

## Satellite Centre Courses for 2010 NFPC ON-LOCATION AT



**In Partnership with:**

OLAER Fawcett Christie Ltd,  
Glendale Avenue, Sandycroft Industrial Estate,  
SANDYCROFT, Deeside, Flintshire CH5 2QP

The National Fluid Power Centre, operating from this location, offers you the following two-day course progression:

**Stage 1 Hydraulics (2 days) 9 a.m. – 5 p.m.**

**Dates: 30<sup>th</sup> – 31<sup>st</sup> March 2010**

**Stage 1 Electro-Hydraulics (2 days) 9 a.m. – 5 p.m.**

**Dates: 14<sup>th</sup> – 15<sup>th</sup> July 2010**

These courses are designed to improve both the knowledge and understanding of those involved in the maintenance and management of fluid power systems involving hydraulics and electrical control. They also lead to a CETOP Level 1 Competence Based Qualification. NFPC staff are UK leaders in providing effective training programmes to improve your performance, and these Satellite Centre Courses are NO EXCEPTION!

Introductory Price

**£400.00**

per person exc Vat

For more details & reserve your places contact:

**Vicky Cook**, Business and Full Cost Co-ordinator

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## Stage 1 Hydraulics

### Who is it for?

This course has been designed for technical staff involved in the maintenance of both industrial and mobile fluid power systems. It is a pre-requisite to our Stage 2 courses (mobile and industrial hydraulics).

### Course Aims:

On completion of this course candidates will:

- Know the fundamental principles that underpin all hydraulic systems
- Be able to read and interpret hydraulic circuit diagrams
- Know the function of the critical system components
- Know the need for contamination management at all times
- Know the safe working practices associated with maintenance procedures

### Course Outline:

- Basic hydraulic principles - fundamentals of pressure and flow
- Hydraulic symbols and notation
- Pressure, flow and direction control valves - function and operation
- Hydraulic pumps - types and operation
- Hydraulic oils and contamination control
- Introduction to accumulators
- Introduction to proportional control
- Health & Safety

### Leading to:

#### Certificate of attendance

→ CETOP H1 (Level 1 Hydraulics recognised by CETOP throughout Europe)

→ Stage 2 Industrial or Mobile Hydraulics

## Stage 1 Electro-hydraulics

### Who is it for?

This course has been designed for non-electrical craftsmen and technicians involved in the use and maintenance of electro-hydraulic/electro-pneumatic control systems. It is a pre-requisite to our Stage 2 course (industrial electro-hydraulics, PLC programming).

### Course Aims:

On completion of this course candidates will:

- Know the fundamental principles that underpin all electrical systems
- Be able to read and interpret electrical circuit diagrams
- Know the function of the critical system components

### Course Outline:

- Basic electrical principles - fundamentals of voltage, current and resistance
- Test equipment and procedures
- AC and DC Systems - generators and alternators
- DC Power supplies
- Basic electrical components – sensors, relays, contactors
- Basic electronic components – resistors, capacitors, inductors, diodes
- Electrical symbols and notation
- AC motors, construction, operation and control
- Practical exercises - circuit construction and testing using a multi-meter
- Health & Safety

### Leading to:

#### Certificate of Attendance

→ Stage 2 Electro-hydraulics

→ Introduction to SIEMENS STEP-7

**Note:** All delegates will receive a comprehensive set of support notes, lunch and refreshments.