

Corporate Office
7042 Fairfield Business Dr.
Fairfield, OH 45014-5480
(513) 874-3225
(513) 874-3229 Fax



Troubleshooting Mobile Equipment using Hydraulic Schematics

Course Description: Troubleshooting methodology is provided using the hydraulic circuit to group and isolate the potential problems when symptoms such as improper speed, pressure, heat, noise, leaks, and specific failures have been identified. This course begins with a brief review of fundamental fluid principles and hydraulic schematic symbols. It then covers reasons for failure of cylinders, pressure relief valves, flow controls, directional controls, hydraulic pumps and motors, and other hydraulic accessories. Various types of hydraulic circuits are explained so the students develop a broader understanding of symbol (component) arrangements and feel comfortable explaining them. Company specific schematics can be integrated into the course.

Prerequisites: Understanding of basic fluid power physics and knowledge of component construction and operation (Level 1 Mobile Hydraulic course content).

Textbook: Lightning Reference Handbook, Troubleshooting Handouts, Animated Schematic

Learning Objectives:

- Relate the fundamental concepts of pressure, and flow.
- Know basic characteristics of hydraulic fluid.
- Review the 7 Basic Symbols
- Introduce assorted Symbols and Legends
- Learn how to build Simple and Complex Symbols from Basics
- Understand how to read Simple and Complex Circuits
- Troubleshooting Techniques
 - Divide and Conquer Technique
- Grouping and Isolation
- Organizing sequence of actual diagnostic procedure
- Making economic choices when several possibilities are analyzed