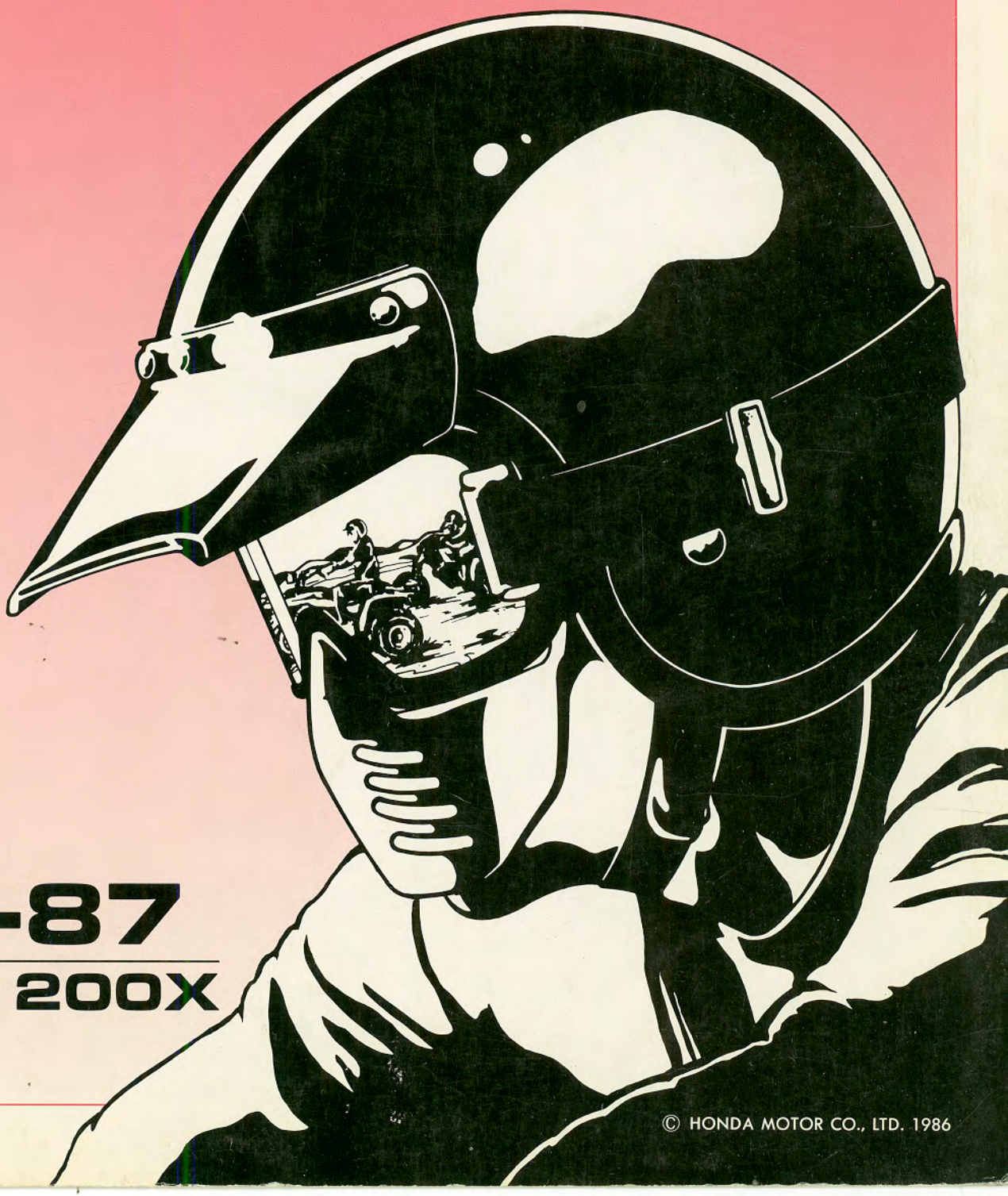
HONDA

SERVICE MANUAL



86-87

ATC® 200X

IMPORTANT SAFETY NOTICE

WARNING *Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.*

CAUTION: *Indicates a possibility of personal injury or equipment damage if instructions are not followed.*

NOTE: Gives helpful information.

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. It is important to note that this manual contains some warnings and cautions against some specific service methods which could cause **PERSONAL INJURY** to service personnel or could damage a vehicle or render it unsafe. Please understand that those warnings could not cover all conceivable ways in which service, whether or not recommended by Honda might be done or of the possibly hazardous consequences of each conceivable way, nor could Honda investigate all such ways.

Anyone using service procedures or tools, whether or not recommended by Honda *must satisfy himself thoroughly* that neither personal safety nor vehicle safety will be jeopardized by the service method or tools selected.

HOW TO USE THIS MANUAL

Sections 1 through 3 apply to the whole ATC, while sections 4 through 16 describe parts of the ATC, 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 and all the required specifications, torque values, general instructions, tools and troubleshooting for the section. The subsequent pages give detailed procedures.

If you don't know what the source of a problem is, refer to section 17, TROUBLESHOOTING.

CONTENTS

Date of Issue: July, 1986

1. GENERAL INFORMATION

GENERAL SAFETY

WARNING

If the engine must be running to do some work, make sure that area is well-ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and lead to death.

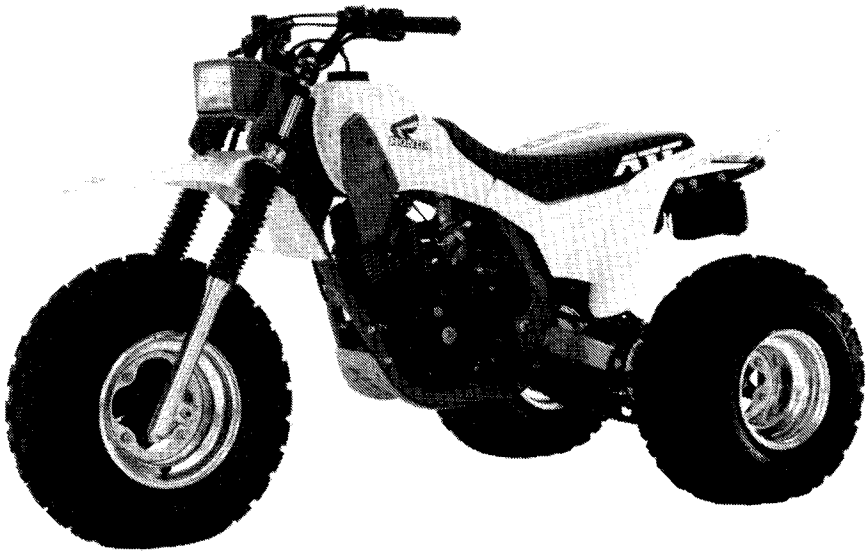
WARNING

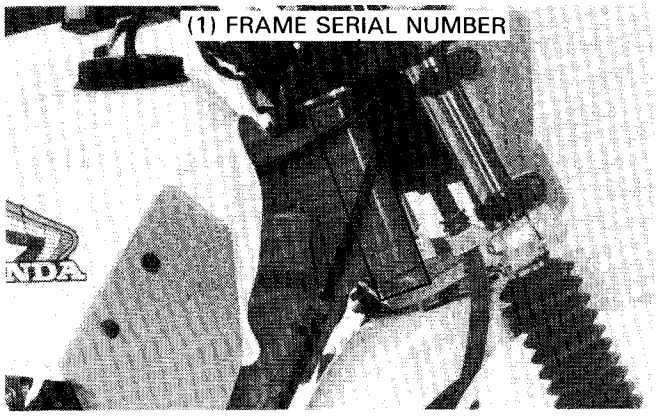
Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your work area.

SERVICE RULES

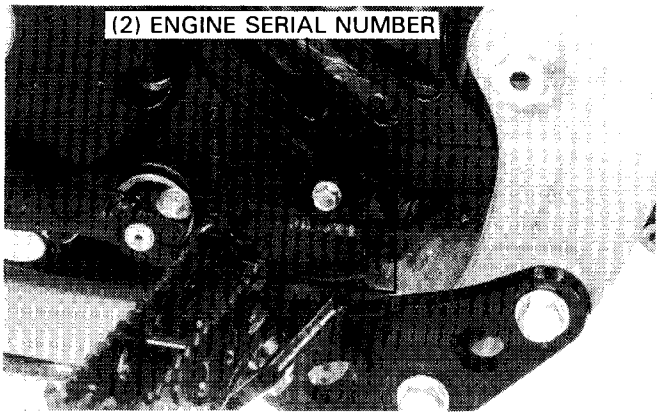
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalent. Parts that don't meet HONDA's design specifications may cause damage to the ATC.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing this ATC. Metric bolts, nuts, and screws are not interchangeable with English fasteners.
4. Install new gasket, O-rings, cotter pins, lock plates, etc. when reassembling.
5. When tightening bolts or nuts, begin with the larger-diameter or inner bolt first. Then 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.
7. Lubricate any sliding surfaces before reassembly.
8. After reassembly, check all parts for proper installation and operation.

MODEL IDENTIFICATION

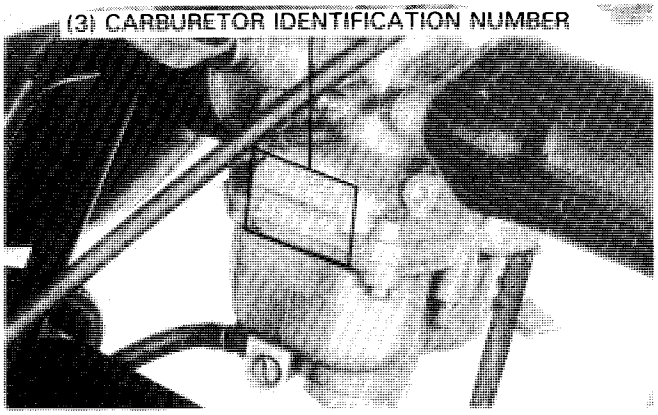




The frame serial number is stamped on the right side of the steering head.



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



The carburetor identification number is on the carburetor body right side.

SPECIFICATIONS

DIMENSIONS	Overall length		1,860 mm (73.2 in)
	Overall width		1,080 mm (42.5 in)
	Overall height		1,050 mm (41.3 in)
	Wheel base		1,210 mm (47.6 in)
	Rear tread		830 mm (32.7 in)
	Seat height		730 mm (28.7 in)
	Footpeg height		320 mm (12.6 in)
	Ground clearance		120 mm (4.7 in)
	Dry weight		126 kg (278 lb)
FRAME	Type		Semi-double cradle
	Front suspension, travel		Telescopic air fork, 195 mm (7.7 in)
	Rear suspension, travel		Swingarm, 185 mm (7.3 in)
	Rim size	Front	11 in
		Rear	9 in
	Front tire size, pressure		23.5 x 8—11, 25 kPa (0.25 kg/cm², 3.6 psi)
	Rear tire size, pressure		'86: 22 x 10—9, 17 kPa (0.17 kg/cm², 2.5 psi)
			After '86: 22 x 10—9, 17.5 kPa (0.175 kg/cm², 2.5 psi)
	Front brake		Single disc
	Rear brake		Single disc
	Fuel tank capacity		10.5 lit (2.78 US gal, 2.31 Imp gal)
	Fuel reserve capacity		1.5 lit (0.40 US gal, 0.33 Imp gal)
	Caster		21°30'
	Trail		30 mm (1.2 in)
	Front fork oil capacity		'86: 216—221 cc (7.3—7.5 US oz)
			After '86: 226—231 cc (7.6—7.8 US oz)
ENGINE	Type		Gasoline, air-cooled 4-stroke
	Cylinder arrangement		Single cylinder inclined 25°
	Bore x stroke		65.0 x 60.0 mm (2.56 x 2.36 in)
	Displacement		199 cm³ (12.14 cu in)
	Compression ratio		9.5:1
	Valve train		Overhead camshaft chain drive
	Maximum horsepower		19 ps/7,500 rpm
	Maximum torque		'86: 1.9 kg-m/6,000 rpm
			After '86: 1.9 kg-m/6,500 rpm
	Oil capacity		1.8 lit (1.90 US qt, 1.59 Imp qt) at disassembly
			1.5 lit (1.59 US qt, 1.32 Imp qt) after draining
	Lubrication system		Forced pressure and wet sump
	Cylinder compession		1,300 ± 100 kPa
			(13.0 ± 1 kg/cm², 184.7 ± 14.2 psi)
	Intake valve	Opens	8° BTDC — at 1 mm lift
		Closes	35° ABDC — at 1 mm lift
	Exhaust valve	Opens	40° BBDC — at 1 mm lift
		Closes	5° ATDC — at 1 mm lift
	Valve clearance	IN (cold)	0.08 mm (0.003 in)
		EX (cold)	0.08 mm (0.003 in)

		'86		After '86
CARBURETOR	Identification number	PD64A [A]	PD64A [B], [C]	PD3AA [A]
	Type	Piston valve	←	←
	Venturi diameter	24 mm (0.94 in)	←	←
	Main jet	#122	#112	←
	Pilot screw opening	2 turns out	←	←
	Jet needle	2nd groove	3rd groove	←
	Float level	14.0 ± 0.5 mm (0.55 ± 0.02 in)	←	←
	Idle speed	1,400 ± 100 rpm	←	←
DRIVE TRAIN	Clutch	Wet multi-plate		
	Transmission	6-speed constant mesh		
	Primary reduction	3.087:1		
	Gear ratio I	3.455:1		
	Gear ratio II	2.333:1		
	Gear ratio III	'86: 1.778:1 After '86: 1.750:1		
	Gear ratio IV	1.450		
	Gear ratio V	1.227		
	Gear ratio VI	1.083		
	Final reduction	2.923		
	Gearshift pattern	1-N-2-3-4-5-6		
	Drive chain size/links	520/86		
ELECTRICAL	Ignition system	CDI		
	Initial ignition timing ("F" mark)	10° BTDC at 1,400 ± 100 rpm		
	Full advance ("II" mark)	28° BTDC at 3,500 ± 200 rpm		
	Alternator	AC generator 135W/5,000 rpm		
	Spark plug	NGK: DR8ES-L ND: X24ESR-U		
	Spark plug gap	0.6—0.7 mm (0.024—0.028 in)		
	Headlight	12V 60/55W		
	Taillight	'86: 12V 5W After '86: 12V 8W		

TORQUE VALUES

ENGINE

[ ]: '86

Item	Thread dia. (mm)	Torque		
		N·m	kg-m	ft-lb
Oil drain bolt	12	35—40	3.5—4.0	25—29
Fuel strainer cup	24	3—5	0.3—0.5	2.2—3.6
Valve adjuster lock bolt	6	10—14	1.0—1.4	7.2—10
Fuel valve lock nut	16	20—25	2.0—2.5	15—18
Carburetor mounting nut	6	6—9	0.6—0.9	4.3—6.5
Drive sprocket bolt	6	10—14	1.0—1.4	7.2—10
Exhaust pipe joint nut	6	10—14	1.0—1.4	7.2—10
Exhaust pipe clamp bolt	8	18—28	1.8—2.8	13—20
Exhaust muffler mounting bolt	[8]	[40—45]	[4.0—4.5]	[29—33]
	10	60—70	6.0—7.0	43—51
Cylinder head cover bolt	6	10—14	1.0—1.4	7.2—10
Cylinder head cap nut	6	10—14	1.0—1.4	7.2—10
Cylinder head nut	8	28—30	2.8—3.0	20—22
Breather cover bolt	6	10—14	1.0—1.4	7.2—10
Kick starter arm pinch bolt	8	30—35	3.0—3.5	22—25
Clutch center lock nut	14	50—60	5.0—6.0	36—43
Oil filter rotor lock nut	16	50—60	5.0—6.0	36—43
Drum stopper bolt	6	10—14	1.0—1.4	7.2—10
Shifter plate bolt	6	10—14	1.0—1.4	7.2—10
Gearshift pedal bolt	6	14—18	1.4—1.8	10—13
Flywheel bolt	8	45—55	4.5—5.5	33—40
Camshaft bearing holder bolt	6	10—14	1.0—1.4	7.2—10
Crankcase bolt	6	10—14	1.0—1.4	7.2—10
Camshaft inspection hole cap	14	2.5—4.5	0.25—0.45	1.8—3.3

FRAME

Item	Thread dia. (mm)	Torque		
		N·m	kg-m	ft-lb
Drive chain adjuster lock bolts	8	18—24	1.8—2.4	13—17
Parking brake adjusting lock nut	8	15—20	1.5—2.0	11—15
Top engine hanger plate bolt	8	24—30	2.4—3.0	17—22
	10	60—70	6.0—7.0	43—51
Front engine hanger plate bolt	8	30—36	3.0—3.6	22—26
	10	60—70	6.0—7.0	43—51
Rear engine hanger plate bolt	8	30—36	3.0—3.6	22—26
	10	60—70	6.0—7.0	43—51
Engine lower mounting bolt	10	60—70	6.0—7.0	43—51
Footpeg bolt	10	60—70	6.0—7.0	43—51
Handlebar upper holder bolt	8	18—30	1.8—3.0	13—22
Brake disc nut (front, rear)	8	20—30	2.0—3.0	15—22
Engine guard plate bolt	8	30—35	3.0—3.5	22—25

Item	Thread dia. (mm)	Torque		
		N·m	kg-m	ft-lb
Front axle	14	70–110	7.0–11.0	51–80
Front axle holder nut	6	10–14	1.0–1.4	7.2–10
Wheel nut (front, rear)	10	60–70	6.0–7.0	43–51
Fork tube cap bolt	28	15–30	1.5–3.0	11–22
Fork socket bolt	8	15–25	1.5–2.5	11–18
Fork pinch bolt	8	18–25	1.8–2.5	13–18
Brake hose stay nut	8	24–30	2.4–3.0	17–22
Brake hose clamp bolt	6	10–14	1.0–1.4	7.2–10
Fork boot band screw	3	0.6–0.12	0.06–0.12	0.4–0.9
Steering bearing adjustment nut (initial)	26	25–35	2.5–3.5	18–25
(final)		7–8	0.7–0.8	5.1–5.8
Steering stem nut	24	90–120	9.0–12.0	65–87
Rear axle outer lock nut	40	80–100	8.0–10.0	58–72
Rear axle inner lock nut	40	100–120	10.0–12.0	72–87
Driven sprocket nut	8	30–40	3.0–4.0	22–29
Rear axle nut	18	120–170	12.0–17.0	87–123
Bearing holder stopper bolt	8	8–11	0.8–1.1	5.8–8.0
Shock absorber mounting bolt (upper, lower)	10	40–50	4.0–5.0	29–36
Swing arm pivot bolt	14	70–110	7.0–11.0	51–80
Shock absorber adjusting lock nut	54	80–100	8.0–10.0	58–72
Air bleed valve (front, rear)	8	4–7	0.4–0.7	3–5
Brake pad pin bolt (front, rear)	8	15–20	1.5–2.0	11–15
Caliper mounting bolt (front, rear)	8	20–30	2.0–3.0	15–22
Caliper socket bolt (front, rear)	8	15–20	1.5–2.0	11–15
Oil bolt	10	25–35	2.5–3.5	18–25
Shock absorber oil hose joint bolt	10	20–25	2.0–2.5	15–18
Parking brake base bolt	8	20–25	2.0–2.5	15–18
Rear master cylinder mounting bolt	6	10–14	1.0–1.4	7.2–10
Steering stop cover	4	1–2	0.1–0.2	0.7–2.9

Torque specifications listed above are for specific tightening points. If a torque specification is not listed, follow the standards given below.

STANDARD TORQUE VALUES

Type	Torque N·m (kg-m, ft-lb)	Type	Torque N·m (kg-m, ft-lb)
5 mm bolt, nut	4.5–6.0 (0.45–0.6, 3.3–4.3)	5 mm screw	3.5–5.0 (0.35–0.5, 2.5–3.6)
6 mm bolt, nut	8–12 (0.8–1.2, 6–9)	6 mm screw, SH bolt	7–11 (0.7–1.1, 5–8)
8 mm bolt, nut	18–25 (1.8–2.5, 13–18)	6 mm flange bolt, nut	10–14 (1.0–1.4, 7–10)
10 mm bolt, nut	30–40 (3.0–4.0, 22–29)	8 mm flange bolt, nut	24–30 (2.4–3.0, 17–22)
12 mm bolt, nut	50–60 (5.0–6.0, 36–43)	10 mm flange bolt, nut	35–45 (3.5–4.5, 25–32)

TOOLS

SPECIAL

DESCRIPTION	NUMBER	ALTERNATIVE TOOL	NUMBER	REF. SEC.
Valve guide reamer, 5.5 mm	07984—2000000	Valve guide reamer	07984—200000A	6
Clutch center holder	07923—9580000			8
Universal bearing puller	07631—0010000	Commercially available in U.S.A.		10
Assembly collar	07965—VM00100			10
Assembly shaft	07965—VM00200	Assembly shaft	07931—ME4000A	10
Thread adaptor	07GMF—HB50100	Thread adapter	07965—HB3000A	10
Bearing remover set, 15 mm	07936—KC10000	Not available in U.S.A.		10
—Bearing remover, 15 mm	07936—KC10500			10
—Remover weight	07741—0010201	Remover weight	07936—3710200	10
Attachment	07946—6920100			10
Snap ring pliers	07914—3230001	Commercially available in U.S.A.		11, 14
Steering stem socket	07916—3710100			11
Ball race remover	07953—3330000			11
Ball race driver	07946—3290000			11
Steering stem driver	07946—4300101	Steering stem driver	07946—MB00000	11
Universal bead breaker	GN-AH-958-BB1	U.S.A. only	with GN-HT-54	11
Lock nut wrench, 45 mm (2 pieces)	07916—1870101	Commercially available in U.S.A.		12
Bearing remover set, 20 mm	07936—3710001	Not available in U.S.A.		13
—Spindle assy, 20 mm	07936—3710600			
—Remover handle	07936—3710100			
—Remover weight	07741—0010201	Remover weight	07936—3710200	
Sanwa Electric Tester	07308—0020000	Kowa Tester	TH—5H	16
Kowa Digital Multimeter	07411—0020000		KS-AHM-32-003	16

COMMON

DESCRIPTION	NUMBER	ALTERNATIVE TOOL	NUMBER	REF. SEC.
Float level gauge	07401—0010000			4
Valve guide remover, 5.5 mm	07742—0010100	Valve guide remover	07942—3290100	6
Valve spring compressor	07757—0010000	Valve spring compressor	07957—3290001	6
Inner driver	07746—0020100	Not available in U.S.A.		6
Attachment, 15 mm (inner)	07746—0020200			6
Pin driver, 3 mm	07744—0010200	Commercially available in U.S.A.		8
Gear holder	07724—0010100	Not available in U.S.A.		8, 9
Rotor puller	07733—0020001	Rotor puller	07933—2160000	9
Driver	07749—0010000			
Attachment, 62 x 68 mm	07746—0010500			10, 12
Pilot, 28 mm	07746—0041100			10
Attachment, 42 x 47 mm	07746—0010300			10, 11
Pilot, 20 mm	07746—0040500			10, 13
Attachment, 32 x 35 mm	07746—0010100			10, 13
Pilot, 15 mm	07746—0040300			10, 11
Pilot, 22 mm	07746—0041000			10
Bearing remover shaft	00746—0050100	Commercially available in U.S.A.		11
Bearing remover head, 15 mm	07746—0050400			11
Tire bead breaker set	07772—0050000	Not available in U.S.A.		11
—Breaker arm compressor	07772—0050100			11
—Breaker arm	07772—0050200			11
Fork seal driver	07747—0010100	Fork seal driver	07947—3330000	11
Fork seal driver attachment (D)	07747—0010501			11
Extension	07716—0020500	Commercially available in U.S.A.		11
Lock nut wrench, 30 x 32 mm	07716—0020400			11
Pilot, 35 mm	07746—0040800			12

VALVE SEAT CUTTER

Valve seat cutters are commercially available in the U.S.A. Therefore in the U.S.A., the following cutters are not required and not available.

DESCRIPTION	TOOL NUMBER	REF. SEC.
Valve seat cutter, 27.5 mm (EX 45°)	07780–0010200	6
Valve seat cutter, 33 mm (IN 45°)	07780–0010800	6
Valve seat cutter, 28 mm (EX 32°)	07780–0012100	6
Valve seat cutter, 33 mm (IN 32°)	07780–0012900	6
Valve seat cutter, 30 mm (IN/EX 60°)	07780–0014000	6
Valve seat cutter holder, 5.5 mm	07781–0010101	6

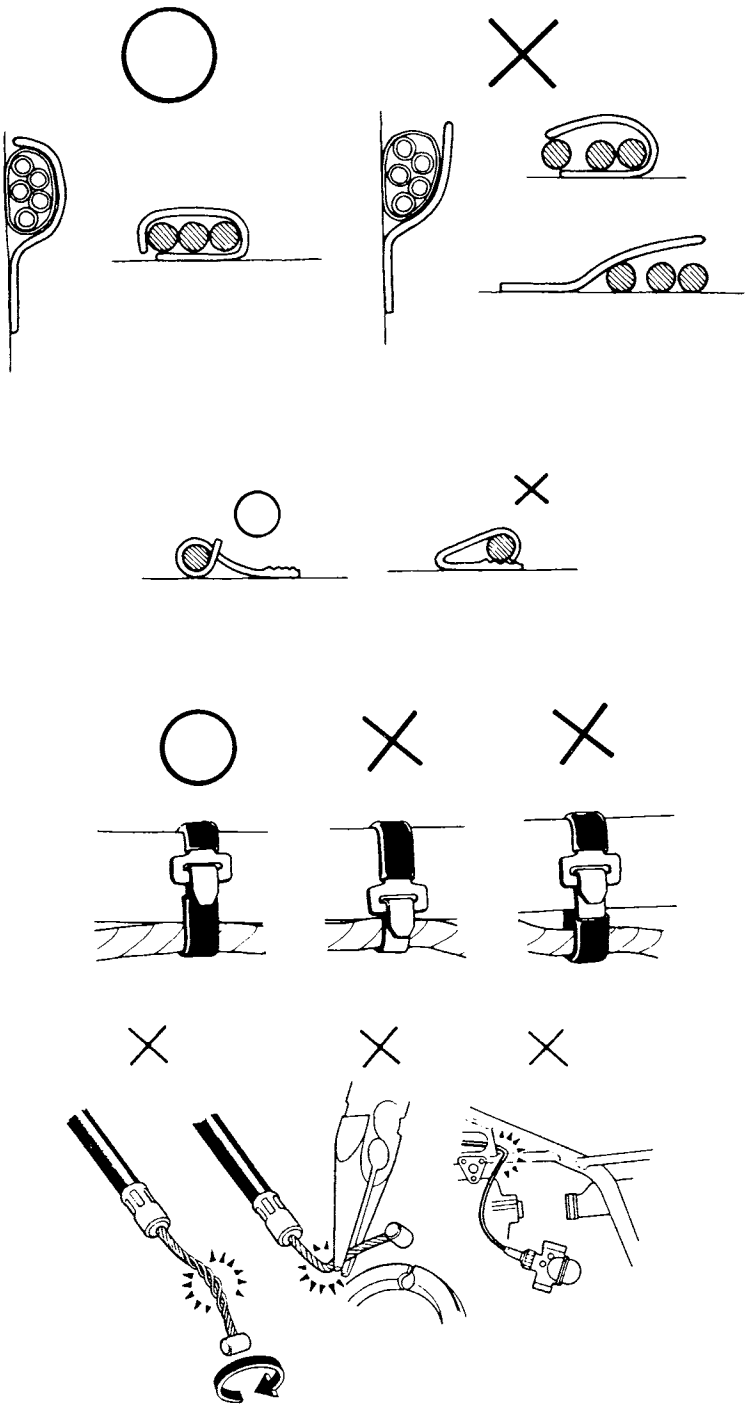
OPTIONAL TOOLS

DESCRIPTION	TOOL NUMBER	REF. SEC.
Pin spanner	89201–KA4–820	13
Pin spanner	89202–KA4–820	13

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 a 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 taut or have excessive slack.
- Protect wires and harnesses with electrical tape or tubing if they are in contact with a sharp edge or corner. Clean the attaching surface thoroughly before applying tape.
- Do not use wires or harnesses with broken insulators. Repair by wrapping them with 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 does not interfere with any moving or sliding parts.
- 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.
- 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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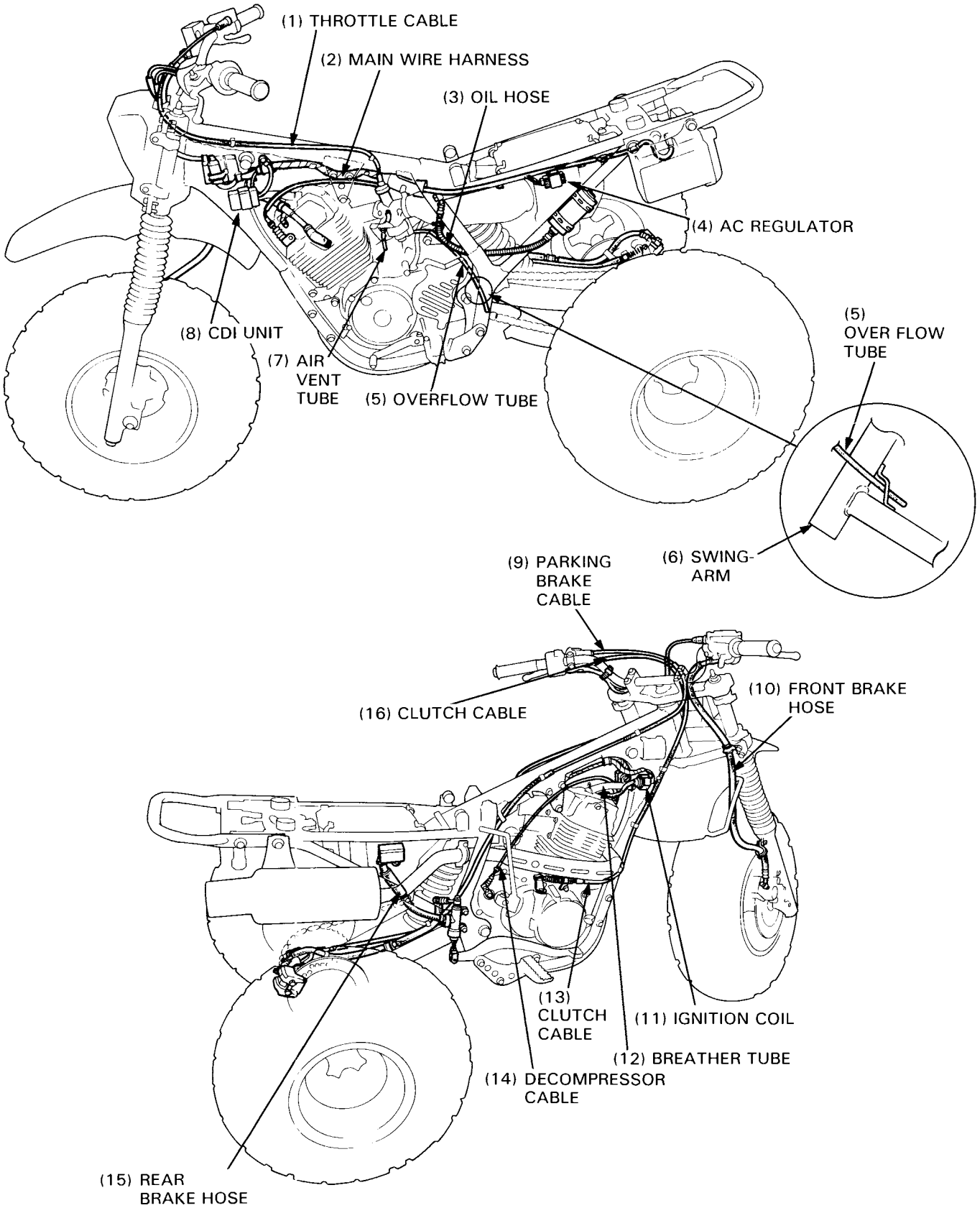
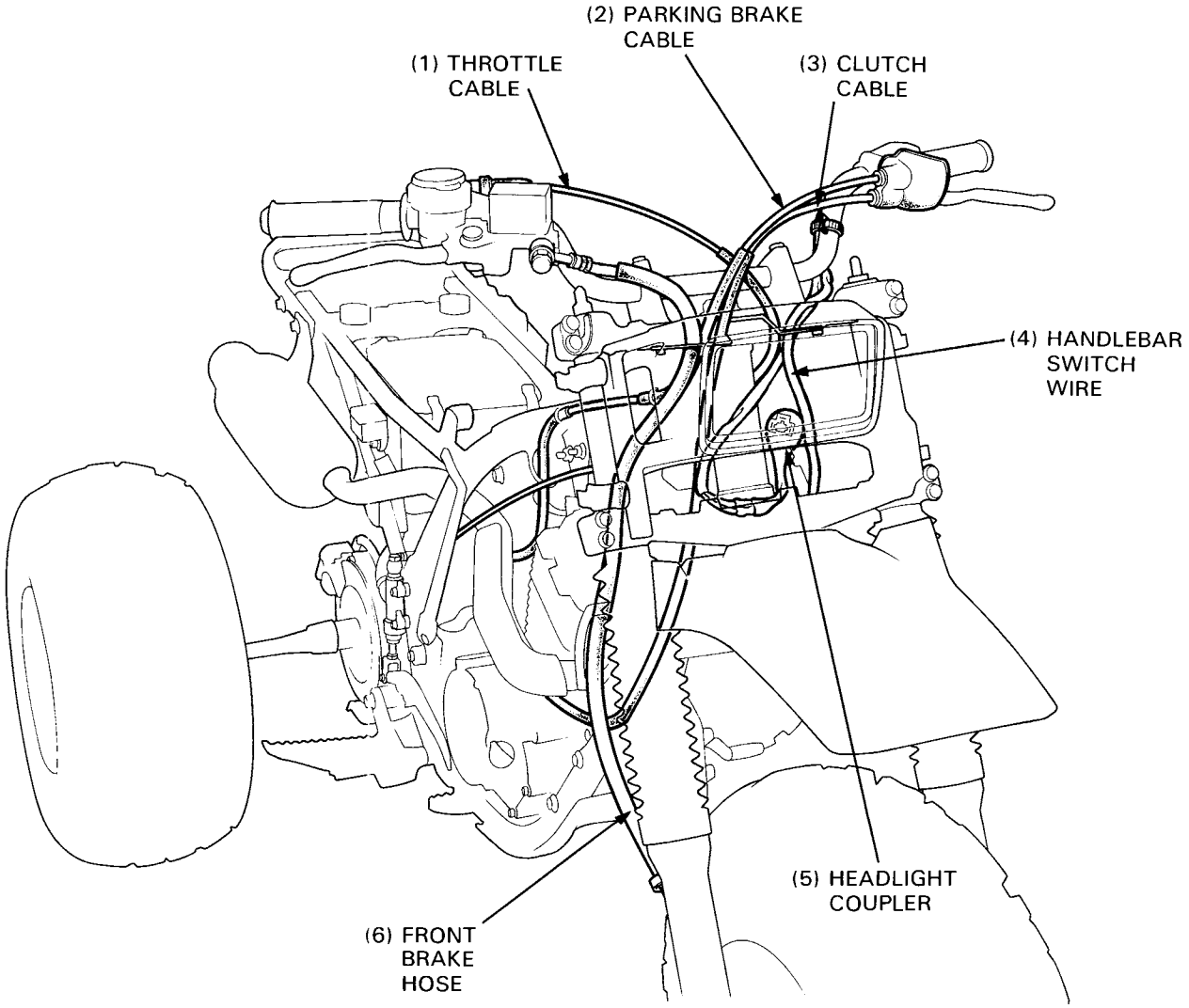
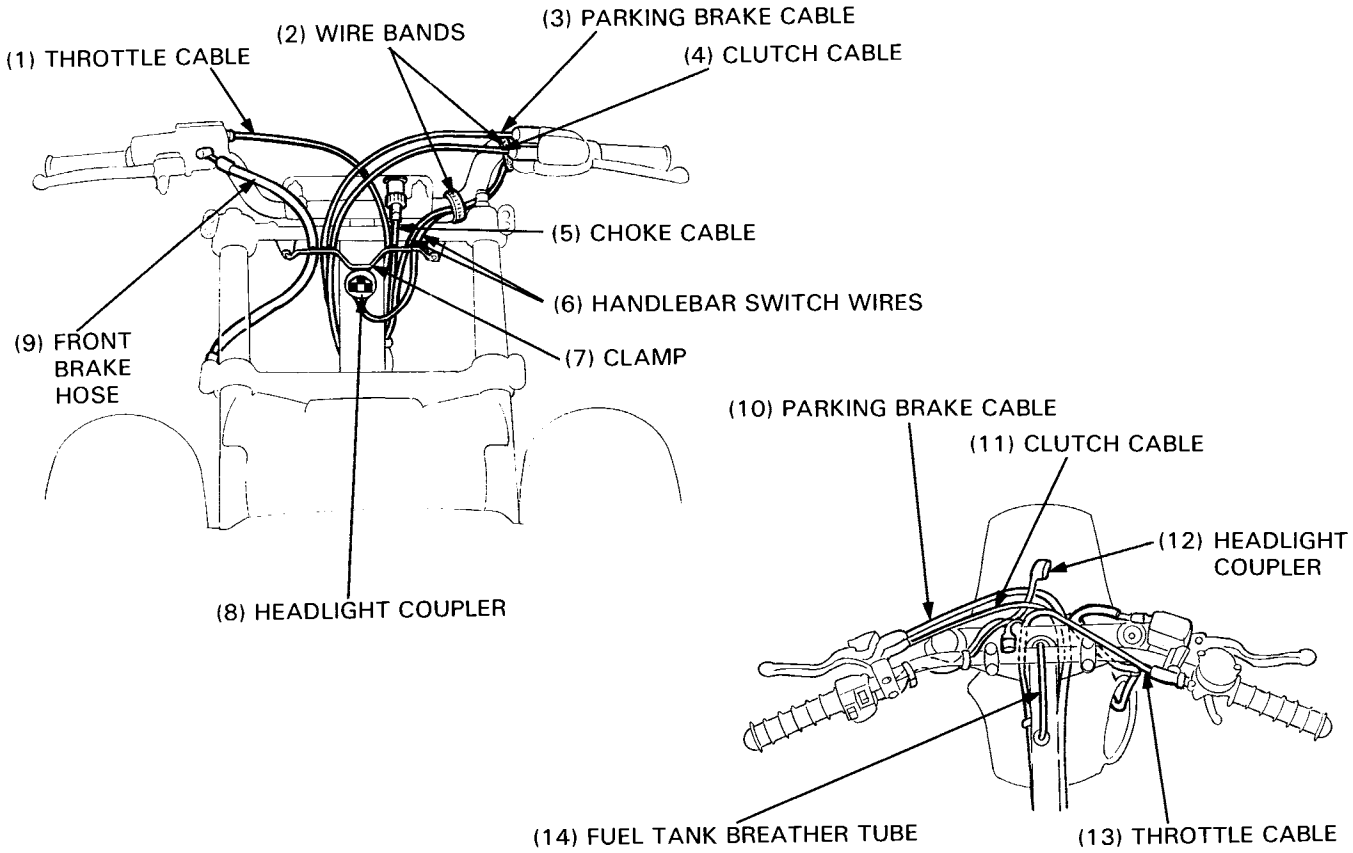

(1) THROTTLE CABLE
(2) MAIN WIRE HARNESS
(3) OIL HOSE
(4) AC REGULATOR
(5) OVER FLOW TUBE
(6) SWING-ARM
(7) AIR VENT TUBE
(8) CDI UNIT
(5) OVERFLOW TUBE
(9) PARKING BRAKE CABLE
(10) FRONT BRAKE HOSE
(11) IGNITION COIL
(12) BREATHER TUBE
(13) CLUTCH CABLE
(14) DECOMPRESSOR CABLE
(15) REAR BRAKE HOSE
(16) CLUTCH CABLE


(2) PARKING BRAKE CABLE
(1) THROTTLE CABLE
(3) CLUTCH CABLE
(4) HANDLEBAR SWITCH WIRE
(5) HEADLIGHT COUPLER
(6) FRONT BRAKE HOSE

After '86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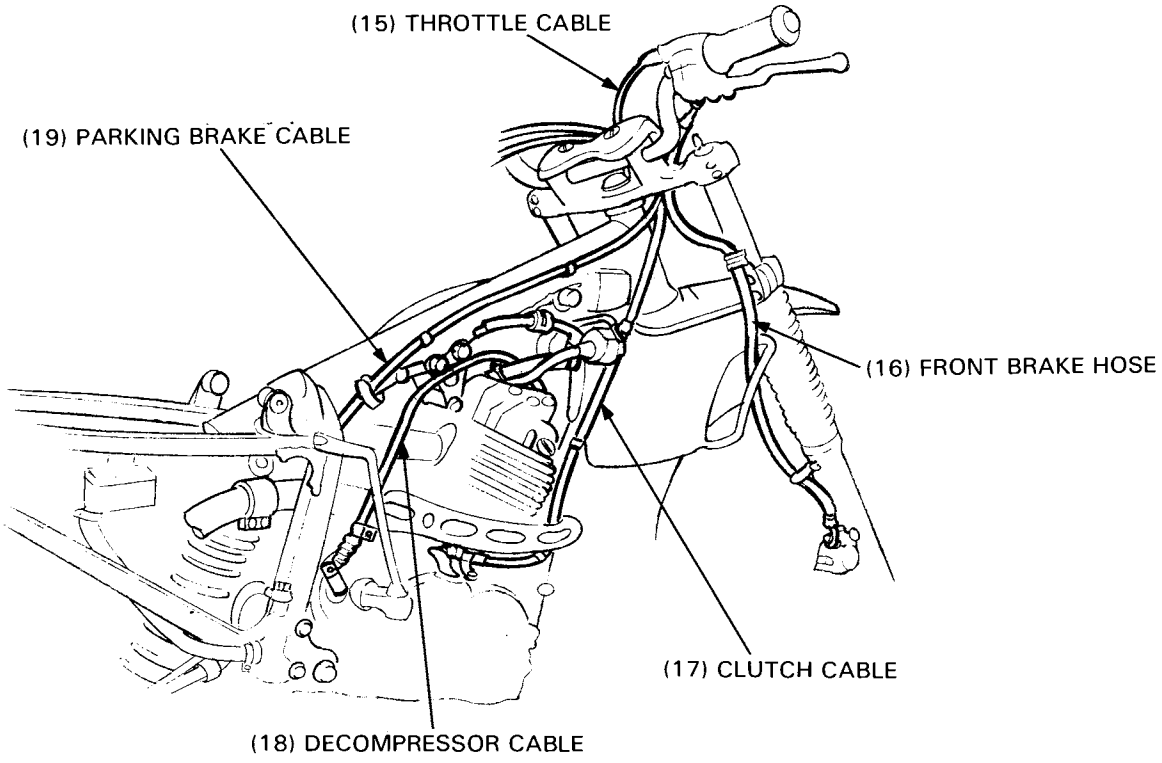
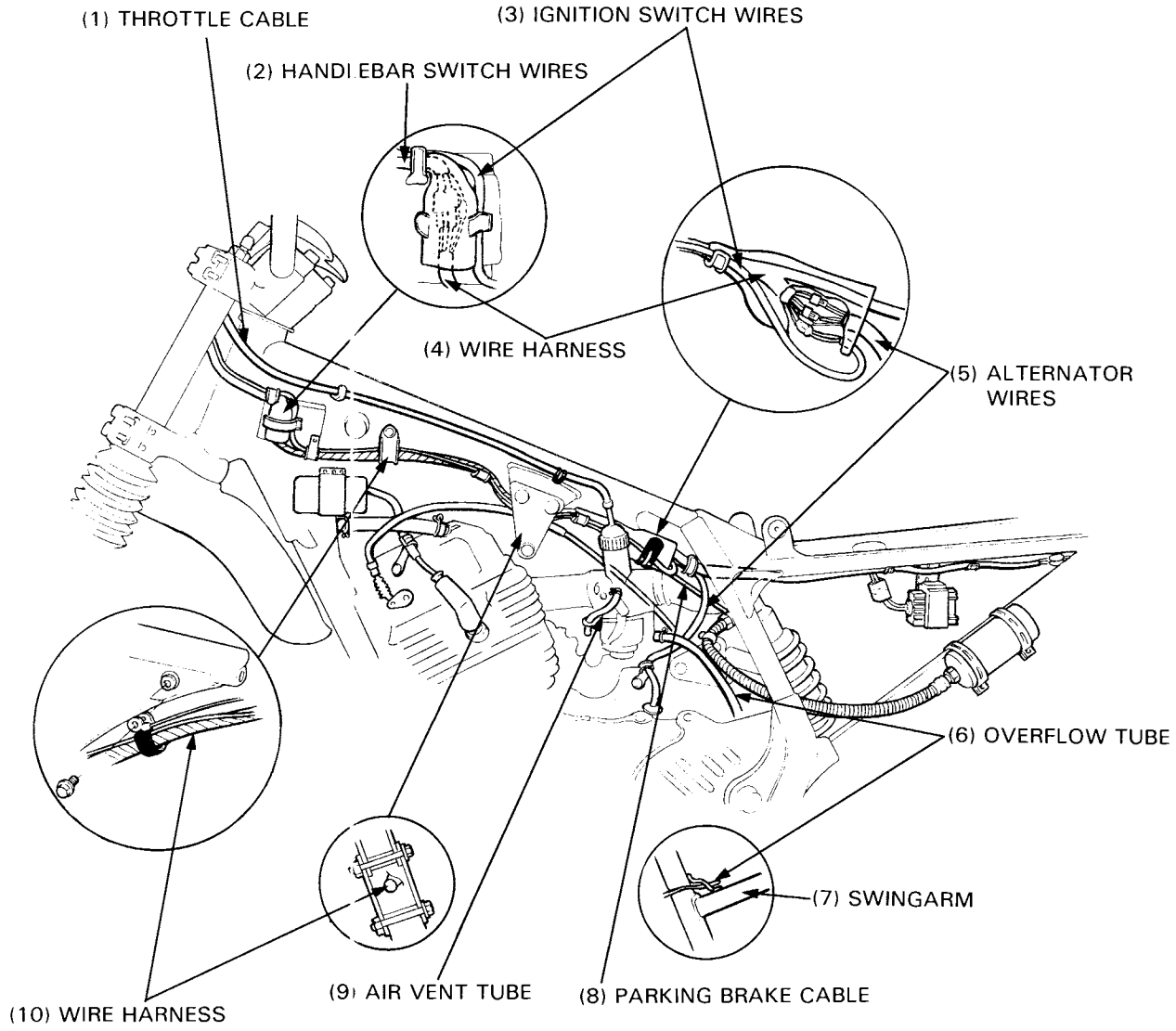
(2) WIRE BANDS
(3) PARKING BRAKE CABLE
(4) CLUTCH CABLE
(5) CHOKE CABLE
(6) HANDLEBAR SWITCH WIRES
(7) CLAMP
(8) HEADLIGHT COUPLER
(9) FRONT BRAKE HOSE
(10) PARKING BRAKE CABLE
(11) CLUTCH CABLE
(12) HEADLIGHT COUPLER
(13) THROTTLE CABLE
(14) FUEL TANK BREATHER TUBE


(15) THROTTLE CABLE
(16) FRONT BRAKE HOSE
(17) CLUTCH CABLE
(18) DECOMPRESSOR CABLE
(19) PARKING BRAKE CABLE


(1) THROTTLE CABLE
(3) IGNITION SWITCH WIRES
(2) HANDLEBAR SWITCH WIRES
(4) WIRE HARNESS
(5) ALTERNATOR WIRES
(6) OVERFLOW TUBE
(7) SWINGARM
(8) PARKING BRAKE CABLE
(9) AIR VENT TUBE
(10) WIRE HARNESS

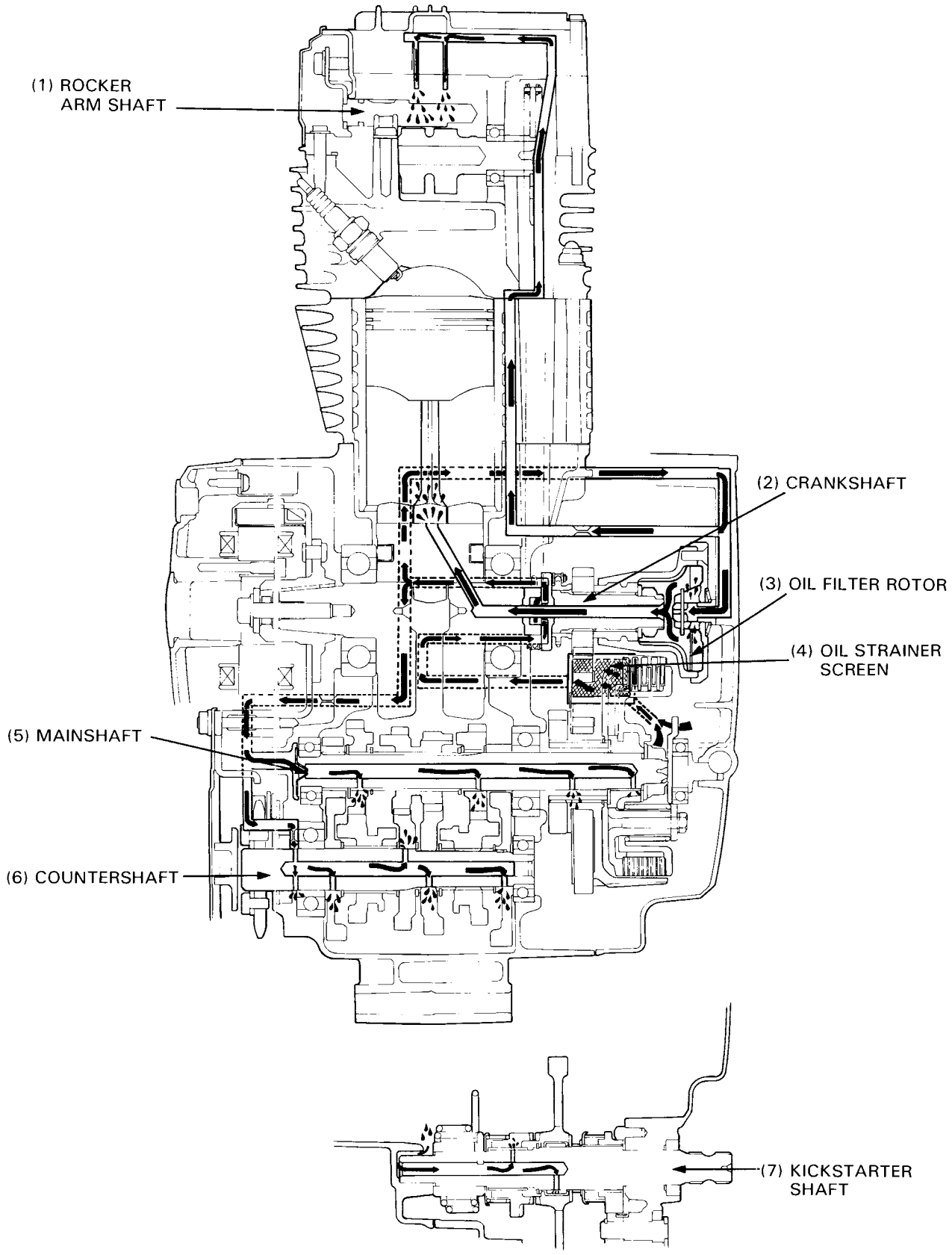
NOISE EMISSION CONTROL SYSTEM (U.S.A. only)

The U.S. Environmental Protection Agency requires manufacturers to certify that vehicles built after January 1, 1983 will comply with applicable noise emission standards for one year or 1,865 miles (3,000 km) after the time of sale to the ultimate purchaser, when operated and maintained according to the instructions provided. Compliance with the terms of the Distributor's Warranty for the Honda Vehicle Noise Emission Control System is necessary in order to keep the noise emission control system in effect.

TAMPERING WITH THE NOISE CONTROL SYSTEM IS PROHIBITED: Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person, other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW:

1. Removal of, or puncturing the muffler, baffle, header pipes or any other component which conducts exhaust gases.
2. Removal of, or puncturing of any parts of the intake system.
3. Lack of proper maintenance.
4. Replacing any moving parts of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.


(1) ROCKER ARM SHAFT
(2) CRANKSHAFT
(3) OIL FILTER ROTOR
(4) OIL STRAINER SCREEN
(5) MAINSHAFT
(6) COUNTERSHAFT
(7) KICKSTARTER SHAFT

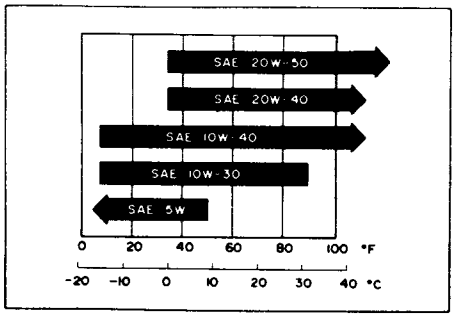
SERVICE INFORMATION

GENERAL

- Section 8 shows how to service the oil pump.

SPECIFICATIONS

Engine oil capacity	1.8 liter (1.90 US qt, 1.59 Imp qt) at disassembly 1.5 liter (1.59 US qt, 1.32 Imp qt) after draining
Engine oil recommendation	Use Honda 4-stroke oil or equivalent. API Service Classification: SE or SF Viscosity: SAE 10 W—40 Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.



TORQUE VALUE

Oil drain bolt	35—40 N·m (3.5—4.0 kg-m, 25—29 ft-lb)

TROUBLESHOOTING

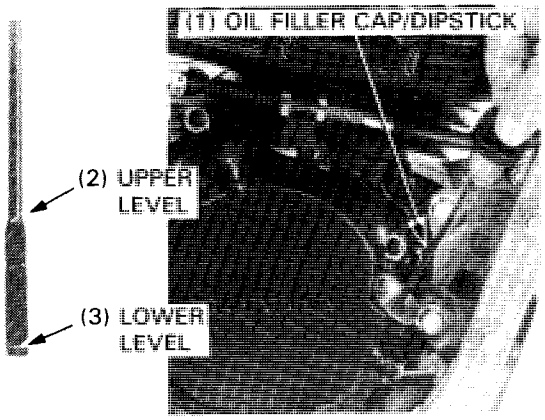
Oil level too low — high oil consumption
- External oil leaks
- Worn piston rings
- Worn valve guide or seal

Oil contamination
- Oil not changed often enough
- Head gasket faulty
- Worn piston rings

ENGINE OIL LEVEL

Place the ATC on level ground.
Check the oil level with the oil filler cap/dipstick.
Do not screw it in when making this check.

If the oil level is below or near the lower level line on the dipstick, add the recommended oil (page 2-1) up to the upper level line.



ENGINE OIL CHANGE

NOTE

- Drain the oil with the engine warm.

Remove the oil filler cap and drain bolt and drain the oil.

Operate the kick starter several times to completely drain any residual oil.
Check that the sealing washer on the drain bolt is in good condition and install the drain bolt.

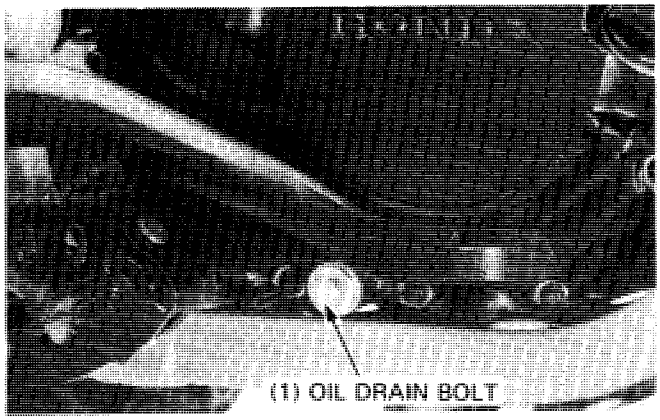
TORQUE: 35—40 N·m (3.5—4.0 kg-m, 25—29 ft-lb)

Fill the crankcase with the recommended oil.

ENGINE OIL CAPACITY:
1.5 liters (1.59 US qt, 1.32 Imp qt) after draining

Install the oil filler cap/dipstick.

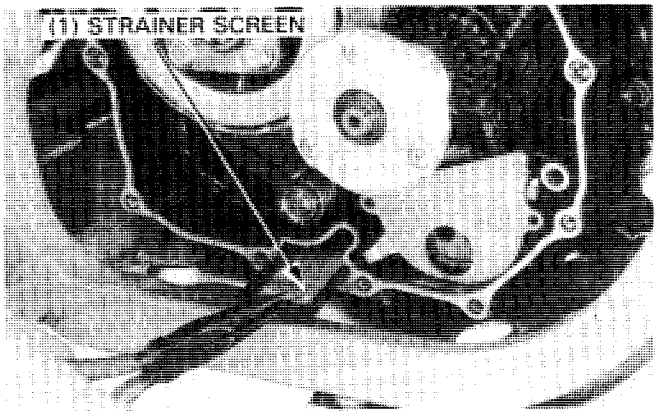
Start the engine and let it idle for 2 or 3 minutes.
Stop the engine and check that the oil level is at the upper level line on the dipstick. Add more oil if necessary.
Make sure there are no oil leaks.



ENGINE OIL STRAINER SCREEN

Remove the right crankcase cover (page 8-3).
Remove the oil strainer screen and clean it.

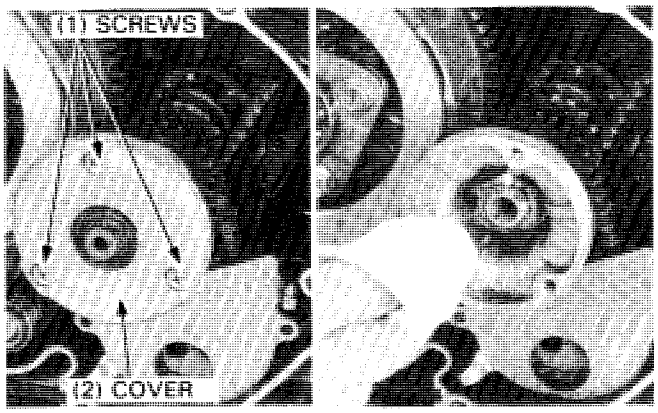
Install the oil strainer screen with the thick end to the right crankcase cover side.
Install the right crankcase cover (page 8-5).



ENGINE OIL FILTER ROTOR

Remove the right crankcase cover (page 8-3).
Remove the oil filter rotor cover and clean the rotor.

Make sure that the rotor cover gasket is in good condition and install the oil filter rotor cover.
Install the right crankcase cover (page 8-5).

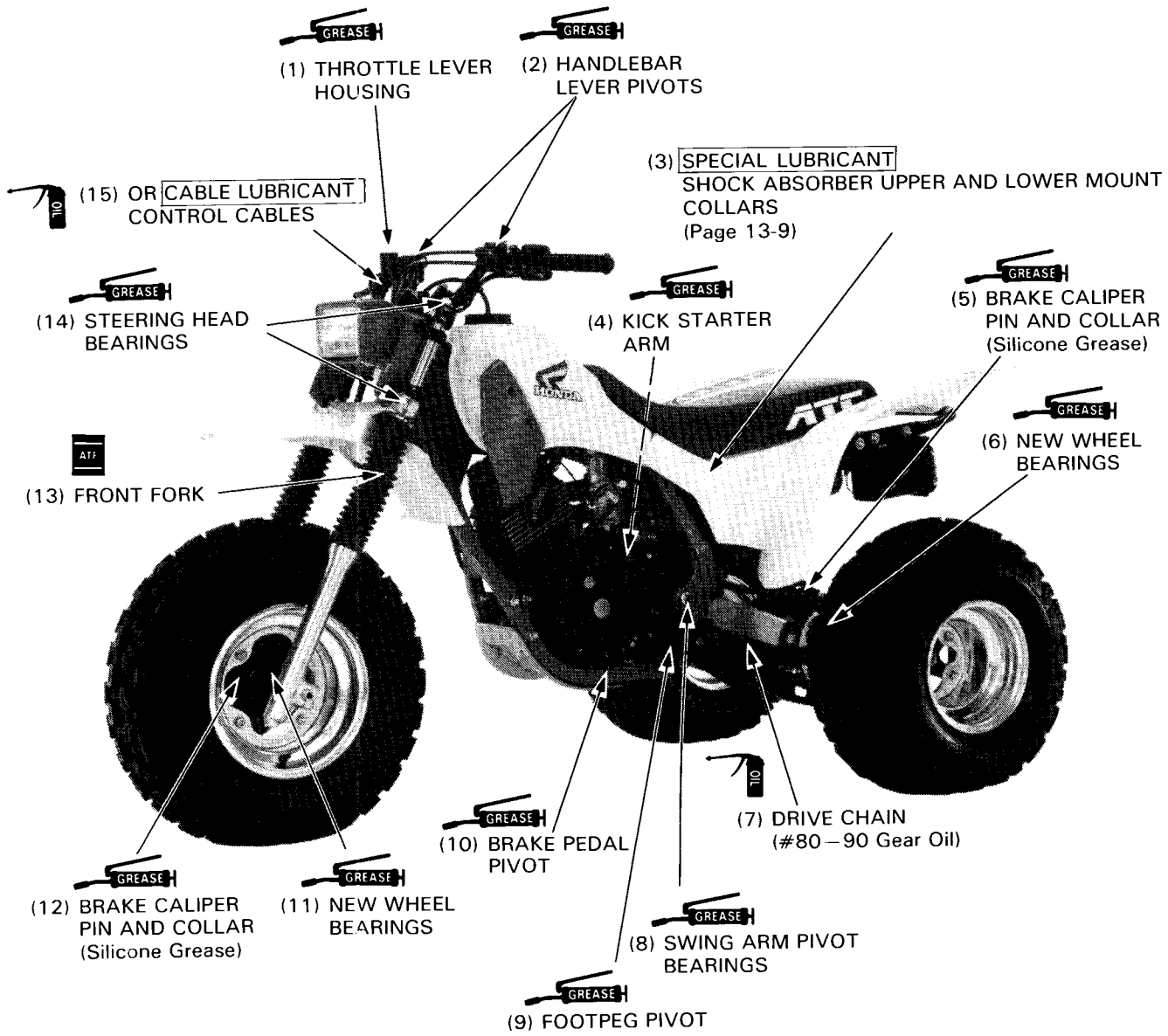


CONTROL CABLE LUBRICATION

Periodically disconnect the throttle, clutch, parking brake and decompressor cables at their upper ends.
Throughly lubricate the cables and their pivot points with a commercially available lubricant.

LUBRICATION POINTS

Use general purpose grease when no other specification is given. Apply oil or grease to any 2 sliding surfaces.



MEMO

SERVICE INFORMATION

SPECIFICATIONS

ENGINE

Ignition timing	Initial	10° BTDC at 1,400 ±100 rpm
	Full advance	28° BTDC at 3,500 ±200 rpm
Spark plug	Spark plug gap	0.6—0.7 mm (0.024—0.028 in)
	Recommended spark plugs	NGK: DR8ES-L ND: X24ESR-U
Valve clearance	IN (cold)	0.08 mm (0.003 in)
	EX (cold)	0.08 mm (0.003 in)
Throttle lever free play		3—8 mm (1/8—5/16 in)
Idle speed		1,400 ± 100 rpm
Cylinder compression		1,300 ± 100 kPa (13.0 ± 1 kg/cm², 184.7 ± 14.2 psi)
Decompressor cam follower shaft arm free play		0.5—1.5 mm (0.02—0.06 in)

CHASSIS

Drive chain slack		25—35 mm (1.0—1.4 in)
Drive chain slider wear limit		6 mm (0.24 in)
Rear brake pedal height		20 mm (3/4 in)
Parking brake lever free play	'86:	31—39 mm (1-3/16—1-1/2 in)
	After '86:	25—30 mm (1—1-1/8 in)
Clutch lever free play		10—20 mm (3/8—3/4 in)
Front tire size, pressure		23.5 x 8—11, 25 kPa (0.25 kg/cm², 3.6 psi)
Rear tire size, pressure	'86:	17 kPa (0.17 kg/cm², 2.5 psi)
	After '86:	17.5 kPa (0.175 kg/cm², 2.5 psi)
Front tire circumference ('86 only)		1,890 mm (74.4 in)
Rear tire circumference ('86 only)		1,720 mm (67.7 in)
Front suspension air pressure		0 kPa (0 kg/cm², 0 psi)

TORQUE VALUES

Fuel strainer cup	3—5 N·m (0.3—0.5 kg-m, 2.2—3.6 ft-lb)
Drive chain adjuster lock bolts	18—24 N·m (1.8—2.4 kg-m, 13—17 ft-lb)
Valve adjuster lock bolts	10—14 N·m (1.0—1.4 kg-m, 7.2—10 ft-lb)
Parking brake adjusting lock nut	15—20 N·m (1.5—2.0 kg-m, 11—15 ft-lb)
Camshaft inspection hole cap	2.5—4.5 N·m (0.25—0.45 kg-m, 1.8—3.3 ft-lb)

MAINTENANCE SCHEDULE

- The maintenance intervals shown in the following schedules are based upon average riding conditions. ATCs subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.

'86:

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 L: Lubricate A: Adjust	EVERY	INITIAL SERVICE PERIOD (First week of operation)	REGULAR SERVICE PERIOD (Every 30 operating days)	Refer to page
*	FUEL LINE	YEAR: I			3-4
*	FUEL STRAINER SCREEN	YEAR: C			3-4
*	THROTTLE OPERATION		I	I	3-4
	AIR CLEANER	NOTE (1)		I	3-5
	AIR CLEANER CASE DRAIN TUBE	NOTE (2)		I	3-7
	SPARK PLUG			I	3-7
*	VALVE CLEARANCE		I	I	3-8
	ENGINE OIL		R	R	2-2
*	ENGINE OIL STRAINER SCREEN			C	2-2
*	ENGINE OIL CENTRIFUGAL FILTER			C	2-2
*	CARBURETOR IDLE SPEED		I	I	3-10
	DRIVE CHAIN	NOTE (1), (2)	I,L	I,L	3-10
	DRIVE CHAIN SLIDER AND ROLLER			I	3-12
	BRAKE FLUID	2 YEARS: R, I	I	I	3-12
*	BRAKE PAD WEAR	YEAR: I NOTE (1), (2)			3-13
	BRAKE SYSTEM		I	I	3-13
*	CLUTCH SYSTEM		I	I	3-15
*	SUSPENSION			I	3-15
*	SPARK ARRESTER	NOTE (3)		C	3-17
*	NUTS, BOLTS, FASTENERS		I	I	3-16
**	WHEELS/TIRES		I	I	3-16
**	STEERING HEAD BEARINGS	YEAR: I			3-17

* Should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically qualified.

** In the interest of safety, we recommend these items be serviced only by authorized Honda dealer.

NOTES: (1) Service more frequently when riding in dusty areas, sand or snow.
(2) Service more frequently after riding in very wet or muddy conditions.
(3) U.S.A. only.

After '86:
Perform the Pre-ride Inspection in the Owner's Manual at each scheduled maintenance period.

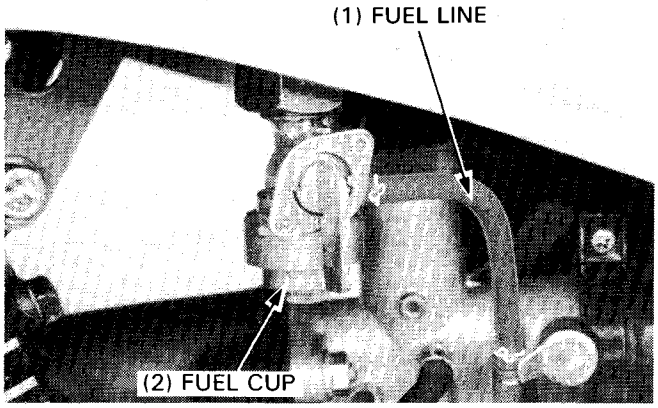
I: Inspect and Clean, Adjust, Lubricate or Replace, if necessary C: Clean R: Replace A: Adjust		EVERY	INITIAL SERVICE PERIOD (First week of operation)	REGULAR SERVICE PERIOD (Every 30 operating days)	Refer to page
*	FUEL LINE	YEAR: I			3-4
*	FUEL STRAINER SCREEN	YEAR: C			3-4
*	THROTTLE OPERATION		I	I	3-4
	AIR CLEANER	NOTE (1)		C	3-5
	AIR CLEANER CASE DRAIN TUBE	NOTE (2)		I	3-7
	SPARK PLUG			I	3-7
*	VALVE CLEARANCE		I	I	3-8
	ENGINE OIL		R	R	2-2
* *	ENGINE OIL STRAINER SCREEN	NOTE (3)			2-2
* *	ENGINE OIL CENTRIFUGAL FILTER	NOTE (3)			2-2
*	CARBURETOR IDLE SPEED		I	I	3-10
	DRIVE CHAIN	NOTE (1), (2)	I,L	I,L	3-10
	DRIVE CHAIN SLIDER			I	3-12
	BRAKE FLUID	2 YEARS: R		I	3-12
*	BRAKE PAD WEAR	YEAR: I NOTE (1), (2)			3-13
	BRAKE SYSTEM		I	I	3-13
	SKID PLATE, GUARD PLATE			I	3-15
*	CLUTCH SYSTEM		I	I	3-15
*	SUSPENSION			I	3-15
*	SPARK ARRESTER	NOTE (4)		C	3-17
*	NUTS, BOLTS, FASTENERS		I	I	3-16
* *	WHEELS/TIRES		I	I	3-16
* *	STEERING HEAD BEARINGS	YEAR: I			3-17

* Should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically qualified.
* * In the interest of safety, we recommend these items serviced only by an authorized Honda dealer.

NOTES: (1) Service more frequently when riding in dusty areas, sand or snow.
(2) Service more frequently after riding in very wet or muddy conditions.
(3) Clean at first 30 days of operation and every year.
(4) U.S.A. only.

FUEL LINE

Replace any parts which show signs of deterioration, damage or leaks.



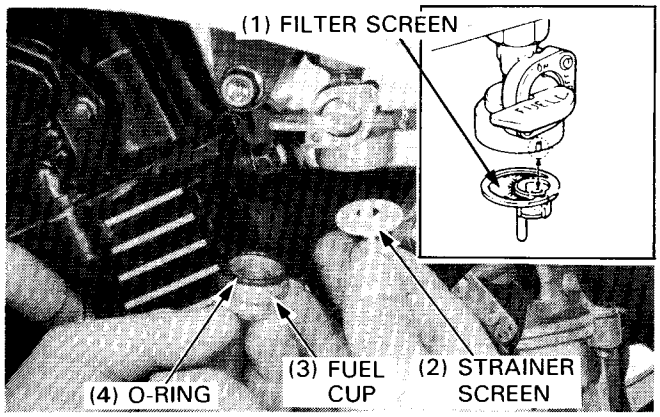
FUEL STRAINER SCREEN

Turn the fuel valve "OFF".
Remove the fuel cup, O-ring and strainer screen, and drain the gasoline into a suitable container.

WARNING

- *Gasoline is flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks near the equipment while draining fuel.*

Wash the cup and strainer screen in clean nonflammable or high flash point solvent.
Reinstall the screen, aligning the index marks on the fuel valve body and strainer screen.
Install a new O-ring into the fuel valve body.
Reinstall the fuel cup, making sure the new O-ring is in place.
Hand tighten the fuel cup and then torque it to specification.
TORQUE: 3—5 N·m (0.3—0.5 kg-m, 2.2—3.6 ft-lb)



CAUTION

- *Do not overtighten the fuel cup.*

After installing, turn the fuel valve "ON" and check that there are no fuel leaks.

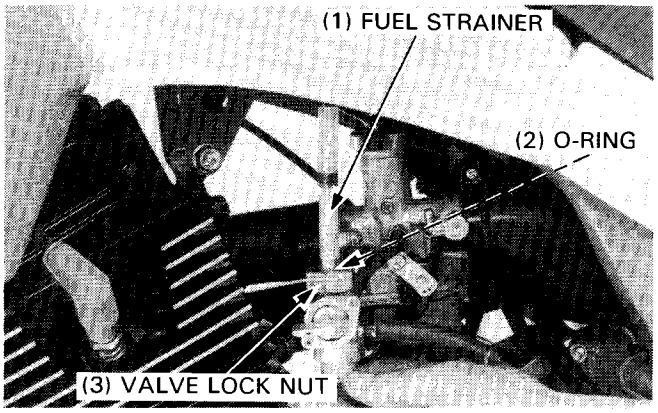
FUEL STRAINER CLEANING

Disconnect the fuel tube.
Drain fuel from the fuel tank into a suitable container.

WARNING

- *Keep gasoline away from flames or sparks.*
- *Wipe up spilled gasoline at once.*

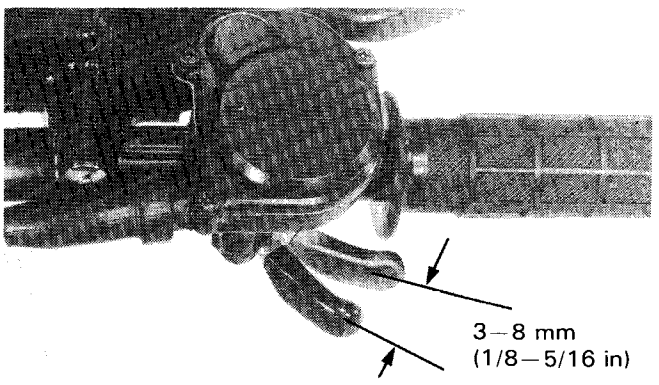
Remove the fuel valve by loosening the valve lock nut.
Remove and clean the strainer.
Make sure the O-ring is in good condition.
Install the strainer and valve, and attach the fuel line.
TORQUE: FUEL VALVE LOCK NUT
20—25 N·m (2.0—2.5 kg-m, 15—18 ft-lb)



Fill the fuel tank, turn the fuel valve to "ON" and check for leaks.

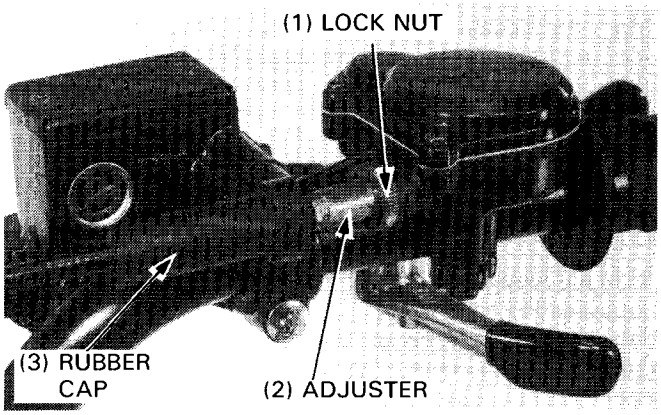
THROTTLE OPERATION

Check for smooth throttle lever 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.
Make sure the throttle lever free play is 3—8 mm (1/8—5/16 in) at the tip of the throttle lever.
THROTTLE LEVER FREE PLAY: 3—8 mm (1/8—5/16 in)



To adjust the free play slide back the rubber cap, loosen the lock nut and turn the adjuster.
Tighten the lock nut and reinstall the rubber cap.

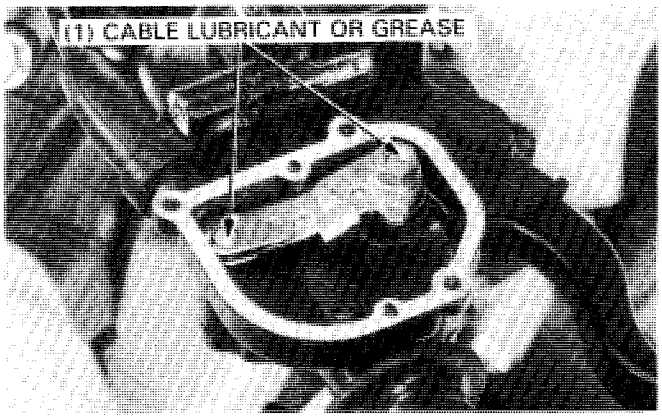
Check that the throttle lever moves smoothly and returns completely.



Remove the throttle housing cover.

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

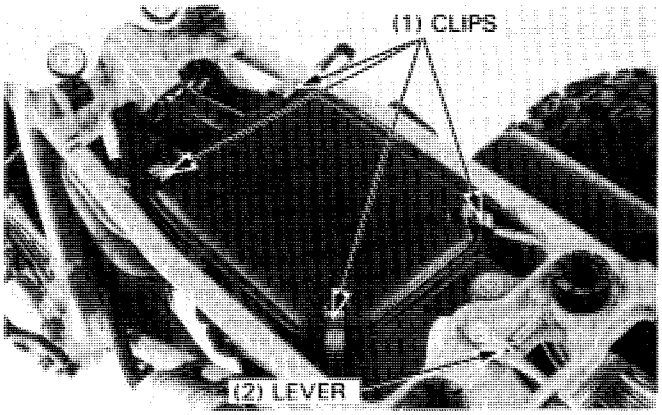
Install the throttle cable in the reverse order of removal.



AIR CLEANER

Slide the release lever to the left and remove the seat/rear fender.

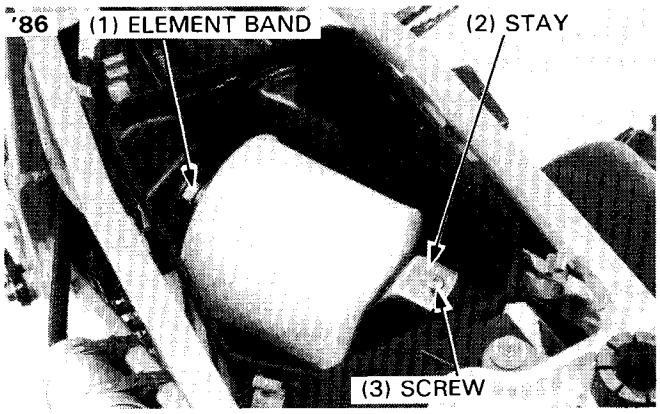
Release the four clips retaining the air cleaner cover.
Remove the air cleaner cover.



'86:
Loosen the element band.

Remove the element holder stay attaching screw and element holder.

Remove the element holder stay from the holder, then remove the element from the holder.



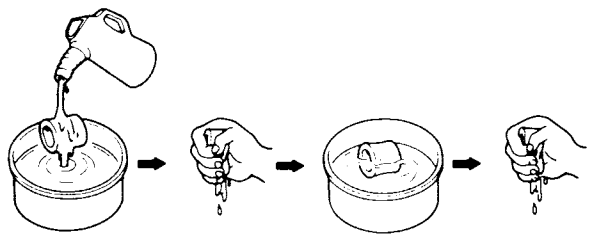
Wash the element in non-flammable or high flash point solvent, squeeze out the solvent thoroughly, and allow the element to dry.

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 gear oil (SAE #80—90) and squeeze out the excess.
Reinstall the air cleaner element on the element holder.
Install the element holder stay to the holder.
Apply a light coat of grease to the sealing edge (open side) of the holder.
Install the element holder into the case and tighten the element holder band.
Install the air cleaner case cover and seat/rear fender.

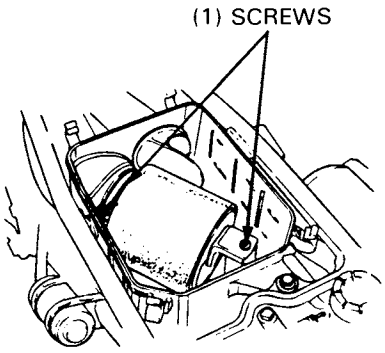
'86



(1) WASH IN SOLVENT
(2) SQUEEZE OUT SOLVENT THOROUGHLY
(3) GEAR OIL (SAE #80—90)
(4) SQUEEZE OUT EXCESS OIL

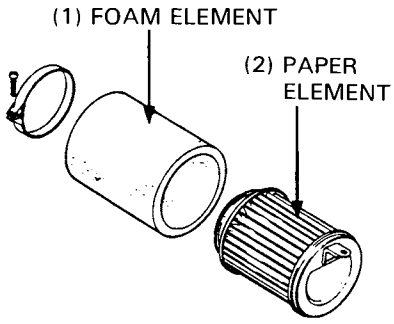
After '86:
Remove the screws and the air cleaner assembly from the frame air cleaner case.

After '86



Remove the foam element from the paper element.

After '86



Wash the foam element in clean soapy water and squeeze out the excess water.

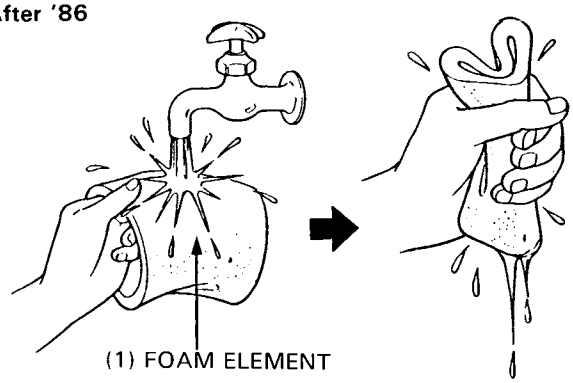
CAUTION

- *Do not twist or wring the foam element; the service life of the filter will be reduced.*
- *Do not apply oil to the foam element.*

NOTE

- Replace the foam element if there are any tears or holes in it.

After '86



Remove the dust from the paper element by blowing compressed air through the filter. Direct the air from the inside out as much as possible to prevent forcing dirt into the paper.
If the paper element is excessively dirty or muddy, wash it with clean water. Shake out the excess water and allow the element to dry thoroughly.

CAUTION

- *Use only clean water to wash and rinse the paper element. Using dirty water will allow dirt to get inside the paper element which may cause rapid piston and ring wear.*
- *Do not apply oil to the paper element.*

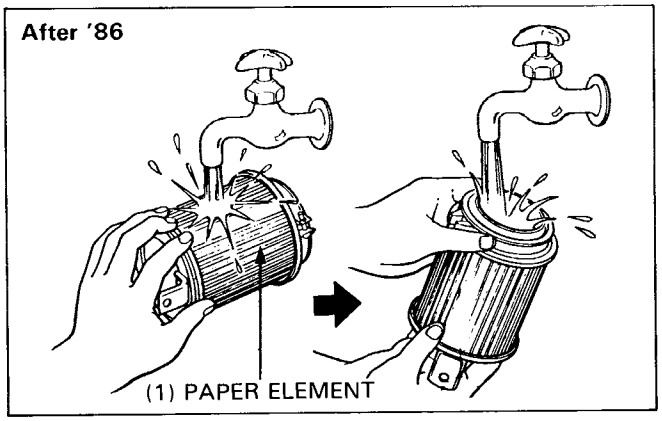
NOTE

- Engine performance will be reduced if the filter elements are wet or excessively dirty.
- If washing an excessively dirty paper element does not restore engine performance, replace the paper element with a new one.

Reinstall the foam element onto the paper element. Be sure that both open ends of the foam element seats fully against the outside edge of the paper element. Reinstall the air cleaner assembly in reverse order of removal.

CAUTION

- *When installing the air cleaner elements, check that there is no dust or other foreign matter on the inside surface.*

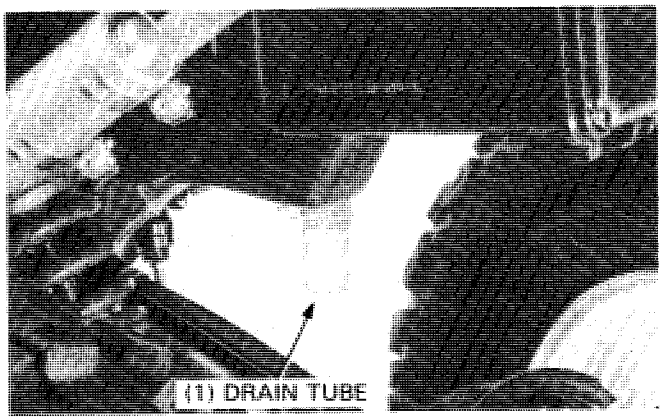


AIR CLEANER CASE DRAIN TUBE

Remove the drain tube and empty any accumulation.
Install the drain tube.

NOTE

- Service more frequently when riding in rain or at full throttle.



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 have a constant thickness.
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 and adjust by carefully bending the side electrode.

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

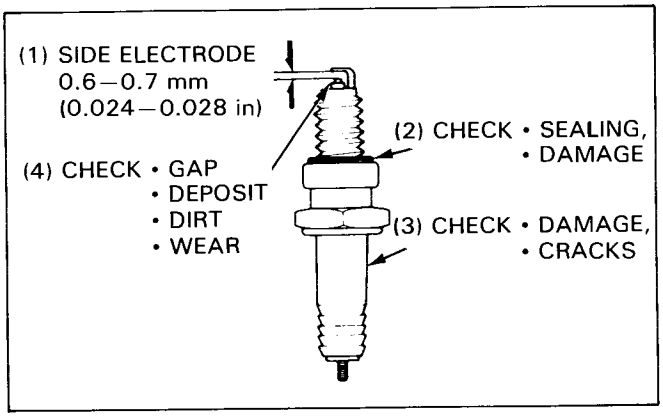
NGK	DR8ES-L
ND	X24ESR-U

Make sure the sealing washer is in good condition.
Install the spark plug, tighten it by hand, then tighten with a spark plug wrench.

NOTE

- Tighten a new spark plug 1/2 turn to compress the washer. If reusing a spark plug, it should only take 1/8—1/4 turn after the plug seats.

Connect the spark plug cap.

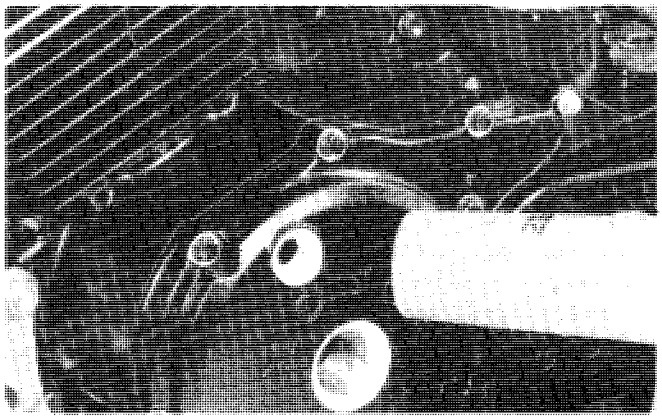


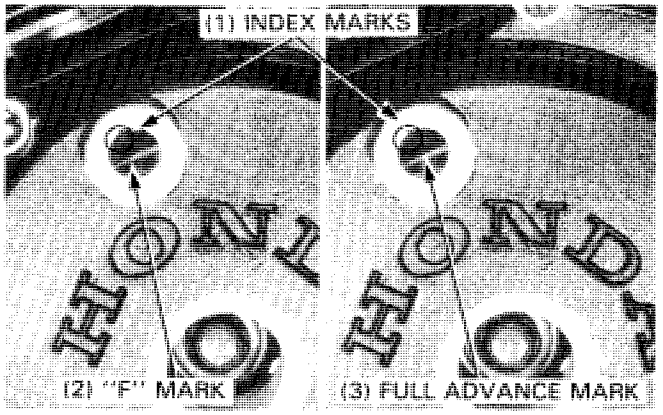
IGNITION TIMING

NOTE

- The Capacitive Discharge Ignition (CDI) system is factory pre-set and does not require adjustment. To inspect the funciton of the CDI components, ignition timing inspection procedures are given here.

Remove the timing hole cap.
Connect a tachometer and timing light.
Start the engine and allow it to idle.
IDLE SPEED: 1,400 ± 100 rpm
Inspect the ignition timing.
Timing is correct if the "F" mark on the flywheel is aligned with the index mark on the left crankcase cover at idle.
Raise the engine speed and check timing advance.
At 1,800 ± 200 rpm: Timing advance should start.
At 3,500 ± 200 rpm: Timing advance should cease. The index mark should be between the full advance marks.
If the ignition timing is incorrect, refer to page 16-3.





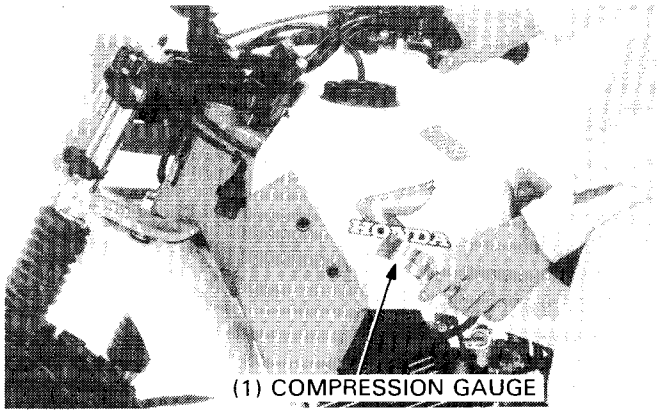
CYLINDER COMPRESSION

Warm up the engine.
Stop the engine and remove the spark plug.
Disconnect the decompressor cable at the cam follower shaft arm.
Insert a compression gauge in the spark plug hole.
Push the choke lever down fully.
Open the throttle lever fully and operate the kick starter pedal several times.

NOTE

- Be sure compression does not leak at the gauge connection.

COMPRESSION: 1,300 ± 100 kPa
(13.0 ± 1.0 kg/cm², 184.7 ± 14.2 psi)



Low compression can be caused by:
- Improper valve adjustment.
- Valve leakage.
- Blown cylinder head gasket.
- Worn piston ring or cylinder.

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

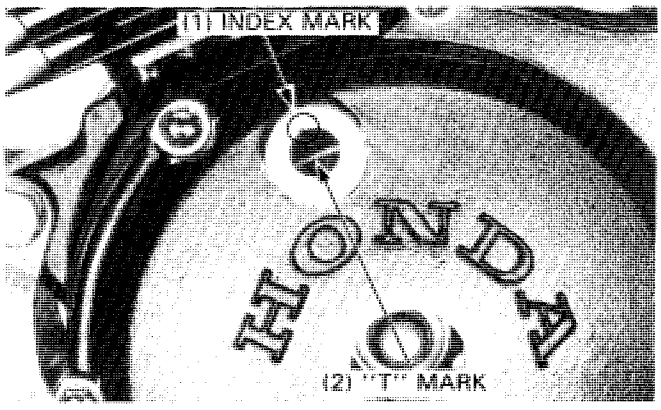
Connect and adjust the decompressor cable (page 3-9).
Install the spark plug.

VALVE CLEARANCE

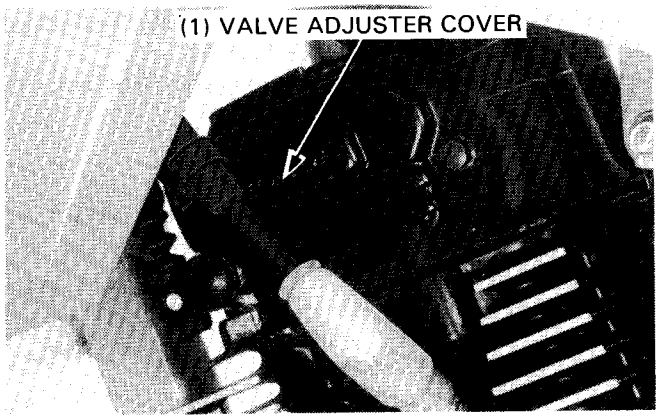
NOTE

- Inspect and adjust valve clearance while the engine is cold (below 35°C/95°F).

Remove the crankshaft hole cap and timing hole cap.
Rotate the crankshaft counterclockwise and align the "T" mark on the flywheel with the index mark or the left crankcase cover.



Remove the valve adjuster cover.

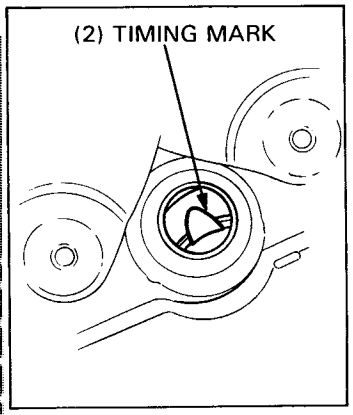


Remove the camshaft inspection hole cap from the cylinder head cover and check that timing mark on the camshaft is visible (facing up).

If the mark is not visible, turn the crankshaft 360° and re-align the "T" mark on the flywheel with the index mark on the left crankcase cover.

NOTE

- When the "T" mark is aligned with the index mark and the timing mark is visible (facing up), the piston is at top dead center on the compression stroke.

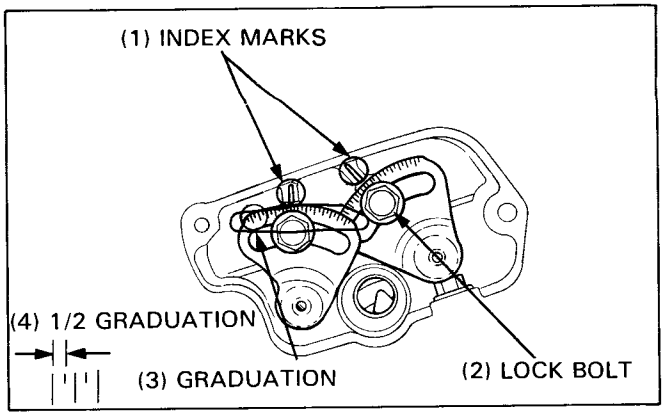


Loosen the valve adjuster lock bolts fully.
Move the intake and exhaust valve adjusters counterclockwise fully, untill resistance is felt.
Then move them clockwise the equivalent of 1/2 graduation.
Tighten the adjuster lock bolts.

TORQUE: 10—14 N·m (1.0—1.4 kg-m, 7.2—10 ft-lb)

NOTE

- Make sure that the adjusters do not move when tightening the lock bolts.
- 1/2 graduation on the adjusters equals 0.08 mm (0.003 in), which is specified clearance.



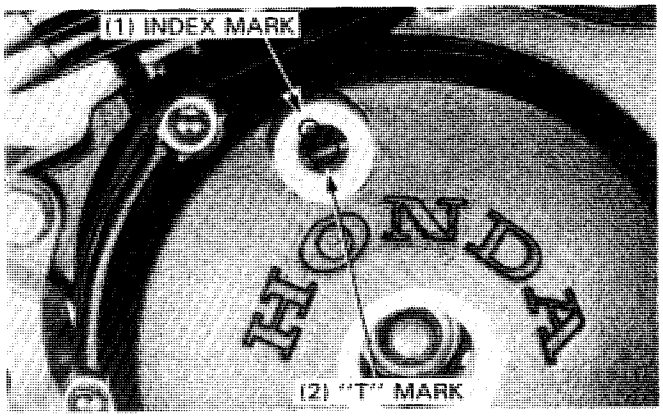
Adjust the decompression system.

DECOMPRESSOR ADJUSTMENT

NOTE

- Always adjust the decompressor cable after adjusting the valve clearance.

Rotate the flywheel counterclockwise and align the "T" mark with the index mark. Make sure the piston is at TDC on the compression stroke.



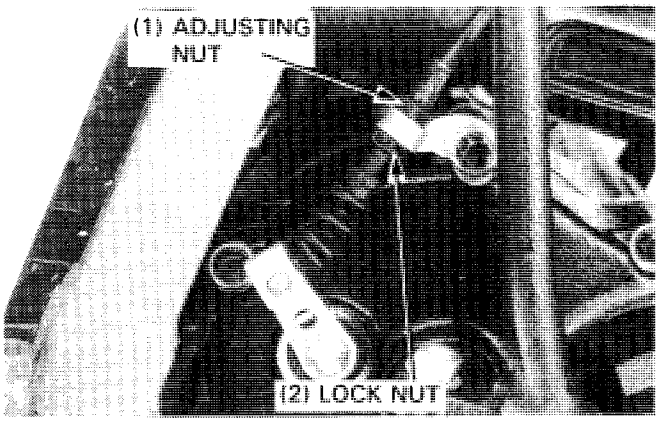
Measure the free play at the tip of the cam follower shaft arm.
FREE PLAY: 0.5—1.5 mm (0.02—0.06 in)
Adjust by loosening the lock nut and turning the adjusting nut.

CAUTION

- *Excessive free play causes hard starting.*
- *Insufficient free play may cause erratic engine idle and valve damage.*

Install the timing and camshaft inspection hole caps and the valve adjuster cover.

TORQUE: CAMSHAFT INSPECTION HOLE CAP
2.5—4.5 N·m (0.25—0.45 kg-m, 1.8—3.3 ft-lb)



CARBURETOR IDLE SPEED

NOTE

- Inspect and adjust the idle speed after all other maintenance items have been performed and are within specifications.
- The engine must be warm for accurate idle speed inspection and adjustment. Stop and go riding for ten minutes is sufficient.

After warming up the engine, shift the transmission into neutral and connect a tachometer.
Turn the throttle stop screw as required to obtain the specified idle speed.
IDLE SPEED: 1,400 ± 100 rpm

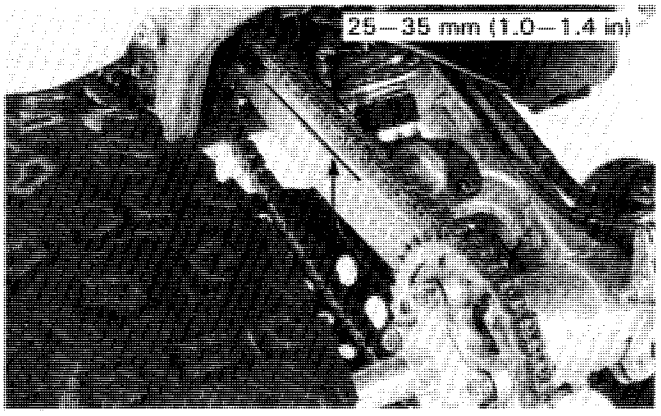
DRIVE CHAIN

CHAIN SLACK INSPECITON

WARNING

- ***Never inspect or lubricate the drive chain while the engine is running.***

With the engine off, shift the transmission into neutral.
Measure the drive chain slack at up side midway between the sprockets.
CHAIN SLACK: 25—35 mm (1.0—1.4 in)

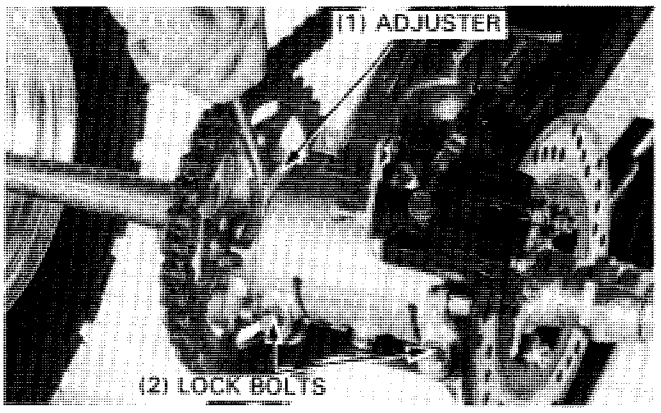


CHAIN SLACK ADJUSTMENT

Loosen the two lock bolts.
Turn the adjuster to decrease or increase chain slack using the adjusting tool provided in the tool kit.
INCREASE: Turn the adjuster clockwise
DECREASE: Turn the adjuster counterclockwise
Tighten the lock bolts.
TORQUE: 18—24 N·m (1.8—2.4 kg-m, 13—17 ft-lb)

NOTE

- If drive chain slack is excessive when the adjuster is moved to the limit of adjustment, the drive chain is worn out and must be replaced.

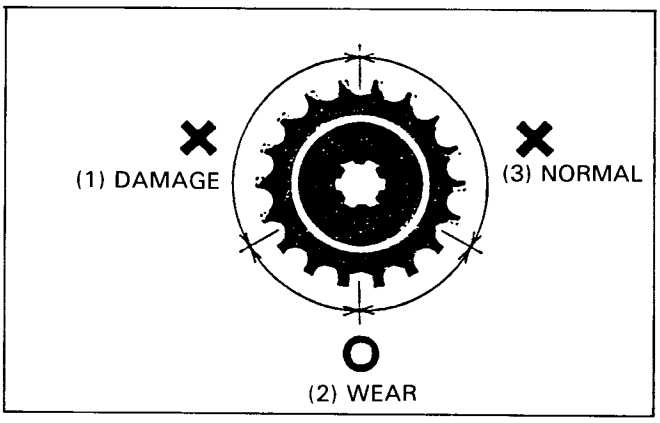


DRIVE CHAIN/SPROCKET INSPECTION/ LUBRICATION

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

NOTE

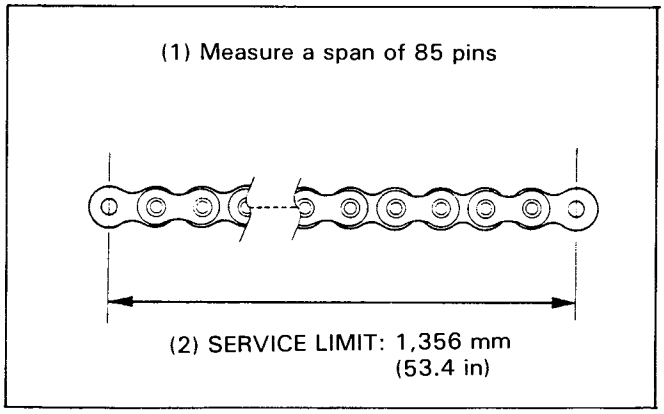
- Never install a new drive chain on worn sprockets or a worn chain on new sprockets.
- Both chain and sprockets must be in good condition, or the new replacement chain or sprockets will wear rapidly.



Visually inspect the drive chain for kinks or damage.

Measure a section of the drive chain to determine whether the chain is worn beyond its service limit.
Remove the drive chain and measure the distance between a span of 85 pins from pin center to pin center.
In a new chain, this distance 1,356 mm (53.4 in), the chain is worn out and should be replaced.

REPLACEMENT DRIVE CHAIN:
DID520 V-6 or RK520SMOZ10



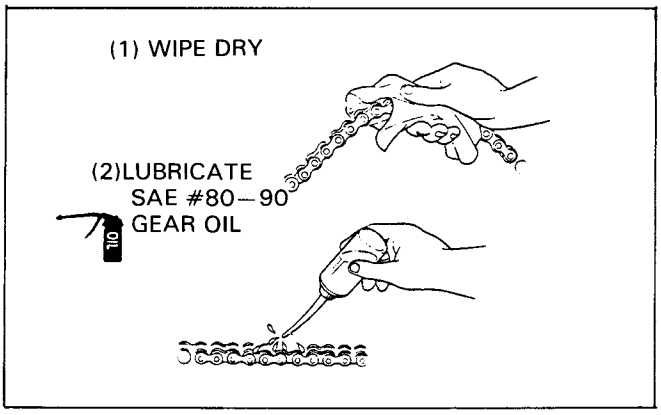
Clean the chain with kerosene. Wipe dry and lubricate only with SAE #80 or #90 gear oil. Commercial chain lubricants may contain solvents which could damage the rubber O-rings.

CAUTION

- *Do not use a steam cleaner, high pressure washers or aerosol chain lubricants as these will damage the O-rings.*

Inspect the drive chain and O-rings for possible wear or damage. Replace the chain, if it is worn excessively or damaged.

Lubricate the drive chain with SAE #80 or #90 gear oil.



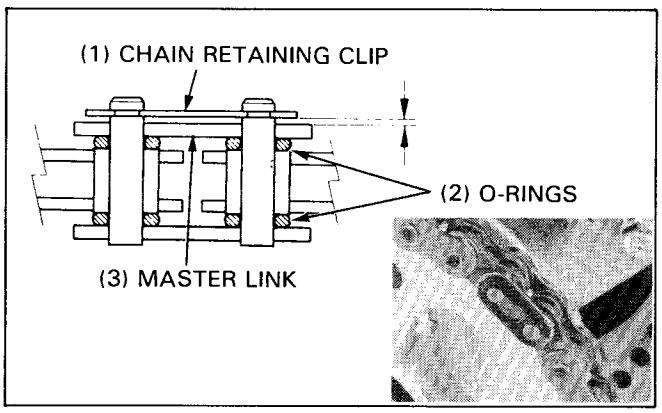
INSTALLATION

Install the drive chain.
Install the master link with O-rings and chain retaining clip.

Note the installation direction of the chain retaining clip.
Its open end should face in the opposite direction of the wheel rotation as shown.
Adjust the drive chain slack.

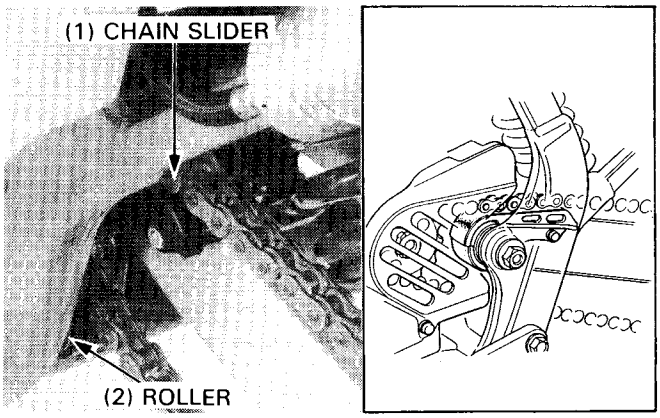
CAUTION

- *Do not assemble the drive chain without the four O-rings. Be sure that there is no space between the master link and chain retaining clip.*



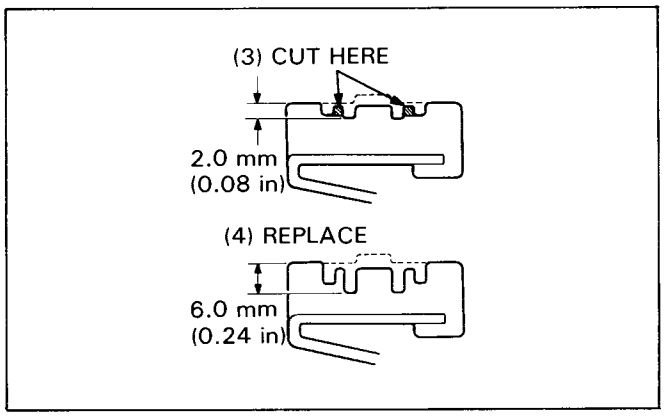
DRIVE CHAIN SLIDER AND ROLLER

Check the drive chain slider at the intervals specified in the Maintenance Schedule.



When the depth of the grooves in the slider reaches 2.0 mm (0.08 in), remove material to lower the height of the center ridge between the grooves to less than 2.0 mm (0.08 in).

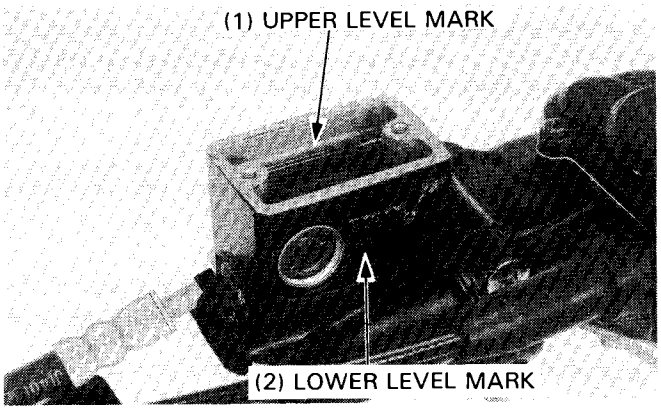
Replace the slider when the depth of the grooves reaches 6.0 mm (0.24 in).



BRAKE FLUID

CAUTION

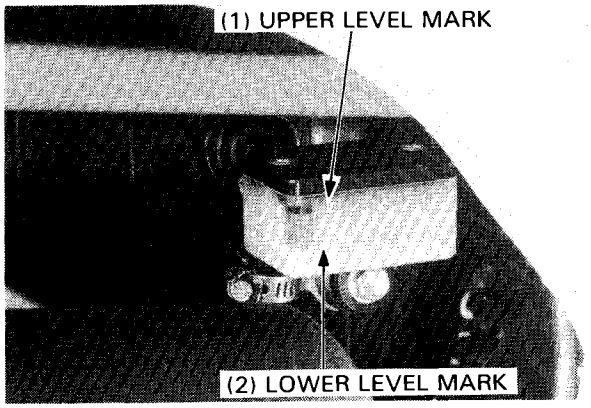
- *Do not remove the cap until the handlebar has been turned so that the front reservoir is level.*
- *Do not mix DOT5 with DOT3 or 4 Brake Fluid.*
- *Avoid spilling fluid on painted, plastic or rubber parts. Place a rag over these parts whenever the system is serviced.*



Check the front and rear brake fluid reservoir levels.

If the level nears the lower level mark, remove the cap and fill the reservoir with DOT-3 or 4 brake fluid to the upper level mark.

Check the entire system for leaks, if either level is low.



BRAKE PADS

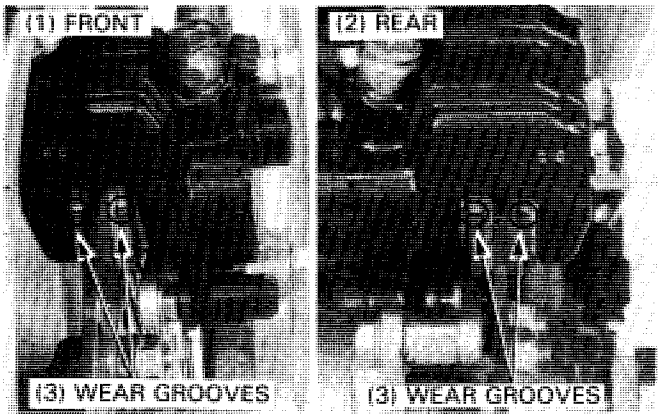
Inspect the front and rear brake pads for wear.

Replace the brake pads if the wear groove on the pads reaches the edge of the brake disc.

CAUTION

- *Always replace the brake pads as a set to assure even disc pressure.*

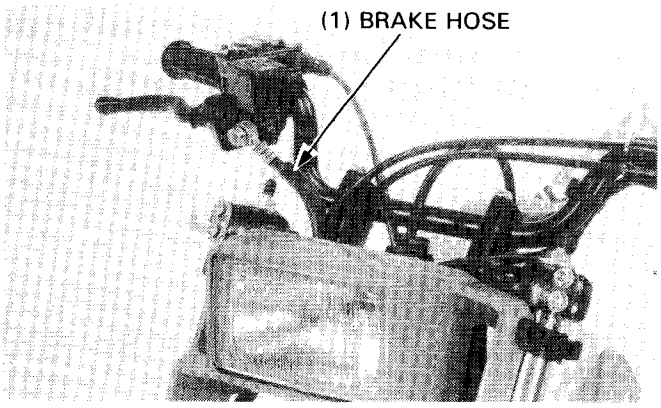
Refer to page 14-5 for brake pad replacement.



BRAKE SYSTEM

Inspect the brake hoses and fittings for deterioration, cracks and signs of leakage. Tighten any loose fittings.

Replace hoses and fittings as required.



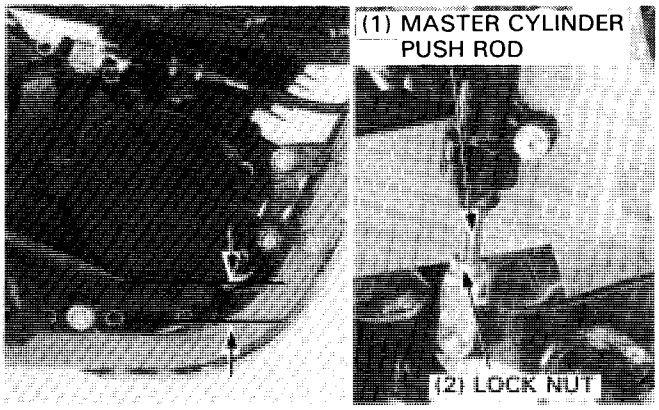
REAR BRAKE PEDAL HEIGHT

Check that the distance between the pedal and upper face of the footpeg is 20 mm (3/4 in).

CAUTION

- *Incorrect brake pedal height can cause brake drag.*

To adjust the height, loosen the lock nut and turn the master cylinder push rod. Tighten the lock nut.

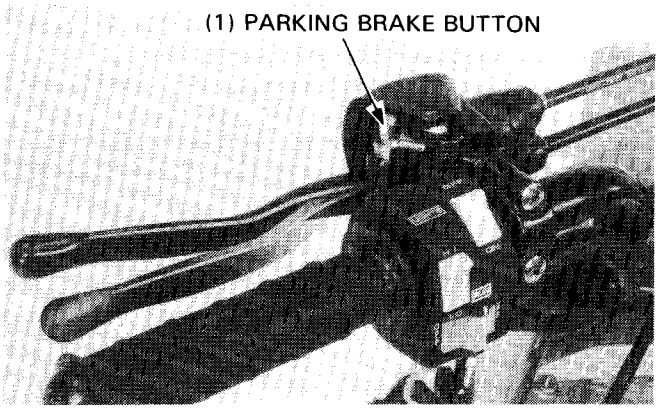


PARKING BRAKE

A parking brake adjustment may be required if the parking brake does not hold the rear wheels properly:
Disconnect the clutch cable at the lower end.
Press the parking brake button and pull in the clutch/parking brake lever.

Measure the free play at the tip of the lever.

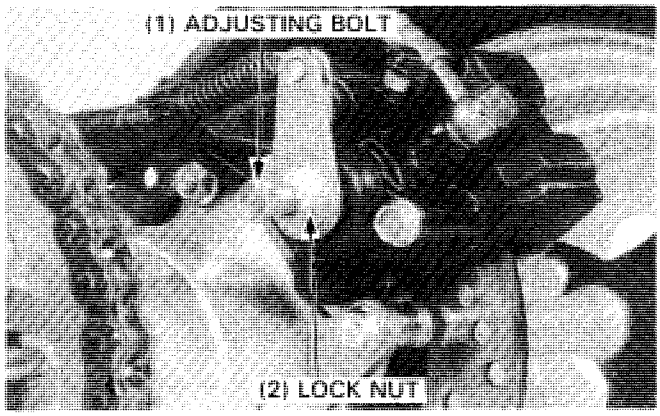
FREE PLAY: '86: 31—39 mm (1-3/16—1-1/2 in)
After '86: 25—30 mm (1—1-1/8 in)



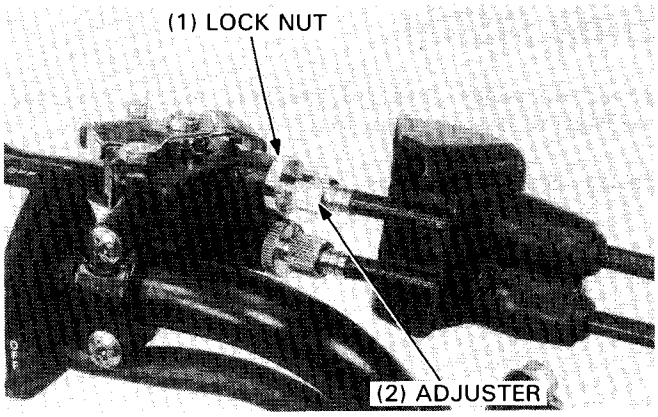
'86:
Adjust as follows:
Loosen the lock nut on the rear caliper.

Screw in the adjusting bolt until you feel resistance without applying the clutch/parking brake lever, and tighten the lock nut.

TORQUE: 15—20 N·m (1.5—2.0 kg-m, 11—15 ft-lb)

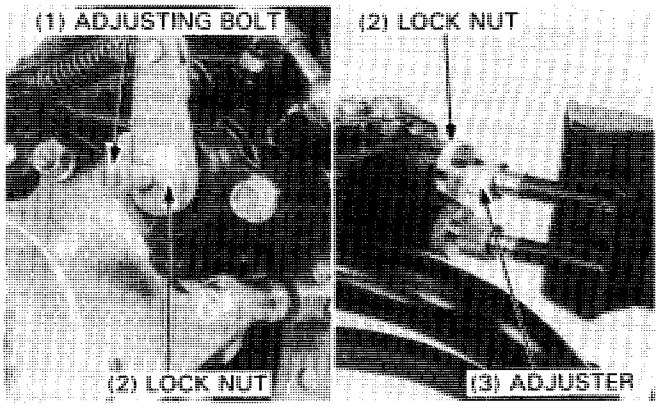


Recheck the lever free play and adjust, if necessary, by loosening the lock nut and turning the adjuster.
Tighten the lock nut, and reconnect the clutch cable.

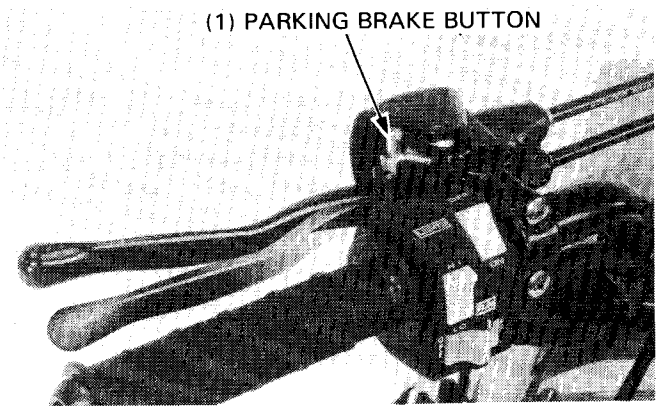


After '86:
Adjust as follows:
Temporarily adjust the clutch lever free play to more than 30 mm (1-1/8 in) (page 3-15).
Loosen the lock nut on the parking brake lever and screw in the adjuster completely.

Loosen the lock nut on the rear caliper and turn the adjusting bolt clockwise until you feel resistance.
Then turn the adjusting bolt 1/8 counterclockwise and tighten the lock nut.

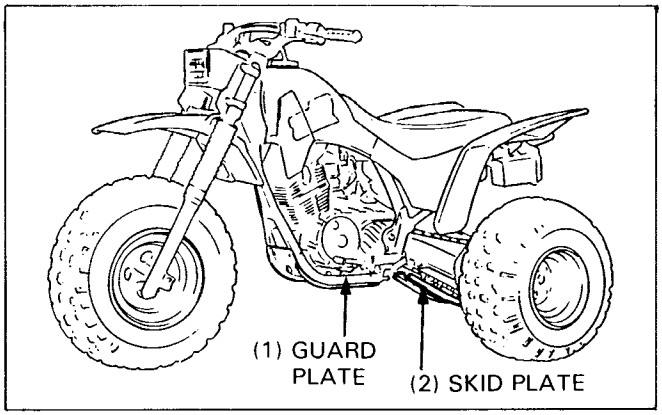


Push down the parking brake button and then squeeze the parking brake lever until firm resistance is felt.
Measure the distance the parking brake lever has moved; the distance should be 25—30 mm (1—1-1/8 in).
If necessary, turn the adjuster and tighten the lock nut.
Adjust the clutch lever free play to 10—20 mm (3/8—3/4 in) (page 3-15).



SKID PLATE, GUARD PLATE

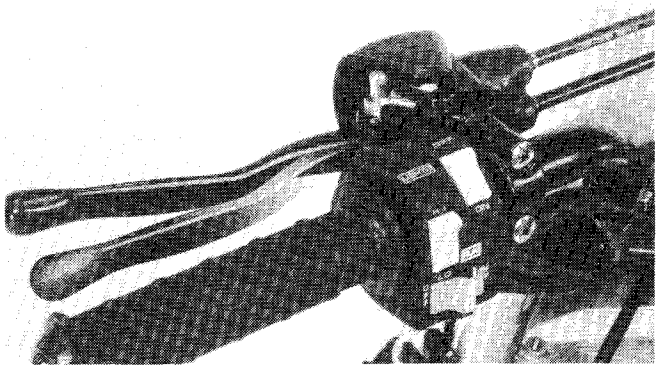
The engine under guard and skid plate protect the engine and rear axle holder from rocks.
Check the under guard and plate for cracks, damage or looseness at intervals shown in the Maintenance Schedule.
Replace the under guard and plate with new ones if they are cracked or damaged.
If the under guard and plate bolts are loose, tighten them securely.



CLUTCH SYSTEM

Measure the clutch lever free play.

FREE PLAY: 10—20 mm (3/8—3/4 in)



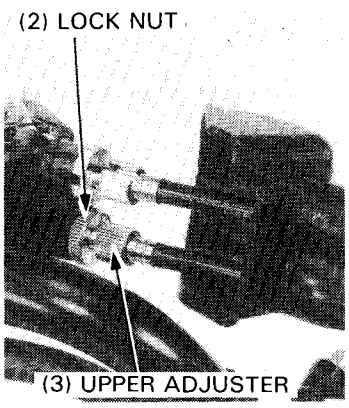
Adjust as follows:
Perform minor adjustments with the upper adjuster.
Pull the cover back.

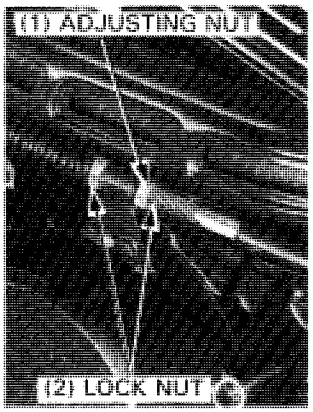
Loosen the lock nut and turn the adjuster.
Tighten the lock nut.

Perform major adjustments with the lower adjusting nut.

Loosen the lock nut and turn the adjusting nut.
Tighten the lock nut.

Check the clutch operation.





SUSPENSION

FRONT SUSPENSION

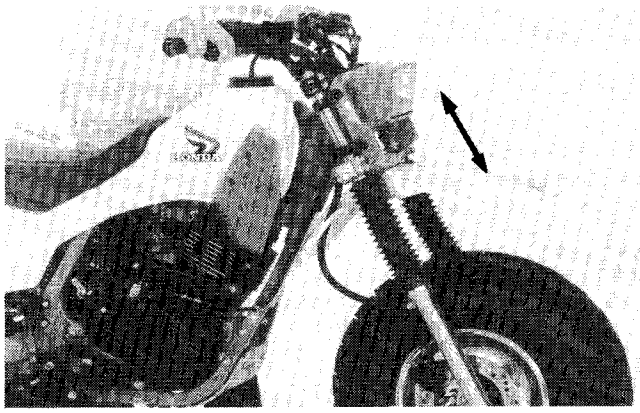
Check the action of the front forks by compressing them several times.

Check the entire fork assembly for signs of leaks or damage.
Replace damaged components which are unrepairable.

NOTE

- Do not repair bent fork tubes. They must be replaced.

Tighten all nuts and bolts to the specified torque values.

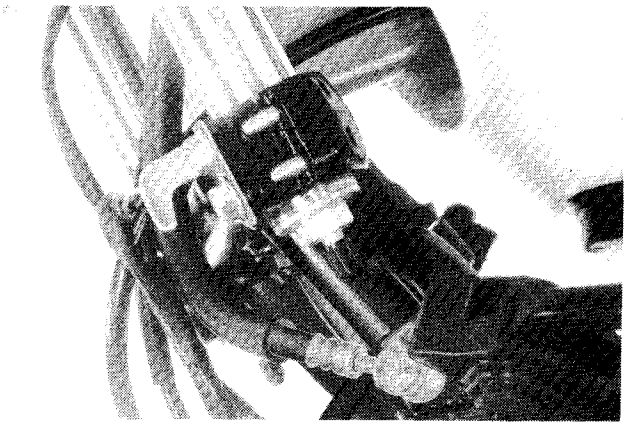


Raise the front of the vehicle so that there is no weight on the front wheel.
Check air pressure in each fork tube.

STANDARD AIR PRESSURE: 0 kPa (0 kg/cm², 0 psi)

NOTE

- Use of more than 70 kPa (0.7 kg/cm², 10 psi) is not recommended because fork action becomes very stiff.



REAR SUSPENSION

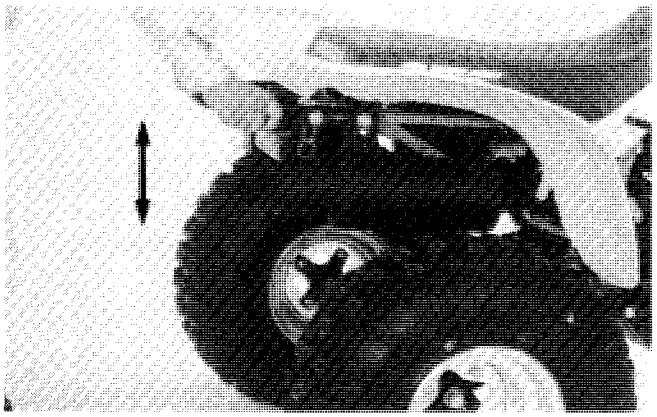
Check the shock absorber for a leak or damage.

Check the suspension operation.
Adjust the spring preload if necessary (page 13-7).

Raise the rear wheels off the ground with a jack or block under the engine.

Move the rear axle sideways with force to see if the wheel and swingarm bearings are worn.

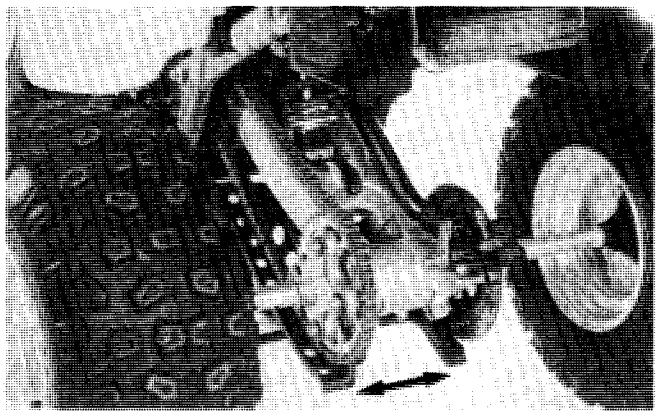
Replace the bearings if there is any play (section 13).



NUTS, BOLTS, FASTENERS

Tighten bolts, nuts and fasteners at regular intervals as shown in the Maintenance Schedule.

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

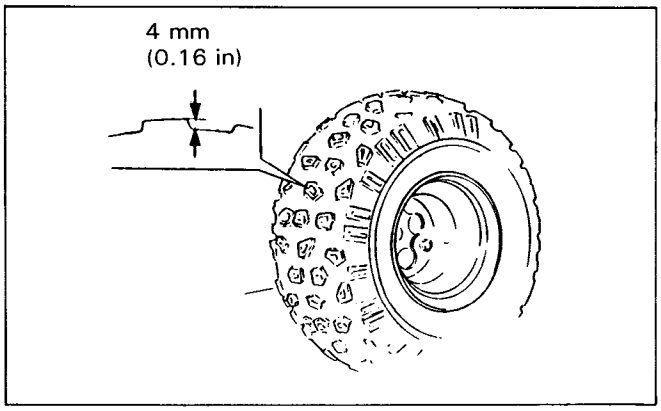
Check the tire for cuts, imbedded nails, or other damage.

Measure the groove depth of tires at the center as shown. Operating the vehicle with excessively worn tires will decrease traction and increase skidding.

WARNING

- ***Replace tires before tread depth at the center of the tires reaches the minimum limit.***

Minumum tread depth: 4 mm (0.16 in)



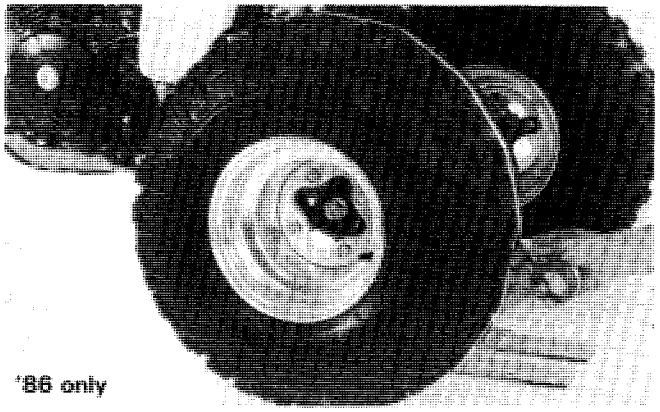
NOTE

- Tire pressure should be checked when the tires are COLD.
- '86: Raise the wheels off the ground when measuring tire circumferences.

'86:

Check the tire pressure and measure the tire circumference. Adjust accordingly.

	Front	Rear
Recommended pressure	3.6 psi (25 kPa, 0.25 kg/cm²)	2.5 psi (17 kPa, 0.17 kg/cm²)
Standard tire circumference	1,890 mm (74.4 in)	1,720 mm (67.7 in)
Max. pressure	4.1 psi (28 kPa, 0.28 kg/cm²)	2.9 psi (20 kPa, 0.20 kg/cm²)
Min. pressure	3.2 psi (22 kPa, 0.22 kg/cm²)	2.0 psi (14 kPa, 0.14 kg/cm²)


*'86 only

After '86:

Check the tire pressure and adjust accordingly.

	Front	Rear
Recommended pressure	3.6 psi (25 kPa, 0.25 kg/cm²)	2.5 psi (17.5 kPa, 0.175 kg/cm²)
Max. pressure	4.1 psi (28 kPa, 0.28 kg/cm²)	2.9 psi (20.5 kPa, 0.205 kg/cm²)
Min. pressure	3.2 psi (22 kPa, 0.22 kg/cm²)	2.1 psi (14.5 kPa, 0.145 kg/cm²)

STEERING HEAD BEARINGS

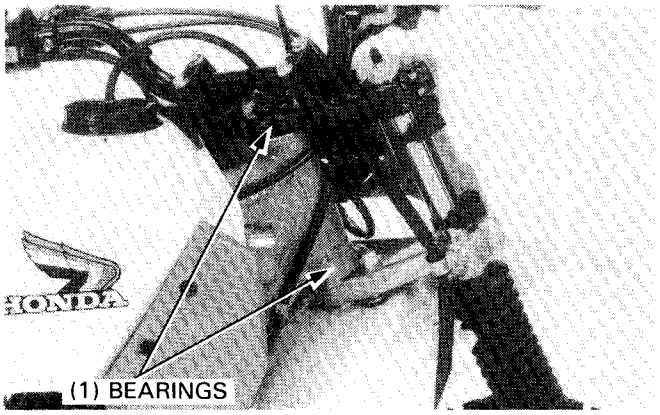
NOTE

- Make sure the cables do not interfere with the rotation of the handlebar.

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

If the handlebar moves unevenly, binds or has vertical play adjust the steering head bearings (page 11-25).

If the handlebar still moves unevenly binds or has vertical play after adjustment, inspect the steering head bearings and replace if necessary (page 11-23).

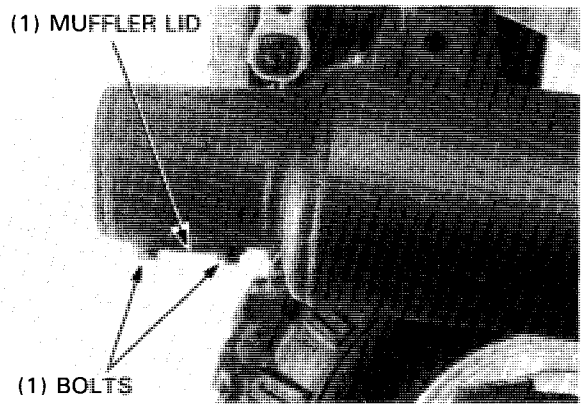


SPARK ARRESTER

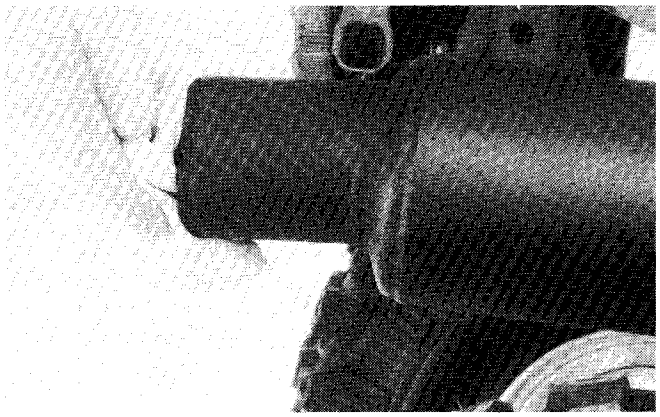
WARNING

- ***Do not remove or install the muffler lid while the exhaust pipe is hot.***
- ***Perform this operation in a well-ventilated area, free from fire hazard.***
- ***Use adequate eye protection.***

Remove the muffler lid. Block the end of the muffler with a shop towel.

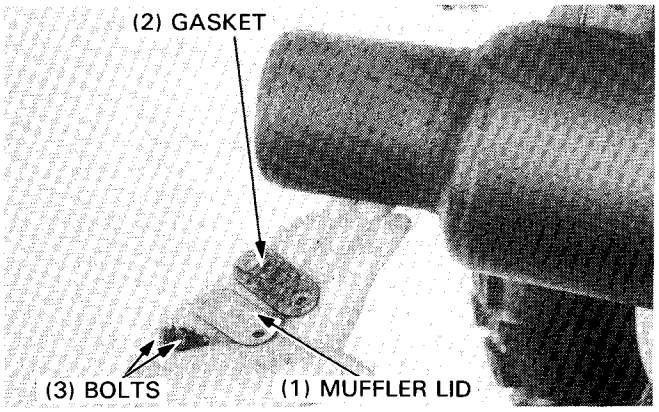


Start the engine and rev it up to blow accumulated carbon deposits out the muffler.



Be sure that the muffler lid bolts and gasket are in good condition. Replace the bolts and gasket if necessary.

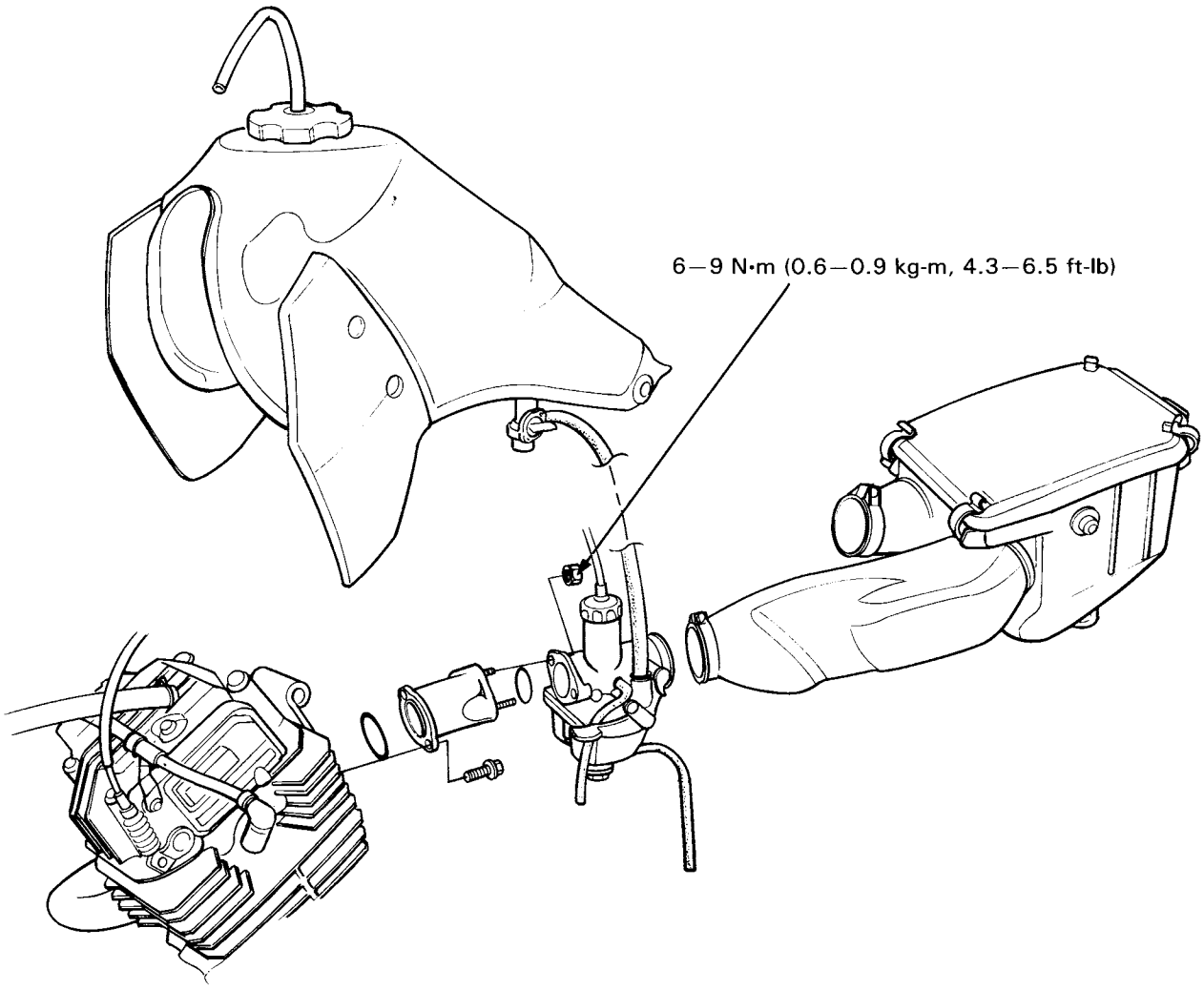
Install the muffler lid and gasket and tighten the bolts securely.



CAUTION

- *Do not remove the two screws from the end of the spark arrester.*
- *The two mounting screws must be installed in the spark arrester body at all times for the spark arrester to be effective.*

MEMO


6—9 N·m (0.6—0.9 kg-m, 4.3—6.5 ft-lb)

SERVICE INFORMATION

GENERAL

WARNING

- *Keep gasoline away from flames or sparks. Wipe up spilled gasoline at once.*

CAUTION

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

- Use caution when working with gasoline. Always work in a well ventilated area away from sparks or flames.
- When disassembling fuel system parts, note the locations of the O-rings. Replace them with new O-rings during re-assembly.
- The carburetor float bowl has a drain screw that can be loosened to drain gasoline.

SPECIFICATIONS

Fuel tank capacity: 10.5 liter (2.78 US gal, 2.31 Imp gal)
Fuel reserve capacity: 1.5 liter (0.40 US gal, 0.33 Imp gal)
Carburetor

	'86		After '86
Identification number	PD64A [A]	PD64A [B], [C]	PD3AA
Type	Piston valve	←	←
Venturi diameter	24 mm (0.94 in)	←	←
Float level	14.0 ± 0.5 mm (0.55 ± 0.02 in)	←	←
Pilot screw opening	2 turns out	←	←
Idle speed	1,400 ± 100 rpm	←	←
Main jet	#122	#112	←
Slow jet	#35	←	←
Throttle lever free play	3—8 mm (1/8—5/16 in)	←	←
Jet needle	2nd groove	3rd groove	←

TORQUE VALUES

Fuel valve lock nut: 20—25 N·m (2.0—2.5 kg-m, 15—18 ft-lb)
Carburetor mounting nut: 6—9 N·m (0.6—0.9 kg-m, 4.3—6.5 ft-lb)

TOOL

Common
Float level gauge: 07401—0010000

TROUBLESHOOTING

Engine cranks but won't start
- No fuel in tank
- No fuel to carburetor
- Too much fuel getting to cylinder
- No spark at plug (ignition malfunction)
- Air cleaner clogged

Engine idles roughly, stalls, or runs poorly
- Idle speed incorrect
- Ignition malfunction
- Rich mixture
- Lean mixture
- Air cleaner dirty
- Insulator leaks

Lean mixture
- Carburetor fuel jet clogged
- Fuel cap vent blocked
- Fuel filter clogged
- Fuel line kinked or restricted
- Float valve faulty
- Float level too low

Rich mixture
- Carburetor choke stuck closed
- Float valve faulty
- Float level too high
- Carburetor air jet clogged
- Air cleaner dirty