
Overview

This standard identifies the competences you need to carry out scheduled maintenance tasks on fluid power equipment on mobile or static plant, in accordance with approved procedures. You will be required to carry out maintenance on pneumatic, hydraulic or vacuum equipment, which will include equipment and components such as pumps, cylinders, valves, actuators, pipework and hoses, switches and sensors, in order to minimise down time, and to ensure that the equipment performs at optimal levels and functions to specification.

Your responsibilities will require you to comply with organisational policy and procedures for the scheduled maintenance activities undertaken, and to report any problems with these activities, or with the tools and equipment used, that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You must ensure that all the tools, equipment and materials used in the maintenance activities are removed from the work area on completion of the activities, and that all necessary job/task documentation is completed accurately and legibly. You will be expected to work to instructions, alone or in conjunction with others, taking personal responsibility for your own actions, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and will enable you to adopt an informed approach to applying scheduled maintenance procedures to fluid power equipment. You will have an understanding of the process of implementing scheduled maintenance tasks, the importance of carrying them out at specific times, and of recording their outcomes and the actions taken. In addition, you will be expected to report where the outcomes identify the need for further investigation or maintenance work.

You will understand the safety precautions required when carrying out the maintenance tasks, especially those for isolating the equipment, and for taking the necessary safeguards to protect yourself and others in the workplace. You will be required to demonstrate safe working practices throughout.

Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
- P2 follow the relevant maintenance schedules to carry out the required work
- P3 carry out the scheduled maintenance activities within the limits of your personal authority
- P4 carry out the scheduled maintenance activities in the specified sequence and in an agreed time scale
- P5 deal with problems within your control and report those that cannot be solved
- P6 complete and store all relevant documentation in accordance with organisational requirements
- P7 dispose of waste materials in line with organisational and environmentally safe procedures

Knowledge and understanding

You need to know and understand:

- K1 how to work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
- K2 the importance of wearing the appropriate personal protective equipment (PPE), and of keeping the work area clean and tidy
- K3 how to obtain and extract information from job instructions, drawings, specifications, manufacturers' manuals and other documents needed in the maintenance process
- K4 the various checks to be carried out during the scheduled maintenance procedure

- K5 the procedure for obtaining the consumables to be used during the scheduled maintenance activity
- K6 methods of checking that components are fit for purpose, and the need to replace 'lived' items
- K7 how to check that any replacement components meet the required specification/operating conditions
- K8 how to make appropriate sensory checks
- K9 the appropriate testing instructions to be adopted during the maintenance activity
- K10 how to make adjustments to components/assemblies to ensure they function to specification
- K11 the basic principles of how the equipment functions, its operating sequence, the working purpose of individual units/components, and how they interact
- K12 how to complete scheduled maintenance records/logs/reports, in accordance with company policy and procedures
- K13 the importance of recording any adjustments and modifications to the system and the implications if this is not carried out
- K14 the equipment operating and control procedures, and how to apply them in order to carry out scheduled maintenance
- K15 the issues that can occur whilst carrying out the scheduled maintenance tasks, and how they can be avoided
- K16 the organisational procedure(s) to be adopted for the safe disposal of waste of all types of materials
- K17 the extent of your own responsibility and to whom you should report if you have problems that you cannot resolve

Scope/range related to performance criteria

1. Carry out all of the following during the scheduled maintenance tasks:
 - 1.1. undertake the maintenance activities to cause minimal disruption to normal working
 - 1.2. use the correct issue of maintenance documentation (such as drawings, manuals, maintenance records)
 - 1.3. adhere to procedures or systems in place for risk assessment, personal protective equipment and other relevant safety regulations and procedures to realise a safe system of work
 - 1.4. adhere to company specific contamination and control procedures at all times
 - 1.5. confirm with the authorised person that the equipment is ready for carrying out the scheduled maintenance
 - 1.6. ensure the safe isolation of equipment (such as mechanical, electricity, gas, air or fluids)
 - 1.7. ensure that safe access and working arrangements have been provided for the maintenance area
 - 1.8. carry out the scheduled maintenance tasks, using appropriate techniques and procedures
 - 1.9. dispose of waste items in a safe and environmentally acceptable manner
 - 1.10. leave the work area in a safe and tidy condition
2. Carry out scheduled maintenance tasks on one of the following types of fluid power equipment:
 - 2.1. pneumatic equipment
 - 2.2. hydraulic equipment
 - 2.3. vacuum equipment
3. Carry out scheduled maintenance tasks on four of the following:
 - 3.1. pumps
 - 3.2. actuators/cylinders
 - 3.3. switches and sensors
 - 3.4. pipework, hoses/tubing
 - 3.5. valves
 - 3.6. connectors
 - 3.7. motors (where applicable)
 - 3.8. fluid conditioning and storage devices

4. Carry out ten of the following scheduled maintenance activities:
 - 4.1. removing excessive dirt and grime
 - 4.2. making sensory checks (such as sight, sound, smell, touch)
 - 4.3. checking equipment for leaks
 - 4.4. replacing 'lified' consumables (such as gaskets and seals, hoses)
 - 4.5. monitoring the condition/deterioration of components (such as actuators, mechanical control devices, pipework)
 - 4.6. checking that any safety equipment or controls are operating correctly (such as switches and sensors)
 - 4.7. checking the operation of instrumentation (such as gauges and indicators)
 - 4.8. carrying out and/or checking equipment self-analysis data
 - 4.9. making adjustments to components and connections
 - 4.10. checking/tightening fastenings to the required torque
 - 4.11. replenishing oils, greases or other fluids
 - 4.12. reviewing and checking the equipment operation and performance
 - 4.13. recording the results of the scheduled maintenance activity
 - 4.14. reporting or taking action with regard to any defects that require immediate attention (such as replacing non-'lified' components)

5. Maintain fluid power equipment, in accordance with one of the following:
 - 5.1. organisational guidelines and codes of practice
 - 5.2. equipment manufacturer's operation range
 - 5.3. BS, ISO and/or BSEN standards

6. Complete one of the following maintenance records, and pass it to the appropriate person:
 - 6.1. job cards
 - 6.2. organisational-specific documentation
 - 6.3. maintenance log and action report
 - 6.4. permit to work/formal risk assessment and/or sign-on/off procedures
 - 6.5. electronic reports

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