

ROTAX ELECTRONIC REVERSE

SERVICE TOOLS

Description	Part Number	Page
FLUKE 115 MULTIMETER	529 035 868	2

GENERAL

SYSTEM DESCRIPTION

There is 3 main components used for the RER system: the RER switch, the ECM and the RER trigger coil.

The ECM receives signals from the trigger coils for the following functions:

- Forward engine rotation
- Reverse engine rotation.

The ECM recognizes a signal sent by the RER switch.

When RER switch is activated and engine is not running, nothing takes place.

When RER switch is activated and engine is running, ECM cuts off ignition. Therefore, engine RPM gradually drops. When engine reaches a low threshold RPM, ECM sends an ignition spark at a great advance creating a thrust which reverses engine rotation.

In reverse operation, the RER trigger coil is used to give the ignition signal to the ECM.

The RER trigger coil is used only when engine is in reverse operation.

Under a threshold low RPM or above drive pulley engagement speed, the RER function is disabled. Nothing takes place when pressing RER button.

TROUBLESHOOTING

TROUBLESHOOTING GUIDELINES

RER Does not Respond when Depressing RER Button

Check if engine RER switch works properly.
Check wires and connectors.

Engine Stops after Pressing RER Button

Check trigger coil.
Check wires and connectors.

Check engine compression and piston condition.
See *RER WORKS ERRATICALLY*.

Replace the ECM.

RER Works Erratically

Check engine compression. A low compression engine may result in RER working erratically making you think the problem is an electronic problem.

Check piston condition. Verify piston condition through the intake and exhaust ports. Look for scoring on piston skirts. Scored piston skirts may result in RER working erratically making you think the problem is an electronic problem.

Check RER switch.

PROCEDURES

RER SWITCH

RER Switch Continuity Test

Remove the multifunction gauge. Refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.

Models without a Multifunction Switch

Unplug both terminals from RER switch.

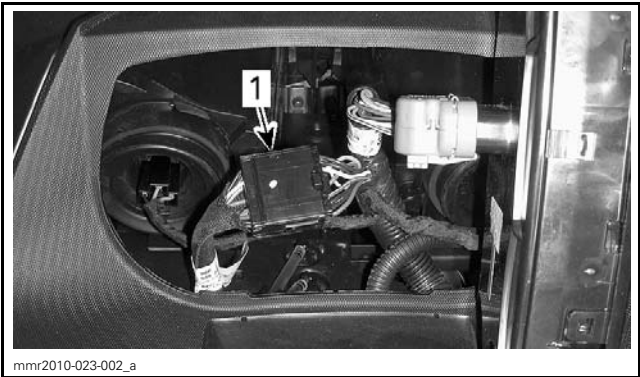


1. RER terminals

Subsection XX (ROTAX ELECTRONIC REVERSE)


Models with a Multifunction Switch

Disconnect the HG connector.



1. HG connector

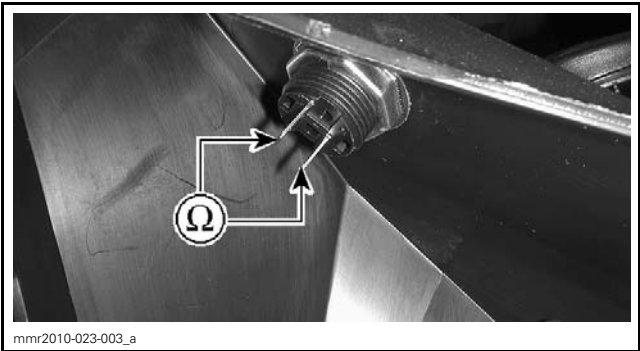
All Models

REQUIRED TOOL	
FLUKE 115 MULTIMETER (P/N 529 035 868)	

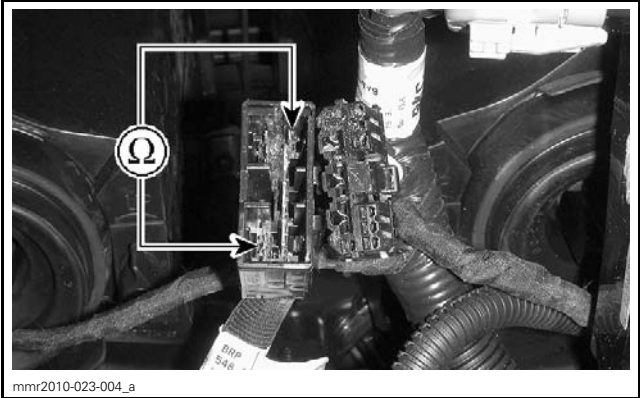
Set the multimeter to "Ω".

Measure the RER switch continuity as per following tables.

Check switch as follows.



TUNDRA		
SWITCH	TERMINAL	RESISTANCE
Release	A and B	Infinite (OL)
Pushed and held		Smaller than 2.8 Ω



REV-XP 550F/TUNDRA SPORT/TUNDRA LT			
SWITCH	HG CONNECTOR		RESISTANCE
Release	Pin 5	Pin 8	Infinite (OL)
Pushed and held			Lower than 0.5 Ω

If continuity test fails, check wires and connectors to RER switch.

If wires and connectors are good, replace the RER switch.

RER TRIGGER COIL

To test the RER trigger coil, refer to *MAGNETO SYSTEM* subsection.

BEEPER (REVERSE ALARM)

The reverse alarm (beeper) is integrated in the gauge cluster.

If the beeper does not function, check its wire continuity as per table.

TEST PROBES		RESISTANCE
ECM DA connector Pin 2	Gauge CV connector Pin 1	Close to 0 Ω

If the test is good, test the multifunction gauge input and the ECM output. Refer to *LIGHTS, GAUGE AND ACCESSORIES* subsection.