

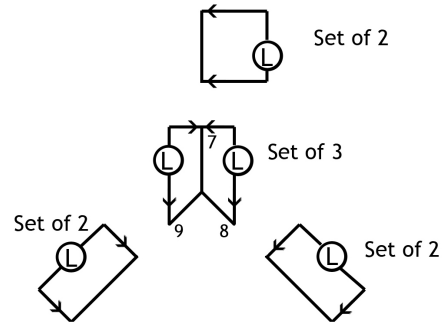
Identifying Unmarked Leads of a Y Connected Motor

By: Augie Hand

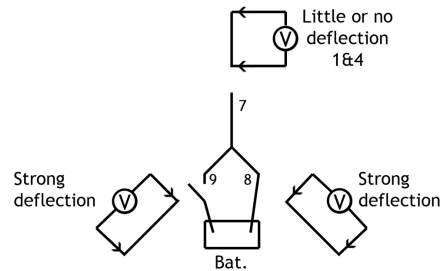
Equipment: Test Light or ohmmeter, 6 or 12 volt battery, low scale voltmeter and numbered lead labels. The motor should be assembled. The rotor is needed to complete the magnetic path.
When a downscale deflection of the voltmeter needle

1. The 9 lead Y connected motor will have four circuits. Three of the circuits will have 2 leads and one circuit will have 3 leads. Identify the three sets of two and the one set of three using the test light or ohmmeter.

Label the set of 3: 7,8, and 9.



2. To locate leads 1&4, Flash 8&9 as illustrated. Leads 1&4 will show little or no deflection and leads 3&6 and 2&5 will show strong deflections.



3. To identify 1 and 4:

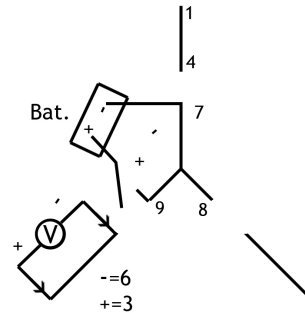
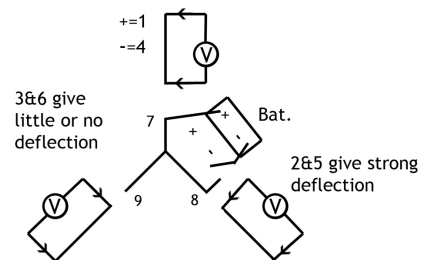
Connect the + terminal of the battery to 7. The - battery terminal will be flashed to 8.

Connect the voltmeter to 1&4. With an upscale deflection, the + lead of the voltmeter will be on 1 and the - lead of the voltmeter will be on 4. 1&4 can now be labeled.

Leads 3&6 can now be located. 3&6 will show little or no deflection. 2&5 will show strong deflection.

4. To identify 3 and 6:

Connect the voltmeter leads to 3&6. Connect the - battery terminal to 7 and flash the + terminal to 9. With an upscale reading, the + lead of the voltmeter will be on 3 and the - voltmeter lead will be on 6. They can now be labeled.



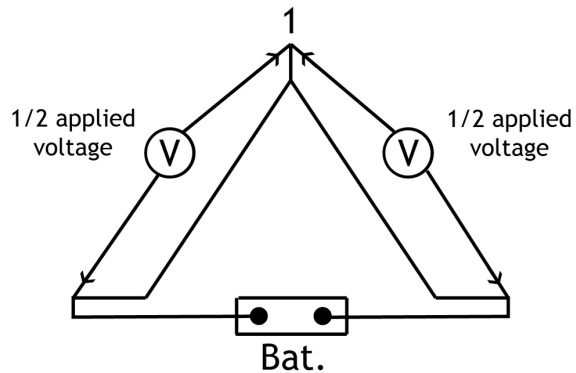
Connect the voltmeter leads to 2&5, connect the - battery terminal to 9. Flash 8 with the + battery terminal. With an upscale deflection, the + voltmeter lead will be on 2 and the - voltmeter lead will be on 5.

Identifying Unmarked Leads of a Nine Lead Delta Connected Motor

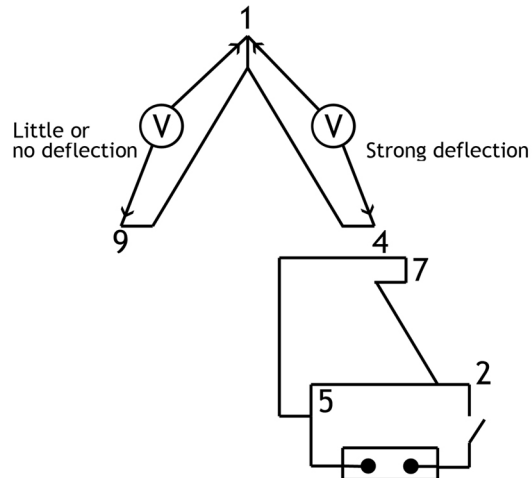
By: Augie Hand

Equipment: Test Light or ohmmeter, 6 or 12 volt battery, low scale voltmeter and numbered lead labels. The motor should be assembled. The rotor is needed to complete the magnetic circuit. The magnitude of deflection of the voltmeter needle, rather than polarity, is used to identify leads in this test.

1. The 9 lead connection will have three circuits with 3 leads each. Identify the three center leads using the method illustrated. The center lead will read $\frac{1}{2}$ of applied voltage as shown. Label the center leads - 1,2, and 3 respectively



2. Connect the 1-4-9 circuit as shown. 4&9 are connected to the battery terminal. 1 is flashed with the other battery terminal. A strong deflection will occur across leads 2&7 and across leads 3&6. Little or no deflection will be seen across leads 2&5 and 3&8. Leads 5,6,7, and 8 can now be labeled.



3. Connect leads 5&7 to the battery and flash lead 2 as illustrated. Leads 1&4 will show a strong deflection. Leads 1&9 will have little or no deflection. Leads 4 & 9 can now be labeled.

