



BFPA LEARNING & DEVELOPMENT PROGRAMME



BRITISH FLUID POWER ASSOCIATION

AN INTRODUCTION TO THE BFPA LEARNING & DEVELOPMENT PROGRAMME

The BFPA is passionate about raising standards within the fluid power industry and we have utilised the knowledge of industry experts to develop a Learning and Development Programme aimed at all sections of the industry, from construction, marine, agriculture and offshore to renewable energy, rail, and mining plus many other industries where hydraulics and pneumatics are incorporated.

We are confident that the mix of short training courses and hydraulic and pneumatic qualifications that fall under the BFPA Learning and Development Programme will be relevant for both employers and employees. Each learning options is designed to increase and improve safety for those who work with

hydraulic and pneumatic hose and systems at all levels, from the system designer and field engineer to the machine operator and the person who actually makes hose assemblies.

All BFPA courses and qualifications are available throughout the year and can be accessed directly from the BFPA or through our national network of approved training providers.

Delegates attending BFPA courses and qualifications receive a copy of the course reference manual, a certificate and an individual personalised BFPA training card.



For further enquiries regarding opportunities through the Learning and Development Programme please email enquiries@bfpa.co.uk

Alternatively, please ring the BFPA on **01608 647900** to speak to us directly.

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TRAINING CARD SCHEME

BFPA WORKING SAFELY WITH HYDRAULIC HOSE AND CONNECTORS TRAINING COURSE

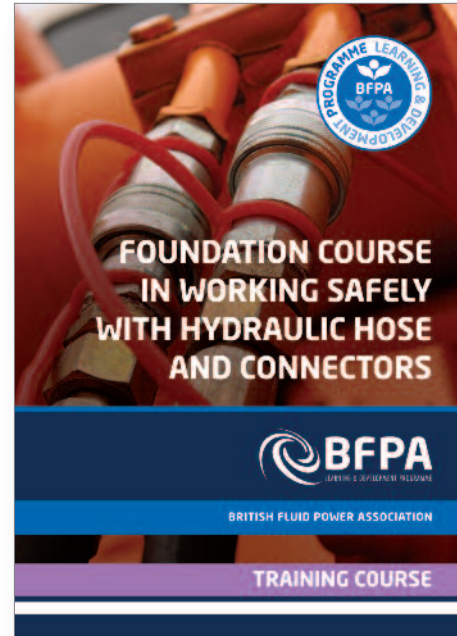
ABOUT THE COURSE

This one day course is designed as either an excellent induction for someone new to the industry or a superb safety course for people who are not primarily hydraulic or fluid power technicians but work from time to time on machinery containing hydraulic components.

This theoretical one day course contains video examples outlining the associated dangers of fluid/pressure injection injuries and examples of hoses being manufactured from the raw components.

On completion a high quality course reference book, training certificate and card helps establish that both the attendee and employer are confidently adopting correct safe working methods within their company.

The BFPA can deliver this introductory safety course onsite at a customer's facility with a dedicated meeting room and WIFI to a group of employees or alternatively a compressed online version is available via our interactive trainer lead sessions.



COURSE CONTENT

Basic Hydraulics
Health, Safety, and Environment
Hose and Connector Identification
Hose Assembly
Installation
Hose and Connector Failure



BFPA HOSE ASSEMBLY SKILLS TRAINING COURSE

ABOUT THE COURSE

This two day course is a mixture of classroom theory and workshop practical assessments. The training programme is designed to provide the attendee with a sound level of understanding to enable them to develop into a quality hydraulic hose technician.

Throughout the course attendees will be asked to complete classroom exercises, answer oral and/or written questions and take part in practical hose assembly assessments.

On completion a high quality course reference book, training certificate and card helps establish that both

the attendee and employer are confidently adopting correct safe working methods within their company.

Due to the practical elements of this course the BFPA recommends that this particular course is delivered face to face at either the customer's facility or at an approved BFPA training venue.

COURSE CONTENT

Thread Awareness
Hose Assembly
Contamination
Tightening of Connectors
Hose Assembly Routing and Installation
Hose Management Assessment



BFPA HOSE ASSEMBLY SKILLS REFRESHER COURSE

ABOUT THE COURSE

Certification for the BFPA Hose Assembly Skills course expires after three years and providing that an attendee has continued to make hose assemblies during that time period the BFPA offers an online Refresher course which concentrates on the theory elements of the original accompanied by a multi choice online assessment to achieve a renewed certificate lasting a further three years after which an attendee must once again complete the full 2 day course.

Alternatively, if clients prefer to book a one day face to face Refresher course for a group of employees this can be completed onsite at their facility where practical assessment will replace the multichoice online assessment.



BFPA HOSE INTEGRITY, INSPECTION AND MANAGEMENT TRAINING COURSE

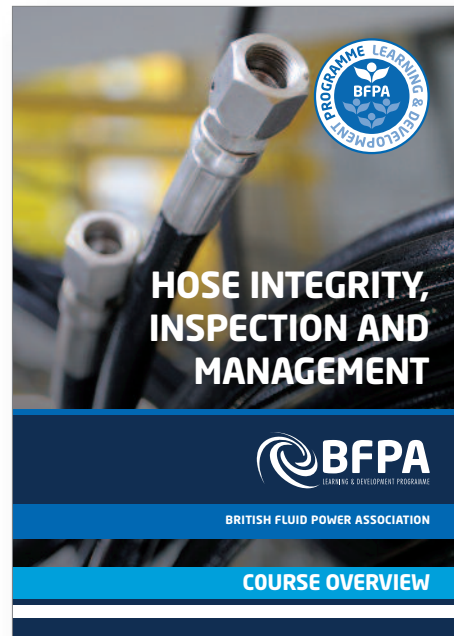
ABOUT THE COURSE

This course sets out to establish a benchmark for training people responsible for hose inspection and management from a wide variety of industry sectors and establishing a recognised standard in hose management best practice.

The one day Hose Integrity, Inspection and Management course includes all core issues surrounding the efficient inspection, analysis, identification, registering and recording of hydraulic hose including hose end connector identification.

During the training the attendee will be assessed in order to achieve a BFPA industry recognised certificate alongside a high quality course reference book to support the adoption of correct working methods and a safety aware culture.

The BFPA are able to deliver this course onsite at a customer's facility with a dedicated meeting room and WIFI to a group of employees or alternatively a compressed version is available online via our interactive trainer lead sessions.



COURSE CONTENT

Hose Assembly – Life Expectancy
Risk analysis
Competence Assurance
Identify, Inspect and Record
Hose Register
Visual Inspection



BFPA SMALL BORE TUBING INTEGRITY TRAINING COURSE

ABOUT THE COURSE

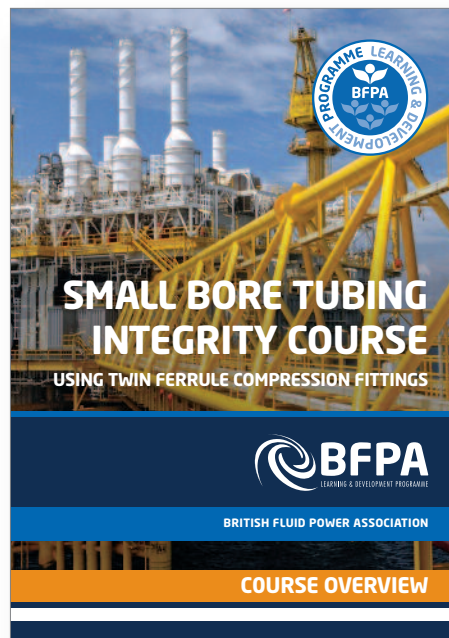
This one day course covers the various theoretical, practical and safety elements involved in the manufacture of small bore tube assemblies using twin ferrule compression fittings and the pressure testing of those assemblies.

The Small Bore Tube Integrity course covers the benefits of these assemblies, tube preparation, bending, assembly, installation runs, producing to drawings and thread identification.

Through this comprehensive BFPA course attendees will be able to demonstrate that they have gained the appropriate skills, knowledge and ability to work with twin ferrule compression fittings and tube line fabrication.

On completion a high quality course reference book, training certificate and card helps establish that both the attendee and employer are confidently adopting correct safe working methods within their company.

Due to the practical exercises within this course the BFPA recommends that this particular course is delivered face to face at either the customer's facility or at an approved BFPA training venue. However, we are able to offer a theoretical online interactive trainer lead course if this is not possible.



COURSE CONTENT

Twin ferrule Compression Fittings

Tube versus Pipe

Tube Preparation

Tube Bending Principles

Planning The Route

Associated Threads



BFPA HYDROSTATIC PROOF PRESSURE TESTING TRAINING COURSE

ABOUT THE COURSE

This one day course covers the theoretical and practical aspects of hydrostatic pressure testing, thread awareness and the tightening of connectors with each delegate being trained to an assessed level.

This is a valuable opportunity for those working with different types of medium under pressure to understand the correct, safe procedures to adopt and to be aware of the associated dangers.

On completion a high quality course reference book, training certificate and card helps establish that both the attendee and employer are confidently adopting correct safe working methods within their company.

COURSE CONTENT

Associated Dangers

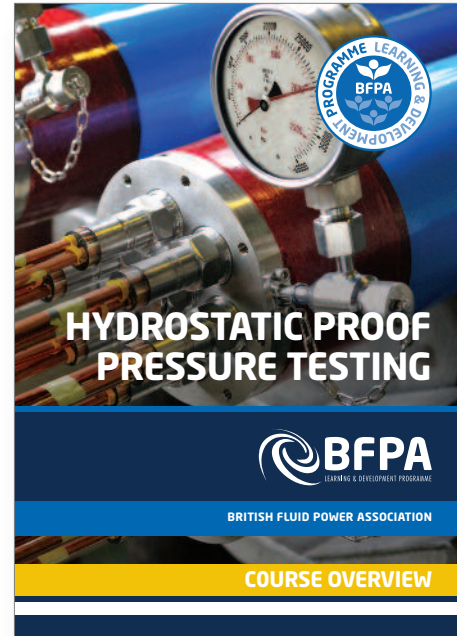
A Safe System of Work

Equipment and Supporting Information

Selection, Storage and Maintenance of Components

Threaded Connectors and sealing

The Pressure Test



BFPA PRESSURE INJECTION INJURY AWARENESS ONLINE TRAINING COURSE

ABOUT THE COURSE

The objective of this short online interactive training course is to raise awareness to the dangers and consequences of pressure injection injuries.

Delegates will have the opportunity to build a greater understanding of how to prevent such injuries through improved working practices.

On completion delegates will receive a BFPA training certificate and wallet sized information card.

COURSE CONTENT

Accident Management

The amount of pressure required to cause injury

Injury types

How to deal with a pressure injection injury

Professional medical guidelines for optimal treatment

Risk Management Strategies

People most at risk of injury

Common injected materials

How to search for a leak

Hose protection



BFPA FLUID POWER SYSTEMS TRAINING

INTRODUCTION

The BFPA's aim is to achieve a uniform level of knowledge and skills for all those working in industries involved with fluid power through the qualifications arm of our Learning and Development Programme.

BFPA programme begins with a Level 1 course in Hydraulics and Electro Pneumatics leading into Level 2 and 3 qualifications for those seeking further achievements.

The BFPA firmly believes that all companies or individuals who work at a practical level with hydraulics, pneumatics combined with electronic control systems when applied to fluid power should consider if our Level 1 courses apply to them. This basic understanding of the different systems in place will ensure that employees are following acknowledged safe working practices and procedures and have the qualification to prove this.

Following advice from member companies we have divided each Level of achievement to offer standalone vocational training courses which combine classroom theory and practical exercises which, if desired, can lead on to a competence based qualification involving one to one practical assessments and a written exam.

BFPA PROGRESSION ROUTE

BFPA Vocational Training Courses

Hydraulics

BFPA Level 1
Hydraulics Vocational
Course (HV1)

BFPA Level 2
Mobile/Industrial
Hydraulics Vocational
Training Course (HV2)

BFPA Level 3
Mobile/Industrial
Hydraulics Vocational
Training Course (HV3)

Pneumatics

BFPA Level 1
Pneumatics Vocational
Course (PV1)

BFPA Level 2
Integrated Pneumatic
Systems Vocational
Training Course (PV2)

BFPA Level 3
Integrated Pneumatic
Systems Vocational
Training Course (PV3)

BFPA Qualifications

Hydraulics

BFPA Level 1
Hydraulics
Competence Based
Qualification (HQ1)

BFPA Level 2
Mobile/Industrial
Hydraulics Competence
Based Qualification (HQ2)

BFPA Level 3
Mobile/Industrial
Hydraulics Competence
Based Qualification (HQ3)

Pneumatics

BFPA Level 1
Electro Pneumatics
Competence Based
Qualification (PQ1)

BFPA Level 2 Integrated
Pneumatic Systems
Competence Based
Qualification (PQ2)

BFPA Level 3 Integrated
Pneumatic Systems
Competence Based
Qualification (PQ3)



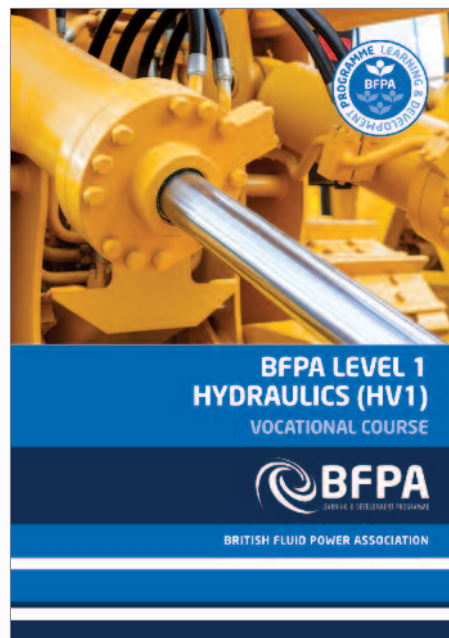
BFPA LEVEL ONE VOCATIONAL TRAINING COURSES

LEVEL 1 HYDRAULICS VOCATIONAL COURSE

This BFPA training course is primarily intended for those personnel involved in the maintenance and management of Fluid Power Systems – in short – anyone who is expected to operate and maintain fluid power components and systems at a practical level whilst taking into account safe working procedures.

Examples of topics covered include:

- Fundamental principles of all hydraulic systems
- Hydraulic symbols, pumps, fluid oil reservoirs, actuators
- Pressure, flow and direction control, contamination control, hose technology, maintenance procedures
- Recognising component parts of a selected machine and their function
- Checking accumulator pre-charge pressure and establishing the required level
- Carrying out hose maintenance on a hydraulic circuit
- Following established procedures for replacing a hydraulic valve seal kit or a filter element and associated seal kit

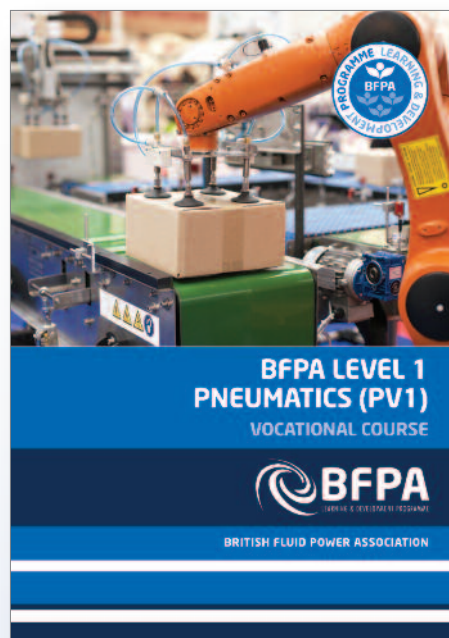


BFPA LEVEL ONE PNEUMATICS VOCATIONAL COURSE

This BFPA training course is designed to increase and improve the knowledge of maintenance staff at all levels. This further level of knowledge and understanding will enable staff to better maintain and manage the control of Electro-Pneumatic Systems and carry out their duties following safer working procedures and improved communication skills.

Examples of topics covered:

- Basic fundamental principles for pneumatic systems
- Pneumatic symbols, compressors, airline components, actuators, tube and pipework
- Pressure, flow and direction control
- Electrical principles, techniques and symbol
- Maintenance procedures



BFPA LEVEL 1 COMPETENCE BASED QUALIFICATIONS

The Level 1 qualifications have been designed as a progression route from the BFPA Level 1 vocational training course. The aim is to cement the knowledge acquired through the vocational courses and demonstrate that candidates can apply that understanding to a series of practical competence based assessments.

BFPA LEVEL 1 HYDRAULICS QUALIFICATION

Following on from the classroom theory sessions candidates will be expected to take part in a written exam covering topics such as the basic layout and function of a typical hydraulic circuit, hydraulic pumps, fluid oil reservoirs, pressure flow and direction control, hydraulic actuators and contamination control.

One to One Practical Assessments cover:

- Recognising component parts of a selected machine and their function
- Checking accumulator pre-charge pressure and establishing the required level
- Carrying out hose maintenance on a hydraulic circuit
- Following established procedures for replacing a hydraulic valve seal kit or a filter element and associated seal kit.



BFPA LEVEL 1 ELECTRO-PNEUMATICS QUALIFICATION

Following on from the classroom theory sessions candidates will be expected to take part in a written exam covering topics such as fundamental scientific principles and their applications, compressed air installations, airline components, circuits and features, basic maintenance procedures.

One to one Practical Assessments cover:

- Interpreting electro-pneumatic circuit diagrams
- Constructing electro-pneumatic systems from given information
- Carrying out routine maintenance on electro-pneumatic systems



BFPA LEVEL 2 VOCATIONAL COURSES AND COMPETENCE BASED QUALIFICATIONS

The BFPA Level 2 competence based qualifications or vocational courses can be seen as standalone courses attended directly with the appropriate work experience and understanding or as part of a progression route from the Level 1 qualification.

The BFPA appreciates that not all candidates require a formal written exam for their working life, so we have provided two option routes at this level.

The Level 2 vocational training course in either Mobile or Industrial Hydraulics or Integrated Pneumatic Systems offer the opportunity to complete the theory based elements of the qualification alongside practical classroom tasks and exercises as a standalone vocational achievement. Those candidates who prefer to work towards the full competence based qualification will be required to complete a written exam and a number of one to one practical assessments.

BFPA LEVEL 2 INDUSTRIAL OR MOBILE HYDRAULICS TRAINING VOCATIONAL COURSES

A mix of theory and vocational practical sessions to cover such topics as hydraulic system components, hydraulic pumps and associated controls, actuators and hydraulic circuitry and control features among others.



BFPA LEVEL 2 INDUSTRIAL OR MOBILE HYDRAULICS COMPETENCE BASED QUALIFICATIONS

Following on from the classroom theory sessions candidates for both qualifications will be expected to complete a written exam.

One to one practical assessments for both qualifications:

- Interpret hydraulic circuit diagrams applicable to selected systems
- Assemble a hydraulic system from given information and carry out effective fault diagnosis
- Carry out pump performance test to assess Q/P relationship underload conditions
- Assess system contamination levels against established target cleanliness levels



BFPA LEVEL 2 VOCATIONAL COURSES AND COMPETENCE BASED QUALIFICATIONS CONTINUED

BFPA LEVEL 2 INTEGRATED PNEUMATIC SYSTEMS VOCATIONAL TRAINING COURSE

A mix of theory and practical sessions to cover such topics as fundamental scientific principles, compressed air installations, airline and integrated pneumatic circuit components among others.

BFPA LEVEL 2 INTEGRATED PNEUMATIC SYSTEMS COMPETENCE BASED QUALIFICATION

Following on from the classroom theory sessions candidates will be expected to complete a written exam.

One to one practical assessments:

- Interpret integrated pneumatic circuit diagrams
- Construct integrated pneumatic systems from given information
- Carry out maintenance on integrated pneumatic systems



BFPA TRAINING CARD SCHEME

Once delegates have completed a BFPA training course or qualification they will be entitled to a personalised training card.

This initiative aims to help delegates keep an easily accessible record of the BFPA training they have achieved and can be updated with new courses once completed. Recipients will be able to show these training cards to employers and customers to confirm qualifications plus they will act as a reminder for when individual training courses need to be renewed.



BENEFITS

- Become a member of a national training card scheme for the fluid power industry
- Raise your profile by receiving recognition for training courses completed with the BFPA and our approved trainers
- An easy way to demonstrate your training achievements to prospective customers and employers
- Promote safe working practices and raise standards within the fluid power industry





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MEMBER OF:

