



## WORKSHEET 2-11

### Heater Switch, Resistor Pack, and Control Relay

#### Worksheet Objectives

In this worksheet you will assemble a blower motor control circuit that uses resistors to vary motor output. A light bulb is used instead of a motor in this example.

#### Tools and Equipment

For this exercise you need the following:

- Technician's Handbook
- Electrical simulator
- Digital multimeter (DMM)

#### Section 1: Relay Resistance Testing

1. Place the relay on the circuit board and connect the two terminals from the relay coil to the power source. Use a fuse and SPST switch as shown below.

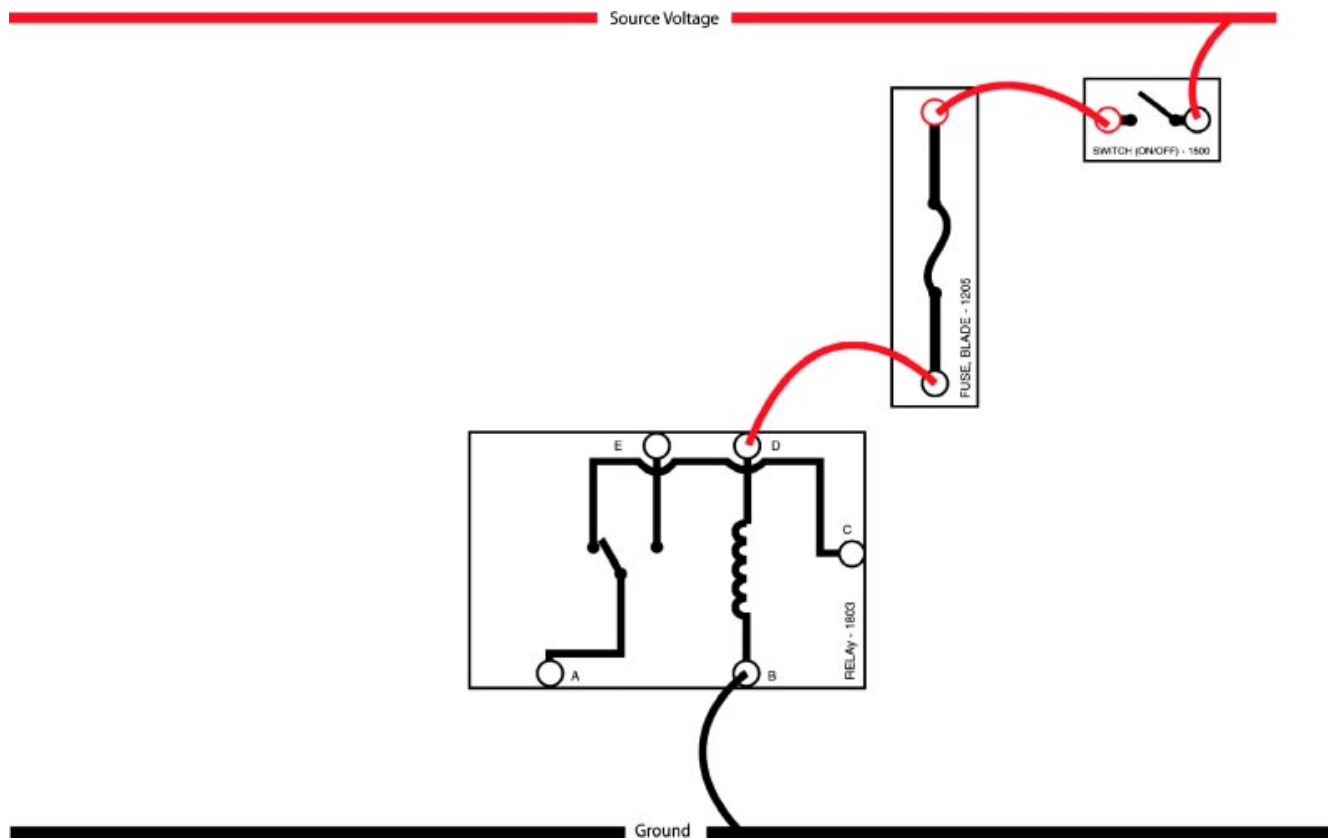


Fig. 2W11-2  
TL623f001c-2W11

- Turn the relay on and off to verify it is working (you should hear a click when the relay contacts open and close when power is turned on and off).
- Turn the power supply off.
- Use the heater control switch (#1650) and a lamp (#1152) to assemble the circuit shown below.

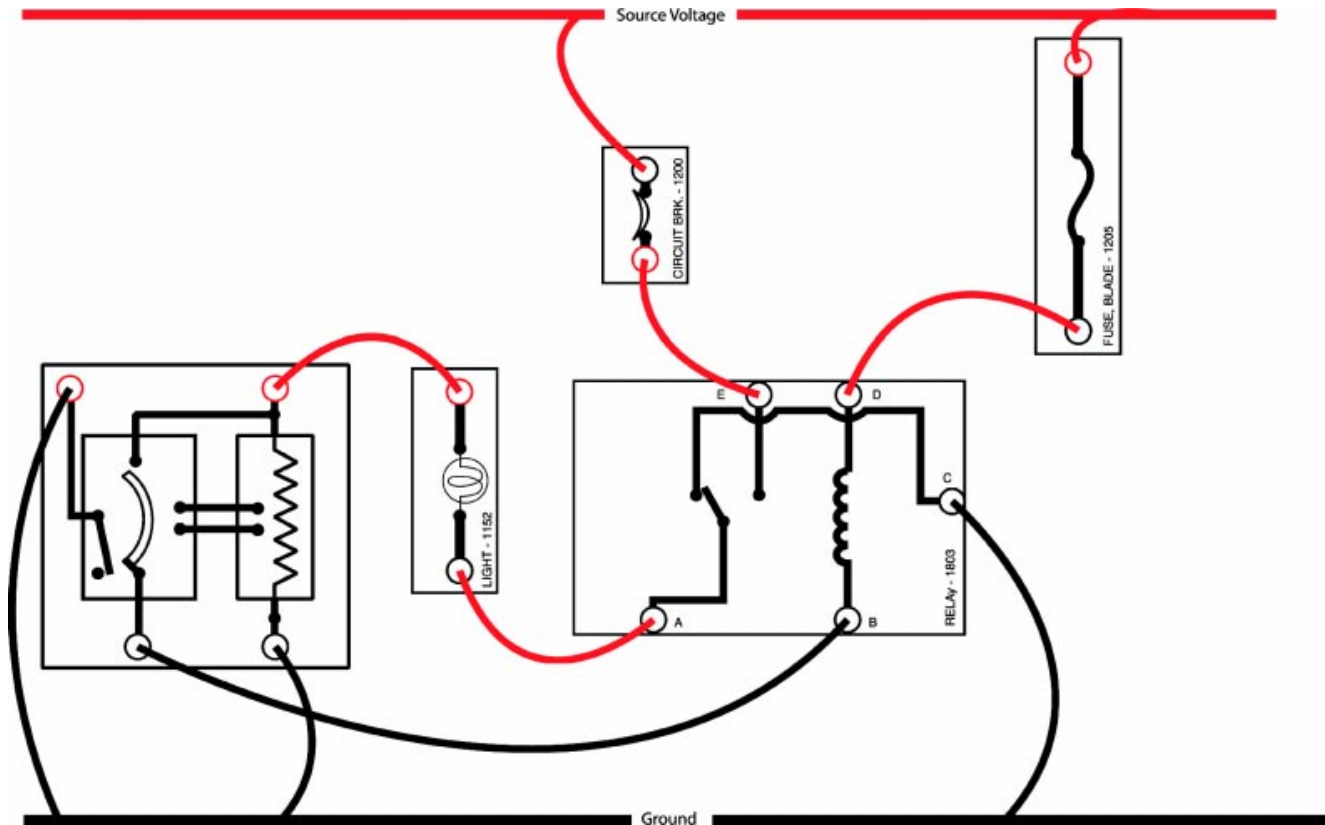


Fig. 2W11-2  
TL623f001c-2W11

- Turn on the power supply and verify the circuit operates correctly. Does the bulb change brightness as the switch is moved through each position?

YES / NO (circle one)

If yes, why?

---



---

- Measure the voltage drop across the bulb in each switch position:

Position 1: \_\_\_\_\_ Position 3: \_\_\_\_\_

Position 2: \_\_\_\_\_ Position 4: \_\_\_\_\_

## Heater Switch, Resistor Pack, and Control Relay

---

Why does the voltage drop change across the lamp as the switch is moved?

---

---

7. Measure the current for the following:

Relay coil \_\_\_\_\_

Bulb (at brightest switch position) \_\_\_\_\_



Stop here after completing all the related activities and answering the questions. Inform your instructor that you are ready to review this section.

# Heater Switch, Resistor Pack, and Control Relay

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Review this sheet as you are doing the Heater Switch, Resistor Pack, and Control Relay worksheet. Check each category after viewing the instructor's presentation and completing the worksheet. Ask the instructor if you have questions regarding the topics provided below. Additional space is provided under topic for you to list any other concerns that you would like your instructor to address. The comments section is provided for your personal comments, information, questions, etc.

I have questions

I know I can

## Topic

## Comment

Measure Voltage Drop			
Measure Current			