NORTON - Commando, Using a Volt/Ohms Meter

Tech information sheet by the Chicago NORTON Owners Club, presented by Bob Nowak

The use of a Volt/Ohms meter will let you know where your basic Electrical problem is.., Keep in mind that the instructions shown, should enable you to find most of your charging problems. You Can Not See Electric or tell how much resistance a component has, a meter can!

First of all. . .A Volt is a unit of electrical measurement and is either AC or DC.
. . .An Ohm is Resistance to an electrical flow.

Next. . . . . .When using a meter for the following checks you must keep in mind, Polarity (+ or -), The "Range" in any perticular mode of operaqtion AND The readings may NOT be exactly as indicated but should be close.

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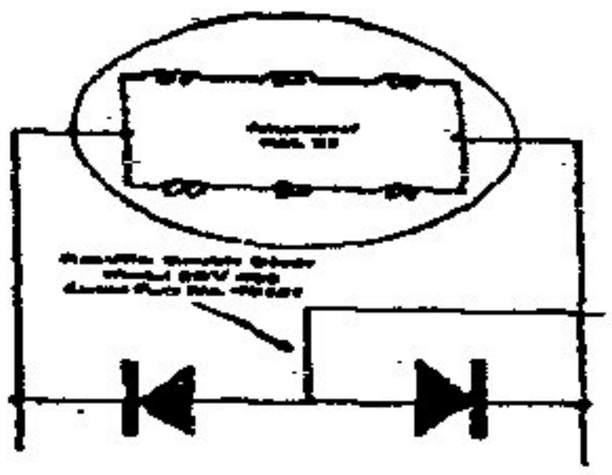
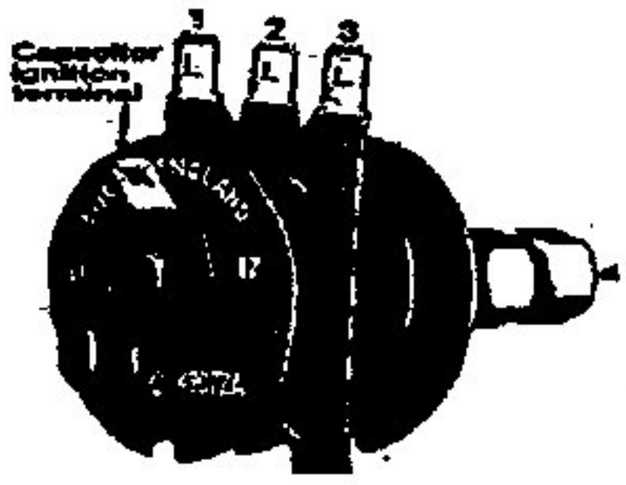
Checking your NORTON

If you feel as though the Charging System is not working properly, the 1st step you should do is check the Battery with your meter. The Motor should not be running, put the Red or + lead from you meter on the Battery + and the Black or - lead from your meter on the Battery - Set the Meter to DC volts, on a 15/20VDC range and record your reading. Start your engine, run it up to 2500RPM and repeat the test. Put your lights on and again record the reading. If the meter reading is higher in step 2 and 3 (little lower then 2 but higher then step 1) your system is probably OK. IF NOT Check the fuse, if bad replace it, repeat the above tests

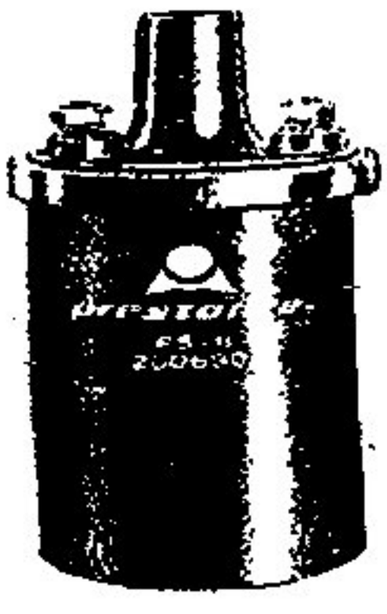
At this stage of your Charging System check out, if steps 2 or 3 do not show a higher voltage reading with your Bike running you may have a problem. Check major components in this order (ign off)



Put your meter on OHMs, in a LOW Range, (X x 1) remove leads #1 and #3, and from the Rectifier OR two leads from the 2 diodes used in the Mk 3 and take a reading from these two leads, it should be about 1 OHM. Now see if there is any reading from either lead to chassis ground, your meter should show 0 or NO reading.



Rectifier check - Meter on OHMs in the Higher Range (0 to 20 Meg Ohm)
Test #1 All readings 5 to 10 Meg Ohms
Plus or Red lead on #2 Black lead on #1, take a reading
Plus or Red lead on #1 Black lead on #4, take a reading
Plus or Red lead on #3 Black lead on #4, take a reading
Plus or Red lead on #2 Black lead on #3, take a reading
Test #1 All readings should show "0" (No resistance)
Plus or Red lead on #1 Black lead on #2, take a reading
Plus or Red lead on #4 Black lead on #1, take a reading
Plus or Red lead on #4 Black lead on #3, take a reading
Plus or Red lead on #3 Black lead on #2, take a reading
On the Mk #3 (Two diodes) Red lead on top connection, Black to ground should show High Ohms
Black lead on top connection, Red to ground should show "0" Ohms



Ign Coil - Shown on left Three tests should be made.
#1 - Meter on Ohms, (X x 1) leads on + and - terminals reading should be 2 Ohms.
#2 - One lead on -, other in HV socket, reading is 5000 Ohms (use X x 1000)
#3 - One lead on any of the three treminals, other lead to gnd. Reading should be "0" Ohms. Above reading for a 6V coil a 12V coil will be 2X that of a 6 volt coil.

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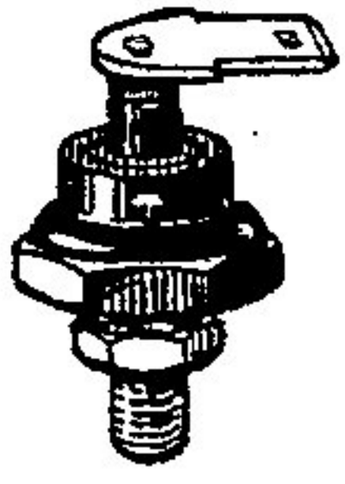
Zener Diode Shown at right Meter in Ohms (Higher range) Plus or Red lead on top of Diode and the Black or - lead on the Screw end, reading is about 5 Meg Ohms.
NOTE: Reverse the leads and the reading should be "0" Ohms.



NOTE: All of the information shown on this sheet may vary depending on the type of meter being used and tightness of the connectors and intended to be a BASIC learning instruction sheet.