

Mobile Equipment Hydraulic Troubleshooting

COURSE INCLUDES:

Workbook
 Fluid Power Data Book
 Certificate of Completion



1-Day Program
 8:00 A.M. – 5:00 P.M.
 \$595 per Person

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 Onsite Programs

NFPI TRAINING
 www.nfpitraining.com
 PH (800) 704-1066
 523D FM 3179 Road
 Huntsville, TX 77340

1. Fundamentals of Hydraulics

- Flow
- Pressure
- Horsepower
- Torque
- Speed
- Duty-Cycles

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

- Types & Location Of Filters
- Micron & Beta Ratings
- Effects of Contamination
- Petroleum Based & Fire Resistant Fluids
- Viscosity Index
- Additives

5. Understanding Flow in the System

- Component Wear – Effects Of Contamination, Pressure & Heat
- Slow Or Erratic Actuator Operation
- Case Drain Monitoring

6. Diagnosing Plumbing Problems

- Correct Use Of Fittings (NPTF, SAE, JIC 37°, Straight Thread O-Ring)
- Hose, Tubing & Pipe Sizing
- Pressure Ratings

7. Cavitation & Aeration Problems

- Inlet Restrictions
- Atmospheric Pressure
- Sizing Filters and Strainers
- Pump & Motor Shaft Speeds

8. Troubleshooting Components

- Pumps & Pump Controls
- Motors
- Cylinders
- Valves
- Pressure Controls
- Volume Controls
- Steering Systems
- Braking Systems
- Fan Drives

9. Pressure Control Adjustments

- Relief Valves
- Sequence Valves
- Pilot Operated Valves
- Counterbalance Valves
- Unloading Valves
- Pressure Reducing Valves
- Brake Valves
- High-Low Valves
- Shuttle Valves

10. Speed Control Adjustments

- Meter-In
- Meter-Out
- Bleed-Off
- Variable Speed
- Variable Displacement
- Pressure Compensated

11. Heat Removal from Hydraulic Systems

12. Start-Up Procedures

13. Hydraulic System Safety

For more information or to register contact us: 800-704-1066 or email info@nfpitraining.com