

Official

HONDA

SHOP MANUAL

XR500R





HOW TO USE THIS MANUAL

Sections 1 through 3 apply to the whole motorcycle, while sections 4 through 16 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 general instructions/specifications, torque values, working practices, tools and troubleshooting for the section. The subsequent pages give detailed procedures for the section.

If you don't know what the source of the trouble is, read section 18, TROUBLESHOOTING.

If you are not familiar with this motorcycle, read section 17 TECHNICAL FEATURES.

Refer to Section 19 for 1982 service information.

Refer to section 20 for European and General type information.

ALL INFORMATION, ILLUSTRATIONS, DIRECTIONS AND SPECIFICATIONS INCLUDED IN THIS PUBLICATION ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF APPROVAL FOR PRINTING.

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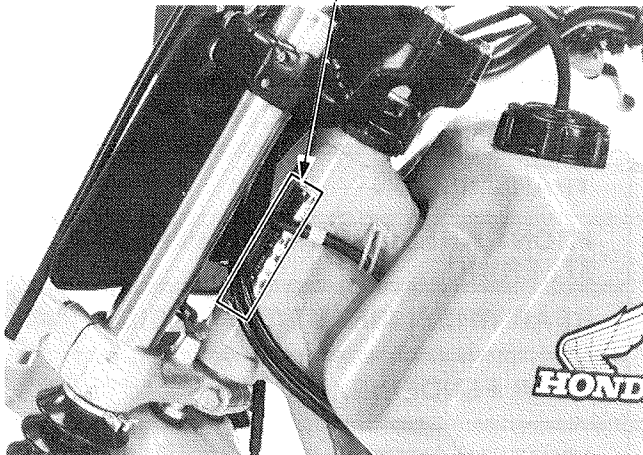
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MODEL IDENTIFICATION

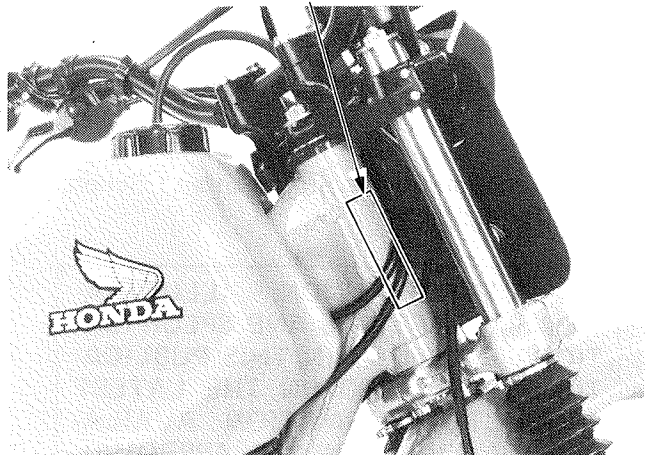


DATE OF MANUFACTURE



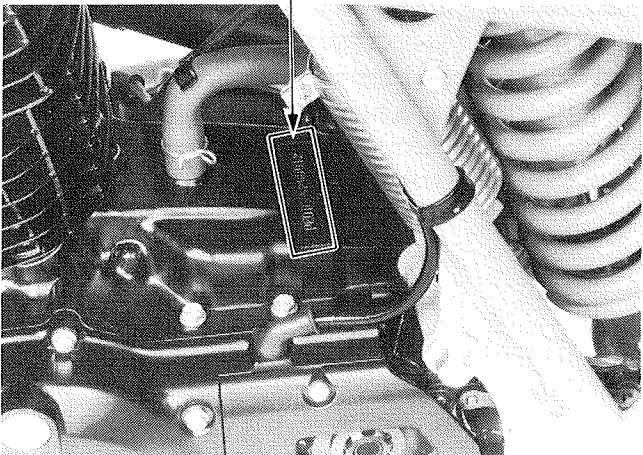
The vehicle identification number (VIN) is on the left side of the steering head.

FRAME SERIAL NUMBER



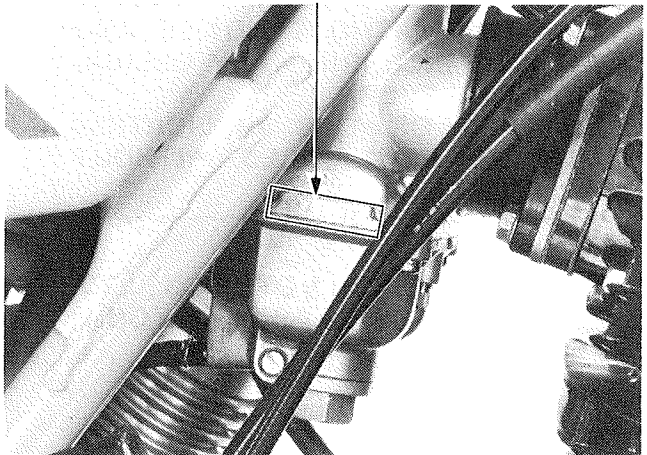
The frame serial number is stamped on the right side of the steering head.

ENGINE SERIAL NUMBER



The engine serial number is stamped on top of the crankcase.

CARBURETOR IDENTIFICATION NUMBER



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



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GENERAL SAFETY

WARNING

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

WARNING

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

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, lock plates, etc. when reassembling.
5. When torquing bolts or nuts, begin with larger-diameter or inner bolts first, and 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.

**GENERAL INFORMATION****SPECIFICATIONS**

DIMENSIONS	Overall length Overall width Overall height Ground clearance Wheel base Seat height/with 68 kg (150 lb) Foot peg height Dry weight	2,160 mm (85.0 in) 850 mm (33.5 in) 1,235 mm (48.6 in) 320 mm (12.6 in) 1,420 mm (55.9 in) 875 mm (34.4 in) 420 mm (16.5 in) 126 kg (277.8 lb)
FRAME	Type Front suspension, travel Rear suspension, travel Front tire size, pressure Rear tire size, pressure Front brake, swept area Rear brake, swept area Fuel capacity Fuel reserve capacity Caster Trail Front fork oil capacity	Diamond Telescopic 254 mm (10 in) Prolink 254 mm (10 in) 3.00-21-6PR, 100 kPa (1.0 kg/cm ² , 14 psi) 5.10-17-6PR 80 kPa (0.8 kg/cm ² , 11 psi) Internal expanding shoes 102 cm ² (15.9 sq.in) Internal expanding shoes 122 cm ² (19.0 sq.in) 9 lit (2.4 U.S gal, 1.9 Imp.gal) 3 lit (0.8 U.S gal, 0.6 Imp.gal) 62° 112 mm (4.4 in) 345 – 350 cc (11.6 – 11.7 ozs)
ENGINE	Type Cylinder arrangement Bore x Stroke Displacement Compression ratio Valve train Maximum horsepower Maximum torque Oil capacity Lubrication system Air filtration system Cylinder compression Intake valve Exhaust valve Valve clearance	Gasoline, air-cooled 4-stroke O H C Single cylinder inclined 15° 89.0 x 80.0 mm (3.50 x 3.15 in) 498 cc (30.4 cu in) 8.6 : 1 4-valve, chain driven overhead camshaft 35 BHP/6,500 rpm 4.3 kg-cm (31.1 ft-lb)/4,000 rpm 2.0 lit (2.1 US qt, 1.8 Imp qt) Forced pressure and wet sump Oiled polyurethane foam 12.5 ± 1.5 kg/cm ² (172 ± 21 psi) Opens 5° (B T D C) Closes 40° (A B D C) Opens 45° (B B D C) Closes 5° (A T D C) Intake 0.05 mm (0.002 in) Exhaust 0.10 mm (0.004 in)

**GENERAL INFORMATION****TORQUE VALUES****ENGINE**

ITEM	Q'TY	THREAD DIA	TORQUE N.m (kg-m, ft-lb)
Kick starter stopper plate	1	8	18 - 25 (1.8 - 2.5, 13 - 18)
Kick starter spring hook pin	1	8	22 - 30 (2.2 - 3.0, 16 - 22)
Gear shift drum bearing set plate	2	6	9 - 13 (0.9 - 1.3, 7 - 9)
Upper crankcase 6 mm bolt	8	6	10 - 14 (1 - 1.4, 7 - 10)
8 mm bolt	1	8	22 - 28 (2.2 - 2.8, 16 - 20)
Lower crankcase 6 mm bolt	5	6	10 - 14 (1 - 1.4, 7 - 10)
9 mm bolt	2	9	27 - 33 (2.7 - 3.3, 20 - 24)
10 mm bolt	2	10	32 - 38 (3.2 - 3.8, 23 - 27)
Balancer holder lock bolt	1	8	22 - 28 (2.2 - 2.8, 16 - 20)
Cam chain tensioner	1	6	10 - 14 (1 - 1.4, 7 - 10)
Spark advancer lock nut	1	18	45 - 60 (4.5 - 6.0, 33 - 43)
Clutch center	1	18	45 - 60 (4.5 - 6.0, 33 - 43)
Fly wheel	1	16	100 - 120 (10.0 - 12.0, 72 - 87)
Cylinder bolt	2	6	10 - 14 (1.0 - 1.4, 7 - 10)
nut	2	8	22 - 28 (2.2 - 2.8, 16 - 20)
Cylinder head nut	6	8	22 - 28 (2.2 - 2.8, 16 - 20)
Cam sprocket bolt	2	7	17 - 23 (1.7 - 2.3, 12 - 17)
Valve adjusting screw lock nut	4	6	15 - 18 (1.5 - 1.8, 11 - 13)
Cylinder head cover	12	6	10 - 14 (1.0 - 1.4, 7 - 10)
Valve cover	4	6	10 - 14 (1.0 - 1.4, 7 - 10)
Engine oil bolt	1	12	30 - 40 (3.0 - 4.0, 22 - 29)

FRAME

ITEM	Q'TY	THREAD DIA	TORQUE N.m (kg-m, ft-lb)
Fuel tank	2	8	15 - 24 (1.5 - 2.4, 11 - 17)
Exhaust pipe joint nut	4	6	8 - 12 (0.8 - 1.2, 6 - 9)
Exhaust pipe protector	2	6	8 - 12 (0.8 - 1.2, 6 - 9)
Steering stem nut	1	24	80 - 120 (8.0 - 12, 58 - 87)
Steering stem bolt	1	10	40 - 50 (4.0 - 5.0, 29 - 36)
Swing arm pivot bolt	1	14	70 - 100 (7.0 - 10.0, 51 - 72)
Handle holder	4	8	18 - 30 (1.8 - 3.0, 13 - 22)
Front top bridge pinch bolt	4	8	18 - 25 (1.8 - 2.5, 13 - 18)
Steering stem pinch bolt	4	8	18 - 30 (1.8 - 3.0, 13 - 22)
Front fork axle holder	4	6	10 - 14 (1.0 - 1.4, 7 - 10)
Front axle	1	12	50 - 80 (5.0 - 8.0, 36 - 58)
Rear axle nut	1	16	80 - 110 (8.0 - 11.0, 58 - 80)



FRAME

ITEM	Q'TY	THREAD DIA	TORQUE N·m (kg·m, ft·lb)
Final driven sprocket	6	8	28 – 34 (2.8 – 3.4, 20 – 25)
Rear shock absorber (upper)	1	10	60 – 75 (6.0 – 7.5, 43 – 54)
(lower)	1	10	38 – 48 (3.8 – 4.8, 27 – 35)
Foot peg	2	12	70 – 100 (7.0 – 10.0, 51 – 72)
Change pedal	1	6	8 – 12 (0.8 – 1.2, 6 – 9)
Kick starter pedal	1	8	20 – 35 (2.0 – 3.5, 14 – 25)
Side stand	1	10	35 – 45 (3.5 – 4.5, 25 – 33)
Engine hanger 8 mm bolt	4	8	45 – 60 (4.5 – 6.0, 33 – 43)
10 mm bolt	3	10	30 – 50 (3.0 – 5.0, 22 – 36)
12 mm bolt	2	12	100 – 130 (10.0 – 13.0, 72 – 94)
Rear shock absorber shock arm	1	12	90 – 120 (9.0 – 12.0, 65 – 87)
Rear shock absorber shock link	1	10	60 – 75 (6.0 – 7.5, 43 – 54)
Muffler band	2	8	15 – 25 (1.5 – 2.5, 11 – 18)
Muffler stay	1	8	20 – 30 (2.0 – 3.0, 14 – 22)

Torque specifications listed above are for the most important tightening points. If a specification is not listed follow the standards 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 (0.35 – 0.5, 2.5 – 3.6)
6 mm bolt, nut	8 – 12 (0.8 – 1.2, 6 – 9)	6 mm screw	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	30 – 40 (3.0 – 4.0, 22 – 29)

**GENERAL INFORMATION****TOOLS
SPECIAL**

TOOL NO.	TOOL DESCRIPTION
07953-MA00000	Ball race remover
07946-4300200	Ball race driver
07914-3230001	Snap ring pliers
07917-3230000	6 mm hex wrench
07923-4280000	Clutch center holder (Not available in U.S.A.)
07936-3710000	Bearing remover set
(07936-3710600)	(Bearing remover
(07936-3710100)	(Bearing remover handle
(07936-3710200)	(Bearing remover weight)
07946-KA50000	Needle bearing driver
07947-3710101	Front fork seal driver
07984-6570100	Valve guide reamer
07916-3710100	Steering stem socket
07946-4300100	Steering stem driver

COMMON

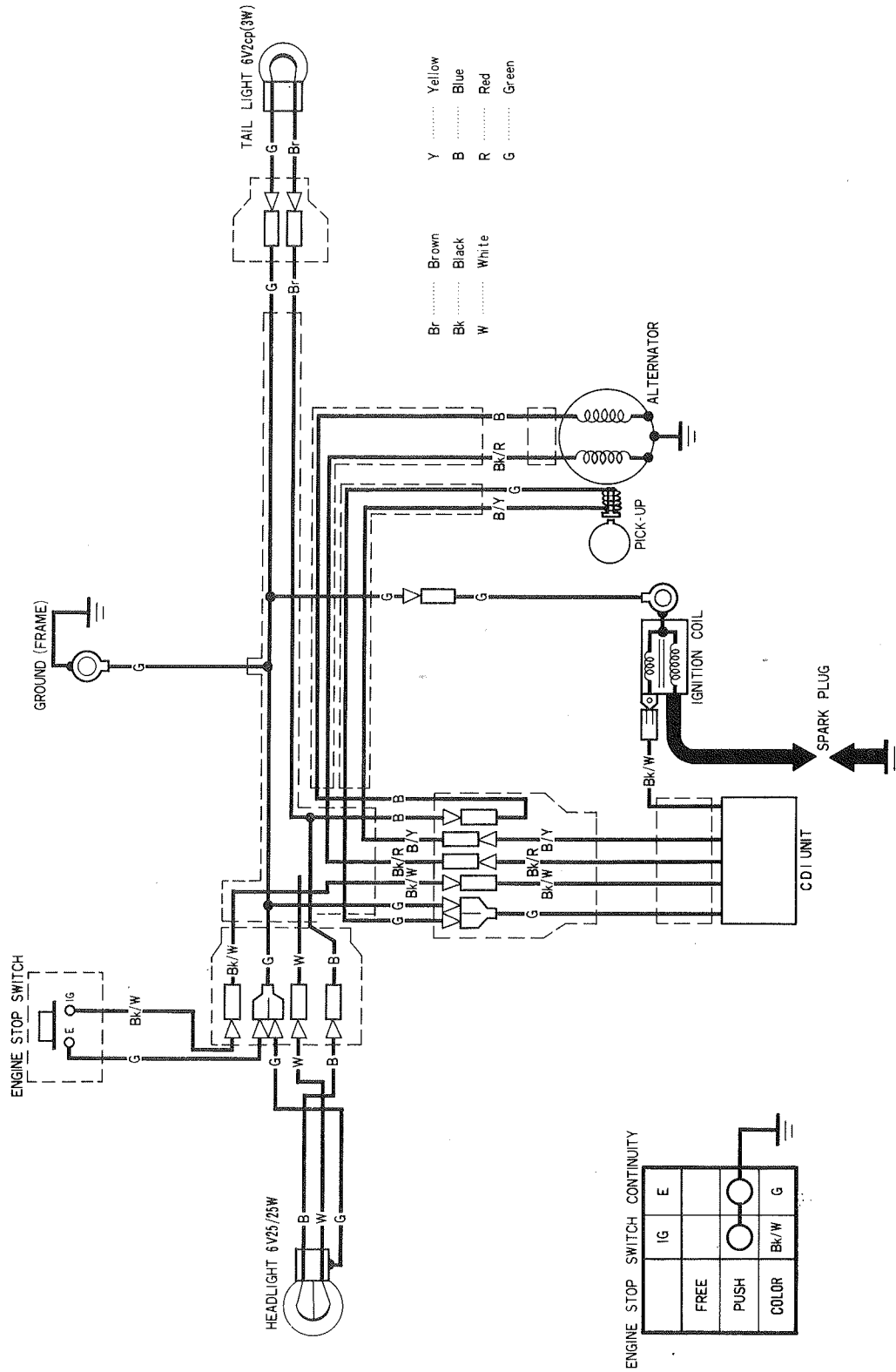
TOOL NO.	TOOL DESCRIPTION	APPLICATION (Common tool ↔ Special tool)
07401-0010000	Float level gauge	
07701-0020300	Spoke wrench	Spoke wrench 07701-0010100
07708-0030200	Wrench, 10 x 12 mm	} Valve adjusting wrench 07908-3230000
07708-0030300	Adjusting wrench A	
07710-0010100	Retainer wrench A	} Retainer wrench 07910-3290000
07710-0010401	Retainer wrench body	
07716-0020400	Socket wrench, 30 x 32 mm	} Commercially available in U.S.A.
07716-0020500	Extension bar	
07725-0030000	Universal holder	07725-001010 (COMMON TOOL)
07733-0020001	Rotor puller	Rotor puller 07933-3290001
07742-0010200	Valve guide remover, 6.6 mm	Valve guide remover 07942-3000000
07742-0020200	Valve guide driver B	Valve guide driver 07942-3290200
07746-0010100	Bearing driver outer, 32 x 35 mm	} Bearing driver 07945-0450000
07746-0040300	Driver pilot 15 mm	
07746-0010200	Bearing driver outer, 37 x 40 mm	} Bearing driver attachment 07946-9180000
07746-0010300	Bearing driver outer, 42 x 47 mm	
07746-0040400	Driver pilot 17 mm	} Ball race remove 07946-4300200
07746-0020100	Driver handle inner B	
07746-0030100	Driver handle inner C	} Bearing driver 07945-3230201
07746-0030200	Bearing driver inner 25 mm	
07746-0030400	Bearing driver inner 35 mm	} Bearing driver attachment 07945-3330200
07749-0010000	Bearing driver outer A	
		Bearing driver inner B 07945-3710200
		Oil seal driver 07947-7070500
		Bearing driver handle 07949-2860000
		07949-3000000
		07949-6110000
07757-0010000	Valve spring compressor	Valve spring compressor 07957-3290001

VALVE SEAT CUTTER (The following are commercially available in the U.S.A.)

TOOL NO.	TOOL NAME	TOOL NO.	TOOL NAME
07780-0010400	35 mm Seat cutter	00780-0014000	30 mm Interior cutter
07780-0010500	40 mm Seat cutter	00780-0014100	37.5 mm Interior cutter
00780-0012300	35 mm Flat cutter	00781-0010200	6.6 mm Cutter holder
00780-0012400	38.5 mm Flat cutter		



WIRING DIAGRAM



0030Z—MA0—0001

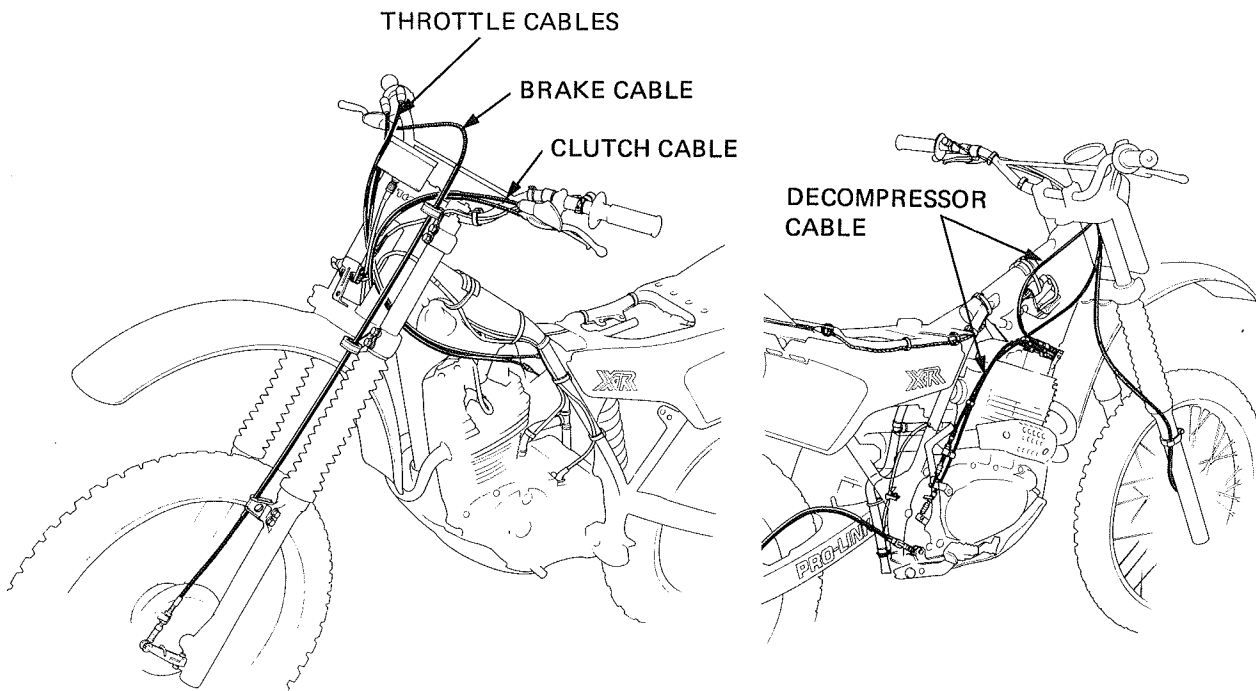
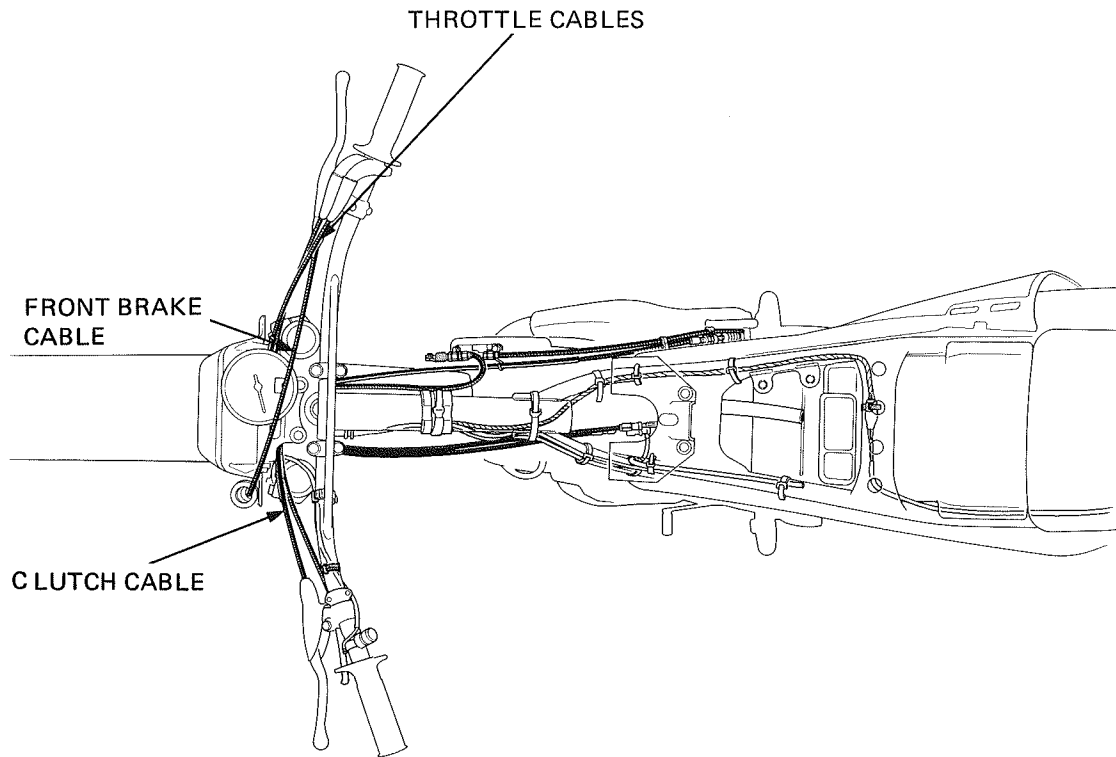
ENGINE STOP SWITCH CONTINUITY

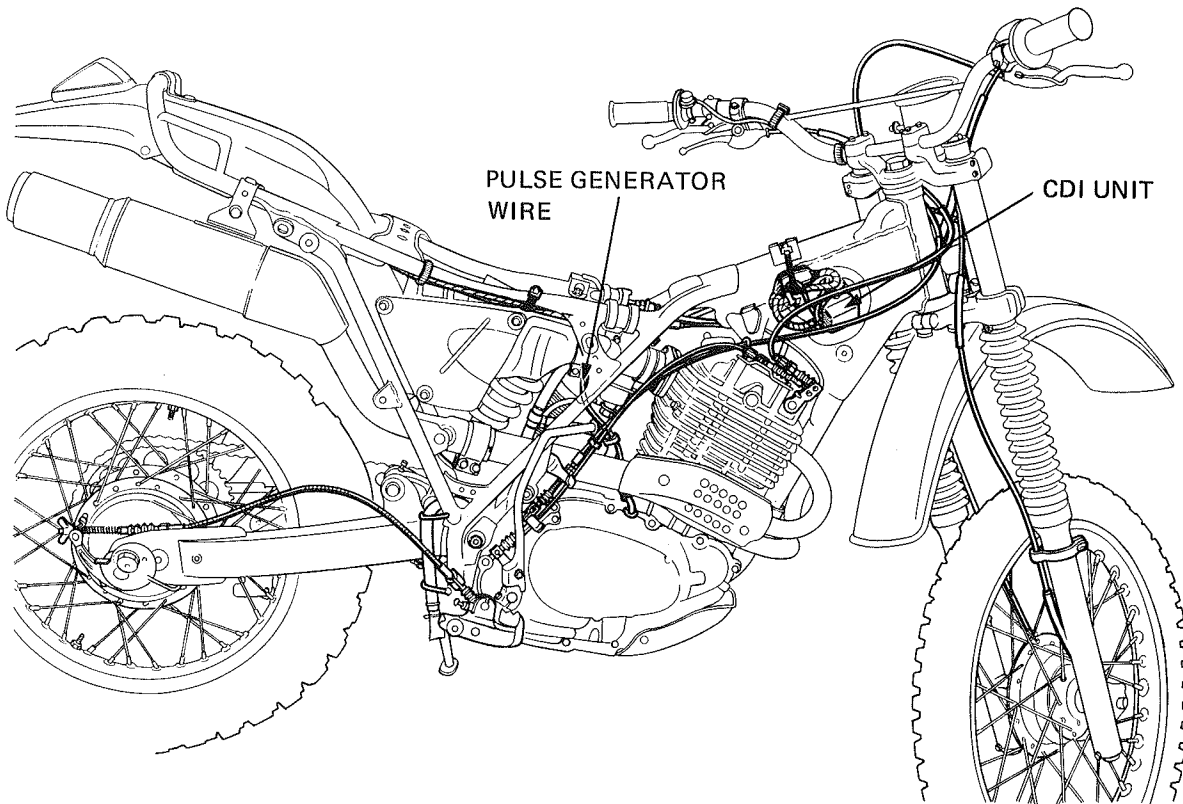
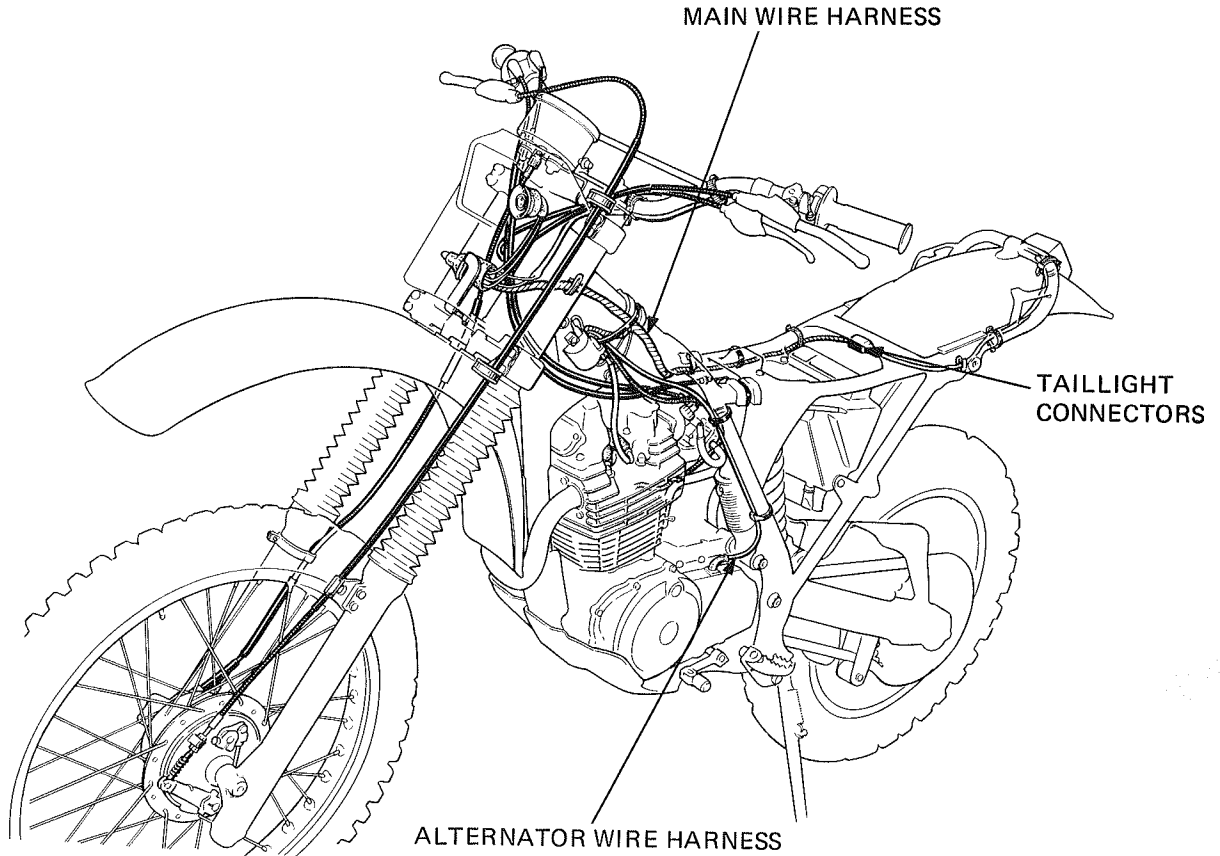
	IG	E
FREE		
PUSH	○	○
COLOR	Bk/W	G



GENERAL INFORMATION

CABLE & HARNESS ROUTING







GENERAL INFORMATION

ITEMS REQUIRING FREQUENT REPLACEMENT

ENGINE OIL

ITEM	NOTE
Engine oil	Change after first 1,000 km (600 mi); thereafter every 3,000 km (1,800 mi)

FAST WEARING COMPONENTS

ITEM	NOTE
Drive chain	Service limit: 105 pins 1,651 mm (65 in)
Drive and driven sprockets Chain guide rollers Chain slider Cables	Replace when damaged or worn

OTHER COMPONENTS TO BE REPLACED AS REQUIRED

ITEM	NOTE
Cylinder head gasket Gaskets, O-rings	Replace whenever the engine is disassembled
Clutch disc	Service limit: Thickness 2.3 mm (0.09 in)
Tires	Service Limit: Tread depth 8 mm (0.3 in)
Spark plug Fender Lights Handlebar Throttle housing Grip Gear shift pedal Rear brake pedal Air cleaner element	Replace when damaged or worn
Brake shoes	Align "△" mark and index mark



INLET DUCT CAP AND MUFFLER DIFFUSER PIPE

A muffler diffuser pipe and inlet duct cap installed will reduce the noise level to 86dB(A).

Some state noise level regulations prohibit operation of this vehicle without the inlet duct cap and muffler diffuser pipe installed.

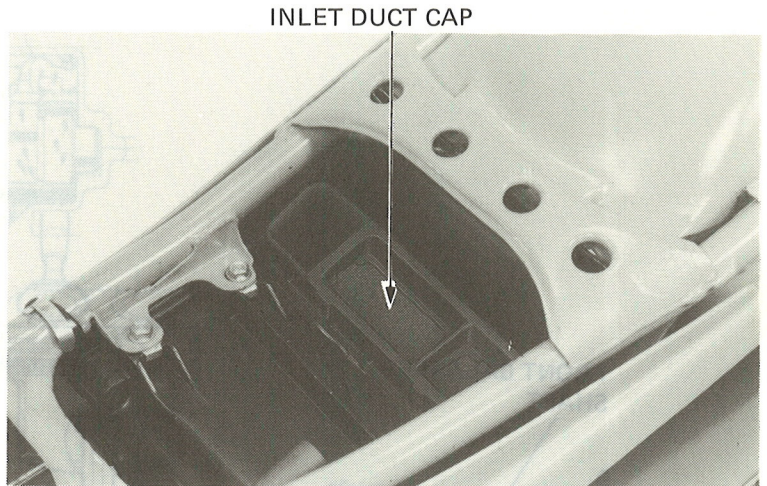
Determine that operation of the vehicle complies with off-road laws and regulation.

INLET DUCT CAP

Remove the seat.

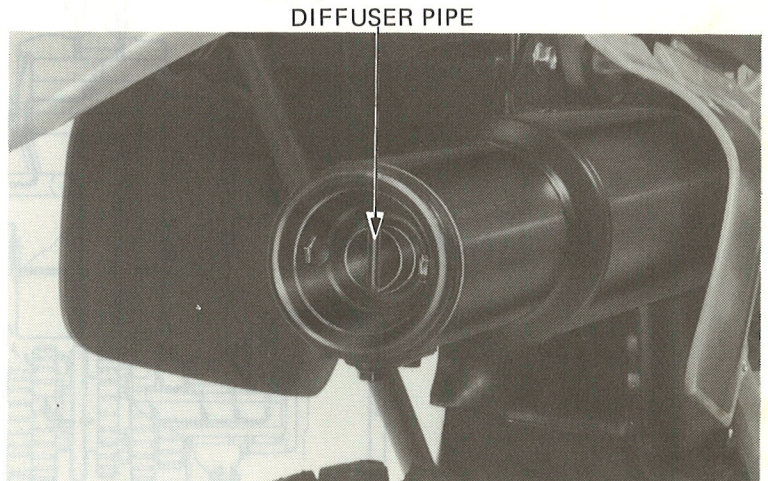
Insert the duct cap into the air cleaner inlet tube securely.

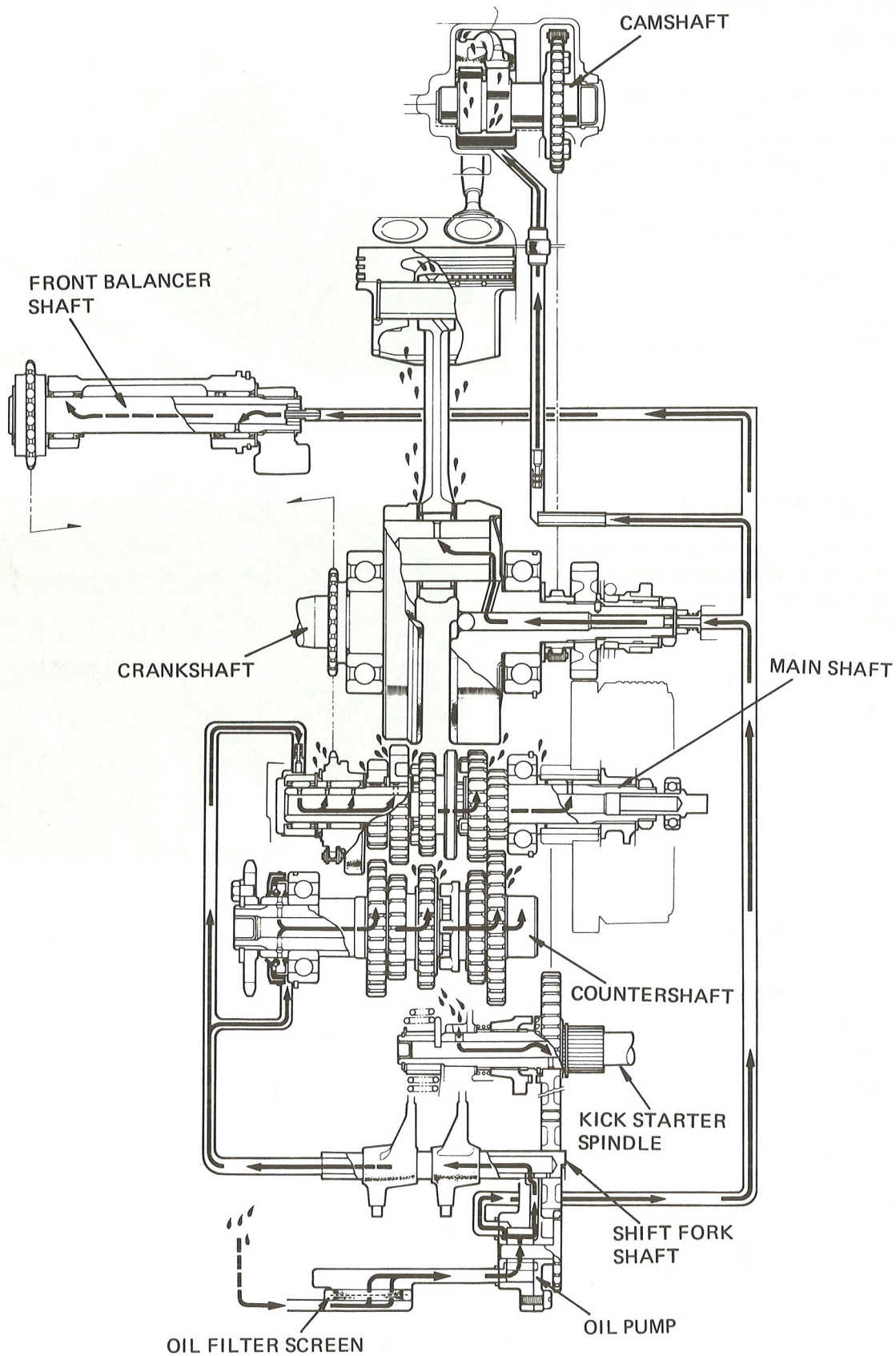
Install the seat.



MUFFLER DIFFUSER PIPE

Remove the two screws from the end of the spark arrester. Attach the muffler diffuser pipe into the end of the spark arrester with the two screws and tighten securely.







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SERVICE INFORMATION

GENERAL INSTRUCTIONS

- This section describes inspection and replacement of engine oil and cleaning of the oil filter screen.
- Oil pump service is described in Section 8.

SPECIFICATIONS

Oil capacity **2.0 liter (2.1 US qt, 1.8 Imp qt) at engine assembly**
1.7 liter (1.8 US qt, 1.5 Imp qt) at oil change

Oil recommendation Use HONDA 4-STROKE OIL or equivalent.
 API SERVICE CLASSIFICATION: SE
 VISCOSITY:
 SAE 10W-40

Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.

Oil pump delivery **4.9 lit (5.2 US qt)/min at 5,000 rpm**

TORQUE VALUE

Oil drain bolt 20-30 N·m (2.0-3.0 kg·m, 14-21 ft·lb)

TROUBLESHOOTING

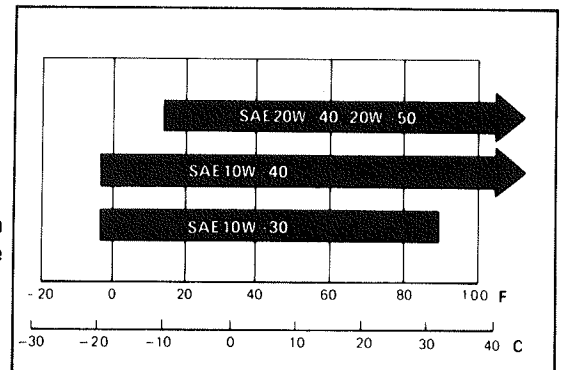
Oil Level Too Low

1. Normal oil consumption
2. External oil leaks
3. Worn piston rings

Oil Contamination

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

OIL VISCOSITIES



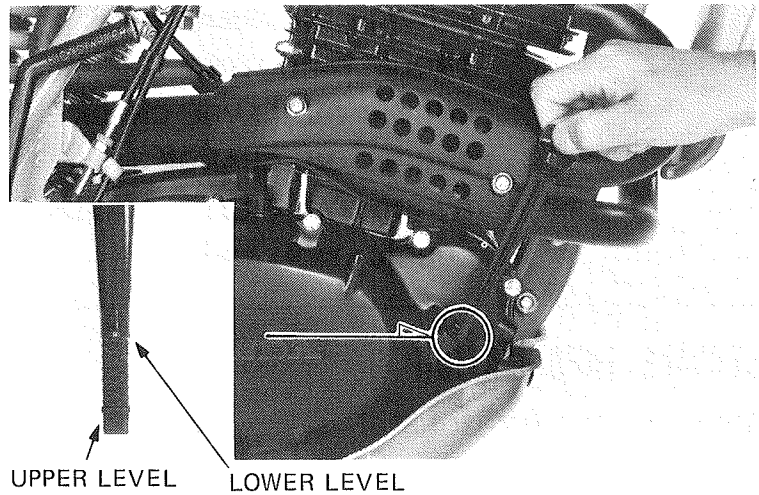


LUBRICATION

ENGINE OIL LEVEL CHECK

Support the motorcycle upright on level ground.
Check the oil level with the 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.



ENGINE OIL CHANGE

NOTE

Change engine oil with the engine warm and the motorcycle on its side stand to assure complete and rapid draining.

Remove the oil filler cap and drain plug.
After the oil has drained, check that the drain plug sealing washer is in good condition, and install the plug.

TORQUE: 20–30 N·m (2.0–3.0 kg·m, 14–21 ft·lb)

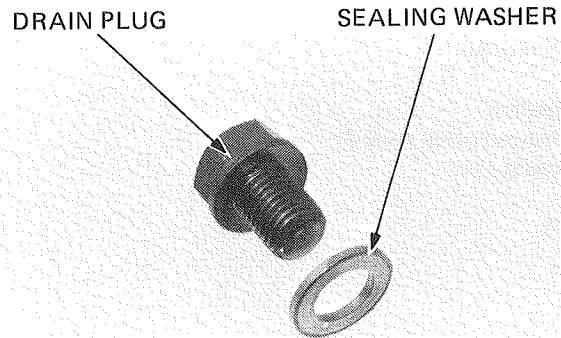
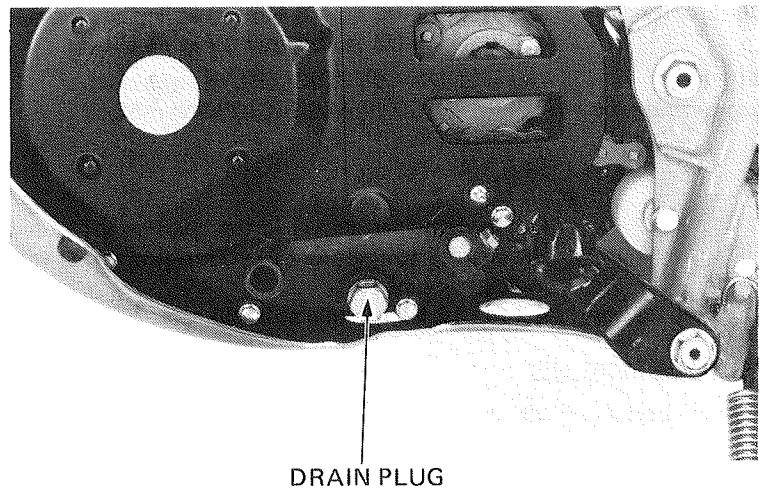
NOTE

Perform the oil filter screen and balancer chain maintenance if required, before filling the crankcase.

Fill the crankcase with 1.7 liters (1.8 US qt, 1mp qt) of the recommended oil.

Install the oil filler cap/dipstick.
Start the engine and let it idle for 2–3 minutes.

Stop the engine and check that the oil level is at the upper level mark with the motorcycle upright.
Check that there are no oil leaks.





ENGINE OIL FILTER SCREEN

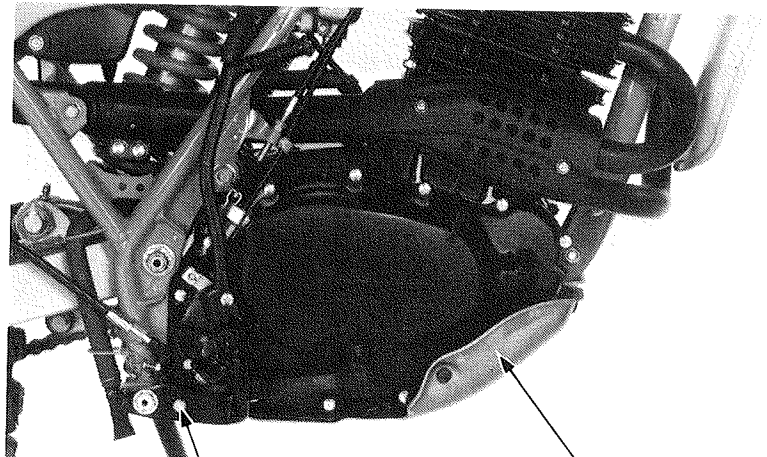
NOTE

Perform this maintenance before filling the engine with oil.

Remove the skid plate and kick starter pedal.
Loosen the adjusting nut and disconnect the clutch cable at the lower end.

Remove the right foot peg.
Remove the brake pedal.

Disconnect the brake cable from the pedal.
Remove the right crankcase cover.



RIGHT FOOT PEG

SKID PLATE

Remove the oil filter screen and clean it.
Install the oil filter screen.

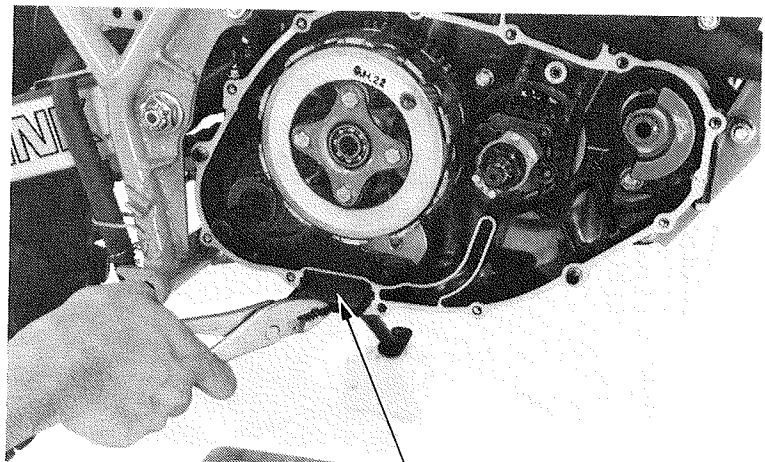
NOTE

Adjust the balancer chain while the right crankcase cover is off (Page 3-11).

Check that the right crankcase cover gasket is in good condition.
Install the removed parts in the reverse order of disassembly.

Adjust the brake pedal (Page 3-16), clutch lever (Page 3-18) and starter decompressor (Page 3-10).

Fill the crankcase with the recommended oil (Page 3-18).

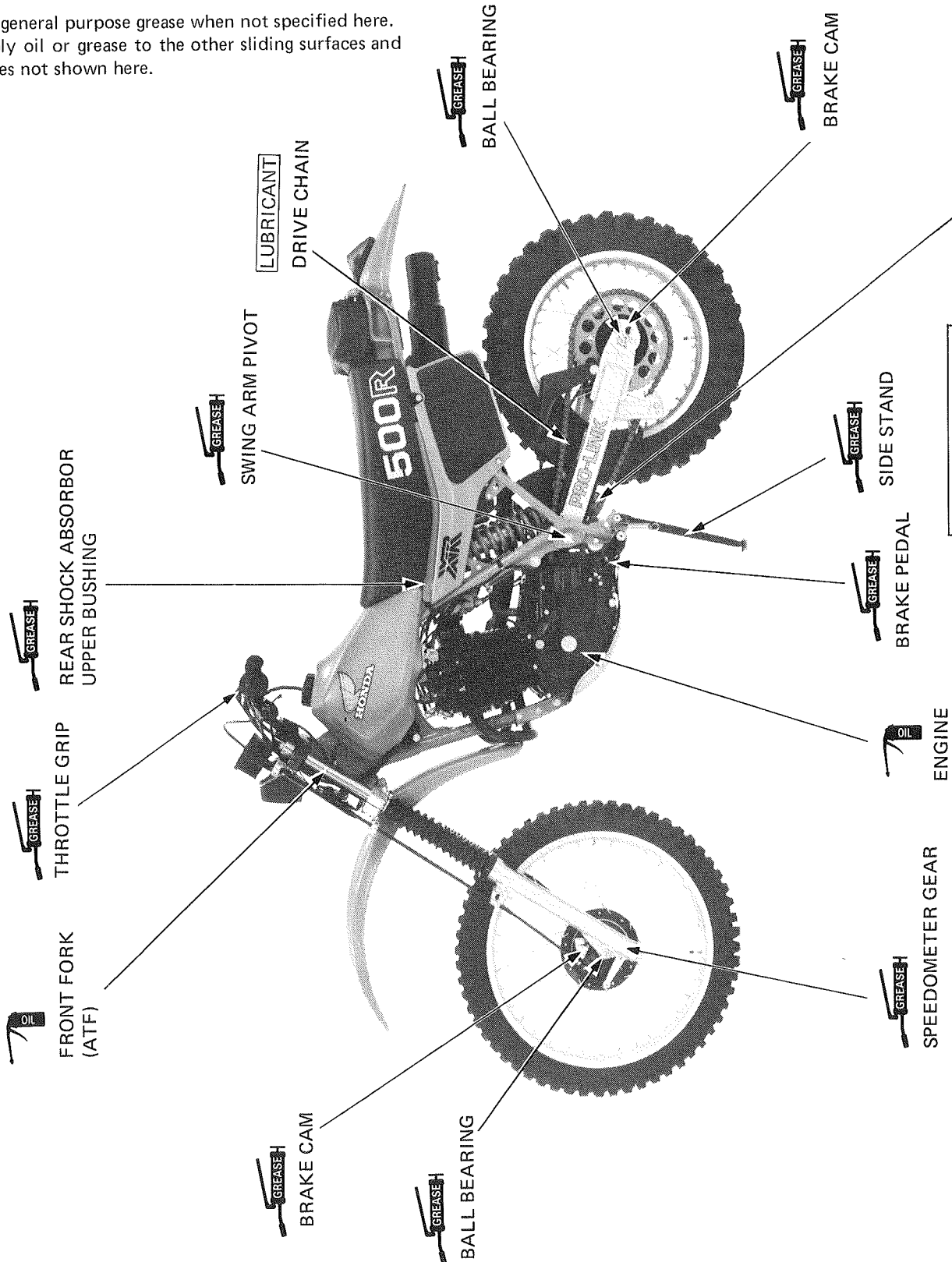


OIL FILTER SCREEN



LUBRICATION POINTS

Use general purpose grease when not specified here.
Apply oil or grease to the other sliding surfaces and cables not shown here.



SPECIAL LUBRICANT

- SHOCK ABSORBER UPPER MOUNT BUSHINGS (page 14-18).
- SUSPENSION LINKAGE PIVOTS (page 14-20).



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MAINTENANCE

SERVICE INFORMATION

SPECIFICATIONS

« ENGINE »

Ignition timing Initial 10° BTDC at 2,250 ± 250 rpm (F mark)
 Full advance 36° ± 2° BTDC at 3,500 rpm

Spark plug	U.S.A. model	D8EA (NGK)
		X24ES-U (ND)
Spark plug	Canada model	DR8ES-L (NGK)
		X24ESR-U (ND)

Spark plug gap 0.6–0.7 mm (0.024–0.028 in)
Valve clearance IN 0.05 mm (0.002 in)
 EX 0.10 mm (0.004 in)
Idle speed 1,200 ± 100 rpm
Cylinder compression 12.5 kg/cm² (175 psi)
Starter decompressor lever
free play 1–2 mm (1/16–1/8 in)
Manual decompressor lever
free play 5–8 mm (3/16–5/16 in)

« FRAME »

Throttle grip free play 2–6 mm (1/8–1/4 in)
Front brake lever free play 25–30 mm (1–1 1/4 in)
Rear brake pedal free play 15–20 mm (5/8–3/4 in)
Clutch lever free play 15–25 mm (5/8–1 in)
Tire pressure Front 100 kPa (1.0 kg/cm², 14 psi)
 Rear 80 kPa (0.8 kg/cm², 11 psi)
Tire size Front 3.00-21-6PR
 Rear 5.10-17-6PR

TORQUE VALUES

Balancer holder lock bolt 22–28 N·m (2.2–2.8 kg-m, 16–20 ft-lb)
Rear axle nut 80–110 N·m (8.0–11.0 kg-m, 58–80 ft-lb)
Spoke nipple 2–4.5 N·m (0.2–0.45 kg-m, 1.4–3.2 ft-lb)
Rim lock 10–15 N·m (1.0–1.5 kg-m, 7–11 ft-lb)
Valve adjusting screw lock nut 15–18 N·m (1.5–1.8 kg-m, 11–13 ft-lb)

TOOLS

Spoke wrench 07701-0020300 (Commercially available in U.S.A.)
Wrench, 10 x 12 mm 07708-0030200 (□) or 07908-3230000
Adjusting wrench A 07708-0030300



MAINTENANCE SCHEDULE

REGULAR MAINTENANCE SCHEDULE

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

I : Inspect, Clean, Adjust, Lubricate or Replace if Necessary.

C : Clean

R : Replace

A : Adjust

L : Lubricate

ITEM	FREQUENCY	BREAK-IN MAINTENANCE	REGULAR SERVICE INTERVAL
		350 km (200 mi)	1,600 km (1,000 mi)
ENGINE OIL		R	R, every 3,000 km (1,800 mi)
* ENGINE OIL FILTER SCREEN			C
AIR CLEANER	NOTE	C	C, every 800 km (500 mi)
* FUEL FILTER AND FUEL LINE		I	I
SPARK PLUG		I	I
* VALVE CLEARANCE		I	I
* STARTER DECOMPRESSOR		I	I
* CAM CHAIN TENSION		A	A
* THROTTLE OPERATION		I	I
* CARBURETOR IDLE SPEED		I	I
* CARBURETOR CHOKE		I	I
** BALANCER CHAIN TENSION		I	A
DRIVE CHAIN	NOTE	I, L	I, L every 500 km (300 mi)
DRIVE CHAIN ROLLERS		I	I
DRIVE CHAIN SLIDER		I	I
* BRAKE SHOE WEAR			I
BRAKE SYSTEM		I	I
* HEADLIGHT AIM		I	I
CLUTCH FREE PLAY		I	I
* SUSPENSION		I	I
SWINGARM BEARINGS		I, L	I, L
REAR SUSPENSION LINKAGE		I, L	I, L
* REAR SHOCK ABSORBER UPPER BUSHING			I, L
** SPARK ARRESTER			C
* NUTS, BOLTS, FASTENERS		I	I
** WHEELS/SPOKES		I	I
** STEERING HEAD BEARING		I	I

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

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

NOTE : Service more frequently when ridden in wet or dusty conditions.



COMPETITION MAINTENANCE SCHEDULE

Check all items before each race.

Refer to the REGULAR MAINTENANCE SCHEDULE (Page 3-3) for regular service intervals.

ITEMS	INSPECT FOR	ACTION AS REQUIRED	REFER TO PAGE
ALL PRE-RIDE INSPECTION ITEMS			NOTE 3
ENGINE OIL	Contamination, level	Change	2-2
FUEL LINE	Deterioration, damage or leakage	Replace	3-5
CARBURETOR CHOKE	Proper operation	Adjust	3-6
AIR CLEANER	Dirt or tears	Clean or replace	3-6
SPARK PLUG	Tightness, proper heat range, and the high tension connection	Tighten, replace or secure	3-7
VALVE CLEARANCE	Correct clearance	Adjust	3-8
BALANCER CHAIN	Proper tension NOTE 1	Adjust	3-11
STARTER DECOMPRESSOR	Proper free play	Adjust	3-9
CAM CHAIN	Abnormal noise	Adjust	3-10
CARBURETOR IDLE SPEED	Correct idle speed	Adjust	3-12
DRIVE CHAIN	Length: 1635 mm	Replace	3-13
SPROCKETS	Wear and looseness	Replace or tighten	3-13
BRAKE SHOES	Wear beyond service limit	Replace	3-15
HEADLIGHT	Proper beam aim	Adjust	3-18
FRONT SUSPENSION	Smooth operation, no oil leaks, good boot condition, air pressure and oil volume	Replace or adjust	3-19
REAR SUSPENSION	Smooth operation, oil leaks, spring height	Replace or adjust	3-19
STEERING HEAD	Free rotation of handlebar and steering stem nut tightness	Adjust or tighten	3-21
CLUTCH DISCS	Discoloration or wear beyond Service limit NOTE 2	Replace	3-18
SWINGARM BEARINGS	Smooth operation	Replace	_____
REAR SUSPENSION LINKAGE	Wear	Replace	_____
SEAT	Looseness	Tighten	15-1
CONTROL CABLES	Smooth operation, kinks and correct routing	Lubricate or replace	
ENGINE MOUNTING BOLTS	Looseness	Tighten	5-4

NOTE 1 : Perform the adjustment at the same time as clutch disc inspection.

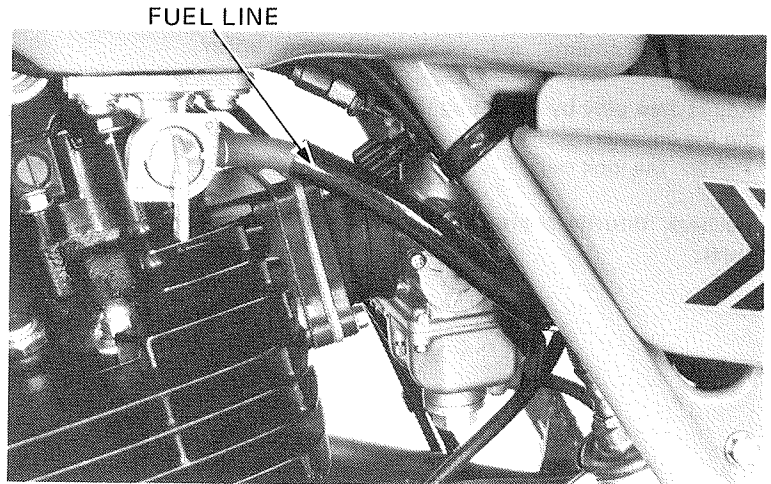
NOTE 2 : Competition use necessitates more frequent service.

NOTE 3 : Refer to the Owner's Manual PRE-RIDE INSPECTION



FUEL LINE

Replace any cracked, damaged or leaking parts.

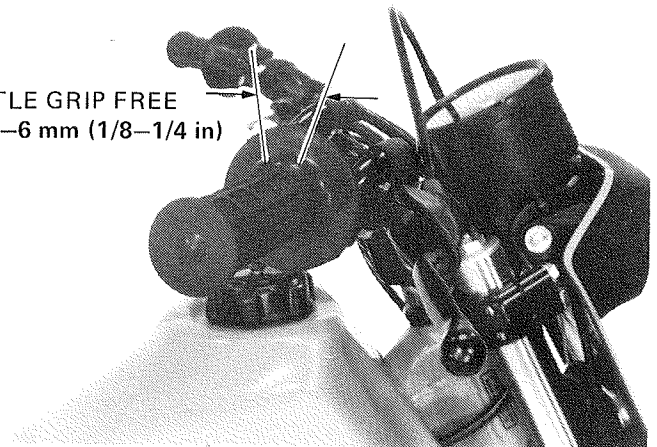


THROTTLE OPERATION

Check for smooth throttle full opening and automatic full closing in all steering positions.

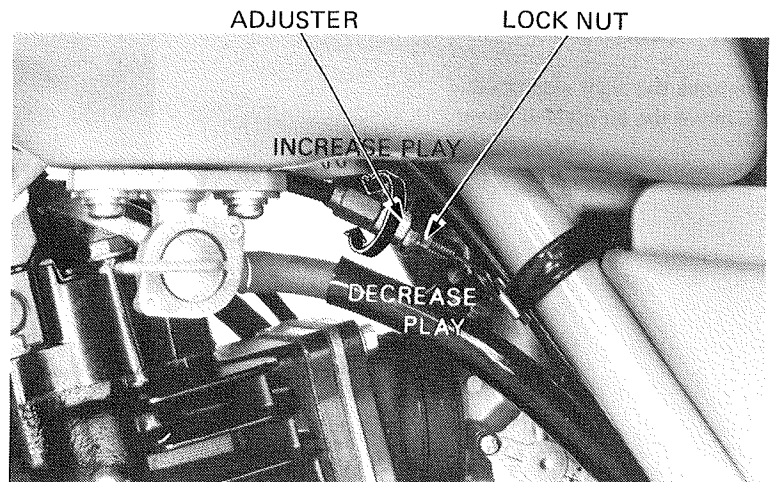
Make sure there is no deterioration, damage, or kinking in the throttle cable, and that the throttle grip free play is 2–6 mm (1/8–1/4 in) at the throttle grip flange.

THROTTLE GRIP FREE
PLAY: 2–6 mm (1/8–1/4 in)



Throttle grip free play can be adjusted at either end of the throttle cable.

Major adjustments are made with the lower adjuster on the carburetor.

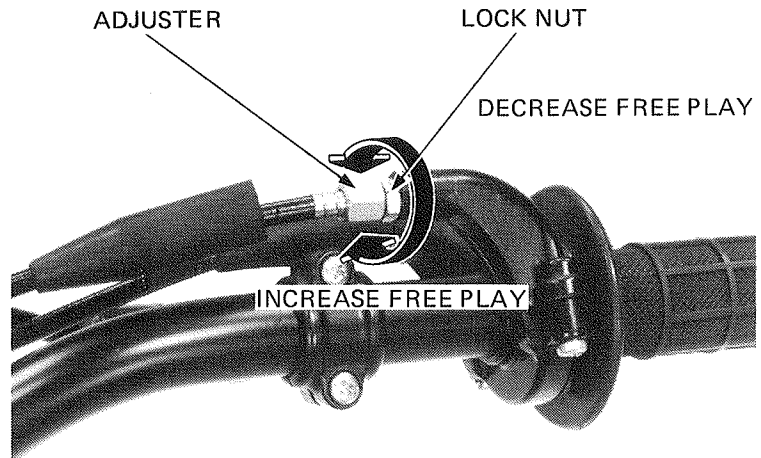




MAINTENANCE

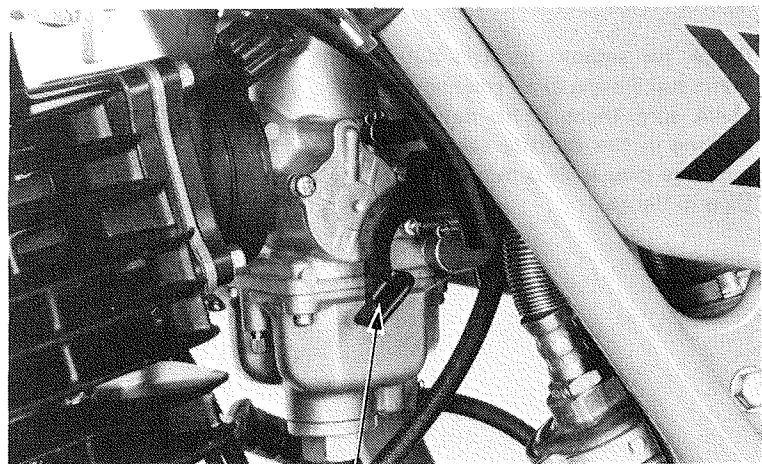
Minor adjustments are made with the upper adjuster.
Adjust free play by loosening the lock nut and turning the adjuster.
Tighten the lock nut.

Recheck throttle operation. Replace any damaged parts.



CHOKE LEVER

Check choke lever operation.
If the choke lever moves stiffly, clean and lubricate the pivot. After cleaning, recheck the lever's movement.



CHOKE LEVER

AIR CLEANER

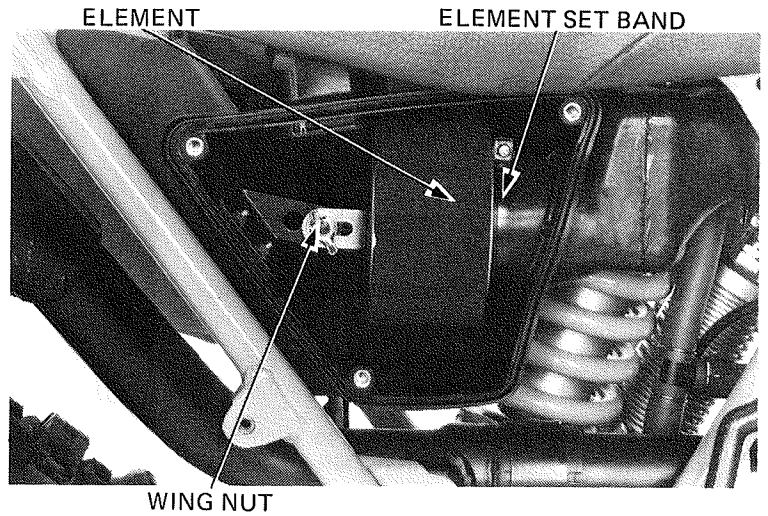
Remove the right side cover.
Remove the air cleaner cover.





Loosen the element set band and remove the wing nut.

Remove the element holder and remove the element from the holder.



Wash the element in non-flammable or high flash point solvent, and let it dry.
Soak the element in gear oil (SAE #80-90) and squeeze out excess.

Install the removed parts in the reverse order of disassembly.

SPARK PLUG

Disconnect the spark plug cap and remove the spark plug.

Visually inspect the spark plug. Discard it if the insulator is cracked or chipped.

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

Adjust the gap by bending the side electrode carefully.

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

RECOMMENDED SPARK PLUG

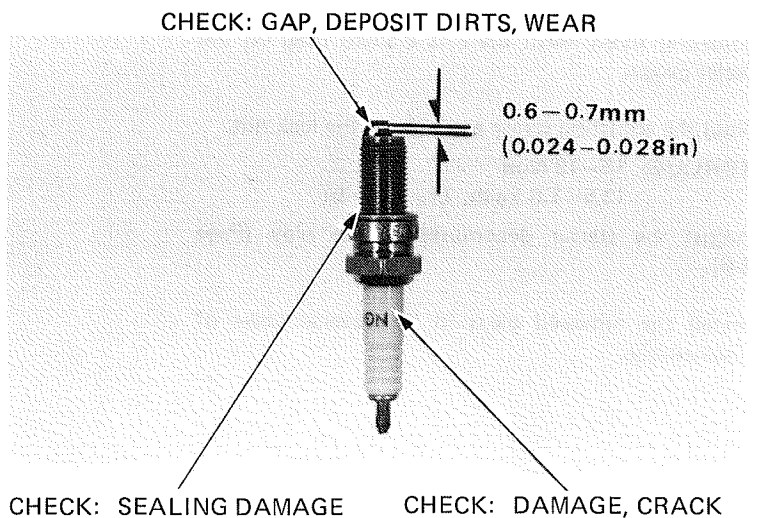
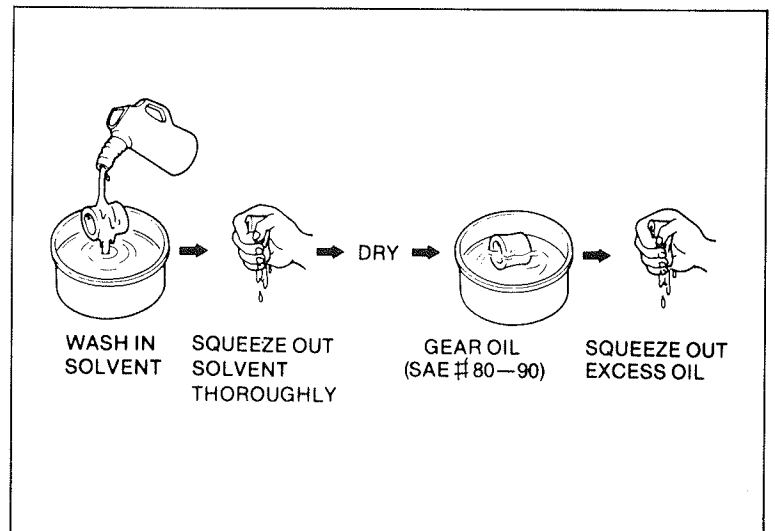
U.S.A. model	D8EA (NGK)
	X24ES-U(ND)
Canadian model	DR8ES-L (NGK)
	X24ESR-U (ND)

Make sure the sealing washer is in good condition.

Install the spark pug and connect the spark plug cap.

NOTE

Turn the spark plug finger tight, then tighten with a spark plug wrench.





MAINTENANCE

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 some free play during this maintenance.

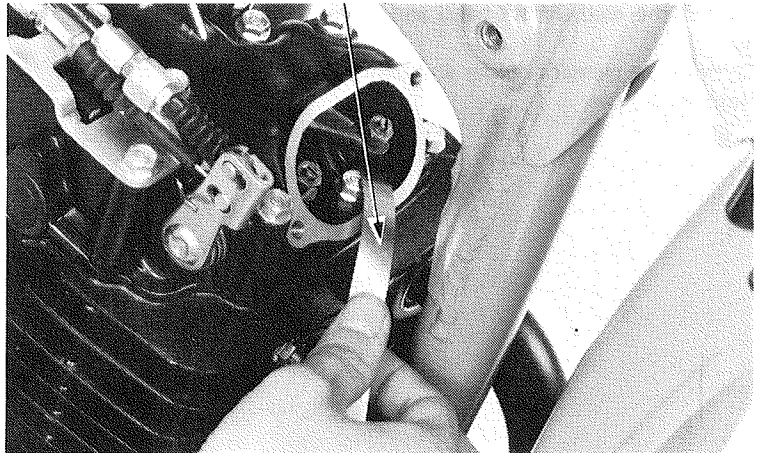
Remove the seat.
Turn the fuel valve OFF, disconnect the fuel line, and remove the tank.
Remove the crankshaft and timing mark hole caps.
Remove the valve adjuster covers.
Rotate the flywheel counterclockwise to align the "T" mark with the index mark on the left crankcase cover.
Make sure the piston is at TDC (Top Dead Center) on the compression stroke.

Check the clearance of both valves by inserting a feeler gauge between the adjusting screw and valve stem.

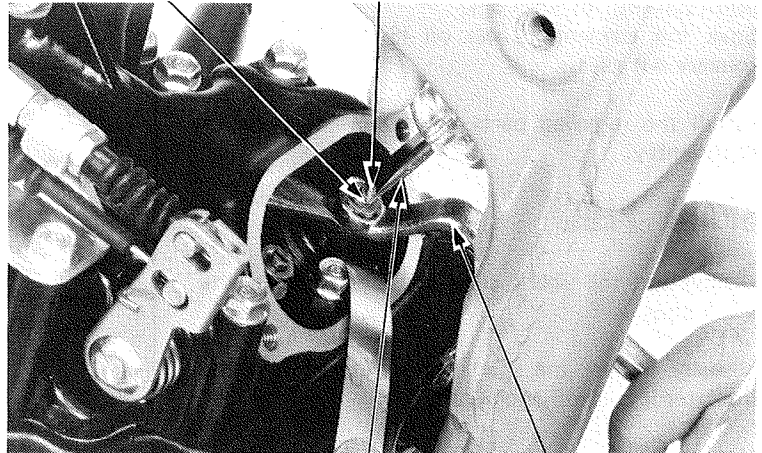
VALVE CLEARANCES:

- Intake 0.05 mm (0.002 in)
- Exhaust: 0.10 mm (0.004 in)

FEELER GAUGE



LOCK NUT VALVE ADJUSTER



ADJUSTER WRENCH A

WRENCH 10 x 12 mm

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)

Adjust the starter decompressor free play (Page 3-9).

Install the removed parts in the reverse order of disassembly.



STARTER DECOMPRESSOR

CAUTION:

The manual and kickstarter decompressor cables must be adjusted at the same time.

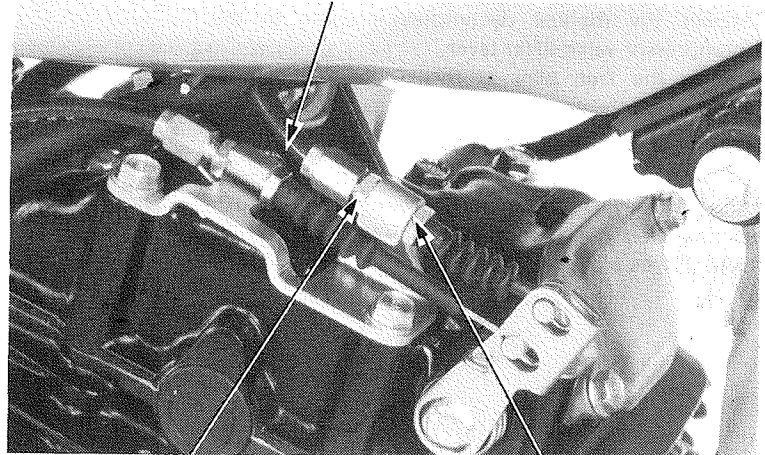
NOTE

Adjust the decompressor linkage after adjusting the valve clearance (Page 3-8).

Loosen the manual decompressor cable lock nut and adjusting nuts.

Disconnect the cable at the decompressor valve lifter lever.

MANUAL DECOMPRESSOR CABLE

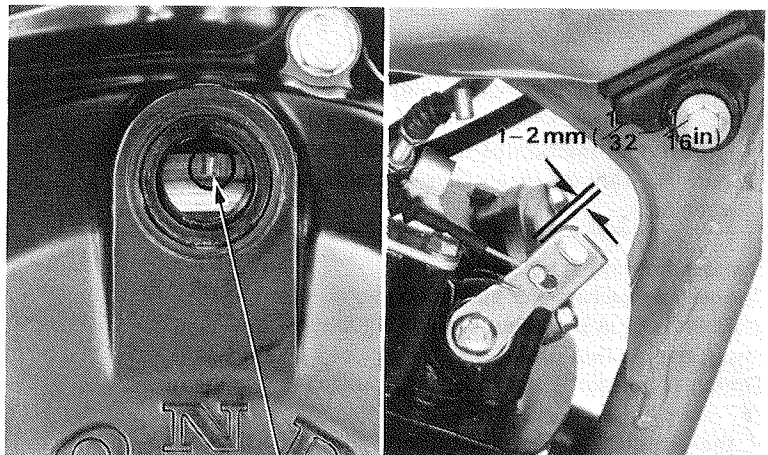


ADJUSTING NUT

LOCK NUT

Remove the crankshaft and timing mark hole caps. Rotate the flywheel counterclockwise and align the "T" mark with the index mark. Measure kickstarter decompressor cable free play at the tip of the decompressor valve lifter lever.

FREE PLAY: 1–2 mm (1/32–1/16 in)



"T" MARK

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 idling and valve damage.

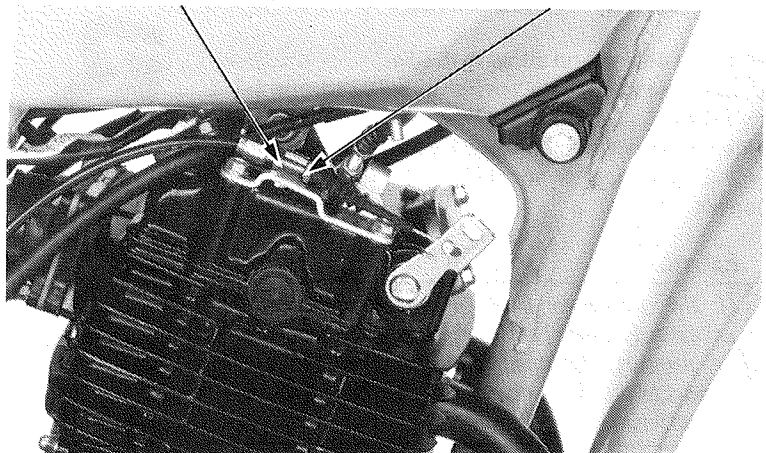
Tighten the lock nut.

Operate the kickstarter and check the operation of the decompressor mechanism.

Recheck free play.

ADJUSTING NUT

LOCK NUT





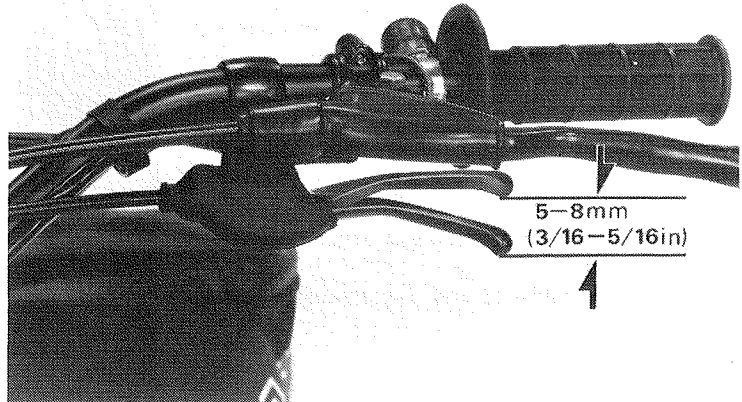
MAINTENANCE

Connect the manual decompressor cable to the decompressor valve lifter lever.

Measure the free play at the tip of the manual decompressor lever.

FREE PLAY: 5–8 mm (3/16–5/16 in)

Adjust by turning the manual decompressor adjusting nut. After adjusting, tighten the lock nut. Recheck free play.



IGNITION TIMING

NOTE

The Capacitive Discharge Ignition system is factory pre-set and cannot be adjusted. To inspect the function of the CDI components, ignition timing inspection procedures are given here.

Remove the timing hole cap.

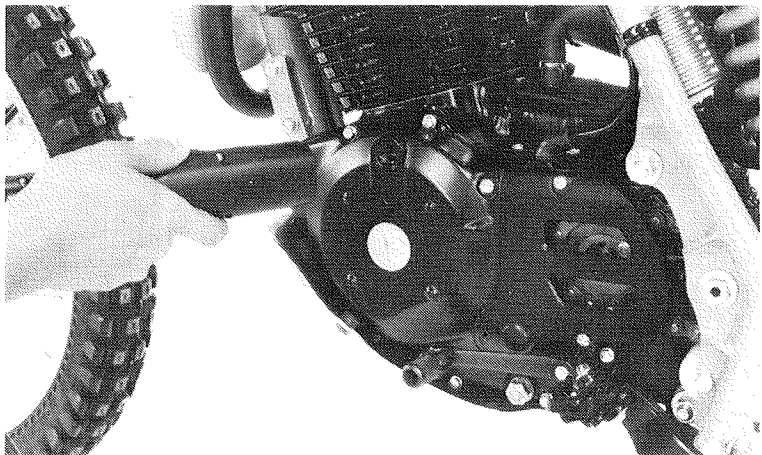
Connect the tachometer and timing light.

Start the engine and allow to idle (1,200 rpm).

Check the ignition timing.

Timing is correct if the index mark aligns with the "F" mark at idle.

If the ignition timing is incorrect, check the CDI unit, pulse rotor and pulse generator, and replace faulty parts. Refer to Section 16, Ignition System.



CAM CHAIN TENSIONER

Start the engine and allow it to idle.

Loosen the cam chain tensioner bolt and nut 1-1/2 to 2 turns.

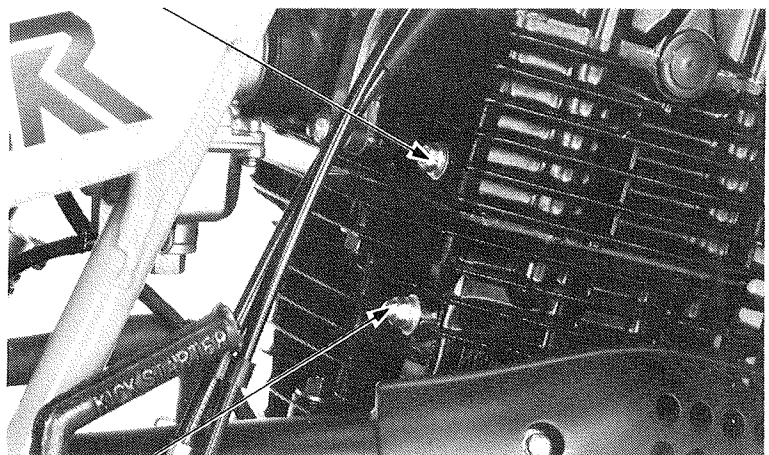
When the bolt and nut are loosened, the tensioner will automatically position itself to provide the correct tension.

CAUTION:

If the tensioner bolt or nut are loosened excessively, the tensioner assembly will not be properly retained and may become disconnected and damaged while the engine is operating.

Tighten the cam chain tensioner bolt and nut.

TENSIONER BOLT



TENSIONER NUT



BALANCER CHAIN TENSION

NOTE

Perform this adjustment while the right crankcase cover is off.

Loosen the balancer holder lock bolt. When the lock bolt is loosened, the spring will pull the balancer holder to the right. Move the holder to the left one graduation from where it stops.

NOTE

Remove the lock bolt if it keeps the holder from moving. Move the holder clockwise to align the next graduation with the crankcase index mark.

Tighten the lock bolt.

TORQUE: 22–28 N·m (2.2–2.8 kg·m, 16–20 ft·lb)

CAUTION:

If the balancer holder travel is limited by the bolt contacting the end of the slot, the balancer holder must be reset to provide required chain tension. See below.

Remove the balancer holder spring.
Remove the balancer weight circlip and weight.
Remove the washer and the holder flange circlip.
Remove the lock bolt and move the balancer holder counterclockwise one notch.

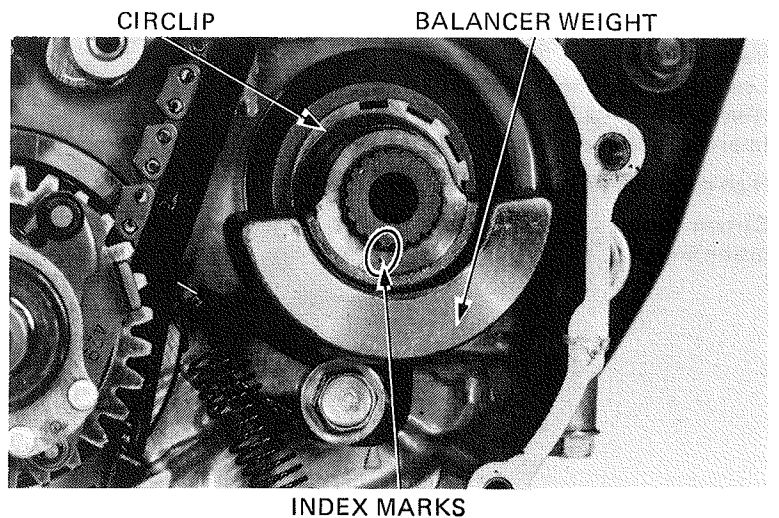
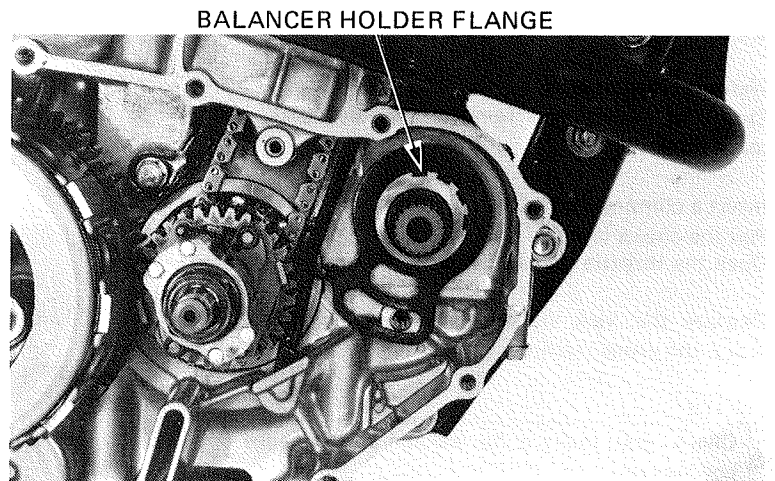
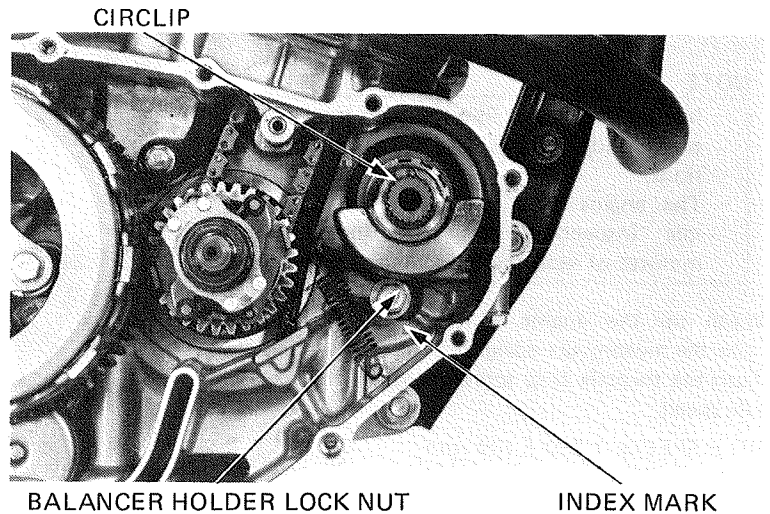
Install the removed parts in the reverse order of disassembly.

NOTE

Install the balancer weight on the shaft aligning the index marks.

Move the balancer holder clockwise to align the next graduation with the crankcase index mark. Tighten the lock bolt.

TORQUE: 22–28 N·m (2.2–2.8 kg·m, 16–20 ft·lb)





MAINTENANCE

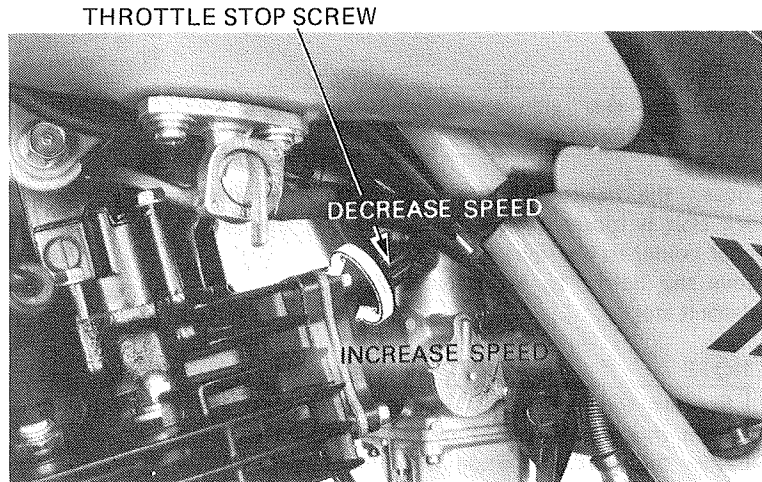
CARBURETOR IDLE SPEED

NOTE

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

Warm up the engine, shift to NEUTRAL, and hold the motorcycle upright. Connect a tachometer. Turn the throttle stop screw to obtain the specified idle speed.

IDLE SPEED: 1,200 ± 100 rpm



CYLINDER COMPRESSION

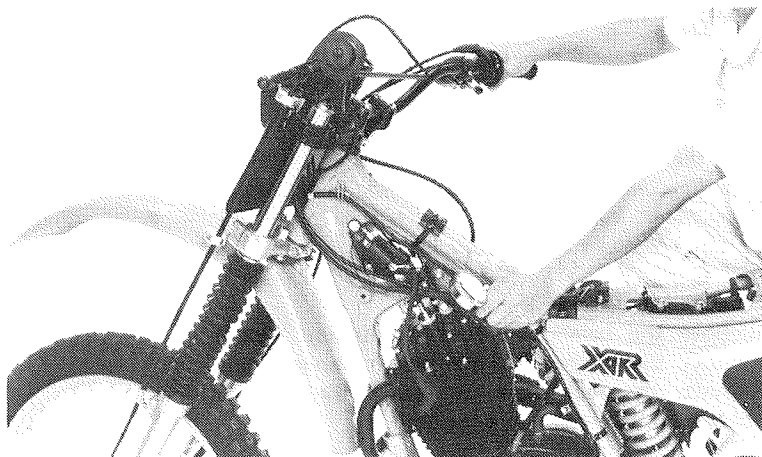
Warm up the engine.
Stop the engine and remove the fuel tank and spark plug.

Insert a compression gauge.
Pull the choke lever down.
Open the throttle grip all the way.

Operate the kick starter pedal several times and check the gauge reading.

NOTE

Check that there is no leakage at the gauge connection.



COMPRESSION: 12.5 kg/cm² (175 psi)

Low compression can be caused by:

- Improper valve adjustment
- Valve leakage
- Leaking cylinder head gasket
- Worn piston rings or cylinder
- Improper decompressor adjustment

High compression can be caused by:

Carbon deposits in combustion chamber or on the piston crown.



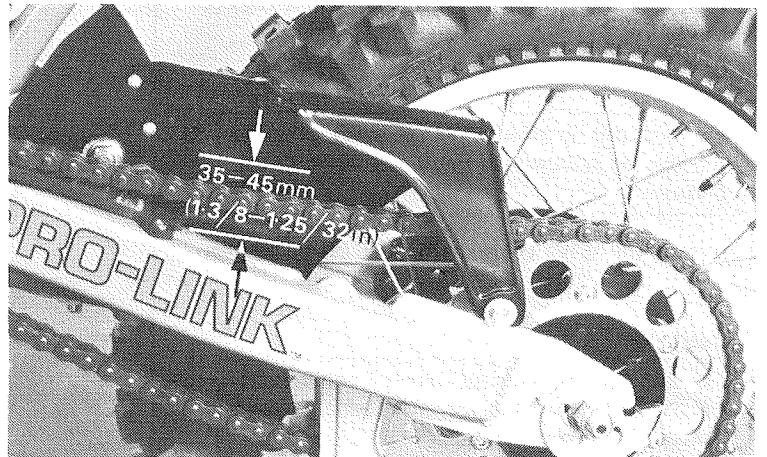
DRIVE CHAIN

REMOVAL

Turn the engine off. Raise the rear wheel off the ground by placing a support block under the engine. Shift the transmission into neutral. Inspect the chain guide rollers and chain slider for wear.

Measure the slack in the higher drive chain run midway between the sprockets.

STANDARD SLACK: 35–45 mm
(1-3/8–1-25/32 in)



Adjust as follows:

Loosen the rear axle nut.

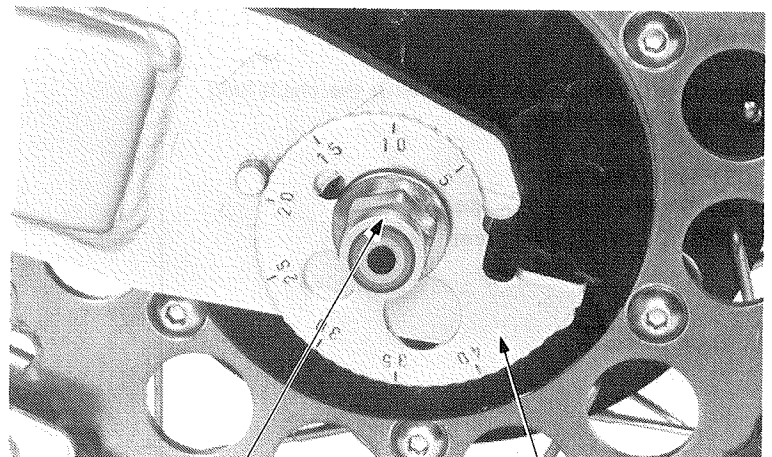
Adjust the chain slack by turning both adjusters equally.

CAUTION:

Be sure the same adjuster index marks align with the stopper pins on both sides of the swingarm.

Tighten the axle nut.

TORQUE: 80–110 N·m (8–11 kg·m, 58–80 ft·lb)



AXLE NUT

ADJUSTER

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

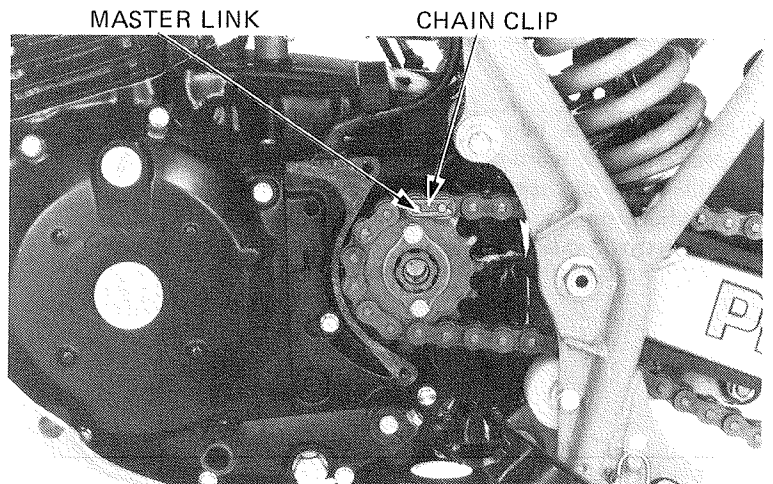
Remove the drive sprocket cover.

Remove the chain retaining clip carefully.

Remove the master link and remove the drive chain.

NOTE

Be careful not to lose the O-rings when the clip and master link are removed.





MAINTENANCE

Clean the drive chain with a non-flammable or high flash point solvent that will not damage the O-rings and wipedry.

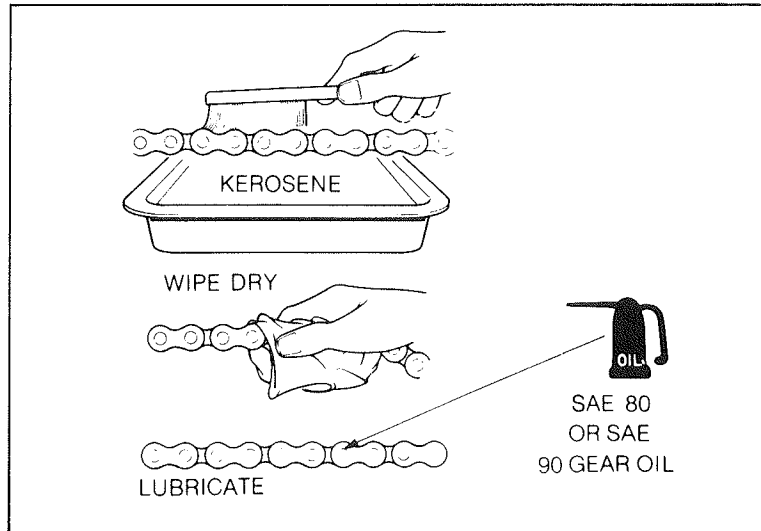
CAUTION:

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

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

CAUTION:

Do not use commercial aerosol chain lubricants. They contain solvents which could damage the O-rings.



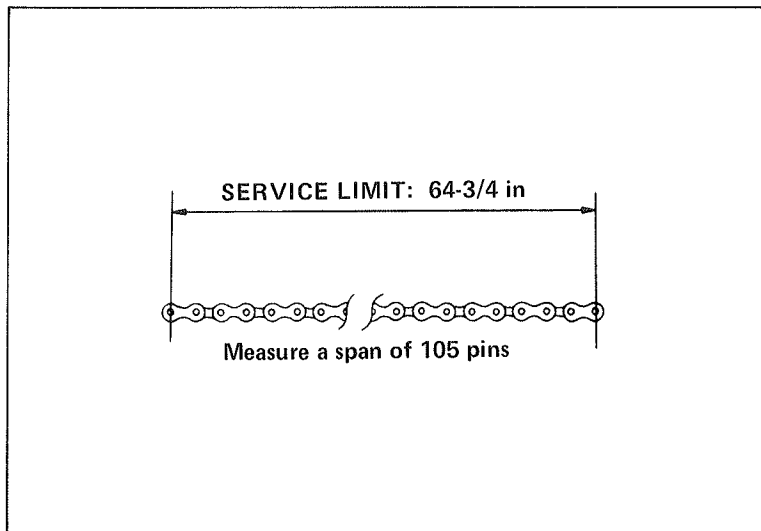
Inspect the drive chain and O-rings for possible wear or damage. Replace the chain, if it is worn excessively or damaged.

Measure the drive chain length with the chain held so that all links are straight.

105 PINS LENGTH:

STANDARD: 1,635 mm (64-1/8 in)

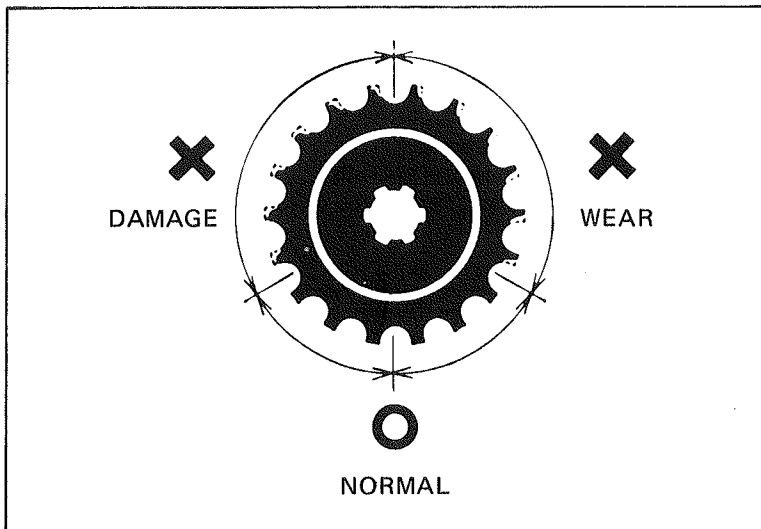
SERVICE LIMIT: 1,651 mm (64-3/4 in)



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.



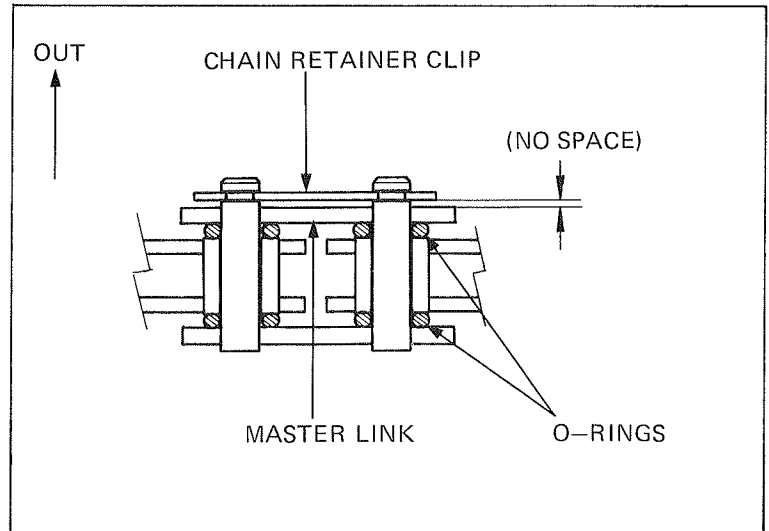


INSTALLATION

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

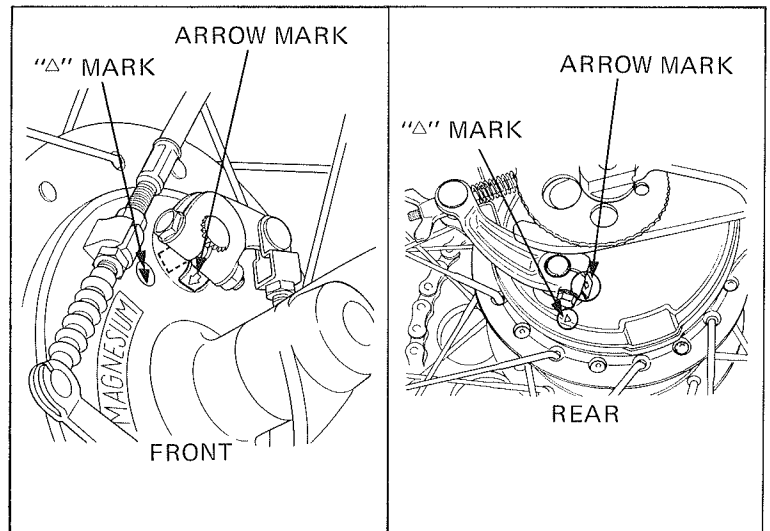
CAUTION:

*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.*



BRAKE SHOE WEAR

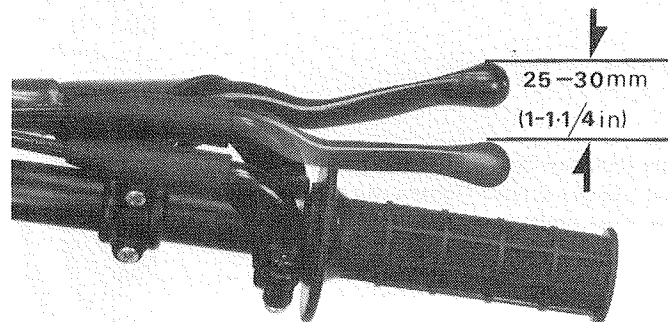
Replace the brake shoes if the arrow on the indicator plate aligns with the "△" mark on the brake panel when the brake is applied.



FRONT BRAKE

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

FREE PLAY: 25-30 mm (1-1/4 in)

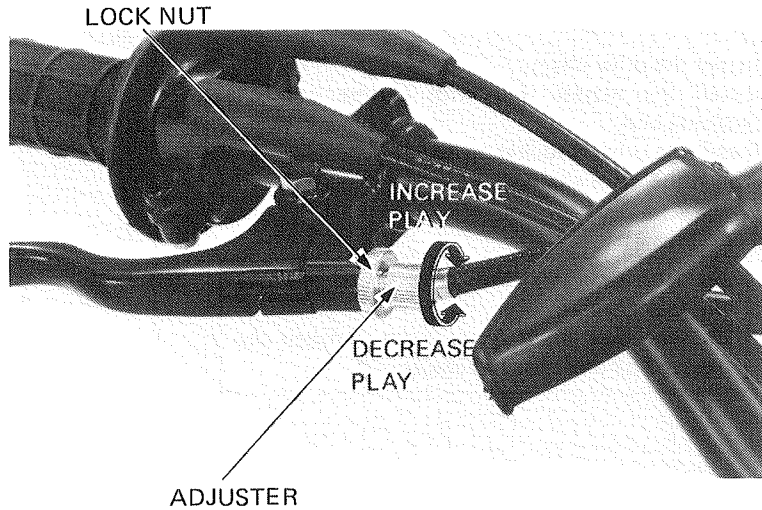




MAINTENANCE

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

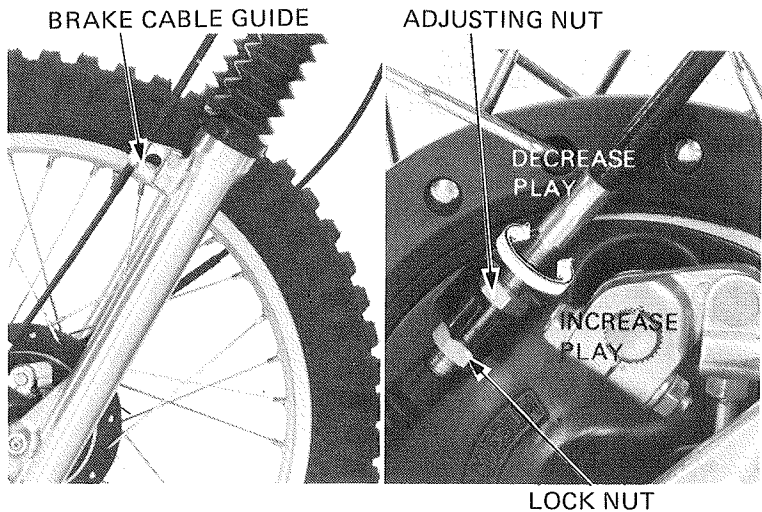
Pull the cover off.
Loosen the lock nut and turn the adjuster to obtain the specified free play.
Tighten the lock nut and install the cover.



Perform major adjustments with the lower adjuster.

Loosen the bolts attaching the front brake cable guide.
Loosen the lock nut and turn the adjuster to obtain the specified free play.

Tighten the lock nut.
Retighten the brake cable guide bolts.

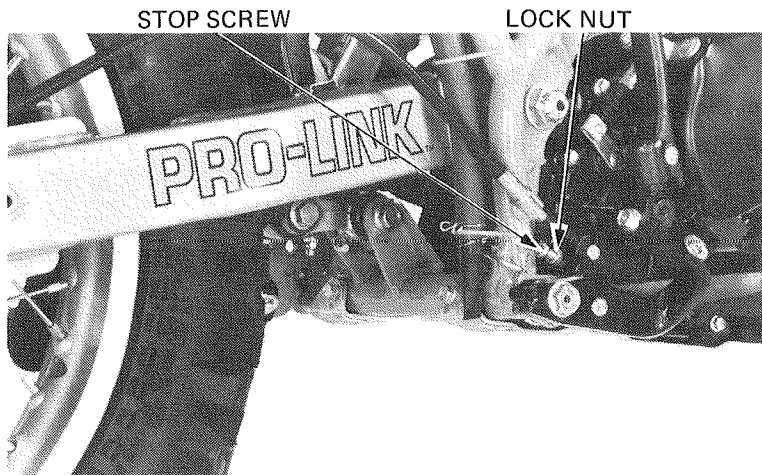


REAR BRAKE

Measure the rear brake pedal height from the footpeg.

BRAKE PEDAL HEIGHT

To adjust:
Loosen the lock nut and adjust the pedal height by turning the stopper screw. Tighten the lock nut.
Adjust the brake pedal free play.





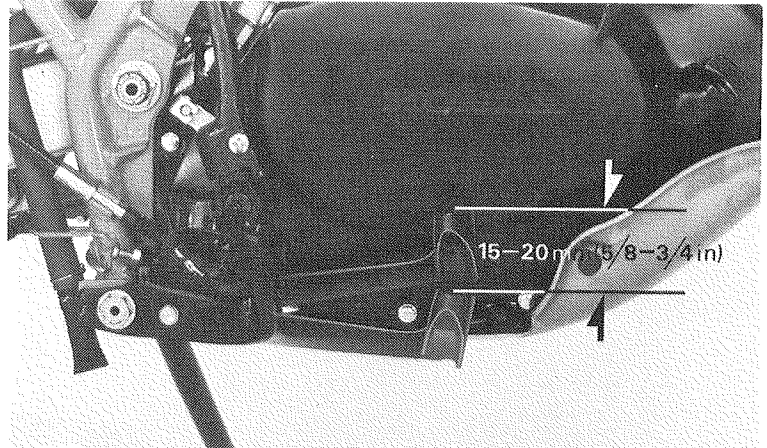
BRAKE PEDAL FREE PLAY

NOTE

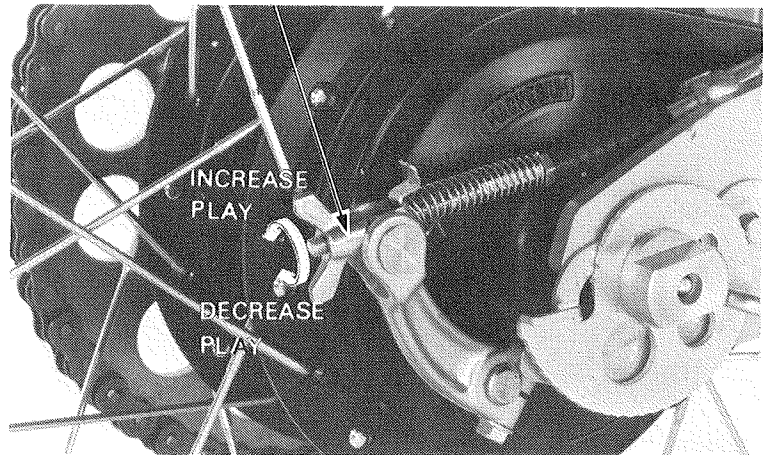
Adjust the brake pedal free play after adjusting the brake pedal height.

Measure the free play and adjust as required by turning the adjuster.

FREE PLAY: 15–20 mm (5/8 – 3/4 in)



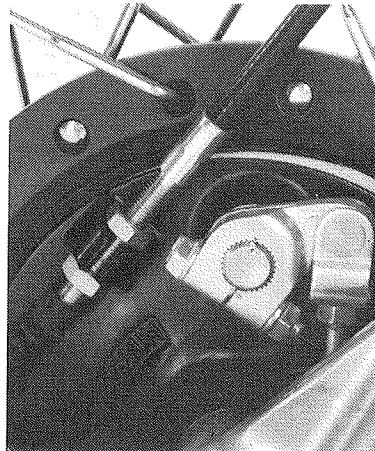
ADJUSTER



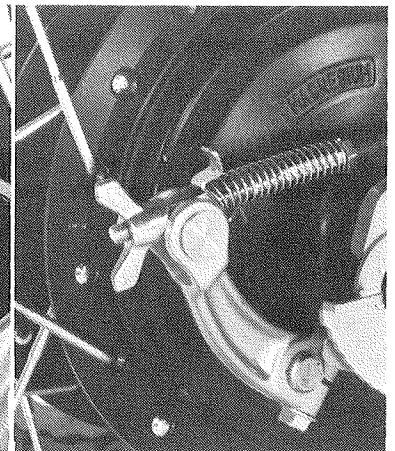
BRAKE LINKAGE

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

FRONT BRAKE



REAR BRAKE

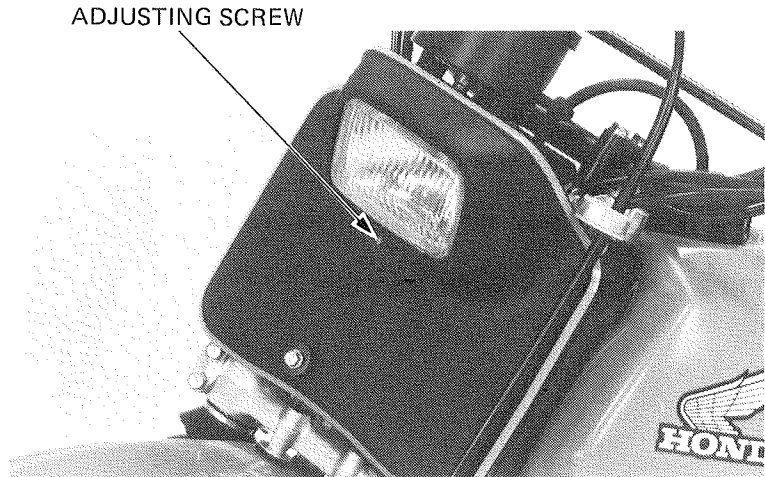




MAINTENANCE

HEADLIGHT AIM

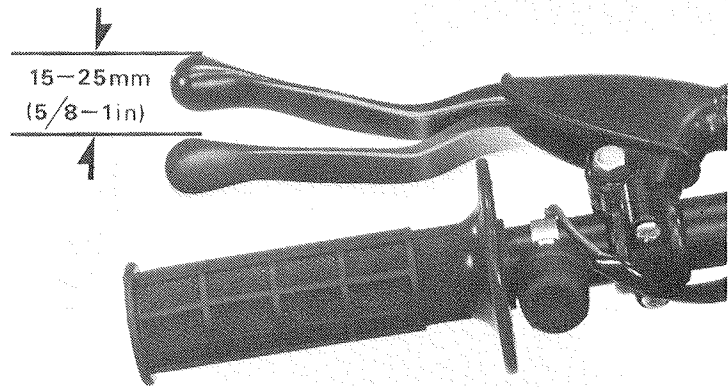
Adjust the vertical beam by turning the adjusting screw on the headlight cover.



CLUTCH

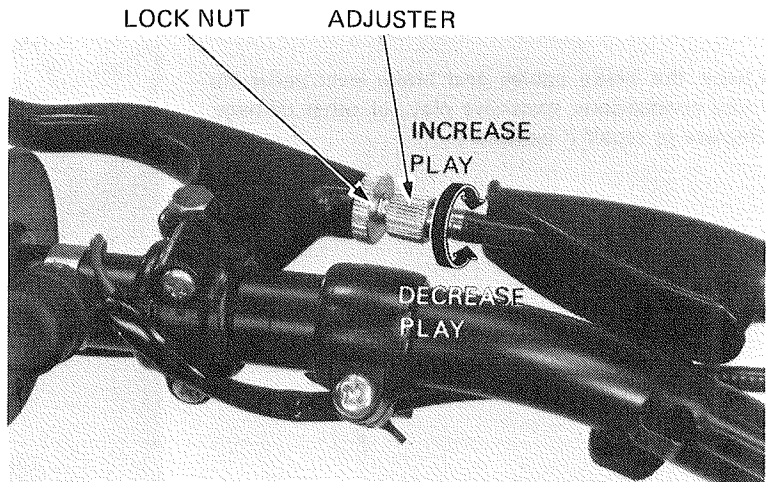
Measure the clutch free play at the lever end.

FREE PLAY: 15 – 25 mm (5/8 – 1 in)



Adjust as follows:
Minor adjustments are made with the upper adjuster.

Pull the cover back.
Loosen the lock nut and turn the adjuster.
Tighten the lock nut and install the cover.



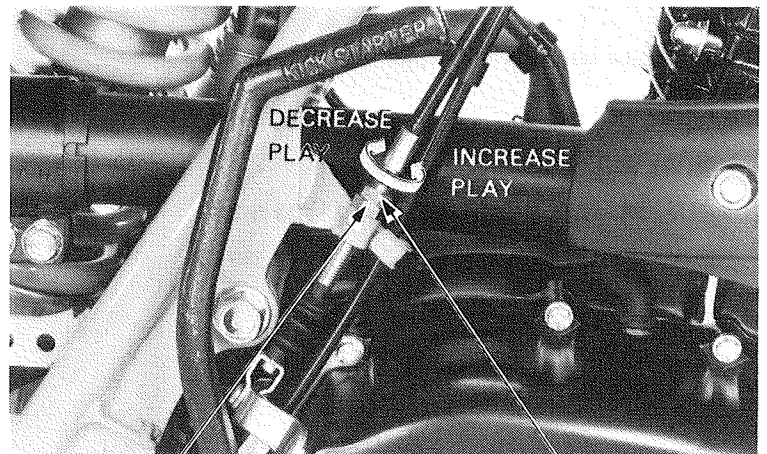


Major adjustments are made with the lower adjuster. Turn the upper adjuster all the way in and back out 1 turn.

Loosen the lower lock nut adjuster and turn the adjuster.

Tighten the lock nuts.

Check clutch operation.



ADJUSTER

LOCK NUT

SUSPENSION

FRONT

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

Check the entire fork assembly for signs of leaks, or damage.

Replace any components which are unrepairable.

Torque all nuts and bolts.

WARNING

Do not ride a vehicle with faulty suspension. Loose, worn, or damaged suspension parts may affect stability and rider control.



REAR

Place the vehicle on a support to raise the rear wheel.

Move the rear wheel sideways with force to see if the swing arm bearings are worn.

Replace if excessively worn.

Check the entire suspension assembly, being sure it is securely mounted and not damaged or distorted.

Torque all nuts and bolts.

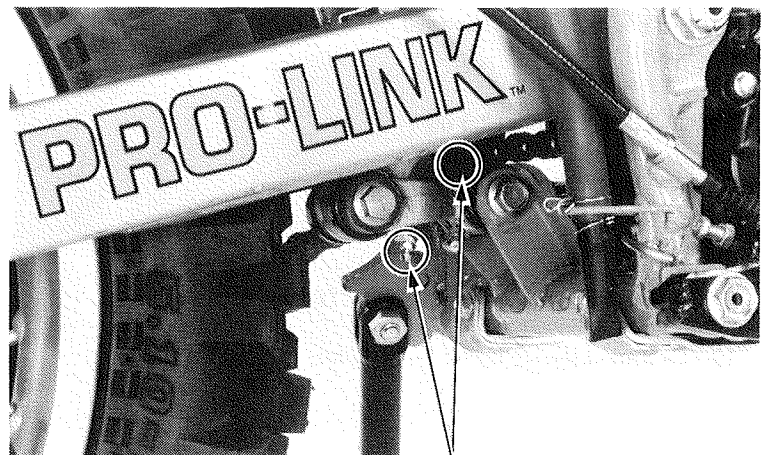
Apply grease to the swingarm pivot bearings through the grease fitting on the swingarm.

Apply molybdenum disulfide (MoS₂) paste to the linkage bushings through the grease fittings on the linkage pivots.

NOTE

Use MoS₂ paste (containing more than 45% of MoS₂) as follows:

- MOLYKOTE® G-n PASTE manufactured by Dow Corning U.S.A.
- ROCOL PASTE manufactured by Sumico Lubricant Co., LTD., Japan.
- Other lubricants of equivalent quality.



GREASE FITTINGS



MAINTENANCE

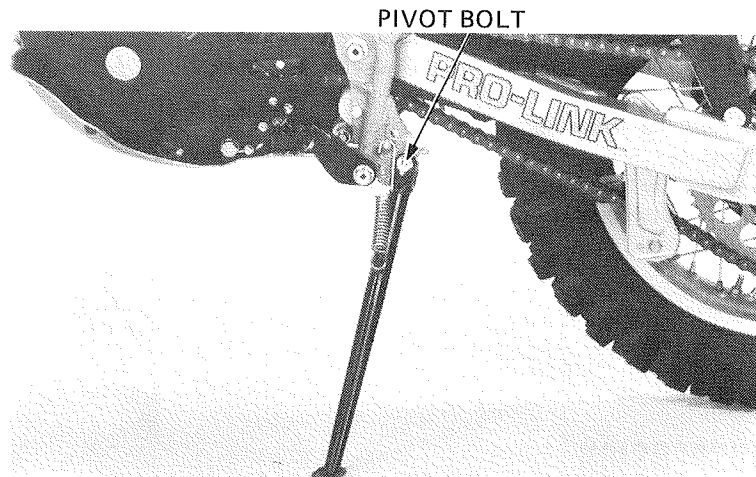
SIDE STAND

Check the side stand spring for damage and loss of tension.

Check that the side stand assembly is not bent and moves freely.

Tighten the pivot bolt if necessary.

TORQUE: 35–45 N·m (3.5–4.5 kg·m, 25–33 ft·lb)



WHEEL/SPOKES

TIRE PRESSURE

NOTE

The pressure should be checked when the tires are **COLD**.

Tire pressure:

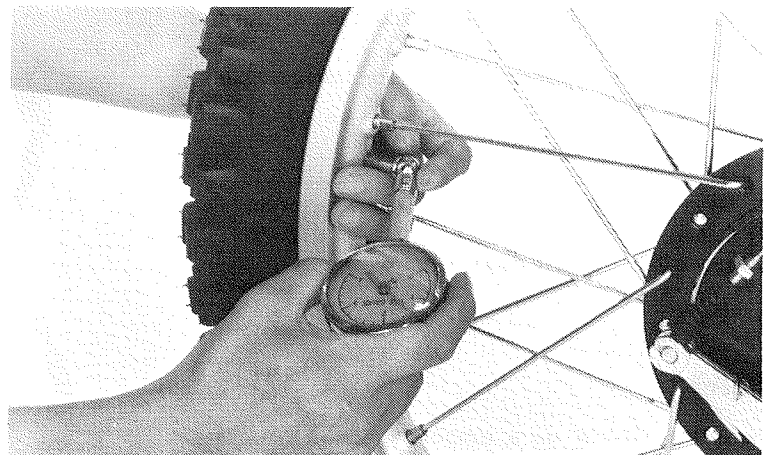
Front: 100 kPa (1.0 kg/cm², 14 psi)

Rear: 80 kPa (0.8 kg/cm², 11 psi)

Tire size:

Front: 3.00-21-6PR

Rear: 5.10-17-6PR



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

Check the tread depth.

SERVICE LIMIT: 8 mm (0.3 in)

Tighten the wheel spokes and rim lock.

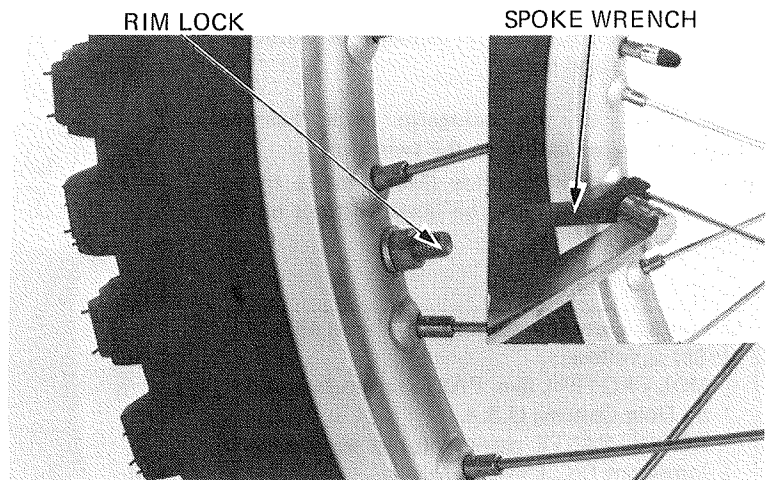
TORQUE VALUES:

SPOKE NIPPLE:

2–4.5 N·m (0.2–0.45 kg·m, 1.4–3.2 ft·lb)

RIM LOCK:

10–15 N·m (1.0–1.5 kg·m, 7–11 ft·lb)





STEERING HEAD BEARING

NOTE

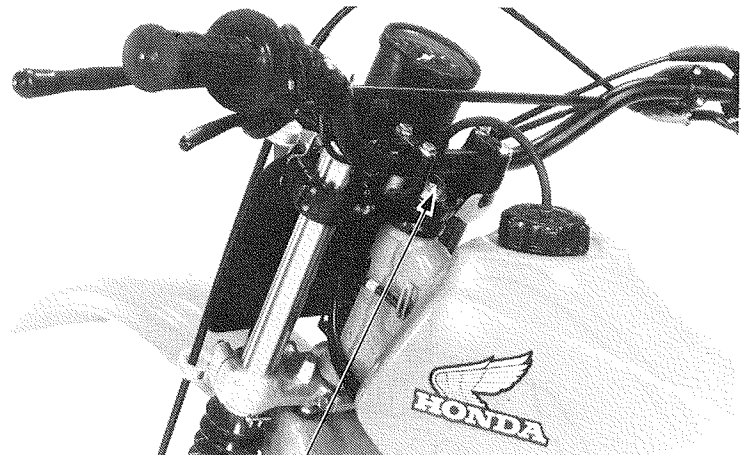
Make sure the control cables do not interfere with the rotation of the handlebar.

Raise the front wheel off the ground.
Check that the handlebar rotates freely.
If the handlebar moves unevenly, binds or has vertical movement, adjust the steering head bearing by turning the steering head adjusting nut to the specified torque.

TORQUE: 5.5–6.5 N·m
(0.55–0.65 kg·m, 4–5 ft·lb)

Tighten the steering stem nut.

TORQUE: 80–120 N·m
(8–12 kg·m, 57–87 ft·lb)



STEERING HEAD ADJUSTING NUT

SPARK ARRESTOR CLEANING

Remove the front and rear muffler lids.
Start the engine and increase rpms to blow carbon out of the exhaust pipe while momentarily creating exhaust system back pressure by blocking the end of the muffler with a shop towel. Repeat until carbon stops coming out.

WARNING

*Do not perform this operation while the exhaust system is hot.
Perform this operation in a well-ventilated area, free from fire hazard.
Use adequate eye protection.*

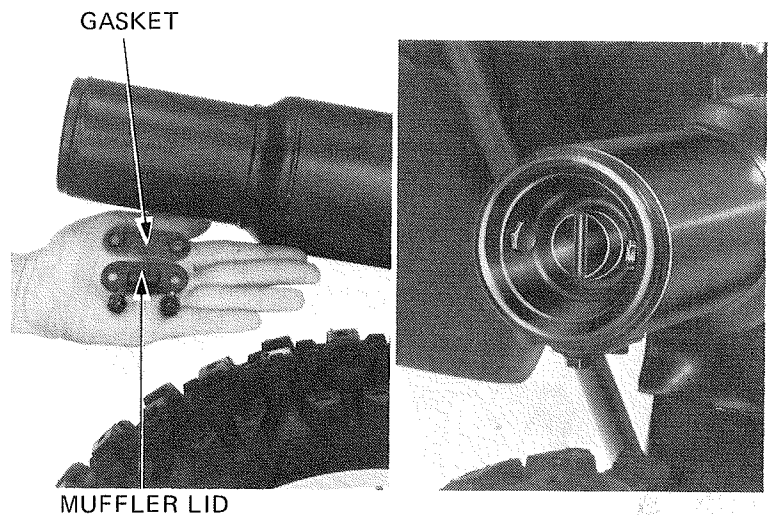
After cleaning the spark arrester, install the muffler lids and gaskets and tighten the bolts.

NOTE

Be sure that the muffler lid and gasket are in good condition and the bolts are tightened securely.

CAUTION:

Be sure that the spark arrester screws are securely in place.

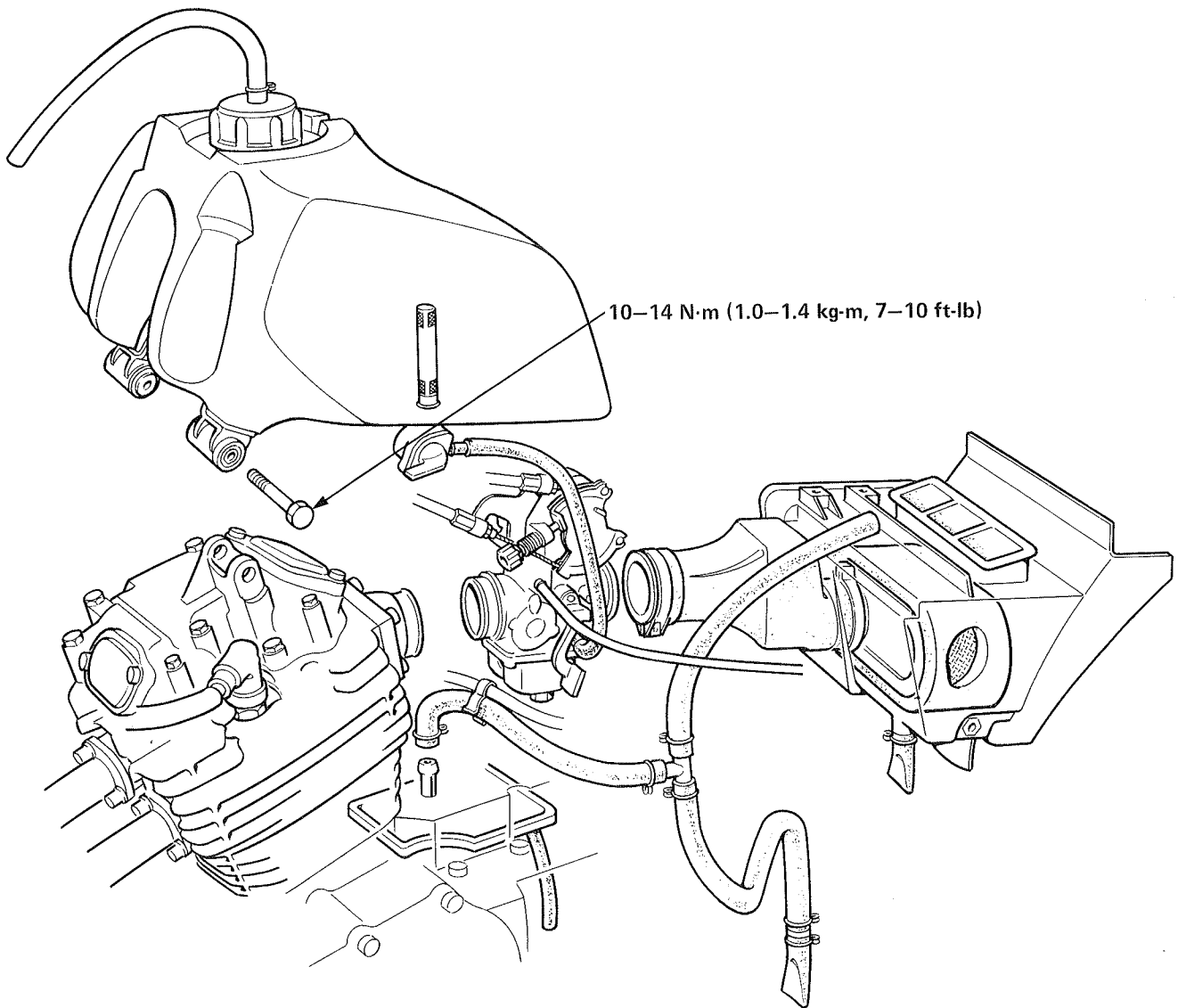


NUTS, BOLTS, FASTENERS

Tighten bolts, nuts and fasteners at regular intervals as shown in the Regular Maintenance Schedule (Page 3-3).

Check that all chassis nuts and bolts are tightened to their correct torque values (Page 1-4 and 1-5).
Check that all cotter pins and safety clips are in place.







SERVICE INFORMATION	4-1
TROUBLESHOOTING	4-2
FUEL TANK	4-3
AIR CLEANER CASE REMOVAL	4-4
CRANKCASE BREATHER	4-4
CARBURETOR REMOVAL	4-5
CARBURETOR DISASSEMBLY	4-5
CARBURETOR ASSEMBLY	4-8
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CARBURETOR INSTALLATION	4-8
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TEMPERATURE AND ALTITUDE	4-9

SERVICE INFORMATION

GENERAL INSTRUCTIONS

- When disassembling fuel system parts, note the locations of the O-rings. Replace them with new ones on reassembly.
- The carburetor float bowl has a drain plug that can be loosened to drain residual gasoline.

SPECIFICATIONS

Fuel tank capacity	9 lit (2.4 US gal, 1.9 Imp gal)
Reserve capacity	3 lit (0.8 US gal, 0.6 Imp gal)
Carburetor	
Type	Piston valve
Identification number	PD11B
Jet needle setting	3rd groove
Float level	14.5 mm (0.57 in)
Pilot screw opening	2-1/4 turns out
Main jet	152
Slow jet	# 55
Idle speed	1,200 ± 100 rpm
Air cut-off valve operating press.	390 mmHg (15.3 inHg)
Throttle grip free play	2-6 mm (1/8-1/4 in)

TOOL

Float level gauge	07401-0010000
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TORQUE VALUE

Fuel tank mounting bolt	10-14 N·m (1.0-1.4 kg-m, 7-10 ft-lb)
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TROUBLESHOOTING

Engine Cranks But Won't Start

1. No fuel in tank
2. No fuel to cylinder
3. Too much fuel getting to cylinder
4. No spark at plug (ignition malfunction)
5. Air cleaner clogged

Engine Idles Roughly, Stalls, or Runs Poorly

1. Idle speed incorrect
2. Ignition malfunction
3. Low compression (Section 6)
4. Rich mixture
5. Lean mixture
6. Air cleaner clogged
7. Air leaking into manifold
8. Fuel contaminated

Lean Mixture

1. Carburetor fuel jets clogged
2. Fuel cap vent blocked
3. Fuel filter clogged
4. Fuel line kinked or restricted
5. Float valve faulty
6. Float level too low

Rich Mixture

1. Choke stuck closed
2. Float valve faulty
3. Float level too high
4. Carburetor air jets clogged
5. Sticking float
6. Dirty air cleaner



FUEL TANK

FUEL TANK REMOVAL

Remove the seat.
 Turn the fuel valve OFF and disconnect the fuel tube.
 Remove the mounting bolts and tank.

WARNING

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

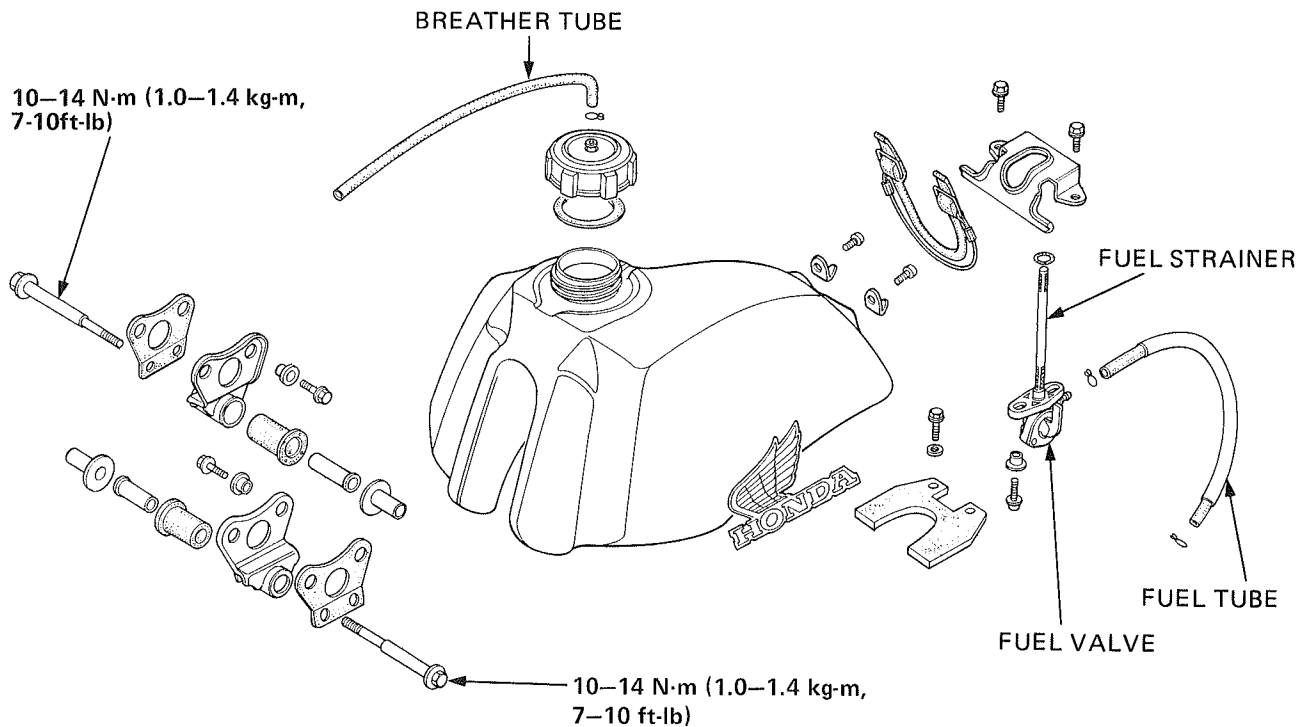
Check that fuel flows out of the fuel valve freely.
 If flow is restricted, clean the fuel strainer.

FUEL TANK INSTALLATION

Install the fuel tank with the two mounting bolts.
 Connect the fuel tube.
 Install the seat.

NOTE

- After assembling, make sure there are no fuel leaks.
- Do not overtighten the fuel valve bolts.

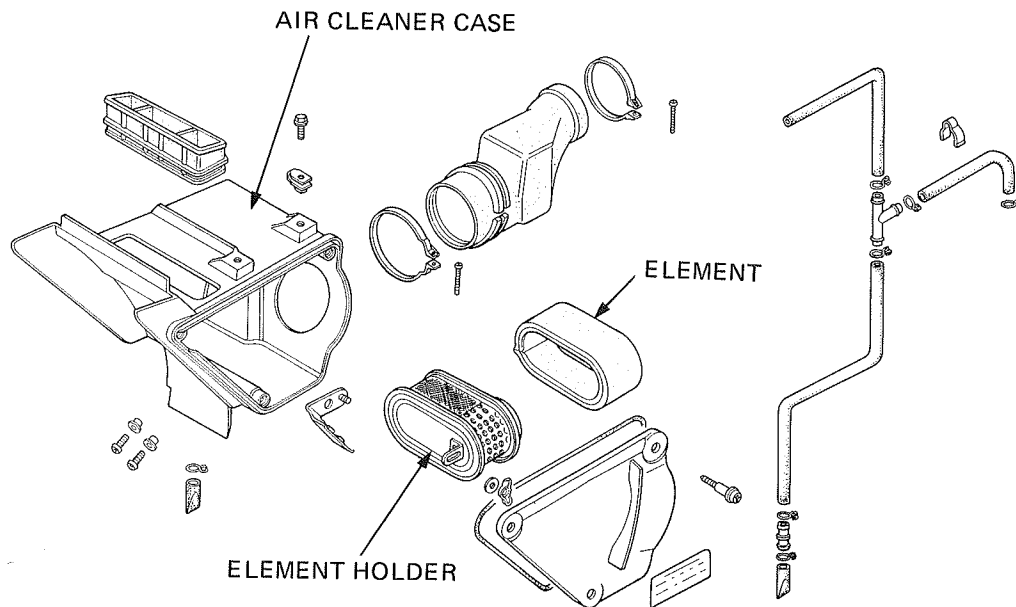




FUEL SYSTEM

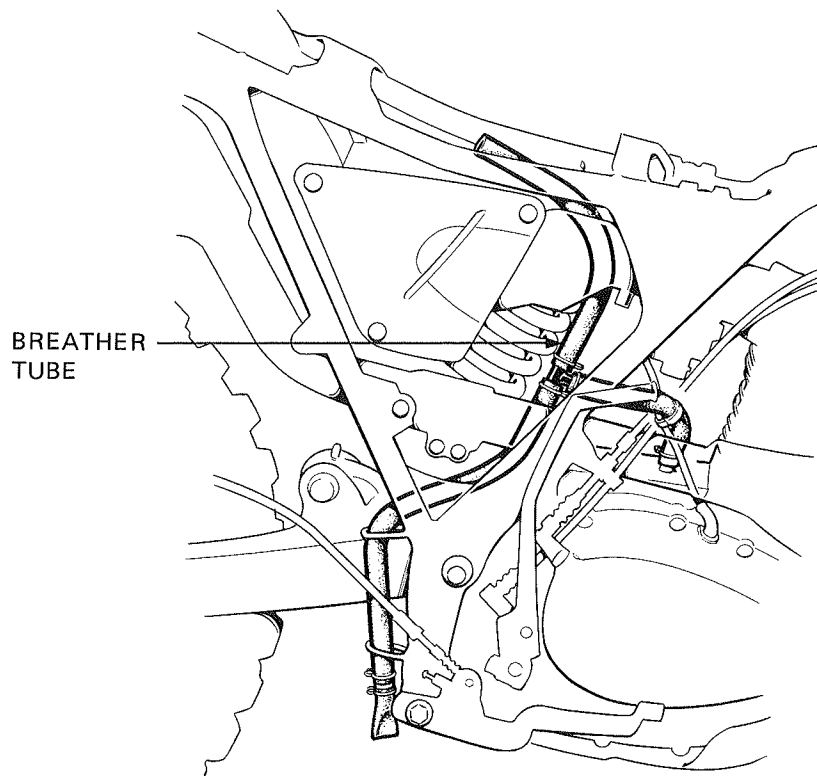
AIR CLEANER CASE REMOVAL

- Remove the left and right side covers.
- Remove the seat.
- Remove the muffler and exhaust pipe.
- Remove the air cleaner case.



CRANKCASE BREATHER

Route the crankcase breather tube as shown.





CARBURETOR REMOVAL

Remove the seat and fuel tank.
Remove the left and right side covers.

Disconnect the throttle cables.
Loosen the drain screw and drain the fuel.

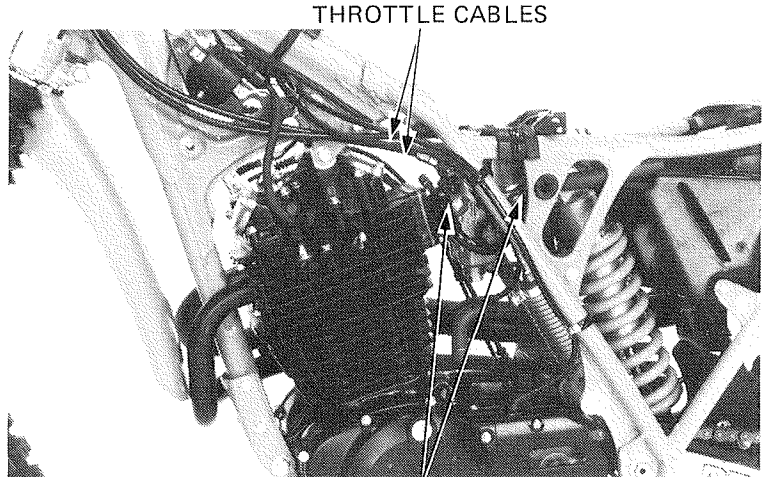
WARNING

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

Loosen the screws securing the carburetor bands.
Remove the carburetor.

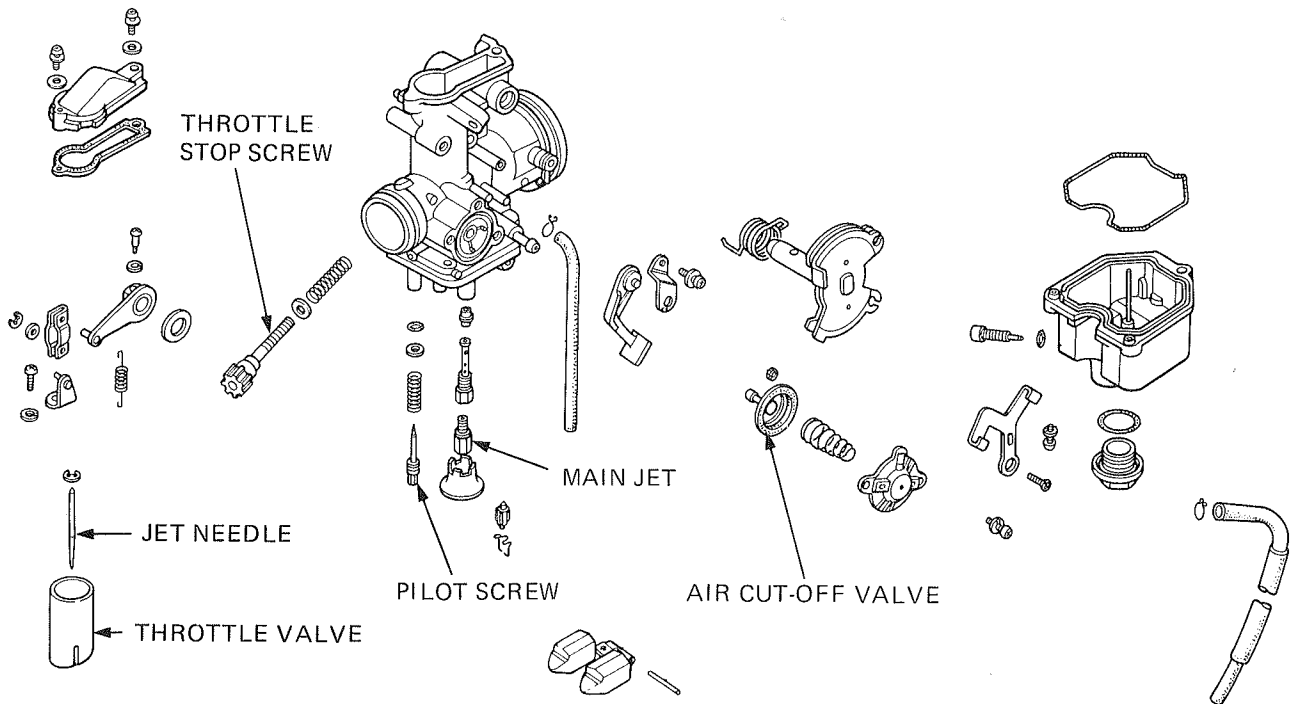
NOTE

Do not pry between the insulator and engine.
Carefully pull it back, away from the engine.



CARBURETOR BANDS

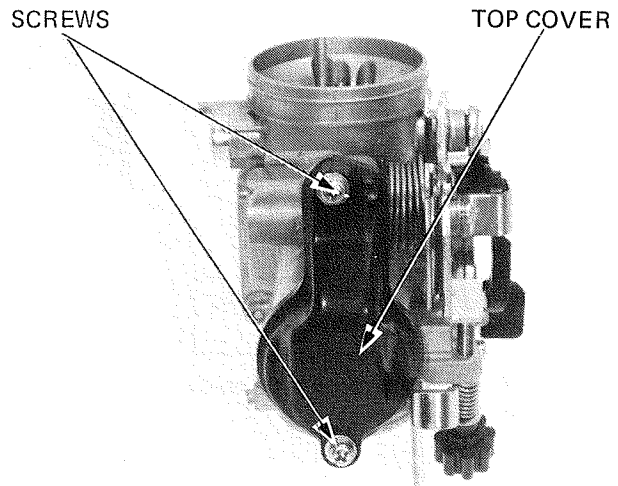
CARBURETOR DISASSEMBLY



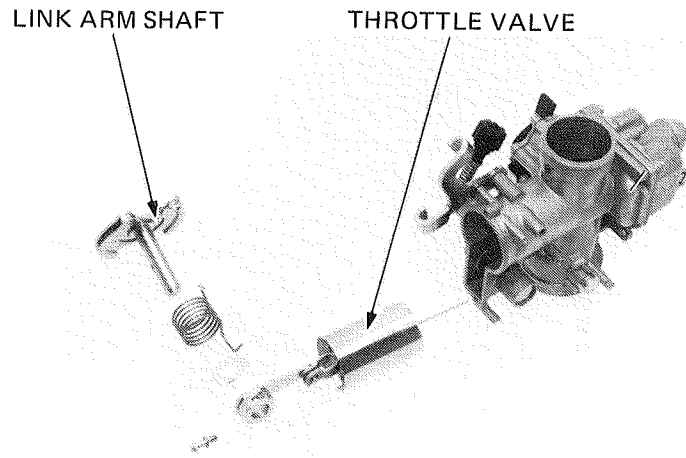


FUEL SYSTEM

Remove the carburetor top cover.

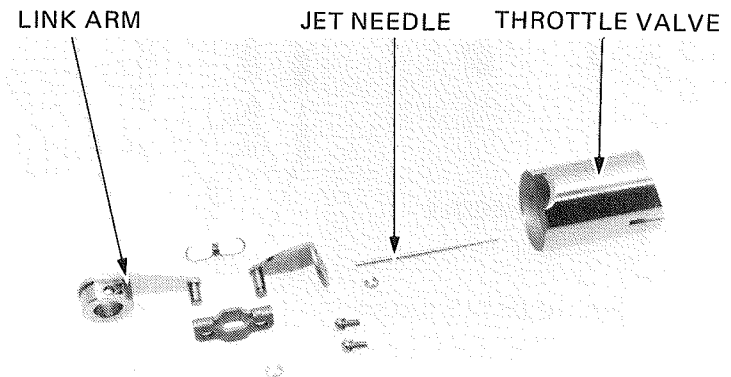


Remove the screw, and remove the link arm shaft, nut, spring and throttle valve.



THROTTLE VALVE DISASSEMBLY

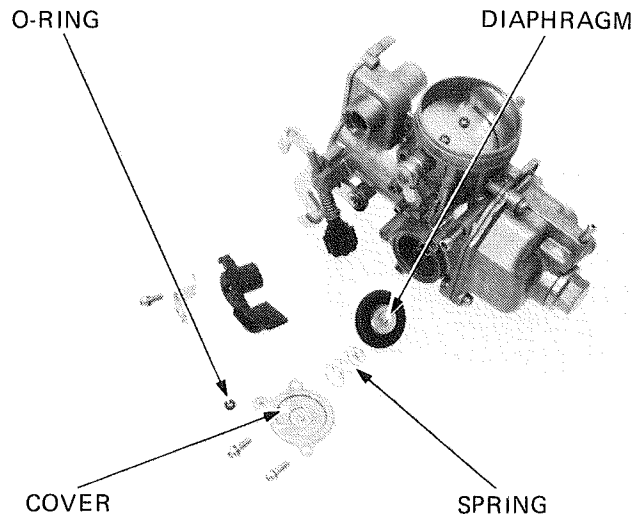
Remove the link arm.
Remove the jet needle and spring.
Check the throttle valve for wear or damage.





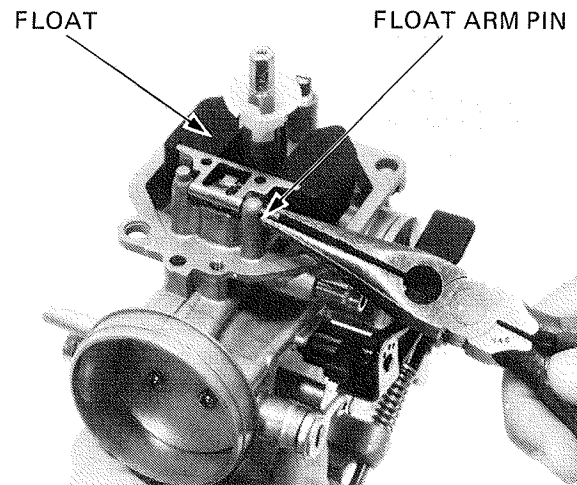
AIR CUT-OFF VALVE DISASSEMBLY

Remove the air cut-off valve cover and pull out the spring.
Remove the diaphragm and O-ring.
Check the diaphragm for tears or pin holes.



FLOAT, FLOAT VALVE, AND JETS

Remove the float chamber body.
Pull out the float pin and remove the float.



Remove the float valve, main jet and needle jet holder.
Remove the needle jet.

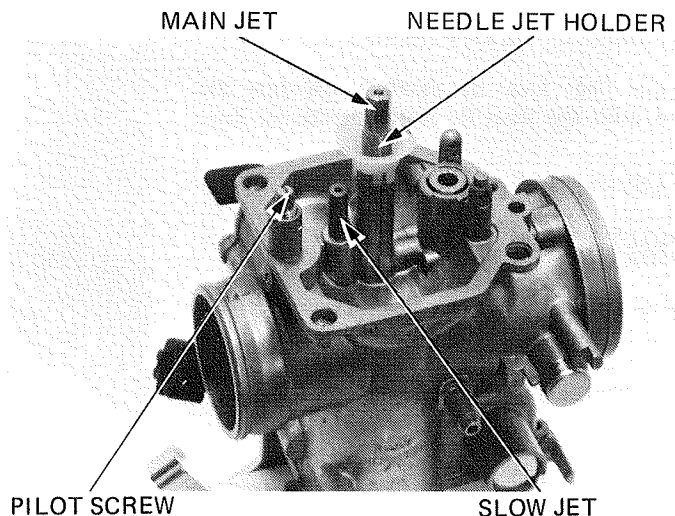
NOTE

The slow jet cannot be removed since it is a press fit.

Remove the pilot screw.

NOTE

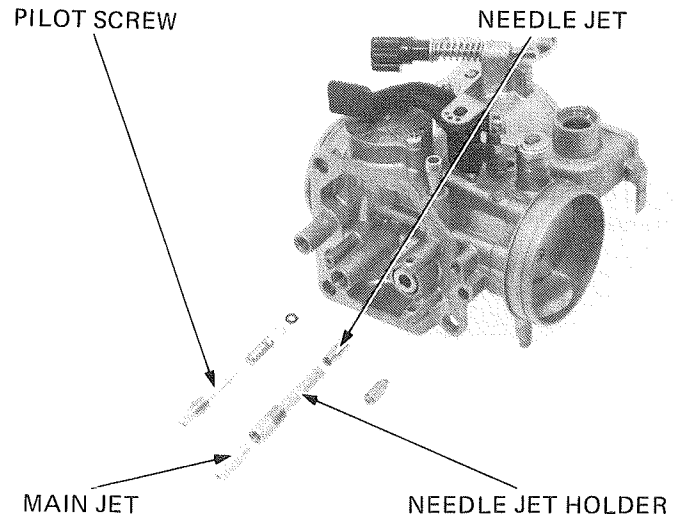
Before removing the pilot screw, record the number of rotations until it seats lightly, so it can be returned to its original position.





FUEL SYSTEM

Check each part for wear or damage.
Blow open all jets and passages with compressed air.



CARBURETOR ASSEMBLY

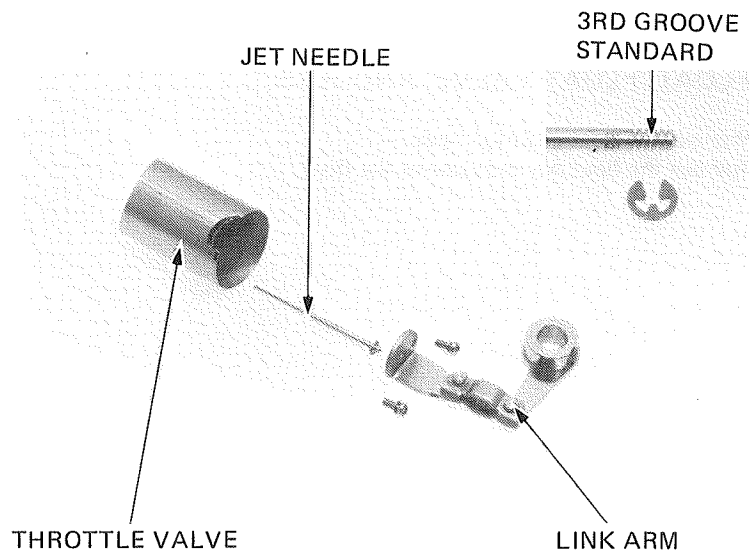
NOTE

- Use new O-rings whenever the carburetor is reassembled.
- Handle all jets and needles with care. They can easily be scored or scratched.
- Be sure to install the top cover screw washers during assembly.

Assemble the carburetor in the reverse order of disassembly. Turn the pilot screw to the position recorded during disassembly.

Install the jet needle clip on the jet needle.

STANDARD: 3rd groove



FLOAT LEVEL ADJUSTMENT

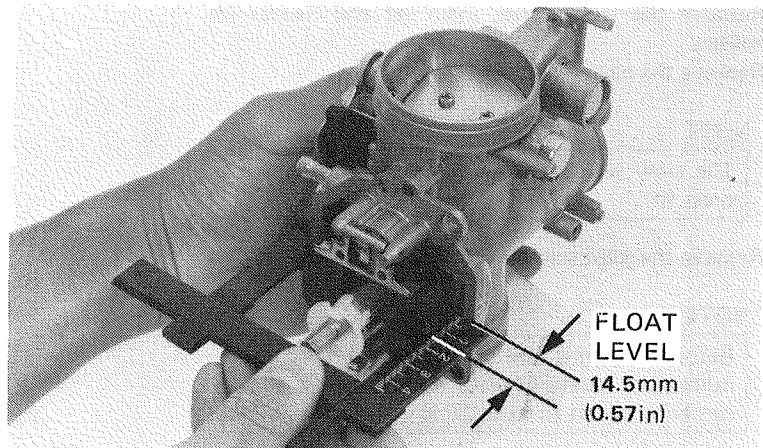
Adjust the float level by carefully bending the float arm until the float tip just contacts the float valve.

FLOAT LEVEL: 14.5 mm (0.57 in)

CARBURETOR INSTALLATION

Install the carburetor in the reverse order of removal.

Adjust the throttle grip free play (Page 3–5).





PILOT SCREW ADJUSTMENT

Turn the pilot screw clockwise until it seats lightly and then back it out 2-1/4 turns.

CAUTION:

Damage to the pilot screw seat will occur if the pilot screw is tightened against the seat.

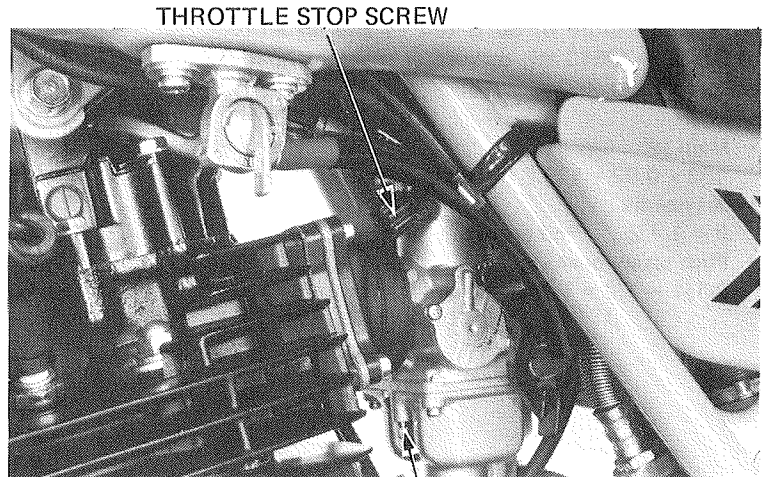
Warm the engine up to operating temperature. Stop the engine and connect a tachometer.

Start the engine and adjust the idle speed to 1200 ± 100 rpm with the throttle stop screw.

Check that the engine speed increases smoothly by operating the throttle grip.

Turn the pilot screw until the highest idle speed is obtained.

Reset the idle speed to 1200 ± 100 rpm with the throttle stop screw.



THROTTLE STOP SCREW

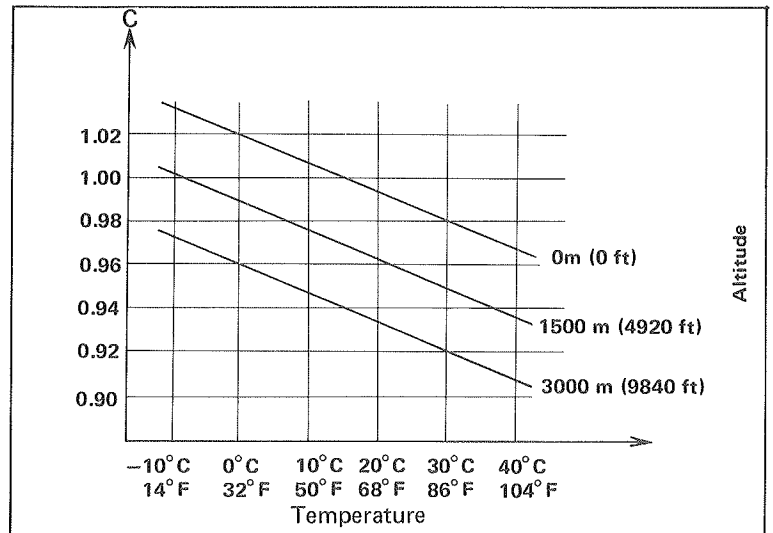
PILOT SCREW

TEMPERATURE AND ALTITUDE

Use the chart at right to determine if carburetor adjustments are necessary because of changes in temperature and altitude. Decide where the approximate elevation and temperature factors intersect to get C, the correction factor.

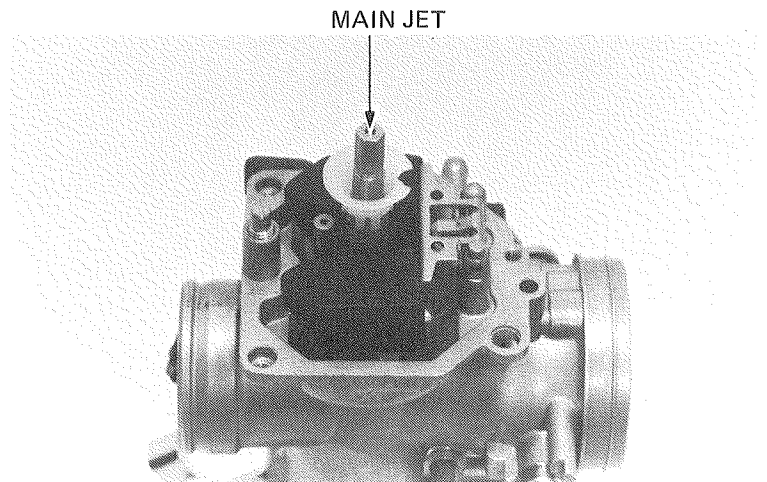
To determine jet needle and pilot screw adjustments:

If C is 0.95 or below, lower jet needle one groove and screw the pilot screw in 1/2 turn. Adjustments are not needed if C is over 0.95.



The determine main jet size:

Multiply the standard main jet size times C.



MAIN JET