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| Title | **Commission complex auxiliary systems on a heavy vehicle or machine and reflect on own commissioning procedures**  |
| Level | **5** | **Credits** | **15** |

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| Purpose | People credited with this unit standard are able to explain complex auxiliary system operation on heavy vehicles or machines to help determine commissioning requirements, commission complex auxiliary systems on heavy vehicles or machines and demonstrate knowledge of own learning experience in response to commissioning complex auxiliary systems on heavy vehicles or machines. |

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| Classification | Motor Industry > Automotive Hydraulics |

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| Available grade | Achieved |

**Guidance information**

1. Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, and company and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
2. Legislation, regulations and industry standards relevant to this unit standard include but are not limited to the current version of the Health and Safety at Work Act 2015; and any subsequent amendments and replacements.
3. Definitions

*Company requirements* refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.

*Heavy vehicle* refers to a motor vehicle that is of Class MD3, MD4, ME, NB, NC, TC or TD; or has a gross vehicle mass that exceeds 3500 kg and is not of a class specified in the Table of vehicle classes as listed from Land Transport New Zealand website <http://www.landtransport.govt.nz/publications/infosheets/infosheet-1-10.html#classes>.

*Service information* refers to technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

*Complex* a*uxiliary systems* include non-standard attachments or devices that are fitted to a heavy vehicle or machine.

1. Range

A complex auxillary system integrates two or more systems, or three or more sub-systems (electronic, electrical, mechanical, pneumatic, hydraulic).

Complex auxiliary systems may include – a processing head, pumping unit or grappling device; and a combination of electronic, hydraulic, hydrostatic or mechanical systems interacting together.

Machines may include – forklifts, earth moving equipment, grader equipment, loaders, dozers, tractors, agricultural equipment, dump trucks, prime movers; electric machines including – forklift, walk-behind pallet, ride-on pallet, reach truck, order picker, counterbalance truck, turret truck.

**Outcomes and performance criteria**

**Outcome 1**

Explain complex auxiliary system operation on heavy vehicles or machines to help determine commissioning requirements.

**Performance criteria**

* 1. Comprehensive operation of the auxiliary system and its interaction with other systems to help determine commissioning requirements is explained.

**Outcome 2**

Commission complex auxiliary systems on heavy vehicles or machines.

Range evidence of commissioning two different auxiliary systems is required.

**Performance criteria**

2.1 Commissioning requirements are determined.

2.2 Commissioning of auxiliary systems is carried out.

2.3 Commissioned auxiliary system is tested and adjusted as required.

2.4 Commissioning is reported.

 Range report must include – operational performance, testing of any related systems.

**Outcome 3**

Demonstrate knowledge of own learning experience in response to commissioning complex auxiliary systems on a heavy vehicle or machine.

**Performance criteria**

3.1 Own experience commissioning complex auxiliary systems and interactions with other systems are reflected on and described in relation to knowledge and analytical skills acquired.

3.2 Improvements to own future commissioning procedures are identified based on own reflection.

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| Planned review date | 31 December 2025 |

**Status information and last date for assessment for superseded versions**

| Process | Version | Date | Last Date for Assessment |
| --- | --- | --- | --- |
| Registration | 1 |  | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0014 |

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.