1. General Information

General Safety

Carbon Monoxide

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

⚠ WARNING

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

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

Gasoline

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

⚠ WARNING

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

Hot Components

⚠ WARNING

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

Used Engine/Transmission Oil

⚠ WARNING

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

Brake Dust

Brake dust may contain asbestos. Never use an air hose or dry brush to clean brake assemblies. Use an OSHA-approved vacuum cleaner or alternate method approved by OSHA, designed to minimize the hazard caused by airborne asbestos fibers.

⚠ WARNING

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

Brake Fluid

CAUTION

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

Coolant

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

⚠ WARNING

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

If coolant contacts your skin, wash the affected areas immediately with soap and water. If it contacts your eyes, flush them thoroughly with fresh water and get immediate medical attention. If it is swallowed, the victim must be forced to vomit then rinse mouth and throat with fresh water before obtaining medical attention. Because of these dangers, always store coolant in a safe place, away from the reach of children.

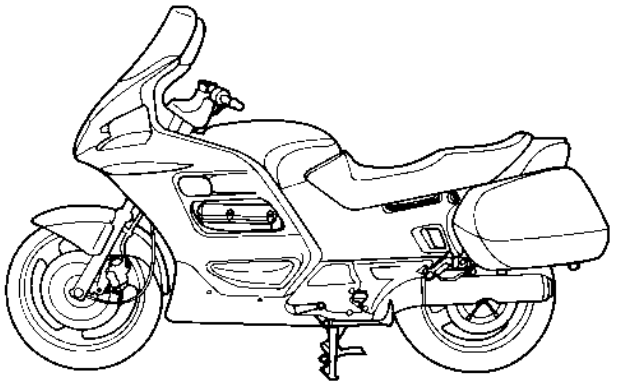
Battery Hydrogen Gas & Electrolyte

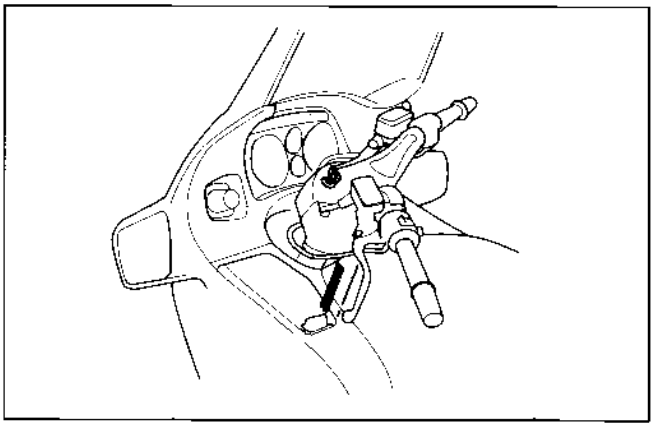
⚠ WARNING

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

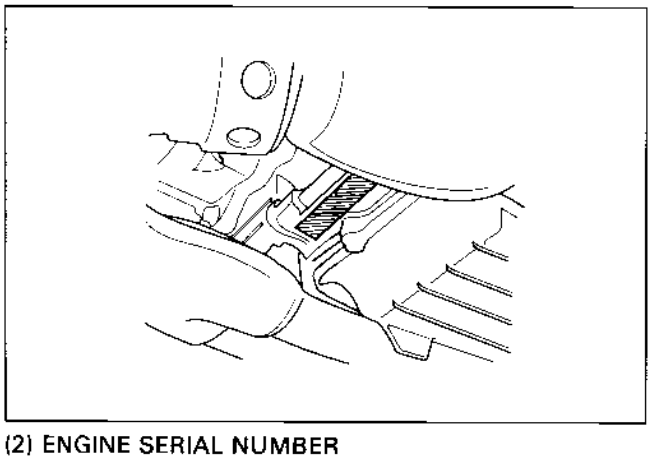
Model Identification

'91 (Standard model) Shown:

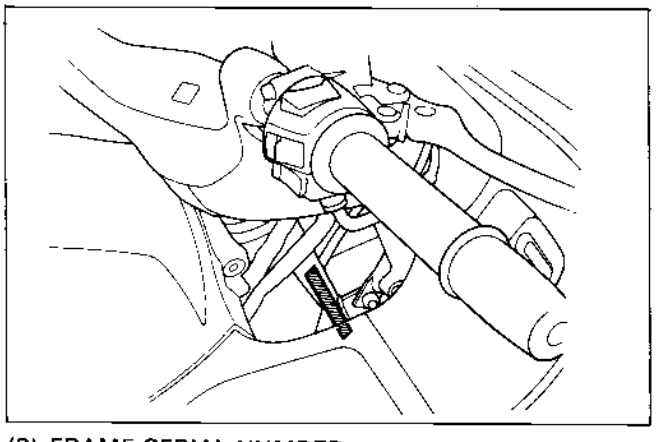




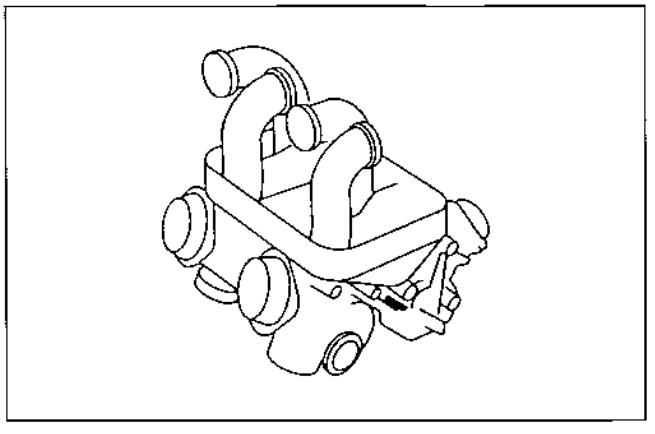
(1) VEHICLE IDENTIFICATION NUMBER
The Vehicle Identification Number (VIN) is located on the Safety Certification Label on the left side of the steering head.



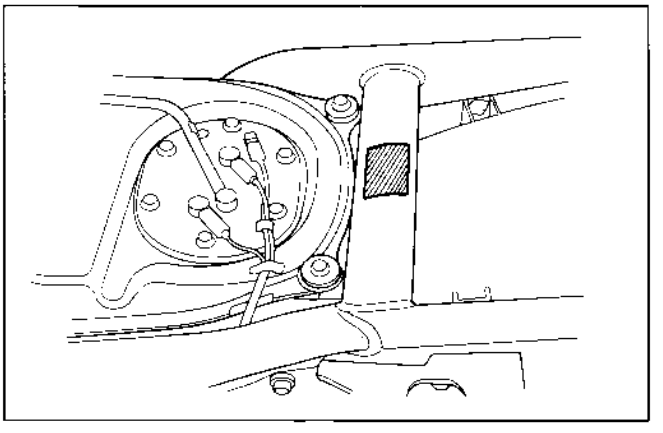
(2) ENGINE SERIAL NUMBER
The engine serial number is stamped on the rear of the lower crankcase behind the oil pan.



(3) FRAME SERIAL NUMBER
The frame serial number is stamped on the right side of the the steering head.



(4) CARBURETOR IDENTIFICATION NUMBER
The carburetor identification number is stamped on each carburetor body on the intake side.



(5) COLOR LABEL
The color label is attached to the frame under the seat.

Specifications

Unit: mm (in)

General

Item			Specifications
Dimensions	Overall length		2,285 (90.0)
	Overall width ('91–'93)		835 (32.9) [Saddlebag end]
	(After '93)		935 (36.8) [Rear view mirror end]
	Overall height	('91–'94)	1,395 (54.9)
		(After '94)	1,405 (55.3)
	Wheelbase		1,555 (61.2)
	Seat height		800 (31.5)
	Footpeg height		—
	Ground clearance		145 (5.7)
	Dry weight		
	ABS/TCS or LBS-ABS/TCS model with saddlebag		
	('91–'94)	49 state type	297 kg (655 lb)
		California type	298 kg (657 lb)
		Canada type	293 kg (646 lb)
	(After '94)	49 state type	298 kg (657 lb)
		California type	299 kg (659 lb)
		Canada type	297 kg (655 lb)
	Standard model with saddlebag		
	('91–'94)	49 state type	284 kg (626 lb)
		California type	285 kg (628 lb)
		Canada type	283 kg (624 lb)
	(After '94)	49 state type	288 kg (635 lb)
		California type	289 kg (637 lb)
		Canada type	287 kg (633 lb)
	Curb weight		
	ABS/TCS or LBS-ABS/TCS model with saddlebag		
	('91–'94)	49 state type	326 kg (719 lb)
		California type	327 kg (721 lb)
		Canada type	322 kg (710 lb)
	(After '94)	49 state type	327 kg (721 lb)
		California type	328 kg (723 lb)
		Canada type	326 kg (719 lb)
	Standard model with saddlebag		
	('91–'94)	49 state type	313 kg (690 lb)
		California type	314 kg (692 lb)
		Canada type	312 kg (688 lb)
	(After '94)	49 state type	317 kg (699 lb)
		California type	318 kg (701 lb)
		Canada type	316 kg (697 lb)

Unit: mm (in)

General (cont'd)

Item		Specifications	
Frame	Frame type	Double cradle	
	Front suspension	Telescopic fork	
	Front wheel travel	150 (5.9)	
	Rear suspension	Swingram	
	Rear wheel travel	120 (4.7)	
	Front tire size		
	(Standard model and '92–'95 ABS/ TCS model)	110/80 V18 (Bridgestone, Dunlop) 110/80 V18-V240 (Metzeler)	
	(After '95 LBS-ABS/TCS model)	120/70 ZR18	
	Rear tire size		
	(Standard model and '92–'95 ABS/ TCS model)	160/70 V17 (Bridgestone, Dunlop) 160/70 VB17-V240 (Metzeler)	
	(After '95 LBS-ABS/TCS model)	160/70 ZR17	
	Tire brand FR/RR		
	(Standard model and '92–'95 ABS/ TCS model)	G547/G548 (Bridgestone) D103F/D103 (Dunlop) ME33 LASER/ME55A METRONIC (Metzeler)	
	(After '95 LBS-ABS/TCS model)	BT-54F/BT-54R (Bridgestone) D202F/D202 (Dunlop)	
	Front brake	Hydraulic double disc	
	Rear brake	Hydraulic single disc	
	Caster angle	27°30′	
	Trail length	101 (4.0)	
	Fuel tank capacity	28 liters (7.40 US gal, 6.16 Imp gal)	
	Fuel tank reserve capacity	——	
Engine	Bore and stroke	73.0 x 64.8 (2.87 x 2.55)	
	Displacement	1,085 cm³ (66.2 cu in)	
	Compression ratio	10.0 : 1	
	Valve train	Belt and gear driven DOHC	
		'91–'93 : Standard California and U.S.A. ABS/TCS type After '93 : California type	'91–'93 : Standard 49 state and Canada type After '93 : 49 state and Canada type
	Intake valve opens at 1 mm lift	–5° BTDC (5° ATDC)	8° BTDC
	Intake valve closes at 1 mm lift	35° ABDC	37° ABDC
	Exhaust valve opens at 1 mm lift	40° BBDC	33° BBDC
	Exhaust valve closes at 1 mm lift	–5° ATDC (5° BTDC)	2° ATDC
	Lubrication system	Forced pressure and wet sump	
	Oil pump type	Trochoid	
	Cooling system	Liquid cooled	
	Air filtration	Paper Filter	
	Crankshaft type	Unit type, 3 main journals	
	Engine dry weight ('91–'93)	93.0 kg (205 lb) : U.S.A. type and ABS/TCS Canada type 92.0 kg (203 lb) : Standard Canada type	
	('94)	93.0 kg (205 lb) : All types	
	(After '94)	93.0 kg (205 lb) : U.S.A. type 92.0 kg (203 lb) : Canada type	
	Firing order	1—90°—4—270°—3—90°—2—270°—1	
	Cylinder arrangement	4 cylinders, 90°V	
	Cylinder number Left 4 2 ⇨ Front 3 1		

Unit: mm (in)

General (cont'd)

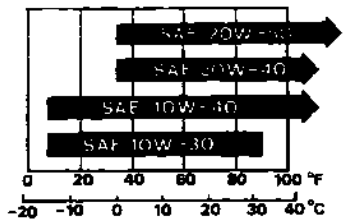
Item		Specifications
Carburetor	Carburetor type	Constant velocity 4 carburetors
	Throttle bore	34.5 (1.36)
Drive train	Clutch system	Multi-plate, wet
	Clutch operation system	Hydraulic operating
	Transmission	5 speeds
	Primary reduction	1.8292 (75/41)
	Secondary reduction	——
	Third reduction	——
	Final reduction	2.8333 (34/12)
	Gear ratio 1st	2.2666 (34/15)
	Gear ratio 2nd	1.5000 (27/18)
	Gear ratio 3rd	1.1428 (24/21)
	Gear ratio 4th	0.9166 (22/24)
	Gear ratio 5th	0.7586 (22/29)
	Gear ratio 6th	——
	Gear ratio reverse	——
	Gearshift pattern	Left foot operated return system 1−N−2−3−4−5
Electrical	Ignition system	Digitalized full transistor ignition
	Starting system	Electric starter motor
	Charging system	Triple phase output alternator
	Regulator/rectifier type	Field control/triple phase full-wave rectification
	Lighting system	Battery
	AC regulator type	——

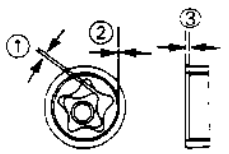
Unit: mm (in)

Lubrication

Item			Standard	Service Limit
Engine oil capacity at draining			3.6 liters (3.80 US qt, 3.17 Imp qt)	—
at disassembly			4.3 liters (4.54 US qt, 3.78 Imp qt)	—
at oil filter change			3.7 liters (3.91 US qt, 3.26 Imp qt)	—
Recommended engine oil			Use Honda GN4 4-stroke oil or equivalent motor oil certified to meet API service classification SF or SG. Viscosity: SAE 10W—40 Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.	
Oil pressure at oil pressure switch			392—490 kPa (4.0—5.0 kg/cm², 57—71 psi) at 5,000 rpm (80°C/ 176°F)	
Oil pump rotor tip clearance ①			0.15 (0.006)	—
body clearance ②			0.15—0.22 (0.006—0.009)	—
end clearance ③			0.02—0.09 (0.0008—0.0035)	—

OIL VISCOSITIES



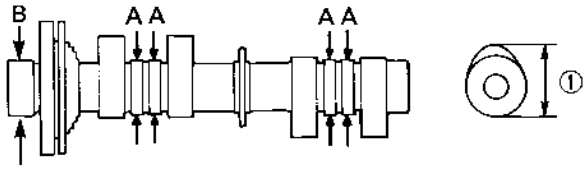
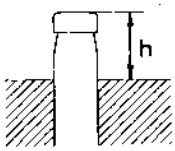


Fuel System

Carburetor identification number				
	('91—'93)	(Standard 49 state type)	VD BDA	—
		(Standard California and U.S.A. ABS/TCS type)	VD BEA	—
		(Canada type)	VD B1A	—
	(After '93)	(Standard 49 state type)	VD BDA	—
		(49 state ABS/TCS or 49 state LBS-ABS/TCS type)	VD BJA	—
		(California type)	VD BEA	—
		(Canada type)	VD B1A	—
Main jet	('91—'93)	(49 state and Canada type)	#128	—
		(California type)	#125	—
	(After '93)	(Standard 49 state and Canada type)	#128	—
		(49 state ABS/TCS or 49 state LBS-ABS/TCS and California type)	#125	—
Slow jet		(All U.S.A. types)	#38	—
		(Canada type)	#40	—
Pilot screw initial opening			See page 5-12	—
Pilot screw high altitude adjustment			See page 5-16	—
Pilot screw final opening			See page 5-12	—
Float level			7.0 (0.28)	—
Carburetor vacuum difference			Within 40 mmHg (1.6 inHg)	—
Base carburetor (For carburetor synchronization)			No.4 carburetor	—
Idle speed		(All U.S.A. types)	1,200±100 rpm	—
		(Canada type)	1,000±100 rpm	—
Throttle grip free play			2—6 (0.08—0.24)	—
Pulse secondary air injection (PAIR) control valve vacuum pressure			360 mmHg (14.2 inHg)	—

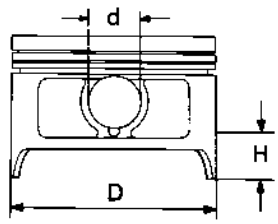
Unit: mm (in)

Cylinder Head

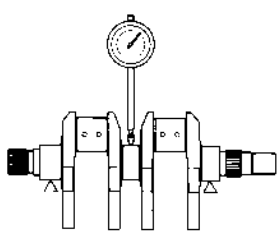
Item	Standard	Service Limit
Cylinder compression	1,373 ± 196 kPa (14.0 ± 2.0 kg/cm², 199 ± 28 psi)/400 min⁻¹ (rpm)	—
Cylinder compression difference	—	—
Valve clearance IN	0.13—0.19 (0.005—0.007)	—
EX	0.22—0.28 (0.009—0.011)	—
Cylinder head warpage	—	0.10 (0.004)
Cam lobe height ①		
IN	36.480—36.640 (1.4362—1.4425)	36.450 (1.4350)
IN (Standard California and U.S.A. ABS/TCS or U.S.A. LBS-ABS/TCS type)	35.680—35.840 (1.4047—1.4110)	35.650 (1.4035)
EX	35.970—36.130 (1.4161—1.4224)	35.940 (1.4150)
EX(Standard California and U.S.A. ABS/TCS or U.S.A. LBS-ABS/TCS type)	35.770—35.930 (1.4083—1.4146)	35.740 (1.4071)
Camshaft runout	—	0.05 (0.002)
Camshaft oil clearance A	0.020—0.062 (0.0008—0.0024)	0.100 (0.0039)
B	0.050—0.092 (0.0020—0.0036)	0.130 (0.0051)
		
Camshaft journal O.D. A	24.959—24.980 (0.9826—0.9835)	24.950 (0.9823)
B	24.929—24.950 (0.9815—0.9823)	24.920 (0.9811)
Camshaft holder I.D. A	25.000—25.021 (0.9843—0.9851)	—
B	25.000—25.021 (0.9843—0.9851)	—
Valve stem O.D. IN	4.475—4.490 (0.1762—0.1768)	4.465 (0.1758)
EX	4.465—4.480 (0.1758—0.1764)	4.455 (0.1754)
Valve guide I.D. IN	4.500—4.512 (0.1772—0.1776)	4.562 (0.1796)
EX	4.500—4.512 (0.1772—0.1776)	4.612 (0.1816)
Stem-to guide clearance IN	0.010—0.037 (0.0004—0.0015)	—
EX	0.020—0.047 (0.0008—0.0019)	—
Valve guide projection above cylinder head IN (h)	15.3—15.5 (0.60—0.61)	—
EX (h)	15.3—15.5 (0.60—0.61)	—
 Before guide installation: 1. Chill the valve guide in the freezer section of a refrigerator for about an hour. 2. Heat the cylinder head to 100—150°C (212—300°F)		
Valve seat width IN	1.0 (0.04)	1.5 (0.06)
EX	1.0 (0.04)	1.5 (0.06)
Valve spring free length IN	41.72 (1.643)	39.6 (15.59)
EX	41.72 (1.643)	39.6 (15.59)
Inner IN	—	—
Inner EX	—	—
Outer IN	—	—
Outer EX	—	—
Rocker arm I.D. IN	—	—
EX	—	—
Rocker arm shaft O.D. IN	—	—
EX	—	—
Rocker arm-to-rocker arm shaft clearance	—	—
Valve lifter O.D.	25.978—25.993 (1.0228—1.0233)	25.968 (1.0224)
Valve lifter bore I.D.	26.010—26.026 (1.0240—1.0246)	26.040 (1.0252)
Hydraulic tappet adjuster assist spring free length	—	—
Hydraulic tappet adjuster compression stroke with kerosene	—	—

Unit: mm (in)

Cylinder/Piston

Item	Standard	Service Limit
Cylinder I.D.	73.000—73.015 (2.8740—2.8746)	73.10 (2.878)
Cylinder out of round	—	0.10 (0.004)
Cylinder taper	—	0.10 (0.004)
Cylinder warpage	—	0.10 (0.004)
Piston mark direction	"IN" mark facing toward the intake side	—
Piston O.D. (D)	72.970—72.990 (2.8728—2.8736)	72.850 (2.8681)
Piston O.D. measurement point (H)	19 (0.75)	—
Piston pin hole I.D. (d)	18.002—18.008 (0.7087—0.7090)	18.020 (0.7094)
		
Cylinder-to-piston clearance	0.010—0.045 (0.0004—0.0018)	—
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)	—
Connecting rod-to-piston pin clearance	0.016—0.040 (0.0006—0.0016)	—
Top ring-to-ring groove clearance	0.025—0.060 (0.0010—0.0024)	0.10 (0.004)
Second ring-to-ring groove clearance	0.015—0.050 (0.0006—0.0020)	0.10 (0.004)
Top ring end gap	0.15—0.30 (0.006—0.012)	0.5 (0.02)
Second ring end gap	0.30—0.45 (0.012—0.018)	0.7 (0.03)
Oil ring (side rail) end gap	0.20—0.70 (0.008—0.028)	1.0 (0.04)
Top ring mark	"R" mark facing up	—
Second ring mark	"RN" mark facing up	—

Crankshaft

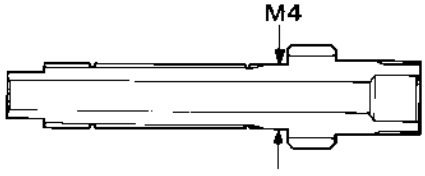
Connecting rod small end I.D.	18.016—18.034 (0.7093—0.7100)	18.050 (0.7106)
Connecting rod big end side clearance	0.10—0.30 (0.004—0.012)	0.40 (0.016)
radial clearance	—	—
Crankshaft runout	—	0.05 (0.002)
		
Crankpin oil clearance	0.030—0.052 (0.0012—0.0020)	0.080 (0.0031)
Crankpin bearing selection	See page 11-6	—
Main journal oil clearance	0.026—0.048 (0.0010—0.0019)	0.065 (0.0026)
Main journal bearing selection	See page 11-6	—

Kickstarter

Kickstarter pinion gear I.D.	—	—
Kickstarter spindle O.D.	—	—
Kickstarter idle gear I.D.	—	—
Countershaft O.D. at kickstarter idle gear	—	—
Kickstarter idle gear bushing O.D.	—	—
I.D.	—	—

Unit: mm (in)

Transmission

Item	Standard	Service Limit
Transmission gear I.D. M4, M5	31.000—31.025 (1.2204—1.2215)	31.040 (1.2220)
C2, C3	31.000—31.025 (1.2204—1.2215)	31.040 (1.2220)
Transmission gear bushing O.D. M4, M5	30.950—30.975 (1.2185—1.2195)	30.930 (1.2177)
C2, C3	30.950—30.975 (1.2185—1.2195)	30.930 (1.2177)
Transmission gear bushing I.D. M4	28.000—28.021 (1.1024—1.1032)	28.031 (1.1036)
Gear-to-bushing clearance at M4, M5 gear	0.025—0.075 (0.0010—0.0030)	—
at C2, C3 gear	0.025—0.075 (0.0010—0.0030)	—
Mainshaft O.D. at M4 gear bushing	27.967—27.980 (1.1011—1.1016)	27.960 (1.1008)
		
Gear bushing-to-shaft clearance at M4 gear	0.020—0.054 (0.0008—0.0021)	—
Shift fork claw thickness F	5.93—6.00 (0.233—0.236)	5.9 (0.23)
C	5.93—6.00 (0.233—0.236)	5.9 (0.23)
R	5.93—6.00 (0.233—0.236)	5.9 (0.23)
Shift fork I.D. F	14.000—14.021 (0.5512—0.5520)	14.03 (0.552)
C	14.000—14.021 (0.5512—0.5520)	14.03 (0.552)
R	14.000—14.021 (0.5512—0.5520)	14.03 (0.552)
Shift fork shaft O.D. at F shift fork	13.973—13.984 (0.5501—0.5506)	13.965 (0.5498)
at C shift fork	13.973—13.984 (0.5501—0.5506)	13.965 (0.5498)
at R shift fork	13.973—13.984 (0.5501—0.5506)	13.965 (0.5498)

Primary Damper Shaft

Primary damper spring free length	95.4 (3.76)	93.0 (3.66)

Unit: mm (in)

Clutch System

Item	Standard	Service Limit
Clutch lever free play	—	—
Recommended clutch fluid	DOT 4 brake fluid	—
Clutch master cylinder I.D.	14.000—14.043 (0.5512—0.5529)	14.06 (0.553)
Clutch master piston O.D.	13.957—13.984 (0.5495—0.5506)	13.94 (0.549)
Clutch outer I.D.	—	—
Clutch outer guide O.D.	34.975—34.991 (1.3770—1.3776)	34.965 (1.3766)
I.D.	27.989—28.006 (1.1019—1.1026)	28.016 (1.1030)
Primary damper shaft O.D. at clutch outer guide	27.974—27.987 (1.1013—1.1018)	—
Oil pump drive sprocket I.D.	—	—
Clutch center B I.D.	—	—
One way clutch inner O.D.	—	—
Clutch spring free height	—	—
Clutch spring free length	43.0 (1.70)	40.0 (1.57)
Clutch disc/plate thickness (Total of 10 discs and 9 plates)	54.72—55.72 (2.154—2.194)	54.2 (2.13)
Centrifugal clutch drum I.D.	—	—
bushing O.D.	—	—
Centrifugal clutch center guide I.D.	—	—
O.D.	—	—
Centrifugal clutch center guide collar height	—	—
Centrifugal clutch spring free length	—	—
Clutch lining thickness	—	—
Crankshaft O.D. at clutch center	—	—

Cooling System

Coolant capacity (Radiator and engine)	2.5 liters (2.6 US qt, 2.2 Imp qt)	—
(Reserve tank) Standard model	0.5 liter (0.5 US qt, 0.4 Imp qt)	—
ABS/TCS or LBS-ABS/TCS model	0.9 liter (1.0 US qt, 0.8 Imp qt)	—
Radiator cap relief pressure	108–137 kPa (1.1–1.4 kg/cm², 16–20 psi)	—
Thermostat begins to open	80–84°C (176–183°F)	—
Thermostat fully open	95°C (203°F)	—
Thermostat valve lift	8.0 (0.32) minimum	—

Drive Train

Recommended final drive oil	Hypoid gear oil SAE #80	—
Final drive gear oil capacity at disassembly	150 cm³ (5.1 US oz, 5.3 Imp oz)	—
at draining	130 cm³ (4.4 US oz, 4.6 Imp oz)	—
Final drive gear backlash	0.05—0.15 (0.002—0.006)	0.3 (0.01)
Final drive gear backlash difference between measurements	—	—
Ring gear-to-stop pin clearance (A)	0.30—0.60 (0.012—0.024)	—
Stop pin shim	See page 12-10	—
Ring gear spacer	See page 12-10	—
Pinion spacer	See page 12-11	—
Final drive gear assembly preload	2—4 kg-cm (1.7—3.5 in-lb)	—
Output gear backlash	—	—
Output gear I.D.	—	—
Output gear bushing O.D.	—	—
I.D.	—	—
Output drive shaft O.D.	—	—
Output gear damper spring free length	—	—
Output shaft adjustment shim	—	—
Countershaft drive shaft adjustment shim	—	—

Unit: mm (in)

Wheels/Tires

Item		Standard	Service Limit
Minimum tire tread depth (FR)		—	1.5 (0.06)
(RR)		—	2.0 (0.08)
Cold tire pressure Up to 90 kg (200 lb) load (FR)		250 kPa (2.50 kg/cm², 36 psi)	—
(RR)		290 kPa (2.90 kg/cm², 42 psi)	—
Up to maximum weight capacity (FR)		250 kPa (2.50 kg/cm², 36 psi)	—
(RR)		290 kPa (2.90 kg/cm², 42 psi)	—
Front and rear axle runout		—	0.2 (0.01)
Front and rear wheel rim runout (Radial)		—	2.0 (0.08)
(Axial)		—	2.0 (0.08)
Front wheel hub-to-rim distance		—	—
Front wheel hub standard surface		—	—
Rear wheel hub-to-rim distance		—	—
Rear wheel hub standard surface		—	—
Wheel balance weight (Front)		—	60 g (2.1 oz) max.
(Rear)		—	60 g (2.1 oz) max.
Drive chain slack		—	—
Drive chain size link (DID)		—	—
(RK)		—	—
Wheel sensor air gap (Front)	ABS/TCS model	0.4–1.2 (0.016–0.047)	—
	LBS-ABS/TCS model	0.4–0.5 (0.016–0.020)	—
(Rear)		0.7–1.2 (0.028–0.047)	—

Front Suspension

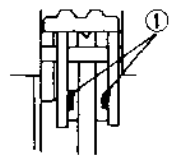
Front spring free length	Standard model	415.6 (16.36)	407.3 (16.04)
	ABS/TCS model	474.2 (18.67)	464.7 (18.30)
	LBS-ABS/TCS model	483.1 (19.02)	473.4 (18.64)
Fork spring free length A		—	—
B		—	—
Fork spring direction		Tightly wound coil end facing down	—
Fork tube runout		—	0.2 (0.008)
Recommended fork oil		Pro Honda Suspension Fluid SS-7	—
Fork oil level		—	—
Fork oil level (R)	Standard model	190 (7.5)	—
	ABS/TCS model	177 (7.0)	—
	LBS-ABS/TCS model	140 (5.5)	—
(L)	Standard model	187 (7.4)	—
	ABS/TCS model	174 (6.9)	—
	LBS-ABS/TCS model	136 (5.4)	—
Fork oil capacity		—	—
Fork oil capacity (R)	Standard model	385 ± 2.5 cm³ (13.02 ± 0.08 US oz, 13.51 ± 0.09 Imp oz)	—
	ABS/TCS model	372.0 ± 2.5 cm³ (12.58 ± 0.08 US oz, 13.05 ± 0.09 Imp oz)	—
	LBS-ABS/TCS model	533.0 ± 2.5 cm³ (18.02 ± 0.08 US oz, 18.71 ± 0.09 Imp oz)	—
(L)	Standard model	435.0 ± 2.5 cm³ (14.71 ± 0.08 US oz, 15.27 ± 0.09 Imp oz)	—
	ABS/TCS Model	418.0 ± 2.5 cm³ (14.14 ± 0.08 US oz, 14.67 ± 0.09 Imp oz)	—
	LBS-ABS/TCS model	486.0 ± 2.5 cm³ (16.43 ± 0.08 US oz, 17.06 ± 0.09 Imp oz)	—
Fork air pressure		—	—
Steering bearing preload		1.5–2.0 kg (3.3–4.4 lb)	—

Unit: mm (in)

Rear Suspension

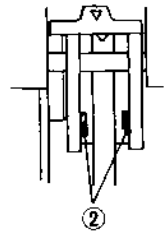
Item	Standard	Service Limit
Shock absorber spring free length Standard model	256.5 (10.10)	251.4 (9.90)
ABS/TCS or LBS-ABS/TCS	258.9 (10.19)	253.7 (9.99)
Shock absorber spring free length (R)	—	—
(L)	—	—
Damper gas pressure	—	—
Damper compressed gas	—	—
Damper rod compressed force at 10 mm compressed	—	—
Damper drilling point	—	—
Shock absorber spring installed length (Standard)	—	—
(Adjustable range)	—	—
Shock absorber spring adjuster standard position	—	—
Shock absorber spring direction	—	—
Recommended shock absorber oil	—	—
Shock absorber oil capacity	—	—
air pressure	—	—

Brakes

Front brake			
Brake fluid		DOT 4	—
Brake lever free play		—	—
Brake pad wear indicator		—	To the groove ①
			
Brake disc thickness		4.8–5.2 (0.19–0.20)	4.0 (0.16)
Brake disc runout		—	0.30 (0.012)
Master cylinder I.D.	Standard and ABS/TCS model	14.000–14.043 (0.5512–0.5529)	14.06 (0.554)
	LBS-ABS/TCS model	12.700–12.743 (0.5000–0.5017)	12.76 (0.502)
Master piston O.D.	Standard and ABS/TCS model	13.957–13.984 (0.5495–0.5506)	13.95 (0.549)
	LBS-ABS/TCS model	12.657–12.684 (0.4983–0.4994)	12.65 (0.498)
Caliper cylinder I.D.	Standard and ABS/TCS model	27.000–27.050 (1.0630–1.0650)	27.06 (1.065)
	LBS-ABS/TCS model R. (Upper)	27.000–27.050 (1.0630–1.0650)	27.06 (1.065)
	(Center)	22.650–22.700 (0.8917–0.8937)	22.71 (0.894)
	(Lower)	25.400–25.450 (1.0000–1.0020)	25.46 (1.002)
	L. (Upper)	25.400–25.450 (1.0000–1.0020)	25.46 (1.002)
	(Center)	25.400–25.450 (1.0000–1.0020)	25.46 (1.002)
	(Lower)	22.650–22.700 (0.8917–0.8937)	22.71 (0.894)
Caliper piston O.D.	Standard and ABS/TCS model	26.918–26.968 (1.0598–1.0617)	26.91 (1.059)
	LBS-ABS/TCS model R. (Upper)	26.935–26.968 (1.0604–1.0617)	26.91 (1.059)
	(Center)	22.585–22.618 (0.8892–0.8905)	22.56 (0.888)
	(Lower)	25.335–25.368 (0.9974–0.9987)	25.31 (0.996)
	L. (Upper)	25.335–25.368 (0.9974–0.9987)	25.31 (0.996)
	(Center)	25.335–25.368 (0.9974–0.9987)	25.31 (0.996)
	(Lower)	22.585–22.618 (0.8892–0.8905)	22.56 (0.888)
Brake drum I.D.		—	—
Brake lining thickness		—	—

Unit: mm (in)

Brakes (cont'd)

Item		Standard	Service Limit
Rear brake			
Brake fluid		DOT 4	—
Brake pedal height		—	—
Brake pedal free play		—	—
Brake pad wear indicator	 ②	—	— To the groove ②
Brake disc thickness	Standard and ABS/TCS model	7.3–7.7 (0.29–0.30)	6.0 (0.24)
	LBS-ABS/TCS model	7.3–7.7 (0.29–0.30)	6.5 (0.26)
Brake disc runout		—	0.30 (0.012)
Master cylinder I.D.	Standard and ABS/TCS model	12.700–12.743 (0.5000–0.5017)	12.76 (0.502)
	LBS-ABS/TCS model	17.460–17.503 (0.6874–0.6891)	17.515 (0.6895)
Master piston O.D.	Standard and ABS/TCS model	12.657–12.684 (0.4983–0.4994)	12.65 (0.498)
	LBS-ABS/TCS model	17.417–17.444 (0.6857–0.6868)	17.405 (0.6852)
Caliper cylinder I.D.	Standard and ABS/TCS model	27.000–27.050 (1.0630–1.0650)	27.06 (1.065)
	LBS-ABS/TCS model (Front)	22.650–22.700 (0.8917–0.8937)	22.71 (0.894)
	(Center)	27.000–27.050 (1.0630–1.0650)	27.06 (1.065)
	(Rear)	22.650–22.700 (0.8917–0.8937)	22.71 (0.894)
Caliper piston O.D.	Standard and ABS/TCS model	26.918–26.968 (1.0598–1.0617)	26.91 (1.059)
	LBS-ABS/TCS model (Front)	22.585–22.618 (0.8892–0.8905)	22.56 (0.888)
	(Center)	26.935–26.968 (1.0604–1.0617)	26.91 (1.059)
	(Rear)	22.585–22.618 (0.8892–0.8905)	22.56 (0.888)
Brake drum I.D.		—	—
Brake lining thickness		—	—
Secondary master cylinder I.D. (LBS-ABS/TCS model)		14.000–14.043 (0.5512–0.5529)	14.06 (0.554)
master piston O.D. (LBS-ABS/TCS model)		13.957–13.984 (0.5495–0.5506)	13.95 (0.549)

Battery/Charging System

Alternator charging coil resistance (at 20°C/68°F)	0–1.0 Ω ('91–'95)	—
	0.22–0.26 Ω (After '95)	—
Rotor coil (field coil) resistance (at 20°C/68°F)	0–4.0 Ω ('91–'95)	—
	2.6–3.2 Ω (After '95)	—
Regulator/rectifier regulated voltage ('91–'95)	12.6–15.0 V at 5,000 rpm	—
(After '95)	14.2–14.8 V at 5,000 rpm	—
Battery capacity	12 V–12 AH (Maintenance free battery: YTX14-BS)	—
Specified current leakage ('91–'95)	—	3 mA max.
(After '95)	—	2 mA max.
Battery specific gravity (Fully charged)	—	—
(Needs charging)	—	—
Battery charging rate (Normal)	1.4 A x 5 h	—
(Quick)	6 A x 1 h	—
Battery voltage (Fully charged at 20°C/68°F)	13.1 V	—
(Needs charging at 20°C/68°F)	Below 12.3 V	—
AC regulator regulated voltage (With analogue type)	—	—
(With digital type)	—	—
Brush length (After '95)	13.7 (0.54)	4.7 (0.19)
Slip ring O.D. (After '95)	14.4 (0.57)	12 (0.5)

Ignition System

Item	Standard	Service Limit
Spark plug		
(Standard NGK)	CR8EH 9	—
(Standard NIPPONDENSO)	U24FER9	—
(For cold climate/below 5°C/41°F NGK)	—	—
(For cold climate/below 5°C/41°F NIPPONDENSO)	—	—
(For extended high speed riding NGK)	CR9EH 9	—
(For extended high speed riding NIPPONDENSO)	U27FER9	—
Spark plug gap	0.8—0.9 (0.031—0.035)	—
Ignition timing "F" mark	12° BTDC at 1,000 rpm	—
Advance starts	2,000 rpm	—
stops	5,000 rpm	—
Full advance	27° BTDC at 5,000 rpm	—
Alternator exciter coil resistance (At 20°C/68°F)	—	—
Ignition coil resistance (Primary; at 20°C/68°F)	2.16—3.19 Ω	—
(Secondary with plug cap)	22.5—27.5 kΩ	—
(Secondary without plug cap)	13.5—16.5 kΩ	—
Ignition pulse generator resistance (At 20°C/68°F)	405—495 Ω	—

Unit: mm (in)

Lights/Meters/Switches Item		Standard	Service Limit
Main fuse		30A	
Alternator fuse		55A	—
Fuse ('91–95)		10A x 6, 20A x 1	—
(After '95)	Standard model	5A (Accessory), 10A x 6, 20A x 1	—
	LBS-ABS/TCS model	5A (Accessory), 10A x 5, 15A x 2	—
ABS fuse (ABS/TCS model)		10A x 3, 20A x 1	—
(LBS-ABS/TCS model)		10A x 1, 30A x 2	—
Headlight (high/low beam)	Standard and ABS/TCS model	12V45/45W x 2	—
	LBS-ABS/TCS model	12V 60/55W	—
Tail/brake light		12V32/3cp x 2	—
License light		—	—
Position light		—	—
Front turn signal/running light		12V32/3cp x 2	—
Front turn signal light		—	—
Rear turn signal light		12V32cp x 2	—
Instrument light		12V1.7W x 4	—
Oil pressure indicator	Standard model	12V3.4W	—
	ABS/TCS or LBS-ABS/TCS model	12V3W	—
Tail/brake light indicator		—	—
Side stand indicator	Standard model	12V3.4W	—
	ABS/TCS or LBS-ABS/TCS model	12V1.7W	—
Low fuel indicator	Standard model	12V3.4W	—
	ABS/TCS or LBS-ABS/TCS model	12V3W	—
Coolant temperature indicator		—	—
Oil temperature indicator		—	—
High beam indicator	Standard model	12V3.4W	—
	ABS/TCS or LBS-ABS/TCS model	12V3W	—
Turn signal indicator	Standard model	12V3.4 x 2	—
	ABS/TCS or LBS-ABS/TCS model	12V3W x 2	—
Neutral indicator	Standard model	12V3.4W	—
	ABS/TCS or LBS-ABS/TCS model	12V1.7W	—
TCS activation light (ABS/TCS or LBS-ABS/TCS model)		12V3W x 2	—
TCS OFF indicator (ABS/TCS or LBS-ABS/TCS model)		12V3W	—
TCS indicator light (ABS/TCS or LBS-ABS/TCS model)		LED x 1	—
ABS indicator light (ABS/TCS or LBS-ABS/TCS model)		LED x 2	—
Reverse indicator		—	—
Overdrive indicator		—	—
Oil temperature sensor resistance		—	—
Fuel unit resistance (At full level)		10 Ω	—
(At empty)		90 Ω	—
Fuel pump flow capacity (min./minute)		—	—
Thermo sensor resistance (50°C/122°F)		130–180 Ω	—
(80°C/176°F)		45–60 Ω	—
(120°C/248°F)		10–20 Ω	—
Fan motor switch Starts to close (ON)		98–102°C (208–216°F)	—
Fully open (OFF)		93–97°C (199–207°F)	—

Starting System		
Starter driven gear O.D.	57.749–57.768 (2.2736–2.2743)	—
Starter clutch outer I.D.	74.414–74.440 (2.9297–2.9307)	—
Starter motor brush length	12.0–13.0 (0.47–0.51)	—

Torque Values

Standard

Fastener Type	Torque N·m (kg-m, ft-lb)	Fastener Type	Torque N·m (kg-m, ft-lb)
5 mm bolt and nut	5 (0.5, 3.5)	5 mm screw	4 (0.4, 3)
6 mm bolt and nut	10 (1.0, 7.2)	6 mm screw	9 (0.9, 7)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head)	9 (0.9, 7)
10 mm bolt and nut	35 (3.5, 25)	6 mm flange bolt (10 mm head) and nut	12 (1.2, 9)
12 mm bolt and nut	55 (5.5, 40)	8 mm flange bolt and nut	27 (2.7, 20)
		10 mm flange bolt and nut	40 (4.0, 29)

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

Notes: 1. Apply locking agent to the threads.
2. Apply oil to the threads and flange surface.
3. Apply sealant to the threads.
4. Stake.
5. Apply clean engine oil to the O-ring.

Engine

Item	Q'ty	Thread dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Lubrication:				
Oil pump driven sprocket bolt	1	6	15 (1.5, 11)	Note 1
Oil pressure switch	1	PT 1/8	12 (1.2, 9)	Note 3
Oil filter	1	20	10 (1.0, 7)	Note 5
Oil drain bolt	1	12	38 (3.8, 27)	
Oil cooler bolt ('91-'95)	1	20	65 (6.5, 47)	
Oil filter boss	1	20	18 (1.8, 20)	Note 1
Oil pan bolt	14	6	12 (1.2, 9)	
Timing belt/cylinder head:				
Timing belt tensioner bolt	1	10	46 (4.6, 33)	
Timing belt idle pulley bolt	1	12	46 (4.6, 33)	Note 1
Timing belt driven pulley bolt	2	8	27 (2.7, 20)	
Timing belt drive pulley bolt	1	12	65 (6.5, 47)	
Cylinder head bolt	12	10	58 (5.8, 42)	Note 2
Camshaft holder bolt	24	6	12 (1.2, 9)	
Cylinder head cover bolt	8	6	12 (1.2, 9)	
Spark plug	4	10	11 (1.1, 8)	
Vacuum joint	4	5	4 (0.4, 2.9)	
Reduction bolt	1	12	38 (3.8, 27)	
Clutch/gearshift linkage:				
Clutch lock nut	1	22	110 (11.0, 80)	
Shift drum center bolt	1	8	23 (2.3, 17)	
Shift return spring pin bolt	1	8	23 (2.3, 17)	
Slave cylinder bleed valve	1	8	9 (0.9, 6.5)	
Gearshift arm bolt	1	6	12 (1.2, 9)	
Crankcase/crankshaft/transmission:				
Connecting rod cap nut	8	8	36 (3.6, 26)	Note 2
Crankcase bolt 6 mm	6	6	12 (1.2, 9)	
8 mm	7	8	23 (2.3, 17)	Note 2
10 mm	6	10	52 (5.2, 38)	Note 2
Pulse generator rotor bolt	1	12	100 (10.0, 72)	Note 2
Neutral switch	1	10	12 (1.2, 9)	
32 mm cap	1	32	12 (1.2, 9)	Note 5
Alternator:				
Alternator terminal nut (After '95)	1	6	8 (0.8, 5.8)	
Alternator shaft nut	1	14	58 (5.8, 42)	Note 1
Alternator drive gear bolt	8	6	16 (1.6, 12)	Note 1

Frame

Item	Q'ty	Thread dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Frame/body panels:				
Center stand pivot bolt	1	8	27 (2.7, 20)	
Side stand pivot bolt	1	10	10 (1.0, 7)	
Side stand pivot lock nut	1	10	27 (2.7, 20)	
Rotary switch attaching bolt	1	6	10 (1.0, 7)	
Footpeg holder 8 mm	2	8	27 (2.7, 20)	
10 mm	4	10	35 (3.5, 25)	
Grab rail	6	8	27 (2.7, 20)	
Grab rail center plate bolt	4	8	35 (3.5, 25)	
Saddle bag stay bolt 6 mm	2	6	10 (1.0, 7)	
8 mm	2	8	35 (3.5, 25)	
Center stand grip bolt	2	6	10 (1.0, 7)	
Engine guard mounting bolt	3	8	27 (2.7, 20)	
Windshield screw	5	5	0.6 (0.06, 0.43)	
Upper fairing bracket bolt	1	8	27 (2.7, 20)	
Exhaust system:				
Exhaust pipe joint nut	8	7	17 (1.7, 12)	
Muffler band bolt	4	8	22 (2.2, 16)	
Exhaust pipe band bolt	1	8	22 (2.2, 16)	
Muffler mounting bolt	2	8	27 (2.7, 20)	
Exhaust pipe protector bolt	12	6	12 (1.2, 9)	
Fuel system:				
Fuel tank mounting bolt	4	6	12 (1.2, 9)	
Fuel pump mounting nut	6	6	10 (1.0, 7)	
Carburetor connecting screw	2	6	8 (0.8, 5.8)	
Air cleaner housing cover screw	8	5	0.9 (0.09, 0.65)	
Fuel valve mounting screw	2	5	0.9 (0.09, 0.65)	
Cooling system:				
Fan motor switch	1	16	12 (1.2, 9)	
Thermostat case	2	6	10 (1.0, 7)	
Water hose band screw	10	—	1.2 (0.12, 0.9)	
Engine mount:				
Engine mounting bolt 10 mm	4	10	55 (5.5, 40)	Note 2
12 mm	1	12	65 (6.5, 47)	
Engine mounting bracket bolt 8 mm	8	8	35 (3.5, 25)	
10 mm	4	10	40 (4.0, 29)	
Sub frame bolt	5	10	40 (4.0, 29)	
Engine mounting collar lock nut ('91-'95)	1	18	21 (2.1, 15)	
(After '95)	2	18	28 (2.8, 20)	
Engine mounting collar adjusting nut (lower) (After '95)	1	18	10 (1.0, 7)	
Gearshift pedal pivot bolt	1	8	27 (2.7, 20)	Note 1

Frame

Item	Q'ty	Thread dia. (mm)	Torque N-m (kg-m, ft-lb)	Remarks
Front suspension:				
Handlebar lower cover bolt	4	5	4.3 (0.43, 3.1)	
Handlebar upper holder bolt	4	8	27 (2.7, 20)	
Handlebar weight screw	2	6	9 (0.9, 6.5)	Note 1
Ignition switch mounting bolt	2	8	25 (2.5, 18)	
Throttle housing screw	2	5	4.2 (0.42, 3.0)	
Front fender attaching socket bolt				
Standard and LBS-ABS/TCS model	2	6	12 (1.2, 9)	
ABS/TCS model	2	8	22 (2.2, 16)	
Front fender plate bolt (LBS-ABS/TCS model)	2	8	22 (2.2, 16)	Front side bolts
Steering bearing adjustment nut	1	26	28 (2.8, 20)	Note 2
Steering stem nut	1	24	105 (10.5, 76)	
Upper fork pinch bolt	2	8	23 (2.3, 17)	
Lower fork pinch bolt	4	10	50 (5.0, 36)	
Fork cap Standard and ABS/TCS model	2	—	20 (2.0, 14)	
LBS-ABS/TCS model	2	—	23 (2.3, 17)	
Fork socket bolt	2	8	20 (2.0, 14)	Note 1
Fork damper lock nut	1	10	23 (2.3, 17)	
Anti-drive case bolt	4	5	4 (0.4, 2.9)	Note 1
Front axle bolt	1	14	90 (9.0, 65)	
Front axle pinch bolt	4	8	22 (2.2, 16)	
Front pulser ring bolt (ABS/TCS or LBS-ABS/TCS model)	6	5	8 (0.8, 5.8)	
Rear suspension:				
Shock absorber upper mounting bolt	1	10	50 (5.0, 36)	Note 2
Shock absorber lower mounting bolt	1	8	23 (2.3, 17)	
Swingarm right pivot bolt	1	30	105 (10.5, 76)	
Swingarm left pivot bolt				
Standard and ABS/TCS model	1	30	18 (1.8, 13)	
LBS-ABS/TCS model	1	30	22 (2.2, 16)	
Swingarm left pivot bolt lock nut	1	30	105 (10.5, 76)	
Rear axle nut	1	18	110 (11.0, 80)	
Rear axle pinch bolt	1	8	27 (2.7, 20)	
Rear wheel damper plate bolt	5	6	20 (2.0, 14)	
Rear pulser ring bolt (ABS/TCS or LBS-ABS/TCS model)	6	5	8 (0.8, 5.8)	
Brake/clutch system:				
Front wheel speed sensor bracket bolt (LBS-ABS/TCS model)	1	6	12 (1.2, 9)	
Rear caliper stopper pin bolt	1	18	70 (7.0, 51)	
Pad pin plug	3	10	2.5 (0.25, 1.8)	
Pad pin	3	10	18 (1.8, 13)	
Caliper assembly bolt (LBS-ABS/TCS model)	9	8	33 (3.3, 24)	
Front caliper pin bolt (caliper side)	2	8	23 (2.3, 17)	Note 1
(bracket side)	2	8	13 (1.3, 9)	Note 1
Rear caliper pin bolt				
(caliper side) Standard and ABS/TCS model	1	12	28 (2.8, 20)	Note 1
LBS-ABS/TCS model	1	12	28 (2.8, 20)	
(bracket side) Standard and ABS/TCS model	1	8	13 (1.3, 17)	Note 1
LBS-ABS/TCS model	1	8	23 (2.3, 17)	Note 1
Caliper bleed valve				
Standard and ABS/TCS model	3	—	5.5 (0.55, 4.0)	
LBS-ABS/TCS model	6	—	5.5 (0.55, 4.0)	

Frame (cont'd)

Item	Q'ty	Thread dia. (mm)	Torque N·m (kg-m, ft-lb)	Remarks
Brake/clutch system (cont'd):				
Right front caliper mounting bolt (Standard and ABS/TCS model)	2	8	27 (2.7, 20)	
Left front caliper pivot bolt (Standard and ABS/TCS model); upper	1	8	27 (2.7, 20)	
lower	1	6	12 (1.2, 9)	
Right front caliper pivot bolt (LBS-ABS/TCS model); upper	1	8	30 (3.0, 22)	
lower	1	6	12 (1.2, 9)	
Left front caliper pivot bolt (LBS-ABS/TCS model)	2	8	30 (3.0, 22)	
Brake disc bolt	18	8	43 (4.3, 31)	
Rear master cylinder push rod lock nut	1	8	18 (1.8, 13)	
Secondary master cylinder mounting bolt (LBS-ABS/TCS model)	2	6	12 (1.2, 9)	
Secondary master cylinder push rod lock nuts (LBS-ABS/TCS model)	2	8	18 (1.8, 13)	Note 1
Secondary master cylinder link plate bolt (LBS-ABS/TCS model)	2	8	30 (3.0, 22)	
Delay valve mounting bolt (LBS-ABS/TCS model)	2	6	12 (1.2, 9)	
Brake lever adjuster rod bolt	1	5	4 (0.4, 29)	Note 1
Master cylinder holder bolt	4	6	12 (1.2, 9)	
Master cylinder reservoir cap screw	4	4	1.5 (0.15, 1.1)	
Clutch lever pivot nut	1	6	6 (0.6, 4.3)	
Clutch lever pivot bolt	1	6	1 (0.1, 0.7)	
Clutch switch mounting screw	1	4	1.2 (0.12, 0.9)	
Brake lever pivot nut	1	6	6 (0.6, 4.3)	
Front brake lever pivot bolt	1	6	1 (0.1, 0.7)	
Front brake switch mounting screw	1	4	1.2 (0.12, 0.9)	
Brake hose oil bolt Standard model	5	10	35 (3.5, 25)	
ABS/TCS model	9	10	35 (3.5, 25)	
LBS-ABS/TCS model	18	10	35 (3.5, 25)	
Clutch hose oil bolt	2	10	35 (3.5, 25)	
Brake pipe joint nut (LBS-ABS/TCS model)	14	—	17 (1.7, 12)	
Brake hose clamp screw (at fork tube; Standard model)	1	5	4.3 (0.43, 3.1)	
Final drive:				
Final gear case mounting nut	4	10	65 (6.5, 43)	
Final gear case oil filler cap	1	30	12 (1.2, 9)	
Pinion bearing retainer	1	70	150 (15.0, 108)	
Pinion joint nut	1	16	110 (11.0, 80)	Note 1
Retainer lock washer bolt	1	6	10 (1.0, 7)	
Final gear case bolt 8 mm	6	8	26 (2.6, 19)	
10 mm	2	10	63 (6.3, 46)	Note 1
Final gear case drain bolt	1	14	20 (2.0, 14)	
Dust guard plate bolt	1	6	10 (1.0, 7)	
Electrical system:				
Ignition coil mounting bolt	4	6	9 (0.9, 6.5)	
Meter mounting bolt	3	6	9 (0.9, 6.5)	

Tools

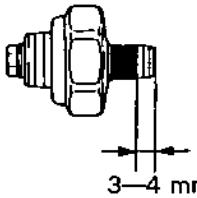
Description	Tool Number	Alternate Tool	Tool Number	Ref. Section(s)
Oil filter wrench	07HAA-PJ70100			4
Oil pressure gauge	07506-3000000	Equivalent commercially available in U.S.A.		4
Oil pressure gauge attachement	07501-4220100			4
Float level gauge	07401-0010000			5
Pilot screw wrench	07KMA-MS60101	Pilot screw wrench (U.S.A. only)	07LMA-MT8010A or 07MMA-MT3010A	5
Bearing remover set	07936-3710001	Not available in U.S.A.		8, 10
– Remover handle	07936-3710100			8, 10
– Bearing remover, 17 mm	07936-3710600			8, 10
– Remover weight	07741-0010201	Remover weight	07936-3710200	8,10,14
Driver	07749-0010000			8,9,10, 12,13,14
Attachment, 37 x 40 mm	07746-0010200			8, 14
Pilot, 20 mm	07746-0040500			8, 10
Valve guide driver, 4.5mm	07HMD-ML00100	Valve guide driver, 4.5mm	07HMD-ML00101	8
Valve spring compressor	07757-0010000			8
Valve spring compressor attachment	07959-KM30101			8
Tappet hole protector	07HMG-MR70001	or Equivalent (see page 8-9)		8
Valve guide reamer, 4.5 mm	07HMH-ML00101	Valve guide reamer, 4.5mm	07HMH-ML0010A	8
Compression gauge attachment	07JMJ-KY20100	Equivalent commercially available in U.S.A.		8
Valve seat cutter, 24.5 mm (45°EX)	07780-0010100	Equivalent commercially available in U.S.A.		8
Valve seat cutter, 29 mm (45°IN)	07780-0010300			8
Flat cutter, 25 mm (32°EX)	07780-0012000			8
Flat cutter, 28 mm (32°IN)	07780-0012100			8
Interior cutter, 30 mm (60°IN, EX)	07780-0014000			8
Cutter holder, 4.5 mm	07781-0010600			8
Snap ring pliers	07914-3230001			9, 15
Clutch center holder	07JMB-MN50300	Holder plate Clutch center collar "B"	07HGB-001010B 07MPB-764021A	9
Clutch holder collar	07LMB-MT30100			9
Lock nut wrench, 30 x 32 mm	07716-0020400	Equivalent commercially available in U.S.A.		9
Extension bar	07716-0020500			9
Attachment, 28 x 30 mm	07946-1870100			9
Pilot, 12 mm	07746-0040200			9
Ball race & bearing driver attachment	07945-3330300			10
Attachment, 42 x 47 mm	07746-0010300			10,12,13
Pilot, 25 mm	07746-0040600			10
Attachment, 62 x 68 mm	07746-0010500			10, 12
Pilot, 30 mm	07746-0040700			10
Pilot, 28 mm	07746-0041100			10

Cont'd

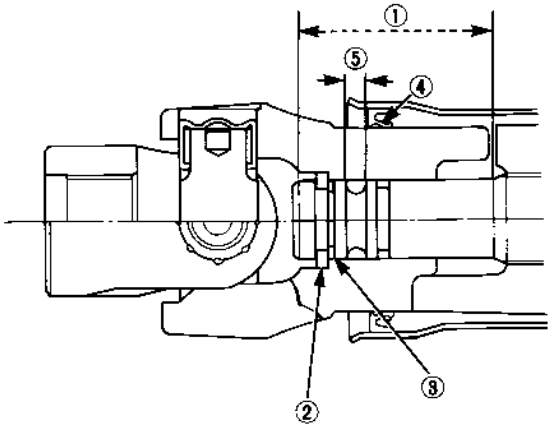
Description	Tool Number	Alternate Tool	Tool Number	Ref. Section(s)
Pinion retainer wrench	07910-MA10100			12
Shaft puller	07931-ME40000	Shaft puller	07931-ME4010A	12
Pinion holder attachmemt	07924-ME40000			12
attachment	07924-9690102			12
Oil seal remover	07948-4630100			12
Oil seal driver attachment	07948-SB00101			12
Bearing race remover	07946-3710500			12
Oil seal driver	07965-MC70100			12
Attachment, 52 x 55 mm	07746-0010400			12, 13
Pilot, 35 mm	07746-0040800			12
Driver, 40 mm I.D.	07746-0030100			12
Attachment, 25 mm I.D.	07746-0030200			12
Bearing insert attachment	07931-4630300			12
Yoke joint compressor attachment	07LMF-MT30110	Not available in U.S.A.		12
Yoke joint compressor base	07LMF-MT30120			12
Fork seal driver attachment				13
Standard and ABS/TCS model	07947-KF00100			
LBS-ABS/TCS model	07947-KA40200			
Fork seal driver body	07947-KA50100			13
Steering stem socket	07916-3710100			13
Steering stem driver	07946-MB00000	Race remover attachment	07953-MJ1000B	13
Ball race remover set	07953-MJ10000	(U.S.A. only)		13
– Driver attachment	07953-MJ10100			13
– Driver handle	07953-MJ10200			13
Bearing race remover	07946-3710100			13
Shock absorber compressor	07GME-0010000			14
Shock absorber compressor attachment	07959-MB10000			14
Pivot bearing outer remover	07936-4150000			14
Lock nut wrench	07908-4690003	Lock nut wrench	KS-HBA-08-469	14
Digital multimeter (U.S.A. only)	KS-AHM-32-003	Equivalent commercially available in U.S.A.		17,18,20, 21
Analogue tester (SANWA)	SP-15D			17,18,20, 21
Analogue tester (KOWA)	TH-5H			17,18,20, 21

Lubrication & Seal Points

Engine

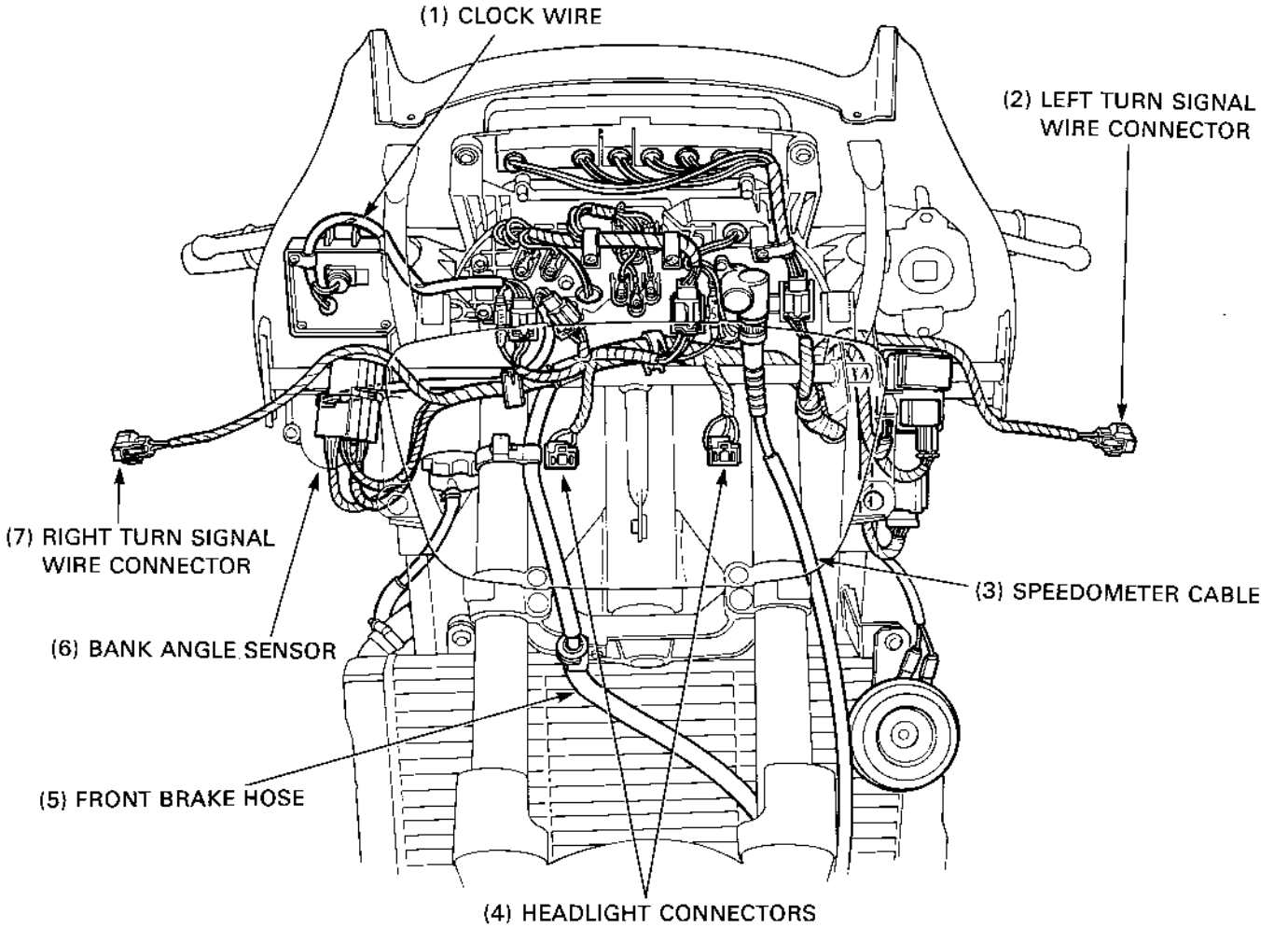
Location	Material	Remarks
Upper and lower crankcase mating surface Oil pressure switch thread  3—4 mm (0.12—0.16 in) Semi-circular portion of the cylinder head	Liquid sealant	Do not apply sealant near the rain journal bearings. Do not apply sealant to the switch thread head as shown.
Valve stem (valve guide sliding surface) Crankshaft main journal bearings Connecting rod bearings Crankshaft thrust surfaces Crankshaft thrust bearings Camshaft journals, cam lobes and thrust surfaces Camshaft driven gear Cam reduction gear shaft spline Valve lifter Piston pin Primary drive gear Clutch outer guide Transmission gearshift fork grooves Alternator driven gears	Molybdenum disulfide oil (a mixture of engine oil and molybdenum disulfide grease in a 1 : 1 ratio)	
Connecting rod bearing cap nuts Piston Connecting rod small end bearing Transmission gears Shift forks Oil filter O-ring Oil strainer packing Clutch lifter rod Lifter rod guide Shift fork shaft 10 mm crankcase bolts 8 mm crankcase bolts Pulse generator rotor bolt Cylinder head bolts O-rings Other sliding surfaces	Engine oil	
Oil seal lips	Multipurpose grease	
Clutch slave cylinder piston seal	DOT 4 brake fluid	
Timing belt idle pulley bolt threads Shift drum set plate bolt threads Oil pump driven sprocket bolt threads Primary damper shaft bearing set plate bolt threads Alternator drive gear bolt threads Timing belt tensioner spring hook bolt threads Water pump mounting bolt threads Cam reduction holder bolt threads Clutch cover base bolt threads Alternator shaft nut threads	Locking agent	

Frame

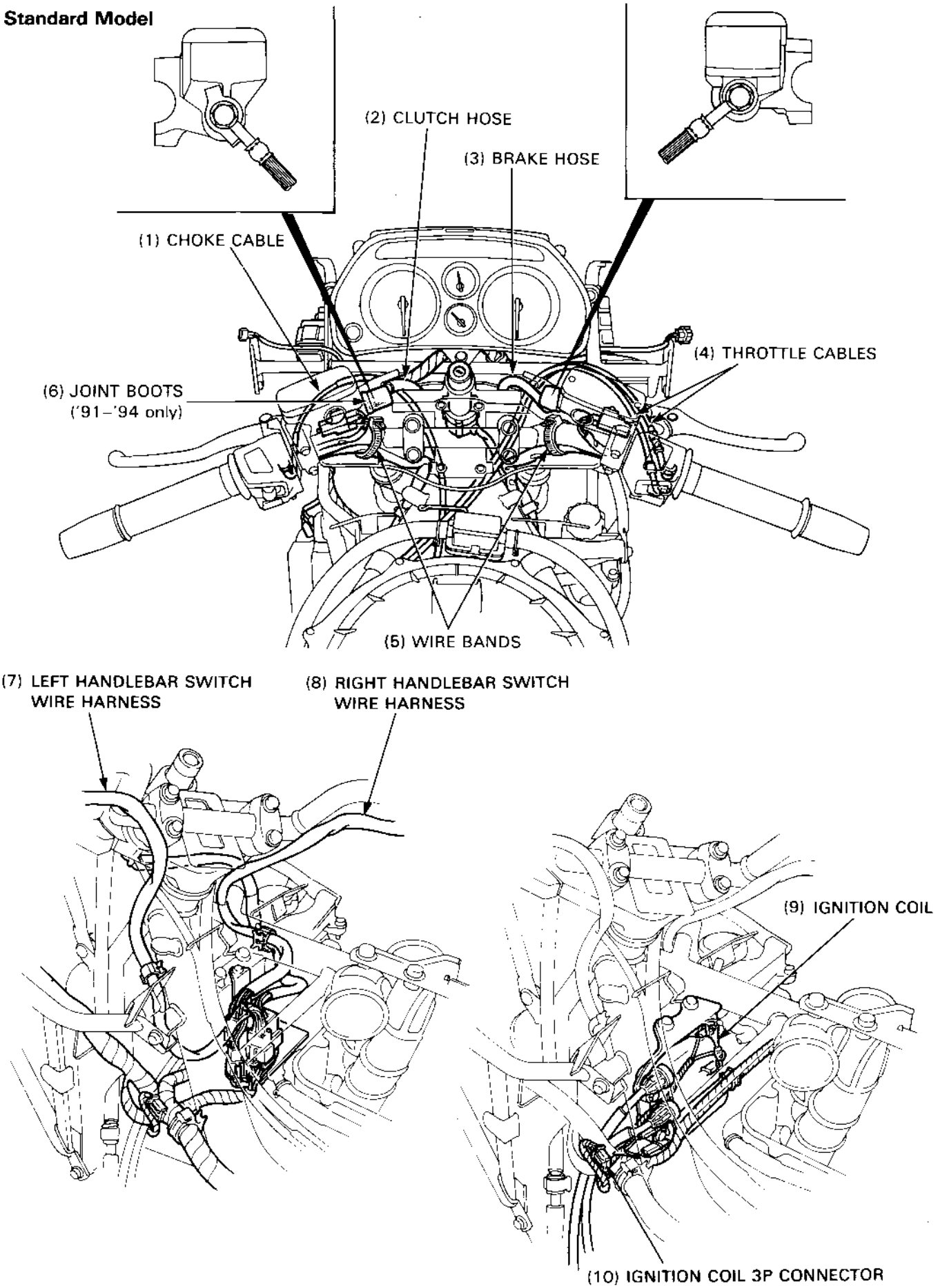
Location	Material	Remarks
Center stand pivot Side stand pivot Rear brake pedal pivot Gearshift pedal pivot Throttle grip pipe flange Steering head bearings Steering head bearing dust seal lips Front caliper pivot collars	Multipurpose grease	
Driveshaft and driveshaft joint splines	Molybdenum disulfide grease	
Driveshaft ① Driveshaft yoke joint cotters ② Driveshaft yoke joint thrust washer ③ Driveshaft yoke joint oil seal lip ④ Driveshaft groove ⑤  Rear shock absorber upper mounting collar (inside and outside surfaces) Rear wheel thrust washer Final driven flange splines Final driven flange O-ring	Molybdenum disulfide paste	Apply to the area as shown. Pack the groove with the grease
Handlebar grip rubbers	Honda Bond A or equivalent	
Steering bearing adjustment nut threads	Engine oil	
Thermo sensor threads	Sealant	
Fork Fork oil seal lip	Fork fluid	
Brake/clutch master cylinder pistons/piston cups Caliper pistons/piston seals Brake/clutch reservoir	DOT 4 brake fluid	
Insides of the caliper boots Brake pad pin stopper rings (LBS-ABS/TCS model) Front master cylinder push rod ends (LBS-ABS/TCS model) Front master cylinder piston end (Standard and ABS/TCS model) Rear master cylinder push rod upper end and boot groove	Silicone grease	
Handlebar weight screw threads Front fork socket bolt threads Cooling fan nut threads Caliper pin bolt threads Secondary master cylinder push rod lock nut threads (LBS-ABS/TCS model) Anti-dive case bolt threads	Locking agent	

Cable & Harness Routing

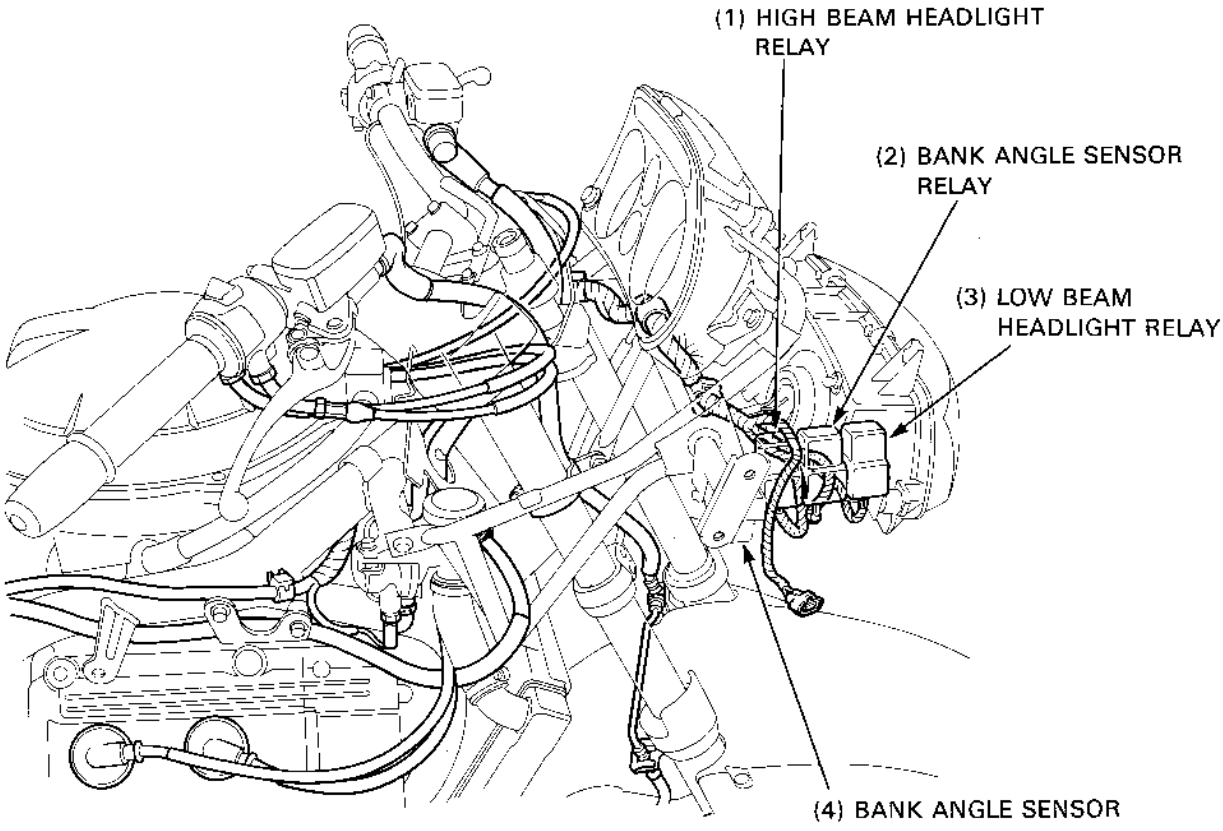
Standard Model

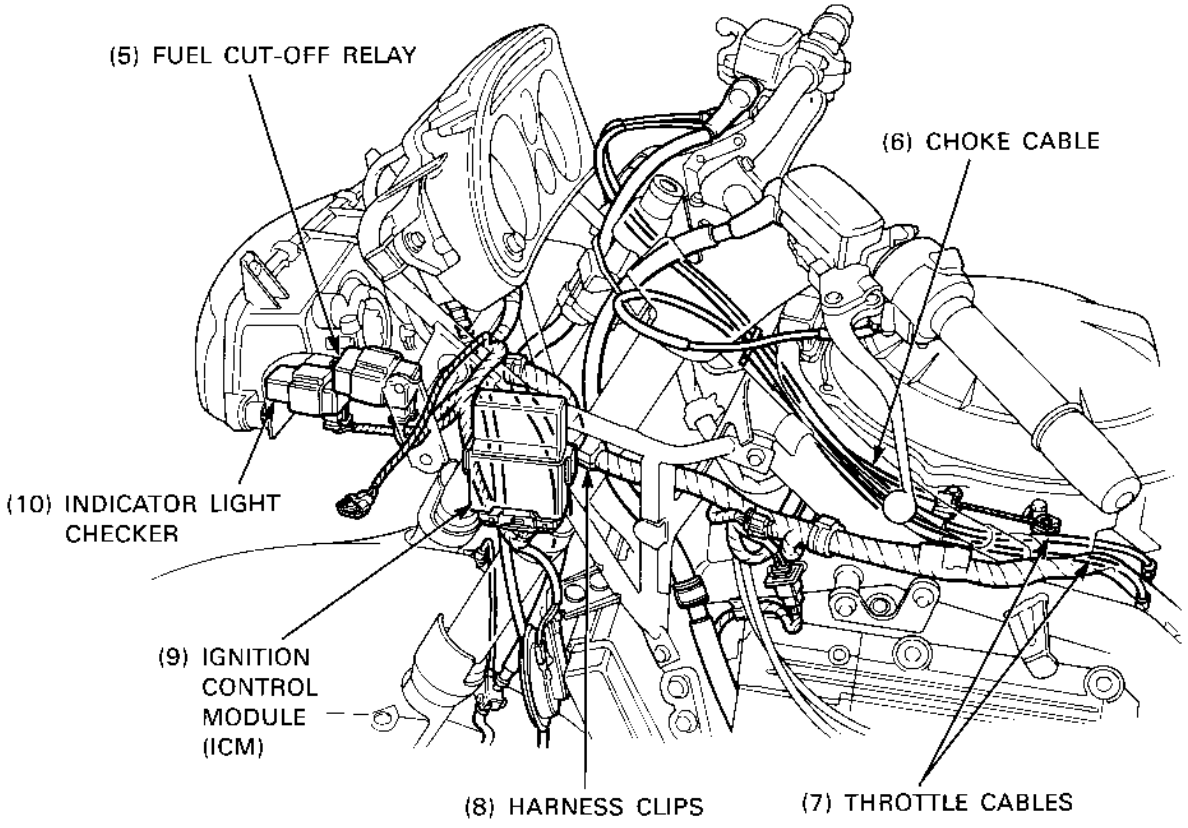


Standard Model

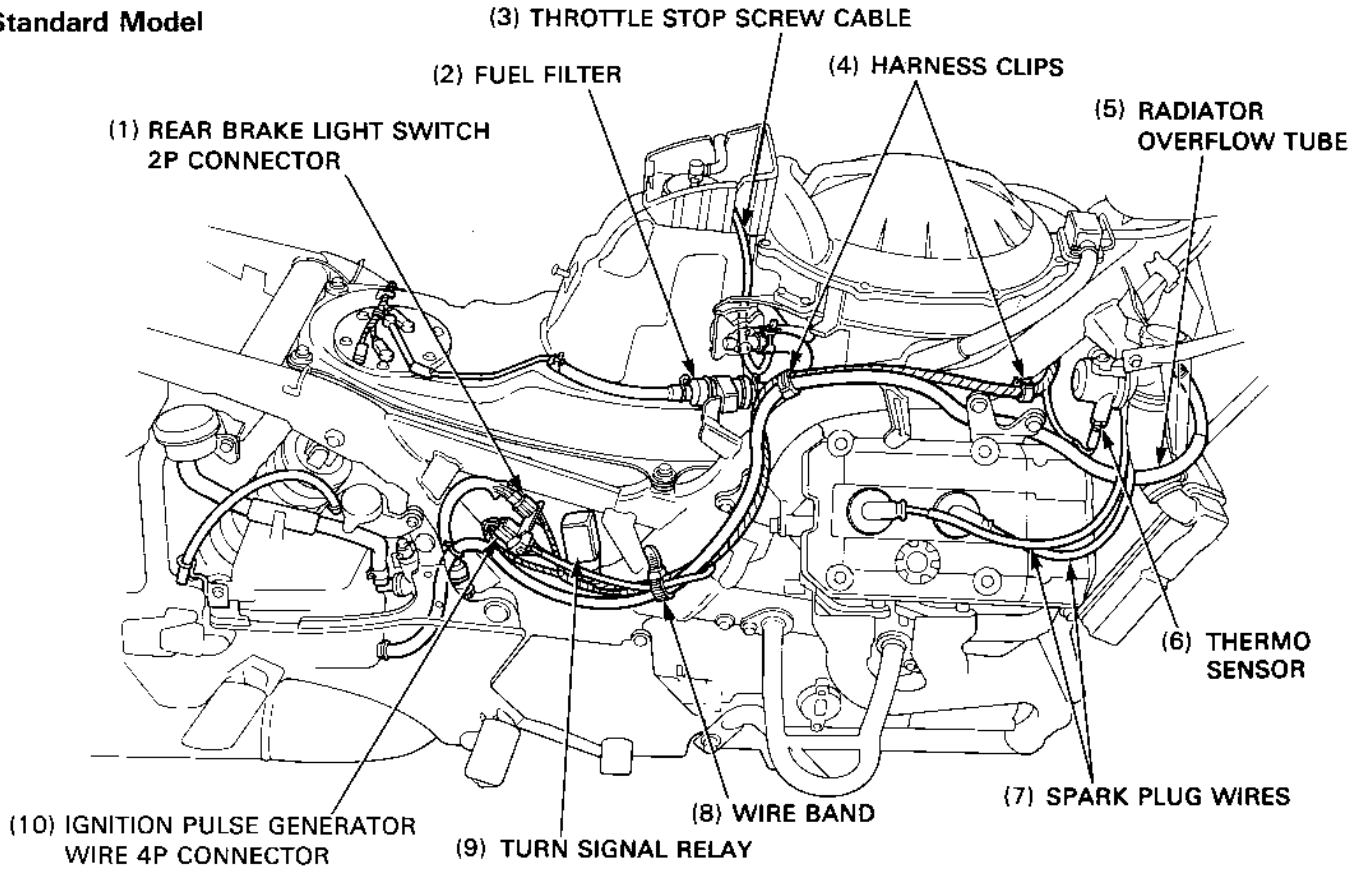


Standard Model

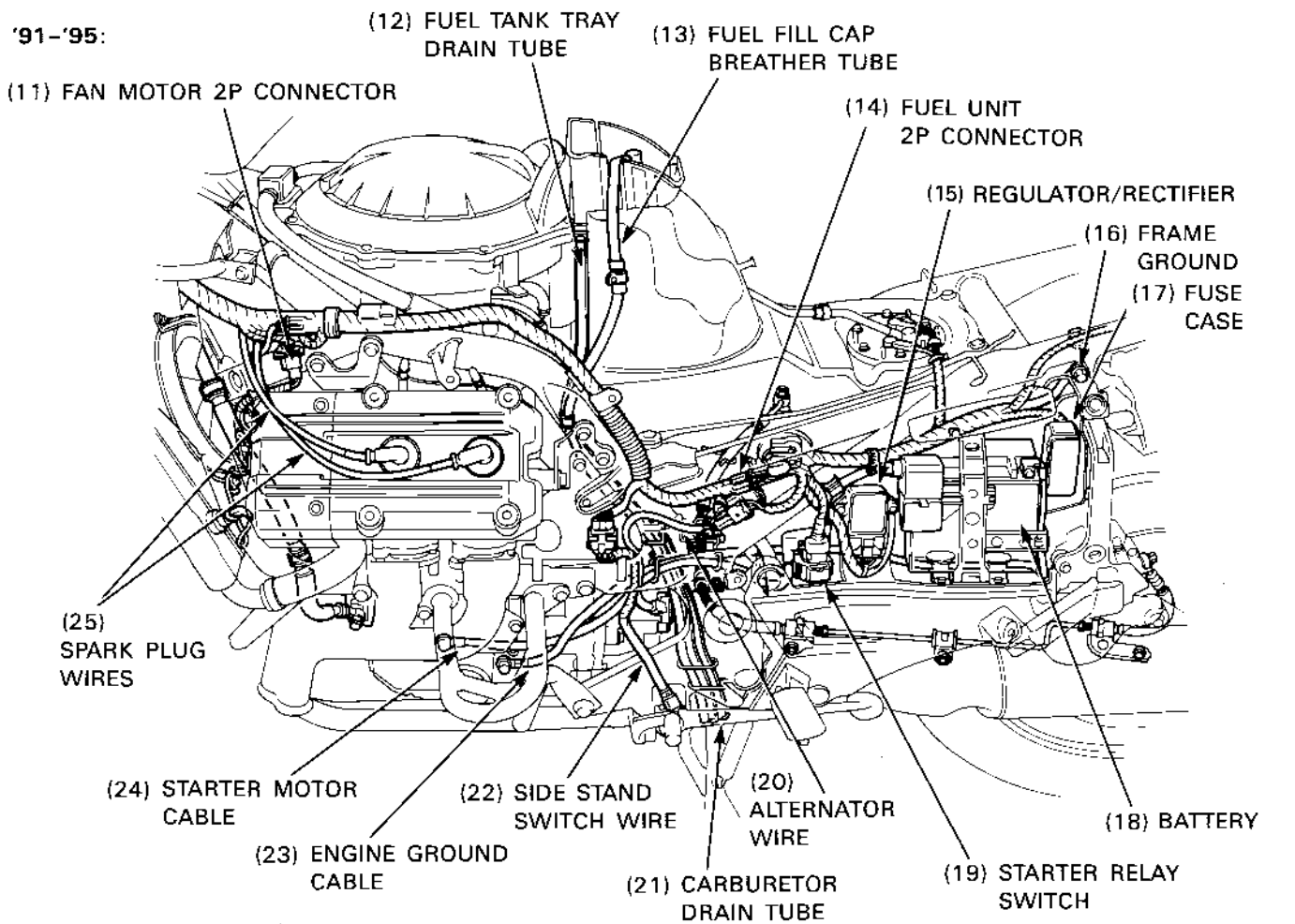




Standard Model

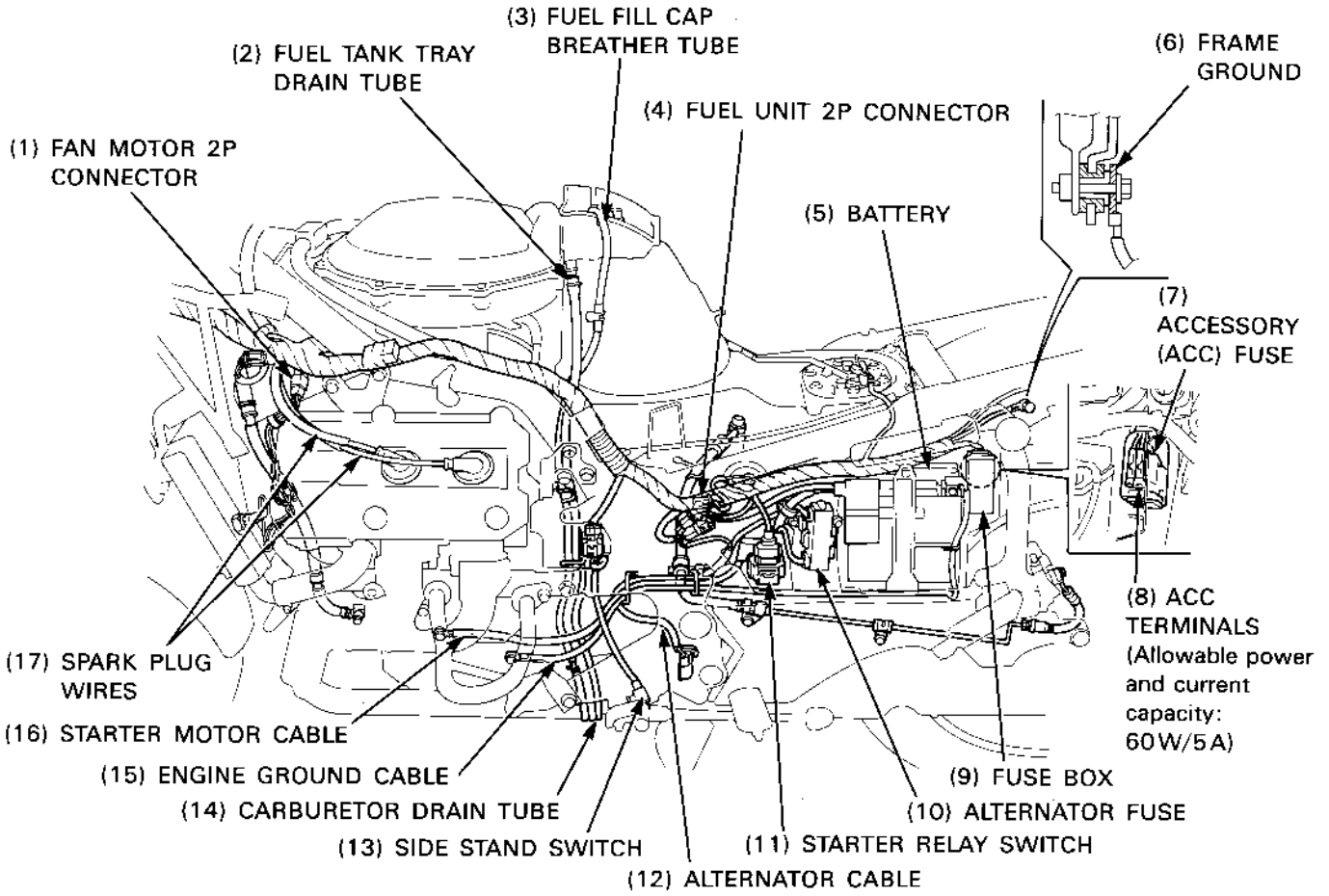


'91-'95:

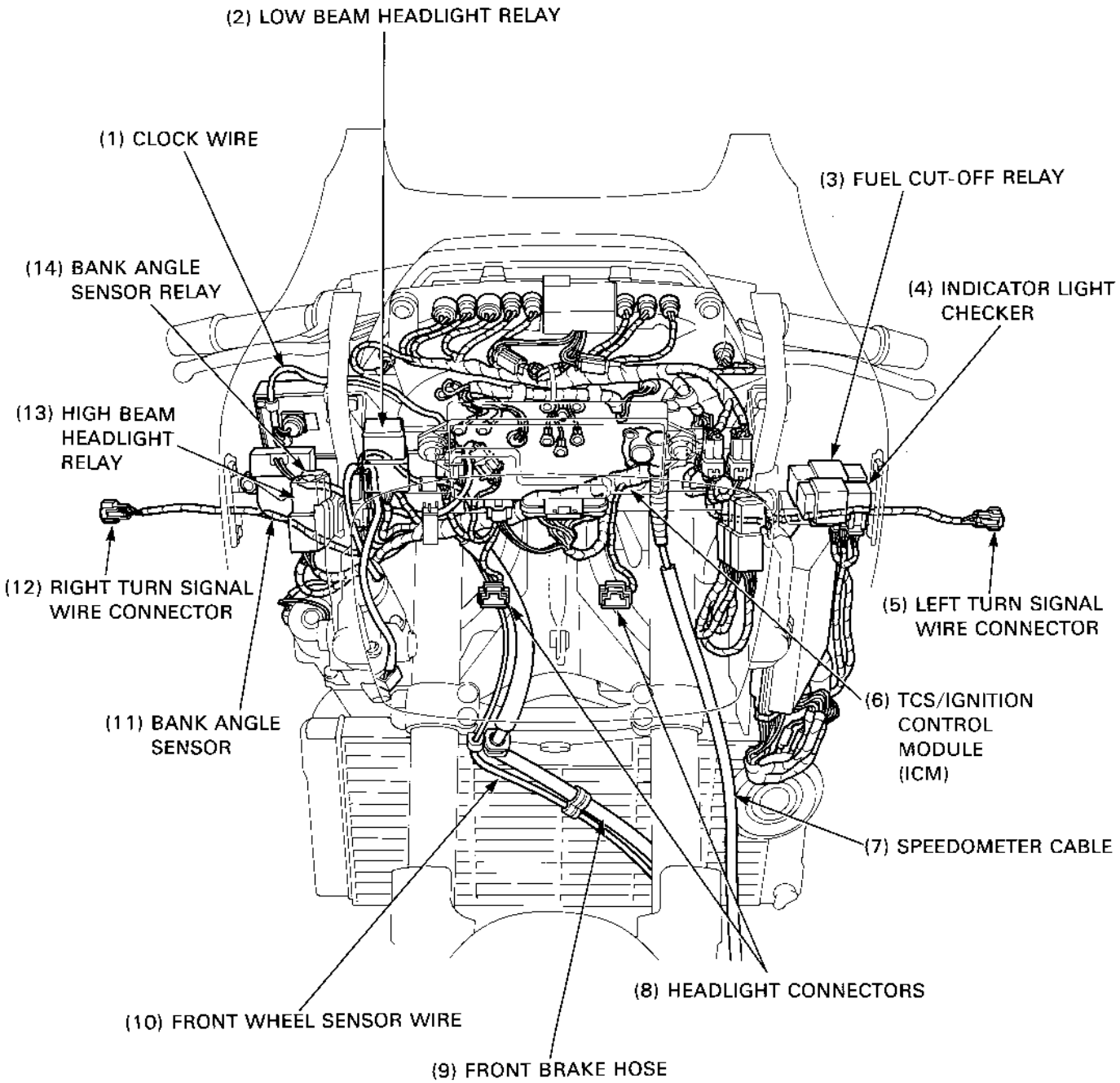


Standard Model

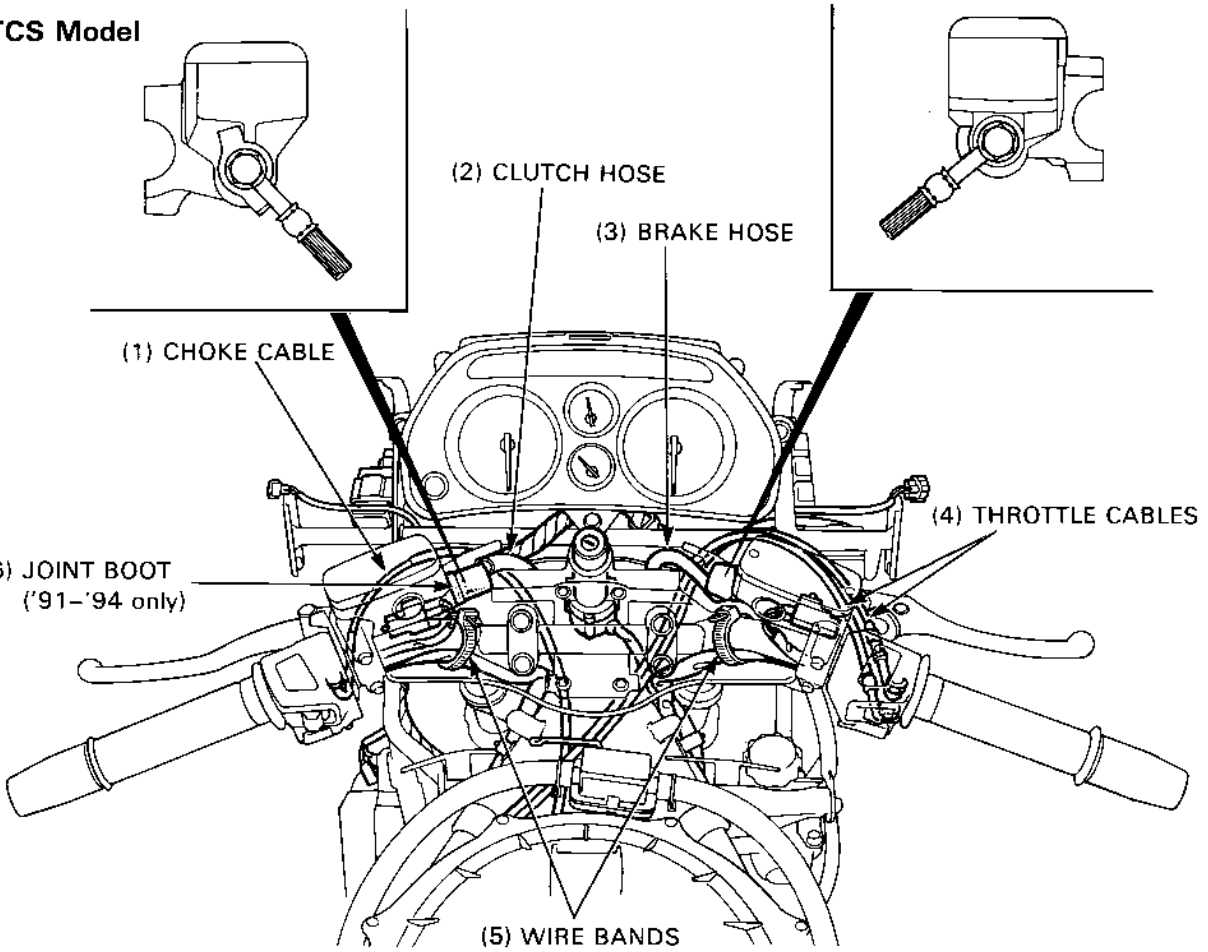
After '95:

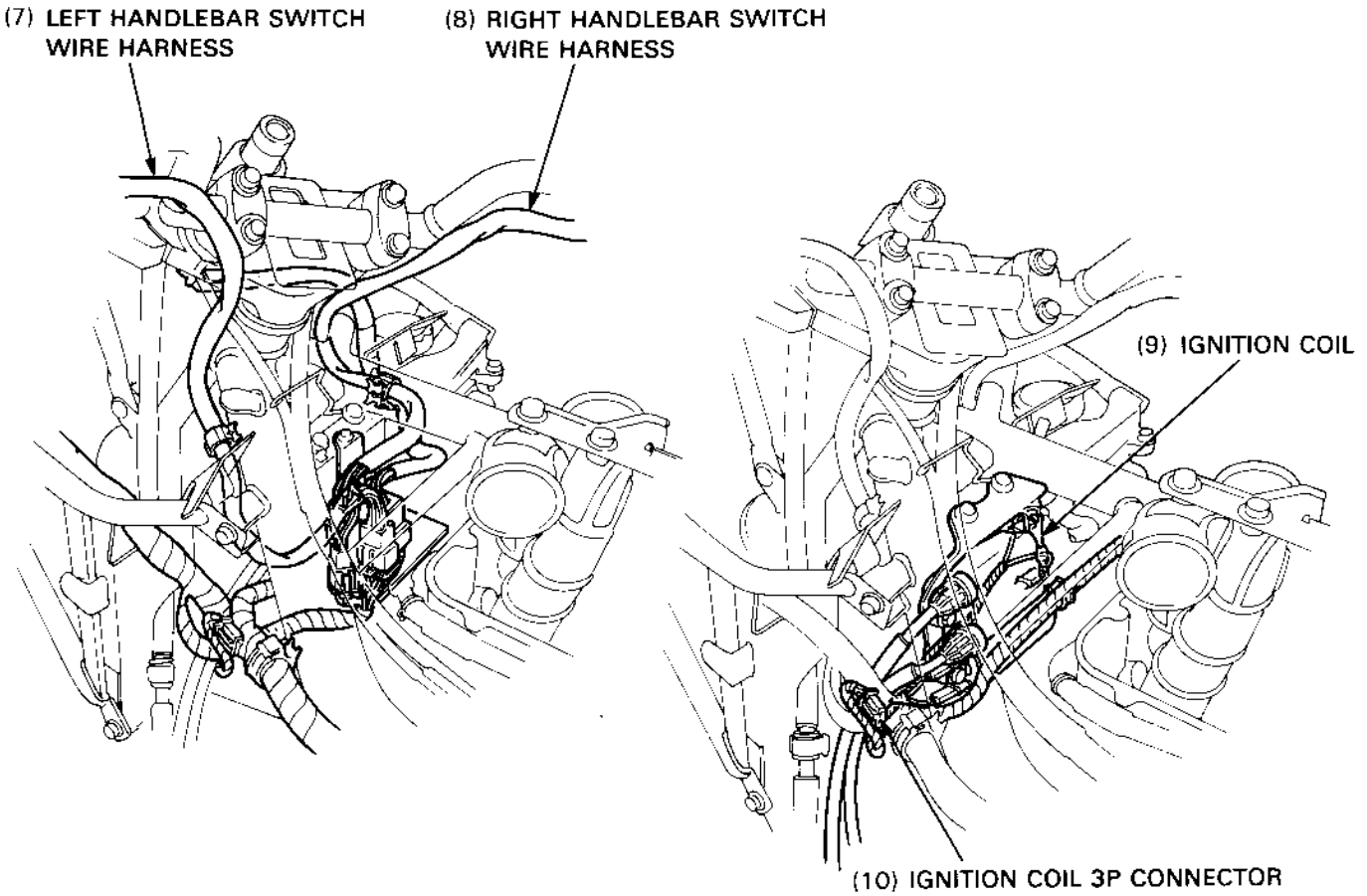


ABS/TCS Model

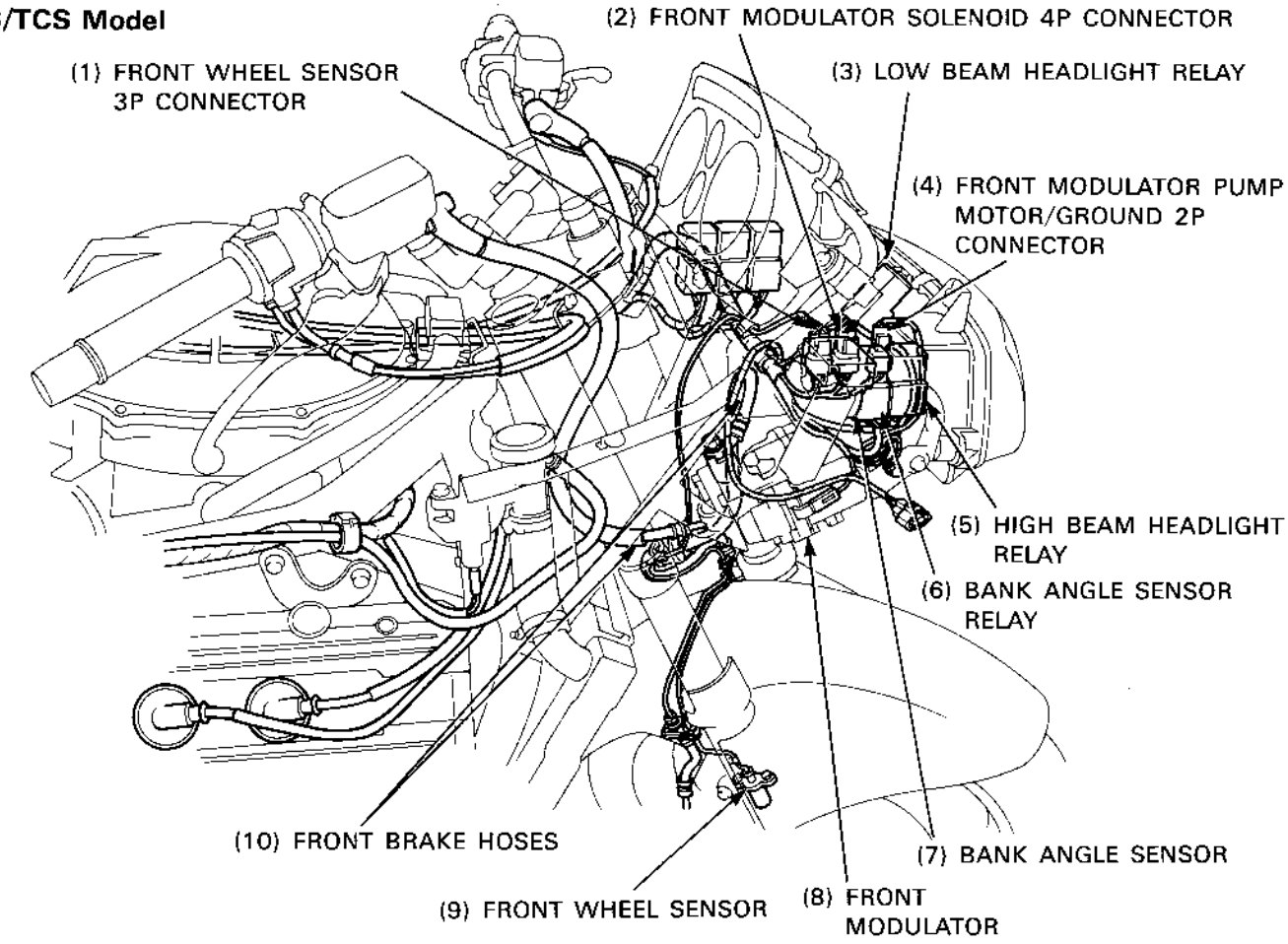


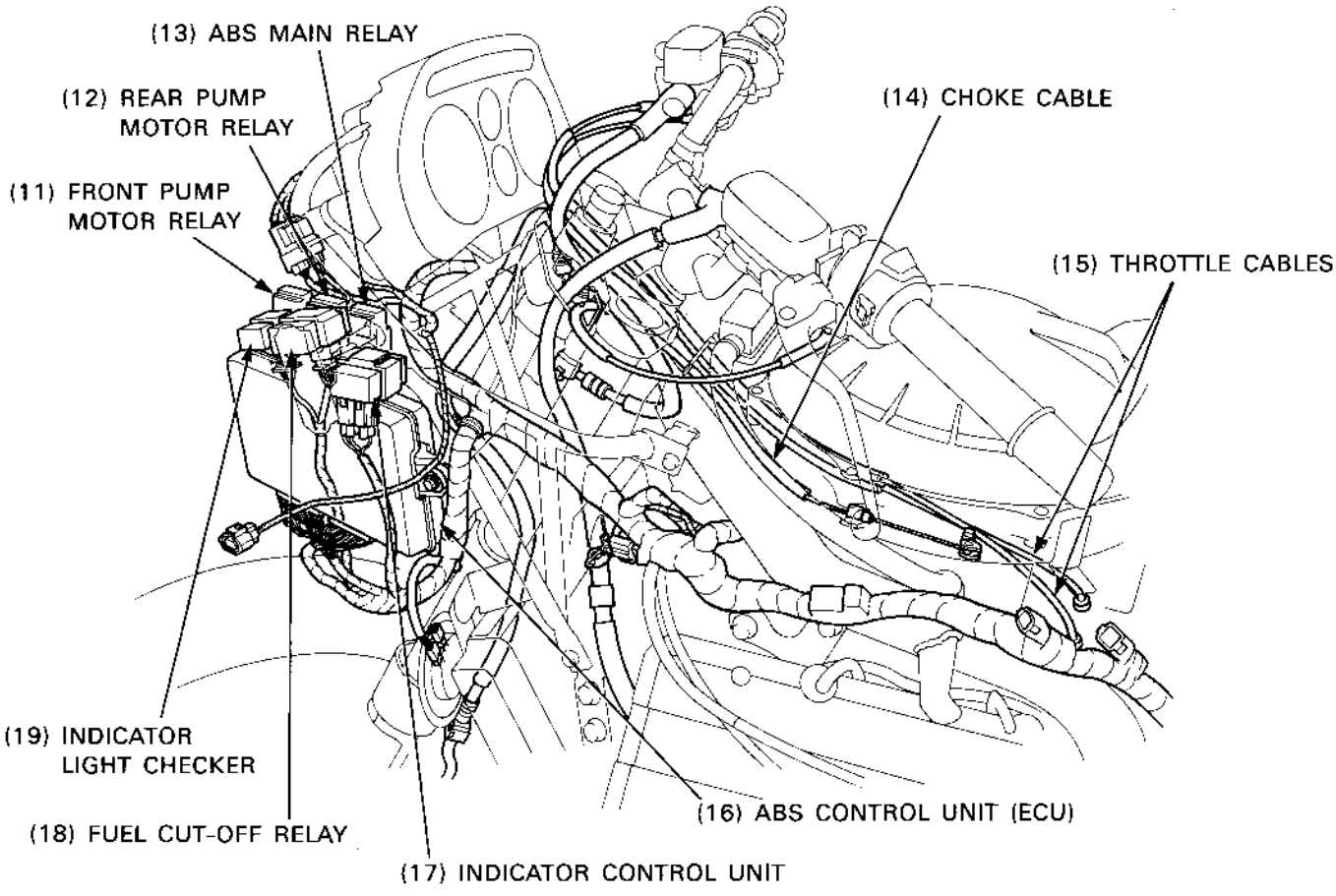
ABS/TCS Model



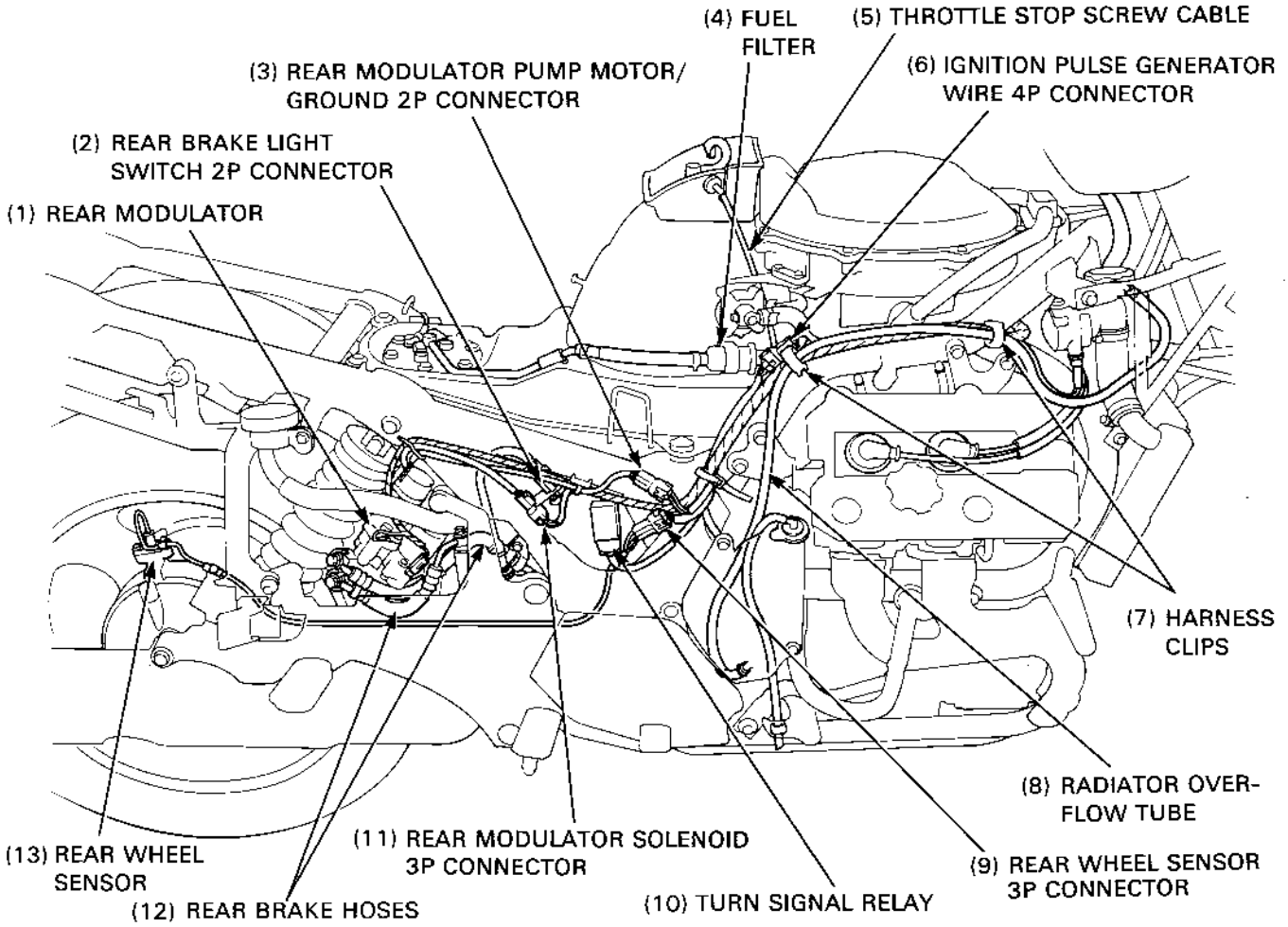


ABS/TCS Model

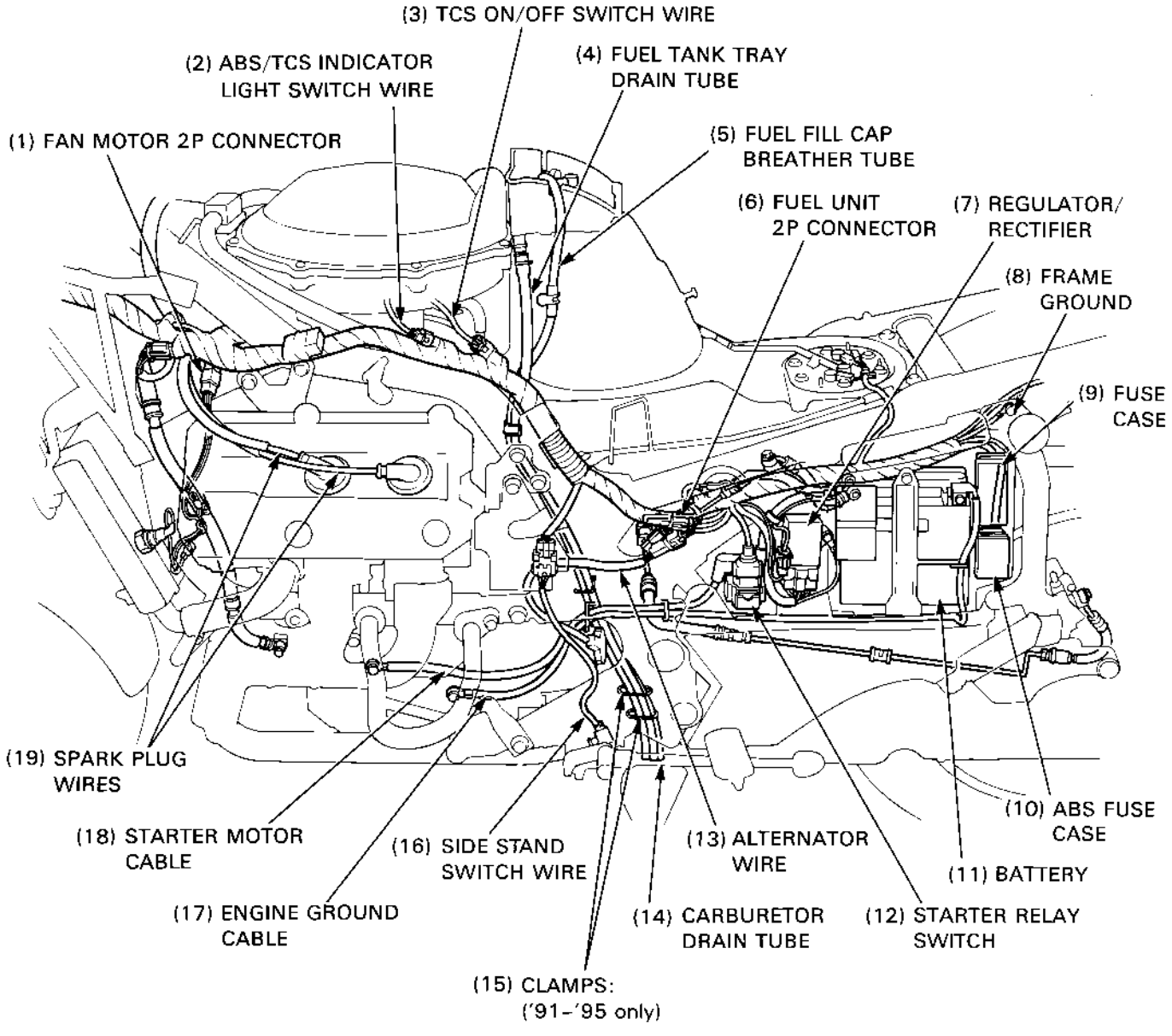




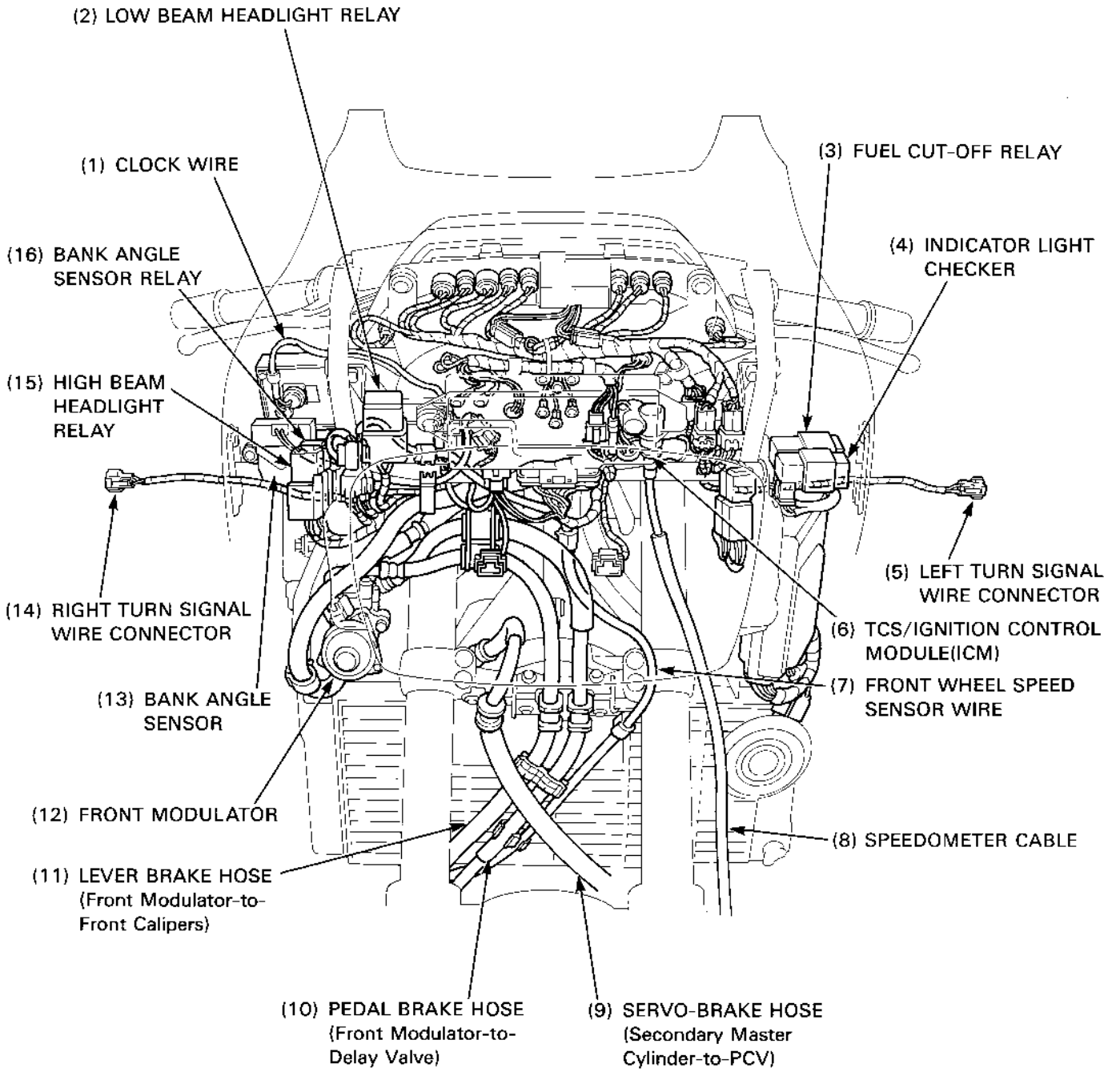
ABS/TCS Model



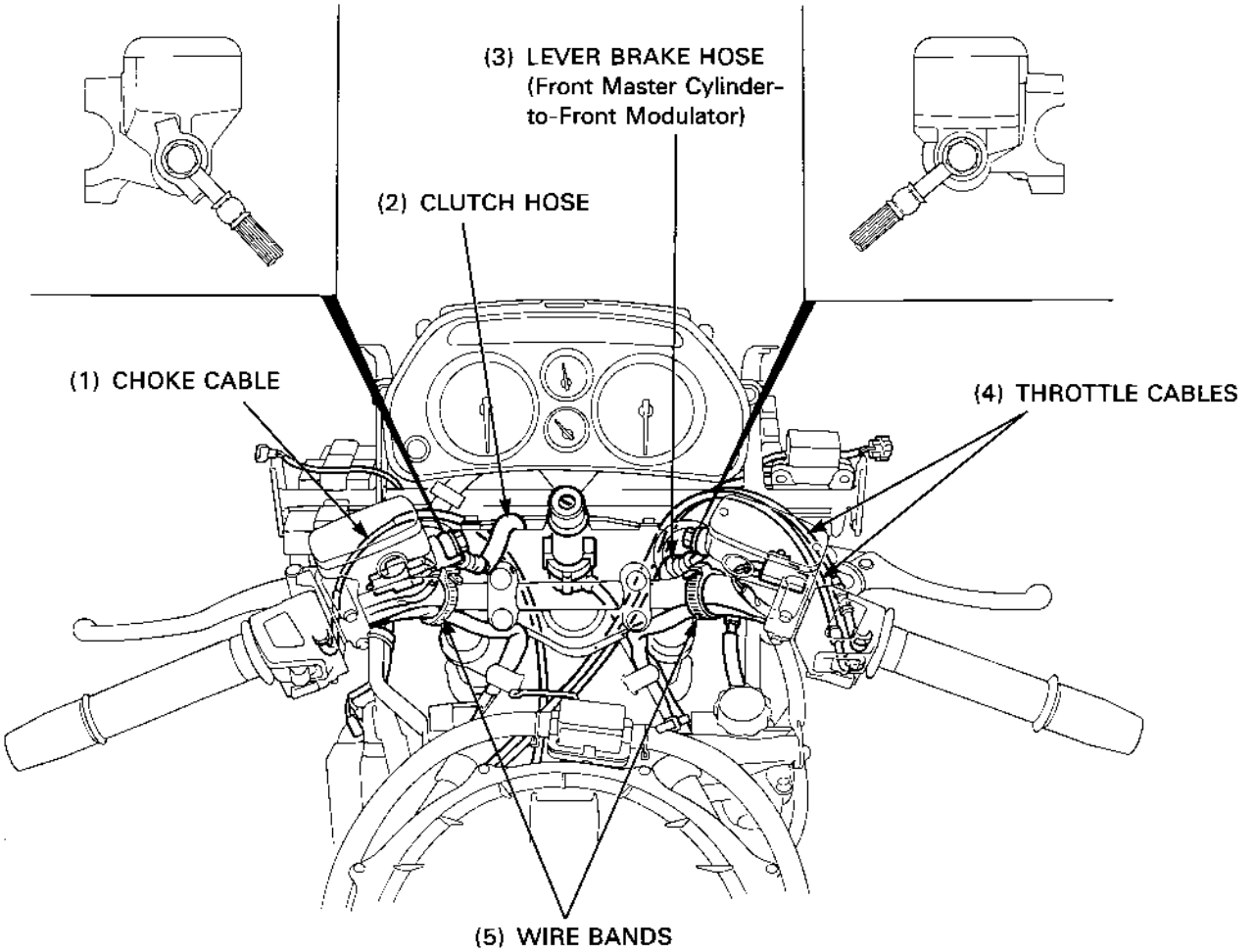
ABS/TCS Model

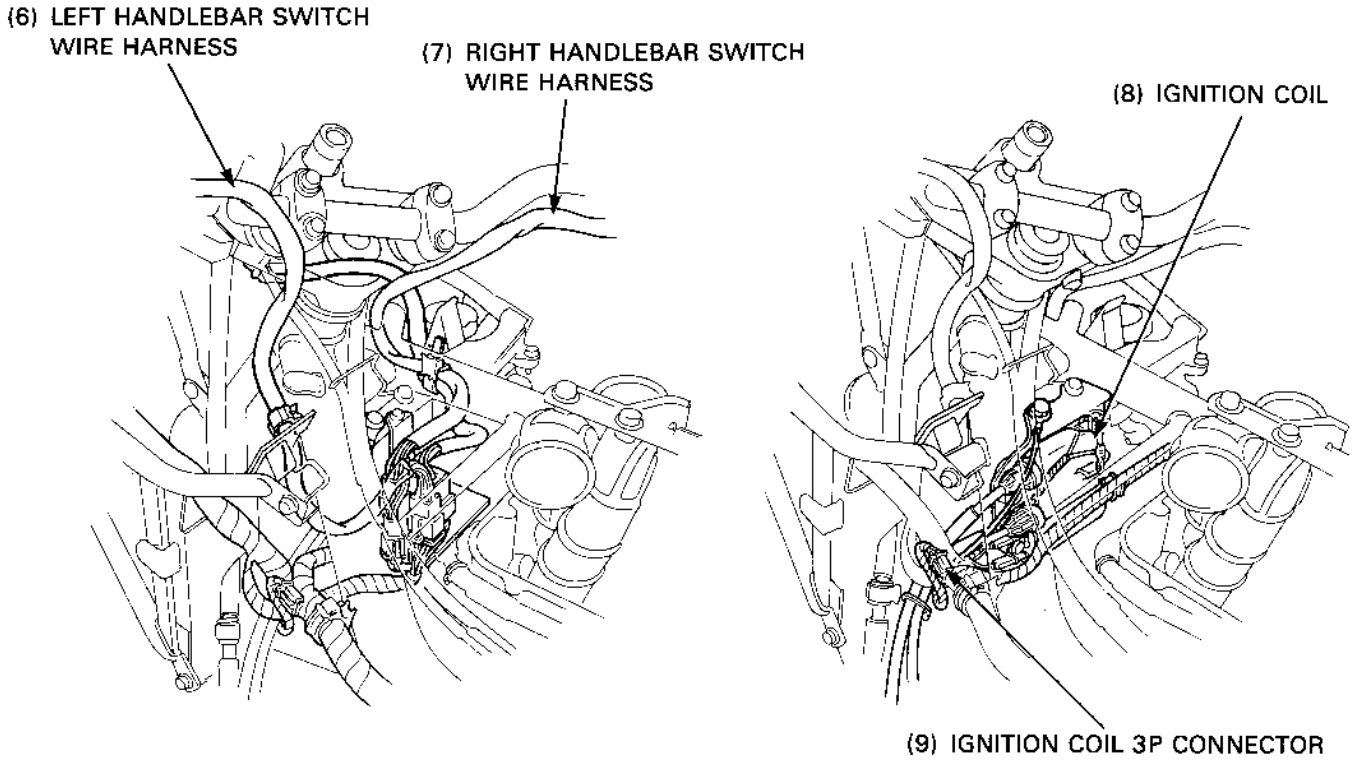


LBS-ABS/TCS Model

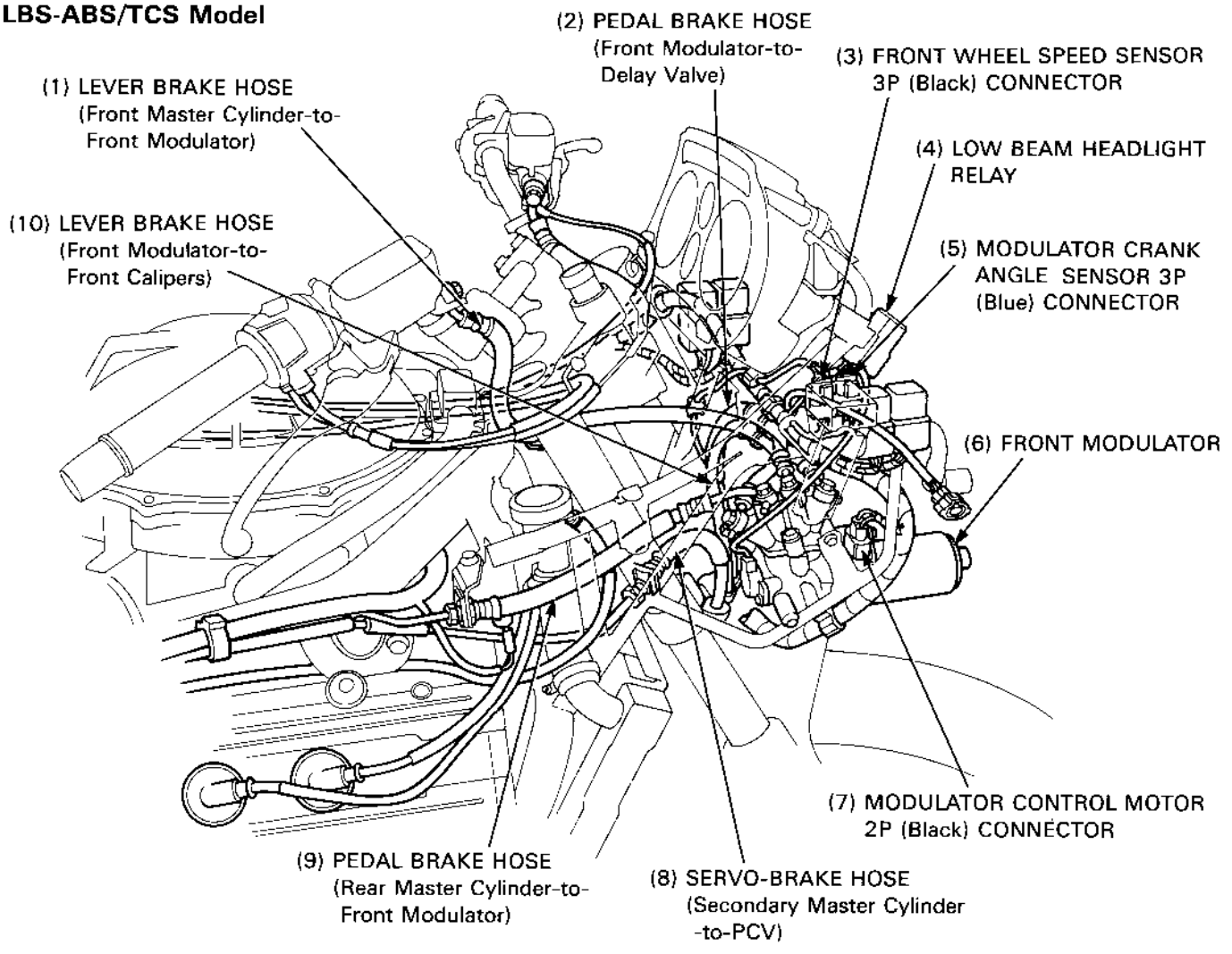


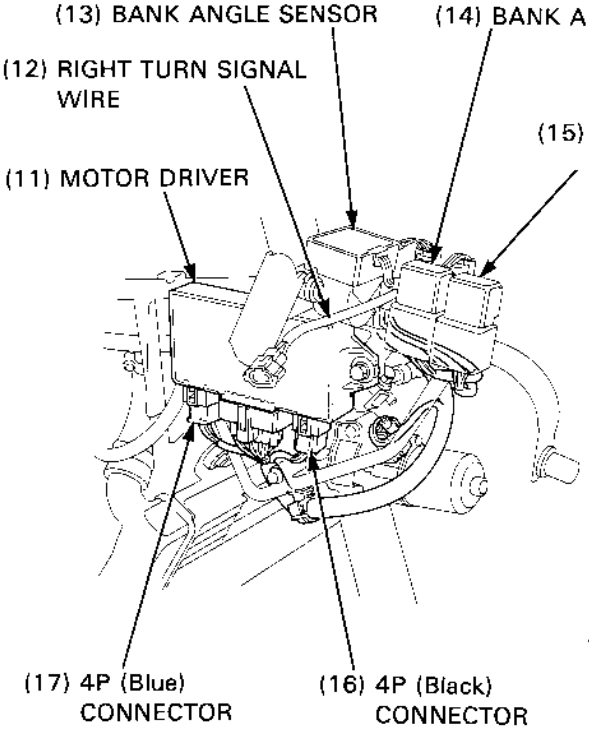
LBS-ABS/TCS Model

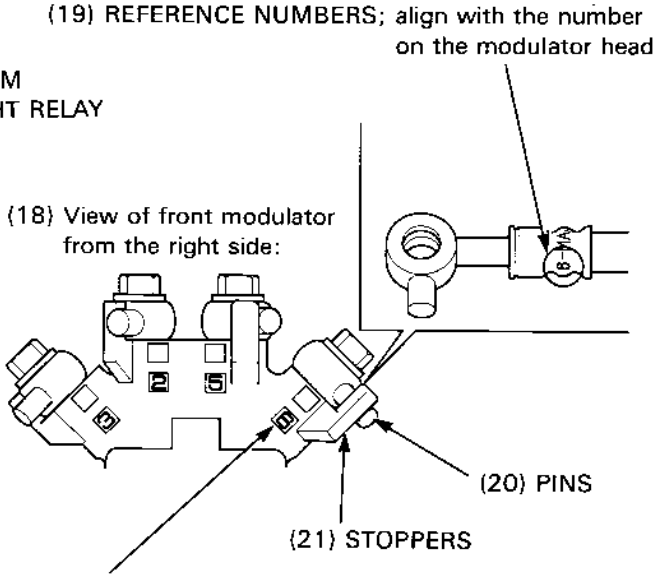




LBS-ABS/TCS Model







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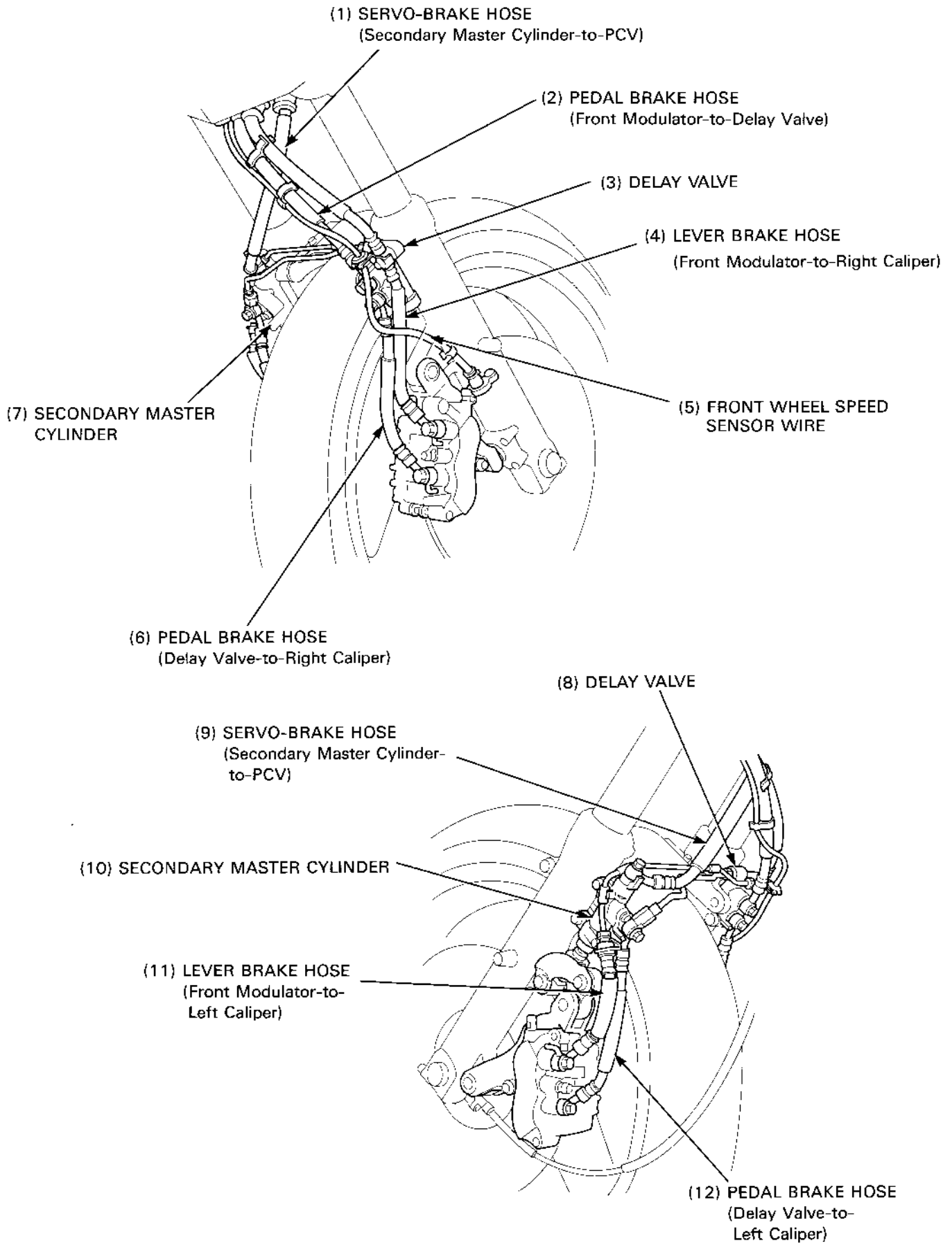
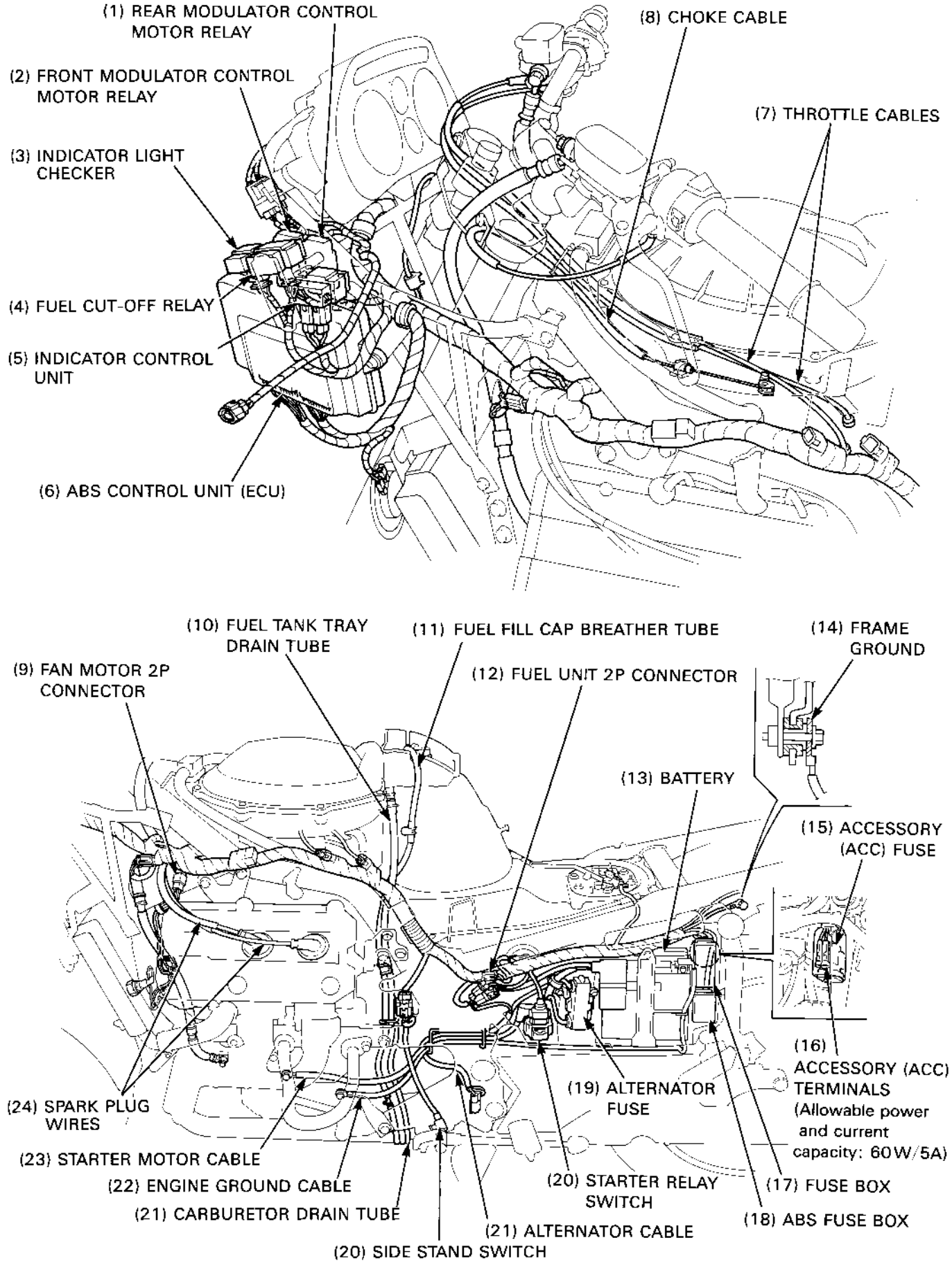
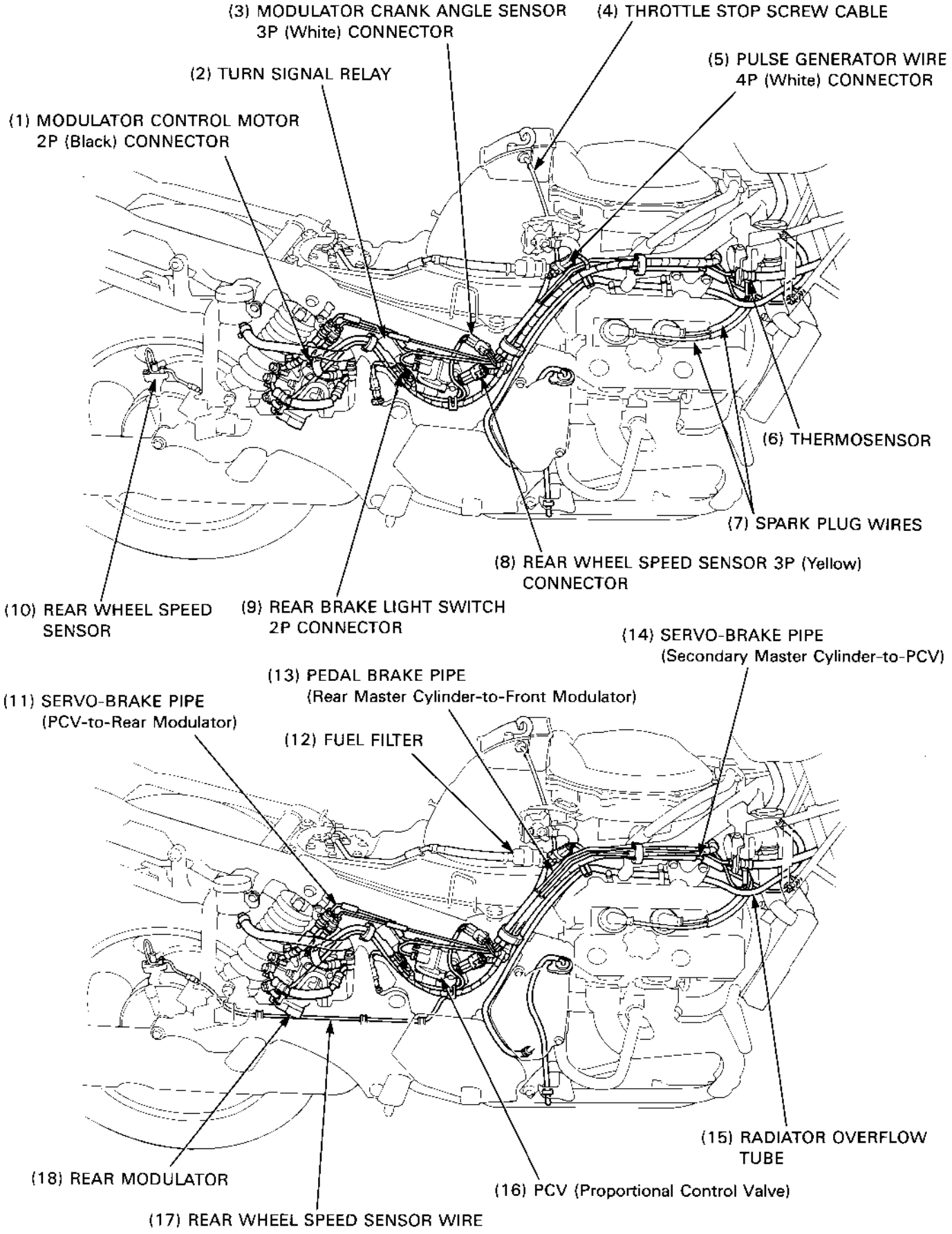


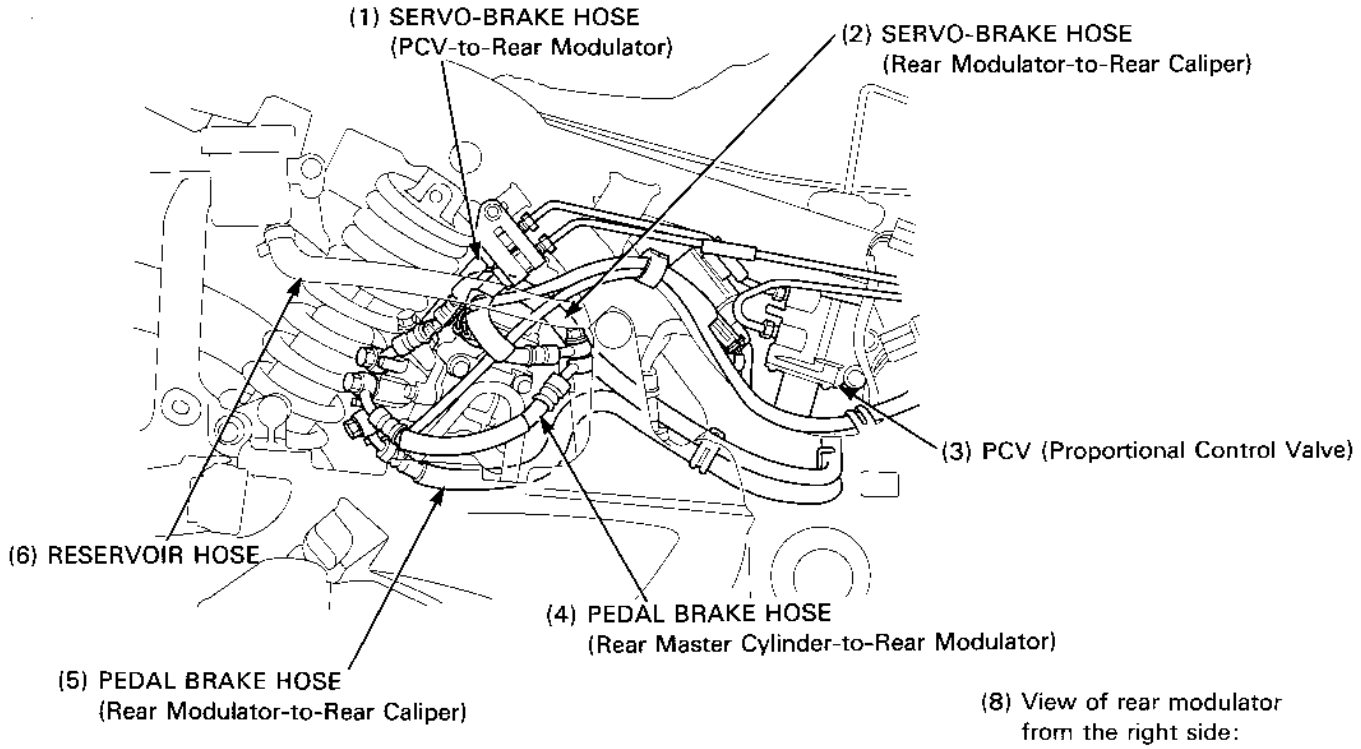
LBS-ABS/TCS Model

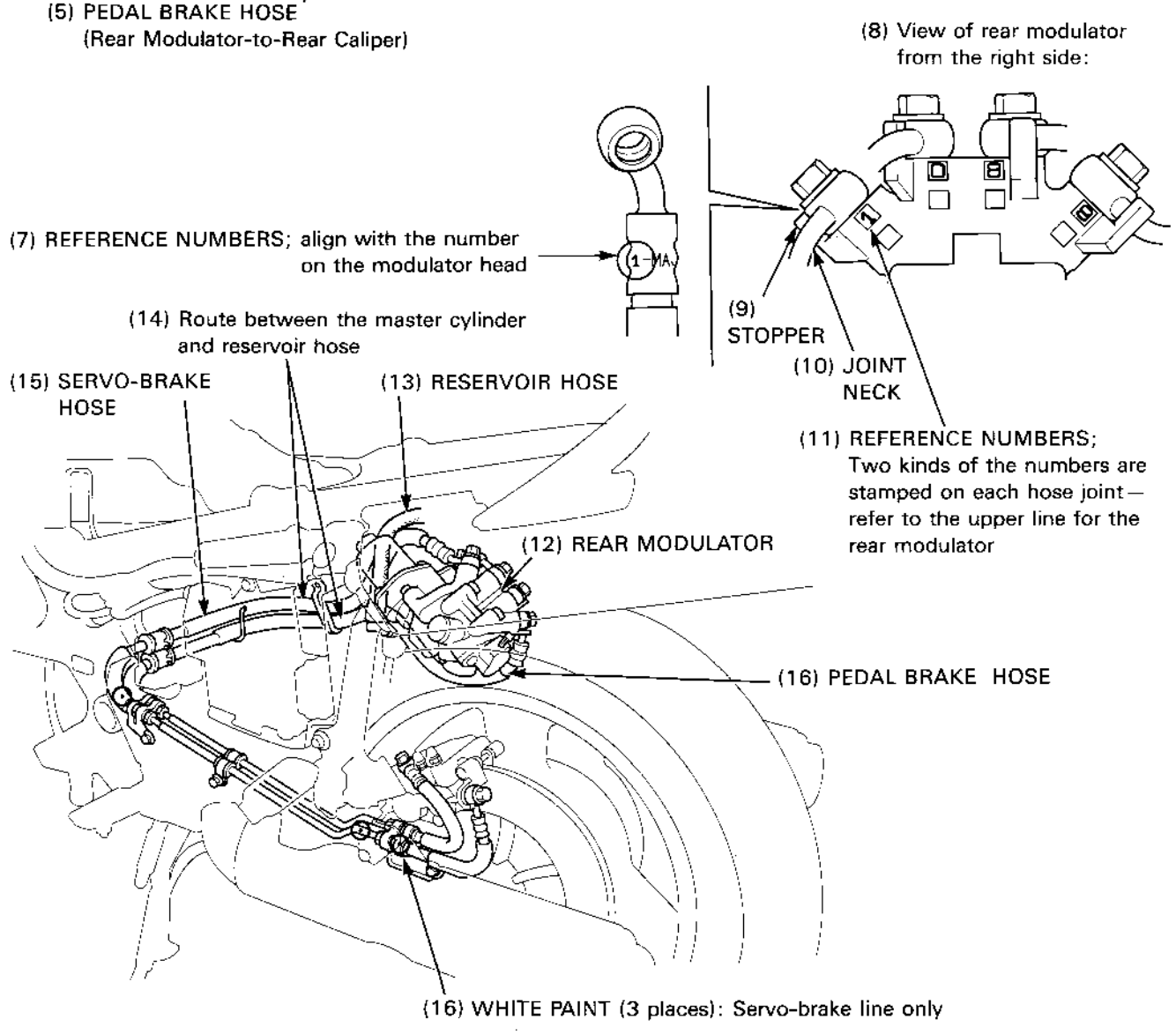


LBS-ABS/TCS Model

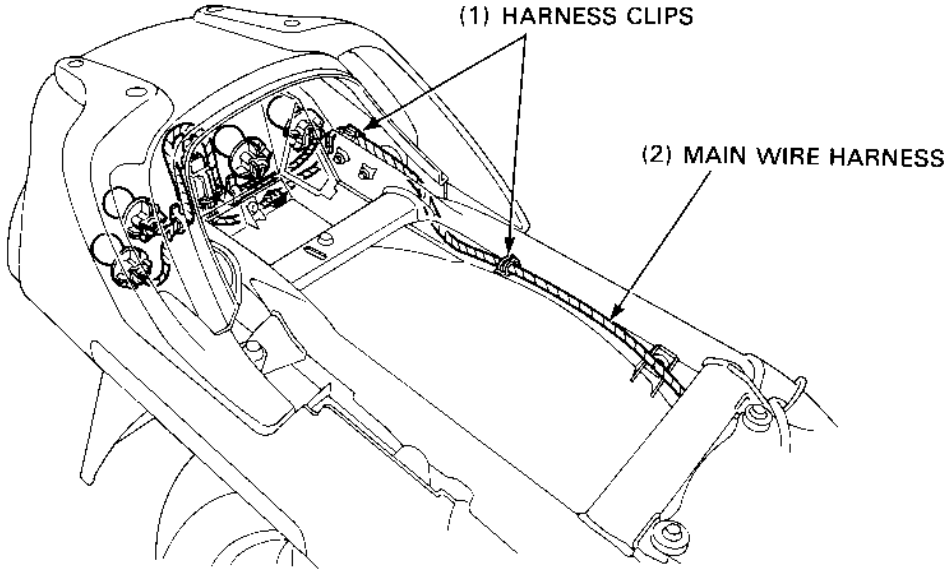


LBS-ABS/TCS Model





All Models



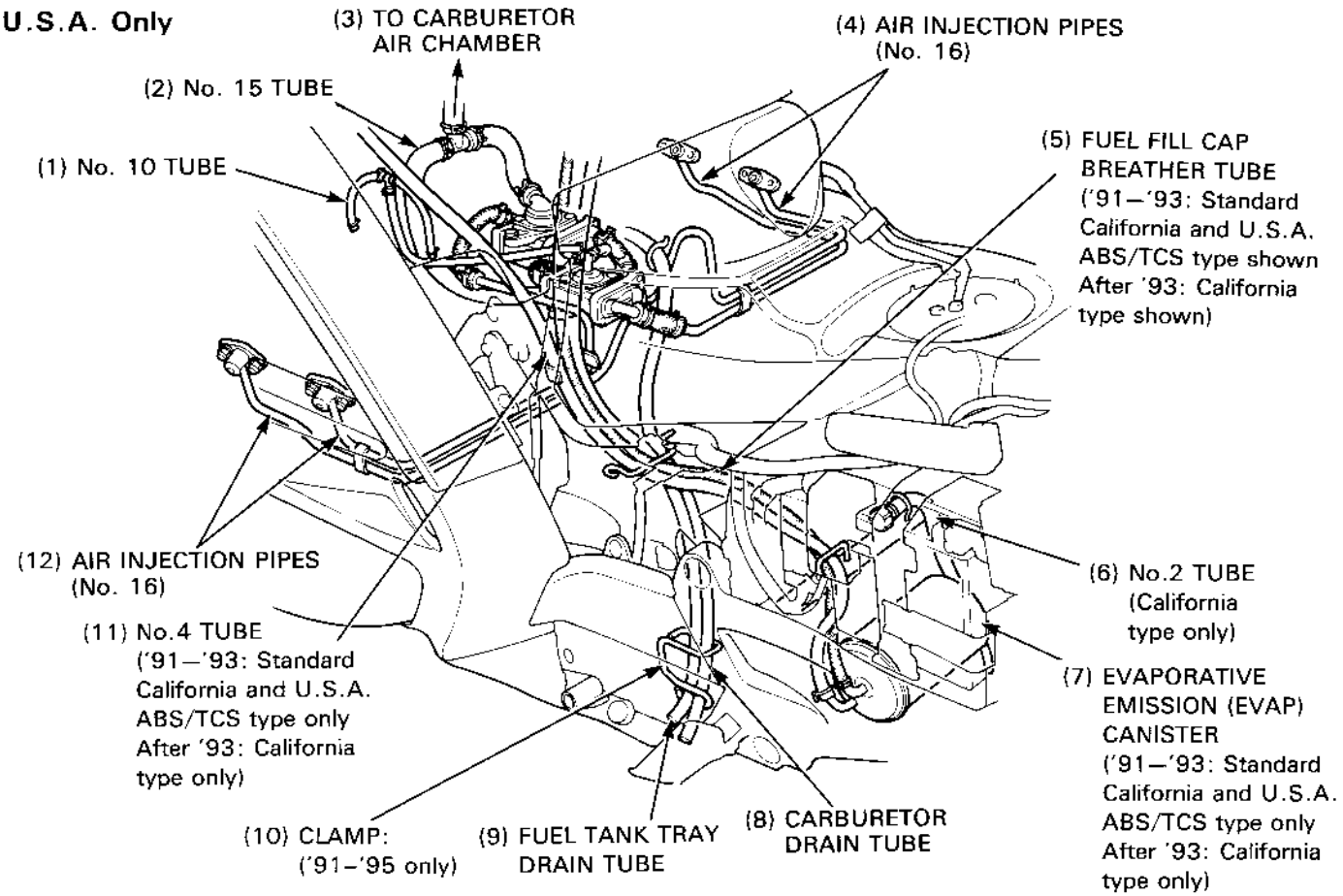
Emission Control Systems:

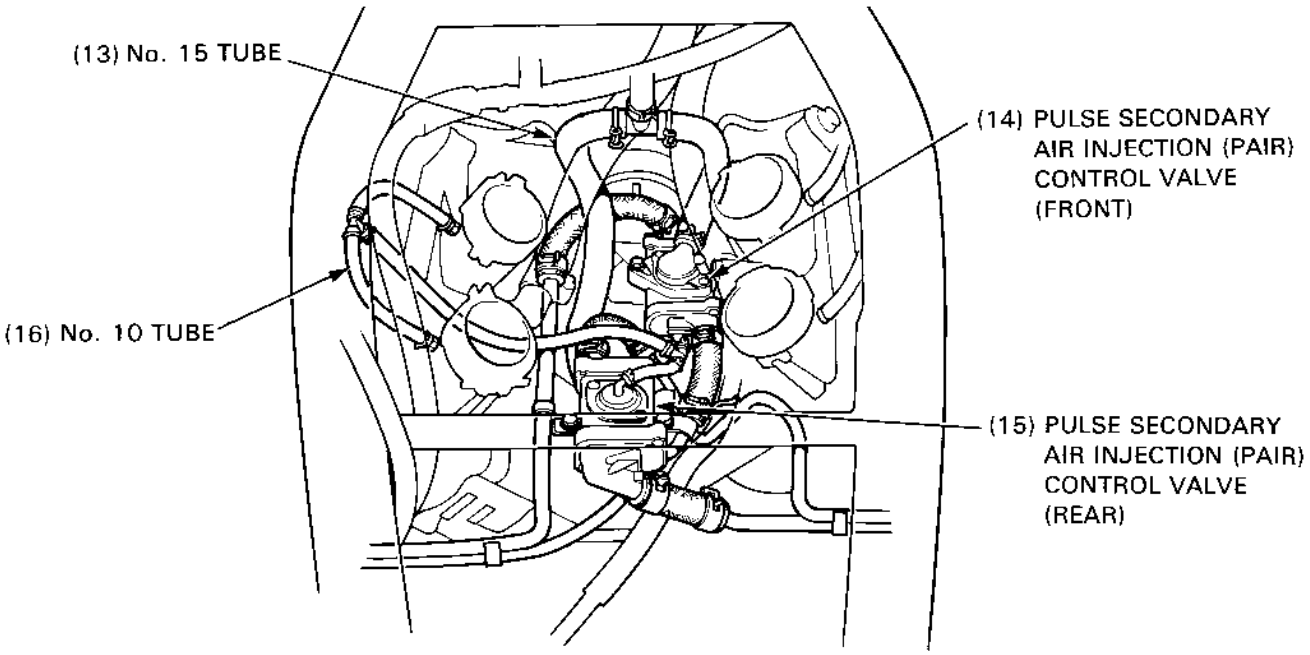
49 state	PAIR control valves
California	PAIR control valves EVAP purge control valve EVAP CAV control valve EVAP canister
Canada	

Model:

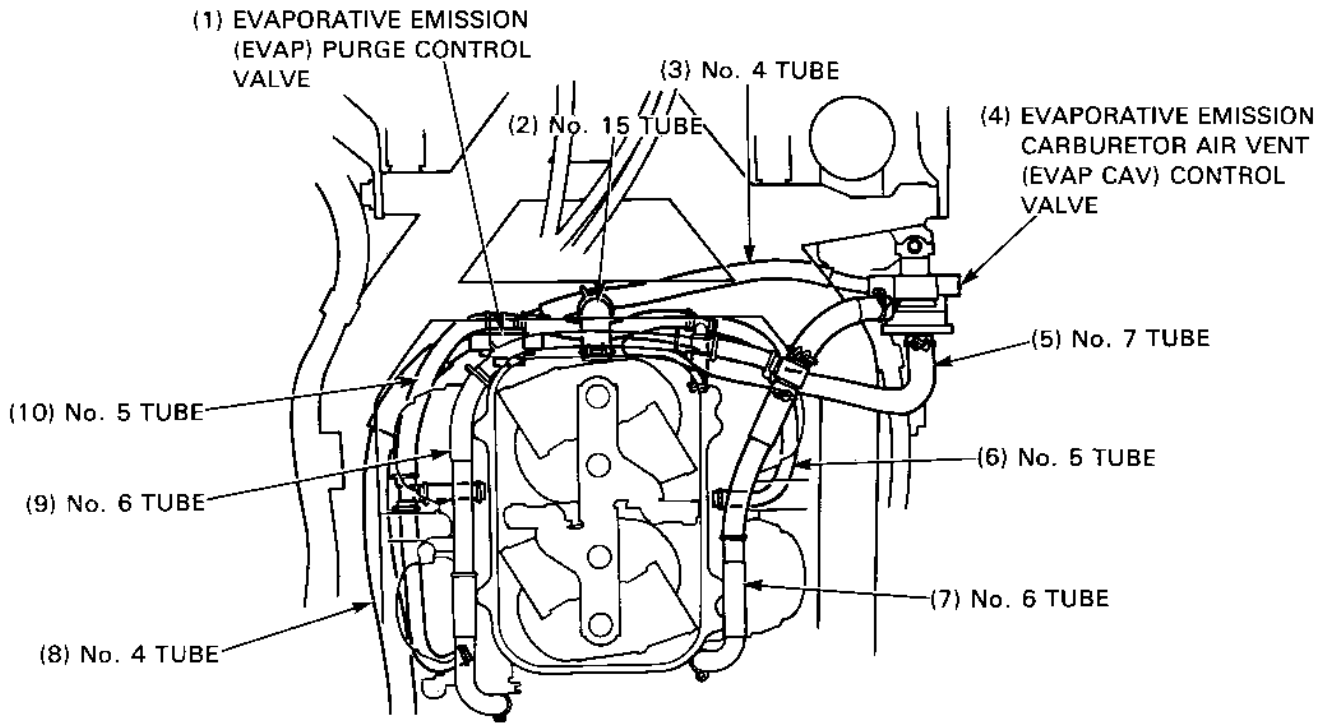
	Standard	ABS/TCS	LBS-ABS /TCS
49 state	'91~	'94~'95	'96~
California		'92~'95	
Canada			

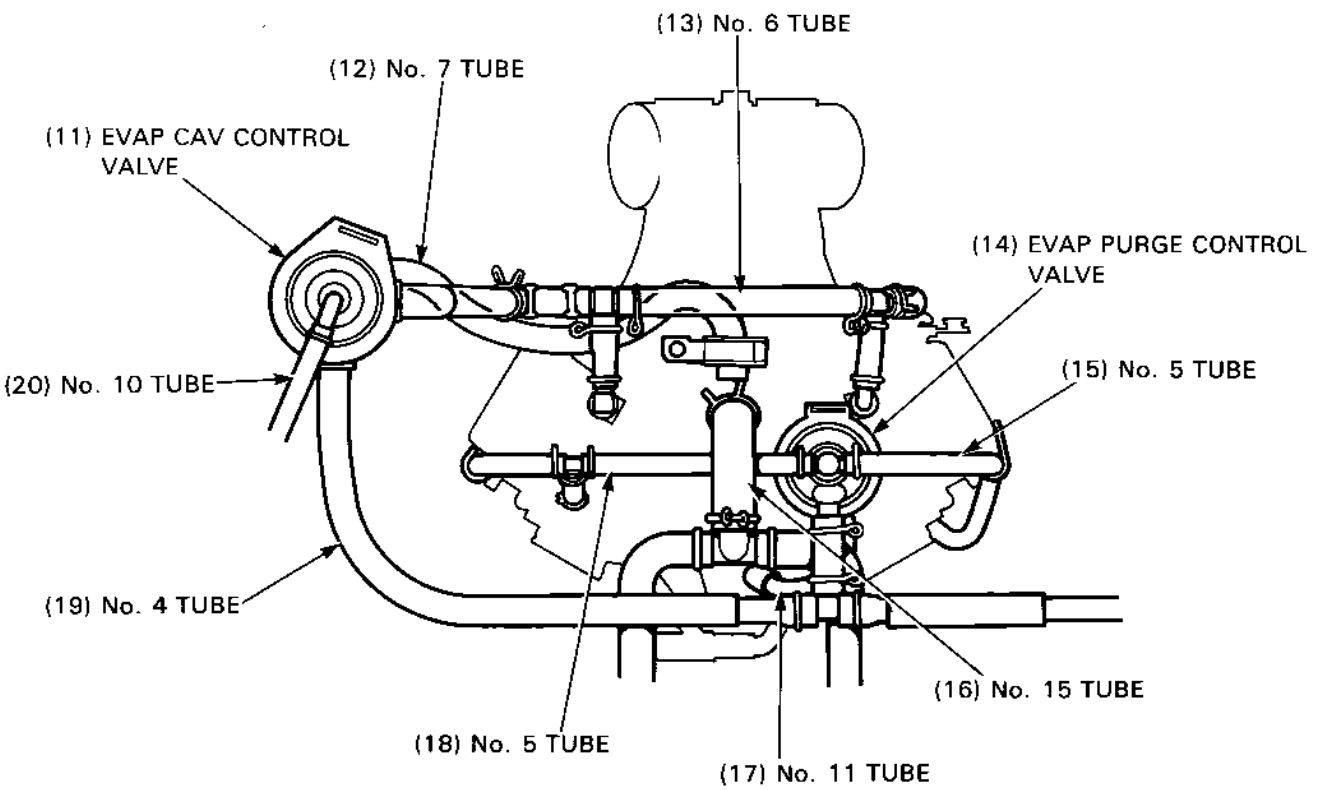
U.S.A. Only





'91—'93:
Standard California Type and U.S.A. ABS/TCS Type
After '93:
California Type





Emission Control Systems

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

Source of Emissions

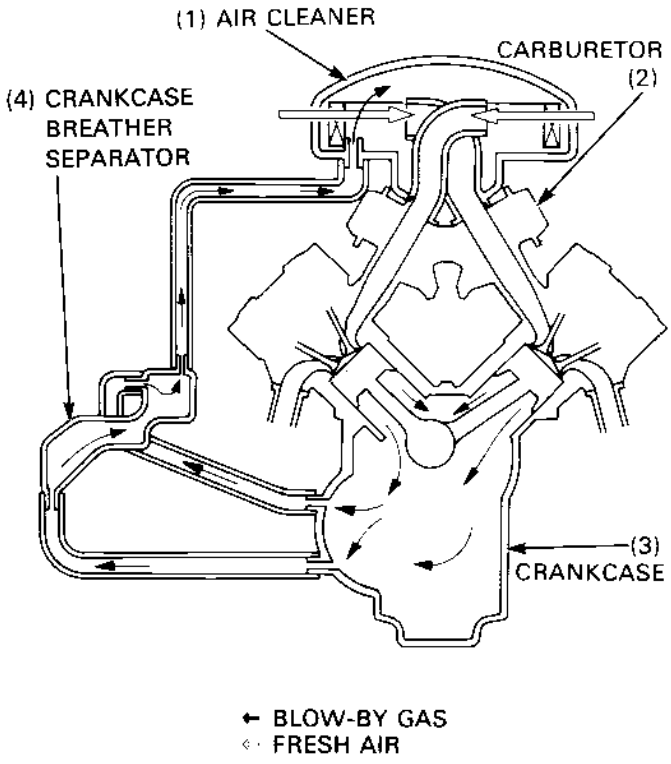
The combustion process produces carbon monoxide and hydrocarbons. Control of hydrocarbons is very important because, under certain conditions, they react to form photochemical smog when subjected to sunlight. Carbon monoxide does not react in the same way, but it is toxic.

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

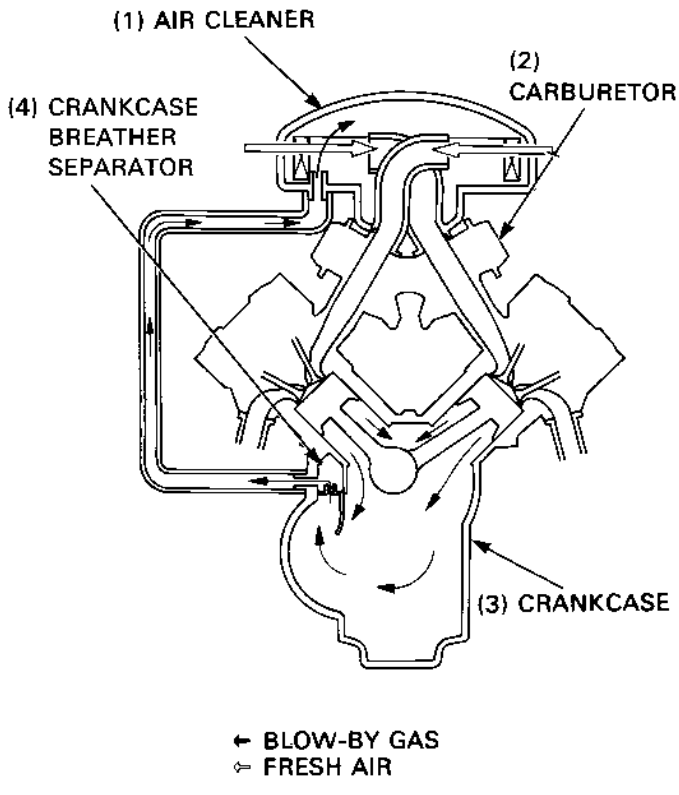
Crankcase Emission Control System

The crankcase emission control system routes crankcase emissions through the air cleaner and into the combustion chamber.

'91:



After '91:

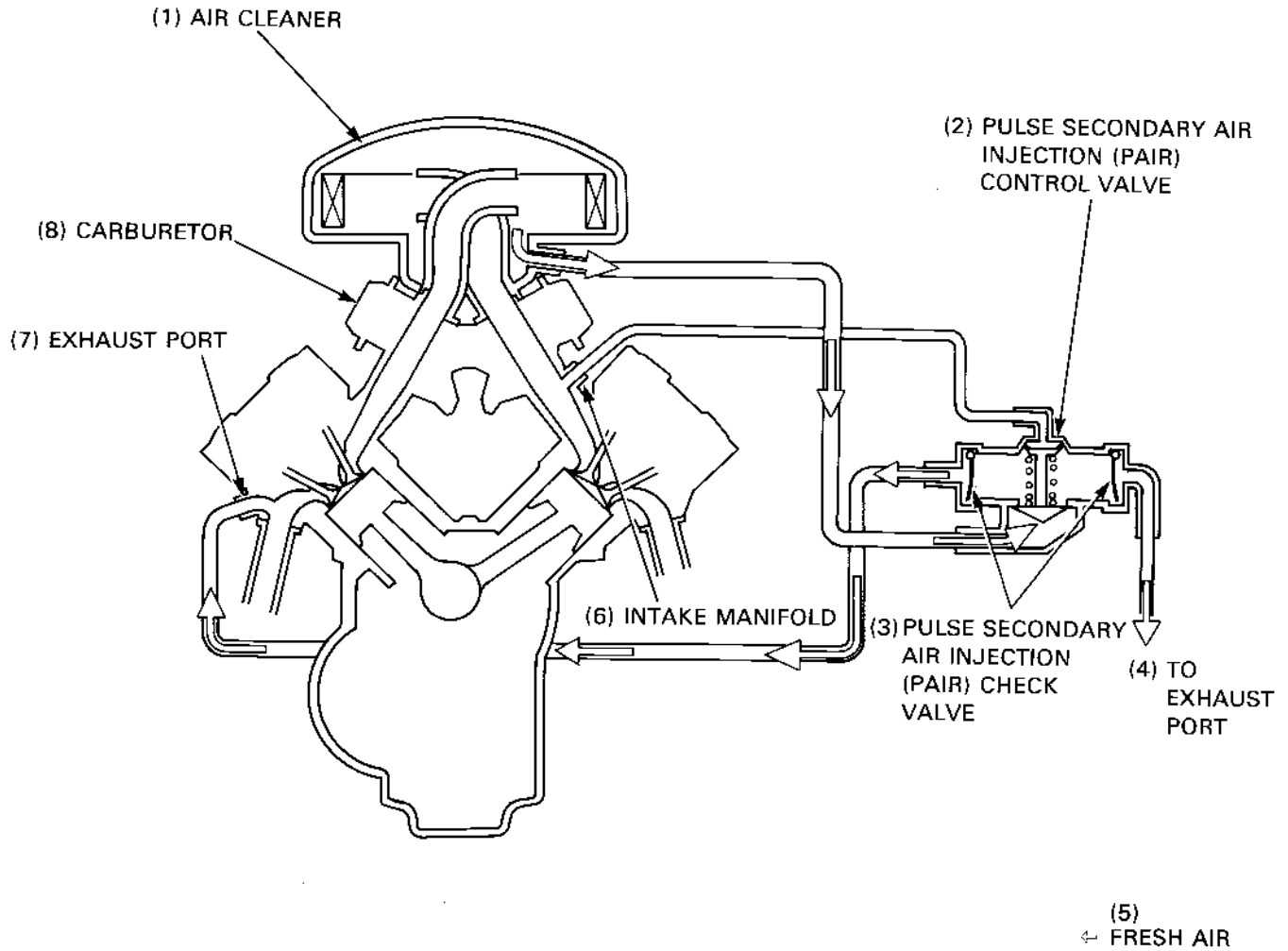


Exhaust Emission Control System (Secondary Air Supply System) [U.S.A. only]

The exhaust emission control system consists of a secondary air supply system which introduces filtered air into the exhaust gases in the exhaust port. Fresh air is drawn into the exhaust port whenever there is a negative pressure pulse in the exhaust system. This charge of fresh air promotes burning of the unburned exhaust gases and changes a considerable amount of hydrocarbons and carbon monoxide into relatively harmless carbon dioxide and water vapor.

The pulse secondary air injection check valves prevents reverse air flow through the system. The pulse secondary air injection control valve reacts to high intake manifold vacuum and will cut off the supply of fresh air during engine deceleration, thereby preventing afterburn in the exhaust system.

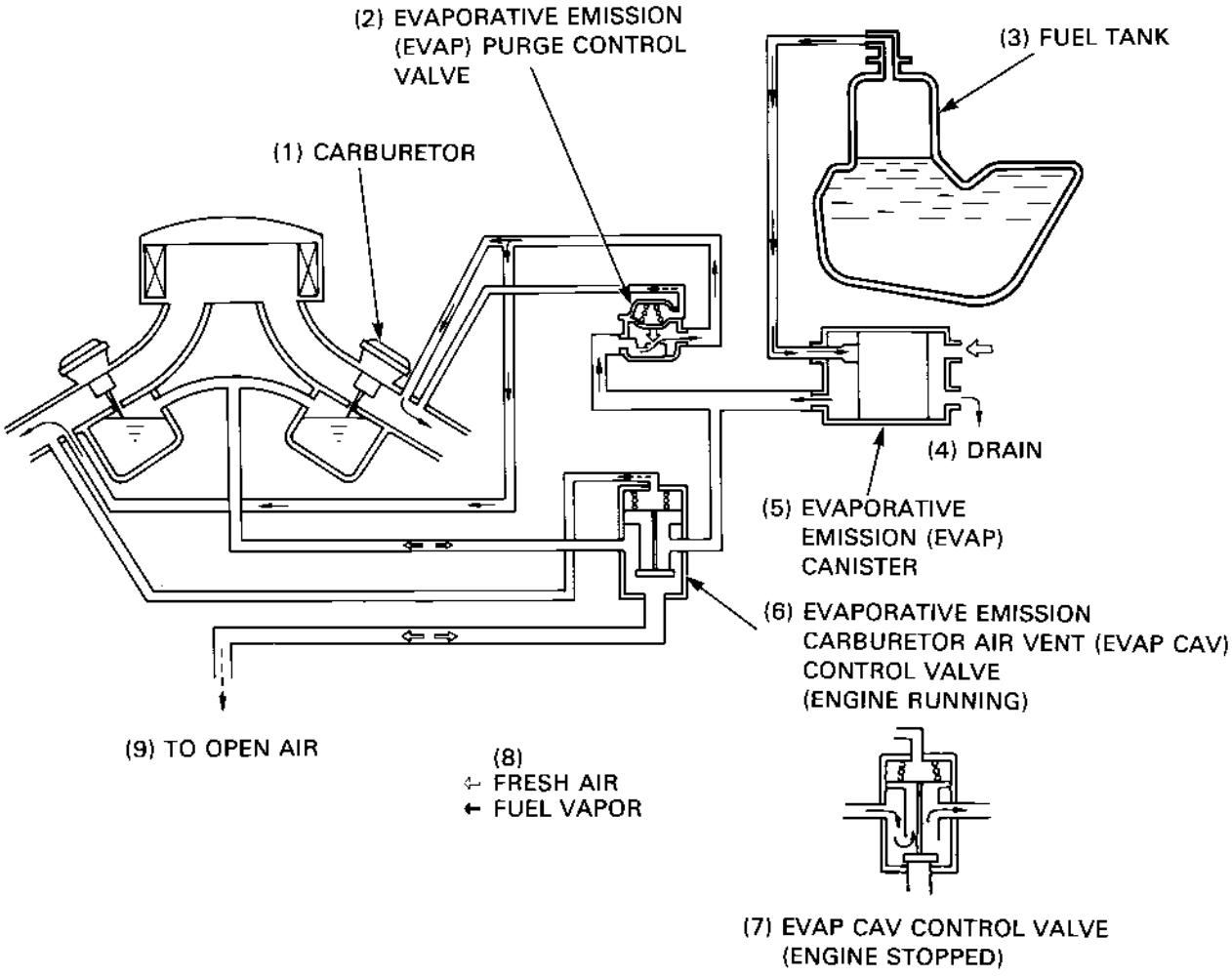
No adjustments to the secondary air supply system should be made, although periodic inspection of the components is recommended.



Evaporative Emission Control System ('91—'93: Standard California Type and U.S.A. ABS/TCS Type) (After '93: California Type)

This vehicle complies with the California Air Resources Board requirements for evaporative emission regulations.

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



Noise Emission Control System

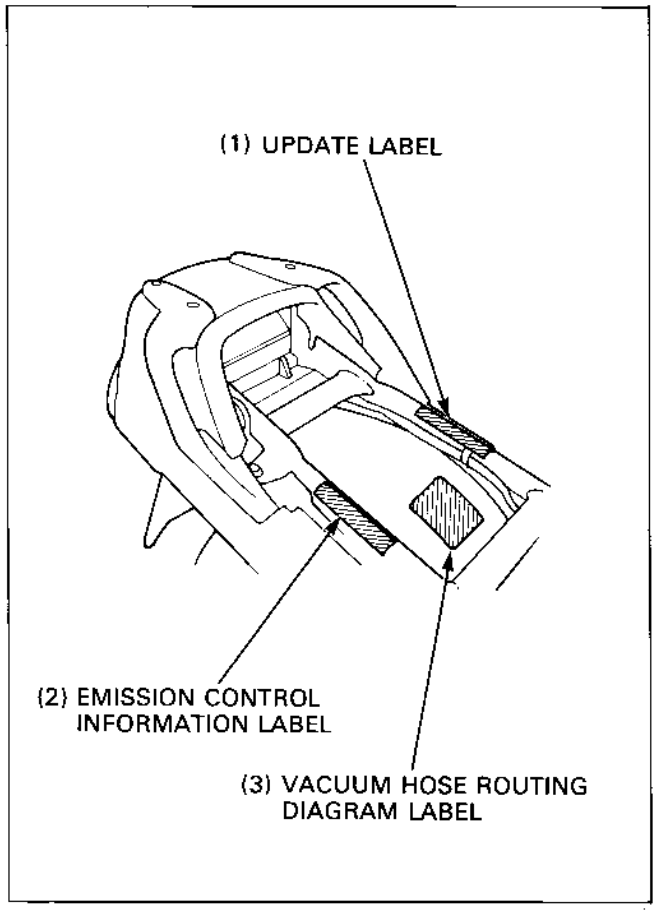
TAMPERING WITH THE NOISE CONTROL SYSTEM IS PROHIBITED: Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person, other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle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

Emission Control Information Labels (U.S.A. Only)

An Emission Control Information Label is located on the right side of the frame as shown. The seat must be removed to read it. it gives basic tune-up specifications.



Vehicle Emission Control Information Update Label

After making a high altitude carburetor adjustment, attach an update label on the left side of the frame as shown.

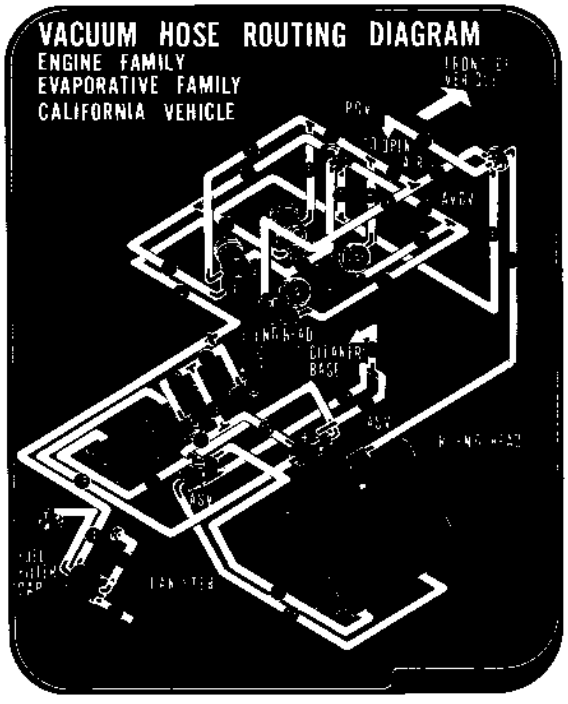
Instructions for obtaining the update label are given in Service Letter No. 132.

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

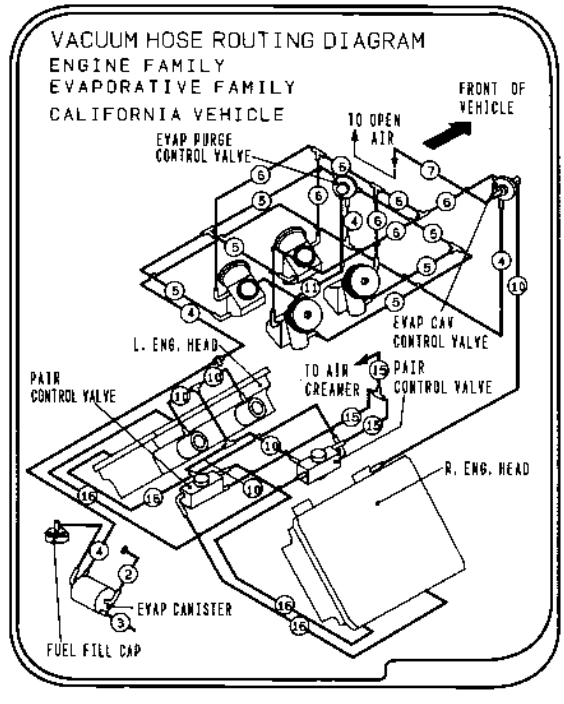
Vacuum Hose Routing Diagram Label ('91—'93: Standard California type and U.S.A. ABS/TCS type) (After '93: California type)

The Vacuum Hose Routing Diagram Label is on the rear fender as shown. The seat must be removed to read it.

'91—'93:



After '93:



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 special tool
	Use optional tool. Use the same procedure you use to order parts.
 10 (1.0, 7.2)	Torque specification. 10 N·m (1.0 kg-m, 7.2 ft-lb)
	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 brake fluid, DOT 3 or DOT 4. Use the recommended brake fluid, unless otherwise specified.
	Use Fork or Suspension Fluid.