



COURSE TITLE: HYDRAULIC SYSTEM/MAINTENANC/TROUBLESHOOTING

Learning Outcomes

By the end of this training, participants will be able to:

- Explain basic hydraulic theory and principles (Pascal's law, pressure, flow).
- Identify major hydraulic components and describe their functions.
- Interpret and draw simple hydraulic circuit diagrams using ISO symbols.
- Apply preventive maintenance practices to extend system life and reliability.
- Diagnose and troubleshoot common hydraulic system problems systematically.
- Follow safe practices while working with hydraulic equipment.
- Design and assemble basic hydraulic circuits for practical applications.

Who Should Join?

Technician, Operation, Maintenance staff/Junior Engineer etc

Trainer

Mechanical Engineering background, well spoken and many years in hydraulic/pneumatic automation system design/PM contract service experience with many MNC company. University/Institution Invited speaker for hydraulic system training & application.

Learning Session:-

- Introduction of Hydraulic
- Hydraulic Components & Functions
- Basic Hydraulic Circuits
- Read Hydraulic Schematics
- Preventive Maintenance Practices
- Troubleshooting Technique
- Hydraulic Safety
- Circuit Design and Practical Exercise

Pre-Requitsite

Basic Automation Knowledge

Duration : 2 Days
Time : 9.00 am - 5pm
Venue : In-House Training
Participant : Max: 9pax

Training Schedule

Oct 2025

Certification Completion Included

REGISTER NOW

+60124209420

Training Provider : MTA Skilllab Sdn. Bhd

jonathantan@multitradeprac.com



Training Modules

Day 1 : Fundamental & Core Components

Session 1 : Introduction of Hydraulic

- Principles of fluid power
- Pascal's law, pressure, flow, force, torque basics
- Advantages & limitations of hydraulic systems
- Quiz

Session 2 : Hydraulic Components & Functions

- Hydraulic fluid types & properties
- Reservoir, pumps, actuators (cylinders, motors)
- Directional, pressure, and flow control valves
- Filters, hoses, seals & fittings
- Quiz

Session 3 : Basic Hydraulic Circuits

- Simple power unit layout
- Open-loop and closed-loop systems
- Building blocks of circuits: series, parallel, regenerative, meter-in/meter-out

Session 4 : Reading Hydraulic Schematics

- ISO symbols and conventions
- Interpreting simple diagrams
- Tracing flow paths in a circuit

Day 2 : Maintenance, Safety & Troubleshooting

Session 5 : Preventive Maintenance Practice

- Fluid cleanliness & contamination control
- Filter inspection & replacement schedules
- Seal & hose inspection
- Temperature & pressure monitoring

Session 6 : Troubleshooting Technique

- Common hydraulic faults: overheating, leakage, noise, slow operation, pressure loss
- Root cause identification methods
- Step-by-step troubleshooting flowcharts
- Hands-on troubleshooting with trainer kit (if available)

Training Modules

Session 7 : Hydraulic Safety

- Pressure hazards & safe depressurization
- Handling hoses & connections safely
- Lockout-tagout procedures for hydraulic systems
- Personal protective equipment (PPE)

Session 8 : Circuit Design & Practical Exercise

- Designing simple circuits for cylinder and motor control
- Group activity: build & test a circuit on trainer board
- Schematic drawing exercise

Wrap-up, Review & Assessment