

Unit:

Unit: Level 2 Environmental for Field Service Technicians

Development Group: FD&A Development Group

Date Completed: 31 Jan '17

Revision date 05 Feb 20

Guided Learning Hours (GLH) 4

Directed Learning (DL) 0

Invigilated Assessment (IA) 1

Total Qualification Time (5)

Assessment Method: Multi Choice and Short Answer

Learning Outcomes: This unit is a generic unit required for a number of qualifications including;

- FIA AO Level 3 in Fire Detection and Alarm Design, Theory and Regulatory Requirements
- FIA AO Level 3 in Fire Detection and Alarm Installation, Theory and Regulatory Requirements
- FIA AO Level 3 in Fire Detection and Alarm Commissioning, Theory and Regulatory Requirements
- FIA AO Level 3 in Fire Detection and Alarm Maintenance, Theory and Regulatory Requirements

It is not a requirement that this unit be completed before any other units in the above qualifications, but that successful completion is achieved before award of the qualification will be made. A successful pass needs to be recorded before inclusion in other units, it is not required that this unit be completed on each occasion.

The following qualifications have been recognised as advanced of this unit and are therefore recognised as prior learning. Holders of the units/qualifications listed below, will not be required to complete this unit to achieve award of associated qualifications.

- The NEBOSH Certificate in Environmental Management
Plus
- The FIA Course – F-Gas Certification for Service Technicians
and
- The FIA Course – Critical Uses of Halon

Learners completing this unit will have gained knowledge and understanding of environmental law and specific requirements relating to their role as technicians in the FD&A sector of the fire industry. In particular, learners will have a basic knowledge and understanding of Environmental Law, Waste Electrical and Electronic Equipment (WEEE), Energy Consumption, F-Gas and Ozone Depleting Substances (ODS)

| Subject | Knowledge Criteria | Performance Criteria |
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| A. Environmental Law | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. Definition of what is covered under the term 'Environment' in the UK <ol style="list-style-type: none"> a. Air b. Water c. Land 2. Who is responsible for legislation and enforcement for the protection of the environment in the UK <ol style="list-style-type: none"> a. EU b. Department for Environment, Farming and Rural Affairs (DEFRA) c. Environment Agency (EA) d. Natural Resources Wales (NRW) e. Scottish Environmental Protection Agency (SEPA) f. Department of Agriculture, Environment and Rural Affairs (DAERA – Northern Ireland) g. Local Authorities 3. Environmental Management Systems for compliance with environmental legislation | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain what is meant by the term 'Environment' and the overarching legislation for the protection of the environment (air, water, land) 2. Name the agencies responsible for regulating/enforcing environmental law and provide a brief overview of their areas of responsibility 3. Provide an outline description of environmental management systems, their benefits and how they apply to an organisations compliance with environmental legislation |
| | <p>Explanatory Notes:</p> <p>This unit is not only intended to provide awareness of Environmental law, which will serve to maintain regulatory compliance for both the fire business (the employer) and their clients, but will also provide a general understanding of the scale of regulations that are covered by the term 'Environmental Law'.</p> | |

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| | Further sections in this unit will highlight the regulations that are of specific application and interest to FD&A technicians. This section is intended to provide a broad awareness and understanding of the legislation and the regulatory bodies that enforce environmental law. |
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| Subject | Knowledge Criteria | Performance Criteria |
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| B. Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) | Learners will have knowledge and understanding of: <ol style="list-style-type: none"> 1. UK Law (UK 2012 No. 3032) 2. The scope of coverage by the regulations 3. Compliance <ol style="list-style-type: none"> a. Self-Declaration b. 3rd party declaration 4. Exempted applications 5. Enforcement Authority | Learners will be able to: <ol style="list-style-type: none"> 1. Name current UK legislation and provide a brief overview of its intent, with reference to the overarching European Directive 2. Identify and list the substances covered by the legislation 3. Explain the role of the manufacturers, importers and distributors to ensure compliance and the options available to the technician for ensuring use of compliant equipment and materials 4. Identify and list examples of exempted applications for substances restricted by the regulations 5. Name the enforcement authority |
| | Explanatory Notes It is not generally the responsibility of the technician to ensure compliance with the RoHS regulations within components, as that will be covered by the manufacturer. However, awareness of the regulations and understanding of the necessity for compliance will help to ensure that compliant equipment is sourced and used. Learners will also have understanding of circumstance in which non-compliant equipment is identified, and the appropriate steps to be taken, either for its replacement with compliant components or if necessary, for continued legitimate use. | |

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| <p>C. Waste Electrical and Electronic Equipment (WEEE)</p> | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. The WEEE regulations and their intent 2. Outline requirements of the regulations <ol style="list-style-type: none"> a. Producer b. Distributor 3. Required markings on Electrical and Electronic Equipment (EEE) 4. The scope of coverage by the regulations 5. Enforcement bodies | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Name and provide a brief overview of the WEEE regulations 2. Provide a summary of the distinction between producers and distributors and the requirements placed on them for compliance 3. Identify and describe the markings on Electrical and Electronic Equipment (EEE) 4. Provide, with examples, a brief explanation of EEE covered by the regulations and where appropriate, any exemptions. 5. Name/identify the enforcement authorities for each of the UK countries, and a brief overview of their powers |
| | <p>Explanatory Notes:</p> <p>It is not generally the responsibility of the technician to ensure that a company is compliant with WEEE, however they may be required to facilitate the return of Electrical and Electronic Equipment (EEE), to ensure that a producer or distributor fulfil their regulatory requirement. Understanding the regulations and a general awareness of the requirements they place on producers and distributors will ensure their part in maintaining compliance.</p> | |

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| <p>D. The Waste Framework Directive and applicable UK legislation</p> | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. Applicable UK Legislation <ol style="list-style-type: none"> a. England and Wales b. Northern Ireland c. Scotland 2. The Producer and requirements placed upon them for the disposal of waste 3. The Waste Hierarchy 4. Waste Licensing and Documentation (controlled, hazardous and non-hazardous) | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Name and provide a brief overview of the scope of UK legislation applicable to the Waste Framework Directive 2. Define what is meant by the term 'Producer' and provide a summary of the requirements placed upon them 3. Provide an explanation of the waste hierarchy and the processes for appropriate handling and treatment of waste 4. Provide, with examples, an explanation of the licensing and documentation required for the compliant handling, storage and processing of waste materials by organisations and persons working in the fire safety technical services sector |
| | <p>Explanatory Notes:</p> <p>The technician will understand the requirements for effective and compliant waste management, disposal and recovery. So that their own activities and waste management ensures regulatory compliance for both the employer and the client.</p> | |

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| E. Energy Consumption | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. Energy consumption and energy demand reduction 2. Benefits of energy reduction <ol style="list-style-type: none"> a. Financial b. Environmental 3. Measures currently available that will enable organisations to reduce energy demand <ol style="list-style-type: none"> a. Low energy equipment b. Renewable energy generation c. Energy efficient buildings d. Energy Efficiency Schemes e. Logistics | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Provide an outline overview of the terms ‘Energy consumption’ and ‘Energy demand reduction’ 2. Explain the benefits to the company for energy usage reduction <ol style="list-style-type: none"> a. Financial b. Environmental 3. List measures that may be implemented and how they can be used to reduce energy consumption |
| | <p>Explanatory Notes</p> <p>While not specifically covered by legislation, there are a number of EU and UK Government requirements for the reduction of energy use. To that end, there are also a range of measures and technologies available that are intended to aid businesses and the consumer in energy reduction measures.</p> | |

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| F. Ionising Radiation | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. The title and main principles regulations pertaining to ionising radiation within the fire safety sector 2. The responsible authorities for enforcement of the ionising radiation regulations pertaining to the fire safety sector 3. Application and impact to fire safety systems 4. Handling, transportation, storage and disposal of equipment containing ionising radiation materials | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Name and provide a brief overview of applicable regulations 2. Name the UK authorities for enforcement 3. Recognise and provide an outline summary of the sources of ionising radiation used within fire safety systems 4. Provide an explanation of requirements for handling, transportation and safe disposal |
| | <p>Explanatory Notes</p> <p>The use of Ionising radiation within the fire safety sector is limited however learners should have an understanding of its use and the applicable controls regarding its use, handling, transportation storage and disposal.</p> | |

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| <p>G. F-Gas (Fluorinated Gas)</p> | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. The Kyoto Protocol and its intent 2. Legislation its application and use across the EU 3. Regulating Authorities 4. Available Guidance and Standards 5. What F-Gases are and their use in fire protection 6. Individual responsibilities under the regulation 7. Record Keeping, labelling and Certification 8. Alternative agents to F-Gases 9. Treatment of F-Gases | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Explain the intent of the Kyoto Protocol 2. Name and provide a brief overview of the EU Regulation 3. Identify the enforcement bodies across the UK <ol style="list-style-type: none"> a. Explain the penalties that may be imposed for non-compliance within the UK 4. Name the Guidance documents available for F-Gas systems 5. Explain what F-Gases are and list the F-Gases used for the fire protection sector 6. Explain the individual responsibilities defined in the regulation 7. Explain the requirements for record keeping and certification of the system 8. Name and provide a brief description of the alternative agents to F-Gases 9. Provide an explanation of the terms; <ol style="list-style-type: none"> a. Recovery b. Recycling c. Reclamation d. Destruction |

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| | <p>Explanatory Notes</p> <p>F-Gas is an effective and commonly used extinguishing agent used in both total flood and local applications. Technicians from both the FD&A and Portables sectors of the fire industry may be called upon to test and service systems containing F-Gases and are required by law to hold the appropriate qualification to carry out installation, servicing and decommissioning while preventing leakage.</p> |
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| <p>H. Ozone Depleting Substances (ODS) (Halon)</p> | <p>Learners will have knowledge and understanding of:</p> <ol style="list-style-type: none"> 1. The Montreal Protocol and its intent 2. Legislation its application and use across the EU 3. Regulating Authorities 4. Ozone Depleting Substances and their use 5. Treatment of Halon Gases | <p>Learners will be able to:</p> <ol style="list-style-type: none"> 1. Name and provide a brief overview of the Montreal Protocol 2. Name the title of the current legislation and provide a brief overview 3. Name and provide a brief overview of the regulating authorities and penalties that may be imposed 4. Provide a brief explanation of ODS and their provisions for critical use 5. Provide an explanation of the terms; <ol style="list-style-type: none"> a. Recovery b. Recycling c. Reclamation d. Destruction |
| | <p>Explanatory Notes</p> <p>Halon Gas is still used, all be it under very strict controls. Technicians are required, by legislation to ensure that Halon is only used where it is approved for critical users and that all measures are taken to prevent unnecessary leakage. It is also important, that recovered Halon Gases are treated accordingly, so as to prevent unnecessary leakage to atmosphere of these Ozone Depleting Substances.</p> | |