

## H-100

### Troubleshooting Industrial Hydraulics/Level One

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***Course  
Description***

This course focuses on industrial hydraulic systems. We place emphasis on understanding the basic hydraulic fundamentals utilized in all industrial hydraulic systems; the participant will learn to effectively to setup, adjust and troubleshoot industrial hydraulic systems. The participant will apply practical hands on exercises for each basic principle covered in the class. These hands on exercises will be executed utilizing real world hydraulic adjustments and calibrations as used in actual systems. We focus heavily on teaching proper safety procedures, and strictly enforce these procedures to assure participants learn and practice safe work habits. ISO 1219 Industrial hydraulic symbology will be taught and used throughout the class. The participant will utilize this symbology throughout the class, and learn from case history hydraulic prints. Proper adjustment procedures for pressure, flow, and directional control valves will be emphasized and applied.

***Course Length***

32 hours

***CEU's***

3.0

***Objectives***

Successful completion of the course will enable the participant to:

- Demonstrate and identify good safety procedures when working with industrial hydraulic systems.
- Match system components with appropriate ISO 1219 symbols.
- Assemble hydraulic circuits and verify their operation in a lab setting.
- Determine why certain components are required in specific circuits.
- Adjust and calibrate system components in a predetermined sequence.
- Understand sources of heat in a hydraulic system.
- Understand the different types of flow controls and applications of each.
- Understand how to control a suspend load.
- Understand the purpose of accumulators and how to properly charge them.
- Identify the symptoms, causes, and prevention of shock in a hydraulic circuit.
- Diagnose failure of components that affect efficiency, but not operation.

Successful completion of this program should adequately prepare the participant to successfully pass the written portion of the Fluid Power Societies Industrial Hydraulic Mechanic certification examination.