engineering **adventures**

Worksheet HS03 & Training Record **Hydraulic Risks and Safety Assessment**		**Safe Working Practices**
Email:	Course:	Provider:

Learning Objectives/Expected Outcomes: (90-150mins)

1. Appreciate the importance, requirements, and legal responsibilities of working safely.
2. Learn the 5 steps for completing a risk assessment and the specific risk from a range of typical fluid power equipment.
3. Produce a risk assessment for a scissor lift or other equipment.
4. Appreciate the potential risk points within a hydraulic system.

Previous Knowledge Required:

Students should have completed worksheet HS01 'Safe operation of hydraulic equipment' and have a basic knowledge of hydraulic components and systems.

Terminology:

Risk assessment, hazards, procedure documents, inspection, validation dates, calibration, pressure vessel.

Record of Achievement:

Click the email icon to post your results, once training is complete. Enter an LRS username and endpoint details or see www.e4training.com/xapi/ for free examples. Keep a record of any written work or worked calculations etc.

Interactive tutorial

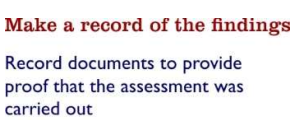
Complete the 'Safe working practices' tutorial at www.e4training.com/hydraulic_courses/microtutor1.php?wtsafety (or via the phone app)
Complete quick quiz at end and post results.

Estimated time: 15 minutes, skill level 3

Date, score:

Tick when posted ☐

Coursework investigations



Read the detailed information and watch the instructional videos at www.e4training.com/hyd_maint/safety1.php and safety2.php

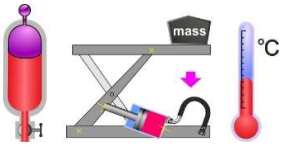
- Understand the terms, hierarchy, and definitions or risk control.
- Understand the 5 steps to a risk assessment.
- Understand the reporting and communication procedures.

Consider what information would be required to complete a risk assessment on your systems.

Estimated time: 30 minutes, skill level 3

Date complete:

Complete ☐



Study the detailed information and instructional videos at www.e4training.com/hyd_maint/fluid_risk1.php and fluid_risk2.php

- Learn about some of the potential risks from fluid power equipment.
- Appreciate how to identify the level of risk.
- Consider risks including energy storage, loads, supply isolation, hoses, and leaks, etc.

Consider all areas where risks may arise from using fluid power equipment.

Estimated time: 30 minutes, skill level 3

Date complete: Complete ☐

Practical and coursework assignments

Identify hazards

- Physical
- Mental
- Chemical
- Biological hazards

Identify a piece of hydraulic equipment you work with (or consider the scissor lift design example).
Complete the risk assessment tasks at www.e4training.com/hyd_maint/safety3.php

Estimated time: 30 minutes, skill level 3

Complete ☐

Identify the potential risk factors from the hydraulic equipment.
Consider the areas listed and tasks at www.e4training.com/hyd_maint/fluid_risk3.php

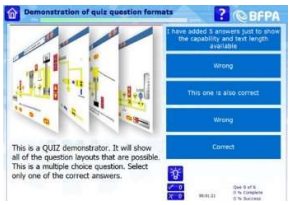
Estimated time: 20 minutes, skill level 3

Complete ☐

Date complete:

Submit a risk assessment and risk factors for a scissor lift design or other relevant m/c example

Interactive quiz



Complete the 'hydraulic safety awareness' quiz questions at www.e4training.com/hydraulic_test2.php?Quiz - Hydraulics part 1

Post result when complete.

Estimated time: 15 minutes, skill level 3

Quiz name, date, score: Tick when posted ☐

Key questions / Plenary

Can you describe the logic behind the hierarchy of hazards?
Can you list the 5 steps to a risk assessment?
Do you know where the risk assessment is for the equipment in your company or college?
Can you describe 5 potential risk points with a specific or typical fluid power system?

Record answers: Tick when complete

And Finally:

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

Follow-on Course Worksheets:

For potential follow-on, worksheets refer to your individual lesson plan or search www.e4training.com/hydraulic_courses/worksheets1.php or courses1.php

Notes