

1. GENERAL INFORMATION

SERVICE RULES

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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.
Use the special tools designed for this product to avoid damage and incorrect assembly.
Use only metric tools when servicing the motorcycle. Metric bolts, nuts and screws are not interchangeable with English fasteners.
Install new gaskets, O-rings, cotter pins, and lock plates when reassembling.
When tightening bolts or nuts, begin with the largest diameter or inner bolt first. Then tighten to the specified torque diagonally in incremental steps unless a particular sequence is specified.
Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
After reassembly, check all parts for proper installation and operation.
Route all electrical wires as shown in the Cable and Harness Routing (page 1-23).

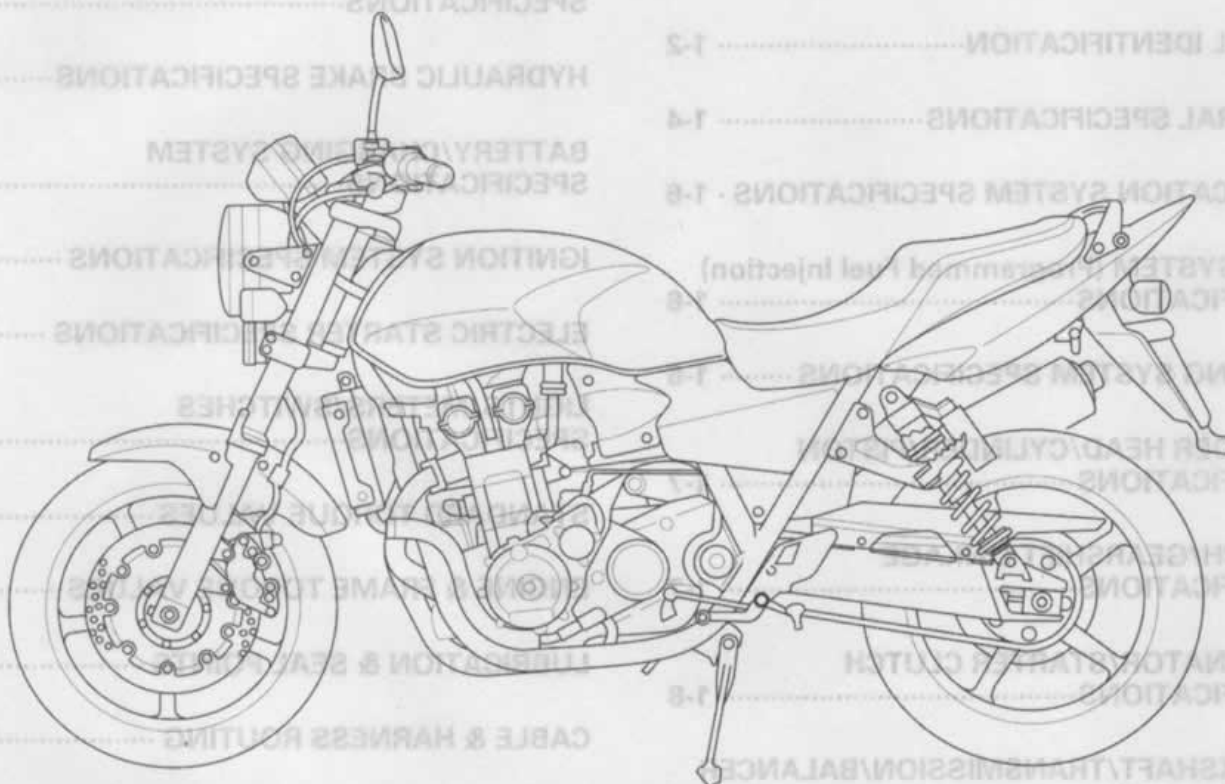
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5. When tightening bolts or nuts, begin with the larger diameter or inner bolt first. Then tighten to the specified torque diagonally in incremental steps unless a particular sequence is specified.
6. Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
7. After reassembly, check all parts for proper installation and operation.
8. Route all electrical wires as show in the Cable and Harness Routing (page 1-23).

MODEL IDENTIFICATION



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



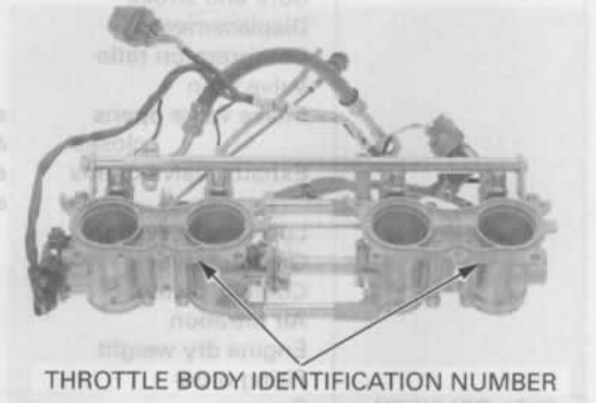
FRAME SERIAL NUMBER

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



ENGINE SERIAL NUMBER

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



THROTTLE BODY IDENTIFICATION NUMBER

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



COLOR LABEL

GENERAL INFORMATION

GENERAL SPECIFICATIONS

	ITEM	SPECIFICATIONS
DIMENSIONS	Overall length	2,220 mm (87.4 in)
	Overall width	790 mm (31.1 in)
	Overall height	1,120 mm (44.1 in)
	Wheelbase	1,515 mm (59.6 in)
	Seat height	790 mm (31.1 in)
	Footpeg height	350 mm (13.8 in)
	Ground clearance	135 mm (5.3 in)
	Dry weight	224 kg (494 lbs)
	Curb weight	252 kg (556 lbs)
	Maximum weight capacity	188 kg (414 lbs)
FRAME	Frame type	Double cradle
	Front suspension	Telescopic fork
	Front axle travel	109.0 mm (4.30 in)
	Rear suspension	Swingarm
	Rear axle travel	116.0 mm (4.57 in)
	Front tire size	120/70 ZR 17 M/C (58W)
	Rear tire size	180/55 ZR 17 M/C (73W)
	Front tire brand	D220FSTK (Dunlop)
		MACADAM 100XC (Michelin)
	Rear tire brand	D220STK (Dunlop)
		MACADAM 100XC (Michelin)
	Front brake	Hydraulic double disc
	Rear brake	Hydraulic single disc
	Caster angle	25°
ENGINE	Trail length	99 mm (3.9 in)
	Fuel tank capacity	21.0 liter (5.55 US gal, 4.62 Imp gal)
	Cylinder arrangement	4 cylinders in-line, inclined 13° from vertical
	Bore and stroke	78.0 X 67.2 mm (3.07 X 2.65 in)
	Displacement	1,284 cm³ (78.3 cu-in)
	Compression ratio	9.6 : 1
	Valve train	Chain driven, DOHC
	Intake valve opens	0° BTDC
	Intake valve closes	35° ABDC
	Exhaust valve opens	40° BBDC
	Exhaust valve closes	5° BTDC
	Lubrication system	Forced pressure and wet sump
	Oil pump type	Trochoid
	Cooling system	Liquid cooled
FUEL DELIVERY SYSTEM	Air filtration	Paper element
	Engine dry weight	87.8 kg (193.6 lbs)
FUEL DELIVERY SYSTEM	Firing order	1 - 2 - 4 - 3
	Type	PGM-FI (Programmed Fuel Injection)
DRIVE TRAIN	Throttle bore	36 mm (1.4 in)
	Clutch system	Multi-plate, wet
	Clutch operation system	Hydraulic operating
	Transmission	Constant mesh, 5-speeds
	Primary reduction	1.652 (76/46)
	Final reduction	2.167 (39/18)
	Gear ratio	3.083 (37/12)
	1st	2.062 (33/16)
	2nd	1.545 (34/22)
	3rd	1.272 (28/22)
	4th	1.130 (26/23)
	5th	
	Gearshift pattern	Left foot operated return system, 1 - N - 2 - 3 - 4 - 5

ITEM		SPECIFICATIONS
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
		Recommended engine oil
		Oil pressure at oil pressure switch
		Oil pump rotor
		Tip clearance
		Body clearance
		Side clearance

FUEL SYSTEM (Programmed Fuel Injection) SPECIFICATIONS

ITEM		SPECIFICATIONS
FUEL SYSTEM (Programmed Fuel Injection) SPECIFICATIONS	Throttle body identification number	GO38A
	Scrubber valve vacuum difference	30 mm Hg
	Base throttle valve for synchronization	No. 1
	Idle speed	1,000 ± 100 min ⁻¹ (rpm)
	Throttle link free play	2 - 4 mm (1/16 - 3/16 in)
	Pressure in temperature sensor resistance (at 20°C/68°F)	1 - 4 kΩ
	Engine coolant temperature sensor resistance (at 20°C/68°F)	2.3 - 2.8 kΩ
	Fuel injection resistance (at 20°C/68°F)	10.5 - 14.5 Ω
	RAIR solenoid valve resistance (at 20°C/68°F)	28 - 34 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 - 200 mm Hg
	Fuel pressure at idle	343 kPa (3.5 kgf/cm ² , 50 psi)
	Fuel pump flow (at 12V)	188 cm ³ (6.4 US oz, 6.6 imp oz) minimum 10 seconds

COOLING SYSTEM SPECIFICATIONS

ITEM		SPECIFICATIONS
Coolant capacity	Radiator and engine	2.74 liter (2.90 US qt, 2.41 imp qt)
	Reserve tank	0.31 liter (0.33 US qt, 0.27 imp qt)
	Radiator cap relief pressure	108 - 133 kPa (1.1 - 1.4 kgf/cm ² , 16 - 20 psi)
	Thermostat	80 - 84°C (176 - 183°F)
Recommended antifreeze	Begin to open	88°C (190°F)
	Fully open	8 mm (0.3 in) minimum
	Valve lift	High quality ethylene glycol antifreeze containing corrosion protection inhibitors
Standard coolant concentration		50% mixture with soft water

LUBRICATION SYSTEM SPECIFICATIONS

ITEM		STANDARD	SERVICE LIMIT
Engine oil capacity	After draining	3.7 liter (3.9 US qt, 3.3 Imp qt)	—
	After draining/filter change	3.9 liter (4.1 US qt, 3.4 Imp qt)	—
	After disassembly	4.8 liter (5.1 US qt, 4.2 Imp qt)	—
Recommended engine oil		Honda 4-stroke oil or equivalent motor oil API service classification SE, SF or SG Viscosity: SAE 10W-40	—
Oil pressure at oil pressure switch		490 - 588 kPa (5.0 - 6.0 kgf/cm ² , 71 - 85 psi) at 5,000 min ⁻¹ (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)

FUEL SYSTEM (Programmed Fuel Injection) SPECIFICATIONS

ITEM	SPECIFICATIONS
Throttle body identification number	GQ36A
Starter valve vacuum difference	20 mm Hg
Base throttle valve for synchronization	No.1
Idle speed	1,000 ± 100 min ⁻¹ (rpm)
Throttle grip free play	2 - 4 mm (1/16 - 3/16 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)	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 mm Hg
Fuel pressure at idle	343 kPa (3.5 kgf/cm ² , 50 psi)
Fuel pump flow (at 12V)	188 cm ³ (6.4 US oz, 6.6 Imp oz) minimum/10 seconds

COOLING SYSTEM SPECIFICATIONS

ITEM	SPECIFICATIONS
Coolant capacity	Radiator and engine
	2.74 liter (2.90 US qt, 2.41 Imp qt)
Radiator cap relief pressure	Reserve tank
	0.31 liter (0.33 US qt, 0.27 Imp qt)
108 - 137 kPa (1.1 - 1.4 kgf/cm ² , 16 - 20 psi)	
Thermostat	Begin to open
	80 - 84 °C (176 - 183 °F)
	Fully open
Recommended antifreeze	95 °C (203 °F)
	8 mm (0.3 in) minimum
High quality ethylene glycol antifreeze containing corrosion protection inhibitors	
Standard coolant concentration	
50% mixture with soft water	

CYLINDER HEAD/CYLINDER/PISTON SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Cylinder compression		1,324 kPa (13.5 kgf/cm ² , 192 psi) at 240 min ⁻¹ (rpm)	—
Valve clearance	IN	0.16 ± 0.03 (0.006 ± 0.001)	—
	EX	0.22 ± 0.03 (0.009 ± 0.001)	—
Camshaft	Cam lobe height	IN 37.54 – 37.78 (1.4779 – 1.4874) EX 37.40 – 37.64 (1.4724 – 1.4818)	37.50 (1.476) 37.36 (1.471)
	Runout	—	0.05 (0.002)
Valve lifter	Oil clearance	0.030 – 0.072 (0.0012 – 0.0028)	0.10 (0.004)
	Valve lifter O.D.	25.978 – 25.993 (1.0228 – 1.0233)	25.97 (1.022)
Valve, valve guide	Valve lifter bore I.D.	26.010 – 26.026 (1.0240 – 1.0246)	26.04 (1.025)
	Valve stem O.D.	IN 4.975 – 4.990 (0.1959 – 0.1965) EX 4.960 – 4.975 (0.1953 – 0.1959)	4.965 (0.1955) 4.950 (0.1949)
	Valve guide I.D.	IN/EX 5.000 – 5.012 (0.1969 – 0.1973)	5.040 (0.1984)
	Stem-to-guide clearance	IN 0.010 – 0.037 (0.0004 – 0.0015) EX 0.025 – 0.052 (0.0010 – 0.0020)	— —
	Valve guide projection above cylinder head	IN 15.6 – 15.8 (0.61 – 0.62) EX 15.6 – 15.8 (0.61 – 0.62)	— —
	Valve seat width	IN/EX 0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)
Valve spring free length	IN	44.85 (1.766)	43.95 (1.730)
	EX	44.85 (1.766)	43.95 (1.730)
Cylinder head warpage		—	0.10 (0.004)
Piston, piston rings	Piston O.D. at 15 (0.6) from bottom	77.970 – 77.990 (3.0697 – 3.0705)	77.87 (3.066)
	Piston pin bore I.D.	19.002 – 19.008 (0.7481 – 0.7483)	19.06 (0.750)
	Piston pin O.D.	18.994 – 19.000 (0.7478 – 0.7480)	18.98 (0.747)
	Piston -to piston pin clearance	0.002 – 0.014 (0.0001 – 0.0006)	0.04 (0.002)
	Piston ring end gap	Top 0.25 – 0.40 (0.010 – 0.016) Sec- ond 0.32 – 0.47 (0.013 – 0.019)	0.58 (0.023) 0.65 (0.026)
		Oil (side rail) 0.20 – 0.70 (0.008 – 0.026)	0.85 (0.033)
	Piston ring-to-ring groove clearance	Top 0.015 – 0.050 (0.0006 – 0.0020) Sec- ond 0.015 – 0.050 (0.0006 – 0.0020)	0.09 (0.004) 0.09 (0.004)
Cylinder	I.D.	78.000 – 78.015 (3.0709 – 3.0715)	78.10 (3.075)
	Out of round	—	0.05 (0.002)
	Taper	—	0.05 (0.002)
	Warpage	—	0.05 (0.002)
Cylinder-to piston clearance		0.010 – 0.045 (0.0004 – 0.0018)	—
Connecting rod small end I.D.		19.030 – 19.051 (0.7492 – 0.7500)	19.061 (0.7504)
Connecting rod-to-piston pin clearance		0.030 – 0.057 (0.0012 – 0.0022)	—

CLUTCH/GEARSHIFT LINKAGE SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Recommended clutch fluid		Honda DOT 4 brake fluid	—
Clutch master cylinder	Cylinder I.D.	12.7 (0.50)	
Clutch	Spring free length	61.53 (2.422)	60.3 (2.37)
	Disc thickness	3.72 – 3.88 (0.146 – 0.153)	3.5 (0.14)
	Plate warpage	—	0.30 (0.012)
Clutch outer guide	I.D.	27.995 – 28.012 (1.1022 – 1.1028)	28.08 (1.106)
	O.D.	39.992 – 40.008 (1.5745 – 1.5751)	39.93 (1.572)
Mainshaft O.D. at clutch outer guide		27.980 – 27.993 (1.1016 – 1.1021)	27.10 (1.067)

ALTERNATOR/STARTER CLUTCH SPECIFICATIONS

Unit: mm (in)

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

CRANKSHAFT/TRANSMISSION/BALANCER SPECIFICATIONS

Unit: mm (in)

	ITEM	STANDARD	SERVICE LIMIT	
Crankshaft	Connecting rod side clearance	0.05 – 0.20 (0.002 – 0.008)	0.30 (0.012)	
	Crankpin bearing oil clearance	0.028 – 0.052 (0.0011 – 0.0020)	0.08 (0.003)	
	Main journal bearing oil clearance	0.016 – 0.040 (0.0006 – 0.0016)	0.08 (0.003)	
	Runout	–	0.03 (0.001)	
Shift fork, fork shaft	I.D.	14.000 – 14.021 (0.5512 – 0.5520)	14.04 (0.553)	
	Claw thickness	5.93 – 6.00 (0.233 – 0.236)	5.9 (0.23)	
	Shift fork shaft O.D.	13.957 – 13.968 (0.5495 – 0.5499)	13.90 (0.547)	
Transmission	Gear I.D.	M4,M5	31.000 – 31.025 (1.2205 – 1.2215)	31.05 (1.222)
		C1	26.007 – 26.028 (1.0239 – 1.0247)	26.04 (1.025)
		C2, C3	33.000 – 33.025 (1.2992 – 1.3002)	33.05 (1.301)
	Gear busing O.D.	M4, M5	30.975 – 30.985 (1.2195 – 1.2199)	30.93 (1.218)
		C2	32.955 – 32.980 (1.2974 – 1.2984)	32.93 (1.296)
		C3	32.950 – 32.975 (1.2972 – 1.2982)	32.93 (1.296)
	Gear-to-bushing clearance	M4, M5	0.025 – 0.075 (0.0010 – 0.0030)	0.11 (0.004)
		C2	0.020 – 0.070 (0.0008 – 0.0028)	0.11 (0.004)
		C3	0.025 – 0.075 (0.0010 – 0.0030)	0.11 (0.004)
	Gear bushing I.D.	M4	28.000 – 28.021 (1.1024 – 1.1032)	28.04 (1.104)
		C2	29.985 – 30.006 (1.1805 – 1.1813)	30.02 (1.182)
	Mainshaft O.D.	at M4	27.980 – 27.993 (1.1016 – 1.1021)	27.97 (1.101)
	Countershaft O.D.	at C2	29.950 – 29.975 (1.1791 – 1.1801)	29.94 (1.179)
	Bushing-to-shaft clearance	M4	0.007 – 0.041 (0.0028 – 0.0016)	0.08 (0.003)
		C2	0.010 – 0.056 (0.0004 – 0.0022)	0.10 (0.004)

CLUTCH/GEARSHIFT LINKAGE SPECIFICATIONS

Unit: mm (in)

ITEM	STANDARD	SERVICE LIMIT
Clutch	Recommended clutch fluid	12.7 (0.50)
	Clutch master cylinder	61.63 (2.425)
	Spring free length	3.75 – 3.88 (0.148 – 0.153)
	Disc thickness	–
Clutch outer guide	Plate warpage	–
	I.D.	27.985 – 28.012 (1.1022 – 1.1028)
	O.D.	39.985 – 40.008 (1.5745 – 1.5757)
Mainshaft O.D. at clutch outer guide	27.980 – 27.993 (1.1018 – 1.1021)	27.970 (1.097)

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	348.7 (13.73)	341.7 (13.45)
	Tube runout	—	0.20 (0.008)
	Recommended fork fluid	Honda Ultra Cushion Oil 10W or equivalent	—
	Fluid level	160 (6.3)	—
	Fluid capacity	500 ± 2.5 cm ³ (16.9 ± 0.08 US oz, 17.6 ± 0.09 Imp oz)	—
	Pre-load adjuster initial setting	14 mm (0.6 in) from top/4th groove	—
	Rebound adjuster initial setting	1 - 1/2 turn out from full hard	—
Steering head bearing pre-load		1.0 - 1.5 kgf (2.2 - 3.3 lbf)	—

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	DID50ZVM2-114LE
		RK	RK50LF0Z2-114LE
	Slack	25 - 35 (1.0 - 1.4)	—
Shock absorber	Spring preload adjuster standard position	2nd position	—
	Rebound adjuster initial setting	10 clicks out from full hard	—

ITEM	STANDARD	SERVICE LIMIT
Starter motor brush length	15.0 - 13.0 (0.6 - 0.51)	8.8 (0.35)

GENERAL INFORMATION

HYDRAULIC BRAKE SPECIFICATIONS

Unit: mm (in)

	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	—	0.20 (0.008)
	Master cylinder I.D.	14.0 (0.55)	—
	Caliper cylinder I.D.	30.2 (1.19)	—
Rear	Specified brake fluid	Honda DOT 4 brake fluid	—
	Brake disc thickness	6.0 (0.24)	5.0 (0.20)
	Brake disc runout	—	0.30 (0.012)
	Master cylinder I.D.	14.0 (0.55)	—
	Caliper cylinder I.D.	38.1 (1.50)	—

BATTERY/CHARGING SYSTEM SPECIFICATIONS

	ITEM	SPECIFICATIONS
Battery	Capacity	12V – 11 Ah
	Current leakage	2.0 mA max.
	Voltage (20° C/68° F)	Fully charged 13.0 – 13.2 V
		Needs charging Below 12.3 V
	Charging current	0.9 A/5 – 10 h 4.5 A/0.5 h
Alternator	Capacity	0.421 kW/5,000 min ⁻¹ (rpm)
	Charging coil resistance (20° C/68° F)	0.1 – 1.0 Ω

IGNITION SYSTEM SPECIFICATIONS

	ITEM	SPECIFICATIONS
Spark plug (option)	NGK	DPR8EA-9 (DPR9EA-9)
	DENSO	X24EPR-U9 (X27EPR-U9)
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)		5° 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 – 60 W
		Lo	12V – 55 W
	Position light (except U type)		12V – 5 W
	Brake/tail light		LED (5.7 W/0.8 W)
	Turn signal light		12V – 21 W X 4
	License light		12V – 5 W
	Instrument light		LED
	Turn signal indicator		LED
	High beam indicator		LED
	Temperature indicator		LED
	Neutral indicator		LED
	Oil pressure indicator		LED
	PGM-FI warning indicator		LED
	Immobilizer indicator		LED
Fuse	Main fuse		30 A
	Sub fuse		20 A X 2, 10 A X 4
Tachometer peak voltage			10.5 V minimum
Engine coolant temperature resistance		80°C (68°F)	47.5 – 56.8 kΩ
		120°C (248°F)	14.9 – 17.3 kΩ

ENGINE
MAINTENANCE

ITEM	QTY	THREAD DIA. (mm)	TORQUE N·m (kgf-m, lbf-ft)	REMARKS
Spark plug	4	12	18 (1.8, 11)	
Timing hole cap	1	14	10 (1.0, 7)	NOTE 7
Crankshaft hole cap	1	30	10 (1.0, 7)	NOTE 7
Engine oil filter cartridge	1	50	38 (3.5, 20)	NOTE 10
Engine oil drain plug	1	18	29 (3.0, 22)	

LUBICATION SYSTEM

ITEM	QTY	THREAD DIA. (mm)	TORQUE N·m (kgf-m, lbf-ft)	REMARKS
Oil pump assembly bolt	3	8	13 (1.3, 0)	NOTE 9
Oil pump driven sprocket bolt/washer	1	8	18 (1.8, 11)	NOTE 2
Oil pump plate mounting bolt	4	8	12 (1.2, 8)	NOTE 3
Oil cooler bolt (filter base)	1	20	34 (3.5, 24)	

FUEL SYSTEM (Preprogrammed Fuel Injection)

ITEM	QTY	THREAD DIA. (mm)	TORQUE N·m (kgf-m, lbf-ft)	REMARKS
ECT engine coolant temperature/rhemo sensor	1	12	23 (2.3, 17)	
Throttle body insulator band screw	8	5	See page 7-18	
Service check bolt	1	8	12 (1.2, 8)	
Fuel rail mounting bolt	3	8	10 (1.0, 7)	
Starter valve lock nut	4	10	2 (0.18, 1.3)	
Choke cable/throttle stop screw/bracket mounting screw	2	8	8 (0.8, 3.8)	
Starter valve synchronization plate screw	4	3	1 (0.08, 0.7)	
Choke link plate screw	1	3	1 (0.08, 0.7)	

GENERAL INFORMATION

STANDARD TORQUE VALUES

FASTENER TYPE	TORQUE FASTENER TYPE	N·m (kgf·m, lbf·ft)	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)
6 mm hex bolt and nut	10 (1.0, 7)	6 mm screw	9 (0.9, 6.5)
8 mm hex bolt and nut	22 (2.2, 16)	6 mm flange bolt	10 (1.0, 7)
10 mm hex bolt and nut	34 (3.5, 25)	(8 mm head, small flange)	
12 mm hex bolt and nut	54 (5.5, 40)	6 mm flange bolt	12 (1.2, 9)
		(8 mm head, large flange)	
		6 mm flange bolt	12 (1.2, 9)
		(10 mm head) and nut	
		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:

- Apply sealant to the threads.
- Apply a locking agent to the threads.
- Stake.
- Apply oil to the threads and flange surface.
- U-nut.
- ALOC bolt/screw: replace with a new one.
- Apply grease to the threads.
- Apply molybdenum disulfide oil to the threads and seating surface
- CT bolt
- Apply oil to a new O-ring.

ENGINE

MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Spark plug	4	12	15 (1.5, 11)	
Timing hole cap	1	14	10 (1.0, 7)	NOTE 7
Crankshaft hole cap	1	30	10 (1.0, 7)	NOTE 7
Engine oil filter cartridge	1	20	26 (2.7, 20)	NOTE 10
Engine oil drain plug	1	14	29 (3.0, 22)	

LUBRICATION SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Oil pump assembly bolt	3	6	13 (1.3, 9)	NOTE 9
Oil pump driven sprocket bolt/washer	1	6	15 (1.5, 11)	NOTE 2
Oil pass pipe plate mounting bolt	4	6	12 (1.2, 9)	NOTE 2
Oil cooler bolt (filter boss)	1	20	74 (7.5, 54)	

FUEL SYSTEM (Programmed Fuel Injection)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
ECT (Engine Coolant Temperature)/thermo sensor	1	12	23 (2.3, 17)	
Throttle body insulator band screw	8	5	See page 1-15	
Service check bolt	1	6	12 (1.2, 9)	
Fuel rail mounting bolt	3	6	10 (1.0, 7)	
Starter valve lock nut	4	10	2 (0.18, 1.3)	
Choke cable/throttle stop screw bracket mounting screw	2	6	5 (0.5, 3.6)	
Starter valve synchronization plate screw	4	3	1 (0.09, 0.7)	
Choke link plate screw	1	3	1 (0.09, 0.7)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Coolant drain bolt	1	6	13 (1.3, 9)	NOTE 9
Water pump cover flange bolt	2	6	13 (1.3, 9)	NOTE 9
Lower radiator hose joint mounting bolt	1	6	13 (1.3, 9)	NOTE 9

ENGINE MOUNTING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Left crankcase side cover mounting special bolt	3	6	6 (0.6, 4.3)	
Left crankcase rear cover damper rubber plate special bolt	1	6	12 (1.2, 9)	NOTE 2
Drive sprocket bolt	1	10	54 (5.5, 40)	

CYLINDER HEAD/CYLINDER/PISTON

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder head mounting flange nut	12	10	45 (4.6, 33)	NOTE 4
Cylinder head mounting flange bolt	4	8	25 (2.5, 18)	NOTE 4
Cylinder head sealing bolt	2	18	32 (3.3, 24)	NOTE 2
Camshaft holder flange bolt	20	6	12 (1.2, 9)	
Cylinder head cover bolt	8	6	10 (1.0, 7)	
PAIR reed valve cover SH bolt	4	6	13 (1.3, 9)	NOTE 9
Intake cam sprocket/cam pulse generator rotor UBS bolt	2	7	20 (2.0, 14)	NOTE 2
Exhaust cam sprocket flange dowel bolt	2	7	20 (2.0, 14)	NOTE 2
Cylinder head stud bolt (exhaust pipe stud bolt)	8	6	See page 1-16	

CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch cover damper rubber set plate bolt	1	6	12 (1.2, 9)	NOTE 2
Clutch center lock nut	1	25	137 (14.0, 101)	NOTE 3, 4
Clutch spring bolt/washer	6	6	12 (1.2, 9)	
Clutch slave cylinder bleeder screw	1	8	9 (0.9, 6.5)	
Shift drum center bolt	1	8	23 (2.3, 17)	NOTE 2
Gearshift spindle return spring pin	1	8	23 (2.3, 17)	

ALTERNATOR/STARTER CLUTCH

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Alternator wire clamp socket bolt	1	6	9 (0.9, 6.5)	
Starter one-way clutch outer socket bolt	6	8	16 (1.6, 12)	NOTE 2
Flywheel flange bolt	1	10	113 (11.5, 83)	NOTE 4
Alternator stator mounting socket bolt	4	6	12 (1.2, 9)	

CRANKCASE/TRANSMISSION/BALANCER

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Crankshaft main journal flange bolt	12	9	33 (3.4, 25)	NOTE 4
Crankcase bolt	1	10	39 (4.0, 29)	
Crankcase bolt	18	8	25 (2.5, 18)	
Crankcase bolt	4	6	12 (1.2, 9)	
Oil pass pipe plate bolt	3	6	12 (1.2, 9)	NOTE 2, 3
Lower crankcase sealing bolt	2	20	29 (3.0, 22)	NOTE 2
Lower crankcase sealing bolt	2	10	12 (1.2, 9)	NOTE 2
Connecting rod bearing cap nut	8	8	41 (4.2, 30)	NOTE 4
Balancer shaft special bolt	1	6	12 (1.2, 9)	
Shift fork shaft stopper plate bolt	1	6	12 (1.2, 9)	NOTE 2

GENERAL INFORMATION

IGNITION SYSTEM

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
	Ignition pulse generator rotor flange bolt	10	1	49 (5.0, 36)	NOTE 4

ELECTRIC STARTER

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
	Starter motor terminal nut	6	1	12 (1.2, 9)	

LIGHTS/METERS/SWITCHES

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
	Oil pressure switch	PT 1/8	1	12 (1.2, 9)	NOTE 1
	Oil pressure switch wire terminal bolt/washer	4	1	2 (0.22, 1.6)	
	Neutral switch	10	1	12 (1.2, 9)	

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
NOTE 4	Cylinder head mounting flange nut	10	12	45 (4.6, 32)	
NOTE 4	Cylinder head mounting flange bolt	8	4	38 (3.9, 26)	
NOTE 3	Cylinder head sealing bolt	18	2	92 (9.3, 24)	
	Camshaft holder flange bolt	6	20	12 (1.2, 9)	
	Cylinder head cover bolt	8	8	10 (1.0, 7)	
NOTE 8	PAIR head valve cover SH bolt	8	4	13 (1.3, 9)	
NOTE 5	Intake cam sprocket/shim drive generator rotor	7	2	20 (2.0, 14)	
NOTE 5	UJT bolt				
NOTE 5	Exhaust cam sprocket flange cover bolt	7	2	20 (2.0, 14)	
	Cylinder head stud bolt (exhaust pipe stud bolt)	8	8	See page 7-18	

CLUTCH/GEARSHIFT LINKAGE

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
NOTE 3, 4	Clutch cover/damper rubber seat plate bolt	8	1	12 (1.2, 9)	
	Clutch cover lock nut	25	1	127 (12.7, 10)	
	Clutch spring bolt/washer	8	8	12 (1.2, 9)	
NOTE 3	Clutch slave cylinder bleed screw	8	1	9 (0.9, 6.5)	
	Shift drum center bolt	8	1	23 (2.3, 17)	
	Gearshift spindle return spring pin	8	1	23 (2.3, 17)	

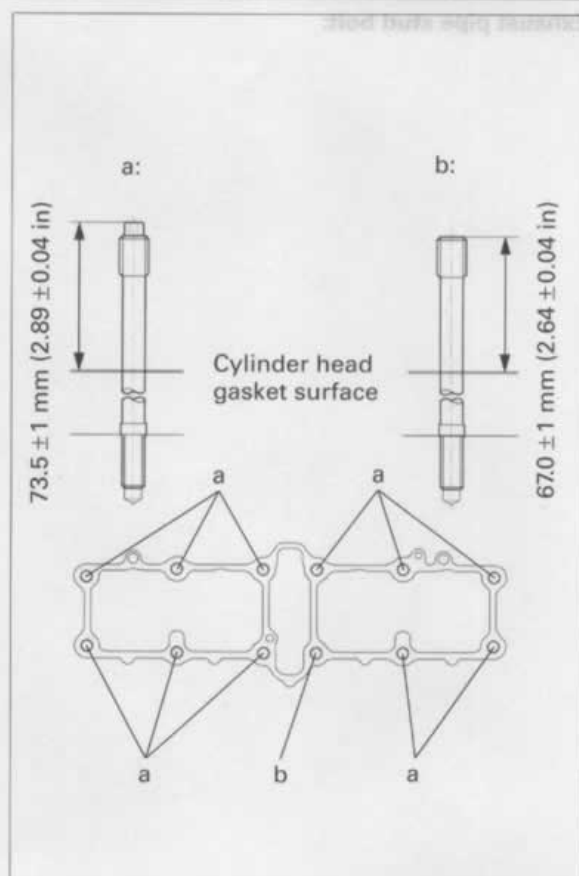
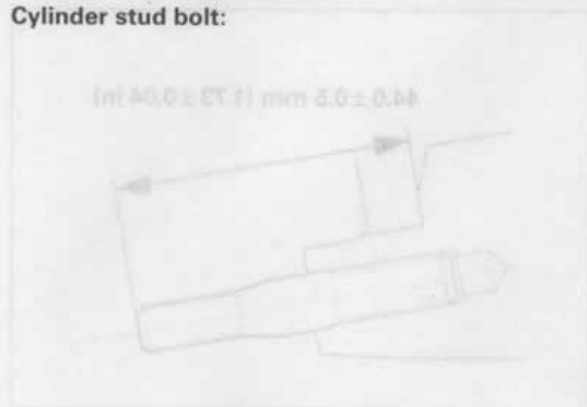
ALTERNATOR/STARTER CLUTCH

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
NOTE 3	Alternator wire clamp socket bolt	8	1	9 (0.9, 6.5)	
NOTE 4	Starter one-way clutch outer socket bolt	8	8	18 (1.8, 12)	
	Physical flange bolt	10	1	113 (11.3, 83)	
	Alternator rotor mounting socket bolt	8	4	12 (1.2, 9)	

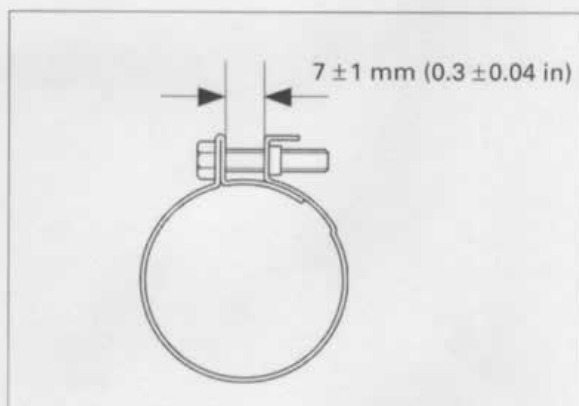
CRANKCASE/TRANSMISSION/BALANCER

REMARKS	ITEM	THREAD DIA. (mm)	Q'TY	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
NOTE 4	Crankshaft main journal flange bolt	9	12	33 (3.3, 24)	
	Crankcase bolt	10	1	39 (4.0, 28)	
	Crankcase bolt	8	18	28 (2.8, 18)	
	Crankcase bolt	6	4	12 (1.2, 9)	
NOTE 3, 3	Oil pan gasket plate bolt	8	3	12 (1.2, 9)	
NOTE 3	Lower crankcase sealing bolt	20	2	28 (2.8, 22)	
NOTE 3	Lower crankcase sealing bolt	10	2	12 (1.2, 9)	
NOTE 4	Connecting rod bearing cap nut	8	8	41 (4.1, 30)	
NOTE 4	Balance shaft special bolt	8	1	12 (1.2, 9)	
NOTE 3	Shift fork shaft stopper plate bolt	8	1	12 (1.2, 9)	

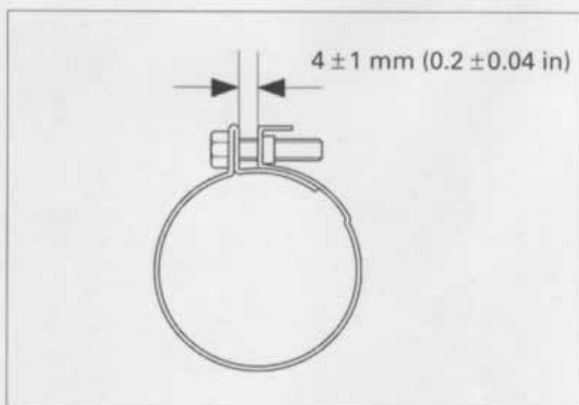
Cylinder stud bolt:



Insulator clamp (Throttle body side):

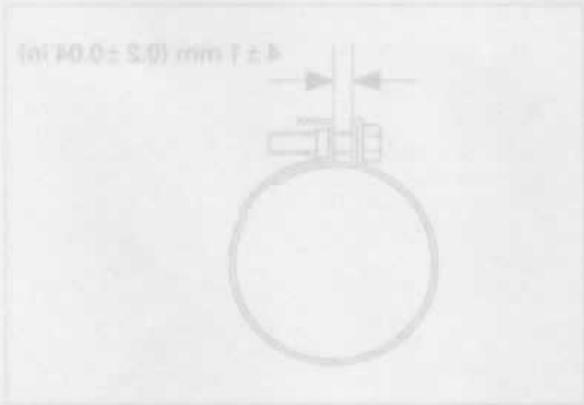
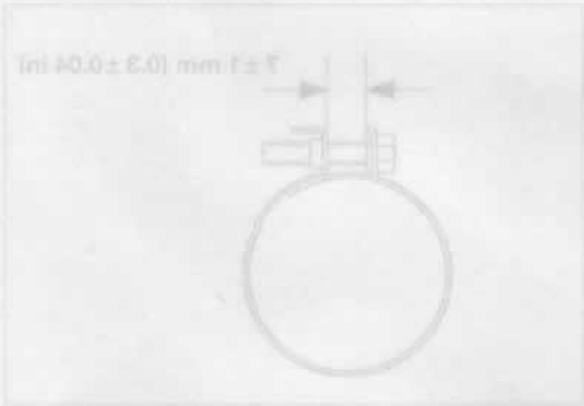
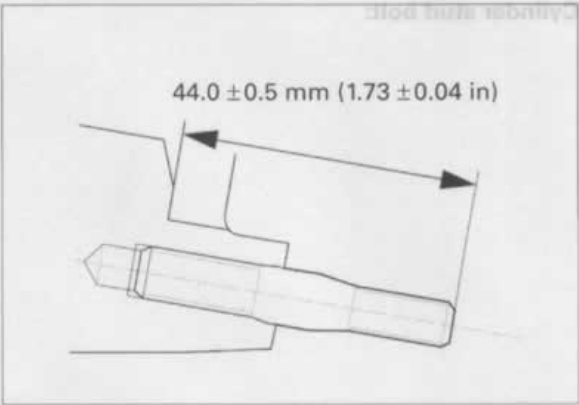
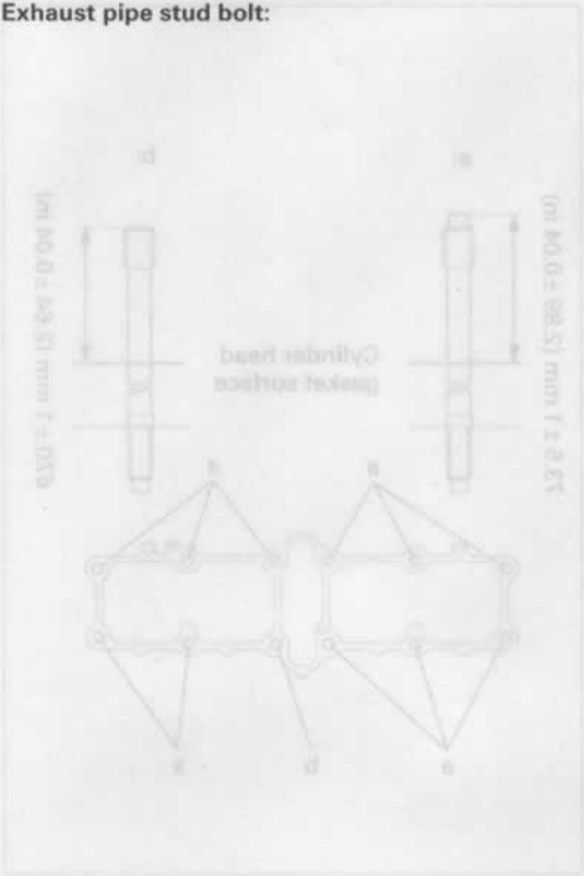


Insulator clamp (Cylinder head side):



GENERAL INFORMATION

Exhaust pipe stud bolt:



Insulator clamp (Throttle body side):

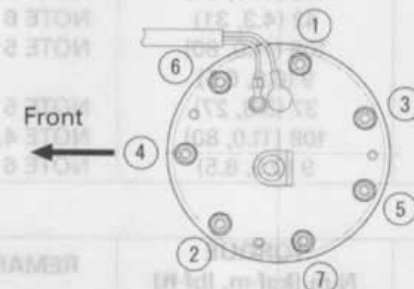
Insulator clamp (Cylinder head side):

FRAME

FRAME BODY PANELS/EXHAUST SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Grab rail mounting bolt	2	6	12 (1.2, 9)	
Grab rail mounting bolt	2	8	26 (2.7, 20)	
Rear fender A stay mounting bolt	2	8	32 (3.3, 24)	
Exhaust pipe joint cap nut	8	7	12 (1.2, 9)	
Muffler band flange bolt	1	8	22 (2.2, 16)	
Exhaust pipe mounting bolt/nut	1	8	22 (2.2, 16)	
Muffler mounting bolt/nut	1	8	22 (2.2, 16)	

FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fuel hose banjo bolt (fuel pump side)	1	12	22 (2.2, 16)	Yellow marking
Fuel hose mounting bolt (throttle body side)	2	6	10 (1.0, 7)	
Fuel tank rear bracket socket bolt	2	8	22 (2.2, 16)	
Fuel pump mounting nut	6	6	12 (1.2, 9)	
				
Air cleaner housing cover mounting screw	3	5	1 (0.1, 0.7)	
Front air cleaner housing cover screw	10	5	1 (0.1, 0.7)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cooling fan mounting nut	1	5	3 (0.27, 2.0)	NOTE 2
Fan motor mounting nut	3	5	5 (0.5, 3.6)	
Fan motor bracket mounting nut	3	6	9 (0.9, 6.5)	

ENGINE MOUNTING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Front engine hanger bolt (engine side)	2	10	59 (6.0, 43)	
Front engine hanger bolt (frame side)	2	10	59 (6.0, 43)	
Rear upper engine hanger plate bolt	2	10	59 (6.0, 43)	
Rear upper engine hanger bolt	1	10	59 (6.0, 43)	
Rear lower engine hanger bolt	1	10	59 (6.0, 43)	
Gearshift pedal pivot bolt	1	8	22 (2.2, 16)	
Gearshift pedal link pinch bolt	1	6	12 (1.2, 9)	

CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch lever pivot bolt	1	6	1 (0.1, 0.7)	
Clutch lever pivot nut	1	6	6 (0.6, 4.3)	
Clutch master cylinder reservoir cap screw	2	4	2 (0.15, 1.1)	
Clutch switch screw	1	4	1 (0.1, 0.7)	
Clutch hose oil bolt	2	10	34 (3.5, 25)	
Clutch master cylinder mounting bolt	2	6	12 (1.2, 9)	

GENERAL INFORMATION

FRONT WHEEL/SUSPENSION/STEERING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Handlebar weight mounting screw	2	6	10 (1.0, 7)	NOTE 6
Handlebar upper holder socket bolt	4	8	22 (2.2, 16)	
Handlebar lower holder nut	2	8	26 (2.7, 20)	
Front axle bolt	1	14	59 (6.0, 43)	
Front axle holder flange bolt	4	8	22 (2.2, 16)	
Front brake disc bolt	12	6	20 (2.0, 14)	NOTE 2
Fork bolt	2	39	23 (2.3, 17)	
Fork socket bolt	2	8	20 (2.0, 14)	NOTE 2
Fork top bridge pinch bolt	2	8	23 (2.3, 17)	
Fork bottom bridge pinch bolt	4	8	26 (2.7, 20)	
Steering bearing adjusting nut	1	26	29 (3.0, 22)	See page 13-33
Steering bearing adjusting nut 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 axle nut	1	22	113 (11.5, 83)	NOTE 5
Rear brake disc bolt	4	8	42 (4.3, 31)	NOTE 6
Final driven sprocket nut	6	12	108 (11.0, 80)	NOTE 5
Rear shock absorber upper mounting bolt	2	6	9 (0.9, 6.5)	
Rear shock absorber lower mounting bolt	2	10	37 (3.8, 27)	NOTE 5
Swingarm pivot nut	1	18	108 (11.0, 80)	NOTE 4, 5
Drive chain slider mounting bolt	2	6	9 (0.9, 6.5)	NOTE 6

HYDRAULIC BRAKE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Front brake caliper mounting bolt	4	8	30 (3.1, 22)	NOTE 6
Front brake lever pivot bolt	1	6	1 (0.1, 0.7)	
Front brake lever pivot nut	1	6	6 (0.6, 4.3)	
Front master cylinder reservoir cap screw	2	4	2 (0.15, 1.1)	
Front brake light switch screw	1	4	1 (0.1, 0.7)	
Brake hose oil bolt	4	10	34 (3.5, 25)	
Front brake caliper pad pin	4	10	18 (1.8, 13)	
Rear brake caliper pad pin	1	10	18 (1.8, 13)	
Brake caliper bleeder valve	3	8	6 (0.6, 4.3)	
Rear master cylinder push rod joint nut	1	8	18 (1.8, 13)	
Front master cylinder mounting bolt	2	6	12 (1.2, 9)	
Front brake caliper assembly torx bolt	8	8	23 (2.3, 17)	NOTE 2
Rear brake hose clamp bolt (swingarm)	1	6	12 (1.2, 9)	
Rear brake hose clamp bolt (caliper bracket)	1	6	9 (0.9, 6.5)	
Rear brake caliper bolt	1	8	23 (2.3, 17)	
Rear brake caliper pin bolt	1	12	27 (2.8, 20)	

LIGHTS/METERS/SWITCHES

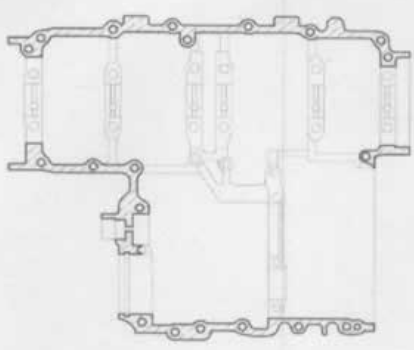
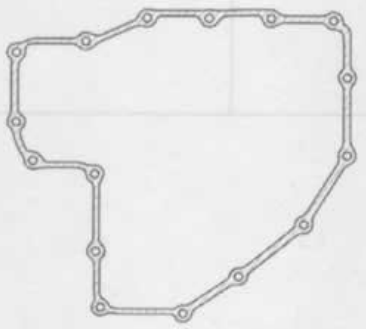
ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Side stand switch bolt	1	6	10 (1.0, 7)	NOTE 6
Ignition switch mounting bolt	2	8	26 (2.7, 20)	

OTHERS

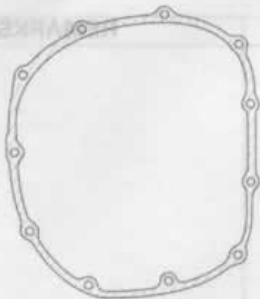
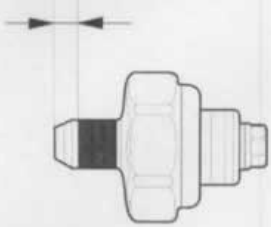
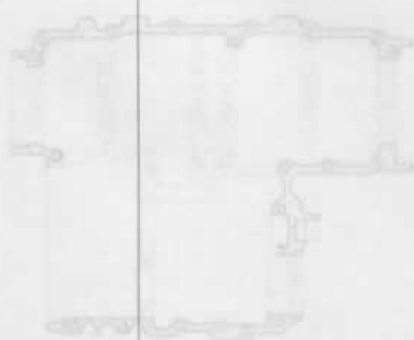
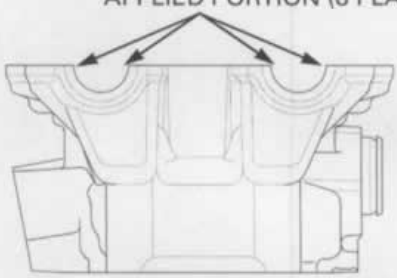
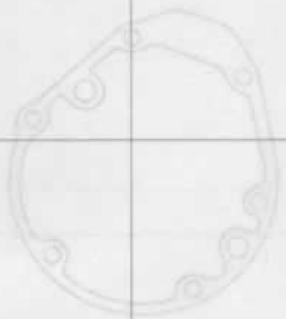
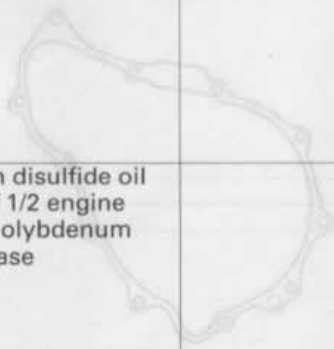
ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Side stand pivot bolt	1	10	10 (1.0, 7)	
Side stand pivot nut	1	10	39 (4.0, 29)	
Driver footpeg bracket socket bolt	4	8	32 (3.3, 24)	
Passenger footpeg bracket socket bolt	4	8	26 (2.7, 20)	

LUBRICATION & SEAL POINTS

ENGINE

LOCATION	MATERIAL	REMARKS
Crankcase mating surface	Liquid sealant (Three Bond 1207B or equivalent)	
		
		
10 - 15 mm (0.4 - 0.6 in)		
10 - 15 mm (0.4 - 0.6 in)		
10 - 15 mm (0.4 - 0.6 in)		
10 - 15 mm (0.4 - 0.6 in)		
Oil pan mating surface		

GENERAL INFORMATION

LOCATION	MATERIAL	REMARKS
<p>Right crankcase cover mating surface</p>  <p>Oil pressure switch threads</p> <p>Do not apply to the thread head 3 - 4 mm (0.1 - 0.2 in.)</p> 	<p>Liquid sealant (Three Bond 1207B or equivalent)</p>	
<p>Cylinder head semi-circular cut-out</p> <p>APPLIED PORTION (8 PLACES)</p> 	<p>Sealant</p>	 <p>mm 21 - 31 (in 0.8 - 1.2)</p> <p>mm 27 - 37 (in 1.1 - 1.5)</p>
<p>Stator wire grommet</p> <p>Ignition pulse generator wire grommet</p> <p>Main journal bearing surface</p> <p>Connecting rod bearing surface</p> <p>Connecting rod small end inner surface</p> <p>Crankshaft thrust surface</p> <p>Camshaft lobes/journals and thrust surface</p> <p>Valve stem (valve guide sliding surface)</p> <p>Valve lifter outer sliding surface</p> <p>Piston pin sliding surface</p> <p>Clutch outer/primary driven gear sliding surface</p> <p>Clutch outer/needle bearing sliding surface</p> <p>Clutch outer guide sliding surface</p> <p>M3, C4, C5 shifter gear (shift fork grooves)</p> <p>Starter reduction gear shaft outer surface</p>	<p>Molybdenum disulfide oil (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease)</p>	 <p>mm 21 - 31 (in 0.8 - 1.2)</p> <p>mm 27 - 37 (in 1.1 - 1.5)</p> <p>mm 21 - 31 (in 0.8 - 1.2)</p>

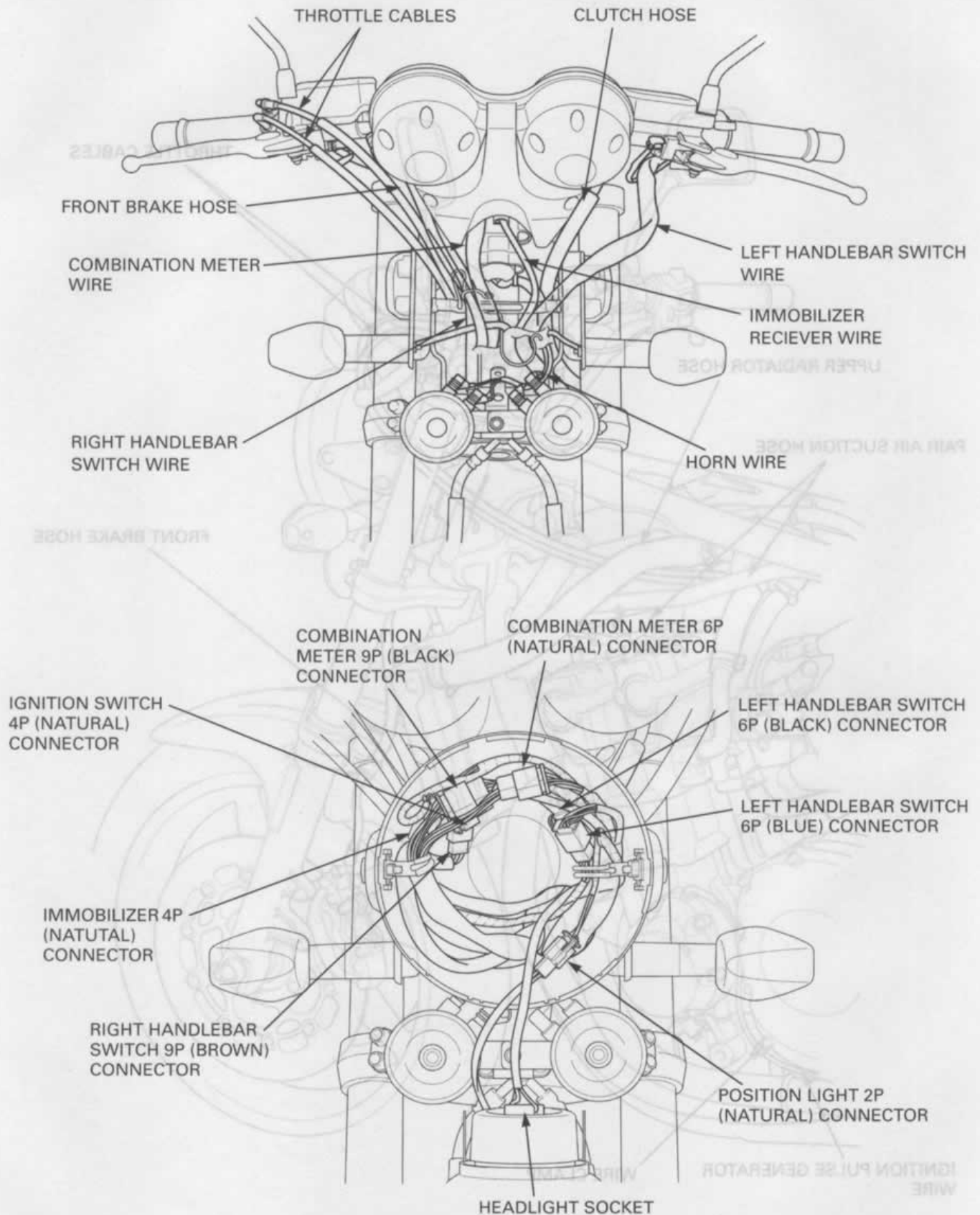
LOCATION	MATERIAL	REMARKS
Piston/piston ring sliding area	Engine oil	
Each gear teeth and rotating surface		
Each bearing		
Each O-ring		
Clutch joint piece		
Clutch disc surface		
Clutch lifter rod		
Oil strainer packing		
Oil pass plate seal		
Starter one-way clutch sliding surface		
Oil cooler bolt threads		
Ignition pulse generator bolt threads and seating surface		
Flywheel bolt threads and seating surface		
Cylinder head mounting nut threads and seating surface		
Connecting rod nut threads and seating surface		
Camshaft holder bolt threads and seating surface		
Oil filter cartridge O-ring		
Clutch center lock nut threads and seating surface		
Each tightening nut threads and seating surface		
Other rotating area and sliding surface		
Balancer damper rubber fitting area	Multi-purpose grease	
Timing hole cap threads		
Crankshaft hole cap threads		
Each oil seal lips		
Upper crankcase 10 mm sealing bolt threads	Locking agent	Coating width: 6.5 ± 1 mm
Lower crankcase 10 mm sealing bolt threads		Coating width: 6.5 ± 1 mm
Lower crankcase 20 mm sealing bolt threads		Coating width: 6.5 ± 1 mm
Cylinder head 18 mm sealing bolt threads		Coating width: 6.5 ± 1 mm
Cylinder head cover breather plate bolt threads		Coating width: 6.5 ± 1 mm
Cam pulse generator rotor/intake cam sprocket bolt threads		
Exhaust cam sprocket bolt threads		Coating width: 6.5 ± 1 mm
Oil pump drive chain guide bolt threads		Coating width: 6.5 ± 1 mm
Oil pump driven sprocket bolt threads		Coating width: 6.5 ± 1 mm
Oil pass pipe plate bolt threads		Coating width: 6.5 ± 1 mm
Oil pass pipe/oil pipe bolt threads		Coating width: 6.5 ± 1 mm
Shift drum center bolt threads		Coating width: 6.5 ± 1 mm
Shift drum bearing set plate bolt threads		Coating width: 6.5 ± 1 mm
Shift fork shaft stopper plate bolt threads		Coating width: 6.5 ± 1 mm
Clutch cover damper rubber mounting bolt threads		Coating width: 6.5 ± 1 mm
Starter one-way clutch outer bolt threads		Coating width: 6.5 ± 1 mm
Clutch slave cylinder O-ring	Silicone grease	

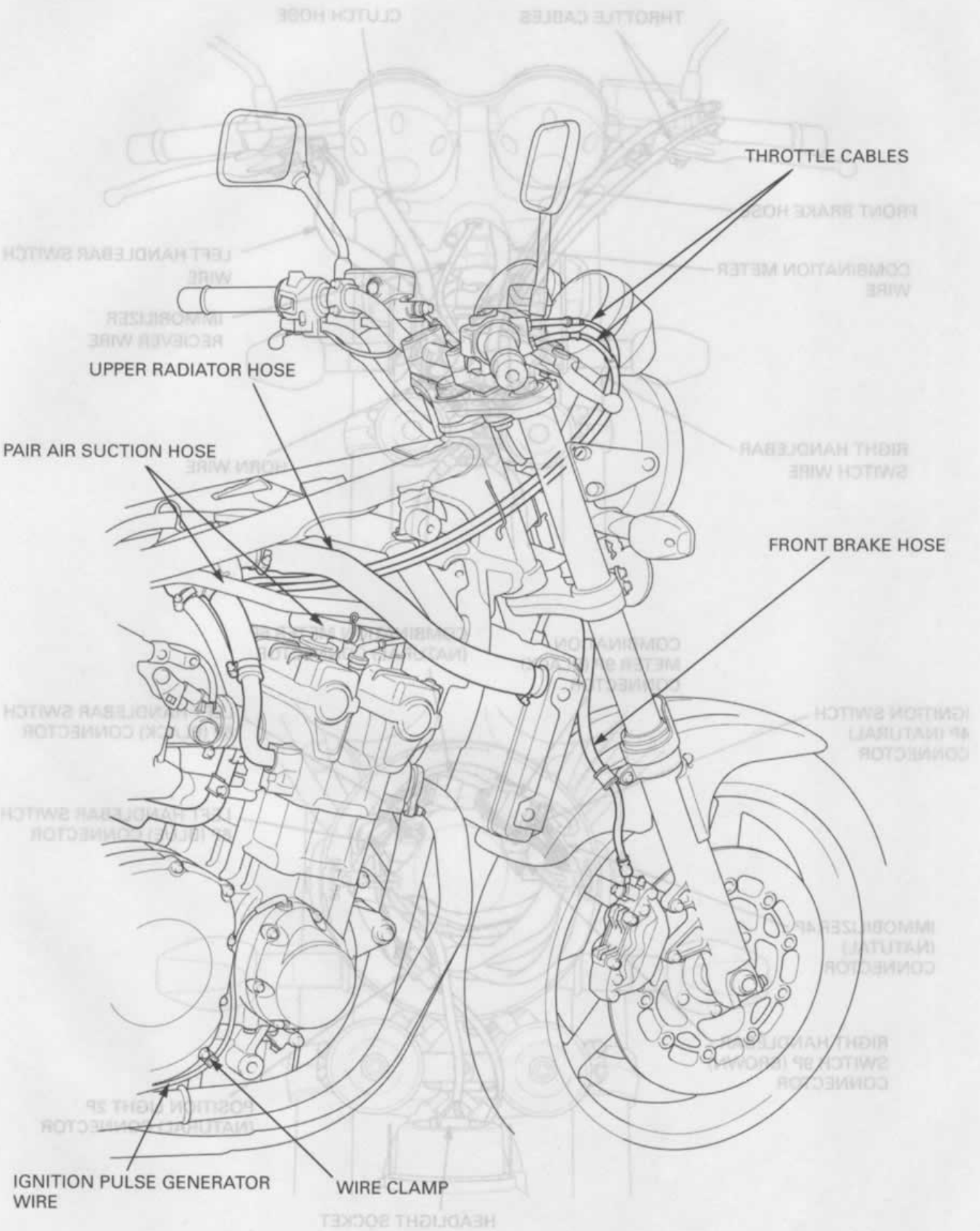
GENERAL INFORMATION

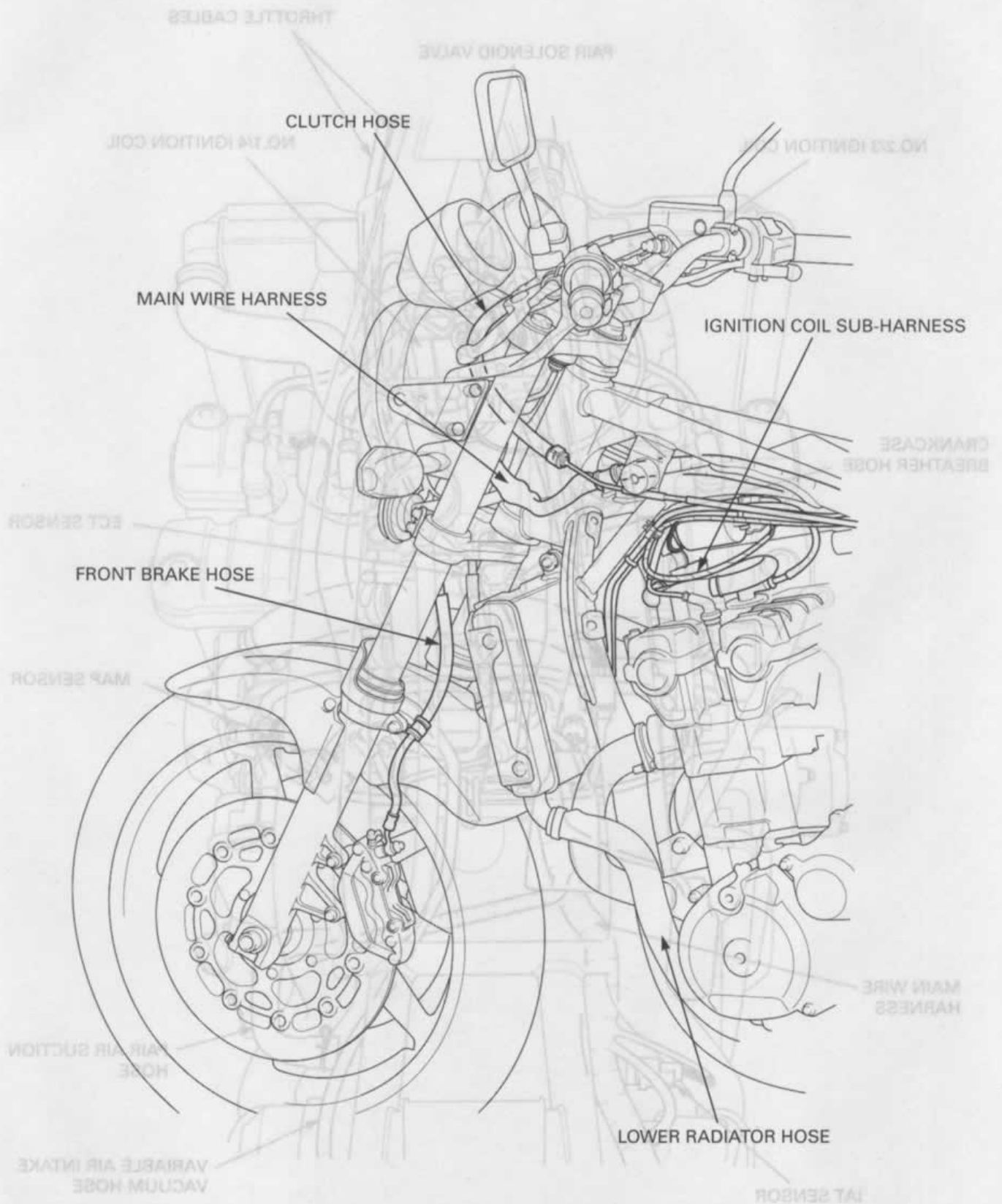
FRAME

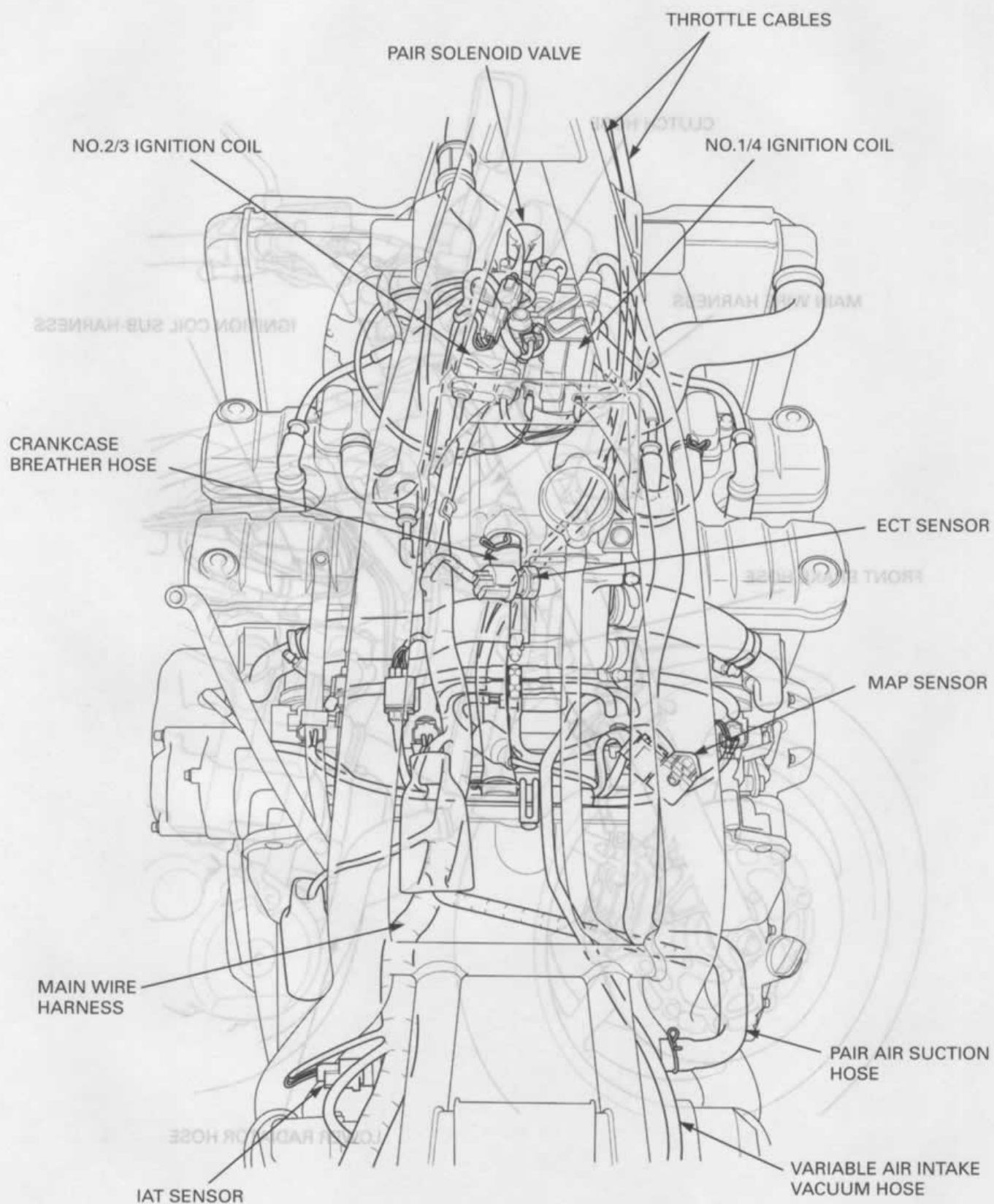
LOCATION	MATERIAL	REMARKS
Front wheel dust seal lips Rear wheel dust seal lips Each dust seal lips Throttle grip pipe flange Clutch lever pivot bolt sliding area Rear brake pedal pivot sliding area Gearshift pedal link tie-rod ball joints Gearshift pedal pivot Driver footpeg sliding area Passenger footpeg sliding area Side stand pivot Center stand (optional) pivot	Multi-purpose grease	Each bearing Each O-ring Clutch joint piece Clutch disc surface Clutch lifter rod Oil strainer packing Oil pump plate seal Starter one-way clutch sliding surface Oil cooler bolt threads Ignition pulley generator bolt threads and seating surface Face
Steering head bearing sliding surface Steering head dust seal lips	Urea based multi-purpose grease with extreme pressure (example: EXCELITE EP2 manufactured by KYODO YUSHI, Japan), Shell Stamina EP2 or equivalent	Cylinder head mounting nut threads Face Connecting rod nut threads and seating surface Camshaft holder bolt threads and seating surface Oil filter cartridge O-ring Clutch center lock nut threads and seating surface
Swingarm pivot bearings Swingarm pivot dust seal lips	Multi-purpose grease (Shell Alvania EP2 or equivalent)	Each tightening nut threads and seating surface Other rotating axes and sliding surfaces Balancer damper rubber fitting area
Throttle cable A, B outer inside	Cable lubricant	Timing hole cap threads
Rear shock absorber spring adjuster cam surface	G-n paste	Crankshaft hole cap threads
Handlebar grip rubber inside	Honda bond A or equivalent	Each oil seal lip
Swingarm pivot nut threads and seating surface Steering bearing adjustment nut threads	Engine oil	Upper crankcase 10 mm sealing bolt threads Lower crankcase 10 mm sealing bolt threads Lower crankcase 20 mm sealing bolt threads
Front brake lever-to-master piston contacting area Clutch lever-to-master piston contacting area Rear master brake master piston-to-push rod contact area Brake caliper dust seals Rear brake caliper boot inside Rear brake caliper pin boot inside	Silicone grease	Cylinder head 18 mm sealing bolt threads Cylinder head cover breather plate bolt threads Cam pulley generator rotor/inlet cam sprocket bolt threads Exhaust cam sprocket bolt threads Oil pump drive chain guide bolt threads Oil pump driven sprocket bolt threads
Brake master piston and cups Brake caliper piston and piston seals	DOT 4 brake fluid	Oil pump plate bolt threads Oil pump plate plate bolt threads Oil pump plate plate bolt threads
Fork cap O-ring Fork dust seal and oil seal lips	Fork fluid	Shift drum center bolt threads Shift drum bearing set plate bolt threads Shift fork shaft stopper plate bolt threads
Front brake caliper assembly bolt threads Fork socket bolt threads Rear brake caliper pin bolt threads	Locking agent	Clutch cover damper rubber mounting bolt threads Starter one-way clutch outer bolt threads Clutch slave cylinder O-ring

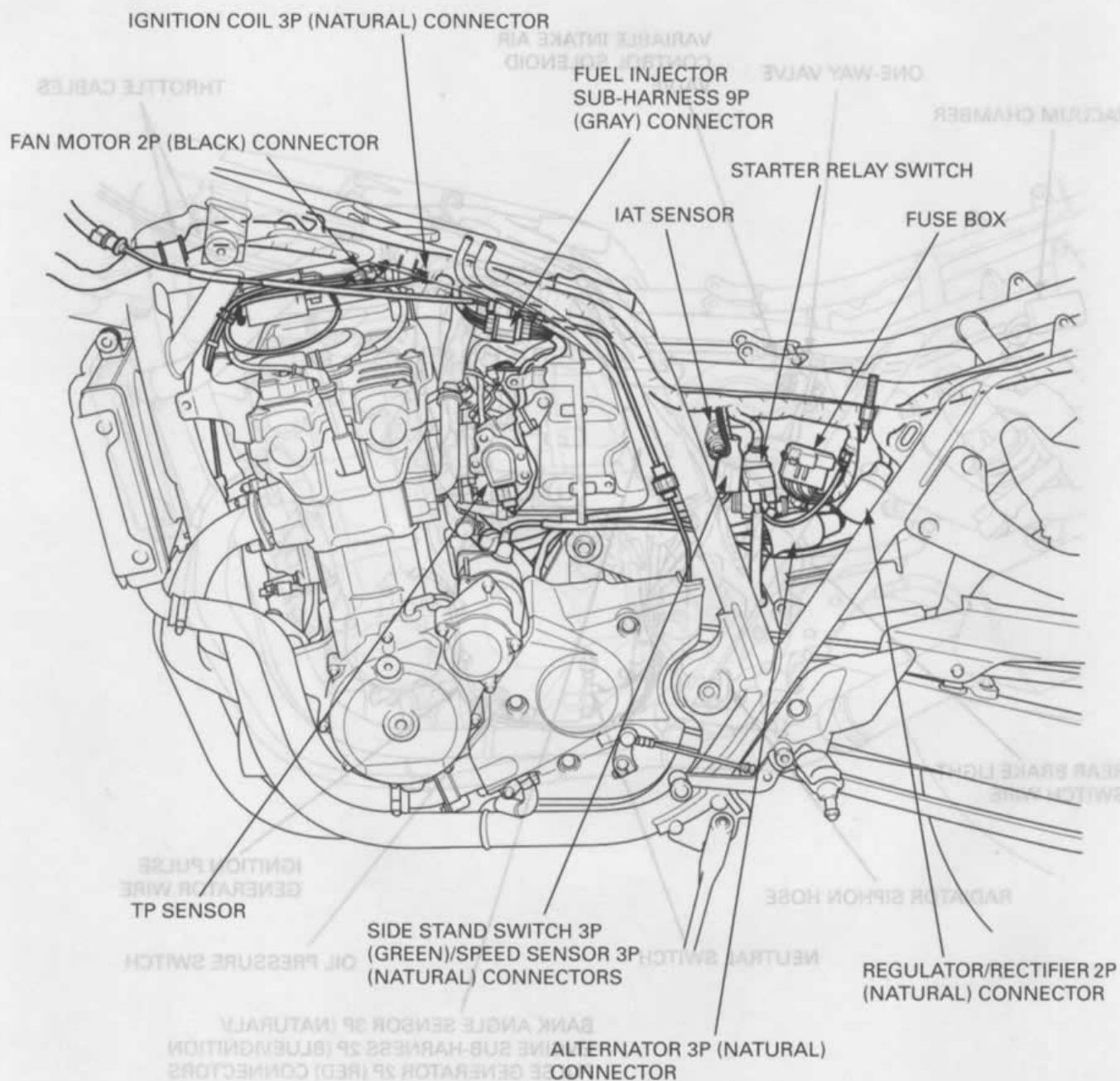
CABLE & HARNESS ROUTING

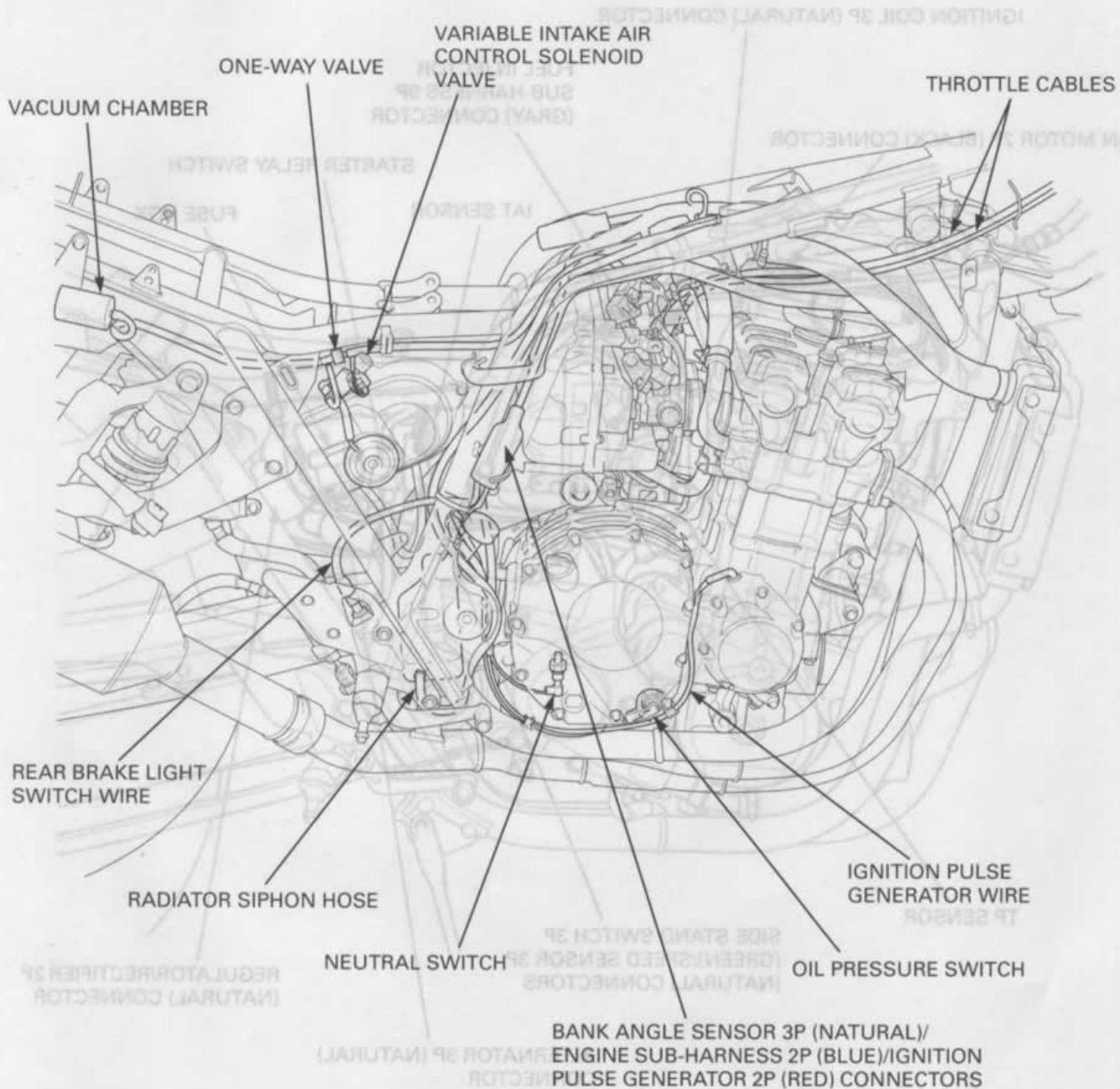


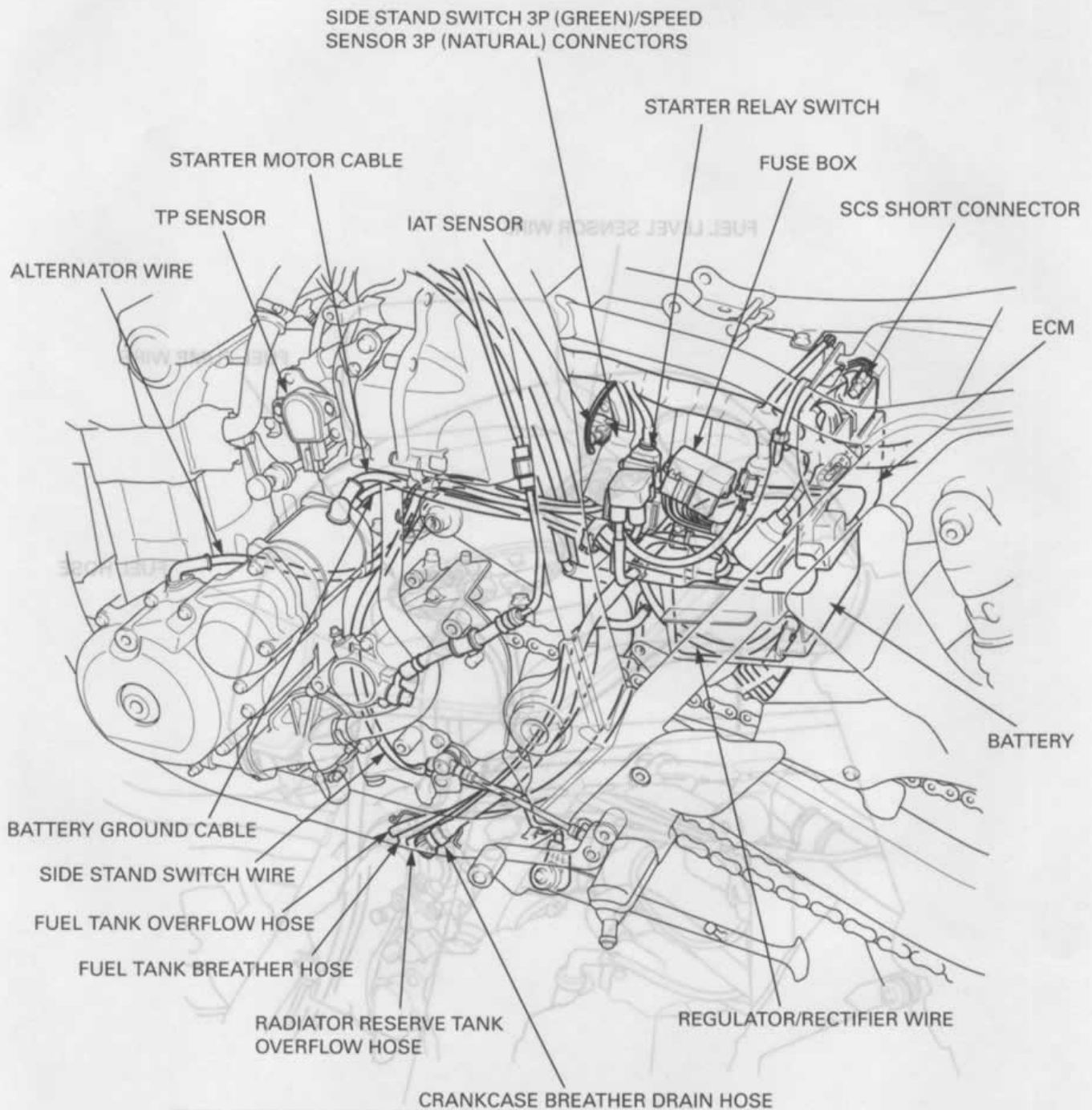


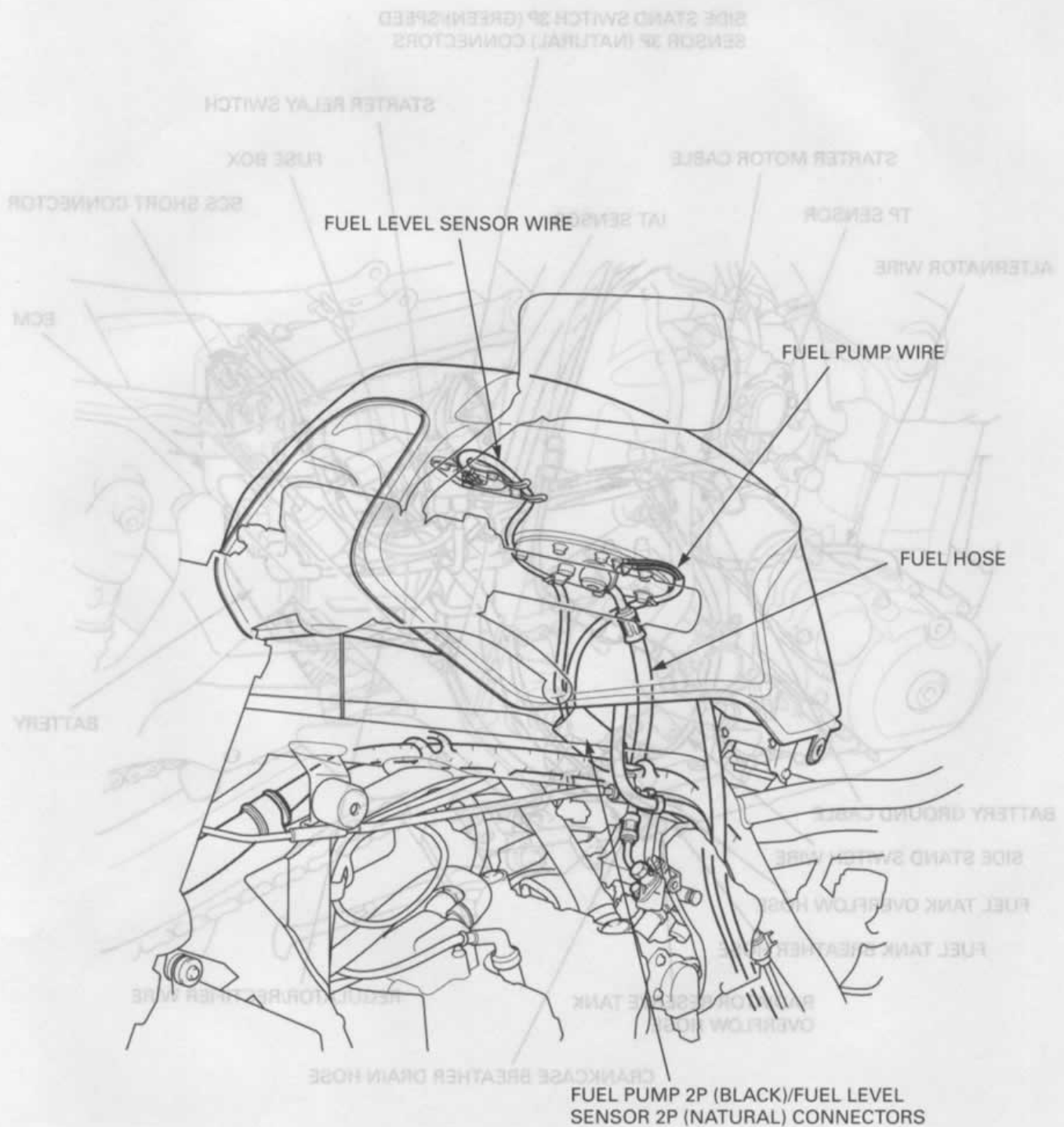


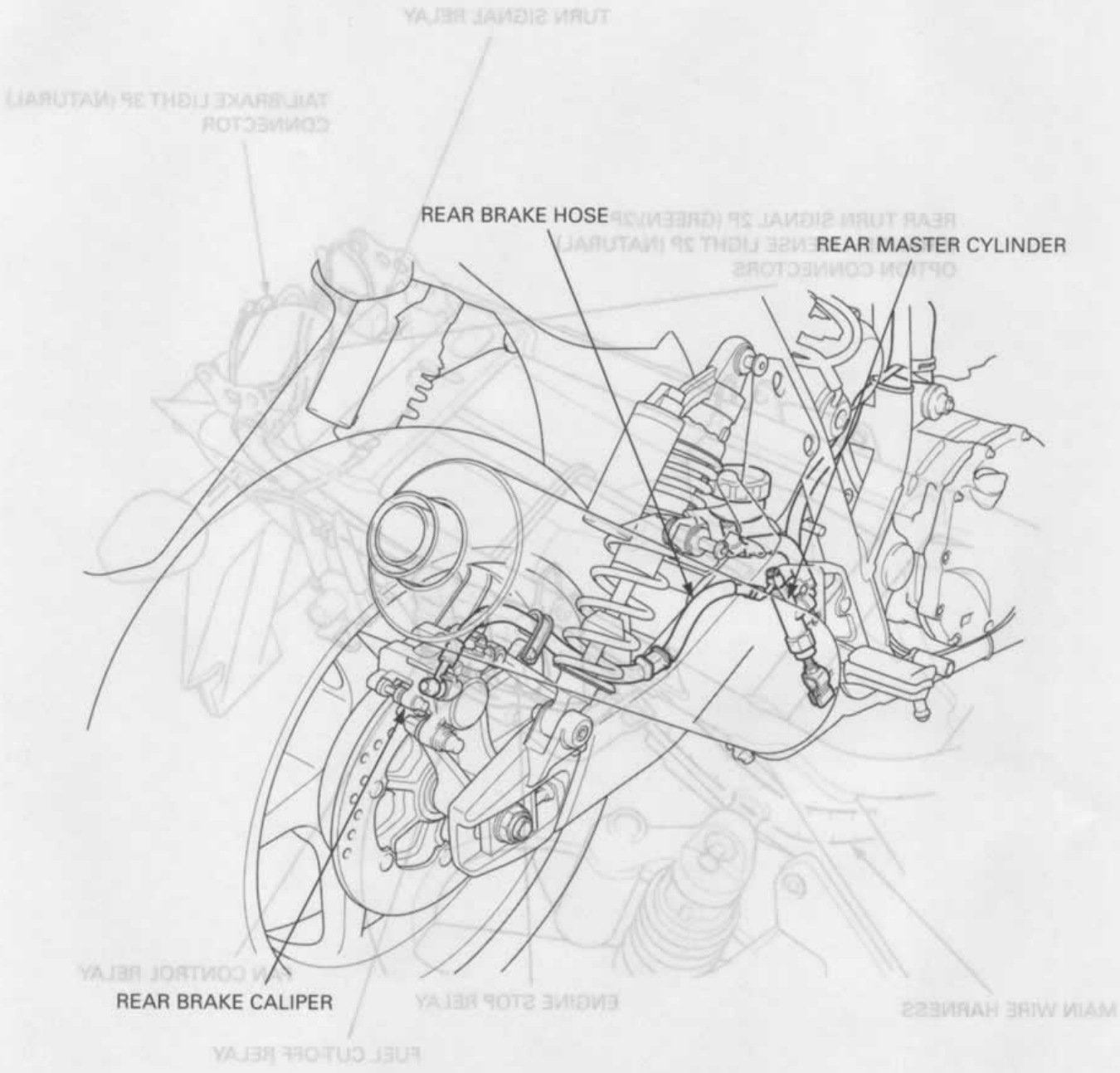


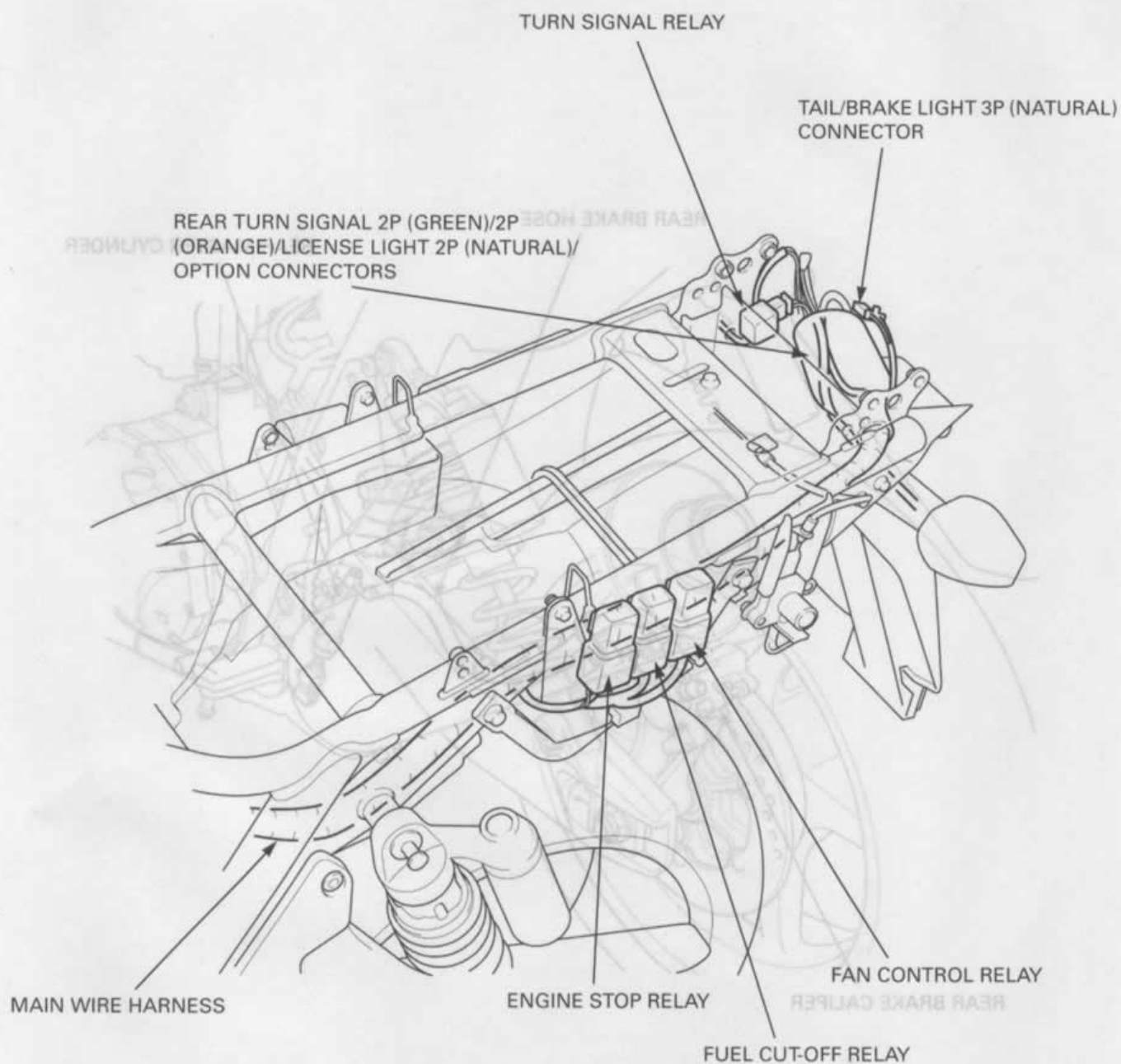












EMISSION CONTROL SYSTEMS

SOURCE OF EMISSIONS

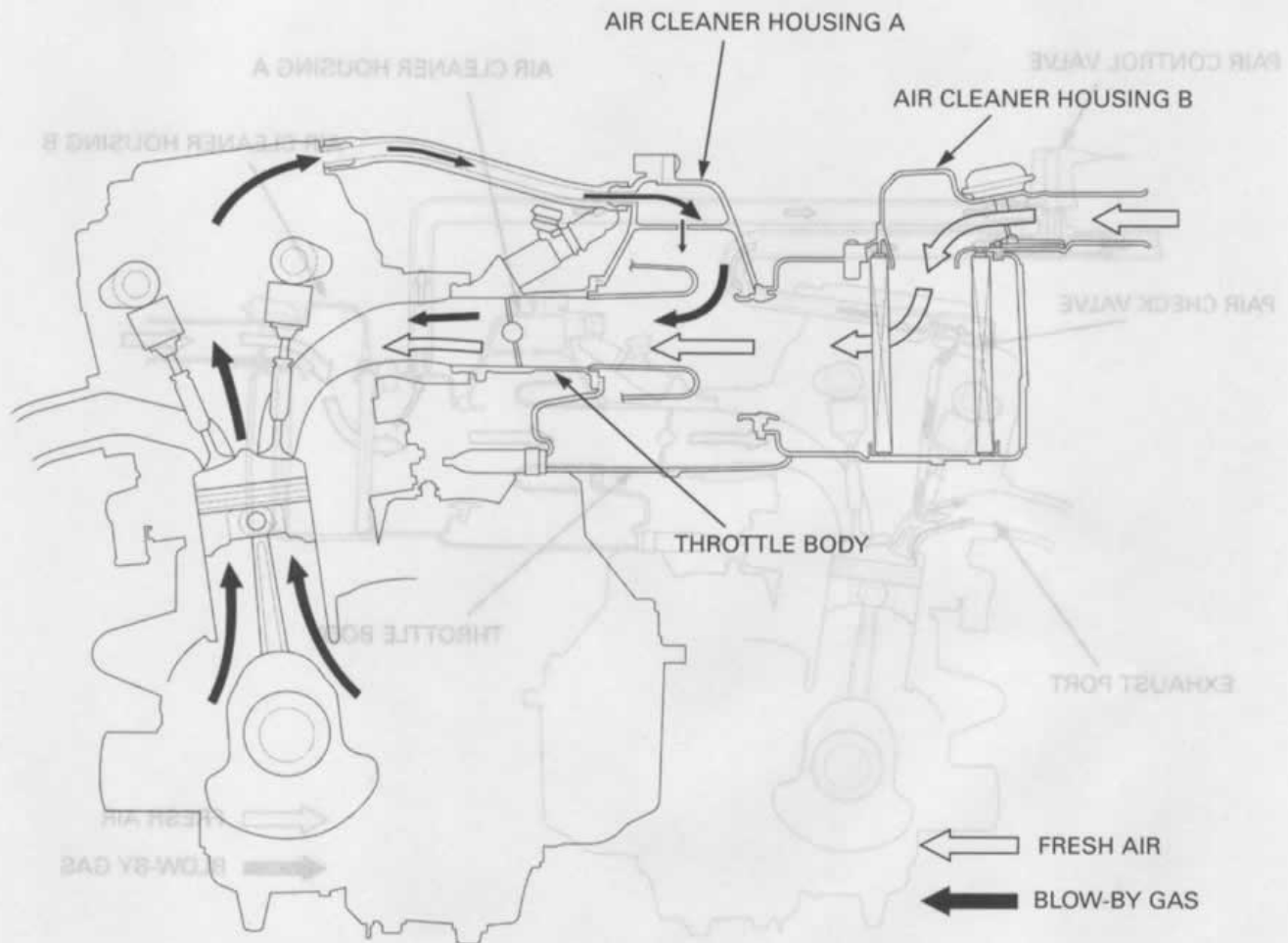
The combustion process produces carbon monoxide and hydrocarbons. Control of hydrocarbons is very important because, under certain conditions, they react to form photochemical smog when subject to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

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.



GENERAL INFORMATION

EXHAUST EMISSION CONTROL SYSTEM (SECONDARY AIR SUPPLY SYSTEM)

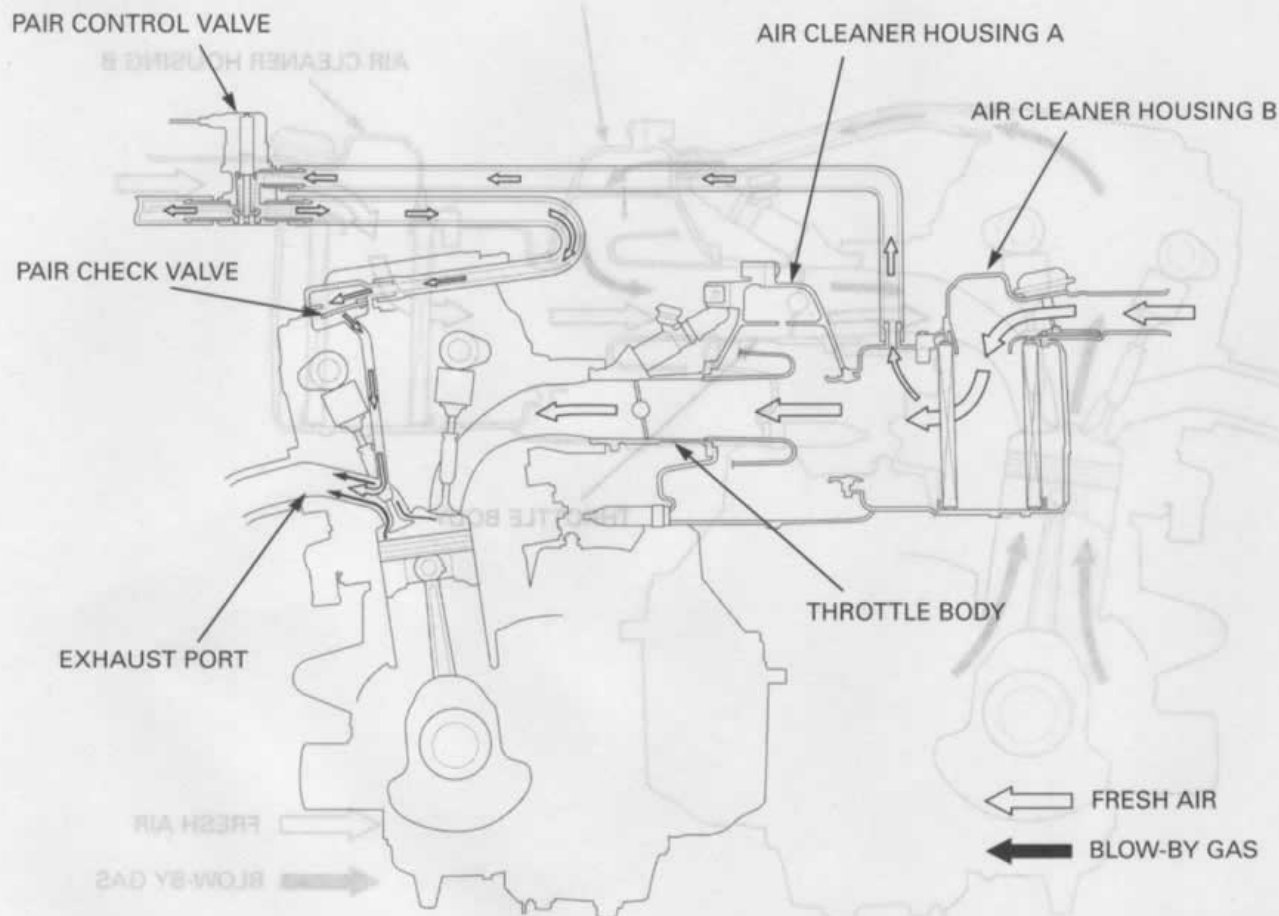
The exhaust emission control system is composed of a lean fuel injection setting, and no adjustments should be made except idle speed adjustment with the throttle stop screw. The exhaust emission control system is separate from the crank case emission control system.

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 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.



NOISE EMISSION CONTROL SYSTEM

MEMO

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

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

1. Removal of, or puncturing of the muffler, baffles, header pipes or any other component which 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 than those specified by the manufacturer.