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› Honda TRX420FE/FM/TE/TM/FPE/FPM Rancher ATV Service Manual (2007-2013)

Honda TRX420FE, TRX420FM, TRX420TE, TRX420TM, TRX420FPE, TRX420FPM

Honda TRX420FE/FM/TE/TM/FPE/FPM Rancher ATV Service Manual (2007-2013)

Model: TRX420FE, TRX420FM, TRX420TE, TRX420TM, TRX420FPE, TRX420FPM

INTRODUCTION

This official service manual provides comprehensive, detailed service information, step-by-step repair instructions, and maintenance specifications for the 2007-2013 Honda TRX420FE, TRX420FM, TRX420TE, TRX420TM, TRX420FPE, and TRX420FPM Rancher ATV models. It is an essential resource for proper diagnosis, repair, and maintenance procedures.

2007-2013



HONDA

SERVICE MANUAL

TRX420FE/FM/FPE/FPM/TE/TM

RepairManual.com

Figure 1: Cover of the Official Honda TRX420 Rancher ATV Service Manual, covering models from 2007 to 2013.

GENERAL INFORMATION

This section covers fundamental information applicable to all service and maintenance procedures. It includes safety precautions, general service practices, and an overview of the ATV's systems.

Technical Features

An overview of the key technical specifications and unique features of the Honda TRX420 Rancher models, including engine type, transmission, and chassis design.

MAINTENANCE

Regular maintenance is crucial for the longevity and optimal performance of your Honda TRX420 Rancher. This section details scheduled maintenance tasks and procedures.

- **Lubrication System:** Inspection and service of engine oil, oil filter, and other lubrication points.
- **Fuel System (PGM-FI):** Maintenance of the Programmed Fuel Injection system, including fuel filter and injector checks.
- **Cooling System:** Checks for coolant level, radiator condition, and hose integrity.
- **Air Cleaner:** Inspection and cleaning/replacement of the air filter element.
- **Battery:** Inspection of battery terminals, electrolyte level (if applicable), and charging system.
- **Brake System:** Inspection of brake fluid, brake pads/shoes wear, and brake light switch operation.
- **Clutch System:** Inspection and adjustment of clutch components.

ENGINE SYSTEMS

This section provides detailed instructions for servicing the engine and its related components.

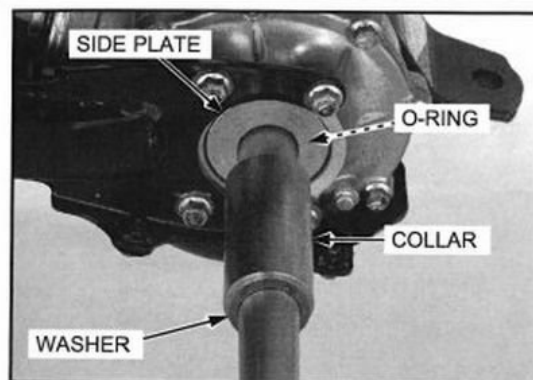
- **Engine Removal/Installation:** Procedures for safely removing and reinstalling the engine assembly.
- **Cylinder Head/Valve:** Inspection, disassembly, and assembly of the cylinder head and valve train components.
- **Cylinder/Piston:** Procedures for inspecting and servicing the cylinder and piston assembly.
- **Clutch/Gearshift Linkage:** Detailed service for the clutch and gear shifting mechanisms.
- **Alternator/Starter Clutch:** Inspection and repair of the alternator and starter clutch components.
- **Crankcase/Transmission/Crankshaft/Balancer:** Comprehensive service procedures for the engine's lower end components.

CHASSIS SYSTEMS

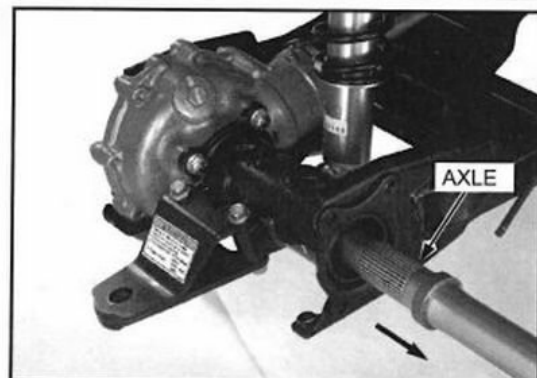
This section covers the frame, suspension, steering, and driving mechanisms of the ATV.

- **Frame/Body Panels/Exhaust System:** Inspection and removal/installation of frame components, body panels, and the exhaust system.
- **Front Wheel/Suspension/Steering:** Service procedures for the front wheels, suspension components, and steering system.
- **Rear Wheel/Suspension:** Service procedures for the rear wheels and suspension components.
- **Brake System:** Detailed service for front and rear brake components, including calipers, master cylinders, and lines.
- **Front Driving Mechanism (FM/FE/FPM/FPE Models):** Specific service for the front differential and drive shafts on 4WD models.
- **Rear Driving Mechanism:** Service procedures for the rear axle, differential, and drive components.

- spring washer
- axle collar
- side plate
- O-ring



Remove the rear axle by driving it from the left side using a rubber mallet.

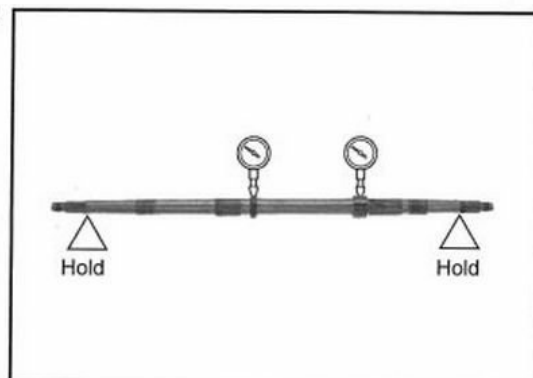


INSPECTION

AXLE

Set the axle in V-blocks and measure the axle runout with a dial indicator. Axle runout is 1/2 the total indicator reading.

SERVICE LIMIT: 3.0 mm (0.12 in)



AXLE BEARING

Remove the dust seal from the brake panel. Turn the inner race of the bearing with your finger. The bearings should turn smoothly and quietly. Also check that the bearing outer race fits tightly in the panel.

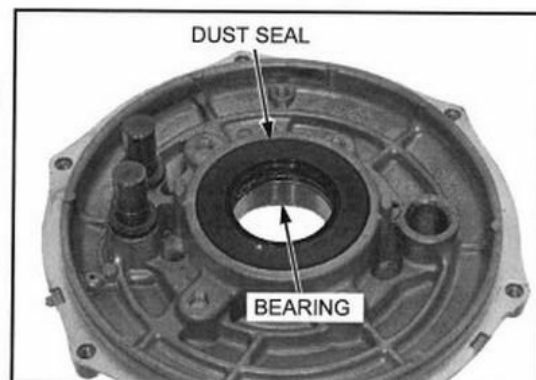


Figure 2: Illustration of the Rear Driving Mechanism, detailing components such as the axle, side plate, washer, collar, and O-ring for inspection and removal. This image also shows the inspection of axle runout and axle bearing dust seal.

ELECTRICAL SYSTEMS

This section covers the electrical components and wiring of the ATV.

- **Battery/Charging System:** Inspection and testing of the battery and charging system components.
- **Ignition System:** Service procedures for the ignition coil, spark plug, and related components.
- **Electric Starter:** Inspection and repair of the starter motor and solenoid.
- **Lights/Meters/Switches:** Service for all lighting, instrumentation, and control switches.

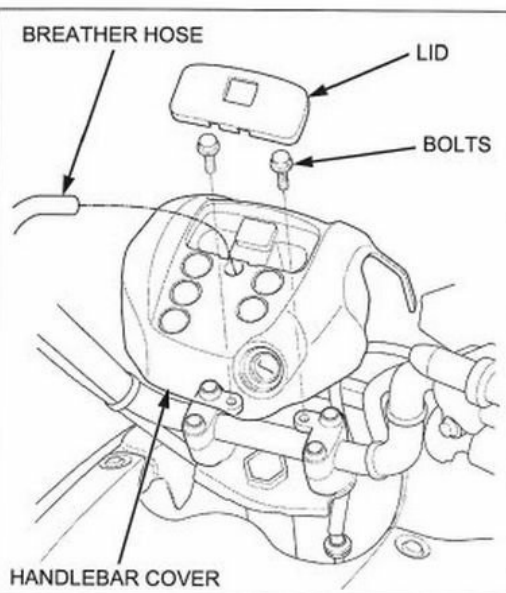
INDICATORS ('07 TM/FM and After '07 U.S.A. TM/FM)

BULB REPLACEMENT

Disconnect the fuel tank breather hose from the handlebar cover.

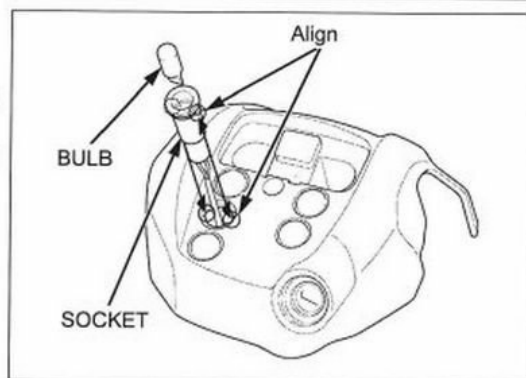
Remove the following

- handlebar cover lid
- two bolts
- handlebar cover
- indicator lens
- indicator socket from underside of the cover
- indicator bulb from the socket by pulling it



Pass the bulb socket through the handlebar cover. Install a new bulb into the socket. Install the indicator lens into the socket. Install the socket into the handlebar cover by aligning the locating tabs with the cover grooves.

Install the removed parts in the reverse order of removal.



IGNITION SWITCH

INSPECTION

Remove the front fender/carrier (page 3-7).

Remove the ignition switch 4P connector from the frame and disconnect it.

Check for continuity between the switch side connector terminals in each switch position.

Continuity should exist between the color coded wires as follows:

Color	R/BI	P	R	BI
Position				
ON	○—○	○—○	○—○	○—○
OFF				

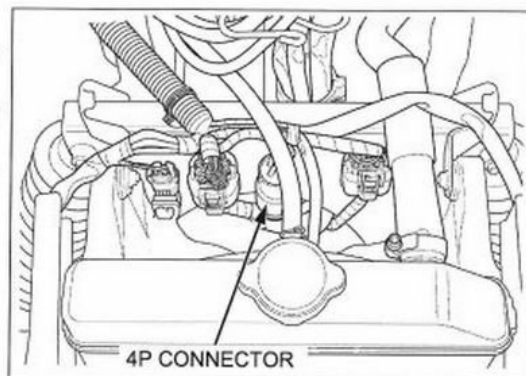
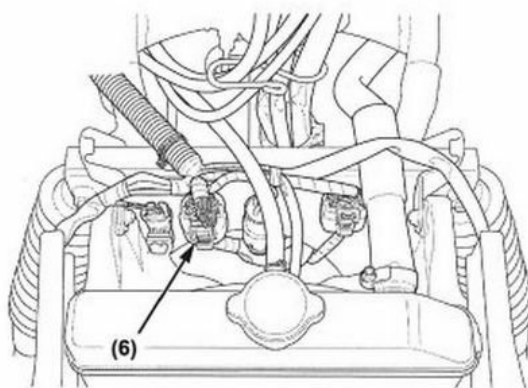
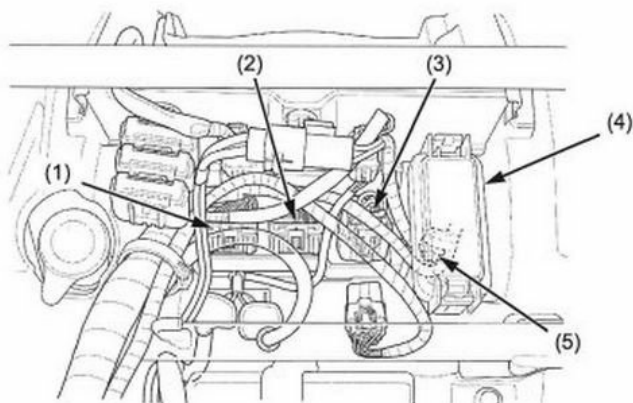


Figure 3: Detailed instructions for indicator bulb replacement, showing the breather hose, handlebar cover, and bulb socket. Also includes a diagram for inspecting the ignition switch and its 4P connector, along with a continuity table.

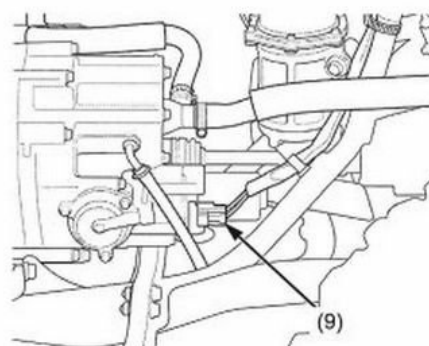
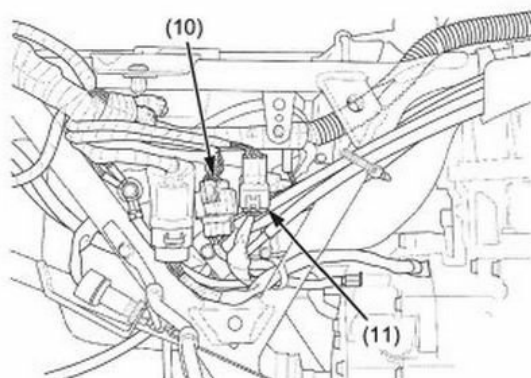
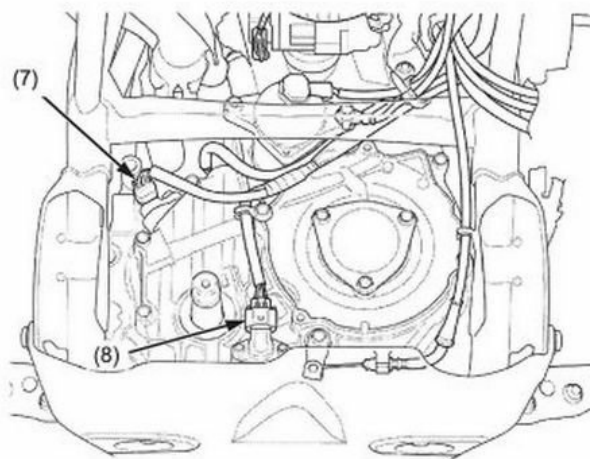
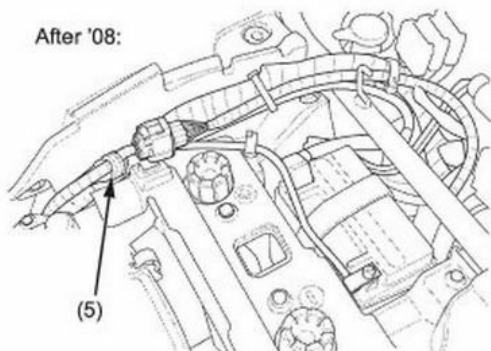
- **Electric Shift Program (TE/FE/FPE Models):** Specific service information for models equipped with the Electric Shift Program.

ELECTRIC SHIFT PROGRAM (ESP: TE/FE/FPE models)

ESP CONNECTOR LOCATION



After '08:



Refer to the secondary notes for the parts that must be removed for service.

- | | |
|---|---|
| <ul style="list-style-type: none"> (1) PCM 33P (Gray)
– Rear fender cover (page 3-9) (2) PCM 33P (Black)
– Rear fender cover (page 3-9) (3) PCM 5P (Black)
– Rear fender cover (page 3-9) (4) FUSE BOX
– Rear fender cover (page 3-9) (5) DLC
– '07 – '08: Rear fender cover (page 3-9)
– After '08: Seat (page 3-4) (6) HANDLEBAR SWITCH 14P (Green)
– Rear fender/carrier (page 3-10) | <ul style="list-style-type: none"> (7) VS SENSOR 3P (Black)
– Left side cover (page 3-4) (8) SHIFT ANGLE SENSOR 3P (Gray)
– Left mudguard (page 3-6) (9) SHIFT CONTROL MOTOR 2P (Black)
– Right mudguard (page 3-6) (10) GEAR POSITION SWITCH 8P (Gray)
– Right side cover (page 3-4) (11) ENGINE SUB-WIRE HARNESS 6P (White)
(for Shift Angle Sensor/VS Sensor)
– Right side cover (page 3-4) |
|---|---|

Figure 4: Diagram illustrating the ESP (Electric Shift Program) connector locations for TE, FE, and FPE models, with numbered points corresponding to specific components like PCM, shift angle sensor, shift control motor, and gear position switch.

- **Electric Power Steering (FPM/FPE Models):** Service procedures for models equipped with Electric Power Steering.
- **Wiring Diagrams:** Comprehensive wiring diagrams to assist in electrical troubleshooting.

TROUBLESHOOTING

This section provides guidance for diagnosing common issues and identifying potential causes for various malfunctions. It includes diagnostic flowcharts and symptom-based troubleshooting tables.

SPECIFICATIONS

Refer to this section for detailed technical specifications, torque values, fluid capacities, and other critical data required for proper service and repair.

General Specifications

Specification	Value
ASIN	B01LX0H4EO
Language	English
Publication Date	January 1, 2004
Publisher	By Publisher

Note: Specific torque values and fluid capacities are detailed within the relevant sections of this manual.

This manual is intended for qualified technicians. Always follow safety precautions and use appropriate tools.
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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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