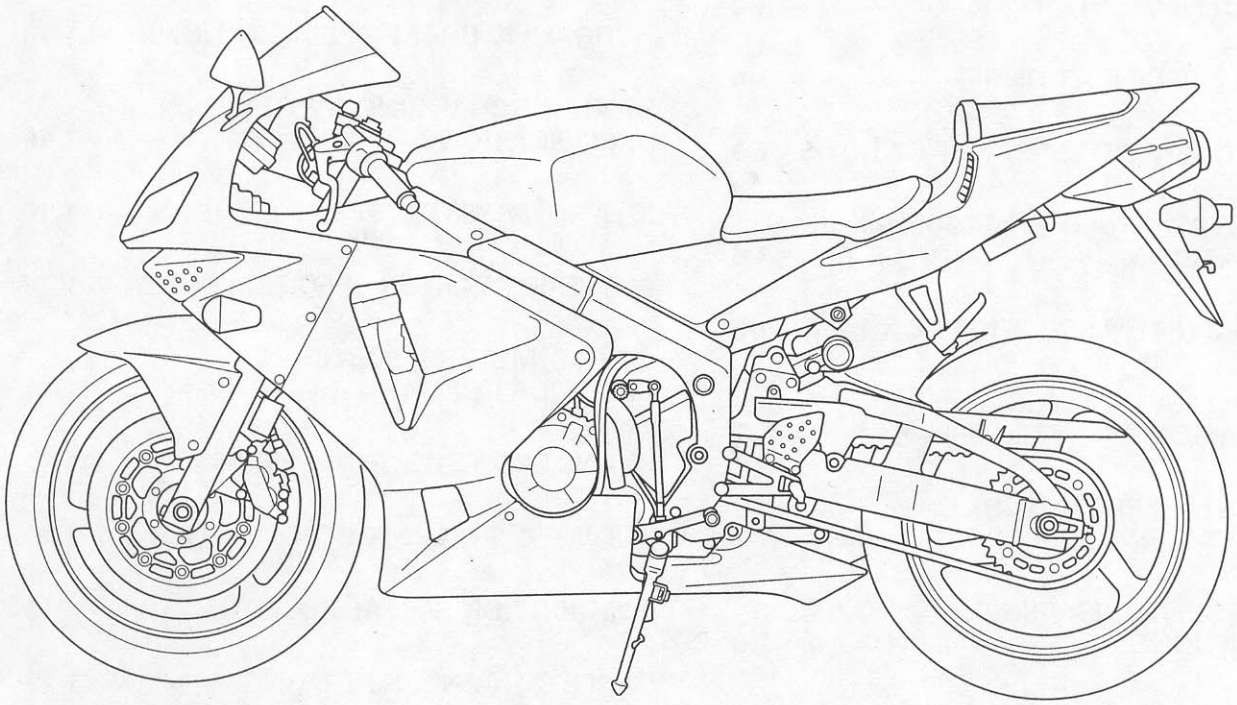
1. GENERAL INFORMATION

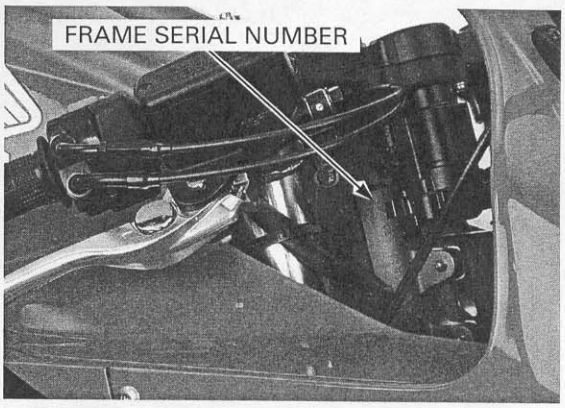
SERVICE RULES

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 shown in the Cable and Harness Routing (page 1-22).

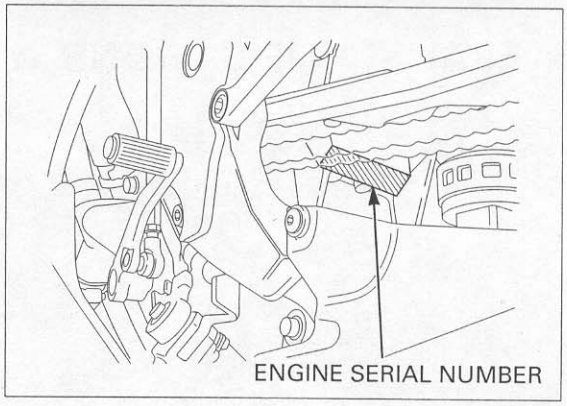
MODEL IDENTIFICATION



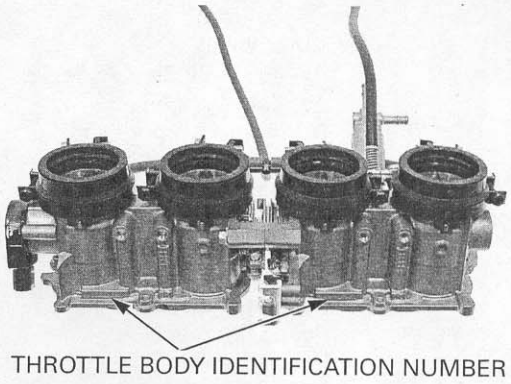
The frame serial number is stamped on the right side of the steering head.



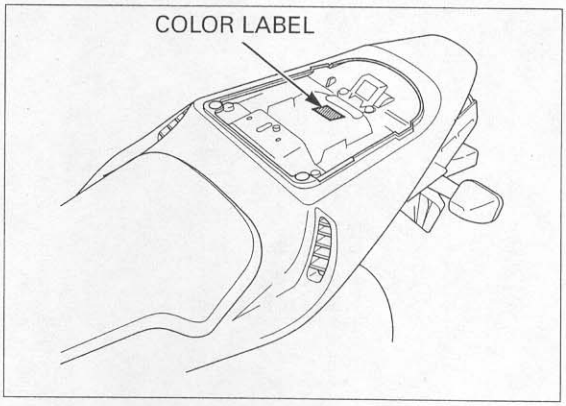
The engine serial number is stamped on the lower side of the lower crankcase.



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

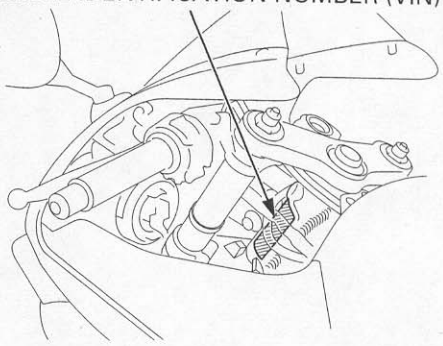


The color label is attached as shown. When ordering color-coded parts, always specify the designated color code.



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

VEHICLE IDENTIFICATION NUMBER (VIN)



GENERAL SPECIFICATIONS

ITEM		SPECIFICATIONS
DIMENSIONS	Overall length	2,030 mm (79.9 in)
	Overall width	695 mm (27.4 in)
	Overall height	1,115 mm (43.9 in)
	Wheelbase	1,390 mm (54.7 in)
	Seat height	820 mm (32.3 in)
	Footpeg height	395 mm (15.6 in)
	Ground clearance	130 mm (5.1 in)
	Dry weight	
	49 states, Canada type:	169 kg (373 lbs)
	California type:	169 kg (373 lbs)
	Curb weight	
	49 states, Canada type:	199 kg (439 lbs)
	California type:	202 kg (445 lbs)
	Maximum weight capacity	
	49 states, California type:	166 kg (366 lbs)
	Canada type:	170 kg (375 lbs)
FRAME	Frame type	Diamond
	Front suspension	Telescopic fork
	Front axle travel	102.7 mm (4.04 in)
	Rear suspension	Swingarm
	Rear axle travel	130 mm (5.12 in)
	Front tire size	120/70ZR17 M/C (58W)
	Rear tire size	180/55ZR17 M/C (73W)
	Front tire brand	BT012F RADIAL G (Bridgestone) D208FK (Dunlop) Pilot SPORT E (Michelin)
	Rear tire brand	BT012R RADIAL L (Bridgestone) D208K (Dunlop) Pilot SPORT E (Michelin)
	Front brake	Hydraulic double disc
	Rear brake	Hydraulic single disc
	Caster angle	24°
	Trail length	95 mm (3.7 in)
	Fuel tank capacity	18.0 liter (4.76 US gal, 3.96 Imp gal)

ITEM			SPECIFICATIONS
ENGINE	Cylinder arrangement		4 cylinders in-line, inclined 38° from vertical
	Bore and stroke		67.0 X 42.5 mm (2.64 X 1.67 in)
	Displacement		599 cm^3 (36.5 cu-in)
	Compression ratio		12.0: 1
	Valve train		Chain driven, DOHC
	Intake valve opens	at 1 mm (0.04 in) lift	22° BTDC
	Intake valve closes	at 1 mm (0.04 in) lift	43° ABDC
	Exhaust valve opens	at 1 mm (0.04 in) lift	40° BBDC
	Exhaust valve closes	at 1 mm (0.04 in) lift	5° ATDC
	Lubrication system		Forced pressure and wet sump
	Oil pump type		Trochoid
	Cooling system		Liquid cooled
	Air filtration		Paper element
	Engine dry weight		58.3 kg (128.5 lbs)
	Firing order		1 - 2 - 4 - 3
FUEL DELIVERY SYSTEM	Type		PGM-FI (Programmed Fuel Injection)
	Throttle bore		40 mm (1.6 in)
DRIVE TRAIN	Clutch system		Multi-plate, wet
	Clutch operation system		Cable operating
	Transmission		Constant mesh, 6-speeds
	Primary reduction		2.111 (76/36)
	Final reduction		2.688 (43/16)
	Gear ratio	1st	2.666 (32/12)
		2nd	1.937 (31/16)
		3rd	1.611 (29/18)
		4th	1.409 (31/22)
		5th	1.260 (29/23)
		6th	1.666 (28/24)
	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

LUBRICATION SYSTEM SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Engine oil capacity	After draining	2.6 liter (2.7 US qt, 2.3 Imp qt)	–
	After oil filter change	2.9 liter (3.1 US qt, 2.6 Imp qt)	–
	After disassembly	3.5 liter (3.7 US qt, 3.1 Imp qt)	–
Recommended engine oil		Pro Honda GN4 or HP4 (without molybdenum additives) 4-stroke oil (U.S.A. & Canada) or Honda 4-stroke oil (Canada only) or an equivalent motorcycle oil API service classification SG or Higher except oils labeled as energy consering on the circular API service label JASO T 903 standard: MA Viscosity: SAE 10W-40	–
Oil pressure at oil pressure switch		540 kPa (5.5 kgf/cm^2, 78 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 – 0.21 (0.006 – 0.008)	0.35 (0.014)
	Side clearance	0.04 – 0.09 (0.002 – 0.004)	0.17 (0.007)

FUEL SYSTEM (Programmed Fuel Injection) SPECIFICATIONS

ITEM		SPECIFICATIONS
Throttle body identification number	49 states, Canada type:	GQ63C
	California type:	GQ63B
Starter valve vacuum difference		20mm Hg
Base throttle valve for synchronization		No. 3
Idle speed		1,300 ± 100 rpm
Throttle grip free play		2 – 4 mm (1/16 – 1/8 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 injection resistance (at 20°C /68°F)	Secondary injector	10.5 – 14.5 Ω
	Primary injector	10.5 – 14.5 Ω
PAIR control 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 mm Hg
Fuel pressure at idle		343 kPa (3.5 kgf/cm^2, 50 psi)
Fuel pump flow (at 12V)		189 cm^3 (6.4 US oz, 6.7 Imp oz) minimum/10 seconds

COOLING SYSTEM SPECIFICATIONS

ITEM		SPECIFICATIONS
Coolant capacity	Radiator and engine	3.2 liter (3.4 US qt, 2.8 Imp qt)
	Reserve tank	0.30 liter(0.32 US qt, 0.26 Imp qt)
Radiator cap relief pressure		108 – 137 kPa (1.1 – 1.4 kgf/cm^2, 16 – 20 psi)
Thermostat	Begin to open	80 – 84 °C (176 – 183 °F)
	Valve lift	8 mm (0.3 in) minimum at 90°C (194°F)
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 SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Cylinder compression			1,226 kPa (12.5 kgf/cm², 178psi) at 350 rpm	
Valve clearance		IN	0.20 ± 0.03 (0.008 ± 0.001)	–
		EX	0.28 ± 0.03 (0.011 ± 0.001)	–
Camshaft	Cam lobe height	IN	36.36 – 36.60 (1.431 – 1.441)	36.34 (1.431)
		EX	35.34 – 35.58 (1.391 – 1.401)	35.32 (1.391)
	Runout		–	0.05 (0.002)
	Oil clearance		0.020 – 0.062 (0.0008 – 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	17.1 – 17.4 (0.67 – 0.69)	–
		EX	13.3 – 13.6 (0.52 – 0.54)	–
	Valve seat head	IN	0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)
		EX	0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)
Valve spring free length	IN	Inner	36.17 (1.424)	35.1 (1.38)
		Outer	39.76 (1.565)	38.8 (1.53)
	EX	Inner	35.34 (1.391)	34.4 (1.35)
		Outer	39.05 (1.537)	38.1 (1.50)
Cylinder head warpage			–	0.10 (0.004)

CLUTCH/STARTER CLUTCH/GEARSHIFT LINKAGE SPECIFICATIONS

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 A (Without ID mark)	I.D.	24.993 – 25.003 (0.9840 – 0.9844)	25.013 (0.9848)
	O.D.	35.004 – 35.012 (1.3781 – 1.3784)	34.994 (1.3777)
Clutch outer guide B (With ID mark)	I.D.	24.993 – 25.003 (0.9840 – 0.9844)	25.013 (0.9848)
	O.D.	34.996 – 35.004 (1.3778 – 1.3781)	34.986 (1.3774)
Primary driven gear I.D.	A	41.008 – 41.016 (1.6145 – 1.6148)	41.026 (1.6152)
	B	41.000 – 41.008 (1.6142 – 1.6145)	41.018 (1.6149)
Oil pump drive sprocket guide	I.D.	25.000 – 25.021 (0.9843 – 0.9851)	25.031 (0.9855)
	O.D.	34.950 – 34.975 (1.3760 – 1.3770)	34.940 (1.3756)
Oil pump drive sprocket I.D.		35.025 – 35.145 (1.3789 – 1.3837)	35.155 (1.3841)
Mainshaft O.D. at clutch outer guide		24.980 – 24.990 (0.9835 – 0.9839)	24.960 (0.9827)
Mainshaft O.D. at oil pump drive sprocket guide		24.980 – 24.990 (0.9835 – 0.9839)	24.960 (0.9827)
Starter driven gear boss O.D.		45.657 – 45.673 (1.7975 – 1.7981)	45.642 (1.7969)

CRANKCASE/TRANSMISSION SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Shift 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)
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)
		C1	24.000 – 24.021 (0.9449 – 0.9457)	26.04 (1.025)
		C2, C3, C4	31.000 – 31.025 (1.2205 – 1.2215)	31.04 (1.222)
	Gear busing 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 SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Crankshaft	Connecting rod side clearance		0.15 – 0.30 (0.006 – 0.012)	0.35 (0.014)
	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 rings	Piston O.D. at 10 (0.4) from bottom		66.965 – 66.985 (2.6364 – 2.6372)	66.90 (2.634)
	Piston pin bore I.D.		16.002 – 16.008 (0.6300 – 0.6302)	16.02 (0.631)
	Piston pin O.D.		15.994 – 16.000 (0.6297 – 0.6299)	15.98 (0.629)
	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	0.21 – 0.31 (0.008 – 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	0.030 – 0.060 (0.0012 – 0.0024)	0.10 (0.004)
		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 – 0.0022)	0.10 (0.004)
Connecting rod small end I.D.			16.010 – 16.034 (0.6303 – 0.6313)	16.050 (0.6319)
Connecting rod-to-piston pin clearance			0.010 – 0.040 (0.0004 – 0.0016)	0.070 (0.0028)

FRONT WHEEL/SUSPENSION/STEERING SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Minimum tire tread depth		–	1.5 (0.06)
Cold tire pressure	Driver only	250 kPa (2.50 kgf/cm^2, 36 psi)	–
	Driver and passenger	250 kPa (2.50 kgf/cm^2, 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 (2.1oz) max.
Fork	Spring free length	258.8 (10.19)	253.6 (9.98)
	Tube runout	–	0.20 (0.008)
	Recommended fork fluid	Pro Honda Suspension Fluid SS-8	–
	Fluid level	110 (4.3)	–
	Fluid capacity	531 ± 2.5 cm^3 (18.0 ± 0.08 US oz, 18.7 ± 0.09 Imp oz)	–
	Pre-load adjuster initial setting	14 mm (0.6 in) (4th groove from top)	–
	Rebound adjuster initial setting	2-1/2 turns out from full hard	–
	Compression adjuster initial setting	2 turns out from full hard	–
Steering head bearing pre-load		9.8 – 15 N·m (1.0 – 1.5 kgf·m)	–

REAR WHEEL/SUSPENSION SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Minimum tire tread depth			–	2.0 (0.08)
Cold tire pressure	Driver only		290 kPa (2.90 kgf/cm^2, 42 psi)	–
	Driver and passenger		290 kPa (2.90 kgf/cm^2, 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	Size/link	DID	DID525HV-120ZB	–
		RK	RK525ROZ1-120LJ-FZ	–
	Slack		25 – 35 (1 – 1-3/8)	–
Shock absorber	Spring pre-load adjuster standard position		Position 3	–
	Rebound damping adjuster initial setting		1-3/4 turns out from full hard	–
	Compression damping adjuster initial setting		2 turns out from full hard	–

HYDRAULIC BRAKE SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Front	Specified brake fluid		Honda DOT4 Brake Fluid	–
	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.		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.	A	32.030 – 32.080 (1.2610 – 1.2630)	32.092 (1.2635)
		B	30.230 – 30.280 (1.1902 – 1.1921)	30.292 (1.1926)
	Caliper piston O.D.	A	31.948 – 31.998 (1.2578 – 1.2598)	31.940 (1.2574)
		B	30.082 – 30.115 (1.1843 – 1.1856)	30.074 (1.1840)
Rear	Specified brake fluid		Honda DOT4 Brake Fluid	–
	Brake pedal height		75 (3.0)	–
	Brake disk thickness		4.8 – 5.2 (0.19 – 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 piston O.D.		38.098 – 38.148 (1.4999 – 1.5019)	38.09 (1.500)

BATTERY/CHARGING SYSTEM SPECIFICATIONS

ITEM			SPECIFICATIONS
Battery	Capacity		12V – 8.6 Ah
	Current leakage		2.0 mA max.
	Voltage (20°C/68°F)	Fully charged	13.0 – 13.2 V
		Needs charging	Below 12.4 V
	Charging current	Normal	0.9 A/5 – 10 h
		Quick	4.5 A/1 h
Alternator	Capacity		0.333 kW/5,000 rpm
	Charging coil resistance (20°C/68°F)		0.1 – 1.0 Ω

IGNITION SYSTEM SPECIFICATIONS

ITEM	SPECIFICATIONS
Spark plug (Iridium)	IMR9C-9HE (NGK)
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)	15° BTDC at idle

ELECTRIC STARTER SPECIFICATIONS

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 SPECIFICATIONS

ITEM			SPECIFICATIONS
Bulbs	Headlight	Hi	12V – 55 W
		Lo	12V – 55 W
	Position light		12V – 5 W
	Brake/tail light		LED
	Turn signal light		12V – 21 W X 4
	Instrument light		LED
	Turn signal indicator		LED
	High beam indicator		LED
	Neutral indicator		LED
	PGM-FI warning indicator		LED
Fuse	Main fuse		30 A
	PGM-FI fuse		20 A
	Sub fuse		10 A X 4, 20 A X 2
Tachometer peak voltage			10.5 V minimum
ECT sensor resistance		80°C (176 °F)	2.1 – 2.6 kΩ
		120 °C (248 °F)	0.65 – 0.73 kΩ

STANDARD 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	4.9 (0.5, 3.6)	5 mm screw	3.9 (0.4, 2.9)
6 mm hex bolt and nut	9.8 (1.0, 7)	6 mm screw	8.8 (0.9, 6.5)
8 mm hex bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	9.8 (1.0, 7)
10 mm hex bolt and nut	34 (3.5, 25)	6 mm flange bolt (8 mm head, large flange)	12 (1.2, 9)
12 mm hex bolt and nut	54 (5.5, 40)	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)

ENGINE & FRAME TORQUE VALUES

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

NOTE:

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

ENGINE

MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Spark plug	4	10	16 (1.6, 12)	
Timing hole cap	1	45	18 (1.8, 13)	NOTE 7
Engine oil filter cartridge	1	20	26 (2.7, 20)	NOTE 4
Engine oil drain bolt	1	12	29 (3.0, 22)	

LUBLICATION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Oil pump assembly flange bolt	1	6	7.8 (0.8, 5.8)	NOTE 9
Oil filter boss (stud side)	1	20	18 (1.8, 13)	NOTE 2

FUEL SYSTEM (Programmed Fuel Injection)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
ECT (Engine Coolant Temperature) sensor	1	12	23 (2.3, 17)	
Throttle body insulator band screw	8	5	See page 1-15	
Starter valve lock nut	4	10	1.8 (0.18, 1.3)	
Starter valve synchronization plate screw	4	3	0.9 (0.09, 0.7)	
Fuel pipe mounting bolt	3	6	9.8 (1.0, 7)	
Fast idle wax unit link plate screw	1	3	0.9 (0.09, 0.7)	
Fast idle wax unit mounting screw	2	6	4.9 (0.5, 3.6)	
Secondary injector bracket mounting bolt	5	5	5.4 (0.55, 4)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Water pump assembly flange bolt	2	6	12 (1.2, 9)	NOTE 9
Thermostat housing cover flange bolt	2	6	13 (1.3, 10)	NOTE 9

ENGINE MOUNTING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Drive sprocket special bolt	1	10	54 (5.5, 40)	

CYLINDER HEAD/VALVES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder head mounting bolt	10	9	47 (4.8, 35)	NOTE 8
Camshaft holder bolt	20	6	12 (1.2, 9)	NOTE 4
Cylinder head sealing bolt	3	14	18 (1.8, 13)	NOTE 2
Cylinder head cover bolt	4	6	9.8 (1.0, 7)	
Breather plate bolt	3	6	13 (1.3, 9)	NOTE 2, 9
PAIR reed valve cover bolt	4	6	13 (1.3, 9)	NOTE 9
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 lifter mounting socket bolt	2	6	9.8 (1.0, 7)	
Cam chain tensioner A pivot bolt	1	6	9.8 (1.0, 7)	NOTE 2
Cam chain tensioner B pivot bolt	1	10	20 (2.0, 14)	NOTE 2
Cam chain guide bolt	1	6	12 (1.2, 9)	
Cylinder block socket bolt	1	10	12 (1.2, 9)	NOTE 2

CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch center lock nut	1	22	127 (13.0, 94)	NOTE 3, 4
Clutch spring bolt	5	6	12 (1.2, 9)	
Oil pump driven sprocket bolt	1	6	15 (1.5, 11)	NOTE 2
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 spindle return spring pin	1	8	22 (2.2, 16)	

ALTERNATOR/STARTER CLUTCH

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Alternator stator socket bolt	4	6	12 (1.2, 9)	
Flywheel bolt	1	10	103 (10.5, 76)	NOTE 4
Stator wire clamp bolt	1	6	14 (1.4, 10)	NOTE 9

CRANKCASE/TRANSMISSION

ITEM		Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Mainshaft bearing set plate flange bolt		3	6	12 (1.2, 9)	NOTE 2
Gearshift drum bearing set bolt		2	6	12 (1.2, 9)	NOTE 2
Lower crankcase sealing bolt		2	20	28 (2.8, 20)	
Crankcase	6 mm bolt	10	6	12 (1.2, 9)	
	8 mm bolt	6	8	25 (2.5, 18)	
	8 mm bolt (main journal bolt)	10	8	15 (1.5, 10) + 120°	See page 12-17
	10 mm bolt	1	10	39 (4.0, 29)	

CRANKSHAFT/PISTON/CYLINDER

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Connecting rod bearing cap bolt	8	7	14 (1.4, 10) + 90°	NOTE 4

IGNITION SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Starter clutch outer special bolt	1	10	74 (7.5, 54)	NOTE 4

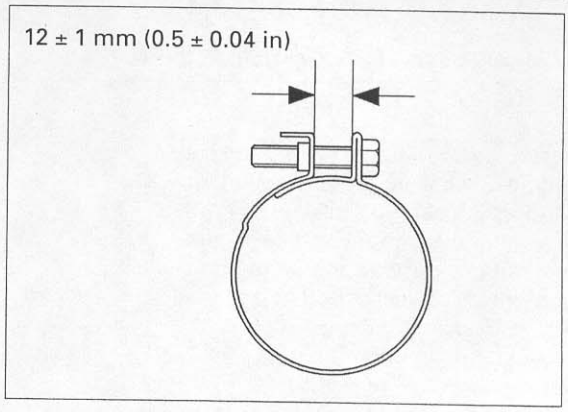
ELECTRIC STARTER

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Starter motor terminal nut	17	6	12 (1.2, 9)	

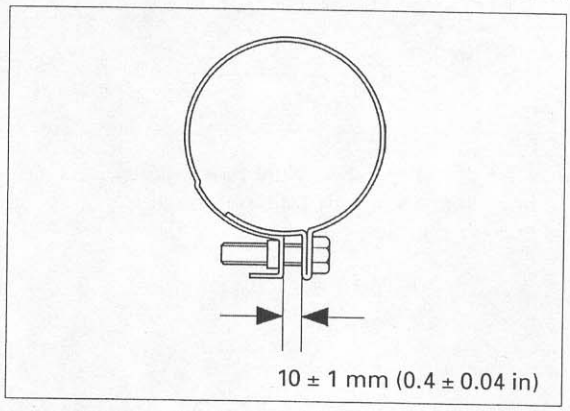
LIGHTS/METERS/SWITCHES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Oil pressure switch	1	PT 1/8	12 (1.2, 9)	NOTE 1
Oil pressure switch wire terminal screw	1	4	2.0 (0.2, 1.4)	
Neutral switch	1	10	12 (1.2, 9)	

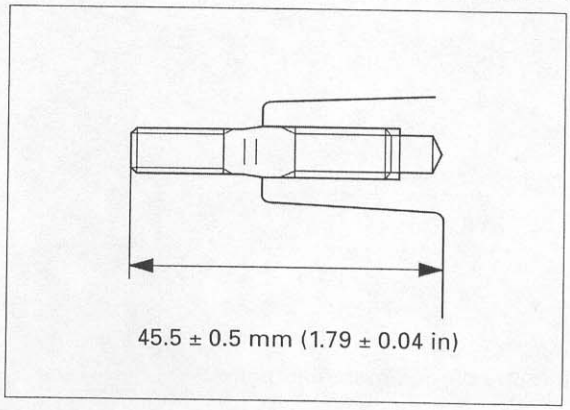
Insulator clamp (Throttle body side):



Insulator clamp (Cylinder head side):



Exhaust pipe stud bolt:

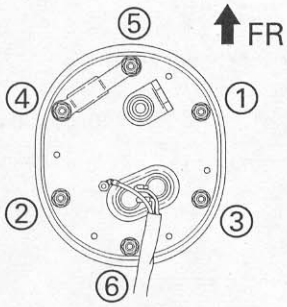


FRAME

FRAME BODY PANELS/EXHAUST SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Lower cowl-to-middle cowl pan screw	2	5	1.5 (0.15, 1.1)	
Middle cowl-to-upper cowl pan screw	4	5	1.5 (0.15, 1.1)	
Windscreen setting screw	6	5	0.5 (0.05, 0.4)	
Seat rail upper mounting flange nut	2	10	54 (5.5, 40)	
Seat rail lower mounting flange bolt	2	10	44 (4.5, 33)	
Seat rail brace socket bolt	4	8	26 (2.7, 20)	
Seat rail assembly flange nut	2	8	30 (3.1, 22)	
Exhaust pipe joint flange nut	8	7	12 (1.2, 9)	
Muffler band flange bolt	2	8	23 (2.3, 17)	
Passenger footpeg bracket socket bolt	4	8	26 (2.7, 20)	

FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fuel filler cap socket bolt	3	4	1.8 (0.18, 1.3)	
Fuel feed 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)	
				
O_2 sensor (California type only)	1	12	25 (2.6, 19)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cooling fan nut	1	5	2.9 (0.3, 2.2)	NOTE 2
Fan motor nut	3	5	4.9 (0.5, 3.6)	
Fan motor shroud mounting bolt	3	6	7.8 (0.8, 5.8)	

ENGINE MOUNTING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Front engine hanger bolt (left side)	1	12	54 (5.5, 40)	
Front engine hanger nut (right side)	1	12	54 (5.5, 40)	
Front engine hanger pinch bolt	2	10	27 (2.7, 20)	
Rear engine hanger adjusting bolt	1	20	9.8 (1.0, 7)	See page 8-10
Rear engine hanger lock nut	1	20	54 (5.5, 40)	
Rear engine hanger nut	1	12	59 (6.0, 43)	
Lower engine hanger pinch bolt	2	8	27 (2.7, 20)	
Lower engine hanger nut	1	12	59 (6.0, 43)	

FRONT WHEEL/SUSPENSHON/STEERING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Handlebar weight mounting screw	2	6	9.8 (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 pinch bolt	4	8	22 (2.2, 16)	
Fork socket bolt	2	10	34 (3.5, 25)	NOTE 2
Fork bolt	2	42	23 (2.3, 17)	
Fork top bridge pinch bolt	2	8	23 (2.3, 17)	
Handlebar pinch bolt	2	8	23 (2.3, 17)	
Fork bottom bridge pinch bolt	2	8	27 (2.7, 20)	
Steering stem adjusting nut	1	26	49 (5.0, 36)	See page 14-34
Steering stem adjusting lock nut	1	26	–	
Steering stem nut	1	24	103 (10.5, 76)	

REAR WHEEL/SUSPENSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Rear brake disc bolt	4	8	42 (4.3, 31)	NOTE 6
Final driven sprocket nut	6	10	64 (6.5, 47)	NOTE 5
Rear axle nut	1	22	113 (11.5, 83)	NOTE 5
Rear shock absorber upper mounting nut	1	10	44 (4.5, 33)	NOTE 5
Rear shock absorber lower mounting nut	1	10	44 (4.5, 33)	NOTE 5
Shock link-to-frame pivot nut	1	10	44 (4.5, 33)	NOTE 5
Shock arm-to-shock link nut	1	10	44 (4.5, 33)	NOTE 5
Shock arm-to-swingarm nut	1	10	44 (4.5, 33)	NOTE 5
Rear shock absorber bracket mounting bolt	4	10	44 (4.5, 33)	
Drive chain slider flange bolt	3	6	8.8 (0.9, 6.5)	NOTE 2
Swingarm pivot pinch bolt	2	8	27 (2.7, 20)	
Swingarm pivot nut	1	18	93 (9.5, 69)	

HYDRAULIC BRAKE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Front master cylinder reservoir cap screw	2	4	1.5 (0.15, 1.1)	
Front brake lever pivot bolt	1	6	1.0 (0.1, 0.7)	
Front brake lever pivot nut	1	6	5.9 (0.6, 4.3)	
Front brake light switch screw	1	4	1.0 (0.1, 0.7)	
Front master cylinder holder bolt	2	6	12 (1.2, 9)	
Front brake caliper assembly torx 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 push rod joint nut	1	8	18 (1.8, 13)	
Rear master cylinder reservoir cap screw	2	4	1.5 (0.15, 1.1)	
Rear master cylinder mounting bolt	2	6	8.8 (0.9, 6.5)	
Rear brake reservoir mounting bolt	1	6	12 (1.2, 9)	
Rear brake reservoir hose joint screw	1	4	1.5 (0.15, 1.1)	NOTE 2
Rear brake caliper mounting bolt	1	8	23 (2.3, 17)	
Rear brake caliper slide pin bolt	1	12	27 (2.8, 20)	
Front brake caliper pad pin	2	10	18 (1.8, 13)	
Rear brake caliper pad pin	1	10	18 (1.8, 13)	
Brake hose oil bolt	5	10	34 (3.5, 25)	
Front brake hose clamp bolt	2	6	12 (1.2, 9)	
Front brake hose 3-way joint bolt	1	6	12 (1.2, 9)	
Brake caliper bleed valve	3	8	5.9 (0.6, 4.3)	

LIGHTS/METERS/SWITCHES

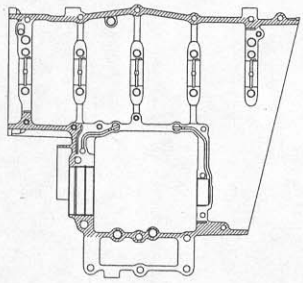
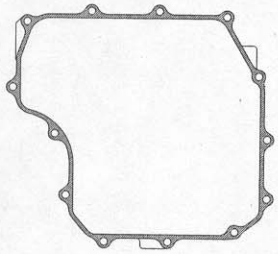
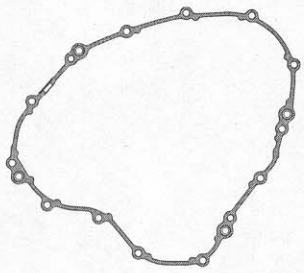
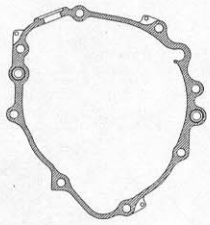
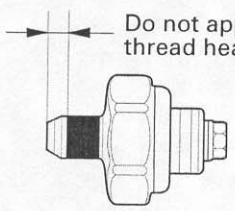
ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Side stand switch bolt	1	6	9.8 (1.0, 7)	NOTE 6
Ignition switch mounting bolt	2	8	25 (2.5, 18)	
Driver footpeg bracket socket bolt	4	8	37 (3.8, 28)	

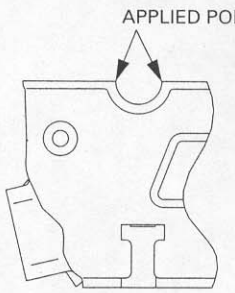
OTHERS

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Side stand pivot bolt	1	10	9.8 (1.0, 7)	
Side stand pivot lock nut	1	10	29 (3.0, 22)	
Side stand bracket socket bolt	2	10	39 (4.0, 29)	NOTE 6
Driver footpeg bolt	2	10	44 (4.5, 33)	NOTE 6
Driver footpeg cap bolt	2	6	11 (1.1, 8)	

LUBRICATION & SEAL POINTS

ENGINE

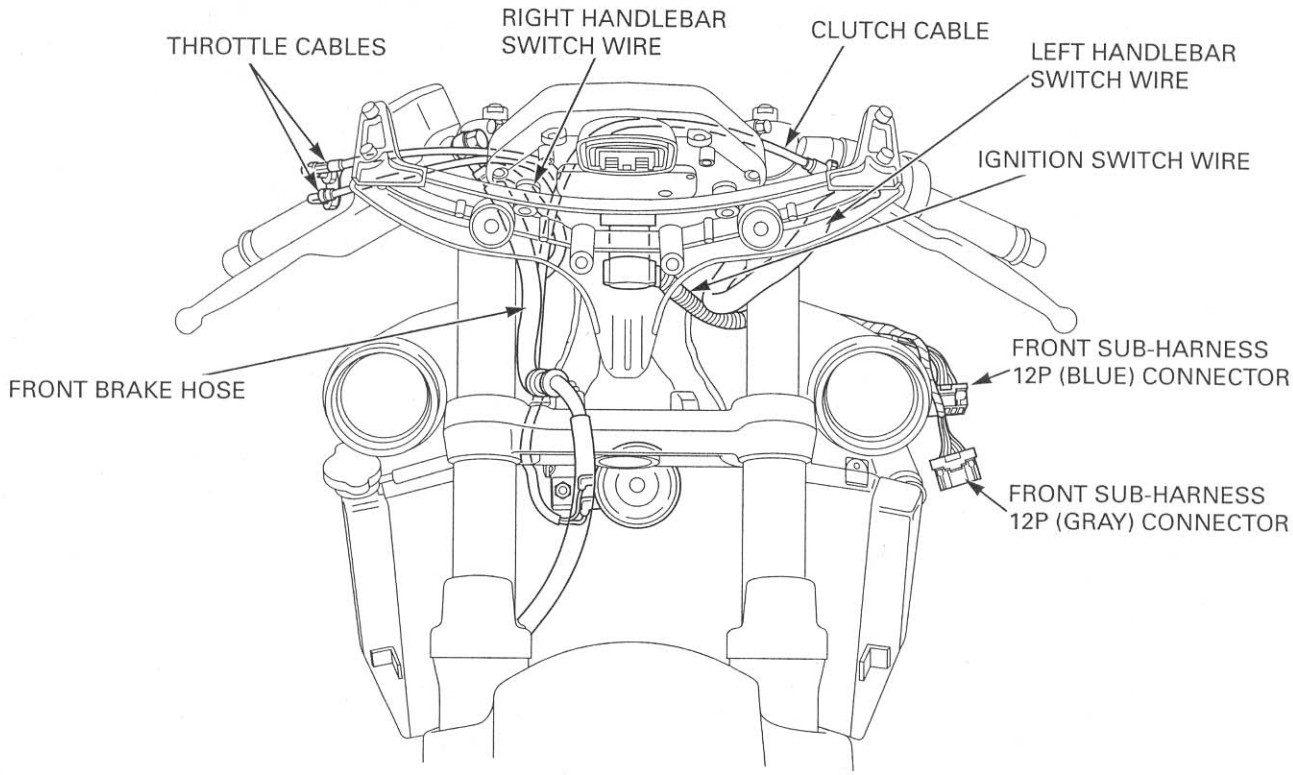
LOCATION	MATERIAL	REMARKS
Crankcase mating surface 	Liquid sealant (Three Bond 1207B or equivalent)	
Oil pan mating surface 		
Right crankcase cover mating surface 	Liquid sealant (Three Bond 1207B or equivalent)	
Alternator cover mating surface 		
Oil pressure switch threads 		

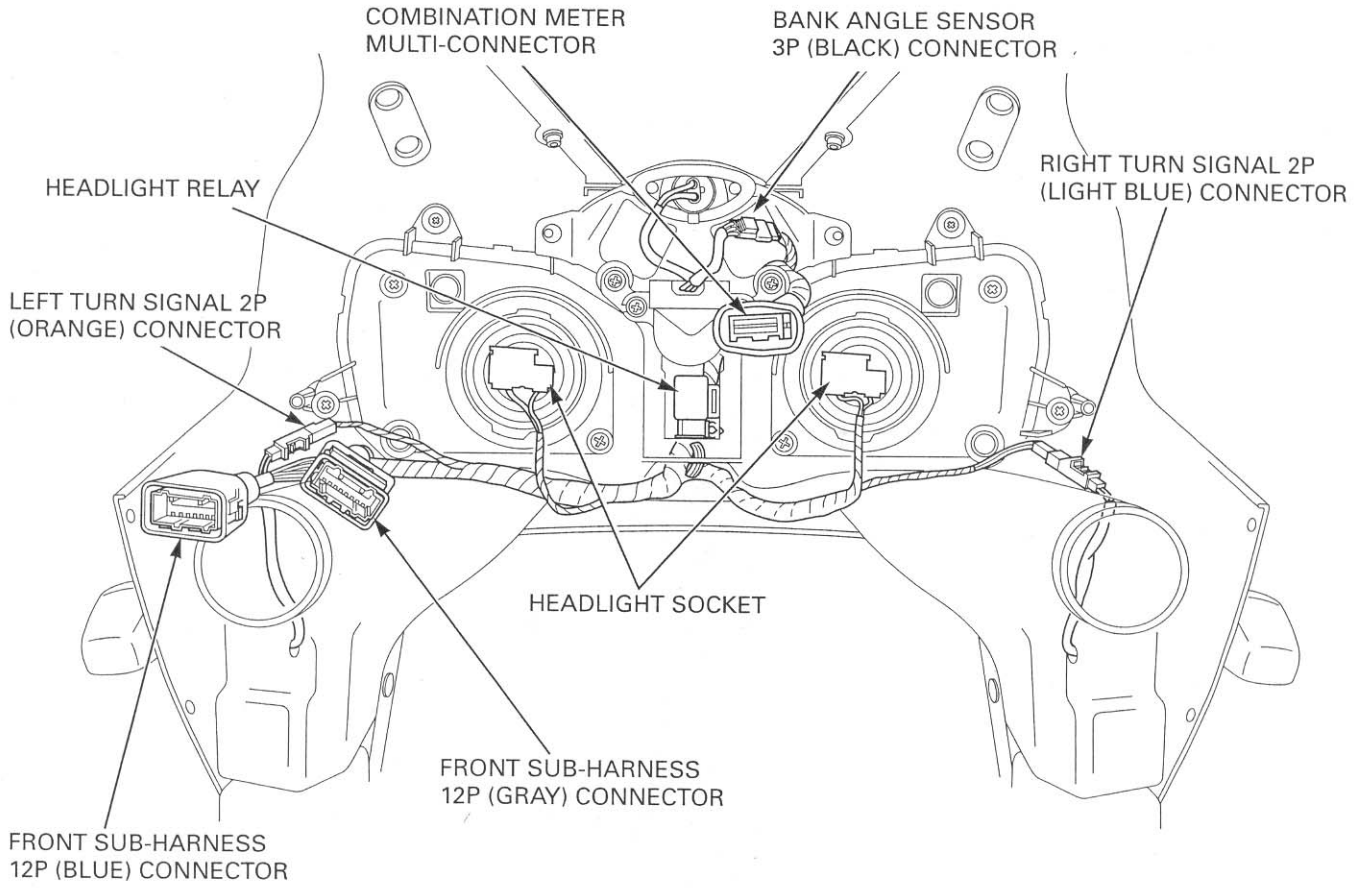
LOCATION	MATERIAL	REMARKS
Cylinder head semi-circular cut-out 	Sealant	
Main journal bearing surface Piston pin sliding surface Connecting rod bearing surface Connecting rod small end inner surface Crankshaft thrust surface Camshaft lobes/journals and thrust surface Valve stem (valve guide sliding surface) Valve lifter outer sliding surface Water pump shaft spline and thrust washer sliding surface Clutch outer/primary driven gear sliding surface Clutch outer guide sliding surface Oil pump gear and collar sliding surface M3/4, C5, C6 shifter gear (shift fork grooves) Starter reduction gear sliding surface Starter reduction gear shaft sliding surface	Molybdenum disulfide oil (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease	
Piston and piston ring sliding area Oil strainer packing Clutch disc surface Starter one-way clutch sliding surface Connecting rod bolt threads and seating surface Flywheel bolt threads and seating surface Cylinder head special bolt (after removing anti-rust oil additive) Clutch center lock nut threads and seating surface Oil filter cartridge threads and O-ring Camshaft holder bolt threads and seating surface Each gear teeth and rotating surface Each bearing Each O-ring Other rotating area and sliding surface	Engine oil	
Timing hole cap threads Each oil seal lips	Multi-purpose grease	
Upper crankcase sealing bolt threads Lower crankcase sealing bolt threads Cylinder head cover breather joint threads Cylinder head sealing bolt threads Cam pulse generator rotor bolt threads Oil pump driven sprocket bolt threads Oil cooler center bolt thread (stud side) 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 A bolt threads Cam chain tensioner pivot B bolt threads Spindle plate tightening bolt threads Spindle set plate tightening bolt threads	Locking agent	 Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm Coating width: 6.5 ± 1 mm

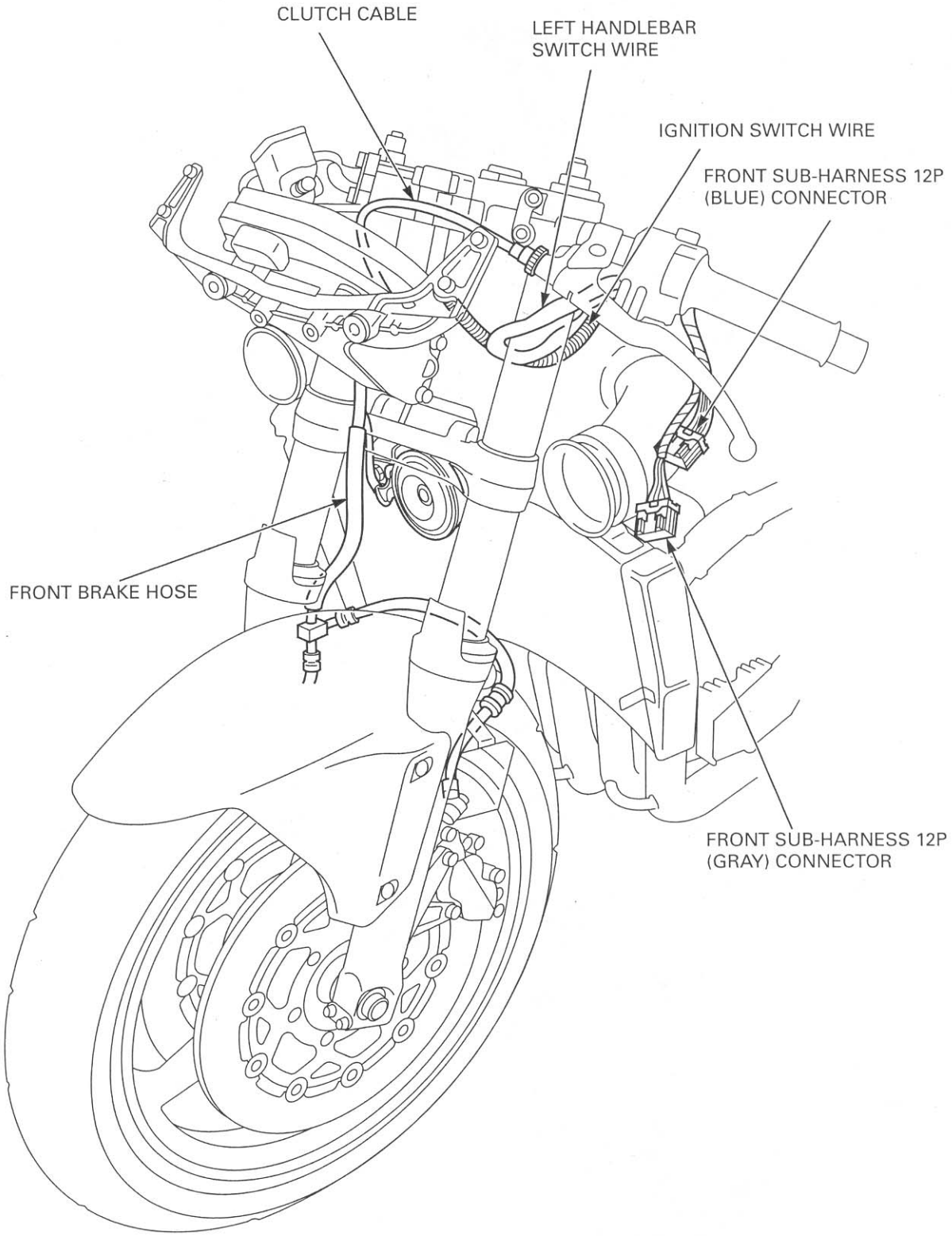
FRAME

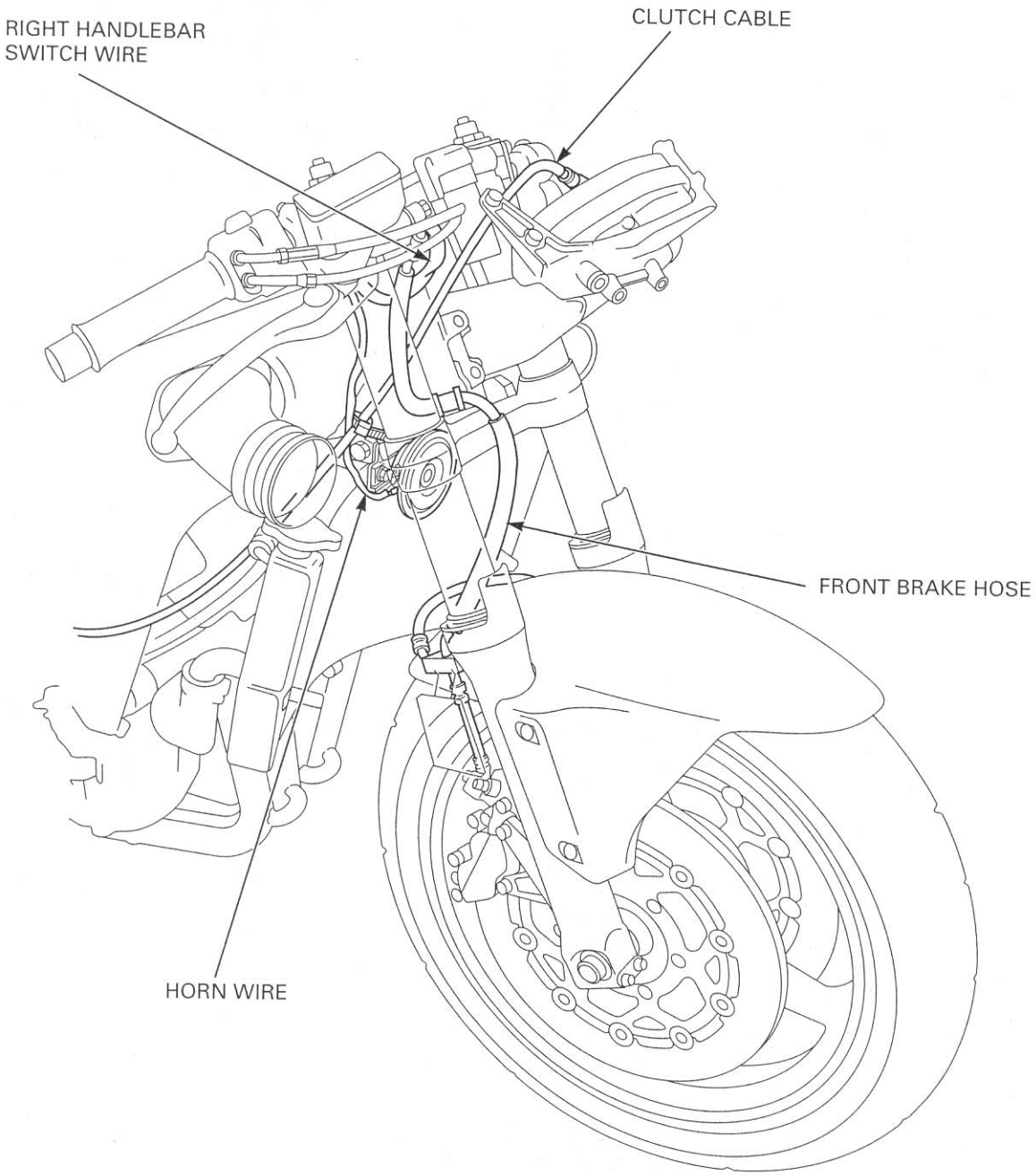
LOCATION	MATERIAL	REMARKS
Seat catch hook sliding area Front wheel dust seal lips Final driven flange-to-rear wheel hub mating surface and O-ring Rear wheel dust seal lips Rear wheel side collar inner surface Throttle grip pipe flange Clutch lever pivot bolt sliding area Rear brake pedal pivot sliding area Gearshift pedal link tie-rod ball joints Gearshift pedal pivot Driver footpeg sliding area Pillion footpeg sliding area Side stand pivot Center stand pivot	Multi-purpose grease	
Steering head bearing sliding surface Steering head dust seal lips	Urea based multi-purpose grease with extreme pressure (example: EXCE-LIGHT EP2 manufactured by KYODO YUSH1, Japan), Shell stamina EP2 or equivalent	
Swingarm pivot bearings Swingarm pivot dust seal lips Shock arm and shock link needle bearings Shock arm and shock link dust seal lips Shock absorber needle bearings Shock absorber dust seal lips	Multi-purpose grease (Shell Alvania EP2 or equivalent)	
Throttle cable A, B outer inside Clutch cable outer inside Clutch cable outer inside	Cable lubricant	
Handlebar grip rubber inside	Honda bond A or Honda hand Grip Cement (U.S.A. only)	
Steering bearing adjustment nut threads	Engine oil	
Front brake lever-to-master piston contacting area Front brake lever pivot Rear master brake master piston-to-push rod contacting area Brake caliper dust seals Rear brake caliper boot inside Rear brake caliper pin boot inside	Silicone grease	
Brake master piston and cups Brake caliper piston and piston seals	Honda DOT 4 brake fluid	
Fork cap O-ring Fork dust seal and oil seal lips	Pro Honda Suspension Fluid SS-8	
Rear brake reservoir hose joint screw threads Front brake caliper assembly bolt threads Rear brake caliper pin bolt threads	Locking agent	

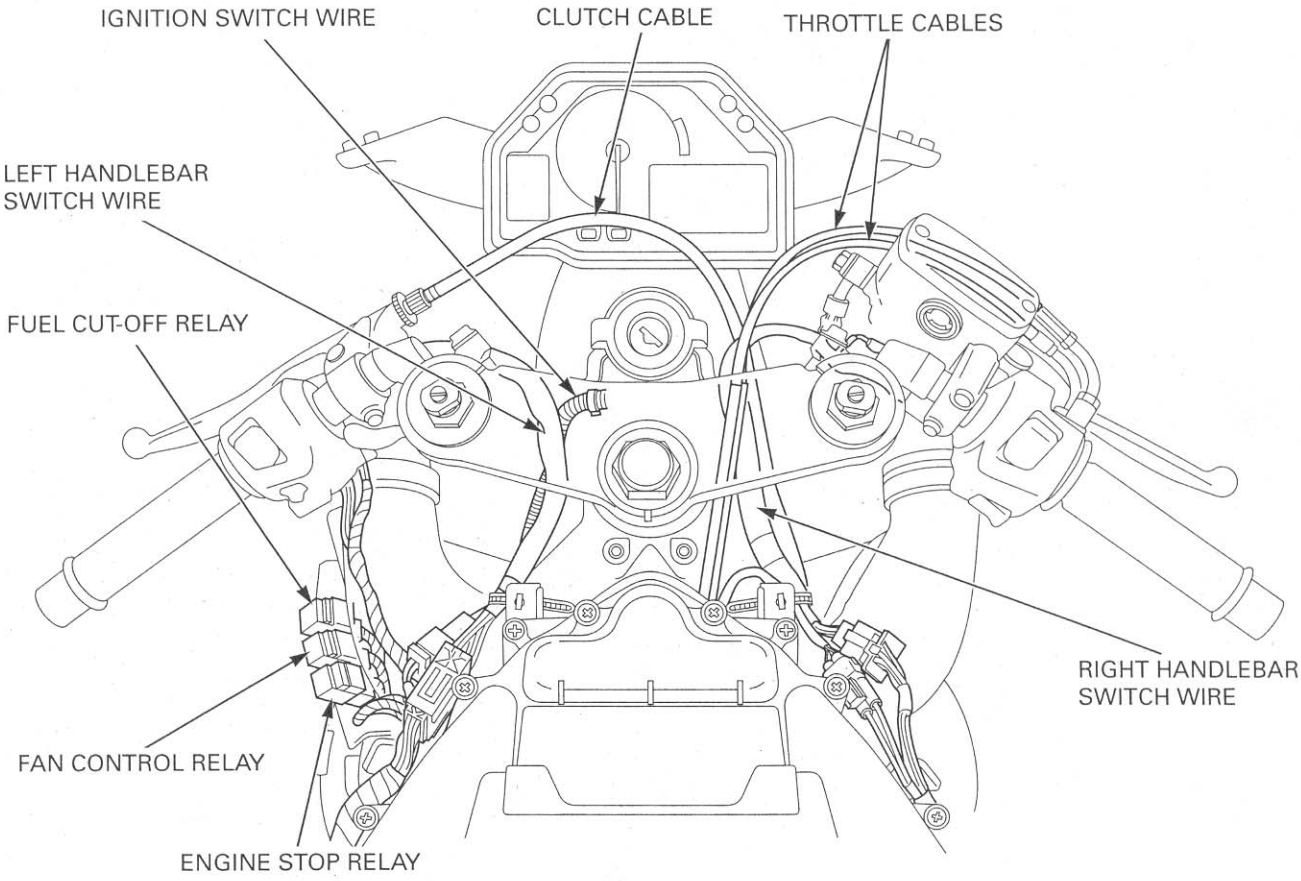
CABLE & HARNESS ROUTING

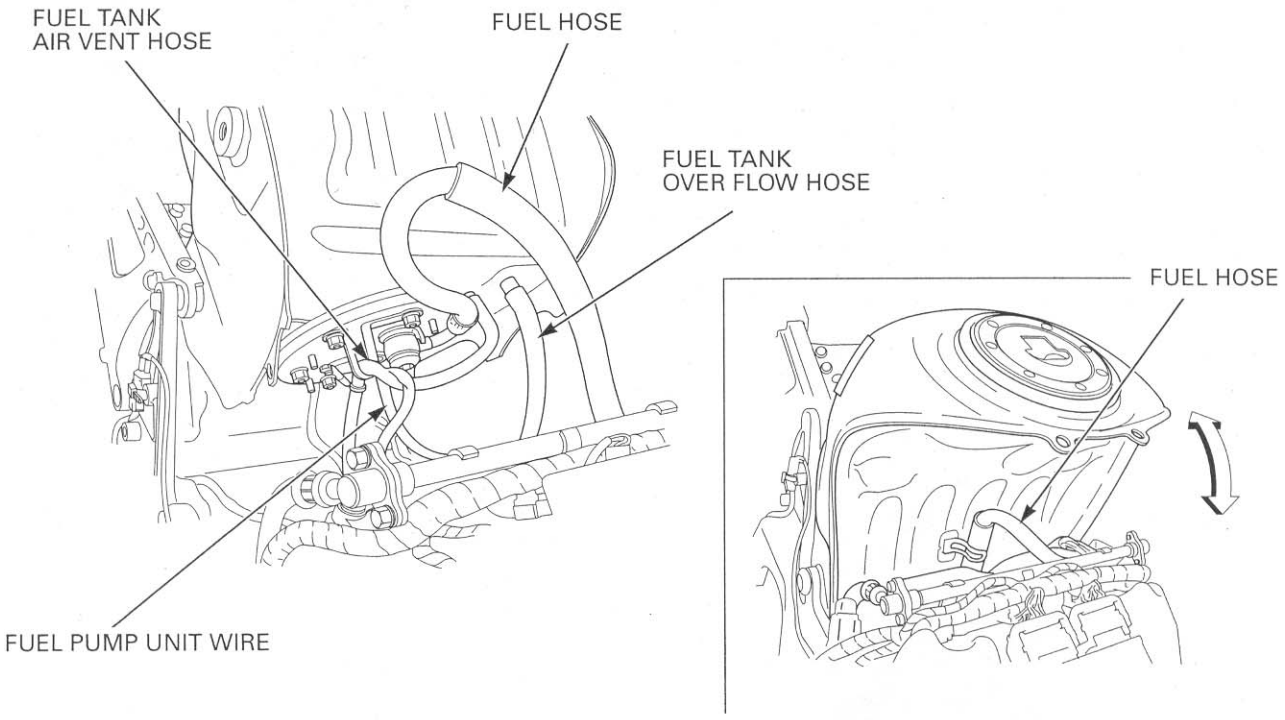


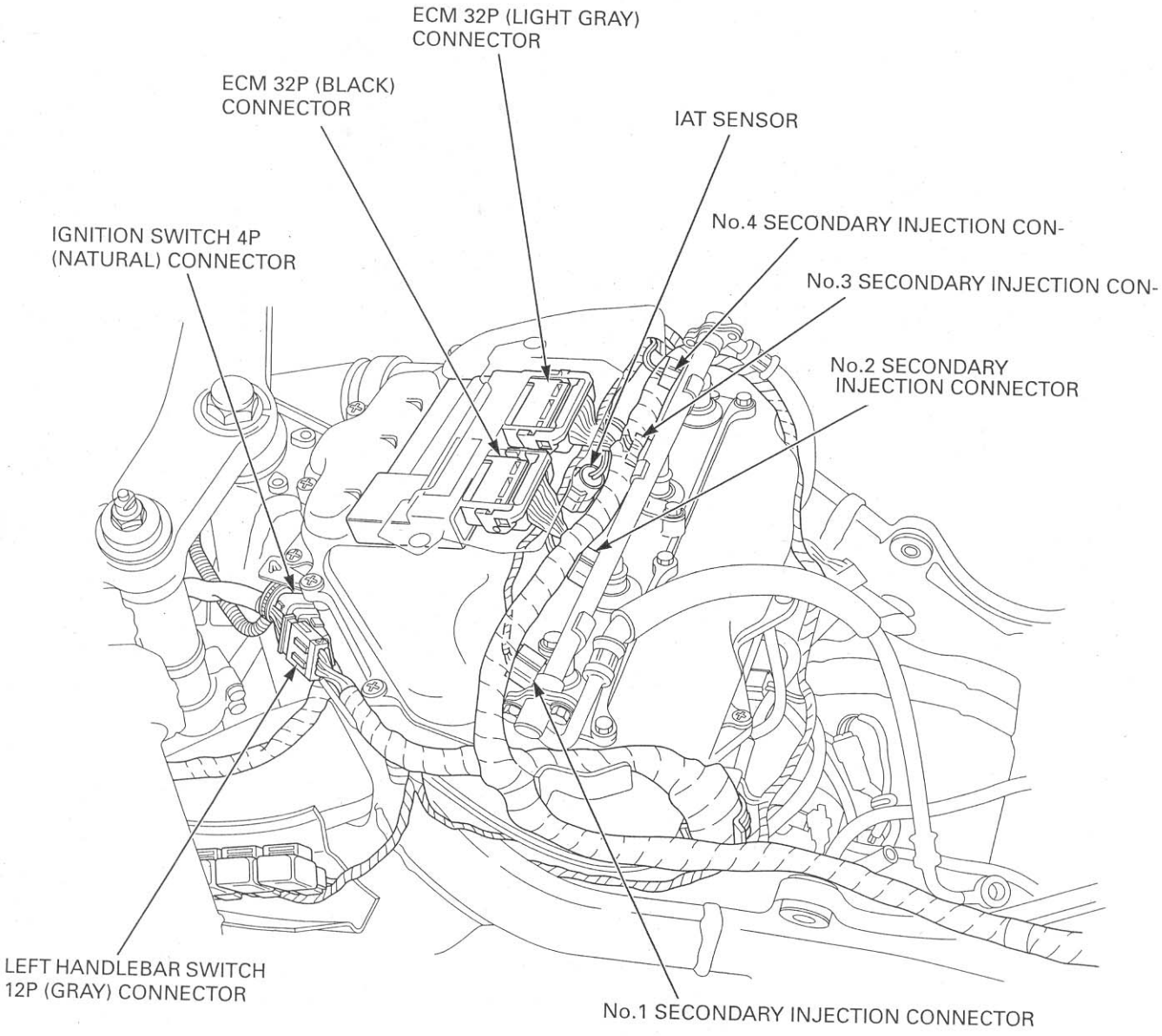


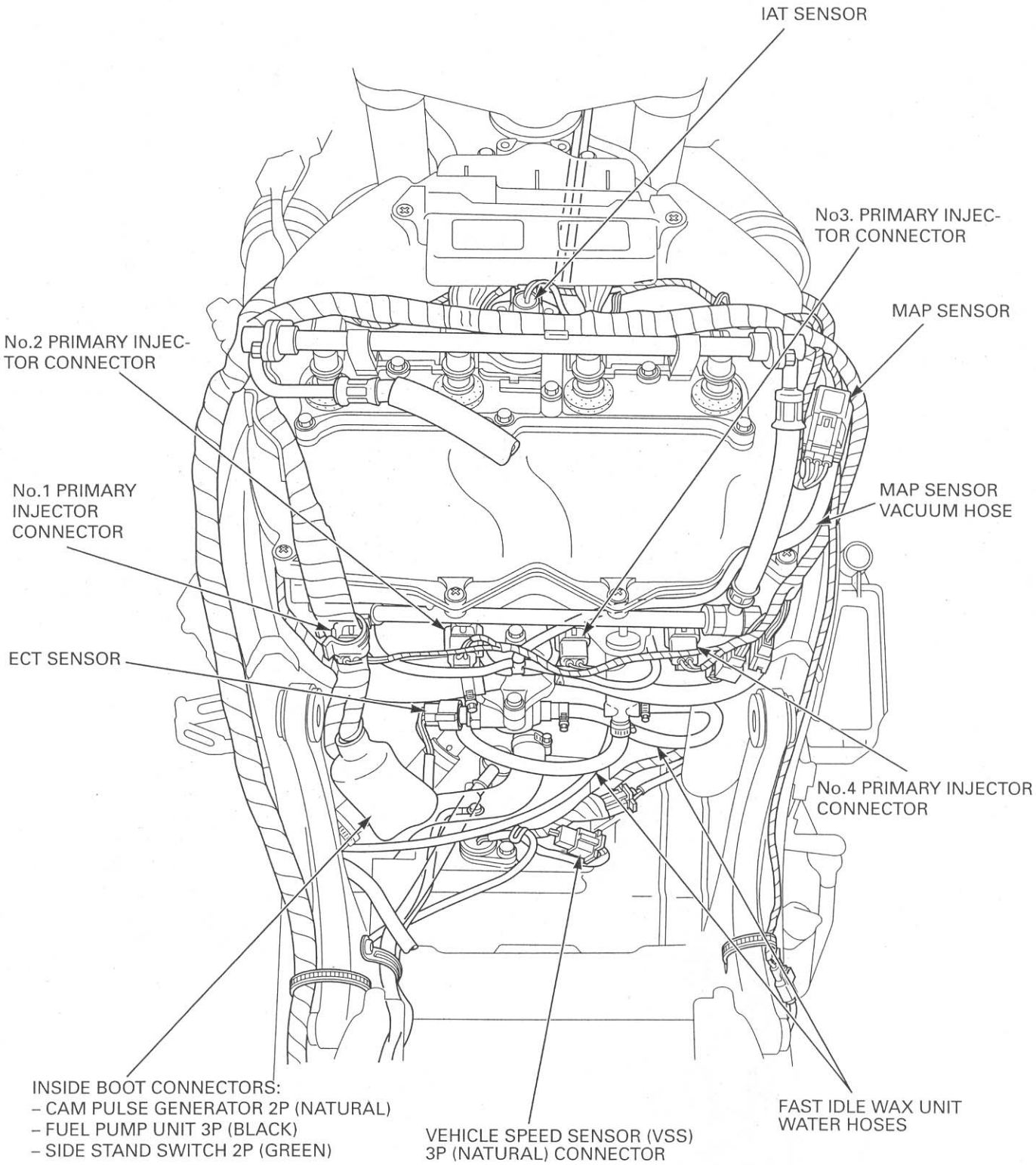

CLUTCH CABLE
LEFT HANDLEBAR SWITCH WIRE
IGNITION SWITCH WIRE
FRONT SUB-HARNESS 12P (BLUE) CONNECTOR
FRONT BRAKE HOSE
FRONT SUB-HARNESS 12P (GRAY) CONNECTOR

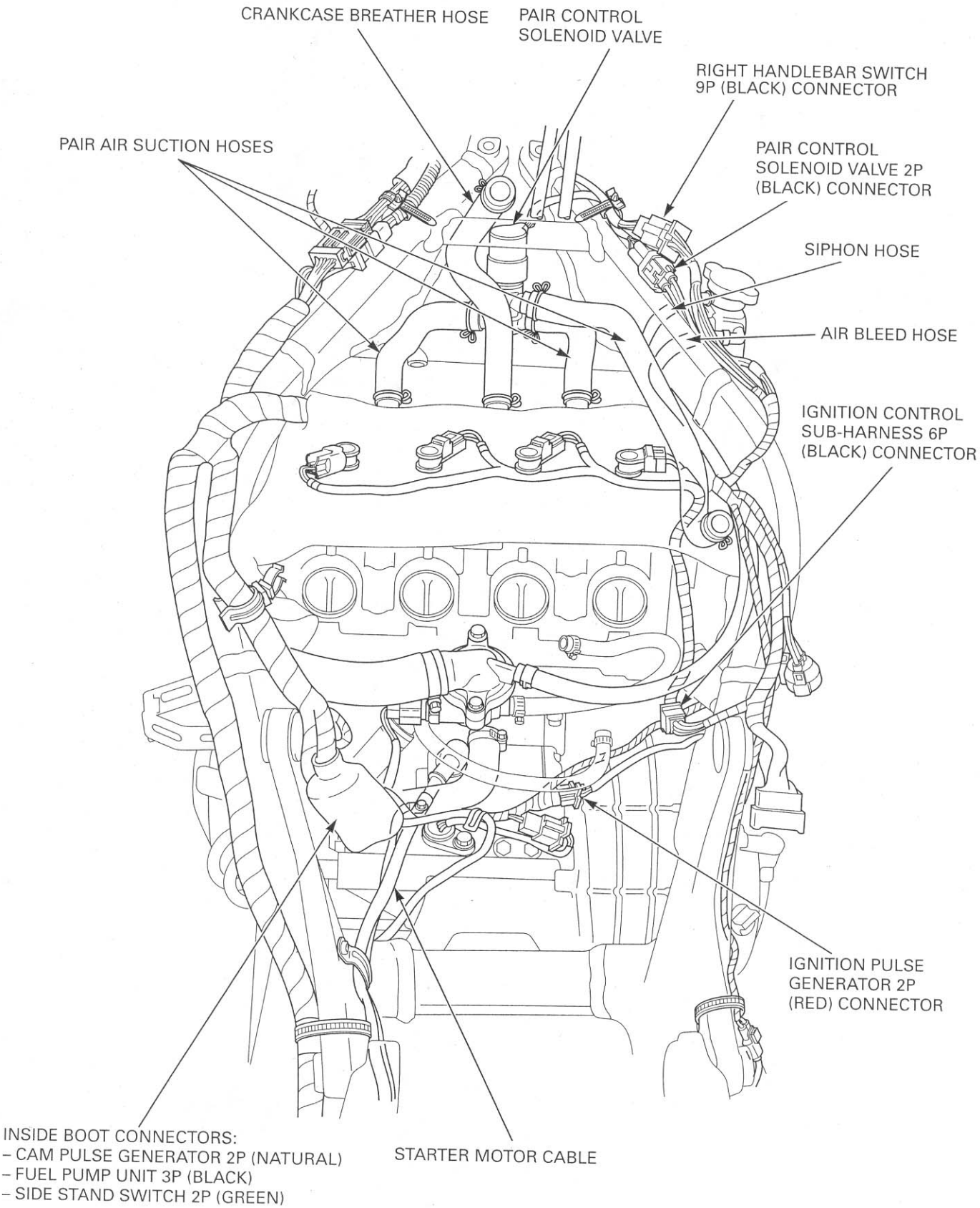

RIGHT HANDLEBAR
SWITCH WIRE
CLUTCH CABLE
FRONT BRAKE HOSE
HORN WIRE

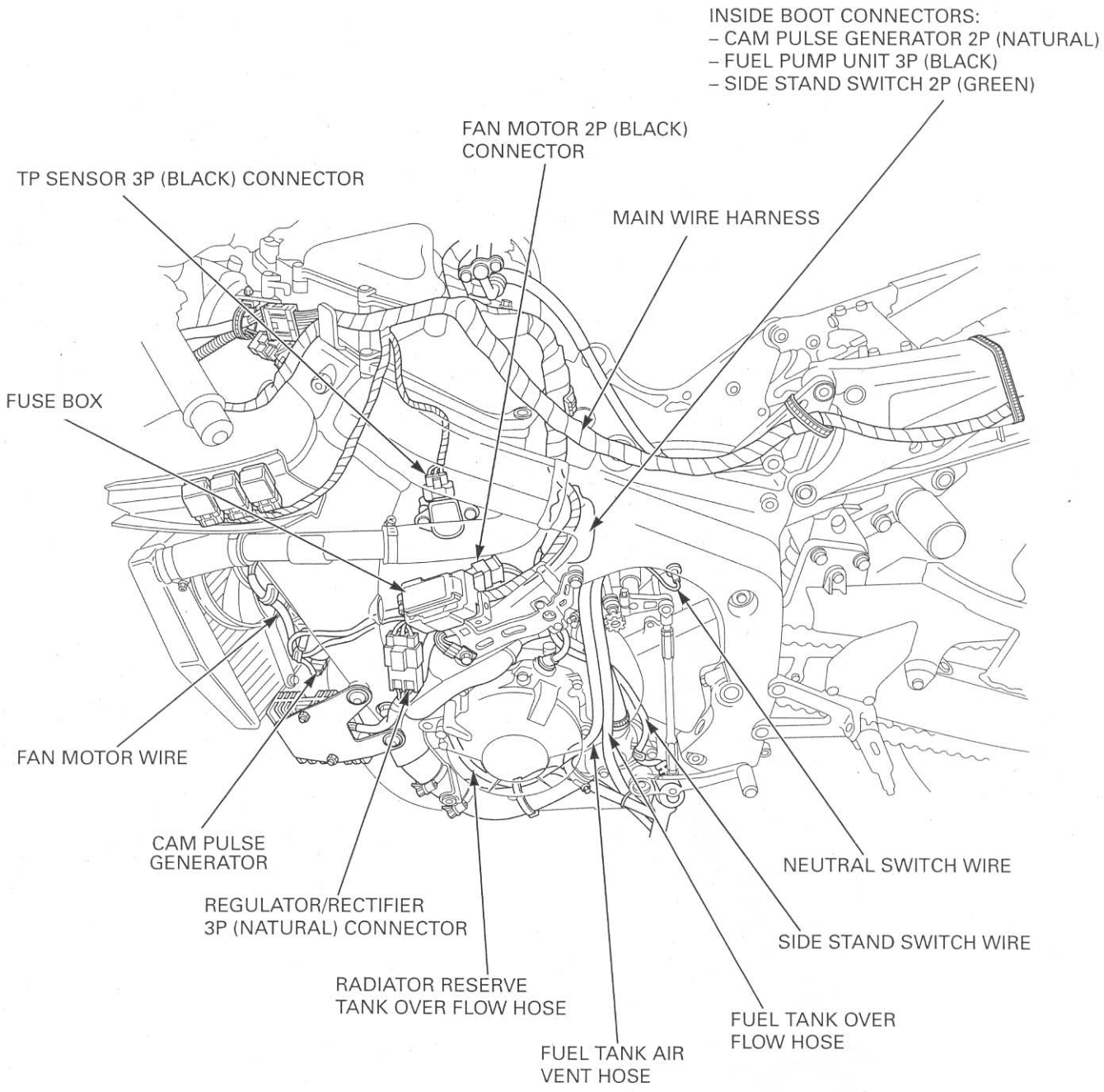

IGNITION SWITCH WIRE
CLUTCH CABLE
THROTTLE CABLES
LEFT HANDLEBAR SWITCH WIRE
FUEL CUT-OFF RELAY
RIGHT HANDLEBAR SWITCH WIRE
FAN CONTROL RELAY
ENGINE STOP RELAY

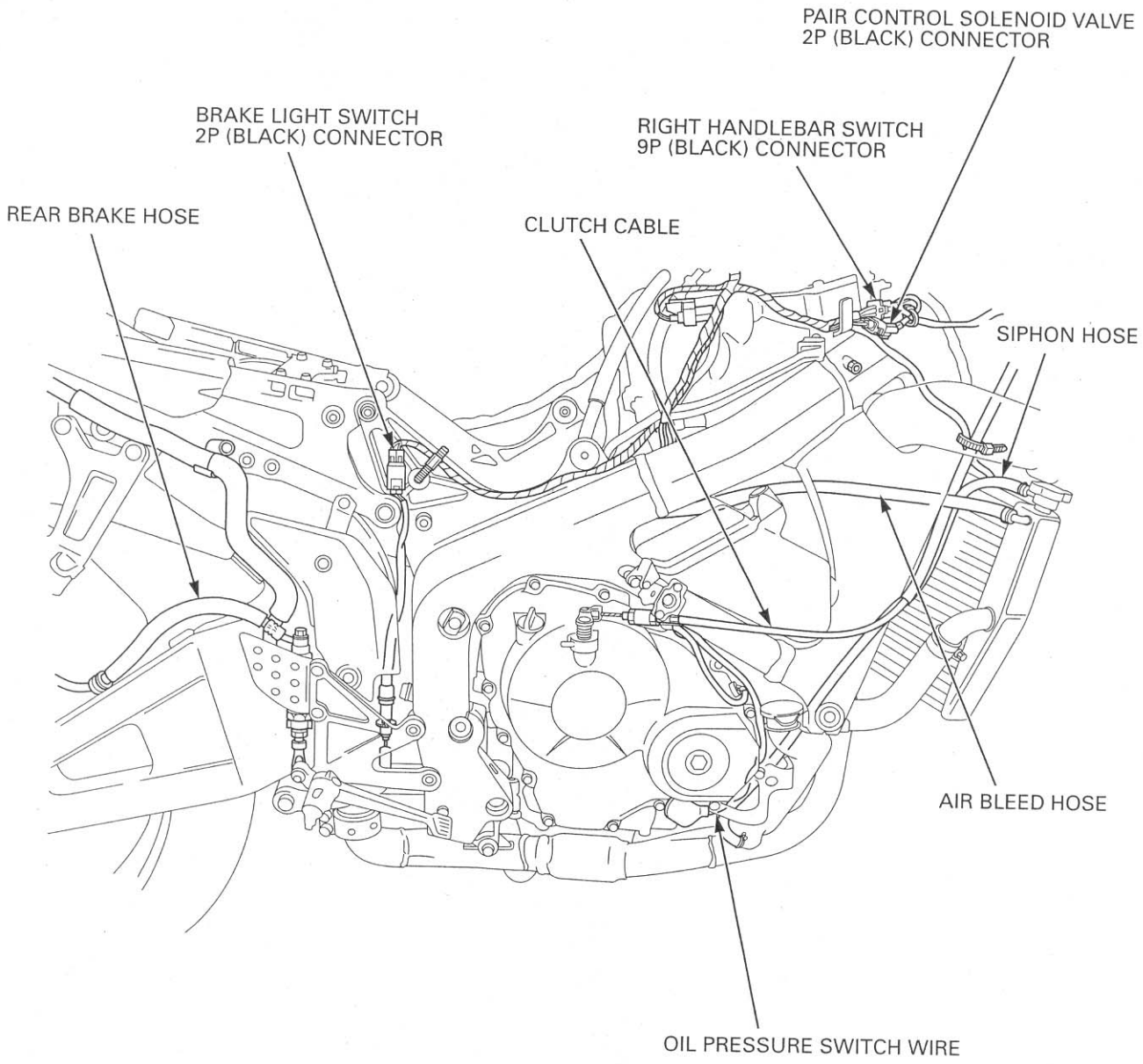

FUEL TANK AIR VENT HOSE
FUEL HOSE
FUEL TANK OVER FLOW HOSE
FUEL HOSE
FUEL PUMP UNIT WIRE

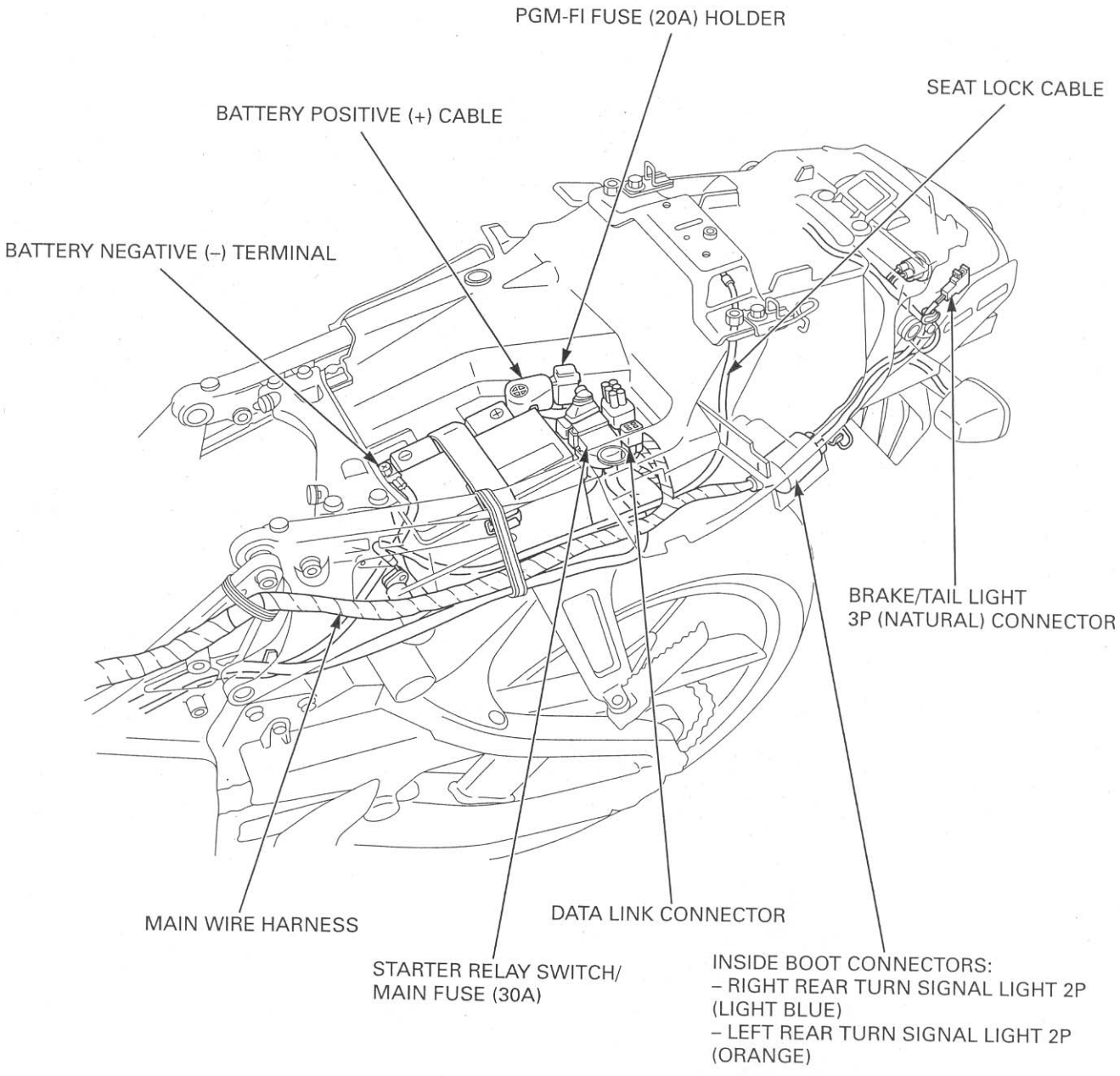

ECM 32P (LIGHT GRAY) CONNECTOR
ECM 32P (BLACK) CONNECTOR
IAT SENSOR
IGNITION SWITCH 4P (NATURAL) CONNECTOR
No.4 SECONDARY INJECTION CON-
No.3 SECONDARY INJECTION CON-
No.2 SECONDARY INJECTION CONNECTOR
LEFT HANDLEBAR SWITCH 12P (GRAY) CONNECTOR
No.1 SECONDARY INJECTION CONNECTOR

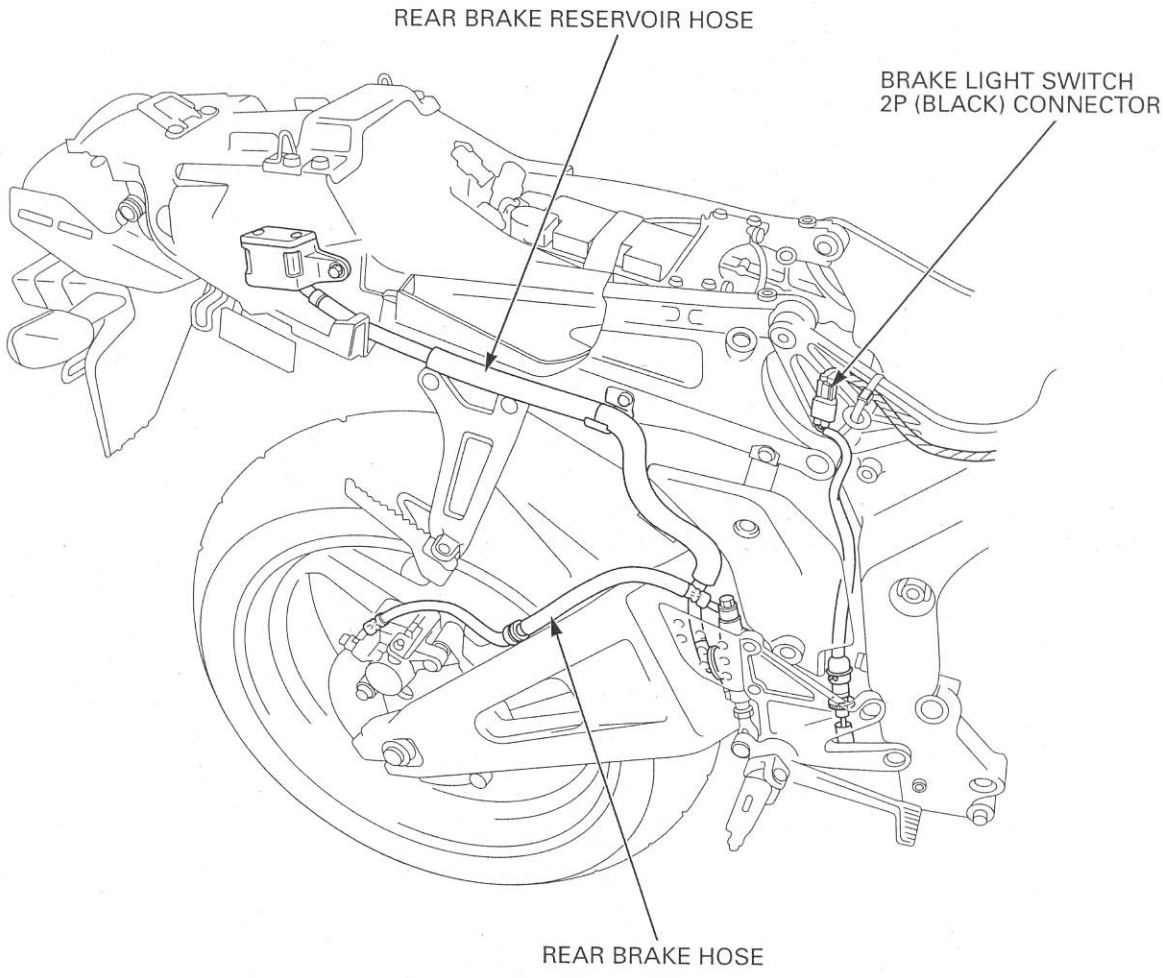

IAT SENSOR
No3. PRIMARY INJEC-
TOR CONNECTOR
MAP SENSOR
No.2 PRIMARY INJEC-
TOR CONNECTOR
No.1 PRIMARY
INJECTOR
CONNECTOR
MAP SENSOR
VACUUM HOSE
ECT SENSOR
No.4 PRIMARY INJECTOR
CONNECTOR
INSIDE BOOT CONNECTORS:
– CAM PULSE GENERATOR 2P (NATURAL)
– FUEL PUMP UNIT 3P (BLACK)
– SIDE STAND SWITCH 2P (GREEN)
VEHICLE SPEED SENSOR (VSS)
3P (NATURAL) CONNECTOR
FAST IDLE WAX UNIT
WATER HOSES

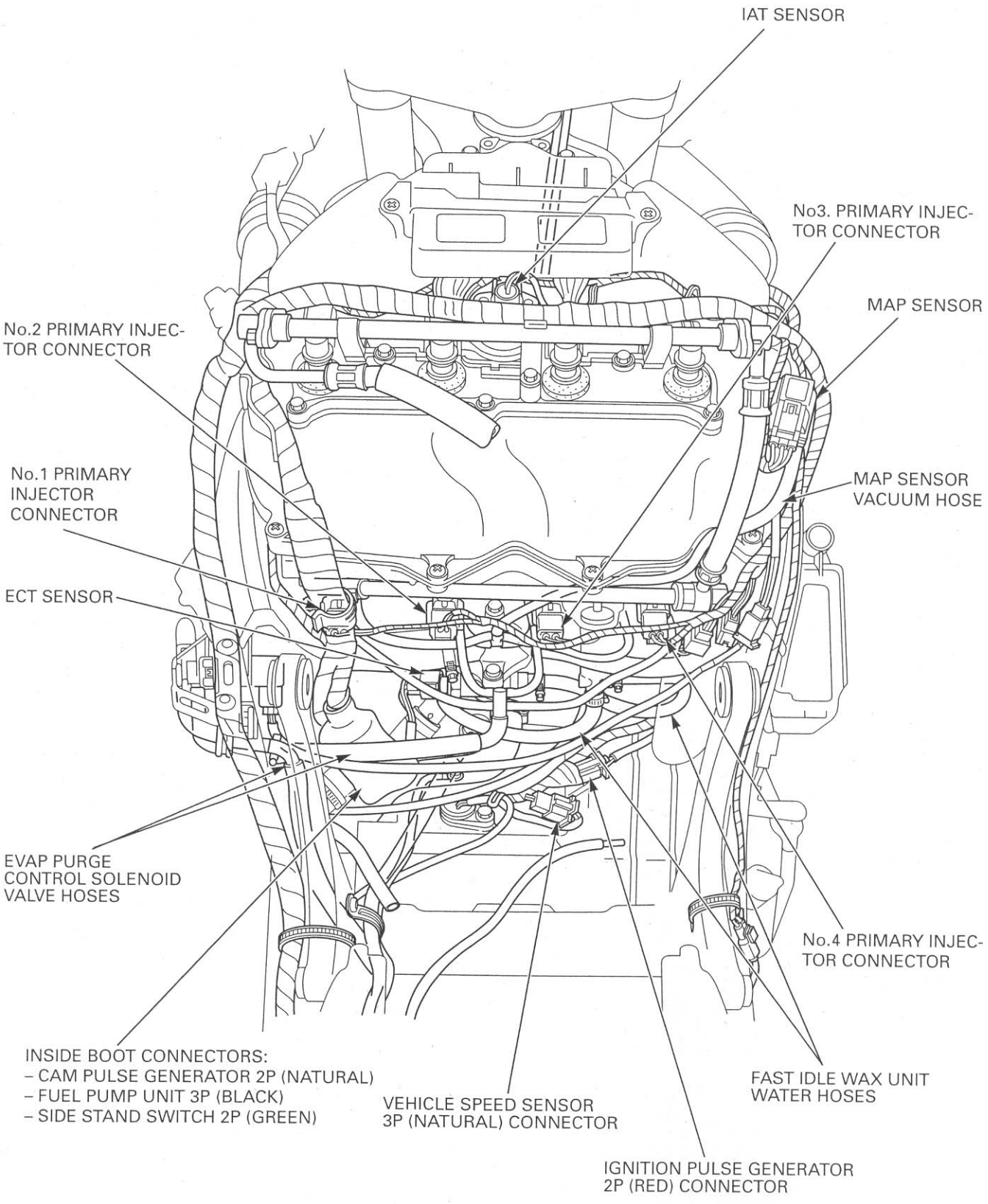

CRANKCASE BREATHER HOSE
PAIR CONTROL SOLENOID VALVE
RIGHT HANDLEBAR SWITCH 9P (BLACK) CONNECTOR
PAIR AIR SUCTION HOSES
PAIR CONTROL SOLENOID VALVE 2P (BLACK) CONNECTOR
SIPHON HOSE
AIR BLEED HOSE
IGNITION CONTROL SUB-HARNESS 6P (BLACK) CONNECTOR
IGNITION PULSE GENERATOR 2P (RED) CONNECTOR
INSIDE BOOT CONNECTORS:
– CAM PULSE GENERATOR 2P (NATURAL)
– FUEL PUMP UNIT 3P (BLACK)
– SIDE STAND SWITCH 2P (GREEN)
STARTER MOTOR CABLE

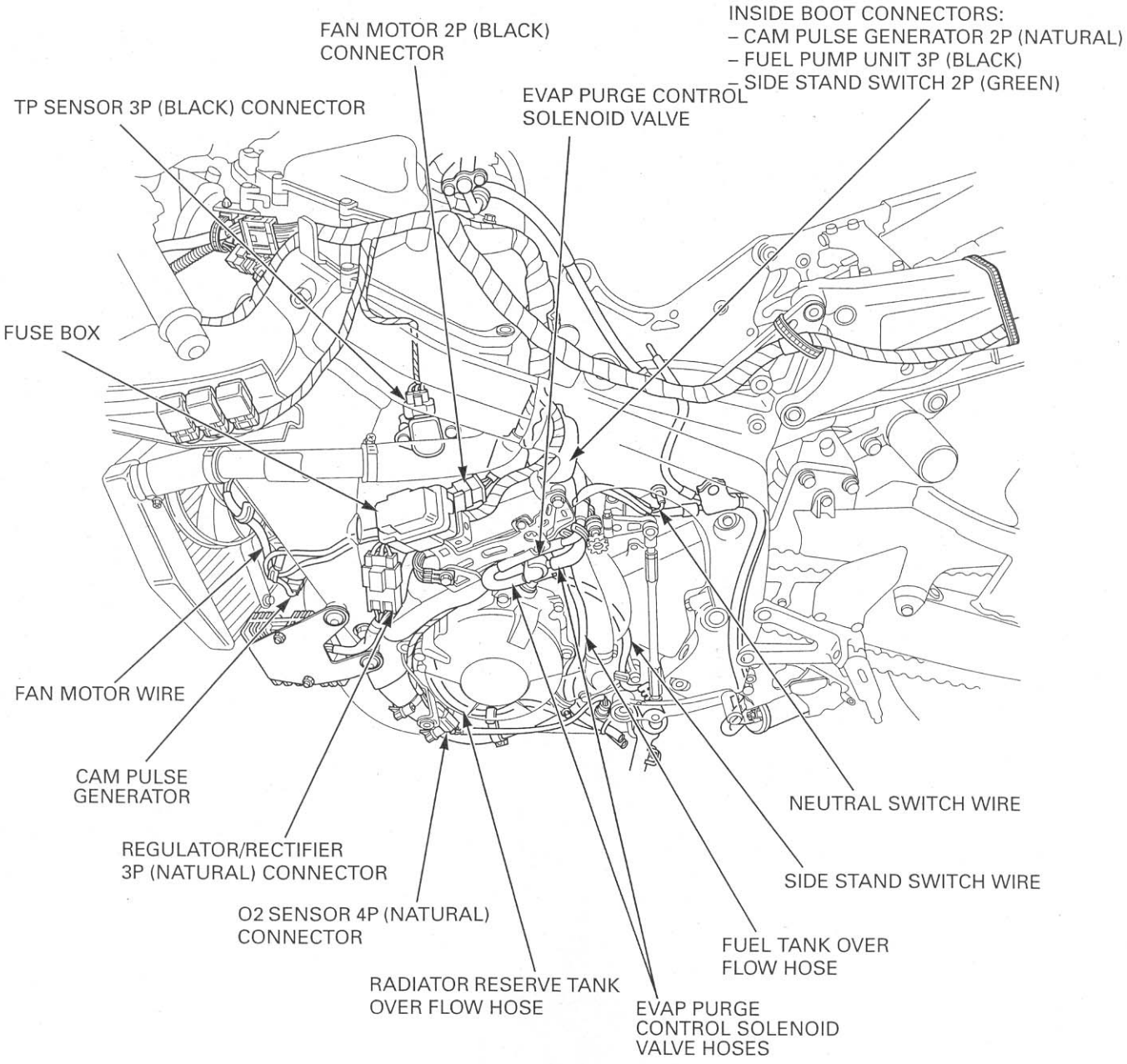

INSIDE BOOT CONNECTORS:
– CAM PULSE GENERATOR 2P (NATURAL)
– FUEL PUMP UNIT 3P (BLACK)
– SIDE STAND SWITCH 2P (GREEN)
FAN MOTOR 2P (BLACK) CONNECTOR
TP SENSOR 3P (BLACK) CONNECTOR
MAIN WIRE HARNESS
FUSE BOX
FAN MOTOR WIRE
CAM PULSE GENERATOR
REGULATOR/RECTIFIER 3P (NATURAL) CONNECTOR
RADIATOR RESERVE TANK OVER FLOW HOSE
FUEL TANK AIR VENT HOSE
FUEL TANK OVER FLOW HOSE
NEUTRAL SWITCH WIRE
SIDE STAND SWITCH WIRE

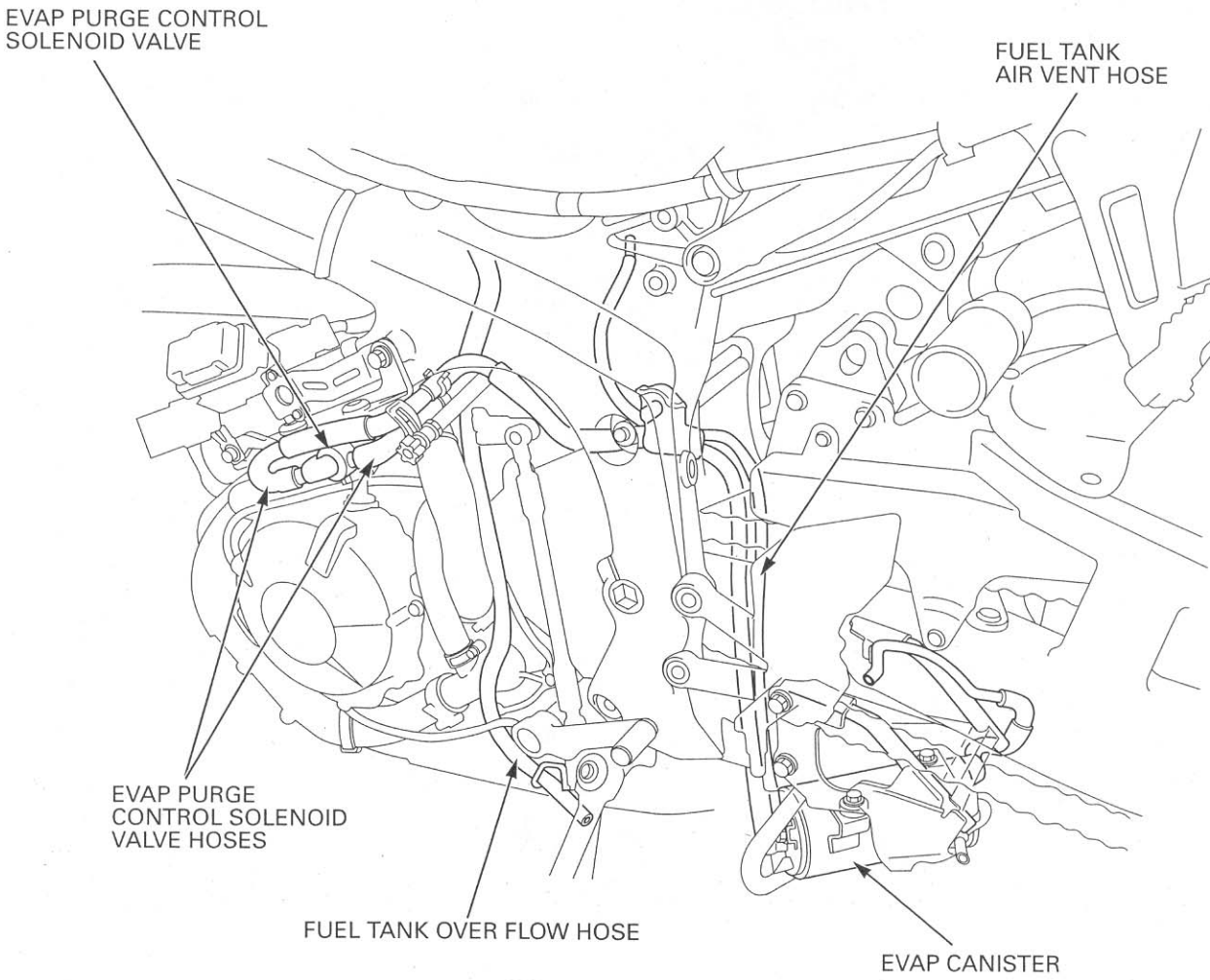

PAIR CONTROL SOLENOID VALVE
2P (BLACK) CONNECTOR
BRAKE LIGHT SWITCH
2P (BLACK) CONNECTOR
RIGHT HANDLEBAR SWITCH
9P (BLACK) CONNECTOR
REAR BRAKE HOSE
CLUTCH CABLE
SIPHON HOSE
AIR BLEED HOSE
OIL PRESSURE SWITCH WIRE

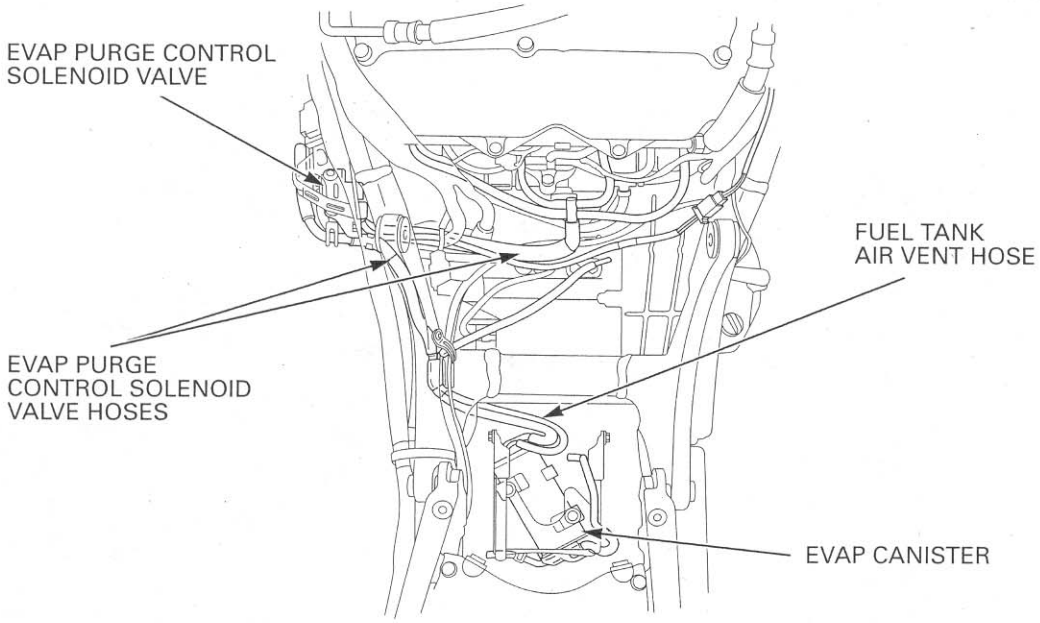

PGM-FI FUSE (20A) HOLDER
SEAT LOCK CABLE
BATTERY POSITIVE (+) CABLE
BATTERY NEGATIVE (–) TERMINAL
BRAKE/TAIL LIGHT
3P (NATURAL) CONNECTOR
MAIN WIRE HARNESS
DATA LINK CONNECTOR
STARTER RELAY SWITCH/
MAIN FUSE (30A)
INSIDE BOOT CONNECTORS:
– RIGHT REAR TURN SIGNAL LIGHT 2P
(LIGHT BLUE)
– LEFT REAR TURN SIGNAL LIGHT 2P
(ORANGE)


REAR BRAKE RESERVOIR HOSE
BRAKE LIGHT SWITCH
2P (BLACK) CONNECTOR
REAR BRAKE HOSE


IAT SENSOR
No3. PRIMARY INJEC-
TOR CONNECTOR
MAP SENSOR
No.2 PRIMARY INJEC-
TOR CONNECTOR
No.1 PRIMARY
INJECTOR
CONNECTOR
MAP SENSOR
VACUUM HOSE
ECT SENSOR
EVAP PURGE
CONTROL SOLENOID
VALVE HOSES
No.4 PRIMARY INJEC-
TOR CONNECTOR
INSIDE BOOT CONNECTORS:
– CAM PULSE GENERATOR 2P (NATURAL)
– FUEL PUMP UNIT 3P (BLACK)
– SIDE STAND SWITCH 2P (GREEN)
VEHICLE SPEED SENSOR
3P (NATURAL) CONNECTOR
FAST IDLE WAX UNIT
WATER HOSES
IGNITION PULSE GENERATOR
2P (RED) CONNECTOR


FAN MOTOR 2P (BLACK) CONNECTOR
INSIDE BOOT CONNECTORS:
– CAM PULSE GENERATOR 2P (NATURAL)
– FUEL PUMP UNIT 3P (BLACK)
– SIDE STAND SWITCH 2P (GREEN)
TP SENSOR 3P (BLACK) CONNECTOR
EVAP PURGE CONTROL SOLENOID VALVE
FUSE BOX
FAN MOTOR WIRE
CAM PULSE GENERATOR
REGULATOR/RECTIFIER 3P (NATURAL) CONNECTOR
O2 SENSOR 4P (NATURAL) CONNECTOR
RADIATOR RESERVE TANK OVER FLOW HOSE
EVAP PURGE CONTROL SOLENOID VALVE HOSES
FUEL TANK OVER FLOW HOSE
SIDE STAND SWITCH WIRE
NEUTRAL SWITCH WIRE


EVAP PURGE CONTROL SOLENOID VALVE
FUEL TANK AIR VENT HOSE
EVAP PURGE CONTROL SOLENOID VALVE HOSES
FUEL TANK OVER FLOW HOSE
EVAP CANISTER


EVAP PURGE CONTROL SOLENOID VALVE
FUEL TANK AIR VENT HOSE
EVAP PURGE CONTROL SOLENOID VALVE HOSES
EVAP CANISTER

EMISSION CONTROL SYSTEMS

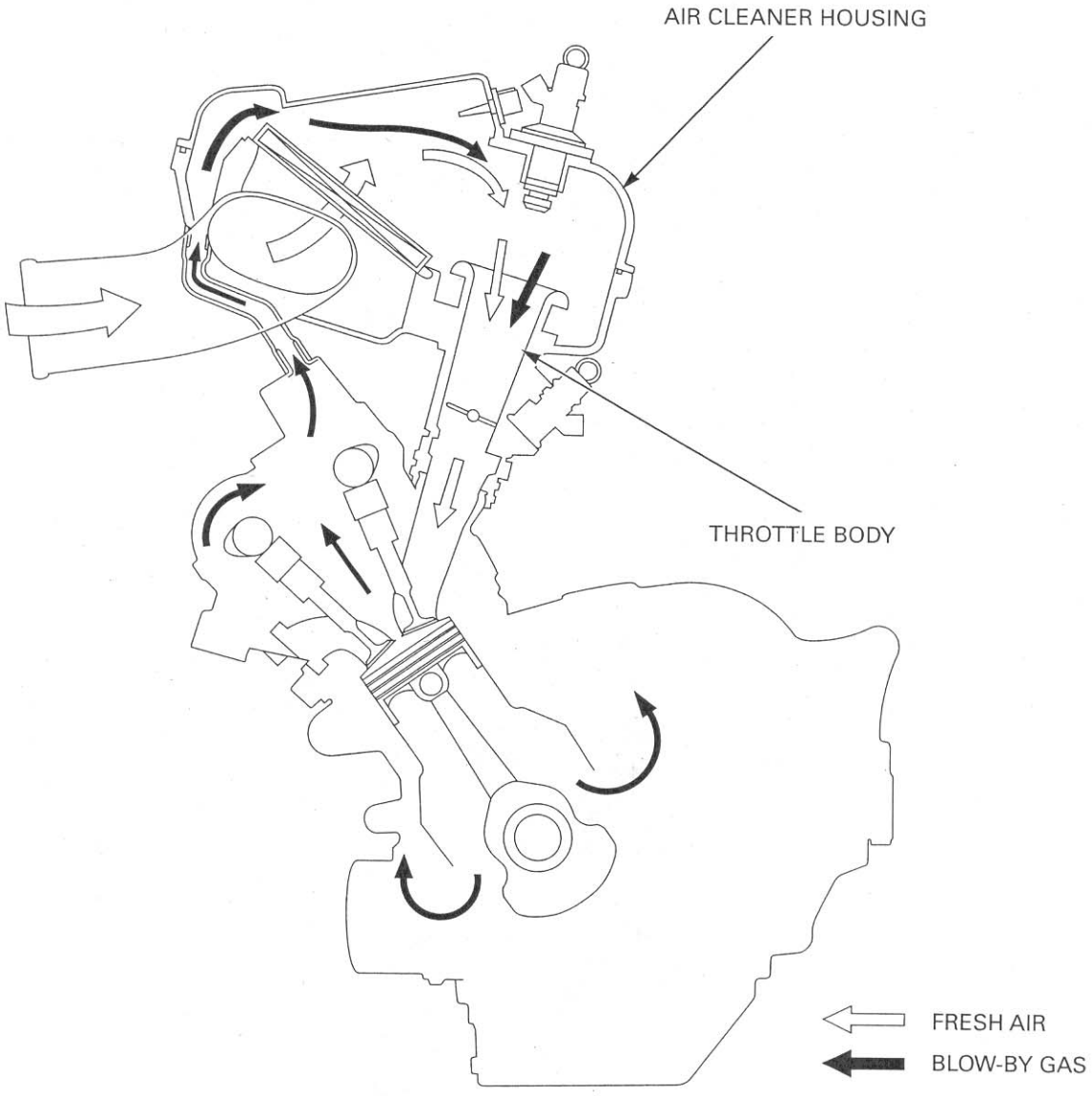
The U.S. Environmental Protection Agency, California Air Resources Board (CARB) and Transport Canada require manufacturers to certify that their motorcycles comply with applicable exhaust emissions standards during their useful life. When operated and maintained according to the instructions provided,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



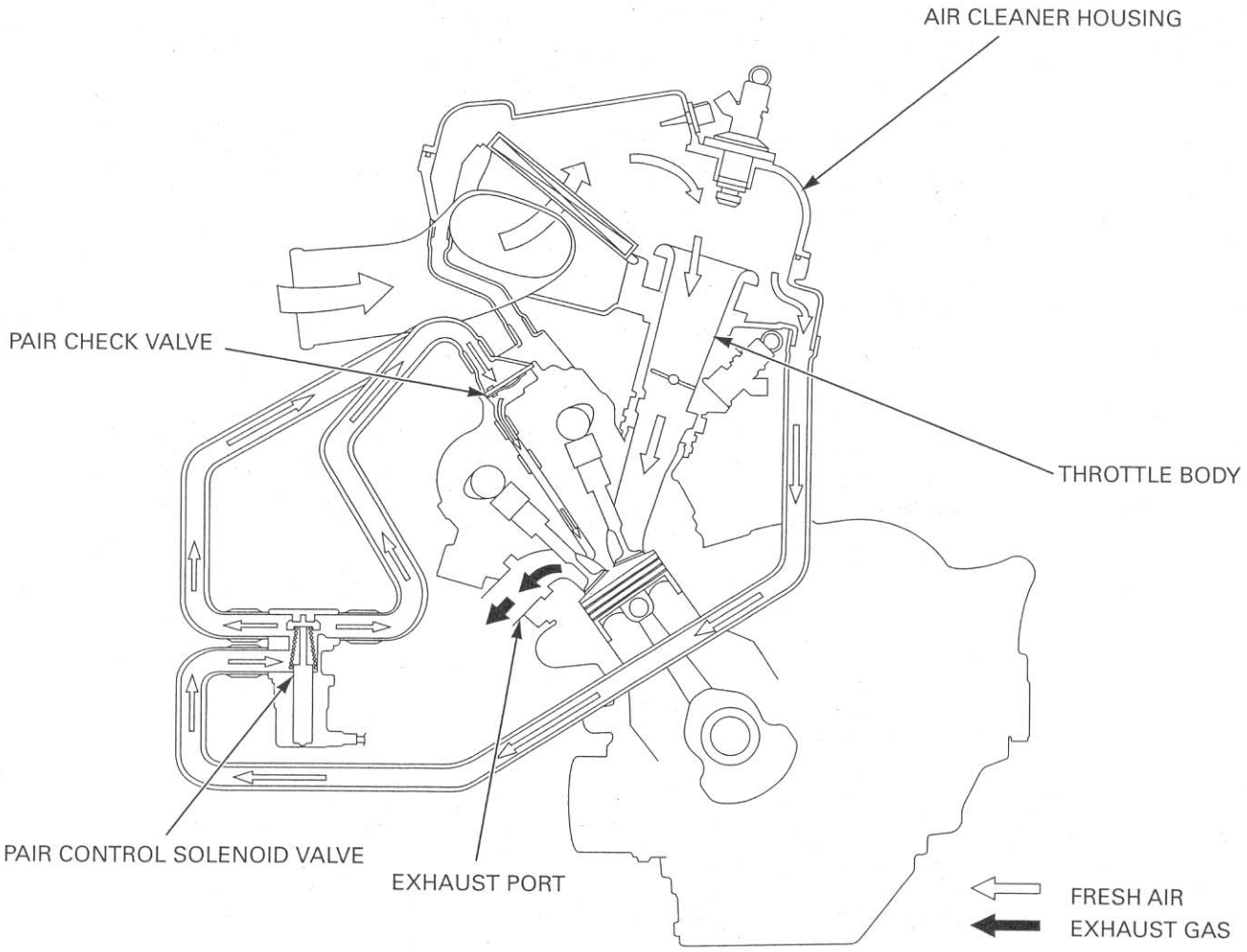
EXHAUST EMISSION CONTROL SYSTEM (SECONDARY AIR SUPPLY SYSTEM)

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 crank case emission control 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 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 to running conditions (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.

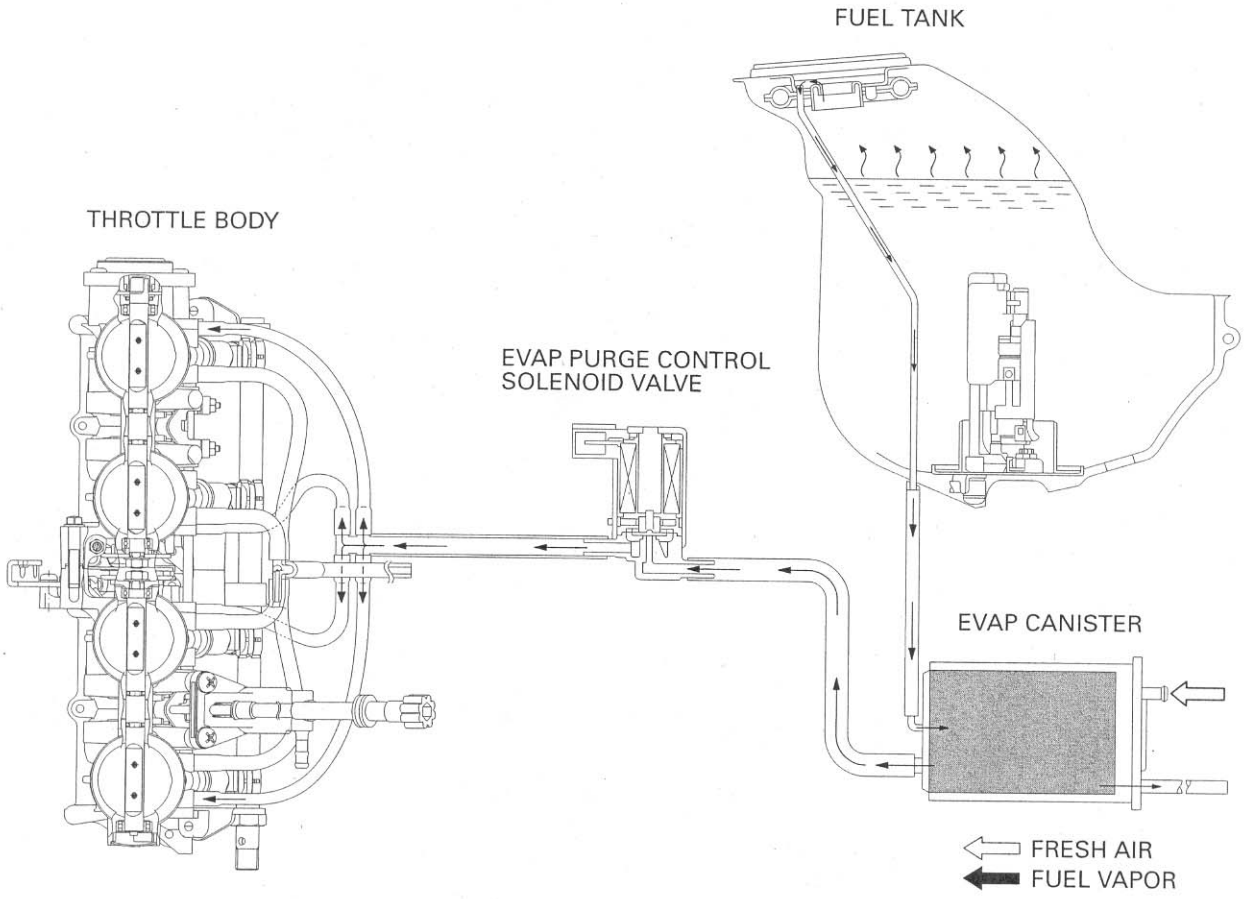


California type only:

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 is it 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.

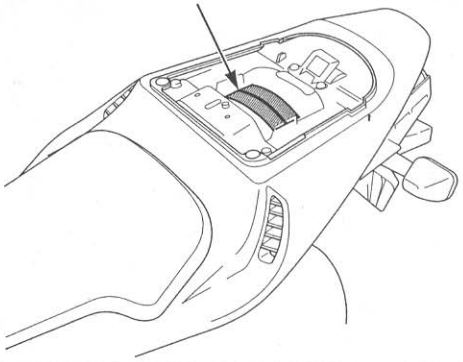
AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW:

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 (U.S.A. only)

An Emission Control Information Label is located on the as shown.
The fuel tank must be opened to read it. Refer to page 6-61 fuel tank opening.

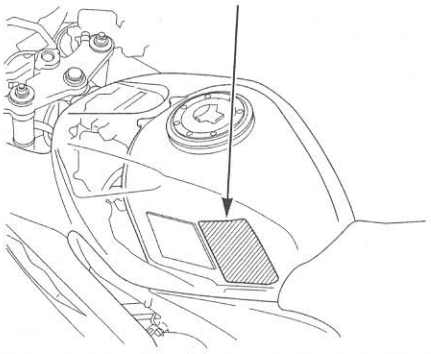
EMISSION CONTROL INFORMATION LABEL

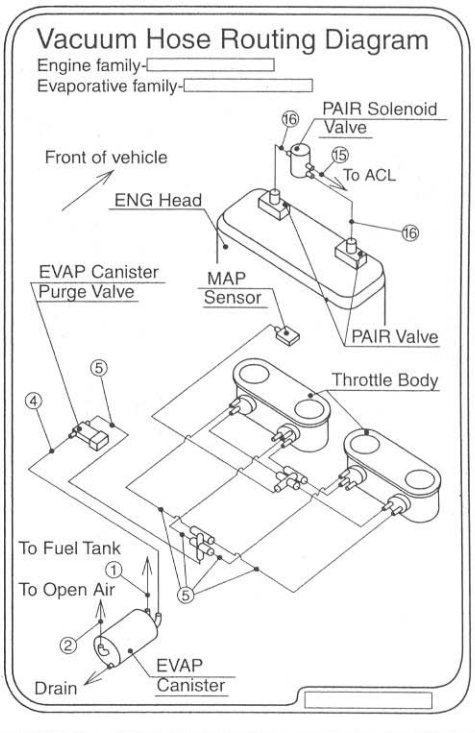


VACUUM HOSE ROUTING DIAGRAM LABEL (CALIFORNIA TYPE ONLY)

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 6-61 for fuel tank opening.

VACUUM HOSE ROUTING DIAGRAM LABEL

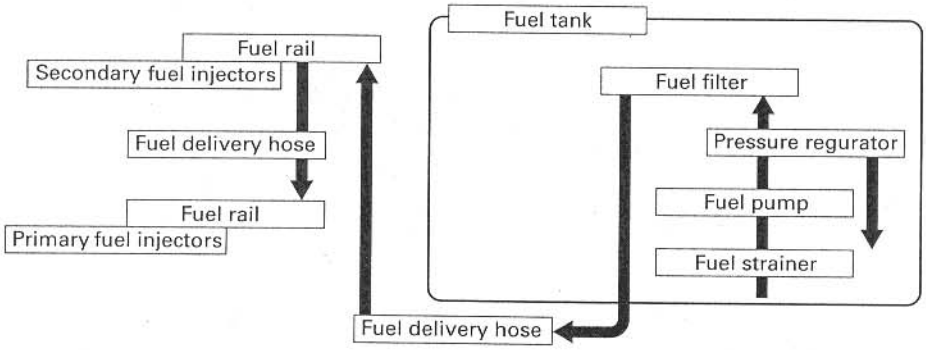


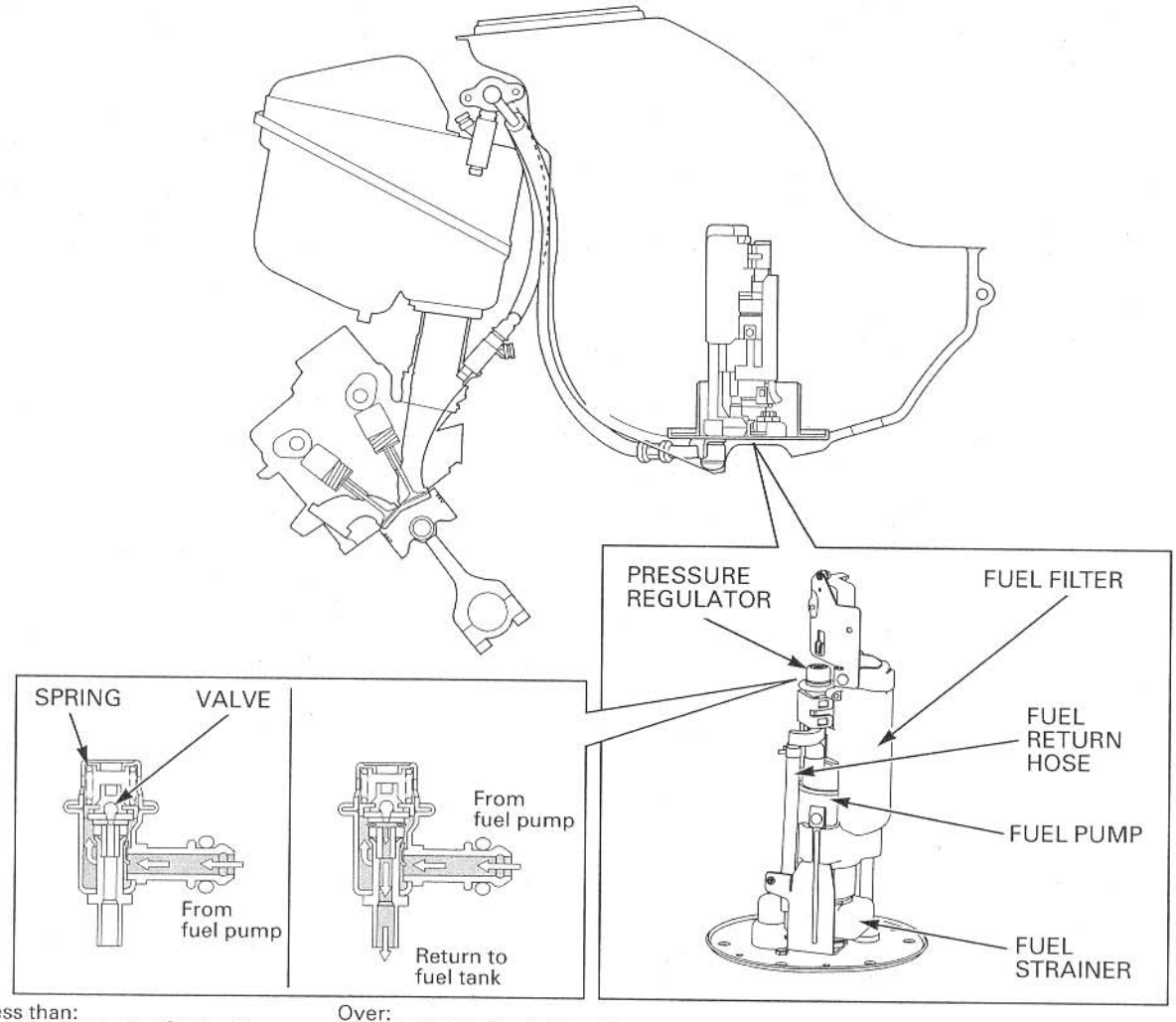


2. TECHNICAL FEATURE

ABSOLUTE PRESSURE FUEL SUPPLY SYSTEM

The fuel delivery system consists of the following components: fuel tank, fuel strainer, fuel pump, fuel filter, internal pressure regulator, fuel delivery hoses, fuel rails and injectors.
This system is equipped with the absolute fuel pressure. There is no external fuel return hose or vacuum pressure regulator with this system.
The fuel pressure in the fuel delivery system is regulated by the internal pressure regulator and always kept absolute; 343 kPa (3.5 kgf/cm^2, 50 psi).
The internal pressure regulator returns the fuel by opening a valve when the fuel pressure increases more than 343 kPa (3.5 kgf/cm^2, 50 psi).
This system optimizes injection volume by the ECM control.



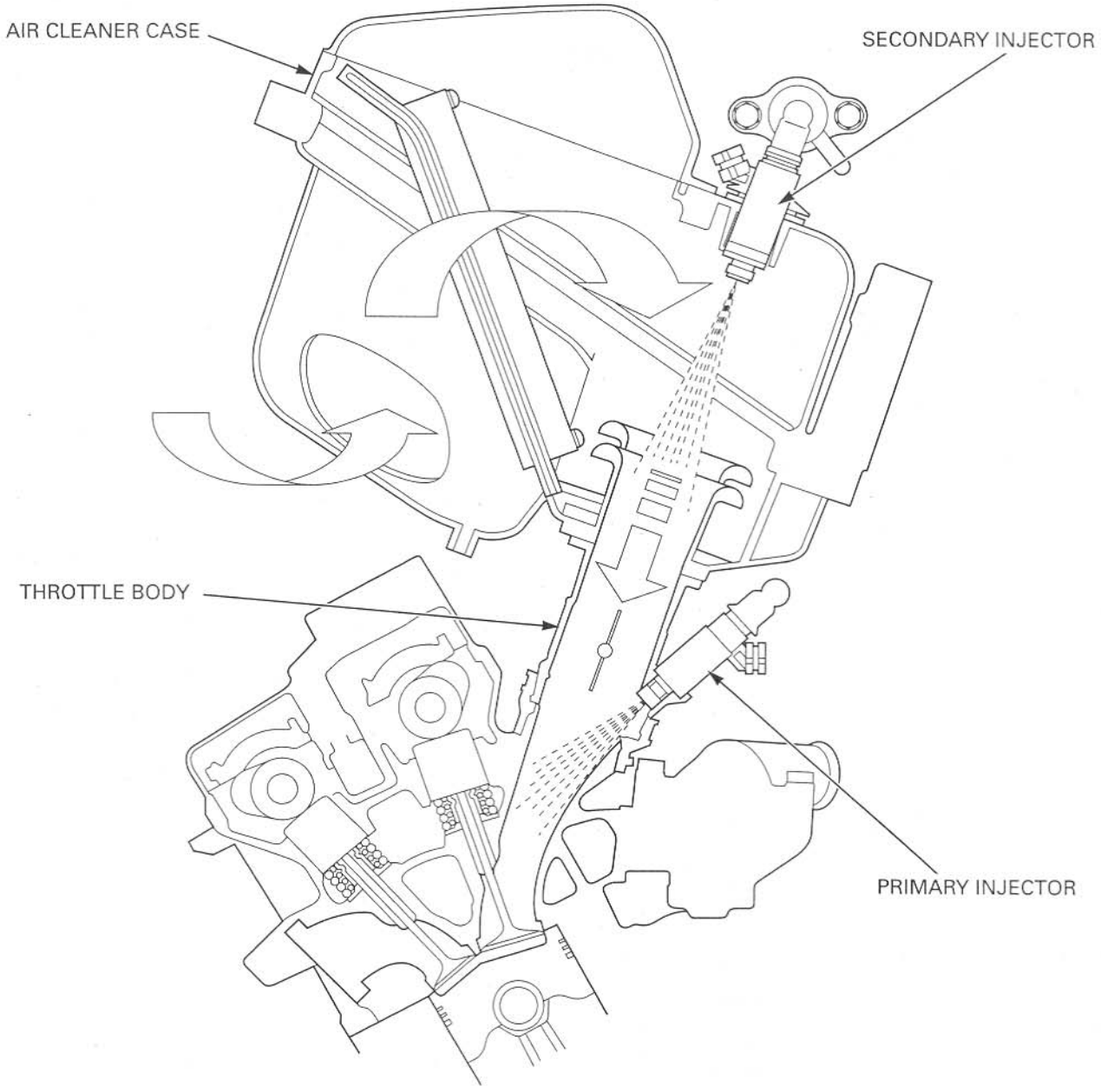


Less than:
343 kPa (3.5 kgf/cm^2, 50 psi)

Over:
343 kPa (3.5 kgf/cm^2, 50 psi)

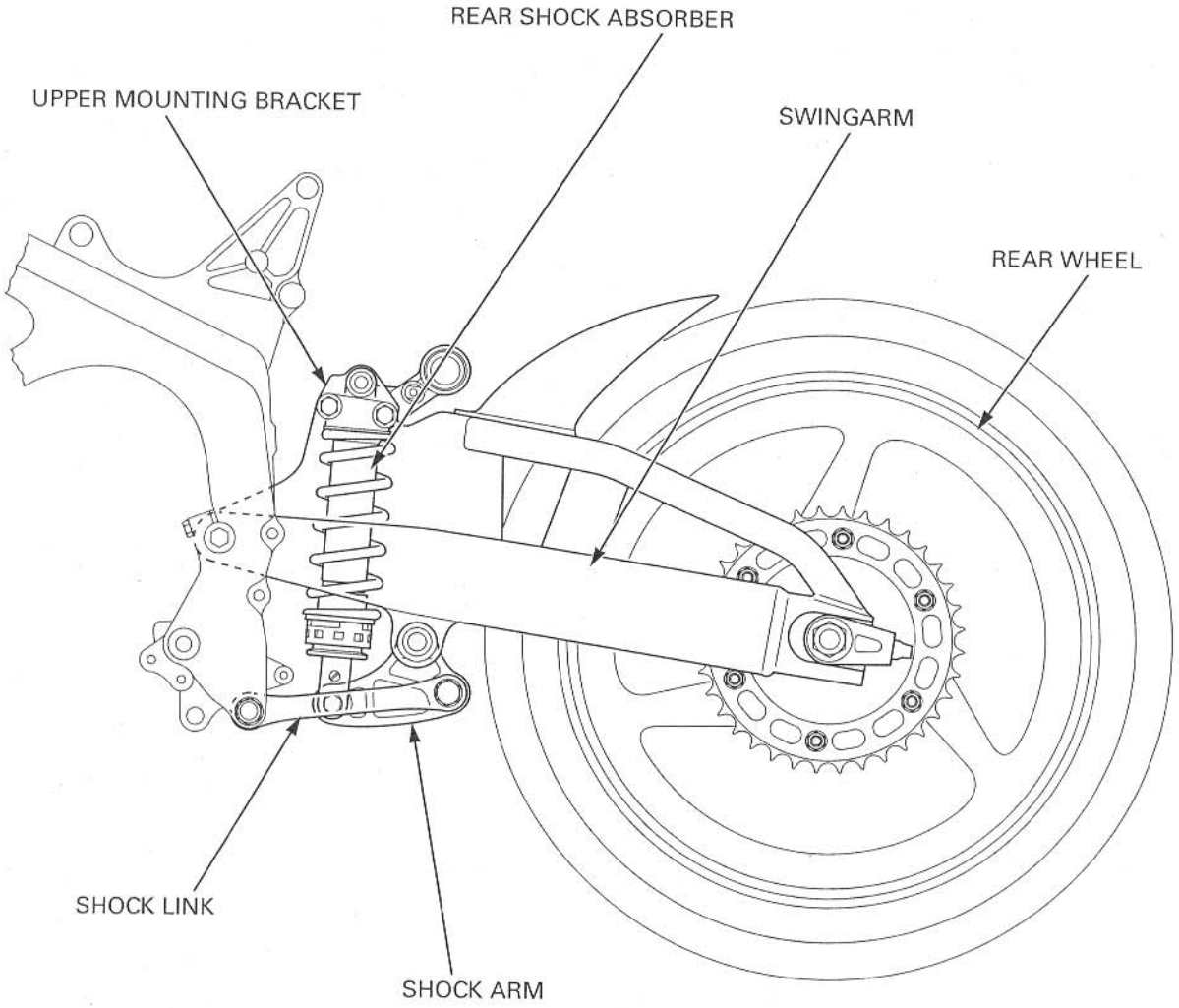
DUAL SEQUENTIAL FUEL INJECTION SYSTEM (PGM-DSFI)

The CBR600RR is equipped with two injectors per cylinder.
The primary injector is built in the throttle body and the secondary injector is built on the upper air cleaner case.
Four primary injectors and four upper injectors are connected in series to the fuel delivery hose.
The ECM controls the injector operation and injection time, according to the signals from each sensor.
The primary injector operates at all engine speed, both the primary and secondary injector operate at high engine speeds (over 5,500 rpm) and throttle wide opened (over 50°).



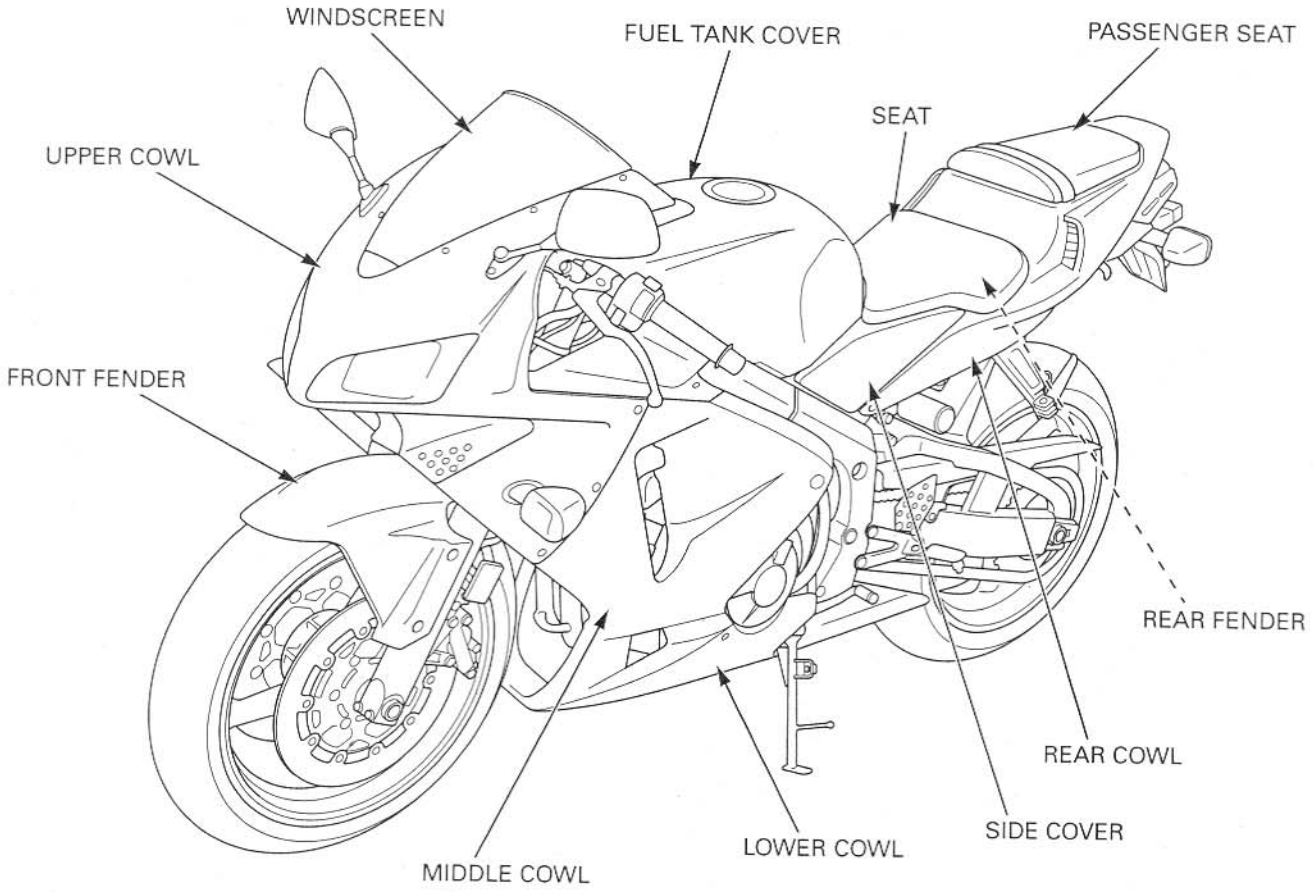
UNIT PROLINK SUSPENSION

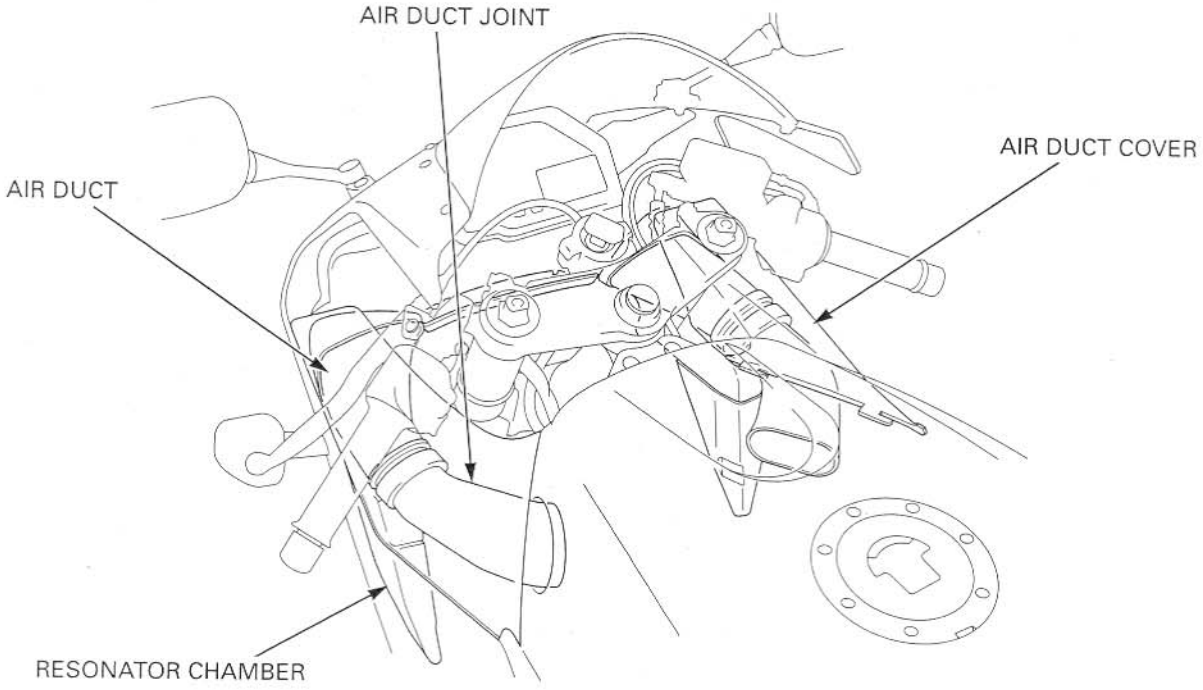
The CBR600RR features the unit pro-link rear suspension which consists of the swingarm, shock link, shock arm, shock absorber and upper mounting bracket.
The rear suspension unit is connected to the frame at the swingarm pivot and link arm, eliminating an upper shock connection to the frame.
The upper part of rear shock absorber is mounted on the upper mounting bracket through the swingarm, therefore the whole rear shock absorber moves in response to rear wheel movement.



3. FRAME/BODY PANELS/EXHAUST SYSTEM

BODY PANEL LOCATIONS





SERVICE INFORMATION

GENERAL

- This section covers removal and installation of the body panels, exhaust system and seat rail.
- Serious burns may result if the exhaust system is not allowed to cool before components are removed or serviced.
- Always replace the exhaust pipe gaskets with a new one after removing the exhaust pipe from the engine.
- When installing the exhaust system, loosely install all of the exhaust pipe fasteners. Always tighten the exhaust clamps first, then tighten the mounting fasteners.
- Always inspect the exhaust system for leaks after installation.

TORQUE VALUES

Lower cowl-to-middle cowl pan screw	1.5 N·m (0.15 kgf·m, 1.1 lbf·ft)
Middle cowl-to-upper cowl pan screw	1.5 N·m (0.15 kgf·m, 1.1 lbf·ft)
Windscreen setting screw	0.5 N·m (0.05 kgf·m, 0.4 lbf·ft)
Front brake hose clamp bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)
Front brake hose 3-way joint bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)
Rear brake reservoir mounting bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)
Seat rail upper mounting flange nut	54 N·m (5.5 kgf·m, 40 lbf·ft)
Seat rail lower mounting flange bolt	44 N·m (4.5 kgf·m, 33 lbf·ft)
Seat rail brace socket bolt	26 N·m (2.7 kgf·m, 20 lbf·ft)
Seat rail assembly flange nut	30 N·m (3.1 kgf·m, 22 lbf·ft)
Exhaust pipe joint flange nut	12 N·m (1.2 kgf·m, 9 lbf·ft)
Muffler band flange bolt	23 N·m (2.3 kgf·m, 17 lbf·ft)
Passenger footpeg bracket socket bolt	26 N·m (2.7 kgf·m, 20 lbf·ft)
O_2 sensor (California type only)	25 N·m (2.6 kgf·m, 19 lbf·ft)

TROUBLESHOOTING

Excessive exhaust noise
- Broken exhaust system
- Exhaust gas leak

Poor performance
- Deformed exhaust system
- Exhaust gas leak
- Clogged muffler

SEAT

REMOVAL

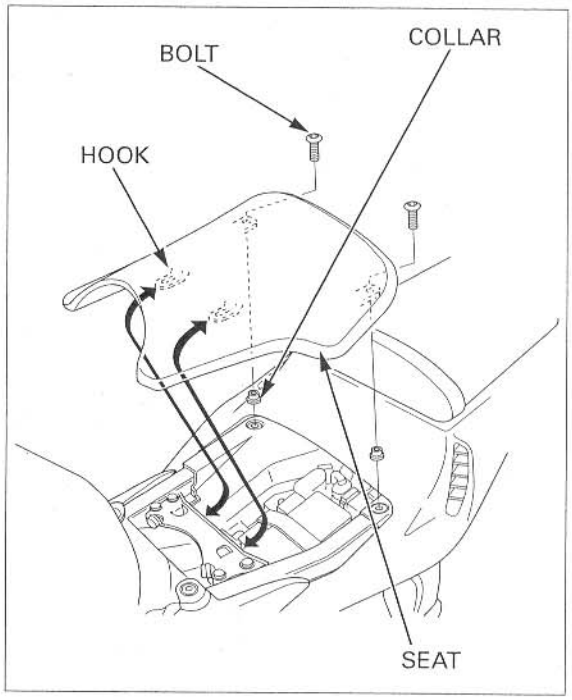
Remove the two seat mounting bolts and collars.

Remove the seat by pulling it backward.

INSTALLATION

Install the seat hooks under the fuel tank rear bracket.

Install the collars and seat mounting bolts.



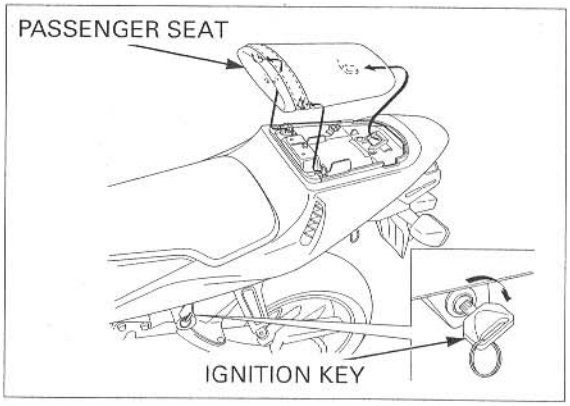
PASSENGER SEAT

REMOVAL/INSTALLATION

Unhook the passenger seat lock using the ignition key.

Remove the passenger seat by pulling it forward.

Install the passenger seat in the reverse order of removal.



SIDE COVERS

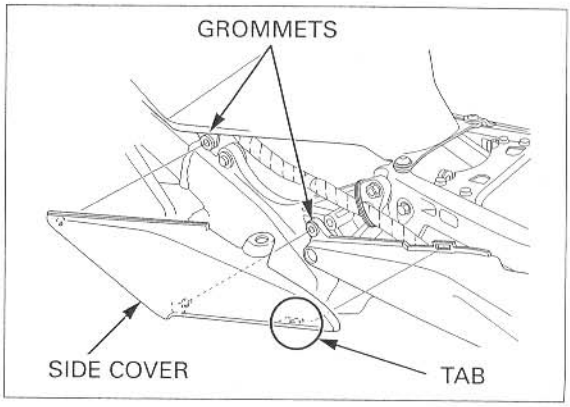
REMOVAL/INSTALLATION

Remove the seat (page 3-4).

Be careful not to damage tab and groove.

Remove the side cover by carefully releasing the bosses from the grommets and slide it forward.

Install the side cover in the reverse order of removal.



REAR COWL

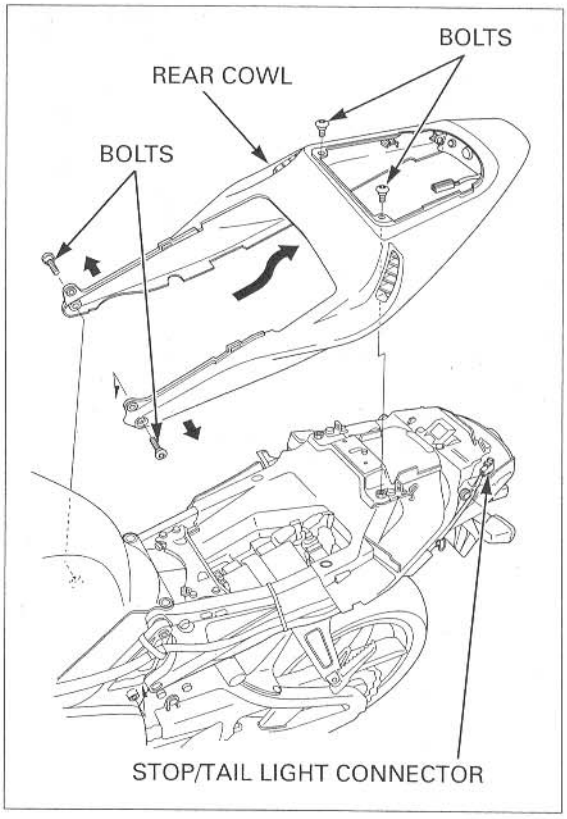
REMOVAL

Remove the following:

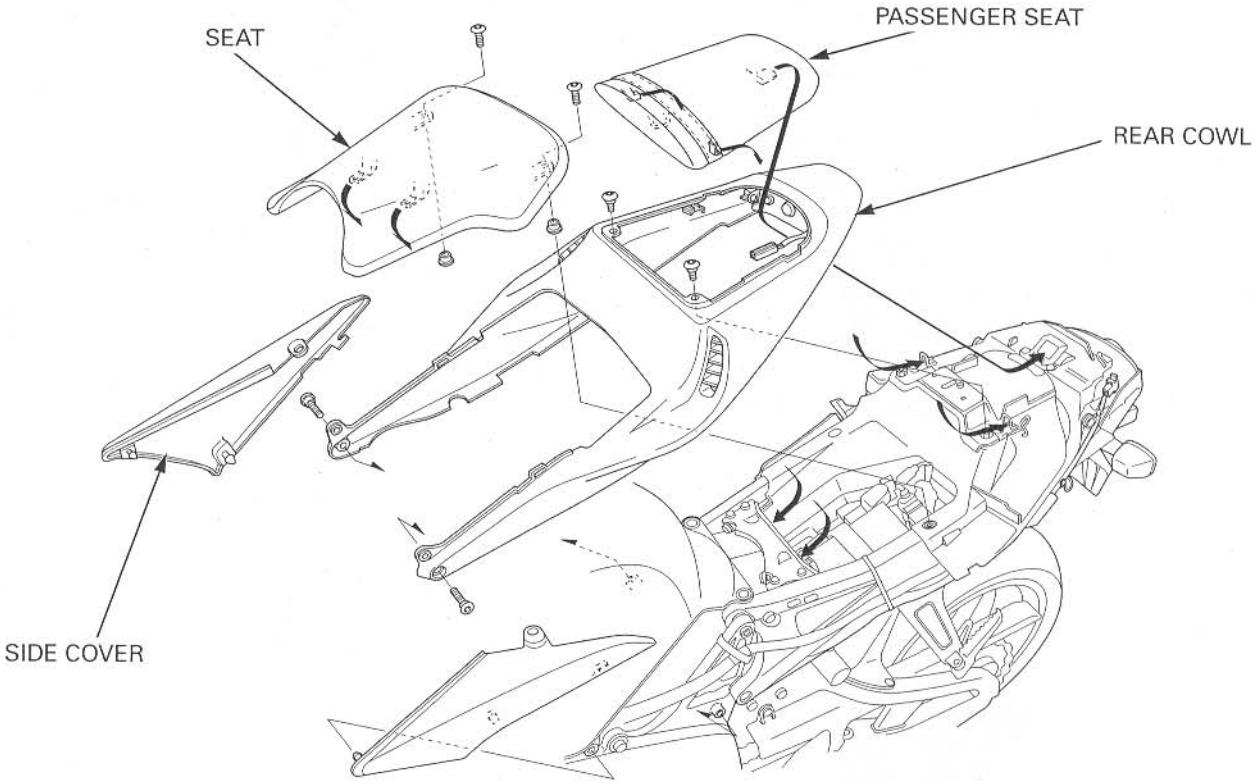
- Seat (page 3-4)
- Passenger seat (page 3-4)
- Side covers (page 3-4)

Remove the four bolts.
Disconnect the stop/tail light connector.

Carefully pull both out sides of the rear cowl, then remove it backward.



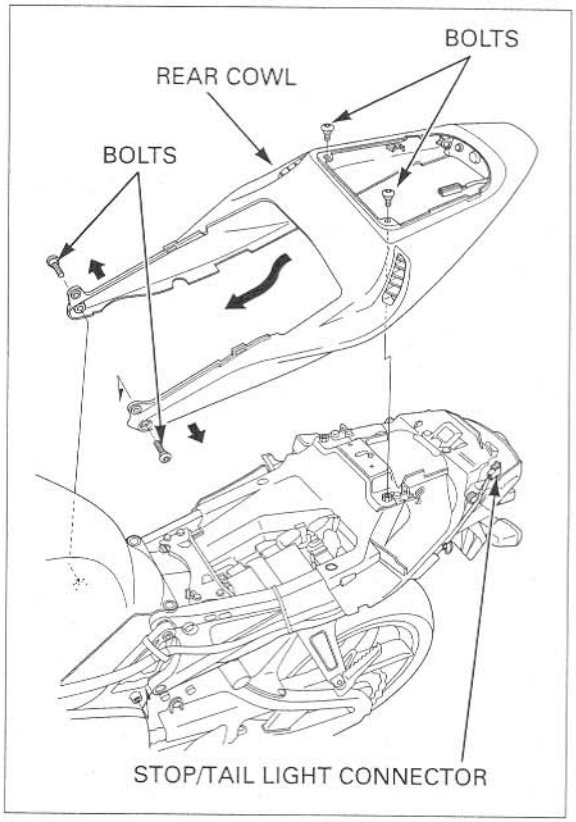
INSTALLATION



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

Install the rear cowl over the seat rail being careful not to damage the wire harness.
Connect the stop/tail light connector.

Install the removed parts in the reverse order of removal.



LOWER COWLS

REMOVAL/INSTALLATION

Be careful not to damage the tabs and grooves.

Remove the five trim clips and bolt from the bottom of the lower cowls.

Remove the lower cowl-to-middle cowl pan screws. Remove the lower cowl mounting bolts and then remove the lower cowls by sliding them backward.

Install the lower cowl by aligning the tabs of the lower cowl with the grooves of the middle cowl.

Install and tighten the lower cowl-to-middle cowl pan screws to the specified torque.

TORQUE: 1.5 N·m (0.15 kgf·m, 1.1 lbf·ft)

Install the lower cowl mounting bolts.

Install the five trim clips and bolt from the bottom of the lower cowls.