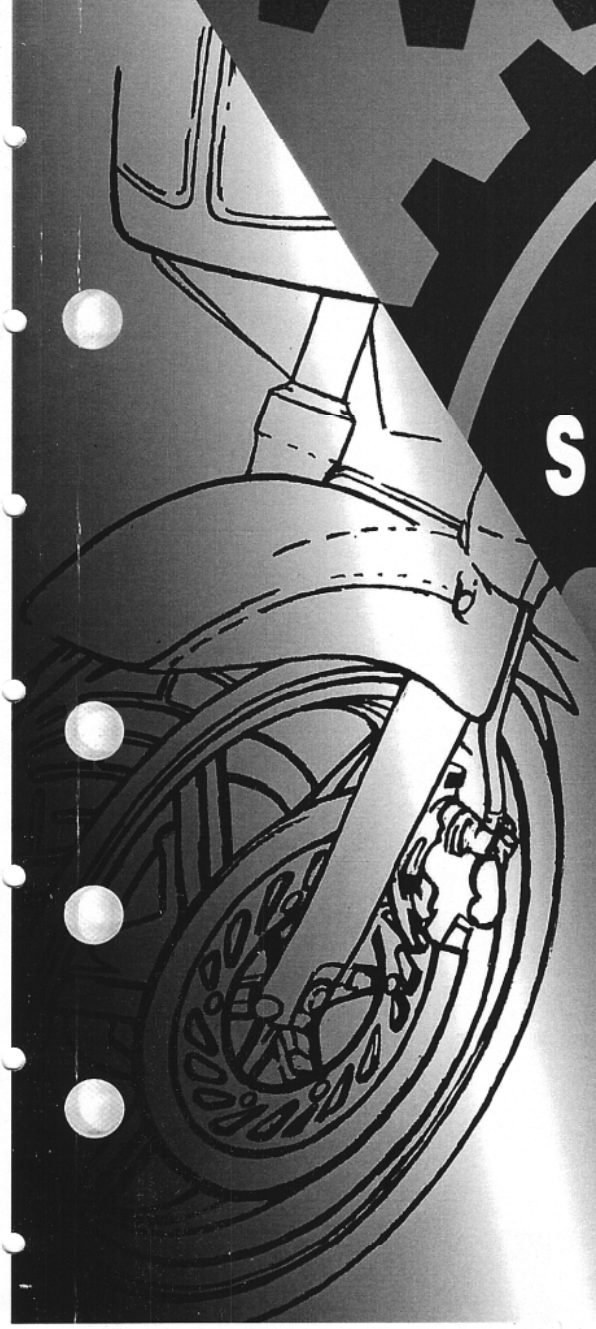
2002

HONDA



SERVICE MANUAL

CBR954RR

HOW TO USE THIS MANUAL

This service manual describes the service procedures for the CBR954RR.

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition.

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.
Section 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 start with an assembly or system illustration, service information and troubleshooting for the section. The subsequent pages give detailed procedure.

If you don't know the source of the trouble, go to section *21,* Troubleshooting.

CONTENTS

Date of Issue: January, 2002

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.

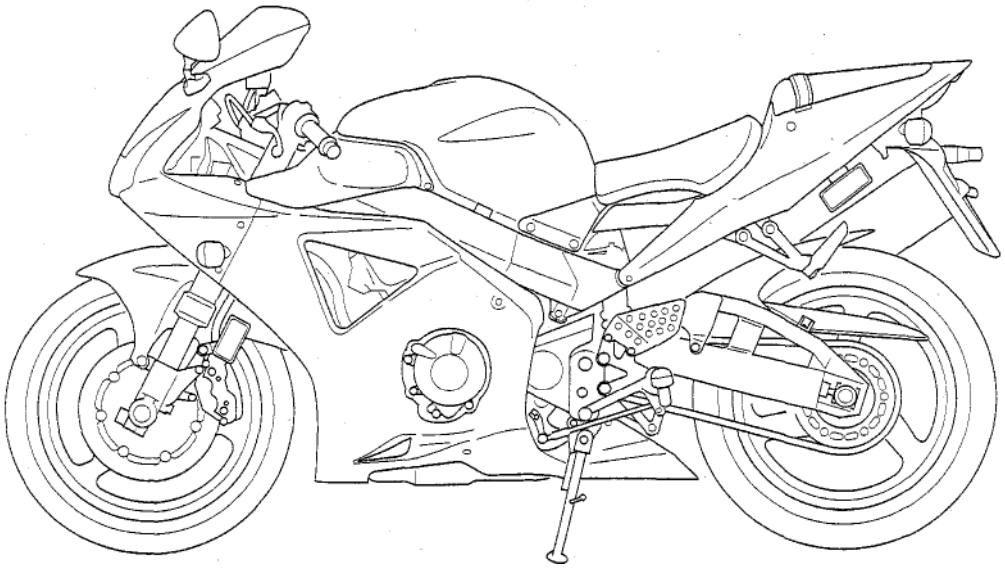
	Replace the part(s) with new one(s) before assembly.
	Use the recommended engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1:1).
	Use multi-purpose grease (lithium based multi-purpose grease NLGI #2 or equivalent).
	Use molybdenum disulfide grease (containing more than 3% molybdenum disulfide, NLGI #2 or 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 medium 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.

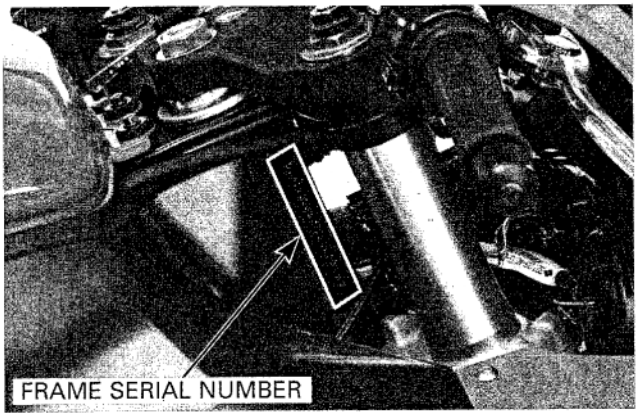
1. GENERAL INFORMATION

SERVICE RULES

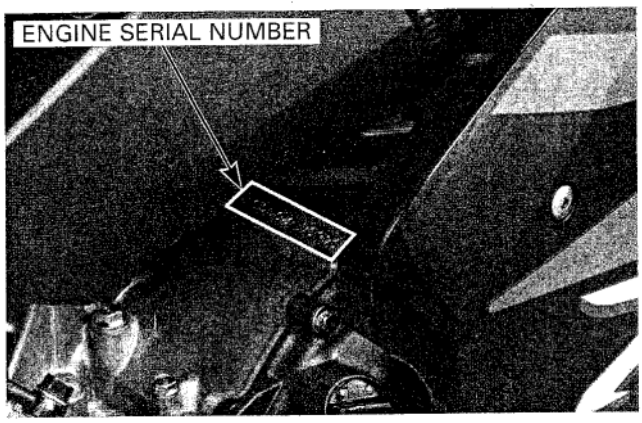
1. Use genuine Honda or Honda-recommended parts and lubricants or their equivalents. Parts that do not meet Honda's design specifications may cause damage to the motorcycle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing 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 shown on pages *1-23* through *1-36,* Cable and Harness Routing.

MODEL IDENTIFICATION

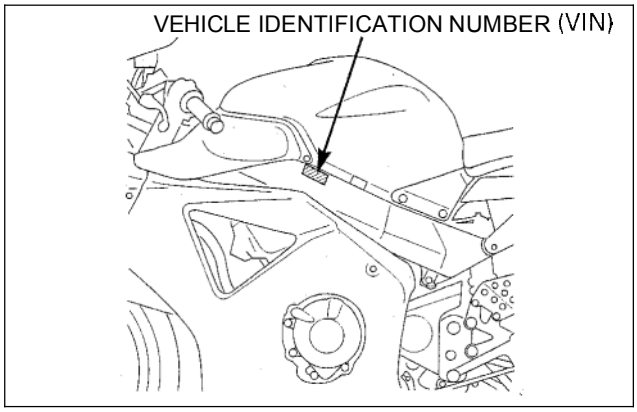




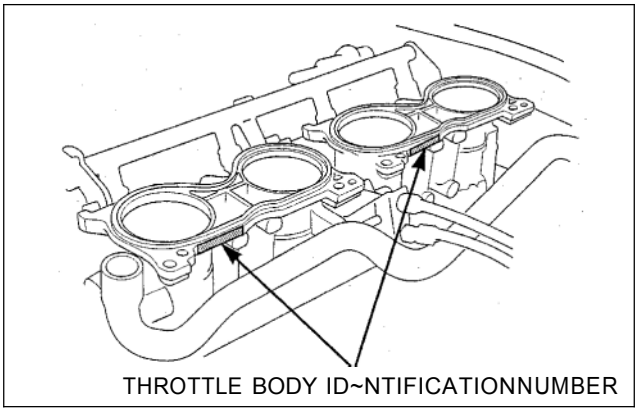
(1) The frame serial number is stamped on the right side of the steering head.



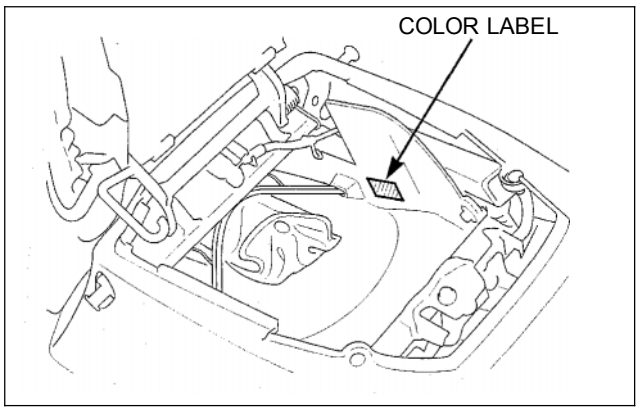
(2) The engine serial number is stamped on the right side of the upper crankcase.



(3) The Vehicle Identification Number (VIN) is located on left side of the main frame on the Safety Certification Labels.



(4) The throttle body identification number is stamped on the intake side of the throttle body as shown.



(5) The color label is attached as shown. When ordering color-coded parts, always specify the designated color code.

SPECIFICATIONS

GENERAL

ITEM		SPECIFICATIONS
DIMENSIONS	Overall length	2,025 mm (79.7 in)
	Overail width	680 mm (26.8 in)
	Overall height	1,135 mm (44.7 in)
	Wheelbase	1,395 mm (54.9 in)
	Seat height	820 mm (32.3 in)
	Footpeg height	383 mm (15.1 in)
	Ground clearance	130 mm (5.1 in)
	Dry weight	
	49 states, Canada type:	168 kg (370 lbs)
	California type:	170 kg (375 lbs)
	Curb weight	
	49 states, Canada type:	195 kg (430 lbs)
	California type:	197 kg (434 lbs)
	Maximum weight capacity	
	49 states, California type:	160 kg (353 lbs)
	Canada type:	164 kg (362 lbs)
FRAME	Frame type	Diamond
	Front suspension	Inverted telescopic fork
	Front wheel travel	110 mm (4.3 in)
	Rear suspension	Swingarm
	Rear wheel travel	135 mm (5.3 in)
	Rear damper	Nitrogen gas filled damper
	Front tire size	120/70 ZR17 M/C (58W)
	Rear tire *size*	190/50 ZR17 M/C (73W)
	Tirebrand	
	Bridgestone	Front: BT012F RADIAL G /Rear: BT012R RADIAL G
	Michelin	Front: Pilot SPORT E /Rear: Pilot SPORT E
	Front brake	Hydraulic double disc brake with 4 pots caliper
	Rear brake	Hydraulic single disc brake with 1 pots caliper
	Caster angle	23" 45'
	Trail length	97 mm (3.8 in)
	Fuel tank capacity	18.0 liter (4.76 US gal, 3.96 Imp gal)
ENGINE	Cylinder arrangement	4 cylinders in-line, inclined 30" from vertical
	Bore and stroke	75.0 x 54.0 mm (2.95 x 2.13 in)
	Displacement	954 cm3 (58.2 cu-in)
	Compression ratio	11.5: 1
	Valve train	Chain driven, DOHC
	Intake valve opens (at 1 mm (0.04 in) lift)	25' BTDC
	Intake valve closes (at 1 mm (0.04 in) lift)	38" ABDC
	Exhaust valve opens (at 1 mm (0.04 in) lift)	41" BBDC
	Exhaust valve closes (at 1 mm (0.04 in) lift)	22° ATDC
	Lubrication system	Forced pressure and wet sump
	Oil pump type	Trochoid
	Cooling system	Liquid cooled
	Air filtration	Paper element
	Engine dry weight	61.2 kg (134.9 lbs)
	Firing order	1 – 2 – 4 – 3

GENERAL (Cont'd)

ITEM		SPECIFICATIONS
CARBURATION	Type	PGM-FI (Programmed Fuel Injection)
	Throttle bore	42 mm (1.7 in)
DRIVE TRAIN	Clutch system	Multi-plate, wet
	Clutch operation system	Cable operating
	Transmission	Constant mesh, 6-speeds
	Primary reduction	1.520 (73/48)
	Final reduction	2.687 (43/16)
	Gear ratio 1st	2.692 (35/13)
	2nd	1.933 (29/15)
	3rd	1.600 (32/20)
	4th	1.400 (28/20)
	5th	1.285 (27/21)
	6th	1.190 (25/21)
	Gearshift pattern	Left foot operated return system, **1** – N – 2 – 3 – **4** – 5 – 6
ELECTRICAL	Ignition system	Computer-controlled digital transistorized with electric advance
	Starting system	Electric starter motor
	Charging system	Triple phase output alternator
	Regulator/rectifier	SCR shorted/triple phase, full wave rectification
	Lighting system	Battery

Unit: mm (in)

		STANDARD	SERVICE LIMIT
Engine oil capacity	At draining	3.5 liter (3.7 US qt, 3.1 Imp qt)	—
	At oil filter change	3.7 liter (3.9 US qt, 3.3 Imp qt)	—
	At disassembly	4.0 liter (4.2 US qt, 3.5 Imp qt)	—
		Pro Honda GN4 or HP4 (without molybdenum additives) 4-stroke oil or equivalent motor oil API service classification: SG or higher JASO T 903 standard: MA Viscositv: SAE 1OW-40	—
		490 kPa (5.0 kgf/cm², 71 psi) at 5,400 rpm/(80°C/176°F)	—
Oil pump rotor	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)

ITEM		SPECIFICATIONS
Throttle body identification number	Except California type	GQ44C
	California type	GQ44B
Starter valve vacuum difference		20 mmHg
Base throttle valve for synchronization		No.1
Idle speed		1,200 ± 100 rpm
Throttle grip free play		2 – 6 mm (1/16 – 1/4 in)
Intake air temperature sensor resistance (at 20°C/68°F)		1 – 4 kΩ
Engine coolant temperature sensor resistance (at 20°C/68°F)		2.3 – 2.6 kΩ
Fuel injector resistance (at 20°C/68°F)		10.5 – 14.5 Ω
PAIR solenoid valve resistance (at 20°C/68°F)		20 – 24 Ω
Cam pulse generator peak voltage (at 20°C/68°F)		0.7 V minimum
Ignition pulse generator peak voltage (at 20°C/68°F)		0.7 V minimum
Manifold absolute pressure at idle		150 – 250 mmHg
Fuel pressure at idle		343 kPa (3.5 kgf/cm², 50 psi)
Fuel pump flow (at 12 V)		188 cm³ (6.4 US oz, 6.6 Imp oz) minimum/10 seconds

ITEM		SPECIFICATIONS
Coolant capacity	Radiator and engine	3.1 liter (3.3 US qt, 2.7 Imp qt)
	Reserve tank	0.4 liter (0.4 US qt, 0.4 Imp qt)
Radiator cap relief pressure		108 – 137 kPa (1.1 – 1.4 kgf/cm², 16 – 20 psi)
Thermostat	Begin to open	80.5 – 83.5°C (177 – 182°F)
	Fully open	95°C (203°F)
	Valve lift	8 mm (0.3 in) minimum
Recommended antifreeze		Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing corrosion protection inhibitors
Standard coolant concentration		1:1 mixture of antifreeze and soft water

CYLINDER HEAD/VALVES

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Cylinder compression			1,196 kPa (12.2 kgf/cm², 174 psi) at 350 rpm	—
Valve clearance		IN	0.16 ± 0.03 (0.006 ± 0.001)	—
		EX	0.27 ± 0.03 (0.011 ± 0.001)	—
Cam shaft	Cam lobe height	IN	36.74 – 36.98 (1.446 – 1.456)	36.72 (1.446)
		EX	36.45 – 36.69 (1.435 – 1.444)	36.43 (1.434)
	Runout		—	0.04 (0.002)
	Oil clearance		0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
Valve lifter	Valve lifter O.D.	IN/EX	25.978 – 25.993 (1.0228 – 1.0233)	25.97 (1.022)
	Valve lifter bore I.D.	IN/EX	26.010 – 26.026 (1.0240 – 1.0246)	26.04 (1.025)
Valve, valve guide	Valve stem O.D.	IN	4.475 – 4.490 (0.1762 – 0.1768)	4.465 (0.1758)
		EX	4.465 – 4.480 (0.1758 – 0.1764)	4.455 (0.1754)
	Valve guide I.D.	IN/EX	4.500 – 4.512 (0.1722 – 0.1776)	4.540 (0.1787)
	Stem-to-guide clearance	IN	0.010 – 0.037 (0.0004 – 0.0015)	—
		EX	0.020 – 0.047 (0.0008 – 0.0019)	—
	Valve guide projection above cylinder head	IN	14.3 – 14.6 (0.56 – 0.57)	—
		EX	12.4 – 12.7 (0.49 – 0.50)	—
	Valve seat width	IN/EX	0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)
Valve spring free length	IN	Inner	34.80 (1.370)	33.1 (1.30)
		Outer	37.97 (1.495)	36.1 (1.42)
	EX		39.60 (1.559)	37.6 (1.48)
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			48.8 (1.92)	47.4 (1.87)
Clutch disc thickness			2.92 – 3.08 (0.115 – 0.121)	2.6 (0.10)
Clutch 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)
Shift fork, forkshaft	Fork	I.D.	12.000 – 12.018 (0.4724 – 0.4731)	12.03 (0.474)
		Claw thickness	5.93 – 6.00 (0.233 – 0.236)	5.9 (0.23)
	Fork shaft O.D.		11.957 – 11.968 (0.4707 – 0.4712)	11.95 (0.470)

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

CRANKCASE/PISTON/CYLINDER

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
			—	0.10 (0.004)
	Taper		—	0.10 (0.004)
	Warpage		—	0.05 (0.002)
Piston, piston rings	Piston mark direction		"O" mark facing toward the intake side	—
	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)	—
	Piston ring-to-ring groove clearance	Top	0.030 – 0.065 (0.0012 – 0.0026)	0.08 (0.003)
		Second	0.015 – 0.045 (0.0006 – 0.0018)	0.06 (0.002)
	Piston ring end gap	Top	0.28 – 0.38 (0.011 – 0.015)	0.5 (0.02)
		Second	0.40 – 0.55 (0.016 – 0.022)	0.7 (0.03)
Cylinder-to-piston clearance			0.020 – 0.055 (0.0008 – 0.0022)	—
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)	—
Crank pin oil clearance			0.030 – 0.052 (0.0012 – 0.0020)	0.062 (0.0024)

CRANKSHAFT/TRANSMISSION

ITEM			STANDARD	SERVICE LIMIT
Crankshaft	Side clearance		0.05 – 0.20 (0.002 – 0.008)	0.30 (0.012)
	Runout		—	0.03 (0.001)
	Main journal oil clearance		0.017 – 0.035 (0.0007 – 0.0014)	0.045 (0.0018)
Transmission	Gear I.D.	M5, M6	31.000 – 31.025 (1.2205 – 1.2215)	31.04 (1.222)
		C1	26.000 – 26.021 (1.0236 – 1.0244)	26.04 (1.025)
		c2, c3, c4	33.000 – 33.025 (1.2992 – 1.3002)	33.04 (1.301)
	Bushing O.D.	M5, M6	30.950 – 30.975 (1.2185 – 1.2195)	30.93 (1.218)
		c3, c4	32.950 – 32.975 (1.2972 – 1.2982)	32.93 (1.296)
	Bushing I.D.	M5	27.985 – 28.006 (1.1018 – 1.1026)	28.02 (1.103)
		c2	29.985 – 30.006 (1.1805 – 1.1813)	30.02 (1.182)
	Gear-to-bushing clearance	M5, M6	0.025 – 0.075 (0.0010 – 0.0030)	0.11 (0.004)
		c3, c4	0.025 – 0.075 (0.0010 – 0.0030)	0.11 (0.004)
	Mainshaft O.D.	M5	27.967 – 27.980 (1.1011 – 1.1016)	27.957 (1.1007)
		Clutch outer guide	24.980 – 24.993 (0.9835 – 0.9840)	24.96 (0.983)
	Countershaft O.D.	C2	29.967 – 29.980 (1.1798 – 1.1803)	29.96 (1.180)
	Bushing-to-shaft clearance	M5	0.005 – 0.039 (0.0002 – 0.0015)	0.08 (0.003)
		c2	0.005 – 0.039 (0.0002 – 0.0015)	0.08 (0.003)

Minimum tire tread depth		—	1.5 (0.06)
Cold tire pressure	Up to 90 kg (200 lb) load	250 kPa (2.50 kgf/cm², 36 psi)	—
	Up to maximum weight capacity	250 kPa (2.50 kgf/cm², 36 psi)	—
Axle runout		—	0.20 (0.008)
Wheel rim runout	Radial	—	2.0 (0.08)
	Axial	—	2.0 (0.08)
Wheel balance weigh		—	60 g (2.1 oz) max.
Fork	Spring free length	255.8 (10.07)	250.8 (9.87)
	Spring direction	With the tapered end facing up	—
	Fork pipe runout	—	0.20 (0.008)
	Recommended fork oil	Pro Honda Suspension Fluid SS-8	—
	Fluid level	73 (2.9)	—
	Fluid capacity	513 ± 2.5 cm³ (17.3 ± 0.08 US oz, 18.1 ± 0.09 Imp oz)	—
	Pre-load adjuster initial setting	7 turns from full soft	—
	Rebound adjuster initial setting	2 turns from full hard	—
	Compression adjuster initial setting	2 turns from full hard	—

ITEM			STANDARD	SERVICE LIMIT
Minimum tire tread depth			—	2.0 (0.08)
Cold tire pressure	Up to 90 kg (200 lb) load		290 kPa (2.90 kgf/cm², 42 psi)	—
	Up to maximum weight capacity		290 kPa (2.90 kgf/cm², 42 psi)	—
Axle runout			—	0.20 (0.008)
Wheel rim runout	Radial		—	2.0 (0.08)
	Axial		—	2.0 (0.08)
Wheel balance weight			—	60 g (2.1 oz) max.
Drive chain	Size/link	DID	DID 50VA8 C1/108	—
		RK	RK GB50HFOZ5/108	—
	Slack		40 – 50 (1.6 – 2.0)	50 (2.0)
Shock absorber	Spring adjuster standard position		4th groove	—
	Rebound adjuster initial setting		2 turns from full hard	—
	Compression adjuster initial setting		2 turns from full hard	—

ITEM			STANDARD	SERVICE LIMIT
Front	Specified brake fluid		Honda DOT 4 Brake Fluid	—
	Brake disc thickness		4.5 (0.18)	3.5 (0.14)
	Brake disc runout		—	0.30 (0.012)
	Master cylinder I.D.		17.460 – 17.503 (0.6874 – 0.6891)	17.515 (0.6896)
	Master piston O.D.		17.321 – 17.367 (0.6819 – 0.6837)	17.309 (0.6815)
	Caliper cylinder I.D.	Upper	32.025 – 32.035 (1.2608 – 1.2612)	32.05 (1.262)
		Lower	30.250 – 30.280 (1.1909 – 1.1921)	30.29 (1.193)
	Caliper piston O.D.	Upper	31,965 – 31.998 (1.2585 – 1.2598)	31.953 (1.2580)
		Lower	30.082 – 30.115 (1.1843 – 1.1856)	30.074 (1.1840)
Rear	Specified brake fluid		Honda DOT 4 Brake Fluid	—
	Brake disc thickness		5.0 (0.20)	4.0 (0.16)
	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.		38.180 – 38.230 (1.5031 – 1.5051)	38.24 (1.506)
	Caliper cylinder O.D.		38.098 – 38.148 (1.4999 – 1.5019)	38.090 (1.4996)

Battery	Capacity		12V – 8.6 Ah
	Current leakage		0.2 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 *A10.5* h
Alternator	Capacity		0.421 kW/5,000 rpm
	Charging coil resistance (20°C/68°F)		0.1 – 1.0 Ω

IGNITION SYSTEM

ITEM		SPECIFICATIONS
Spark plug	Standard	IMR9C-9H (NGK), VUH27D (DENSO)
	Optional	IMR8C-9H (NGK), VUH24D (DENSO)
Spark plug gap		0.80 – 0.90 mm (0.031 – 0.035 in)
Ignition coil peak voltage		100 V minimum
Ignition pulse generator peak voltage		0.7 V minimum
Ignition timing ("F" mark)		13° BTDC at idle

Starter motor brush length	10.0 – 10.5 (0.39 – 0.41)	3.5 (0.14)

ITEM			SPECIFICATIONS
Bulbs	Headlight	Hi	12v – 55w X 2
		Lo	12V – 55W
	Brake/tail light		LED
	Front turn signal light		12V – 32/3cp (23/8W) X 2
	Rear turn signal light		12V – 32cp (23W) X 2
	License light		12V – 5W
	Instrument light		LED
	Turn signal indicator		LED X 2
	High beam indicator		LED
	Neutral indicator		LED
	Oil pressure indicator		LED
	PGM-FI warning indicator		LED
	Fuel reserve indicator		LED
Fuse	Main fuse		30 A
	PGM-FI fuse		20 A
	Sub fuse		20A X 2, 10A X 3
Tachometer peak voltage			10.5V minimum
Thermo sensor resistance		80 °C (176°F)	2.1 – 2.6 kΩ
		120 °C (248°F)	0.65 – 0.73 kΩ

TORQUE VALUES

FASTENER TYPE	TORQUE N·m (kgf·m, lbf·ft)	FASTENER TYPE	TORQUE N·m (kgf·m, lbf·ft)
5 mm hex bolt and nut	5 (0.5, 3.6)	5 mm screw	4 (0.4, 2.9)
10 mm hex bolt and nut	34 (3.5, 25)	small flange)	
12 mm hex bolt and nut	54 (5.5, 40)	6 mm flange bolt (8 mm head, large flange)	12 (1.2, 9)

- 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 a locking agent to the threads.
3. Apply grease to the threads.
4. Stake.
5. Apply oil to the threads and flange surface.
6. Apply clean engine oil to the O-ring.
7. U-nut
8. ALOC bolt: replace with a new one.
9. CT bolt
10. Apply molybdenum disulfide oil to the threads and seating surface (after removing anti-rust oil additive).
11. One-way bolt

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 3
Oil drain bolt	1	12	29 (3.0, 22)	
Oil filter cartridge	1	20	26 (2.7, 20)	NOTE 6
LUBRICATION SYSTEM:				
Oil cooler mounting bolt	1	20	74 (7.5, 54)	
Oil pump assembly flange bolt	1	6	8 (0.8, 5.8)	NOTE 9
Oil pump driven sprocket bolt	1	6	15 (1.5, 11)	NOTE 2
Oil pressure switch	1	PT 1/8	12 (1.2, 9)	NOTE 1
Oil pressure switch wire terminal screw	1	4	2 (0.2, 1.4)	
Lower crankcase 20 mm sealing bolt	1	20	29 (3.0, 22)	NOTE 2
FUEL SYSTEM (Programmed Fuel Injection):				
ECT (Engine Coolant Temperature)/thermo sensor	1	12	23 (2.3, 17)	
Throttle body insulator band screw	8	5	See page 1-14	
Throttle cable bracket mounting bolt	2	5	3 (0.35, 2.5)	
Fuel pipe mounting bolt	3	6	10 (1.0, 7)	
Pressure regulator mounting bolt	2	6	10 (1.0, 7)	
Starter valve synchronization plate screw	4	3	1 (0.09, 0.7)	
Fast idle wax unit link plate screw	1	3	1 (0.09, 0.7)	
Fast idle wax unit mounting screw	2	6	5 (0.5, 3.6)	
Starter valve lock nut	4	10	2 (0.18, 1.3)	
COOLING SYSTEM:				
Water pump cover flange bolt	2	6	12 (1.2, 9)	NOTE 9
Thermostat cover flange bolt	2	6	12 (1.2, 9)	NOTE 9
ENGINE MOUNTING:				
Drive sprocket special bolt	1	10	54 (5.5, 40)	

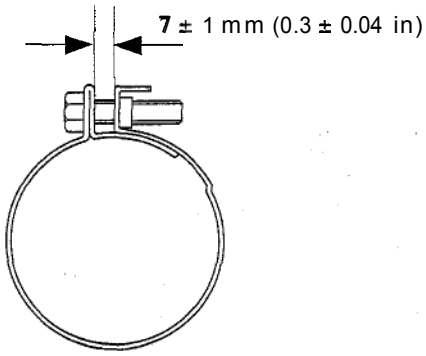
ENGINE (Cont'd)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
CYLINDER HEAD/VALVES:				
Cylinder head cover bolt	4	6	10 (1.0, 7)	
PAIR reed valve cover flange bolt	4	6	12 (1.2, 9)	NOTE 2
Breather plate flange bolt	3	6	12 (1.2, 9)	NOTE 2
Camshaft holder flange bolt	20	6	12 (1.2, 9)	NOTE 5
Cylinder head sealing bolt	1	18	27 (2.8, 20)	NOTE 2
Cylinder head mounting bolt	2	8	25 (2.5, 18)	NOTE 5
Cylinder head mounting bolt/washer	10	9	51 (5.2, 38)	NOTE 10
Cam sprocket bolt	4	7	20 (2.0, 14)	NOTE 2
Cam pulse generator rotor bolt	2	6	12 (1.2, 9)	NOTE 2
Cam chain tensioner pivot socket bolt	1	6	10 (1.0, 7)	NOTE 2
Cam chain guide mounting socket bolt	1	6	12 (1.2, 9)	NOTE 2
Cylinder head stud bolt (exhaust pipe stud bolt)	8	8	See page 1-14	
CLUTCH/GEARSHIFT LINKAGE:				
Clutch center lock nut	1	22	127 (13.0, 94)	NOTE 4,5
Clutch spring bolt/washer	5	6	12 (1.2, 9)	
Shift drum center socket bolt	1	8	23 (2.3, 17)	NOTE 2
Shift drum stopper arm pivot bolt	1	6	12 (1.2, 9)	
Gearshift return spring pin	1	8	23 (2.3, 17)	
Shift drum bearing/shift fork retaining bolt/washer	2	6	12 (1.2, 9)	NOTE 2
ALTERNATOR/STARTER CLUTCH:				
Alternator wire clamp bolt	1	6	14 (1.4, 10)	NOTE 9
Flywheel flange bolt	4	10	103 (10.5, 76)	NOTE 5
Stator mounting socket bolt	4	6	12 (1.2, 9)	
Starter one-way clutch torx bolt	6	6	16 (1.6, 12)	NOTE 2
CRANKCASE/PISTON/CYLINDER:				
Mainshaft bearing set plate bolt	3	6	12 (1.2, 9)	NOTE 2
Crankcase bolt, 10 mm	1	10	39 (4.0, 29)	
9 mm (main journal bolt)	10	9	20 (2.0, 14) + 150°	See page 11-12 NOTE 5
8 mm	12	8	25 (2.5, 18)	
Connecting rod nut	8	8	35 (3.6, 26)	NOTE 5
Upper crankcase sealing bolt	1	8	22 (2.2, 16)	NOTE 2
Lower crankcase 20 mm sealing bolt	1	20	29 (3.0, 22)	NOTE 2
Lower crankcase 10 mm socket bolt	1	10	12 (1.2, 6.5)	NOTE 2

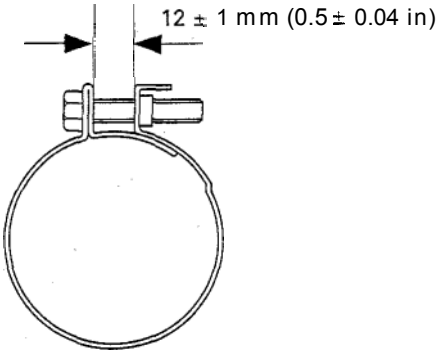
ENGINE (Cont'd)

ITEM	Q'TY	DIA. (mm)	N•m (kgf•m, lbf•ft)	REMARKS
IGNITION SYSTEM:				
Ignition pulse generator rotor mounting bolt	1			NOTE 5
ELECTRIC STARTER:				
Starter motor terminal nut	2			
LIGHTS/METERS/SWITCHES:				
Neutral switch	1		1	

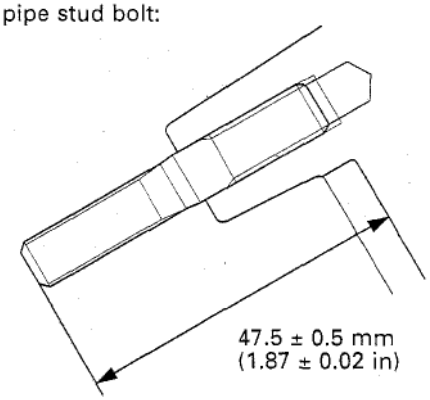
Insulator clamp (Throttle body side):



insulator clamp (Cylinder head *side):*

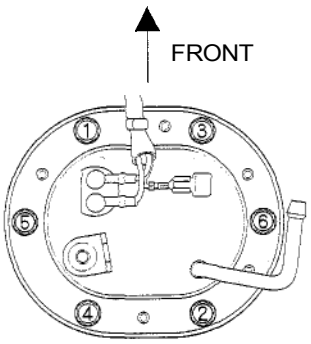


Exhaust pipe stud bolt:



FRAME

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
FRAME BODY PANELS/EXHAUST SYSTEM:				
Upper cowl stay mounting bolt	2	8	26 (2.7, 20)	
Upper cowl stay mounting SH bolt	3	6	7 (0.7, 5.1)	
Upper cowl pan screw	4	5	1.5 (0.15, 1.1)	
Lower cowl pan screw	2	5	1.5 (0.15, 1.1)	
Rear cowl truss screw	2	5	1.5 (0.15, 1.1)	
Pillion seat mounting nut	2	6	11 (1.1, 8)	NOTE7
Pillion seat hinge special screw	2	6	12 (1.2, 9)	
Duct cover pan screw	4		1.5 (0.15, 1.1)	
Windscreen mounting screw	1 7	5	0.3(0.03, 0.22)	See page 2-8
Seat rail mounting bolt, 8 mm		8	39 (4.0, 29)	
Seat rail mounting nut, 10 mm	2	10	39 (4.0, 29)	
Pillion step mounting socket bolt	4	8	39 (4.0, 29)	
Exhaust pipe joint nut	8	7	12 (1.2, 9)	
FUEL SYSTEM (Programmed Fuel Injection):				
Fuel filler cap bolt	7	4	2 (0.2, 1.4)	
Fuel hose banjo bolt (fuel tank side)	1	12	22 (2.2, 16)	
Fuel hose sealing nut (throttle body side)	1	12	22 (2.2, 16)	
Fuel pump mounting nut	6	6	12 (1.2, 9)	
(see tightening sequence below)				
Bank angle sensor mounting screw	2	6	11 (1.1, 8)	
Exhaust valve mounting bolt (front)	4	6	14 (1.4, 10)	
(rear)	3 ~ 4	6	14 (1.4, 10)	
Exhaust valve cover mounting bolt		6	12 (1.2, 9)	
Exhaust valve pulley nut	1	6	12 (1.2, 9)	
Exhaust valve pulley cover mounting bolt	2	6	12 (1.2, 9)	
O_2 sensor (California type only)	1	12	25 (2.6, 19)	
COOLING SYSTEM:				
Cooling fan nut	1	5	3 (0.3, 2.2)	
Fan motor nut	2	5	5 (0.5, 3.6)	
Fan motor shroud mounting bolt	3	6	8 (0.8, 5.8)	
ENGINE MOUNTING:				
Main footpeg bracket mounting socket bolt	4	8	39 (4.0, 29)	
Main footpeg mounting bolt	2	10	44 (4.5, 33)	NOTE 8
Lower bracket mounting nut	2	10	42 (4.3, 31)	See page 7-12 NOTE 7
Lower bracket mounting pinch bolt	4	8	26 (2.7, 20)	
Engine hanger bolt (front)	2	10	39 (4.0, 29)	See page 7-7
Engine hanger bolt (middle)	2	12	54 (5.5, 40)	
Engine hanger nut (rear)	1	12	54 (5.5, 40)	
Rear engine hanger pinch bolt	1	8	26 (2.7, 20)	
Side stand bracket bolt	2	10	44 (4.5, 33)	NOTE 8
Side stand pivot bolt	1	10	10 (1.0, 7)	
Side stand pivot lock nut	1	10	29 (3.0, 22)	NOTE 7



FRAME (Cont'd)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
CLUTCH/GEARSHIFT LINKAGE:				
Gearshift pedal link pinch bolt	1	6	10 (1.0, 7)	NOTE 8
FRONT WHEEL/SUSPENSION/STEERING:				
Handlebar pinch bolt	2	8	26 (2.7, 20)	
Handlebar weight mountign screw	2	6	10 (1.0, 7)	NOTE 8
Steering stem nut	1	24	103 (10.5, 76)	See page 13-30
Steering stem adjusting nut	1	26	20 (2.0, 14)	
Steering stem lock nut	1	26		
Fork top bridge pinch bolt	2	8	23 (2.3, 17)	
Fork bottom bridge pinch bolt	4	8	26 (2.7, 20)	
Front axle bolt	1	18	78 (8.0, 58)	
Front axle holder pinch bolt	4	8	22 (2.2, 16)	
Front brake disc mounting bolt	12	6	20 (2.0, 14)	NOTE 8
Fork bolt	2	42	23 (2.3, 17)	
Fork center bolt	2	10	34 (3.5, 25)	
REAR WHEEL/SUSPENSION:				
Rear axle nut	1	22	113 (11.5, 83)	NOTE 7
Rear brake disc mounting bolt	4	8	42 (4.3, 31)	NOTE 8
Driven sprocket nut	6	10	64 (6.5, 47)	NOTE 7
Rear shock absorber upper mounting nut	1	10	44 (4.5, 33)	NOTE 7
Rear shock absorber upper bracket mounting nut	1	16	93 (9.5, 69)	NOTE 7
Shock arm plate nut	3	10	44 (4.5, 33)	NOTE 7
Shock link nut (frame side)	1	10	44 (4.5, 33)	NOTE 7
Swingarm pivot nut	1	24	118 (12.0, 87)	NOTE 7
Swingarm pivot pinch bolt	2	8	26 (2.7, 20)	
Drive chain slider bolt	3	6	9 (0.9, 6.5)	NOTE 8
HYDRAULIC BRAKE:				
Front brake master cylinder cup mounting nut	1	6	6 (0.6, 4.3)	NOTE 7
Brake lever pivot bolt	1	6	1 (0.1, 0.7)	
Brake lever pivot nut	1	6	6 (0.6, 4.3)	
Front brake light switch screw	1	4	1 (0.1, 0.7)	
Front brake caliper mounting bolt	4	8	30 (3.1, 22)	NOTE 8
Caliper body assembly torx bolt	8	8	23 (2.3, 17)	NOTE 2
Front caliper pad pin	4	10	18 (1.8, 13)	
Rear caliper pad pin	1	10	18 (1.8, 13)	
Rear caliper pad pin plug	1	10	3 (0.3, 2.2)	
Brake caliper bleeder	3	8	6 (0.6, 4.3)	
Rear brake hose clamp screw	1	5	4 (0.4, 2.9)	NOTE 8
Brake pedal joint nut	1	8	18 (1.8, 13)	
Rear master cylinder push rod lock nut	1	8	18 (1.8, 13)	
Rear master cylinder hose joint screw	1	4	1 (0.15, 1.1)	NOTE 2
Rear brake caliper pin bolt	1	12	27 (2.8, 20)	NOTE 2
Rear brake caliper bolt	1	8	23 (2.3, 17)	NOTE 2
Brake hose oil bolt	5	10	34 (3.5, 25)	
LIGHTS/METERS/SWITCHES:				
Ignition switch mounting one-way bolt	2	8	26 (2.7, 20)	NOTE 11
Side stand switch mountinq bolt	1	6	10 (1.0, 7)	

TOOLS

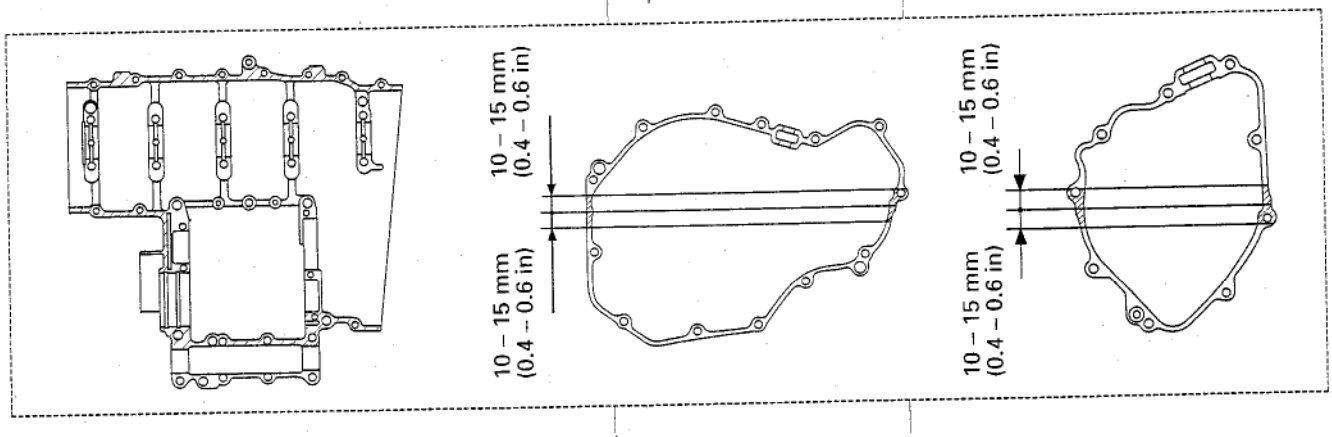
NOTES: 1. Equivalent commercially available in U.S.A.
2. Alternative tool.
3. Newly designed tool.
4. Not available in U.S.A.

DESCRIPTION	TOOL NUMBER	REMARKS	REF. SEC.
ECM test harness, 26P	070MZ-0010100		5
Fuel pressure gauge	07406-0040003	NOTE 2: 07406-004000A (U.S.A. only)	5
Oil pressure gauge set	07506-3000001	NOTE 1	4
Oil pressure gauge attachment	07510-MA70000	NOTE 1	4
Clutch center holder	07724-0050002		9
Flywheel holder	07725-0040000	NOTE 1	10
Rotor puller	07733-0020001	NOTE 2: 07933-3950000 (U.S.A. only)	10
Attachment, 42 x 47 mm	07746-0010300		9, 13, 14
Attachment, 52 x 55 mm	07746-0010400		14
Attachment, 22 x 24 mm	07746-0010800		14
Attachment, 40 x 42 mm	07746-0010900		14
inner driver, 40 mm I.D.	07746-0030100		12
Attachment, 25 mm I.D.	07746-0030200		12
Pilot, 17 mm	07746-0040400		14
Pilot, 25 mm	07746-0040600		13, 14
Pilot, 35 mm	07746-0040800		9
Bearing remover shaft	07746-0050100		13, 14
Bearing remover head, 25 mm	07746-0050800		13, 14
Driver	07749-0010000		9, 13, 14
Valve spring compressor	07757-0010000		8
Valve seat cutter		NOTE 1	8
Seat cutter, 24.5 mm (45° EX)	07780-0010100		
Seat cutter, 29 mm (45° IN)	07780-0010300		
Flat cutter, 28 mm (32° EX)	07780-0012100		
Flat cutter, 30 mm (32° IN)	07780-0012200		
interior cutter, 26 mm (60° EX)	07780-0014500		
Interior cutter, 30 mm (60° IN)	07780-0014000		
Cutter holder, 4.5 mm	07781-0010600		
Snap ring pliers	07914-SA50001		15
Steering stem socket	07916-3710101	NOTE 2: 07916-3710100 (U.S.A. only)	13
Rod holder, 24 x 27 mm	07930-KA50100		7, 14
Driver attachment, A	07946-KM90100	NOTE 4	13
Driver shaft assembly	07946-KM90300	NOTE 4	13
Bearing remover, A	07946-KM90401	NOTE 4	13
Assembly base	07946-KM90600	NOTE 4	13
Steering stem driver	07946-MB00000		13
Driver shaft	07946-MJ00100		14
Fork seal driver body	07947-KA50100		13
Driver	07949-3710001		14
Valve spring compressor attachment	07959-KM30101		8
Driver shaft	07964-MB00200		12
Oil filter wrench	07HAA-PJ70101	NOTE 2: 07HAA-PJ70100	3, 4
Peak voltage adaptor	07HGJ-0020100	NOTE 4 NOTE 1: IgnitionMate peak voltage tester (U.S.A. only)	5, 17, 19
Tappet hole protector	07HMG-MR70002	NOTE 4	8
Valve guide driver, 4.5 mm	07HMD-ML00101		8
Valve guide reamer, 4.5 mm	07HMH-ML00101	NOTE 1: 07HMH-ML0010A (U.S.A. only)	8
Drive chain tool set	07HMH-MR10103	NOTE 1: 07HMH-MR1010C (U.S.A. only)	3
Needle bearing remover	07LMC-KV30100		14
Vacuum gauge set	07LMJ-001OOOA		5
Pilot, 32 x 50 mm	07MAD-PR90200		14

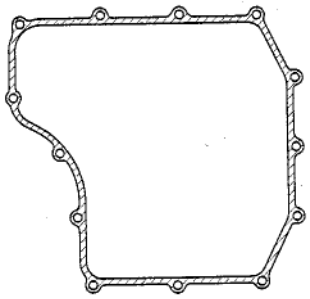
DESCRIPTION	TOOL NUMBER	REMARKS	REF. SEC.
Race remover	07NMF-MT70110	NOTE 4	13
Driver attachment	07NMF-MT70120	NOTE 4	13
Compression gauge attachment	07RMJ-MY50100		8
Fork damper holder handle	07TMB-00101OA		13
Installer attachment, A	07VMF-MAT0100	U.S.A. only	13
Installer attachment, B	07VMF-MAT0200	U.S.A. only	13
Remover attachment, A	07VMF-MAT0300	U.S.A. only	13
Remover attachment, B	07VMF-MAT0400	U.S.A. only	13
Fork damper holder	07YMB-MCF0101		13
Oil seal driver	07YMD-MCF0100	NOTE 1: 07NMD-KZ3010A (U.S.A. only)	13
Driver attachment, 25 x 38.5 mm	07YMD-MCJ0100		14
Installer shaft guide	07YMF-MCJ0100	NOTE 2: 07YMF-MCJA100 (U.S.A. only)	5
Installer shaft	07YMF-MCJ0200	NOTE 2: 07YMF-MCJA200 (U.S.A. only)	5
installer shaft, 14 x 30 mm	07YMF-MCJ0300	NOTE 2: 07YMF-MCJA300 (U.S.A. only)	5
Remover, 14 x 16 mm	07YMF-MCJ0400	NOTE 2: 07YMF-MCJA400 (U.S.A. only)	5
Cam chain tensioner holder	07ZMG-MCAA400	U.S.A. only	3, 8
Batterv tester	BM-210-AH	NOTE 2: BM-210 (U.S.A. only)	16

LUBRICATION & SEAL POINTS

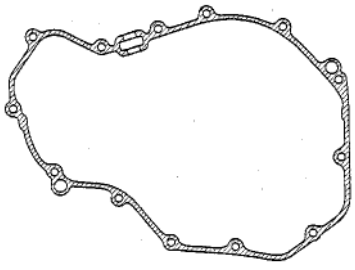
LOCATION	MATERIAL	REMARKS
Crankcase mating surface	Liquid sealant (Three Bond 1207B or equivalent)	



Oil pan mating surface

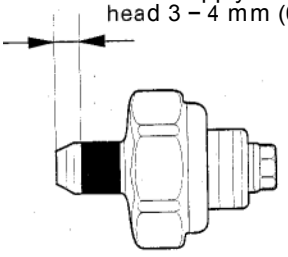


Right crankcase cover mating surface

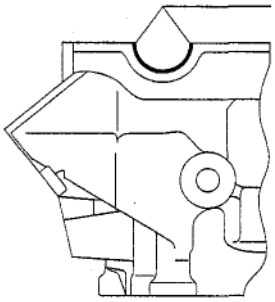
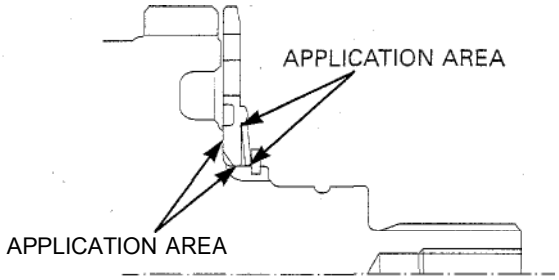


Oil pressure switch threads

Do not apply sealant to the thread head 3 – 4 mm (0.1 – 0.2 in)



ENGINE (Cont'd)

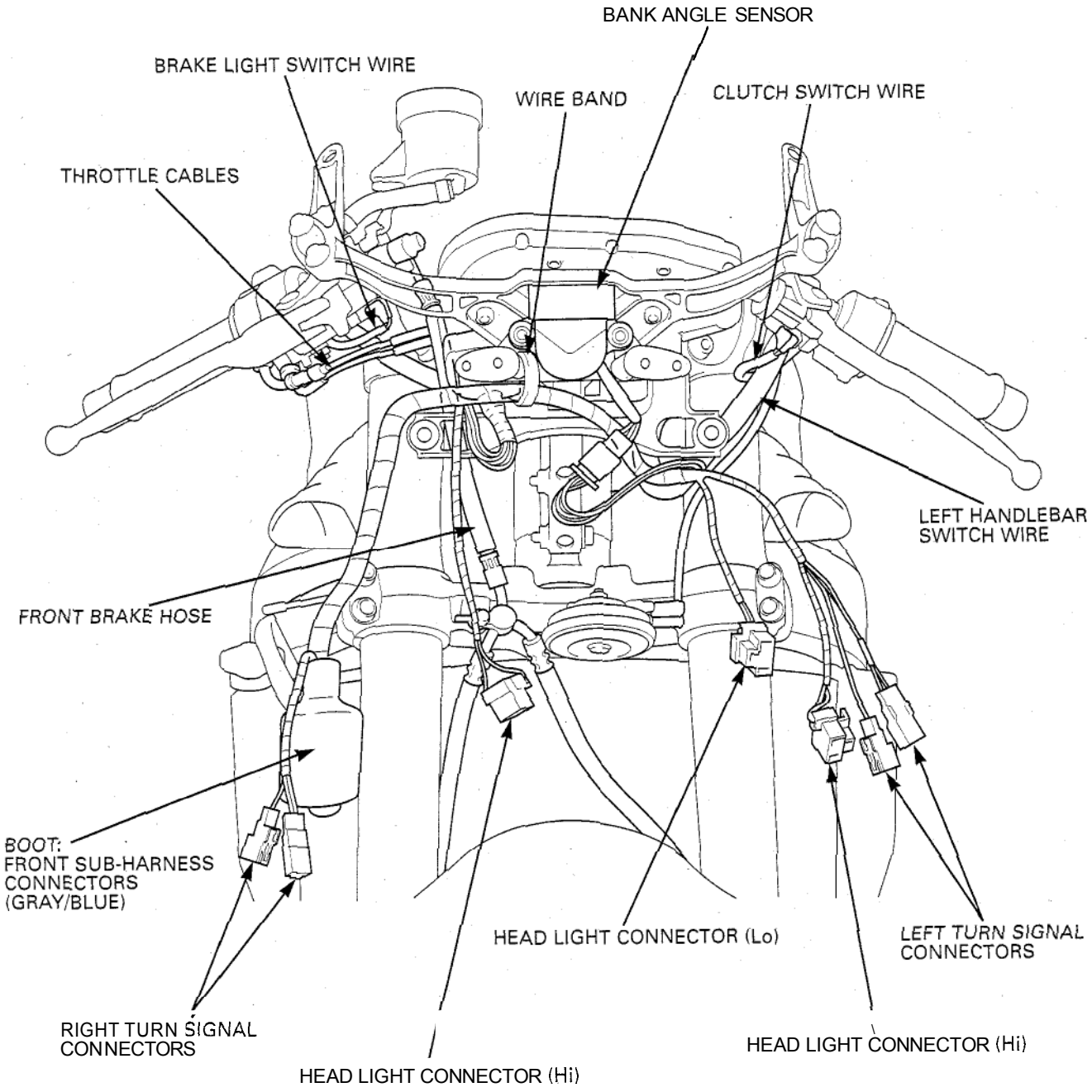
LOCATION	MATERIAL	REMARKS
Cylinder head semi-circular cut-out 	Sealant	
Main journal bearing surface Piston pin sliding surface Connecting rod bearing surface Connecting rod small end inner surface Crankshaft thrust surface Camshaft lobes/journals and thrust surface Valve stem (valve guide sliding surface) Valve lifter outer sliding surface Clutch outer/primary driven gear sliding surface Clutch outer guide sliding surface M3/4, C5, C6 shifter gear (shift fork grooves) Starter reduction gear shaft outer surface Cylinder head special bolt (after removing anti-rust oil additive) Primary sub-gear friction spring sliding surface 	Molybdenum disulfide oil (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease	
Piston ring sliding area Oil strainer packing Clutch disc surface Starter one-way clutch sliding surface Connecting rod nut threads Flywheel bolt threads and seating surface Main journal 9 mm bolt threads and seating surface (after removing anti-rust oil additive) Clutch center lock nut threads Oil filter cartridge threads and O-ring Camshaft holder bolt threads and seating surface Oil cooler center bolt threads Each gear teeth and rotating surface Each bearing rotating area Each O-ring Other rotating area and sliding surface	Engine oil	

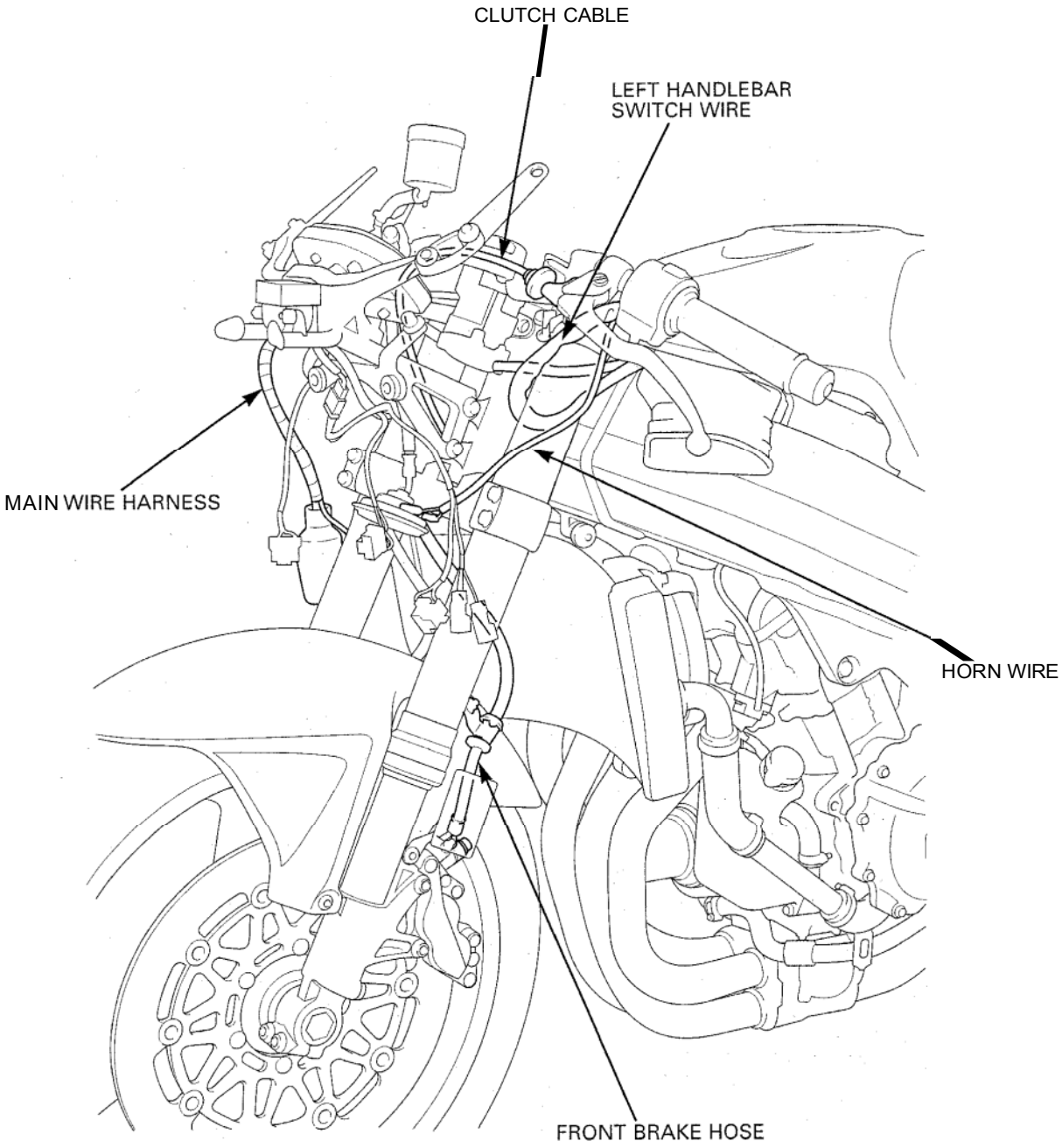
LOCATION	MATERIAL	REMARKS
Timing hole cap threads Each oil seal lip	Multi-purpose grease	
Upper crankcase sealing bolt threads Lower crankcase sealing bolt threads Cam chain guide A mounting bolt threads Cam pulse generator rotor bolt threads Cylinder head sealing bolt threads Cylinder head cover breather joint threads Starter one-way clutch outer bolt threads Oil pump driven sprocket bolt threads Shift drum bearing set plate bolt threads Mainshaft bearing set plate bolt threads Cam sprocket bolt threads Cylinder head cover breather plate bolt threads Shift drum center bolt threads Cam chain tensioner pivot bolt threads Cam chain guide pivot bolt threads Gearshift return spring pin	Locking agent	Coating width: 6.5 ± 1 mm

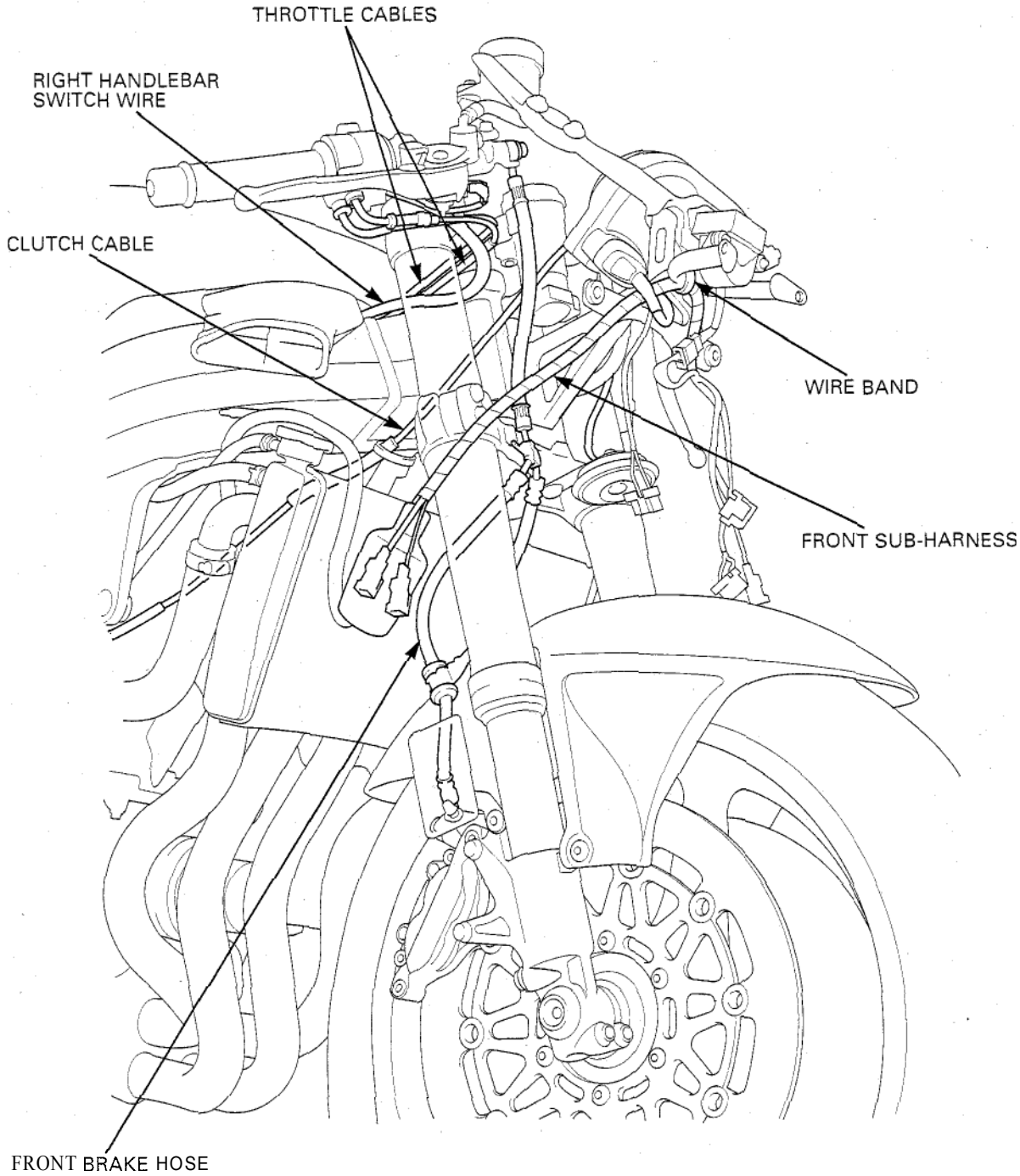
FRAME

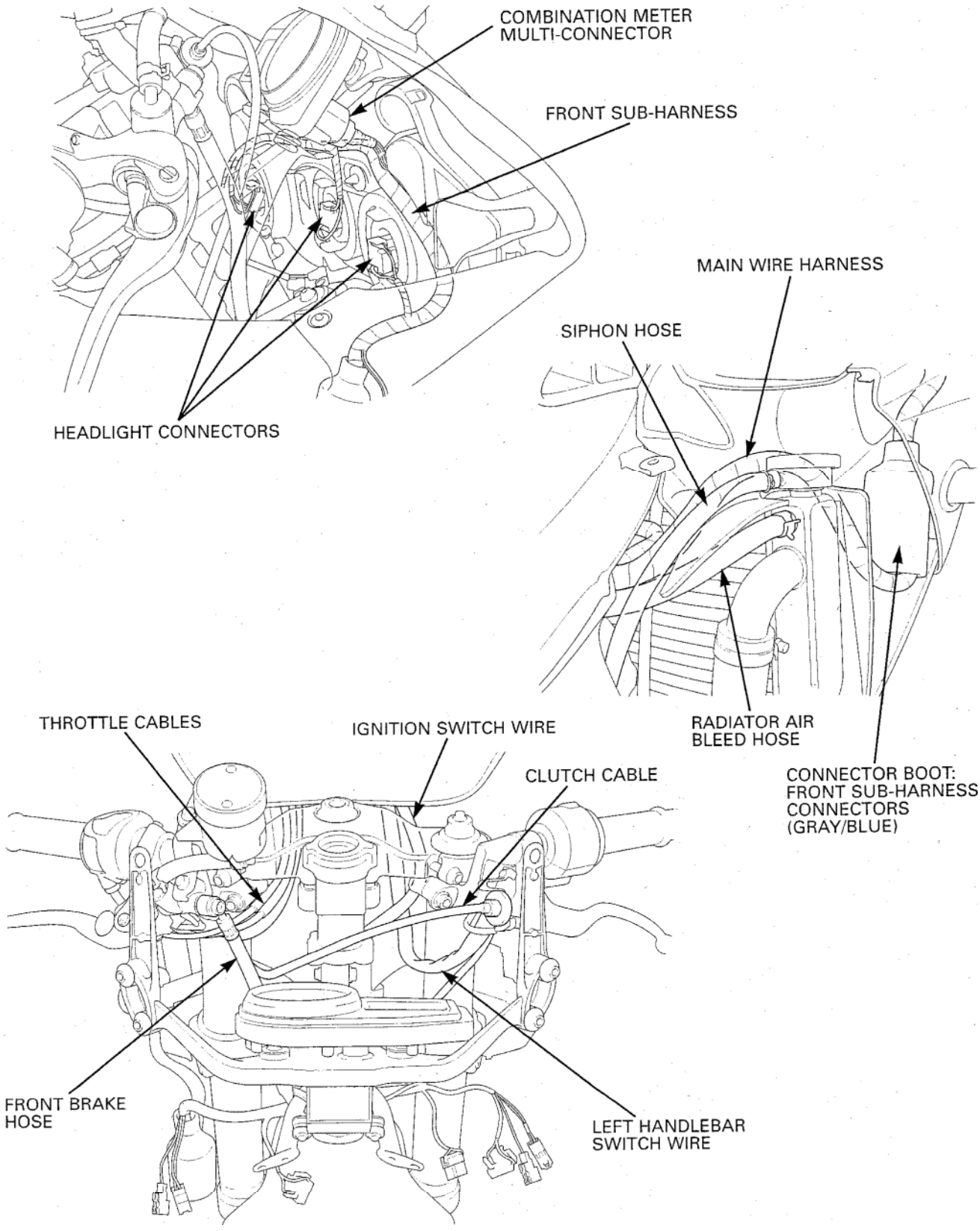
LOCATION	MATERIAL	REMARKS
Front wheel dust seal lips Rear wheel dust seal lips Rear wheel hub O-ring Footpeg sliding area Pillion footpeg sliding area Rear brake pedal pivot sliding area Gearshift pedal pivot sliding area Gearshift pedal tie-rod ball joint Clutch lever pivot bolt sliding area Throttle pipe sliding area Pillion seat pivot sliding area Pillion seat catch hook Pillion seat spring sliding area Side stand pivot surface Throttle pipe cable sliding surface	Multi-purpose grease	
Steering head bearing sliding surface Steering head dust seal lips Swingarm pivot bearings	Urea based multi-purpose grease for extreme pressure (example: EXCELITE EP2 manufactured by KYODO YUSHI, Japan, Shell Stamina EP2) or equivalent	
Swingarm pivot bearings Swingarm pivot dust seal lips Shock arm and link dust seal lips Shock arm and link needle bearings Shock absorber needle bearing Shock absorber dust seal lips	Multi-purpose grease (Shell Alvania EP2 or equivalent)	
Side stand pivot surface Throttle pipe cable sliding surface	Molybdenum disulfide grease	
Shock absorber spring adjuster cam surface	Molybdenum paste	
Steering stem top thread Brake pipe joint threads	Engine oil	
Throttle cable A, B casing inner Clutch cable casing inner Variable air intake valve cable inner Exhaust gas control valve cable A, B casing inner	Cable lubricant	
Brake master cylinder cups Brake caliper piston seals	DOT 4 brake fluid	
Brake caliper dust seals Front brake lever pivot and piston tips Rear master cylinder boot inside and push rod tips Rear brake caliper slide pin surface	Silicone grease	
Rear brake caliper slide pin threads Rear master cylinder hose joint screw threads Driven sprocket stud bolt threads	Locking agent	
Handlebar grip rubber inside	Honda Bond A	
Fork cap O-ring Fork oil seal lips	Fork fluid	

CABLE & HARNESS ROUTING

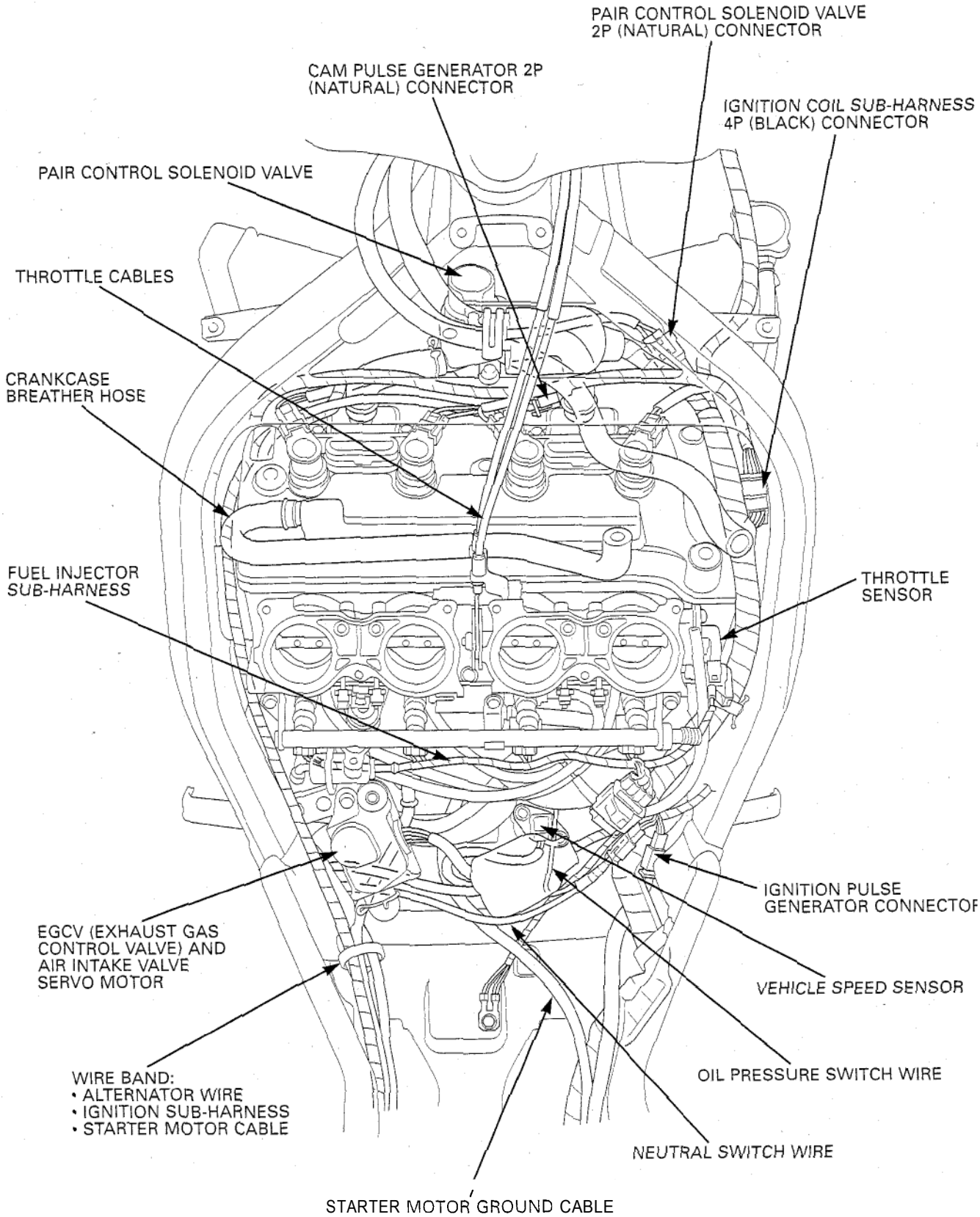



CLUTCH CABLE
LEFT HANDLEBAR SWITCH WIRE
MAIN WIRE HARNESS
HORN WIRE
FRONT BRAKE HOSE

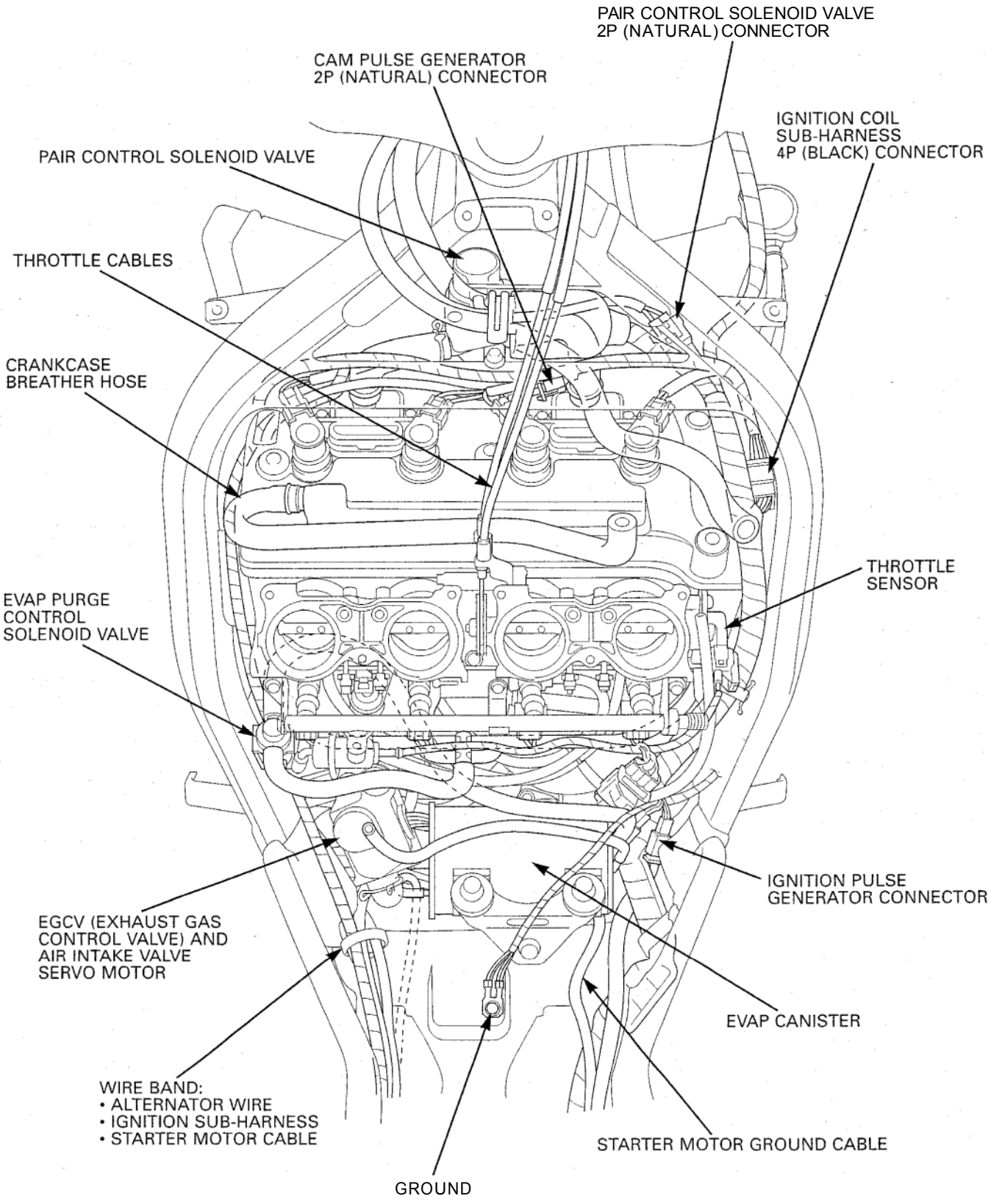

THROTTLE CABLES
RIGHT HANDLEBAR SWITCH WIRE
CLUTCH CABLE
WIRE BAND
FRONT SUB-HARNESS
FRONT BRAKE HOSE

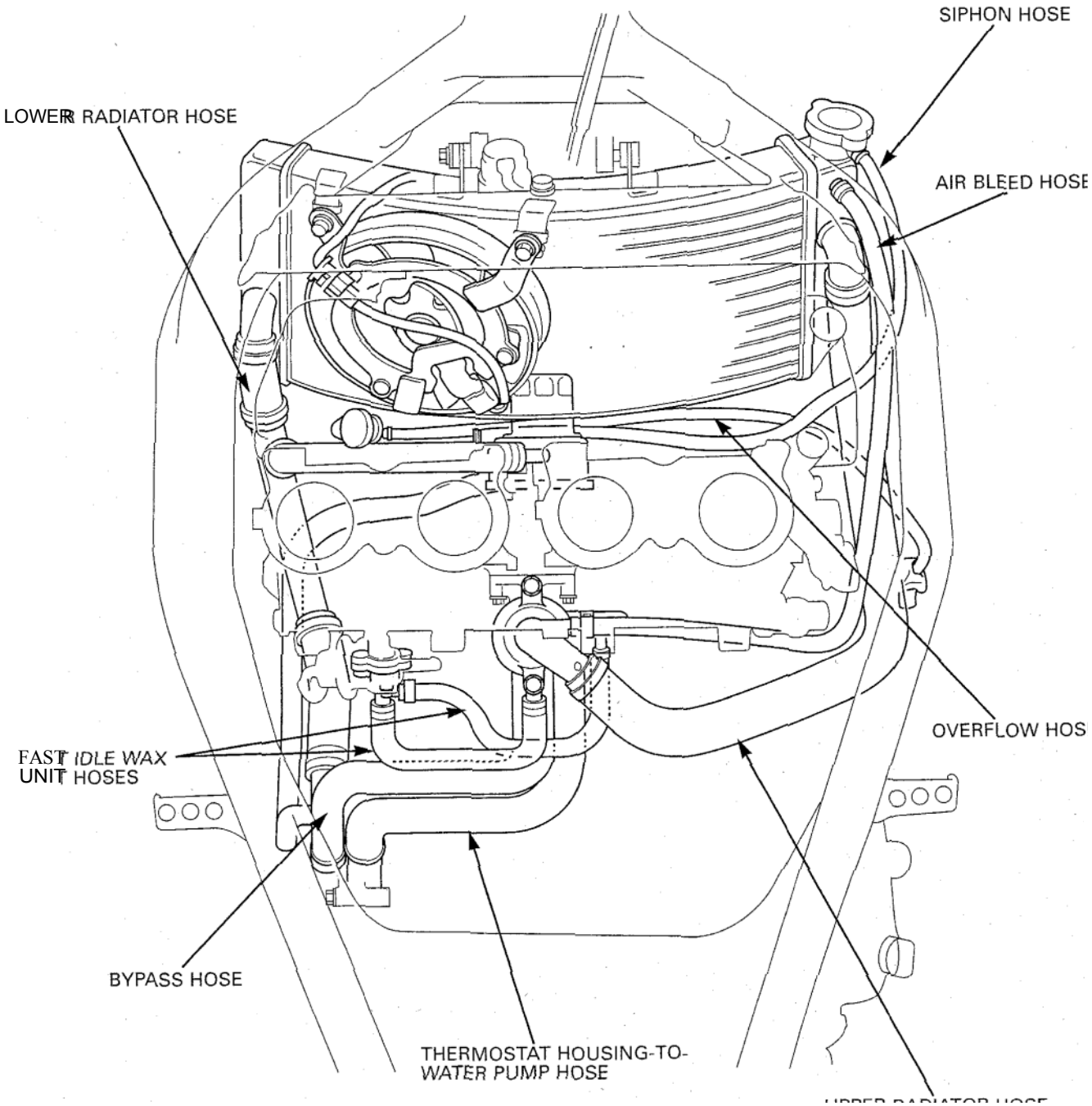

COMBINATION METER MULTI-CONNECTOR
FRONT SUB-HARNESS
HEADLIGHT CONNECTORS
MAIN WIRE HARNESS
SIPHON HOSE
RADIATOR AIR BLEED HOSE
CONNECTOR BOOT: FRONT SUB-HARNESS CONNECTORS (GRAY/BLUE)
THROTTLE CABLES
IGNITION SWITCH WIRE
CLUTCH CABLE
FRONT BRAKE HOSE
LEFT HANDLEBAR SWITCH WIRE

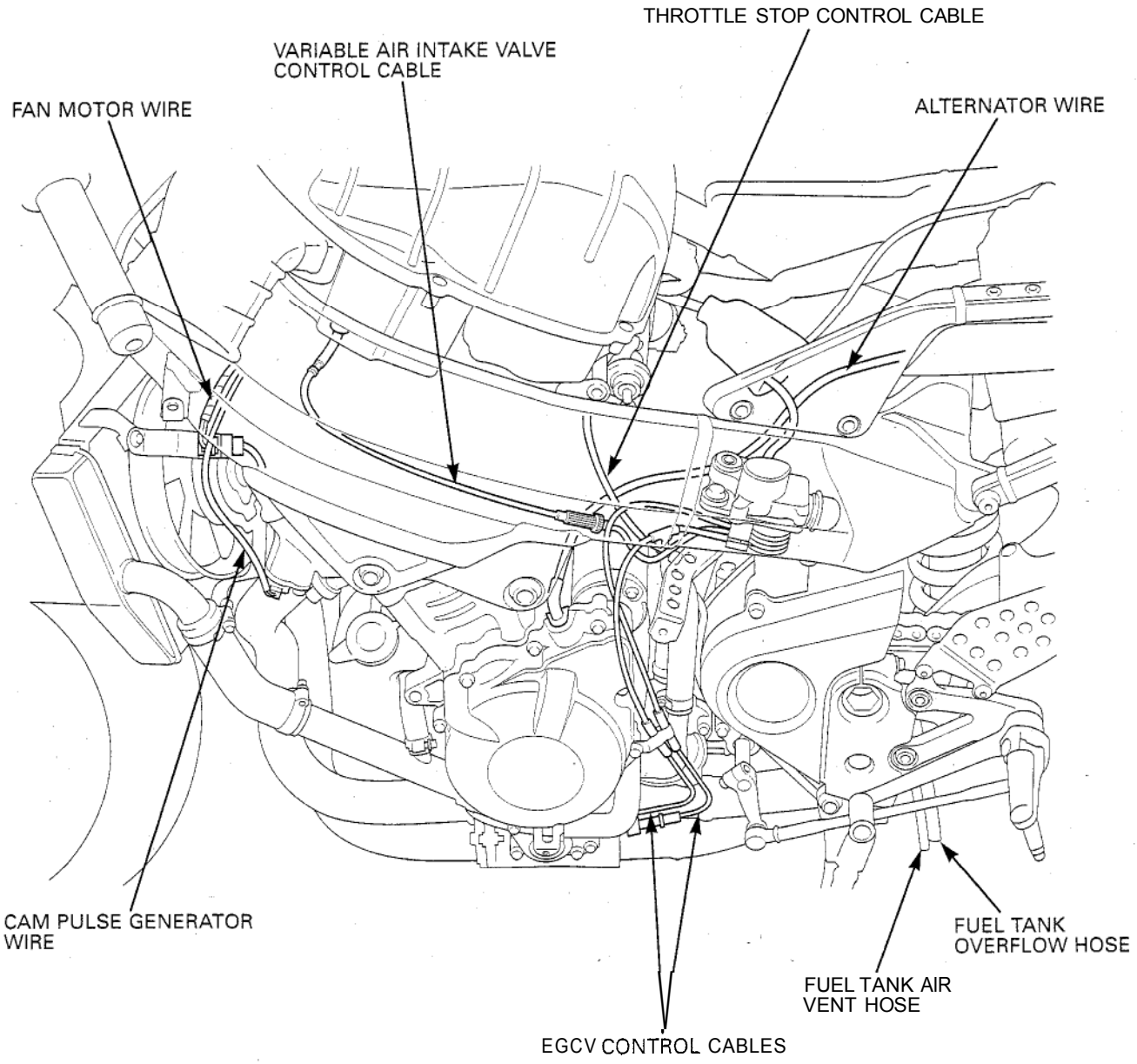
EXCEPT CALIFORNIA TYPE:

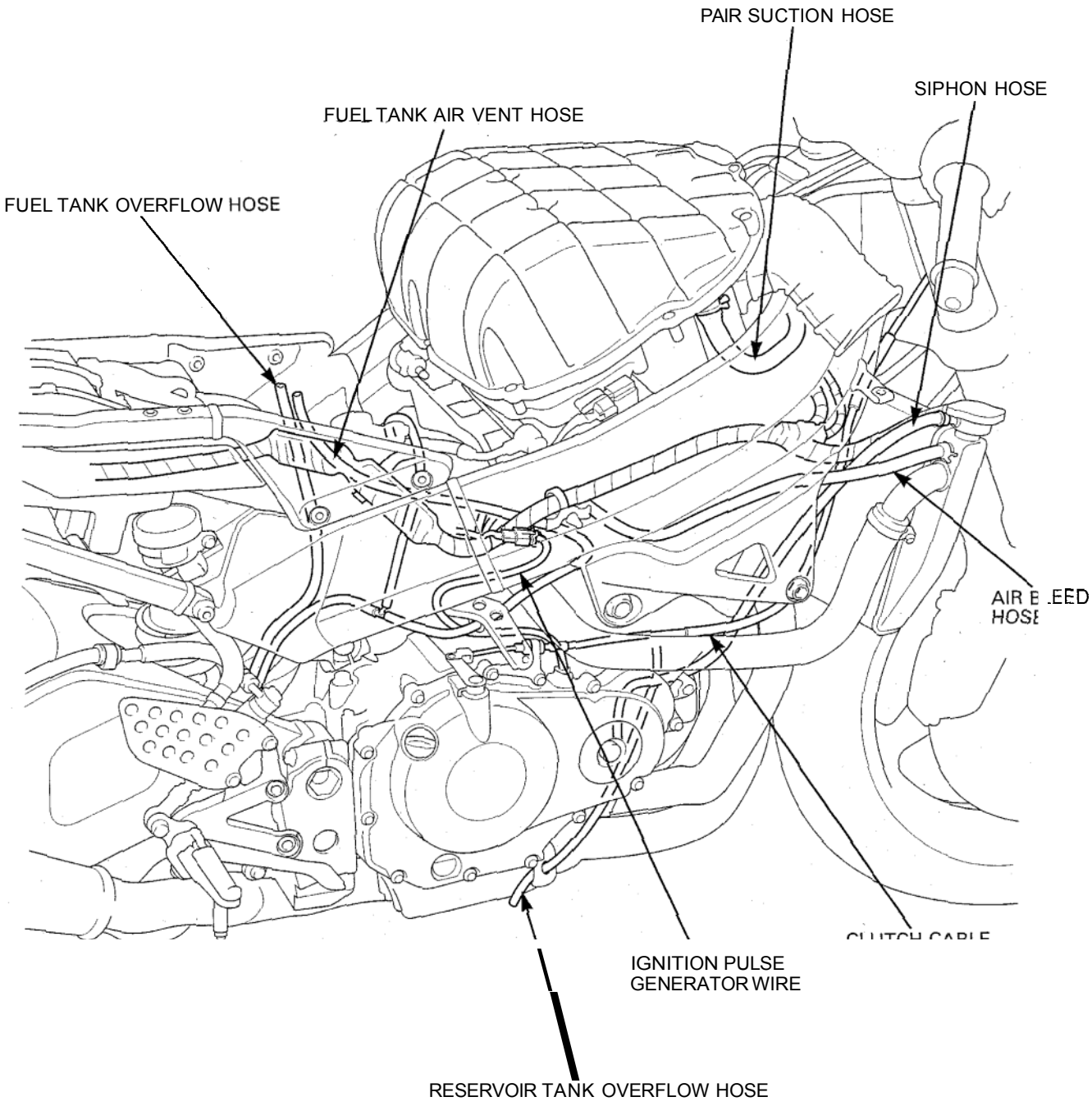


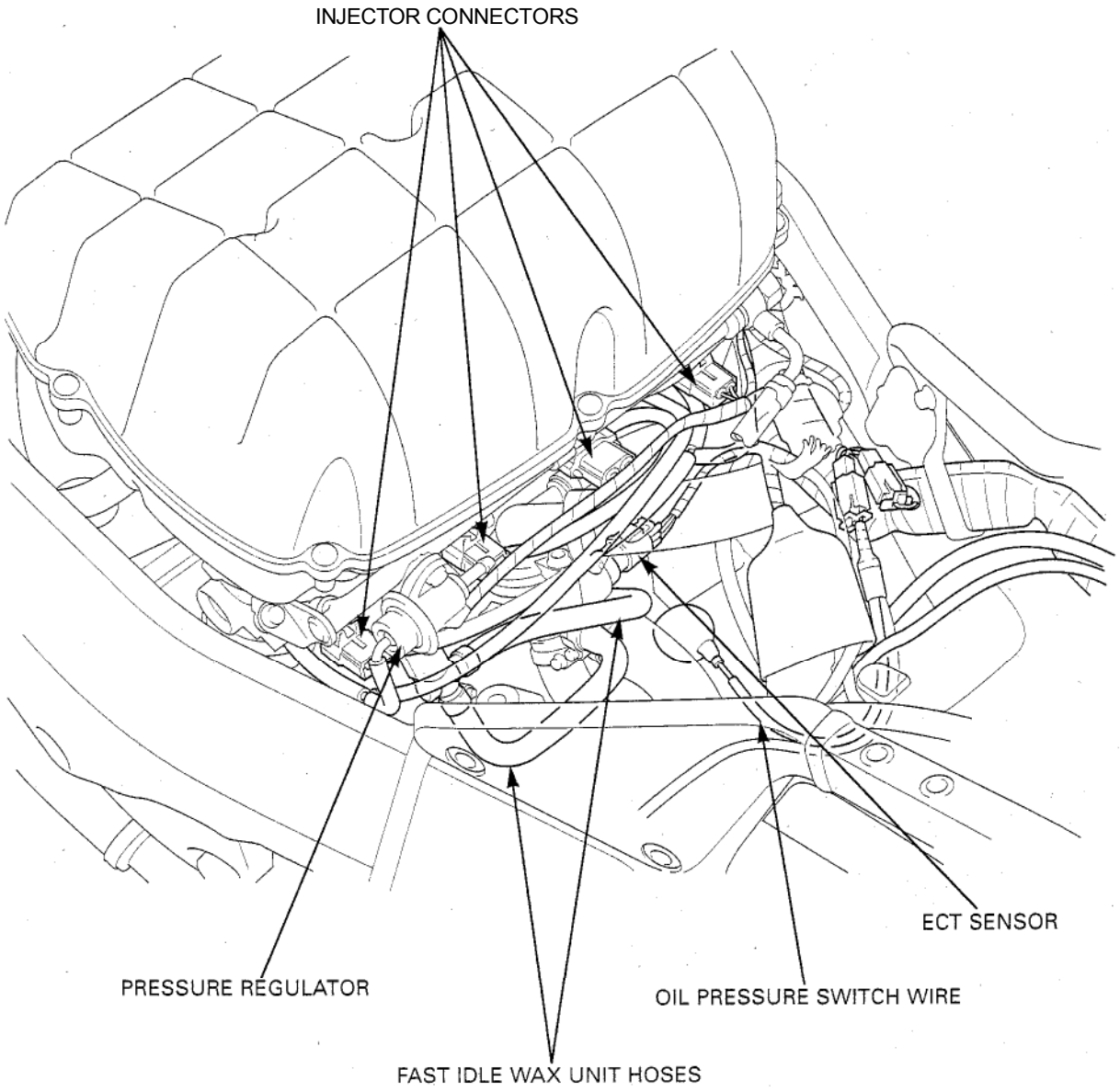
CALIFORNIA TYPE:

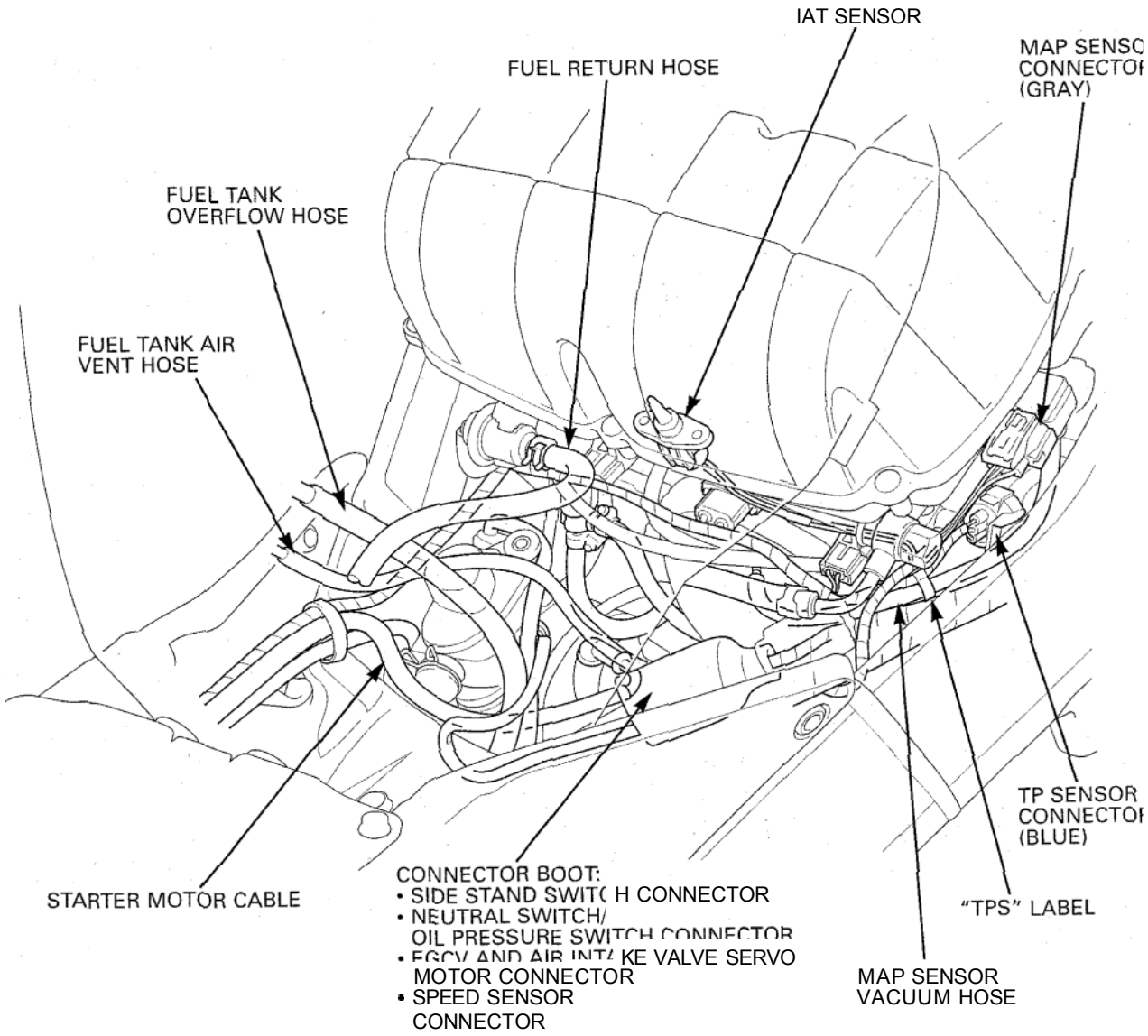


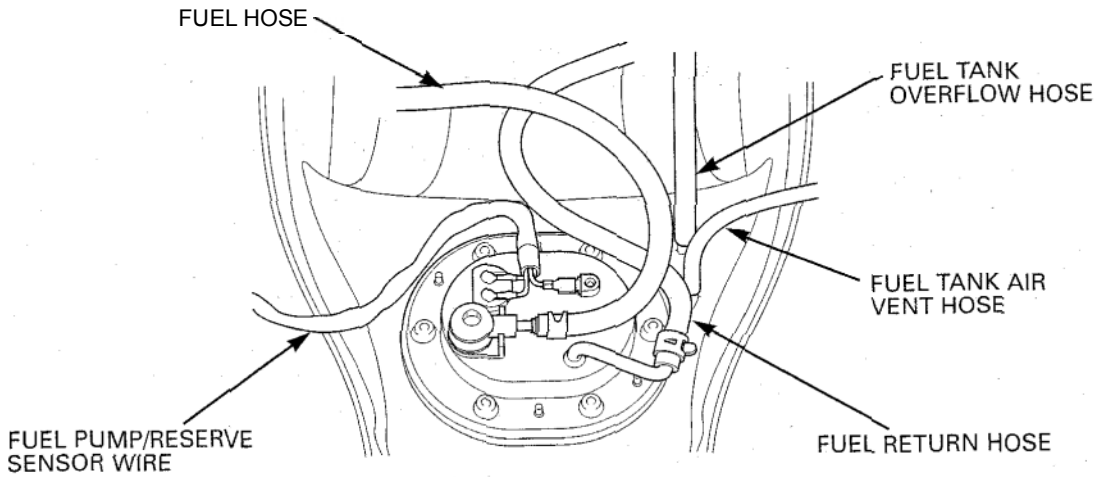

SIPHON HOSE
LOWER RADIATOR HOSE
AIR BLEED HOSE
OVERFLOW HOS
FAST IDLE WAX UNIT HOSES
BYPASS HOSE
THERMOSTAT HOUSING-TO-WATER PUMP HOSE

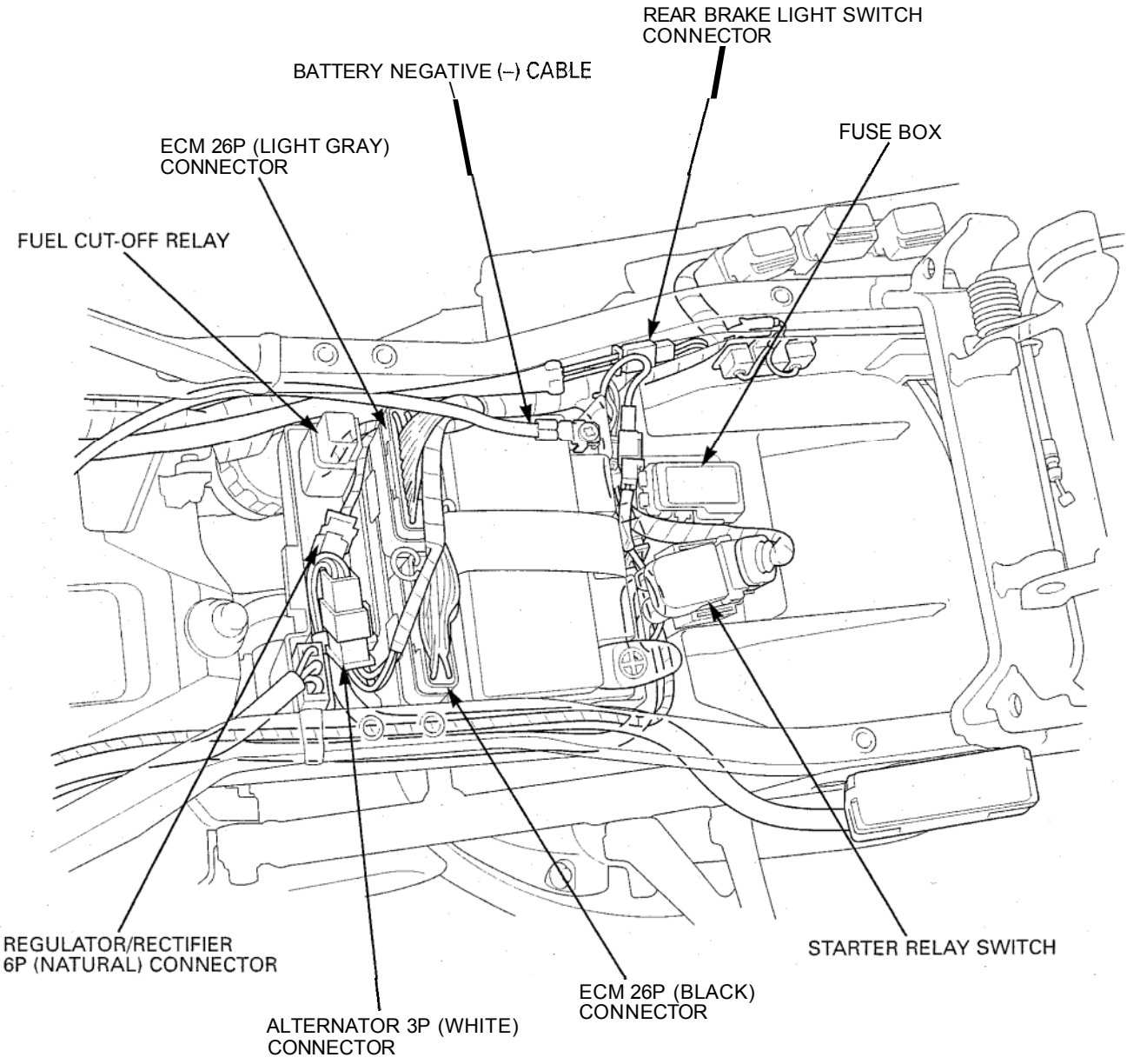

THROTTLE STOP CONTROL CABLE
VARIABLE AIR INTAKE VALVE CONTROL CABLE
FAN MOTOR WIRE
ALTERNATOR WIRE
CAM PULSE GENERATOR WIRE
FUEL TANK OVERFLOW HOSE
FUEL TANK AIR VENT HOSE
EGCV CONTROL CABLES

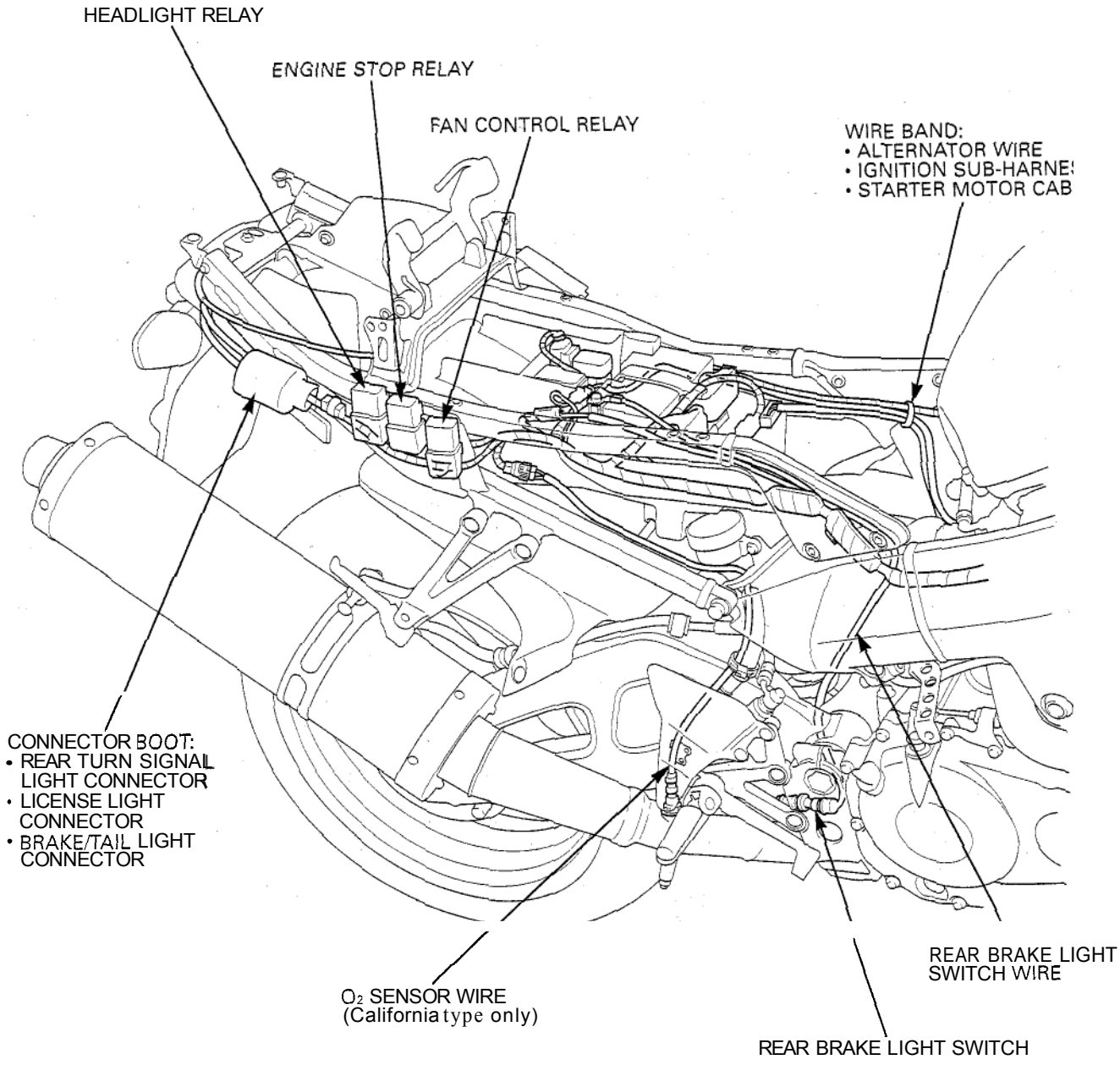

PAIR SUCTION HOSE
SIPHON HOSE
FUEL TANK AIR VENT HOSE
FUEL TANK OVERFLOW HOSE
AIR B .EED
HOSE
IGNITION PULSE
GENERATOR WIRE
RESERVOIR TANK OVERFLOW HOSE

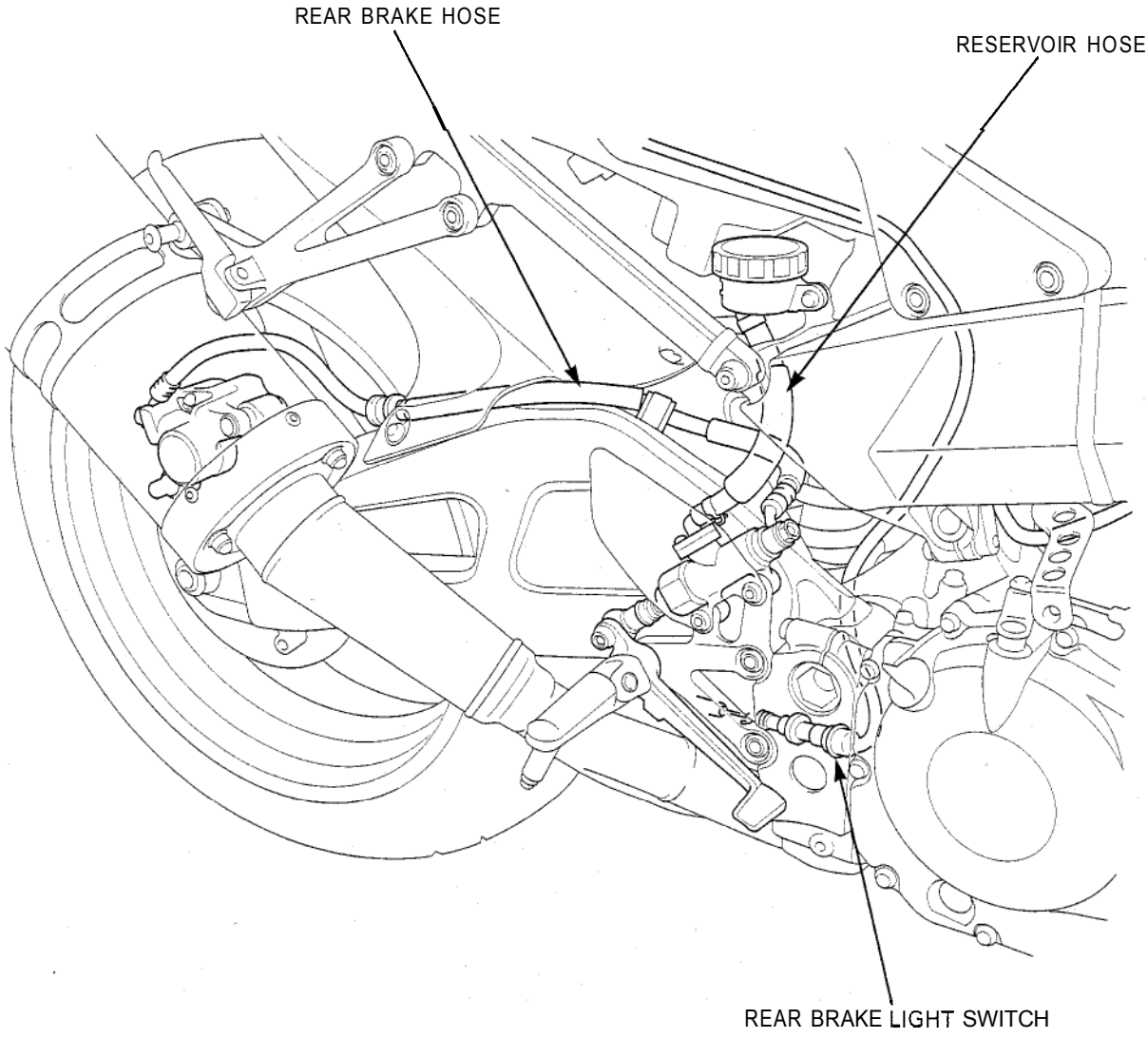

INJECTOR CONNECTORS
ECT SENSOR
PRESSURE REGULATOR
OIL PRESSURE SWITCH WIRE
FAST IDLE WAX UNIT HOSES


IAT SENSOR
FUEL RETURN HOSE
MAP SENSC
CONNECTOI
(GRAY)
FUEL TANK
OVERFLOW HOSE
FUEL TANK AIR
VENT HOSE
TP SENSOR
CONNECTOI
(BLUE)
STARTER MOTOR CABLE
CONNECTOR BOOT:
• SIDE STAND SWITC H CONNECTOR
• NEUTRAL SWITCH/
OIL PRESSURE SWITCH CONNECTOR
• EGCV AND AIR INTA KE VALVE SERVO
MOTOR CONNECTOR
• SPEED SENSOR
CONNECTOR
"TPS" LABEL
MAP SENSOR
VACUUM HOSE


FUEL HOSE
FUEL TANK
OVERFLOW HOSE
FUEL TANK AIR
VENT HOSE
FUEL PUMP/RESERVE
SENSOR WIRE
FUEL RETURN HOSE


REAR BRAKE LIGHT SWITCH CONNECTOR
BATTERY NEGATIVE (–) CABLE
FUSE BOX
ECM 26P (LIGHT GRAY) CONNECTOR
FUEL CUT-OFF RELAY
REGULATOR/RECTIFIER 6P (NATURAL) CONNECTOR
ALTERNATOR 3P (WHITE) CONNECTOR
ECM 26P (BLACK) CONNECTOR
STARTER RELAY SWITCH


HEADLIGHT RELAY
ENGINE STOP RELAY
FAN CONTROL RELAY
WIRE BAND:
• ALTERNATOR WIRE
• IGNITION SUB-HARNE
• STARTER MOTOR CAB
CONNECTOR BOOT:
• REAR TURN SIGNAL LIGHT CONNECTOR
• LICENSE LIGHT CONNECTOR
• BRAKE/TAIL LIGHT CONNECTOR
O2 SENSOR WIRE
(California type only)
REAR BRAKE LIGHT SWITCH WIRE
REAR BRAKE LIGHT SWITCH


REAR BRAKE HOSE
RESERVOIR HOSE
REAR BRAKE LIGHT SWITCH

EMISSION CONTROL SYSTEMS

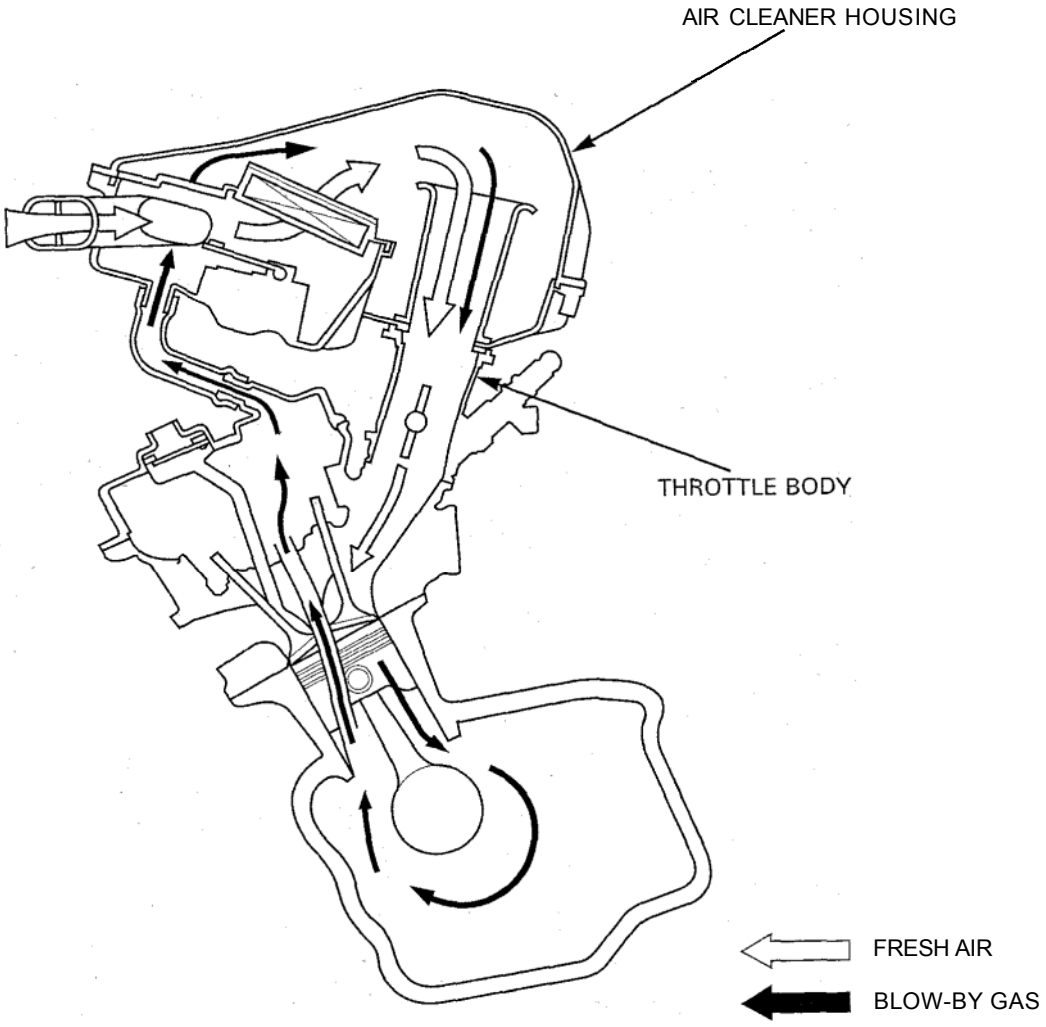
The U.S. Environmental Protection Agency, California Air Resources Board (CARB) and Transport Canada require manufacturers to certify that their motorcycles comply with applicable exhaust emissions standards during their useful life, when operated and maintained according to the instructions provided, 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. Control of hydrocarbons 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 injection 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 throttle body.



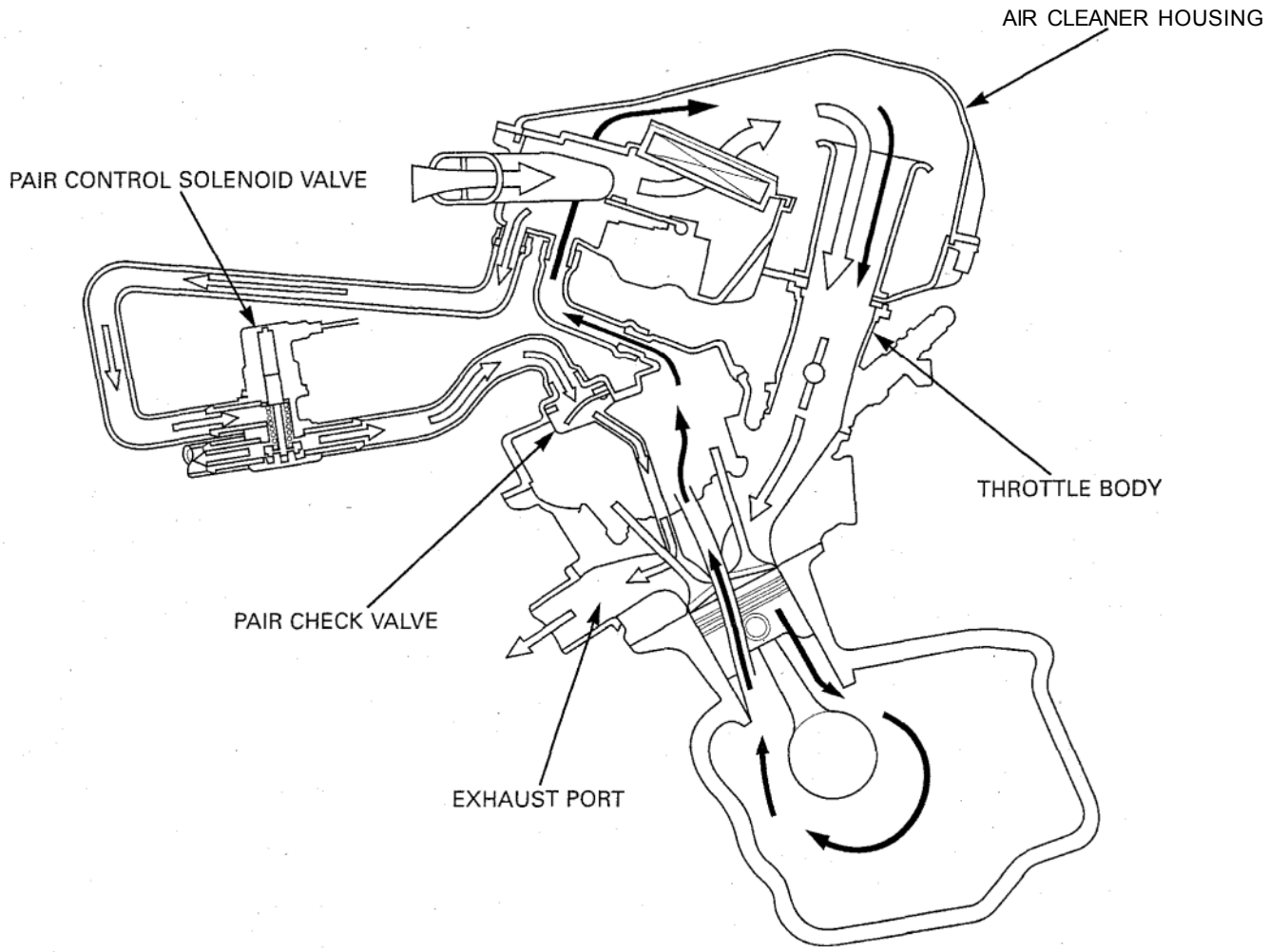
EXHAUST EMISSION CONTROL SYSTEM (SECONDARY AIR SUPPLY SYSTEM)

The exhaust emission control system is composed of a lean fuel injection setting, and no adjustments should be made except idle speed adjustment with the throttle stop screw. The exhaust emission control system is separate from the crankcase emission control system.

The exhaust emission control system also includes 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 by the function of the PAIR (Pulse Secondary Air Injection) control valve.
This charge of fresh air promotes burning of the unburned exhaust gases and changes a considerable amount of hydrocarbons and carbon monoxide into relatively harmless carbon dioxide and water vapor.

The reed valve prevents reverse air flow through the system. The PAIR control valve is operated by the solenoid valve. The solenoid valve is controlled by the PGM-FI unit, and the fresh air passage is opened/closed according the running condition (ECT/IAT/TP/MAP sensor and engine revolution).

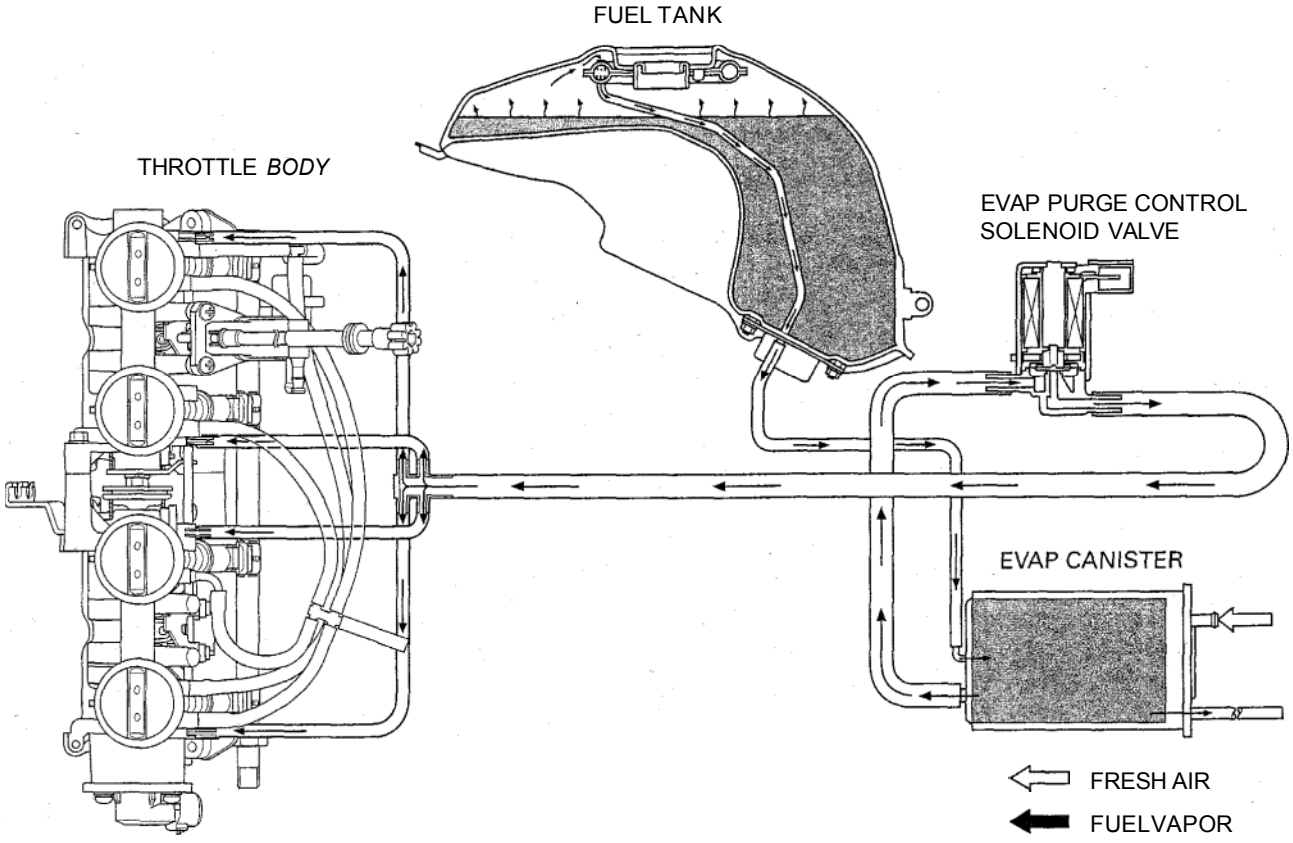
No adjustments to the secondary air supply system should be made, although periodic inspection of the components is recommended.



California type:
The California type is equipped with two three-way warm-up catalytic converters, a three-way catalytic converter, and a heated oxygen sensor.
The three-way catalytic converters are in the exhaust system. Through chemical reactions, they convert HC, CO, and NOx in the engine's exhaust to carbon dioxide (CO_2), dinitrogen (N_2), and water vapor.
No adjustment to these systems should be made although periodic inspection of the components is recommended.

EVAPORATIVE EMISSION CONTROL SYSTEM (CALIFORNIA TYPE ONLY)

This model complies with CARB evaporative emission requirements.
Fuel vapor from the fuel tank is routed into the evaporative emission (EVAP) canister where it is absorbed and stored while the engine is stopped. When the engine is running and the evaporative emission (EVAP) purge control solenoid valve is open, fuel vapor in the EVAP canister is drawn into the engine through the throttle body.



NOISE EMISSION CONTROL SYSTEM

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

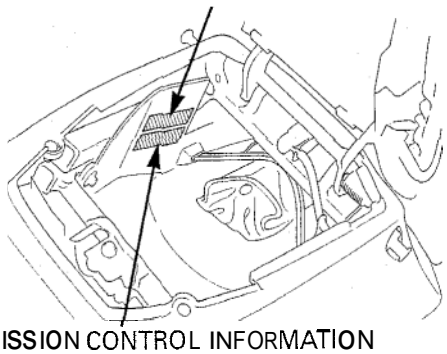
AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW:

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

EMISSION CONTROL INFORMATION LABELS

An Emission Control Information Label is located on the storage compartment as shown.
The seat must be removed to read it.
It gives base tune-up specifications.

EMISSION CONTROL INFORMATION LABEL

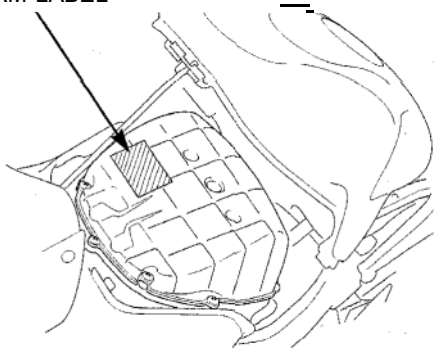


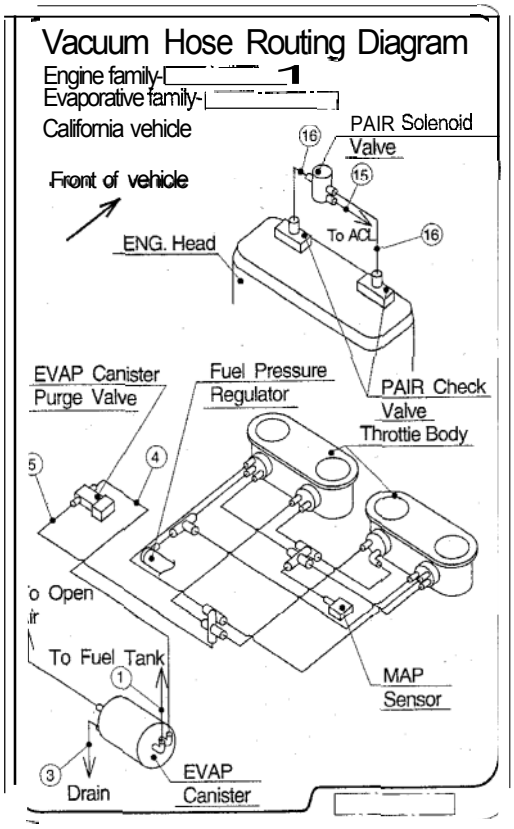
EMISSION CONTROL INFORMATION LABEL (Canada only)

VACUUM HOSE ROUTING DIAGRAM LABEL (CALIFORNIA TYPE ONLY)

The Vacuum Hose Routing Diagram Label is on the air cleaner housing cover as shown.
The fuel tank must be opened to read it. Refer to page 3-4 for fuel tank opening.

VACUUM HOSE ROUTING DIAGRAM LABEL





BODY PANEL LOCATIONS