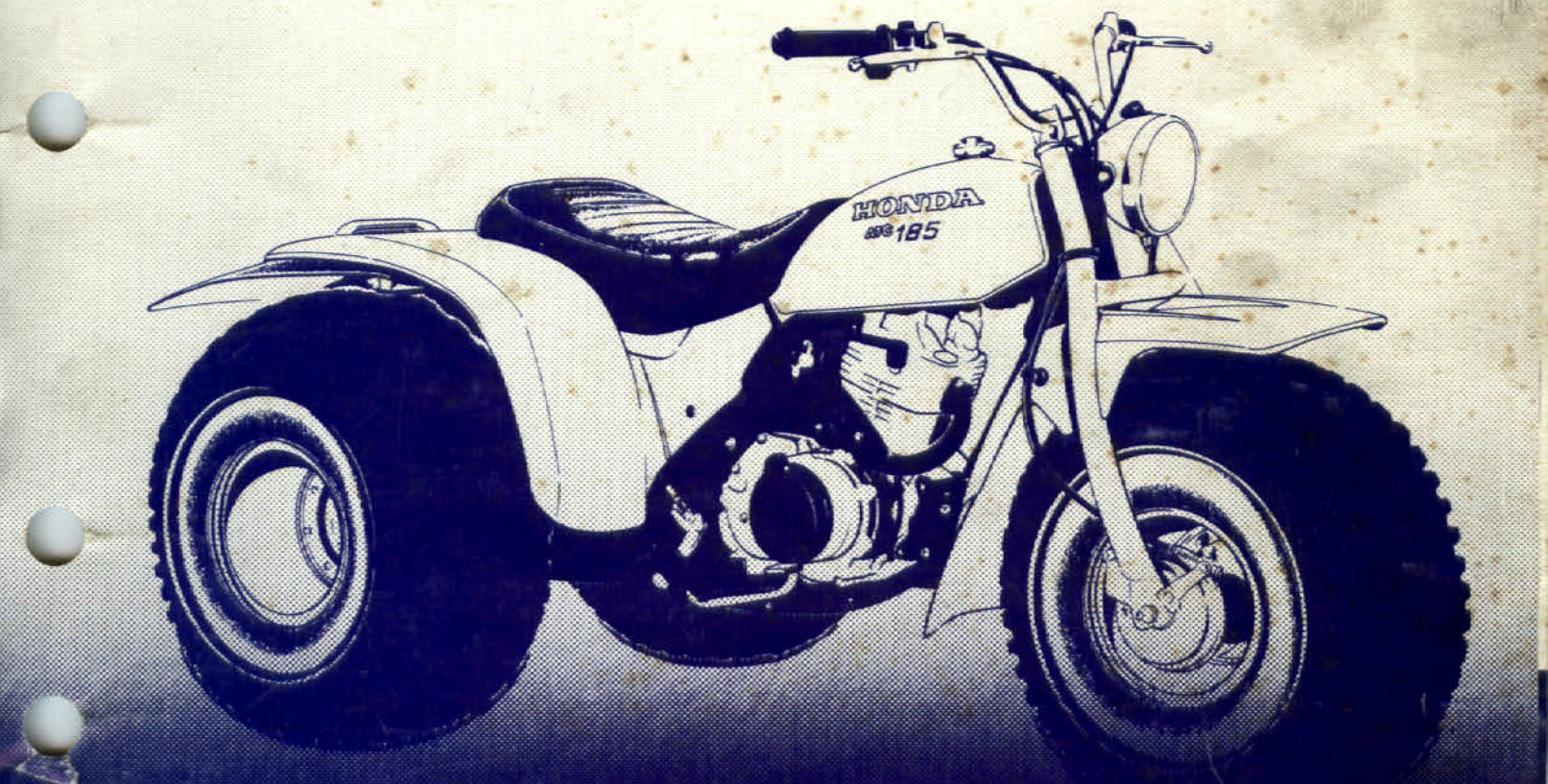
Official

HONDA

SHOP MANUAL

ATC 185
ATC 185S
ATC 200



ATC 185 '80
ATC 185S/200 '81–83

6195803
A27008207

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 motorcycle, while sections 4 through 15 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.

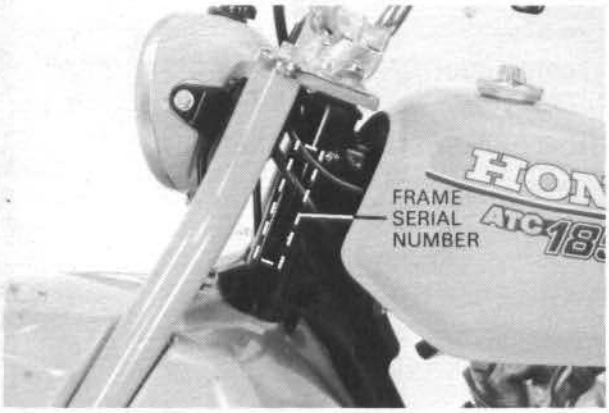
Read Technical Feature section 17 if you are unfamiliar with the ATC185/200 clutch operation.

Refer to the addendums at the back of the manual for 1981 and subsequent model year information.

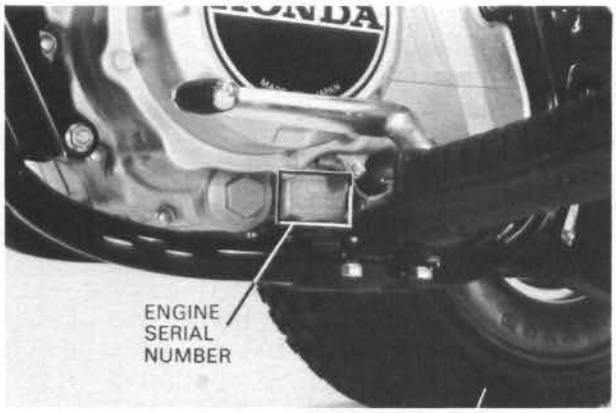
CONTENTS

Date of Issue: Aug., 1982

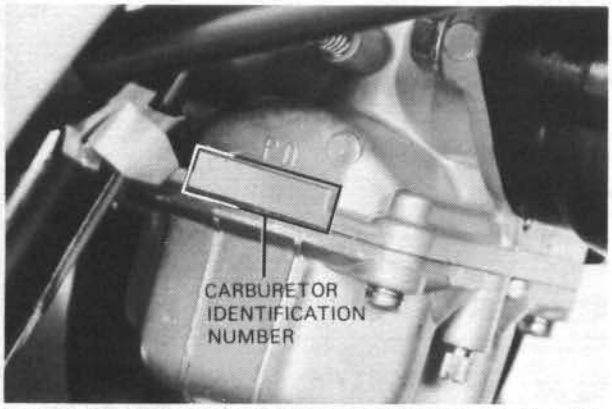
MODEL IDENTIFICATION



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



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



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

Date of Issue: July, 1981

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.

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 damage the motorcycle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing this motorcycle. 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 2-3 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.

SPECIFICATIONS

DIMENSIONS	Overal length		1,820 mm (71.7 in)
	Overall width		1,110 mm (43.7 in)
	Overall height		995 mm (39.2 in)
	Wheel base		1,160 mm (45.7 in)
	Rear tread		805 mm (31.5 in)
	Seat height		680 mm (26.8 in)
	Foot peg height		275 mm (10.8 in)
	Ground clearance		130 mm (5.1 in)
	Dry weight		137 kg (302 lb)
FRAME	Type		Semi-double cradle
	Rim size	Front	10.0 x 9.0
		Rear	10.0 x 9.0
	Front tire size, pressure		25 x 12–9, 0.15 kg/cm² (2.2 psi)
	Rear tire size, pressure		25 x 12–9, 0.15kg/cm² (2.2 psi)
	Front brake		Cable operated leading shoe
	Rear brake		Cable operated leading shoe
	Fuel capacity		8.8 liters (2.3 US gal, 1.9 Imp gal)
	Fuel reserve capacity		1.6 liters (0.42 US gal, 0.35 Imp gal)
	Caster		70°30'
	Trail		30 mm (1.2 in)
ENGINE	Type		Gasoline, air-cooled 4-stroke
	Cylinder arrangement		Single cylinder inclined 15°
	Bore x stroke		63.0 x 57.8 mm (2.48 x 2.28 in)
	Displacement		180.2 cc (11.01 cu in)
	Compression ratio		8.0:1
	Valve train		Overhead camshaft chain driven
	Maximum hosepower		13 BHP/7,000 rpm
	Maximum torque		1.38 kg-m/5,500 rpm (9.26 ft-lb/5,500 rpm)
	Oil capacity		1.35 lit (1.43 US qt, 1.19 Imp qt) 0.95 lit (1.00 US qt, 0.84 Imp qt) after draining
	Lubrication system		Forced pressure and wet sump
	Cylinder compression		11 ± 1.0 kg/cm² (156 ± 14 psi)
	Intake valve	OPENS	5° BTDC } at 1 mm lift
		CLOSES	35° ABDC
	Exhaust valve	OPENS	35° BBDC
		CLOSES	5° ATDC
	Valve clearance	Intake	0.05 mm (0.002 in)
	(Cold)	Exhaust	0.05 mm (0.002 in)
CARBURETOR	Type		Piston valve
	Main jet		# 95
	Pilot screw opening		2 turns out
	Float level		12.5 mm (0.49 in)
	Idle speed		1,400 ± 100 rpm
	Venturi dia.		22 mm (0.9 in)

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DRIVE TRAIN	Clutch		Wet multi-plate, semi-automatic
	Transmission		5-speed constant mesh
	Primary reduction		3.333
	Gear ratio	I	2.769
		II	1.722
		III	1.273
		IV	1.000
		V	0.815
	Final reduction		4.273
	Gearshift pattern		Left foot operated return system, N–1–2–3–4–5
	Drive chain		520, 90 L
ELECTRICAL	Ignition		CDI
	Ignition timing	Initial	10° ± 2° BTDC at idle
		Full advanve	30° ± 2° BTDC at 3,350 rpm
	Alternator	Capacity	A. C. generator, 12V 50W/5,000 rpm
	Spark plug	USA model	X24ES–U (ND)
			D8EA (NGK)
		Canada model	X24ESR–U (ND)
			DR8ES–L (NGK)
	Spark plug gap		0.6–0.7 mm (0.024–0.028 in)
	Headlight		12V 45W/45W
	Taillight		12V (5W)

TORQUE VALUES

ENGINE

Item	Q'ty	Thread Size (mm)	Torque	
			kg-m	ft-lb
Cylinder head bolt	4	8 x 1.25	1.8–2.0	13–14
Clutch lock nut	1	16 x 1.0	4.0–5.0	29–36
Centrifugal clutch lock nut	1	22 x 1.25	10.5–11.5	76–83
Clutch adjuster lock nut	1	8 x 1.25	1.9–2.5	14–18
A. C. generator rotor nut	1	12 x 1.25	6.5–7.5	47–54
Valve adjuster cover	2	36 x 1.5	1.0–1.4	7–14
Oil filler cap	1	36 x 1.5	1.0–2.0	7–10
Spark plug	1	12 x 1.25	1.2–1.9	9–14
Cam sprocket bolt	2	6 x 1.0	0.8–1.2	6–9
Oil filter rotor cover bolt	3	6 x 1.0	1.0–1.4	7–10
Clutch lifter stopper bolt	1	8 x 1.25	1.8–2.5	13–18
Gearshift drum stopper arm bolt	1	6 x 1.0	1.0–1.4	7–10
Pulser generator screw	2	5 x 0.5	0.4–0.7	2.9–4.3
Pulser cover screw	2	5 x 0.8	0.4–0.7	2.9–4.3
Valve adjuster lock nut	2	6 x 0.75	1.5–1.8	11–13
Gearshift stopper plate bolt	1	6 x 1.0	0.8–1.2	6–9
Clutch bolt	4	6 x 1.0	1.0–1.4	7–10
Recoil starter driven pulley	4	6 x 1.0	1.0–1.4	7–10
Cam chain tensioner adjust bolt	1	16 x 1.0	1.5–2.2	11–16
Cam chain tensioner check bolt	1	6 x 1.0	0.8–1.0	6–7
Decompressor lever pivot bolt	1	6 x 1.0	0.5–0.7	3.6–5.1
Drive sprocket bolt	3	6 x 1.0	0.8–1.2	6–9
Right crankcase protector screw	3	Self tapping screw	0.3–0.7	2.2–5.1

FRAME

Item	Q'ty	Thread Size (mm)	Torque	
			kg-m	ft-lb
Handlebar upper holder bolt	4	6 x 1.0	0.7–1.2	5–9
Handlebar lower holder nut	2	10 x 1.25	4.0–4.8	29–35
Fork top bridge bolt	2	10 x 1.25	4.0–4.8	29–35
Steering stem nut	1	22 x 1.0	5.0–7.0	36–51
Front axle nut	2	12 x 1.25	5.0–7.0	36–51
Front hub nut	4	8 x 1.25	1.9–2.5	14–18
Front brake drum bolt	3	8 x 1.25	1.9–2.5	14–18
Front brake panel bolt	1	8 x 1.25	2.1–2.7	15–20
Front/rear rim nut	12	8 x 1.25	1.9–2.5	14–18
Damper holder nut	5	8 x 1.25	2.1–2.7	15–20
Rear brake drum nut	2	32 x 1.0	6.0–8.0	43–58
Rear hub nut	8	8 x 1.25	1.9–2.5	14–18
Rear axle nut	2	14 x 1.5	6.0–8.0	43–58
Bearing holder bolt	4	12 x 1.25	5.0–7.0	36–51

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Item	Q'ty	Thread Size (mm)	Torque	
			kg-m	ft-lb
Front engine hanger nut	2	10 x 1.25	4.0–4.8	29–35
Front engine hanger nut	2	8 x 1.25	2.3–2.7	17–20
Rear engine hanger nut	2	10 x 1.25	4.0–4.8	29–35
Upper engine hanger nut	1	8 x 1.25	1.9–2.5	14–18
Carburetor nut	2	6 x 1.0	0.6–0.9	4.3–6.5
Gearshift pedal	1	6 x 1.0	0.7–1.2	5–8.7
Foot peg bolt	8	8 x 1.25	1.9–2.5	14–18
Mud guard bolt	11	5 x 0.8	0.4–0.8	2.9–5.8
Drive chain slider nut	2	6 x 1.0	0.6–0.9	4.3–6.5

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 kg-m (ft-lb)	Item	Torque kg-m (ft-lb)
5 mm bolt, nut	0.45–0.6 (3.3–4.3)	5 mm screw	0.35–0.5 (2.5–3.6)
6 mm bolt, nut	0.8–1.2 (5.8–8.7)	6 mm screw	0.7–1.1 (5–8)
8 mm bolt, nut	1.8–2.5 (13–18)	6 mm flange bolt, nut	1.0–1.4 (7.2–10)
10 mm bolt, nut	3.0–4.0 (22–29)	8 mm flange bolt, nut	2.4–3.0 (17–22)
12 mm bolt, nut	5.0–6.0 (36–43)	10 mm flange bolt, nut	3.0–4.0 (22–29)

TOOLS

SPECIAL

Description	Tool No.	Interchangeability	Ref. Page
Valve guide reamer 5.5 mm	07984–0980000		6–10
Flywheel holder	07925–9580000	Not available in USA	8–5, 8–9, 9–6, 9–8
Clutch center holder	07923–9580000	Not available in USA	8–11, 8–14
41 mm lock nut wrench	07916–9180000	Commercially available	12–5, 12–12
30 mm lock nut wrench	07907–6890100	30 mm socket	8–5, 8–9, 11–18, 11–21
Ball race remover	07944–1150001		11–19
Tire disassembling tool	07772–0010000	M987X–350–XXX	11–11
Lever	07772–0010100	(Available in USA only)	11–11
Weight	07772–0010200		11–11

COMMON

Description	Tool No.	Interchangeability	Ref. Page
Float level gauge	07401–0010000		4–9
Pin spanner	07702–0010000	07902–0010000	11–18, 11–20
Valve adjusting wrench 10 x 12 mm	07708–0030200	07908–3230000	3–5
Valve adjuster A	07708–0030300		3–5
Lock nut wrench 20 x 24 mm	07716–0020100	07916–3710000	8–11, 8–14
Lock nut wrench 30 x 32 mm	07716–0020400	07907–6890100	11–18, 11–21
Extension bar	07716–0020500	Commercially available in USA	8-11, 8–14, 11–18, 11–21
Flywheel puller	07733–0010000	07933–0010000	9–6
Valve guide remover 5.5 mm	07742–0010100	07942–3290100	6–10
Valve guide driver B	07742–0020200	07942–3290200	6–10
Bearing driver outer 37 x 40 mm	07746–0010200		11–19
Bearing driver outer 42 x 47 mm	07746–0010300	07946–9350200	11–15
Driver handle outer A	07749–0010000	07949–6110000	11–15, 11–19, 12–10
Driver pilot 15 mm	07746–0040300		11–15
Driver pilot 35 mm	07746–0040800		12–10
Bearing driver inner 20 mm	07746–0020400	07945–8340100	
Driver handle inner B	07746–0020100	07945–8150000	
Bearing driver outer 62 x 68 mm	07746–0010500	07945–3710300	12–9
Valve spring compressor	07757–0010000	07957–3290001	6–8, 6–14

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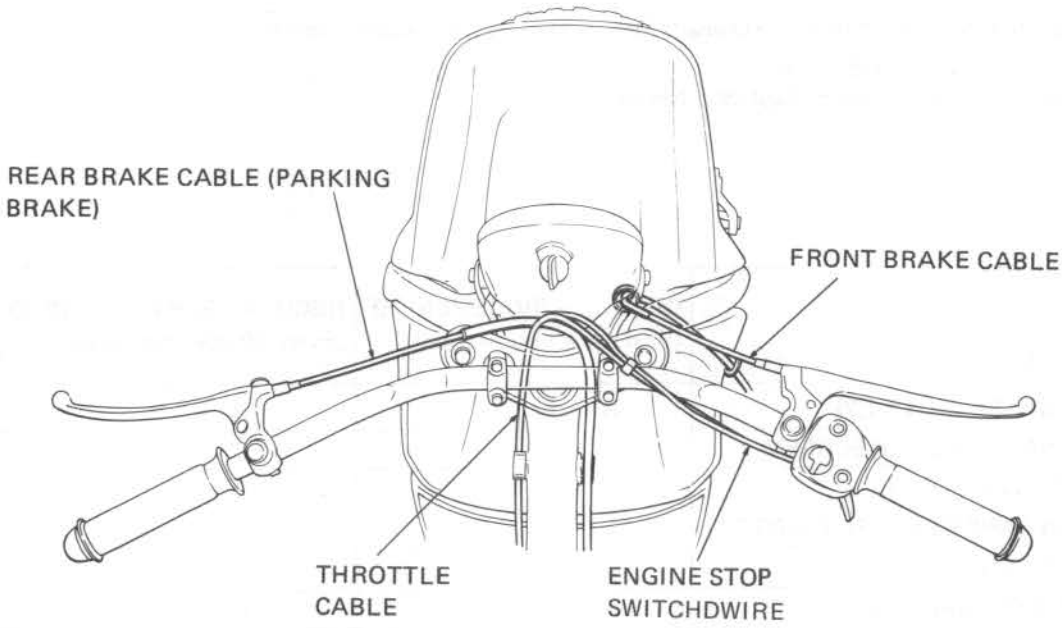
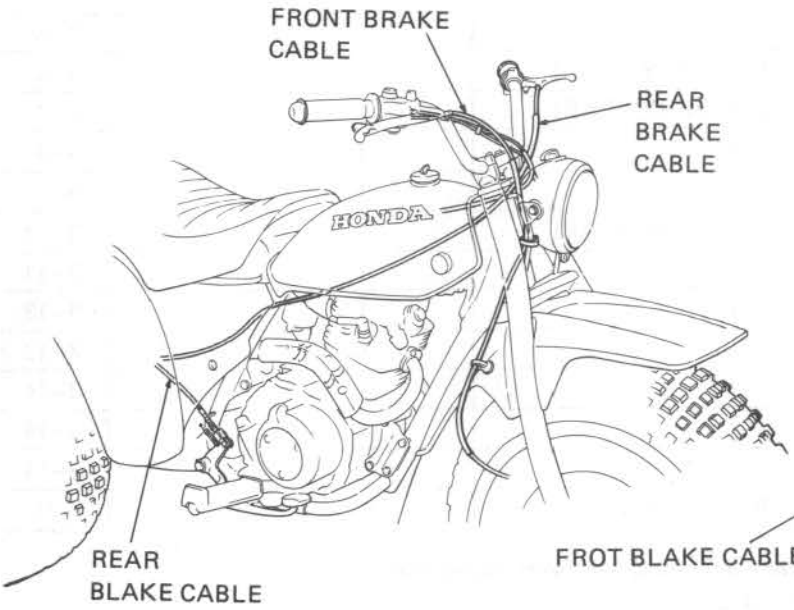
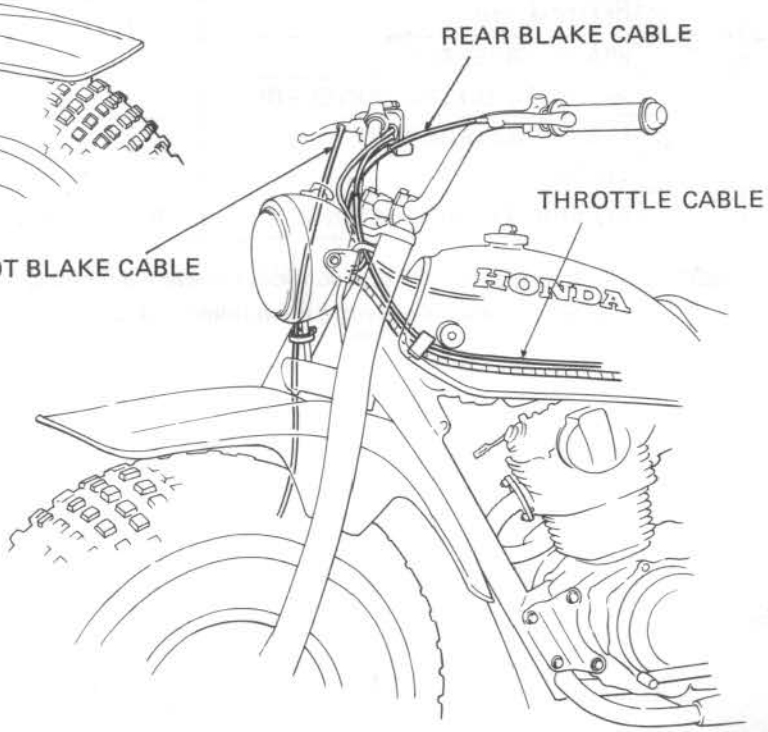
CABLE & HARNESS ROUTING







MAINTENANCE SCHEDULE

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

REGULAR MAINTENANCE SCHEDULE

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)	Ref. Page
	ENGINE OIL (NOTE 1,2)	R	R	2–2
*	ENGINE OIL FILTER SCREEN	C	C	2–2
	OIL FILTER ROTOR		C	2–3
	AIR CLEANER ELEMENT (NOTE 2)		C	3–3
	SPARK PLUG		I	3–4
*	VALVE CLEARANCE	I	I	3–5
*	CAM CHAIN TENSION	A	A	3–6
*	CARBURETOR IDLE SPEED	I	I	3–6
	FUEL LINE	I (EVERY YEAR)		3–6
*	FUEL STRAINER	C (EVERY YEAR)		3–7
	THROTTLE OPERATION	I	I	3–7
	DRIVE CHAIN	I	I	3–9
*	BRAKE SHOES	I (EVERY YEAR)		3–11
	BRAKE CONTROL LINKAGE	I	I	3–11
*	CLUTCH	I	I	3–13
*	SPARK ARRESTER		C	3–13
	ALL NUTS, BOLTS, FASTENERS	I	I	3–14
	LIGHTING EQUIPMENT	I	I	3–14
	TIRES	I	I	3–14
*	STEERING HEAD BEARING	A (EVERY YEAR)		3–15

NOTES: 1. Replace every 30 operating days or every 3 months, whichever occurs first.
2. Service more frequently when riding in dusty areas.

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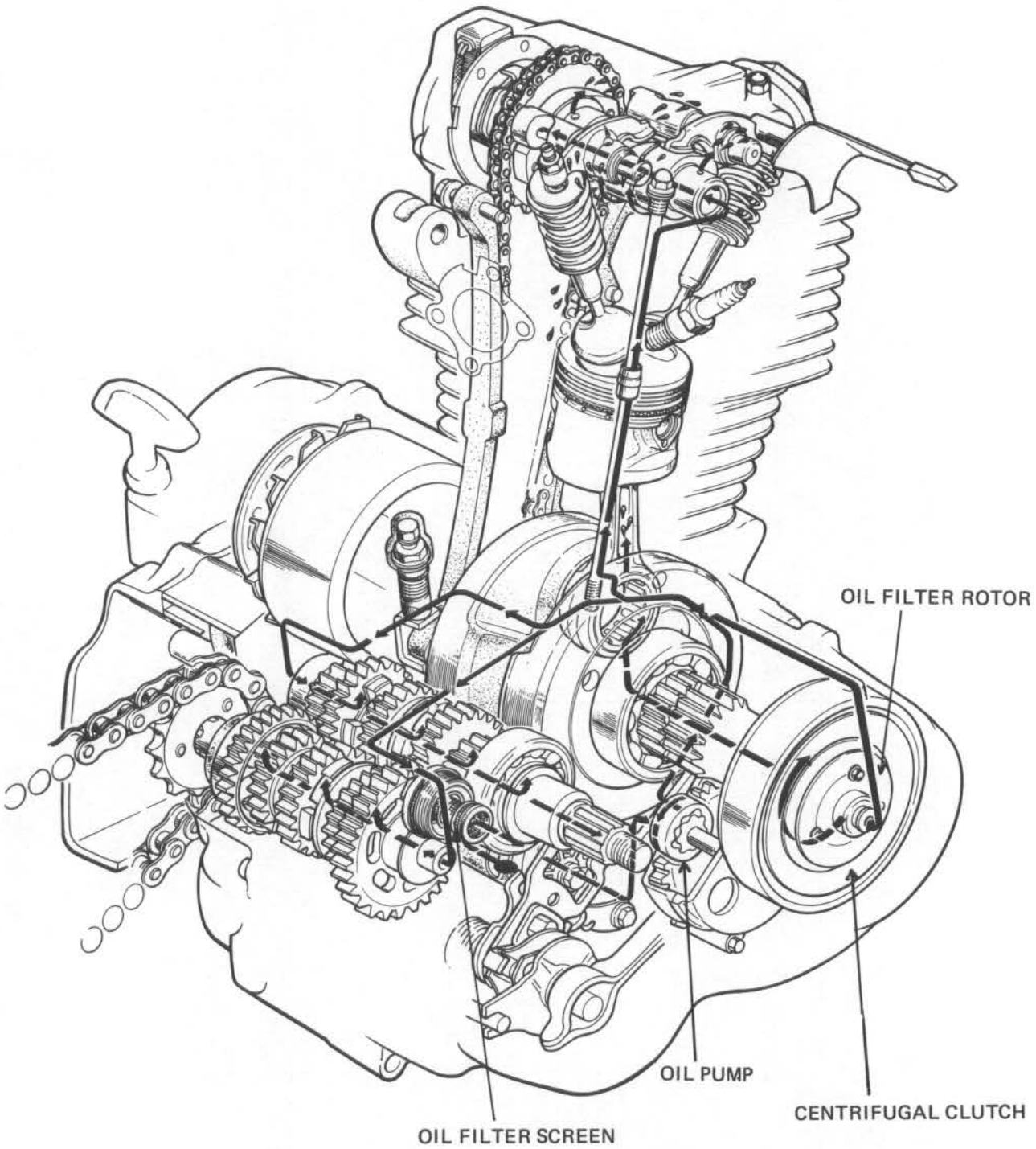
MEMO



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2. LUBRICATION

SERVICE INFORMATION

GENERAL INSTRUCTIONS

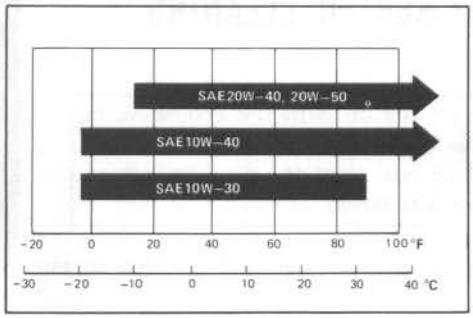
- This section describes how to inspect and replace the engine oil and clean the oil filter screen.
- Section 8 shows how to service the oil pump.

SPECIFICATIONS

Oil capacity 1.35 lit (1.43 US qt, 1.19 Imp qt) at disassembly
0.95 lit (1.00 US qt, 0.84 Imp qt) at draining

Engine oil recommendation
Use HONDA 4-STROKE OIL or equivalent.
API SERVICE CLASSIFICATION: SE
Viscosity: SAW 10W–40

OIL VISCOSITY



TORQUE VALUES

Oil filter screen cap	1.0–2.0 kg-m (7–14 ft-lb)
Oil filter rotor cover bolt	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

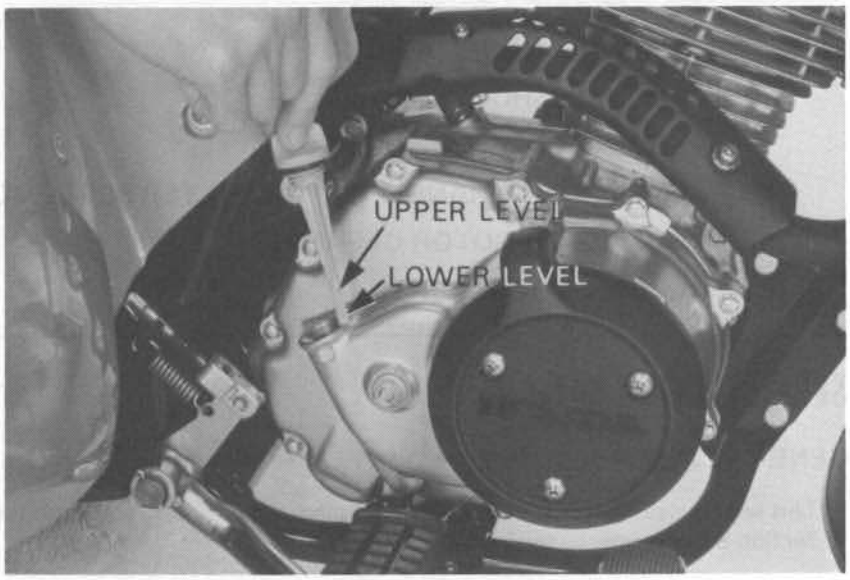
Oil consumption

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.
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.

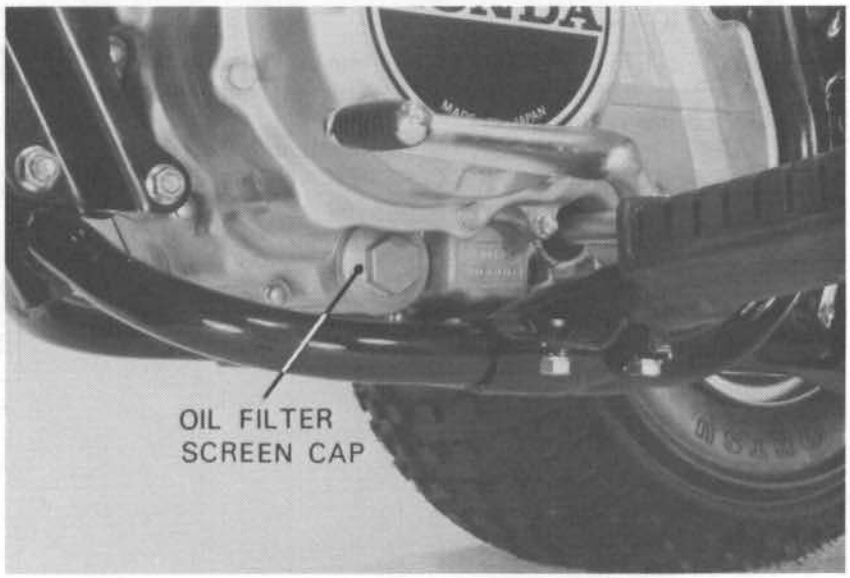
Install the oil filter screen, spring and screen cap.

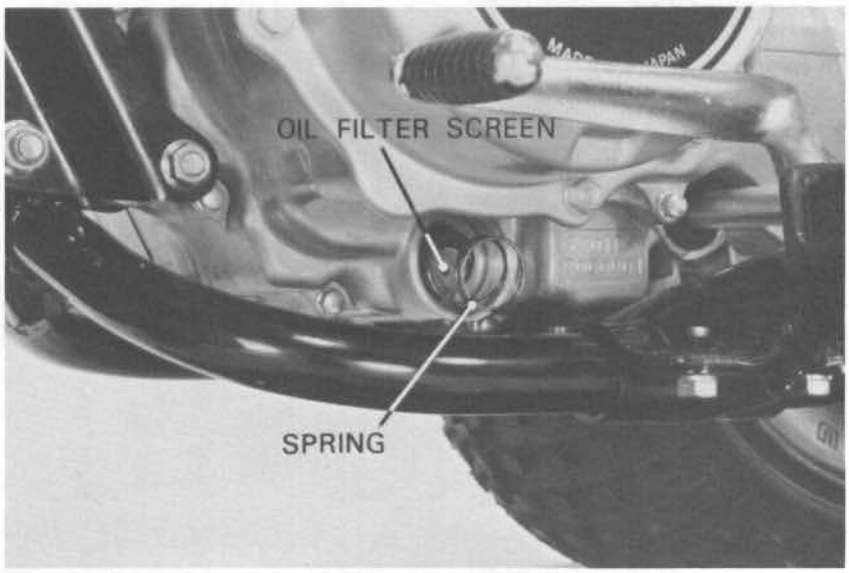
TORQUE: 1.0–2.0 kg-m (7–14 ft-lb)

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

ENGINE OIL CAPACITY:
0.95 liters (1.00 US qt, 0.84 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.
Be sure there are no leaks.





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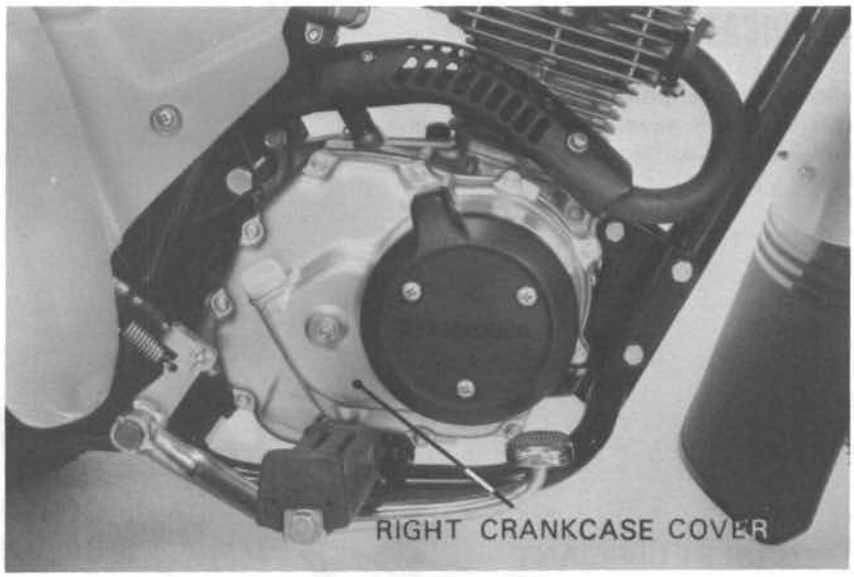
OIL FILTER ROTOR CLEANING

NOTE

Clean the oil filter rotor before adding oil.

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

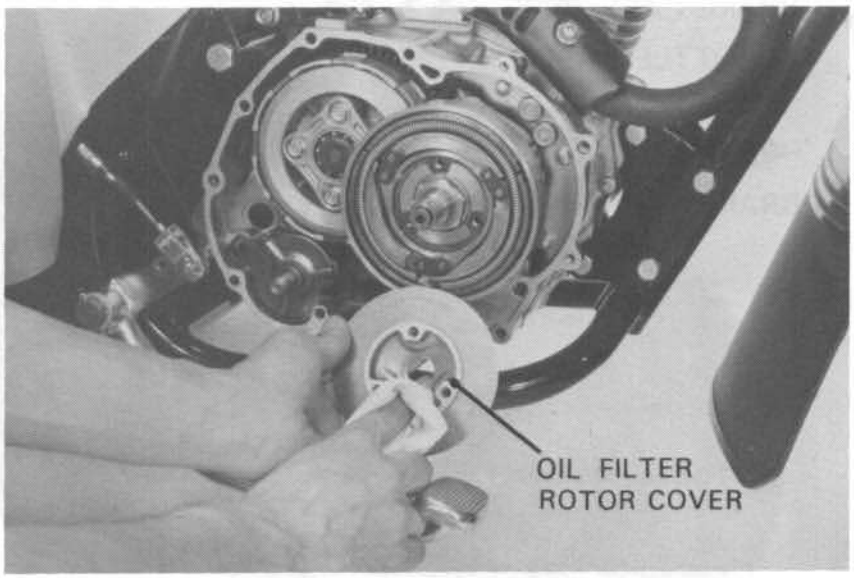


Remove the oil filter rotor cover and clean the inside of the rotor cover and rotor.

Install the oil filter rotor cover (Page 8–10).

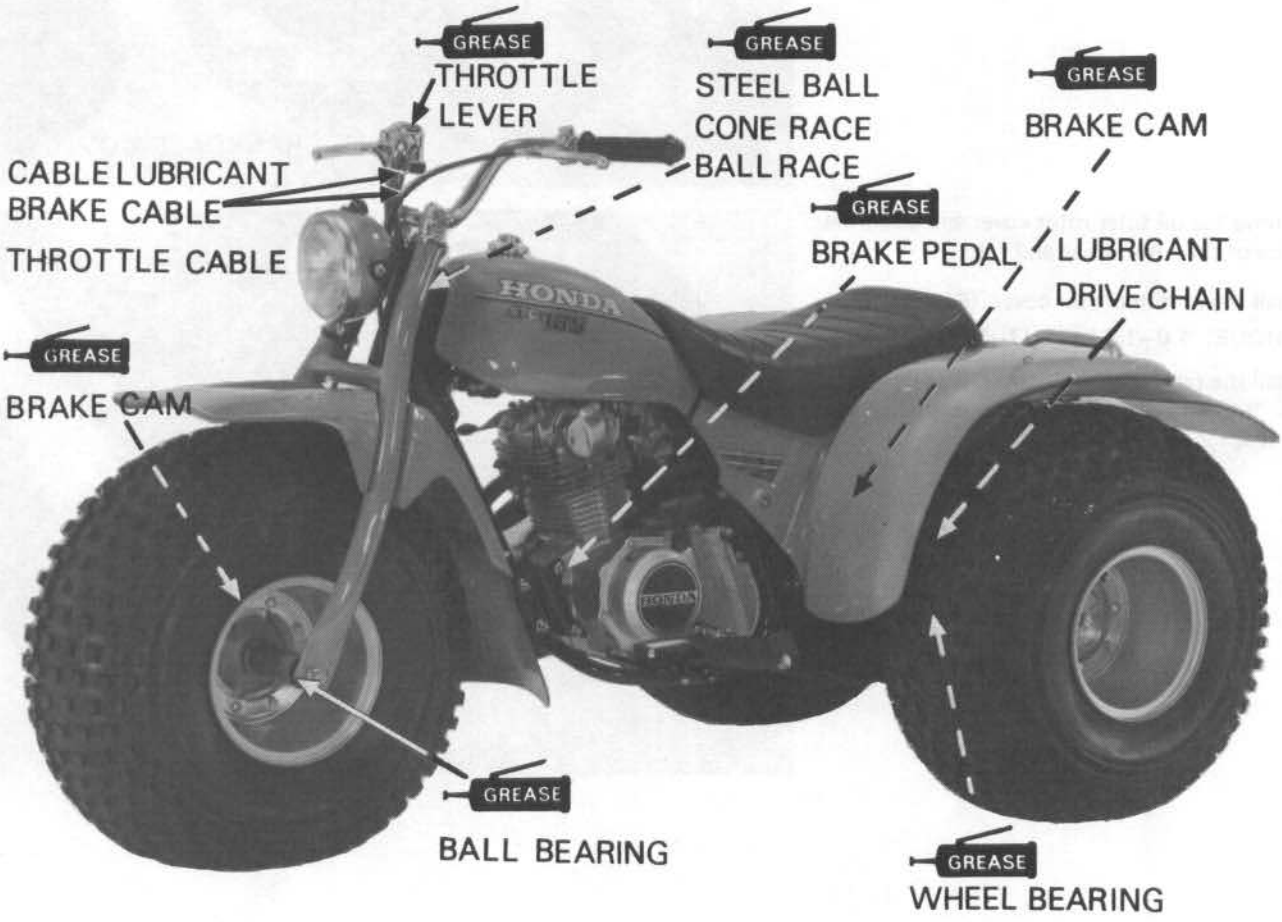
TORQUE: 1.0–1.4 kg-m (7–10 ft-lb)

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



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.



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SERVICE INFORMATION

SPECIFICATIONS

<ENGINE>

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:		
USA model	X24ES–U	(ND)
	D8EA	(NGK)
Canada model	X24ESR–U	(ND)
	DR8ES–L	(NGK)
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 ± 1 kg/cm² (156 ± 14 psi)	

<CHASSIS>

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	715 mm (28.1 in)
Front/rear rim size	10.0 x 9.0
Front/rear tire size	25 x 12–9.0
Front/rear tire pressure	0.15 kg/cm² (2.2 psi)
Front/rear tire circumference	
Standard	1,963 mm (77.28 in)

TORQUE VALUES

Spark plug	1.2–1.9 kg-m (9–14 ft-lb)
Valve adjuster cover	1.0–2.0 kg-m (7–14 ft-lb)
Cam chain tensioner adjusting bolt	1.5–2.2 kg-m (11–16 ft-lb)
Rear axle bearing holder bolt	5.0–7.0 kg-m (36–51 ft-lb)
Clutch adjusting screw lock nut	1.9–2.5 kg-m (14–18 ft-lb)
Valve adjusting screw lock nut	1.5–1.8 kg-m (11–13 ft-lb)

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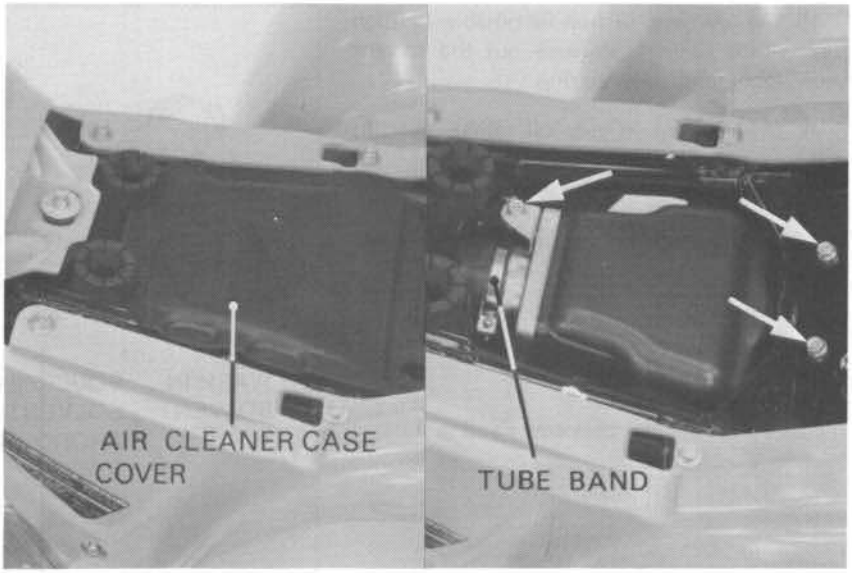
AIR CLEANER

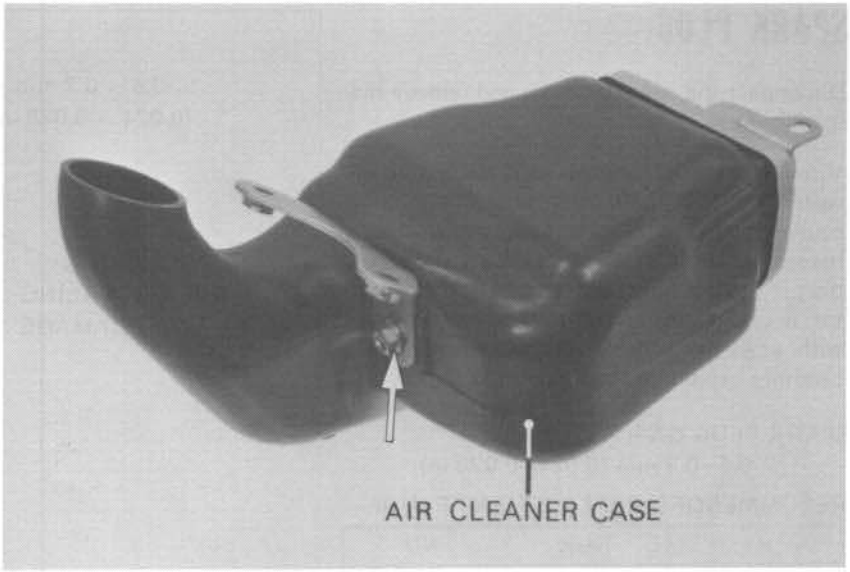
Remove the seat.
Remove the air cleaner case cover.

Remove the air cleaner case attaching bolts and loosen the air cleaner connecting tube band.

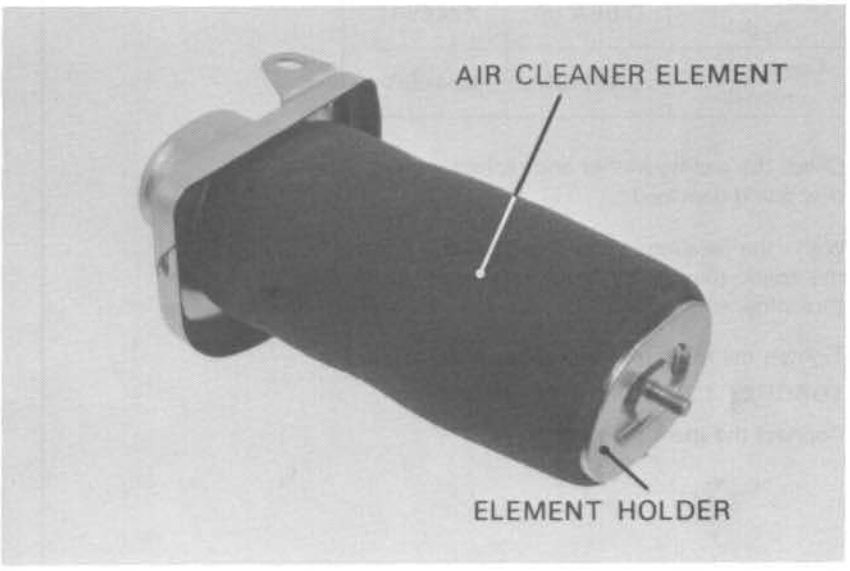
Remove the air cleaner case.



Remove the nut and the air cleaner element from the air cleaner case.



Remove the retainer and air cleaner element from the element holder.



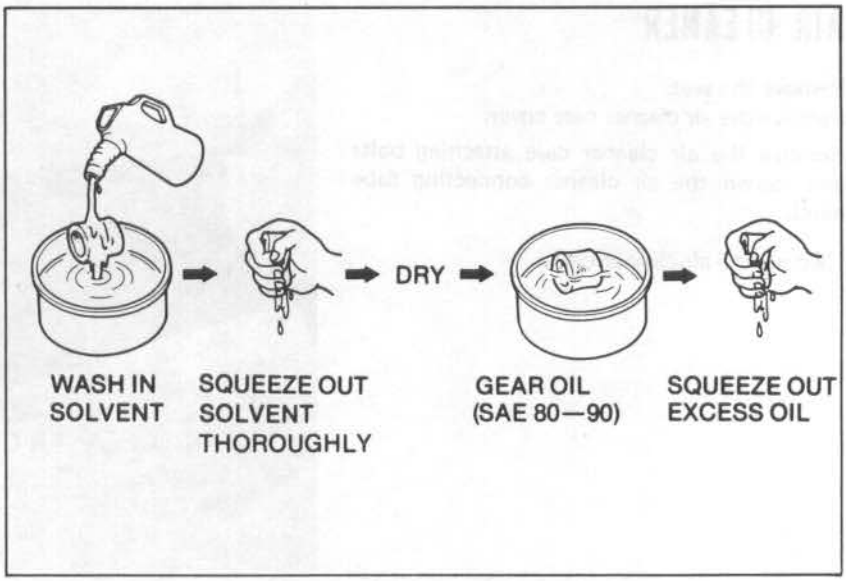
Wash the element in non-flammable or high flash point solvent, squeeze out the solvent thoroughly, and allow to dry.

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

Install the element holder into the air cleaner case.

Install the air cleaner case and attach the connecting tube.

Tighten the tube band.
Install the air cleaner case cover and 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:

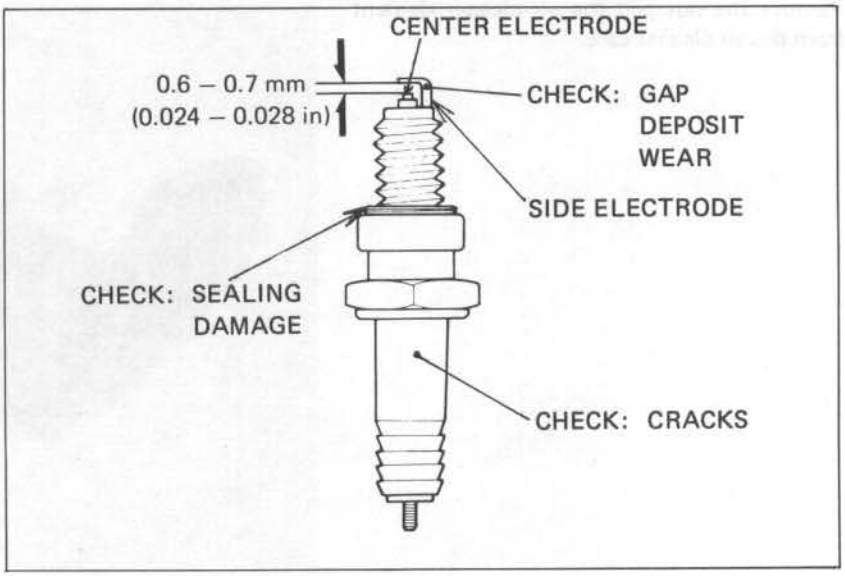
	NGK	ND
USA model	D-8EA	X24ES-U
Canada model	DR8ESR-L	X24ESR-U

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 cross-threading.

Tighten the spark plug to the specified torque.
TORQUE: 1.2–1.9 kg-m (9–14 ft-lb)

Connect the spark plug cap.



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VALVE CLEARANCE

NOTE

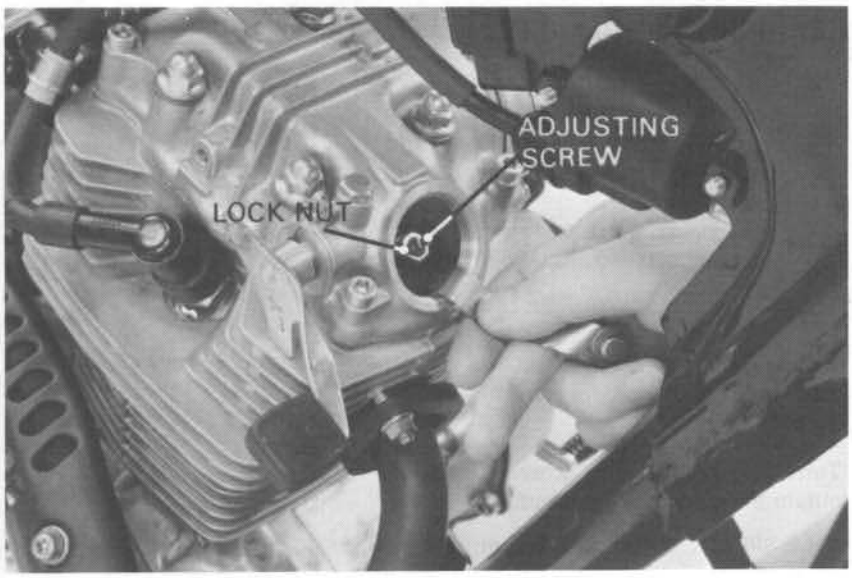
- Inspect and adjust valve clearance while the engine is cold (below 35°C/95°F).
- Make sure the decompressor valve lifter has free play.

Remove the seat and fuel tank.
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.

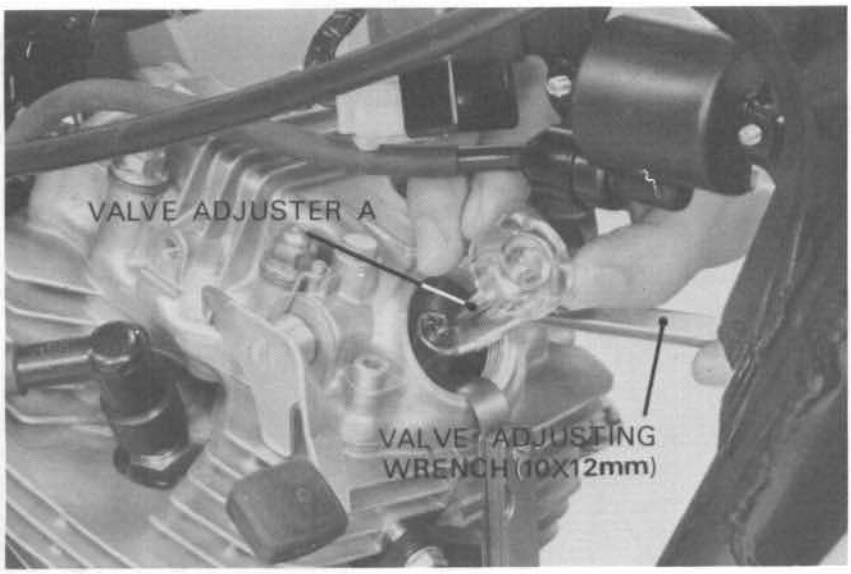
Hold the adjusting screw and tighten the lock nut.

TORQUE: 1.5–1.8 kg-m (11–13 ft-lb)

Recheck the valve clearance.
Install the valve adjuster covers.

TORQUE: 1.0–2.0 kg-m (7–14 ft-lb)

Install the timing hole cap.
Install the fuel tank and the seat.
Reconnect the fuel tube.



CAM CHAIN TENSION

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

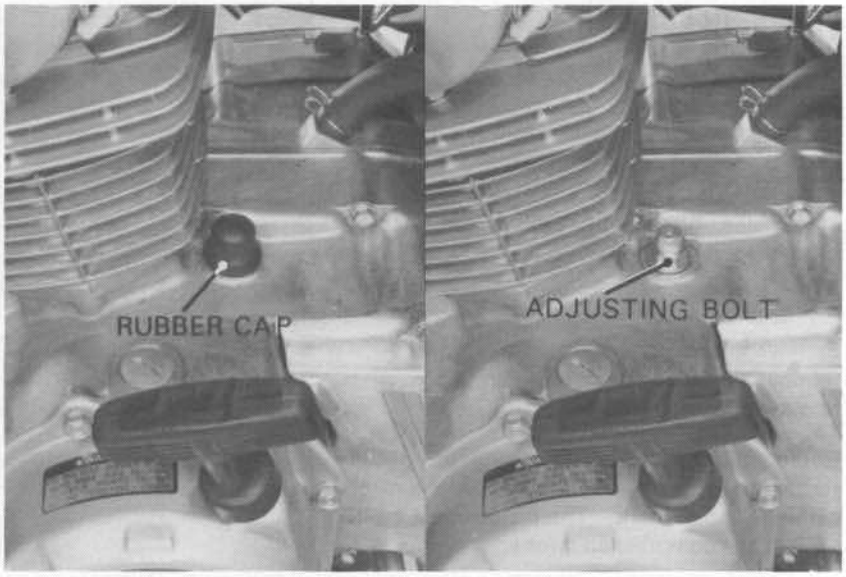
When the cam chain tensioner adjusting bolt is loosened, the tensioner will automatically position itself to provide the correct tension.

Retighten the adjusting bolt and install the rubber cap.

TORQUE: 1.5–2.2 kg-m (11–16 ft-lb)

NOTE

Do not loosen the 6 mm bolt.



CARBURETOR IDLE SPEED

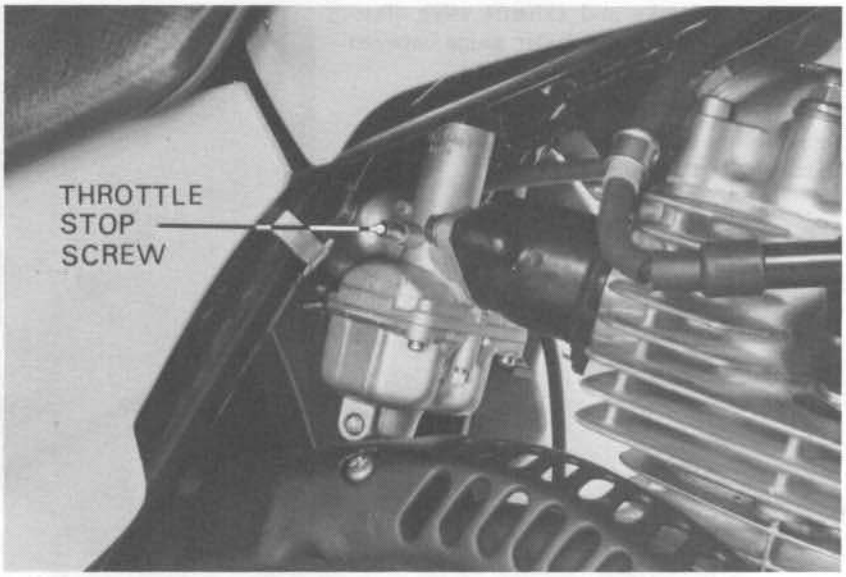
NOTE

- 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.
Stop and go driving for ten minutes is sufficient.

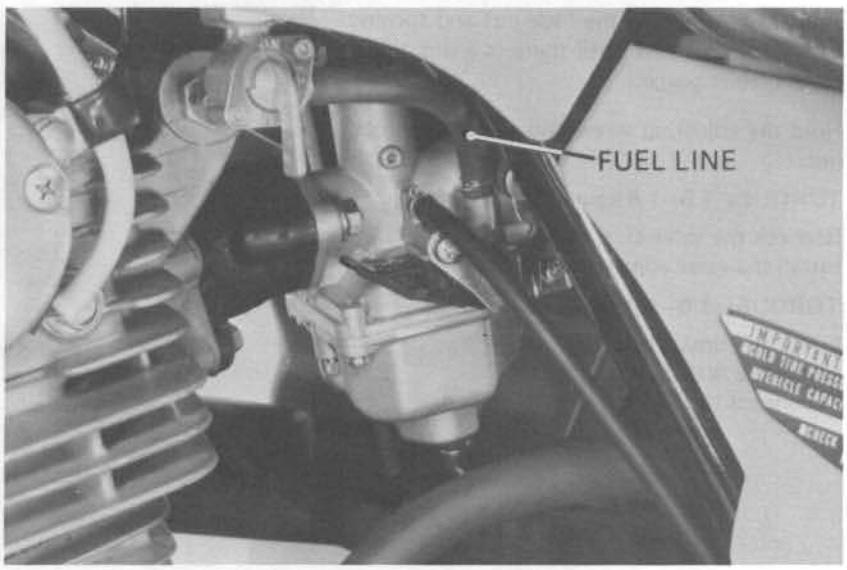
Turn the throttle stop screw as required to obtain the specified idle speed.

IDLE SPEED: 1,400 ± 100 rpm



FUEL LINE

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



FUEL STRAINER

Disconnect the fuel tube.
Drain fuel from the fuel tank.

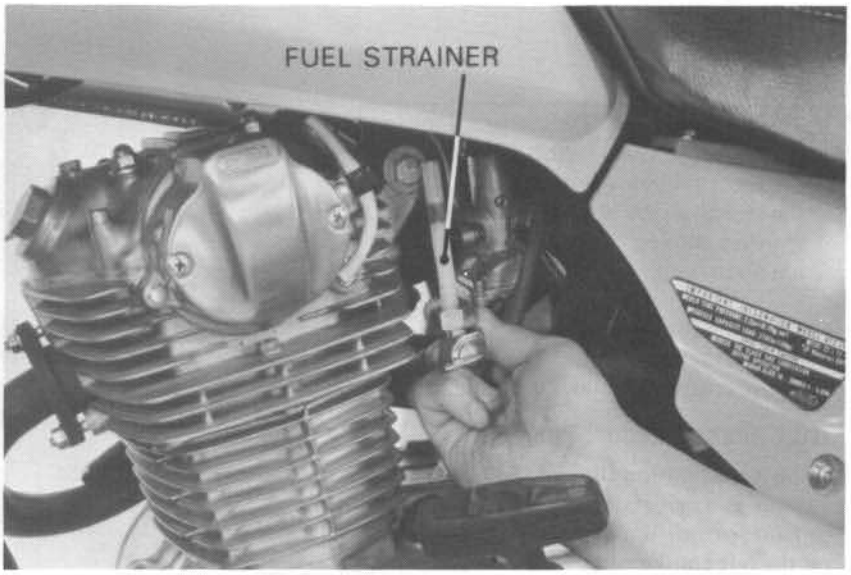
WARNING

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 stariner and clean the strainer.

Install the strainer and valve.
Attach the fuel line.

Fill the fuel tank and turn the fuel valve "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.

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.

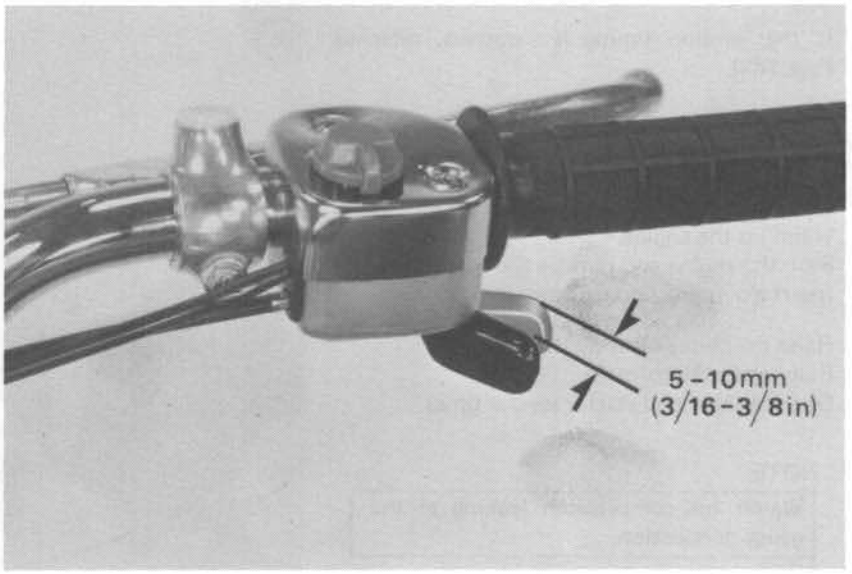
Make sure the throttle lever free play is 5–10 mm (3/16–1/8 in) at the tip of the throttle lever.

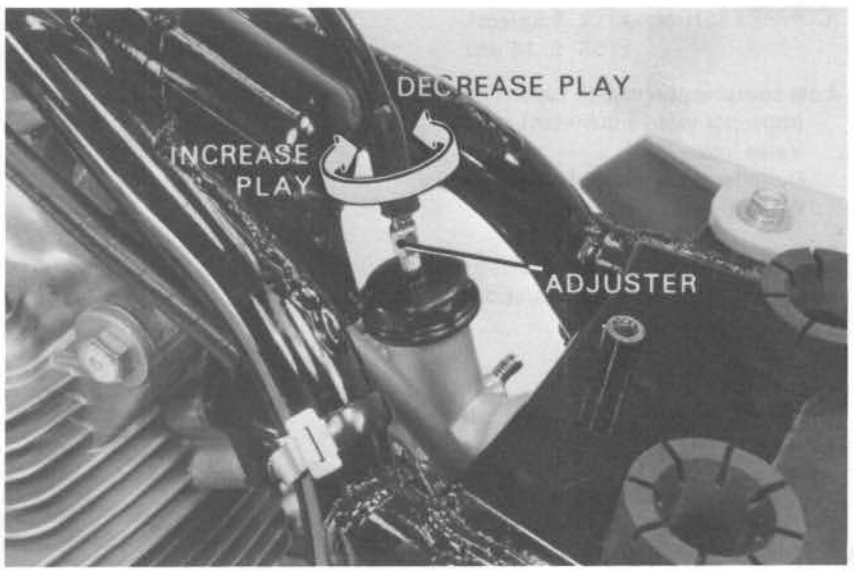
Adjust as follows:

Remove the fuel tank.

Slide the rubber cap of the adjuster on the carburetor top up.
Adjust the throttle lever free play by turning the adjuster on the carburetor.

Install the adjuster rubber cap securely.
Install the fuel tank.





IGNITION TIMING

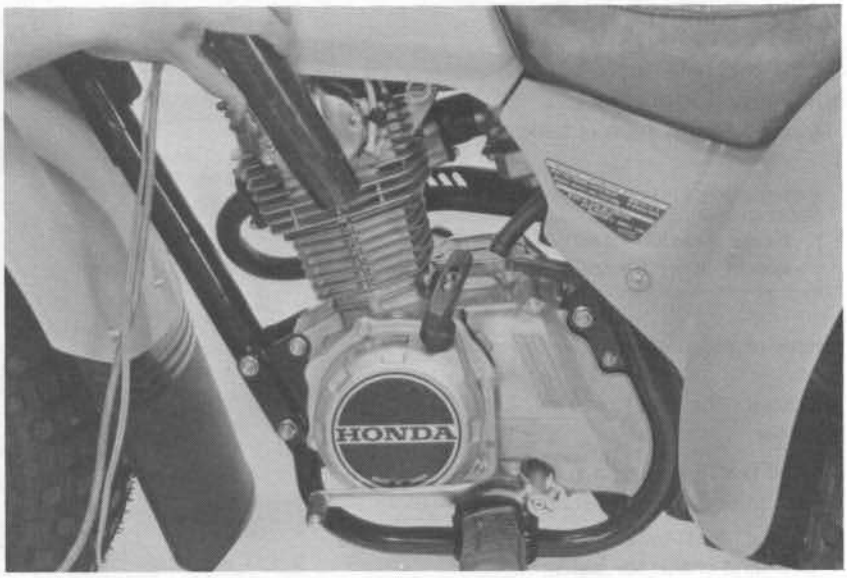
NOTE

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 generator rotor is aligned with the index mark on the left crankcase cover at idle.



If the ignition timing is incorrect, refer to Page 14-4.

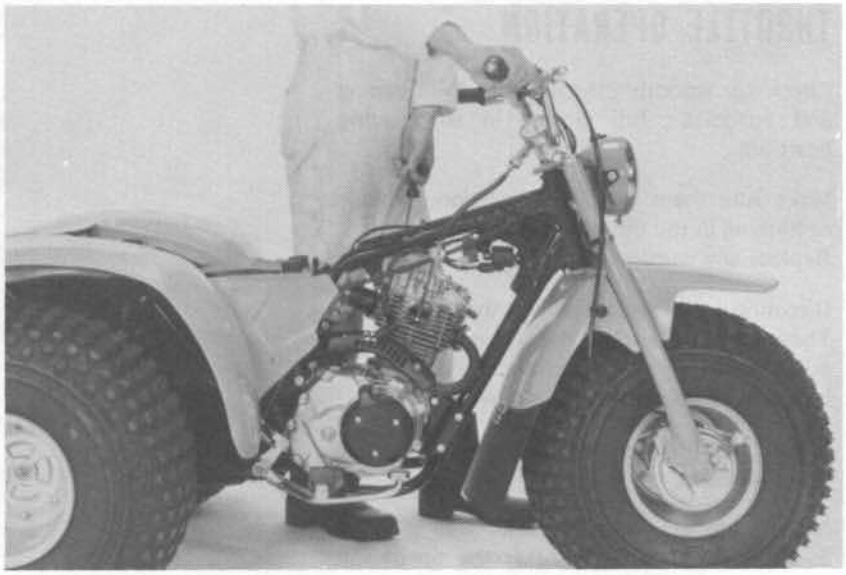
CYLINDER COMPRESSION

Warm up the engine.
Stop the engine and remove the spark plug.
Insert a compression gauge.

Raise the choke lever all the way up.
Fully open the throttle.
Operate the recoil starter several times.

NOTE

Watch for compression leaking at the gauge connection.



COMPRESSION: 11 ± 1 kg/cm² (156 ± 14 psi)

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

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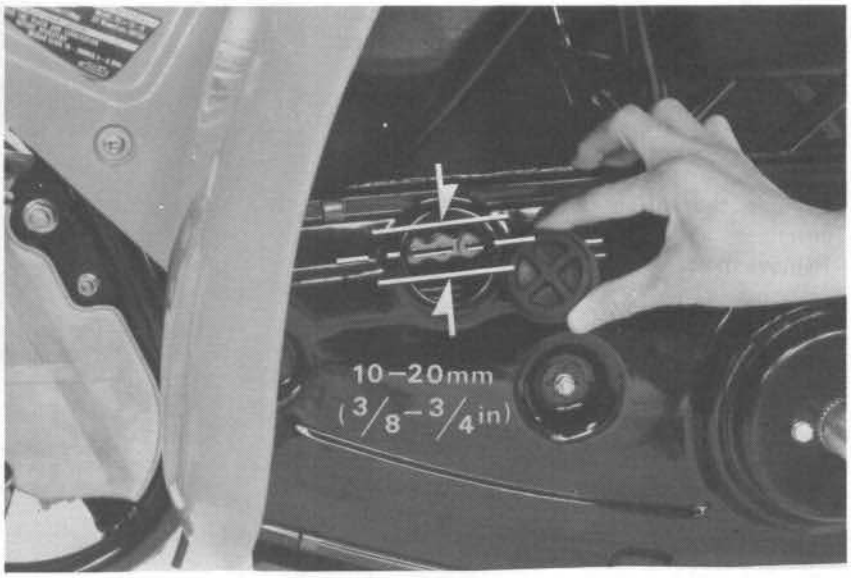
DRIVE CHAIN

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.

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

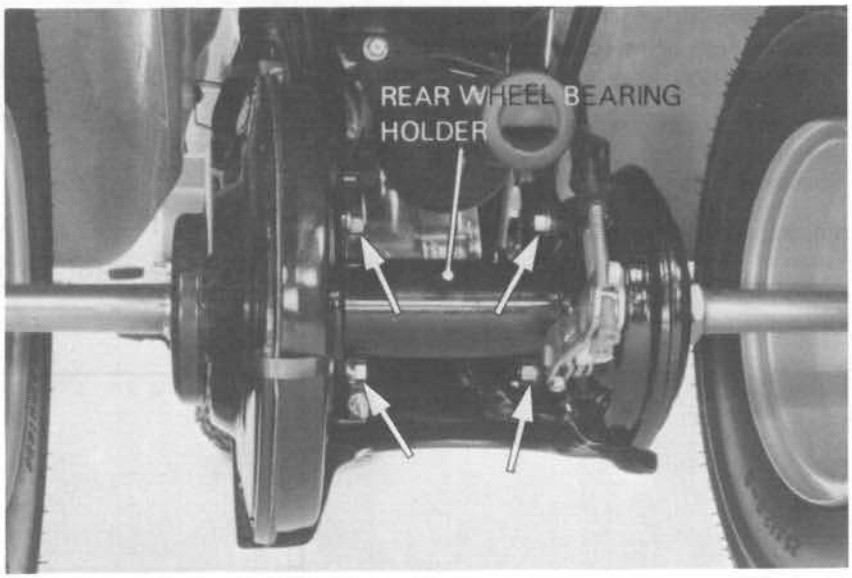


Adjust as follows:

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

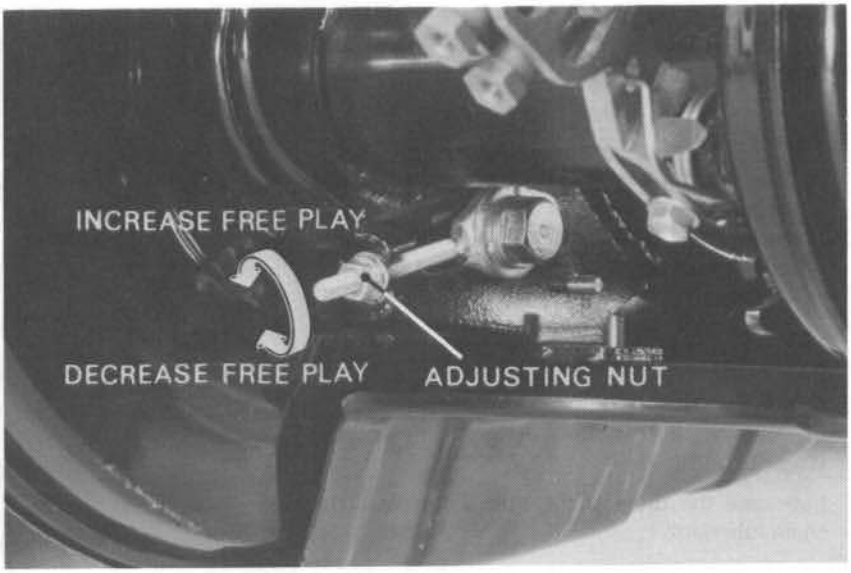
Retighten the rear axle bearing holder bolts.

Check the rear wheels for free rotation.
Adjust the rear brake (Page 3–12).



Lubricate the drive chain with a commercial chain lubricant through the inspection hole.

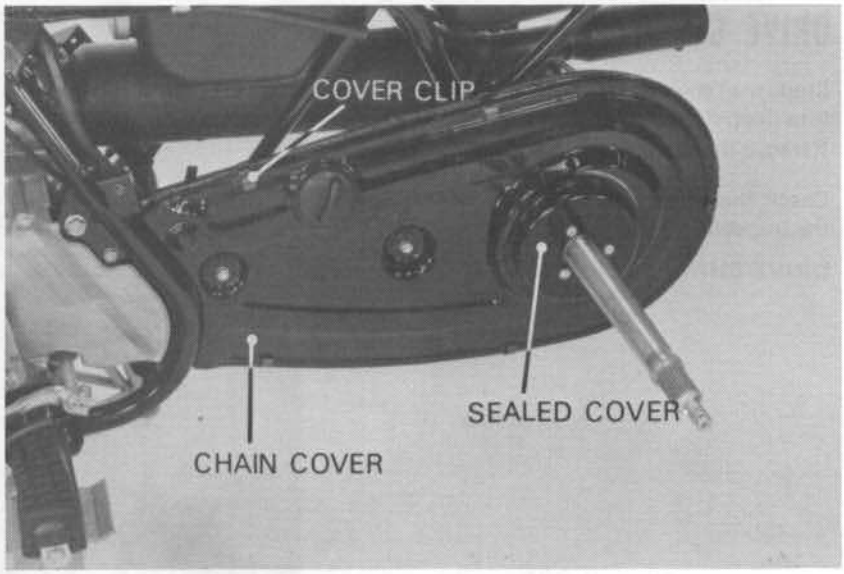
Install the inspection hole cap.



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

Remove the frame under cover.
Remove the drive sprocket cover.

Remove the sealed cover and drive chain cover.
Remove the drive chain.

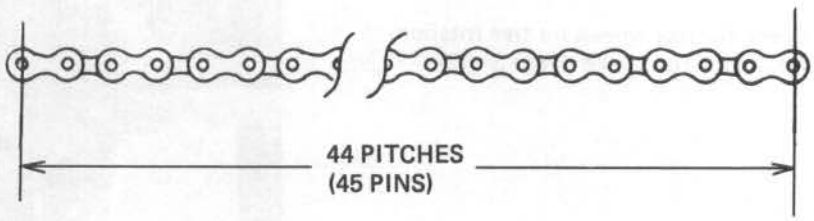


Clean the drive chain in non-flammable or high flash point solvent with a brush and allow it to dry.

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

Measure the drive chain distance between a span of 45 pins from pin center to pin center with the chain held taut and any kinks straightened.

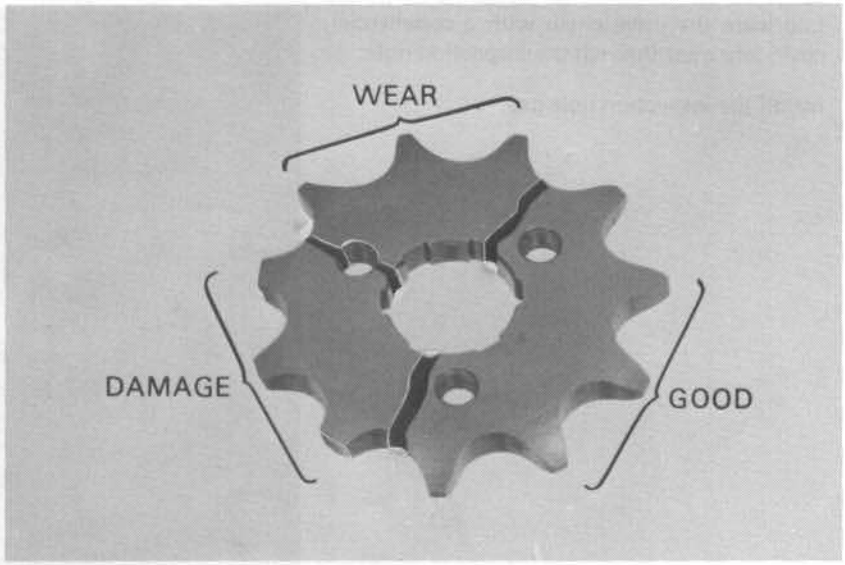
STANDARD: 698.5 mm (27.50 in)
SERVICE LIMIT: 715 mm (28.1 in)



Inspect the drive 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.



Install the drive chain in the reverse order of removal noting the chain clip direction (Page 12–13).

Lubricate the drive chain with a commercial chain lubricant.

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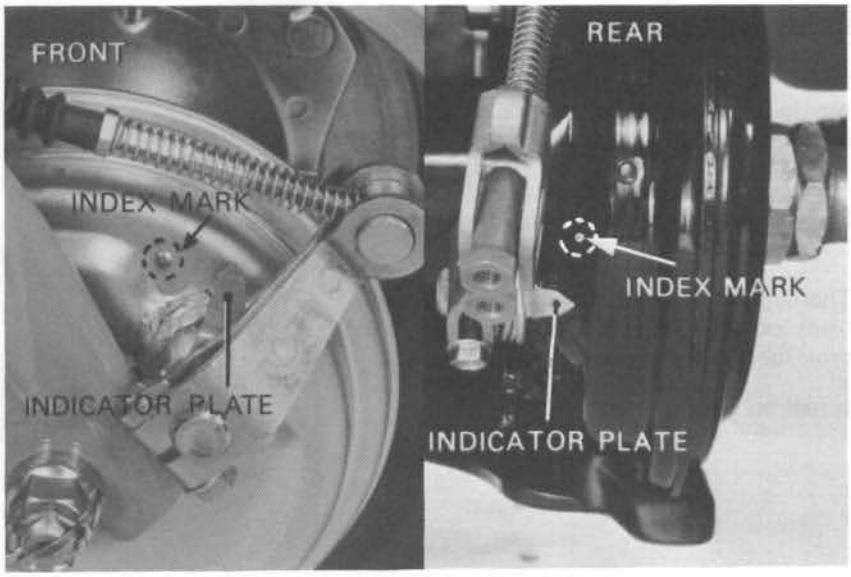
BRAKE SHOES

Replace the brake shoes if the indicator plate aligns with the brake panel index mark when the front brake lever, rear brake lever or pedal is applied.

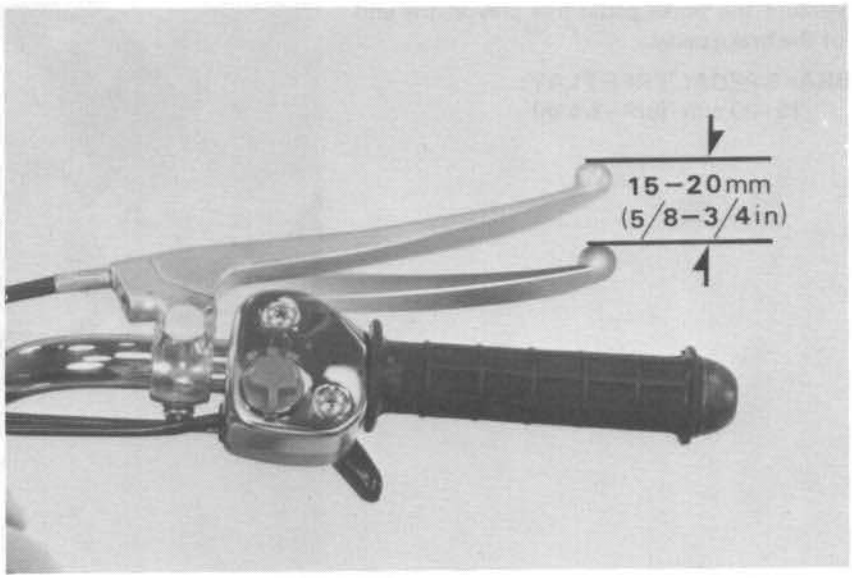


FRONT BRAKE

Check the cable and brake lever for loose connections, excessive play, or other damage. Replace or repair if necessary.

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

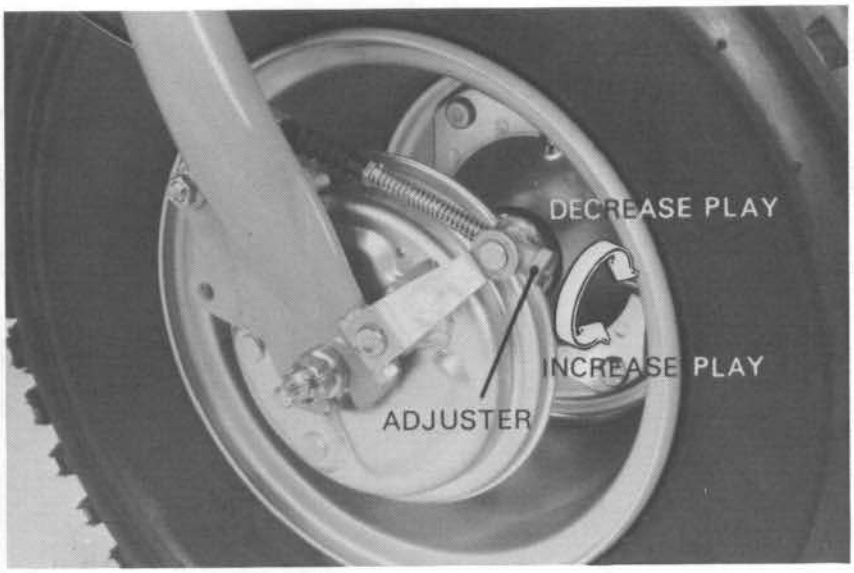
Install the brake cable.
Make sure brake lever free play is 15–20 mm (5/8–3/4 in) at the brake lever tip.



Adjust free play by turning the adjusting nut.

NOTE

Make sure the cut-out of the adjusting nut is seated on the brake arm pin.



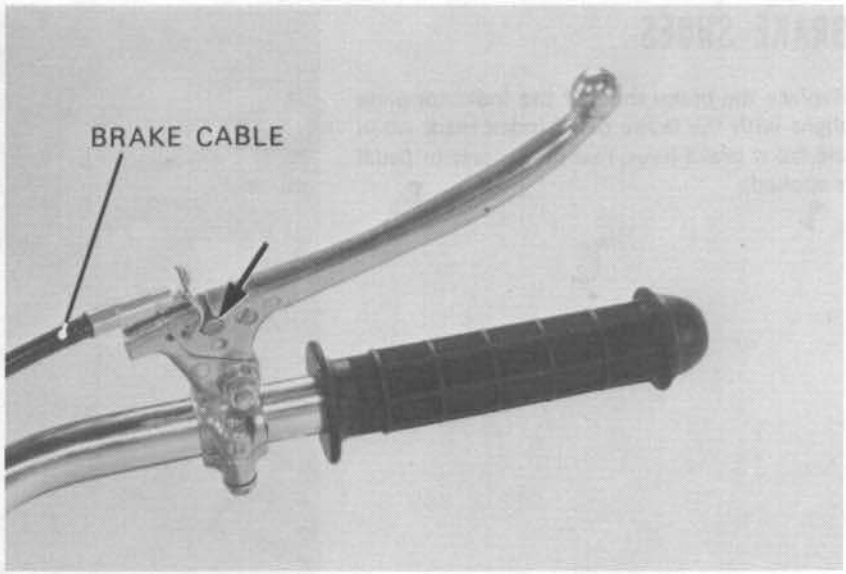
REAR BRAKE

Check the cable, brake lever and brake pedal for loose connections, excessive play, or other damage.

Replace or repair if necessary.
Disconnect the brake cables at the brake lever or pedal ends.

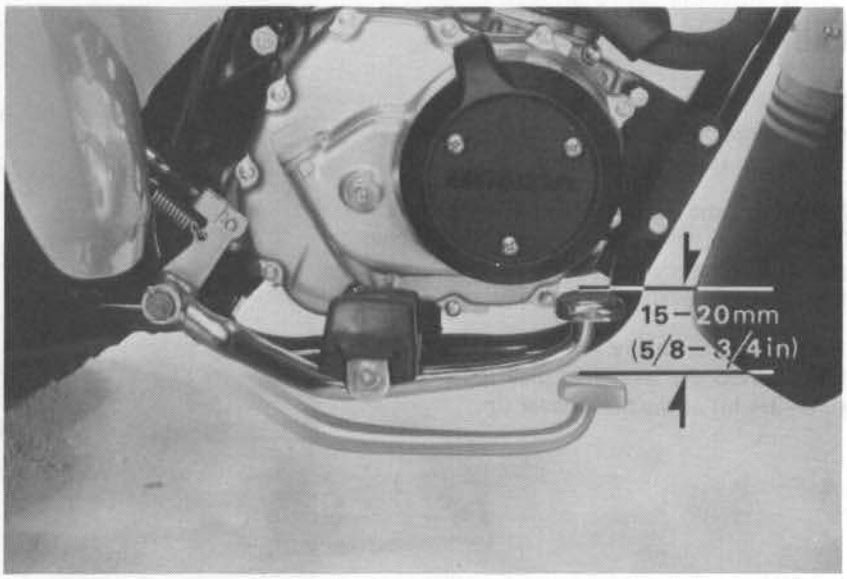
Thoroughly lubricate the cables and their pivot points with a commercially available cable lubricant to prevent premature wear.

Install the cables.



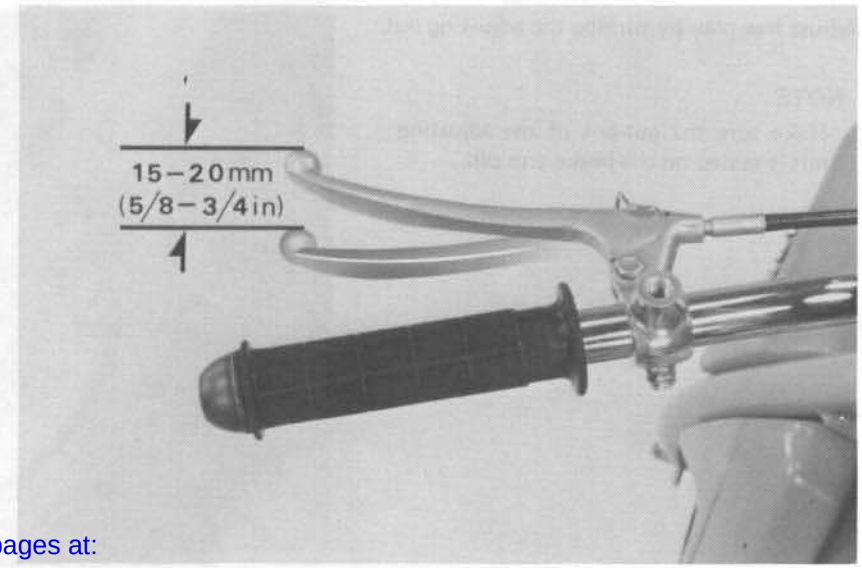
Measure the brake pedal free play at the end of the brake pedal.

BRAKE PEDAL FREE PLAY:
15–20 mm (5/8–3/4 in)



Measure the rear brake lever (parking brake) free play at the end of the brake lever.

REAR BRAKE LEVER FREE PLAY:
15–20 mm (5/8–3/4 in)



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