

**Course Objectives/Course Outline**  
**Spokane Community College**

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**Course Title:** Hydraulic Component Repair

**Prefix and Course Number:** FLPT 252

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**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