

SFS SYS 14 (SQA Unit Code - H4GS 04)

Diagnose and rectify faults on electronic security systems



Overview

This NOS sets out the skills, knowledge and understanding for you to diagnose and rectify faults on electronic security systems ensuring liaison with customers during repair visits.

This NOS covers the following activities:

1. Identify causes of unacceptable system performance
2. Rectify faults in systems
3. Liaise with customers during repair visits

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Performance criteria

Identify causes of unacceptable system performance

You must be able to:

- P1 safely identify the presence of electrical supply, into and inside, electronic security systems equipment
- P2 identify the means for safe isolation of electrical supply systems
- P3 confirm the nature of the fault before diagnosing causes
- P4 make sure that test equipment is working properly and calibrated where necessary before starting diagnostic tests
- P5 discuss with the customer and take suitable action to minimise potential disruption
- P6 diagnose the cause of faults using logical and systematic processes
- P7 get help to diagnose causes of faults from appropriate persons when you need it
- P8 record diagnostic tests and results fully and accurately in line with your organisational requirements
- P9 comply with relevant health and safety requirements while diagnosing faults

Rectify faults in systems

You must be able to:

- P10 confirm you have authority to rectify faults before taking any action
- P11 communicate effectively to the customer throughout the repair process
- P12 carry out actions to rectify faults to restore system performance
- P13 confirm systems meet the required performance after a fault repair
- P14 process removed components in line with approved procedures and current legislation
- P15 record accurately details of repairs using the approved methods and documents
- P16 comply with relevant health and safety requirements while carrying out fault repairs in systems

Liaise with customers during repair visits

You must be able to:

- P17 give customers sufficient warning of any action you are about to take so that potential disruption to their normal work activities is minimised
- P18 communicate effectively throughout the repair process
- P19 record details of repair work carried out
- P20 record any changes to the system which may deviate from the specification
- P21 maintain a positive and professional manner with the customer at all times

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Knowledge and understanding

You need to know and understand:

Legal and Organisational requirements

- K1 why it is important to dispose of waste debris and surplus material safely and in line with the relevant regulations and codes of practice
- K2 current relevant legislation, regulation, standards, codes of practice and guidelines relating to the operation, testing and maintenance of systems
- K3 your organisation's policy and procedures relevant to working at customer's premises
- K4 relevant electrical systems theory in order to understand the purpose of the results of the tests, adjustments and replacements carried out

Identify causes of unacceptable system performance

You need to know and understand:

- K5 why it is important to get sufficient information about the fault before starting to diagnose the cause
- K6 why it is important to make sure test equipment is working properly, and calibrated where necessary
- K7 the required operational performance of the transmission and systems components relevant to the specification
- K8 what tests you must use to diagnose faults, how to carry them out, the expected results using the appropriate test equipment
- K9 why it is important to record accurate details of reported faults, tests carried out and results, and make them available to the relevant person
- K10 why you need to identify the presence of electrical supply and how it can be isolated safely

Rectify faults in systems

You need to know and understand:

- K11 what actions to rectify faults you are authorised to take, and how to carry them out
- K12 how systems and equipment operate, which you rectify faults on
- K13 relevant electrical, and systems theory in order to rectify faults
- K14 why it is important to record accurate details of fault repairs, and make them available to the relevant person
- K15 how to discuss and agree work activities mutually acceptable to customers and yourself
- K16 why it is important to dispose of waste debris and surplus material safely and in line with the relevant regulations and codes of practice

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Liaise with customers during repair visits

You need to know and understand:

- K17 how to communicate and work with other people
- K18 why and how you must carry out repair with minimum disruption to the customer, ensuring the safety and security of the premises is maintained
- K19 why you must record any changes to the system which may deviate from the specification
- K20 what information you must provide the customer with about repair work that you have carried out

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Glossary

In these National Occupational Standards;

electrical supply systems: supply to the system components, such as primary and secondary supplies

faults: transmission and system components not working as required

specification: the specific detail containing design, installation, commissioning or maintenance requirements

systems: a set of components working together as an interconnecting network. For example (but not exhaustive) new installations; extensions; modifications

tests: For example (but not exhaustive) visual; electrical, operational, induced faults

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