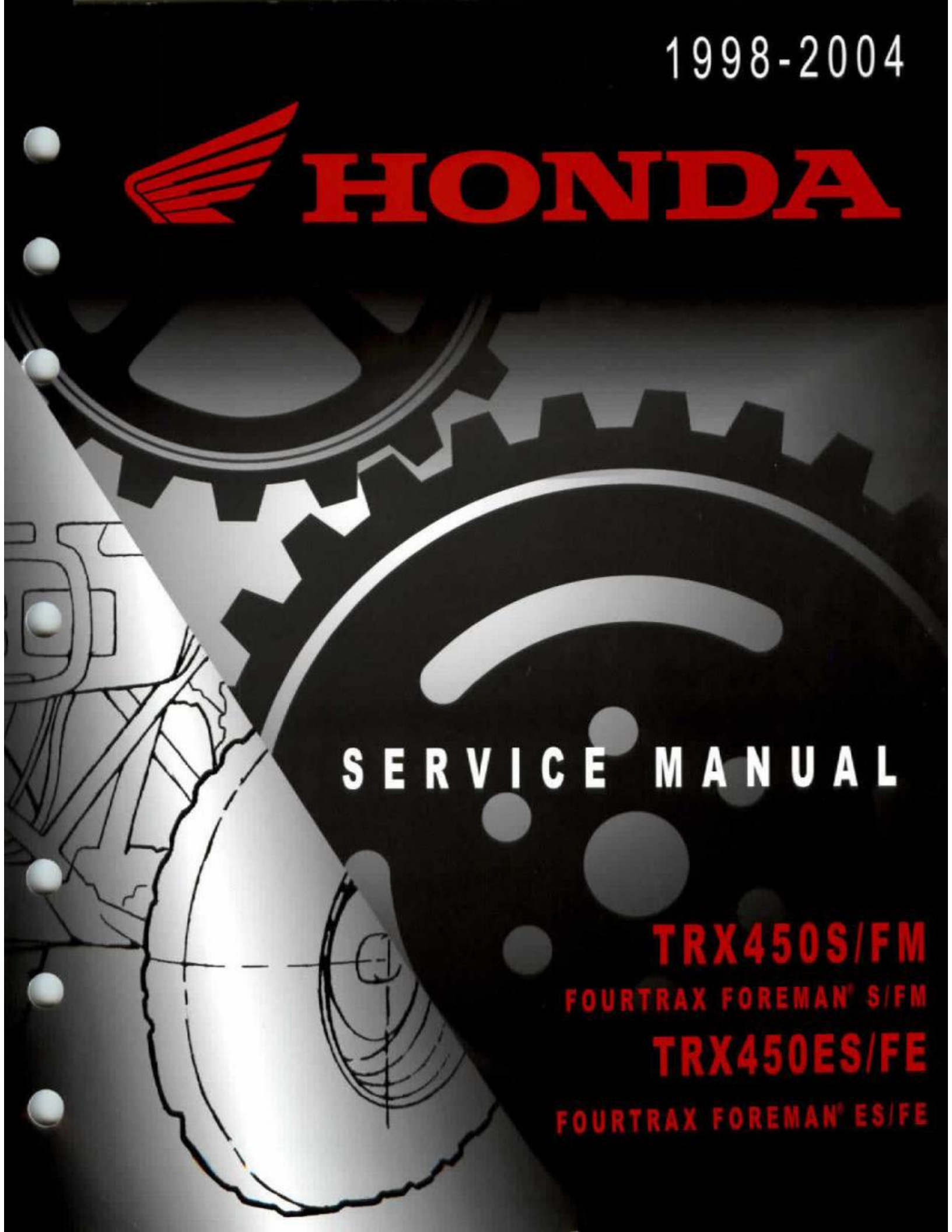
1998-2004

HONDA



SERVICE MANUAL

TRX450S/FM

FOURTRAX FOREMAN® S/FM

TRX450ES/FE

FOURTRAX FOREMAN® ES/FE

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.

HOW TO USE THIS MANUAL

This service manual describes the service procedures for the TRX450S/FM and TRX450ES/FE.

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 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.

Sections 1 and 3 apply to the whole vehicle. Section 2 illustrates procedures for removal/installation of components that may be required to perform service described in the following sections.
Section 4 through 23 describe parts of the vehicle, 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 assembly or system illustration, service information and troubleshooting for the section.
The subsequent pages give detailed procedure.

If you are not familiar with this vehicle, read the Technical Features in section 24.

If you do not know the source of the trouble, go to section 25, Troubleshooting.

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). 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® BR-2 plus, manufactured by Dow Corning, U.S.A. Honda Moly 60 (U.S.A. only) Rocol ASP manufactured by Rocol Limited, U.K. Rocol Paste manufactured by Sumico Lubricant, Japan
	Use silicone grease.
	Apply a locking agent. Use a middle strength locking agent unless otherwise specified.
	Apply sealant.
	Use DOT 3 or 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 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.

BRAKE DUST

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

⚠ WARNING

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

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.

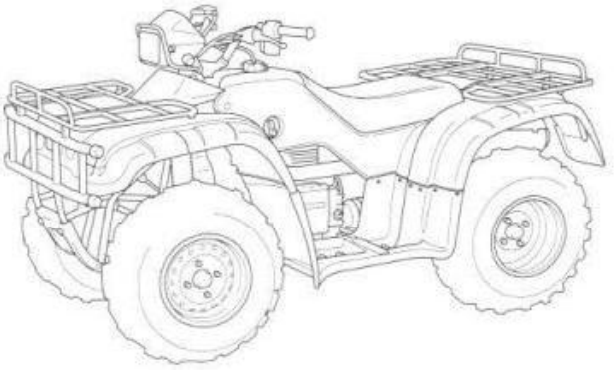
SERVICE RULES

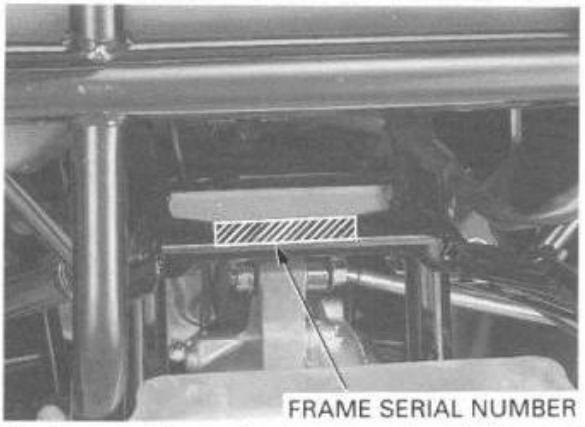
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalents. Parts that don't meet HONDA's design specifications may cause damage to the vehicle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing the vehicle. 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 cable and harness routing as shown on pages 1-21 through 1-29 Cable and Harness Routing.

MODEL IDENTIFICATION

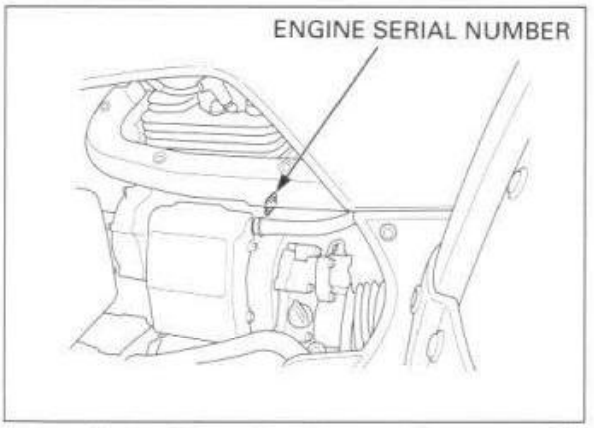
TRX 450S/FM :

TRX 450ES/FE :

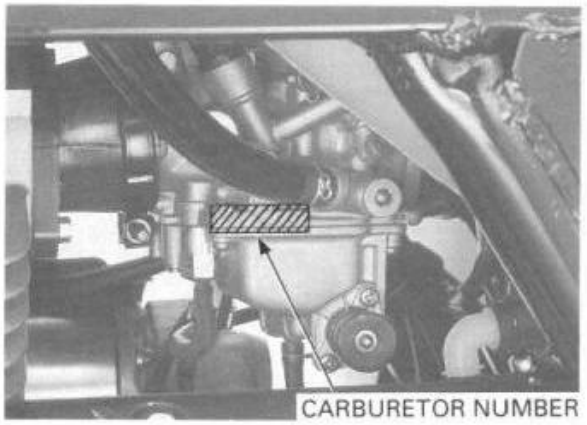




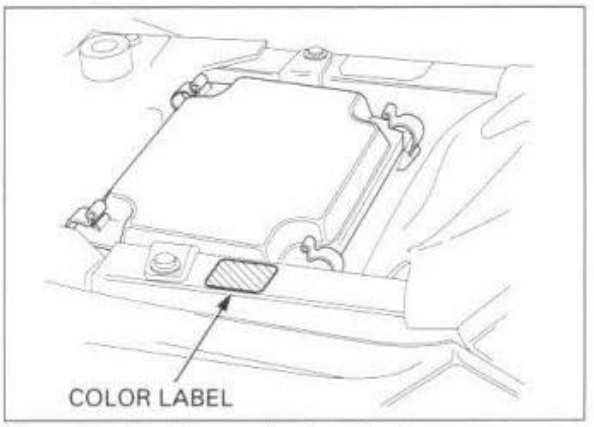
The frame serial number is stamped on the front of the frame.



The engine serial number is stamped on upper side of the rear crankcase viewed from the left side.



The carburetor identification numbers are stamped on the left side of the carburetor body as shown.



The color label is attached to the frame under the seat as shown. When ordering color-coded parts, always specify the designated color code.

SPECIFICATIONS

[ ] : '98 – '01: TRX450ES
After '01: TRX450FE

GENERAL

ITEM			SPECIFICATION
DIMENSIONS	Overall length	('98 – '01)	1,961 mm (77.2 in)
		(After '01)	1,963 mm (77.3 in)
	Overall width	('98 – '01)	1,156 mm (45.5 in)
		(After '01)	1,151 mm (45.3 in)
	Overall height		1,144 mm (45.0 in)
	Wheelbase	('98 – '01)	1,271 mm (50.0 in)
		(After '01)	1,274 mm (50.2 in)
	Front tread	('98 – '01)	912 mm (35.9 in)
		(After '01)	910 mm (35.8 in)
	Rear tread		905 mm (35.6 in)
	Seat height	('98 – '01)	860 mm (33.9 in)
		(After '01)	854 mm (33.6 in)
	Footpeg height	('98 – '01)	327 mm (12.9 in) [333 mm (13.1 in)]
		(After '01)	329 mm (13.0 in) [336 mm (13.2 in)]
	Ground clearance	('98 – '01)	192 mm (7.6 in)
		(After '01)	196 mm (7.7 in)
	Dry weight	('98 – '01)	260 kg (573 lbs) [266 kg (586 lbs)]
		(After '01)	264 kg (582 lbs) [270 kg (595 lbs)]
	Curb weight	('98 – '01)	270 kg (595 lbs) [276 kg (608 lbs)]
		(After '01)	274 kg (604 lbs) [280 kg (617 lbs)]
	Maximum weight capacity		220 kg (485 lbs)
FRAME	Frame type		Double cradle
	Front suspension		Double wish-bone
	Front wheel travel		150 mm (5.91 in)
	Front damper		Double tube
	Rear suspension		Swingarm
	Rear wheel travel		150 mm (5.91 in)
	Rear damper		Double tube
	Front tire size		AT 25 X 8-12 ★★
	Rear tire size		AT 25 X 10-12 ★★
	Front rim size		12 X 6.0 AT
	Rear rim size		12 X 7.5 AT
	Tire brand (DUNLOP) FR/RR		KT401C/ '98 – '01: KT405C, After '01 KT128
	Front brake		Hydraulic drum brake
	Rear brake		Mechanical drum brake
	Toe		Toe-out : 35 mm (1-3/8 in)
	Caster angle		3°
	Camber angle		0.1°
	Trail length		7 mm (9/32 in)
	Fuel tank capacity		12.0 ℓ (3.18 US gal, 2.64 Imp gal)
	Fuel tank reserve capacity		2.7 ℓ (0.71 US gal, 0.59 Imp gal)

GENERAL (Cont'd)

ITEM			SPECIFICATION
ENGINE	Bore and stroke		90.0 × 68.0 mm (3.54 × 2.68 in)
	Displacement		432.6 cm³ (26.40 cu-in)
	Compression ratio		8.5 : 1
	Valve train		Overhead valve
	Intake valve opens		6° BTDC
	Intake valve closes		45° ABDC
	Exhaust valve opens		36° BBDC
	Exhaust valve closes		10° ATDC
	Lubrication system		Forced pressure and wet sump
	Oil pump type		Trochoid
	Cooling system		Air cooled
	Air filtration		Oiled double urethane
	Crankshaft type		Unit type, two main journals
	Engine weight	(TRX450S/FM)	50.2 kg (110.7 lbs)
		(TRX450ES/FE)	52.2 kg (115.1 lbs)
	Cylinder arrangement		Single cylinder, longitudinally installed
CARBURETOR	Carburetor type		CV (Constant Vacuum) type
	Throttle bore		32.0 mm
DRIVE TRAIN	Clutch system		Centrifugal & multi-plate, wet
	Clutch operation system		Automatic
	Transmission		Constant mesh, 5-speed with reverse
	Primary reduction		2.103 (61/29)
	Secondary reduction		2.100 (42/20)
	Final reduction	Front ('98 – '01)	3.153 (41/13)
		(After '01)	3.231 (42/13)
		Rear	3.153 (41/13)
	Gear ratio	1st	4.083 (49/12)
		2nd	2.388 (43/18)
		3rd	1.608 (37/23)
		4th	1.178 (33/28)
		5th	0.848 (28/33)
		Reverse	4.781 (34/12 X 27/16)
	Gearshift pattern		Left foot operated return system R – N – 1 – 2 – 3 – 4 – 5
ELECTRICAL	Ignition system		DC – CDI
	Starting system		Starter motor and emergensy recoil starter
	Charging system		Triple phase output alternator
	Regulator/rectifier		SCR shorted/triple phase full-wave rectification
	Lighting system		Battery

LUBRICATION SYSTEM

Unit: mm (in)

ITEM		STANDARDS	SERVICE LIMIT
Engine oil capacity	At draining	2.0 ℓ (2.10 US qt, 1.76 Imp qt)	—
	At disassembly	2.7 ℓ (2.84 US qt, 2.38 Imp qt)	—
	At oil filter change	2.1 ℓ (2.21 US qt, 1.85 Imp qt)	—
Recommended engine oil		HONDA GN4 4-stroke oil or equivalent motor oil API service classification SF or SG	—
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	0.02 – 0.09 (0.001 – 0.004)	0.11 (0.004)

FUEL SYSTEM

ITEM			SPECIFICATIONS
Carburetor identification number		'98 – '01:	VE93A
		After '01:	VE93C
Main jet	Initial		#130
	High altitude setting		#120
Slow jet			#45
Jet needle clip position			3rd groove from top
Pilot screw	Initial opening		2 – 5/8 turns out
	High altitude setting		2 – 5/8 turns out
Float level			18.5 mm (0.73 in)
Engine idle speed			1,400 ± 100 rpm
Throttle lever free play			3.0 – 8.0 mm (1/8 – 5/16 in)
Starting enrichment (SE) valve distance			10 – 11 mm (0.39 – 0.43 in)

CYLINDER HEAD/VALVES/CAMSHAFT

Unit: mm (in)

ITEM			STANDARDS	SERVICE LIMIT
Cylinder compression	Decompressor effected		539 – 834 kPa (5.5 – 8.5 kgf/cm², 78 – 121 psi) at 450 rpm	—
	Decompressor not effected		1,226 – 1,442 kPa (12.5 – 14.5 kgf/cm², 178 – 206 psi) at 450 rpm	—
Valve, Valve guide	Valve clearance	IN	0.15 (0.006)	—
		EX	0.15 (0.006)	—
	Valve stem O.D.	IN	5.475 – 5.490 (0.2156 – 0.2161)	5.45 (0.215)
		EX	5.455 – 5.470 (0.2148 – 0.2154)	5.43 (0.214)
	Valve guide I.D.	IN	5.500 – 5.512 (0.2165 – 0.2170)	5.525 (0.2175)
		EX	5.500 – 5.512 (0.2165 – 0.2170)	5.525 (0.2175)
	Stem to guide clearance	IN	0.010 – 0.037 (0.0004 – 0.0015)	0.12 (0.005)
		EX	0.030 – 0.057 (0.0012 – 0.0022)	0.14 (0.006)
	Valve seat width		1.2 (0.005)	1.5 (0.06)
Valve spring free length	Inner		36.85 (1.451)	35.84 (1.411)
	Outer		41.67 (1.641)	40.42 (1.591)
Rocker arm/ shaft	Rocker arm I.D.		12.000 – 12.018 (0.4724 – 0.4731)	12.05 (0.474)
	Rocker arm shaft O.D.		11.964 – 11.984 (0.4710 – 0.4718)	11.92 (0.469)
	Rocker arm to shaft clearance		0.016 – 0.054 (0.0006 – 0.002)	0.08 (0.003)
Camshaft and cam follower	Cam lobe height	IN	36.4291 – 36.4291 (1.43421 – 1.44051)	36.25 (1.427)
		EX	36.2670 – 36.4270 (1.42783 – 1.43131)	36.10 (1.421)
	Cam follower O.D.	IN/EX	22.467 – 22.482 (0.8845 – 0.8851)	22.46 (0.884)
	Cam follower bore O.D.	IN/EX	22.510 – 22.526 (0.8862 – 0.8868)	22.54 (0.887)
	Cam follower to bore clearance		0.028 – 0.059 (0.0011 – 0.0023)	0.07 (0.003)

CYLINDER/PISTON

Unit: mm (in)

ITEM			STANDARDS	SERVICE LIMIT
Cylinder	I.D.		90.00 – 90.01 (3.543 – 3.544)	90.10 (3.547)
	Taper		—	0.10 (0.004)
	Out of round		—	0.10 (0.004)
	Warpage		—	0.10 (0.004)
Piston, piston rings, piston pin	Piston mark direction		"IN" mark facing toward the intake side	—
	Piston O.D.		89.945 – 89.965 (3.5411 – 3.5419)	89.90 (3.539)
	Piston O.D. measurement point		10 mm (0.4 in) from bottom of skirt	—
	Piston pin bore I.D.		19.002 – 19.008 (0.7481 – 0.7483)	19.08 (0.751)
	Piston pin O.D.		18.994 – 19.000 (0.7478 – 0.7480)	18.96 (0.746)
	Piston-to piston pin clearance		0.002 – 0.014 (0.0001 – 0.0006)	0.12 (0.039)
	Piston ring-to-ring groove clearance	Top	0.030 – 0.060 (0.0011 – 0.0024)	0.09 (0.004)
		Second	0.015 – 0.45 (0.0006 – 0.0018)	0.09 (0.004)
	Piston ring end gap	Top	0.015 – 0.30 (0.006 – 0.012)	0.5 (0.02)
		Second	0.300 – 0.450 (0.012 – 0.018)	0.6 (0.02)
		Oil (side rail)	0.20 – 0.70 (0.008 – 0.028)	—
Cylinder-to-piston clearance			0.035 – 0.056 (0.0014 – 0.0022)	0.10 (0.004)
Connecting rod small end I.D.			19.020 – 19.041 (0.7488 – 0.7496)	19.07 (0.7508)
Connecting rod-to piston pin clearance			0.020 – 0.047 (0.0008 – 0.0019)	0.10 (0.004)

CLUTCH/GEARSHIFT LINKAGE

Unit: mm (in)

ITEM			STANDARDS	SERVICE LIMIT
Change clutch	Spring free length		32.1 (1.26)	31.0 (1.22)
	Disc thickness		2.62 – 2.78 (0.103 – 0.109)	2.3 (0.09)
	Plate warpage		—	0.20 (0.008)
	Clutch outer guide	O.D.	27.959 – 27.980 (1.1007 – 1.1016)	27.92 (1.099)
		I.D.	22.000 – 22.021 (0.8661 – 0.8670)	22.05 (0.868)
	Mainshaft O.D at outer guide		21.972 – 21.993 (0.8650 – 0.8659)	21.93 (0.863)
Centrifugal clutch	Drum I.D.		140.0 – 140.2 (5.51 – 5.52)	140.4 (5.53)
	Weight lining thickness		3.0 (0.12)	2.0 (0.08)
	Clutch spring height		3.1 (0.12)	2.95 (0.116)
	Clutch weight spring free length		21.6 (0.85)	22.5 (0.89)
Primary drive gear	I.D.		27.000 – 27.021 (1.0630 – 1.0638)	27.05 (1.065)
	Crankshaft O.D. at drive gear		26.959 – 26.980 (1.0614 – 1.0622)	26.93 (1.060)

CRANKSHAFT/TRANSMISSION

Unit: mm (in)

ITEM				STANDARDS	SERVICE LIMIT
Crankshaft, connecting rod	Side clearance			0.05 – 0.65 (0.002 – 0.026)	0.80 (0.031)
	Radial clearance			0.006 – 0.018 (0.0002 – 0.0007)	0.05 (0.002)
	Runout			———	0.05 (0.002)
Transmission	Gear I.D.	M4		25.000 – 25.021 (0.9843 – 0.9851)	25.05 (0.986)
		M5		20.000 – 20.021 (0.7874 – 0.7882)	25.05 (0.986)
		C1, C2, C3		28.020 – 28.041 (1.1031 – 1.1040)	28.07 (1.105)
		CR		28.021 – 28.041 (1.1032 – 1.1040)	28.07 (1.105)
		Reverse idle		18.000 – 18.021 (0.7087 – 0.7095)	18.05 (0.711)
	Shaft O.D.	M4		21.959 – 21.980 (0.8645 – 0.8654)	21.93 (0.863)
		M5		16.983 – 16.994 (0.6686 – 0.6691)	16.95 (0.667)
		Reverse idle		13.966 – 13.984 (0.5498 – 0.5506)	13.93 (0.548)
	Gear bushing	C1 O.D.		27.984 – 28.005 (1.1017 – 1.1026)	27.93 (1.100)
		C2 O.D.		27.979 – 28.000 (1.1015 – 1.1024)	27.93 (1.100)
		CR O.D.		27.979 – 28.000 (1.1015 – 1.1024)	27.93 (1.100)
		M4	I.D.	22.000 – 22.021 (0.8661 – 0.8670)	22.05 (0.868)
			O.D.	24.959 – 24.980 (0.9826 – 0.9835)	24.93 (0.981)
		M5	I.D.	17.016 – 17.034 (0.6699 – 0.6706)	17.06 (0.672)
			O.D.	19.966 – 19.984 (0.7861 – 0.7868)	19.93 (0.785)
		R	I.D.	14.000 – 14.025 (0.5515 – 0.5522)	14.05 (0.553)
			O.D.	17.966 – 17.984 (0.7073 – 0.7080)	17.93 (0.706)
	Gear-to-bushing clearance	M4		0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
		M5		0.016 – 0.055 (0.0006 – 0.0022)	0.10 (0.004)
		C1		0.015 – 0.057 (0.0006 – 0.0022)	0.10 (0.004)
		C2		0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
		CR		0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
		C3		0.015 – 0.057 (0.0006 – 0.0022)	0.10 (0.004)
		Reverse idle		0.016 – 0.055 (0.0006 – 0.0022)	0.10 (0.004)
	Bushing-to-shaft clearance	M4		0.020 – 0.062 (0.0008 – 0.0024)	0.10 (0.004)
		M5		0.022 – 0.051 (0.0009 – 0.0020)	0.10 (0.004)
		Reverse idle		0.016 – 0.059 (0.0006 – 0.0023)	0.10 (0.004)
Shift fork, shaft	Fork	I.D.		13.000 – 13.021 (0.5118 – 0.5126)	13.04 (0.513)
		Claw thickness		4.93 – 5.00 (0.194 – 0.197)	4.50 (0.177)
	Fork shaft O.D.			12.966 – 12.984 (0.5105 – 0.5112)	12.96 (0.510)

FRONT WHEEL/SUSPENSION/STEERING

Unit: mm (in)

ITEM		STANDARDS	SERVICE LIMIT
Minimum tire tread depth		—	4 (0.16)
Cold tire pressure	Standard	25 kPa (0.25 kgf/cm², 3.6 psi)	—
	Minimum	22 kPa (0.22 kgf/cm², 3.2 psi)	—
	Maximum	28 kPa (0.28 kgf/cm², 4.0 psi)	—
	With cargo	25 kPa (0.25 kgf/cm², 3.6 psi)	—
Tie-rod-distance berween the ball joints		369 ± 1.0 (14.5 ± 0.04)	—
Toe		Toe out : 35 ± 15 mm (1–3/8 ± 9/16 in)	—

REAR WHEEL/SUSPENSION

Unit: mm (in)

ITEM		STANDARDS	SERVICE LIMIT
Minimum tire tread depth		—	4 (0.16)
Cold tire pressure	Standard	25 kPa (0.25 kgf/cm², 3.6 psi)	—
	Minimum	22 kPa (0.22 kgf/cm², 3.2 psi)	—
	Maximum	28 kPa (0.28 kgf/cm², 4.0 psi)	—
	With cargo	25 kPa (0.25 kgf/cm², 3.6 psi)	—

BRAKES

Unit: mm (in)

ITEM		STANDARDS	SERVICE LIMIT
Front brake	Drum I.D.	160.0 (6.30)	161.0 (6.34)
	Lining thickness	4.0 (0.16)	2.0 (0.08)
	Brake panel warpage	—	0.4 (0.02)
	Brake panel seal lip wear	—	0.5 (0.02)
	Water seal lip length	22.0 (0.87)	20.0 (0.79)
	Master cylinder I.D.	14.000 – 14.043 (0.5512 – 0.5529)	14.055 (0.5533)
	Master piston O.D.	13.957 – 13.984 (0.5495 – 0.5506)	13.945 (0.5490)
	Wheel cylinder I.D.	19.050 – 19.102 (0.7500 – 0.7520)	19.12 (0.753)
	Wheel cylinder piston O.D.	18.997 – 19.030 (0.7479 – 0.7492)	18.81 (0.741)
Rear brake	Drum i.D.	160 (6.30)	161.0 (6.34)
	Lining thickness	5.0 (0.20)	To the indicator

FRONT DRIVING MECHANISM

Unit: mm (in)

ITEM		STANDARDS	SERVICE LIMIT
Oil capacity	After draining	190 cm³ (6.43 US oz, 6.67 Imp oz)	—
	At disassembly	200 cm³ (6.76 US oz, 7.02 Imp oz)	—
Recommended oil		Hypoid gear oil SAE #80	—
Clutch spring free height		2.65 (0.104)	2.5 (0.10)
Clutch disc thickness	A	2.7 – 2.8 (0.106 – 0.110)	2.4 (0.09)
	B	2.3 – 2.4 (0.091 – 0.094)	2.1 (0.08)
Pinion gear I.D.		12.000 – 12.018 (0.4724 – 0.4731)	12.05 (0.474)
Pinion gear shaft O.D.		11.973 – 11.984 (0.4714 – 0.4718)	11.75 (0.463)
Slip torque		17 – 25 N•m (1.7 – 2.5 kgf•ft, 12 – 18 lbf•ft)	—
Gear backlash		0.05 – 0.30 (0.002 – 0.012)	0.40 (0.016)

Unit: mm (in)

FRONT DRIVING MECHANISM ('98 – '01)

ITEM		STANDARDS	SERVICE LIMIT
Oil capacity	After draining	190 cm³ (6.4 US oz, 6.7 Imp oz)	—
	At disassembly	200 cm³ (6.8 US oz, 7.0 Imp oz)	—
Recommended oil		Hypoid gear oil SAE #80	—
Clutch spring free height		2.65 (0.104)	2.5 (0.10)
Clutch disc thickness	A	2.7 – 2.8 (0.106 – 0.110)	2.4 (0.09)
	B	2.3 – 2.4 (0.091 – 0.094)	2.1 (0.08)
Pinion gear I.D.		12.000 – 12.018 (0.4724 – 0.4731)	12.05 (0.474)
Pinion gear shaft O.D.		11.973 – 11.984 (0.4714 – 0.4718)	11.75 (0.463)
Slip torque		17 – 25 N•m (1.7 – 2.5 kgf•ft, 12 – 18 lbf•ft)	—
Gear backlash		0.05 – 0.30 (0.002 – 0.012)	0.40 (0.016)

Unit: mm (in)

FRONT DRIVING MECHANISM (After '01)

ITEM			STANDARDS	SERVICE LIMIT
Front differential	Oil capacity	After draining	241 cm³ (8.2 US oz, 8.5 Imp oz)	—
		After disassembly	275 cm³ (9.3 US oz, 9.7 Imp oz)	—
	Recommended oil		Hypoid gear oil SAE #80	—
	Gear backlash		0.05 – 0.25 (0.002 – 0.010)	0.4 (0.02)
	Backlash difference		—	0.2 (0.01)
	Slip torque		14 – 17 N•m (1.45 – 1.75 kgf•m, 10 – 13 lbf•ft)	12 N•m (1.2 kgf•m, 9 lbf•ft)
	Face cam-to-housing distance		6.3 – 6.7 (0.25 – 0.26)	6.3 (0.25)
	Differential housing cap depth		9.55 – 9.65 (0.376 – 0.380)	9.55 (0.376)
	Cone spring free height		2.8 (0.11)	2.6 (0.10)

Unit: mm (in)

REAR DRIVING MECHANISM

ITEM			STANDARDS	SERVICE LIMIT
Rear axle runout			—	3.0 (0.12)
Rear final drive	Oil capacity	After draining	90 cm³ (3.0 US oz, 3.21 Imp oz)	—
		At disassembly	100 cm³ (3.4 US oz, 3.5 Imp oz)	—
	Recommended oil		Hypoid gear oil SAE #80	—
	Gear backlash		0.05 – 0.30 (0.002 – 0.012)	0.40 (0.016)

BATTERY/CHARGING SYSTEM

ITEM			SPECIFICATIONS
Battery	Capacity		12 V – 12 AH
	Current leakage		5 mA max.
	Voltage (20°C/68°F)	Fully charged	13.0 – 13.2 V
		Needs charging	Below 12.3 V
	Charging current	Normal	1.2 A/5 – 10 h
		Quick	5.0 A/1.0 h
Alternator	Capacity		0.310 kw/5,000 rpm
	Charging coil resistance (20°C/68°F)		0.1 – 1.0 Ω
Regulator/ rectifier	Type		Triple phase/full-wave rectification
	Regulated voltage		14.7 – 15.5 V at 5,000 rpm

IGNITION SYSTEM

Unit: mm (in)

ITEM		SPECIFICATIONS	
Spark plug	Standard	DPR7EA – 9 (NGK)	X22EPR – U9 (DENSO)
	For cold climate (below 5°C/41°F)	DPR6EA – 9 (NGK)	X20EPR – U9 (DENSO)
	For extended high speed riding	DPR8EA – 9 (NGK)	X24EPR – U9 (DENSO)
Spark plug gap		0.8 – 0.9 mm (0.03 – 0.04 in)	
Ignition coil peak voltage		100 V minmium	
Ignition pulse generator peak voltage		0.7 V minmium	
Ignition timing	"F" mark	10° BTDC at 1,400 rpm	
	Full advance	30° BTDC at 5,900 rpm	

ELECTRIC STARTER

Unit: mm (in)

ITEM	STANDARDS	SERVICE LIMIT
Starter motor brush length	12.5 (0.49)	9.0 (0.35)

LIGHTS/METERS/SWITCHES

ITEM			SPECIFICATIONS
Bulbs	Headlight	'98 – '01	12V – 25/25W X 2
		After '01	12V – 30/30W X 2
	Assist headlight		12V – 45W
	Taillight		12V – 5W X 2
	Brake Light (After'01 Quebec province only)		12V – 21CP
	Indicator (Oil/Reverse/Neutral)		LED
Fuse	Main fuse		30A
	Sub fuse	'98 – '01	15A X 2, 10A X 2
		After '01	15A X 2, 10A X 3
	MOTOR FUSE (TRX450 ES/FE only)		30 A

TORQUE VALUES

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

- Torque specificatons 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 a locking agent to the threads.
3. Stake.
4. Apply oil to the threads and flange surface.
5. Apply clean engine oil to the O-ring.
6. Apply grease to the threads and flange surface.
7. ALOC bolt: replace with a new one.
8. Do not reuse; replace with a new one.
9. Castle nut: Tighten to the specified torque then tighten to position suitable for cotter pin hole direction.

ENGINE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Maintenance:				
Oil drain bolt	1	12	25 (2.5,18)	
Oil filter cover flange bolt	3	6	10 (1.0, 7)	
Spark plug	1	12	18 (1.8, 13)	
Timing hole cap	1	14	10 (1.0,7)	
Valve adjuster lock nut	2	6	17 (1.7, 12)	
Clutch adjusting screw lock nut	1	8	22 (2.2, 16)	
Lubrication System:				
Oil pump rotor side plate screw	1	5	4 (0.40, 2.9)	
Relief valve cap	1	14	19 (1.9, 14)	NOTE 2
Fule System:				
Carburetor cover screw	1	5	4 (0.4, 2.9)	
Starting enrichment (SE) valve nut	1	14	3 (0.3, 1.8)	
Insulator band screw (After '01)	1	5	4 (0.4, 2.9)	
Cylinder Head/Valves/Camshaft:				
Cylinder head flange cap nut	3	10	39 (4.0, 29)	NOTE 4
Camshaft bearing retainer bolt	1	8	26 (2.7, 20)	NOTE 2
Cam sprocket flange dowel bolt	2	7	20 (2.0, 14)	NOTE 2
Cam chain tensioner lifter sealing screw	1	6	4 (0.4, 2.9)	
Cam chain tensioner mounting bolt	2	6	12 (1.2, 9)	NOTE 2
Rocker arm holder flange cap nut	3	10	39 (4.0, 29)	NOTE 4
Rocker arm shaft flange bolt	1	6	7 (0.7, 5.1)	
Clutch/Gearshift Linkage:				
Gearshift return spring pin	1	8	22 (2.2, 16)	NOTE 2
Shift drum stopper arm bolt	1	6	12 (1.2, 9)	
Gearshift A arm bolt	1	8	25 (2.5, 18)	
Centrifugal clutch outer lock nut	1	20	118 (12.0, 87)	NOTE 3, 4
Clutch spring bolt	4	6	12 (1.2, 9)	
Change clutch center lock nut	1	18	108 (11.0, 80)	NOTE 3, 4
Drum shifter and guide plate bolt ('98 – '01)	1	6	12 (1.2, 9)	NOTE 2
(After '01)	1	6	16 (1.6, 12)	NOTE 2

ENGINE (Cont'd)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Recoil Starter:				
Recoil pulley flange bolt	1	12	108 (11.0, 80)	NOTE 4
Alternator/Starter Clutch:				
Starter one-way clutch socket bolt	6	8	31 (3.1, 22)	NOTE 2
Stator socket bolt	3	6	10 (1.0, 7)	
Ignition System:				
Ignition pulse generator socket bolt	2	5	6 (0.6, 4.3)	NOTE 2
Lights/Meters/Switches:				
Neutral/reverse (or gear position) switch mounting bolt	1	6	12 (1.2, 9)	NOTE 2
Oil thermo sensor	1	12	18 (1.8, 13)	
Angle sensor (TRX450ES only)	2	6	6 (0.6, 4.3)	

FRAME

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Frame/Body Panels/Exhaust System:				
Muffler band bolt	2	8	23 (2.3,17)	
Exhaust pipe protector bolt	3	6	22 (2.2, 16)	
Heat protector bolt	2	6	22 (2.2,16)	
Heat guard bolt	4	6	20 (2.0, 14)	
Step bar mounting bolt	4	8	32 (3.3, 24)	
Cooling fan shroud special bolt	4	6	18 (1.8, 13)	
Fuel tank rear bracket bolt	4	6	18 (1.8,13)	
Carrier mounting bolt ('98 – '01)	14	8	32 (3.3, 24)	
(After '01)	14	8	37 (3.8, 27)	
Fuel System:				
Fuel valve mounting bolt	2	6	9 (0.9, 6.5)	
Fuel level gauge mounting bolt	2	6	12 (1.2, 9)	
By-starter cap special bolt	1	14	2.3 (0.23, 1.6)	
Clutch/Gearshift Linkage:				
Gearshift pedal bolt ('98 – '01)	1	6	16 (1.6, 12)	
(After '01)	1	6	20 (2.0, 14)	
Engine Mounting:				
Lower engine mounting bolt (right)	1	10	54 (5.5, 40)	
Lower engine mounting bolt (left)	1	10	54 (5.5, 40)	
Upper engine hanger bolt	1	10	54 (5.5, 40)	
Upper engine hanger bracket bolt	2	8	32 (3.3, 24)	
Lower engine hanger bracket bolt	2	8	32 (3.3, 24)	
Front Wheel/Suspension/Steering:				
Throttle case cover	3	4	4 (0.4, 2.5)	
Handlebar lower holder nut	2	10	39 (4.0, 29)	NOTE 8
Steering shaft U-nut	1	14	108 (11.0, 80)	NOTE 6
Tie-rod ball joint self lock nut	4	12	54 (5.5, 40)	
Tie-rod lock nut	4	12	54 (5.5, 40)	
Steering shaft holder flange bolt	2	8	32 (3.3, 24)	
Upper/lower arm pivot self lock nut	8	10	44 (4.5, 33)	NOTE 8
Knuckle ball joint castle nut ('98 – '01)	4	12	29 (3.0, 22)	NOTE 9
(After '01)	4	12	32 (3.3, 24)	NOTE 9
Shock absorber upper mounting self lock nut	2	10	44 (4.5, 33)	NOTE 8
Shock absorber lower mounting self lock nut	2	10	44 (4.5, 33)	NOTE 9
Damper rod lock nut	2	10	37 (3.8, 27)	NOTE 2
Front wheel nut	8	10	64 (6.5, 47)	
Front wheel hub castle nut	2	16	78 (8.0, 58)	NOTE 9

FRAME (Cont'd)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Rear Wheel/Suspension:				
Rear axle castle nut	2	20	137 (14.0, 101)	NOTE 9
Rear wheel nut	8	10	64 (6.5, 47)	
Shock absorber lower mounting self lock nut	1	10	44 (4.5, 33)	NOTE 8
Shock absorber upper mounting self lock nut	2	10	39 (4.0, 29)	NOTE 8
Shock absorber lower mounting bolt	1	10	44 (4.5, 33)	
Damper rod lock nut	2	10	37 (3.8, 27)	NOTE 2
Swingarm left pivot bolt	1	30	113 (11.5, 83)	
Swingarm right pivot bolt ('98 – '01)	1	30	4 (0.40, 2.9)	
(After '01)	1	30	10(1.0, 7)	
Swintarm right pivot lock nut	1	30	113 (11.5, 83)	
Rear axle housing and swingarm nut	8	10	44 (4.5, 33)	NOTE 8
Skid plate flange bolt	3	8	32 (3.3, 24)	
Brakes:				
Rear brake arm pinch bolt/nut	1	8	20 (2.0, 14)	
Rear brake panel drain bolt ('98 – '01)	1	12	34 (3.5, 25)	
(After '01)	1	12	12 (1.2, 9)	
Master cylinder reservoir cap screw	2	4	2 (0.20, 1.4)	
Master cylinder holder SH bolt	2	6	12 (1.2, 9)	
Brake lever pivot bolt	1	6	1 (0.10, 0.7)	
Brake lever pivot lock nut	1	6	6 (0.6, 4.3)	
Brake hose oil bolt	4	10	34 (3.5, 25)	
Brake hose clamp flange bolt	2	6	12 (1.2, 9)	
Brake panel flange bolt	8	8	29 (3.0, 22)	NOTE 8
Wheel cylinder bolt/washer	4	6	8 (0.8, 5.8)	
Wheel cylinder nut	4	8	17 (1.7, 12)	
Wheel cylinder oil pipe	4	10	16 (1.6, 12)	
Brake bleeder valve	2	8	6 (0.6, 4.3)	
Breather hose clamp (knuckle)	2	8	32 (3.3, 24)	
Brake hose 2-way joint	2	8	15 (1.5, 11)	
Front Driving Mechanism:				
Differential case mounting bolt/nut, 10 mm	2	10	44 (4.5, 33)	
8 mm	1	8	22 (2.2, 16)	
Differential case cover flange bolt, 8 mm	6	8	25 (2.6, 19)	
10 mm	2	10	49 (5.0, 36)	NOTE 2
Pinion joint nut ('98 – '01)	1	16	108 (11.0, 80)	NOTE 2
Pinion bearing lock nut ('98 – '01)	1	64	98 (10.0, 72)	NOTE 3
Differential gear case drain bolt	1	8	12 (1.2, 9)	
Differential gear case cover oil cap	1	30	12 (1.2, 9)	
Differential case cap torx bolt ('98 – '01)	6	8	32 (3.3, 24)	NOTE 7
Differential case UBS bolt ('98 – '01)	6	8	49 (5.0, 36)	
Differential ring gear bolt (After '01)	6	8	49 (5.0, 36)	NOTE 8
Speed sensor mounting bolt (After '01)	2	6	10 (1.0, 7)	
Final clutch speed sensor mounting bolt (After '01)	2	6	10 (1.0, 7)	
Final clutch mounting bolt (After '01)	3	8	25 (2.6, 19)	
Final clutch cover bolt (After '01)	2	6	7 (0.7, 5)	
Rear Driving Mechanism:				
Gear case cover flange bolt, 8 mm	6	8	25 (2.6, 19)	
10 mm	2	10	49 (5.0, 36)	NOTE 2
Pinion joint nut ('98 – '01)	1	16	108 (11.0, 80)	NOTE 2
Pinion bearing lock nut	1	64	98 (10.0, 72)	NOTE 3
Gear case drain bolt	1	8	12 (1.2, 9)	
Gear case cover oil check bolt	1	8	12 (1.2, 9)	
Gear case cover oil cap	1	30	12 (1.2, 9)	

TOOLS

NOTES: 1. Newly designed tool.
2. Equivalent commercially available in U.S.A.
3. Not available in U.S.A.
4. Alternative tool.

DESCRIPTION	TOOL NUMBER	REMARKS	REF. SEC.
Carburetor float level gauge	07401 – 0010000		5
Flywheel holder	07725 – 0040000	NOTE 2	10
Rotor puller	07733 – 0020001	NOTE 4: 07933 – 3950000 (U.S.A. only)	10
Remover weight	07741 – 0010201	NOTE 4: 07936 – 371020A or 07936 – 3710200	8, 13 15 (After '01)
Valve guide driver, 5.5 mm	07742 – 0010100		7
Attachment, 37 × 40 mm	07746 – 0010200		11, 12, 13
Attachment, 42 × 47 mm	07746 – 0010300		8, 11
Attachment, 52 × 55 mm	07746 – 0010400		10, 11, 12, 14 15, 16
Attachment, 62 × 68 mm	07746 – 0010500		14, 16
Attachment, 72 × 75 mm	07746 – 0010600		11
Attachment, 24 × 26 mm	07746 – 0010700		10, 11
Attachment, 22 × 24 mm (After '01)	07746 – 0010800		15
Driver, 22 mm I.D.	07746 – 0020100		8
Attachment, 15 mm I.D.	07746 – 0020200		8
Driver, 40 mm I.D.	07746 – 0030100		15, 16
Attachment, 25 mm I.D. ('98 – '01)	07746 – 0030200		15, 16
Attachment, 30 mm I.D. (After '01)	07746 – 0030300		15, 16
Pilot, 10 mm	07746 – 0040100		10
Pilot, 15 mm (After '01)	07746 – 0040300		15
Pilot, 17 mm	07746 – 0040400		8, 11, 13, 14
Pilot, 20 mm	07746 – 0040500		11, 12
Pilot, 25 mm	07746 – 0040600		11
Pilot, 30 mm	07746 – 0040700		12
Pilot, 35 mm	07746 – 0040800		11
Pilot, 40 mm	07746 – 0040900		11
Pilot, 22 mm	07746 – 0041000		11
Pilot, 28 mm	07746 – 0041100		14, 15
Pilot, 14 mm (After '01)	07746 – 0041200		15
Driver	07749 – 0010000		8, 10, 11, 12, 13, 14, 15, 16
Valve spring compressor	07757 – 0010000		7
Valve seat cutter		NOTE 2	
Seat cutter, 29 mm (45° EX)	07780 – 0010300		7
Seat cutter, 35 mm (45° IN)	07780 – 0010400		7
Flat cutter, 30 mm (32° EX)	07780 – 0012200		7
Flat cutter, 35 mm (32° IN)	07780 – 0012300		7
Interior cutter, 30 mm (60° EX)	07780 – 0014000		7
Interior cutter, 37.5 mm (60° IN)	07780 – 0014100		7
Cutter holder, 5.5 mm	07781 – 0010101		7
Swingarm lock nut wrench	07908 – 4690003		13
Snap ring pliers	07914 – 3230001		14
Lock nut wrench, 30 × 64 mm ('98 – '01)	07916 – MB00002	NOTE 4: 07916 – MB00001	15, 16

DESCRIPTION	TOOL NUMBER	REMARKS	REF. SEC.
Bearing remover set	07936 – 3710001	NOTE 3	11
– Remover handle	07936 – 3710100		11
– Bearing remover, 20 mm	07936 – 3710600		11
– Remover weight	07741 – 0010201	NOTE 4: 07936 – 371020A or 07936 – 3710200	11
Remover handle	07936 – 3710100		8, 11, 13
Bearing remover, 17 mm	07936 – 3710300		8, 11, 13
Clutch puller	07933 – HA80000	NOTE 4: 07933 – HB3000A	8
Attachment	07945 – 3330300	NOTE 4: 07746 – 0010400	12
Attachment, 28 × 30 mm	07946 – 1870100		12
Driver handle attachment	07949 – 3710001		12
Oil seal driver (After '01)	07965 – KE80100		15
Driver attachment	07965 – KE80200	NOTE 4: 07947 – KA50100	15 ('98 – '01), 16
Oil seal driver	07965 – MC70100		14
Assembly collar	07965 – VM00100		11
Assembly shaft	07965 – VM00200	NOTE 4: 07931 – ME4010B and 07931 – HB3020A (U.S.A. only)	11
Threaded adapter	07965 – VM00300	NOTE 4: 07931 – KF00200 (U.S.A. only)	11
Valve guide reamer, 5.5 mm	07984 – 2000001	NOTE 4: 07984 – 200000D (U.S.A. only)	7
Clutch holder	07GMB – HA70101	NOTE 4: 07GMB-HA7010A or 07GMB-HA7011A and 07GMB-HA7012A	8
Inspection adaptor	07GMJ – ML80100		20
Peak voltage adapter	07HGJ – 0020100	NOTE 4: Peak voltage tester (U.S.A. only)	18
Pinion puller set	07HMC – MM80101	NOTE 3	15 ('98 – '01), 16
– Shaft puller	07931 – ME40000	NOTE 4: 07931 – ME4010B and 07931 – HB3020A (U.S.A. only)	15 ('98 – '01), 16
– Pinion puller base	07HMC – MM80110	NOTE 4: 07HMC – MM8011A (U.S.A. only)	15, 16
Adjustable bearing puller (After '01)	07JAC – PH80101		15
Remover shaft (After '01)	07JAC – PH80200		15
Oil seal driver attachment	07JAD – PH80101		10, 12
Clutch center holder	07JMB – MN50300	NOTE 4: 07HGB – 001010B and 07HGB – 001020B (U.S.A. only)	8
Differential inspection tool	07KMK – HC50101	NOTE 4: 07KMK – HC5010A (U.S.A. only)	15
Ball joint remover, 28 mm	07MAC – SL00200		12, 14
Pilot, 32 mm	07MAD – PR90200		11, 16
Ball joint installer base	07HAF – SF10120		12
Recoil pulley holder	07SMB – HM70100		10
Pinion holder ('98 – '01)	07SMB – HM70200		15, 16
Ball joint remover/installer	07WMF – HN00100	NOTE 1	12
Universal bead breaker	GN-AH-958-BB1		12, 13

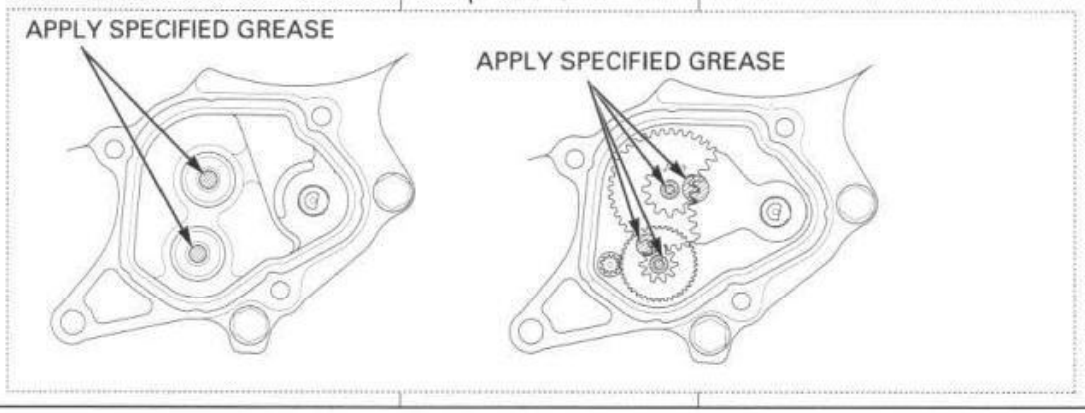
LUBRICATION & SEAL POINTS

ENGINE

LOCATION	MATERIAL	REMARKS
Oil filter cover inside Cylinder bore Cylinder stud bolt threads (at cap nut) Piston pin bore and piston outer surface Piston ring surface Connecting rod small end inner surface Centrifugal clutch outer lock nut threads Cam follower surface Cam chain surface Rocker arm both ends Clutch friction disc surface Clutch lifter plate outer surface Centrifugal clutch outer sliding surface Clutch drive plate one-way clutch sliding surface Transmission bearing and gear teeth surface Transmission bushing journal surface Main shaft and countershaft journal surface Change clutch center lock nut threads Shift fork shaft surface Shift drum grooves and surface Reverse stopper shaft journal surface Starter idle gear teeth Recoil pulley bolt threads Starter one-way clutch surface Each ball and needle bearing rolling area Each oil seal lip Crankshaft oil path	Engine oil	
Piston pin outer surface Camshaft lobes Rocker arm shaft (rocker arm sliding surface) Valve stem sliding surface Clutch outer guide sliding surface Starter reduction shaft A surface Starter reduction shaft surface Starter motor pinion end	Molybdenum disulfide oil (a mixture of 1/2 engine oil and 1/2 molybdenum disulfide grease)	
Cam sprocket bolt threads Cam chain tensioner 6 mm flange bolt threads Camshaft bearing fixing plate 8 mm bolt threads Relief valve 14 mm cap threads Gearshift return spring pin threads Starter one-way clutch socket bolt threads Neutral/reverse switch 6 mm bolt threads Ignition pulse generator 5 mm socket bolt threads	Locking agent	
Change switch grommet Alternator wire grommet Alternator cover gasket	Sealant	

ENGINE (cont'd)

LOCATION	MATERIAL	REMARKS
Front cover shift reduction gears (TRX450ES only)	Unirex N2 (ESSO) Unirex N3 (ESSO) or equivalent	Apply 3 - 5g of recommended grease.



FRAME

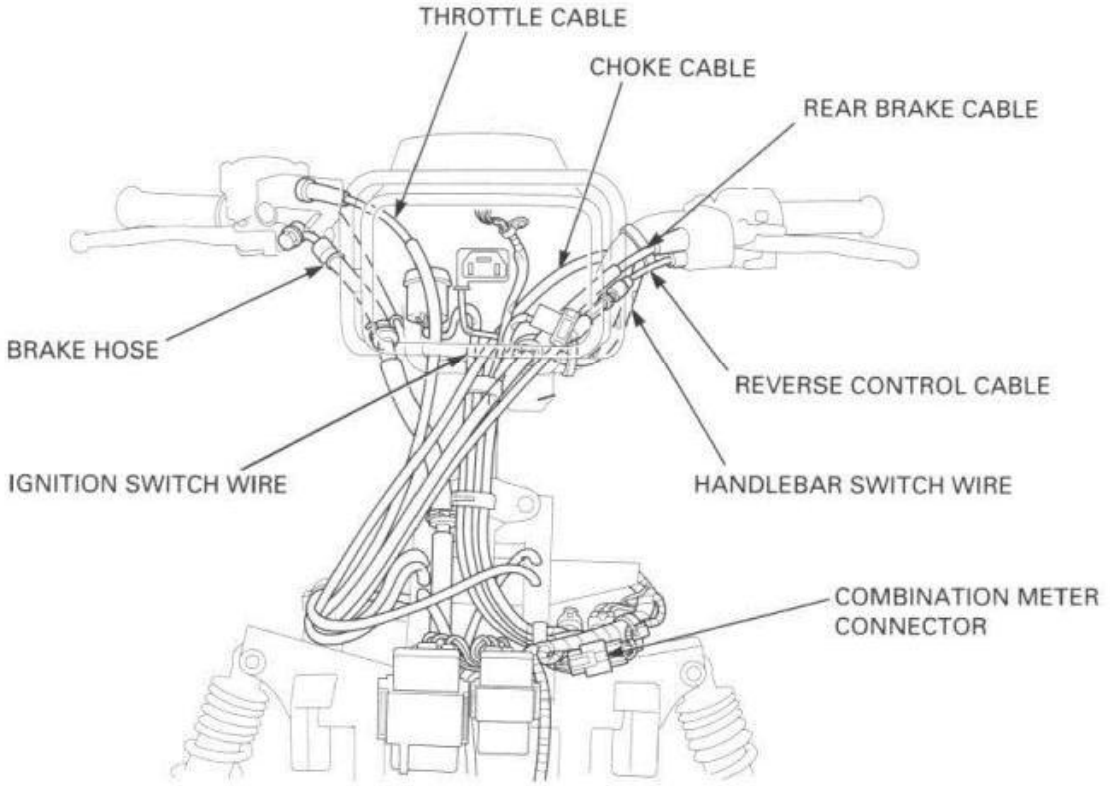
LOCATION	MATERIAL	REMARKS
Steering bushing sliding surface	Multi-purpose grease	Apply 2 – 3 g of grease
Steering shaft oil seal lip		
Steering shaft dust seal lip		
Steering shaft nut threads		
Steering shaft spline		
Knuckle dust seal lip and side seal		
Rear brake cable end		
Rear brake cam shaft sliding surface		Apply 0.5 – 1.0 g of grease
Rear brake cam dust seal lip		
Rear brake panel dust seal lip		
Rear brake shoe cam contact surface		Apply 0.5 – 1.0 g of grease
Rear brake shoe anchor pin contact surface		Apply 0.5 – 1.0 g of grease
Brake pedal shaft sliding surface		
Brake pedal dust seal lip		
Brake cover seal lip and side seal		
Brake lever pivot sliding surface		
Brake lever parking arm pin sliding surface		
Rear brake panel O-ring		
Left axle housing seal lip		
Left axle housing bearing		
Front final drive pinion joint oil seal lip		
Front drive shaft oil seal lip		
Front differential oil cap O-ring		
Front differential pinion joint O-ring		
Front final clutch dust seal lip (After '01)		
Front final clutch oil seal lip (After '01)		
Front final clutch needle bearing (After '01)		
Front drive pinion spline (After '01)		
Rear final drive pinion joint oil seal lip		
Rear final drive ring gear oil seal lip		
Rear final drive oil cap O-ring		
Rear final drive pinion joint O-ring		
Cross joing needle bearing		
Swingarm bearing and grease holder		Fill up 3 g minimum
Swingarm bearing dust seal lip		
Throttle cable end		

FRAME (Cont'd)

LOCATION	MATERIAL	REMARKS
Front brake drum water seal lip and outside lip inside	Multi-purpose grease NLGI NO.3	Fill up 14 – 16 g of grease
Rear axle shaft spline (left side) (center) (right side)	Molybdenum disulfide grease	 Apply grease to 20 mm width of area of 10 mm away from spline right end so that spline is filled with grease.
Rear wheel hub dust seal lip		Fill up 5 – 8 g of grease
Front differential pinion joint spline		Fill up 5 – 8 g of grease
Rear final drive pinion joint spline Yoke joints spline		
Front propeller shaft joint spline (Differential side)		Fill up 5 – 8 g of grease
(Engine side)		Fill up 5 – 8 g of grease
Rear propeller shaft seal lip		
Front propeller shaft seal lip		
Front drive shaft spline (Wheel side)		
Front drive shaft boot inside (Inboard)		40 – 60 g
(Outboard)		30 – 50 g
Rear brake inner cable Throttle inner cable Reverse assist inner cable Choke inner cable	Cable lubricant	
Front differential case	Hypoid gear oil SAE #80	200 cc (6.76 oz)
Rear final drive case		100 cc (3.38 oz)
Front differential case mating surface Rear final drive case mating surface	Liquid sealant (Three-bond 1215 or equivalent)	
Handlebar grip rubber inside	Handa bond A or Cemedine #540	

CABLE & HARNESS ROUTING

TRX450S ('98–'01):



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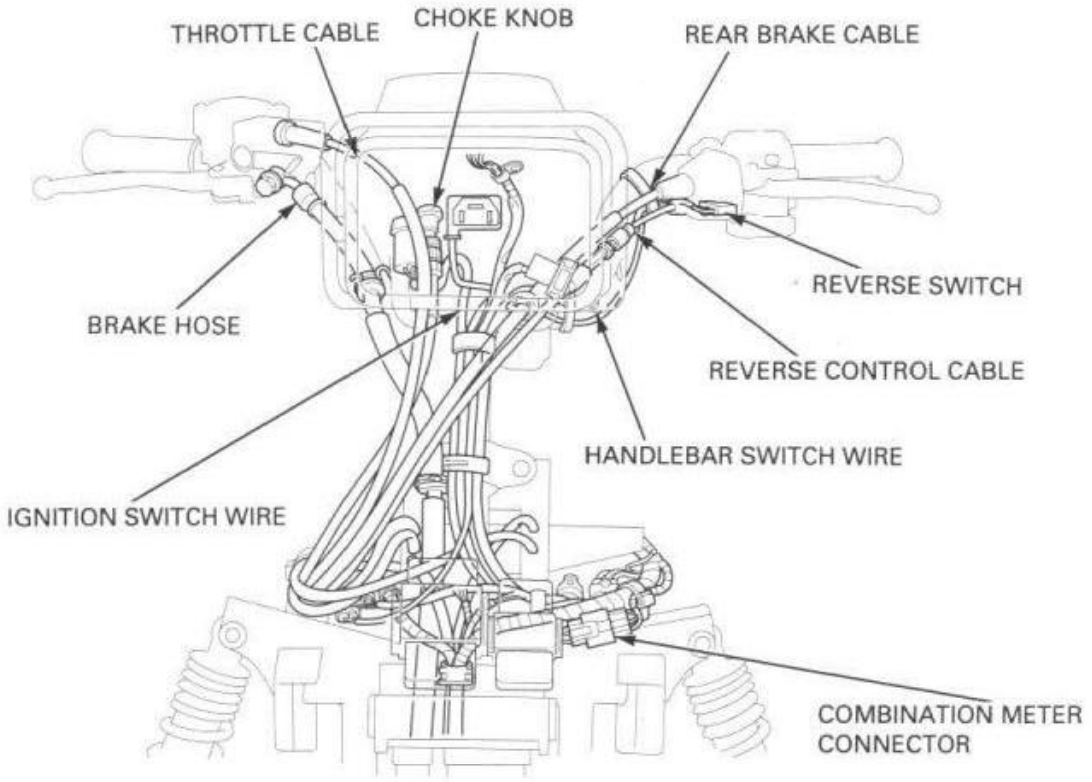

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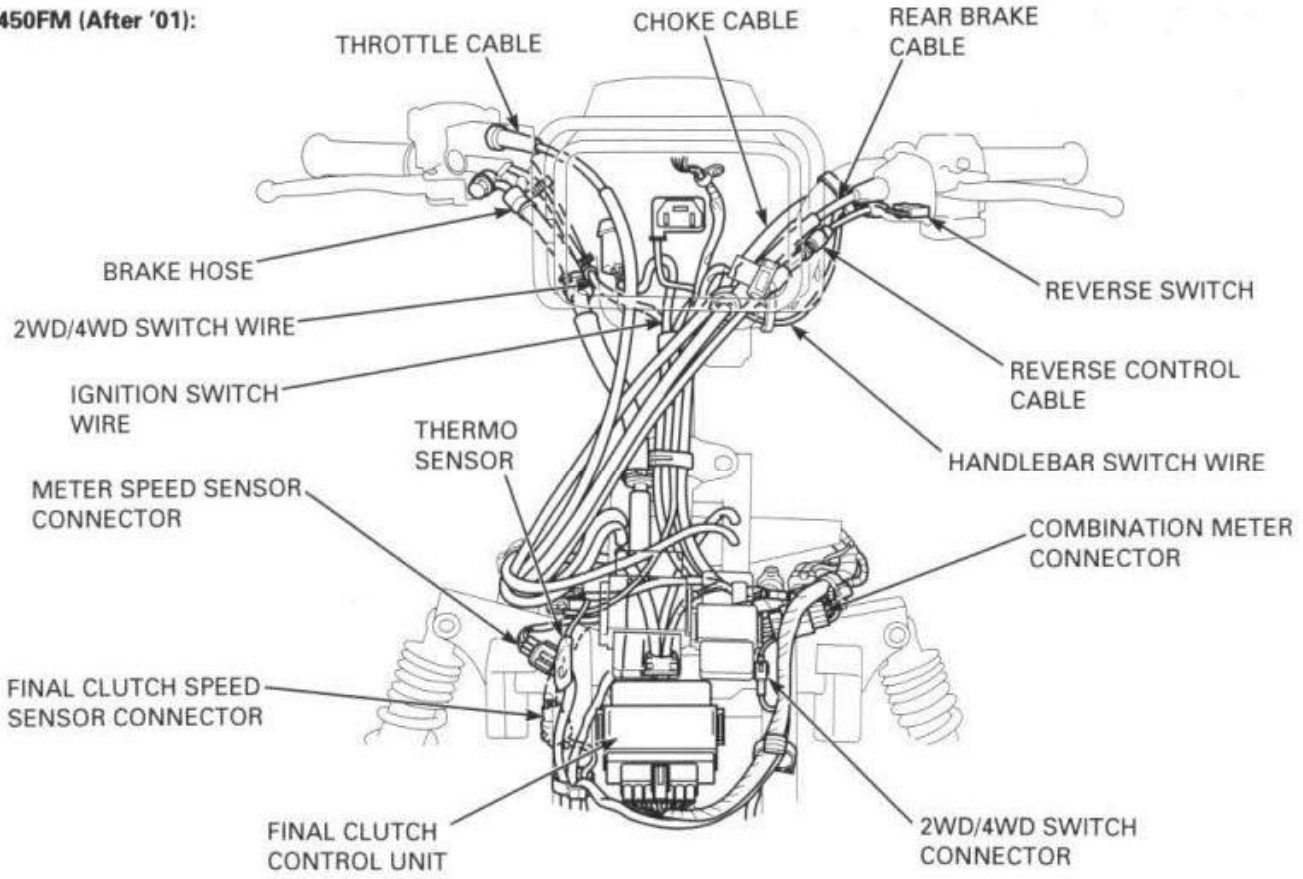

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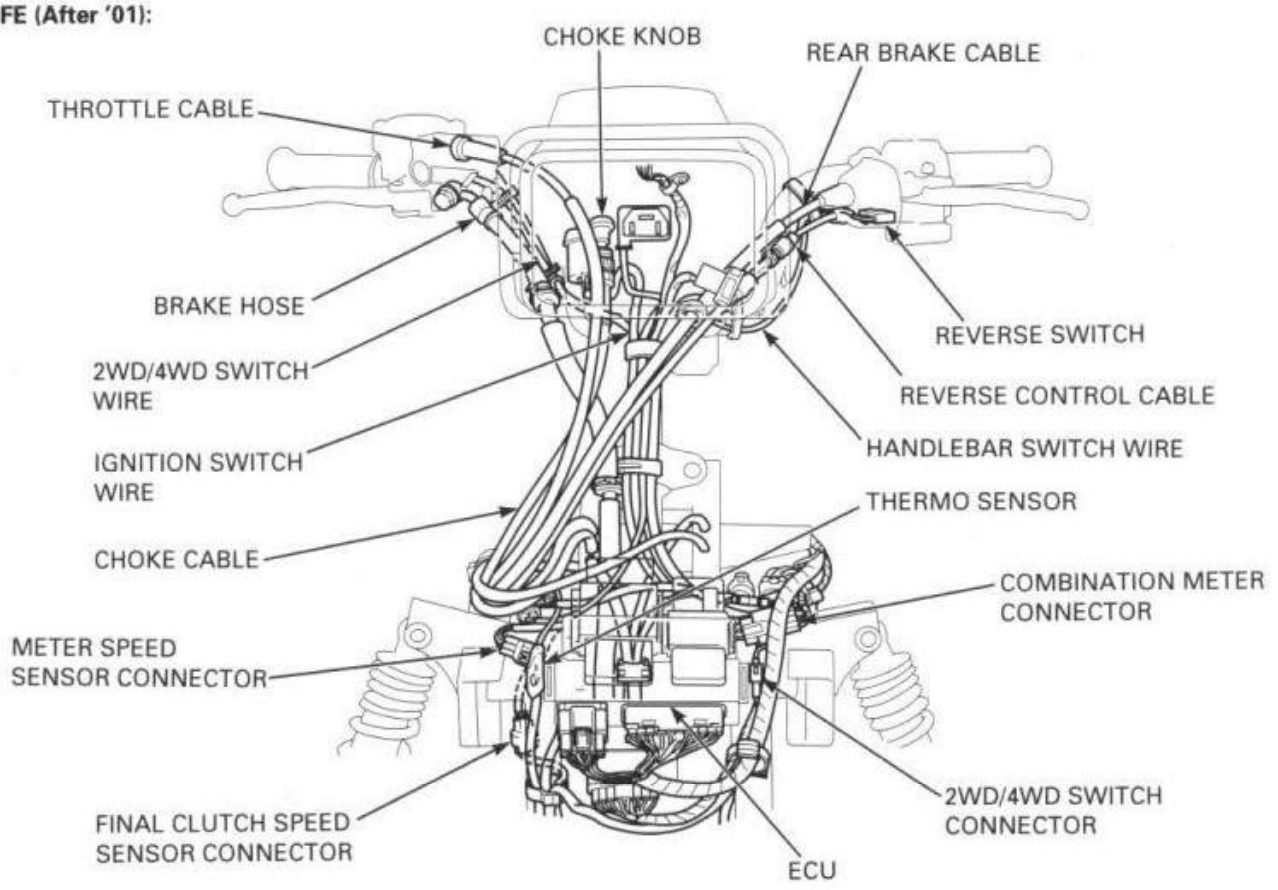

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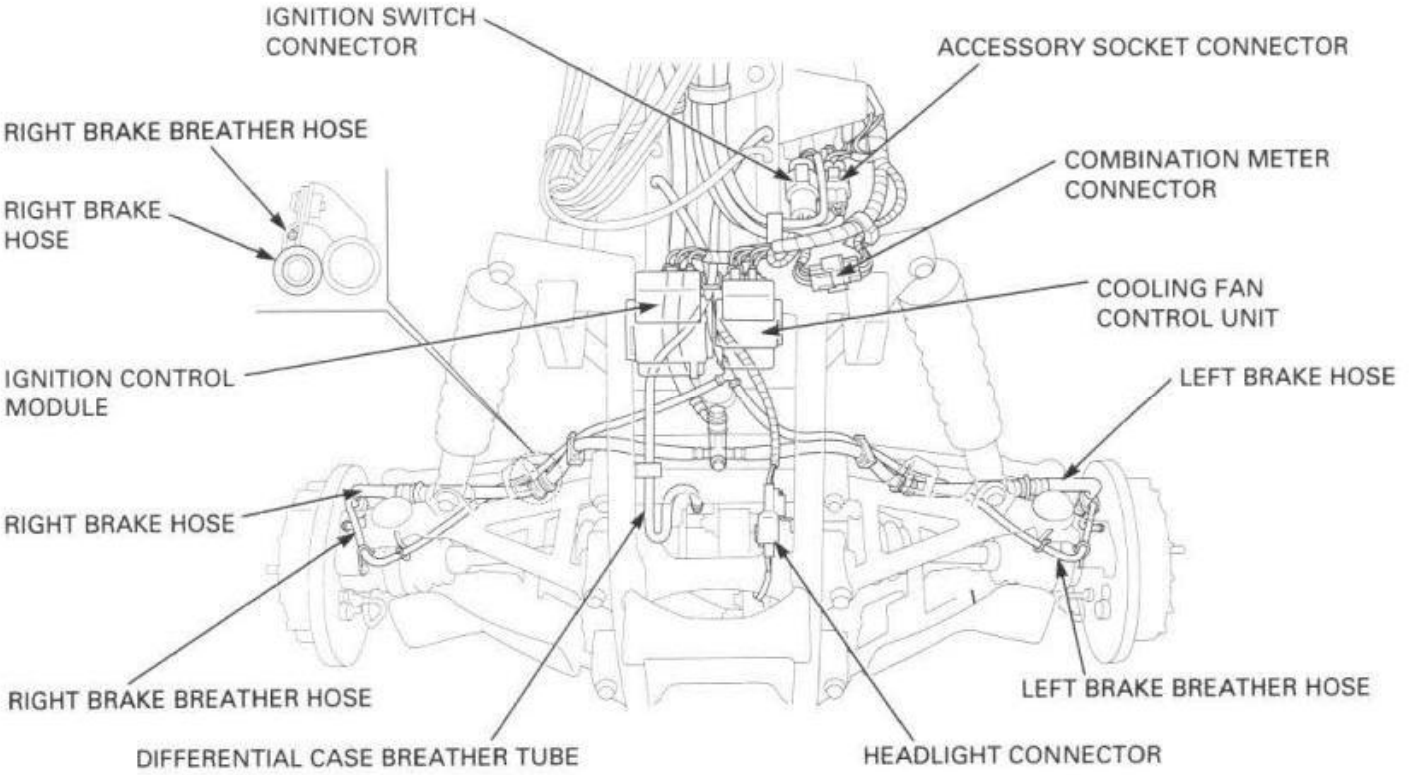

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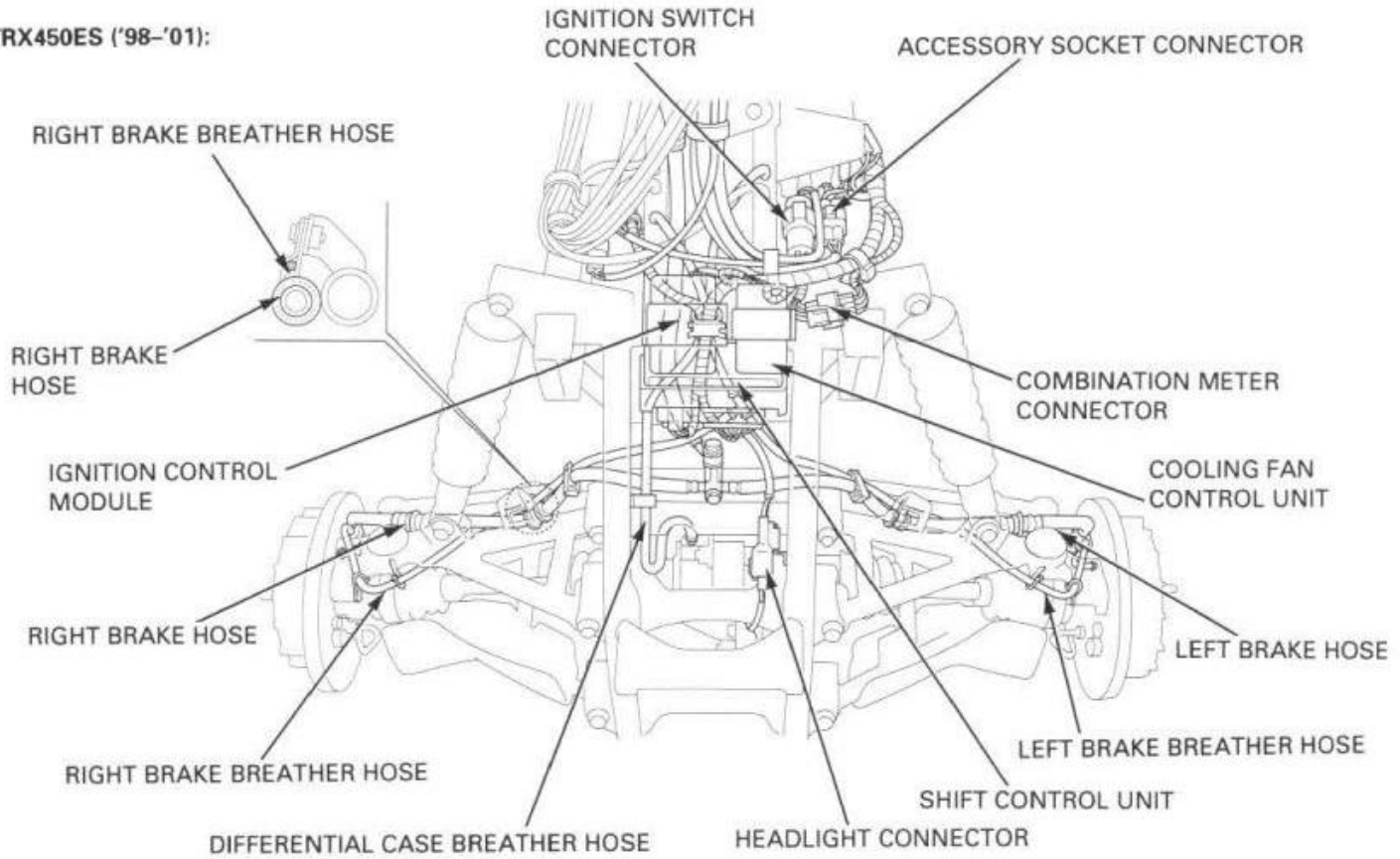

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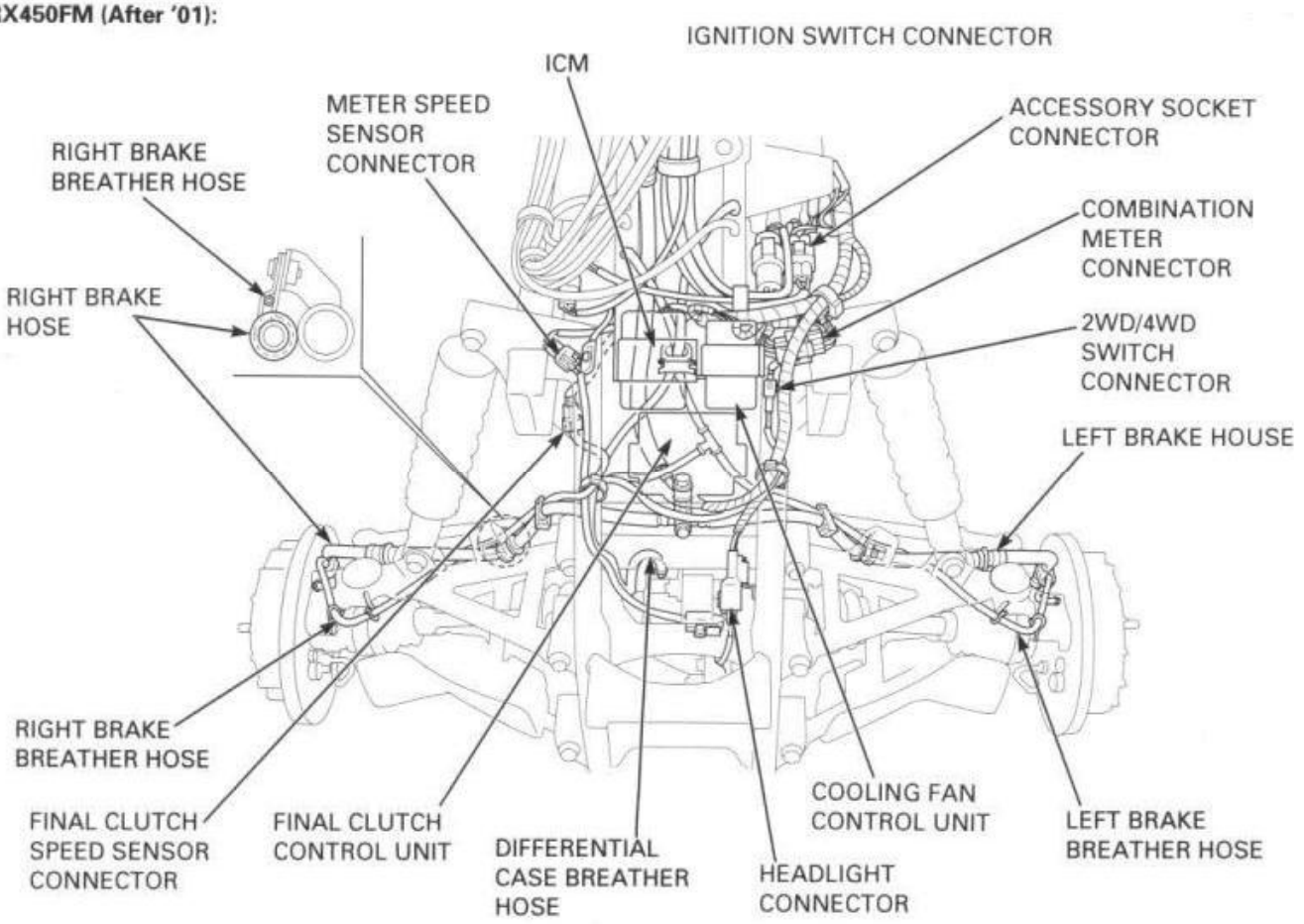

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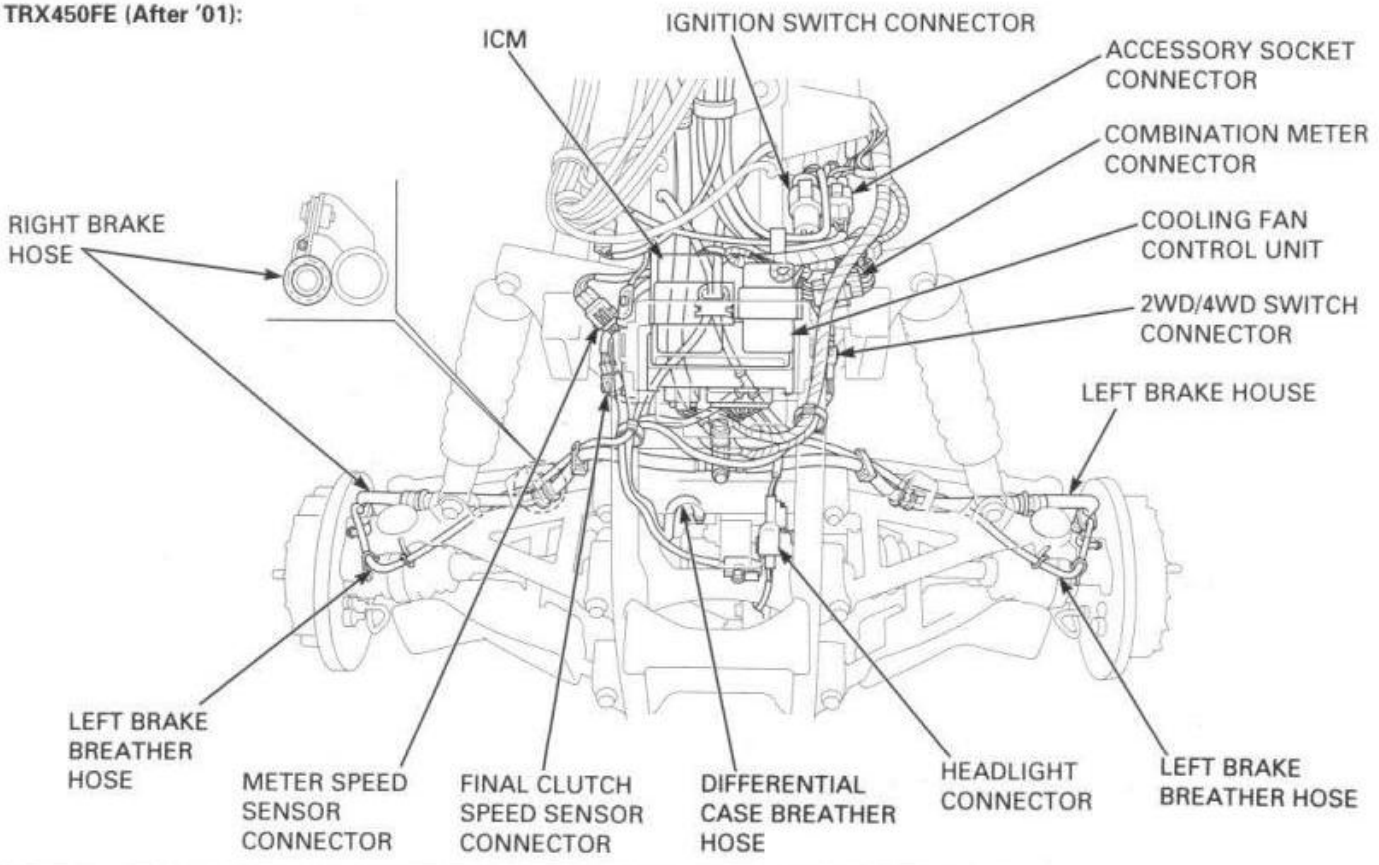

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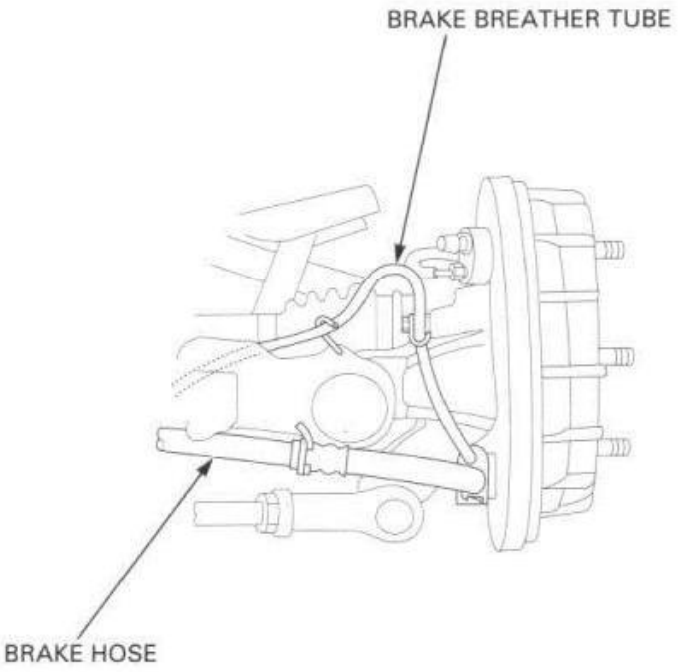
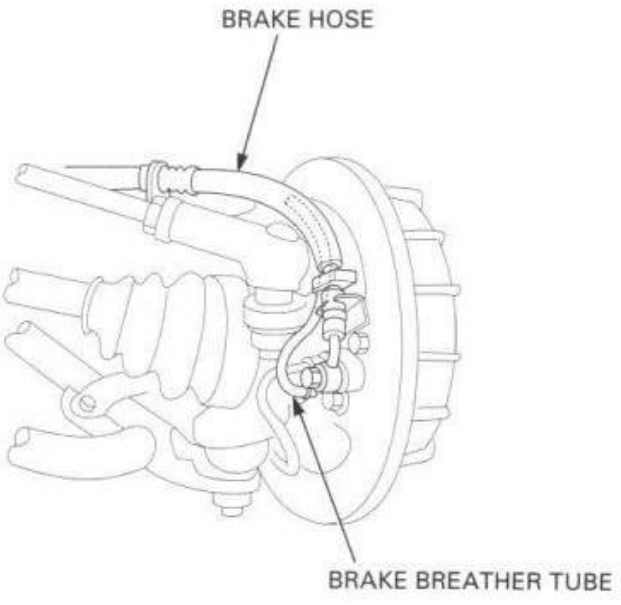


TOP VIEW



REAR VIEW