

## HOW TO USE THIS MANUAL

This service manual describes the service procedures for the CBR150R.

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.

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. Section 4 through 21 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 22 TROUBLESHOOTING.

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Honda Motor Co., Ltd.  
SERVICE PUBLICATION OFFICE

## CONTENTS

	<b>GENERAL INFORMATION</b>	<b>1</b>
	<b>FRAME/BODY PANELS/EXHAUST SYSTEM</b>	<b>2</b>
	<b>MAINTENANCE</b>	<b>3</b>
<b>ENGINE &amp; DRIVE TRAIN</b>	<b>LUBRICATION SYSTEM</b>	<b>4</b>
	<b>FUEL SYSTEM</b>	<b>5</b>
	<b>COOLING SYSTEM</b>	<b>6</b>
	<b>ENGINE REMOVAL/INSTALLATION</b>	<b>7</b>
	<b>CLUTCH/GEARSHIFT LINKAGE</b>	<b>8</b>
	<b>ALTERNATOR/STARTER CLUTCH</b>	<b>9</b>
	<b>CYLINDER HEAD/VALVES</b>	<b>10</b>
	<b>CYLINDER/PISTON</b>	<b>11</b>
	<b>TRANSMISSION</b>	<b>12</b>
	<b>CRANKSHAFT/BALANCER</b>	<b>13</b>
<b>CHASSIS</b>	<b>FRONT WHEEL/SUSPENSION/STEERING</b>	<b>14</b>
	<b>REAR WHEEL/SUSPENSION</b>	<b>15</b>
	<b>BRAKE SYSTEM</b>	<b>16</b>
<b>ELECTRICAL</b>	<b>CHARGING SYSTEM</b>	<b>17</b>
	<b>IGNITION SYSTEM</b>	<b>18</b>
	<b>ELECTRIC STARTER</b>	<b>19</b>
	<b>LIGHTS/METERS/SWITCHES</b>	<b>20</b>
	<b>WIRING DIAGRAM</b>	<b>21</b>
	<b>TROUBLESHOOTING</b>	<b>22</b>
	<b>INDEX</b>	<b>23</b>

## 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.

# 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.

	<p>Replace the part(s) with new one(s) before assembly.</p>
	<p>Use recommended engine oil, unless otherwise specified.</p>
	<p>Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1:1)</p>
	<p>Use multi-purpose grease (Lithium based multi-purpose grease NLGI #2 or equivalent)</p>
	<p>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</p>
	<p>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</p>
	<p>Use silicone grease.</p>
	<p>Apply a locking agent. Use a middle strength locking agent unless otherwise specified.</p>
	<p>Apply sealant.</p>
	<p>Use DOT 4 brake fluid. Use the recommended brake fluid unless otherwise specified.</p>
	<p>Use Fork or Suspension Fluid.</p>

# 1. GENERAL INFORMATION

GENERAL SAFETY	1-1	TOOLS	1-14
SERVICE RULES	1-2	LUBRICATION & SEAL POINTS	1-15
MODEL IDENTIFICATION	1-3	CABLE & HARNESS ROUTING	1-17
SPECIFICATIONS	1-4	EMISSION CONTROL SYSTEMS	1-24
TORQUE VALUES	1-12		

1

## 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 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 GAS & ELECTROLYTE

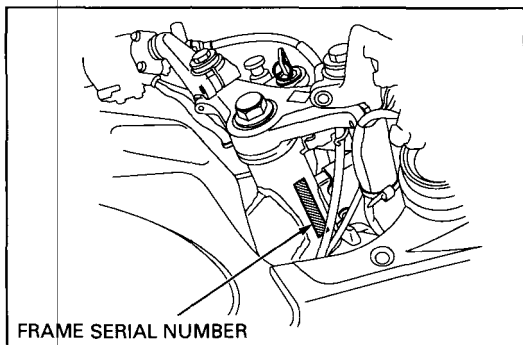
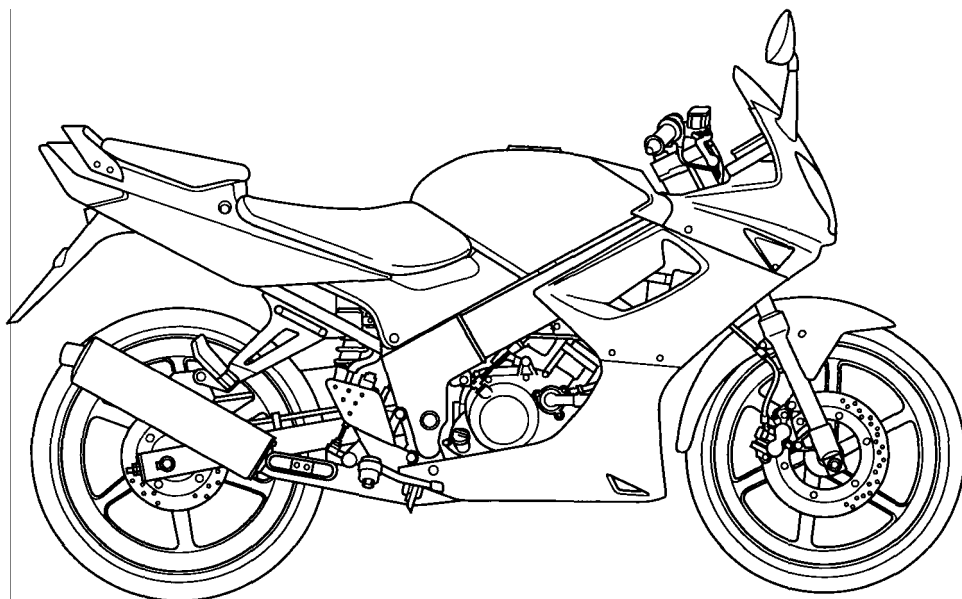
#### ⚠ WARNING

- *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 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.*

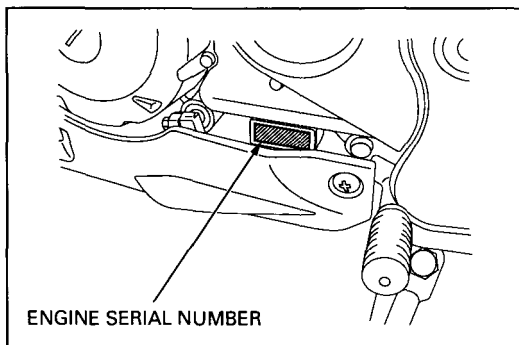
## **SERVICE RULES**

1. Use genuine Honda or Honda-recommended parts and lubricants or their equivalents. Parts that don't meet HONDA's design specifications may cause damage to the motorcycle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing the motorcycle. Metric bolts, nuts and screws are not interchangeable with English fasteners.
4. Install new gaskets, O-rings, cotter pins, and lock plates when reassembling.
5. When tightening bolts or nuts, begin with the larger diameter or inner bolt first. Then tighten to the specified torque diagonally in incremental steps unless a particular sequence is specified.
6. Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
7. After reassembly, check all parts for proper installation and operation.
8. Route all electrical wires as show on pages 1-17 through 1-23, Cable and Harness Routing.

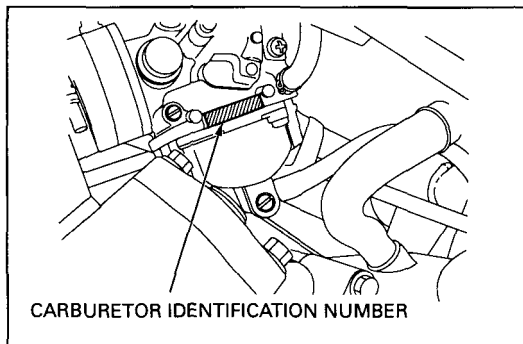
## MODEL IDENTIFICATION



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



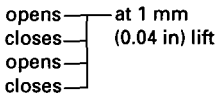
The engine serial number is stamped on the lower left side of the crankcase.



The carburetor identification number is stamped on the left side of the carburetor body.

**SPECIFICATIONS**

GENERAL	ITEM	SPECIFICATIONS
DIMENSIONS	Overall length Overall width Overall height Wheelbase Seat height Footpeg height Ground clearance Dry weight Curb weight	1,910 mm (75.2 in) 652 mm (25.7 in) 1,065 mm (41.9 in) 1,286 mm (50.6 in) 776 mm (30.6 in) 312 mm (12.3 in) 172 mm (6.8 in) 115 kg (253.53 lbs) 123 kg (271.17 lbs)
FRAME	Frame type Front suspension Front axle travel Rear suspension Rear axle travel Rear damper Front tire size Rear tire size Tire brand Front brake Rear brake Caster angle Trail length Fuel tank capacity	Diamond type Telescopic fork 190 mm (4.29 in) Swingarm 120 mm (4.72 in) Single effected tube type 80/90-17M/C 44P 100/80-17M/C 52P Front/Rear: IRC Hydraulic disc brake Hydraulic disc brake 25° 88 mm (3.46 in) 10.0 liter (2.64 US gal, 2.2 Imp gal)
ENGINE	Bore and stroke Displacement Compression ratio Valve train Intake valve Exhaust valve Lubrication system Oil pump type Cooling system Air filtration Crankshaft type Engine dry weight Cylinder arrangement	63.5 x 47.2 mm (2.50 x 1.86 in) 149.4 cm <sup>3</sup> (9.1 cu-in) 11.0: 1 Multi link chain drive and DOHC 5° BTDC 35° ABDC 30° BBDC 0° ATDC Forced pressure and wet sump Trochoid Liquid cooled Paper filter Assembled type 26.1 kg (57.55 lbs) Single cylinder inclined 40° from vertical



GENERAL (Cont'd)		
	ITEM	SPECIFICATIONS
CARBURETOR	Carburetor type Venturi dia.	CV (Constant velocity) type 25 mm (0.98 in) or equivalent
DRIVE TRAIN	Clutch system Clutch operation system Transmission Primary reduction Final reduction Gear ratio 1st 2nd 3rd 4th 5th 6th Gearshift pattern	Multi-plate, wet Mechanical type Constant mesh, 6-speed 3.260 (75/23) 2.933 (44/15) 3.083 (37/12) 1.941 (33/17) 1.500 (30/20) 1.227 (27/22) 1.041 (25/24) 0.923 (24/26) Left foot operated return system 1-N-2-3-4-5-6
ELECTRICAL	Ignition system Starting system Charging system Regulator/rectifier Lighting system	Condenser Discharged Ignition (CDI) Electric starter motor Single phase output alternator SCR shorted/single phase, half wave rectification Alternator



## GENERAL INFORMATION

Unit: mm (in)

LUBRICATION SYSTEM		STANDARD	SERVICE LIMIT
ITEM			
Engine oil capacity	At draining	1.0 liter (1.06 US qt, 0.88 Imp qt)	-----
	At disassembly	1.3 liter (1.37 US qt, 1.14 Imp qt)	-----
Recommended engine oil		Honda 4-stroke oil or equivalent motor oil API service classification SE, SF or SG Viscosity: SAE 10W-30	-----
Oil pump rotor	Tip clearance	-----	0.20 (0.008)
	Body clearance	0.150 – 0.210 (0.0059 – 0.0083)	0.26 (0.010)
	Side clearance	0.050 – 0.100 (0.0020 – 0.0040)	0.15 (0.006)

FUEL SYSTEM		SPECIFICATIONS
ITEM		
Carburetor identification number		VK6AA
Main jet		#115
Slow jet		#35
Pilot screw opening		See page 5-14
Float level		13 mm (0.5 in)
Idle speed		1,400 ± 100 min <sup>-1</sup> (rpm)
Throttle grip free play		2 – 6 mm (1/12 – 1/4 in)

COOLING SYSTEM		SPECIFICATIONS
ITEM		
Coolant capacity	Radiator and engine	0.76 liter (0.20 US qt, 0.17 Imp qt)
	Reserve tank	0.24 liter (0.06 US qt, 0.05 Imp qt)
Radiator cap relief pressure		108 kPa (1.1 kgf/cm <sup>2</sup> , 16 psi)
Thermostat	Begin to open	69.5 – 72.5°C (157.1 – 162.5°F)
	Fully open	80°C (176°F)
	Valve lift	3.5 mm (0.14 in) minimum

Unit: mm (in)

CLUTCH/GEARSHIFT LINKAGE			STANDARD	SERVICE LIMIT
ITEM				
Clutch	Lever free play		10 – 20 (3/8 – 13/16)	-----
	Spring free length		37.6 (1.48)	36.6 (1.44)
	Disc thickness	A	3.5 – 3.6 (0.138 – 0.142)	3.1 (0.12)
		B	2.92 – 3.08 (0.115 – 0.121)	2.60 (0.102)
	Plate warpage		-----	0.2 (0.008)
	Outer guide	O.D.	22.959 – 22.980 (0.9039 – 0.9047)	22.93 (0.903)
		I.D.	16.991 – 17.009 (0.6689 – 0.6696)	17.04 (0.671)
Outer I.D.		23.000 – 23.013 (0.9055 – 0.9060)	23.06 (0.908)	
Mainshaft O.D. at clutch outer guide			16.996 – 16.984 (0.6680 – 0.6687)	16.935 (0.6667)

Unit: mm (in)

CYLINDER HEAD/V VALVES			STANDARD	SERVICE LIMIT
ITEM				
Cylinder compression			1,370 kpa (13.9 kgf/cm <sup>2</sup> , 197.7 psi) at 680 min <sup>-1</sup> (rpm)	—
Cylinder head warpage			—	0.05 (0.002)
Valve, valve guide	Valve clearance	IN	0.16 ± 0.03 (0.006 ± 0.001)	—
		EX	0.25 ± 0.03 (0.010 ± 0.001)	—
	Valve stem O.D.	IN	3.775 – 3.790 (0.1486 – 0.1492)	3.7 (0.15)
		EX	3.765 – 3.780 (0.1482 – 0.1488)	3.7 (0.15)
	Valve guide I.D.	IN/EX	3.800 – 3.812 (0.1496 – 0.1501)	3.89 (0.153)
	Stem-to-guide clearance	IN	0.010 – 0.037 (0.0004 – 0.0015)	0.075 (0.0029)
		EX	0.020 – 0.047 (0.0008 – 0.0019)	0.085 (0.0033)
	Valve guide projection above cylinder head	IN	15.5 (0.61)	—
EX		13.1 (0.52)	—	
Valve seat width	IN/EX	1.2 – 1.6 (0.05 – 0.06)	1.9 (0.07)	
Valve spring free length		IN/EX	39.7 (1.56)	38.5 (1.52)
Valve lifter	O.D.		22.478 – 22.493 (0.8850 – 0.8855)	22.47 (0.885)
	Bore I.D.		22.510 – 22.526 (0.8862 – 0.8869)	22.5 (0.89)
Camshaft	Cam lobe height	IN	35.12 – 35.20 (1.383 – 1.386)	35.073 (1.3808)
		EX	34.71 – 34.79 (1.367 – 1.370)	34.662 (1.3646)
	Runout		—	0.02 (0.001)
	Camshaft holder I.D.	IN/EX	17.000 – 17.018 (0.6693 – 0.6700)	17.02 (0.6703)
	Camshaft O.D.	IN/EX	16.966 – 16.984 (0.6680 – 0.6687)	16.960 (0.6677)
	Camshaft-to-camshaft holder clearance (right side)	IN/EX	0.016 – 0.052 (0.0006 – 0.0020)	0.067 (0.0026)

Unit: mm (in)

CYLINDER/PISTON			STANDARD	SERVICE LIMIT
ITEM				
Cylinder	I.D.		63.50 – 63.51 (2.5000 – 2.5004)	63.55 (2.502)
	Out of round		—	0.10 (0.004)
	Taper		—	0.10 (0.004)
	Warpage		—	0.05 (0.002)
Piston, piston rings	Piston mark direction		"IN" mark facing toward the intake side	—
	Piston O.D.		63.47 – 63.49 (2.4988 – 2.4996)	63.40 (2.496)
	Piston O.D. measurement point		6.5 (0.36) from bottom of skirt	—
	Piston pin bore I.D.		15.002 – 15.008 (0.5960 – 0.5969)	15.055 (0.5927)
	Piston pin O.D.		14.994 – 15.000 (0.5903 – 0.5906)	14.98 (0.590)
	Piston-to-piston pin clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.04 (0.0016)
	Piston ring-to-ring groove clearance	Top	0.045 – 0.075 (0.0018 – 0.0030)	0.10 (0.004)
		Second	0.015 – 0.050 (0.0006 – 0.0020)	0.08 (0.003)
	Piston ring end gap	Top	0.05 – 0.20 (0.002 – 0.008)	0.3 (0.01)
		Second	0.15 – 0.30 (0.004 – 0.010)	0.7 (0.030)
Oil (side rail)		0.20 – 0.70 (0.008 – 0.028)	1.1 (0.04)	
Cylinder-to-piston clearance			0.01 – 0.04 (0.0004 – 0.0016)	0.90 (0.035)
Connecting rod small end I.D.			15.010 – 15.028 (0.5909 – 0.5917)	15.09 (0.594)
Connecting rod small end-to-piston pin clearance			0.010 – 0.034 (0.0004 – 0.0013)	0.075 (0.0030)

**GENERAL INFORMATION**

Unit: mm (in)

<b>TRANSMISSION</b>			<b>STANDARD</b>	<b>SERVICE LIMIT</b>
<b>ITEM</b>				
Transmission	Gear I.D.	M5, M6	17.016 – 17.034 (0.6699 – 0.6706)	17.08 (6.724)
		C1	18.000 – 18.021 (0.7087 – 0.7095)	18.07 (0.711)
		C2	23.020 – 23.041 (0.9063 – 0.9071)	23.09 (0.909)
		C3, C4	22.020 – 22.041 (0.8669 – 0.8678)	22.1 (0.87)
	Bushing I.D.	C1	15.000 – 15.018 (0.590 – 0.591)	15.1 (0.59)
		C2	20.020 – 20.041 (0.7882 – 0.7890)	20.10 (0.791)
	Bushing O.D.	C1	17.969 – 17.980 (0.7074 – 0.7079)	17.9 (0.70)
		C2	22.984 – 23.005 (0.9049 – 0.9057)	22.9 (0.90)
	Gear-to-bushing clearance	C1	0.020 – 0.052 (0.0008 – 0.0020)	0.10 (0.004)
		C2	0.036 – 0.057 (0.0014 – 0.0022)	0.10 (0.004)
	Mainshaft O.D.	M5	16.966 – 16.984 (0.6680 – 0.6687)	16.93 (0.667)
	Countershaft O.D.	C1 gear bushing	14.966 – 14.984 (0.5892 – 0.5899)	14.90 (0.587)
		C2 gear bushing	19.978 – 19.989 (0.7866 – 0.7870)	19.92 (0.784)
	Gear-to-shaft clearance	M5	0.032 – 0.068 (0.0012 – 0.0027)	0.10 (0.004)
Bushing-to-shaft clearance	C1	0.016 – 0.052 (0.0001 – 0.0020)	0.10 (0.004)	
	C2	0.031 – 0.063 (0.0012 – 0.0025)	0.10 (0.004)	
Shift fork	Shaft O.D.		9.986 – 9.995 (0.3931 – 0.3935)	9.93 (0.391)
	Fork I.D.		10.000 – 10.018 (0.3937 – 0.3944)	10.03 (0.395)
	Fork claw thickness		4.93 – 5.00 (0.194 – 0.197)	4.90 (0.193)
	Shift drum O.D. at right end		25.959 – 25.980 (1.0220 – 1.0228)	25.90 (1.020)
	Shift drum journal (R.crankcase)		26.000 – 26.021 (1.0236 – 1.0244)	25.08 (0.987)

Unit: mm (in)

<b>CRANKSHAFT/BARANCER</b>			<b>STANDARD</b>	<b>SERVICE LIMIT</b>
<b>ITEM</b>				
Connecting rod	Big end side clearance		—	0.6 (0.02)
	Big end radial clearance		—	0.05 (0.002)
Crankshaft runout			—	0.03 (0.001)

Unit: mm (in)

FRONT WHEEL/SUSPENSION/STEERING			
ITEM		STANDARD	SERVICE LIMIT
Minimum tire tread depth		—	To the indicator
Cold tire pressure	Driver only	200 kPa (2.00 kgf/cm <sup>2</sup> , 29 psi)	—
	Driver and passenger	200 kPa (2.00 kgf/cm <sup>2</sup> , 29 psi)	—
Axle runout		—	0.20 (0.008)
Wheel rim runout	Radial	—	2.0 (0.08)
	Axial	—	2.0 (0.08)
Wheel balancer weight		—	60 g (2.1 oz) max.
Fork	Spring free length	412.4 (16.24)	404.1 (15.91)
	Spring direction	With the tightly wound end facing down	
	Pipe runout	—	0.20 (0.008)
	Recommended fork fluid	Honda Ultra Cushion Oil No.10	
	Fluid level	131 (5.2)	—
	Fluid capacity	206 ± 2.5 cm <sup>3</sup> (7.0 ± 0.08 US oz, 7.3 ± 0.09 Imp oz)	

Unit: mm (in)

REAR WHEEL/SUSPENSION			
ITEM		STANDARD	SERVICE LIMIT
Minimum tire tread depth		—	To the indicator
Cold tire pressure	Driver only	200 kPa (2.00 kgf/cm <sup>2</sup> , 29 psi)	—
	Driver and passenger	225 kPa (2.25 kgf/cm <sup>2</sup> , 33 psi)	—
Axle runout		—	0.20 (0.008)
Wheel rim runout	Radial	—	2.0 (0.08)
	Axial	—	2.0 (0.08)
Wheel balancer weight		—	60 g (2.1 oz) max.
Drive chain	Size/link	DID428VI3-124LE	
	Slack	25 – 35 (1.0 – 1.4)	

# GENERAL INFORMATION

Unit: mm (in)

BRAKE SYSTEM		STANDARD	SERVICE LIMIT
ITEM			
Front	Specified brake fluid	DOT 3 or DOT 4	—
	Brake pad wear indicator	—	To groove
	Brake disc thickness	3.8 – 4.2 (0.15 – 0.17)	3.0 (0.12)
	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)	12.640 (0.4976)
	Caliper cylinder I.D.	25.400 – 25.405 (1.0000 – 1.0002)	25.450 (1.0020)
	Caliper piston O.D.	25.318 – 25.368 (0.9968 – 0.9987)	25.300 (0.9960)
Rear	Specified brake fluid	DOT 3 or DOT 4	—
	Brake pad wear indicator	—	To groove
	Brake disc thickness	3.8 – 4.2 (0.15 – 0.17)	3.0 (0.12)
	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)	12.645 (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			SPECIFICATIONS
ITEM			
Battery	Capacity		12 V – 5 Ah
	Current leakage		0.1 mA max
	Specific gravity	Fully charged	13.0 – 13.2 V
		Needs charging	Below 12.3 V
	Charging current	Normal	0.5 A x 5 – 10 h
Quick		2.5 A x 1 h	
Alternator	Capacity		155 W/ 5,000 min <sup>-1</sup> (rpm)
	Charging coil resistance (20°C/68°F)		0.2 – 1.0 Ω
	Lighting coil resistance (20°C/68°F)		0.1 – 0.8 Ω

IGNITION SYSTEM		SPECIFICATIONS	
ITEM			
Spark plug		NGK	DENSO
	Standard	CR8E	U24ESR - N
	Optional	CR9E	U27ESR - N
Spark plug gap		0.7 - 0.8 mm (0.028 - 0.032 in)	
Ignition coil peak voltage		100 V minimum	
Ignition pulse generator peak voltage		0.7 V minimum	
Ignition timing		12° BTDC at 1,400 ± 100 min <sup>-1</sup> (rpm)	

Unit: mm (in)

ELECTRIC STARTER		
ITEM	STANDARD	SERVICE LIMIT
Starter motor brush length	10.00 - 10.05 (0.393 - 0.396)	3.5 (0.14)

LIGHTS/METERS/SWITCHES		SPECIFICATIONS
ITEM		
Bulbs	Headlight (Hi/low beam)	12 V - 18/18 W x 2
	Brake/tail light	12 V - 10/5 W x 2
	License light	12 V - 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 4
	Turn signal indicator	12 V - 1.7 W
	High-beam indicator	12 V - 1.7 W
	Neutral indicator	12 V - 1.7 W
Fuse	Main	20 A
	Sub	10 A x 2
Thermosensor resistance	50°C (122°F)	133.9 - 178.9 Ω
	120°C (248°F)	14.9 - 17.3 Ω

## 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)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt and nut (Include NSHF)	12 (1.2, 9)
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 engine oil to the threads and flange surface.  
 2. Apply molybdenum disulfide oil to the threads and flange surface.  
 3. Apply locking agent to the threads.  
 4. Apply sealant to the threads.  
 5. Stake.  
 6. UBS bolt.  
 7. U-nut.  
 8. ALOC bolt.

ENGINE	ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
<b>MAINTENANCE:</b>					
	Spark plug	1	10	12 (1.2, 9)	
	Crankshaft hole cap	1	30	7.9 (0.8, 5.8)	
	Timing hole cap	1	14	5.9 (0.6, 4.3)	
	Oil drain bolt	1	12	25 (2.5, 18)	
<b>LUBRICATION SYSTEM:</b>					
	Oil pump bolt	3	5	5.2 (0.53, 3.8)	
<b>COOLING SYSTEM:</b>					
	Water pump impeller	1	7	10 (1.0, 7)	
<b>CYLINDER HEAD/VALVE:</b>					
	Cylinder head cover bolt	2	6	10 (1.0, 7)	
	Cylinder head nut	4	8	30 (3.1, 22)	NOTE 1
	Cylinder head bolt	2	12	32 (3.3, 24)	
	Cam sprocket bolt	2	5	8.8 (0.9, 6.5)	NOTE 3
	Cam chain tensioner plug	1	6	4.2 (0.43, 3.1)	
	Camshaft holder bolt	8	6	12 (1.2, 9)	NOTE 1
<b>CLUTCH/GEARSHIFT LINKAGE:</b>					
	Clutch center lock nut	1	14	74 (7.5, 54)	NOTE 1
	Primary drive gear lock nut	1	14	64 (6.5, 47)	NOTE 1
	Gearshift cam plate bolt	1	6	12 (1.2, 9)	NOTE 3
	Shift drum stopper arm bolt	1	6	12 (1.2, 9)	
<b>ALTERNATOR/STARTER CLUTCH:</b>					
	Flywheel nut	1	12	64 (6.5, 47)	NOTE 1
	Stator bolt	3	6	10 (1.0, 7)	NOTE 3
	Ignition pulse generator bolt	3	5	5.2 (0.53, 3.8)	NOTE 3
	Starter clutch bolt	3	8	30 (3.1, 22)	NOTE 3
<b>OTHER FASTENERS:</b>					
	Reed valve cover bolt	2	5	5.2 (0.53, 3.8)	

FRAME	ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
<b>FRAME/BODY PANELS/EXHAUST SYSTEM:</b>					
	Muffler mounting nut	1	6	13 (1.3, 9)	
	Exhaust pipe cover bolt	3	6	13 (1.3, 9)	
<b>ENGINE REMOVAL/INSTALLATION:</b>					
	Engine hanger nut	3	10	59 (6.0, 43)	
	Drive sprocket fixing plate bolt	2	6	10 (1.0, 7)	NOTE 3
<b>FRONT WHEEL/SUSPENSION/STEERING:</b>					
	Steering stem nut	1	24	88 (9, 65)	
	Top thread	1	26	See page 14-22	
	Handlebar pinch bolt	2	8	27 (2.8, 20)	
	Top bridge pinch bolt	2	8	23 (2.3, 17)	
	Bottom bridge pinch bolt	2	8	26 (2.7, 20)	
	Front axle nut	1	12	59 (6.0, 43)	NOTE 7
	Fork bolt	2	27	23 (2.3, 17)	
	Fork socket bolt	2	8	20 (2.0, 14)	NOTE 3
	Front brake disk bolt	8	6	42 (4.3, 31)	NOTE 8
	Grip end screw	2	6	8.8 (0.9, 6.5)	
<b>REAR WHEEL/SUSPENSION:</b>					
	Rear axle nut	1	12	59 (6.0, 43)	NOTE 7
	Driven sprocket nut	4	10	64 (6.5, 47)	NOTE 7
	Rear brake disc bolt	4	8	42 (4.3, 31)	NOTE 8
	Shock absorber upper mounting bolt	1	10	39 (4.0, 29)	
	Shock absorber lower mounting nut	1	10	44 (4.5, 33)	NOTE 7
	Swingarm pivot nut	1	12	88 (9.0, 65)	NOTE 7
<b>BRAKE SYSTEM:</b>					
	Brake hose bolt	1	10	34 (3.5, 25)	
	Front master cylinder cover screw	2	4	1.5 (0.15, 1.1)	
	Front brake light switch screw	1	4	1.2 (0.12, 0.9)	
	Brake lever pivot nut	1	6	5.9 (0.6, 4.3)	
	Front brake caliper mounting bolt	2	8	30 (3.1, 22)	NOTE 8
	Brake caliper pad pin	1	8	17 (1.7, 12)	
	Bleed valve	2	8	5.4 (0.6, 4)	
	Rear brake reservoir cover screw	2	4	1.5 (0.15, 1.1)	
	Rear master cylinder mounting bolts	2	6	12 (1.2, 9)	
	Rear master cylinder push rod nut	1	8	17 (1.7, 12)	
	Main step holder mounting bolt	4	8	27 (2.8, 20)	
<b>OTHER FASTENERS:</b>					
	Chain slider screw	2	6	5.9 (0.6, 4.3)	



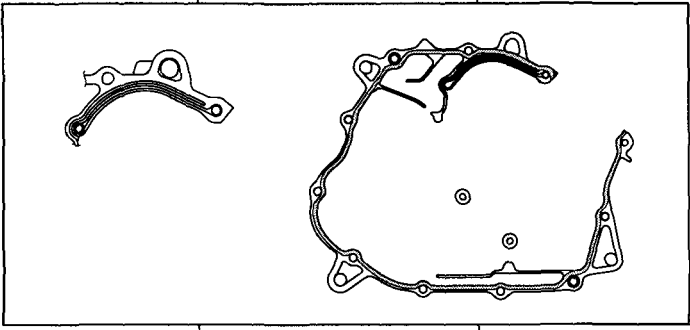
**GENERAL INFORMATION**

**TOOLS**

NOTES: 1. Equivalent commercially available.  
2. Alternative tool.

DESCRIPTION	TOOL NUMBER	REMARKS	REF. SEC.
Float level gauge	07401 - 0010000		5
Universal bearing puller	07631 - 0010000		13
Lock nut wrench, 20 x 24 mm	07716 - 0020100		8
Flywheel holder	07725 - 0040000		9
Bearing remover weight	07741 - 0010201		12
Attachment, 32 x 35 mm	07746 - 0010100		12, 13
Attachment, 37 x 40 mm	07746 - 0010200		12, 13, 14, 15
Attachment, 42 x 47 mm	07746 - 0010300		12, 14
Attachment, 72 x 75 mm	07746 - 0010600		13
Pilot, 12 mm	07746 - 0040200		13, 14, 15
Pilot, 15 mm	07746 - 0040300		12
Pilot, 17 mm	07746 - 0040400		12
Pilot, 20 mm	07746 - 0040500		12
Pilot, 35 mm	07746 - 0040800		13
Bearing remover shaft	07746 - 0050100		14, 15
Bearing remover head, 12 mm	07746 - 0050300		14, 15
Fork seal driver	07747 - 0010100		14
Fork seal driver attachment	07747 - 0010300		14
Oil seal remover	07748 - 0010001		14
Driver	07749 - 0010000		12, 13, 14, 15
Valve spring compressor	07757 - 0010000		10
Valve seat cutter		NOTE 1	10
Seat cutter, 27.5 mm (45° IN)	07780 - 0010200		
Seat cutter, 24 mm (45° EX)	07780 - 0010600		
Flat cutter, 24 mm (32° IN)	07780 - 0012500		
Flat cutter, 27 mm (32° EX)	07780 - 0013300		
Interior cutter, 30 mm (60° IN)	07780 - 0014000		
Interior cutter, 26 mm (60° EX)	07780 - 0014500		
Cutter holder, 3.8 mm	07JMH - KY20200		
Snap ring pliers	07914 - SA50001		16
Steering stem socket	07916 - 3710101		14
Bearing remover head, 12 mm	07936 - 1660110		12
Bearing remover shaft	07936 - 1660120		12
Bearing remover shaft	07936 - KC10100		12
Bearing remover head, 15 mm	07936 - KC10200		12
Attachment, 36 mm	07945 - 4150400		6
Steering stem driver	07946 - 4300101		14
Assembly collar	07965 - VM00100		13
Assembly shaft	07965 - VM00200		13
Clutch center holder	07GMB - KT70101		8
Ball race remover	07GMD - KS40100		14
Valve guide driver	07GMD - KT70100		10
Peak voltage adaptor	07HGJ - 0020100		18
Valve spring compressor attachment	07JME - KY20100	NOTE 2: Imrie diagnostic tester	10
Tapet hole protector	07JMG - KY20100	(model 625)	10
Valve guide reamer	07JMH - KY20100		10
Rotor puller	07KMC - HE00100		9

# LUBRICATION & SEAL POINTS

ENGINE	LOCATION	MATERIAL	REMARKS
	Valve stem (valve guide sliding surface) Clutch outer guide outer surfaces Piston pin outer surface Connecting rod small end inner surface Shift fork shaft Transmission gear rotating surfaces Transmission gear shift fork grooves C1, C2 gear bushing Balancer driven gear inner surface Clutch lifter arm spindle Gearshift spindle outer surface Shift drum journal outer surface Camshaft	Molybdenum oil solution (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease)	
	Cam chain Camshaft holder bolt threads and seating surface Piston outer surface Piston rings Cylinder head nut threads and seating surface Valve lifter sliding surfaces Clutch disc lining surface Clutch center lock nut threads and seating surface Clutch lifter piece Crankshaft thrust surfaces Primary drive gear nut threads and seating surface Flywheel nut threads and seating surface Shift drum grooves Starter clutch rolling surface Starter reduction gear Oil pump inner and outer rotor Each bearing rotating area Each O-ring whole surface Each oil seal lip Water pump shaft	Engine oil	
	Each oil seal lip (clutch lifter arm spindle, gearshift spindle) Timing hole cap threads Crankshaft hole cap threads	Multi-purpose grease	
	Gearshift cam plate bolt threads Ignition pulse generator bolt threads Mainshaft bearing setting plate bolt threads Starter clutch bolt threads Camsprocket bolt threads	Locking agent	
	Alternator/ignition pulse generator wire grommet seating surface R./L. Crankcase mating surface except the oil passage area.	Liquid sealant	

**GENERAL INFORMATION**

<b>FRAME</b>	<b>LOCATION</b>	<b>MATERIAL</b>	<b>REMARKS</b>
	Steering head bearing sliding surface Steering head bearing dust seal lips Front fork oil seal lips Front wheel dust seal lips Rear wheel dust seal lips Rear wheel hub O-ring Clutch lever pivot bolt sliding surface Speedometer gear and pinion gear teeth Speedometer gear/pinion sliding surface Side stand pivot surface Throttle grip sliding surface Speedometer outer cable inside Seat lock sliding surface Brake pad pin sliding surface	Multi-purpose grease	
	Brake caliper pin bolt Brake lever pivot bolt sliding surface Brake lever-to-master piston contacting area Rear brake master piston-to-push rod contacting area Throttle cable inside	Silicone grease	
	Clutch inner cable surface Choke inner cable surface	Molybdenum compound oil	
	Fork socket bolt threads Cooling fan motor shaft threads	Locking agent	
	Handle grip rubber inside	Honda Bond A or equivalent	
	Brake master piston and cups Brake caliper piston and piston seals Brake caliper dust seal	DOT 3 or 4 brake fluid	
	Fork inside	Honda Ultra Cushion Oil No.10	
	Air cleaner housing tube joint	Sealant	

## CABLE & HARNESS ROUTING

