



MOTOR CYCLE, GENERAL PURPOSE, HARLEY - DAVIDSON MT350 TECHNICAL DESCRIPTION

ELECTRICAL TESTING



This is intended as a walk through & Guide only to the Electrical Testing on a MT350 / Rotax 348 engine Electrical System.

Approx Procedure Time 1.5 Hours

This is a guide only please refer to the relevant manuals for full details or ask professional advice if in doubt.

This is the writer(s) interpretation of the required steps only and does not take any liability for the accuracy of the information supplied in this publication and it is supplied as is.



General Tools

13 MM Spanner
6mm Allen Key
Flat Head Screw Driver

Fluids

None

Specialist Tools

Ohm and Voltage Meter

Required Parts

None

**The parts marked * are the parts that you will need for this procedure.
Other Parts were changed as general maintenance.**



General Torque Values

Where Torque settings are not detailed the following are a guide.

M5	7-8 Nm
M6	11-14 Nm
M8	24-27 Nm
M10	51-54 Nm

Notes

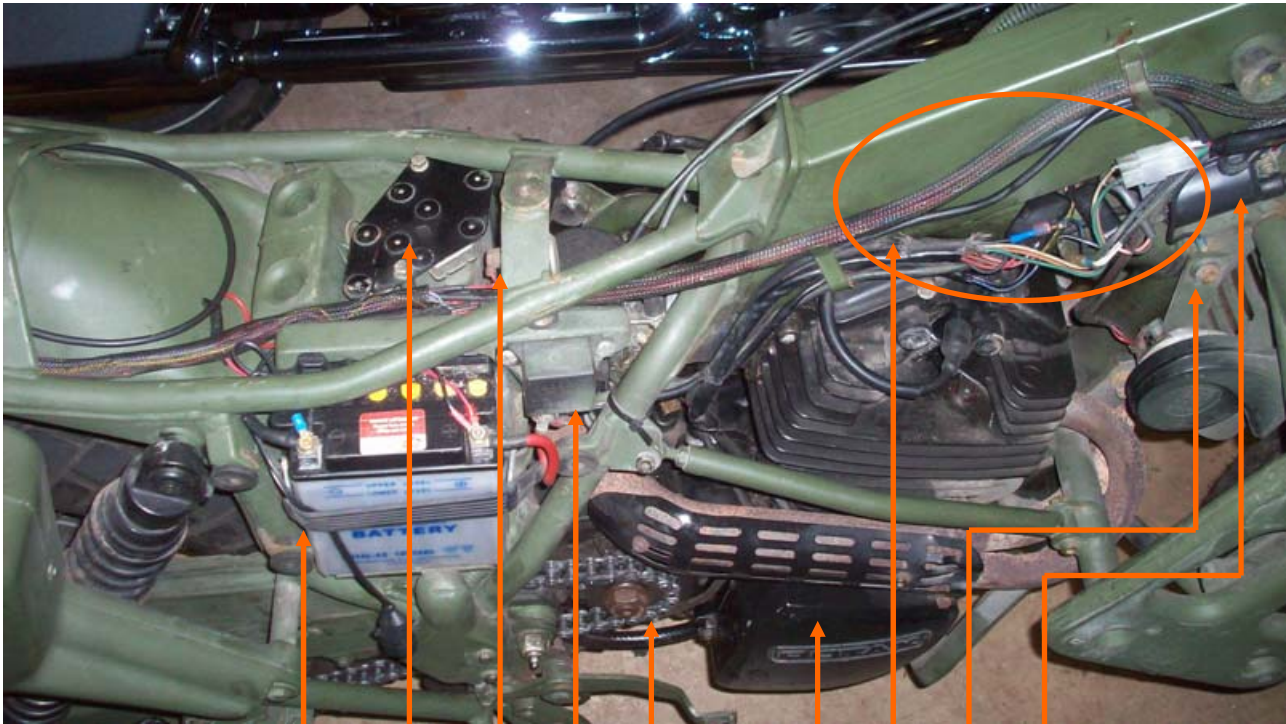
1. Tests should be done with a cold engine.
2. Also Refer to Chapter 6 Ignition System of the MT350e SEME Training Manual.



MT350 Electrical Testing



Electrical Component Location



Ground -

Circuit Breakers

Indicator Flasher Unit

Starter Relay

Neutral Light Switch

Coil

Ground -

Connectors (Test Points)

Flywheel Magneto 12v 190w



CDI Unit



Regulator

Low Voltage Indicator Switch

MT350 Electrical Testing



You will need to expose the electrical connectors under the tank so they can be unplugged to connect the meter.

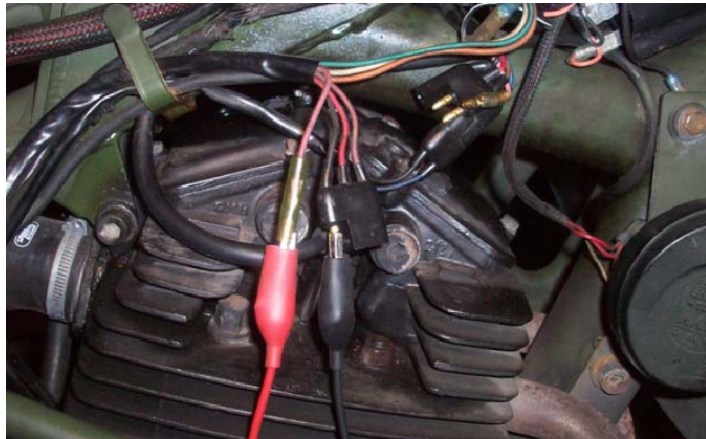


- A) Switch Off the Fuel Tank Tap
- B) Remove the Fuel Pipe
- C) Remove the Seat (6mm Allen Key)
- D) Remove the Fuel Tank(13mm Spanner)

1. High Speed Trigger Coil (Ignition Timing Sensor)

Put a Ohm “ Ω ” Meter across the Black cable on the 3 Pin Flat Connector & Single pink wire on the engine side.

The Manual States the Resistance should be between 12 & 20 Ω



Reading

Ω

2. Low Speed Trigger Coil (Ignition Timing Sensor)

Put a Ohm “ Ω ” Meter across the Black & Blue cables on the 2 Pin Flat Connector on the engine side.

The Manual States the Resistance should be between 120 & 180 Ω



Reading

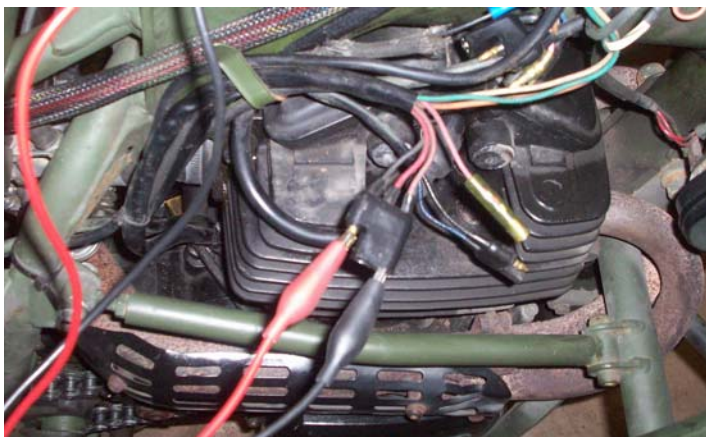
Ω

3. Low Speed Charging Coil (Flywheel Generator)

Put a Ohm “ Ω ” Meter across the Black & Brown cables on the 3 Pin Flat Connector on the engine side.

The Manual States the Resistance should be between 230 & 250 Ω

Note: The reading is 311 Ω but works ok.



Reading

Ω

MT350 Electrical Testing



4. High Speed Charging Coil (Flywheel Generator)

Put a Ohm “ Ω ” Meter across the Red and Brown cables on the 3 Pin Flat Connector on the engine side.

The Manual States the Resistance should be between 4 & 6 Ω



Reading

Ω

5. Lighting Coil (Flywheel Generator)

Put a Ohm “ Ω ” Meter across the White & Orange cables on the 3 Pin White Square Connector on the engine side.

The Manual States the Resistance should be between 0.6 & 0.9 Ω



Reading

Ω

6. Lighting Coil (Flywheel Generator)

Put a Ohm “ Ω ” Meter across the White & Green cables on the 3 Pin White Square Connector on the engine side.

The Manual States the Resistance should be between 0.54 & 0.8 Ω



Reading

Ω

MT350 Electrical Testing



7. Lighting Coil (Flywheel Generator)

Put a Ohm " Ω " Meter across the Green & Orange cables on the 3 Pin White Square Connector on the engine side.

The Manual States the Resistance should be between 0.8 & 1.6 Ω



Reading

Ω

8. Ignition Timing Sensor Primary Winding (Ignition Coil)

Put a Ohm " Ω " Meter across the Orange cable on the 3 Pin Triangular Connector on the coil side and earth.

The Manual States the Resistance should be between 0.95 & 1.1 Ω

Note: The reading is 1.9 Ω but works ok.



Reading

Ω

9. Ignition Timing Sensor Secondary Winding (Ignition Coil)

Put a Ohm " Ω " Meter across the HT Wire and earth.

The Manual States the Resistance should be between 11k Ω & 12 k Ω

Note: I have tested 2 bikes and the reading were 19.1 & 19.33 k Ω but both bikes work ok.



Reading

k Ω

MT350 Electrical Testing



10. Battery Charging Test

With the Motorcycle switched off Connect a DC Voltage Meter to the Positive and Negative Terminals of the Battery.



Take the Reading which should be around 13Volts



Start the Motorcycle and take the reading which should be around 14.5 - 15 Volts.



If the voltage does not increase to above 14 volts then there is possibly a problem with the charging circuit, possible causes are a faulty battery or Regulator.

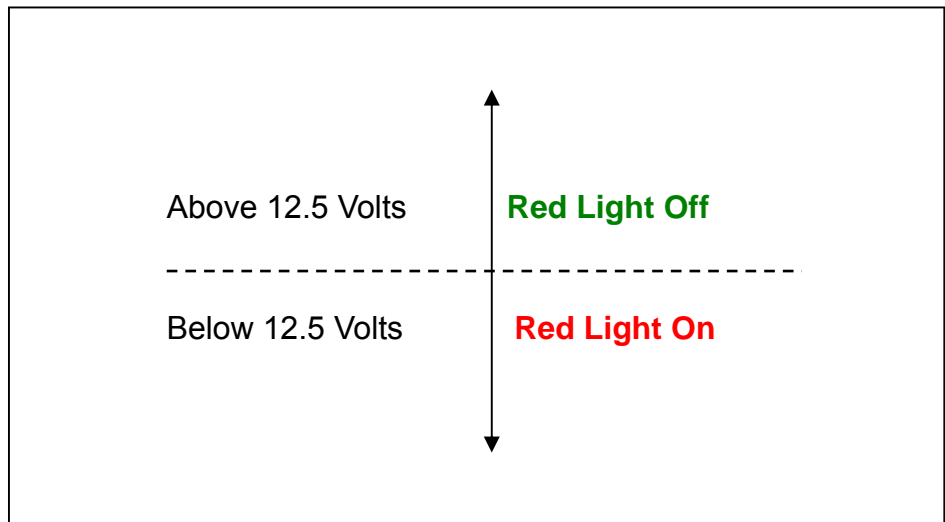


11. Charge Indicator Light (Operation)

The Red Voltage indicator light illuminates if there is not enough voltage charging the battery.



The light comes on if the voltage is below 12.5 Volts and goes off if the voltage is above 12.5 Volts



The illumination of the red warning light is controlled by the Low Voltage Indicator Switch located behind the head light in the cowling.



If the voltages at the battery when running is above 12.5 Volts and the red light is illuminated then the Low Voltage Indicator Switch could be faulty.



END OF PROCEDURE