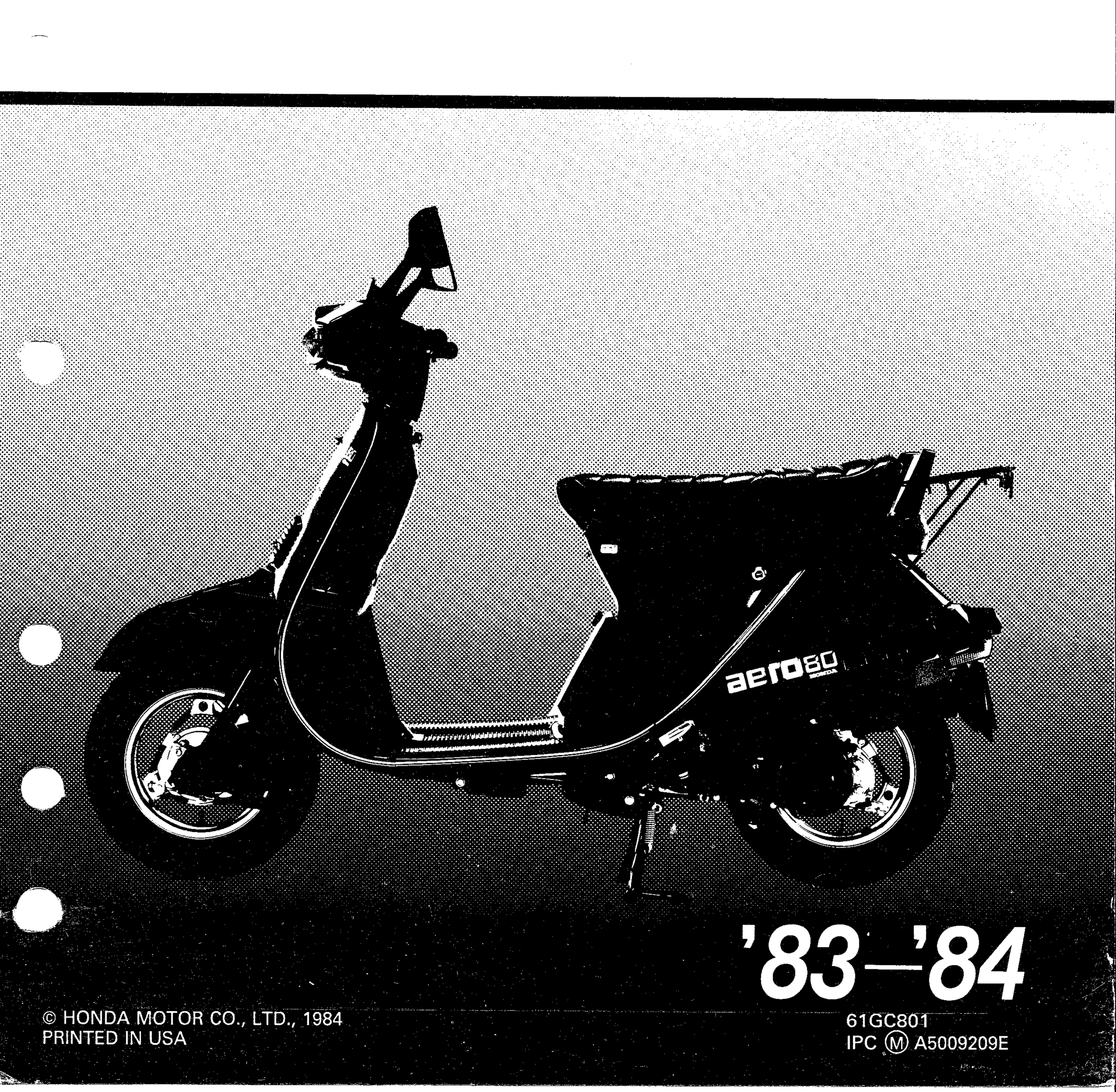
Official

HONDA

SHOP MANUAL

NH80 aero80



'83—'84

PRINTED IN USA

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HONDA
NH80

HOW TO USE THIS MANUAL

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition and the emission levels are withir. the standards set by the U.S. Environmental Protection Agency. Performing the first scheduled maintenance is very important. It compensates for the initial wear that occurs during the break-in period.

Sections 1 through 3 apply to the whole motor scooter, while sections 4 through 16 describe parts of the scooter, 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.

If you are familiar with this scooter read the TECHNICAL FEATURES in section 16.

If you don't know what the source of the trouble is, refer to section 18, Troubleshooting.

HONDA MOTOR CO., LTD.
Service Publications Office

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1. GENERAL INFORMATION

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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.

WARNING

Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.

WARNING

The battery electrolyte contains sulfuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water and call a doctor if electrolyte gets in your eyes.

WARNING

The battery generates hydrogen gas which can be highly explosive. Do not smoke or allow flames or sparks near the battery, especially while charging it.

SERVICE RULES

1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalents. Parts that do not meet HONDA's design specifications may damage the scooter.
2. Use the special tools designed for this product.
3. Use only metric tools when servicing this scooter. Metric bolts, nuts, and screws are not interchangeable with English fasteners. The use of incorrect tools and fasteners may damage the scooter.
4. Install new gaskets, O-rings, cotter pins, lock plates, etc. when reassembling.
5. When tightening bolts or nuts, begin with larger-diameter or inner bolts first, and tighten to the specified torque diagonally in 2–3 steps, unless a particular sequence is specified.
6. Clean parts in non-flammable or high flash point solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
7. After reassembly, check all parts for proper installation and operation.
8. Route all electrical wires as shown on page 1-7 Cable and Harness Routing and always away from sharp edges and areas where they might be pinched between moving parts.

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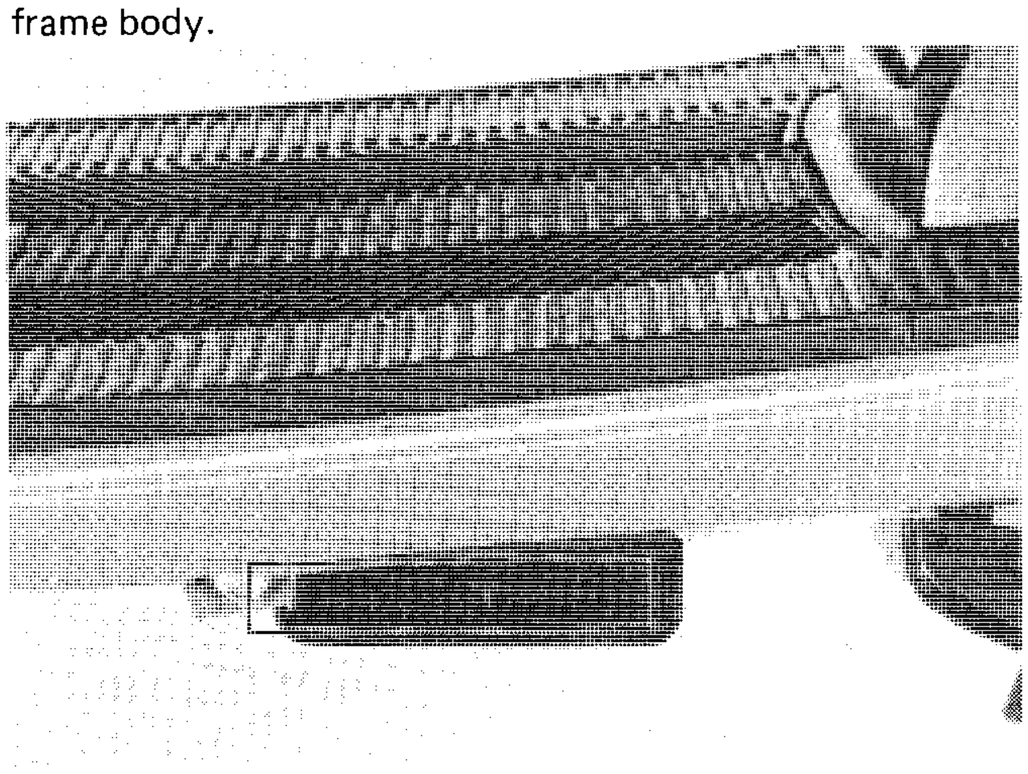
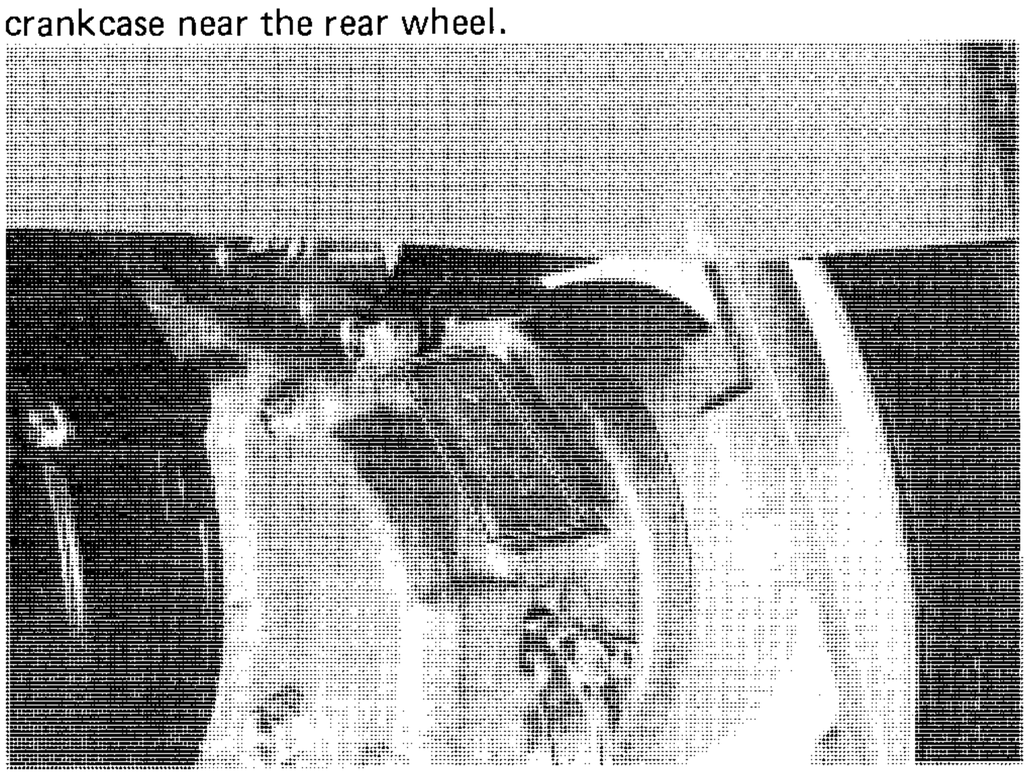
MODEL IDENTIFICATION

Beginning Frame Number: HF010*DS000001

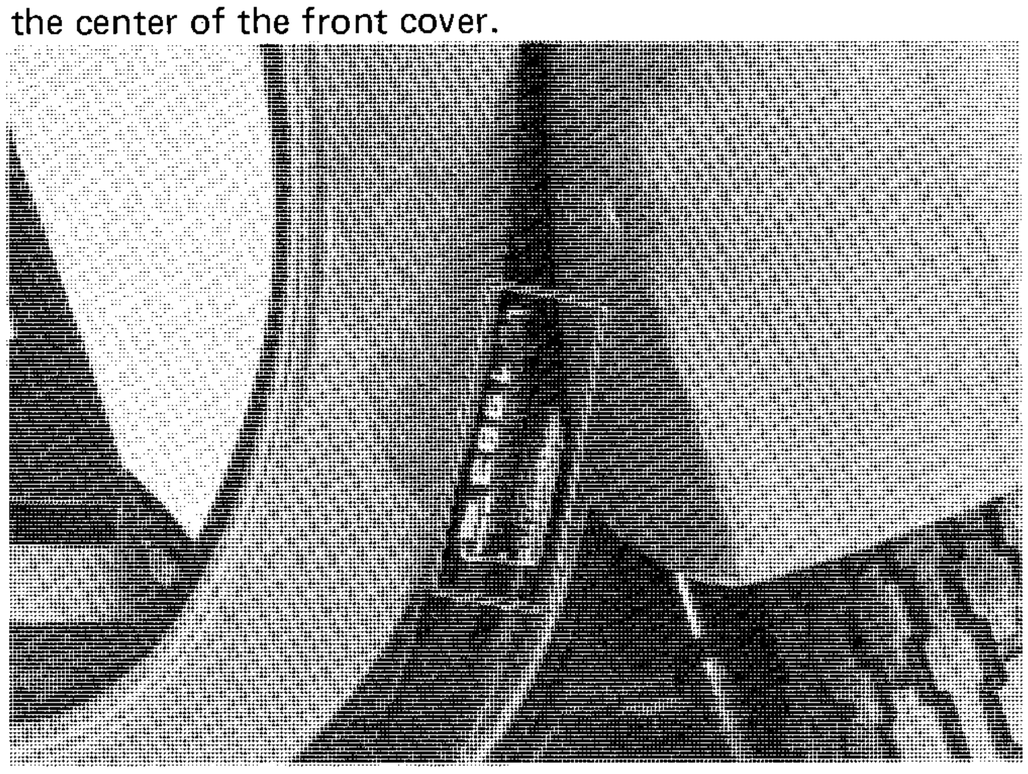
The frame serial number is stamped on the left side of the frame body.



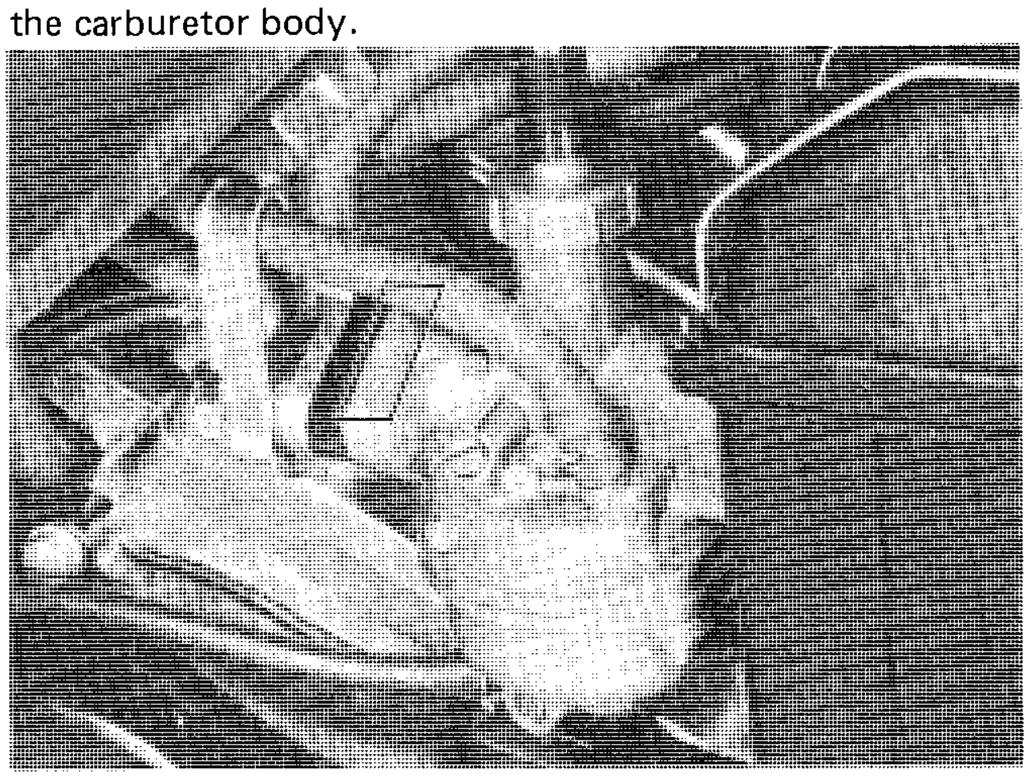
The engine serial number is stamped on the back of the crankcase near the rear wheel.



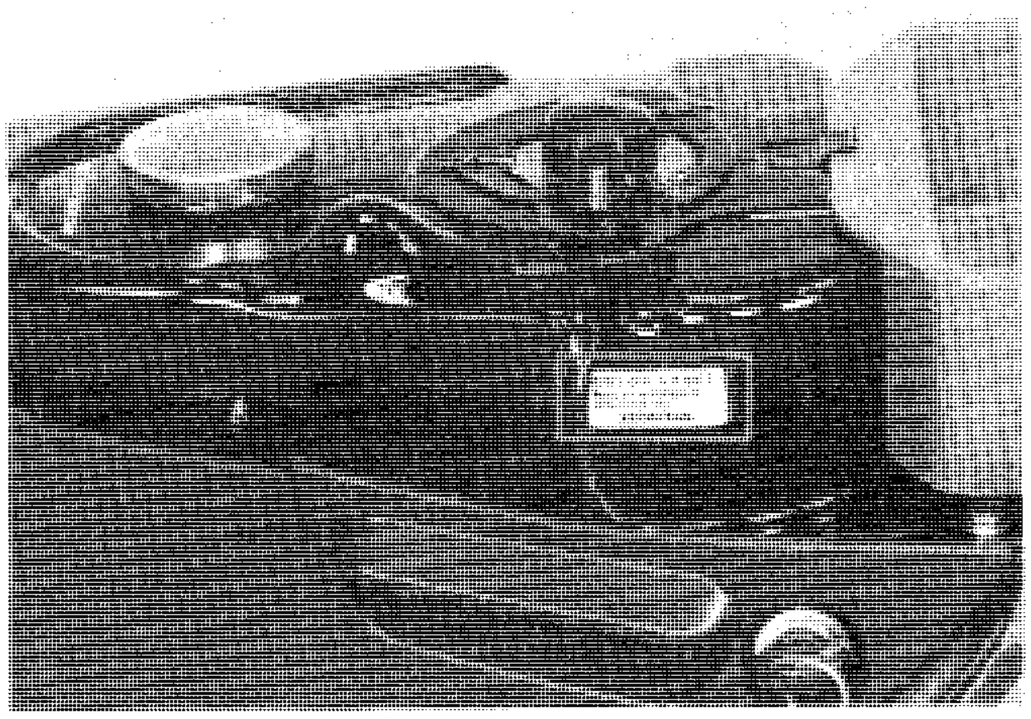
The vehicle identification number is on the frame pipe of the center of the front cover.



The carburetor identification number is on the left side of the carburetor body.



The color label is attached to the left side of the fuel tank, under the seat.



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SPECIFICATIONS

ITEM				SPECIFICATIONS
DIMENSIONS	Overall length			1,685 mm (66.3 in)
	Overall width			665 mm (26.2 in)
	Overall height			1,070 mm (42.1 in)
	Wheelbase			1,170 mm (46.1 in)
	Seat height			730 mm (28.7 in)
	Foot peg height			256 mm (10.1 in)
	Ground clearance			110 mm (4.3 in)
	Dry weight			75 kg (165 lb)
	Curb weight			80 kg (176 lb)
FRAME	Type			Back bone
	Front suspension, travel			Bottom link, 81 mm (3.19 in)
	Rear suspension, travel			Engine/Final drive unit swingarm, 78 mm (3.07 in)
	Gross vehicle weight rating, '83:			222 kg (490 lb)
	'84:			232 kg (505 lb)
	Vehicle capacity load, '83:			145 kg (320 lb)
	'84:			150 kg (330 lb)
	Front tire size			3.50—10—4PR
	Rear tire size			3.50—10—4PR
	Cold tire pressure	Up to 90 kg (200 lbs) load	Front	21 psi (150 kPa, 1.5 kg/cm²)
			Rear	24 psi (175 kPa, 1.75 kg/cm²)
		Up to vehicle capacity load	Front	21 psi (150 kPa, 1.5 kg/cm²)
			Rear	36 psi (250 kPa, 2.5 kg/cm²)
	Front brake, lining swept area			Internal expanding shoe, 86 cm² (13.4 sq in)
	Rear brake, lining swept area			Internal expanding shoe, 60 cm² (9.3 sq in)
	Fuel capacity			5.3 liters (1.4 US gal)
	Fuel reserve capacity			0.9 liters (0.25 US gal)
	Caster			63 °
	Trail			70 mm (2.8 in)
ENGINE	Type			Air cooled 2-stroke
	Cylinder arrangement			Single cylinder 15 ° inclined from vertical
	Bore and stroke			48 x 44 mm (1.89 x 1.73 in)
	Displacement			80 cm³ (4.88 cu in)
	Compression ratio			6.8 : 1
	Maximum horsepower			5 BHP/5,000 rpm
	Maximum torque			0.82 kg-m (5.9 ft-lb)/3,500 rpm
	Transmission oil capacity			90 cc (0.09 US qt)
	Oil tank capacity			1.3 liters (1.4 US qt)
	Lubrication system			Lubricated by mixing oil with fuel
	Air filtration			Oiled urethane foam
	Cylinder compression			10.0—14.0 kg/cm² (142—200 psi)
	Port timing	Intake	Open	Reed valve controlled
			Close	Reed valve controlled
		Exhaust	Open	80 ° BBDC
			Close	80 ° ABDC
		Scavenge	Open	55 ° BBDC
			Close	55 ° ABDC
	Engine dry weight			18 kg (39.7 lb)
	Idle speed			1,800 ± 100 rpm

GENERAL INFORMATION

ITEM		SPECIFICATION
CARBURETION	Carburetor type, size Identification number Air screw Float level	Piston valve, 16 mm (0.63 in) venturi dia. PB54D Refer to page 4-10 8.5 mm (0.33 in)
DRIVE TRAIN	Clutch type Primary reduction Gear ratio Final reduction	Automatic dry centrifugal clutch V-belt 2.3–1.2 : 1 6.914 : 1
ELECTRICAL	Ignition type Ignition timing "F" mark Starting system Alternator Battery capacity	C.D.I. 14° BTDC at idle Starting motor and kickstarter 12V–110W/5,000 rpm 12V–5AH

Spark plug

	NGK	ND
Standard	BPR6HS	W20FPR
For cold climate, (Below 5°C, 41°F)	BPR5HS	W16FPR
For extended high speed riding	BPR7HS	W22FPR

Spark plug gap	0.6–0.7 mm (0.024–0.028 in)
Fuse capacity	7A

LIGHTS			
	Headlight (High/Low)	12V–25/25W	
	Tail/brake light	12V–3/32 cp	SAE No. 1157
	Turn signals (Front)	12V–32 cp	SAE No. 1156
	(Rear)	12V–32 cp	SAE No. 1156
	Speedometer light	12V–2 cp	SAE No. 57
	Oil indicator light	12V–2 cp	SAE No. 57
	Turn signal indicator	12V–2 cp	SAE No. 57
	High beam indicator	12V–2 cp	SAE No. 57

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TORQUE VALUES

ENGINE

ITEM	THREAD DIA. mm	TORQUE N·m (kg-m, ft-lb)	REMARKS
Cylinder head	6	8–12 (0.8–1.2, 6–9)	While the engine is cold (below 35°C, 95°F).
Flywheel	10	35–40 (3.5–4.0, 25–29)	
Drive pulley	10	35–40 (3.5–4.0, 25–29)	
Clutch outer	10	35–40 (3.5–4.0, 25–29)	
Driven face and clutch	–	35–40 (3.5–4.0, 25–29)	
Intake pipe	6	8–12 (0.8–1.2, 6–9)	
Carburetor	6	9–12 (0.9–1.2, 7–9)	
Crankcase	6	8–12 (0.8–1.2, 6–9)	

FRAME

ITEM	THREAD DIA. mm	TORQUE N·m (kg-m, ft-lb)	REMARKS
Steering stem nut	–	80–120 (8.0–12.0, 58–87)	
Front axle nut	12	50–70 (5.0–7.0, 36–51)	Self-locking nut
Engine hanger bolt	10	27–33 (2.7–3.3, 20–24)	Self-locking nut
Rear axle nut	14	80–100 (8.0–10.0, 58–72)	Self-locking nut
Rear shock absorber (Upper)	10	30–40 (3.0–4.0, 22–29)	
Rear shock absorber (Lower)	8	20–30 (2.0–3.0, 14–22)	
Rear shock absorber damper lock nut	8	15–25 (1.5–2.5, 11–18)	Apply a locking agent.
Rear brake arm	5	4–7 (0.4–0.7, 3–5)	
Kick starter pedal	6	8–10 (0.8–1.0, 6–7)	
Front brake arm	6	8–12 (0.8–1.2, 6–9)	
Front fork pivot arm	8	20–24 (2.0–2.4, 14–17)	
Muffler	8	40–50 (4.0–5.0, 29–36)	

Torque specifications listed above are for important fasteners. Others should be tightened to the standard torque values below.

STANDARD TORQUE VALUES

ITEM	TORQUE N·m (kg-m, ft-lb)	ITEM	TORQUE N·m (kg-m, ft-lb)
5 mm bolt and nut	4– 6 (0.4–0.6, 3–4)	5 mm screw	3– 5 (0.3–0.5, 3–4)
6 mm bolt and nut	8–12 (0.8–1.2, 6–9)	6 mm screw	7–11 (0.7–1.1, 5–8)
8 mm bolt and nut	18–25 (1.8–2.5, 13–18)	6 mm flange bolt and nut	10–14 (1.0–1.4, 7–10)
10 mm bolt and nut	30–40 (3.0–4.0, 22–29)	8 mm flange bolt and nut	20–30 (2.0–3.0, 14–22)
12 mm bolt and nut	50–60 (5.0–6.0, 36–43)	10 mm flange bolt and nut	30–40 (3.0–4.0, 22–29)

TOOLS

SPECIAL

DESCRIPTION	NUMBER	ALTERNATIVE	NUMBER	REF. SECT.
Clutch spring compressor	07960-KJ90000			8-15, 8-22
Seal and case assembling tool	07965-GC70000	Assembly collar Assembly tool (bolt only)	07965-GC70100 07965-1480200	10-5, 10-6
Bearing driver	07945-GC80000			8-20
Spring attachment holder	07967-GC80000	Spring attachment holder	07967-1180100	13-7, 13-8
Lock nut wrench, 39 mm	07916-1870001			8-15, 8-22
*Universal bearing puller	07631-0010000			10-3
Crankcase puller	07935-KG80000			8-9, 10-2
*Bearing remover set, 12 mm	07936-1660001	Bearing remover, 12 mm Remover weight	07936-1660100 07936-3710200	9-4
*Bearing remover, 15 mm	07936-KC10000			9-4
Hand vacuum pump	ST-AH-260-MC7	(U.S.A. only)		4-13
Rear shock absorber attachment A	07967-GA70101			13-7, 13-8
*Bearing driver attachment, 28 x 30 mm	07946-1870100			8-21

*These tools are not available in the U.S.A. Equivalent tools or commercially available in U.S.A. or other methods are recommended. Refer to the alternative column.

COMMON

DESCRIPTION	NUMBER	ALTERNATIVE	NUMBER	REF. SECT.
Float level gauge	07401-0010000			4-7
Universal holder	07725-0030000			7-2, 7-5, 8-2, 8-7, 8-15, 8-22
Pin spanner	07702-0020000	Pin spanner	07702-0010000	12-20, 12-23
Attachment, 32 x 35 mm	07746-0010100			9-5, 9-6, 12-11
Attachment, 37 x 40 mm	07746-0010200			9-5
Attachment, 42 x 47 mm	07746-0010300			10-5, 12-22
Pilot, 12 mm	07746-0040200			9-6, 12-11
Pilot, 15 mm	07746-0040300			8-21, 9-5
Pilot, 17 mm	07746-0040400			9-5
Pilot, 25 mm	07746-0040600			10-5
Driver	07749-0010000	Driver (May be used when pilot not used)	07949-6110000	
Bearing remover shaft	07746-0050100			8-18
Bearing remover head, 12 mm	07746-0050300			8-18
Bearing remover head, 15 mm	07746-0050400			8-18
Rear shock absorber compressor	07959-3290001			13-7, 13-8
Rotor puller	07733-0010000	Rotor puller	07933-0010000	7-3
Lock nut wrench, 30 x 32 mm	07716-0020400	Equivalent tools commercially available in U.S.A.		12-7, 12-8
Extension bar	07716-0020500			12-7, 12-8
Fork seal driver	07747-0010100	Fork seal driver	07947-3550000	12-23
Fork seal driver attachment	07747-0010400			12-23

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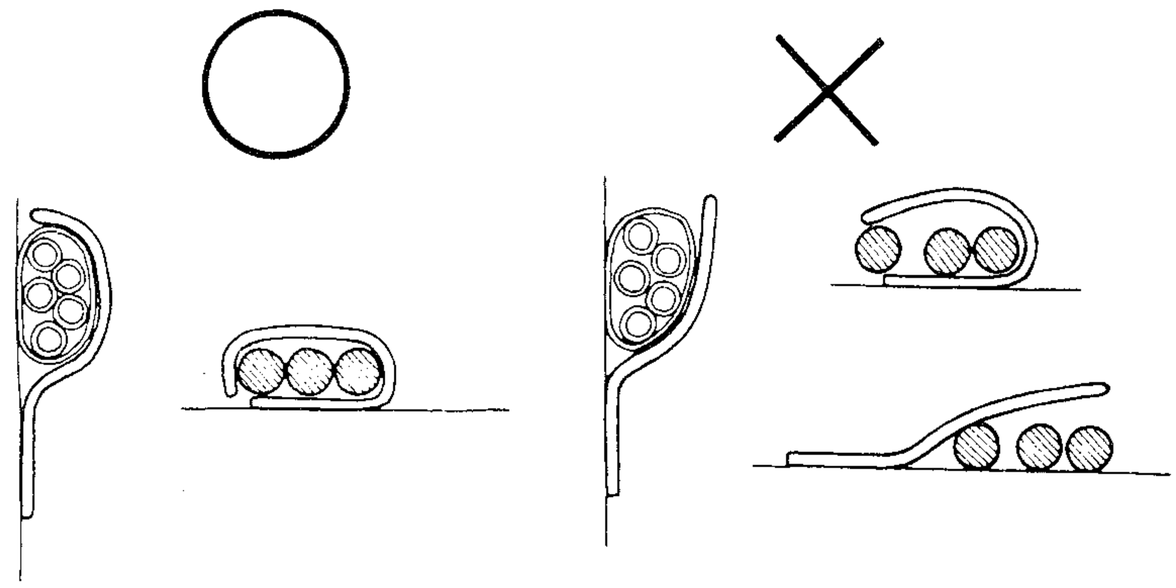
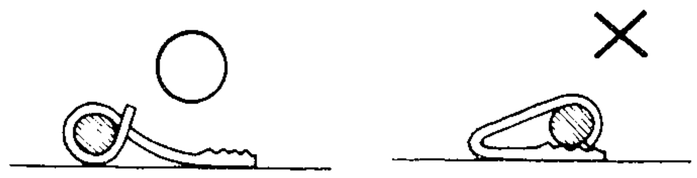
CABLE & HARNESS ROUTING

Note the following when routing cables and wire harnesses.
A loose wire, harness or cable can be a safety hazard. After clamping, check each wire to be sure it is secure.



- Do not squeeze wires against the weld or end of its clamp when a weld-on clamp is used.

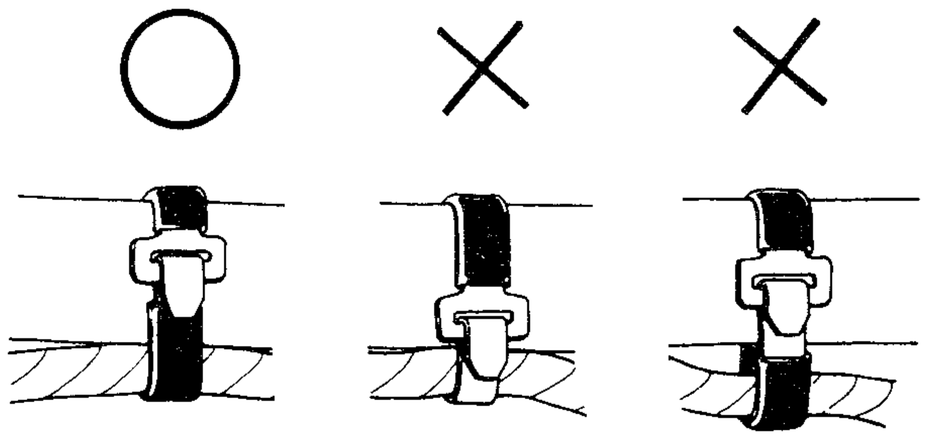
- Secure wires and wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wires or wire harnesses.



- Route harnesses so they are not pulled tight or have excessive slack.

- Protect wires and harnesses with electrical tape or tubing if they are contact a sharp edge or corner. Clean the attaching surface thoroughly before applying tape.

- Do not use wires or harnesses with a broken insulator. Repair by wrapping them with a protective tape or replace them.



- Route wire harnesses to avoid sharp edges or corners.

- Also avoid the projected ends of bolts and screws.

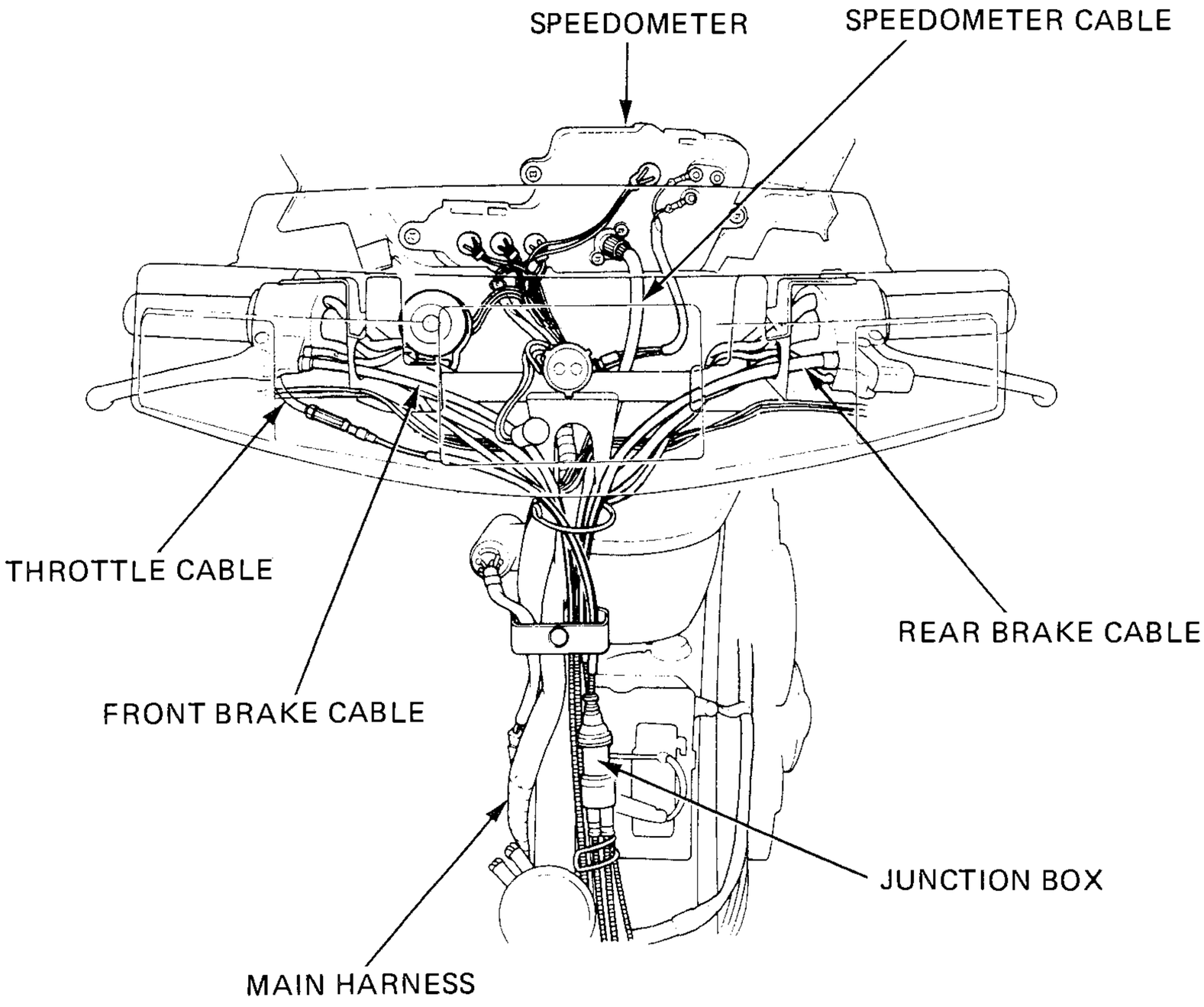
- Keep wire harnesses away from the exhaust pipes and other hot parts.

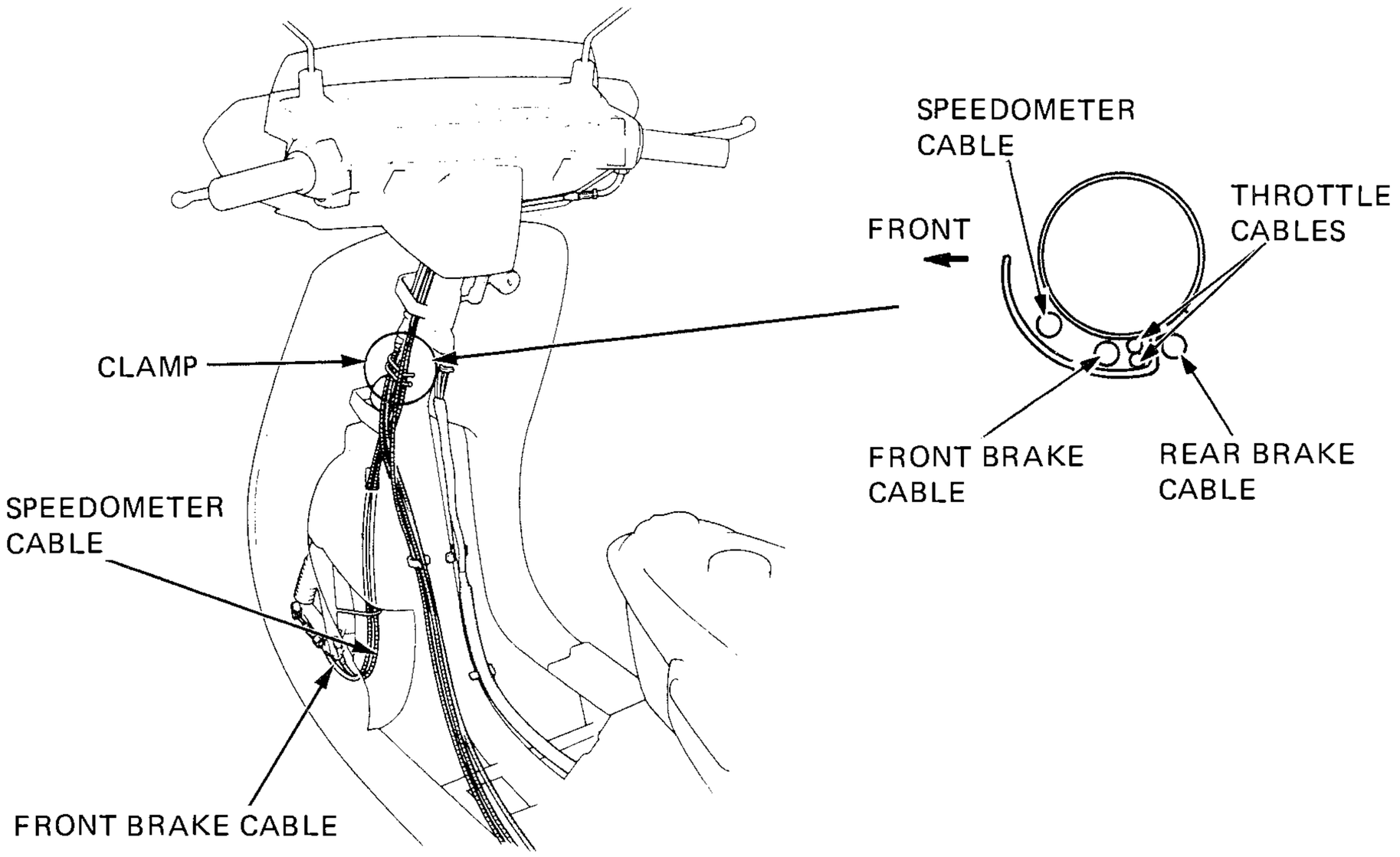
- Be sure grommets are seated in their grooves properly.

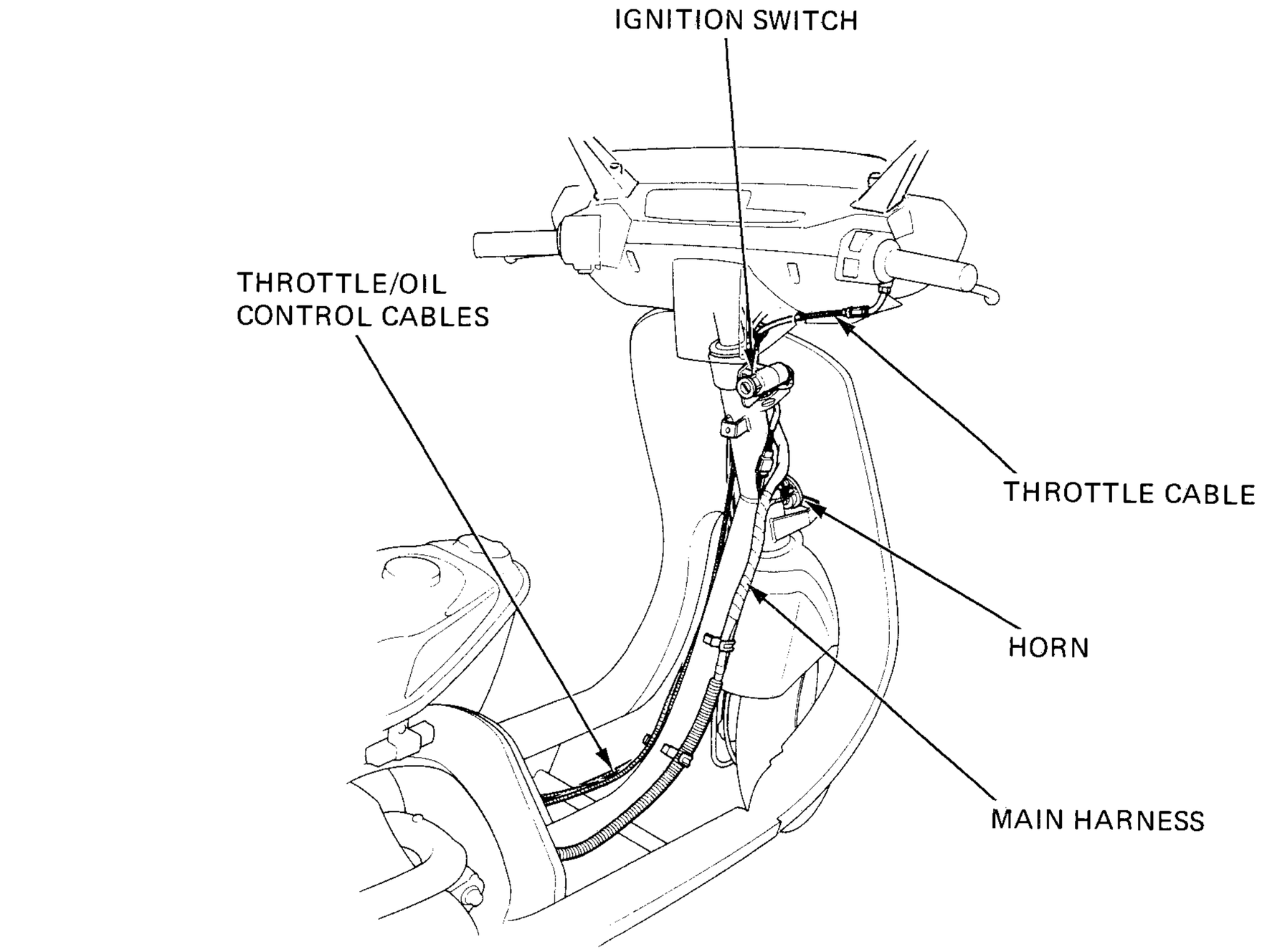
- After clamping, check each harness to be certain that it is not interfering with any moving or sliding parts.

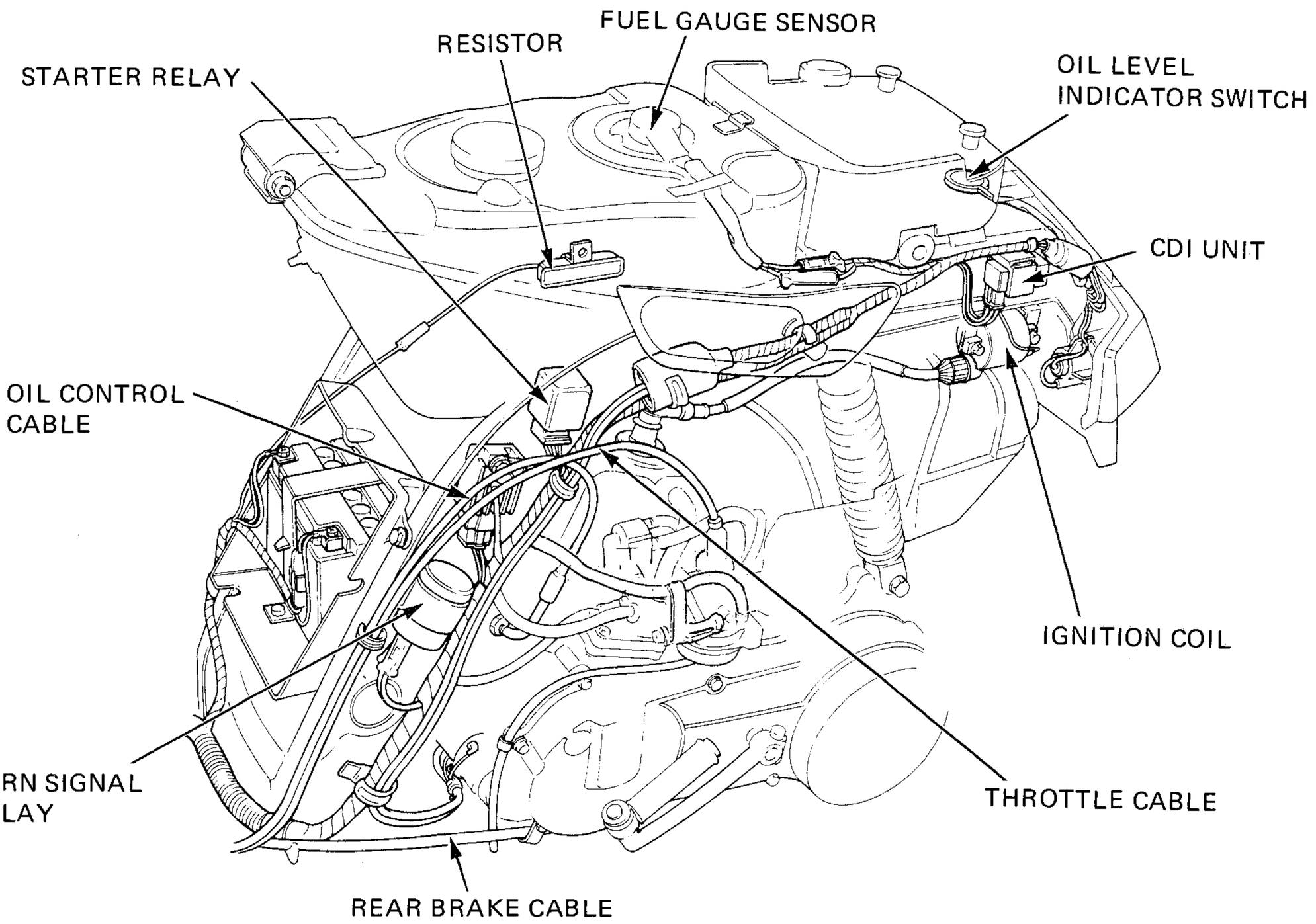
- After routing, check that the wire harnesses are not twisted or kinked.

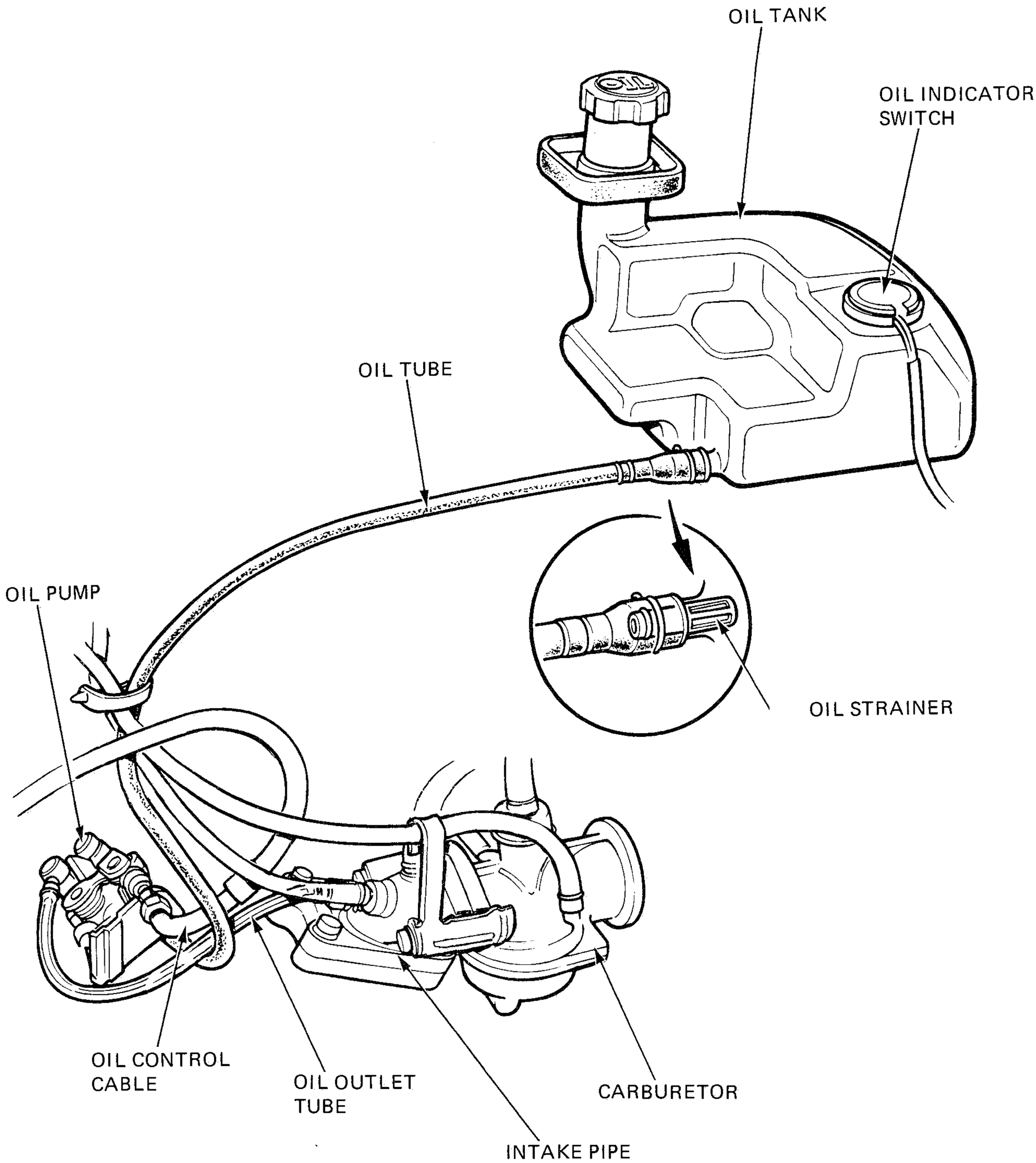
- Wire harnesses routed along the handlebars should not be pulled tight, have excessive slack, be pinched, or interfere with adjacent or surrounding parts in all steering positions.











2. LUBRICATION

SERVICE INFORMATION	2–1	OIL PUMP BLEEDING	2–3
TROUBLESHOOTING	2–1	OIL PUMP CONTROL CABLE ADJUSTMENT	2–4
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SERVICE INFORMATION

GENERAL

- The engine must be removed from the frame when removing and installing the oil pump.
- When removing and installing the oil pump, use care not to allow dust and dirt to enter the engine and oil line.
- Bleed air from the oil pump if there is air in the oil inlet line (from the oil tank to the oil pump) or if the oil line is disconnected.
- Bleed air from the oil outlet line (from the oil pump to the carburetor) if the line is disconnected.

SPECIFICATIONS

Engine oil recommendation:	Honda 2-stroke oil or equivalent
Final reduction oil capacity:	90 cc (0.09 US qt)
Final reduction oil recommendation:	Honda 4-stroke oil or equivalent Viscosity: SAE 10W-40 API Service classification: SE or SF

TORQUE VALUE

Final reduction oil drain bolt	10–14 N·m (1.0–1.4 kg-m, 7–10 ft-lb)

TROUBLESHOOTING

Excessive smoke and/or carbon on spark plug
1. Pump not properly adjusted (excessive oil)
2. Low quality engine oil
3. Incorrect engine oil

Overheating
1. Oil pump not adjusted properly (insufficient oiling)
2. Low quality oil
3. Incorrect engine oil

Seized piston
1. No oil in tank or clogged oil line
2. Pump not properly adjusted (insufficient oiling)
3. Air in oil lines
4. Faulty oil pump

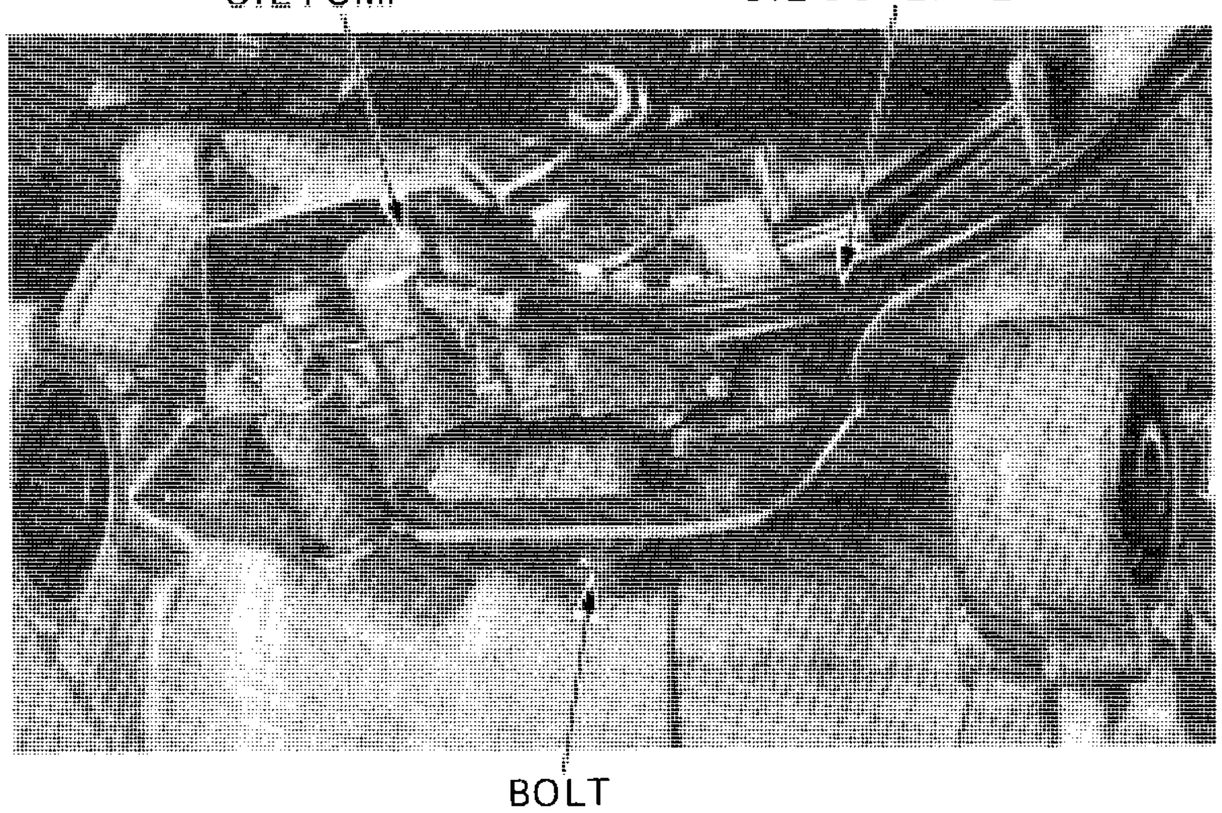
Oil not flowing out of tank
1. Clogged oil tank cap breather hole
2. Clogged oil strainer

OIL PUMP REMOVAL

NOTE:

Before removing the oil pump, clean the oil pump and crankcase.

Remove the engine (Section 5).
Remove the starter motor (Page 15-13).
Disconnect the oil outlet line from the intake pipe.
Remove the oil pump attaching bolt and remove the oil pump.



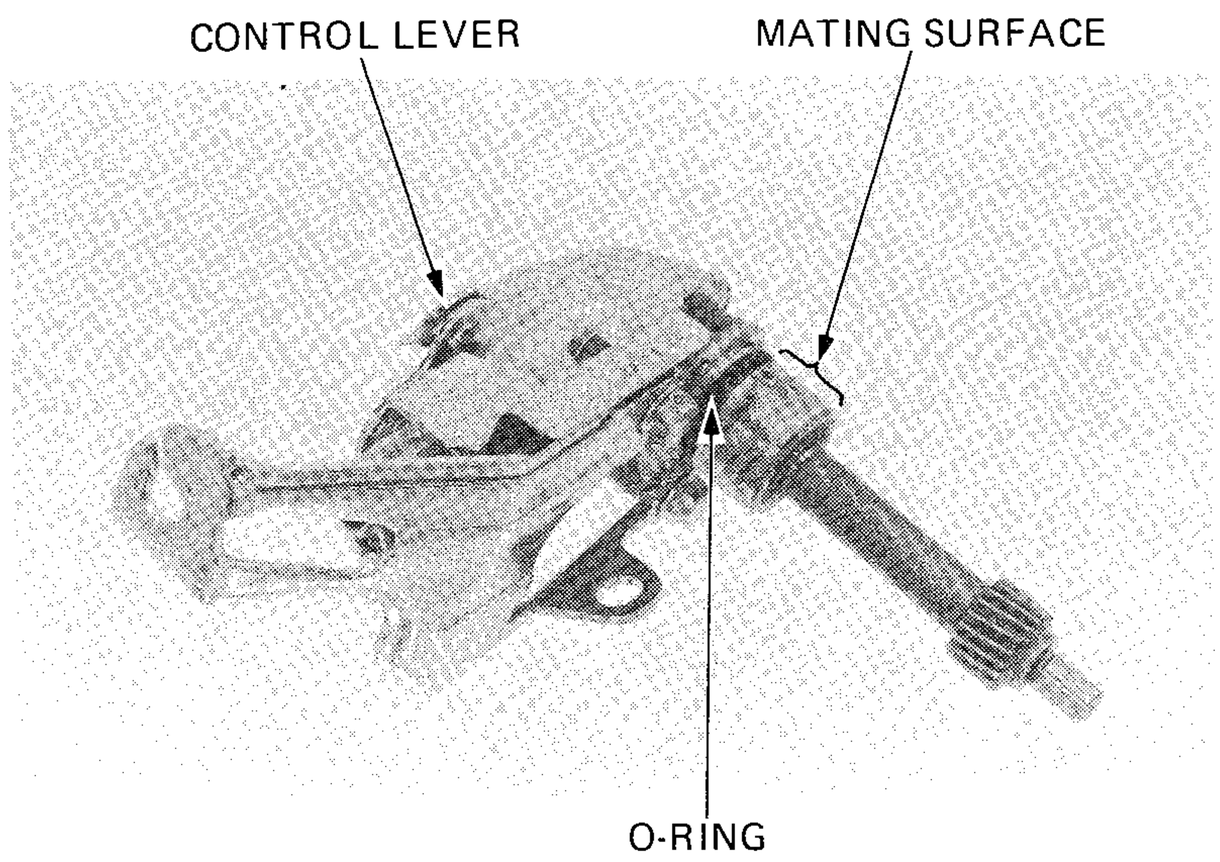
OIL PUMP INSPECTION

Remove the oil pump and inspect the following items:

- Damaged or weak O-rings
- Damage to crankcase mating surface
- Damage to pump body
- Control lever operation
- Worn or damaged pump gears
- Oil leaks

CAUTION:

Do not disassemble the oil pump.

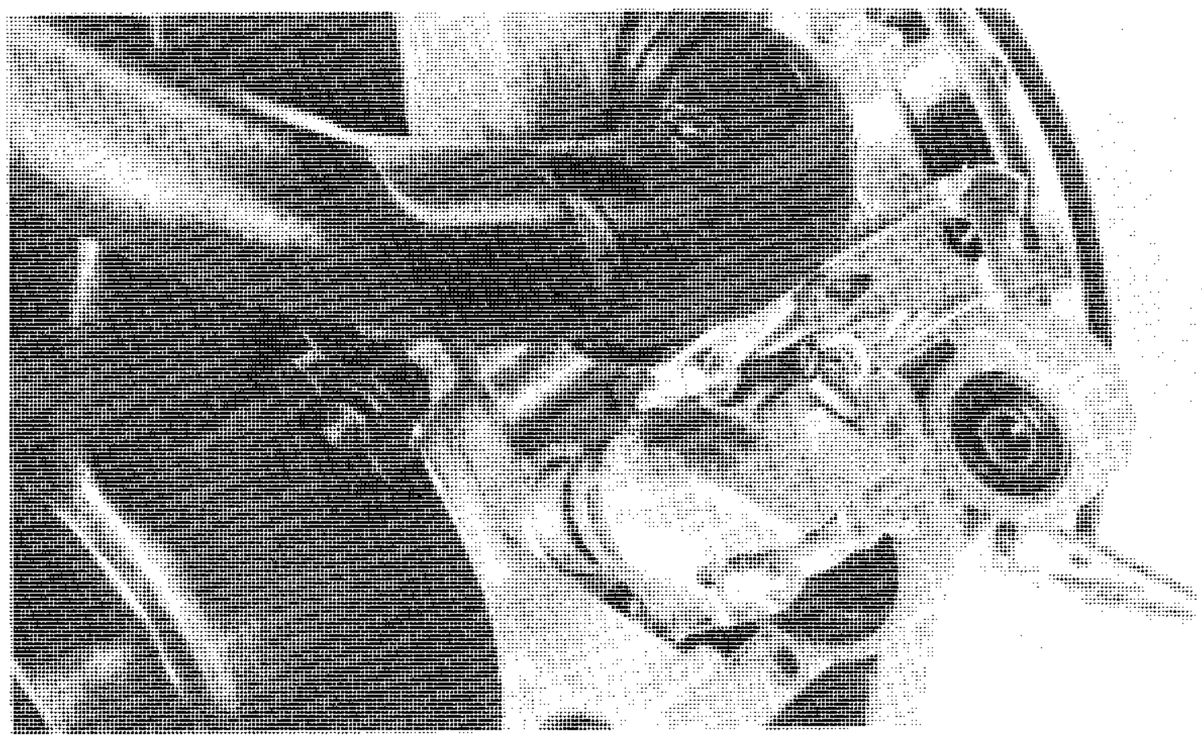


OIL PUMP INSTALLATION

Install the oil pump onto the crankcase.

CAUTION:

- *Lubricate the pump gear and O-ring with clean grease before installation.*
- *Make sure that the oil pump is inserted into the crankcase properly.*



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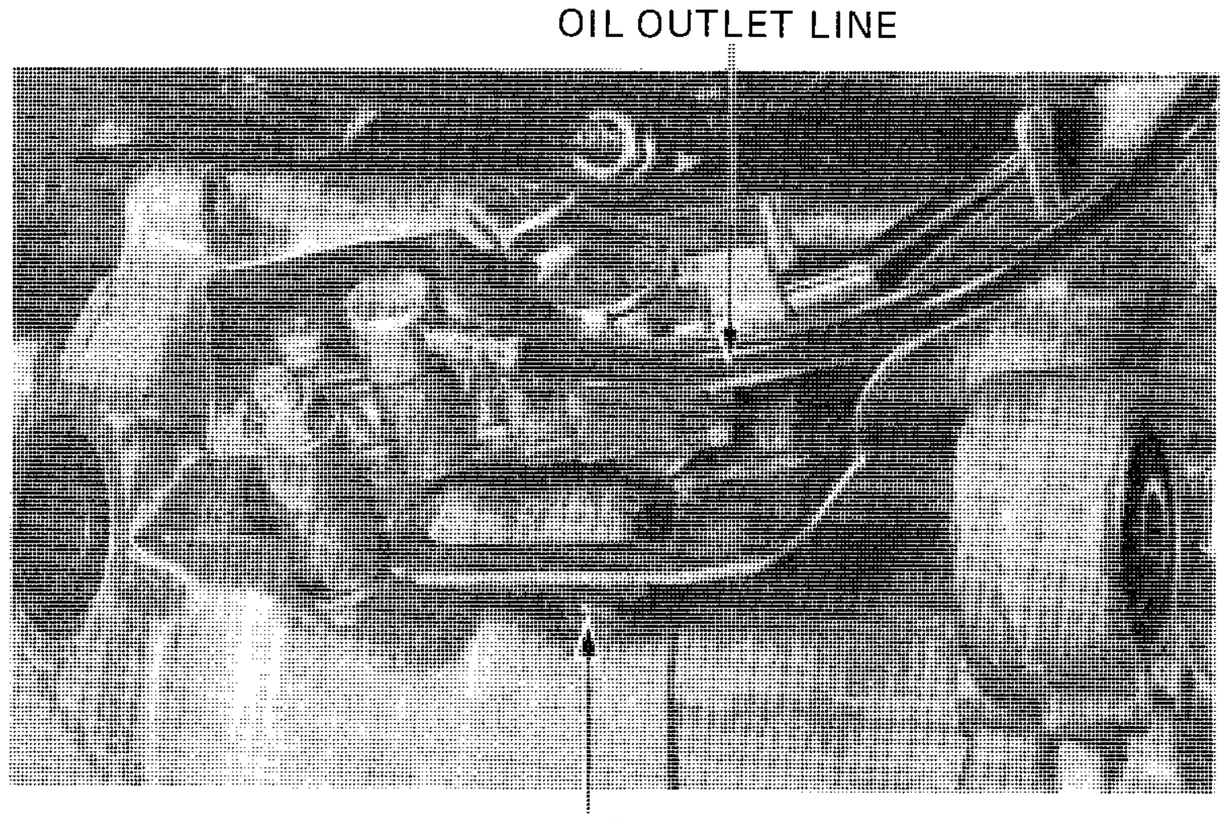
Tighten the oil pump attaching bolt securely.
Connect the oil outlet line.
Install the starter motor (Page 15-15).
Install the engine (Page 5-4).

NOTE:

After installation, perform the following inspections and adjustment:
- Control cable adjustment (Page 2-4)
- Oil pump bleeding.
- Check for oil leaks.



OIL PUMP BLEEDING

CAUTION:

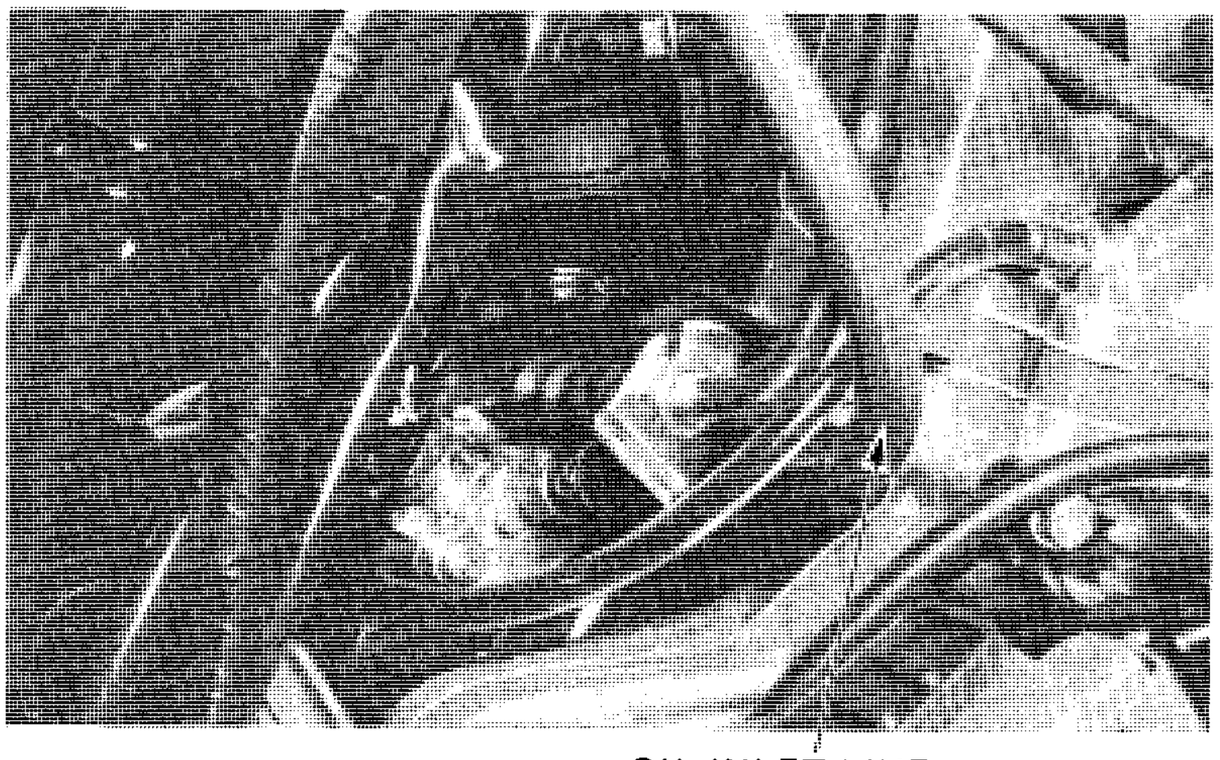
- *Air in the oil system will block or restrict oil flow and may result in severe engine damage.*
- *Bleed air from the oil inlet line first, then bleed air from the oil outlet line.*

OIL INLET LINE/OIL PUMP

CAUTION:

Bleed air from the oil lines whenever the oil lines or pump have been removed or there is air in the oil lines.

Fill the oil tank with recommended oil.
Place a shop towel around the oil pump.
Disconnect the oil inlet line from the oil pump.
Fill the oil pump with oil by squirting clean oil through the joint (about 3 cc).
Fill the oil line with oil and connect it to the joint of the oil pump.
After installation, make sure there is no air in the oil inlet line.



CAUTION:

Bleed air from the oil outlet line after bleeding the oil inlet line and oil pump.

OIL OUTLET LINE

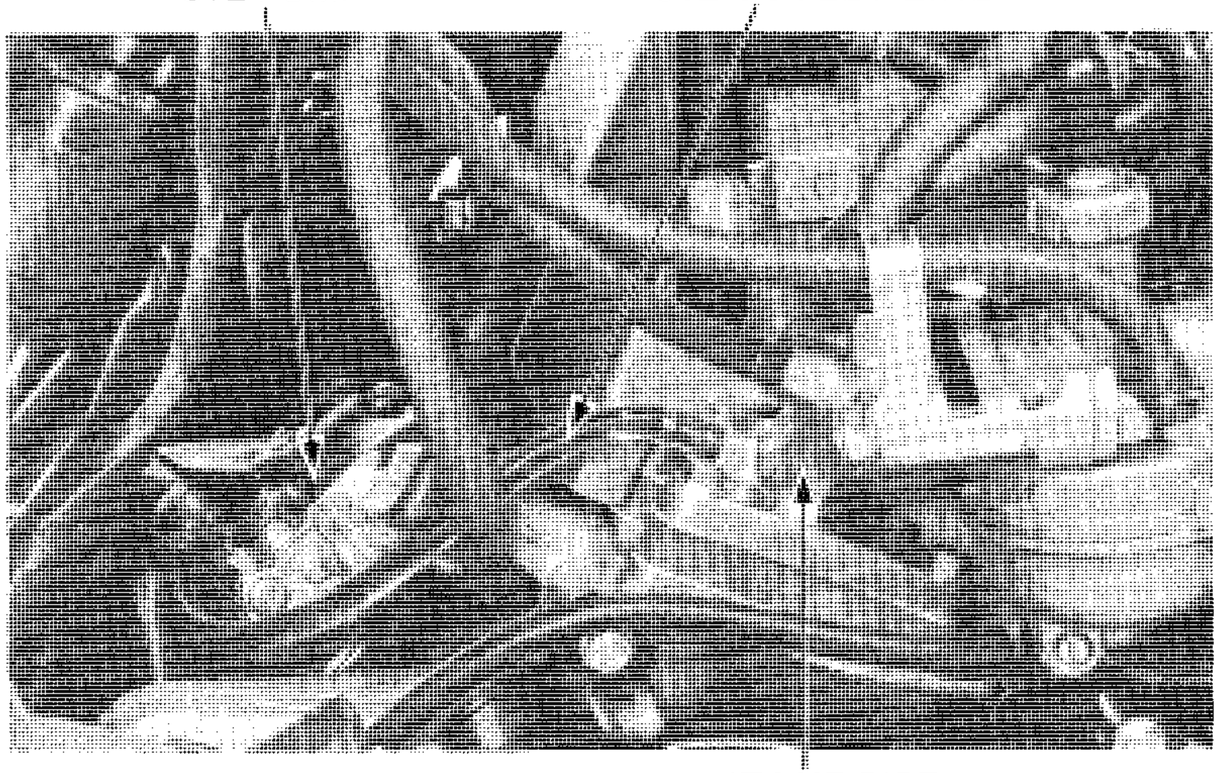
1. Disconnect the oil outlet line at the carburetor and force air out of the tube by filling it with oil using an oil squirt can.
2. Connect the oil outlet line to the carburetor.
3. Start the engine and allow it to idle with the oil control lever in the fully open position, making sure that there are no air bubbles in the oil from the oil pump.
4. If there are air bubbles, repeat steps 1 through 3 until the oil line is free of air bubbles.

WARNING

- *Perform this operation in a well ventilated area.*

CAUTION:

- *Do not race the engine unnecessarily.*



OIL PUMP CONTROL CABLE ADJUSTMENT

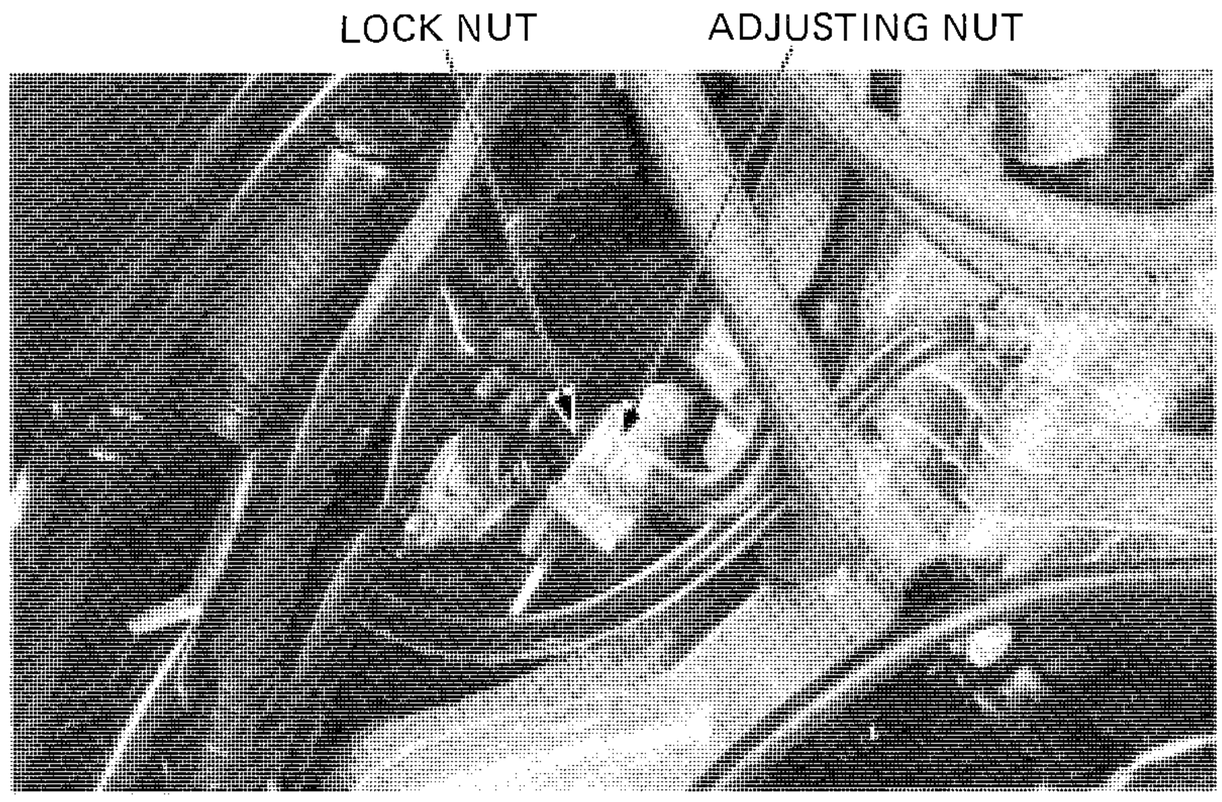
NOTE:

The oil pump control cable should be adjusted after the throttle grip free play adjustment.

Remove the frame center cover (Page 11-3).
Loosen the oil pump control cable lock nut and open the throttle fully.
Check that the aligning mark on the oil pump control lever is aligned with the index mark projection on the pump body.
Adjust if necessary by turning the adjusting nut.

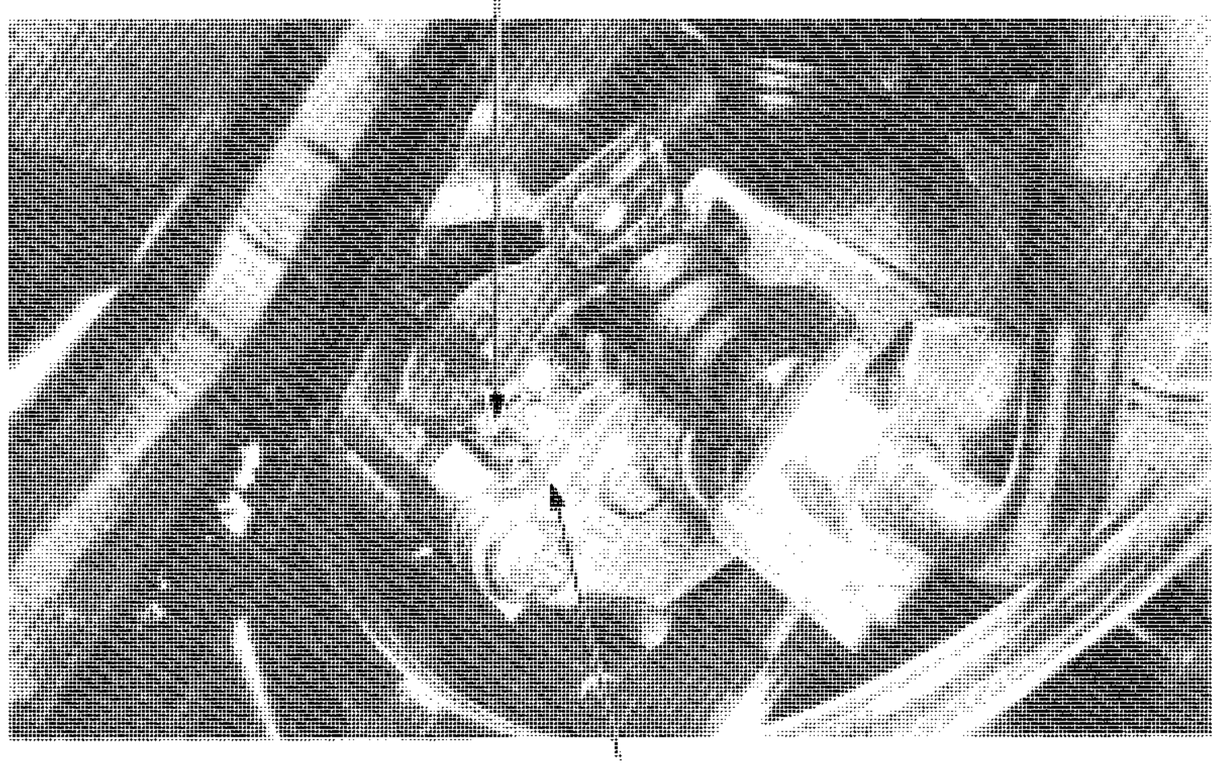
CAUTION:

Reference tip adjustment within 1 mm (0.04 in) of index mark on the open side is acceptable. However, the aligning mark must never be on the closed side of the index mark, otherwise engine damage will occur because of insufficient lubrication.



Excessive white smoke or hard starting:
- Pump control lever excessively open

Seized piston:
- Pump control lever not properly adjusted



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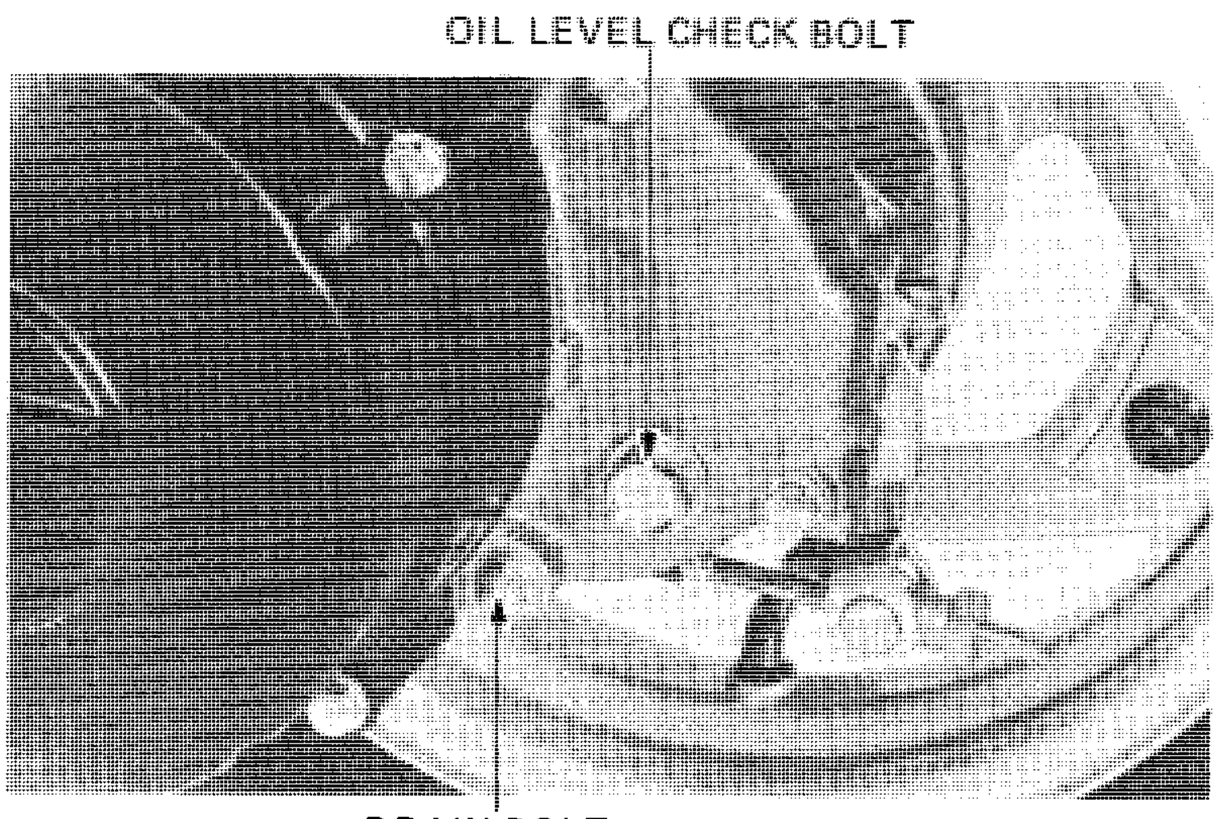
FINAL REDUCTION OIL

CHECK

NOTE:

> Place the scooter on a level ground and support with the center stand.

Remove the oil level check bolt and check that the oil level is at the oil level check bolt hole.



CHANGE

Remove the oil level check bolt.
Remove the drain bolt to allow the oil to drain thoroughly.
Reinstall the drain bolt.

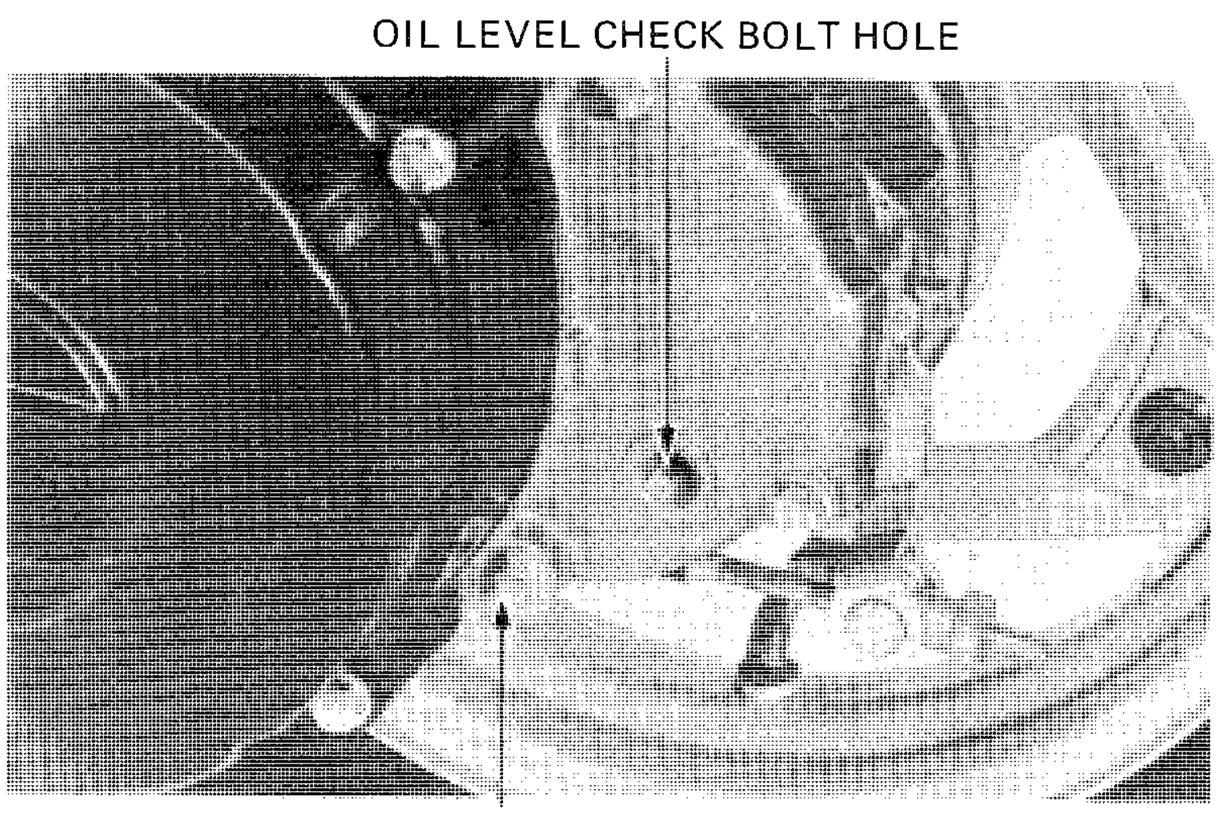
TORQUE: 10—14 N·m (1.0—1.4 kg-m, 7—10 ft-lb)

NOTE:

> Check that the sealing washer is in good condition.

Fill the final reduction case up to the proper level with recommended oil.

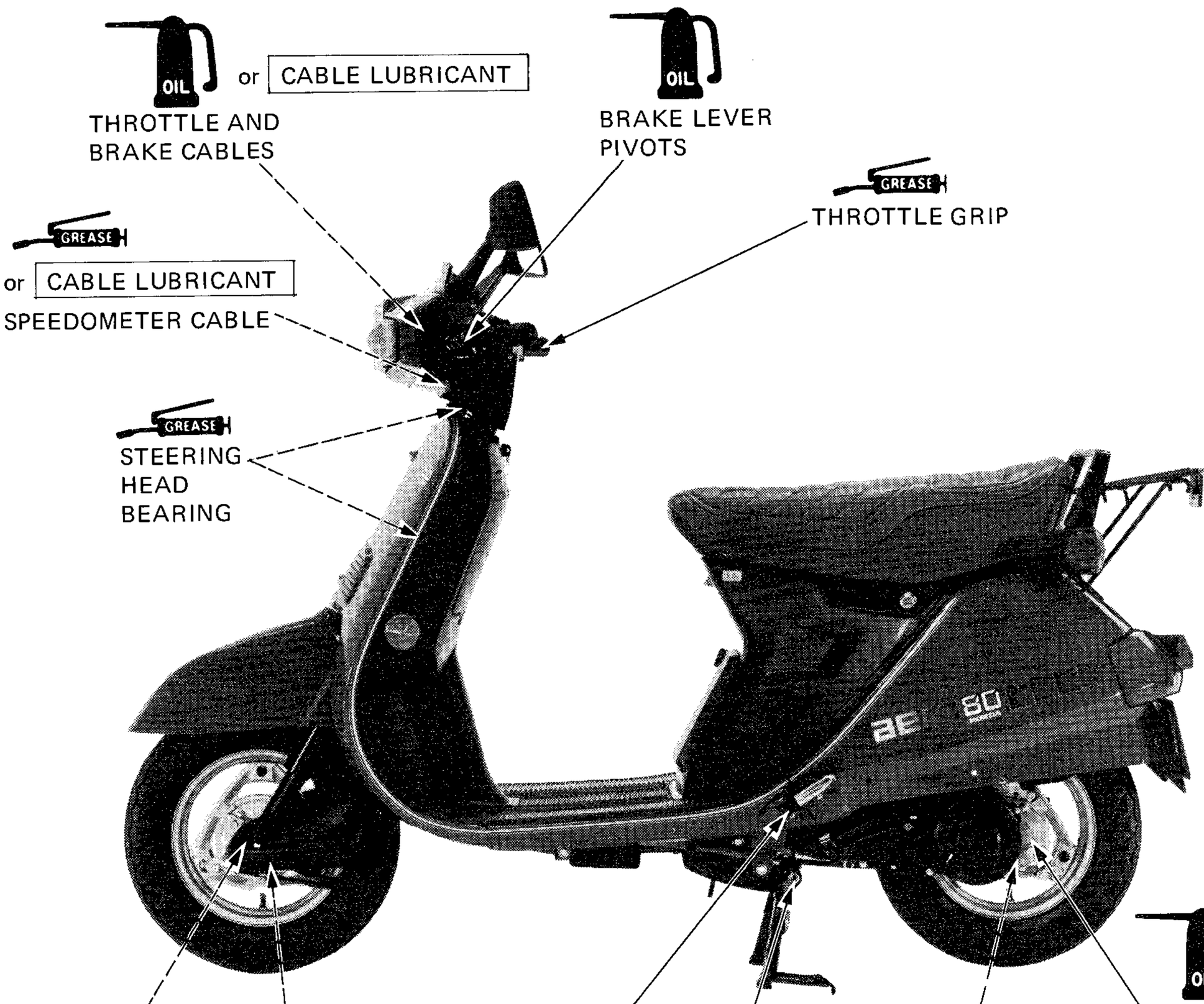
OIL CAPACITY: 90 cc (0.09 US qt)
SPECIFIED OIL: HONDA 4-STROKE OIL or equivalent, 10W-40



CONTROL CABLE LUBRICATION

Periodically disconnect the throttle, oil control and brake cables at their upper ends. Thoroughly lubricate the cables and their pivot points with a commercially available cable lubricant.

LUBRICATION POINTS



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3. MAINTENANCE

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SERVICE INFORMATION

GENERAL

Oil pump — See page 2-2.
Transmission oil — See page 2-4.
Clutch shoe wear — See page 8-19.

SPECIFICATIONS

<Engine>
Spark plug:

Standard		For cold climate (below 5°C, 41°F)		For extended high speed riding	
NGK	ND	NGK	ND	NGK	ND
BPR6HS	W20FPR	BPR5HS	W16FPR	BPR7HS	W22FPR

Spark plug gap: 0.6–0.7 mm (0.024–0.028 in)
Throttle grip free play: 2–6 mm (1/8–1/4 in)
Idle speed: 1,800 ± 100 rpm
Cylinder compression: 10.0–14.0 kg/cm^2 (142–200 psi)

<Chassis>
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:

Tire size		Front	Rear
		3.50–10–4PR	3.50–10–4PR
Cold tire pressure psi (kPa, kg/cm^2)	Up to 90 kg (200 lbs) load	21 (150, 1.5)	24 (175, 1.75)
	90 kg (200 lbs) load and up to vehicle capacity load	21 (150, 1.5)	36 (250, 2.5)

MAINTENANCE SCHEDULE

Perform the Pre-ride Inspection in the Owner's Manual at each scheduled maintenance period.

I : INSPECT AND CLEAN, ADJUST, LUBRICATE, OR REPLACE IF NECESSARY.
C : CLEAN
R : REPLACE
A : ADJUST
L : LUBRICATE

		ITEM \ FREQUENCY	WHICHEVER COMES FIRST ▶ / EVERY ▼	ODOMETER READING (NOTE 2) 600 mi (1,000 km)	2,500 mi (4,000 km)	5,000 mi (8,000 km)	7,500 mi (12,000 km)	Refer to page
EMISSION RELATED ITEMS	*	FUEL LINES			I	I	I	3-3
	*	FUEL FILTER					R	3-3
	*	THROTTLE OPERATION		I	I	I	I	3-4
		AIR CLEANER	NOTE 1		C	C	C	3-4
		CARBURETORCHOKE CLEANER	NOTE 1		C	C	C	3-5
		SPARK PLUG			R	R	R	3-6
	**	OIL PUMP		I	I	I	I	2-2
		ENGINE OIL LINES			I	I	I	3-6
	*	ENGINE OIL STRAINER SCREEN				C		3-6
	**	MUFFLER DECARBONIZATION					C	3-7
	*	CARBURETOR-IDLE SPEED		I	I	I	I	3-7
NON-EMISSION RELATED ITEMS	*	TRANSMISSION OIL	2 YEARS R*					2-4
		BATTERY	MONTH	I	I	I	I	3-8
		BRAKE SHOE WEAR			I	I	I	3-8
		BRAKE SYSTEM		I	I	I	I	3-9
		PARKING BRAKE		I	I	I	I	3-10
	*	BRAKE LIGHT SWITCH		I	I	I	I	3-10
	*	HEADLIGHT AIM		I	I	I	I	3-10
	*	SUSPENSION		I	I	I	I	3-11
	*	NUTS, BOLTS, FASTENERS		I	I	I	I	3-11
	**	CLUTCH SHOE WEAR			I	I	I	8-19
	**	WHEELS		I	I	I	I	3-11
	**	STEERING HEAD BEARINGS		I			I	3-12

* SHOULD BE SERVICED BY AN AUTHORIZED HONDA SCOOTER DEALER, UNLESS THE OWNER HAS PROPER TOOLS AND SERVICE DATA AND IS MECHANICALLY QUALIFIED.

** IN THE INTEREST OF SAFETY, WE RECOMMEND THESE ITEMS BE SERVICED ONLY BY AN AUTHORIZED HONDA SCOOTER DEALER.

NOTES: 1. Service more frequently when riding in dusty areas.
2. For higher odometer readings, repeat at the frequency interval established here.

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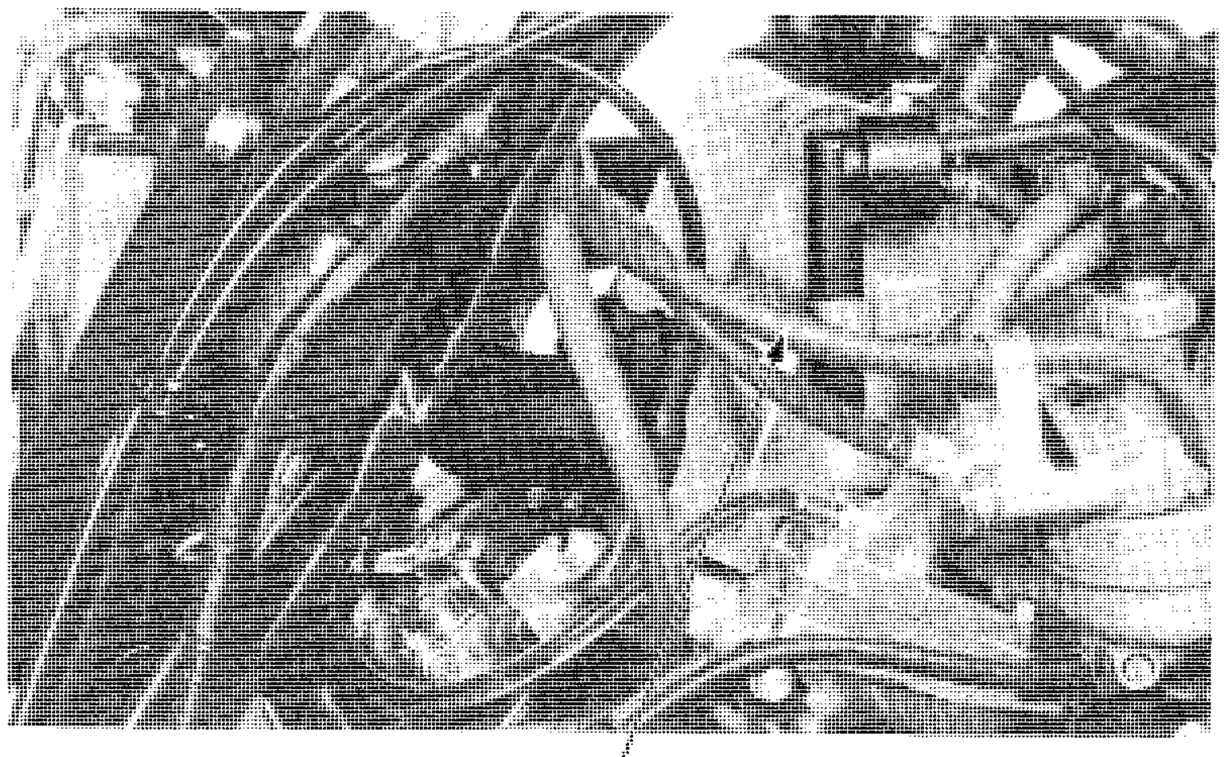
FUEL LINES

Remove the frame center cover (Section 11).
Check the fuel lines and replace any parts which show deterioration, damage or leakage.
Install the frame center cover.

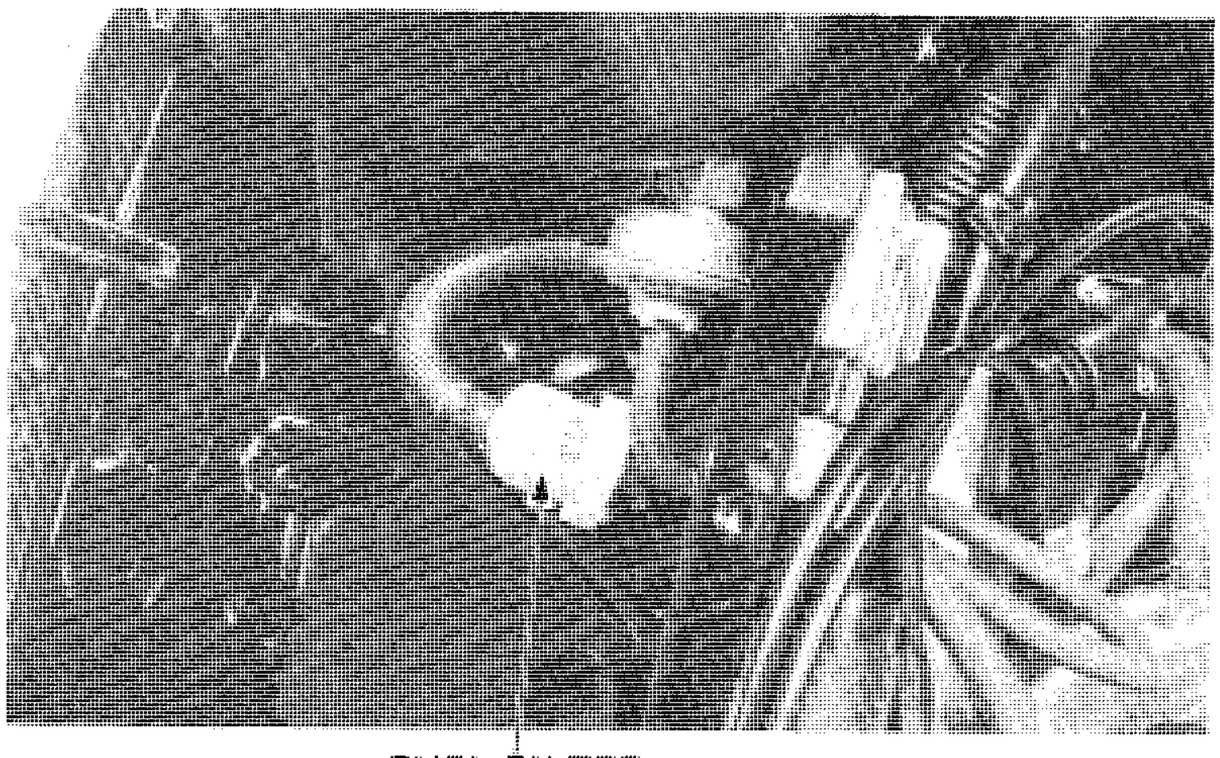


FUEL FILTER

Replace the fuel filter with a new one when indicated by the maintenance schedule (page 3-2).
Remove the frame center cover and battery box (Section 11).
Disconnect the fuel lines from the fuel filter.
Replace the fuel filter with a new one.

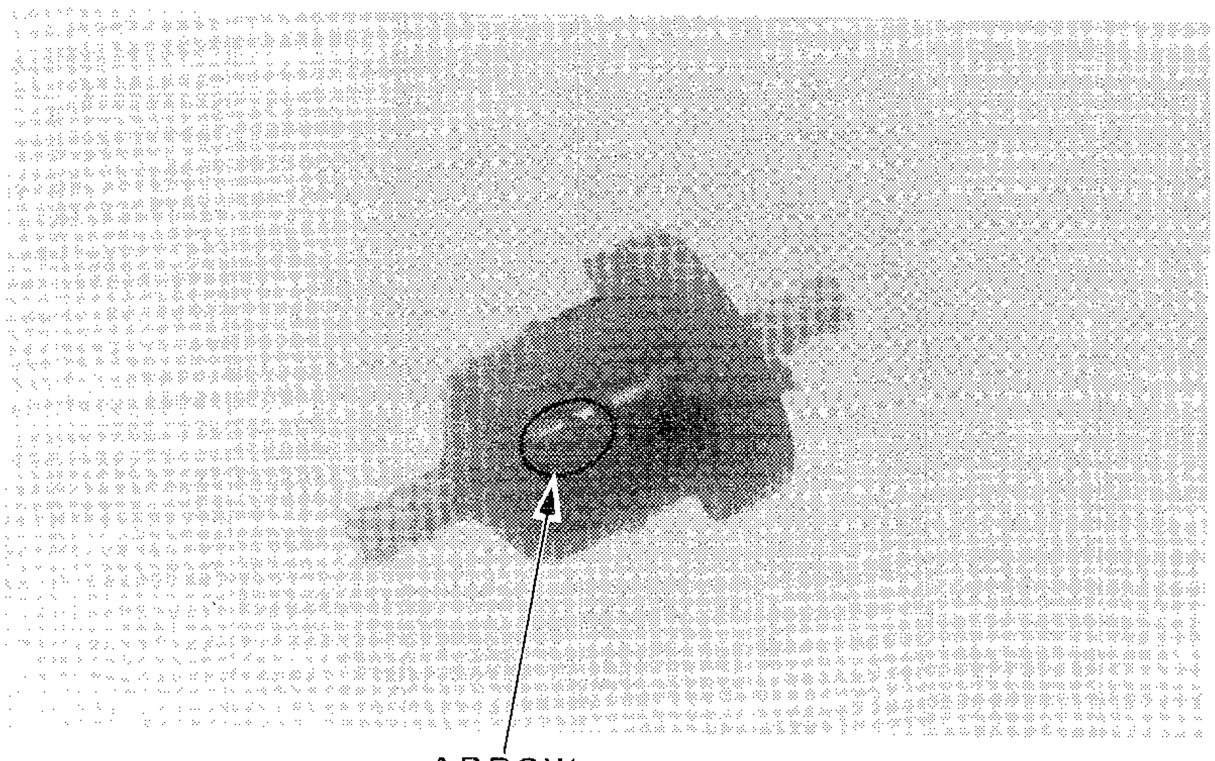
WARNING

Gasoline is flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.



Install the fuel filter with the arrow in the normal direction of fuel flow.

After installing, check that there are no fuel leaks.

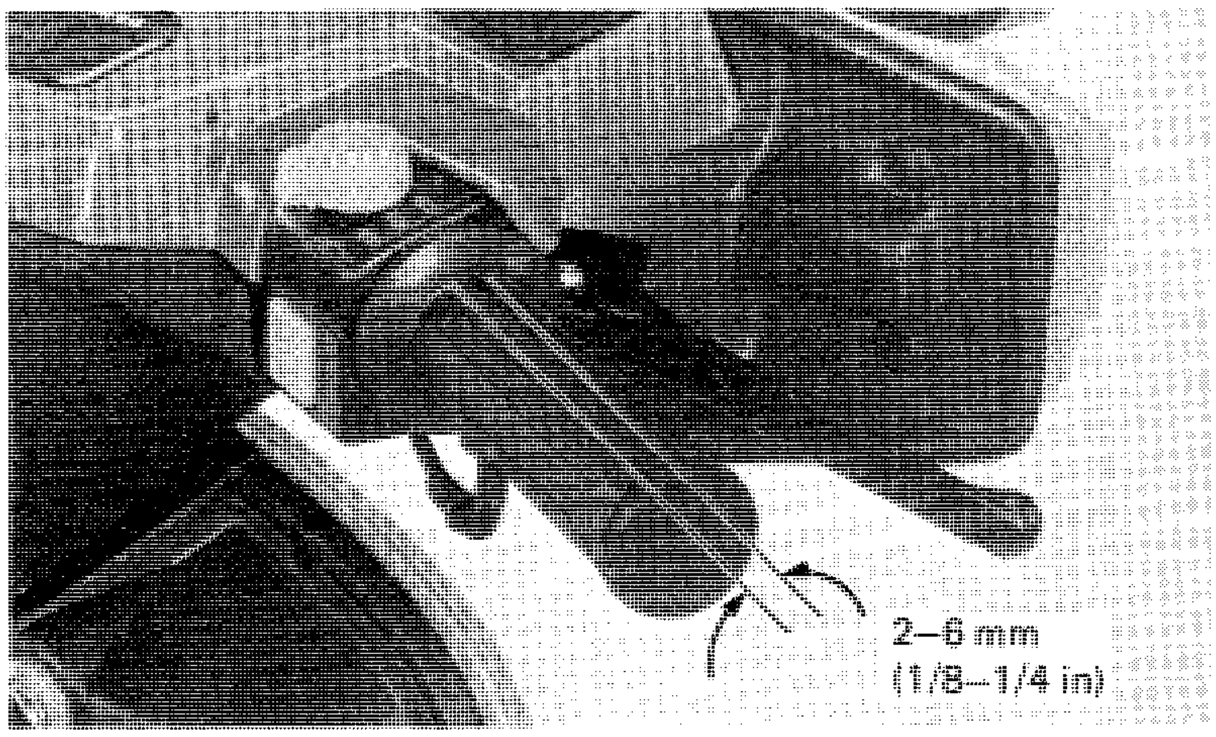


THROTTLE OPERATION

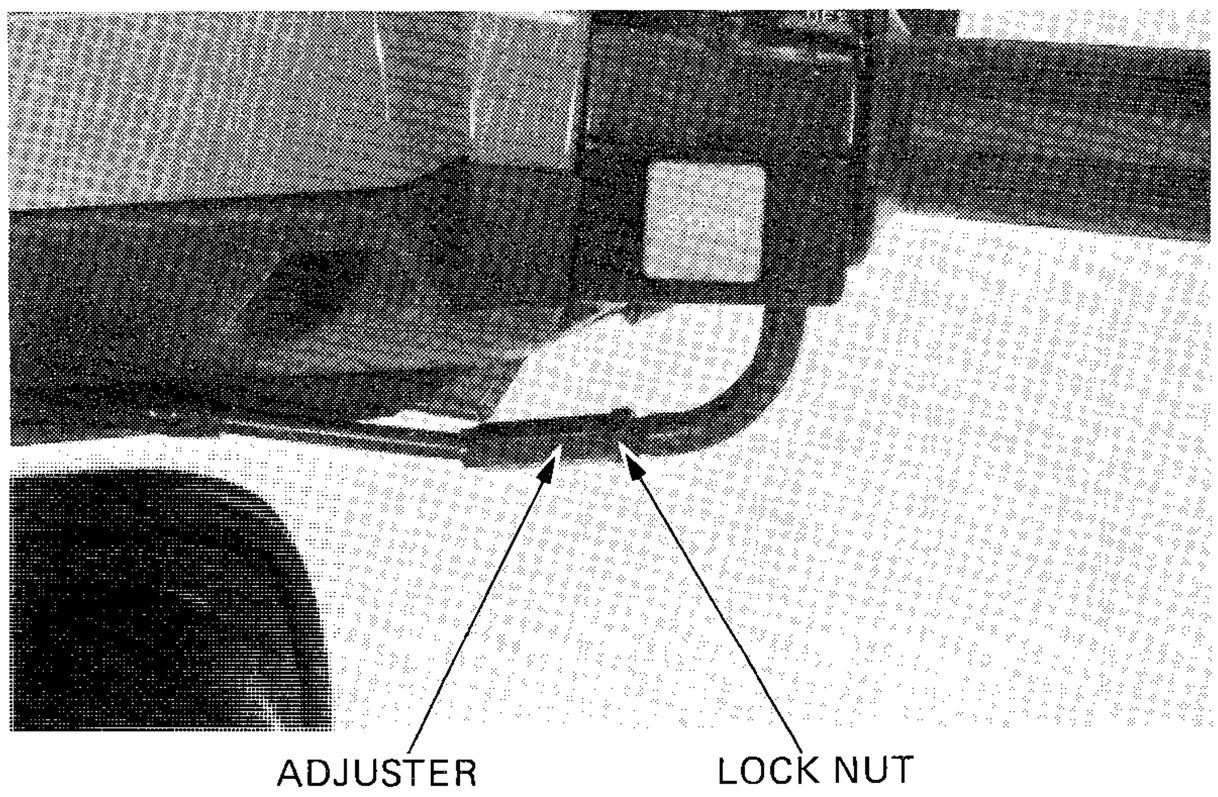
Check for smooth throttle grip full opening and automatic full closing in all steering positions.
Check the throttle cable and replace it, if it is deteriorated, kinked or damaged.

Lubricate the throttle cable (page 2-5), if throttle operation is not smooth.
Measure the throttle grip free play at the throttle grip flange.

FREE PLAY: 2–6 mm (1/8–1/4 in)

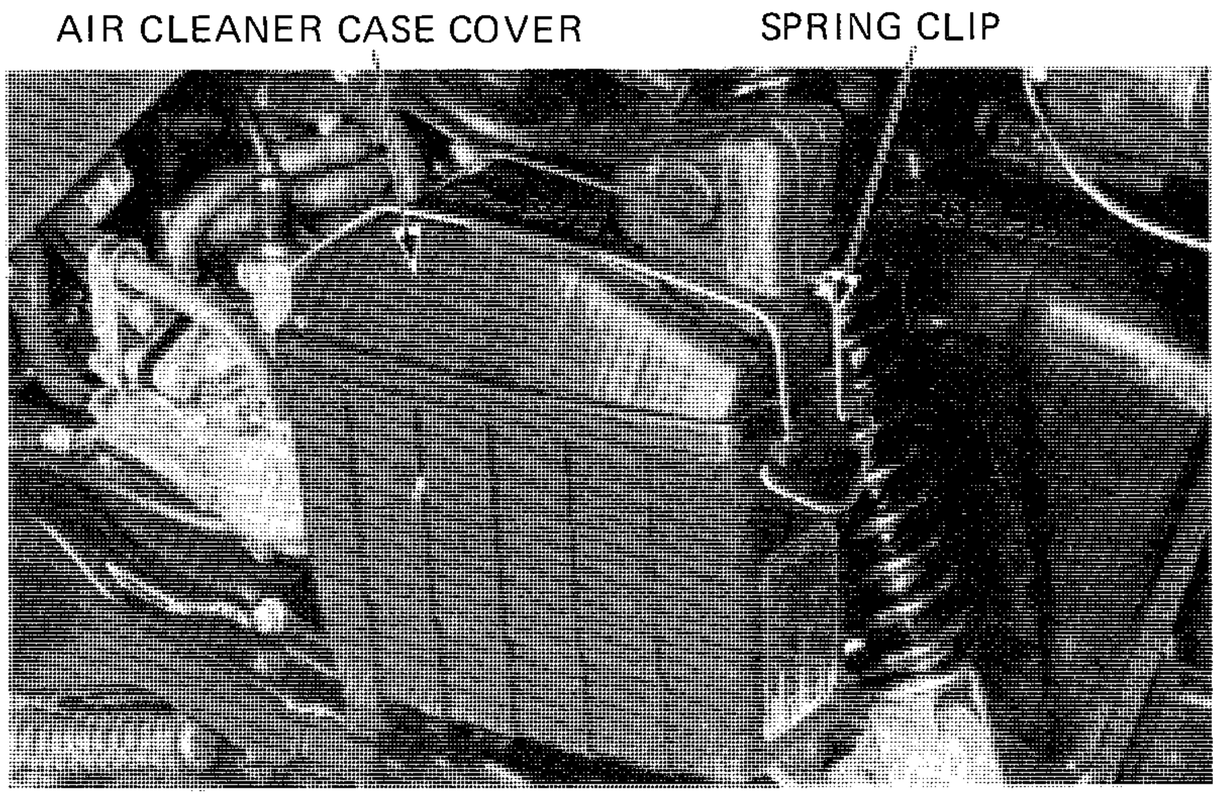


Adjustments can be made by loosening the lock nut and turning the throttle grip free play adjuster.
Replace the throttle cable when the above procedure is no longer effective.



AIR CLEANER

Remove the left frame cover.
Remove the spring clip and remove the air cleaner case cover.



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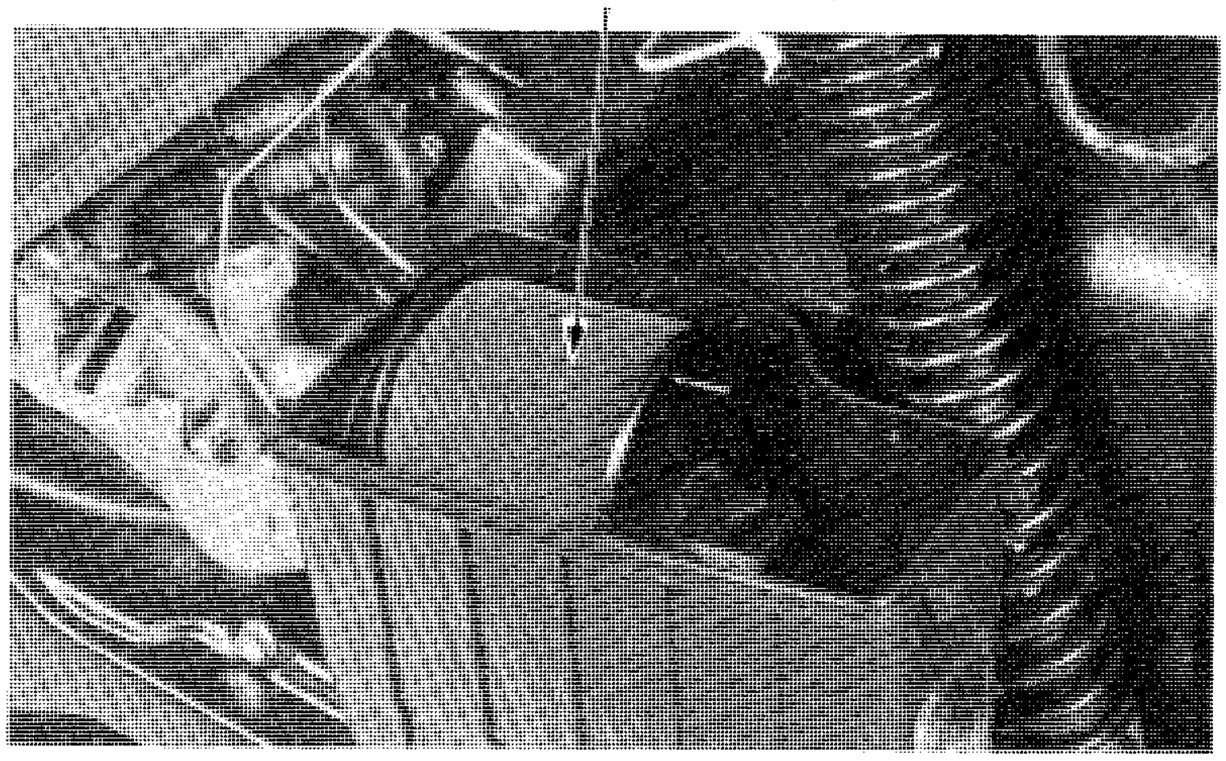
Remove the air cleaner element.

AIR CLEANER ELEMENT

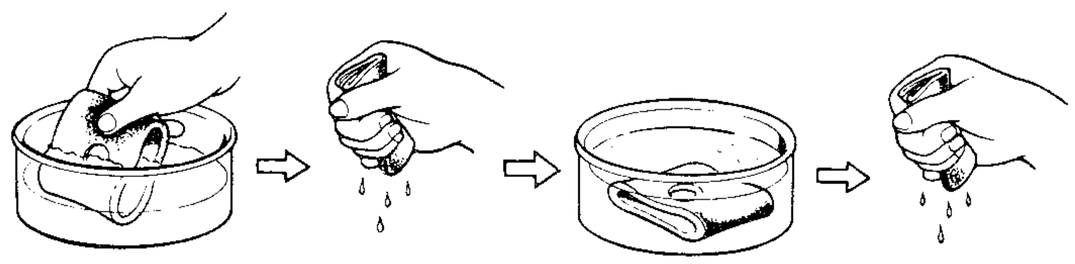


Wash the element in non-flammable or high flash point solvent, squeeze out and allow to dry.

WARNING

Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could result.

Soak the element in clean motor oil (SAE 10W–40) or gear oil (#80–90) and squeeze out the excess. Reinstall the element, element holder, air cleaner case cover and carburetor cover.



WASH	SQUEEZE OUT AND DRY	OIL	SQUEEZE OUT EXCESS OIL

CARBURETORCHOKE CLEANER

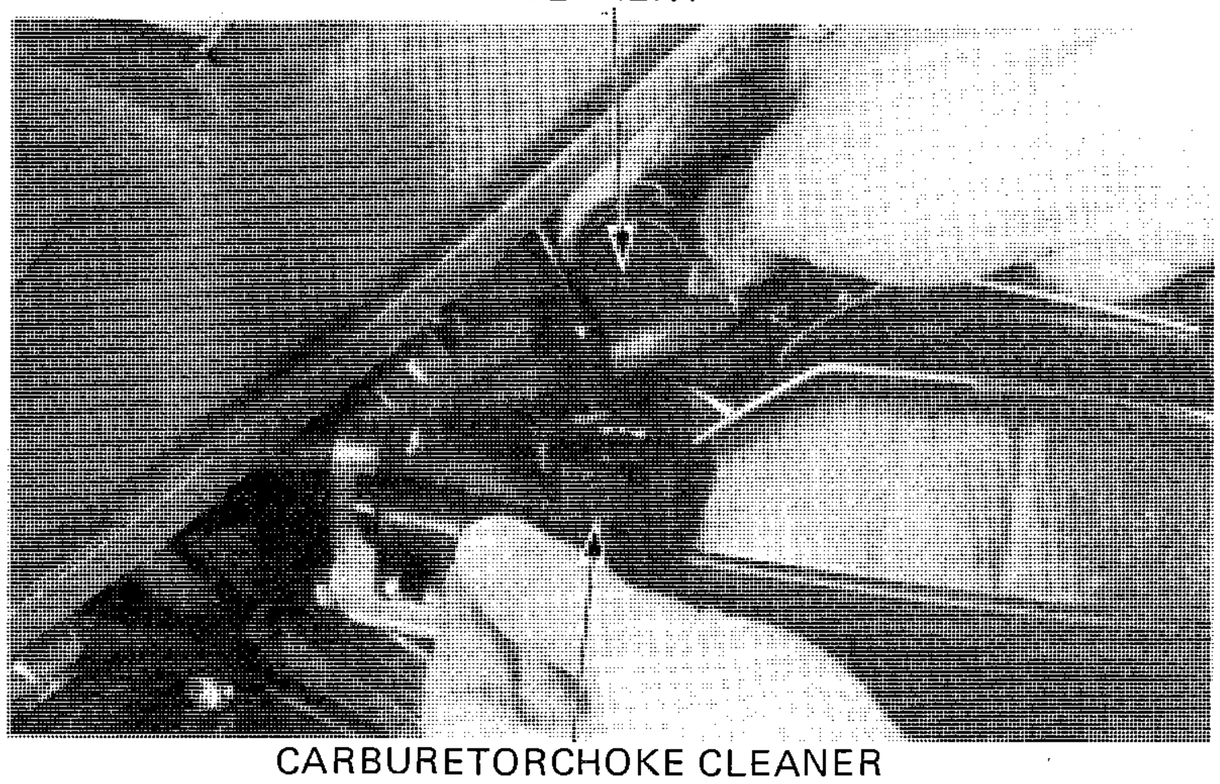
Remove the left frame cover.
Remove the carburetorchoke cleaner chamber and remove the element.
Wash the element in non-flammable or high flash point solvent, squeeze out the excess and allow it to dry.

WARNING

Never use gasoline or low flash point solvents for cleaning the cleaner element. A fire or explosion could result.

Soak the element in clean motor oil (SAE 10W–40) or gear oil (#80–90) and squeeze out excess.
Reinstall the carburetorchoke cleaner element and chamber, and clamp the chamber in position.

ELEMENT



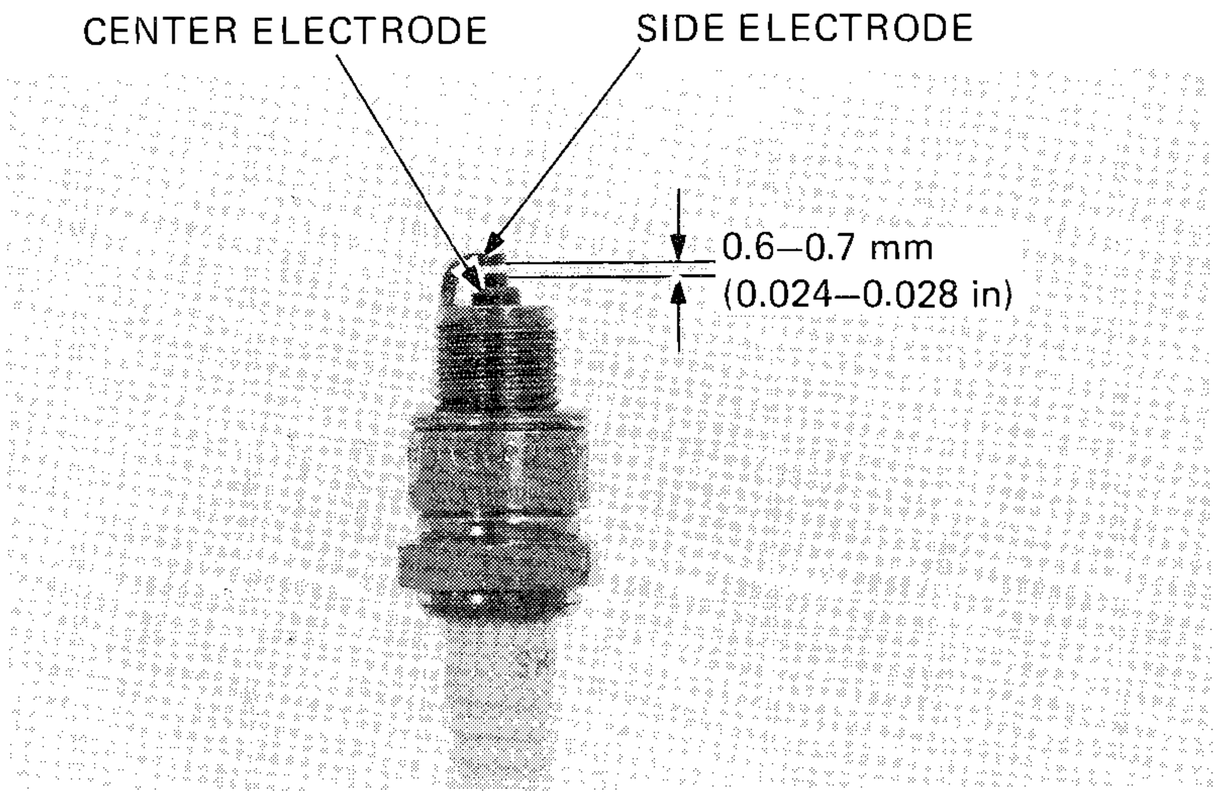
CARBURETORCHOKE CLEANER CHAMBER

SPARK PLUG

RECOMMENDED SPARK PLUG

	NGK	ND
Standard	BPR6HS	W20FPR
For cold climate (Below 5°C, 41°F)	BPR5HS	W16FPR
For extended high speed riding	BPR7HS	W22FPR

Disconnect the spark plug cap.
Clean any dirt from around the spark plug base.
Remove and discard the spark plug.
Measure the new spark plug gap using a wire-type feeler gauge.

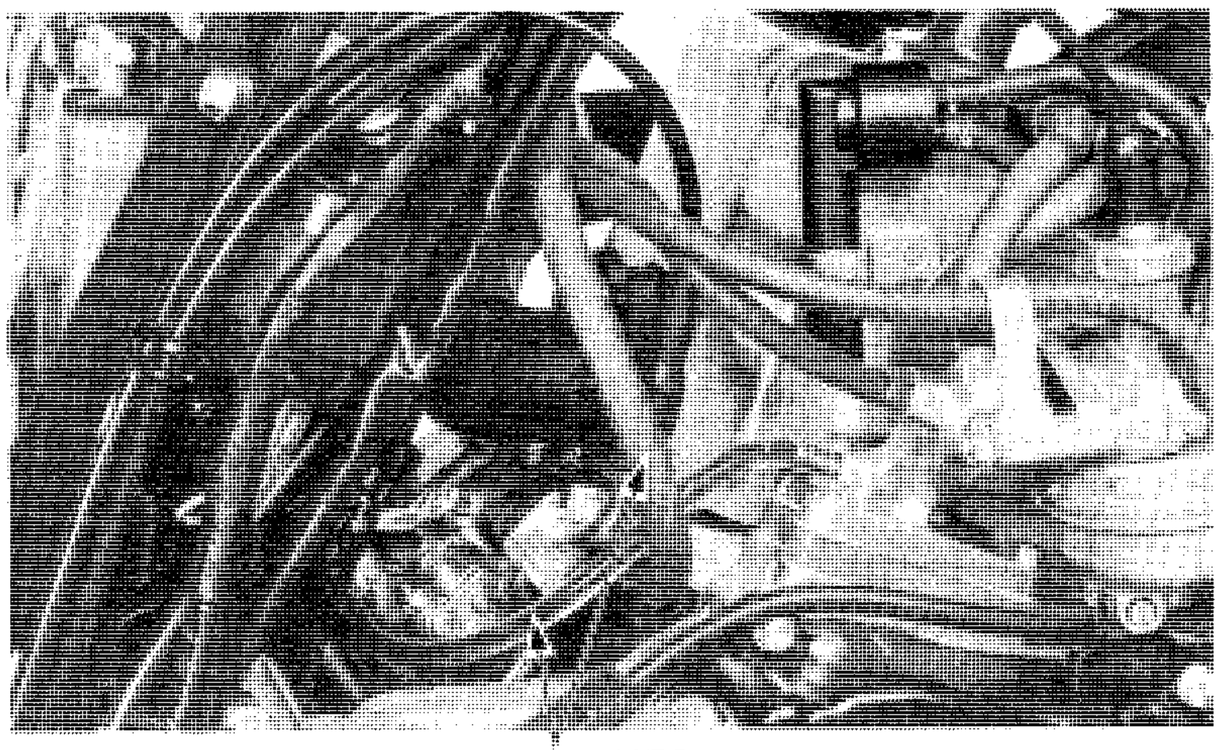


SPARK PLUG GAP: 0.6–0.7 mm (0.024–0.028 in)

Adjust by bending the side electrode carefully.
With the plug washer attached, thread the spark plug in by hand to prevent crossthreading.
Tighten the spark plug another 1/2 turn with a spark plug wrench to compress the plug washer.
Then connect the spark plug cap.

ENGINE OIL LINE

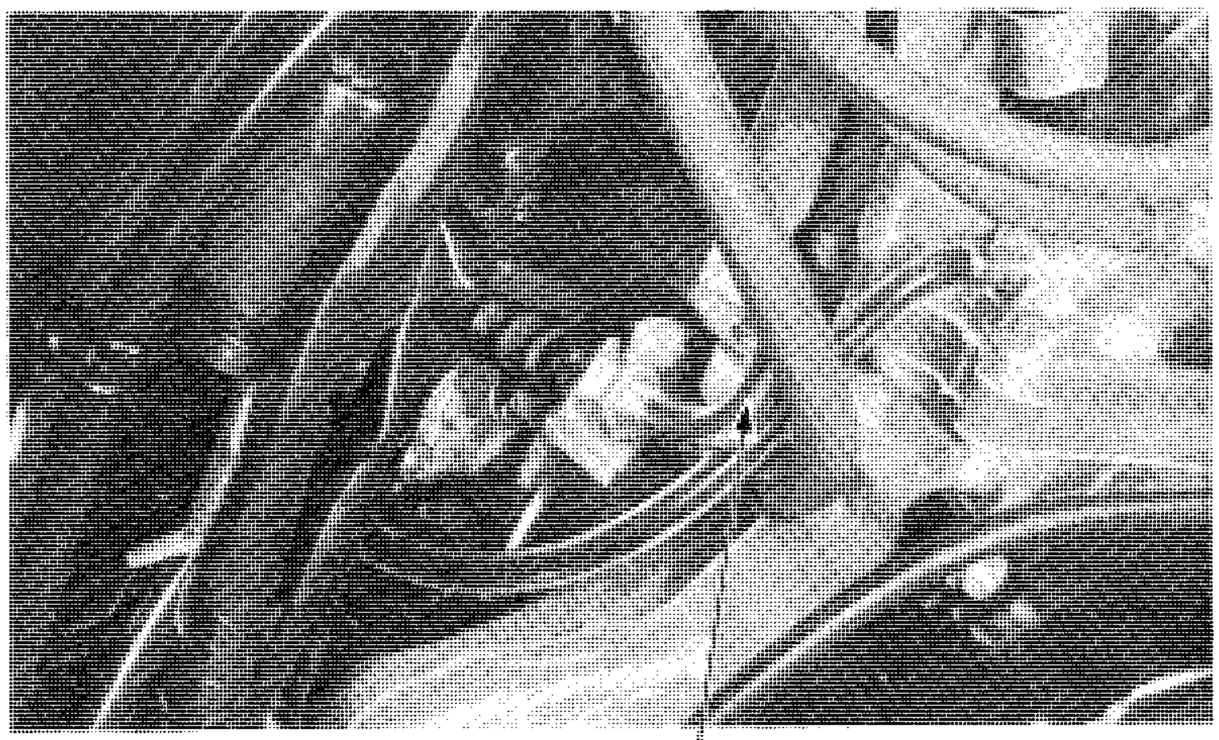
Remove the frame center cover (Section 11).
Check the engine oil lines and replace any parts which show deterioration, damage or leakage.
Bleed the oil pump and oil line, if they have air bubbles in them (Page 2-3).
Install the frame center cover.



ENGINE OIL LINES

ENGINE OIL STRAINER SCREEN

Remove the frame center cover (Page 11-3).
Disconnect the oil inlet line at the oil pump and allow the oil to drain into a clean container.



OIL INLET LINE

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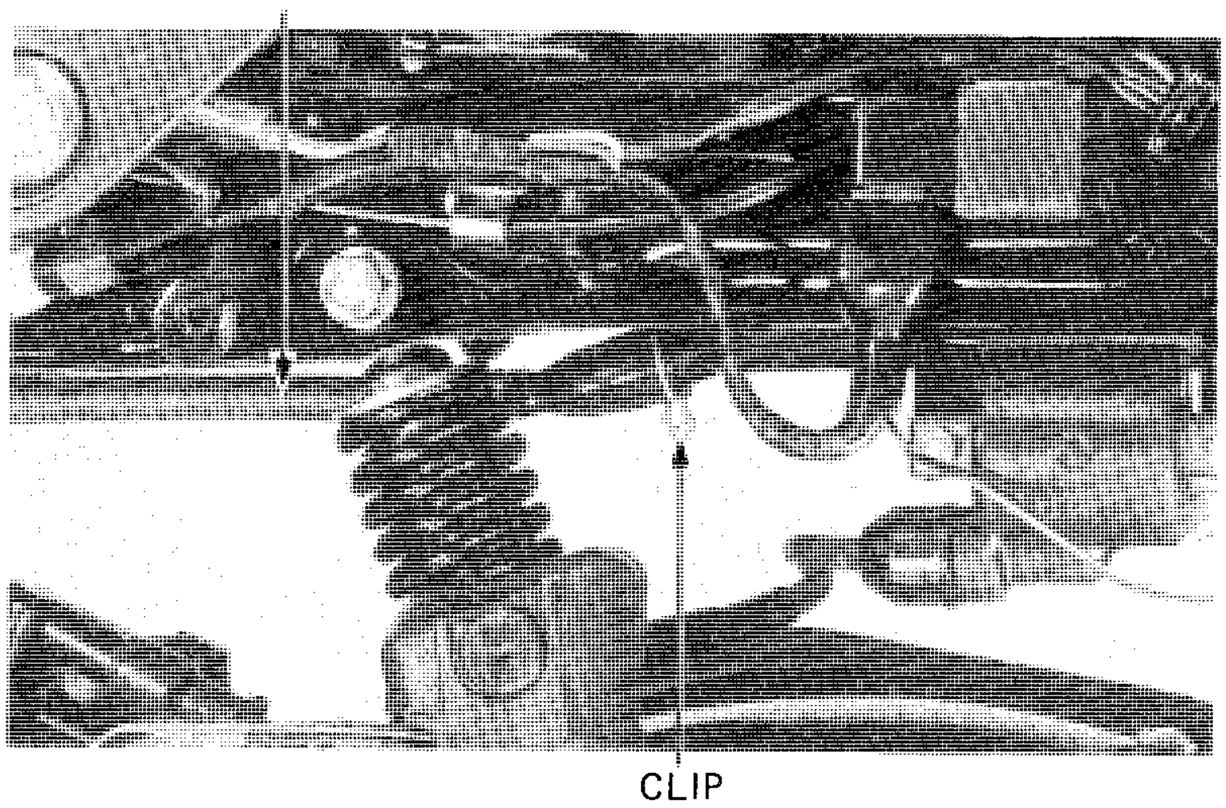
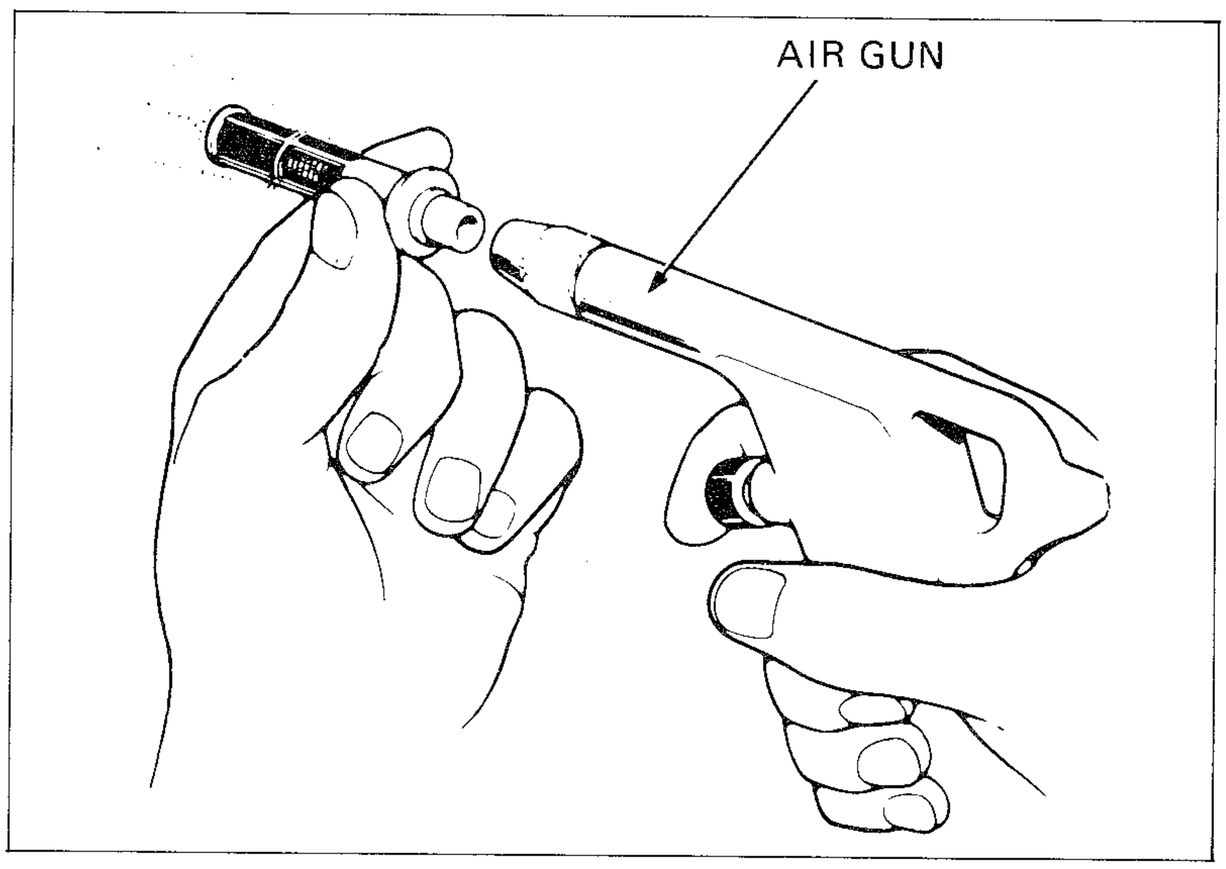
Disconnect the oil line at the bottom of the oil tank by loosening the clip.
Remove the oil strainer.



Clean the oil strainer with compressed air. Replace the oil strainer if necessary. The installation sequence is essentially the reverse order of removal.
Fill the tank with the recommended oil up to the proper level and bleed air from the oil pump and oil line (Page 2-3).

NOTE:

- Connect the oil line securely.
- Check for leaks.



MUFFLER DECARBONIZATION

Remove the muffler (Page 13-2).
Remove the carbon from the muffler.
Reinstall the muffler (Page 13-3).

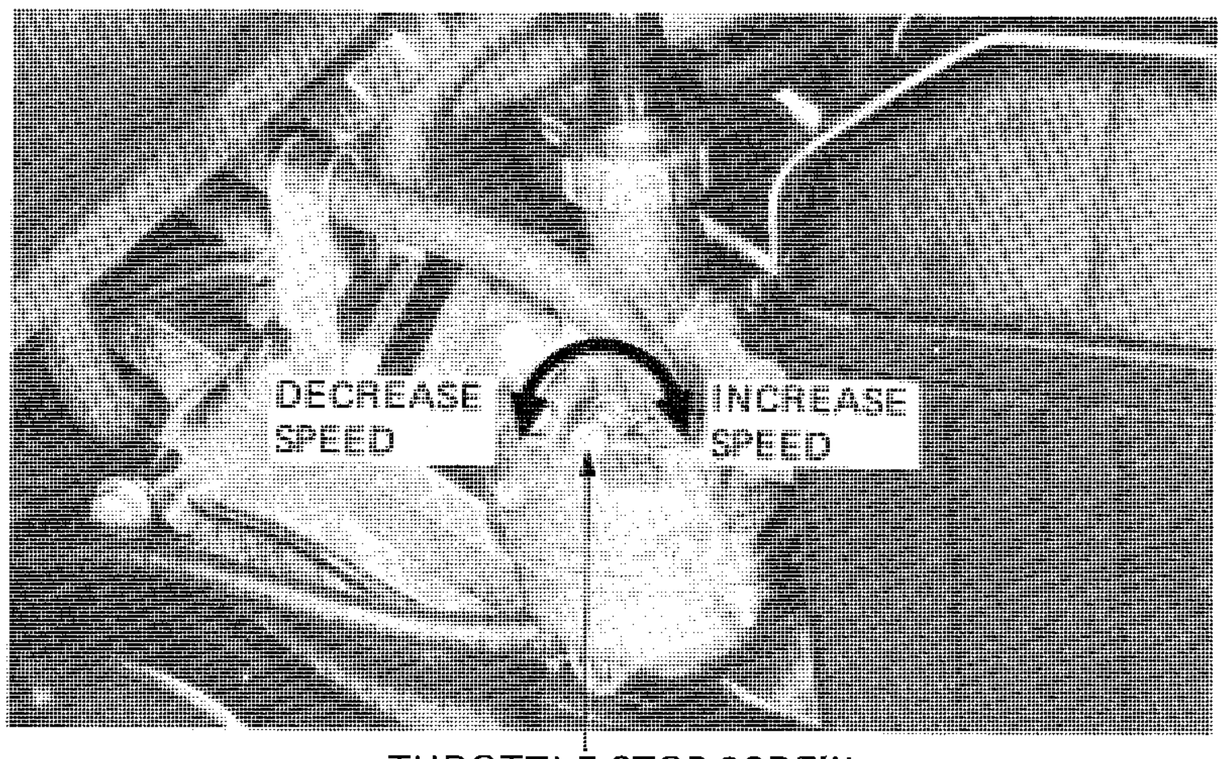
CARBURETOR IDLE SPEED

NOTE:

- Inspect and adjust idle speed after all other engine adjustments are within specifications.
- The engine must be warm for accurate adjustment. Ten minutes of stop-and-go riding is sufficient.

Remove the left side cover.
Warm up the engine and place the scooter on its center stand.
Turn the throttle stop screw as required to obtain the specified idle speed.

IDLE SPEED: 1,800 ± 100 rpm



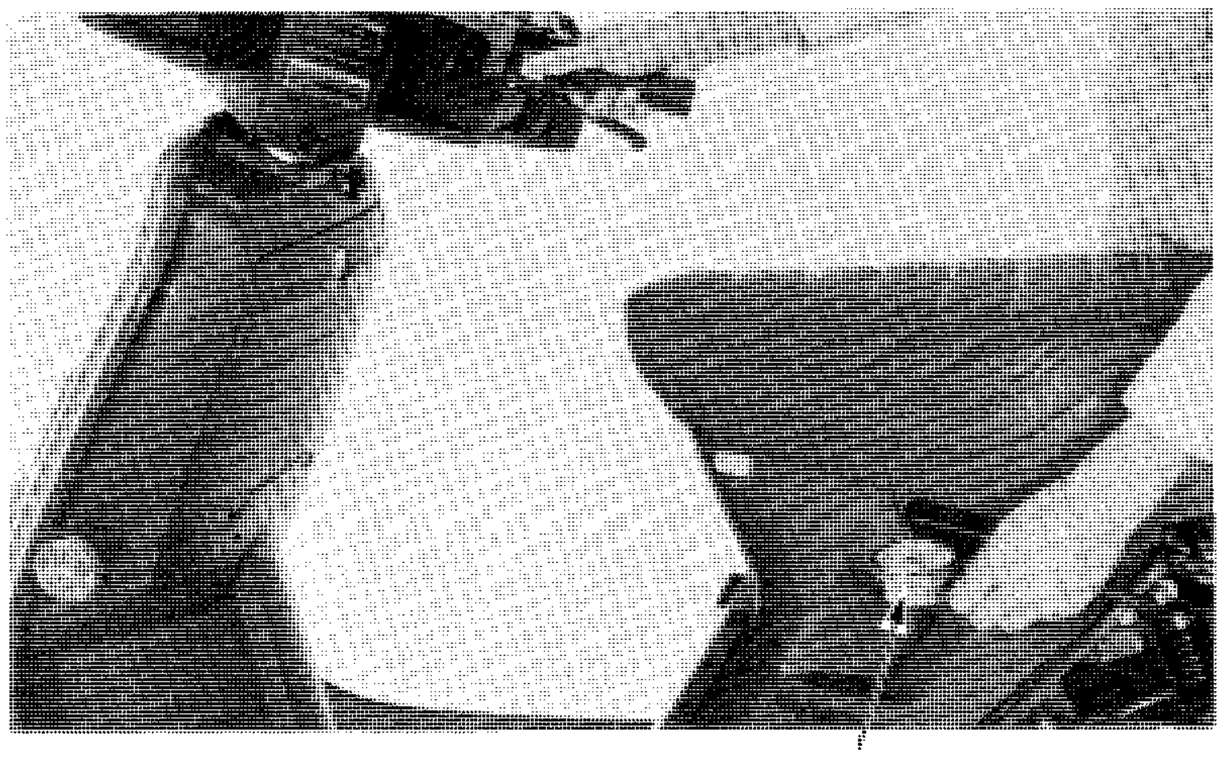
COMPRESSION TEST

Remove the left frame cover and warm up the engine.
Stop the engine and remove the spark plug.
Insert a compression gauge. Open the throttle grip fully and operate the kick starter several times.

COMPRESSION: 10.0–14.0 kg/cm^2 (142–200 psi)

Low compression can be caused by:
- Blown cylinder head gasket
- Worn piston rings
- Worn cylinder

High compression can be caused by:
- Carbon deposits in combustion chamber or on piston head


COMPRESSION GAUGE

BATTERY

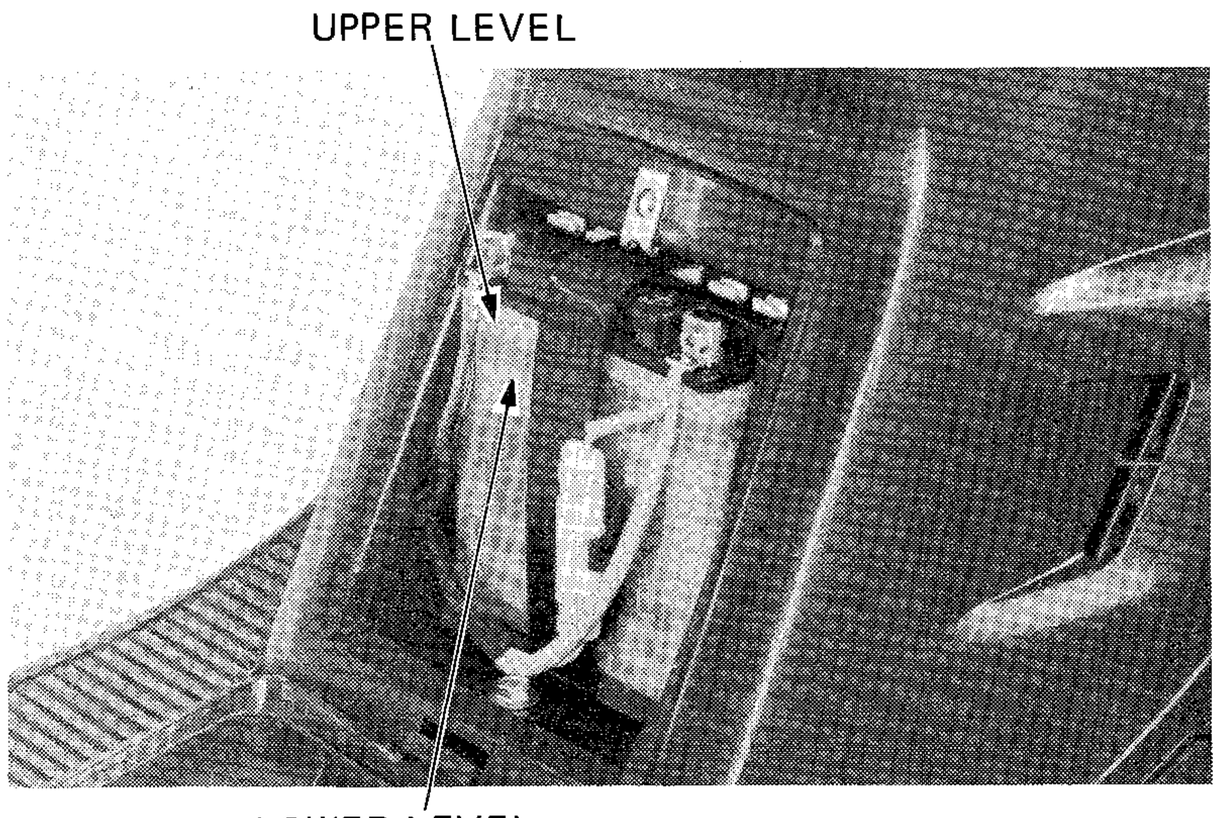
Remove the battery cover.
Inspect the battery fluid level. When the fluid level nears the lower level mark, refill with distilled water to the upper level.
- Check the specific gravity of the battery electrolyte in each cell (Page 15-3).
- Recharge the battery if necessary (Page 15-4).

NOTE:

Add only distilled water. Tap water will shorten the service life of the battery.

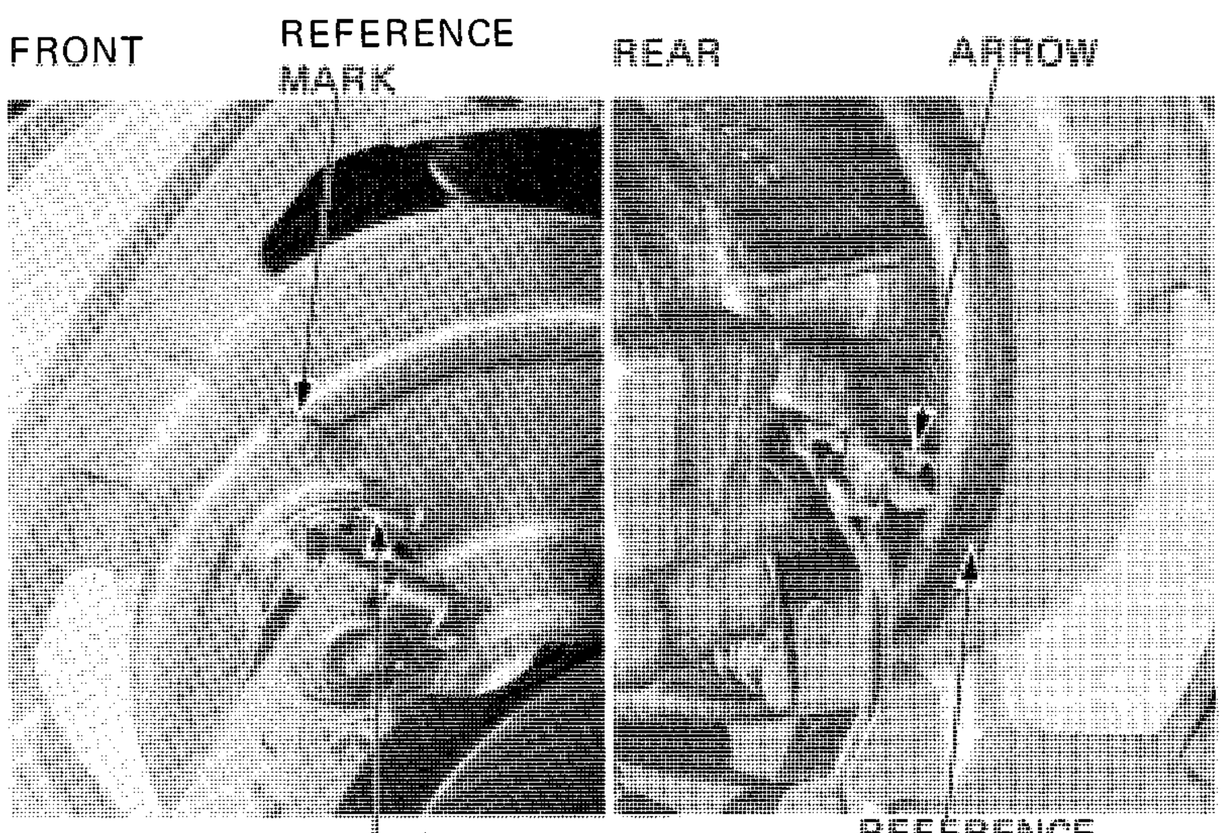
WARNING

The battery electrolyte contains sulfuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water and call a doctor if electrolyte gets in your eyes.



BRAKE SHOE WEAR

Replace the brake shoes if the arrow on the brake arm aligns with the reference mark "△" when the brake is fully applied.



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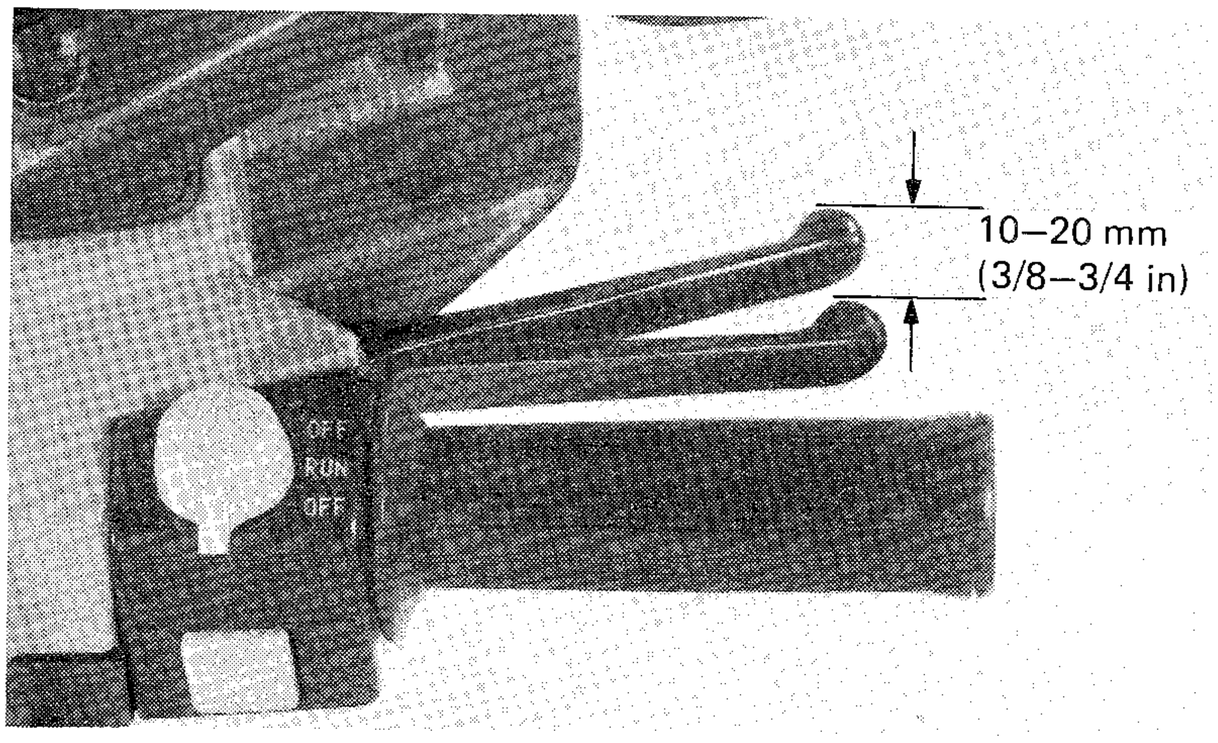
BRAKE SYSTEM

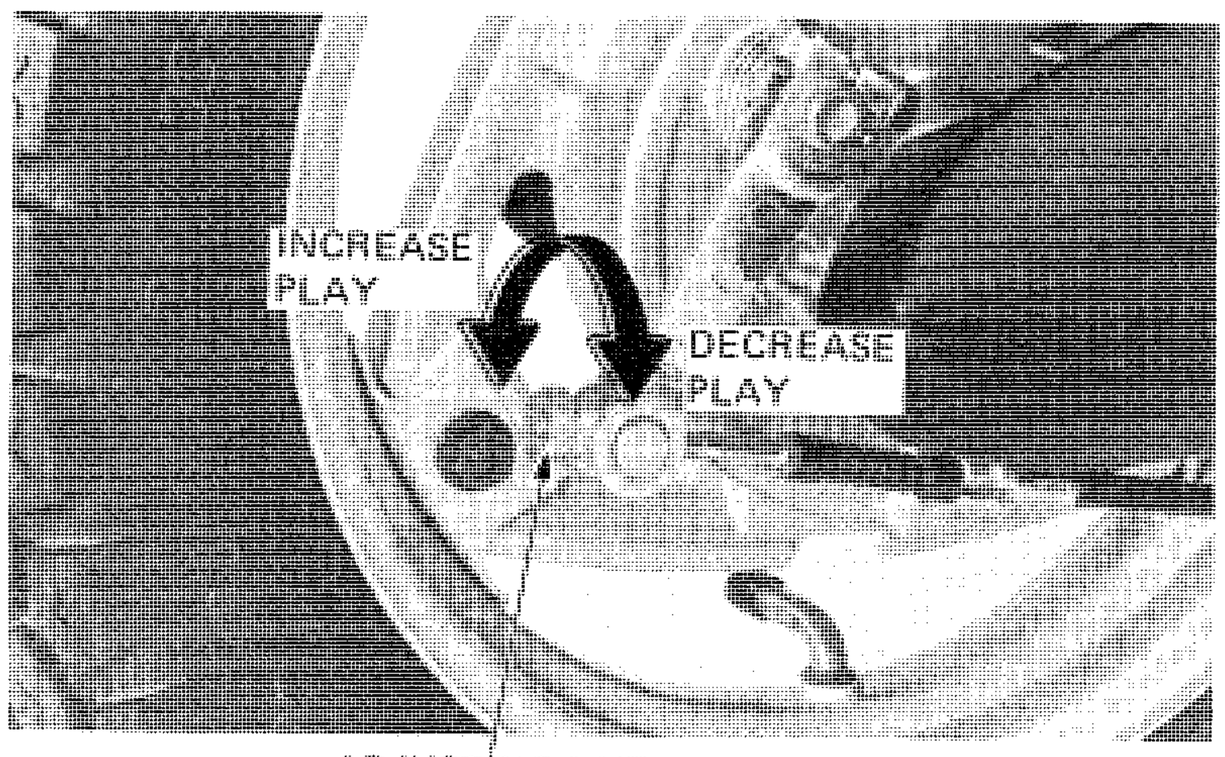
FRONT BRAKE

Measure the front brake lever free play at the tip of the brake lever.

FREE PLAY: 10–20 mm (3/8–3/4 in)



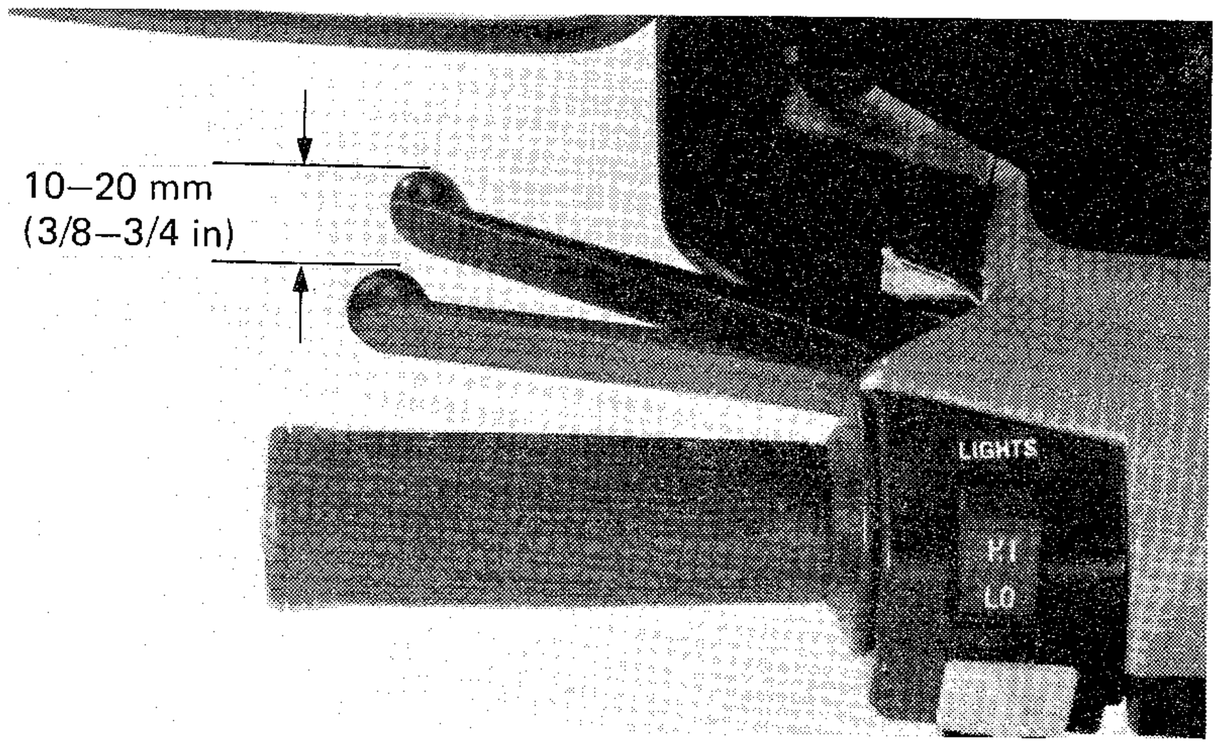
If adjustment is necessary, turn the front brake adjusting nut.



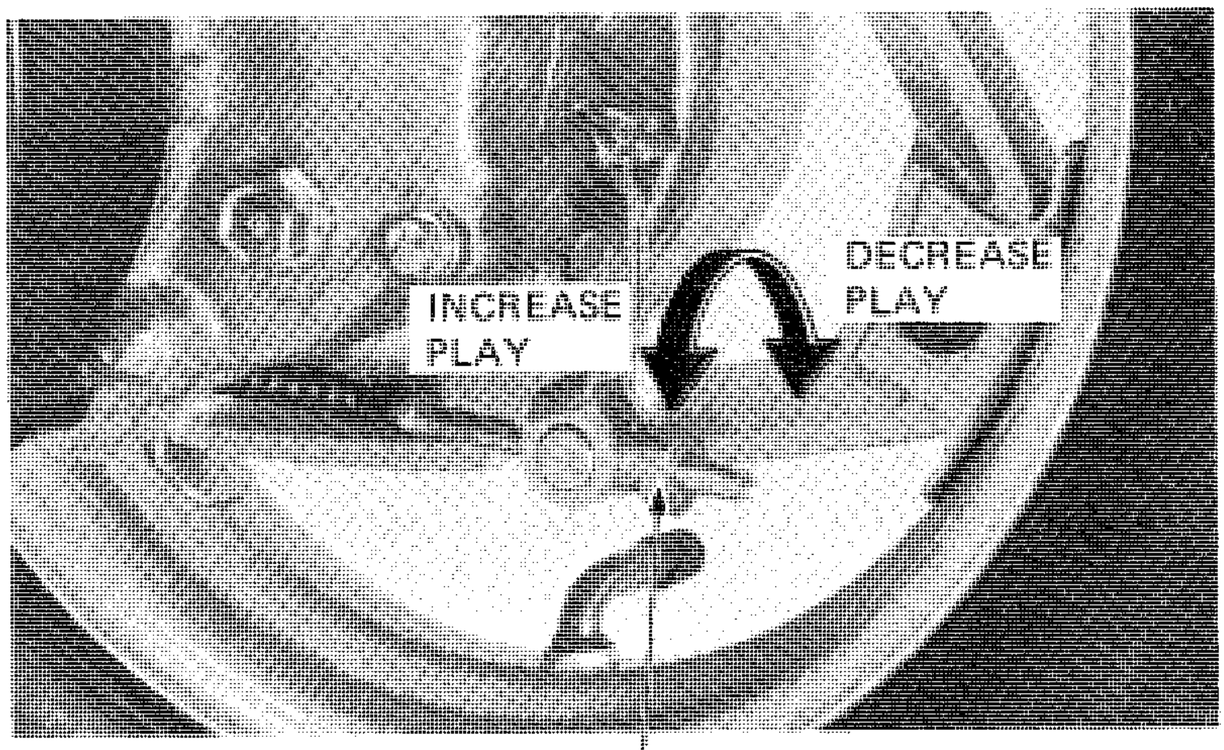
REAR BRAKE

Measure the rear brake lever free play at the tip of the brake lever.

FREE PLAY: 10–20 mm (3/8–3/4 in)



If adjustment is necessary, turn the rear brake adjusting nut.



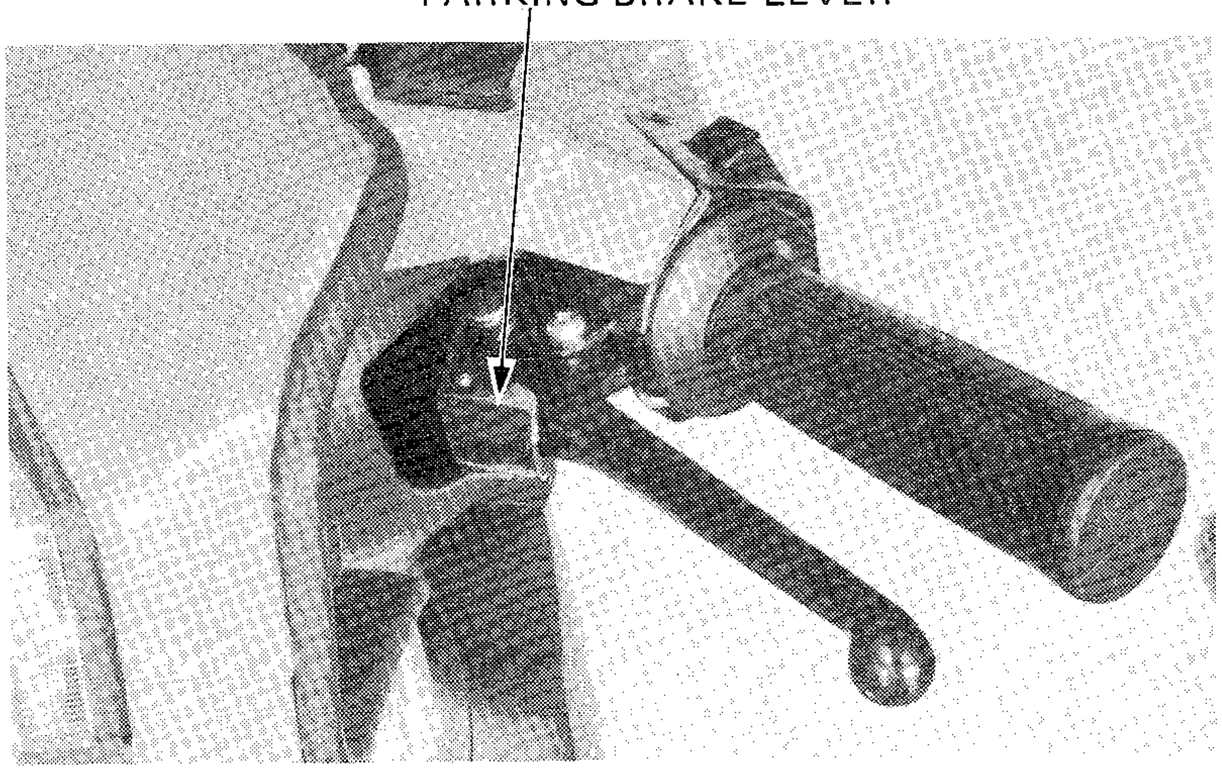
PARKING BRAKE

NOTE:

> Parking brake inspection must be made after the rear brake is adjusted properly.

Apply the parking brake and check that the rear wheel is locked securely.

Squeeze the rear brake lever. The parking brake should release automatically.



BRAKE LIGHT SWITCH

Check that the brake light comes on when brake engagement begins. Replace the switch if the brake light does not come on at the proper time.

NOTE:

> The brake light switches cannot be adjusted.

HEADLIGHT AIM

Adjust the headlight beam vertically by turning the vertical adjusting screw. Turn the adjusting screw clockwise to direct the beam down.

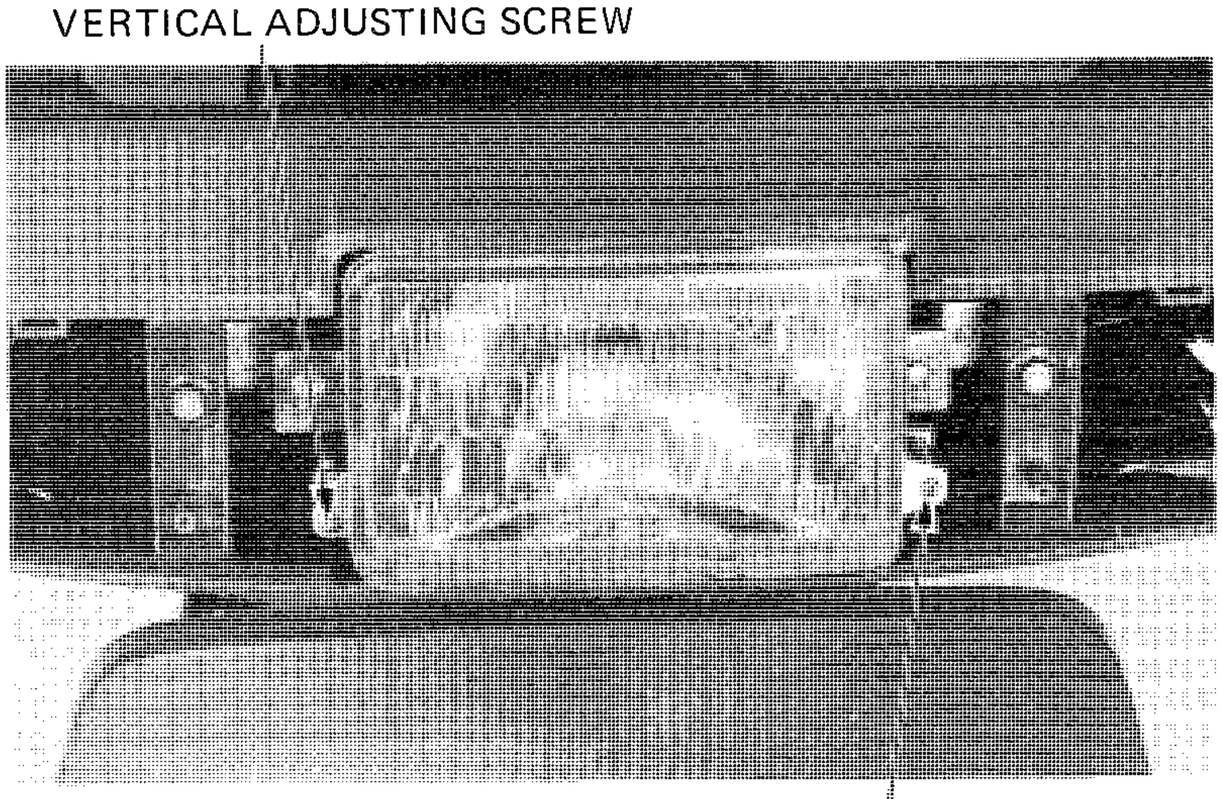
Adjust the headlight beam horizontally by turning the horizontal adjusting screw. Turn the adjusting screw clockwise to direct the beam toward the left side of the rider.

NOTE:

> Adjust the headlight beam as specified by local laws and regulations.

WARNING

> *An improperly adjusted headlight may blind oncoming drivers, or it may fail to light the road for a safe distance.*



Date of Issue: May, 1983

SUSPENSION

WARNING

Do not ride a scooter with faulty suspension. Loose, worn or damaged suspension parts impair vehicle stability and control.

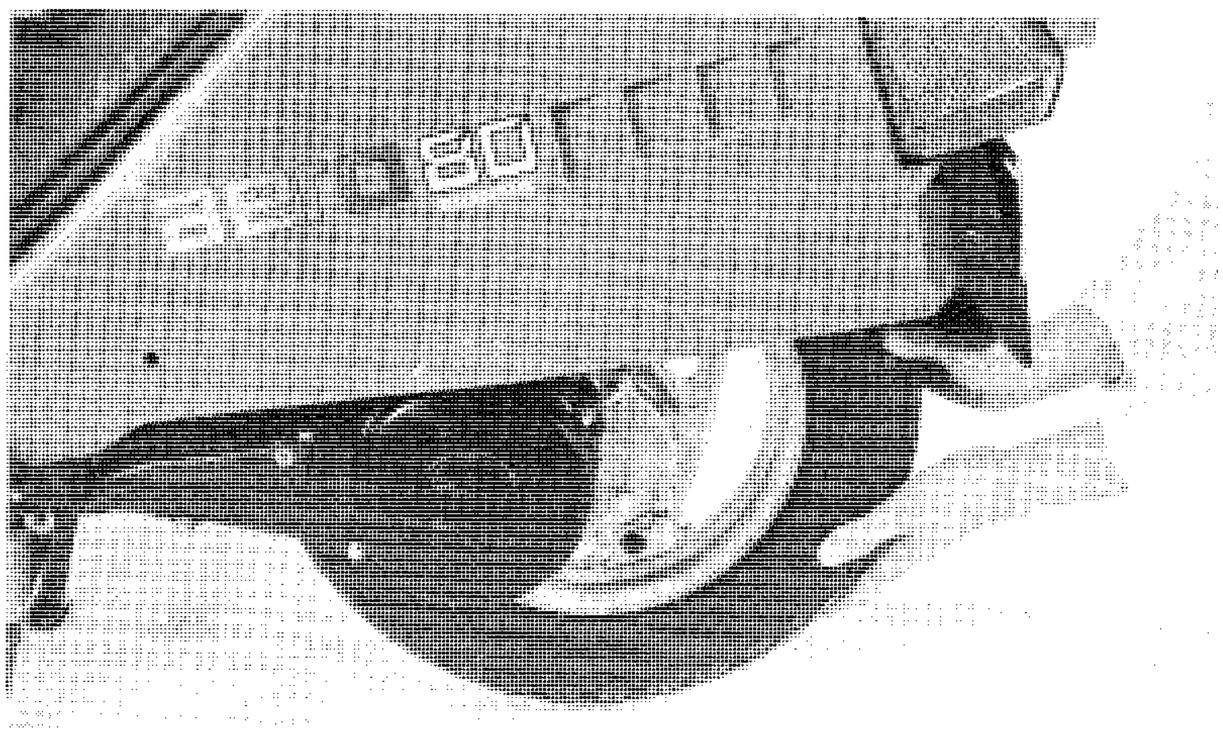
FRONT

Check the action of the front fork/shocks by compressing them several times.
Check the entire fork assembly for damage.
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.

REAR

Place the scooter on its center stand.
Move the rear wheel sideways with force to see if the engine hanger bushings are worn.
Replace the hanger bushings if there is any looseness.

Check the shock absorber for damage.
Tighten all rear suspension nuts and bolts.



NUTS, BOLTS, FASTENERS

Check that all chassis nuts and bolts are tightened to their correct torque values (Section 1) at the intervals shown in the Maintenance Schedule (Page 3-2).
Check all cotter pins, safety clips, hose clamps and cable stays.

WHEELS

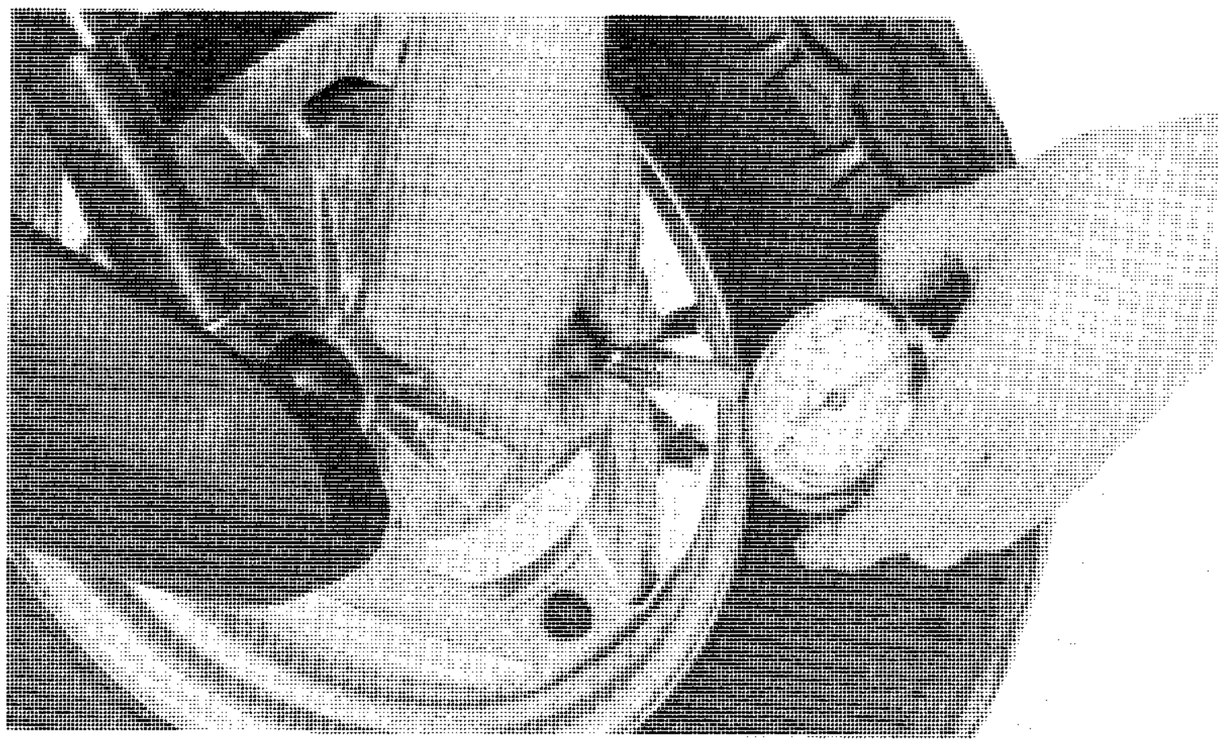
NOTE:

Tire pressure should be checked when tires are COLD.

Check the tires for cuts, imbedded nails, or other sharp objects.

RECOMMENDED TIRES AND PRESSURES:

		Front	Rear
Tire size		3.50-10-4PR	3.50-10-4PR
Cold tire pressure psi (kPa, kg/cm²)	Up to 90 kg (200 lbs) load	21 (150, 1.5)	24 (175, 1.75)
	90 kg (200 lbs) and up to vehicle capacity load	21 (150, 1.5)	36 (250, 2.5)

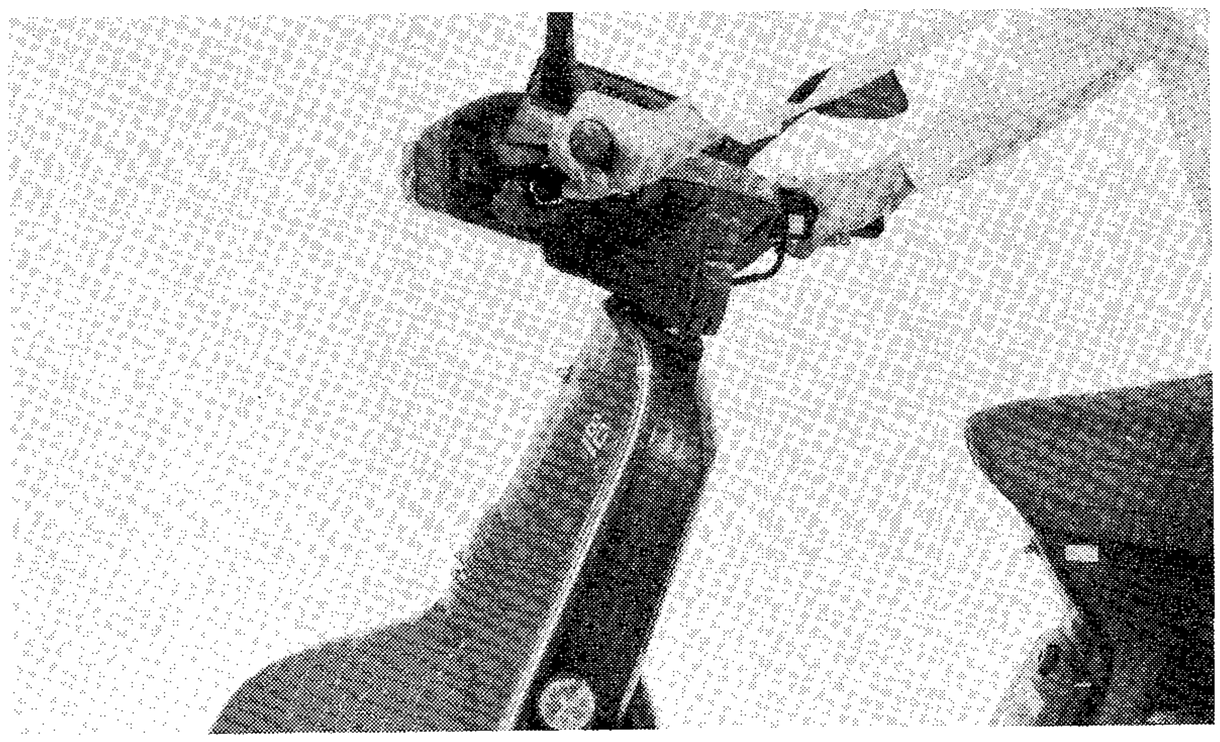


Check the front and rear wheels for trueness.

Measure the tread depth at the center of the tires. Replace the tires if the tread depth reaches the following limits:

Minimum tread depth:

Front: **0.8 mm (0.03 in)**
Rear: **0.8 mm (0.03 in)**



STEERING HEAD BEARINGS

NOTE:

> Check that the control cables do not interfere with handlebar rotation.

Raise the front wheel off the ground and check that the handlebar rotates freely.

If the handlebar moves unevenly, binds, or has vertical movement, adjust the steering head bearing by turning the steering head adjusting nut (Page 12-24).