HONDA

SERVICE MANUAL

89

CB400F

CB-1

INTRODUCTION

This service manual describes the service procedures for the CB400F.

This Model Specific Manual includes every service procedure that is of a specific nature to this particular model. Basic service procedures that are common to other Honda Motorcycles/Motor Scooters Common Service Manual. This Model Specific Service Manual should be used together with the Common Service Manual in order to provide complete service information on all aspects of this motorcycle.

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition and the emission levels are within the standards set by the U.S. Environmental Protection Agency and the California Air Resources Board.

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

Section 1 and 3 apply to the whole motorcycle, section 2 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections.

While section 4 through 18 describe parts of the motorcycle, grouped according to locations.

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

Most sections describe the service procedure through a system illustration. Refer to the next page for details on how to use this manual.

If you don't know the source of the trouble, go to section 19, TROUBLESHOOTING.

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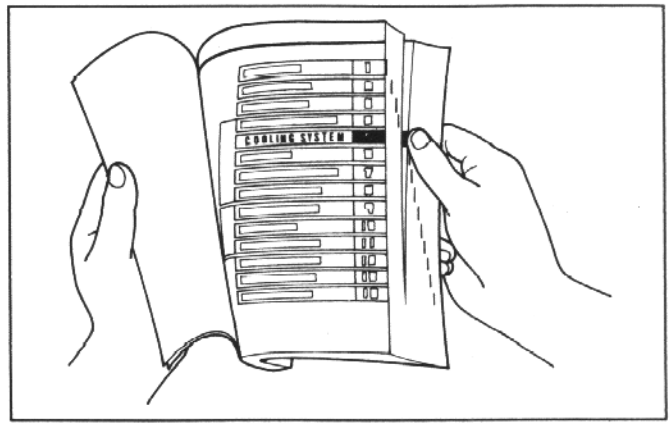
Date of Issue: January, 1989

HOW TO USE THIS MANUAL

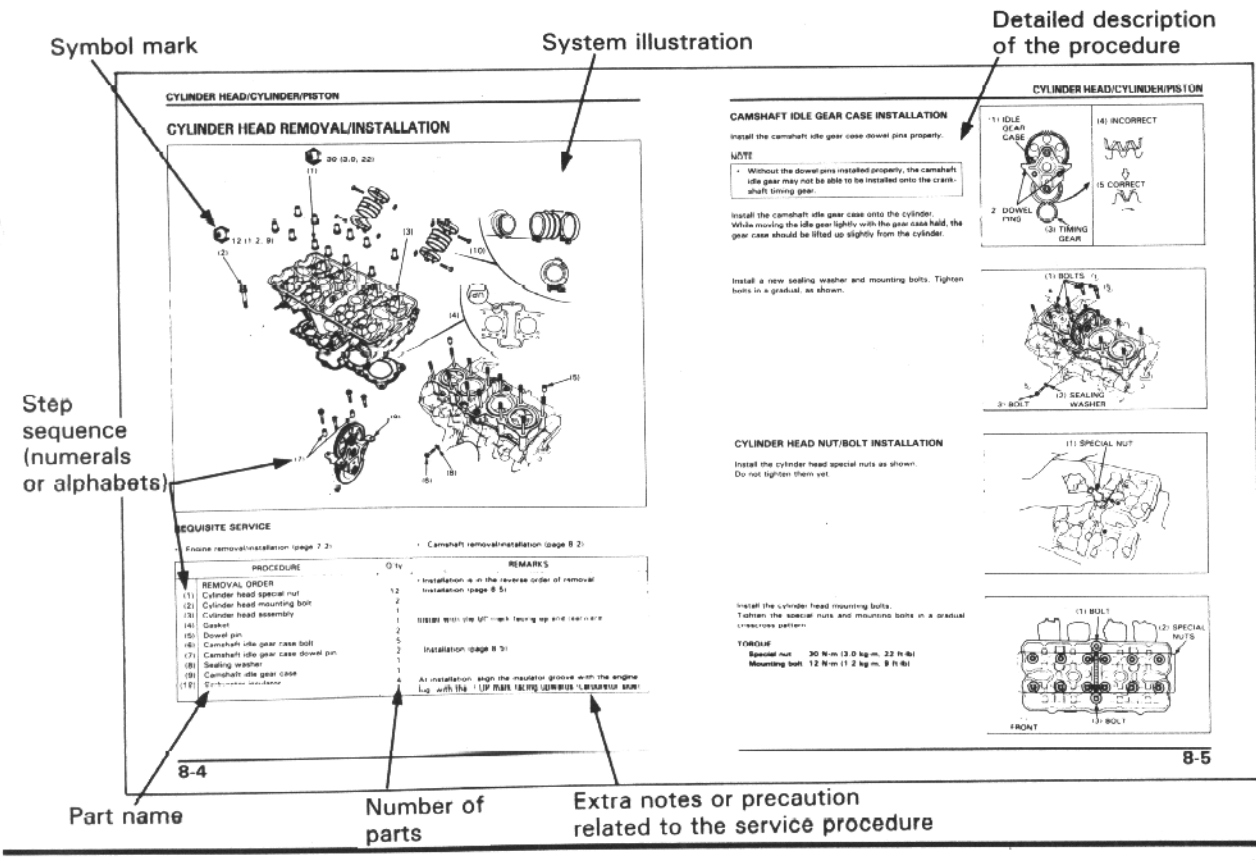
FINDING INFORMATION YOU NEED



- This manual is divided into sections which cover each of the major components of the motorcycle.
  To quickly find the section you are interested in, the first page of each section is marked with a black tab that lines up with one of the thumb index tabs before this page.
  The first page of each section lists the table of contents within the section.
  Read the service information and troubleshooting related to the section before you begin working.
- An index of the entire book is provided in the last chapter to directly locate the information you need.

NOTE ON THE EXPLANATION METHOD OF THIS MANUAL

- The removal and installation of parts are for the most part illustrated by large and clear illustrations that should provide the reader with visual aid in understanding the major point for servicing.
- The system illustrations are augmented by callouts whose numbers or letters indicate the order in which the parts should be removed or installed.
- The sequence of steps represented numerically are differentiated from the ones represented alphabetically to notify the reader that they must perform these steps seperately.
  For example, if the steps prior and up to camshaft removal are performed with the engine installed, but the subsequent steps like cylinder head removal require engine removal, the callouts are grouped in numerical and alphabetical orders.
- The illustrations may contain symbol marks to indicate necessary service procedures and precautions that need to be taken. Refer to the next page for the meaning of each symbol mark.
- Also in the illustration is a chart that lists information such as the order in which the part is removed/installed, the name of the part, and some extra notes that may be needed.
- Step by step instructions are provided to supplement the illustrations when detailed explanation of the procedure is necessary or illustrations alone would not suffice.
- Service procedures required before or after the procedure described on that particular page, or inspection/adjustment procedures required following the installation of parts, are described under the title Requisite Service.
- Standard workshop procedures and knowledge covered in the Common Service Manual are abbreviated in this manual.



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. These tools are obtained as you 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 with the ratio 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 45 (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 the agent of the middle strength, 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.

1. GENERAL INFORMATION

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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

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 it 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.

Nitrogen Pressure

For shock absorbers with a gas-filled reservoir:

⚠ WARNING

- **Use only nitrogen to pressurize the shock absorber. The use of an unstable gas can cause a fire or explosion resulting in serious injury.**
- **The shock absorber contains nitrogen under high pressure. Allowing fire or heat near the shock absorber could lead to an explosion that could result in serious injury.**
- **Failure to release the pressure from a shock absorber before disposing of it may lead to a possible explosion and serious injury if it is heated or pierced.**

To prevent the possibility of an explosion, release the nitrogen by pressing the valve core. Then remove the valve stem from the shock absorber reservoir. Dispose of the oil in a manner acceptable to the Environmental Protection Agency (EPA).

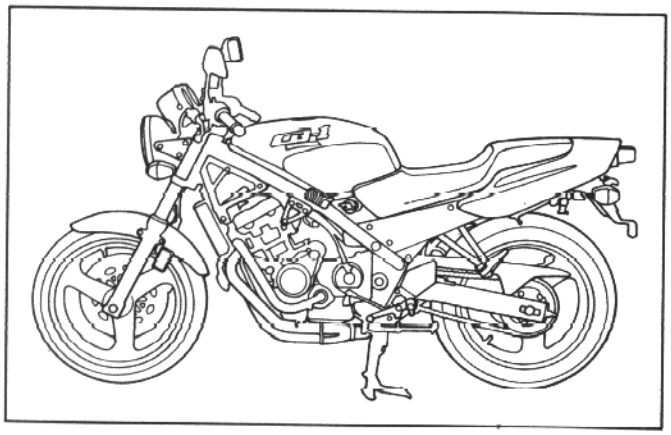
Before disposal of the shock absorber, release the nitrogen by pressing the valve core. Then remove the valve stem from the shock absorber.

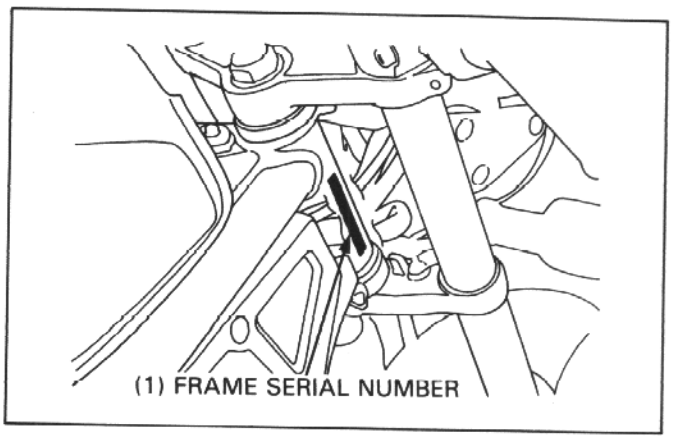
Battery Hydrogen Gas & Electrolyte

⚠ WARNING

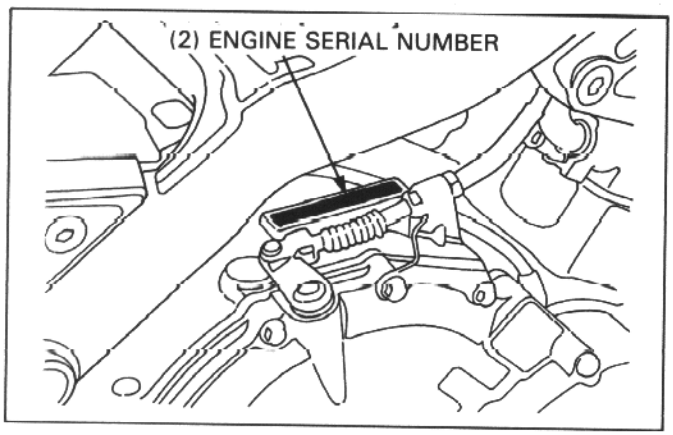
- **The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging.**
- **The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.**
  - **If electrolyte 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

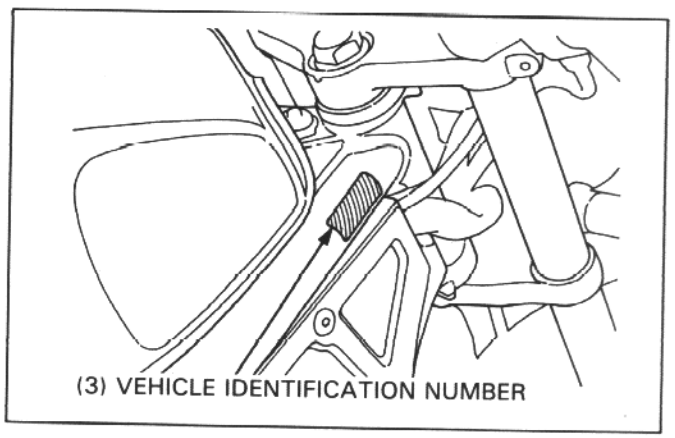




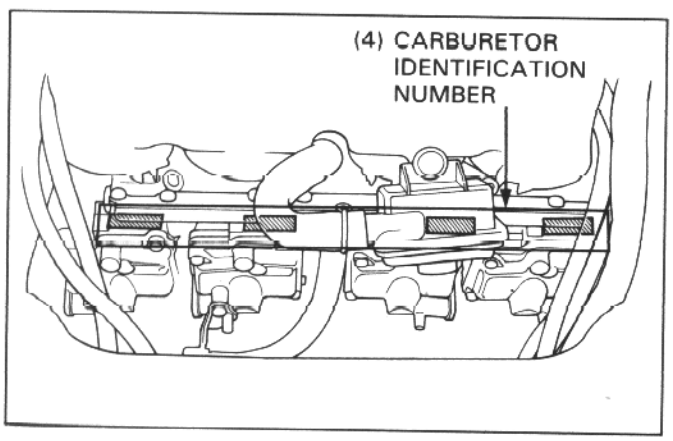
The frame serial number is stamped on the right side of the steering head.



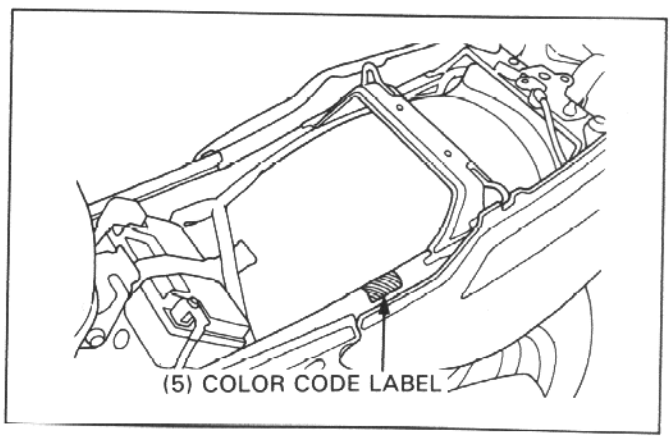
The engine serial number is stamped on the right side of the crankcase.



The Vehicle Identification Number (VIN) is located on the safety certification label on the right side of the frame tube.



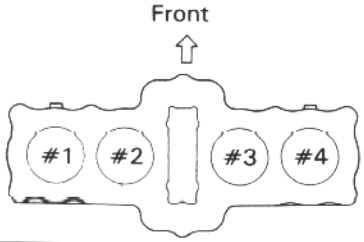
The carburetor identification number is on the rear side of each carburetor.



The color code label is attached on the left frame tube under the seat. When ordering a color coded part, always specify its designated color code.

SPECIFICATIONS

General

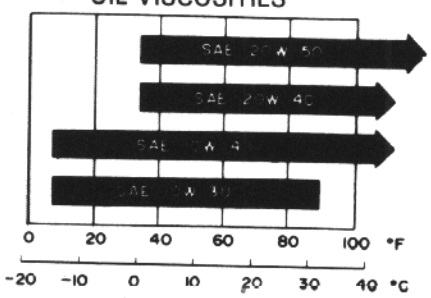
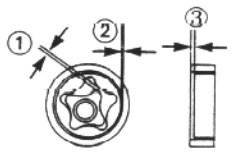
ITEM		SPECIFICATIONS
DIMENTIONS	Overall length	2,035 mm (80.1 in)
	Overall width	705 mm (27.8 in)
	Overall height	1,025 mm (40.4 in)
	Wheel base	1,370 mm (53.9 in)
	Seat height	775 mm (30.5 in)
	Foot peg height	335 mm (13.2 in)
	Ground clearance	130 mm (5.1 in)
	Dry weight	170 kg (375 lbs)
	Curb weight	183 kg (403 lbs)
	Maximum weight capacity	157 kg (347 lbs)
FRAME	Frame type	Diamond
	Front suspension	Telescopic fork
	Front wheel travel	130 mm (5.1 in)
	Rear suspension	Swingarm
	Rear wheel travel	110 mm (4.3 in)
	Rear damper	Gas-filled damper
	Front tire size	110/70—17 54H
	Rear tire size	140/70—17 66H
	Tire brand (Bridgestone) Front/Rear	G547/G548
	Tire brand (Dunlop) Front/Rear	K505F/K505
	Tire brand (Yokohama) Front/Rear	——
	Tire brand (IRC) Front/Rear	——
	Front brake	Hydraulic disc brake
	Rear brake	Hydraulic disc brake
	Caster angle	25°30'
	Trail length	99 mm (3.9 in)
	Fuel tank capacity	11.5 lit (3.04 US gal, 2.53 Imp gal)
	Fuel tank reserve capacity	3.5 lit (0.92 US gal, 0.77 Imp gal)
ENGINE	Bore and stroke	55.0 x 42.0 mm (2.17 x 1.65 in)
	Displacement	399 cm³ (24.3 cu in)
	Compression ratio	11.5 : 1
	Valve train	Gear driven DOHC, 4 valves per cylinder
	Intake valve opens at 1 mm lift	5° ATDC
	Intake valve close at 1 mm lift	33° ABDC
	Exhaust valve opens at 1 mm lift	33° BBDC, 38° BBDC (California)
	Exhaust valve close at 1 mm lift	5° BTDC, 10° BTDC (California)
	Lubrication system	Forced pressure and wet sump
	Oil pump type	Trochoid-type
	Cooling system	Liquid cooling system with cooling fan
	Air filtration	Paper filter
	Crankshaft type	Unit-type, 6 main journals
	Engine weight (dry)	57 kg (126 lbs)
	Firing order	1—2—4—3
	Cylinder arrangement	Vertical 30° in line four
		

General (Cont'd)

ITEM		SPECIFICATIONS
CARBURETOR	Carburetor type	VG06
	Throttle bore	32.5 mm (1.28 in)
DRIVE TRAIN	Clutch system	Wet, multi-plate
	Clutch operation system	Mechanical type
	Transmission	6-speed constant-mesh
	Primary reduction	2.181 (96/44)
	Secondary reduction	——
	Third reduction	——
	Final reduction	2.733 (41/15)
	Gear ratio 1st	3.307 (43/13)
	Gear ratio 2nd	2.352 (40/17)
	Gear ratio 3rd	1.875 (30/16)
	Gear ratio 4th	1.590 (35/22)
	Gear ratio 5th	1.434 (33/23)
	Gear ratio 6th	1.333 (32/24)
	Gear ratio reverse	——
	Gearshift pattern	Left foot operated return system 1—N—2—3—4—5—6
ELECTRICAL	Ignition system	Full transistor ignition
	Starting system	Starter motor
	Charging system	Triple phase output alternator
	Regulator/rectifier type	SCR shorted/triple phase full-wave rectification
	Lighting system	Battery
	AC regulator type	——

Lubrication

Unit: mm (in)

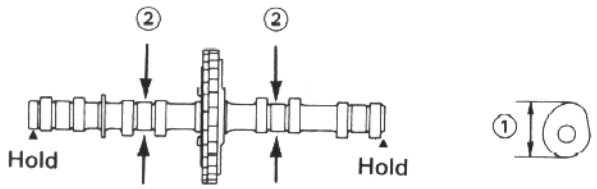
Item	Standard	Service limit
Engine oil capacity at draining	2.9 ℓ (3.06 US qt, 2.55 Imp qt)	—
at disassembly	3.5 ℓ (3.70 US qt, 3.08 Imp qt)	—
at oil filter change	3.1 ℓ (3.28 US qt, 2.73 Imp qt)	—
Recommended engine oil	HONDA 4-stroke oil or equivalent. API service classification SE or SF.	—
OIL VISCOSITIES  	The 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	490 kPa (5 kg/cm², 71 psi)	—
Oil pump roter tip clearance ①	0.10 (0.004)	0.15 (0.006)
body clearance ②	0.15—0.22 (0.006—0.009)	0.35 (0.014)
end clearance ③	0.02—0.07 (0.001—0.003)	0.10 (0.004)
 		

Fuel system

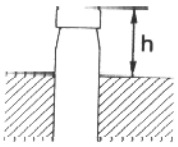
Carburetor identification number	VG06B	—
(California)	VG06C	—
Main jet	#105	—
(High altitude)	—	—
(2, 3)	—	—
(1, 4)	—	—
(Front)	—	—
(Rear)	—	—
Slow jet	#35	—
Jet needle crip position	—	—
Pilot screw initial opening	2-1/4 turns out	—
(California)	2-1/2 turns out	—
Pilot screw adjustment final opening	1 turn out	—
Pilot screw high altitude adjustment	1/2 turn in from initial opening	—
Air screw initial opening	—	—
(California)	—	—
Air screw high altitude adjustment	—	—
Float level	8.0 (0.31)	—
Carburetor vacuum difference	Within 30 mmHg (1.2 inHg)	—
Base carburetor (For carburetor synchronization)	No. 2 carburetor	—
Idle speed	1,300 ± 100 rpm	—
(California)	1,400 ± 100 rpm	—
Throttle grip free play	2—6 (0.08—0.24)	—
Accelerator pump clearance	—	—
Secondary air supply system	Reed valves are built into the ASV	—
Air injection control valve vacuum pressure	360 mmHg (14.2 inHg)	—

Cylinder head — Unit: mm (in)

Item	Standard	Service limit
Cylinder compression	1,280—1,320 kPa (12.8—13.2 kg/cm², 182—188 psi)/400 rpm	——
Cylinder compression difference	Within 30 mmHg (1.2 inHg) of each other	——
Valve clearance IN (cold)	0.12—0.18 (0.005—0.007)	——
EX	0.17—0.23 (0.007—0.009)	——
Cylinder head warpage	——	0.1 (0.004)
Cam lobe height ① IN	33.070—33.230 (1.3020—1.3083)	33.02 (1.300)
IN (California model)	——	——
EX	33.120—33.280 (1.3039—1.3102)	33.07 (1.302)
EX (California model)	——	——
Camshaft runout ②	——	0.05 (0.002)
Camshaft oil clearance	0.020—0.062 (0.0008—0.0024)	0.10 (0.004)



Camshaft journal O.D.	22.959—22.980 (0.9039—0.9047)	22.965 (0.9041)
Camshaft holder I.D.	——	——
Valve stem O.D. IN	3.775—3.790 (0.1486—0.1492)	3.70 (0.146)
EX	3.755—3.770 (0.1478—0.1484)	3.69 (0.145)
Valve guide I.D. IN	3.800—3.812 (0.1496—0.1253)	3.89 (0.153)
EX	3.800—3.812 (0.1496—0.1253)	3.89 (0.153)
Stem-to-guide clearance IN	——	0.04 (0.002)
EX	——	0.05 (0.002)
Valve guide projection above cylinder head (h) IN	13.37—13.77 (0.526—0.542)	——
EX	11.52—11.92 (0.454—0.469)	——



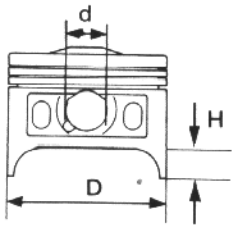
Before guide installation:
1. Chill the valve guides in the freezer section of a refrigerator for about an hour.
2. Heat the cylinder head to 100—150°C (212—300°F).

Valve seat width	0.9—1.1 (0.035—0.043)	1.5 (0.06)
Valve spring free length IN	39.40 (1.551)	38.6 (1.52)
EX	39.40 (1.551)	38.6 (1.52)
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.	——	——
Valve lifter bore I.D.	——	——
Hydraulic lash adjuster assist spring free length	——	——
Hydraulic lash adjuster compression stroke with kerosene	——	——

Unit: mm (in)

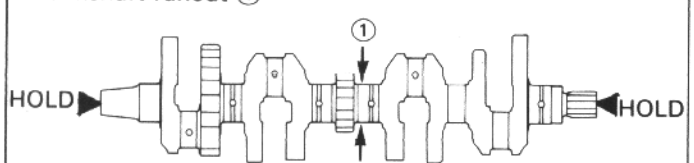
Cylinder/piston

Item	Standard	Service limit
Cylinder I.D.	55.000—55.010 (2.1654—2.1657)	55.10 (2.169)
Cylinder out of round	—	0.10 (0.004)
Cylinder taper	—	0.10 (0.004)
Cylinder warpage	—	0.10 (0.004)
Piston mark direction	With "IN" mark facing to the intake side	—
Piston O.D. (D)	54.960—54.990 (2.1638—2.1650)	54.90 (2.161)
Piston O.D. measurement point (H)	10 (0.4)	—
Piston pin hole I.D. (d)	14.002—14.008 (0.5513—0.5515)	14.05 (0.553)
Cylinder-to-piston clearance	—	0.10 (0.004)
Piston pin O.D.	13.994—14.000 (0.5509—0.5512)	13.98 (0.550)
Piston-to-piston pin clearance	0.002—0.014 (0.0001—0.0006)	0.04 (0.002)
Connecting rod-to-piston pin clearance	0.016—0.040 (0.0006—0.0016)	0.06 (0.002)
Top ring-to-ring groove clearance	0.015—0.050 (0.0006—0.0020)	0.08 (0.003)
Second ring-to-ring groove clearance	0.015—0.050 (0.0006—0.0020)	0.08 (0.003)
Top ring end gap	0.18—0.28 (0.007—0.011)	0.5 (0.02)
Second ring end gap	0.18—0.33 (0.007—0.013)	0.5 (0.02)
Oil ring (side rail) end gap	0.2—0.7 (0.01—0.03)	1.1 (0.04)
Top ring mark	Install with the marked side up	—
Second ring mark	Install with the marked side up	—



Crankshaft

Connecting rod small end I.D.	14.016—14.034 (0.5518—0.5525)	14.07 (0.554)
Connecting rod big end side clearance	0.05—0.20 (0.002—0.008)	0.30 (0.012)
radial clearance	—	—
Crankshaft runout ①	—	0.05 (0.002)
Crankpin oil clearance	0.020—0.052 (0.0008—0.0020)	0.06 (0.002)
Crankpin bearing selection	See page 10-7	—
Main journal oil clearance	0.022—0.046 (0.0009—0.0018)	0.05 (0.002)
Main journal bearing selection	See page 10-6	—

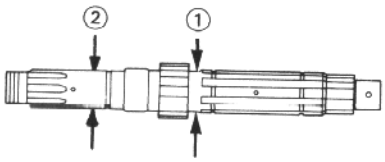
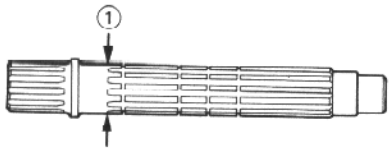


Kickstarter

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.	—	—

Transmission

Unit: mm (in)

Item	Standard	Service limit
Transmission gear I.D. M5	25.000–25.021 (0.9843–0.9851)	25.05 (0.986)
M6	25.000–25.021 (0.9843–0.9851)	25.05 (0.986)
C2	28.000–28.021 (1.1024–1.1032)	28.05 (1.104)
C3	28.000–28.021 (1.1024–1.1032)	28.05 (1.104)
C4	28.000–28.021 (1.1024–1.1032)	28.05 (1.104)
Transmission gear bushing O.D. M5	24.959–24.980 (0.9826–0.9835)	24.92 (0.981)
M6	24.959–24.980 (0.9826–0.9835)	24.92 (0.981)
C2	27.959–27.980 (1.1007–1.1016)	27.92 (1.099)
C3	27.959–27.980 (1.1007–1.1016)	27.92 (1.099)
C4	27.959–27.980 (1.1007–1.1016)	27.92 (1.099)
Transmission gear busing I.D. M5	21.985–22.006 (0.8655–0.8664)	22.07 (0.869)
C2	24.985–25.006 (0.9837–0.9845)	25.07 (0.987)
Gear-to-bushing clearance at M5 gear	0.020–0.062 (0.0008–0.0024)	0.10 (0.004)
at M6 gear	0.020–0.062 (0.0008–0.0024)	0.10 (0.004)
at C2 gear	0.020–0.062 (0.0008–0.0024)	0.10 (0.004)
at C3 gear	0.020–0.062 (0.0008–0.0024)	0.10 (0.004)
at C4 gear	0.020–0.062 (0.0008–0.0024)	0.10 (0.004)
Mainshaft O.D. at M5 gear bushing ①	21.959–21.980 (0.8645–0.8654)	21.93 (0.863)
at clutch outer guide ②	21.967–21.980 (0.8648–0.8654)	21.93 (0.863)
	—	—
Coutershaft O.D. at C2 gear bushing ①	24.967–24.980 (0.9830–0.9835)	24.93 (0.981)
	—	—
Gear-to-shaft clearance		
Gear bushing-to-shaft clearance at M5 gear	0.020–0.062 (0.0008–0.0024)	0.10 (0.004)
at C2 gear	0.005–0.039 (0.0002–0.0015)	0.06 (0.002)
Shift fork claw thickness L	5.93–6.00 (0.233–0.236)	5.60 (0.220)
C	5.93–6.00 (0.233–0.236)	5.60 (0.220)
R	5.93–6.00 (0.233–0.236)	5.60 (0.220)
Shift fork I.D. L	12.000–12.018 (0.4724–0.4731)	12.06 (0.475)
C	12.000–12.018 (0.4724–0.4731)	12.06 (0.475)
R	12.000–12.018 (0.4724–0.4731)	12.06 (0.475)
Shift fork shaft O.D.	11.969–11.980 (0.4712–0.4717)	11.90 (0.469)

Unit: mm (in)

Clutch system

Item	Standard	Service limit
Clutch lever free play	10–20 (0.4–0.8)	—
Recommended clutch fluid	—	—
Clutch master cylinder I.D.	—	—
Clutch master piston O.D.	—	—
Clutch outer I.D.	37.005–37.030 (1.4569–1.4579)	37.08 (1.460)
Clutch outer guide O.D.	29.994–30.007 (1.1809–1.1814)	29.95 (1.179)
I.D.	21.980–22.007 (0.8654–0.8664)	22.05 (0.868)
Mainshaft O.D. at clutch outer guide	21.967–21.980 (0.8648–0.8654)	21.93 (0.863)
Oil pump drive sprocket I.D.	30.025–30.075 (1.1821–1.1841)	30.13 (1.186)
Clutch spring free height	—	—
Clutch spring free length	37.5 (1.48)	36.0 (1.42)
Clutch disc thickness A	3.22–3.38 (0.127–0.133)	2.9 (0.11)
B	3.22–3.38 (0.127–0.133)	2.9 (0.11)
C	3.42–3.58 (0.135–0.141)	3.1 (0.12)
Clutch plate warpage	—	0.3 (0.01)
Centrifugal clutch drum I.D.	—	—
bushing O.D.	—	—
Centrifugal clutch center guide I.D.	—	—
O.D.	—	—
Centrifugal clutch center guide collar height	—	—
Centrifugal clutch weight lining thickness	—	—
Centrifugal clutch spring free length	—	—
Clutch lining thickness	—	—
Crankshaft O.D. at clutch center	—	—

Cooling system

Coolant capacity (Radiator and engine)	1.5 ℓ (0.40 US gal, 0.33 Imp gal)	—
(Reserve tank)	0.3 ℓ (0.08 US gal, 0.07 Imp gal)	—
Radiator cap relief pressure	93–123 kPa (0.95–1.25 kg/cm², 14–18 psi)	—
Thermostat begins to open	80–84°C (176–183°F)	—
Thermostat fully open	95°C (203°F)	—
Thermostat valve lift	8.0 (0.315) min.	—

Drive train

Recommended final drive oil	—	—
Final drive gear oil capacity at disassembly	—	—
at draining	—	—
Final drive gear backlash	—	—
Ring gear-to-stop pin clearance (A)	—	—
Stop pin shim	—	—
Ring gear spacer	—	—
Pinion spacer	—	—
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	—	—

Wheels/tires

Unit: mm (in)

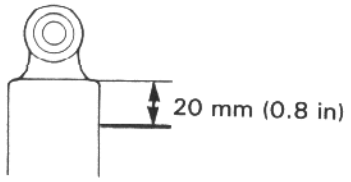
Item	Standard	Service limit
Minimum tire tread depth (FR)	—	1.5 (0.06)
(RR)	—	2.0 (0.08)
Cold tire pressure Up to 90kg (200lb) load (FR)	225 kPa (2.25 kg/cm², 33 psi)	—
Up to 90kg (200lb) load (RR)	225 kPa (2.25 kg/cm², 33 psi)	—
Up to maximum weight capacity (FR)	225 kPa (2.25 kg/cm², 33 psi)	—
Up to maximum weight capacity (RR)	250 kPa (2.50 kg/cm², 36 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/Rear	—	60 g (2.1 oz)
Drive chain slack	15—25 (5/8—1)	—
Drive chain size/link (DID)	DID525V8/104	—
(RK)	RK525SM4/104	—

Front suspension

Fork spring free length	324.5 (12.78)	318 (12.5)
Fork spring free length A	—	—
B	—	—
Fork spring direction	With tightly wound coil end facing down	—
Fork tube runout	—	0.2 (0.01)
Recommended fork oil	Fork Fluid	—
Fork oil level	95 (3.7)	—
Fork oil level (R)	—	—
(L)	—	—
Fork oil capacity	510 cc (17.2 US oz, 17.9 Imp oz)	—
Fork oil capacity (R)	—	—
(L)	—	—
Fork air pressure	—	—
Steering bearing preload	1.0—1.6 kg	—

Rear suspension

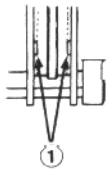
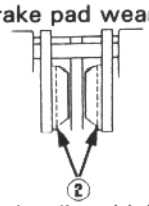
Shock absorber spring free length	178.0 (7.01)	174 (6.9)
Shock absorber spring free length (A)	—	—
(B)	—	—
Damper gas pressure	—	—
Damper compressed gas	—	—
Damper rod compressed force at 10 mm (0.4 in) compressed	—	—
Damper drilling point		



Shock absorber spring installed length (Standard)	Adjuster position III	—
(Adjustable range)	Position I—VII	—
Shock absorber spring direction	With the taper end facing to adjuster	—
Recommended shock absorber oil	—	—
Shock absorber oil capacity	—	—
air pressure	—	—

Unit: mm (in)

Brakes

Item	Standard	Service limit
Front brake fluid	DOT4	—
brake lever free play	—	—
brake pad wear indicator	—	to the groove ①
 ①		
brake disc thickness	5.6—6.0 (0.22—0.24)	5.0 (0.20)
brake disc runout	—	0.4 (0.02)
master cylinder I.D.	11.000—11.043 (0.4331—0.4348)	11.055 (0.4352)
master piston O.D.	10.957—10.984 (0.4314—0.4324)	10.945 (0.4309)
caliper cylinder I.D.	27.000—27.050 (1.0630—1.0650)	27.06 (1.065)
caliper cylinder I.D. (Upper)	—	—
(Lower)	—	—
caliper piston O.D.	26.918—26.968 (1.0598—1.0617)	26.91 (1.059)
caliper piston O.D. (Upper)	—	—
(Lower)	—	—
brake drum I.D.	—	—
brake lining thickness	—	—
Rear brake fluid	DOT4	—
brake pedal height	—	—
brake pedal free play	—	—
brake pad wear indicator	—	to the step ②
 ②		
brake disc thickness	4.8—5.2 (0.19—0.20)	4.0 (0.16)
runout	—	0.4 (0.02)
master cylinder I.D.	14.000—14.043 (0.5512—0.5529)	14.06 (0.554)
master piston O.D.	13.957—13.984 (0.5495—0.5506)	13.95 (0.549)
caliper cylinder I.D.	38.180—38.230 (1.5031—1.5051)	38.24 (1.506)
caliper piston O.D.	38.098—38.148 (1.4999—1.5019)	38.09 (1.500)
brake drum I.D.	—	—
brake lining thickness	—	—

Battery/charging system

Alternator charging coil resistance (At 20°C/68°F)	0.1—0.5 Ω	—
Regulator/rectifier regulated voltage/amperage	14.0—16.0 V/0—8 A at 5,000 rpm	—
Battery capacity	12 V—8 AH	—
Battery specific gravity (Fully charging)	—	—
(Needs charging)	—	—
Battery charging rate (Normal)	0.8 A (5—10 hours)	—
(Quick)	4 A (1 hour)	—
Battery voltage (Fully charged 20°C/68°F)	Over 12.8 V	—
(Needs charging 20°C/68°F)	Below 12.5 V	—
Alternator lighting coil resistance (At 20°C/68°F)	—	—
AC regulator regulated voltage (With analogue type)	—	—
(With digital type)	—	—

Starting system

Starter driven gear O.D.	42.175—42.200 (1.6604—1.6614)	42.12 (1.658)
Starter clutch outer I.D.	—	—
Starter motor brush spring tension	920 ± 140 g (32.4 ± 4.9 oz)	—
brush length	12.5 (0.49)	8.5 (0.33)

Ignition system

Unit: mm (in)

Item	Standard	Service limit
Spark plug (Standard NGK)	CR8EH-9	—
(Standard ND)	U24FER9	—
(For cold climate/below 5°C/41°F NGK)	—	—
(For cold climate/below 5°C/41°F ND)	—	—
(For extended high speed riding NGK)	CR9EH-9	—
(For extended high speed riding ND)	U27FER9	—
Spark plug gap	0.8—0.9 (0.031—0.035)	—
Ignition timing "F" mark	16° BTDC at idle	—
Advance start	1,700 rpm	—
stop	—	—
Full advance	—	—
Alternator exciter coil resistance (At 20°C/68°F)	—	—
Ignition coil resistance (Primary: at 20°C/68°F)	2—4 Ω	—
(Secondary with plug cap)	23—27 kΩ	—
(Secondary without plug wire)	13—17 kΩ	—
Pulse generator resistance (At 20°C/68°F)	340—420 Ω	—

Lights/meters/switches

Main fuse		30 A	—
Fuse		10 A x 4	—
Headlight (high/low beam)		12 V 60/55 W	—
Tail/brakelight		12 V 3/32 CP	—
License light		—	—
Position light bulb		—	—
Front turn signal/runing light		—	—
Front turn signal light		12 V 32 CP x 2	—
Rear turn signal light		12 V 32 CP x 2	—
Instrument lights		12 V 1.7 W x 3	—
Oil pressure warning indicator		12 V 1.7 W	—
Tail/brakelight warning indicator		—	—
Side stand indicator		12 V 1.7 W	—
Low fuel indicator		—	—
Coolant temperature indicator		—	—
Oil temperature indicator		—	—
High beam indicator		12 V 1.7 W	—
Turn signal indicator		12 V 1.7 W	—
Neutral indicator		12 V 1.7 W	—
Reverse indicator		—	—
Overdrive indicator		—	—
Oil temperature sensor resistance		—	—
Fuel unit resistance (at full level)		—	—
(at low level)		—	—
Fuel pump flow capacity (min./minute)		660 cc (22.3 US oz, 23.2 Imp oz) min.	—
Coolant temperature sensor resistance	80°C (176°F)	47—57 Ω	—
	120°C (248°F)	14—18 Ω	—
Fan motor switch	Starts to close (ON)	98—102°C (208—216°F)	—
	Stops to open (OFF)	93—97°C (199—207°F)	—

TORQUE VALUES

STANDARD TORQUE VALUES

Item	Torque N·m (kg-m, ft-lb)	Item	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)	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 a locking agent to the threads.
2. Apply sealant to the threads.
3. Stake.
4. Apply silicone grease to the sliding surface.

ENGINE

Item	Q'ty	Thread dia (mm)	Torque N·m	Torque kg-m	Torque ft-lb	Remarks
Lubrication:						
Oil pump driven sprocket bolt	1	6	15	1.5	11	NOTE 1
Oil pressure switch	1	—	12	1.2	9	NOTE 2
Oil drain bolt	1	12	35	3.5	25	
Oil filter boss	1	20	18	1.8	13	
Oil filter	1	20	10	1.0	7	
Cylinder head/cylinder/piston:						
Cylinder head cover bolt	8	6	10	1.0	7	
Camshaft holder bolt	16	6	12	1.2	9	
Cylinder head cover breather plate bolt	2	6	12	1.2	9	NOTE 1
Cylinder head special nut	12	8	30	3.0	22	
Cylinder head mounting bolt	2	6	12	1.2	9	
Cylinder mounting bolt	1	6	10	1.0	7	
Cylinder stud bolt	12	8	26	2.6	19	
Spark plug	4	10	11	1.1	8	
Clutch/gearshift linkage:						
Crankshaft hole cap	1	30	7	0.7	5	
Timing hole cap	1	14	10	1.0	7	
Clutch center lock nut	1	20	85	8.5	61	NOTE 3
Gearshift spindle return spring pin	1	8	23	2.3	17	
Crankcase/crankshaft/transmission:						
Connecting rod nut	8	7	24	2.4	17	
Crankcase bolt (8 mm)	12	8	24	2.4	17	
(8 mm x 65)	1	8	27	2.7	20	
(6 mm)	19	6	12	1.2	9	
Sealing bolt (lower crankcase)	1	20	30	3.0	22	
Special bolt (lower crankcase)	1	14	25	2.5	18	NOTE 2
Neutral switch	1	10	18	1.8	13	NOTE 2
Drive sprocket bolt	1	10	55	5.5	40	
Alternator:						
Flywheel bolt	1	10	85	8.5	61	
Starter clutch:						
Starter clutch bolt	1	10	85	8.5	61	

FRAME

Item	Q'ty	Thread dia (mm)	Torque N·m	Torque kg-m	Torque ft-lb	Remarks
Frame/exhaust system:						
Exhaust pipe joint nut	8	6	12	1.2	9	
Muffler mounting bolt	2	8	22	2.2	16	
Side stand pivot bolt	1	10	10	1.0	7	
Side stand pivot lock nut	1	10	27	2.7	20	
Side stand switch mounting bolt	1	6	30	3.0	22	
Gearshift pedal joint bolt	1	6	12	1.2	9	
Gearshift pedal mounting bolt	1	8	27	2.7	20	NOTE 1
Footpeg stay bolt	4	8	27	2.7	20	
Cooling system:						
Temperature sensor	1	—	10	1.0	7	NOTE 2
Fan motor switch	1	16	18	1.8	13	NOTE 2
Fuel system:						
Fuel valve nut	1	22	23	2.3	17	
Fuel tank cap mounting bolt	3	4	3	0.3	2	
Engine mount:						
Engine mount nut (front)	2	10	40	4.0	29	
Engine mount nut (rear/upper)	1	10	50	5.0	36	
Engine mount nut (rear/lower)	1	10	50	5.0	36	
Adjusting bolt	1	20	15	1.5	11	
Adjusting bolt lock nut	1	20	65	6.5	47	
Engine sub frame nut	4	10	45	4.5	33	
Engine bracket bolt	6	10	40	4.0	29	
Front:						
Handlebar pinch bolt	2	8	27	2.7	20	
Handlebar weight screw	2	6	10	1.0	7	NOTE 1
Axle bolt	1	14	60	6.0	43	
Axle pinch bolt	4	8	22	2.2	16	
Fork pinch bolt (upper)	2	7	11	1.1	8	
Fork pinch bolt (lower)	2	10	50	5.0	36	
Fork cap bolt	2	37	23	2.3	17	
Fork socket bolt	2	6	20	2.0	14	NOTE 1
Steering stem nut	1	24	105	10.5	76	
Steering head bearing adjustment nut	1	26	25	2.5	18	
Ignition switch mounting bolt	2	8	25	2.5	18	NOTE 1
Rear:						
Axle nut	1	16	90	9.0	65	
Driven sprocket nut	5	10	65	6.5	47	
Shock absorber mounting nut (upper)	1	10	45	4.5	33	
Shock absorber mounting nut (lower)	1	10	45	4.5	33	
Shock absorber lower joint lock nut	1	14	68	6.8	49	NOTE 1
Swingarm pivot nut	1	14	110	11.0	80	
Brake:						
Front caliper pad pin plug	1	10	2.5	0.25	1.8	
pad pin	1	10	18	1.8	13	
bracket bolt	2	8	27	2.7	20	
pin bolt	1	—	23	2.3	17	NOTE 1, 4
bracket pin bolt	1	—	13	1.3	9	NOTE 1, 4
Front master cylinder reservoir cover screw	2	4	6	0.6	4	
Front brake disc bolt	6	8	30	3.0	22	
Rear caliper pad pin plug	1	10	2.5	0.25	1.8	
pad pin	1	10	18	1.8	13	
mounting bolt	1	8	23	2.3	17	
pin bolt	1	—	23	2.3	17	NOTE 1, 4
Rear master cylinder push rod joint lock nut	1	—	17	1.7	12	
Rear brake disc bolt	4	8	40	4.0	29	
Brake hose bolt	4	10	35	3.5	25	

TOOLS

- The tools for the ball bearing removal and installation are not contained in this list. Refer to section 1, Ball Bearing Replacement, of the Common Service Manual.
- The newly designed tools are indicated with * mark in the list.

Description	Tool number	Alternative tool	Ref. section(s)
Oil filter wrench	07HAA—PJ70100		3
Vacuum gauge	07404—0030000		3
Oil pressure gauge	07506—3000000	┐	4
Oil pressure gauge attachment	07510—4220100	├ or equivalent commercially available in U.S.A.	4
Rotor holder	07725—0040000	┘	4, 14, 16
Antifreeze tester	Commercially available		5
Cooling system tester	Commercially available		5
Float level gauge	07401—0010000		6
Vacuum pump	ST—AH—260—MC7	—U.S.A. only	6
Pressure pump	ST—AH—255—MC7	—U.S.A. only	6
*Valve guide driver (guide removal/ installtion)	07JMD—KY20100		8
*Valve bucket hole protector	07JMG—KY20100		8
Valve spring compressor	07757—0010000		8
*Valve spring compressor attachment	07JME—KY20100		8
*Valve guide reamer, 3.8 mm	07JMH—KY20100	—07JMH-KY2010A (U.S.A. only)	8
Valve seat cutter, 22 mm (45° IN, EX)	07780—0010701	┐	8
Valve flat cutter, 22 mm (32° IN)	07780—0012601	├ or equivalent commercially available in U.S.A.	8
Valve flat cutter, 21.5 mm (32° EX)	07780—0012800	├	8
Valve interior cutter, 22 mm (60° IN, EX)	07780—0014202	├	8
*Cutter holder	07JMH—KY20200	┘	8
Piston ring compressor	07954—2500000	—07954—2350000	8
Piston base	07958—4130000	—07958—2500001 (U.S.A. only)	8
Compression gauge	07305—0010000	┐	8
*Compression gauge attachment	07JMJ—KY20100	┘ or equivalent commercially available in U.S.A.	8
*Clutch center holder	07GMB—KT80100	—Not available in U.S.A. 07HGB—001000A (U.S.A. only)	9

(Cont'd)

Description	Tool number	Alternative tool	Ref. section(s)
Bearing remover head, 20 mm	07746—0050600		11
Bearing remover shaft	07746—0050100		11
Driver	07749—0010000		11, 12
Attachment, 42 x 47 mm	07746—0010300		11, 12
Attachment, 52 x 55 mm	07746—0010400		11
Pilot, 20 mm	07746—0040500		11, 12
Fork seal driver	07947—KA50100		11
Fork seal driver attachment	07947—KF00100		11
Lock nut wrench, 30 x 32 mm	07716—0020400		11
Steering stem socket	07916—3710100		11
Ball race remover	07953—MJ10000	—Attachment (07953—MJ1000A), Driver (07949—3710001) and Attachment, 37 x 40 mm (07746—0010200)	11
—attachment	07953—MJ10100		(11)
—driver	07953—MJ10200		(11)
Bearing race remover	07946—3710500		11
Driver	07949—3710001		11
Attachment, 37 x 40 mm	07746—0010200		11
Steering stem driver	07946—MB00000		11
Bearing remover head, 17 mm	07746—0050500		12
Attachment, 24 x 26 mm	07746—0010700		12
Pilot, 17 mm	07746—0040400		12
Pilot, 22 mm	07746—0041000		12
Shock absorber compressor	07GME—0010000	—Not available in U.S.A. 07959—3290001	12
—screw assembly	07GME—0010100		(12)
Shock absorber compressor attachment	07959—MB10000		12
*Driver pin	07GMD—KT80100	—Not available in U.S.A. Pilot, 22 mm (07746—0041000) and Driver (07749—0010000)	12
Driver shaft	07946—MJ00100	—Not available in U.S.A. Driver (07949—3710001)	12
*Needle bearing remover attachment	07GMD—KT70200	—Not available in U.S.A. Bushing remover (M967X—038—XXXXX)	12
Attachment, 28 x 30 mm	07946—1870100		12
Attachment, 32 x 35 mm	07746—0010100		12
Pilot, 15 mm	07746—0040300		12
Snap ring pliers	07914—3230001		12, 13
Rotor puller	07733—0020001	—07933—2160000 (U.S.A. only)	14
Christie battery charger	MC1012/2		14
Battery tester	BM—210		14
Digital multitester (KOWA)	07411—0020000	—KS—AHM—32—003 (U.S.A. only)	14, 15, 16, 17
Analogue tester	07308—0020001 (SANWA) or TH—5H (KOWA)		14, 15, 16, 17
Torx bit (T40)	07703—0010100	—or equivalent commercially available in U.S.A.	17

LUBRICATION AND SEAL POINTS

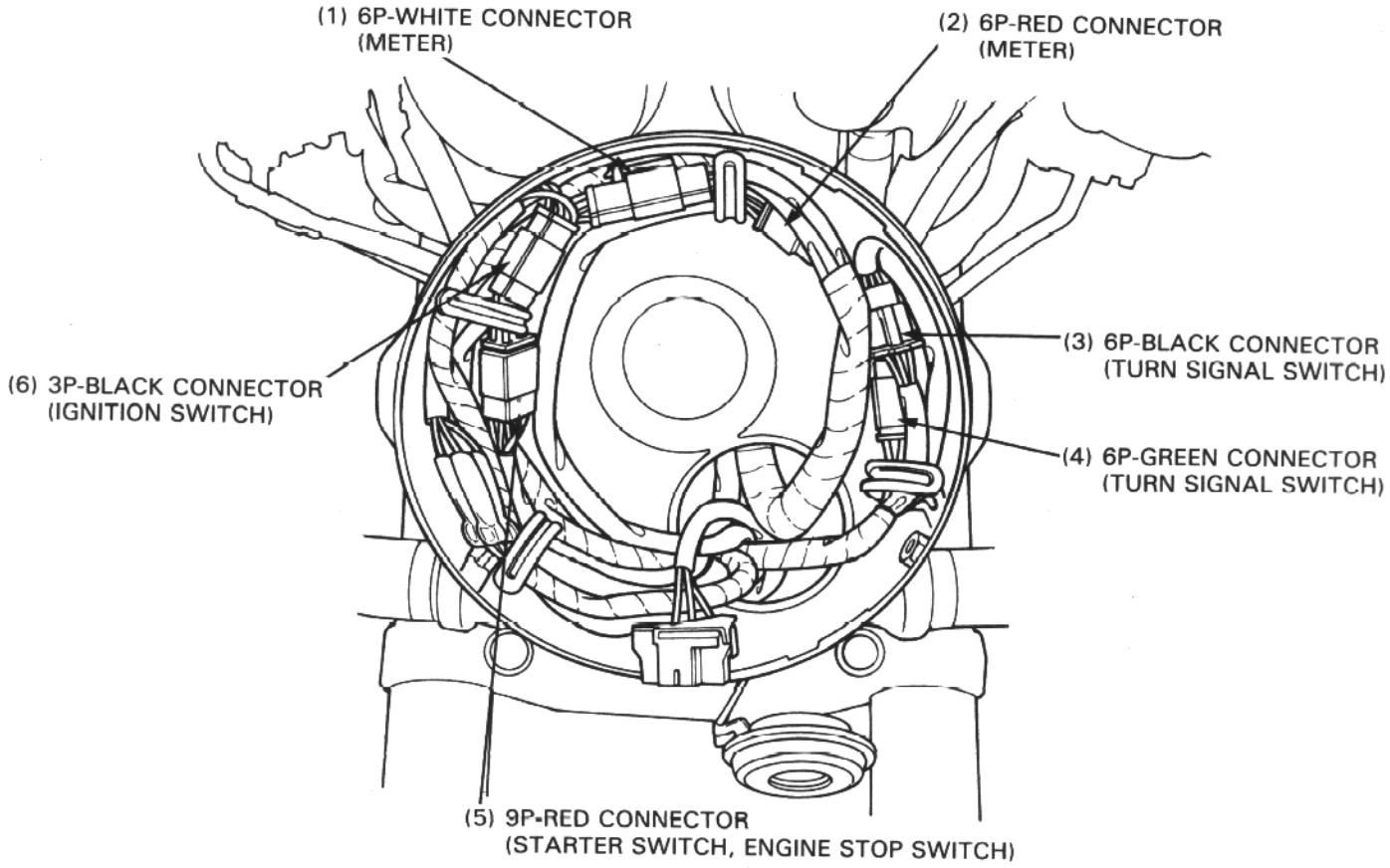
ENGINE

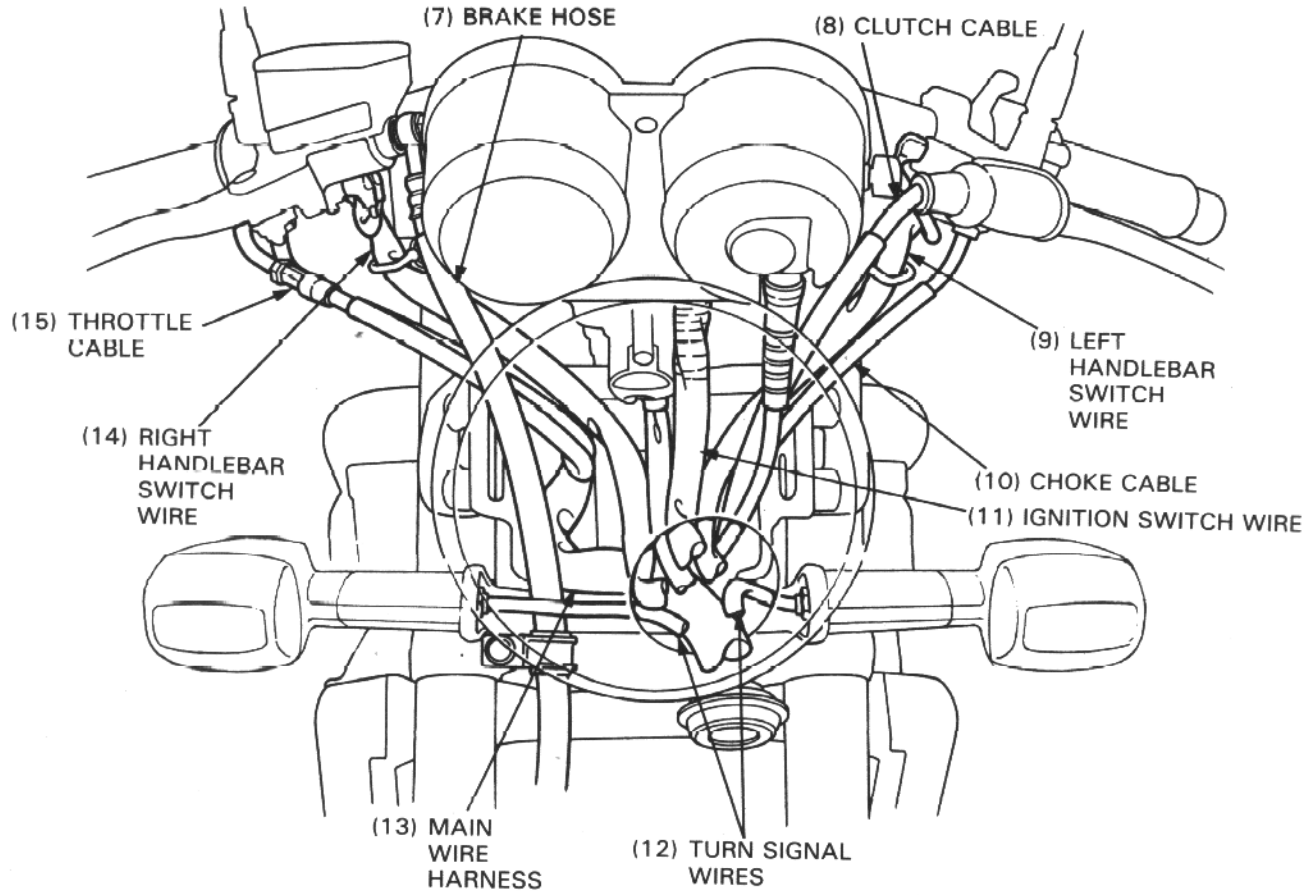
Point	Material	Remarks
• Intake and Exhaust valve stem sliding surface • Camshaft journal • Connecting rod small end-piston pin sliding surface • Transmission gear shifter groove • Crankshaft main journal bearing sliding surface • Connecting rod bearing sliding surface	Molybdenum solution (mixture of the engine oil and molybdenum disulfide grease with the ratio 1 : 1)	
• Upper crankcase mating surface	Liquid sealant	Do not apply sealant to the oil passages and near the main journal bearings
• Oil pressure switch • Fan motor switch • Thermo sensor • Neutral switch	Sealant	Do not apply sealant to the oil pressure switch thread head as shown.
• Gear teeth • Shaft journals • Sliding surface	Engine oil	

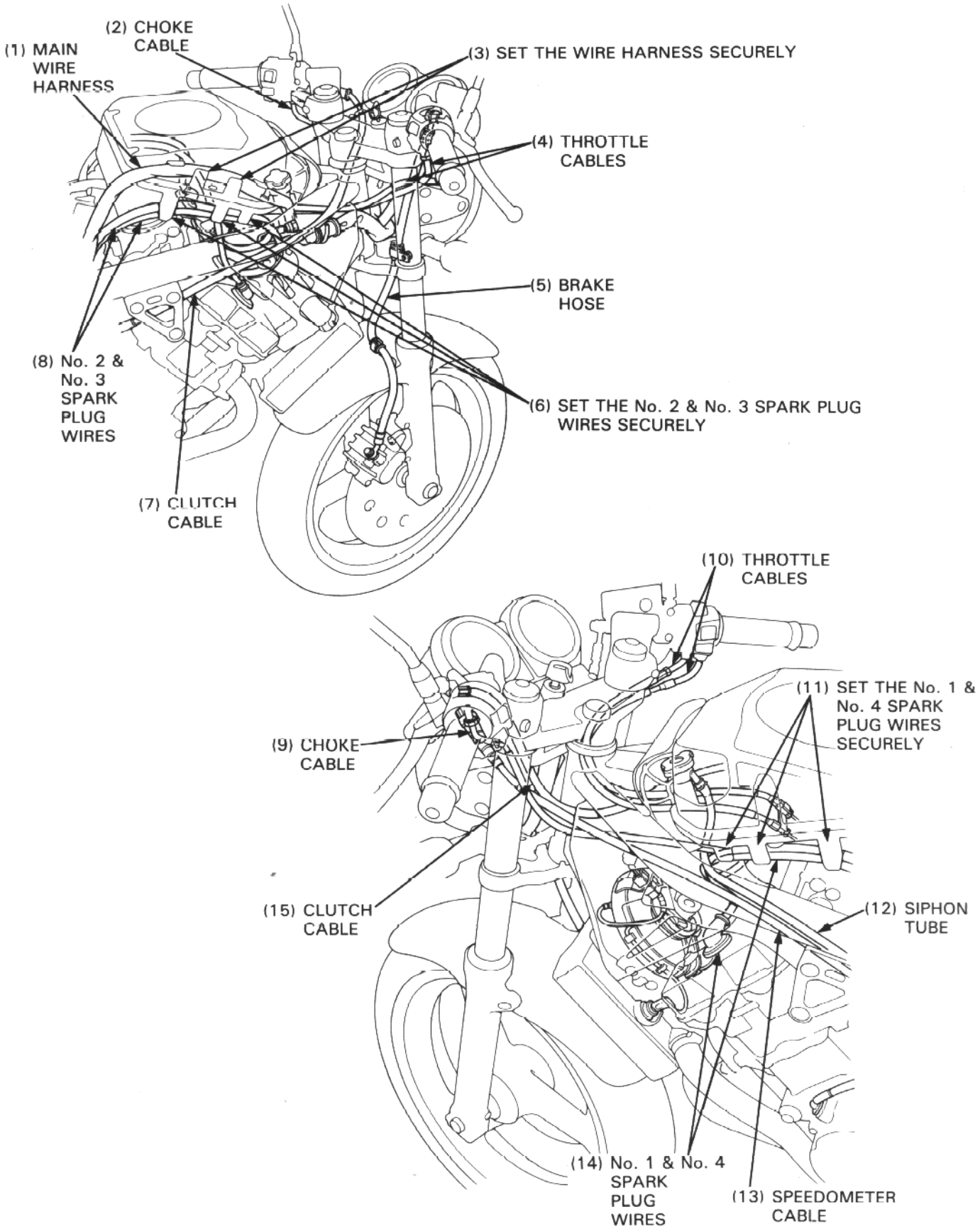
FRAME

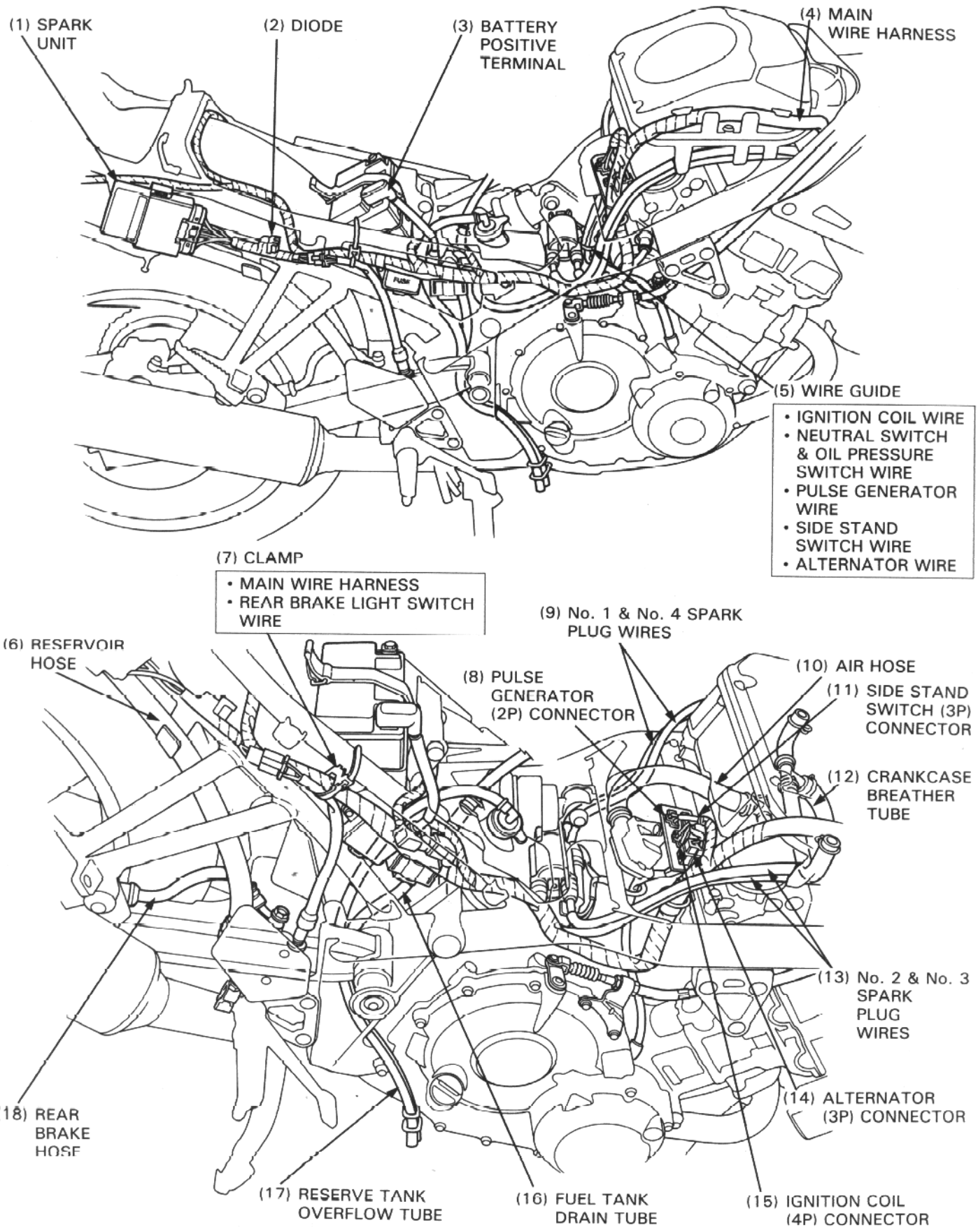
Point	Material	Remarks
• Center stand pivot • Side stand pivot • Brake pedal pivot • Gearshift pedal pivot • Steering head bearings • Dust seal lips • Clutch lever pivot • Throttle cable ends • Swingarm pivot bearings • Seat locking tab • Rear wheel driven flange bearing • Wheel bearings • Speedometer gear	Multipurpose grease	
• Brake caliper seals • Caliper-piston sliding surface • Master cylinder piston cups • Master cylinder piston sliding surface	DOT 4 Brake fluid	
• Brake caliper pivots • Brake caliper pivot boots • Rear brake master cylinder push rod head	Silicone grease	
• Speedometer cable • Throttle cable • Choke cable • Clutch cable	Light weight oil	
• Handlebar grip inside surface	Honda Bond A or Honda Hand Grip Cement (U.S.A. only)	

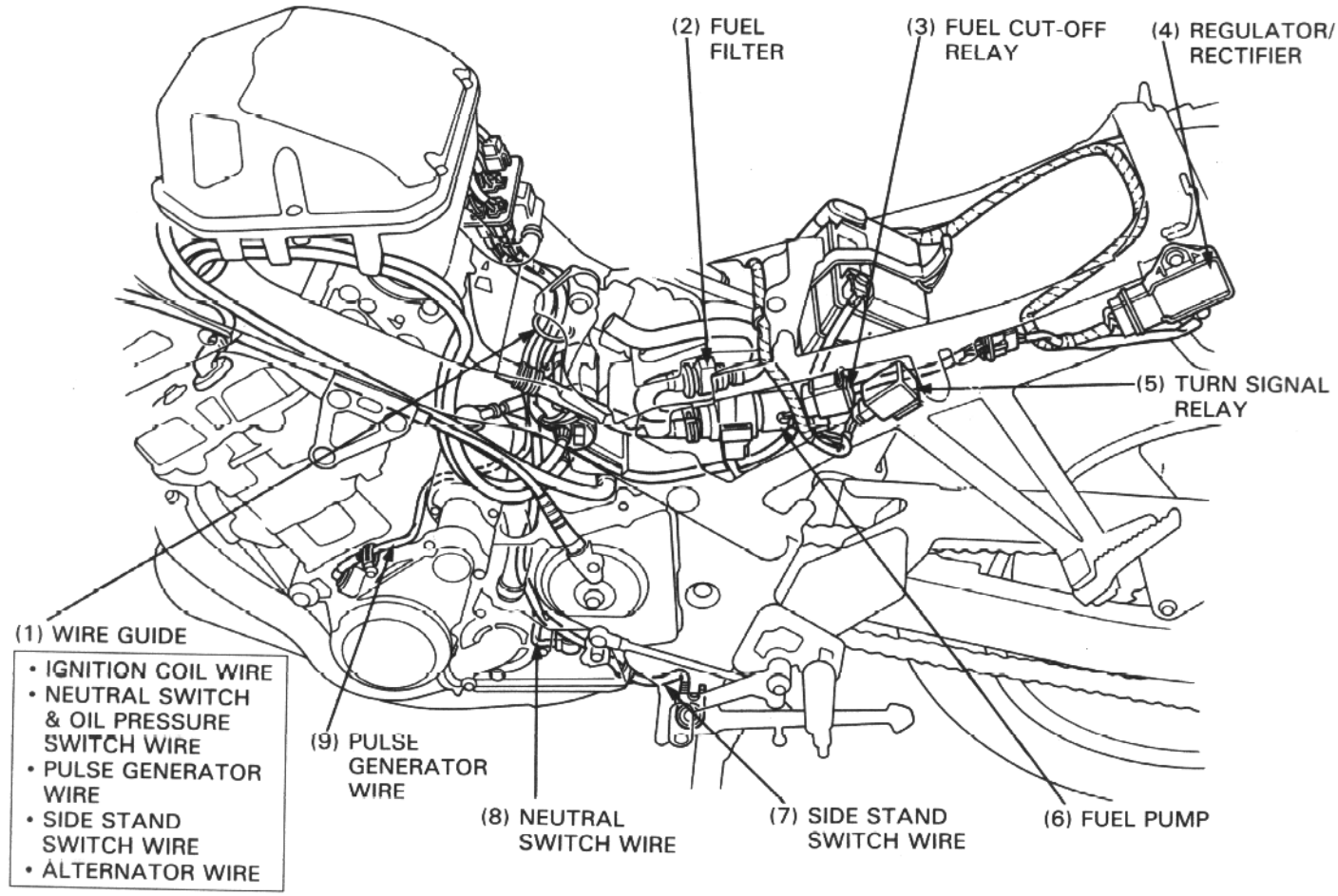
CABLE AND HARNESS ROUTING

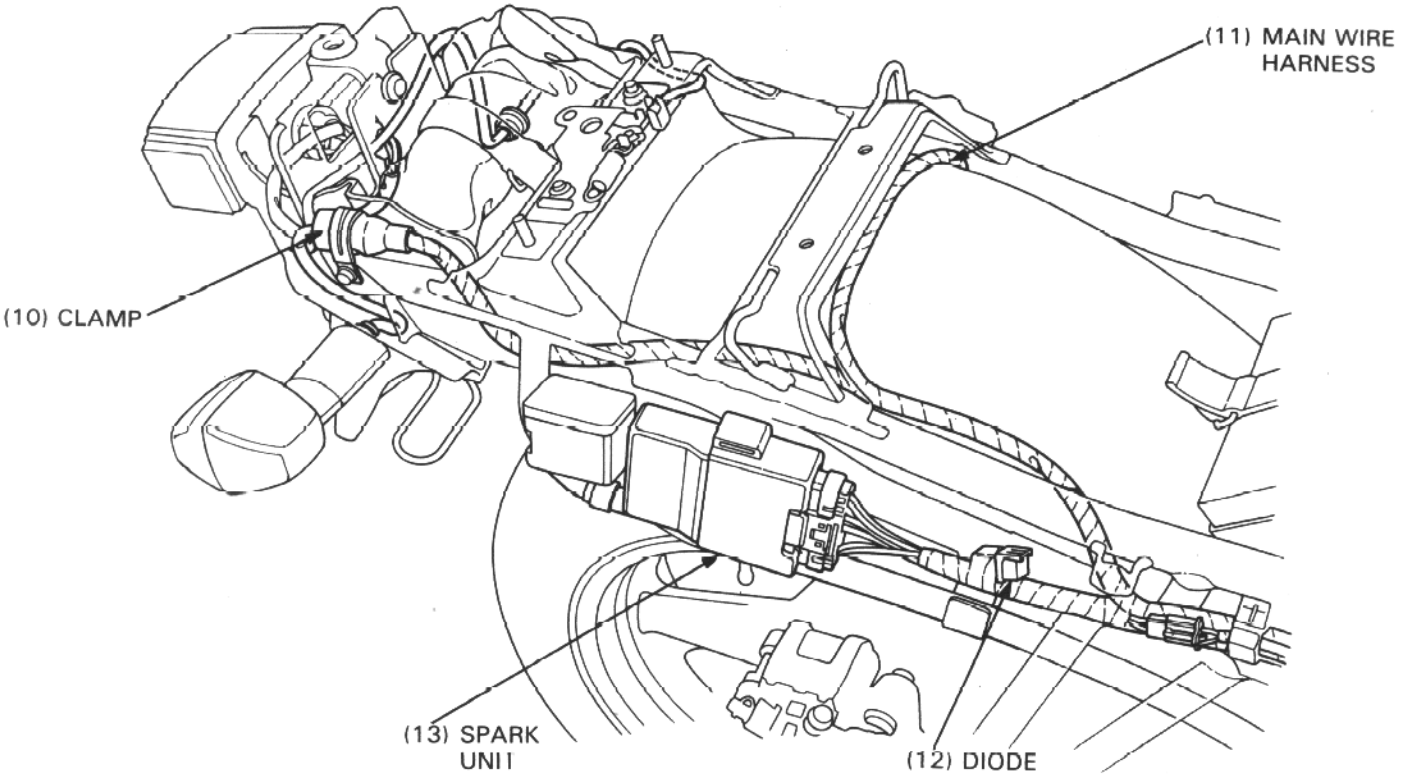




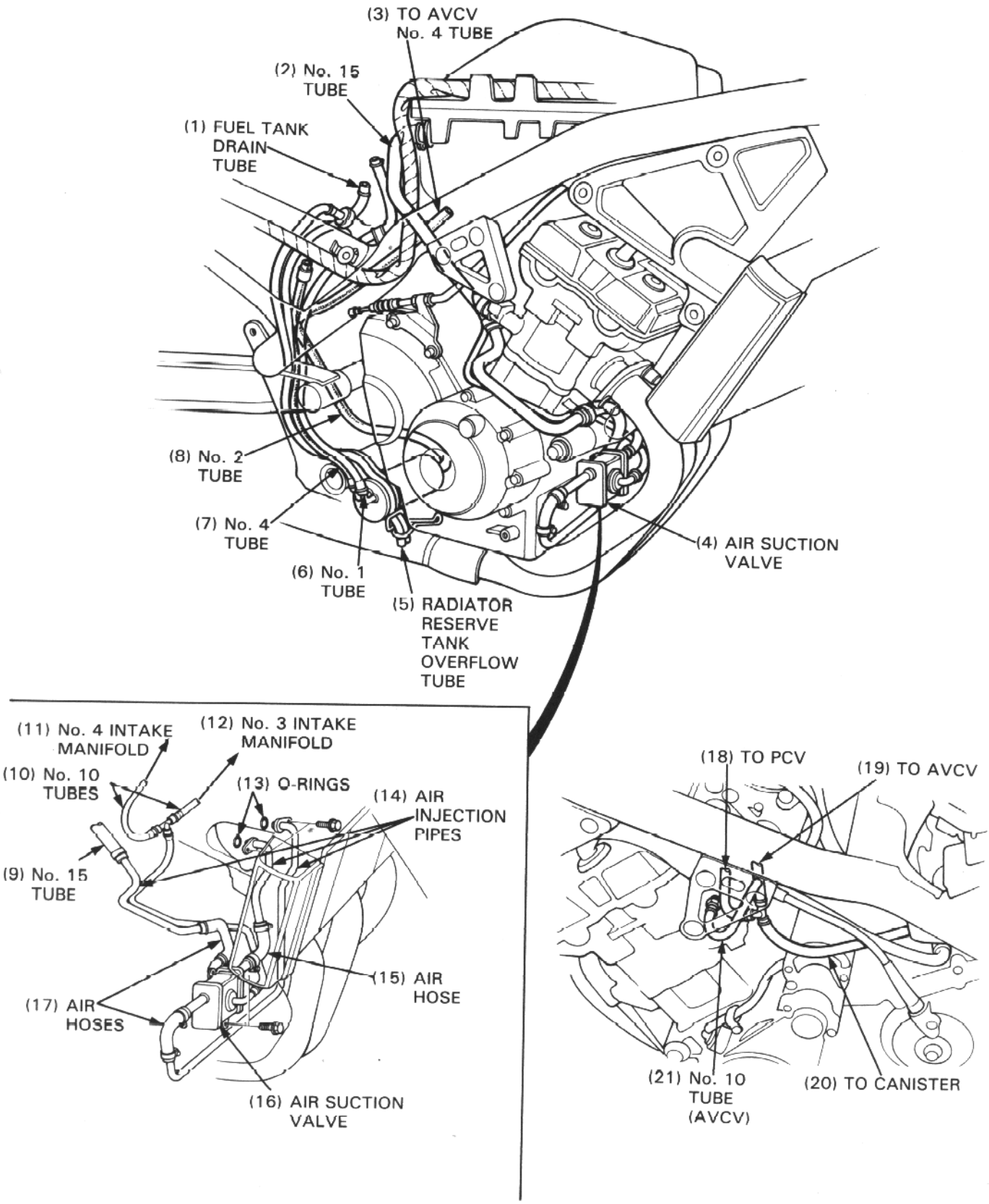

(1) MAIN WIRE HARNESS
(2) CHOKE CABLE
(3) SET THE WIRE HARNESS SECURELY
(4) THROTTLE CABLES
(5) BRAKE HOSE
(6) SET THE No. 2 & No. 3 SPARK PLUG WIRES SECURELY
(7) CLUTCH CABLE
(8) No. 2 & No. 3 SPARK PLUG WIRES
(9) CHOKE CABLE
(10) THROTTLE CABLES
(11) SET THE No. 1 & No. 4 SPARK PLUG WIRES SECURELY
(12) SIPHON TUBE
(13) SPEEDOMETER CABLE
(14) No. 1 & No. 4 SPARK PLUG WIRES
(15) CLUTCH CABLE

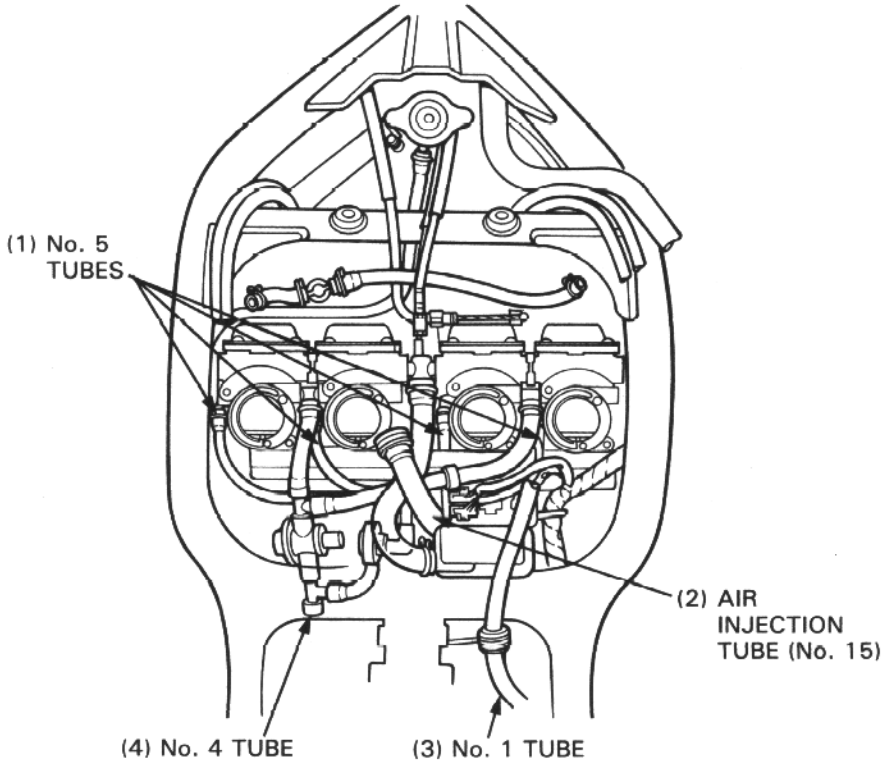

(1) SPARK UNIT
(2) DIODE
(3) BATTERY POSITIVE TERMINAL
(4) MAIN WIRE HARNESS
(5) WIRE GUIDE
• IGNITION COIL WIRE
• NEUTRAL SWITCH & OIL PRESSURE SWITCH WIRE
• PULSE GENERATOR WIRE
• SIDE STAND SWITCH WIRE
• ALTERNATOR WIRE
(7) CLAMP
• MAIN WIRE HARNESS
• REAR BRAKE LIGHT SWITCH WIRE
(6) RESERVOIR HOSE
(8) PULSE GENERATOR (2P) CONNECTOR
(9) No. 1 & No. 4 SPARK PLUG WIRES
(10) AIR HOSE
(11) SIDE STAND SWITCH (3P) CONNECTOR
(12) CRANKCASE BREATHER TUBE
(13) No. 2 & No. 3 SPARK PLUG WIRES
(14) ALTERNATOR (3P) CONNECTOR
(15) IGNITION COIL (4P) CONNECTOR
(16) FUEL TANK DRAIN TUBE
(17) RESERVE TANK OVERFLOW TUBE
(18) REAR BRAKE HOSE

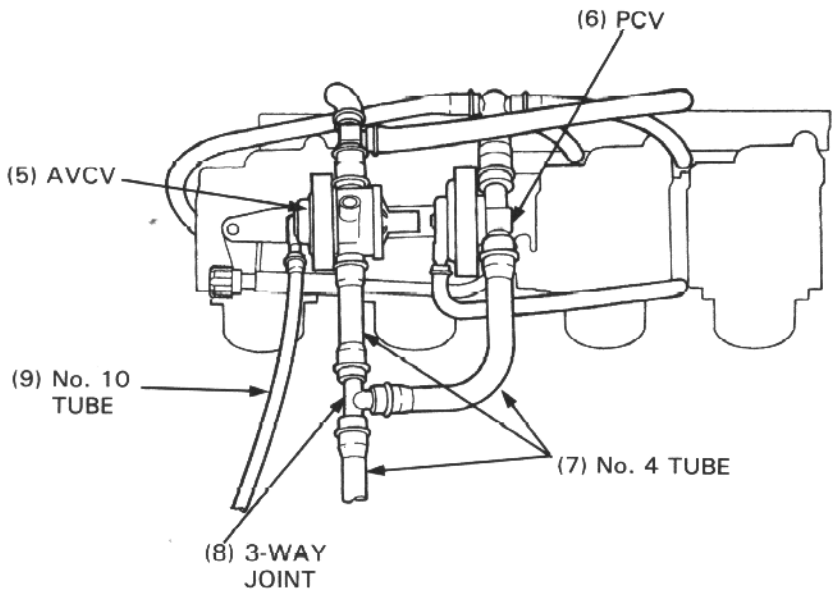

(2) FUEL FILTER
(3) FUEL CUT-OFF RELAY
(4) REGULATOR/ RECTIFIER
(5) TURN SIGNAL RELAY
(1) WIRE GUIDE
• IGNITION COIL WIRE
• NEUTRAL SWITCH & OIL PRESSURE SWITCH WIRE
• PULSE GENERATOR WIRE
• SIDE STAND SWITCH WIRE
• ALTERNATOR WIRE
(9) PULSE GENERATOR WIRE
(8) NEUTRAL SWITCH WIRE
(7) SIDE STAND SWITCH WIRE
(6) FUEL PUMP


(11) MAIN WIRE HARNESS
(10) CLAMP
(13) SPARK UNIT
(12) DIODE

• California Model Only




(1) No. 5
TUBES
(2) AIR
INJECTION
TUBE (No. 15)
(4) No. 4 TUBE
(3) No. 1 TUBE


(6) PCV
(5) AVCV
(9) No. 10
TUBE
(7) No. 4 TUBE
(8) 3-WAY
JOINT

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.

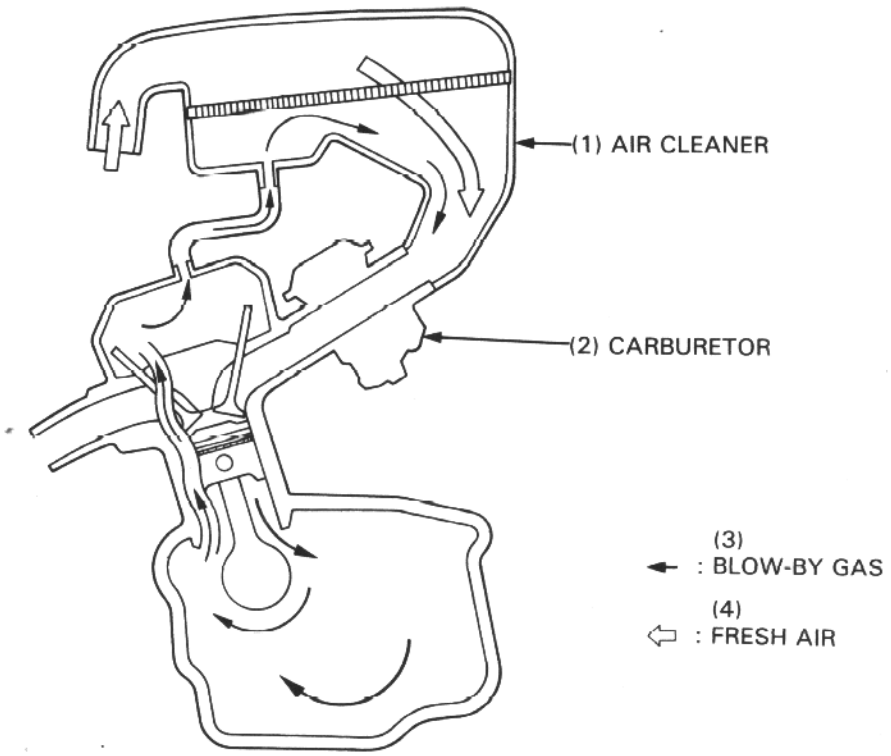
SOURCE OF EMISSIONS

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. utilized 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. Condensed crankcase vapors are accumulated in an air/oil separator and drain tube which must be emptied periodically. Refer to the Maintenance Schedule (page 3-4). The drain tube needs to be checked for oil accumulation more frequently if the machine has been ridden mostly at high speeds or in rain.



EXHAUST EMISSION CONTROL SYSTEM (SECONDARY AIR SUPPLY SYSTEM)

(Except California model)

The exhaust emission control system is composed of lean carburetor settings and no adjustment should be made except idle speed adjustment with the throttle stop screw.

(California model)

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.

This model has the air suction valve; it consists of reed valves built into the air injection control valve.

A reed valve prevents reverse air flow through the system. The 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.