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## Overview

This standard covers the service and repair of pneumatic systems on land-based equipment. It includes the diagnosis, removal, service/repair and reinstatement of pneumatic circuits, systems and components (e.g. air braking or air activated mechanisms) to the manufacturers' specifications.

This standard is for those who work in land-based engineering.

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## Performance criteria

You must be able to:

1. identify, remove and replace **pneumatic system components** on land-based equipment
2. release stored air pressure and condensation in systems and circuits
3. dismantle, service/repair and reinstate pneumatic systems and components to manufacturers' specifications
4. use pneumatic system **diagnostic tools**
5. detect air leaks and seal components used in a pneumatic systems
6. prepare the system to be tested and carry out tests

## Knowledge and understanding

You need to know and understand:

1. the symbols used in **pneumatic circuit** diagrams
2. how to read and interpret pneumatic circuit diagrams
3. how to remove and replace pneumatic components
4. how to dismantle, service/repair and reinstate pneumatic components and systems to manufacturers' specifications
5. the different types of pneumatic circuit
6. the construction, types and function of pneumatic system components
7. the methods of leak detection in air systems
8. how to identify pneumatic pipe types and their appropriate fittings
9. how to assemble and repair and manufacture pneumatic pipes
10. how to carry out **diagnostic tests** and adjust pneumatic components and systems to manufacturers' specifications and factory settings
11. the primary **causes of pneumatic failures** and their symptoms

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## Glossary

**causes of pneumatic failures** - e.g. water, fatigue, contamination, leaks

**diagnostic tests** - e.g. pressure tests, adjust pressure limiting and relief valves, set air brake actuation valves

**diagnostic tools** - e.g. high and low pressure gauges, pressure

**pneumatic circuit** - e.g. single line and twin line

**pneumatic system components** - e.g.

- air compressors
- air pressure regulating valves, relief valves, dump valves
- air pressure control valves, handbrake valve, footbrake valves, diaphragm operated valves
- air activated cylinders, air cushions, failsafe/emergency system components
- air receivers and driers

## Links to other NOS

Basic testing and diagnostics is covered in LANLEO30 Inspect and test land-based machinery and equipment.

## Service and repair pneumatic systems on land-based equipment

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