

PRE 1976 MAGNETO MOTORCYCLE MODEL ENDUROS TROUBLE SHOOTING HEADLIGHT FAILURE PROBLEMS

M6-058

The following information has been compiled to help solve headlight blowing and battery discharging problems on pre-1976 Enduros with magneto ignitions. Listed below are the major causes for headlight blowing and battery discharging problems.

MAJOR CAUSES

1. Blown fuse or broken fuse holder.
2. Broken wires.
3. Unplugged, defective or grounded rectifier.
4. Dirty or unplugged connectors.
5. Defective switches.
6. Defective or dead battery.
7. Bad grounds (especially the ground at the battery or ground wire from the wire harness located by the ignition coil).
8. Vibration

The switches, fuse holder, rectifier wiring harness and connectors can all be checked without removal from the motorcycle by following the procedure below:

CIRCUIT RESISTANCE QUICK CHECK PROCEDURE:

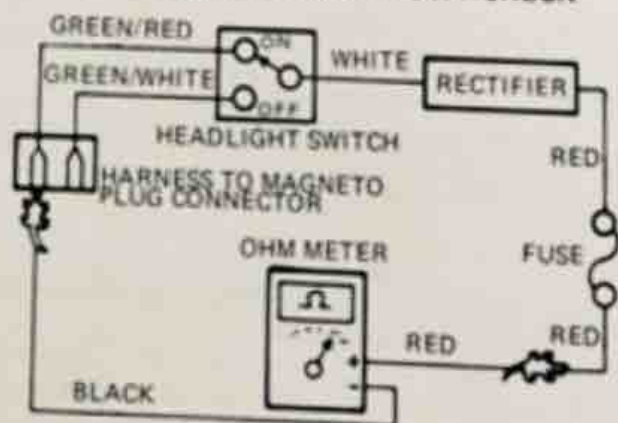
1. Unplug connector between magneto and wiring harness.
 2. Disconnect red (+) wire at battery from fuse box to battery.
 3. Find resistance value for silicon rectifier in applicable service manual.
- NOTE: Resistance values for rectifiers on Yamaha 6-volt battery magneto type charging systems measures 8 ~ 10 ohms.
4. Determine charging system resistance using the following formula:
(Rectifier Resistance) + (* Resistance for switches and wires) = Charging System Resistance
*NOTE: Resistance for switches and wires = 1 ohm or less.
 5. Use the ohms x 1 scale of the meter. Zero your ohm meter.
 6. Attach ohm meter red (+) lead to red wire previously disconnected from battery. Attach black (-) lead to green/red wire coming from harness side of magneto plug connector.

Correct resistance of night time charge circuit (green/red to red) should read as follows:

Headlight Switch "ON" = 8 ~ 10 ohms
Headlight Switch "OFF" = Infinite (∞) Resistance

With headlight switch "ON", jiggle the switch contact while watching ohm meter, thus making sure contact is not being lost by vibration. Also, check all connectors and connections while watching for any ohm meter needle movement.

NIGHT TIME CHARGE CIRCUIT CHECK



(continued)

NOTE: On 1974 and later Enduros, headlight on/off switch is on the left handlebar switch. On 1973 and earlier Enduros, headlight on/off switch is in the main ignition switch. On 1973 and earlier models, turn handlebars lock to lock to check for wire loose at main switch.

CIRCUIT RESISTANCE QUICK CHECK PROCEDURE (cont.):

7. Reverse leads of pocket tester to check rectifier diode:
- Black (-) lead of tester to red (+) wire disconnected from battery
 - Red (+) lead of tester to green/red wire at harness side of magneto connector

Correct readings should be as follows:

Headlight Switch "ON" = ∞ Resistance
Headlight Switch "OFF" = ∞ Resistance

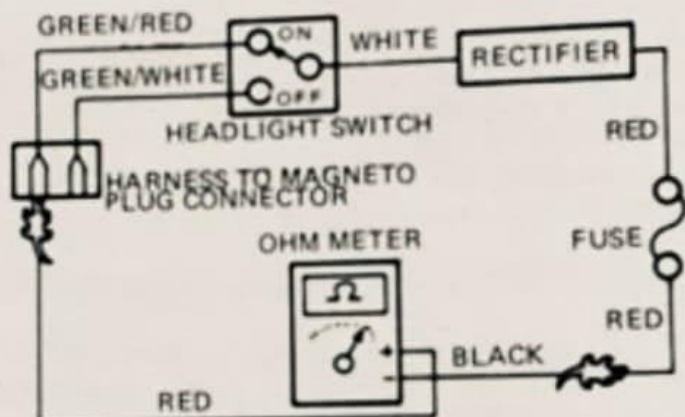
8. Check daytime charge circuit (green* or green/white to red) by following Step No. 6 except substituting the (green/white) wire in place of the (green/red) wire.

*Wire may be green or green/white.

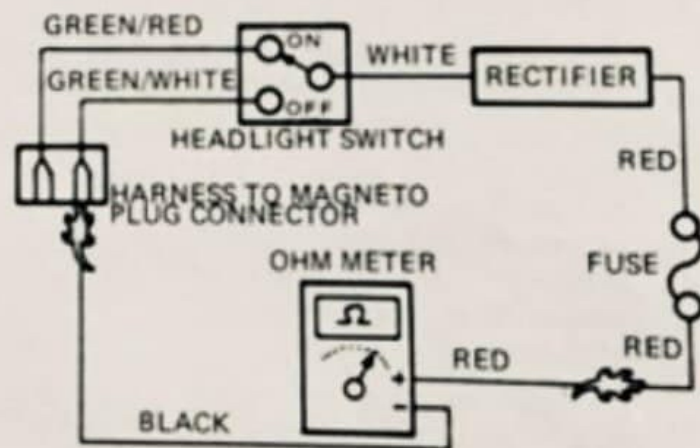
Correct resistance of daytime charge (green/white to red) should read as follows:

Headlight Switch "ON" = Infinite (∞) Resistance
Headlight Switch "OFF" = 8 ~ 10 ohms

RECTIFIER DIODE CHECK



DAYTIME CHARGE CIRCUIT CHECK



NOTES:

- Customers should be informed about the availability of voltage regulators as described in Technical Bulletin M5-084.
- The regulator is not a cure-all. The original cause for headlight blowing must still be checked and corrected even though a regulator is to be installed.