**Unit: Manual Motor Controls Job: 7**

**Title: Sealing/Unsealing Circuit CLO# 2**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Station \_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Recognize the function of a sealing and unsealing control circuit.
2. Interpret how this circuit can be used in a motor control scenario.
3. Establish a foundation for creating a motor control circuit.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this shop job. Grading shall be based on the Manual Motor Controls rubric.

**Instructions**

Wire the schematic shown below. Ensure to use the proper colored wire and label all wires with the appropriate wire number. Have the instructor review your circuit before energizing the panel. After obtaining approval, energize the circuit and follow the steps in the table below.

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1. After energizing the circuit, complete truth table below.

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| --- | --- | --- | --- |
| Step | PB1 | PB2 | Green Light |
| 1 | Not Pressed | Not Pressed |  |
| 2 | Pressed | Not Pressed |  |
| 3 | Not Pressed | Pressed |  |
| 4 | Pressed | Pressed |  |

1. Why does the addition of PB1 allow the circuit to “Un-seal”?

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1. Write out the Boolean formula for this circuit. Remember that normally closed components are considered “nots” and normally open components are considered “equals”.

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1. Modify the circuit to have an additional pilot light to indicate that the circuit is “un-sealed”? Use the red pilot light to indicate “un-sealed”. Draw the complete circuit below.

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1. Render the schematic you designed in question 4 using a CAD type software package on a classroom PC. Once complete, post the schematic to your student network folder using filename MMC Job 07 – *username.ext*