SFJ ZI10
Test and repair technical support systems and equipment

Overview

This unit is about testing and repairing software and electronic, electrical and mechanical systems and equipment.

There are two elements

1. Assess the status and performance of systems and equipment
2. Repair and restore systems and equipment

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Performance criteria

Assess the status and performance of systems and equipment

You must be able to:

P1 obtain and assess relevant information on the performance of systems and equipment

P2 carry out tests on the systems and equipment

P3 record results obtained during test routines

P4 identify issues with the systems and equipment, and report as necessary

P5 place systems and equipment in the designated location for repair or disposal in accordance with local policy

Repair and restore systems and equipment

You must be able to:

P6 identify and obtain the right type, quantity and quality of resource to be used in the repair

P7 prepare the systems and equipment for repair

P8 repair the systems and equipment to meet its original specification, within an economic timescale, making effective use of the resources available when possible

P9 report to, and clear with, relevant personnel variations needed to achieve the specification

P10 where necessary, organise repairs by external organisations

P11 maintain a record of repairs

P12 adhere to health and safety procedures throughout the repair

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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

K2   the manufacturers' instructions for the safe and correct use and repair of systems and equipment

Testing and repairing systems and equipment

You need to know and understand:

K3   how the systems and equipment operate and the capabilities of systems and equipment

K4   how to identify and apply the necessary test routines and record the results

K5   usual and unusual problems with systems and equipment

K6   reporting and recording procedures

K7   how to use test equipment correctly

K8   how to prepare systems and equipment for repair

K9   how to assess the resource needed for the repair

K10 how to interpret technical specifications

K11 safety requirements for specific systems and equipment

K12 how to repair systems and equipment

K13 how to deal with variations

K14 how to restore systems and equipment

K15 how to confirm operational effectiveness of systems and equipment

K16 how to organise and check repairs by external organisations

Principles and theories

You need to know and understand:

K17 the principles of electricity

K18 electronic theory and how it applies to the equipment being reviewed

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Scope/range related to performance criteria

Assess the status and performance of systems and equipment

1   systems and equipment
    1.1. electronic
    1.2. electrical
    1.3. mechanical
    1.4. software

2   test methods
    2.1. visual
    2.2. physical
    2.3. diagnostics

Repair and restore systems and equipment

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

4   repairs
    4.1. replacement
    4.2. adjustment
    4.3. temporary
    4.4. permanent

5   variations
    5.1. time
    5.2. cost
    5.3. temporary repair
    5.4. incomplete repair

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