

PLC123 LAB 2.1: LEARNING THE MACHINES TRAINING UNIT LAB

Student Name: _____

Student ID: _____

LAB OUTCOMES:

Upon completion of this lab procedure, the student should be able to:

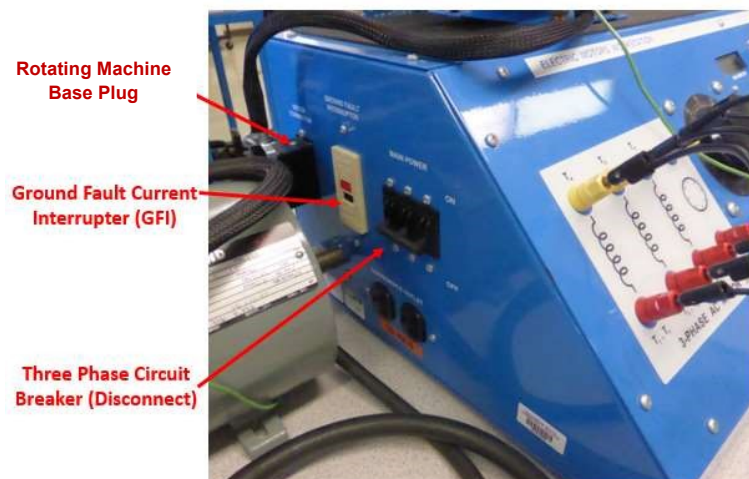
1. Identify and explain all the parts of the Machines Training Unit.
2. Plug in the turn on the power to the Machines Training Unit
3. Determine the correct external connections overlay with a rotating machine.
4. Mount a rotating machine and connect it to the base plug unit
5. Determine when to use guarding for a rotating machine

LAB PROCESS:

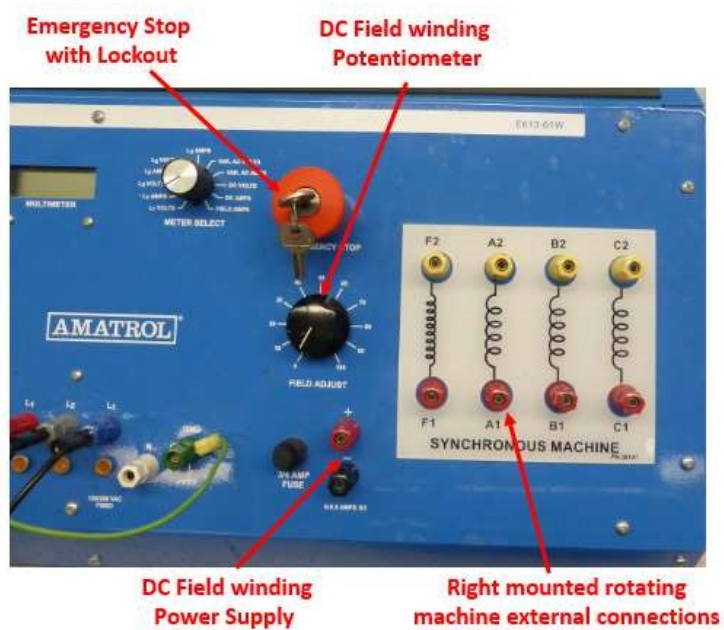
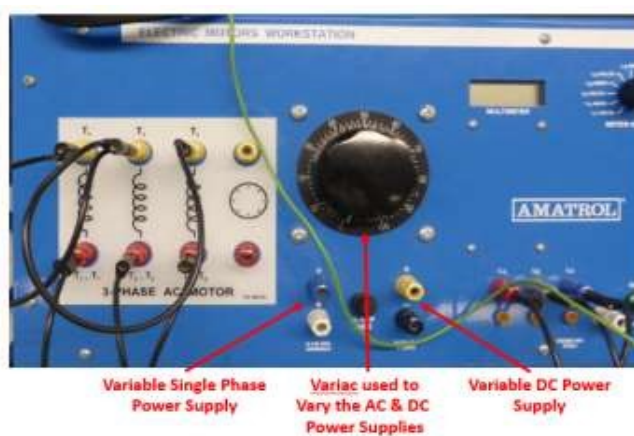
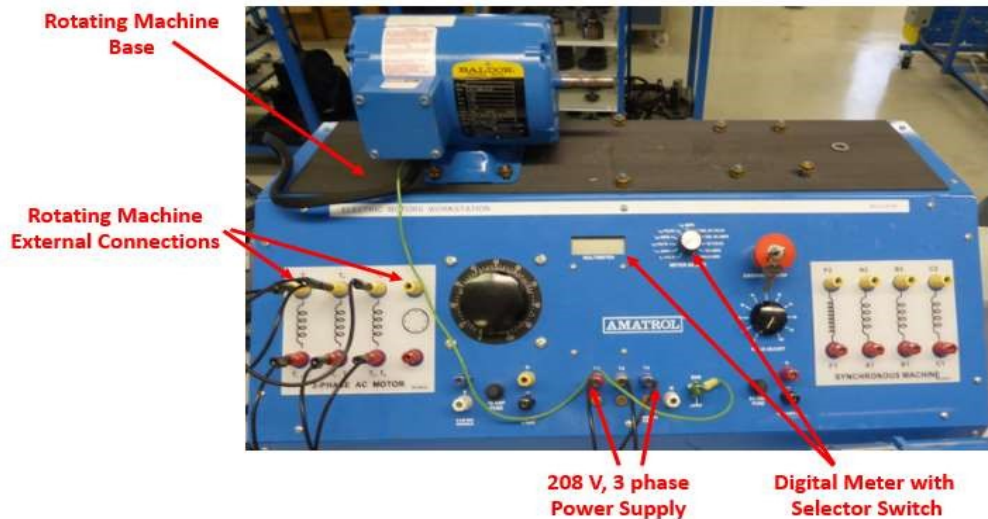
Obtain a workbench with an Amatrol Machines Training Unit.

Part 1:

1. Identify all the components on the left end of the Machines Training Unit.
 - a. Machine plug in connector
 - b. Ground Fault Current Interrupter outlet
 - c. Three phase circuit breaker/disconnect
 - d. 120 VAC duplex outlet
 - e. Three phase plug to power the unit



2. Identify all the components on the front of the Machines Training Unit
 - a. The top of the motor based unit. What are the bolts for?
 - b. Rotating machine external connectors
 - c. Three phase power supply (208 V, 3 phase, 4 wire)
 - d. Digital meter and selector switch
 - e. Variac (Variable transformer) for varying power supply voltage
 - f. Variable DC power supply
 - g. Variable AC power supply
 - h. Emergency Stop push button
 - i. DC Field winding potentiometer
 - j. DC Field winding power supply
 - k. External connections for the right mounted rotating machine



Part 2:

1. Perform the following tasks:
 - a. Install the coupling guard over the coupling for safety (as shown above)
 - b. Power up the unit and reset the Emergency Stop
 - c. Measure the variable DC supply voltage and vary it with the Variac
 - d. Measure the Field voltage supply and vary this with the rheostat
 - e. Hit the Emergency Stop and see how to lock it out when working on the unit
 - f. Reset the Emergency Stop and repower the unit
 - g. Put a DC machine on the Machines Training Unit
 - h. Put the proper external connections overlay on the front of the unit

The outcomes of this exercise (listed on page 1) specifies the skills that the Student must demonstrate to the Instructor. Once the Instructor is satisfied with the demonstration of Knowledge & Skills by the individual student, they will sign this document (for the student), then enter a 100% into the Hands-On Lab grade in Sakai.

I verify that this student has completed all of the requirements of this Hands-On Assessment:

Student Name: _____

Faculty Signature: _____ Date: _____

DOL DISCLAIMER:

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