
Overview

This standard is about diagnosing faults, repairing and maintaining equipment. You will be expected to have an understanding of the operating procedures for the equipment and to have the experience to identify when there are problems. You will be able to diagnose and repair the fault or to recognise when more expert help is required.

Accurate and reliable results from scientific or technical equipment are essential in any organisation. Good technical support can ensure that instruments or machines continue to perform at their best. When there is a fault, it can be very costly to the company, especially if a specialist engineer has to be called in. Being able to identify faults, repair and maintain equipment is a crucial part of a technician's job.

You will be expected to comply with organisational policy and procedures for the scientific or technical operations undertaken. You will be expected to be able to complete tasks that are relatively complex, but you should be confident in saying when a more experienced person may be required. You will be expected to initiate and complete tasks, including, where relevant, taking responsibility for supervising or guiding others.

Who this standard is for

The standard is recommended for more experienced laboratory staff possible staff who are about to complete an apprenticeship.

**Performance
criteria**

- You must be able to:
- P1 ensure that your work is carried out in accordance with workplace procedures
 - P2 confirm that the scientific or technical equipment is in a safe and usable condition
 - P3 identify accurately any equipment faults or problems and report those outside your control to the relevant people
 - P4 identify and interpret the required information from the manufacturers' specifications
 - P5 employ the appropriate test equipment and measurement to locate the source of the fault
 - P6 perform repair or maintenance in accordance with manufacturers' instructions, diagrams and relevant health and safety procedures
 - P7 recognize when specialist help is needed and organise for them to repair the defective equipment
 - P8 dispose of defective equipment that is beyond repair, in accordance with workplace procedures
 - P9 test and confirm that the equipment is operating correctly, within calibration specifications, in accordance with workplace procedures
 - P10 maintain records of repairs, maintenance and checks completed in accordance with workplace procedures
 - P11 communicate the required information about the work done, to authorised people, in accordance with departmental and organisational procedures

Knowledge and understanding

You need to know and understand:

- K1 the health and safety requirements of the area in which you are carrying out the activities
- K2 the legal and regulatory frameworks within which you are working and the implications of failing to comply with either
- K3 the correct procedures for the work you are carrying out
- K4 the limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K5 the manufacturers' specifications and recommendations for the maintenance and calibration of the scientific or technical equipment
- K6 where to obtain, and how to interpret drawings, circuit diagrams, specifications, manufacturers' manuals and other technical documents needed for the fault-finding or maintenance activities
- K7 the methods used for visually checking and cleaning of scientific or technical equipment
- K8 how to check that the scientific or technical equipment is working correctly and in accordance with the manufacturer's specifications
- K9 how to evaluate the different types of equipment fault, and how these must be dealt with
- K10 how to use appropriate tools and equipment to locate the source of a fault or carry out maintenance activities
- K11 the procedures to be followed to investigate faults or maintenance activities
- K12 the methods used for keeping records of the maintenance, cleaning and calibration of scientific or technical equipment, and why this is important
- K13 the procedure for the disposal of any waste produced and any equipment beyond repair

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Diagnose faults, repair and maintain equipment in life sciences and related industries



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