HONDA

SERVICE MANUAL

88-01

SA50/SA50P

ELITE 50 LX/SR/S

HOW TO USE THIS MANUAL

Follow the Maintenance Schedule recommendations to ensure that the vehicle is in peak operating condition. 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 18 describe parts of the motor 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 don't know what the source of the trouble is, refer to section 19, Troubleshooting.

HONDA MOTOR CO., LTD.
Service Publications Office

CONTENTS

	GENERAL INFORMATION	1
	LUBRICATION	2
	MAINTENANCE	3
ENGINE	FUEL SYSTEM	4
ENGINE	ENGINE REMOVAL/INSTALLATION	5
ENGINE	CYLINDER HEAD/CYLINDER/PISTON	6
ENGINE	ALTERNATOR	7
ENGINE	DRIVE AND DRIVEN PULLEYS/ KICKSTARTER/CLUTCH	8
ENGINE	FINAL REDUCTION	9
ENGINE	CRANKCASE/CRANKSHAFT	10
CHASSIS	FRAME COVERS	11
CHASSIS	STEERING/FRONT WHEEL/BRAKE/ SUSPENSION	12
CHASSIS	REAR WHEEL/BRAKE/SUSPENSION	13
ELECTRICAL	BATTERY/CHARGING SYSTEM	14
ELECTRICAL	IGNITION SYSTEM	15
ELECTRICAL	ELECTRIC STARTER	16
ELECTRICAL	LIGHTS/METERS/SWITCHES	17
ELECTRICAL	WIRING DIAGRAM	18
	TROUBLESHOOTING	19
	INDEX	20

Date of Issue: January, 1994

1. GENERAL INFORMATION

GENERAL SAFETY	1-1	TOOLS	1-6
SERVICE RULES	1-1	CABLE & HARNESS ROUTING	1-7
MODEL IDENTIFICATION	1-2	NOISE EMISSION CONTROL SYSTEMS (U.S.A. only)	1-11
SPECIFICATIONS	1-3		
TORQUE VALUES	1-5		

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 that can cause loss of consciousness and may lead to death.

WARNING

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

WARNING

Inhaled asbestos fibers have been found to cause respiratory disease and cancer. Never use an air hose or dry brush to clean brake or clutch assemblies. Use an OSHA-approved vacuum cleaner or alternater method approved by OSHA designed to minimize the hazard caused by airborne asbestos fibers.

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

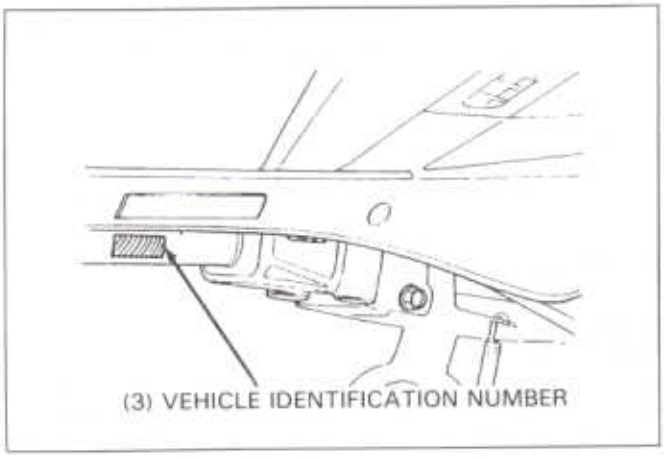
The battery generates hydrogen gas which can be highly explosive. Do not smoke or allow flames or sparks near the battery, especially while charging it.

SERVICE RULES

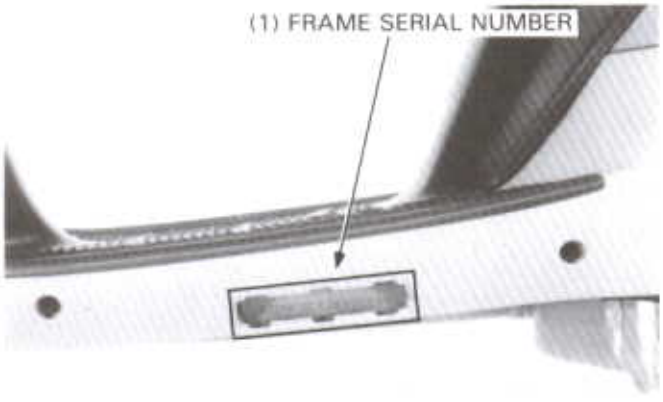
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalents. Parts that do not meet HONDA's design specifications may damage the scooter.
2. Use the special tools designed for this scooter.
3. Use only metric tools when servicing this scooter. Metric bolts, nuts, and screws are 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 or 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 pages 1-7 thru. 1-11, Cable and Harness Routing, and away from sharp edges and areas where they might be pinched between moving parts.

MODEL IDENTIFICATION

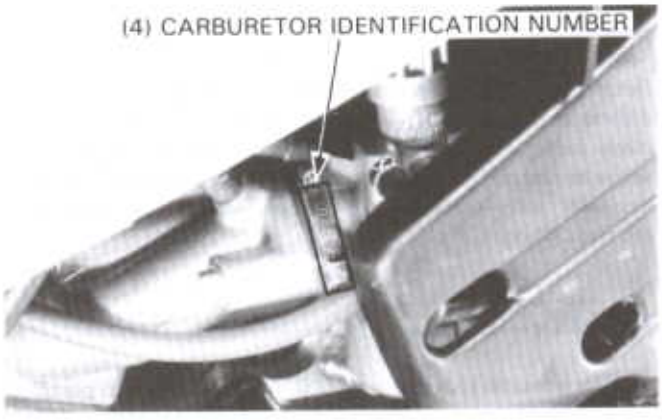
'88 Shown: After '88 similar



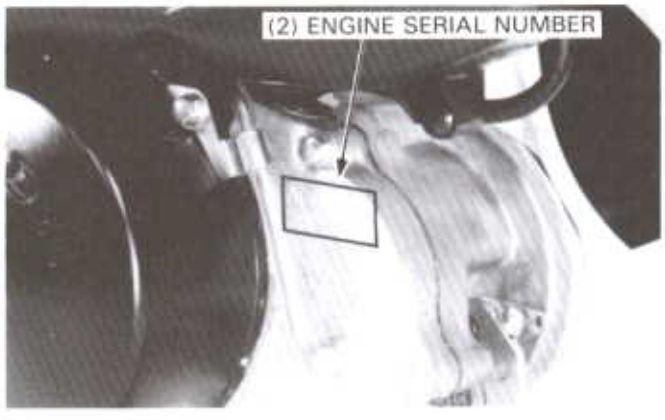
The vehicle identification number is attached to the left side of the frame body.



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



The engine serial number is stamped on the left side of the engine case.



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

The color code label is attached to the fuel tank below the seat. When ordering a color coded parts, always specify its designated color.

SPECIFICATIONS

ITEM			SPECIFICATIONS
DIMENSIONS	Overall length	'88 – '93	1,650 mm (65.0 in)
		After '93	1,655 mm (65.2 in)
	Overall width		650 mm (25.6 in)
	Overall height		1,010 mm (39.8 in)
	Wheelbase	'88 – '93	1,160 mm (45.7 in)
		After '93	1,170 mm (46.1 in)
	Ground clearance	'88 – '93	100 mm (3.9 in)
		After '93	105 mm (4.1 in)
	Dry weight	'88 – '93	62.4 kg (138 lb)
		After '93	SA50: 65.0 kg (143 lb) SA50P: 65.2 kg (144 lbs)
FRAME	Type		Under bone
	Front suspension, travel	'88 – '93	Trailing link, 73 mm (2.9 in)
		After '93	Trailing link, 58 mm (2.3 in)
	Rear suspension, travel		Final drive unit/swingarm, 60 mm (2.4 in)
	Maximum weight capacity		91 kg (200 lb)
	Front tire size, pressure	'88 – '93	3.00–10–4PR, 125 kPa (1.25 kg/cm², 18 psi)
		After '93	3.00–10 42J, 125 kPa (1.25 kg/cm², 18 psi)
	Rear tire size, pressure	'88 – '93	3.00–10–4PR, 225 kPa (2.25 kg/cm², 33 psi)
		After '93	3.00–10 42J, 225 kPa (2.25 kg/cm², 33 psi)
	Front brake		Internal expanding shoe
	Rear brake		Internal expanding shoe
	Fuel tank capacity		4.6 liters (1.22 US gal, 1.01 Imp gal)
	Caster angle		27°
	Trail	'88 – '89	77 mm (3.0 in)
		'90 – '93	81 mm (3.2 in)
		After '93	73 mm (2.9 in)
ENGINE	Type		Air cooled 2-stroke
	Cylinder arrangement		Single cylinder inclined 15° from vertical
	Bore and stroke	'88 – '93	41.0 × 37.4 mm (1.61 × 1.47 in)
		After '93	39.0 × 41.4 mm (1.54 × 1.63 in)
	Displacement		49.4 cm (3.01 cu in)
	Compression ratio	'88 – '93	6.9: 1
		After '93	7.0: 1
	Transmission oil capacity		90 cc (3.0 US oz, 2.5 Imp oz)
	Oil tank capacity		0.8 liter (0.85 US qt, 0.70 Imp qt)
	Lubrication system		Oil automatically mixed with gasoline
	Port timing Intake open		Reed valve controlled
	close		Reed valve controlled
	Exhaust open	'88 – '93	80° BBDC
		After '93	79° BBDC
	close	'88 – '93	80° ABDC
		After '93	79° ABDC
	Scavenge open		56° BBDC
	close		56° ABDC
	Egnine dry weight	'88 – '93	14.7 kg (32.4 lb)
		After '93	16.5 kg (36.4 lb)
	Idle speed		1,800 ± 100 rpm
CARBURATION	Carburetor type		Piston valve
	Identification number	'88 – '93	PA31M
		After '93	SA50: PA35J SA50P: PA35K
	Air screw initial setting	'88 – '93	1-3/8 turns out
		After '93	SA50: 1-7/8 turns out SA50P: 1-3/4 turns out
	Float level		12.2 mm (0.48 in)

Item			Specifications	
DRIVE TRAIN	Clutch type		Dry, automatic centrifugal clutch	
	Primary reduction		V-belt	
	Gear ratio		2.45–0.85: 1	
			SA50P: 2.40–1.15: 1	
	Final reduction	'88–'93	11.097: 1	
		After '93	12.115: 1	
ELECTRICAL	Ignition system		Condenser capacitive discharge ignition (CDI)	
	Starting system		Electric starter motor and kickstarter	
	Alternator	'88–'93	12V 96W/5,000 rpm	
		'94–'00	12V 88W/5,000 rpm	
		After '00	12V 100W/5,000 rpm	
	Spark plug		NGK	DENSO
	'88–'93	Standard	BPR6HSA	W20FPR-L
		For cold climate	BPR4HSA	W14FPR-L
		For extended high speed riding	BPR8HSA	W24FPR-L
	After '93	Standard	BR6HSA	W20FR-L
		For cold climate	BR4HSA	W14FR-L
		For extended high speed riding	BR8HSA	W24FR-L
	Spark plug gap		0.6–0.7 mm (0.024–0.028 in)	
	Ignition timing "F" mark		17° BTDC at 1,800 ± 100 rpm	
	Battery capacity		12V 3AH	
	Fuse capacity		10A	
LIGHT	Headlight Low/High	'88–'00	12V 25W/25W	
		After '00	12V 35W/35W	
	Tail/brake light		12V 8W/27W	
	Turn signal light		12V 17W × 4	
	Speedometer light		12V 1.7W × 2	
	High beam indicator		12V 1.7W	
	Turn signal indicator		12V 3.4W	

TORQUE VALUES

ENGINE

Item	Q'ty	Thread Dia (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Cylinder head bolt	4	6	10 (1.0, 7.2)	NOTE 1
Flywheel nut	1	10	38 (3.8, 27)	'88 thru. '93
	1	10	40 (4.0, 29)	After '93
Clutch outer nut	1	10	38 (3.8, 27)	'88 thru. '93
	1	10	40 (4.0, 29)	After '93
Clutch lock nut	1	28	38 (3.8, 27)	'88 thru. '93
	1	28	55 (5.5, 40)	After '93
Movable drive face seal bolt	3	4	4.5 (0.45, 3.3)	
Drive pulley nut	1	10	38 (3.8, 27)	'88 thru. '93
	1	12	60 (6.0, 43)	After '93
Oil check bolt	1	8	13 (1.3, 9)	NOTE 1
Exhaust pipe joint nut	2	6	12 (1.2, 9)	
Muffler mount bolt	2	8	32 (3.2, 23)	
Spark plug	1	14	14 (1.4, 10)	
Crankcase bolt	6	6	10 (1.0, 7.2)	
Engine mount bolt	1	10	50 (5.0, 36)	
Left crankcase rear cover bolt	5	6	10 (1.0, 7.2)	After '93
Left crankcase front cover bolt	5	6	10 (1.0, 7.2)	

FRAME

Item	Q'ty	Thread Dia (mm)	Torque N·m (kg-m, ft-ld)	Remarks
Steering stem lock nut	1	25.4	9 (0.9, 6.5)	
Steering stem nut	1	25.4	100 (10.0, 72)	
Front axle nut	1	10	45 (4.5, 33)	
Front brake arm bolt	1	5	6 (0.6, 4.3)	
Speedometer attaching screw	1	4	2 (0.2, 1.4)	
Front shock absorber upper mount bolt	2	8	27 (2.7, 20)	
Front shock absorber lower mount nut	2	8	18 (1.8, 13)	
Front shock absorber lower mount bolt	2	8	1 (0.1, 0.7)	
Pivot arm nut	2	8	27 (2.7, 20)	
Front shock absorber damper lock nut	2	8	20 (2.0, 14)	NOTE 2
Rear axle nut	1	14	110 (11.0, 80)	'88 thru. '93
	1	14	120 (12.0, 87)	After '93
Rear brake arm bolt	1	5	5 (0.5, 3.6)	NOTE 1
Rear shock absorber upper mount bolt	1	10	40 (4.0, 29)	
Rear shock absorber lower mount bolt	1	8	25 (2.5, 18)	'88 thru. '93
	1	8	27 (2.7, 20)	After '93
Rear shock absorber damper lock nut	1	8	20 (2.0, 14)	NOTE 2
Auto fuel valve	1	16	23 (2.3, 17)	
Engine bracket bolt	1	10	50 (5.0, 36)	

NOTE 1: Apply oil to the threads and seating (or flange) surface. NOTE 2: Apply locking agent to the threads.
Torque specifications listed above are for specific fasteners. Others should be tightened to the standard torque values below.

STANDARD TORQUE VALUES

Item	Torque Values N·m (kg-m, ft-lb)	Item	Torque Values N·m (kg-m, ft-lb)
5 mm bolt and nut	5 (0.5, 3.5)	5 mm screw	4 (0.4, 3)
6 mm bolt and nut	10 (1.0, 7.2)	6 mm screw	9 (0.9, 7)
		6 mm bolt with 8 mm head	9 (0.9, 7)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt and nut	12 (1.2, 9)
10 mm bolt and nut	35 (3.5, 25)	8 mm flange bolt and nut	27 (2.7, 20)
12 mm bolt and nut	55 (5.5, 40)	10 mm flange bolt and nut	40 (4.0, 29)

TOOLS

SPECIAL

Description	Tool Number	Alternate Tool	Tool Number	Ref. Sec
Vacuum pump (U.S.A. only)	A937X–041–XXXXX	Vacuum pump (U.S.A. only: Included in turbo kit)	ST–AH–260–MC7	
Lock nut wrench, 39 mm	07916–KS40100	39 mm socket		
Clutch spring compressor	07936–KM10000	Clutch spring compressor	07960–KM1000A	
Bearing driver	07945–GC80000			
Bearing remover set, 15 mm	07936–KC10000			
-remover handle	07936–1660100			
-remover weight	07741–0010201	Remover weight	07936–3710200	
Bearing remover set, 12 mm	07936–1660001			
-remover handle	07936–1660100			
-remover weight	07741–0010201	Remover weight	07936–3710200	
Assembly collar	07965–GM00100			
Assembly shaft	07965–GM00300			
*Assembly shaft	07965–1660200			
Case puller	07935–GK80000			
Case puller	07935–KG80000			
Universal bearing puller	07631–0010000			
Thread protector	07931–1870000			
Lock nut wrench	07916–1870000			
Lock nut wrench	07916–KM10000	Equivalent commercially available in U.S.A.		
Attachment, 28×30 mm	07946–1870100	Equivalent commercially available in U.S.A.		
Ball race remover	07946–GA70000			
Shock absorber compressor attachment	07967–GA70101			
Spring attachment	07967–GM90100			
Digital multimeter	M9360–277–91774	Digital multimeter	KS–AHM–32–003	

COMMON

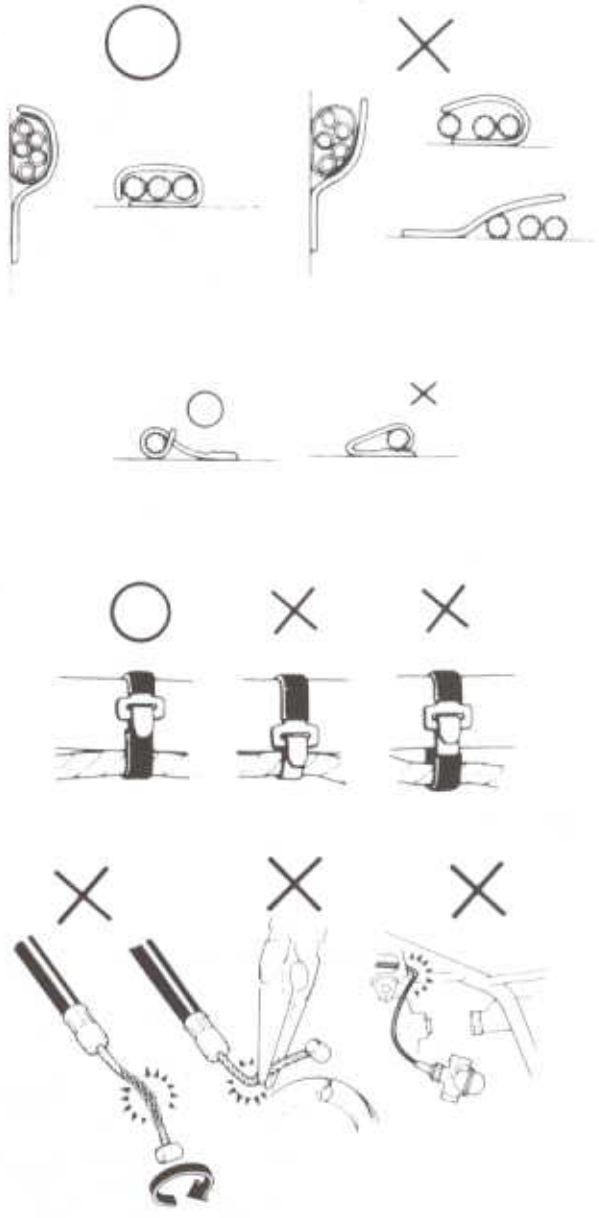
Description	Tool Number	Alternate Tool	Tool Number	Ref. Sec
Float level gauge	07401–0010000			
Universal holder	07725–0030000			
Flywheel puller	07733–0010000	Flywheel puller	07933–0230000	
Attachment, 32×35 mm	07746–0010100			
Attachment, 37×40 mm	07746–0010200			
**Attachment, 42×47 mm	07746–0010300			
*Attachment, 52×55 mm	07746–0010400			
Pilot, 10mm	07746–0040100			
Pilot, 12 mm	07746–0040200			
Piolt, 15 mm	07746–0040300			
Piolt, 17 mm	07746–0040400			
Piolt, 20 mm	07746–0040500			
Bearing driver	07749–0010000			
Bearing remover shaft	07746–0050100	Equivalent commercially available in U.S.A.		
Bearing remover head, 10 mm	07746–0050200			
Shoch absorber compressor	07GME–0010000			
Lock nut wrench, 30×32 mm	07716–0020400			
Extension bar	07716–0020500	Equivalent commercially available in U.S.A.		

*After '93 only **'88 thru. '93 only

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 a weld or end of a clamp.
- 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 tubes if they contact a sharp edge or corner.
  Clean the attaching surface thoroughly before applying tape.
- Do not use wires or harnesses with broken insulation. Repair by wrapping them with a protective tape or replace them.
- Route wire harnesses to avoid sharp edges and 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.
- Wire harnesses routed along the handlebars should not be pulled taut, have excessive slack, be pinched, or interfere with adjacent or surrounding parts in all steering positions.
- After routing, check that the wire harnesses are not twisted or kinked.
- Do not bend or twist control cables. Damaged control cables will not operate smoothly and may stick or bind.



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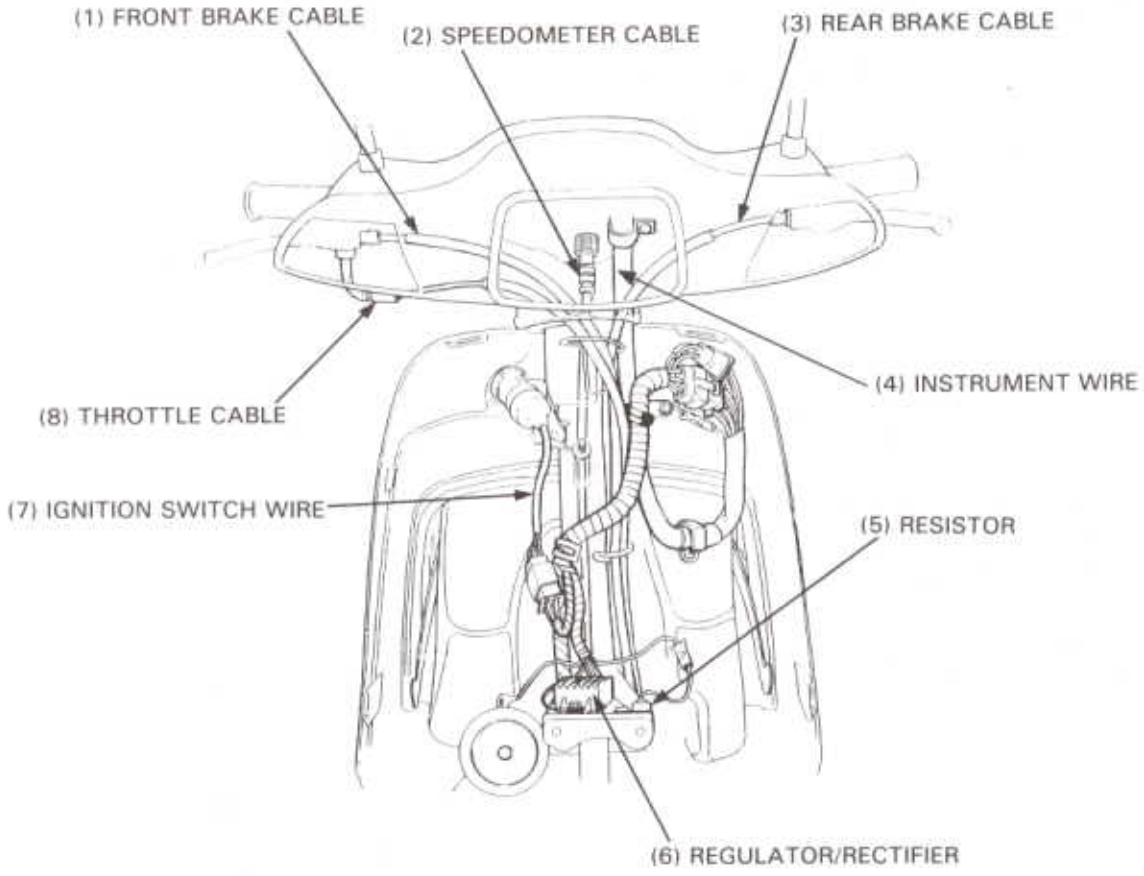
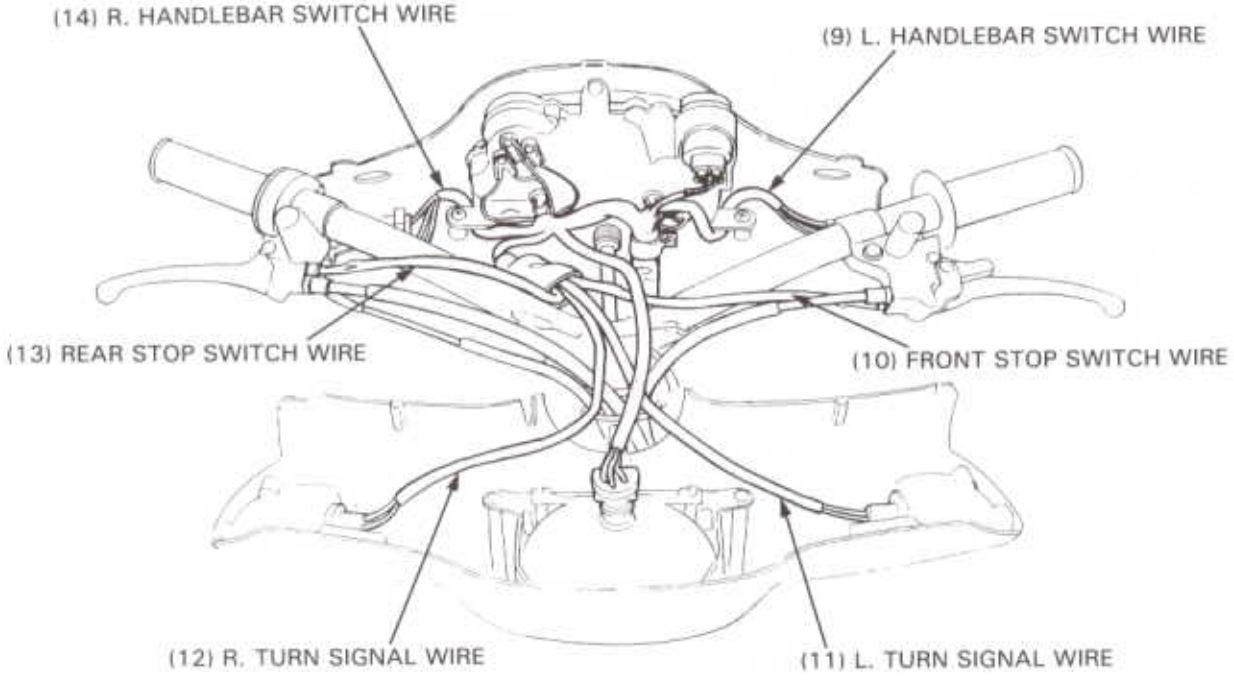
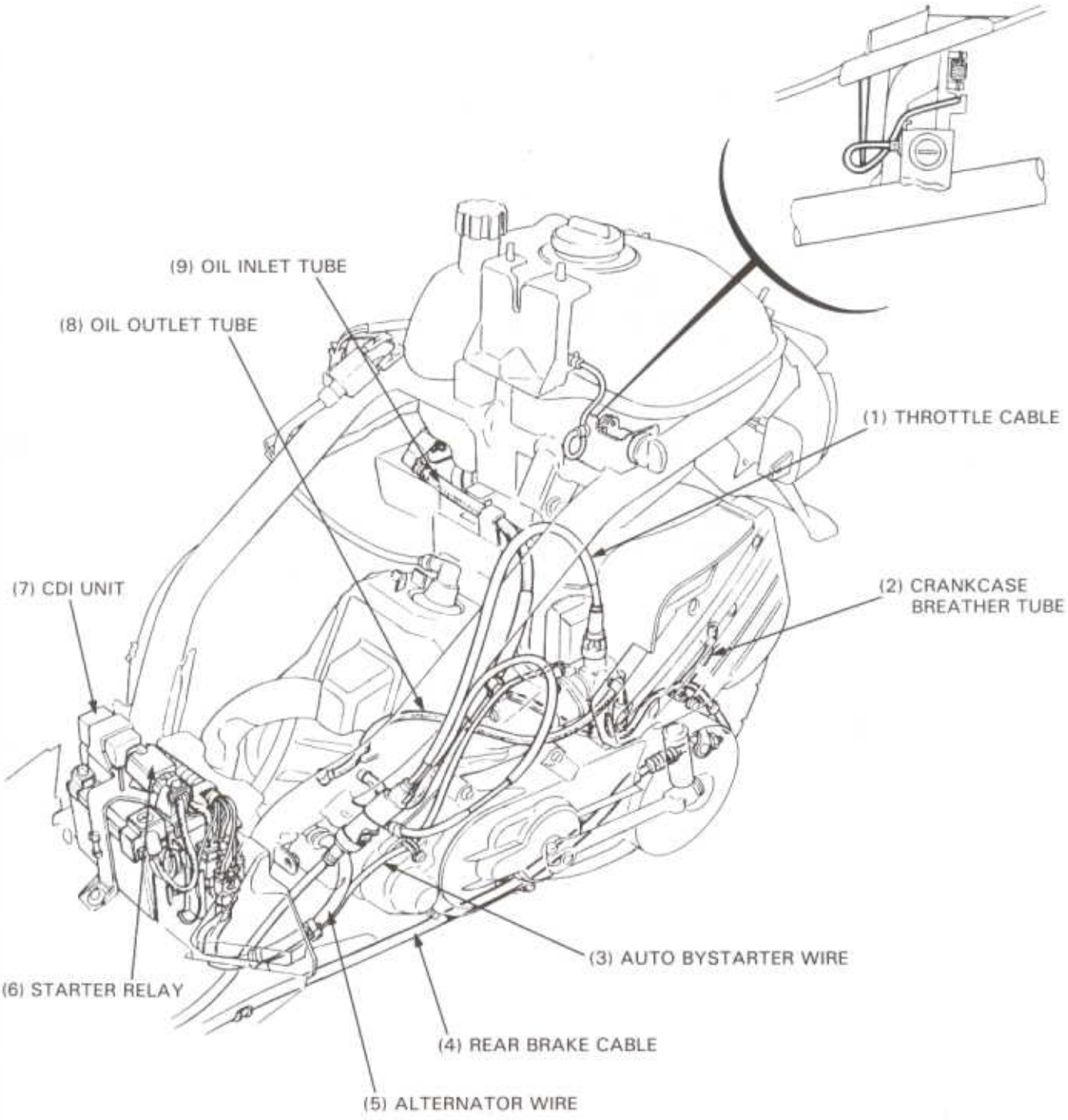
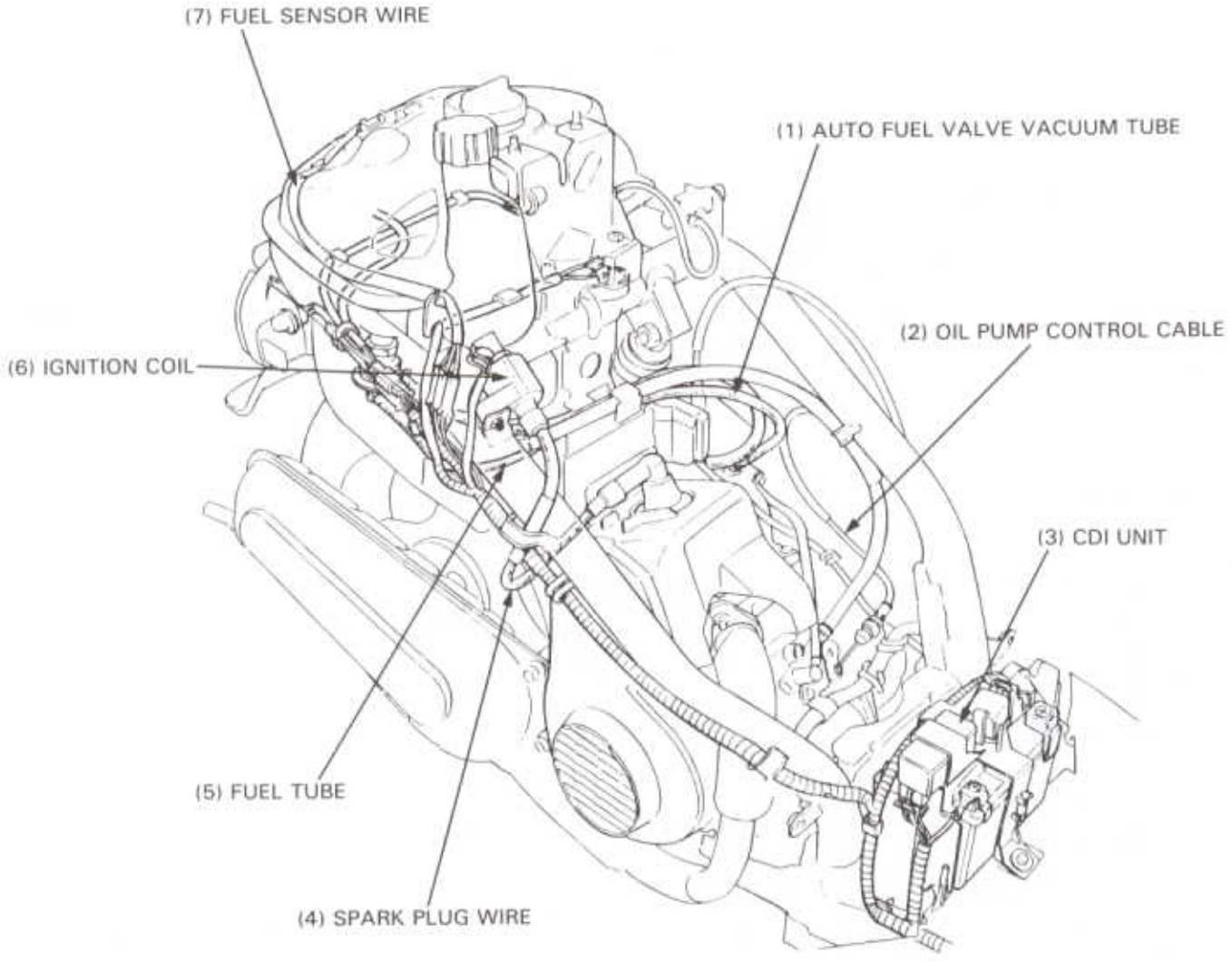
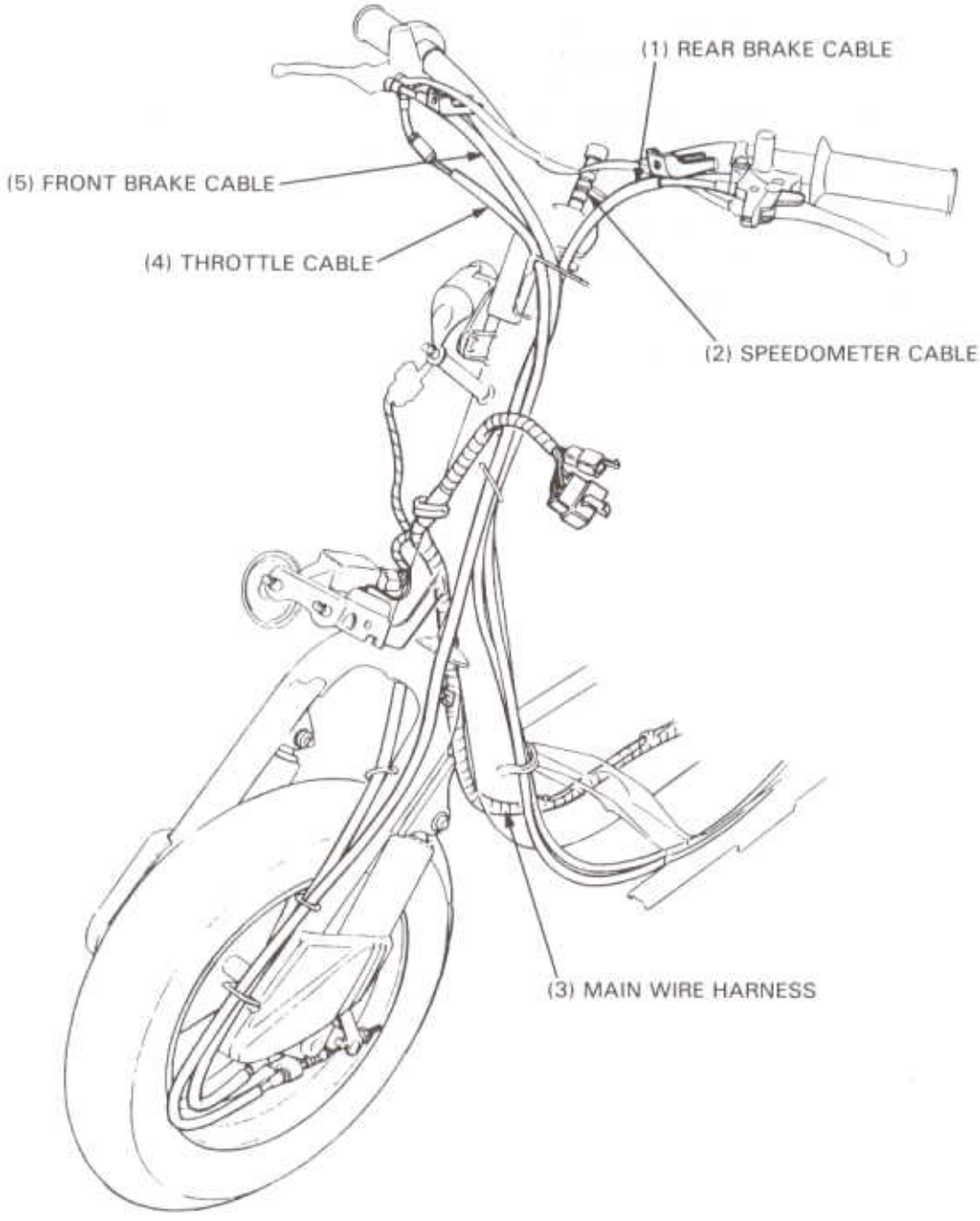
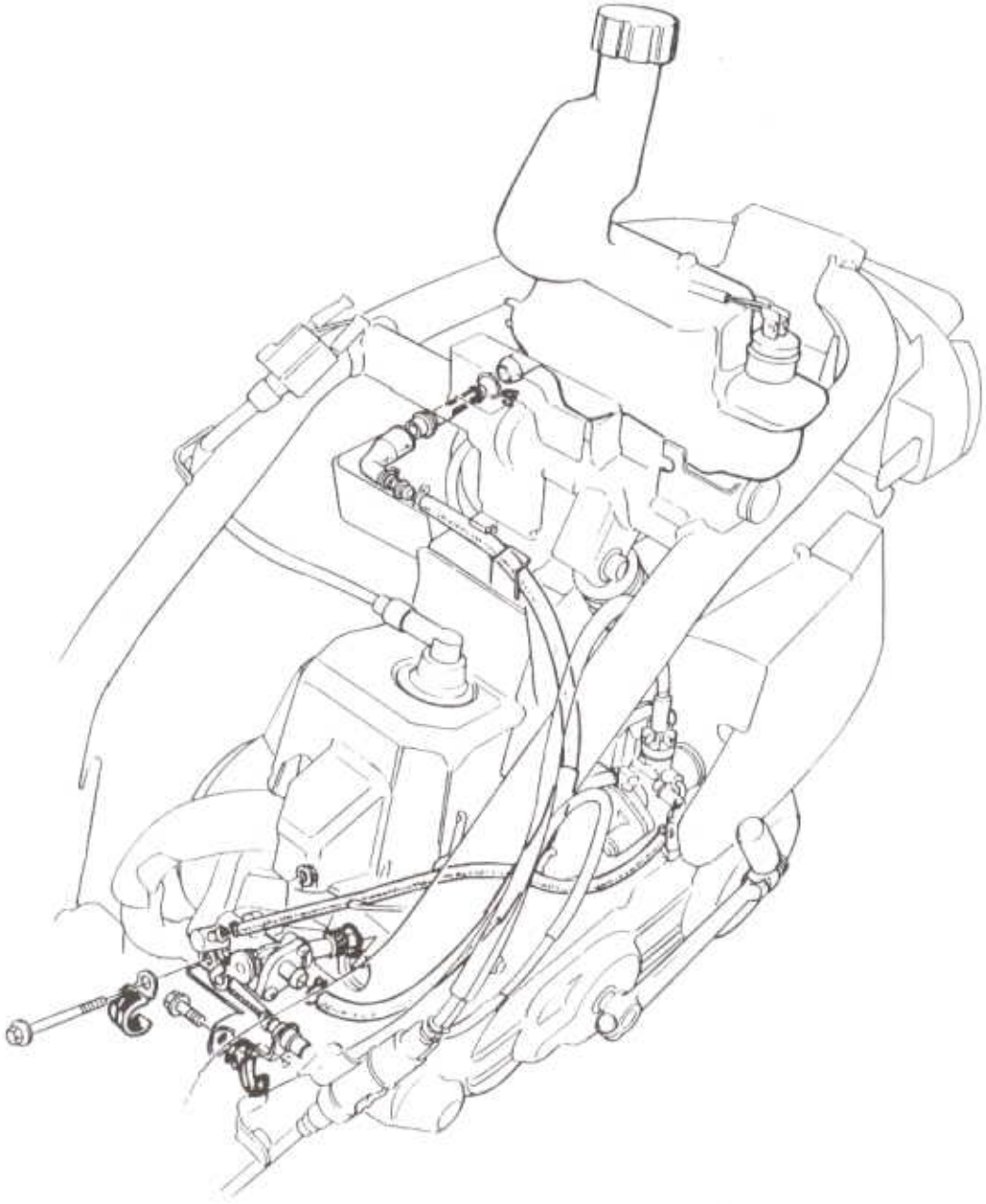

(1) FRONT BRAKE CABLE
(2) SPEEDOMETER CABLE
(3) REAR BRAKE CABLE
(4) INSTRUMENT WIRE
(5) RESISTOR
(6) REGULATOR/RECTIFIER
(7) IGNITION SWITCH WIRE
(8) THROTTLE CABLE


(9) L. HANDLEBAR SWITCH WIRE
(10) FRONT STOP SWITCH WIRE
(11) L. TURN SIGNAL WIRE
(12) R. TURN SIGNAL WIRE
(13) REAR STOP SWITCH WIRE
(14) R. HANDLEBAR SWITCH WIRE


(9) OIL INLET TUBE
(8) OIL OUTLET TUBE
(1) THROTTLE CABLE
(7) CDI UNIT
(2) CRANKCASE BREATHER TUBE
(3) AUTO BYSTARTER WIRE
(6) STARTER RELAY
(4) REAR BRAKE CABLE
(5) ALTERNATOR WIRE


(7) FUEL SENSOR WIRE
(1) AUTO FUEL VALVE VACUUM TUBE
(2) OIL PUMP CONTROL CABLE
(6) IGNITION COIL
(3) CDI UNIT
(5) FUEL TUBE
(4) SPARK PLUG WIRE


(1) REAR BRAKE CABLE
(5) FRONT BRAKE CABLE
(4) THROTTLE CABLE
(2) SPEEDOMETER CABLE
(3) MAIN WIRE HARNESS



2. LUBRICATION

SERVICE INFORMATION	2-1	OIL STRAINER	2-4
TROUBLESHOOTING	2-1	OIL TANK	2-5
OIL PUMP	2-2	LUBRICATION POINTS	2-6
OIL LINES/PUMP BLEEDING	2-3		
OIL PUMP CONTROL CABLE ADJUSTMENT (SA50)	2-4		

SERVICE INFORMATION

GENERAL

- When removing and installing the oil pump, use care not to allow dust or dirt to enter the engine and oil line.
- Do not attempt to disassemble the oil pump.
- Bleed air from the oil pump if there is air in the oil inlet line (from the oil tank to the oil pump) or whenever the oil line has been disconnected.
- Bleed air from the oil outlet line (from the oil pump to the carburetor) whenever the line has been disconnected (page 2-3).
- Use HONDA 2-stroke injector oil or equivalent.

TROUBLESHOOTING

Excessive smoke and/or carbon on spark plug
- Faulty oil pump
- Low quality engine oil
- SA50: Oil pump not properly adjusted (excessive oil)

Overheating
- Faulty oil pump
- Low quality oil
- SA50: Oil pump not properly adjusted (insufficient oil)

Seized piston
- No oil in tank or clogged oil line
- Air in oil lines
- Faulty oil pump
- Clogged oil strainer
- SA50: Oil pump not properly adjusted (insufficient oil)

Oil not flowing out of tank
- Clogged oil tank cap breather hole
- Clogged oil strainer

OIL PUMP

REMOVAL

Remove the center trunk (page 11-5).

NOTE

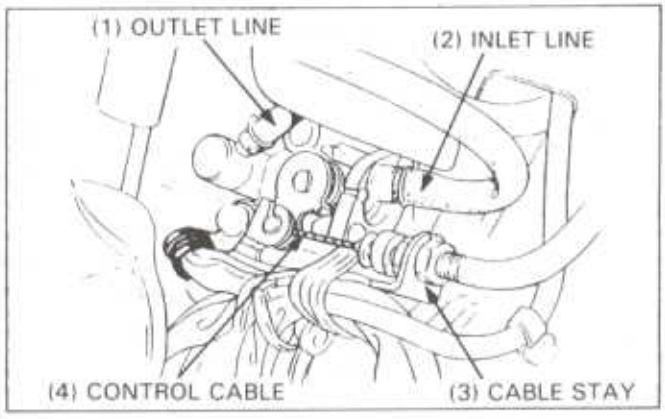
- Before removing the oil pump, clean the oil pump and crankcase.

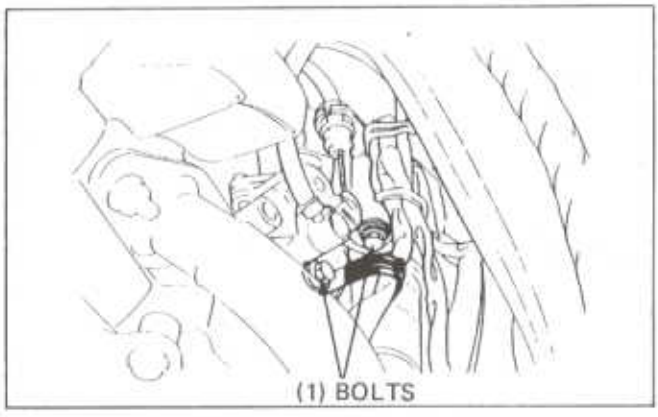
Except SA50P : Remove the oil control cable from the cable stay and oil pump control lever.

Clamp the oil lines so oil does not flow out; then disconnect the oil lines from the oil pump.

Disconnect the alternator wire from the clamp.

Remove the oil pump control cable stay attaching bolts. Remove the oil pump.





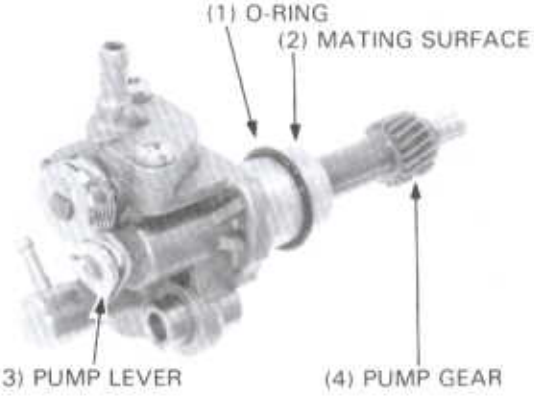
INSPECTION

CAUTION

- *Do not disassemble the oil pump.*

Inspect for the following:

- Damaged or weak O-ring
- Damage to crankcase mating surface
- Damage to pump body
- Except SA50P : Control lever operation
- Worn or damaged pump gear
- Oil leaks

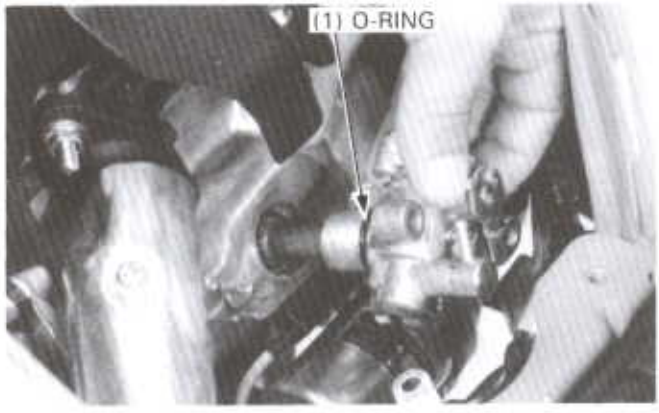


INSTALLATION

Lubricate the O-ring with grease or oil.

Apply molybdenum disufide grease to the oil pump gear and install the oil pump.

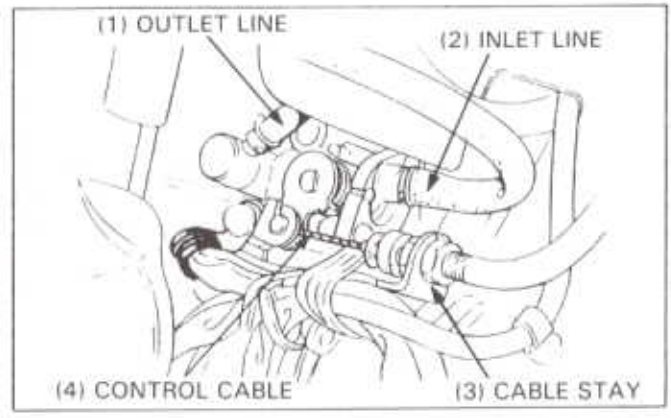
Make sure that the oil pump is properly inserted into the crankcase.



Install the oil pump control cable stay and attaching bolts and tighten the attaching bolts securely.
Connect the oil inlet and outlet lines.
Connect the oil control cable to the control lever.
Clamp the alternator wire.

After installation, bleed the oil pump and lines and check for leaks.
—Except SA50P: Adjust the oil control cable (page 2-4)

OIL LINES/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 lines whenever the oil lines or pump have been removed or there is air in the oil lines.*
- *Bleed air from the oil inlet line first, then bleed air from the oil outlet line.*

OIL INLET LINE/OIL PUMP

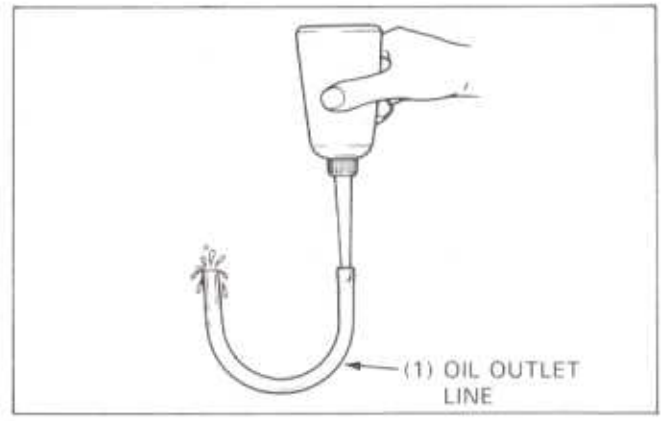
Fill the oil tank with the recommended oil (page 2-1).

Place a shop towel around the oil pump and disconnect the oil inlet line from the oil pump.
Fill the oil pump with the recommended oil at the oil pump inlet joint.
Let oil drip from the inlet line to bleed air in the line.
Connect the oil inlet line to the oil pump.

OUTLET LINE

1. Remove the outlet line from the intake pipe and oil pump.
   Fill the outlet line with the recommended oil as shown.
   Install the outlet line to the oil pump.

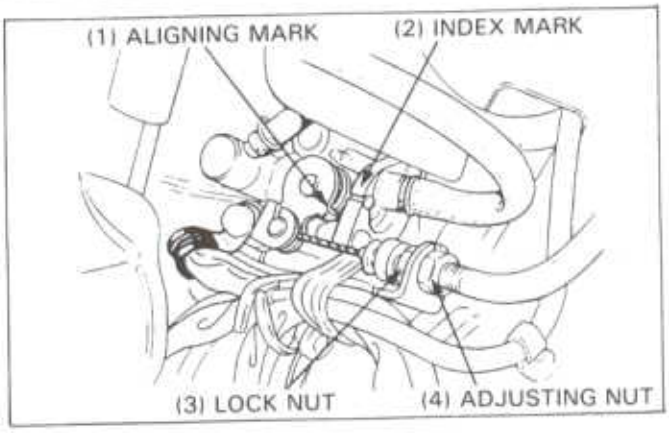
2. Start the engine and allow it to idle and make sure that oil is forced out from the intake pipe end of the oil outlet line.
   If oil is not forced out within one minute, stop the engine and repeat steps 1 and 2.
   Connect the oil outlet line to the intake pipe.



CAUTION

- *Perform this operation in well-ventilated area. Do not rev the engine up.*

OIL PUMP CONTROL CABLE ADJUSTMENT (SA50)



NOTE

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

Remove the center trunk (page 11-5).

Loosen the oil pump control cable lock nut and open the throttle fully.

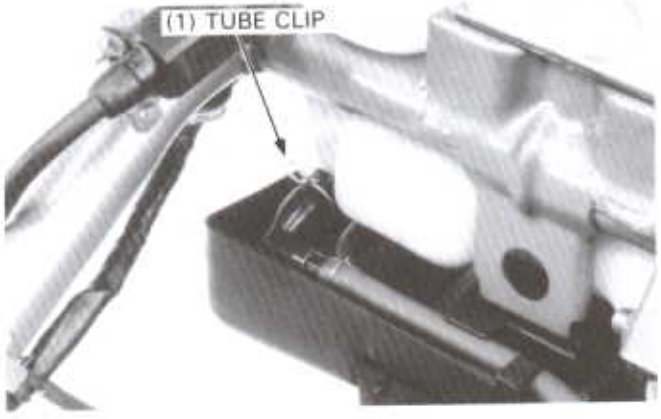
Check that the aligning mark on the oil pump control lever is aligned with the index mark on the pump body.

Adjust if necessary by turning the adjusting nut.

CAUTION

- *An adjustment within 1 mm (0.04 in) of the 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.*

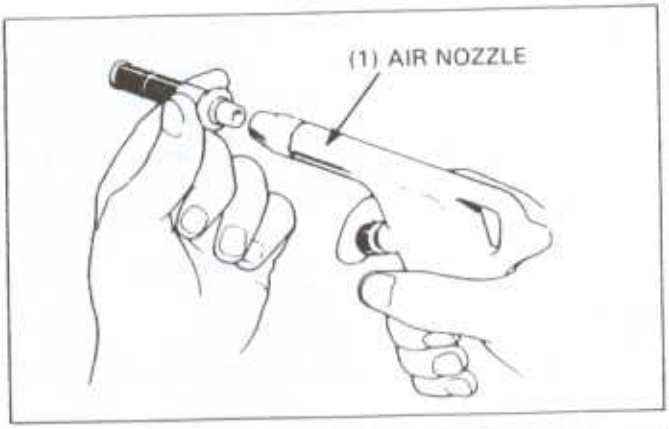
OIL STRAINER



Remove the following:
– both frame rear covers (page 11-3).
– center trunk (page 11-5).
Disconnect the oil inlet line at the oil pump and allow the oil to drain into a clean container.

Loosen the tube clip and disconnect the oil tube joint under the oil tank.

Remove the oil strainer.



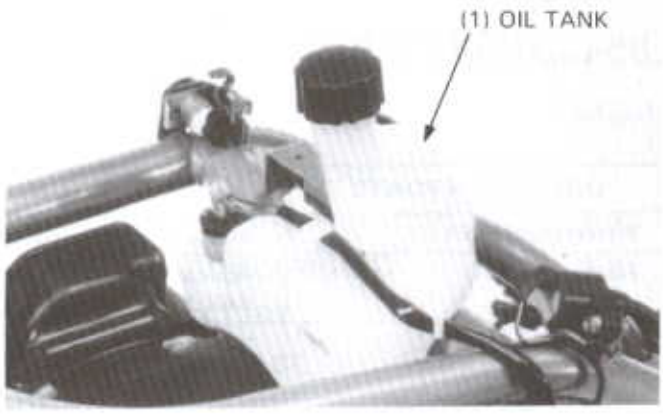
Clean the oil strainer with compressed air.
Install the oil strainer in the reverse of removal.

Fill the oil tank with the recommended oil up to the proper level.

Bleed air from the oil pump and oil lines.

Connect the oil lines securely and check for leaks.

OIL TANK



REMOVAL

Remove the following:
– both frame rear covers (page 11-3).
– center trunk (page 11-5).
– fuel tank (page 4-12).
Disconnect the oil level sensor wires from the oil level sensor.
Remove the oil filler cap.
Disconnect the oil inlet line at the oil pump and allow the oil to drain into a clean container.

Remove the oil tank.

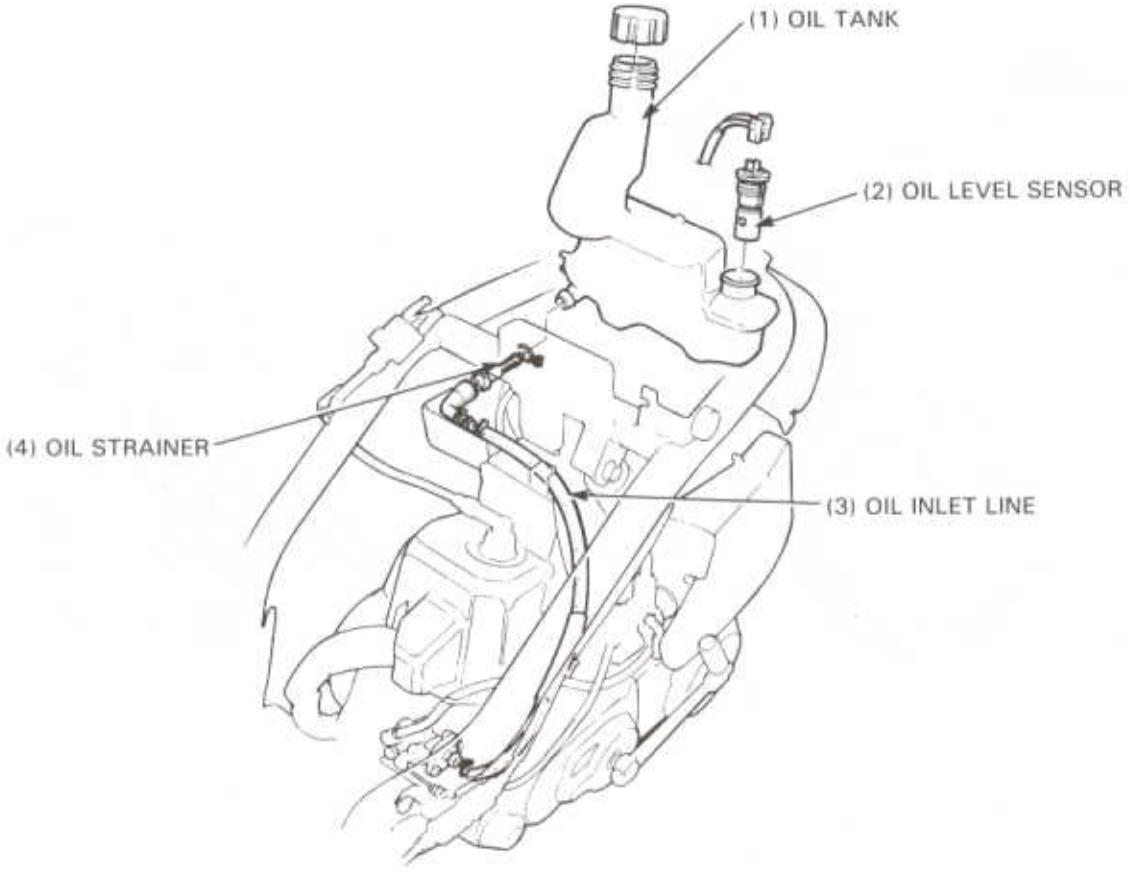
Clean the interior of the oil tank thoroughly.
Clean the oil strainer (page 2-4).

INSTALLATION

Install the oil tank in the reverse order of removal.

Refill the tank to the proper level and check for oil leaks.

Bleed the oil lines (page 2-3).



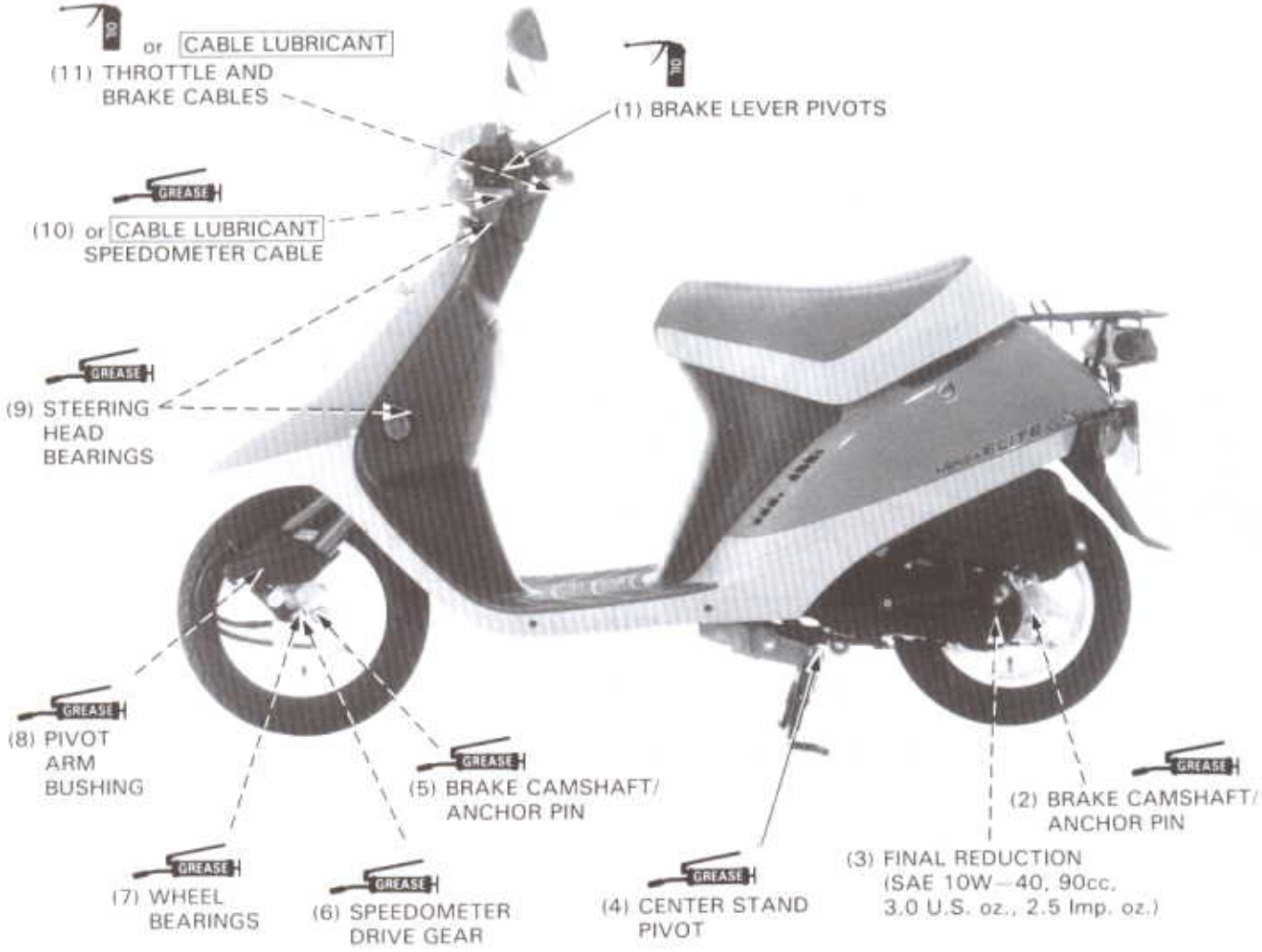
LUBRICATION POINTS

ENGINE

LUBRICATION POINTS	LUBRICANT	REMARKS
Piston/crankshaft	Honda 2-stroke injector oil or equivalent	
Final reduction	Honda 4-stroke oil SAE 10W—40 or equivalent	90cc (3.0 US oz., 2.5 Imp.oz.)
Movabl drive face ('88 thru. '93 only) (After '93; Do not use lubricant)	Lithium Based Grease Mitsubishi HD-3 Nippon Sekiyu Lipanox Deluxe 3 Idemitsu Coronex 3 or equivalent Sta-Lube HP #3141 Bel-Rey Holy Lube 126 EP #0	10—15g (0.35—0.53 oz.)
Starter gear	General purpose grease	

FRAME

Apply clean engine oil or grease to cables and parts not called out.



SERVICE INFORMATION	3-1	BRAKE SYSTEM	3-5
MAINTENANCE SCHEDULE	3-2	HEADLIGHT AIM	3-6
FUEL LINE	3-3	SUSPENSION	3-6
THROTTLE OPERATION	3-3	NUTS, BOLTS, FASTENERS	3-7
AIR CLEANER ELEMENT	3-3	WHEELS/TIRES	3-7
SPARK PLUGS	3-4	STEERING HEAD BEARINGS	3-7
CARBURETOR IDLE SPEED	3-5	COMPRESSION TEST	3-7
BRAKE SHOE WEAR	3-5	TRANSMISSION CASE	3-8

SERVICE INFORMATION

ITEM			STANDARD	
Spark plug			NGK	NIPPONDENSO
	'88 thru. '93	Standard	BPR6HSA	W20FPR-L
		For cold climate	BPR4HSA	W14FPR-L
		For extended high speed riding	BPR8HSA	W24FPR-L
	After '93	Standard	BR6HSA	W20FR-L
		For cold climate	BR4HSA	W16FR-L
		For extended high speed riding	BR8HSA	W24FR-L
Spark plug gap	0.6–0.7mm (0.024–0.028 in)			
Cylinder compression	800–1,200 kPa (8.0–12.0 kg/cm², 114–171 psi)			
Idle speed	1,800 ± 100 rpm			
Brake lever free play	Front	10–20 mm (0.04–0.80 in)		
	Rear	10–20 mm (0.04–0.80 in)		
Tire size	Front	3.00–10–4PR		
	Rear	3.00–10–4PR		
Tire pressure	Front	125 kPa (1.25 kg/cm², 18 psi)		
	Rear	225 kPa (2.25 kg/cm², 33 psi)		

MAINTENANCE SCHEDULE

I — Inspection and clean, adjust, lubricate or replace if necessary R — Replace C — Clean

ITEM / FREQUENCY		WHICHEVER COMES FIRST	ODOMETER READING (NOTE 1)					
			x1,000 mi	0.6	2.5	5	7.5	Refer to page
		EVERY	x1,000 km	1	4	8	12	
*	FUEL LINE				I	I	I	3-3
*	THROTTLE OPERATION				I	I	I	3-3
**	OIL PUMP AND OIL LINE				I	I	I	2-2
	AIR CLEANER	(NOTE 2)			C	C	C	3-3
	SPARK PLUG	(NOTE 3)	EVERY 1,000 mi (1,600 km) R					3-4
**	DECARBONIZING	(NOTE 3)	EVERY 2,000 mi (3,600 km) C					6-3, 5
*	CARBURETOR IDLE SPEED			I	I	I	I	3-5
	BRAKE SHOE WEAR				I	I	I	3-5
	BRAKE SYSTEM			I	I	I	I	3-5
*	BRAKE LIGHT SWITCH				I	I	I	17-3
*	HEADLIGHT AIM				I	I	I	3-6
**	CLUTCH SHOE WEAR					I		8-9
*	SUSPENSION				I	I	I	3-6
*	NUTS, BOLTS, FASTENERS			I		I		3-7
**	WHEELS/TIRES				I	I	I	3-7, 12-5, 13-2
**	STEERING HEAD BEARINGS			I			I	3-7

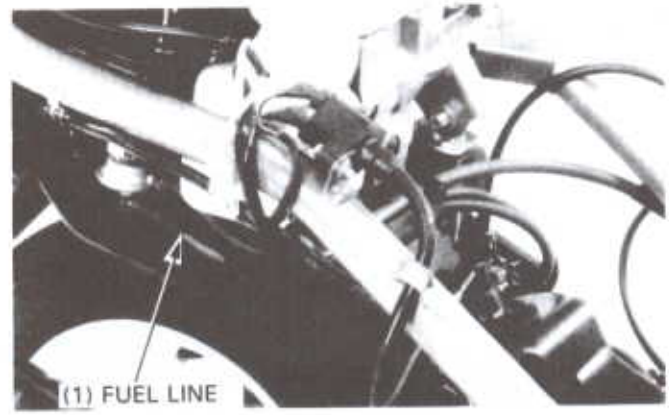
* SHOULD BE SERVICED BY AN AUTHORIZED HONDA DEALER UNLESS THE OWNER HAS PROPER TOOLS AND SERVICE DATA, AND IS MECHANICALLY QUALIFIED.
** IN THE INTEREST OF SAFETY, WE RECOMMENDED THESE ITEMS BE SERVICED ONLY BY AN AUTHORIZED HONDA DEALER.

NOTES: 1 At higher odometer reading, repeat at the frequency tested in and recommended for this engine.
2 Service more frequently when riding in wet or dusty area.
3 HONDA 2 STROKE MOTORCYCLE OIL has been specifically tested in and exhaust system, resulting in loss of power and possible engine damage.

FUEL LINE

Remove both frame rear covers (page 11-3).
Inspect the fuel line for damage or deterioration.
Check that the fuel line is intact and has clamps at each connection.

Replace any parts that are damaged, leaking or show signs of deterioration.

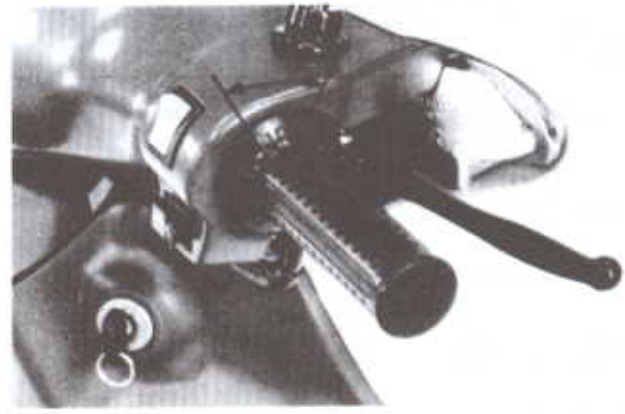


THROTTLE OPERATION

Check for smooth throttle grip full opening and automatic full closing in all steering positions.
Make sure there is no deterioration, damage or kinking in the throttle cable.

Replace any damaged parts.

Remove the front and rear handlebar covers (page 11-5).



Disconnect the throttle cable upper end.
Thoroughly lubricate the cable with a commercially available cable lubricant or grease.

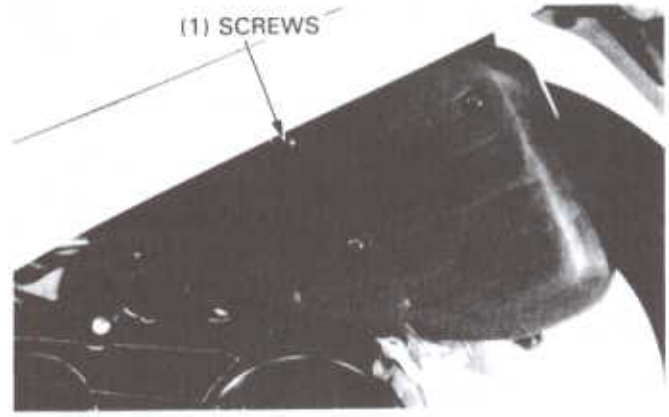
Install the throttle cable in the reverse order of removal.

Measure the throttle grip free play at the throttle grip flange.

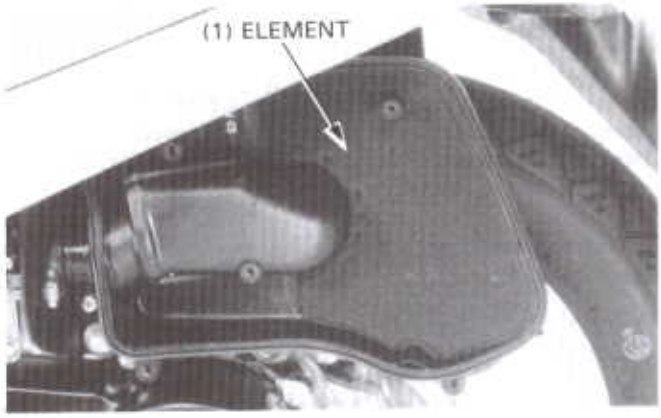
FREE PLAY: 2—6 mm (1/8—1/4 in)

AIR CLEANER ELEMENT

Remove the five air cleaner case cover screws and remove cover.



Remove the air cleaner element.



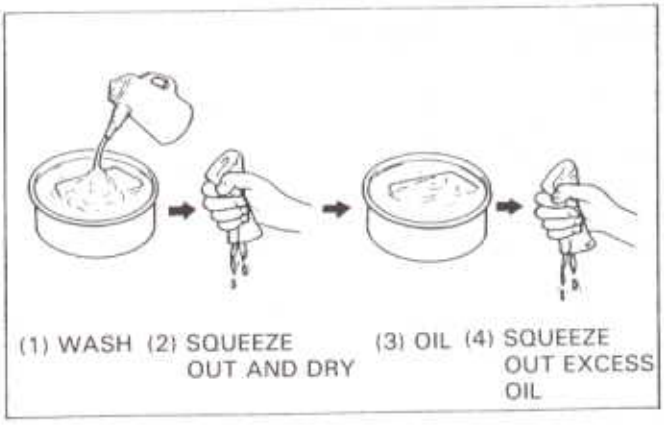
Wash the element in non-flammable or high flash point solvent, squeeze out and allow to dry.

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 excess.

Reinstall the element, and the air cleaner case cover.



SPARK PLUG

RECOMMENDED SPARK PLUGS:

	NGK	ND
Standard	BPR6HSA	W20FPR-L
For cold climate	BPR6HSA	W14EPR-L
For extended high speed riding	BPR8HSA	W24FPR-L

Loosen the screw and open the maintenance lid.
Disconnect the spark plug cap and clean any dirt from around the spark plug base.

Remove and discard the spark plug.

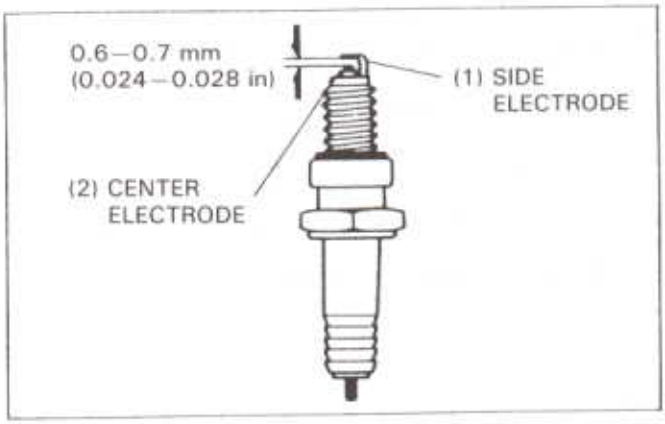
Measure the new spark plug gap using a wire-type feeler gauge.

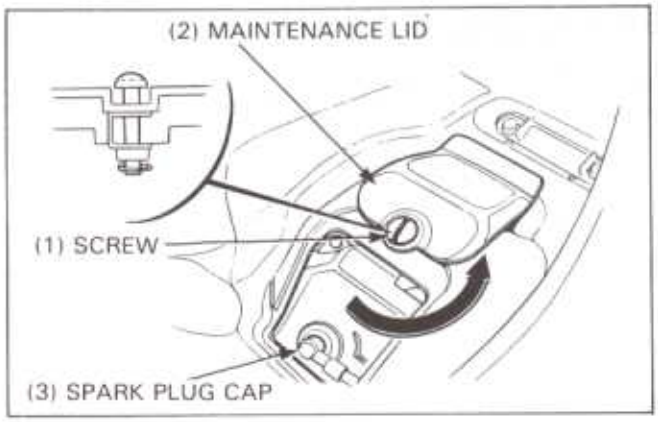
SPARK PLUG GAP: 0.6—0.7 mm (0.024—0.028 in)

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

TORQUE: 14 N·m (1.4 kg-m, 10 ft-lb)

Connect the spark plug cap.





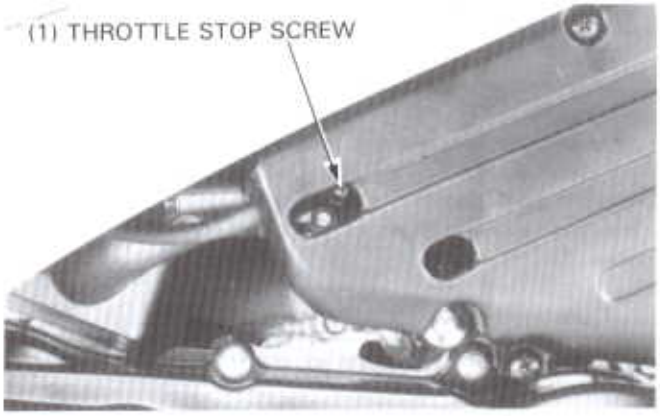
CARBURETOR IDLE SPEED

Place the scooter on firm, level ground.

Warm up the engine and attach an engine tachometer.

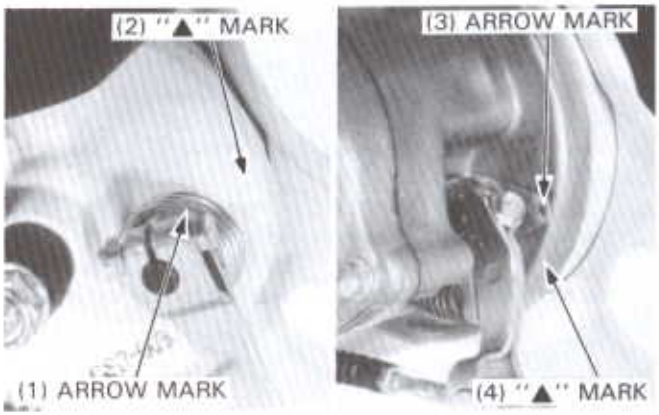
Adjust the idle speed with the throttle stop screw.

IDLE SPEED: 1,800 ± 100 rpm



BRAKE SHOE WEAR

Replace the brake shoes if the arrow on the brake arm aligns with the reference mark "▲" on full application of the front or rear brake (pages 12-7, 13-3).

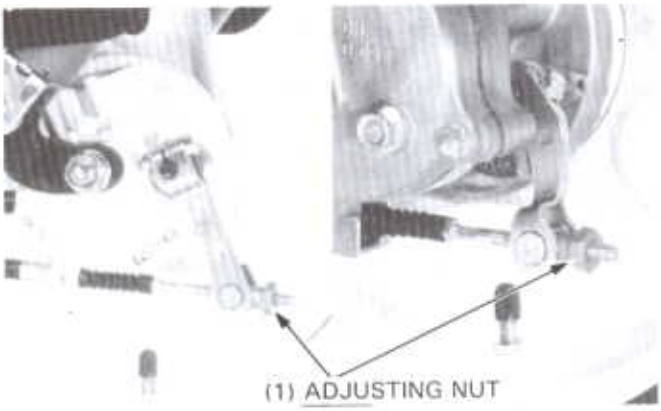


BRAKE SYSTEM

Measure the front and rear brake lever free play at the end of the levers.

FREE PLAY:
FRONT: 10–20 mm (0.40–0.80 in)
REAR: 10–20 mm (0.40–0.80 in)

If adjustment is necessary, turn the brake adjusting nut.



HEADLIGHT AIM

Place the scooter on firm, level ground and support it with the center stand.
Start the engine and allow it to idle.
Make sure that the headlight and taillight are on.
Check the operation of the headlight dimmer (Lo-Hi) switch.
Adjust the headlight beam by turning the horizontal adjusting screws.

CAUTION

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


(1) ADJUSTING SCREWS

SUSPENSION

FRONT

Check the action of the front suspension by compressing them several times.
Check the entire fork assembly for signs of damage.
Replace any components which cannot be repaired.

Tighten all nuts and bolts to the specified torque values (page 1-5).

REAR

Check the operation of the shock absorber by pressing down on the end of the frame several times.

Place the scooter on its center stand.

Hold the rear carrier with one hand and move the left crankcase sideways with force to see if the swingarm bushings are worn. Replace if excessively worn.
Check the entire suspension assembly. Be sure it is securely mounted and not damaged.

Tighten all nuts and bolts to the specified torque value (page 1-5).

NUTS, BOLTS, FASTENERS

Tighten bolts, nuts and fasteners at the regular intervals shown in the Maintenance Schedule (page 3-2).

Check that all chassis nuts and bolts are tightened to their correct torque values (page 1-5).
Check that all cotter pins and safety clips are in place.

WHEELS/TIRES

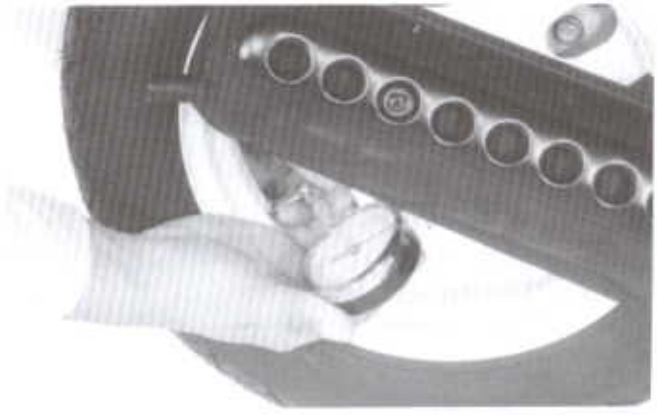
NOTE

- Check the tire pressures when the tires are COLD.

TIRE PRESSURES:
FRONT: 125 kPa (1.25 kg/cm², 18 psi)
REAR: 225 kPa (2.25 kg/cm², 33 psi)

TIRE SIZES:
FRONT: 3.00—10—4PR
REAR: 3.00—10—4PR

Check the tires for wear, damage or embedded objects.



STEERING HEAD BEARINGS

NOTE

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

Raise the front wheel off the ground by placing a block or jack under the floorboard.
Check that the handlebar rotates freely.
If the handlebar moves unevenly, binds, or has vertical movement, adjust the steering head bearings by turning the steering head adjusting nut (page 12-14).

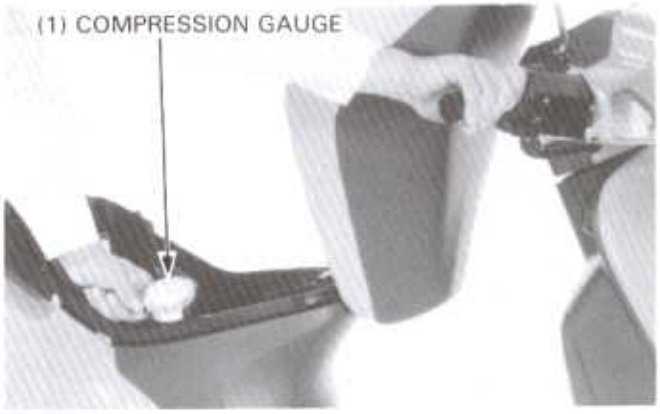
COMPRESSION TEST

Raise the seat.
Open the spark plug maintenance lid.
Warm up the engine.
Stop the engine and remove the spark plug.
Insert a compression gauge.
Open the throttle grip fully and operate the starter motor several times.

COMPRESSION: 800—1,200 kPa
(8.0—12.0 kg/cm², 114—171 psi)

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

High compression can be caused by:
- Carbon deposits in combustion chamber or on top of the piston.



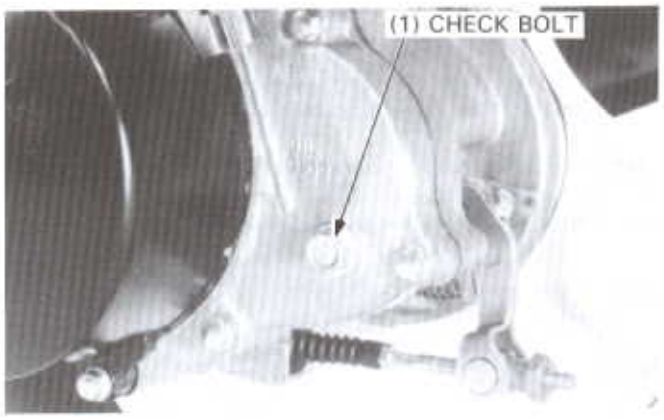
TRANSMISSION CASE

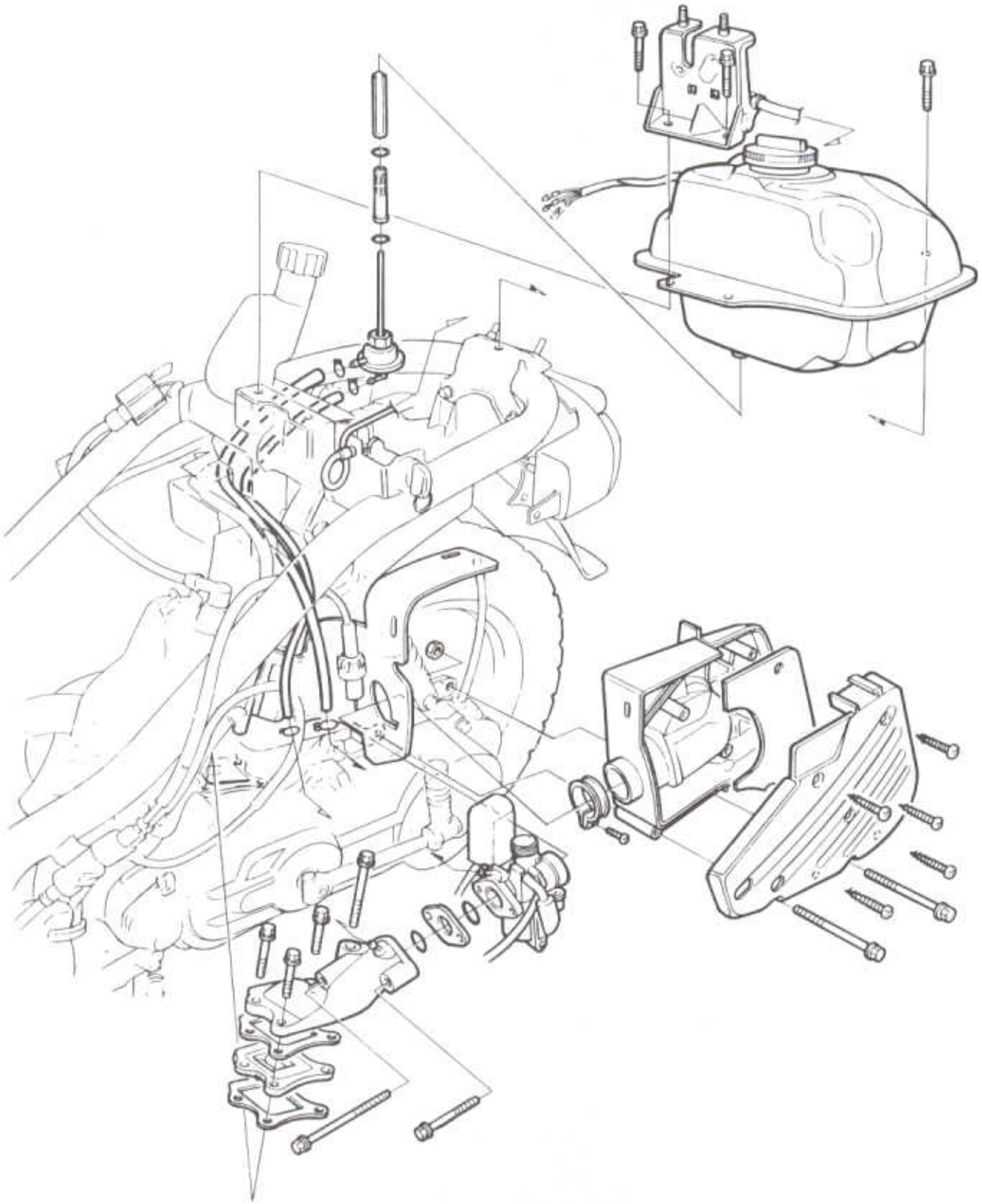
NOTE

- Place the scooter on firm, level ground and support it with the center stand.

Start the engine and let it idle for a few minutes.
Stop the engine, remove the oil level check bolt and check that the oil level is at the bottom edge of the oil level check bolt hole.

Check the transmission case for oil leakage.





SERVICE INFORMATION	4-1	THROTTLE VALVE INSTALLATION	4-8
TROUBLESHOOTING	4-2	REED VALVE	4-9
THROTTLE VALVE DISASSEMBLY	4-3	AIR SCREW ADJUSTMENT	4-11
CARBURETOR REMOVAL	4-4	HIGH ALTITUDE ADJUSTMENT (U.S.A. only)	4-11
AUTO BYSTARTER	4-4	AUTO FUEL VALVE INSPECTION/ MAINTENANCE	4-12
FLOAT/FLOAT VALVE/JETS DISASSEMBLY	4-6	FUEL STRAINER CLEANING	4-13
JETS/FLOAT VALVE/FLOAT ASSEMBLY	4-7	FUEL TANK	4-13
FLOAT LEVEL INSPECTION	4-8	AIR CLEANER CASE	4-14
CARBURETOR INSTALLATION	4-8		

SERVICE INFORMATION

GENERAL

WARNING

- *Gasoline is extremely flammable and is explosive under certain conditions. Work in a well-ventilated area with the engine stopped. Do not smoke or allow open flames or sparks in the work area or where gasoline is stored.*

CAUTION

- *Do not bend or twist control cables. Damaged control cables will not operate smoothly and may stick or bind.*

- The fuel tank is equipped with an auto fuel valve that is turned OFF automatically when the engine is stopped.
- Use caution when working with gasoline. Always work in a well-ventilated area and away from sparks or flames.
- When disassembling fuel system parts, note the locations of the O-rings. Replace them with new ones during assembly.
- Bleed air from the oil outlet line whenever it is disconnected.

SPECIFICATIONS

ITEM		SPECIFICATIONS
Identification number	'88–'93	PA31M
	After '93	SA50: PA35J SA50P: PA35K
Type		Piston valve
Venturi diameter		14 mm (0.55 in)
Float level		12.2 mm (0.48 in)
Air screw opening	'88–'93	1-3/8 turns out
	After '93	SA50: 1-7/8 turns out SA50P: 1-3/4 turns out
Idle speed		1,800 ± 100 rpm
Main jet	'88–'93	#88
	After '93	SA50: #78 SA50P: #68
Slow jet		#35
Throttle grip free play		2–6 mm (1/8–1/4 in)
Jet needle		2nd groove