

1-Day Hydraulic Troubleshooting

LIVE ONLINE SEMINAR
 THURSDAY
 SEPTEMBER 10, 2020
 8:00 AM – 4:30 PM (CST)

COST: \$595.00
 INCLUDES:
 Class Manual
 Certificate of Completion



1. **Fundamentals of Hydraulics**
 - Flow
 - Pressure
 - Torque
 - Horsepower
 - Speed
2. **Reading Schematics & Graphic Symbols**
3. **Understanding System Operation**
 - System Efficiency
 - Advantages & Disadvantages
 - Braking Systems
 - Open Loop & Closed Loop
 - Load-Sense
 - Steering Systems
4. **Recognizing the Need for Cleanliness & Filtration**
 - Viscosity Effects
 - Micron Ratings
 - Effects of Contamination
5. **Understanding Flow in the System**
 - Slow Or Erratic Actuator Operation
 - Component Wear – Effects Of Contamination, Pressure & Heat
 - Case Drain Monitoring
6. **Diagnosing Plumbing Problems**
 - Fittings (NPTF, SAE, JIC 37°, Straight Thread O-Ring)
 - Hose, Tubing & Pipe Sizing
 - Pressure Ratings
7. **Cavitation & Aeration Problems**
 - Inlet Restrictions
 - Sizing Filters and Strainers
 - Atmospheric Pressure
 - Pump & Motor Shaft Speeds
8. **Troubleshooting Components**
 - Pumps & Pump Controls
 - Motors
 - Cylinders
 - Valves
 - Pressure Controls
 - Steering Systems
 - Braking Systems
9. **Pressure Control Adjustments**
 - Relief Valves
 - Sequence Valves
 - Pilot Operated Valves
 - Counterbalance Valves
 - Unloading Valves
 - Pressure Reducing Valves
 - Brake Valves
10. **Speed Control Adjustments**
 - Meter-In
 - Bleed-Off
 - Meter-Out
 - Variable Displacement
 - Variable Speed
 - Pressure Compensated
11. **Heat Removal from Hydraulic Systems**
12. **Start-Up Procedures**
13. **Hydraulic System Safety**

REGISTRATION FORM

PLEASE USE A SEPARATE FORM FOR EACH COURSE # _____

COURSE LOCATION: _____

COURSE DATES: _____

PERSON TO CONTACT IF THERE IS A CHANGE IN SCHEDULE: _____

STUDENTS: _____

COMPANY: _____

PHONE: _____ EXT: _____

ADDRESS: _____

FAX: _____

CITY: _____

STATE: _____ ZIP: _____

CHECK IS ENCLOSED (_____) STUDENT(s) @ \$595 PER PERSON \$ _____

USE OUR PURCHASE ORDER NO. _____

VISA M/C AE # _____ EXP. DATE: _____

ENROLLMENT ARRANGEMENTS SHOULD BE RECEIVED A MINIMUM OF SEVEN DAYS PRIOR TO THE SEMINAR DATE

For more information or to register contact us: 806-358-8790 or email dillon@nfpitraining.com