Paper Book Part No. 62MEW00

HOW TO USE THIS MANUAL

This service manual describes the service procedures for the NT700V/VA.

Follow the Maintenance Schedule (Section 4) recommendations to ensure that the vehicle is in peak operating condition.

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

Sections 1 and 4 apply to the whole motorcycle. Section 3 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections.
Section 5 through 23 describe parts of the motorcycle, grouped according to location.

Find the section you want on this page, then turn to the table of contents on the first page of the section.

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

If you are not familiar with this motorcycle, read Technical Feature in Section 2.

If you don't know the source of the trouble, go to section 25 Troubleshooting.

Your safety, and the safety of others, is very important. To help you make informed decisions we have provided safety messages and other information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing this vehicle.
You must use your own good judgement.
You will find important safety information in a variety of forms including:

- Safety Labels – on the vehicle
- Safety Messages – preceded by a safety alert symbol ⚠ and one of three signal words, DANGER, WARNING, or CAUTION. These signal words mean:

⚠DANGER You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠WARNING You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠CAUTION You CAN be HURT if you don't follow instructions.

- Instructions – how to service this vehicle correctly and safely.

As you read this manual, you will find information that is preceded by a **NOTICE** symbol. The purpose of this message is to help prevent damage to your vehicle, other property, or the environment.

ALL INFORMATION, ILLUSTRATIONS, DIRECTIONS AND SPECIFICATIONS INCLUDED IN THIS PUBLICATION ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF APPROVAL FOR PRINTING. Honda Motor Co., Ltd. RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE AND WITHOUT INCURRING ANY OBLIGATION WHATSOEVER. NO PART OF THIS PUBLICATION MAY BE REPRODUCED WITHOUT WRITTEN PERMISSION. THIS MANUAL IS WRITTEN FOR PERSONS WHO HAVE ACQUIRED BASIC KNOWLEDGE OF MAINTENANCE ON Honda MOTORCYCLES, MOTOR SCOOTERS OR ATVS.

Honda Motor Co., Ltd.
SERVICE PUBLICATION OFFICE

CONTENTS

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TYPE CODE

• Throughout this manual, the following abbreviations are used to identify individual model.

CODE	AREA TYPE
ED	EUROPEAN DIRECT SALES (Netherlands, Spain, Germany, Belgium, Portugal, Italy, Switzerland, Austria)
E	U.K. (Ireland)
F	France
U	Australia

A Few Words About Safety

Service Information

The service and repair information contained in this manual is intended for use by qualified, professional technicians. Attempting service or repairs without the proper training, tools, and equipment could cause injury to you or others. It could also damage the vehicle or create an unsafe condition.

This manual describes the proper methods and procedures for performing service, maintenance, and repairs. Some procedures require the use of specially designed tools and dedicated equipment. Any person who intends to use a replacement part, service procedure or a tool that is not recommended by Honda, must determine the risks to their personal safety and the safe operation of the vehicle.

If you need to replace a part, use genuine Honda parts with the correct part number or an equivalent part. We strongly recommend that you do not use replacement parts of inferior quality.

For Your Customer's Safety

Proper service and maintenance are essential to the customer's safety and the reliability of the vehicle. Any error or oversight while servicing a vehicle can result in faulty operation, damage to the vehicle, or injury to others.

⚠WARNING

Improper service or repairs can create an unsafe condition that can cause your customer or others to be seriously hurt or killed.

Follow the procedures and precautions in this manual and other service materials carefully.

For Your Safety

Because this manual is intended for the professional service technician, we do not provide warnings about many basic shop safety practices (e.g., Hot parts–wear gloves). If you have not received shop safety training or do not feel confident about your knowledge of safe servicing practice, we recommended that you do not attempt to perform the procedures described in this manual.

Some of the most important general service safety precautions are given below. However, we cannot warn you of every conceivable hazard that can arise in performing service and repair procedures. Only you can decide whether or not you should perform a given task.

⚠WARNING

Failure to properly follow instructions and precautions can cause you to be seriously hurt or killed.

Follow the procedures and precautions in this manual carefully.

Important Safety Precautions

Make sure you have a clear understanding of all basic shop safety practices and that you are wearing appropriate clothing and using safety equipment. When performing any service task, be especially careful of the following:

- Read all of the instructions before you begin, and make sure you have the tools, the replacement or repair parts, and the skills required to perform the tasks safely and completely.
- Protect your eyes by using proper safety glasses, goggles or face shields any time you hammer, drill, grind, pry or work around pressurized air or liquids, and springs or other stored-energy components. If there is any doubt, put on eye protection.
- Use other protective wear when necessary, for example gloves or safety shoes. Handling hot or sharp parts can cause severe burns or cuts. Before you grab something that looks like it can hurt you, stop and put on gloves.
- Protect yourself and others whenever you have the vehicle up in the air. Any time you lift the vehicle, either with a hoist or a jack, make sure that it is always securely supported. Use jack stands.

Make sure the engine is off before you begin any servicing procedures, unless the instruction tells you to do otherwise. This will help eliminate several potential hazards:

- Carbon monoxide poisoning from engine exhaust. Be sure there is adequate ventilation whenever you run the engine.
- Burns from hot parts or coolant. Let the engine and exhaust system cool before working in those areas.
- Injury from moving parts. If the instruction tells you to run the engine, be sure your hands, fingers and clothing are out of the way.

Gasoline vapors and hydrogen gases from batteries are explosive. To reduce the possibility of a fire or explosion, be careful when working around gasoline or batteries.

- Use only a nonflammable solvent, not gasoline, to clean parts.
- Never drain or store gasoline in an open container.
- Keep all cigarettes, sparks and flames away from the battery and all fuel-related parts.

SYMBOLS

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

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

1. GENERAL INFORMATION

1

SERVICE RULES

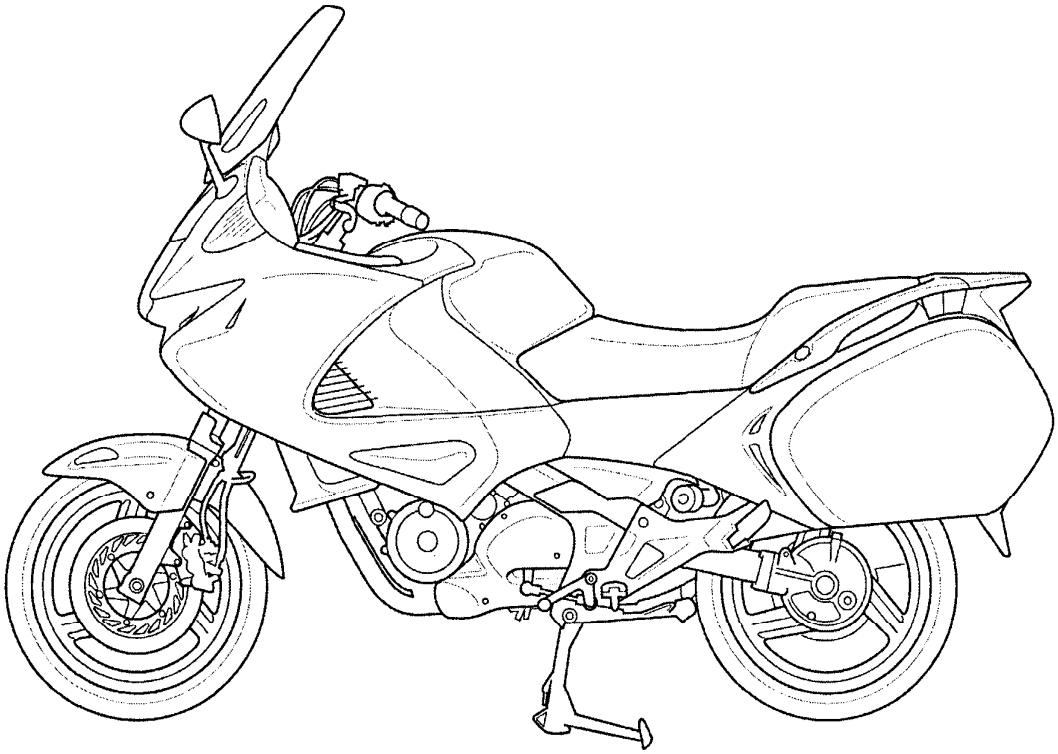
1. Use genuine Honda or Honda-recommended parts and lubricants or their equivalents. Parts that don't meet Honda's design specifications may cause damage to the motorcycle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing 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 1-35).

ABBREVIATION

Throughout this manual, the following abbreviations are used to identify the respective parts or systems.

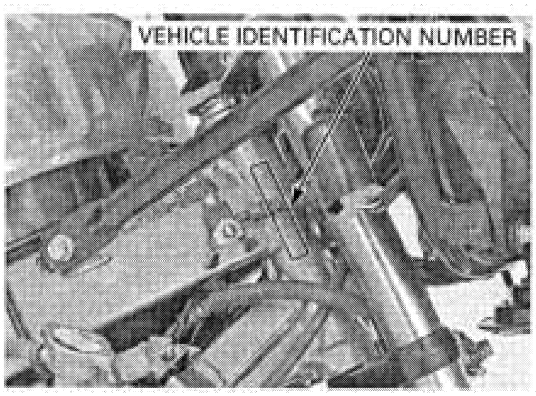
Abbrev. term	Full term
PGM-FI	Programmed Fuel Injection
MAP sensor	Manifold Absolute Pressure sensor
TP sensor	Throttle Position sensor
ECT sensor	Engine Coolant Temperature sensor
IAT sensor	Intake Air Temperature sensor
CKP sensor	Crankshaft Position sensor
CMP sensor	Camshaft Position sensor
VS sensor	Vehicle Speed sensor
IACV	Idle Air Control Valve
ECM	Engine Control Module
EEPROM	Electrically Erasable Programmable Read Only Memory
DLC	Data Link Connector
SCS connector	Service Check Short connector
HDS	Honda Diagnostic System
DTC	Diagnostic Trouble Code
MIL	Malfunction Indicator Lamp
FP	Fuel Pump
PAIR	Pulsed Secondary Air Injection
ABS	Anti-lock Brake System
HISS	Honda Ignition Security System

MODEL IDENTIFICATION

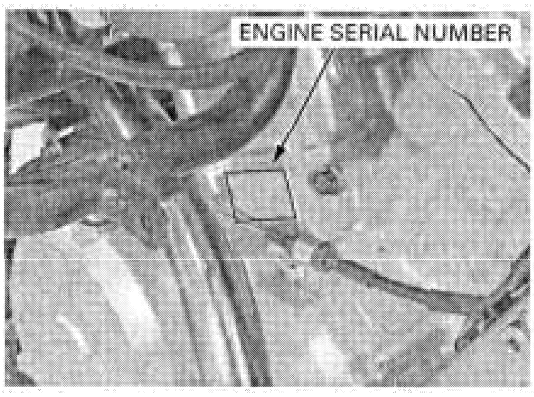


SERIAL NUMBERS

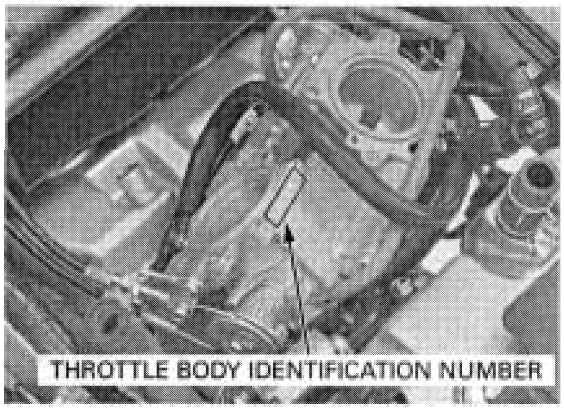
The Vehicle Identification Number (V.I.N) is stamped on the right side of the steering head.



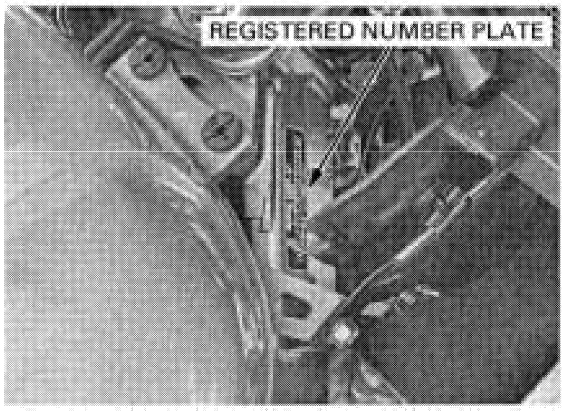
The engine serial number is stamped on the right side of the crankcase.



The throttle body identification number is stamped on the throttle drum side of the throttle body.

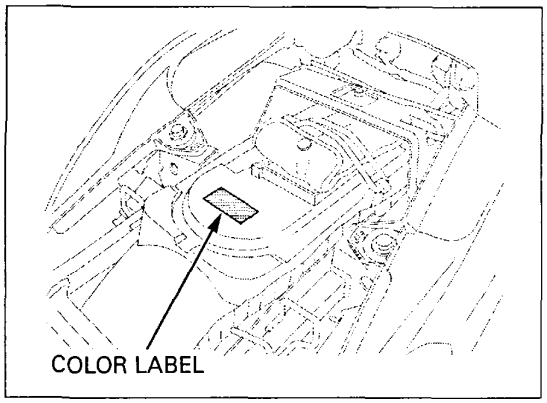


The registered number plate is attached on the right side of the frame.



LABELS

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



GENERAL SPECIFICATIONS

ITEM			SPECIFICATIONS
DIMENSION	Overall length		2,215 mm (87.2 in)
	Overall width		805 mm (31.7 in)
	Overall height (Windscreen high position)		1,480 mm (58.2 in)
	Overall height (Windscreen low position)		1,320 mm (52.0 in)
	Wheelbase		1,475 mm (58.1 in)
	Seat height		805 mm (31.6 in)
	Footpeg height		322 mm (12.7 in)
	Ground clearance		160 mm (6.3 in)
	Curb weight (NT700V)		254 kg (560 lbs)
	Curb weight (NT700VA)		257 kg (567 lbs)
	Maximum weight capacity		197 kg (434 lbs)
FRAME	Frame type		Diamond
	Front suspension		Telescopic fork
	Front axle travel		115 mm (4.5 in)
	Rear suspension		Swingarm
	Rear axle travel		123 mm (4.8 in)
	Front tire size		120/70ZR17M/C (58W)
	Rear tire size		150/70ZR17M/C (69W)
	Tire brand	Michelin	Front: MACADAM90XB/ Rear: MACADAM90XB
		Bridgestone	Front: BT020F RADIAL J/ Rear: BT020R RADIAL U
	Front brake		Hydraulic double disc
	Rear brake		Hydraulic single disc
	Caster angle		28° 50′
	Trail length		115 mm (4.5 in)
	Fuel tank capacity		19.7 liters (5.2 US gal, 4.3 Imp gal)
ENGINE	Cylinder arrangement		2 cylinders 52° V transverse
	Bore and stroke		81.0 x 66.0 mm (3.19 x 2.60 in)
	Displacement		680.2 cm^3 (41.6 cu-in)
	Compression ratio		10.0 : 1
	Valve train		Silent cam chain driven, OHC
	Intake valve	opens	10° BTDC (at 1 mm lift)
		closes	30° ABDC (at 1 mm lift)
	Exhaust valve	opens	35° BBDC (at 1 mm lift)
		closes	5° ATDC (at 1 mm lift)
	Lubrication system		Forced pressure and wet sump
	Oil pump type		Trochoid
	Cooling system		Liquid cooled
	Air filtration		Net and viscous paper element
	Engine dry weight		65.2 kg (144 lbs)
	Firing order		Front - 232° - Rear - 488° - Front
	Cylinder number		Front: #2/Rear: #1
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, 5-speeds
	Primary reduction		1.763 (67/38)
	Secondary reduction		0.939 (31/33)
	Third reduction (Output drive reduction)		1.059 (18/17)
	Final reduction		3.090 (34/11)
	Gear ratio	1st	2.571 (36/14)
		2nd	1.688 (27/16)
		3rd	1.300 (26/20)
		4th	1.074 (29/27)
		5th	0.955 (21/22)
	Gearshift pattern		Left foot operated return system, 1 - N - 2 - 3 - 4 - 5

ITEM		SPECIFICATIONS
ELECTRICAL	Ignition system	Full transistorized ignition
	Starting system	Electric starter motor
	Charging system	Triple phase output alternator
	Regulator/rectifier	SCR shorted/triple phase full-wave rectification
	Lighting system	Battery

LUBRICATION SYSTEM SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Engine oil capacity	After draining	2.6 liters (2.75 US qt, 2.29 Imp qt)	–
	After draining/filter change	2.8 liters (2.96 US qt, 2.46 Imp qt)	–
	After disassembly	3.2 liters (3.38 US qt, 2.82 Imp qt)	–
Recommended engine oil		Suggested oil: Honda "4-stroke motorcycle oil" or an equivalent Oil recommendation: API classification SG or higher (except oils labeled as energy conserving on the circular API service label) Viscosity: SAE 10W-30 JASO T 903 standard: MA	–
Oil pressure at oil pressure switch		568 kPa (5.8 kgf/cm^2, 82 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 – 0.21 (0.006 – 0.008)	0.35 (0.014)
	Side clearance	0.02 – 0.08 (0.001 – 0.003)	0.10 (0.004)

FUEL SYSTEM (PGM-FI) SPECIFICATIONS

ITEM	SPECIFICATIONS
Throttle body identification number	GQ66A
Idle speed	1,200 ± 100 min^{-1} (rpm)
Throttle grip free play	2 – 6 mm (1/12 – 1/4 in)
IAT sensor resistance (at 20 °C/68 °F)	1 – 4 kΩ
ECT sensor resistance (at 20 °C/68 °F)	2.32 – 2.59 kΩ
Fuel injector resistance (at 20 °C/68 °F)	10.0 – 14.0 Ω
CMP sensor peak voltage (at 20 °C/68 °F)	0.7 V minimum
CKP sensor peak voltage (at 20 °C/68 °F)	0.7 V minimum
Fuel pressure at idle	343 kPa (3.5 kgf/cm^2, 50 psi)
Fuel pump flow (at 12V)	200 cm^3 (6.8 US oz, 7.0 Imp oz) minimum/10 seconds

COOLING SYSTEM SPECIFICATIONS

ITEM		SPECIFICATIONS
Coolant capacity	Radiator and engine	1.88 liters (1.99 US qt, 1.65 Imp qt)
	Reserve tank	0.4 liter(0.42 US qt, 0.35 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)
	Fully open	95 °C (203 °F)
	Valve lift	8 mm (0.3 in) minimum at 95 °C (203 °F)
Recommended antifreeze		High quality ethylene glycol antifreeze containing corrosion protection inhibitors
Standard coolant concentration		1:1 mixture with distilled water

CYLINDER HEAD/VALVE SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Cylinder compression at 400 min^{-1} (rpm)			1,373 ± 98 kPa (14.0 ± 1.0 kgf/cm^2, 199 ± 14 psi)	–
Valve clearance		IN	0.15 ± 0.02 (0.006 ± 0.001)	–
		EX	0.20 ± 0.02 (0.008 ± 0.001)	–
Camshaft	Cam lobe height	IN	40.609 – 40.769 (1.5988 – 1.6051)	40.58 (1.598)
		EX	40.695 – 40.855 (1.6022 – 1.6085)	40.67 (1.601)
	Runout		–	0.05 (0.002)
	Journal O.D.		21.959 – 21.980 (0.8645 – 0.8654)	21.90 (0.862)
	Oil clearance		0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
Rocker arm, rocker arm shaft	Rocker arm shaft O.D.	IN	11.983 – 11.994 (0.4718 – 0.4722)	11.92 (0.469)
		EX	11.983 – 11.994 (0.4718 – 0.4722)	11.92 (0.469)
	Rocker arm I.D.	IN/EX	12.006 – 12.024 (0.4726 – 0.4734)	12.05 (0.474)
	Rocker arm-to-shaft clearance		0.012 – 0.041 (0.0008 – 0.0016)	0.14 (0.006)
Valve, valve guide	Valve stem O.D.	IN	5.475 – 5.490 (0.2156 – 0.2161)	5.460 (0.2150)
		EX	5.460 – 5.475 (0.2150 – 0.2156)	5.455 (0.2148)
	Valve guide I.D.	IN/EX	5.500 – 5.512 (0.2165 – 0.2170)	5.54 (0.218)
	Stem-to-guide clearance	IN	0.010 – 0.037 (0.0004 – 0.0015)	0.07 (0.003)
		EX	0.025 – 0.052 (0.0009 – 0.0020)	0.09 (0.004)
	Valve guide projection above cylinder head	IN	12.5 – 12.7 (0.49 – 0.50)	–
		EX	16.7 – 16.9 (0.66 – 0.67)	–
	Valve seat width	IN/EX	0.90 – 1.10 (0.035 – 0.043)	1.5 (0.06)
Valve spring	Free length	IN/EX	44.91 (1.768)	43.9 (1.73)
Cylinder head warpage			–	0.10 (0.004)

CYLINDER/PISTON SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Cylinder	I.D.		81.000 – 81.015 (3.1890 – 3.1896)	81.10 (3.193)
	Out of round		–	0.06 (0.002)
	Taper		–	0.06 (0.002)
	Warpage		–	0.10 (0.004)
Piston, piston pin, piston rings	Piston O.D. at 15 mm (0.59 in) from bottom		80.970 – 80.990 (3.1878 – 3.1886)	80.91 (3.185)
	Piston pin bore I.D.		18.002 – 18.008 (0.7087 – 0.7089)	18.05 (0.711)
	Piston pin O.D.		17.994 – 18.000 (0.7084 – 0.7087)	17.98 (0.708)
	Piston-to-piston pin clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.04 (0.002)
	Piston ring end gap	Top	0.20 – 0.35 (0.008 – 0.014)	0.50 (0.020)
		Second	0.35 – 0.50 (0.014 – 0.020)	0.65 (0.026)
		Oil (side rail)	0.20 – 0.70 (0.008 – 0.028)	0.90 (0.035)
	Piston ring-to-ring groove clearance	Top	0.010 – 0.045 (0.0004 – 0.0018)	0.065 (0.0026)
		Second	0.010 – 0.045 (0.0004 – 0.0018)	0.065 (0.0026)
Cylinder-to-piston clearance			0.010 – 0.045 (0.0004 – 0.0018)	0.10 (0.004)
Connecting rod small end I.D.			18.016 – 18.037 (0.7093 – 0.7101)	18.047 (0.7105)
Connecting rod-to-piston pin clearance			0.016 – 0.043 (0.0006 – 0.0017)	0.06 (0.002)

CLUTCH/GEARSHIFT LINKAGE SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Clutch lever free play			10 – 20 (3/8 – 3/4)	–
Clutch	Spring free length		43.2 (1.70)	41.7 (1.64)
	Disc thickness	Disc A	2.692 – 2.708 (0.1060 – 0.1066)	2.3 (0.09)
		Disc B	2.920 – 3.080 (0.1150 – 0.1213)	2.6 (0.10)
		Disc C	2.692 – 2.708 (0.1060 – 0.1066)	2.3 (0.09)
	Plate warpage		–	0.30 (0.012)
Clutch outer guide		I.D.	21.991 – 22.016 (0.8658 – 0.8668)	22.03 (0.867)
		O.D.	31.959 – 31.975 (1.2582 – 1.2588)	31.92 (1.257)
Mainshaft O.D. at clutch outer guide			21.967 – 21.980 (0.8648 – 0.8654)	21.95 (0.864)
Clutch outer guide-to-mainshaft clearance			0.011 – 0.049 (0.0004 – 0.0019)	0.08 (0.003)
Clutch outer I.D.			32.000 – 32.025 (1.2598 – 1.2608)	32.09 (1.263)
Clutch outer-to-outer guide clearance			0.025 – 0.066 (0.0010 – 0.0026)	0.18 (0.007)
Oil pump drive sprocket I.D.			32.025 – 32.145 (1.2608 – 1.2655)	32.16 (1.266)
Oil pump drive sprocket-to-clutch outer guide clearance			0.066 – 0.170 (0.0026 – 0.0067)	0.23 (0.009)

ALTERNATOR/STARTER CLUTCH SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Starter driven gear	I.D.	37.000 – 37.025 (1.4567 – 1.4577)	37.10 (1.461)
	O.D.	57.749 – 57.768 (2.2736 – 2.2743)	57.73 (2.273)
Starter clutch outer I.D.		74.414 – 74.440 (2.9297 – 2.9307)	74.46 (2.931)

CRANKSHAFT/TRANSMISSION SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Crankshaft	Connecting rod big end 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)	0.07 (0.003)
	Main journal oil clearance		0.020 – 0.038 (0.0008 – 0.0015)	0.07 (0.003)
	Crankshaft runout		–	0.03 (0.001)
	Main journal O.D.		52.976 – 52.994 (2.0857 – 2.0864)	52.976 (2.0857)
Main journal I.D.			58.010 – 58.022 (2.2839 – 2.2843)	58.070 (2.2862)
Shift fork, fork shaft	I.D.		13.000 – 13.018 (0.5118 – 0.5125)	13.03 (0.513)
	Claw thickness		5.93 – 6.00 (0.233 – 0.236)	5.6 (0.22)
	Fork shaft O.D.		12.966 – 12.984 (0.5105 – 0.5112)	12.90 (0.508)
Shift drum O.D.			11.966 – 11.984 (0.4711 – 0.4718)	11.94 (0.470)
Shift drum journal I.D.			12.000 – 12.018 (0.4724 – 0.4731)	12.05 (0.474)
Shift drum-to-shift drum journal clearance			0.016 – 0.042 (0.0006 – 0.0017)	0.09 (0.035)
Transmission	Gear I.D.	M3	28.020 – 28.041 (1.1031 – 1.1040)	28.06 (1.105)
		M5	28.000 – 28.021 (1.1024 – 1.1032)	28.04 (1.104)
		C1, C4	31.000 – 31.025 (1.2204 – 1.2215)	31.05 (1.222)
		C2	27.991 – 28.012 (1.1020 – 1.1070)	28.030 (1.1035)
	Gear busing O.D.	M3	27.979 – 28.000 (1.1015 – 1.1024)	27.960 (1.1008)
		M5	27.959 – 27.980 (1.1007 – 1.1016)	27.940 (1.1000)
		C1, C4	30.950 – 30.975 (1.2185 – 1.2195)	30.93 (1.218)
	Gear-to-bushing clearance	M3, M5	0.020 – 0.062 (0.0008 – 0.0024)	0.08 (0.003)
		C1, C4	0.025 – 0.075 (0.0010 – 0.0030)	0.11 (0.004)
	Gear bushing I.D.	M3	25.000 – 25.021 (0.9843 – 0.9851)	25.04 (0.985)
	Mainshaft O.D.	at M3	24.959 – 24.980 (0.9826 – 0.9835)	24.94 (0.982)
	Countershaft O.D.	at C2	23.971 – 23.984 (0.9437 – 0.9443)	23.950 (0.9429)
	Bushing-to-shaft clearance	M3	0.020 – 0.062 (0.0008 – 0.0024)	0.08 (0.003)
Output drive train	Output gear I.D.		24.000 – 24.021 (0.9449 – 0.9457)	24.04 (0.946)
	Output gear bushing	O.D.	23.959 – 23.980 (0.9433 – 0.9441)	23.70 (0.933)
		I.D.	20.020 – 20.041 (0.7882 – 0.7890)	20.06 (0.790)
	Output drive gear shaft O.D.		19.979 – 20.000 (0.7866 – 0.7874)	19.97 (0.786)
	Gear-to-bushing clearance		0.020 – 0.062 (0.0008 – 0.0024)	0.082 (0.0032)
	Gear bushing-to-shaft clearance		0.020 – 0.042 (0.0008 – 0.0016)	0.08 (0.003)
	Output gear damper spring free length		66.9 (2.63)	63 (2.48)
	Output drive gear backlash		0.08 – 0.23 (0.003 – 0.009)	0.40 (0.016)
	Backlash difference between measurements		–	0.10 (0.004)

FINAL DRIVE SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT
Recommended final drive oil		Hypoid gear oil, SAE #80	–
Final drive oil capacity	After draining	130 cm^3 (4.3 US oz, 4.5 Imp oz)	–
	After disassembly	150 cm^3 (5.1 US oz, 5.3 Imp oz)	–
Final drive gear backlash		0.05 – 0.15 (0.002 – 0.006)	0.30 (0.012)
Backlash difference between measurements		–	0.10 (0.004)
Ring gear-to-stop pin clearance		0.30 – 0.60 (0.012 – 0.024)	–
Final drive gear assembly preload		0.2 – 0.4 N·m (2 – 4 kgf·cm, 1.7 – 3.5 lbf·ft)	–

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/cm², 36 psi)	–
	Driver and passenger	250 kPa (2.50 kgf/cm², 36 psi)	–
Axle runout		–	0.2 (0.01)
Wheel rim runout	Radial	–	2.0 (0.08)
	Axial	–	2.0 (0.08)
Wheel balance weight		–	60 g (2.1oz) max.
Fork	Spring free length	426.1 (16.78)	417.6 (16.44)
	Tube runout	–	0.20 (0.008)
	Recommended fork fluid	Honda ULTRA CUSHION OIL 10W or equivalent	–
	Fluid level	124 (4.9)	–
	Fluid capacity	464 ± 2.5 cm³ (15.7 ± 0.08 US oz, 16.3 ± 0.09 Imp oz)	–
Steering head bearing preload		8.3 – 13.5 N (0.8 – 1.4 kgf)	–

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/cm², 42 psi)	–
	Driver and passenger	290 kPa (2.90 kgf/cm², 42 psi)	–
Axle runout		–	0.20 (0.008)
Wheel rim runout	Radial	–	2.0 (0.08)
	Axial	–	2.0 (0.08)
Wheel balance weight		–	60 g (2.1 oz) max.
Shock absorber spring preload adjuster setting		8 position from full out	–

HYDRAULIC BRAKE SPECIFICATIONS

Unit: mm (in)

ITEM			STANDARD	SERVICE LIMIT
Specified brake fluid			DOT 4	–
Front	Brake disc thickness		4.3 – 4.7 (0.17 – 0.19)	3.5 (0.14)
	Brake disc warpage		–	0.30 (0.012)
	Master cylinder I.D.		12.700 – 12.743 (0.4724 – 0.5016)	12.755 (0.5022)
	Master piston O.D.		12.657 – 12.684 (0.4983 – 0.4994)	12.645 (0.4978)
	Right caliper cylinder I.D.	Front	22.650 – 22.700 (0.8917 – 0.8937)	22.712 (0.8942)
		Center	22.650 – 22.700 (0.8917 – 0.8937)	22.712 (0.8942)
		Rear	22.650 – 22.700 (0.8917 – 0.8937)	22.712 (0.8942)
	Left caliper cylinder I.D.	Front	22.650 – 22.700 (0.8917 – 0.8937)	22.712 (0.8942)
		Center	25.400 – 25.450 (1.0000 – 1.0020)	25.462 (1.0024)
		Rear	22.650 – 22.700 (0.8917 – 0.8937)	22.712 (0.8942)
	Right caliper piston O.D.	Front	22.585 – 22.618 (0.8892 – 0.8905)	22.560 (0.8882)
		Center	22.585 – 22.618 (0.8892 – 0.8905)	22.560 (0.8882)
		Rear	22.585 – 22.618 (0.8892 – 0.8905)	22.560 (0.8882)
	Left caliper piston O.D.	Front	22.585 – 22.618 (0.8892 – 0.8905)	22.560 (0.8882)
		Center	25.318 – 25.368 (0.9968 – 0.9987)	25.310 (0.9965)
		Rear	22.585 – 22.618 (0.8892 – 0.8905)	22.560 (0.8882)
Rear	Brake disc thickness		5.8 – 6.2 (0.23 – 0.24)	5.0 (0.20)
	Brake disc warpage		–	0.30 (0.012)
	Master cylinder I.D.		17.460 – 17.503 (0.6874 – 0.6891)	17.515 (0.6896)
	Master piston O.D.		17.417 – 17.444 (0.6857 – 0.6868)	17.405 (0.6852)
	Caliper cylinder I.D.		32.030 – 32.080 (1.2610 – 1.2630)	32.090 (1.2633)
	Caliper piston O.D.		31.948 – 31.998 (1.2578 – 1.2594)	31.940 (1.2575)

BATTERY/CHARGING SYSTEM SPECIFICATIONS

ITEM			SPECIFICATIONS
Battery	Capacity		12V – 14 Ah
	Current leakage		1 mA max.
	Voltage (20°C/68°F)	Fully charged	13.0 – 13.2 V
		Needs charging	Below 12.3 V
	Charging current	Normal	1.1 A/5 – 10 h
		Quick	5.5 A/1.0 h
Alternator	Capacity		452 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	Standard	CPR8EA-9 (NGK)
Spark plug gap		0.8 – 0.9 mm (0.031 – 0.035 in)
Ignition coil primary peak voltage		100 V minimum
CKP sensor peak voltage		0.7 V minimum
Ignition timing ("F"mark)		10° BTDC at idle

ELECTRIC STARTER SPECIFICATIONS

Unit: mm (in)

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

LIGHTS/METERS/SWITCHES SPECIFICATIONS

ITEM		SPECIFICATIONS
Bulbs	Headlight (High)	12 V – 55 W
	Headlight (Low)	12 V – 55 W
	Position light	12 V – 5 W
	Brake/taillight	12 V – 21/5 W x 2
	License light	12 V – 5 W
	Front turn signal light	12 V – 21 W x 2
	Rear turn signal light	12V – 21 W x 2
	Instrument light	LED x 14
	Turn signal indicator	LED
	High beam indicator	LED
	Neutral indicator	LED
	Oil pressure indicator	LED
	Immobilizer indicator	LED
Fuse (NT700V)	Main fuse	30 A
	Sub fuse	20 A x 3, 10 A x 5
Fuse (NT700VA)	Main fuse	30 A
	Sub fuse	30 A x 2, 20 A x 3, 10 A x 6

STANDARD TORQUE VALUES

FASTENER TYPE	N·m (kgf·m, lbf·ft)	FASTENER TYPE	N·m (kgf·m, lbf·ft)
5 mm hex bolt and nut	5.2 (0.5, 3.8)	5 mm screw	4.2 (0.4, 3.2)
6 mm hex bolt and nut	10 (1.0, 7)	6 mm screw	9.0 (0.9, 6.6)
8 mm hex bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	10 (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	27 (2.8, 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.

ENGINE

FRAME/BODY PANELS/EXHAUST SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Left crankcase rear cover bolt	1	6	13 (1.3, 9)	CT bolt

MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Spark plug	2	10	16 (1.6, 12)	
Timing hole cap	1	14	10 (1.0, 7)	Apply engine oil to the threads and flange surface
Crankshaft hole cap	1	30	15 (1.5, 11)	Apply engine oil to the threads and flange surface
Valve adjusting screw lock nut	8	7	23 (2.3, 17)	Apply engine oil to the threads and flange surface
Engine oil filter cartridge	1	20	26 (2.7, 20)	
Engine oil drain bolt	1	14	30 (3.1, 22)	

LUBRICATION SYSTEM

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)	Apply sealant to the threads
Oil pressure switch terminal screw	1	4	1.9 (0.2, 1.4)	
Oil cooler bolt	1	20	64 (6.5, 47)	Apply engine oil to the threads
Oil pump assembly bolt	3	6	13 (1.3, 9)	CT bolt

FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
ECT sensor	1	12	24.5 (2.5, 18)	
Throttle body clamp screw	1	5	2.1 (0.2, 1.5)	
IACV screw	3	5	3.4 (0.3, 2.5)	
Set plate torx screw	2	5	2.1 (0.2, 1.5)	
Throttle cable guide screw	2	5	3.4 (0.3, 2.5)	
Fuel injector mounting bolt	4	5	5.4 (0.6, 4.0)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Water pump cover bolt	5	6	13 (1.3, 9)	CT bolt

CYLINDER HEAD/VALVE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder head cover bolt	8	6	10 (1.0, 7)	
Cylinder head bolt	4	8	23 (2.3, 17)	Apply engine oil to the threads and flange surface
Cylinder head nut	8	10	40 (4.1, 30)	Apply engine oil to the threads and flange surface
Cam sprocket bolt	4	7	23 (2.3, 17)	Apply a locking agent
Cam chain tensioner bolt	4	6	10 (1.0, 7)	
Camshaft holder bolt	12	8	23 (2.3, 17)	Apply engine oil to the threads and flange surface
Reed valve cover bolt	4	5	5.2 (0.5, 3.7)	CT bolt
Cylinder head sealing bolt	2	18	44 (4.5, 32)	Apply a locking agent

CYLINDER/PISTON

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder stud bolt	2	12	–	page 10-8
Cylinder stud bolt	6	10	–	page 10-8

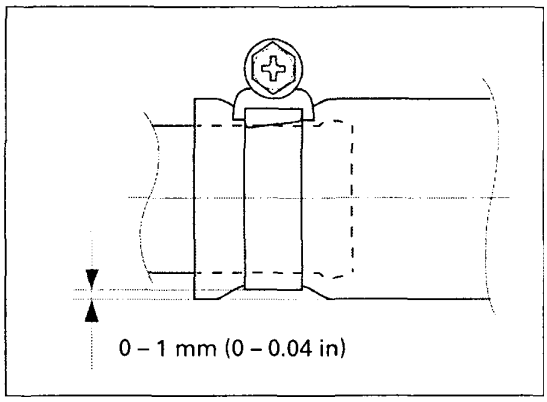
CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch lifter plate bolt	4	6	12 (1.2, 9)	
Clutch center lock nut	1	18	128 (13.1, 95)	Apply engine oil to the threads and flange surface Stake
Oil pump driven sprocket bolt	1	6	15 (1.5, 11)	Apply a locking agent
Primary drive gear bolt	1	12	88 (9.0, 65)	Apply engine oil to the threads and flange surface
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
Flywheel bolt	1	12	157 (16.0, 116)	Left hand threads Replace with a new one
Stator socket bolt	4	6	12 (1.2, 9)	Apply a locking agent
Starter one-way clutch outer torx bolt	6	8	30 (3.1, 22)	Apply a locking agent
Stator wire holder socket bolt	1	6	12 (1.2, 9)	Apply a locking agent

WATER HOSE BAND SCREW:



CRANKSHAFT/TRANSMISSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Crankcase bolt, 8 mm	13	8	23 (2.3, 17)	
Crankcase bolt, 6 mm	5	6	12 (1.2, 9)	
Crank pin bearing cap nut	4	9	42 (4.3, 31)	Apply engine oil to the threads and flange surface
Output gear case mounting bolt	3	8	31 (3.2, 23)	Apply sealant to the threads
Output drive gear bearing holder bolt	2	8	31 (3.2, 23)	Apply engine oil to the threads and flange surface
Output driven gear bearing holder socket bolt	4	8	31 (3.2, 23)	Apply engine oil to the threads and flange surface
Output drive gear bearing lock nut (inner)	1	30	73 (7.4, 54)	Apply engine oil to the threads and flange surface Stake
(outer)	1	64	98 (10.0, 72)	Apply engine oil to the threads and flange surface Stake
Output driven gear bearing lock nut (inner)	1	30	137 (14.0, 101)	Apply engine oil to the threads and flange surface Stake
(outer)	1	64	98 (10.0, 72)	Apply engine oil to the threads and flange surface Stake
Output drive gear shaft bolt	1	10	49 (5.0, 36)	Apply engine oil to the threads
Oil seal stopper plate bolt	1	6	13 (1.3, 9)	CT bolt

ELECTRIC STARTER/STARTER CLUTCH

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Starter motor cable terminal nut	1	6	10 (1.0, 7)	
Starter motor cover bolt	2	5	4.9 (0.5, 3.6)	

LIGHTS/METERS/SWITCHES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Neutral switch	1	10	12 (1.2, 9)	

FRAME

FRAME/BODY PANELS/EXHAUST SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Upper cowl stay flange bolt	2	10	49 (5.0, 36)	
Seat rail upper flange bolt	2	12	59 (6.0, 44)	
Seat rail lower flange bolt	2	12	59 (6.0, 44)	
Rear fender bolt (upper/lower)	4	6	12 (1.2, 9)	
Rear fender bolt (side)	2	6	7.0 (0.7, 5.2)	
Exhaust pipe joint nut	4	8	25 (2.5, 18)	
Muffler band bolt	2	8	17 (1.7, 13)	
Main stand pivot bolt	1	6	12 (1.2, 9)	

MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Final drive oil filler cap	1	30	12 (1.2, 9)	

FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fuel pump mounting nut	6	6	12 (1.2, 9)	
Fuel filler cap	1	4	1.8 (0.2, 1.3)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Thermostat housing cover bolt	2	6	9.8 (1.0, 7)	

ENGINE MOUNTING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Engine hanger bolt (Front low; A)	2	10	39 (4.0, 29)	
Engine hanger cross plate bolt	2	8	27 (2.8, 20)	
Engine hanger cross plate nut	2	8	27 (2.8, 20)	
Engine hanger bolt (Rear up; C)	1	10	39 (4.0 29)	Apply engine oil to the threads and flange surface
Engine hanger bolt (Rear low; D)	1	10	39 (4.0 29)	Apply engine oil to the threads and flange surface

CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Gearshift pedal pivot bolt	1	8	27 (2.8, 20)	

FINAL DRIVE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Pinion retainer	1	64	108 (11.0, 80)	
Pinion retainer lock plate bolt	1	6	10 (1.0, 7)	
Pinion joint nut	1	16	108 (11.0, 80)	Apply a locking agent
Dust guard plate bolt	1	6	10 (1.0, 7)	
Gear case cover bolt	2	10	47 (4.8, 35)	Apply a locking agent
Gear case cover bolt	6	8	25 (2.6, 19)	
Final gear case assembly mounting nut	4	10	64 (6.5, 47)	UBS nut
Final gear case stud bolt	4	10	–	page 14-22

FRONT WHEEL/SUSPENSION/STEERING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch lever pivot bolt	1	6	1.0 (0.1, 0.7)	
Clutch lever pivot nut	1	6	5.9 (0.6, 4.3)	
Handlebar holder bolt	4	8	27 (2.8, 20)	
Front axle	1	14	59 (6.0, 44)	
Front axle pinch bolt	4	8	22 (2.2, 16)	
Front brake disc bolt	12	8	42 (4.3, 31)	ALOC bolt; replace with a new one
Fork center socket bolt	2	10	20 (2.0, 15)	Apply a locking agent
Fork cap	2	36	22 (2.2, 16)	
Fork top bridge pinch bolt	2	8	23 (2.3, 17)	
Fork bottom bridge pinch bolt	2	10	39 (4.0, 29)	
Steering top thread	1	26	page 15-30	
Steering top thread lock nut	1	26	page 15-30	
Steering stem nut	1	24	103 (10.5, 76)	

REAR WHEEL/BRAKE/SUSPENSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Rear axle nut	1	18	89 (9.1, 66)	U-nut
Rear axle pinch bolt	1	8	32 (3.3, 24)	
Rear shock absorber upper mounting bolt	1	10	44 (4.5, 32)	U-nut
Rear shock absorber lower mounting bolt	1	10	44 (4.5, 32)	U-nut
Swingarm pivot nut	1	18	127 (13, 74)	U-nut
Rear brake disc bolt	8	6	42 (4.3, 31)	ALOC bolt; replace with a new one
Stopper plate bolt	5	6	20 (2.0, 15)	ALOC bolt; replace with a new one

HYDRAULIC BRAKE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Brake caliper bleed valve	4	8	5.4 (0.6, 4.0)	
Front master cylinder reservoir cap screw	2	4	1.5 (0.2, 1.1)	
Brake pad pin	3	10	17.2 (1.8, 13)	
Brake hose oil bolt	6	10	34 (3.5, 25)	
Brake pipe nut	7	10	17 (1.7, 13)	Apply brake fluid to the threads
Front brake hose clamper bolt	1	6	12 (1.2, 9)	
Brake lever pivot bolt	1	6	1.0 (0.1, 0.7)	
Brake lever pivot nut	1	6	6.0 (0.6, 4.4)	
Front brake light switch screw	1	4	1.2 (0.1, 0.9)	
Front master cylinder holder bolt	2	6	12 (1.2, 9)	
Front brake caliper bracket pin	2	8	12 (1.2, 9)	Apply a locking agent
Rear master cylinder holder bolt	2	6	12 (1.2, 9)	ALOC bolt; replace with a new one
Rear brake reservoir joint screw	1	4	1.5 (0.2, 1.1)	Apply a locking agent
Rear master cylinder lower joint lock nut	1	8	17.2 (1.8, 1.3)	
Front brake caliper pin	2	8	22 (2.2, 16)	Apply a locking agent
Front brake caliper mounting bolt	4	8	31 (3.2, 23)	ALOC bolt; replace with a new one
Rear brake caliper bracket pin	1	8	22 (2.2, 16)	Apply a locking agent
Rear brake caliper pin	1	12	27 (2.8, 20)	
Rear brake caliper stopper bolt	1	18	89 (9.1, 66)	
Proportional control valve mounting bolt	2	6	12 (1.2, 9)	

ABS

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Modulator stay bolt	3	6	12 (1.2, 9)	ALOC bolt; replace with a new one
Pulser ring bolt	6	5	7.0 (0.7, 5.2)	

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)	
Ignition switch mounting bolt	2	8	24 (2.4, 18)	

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 lock nut	1	10	29 (3.0, 22)	
Step holder bolt	4	8	27 (2.8, 20)	

LUBRICATION & SEAL POINTS

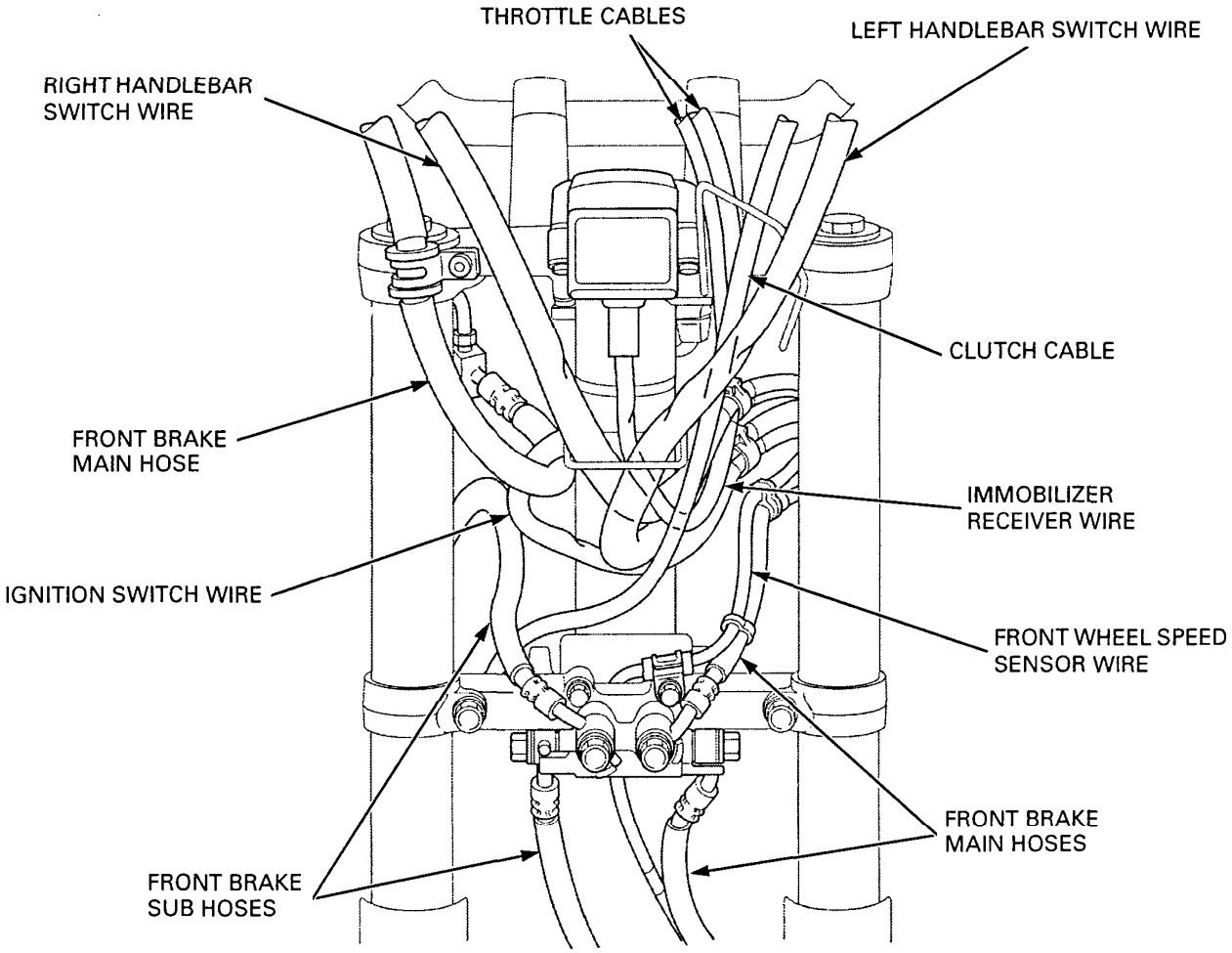
ENGINE

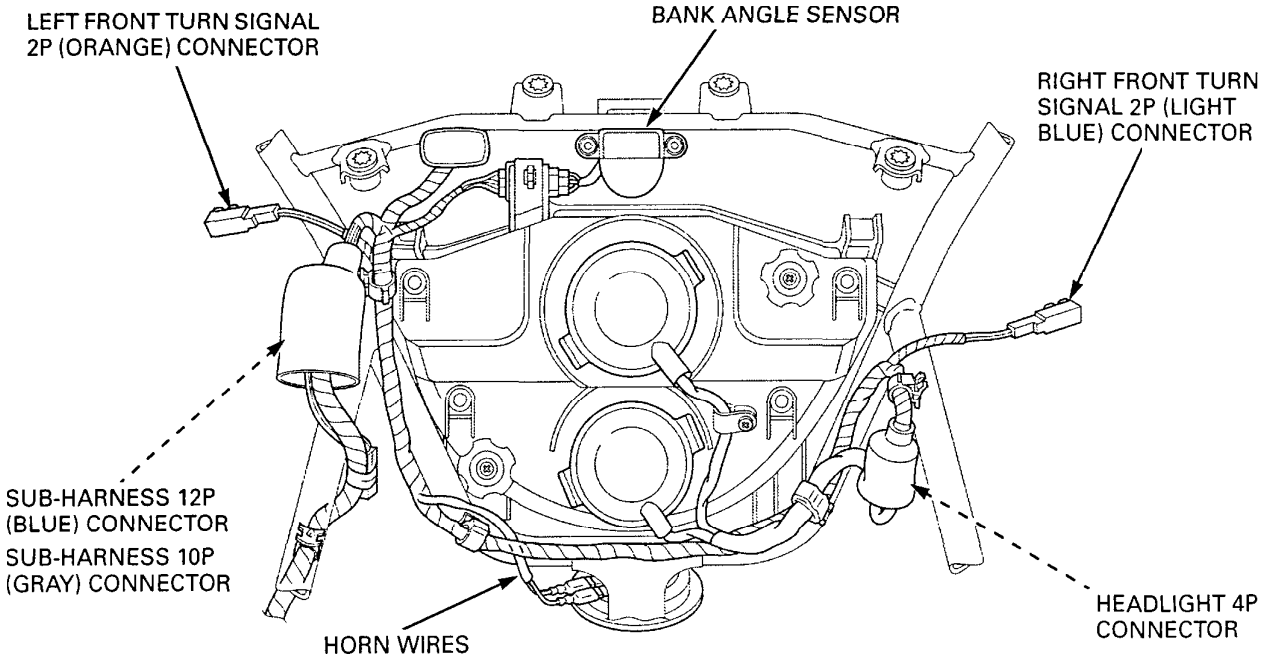
MATERIAL	LOCATION	REMARKS
Molybdenum disulfide oil	Camshaft lobes/journals Valve stem (valve guide sliding surface) Rocker arm slipper surface Rocker arm shaft outer surface Crankpin bearing surface Crankshaft journals Clutch outer guide outer surface Transmission gear shift fork groove Transmission bushing inner and outer surface Transmission spline bushing outer surface Connecting rod small end inner surface	
Engine oil	Piston outer surface Piston ring outer surface Piston pin outer surface Primary drive gear bolt threads and seating surface Flywheel bolt threads and seating surface Starter one-way clutch sprag Starter idle and reduction gear shaft outer surface Clutch center lock nut threads Clutch lifer arm-to-right crankcase cover sliding surface Clutch lifer piece-to-right crankcase cover sliding surface Clutch disc outer surface Cylinder stud bolt threads Cylinder head 8 mm bolt threads and seating surface Valve adjusting screw lock nut threads and seating surface Connecting rod bolt/nut threads and seating surface Cylinder head mounting bolt and nut seating surface Transmission gear tooth Oil cooler bolt threads Oil filter cartridge threads and O-ring Each bearings rotating area Each O-rings	
Multi-purpose grease	Crankshaft hole cap threads Timing hole cap threads Each oil seal lips	
Sealant (Three Bond 1207B or equivalent)	Oil pressure switch threads Right and left crankcase mating surface Right crankcase cover mating surface Left crankcase cover mating surface Output gear case mounting bolt threads	Do not apply to the sealant to the head 3 – 4 mm (0.1 – 0.2 in). page 5-5 page 13-47 page 11-20 page 12-11
Sealant (Three Bond 1323B or 2415)	Left crankcase cover bolt threads	page 12-11
Locking agent	Cam sprocket bolt threads Starter one-way clutch outer bolt threads Oil pump driven sprocket bolt threads Final gear case stud bolt threads (gear case side) Stator wire holder socket bolt threads Gearshift stopper arm bolt threads Gearshift cam plate bolt threads Transmission bearing setting plate bolt threads Cam chain tensioner setting plate bolt threads Stator mounting bolt threads Cylinder head sealing bolt threads Left crankcase cover bolt threads (marked "△")	 Coating width: 6.5 ± 1 mm (0.26 ± 0.04 mm page 12-11

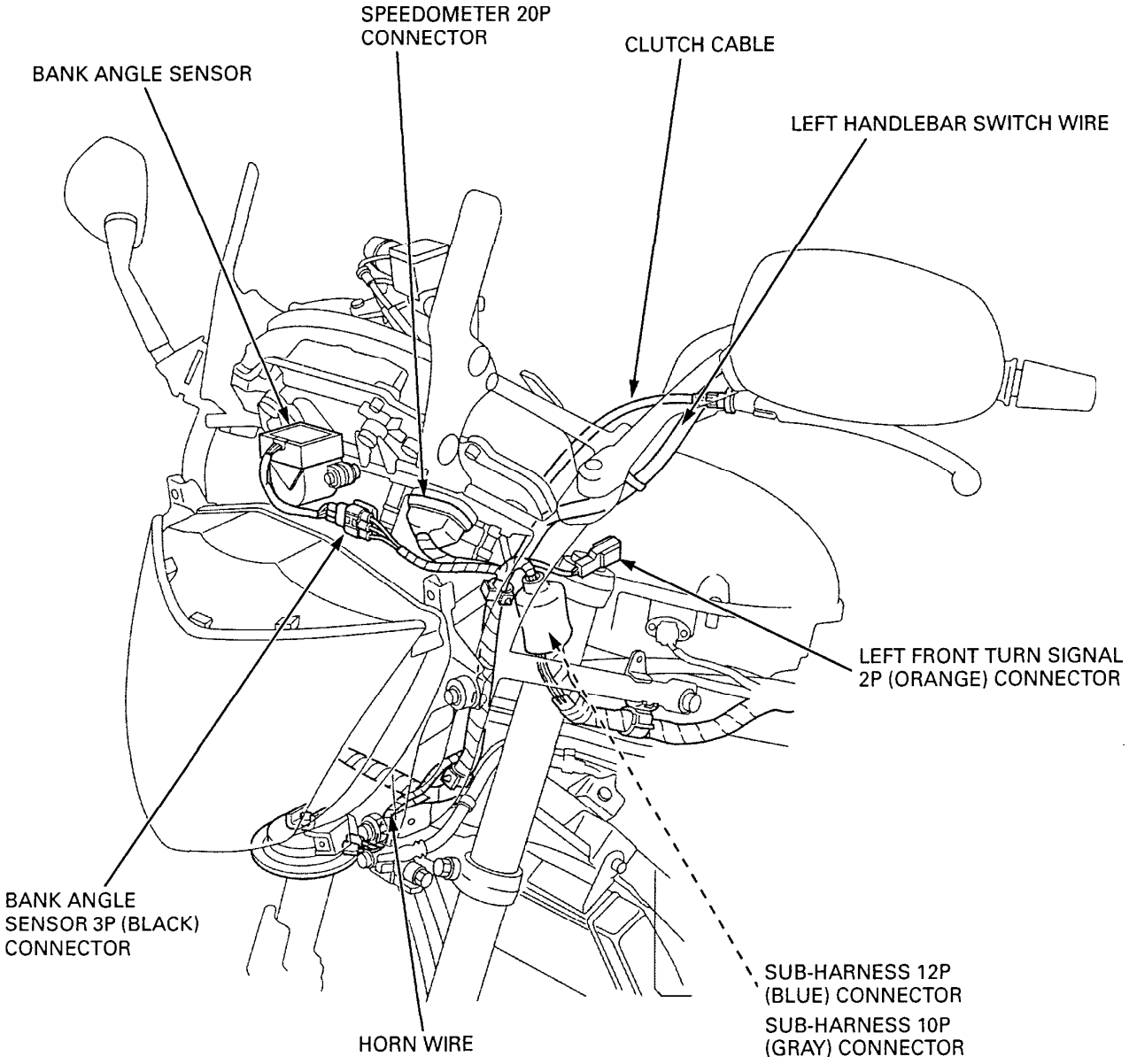
FRAME

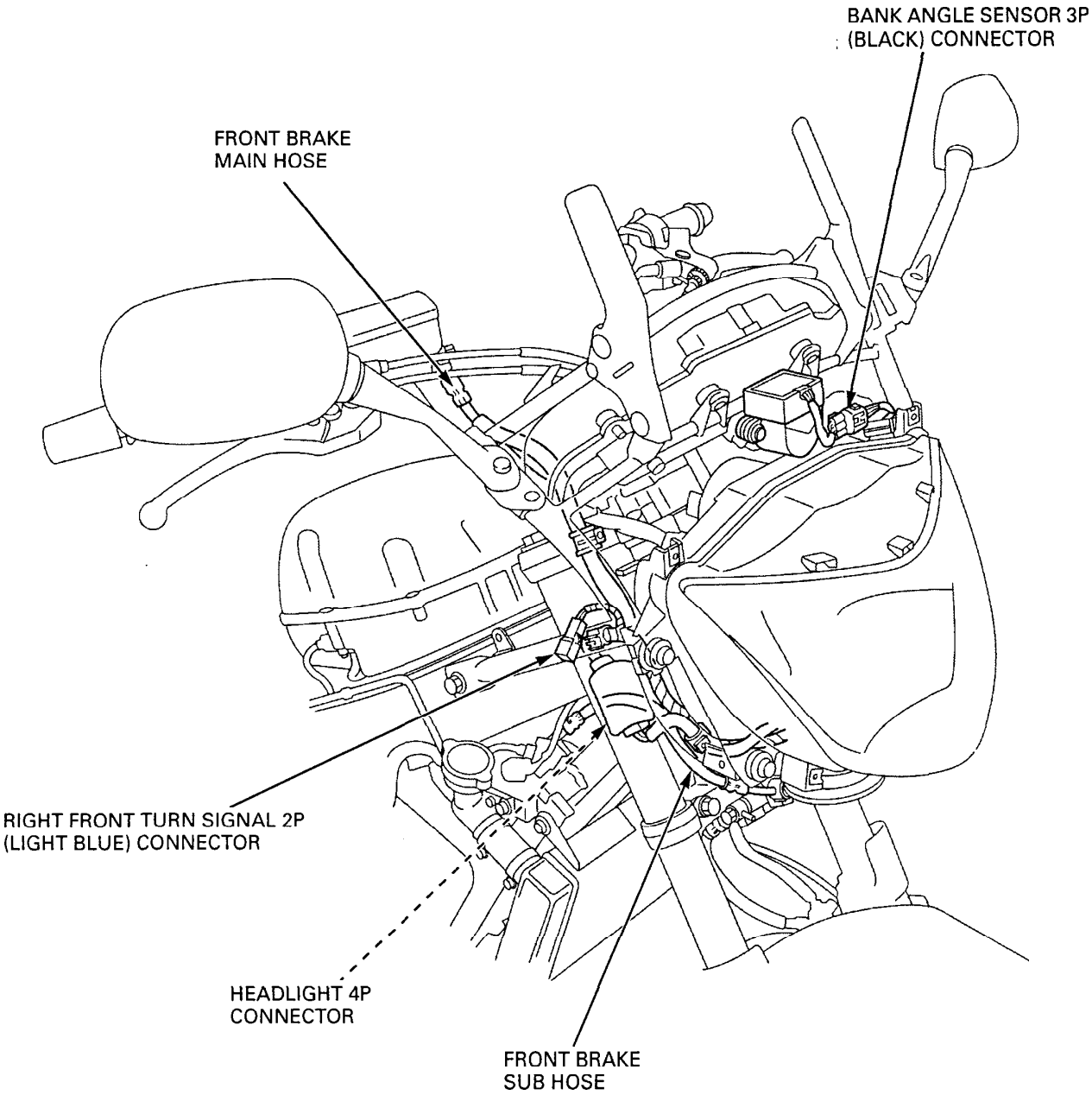
MATERIAL	LOCATION	REMARKS
Sealant	Final gear case cover mating surface	
	ECT sensor threads	Do not apply to the thread head.
Multi-purpose grease	Side stand pivot	Apply 1 g
	Throttle pipe flange and sliding surface	Spreading 0.2 – 0.3 g
	Clutch lever pivot	
	Gearshift pedal pivot thrust surface	
	Brake pedal pivot sliding surface	
	Front/rear wheel dust seal lips	
	Swingarm pivot dust seal lips	
	Swingarm pivot bearings	Apply 1.0 – 1.5 g for each bearing
	Final gear case O-ring	
	Final gear case oil seal lips	
Urea based multi-purpose grease with extreme pressure (Kyodo Yushi EXCELITE EP2, Shell stamina EP2 or equivalent)	Steering head bearings	Apply 3 – 5 g for each bearing
	Steering head bearing dust seal lips	
Molybdenum disulfide grease	Universal joint bearings	
	Drive shaft oil seal lip	Apply 0.5 g
	Drive shaft splines (universal joint side)	Apply 1 g
	Final drive pinion joint splines	Apply 2 g
Molybdenum disulfide paste	Final driven flange-to-rear wheel hub mating surface	Apply 0.5 – 1.0 g
	Output shaft splines (universal joint side)	Apply 1 g
	Final driven flange O-ring	
	Rear wheel hub O-ring groove	
	Ring gear O-ring groove and spline	Apply 4 – 5 g
	Final driven flange sliding portion	Apply 2 – 3 g
Cable lubricant	Throttle cable outer inside	
	Clutch cable outer inside	
	Choke cable outer inside	
Honda bond A or equivalent	Handlebar grip rubber inside	
Engine oil	Steering bearing top threads	
	Rear brake cam felt seal	
Silicone grease	Brake lever pivot	Apply 0.1 g
	Brake lever-to-master piston contacting area	Apply 0.1 g
	Brake caliper slide pin sliding surface	
	Brake caliper bracket pin sliding surface	
	Brake caliper and bracket pin boot inside	
DOT 4 brake fluid	Brake master piston and cups	
	Brake caliper piston and piston seals	
Honda ULTRA CUSHION OIL 10W or equivalent	Fork dust seal and oil seal lips	
	Fork cap O-ring	
Locking agent	Pinion joint nut threads	
	Final gear case cover 10 mm bolt threads	
	Fork center socket bolt threads	
	Brake caliper bracket pin threads	
	Brake caliper slide pin threads	
	Final gear case stud bolt threads	
	Steering stem cover bolt threads	

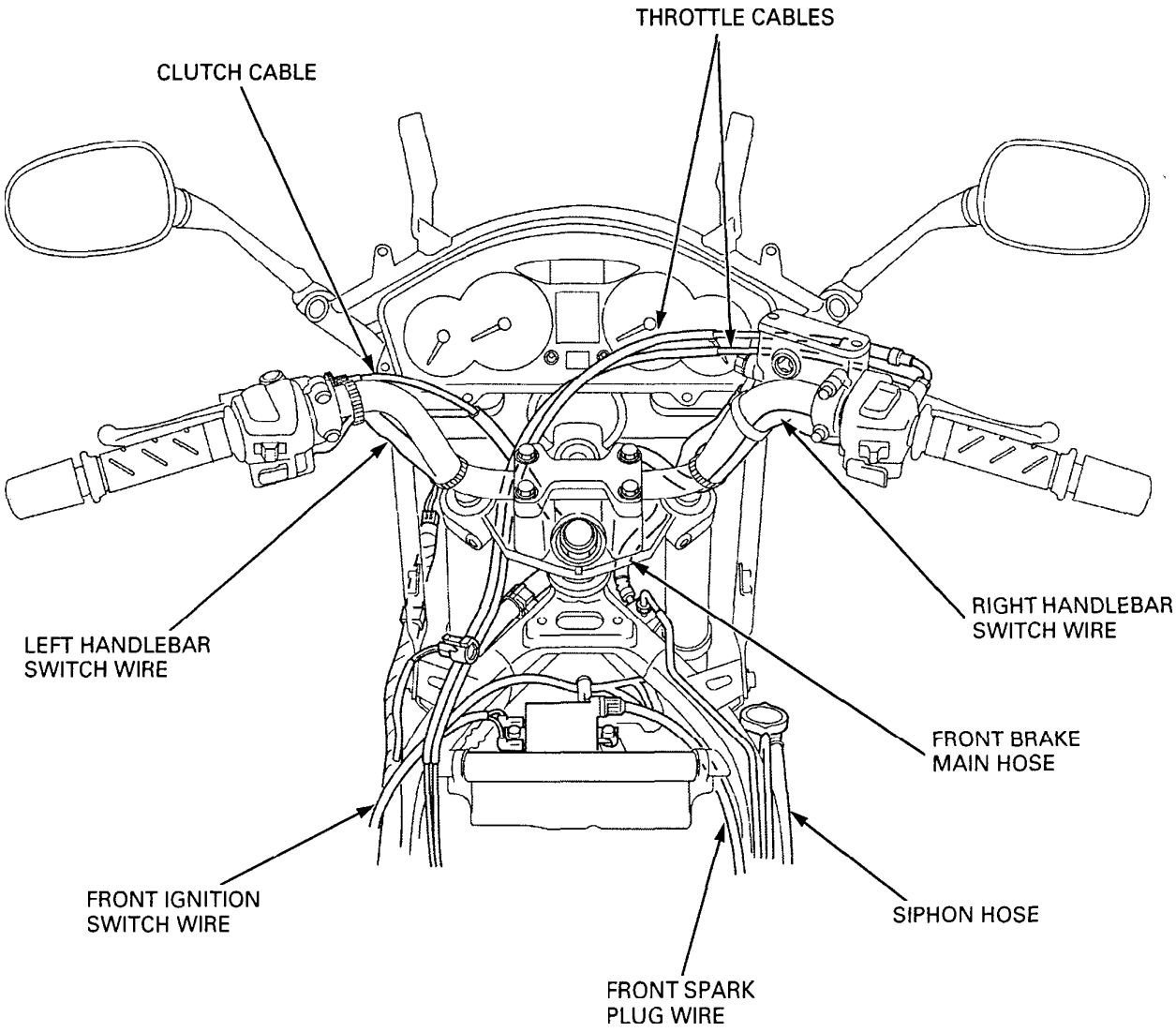
CABLE & HARNESS ROUTING (NT700VA)

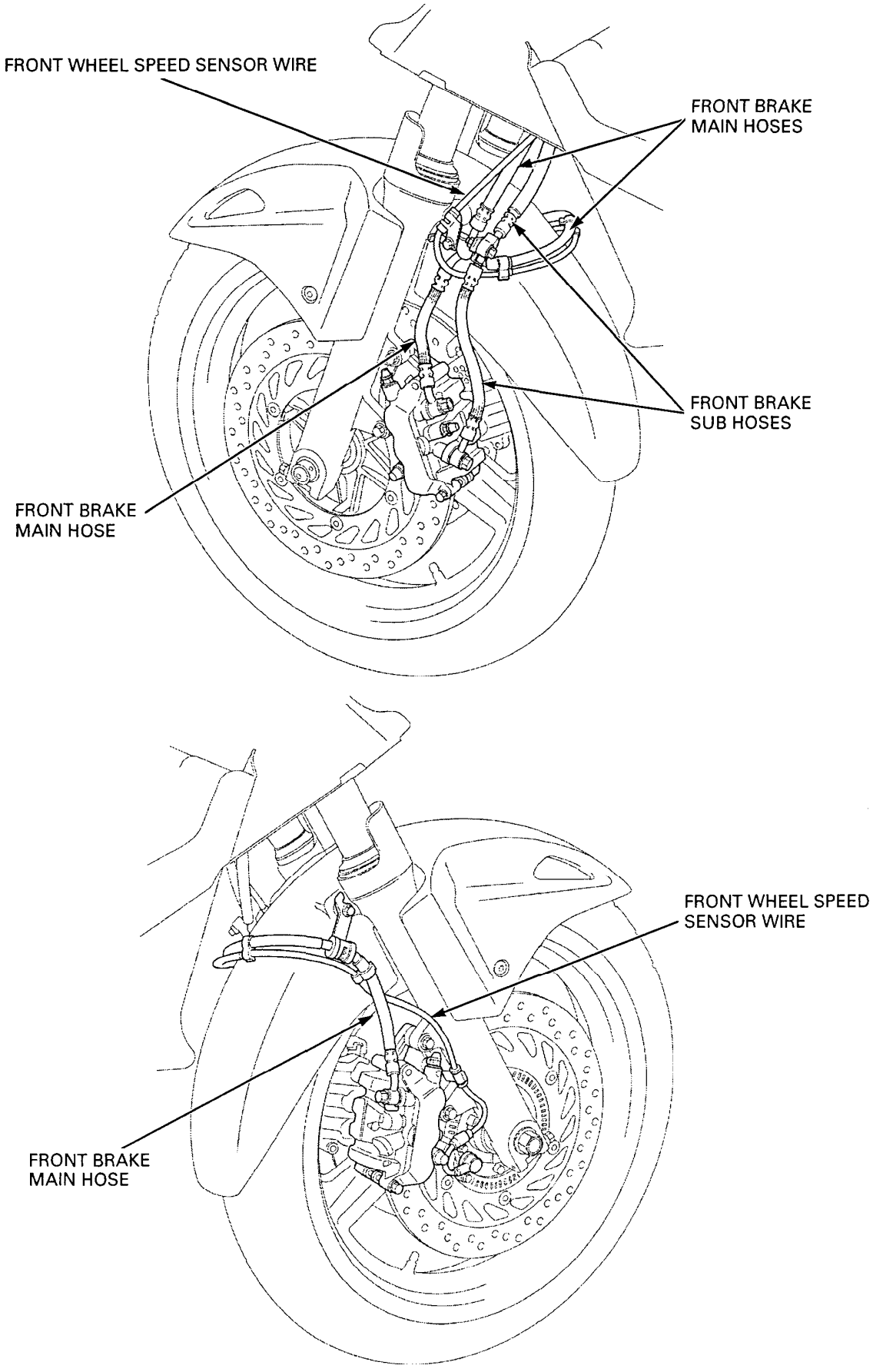


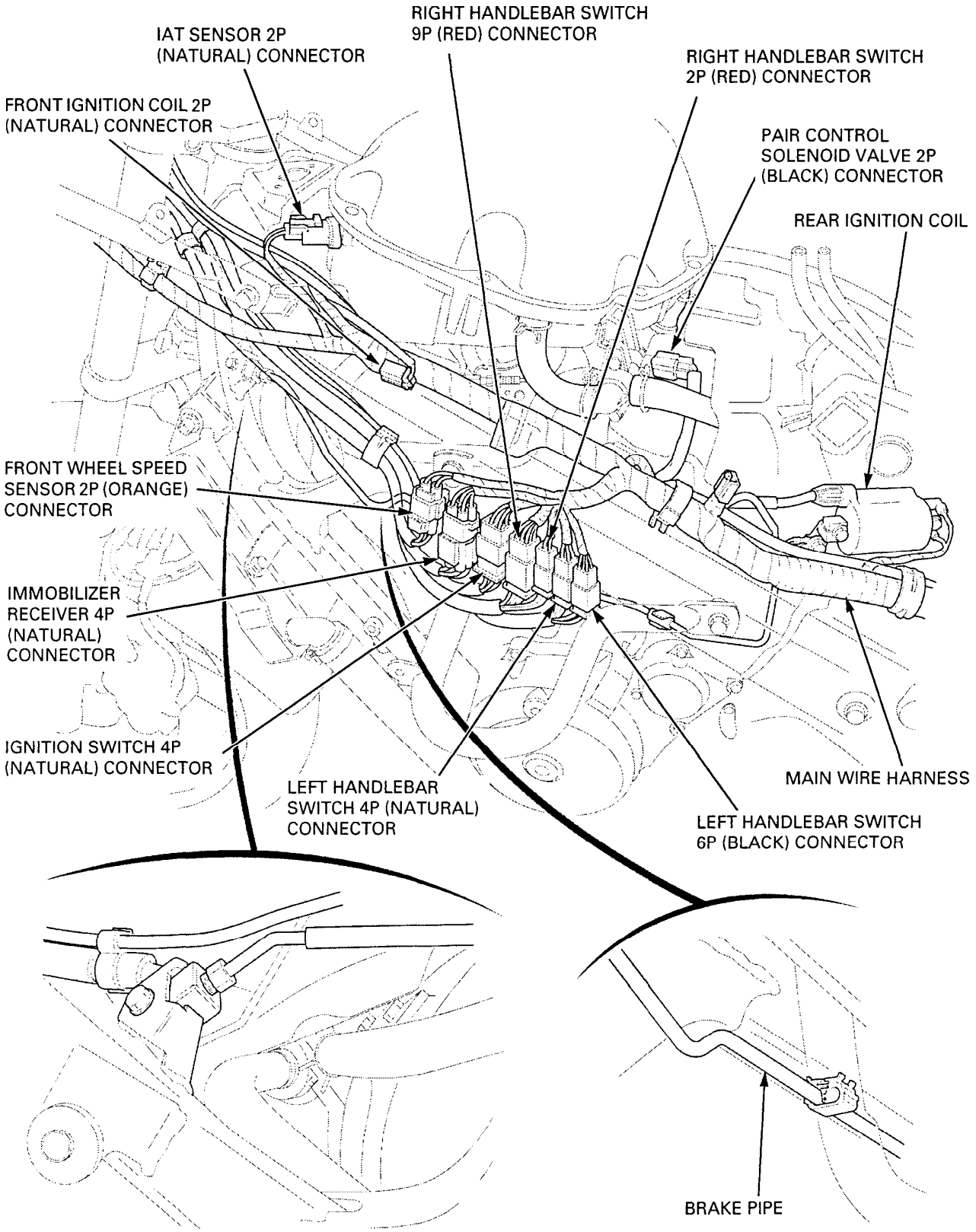


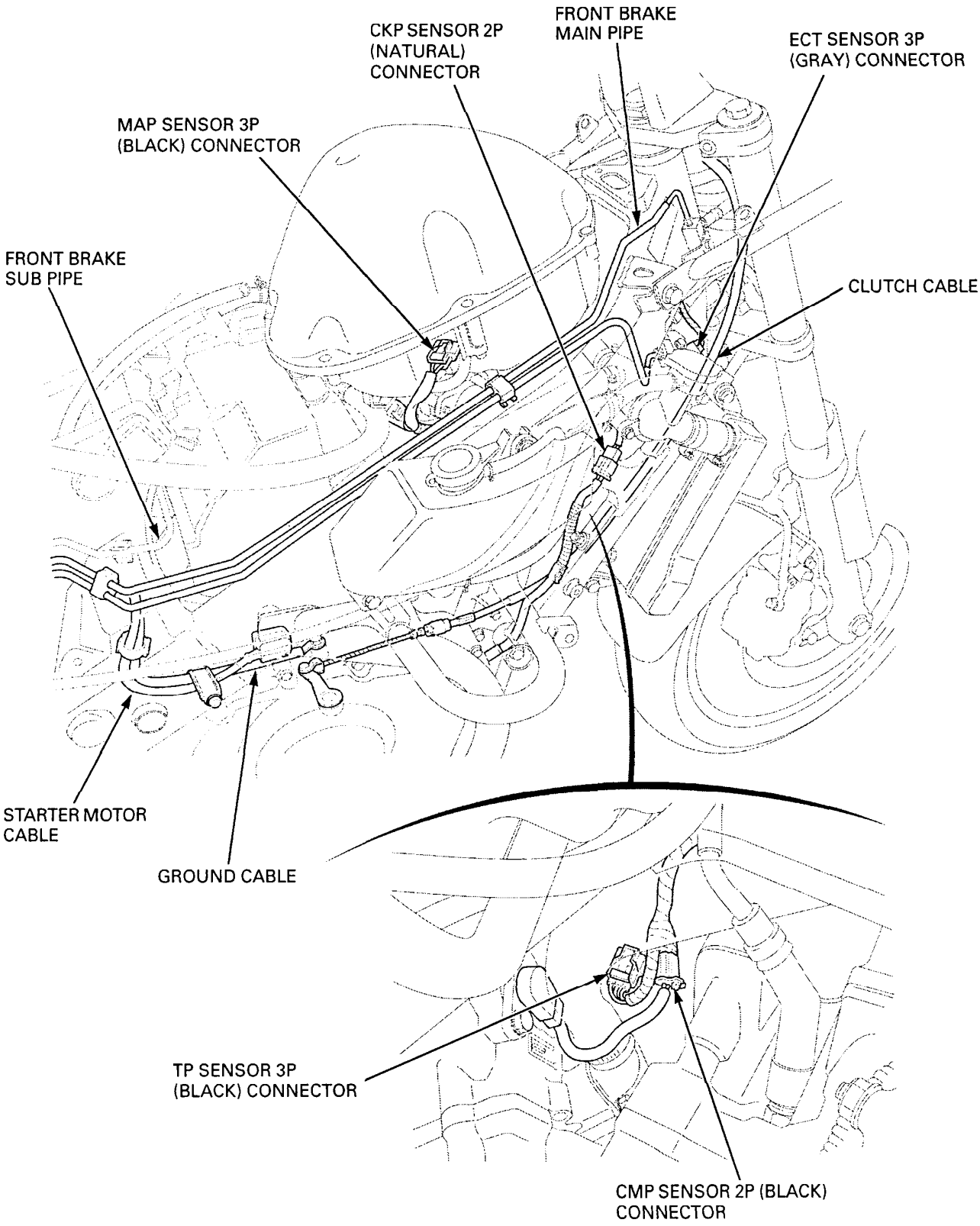


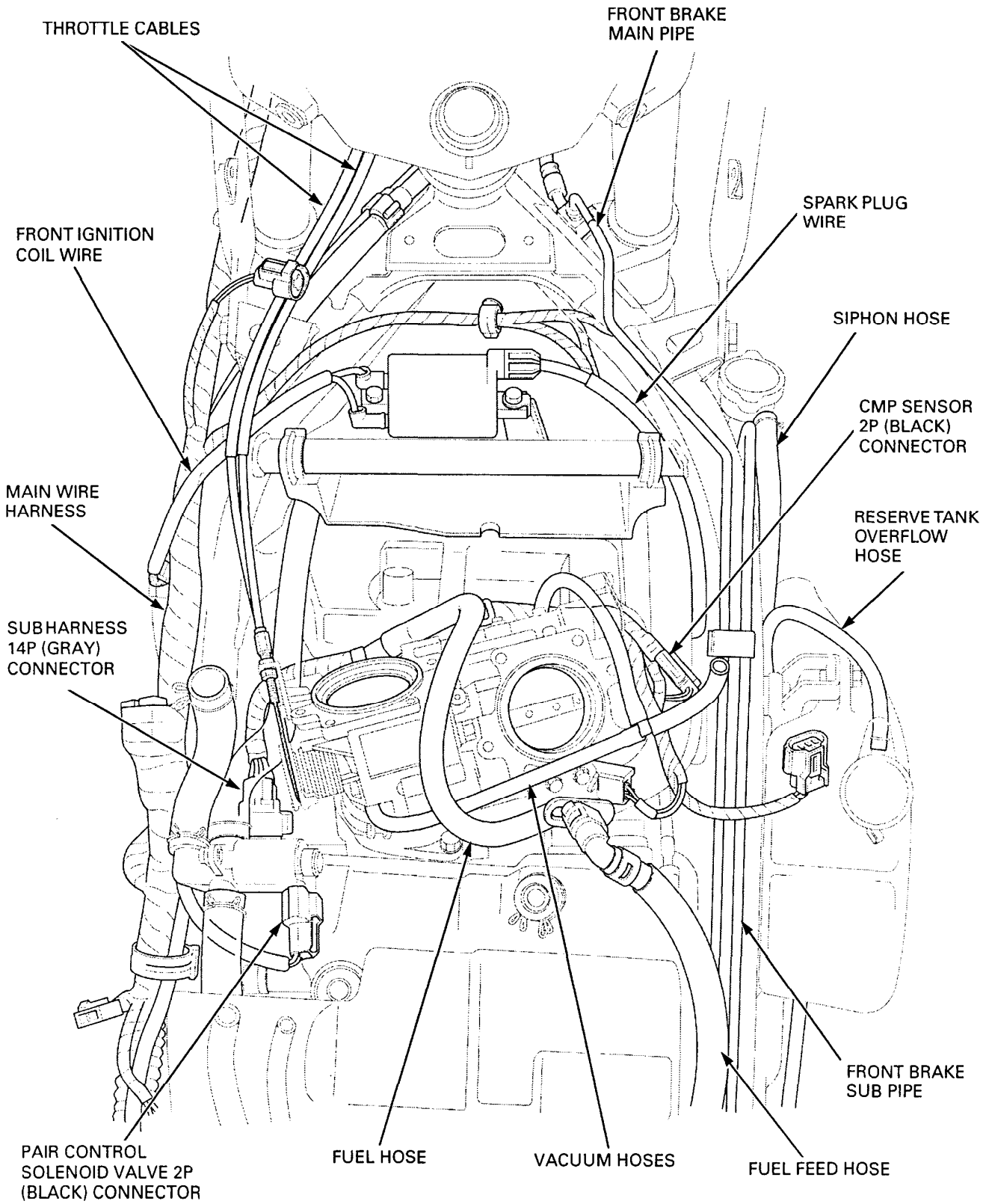


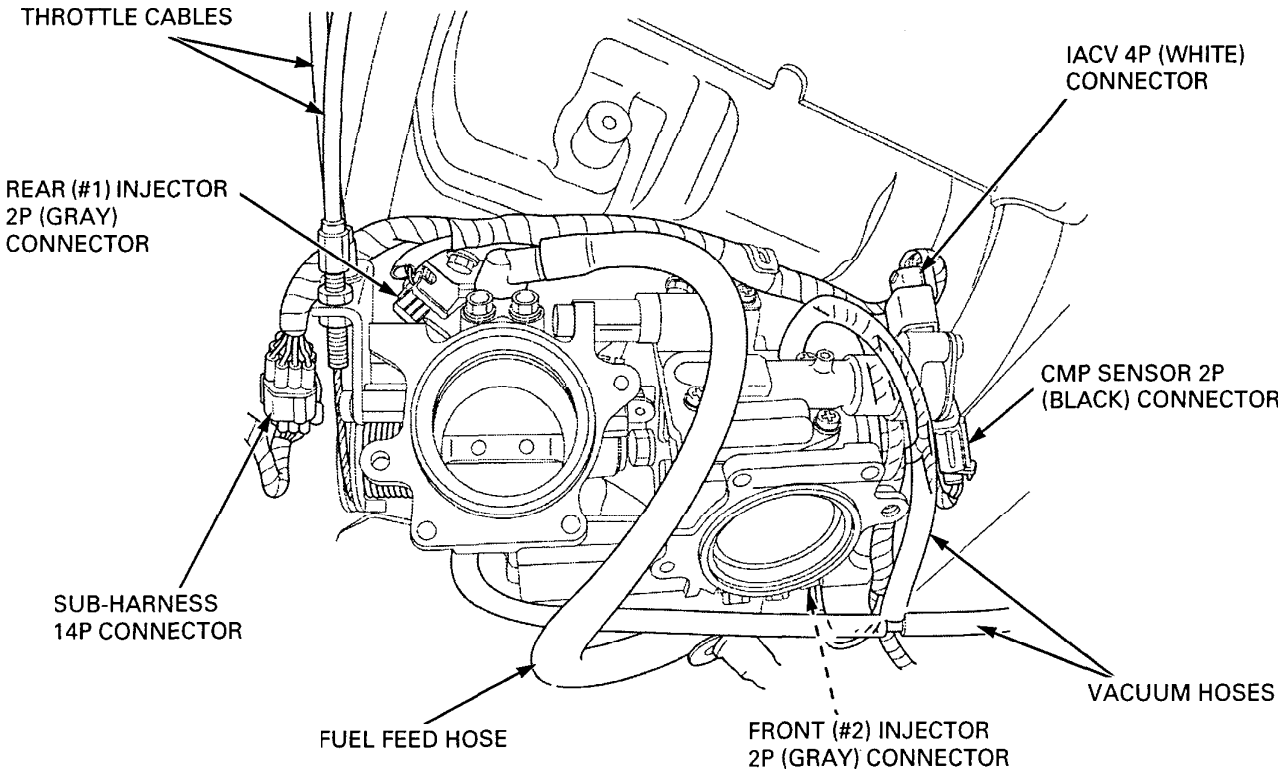


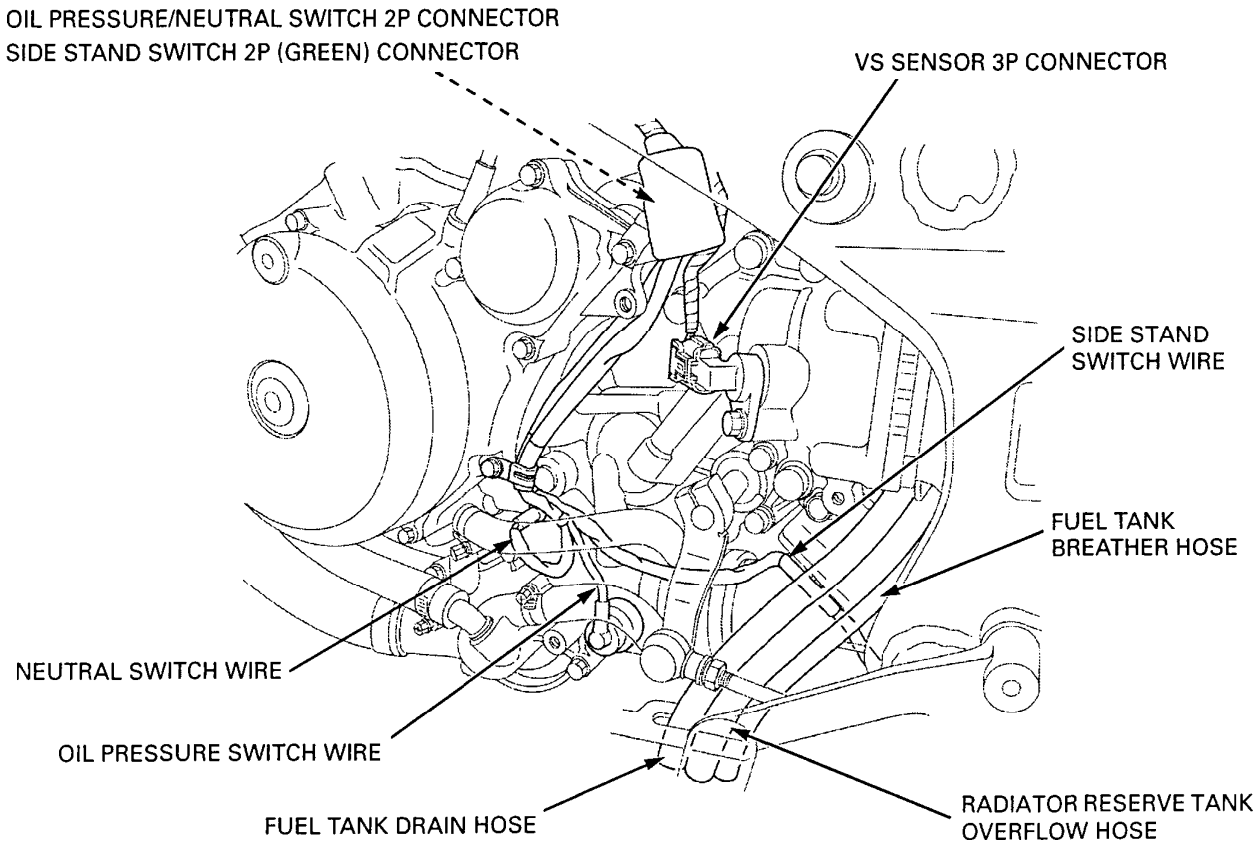


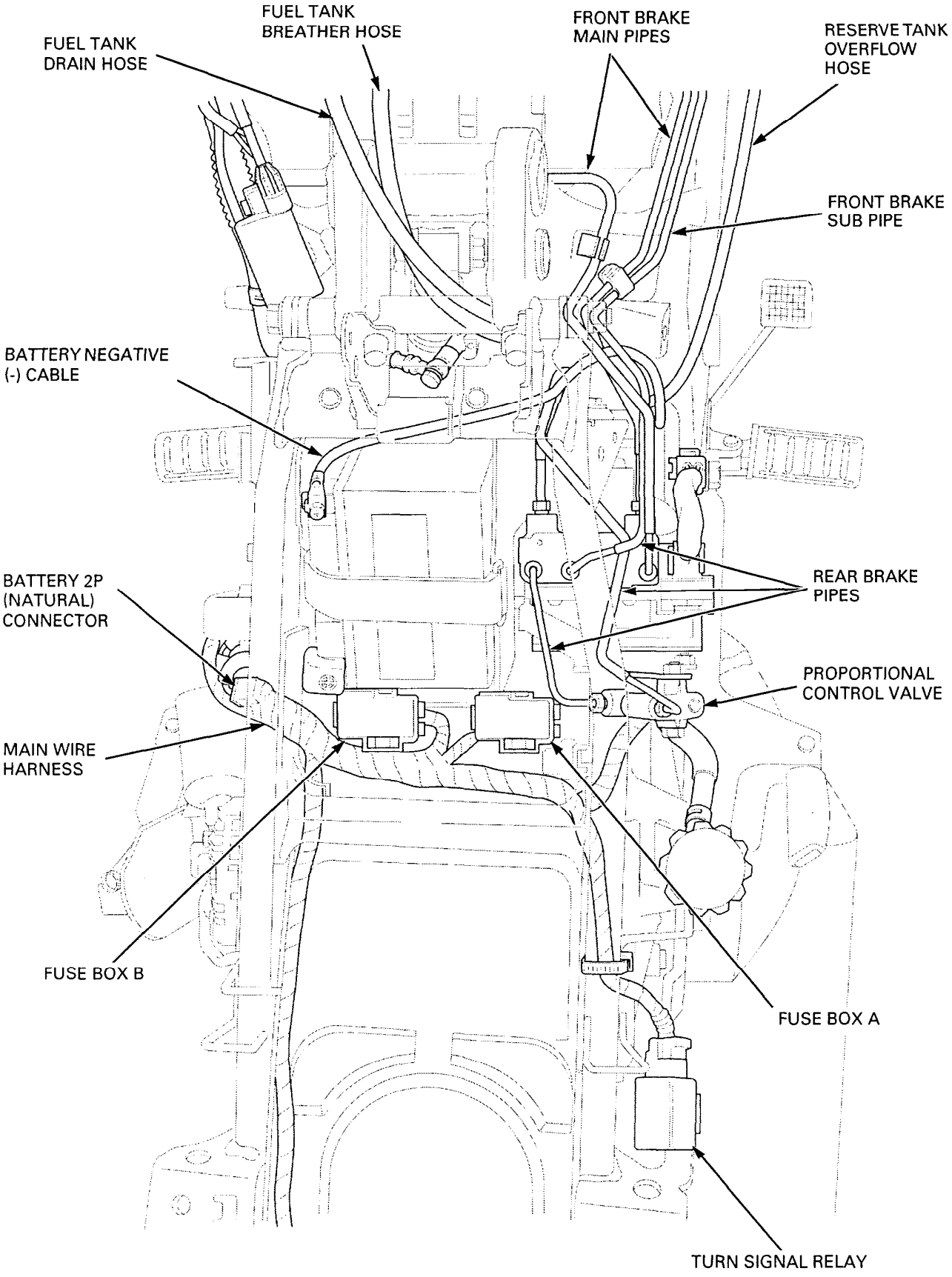


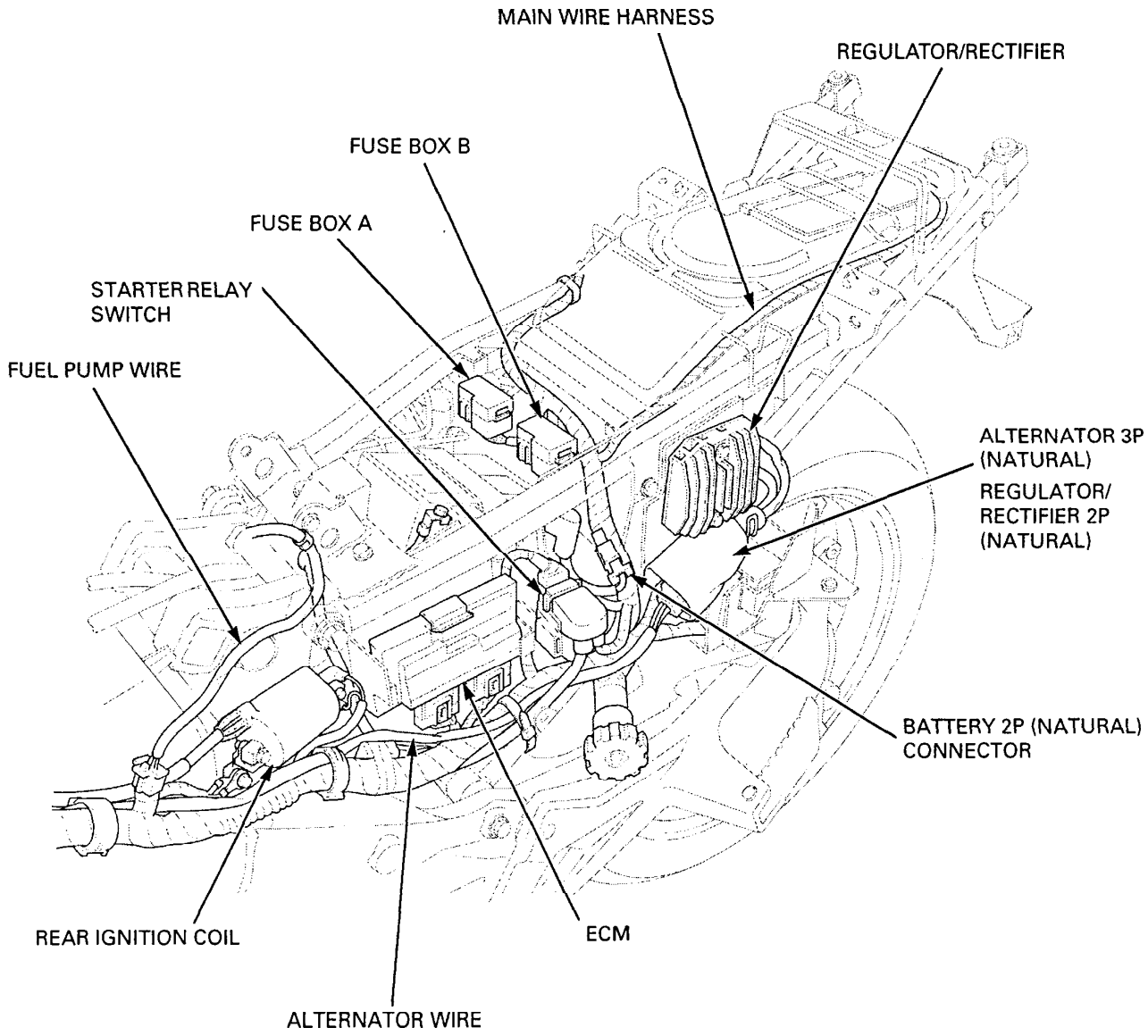


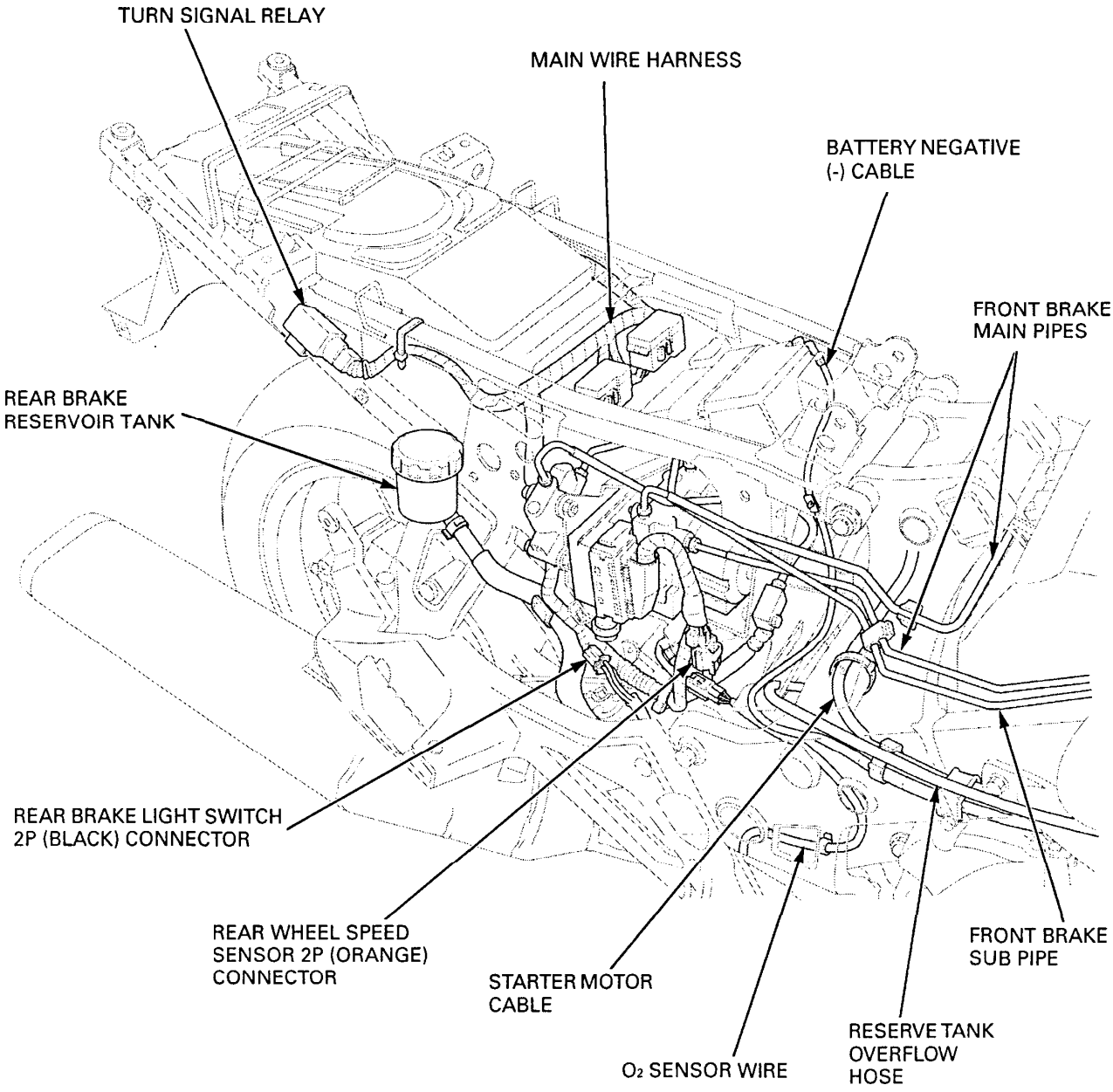


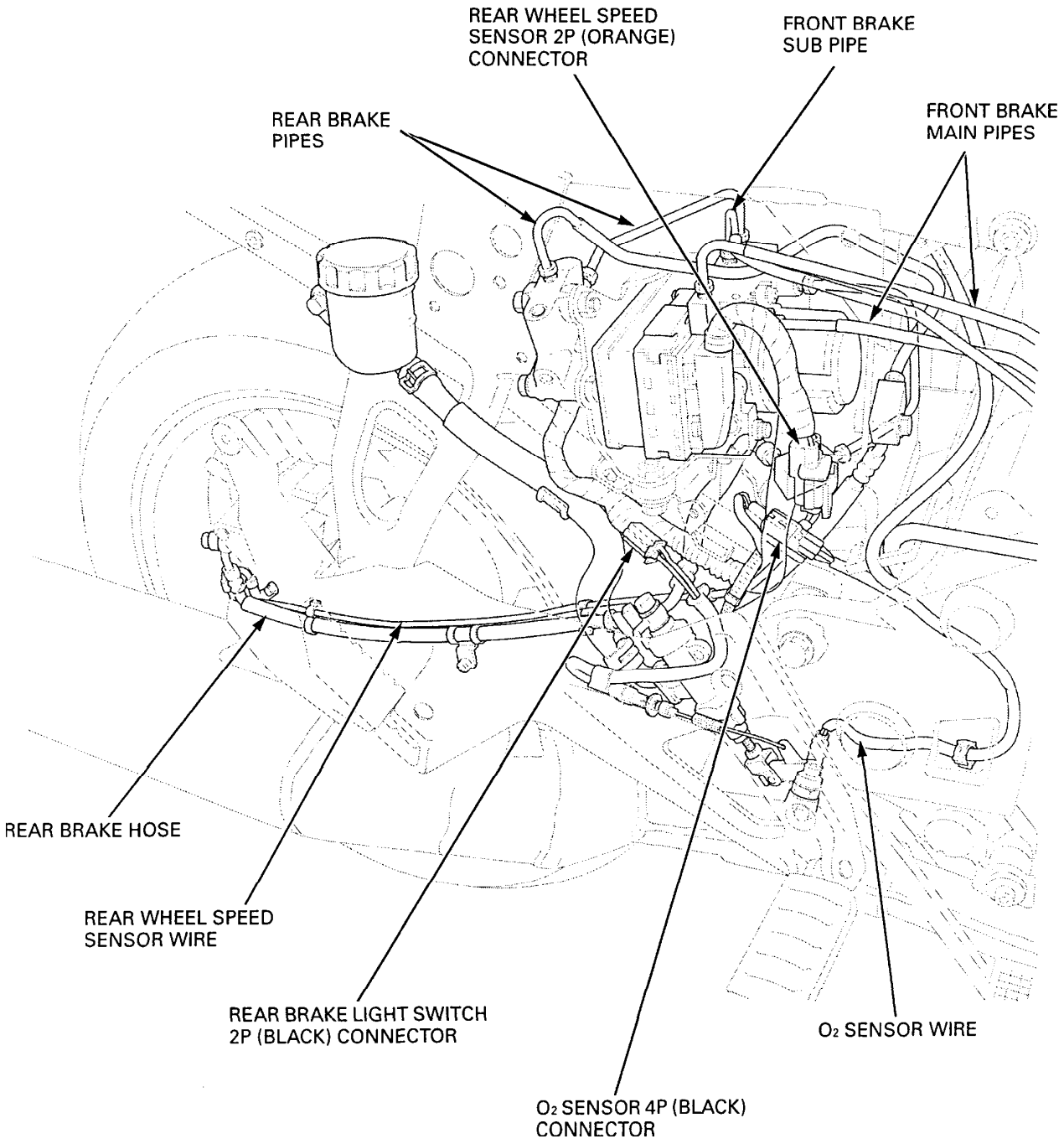


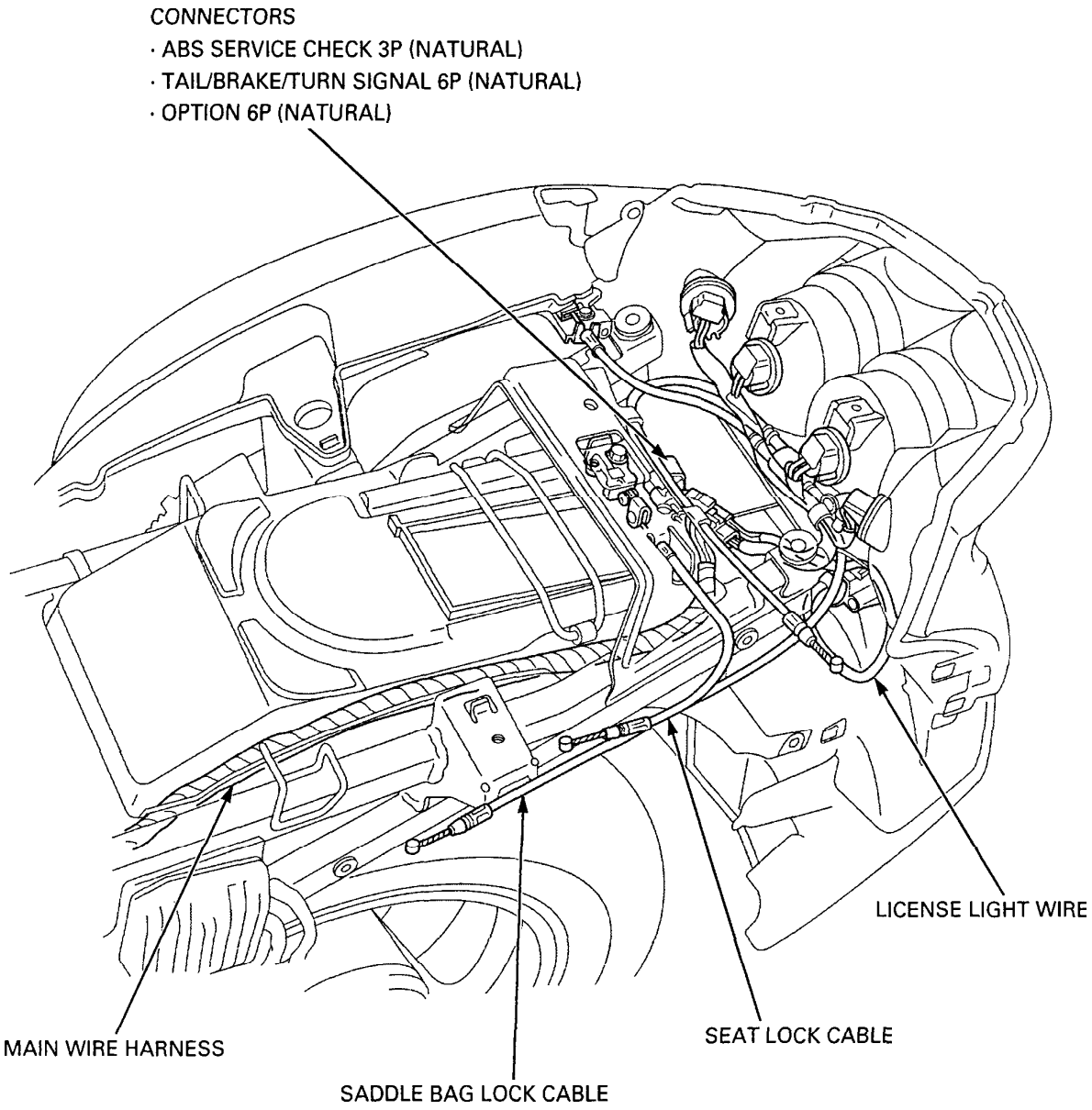


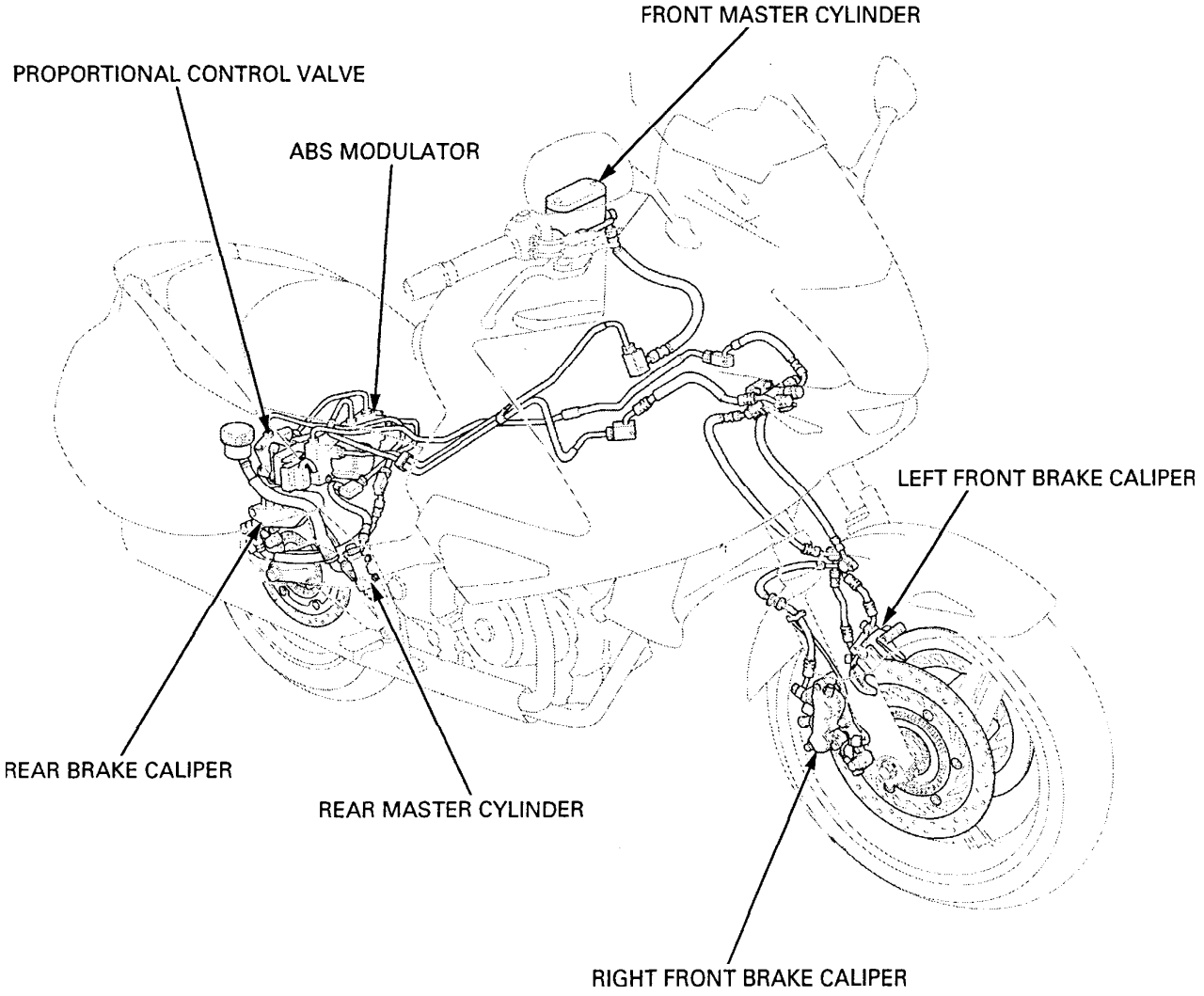




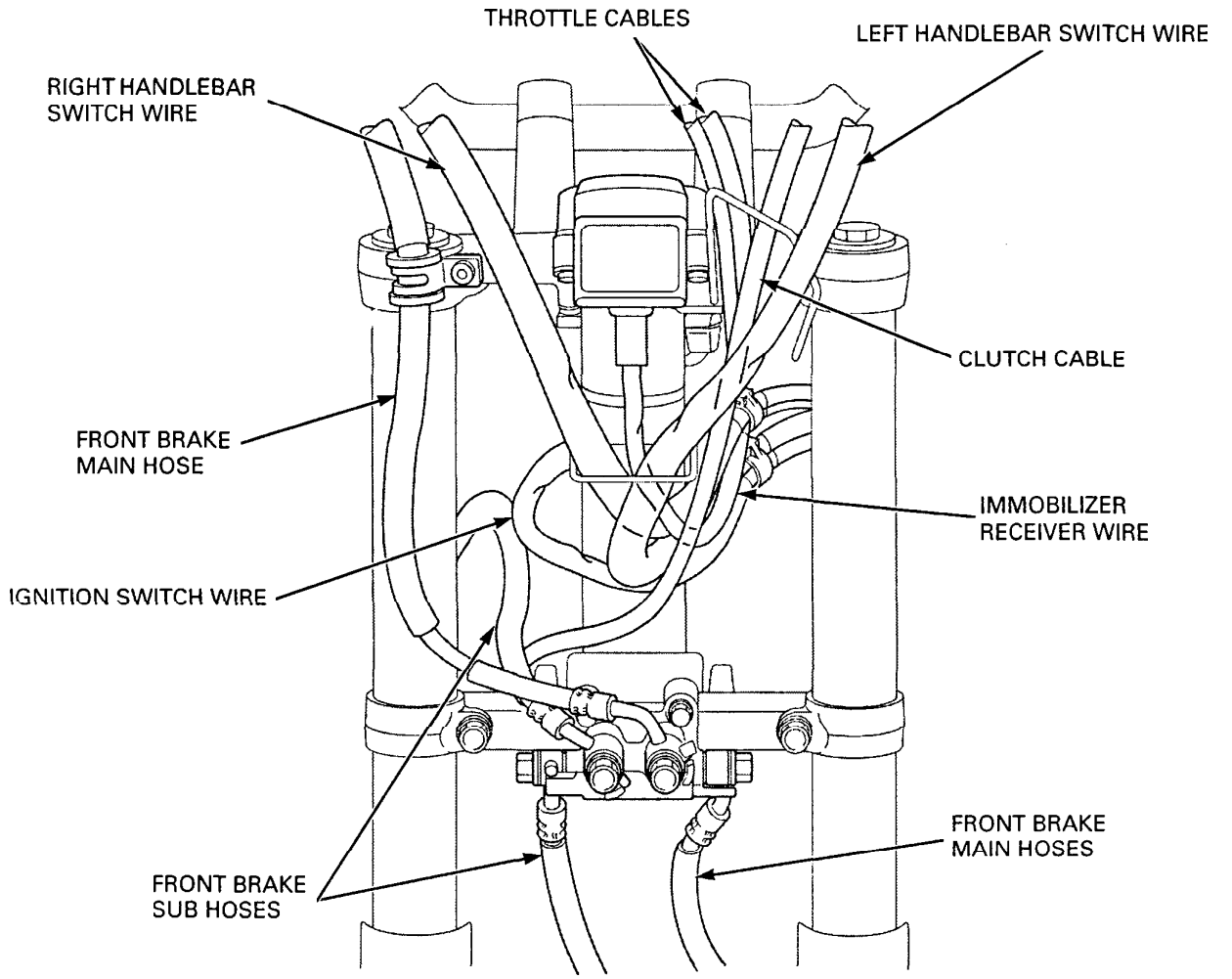


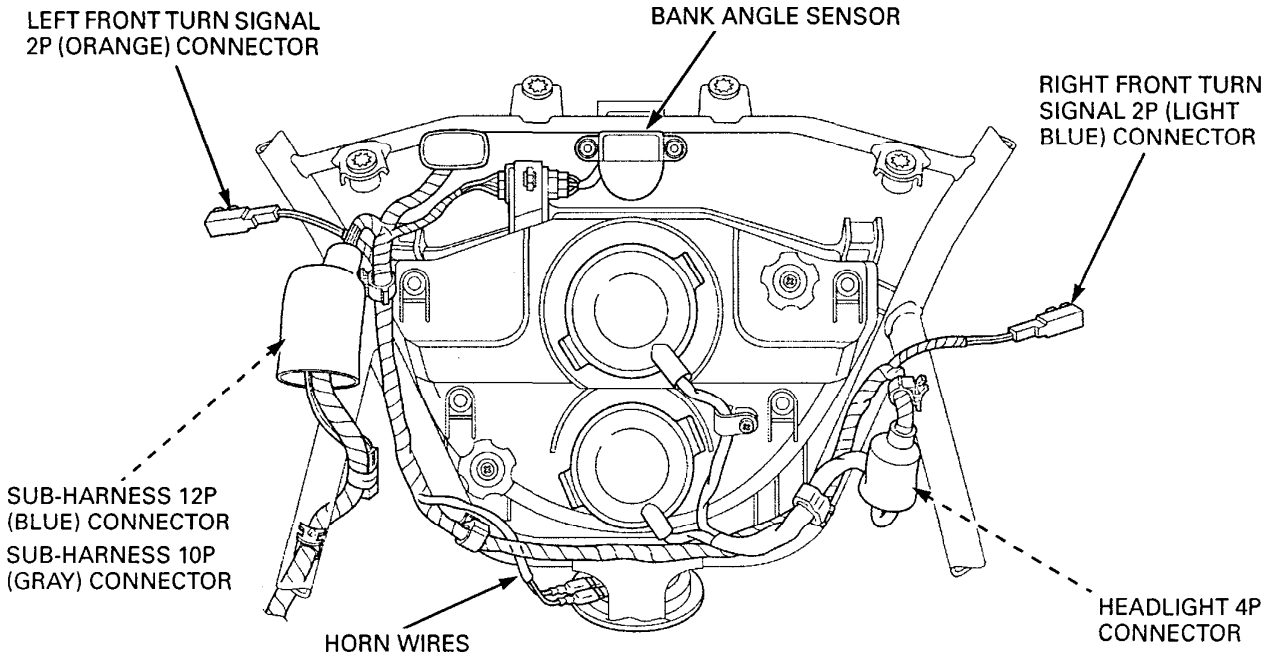


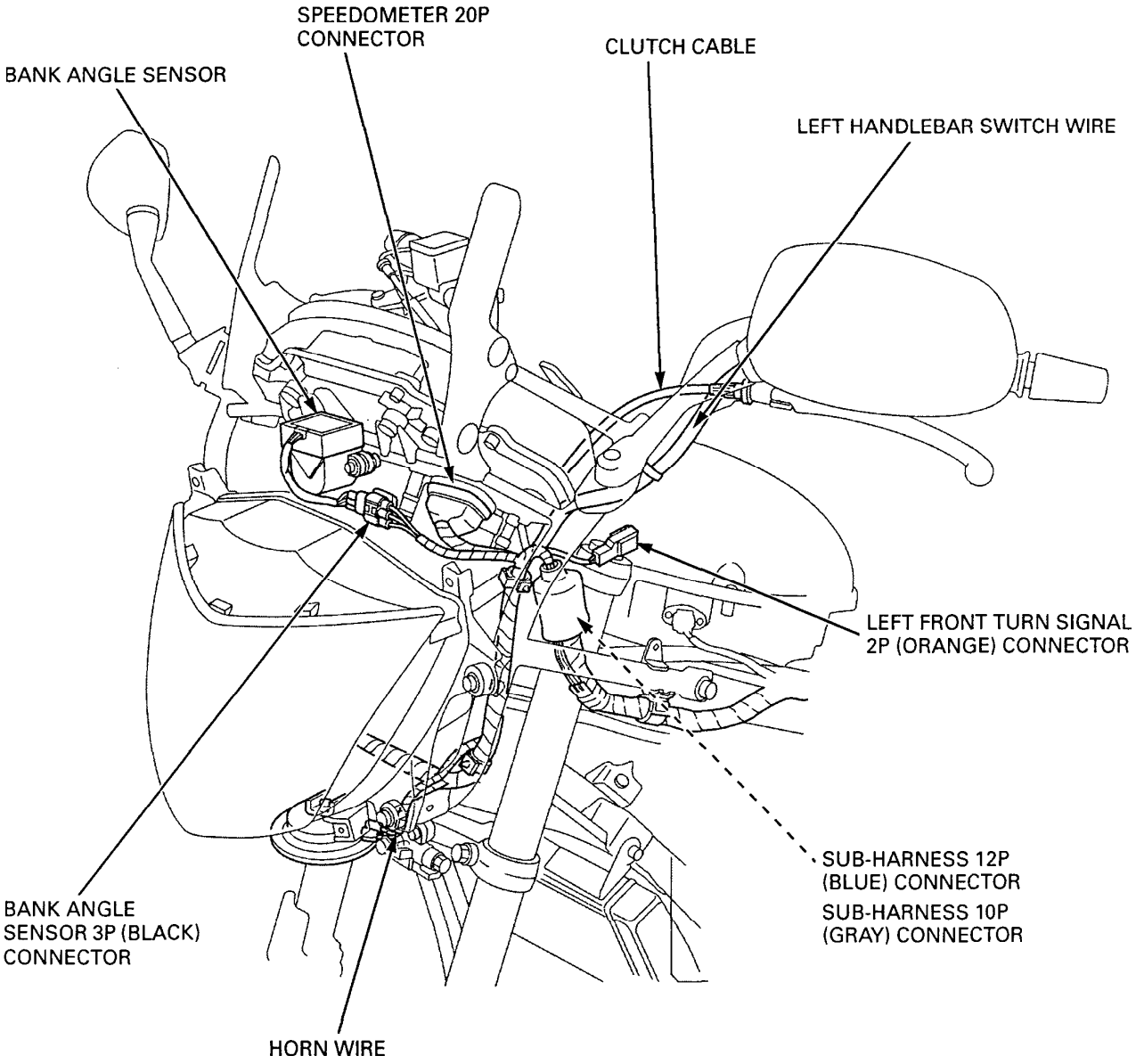


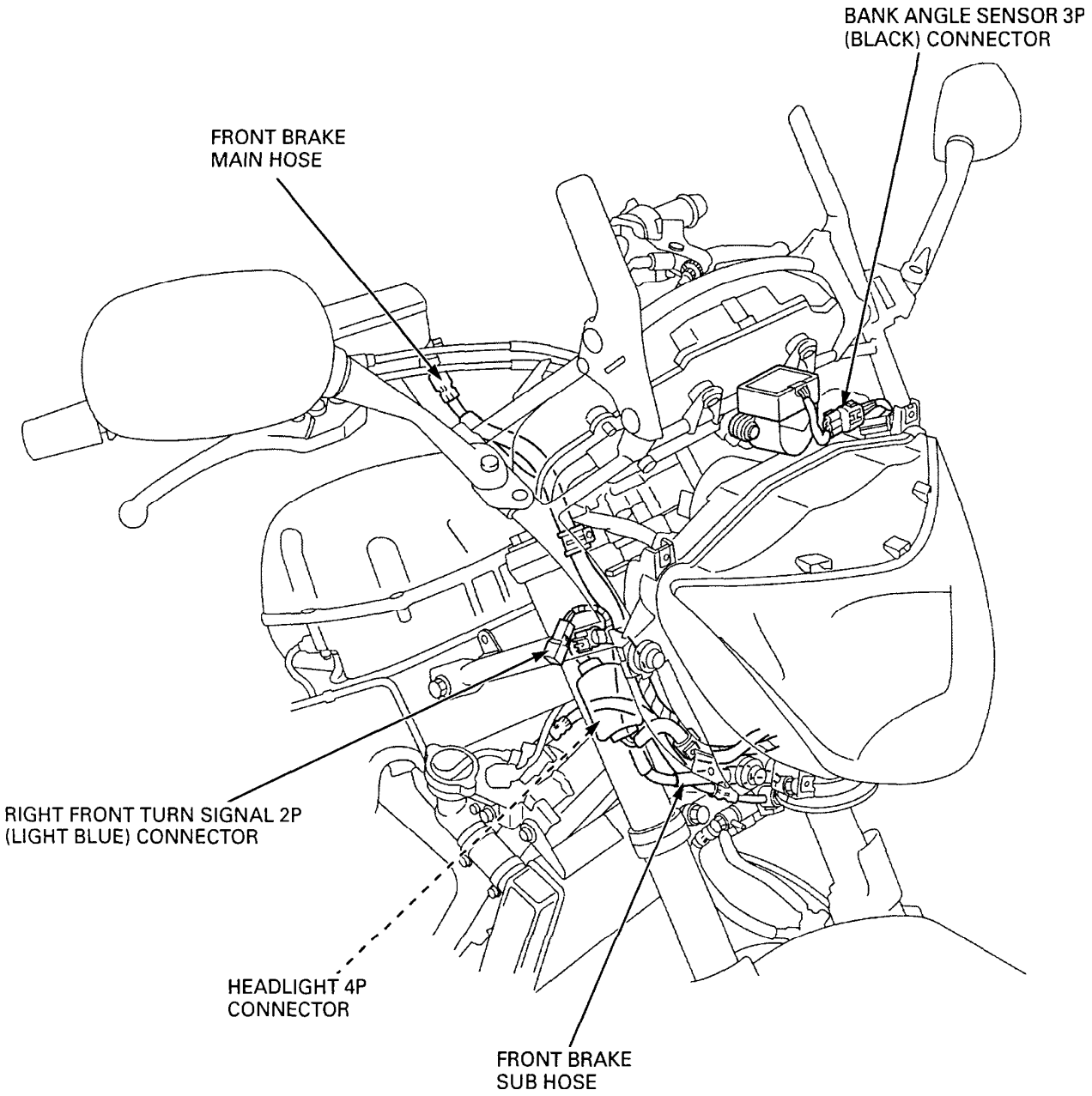


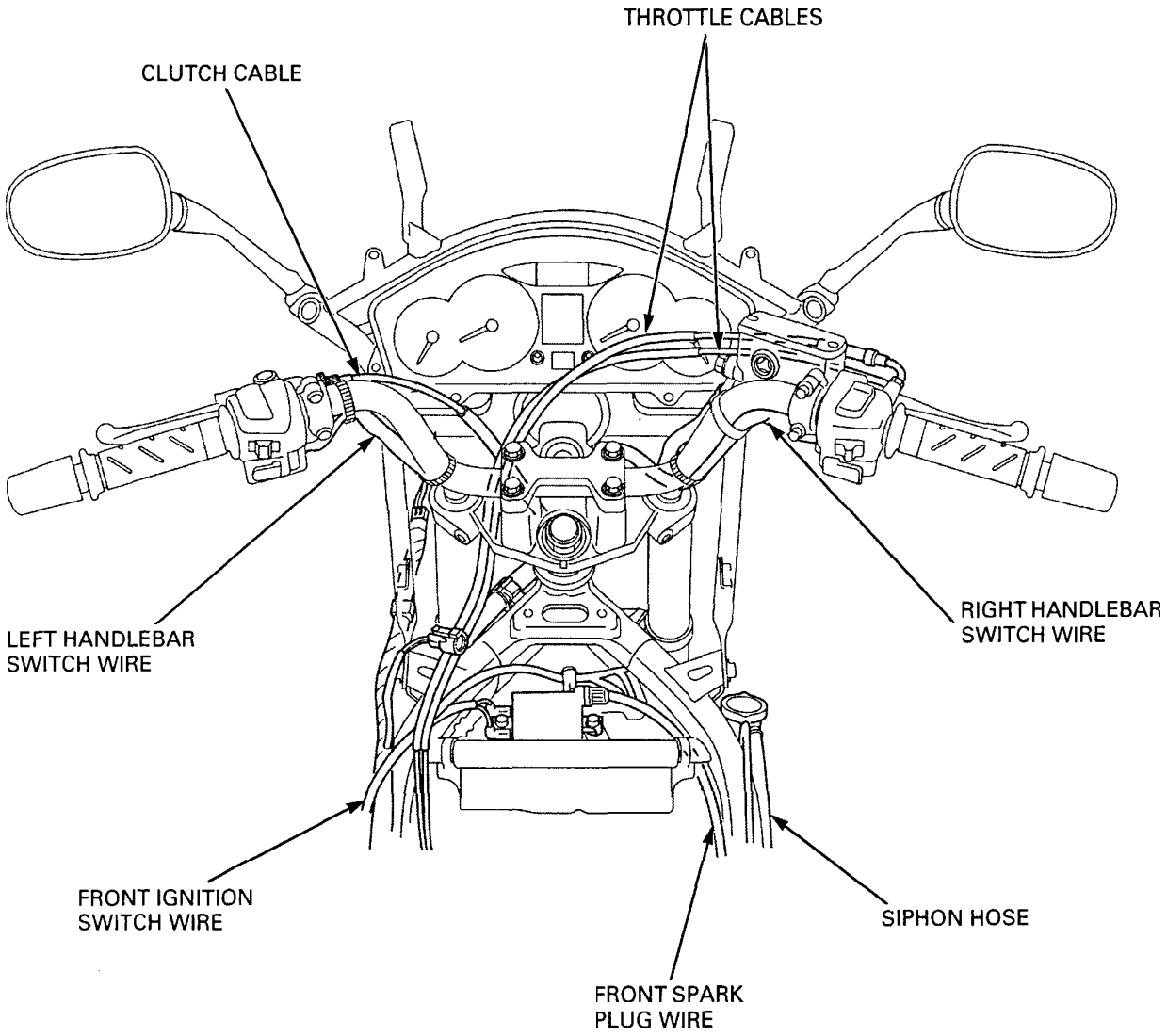
CABLE & HARNESS ROUTING (NT700V)

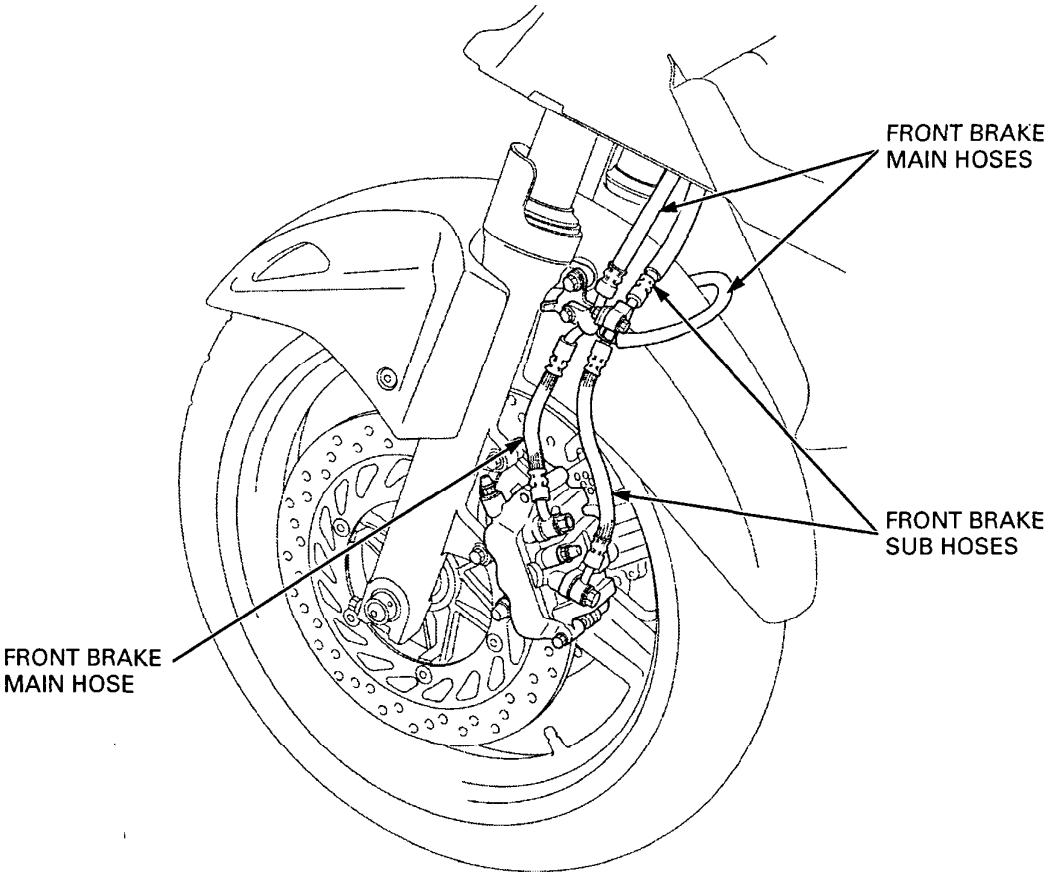


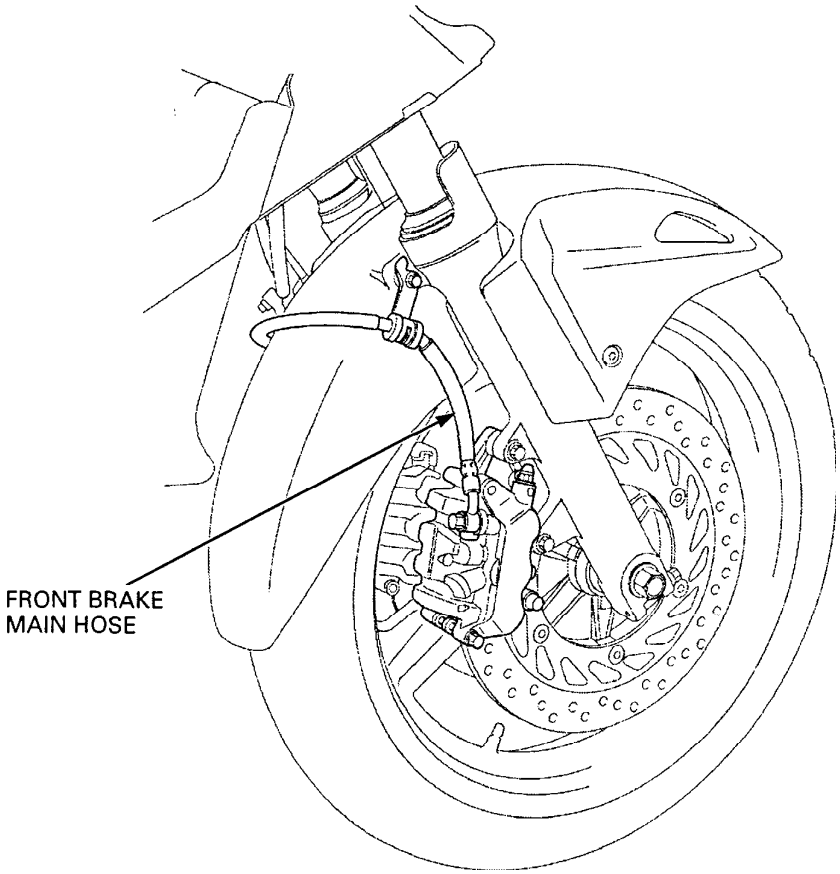


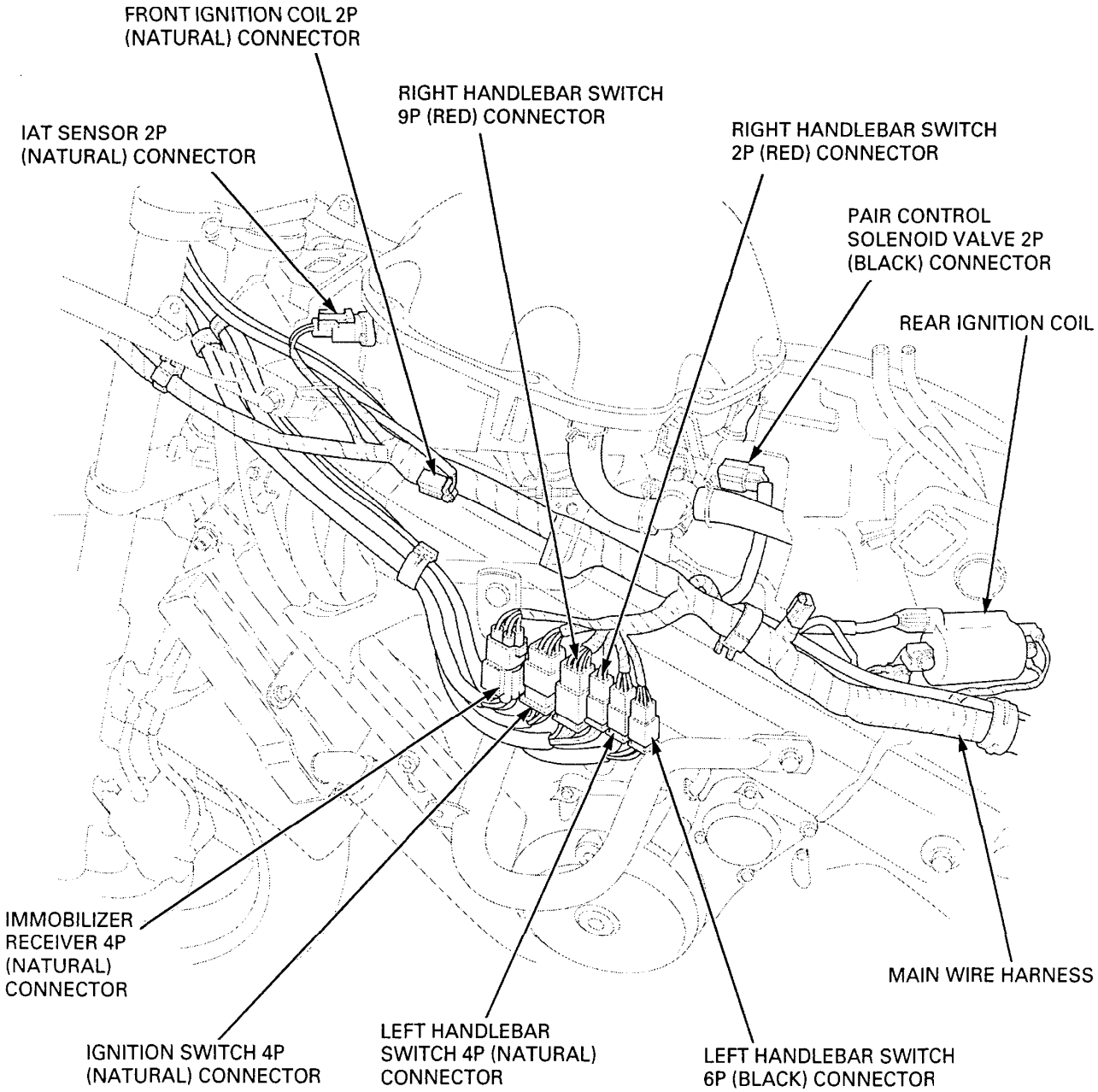


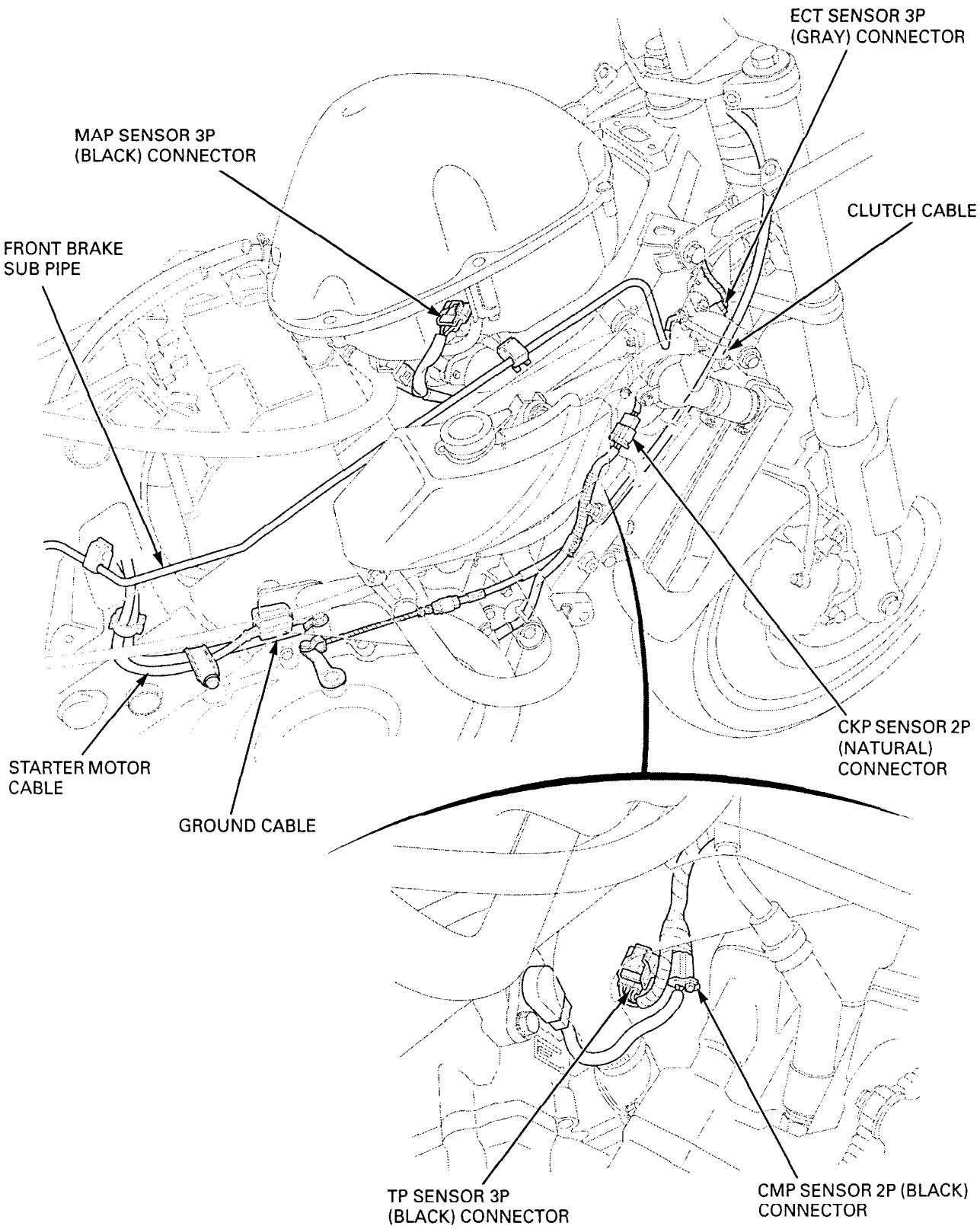


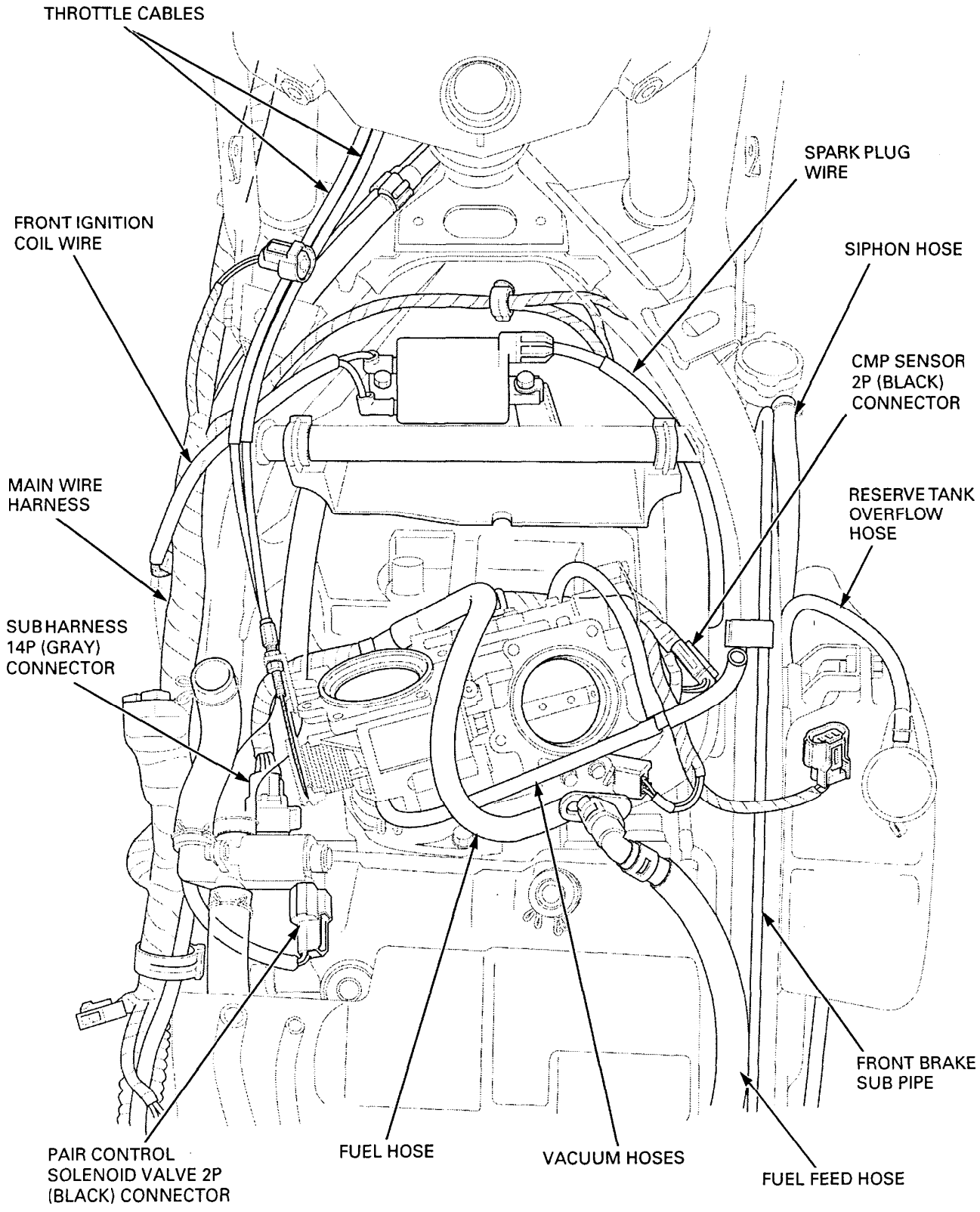


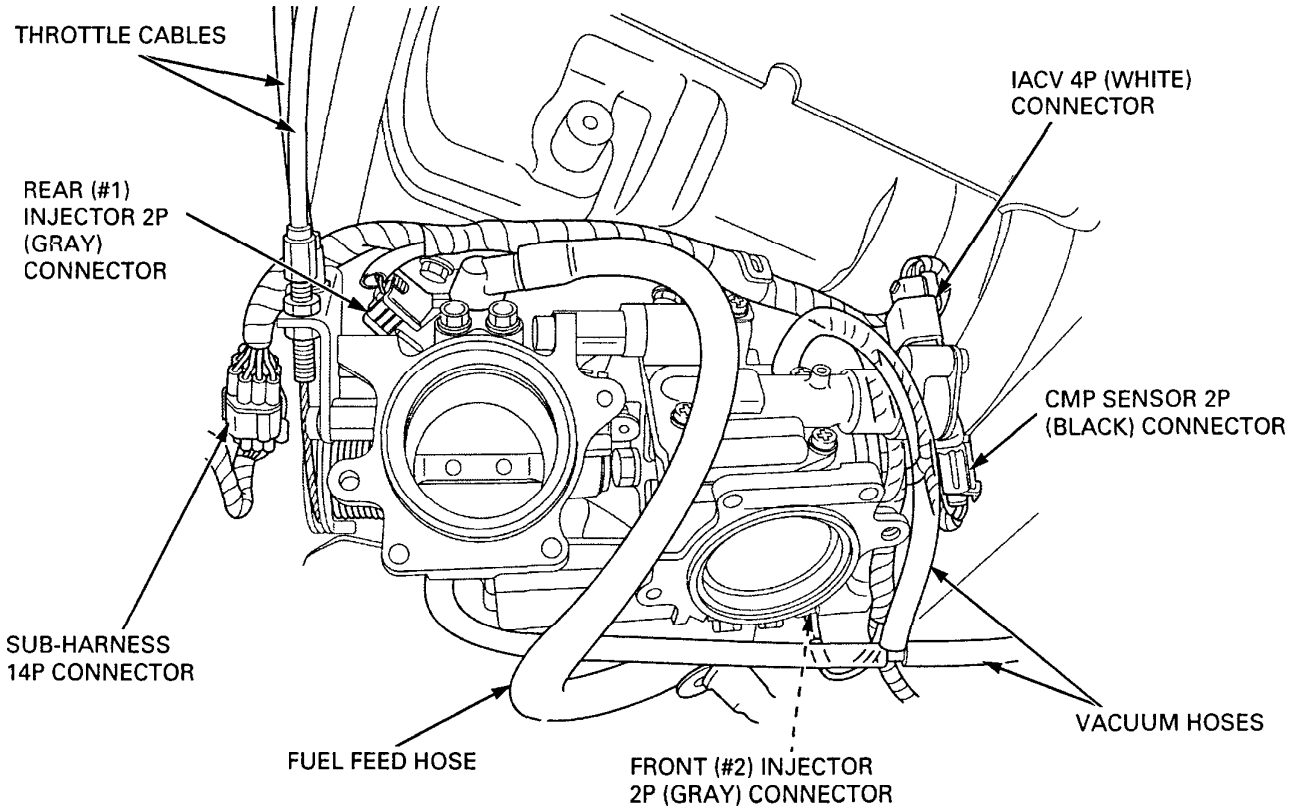


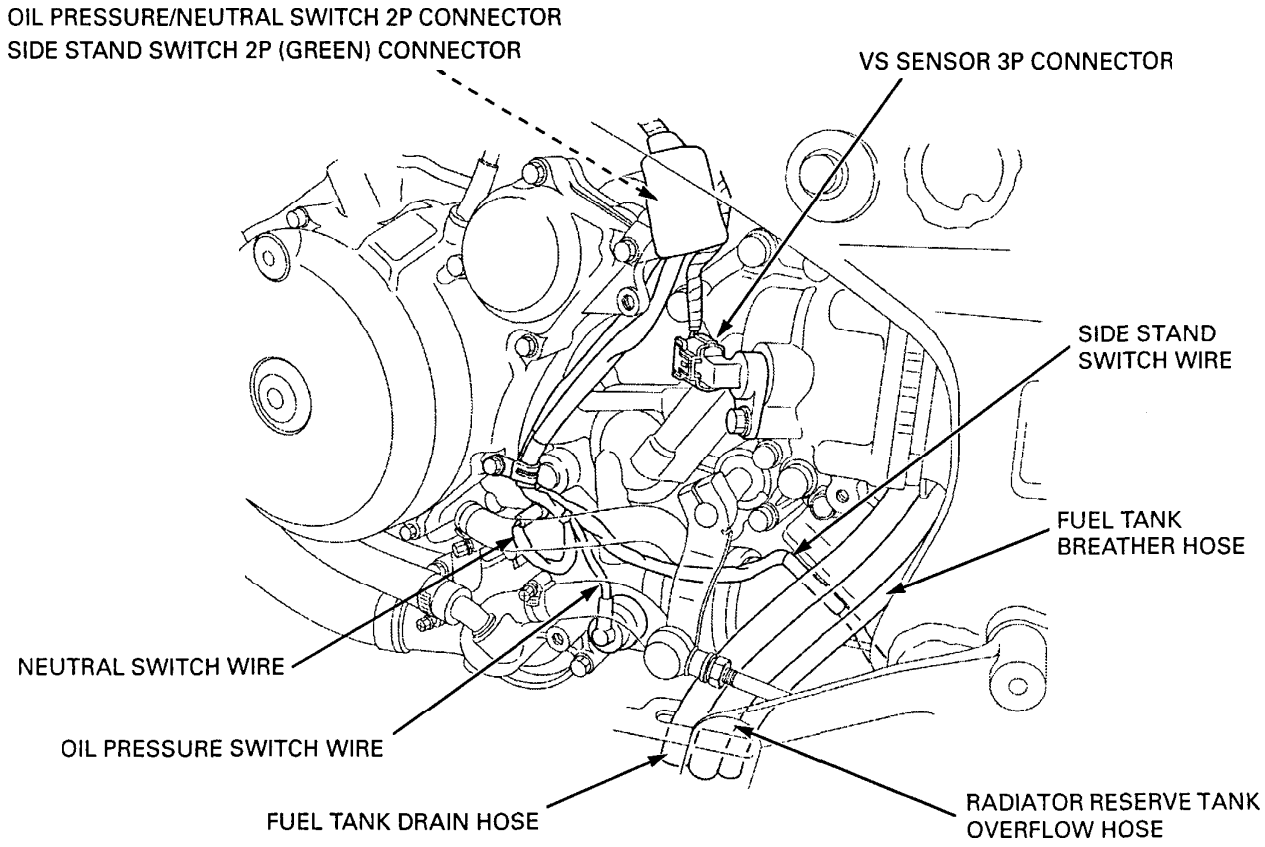


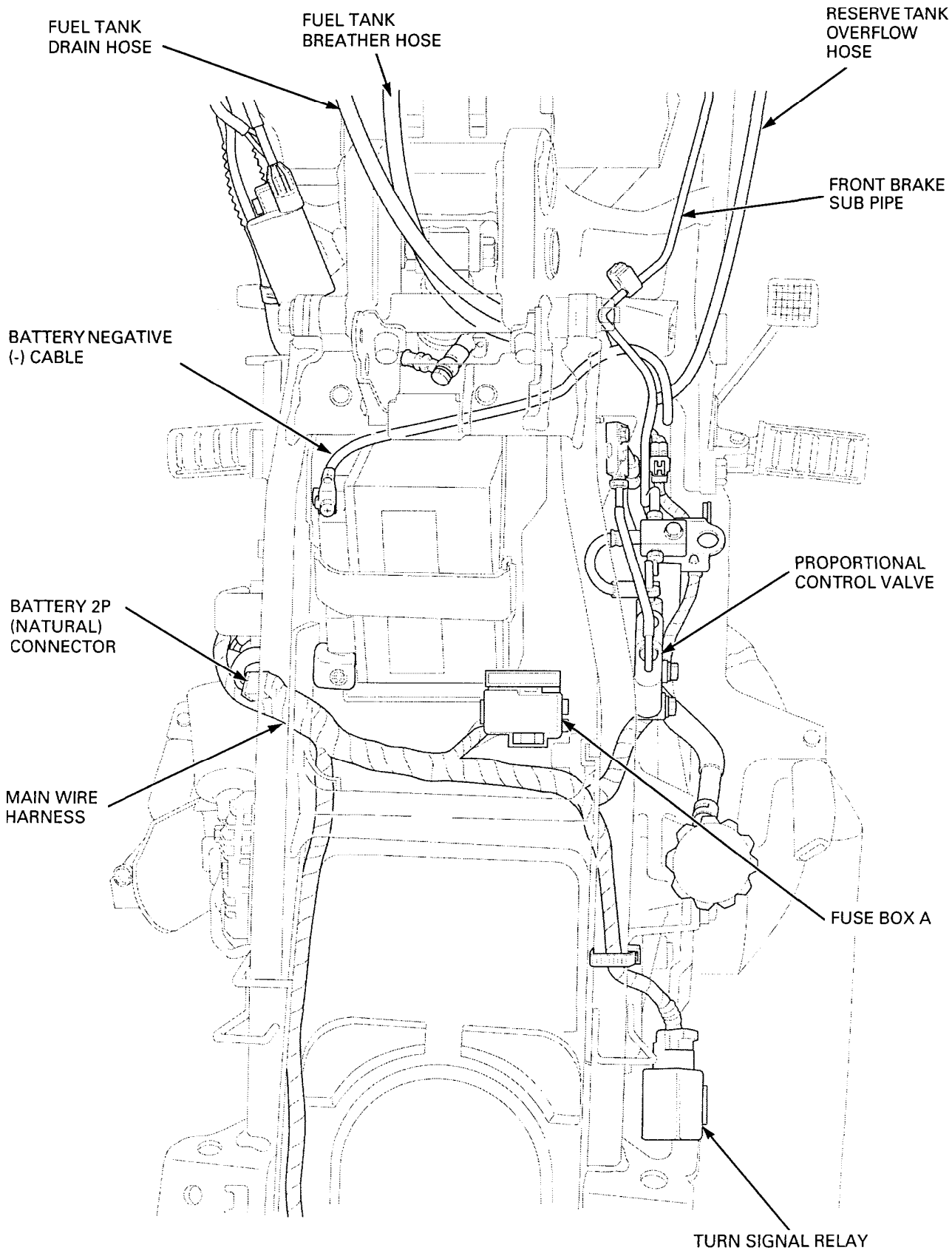


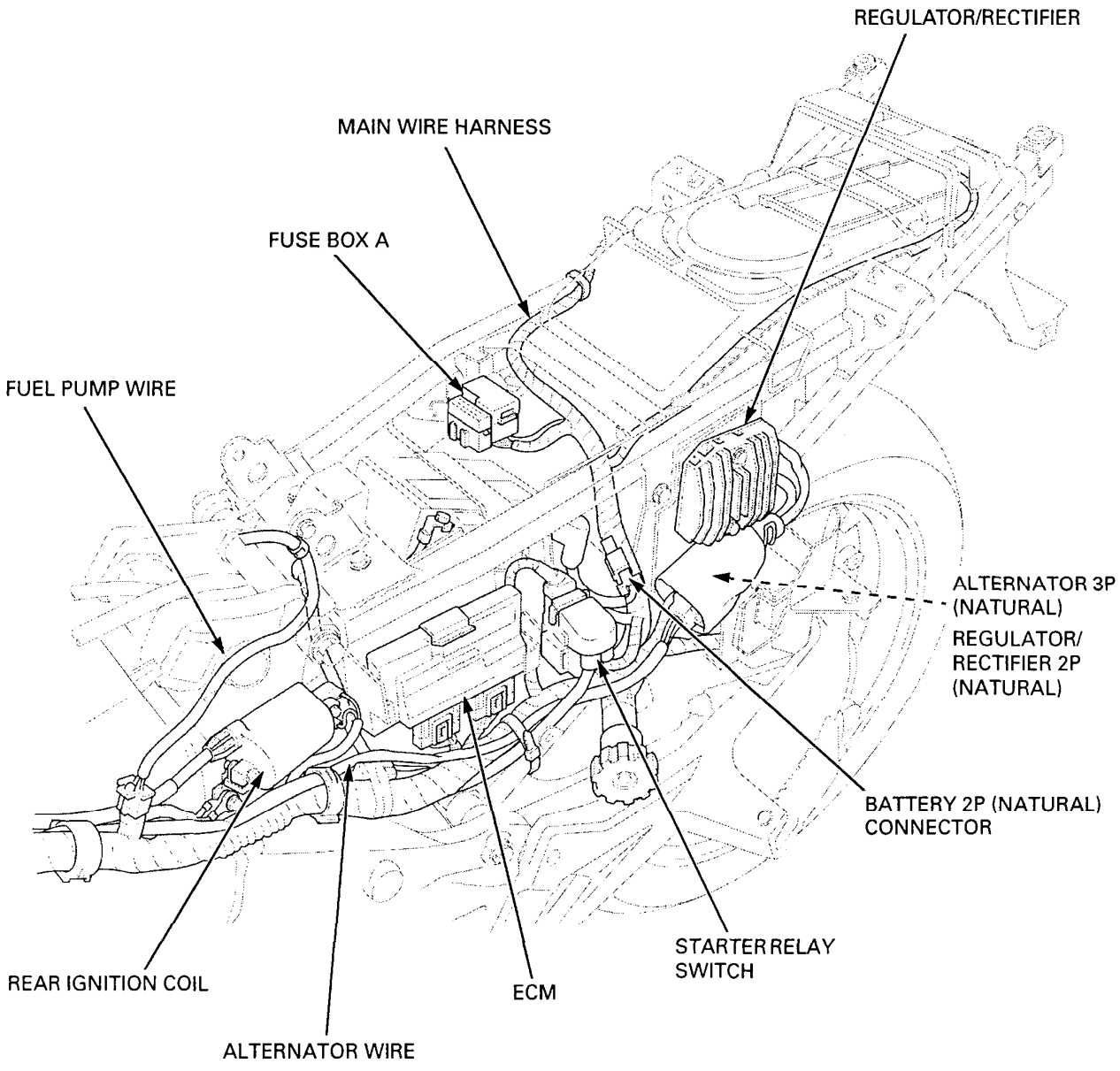


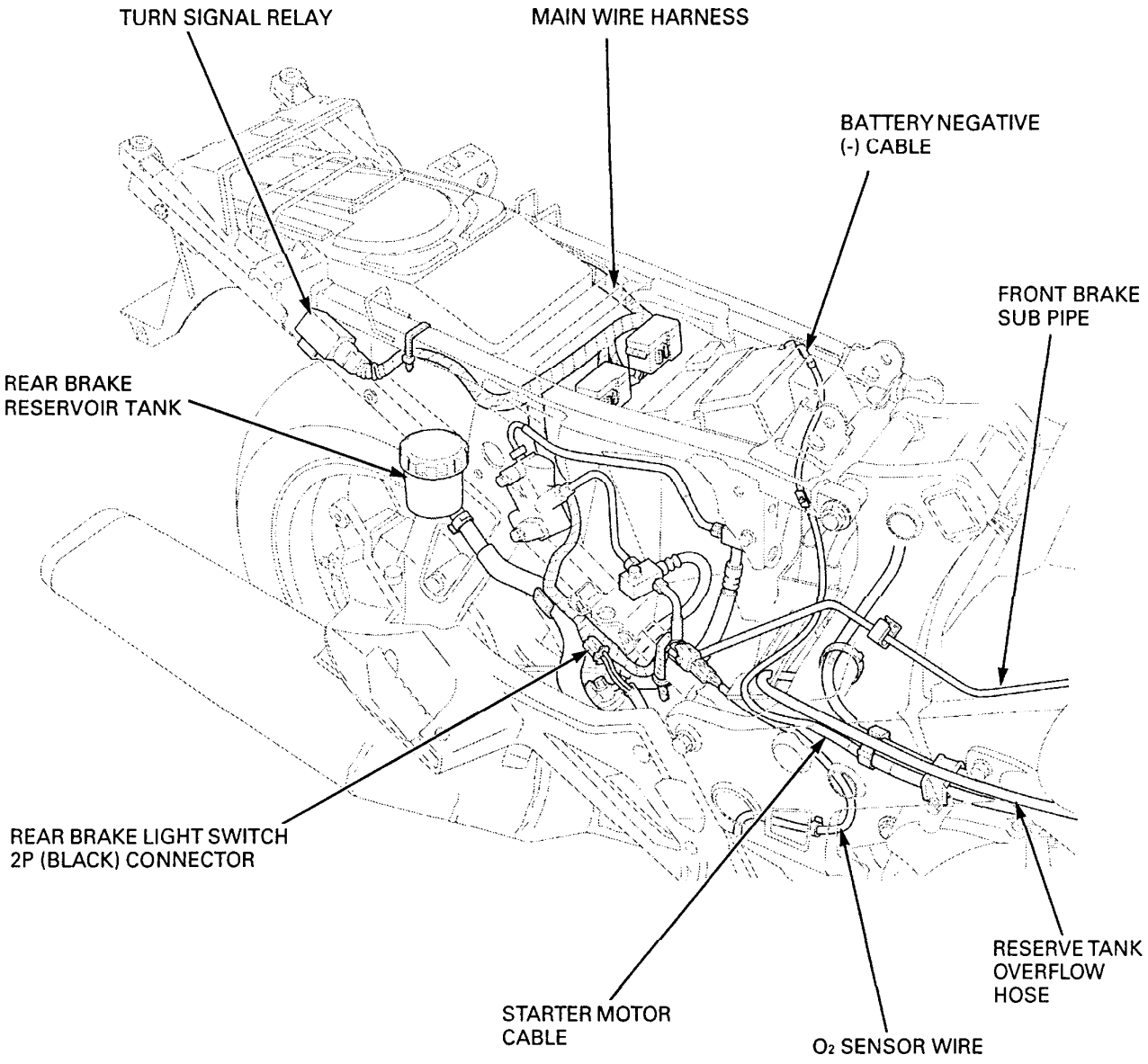


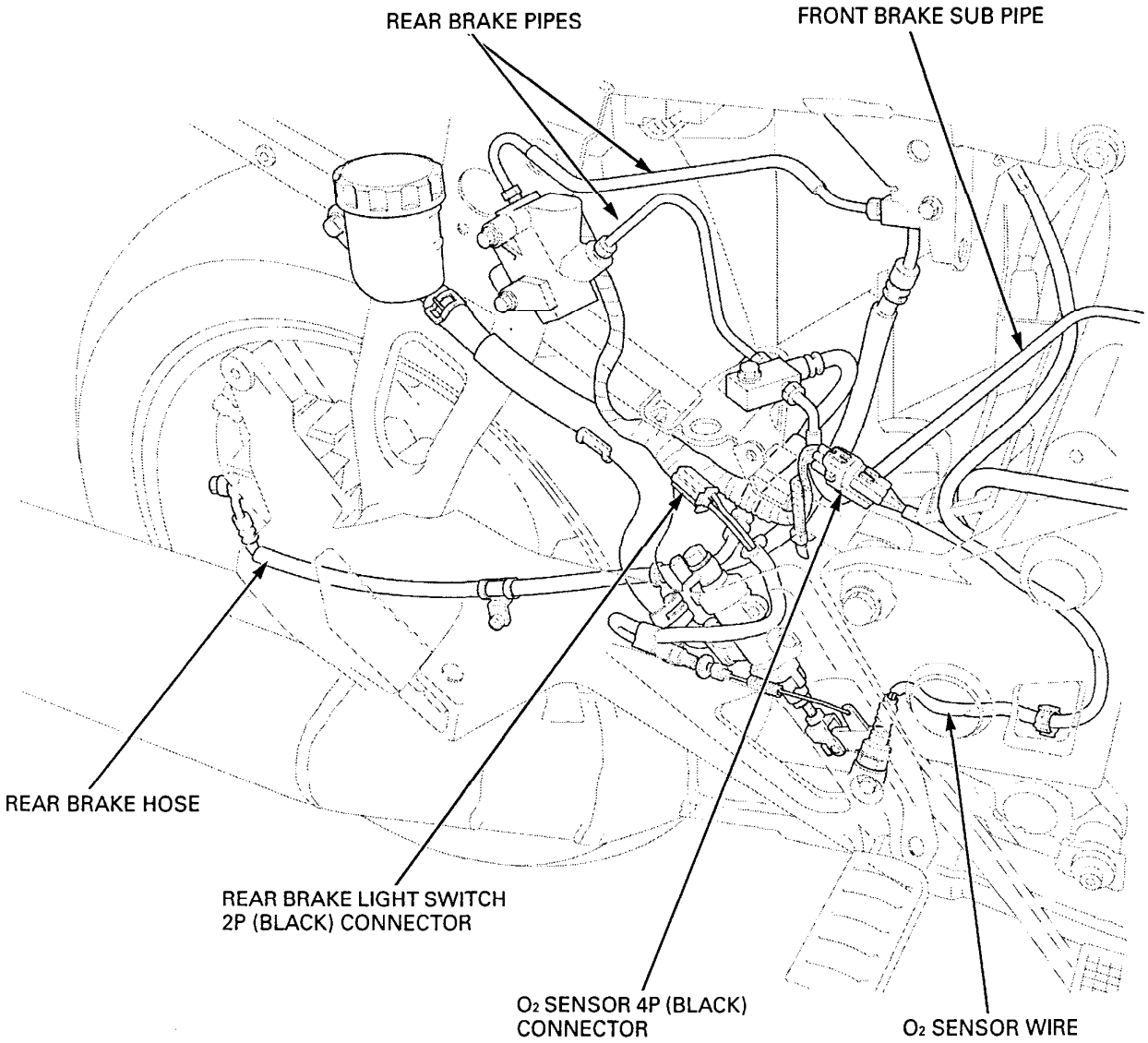


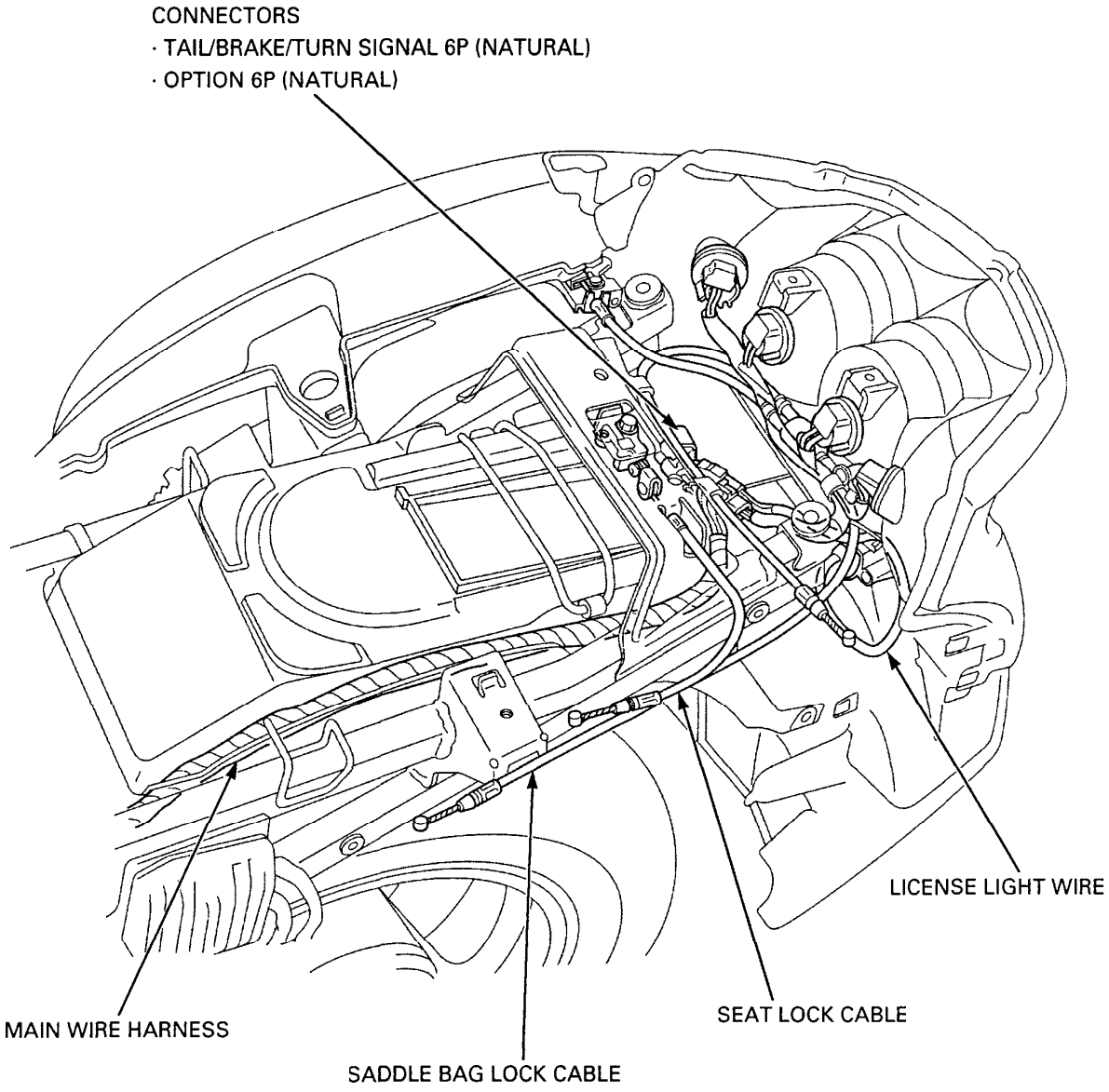


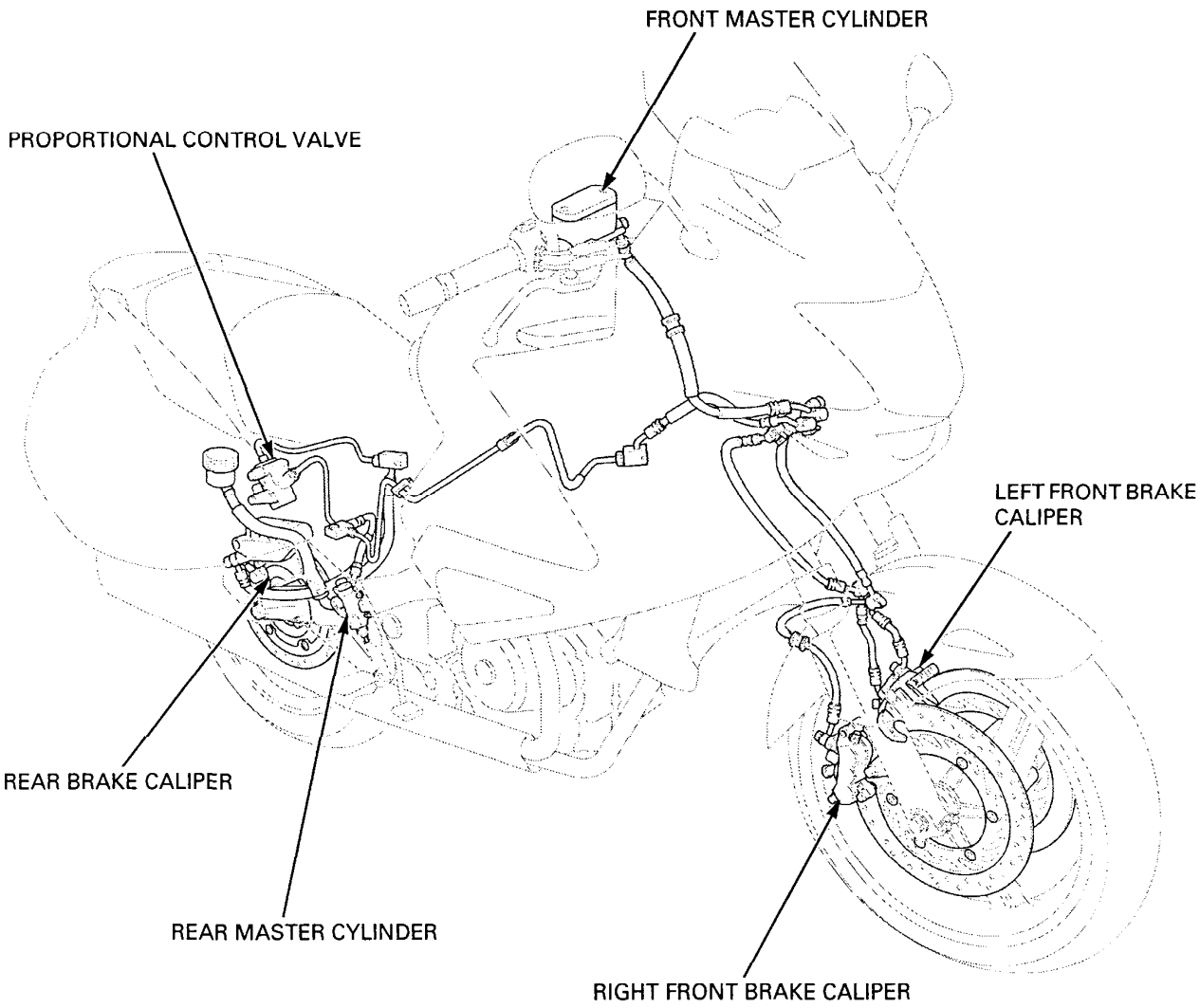












EMISSION CONTROL SYSTEMS

SOURCE OF EMISSIONS

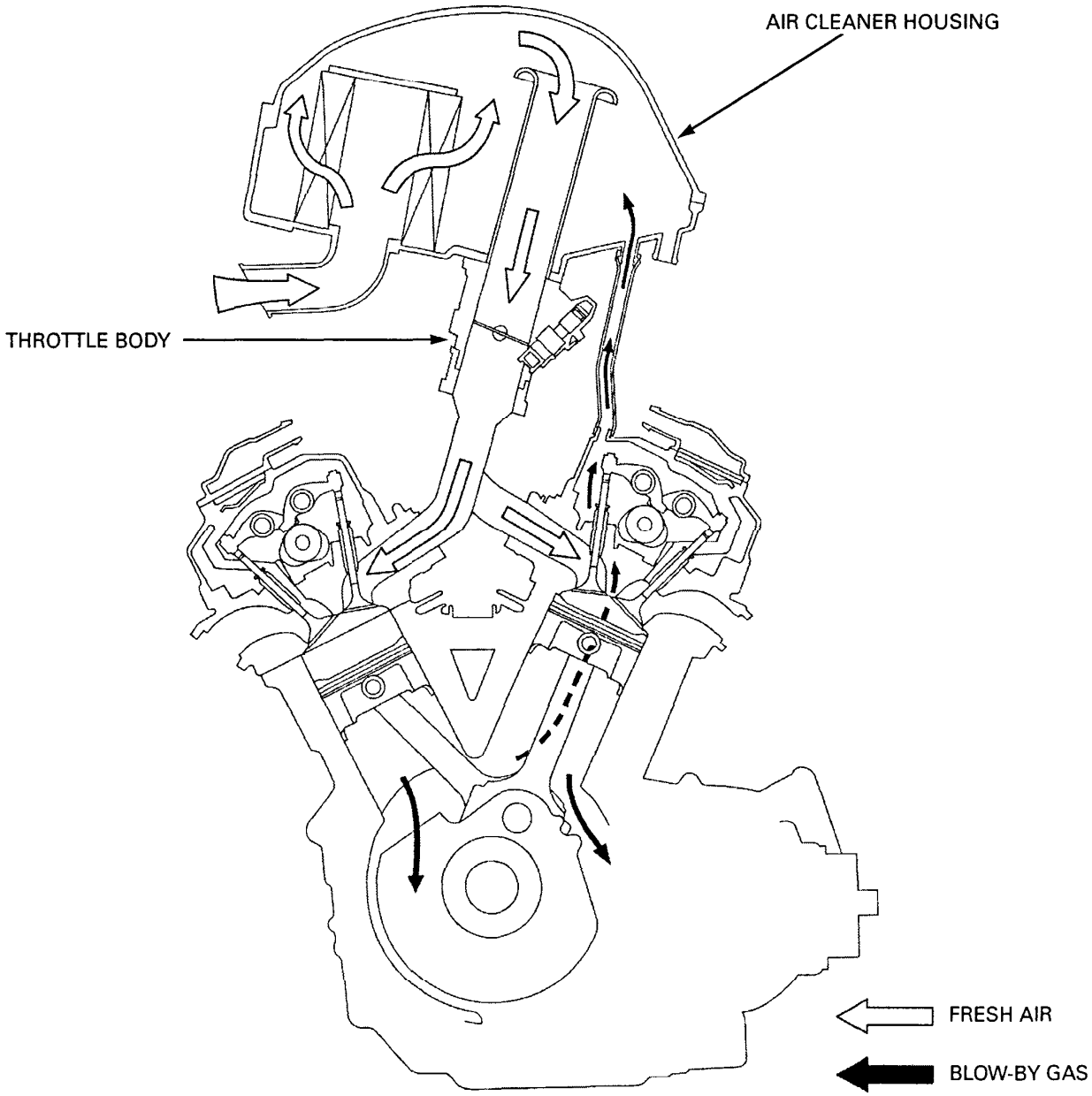
The combustion process produces carbon monoxide, oxides of nitrogen and hydrocarbons. Control of carbon monoxide, oxides of nitrogen and hydrocarbons is very important because, under certain conditions, they react to form photochemical smog when subject to sunlight. Carbon monoxide does not react in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

Honda Motor Co., Ltd. utilizes various systems to reduce carbon monoxide, oxides of nitrogen 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

The exhaust emission control system includes of a pulse secondary air supply system and PGM-FI system.

No adjustment should be made about the exhaust emission control systems. The exhaust emission control system is separate from the crank case emission control system.

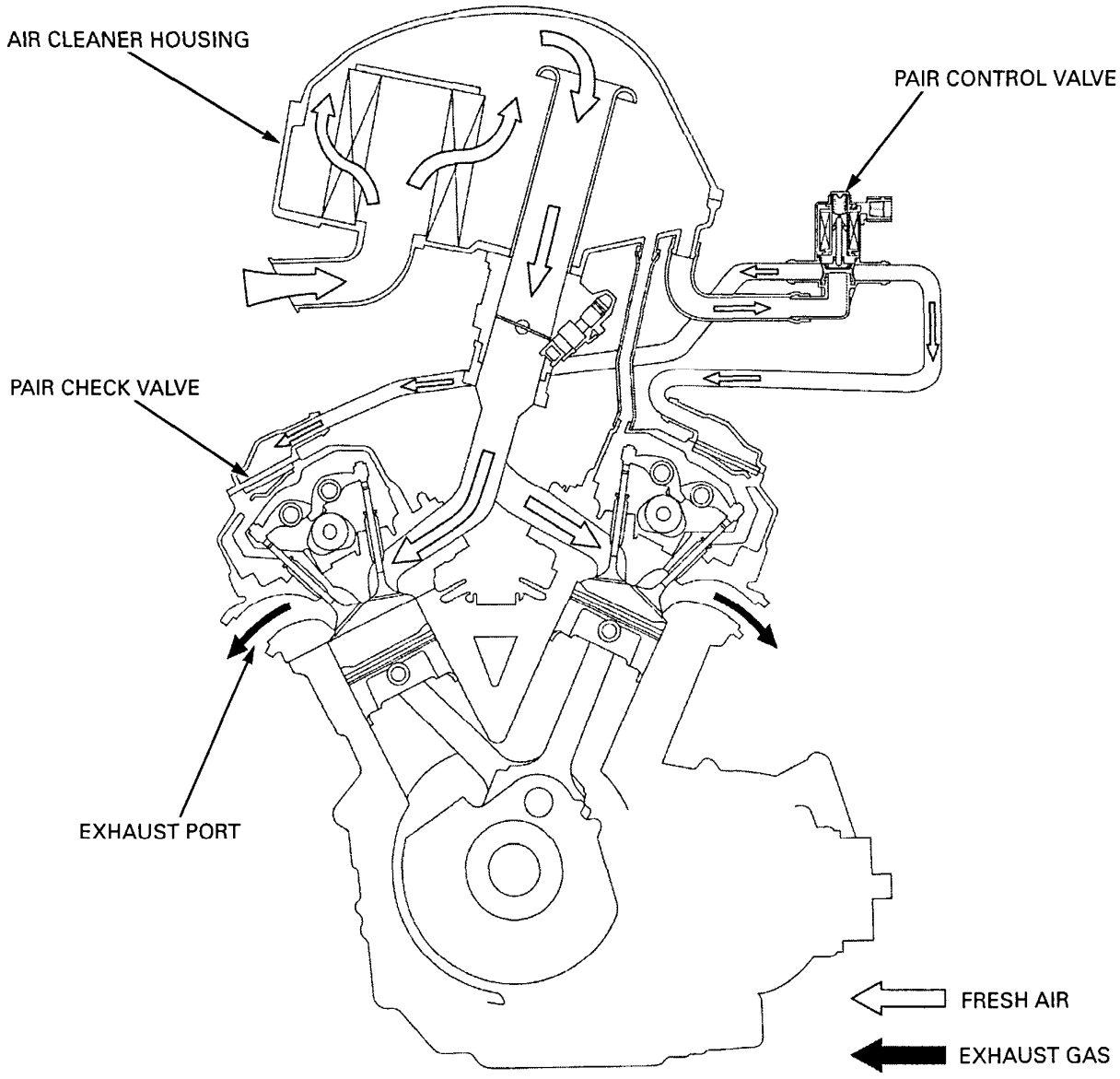
SECONDARY AIR SUPPLY SYSTEM

The secondary air supply system 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.



THREE-WAY CATALYTIC CONVERTER

This motorcycle is equipped with a three-way catalytic converter.

The three-way catalytic converter is 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.

NOISE EMISSION CONTROL SYSTEM

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 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.

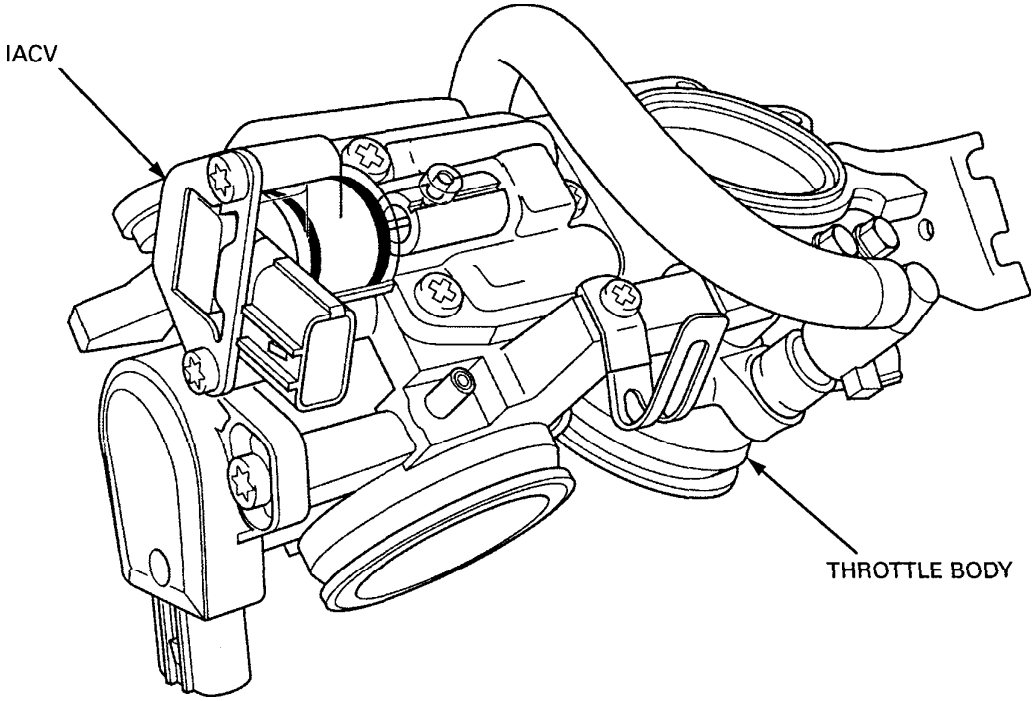
2. TECHNICAL FEATURE

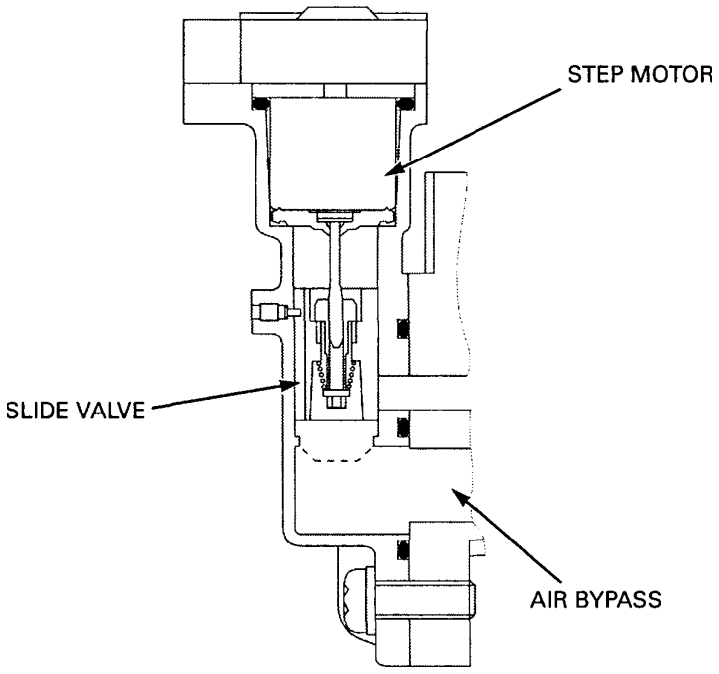
IACV (Idle Air Control Valve)

SUMMARY

This motorcycle adopts an Idle Air Control system for the V-twin engine, this system is composed the IACV that are incorporated into the throttle body. The IACV consists of a step motor and a slide valve, and controls the amount of air bypassed around the closed throttle body. With the ignition switch ON, the amount of inlet air is determined from information detected by the ECT sensor. During engine start-up or while maintaining idle (throttle valve closed), the amount of inlet air is corrected by various sensor's information.

This system eliminates the need for manual idle speed adjustment.





IACV OPERATION

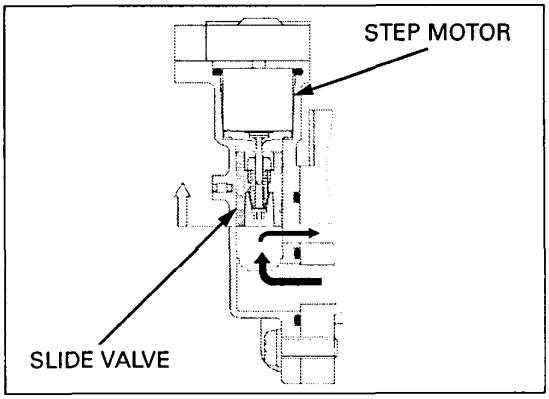
The ECM controls the IACV when engine idling, so the ECM stops to control the IACV operation at closed position in case that the ECM detects the following condition:

- Throttle valve open
- Neutral switch OFF (in gear) and clutch switch ON

When engine idling, from ignition switch ON to warming up, the ECM control the IACV step motor as following operations:

With the ignition switch ON

When the ignition switch ON, the IACV activates initial function, idle-open-idle position. There will be a step motor operating sound.



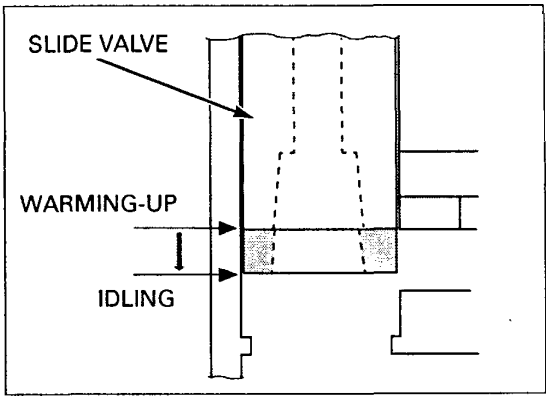
Start the engine - warming up

This optimizes the bypass opening with the throttle valve closed, and the corrected amount of inlet air passes through allowing proper engine start up.

After the engine has started, the ECM controls the IACV step motor to move the slide valve to the left by applying various sensor's information. This results in a reduced amount of bypassed air compared to the amount during engine start-up, and initiates engine warm-up for several minutes.

After warming up - idling

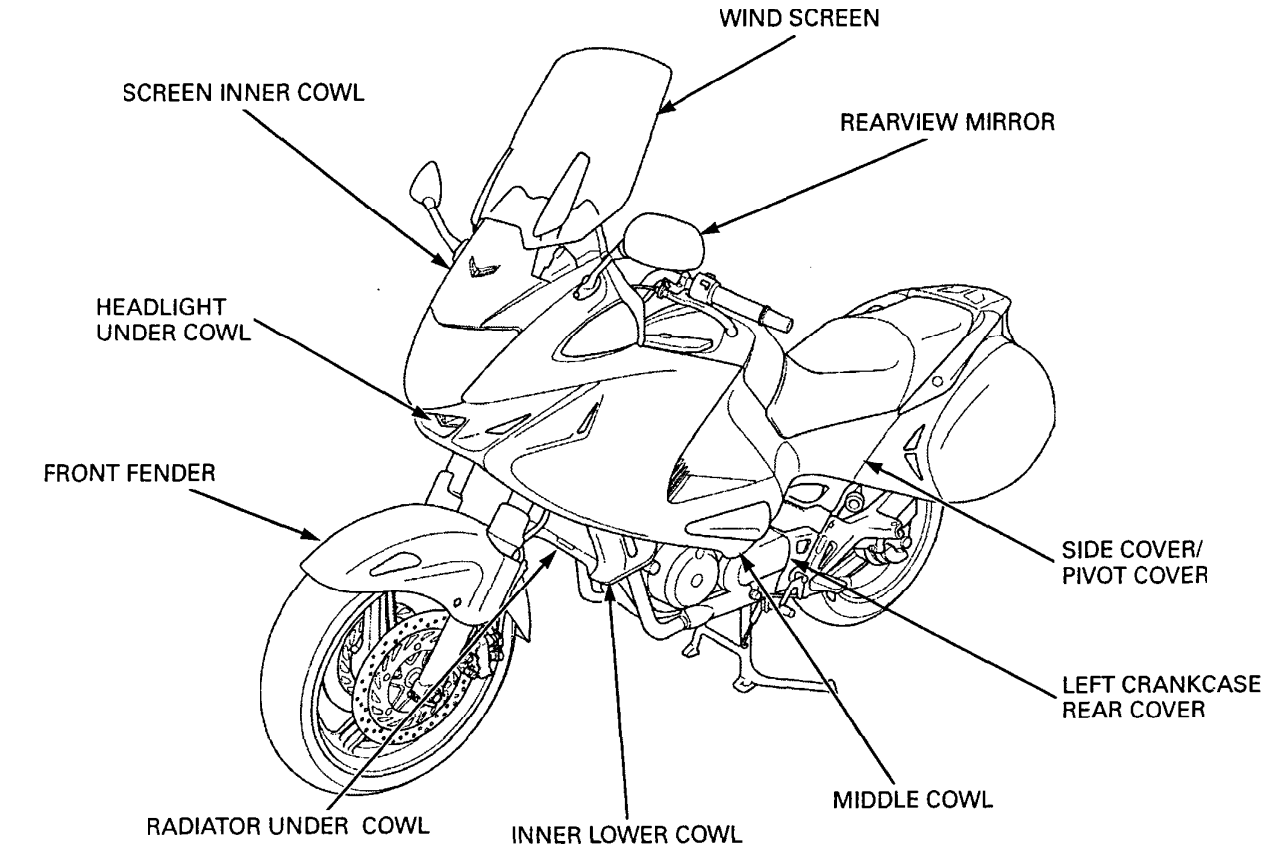
When the ECM receives input signals which indicates the completion of engine warm-up, it operates the step motor to move the slide valve to the left. This results in a reduced amount of bypassed air compared to the amount during engine warm-up, which allows proper engine idle to be maintained.

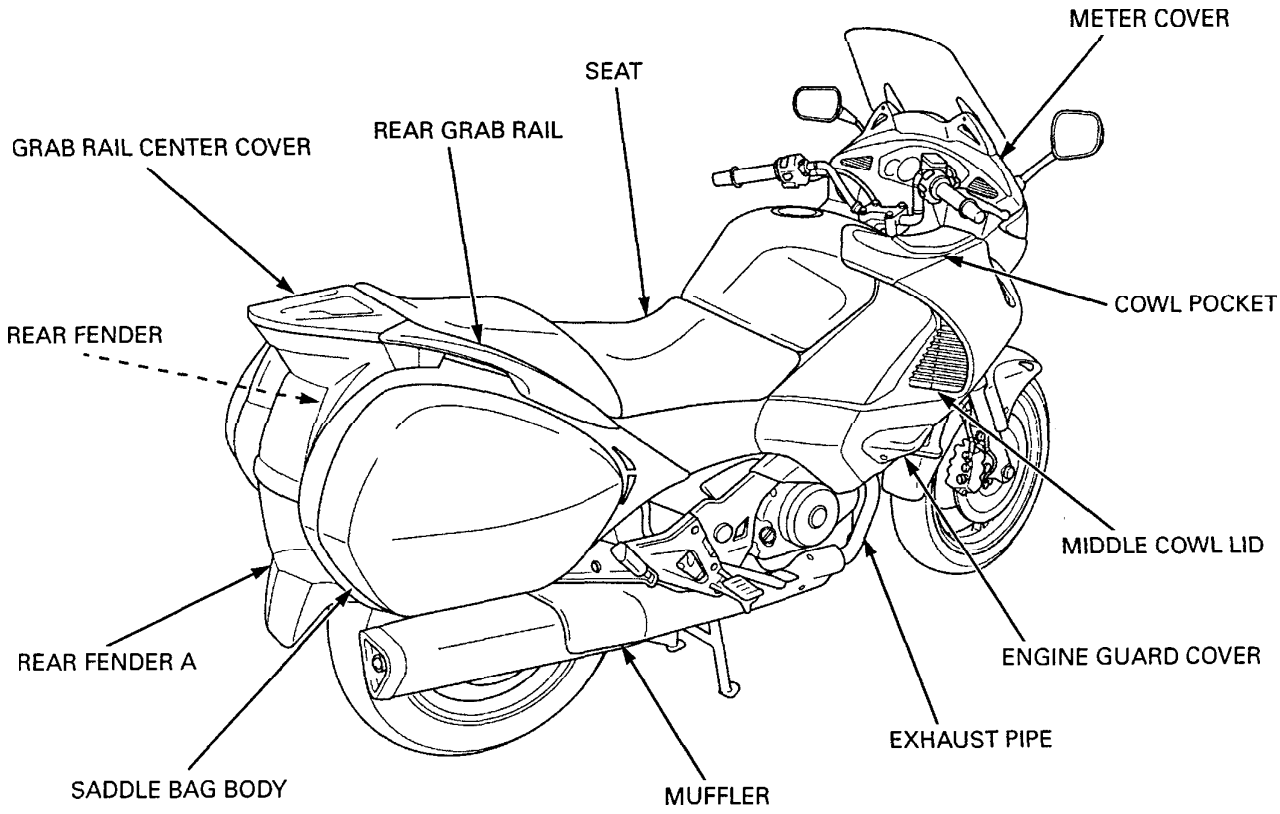


3. FRAME/BODY PANELS/EXHAUST SYSTEM

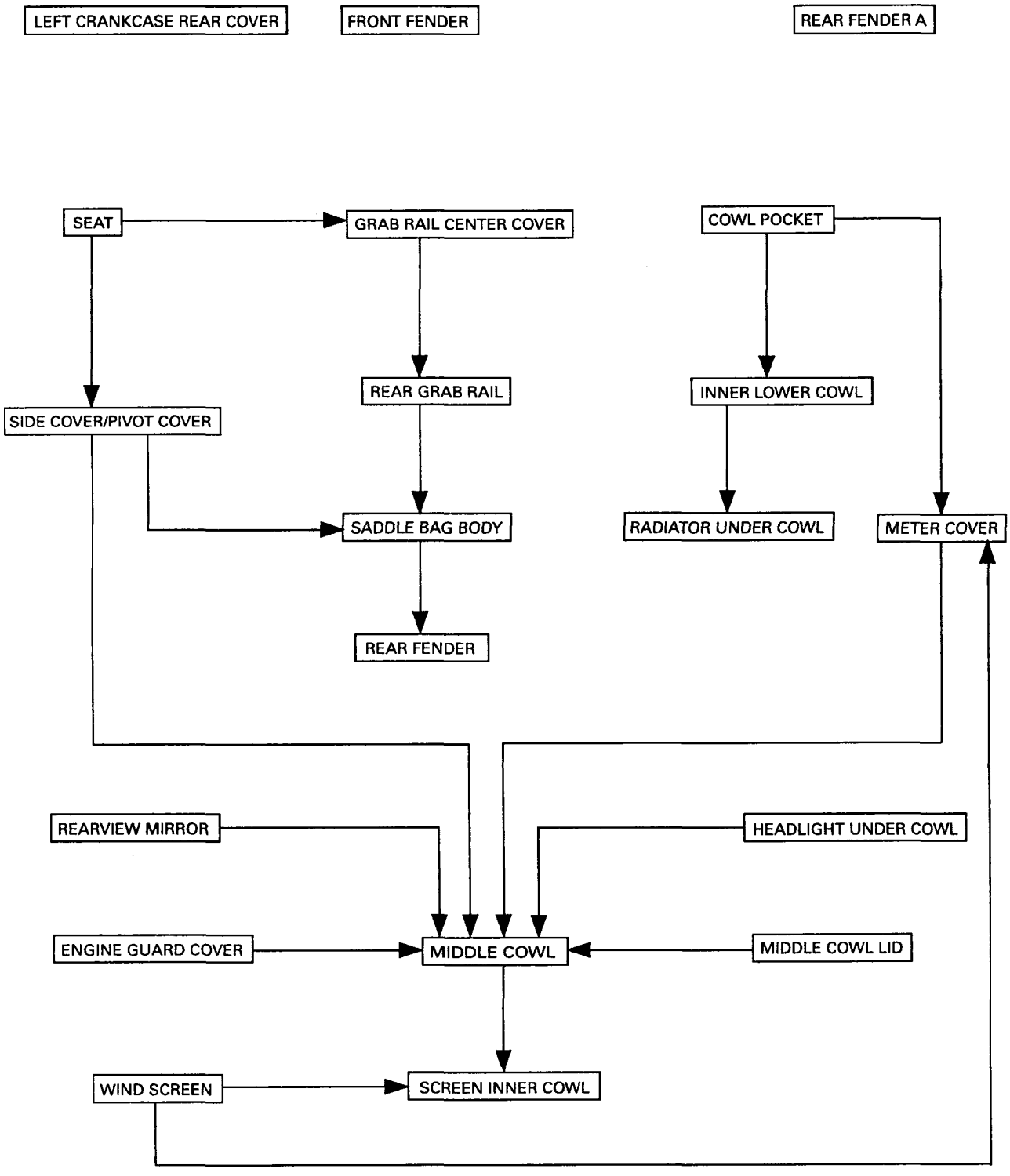
3

BODY PANEL LOCATION





BODY PANEL REMOVAL CHART



SERVICE INFORMATION

GENERAL

- This section covers removal and installation of the body panels, fuel tank and exhaust system.
- 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 new ones 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 pipe joint nuts first, then tighten the mounting fasteners.
- Always inspect the exhaust system for leaks after installation.

TORQUE VALUES

Left crankcase rear cover bolt	13 N·m (1.3 kgf·m, 9 lbf·ft)	CT bolt
Upper cowl stay flange bolt	49 N·m (5.0 kgf·m, 36 lbf·ft)	
Seat rail upper flange bolt	59 N·m (6.0 kgf·m, 44 lbf·ft)	
Seat rail lower flange bolt	59 N·m (6.0 kgf·m, 44 lbf·ft)	
Exhaust pipe joint nut	25 N·m (2.5 kgf·m, 18 lbf·ft)	
Rear fender bolt (upper/lower)	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Rear fender bolt (side)	7.0 N·m (0.7 kgf·m, 5.2 lbf·ft)	
Muffler band nut	17 N·m (1.7 kgf·m, 13 lbf·ft)	
Step holder bolt	27 N·m (2.8 kgf·m, 20 lbf·ft)	
Main stand pivot bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Side stand pivot bolt	10 N·m (1.0 kgf·m, 7 lbf·ft)	
Side stand pivot lock nut	29 N·m (3.0 kgf·m, 22 lbf·ft)	

TROUBLESHOOTING

Excessive exhaust noise
- Broken exhaust system
- Exhaust gas leak

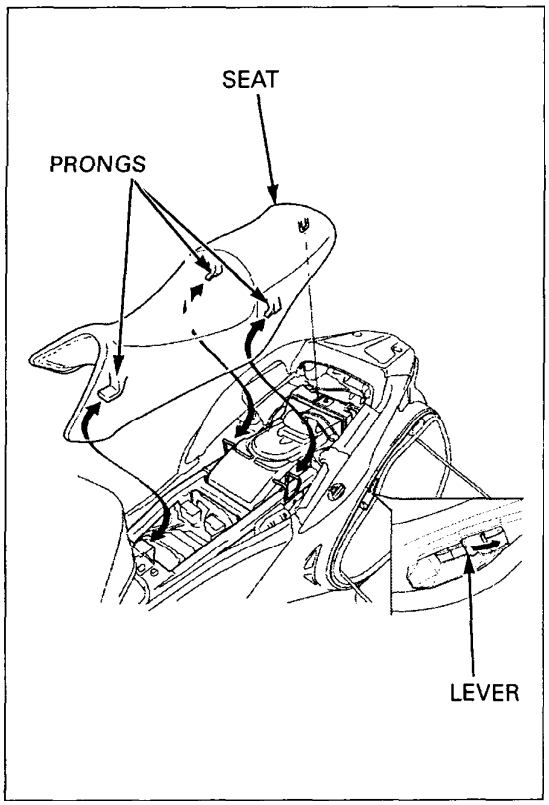
Poor performance
- Deformed exhaust system
- Exhaust gas leaks
- Clogged muffler

SEAT

Open the left saddle bag using the ignition key.

Pull the lever and unlock the seat, then remove the seat off.

Install the seat assembly by inserting its prongs under the raised lip of the frame properly.



SIDE COVER/PIVOT COVER

REMOVAL/INSTALLATION

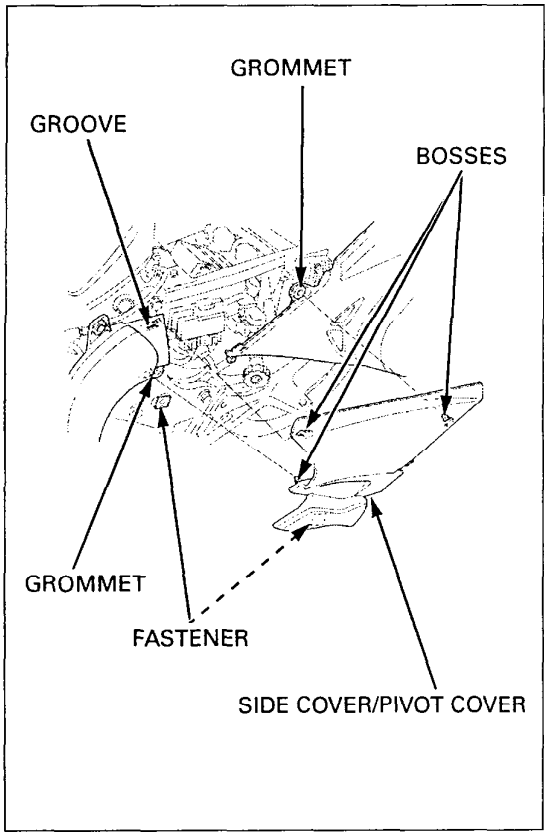
Be careful not to damage the side cover bosses.

Remove the seat (page 3-5).

Release the bosses on the side cover from the frame grommets and groove of the middle cowl.

Remove the side cover/pivot cover by releasing its fastener from the frame fastener and groove of the middle cowl.

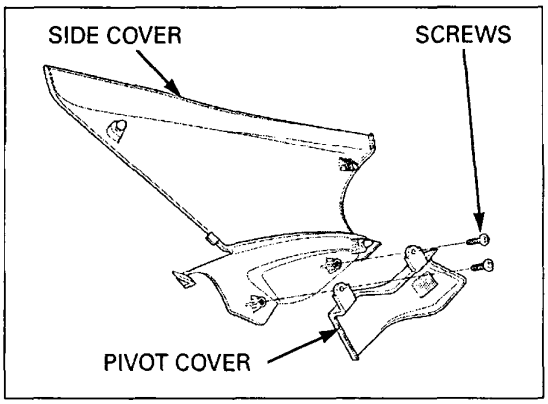
Install the side cover by inserting its bosses into the frame grommets and groove of the middle cowl.



DISASSEMBLY/ASSEMBLY

Remove the screws and pivot cover from the side cover.

Assembly is in the reverse order of disassembly.

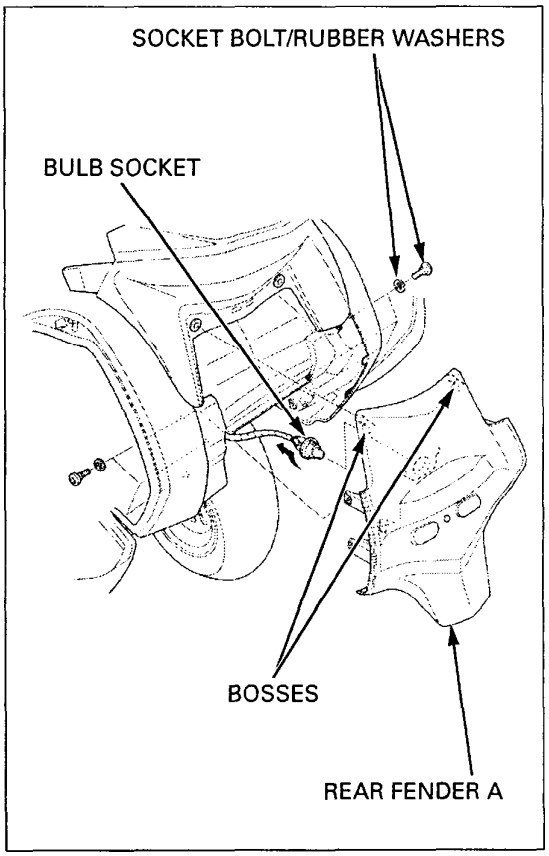


REAR FENDER A

Open the saddle bag using the ignition key (page 3-5).

Remove the socket bolts and rubber washers.
Loosen the saddle bag socket bolts, then make sure the clearance.
Release the bosses from the grommets being careful not to damage the tab, then remove the rear fender A.
Remove the license light bulb socket from the rear fender A (page 22-6).

Installation is in the reverse order of removal.



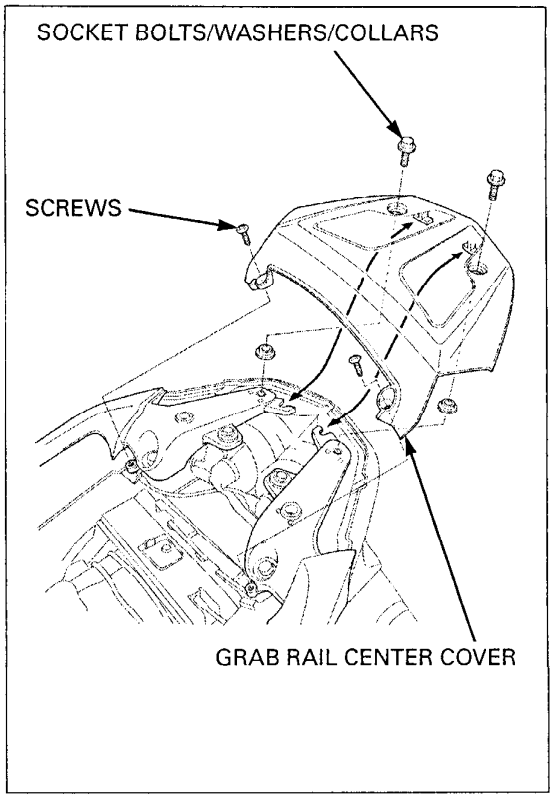
SADDLE BAG BODY

GRAB RAILCENTER COVER

Remove the seat (page 3-5).

Remove the socket bolts, screws, washers and collars.
Remove the grab rail center cover.

At installation, align the tabs on the grab rail center cover to the grooves on the rear grab rails.



REAR GRAB RAIL

Remove the grab rail center cover (page 3-7).

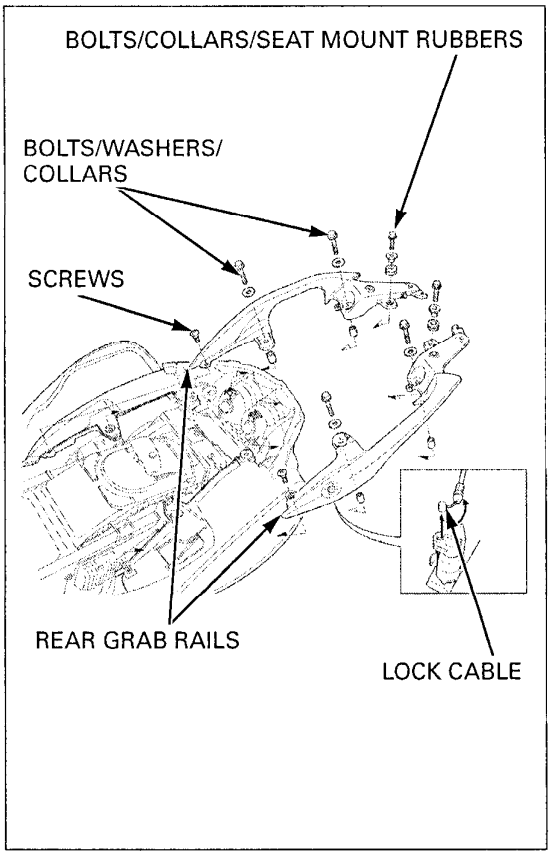
Remove the following:

- Screws
- Bolts/washers/collars
- Bolts/collars/seat mount rubbers

Disconnect the saddle bag lock cable from the key cylinder (left side only).

Remove the rear grab rails.

Installation is in the reverse order of removal.



SADDLE BAG BODY

Remove the rear grab rail (page 3-7).

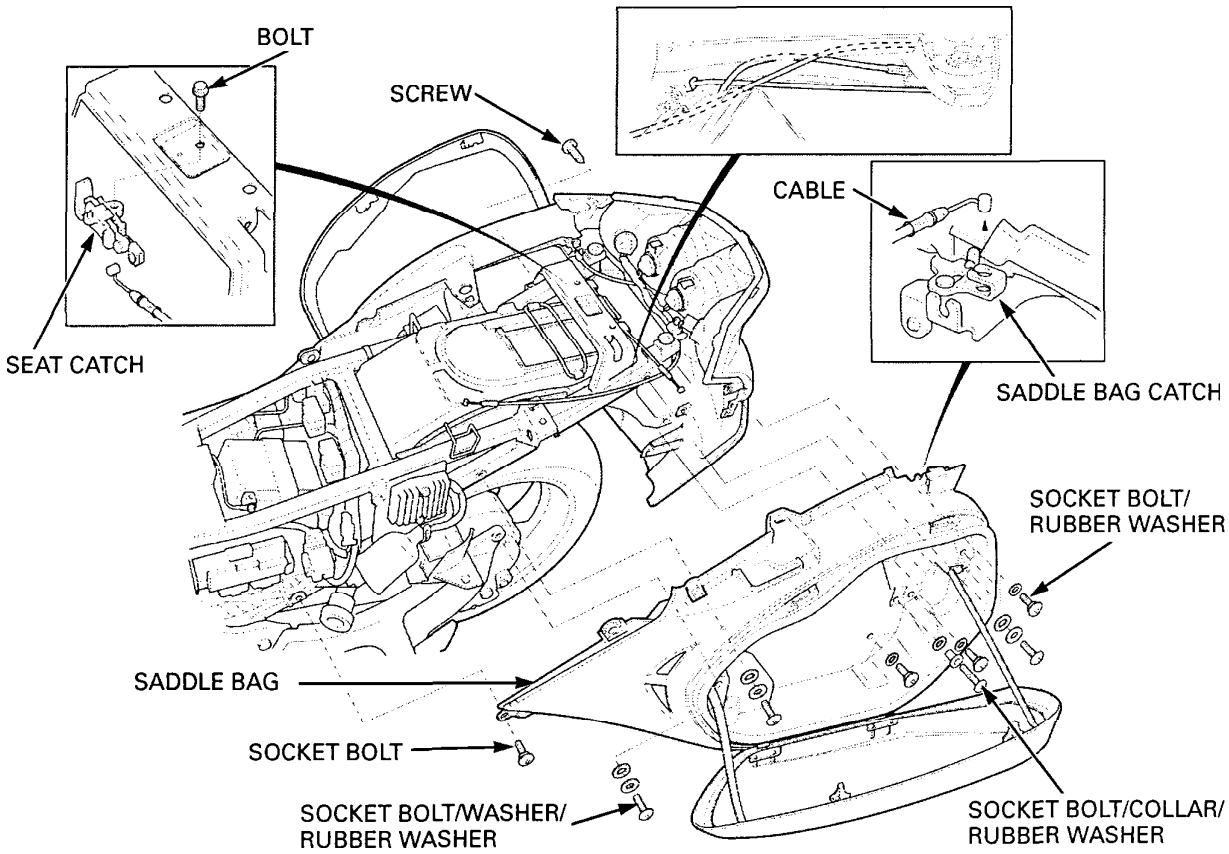
Disconnect the cable from the saddle bag catch (left side only).
Remove the bolt, seat catch and disconnect the cable from the seat catch (right side only).

Remove the following:

- Screw
- Socket bolt
- Socket bolts/washers/rubber washer
- Socket bolt/collar/rubber washer
- Socket bolts/rubber washers

Release the groove on the saddlebag body from the tab on the frame and then remove the saddle bag.

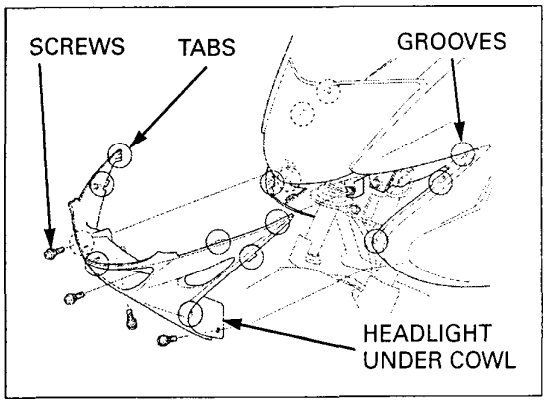
Installation is in the reverse order of removal.



HEADLIGHT UNDER COWL

Remove the screws and headlight under cowl.

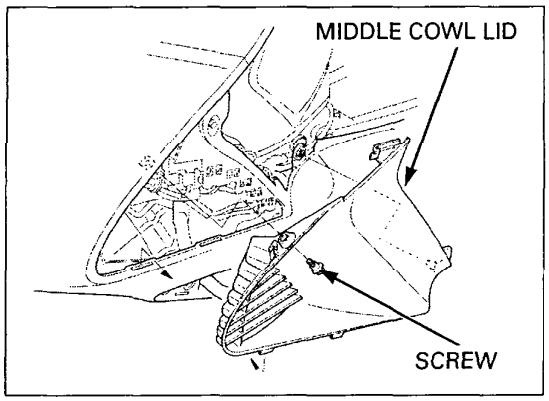
At installation, align the tabs on the headlight under cowl to the grooves on the headlight unit and middle cowl.



MIDDLE COWL LID

Remove the screw and middle cowl lid.

Installation is in the reverse order of removal.

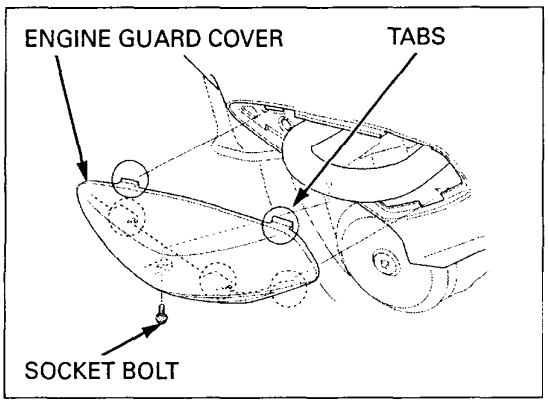


ENGINE GUARD COVER

Remove the socket bolt.

Release the tabs on the engine guard cover from the grooves on the middle cowl and remove the engine guard cover.

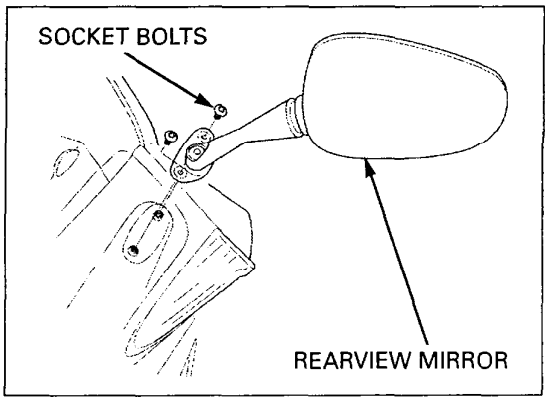
Install the engine guard cover with its tabs aligning the grooves on the middle cowl.



REARVIEW MIRROR

Remove the socket bolts and rearview mirror.

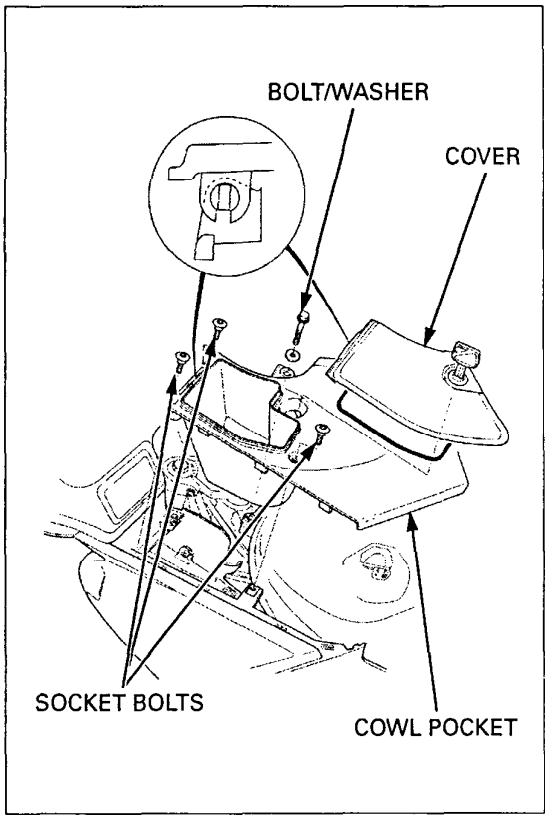
Installation is in the reverse order of removal.



COWL POCKET

Open and remove the cover.
Remove the socket bolts, bolt, washer and cowl pocket.

Installation is in the reverse order of removal.

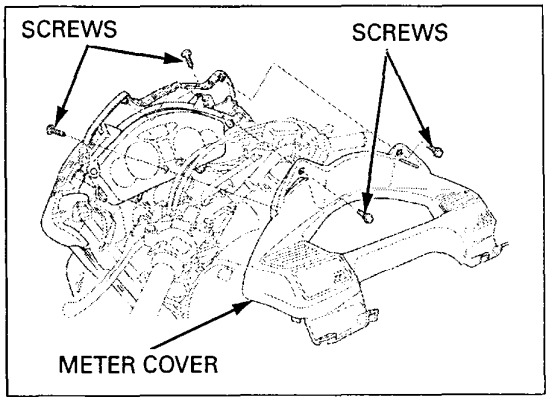


METER COVER

Remove the right and left cowl pocket (page 3-10).
Remove the windscreen (page 3-13).
Remove the inner lid (page 3-14).

Remove the screws.
Release the tabs on the meter cover from the grooves on the screen inner cowl, then remove the meter cover

Installation is in the reverse order of removal.



MIDDLE COWL

RIGHT MIDDLE COWL

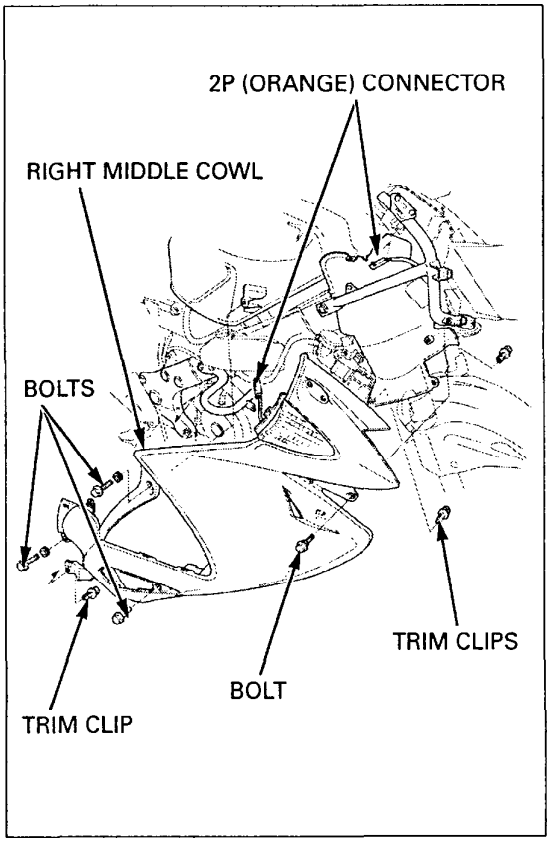
REMOVAL/INSTALLATION

Remove the following:

- Rearview mirror (page 3-9)
- Headlight under cowl (page 3-8)
- Side cover/pivot cover (page 3-5)
- Middle cowl lid (page 3-9)
- Engine guard cover (page 3-9)
- Meter cover (page 3-10)

Disconnect the right front turn signal 2P (Sky blue) connector.
Remove the bolts, screw and trim clips.
Remove the right middle cowl.

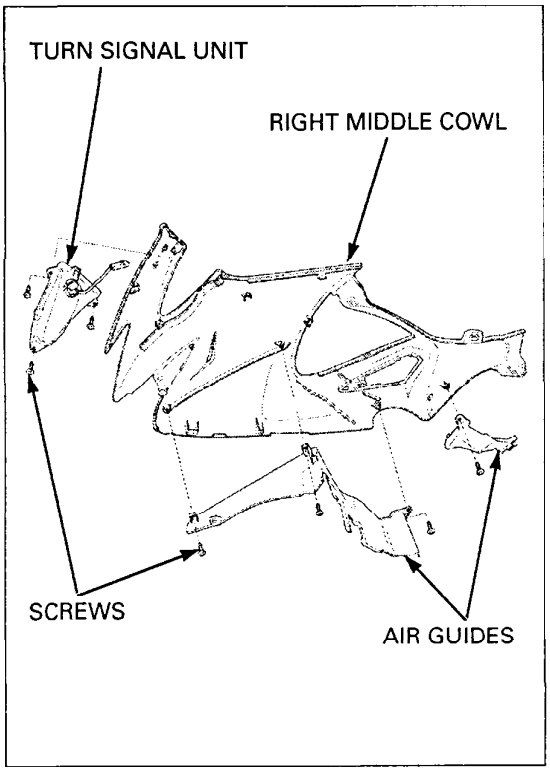
Installation is in the reverse order of removal.



DISASSEMBLY/ASSEMBLY

Remove the screws and right front turn signal unit.
Remove the screws and right middle cowl air guides.

Assembly is in the reverse order of disassembly.



LEFT MIDDLE COWL

REMOVAL/INSTALLATION

Remove the following:

- Rearview mirror (page 3-9)
- Headlight under cowl (page 3-8)
- Side cover/pivot cover (page 3-5)
- Middle cowl lid (page 3-9)
- Engine guard cover (page 3-9)
- Meter cover (page 3-10)

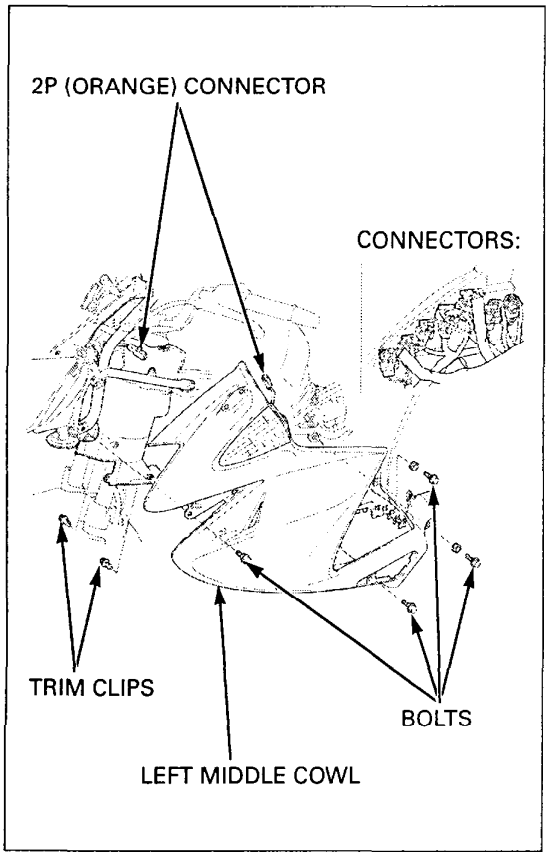
Disconnect the left front turn signal 2P (Orange) connector.
Remove the bolts, screw and trim clips.

Remove the following connector from the left middle cowl:

- Immobilizer 4P (Natural)
- Ignition switch 4P (Natural)
- Right handlebar switch 9P (Red)
- Right handlebar switch 2P (Red)
- Left handlebar switch 4P (Natural)
- Left handlebar switch 6P (Black)
- Front wheel speed sensor 2P (Orange)

Remove the left middle cowl.

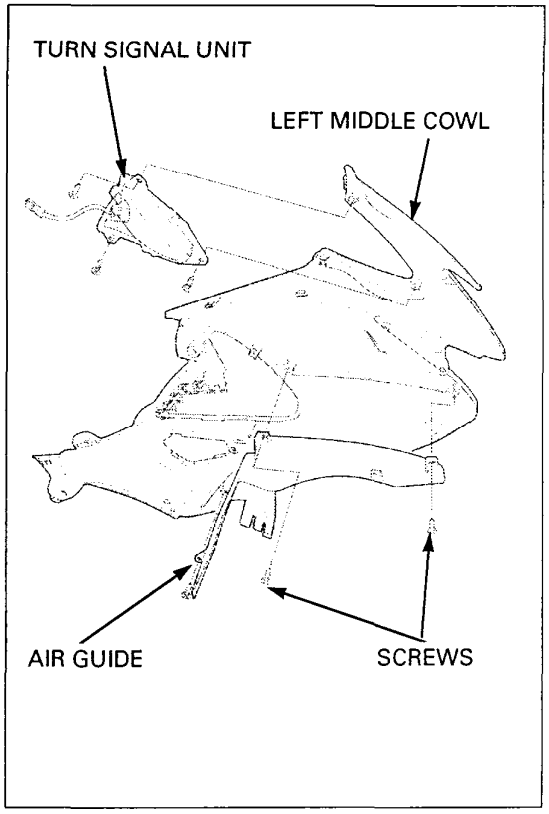
Installation is in the reverse order of removal.



DISASSEMBLY/ASSEMBLY

Remove the screws and left front turn signal unit.
Remove the screws and left middle cowl air guide.

Assembly is in the reverse order of disassembly.



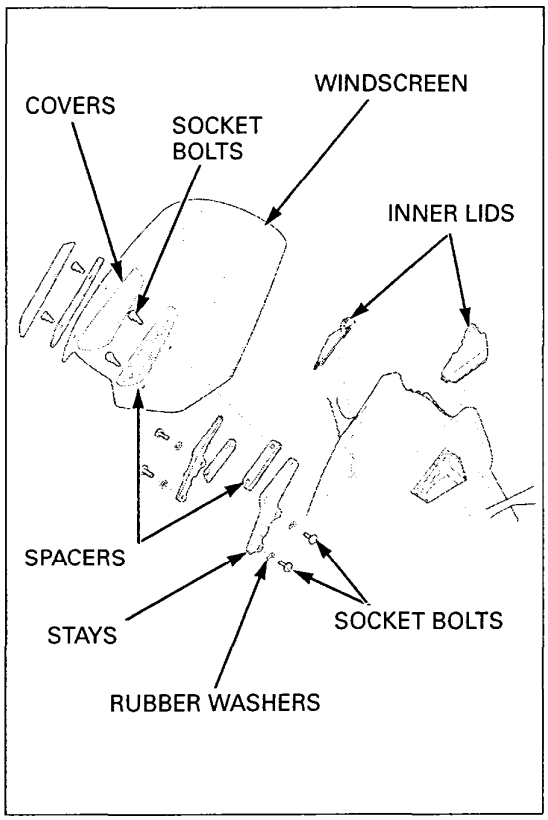
WINDSCREEN

REMOVAL/INSTALLATION

Remove the right/left windscreen covers.
Remove the socket bolts, right/left screen spacers and windscreen.

Remove the right and left inner lids.
Remove the socket bolts, rubber washers and windscreen stays.

Installation is in the reverse order of removal.

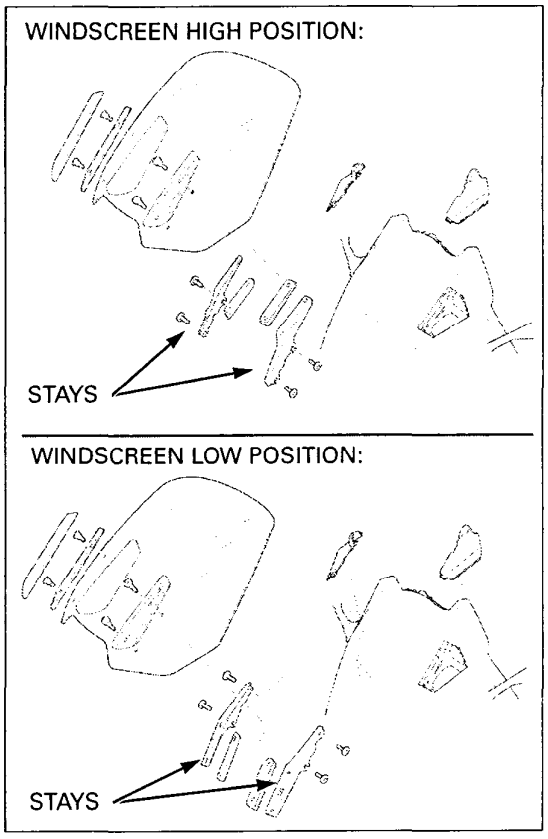


WINDSCREEN HEIGHT ADJUSTMENT

Remove the windscreen (page 3-13).

When the wind screen height is ready to be adjusted, exchange the right and left windscreen stay.

Installation is in the reverse order of removal.

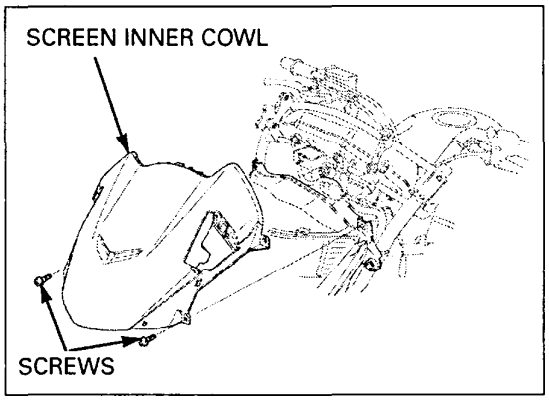


SCREEN INNER COWL

Remove the right/left middle cowls (page 3-11).
Remove the windscreen (page 3-13).

Remove the screws and screen inner cowl.

Installation is in the reverse order of removal.



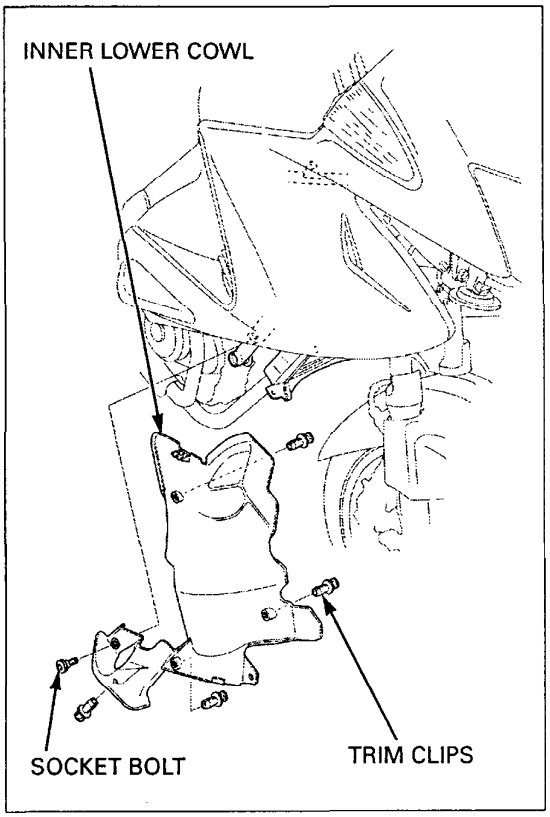
INNER LOWER COWL

INNER LOWER COWL

Remove the headlight under cowl (page 3-8).
Remove the cowl pocket (page 3-10).

Remove the trim clips and socket bolt, then remove the inner lower cowl.

Installation is in the reverse order of removal.

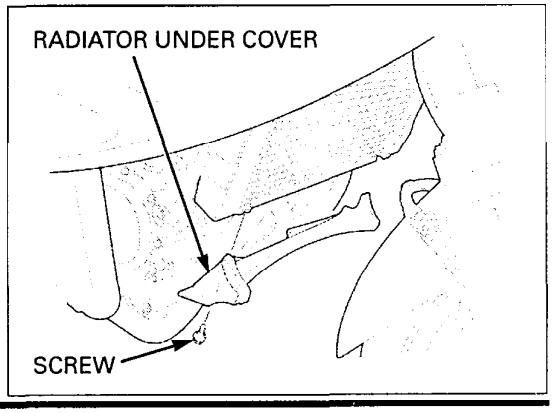


RADIATOR UNDER COVER

Remove the inner lower cowl (page 3-14).

Remove the screw and radiator under cowl.

Installation is in the reverse order of removal.

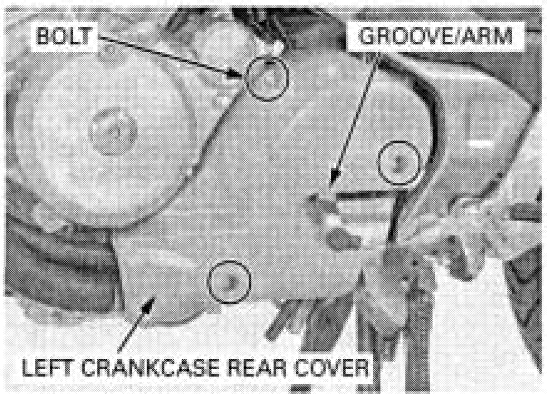


LEFT CRANKCASE REAR COVER

Remove the bolts and left crankcase rear cover by releasing its grove from the gearshift arm.

Installation is in the reverse order of removal.

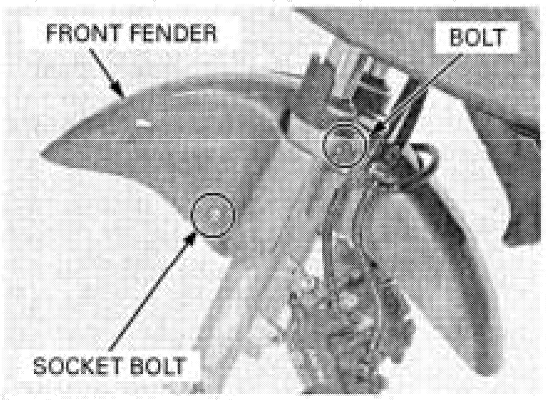
TORQUE: 13 N·m (1.3 kgf·m, 9 lbf·ft)



FRONT FENDER

Remove the front wheel (page 15-12).

Remove the bolts and lift the front fender up.

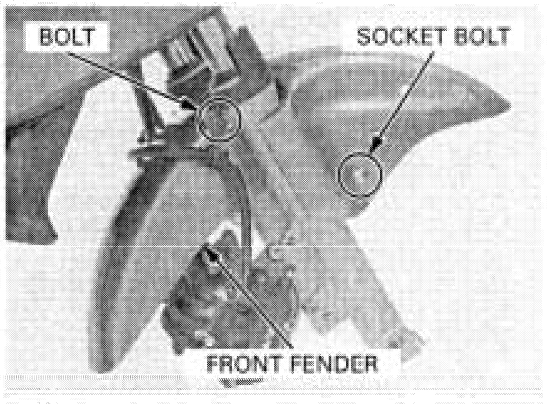


Rotate the fork legs and remove the front fender downward.

NOTE:

To prevent twisting the brake hose, do not rotate the fork legs more than necessary to remove the front fender.

Installation is in the reverse order of removal.



REAR FENDER

REMOVAL/INSTALLATION

Remove the saddle bag body (page 3-7).
Remove the brake/tail light unit (page 22-6).

Remove the following from the rear fender:

- ECM
- Fuse boxes
- Starter relay switch
- Relay connectors

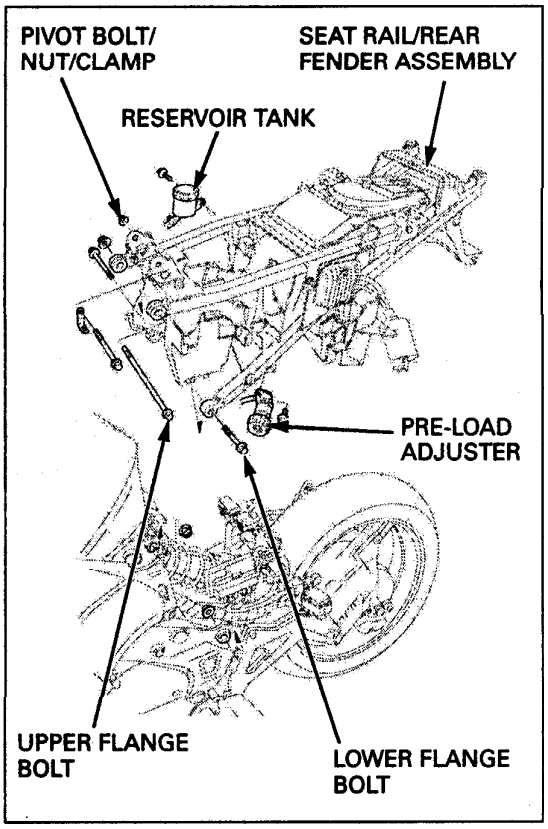
Remove the fuel tank pivot bolt/nut and clamp.
Remove the bolt and rear brake reservoir tank.
Remove the bolt and pre-load adjuster.

Remove the seat rail upper/lower flange bolts/nuts.
Remove the seat rail/rear fender assembly.

Route the wires properly (page 1-35).

Installation is in the reverse order of removal.

TORQUE:
Seat rail upper flange bolt:
59 N·m (6.0 kgf·m, 44 lbf·ft)
Seat rail lower flange bolt:
59 N·m (6.0 kgf·m, 44 lbf·ft)

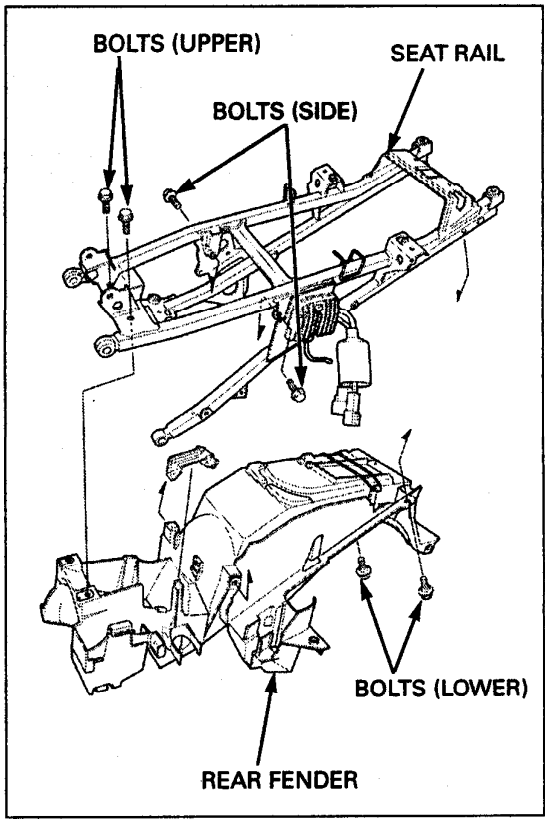


DISASSEMBLY/ASSEMBLY

Remove the bolts, then disassemble the rear fender form the seat rail.

Assembly is in the reverse order of disassembly.

TORQUE:
Rear fender bolt (upper/lower):
12 N·m (1.2 kgf·m, 9 lbf·ft)
Rear fender bolt (side):
7.0 N·m (0.7 kgf·m, 5.2 lbf·ft)



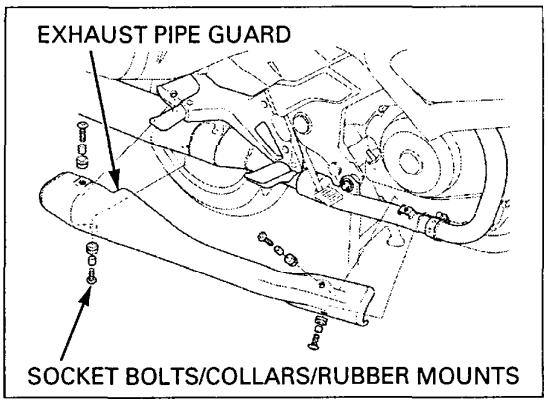
EXHAUST SYSTEM

REMOVAL

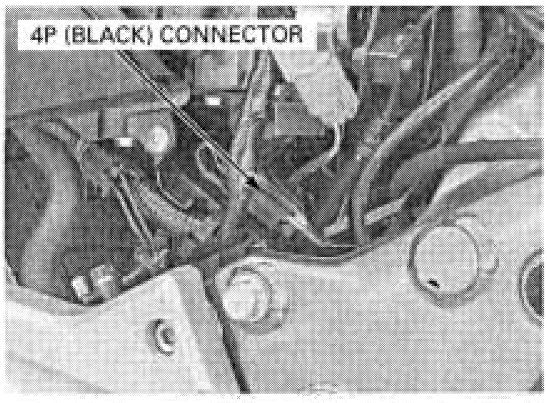
MUFFLER

Remove the side cover/pivot cover (page 3-5).

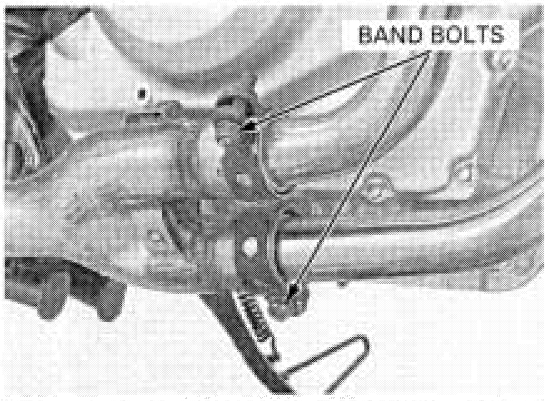
Remove the socket bolts, collars, rubber mounts and exhaust pipe guard.



Disconnect the O_2 sensor 4P (Black) connector.

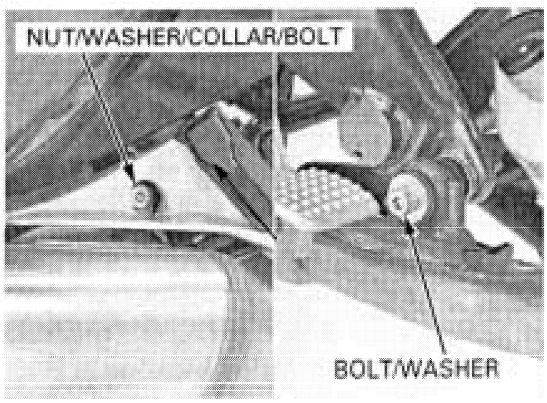


Loosen the muffler band bolts.



Remove the nut, washer, collar and muffler rear mounting bolt.
Remove the muffler front mounting bolt and washer.

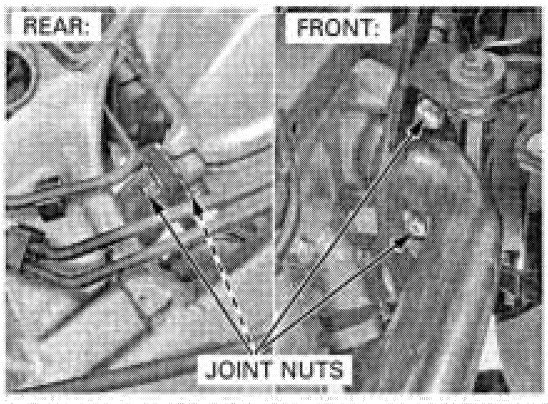
Remove the muffler.



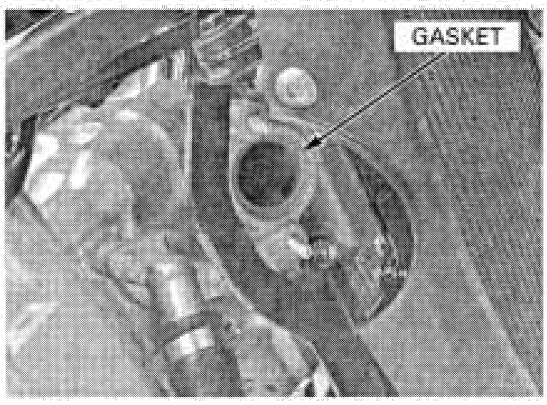
EXHAUST PIPE

Remove the exhaust pipe joint nuts.

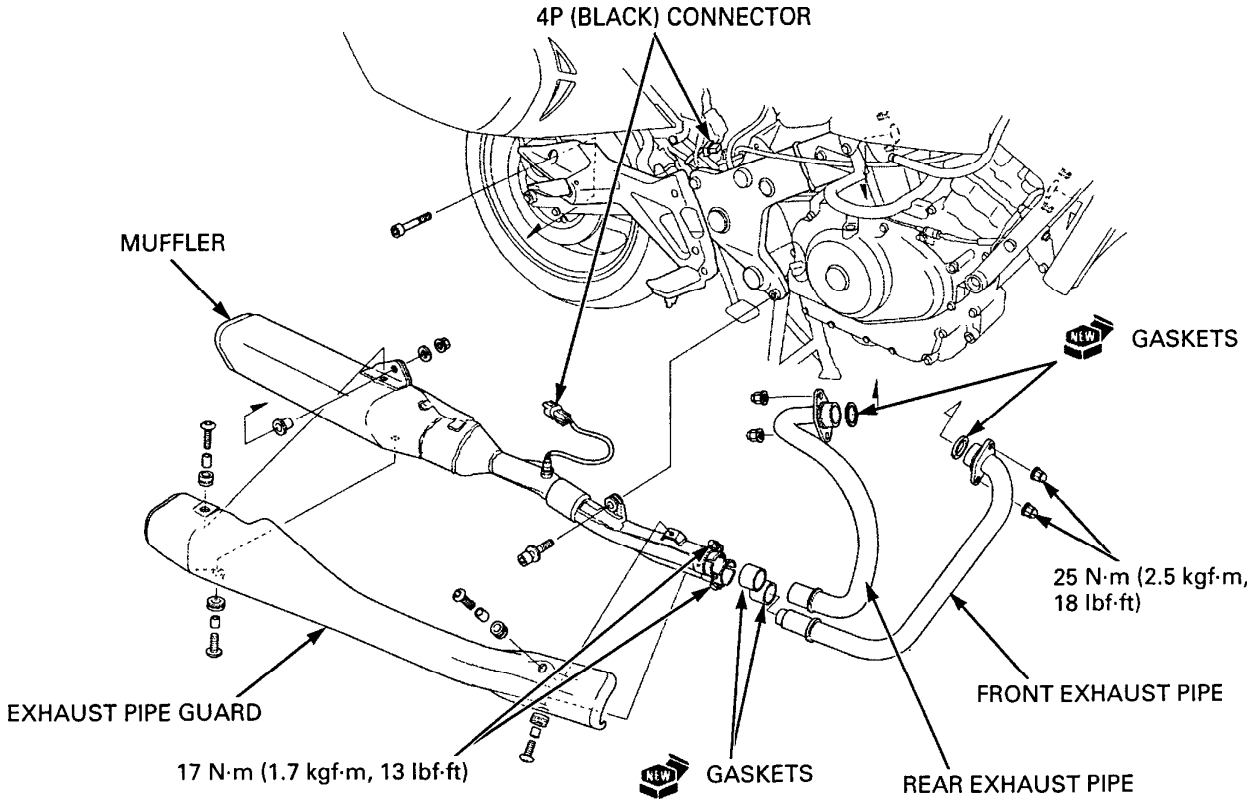
Remove the front/rear exhaust pipes.



Remove the front and rear gaskets.

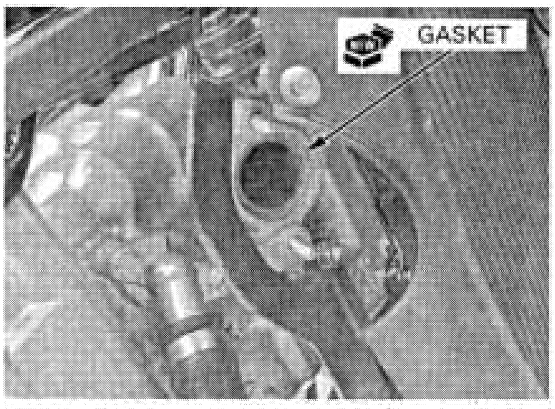


INSTALLATION



EXHAUST PIPE

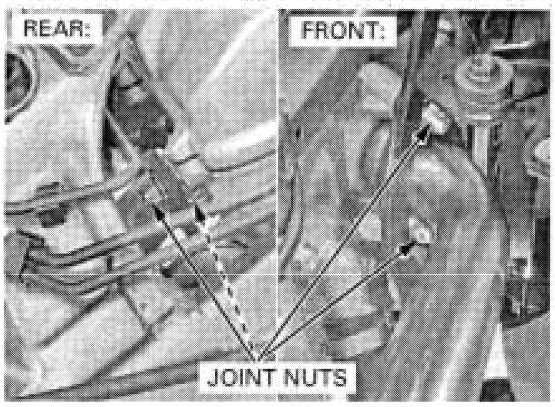
Install a new front and rear exhaust pipe gaskets.



Install the front/rear exhaust pipes and muffler.

Tighten the exhaust pipe joint nuts to the specified torque.

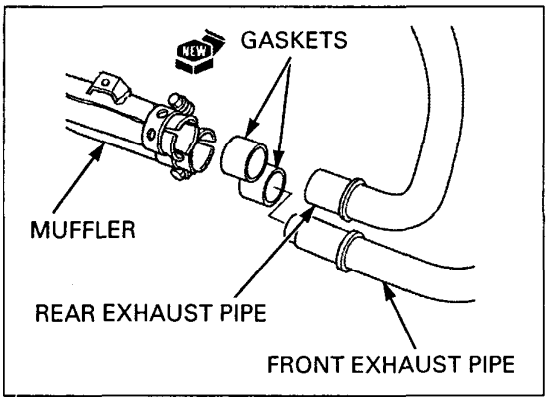
TORQUE: 25 N·m (2.5 kgf·m, 18 lbf·ft)



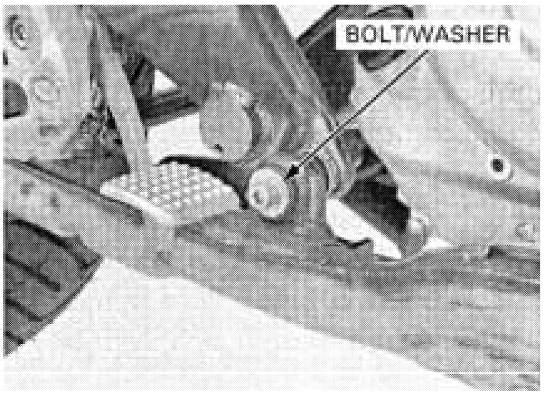
MUFFLER

Install a new muffler gaskets to the front and rear exhaust pipe.

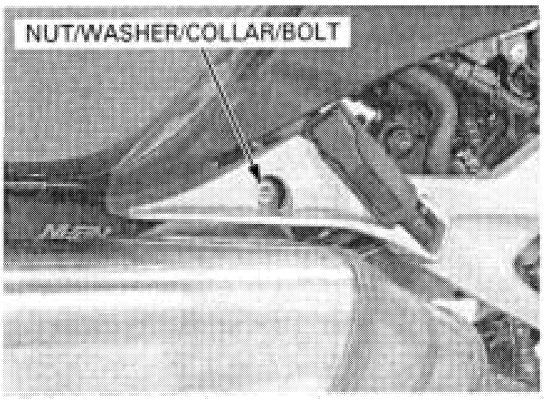
Install the muffler to the front and rear exhaust pipe.



Install and tighten the muffler front mounting bolt securely.

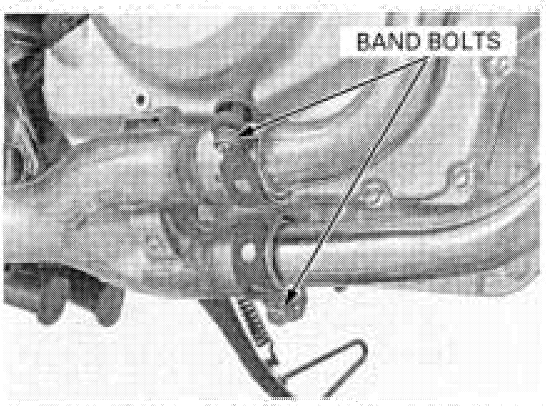


Install and tighten the muffler rear mounting bolt securely.

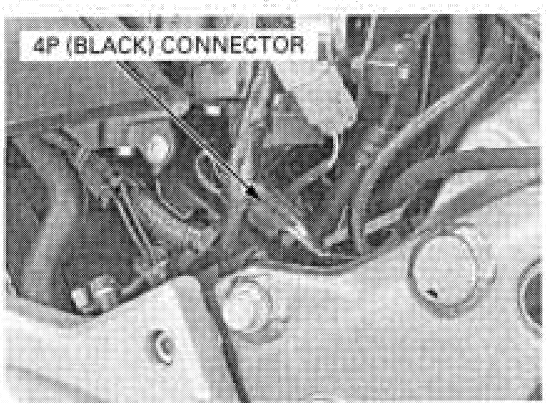


Tighten the muffler band bolts to the specified torque.

TORQUE: 17 N·m (1.7 kgf·m, 13 lbf·ft)

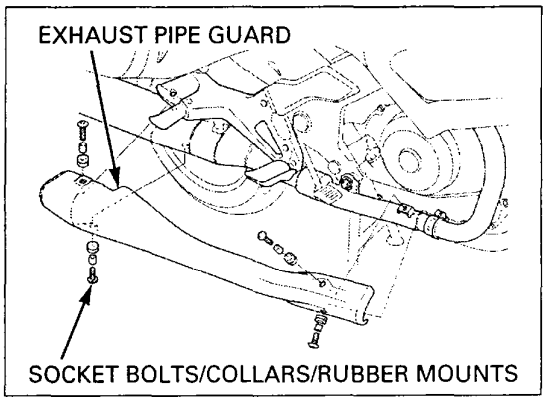


Connect the O_2 sensor 4P (Black) connector.



Install the exhaust pipe guard, rubber mounts and collars.
Install and tighten the socket bolts securely.

Install the side cover/pivot cover (page 3-5).



SIDE STAND

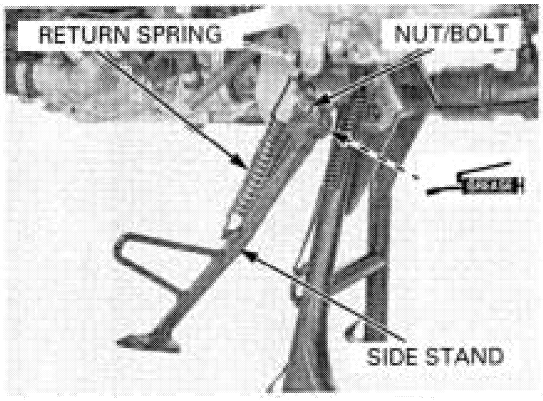
Remove the side stand switch (page 22-19).

Support the motorcycle securely using the main stand.

Unhook the return spring.
Remove the pivot nut, bolt and side stand.

Installation is in the reverse order of removal.
At installation, apply grease to the pivot bolt sliding surfaces.

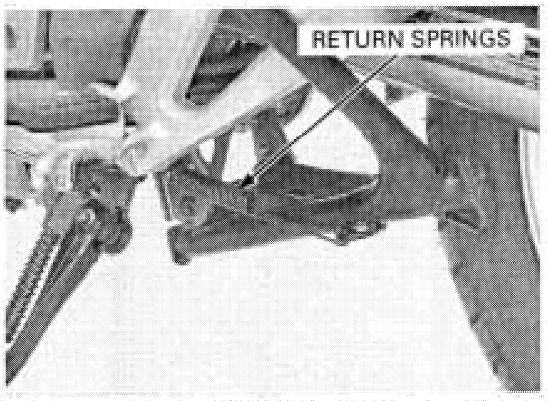
TORQUE:
Side stand pivot bolt 10 N·m (1.0 kgf·m, 7 lbf·ft)
Side stand pivot nut 29 N·m (3.0 kgf·m, 22 lbf·ft)



MAIN STAND

Support the motorcycle securely using the side stand.

Unhook the return springs.

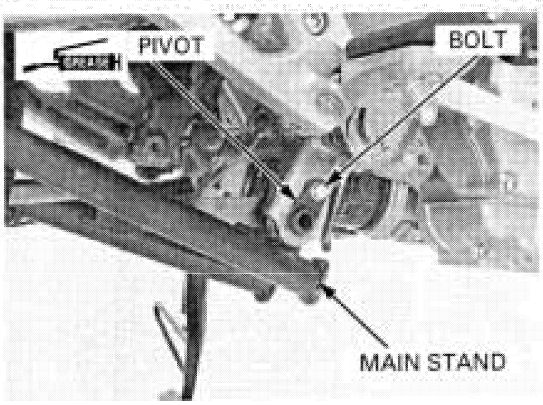


Remove the bolt and main stand pivot.
Remove the main stand.

Installation is in the reverse order of removal.

At installation, apply grease to the pivot sliding surfaces.

TORQUE:
Main stand pivot bolt 12 N·m (1.2 kgf·m, 9 lbf·ft)



4. MAINTENANCE

4

SERVICE INFORMATION

GENERAL

- Place the motorcycle on level ground before starting any work.
- Gasoline is extremely flammable and is explosive under certain conditions.
- Work in a well ventilated area. Smoking or allowing flames or sparks in the work area or where the gasoline is stored can cause a fire or explosion.
- The exhaust contains poisonous carbon monoxide gas that may cause loss of consciousness and may lead to death. Run the engine in and open area or with an exhaust evacuation system in an enclosed area.

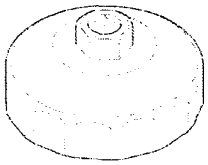
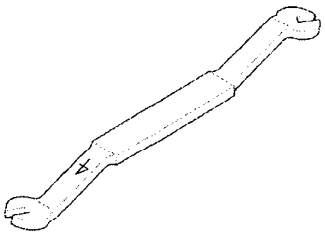
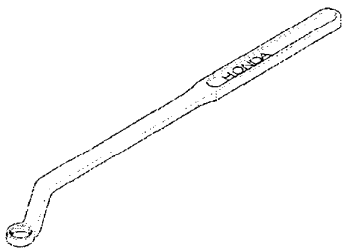
SPECIFICATIONS

ITEM			SPECIFICATIONS
Throttle grip free play			2 – 6 mm (1/16 – 1/4 in)
Spark plug	Standard		CPR8EA-9 (NGK)
Spark plug gap			0.8 – 0.9 mm (0.031 – 0.035 in)
Valve clearance	Intake		0.15 ± 0.02 mm (0.006 ± 0.001 in)
	Exhaust		0.20 ± 0.02 mm (0.008 ± 0.001 in)
Recommended engine oil			Suggested oil: Honda "4-stroke motorcycle oil" or an equivalent Oil recommendation: API classification SG or higher (except oils labeled as energy conserving on circular API service label) Viscosity: SAE 10W-30 JASO T903 standard: MA
Engine oil capacity	After draining		2.6 liter (2.75 US qt, 2.29 Imp qt)
	After draining/filter change		2.8 liter (2.96 US qt, 2.46 Imp qt)
	After disassembly		3.2 liter (3.38 US qt, 2.82 Imp qt)
Engine idle speed			1,200 ± 100 min^{-1} (rpm)
Recommended final drive oil			Hypoid gear oil, SAE #80
Final drive oil capacity	After draining		130 cm^2 (4.3 US oz, 4.5 Imp oz)
	After disassembly		150 cm^2 (5.1 US oz, 5.3 Imp oz)
Recommended brake fluid			DOT 4
Clutch lever free play			10 – 20 mm (3/8 – 3/4 in)
Cold tire pressure	Driver only	Front	250 kPa (2.50 kgf/cm^2, 36 psi)
		Rear	290 kPa (2.90 kgf/cm^2, 42 psi)
	Driver and passenger	Front	250 kPa (2.50 kgf/cm^2, 36 psi)
		Rear	290 kPa (2.90 kgf/cm^2, 42 psi)
Tire size		Front	120/70ZR17M/C (58W)
		Rear	150/70ZR17M/C (69W)
Tire brand	Michelin	Front	MACADAM90XB
		Rear	MACADAM90XB
	Bridgestone	Front	BT020F RADIAL J
		Rear	BT020R RADIAL U
Minimum tire tread depth		Front	1.5 mm (0.06 in)
		Rear	2.0 mm (0.08 in)

TORQUE VALUES

Spark plug	16 N·m (1.6 kgf·m, 12 lbf·ft)	
Timing hole cap	10 N·m (1.0 kgf·m, 7 lbf·ft)	Apply engine oil to the threads and flange surface
Crankshaft hole cap	15 N·m (1.5 kgf·m, 11 lbf·ft)	Apply engine oil to the threads and flange surface
Valve adjusting screw lock nut	23 N·m (2.3 kgf·m, 17lbf·ft)	Apply engine oil to the threads and seating surface
Engine oil filter cartridge	26 N·m (2.7 kgf·m, 20 lbf·ft)	
Engine oil drain bolt	30 N·m (3.1 kgf·m, 22 lbf·ft	
Final drive oil filler cap	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Front master cylinder reservoir cap screw	1.5 N·m (0.2 kgf·m, 1.1 lbf·ft)	
Rear master cylinder lower joint lock nut	17.2 N·m (1.8 kgf·m, 1.3 lbf·ft)	

TOOLS

Oil filter wrench 07HAA-PJ70101	Tappet adjust wrench, 4 mm 07908-KE90100	Tappet lock wrench 07908-MB00100
		

MAINTENANCE SCHEDULE

Perform the Pre-ride inspection in the Owner's Manual at each scheduled maintenance period.

I: Inspect and clean, adjust, lubricate or replace if necessary. C: Clean. R: Replace. A: Adjust. L: Lubricate.

The following items require some mechanical knowledge. Certain items (particularly those marked * and **) may require more technical information and tools. Consult an authorized Honda dealer.

	ITEMS	FREQUENCY WHICHEVER COMES FIRST ⇩	⇨ ODOMETER READING (NOTE 1)								REFER TO PAGE
			X1,000 km	1	6	12	18	24	30	36	
			X1,000 mi	0.6	4	8	12	16	20	24	
			Months		6	12	18	24	30	36	
*	FUEL LINE					I		I		I	4-5
*	THROTTLE OPERATION					I		I		I	4-6
	AIR CLEANER	NOTE 2					R			R	4-7
	SPARK PLUG				I	R	I	R	I	R	4-7
*	VALVE CLEARANCE			I		I		I		I	4-9
	ENGINE OIL			R		R		R		R	4-11
	ENGINE OIL FILTER			R		R		R		R	4-12
	RADIATOR COOLANT	NOTE 3				I		I		R	4-14
*	COOLING SYSTEM					I		I		I	4-14
*	SECONDARY AIR SUPPLY SYSTEM					I		I		I	4-15
	FINAL DRIVE OIL					I		I		R	4-16
	BRAKE FLUID	NOTE 3			I	I	R	I	I	R	4-17
	BRAKE PADS WEAR				I	I	I	I	I	I	4-18
	BRAKE SYSTEM			I		I		I		I	4-19
*	BRAKE LIGHT SWITCH					I		I		I	4-20
*	HEADLIGHT AIM					I		I		I	4-21
	CLUTCH SYSTEM			I	I	I	I	I	I	I	4-21
	SIDE STAND					I		I		I	4-22
*	SUSPENSION					I		I		I	4-22
*	NUTS, BOLTS, FASTENERS			I		I		I		I	4-23
**	WHEELS/TIRES					I		I		I	4-23
**	STEERING HEAD BEARINGS			I		I		I		I	4-24

* Should be serviced by an authorized Honda dealer, unless the owner has proper tools and service data and is mechanically qualified

** In the interest of safety, we recommend these items be serviced only by an authorized Honda dealer

Honda recommends that an authorized Honda dealer should road test the motorcycle after each periodic maintenance is carried out.

NOTES:

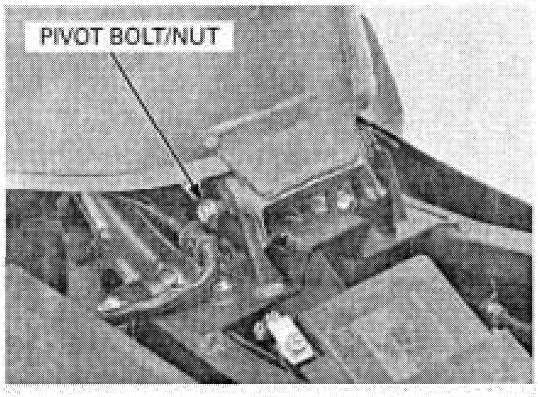
1. At higher odometer reading, repeat at the frequency interval established here.
2. Service more frequently when riding in unusually wet or dusty areas.
3. Replace every 2 years, or at the indicated odometer intervals, whichever comes first. Replacement requires mechanical skill.

FUEL LINE

Support the motorcycle securely on its center stand.

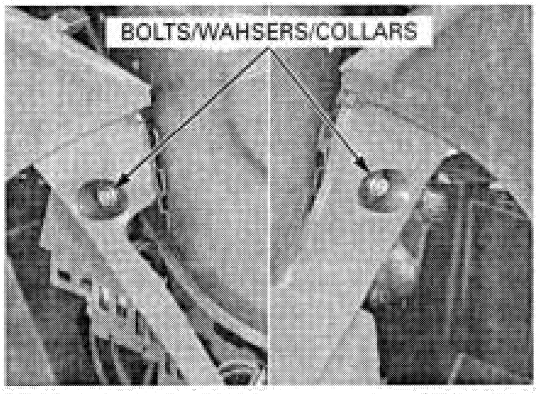
Remove the seat (page 3-5).
Remove the middle cowl lid (page 3-9).
Remove the cowl pocket (page 3-10).

Loosen the fuel tank rear pivot bolt/nut.



Remove the fuel tank mounting bolts/washers/collars.

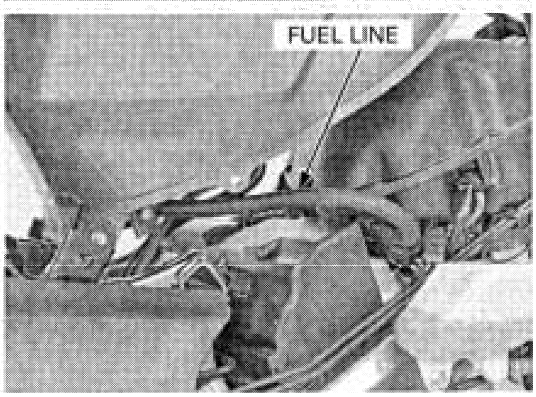
Lift and open the fuel tank.



Turn the handlebar to left and lock the steering, then place the fuel tank on the handlebar grip.

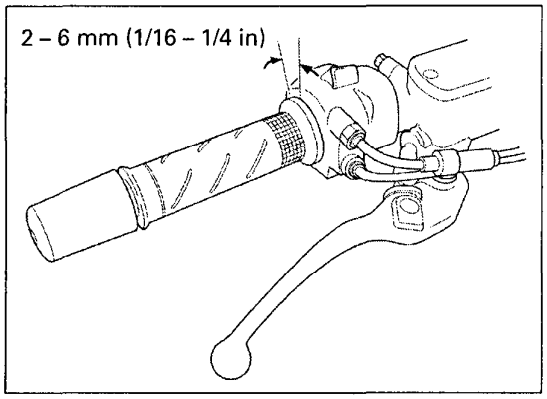
Check the fuel line for deterioration, damage or leakage.
Replace the fuel line if necessary.

Installation is in the reverse order of removal.



THROTTLE OPERATION

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



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

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

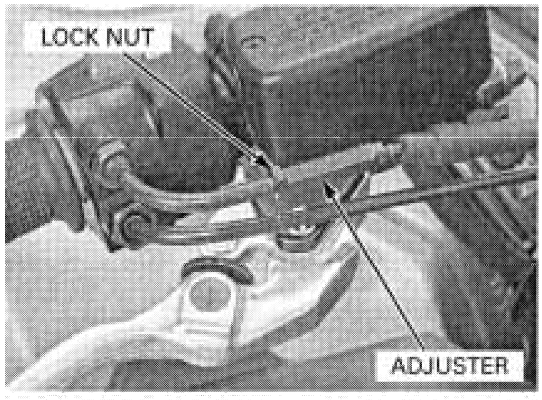
With the engine idling, turn the handlebar all the way to the right and left to ensure that the idle speed does not change. If idle speed increases, check the throttle grip free play and the throttle cable connection.

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

FREE PLAY: 2 – 6 mm (1/16 – 1/4 in)

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

Loosen the lock nut, turn the adjuster as required. Tighten the lock nut while holding the adjuster.

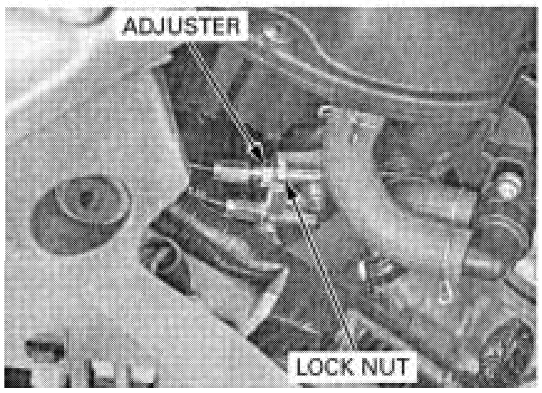


Major adjustment is made with the lower adjuster.

Open and support the fuel tank (page 4-5).

Loosen the lock nut, turn the adjuster as required. Tighten the lock nut while holding the adjuster.

Recheck the throttle operation and install the air cleaner housing (page 4-7).



AIR CLEANER

NOTE:
The viscous paper element type air cleaner can not be cleaned because the element contains a dust adhesive.

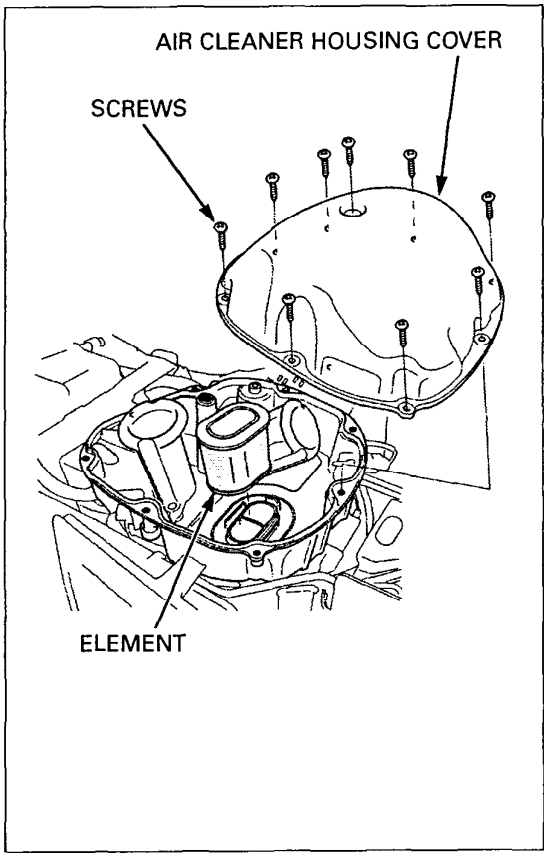
Open and support the fuel tank (page 4-5).

Remove the screws and air cleaner housing cover.

Remove the air cleaner element from the air cleaner housing.

Replace the element in accordance with the maintenance schedule or any time it is excessively dirty or damaged.

Install the removed parts in the reverse order of removal.

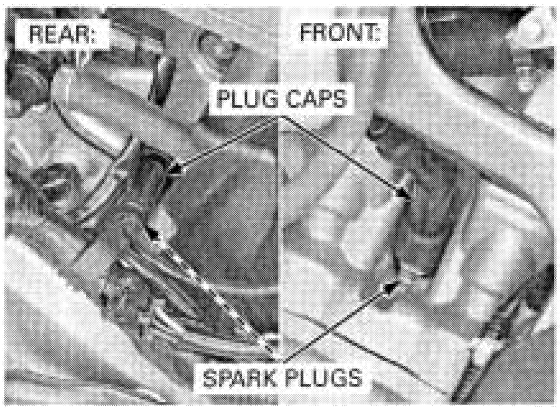


SPARK PLUG

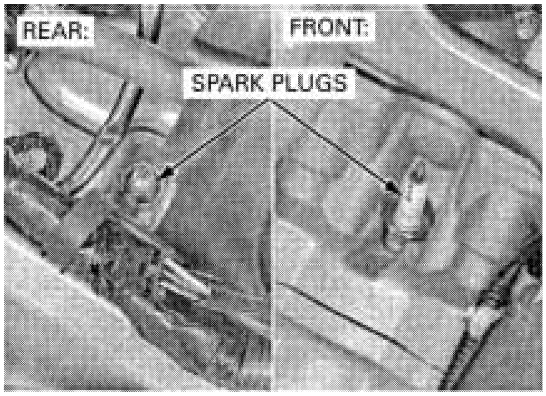
Front: Remove the right middle cowl lid (page 3-9).
Rear: Open and support the fuel tank (page 4-5).

Disconnect the spark plug caps and clean around the spark plug bases.

NOTE:
Clean around the spark plug bases with compressed air before removing the plugs, and be sure that no debris is allowed to enter into the combustion chamber.



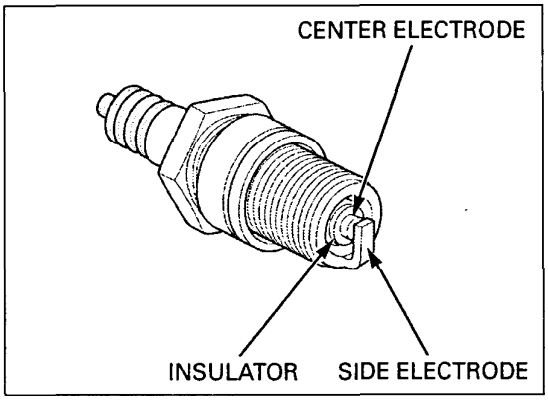
Remove the spark plugs.



Check the insulator for cracks or damage, and the electrodes for wear, fouling or discoloration. Replace the plug if necessary.

RECOMMENDED SPARK PLUG:
Standard: CPR8EA-9 (NGK)

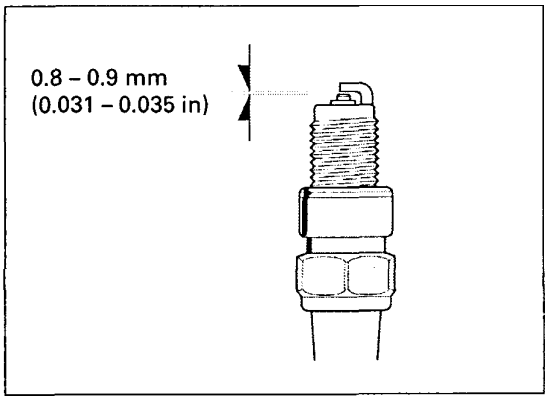
Clean the spark plug electrodes with a wire brush or special plug cleaner.



Check the gap between the center and side electrodes with a feeler gauge.

SPARK PLUG GAP: 0.8 – 0.9 mm (0.031 – 0.035 in)

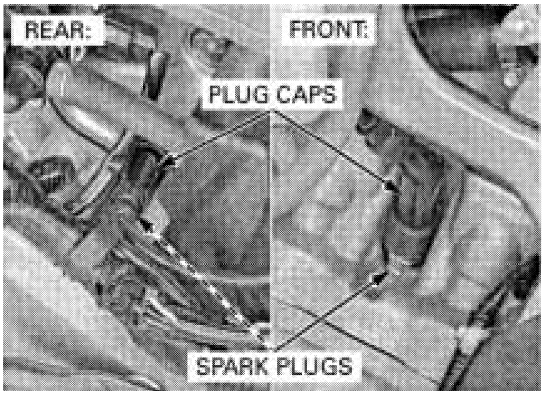
If necessary, adjust the gap by bending the side electrode carefully.



Thread each spark plug in by hand to prevent cross-threading and tighten them with a spark plug wrench.

TORQUE: 16 N·m (1.6 kgf·m, 12 lbf·ft)

Connect the spark plug caps.



VALVE CLEARANCE

INSPECTION

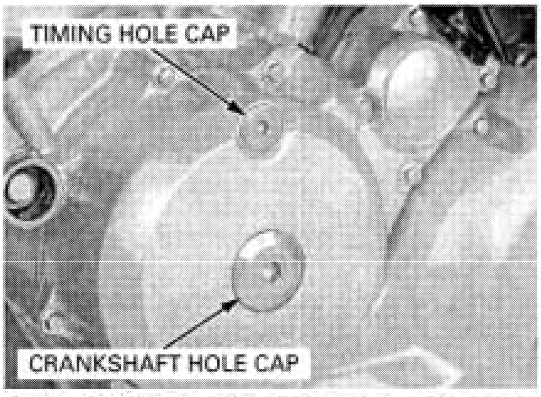
NOTE:

- After the valve clearance inspection, inspect the engine idle speed (page 6-77).
- Inspect and adjust the valve clearance while the engine is cold (below 35°C/95°F).

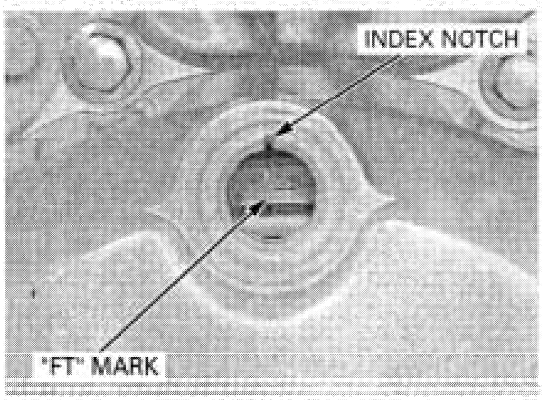
FRONT:

Remove the cylinder head cover (page 9-6).

Remove the timing and crankshaft hole caps.



Rotate the crankshaft counterclockwise and align the "FT" mark on the flywheel with the index notch on the left crankcase cover.
Make sure the piston is at TDC (Top Dead Center) on the compression stroke.
This position can be obtained by confirming that there is slack in the rocker arms. If there is no slack, rotate the crankshaft counterclockwise one full turn and align the "FT" mark with the index notch again.

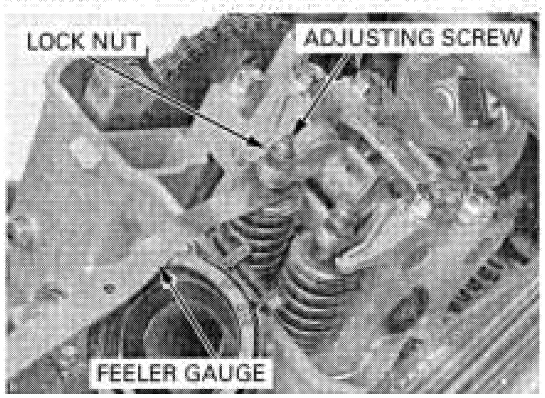


When checking the clearance, slide the feeler gauge from the center toward the outside.

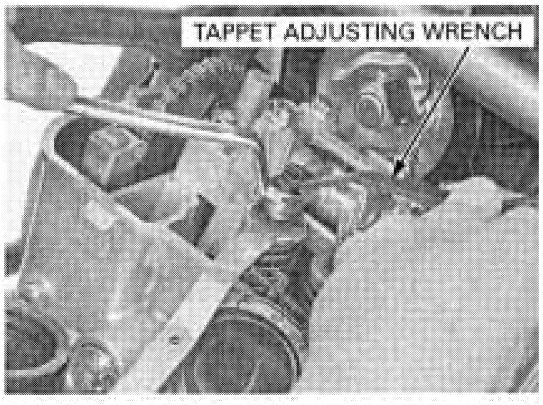
Check the valve clearances by inserting a feeler gauge between the adjusting screw and valve stem.

VALVE CLEARANCES:

INTAKE: 0.15 ± 0.02 mm (0.006 ± 0.001 in)
EXHAUST: 0.20 ± 0.02 mm (0.008 ± 0.001 in)



Adjust by loosening the lock nut and turning the adjusting screw until there is a slight drag on the feeler gauge.



TOOLS:
Tappet adjusting wrench, 4 mm 07908-KE90100
Tappet lock wrench 07908-MB00100

Apply engine oil to the lock nut threads and seating surface.

Hold the adjusting screw and tighten the lock nut to the specified torque.

TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)

After tightening the lock nut, recheck the valve clearance.

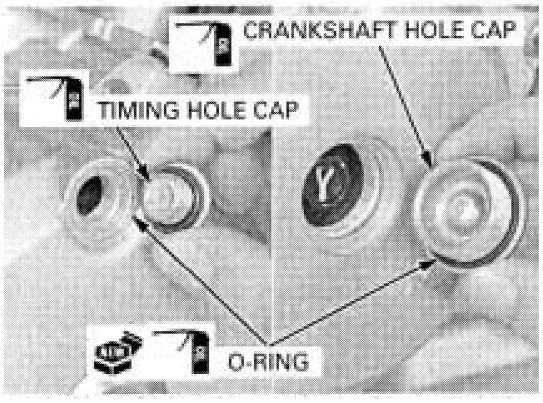
Coat new O-rings with oil and install them into the timing and crankshaft hole cap grooves.
Apply engine oil to the timing and crankshaft hole cap threads.
Install the timing hole cap and tighten it to the specified torque.

TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)

Install the crankshaft hole cap and tighten it to the specified torque.

TORQUE: 15 N·m (1.5 kgf·m, 11 lbf·ft)

Install the cylinder head cover (page 9-33).

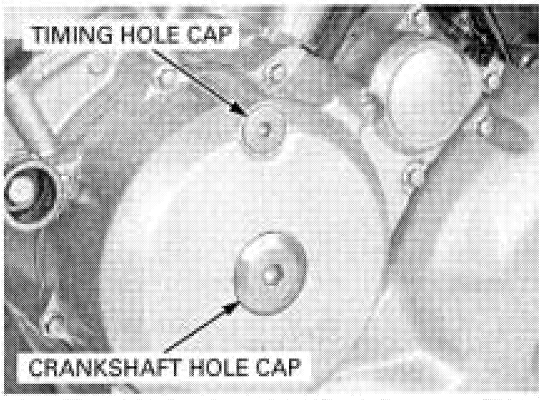


REAR:

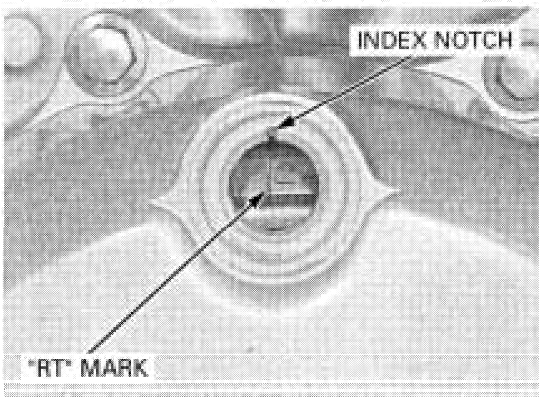
Inspect and adjust the valve clearance while the engine is cold (below 35°C/95°F)

Remove the cylinder head cover (page 9-6).

Remove the timing and crankshaft hole caps.



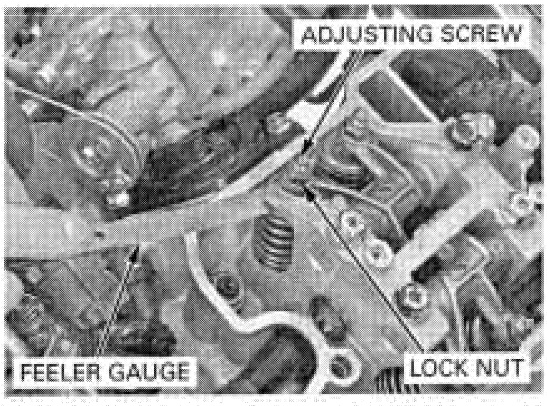
Rotate the crankshaft counterclockwise and align the "RT" mark on the flywheel with the index notch on the left crankcase cover.
Make sure the piston is at TDC (Top Dead Center) on the compression stroke.



When checking the clearance, slide the feeler gauge from the center toward the outside.

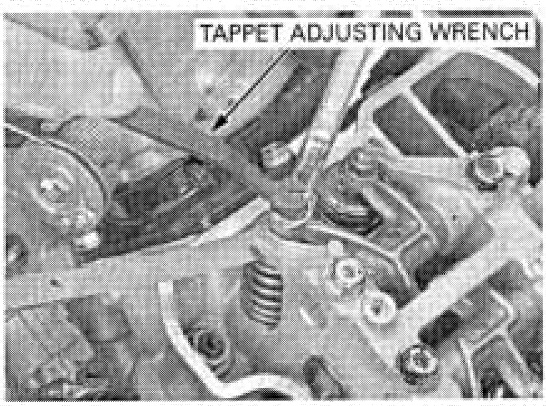
Check the valve clearances by inserting a feeler gauge between the adjusting screw and valve stem.

VALVE CLEARANCES:
INTAKE: 0.15 ± 0.02 mm (0.006 ± 0.001 in)
EXHAUST: 0.20 ± 0.02 mm (0.008 ± 0.001 in)



Adjust by loosening the lock nut and turning the adjusting screw until there is a slight drag on the feeler gauge.

TOOLS:
Tappet adjusting wrench, 4 mm 07908-KE90100
Tappet lock wrench 07908-MB00100



Apply engine oil to the lock nut threads and seating surface.

Hold the adjusting screw and tighten the lock nut to the specified torque.

TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)

After tightening the lock nut, recheck the valve clearance.

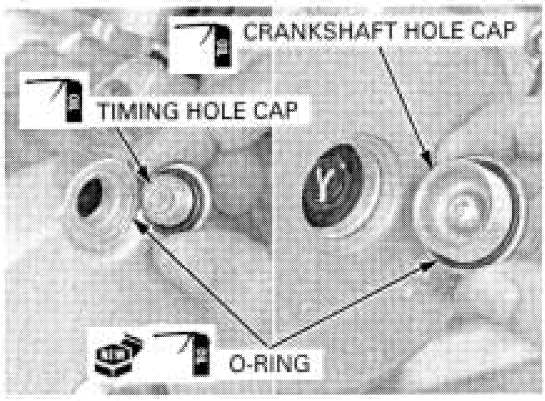
Coat new O-rings with oil and install them into the timing and crankshaft hole cap grooves.
Apply engine oil to the timing and crankshaft hole cap threads.
Install the timing hole cap and tighten it to the specified torque.

TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)

Install the crankshaft hole cap and tighten it to the specified torque.

TORQUE: 15 N·m (1.5 kgf·m, 11 lbf·ft)

Install the cylinder head cover (page 9-33).

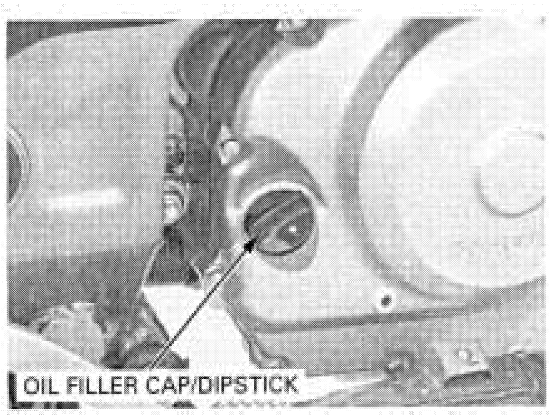


ENGINE OIL

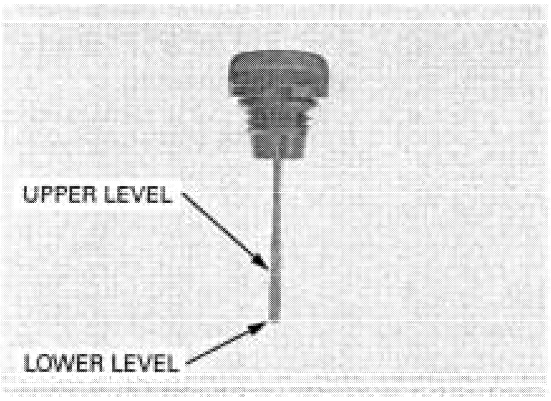
OIL LEVEL CHECK

Start the engine, and let it idle for 3 – 5 minutes.
Stop the engine and wait 2 – 3 minutes.
Hold the motorcycle in an upright position.

Remove the oil filler cap/dipstick and wipe the oil from the dipstick with a clean cloth.
Insert the dipstick without screwing it in, remove it and check the oil level.



If the oil level is below or near the lower level mark on the dipstick, add the recommended oil to the upper level mark.

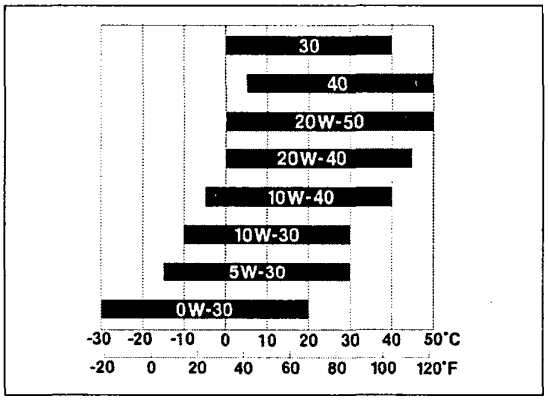


RECOMMENDED ENGINE OIL:

Suggested oil: Honda "4-stroke motorcycle oil " or an equivalent
Oil recommendation:
API service classification SG or higher (except oils labeled as energy conserving on the circular API service label)
Viscosity: SAE 10W-30
JASO T903 standard: MA

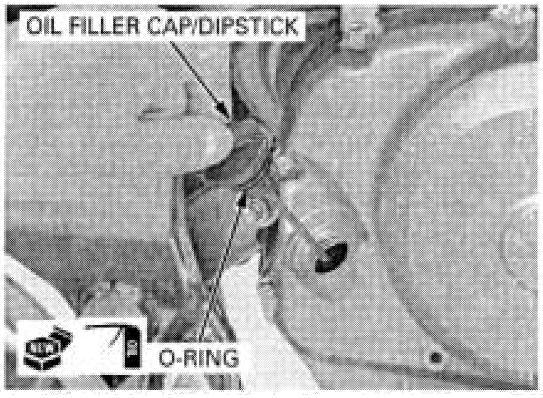
NOTE:

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



Make sure the O-ring is in good condition and install the oil filler cap/dipstick.

For engine oil change, refer to page 4-12.



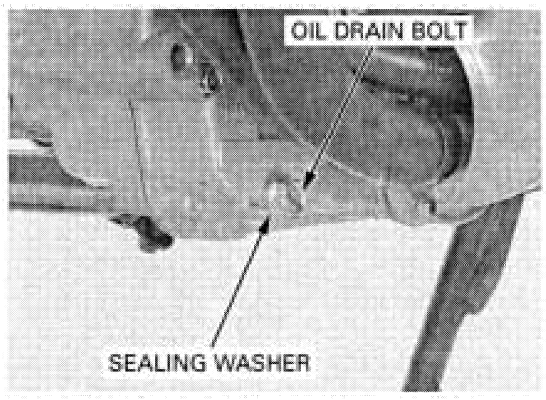
ENGINE OIL FILTER

NOTE:

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

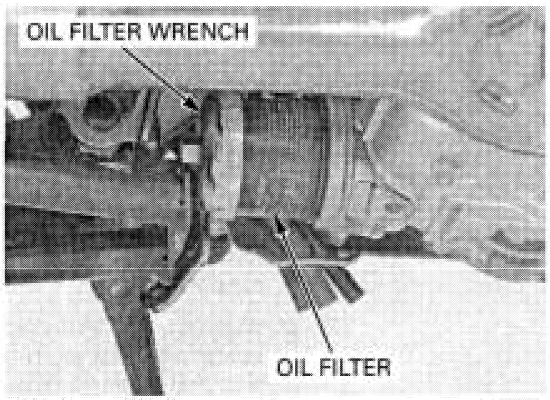
Start the engine, warm it up and stop it.

Remove the oil filler cap/dipstick (page 4-11).
Remove the oil drain bolt, sealing washer and drain the oil.



Remove the oil filter cartridge using the special tool and let the remaining oil drain out.

TOOL:
Oil filter wrench **07HAA-PJ70101**

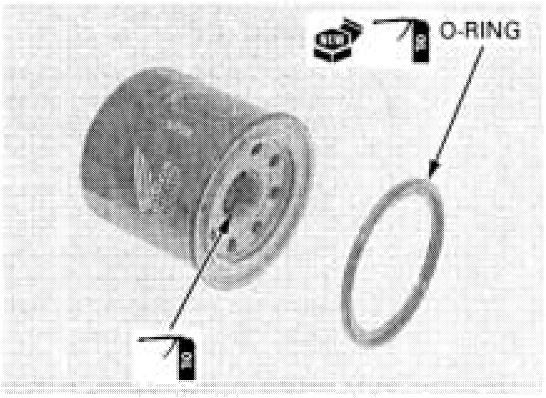


Coat a new O-ring with oil and install it to the oil filter cartridge.
Apply oil to the threads of a new oil filter cartridge.

Install the oil filter cartridge and tighten it to the specified torque.

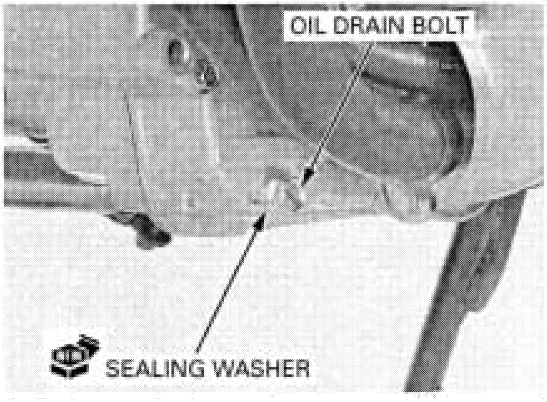
TOOL:
Oil filter wrench **07HAA-PJ70101**

TORQUE: 26 N·m (2.7 kgf·m, 20 lbf·ft)



Install the oil drain bolt with a new sealing washer and tighten it to the specified torque.

TORQUE: 30 N·m (3.1 kgf·m, 22 lbf·ft)



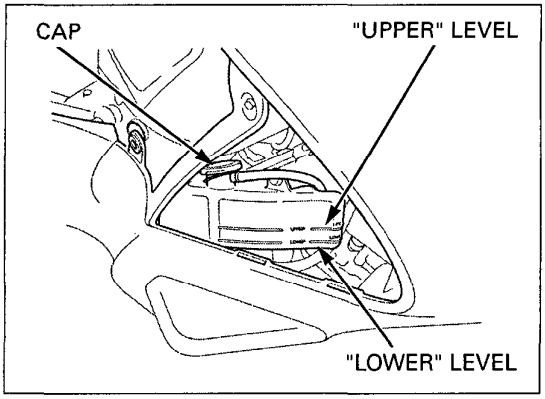
Fill the crankcase with the recommended engine oil (page 4-12).

OIL CAPACITY:
2.6 liters (2.75 US qt, 2.29 Imp qt) at draining
2.8 liters (2.96 US qt, 2.46 Imp qt) at filter change
3.2 liters (3.38 US qt, 2.82 Imp qt) at disassembly

Check the engine oil level (page 4-11).
Install the oil filler cap/dipstick (page 4-12).
Make sure there are no oil leaks.

RADIATOR COOLANT

Check the coolant level of the reserve tank with the engine running at normal operating temperature. The level should be between the "UPPER" and "LOWER" level lines with the motorcycle is in an upright position.



If the level is low, remove the reserve tank cap, and fill the tank to the "UPPER" level line with a 1:1 mixture of distilled water and antifreeze (coolant preparation: page 7-6).

RECOMMENDED ANTIFREEZE:

High quality ethylene glycol antifreeze containing corrosion protection inhibitors.

NOTICE

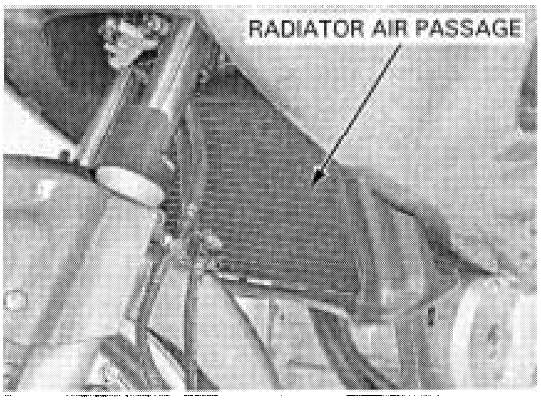
Using coolant with silicate corrosion inhibitors may cause premature wear of water pump seals or blockage of radiator passages. Using tap water may cause engine damage.

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

If the reserve tank becomes completely empty, there is a possibility of air getting into the cooling system. Be sure to remove any air from the cooling system (page 7-7).

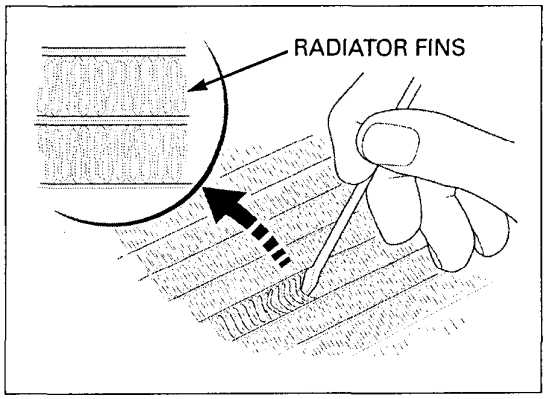
COOLING SYSTEM

Check the radiator air passage for clogs or damage.



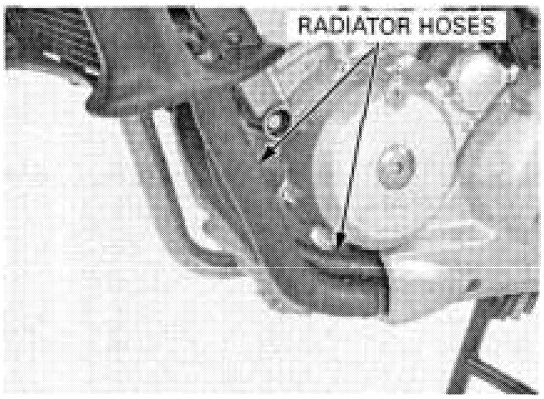
Straighten bent fins with a small, flat blade screwdriver and remove insects, mud or other obstructions with compressed air or low pressure water. Replace the radiator if the air flow is restricted over more than 20% of the radiating surface.

For radiator replacement, refer to page 7-10.



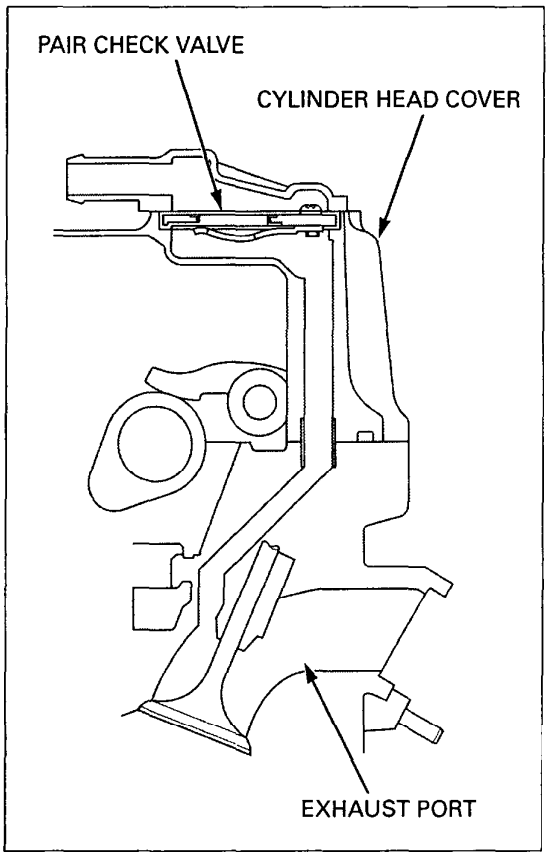
Remove the middle cowl (page 3-11).

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



SECONDARY AIR SUPPLY SYSTEM

- This model is equipped with a built-in secondary air supply system. The pulse secondary air supply system is located on the cylinder head cover.
- The secondary air supply system introduces filtered air into exhaust gases in the exhaust port. The secondary air is drawn into the exhaust port whenever there is negative pressure pulse in the exhaust system. This charged secondary 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.

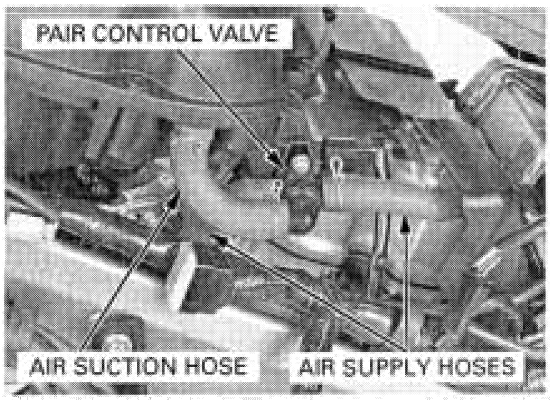


Open and support the fuel tank (page 4-5).

If the hoses show any signs of heat damage, inspect the PAIR check valve in the cylinder head cover for damage.

Check the PAIR (pulse secondary air injection) air supply hoses between the PAIR control valve and cylinder head cover for deterioration, damage or loose connections. Make sure that the hoses are not cracked.

Check the air suction hose between the air cleaner housing and PAIR control valve for deterioration, damage or loose connections.
Make sure that the hoses are not kinked, pinched or cracked.

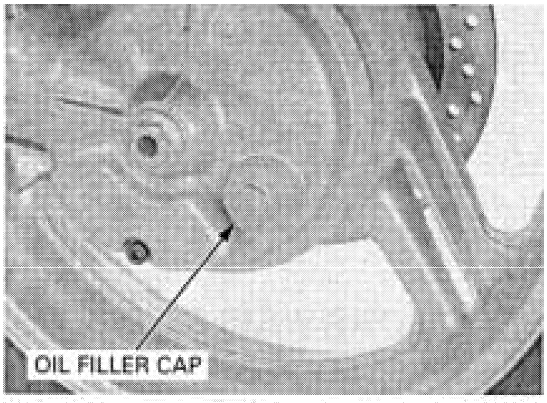


FINAL DRIVE OIL

OIL LEVEL CHECK

Place the motorcycle on its center stand on a level surface.

Remove the oil filler cap from the final gear case.



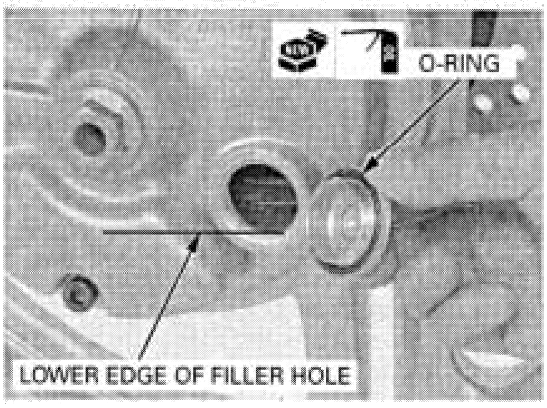
Check that the oil level is up to the lower edge of the oil filler hole.

Check for leaks if the oil level is low. Pour the recommended oil through the oil filler hole until it reaches the lower edge of the hole.

RECOMMENDED OIL: Hypoid gear oil, SAE #80

Coat a new O-ring with oil and install it onto the oil filler cap.
Install and tighten the oil filler cap.

TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)



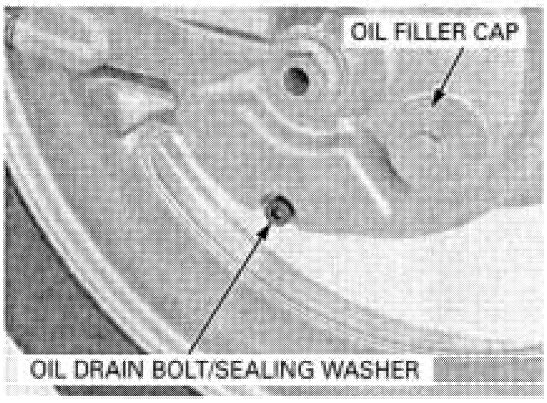
OIL CHANGE

Remove the oil filler cap and drain bolt/sealing washer from the final gear case, slowly turn the rear wheel and drain the oil.

After the oil is completely drained, install the drain bolt with a new sealing washer and tighten it.

Fill the final gear case with the recommended oil to the correct level (page 4-16).

OIL CAPACITY:
130 cm³ (4.3 US oz, 4.5 Imp oz) after draining
150 cm³ (5.1 US oz, 5.3 Imp oz) after disassembly



BRAKE FLUID

NOTICE

Spilled fluid can damage painted, plastic or rubber parts. Place a rag over these parts whenever the system is serviced.

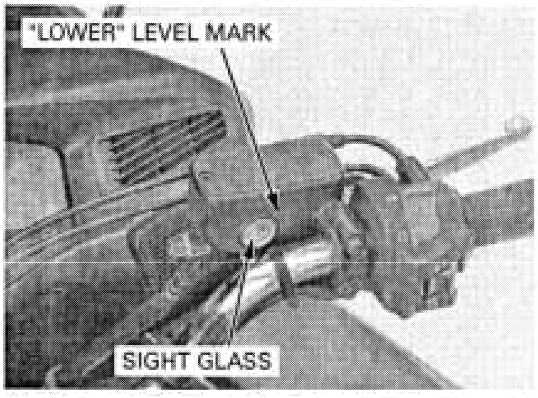
- Do not mix different types of fluid, as they are not compatible with each other.
- Do not allow foreign material to enter the system when filling the reservoir.

NOTE:

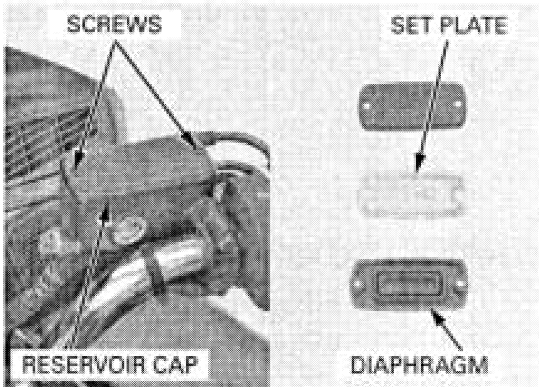
- When the fluid level is low, check the brake pads for wear (page 4-18).
- A low fluid level may be due to wear of the brake pads. If the brake pads are worn and the caliper pistons are pushed out, this accounts for a low reservoir level. If the brake pads are not worn and the fluid level is low, check the entire system for leaks (page 4-19).

FRONT

Turn the handlebar to the left side so the reservoir is level and check the front brake reservoir fluid level through the sight glass.



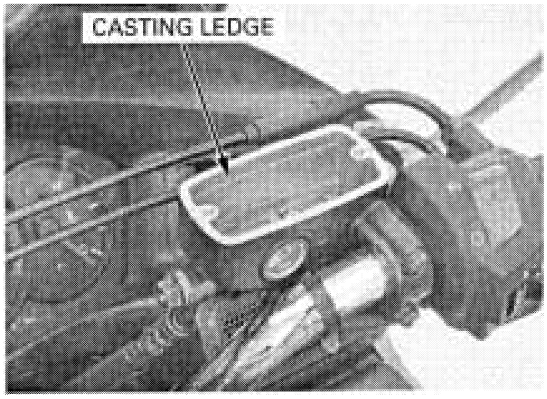
If the fluid level is near the "LOWER" level mark, remove the screws, reservoir cap, set plate and diaphragm.



Fill the reservoir with DOT 4 brake fluid from a sealed container to the casting ledge.

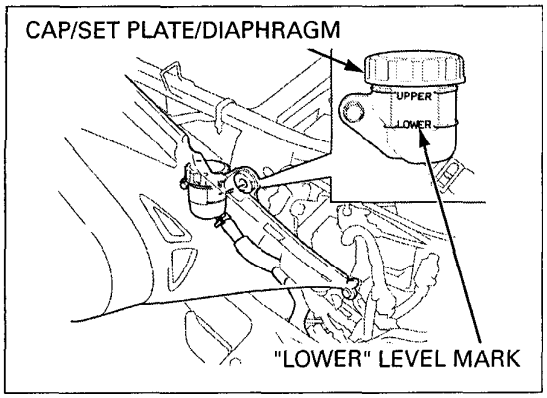
Install the diaphragm, set plate and reservoir cap and tighten the cap screws.

TORQUE: 1.5 N·m (0.2 kgf·m, 1.1 lbf·ft)



REAR

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

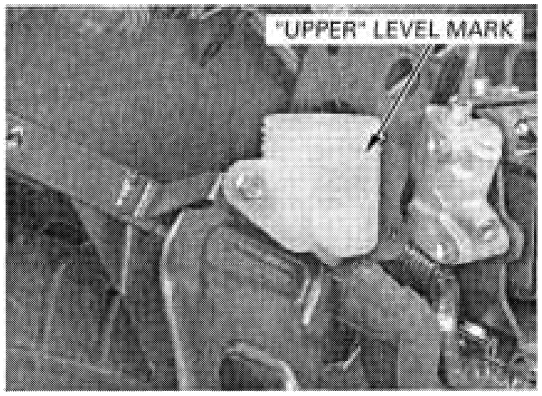


Remove the seat (page 3-5).

If the fluid level is near the "LOWER" level mark, remove the reservoir cap, set plate and diaphragm.

Fill the reservoir with DOT 4 brake fluid from a sealed container to the "UPPER" level mark.

Install the diaphragm, set plate and reservoir cap securely.



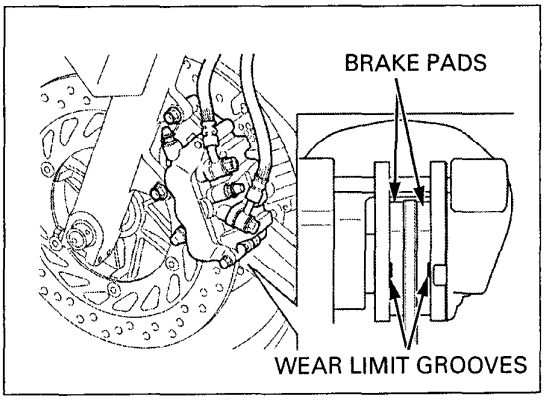
BRAKE PADS WEAR

FRONT BRAKE PADS

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

Always replace the brake pads as a set to assure even disc pressure.

For brake pad replacement, refer to page 17-14.



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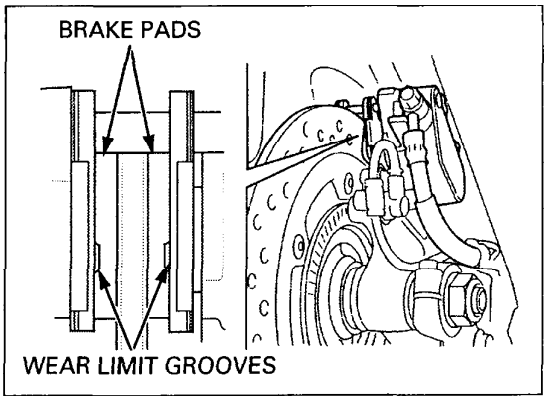


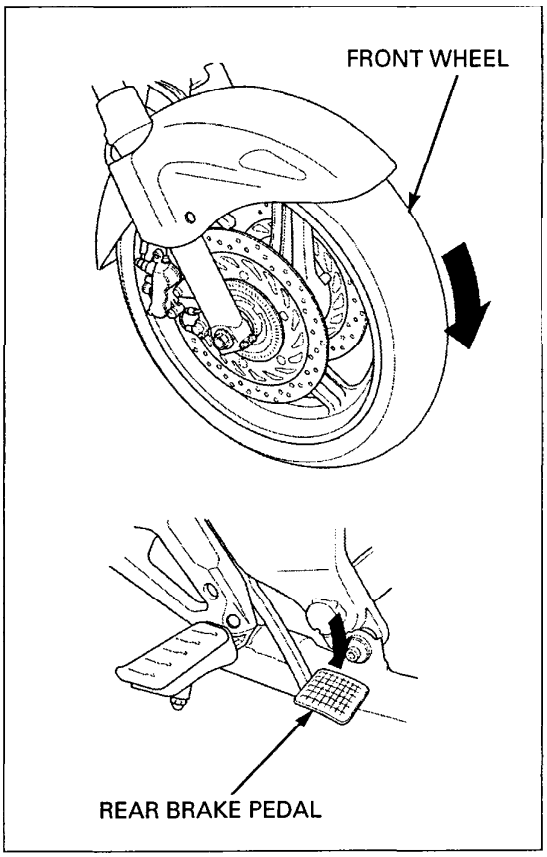
BRAKE SYSTEM

INSPECTION

This model is equipped with a Combined Brake System.
Check the front and rear brake operation as follows:

- Jack-up the motorcycle to raise the front wheel off the ground.

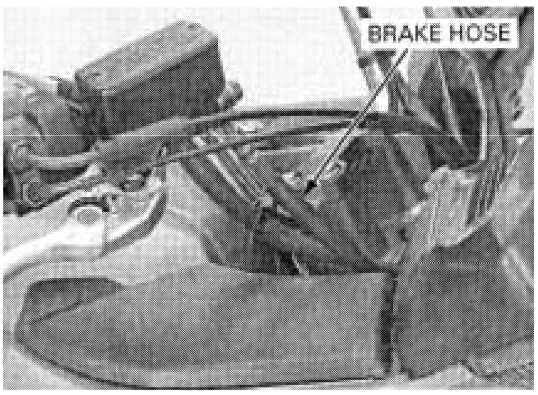
Apply the rear brake pedal.
Make sure the front wheel does not turn while the rear brake pedal is applied.



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

For air bleeding procedures, refer to page 17-9.

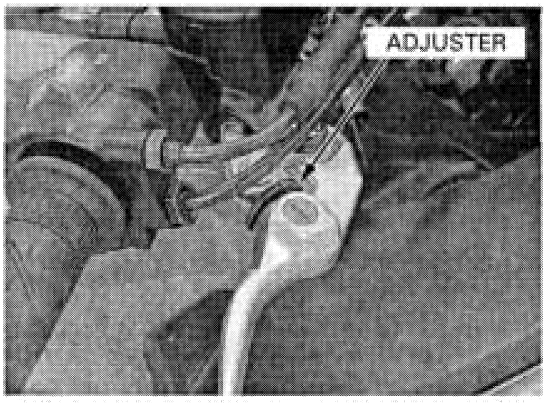
Inspect the brake hose and fittings for deterioration, cracks, damage or signs of leakage.
Tighten any loose fittings.
Replace the hose and fittings as required.



BRAKE LEVER ADJUSTMENT

Align the allowance on the brake lever with the index number on the adjuster.

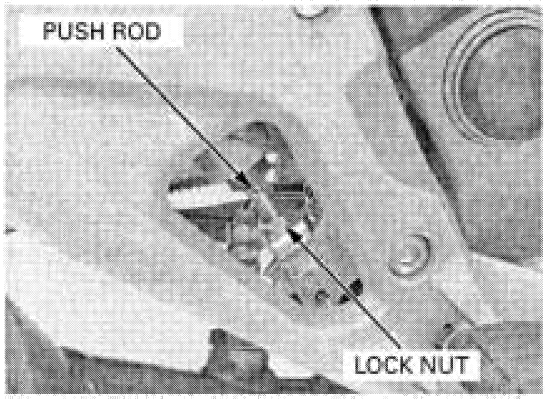
The distance between the top of the brake lever and the grip can be adjusted by turning the adjuster.



BRAKE PEDAL HEIGHT ADJUSTMENT

Loosen the lock nut and turn the push rod as required.
Tighten the lock nut to the specified torque.

TORQUE: 17.2 N·m (1.8 kgf·m, 1.3 lbf·ft)



BRAKE LIGHT SWITCH

NOTE:

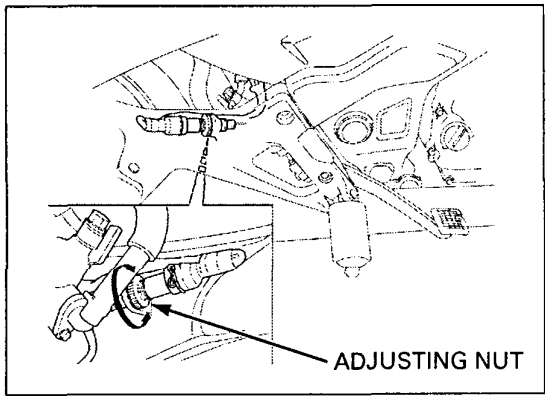
- The brake light switch on the front brake master cylinder cannot be adjusted. If the front brake light switch actuation and brake engagement are not synchronized, either replace the switch unit or the malfunctioning parts of the system.
- Make the rear brake light switch adjustments after the brake pedal height adjustment and the brake pedal free play adjustment have been made.

Check that the brake light comes on just prior to the brake actually being engaged.
If the light fails to come on, adjust the switch so that the light comes on at the proper time.

Do not turn the switch body while turning the adjusting nut.

Hold the switch body and turn the adjusting nut as required.

Recheck the brake light switch operation.



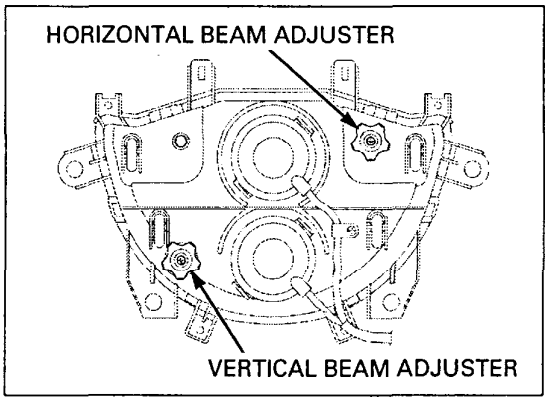
HEADLIGHT AIM

Place the motorcycle on a level surface.

Adjust the headlight beam as specified by local laws and regulations.

Adjust the headlight beam vertically by turning the vertical beam adjuster.

Adjust the headlight beam horizontally by turning the horizontal beam adjuster.

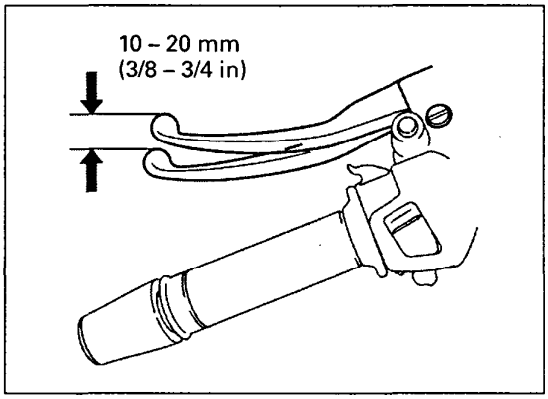


CLUTCH SYSTEM

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

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

FREE PLAY: 10 – 20 mm (3/8 – 3/4 in)

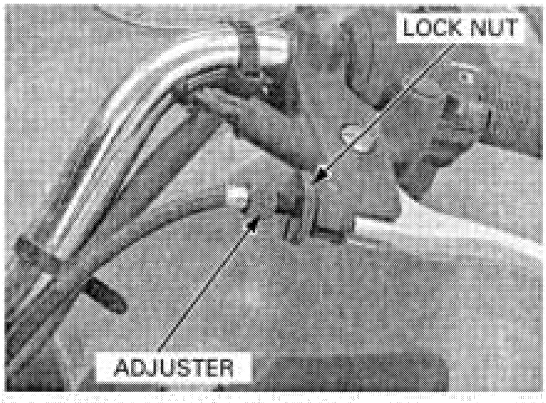


Minor adjustment is made with the upper adjuster at the clutch lever.
Loosen the lock nut and turn the adjuster as required.
Tighten the lock nut while holding the adjuster.

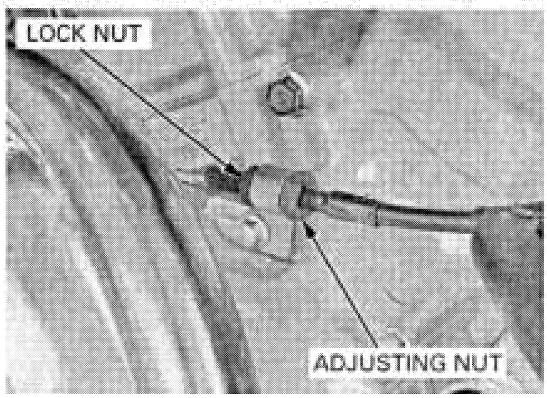
NOTICE

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

If the adjuster is threaded out near its limit and the correct free play cannot be obtained, turn the adjuster all the way in and back out one turn.
Tighten the lock nut and make major adjustment (page 4-21).



Major adjustment is made with the lower adjusting nut at the engine.
Loosen the lock nut and turn the adjusting nut as required.
After adjustment is complete, tighten the lock nut while holding the adjusting nut.

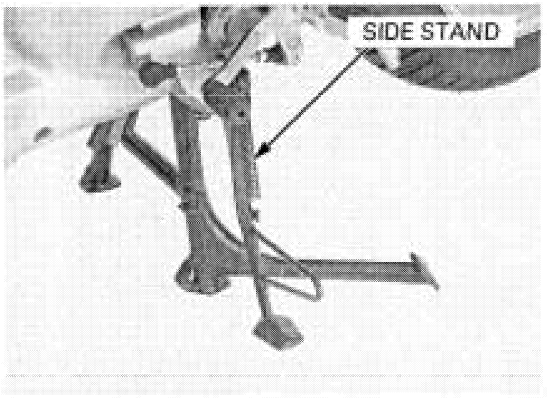


Check the clutch operation.
If the free play cannot be obtained, or the clutch slips during the test ride, disassemble and inspect the clutch (page 11-6).

SIDE STAND

Support the motorcycle on a level surface.

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



Check the side stand ignition cut-off system:

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

If there is a problem with the system, check the side stand switch (page 22-19).

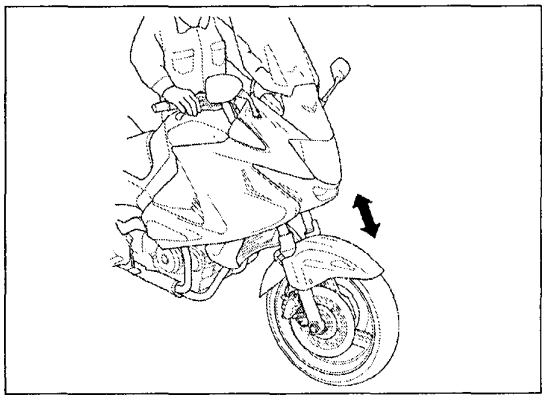
SUSPENSION

FRONT SUSPENSION INSPECTION

Check the action of the forks by applying the front brakes and compressing the front suspension several times.
Check the entire assembly for leaks, damage or loose fasteners.

Loose, worn or damaged suspension parts impair motorcycles stability and control.

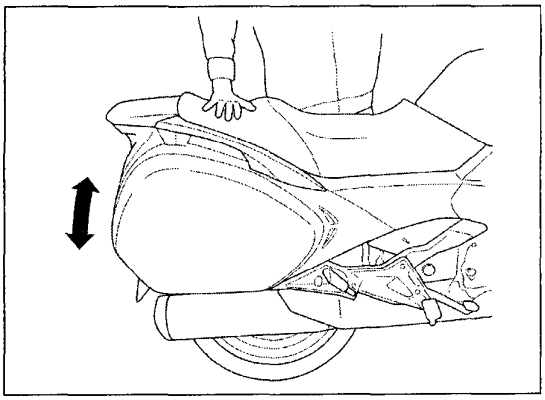
Replace damaged components which cannot be repaired.
Tighten all nuts and bolts.
For fork service, refer to page 15-18.



REAR SUSPENSION INSPECTION

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

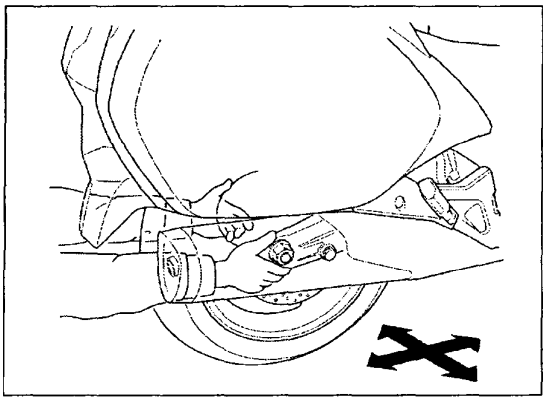
For shock absorber service, refer to page 16-14.



Support the motorcycle securely and raise the rear wheel off the ground.
Check for worn swingarm bearings by grabbing the rear wheel and attempting to move the wheel side to side.

Replace the bearings if any looseness is noted (page 16-18).

Hold the swingarm and move the rear wheel sideways with force to see if the axle bearings are worn.



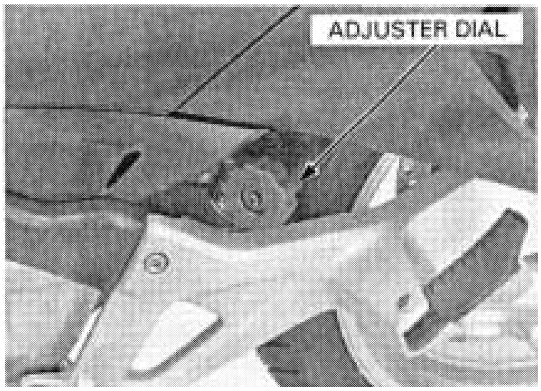
REAR SUSPENSION ADJUSTMENT

SPRING PRE-LOAD ADJUSTER

Spring pre-load can be adjusted by turning the adjuster dial.

TURN CLOCKWISE:
Increase the spring pre-load (High)
TURN COUNTERCLOCKWISE:
Decrease the spring pre-load (Low)

PRE-LOAD ADJUSTER STANDARD POSITION:
8 clicks out from lower position



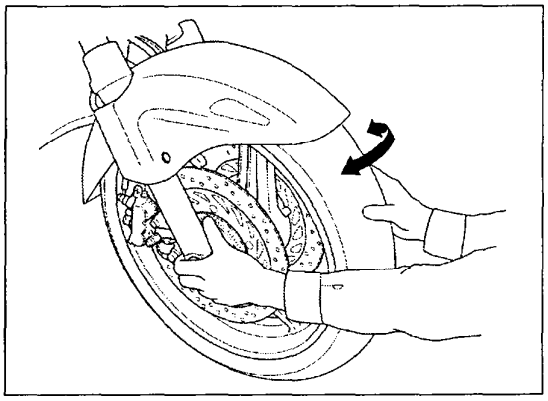
NUTS, BOLTS, FASTENERS

Check that all chassis nuts and bolts are tightened to their correct torque values (page 1-13).
Check that all cotter pins, safety clips, hose clamps and cable stays are in place and properly secured.

WHEELS/TIRES

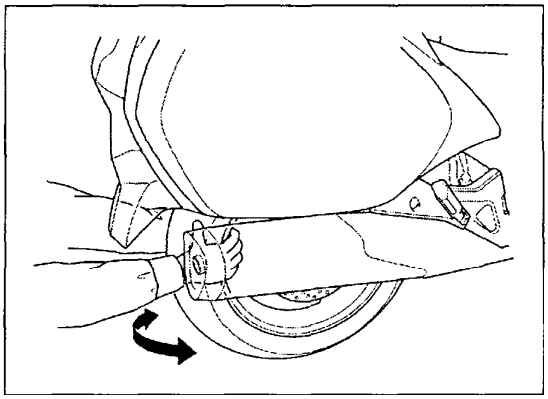
Support the motorcycle securely and raise the front wheel off the ground.
Hold the front fork leg and move the front wheel sideways forcefully to see if the wheel bearings are worn.

For front wheel service, refer to page 15-12.



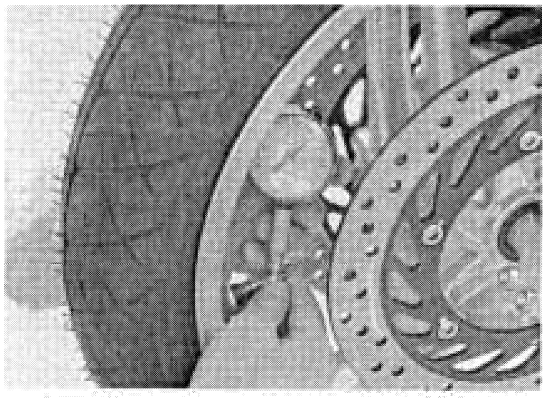
Support the motorcycle securely and raise the rear wheel off the ground.
Hold the swingarm and move the rear wheel sideways with the force to see if the wheel bearings are worn.

For rear wheel service, refer to page 16-6.



Check the tire pressure with a tire pressure gauge when the tires are cold.

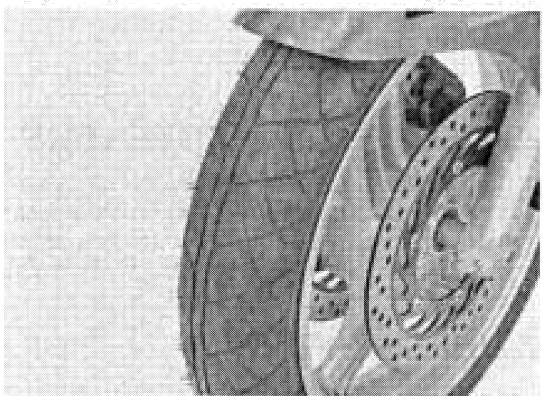
RECOMMENDED TIRE PRESSURE:
Driver only:
Front: 250 kPa (2.50 kgf/cm², 36 psi)
Rear: 290 kPa (2.90 kgf/cm², 42 psi)
Driver and passenger:
Front: 250 kPa (2.50 kgf/cm², 36 psi)
Rear: 290 kPa (2.90 kgf/cm², 42 psi)



Check the tires for cuts, embedded nails, or other damage.
Check the front and rear wheels for trueness.

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

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

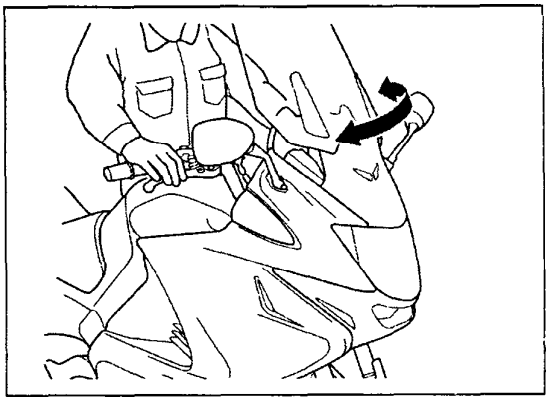


STEERING HEAD BEARINGS

Support the motorcycle securely and raise the front wheel off the ground.

Check that the handlebar moves freely from side to side. Make sure the control cables do not interfere with the handlebar rotation.

If the handlebar moves unevenly, binds, or has vertical movement, inspect the steering head bearings (page 15-27).



Check for steering stem bearings by grabbing the fork legs and attempting to move the front fork side to side.

Replace the bearings if any looseness is noted (page 15-27).