



Worksheet HI04 & Training Record Hydraulic Component Basics

Explore Hydraulics

Email:

Course:

Provider:

Learning Objectives/Expected Outcomes: (60-120mins)

1. Appreciate how hydraulic fluid is used to transmit power.
2. Appreciate hydraulic pumps supply the flow, valves control the operation, and actuators drive the loads.
3. Recognize how Pressure Relief Valves are used to protect against failures.
4. Start to recognize how symbols are used to represent the hydraulic components.
5. Start to recognize how components are arranged to complete a circuit.

Previous Knowledge Required:

Students should have completed worksheet HI03 'Comparing hydraulic, pneumatic and electrical drives' or have a good working knowledge of where hydraulics is used.

Terminology:

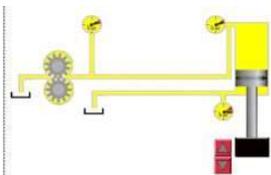
Hydraulic pump, directional valve, actuator, cylinder pressure relief valve, fluid, flow, pressure.

Record of Achievement:



Click the mail icon to post your results to any free or standard LRS/LMS systems. See www.e4training.com/xapi/ for more details. Complete and keep this training record sheet along with any additional written work or sample calculations.

Coursework investigation and instructional video

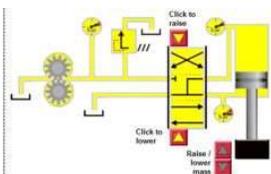


Estimated time: 15 minutes, skill level 2

Date:

Complete

Virtual test rig experiments



Estimated time: 15 minutes, skill level 2

Date, score:

Tick when posted



Interactive tutorial



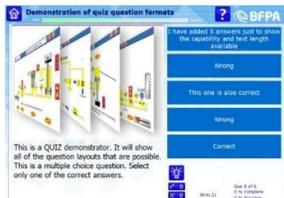
Complete the 'Introduction to hydraulics' tutorial at www.e4training.com/hydraulic_courses/intro_to_hyd1.php
Complete quick quiz at end and post results.

Estimated time: 15 minutes, skill level 2

Date, score:

Tick when posted

Interactive quiz to check and reinforce learning



Complete the 'Introduction to hydraulics' questions at www.e4training.com/hydraulic_test2.php?Quiz - Hydraulics Free
Post result via LRS, LMS when complete.

Estimated time: 15 minutes, skill level 2

Quiz name, date, score:

Tick when posted

Key questions / Plenary

- What function do hydraulic pumps perform?
- What component would you use to lift a mass using fluid power?
- What valve would you use to drive a cylinder up and down?
- Why does a relief valve make hydraulic circuits safer?

Repeat above if the answer is no

And Finally:

Complete this worksheet and keep for your records. Submit any written coursework etc. to your training course provider.

Follow-on Course Worksheets:

Recommended follow-on worksheet:
HI05 – Hydraulic circuit basics

For more specialist course worksheets visit www.e4training.com/hydraulic_courses/worksheets1.php

Notes