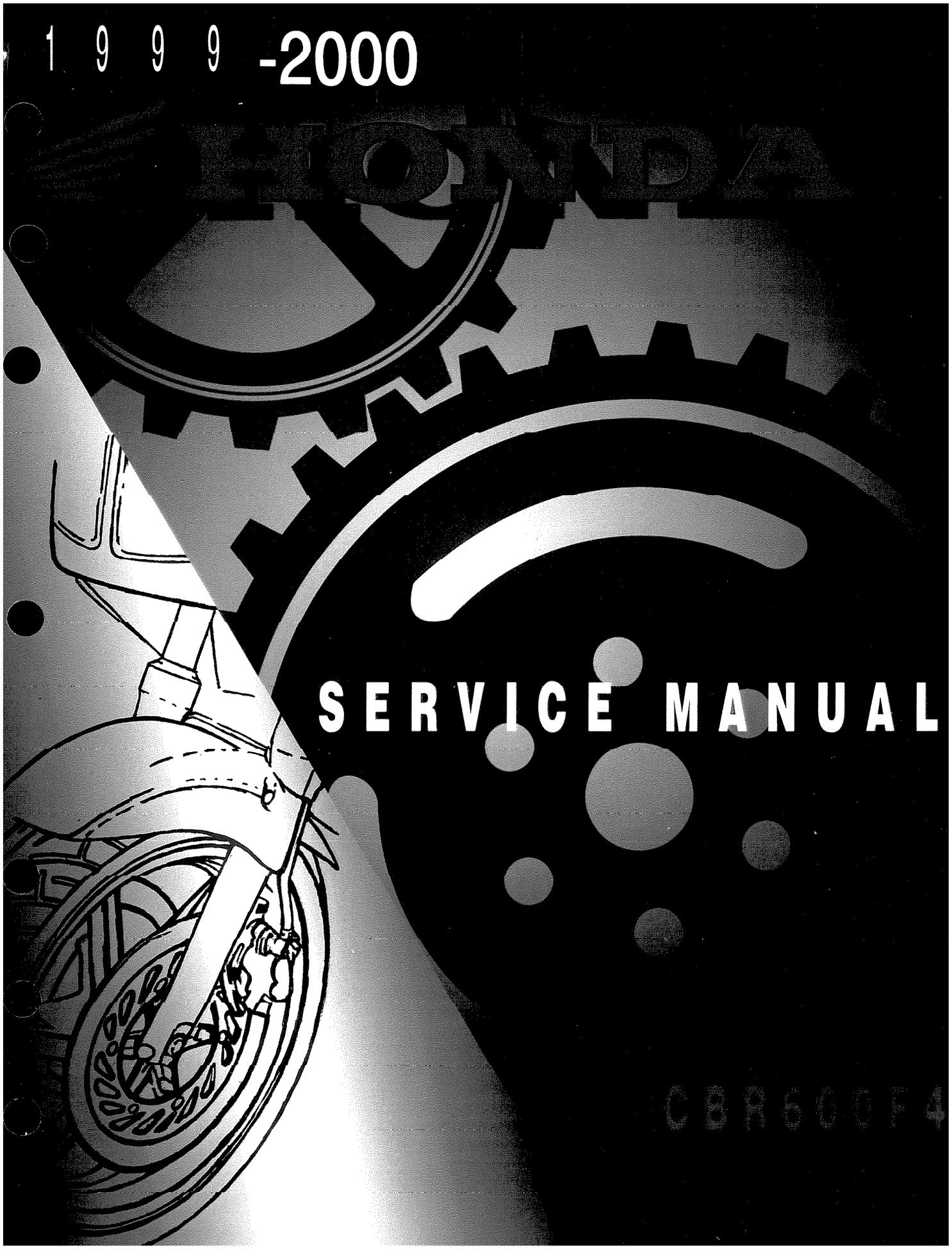
1999-2000



SERVICE MANUAL

CBR600F4

HOW TO USE THIS MANUAL

This service manual describes the service procedures for the CBR600F4.

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition and the emission levels are within the standards set by the U.S. Environmental Protection Agency, California Air Resources Board and Transport Canada.

Performing the first scheduled maintenance is very important. It compensates for the initial wear that occurs during the break-in period.

Sections 1 and 3 apply to the whole motorcycle. Section 2 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections. Sections 4 through 19 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 the first page of the section.

Most sections have an assembly or system illustration, service information and troubleshooting for the section.
The subsequent pages give detailed procedures.

If you don't know the source of the trouble, go to section 22 Troubleshooting.

CONTENTS

Date of Issue: January, 1999

SYMBOLS

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it would be explained specifically in the text without the use of the symbols.

	Replace the part(s) with new one(s) before assembly.
	Use recommended engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1 : 1).
	Use multi-purpose grease (Lithium based multi-purpose grease NLGI # 2 or equivalent).
	Use molybdenum disulfide grease (containing more than 3 % molybdenum [illegible] equivalent). Example: Molykote® BR-2 plus manufactured by Dow Corning, U. S. A. Multi-purpose M-2 manufactured by Mitsubishi Oil, Japan
	Use molybdenum disulfide paste (containing more than 40 % molybdenum disulfide, NLGI # 2 or equivalent). Example: Molykote® G-n paste, manufactured by Dow Corning, U. S. A. Honda Moly 60 (U. S. A. only) Rocol ASP manufactured by Rocol Limited, U. K. Rocol Paste manufactured by Sumico Lubricant, Japan
	Use silicone grease.
	Apply a locking agent. Use a middle strength locking agent unless otherwise specified.
	Apply sealant.
	Use DOT 4 brake fluid. Use the recommended brake fluid unless otherwise specified.
	Use Fork or Suspension Fluid.

1. GENERAL INFORMATION

GENERAL SAFETY

CARBON MONOXIDE

If the engine must be running to do some work, make sure the area is well ventilated. Never run the engine in an enclosed area.

⚠WARNING

The exhaust contains poisonous carbon monoxide gas that can cause loss of consciousness and may lead to death.

Run the engine in an open area or with an exhaust evacuation system in an enclosed area.

GASOLINE

Work in a well ventilated area. Keep cigarettes, flames or sparks away from the work area or where gasoline is stored.

⚠WARNING

Gasoline is extremely flammable and is explosive under certain conditions. KEEP OUT OF REACH OF CHILDREN.

HOT COMPONENTS

⚠WARNING

Engine and exhaust system parts become very hot and remain hot for some time after the engine is run. Wear insulated gloves or wait until the engine and exhaust system have cooled before handling these parts.

USED ENGINE OIL

⚠WARNING

Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil. KEEP OUT OF REACH OF CHILDREN.

BRAKE DUST

Never use an air hose or dry brush to clean the brake assemblies. Use a vacuum cleaner or alternate method to minimize the hazard caused by air borne asbestos fibers.

⚠WARNING

Inhaled asbestos fibers have been found to cause respiratory disease and cancer.

BRAKE FLUID

CAUTION:

Spilling fluid on painted, plastic or rubber parts will damage them. Place a clean shop towel over these parts whenever the system is serviced. KEEP OUT OF REACH OF CHILDREN.

COOLANT

Under some conditions, the ethylene glycol in engine coolant is combustible and its flame is not visible. If the ethylene glycol does ignite, you will not see any flame, but you can be burned.

⚠WARNING

- *Avoid spilling engine coolant on the exhaust system or engine parts. They may be hot enough to cause the coolant to ignite and burn without a visible flame.*
- *Coolant (ethylene glycol) can cause some skin irritation and is poisonous if swallowed. KEEP OUT OF REACH OF CHILDREN.*
- *Do not remove the radiator cap when the engine is hot. The coolant is under pressure and could scald you.*
- *Keep hands and clothing away from the cooling fan, as it starts automatically.*

CAUTION:

Using coolant with silicate corrosion inhibitors may cause premature wear of water pump seals or blockage of radiator passages. Using tap water may cause engine damage.

BATTERY HYDROGEN GAS & ELECTROLYTE

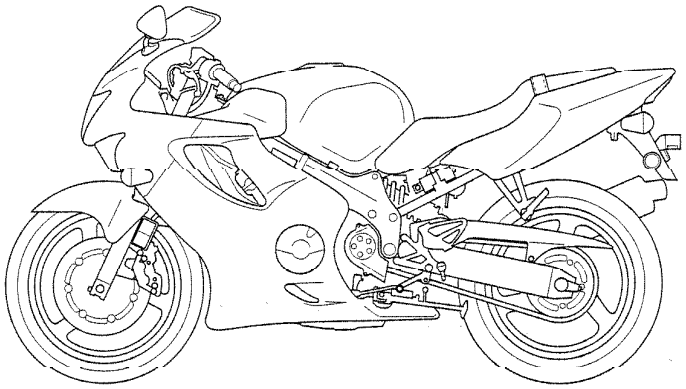
⚠WARNING

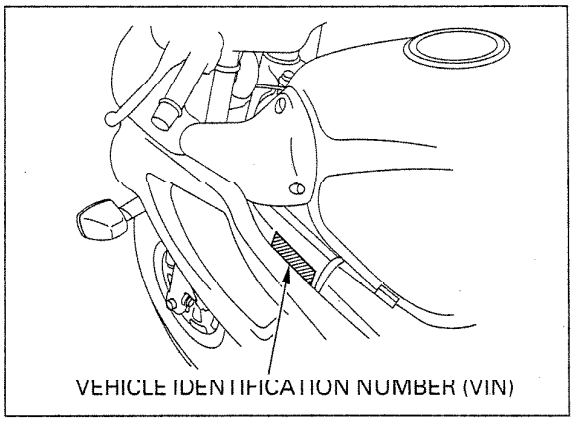
- *The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging.*
- *The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.*
  - *If electrolyte gets on your skin, flush with water.*
  - *If electrolyte gets in your eyes, flush with water for at least 15 minutes and call a physician immediately.*
- *Electrolyte is poisonous.*
  - *If swallowed, drink large quantities of water or milk and follow with milk of magnesia or vegetable oil and call a physician. KEEP OUT OF REACH OF CHILDREN.*

SERVICE RULES

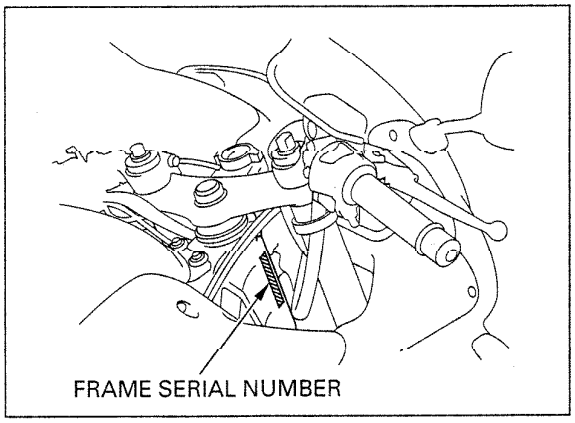
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalents. Parts that don't meet HONDA's design specifications may cause damage to the motorcycle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing the 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 incremental steps unless a particular sequence is specified.
6. Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
7. After reassembly, check all parts for proper installation and operation.
8. Route all electrical wires as show on pages 1-18 through 1-28, Cable and Harness routing.

MODEL IDENTIFICATION

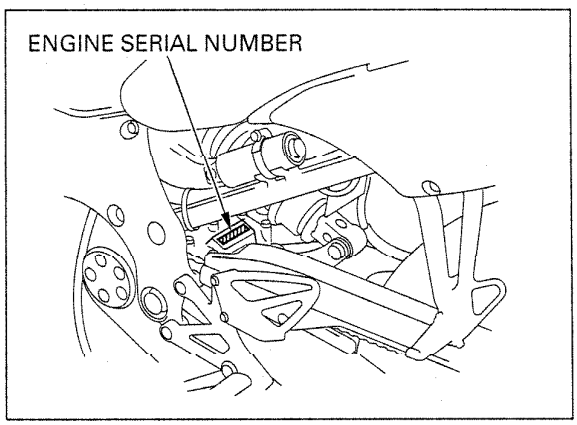




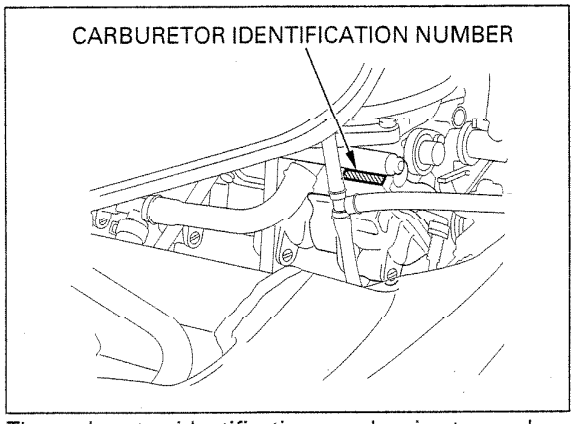
The Vehicle Identification Number (VIN) is located on the left side of the frame.



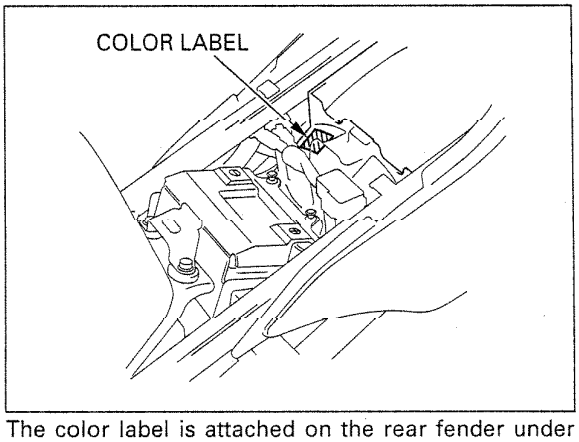
The frame serial number is stamped on the right side of the steering head.



The engine serial number is stamped on the rear side of the upper crankcase.



The carburetor identification number is stamped on the intake side of the carburetor body.



The color label is attached on the rear fender under the seat. When ordering color-coded parts, always specify the designated color code.

SPECIFICATIONS

GENERAL

ITEM		SPECIFICATIONS
DIMENSIONS	Overall length	2,060 mm (81.1 in)
	Overall width	685 mm (27.0 in)
	Overall height	1,130 mm (44.5 in)
	Wheelbase	1,390 mm (54.7 in)
	Seat height	810 mm (31.9 in)
	Footpeg height	360 mm (14.2 in)
	Ground clearance	135 mm (5.3 in)
	Dry weight 49 state/Canada type	169 kg (373 lbs)
	California type	170 kg (375 lbs)
	Curb weight 49 state/Canada type	197 kg (434 lbs)
	California type	198 kg (437 lbs)
	Maximum weight capacity	
	49 state/California type	175 kg (386 lbs)
	Canada type	179 kg (395 lbs)
FRAME	Frame type	Diamond
	Front suspension	Telescopic fork
	Front axle travel	120 mm (4.7 in)
	Rear suspension	Swingarm
	Rear axle travel	120 mm (4.7 in)
	Front tire size	120/70 ZR17 (58W)
	Rear tire size	180/55 ZR17 (73W)
	Front tire brand	BRIDGESTONE BT56F RADIAL E, DUNLOP D207FJ, MICHELIN TX15C
	Rear tire brand	BRIDGESTONE BT56R RADIAL G, DUNLOP D207P, MICHELIN TX25
	Front brake	Hydraulic double disc
	Rear brake	Hydraulic single disc
	Caster angle	24°
	Trail length	96 mm (3.8 in)
	Fuel tank capacity	17.0 ℓ (4.49 US gal, 3.74 Imp gal)
ENGINE	Cylinder arrangement	4 cylinders in-line, inclined 31° from vertical
	Bore and stroke	67.0 × 42.5 mm (2.64 × 1.67 in)
	Displacement	599 cm³ (36.5 cu-in)
	Compression ratio	12.0 : 1
	Valve train	Chain driven, DOHC
	Intake valve opens	22° BTDC (At 1 mm lift)
	closes	43° ABDC (At 1 mm lift)
	Exhaust valve opens	38° BBDC (At 1 mm lift)
	closes	7° ATDC (At 1 mm lift)
	Lubrication system	Forced pressure and wet sump
	Oil pump type	Trochoid
	Cooling system	Liquid cooled
	Air filtration	Viscous paper element
	Engine dry weight	59 kg (130 lbs)
	Firing order	1-2-4-3

GENERAL (Cont'd)

ITEM		SPECIFICATIONS
CARBURETOR	Carburetor type	Constant Velocity
	Throttle bore	36.5 mm (1.44 in)
DRIVE TRAIN	Clutch system	Multi-plate, wet
	Clutch operation system	Cable operating
	Transmission	Constant mesh, 6-speeds
	Primary reduction	1.822 (82/45)
	Final reduction	2.812 (45/16)
	Gear ratio 1st	2.833 (34/12)
	2nd	2.062 (33/16)
	3rd	1.647 (28/17)
	4th	1.421 (27/19)
	5th	1.250 (25/20)
	6th	1.130 (26/23)
	Gearshift pattern	Left foot operated return system, 1-N-2-3-4-5-6
ELECTRICAL	Ignition system	Full transistorized ignition
	Starting system	Electric starter motor
	Charging system	Triple phase output alternator
	Regulator/rectifier	SCR shorted, triple phase full wave rectification
	Lighting system	Battery

LUBRICATION SYSTEM

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Engine oil capacity	After draining	3.0 ℓ (3.2 US qt , 2.6 Imp qt)	———
	After draining/filter change	3.3 ℓ (3.5 US qt , 2.9 Imp qt)	———
	After disassembly	3.7 ℓ (3.9 US qt , 3.3 Imp qt)	———
Recommended engine oil		Honda GN4 4-stroke oil or equivalent motor oil API service classification SF or SG Viscosity: SAE 10 W - 40	—
Oil pressure (at oil main gallery)		490 kPa (5.0 kgf/cm², 71 psi) at 6,000 rpm/(80 °C/176 °F)	———
Oil pump	Tip clearance	0.15 (0.006)	0.20 (0.008)
	Body clearance	0.15 – 0.22 (0.006 – 0.009)	0.35 (0.014)
	Side clearance	0.02 – 0.07 (0.001 – 0.003)	0.10 (0.004)

FUEL SYSTEM

ITEM		SPECIFICATIONS
Carburetor identification number	49 state/Canada type	VP64C
	California type	VP64B
Main jet	49 state/Canada type	No. 1/4 carburetor: # 132 , No. 2/3 carburetor: # 135
	California type	# 128 (all carburetors)
Slow jet		# 40
Pilot screw	initial/final opening	See page 5-33
	high altitude adjustment	See page 5-34
Float level		13.7 ± 0.5 mm (0.54 ± 0.02 in)
Idle speed	49 state/Canada type	1,300 ± 100 rpm
	California type	1,400 ± 100 rpm
Carburetor vacuum difference (base carburetor: No. 4)		Within 30 mm Hg (1.2 in Hg)
Fuel pump flow capacity (minimum)		700 cm³ (23.7 US oz , 24.6 Imp oz)/minute
Throttle grip free play		2 – 6 mm (1/16 – 1/4 in)

COOLING SYSTEM

ITEM		SPECIFICATIONS
Coolant capacity	Radiator and engine	2.7 ℓ (2.9 US qt , 2.4 Imp qt)
	Reserve tank	0.31 ℓ (0.33 US qt , 0.27 Imp qt)
Radiator cap relief pressure		108 – 137 kPa (1.1 – 1.4 kgf/cm², 16 – 20 psi)
Thermostat	Begin to open	73 – 77 °C (163 – 171 °F)
	Fully open	90 °C (194 °F)
	Valve lift	8 mm (0.3 in) minimum
Recommended antifreeze		Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing silicate-free corrosion inhibitors

CYLINDER HEAD/VALVE

Unit: mm (in)

ITEM				STANDARD	SERVICE LIMIT
Cylinder compression at 350 rpm				1,226 kPa (12.5 kgf/cm², 178 psi)	———
Valve clearance			IN	0.20 ± 0.03 (0.008 ± 0.001)	———
			EX	0.28 ± 0.03 (0.011 ± 0.001)	———
Camshaft	Cam lobe height	49 state/Canada type	IN	36.600 – 36.760 (1.4409 – 1.4472)	36.57 (1.440)
			EX	35.380 – 35.540 (1.3929 – 1.3992)	35.35 (1.392)
		California type	IN	34.640 – 34.720 (1.3638 – 1.3669)	34.61 (1.363)
			EX	33.920 – 34.000 (1.3354 – 1.3386)	33.89 (1.334)
	Runout			———	0.05 (0.002)
	Oil clearance			0.020 0.062 (0.0000 0.0024)	0.10 (0.004)
Valve lifter	Valve lifter O.D.			25.978 – 25.993 (1.0228 – 1.0233)	25.97 (1.022)
	Valve lifter bore I.D.			26.010 – 26.026 (1.0240 – 1.0246)	26.04 (1.025)
Valve, valve guide	Valve stem O.D.		IN	3.975 – 3.990 (0.1565 – 0.1571)	3.965 (0.1561)
			EX	3.965 – 3.980 (0.1561 – 0.1567)	3.955 (0.1557)
	Valve guide I.D.		IN/EX	4.000 – 4.012 (0.1575 – 0.1580)	4.04 (0.159)
	Stem-to-guide clearance		IN	0.010 – 0.037 (0.0004 – 0.0015)	0.075 (0.0030)
			EX	0.020 – 0.047 (0.0008 – 0.0019)	0.085 (0.0033)
	Valve guide projection above cylinder head		IN	16.1 – 16.4 (0.63 – 0.65)	———
			EX	14.3 – 14.6 (0.56 – 0.57)	———
	Valve seat width		IN/EX	0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)
Valve spring	Free length		IN	39.87 (1.570)	38.27 (1.507)
			EX	36.23 (1.426)	34.73 (1.367)
Cylinder head warpage				———	0.10 (0.004)

CLUTCH/GEARSHIFT LINKAGE

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Clutch lever free play		10 20 (3/8 13/16)	
Clutch	Spring free length	46.5 (1.83)	45.2 (1.78)
	Disc thickness	2.92 – 3.08 (0.115 – 0.121)	2.6 (0.10)
	Plate warpage	———	0.30 (0.012)
Clutch outer guide	I.D.	25.000 – 25.021 (0.9843 – 0.9851)	25.03 (0.985)
	O.D.	34.975 – 34.991 (1.3770 – 1.3776)	34.97 (1.377)
Mainshaft O.D. at clutch outer guide		24.980 – 24.993 (0.9835 – 0.9840)	24.96 (0.983)

ALTERNATOR/STARTER CLUTCH

Unit: mm (in)

ITEM	STANDARD	SERVICE LIMIT
Starter driven gear boss O.D.	51.699 – 51.718 (2.0354 – 2.0361)	51.684 (2.0348)

CRANKCASE/TRANSMISSION

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Shift fork	I.D.		12.000 – 12.021 (0.4724 – 0.4733)	12.03 (0.474)
	Claw thickness		5.93 – 6.00 (0.233 – 0.236)	5.9 (0.23)
Shift fork shaft	O.D.		11.957 – 11.968 (0.4707 – 0.4712)	11.95 (0.470)
Transmission	Gear I.D.	M5, M6	28.000 – 28.021 (1.1024 – 1.1032)	28.04 (1.104)
		C2, C3, C4	31.000 – 31.025 (1.2205 – 1.2215)	31.04 (1.222)
	Gear bushing O.D.	M5, M6	27.959 – 27.980 (1.1007 – 1.1016)	27.94 (1.100)
		C2	30.955 – 30.980 (1.2187 – 1.2197)	30.94 (1.218)
		C3, C4	30.950 – 30.975 (1.2185 – 1.2195)	30.93 (1.218)
	Gear-to-bushing clearance	M5, M6	0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
		C2	0.020 – 0.070 (0.0008 – 0.0028)	0.10 (0.004)
		C3, C4	0.025 – 0.075 (0.0010 – 0.0030)	0.11 (0.004)
	Gear bushing I.D.	M5	24.985 – 25.006 (0.9837 – 0.9845)	25.016 (0.9849)
		C2	27.985 – 28.006 (1.1018 – 1.1026)	28.021 (1.1032)
	Mainshaft O.D.	at M5	24.967 – 24.980 (0.9830 – 0.9835)	24.96 (0.983)
	Countershaft O.D.	at C2	27.967 – 27.980 (1.1011 – 1.1016)	27.96 (1.101)
	Bushing-to-shaft clearance	M5	0.005 – 0.039 (0.0002 – 0.0015)	0.06 (0.002)
		C2	0.005 – 0.039 (0.0002 – 0.0015)	0.06 (0.002)

CRANKSHAFT/PISTON/CYLINDER

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Crankshaft	Connecting rod side clearance		0.10 – 0.25 (0.004 – 0.010)	0.30 (0.012)
	Crankpin bearing oil clearance		0.028 – 0.052 (0.0011 – 0.0020)	0.06 (0.002)
	Main journal bearing oil clearance		0.020 – 0.038 (0.0008 – 0.0015)	0.05 (0.002)
	Runout		———	0.05 (0.002)
Piston, piston pin, piston ring	Piston O.D. at 15 (0.6) from bottom		66.965 – 66.985 (2.6364 – 2.6372)	66.90 (2.634)
	Piston pin hole I.D.		17.002 – 17.008 (0.6694 – 0.6696)	17.02 (0.670)
	Piston pin O.D.		16.994 – 17.000 (0.6691 – 0.6693)	16.98 (0.669)
	Piston-to-piston pin clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.04 (0.002)
	Piston ring end gap	Top	0.10 – 0.20 (0.004 – 0.008)	0.4 (0.02)
		Second	0.18 – 0.30 (0.007 – 0.012)	0.5 (0.02)
		Oil (side rail)	0.2 – 0.7 (0.01 – 0.03)	1.0 (0.04)
	Piston ring-to-ring groove clearance	Top	0.020 – 0.050 (0.0008 – 0.0020)	0.08 (0.003)
		Second	0.015 – 0.050 (0.0006 – 0.0020)	0.08 (0.003)
Cylinder	I.D.		67.000 – 67.015 (2.6378 – 2.6384)	67.10 (2.642)
	Out of round		———	0.10 (0.004)
	Taper		———	0.10 (0.004)
	Warpage		———	0.10 (0.004)
Cylinder-to-piston clearance			0.015 – 0.050 (0.0006 – 0.0020)	0.10 (0.004)
Connecting rod small end I.D.			17.016 – 17.034 (0.6699 – 0.6706)	17.04 (0.671)
Connecting rod-to-piston pin clearance			0.016 – 0.040 (0.0006 – 0.0016)	0.06 (0.002)

FRONT WHEEL/SUSPENSION/STEERING

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Minimum tire tread depth		———	1.5 (0.06)
Cold tire pressure	Up to 90 kg (200 lbs) load	250 kPa (2.50 kgf/cm², 36 psi)	———
	Up to maximum weight capacity	250 kPa (2.50 kgf/cm², 36 psi)	———
Axle runout		———	0.2 (0.01)
Wheel rim runout	Radial	———	2.0 (0.08)
	Axial	———	2.0 (0.08)
Wheel balance weight		———	60 g (2.1 oz) max.
Fork	Spring free length	336 (13.2)	329.3 (12.96)
	Tube runout		0.20 (0.008)
	Recommended fluid	Pro-Honda Suspension Fluid SS-8	———
	Fluid level	118 (4.6)	———
	Fluid capacity	475 ± 2.5 cm³ (16.1 ± 0.08 US oz, 16.7 ± 0.09 oz)	———
Steering head bearing pre-load		1.0–1.5 kgf (2.2–3.3 lbf)	———

REAR WHEEL/SUSPENSION

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Minimum tire tread depth		———	2.0 (0.08)
Cold tire pressure	Up to 90 kg (200 lbs) load	290 kPa (2.90 kgf/cm², 42 psi)	———
	Up to maximum weight capacity	290 kPa (2.90 kgf/cm², 42 psi)	———
Axle runout		———	0.2 (0.01)
Wheel rim runout	Radial	———	2.0 (0.08)
	Axial	———	2.0 (0.08)
Wheel balance weight		———	60 g (2.1 oz) max.
Drive chain slack		25–35 (1–1 3/8)	———

HYDRAULIC BRAKE

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Front	Specified brake fluid		DOT 4	———
	Brake disc thickness		4.4–4.6 (0.17–0.18)	3.5 (0.14)
	Brake disc runout		———	0.30 (0.012)
	Master cylinder I.D.		15.870–15.913 (0.6248–0.6265)	15.925 (0.6270)
	Master piston O.D.		15.827–15.854 (0.6231–0.6242)	15.815 (0.6226)
	Caliper cylinder I.D.	A	33.96–34.01 (1.337–1.339)	34.02 (1.339)
		B	32.030–32.080 (1.2610–1.2630)	32.09 (1.263)
	Caliper piston O.D.	A	33.895–33.928 (1.3344–1.3357)	33.87 (1.333)
		B	31.965–31.998 (1.2585–1.2598)	31.94 (1.257)
Rear	Specified brake fluid		DOT 4	———
	Brake disc thickness		4.8–5.2 (0.19–0.20)	4.0 (0.16)
	Brake disc runout		———	0.30 (0.012)
	Master cylinder I.D.		14.000–14.043 (0.5512–0.5529)	14.055 (0.5533)
	Master piston O.D.		13.957–13.984 (0.5495–0.5506)	13.945 (0.5490)
	Caliper cylinder I.D.		38.18–38.23 (1.503–1.505)	38.24 (1.506)
	Caliper piston O.D.		38.098–38.148 (1.4999–1.5019)	38.09 (1.500)

BATTERY/CHARGING SYSTEM

ITEM			SPECIFICATIONS
Battery	Capacity		12V – 8 AH
	Current leakage		0.1 mA max.
	Voltage (20 °C/68 °F)	Fully charged	13.0 – 13.2 V
		Needs charging	Below 12.3 V
	Charging current	Normal	0.9 A × 5 – 10 h
		Quick	4.0 A × 1.0 h
Alternator	Capacity		343 W/5,000 min^{-1} (rpm)
	Charging coil resistance (20 °C/68 °F)		0.1 – 1.0 Ω

IGNITION SYSTEM

ITEM		SPECIFICATIONS
Spark plug	49 state/Canada type	CR9EH-9 (NGK) U27FER-9 (DENSO)
	California type	CR9EHVX-9 (NGK)
Spark plug gap		0.80 – 0.90 mm (0.031 – 0.035 in)
Ignition coil primary peak voltage		100 V minimum
Ignition pulse generator peak voltage		0.7 V minimum
Ignition timing ("F" mark)		10° BTDC at idle
Throttle sensor	Resistance (20 °C/68 °F)	4 – 6 kΩ
	Input voltage	4.7 – 5.3 V

ELECTRIC STARTER

Unit: mm (in)

ITEM	STANDARD	SERVICE LIMIT
Starter motor brush length	12.0 – 13.0 (0.47 – 0.51)	6.5 (0.26)

LIGHTS/METERS/SWITCHES

ITEM		SPECIFICATIONS
Bulbs	Headlight (High/low beam)	12V – 60/55W
	Brake/taillight	12V – 21/5W × 2
	License light	12V – 4CP
	Front turn signal/running light	12V – 32/3CP (23/8W) × 2
	Rear turn signal light	12V – 32CP (23W) × 2
	Instrument light	12V – 1.1W × 3
	Turn signal indicator	12V – 1.1W × 2
	High beam indicator	12V – 1.1W
	Neutral indicator	12V – 1.1W
	Oil pressure indicator	12V – 1.1W
	Low fuel indicator	LED
Fuse	Main fuse	30A
	Sub-fuse	10A × 4
Thermosensor resistance	At 80 °C (176 °F)	47 – 57 Ω
	At 120 °C (248 °F)	14 – 18 Ω
Fan motor switch	Starts to close (ON)	98 – 102 °C (208 – 216 °F)
	Stops to open (OFF)	93 – 97 °C (199 – 207 °F)

TORQUE VALUES

STANDARD

FASTENER TYPE	TORQUE N·m (kgf·m, lbf·ft)	FASTENER TYPE	TORQUE N·m (kgf·m, lbf·ft)
5 mm bolt and nut	5 (0.5 , 3.6)	5 mm screw	4 (0.4, 2.9)
6 mm bolt and nut	10 (1.0 , 7)	6 mm screw	9 (0.9, 6.5)
8 mm bolt and nut	22 (2.2 , 16)	6 mm flange bolt (8 mm head, small flange)	10 (1.0, 7)
10 mm bolt and nut	34 (3.5 , 25)		
12 mm bolt and nut	54 (5.5 , 40)	6 mm flange bolt (8 mm head, large flange)	12 (1.2, 9)
		6 mm flange bolt (10 mm head) and nut	12 (1.2, 9)
		8 mm flange bolt and nut	26 (2.7, 20)
		10 mm flange bolt and nut	39 (4.0, 29)

- Torque specifications listed below are for important fasteners.
- Others should be tightened to standard torque values listed above.

NOTES:
1. Apply sealant to the threads.
2. Apply locking agent to the threads.
3. Stake.
4. Apply oil to the threads and seating surface.
5. U-nut.
6. ALOC bolt/screw: replace with a new one.
7. Apply grease to the threads.
8. Apply molybdenum oil solution to the threads and seating surface.

ENGINE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
MAINTENANCE:				
Spark plug	4	10	12 (1.2 , 9)	
Timing hole cap	1	45	18 (1.8 , 13)	NOTE 7
Engine oil filter cartridge	1	20	10 (1.0 , 7)	NOTE 4
Engine oil drain bolt	1	12	29 (3.0 , 22)	
LUBRICATION SYSTEM:				
Oil main gallery sealing bolt	2	20	29 (3.0 , 22)	NOTE 2
Oil pressure switch	1	PT 1/8	12 (1.2 , 9)	NOTE 1
Oil pressure switch terminal screw	1	4	2 (0.2 , 1.4)	
Oil pump cover bolt	1	6	8 (0.8 , 5.8)	
Oil cooler bolt (filter boss)	1	20	64 (6.5 , 47)	NOTE 4
FUEL SYSTEM:				
Starting enrichment (SE) valve nut	4	—	2 (0.2 , 1.4)	
Carburetor connecting nut (front)	2	6	9 (0.9 , 6.5)	
(rear)	2	5	5 (0.5 , 3.6)	
Reed valve cover bolt	4	6	13 (1.3 , 9)	
COOLING SYSTEM:				
Water pump assembly bolt	2	6	12 (1.2 , 9)	
Thermostat cover bolt	2	6	12 (1.2 , 9)	
ENGINE MOUNTING:				
Drive sprocket bolt	1	10	54 (5.5 , 40)	
CYLINDER HEAD/VALVE:				
Cylinder head bolt	10	9	47 (4.8 , 35)	NOTE 8
Camshaft holder bolt	20	6	12 (1.2 , 9)	NOTE 4
Cam sprocket bolt	4	7	20 (2.0 , 14)	NOTE 2
Cylinder head cover bolt	3	6	10 (1.0 , 7)	
Cam chain tensioner lifter mounting bolt	2	6	10 (1.0 , 7)	
Intake manifold vacuum port joint	1	5	3 (0.3 , 2.2)	

ENGINE (Cont'd)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
CLUTCH/GEARSHIFT LINKAGE:				
Clutch center lock nut	1	22	127 (13.0 , 94)	NOTE 3, 4
Clutch bolt	5	6	12 (1.2 , 9)	
Oil pump driven sprocket bolt	1	6	15 (1.5 , 11)	NOTE 2
Gearshift cam bolt	1	8	23 (2.3 , 17)	NOTE 2
Gearshift stopper arm bolt	1	6	12 (1.2 , 9)	
Gearshift spindle return spring pin	1	8	23 (2.3 , 17)	
Right crankcase cover bolt	13	6	12 (1.2 , 9)	page 9-14
ALTERNATOR/STARTER CLUTCH:				
Alternator stator bolt	4	6	12 (1.2 , 9)	
Stator wire clamp bolt	1	6	14 (1.4 , 10)	
Starter clutch bolt	6	8	16 (1.6 , 12)	NOTE 2
Flywheel bolt	1	10	103 (10.5 , 76)	NOTE 4
CRANKCASE/TRANSMISSION				
Mainshaft bearing set plate bolt	3	6	12 (1.2 , 9)	NOTE 2
Gearshift drum bearing and fork shaft set bolt	2	6	12 (1.2 , 9)	NOTE 2
Cam chain tensioner pivot bolt	1	6	10 (1.0 , 7)	NOTE 2
Cam chain guide washer bolt	1	6	12 (1.2 , 9)	
Crankcase bolt (Main journal)	10	8	25 (2.6 , 19)	NOTE 4
Crankcase bolt	1	10	39 (4.0 , 29)	
Crankcase bolt (Upper side)	5	8	25 (2.5 , 18)	
Ignition pulse generator rotor bolt	1	10	59 (6.0 , 43)	
CRANKSHAFT/PISTON/CYLINDER				
Connecting rod bearing cap nut	8	7	25 (2.6 , 19)	NOTE 4
ELECTRIC STARTER:				
Starter motor terminal nut	1	6	10 (1.0 , 7)	
LIGHTS/METERS/SWITCHES:				
Thermosensor	1	PT 1/8	10 (1.0 , 7)	NOTE 1
Neutral switch	1	10	12 (1.2 , 9)	

FRAME

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
FRAME/BODY PANELS/EXHAUST SYSTEM:				
Seat cowl screw	2	5	2 (0.2 , 1.4)	
Front inner fairing screw	4	5	2 (0.2 , 1.4)	
Upper fairing-to-side firing bolt	6	5	2 (0.2 , 1.4)	
Exhaust pipe joint nut	8	7	12 (1.2 , 9)	
Muffler band bolt	2	8	23 (2.3 , 17)	
Passenger footpeg bracket bolt	4	8	26 (2.7 , 20)	
Seat rail mounting bolt	4	10	49 (5.0 , 36)	
ENGINE MOUNTING:				
Front engine hanger bolt	2	10	39 (4.0 , 29)	page 7-6
Center engine hanger bolt	2	10	39 (4.0 , 29)	
Center engine hanger adjusting bolt (right side)	1	20	4 (0.4 , 2.9)	
Center engine hanger lock nut (right side)	1	20	54 (5.5 , 40)	
Rear engine hanger nut	1	10	39 (4.0 , 29)	
Rear engine hanger adjusting bolt (right side)	1	22	4 (0.4 , 2.9)	
Rear engine hanger lock nut (right side)	1	22	54 (5.5 , 40)	
Shock link bracket nut	2	10	39 (4.0 , 29)	NOTE 5
FRONT WHEEL/SUSPENSION/STEERING:				
Handlebar weight mounting screw	2	6	10 (1.0 , 7)	NOTE 6
Front brake disc bolt	12	6	20 (2.0 , 14)	NOTE 6
Front axle bolt	1	14	59 (6.0 , 43)	
Front axle holder bolt	4	8	22 (2.2 , 16)	

FRAME (Cont'd)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
FRONT WHEEL/SUSPENSION/STEERING:				
Front fender bolt	4	6	12 (1.2 , 9)	
Fork socket bolt	2	10	34 (3.5 , 25)	
Fork cap	2	39	23 (2.3 , 17)	
Fork top bridge pinch bolt	2	8	23 (2.3 , 17)	
Fork bottom bridge pinch bolt	2	10	39 (4.0 , 29)	
Steering bearing adjustment nut	1	26	25 (2.5 , 18)	page 13-28
Steering bearing adjustment nut lock nut	1	26		
Steering stem nut	1	24	103 (10.5 , 76)	
Front brake hose clamp bolt (steering stem)	1	6	10 (1.0 , 7)	
REAR WHEEL/SUSPENSION:				
Rear brake disc bolt	4	8	42 (4.3 , 31)	NOTE 6
Final driven sprocket nut	5	12	88 (9.0 , 65)	NOTE 5
Rear axle nut	1	18	93 (9.5 , 69)	NOTE 5
Shock absorber mounting nut	2	10	44 (4.5 , 33)	NOTE 5
Shock arm-to-swingarm nut	1	10	44 (4.5 , 33)	NOTE 5
Shock arm-to-shock link nut	1	10	44 (4.5 , 33)	NOTE 5
Shock link-to-bracket nut	1	10	44 (4.5 , 33)	NOTE 5
Drive chain slider bolt	2	6	9 (0.9 , 6.5)	NOTE 6
Swingarm pivot adjusting bolt	2	30	7 (0.7 , 5.1)	page 14-17
Swingarm pivot lock nut	2	30	64 (6.5 , 47)	
Swingarm pivot nut	1	18	93 (9.5 , 69)	NOTE 5
HYDRAULIC BRAKE:				
Brake caliper bleed valve	3	8	6 (0.6 , 4.3)	
Front master cylinder reservoir cap screw	2	4	2 (0.2 , 1.4)	
Rear brake reservoir mounting bolt	1	6	12 (1.2 , 9)	
Pad pin	5	10	18 (1.8 , 13)	
Pad pin plug	1	10	3 (0.3 , 2.2)	
Brake hose oil bolt	5	10	34 (3.5 , 25)	
Front brake lever pivot bolt	1	6	1 (0.1 , 0.7)	
Front brake lever pivot nut	1	6	6 (0.6 , 4.3)	
Front brake light switch screw	1	4	1 (0.1 , 0.7)	
Front master cylinder mounting bolt	2	6	12 (1.2 , 9)	
Front brake caliper assembly bolt	8	8	23 (2.3 , 17)	NOTE 2
Front brake caliper mounting bolt	4	8	30 (3.1 , 22)	NOTE 6
Rear master cylinder joint nut	1	8	18 (1.8 , 13)	
Rear master cylinder mounting bolt	2	6	9 (0.9 , 6.5)	
Rear brake caliper bolt	1	8	23 (2.3 , 17)	
Rear brake caliper pin bolt	1	12	27 (2.8 , 20)	
LIGHTS/METERS/SWITCHES:				
Side stand switch bolt	1	6	10 (1.0 , 7)	
Ignition switch mounting bolt	2	8	25 (2.5 , 18)	
Fan motor switch	1	16	18 (1.8 , 13)	
Fuel reserve sensor	1	16	23 (2.3 , 17)	
OTHERS:				
Side stand pivot bolt	1	10	10 (1.0 , 7)	
Side stand pivot lock nut	1	10	29 (3.0 , 22)	
Side stand bracket bolt	1	10	44 (4.5 , 33)	NOTE 6
Driver footpeg bracket bolt	4	8	26 (2.7 , 20)	

TOOLS

DESCRIPTION	TOOL NUMBER	ALTERNATIVE TOOL	TOOL NUMBER
Float level gauge	07401-0010000		
Oil pressure gauge	07506-3000000	Equivalent commercially available in U.S.A.	
Oil pressure gauge attachment	07510-MJ10100		
Universal bearing puller	07631-0010000		
Clutch center holder	07724-0050002	Equivalent commercially available in U.S.A.	
Flywheel holder	07725-0040000	Equivalent commercially available in U.S.A.	
Rotor puller	07733-0020001	Rotor puller	07933-3950000
Attachment, 32 × 35 mm	07746-0010100		
Attachment, 37 × 40 mm	07746-0010200		
Attachment, 42 × 47 mm	07746-0010300		
Attachment, 52 × 55 mm	07746-0010400		
Attachment, 22 × 24 mm	07746-0010800		
Inner driver C	07746-0030100		
Attachment, 25 mm I.D.	07746-0030200		
Attachment, 30 mm I.D.	07746-0030300		
Pilot, 17 mm	07746-0040400		
Pilot, 20 mm	07746-0040500		
Pilot, 35 mm	07746-0040800		
Pilot, 28 mm	07746-0041100		
Bearing remover shaft	07746-0050100	Equivalent commercially available in U.S.A.	
Bearing remover head, 20 mm	07746-0050600		
Driver	07749-0010000		
Valve spring compressor	07757-0010000		
Valve seat cutter, 24.5 mm (EX 45°)	07780-0010100	Equivalent commercially available in U.S.A.	
Valve seat cutter, 27.5 mm (IN 45°)	07780-0010200		
Flat cutter, 24 mm (EX 32°)	07780-0012500		
Flat cutter, 27 mm (IN 32°)	07780-0013300		
Interior cutter, 22 mm (EX 60°)	07780-0014202		
Interior cutter, 26 mm (IN 60°)	07780-0014500		
Cutter holder, 4.0 mm	07781-0010500		
Lock nut wrench	07908-4690003	Lock nut wrench	07908-4090002
Snap ring pliers	07914-SA50001		
Steering stem socket	07916-3710101	Steering stem socket	07916-3710100
Attachment, 28 × 30 mm	07946-1870100		
Ball race remover set	07946-KM90001	Not available in U.S.A. (see psge 13-23)	
—Driver attachment A	07946-KM90100		
—Driver attachment B	07946-KM90200		
—Driver shaft assembly	07946-KM90300		
—Bearing remover A	07946-KM90401		
—Bearing remover B	07946-KM90500		
—Assembly base	07946-KM90600		
Steering stem driver	07946-MB00000		

DESCRIPTION	TOOL NUMBER	ALTERNATIVE TOOL	TOOL NUMBER
Main bearing driver attachment	07946-ME90200		
Driver shaft	07946-MJ00100		
Driver head	07946-MJ00200		
Fork seal driver attachment, 43 mm I.D.	07947-KA40200		
Fork seal driver weight	07947-KA50100		
Driver attachment handle	07949-3710001		
Valve spring compressor attachment	07959-KM30101		
Oil seal driver	07965-MA60000		
Oil filter wrench	07HAA-PJ70100		
Peak voltage adaptor	07HGJ-0020100	Peak voltage tester	(U.S.A. only)
Needle bearing remover	07HMC-MR70100		
Tappet hole protector	07HMG-MR70002		
Drive chain tool set	07HMH-MR10103	Drive chain tool set	07HMH-MR1010B (U.S.A. only)
Valve guide driver	07JMD-KY20100		
Pilot screw wrench	07KMA-MN90100	Pilot screw wrench	07KMA-MS60101
Bearing remover set	07LMC-KV30100		
Valve guide reamer, 4.008 mm	07MMH-MV90100		
Compression gauge attachment	07RMJ-MY50100		
Lock nut wrench	07VMA-MBB0100		
Installer shaft	07VMF-KZ30200		
Installer attachment A	07VMF-MAT0100		
Installer attachment B	07VMF-MAT0200		
Remover attachment A	07VMF-MAT0300		
Remover attachment B	07VMF-MAT0400		

LUBRICATION & SEAL POINTS

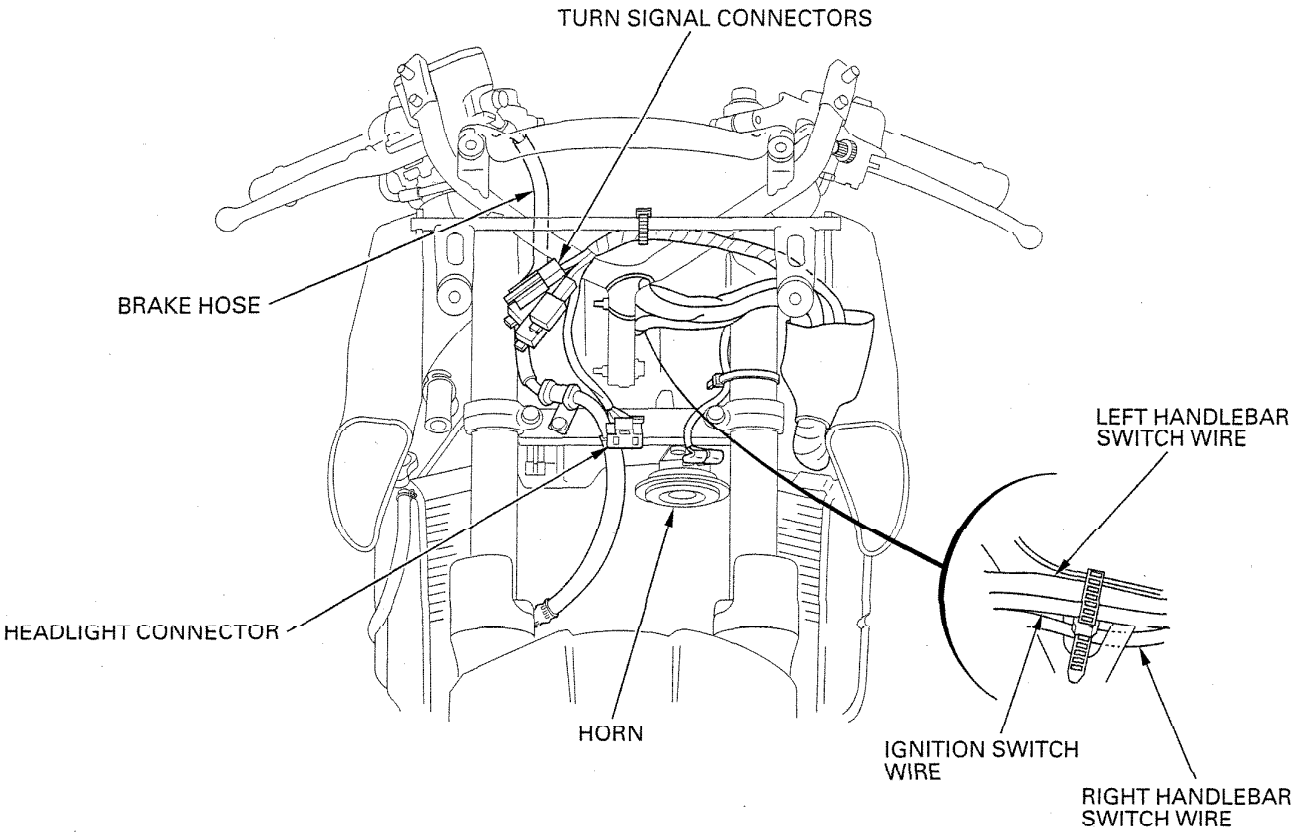
ENGINE

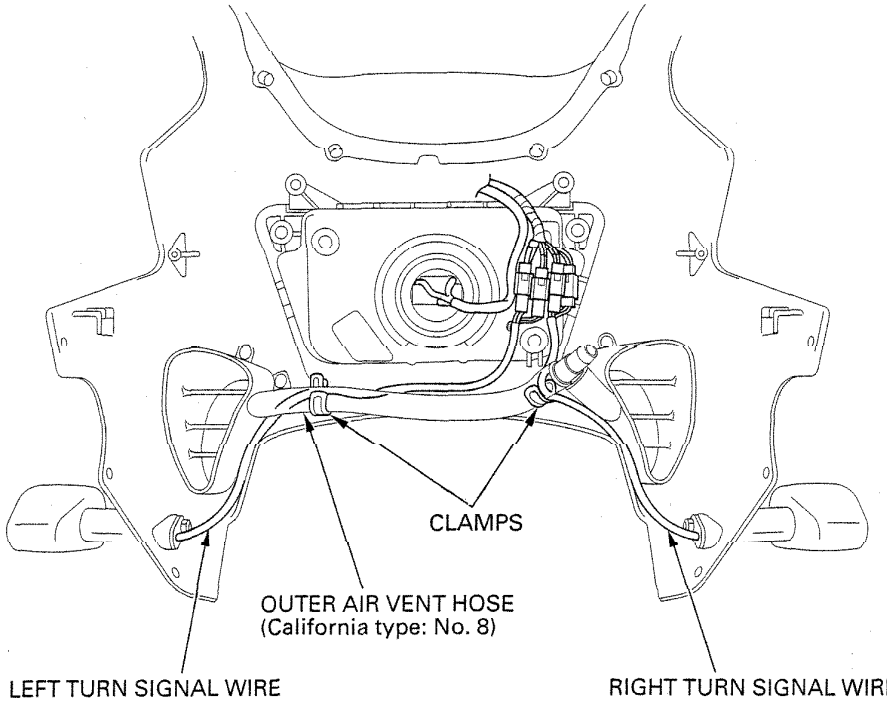
LOCATION	MATERIAL	REMARKS
Oil pan mating surface Cylinder head semi-circuler area Right crankcase cover mating surface Crankcase mating surfaces (right side) Crankcase mating surfaces (left side) Crankcase mating surface Oil pressure switch threads Thermosensor threads	Sealant	 See page 9-14 See page 10-2 See page 11-11 See page 4-4 Do not apply to the sensor head.
Water pump shaft spindle and thrust washer sliding surface Cylinder head 9 mm bolt threads and seating surface Valve stem sliding surface Valve lifter outer surface Camshaft journals and cam lobes Clutch outer guide sliding surfaces Starter reduction gear shaft outer surface M3/4, C5, C6 gear shift fork grooves Connecting rod small end inner surface Piston pin outer surface Crankpin bearing sliding surface Crankshaft main journal bearing sliding surface Primary drive sub-gear sliding surfaces Crankshaft thrust surfaces	Molybdenum oil solution (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease)	See page 6-13 See page 12-5
Engine oil filter cartridge threads and seating surface Oil cooler bolt (filter boss) threads and seating surface Cylinder head bolt threads and seating surface Camshaft holder bolt threads and seating surface Clutch disc lining surfaces Clutch center lock nut threads and seating surface Starter sprag clutch contacting surfaces Flywheel bolt threads and seating surface Piston outer surface Piston ring whole surface Connecting rod bearing cap nut threads and seating surface Crankcase bolt (main journal 8 mm) threads Each gear teeth and rotating surface Each bearing rotating area Each O-ring and packing whole surface Other rotating and sliding area	Engine oil	
Timing hole cap threads Carburetor synchronization adjusting screw tip Each oil seal lips	Multi-purpose grease	
Oil pump driven sprocket bolt threads Cam sprocket bolt threads Gearshift cam bolt threads Gearshift spindle oil seal plate bolt threads Starter clutch bolt threads Mainshaft bearing set plate bolt threads Gearshift drum bearing and fork shaft set bolt threads Cam chain tensioner pivot bolt threads Oil main gallery 20 mm sealing bolt threads	Locking agent	

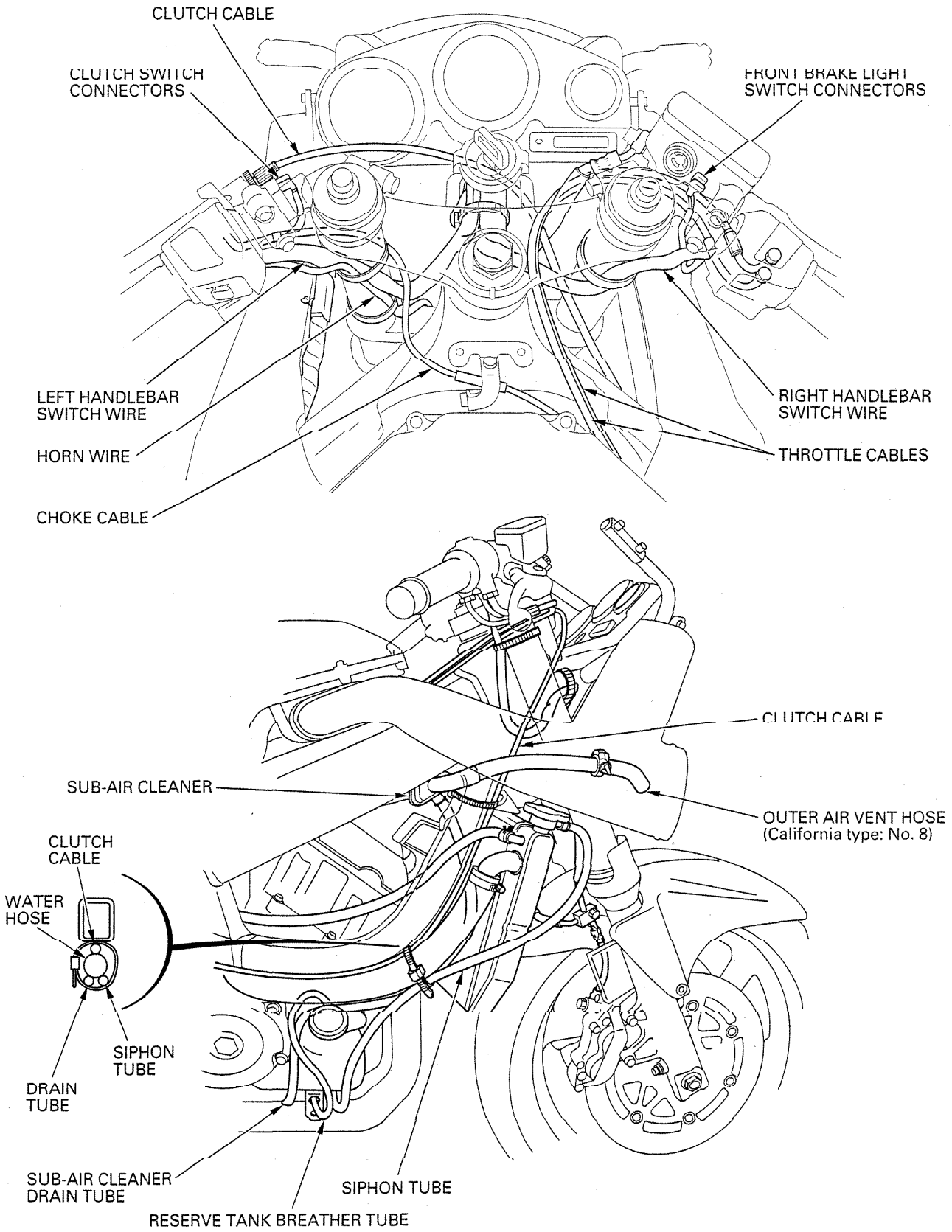
FRAME

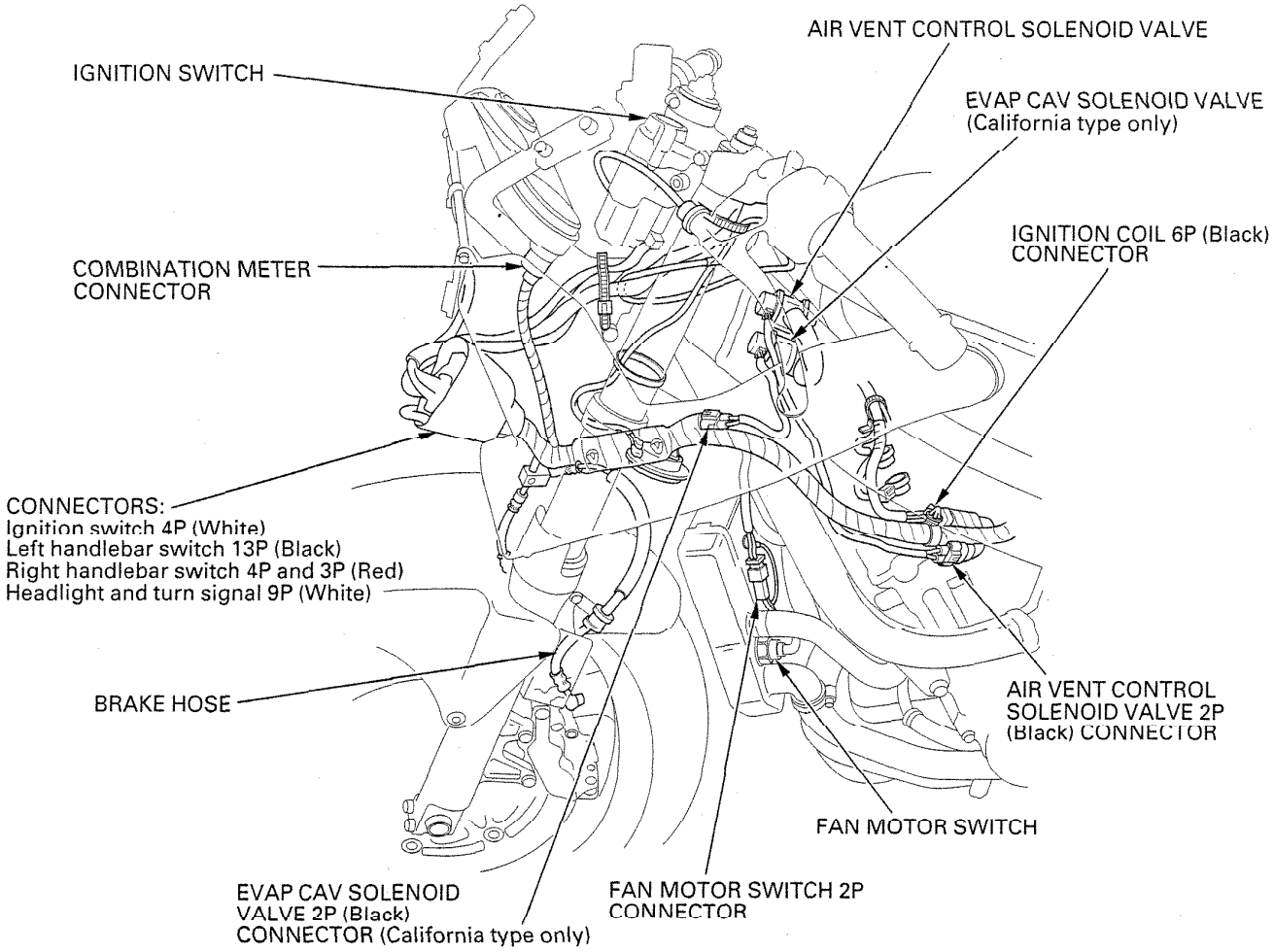
LOCATION	MATERIAL	REMARKS
Seat catch hook sliding area Front wheel dust seal lips Steering head bearings Steering head bearing dust seal lips Final driven flange-to-rear wheel hub mating surface and O-ring Rear wheel dust seal lips Rear wheel side collar inner surfaces Shock absorber needle bearings Shock absorber dust seal lips Shock link and shock arm (swingarm) needle bearings Shock link and shock arm (swingarm) dust seal lips Swingarm pivot bearings Swingarm pivot dust seal lips Throttle grip pipe flange Clutch lever pivot Rear brake pedal pivot Gearshift pedal link tie-rod ball joints Gearshift pedal pivot Driver footpeg sliding area Passenger footpeg sliding area Side stand pivot	Multi-purpose grease	
Throttle cable outer inside Clutch cable outer inside Choke cable outer inside	Cable lubricant	
Handlebar grip rubber inside	Honda bond A or equivalent	
Steering bearing adjustment nut threads	Engine oil	
Front brake lever-to-master piston contacting area Front brake lever pivot Rear brake master piston-to-push rod contacting area and push rod boot groove Rear brake caliper boot inside (collar outer surface) Rear brake caliper pin bolt boot inside	Silicon grease	
Brake master piston and cups Brake caliper piston and piston seals	DOT 4 brake fluid	
Fork dust seal and oil seal lips	Fork fluid	
Rear brake reservoir hose joint screw threads Front brake caliper assembly bolt threads Rear brake caliper pin bolt threads	Locking agent	

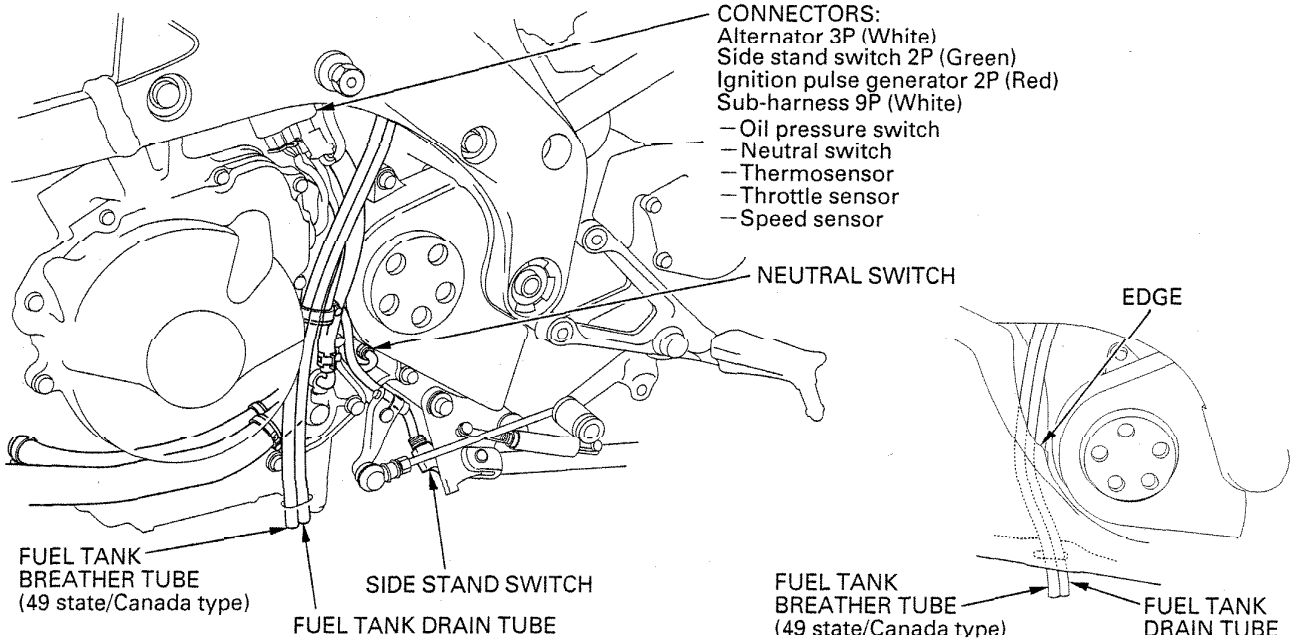
CABLE & HARNESS ROUTING



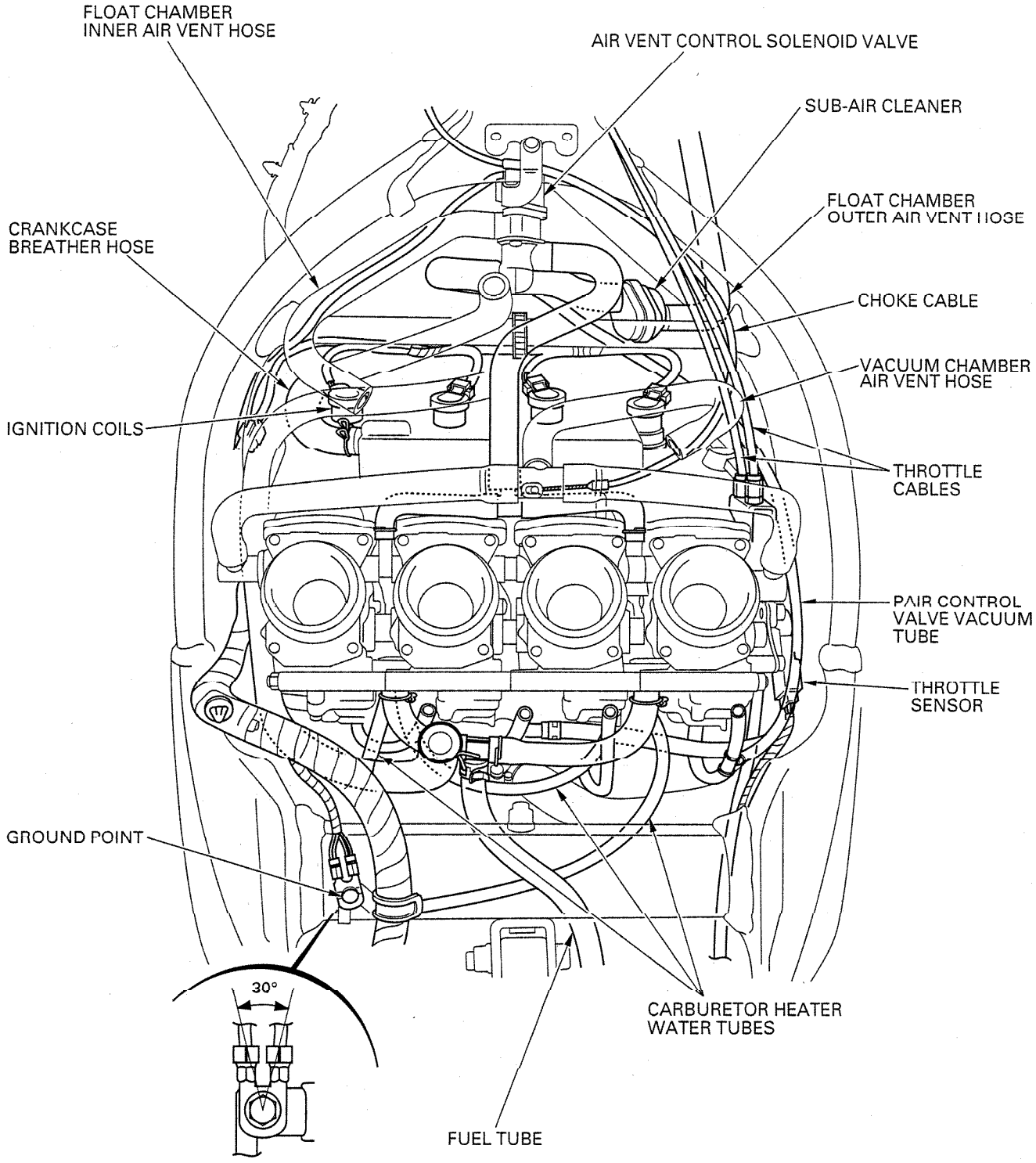


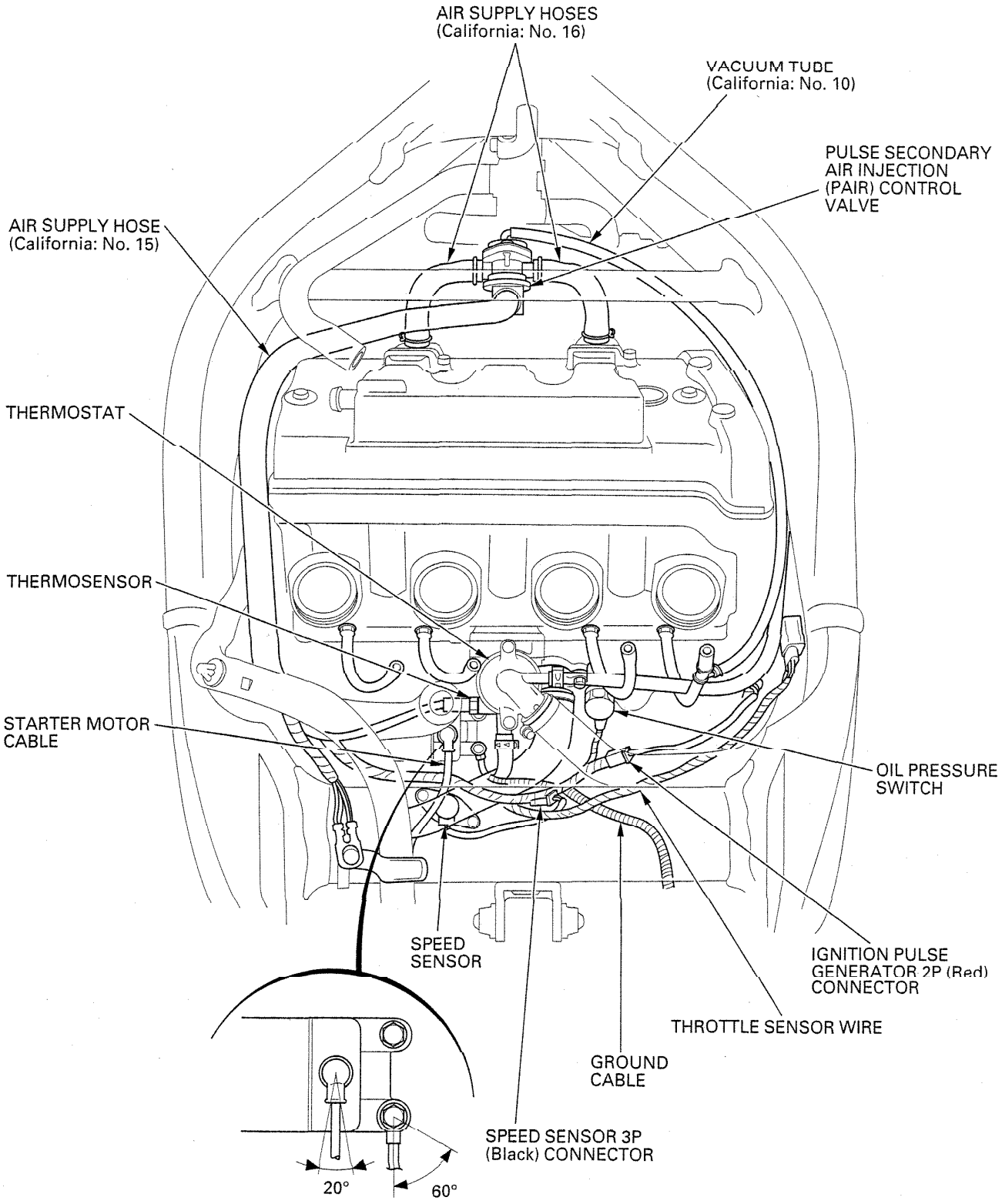

CLUTCH CABLE
CLUTCH SWITCH CONNECTORS
FRONT BRAKE LIGHT SWITCH CONNECTORS
LEFT HANDLEBAR SWITCH WIRE
HORN WIRE
CHOKE CABLE
RIGHT HANDLEBAR SWITCH WIRE
THROTTLE CABLES
CLUTCH CABLE
SUB-AIR CLEANER
OUTER AIR VENT HOSE (California type: No. 8)
CLUTCH CABLE
WATER HOSE
SIPHON TUBE
DRAIN TUBE
SUB-AIR CLEANER DRAIN TUBE
SIPHON TUBE
RESERVE TANK BREATHER TUBE

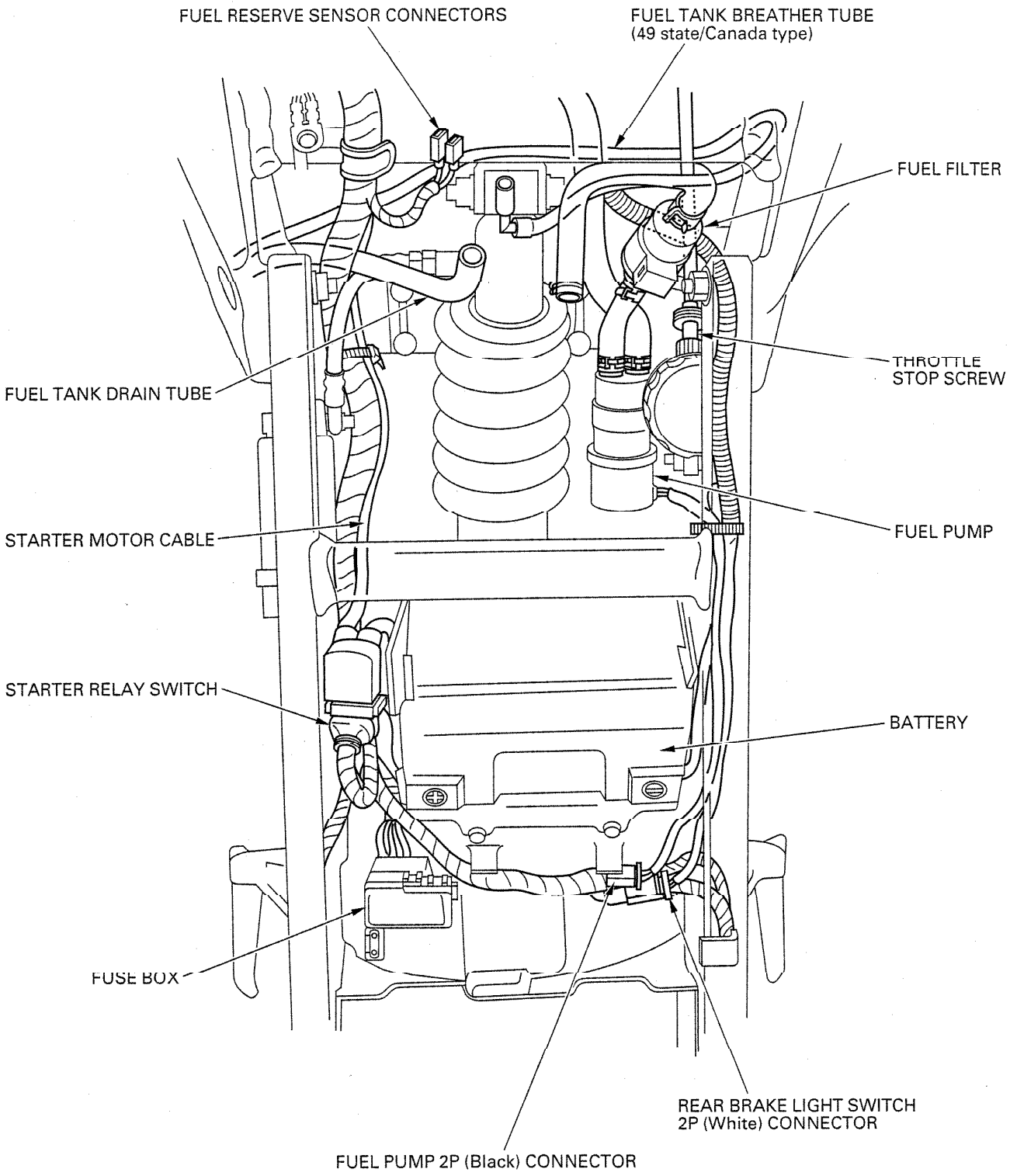

AIR VENT CONTROL SOLENOID VALVE
IGNITION SWITCH
EVAP CAV SOLENOID VALVE
(California type only)
IGNITION COIL 6P (Black)
CONNECTOR
COMBINATION METER
CONNECTOR
CONNECTORS:
Ignition switch 4P (White)
Left handlebar switch 13P (Black)
Right handlebar switch 4P and 3P (Red)
Headlight and turn signal 9P (White)
BRAKE HOSE
AIR VENT CONTROL
SOLENOID VALVE 2P
(Black) CONNECTOR
FAN MOTOR SWITCH
EVAP CAV SOLENOID
VALVE 2P (Black)
CONNECTOR (California type only)
FAN MOTOR SWITCH 2P
CONNECTOR

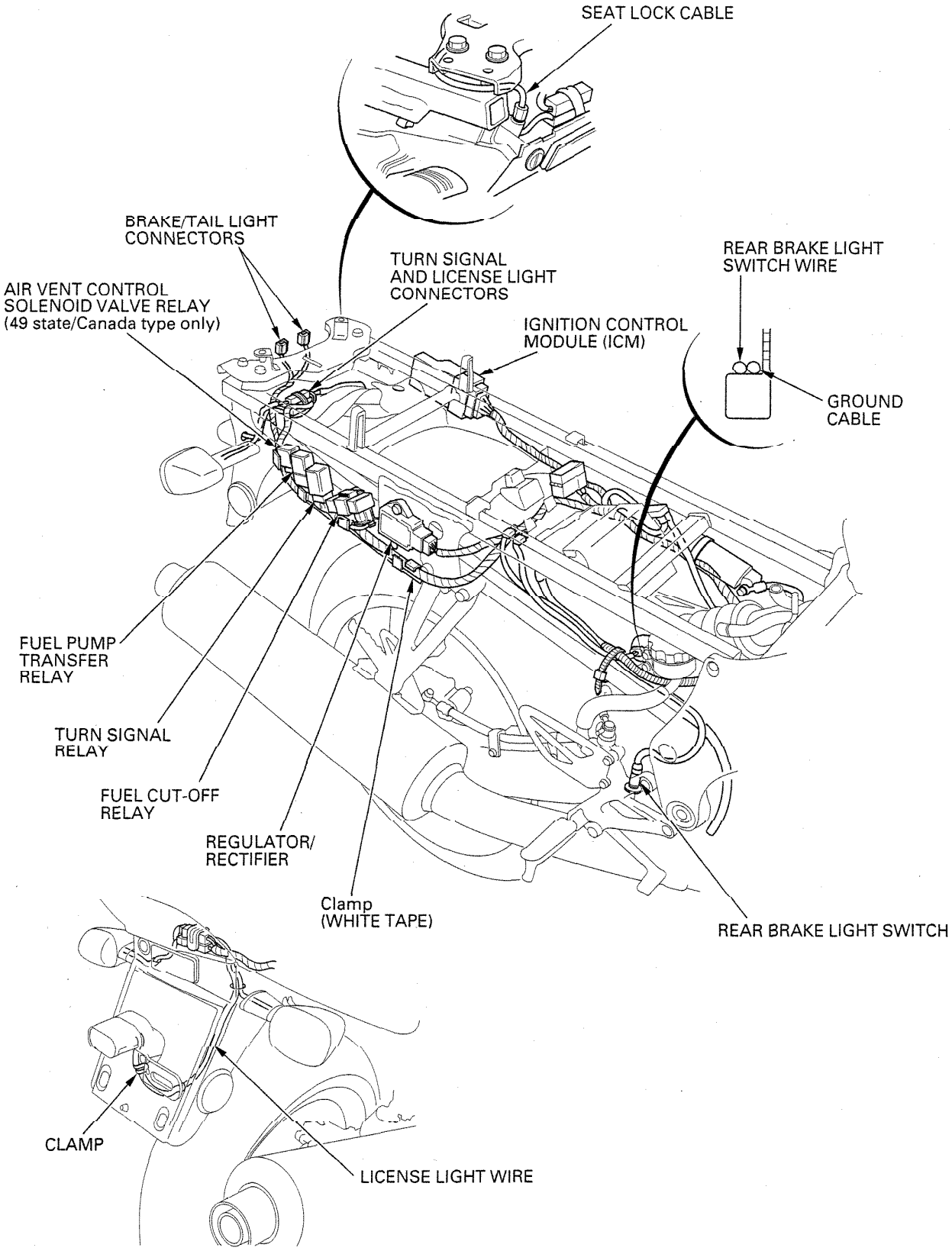

CONNECTORS:
Alternator 3P (White)
Side stand switch 2P (Green)
Ignition pulse generator 2P (Red)
Sub-harness 9P (White)
—Oil pressure switch
—Neutral switch
—Thermosensor
—Throttle sensor
—Speed sensor
NEUTRAL SWITCH
EDGE
FUEL TANK
BREATHER TUBE
(49 state/Canada type)
SIDE STAND SWITCH
FUEL TANK DRAIN TUBE
FUEL TANK
BREATHER TUBE
(49 state/Canada type)
FUEL TANK
DRAIN TUBE

49 state/Canada type shown:

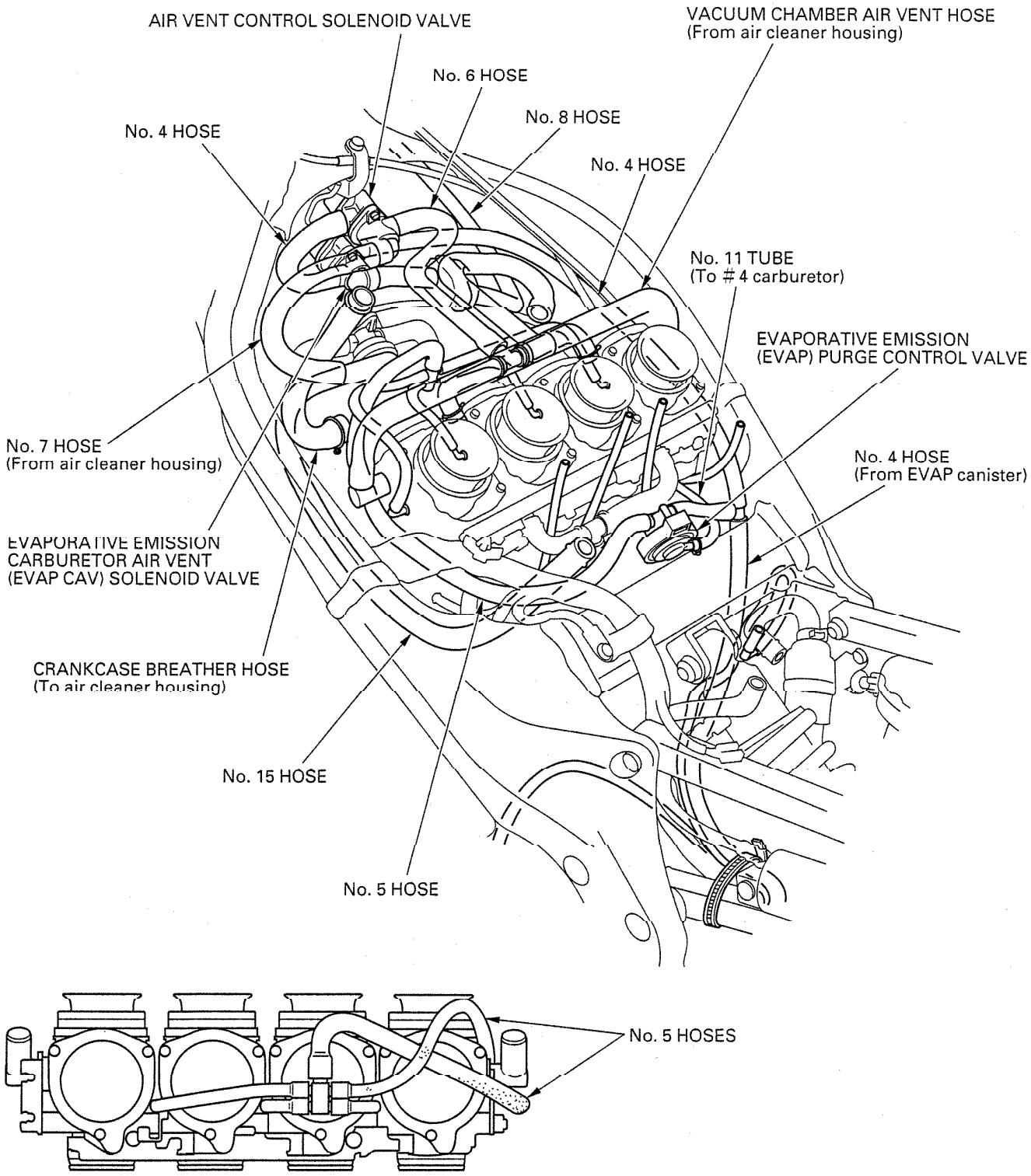



AIR SUPPLY HOSES
(California: No. 16)
VACUUM TUBE
(California: No. 10)
PULSE SECONDARY
AIR INJECTION
(PAIR) CONTROL
VALVE
AIR SUPPLY HOSE
(California: No. 15)
THERMOSTAT
THERMOSENSOR
STARTER MOTOR
CABLE
OIL PRESSURE
SWITCH
SPEED
SENSOR
IGNITION PULSE
GENERATOR 2P (Red)
CONNECTOR
THROTTLE SENSOR WIRE
GROUND
CABLE
SPEED SENSOR 3P
(Black) CONNECTOR
20°
60°

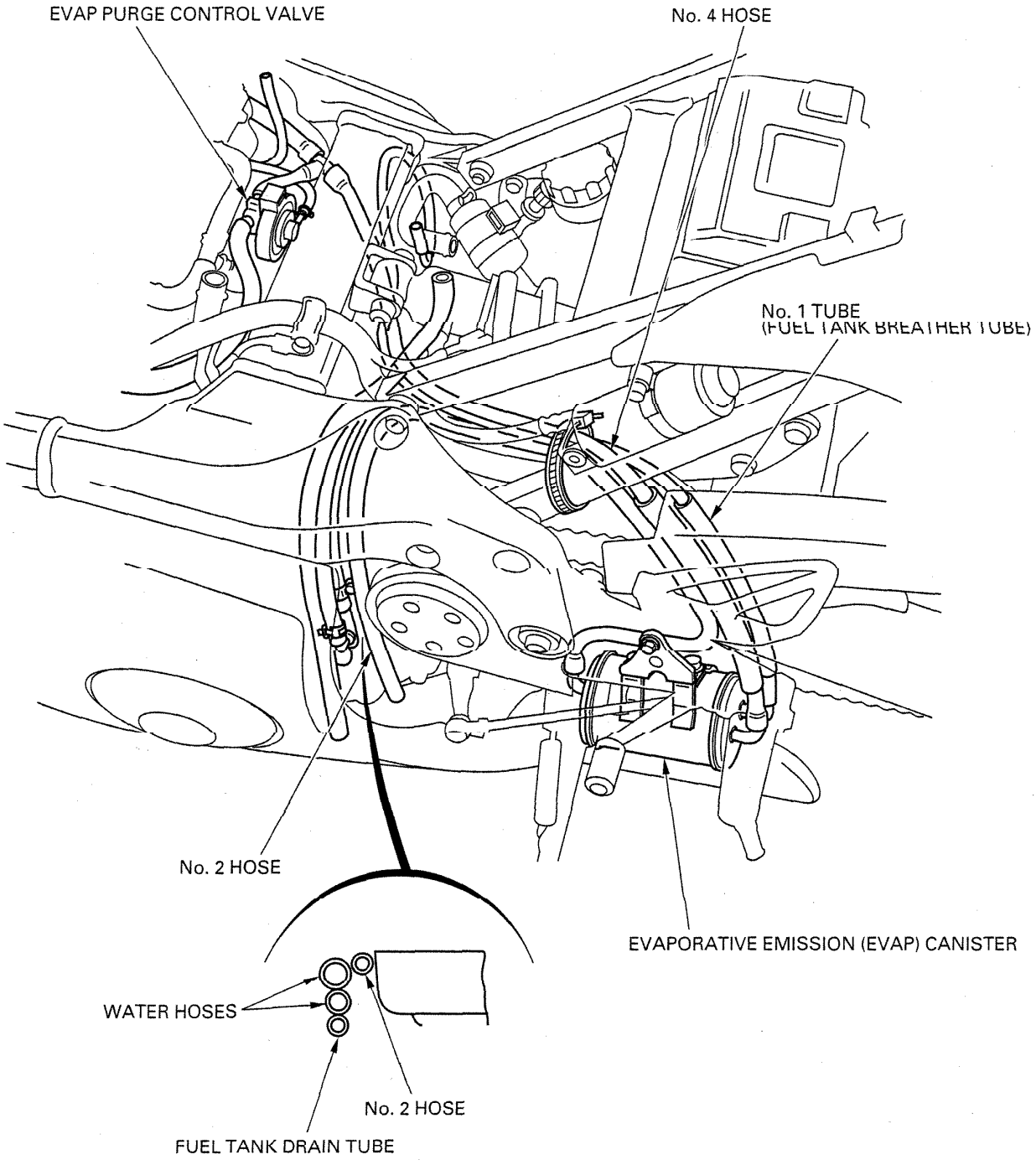

FUEL RESERVE SENSOR CONNECTORS
FUEL TANK BREATHER TUBE
(49 state/Canada type)
FUEL FILTER
THROTTLE
STOP SCREW
FUEL TANK DRAIN TUBE
STARTER MOTOR CABLE
FUEL PUMP
STARTER RELAY SWITCH
BATTERY
FUSE BOX
REAR BRAKE LIGHT SWITCH
2P (White) CONNECTOR
FUEL PUMP 2P (Black) CONNECTOR

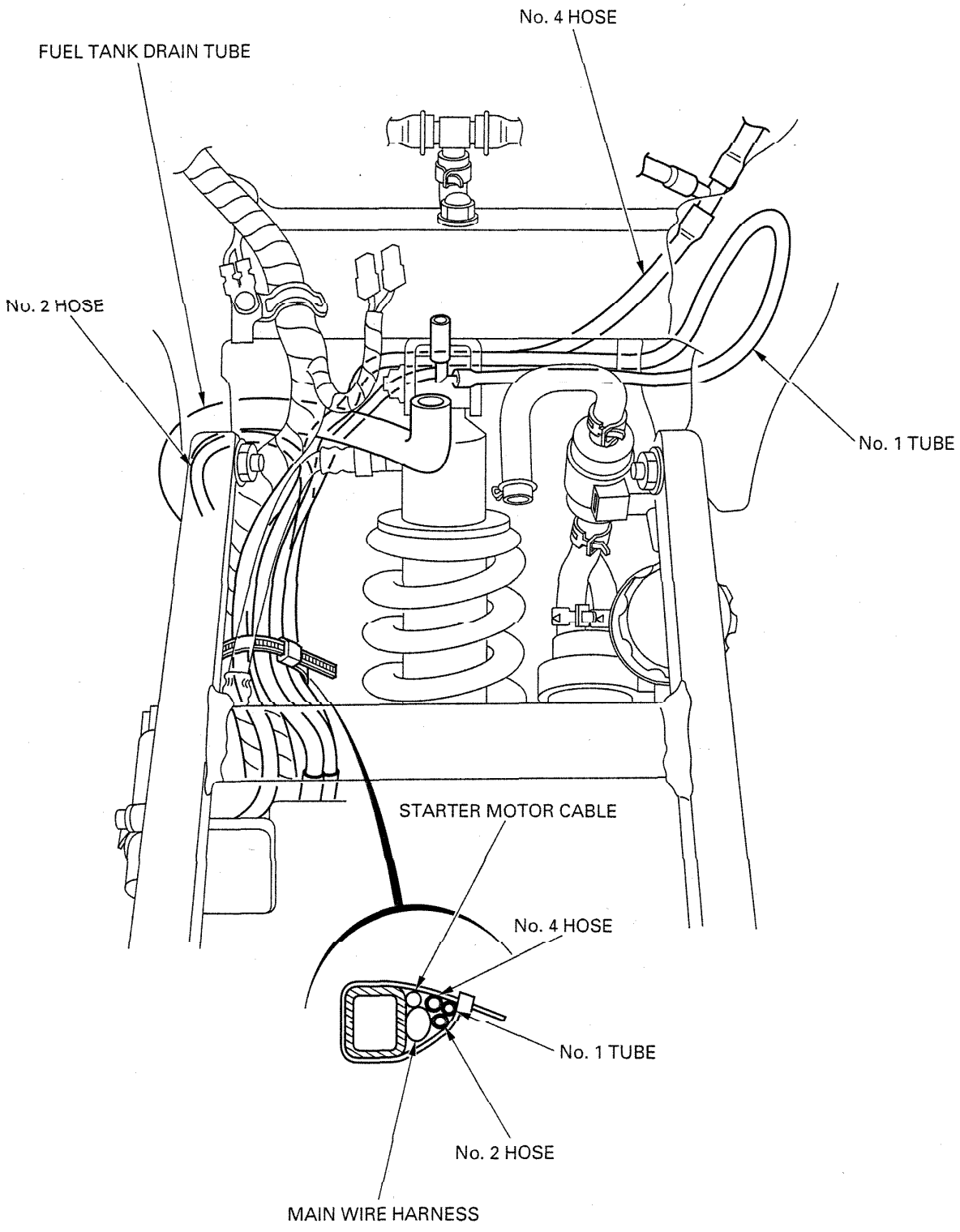

SEAT LOCK CABLE
BRAKE/TAIL LIGHT CONNECTORS
TURN SIGNAL AND LICENSE LIGHT CONNECTORS
REAR BRAKE LIGHT SWITCH WIRE
AIR VENT CONTROL SOLENOID VALVE RELAY (49 state/Canada type only)
IGNITION CONTROL MODULE (ICM)
GROUND CABLE
FUEL PUMP TRANSFER RELAY
TURN SIGNAL RELAY
FUEL CUT-OFF RELAY
REGULATOR/ RECTIFIER
Clamp (WHITE TAPE)
REAR BRAKE LIGHT SWITCH
CLAMP
LICENSE LIGHT WIRE

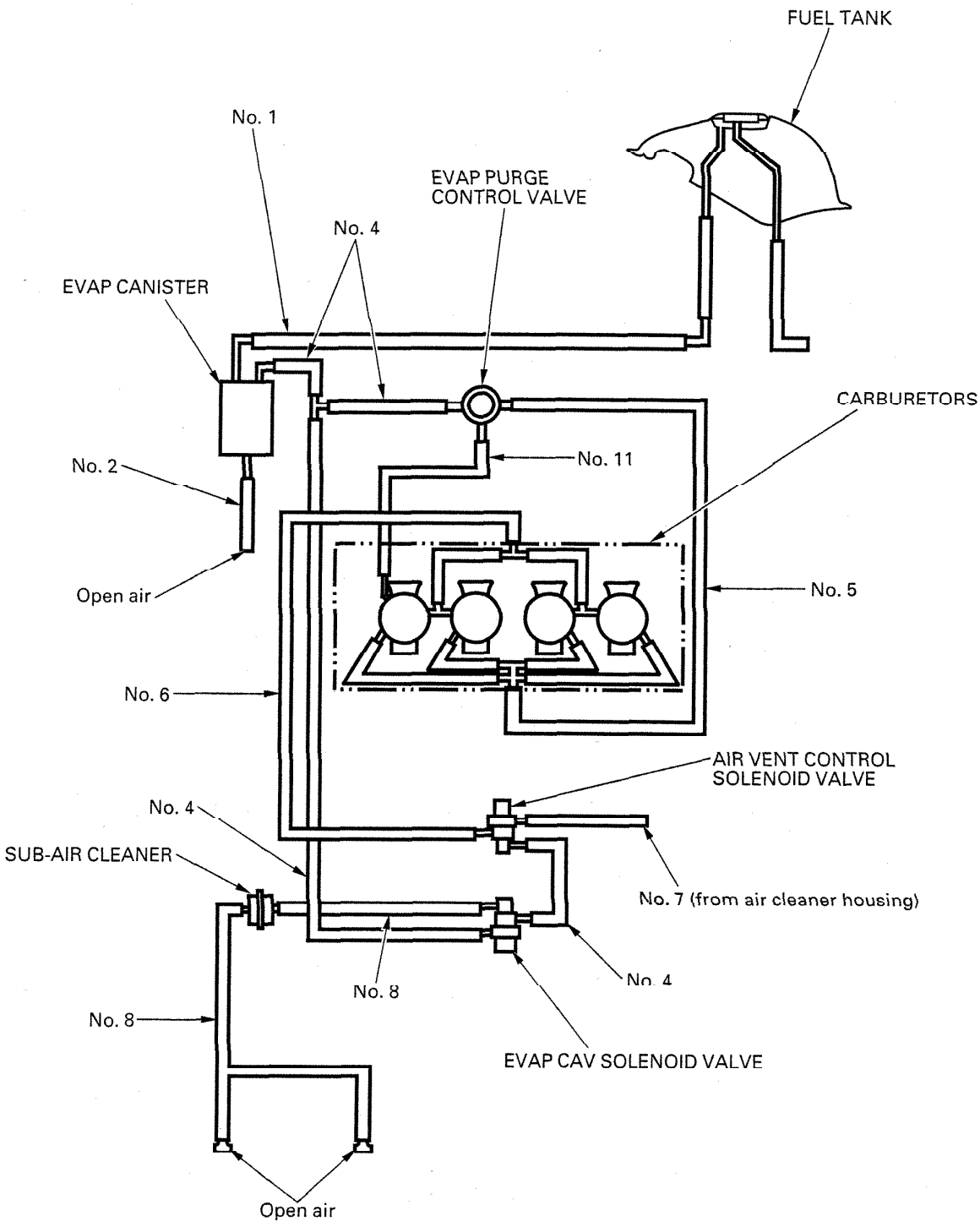
California type only:



California type only:




No. 4 HOSE
FUEL TANK DRAIN TUBE
No. 2 HOSE
No. 1 TUBE
STARTER MOTOR CABLE
No. 4 HOSE
No. 1 TUBE
No. 2 HOSE
MAIN WIRE HARNESS


FUEL TANK
No. 1
EVAP PURGE
CONTROL VALVE
No. 4
EVAP CANISTER
CARBURETORS
No. 2
No. 11
Open air
No. 5
No. 6
AIR VENT CONTROL
SOLENOID VALVE
No. 4
SUB-AIR CLEANER
No. 7 (from air cleaner housing)
No. 8
No. 4
No. 8
EVAP CAV SOLENOID VALVE
Open air

EMISSION CONTROL SYSTEMS

The U.S. Environmental Protection Agency, Transport Canada and California Air Resources Board (CARB) require manufacturers to certify that their motorcycles comply with applicable exhaust emissions standards during their useful life, when operated and maintained according to the instructions provided, and that motorcycles built after January 1, 1983 comply with applicable noise emission standards for one year or 6,000 km (3,730 miles) after the time of sale to the ultimate purchaser, when operated and maintained according to the instructions provided. Compliance with the terms of the Distributor's Limited Warranty for Honda Motorcycle Emission Control Systems is necessary in order to keep the emissions system warranty in effect.

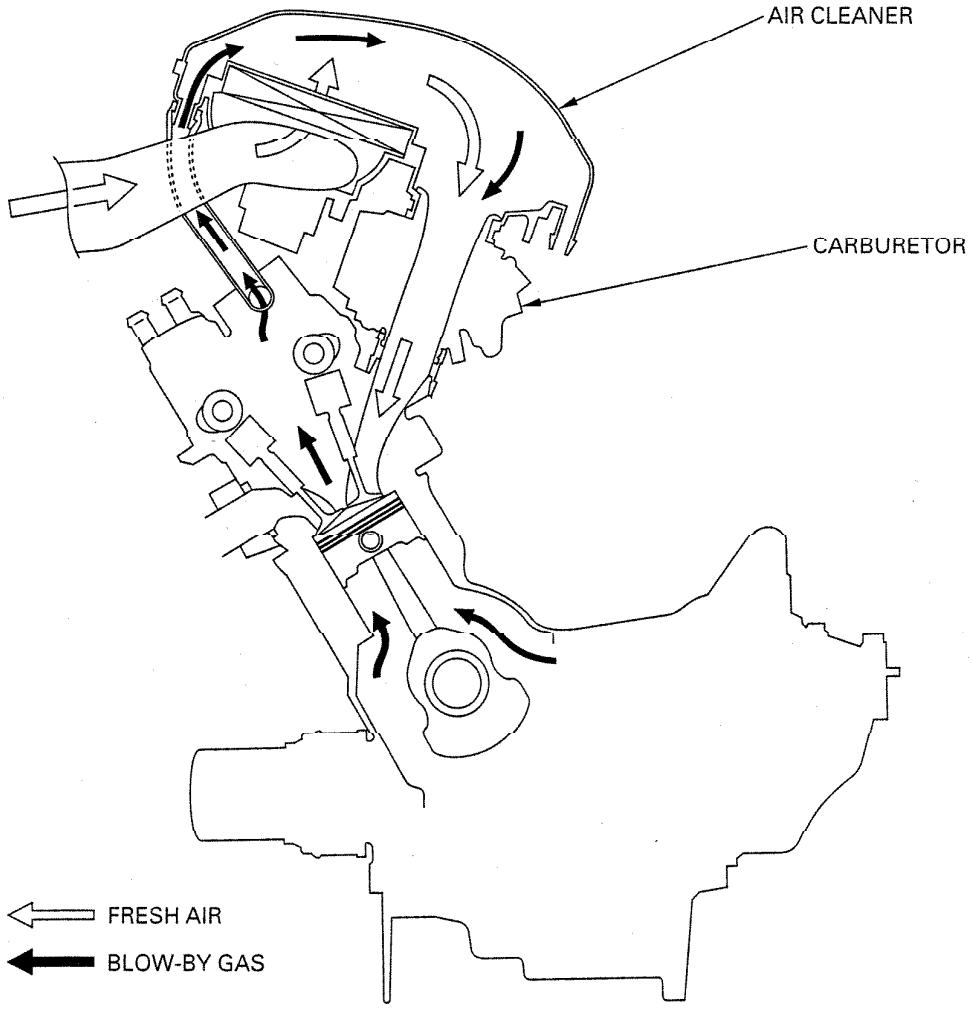
SOURCE OF EMISSIONS

The combustion process produces carbon monoxide and hydrocarbons. Controlling hydrocarbon emissions is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

Honda Motor Co., Ltd. utilizes lean carburetor settings as well as other systems, to reduce carbon monoxide and hydrocarbons.

CRANKCASE EMISSION CONTROL SYSTEM

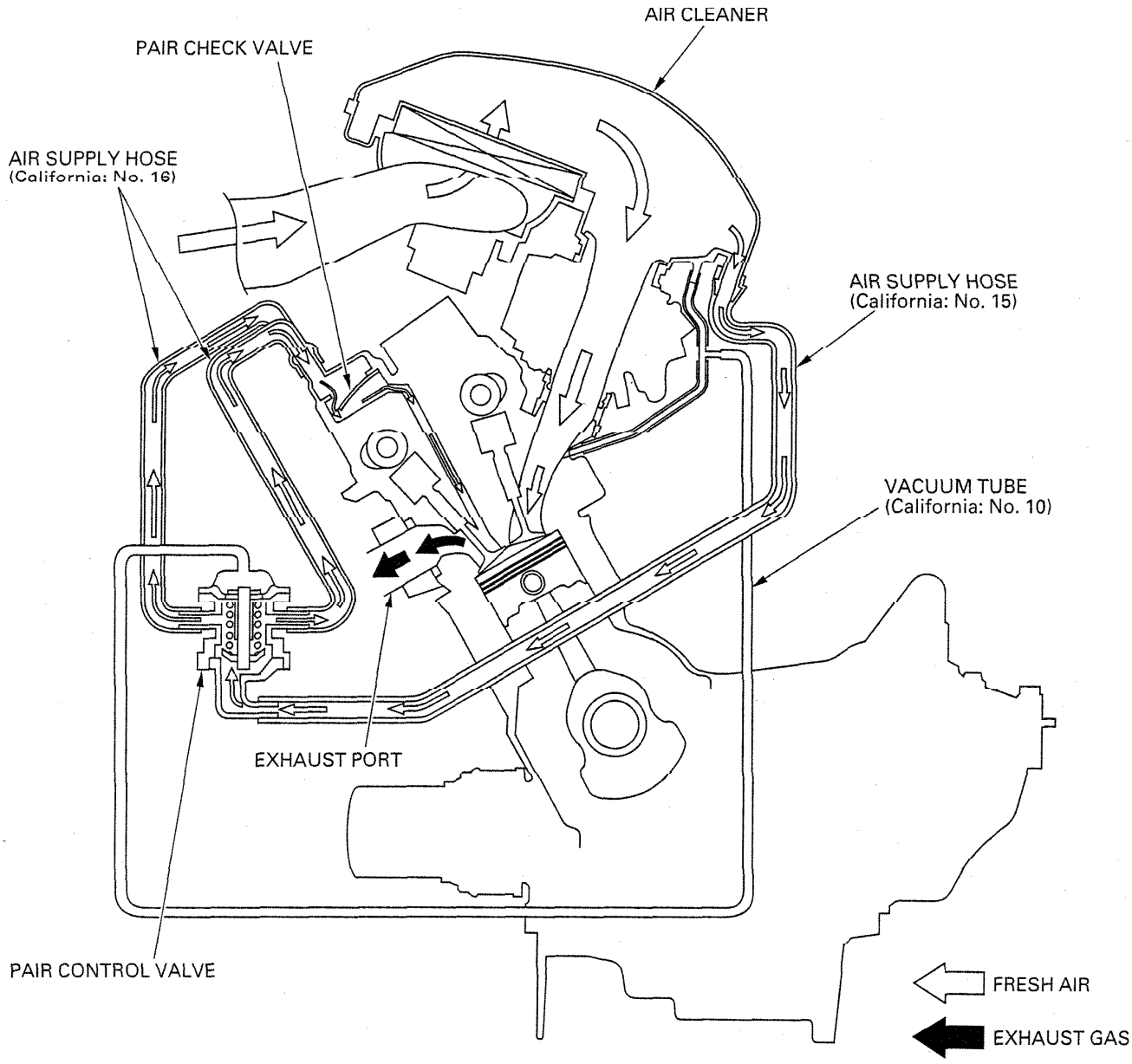
The engine is equipped with a closed crankcase system to prevent discharging crankcase emissions into the atmosphere. Blow-by gas is returned to the combustion chamber through the air cleaner and carburetor.



EXHAUST EMISSION CONTROL SYSTEM (PULSE SECONDARY AIR INJECTION SYSTEM)

The exhaust emission control system consists of a secondary air supply system which introduces filtered air into the exhaust gases in the exhaust port. Fresh air is drawn into the exhaust port whenever there is a negative pressure pulse in the exhaust system. This charge of fresh air promotes burning of the unburned exhaust gases and charges a considerable amount of hydrocarbons and carbon monoxide into relatively harmless carbon dioxide and water vapor.
This model has the pulse secondary air injection (PAIR) control valve and PAIR check valves. PAIR check valve prevents reverse air flow through the system. The PAIR control valve reacts to high intake manifold vacuum and will cut off the supply of fresh air during engine deceleration, thereby preventing afterburn in the exhaust system.

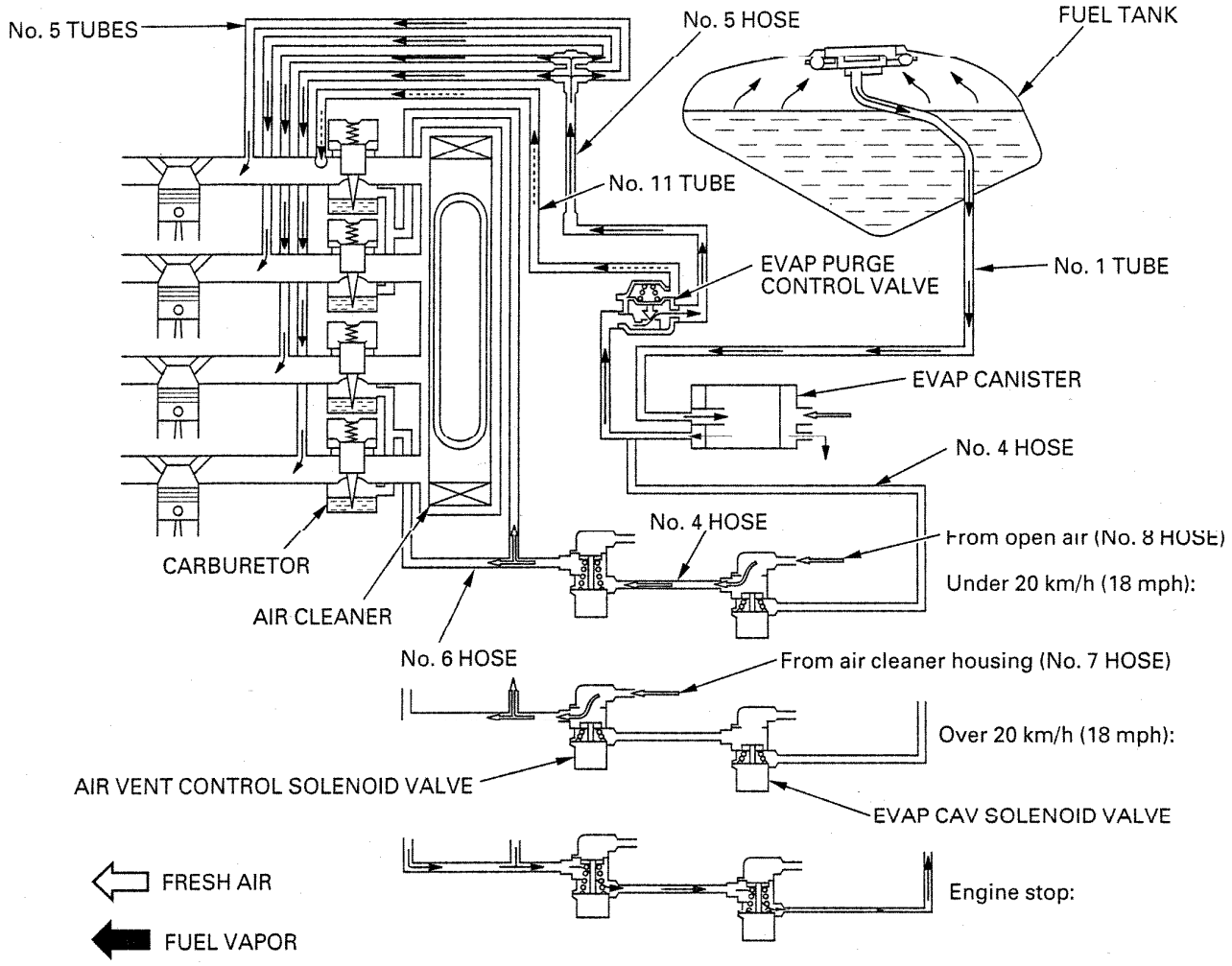
No adjustment to the pulse secondary air injection system should be made, although periodic inspection of the components is recommended.



EVAPORATIVE EMISSION CONTROL SYSTEM (California type only)

This model complies with California Air Resources Board evaporative emission requirements.

Fuel vapor from the fuel tank and carburetors is routed into the evaporative emission (EVAP) canister where it is adsorbed and stored while the engine is stopped. When the engine is running and the EVAP purge control valve is open, fuel vapor in the EVAP canister is drawn into the engine through the carburetor. At the same time, the EVAP carburetor air vent (CAV) solenoid valve is open and air is drawn into the carburetor through the valve.



NOISE EMISSION CONTROL SYSTEM

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

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

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

EMISSION CONTROL INFORMATION LABELS

An Emission Control Information Label is located on the rear fender under the seat as shown. It gives basic tune-up specifications.

VEHICLE EMISSION CONTROL INFORMATION UPDATE LABEL

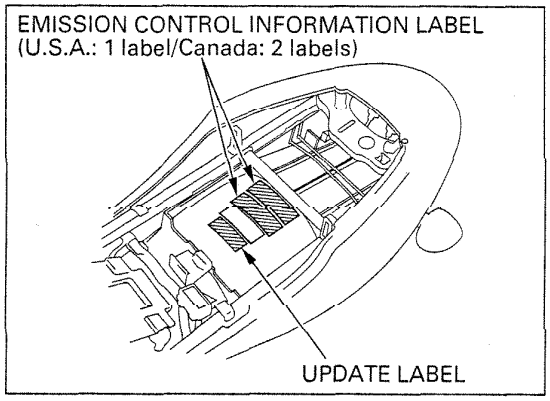
After making a high altitude carburetor adjustment (page 5-34), attach an update label on the rear fender under the seat as shown.

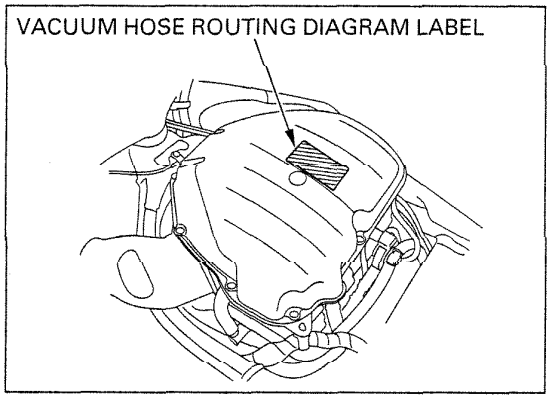
Instructions for obtaining the update label are given in Service Letter No. 132.

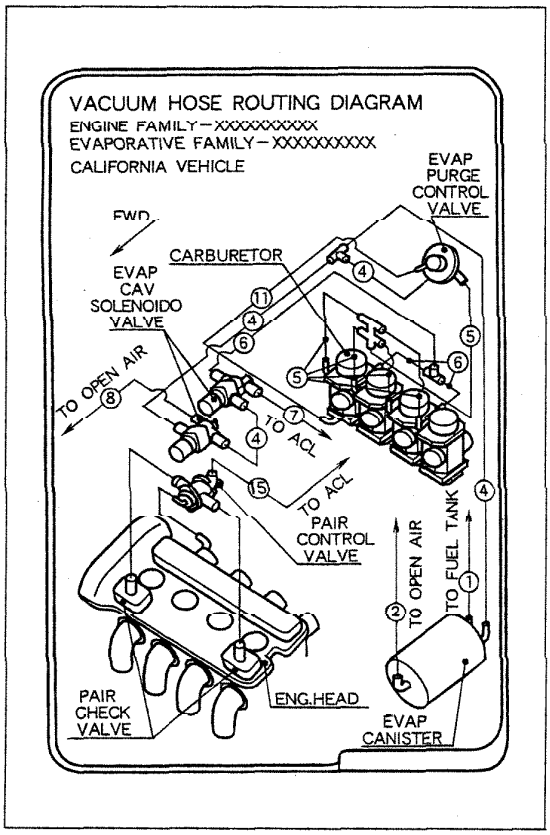
When readjusting the carburetors back to the low altitude specifications, be sure to remove this update label.

VACUUM HOSE ROUTING DIAGRAM LABEL (California type only)

The Vacuum Hose Routing Diagram Label is located on the air cleaner housing cover as shown. The fuel tank must be removed to read it.







2. FRAME/BODY PANELS/EXHAUST SYSTEM

SERVICE INFORMATION

GENERAL

⚠WARNING

- ***Gasoline is extremely flammable and is explosive under certain conditions. KEEP OUT OF REACH OF CHILDREN.***
- ***Serious burns may result if the exhaust system is not allowed to cool before components are removed or serviced.***

- Work in a well ventilated area. Smoking or allowing flames or sparks in the work area or where gasoline is stored can cause a fire or explosion.
- This section covers removal and installation of the body panels, fuel tank and exhaust system.
- Always replace the exhaust pipe gasket when removing the exhaust pipe from the engine.
- Always inspect the exhaust system for leaks after installation.

TORQUE VALUES

Exhaust pipe joint nut	12 N·m (1.2 kgf·m , 9 lbf·ft)
Muffler band bolt	23 N·m (2.3 kgf·m , 17 lbf·ft)
Seat cowl screw	2 N·m (0.2 kgf·m , 1.4 lbf·ft)
Front inner fairing screw	2 N·m (0.2 kgf·m , 1.4 lbf·ft)
Front fairing-to-side fairing bolt	2 N·m (0.2 kgf·m , 1.4 lbf·ft)
Passenger footpeg bracket bolt	26 N·m (2.7 kgf·m , 20 lbf·ft)
Seat rail mounting bolt	49 N·m (5.0 kgf·m , 36 lbf·ft)

TROUBLESHOOTING

Excessive exhaust noise

- Broken exhaust system
- Exhaust gas leaks

Poor performance

- Deformed exhaust system
- Exhaust gas leaks
- Clogged muffler

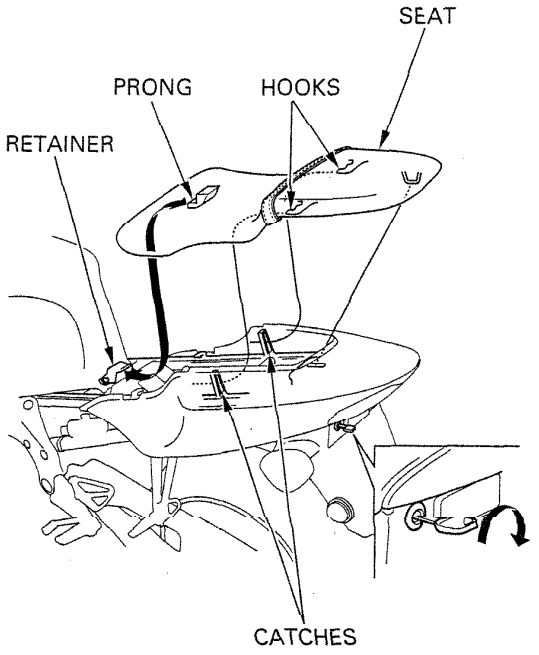
SEAT

REMOVAL

Unlock the seat with the ignition key.
Pull the seat back and remove it.

INSTALLATION

Install the seat by inserting the prong into the retainer on the fuel tank and the hooks into the catches on the frame.
Push the seat forward, then down to lock it.



SEAT COWL

Remove the seat.

Remove the two socket bolts.
Remove the two screws.
Remove the two trim clips.
Disconnect the taillight connectors.

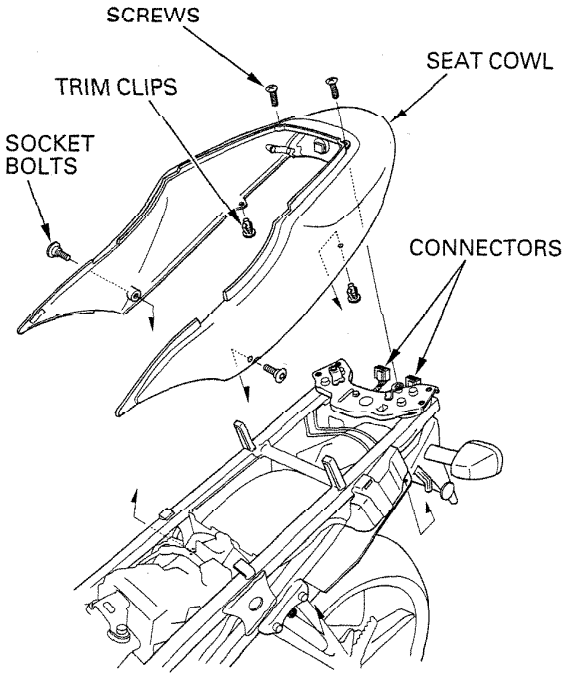
Pull the seat cowl back out of the frame while opening the front portion of it.

Installation is in the reverse order of removal.

NOTE:

Make sure that the mating surfaces of the cowl bottom are seated onto the rear fender properly before tightening the fasteners.

TORQUE: Screw: 2 N·m (0.2 kgf·m , 1.4 lbf·ft)



FUEL TANK

⚠WARNING

Gasoline is extremely flammable and is explosive under certain conditions. KEEP OUT OF REACH OF CHILDREN.

Remove the seat (page 2-2).

Remove the duct cover socket bolts.
Remove the air duct covers by releasing the cover tab from the instrument panel and the side fairing boss from the cover grommet.

Remove the two 6 mm tank mounting bolts and washers.
Remove the two collars from the mounting rubbers.

Do not raise more than necessary to avoid damaging the mounting rubbers and tank.

Raise the front portion of the fuel tank and support it with the eyelet wrench in the tool kit by setting it between the end of the shock absorber and the recess of the tank bottom properly as shown.

Turn the fuel valve OFF and disconnect the following.
—fuel tube
—drain tube
—breather tube (California: No. 1 tube)
—fuel level sensor connectors.

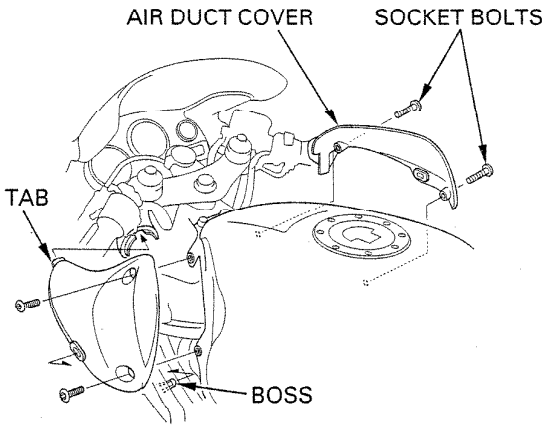
Remove the eyelet wrench and rest the fuel tank on the frame.
Remove the two 8 mm mounting bolts and seat retainer.
Remove the fuel tank.

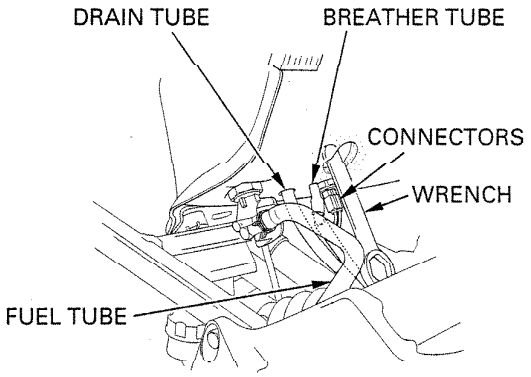
Install the removed parts in the reverse order of removal.

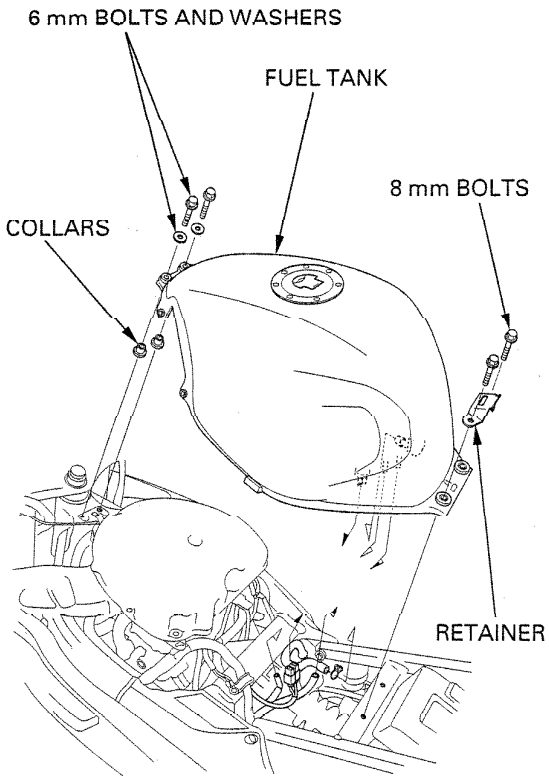
NOTE:

- When tightening the tank mounting fasteners, loosely install all mounting bolts and tighten the 6 mm bolts first, then the 8 mm bolts securely.
- Be careful not to dislodge the rubber nuts in the fuel tank when tightening the duct cover bolts.

TORQUE :
Duct cover bolt: 2 N·m (0.2 kgf·m , 1.4 lbf·ft)







SIDE FAIRING

Remove the following:
—three trim clips
—two screws
—six socket bolts.

Release the boss from the duct cover grommet and remove the side cowl.

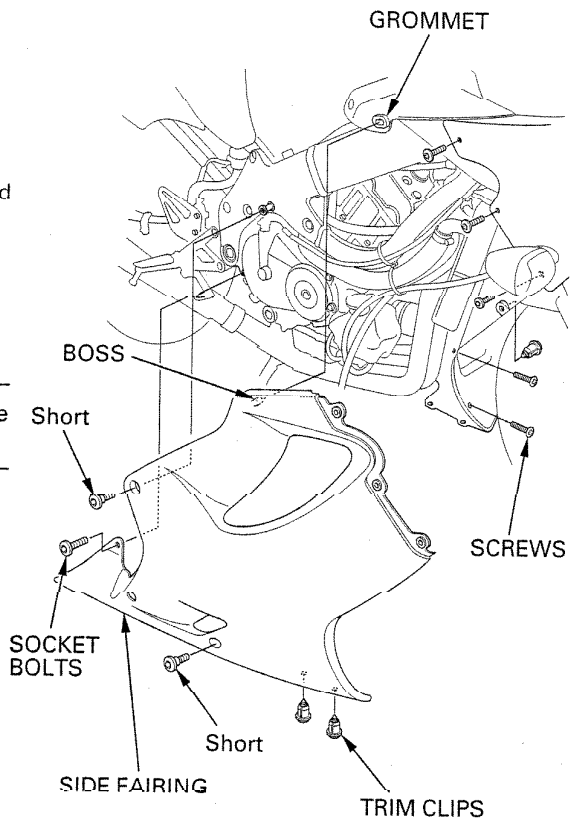
Left side fairing only: Remove the fuel tank drain and breather tubes.

Installation is in the reverse order of removal.

NOTE:

Be careful not to dislodge the rubber nuts in the side fairing when tightening the front side bolts.

TORQUE: Socket bolt (Three bolts on front side):
2 N·m (0.2 kgf·m , 1.4 lbf·ft)



FRONT INNER FAIRING

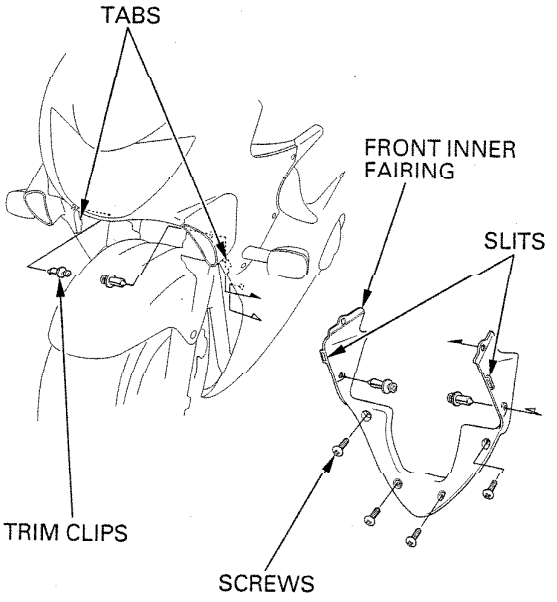
Remove the following:
—four trim clips
—four screws
—inner fairing by releasing front fairing tabs from inner fairing slits.

Installation is in the reverse order of removal.

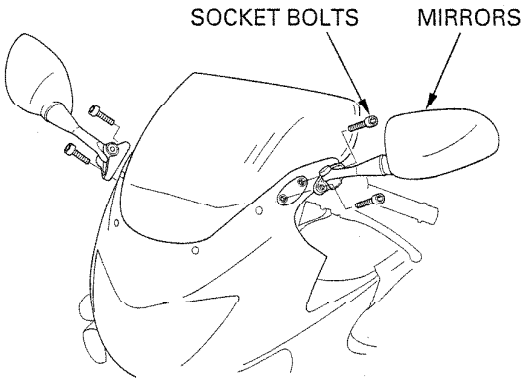
NOTE:

Make sure that the mating areas are aligned properly before tightening the fasteners.

TORQUE: Screw: 2 N·m (0.2 kgf·m , 1.4 lbf·ft)



FRONT FAIRING



Remove the socket bolts and the rearview mirrors.

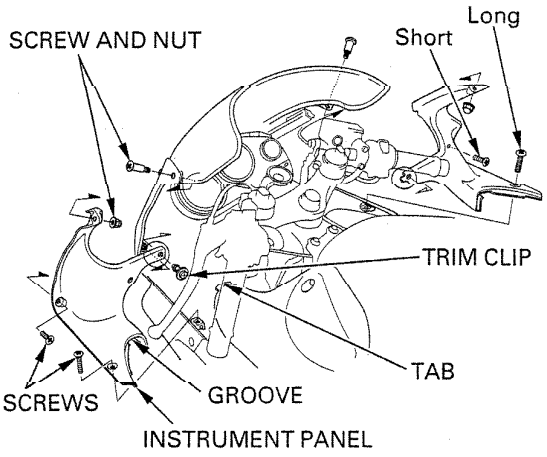
Remove the trim clip from the instrument panel.
Remove the six screws and two nuts.
Remove the instrument panels.

Release the air vent hose (California: No. 8) from the hose clip and disconnect it from the 3-way hose joint.

Be careful not to scratch the front fairing and fender.

Remove the two trim clips and six socket bolts.
Remove the front fairing off the rearview mirror bolt hole studs and rest it on the front fender.
Disconnect the headlight and turn signal connectors.

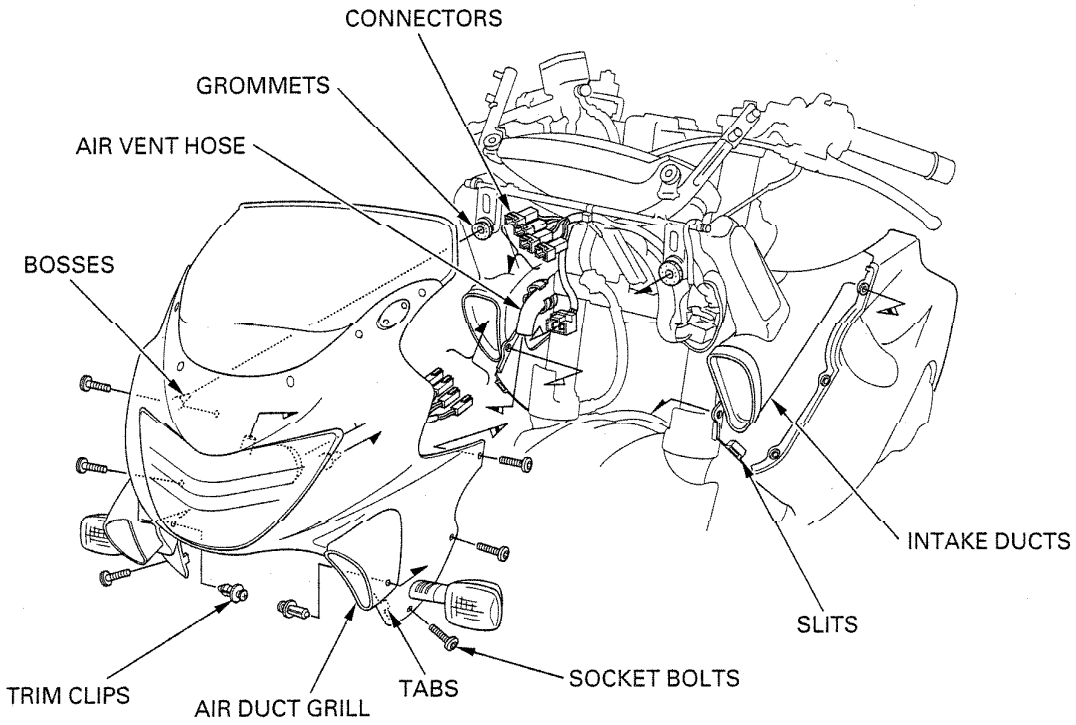
Installation is in the reverse order of removal.



NOTE:

- Install the front fairing air duct grill over the air intake ducts and the bosses into the fairing stay grommets and align the front fairing tabs with the inner fairing slits.
- When tightening the fairing socket bolts, be careful not to dislodge the rubber nuts in the side fairing.
- When installing the instrument panel, align the groove with the tab of the duct cover.

TORQUE :
Fairing socket bolt: 2 N·m (0.2 kgf·m , 1.4 lbf·ft)



WINDSHIELD

Remove the rearview mirrors (page 2-5).

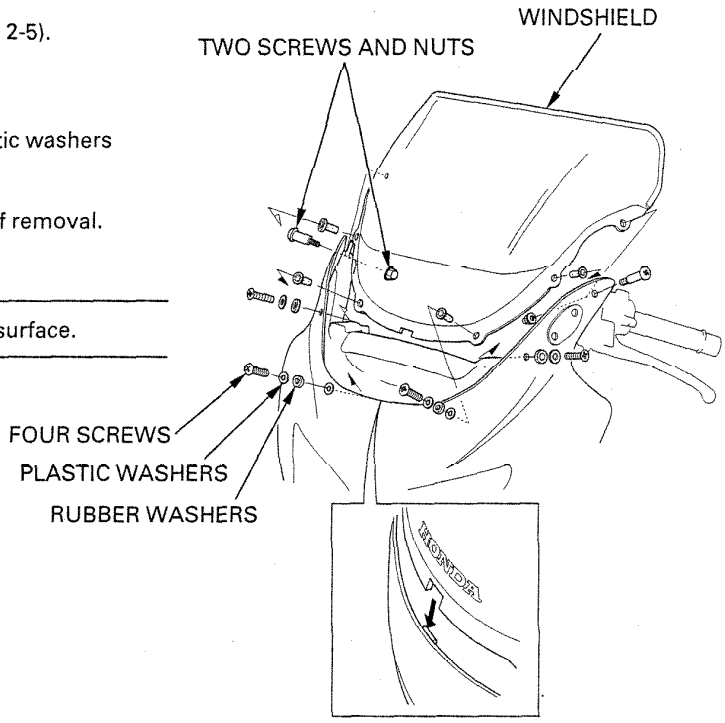
Remove the following:
—two screws and nuts
—four screws with rubber and plastic washers
—windshield

Align the groove in the windshield with the lug on the front fairing.

Installation is in the reverse order of removal.

NOTE:

Be careful not to scratch the shield surface.



DIRECT AIR INTAKE DUCT

Remove the duct cover (page 2-3).
Remove the instrument panel (page 2-5).

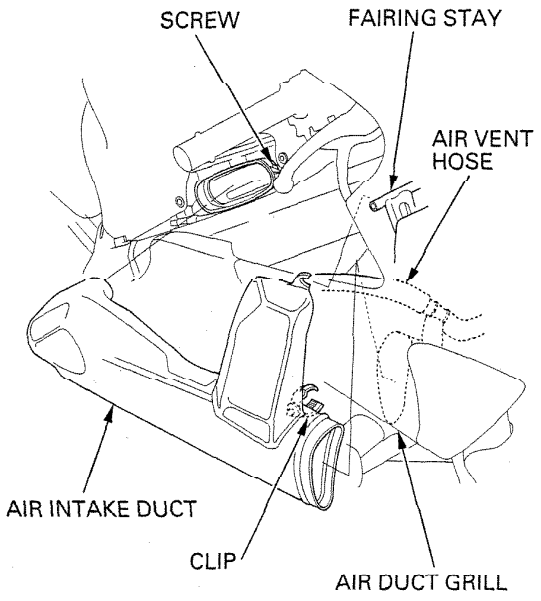
Loosen the connecting tube band screw.

Right duct: Remove the outer air vent hose (California: No. 8) from the duct by releasing the hose clip.

Left duct: Remove the wire harness from the duct.

Remove the air intake duct from the air duct grill of the front fairing and the front fairing stay.

Installation is in the reverse order of removal.



EXHAUST SYSTEM

⚠WARNING

Do not service the exhaust system while it is hot.

CAUTION:

Be careful not to damage the radiator fins.

REMOVAL

MUFFLER

Loosen the muffler band bolts.
Remove the mounting bolt, washer and nut.
Remove the muffler from the exhaust pipe.
Remove the muffler gasket.

EXHAUST PIPE

Remove the radiator from the frame without disconnecting the water hoses (as described in spark plug removal procedure, page 3-6).
Remove the radiator air guide rubber from the cylinder head.

Remove the exhaust pipe joint nuts.
Remove the mounting bolt, washer and nut, and the exhaust pipe.
Remove the exhaust pipe joint gaskets.

INSTALLATION

EXHAUST PIPE

If the joint stud bolts are loose, tighten them. Be sure to verify the distance from top of stud to the cylinder head surface as shown.

Install new joint gaskets into the exhaust ports.
Set the exhaust pipe onto the engine by aligning the exhaust flanges with the cylinder head studs, then install the joint nuts and the mounting bolt/washer and nut.
Tighten the joint nuts.

TORQUE : 12 N·m (1.2 kgf·m , 9 lbf·ft)

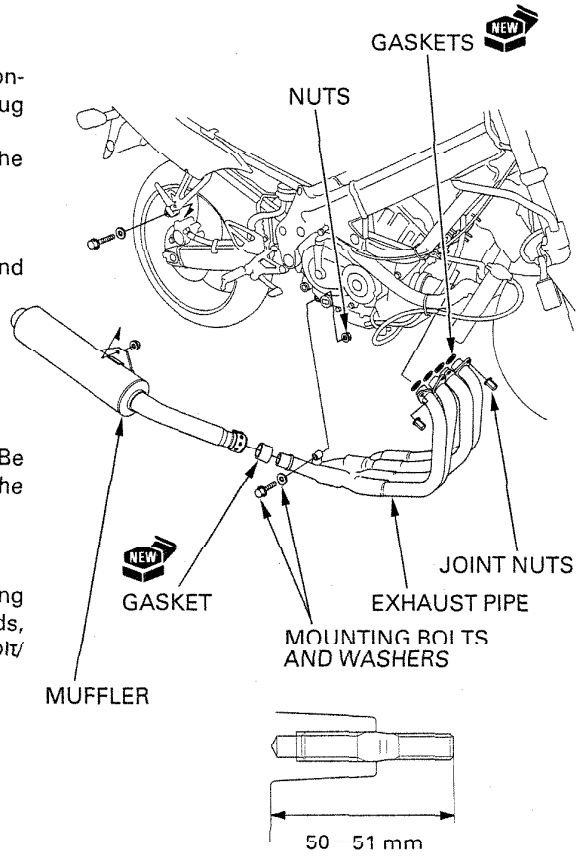
Tighten the mounting bolt.

MUFFLER

Install a new muffler gasket and the muffler over the exhaust pipe.
Install the mounting bolt/washer and nut, and tighten it.
Tighten the muffler band bolts.

TORQUE : 23 N·m (2.3 kgf·m , 17 lbf·ft)

Install the air guide rubber into the cylinder head and the radiator onto the frame if the exhaust pipe is removed (page 3-6).
Install the side fairing and front inner fairing (page 2-4).



REAR FENDER/SEAT RAIL

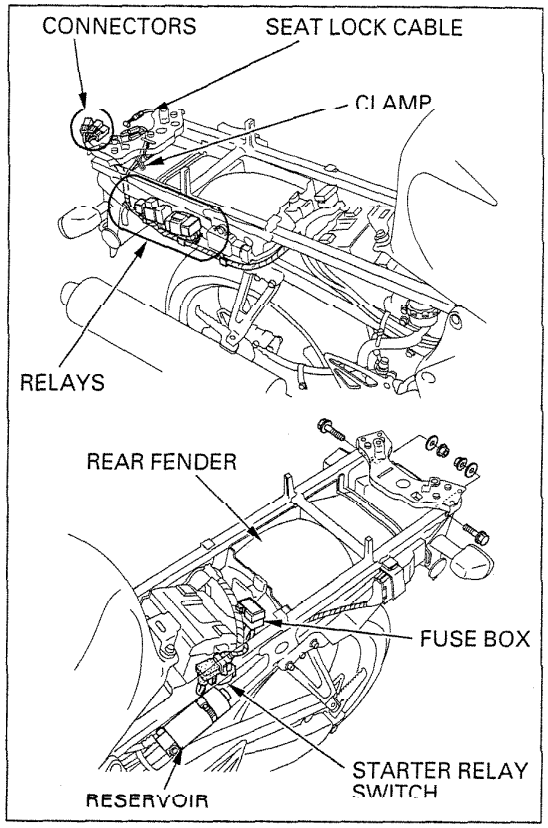
REMOVAL

Remove the seat cowl (page 2-2).
Remove the battery (page 16-4).

Disconnect the following:
- turn signal and license light connectors (release the clamp).
- seat lock cable from seat catch on cross member

Remove the following:
- fuel cut-off relay
- turn signal relay
- fuel pump transfer relay
- air vent control solenoid valve relay (49 state/ Canada only)
- fuse box by releasing the tab on reverse side of fender
- rear shock absorber reservoir by loosing band screw
- starter relay switch

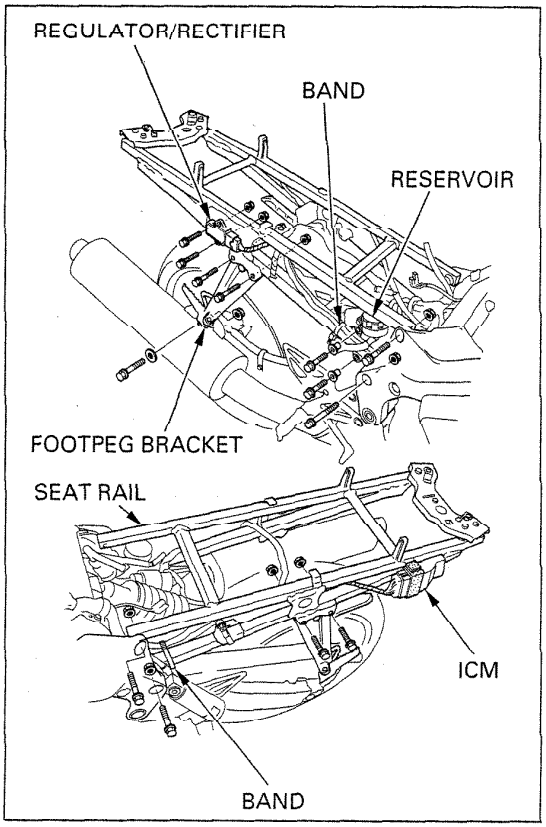
Remove the fender mounting nuts, washers and bolts.
Slide the rear fender rearward, then remove the mounting collars (between the seat rail and fender) and remove the fender from the seat rail.



Remove the fuel tank (page 2-3).

Remove the following:
- wire harness bands
- ignition control module (ICM)
- bolts and regulator/rectifier
- bolts, collars and fuel pump

Secure the reservoir so that it remains upright.
Remove the nuts, bolts, washer and the passenger footpeg brackets.
Remove the four mounting nuts, bolts and seat rail.



INSTALLATION

Route the wire harnesses, cable and hose properly (page 1-18).

Installation is in the reverse order of removal.

TORQUE:

Seat rail mounting:	49 N·m (5.0 kgf·m , 36 lbf·ft)
Footpeg bracket:	26 N·m (2.7 kgf·m , 20 lbf·ft)

3. MAINTENANCE

3

SERVICE INFORMATION

GENERAL

⚠WARNING

When the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in an enclosed area. The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and lead to death. Run the engine in an open area or with an exhaust evacuation system in an enclosed area.

SPECIFICATIONS

ITEM		SPECIFICATIONS
Throttle grip free play		2–6 mm (1/16–1/4 in)
Spark plug	49 state/Canada type	CR9EH-9 (NGK), U27FER-9 (DENSO)
	California type	CR9EHVX-9 (NGK)
Spark plug gap		0.80–0.90 mm (0.031–0.035 in)
Valve clearance	Intake	0.20 ± 0.03 mm (0.008 ± 0.001 in)
	Exhaust	0.28 ± 0.03 mm (0.011 ± 0.001 in)
Recommended engine oil		Honda GN4 4-stroke oil or equivalent motor oil API service classification: SF or SG Viscosity:SAE 10W-40
Engine oil capacity	After draining	3.0 ℓ (3.2 US qt , 2.6 Imp qt)
	After draining/filter change	3.3 ℓ (3.5 US qt , 2.9 Imp qt)
	After disassembly	3.7 ℓ (3.9 US qt , 3.3 Imp qt)
Carburetor vacuum difference (base carburetor: No. 4)		Within 30 mm Hg (1.2 in Hg)

ITEM			SPECIFICATIONS
Engine idle speed	49 state/Canada type		1,300 ± 100 rpm
	California type		1,400 ± 100 rpm
Drive chain slack			25 – 35 mm (1 – 1 3/8 in)
Recommended brake fluid			DOT 4
Clutch lever free play			10 – 20 mm (3/8 – 13/16 in)
Cold tire pressure	Up to 90 kg (200 lbs) load	Front	250 kPa (2.50 kgf/cm², 36 psi)
		Rear	290 kPa (2.90 kgf/cm², 42 psi)
	Up to maximum weight capacity	Front	250 kPa (2.50 kgf/cm², 36 psi)
		Rear	290 kPa (2.90 kgf/cm², 42 psi)
Tire size		Front	120/70 ZR17 (58W)
		Rear	180/55 ZR17 (73W)
Tire brand		Front	BRIDGESTONE BT56F RADIAL E, DUNLOP D207FJ MICHELIN TX15C
		Rear	BRIDGESTONE BT56R RADIAL G, DUNLOP D207P MICHELIN TX25
Minimum tread depth		Front	1.5 mm (0.06 in)
		Rear	2.0 mm (0.08 in)

TORQUE VALUES

Spark plug	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Timing hole cap	18 N·m (1.8 kgf·m, 13 lbf·ft)	Apply grease to the threads
Oil filter cartridge	10 N·m (1.0 kgf·m, 7 lbf·ft)	Apply oil to the threads and seating surface
Engine oil drain bolt	29 N·m (3.0 kgf·m, 22 lbf·ft)	
Rear axle nut	93 N·m (9.5 kgf·m, 69 lbf·ft)	U-nut
Rear brake reservoir mounting bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)	

TOOL

Oil filter wrench	07HAA-PJ70100
Drive chain tool set	07HMH-MR10103 or 07HMH-MR1010B (U.S.A. only)

MAINTENANCE SCHEDULE

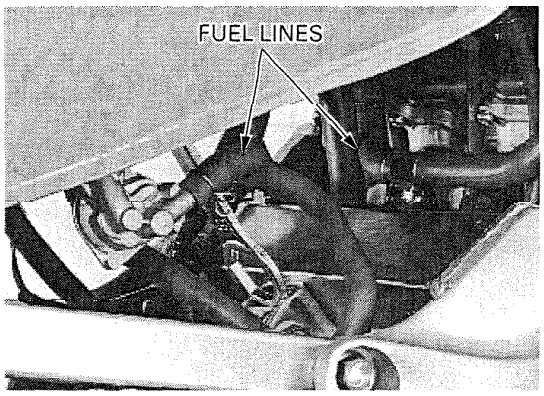
Perform the PRE-RIDE INSPECTION in the Owner's Manual at each scheduled maintenance period.
I: Inspect and Clean, Adjust, Lubricate or Replace if necessary.
C: Clean R: Replace A: Adjust L: Lubricate
The following items require some mechanical knowledge. Certain items (particularly those marked * and **) may require more technical information and tools. Consult your Honda dealer.

		ITEM / FREQUENCY	WHICHEVER COMES → FIRST ↓ NOTE	ODOMETER READING (NOTE 1) × 1,000 mi	0.6	4	8	12	16	20	24	REFER TO PAGE
				× 100 km	10	64	128	192	256	320	384	
EMISSION RELATED ITEMS	*	FUEL LINE					I		I		I	3-4
	*	THROTTLE OPERATION					I		I		I	3-4
	*	CARBURETOR CHOKE					I		I		I	3-5
		AIR CLEANER	NOTE 2					R			R	3-5
		SPARK PLUG				I	R	I	R	I	R	3-6
	*	VALVE CLEARANCE							I			3-8
		ENGINE OIL			R		R		R		R	3-11
		ENGINE OIL FILTER			R		R		R		R	3-12
	*	CARBURETOR SYNCHRONIZATION					I		I		I	3-13
	*	ENGINE IDLE SPEED			I	I	I	I	I	I	I	3-14
		RADIATOR COOLANT	NOTE 3				I		I		R	3-14
	*	COOLING SYSTEM					I		I		I	3-15
	*	SECONDARY AIR SUPPLY SYSTEM					I		I		I	3-15
	*	EVAPORATIVE EMISSION CONTROL SYSTEM	NOTE 4					I			I	3-16
NON-EMISSION RELATED ITEMS		DRIVE CHAIN		Every 500 mi (800 km) I, L								3-16
		BRAKE FLUID	NOTE 3			I	I	R	I	I	R	3-20
		BRAKE PAD WEAR				I	I	I	I	I	I	3-21
		BRAKE SYSTEM			I		I		I		I	3-22
	*	BRAKE LIGHT SWITCH					I		I		I	3-22
	*	HEADLIGHT AIM					I		I		I	3-23
		CLUTCH SYSTEM			I	I	I	I	I	I	I	3-23
		SIDE STAND					I		I		I	3-24
	*	SUSPENSION					I		I		I	3-24
	*	NUTS, BOLTS, FASTENERS			I		I		I		I	3-26
	**	WHEELS/TIRES					I		I		I	3-27
	**	STEERING HEAD BEARINGS			I		I		I		I	3-27

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

NOTES:
1. At higher odometer readings, repeat at the frequency interval established here.
2. Service more frequently if the motorcycle is ridden in unusually wet or dusty areas.
3. Replace every 2 years, or at indicated odometer interval, whichever comes first. Replacement requires mechanical skill.
4. California type only.

FUEL LINE



Raise the fuel tank (page 2-3).

Check the fuel lines for deterioration, damage or leakage.
Replace the fuel lines if necessary.

THROTTLE OPERATION

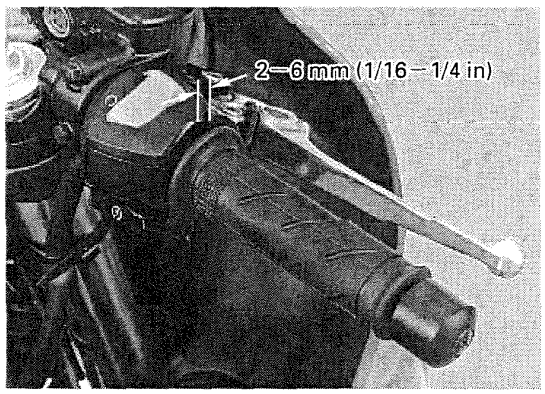
Check for any deterioration or damage to the throttle cables. Check that the throttle grip for smooth operation. Check that the throttle opens and automatically closes in all steering positions.

If the throttle grip does not return properly, lubricate the throttle cables and overhaul and lubricate the throttle grip housing.
For cable lubrication: Disconnect the throttle cables at their upper ends. Thoroughly lubricate the cables and their pivot points with a commercially available cable lubricant or a light weight oil.

If the throttle grip still does not return properly, replace the throttle cables.

⚠WARNING

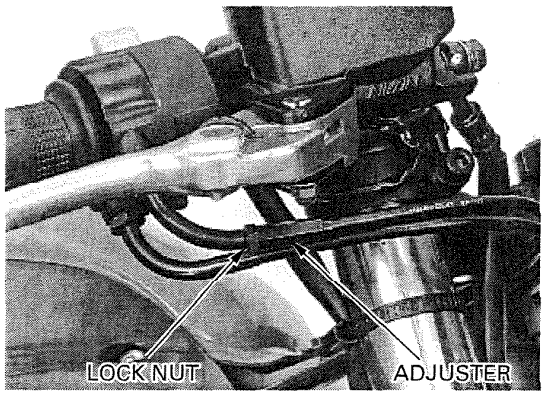
Reusing a damaged or abnormally bent or kinked throttle cable can prevent proper throttle slide operation and may lead to a loss of throttle control while riding.



With the engine idling, turn the handlebar all the way to the right and left to ensure that the idle speed does not change. If idle speed increases, check the throttle grip free play and the throttle cable connection.

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

THROTTLE GRIP FREE PLAY:
2—6 mm (1/16—1/4 in)



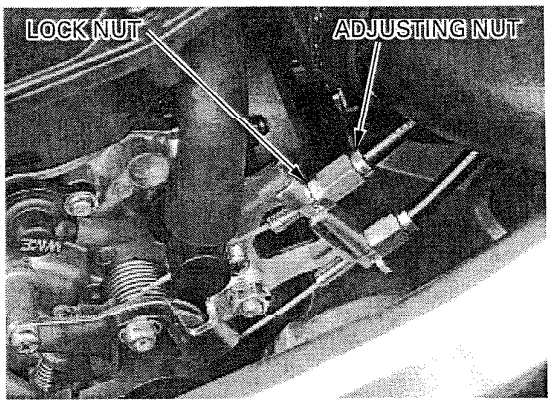
Throttle grip free play can be adjusted at either end of the throttle cable. Minor adjustments are made with the upper adjuster.

Loosen the lock nut, turn the adjuster as required and tighten the lock nut.

Major adjustments are made with the lower adjuster.

Raise the fuel tank and support it (page 2-3).
Loosen the lock nut, turn the adjusting nut as required and tighten the lock nut.

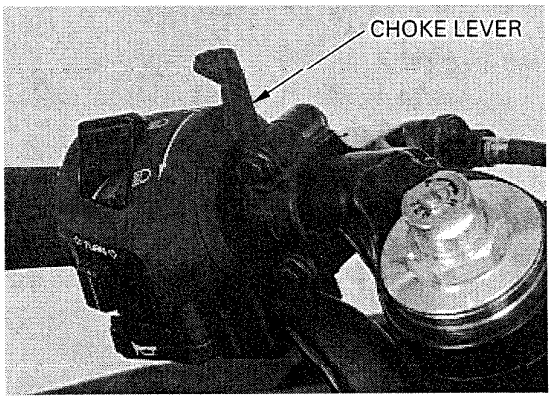
Recheck the throttle operation and install the fuel tank (page 2-3).



CARBURETOR CHOKE

This model's choke system uses a fuel enriching circuit controlled by a starting enrichment (SE) valve. The SE valve opens the enriching circuit via a cable when the choke lever on the left handlebar is turned this side.

Check for smooth choke lever operation and lubricate the choke if required.
Check the choke cable for frayed, kinked or other damage.



AIR CLEANER

NOTE:

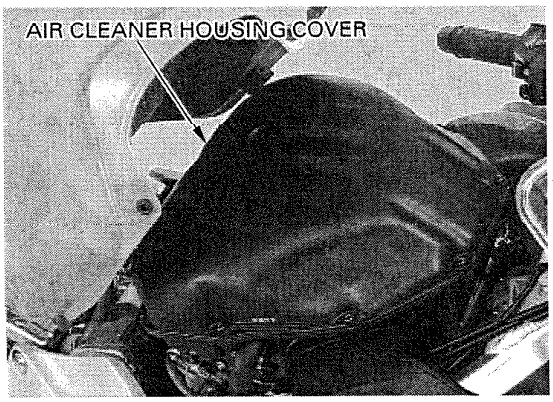
- The viscous paper element type air cleaner cannot be cleaned because the element contains a dust adhesive.
- If the motorcycle is used in wet or dusty areas, more frequent inspections are required.

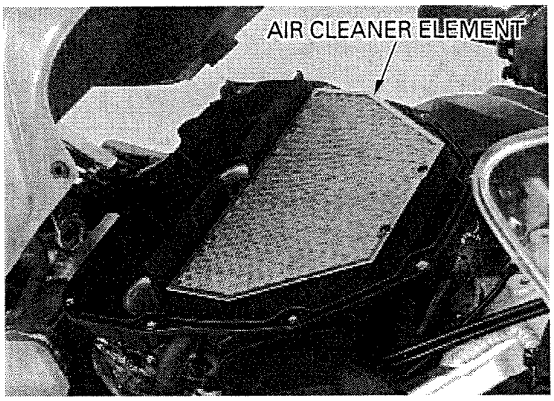
Raise the fuel tank and support it (page 2-3).

Remove the ten cover screws and the air cleaner housing cover.
Replace the element in accordance with the maintenance schedule or any time it is excessively dirty or damaged.

Install the air cleaner element and cover, and tighten the screws.

Install the fuel tank (page 2-3).





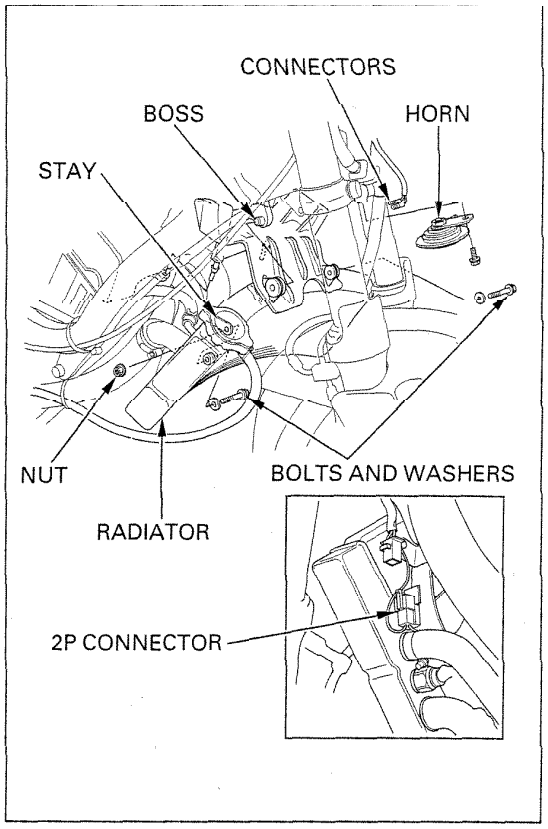
SPARK PLUG

⚠WARNING

Wear insulated gloves to avoid burns while the engine is hot.

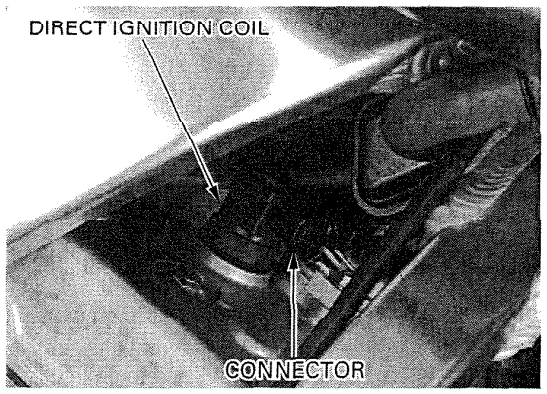
Remove the side fairings and the front inner fairing (page 2-4).

Disconnect the fan motor switch 2P (Black) connector.
Disconnect the horn connectors. Remove the horn bolt and horn.
Remove the radiator mounting bolts, washers and nut.



Cover the radiator with a shop towel to avoid damaging the radiator fins.
Swing the radiator forward so that the lower mounting stay is not interfered with the radiator. Slide the radiator to the right to remove it off the boss of the frame.
Move the radiator down without disconnecting the water hoses and secure it to the fork legs.

Disconnect the ignition coil 2P connectors and remove the direct ignition coils.
Clean around the spark plug bases.

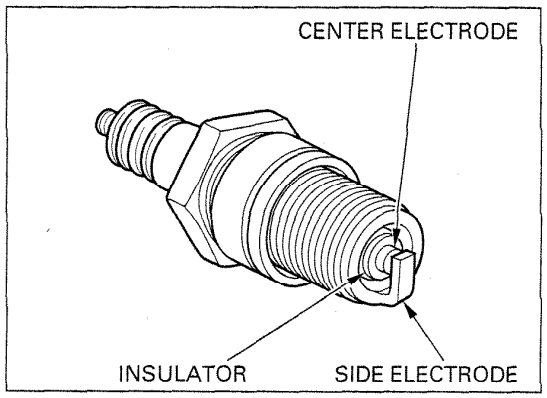


NOTE:

- This motorcycle adopted the direct type ignition coil that the spark plug cap and ignition coil are integrated.
- Clean around the spark plug bases with compressed air before removing the plugs, and be sure that no debris is allowed to enter the combustion chamber.

Remove the spark plugs.

49 state/Canada type: Check the insulator for cracks or damage, and the electrodes for wear, fouling or discoloration. Replace the plug if necessary.



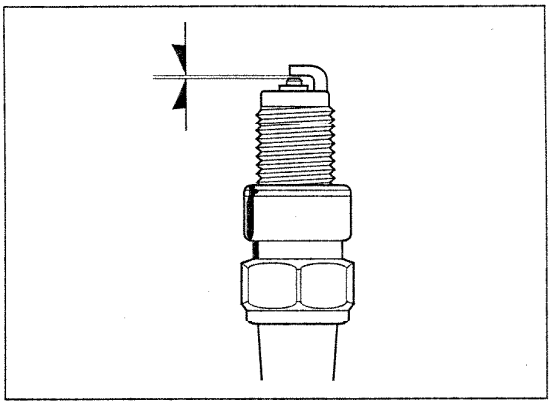
RECOMMENDED SPARK PLUG: CR9EH-9 (NGK)
U27FER-9 (DENSO)

If the electrode is contaminated with carbon deposits, clean the spark plug electrodes using a wire type brush or spark plug cleaner.

Measure the gap between the center and side electrodes with a wire-type feeler gauge. If necessary, adjust the gap by bending the side electrode carefully.

SPARK PLUG GAP:
0.80—0.90 mm (0.031—0.035 in)

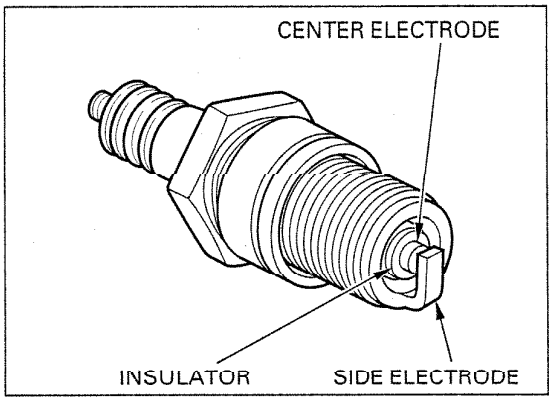
Install the spark plug (page 3-8).



California type: Check the insulator for cracks or damage, and the electrodes for wear, fouling or discoloration. Replace the plug if necessary.
If the electrode is contaminated with carbon deposits, clean the electrode using the spark plug cleaner.

CAUTION:

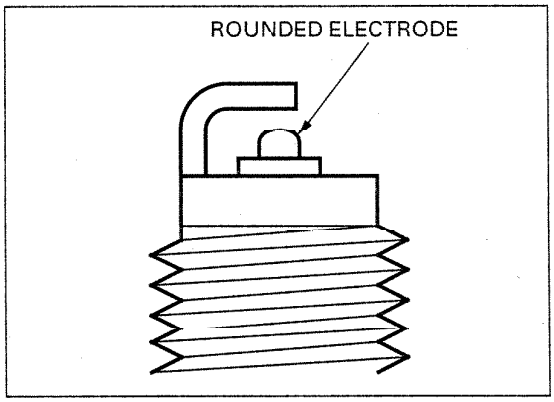
- ***This motorcycle's (california type) spark plug is equipped with platinum type electrodes. Do not use wire brush to clean the electrodes.***
- ***The plug cleaner should be used with the air pressure of less than 6 kgf/cm² (85 psi) and for less than 20 seconds.***



Replace the plug if the center electrode is rounded as shown.

Always use specified spark plugs on this motorcycle.

SPECIFIED SPARK PLUG: CR9EHVX-9 (NGK)



Measure the gap between the center and side electrodes with a wire-type feeler gauge.

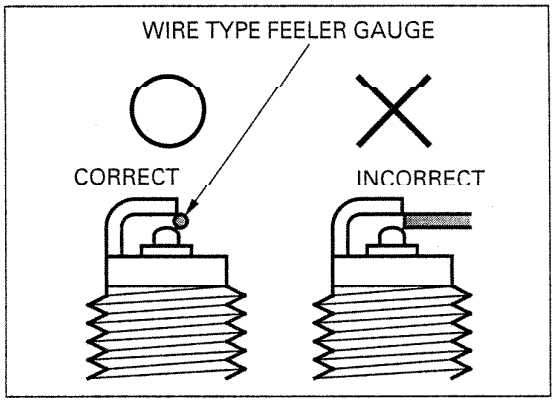
CAUTION:

To prevent damaging the platinum coating of the center electrode, use a wire type feeler gauge to check the spark plug gap.

Make sure that the 1.0 mm (0.04 in) wire type feeler gauge cannot be inserted into the gap.
If the gauge can be inserted into the gap, replace the plug with a new one.

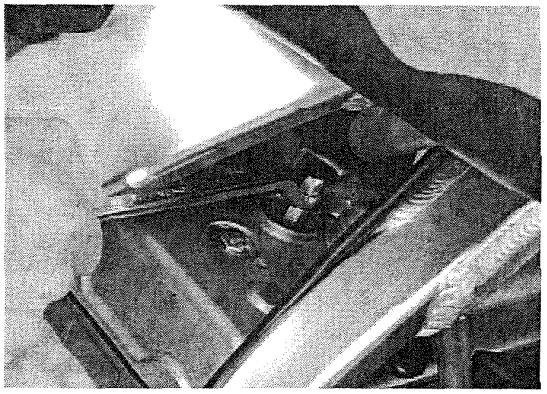
CAUTION:

Do not adjust the spark plug gap. If the gap is out of specification, replace with a new one.



CAUTION:

To prevent damage to the cylinder head, hand-tighten the spark plug before using a wrench to tighten to the specified torque.



With the plug washer attached, screw the spark plug in by hand to prevent cross-threading.
Tighten the spark plug.

TORQUE: 12 N·m (1.2 kgf·m , 9 lbf·ft)

Install the removed parts in the reverse order of removal.

NOTE:

When installing the radiator, set the air guide rubber properly. Do not pinch the air guide rubber between the frame and radiator.

VALVE CLEARANCE

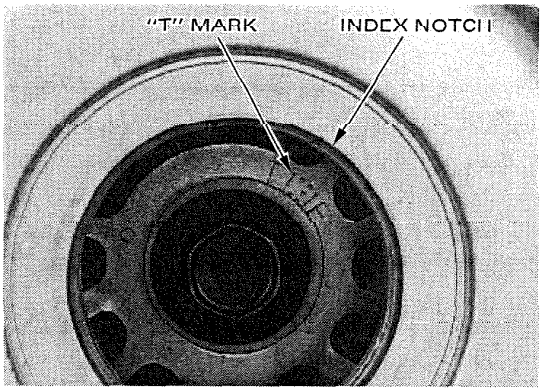
INSPECTION

NOTE:

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

Remove the cylinder head cover (page 8-3).

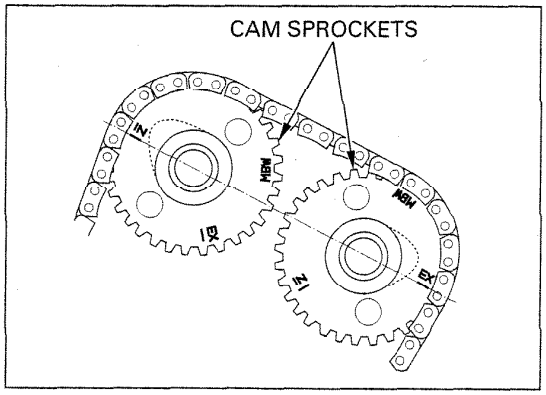
Remove the timing hole cap.



Rotate the crankshaft clockwise and align the "T" mark on the ignition pulse generator rotor with the index notch on the right crankcase cover.

The timing marks ("IN" for intake and "EX" for exhaust) on the cam sprockets must be flush with the cylinder head surface and facing outward as shown.

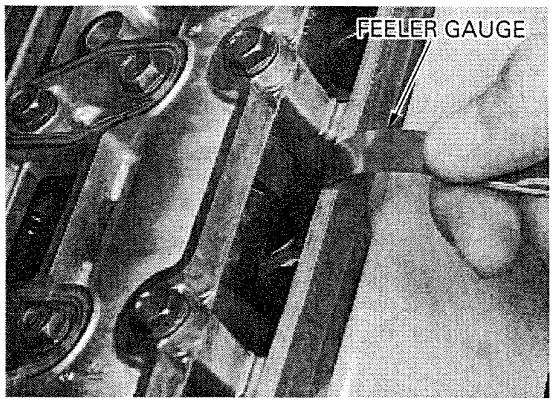
If the timing marks are facing inward, rotate the crankshaft clockwise 360° (1 full turn) and align the "T" mark with the index notch.



Turn the tensioner shaft clockwise with the stopper tool to retract the tensioner and hold it in the fully retracted position (page 8-4).

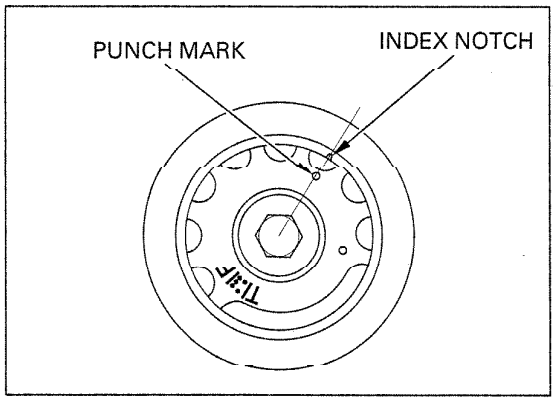
Measure the No. 1 and No. 3 cylinder intake valve clearance by inserting a feeler gauge between the valve lifter and cam lobe.

VALVE CLEARANCE:
IN : 0.20 ± 0.03 mm (0.008 ± 0.001 in)



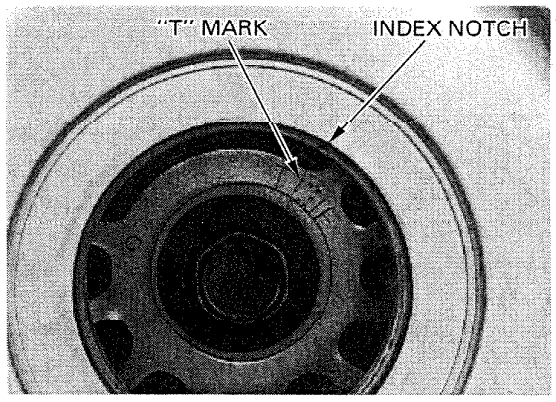
Rotate the crankshaft clockwise 1/2 (180°) turn from previous position and align the punch mark with the index notch.
Measure the No. 2 and No. 4 cylinder exhaust valve clearance.

VALVE CLEARANCE:
EX :0.28 ± 0.03 mm (0.011 ± 0.001 in)



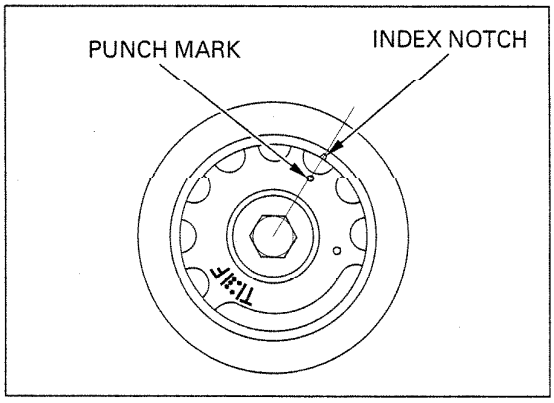
Rotate the crankshaft clockwise 1/2 (180°) turn from previous position and align the "T" mark with the index notch.
Measure the No. 2 and No. 4 cylinder intake valve clearance.

VALVE CLEARANCE:
IN: 0.20 ± 0.03 mm (0.008 ± 0.001 in)



Rotate the crankshaft clockwise 1/2 (180°) turn from previous position and align the punch mark with the index notch.
Measure the No. 1 and No. 3 cylinder exhaust valve clearance.

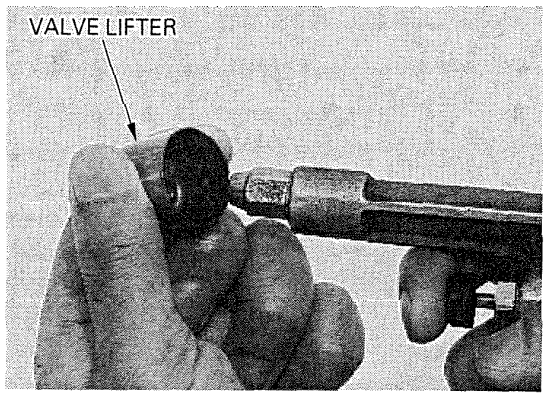
VALVE CLEARANCE:
EX: 0.28 ± 0.03 mm (0.011 ± 0.001 in)



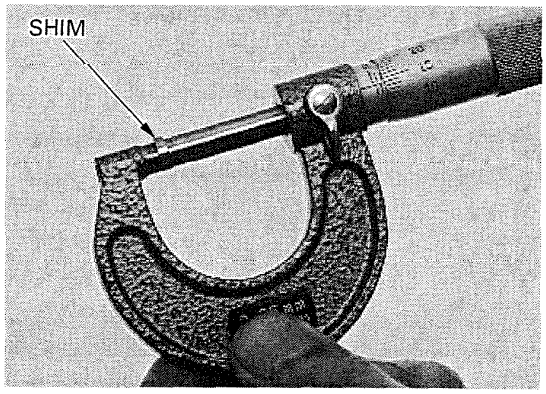
ADJUSTMENT

Remove the valve lifters and shims (page 8-4).

Clean the valve shim contact area in the valve lifter with compressed air.



Measure the shim thickness and record it.



NOTE:

Sixty-nine different thickness shims are available from the thinnest (1.200 mm thickness) shim to the thickest (2.900 mm thickness) in intervals of 0.025 mm.

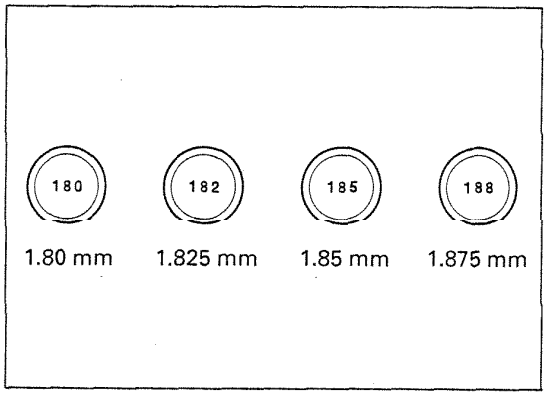
Calculate the new shim thickness using the equation below.

A=(B−C) + D

A: New shim thickness
B: Recorded valve clearance
C: Specified valve clearance
D: Old shim thickness

NOTE:

- Make sure of the correct shim thickness by measuring the shim with the micrometer.
- Reface the valve seat if carbon deposits result in a calculated dimension of over 2.900 mm.

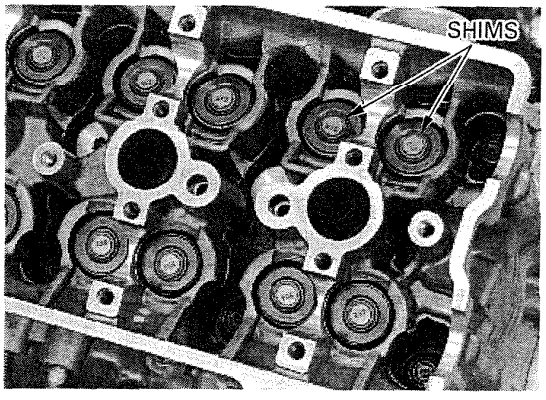


Install the newly selected shims on the valve retainers.

Install the valve lifters and camshafts (page 8-19).

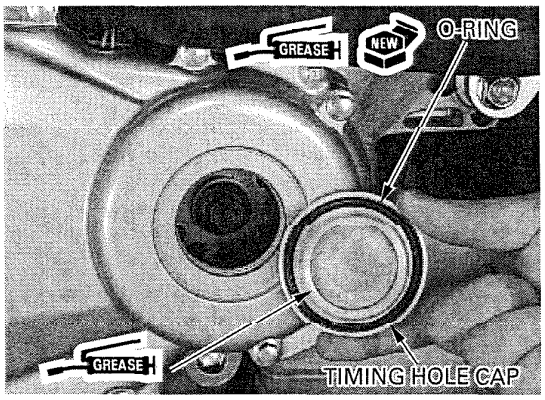
Rotate the camshafts by rotating the crankshaft clockwise several times.
Recheck the valve clearances.

Install the cylinder head cover (page 8-21).



Coat a new O-ring with grease and install it onto the timing hole cap.
Apply grease to the timing hole cap threads.
Install and tighten the timing hole cap.

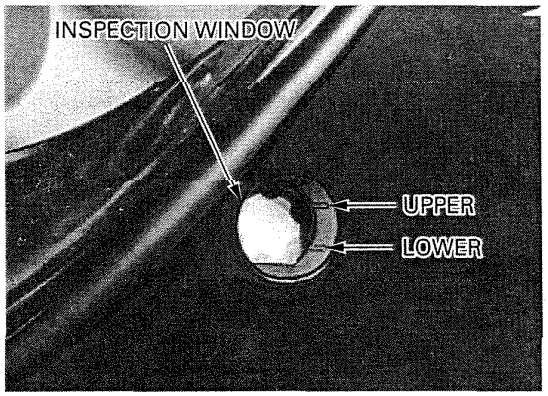
TORQUE : 18 N·m (1.8 kgf·m , 13 lbf·ft)



ENGINE OIL

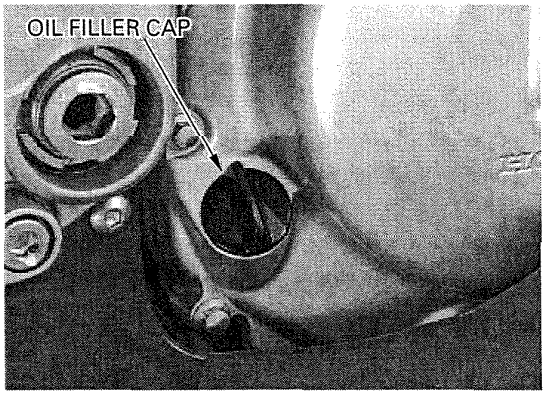
Start the engine and let it idle for a few minutes.

Stop the engine, support the motorcycle upright on a level surface.
Wait for a few minutes and check that the oil level is between the upper and lower level marks in the inspection window.



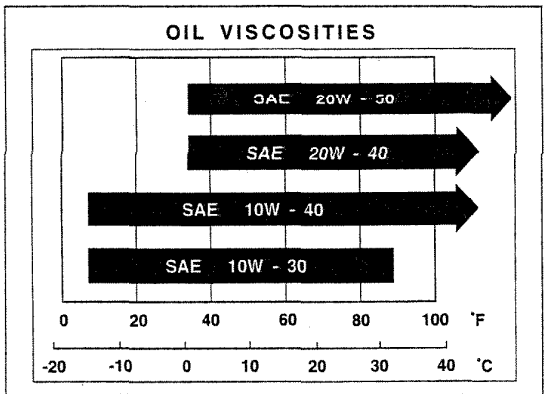
If the oil level is below or near the lower level mark, remove the oil filler cap and add the recommended engine oil up to the upper level mark.

RECOMMENDED ENGINE OIL:
Honda GN4 4-stroke oil or equivalent motor oil
API service classification: SF or SG
Viscosity: SAE 10W-40



NOTE:

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



Reinstall the filler cap.

For engine oil change, see next page.

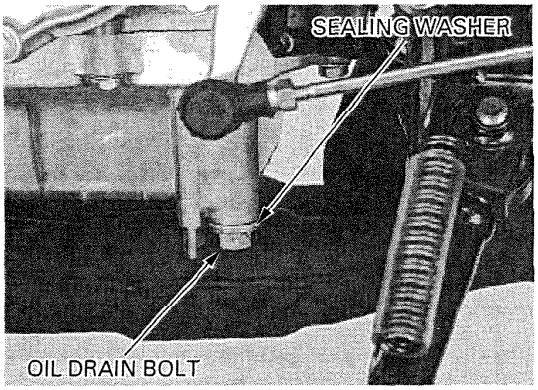
ENGINE OIL FILTER

NOTE:

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

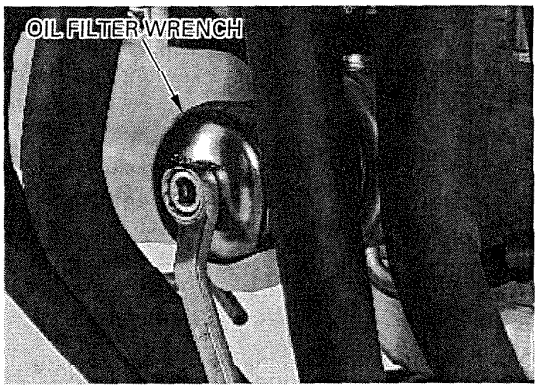
⚠WARNING

Engine and exhaust system parts become very hot and remain hot for some time after the engine is run. Wear insulated gloves.



Warm up the engine.
Stop the engine and remove the side and inner fairings (page 2-4).

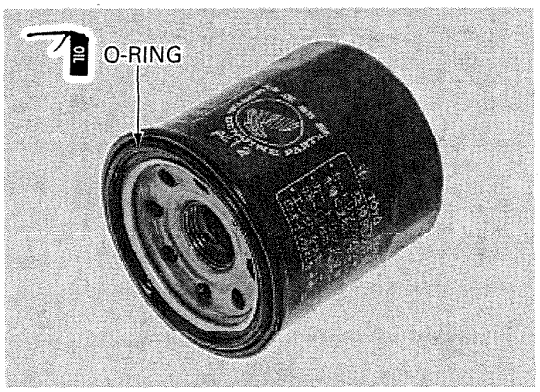
Remove oil filler cap and drain bolt, and drain the oil.
Remove the oil filter cartridge and let the remaining oil drain out. Discard the filter cartridge.



TOOL:
Oil filter wrench 07HAA-PJ70100

CAUTION:

Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

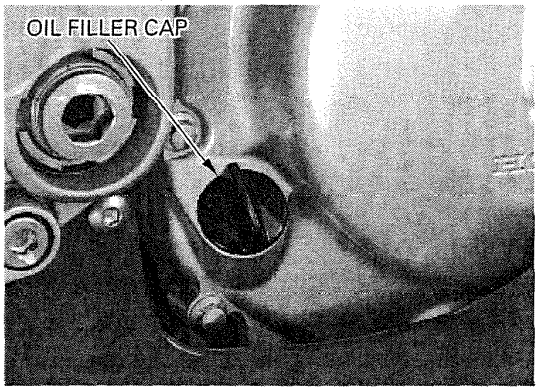


Apply oil to the O-ring and threads of a new oil filter cartridge and install the filter cartridge.

TORQUE : 10 N·m (1.0 kgf·m , 7 lbf·ft)

After draining the oil completely check that the sealing washer on the drain bolt is in good condition and replace it if necessary.
Install and tighten the drain bolt.

TORQUE : 29 N·m (3.0 kgf·m , 22 lbf·ft)



Fill the crankcase with the recommended oil (page 3-10).

OIL CAPACITY: 3.3 ℓ (3.5 US qt , 2.9 Imp qt) after draining/filter change
3.7 ℓ (3.9 US qt , 3.3 Imp qt) at disassembly

Reinstall the oil filler cap.
Check the engine oil level (page 3-11).
Make sure there are no oil leaks.

Install the side and inner fairings (page 2-4).

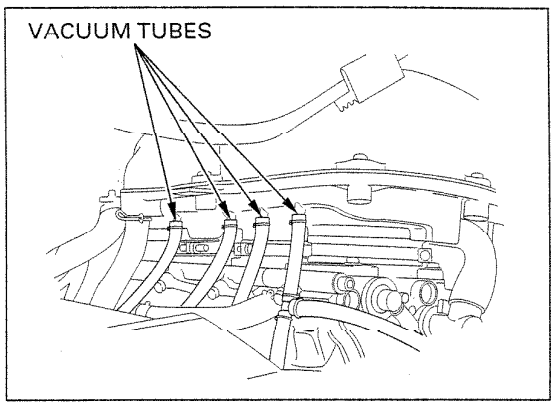
CARBURETOR SYNCHRONIZATION

NOTE:

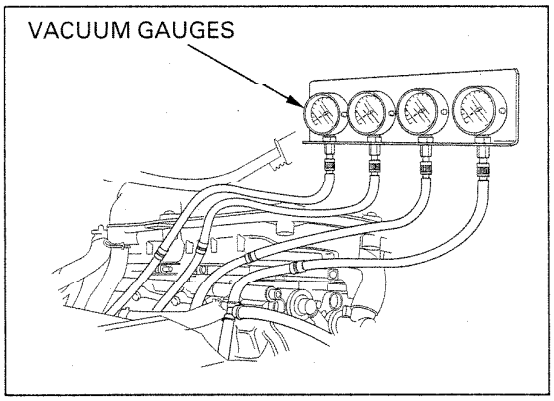
Perform this maintenance with the engine at normal operating temperature and transmission in neutral. Place the motorcycle on a level surface.

Raise the fuel tank and support it (page 2-3).

Disconnect the vacuum tubes from the air cleaner housing.

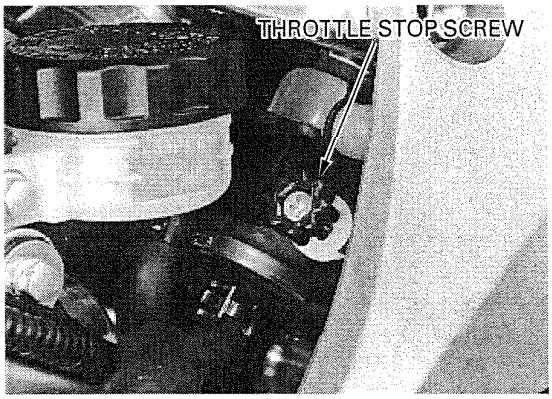


Connect the vacuum gauges to the vacuum tubes.



Start the engine and adjust the idle speed with the throttle stop screw.

IDLE SPEED:
49 state/Canada type : 1,300 ± 100 rpm
California type : 1,400 ± 100 rpm



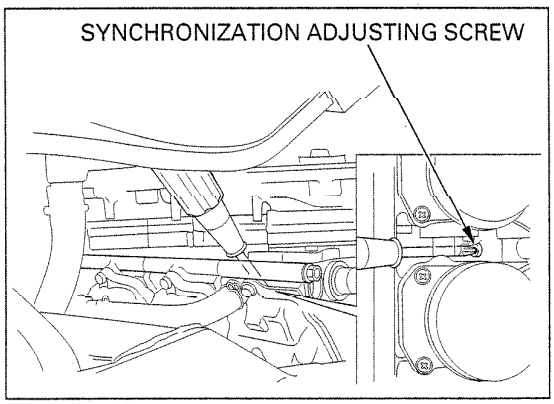
Check the difference between the each carburetor.

CARBURETOR VACUUM DIFFERENCE:
Within 30 mm Hg (1.2 in Hg)

NOTE:

The base carburetor is the No. 4 carburetor.

Synchronize to specification by turning the synchronization adjusting screws.



Rev the engine up several times.
Recheck the idle speed and synchronization.

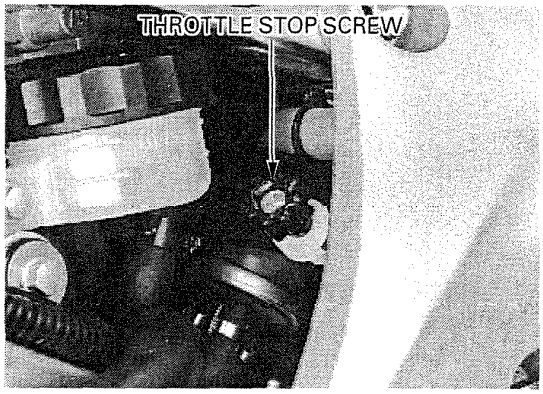
Disconnect the vacuum gauges.

Route the tubes properly (page 1-18)

Connect the vacuum tubes to the joints of the air cleaner housing.

Install the fuel tank (page 2-3).

ENGINE IDLE SPEED



NOTE:

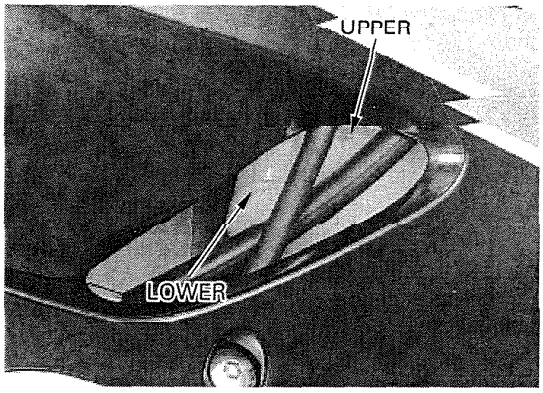
- Inspect and adjust the idle speed after all other engine maintenance items have been performed and are within specifications.
- The engine must be warm for accurate idle speed inspection and adjustment. Ten minutes of stop-and-go riding is sufficient.

Warm up the engine, shift the transmission into neutral and place the motorcycle on a level surface. Check the idle speed and adjust by turning the throttle stop screw as required.

IDLE SPEED:
49 state/Canada: 1,300 ± 100 rpm
California type: 1,400 ± 100 rpm

RADIATOR COOLANT

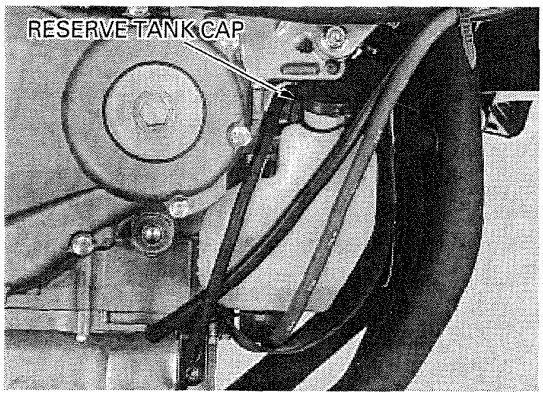
Check the coolant level of the reserve tank with the engine running at normal operating temperature.
The level should be between the "UPPER" and "LOWER" level lines with the motorcycle upright on a level surface.
If the level is low, remove the right side fairing (page 2-4) and the reserve tank cap, and fill the tank to the "UPPER" level line with a 50/50 mixture of distilled water and antifreeze (coolant preparation: page 6-4).



RECOMMENDED ANTIFREEZE:
Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing corrosion protection inhibitors

CAUTION:

Using coolant with silicate corrosion inhibitors may cause premature wear of water pump seals or blockage of radiator passages. Using tap water may cause engine damage.



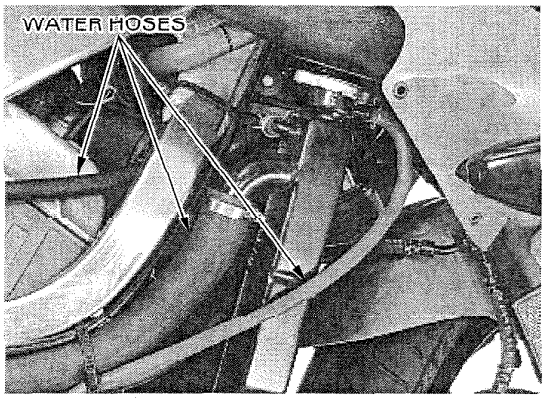
Check to see if there are any coolant leaks when the coolant level decreases very rapidly.

If reserve tank becomes completely empty, there is a possibility of air getting into the cooling system. Be sure to remove all air from the cooling system (page 6-4).

COOLING SYSTEM

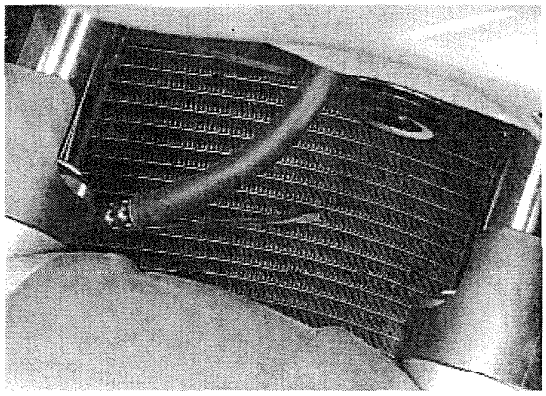
Remove the side fairings (page 2-4).

Check for any coolant leakage from the water pump, water hoses and hose joints.
Check the water hoses for cracks or deterioration and replace if necessary.
Check that all hose clamps are tight.



Check the radiator air passage for clogging or damage.
Straighten bent fins with a small, flat blade screwdriver and remove insects, mud or other obstructions with compressed air or low pressure water.
Replace the radiator if the air flow is restricted over more than 20% of the radiating surface.

Install the side fairings (page 2-4).



SECONDARY AIR SUPPLY SYSTEM

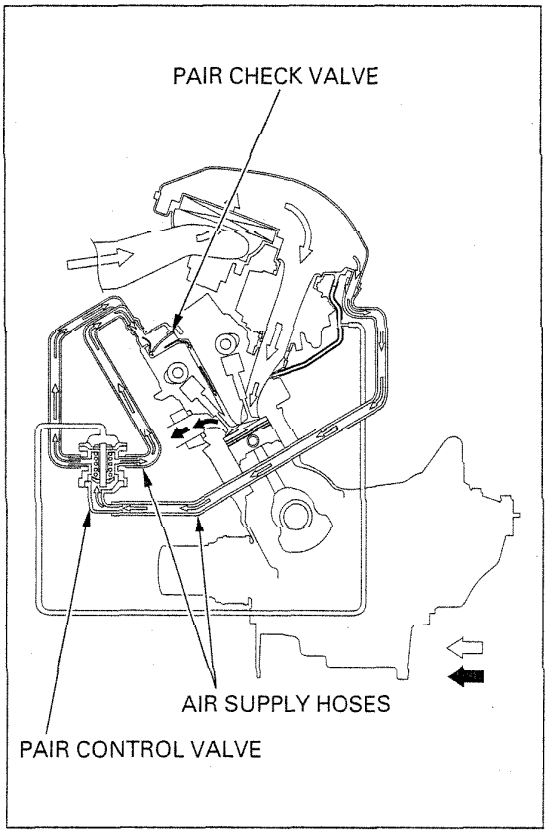
Check the air supply hoses between the pulse secondary air injection (PAIR) control valve and PAIR check valves for damage or loose connections.
Check the air supply hoses for cracks or deterioration.

NOTE:

If the hoses show any signs of heat damage, inspect the PAIR check valves (page 5-38).

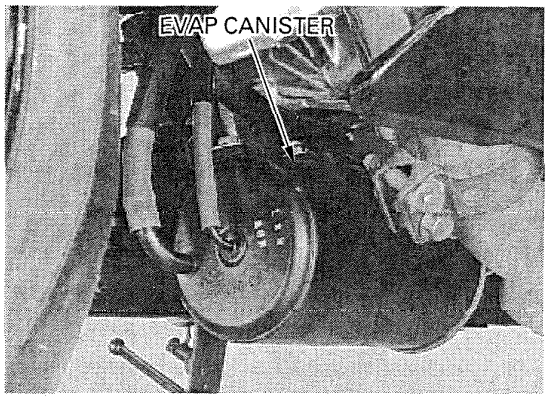
Check the vacuum tube between the No. 4 cylinder head vacuum joint and PAIR control valve for deterioration, damage or loose connections. Also check that the tube is not kinked or pinched.

For PAIR control valve inspection, see page 5-37.



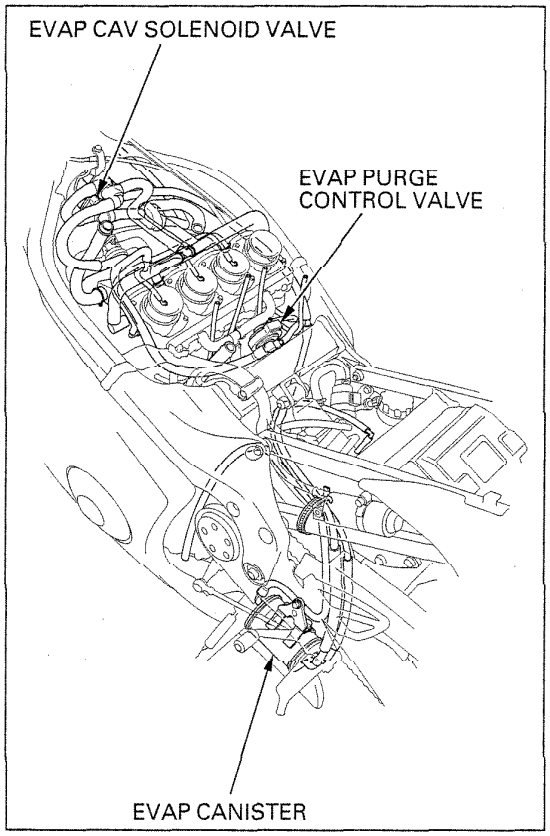
EVAPORATIVE EMISSION CONTROL SYSTEM (California type only)

Check the evaporative emission (EVAP) canister for cracks or damage.



Check the tubes between the fuel tank, EVAP canister, EVAP purge control valve, EVAP carburetor air vent (CAV) solenoid valve and carburetors for deterioration, damage or loose connections. Also check that the tubes are not kinked or pinched.

Refer to the Vacuum Hose Routing Diagram Label and Cable & Harness Routing (page 1-18) for tube connections and routing.



DRIVE CHAIN

CHAIN SLACK INSPECTION

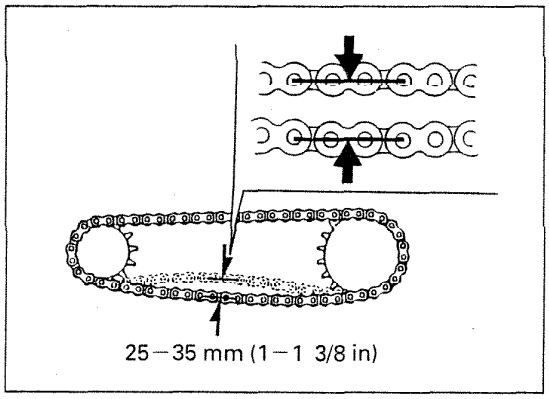
⚠WARNING

Never inspect and adjust the drive chain while the engine is running.

Turn the ignition switch OFF, place the motorcycle on its side stand and shift the transmission into neutral.

Check the slack in the drive chain lower run midway between the sprockets.

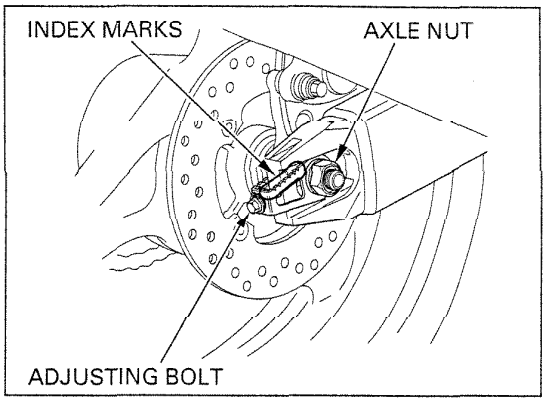
CHAIN SLACK: 25—35 mm (1—1 3/8 in)



ADJUSTMENT

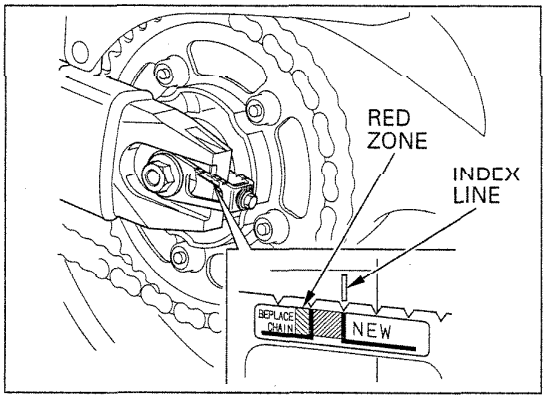
Loosen the rear axle nut.
Turn both adjusting bolts an equal number of turn until the correct drive chain slack is obtained.
Make sure the index marks on both adjusters are aligned with the index lines on the swingarm.
Tighten the rear axle nut.

TORQUE : 93 N·m (9.5 kgf·m , 69 lbf·ft)



Recheck the drive chain slack and free wheel rotation.

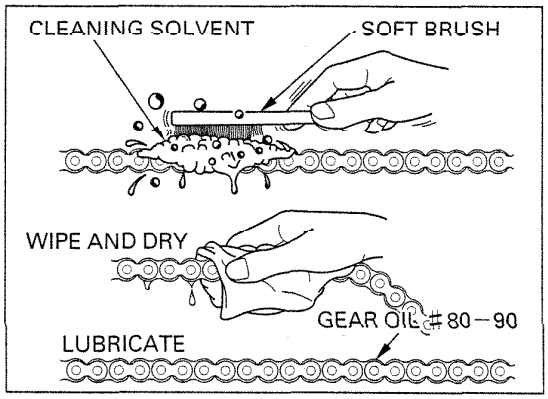
Check the drive chain wear indicator label attached on the left drive chain adjuster.
If the red zone of the indicator label reaches the index line on the swingarm, replace the drive chain with a new one (page 3-18).



CLEANING AND INSPECTION

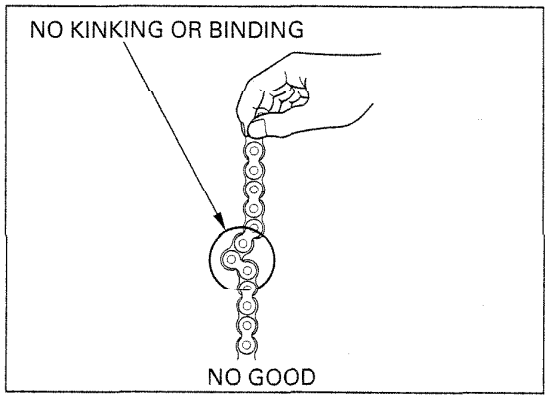
Clean the chain with a soft brush using a non-flammable or high flash point solvent and wipe it dry.
Be sure the chain has dried completely before lubricating.

Inspect the drive chain for possible damage or wear. Replace any chain that has damaged rollers, loose fitting links, or otherwise appears unserviceable.
Installing a new chain on badly worn sprockets will cause the new chain to wear quickly. Inspect and replace the sprockets as necessary.

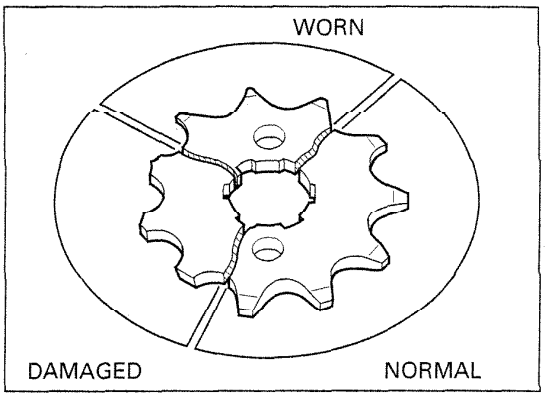


LUBRICATION

Lubricate the drive chain with #80—90 gear oil or equivalent chain lubricant designed for specifically for use on O-ring chains.
Some commercially available chain lubricants may contain solvents which could damage the O-rings.
Wipe off the excess chain lube.



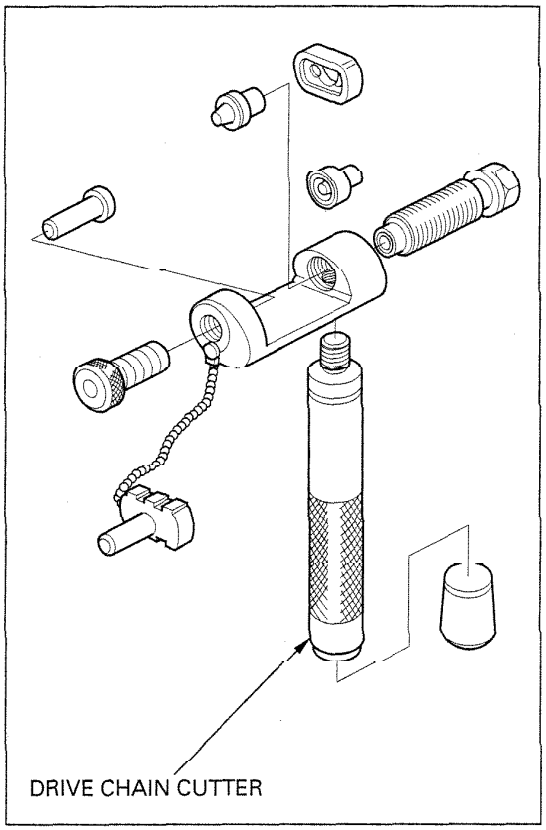
SPROCKET INSPECTION



Inspect the drive and driven sprocket teeth for damage or wear. Replace if necessary.
Never use a worn chain on new sprockets. Both chain and sprockets must be in good condition, or the new replacement parts will wear rapidly.

Check the attachment bolt and nuts on the drive and driven sprockets. If any are loose, torque them.

REPLACEMENT



This motorcycle uses a drive chain with a staked master link.

Loosen the drive chain.
Assemble the special tool.

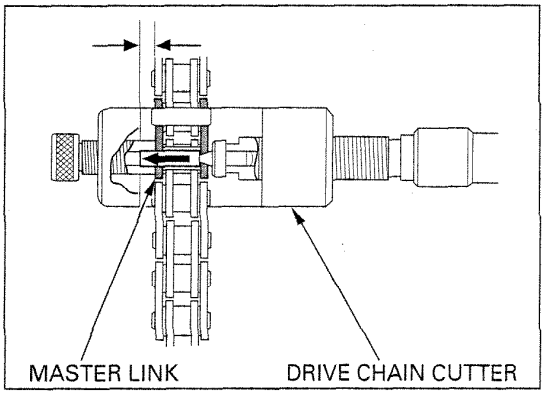
TOOL:

Drive chain tool set	07HMH-MR10103 or 07HMH-MR1010B (U.S.A. only)

NOTE:

When using the special tool, follow the manufacturer's instruction.

Locate the crimped pin ends of the master link from the outside of the chain and remove the link with the drive chain tool set.



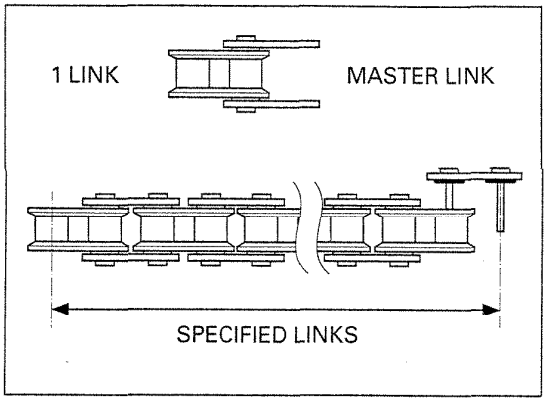
Remove the drive chain.

Remove the excess drive chain links from the new drive chain with the drive chain tool set.

NOTE:

Include the master link when you count the drive chain links.

SPECIFIED LINKS: 110 links
REPLACEMENT CHAIN: DID 525HV
RK 525ROZ1

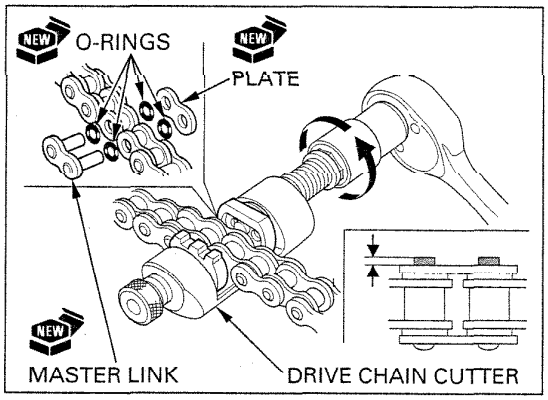


Remove the drive sprocket cover (page 7-4).
Install the new drive chain on the sprockets over the drive and driven sprockets.

Assemble the new master link, O-rings and master link plate with the drive chain tool set.

NOTE:

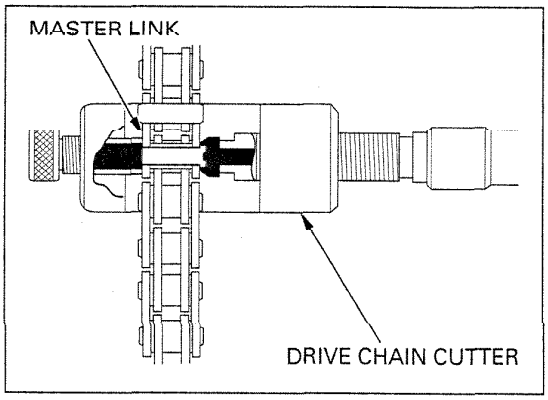
Insert the master link from the inside of the drive chain, and install the plate with the identification mark facing the outside.



Measure the master link pin length projected from the plate.

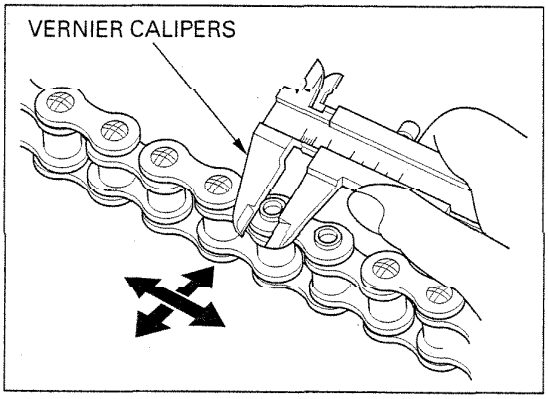
SPECIFIED LENGTH:
DID: 1.15—1.55 mm (0.045—0.061 in)
RK: 1.20—1.40 mm (0.047—0.055 in)

Stake the master link pins with the drive chain tool set.



Make sure that the maser link pins are staked properly by measuring the diameter of the staked area.

DIAMETER OF THE STAKED AREA:
DID: 5.50—5.80 mm (0.217—0.228 in)
RK: 5.55—5.85 mm (0.219—0.230 in)

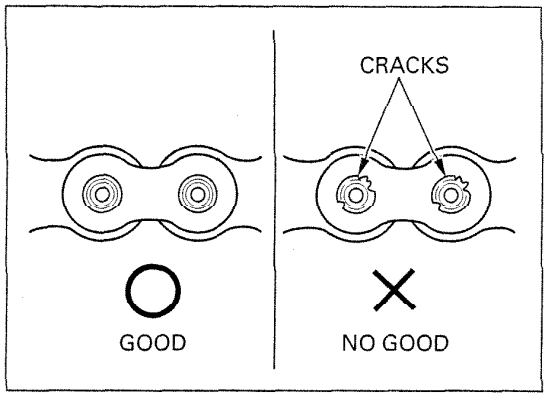


After staking, check the staked area of the master link for cracks.
If there is any cracking, replace the master link, O-rings and plate.

CAUTION:

A drive chain with a clip-type master link must not be used.

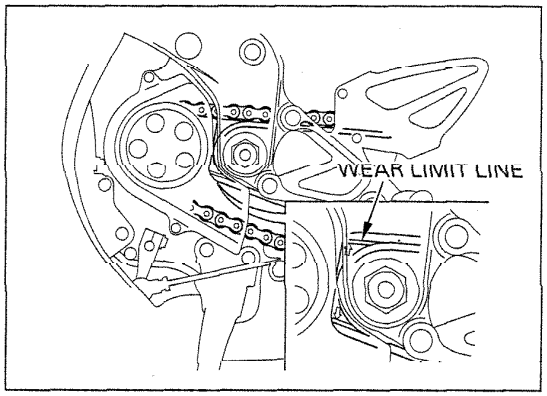
Install the drive sprocket cover (page 7-8).



DRIVE CHAIN SLIDER INSPECTION

Check the drive chain slider for wear.
Replace the chain slider if it is worn to the wear limit line.

Refer to section 14 for drive chain slider replacement.



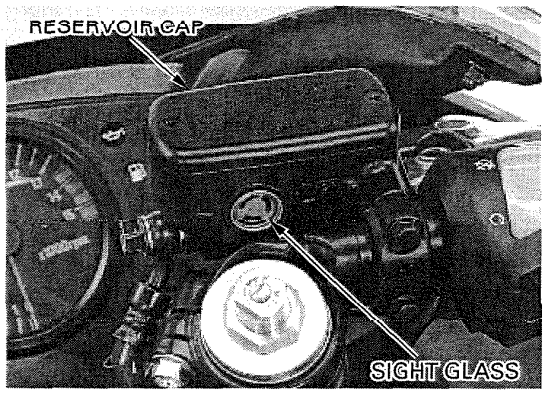
BRAKE FLUID

CAUTION:

- ***Do not mix different types of fluid, as they are not compatible with each other.***
- ***Do not allow foreign material to enter the system when filling the reservoir.***
- ***Avoid spilling fluid on painted, plastic or rubber parts. Place a rag over these parts whenever the system is serviced.***

NOTE:

When the fluid level is low, check the brake pads for wear (page 3-21). A low fluid level may be due to wear of the brake pads. If the brake pads are worn, the caliper pistons are pushed out, and this accounts for a low reservoir level.
If the brake pads are not worn and the fluid level is low, check entire system for leaks (page 3-21).

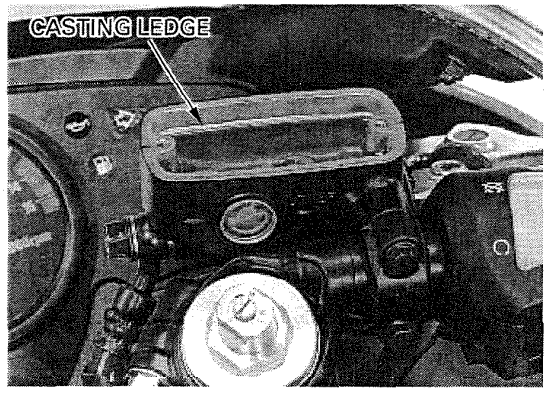


FRONT BRAKE

Turn the handlebar to the left side so that the reservoir is level and check the fluid level through the sight glass.
If the level is near the lower level mark, remove the reservoir cap, set plate and diaphragm, and fill the reservoir with DOT 4 brake fluid from a sealed container to the casting ledge.

Install the diaphragm, set plate and reservoir cap and tighten the cap screws.

TORQUE : 2 N·m (0.2 kgf·m , 1.4 lbf·ft)



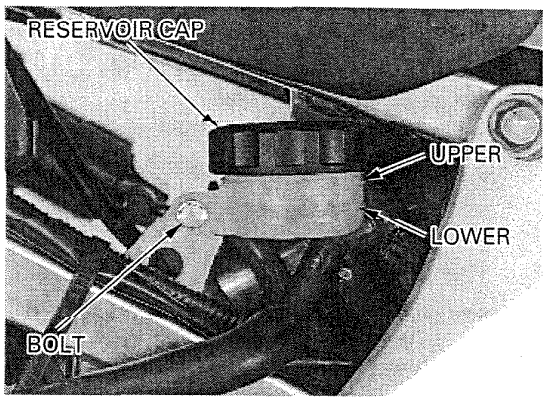
REAR BRAKE

Place the motorcycle on a level surface and support it upright.
Check the fluid level in the rear brake reservoir.

If the level is near the lower level line, remove the reservoir mounting bolt and the reservoir cap, and fill the reservoir with DOT 4 brake fluid from a sealed container to the upper level line.
Install the reservoir cap.

Install the reservoir onto the stay with the mounting bolt.

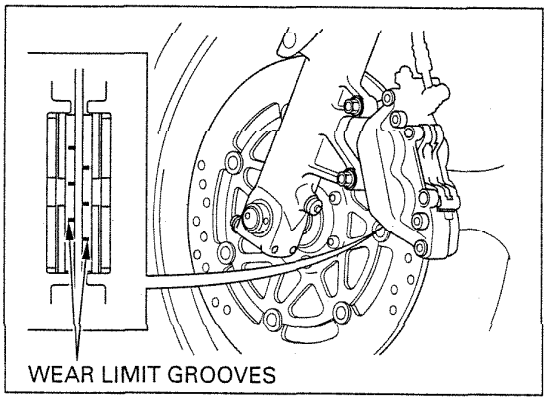
TORQUE : 12 N·m (1.2 kgf·m , 9 lbf·ft)



BRAKE PAD WEAR

FRONT BRAKE PAD

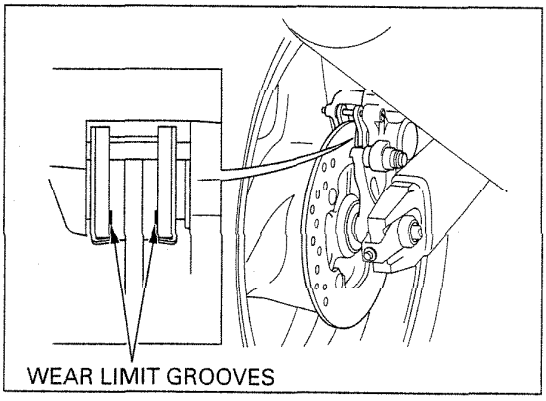
Check the brake pad for wear.
Replace the brake pads if the wear limit groove of either pad is worn out.



REAR BRAKE PAD

Check the brake pad for wear by looking from the rear side of the caliper.
Replace the brake pads if either pad is worn to the bottom of the wear limit groove.

Refer to page 15-5 for brake pad replacement.

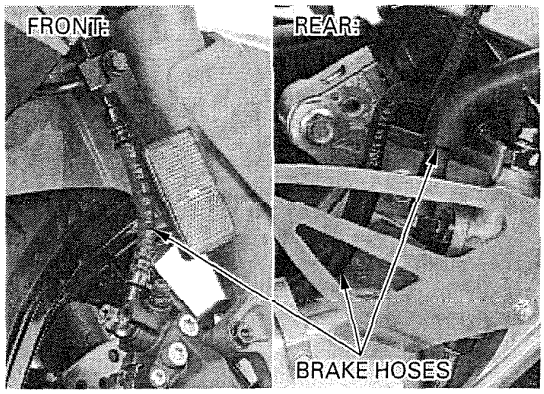


BRAKE SYSTEM

Firmly apply the brake lever or pedal, and check that no air has entered the system.
If the lever or pedal feels soft or spongy when operated, bleed the air from the system.

Refer to page 15-3 for air bleeding procedures.

Inspect the brake hoses, pipes and fittings for deterioration, cracks, damage or signs of leakage.
Tighten any loose fittings.
Replace hoses, pipes and fittings as required.

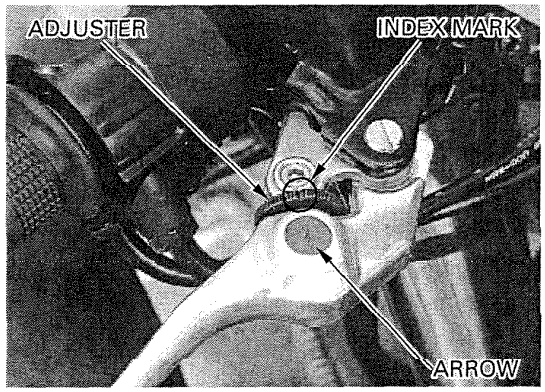


BRAKE LEVER ADJUSTMENT

The distance between the tip of the brake lever and the grip can be adjusted by turning the adjuster.

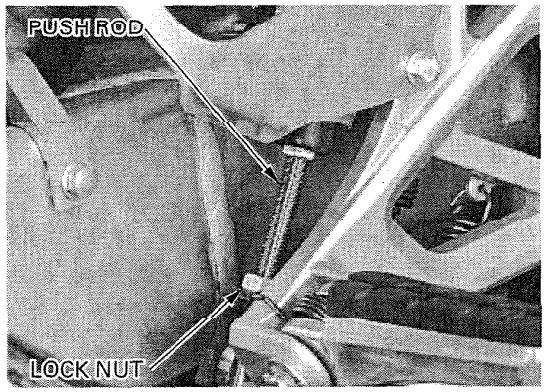
CAUTION:

Align the arrow on the brake lever with the index mark on the adjuster.



BRAKE PEDAL HEIGHT ADJUSTMENT

Loosen the lock nut and turn the push rod until the correct pedal height is obtained.

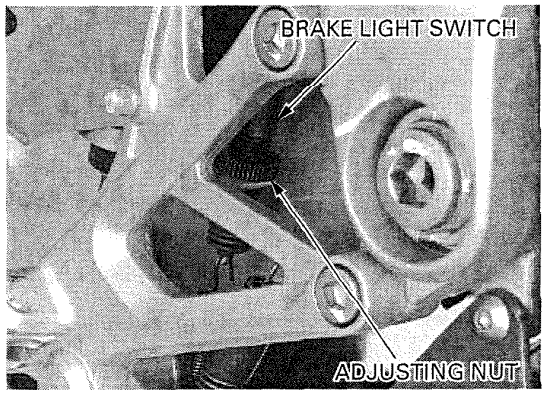


BRAKE LIGHT SWITCH

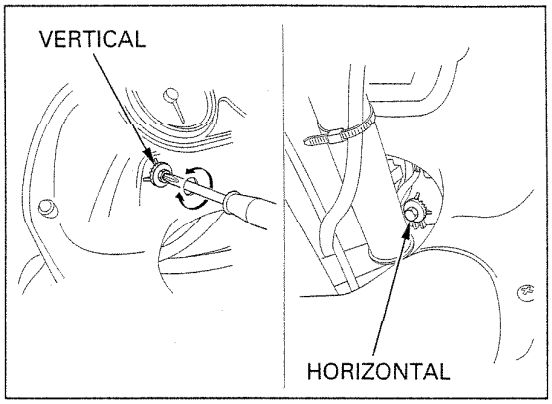
NOTE:

The brake light switch on the front brake master cylinder cannot be adjusted. If the front brake light switch actuation and brake engagement are off, either replace the switch unit or the malfunctioning parts of the system.

Check that the brake light comes on just prior to the brake actually being engaged.
If the light fails to come on, adjust the switch so that the light comes on at proper time.
Hold the switch body and turn the adjusting nut. Do not turn the switch body.



HEADLIGHT AIM



⚠WARNING

An improperly adjusted headlight may blind oncoming drivers, or it may fail to light the road for a safe distance.

NOTE:

Adjust headlight beam as specified by local laws and regulations.

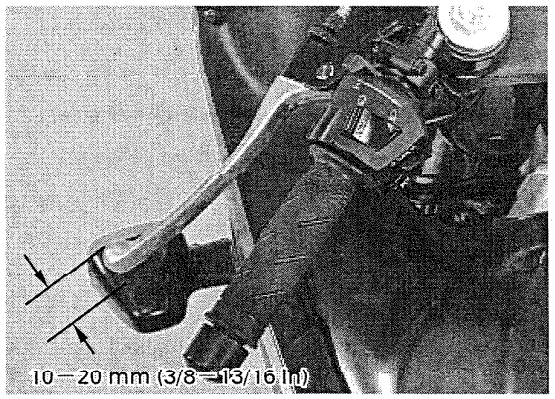
Adjust vertically by turning the vertical adjusting screw.
Adjust horizontally by turning the horizontal adjusting bolt.

CLUTCH SYSTEM

Inspect the clutch cable for kinks or damage, and lubricate the cable if necessary.

Measure the clutch lever free play at the end of the lever.

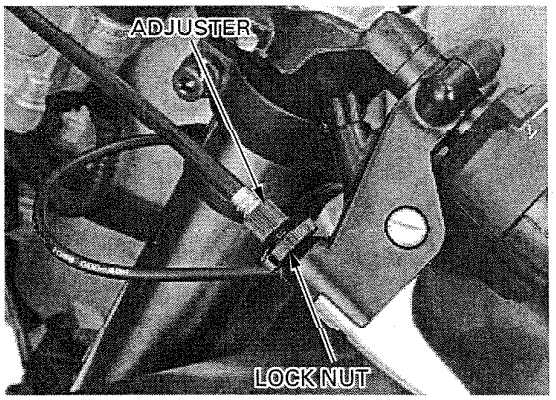
FREE PLAY: 10—20 mm (3/8—13/16 in)



Minor adjustments are made with the upper adjuster at the clutch lever.
Loosen the lock nut and turn the adjuster.
Tighten the lock nut securely.

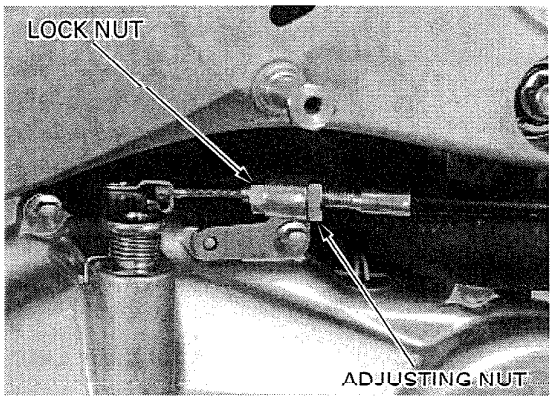
CAUTION:

The adjuster may be damaged if it is positioned too far out, leaving minimal thread engagement.



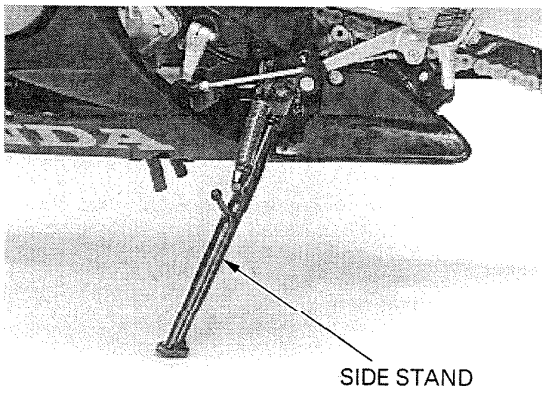
If the adjuster is threaded out neat its limit and the correct free play cannot be obtained, turn the adjuster all the way in and back out one turn.
Tighten the lock nut and make a major adjustment as described below.

Major adjustments are made with the lower adjusting nut at the engine.
Remove the right side fairing (page 2-4).
Loosen the lock nut and turn the adjusting nut.
After adjustment is complete, tighten the lock nut securely while holding the adjusting nut.



Check the clutch operation.
If the free play cannot be obtained, or the clutch slips during test ride, disassemble and inspect the clutch (section 9).

SIDE STAND



Support the motorcycle on a level surface.

Check the side stand spring for damage or loss of tension.
Check the side stand assembly for freedom of movement and lubricate the side stand pivot if necessary.

Check the side stand ignition cut-off system:
- Sit astride the motorcycle and raise the side stand.
- Start the engine with the transmission in neutral, then shift the transmission into gear, while squeezing the clutch lever.
- Fully lower the side stand.
- The engine should stop as the side stand is lowered.

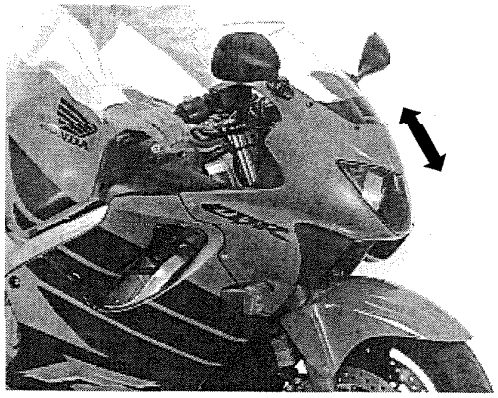
If there is a problem with the system, check the side stand switch (page 19-15).

SUSPENSION

⚠WARNING

Loose, worn or damaged suspension parts impair motorcycle stability and control. Repair or replace any damaged components before riding. Riding a motorcycle with faulty suspension increases your risk of an accident and possible injury.

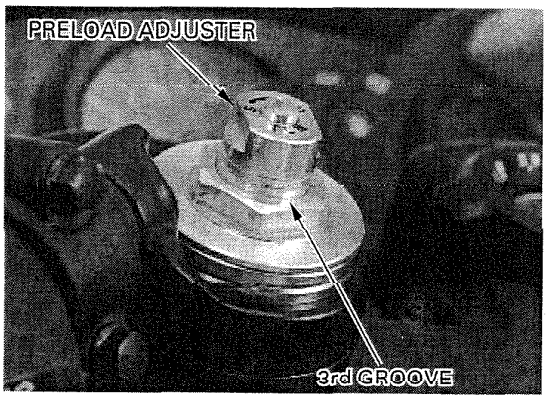
FRONT SUSPENSION INSPECTION



Check the action of the forks by operating the front brakes and compressing the front suspension several times.
Check the entire assembly for signs of leaks, damage or loose fasteners.
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.

Refer to section 13 for fork service.

FRONT SUSPENSION ADJUSTMENT

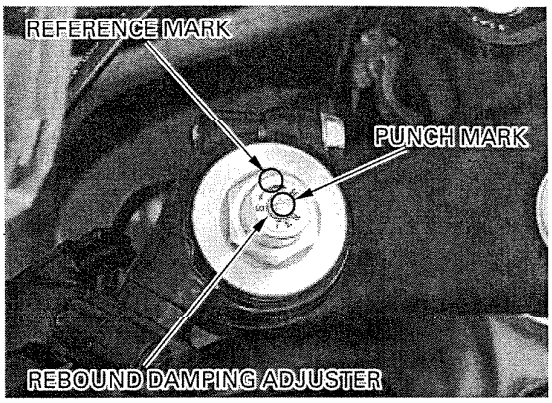


SPRING PRELOAD
Turn the preload adjuster counterclockwise to reduce the spring preload, and turn it clockwise to increase the preload.

To set the standard position, align the 3rd groove on the adjuster with the top surface of the fork cap.

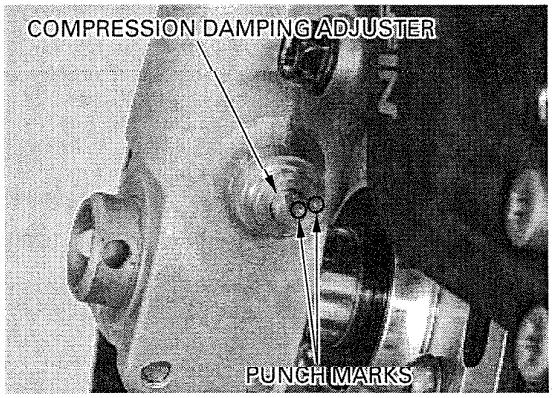
REBOUND DAMPING
Turn the rebound damping adjuster counterclockwise to reduce the rebound damping force, and turn it clockwise to increase the rebound damping force.

To set the standard position, turn the adjuster clockwise until it stops, then turn it counterclockwise approx. 1 turn. Align the punch mark on the adjuster with the reference mark.



COMPRESSION DAMPING
Turn the compression damping adjuster counterclockwise to reduce the compression damping force, and turn it clockwise to increase the compression damping force.

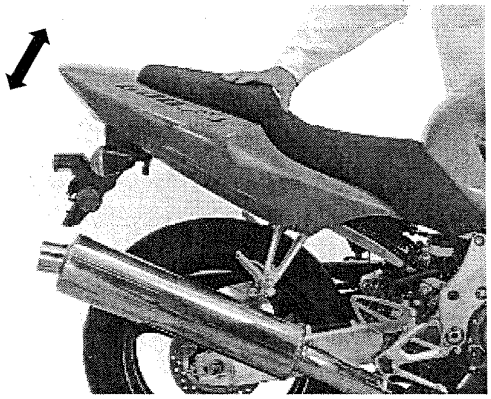
To set the standard position, turn the adjuster clockwise until it stops, then turn it counterclockwise approx. 1-1/2 turn. Align the punch marks.



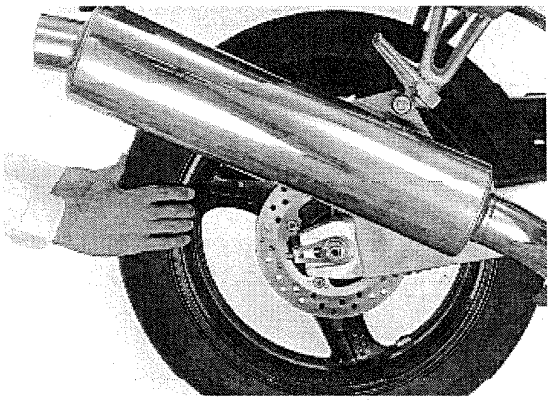
REAR SUSPENSION INSPECTION

Check the action of the shock absorber by compressing it several times.
Check the entire shock absorber assembly for signs of leaks, damage or loose fasteners.
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.

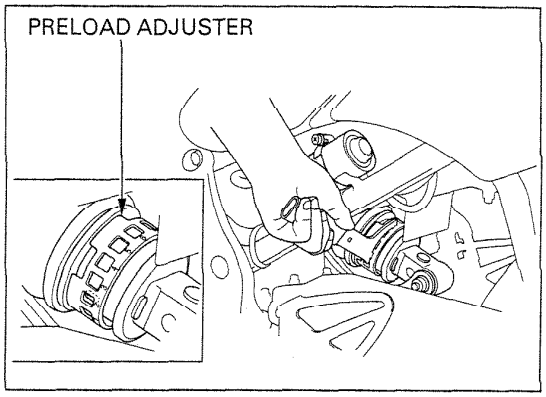
Refer to section 14 for shock absorber service.



Raise the rear wheel off the ground and support the motorcycle securely.
Check for worn swingarm bearings by grabbing the rear wheel and attempting to move the wheel side to side.
Replace the bearings if any looseness is noted (section 14).

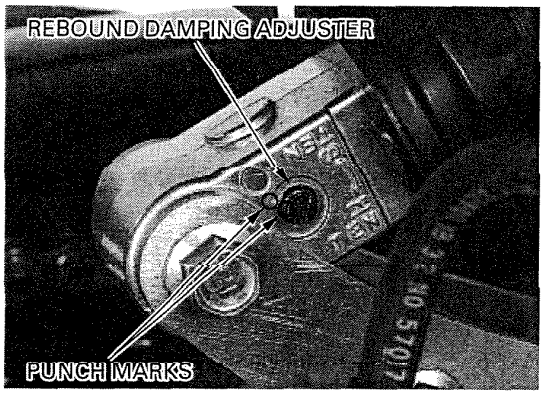


REAR SUSPENSION ADJUSTMENT



SPRING PRELOAD

The spring preload adjuster has 7 positions.
To change the spring preload, turn the adjuster with the pin spanner.
Position 2 is the standard position.
Position 1 is for soft spring preload.
Positions 3 to 7 are for hard spring preload.



REBOUND DAMPING

Turn the rebound damping adjuster counterclockwise to reduce the rebound damping force, and turn it clockwise to increase the rebound damping force.

To set the standard position, turn the adjuster clockwise until it stops, then turn it counterclockwise approx. 1 turn. Align the punch marks.

COMPRESSION DAMPING

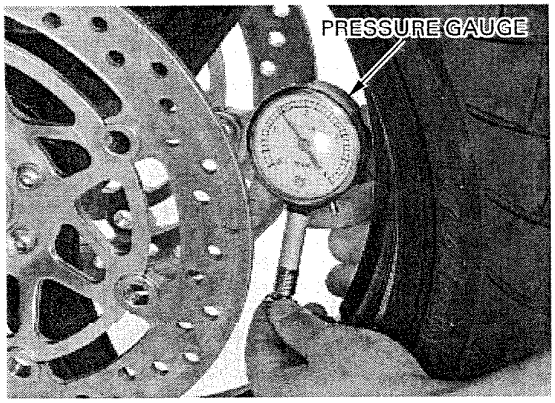
Turn the compression damping adjuster counterclockwise to reduce the compression damping force, and turn it clockwise to increase the compression damping force.

To set the standard position, turn the adjuster clockwise until it stops, then turn it counterclockwise approx. 1 turn. Align the punch marks.

NUTS, BOLTS, FASTENERS

Check that all chassis nuts and bolts are tightened to their correct torque values (page 1-11).
Check that all cotter pins, safety clips, hose clamps and cable stays are in place and properly secured.

WHEELS/TIRES



NOTE:

Tire pressure should be checked when the tires are COLD.

Check the tire pressure with the tire pressure gauge.

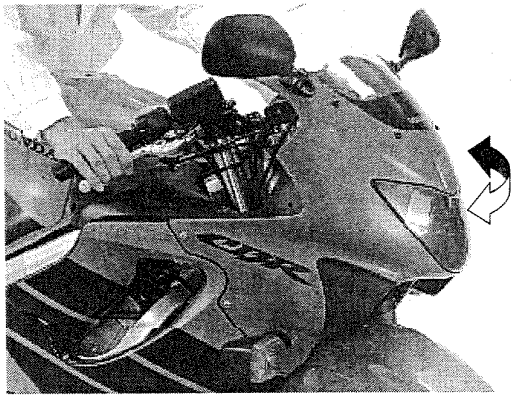
RECOMMENDED TIRE PRESSURE:
Up to 90 kg (200 lbs) load:
Front: 250 kPa (2.50 kgf/cm², 36 psi)
Rear: 290 kPa (2.90 kgf/cm², 42 psi)
Up to maximum weight capacity:
Front: 250 kPa (2.50 kgf/cm², 36 psi)
Rear: 290 kPa (2.90 kgf/cm², 42 psi)

Check the tires for cuts, embedded nails, or other damage.
Check the front and rear wheels for trueness (refer to section 13 and 14).

Measure the tread depth at the center of the tires.
Replace the tires when the tread depth reaches the following limits.

MINIMUM TREAD DEPTH: **Front:** 1.5 mm (0.06 in)
Rear: 2.0 mm (0.08 in)

STEERING HEAD BEARINGS



NOTE:

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

Raise the front wheel off the ground and support the motorcycle securely.
Check that the handlebar moves freely from side to side.
If the handlebar moves unevenly, binds, or has vertical movement, inspect the steering head bearings (section 13).