HONDA

# SHOP MANUAL


## XL 125 V1

## IMPORTANT SAFETY NOTICE

⚠ WARNING ***Indicates a strong possibility of severe personal injury or death if instructions are not followed.***

**CAUTION:** ***Indicates a possibility of equipment damage if instructions are not followed.***

NOTE: Gives helpful information.

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. It is important to note that this manual contains some warnings and cautions against some specific service methods which could cause **PERSONAL INJURY** to service personnel or could damage a vehicle or render it unsafe. Please understand that those warnings could not cover all conceivable ways in which service, whether or not recommended by Honda, might be done or of the possibly hazardous consequences of each conceivable way, nor could Honda investigate all such ways. Anyone using service procedures or tools, whether or not recommended by Honda, must satisfy himself thoroughly that neither personal safety nor vehicle safety will be jeopardized by the service methods or tools selected.

**TYPE CODE**

- Throughout this manual, the following addreviations are used to identify individual model.

| CODE | AREA TYPE |
|---|---|
| ED | EUROPEAN DIRECT SALES |
| E | U.K. |
| F | FRANCE |
| SW | SWITZERLAND |
| IIG | GERMANY (TYPE II) |

# VARADERO 125 VALVE CLEARANCES

Remove fuel tank 2-8

Remove front inner fairing 2-6

Drain coolant 6-5

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Refit air cleaner housing 5-4

Refit radiator 6-12

Refit front inner fairing 2-6

Refit fuel tank 2-8

Refill coolant and bleed system 6-6

# HOW TO USE THIS MANUAL

This service manual describes the service procedures for the XL125V.

Follow the Maintenance Schedule (Section 3) recommendations to ensure that the vehicle is in peak operating condition.

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

Sections 1 and 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. Sections 4 through 20 describe parts of the motorcycle, grouped according to location.

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

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

If you don't know the source of the trouble, go to section 21 Troubleshooting.



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**SERVICE PUBLICATION OFFICE**

# CONTENTS

# SYMBOLS

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

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

# 1. GENERAL INFORMATION





## 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 may 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 OIL

**⚠ WARNING**

***Used engine oil 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 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.***

### BATTERY HYDROGEN & ELECTROLYTE

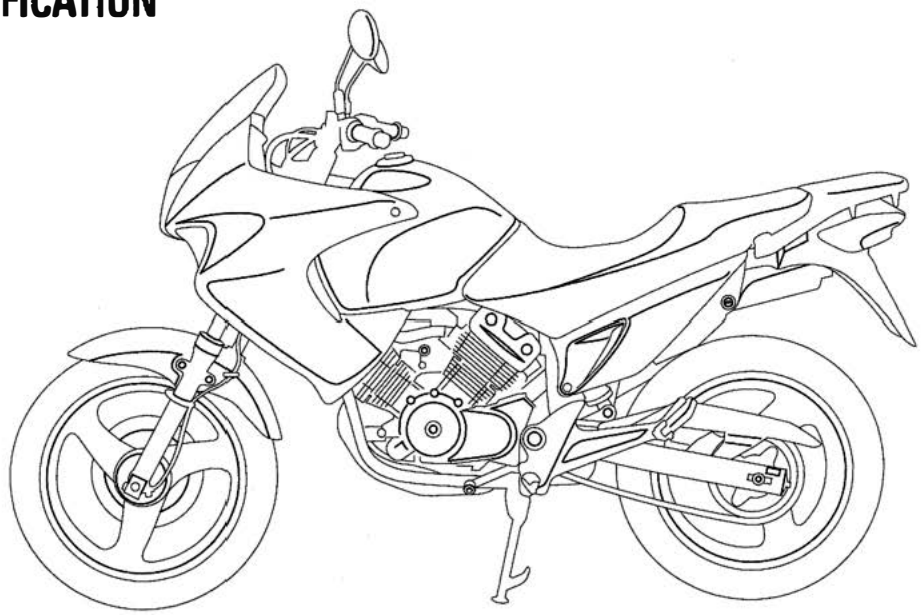
**⚠ WARNING**

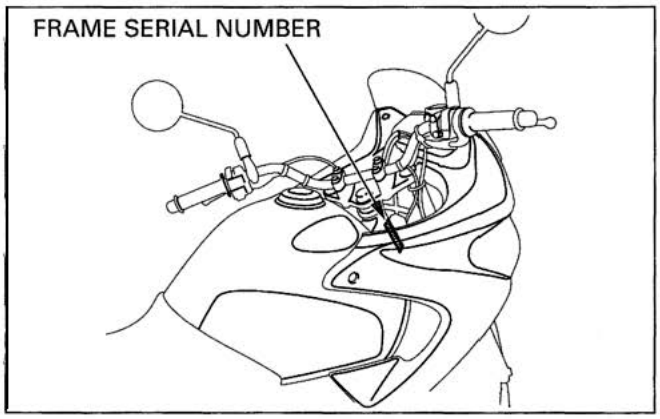
- ***The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using the battery in an enclosed space.***
- ***The battery contains sulfuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing 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 immediately.***
- ***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.***

# SERVICE RULES

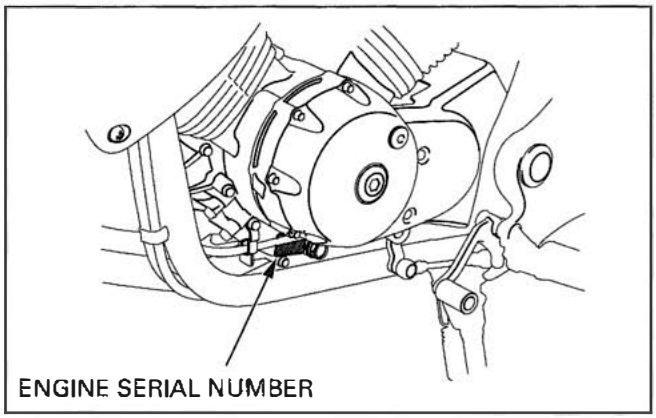
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalents. Parts that do not meet HONDA's design specifications may damage the motorcycle.
2. Use the special tools designed for this product.
3. Use only metric tools when servicing this motorcycle. Metric bolts, nuts and screws are not interchangeable with English fasteners. The use of incorrect tools and fasteners may damage the motorcycle.
4. Install new gaskets, O-rings, cotter pins, lock plates, etc. when reassembling.
5. When tightening a series of bolts or nuts, begin with the larger-diameter of inner bolts first, and tighten to the specified torque diagonally, in incremental steps unless a particular sequence is specified.
6. Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
7. After assembly, check all parts for proper installation and operation.
8. Route all electrical wires as show on pages 1- through 1- , Cable and Harness Routing.

# MODEL IDENTIFICATION

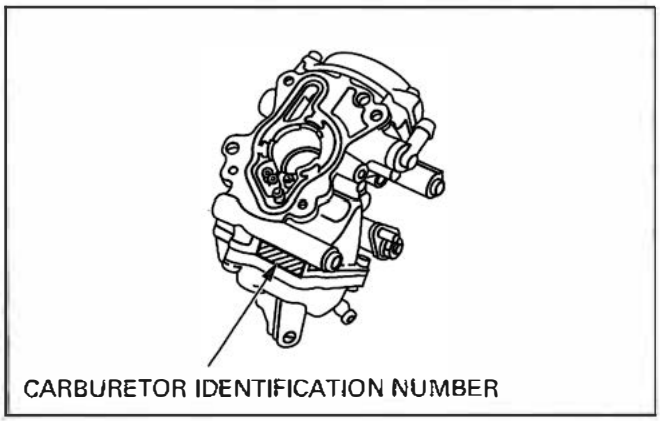





The frame serial number is stamped on the right side of the steering head.




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




The carburetor serial number is stamped on the left side of the carburetor body as shown.

# SPECIFICATIONS

## GENERAL

| ITEM | | | SPECIFICATIONS |
|---|---|---|---|
| DIMENSIONS | Overall length | | 2,150 mm (84.6 in) |
| | Overall width | | 850 mm (33.5 in) |
| | Overall height | | 1,250 mm (49.2 in) |
| | Wheelbase | | 1,450 mm (57.1 in) |
| | Seat height | | 802 mm (31.6 in) |
| | Ground clearance | | 190 mm (7.5 in) |
| | Dry weight | | 154 kg (339.5 lbs) |
| | Curb weight | | 167 kg (368.2 lbs) |
| | Maximum weight capacity | | 180 kg (396.8 lbs) |
| FRAME | Frame type | | Double cradle |
| | Front suspension | | Telescopic fork |
| | Front wheel travel | | 132 mm (5.2 in) |
| | Rear suspension | | Swingarm |
| | Rear wheel travel | | 150 mm (5.9 in) |
| | Front tire size | | 100/90-18 56P |
| | Rear tire size | | 130/80-17 65P |
| | Front tire brand | | BRIDGESTONE, PIRELLI |
| | Rear tire brand | | BRIDGESTONE, PIRELLI |
| | Front brake | | Hydraulic single disc |
| | Rear brake | | Hydraulic single disc |
| | Caster angle | | 28°00' |
| | Trail length | | 97 mm (3.8 in) |
| | Fuel tank capacity | | 17.5 liter (4.62 US gal, 3.85 Imp gal) |
| | Fuel tank reserve capacity | | 2.0 liter (0.53 US gal, 0.44 Imp gal) |
| ENGINE | Bore and stroke | | 42.0 x 45.0 mm (1.65 x 1.77 in) |
| | Displacement | | 125 cm³ (7.6 cu in) |
| | Compression ratio | | 11.8 : 1 |
| | Valve train | | Silent multi-link chain driven SOHC with rocker arms |
| | Intake valve | opens | 6° BTDC |
| | | closes | 24° ABDC |
| | Exhaust valve | opens | 31° BBDC |
| | | closes | 9° ATDC |
| | Lubrication system | | Forced pressure (dry sump) |
| | Oil pump type | | Trochoid |
| | Cooling system | | Liquid cooled |
| | Air filtration | | Viscous paper element |
| | Engine dry weight | | 40.5 kg (89.29 lbs) |

## GENERAL (Cont'd)

| ITEM | | | SPECIFICATIONS |
|---|---|---|---|
| CARBURETOR | Carburetor Type | | CV (Constant Velocity) dual carburetor |
| | Throttle bore | | 22 mm (0.9 in) |
| DRIVE TRAIN | Clutch system | | Multi-plate, wet |
| | Clutch operation system | | Mechanical type |
| | Transmission | | Constant mesh, 5-speed |
| | Primary reduction | | 3.722 (67/18) |
| | Final reduction | | 3.142 (44/14) |
| | Gear ratio | 1st | 3.083 (37/12) |
| | | 2nd | 1.933 (29/15) |
| | | 3rd | 1.428 (30/21) |
| | | 4th | 1.173 (27/23) |
| | | 5th | 1.000 (25/25) |
| | Gearshift pattern | | Left foot operated return system, 1-N-2-3-4-5 |
| ELECTRICAL | Ignition system | | Full transistor digital ignition |
| | Starting system | | Electric starter motor |
| | Charging system | | Triple phase output alterator |
| | Regulator/rectifier | | SCR shorted/triple phase, full wave rectification |
| | Lighting system | | Battery |

## LUBRICATION SYSTEM

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---|---|---|---|
| Engine oil capacity | at draining | 1.1 liter (1.2 US qt, 1.0 Imp qt) | — |
| | at disassembly | 1.5 liter (1.6 US qt, 1.3 Imp qt) | — |
| | at filter change | 1.2 liter (1.3 US qt, 1.1 Imp qt) | — |
| Recommended engine oil | | HONDA 4-stroke oil or equivalent motor oil<br>API service classification SE, SF or SG<br>Viscosity: SAE 10W - 40 | — |
| Oil pump rotor | Tip clearance | 0.15 (0.006) | 0.20 (0.008) |
| | Body clearance | 0.15 – 0.21 (0.006 – 0.008) | 0.25 (0.010) |
| | Side clearance | 0.03 – 0.11 (0.001 – 0.004) | 0.15 (0.006) |

## FUEL SYSTEM

| ITEM | | SPECIFICATIONS |
|---|---|---|
| Carburetor identification number | | VPU 2A |
| Main jet | Front | #82 |
| | Rear | #88 |
| Slow jet | | #38 |
| Jet needle number | Front | C12A |
| | Rear | C12B |
| Pilot screw | Initial/final opening | See page 5-18 |
| Float level | | 13.7 mm (0.54 in) |
| Base carburetor (for synchronization) | | Front cylinder (#2) |
| Idle speed | | 1,500 ± 100 $min^{-1}$ (rpm) |
| PAIR control valve specified vacuum | | 280 mm Hg (11.02 in Hg) |
| Throttle grip free play | | 2 – 6 mm (1/16 – 1/4 in) |

## COOLING SYSTEM

| ITEM | | SPECIFICATIONS |
|---|---|---|
| Coolant capacity | Radiator and engine | 1.03 liter (1.08 US qt, 0.95 Imp qt) |
| | Reserve tank | 0.24 liter (0.25 US qt, 0.21 Imp qt) |
| Radiator cap relief pressure | | 108 kpa (1.1 $kgf/cm^2$, 16 psi) |
| Thermostat | Begin to open | 81 – 84°C (178 – 183°F) |
| | Fully open | 95°C (203°F) |
| | Valve lift | 4.5 mm (0.18 in) minimum |
| Standard coolant concentration | | 50% mixture with soft water |

## CLUTCH SYSTEM/GEARSHIFT LINKAGE

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---|---|---|---|
| Clutch lever free play | | 10 – 20 (3/8 – 13/16) | — |
| Clutch spring free length | | 42.1 (1.66) | 41.2 (1.62) |
| Clutch disc thickness | A | 2.92 – 3.08 (0.115 – 0.121) | 2.6 (0.10) |
| | B | 2.92 – 3.08 (0.115 – 0.121) | 2.6 (0.10) |
| Clutch plate warpage | | — | 0.30 (0.012) |
| Clutch outer guide | I.D. | 20.010 – 20.035 (0.7878 – 0.7888) | 20.05 (0.789) |
| | O.D. | 25.959 – 25.980 (1.0220 – 1.0228) | 25.94 (1.021) |
| Mainshaft O.D. at clutch outer guide | | 19.959 – 19.980 (0.7858 – 0.7866) | 19.94 (0.785) |

## CYLINDER HEAD/VALVE

Unit: mm (in)

| ITEM | | | STANDARD | SERVICE LIMIT |
|---|---|---|---|---|
| Cylinder compression | | | 1,304 kPa (13.3 kgf/cm², 189 psi) at 500 min⁻¹ (rpm) | — |
| Cylinder head warpage | | | — | 0.05 (0.002) |
| Valve, valve guide | Valve clearance | IN | 0.15 ± 0.02 (0.006 ± 0.001) | — |
| | | EX | 0.24 ± 0.02 (0.009 ± 0.001) | — |
| | Valve stem O.D. | IN | 4.975 – 4.990 (0.1959 – 0.1965) | 4.965 (0.1955) |
| | | EX | 4.955 – 4.970 (0.1951 – 0.1957) | 4.945 (0.1947) |
| | Valve guide I.D. | IN | 5.000 – 5.012 (0.1969 – 0.1973) | 5.03 (0.198) |
| | | EX | 5.000 – 5.012 (0.1969 – 0.1973) | 5.03 (0.198) |
| | Stem-to-guide clearance | IN | 0.010 – 0.037 (0.0004 – 0.0015) | 0.065 (0.0026) |
| | | EX | 0.030 – 0.057 (0.0012 – 0.0022) | 0.085 (0.0033) |
| | Valve guide projection above cylinder head | IN | 12.10 (0.476) | — |
| | | EX | 12.10 (0.476) | — |
| | Valve seat width | IN/EX | 0.90 – 1.10 (0.035 – 0.043) | 1.5 (0.06) |
| Valve spring free length | | IN | 38.00 (1.496) | 36.5 (1.44) |
| | | EX | 38.00 (1.496) | 36.5 (1.44) |
| Camshaft | Cam lobe height | IN | 28.8527 – 29.0927 (1.13593 – 1.14538) | 28.82 (1.135) |
| | | EX | 28.8849 – 29.1249 (1.13720 – 1.14665) | 28.85 (1.136) |
| | Runout | | 0.030 (0.0012) | 0.050 (0.0020) |
| | Identification marks | | Front "F"/Rear "R" | — |
| Rocker arm I.D. | | IN/EX | 10.000 – 10.015 (0.3937 – 0.3943) | 10.05 (0.396) |
| Rocker arm shaft O.D. | | IN/EX | 9.972 – 9.987 (0.3926 – 0.3932) | 9.92 (0.391) |
| Rocker arm-to-rocker arm shaft clearance | | | 0.013 – 0.043 (0.0005 – 0.0017) | 0.10 (0.004) |

## CYLINDER/PISTON

Unit: mm (in)

| ITEM | | | STANDARD | SERVICE LIMIT |
|---|---|---|---|---|
| Cylinder | I.D. | | 42.00 – 42.01 (1.654 – 1.654) | 42.10 (1.657) |
| | Out of round | | — | 0.06 (0.002) |
| | Taper | | — | 0.06 (0.002) |
| | Warpage | | — | 0.05 (0.002) |
| Piston, piston rings | Piston mark direction | | "IN" mark facing toward the intake side | — |
| | Piston O.D. | | 41.97 – 41.99 (1.652 – 1.653) | 41.90 (1.650) |
| | Piston O.D. measurement point | | 14.0 (0.55) from bottom of skirt | — |
| | Piston pin bore I.D. | | 13.002 – 13.008 (0.5119 – 0.5121) | 13.04 (0.513) |
| | Piston pin O.D. | | 12.994 – 13.000 (0.5116 – 0.5118) | 12.98 (0.511) |
| | Piston-to-piston pin clearance | | 0.002 – 0.014 (0.0001 – 0.0006) | 0.04 (0.002) |
| | Piston ring-to-ring groove clearance | Top | 0.015 – 0.05 (0.0006 – 0.002) | 0.080 (0.0031) |
| | | Second | 0.015 – 0.05 (0.0006 – 0.002) | 0.080 (0.0031) |
| | Piston ring end gap | Top | 0.05 – 0.15 (0.002 – 0.006) | 0.30 (0.012) |
| | | Second | 0.20 – 0.35 (0.008 – 0.014) | 0.50 (0.020) |
| | | Oil (side rail) | 0.10 – 0.60 (0.004 – 0.024) | 0.80 (0.031) |
| | Piston ring mark | Top | "R" mark | — |
| | | Second | "RN" mark | — |
| Cylinder-to-piston clearance | | | 0.010 – 0.040 (0.0004 – 0.0016) | 0.10 (0.004) |
| Connecting rod small end I.D. | | | 13.016 – 13.034 (0.5124 – 0.5131) | 13.044 (0.5135) |
| Connecting rod-to-piston pin clearance | | | 0.010 – 0.040 (0.0004 – 0.0016) | 0.06 (0.002) |

## – CRANKCASE/TRANSMISSION/CRANKSHAFT

Unit: mm (in)

| ITEM | | | STANDARD | SERVICE LIMIT |
|---|---|---|---|---|
| Transmission | Gear I.D. | M4, M5, C1, C2 | 23.000 – 23.021 (0.9055 – 0.9063) | 23.04 (0.907) |
| | | C3 | 25.020 – 25.041 (0.9850 – 0.9859) | 25.06 (0.987) |
| | Bushing O.D. | M4, M5, C1, C2 | 22.959 – 22.980 (0.9039 – 0.9047) | 22.94 (0.903) |
| | | C3 | 24.979 – 25.000 (0.9834 – 0.9843) | 24.96 (0.983) |
| | Bushing I.D. | M4 | 20.020 – 20.041 (0.7882 – 0.7890) | 20.06 (0.790) |
| | | C1 | 18.000 – 18.018 (0.7087 – 0.7094) | 18.04 (0.710) |
| | | C2 | 20.000 – 20.021 (0.7874 – 0.7882) | 20.04 (0.789) |
| | | C3 | 22.000 – 22.021 (0.8661 – 0.8670) | 22.04 (0.868) |
| | Gear-to-bushing clearance | M4, M5, C1, C2, C3 | 0.020 – 0.062 (0.0008 – 0.0024) | 0.10 (0.004) |
| | Mainshaft O.D. | M4 bushing | 19.959 – 19.980 (0.7858 – 0.7866) | 19.94 (0.785) |
| | Countershaft O.D. | C1 bushing | 17.966 – 17.984 (0.7073 – 0.7080) | 17.95 (0.707) |
| | | C2 bushing | 19.974 – 19.987 (0.7864 – 0.7869) | 19.95 (0.785) |
| | | C3 bushing | 21.959 – 21.980 (0.8645 – 0.8654) | 21.94 (0.864) |
| | Bushing-to-shaft clearance | M4 | 0.040 – 0.082 (0.0016 – 0.0032) | 0.10 (0.004) |
| | | C1 | 0.016 – 0.052 (0.0006 – 0.0020) | 0.08 (0.003) |
| | | C2 | 0.013 – 0.047 (0.0005 – 0.0019) | 0.08 (0.003) |
| | | C3 | 0.020 – 0.062 (0.0008 – 0.0024) | 0.09 (0.004) |
| Shift fork | I.D. | | 12.000 – 12.018 (0.4724 – 0.4731) | 12.03 (0.474) |
| | Claw thickness | | 4.930 – 5.000 (0.1941 – 0.1969) | 4.9 (0.19) |
| Shift fork shaft O.D. | | | 11.957 – 11.968 (0.4707 – 0.4712) | 11.95 (0.470) |
| Shift drum O.D. (at left side journal) | | | 13.966 – 13.984 (0.5498 – 0.5506) | 13.94 (0.549) |
| Crankshaft | Connecting rod big end side clearance | | 0.05 – 0.70 (0.002 – 0.028) | 0.80 (0.031) |
| | Connecting rod big end radial clearance | | — | 0.020 (0.0008) |
| | Runout | | — | 0.05 (0.002) |

## FRONT WHEEL/SUSPENSION/STEERING

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---|---|---|---|
| Minimum tire tread depth | | — | 1.5 (0.06) |
| Cold tire pressure | Driver only | 200 kPa (2.0 kgf/cm², 29 psi) | — |
| | Driver and passenger | 200 kPa (2.0 kgf/cm², 29 psi) | — |
| Axle runout | | — | 0.20 (0.008) |
| Wheel rim runout | Radial | — | 1.0 (0.04) |
| | Axial | — | 1.0 (0.04) |
| Wheel balance weight | | — | 60 g (2.1 oz) max. |
| Fork | Spring free length | 470.6 (18.53) | 461 (18.15) |
| | Tube runout | — | 0.20 (0.008) |
| | Recommended fluid | Fork fluid | — |
| | Fluid level | 117 (4.6) | — |
| | Fluid capacity | 346 ± 2.5 cm³ (11.7 ± 0.08 US oz, 12.2 ± 0.09 Imp oz) | — |
| Steering head bearing pre-load | | 0.10 – 0.15 kgf (0.220 – 0.330 lbf) | — |

## REAR WHEEL/SUSPENSION

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---|---|---|---|
| Minimum tire tread depth | | — | 2.0 (0.08) |
| Cold tire pressure | Driver only | 200 kPa (2.0 kgf/cm², 29 psi) | — |
| | Driver and passenger | 225 kPa (2.25 kgf/cm², 33 psi) | — |
| Axle runout | | — | 0.20 (0.008) |
| Wheel runout | Radial | — | 1.0 (0.04) |
| | Axial | — | 1.0 (0.04) |
| Wheel balance weight | | — | 60 g (2.1 oz) max. |
| Drive chain slack | | 25 – 35 (1 – 1 3/8) | 60 (2 3/8) |
| Drive chain link | | 110 | — |
| Drive chain size | DID | 520V6 | — |
| | RK | 520 SMOZ2 | — |
| | REGINA | 135 ORNV2 | — |

## BRAKE SYSTEM

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---|---|---|---|
| Front | Specified brake fluid | DOT3 or DOT4 | — |
| | Brake pad wear indicator | — | To groove |
| | Brake disc thickness | 3.8 – 4.2 (0.15 – 0.17) | 3.5 (0.13) |
| | Brake disc runout | — | 0.1 (0.004) |
| | 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. | 25.400 – 25.450 (1.0000 – 1.0020) | 25.460 (1.0024) |
| | Caliper piston O.D. | 25.335 – 25.368 (0.9968 – 0.9987) | 25.31 (0.996) |
| Rear | Specified brake fluid | DOT3 or DOT4 | — |
| | Brake pad wear indicator | — | To groove |
| | Brake disc thickness | 3.8 – 4.2 (0.15 – 0.17) | 3.5 (0.13) |
| | Brake disc runout | — | 0.1 (0.004) |
| | Master cylinder I.D. | 12.700 – 12.743 (0.5000 – 0.5017) | 12.755 (0.5022) |
| | Master piston O.D. | 12.657 – 12.684 (0.4983 – 0.4994) | 12.654 (0.4978) |
| | Caliper cylinder I.D. | 32.030 – 32.080 (1.2610 – 1.2630) | 32.090 (1.2634) |
| | Caliper piston O.D. | 31.948 – 31.998 (1.2578 – 1.2598) | 31.94 (1.257) |

## CHARGING SYSTEM/ALTERNATOR

| ITEM | | | SPECIFICATIONS |
|---|---|---|---|
| Battery | Capacity | | 12 V – 6 Ah |
| | Current leakage | | 1.0 mA max |
| | Voltage (20°C/68°F) | Fully charged | 13.0 – 13.2 V |
| | | Needs charging | Below 12.3 V |
| | Charging current | Normal | 0.6 A/5 – 10 h |
| | | Quick | 3.0 A/1 h max |
| Alternator | Capacity | | 260 W/5,000 $min^{-1}$ (rpm) |
| | Charging coil resistance (20°C/68°F) | | 0.1 – 0.5 Ω |

## IGNITION SYSTEM

Unit: mm (in)

| ITEM | | SPECIFICATIONS | |
|---|---|---|---|
| Spark plug | | NGK | DENSO |
| | Standard | CR8EH-9 (NGK) | U24FER-9 (DENSO) |
| Spark plug gap | | 0.8 – 0.9 mm (0.031 – 0.035 in) | |
| Ignition coil primary peak voltage | | 100 V minimum | |
| Ignition pulse generator peak voltage | | 0.7 V minimum | |
| Ignition timing "F" mark | | 12° ± 1° BTDC at 1,500 ± 100 $min^{-1}$ (rpm) | |
| Full advance | | BTDC 38° | |

## ELECTRIC STARTER/STARTER CLUTCH

| ITEM | STANDARD | SERVICE LIMIT |
|---|---|---|
| Starter motor brush length | 10.00 – 10.05 (0.394 – 0.396) | 3.5 (0.14) |
| Starter clutch gear O.D. | 45.657 – 45.673 (1.7975 – 1.7981) | 45.64 (1.797) |
| Starter clutch outer I.D. | 62.317 – 62.347 (2.4534 – 2.4546) | 62.33 (2.454) |

## LIGHTS/METERS/SWITCHES

| ITEM | | SPECIFICATIONS |
|---|---|---|
| Bulbs | Headlight (High/low beam) | 12 V – 35/35 W x 2 |
| | Position light | 12 V – 5 W x 2 |
| | Brake/tail/license light | 12 V – 21/5 W |
| | Front turn signal light | 12 V – 10 W x 2 |
| | Rear turn signal light | 12 V – 10 W x 2 |
| | Instrument light | 12 V – 1.7 W x 3 |
| | Turn signal indicator | 12 V – 2 W x 2 |
| | High beam indicator | 12 V – 1.2 W |
| | Neutral indicator | 12 V – 2 W |
| | Temp indicator | 12 V – 1.7 W |
| Fuse | Main fuse | 30 A |
| | Sub fuse | 10 A x 5 |
| Thermo switch | OFF → ON | 112 – 118°C (234 – 444°F) |
| | ON → OFF | Below 108°C (226°F) |

# TORQUE VALUES

## STANDARD

| FASTENER TYPE | TORQUE N·m (kgf·m, lbf·ft) | FASTENER TYPE | TORQUE N·m (kgf·m, lbf·ft) |
|---|---|---|---|
| 5 mm bolt and nut | 5 (0.5, 3.6) | 5 mm screw | 4 (0.4, 2.9) |
| 6 mm bolt and nut (Include SH flange bolt) | 10 (1.0, 7) | 6 mm screw | 9 (0.9, 6.5) |
| | | 6 mm flange bolt and nut (Include NSHF) | 12 (1.2, 9) |
| 8 mm bolt and nut | 22 (2.2, 16) | | |
| 10 mm bolt and nut | 34 (3.5, 25) | 8 mm flange bolt and nut | 26 (2.7, 20) |
| 12 mm bolt and nut | 54 (5.5, 40) | 10 mm flange bolt and nut | 39 (4.0, 29) |

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

NOTES: 1. Apply sealant to the threads.
2. Apply locking agent to the threads.
3. Apply molybdenum disulfide oil to the threads and flange surface.
4. Left hand threads.
5. Stake.
6. Apply oil to the threads and flange surface.
7. Apply clean engine oil to the O-ring.
8. UBS bolt.
9. U-nut.
10. ALOC bolt.

## ENGINE

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|---|---|---|---|---|
| **MAINTENANCE:** | | | | |
| Spark plug | 2 | 10 | 12 (1.2, 9) | |
| Crankshaft hole cap | 1 | 30 | 15 (1.5, 11) | |
| Timing hole cap | 1 | 14 | 10 (1.0, 7) | |
| Valve adjusting screw lock nut | 4 | 6 | 17 (1.7, 12) | NOTE 6 |
| Oil drain bolt | 1 | 12 | 25 (2.5, 18) | |
| **LUBRICATION SYSTEM:** | | | | |
| Oil pump mounting bolt | 2 | 6 | 14 (1.4, 10) | |
| **FUEL SYSTEM:** | | | | |
| Caburetor insutator band screw | 4 | 5 | 5 (0.5, 3.6) | |
| PAIR check valve cover bolt | 4 | 5 | 5 (0.5, 3.6) | |
| **COOLING SYSTEM:** | | | | |
| Water pump drain bolt | 1 | 10 | 13 (1.3, 9) | |
| Water pump impeller | 1 | 7 | 12 (1.2, 9) | |
| Cooling fan nut | 1 | 3 | 1 (0.1, 0.7) | NOTE 2 |
| **ENGINE REMOVAL/INSTALLATION:** | | | | |
| Drive sprocket setting plate bolt | 2 | 6 | 12 (1.2, 9) | |
| **CLUTCH/GEARSHIFT LINKAGE:** | | | | |
| Clutch center lock nut | 1 | 16 | 108 (11, 80) | NOTE 5, 6 |
| Clutch pressure plate bolt | 5 | 6 | 12 (1.2, 9) | |
| Gear shift stopper arm pivot bolt | 1 | 6 | 12 (1.2, 9) | NOTE 6 |
| Gear shift cam plate bolt | 1 | 8 | 23 (2.3, 17) | NOTE 2 |

## ENGINE (Cont'd)

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|---|---|---|---|---|
| **CYLINDER HEAD/VALVE:** | | | | |
| Cylinder head side cover bolt | 4 | 6 | 10 (1.0, 7) | |
| Cylinder head cover bolt | 8 | 6 | 10 (1.0, 7) | |
| Cam sprocket bolt | 4 | 7 | 20 (2.0, 14) | NOTE 2 |
| Cylinder head flange nut: 8 mm (0.3 in) | 8 | 8 | 32 (3.3, 24) | NOTE 6 |
| 6 mm (0.2 in) | 4 | 6 | 12 (1.2, 9) | NOTE 6 |
| Camshaft holder bolt | 12 | 6 | 12 (1.2, 9) | |
| Rocker arm shaft bolt | 4 | 5 | 5 (0.5, 3.6) | |
| Cam chain tensioner lifter bolt | 4 | 6 | 12 (1.2, 9) | |
| Cam chain tensioner lifter plug | 2 | 6 | 4 (0.4, 2.9) | |
| **CRANKCASE/TRANSMISSION/CRANKSHAFT:** | | | | |
| Mainshaft bearing setting plate bolt | 2 | 6 | 10 (1.0, 7) | |
| Shift drum bearing setting plate bolt | 2 | 6 | 10 (1.0, 7) | NOTE 2 |
| **CHARGING SYSTEM/ALTERNATOR:** | | | | |
| Flywheel nut | 1 | 12 | 64 (6.5, 47) | NOTE 6 |
| Stator mounting bolt | 3 | 6 | 12 (1.2, 9) | |
| Ignition pulse generator mounting bolt | 2 | 5 | 5 (0.5, 3.6) | |
| Stator/Ignition pulse generator wire clamp bolt | 1 | 5 | 5 (0.5, 3.6) | |
| **IGNITION SYSTEM:** | | | | |
| Engine coolant temperature (ECT) sensor | 1 | 12 | 23 (2.3, 17) | |
| **ELECTRIC STARTER/STARTER CLUTCH:** | | | | |
| Starter motor terminal nut | 1 | 6 | 12 (1.2, 9) | |
| Starter motor front cover bolt | 2 | 5 | 5 (0.5, 3.6) | |
| Primary drive gear lock nut | 1 | 16 | 88 (9.0, 65) | NOTE 6 |
| **OTHERS:** | | | | |
| Neutral switch | 1 | 10 | 12 (1.2, 9) | |
| Neutral switch terminal nut | 1 | 4 | 2 (0.2, 1.4) | |

## FRAME

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|---|---|---|---|---|
| **FRAME/BODY PANELS/EXHAUST SYSTEM:** | | | | |
| Muffler band bolt | 1 | 8 | 20 (2.0, 14) | |
| Exhaust pipe joint nut | 4 | 8 | 18 (1.8, 13) | |
| Muffler mounting bolt | 2 | 8 | 32 (3.3, 24) | |
| **ENGINE REMOVAL/INSTALLATION:** | | | | |
| Front engine mounting nut | 1 | 10 | 39 (4.0, 29) | |
| Rear upper engine mounting nut | 1 | 10 | 39 (4.0, 29) | |
| Rear lower engine mounting nut | 2 | 10 | 39 (4.0, 29) | |
| Engine hanger bracket bolt | 1 | 8 | 18 (1.8, 13) | |
| **FRONT WHEEL/SUSPENSION/STEERING:** | | | | |
| Fork bolt | 2 | 28 | 22 (2.2, 16) | |
| Fork socket bolt | 2 | 8 | 20 (2.0, 14) | NOTE 2 |
| Handlebar holder bolt | 4 | 8 | 24 (2.4, 17) | |
| Steering stem nut | 1 | 24 | 103 (10.5, 76) | |
| Steering top thread | 1 | 26 | See page 12-26 | |
| Top bridge pinch bolt | 2 | 8 | 26 (2.7, 20) | |
| Bottom bridge pinch bolt | 4 | 8 | 34 (3.5, 25) | |
| Front axle bolt | 1 | 14 | 66 (6.7, 48) | |
| Front axle pinth bolt | 1 | 8 | 22 (2.2, 16) | |
| Front brake disc bolt | 4 | 8 | 42 (4.3, 31) | NOTE 10 |
| Throttle housing screw | | 5 | 4 (0.4, 2.9) | |

## FRAME (Cont'd)

| ITEM | QTY | THREAD DIA. (mm) | TORQUE N.m (kgf.m, lbf.ft) | REMARKS |
|---|---|---|---|---|
| **REAR WHEEL/SUSPENSION:** | | | | |
| Rear axle nut | 1 | 14 | 88 (9.0, 65) | NOTE 9 |
| Driven sprocket nut | 6 | 10 | 64 (6.5, 47) | NOTE 9 |
| Rear brake disc bolt | 4 | 8 | 42 (4.3, 31) | NOTE 10 |
| Shock absorber upper mounting nut | 1 | 10 | 44 (4.5, 33) | NOTE 9 |
| Shock absorber lower mounting nut | 1 | 10 | 44 (4.5, 33) | |
| Swingarm pivot nut | 1 | 14 | 88 (9.0, 65) | NOTE 9 |
| Chain slider screw | 2 | 5 | 3 (0.3, 2.2) | |
| Chain adjuster lock nut | 2 | 6 | 10 (1.0, 7) | |
| **BRAKE SYSTEM:** | | | | |
| Front brake oil bolt | 2 | 10 | 34 (3.5, 25) | |
| Front master cylinder holder bolt | 2 | 6 | 12 (1.2, 9) | |
| Front master cylinder cover screw | 2 | 4 | 2 (0.2, 1.4) | |
| Front brake light switch screw | 1 | 4 | 1 (0.1, 0.7) | |
| Brake lever pivot nut | 1 | 6 | 6 (0.6, 4.3) | |
| Brake lever pivot bolt | 1 | 6 | 1 (0.1, 0.7) | |
| Front brake caliper mounting bolt | 1 | 8 | 30 (3.1, 22) | NOTE 10 |
| Front caliper pin bolt (main) | 1 | 8 | 18 (1.8, 13) | |
| Front caliper pin bolt (sub) | 1 | 8 | 23 (2.3, 17) | |
| Front caliper pad pin | 1 | 10 | 18 (1.8, 13) | |
| Front caliper pad pin plug | 1 | 10 | 2 (0.2, 1.4) | |
| Rear brake reservoir tank bolt | 1 | 6 | 12 (1.2, 9) | |
| Rear brake oil bolt | 2 | 10 | 34 (3.5, 25) | |
| Rear master cylinder mounting bolt | 2 | 6 | 12 (1.2, 9) | |
| Rear master cylinder push rod nut | 1 | 8 | 17 (1.7, 12) | |
| Rear master cylinder cover screw | 2 | 4 | 2 (0.2, 1.4) | |
| Rear caliper pin bolt | 1 | 8 | 17 (1.7, 12) | |
| Rear caliper pad pin | 1 | 10 | 17 (1.7, 12) | |
| Rear caliper pad pin plug | 1 | 10 | 2 (0.2, 1.4) | |
| **LIGHTS/METERS/SWITCHES:** | | | | |
| Thermo switch | 1 | 16 | 18 (1.8, 13) | |
| **OTHER FASTENERS:** | | | | |
| Side stand pivot bolt | 1 | 10 | 10 (1.0, 7) | |
| Side stand lock nut | 1 | 10 | 29 (3.0, 22) | NOTE 9 |
| Side stand switch bolt | 1 | 6 | 10 (1.0, 7) | |

# TOOLS

NOTES: 1. Alternative tool.
2. Newly provided tool.

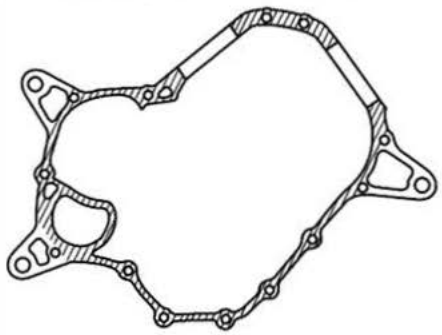
| DESCRIPTION | TOOL NUMBER | REMARKS | REF.SEC. |
|---|---|---|---|
| Attachment, 22 x 24 mm | 07746-0010800 | | 13 |
| Attachment, 24 x 26 mm | 07746-0010700 | | 6 |
| Attachment, 28 x 30 mm | 07746-1870100 | | 8 |
| Attachment, 32 x 35 mm | 07746-0010100 | | 11, 13,6 |
| Attachment, 42 x 47 mm | 07746-0010300 | | 11, 12, 13 |
| Bearing installer 37.42 | 07XMF-KGB0100 | | 11 |
| Bearing installer 37.5 | 07XMF-KGB0200 | | 11 |
| Bearing remover head | 07746-0050400 | | 12, 13 |
| Bearing remover head | 07936-GE00200 | | 6 |
| Bearing remover head | 07936-KC10200 | | 11 |
| Bearing remover shaft | 07936-GE00100 | | 6 |
| Bearing remover shaft | 07936-KC10100 | | 11 |
| Bearing remover shaft | 07746-0050100 | | 12, 13 |
| Bearing remover weight | 07741-0010201 | | 11 |
| Carburetor float level gauge | 07401-0010000 | | 5 |
| Clutch center holder | 07724-0050002 | | 8 |
| Crank shaft assembly collar | 07965-VM00100 | | 11 |
| Crank shaft assembly shaft | 07965-VM00200 | | 11 |
| Driver | 07749-0010000 | | 6, 8, 11, 12, 13 |
| Driver shaft | 07946-MJ00100 | | 13 |
| Flywheel holder | 07725-0040000 | | 15 |
| Flywheel puller | 07KMC-HE00100 | | 15 |
| Fork seal driver body | 07747-0010100 | | 12 |
| Fork seal driver attachment | 07947-KA20200 | | 12 |
| Gear holder | 07724-0010200 | | 17 |
| Mechanical seal driver attachment | 07945-4150400 | | 6 |
| Mechanical seal driver | 07PMD-KBP0100 | | 11 |
| Peak voltage adapter | 07HGJ-0020100 | | 16 |
| Pilot, 10 mm | 07746-0040100 | | 6 |
| Pilot, 12 mm | 07746-0040200 | | 8 |
| Pilot, 15 mm | 07746-0040300 | | 11, 12, 13 |
| Pilot, 17 mm | 07746-0040400 | | 11 |
| Pilot, 20 mm | 07746-0040500 | | 11 |
| Pilot, 25 mm | 07746-0040600 | | 11 |
| Pilot screw wrench | 07908-4730002 | | 5 |
| Plate, 200 x 300 x 20 | 07XMF-KGB0300 | | 11 |
| Snap ring pliers | 07914-SA50001 | | 14 |
| Driver handle | 07953-MJ10200 | | 12 |
| Steering stem driver | 07946-MB00000 | | 12 |
| Driver attachment | 07953-MJ10100 | | 12 |
| Steering stem cap nut wrench | 07716-0020400 | | 12 |
| Steering stem socket wrench | 07916-3710101 | | 12 |
| Universal bearing puller | 07631-0010000 | | 11 |
| Vacuum gauge attachment | 07510-3000100 | | 3 |
| Valve guide driver, 5 mm | 07942-MA60000 | | 9 |

(Cont'd)

| DESCRIPTION | TOOL NUMBER | REMARKS | REF.SEC. |
|---|---|---|---|
| Valve guide reamer | 07984-MA60001 | | 9 |
| Valve spring compressor | 07757-0010000 | | 9 |
| Valve spring compressor attachment | 07959-KM30101 | | 9 |
| Valve seat cutter | | | |
| Seat cutter, 24.5 mm (45° IN) | 07780-0010100 | | 9 |
| Seat cutter, 22 mm (45° EX) | 07780-0010701 | | 9 |
| Flat cutter, 25 mm (32° IN) | 07780-0012000 | | 9 |
| Flat cutter, 22 mm (32° EX) | 07780-0012601 | | 9 |
| Interior cutter, 22 mm (60° IN/EX) | 07780-0014202 | | 9 |
| Cutter holder, 5 mm | 07781-0010400 | | 9 |

# LUBRICATION & SEAL POINTS

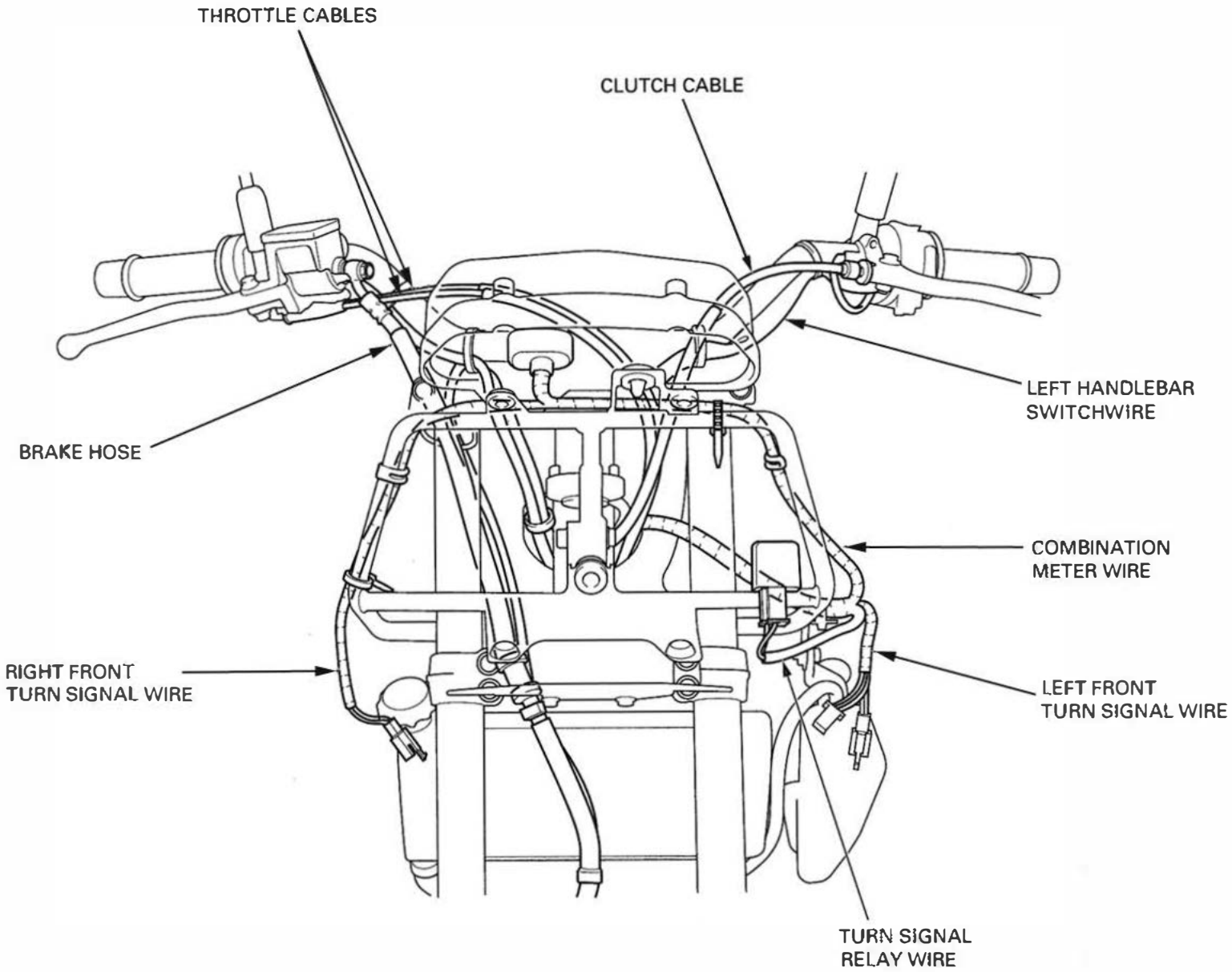
## ENGINE

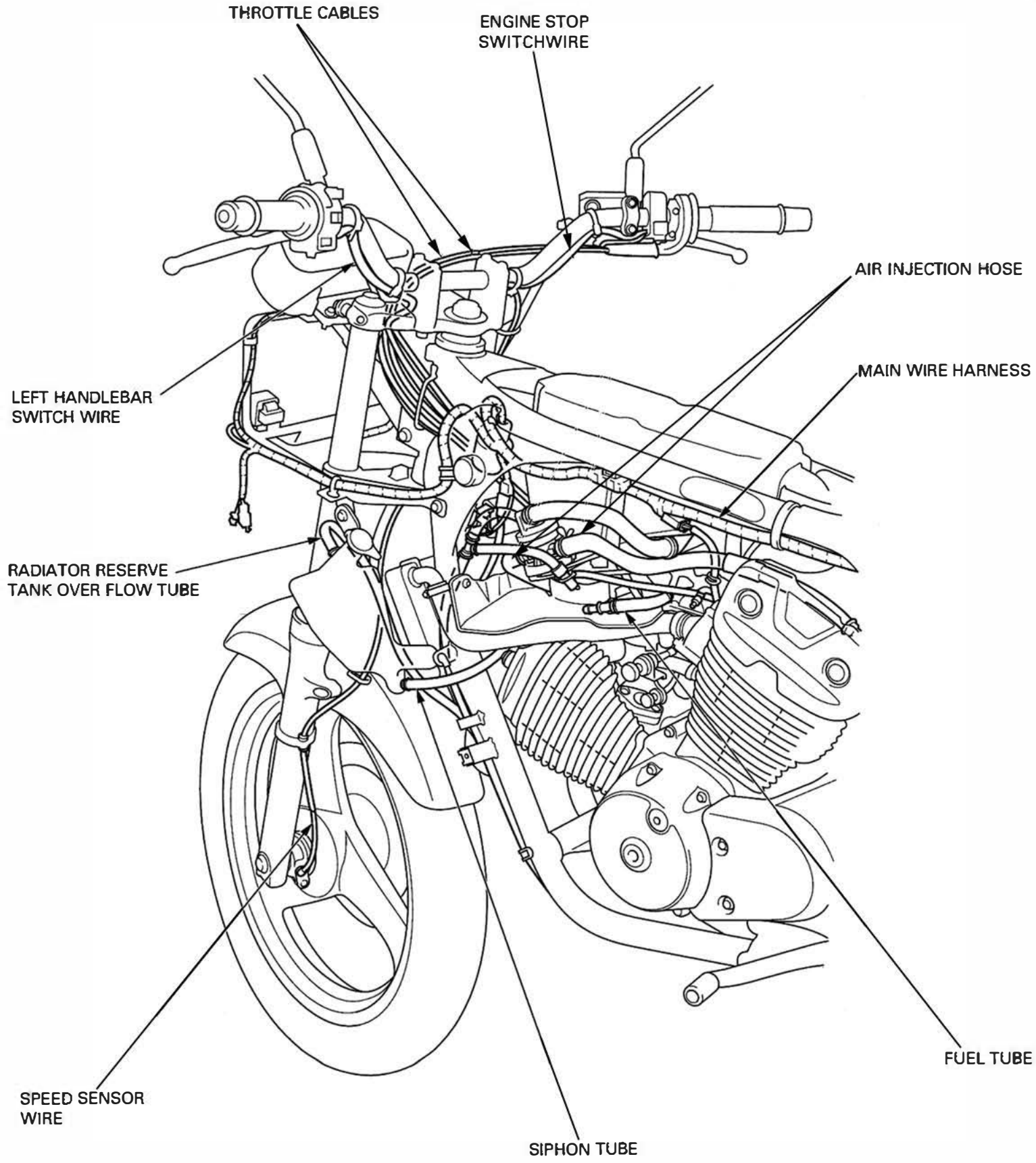
| LOCATION | MATERIAL | REMARKS |
|---|---|---|
| Camshaft camsurf/journals<br>Valve stem (valve guide sliding surface)/stem end<br>Rocker arm slipper surface<br>Rocker arm shaft sliding surface<br>Connecting rod small end inner surface<br>Clutch outer sliding surface<br>M-3, C-4, C-5 gear (shift fork grooves)<br>Clutch outer guide surface<br>Gear (engaging and bearing portion)<br>Piston pin outer surface<br>Gear shift fork inner surface and shaft | Molybdenum disulfide oil (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease) | |
| Piston pin hole and outer cylindrical surface<br>Piston ring whole surface<br>Primary drive gear lock nut threads and seating surface<br>Flywheel lock nut threads and seating surface<br>Clutch disk lining surface<br>Cylinder stud bolt threads<br>Valve adjusting nut threads<br>Cam chain whole surface<br>Connecting rod bearing surface<br>Clutch center lock nut threads and seating surface<br>Oil pump inner rotor<br>Cylinder inner surface<br>Camshaft holder bolt threads and seating surface<br>Clutch lifter piece outer surface<br>Clutch lifter arm shaft outer surface<br>Starter clutch sliding area<br>Each ball/needle bearing sliding area<br>Each O-ring<br>Gearshift spindle shaft outer surface<br>Oil strainer screen rubber frame<br>Scavenging pipe rubber parts | Engine oil | |
| Right and left crankcase mating surface<br>  <br>Thermo switch threads<br>Alternator and ignition pulse generator grommets<br>Water pump mechanical seal flange | Sealant | |
| Cam chain tensioner tighting bolt threads<br>Gearshift cam plate bolt threads<br>Mainshaft bearing set plate bolt threads<br>Gearshift drum bearing set plate bolt threads<br>Fan motor shaft threads<br>Cam sprocket bolt threads | Locking agent | |
| Cylinder head cover gasket | Honda Bond A or equivalent | |

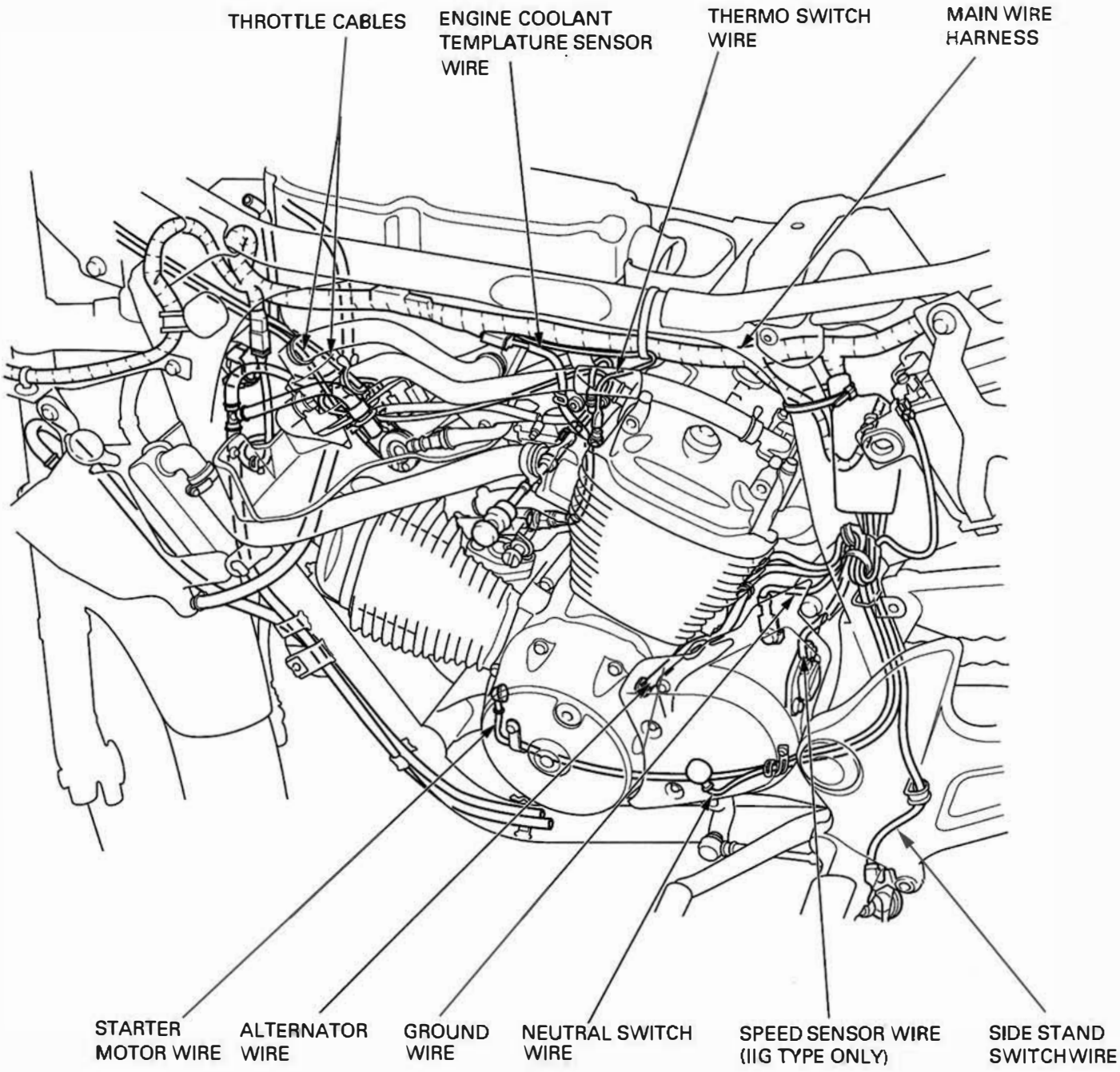
## FRAME

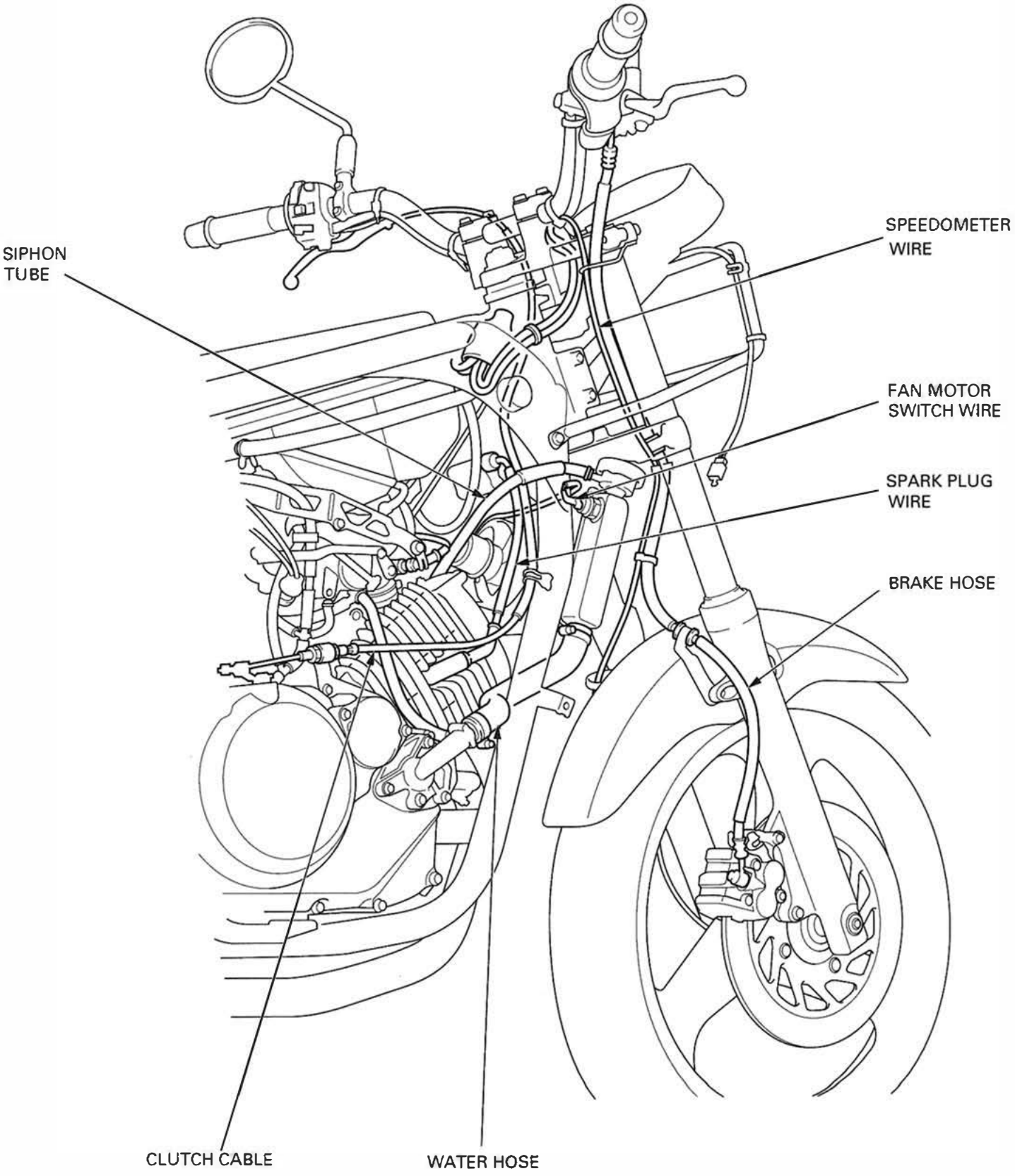
| LOCATION | MATERIAL | REMARKS |
|---|---|---|
| Clutch lever pivot sliding surface<br>Throttle grip pipe rolled up portion<br>Rear brake pedal pivot sliding surface<br>Gearshift pedal pivot sliding surface<br>Side stand pivot sliding surface<br>Front wheel dust seal lip area<br>Rear wheel dust seal lip area<br>Rear wheel O-ring whole<br>Final driver flange gap with rear hub<br>Final driver flange dust seal lip area | Multi-purpose grease | |
| Steering head upper bearing<br>Steering head lower bearing<br>Steering head dust seal lips<br>Rear caliper pin bolt<br>Rear master cylinder push rod contact area<br>Front brake lever pivot and piston contact area<br>Front brake lever pivot sliding area<br>Front fork oil seal lips<br>Swingarm pivot dust seal lips<br>Swingarm pivot bearing and center collar sliding surface<br>Swingarm pivot bush and collar sliding surface<br>Speedometer gear box inside<br>Speedometer gear sliding portion | Grease | |
| Steering top threads<br>Front engine hanger bolt threads<br>Rear engine hanger bolt threads<br>Upper engine hanger bolt threads | Engine oil | |
| Brake master cylinder pistons and cups<br>Rear caliper piston sliding surface | DOT 3 or DOT 4 brake fluid | |
| Throttle cable casting inside<br>Clutch cable casing inside<br>Caliper piston seal sliding surface<br>Caliper pin sliding surface | Silicone grease | |
| Final driven flange bolt threads<br>Rear caliper nut threads<br>Front caliper pin threads<br>Front caliper nut threads<br>Fork socket bolt threads | Locking agent | |
| Handle grip rubber inside surfaces | Honda band A or Cemedine #540 | |
| Front fork inside | Fork fluid | |

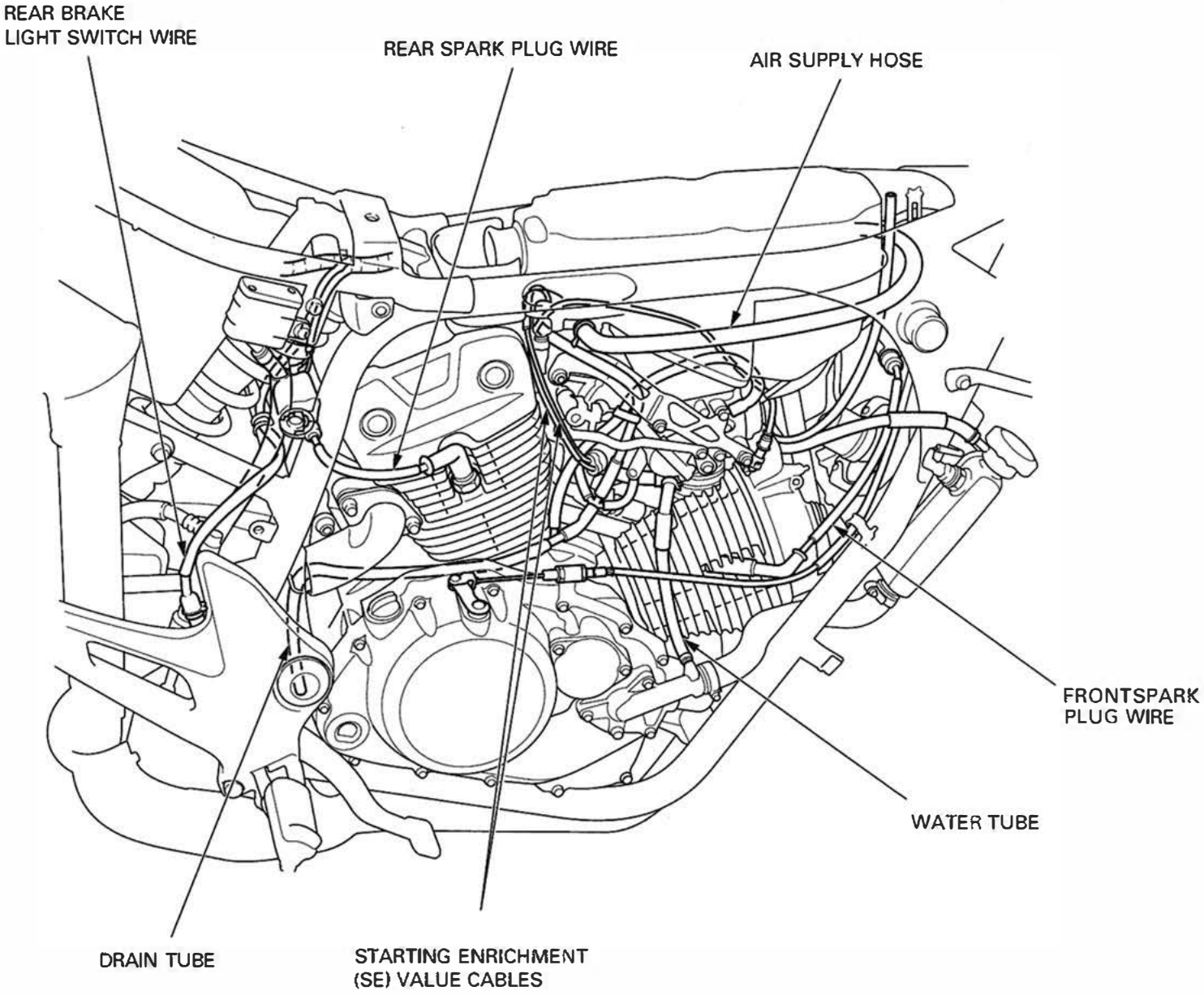
# CABLE & HARNESS ROUTING

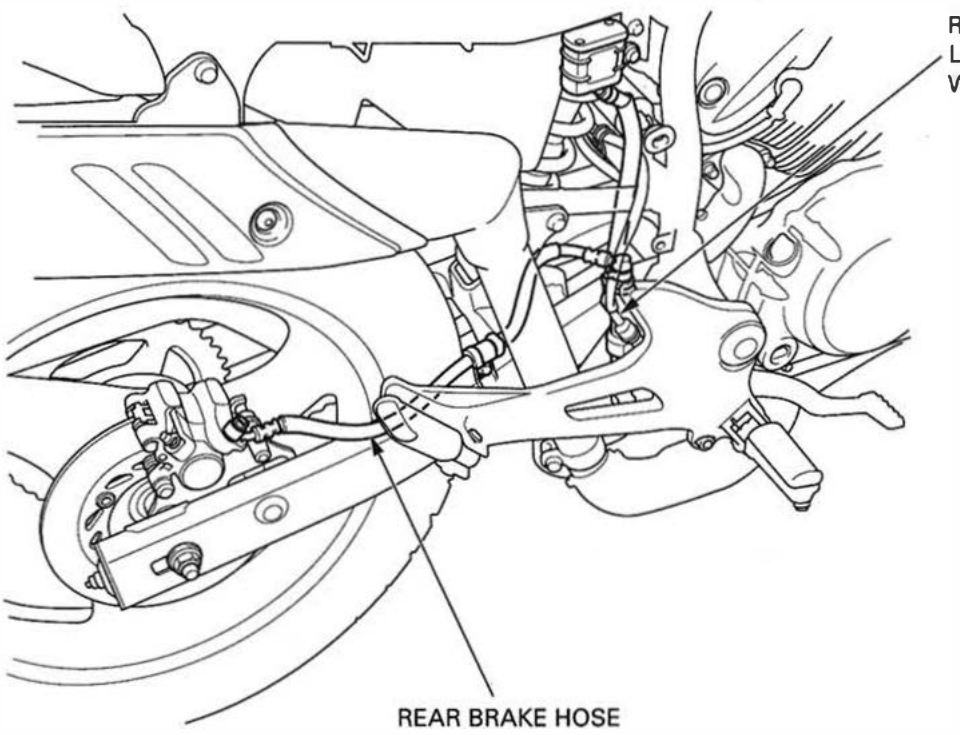


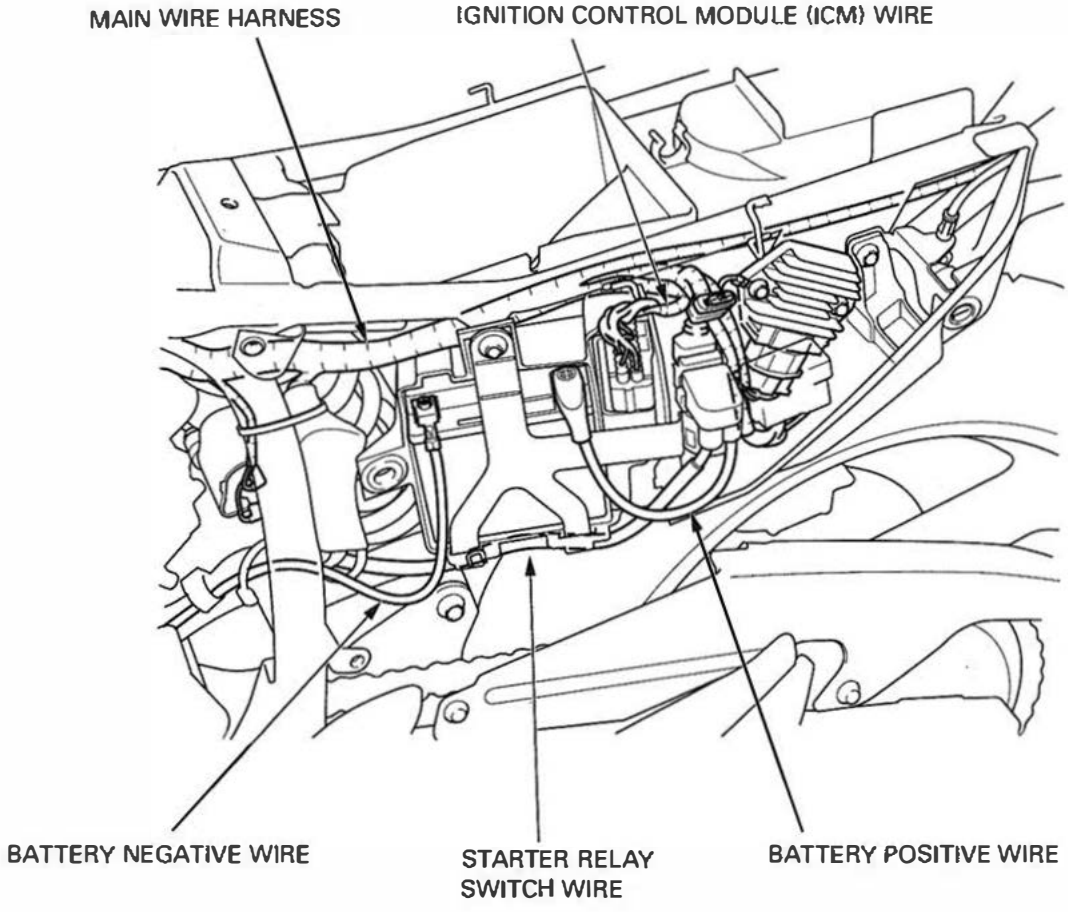

THROTTLE CABLES
ENGINE STOP SWITCHWIRE
AIR INJECTION HOSE
MAIN WIRE HARNESS
LEFT HANDLEBAR SWITCH WIRE
RADIATOR RESERVE TANK OVER FLOW TUBE
SPEED SENSOR WIRE
SIPHON TUBE
FUEL TUBE

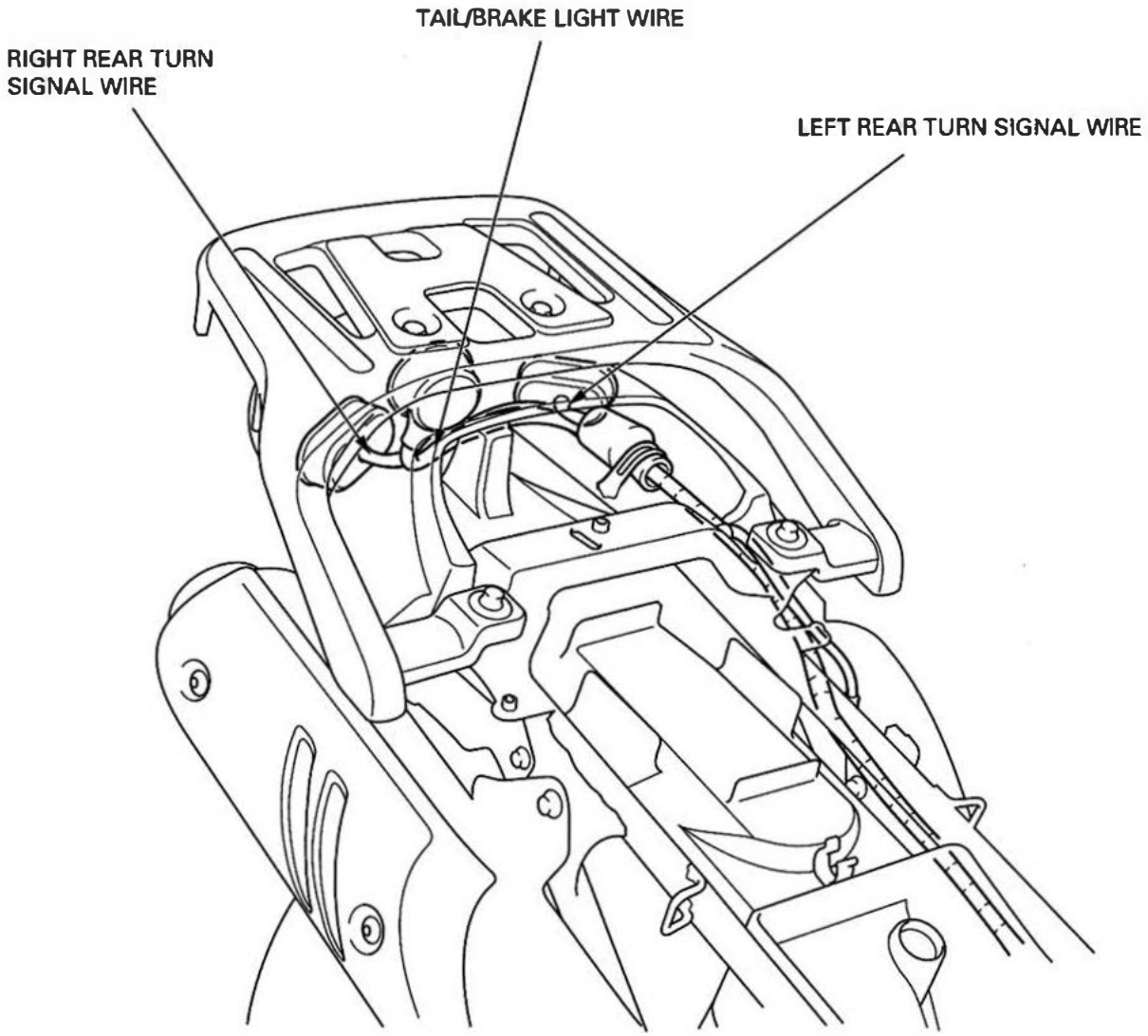

THROTTLE CABLES
ENGINE COOLANT TEMPLATURE SENSOR WIRE
THERMO SWITCH WIRE
MAIN WIRE HARNESS
STARTER MOTOR WIRE
ALTERNATOR WIRE
GROUND WIRE
NEUTRAL SWITCH WIRE
SPEED SENSOR WIRE (IIG TYPE ONLY)
SIDE STAND SWITCH WIRE


SIPHON TUBE
SPEEDOMETER WIRE
FAN MOTOR SWITCH WIRE
SPARK PLUG WIRE
BRAKE HOSE
CLUTCH CABLE
WATER HOSE


REAR BRAKE
LIGHT SWITCH WIRE
REAR SPARK PLUG WIRE
AIR SUPPLY HOSE
FRONTSPARK
PLUG WIRE
WATER TUBE
DRAIN TUBE
STARTING ENRICHMENT
(SE) VALUE CABLES


REAR BRAKE
LIGHT SWITCH
WIRE
REAR BRAKE HOSE


MAIN WIRE HARNESS
IGNITION CONTROL MODULE (ICM) WIRE
BATTERY NEGATIVE WIRE
STARTER RELAY
SWITCH WIRE
BATTERY POSITIVE WIRE


TAIL/BRAKE LIGHT WIRE
RIGHT REAR TURN SIGNAL WIRE
LEFT REAR TURN SIGNAL WIRE

# EMISSION CONTROL SYSTEMS

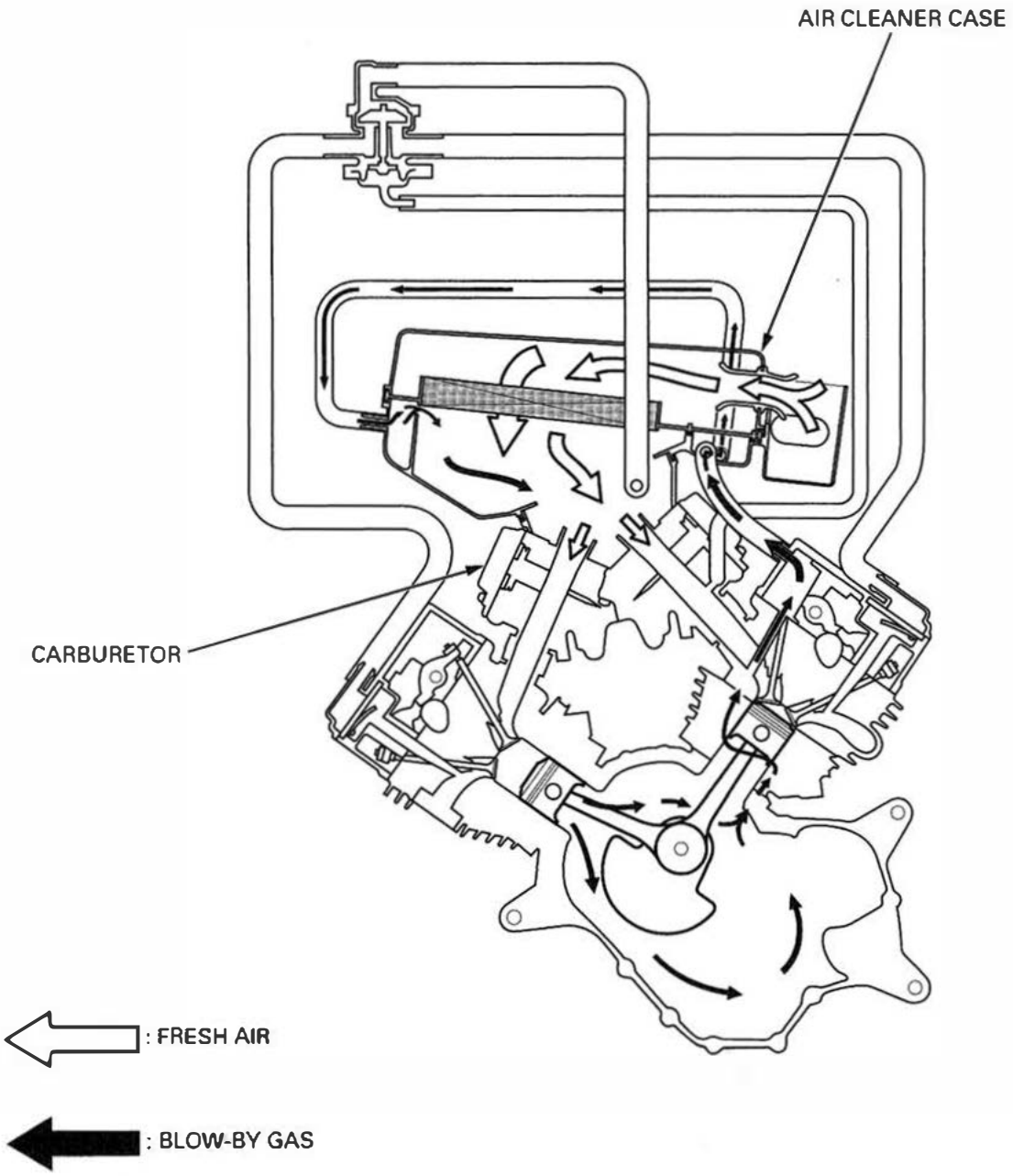
## SOURCE OF EMISSIONS

The combustion process produces carbon monoxide and hydrocarbons. Controlling hydrocarbon emission 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 Moter Co., Ltd. utilizes lean carburetor settings as well as other systems, to reduce carbon monoxide and hydrocarbons.

## CRANKCASE EMISSION CONTROL SYSTEM

The engine is equipped with a closed crankcase system to prevent discharging crankcase emissions into the atmospher. Blow-by gas is returned to the combustion chamber through the air cleaner and carburetor.



## EXHAUST EMISSION CONTROL SYSTEM (PULSE SECONDARY AIR INJECTION SYSTEM)

The exhaust emission control system consists of a secondary air supply system which introduces filtered air into the exhaust bases 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 pulse secondary air injection (PAIR) control valve and PAIR check valve. Pair check valve prevents reverse air flow through the system. The PAIR control valve reacts to high intake manifold vacuum and will cut off the supply of the fresh air during engine deceleration, thereby preventing afterburn in the exhaust system.

No adjustment to the pulse secondary air injection system should be made, although periodic inspection of the components is recommended.