| MSMRV3XX | Fabricate frame structures |
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| Modification History | Release 1. New unit.  |
| Application | This unit describes the skills and knowledge required select materials and equipment, and to measure, cut and assemble frame structures to meet specifications.This unit applies to individuals working in accordance with established procedures. Frame structures may be those in recreational equipment, marine craft, aircraft, heavy vehicles, plant and agricultural equipment.Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority. Relevant industry standards and codes of practice within Australia must be applied.  |
| Prerequisite Unit(s) | Nil |
| Unit Sector | Vehicle body  |

| **Elements** | **Performance Criteria** |
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| *Elements describe the essential outcomes.* | *Performance criteria describe the performance needed to demonstrate achievement of the element.* |
| 1. Prepare for fabrication work | 1.1 Access and interpret job information from specifications 1.2 Identify and follow workplace health and safety requirements 1.3 Select and confirm materials against quality specifications 1.4 Identify, select and prepare components and tooling in accordance with job requirements and workplace procedures1.5 Identify opportunities for minimising waste and maximising energy efficiency and plan work accordingly |
| 2. Select frame materials and accessories | 2.1 Select materials type and size according to frame dimension, in-service environment and customer requirements2.2 Select attachment methods and materials in accordance with regulatory and workplace requirements |
| 3. Measure and determine frame requirements  | 3.1 Identify and access measurement requirements from specifications and/or direct measurement3.2 Make accurate measurements to confirm frame dimensions against specifications |
| 4. Cut and assemble components | 4.1 Cut and assemble components in accordance with work plan and specifications4.2 Safely use tooling and equipment in accordance with manufacturer specifications and workplace procedures4.3 Check component lengths, fittings and frame assembly dimensions for conformity to specifications in accordance with workplace procedures |
| 5. Clean up work area and maintain equipment  | 5.1 Store or recycle materials in accordance with workplace procedures5.2 Clean and clear work area and dispose of rubbish safely5.3 Clean, maintain and store tools and equipment in accordance with workplace procedures and supplier specifications5.4 Identify and tag unserviceable or faulty equipment in accordance with workplace procedures5.5 Accurately complete required workplace documentation |

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| Foundation SkillsThis section describes those language, literacy, numeracy and employment skills that are essential to performance. Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. |

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| Unit Mapping Information | Release 1. New unit.  |
| Links | Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027> |

Assessment Requirements

| Assessment requirements for MSMRV3XX Fabricate frame structures |
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| Performance Evidence | There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:* fabricated 3 frame structures
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| Knowledge Evidence  | There must be evidence the candidate has knowledge of:* basic aspects of regulations and standards that apply to frame fabrication:
	+ Australian Standards
	+ Australian Design Rules
* types of technical information that informs frame fabrication and how to interpret it
* types of frames, fittings and fasteners
* types of frame materials and their application
* equipment and tooling features, functions and safe operation, including:
	+ tube bending
	+ wire swaging
* production methods and procedures, including:
	+ frame design
	+ material and hardware selection
	+ measuring
	+ positioning and fixing
	+ cutting
	+ assembly/fitting up
* organisation procedures for:
	+ communication and reporting
	+ environmental protection and sustainability
		- dust
		- noise
		- waste
	+ quality assurance
	+ work health and safety, including personal protective equipment
	+ work planning.
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| Assessment Conditions | Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit: * use of suitable facilities, equipment and resources, including:
	+ materials for fabrication of frame structures
	+ equipment, hand and power tooling appropriate to fabrication of frame structures
	+ specifications and work instructions
	+ workplace procedures.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors. |
| Links | Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027> |