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**FIRE AND RESCUE SERVICES -  
STRUCTURAL AND INDUSTRIAL**  
**Apply rescue techniques for the  
extrication of entrapped people from  
vehicle wreckage**

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<b>level:</b>	<b>4</b>
<b>credit:</b>	<b>10</b>
<b>final date for comment:</b>	March 2008
<b>expiry date:</b>	December 2009
<b>sub-field:</b>	Fire and Rescue Services
<b>purpose:</b>	People credited with this unit standard are able to: demonstrate an understanding of the terminology used to describe the construction and component features of vehicles; prepare vehicles for rescue and extrication activities; implement glass management techniques on vehicles; and select and apply methods of providing access to casualties.
<b>entry information:</b>	Prerequisite: Unit 16947, <i>Practice casualty care in fire and rescue services during rescue and extrication activities</i> , or demonstrate equivalent knowledge and skills.
<b>accreditation option:</b>	Evaluation of documentation and visit by NZQA and industry.
<b>moderation option:</b>	A national moderation system of moderation networks has been established by the Fire and Rescue Services Industry Training Organisation.
<b>special notes:</b>	<ol style="list-style-type: none"><li>1 Compliance with the fire and rescue service provider's Health and Safety policy and procedures is mandatory.</li><li>2 <i>Fire and rescue service provider's requirements</i> refer to the approved training that will include the policies and procedures on safety and operation set down by each fire service employer.</li><li>3 Assessment against this unit standard may take place under real or practical simulated conditions.</li></ol>

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- 4 To gain credit for this unit standard use and application of rescue equipment must be consistent with its design features and recommended working limitations issued by both the rescue equipment manufacturer and the candidate's fire and rescue service provider.
- 5 **Definitions**  
*rescue equipment* describes motorised hydraulic, pneumatic and electrically operated, purpose designed rescue and extrication equipment. Rescue equipment may also include - hand tools, chocks, and wedges;  
*vehicle* describes any manufacturer assembled craft, machine, automobile, engine, or plant, unless otherwise described, that can be involved in an incident or accident that results in the entrapment of people;  
*casualty* refers to people who are injured or trapped as a result of an incident or accident. Related terms may include victim and patient.

## **Elements and Performance Criteria**

### **element 1**

Demonstrate an understanding of the terminology used to describe the construction and component features of vehicles.

Range: manufacturer assembled, customised.

### **performance criteria**

1.1 The features of motorcars are identified in terms of their construction and safety components.

Range: may include but is not limited to - 2 door, 4 door, 3 and 5 door, hard-top, soft-top.

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- 1.2 The features of utility trucks, light vans, and light trucks are identified in terms of their construction and safety components.
- Range: may include but is not limited to - rear access, dual side access, flat bed tray, drop side tray, tip tray, single axle, dual axle.
- 1.3 The features of medium and heavy trucks are identified in terms of their construction and safety components.
- Range: may include but is not limited to - medium and heavy rigid vehicles, medium and heavy articulated vehicles.
- 1.4 The features of passenger and recreational vehicles are identified in terms of their construction and safety components.
- Range: may include but is not limited to - minivan, passenger coach over 10 passengers, mini camper, recreational motor home.
- 1.5 The features of manufacturer and home built light aircraft, light sea craft and light vehicles are identified in terms of their construction and safety components.
- Range: may include but is not limited to - motorised buggies, micro-light aircraft, light aircraft power driven and non power driven, power boats.

**element 2**

Prepare vehicles for rescue and extrication activities.

**performance criteria**

- 2.1 Vehicle stabilisation methods are selected and implemented in accordance with fire and rescue service provider's requirements.
- Range: may include but is not limited to - inverted step chock, traditional step chock, step chock/wedge combination, crib/wedge combination, tensioning techniques, controlled tire deflation.

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- 2.2 Stabilisation methods maintained ensure the ongoing integrity of vehicle and scene security and safety in accordance with fire and rescue service provider's requirements.

**element 3**

Implement glass management techniques on vehicles.

**performance criteria**

- 3.1 Common glass types used in vehicle manufacture both pre and post 1980 are identified in terms of their characteristics.

Range: may include but is not limited to - tempered, armoured, laminated, synthetic.

- 3.2 Glass management equipment and techniques are applied for the purpose of gaining clear access in accordance with fire and rescue service provider's requirements.

**element 4**

Select and apply methods of providing access to casualties.

**performance criteria**

- 4.1 Forced door entry techniques are selected and applied in accordance with SOPs.

Range: may include but is not limited to - nader pin latch (traditional), nader pin crush, roof rail spread, quarter light spread, rear door panel crush, hinge side spread, hinge spread and cut, hinge cutting.

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- 4.2 Techniques of providing access to the passenger compartment(s) of vehicles are applied in accordance with SOPs.
- Range: roof flap rear, roof flap front, roof flap side, half roof flap, quarter roof flap, roof removal.
- 4.3 Space making techniques are selected and applied in accordance with SOPs.
- Range: may include but is not limited to - B pillar cut and spread, side removal, inverted side removal, inverted ramming, inverted double ramming, third door conversion.
- 4.4 Extrication of casualties from frontal entrapment is undertaken in accordance with SOPs.
- Range: may include but is not limited to - dash roll, dash lift center, dash lift side, alternative purchase dash roll.
- 4.5 Techniques for interior clearing are applied in accordance with SOPs.
- Range: footwell flap, pedal pull/cutting, steering wheel cutting, forced seat removal, seat reversing, seat cutting.
- 4.6 Lifting techniques using hydraulic rescue tools are applied in accordance with SOPs.
- Range: spreader lifts, ram lifts.
- 4.7 Techniques for positioning and supporting air bags are applied to achieve optimum lift in accordance with fire and rescue service provider's requirements.

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**Comments on this unit standard**

Please contact the Fire and Rescue Services Industry Training Organisation [info@frsito.org.nz](mailto:info@frsito.org.nz) if you wish to suggest changes to the content of this unit standard.

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**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 0039 which can be accessed at <http://www.nzqa.govt.nz/site/framework/search.html>.