

Title	Repair damaged or faulty complex composite structures		
Level	6	Credits	15

Purpose	People credited with this unit standard are able to: evaluate the scope of repair work; prepare materials, equipment and resources; and repair damaged or faulty complex composite structures.
Classification	Composites > Industrial Composites

Available grade	Achieved
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Guidance Information

- 1 All work practices must meet recognised codes of practice such as the Code of Practice for Health and Safety in the Manufacture of Composites Based on Synthetic Resins (Fibreglass), 1998, available at <http://www.composites.org.nz>, and documented worksite health and safety procedures (where these exceed code) for personal, product, and worksite health and safety, and must meet the obligations required under legislation.
- 2 **Definitions**
Equipment refers to grinder, applicators, dispensers, measuring devices, and cutters.
Job specifications refers to the standard requirements of the job being undertaken.
Process specification refers to the documented instructions and method of applying the materials to manufacture the structure. (For example: time, materials, temperature, application rates).
Product specification refers to the documented requirements of the manufactured structure.
Workplace policies and procedures refers to the documented procedures and policies providing guidelines of the tasks and activities carried out in the workplace. This typically includes relevant health and safety requirements to eliminate hazard/risk in the workplace.
- 3 Assessment does not include painting of the composite.
- 4 **Range**
 complex composite structures may include but are not limited to – composite mast, composite hull, composite deck, composite car body, composite rocket parts, composite aircraft.
 evidence of three different repairs to damaged or faulty complex composite structures is required.

Outcomes and performance criteria

Outcome 1

Evaluate the scope of work for repair of the damaged or faulty complex composite structures.

Performance criteria

1.1 Scope of work for repair of faulty or damaged complex composite structures is evaluated.

Range evaluation includes but is not limited to – inspect and measure, identify and determine nature of damage or fault, assess repair context and cost of repair.

Outcome 2

Prepare materials, equipment, and resources for repair of damaged or faulty complex composite structures.

Performance criteria

2.1 Materials, equipment and resources are prepared in accordance with job specifications.

Range materials may include but are not limited to – filling compounds, gel coats, resins, catalysts, reinforcements, cores, spray guns, hardeners, appropriate tools.
methods identified may include – machining (scarfing), patching, fusing and re-laminating.

Outcome 3

Repair the damaged or faulty complex composite structures.

Performance criteria

3.1 Damaged or faulty materials are removed ready for repairs to commence.

3.2 Damaged or faulty complex composite structures are repaired in accordance with product and process specifications, and workplace policies and procedures.

3.3 Repaired structures are checked, and remedial action is taken if required to ensure product specifications and safety are met.

3.4 Report is produced that assesses and evaluates the repair process and outcome.

Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 August 2022	N/A

Consent and Moderation Requirements (CMR) reference	0136
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.