Australian Government

MSMSUP405 Identify problems in fluid power system

Release: 1

MSMSUP405 Identify problems in fluid power system

Modification History

Release 1. Supersedes and is equivalent to MSAPMOPS405A Identify problems in fluid power system

Application

This unit of competency covers the skills and knowledge required to recognise and diagnose problems in hydraulic/pneumatic control systems on process equipment, and take appropriate corrective action.

This unit of competency applies to operators who are required to apply knowledge of fluid power systems and components to the identification and isolation of faults in equipment. The key factors are the diagnosis and the recommendation of action to resolve routine and non-routine faults in order to return the equipment to production.

The unit applies to all work environments and sectors within the manufacturing industry. It requires an understanding of the operation of all relevant equipment and processes but does not necessarily require them to be used personally.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members and the control room operator, as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Support

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes		Performance criteria describe the performance needed to demonstrate achievement of the element	
1	Identify pneumatic/hydraul	1.1	Categorise the types of equipment malfunctions due to fluid power problems

	ic system problems	1.2	Identify the effects on product quality of fluid power problems
		1.3	Describe the function of components on the fluid power circuit diagram
		1.4	Identify possible faulty components from a circuit diagram
		1.5	Identify hazards arising from the problem and implement appropriate hazard control
2	Implement appropriate corrective action	2.1	Identify other possible problems
		2.2	Short list possible fault problems
		2.3	Investigation machine, products or data to determine most likely problem causes
		2.4	Take appropriate action to ensure problem is rectified
		2.5	Follow up on action to ensure completion in an appropriate timeframe
		2.6	Recheck after corrective action to ensure problem has been rectified
3	Develop maintenance requirements	3.1	Check manufacturer instructions to determine recommended maintenance schedule
		3.2	Check fault and maintenance history to determine adequacy of current regime and special requirements
		3.3	Determine criticality of machine to production/business
		3.4	Develop maintenance schedule/requirements for machine
		3.5	Liaise with all relevant stakeholders to ensure schedule is appropriate
		3.6	Report outcome to appropriate personnel

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Regulatory framework

The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements

Procedures

All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or more of the following:

- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant

Equipment using fluid power control systems

Equipment that uses fluid power control systems include one or more of the following:

- pumps
- pressure controls

- directional control valves (DCVs)
- remote operated valves (ROVs)
- flow control actuators
- accumulators
- filters
- heat exchangers
- proportional, servo and cartridge valves

Non-routine problems

Non-routine problems must be resolved by applying operational knowledge to develop new solutions, either individually or in collaboration with relevant experts to:

- determine problems needing action
- determine possible fault causes
- develop solutions to problems which do not have a known solution
- follow through items initiated until final resolution has occurred
- report problems outside area of responsibility to designated person

Operational knowledge includes one or more of the following:

- procedures
- training
- technical information, such as journals and engineering specifications
- remembered experience
- relevant knowledge obtained from appropriate people

Hazards

Hazards include one or more of the following:

- high pressures (hydraulic and pneumatic)
- hot surfaces
- equipment failures
- heat, smoke, dust or other atmospheric hazards
- flammability and explosivity
- equipment or product mass
- slippery surfaces, spills or leaks
- noise, rotational equipment or vibration
- electricity
- other hazards that might arise

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSAPMOPS405A Identify problems in fluid power system

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027