

2005-2012



SERVICE MANUAL

TRX500FA

FourTrax Foreman Rubicon™

TRX500FGA

FourTrax Foreman Rubicon™
GPScape™

TRX500FPA

FourTrax Foreman Rubicon™
GPScape™ Power Steering

HOW TO USE THIS MANUAL

This service manual describes the service procedures for the TRX500FA/FGA/FPA.

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

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. Sections 4 through 24 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 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 26 Troubleshooting.

Your safety, and the safety of others, is very important. To help you make informed decisions we have provided safety messages and other information throughout this manual. Of course, it is not practical or possible to warn you about all the hazards associated with servicing this vehicle. You must use your own good judgement. You will find important safety information in a variety of forms including:

- Safety Labels – on the vehicle
- Safety Messages – preceded by a safety alert symbol  and one of three signal words, DANGER, WARNING, or CAUTION.

These signal words mean:

▲ DANGER You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

▲ WARNING You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

▲ CAUTION You CAN be HURT if you don't follow instructions.

- Instructions – how to service this vehicle correctly and safely.












As you read this manual, you will find information that is preceded by a **NOTICE** symbol. The purpose of this message is to help prevent damage to your vehicle, other property, or the environment.

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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

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GENERAL INFORMATION

SERVICE RULES

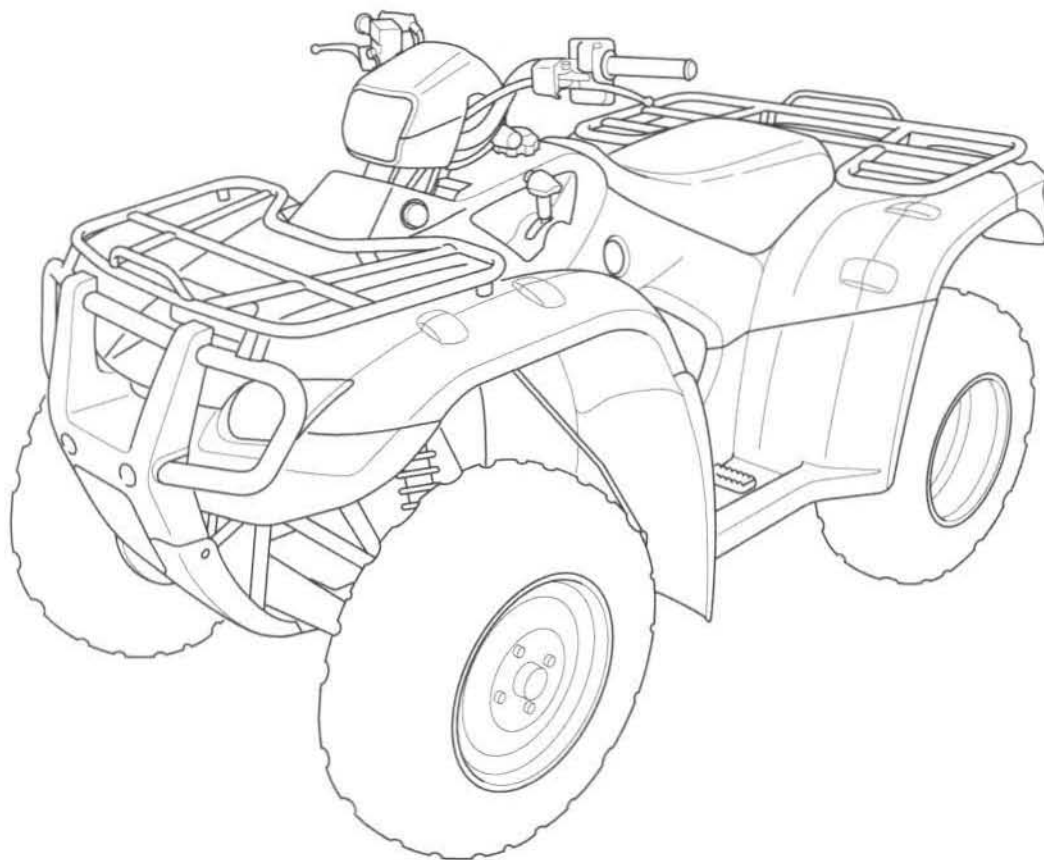
1. Use genuine Honda or Honda-recommended parts and lubricants or their equivalents. Parts that don't meet Honda's design specifications may cause damage to the vehicle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing 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 electrical wires as show in the Cable and Harness Routing (page 1-24).

MODEL IDENTIFICATION

This manual covers 3 types of TRX500 models:

- FA – 4WD/Automotic transmission
- FGA – 4WD/Automotic transmission/GPScape
- FPA – 4WD/Automotic transmission/GPScape/EPS

'05, '06 shown:



ABBREVIATION

Throughout this manual, the following abbreviations are used to identify the respective parts or systems.

Abbrev. term	Full term
ECU	Electronic Control Unit
EPS	Electric Power Steering
ESP	Electric Shift Program
DLC	Data Link Connector
ECM	Engine Control Module
CKP sensor	Crankshaft Position sensor
VS sensor	Vehicle Speed sensor
HDS	Honda Diagnostic System
DTC	Diagnostic Trouble Code
SCS connector	Service Check Short connector

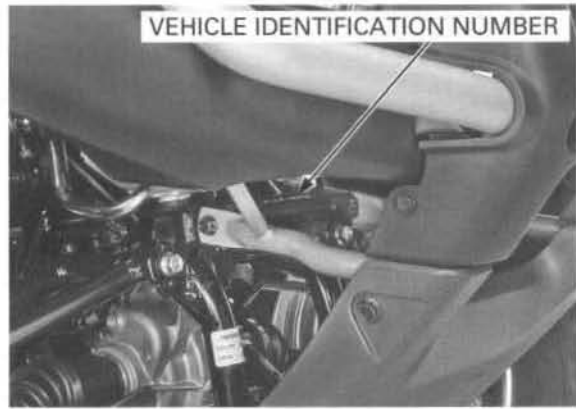
DESTINATION CODE

Throughout this manual, the following codes are used to identify individual types for each region.

DESTINATION CODE	REGION
A	U.S.A.
CM	Canada
U	Australia, U.K., Sweden

GENERAL INFORMATION

The Vehicle Identification Number (VIN) is stamped on the front side of the frame.

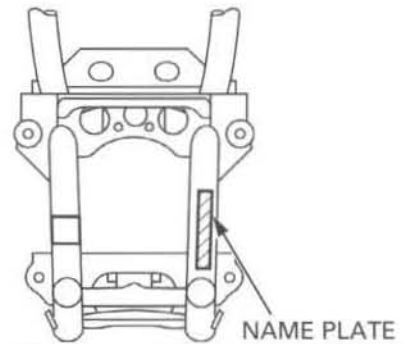


The engine serial number is stamped on the right side of the crankcase.



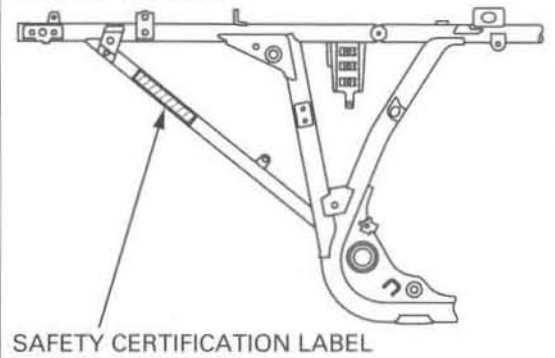
The name plate is attached on the front frame pipe (U type only).

U type only:



The vehicle safety certification label is attached on the right side of the frame (U.S.A. and Canada).

U.S.A. and Canada:

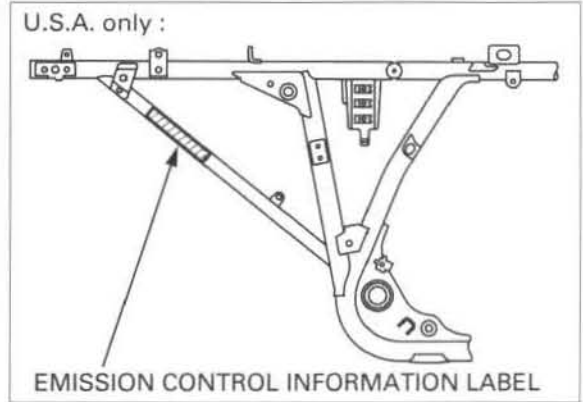


The carburetor identification number is stamped on the left side of the carburetor body.



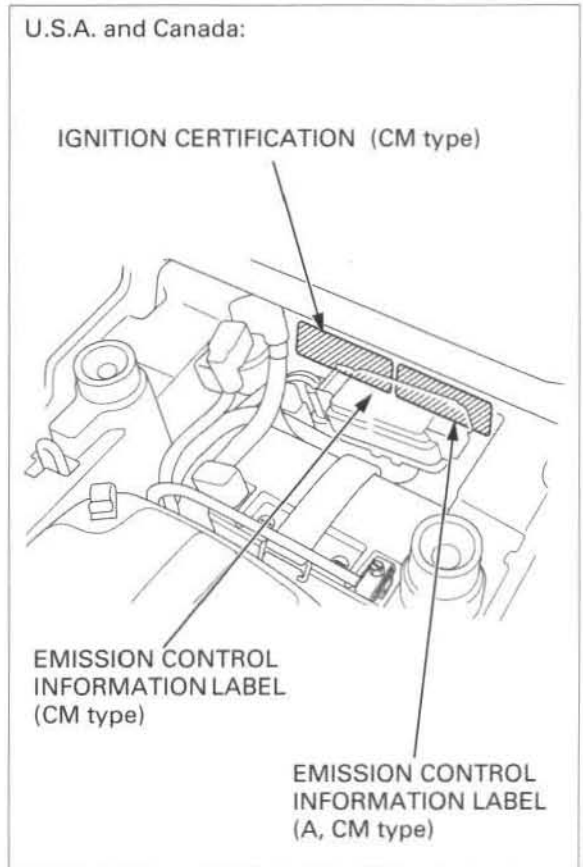
'05 - '07:

The vehicle emission control information label is attached on the right side of the frame (U.S.A. only).



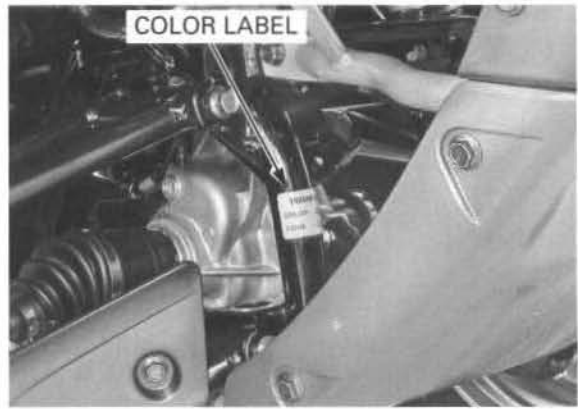
After '07:

The vehicle emission control information label is attached on the rear fender near the battery.



GENERAL INFORMATION

The color label is attached on the front side of the frame. When ordering color coded parts, always specify the designated color code.



GENERAL SPECIFICATIONS

ITEM		SPECIFICATIONS	
DIMENSIONS	Overall length	2,108 mm (83.0 in)	
	Overall width	1,188 mm (46.8 in)	
	Overall height	1,179 mm (46.4 in)	
	Wheelbase	1,286 mm (50.6 in)	
	Front tread	917 mm (36.1 in)	
	Rear tread	925 mm (36.4 in)	
	Seat height	861 mm (33.9 in)	
	Footpeg height	340 mm (13.4 in)	
	Ground clearance	190 mm (7.5 in)	
	Curb weight	Except EPS EPS	287 kg (633 lbs) 294 kg (648 lbs)
	Maximum weight capacity	220 kg (485 lbs)	
FRAME	Frame type	Double cradle	
	Front suspension	Double wishbone	
	Front wheel travel	170 mm (6.7 in)	
	Front damper	Double tube	
	Rear suspension	Swingarm	
	Rear wheel travel	170 mm (6.7 in)	
	Rear damper	Double tube	
	Front tire size	AT25 x 8-12 ★★	
	Rear tire size	AT25 x 10-12 ★★	
	Front rim size	12 x 6.0 AT	
	Rear rim size	12 x 7.5 AT	
	Front tire brand	KT181 (DUNLOP)	
	Rear tire brand	KT185 (DUNLOP)	
	Front brake	Hydraulic disc brake	
	Rear brake	Mechanical drum brake (Leading-trailing)	
	Caster angle	2°	
	Trail length	8 mm (0.3 in)	
	Camber angle	0°	
	Fuel tank capacity	'05 - '07 After '07	15.8 liters (4.17 US gal, 3.48 Imp gal) 15.0 liters (3.96 US gal, 3.30 Imp gal)
	Fuel tank reserve capacity	'05 - '07 After '07	3.3 liters (0.87 US gal, 0.73 Imp gal) 2.5 liters (0.66 US gal, 0.55 Imp gal)
ENGINE	Cylinder arrangement	Single cylinder, longitudinally installed	
	Bore and stroke	92.0 x 75.0 mm (3.62 x 2.95 in)	
	Displacement	499 cm ³ (30.4 cu-in)	
	Compression ratio	9.2 : 1	
	Valve train	OHV	
	Intake valve	opens at 1 mm (0.04 in) lift closes at 1 mm (0.04 in) lift	13° BTDC 35° ABDC
	Exhaust valve	opens at 1 mm (0.04 in) lift closes at 1 mm (0.04 in) lift	45° BBDC 5° ATDC
	Lubrication system	Forced pressure (dry sump)	
	Oil pump type	Trochoid	
	Cooling system	Liquid cooled	
	Air filtration	Oiled urethane foam	
	Engine dry weight	62.9 kg (138.7 lbs)	
CARBURETOR	Carburetor type	Constant Velocity (VE type)	
	Throttle bore	36 mm (1.4 in)	

GENERAL INFORMATION

ITEM		SPECIFICATIONS
DRIVE TRAIN	Clutch system	Centrifugal, wet
	Transmission	HONDAMATIC (automatic; non-stage speed) with sub-transmission (constant mesh)
	Primary reduction	1.045 (70/67)
	Secondary reduction	2.000 (40/20)
	Final reduction	3.231 (42/13)
		Front
		Rear
	Automatic transmission ratio	0.93—3.47
	Sub-transmission ratio	1.583 (38/24)
		Drive
	Low	
	Reverse	
	3.222 (29/18 x 28/14)	
	D - N - R - L (Sub-transmission)	
	D: 3-mode; Automatic 2-pattern (D1/D2) and Manual (ESP; 5-speeds)	
	L: 2-mode; Automatic and manual (ESP: 5-speeds)	
	R: 1-mode (fixed low ratio)	
ELECTRICAL	Ignition system	DC-CDI (Direct current-Capacitor discharge ignition)
	Starting system	Electric starter motor and emergency recoil starter
	Charging system	Triple phase output alternator
	Regulator/rectifier	FET shorted, triple phase full wave rectification
	Lighting system	Battery

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