

Title	Demonstrate knowledge of plastics and plastic composite repairs used in the collision repair industry		
Level	4	Credits	2

Purpose	People credited with this unit standard are able to demonstrate knowledge of plastics and plastic composite materials; and, plastics and plastic composite component repair requirements, in the collision repair industry.
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Classification	Motor Industry > Automotive Plastic Repair
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturers specifications, service information, company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 2 Legislation, regulations and/or 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; Spray Coating Regulations 1962; *Approved Code of Practice for the Safe Use of Isocyanates* (WorkSafe); 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.
Service information may include – technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.
- 4 Range
Types of plastic materials may include – Acrylonitrile-butadiene-styrene (ABS); Polyethylene (PE); Polypropylene (PP); Polyvinyl Chloride (PVC); Polyamide (PA); Polymethyl Methacrylate (PMMA); Thermoplastic Polyurethane (TPU); Urethane (U); Sheet Moulded Compound (SMC); Carbon Fibre; Polycarbonate (PC); Thermoplastic Polyolefin (TPO), ethylene propylene diene monomer (EPDM), polypropylene (PP).

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of plastics and plastic composite materials used in the collision repair industry.

Performance criteria

1.1 The types of plastic and plastic composite materials and their applications on motor vehicles and related machines and equipment are identified.

Range types include – thermosetting, thermoplastic;
applications include – exterior, interior, electrical, powertrain, chassis, engine.

1.2 Methods of identifying plastics and plastic composite materials are described.

Range International Standards Organisation (ISO) codes, cutting, solvent, welding, flexibility, sanding.

Outcome 2

Demonstrate knowledge of plastics and plastic composite component repair requirements in the collision repair industry.

Performance criteria

2.1 Procedures to take to decide the feasibility of a repair are identified.

Range type of material, type and extent of repair required, manufacturer repair standards, cost of repair, availability and cost of replacement components.

2.2 The types of repair are described.

Range welding, heating and reshaping, bonding, resealing.

2.3 Equipment for repair applications is identified in accordance with the type and complexity of repair and the manufacturer's repair equipment recommendations.

Range hot air gun, filler rods, glue gun, sealants, heating oven, clamps, bonding agents, seals, adhesives, fillers, fibreglass.

2.4 The plastic welding process is described.

Range identifying the type of plastic to be welded, preparing the material to be welded, completing the weld, observing safety precautions.

2.5 Plastic adhesive systems are identified.

Range single pack, two pack.

- 2.6 Disposal requirements for disused plastic components and materials are identified.

Replacement information	This unit standard and unit standard 23742 replaced unit standard 876.
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Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 May 2007	31 December 2018
Review	2	21 April 2016	31 December 2023
Review	3	10 December 2020	N/A

Consent and Moderation Requirements (CMR) reference	0014
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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 the MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.