

SFJ ZI11

Modify, adapt and simplify technical support systems and equipment



Overview

This unit is about modifying and adapting systems and equipment for use in particular situations and circumstances. It is also about simplifying the systems and equipment for use by others.

There are two elements

1. Make changes to systems and equipment
2. Confirm serviceability of systems and equipment

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Performance criteria

You must be able to:

Make changes to systems and equipment

- P1 adhere to health and safety procedures throughout the process
- P2 identify and confirm with relevant personnel the need to change particular systems and equipment
- P3 assess and confirm the potential to change the systems and equipment with manufacturers
- P4 carry out risk assessments
- P5 identify and obtain the necessary materials, tools and equipment for the work
- P6 assess and confirm the safety and integrity of the systems and equipment
- P7 prepare the specification for changes to the systems and equipment
- P8 change systems and equipment to meet the specification
- P9 identify problems in achieving the specification and propose suitable solutions to relevant personnel
- P10 achieve changes using the materials, tools and equipment identified and approved for use by relevant personnel
- P11 ensure you do not exceed your own limitations in making changes to systems and equipment and inform relevant personnel of the need for additional expertise
- P12 produce operating instructions which enable others to use the systems and equipment, if necessary

Confirm serviceability of systems and equipment

You must be able to:

- P13 assess and confirm the safety and integrity of the systems and equipment
- P14 contact relevant personnel to field test the systems and equipment
- P15 agree with relevant personnel the criteria to use to check the systems and equipment
- P16 assess the results of field tests and evaluate the performance of the systems and equipment
- P17 complete relevant documentation accurately, comprehensively and legibly
- P18 inform relevant personnel of the modifications, adaptations and simplifications which have been completed

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Knowledge and understanding

Legal and organisational requirements

You need to know and understand:

- K1 your responsibilities under current legislation and regulations and the implications of non-compliance

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You need to know and understand:

- K2 the capabilities of deployed equipment
- K3 how to recognise and correct imperfections in system results
- K4 what other equipment is available to improve on performance
- K5 how to use test equipment correctly
- K6 how to establish the environmental integrity, safety and security of equipment
- K7 what information to record and the importance of keeping accurate records
- K8 the principles of electricity
- K9 how to carry out test and measurement procedures
- K10 how to carry out risk assessments and why these are required
- K11 electronic theory and how it applies to the systems and equipment being modified, adapted or simplified
- K12 how to modify systems and equipment to meet user requirements

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Scope/range related to performance criteria

Make changes to systems and equipment

- 1 systems and equipment
 - 1.1. electronic
 - 1.2. electrical
 - 1.3. mechanical
 - 1.4. software
 - 1.5. components
- 2 changes
 - 2.1. changes to packaging
 - 2.2. changes to power supply
 - 2.3. weather proofing
 - 2.4. adding facilities and control
 - 2.5. extending capabilities
 - 2.6. removing facilities and controls

Confirm serviceability of systems and equipment

- 3 systems and equipment
 - 3.1. electronic
 - 3.2. electrical
 - 3.3. mechanical
 - 3.4. software
 - 3.5. components

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