Hydraulics and Pneumatics Fundamentals

OEM: Rockwell Automation • Duration: 3 Days (24 hrs) • Code: MMS-125

COURSE MODULES & TOPICS

Objectives

- Describe the basic principle of fluid dynamics
- State the relationship between force, pressure, and area
- List and describe the major components of a hydraulic system
- Identify the symbols used to identify hydraulic components in a schematic
- List and describe the major components of a pneumatic system
- Identify the symbols used to identify pneumatic components in a schematic

Who Should Attend

- Understanding of mechanical theory and mechanical systems

Student Materials

- Student Manual includes the key concepts, definitions, examples, and activities presented in this course
- Lab Guide includes the hands-on exercises

Next Level Learning

- Centrifugal Pumps (MMS-200)

Course Agenda

Day 1

- Listing the Advantages of Hydraulics and Pneumatics
- Discuss Hydraulic and Pneumatic Components
- Disassembling, Cleaning, Inspecting, and Reassembling a Hydraulic and/or Pneumatic Control Valve
- Operating a Hydraulic and/or Pneumatic Cylinder Using a Given Medium

Day 2

- Operating Multiple Hydraulic Cylinders Using a Hydraulic Medium
- Disassembling, Cleaning, Inspecting, and Reassembling a Hydraulic and/or Pneumatic Control Valve

Day 3

- Operating a Pneumatic Cylinder Using a Pneumatic Medium
- Operating Multiple Pneumatic Cylinders Using a Pneumatic Medium
- Review and Exam