Course Title: Hydraulic Component Repair
Prefix and Course Number: FLPT 252

Course Learning Outcomes:
By the end of this course, a student should be able to:

- Repair standard hydraulic components used in industrial hydraulic systems
- Develop a list of replacement parts from manufacturer’s component repair sheet
- Use hand tools in a safe and proper manner
- Maintain a clean work area where hydraulic component repair is being completed.

Course Outline

I. Component Identification
   A. Component Manufacturer
   B. Component Part of Identification Number
   C. Manufacturer’s Literature
      1. Repair procedures or manuals
      2. Spare parts sheets
      3. Technical or engineering specifications required

II. Component Disassembly
    A. Recommended Procedures
    B. Parts Layout
    C. Parts Inspection
    D. Diagnosis of Malfunction or Failure

III. Order Parts for Overhaul or Repair
    A. Appropriate paperwork
       1. Parts identification by part or kit number

IV. Component Reassembly
    A. Performance Testing and Comparison (manufacturer specification)

V. Hydraulic Components
    A. Oral Assessment/Written Tests
    B. Three Types of Pumps
    C. Pressure Control Valves
    D. Directional Control Valves
    E. Flow Control Valves
    F. Cylinder and Hydraulic Motors

VI. Pneumatic Components
    A. Oral Assessment/Written Tests
    B. Air Filters
    C. Regulators
    D. Lubricators
    E. Directional Valves (Poppet and Spool)
    F. Air Cylinders