

**Course Overview:**

The purpose of this unit is to introduce trainees to the components, Op. and Main of a hydraulic system.

After completing this unit, trainees should understand the basic principles of how hydraulic systems work.

Also this unit is designed to familiarize trainees with the operation of various types of cylinders and hydraulic motors in hydraulic systems. After completing this unit, trainees should be able to describe the basic components and common types of single-acting cylinders and double-acting cylinders. They should also be able to describe the basic components and operation of common types of vane motors, gear motors, piston motors, and partial rotation actuators.

**Course Objective:**

- Explain the basic principles of hydraulic system operation
- Identify the basic components of a typical hydraulic system
- Describe the general operation of a typical hydraulic system
- Describe the basic components and operation of a single-acting load-return cylinder
- Describe the basic components and operation of a single-acting spring return cylinder
- Describe the basic components and operation of a vane motor
- Explain what a balanced vane motor is

**Course Outline:**

- Principles Of Hydraulic Systems
- Principles Of Pneumatic Systems
- System Components
- Directional Control Valves
- Flow Control
- Hydraulic Actuators And Motors
- Operator Responsibilities
- Basic Components And Operation Of A Cylinders
- Basic Components And Operation Of A Motors

**Who Should Attend:**

Mechanical, operation, production, and maintenance engineers senior technicians should benefit from this course. Also senior technicians should update and refresh their knowledge by attending this course.

**Training Language:**

EN / AR

**Training Methodology:**

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation