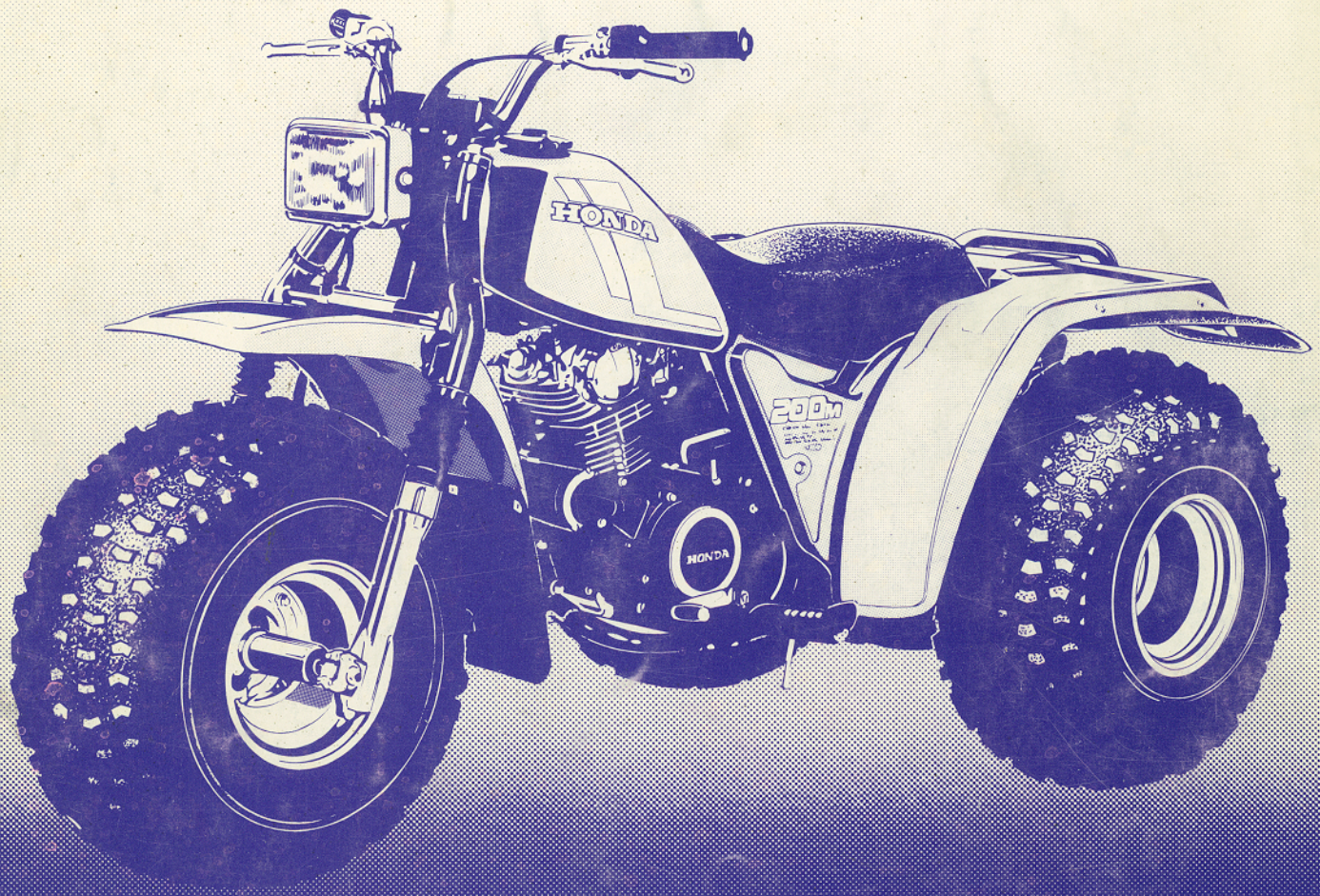
Official

HONDA

SHOP MANUAL

ATC200M



84-85

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 possible 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 methods or tools selected.

HOW TO USE THIS MANUAL

Sections 1 through 3 apply to the whole motorcycle, while sections 4 through 17 describe parts of the motorcycle, grouped according to location.

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

Most sections start with an assembly or system illustration 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 the source of the trouble, see section 18, Troubleshooting.

HONDA MOTOR CO., LTD.
SERVICE PUBLICATIONS OFFICE

CONTENTS

Date of Issue: July, 1984

MEMO

1. GENERAL INFORMATION

GENERAL SAFETY

WARNING

- *If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas.*
- *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.*

WARNING

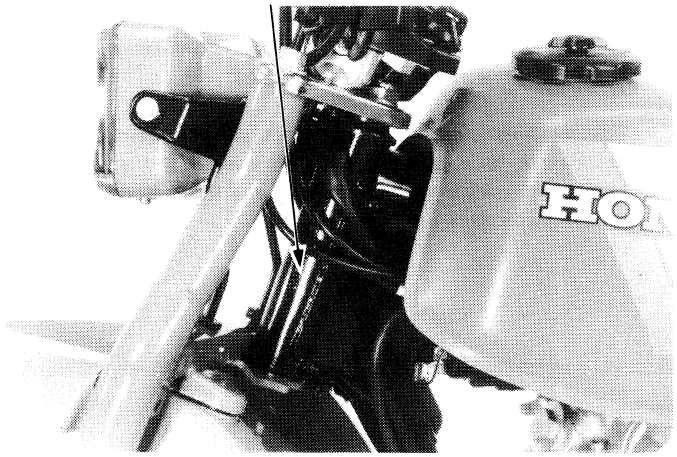
- *Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your work area.*
- *The battery electrolyte contains sulfuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water and call a doctor if electrolyte gets in your eyes.*

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 damage 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 gaskets, O-rings, cotter pins, and lock plates 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 1-4 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.

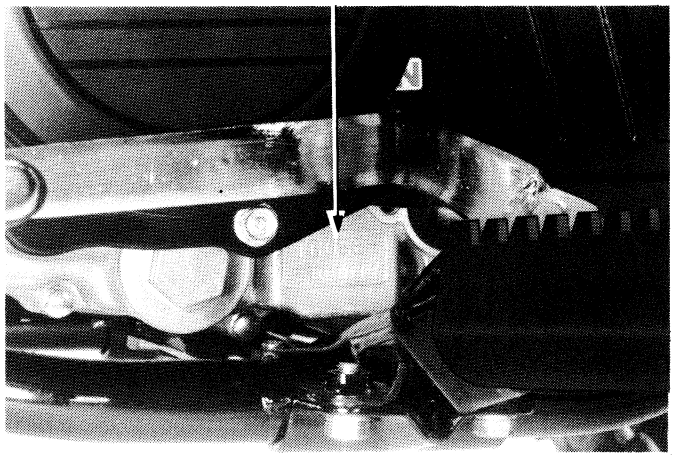
MODEL IDENTIFICATION

FRAME SERIAL NUMBER



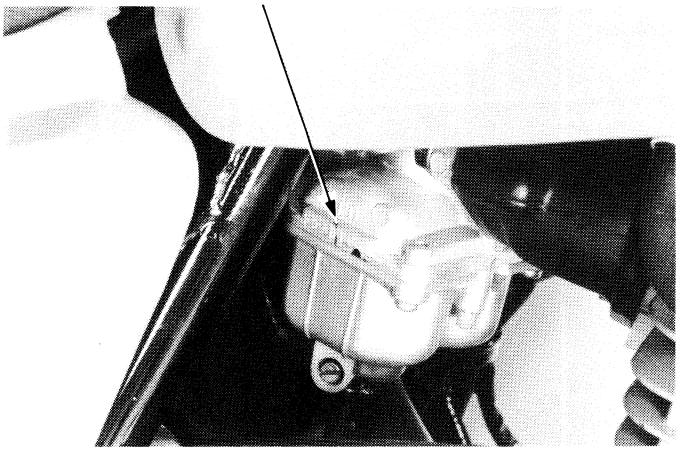
The frame serial number is stamped on the steering head left side.

ENGINE SERIAL NUMBER



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

CARBURETOR IDENTIFICATION NUMBER



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

SPECIFICATIONS

DIMENSIONS	Overall length		1,855 mm (73.0 in)
	Overall width		1,080 mm (42.5 in)
	Overall height		1,005 mm (39.6 in)
	Wheelbase		1,205 mm (39.6 in)
	Rear tread		800 mm (31.5 in)
	Seat height		685 mm (27.0 in)
	Foot peg height		260 mm (10.2 in)
	Ground clearance		110 mm (4.3 in)
	Dry weight		149 kg (328 lb)
FRAME	Type		Semi-double cradle
	Rim size	Front	9.2 x 9.0
		Rear	9.2 x 9.0
	Front tire size, pressure		25 x 12–9, 0.15 kg/cm^2 (2.2 psi)
	Rear tire size, pressure		25 x 12–9, 0.15 kg/cm^2 (2.2 psi)
	Front brake		Cable operated leading shoe
	Rear brake		Cable operated leading shoe
	Fuel capacity '84:		11.5 liters (3.04 US gal, 2.53 Imp gal)
	After'84:		10.5 liters (2.77 US gal, 2.31 Imp gal)
	Fuel reserve capacity		1.0 liters (0.26 US gal, 0.22 Imp gal)
	Caster		69°
	Trail		10 mm (0.39 in)
ENGINE	Type		Gasoline, air-cooled 4-stroke
	Cylinder arrangement		Single cylinder inclined 15°
	Bore x stroke		65.0 x 57.8 mm (2.56 x 2.28 in)
	Displacement		192 cc (11.7 cu in)
	Compression ratio		7.8 : 1
	Valve train		Overhead camshaft chain driven
	Maximum horsepower		13.0 BHP/7,000 rpm
	Maximum torque		1.46 kg-m/5,500 rpm (10.6 ft-lb/5,500 rpm)
	Oil capacity		1.5 lit (1.59 US qt, 1.32 Imp qt) 1.3 lit (1.37 US qt, 1.14 Imp qt) after draining
	Lubrication system		Forced pressure and wet sump
	Cylinder compression		11.0 ± 1.0 kg/cm^2 (156 ± 14 psi)
	Intake valve	OPENS	5° BTDC ┐
		CLOSES	35° ABDC ├ at 1 mm lift
	Exhaust valve	OPENS	35° BBDC ├ at 1 mm lift
		CLOSES	5° ATDC ┘
	Valve clearance	Intake	0.05 mm (0.002 in)
	(Cold)	Exhaust	0.05 mm (0.002 in)
CARBURETOR	Type		Piston valve
	Venturi dia.		22 mm (0.9 in)
	Main jet		#95
	Pilot screw opening		2-1/8 turns out
	Jet needle		3rd
	Float level		14 mm (0.55 in)
	Idle speed		1,400 ± 100 rpm

DRIVE TRAIN	Clutch		Wet multi-plate, semi-automatic
	Transmission		5-speed constant mesh
	Primary reduction		3.333 : 1
	Gear ratio	I	2.769 : 1
	(Posi-torque gear ratio)	II	1.722 : 1
		III	1.273 : 1
		IV	1.000 : 1
		V	0.815 : 1
	Final reduction		4.273 : 1
	Gearshift pattern		Left foot operated return system, N-1-2-3-4-5
	Drive chain		520, 92 Links
ELECTRICAL	Ignition		CDI
	Ignition timing	Initial	10° ± 2° BTDC at idle
		Full advance	30° ± 2° BTDC at 3,350 rpm
	Alternator	Capacity	70 W/5,000 rpm
	Battery		12V-14 AH
	Spark plug		DR8ES-L (NGK)
			X24ESR-U (ND)
	Spark plug gap		0.6–0.7 mm (0.024–0.028 in)
	Headlight		12 V 45 W/45 W
	Taillight		12 V 5 W

TORQUE VALUES

ENGINE

Item	Q'ty	Thread Size (mm)	Torque		
			N·m	kg-m	ft-lb
Cylinder head cap nut	4	8 x 1.25	28–30	2.8–3.0	20–22
Clutch lock nut	1	16 x 1.0	50–60	5.0–6.0	36–43
Centrifugal clutch lock nut	1	22 x 1.25	105–115	10.5–11.5	76–83
Clutch adjuster lock nut	1	8 x 1.25	19–25	1.9–2.5	14–18
Alternator flywheel bolt	1	8 x 1.25	40–50	4.0–5.0	29–36
Valve adjuster cover	2	36 x 1.5	10–14	1.0–1.4	7–10
Oil filter screen cap	1	36 x 1.5	9–15	0.9–1.5	7–11
Spark plug	1	12 x 1.25	12–19	1.2–1.9	9–14
Cam sprocket bolt	2	6 x 1.0	8–12	0.8–1.2	6–9
Oil filter rotor cover bolt	3	6 x 1.0	10–14	1.0–1.4	7–10
Clutch lifter stopper bolt	1	8 x 1.25	18–25	1.8–2.5	13–18
Gearshift drum stopper arm bolt	1	6 x 1.0	10–14	1.0–1.4	7–10
Pulse generator screw	2	5 x 0.8	4–7	0.4–0.7	2.9–5
Pulse cover screw	2	5 x 0.8	4–7	0.4–0.7	2.9–5
Valve adjuster lock nut	2	6 x 0.75	15–18	1.5–1.8	11–13
Gearshift stopper plate bolt	1	6 x 1.0	8–12	0.8–1.2	6–9
Cam chain tensioner adjuster bolt	1	16 x 1.0	15–22	1.5–2.2	11–16
Cam chain tensioner check bolt	1	6 x 1.0	8–10	0.8–1.0	6–7
Decompressor lever guide bolt	1	6 x 1.0	5–7	0.5–0.7	3.6–5
Right crankcase protector screw	3	Self tapping screw	3–7	0.3–0.7	2.2–5

FRAME

Item	Q'ty	Thread Size (mm)	Torque		
			N·m	kg-m	ft-lb
Handlebar upper holder bolt	4	8 x 1.25	18–30	1.8–3.0	13–22
Handlebar lower holder nut	2	10 x 1.25	40–48	4.0–4.8	29–35
Fork top bridge bolt	2	12 x 1.25	50–70	5.0–7.0	36–51
Steering stem nut	1	22 x 1.0	50–70	5.0–7.0	36–51
Front axle	1	14 x 1.5	70–110	7.0–11.0	51–80
Front hub nut	4	8 x 1.25	20–25	2.0–2.5	14–18
Rear brake drum nut (INNER) (OUTER)	1	32 x 1.0	35–45 120–140	3.5–4.5 12.0–14.0	25–33 87–101
Rear hub nut	8	8 x 1.25	20–25	2.0–2.5	14–18
Rear axle nut	2	14 x 1.5	60–80	6.0–8.0	43–58
Bearing holder bolt	4	12 x 1.25	50–70	5.0–7.0	36–51
Front fork mounting bolt	4	10 x 1.25	40–50	4.0–5.0	29–36

Item	Q'ty	Thread Size (mm)	Torque		
			N·m	kg-m	ft-lb
Front engine hanger nut	2	10 x 1.25	40–48	4.0–4.8	29–35
Front engine hanger nut	2	8 x 1.25	23–27	2.3–2.7	17–20
Rear engine hanger nut upper	1	10 x 1.25	40–48	4.0–4.8	29–35
Rear engine hanger nut lower	1	10 x 1.25	60–80	6.0–8.0	44–57
Upper engine hanger nut	1	8 x 1.25	20–25	2.0–2.5	14–18
Carburetor nut	2	6 x 1.0	6–9	0.6–0.9	4.5–7
Gearshift pedal	1	6 x 1.0	10–14	1.0–1.4	7–10
Foot peg bolt	8	8 x 1.25	20–25	2.0–2.5	14–18
Drive chain slider nut	2	6 x 1.0	6–9	0.6–0.9	4.5–7
Front axle holder nut	4	6 x 1.0	10–14	1.0–1.4	7–10
Air cleaner cover wing bolt	4	6 x 1.0	1.5–3	0.15–0.3	1.1–2.2
Driven sprocket damper nut	4	8 x 1.25	25–30	2.5–3.0	18–22

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

STANDARD TORQUE VALUES

Item	Torque N·m (kg-m, ft-lb)	Item	Torque N·m (kg-m, ft-lb)
5 mm bolt, nut	4.5–6 (0.45–0.6, 3.3–4.3)	5 mm screw	3.5–5 (0.35–0.5, 2.5–3.6)
6 mm bolt, nut	8–12 (0.8–1.2, 6–9)	6 mm screw	10–14 (1.0–1.4, 7–10)
8 mm bolt, nut	18–25 (1.8–2.5, 13–18)	6 mm flange bolt, nut	10–14 (1.0–1.4, 7.2–10)
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	30–40 (3.0–4.0, 22–29)

TOOLS

SPECIAL

Description	Tool No.	Alternative	Ref. page
Valve guide reamer, 5.48 mm	07984–0980000		6-10
Clutch center holder	07923–9580000		8-12, 8-15
Lock nut wrench, 30 mm	07907–PD10000	Equivalent commercially available in U.S.A.	8-6, 8-10
Ball race remover	07944–1150001	M9360–277–91774 (U.S.A.)	11-28
Universal bead breaker	GN–AH–958–BB1	Available in U.S.A. only	11-10
Lock nut spanner, 41 mm	07916–9580200	Not available in U.S.A.	12-10
Lock nut wrench, 41 mm	07916–9580300	07916–9580400	12-10
Bearing remover, 17 mm	07936–3710300		8-5
Bearing remover handle	07936–3710100		8-5
Sliding weight	07741–0010201	07936–3710200	8-5
Bearing remover, 15 mm	07936–KC10000		10-8
Hollow set wrench, 6 mm	07917–3230000	Equivalent commercially available in U.S.A.	11-20
Digital Multi-tester	KS–AHM–32–003	U.S.A. only	14-3

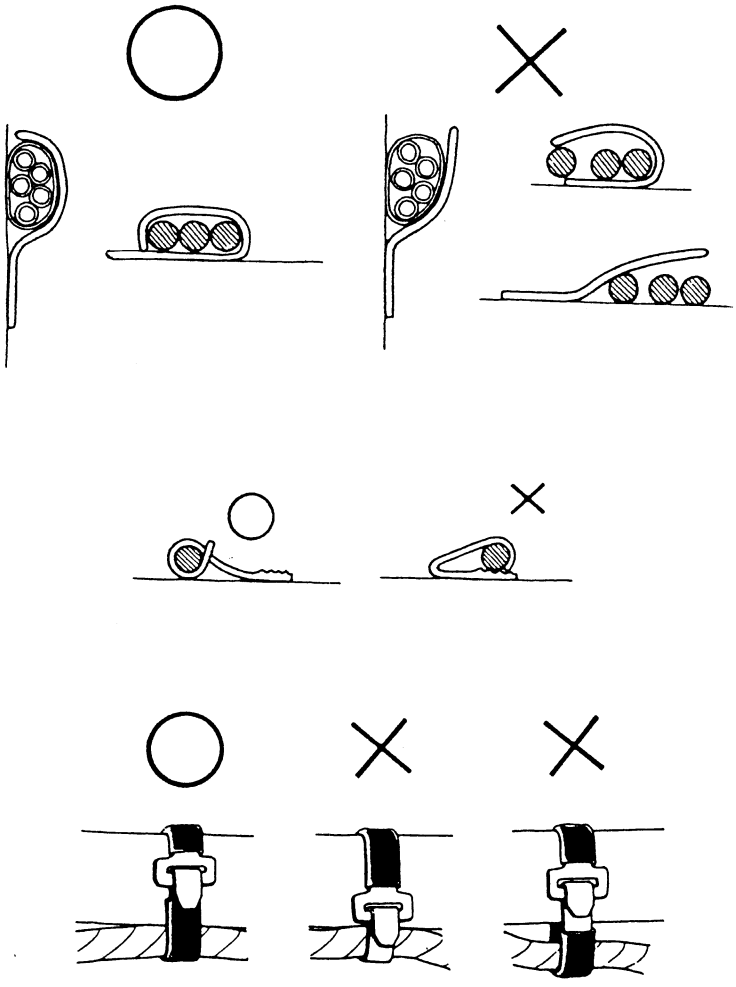
COMMON

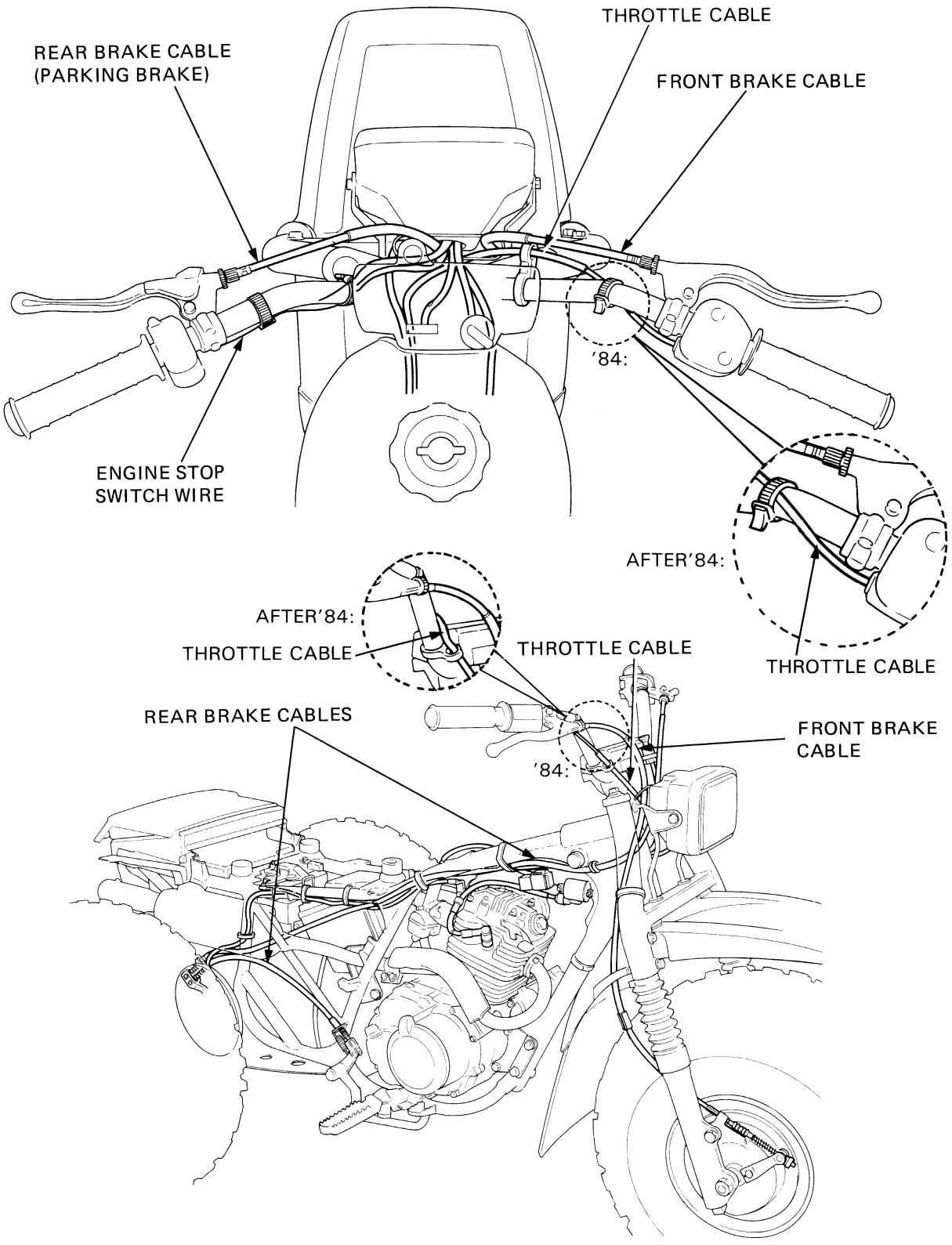
Description	Tool No.	Alternative	Ref. page
Float level gauge	07401–0010000		4-9
Pin spanner	07702–0020000	07902–0010000, 07702–0010000 or M9361–412–099788 (Available in U.S.A.)	11-28, 11-30
Valve adjusting wrench, 10 x 12 mm	07708–0030200	07908–3230000	3-6
Valve adjuster A	07708–0030300		3-6
Lock nut wrench, 20 x 24 mm	07716–0020100	07916–3710000	8-12, 8-15
Lock nut wrench, 30 x 32 mm	07716–0020400	Commercially available in U.S.A.	11-27, 11-30
Extension bar	07716–0020500	Commercially available in U.S.A.	8-6, 8-10
Flywheel puller	07733–0010000	07933–2000000	9-8
Valve guide remover 5.5 mm	07742–0010100	07942–3290100	6-10
Valve guide driver B	07742–0020200	07942–3290200	6-10
Attachment, 37 x 40 mm	07746–0010200		11-29
Driver	07749–0010000	07949–6110000	8-5, 10-8
Pilot, 15 mm	07746–0040300		11-14
Attachment, 42 x 47 mm	07746–0010300		10-8, 11-14
Pilot, 35 mm	07746–0040800		12-17
Attachment, 62 x 68 mm	07746–0010500		12-17
Valve spring compressor	07757–0010000	07957–3290001	6-8, 6-14
Driver	07746–0030100		10-4
Pilot, 30 mm	07746–0040700		10-8
Attachment, 32 x 35 mm	07746–0010100		10-8
Pilot, 20 mm	07746–0040500		10-8
Attachment, 52 x 55 mm	07746–0010400		10-8
Attachment, 30 mm I.D.	07746–0030300		10-4
Fork seal driver	07747–0010100	07947–3550000	11-25
Fork seal driver attachment C	07747–0010400		11-25
Pilot, 17 mm	07746–0040300		8-5

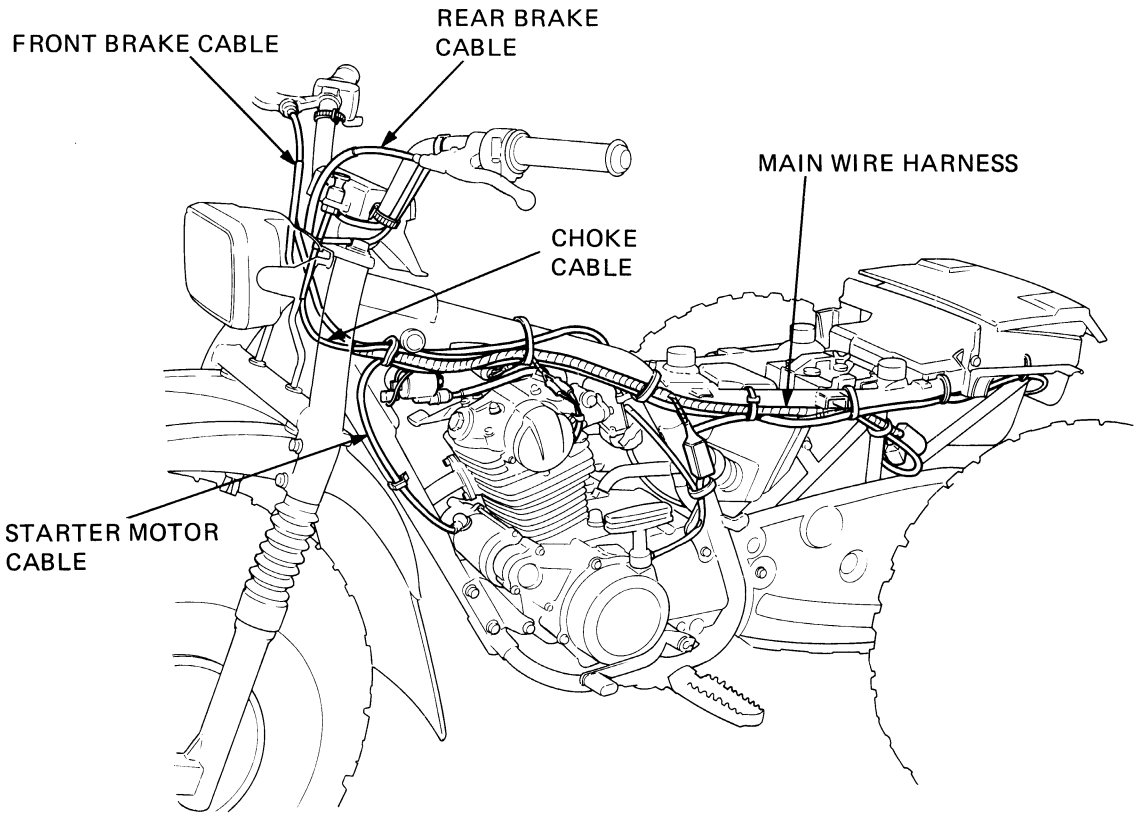
CABLE & HARNESS ROUTING

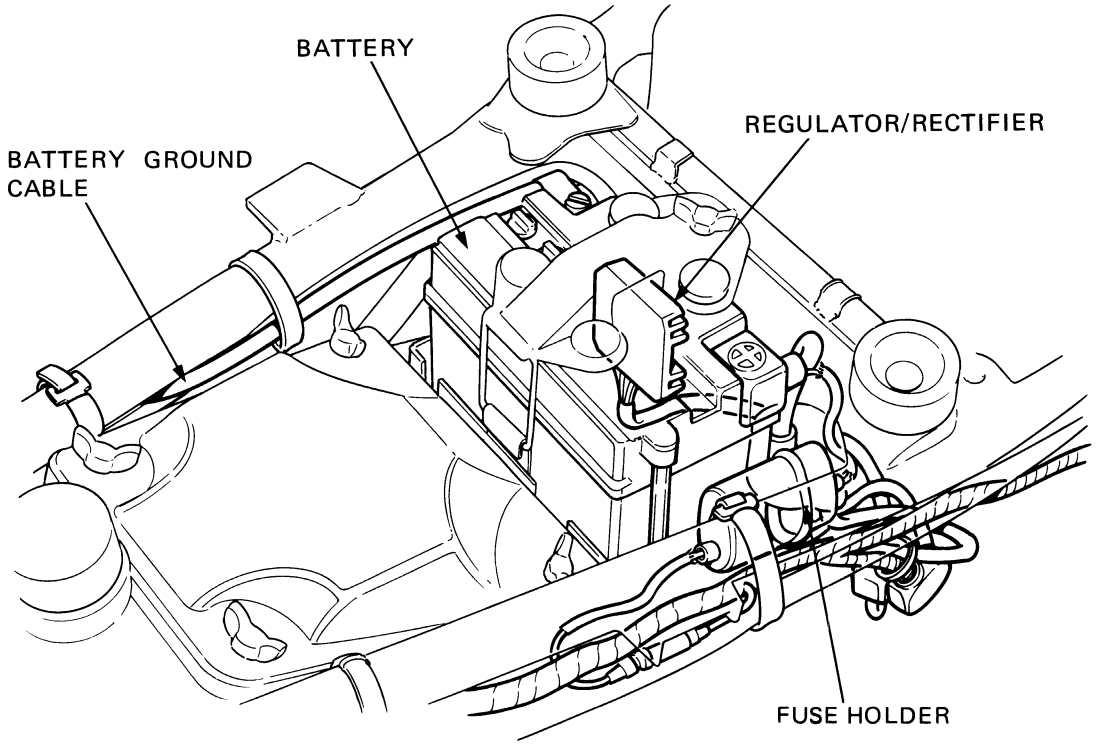
Note the following when routing cables and wire harnesses:

- A loose wire, harness or cable can be a safety hazard. After clamping, check each wire to be sure it is secure.
- Do not squeeze wires against the weld or end of its clamp when a weld-on clamp is used.
- Secure wires and wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wires or wire harnesses.
- Route harnesses so they are not pulled taut 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 a wire or harness with a broken insulator. 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 parts that get hot.
- Be sure grommets are seated in their grooves properly.
- After clamping, check each harness to be certain that it is not interferring 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.



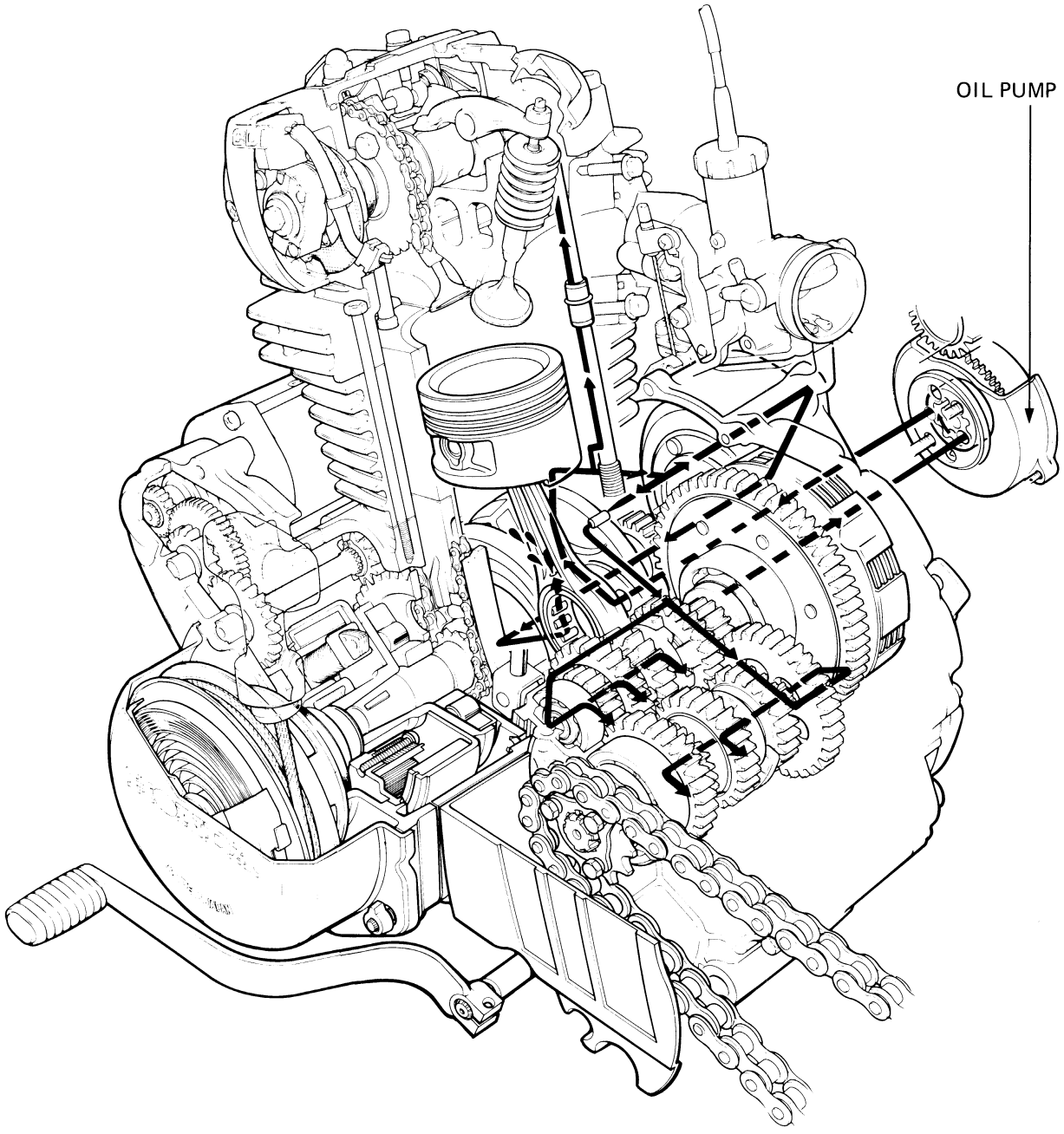

THROTTLE CABLE
REAR BRAKE CABLE
(PARKING BRAKE)
FRONT BRAKE CABLE
'84:
ENGINE STOP
SWITCH WIRE
AFTER'84:
AFTER'84:
THROTTLE CABLE
THROTTLE CABLE
THROTTLE CABLE
REAR BRAKE CABLES
FRONT BRAKE
CABLE
'84:


FRONT BRAKE CABLE
REAR BRAKE CABLE
MAIN WIRE HARNESS
CHOKE CABLE
STARTER MOTOR CABLE


BATTERY
REGULATOR/RECTIFIER
BATTERY GROUND CABLE
FUSE HOLDER

NOISE EMISSION CONTROL SYSTEM

- 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 AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW:
  1. Removal of, or puncturing the muffler, bafflers, header pipes or any other component which conducts exhaust gases.
  2. Removal of, or puncturing of any part 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.


OIL PUMP

2. LUBRICATION

SERVICE INFORMATION

GENERAL

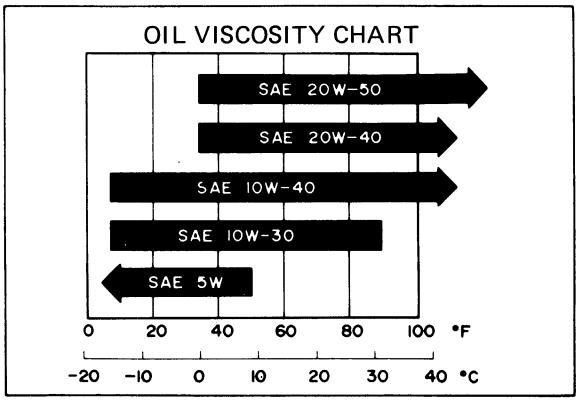
- This section describes how to inspect and replace the engine oil and clean the oil filter screen.
- Section 8 shows how to service the oil pump.

SPECIFICATIONS

Oil capacity 1.5 liter (1.59 US qt, 1.32 Imp qt) at disassembly
1.3 liter (1.37 US qt, 1.14 Imp qt) at draining

Engine oil recommendation
Use Honda 4-Stroke Oil or equivalent.
API Service Classification: SE or SF
Viscosity: SAE 10W–40

Other viscosities shown in the chart may be used for the temperature ranges indicated.



TORQUE VALUES

Oil filter screen cap	9–15 N·m (0.9–1.5 kg-m, 7–11 ft-lb)
Oil filter rotor cover bolt	10–14 N·m (1.0–1.4 kg-m, 7–10 ft-lb)

TROUBLESHOOTING

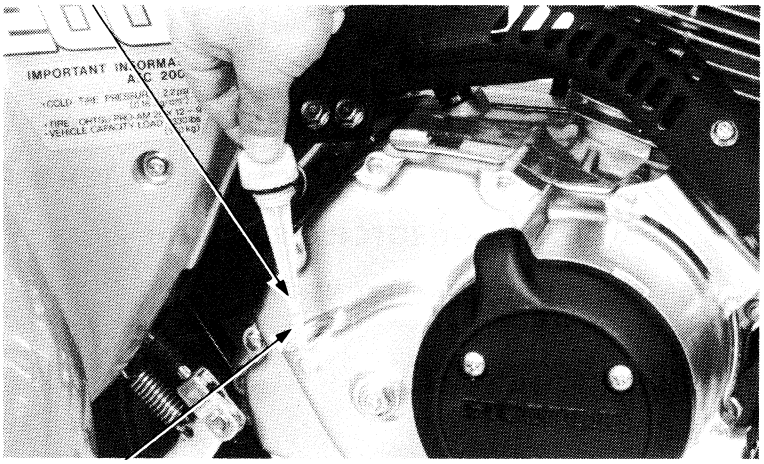
Oil level too low
1. Normal oil consumption
2. External oil leaks
3. Worn piston rings

Oil consumption
1. Oil not changed often enough
2. Faulty head gasket

ENGINE OIL LEVEL CHECK

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

If the oil level is below the lower level mark on the dipstick, fill to the upper level mark with the recommended oil (Page 2–1).



ENGINE OIL CHANGE AND OIL FILTER SCREEN CLEANING

NOTE

- Drain the oil with the engine warm.
- The oil filter screen and spring will come out when the oil filter screen cap is removed.

Remove the oil filler cap and oil filter screen cap to drain the oil.
Operate the recoil starter several times to completely drain any residual oil.
Clean the oil filter screen.

Make sure that the oil filter screen, sealing rubber, screen cap and O-ring are in good condition.

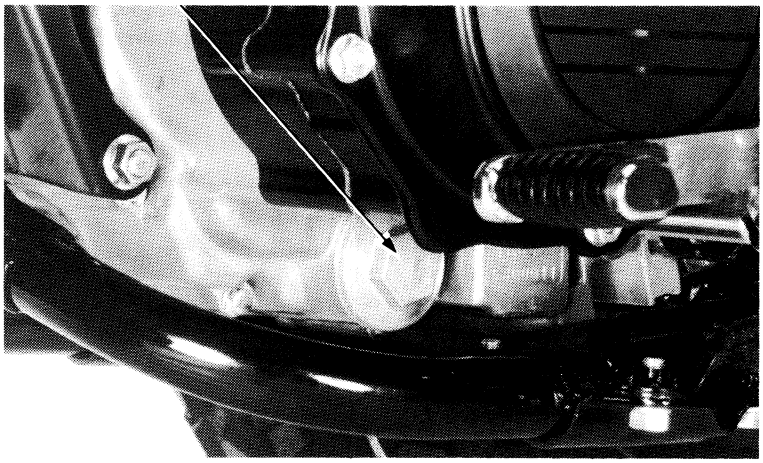
Install the oil filter screen, spring and screen cap.

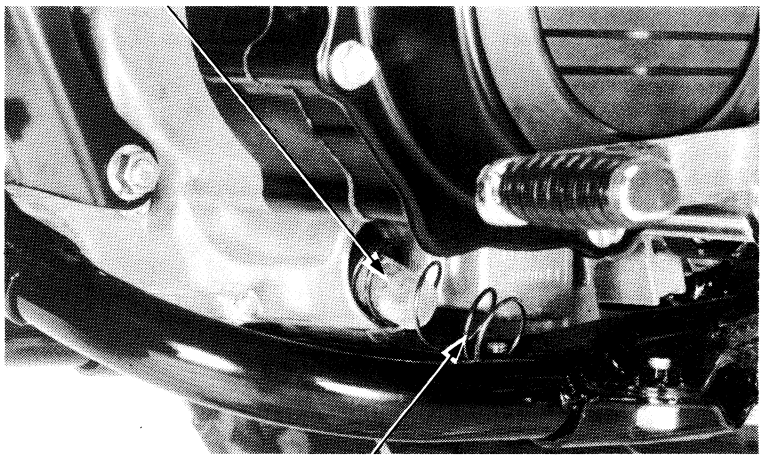
TORQUE: 9–15 N·m
(0.9–1.5 kg-m, 7–11 ft-lb)

Fill the crankcase with the recommended grade oil (Page 2–1).

ENGINE OIL CAPACITY:
1.3 liters (1.37 US qt, 1.14 Imp qt) after draining

Install the oil filler cap.
Start the engine and let it idle for 2–3 minutes.
Stop the engine.
With the ATC on level ground, make sure that the oil level is at the upper level mark and that there are no oil leaks.





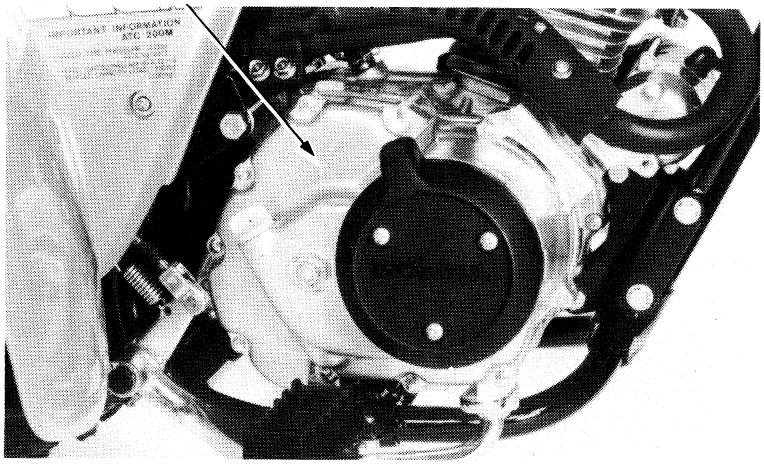
OIL FILTER ROTOR CLEANING

NOTE

Clean the oil filter rotor before adding oil.

Remove the right crankcase cover (Page 8–3).

RIGHT CRANKCASE COVER



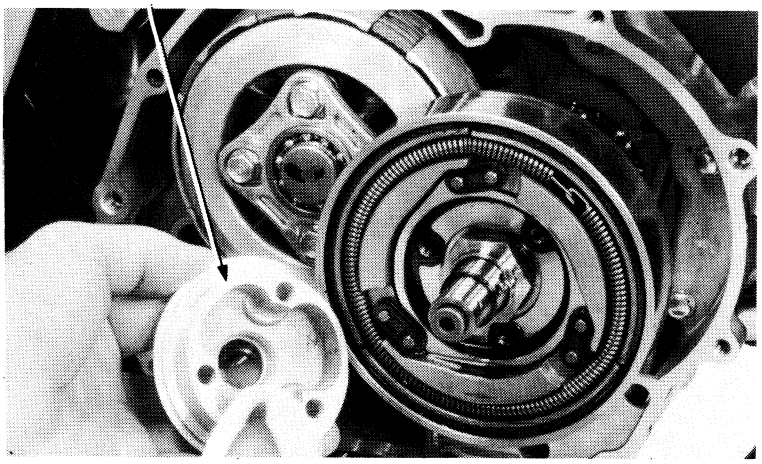
Remove the oil filter rotor cover and clean the inside of the rotor cover and rotor.

Install the oil filter rotor cover (Page 8–11).

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

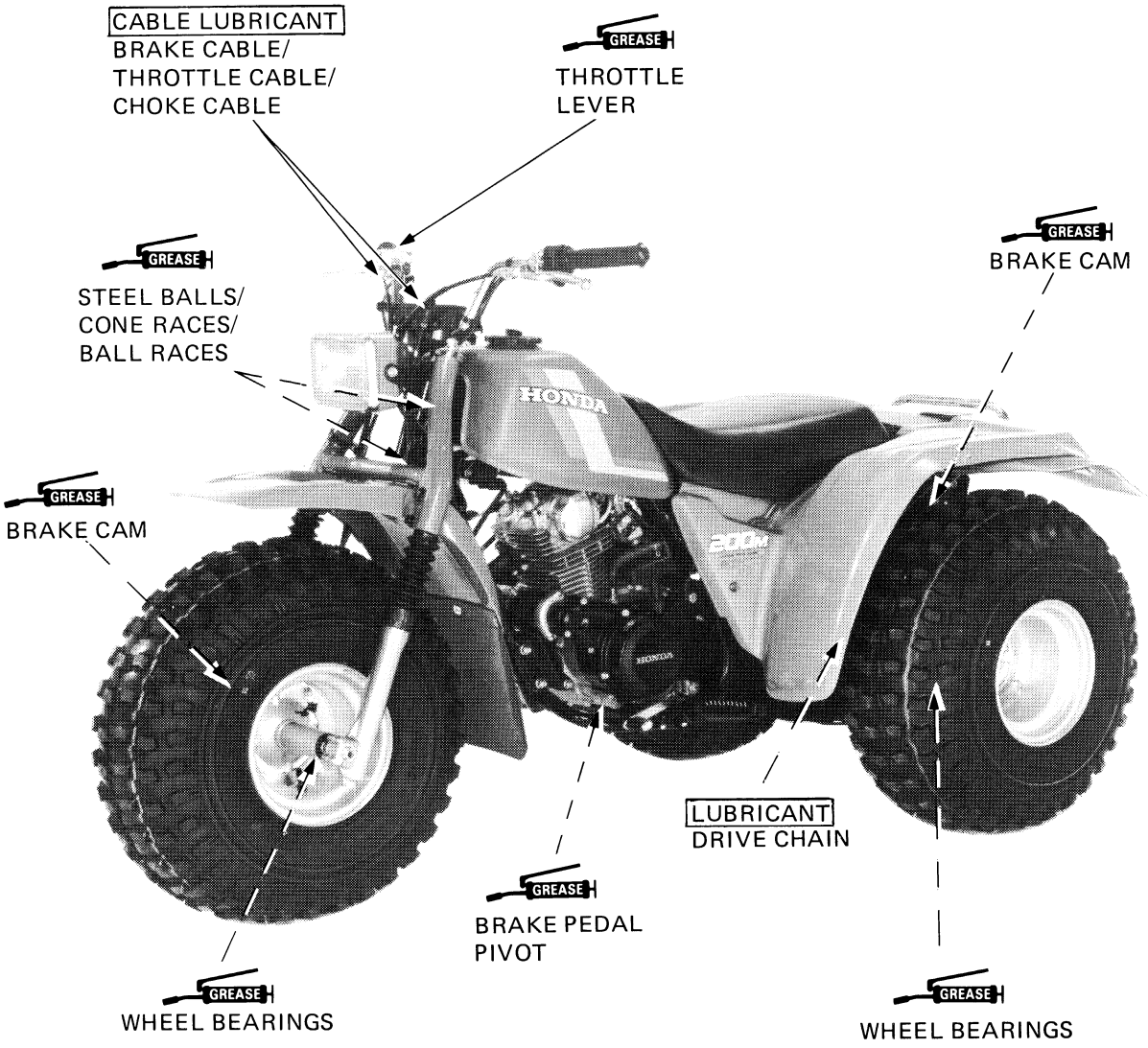
Install the right crankcase cover (Page 8–21).
Fill the engine with recommended grade oil (Pages 2–1 and 2–2).

OIL FILTER ROTOR COVER



LUBRICATION POINTS

Use general purpose grease when no other specification is given. Apply oil or grease to any 2 sliding surfaces and cables not shown here.



3. MAINTENANCE

SERVICE INFORMATION

SPECIFICATIONS

Ignition timing:	
Initial	10° ± 2° BTDC at idle
Full advance	30° ± 2° BTDC at 3,350 rpm
Spark plug:	
Spark plug gap	0.6–0.7 mm (0.024–0.028 in)
Recommended spark plugs:	DR8ES-L (NGK) X24ESR-U (ND)
Valve clearance (cold)	
Intake	0.05 mm (0.002 in)
Exhaust	0.05 mm (0.002 in)
Throttle lever free play	5–10 mm (3/16–3/8 in)
Idle speed	1,400 ± 100 rpm
Cylinder compression	11.0 ± 1.0 kg/cm^2 (156 ± 14 psi)

Front brake lever free play	15–20 mm (5/8–3/4 in)
Rear brake pedal free play	15–20 mm (5/8–3/4 in)
Rear brake lever (parking brake) lever free play	15–20 mm (5/8–3/4 in)
Drive chain free play	10–20 mm (3/8–3/4 in)
Drive chain length (45 pins):	
Standard	698.5 mm (27.50 in)
Service limit	705.5 mm (27.78 in)
Front/rear rim size	9.2 x 9.0
Front/rear tire size	25 x 12–9
Front/rear tire pressure	2.2 psi (0.15 kg/cm^2, 15 kPa)
Front/rear tire circumference	
Standard	1,870 mm (73.6 in)

TORQUE VALUES

Spark plug	12–19 N·m (1.2–1.9 kg-m, 9–14 ft-lb)
Valve adjuster cover	10–14 N·m (1.0–1.4 kg-m, 7–10 ft-lb)
Cam chain tensioner adjusting bolt	15–22 N·m (1.5–2.2 kg-m, 11–16 ft-lb)
Rear axle bearing holder bolt	50–70 N·m (5.0–7.0 kg-m, 36–51 ft-lb)
Clutch adjuster lock nut	19–25 N·m (1.9–2.5 kg-m, 14–18 ft-lb)
Valve adjuster lock nut	15–18 N·m (1.5–1.8 kg-m, 11–13 ft-lb)

MAINTENANCE SCHEDULE

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

Perform the PRE-RIDE INSPECTION in the Owner's Manual at each scheduled maintenance period.

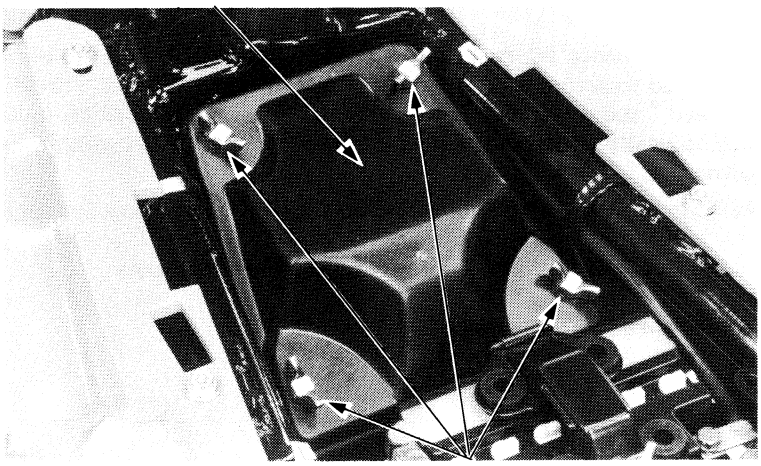
I: Inspect, Clean, Adjust, Lubricate or Replace, if necessary.
C: Clean
R: Replace
A: Adjust
L: Lubricate

	ITEM		INITIAL SERVICE PERIOD (First week of operation)	REGULAR SERVICE PERIOD (Every 30 operating days)
	ENGINE OIL	NOTE (1), (2)	R	R
*	ENGINE OIL FILTER SCREEN		C	C
*	ENGINE OIL FILTER ROTOR			C
	AIR CLEANER ELEMENT	NOTE(2)		I
	SPARK PLUG			I
	BATTERY		I	I
*	VALVE CLEARANCE		I	I
*	CAM CHAIN TENSIONER		A	A
*	CARBURETOR		I	I
	FUEL LINE		I: (EVERY YEAR)	
*	FUEL FILTER		C: (EVERY YEAR)	
	THROTTLE OPERATION		I	I
	DRIVE CHAIN	NOTE (2)	I,L	I,L
*	FRONT & REAR BRAKE SHOES	NOTE (3)	I: (EVERY YEAR)	
	FRONT & REAR BRAKE SYSTEM		I	I
*	CLUTCH		A	A
*	SPARK ARRESTER			C
	ALL NUTS, BOLTS, FASTENERS		I	I
	LIGHTING EQUIPMENT		I	I
	TIRES		I	I
*	STEERING HEAD BEARINGS		A: (EVERY YEAR)	

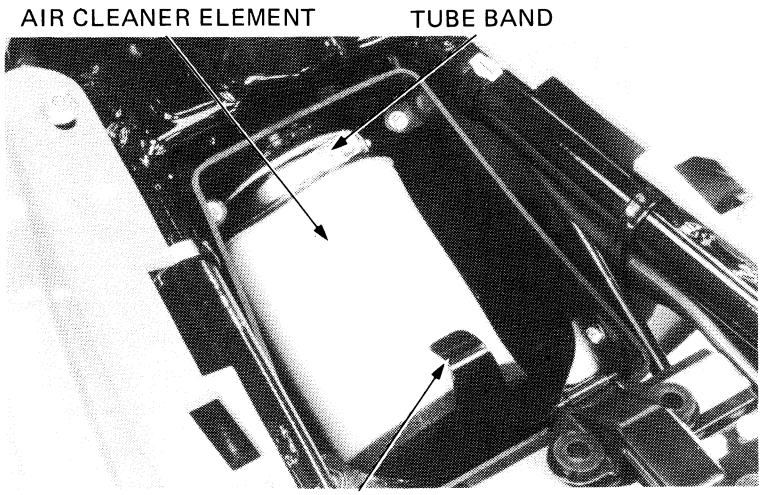
NOTES: (1) Replace every 30 operating days or every 3 months, whichever comes first.
(2) Service more frequently when riding in dusty areas, sand or snow.
(3) Service more frequently after riding in very wet or muddy conditions.

AIR CLEANER

Remove the seat by pulling the seat lever.
Loosen the four wing bolts attaching the air cleaner case cover.
Remove the air cleaner case cover.



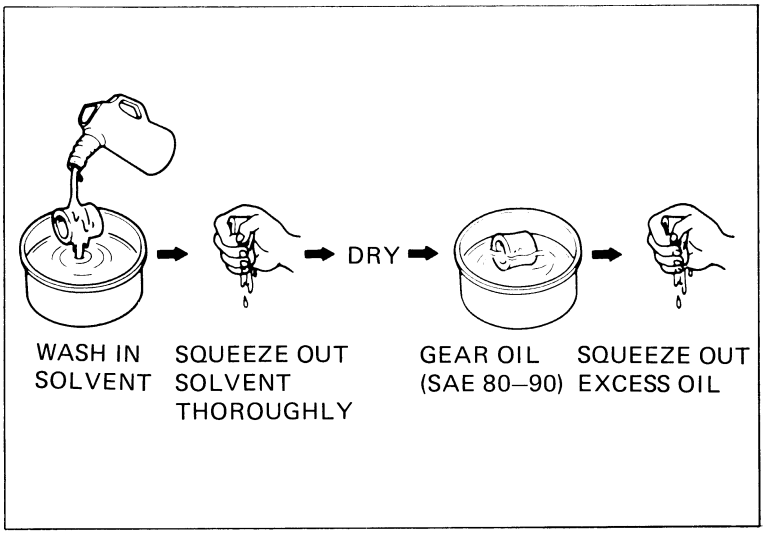
Remove the air cleaner element assembly from the air cleaner case.
Remove the bracket from the element holder.
Remove the air cleaner element from the element holder.



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

Soak the element in gear oil (SAE 80–90) and squeeze out excess.
Place the element onto the element holder.

Install the bracket onto the element holder.
Install the element assembly into the air cleaner case.
Install the air cleaner case cover by using four wing bolts.
Install the seat.



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 REPLACEMENT PLUG:
DR8ES-L (NGK)
X24ESR-U (ND)

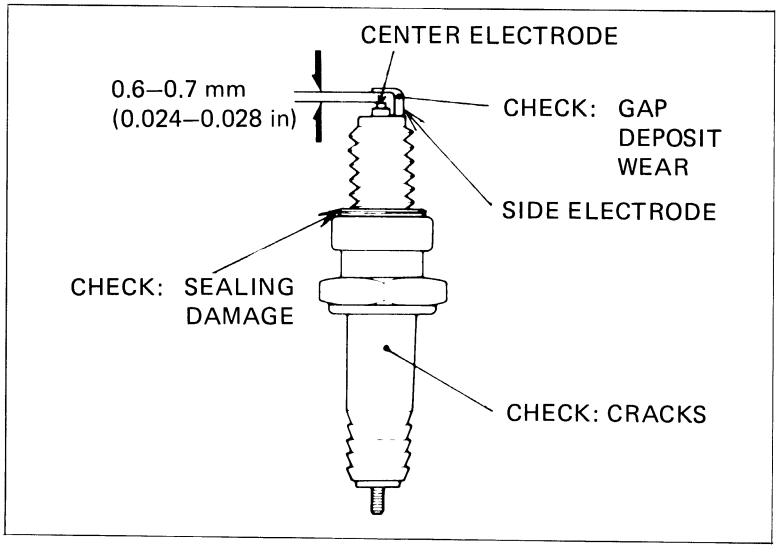
Check the sealing washer and replace with a new one if damaged.

With the sealing washer attached, thread the spark plug in by hand to prevent crossthreading.

Tighten the spark plug to the specified torque.

TORQUE: 12–19 N·m
(1.2–1.9 kg-m, 9–14 ft-lb)

Connect the spark plug cap.



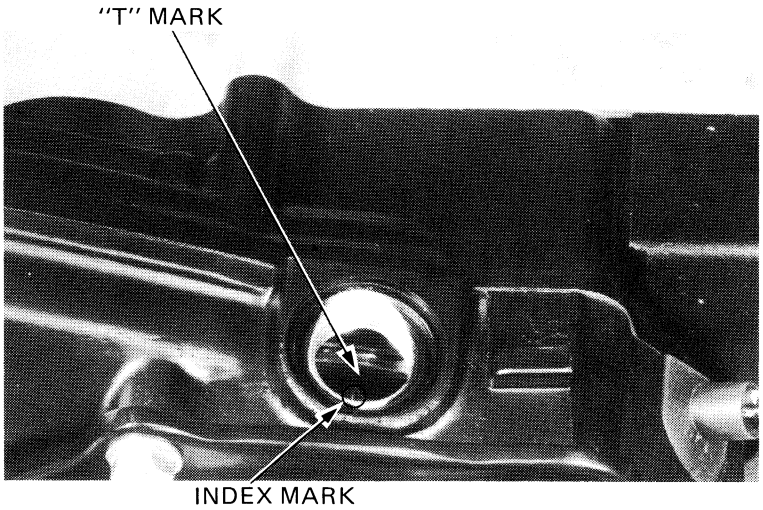
VALVE CLEARANCE

NOTE

- Inspect and adjust valve clearance while the engine is cold (below 35°C/95°F).
- Make sure the decompressor valve lifter has free play.

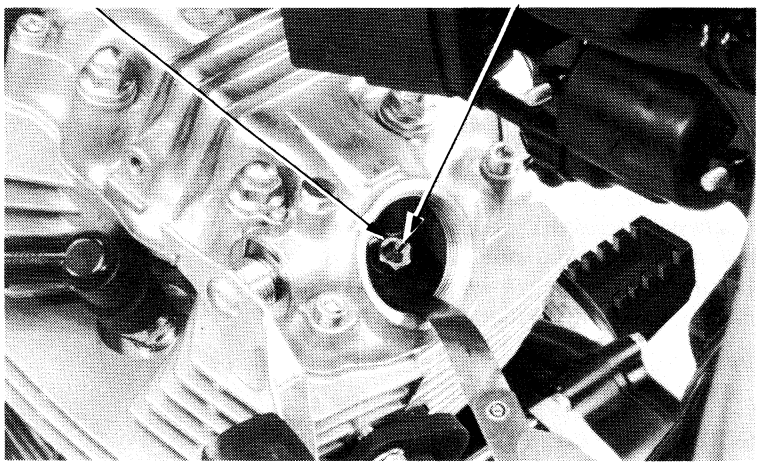
Remove the timing mark hole cap.
Remove the valve adjuster covers.

Rotate the crankshaft by using the recoil starter and align the "T" mark on the rotor with the index mark. The piston must be at TDC of the compression stroke.



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

VALVE CLEARANCES:
Intake: 0.05 mm (0.002 in)
Exhaust: 0.05 mm (0.002 in)



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

Hold the adjusting screw and tighten the lock nut.

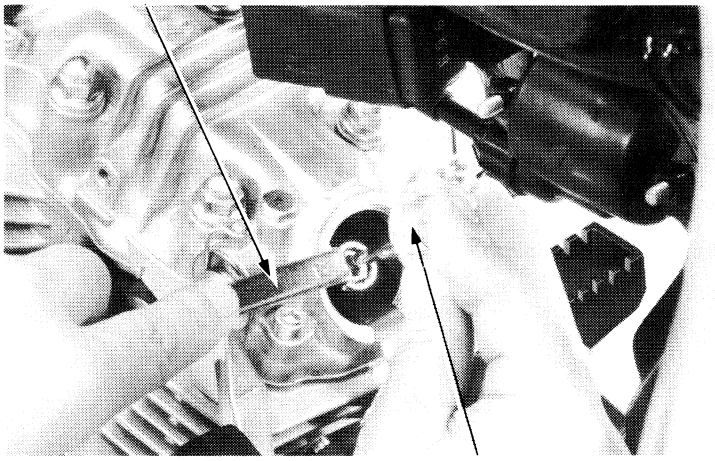
TORQUE: 15–18 N·m
(1.5–1.8 kg-m, 11–13 ft-lb)

Recheck the valve clearance and install the valve adjuster covers.

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

Install the timing hole cap.

VALVE ADJUSTING WRENCH, 10 x 12 mm
07708–0030200



VALVE ADJUSTER A
07708–0030300

FUEL FILTER

Disconnect the fuel tube and drain fuel from the fuel tank.

WARNING

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

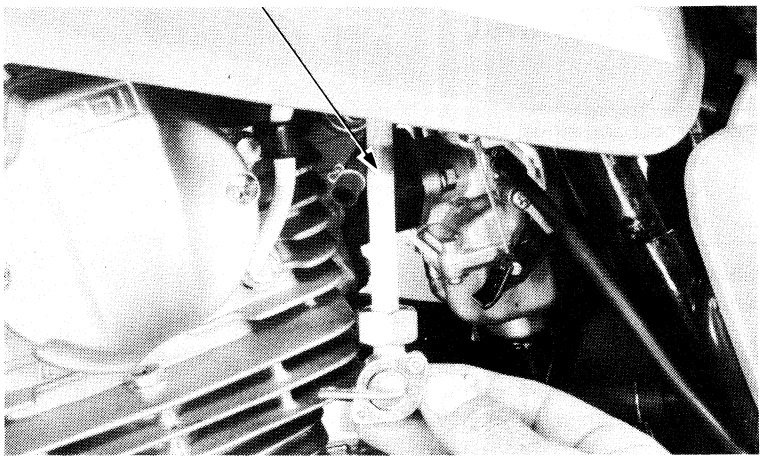
Remove the fuel valve by loosening the valve nut.

Remove the fuel filter and wash it in clean non-flammable or high flash point solvent.

Install the filter and valve and attach the fuel line.

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

FUEL FILTER



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.

Disconnect the throttle cable at the upper end.
Thoroughly lubricate the cable and pivot point with a commercially available cable lubricant to prevent premature wear.

Install the throttle cable in the reverse order of removal.

Make sure the throttle lever free play is 5—10 mm (3/16—1/8 in) at the tip of the throttle lever.

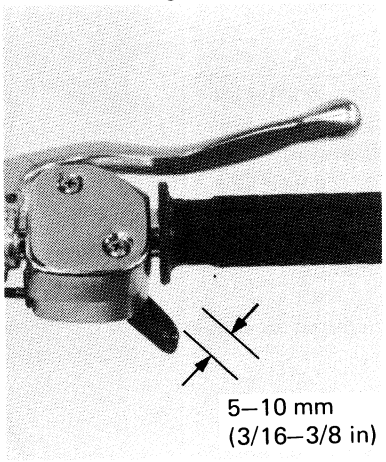
Adjust as follows:
'84:
Remove the fuel tank

Slide the rubber cap off the adjuster on the carburetor cap.

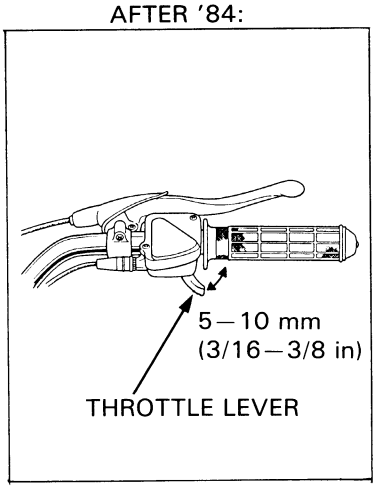
Adjust the throttle lever free play by turning the adjuster on the carburetor.

Install the adjuster rubber cap securely.
Install the fuel tank.
After '84:
Slide rubber cap off the adjuster on the throttle lever housing.
Adjust the throttel lever free play by loosening the lock nut and turning the adjuster.
Tighten the lock nut and install the adjuster rubber cap securely.

'84:

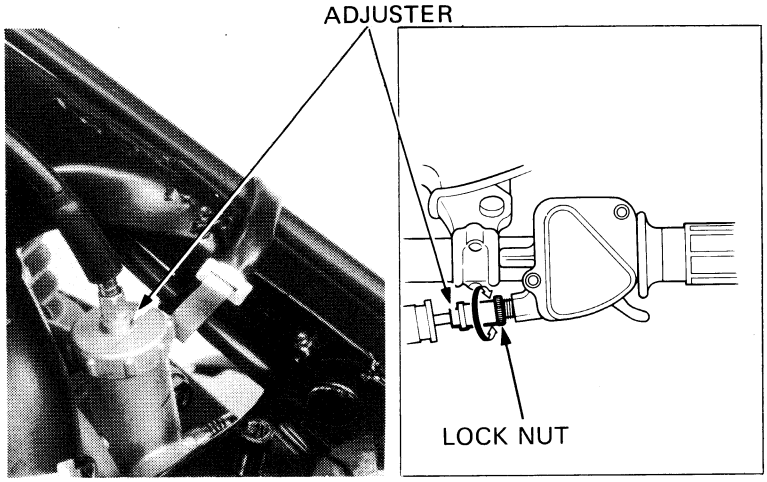


AFTER '84:



'84:

AFTER '84:



CAM CHAIN TENSION

Start the engine and allow it to idle.
Remove the rubber cap and loosen the cam chain tensioner adjusting bolt.

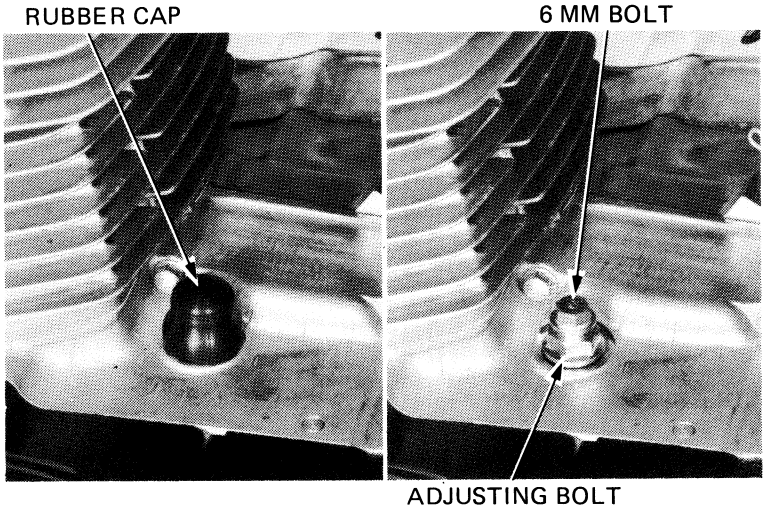
When the cam chain tensioner adjusting bolt is loosened, the tensioner will automatically position itself to provide the correct tension.

Retighten the adjusting bolt and install the rubber cap.

TORQUE: 15—22 N·m
(1.5—2.2 kg-m, 11—16 ft-lb)

NOTE

Do not attempt to loosen the 6 mm bolt while adjusting.



CARBURETOR IDLE SPEED

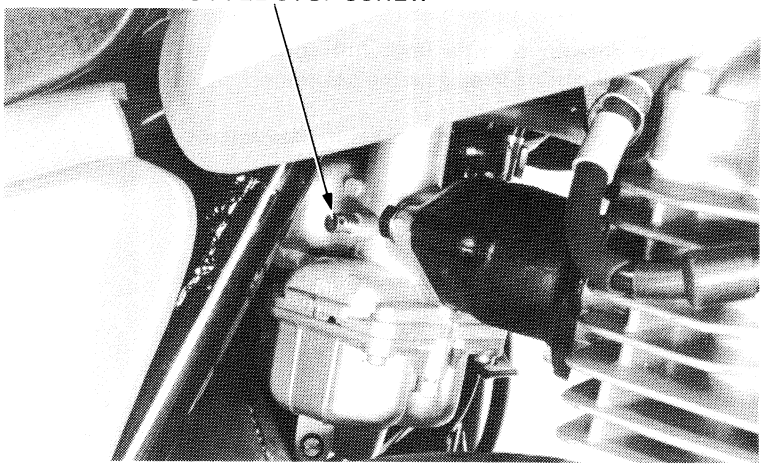
NOTE

- 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.

Warm up the engine for about ten minutes.

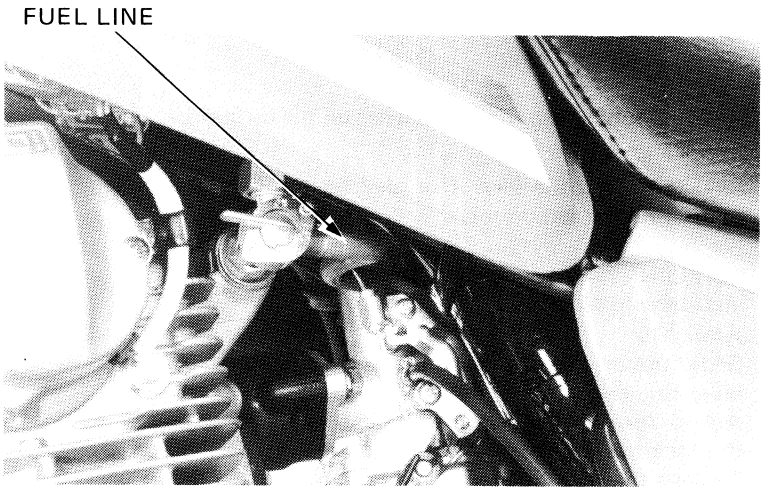
Turn the throttle stop screw as required to obtain the specified idle speed.

IDLE SPEED: 1,400 ± 100 rpm



FUEL LINE

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



IGNITION TIMING

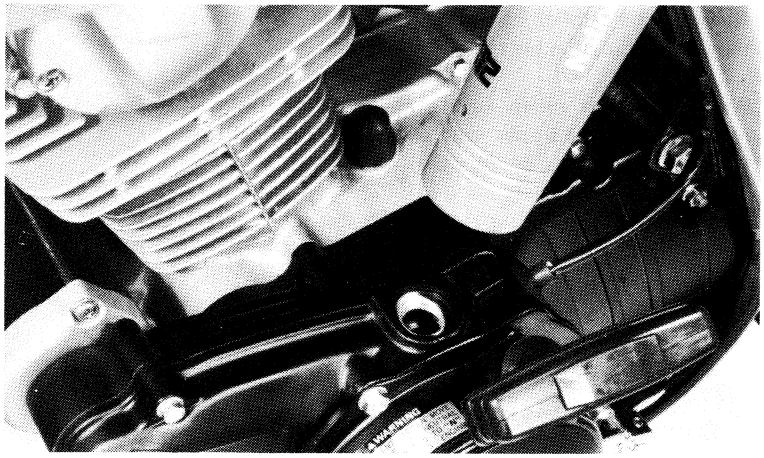
NOTE

The Capacitive Discharge Ignition (CDI) system is factory pre-set and does not require adjustment. To inspect the function 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.



CYLINDER COMPRESSION

Warm up the engine. After the engine is warm, stop the engine and remove the spark plug.
Insert a compression gauge.

Pull out the choke knob all the way and fully open the throttle.
Push the starter button until the compression gauge reading stops rising.

NOTE

Watch for compression leaking at the gauge connection.

COMPRESSION: 11.0 ± 1.0 kg/cm^2 (159 ± 14 psi)

COMPRESSION GAUGE

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

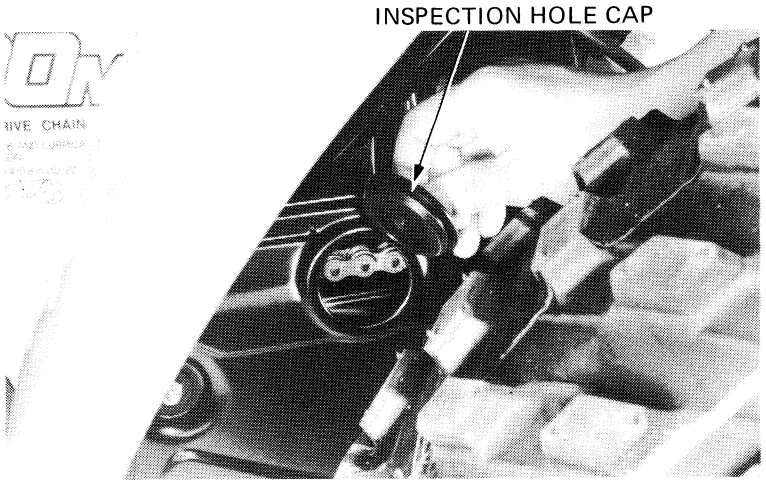
High compression can be caused by:
- Carbon deposits in combustion chamber or on piston crown.
  The maximum reading is usually reached with in 4–7 seconds.

DRIVE CHAIN

Stop the engine and shift the transmission into neutral.
Remove the drive chain inspection hole cap.

Check the amount of chain free play through the inspection hole.

CHAIN FREE PLAY: 10–20 mm (3/8–3/4 in)

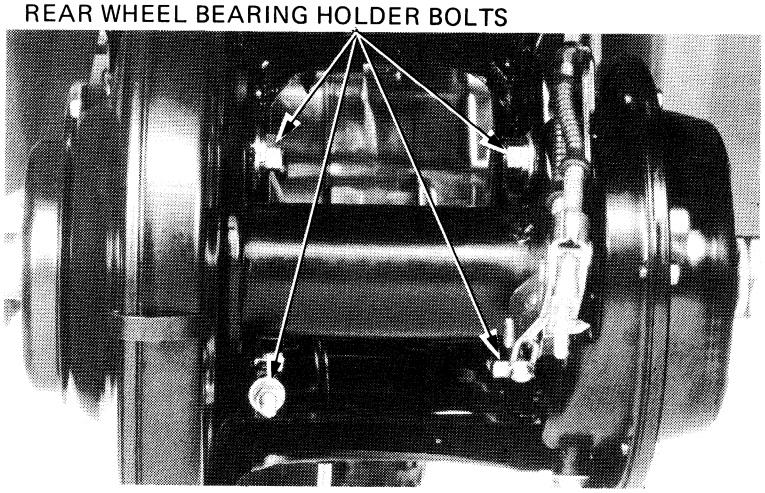

INSPECTION HOLE CAP

Adjust as follows:
Loosen the rear axle bearing holder bolts.
Turn the adjusting nut to obtain the specified free play.

Retighten the rear axle bearing holder bolts.

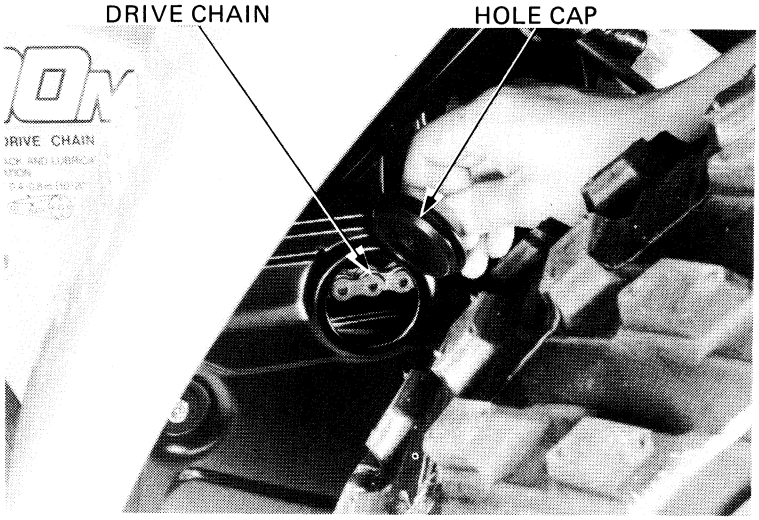
TORQUE: 50–70 N·m
(5.0–7.0 kg-m, 36–51 ft-lb)

Check the rear wheels for free rotation.
Adjust the rear brake (Page 3–14).



Lubricate the drive chain with SAE 80 or 90 gear oil lubricant through the inspection hole.

Install the inspection hole cap.



When the drive chain becomes extremely dirty, it should be removed and cleaned prior to lubrication.

Remove the left rear wheel (Page 12–3).

Remove the sealed cover and chain case clips (Page 12–4).
Remove the drive chain cover (Page 12–4).
Remove the chain clip, master link, drive chain, and O-rings.