**Unit: Manual Motor Controls Job: 22**

**Title: Forward/Reverse using Three Pushbuttons for 3 Phase Mtr. CLO# 1,2**

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

**Objectives**

1. Student shall develop a further understanding of reversing a motor.
2. Student shall enhance motor circuit design skills.
3. Upon completion, a student shall have a more complete knowledge base for creating proficient motor control circuits.

**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**

Design a forward/reverse motor control circuit using three momentary pushbuttons. One pushbutton shall be a “forward” button, another pushbutton shall be a “reverse” pushbutton and the remaining pushbutton a “stop” button. If the motor is running “forward” the operator shall not be able to select “reverse” without pressing stop first (i.e. if the motor is running “forward” and the “reverse” button is pressed, no action shall be taken). The same shall be true if the motor is running in “reverse”. The green light shall indicate “forward”, the blue light shall indicate “reverse”, the red light shall indicate “stopped” and the yellow light shall indicate “overload”. Use the space on the opposite side of this page to design your circuit. Once complete, review your design with your instructor. After obtaining approval, you may wire your circuit. Ensure to label all wires with the appropriate wire numbers. Have your instructor review your wiring before energizing your circuit.



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