



Worksheet HM00 & Training Record		Hydraulic Maintenance
Hydraulic Maintenance Considerations		
Email:	Course:	Provider:

Expected Outcomes: (2-3 hours)

1. Appreciate that hydraulic equipment is designed to meet different duties and length of service life.
2. Understand the key areas that require maintenance and why they are important.
3. Review different power unit designs to recognise which features are used to extend the service life.
4. Learn about the different maintenance tasks, procedures, and documentation.

Previous Knowledge Required:

You should have already completed all of the basic hydraulic modules including HF, HP, HD, HV, HA, and HE worksheets before starting any physical maintenance work. You must complete and understand the importance of all HS Safety worksheets along with HP04 'hydraulic contamination' and HE05 'Pipework and fittings'. Good working knowledge of hydraulic equipment is required even if your maintenance work is to be closely supervised.

Terminology:


Planned, periodic, scheduled maintenance, service life, duty cycle, troubleshooting, diagnostics.

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.

Interactive tutorial



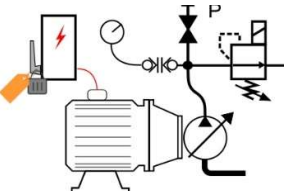
Complete the 'Hydraulic maintenance considerations' at www.e4training.com/hydraulic_courses/microtutor1.php?wtmaintain

Complete quick quiz at end and post results.

Estimated time: 10 minutes, skill level 4

Date, score: Tick when posted

Coursework investigations and instructional video



Study the detailed information and instructional videos at www.e4training.com/hyd_maint/maintdesign1.php & 2.php

Recognise the important areas for hydraulic maintenance.

Estimated time: 30 minutes, skill level 4

Date complete: Complete



Mini Hydraulic Power Unit DC, Intermittent operation



Estimated time: 20 minutes, skill level 4

Date complete:

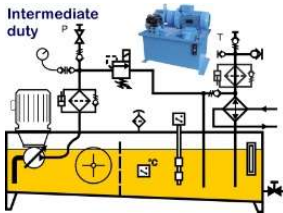
Complete

Study the detailed information and instructional videos at

www.e4training.com/hyd_maint/maintexample1.php

Compare three different power units designs and their effect on maintenance and service life.

Intermediate duty



Estimated time: 20 minutes, skill level 4

Date complete:

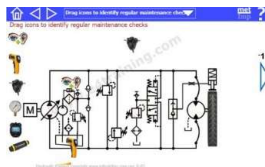
Complete

Study the detailed information at

www.e4training.com/hyd_maint/mainttask1.php

Review typical planned and preventative maintenance procedures.

Virtual test rig experiments



Experiment with the 'virtual hydrostatic drive' system at

www.e4training.com/hyd_maint/maintdesign3.php

- Follow the suggested exercises and observations list below the simulation.
- Run the experiments, answer the questions, and click the buttons to see the answers.

Includes a range of identification, testing, maintenance, and repair diagnostic exercises.

Estimated time: 30 minutes, skill level 4

Date, score:

Tick when complete



Experiment with the 'virtual industrial hydraulic power unit' at

www.e4training.com/hyd_maint/maintexample3.php

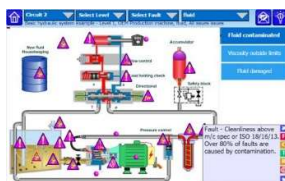
- Follow the suggested exercises and observations list below the simulation.
- Run the experiments, answer the questions, and click the buttons to see the answers.

Includes a range of identification, testing, maintenance, and repair diagnostic exercises.

Estimated time: 30 minutes, skill level 4

Date, score:

Tick when complete



Experiment with the 'hydraulic troubleshooting tool' at

www.e4training.com/hyd_maint/troubleshooting3.php

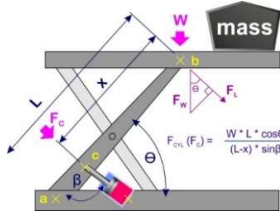
- Follow the operating instructions below the application.
- Explore each system to learn about the typical failure points and how to identify and repair them.

Includes a searchable database covering a range of fault, cause, test, and repair information.

Estimated time: 30 minutes, skill level 4

Date, score:

Tick when complete



Estimated time: 30 minutes, skill level 4

Submitted written work:

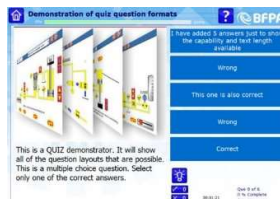
Complete

Follow the practical discussions and exercises at

www.e4training.com/hyd_maint/maintexample3.php

- Review potential issues affecting the expected service life of different designs.
- Submit a maintenance plan for the scissor lift, or alternative equipment, showing which components you will monitor, including how and why you will maintain them.

Interactive quiz



Estimated time: 15 minutes, skill level 4

Quiz name, date, score:

Tick when posted

Complete the 'Operation and Maintenance' questions at

[www.e4training.com/hydraulic_test2.php? Quiz - Hydraulics part 2](http://www.e4training.com/hydraulic_test2.php?Quiz-Hydraulics%20part%202)

Post result when complete.

Key questions / Plenary

Can you describe the two main features that will enable a power unit with them to have a longer service life than one that doesn't?

Do you know how to test for contamination levels and fluid temperature?

Can you explain what different instrumentation might be used for testing?

Did you diagnose the built-in power unit and hydrostatic drive circuit faults?

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:

Potential follow-on worksheets include: HV02 – Advanced valve tips and specification.

Or refer to your individual lesson plan or search the worksheet lists at

www.e4training.com/hydraulic_courses/worksheets1.php or courses1.php

Notes