

# How to Check the Values of the Resistors

Measure the One Meg Ohm Resistor (see figure 1). Connect one-meter lead to the top of the resistor and one-meter lead to the bottom. The meter should show a value close to 1 Meg Ohm. The resistor has a tolerance of 10% so a value of .9 Meg to 1.1 Meg is acceptable. Hawkinson recommends replacing the resistor if the measured value is outside of this range.



Figure 1

Measure the 20 Meg Ohm Resistor (see figure 2). Connect one-meter lead to the top of the resistor and one-meter lead to the bottom. The meter should show a value close to 20 Meg Ohm. The resistor has a tolerance of 10% so a value of 22 Meg to 18 Meg is acceptable. Hawkinson recommends replacing the resistor if the measured value is outside of this range.



Figure 2

Measure the 5k Ohm Resistors (see figure 3). The 5k Ohm Resistors are the two resistors on the left side of the four resistors in series. Connecting the meter leads to points "A" and "B" should produce a value close to zero. The value of zero is because of a sneak path through HV Relay #1. If the plunger (HV Relay #1) is held to the "in" position causing the relay to change states from closed to open, the value between

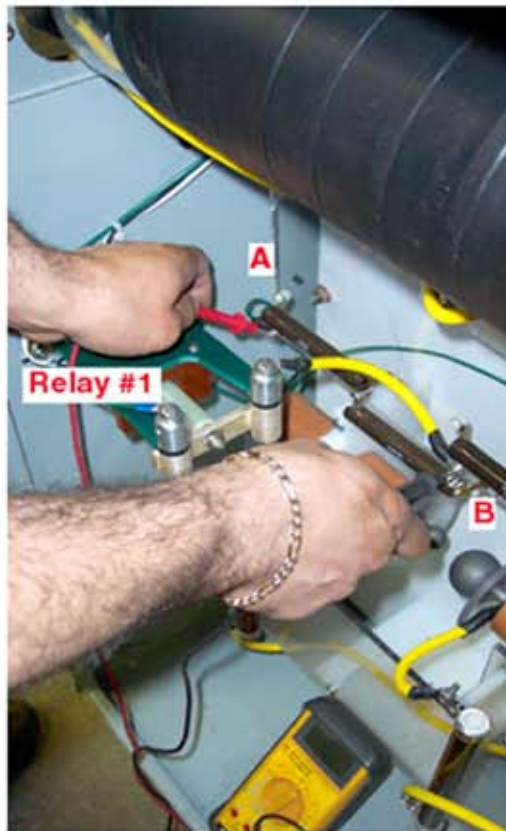


Figure 3

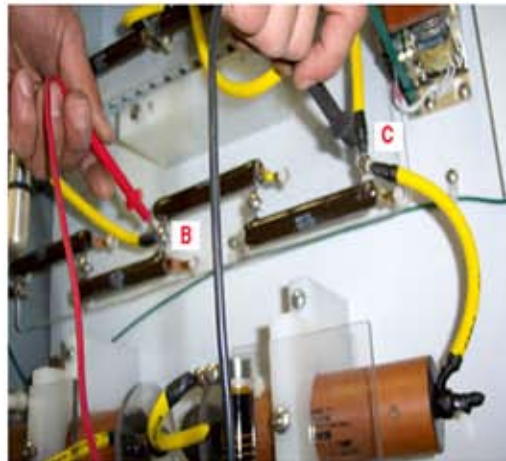


Figure 4

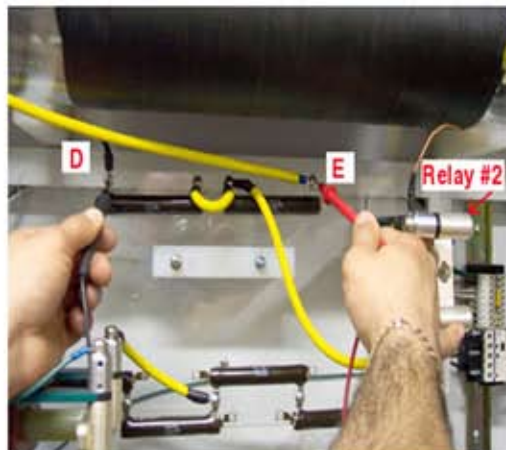


Figure 5

tween points "A" and "B" should be 10k Ohms (5k Ohms (+) 5k Ohms = 10k Ohms  $\pm 10\%$ ). If the value is significantly different from the described remove each resistor

and measure the resistance of each separately. Replace either or both if the values are not 5k ohm  $\pm 10\%$ .

Now Measure the two resistors on the right side of the four resistors in series. The 75 Ohm Resistors (see figure 4). Connecting the meter leads to points "B" and "C" should produce a value close to 150 Ohms (75 Ohms (+) 75 Ohms = 150 Ohms  $\pm 10\%$ ).

If the resistor values are not the expected values, remove each resistor and measure separately. Replace either or both if the values are not 75 Ohms  $\pm 10\%$  each.

The last two resistors in the high voltage cabinet are the two 150 Ohm Resistors at the top of the cabinet. Place one-meter lead on point "D" and the other on Point "E" the value indicated from the meter should be 156 Ohms. This is because of the sneak path through HV Relay #2. The meter is actually reading the large coil above the resistors and the 150 Ohm resistor on the right (150 Ohm resistor (+) HV Coil 6 Ohms = 156 Ohms).

To read the 150 Ohm resistor on the left, the plunger must be held to the "in" position, the value indicated on the meter should be approximately 306 Ohms (150 Ohms (+) 150 Ohms (+) 6 Ohms = 306 Ohms).

If the values indicated do not match those described check each individual component separately.