HONDA Z50R

HOW TO USE THIS MANUAL

Sections 1 through 3 apply to the whole motorcycle, while sections 4 through 14 describe parts of the motorcycle, grouped according to location.

Find the section you want on this page, then turn to the table of contents on page 1 of that section.

Most sections start with an assembly or system illustration, service information and troubleshooting for the section.
The subsequent pages give detailed procedures for the section.

If you don't know what the trouble is, go to section 15, TROUBLESHOOTING.

This shop manual is based on the 1979 Z50R. Subsequent year models service procedures and data are given with addendums, beginning with section 16.

HONDA MOTOR CO., LTD.
SERVICE PUBLICATIONS OFFICE

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Date of Issue September, 1981

M E M O

Date of Issue: Sep., 1980

1. GENERAL INFORMATION

GENERAL SAFETY

WARNING

- *If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas.*
- *Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your work area.*

SERVICE RULES

1. Use genuine HONDA or HONDA recommended parts and lubricants or their equivalent. Parts that do not meet HONDA's design specifications may damage the motorcycle.
2. Use the special tools designed for this product.
3. Install new gaskets, O-rings, cotter pins, lock plates, etc. when reassembling.
4. When torquing bolts or nuts, begin with the larger diameter or inner bolt first, and tighten to the specified torque diagonally in 2–3 steps, unless a particular sequence is specified.
5. Clean parts in non-flammable or high flash point solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
6. After reassembly, check all parts for proper installation and operation.
7. Use only metric tools when servicing this motorcycle. Metric bolts, nuts, and screws are not interchangeable with English fasteners. The use of incorrect tools and fasteners may damage the motorcycle.

SPECIFICATIONS

	Item		Metric	English
Dimensions	Overall length		1,300 mm	51.2 in
	Overall width		623 mm	24.6 in
	Overall height		860 mm	33.9 in
	Wheel base		895 mm	35.2 in
	Seat height		590 mm	23.2 in
	Foot peg height		220 mm	8.7 in
	Ground clearance		140 mm	5.5 in
	Dry weight		52 kg	115 lb
Frame	Type		Backbone	
	Front suspension		Telescopic fork	
	Rear suspension		Swing arm	
	Front tire size		3.50–8–2PR	
	Rear tire size		3.50–8–2PR	
	Cold tire pressures	Front	1.0 kg/cm^2	14 psi
		Rear	1.0 kg/cm^2	14 psi
	Front brake		Internal expanding shoe	
	Rear brake		Internal expanding shoe	
	Fuel capacity		4.5 lit	1.19 US gal
	Fuel reserve capacity		1.0 lit	0.26 US gal
	Caster (Degrees from horizontal)		25°	
	Trail		42 mm	1.7 in
	Front fork oil		Grease	
Engine	Type		Air-cooled, 4 stroke OHC	
	Cylinder arrangement		Single 80° inclined from vertical	
	Bore and stroke		39.0 x 41.4 mm	1.535 x 1.630 in
	Displacement		49 cm^2	3.0 cu in
	Compression ratio		8.8 x 1	
	Valve train		Chain driven overhead camshaft	
	Oil capacity		0.8 lit	0.21 US gal
	Lubrication system		Forced and wet sump	
	Cylinder head compression pressure		12.0 kg/cm^2 –1,000 rpm	168 psi
	Intake valve	Opens	7° BTDC (at 1mm lift)	
		Closes	12° ABDC (at 1mm lift)	
	Exhaust valve	Opens	22° BBDC (at 1mm lift)	
		Closes	2° ATDC (at 1mm lift)	
	Valve clearance (cold)	IN	0.05 mm	0.002 in
		EX	0.05 mm	0.002 in
	Idle speed		1500 ± 100 rpm	
	Engine dry weight		17 kg	37.5 lb

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GENERAL INFORMATION

	Item		Metric	English
Carburetion	Carburetor type		Piston valve	
	Venturi diameter		11 mm	0.43 in
	Setting number		PA03B [A]	
	Air screw opening		1-1/2	
	Float level		12.7 mm	0.50 in
Drive train	Clutch		Wet multi-plate automatic (centrifugal)	
	Transmission		3-speed constant mesh	
	Primary reduction ratio		3,722	
	Gear ratio I		3,181	
	Gear ratio II		1,823	
	Gear ratio III		1,190	
	Gear ratio IV		–	
	Gear ratio V		–	
	Final reduction ratio		3.083,37/12	
	Gear shift pattern		Left foot operated return system N–1–2–3	
Electrical	Ignition		Flywheel magneto	
	Alternator		Flywheel	
	Starting system		Kick start	
	Spark plug	U.S.A. type	NGK C6H	DENSO U20FS
		Canada type	NGK CR6HS	DENSO U20FSR-L
	Spark plug gap		0.6–0.7 mm	0.024–0.028 in

TORQUE VALUES

ENGINE

Item	Q'ty	Thread dia (mm)	Torque kg-m (ft-lb)
Valve adjusting hole cap	2	30	1.0 ~ 1.4 (7 ~ 10)
Valve adjusting lock nut	2	5	0.7 ~ 1.1 (5 ~ 8)
Cylinder head cover nut	4	8	0.9 ~ 1.2 (7 ~ 9)
Cam sprocket bolt	3	5	0.8 ~ 1.2 (6 ~ 9)
Cylinder bolt	1	6	0.8 ~ 1.2 (6 ~ 9)
Left crankcase cover screw	3	6	0.7 ~ 1.1 (5 ~ 8)
Flywheel nut	1	10	3.0 ~ 3.8 (22 ~ 27)
Right crankcase cover screw	8	6	0.7 ~ 1.1 (5 ~ 8)
Clutch outer nut	1	14	3.5 ~ 4.5 (25 ~ 33)
Shift drum stopper bolt	1	6	0.9 ~ 1.4 (7 ~ 10)
Drain plug	1	12	2.0 ~ 3.0 (15 ~ 22)
Drive sprocket bolt	2	6	0.8 ~ 1.2 (6 ~ 9)

FRAME

Item	Q'ty	Thread dia (mm)	Torque kg-m (ft-lb)
Steering stem nut	1	24	6.0 ~ 8.0 (43 ~ 58)
Fork top bridge bolt	2	10	1.8 ~ 2.5 (13 ~ 18)
Front axle nut	1	12	3.5 ~ 5.0 (25 ~ 36)
Rear axle nut	1	12	3.5 ~ 5.0 (25 ~ 36)
Shock absorber nut	4	10	2.5 ~ 3.5 (18 ~ 25)
Swing arm pivot nut	1	10	2.5 ~ 3.5 (18 ~ 25)
Engine hanger bolt	2	8	2.0 ~ 2.5 (15 ~ 18)
Driven sprocket bolt	3	8	1.8 ~ 2.3 (13 ~ 17)

Torque specifications listed above are for the most important items. If a torque specification is not listed, follow the standards given below.

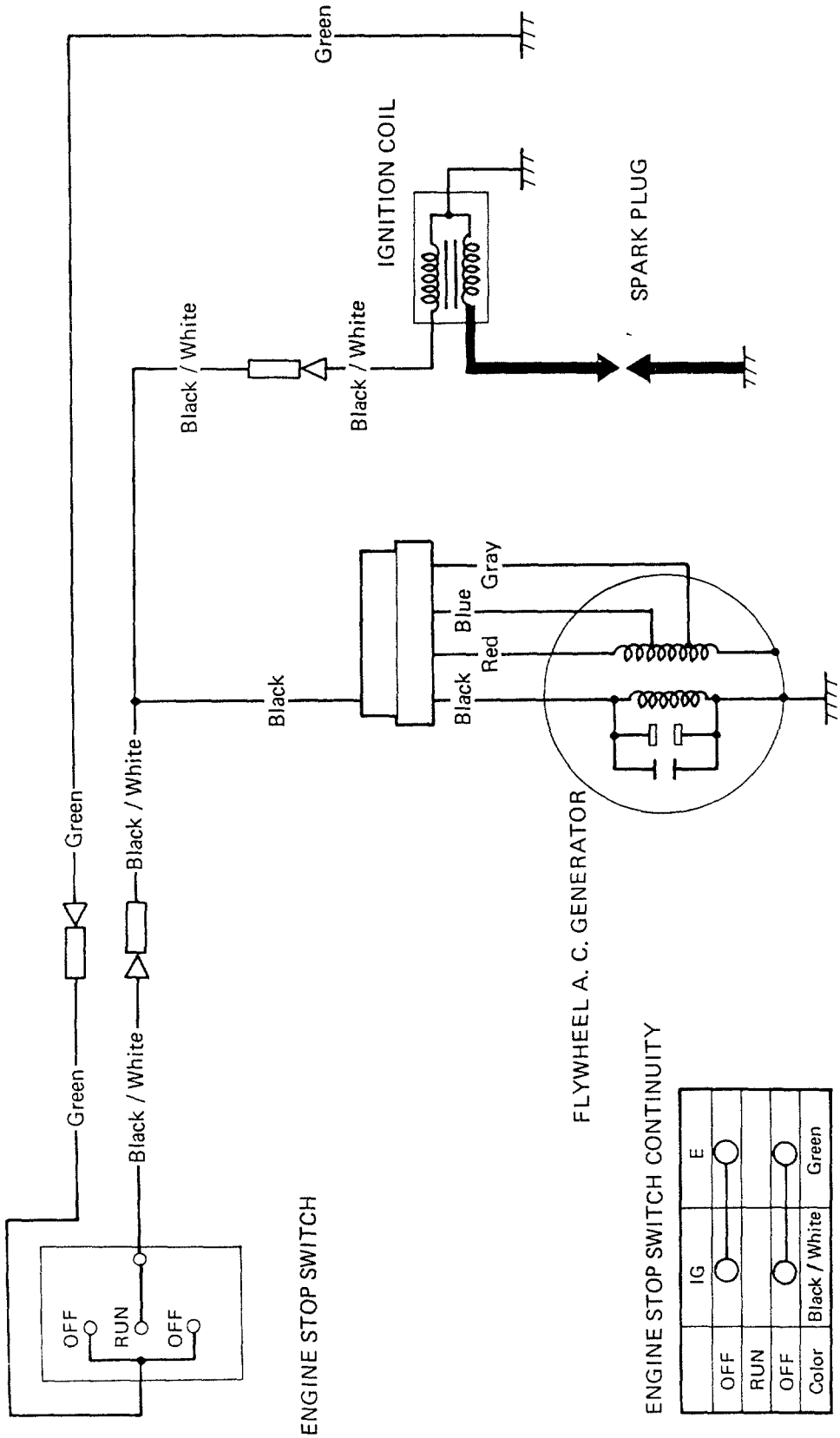
STANDARD TORQUES

Item	Torque kg-m (ft-lb)	Item	Torque kg-m (ft-lb)
5 mm bolt, nut	0.45 ~ 0.6 (3.3 ~ 4.3)	5 mm screw	0.35 ~ 0.5 (2.5 ~ 3.6)
6 mm bolt, nut	0.8 ~ 1.2 (6 ~ 9)	6 mm screw	0.7 ~ 1.1 (5 ~ 8)
8 mm bolt, nut	1.8 ~ 2.5 (13 ~ 18)	6 mm flange bolt, nut	1.0 ~ 1.4 (7 ~ 10)
10 mm bolt, nut	3.0 ~ 4.0 (22 ~ 29)	8 mm flange bolt, nut	2.4 ~ 3.0 (17 ~ 22)
12 mm bolt, nut	5.0 ~ 6.0 (36 ~ 43)	10 mm flange bolt, nut	3.0 ~ 4.0 (22 ~ 29)

TOOLS

SPECIAL TOOLS		COMMON TOOLS	
Tool name	Tool No.	Tool name	Tool No.
Float level gauge	72401–0010000	←	
Pin spanner, 36 mm	07902–0010000	Pin spanner	07702–0010000
Valve adjusting socket wrench	07908–0010000	Tappet adjusting (B) Tappet adjusting wrench 8 x 9	07708–0030400 07708–0030100
Lock nut wrench, 14 mm	07716–0010100	←	
Flywheel holder	07925–0010001	Universal holder	07725–0010101
Flywheel puller	07933–0010000	Flywheel & Rotor puller	07733–0010000
Valve guide remover	07942–3290100	Valve guide remover (5.5 mm)	07742–0010100
Valve guide driver	07942–3290200	Valve guide driver (B)	07742–0020200
Bearing driver	07947–0450000	Bearing driver outer 32 x 35 Bearing driver pilot (12 mm)	07746–0010100 07746–0040200
Driver handle	07949–2860000	Bearing driver handle (A)	07749–0010000
Valve spring compressor	07757–0010000	←	
Valve guide reamer 5.48 mm	07984–0980000	←	
Clutch outer holder	07923–0400000	Universal holder	07725–0010101
Shock absorber compressor	07959–3290001	←	
Ball race driver/remover	07944–1150001	←	

WIRING DIAGRAM



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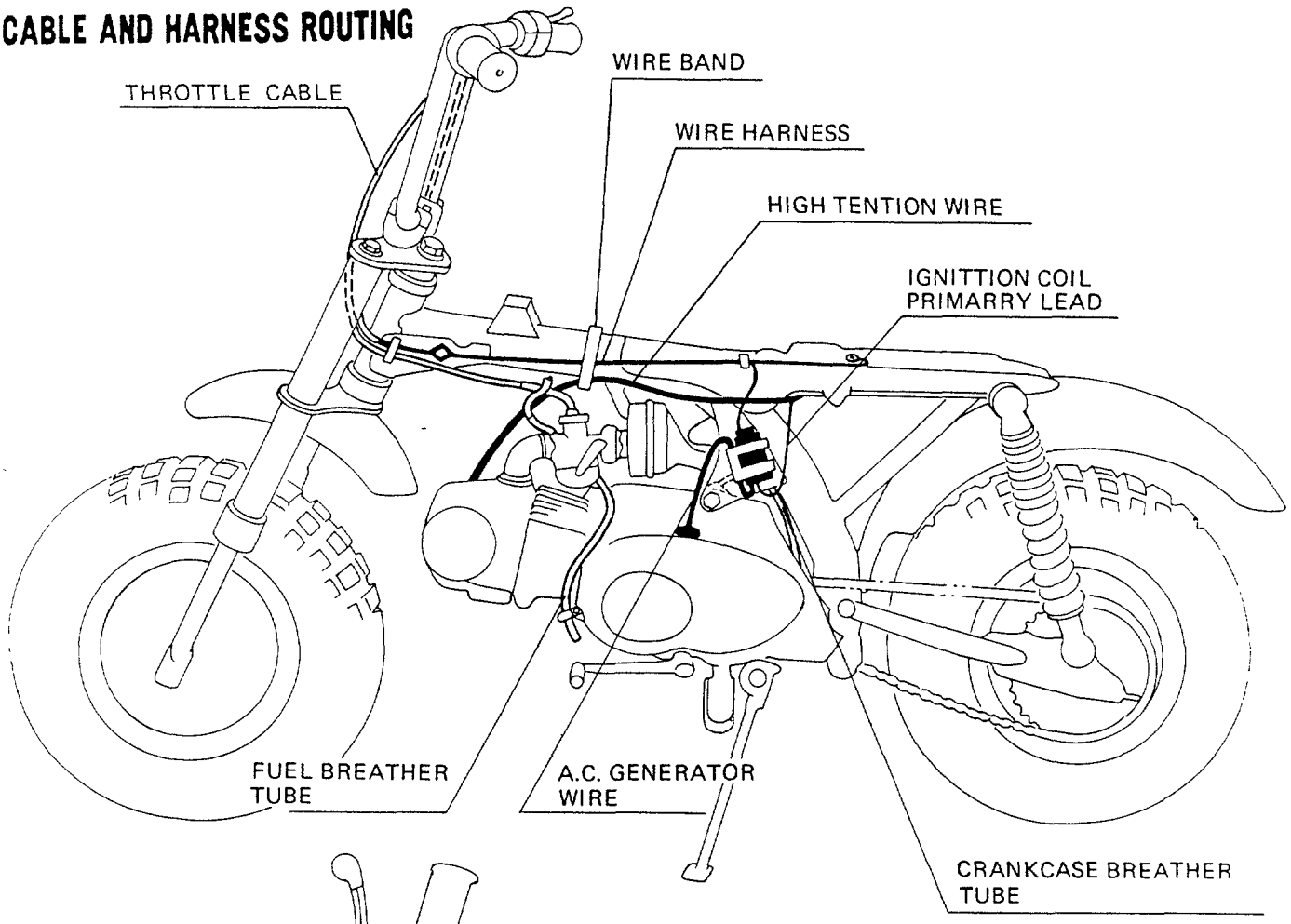
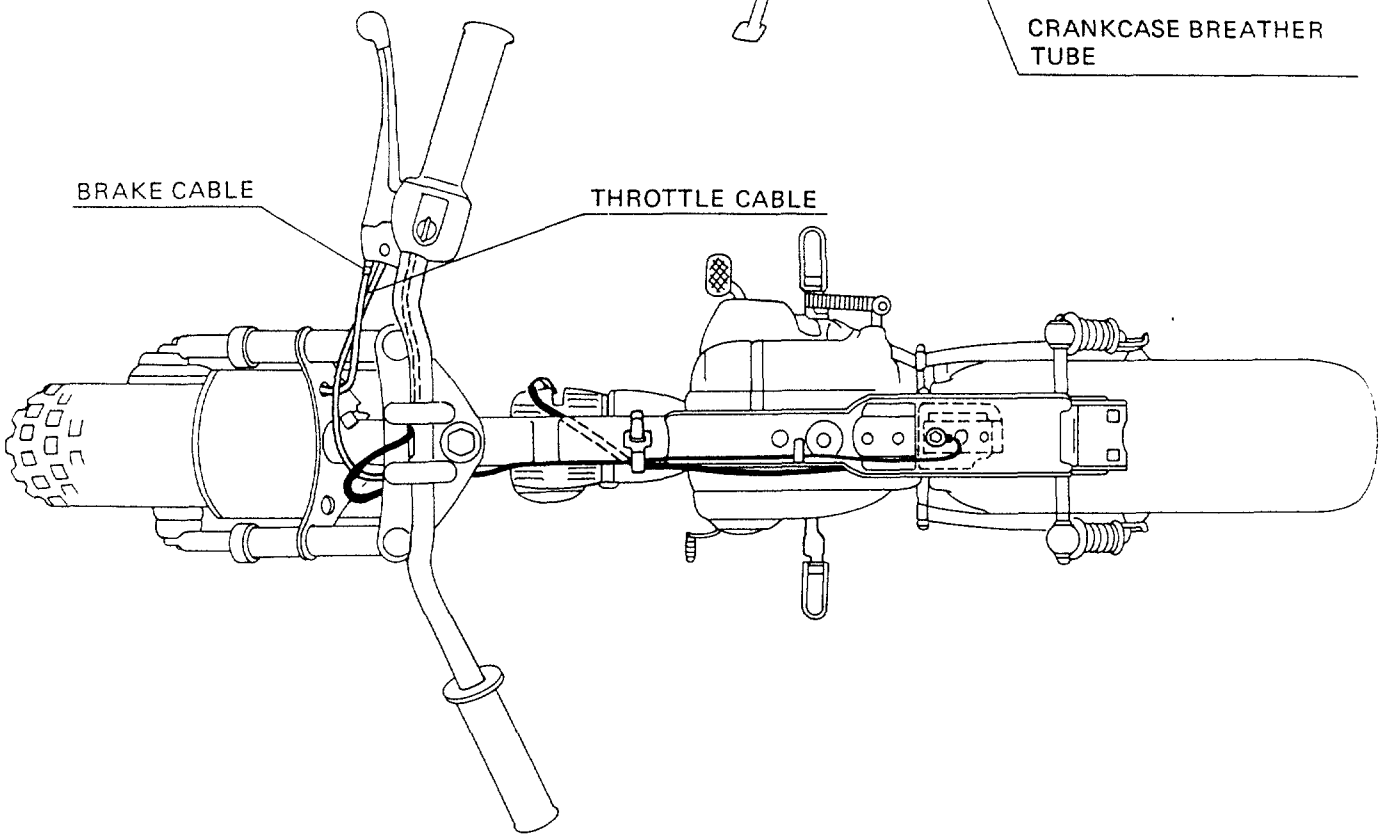
CABLE AND HARNESS ROUTING





MAINTENANCE SCHEDULE

The maintenance intervales shown in the following schedule are based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing. Items marked *should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically qualified. Other maintenance items may be serviced by the owner.

CAUTION

To maintain the safety and reliability of your HONDA motorcycle, do not modify the motorcycle and use genuine HONDA parts or their equivalent when servicing or repairing. The use of other replacement parts which are not of equivalent quality may impair the operation of your motorcycle.

WARNING

To prevent personal injury, always make certain the engine is stopped and the motorcycle is supported securely on a level surface prior to performing any maintenance.

ITEM \ FREQUENCY	*INITIAL	EVERY 30 OPERATING DAYS	YEARLY	REFERENCE PAGE
Fuel Line			I	4–1
Throttle Operation	I	I		3–4
Carburetor Choke	I	I		–
Air Cleaner		C		3–6
Valve Clearance	I	I		3–3
Clutch	I	I		3–5
Contact Breaker Points/Ignition Timing	I	I		3–2
Carburetor Idle Speed	I	I		3–5
** Engine Oil	R			2–2
Drive Chain	I, L	I, L		2–5
Brake System	I	I	I	3–6
Tires	I	I		11–2, 12–2
Nuts, Bolts, Fasteners	I	I		1–4
Spark Arrester		C		3–8
Steering Head Bearing			A	11–3

* First week of operation

** Replace engine oil every 30 operating, days or 3 months, whichever comes first.

I Inspet, Clean, Adjust, Lubricate or Replace if necessary

C Clean R · Replace A : Adjust L : Lubricate

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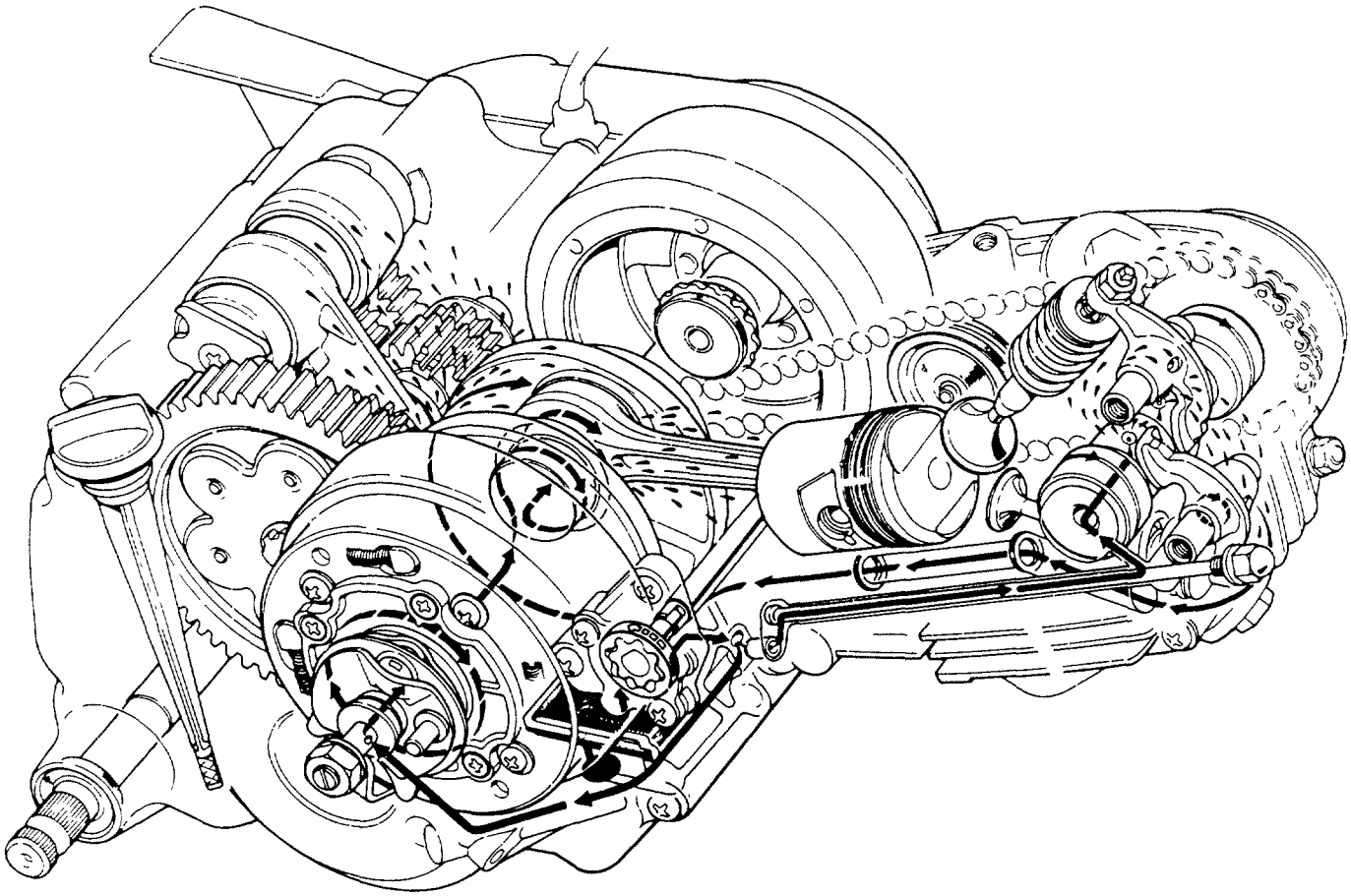
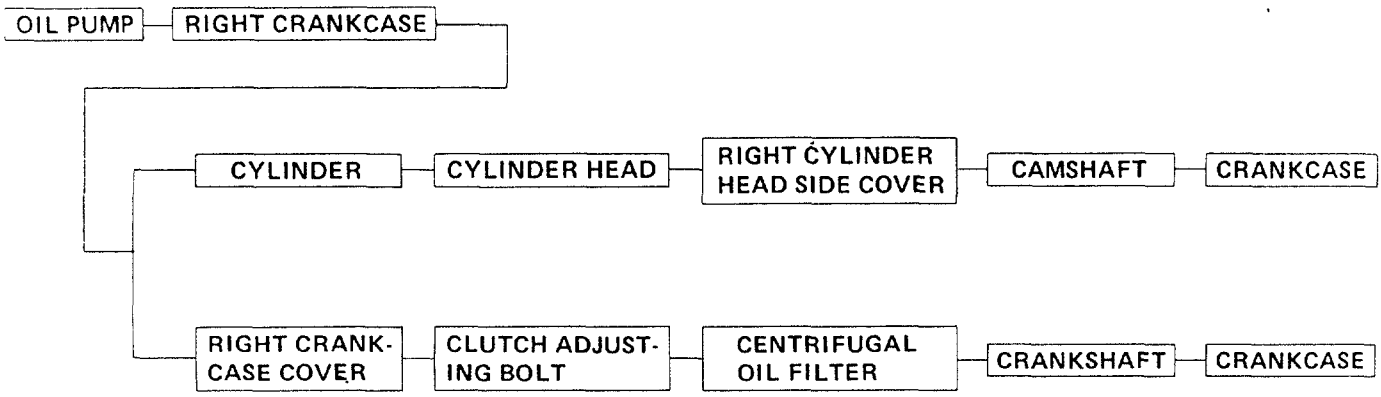



OIL PUMP
RIGHT CRANKCASE
CYLINDER
CYLINDER HEAD
RIGHT CYLINDER HEAD SIDE COVER
CAMSHAFT
CRANKCASE
RIGHT CRANK-CASE COVER
CLUTCH ADJUST-ING BOLT
CENTRIFUGAL OIL FILTER
CRANKSHAFT
CRANKCASE

2. LUBRICATION

SERVICE INFORMATIN

GENERAL INFORMATION

The oil pump can be disassembled with the engine in the frame.

SPECIFICATIONS

Forced and wet sump
0.8 lit (0.21 US qt)
HONDA 4-STROKE OIL or an equivalent
API service classification – SE
Viscosity:
General, all temperatures
SAE 10W-40
Alternate

Above 15°C (60°F)	SAE 30
−10° – +15°C (15°–60°F)	SAE 20 or 20W
Above −10°C (15°F)	SAE 20W-50
Below 0°C (32°F)	SAE 10W

	STANDARD		SERVICE LIMIT	
Outer rotor-to-body clearance	0.10–0.15 mm	(0.004–0.006 in)	0.20 mm	(0.008 in)
Tip clearance	0.15 mm	(0.006 in)	0.20 mm	(0.008 in)
Rotor-to-cover clearance	0.02–0.07 mm	(0.001–0.003 in)	0.12 mm	(0.005 in)

TROUBLESHOOTING

Oil level too low
1 Normal oil consumption
2 External oil leaks
3 Worn piston rings

Low oil pressure
1 Plugged oil screen
2 Main oil pump worn

High oil pressure
1 Plugged oil screen, gallery, or oil control orifice
2 Incorrect oil being used

No oil pressure
1 Oil level too low
2 Oil pump shaft pin sheared or missing

ENGINE OIL LEVEL

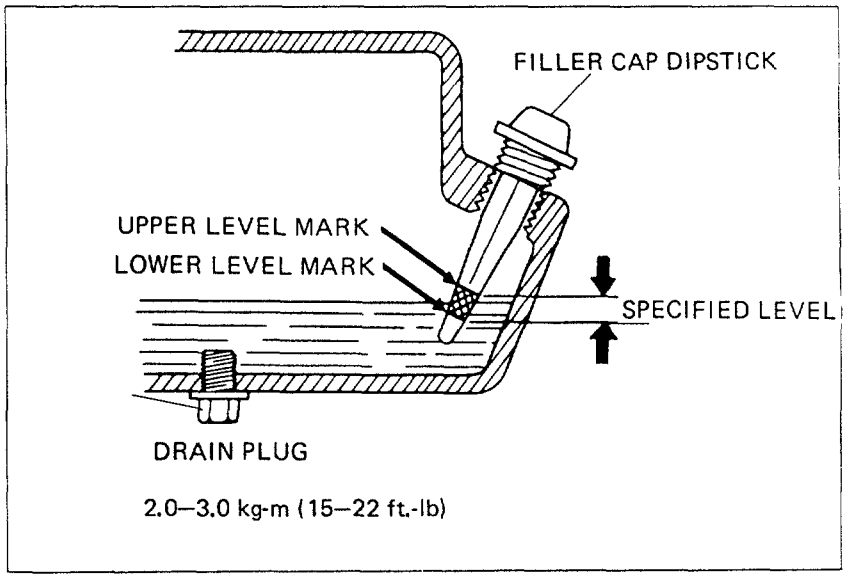
Stop the engine and hold the motorcycle upright.

Check the oil level with the filler cap/dipstick after 2–3 minutes.

If the level is below the lower level mark on the dipstick, fill to the upper level mark.

NOTE

Do not screw in the cap when making this check



ENGINE OIL CHANGE

NOTE

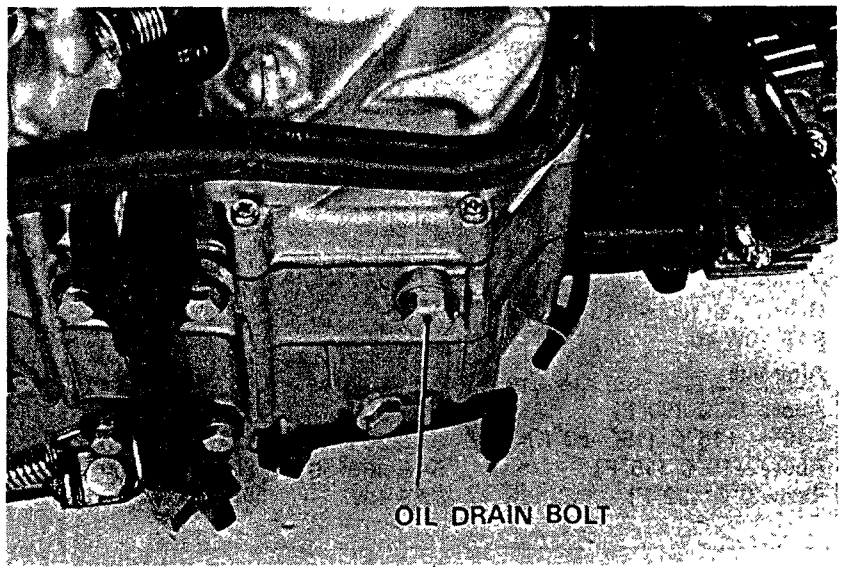
Drain the oil with the engine warm.

Remove the oil filler cap dipstick and drain plug, and drain the oil.

Install the drain plug.
Fill the crankcase with the recommended oil.

Check the oil level with the filler cap/dipstick after 2–3 minutes.

Install the oil filler cap.



ENGINE OIL FILTER AND SCREEN

Drain the engine oil.
Remove the foot pegs and kick starter arm.

Remove the right crankcase cover.
Remove the clutch outer cover.

CENTRIFUGAL FILTER CLEANING

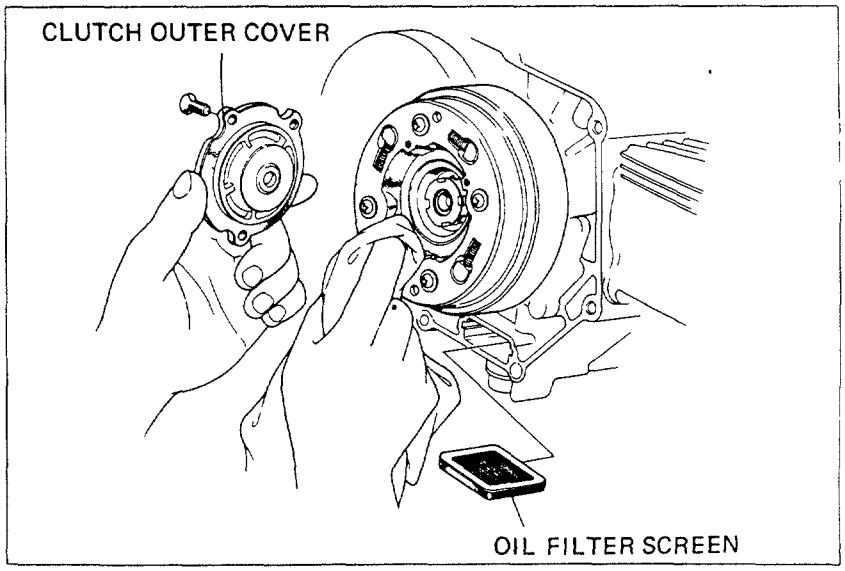
Clean the clutch outer cover and the inside of the clutch outer using a clean, lint-free cloth.

NOTE

- Do not allow dust and dirt to enter the crankshaft oil passage.
- Do not use compressed air.

OIL FILTER SCREEN CLEANING

Remove the oil filter screen from the crankcase.
Clean the filter screen.



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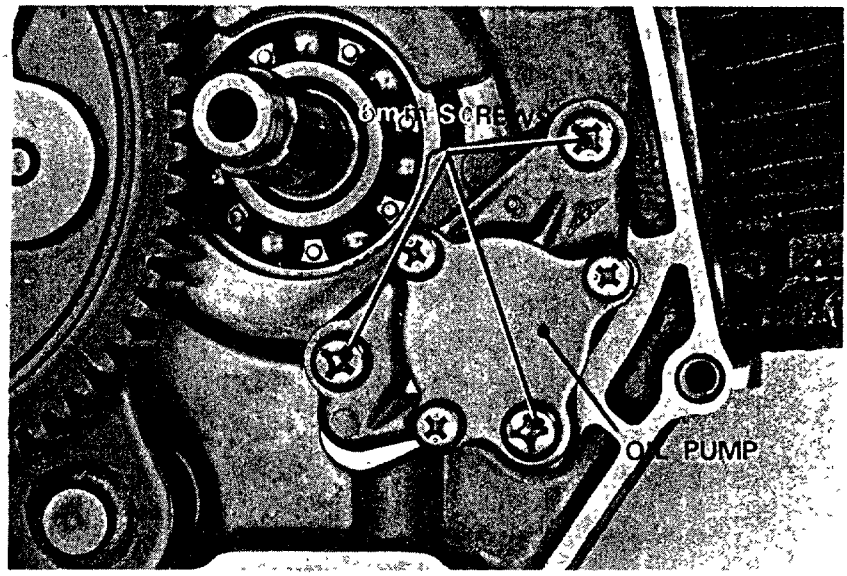
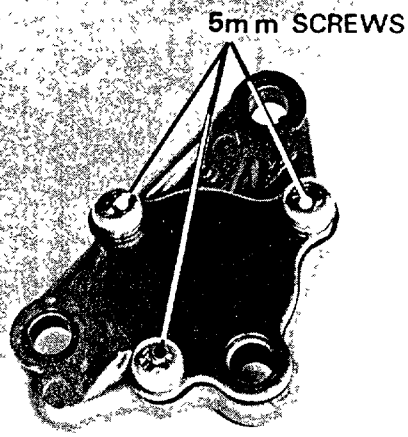
OIL PUMP REMOVAL /DISASSEMBLY

Drain the engine oil.
Remove the kick starter pedal and foot pegs.
Remove the right crankcase cover.

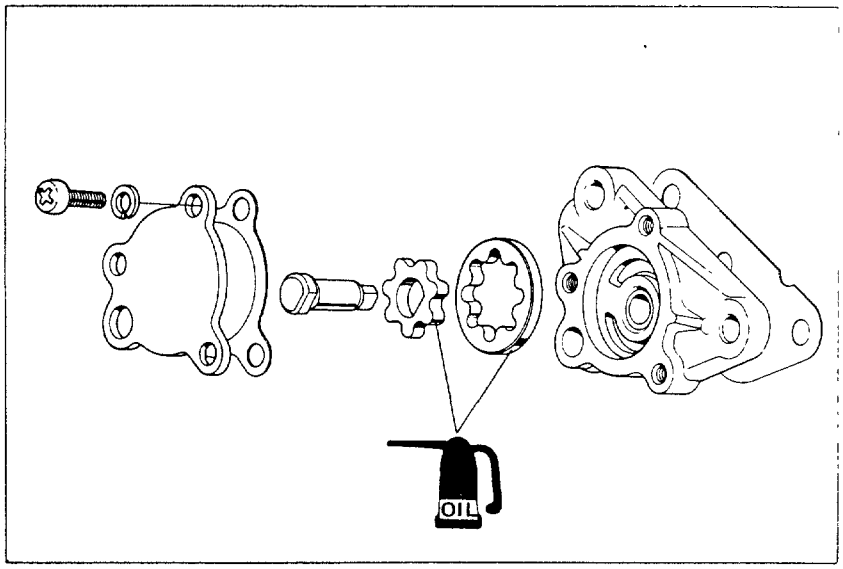
Pull out the clutch lever, lifter, ball retainer and clutch cam.
Remove the clutch outer cover and clutch assembly
Remove the three oil pump mounting screws and oil pump.



Remove the three cover screws and remove the oil pump cover.



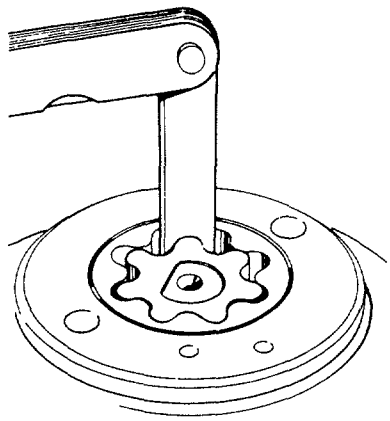
Pull out the pump shaft and remove the inner and outer rotors from the pump body.



OIL PUMP INSPECTION

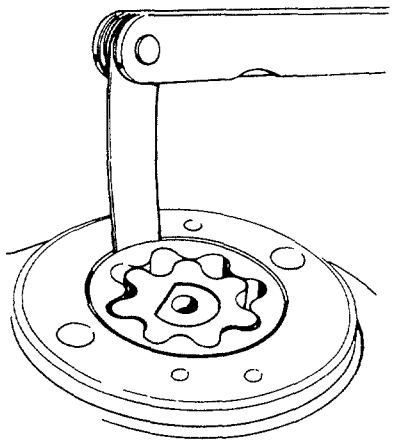
Check the inner and outer rotors.
Replace as a set if damaged or scratched.
Measure the pump tip clearance

SERVICE LIMIT
0.2mm (0.008 in)



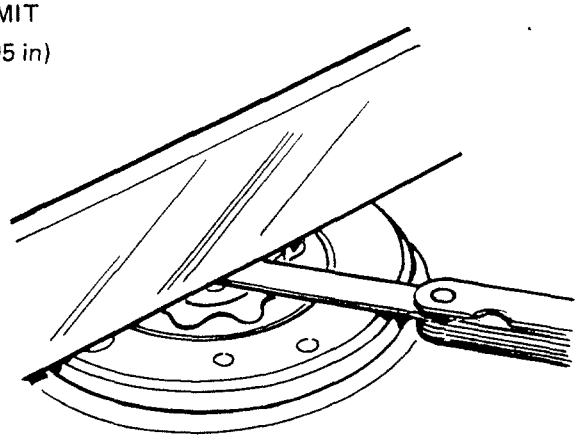
Measure the pump body clearance.

SERVICE LIMIT
0.2mm (0.008 in)



Measure the pump side clearance.

SERVICE LIMIT
0.12mm (0.005 in)



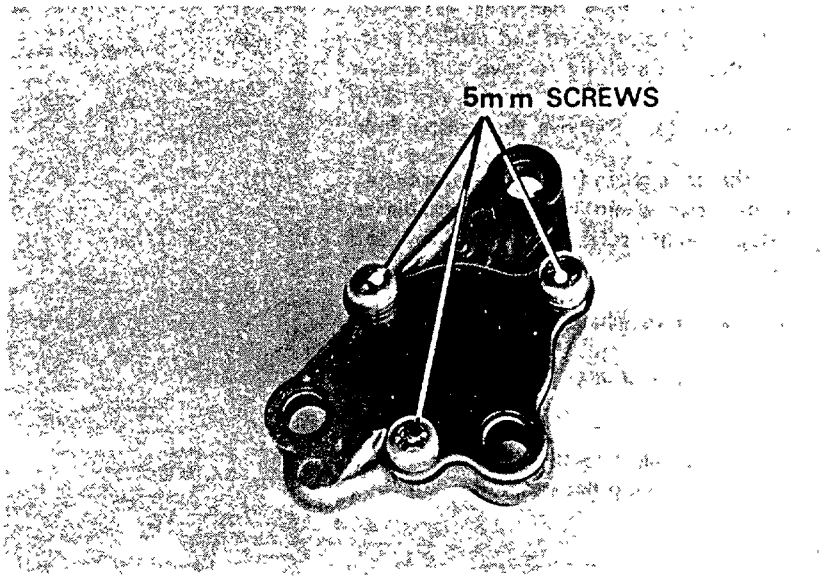
OIL PUMP /ASSEMBLY INSTALLATION

Install the outer and inner rotors into the pump body.
Install the pump shaft.

Install a new cover gasket. Secure the gasket and cover with the three screws.

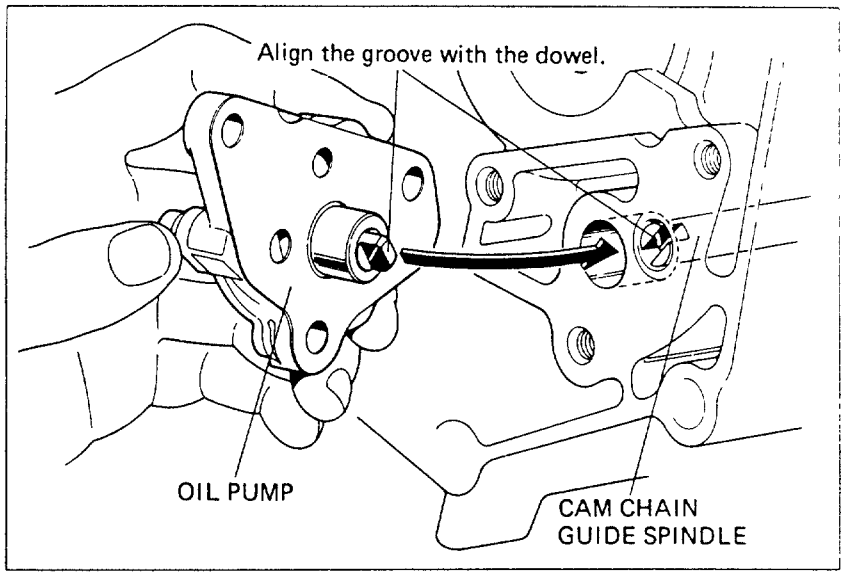
NOTE

Make sure that the pump rotates freely.



OIL PUMP INSTALLATION

Install the oil pump with the gasket under it by aligning the rotor shaft with the groove of the cam chain guide spindle.



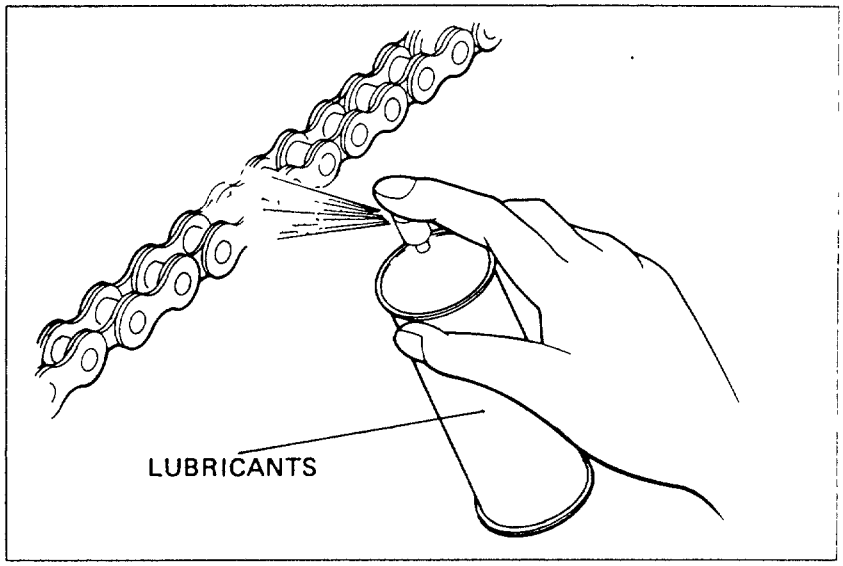
DRIVE CHAIN

NOTE

Commercial aerosol type drive chain lubricants are recommended.

Normally, drive chain lubrication is performed at the time of chain adjustment.

Saturate each chain link joints so that the lubricant penetrates between the link plates, pins, bushings and rollers.



When the drive chain becomes extremely dirty, it should be removed and cleaned prior to lubrication. Carefully remove the master link retaining clip with a plier. Do not bend or twist the clip. Remove the master link.

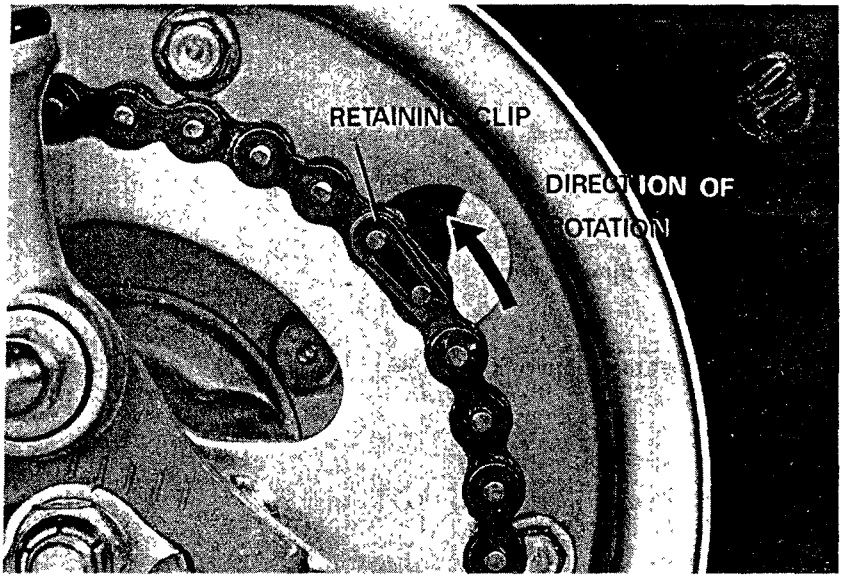
Remove the drive chain from the motorcycle. Clean the drive chain in non-flammable or high flash point solvent and brush, and allow to dry.

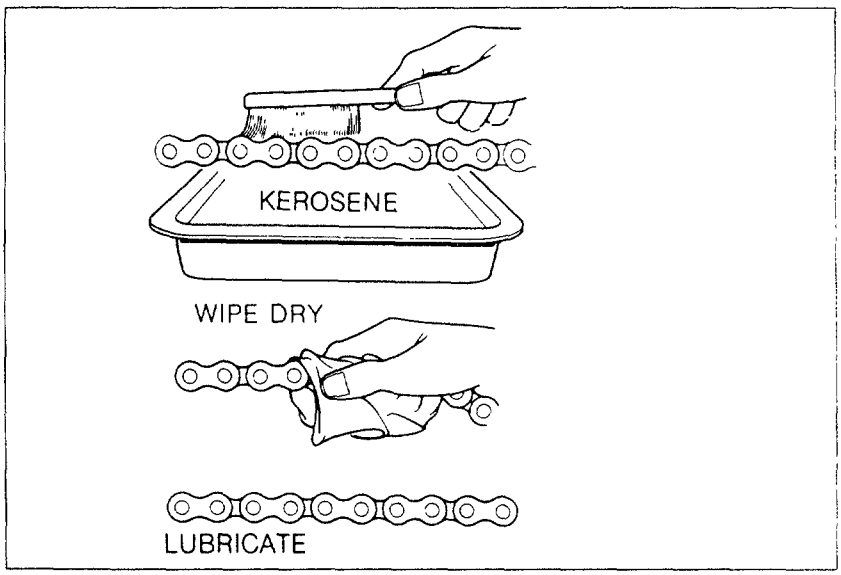
Inspect the drive chain for possible wear or damage.
Replace any chain that is excessively worn or damaged.

Inspect the sprocket teeth for possible wear or damage. Replace if necessary.

CAUTION

Never install a new drive chain on badly worn sprockets or a badly worn chain on new sprockets. Both chain and sprockets must be in good condition, or the new replacement chain or sprockets will wear rapidly.





Lubricate the drive chain.
Install the drive chain.
For ease of assembly, hold the chain ends against adjacent rear sprocket teeth while inserting the master link.

Install the master link retaining clip so that the closed end of the clip will face the direction of forward wheel rotation.

Adjust the drive chain free play (Page 3–8).

FREE PLAY: 15–25 mm (5/8–1 in)

Check brake pedal free play and adjust, if necessary.

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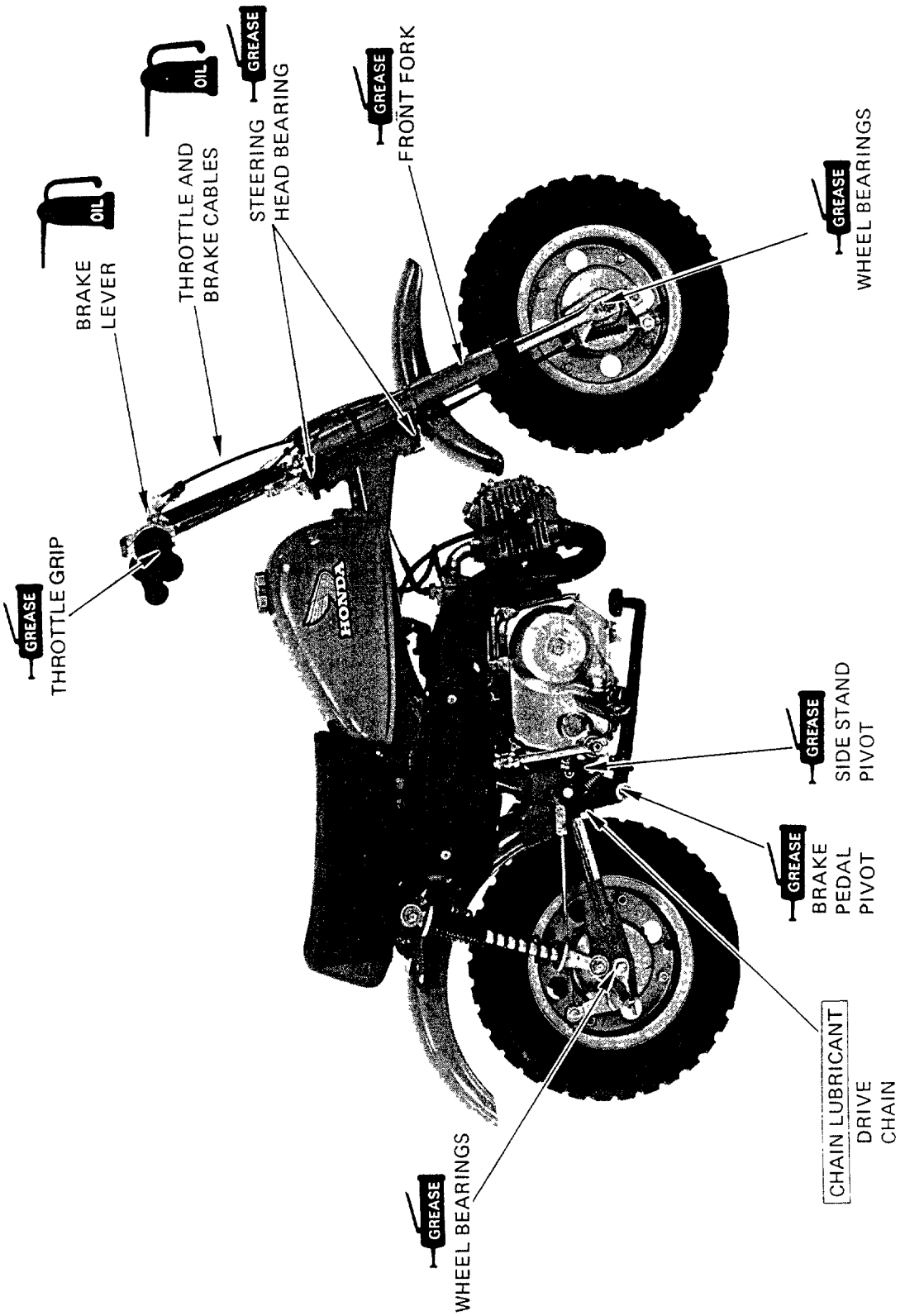
LUBRICATION POINTS



M E M O

SERVICE INFORMATION

SPECIFICATIONS

Spark plug gap		0.6–0.7 mm (0.024–0.028 in)
Spark plug type	USA type	NGK: C6H ND: U20FS
	Canada type	NGK: CR6HS ND: U20FSR–L
Valve clearance	IN	0.05 mm (0.002 in)
	EX	0.05 mm (0.002 in)
Contact breaker point gap		0.3–0.4 mm (0.012–0.016 in)
Throttle free play		2–6 mm (1/8–1/4 in)
Idle speed		1,500 ± 100 rpm
Drive chain free play		15–25 mm (5/8–1 in)
Front brake free play		10–20 mm (3/8–3/4 in)
Rear brake free play		10–20 mm (3/8–3/4 in)

Tire pressure: Cold tire pressure kg/cm² (psi)	Front	1.0 (14)
	Rear	1.0 (14)
Tire size	Front	3.50–8–2PR
	Rear	3.50–8–2PR

TORQUE VALUES

Valve adjusting hole cap	1.0–1.4 kg-m (7–10 ft-lb)
Valve adjusting screw lock nut	0.7–1.1 kg-m (5–8 ft-lb)
Oil drain plug	2.0–2.5 kg-m (15–18 ft-lb)
Rear axle nut	3.5–5.0 kg-m (25–36 ft-lb)

SPARK PLUG

Disconnect the spark plug cap and remove the spark plug

Visually inspect the spark plug electrodes for wear
The center electrode should have square edges and the side electrode should not be eroded.

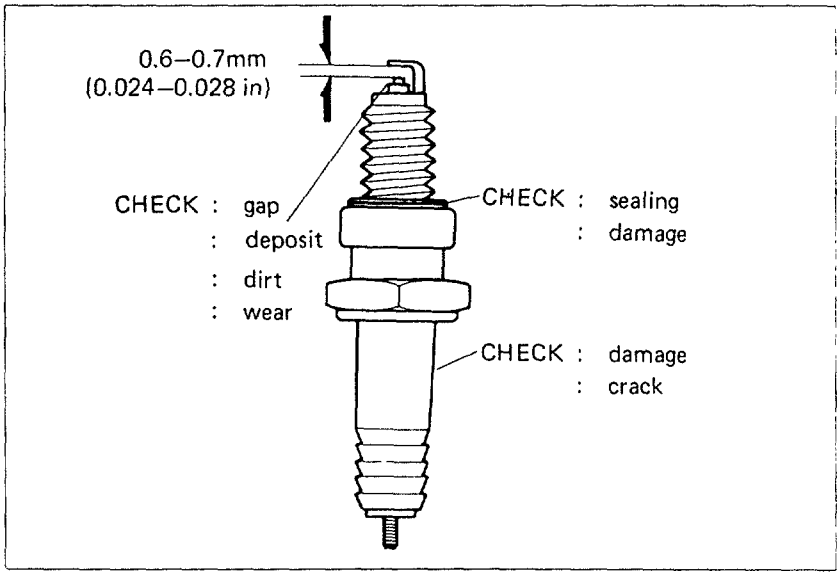
Discard the spark plug if there is apparent wear or if the insulator is cracked or chipped.

Measure the gap with a wire-type feeler gauge. Adjust the spark plug gap by carefully bending the side electrode.

RECOMMENDED SPARK PLUG:

	U.S.A Type	Canada Type
NGK	C6H	CR6HS
ND	U20FS	U20FSR–L

Install the spark plug, tighten it by hand, then with a spark plug wrench.
Connect the spark plug cap.



CONTACT BREAKER POINT/ IGNITION TIMING

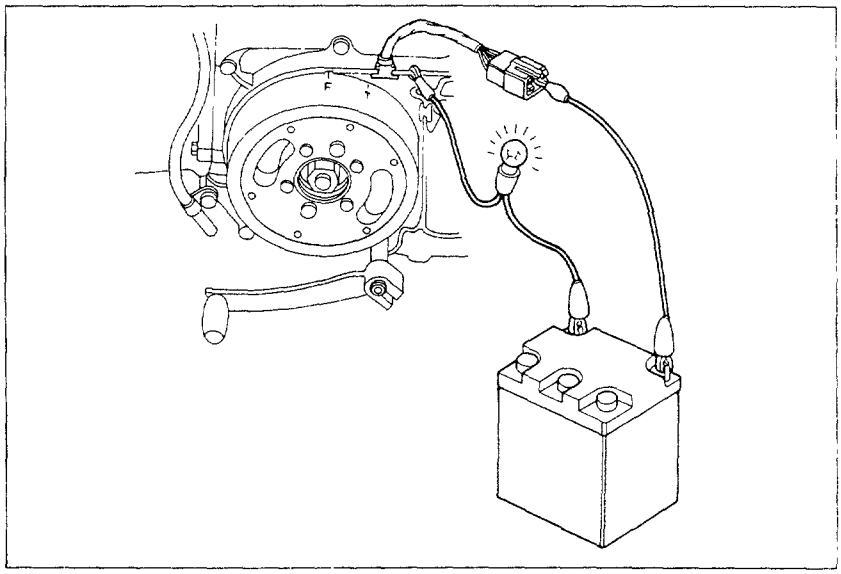
IGNITION TIMING

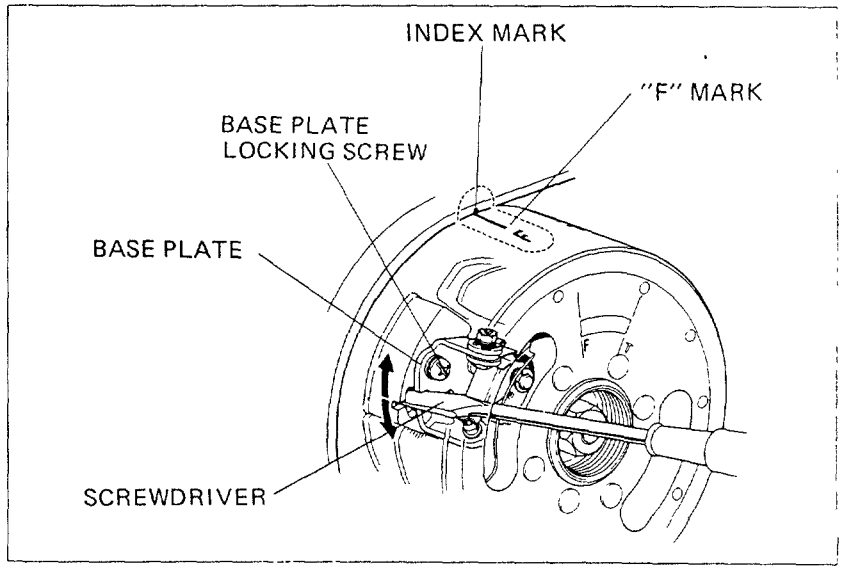
Remove the left crankcase cover.
Inspect the contact point surfaces. If they are level but grayish in color or are slightly pitted, file or sand them lightly. If they have a noticable transfer of metal from one surface to the other, have evidence of heavy arcing, or are worn at an angle, the point set should be replaced.

Adjust as follows:

Disconnect the A. C. generator wires.
Connect a continuity light to the black lead and to a battery positive terminal. Connect the battery negative terminal to a convenient frame ground.

Rotate the flywheel counterclockwise and align the "F" mark with the crankcase index mark. The timing is correct if the light becomes dim when both marks align.





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If the ignition timing is incorrect, loosen the contact breakter locking screw and adjust the breaker point gap. Increasing point gap will advance ignition timing. Decreasing the gap will retard ignition timing. Tighten the locking screw and recheck the timing.

NOTE

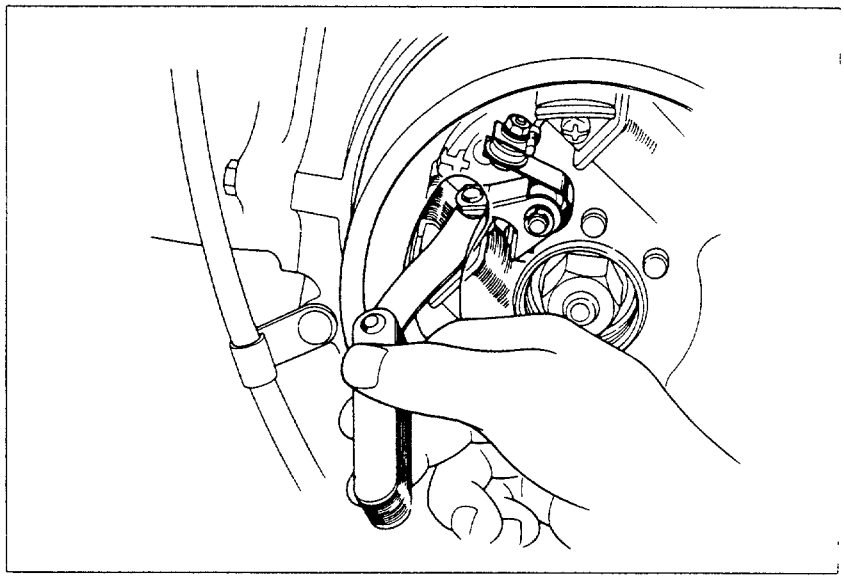
Replace the contact breaker points if the timing cannot be correctly adjusted while maintaining a minimum point gap of 0.3–0.4 mm (0.12–0.16 in).

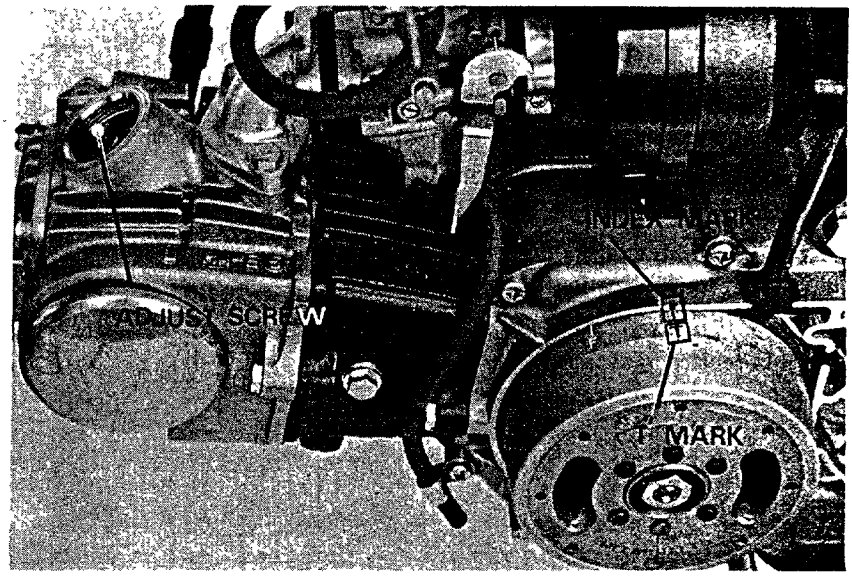
Connect the A.C. generator wires and install the left crankcase cover.

Use a stroboscopic timing light to determine accurate ignition timing.

NOTE

The "F" mark should align with the index mark at idle speed (1,500 rpm).





VALVE CLEARANCE

NOTE

Inspect and adjust the valve clearance while the engine is cold (Below 35°C, 95°F).

Remove the left crankcase cover and valve adjusting caps.

Rotate the flywheel counterclockwise and align the rotor "T" mark and crankcase index mark.

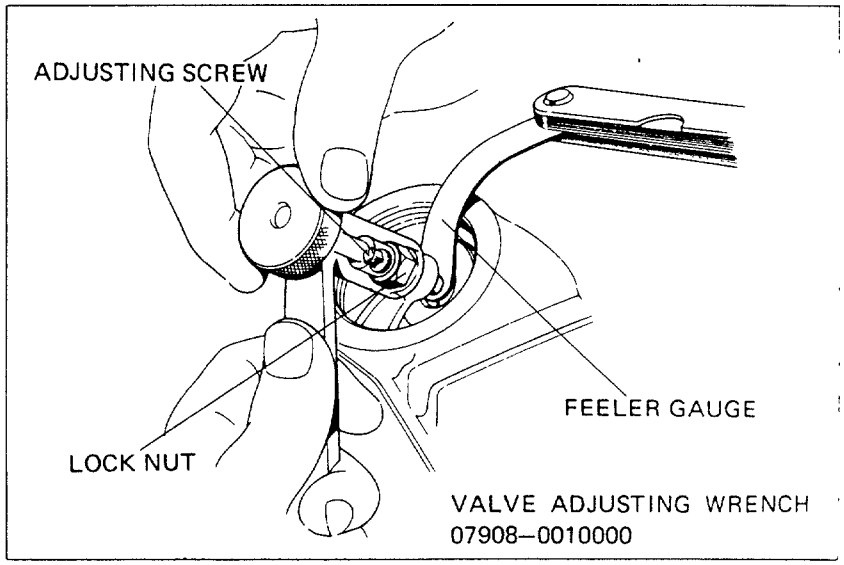
Before checking, make sure that the piston is at TDC (Top Dead Center) on the compression stroke (The rockers should be loose).

Check the intake and exhaust valve clearances by inserting a feeler gauge between the adjusting screw and the valve stem.

Adjust by loosening the lock nut and turning the screw until there is a slight drag on the feeler gauge.

Tighten the lock nut and recheck the clearance.

SERVICE LIMIT: 0.05 mm (0.002 in) (IN/EX)

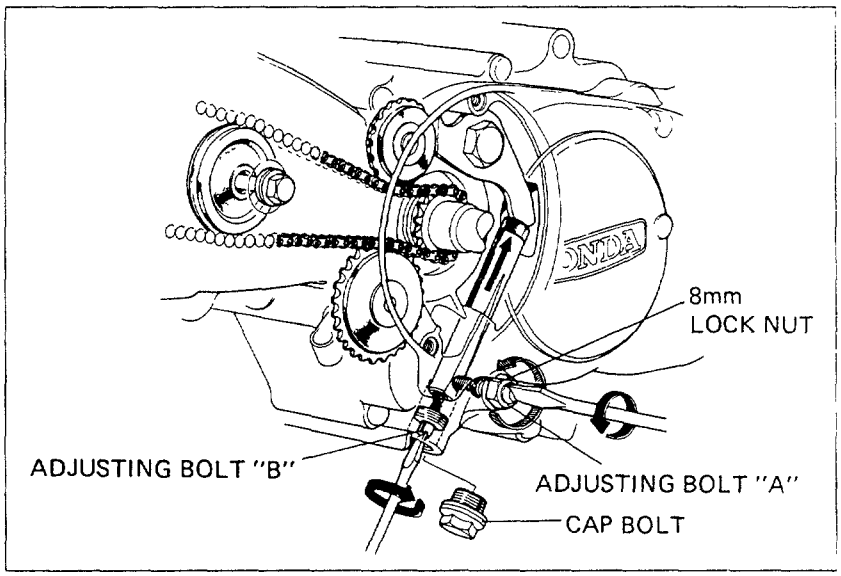


CAM CHAIN TENSION

Start the engine and allow it to idle.

Loosen the 8 mm lock nut and adjusting bolt A one half turn.

If the cam chain is still noise, remove the cap bolt.
With adjusting bolt A still loosened, carefully screw in adjusting bolt B until the noise stops

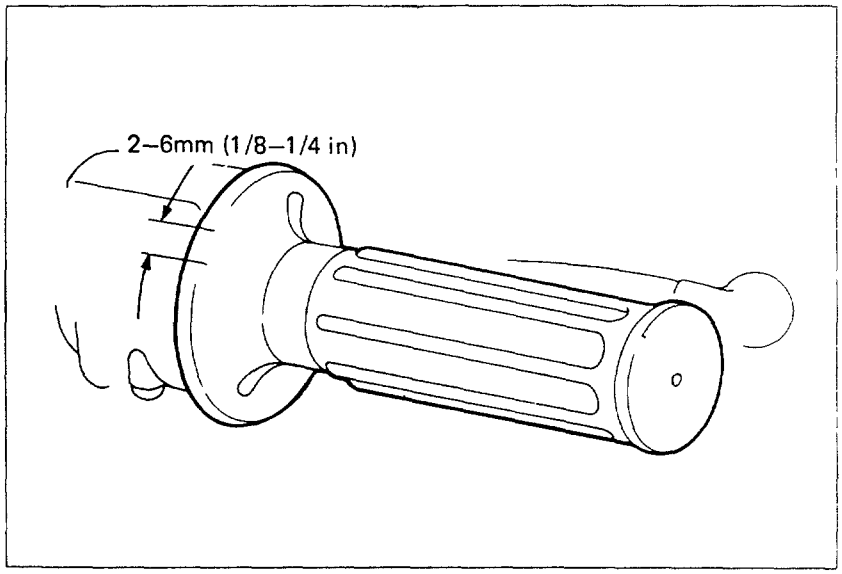


THROTTLE OPERATION

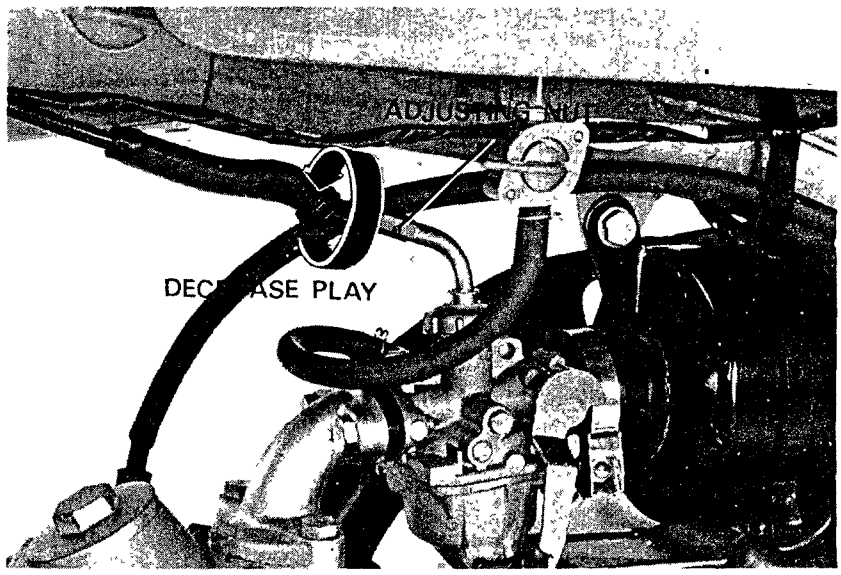
Make sure that there is no deterioration, damage or kinks in the throttle cable, and that the throttle grip free play is 2–6 mm (1/8–1/4 in) at the outer edge of the throttle grip flange.

Check for smooth throttle grip rotation from fully open to automatic full closing in all steering positions.

Adjust or replace, if necessary.



To adjust, turn the adjuster in either direction.



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CARBURETOR IDLE MIXTURE

NOTE

The carburetor idle mixture adjustment should be made after the engine has obtained operating temperature, and with the transmission in neutral.

Turn the throttle stop screw to obtain the lowest stable idle rpm.

Turn the air screw clockwise until you hear the engine miss or decrease in speed, then counterclockwise until the engine misses or decreases in speed. Center the air screw exactly between these two extremes, at the point which produces the highest idle rpm. (Usually 1-1/2 turns out from the fully closed position).

NOTE

Turning the air screw in produces a rich fuel mixture. Turning the air screw out produces a lean fuel mixture.
If the idle speed increases during mixture adjustment, readjust the throttle stop screw to reduce rpm.

Adjust the idle speed to the specified rpm.

CARBURETOR IDLE SPEED

Turn the throttle stop screw to obtain the specified idle speed.

IDLE SPEED: 1,500 ± 100 rpm

CLUTCH

Loosen the lock nut and turn the adjusting screw one full turn clockwise.

Turn the screw counterclockwise until resistance is felt.

Then turn the adjusting screw 1/8 to 1/4 turns clockwise.

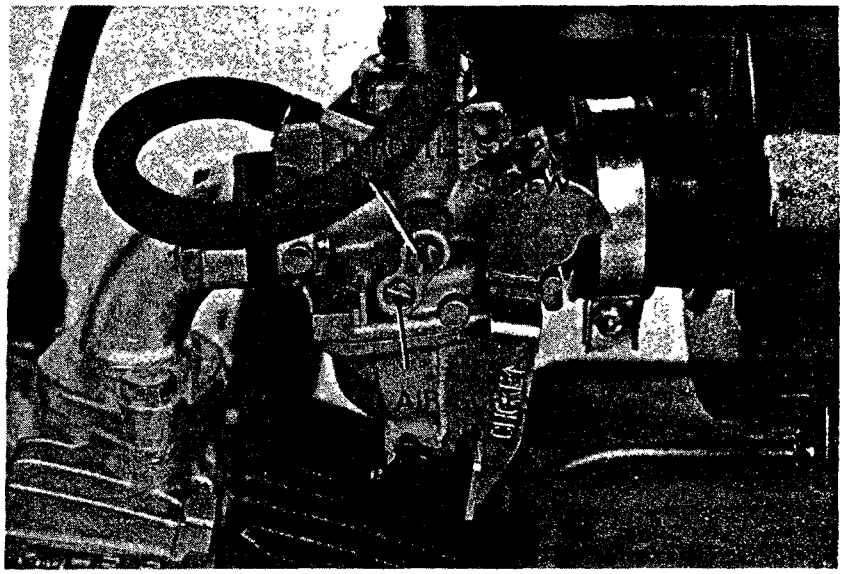
Tighten the lock nut.

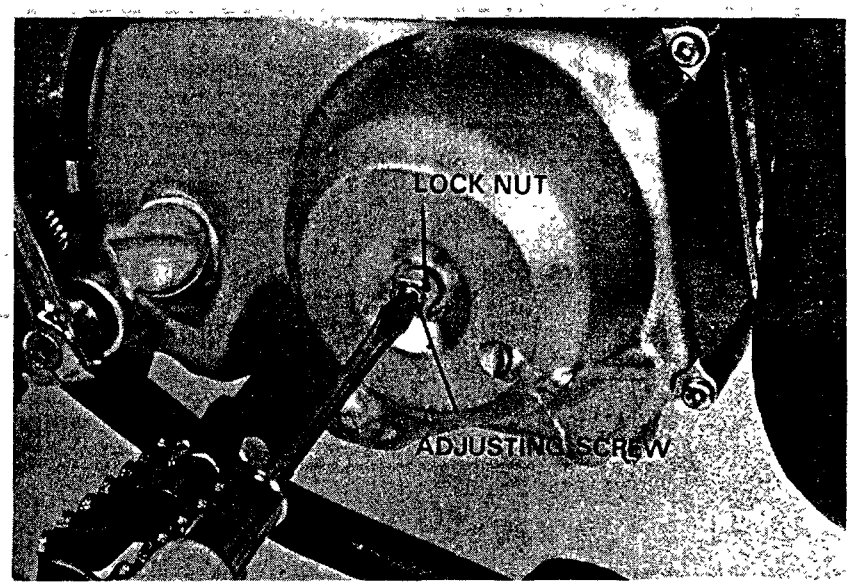
NOTE

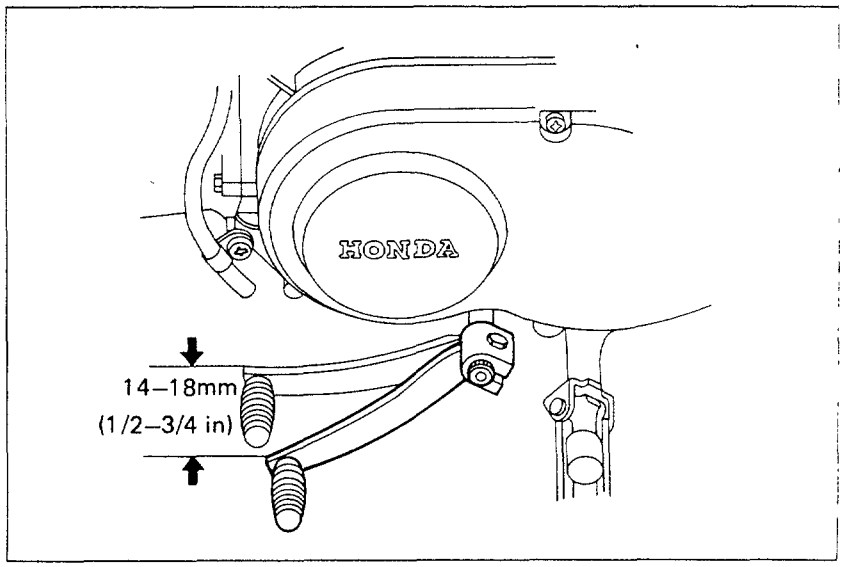
- Hold the adjusting screw while tightening the lock nut.
- After adjusting the clutch, check its operation.

CLUTCH DISENGAGEMENT

The clutch should be disengaged when the gearshift pedal is depressed 14–18 mm (1/2–3/4 in) measured at the pedal end.

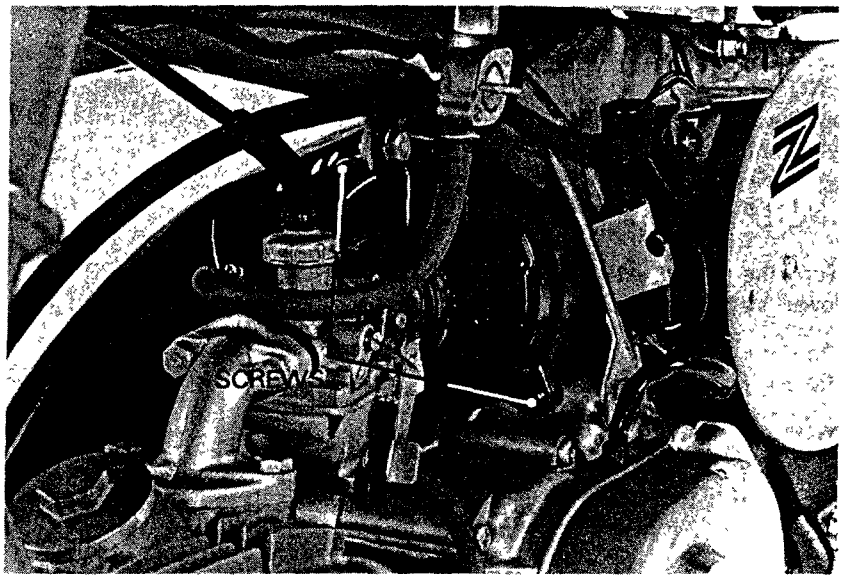






AIR CLEANER

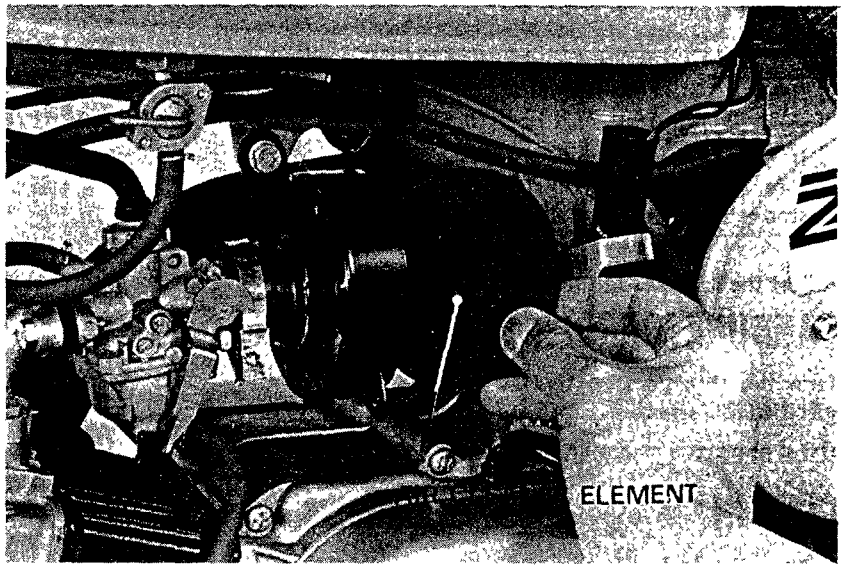
Remove the two screws and the air cleaner cover.



Remove the air cleaner element.
Wash the element in non-flammable or high flash point solvent and allow it to dry thoroughly.

Soak the element in clean gear oil (SAE 80–90).
Squeeze out the excess oil.

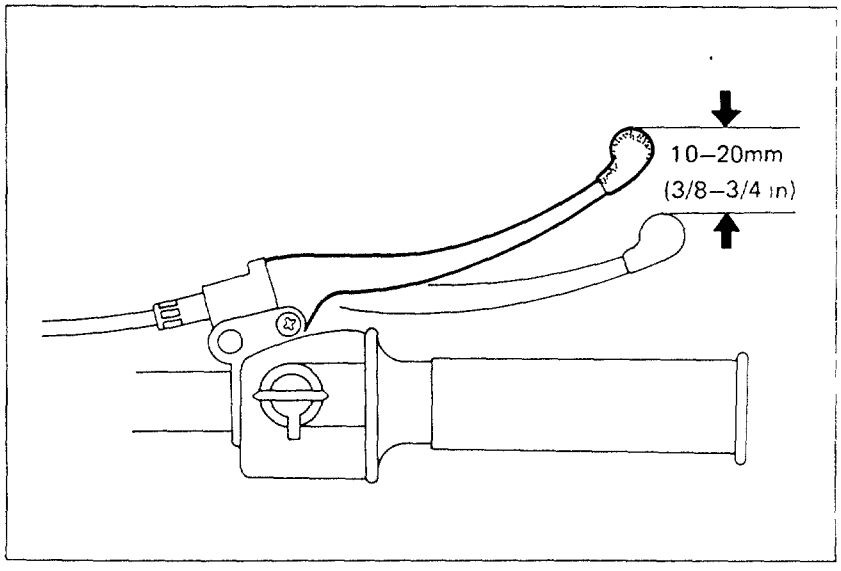
Reinstall the element and the cover.



FRONT BRAKE

Measure the front brake lever free play.

FREE PLAY: 10–20 mm (3/8–3/4 in)



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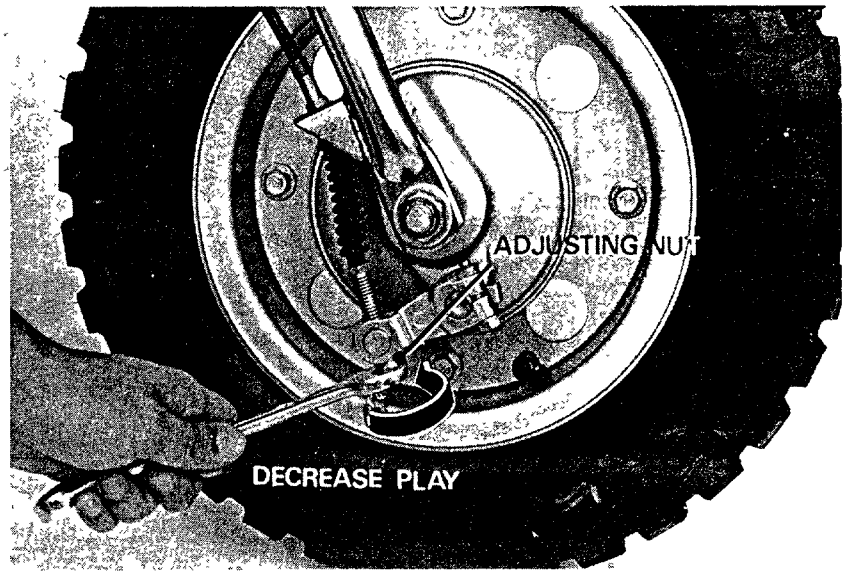
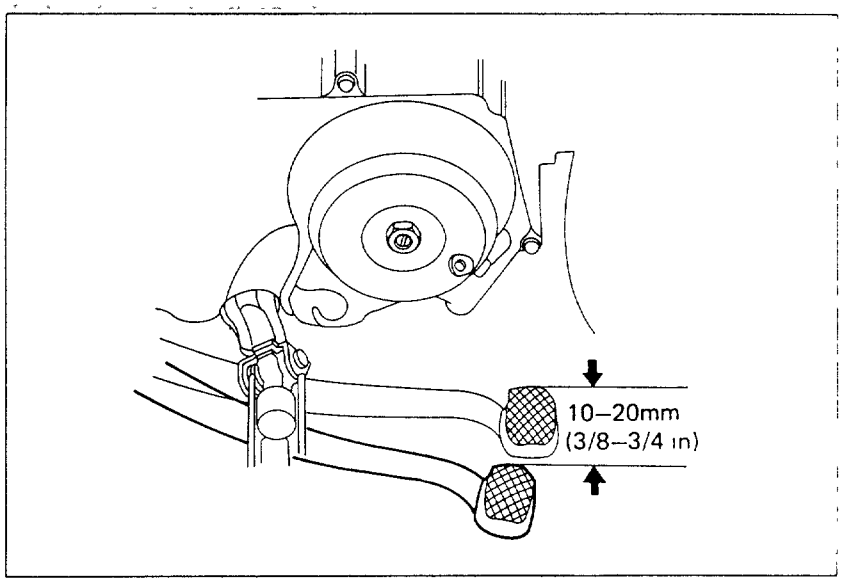
Adjust by turning the front brake adjusting nut.



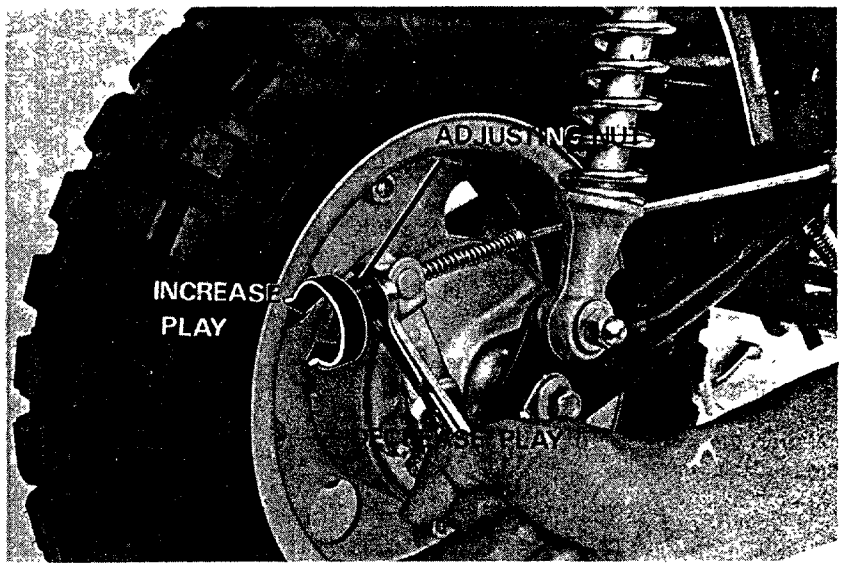
REAR BRAKE

Measure the rear brake pedal free play.

FREE PLAY: **10–20 mm (3/8–3/4 in)**



Adjust by turning the rear brake adjusting nut.

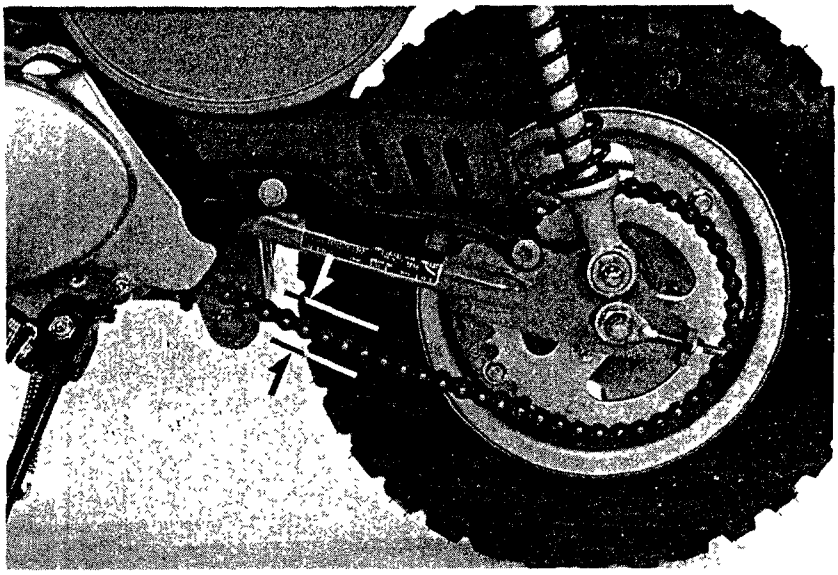


DRIVE CHAIN

Place the motorcycle on a support block and shift the transmission into neutral.

Check the drive chain free play.

FREE PLAY: 15–25 mm (5/8–1 in)



To adjust, loosen the axle nut.

Turn both adjusting nuts an equal number of turns until the correct free play is obtained.

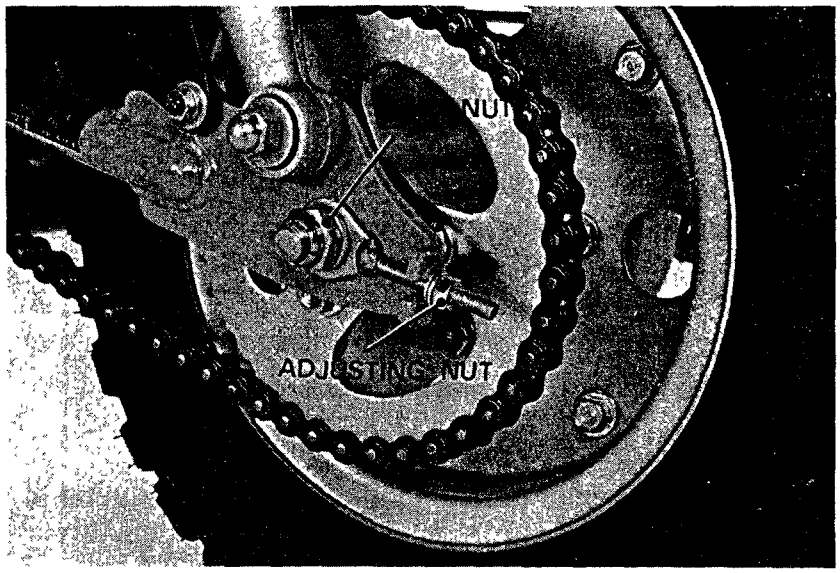
NOTE

Be sure that the index mark aligns with the same scale graduation on both sides.

Tighten the axle nut.

TORQUE: 3.5–5.0 kg-m (25–36 ft-lb)

Tighten the adjusting nuts after the axle nut has been tightened.



SPARK ARRESTER

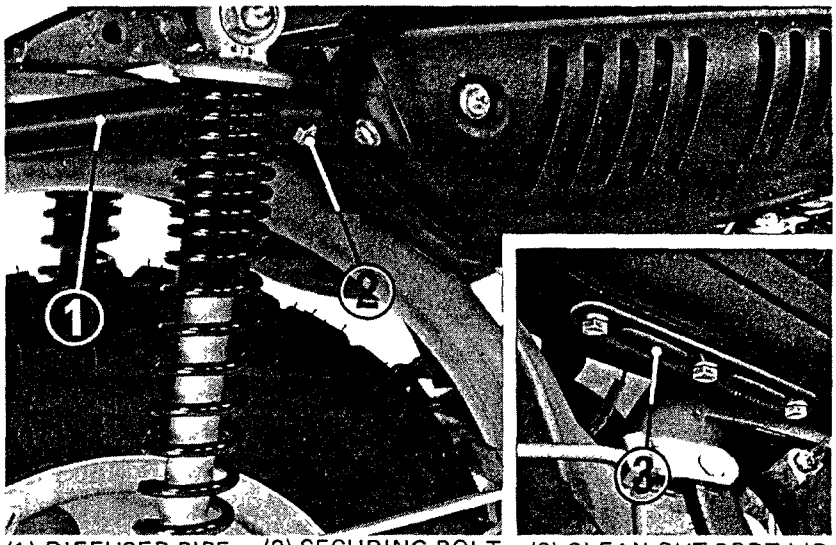
Remove the diffuser pipe by removing the securing bolt.

Remove the clean-out port lid by removing the three securing bolts.

Start the engine and rev several times while momentarily creating exhaust system back pressure by blocking the end of the exhaust pipe with a rag.

After cleaning the carbon from the exhaust pipe, reinstall the clean-out port lid.

Remove the carbon from the diffuser pipe and reinstall.



(1) DIFFUSER PIPE (2) SECURING BOLT (3) CLEAN-OUT PORT LID

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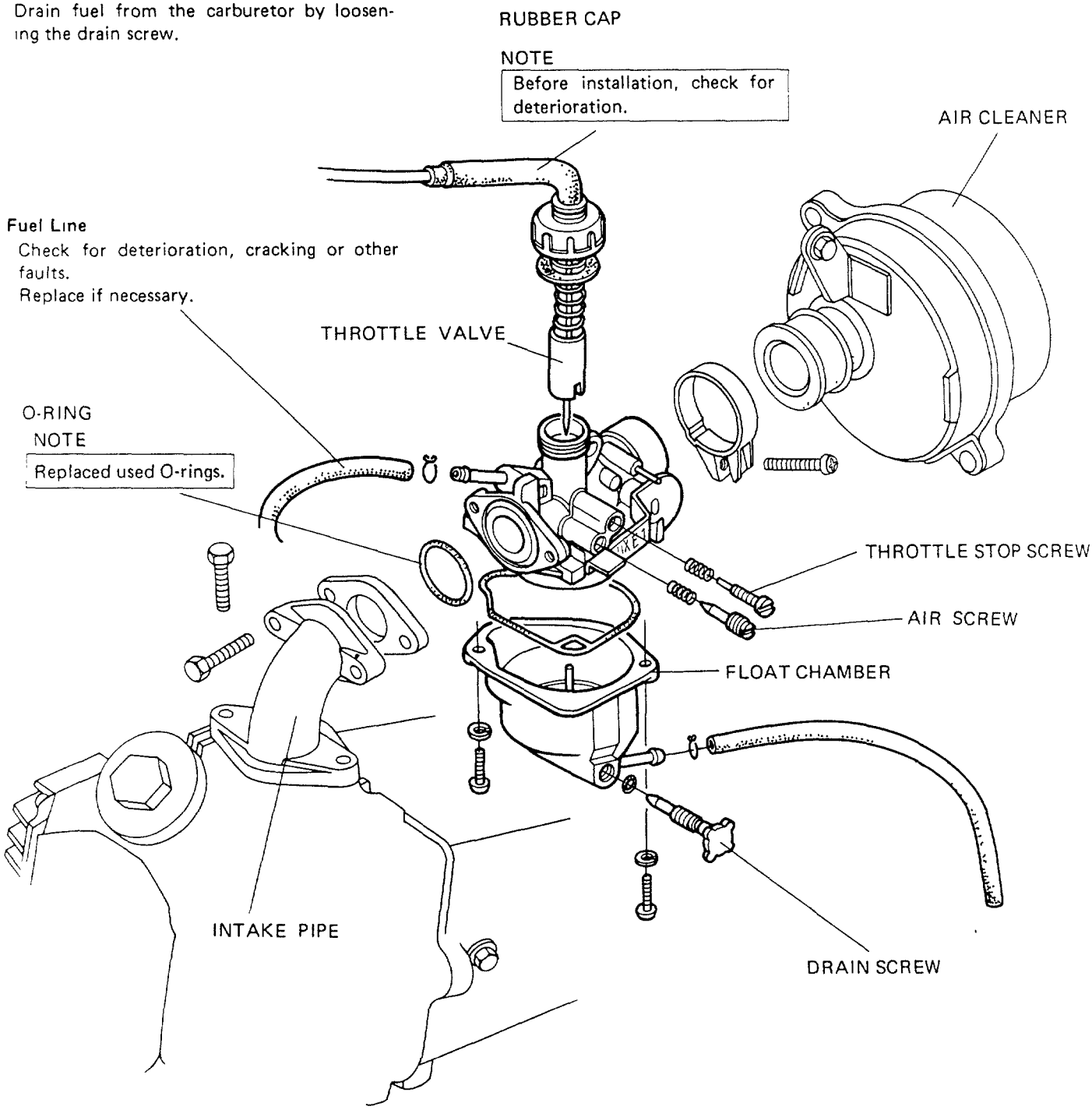
MEMO

Turn the fuel valve OFF.
Drain fuel from the carburetor by loosening the drain screw.



Clean carburetor jets and body with non-flammable or high flash point solvent before installation.

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