

---

**AUTOMOTIVE ADMINISTRATION**  
**Service and repair complex automotive**  
**systems**

---

<b>level:</b>	<b>5</b>
<b>credit:</b>	<b>4</b>
<b>final date for comment:</b>	December 2008
<b>expiry date:</b>	December 2009
<b>sub-field:</b>	Motor Industry
<b>purpose:</b>	People credited with this unit standard are able to: identify, analyse, and determine repair and/or service method for a complex automotive system; complete the repair and/or service; and conduct testing procedures for complex automotive systems.
<b>entry information:</b>	Open.
<b>accreditation option:</b>	Evaluation of documentation and visit by NZQA and industry.
<b>moderation option:</b>	A centrally established and directed national moderation system has been set up by the NZ Motor Industry Training Organisation.
<b>special notes:</b>	<ol style="list-style-type: none"><li>1 The following legislation and other sources must be consulted and followed where applicable: Consumer Guarantees Act 1993; Fair Trading Act 1986; Health and Safety in Employment Act 1992; Land Transport Rule: Vehicle Repair 1998, Rule 34001; Transport (Vehicle Standards) Regulations 1990.</li><li>2 Land Transport Rules are produced for the Minister of Transport by Land Transport New Zealand. These rules are available online at <a href="http://www.landtransport.govt.nz">http://www.landtransport.govt.nz</a>.</li></ol>

---

**AUTOMOTIVE ADMINISTRATION**  
**Service and repair complex automotive**  
**systems**

---

- 3 The *Low Volume Vehicle Code* is developed and issued by the Low Volume Technical Association Inc (LVVTA). The Code is the legal framework leading to the LVVTA Standards that are used by Land Transport New Zealand Certifiers, and is referenced in the Vehicle Standards Regulations. This Code is available online at <http://www.lvvta.org.nz>.
- 4 Reference to *company policy* means that the standard must comply with any policies, procedures, and requirements of the company involved, and the ethical codes of relevant professional management organisations.
- 5 Servicing and/or repair of complex automotive systems may include but is not limited to – new and complex technologies, repairs where no original specifications are available, low volume vehicles, off-road agricultural and/or construction machines, plant and equipment, performance vehicles and machines used for off-road competition purposes, exotic paint finishes, extensive under-frame measuring, and extensive re-alignment.
- 6 For the purpose of this standard, a *complex automotive system* is defined as a number of interacting components and/or systems that may have many potential problems and/or solutions to consider.
- 7 The NZ Motor Industry Training Organisation acknowledges the assistance provided by the Australian National Training Authority (ANTA) in permitting their competency unit to be used as the basis for this unit standard. This unit standard is based on the unit of competency AUR66671A *Service and repair complex systems*.

---

**AUTOMOTIVE ADMINISTRATION**  
**Service and repair complex automotive**  
**systems**

---

- 8 The practical skills of this unit standard can be assessed in the workplace or in simulated workplace conditions off-job. For the purpose of off-job assessment the term *customer* means the training provider.
- 9 Reference to *suitable equipment* means industry approved equipment that is recognised within the industry as being the most suited to complete the task to a professional and competent manner with due regard to safe working practices.

## **Elements and Performance Criteria**

### **element 1**

Identify, analyse, and determine repair and/or service method for a complex automotive system.

### **performance criteria**

- 1.1 Alternative service and/or repair procedures are identified and analysed according to company policy.
- 1.2 A description of the fault situation is established from the customer or supplier.
- Range: may include but is not limited to – oral, written.
- 1.3 Technical information is sourced and analysed to ensure the service and/or repair procedure meets the customer or supplier specifications, and/or legislative requirements.
- Range: sources may include but are not limited to – company operating procedures; product manufacturer's specifications; customer and/or engineer's requirements; industry and/or workplace guides, information sheets, codes of practice, published data and manuals; industry experts.

---

**AUTOMOTIVE ADMINISTRATION**  
**Service and repair complex automotive**  
**systems**

---

- 1.4 Service and/or repair method and procedure are determined in consultation with management and/or customer or supplier.
- 1.5 Essential and non-essential parts of the system are identified and by-pass techniques are applied according to repair method and procedure.

**element 2**

Complete service and/or repair.

**performance criteria**

- 2.1 Safe working practices are observed throughout the task.  
Range: personal safety, safety of others, equipment and vehicle safety.
- 2.2 Suitable equipment that enables the service and/or repair to be completed is selected and used.
- 2.3 Cost effective servicing and/or rectification procedures are assessed where a choice is available.
- 2.4 Removed components to be refitted are stored to avoid damage and/or contamination.
- 2.5 The service and/or repair are completed according to the manufacturer's procedures and/or company policy.

**element 3**

Conduct testing procedures for complex automotive systems.

**performance criteria**

- 3.1 Tests are conducted that will confirm the service and/or repair has been completed to the manufacturer's procedures and/or company policy.  
Range: may include but is not limited to – electrical and/or electronic testing, measuring, road test, non-destructive test.

---

**AUTOMOTIVE ADMINISTRATION**  
**Service and repair complex automotive**  
**systems**

---

- 3.2 Potential problem areas identified during the test procedure are rectified according to the manufacturer's procedures and/or company policy.
- 3.3 The automotive system is checked after servicing and/or repairing to ensure it functions as originally designed and/or specified and meets the manufacturer's specifications, customer or supplier specifications, legislative requirements, and/or company policy.

---

**Comments on this unit standard**

Please contact the NZ Motor Industry Training Organisation [jlane@mito.org.nz](mailto:jlane@mito.org.nz) if you wish to suggest changes to the content of this unit standard.

**Please Note**

Providers must be accredited by the Qualifications Authority or a delegated inter-institutional body before they can register credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for providers wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

This unit standard is covered by AMAP 0014 which can be accessed at <http://www.nzqa.govt.nz/site/framework/search.html>.