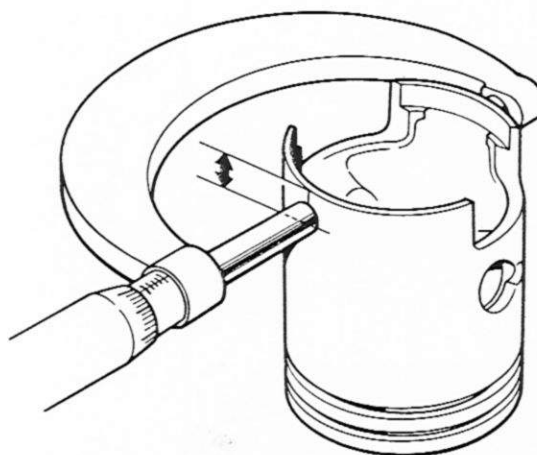
Service Limit: 0.1mm (0.0039 in.)





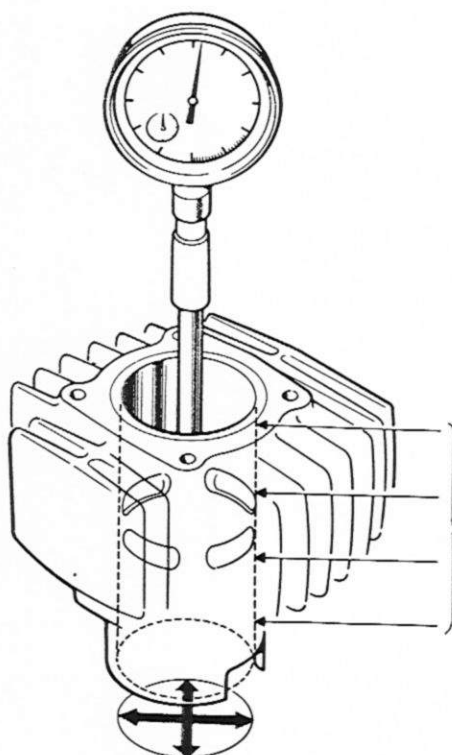
(PISTON SKIRT O.D.)

39.955 – 39.975mm (1.5731 – 1.5739 in.)
Service Limit: 39.85mm (1.5689 in.)



Measurements should be taken at a point 4mm (0.16 in.) from the bottom.

(CYLINDER I.D.)



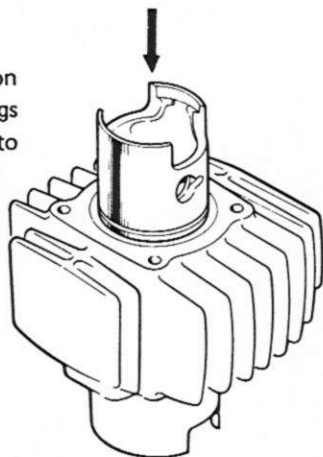
40.00 – 40.01mm (1.5748 – 1.5752 in.)
Service Limit: 40.05mm (1.5768 in.)

Take smallest diameter reading.



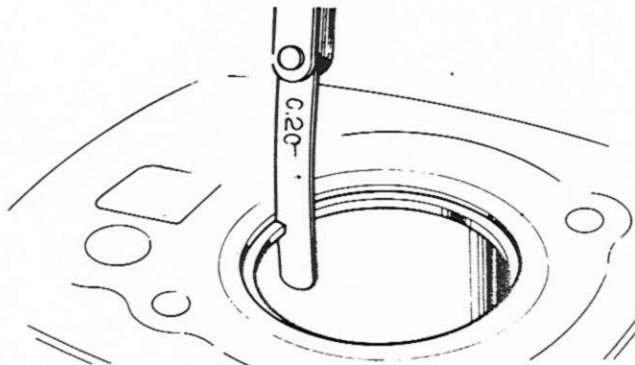
(PISTON RING END GAP)

Using the piston head push the rings down squarely into the cylinder bore.



0.15 – 0.35mm (0.0059 – 0.0138 in.)

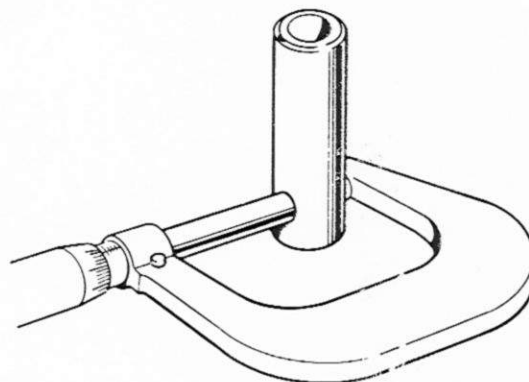
Service Limit: 0.6mm (0.0236 in.)



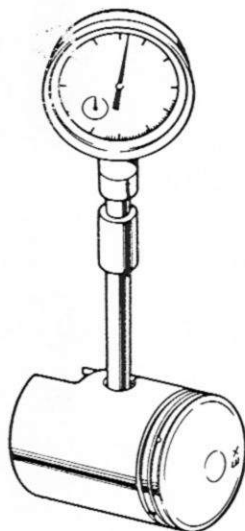
(PISTON PIN O.D.)

9.994 – 10.000mm (0.3935 – 0.3937 in.)

Service Limit: 9.97mm (0.3925 in.)



(PISTON PIN HOLE I.D.)

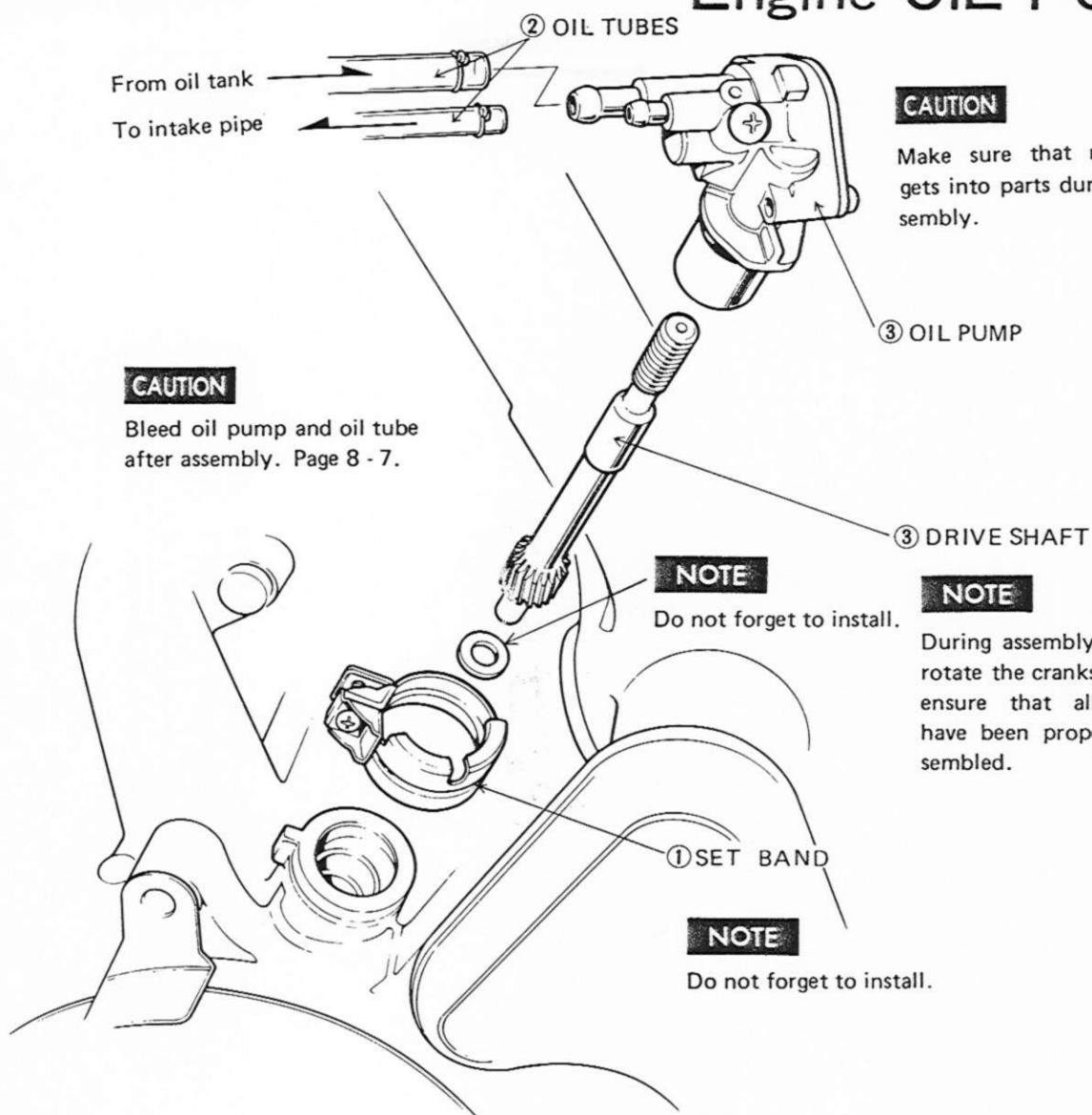


10.002 – 10.008mm (0.3938 – 0.3940 in.)

Service Limit: 10.03mm (0.3949 in.)

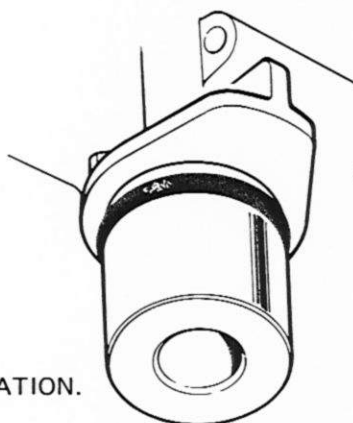


Engine OIL PUMP



• INSPECTION

CHECK GASKET FOR DETERIORATION.



CHECK FOR OIL LEAKS.



Engine A.C. GENERATOR

WARNING

Never turn flywheel clockwise during disassembly and reassembly.

② A.C. FLYWHEEL
GENERATOR
Disassembly/assembly,
page 12 - 2.

CAUTION

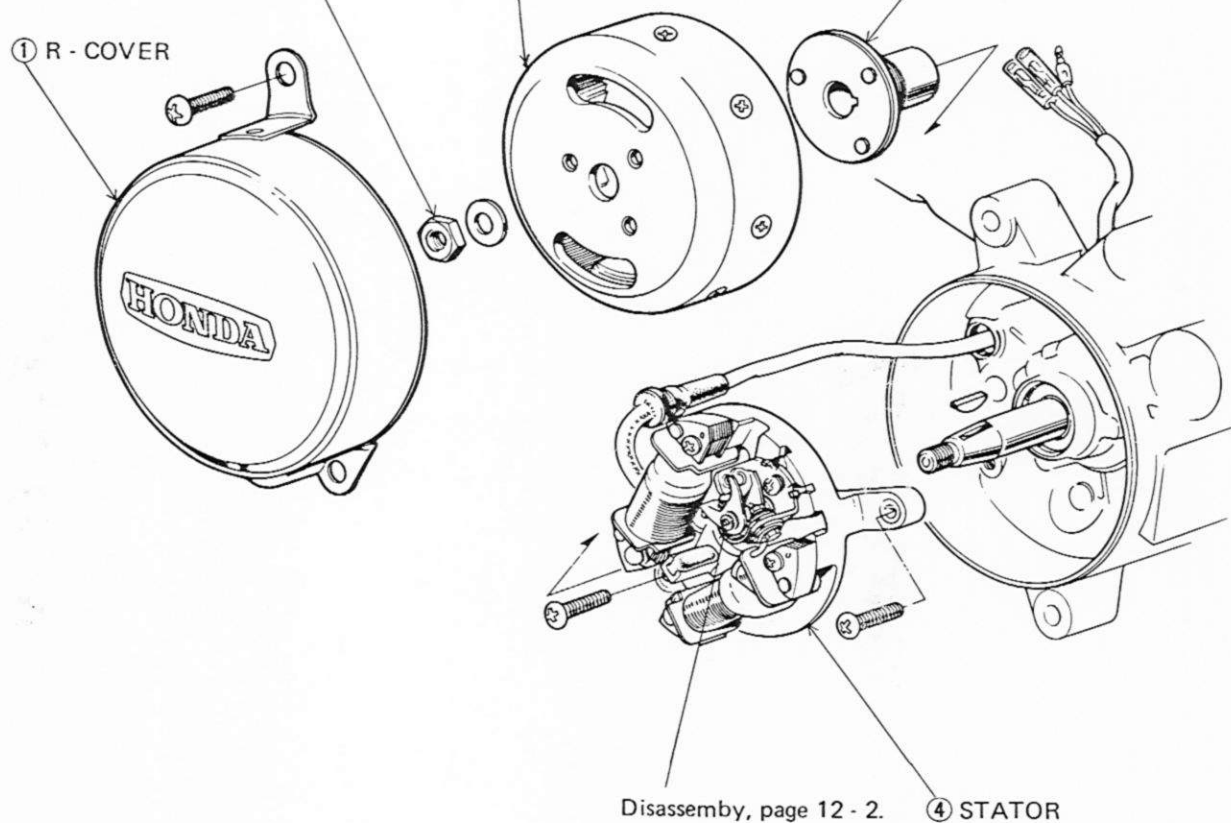
During disassembly and installation, check the inside to make sure that no metal particles have adhered to the magnet.

NOTE

300 – 350kg - cm
(21.7 – 25.3ft-lbs)

③ ROTOR FLANGE
Disassembly/assembly,
page 12 - 2.

① R - COVER



Disassembly, page 12 - 2.

④ STATOR

NOTE

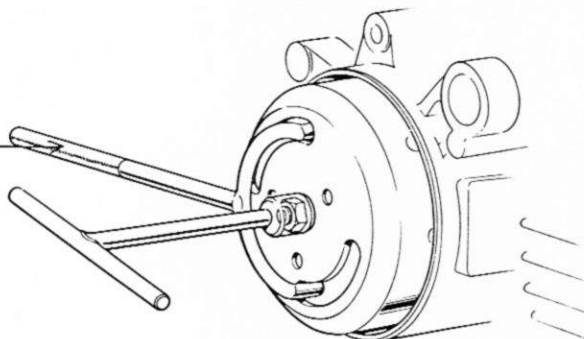
Prior to installing, route the generator cable through the hole in the case.

■ PAGE 8 - 4 FOR IGNITION TIMING ADJUSTMENT AFTER ASSEMBLING.



(FLYWHEEL DISASSEMBLY/ASSEMBLY)

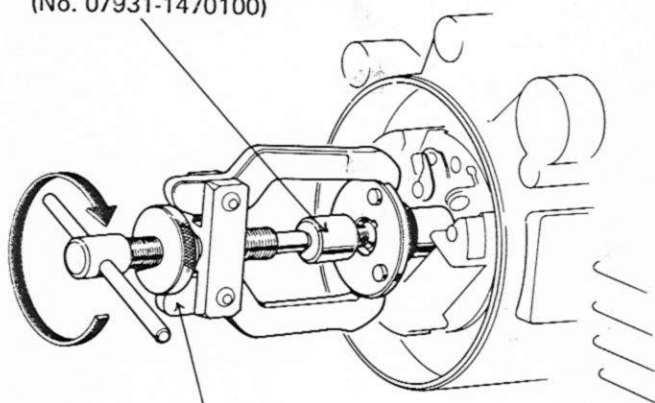
FLYWHEEL HOLDER
(No. 07925-0010001)



• DISASSEMBLY

(ROTOR FLANGE)

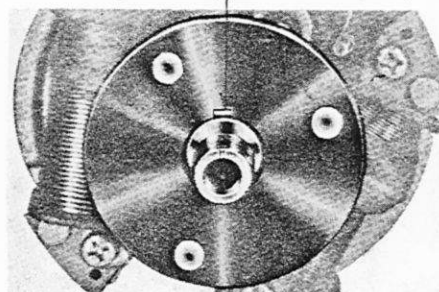
ACG PULLER ATTACHMENT
(No. 07931-1470100)



PULLER

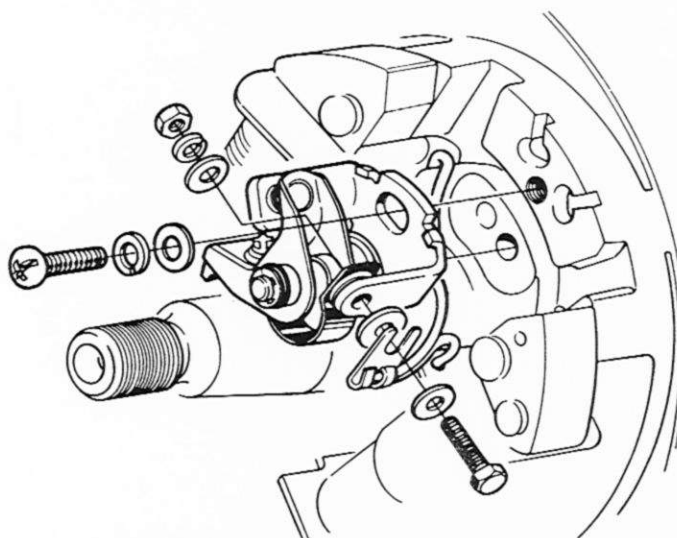
• INSTALLATION

Align the key with the keyway.



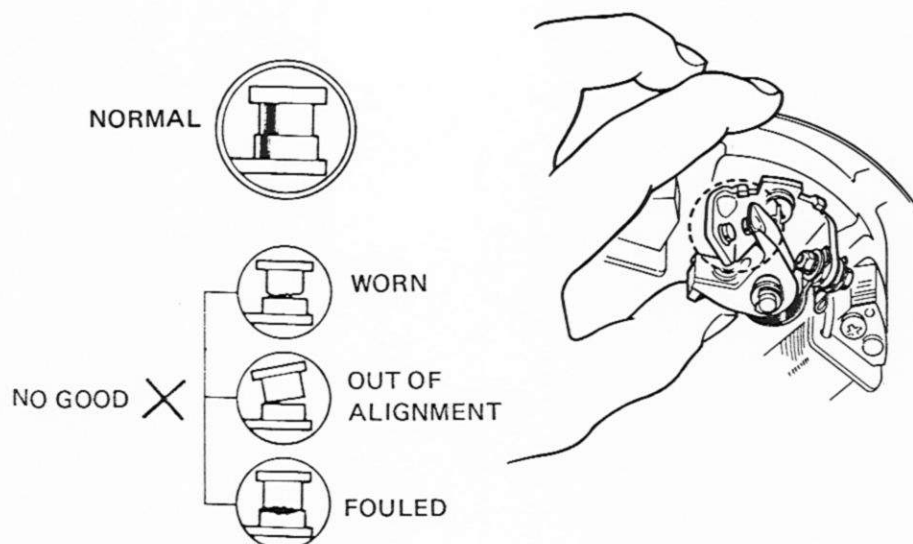
(CONTACT BREAKER DISASSEMBLY)

After installation, check
and adjust the point gap
and the ignition timing
(page 8 - 4.).





(CONTACT BREAKER POINT)



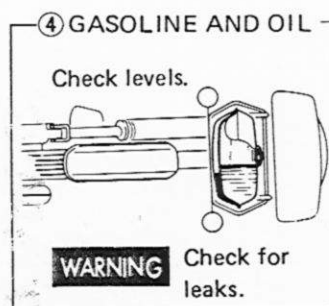
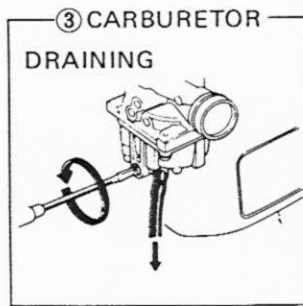
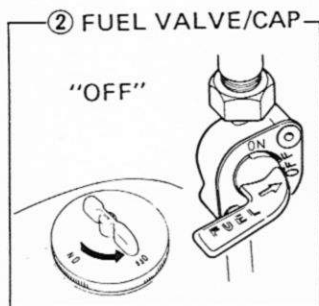
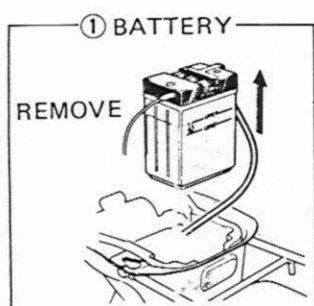
Polish the contact points with a point file if they are burned, oxidized or out of alignment.

Engine L. COVER/STARTER

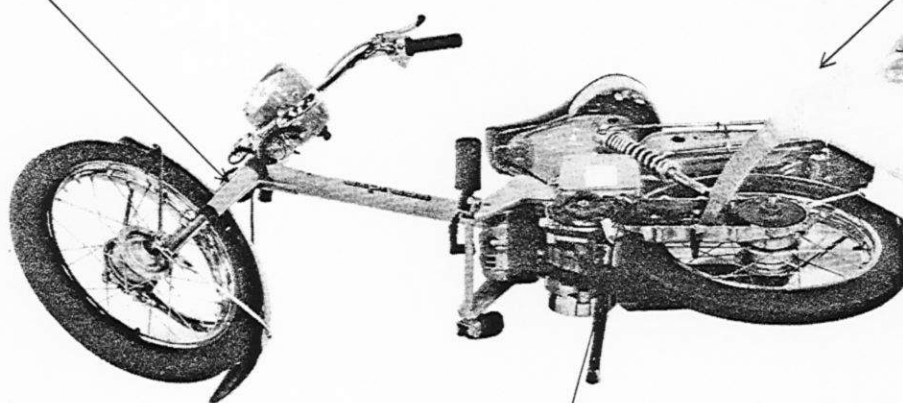
WARNING

Prior to disassembling, release the starter spring fully by pulling in the rear brake lever.

(L. COVER DISASSEMBLY WITHOUT OIL RENEWED)



⑤ Lay on ground with the L-cover facing up.



⑥ REMOVE L-COVER

NOTE

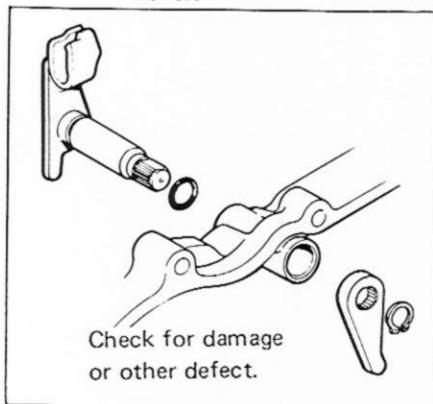
ASSEMBLY:
Pour 0.75 liters (0.79 qt.) of oil in to case before installing the L-cover.



(L. COVER DISASSEMBLY WHEN OIL RENEWED)

STARTER LEVER

NOTE Keep the lever turned all the way in the arrow direction when installing the L-cover.



NOTE

Install the L-cover while hand rotating the flywheel in the arrow direction.

NOTE

During reassembly, keep parts assembled in place.

WARNING

Avoid getting oil on the brake linings.

OIL FILLER
After assembling, adjust the oil level to the lower rim of the filler opening.

For L-cover installation and oil refilling, see page 13-1.

For periodical changes as prescribed in the maintenance schedule, follow the procedure below:

1. Stand the motorcycle up-right.
2. Drain the case oil.
3. Pour oil up to the lower rim of the oil filler hole.

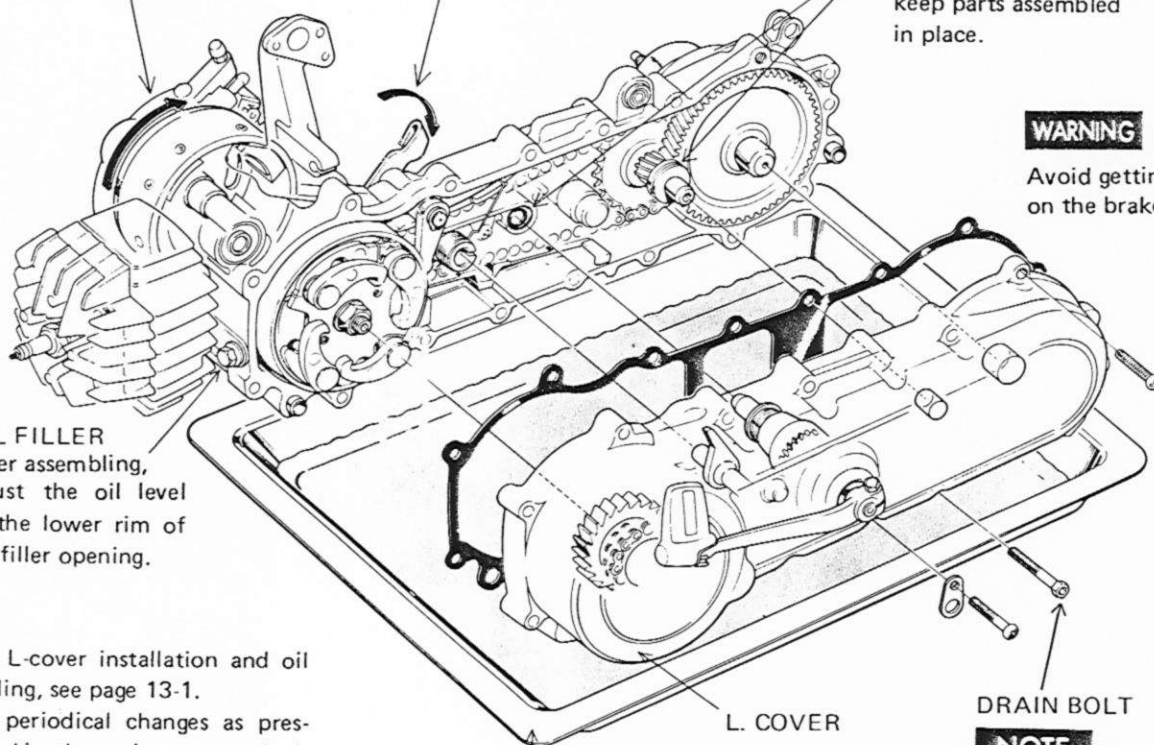
NOTE

Place an oil pan under the L-case and power train.

DRAIN BOLT

NOTE

Only about 0.6ℓ (0.66 US qt) of oil will drain from the drain bolt hole.





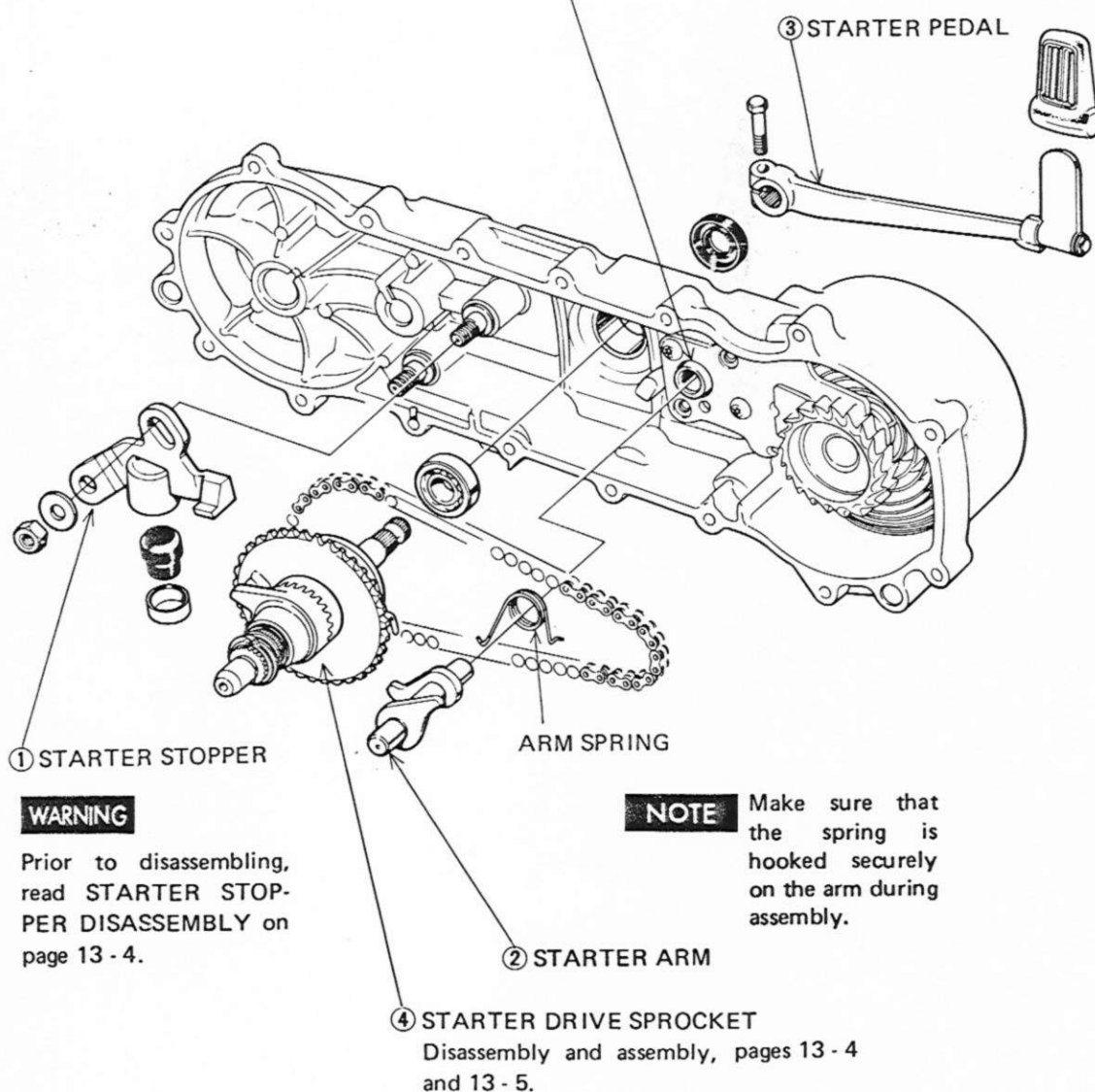
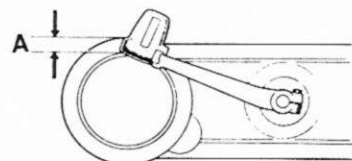
(STARTER DISASSEMBLY/ASSEMBLY)

Use special tool "STAND" as described on page 13 - 4.

SUSTAINING PLATE
(STARTER SPRING)

WARNING NEVER DISASSEMBLE.
REPLACE WITH THE L-COVER
AS AN ASSEMBLY.

During assembly, install starter pedal so that the tip is within "A".



WARNING

Prior to disassembling,
read STARTER STOP-
PER DISASSEMBLY on
page 13 - 4.

NOTE

Make sure that
the spring is
hooked securely
on the arm during
assembly.

Disassembly and assembly, pages 13 - 4
and 13 - 5.



(STARTER DISASSEMBLY/ASSEMBLY)

— STARTER STOPPER DISASSEMBLY —

③ STARTER STOPPER

Remove the stopper with the starter pedal held.

NOTE

After assembly, check for proper operation.

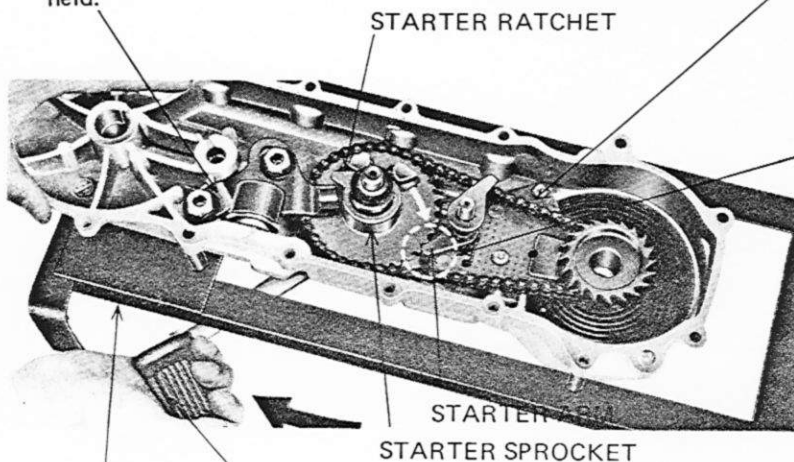
- ② Make sure that the starter sprocket is locked by the starter arm securely.

WARNING

Do not touch the chain and the starter arm with your hands.

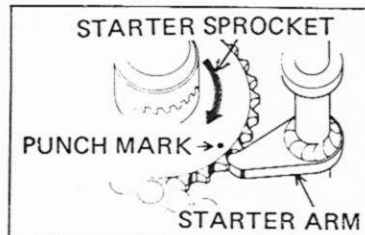
NOTE

When installing the L cover to the L case, wind the starter spring up until the punch mark on the starter sprocket aligns with the starter arm tip. Lightly tap the L cover while rotating the flywheel. Never tap the L case.



L-COVER DISASSEMBLING
BASE
(No. 07965-1470001)

- ① Temporarily install the starter pedal in the proper position and rotate until there is a clearance between the starter stopper and the sprocket dog.



— STARTER DRIVE SPROCKET DISASSEMBLY —

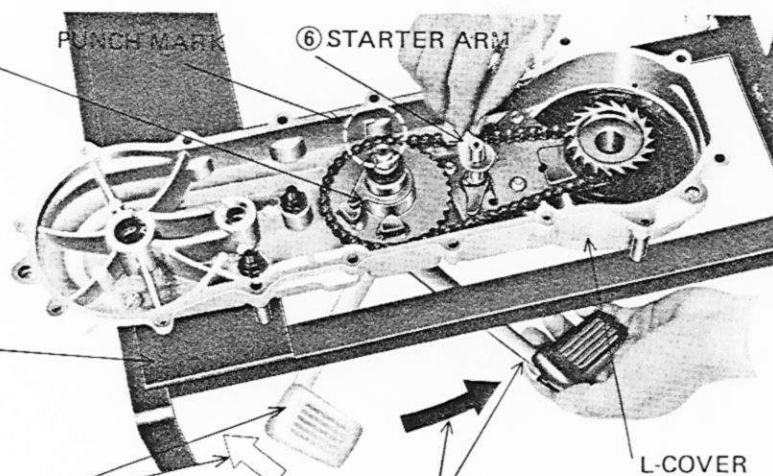
NOTE

Install the drive sprocket with the marks aligned.

⑦ SPROCKET ASSEMBLY

CAUTION

During assembly, do not damage the oil seal.



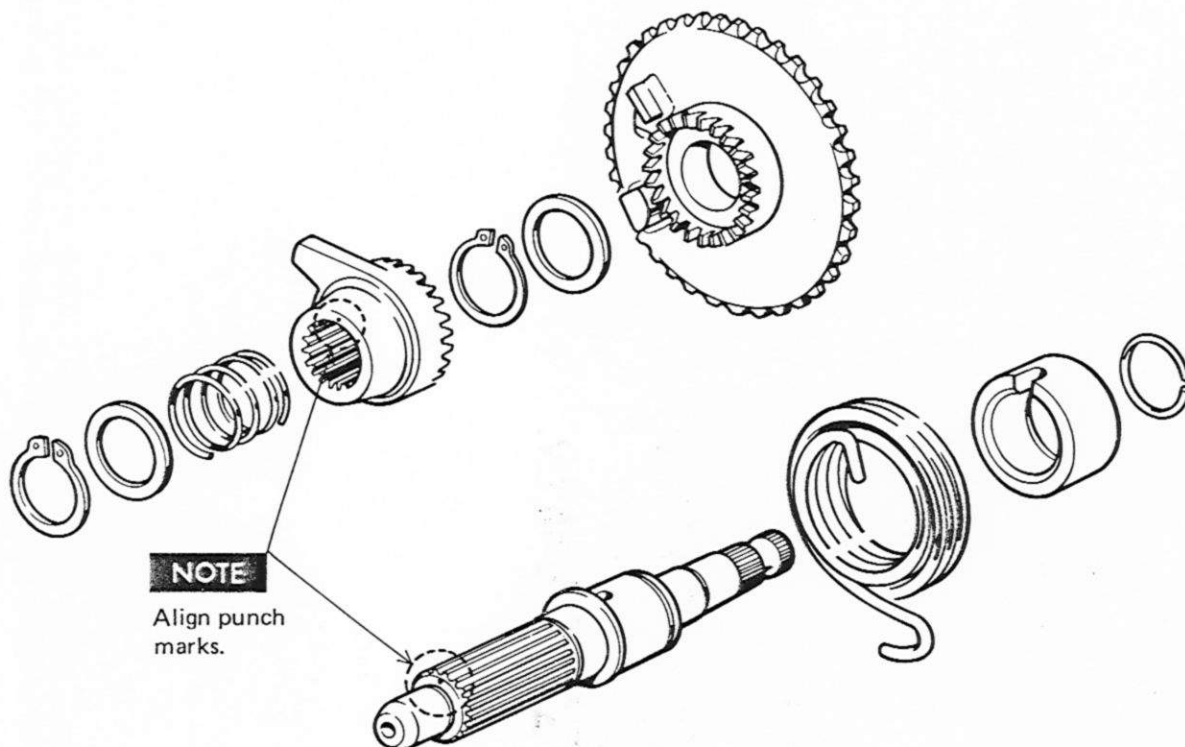
L-COVER BASE
(No. 07965-1470001)

- ④ Release the pedal stopper arm by rotating in arrow direction.

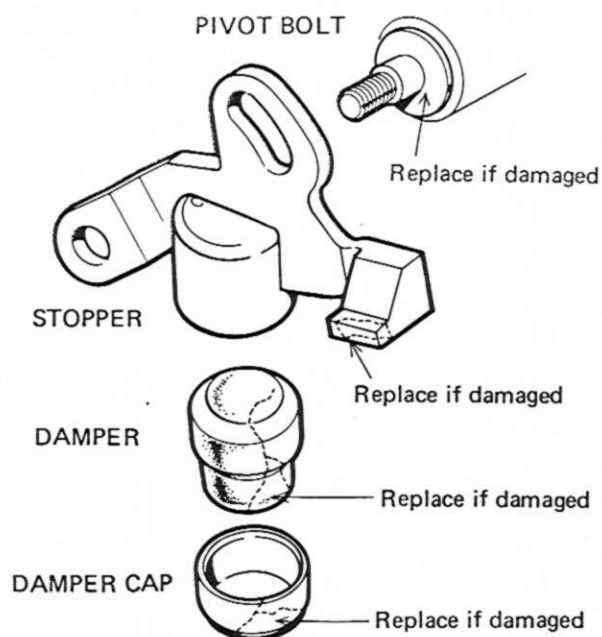
- ⑤ The starter spring is released by returning the pedal gradually in the arrow direction.



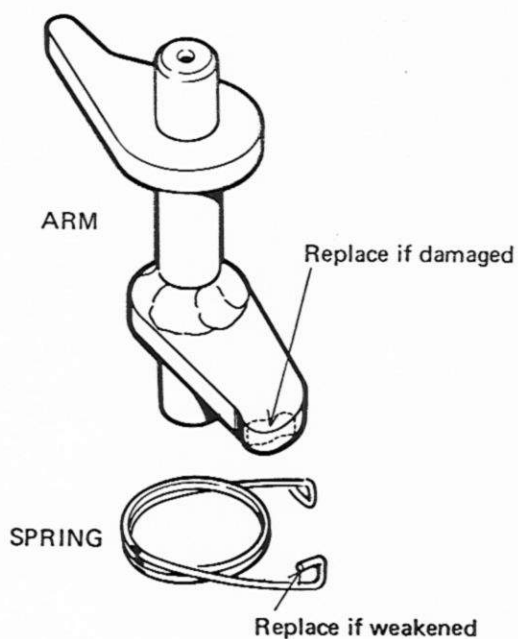
(STARTER DRIVE SPROCKET ASSEMBLY)



(STARTER STOPPER INSPECTION)

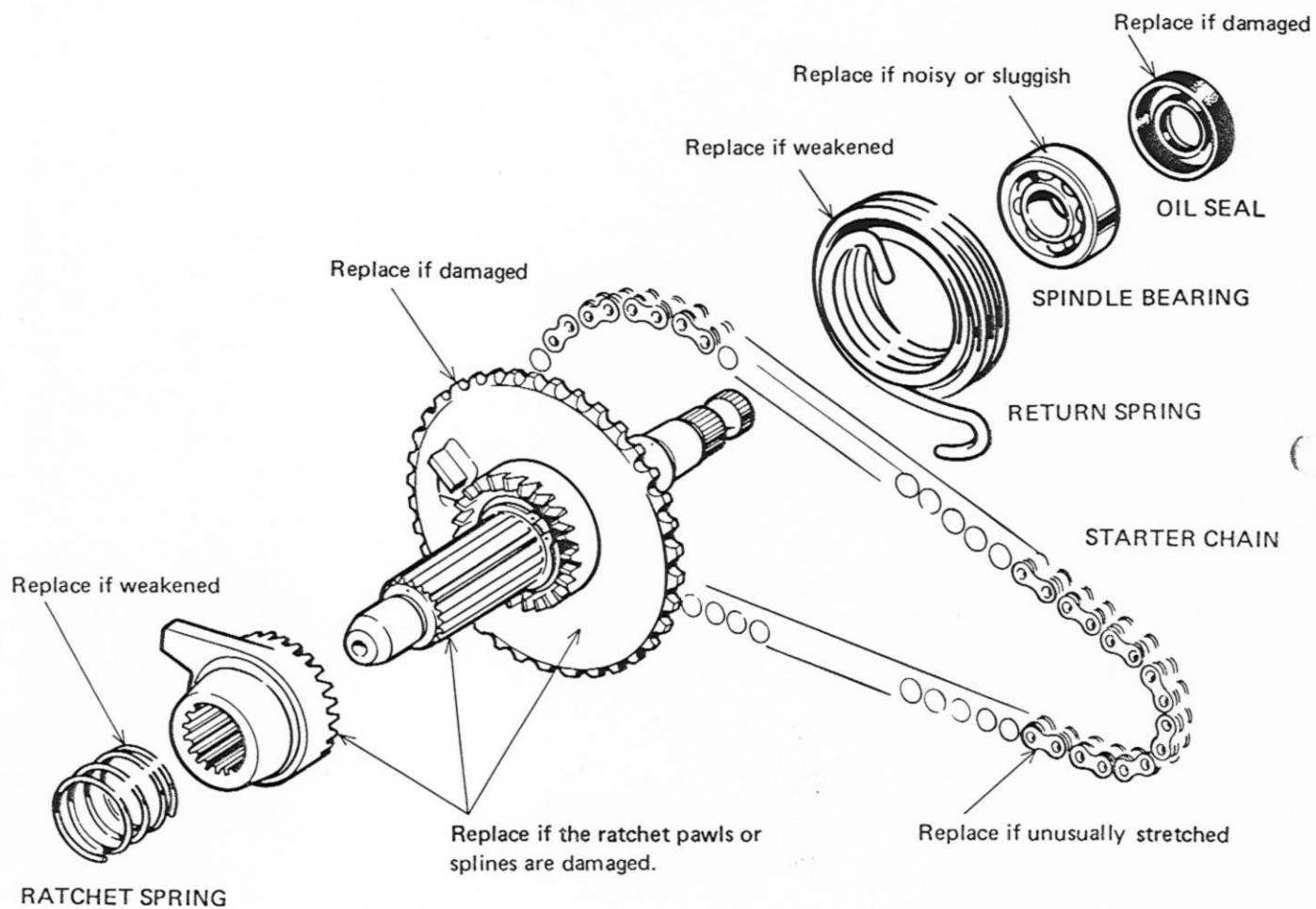


(STARTER ARM/SPRING INSPECTION)





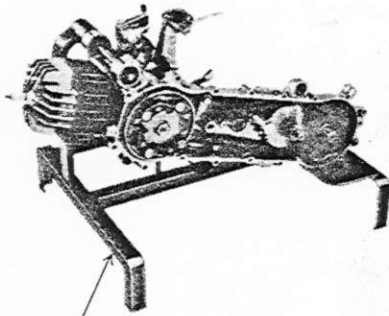
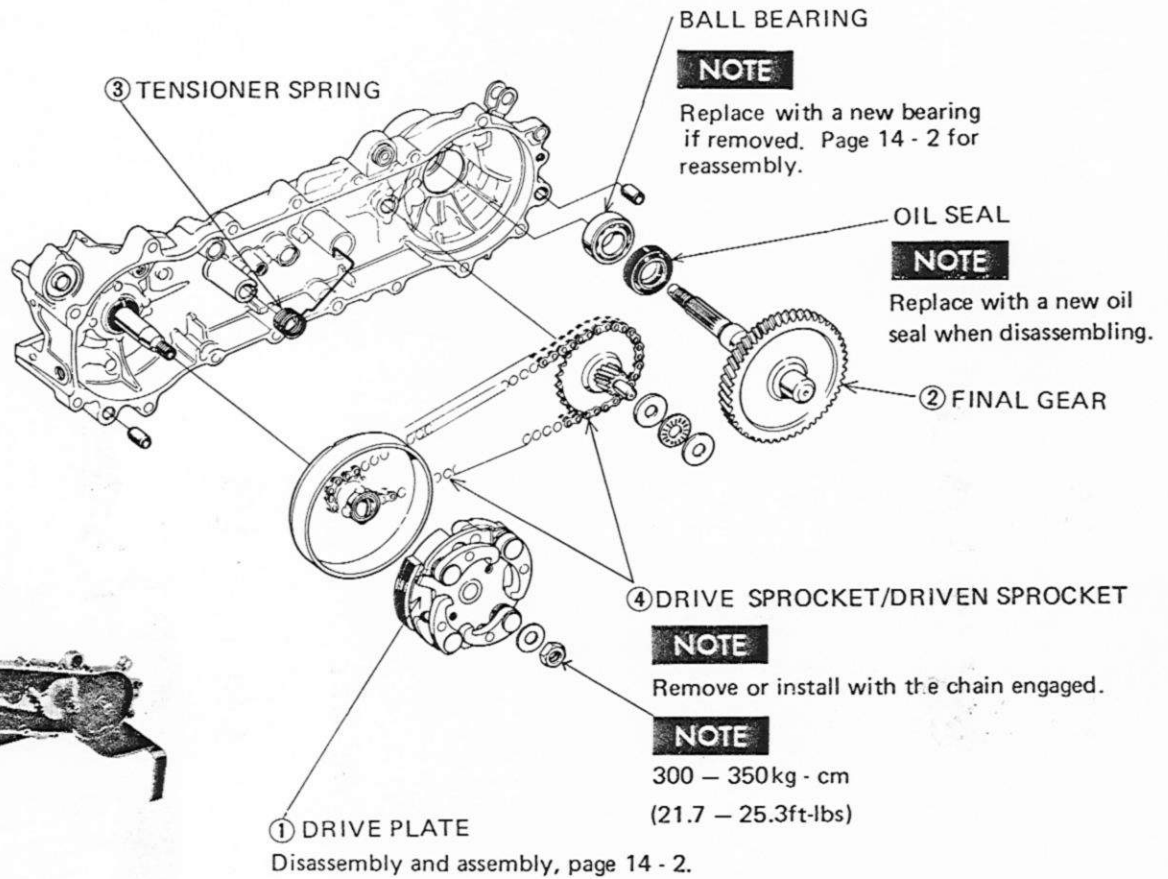
(DRIVE SPROCKET)





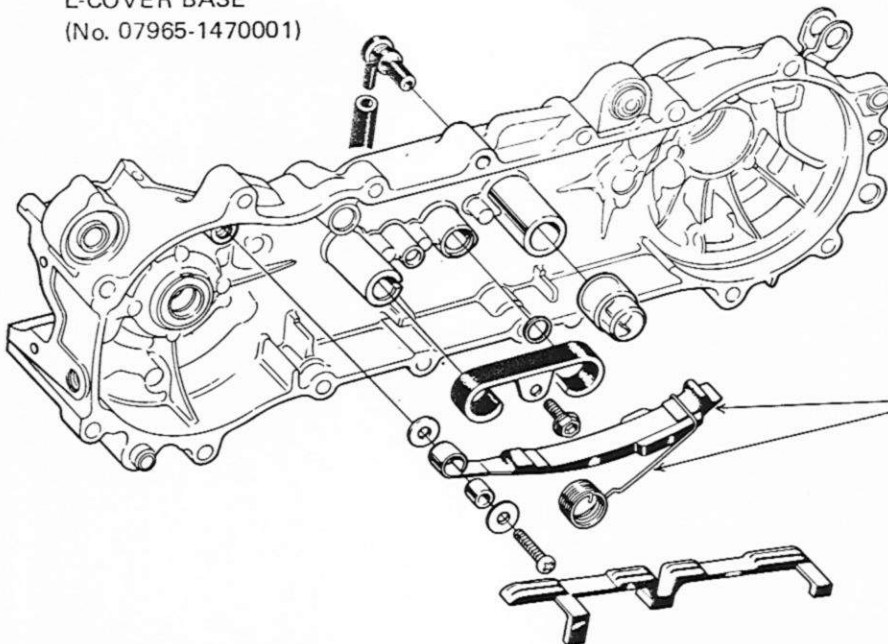
HONDA
NC50

14 Engine CLUTCH/FINAL DRIVE GEAR



L-COVER BASE
(No. 07965-1470001)

(CHAIN TENSIONER)



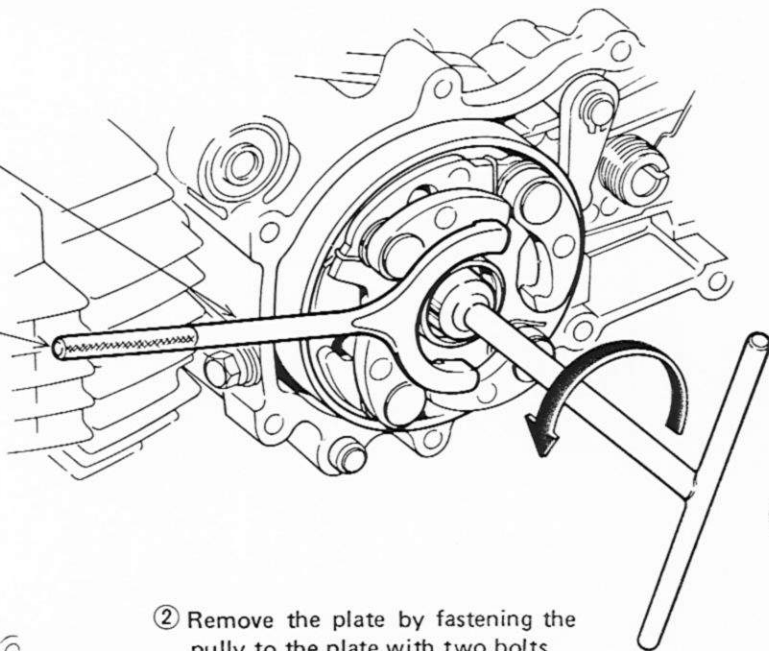
NOTE
After assembling, check the chain tension. Replace the spring if it has weakened.



(DRIVE PLATE DISASSEMBLY/ASSEMBLY)

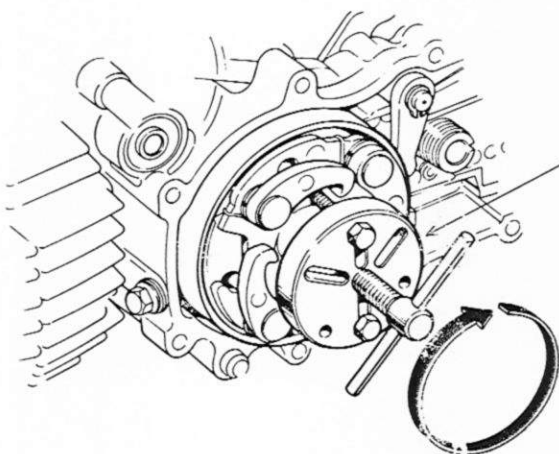
- ① Remove the nut while the tool is engaged with the ratchet pawls.

FLYWHEEL HOLDER
(No. 07925-0010001)



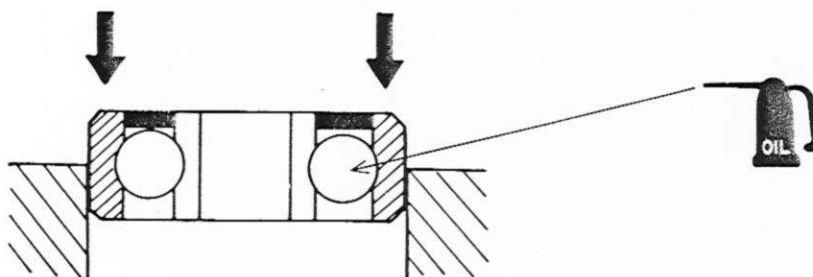
- ② Remove the plate by fastening the pulley to the plate with two bolts.

CLUTCH PULLER
(No. 07935-8050001)



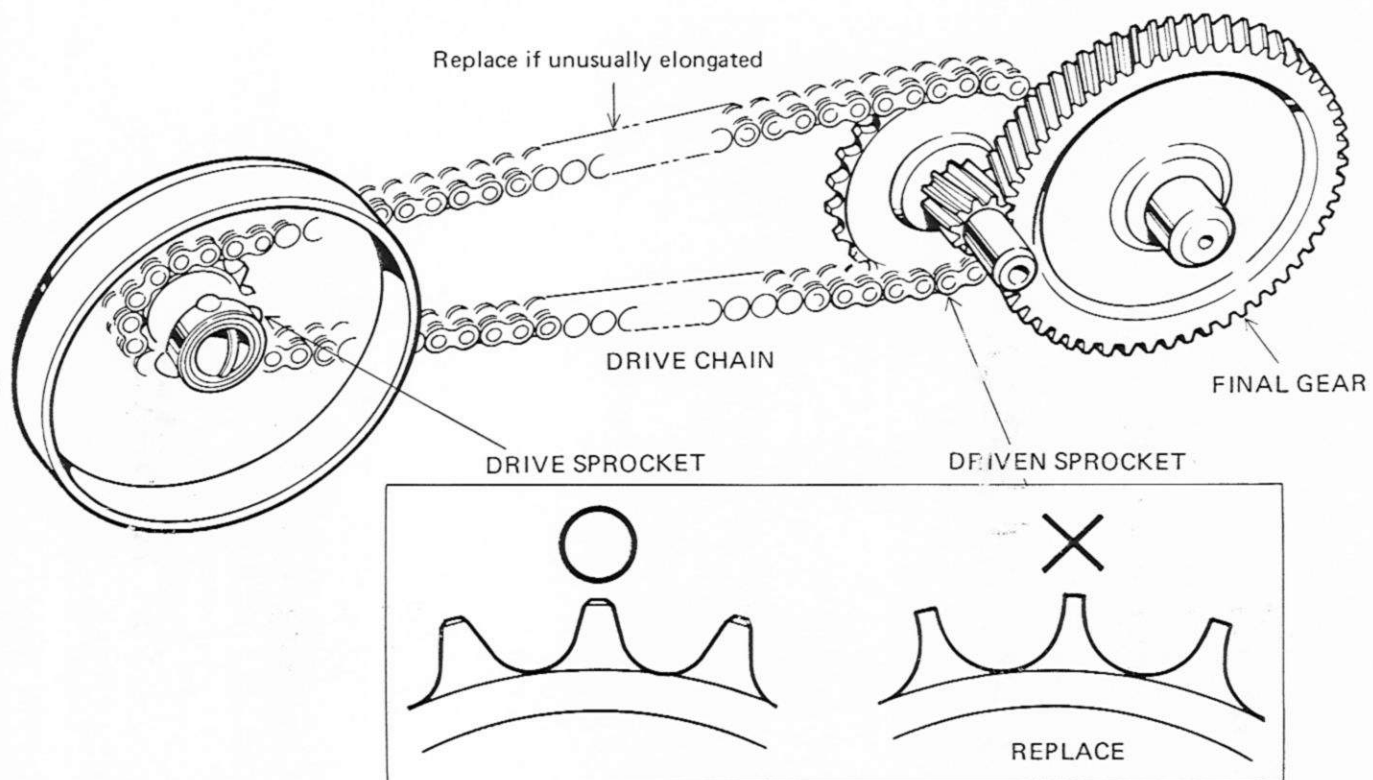
(BALL BEARING ASSEMBLY)

To install, drive outer race squarely to outer race.

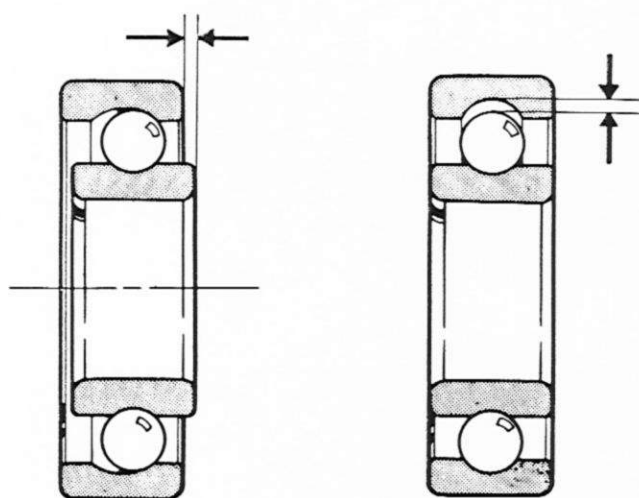




(INSPECTING DRIVE AND DRIVEN SPROCKETS FOR WEAR)



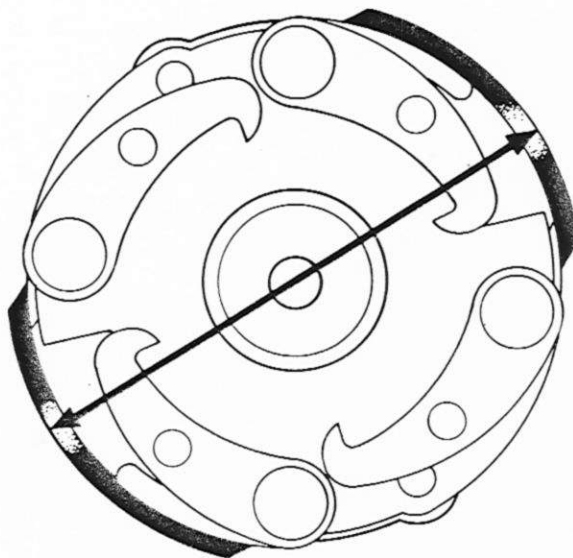
(BALL BEARING LOOSENESS)



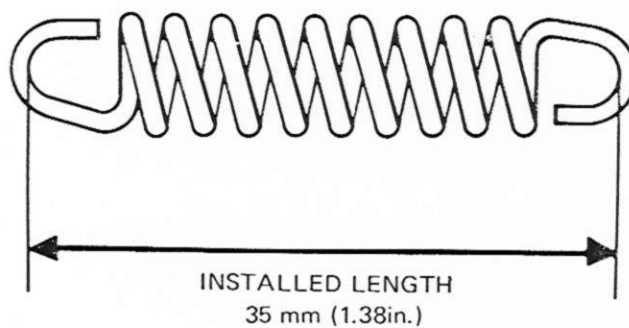


(CLUTCH SHOE WEAR)

103.8 – 103.9 mm (4.0826 – 4.0905 in.)
Service Limit: 103.6 mm (4.0787 in.)



(CLUTCH SPRING TENSION)



15 kg/35 mm (33.1 lbs/1.38 in.)
Service Limit: 13.5 kg/35 mm (29.8 lbs/1.38 in.)



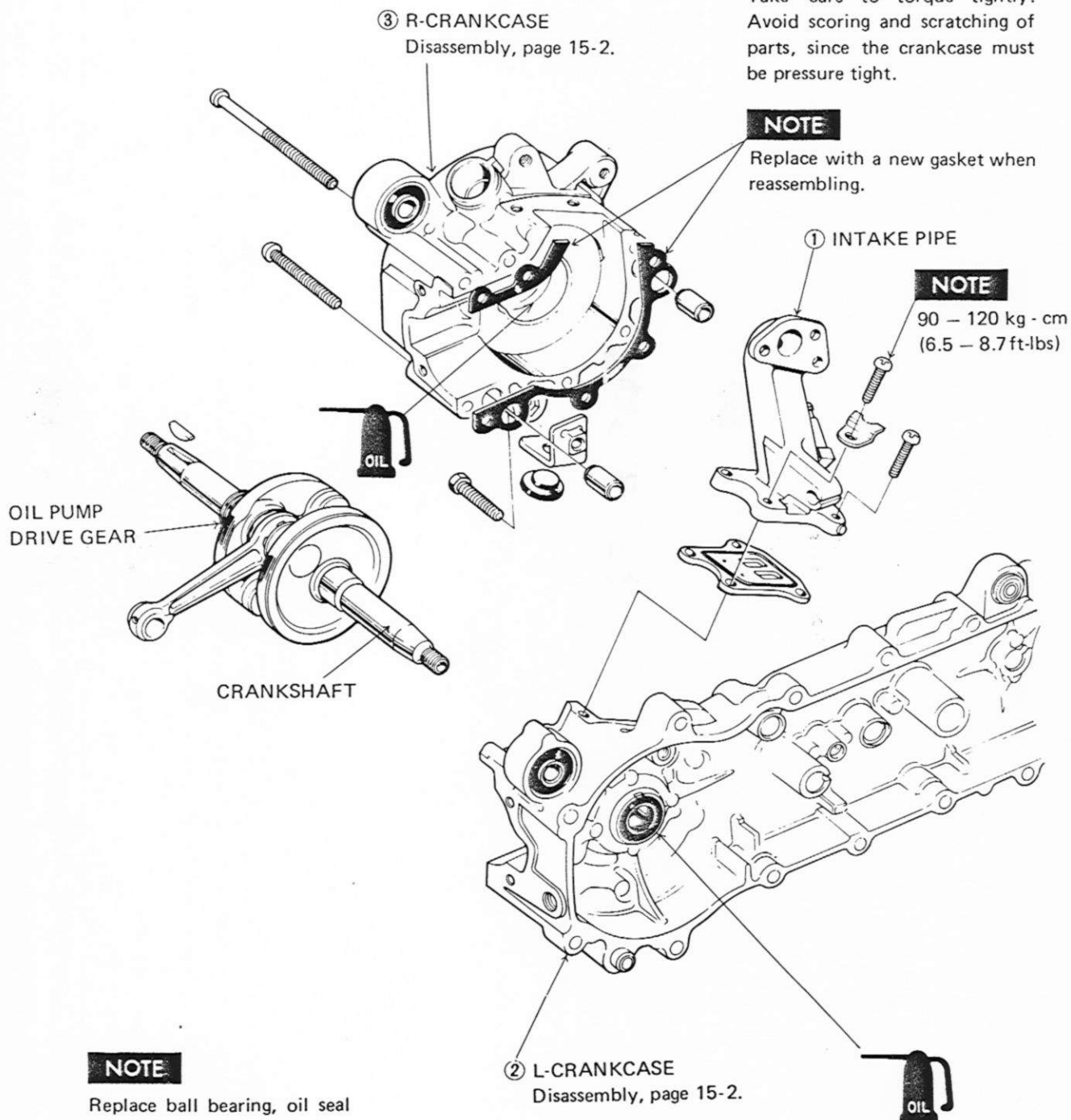
CRANKCASE/CRANKSHAFT

CAUTION

Take care to torque tightly. Avoid scoring and scratching of parts, since the crankcase must be pressure tight.

NOTE

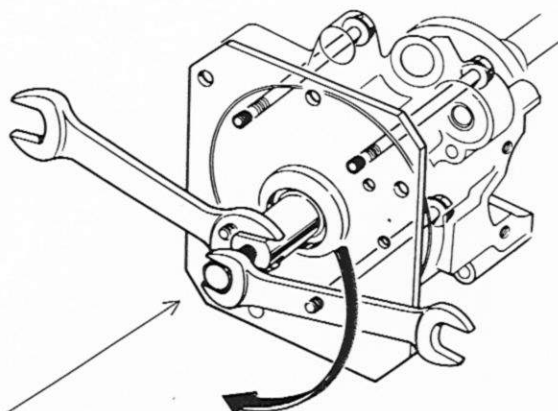
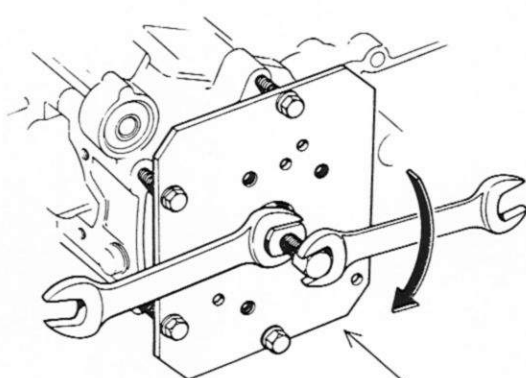
Replace with a new gasket when reassembling.





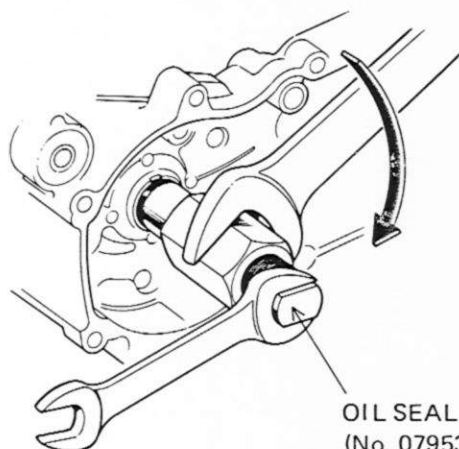
(L-CRANKCASE DISASSEMBLY)

(R-CRANKCASE DISASSEMBLY)



CASE PULLER
(No. 07933-1470000)

(CRANKCASE/ OIL SEAL ASSEMBLY)

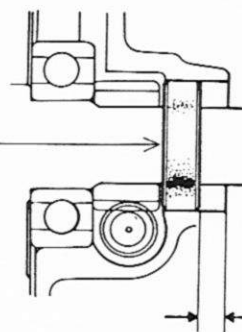
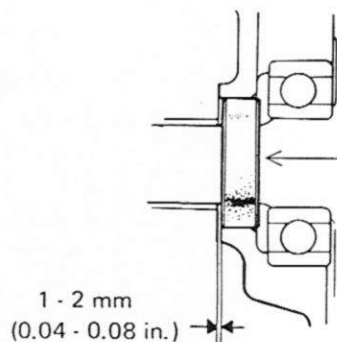


Use collar when assembling
the crankcase.

OIL SEAL ASSEMBLING TOOL
(No. 07953-1470000)

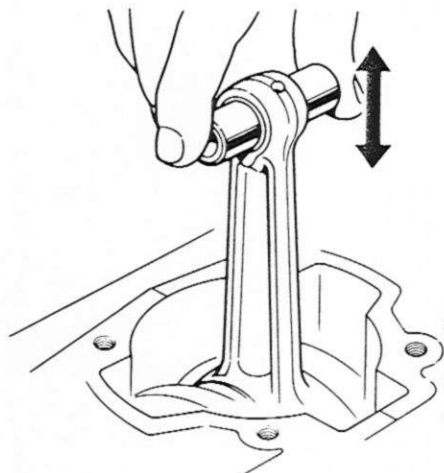
— L-OIL SEAL INSTALLATION DIMENSION —

— R-OIL SEAL INSTALLATION DIMENSION —



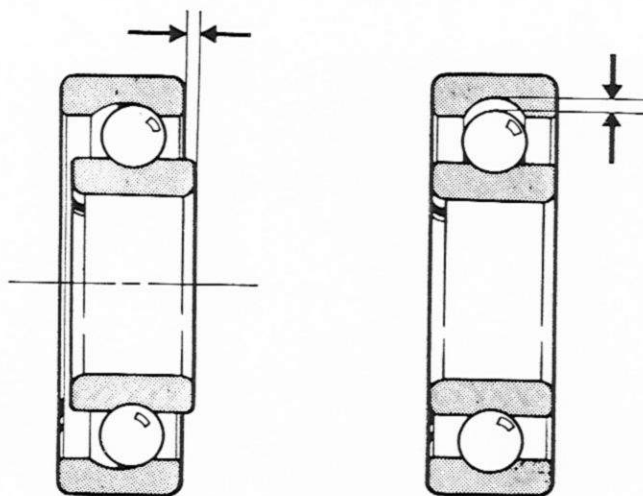


(CHECK CONNECTING ROD SMALL
END BEARING LOOSENESS)



Over 1.5 mm (0.06 in.) (Replace)

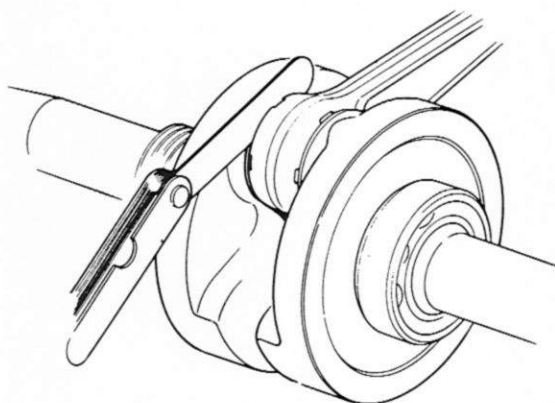
(CHECK BEARING LOOSENESS)



UNUSUAL LOOSENESS
(Replace)

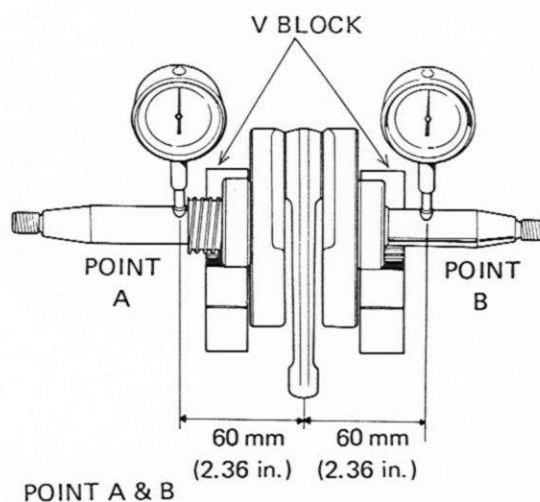
UNUSUAL LOOSENESS
(Replace)

(MEASURE CONNECTING ROD BIG
END BEARING SIDE CLEARANCE)



0.15 – 0.41mm (0.0059 – 0.0161 in.)
Service Limit: 0.6mm (0.0236 in.)

(MEASURE CRANKSHAFT RUNOUT)



POINT A & B

0.05mm (0.0020 in.)
Service Limit: 0.15mm (0.0059 in.)

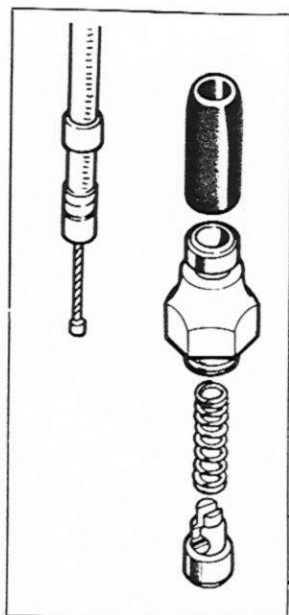
16 Engine CARBURETOR

HONDA
NC50



NOTE

Turn fuel valve off
before draining.



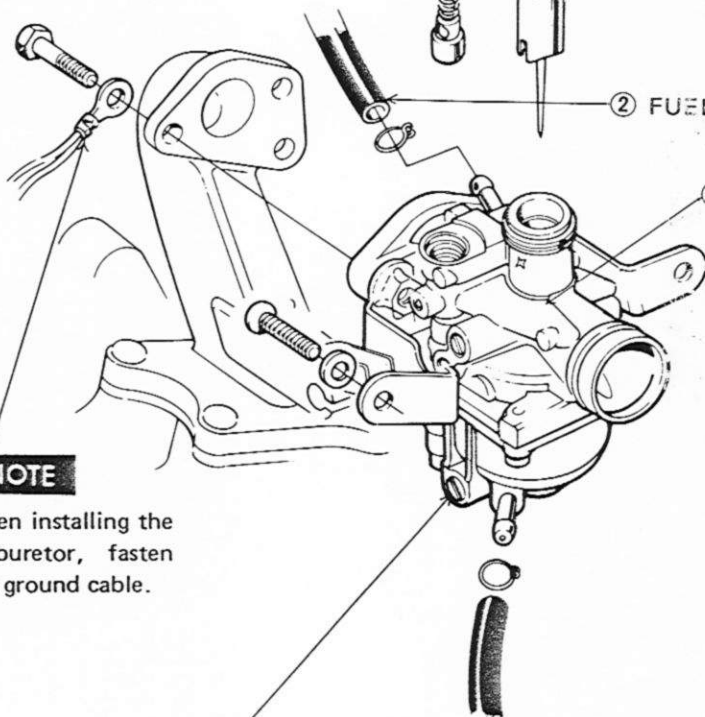
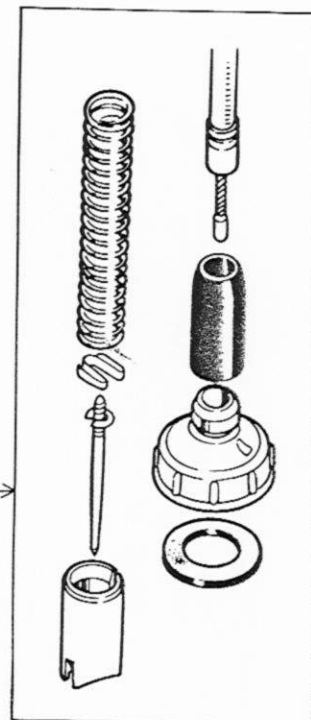
④ CHOKE CABLE

NOTE

10 – 30 kg-cm
(0.72 – 2.17 ft-lbs)

③ THROTTLE CABLE

② FUEL TUBE



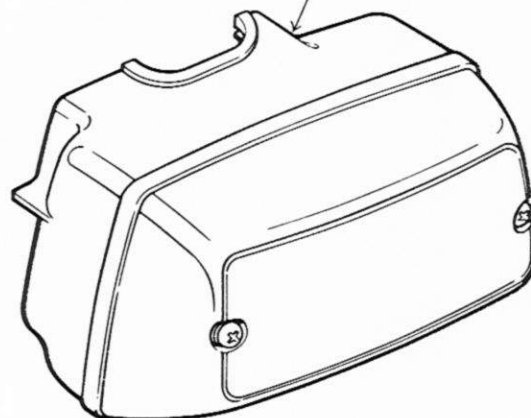
NOTE

When installing the
carburetor, fasten
the ground cable.

① ROTATE SCREW TO DRAIN.

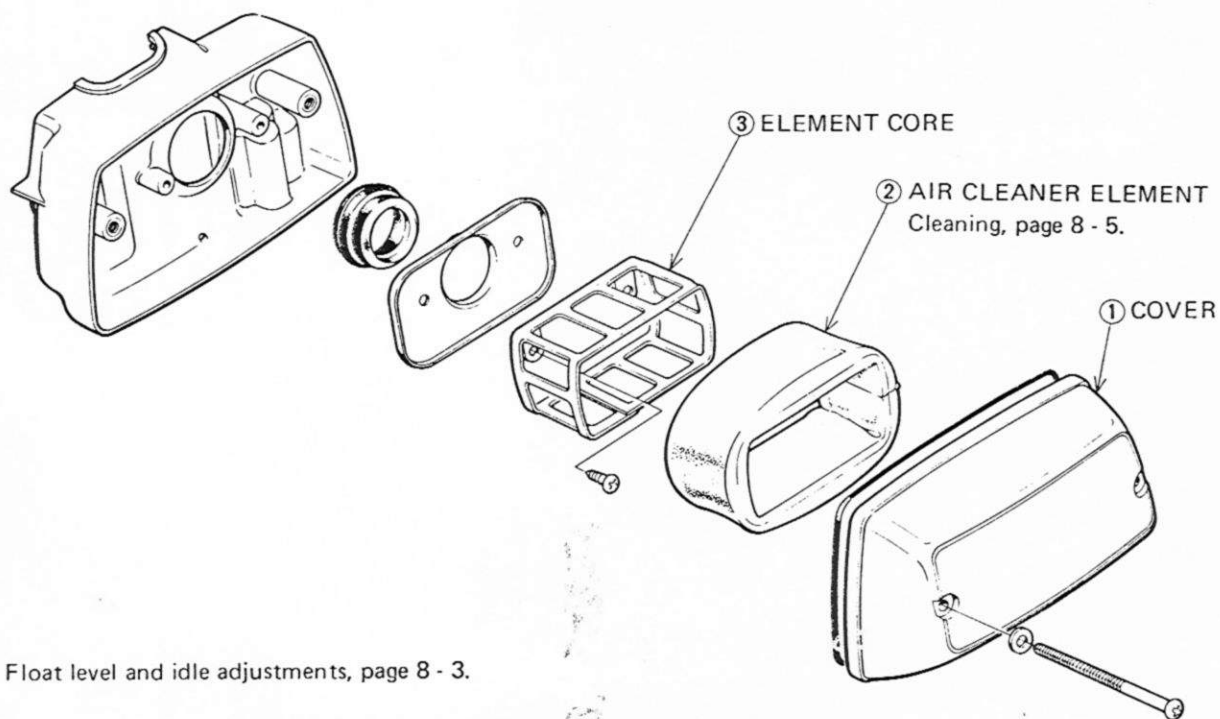
⑥ CARBURETOR
Disassembly and
reassembly, page
16-2.

⑤ AIR CLEANER

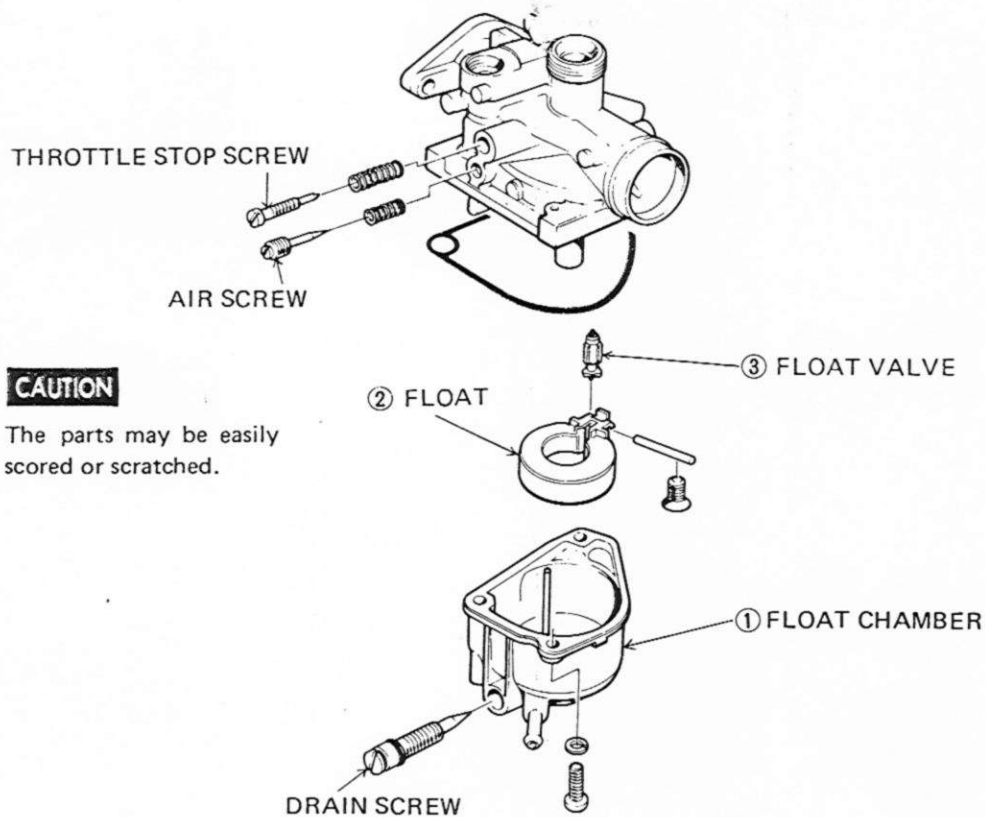




(AIR CLEANER)



(CARBURETOR DISASSEMBLY/ASSEMBLY)



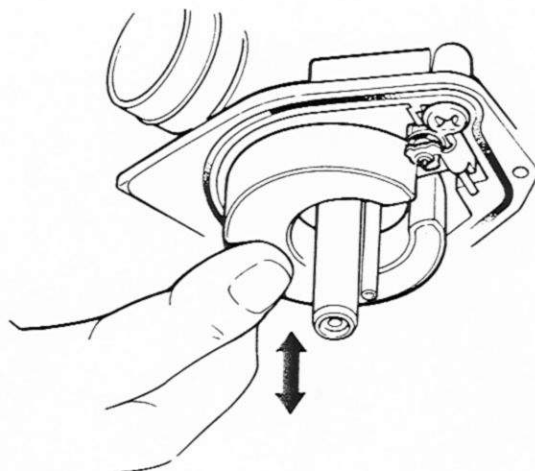


(MAIN JET/SLOW JET CLOGGING)



Blow air through orifices to make sure they are open and not clogged.

(FLOAT VALVE OPERATION)



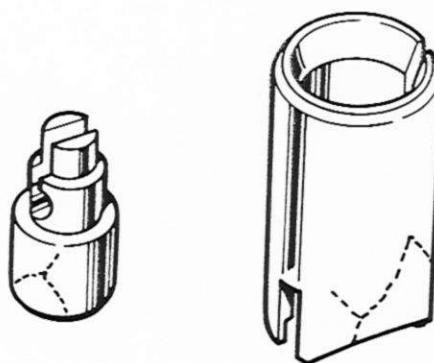
Replace the float valve, if the float does not return smoothly.

(THROTTLE/CHOKE WIRE FRAY OR DAMAGE)

(CHOKE VALVE/THROTTLE VALVE DAMAGE)



(Replace)

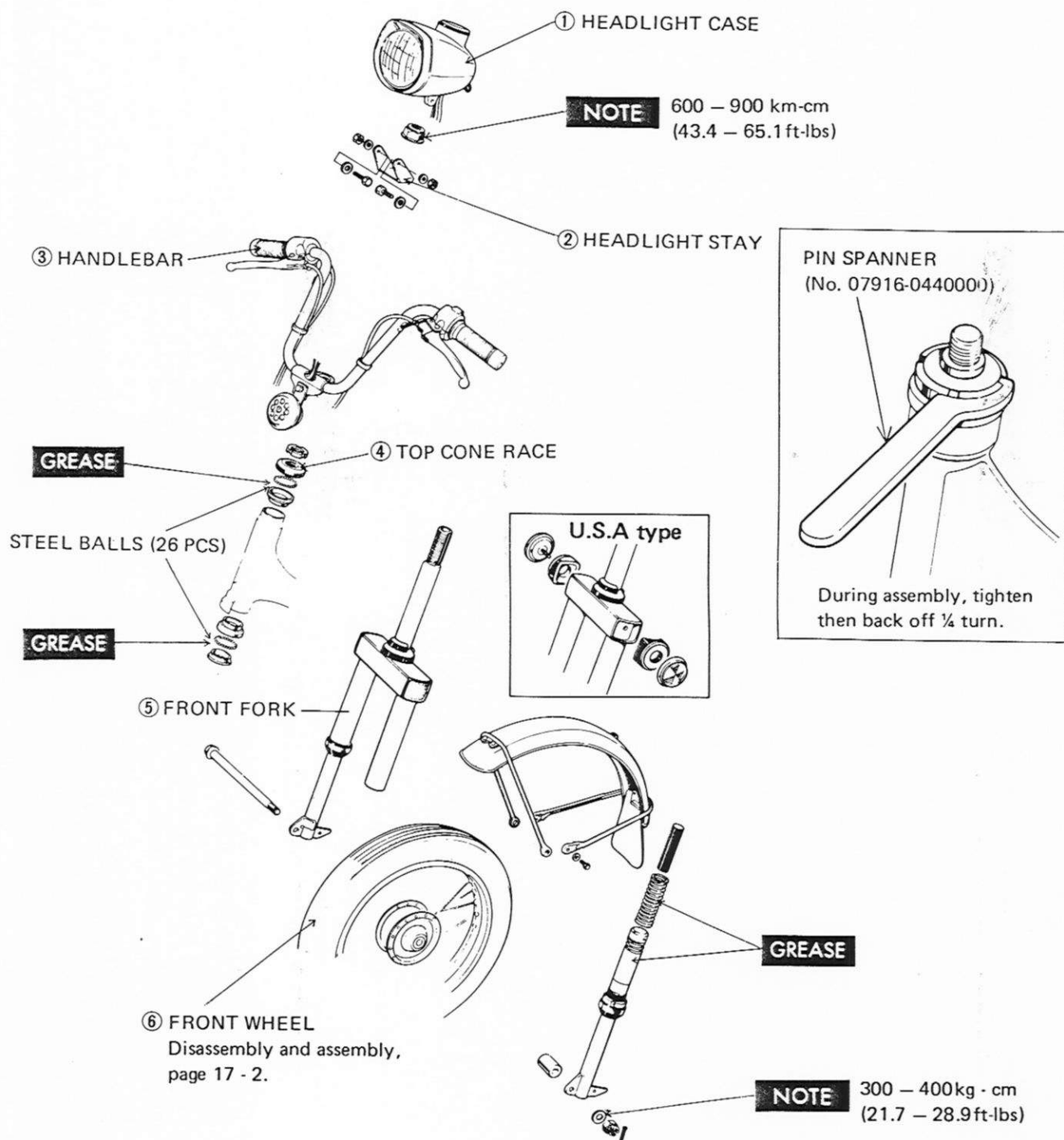


SCRATCHED OR SCORED (Replace)



HONDA
NC50

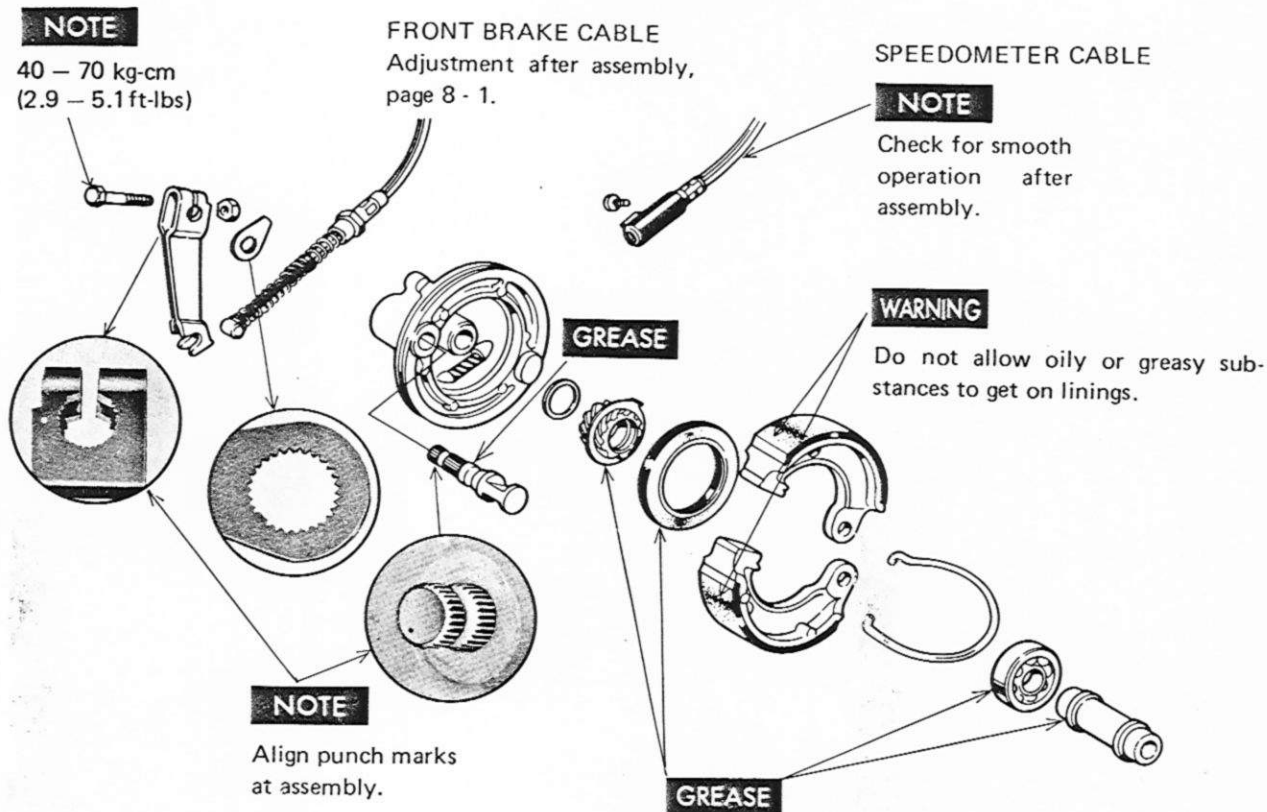
17 Frame HANDLEBAR/ FRONT FORK/ FRONT WHEEL



■ BALL RACE DISASSEMBLY AND ASSEMBLY, PAGE 17 - 3.



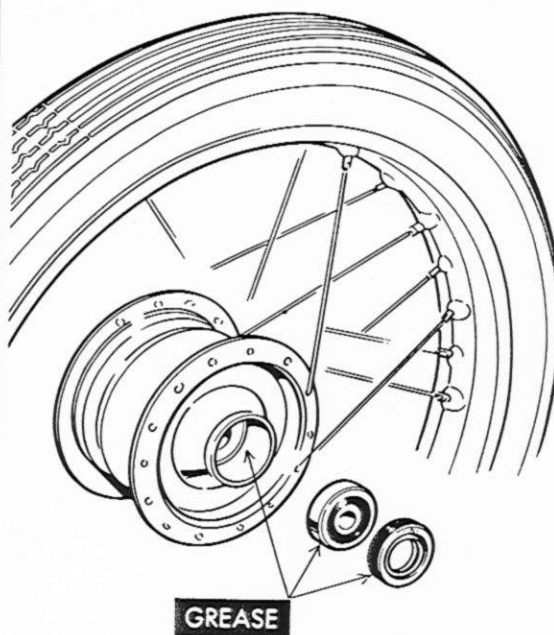
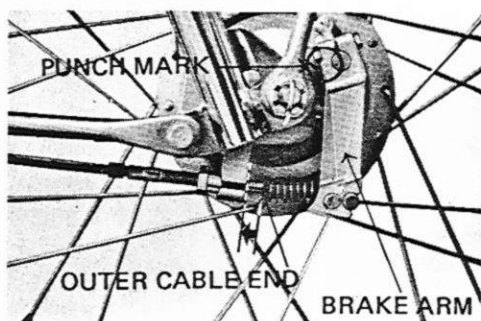
(FRONT WHEEL DISASSEMBLY/ASSEMBLY)



〈 FRONT BRAKE ARM READJUSTMENT 〉

If the outer cable end reaches the point shown in the picture due to shoe wear after adjusting the front brake lever free play, reset the brake arm position (punch mark) by turning the brake arm one serration counter-clockwise.

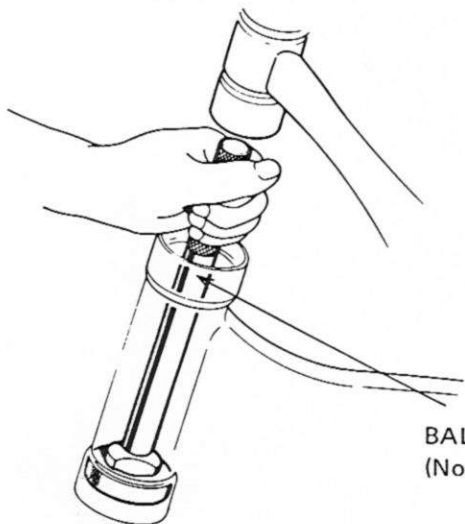
Reset the front brake arm only once after adjustment.



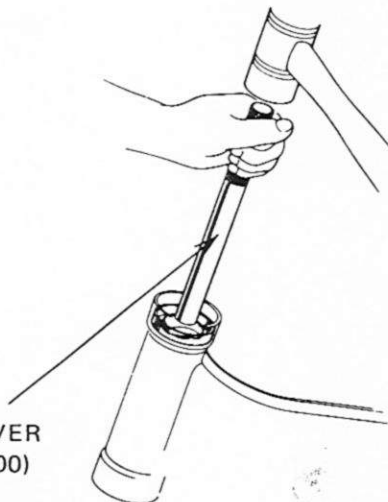


(BALL RACE DISASSEMBLY/ASSEMBLY)

— DISASSEMBLY —

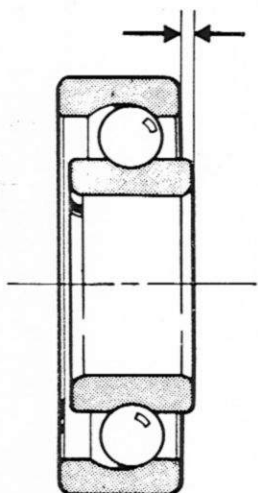


— ASSEMBLY —

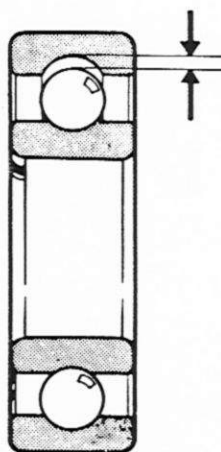


BALL RACE DRIVER
(No. 07953-3330000)

(CHECKING BALL BEARING LOOSENESS)

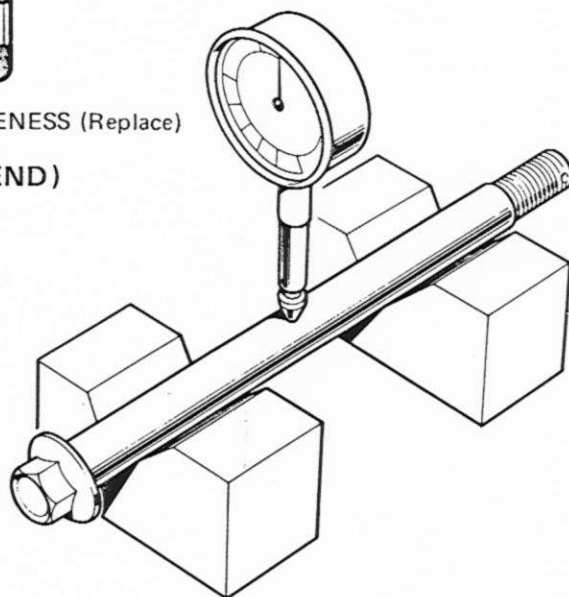


EXCESSIVE LOOSENESS (Replace)



EXCESSIVE LOOSENESS (Replace)

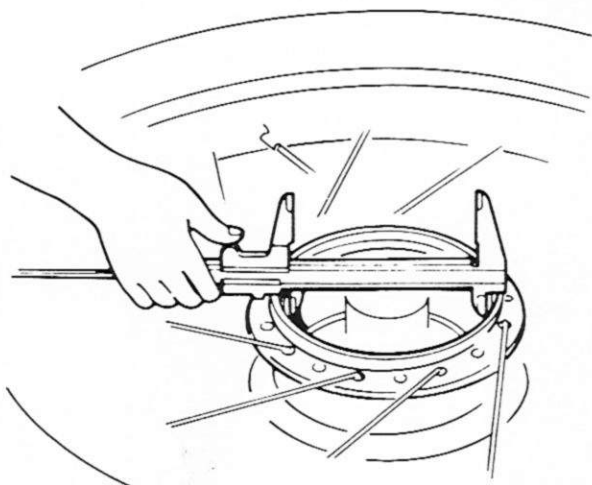
(CHECKING FRONT WHEEL AXLE BEND)



0.05mm (0.0020 in.) MAX.
Service Limit: 0.1mm (0.0039 in.)



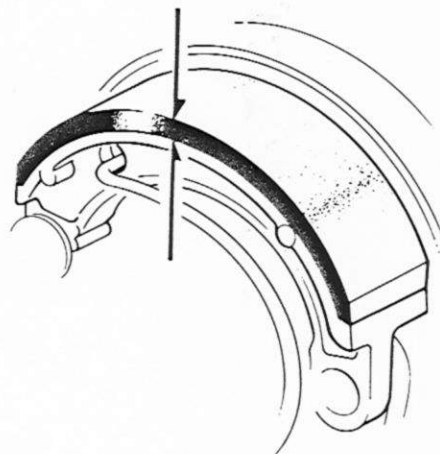
(WHEEL HUB I.D.)



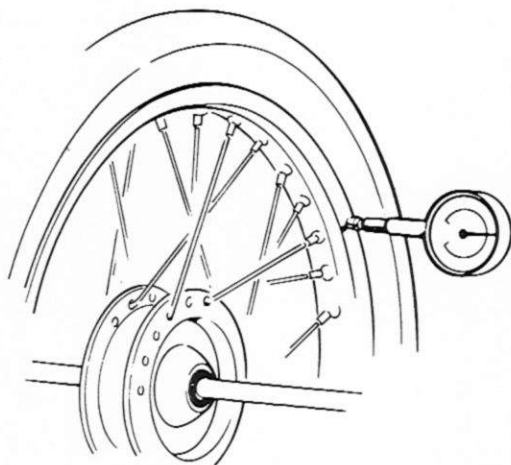
80.0 – 80.2mm (3.150–3.158 in.)
Service Limit: 81.0mm (3.189 in.)

(BRAKE LINING THICKNESS)

3.5mm (0.138 in.)
Service Limit: 2.0mm (0.079 in.)



(FRONT WHEEL WOBBLE)



1.0mm (0.04 in.) MAX.
Service Limit: 2.0mm (0.079 in.)

NOTE

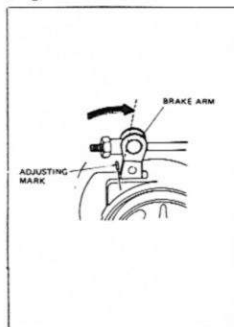
Check for damage or nails embedded in the tire treads.

— SPOKE LOOSENESS —

Retighten or repair as necessary.



(fig. D)



Point of resettings

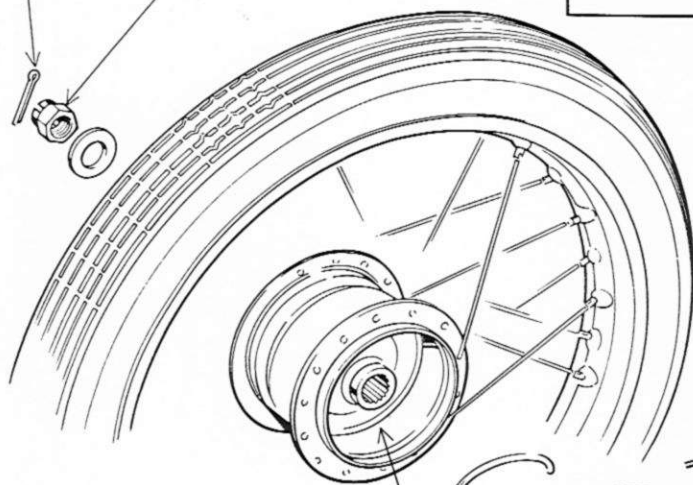
NOTE

Replace new when disassembled.

NOTE

400 – 500 kg - cm
(28.9 – 36.2 ft-lbs)

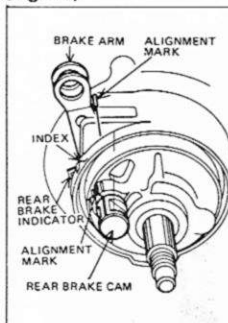
REAR WHEEL



REAR BRAKE ARM RESETTINGS

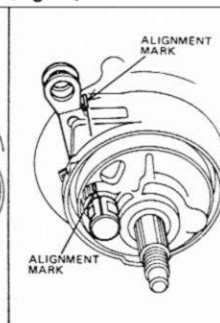
Before arrow on rear brake indicator aligns to index mark on L crankcase, the brake arm must be reset twice according to the shoe wear.

(fig. A)



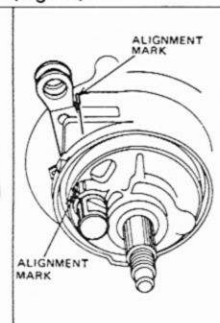
First resetting

(fig. B)



Second resetting

(fig. C)



Installation with new shoe

If the brake arm reaches the point shown in fig. D, reset arm in accordance with fig. A.

If arm is again in the point shown in fig. D, reset as in fig. B. When installing a new shoe, follow fig. C.

REAR BRAKE INDICATO

REAR BRAKE CAM

REAR BRAKE ARM

WARNING

Do not allow oily or greasy substances getting on linings.

GREASE

NOTE

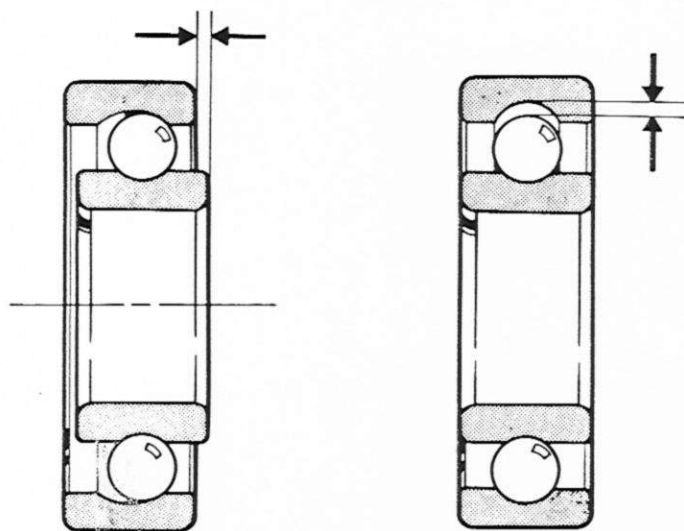
40 – 70 kg - cm
(2.9 – 5.1 ft-lbs)

L. CRANKCASE

■ PAGES 8 - 1 AND 8 - 2 FOR REAR BRAKE CABLE ADJUSTMENT AFTER ASSEMBLING.



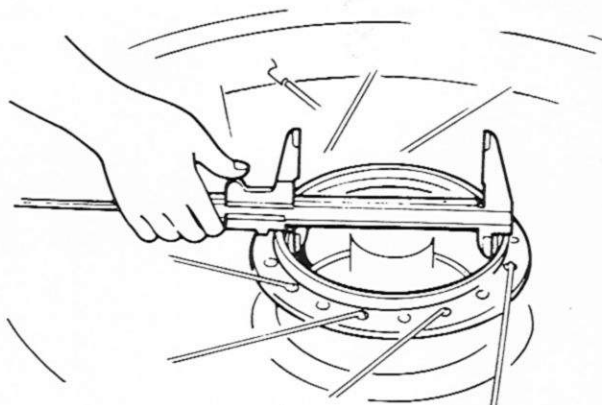
(CHECKING BALL BEARING LOOSENESS)



UNUSUAL LOOSENESS (Replace)

UNUSUAL LOOSENESS (Replace)

(MEASURE WHEEL HUB I.D.)



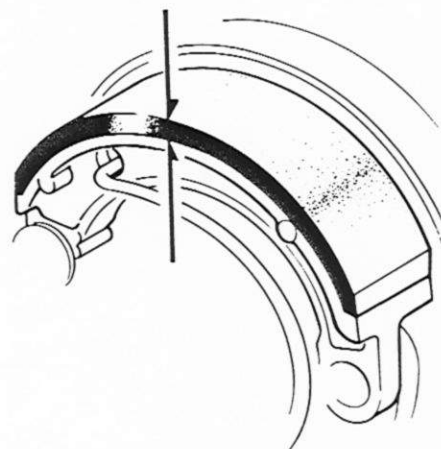
80.0 – 80.2mm (3.150 – 3.158 in.)

Service Limit: 81.0mm (3.189 in.)

(MEASURE BRAKE LINING THICKNESS)

3.5mm (0.138 in.)

Service Limit: 2.0mm (0.079 in.)

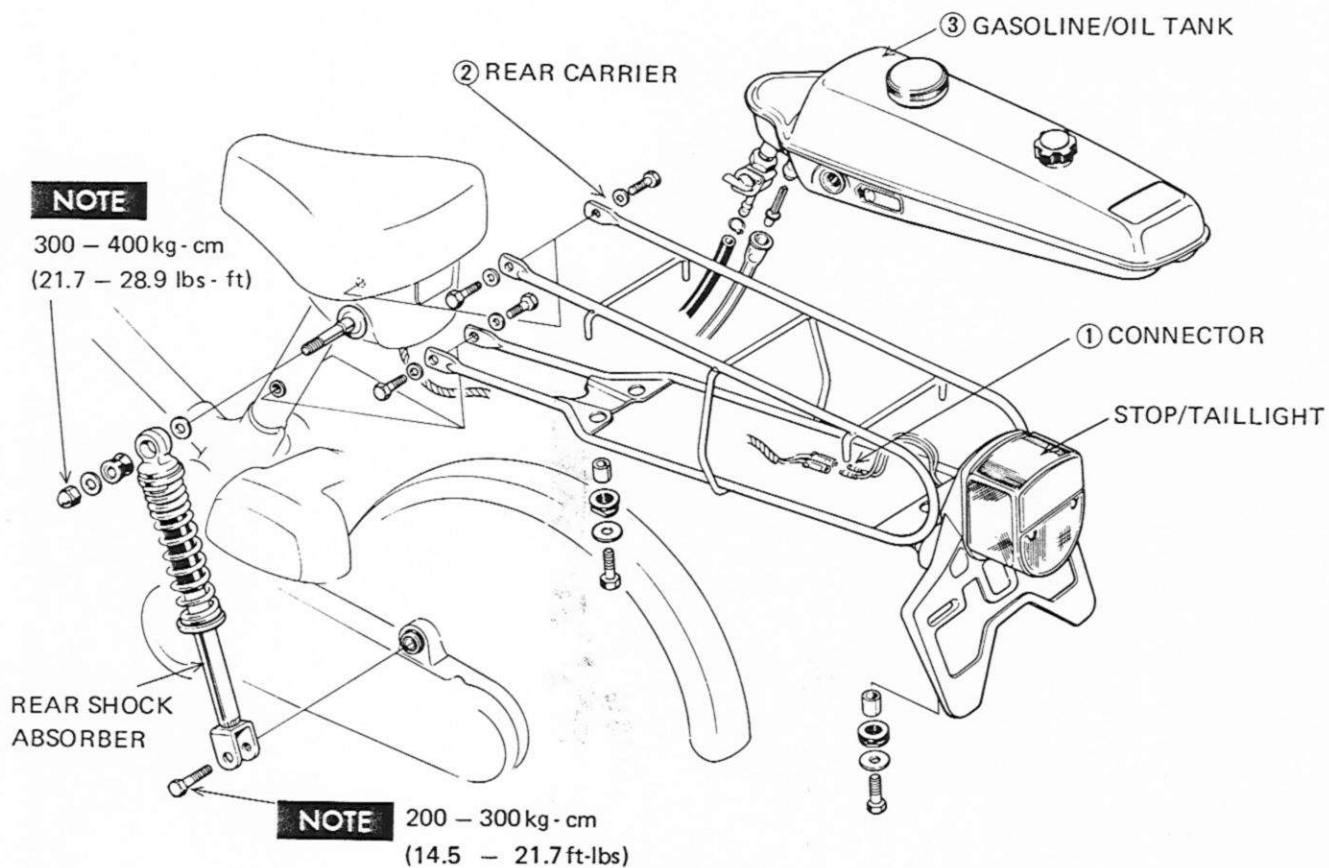




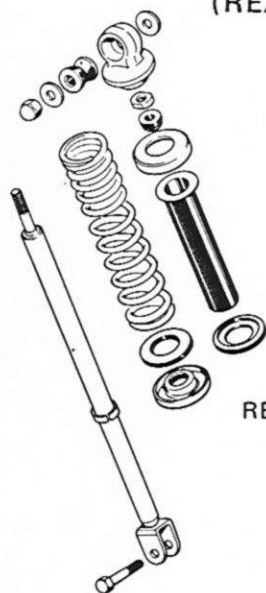
HONDA
NC50

19
Frame

REAR SHOCK ABSORBER/ FUEL TANK



(REAR SHOCK ABSORBER DISASSEMBLY)

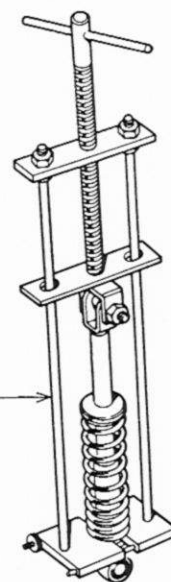


NOTE

After assembling, check operation.

S. TOOL

REAR SHOCK ABSORBER COMPRESSOR
(No. 07959-3290000)





(ELECTRICAL ACCESSORIES AND THEIR LOCATIONS)

1. IGNITION SYSTEM

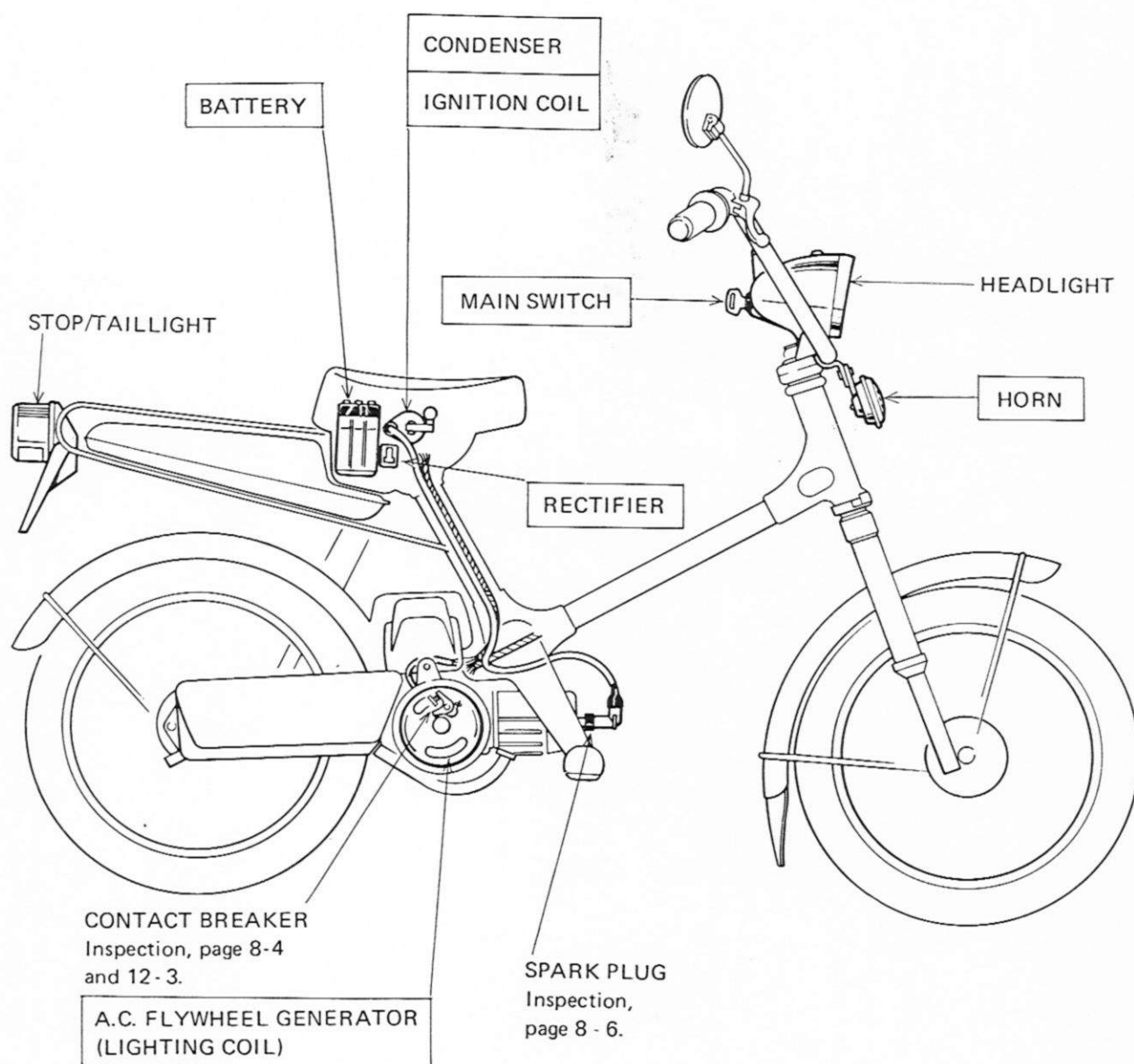
CONTACT BREAKER
IGNITION COIL
CONDENSER
SPARK PLUG

2. BATTERY CHARGING SYSTEM

A.C. FLYWHEEL GENERATOR
RECTIFIER
BATTERY

3. LIGHTING SYSTEM AND OTHERS

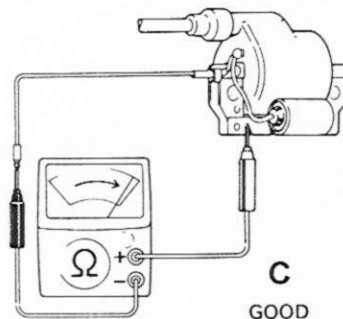
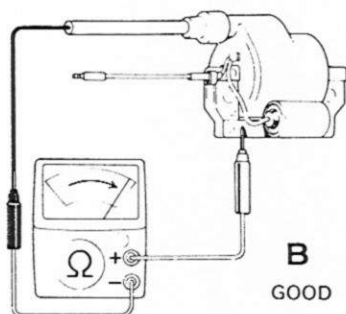
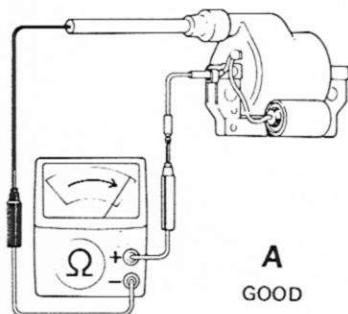
HEADLIGHT
STOP/TAILLIGHT
HORN



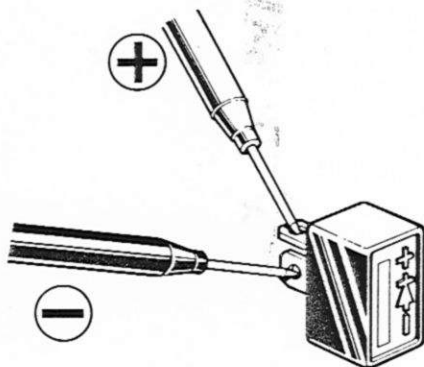


(IGNITION COIL)

Check for continuity as shown.

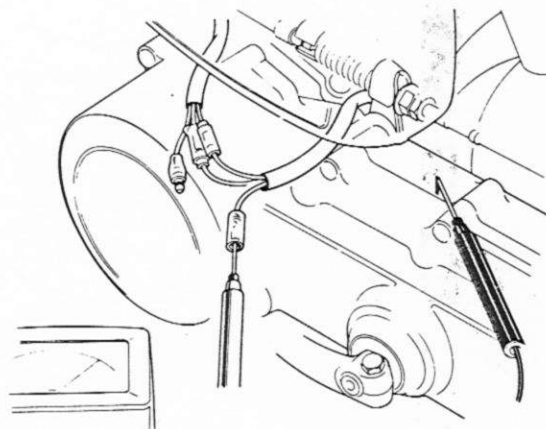


(RECTIFIER)



Normal if continuous only in arrow direction.
Replace if continuity exists in reverse direction.

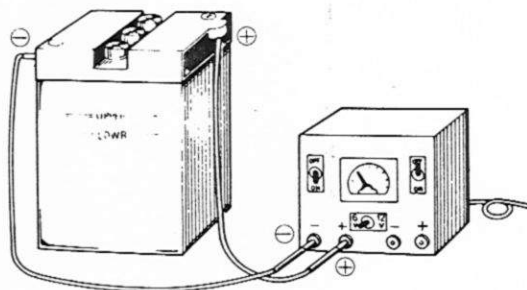
(LIGHTING COIL)



Check for continuity by attaching one test probe to yellow connector and the other to ground. Normal if there is continuity.

(BATTERY CHARGING)

Battery inspection, page 8 - 6.



WARNING

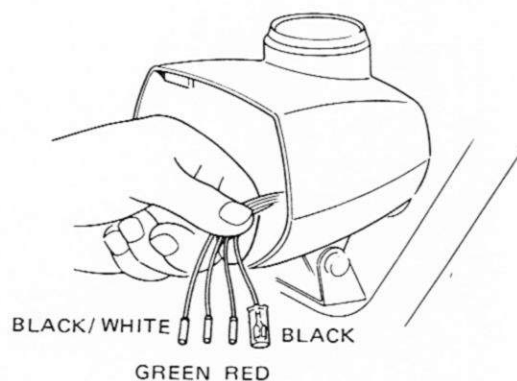
Keep sparks and open flames away from battery while charging.

Connecting method	Connect charger positive (+) terminal to battery positive terminal. Connect charger negative (-) terminal to battery negative terminal.
Charging current	0.2A
Inspection	Continue charging until specific gravity of battery electrolyte is 1.26 - 1.28 (at 20°C). Gases are formed on plate surfaces at end of charge.
Charging time	12 - 13 hours for batteries with specific gravity below 1.22 (at 20°C)



(MAIN SWITCH)

	IG	E	P	BAT
ON			○—○	
OFF	○—○			
Wire color	BLACK/WHITE	GREEN	BLACK	RED



(DIMMER/HORN SWITCH)

	Lo	Hi	GEN		HO	E
Lo	○—○		○	PUSH	○—○	
Hi		○—○				
Wire color	WHITE	BLUE	YELLOW	Lead color	LIGHT GREEN	GREEN

(ENGINE STOP SWITCH)
(U.S.A. type)

	IG	E
RUN		
OFF	○—○	
Wire color	BLACK/WHITE	GREEN

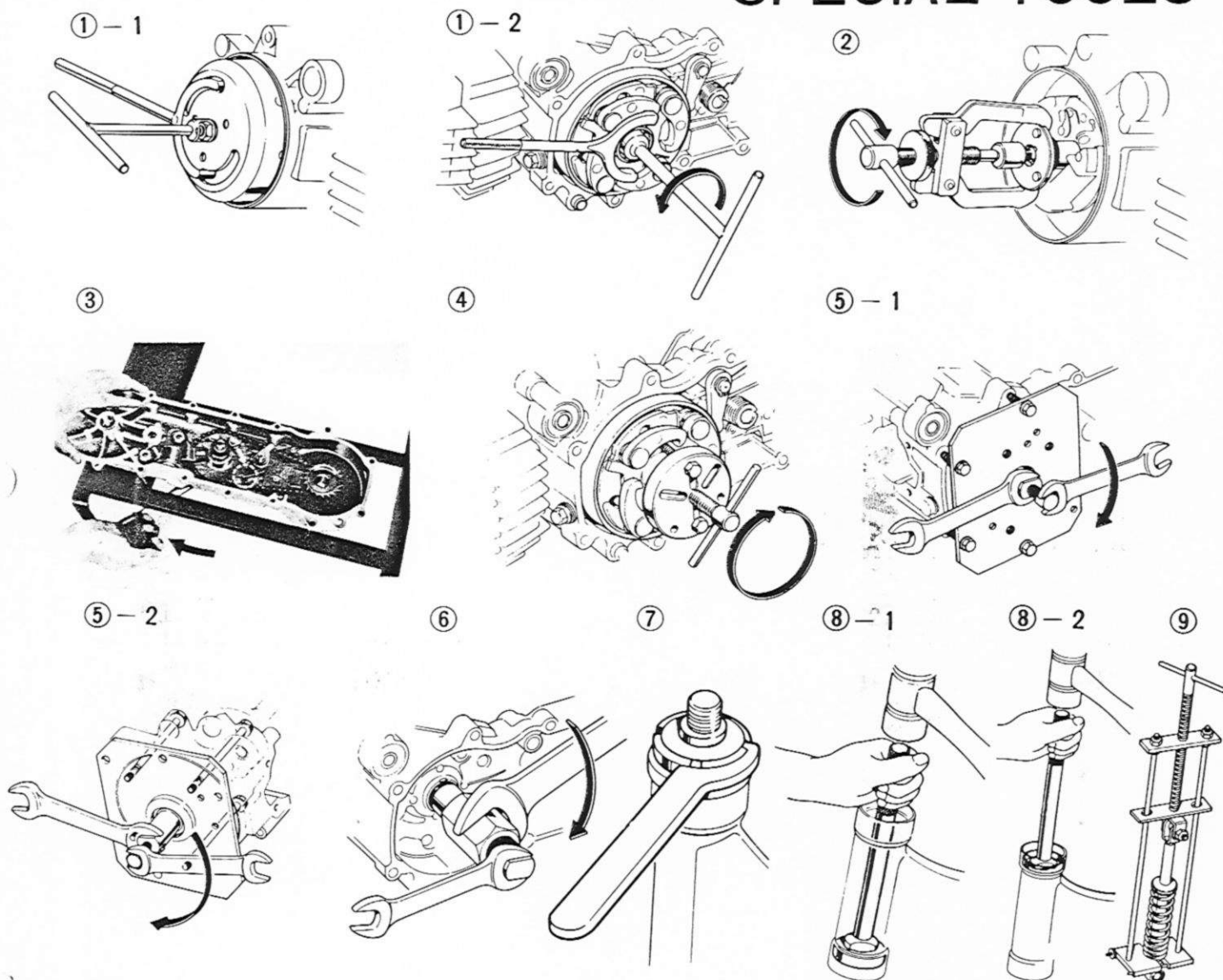
(RIGHTING SWITCH) (U.K. type)

	BAT1	PO	TL	HL	C2	R
OFF					○—○	
P	○—○—○					
HL	○—○		○	○—○		
Wire color	BLACK	BROWN/WHITE	BROWN	YELLOW	PINK	GREY

All wires are routed in headlight case. Check these switches when the main switch is to be inspected.



SPECIAL TOOLS



Ref. No.	Tool parts No.	Description	Common to:	Remarks	Page
①	07925-0010001	Flywheel holder	—	Holding flywheel and drive plate	12 - 2 14 - 2
②	07931-1470100	ACG. puller attachment	NC50	Protecting shaft end when disassembling rotor flange	12 - 2
③	07965-1470001	L-crankcase base	NC50	Disassembling L-crankcase cover	13 - 4
④	07935-8050000	Clutch puller	G series	Pulling out drive plate	14 - 2
⑤	07933-1470000	Case puller	NC50	Disassembling crankcase	15 - 2
⑥	07953-1470000	Oil seal assembling tool	NC50	Installing crankcase and crankshaft oil seal	15 - 2
⑦	07916-0440000	Pin spanner	—	Removing and tightening top corn race	17 - 1
⑧	07953-3330000	Ball race driver	CB350F	Removing and installing ball race	17 - 3
⑨	07959-3290000	Rear shock absorber compressor	XL250	Disassembling and reassembling rear shock absorber	19 - 1

MAINTENANCE SCHEDULE

HONDA
NC50


MAINTENANCE SCHEDULE This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.	PRE-RIDING INSPECTION	INITIAL SAFETY INSPECTION	REGULAR SERVICE PERIOD Perform at every indicated month or mileage interval, whichever occurs first.	
		1 month 200 miles 300 km	12 months 1,000 miles 1,500 km	24 months 2,000 miles 3,000 km
*TIRES AND PRESSURE	I			
CONTACT BREAKER POINTS		I	I	
IGNITION TIMING		I	I	
*THROTTLE OPERATION	I			
WHEEL TRUENESS AND SPOKES		I	I	
NUTS, BOLTS (TIGHTEN)		I	I	
BRAKE LININGS			I	
*BATTERY FLUID LEVEL	I			
BATTERY FLUID SPECIFIC GRAVITY			I	
SPARK PLUG		(EVERY 500 km) I		
AIR FILTER ELEMENT		(EVERY 6 MONTHS) C		
CARBURETOR			I	
FUEL FILTER SCREEN		C	C	
SUSPENSION OPERATION			I	
CLUTCH SHOES FOR WEAR				I
TRANSMISSION OIL				R
DECARBONIZE CYLINDER HEAD AND MUFFLER				C
*BRAKE OPERATION AND FREE PLAY	I			
*OIL AND FUEL LEVEL	I			
*ALL LIGHTS	I			
*TRANSMISSION CASE FOR LEAKS	I			

I-Inspect, clean, adjust or replace if necessary R-Replace C-Clean L-Lubricate

Items marked *are simple to perform and may be serviced by the owner.

Other maintenance items should be serviced by an authorized Honda dealer, unless the owner has the proper tools, a NC50 service manual, and is mechanically proficient.



TORQUE SPECIFICATIONS

(ENGINE)

Ref. No.	Tightening point	Qty	Thread dia. mm	Torque kg-cm (lbs - ft)	Page
1	Cylinder head hold-down nuts	4	6	90-120 (6.5 - 8.7)	10-1
2	A.C. flywheel generator attaching nut	1	10	300-350 (21.7 - 25.3)	12-1
3	Clutch (drive plate) attaching nut	1	10	300-350 (21.7 - 25.3)	14-1
4	Intake pipe attaching nuts	4	6	90-120 (6.5 - 8.7)	15-1

(FRAME)

Ref. No.	Tightening point	Qty	Thread dia. mm	Torque kg-cm (lbs - ft)	Page
1	Engine mounting bolt	1	10	300-400 (21.7 - 28.9)	9-1
2	Steering stem nut	1	—	600-900 (43.4 - 65.1)	17-1
3	Front wheel axle nut	1	10	300-400 (21.7 - 28.9)	17-1
4	Rear wheel axle nut	1	12	400-500 (28.9 - 36.2)	9-1 18-1
5	Front brake arm bolt	1	5	40-70 (2.9 - 5.1)	17-2
6	Rear brake arm bolt	1	5	40-70 (2.9 - 5.1)	18-1
7	Rear shock absorber Upper nut	1	10	300-400 (21.7 - 28.9)	19-1
	Lower bolt	1	8	200-300 (14.5 - 21.7)	

Standard Torque Specifications

Type	Torque kg-cm (lbs - ft)	
5mm bolts	40-70	(2.9 - 5.1)
6mm screws	90-110	(6.5 - 8.0)
6mm bolts	100-140	(7.2 - 10.1)
8mm bolts	200-250	(14.5 - 18.1)
10mm bolts	300-400	(21.7 - 28.9)



(ENGINE)

Unit:mm (in.)

Item	Assembly Standard	Repair Limit	Page
Piston/piston ring clearance	0.025–0.055 (0.0010–0.0022)	0.1 (0.0039)	10 – 3
Piston skirt O.D. (4 mm from bottom)	39.955–39.975 (1.5731–1.5739)	39.85 (1.5689)	10 – 4
Cylinder I.D.	40.00–40.01 (1.5748–1.5752)	40.05 (1.5768)	10 – 4
Piston ring end gap	0.15–0.35 (0.0059–0.0138)	0.6 (0.0236)	10 – 5
Piston pin O.D.	9.994–10.000 (0.3935–0.3937)	9.97 (0.3925)	10 – 5
Piston pin hole I.D.	10.002–10.008 (0.3938–0.3940)	10.03 (0.3949)	10 – 5
Clutch shoe O.D.	103.8–103.9 (4.0826–4.0905)	103.6 (4.0787)	14 – 4
Clutch spring preload: Load kg/mm (lbs/in.)	15/35 (33.1/1.38)	13.5/35 (29.8/1.38)	14 – 4
Connecting rod big end bearing side clearance	0.15–0.41 (0.0059–0.0161)	0.6 (0.0236)	15 – 3
Crankshaft runout	Left 60mm Right 60mm	0.05 max. (0.0020) 0.05 max. (0.0020)	0.15 (0.0059) 0.15 (0.0059)
			15 – 3

(FRAME)

Unit:mm (in.)

Item	Assembly Standard	Repair Limit	Page
Front wheel axle bend	0.05 max. (0.0020)	0.1 (0.0039)	17 – 3
Front and rear wheel hub I.D.	80.0 – 80.2 (3.150–3.158)	81.0 (3.189)	17 – 4 18 – 2
Front and rear brake lining thicknesses	3.5 (0.138)	2.0 (0.079)	17 – 4 18 – 2
Front wheel runout	1.0 max. (0.04)	2.0 (0.079)	17 – 4

**TROUBLE SHOOTING**

Trouble	Probable Cause	Remedy
Engine does not start	1. Loss of compression Primary compression leak past oil seal Primary compression leak past gasket surface Leaky cylinder head gasket Poorly tightened spark plug Worn piston ring or seized piston Damaged or defective piston Blown out cylinder head gasket Scores or scratches on cylinder wall	Replace Repair Replace Retighten Replace Replace Replace Repair or replace
	2. No sparks across spark plug gap Fouled plug or bridging Wet spark plug Fouled breaker points Improper point gap Improper ignition timing Defective ignition coil Ignition coil open or short circuited Shorted or defective condenser	Clean or replace Clean or replace Clean or replace Adjust or replace Adjust Replace Replace Replace
	3. Fuel not reaching carburetor Clogged fuel tube Clogged fuel valve Defective carburetor float valve Fuel filler cap hole clogged	Clean Clean Replace Clean
	4. Clutch not operating Burned or worn clutch weight shoe Weakened clutch weight spring	Replace Replace
	5. Starter pedal not operating Too little a starter lever play Starter arm spring out of proper position or damaged Starter lever shaft stuck Weakened or damaged ratchet spring Worn or damaged starter ratchet Starter chain disconnected Starter spring out of proper position or damaged	Adjust Repair or replace Clean Replace Replace Replace Replace
	6. Starter spring not released Excessive starter lever play Drive sprocket shaft seized Sustaining plate out of proper position or damaged	Adjust Replace Repair or replace



Engine starts but stops soon	<ol style="list-style-type: none"> 1. Spark plug fouled 2. Breaker points fouled 3. Engine out of time 4. Clogged fuel pipe 5. Clogged carburetor jet 6. Loss of crankcase compression 	Clean or replace Clean or replace Adjust Clean Clean Repair
Starter pedal does not return	<ol style="list-style-type: none"> 1. Starter arm spring weakened 2. Drive sprocket spring weakened 3. Starter ratchet out of order or damaged 	Replace Replace Repair or replace
Engine lacks power	<ol style="list-style-type: none"> 1. Worn or seized cylinder or piston ring 2. Engine out of time 3. Defective breaker points 4. Improper spark plug gap 5. Clogged carburetor jet 6. Improper float level 7. Air cleaner clogged 8. Excessive carbon accumulation in exhaust muffler 	Repair or replace Adjust Repair or replace Repair or replace Clean or replace Adjust Clean or replace Clean
Engine overheats	<ol style="list-style-type: none"> 1. Excessive carbon accumulation in combustion chamber 2. Float level too low (too lean a mixture) 3. Timing too far advanced 4. Brake not releasing 5. Excessive carbon accumulation on piston and piston rings 	Clean Adjust Adjust Adjust Clean or replace
Poor engine performance at low speed	<ol style="list-style-type: none"> 1. Ignition timing improper 2. Defective breaker point 3. Excessive spark plug gap 4. Spark too weak due to defective condenser or ignition coil 5. Float level improper 6. Carburetor air screw out of specification 	Adjust Repair or replace Repair or replace Replace Adjust Adjust
Poor engine performance at high speed	<ol style="list-style-type: none"> 1. Spark plug gap too little 2. Ignition timing too late 3. Defective breaker point 4. Faulty ignition coil 5. Improper float level 6. Clogged air cleaner element 7. Loss of crankcase compression 8. Leaky exhaust pipe or excessive carbon accumulation in exhaust pipe 	Repair or replace Adjust Replace Replace Adjust Clean or replace Repair Repair or replace



Defective clutch	1. Clutch slips Worn or burned clutch weight shoe	Replace
	2. Clutch does not disengage Clutch weight not functioning properly	Repair
	3. Clutch engages too early (too late) Clutch spring weakened Worn or burned clutch weight shoe	Replace Replace
	4. Clutch drags at idling (engine stalls) Idling speed too fast Weakened clutch spring Faulty carburetor	Adjust Replace Adjust or replace
Sparks do not jump across spark plug gap	1. Defective ignition coil 2. Defective spark plug 3. Breaker points fouled or point gap improper	Replace Replace Adjust or replace
Excessive carbon accumulation on spark plug electrodes	1. Too rich a mixture (carburetor or air cleaner clogged) 2. Spark plug heat range improper	Adjust or clean Replace
Burned breaker points	1. Points out of alignment or not properly contacted 2. Faulty condenser	Replace Replace
Spark plug electrodes excessively fouled	1. Carburetor out of adjustment 2. Flooded carburetor	Adjust Adjust
Burnt spark plug electrodes	1. Improper heat range 2. Engine overheating 3. Engine out of time 4. Loosened spark plug in head 5. Mixture too lean	Replace See page 10 - 1 Adjust Retighten Adjust
Heavy steering	1. Improper tire pressure 2. Loose handlebars 3. Front axle not tightened properly 4. Loosened or excessively tightened steering stem nut 5. Loosened or broken spoke 6. Deformed rim 7. Excessive rattle in ball bearing 8. Bound wire or cable	Adjust Retighten Retighten Retighten or adjust Retighten Repair or replace Replace Repair
Poor braking	1. Brake shoe partially contacted with brake drum	Repair or replace



Poor braking	2. Oily or greasy substances on brake lining or drum 3. Defective brake cable 4. Brake out of proper adjustment	Clean Replace Adjust
Brake not adjustable	1. Excessively worn brake shoe 2. Excessively worn brake cam 3. Improper installation of brake arm on brake arm spindle (serration)	Replace Replace Replace
Unusual noise	1. At front shock absorber Front cushion needs lubrication Loose front shock absorber 2. At drive chain or starter chain Excessive chain slack or deflection Worn chain tensioner Worn or starved chain Chain interfering with chain case	Lubricate Retighten Adjust or replace Replace Replace or lubricate Adjust



SPECIFICATIONS

U.K. type

DIMENSIONS Overall length Overall width Overall height Wheel base Ground clearance Dry weight	1,550mm (61 in.) 600mm (23.6 in.) 1,000mm (39.4 in.) 1,050mm (41.3 in.) 125mm (4.9 in.) 45 kg (99.0 lb.)
FRAME Type F. suspension R. suspension F. tire size, pressure R. tire size, pressure F. brake R. brake Fuel capacity Fuel reserve capacity Caster angle Trail length Front fork grease	Back bone Telescopic fork Swing arm 2.25 — 14 — 4PR 21 psi. (1.5kg/cm ²) 2.25 — 14 — 4PR 28 psi. (2.0kg/cm ²) Internal expanding shoes Internal expanding shoes 2.0 lit. 0.44 Imp. gal. 0.2 lit. 0.044 Imp. gal. 67° 72mm (2.8 in.) 5cc (0.18 ozs)
ENGINE Type Cylinder arrangement Bore and stroke Displacement Compression ratio Transmission oil capacity Oil tank capacity Lubrication system Air screw opening Intake Open Close Exhaust Open Close Scavenge Open Close Idle speed	Air cooled, 2-stroke Single-cylinder flat 40 x 39.6mm (1.57 x 1.56 in.) ['78] 49cc (2.99 cu in.) 6.7 : 1 ['78] 0.75 lit. (0.66 Imp. qt.); 10W — 40 motor oil 0.8 lit. (0.70 Imp. qt.); 2 stroke injector oil Forced and wet sump 2-1/8 Automatically controlled Automatically controlled 65° BBDC 65° ABDC 47° BBDC 47° BBDC 1,800 rpm



DRIVE TRAIN Clutch Primary reduction Final reduction	Automatic centrifugal wet type Chain and gear 14.220 : 1
ELECTRICAL Ignition Starting system Generator Spark plug () Optional parts Spark plug gap Ignition timing Battery capacity Fuse capacity Headlight Low/High Tail/stoplight Speedometer light High beam indicator light Position light	Magneto and battery Tap starter A.C. generator 6V 0.066 kw/6,000 rpm NGK BPR4HS, (BPR5HS, BPR2HS); ND W14FPR-L (W16FPR, W9FPR) ['78] NGK BPR4HS, (BPR5HS, BPR2HS); ND W14FPR-L (W16FPR, W9FPR) ['78] 0.6 – 0.7mm (0.024 – 0.028 in.) 18° BTDC 6V 2AH 7 amp. 6V-18/18 W 6V-5/21 W 6V-1.7 W 6V-1.7 W 6V-4 W

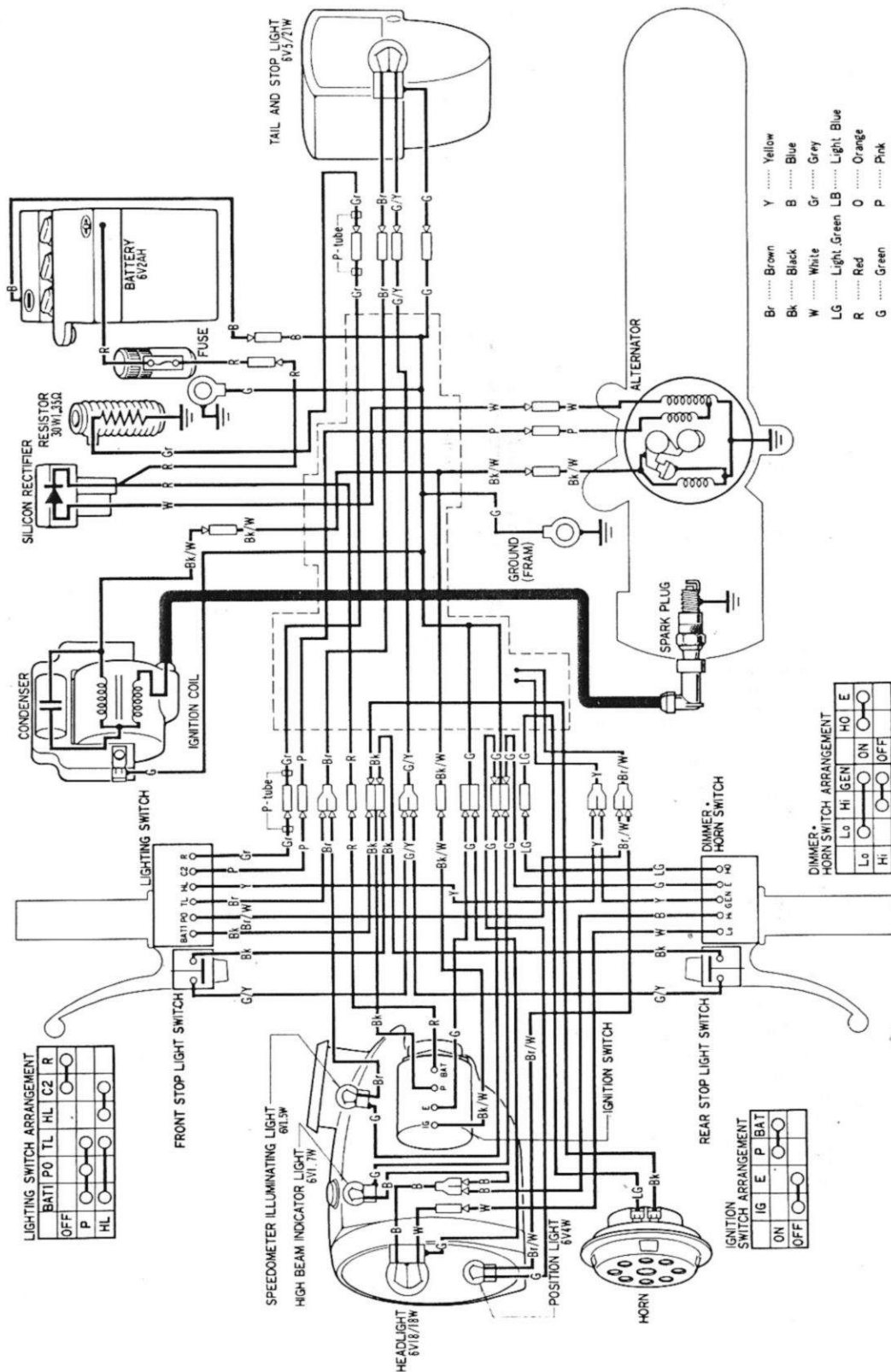


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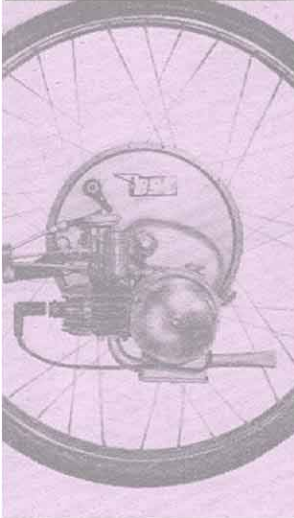
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