LANLEO25

Service and repair pneumatic systems on land-based equipment



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.

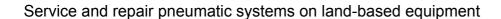


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Performance criteria

You must be able to:

- identify, remove and replace pneumatic system components on landbased 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

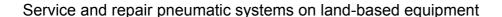




Knowledge and understanding

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





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.

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Developed by	Lantra
Version Number	2
Date Approved	December 2015
Indicative Review Date	December 2020
Validity	Current
Status	Original
Originating Organisation	Lantra
Original URN	LANLEO25
Relevant Occupations	Land-based Engineering
Suite	Land-based Engineering Operations
Keywords	land-based; equipment; machinery; pneumatic; service; repair