



Self-Study Worksheet HI01&2

What Hydraulics is Used For

Explore Hydraulics

Email:

Course:

Provider:

Learning Objectives/Expected Outcomes: (2-3 hrs)

1. To recognise examples of where fluid power, hydraulic equipment is used.
2. To appreciate that loads are moved by either hydraulic cylinders or rotating motors.
3. To appreciate that many different market sectors and machines use hydraulic.
4. To understand why fluid power is used in these applications.

Previous Knowledge Required:

No previous knowledge is required. Students already working with hydraulic equipment including hydraulic pumps, actuators and control valves etc. may not require this worksheet.

Terminology:

Fluid power, hydraulics, mobile equipment, industrial systems, hydraulic actuators.

Record of Achievement:



Click the email button (that will appear within each app) to post your results, once training is complete. Enter your training provider or your own email address. Also record progress, times, scores etc. on this training record sheet and keep together with any additional written work or sample calculations.

Coursework investigations



Submit notes

Complete

Look at the examples of where hydraulic equipment is used at www.e4training.com/hyd01/ & [/hyd02/](http://www.e4training.com/hyd02/)
Write down the different uses of fluid power you see around you or can find on the internet.



Submit notes

Complete

Drive a skid steer excavator. Move with the left and right track drive motors. Extend and retract the boom cylinder. Rotate the cab slew motor.

Go to www.e4training.com/Hydraulic_projects/skidsteer3.php
Identify and write down other linear and rotary movement actuators seen on other hydraulic systems.



Submit notes

Identify the range of different industries that uses fluid power e.g.

- Mobile excavators, dozers, tractors.
- Industrial power units, steel mills, plastic injection moulding machines.
- Flight simulators, aircraft landing gear.

Write down other examples you can find.

Complete



Submit notes

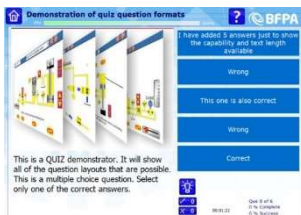
Consider why hydraulic fluid power is used in these system e.g.

- Very heavy loads or high power.
- High power to weight ratio (big loads but small installation size).
- Flexible positioning with power units in one location and drive actuators in another.

Write down examples of the above

Complete

Interactive quiz to check and reinforce learning



Quiz name, date, score

Complete the 'hydraulic valve questions' at

www.e4training.com/hydraulic_test1.php? Quiz - Hydraulics Free

Post result when complete.

Tick when posted

And Finally:

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

Follow-on Course Worksheets:

Potential follow-on worksheets include:

HI03 – Compare hydraulic, pneumatic and electrical systems

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