Title	**Demonstrate knowledge of the principles of collision repair production control and management**		
Level	**5**	**Credits**	**20**

Purpose	People credited with this unit standard are able to: demonstrate knowledge of the principles of waste minimisation in a collision repair workplace; demonstrate knowledge of the principles of adding value for a customer and a collision repair organisation; demonstrate knowledge of the quality management process and its effect on customer and organisation needs; develop production plan requirements as it relates to parts, labour, and level of repair in collision repair; and discuss measurements of improvements to the organisation.

Classification	Motor Industry > Vehicle Bodywork

Available grade	Achieved

Guidance Information

1 Legislation and references
Performance of the outcome of this unit standard must comply with the following: Health and Safety at Work Act 2015.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

Resources are available through automotive paint manufacturers and distributors.

2 Definitions
5S refers to a systematic and methodical approach allowing teams to organise their workplace in the safest and most efficient manner.
Company requirements refers to any documented policies and procedures of the company involved.
Efficient and effective principles refers to processes that add value for customers with fewer resources through optimizing the flow of work, improving quality and reducing waste. This includes but is not limited to what is commonly referred to as Lean Manufacturing.
Factors affecting production refers to parts availability, human resources, environmental, incorrect repair scope mix, rework training opportunities.
Human resource refers to a tradesperson = 1, a part stripper/fitter = 0.75, an apprentice = 0.25 – 0.75, as a percentage of a fulltime employee (FTE).

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Scope of repair refers to duration of a repair depending on size and complexity, the skill sets required to carry out the repair and availability of the skill sets, parts and sublet.

3 Assessment information
Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturer's specifications, service information, company and legislative requirements.

4 Assessor guidelines
This unit standard must be assessed in a collision repair workshop situation. As these workshops vary considerably assessors must allow for the type, size, standard operating procedures and location of each individual workplace when making a judgement. Alternatively, assessment could be in a simulated collision repair workshop environment.

The changes or improvements proposed by the learner must be realistic for the workshop to be able to implement (financial position, physical space, labour etc).

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the principles of waste minimisation in a collision repair workplace.

Performance criteria

1.1 Methodologies and tools to manage production waste are analysed.

Range includes but is not limited to – six sigma, 5S, efficient and effective (lean) principles, current state vs future state (customer journey).

1.2 Benefits of minimising waste in a process or organisation are explained.

Range includes but is not limited to – benefits to customer and organisation, health and safety, workflow, pull not push, throughput, use of materials, recycling and sustainability opportunities.
evidence of a minimum of five benefits is required.

Outcome 2

Demonstrate knowledge of the principles of adding value for a customer and a collision repair organisation.

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Performance criteria

2.1 Adding value in terms of meeting customer and organisation needs is determined.

Range may include – point of difference, positive association, growing market share, customer benefit, customer satisfaction, competitive advantage.

2.2 The difference(s) between non-essential and essential value adding steps in a process is analysed to determine areas for improvement.

2.3 Essential non-value adding steps in a process are explained.

Outcome 3

Demonstrate knowledge of the quality management process and its effect on customer and organisation needs.

Performance criteria

3.1 Management of quality and its effects on meeting customer and organisation needs is examined.

Range effects include but are not limited to – dissatisfied customers, viability of business and jobs, consistency of product and service, use of time and resources, reduced production waste.
evidence of a minimum of three effects is required.

3.2 The purpose of quality control checks prior to commencing a collision repair job is explained.

Range checks include but are not limited to – correct information, correct parts and materials, estimating, storage of vehicles, expectation of quality, pre-check for existing faults and damage, fuel level, odometer reading.

Outcome 4

Develop production plan requirements as it relates to parts, labour, and level of repair in collision repair.

Performance criteria

4.1 Parts versus labour and sublet versus in-house percentage analysis are determined for optimal repair.

Range includes fix or replace according to – human resource skill sets, plant and machinery.

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4.2 Scope of repair according to labour hours is developed.

Range level of repair may include but is not limited to – small, medium, large, or heavy, medium, light.
evidence of three levels of repair is required.

4.3 A production plan to optimise flow of production to maximise throughput is generated.

Range includes but is not limited to – scope of repair, human resources, end to end process over a five-day duration, factors affecting production.
evidence of five vehicles per day with three levels of scope repair

4.4 A consistency standard operating procedure is developed.

Range includes but is not limited to – bullet point operating procedure; may include but is not limited to – site map present state and future state, checklists, process map.

Outcome 5

Discuss measurements of improvements to the organisation.

Performance criteria

5.1 Measurement of improvements to the organisation are discussed.

Range may include but is not limited to – financial, production numbers, staff morale, staff retention, customer satisfaction, material waste reduction.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 September 2023	N/A

Consent and Moderation Requirements (CMR) reference	0014

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.

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