

# H1 hydraulics competence assessment

The H1 hydraulics programme has been developed by the British Fluid Power Association (BFPA) and CETOP in Europe to assess the competence of hydraulic technicians. This course is designed to test the knowledge and practical skills that all hydraulic technicians should be able to perform as a minimum, so you can be assured your personnel can work safely and proficiently.

## Who should attend?

This course is intended for anyone with a technical background who works on machines incorporating hydraulic systems. This is the first level of competency assessment, allowing progression to more advanced levels of courses.

## What are the prerequisites to attending?

Level 1 hydraulics (or equivalent).

## What are the aims of the course?

To assess the practical skills and theory knowledge of the attendee to H1 level, as determined by the specifications laid out by BFPA.

## What is the duration of this course?

Two days, comprising theory content, four practical tasks (assessed on a 1:1 basis by the instructor) and a written exam.

## What will be covered?

### Day 1

- **Introductions and welcome**
- **Explanation of the course and its objectives**
- **Assessed task 1: component recognition**
  - During this task, the attendee will have time to look over a hydraulic system and work out the location and function of eight different components. The assessor will then ask the attendee to point out each device, and to briefly state its function in the circuit

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**DELIVERY ASSURED**

- **Assessed task 2: use of pressure gauges**

- During this task, the attendee will have time to look over a hydraulic system and work out the location of three pressure test points. Then, following a maintenance task sheet provided to the attendee, the attendee will use appropriate pressure gauges to safely and accurately measure several different pressures, in a timely manner

- **Assessed task 3: filter element change**

- During this task, the attendee will carry out the change of a filter element on a return filter. The task will be carried out in a safe and timely manner, with a focus on the use of the correct tools and keeping the working area clean and tidy

- **Assessed task 4: accumulator pre-charging**

- During this task, the attendee will be asked to check the gas pre-charge pressure on a bladder accumulator. Then, they will be asked to either increase or decrease (or both) the pre-charge, in a safe and timely manner.

- pressure of an accumulator

- Procedure for reducing the pre-charge

- pressure of an accumulator

- Function and construction of accumulator safety blocks

- Certification requirements of accumulators (PED & PSSR)

- Gas-side safety valves

- **Exam practise:**

- The attendee will have the opportunity to carry out a number of practise sheets, in order to practise for the exam

- **Theory exam:**

- The attendee will sit a formal two-hour theory exam, where their knowledge of the theory portion of the H1 syllabus is tested. This includes function and operation of common hydraulic components, symbol recognition and drawing, component port identification and basic fundamental principles. All topics on the exam paper are covered in the Sparrows 'Level 1 Hydraulics' course, which is strongly recommended as a pre-requisite.

## Day 2

- **Additional theory is provided to the attendee, on the following points:**

- Overview of construction of diaphragm, bladder and piston accumulators
- Procedure for checking the pre-charge pressure of an accumulator
- Procedure for increasing the pre-charge

## What certificate do attendees receive on completion of this course?

Candidates who successfully pass both the practical and theory elements of the assessment will receive a BFFA H1 certificate.

## Developing competence and reducing risk

Having worked in the offshore industry since 1975, Sparrows Group has unrivalled experience in offshore lifting operations, competence assessment and training. Our goal is to help build a strong safety culture in the workforce, reducing the frequency and severity of incidents which could cause harm to people or property.

We are the only company in the world to offer onshore coaching in a real offshore pedestal crane and a crane simulator.

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