

Field Engineering and Technology

Review and development of *Motor Industry* unit standards

Subfield	Domain	ID
Motor Industry	Automotive Fuel Systems and Exhaust	24182
	Automotive Hydraulics	15410
	Automotive Preventive Maintenance	23958
	Automotive Transmission Systems	24319

MITO New Zealand Incorporated has completed the review of the unit standards listed above.

Date new versions published

July 2018

Planned review date

December 2023

Summary

MITO has reviewed the unit standards listed above and developed new unit standards at the request of industry.

The unit standards were reviewed and developed to align with the New Zealand Certificate in Heavy Automotive Engineering (Level 4) with strands in Road Transport, Plant and Equipment, Agricultural Equipment, and Materials Handling [Ref: 3118].

This review has resulted in fit-for-purpose assessment content being made available to industry that reflects current legislation and industry practice.

MITO's heavy automotive industry working group endorsed the unit standard review. Representation in the working group included subject matter experts, industry representatives, provider representatives and MITO representatives. The unit standards were circulated in the working group's greater networks and all feedback was actioned where appropriate.

Main changes

- Three unit standards were reviewed and replaced with four new unit standards.
- Unit 24182 was reviewed and updated. The credit value of the standard was amended to reflect the complex nature of the electronic systems used with LPG fuel systems.
- 15 new unit standards were developed.

Category C unit standards will expire at the end of December 2020

Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Subfield	Motor Industry	3	Standards	31276, 31277	4
Domain	Automotive Transmission Systems	3	Standards	31276, 31277	4
Standard	24319	3	Standards	31276, 31277	4

Detailed list of unit standards – classification, title, level, and credits

All changes are in **bold**.

Key to review category	
A	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new version number
B	Changes made, but the overall outcome remains the same - the new version of the standard carries the same ID and a new version number
C	Major changes that necessitate the registration of a replacement standard with a new ID
D	Standard will expire and not be replaced

Engineering and Technology > Motor Industry > Automotive Fuel Systems and Exhaust

ID	Title	Level	Credit	Review Category
24182	Diagnose and rectify faults in a liquefied petroleum gas (LPG) vehicle fuel system	4	3	B
	Diagnose and repair faults in an automotive liquefied petroleum gas (LPG) fuel system	4	5	
31267	Diagnose and repair carburettor faults	4	4	New
31271	Demonstrate knowledge of automotive liquefied petroleum gas (LPG) and liquefied natural gas (LNG) fuel systems	3	3	New

Engineering and Technology > Motor Industry > Automotive Hydraulics

ID	Title	Level	Credit	Review Category
15410	Test and repair hydraulic equipment components on heavy equipment, vehicles, and machines	4	12	C
31264	Diagnose and repair faults in a machine hydraulic or hydrostatic system	4	10	

Engineering and Technology > Motor Industry > Automotive Preventive Maintenance

ID	Title	Level	Credit	Review Category
23958	Diagnose and rectify faults in forklift masts	4	5	C
31270	Diagnose and repair faults in materials handling equipment masts and carriages	4	5	
31262	Diagnose and repair faults in machine ground engagement devices	4	4	New
31269	Diagnose and repair faults in materials handling equipment attachments	4	3	New
31272	Demonstrate knowledge of materials handling equipment attachments	3	2	New
31273	Demonstrate knowledge of materials handling equipment masts and carriages	3	3	New
31274	Describe a materials handling machine frame	3	2	New
31279	Demonstrate knowledge of machine operator protective structures	3	2	New
31280	Demonstrate knowledge of machine frame, undercarriage and track systems	4	4	New
31281	Demonstrate knowledge of machine attachments and ground engagement devices	3	2	New

Engineering and Technology > Motor Industry

ID	Domain	Title	Level	Credit	Review Category
24319	Automotive Transmission Systems	Demonstrate knowledge of hydrostatic transmission drives, and testing and diagnosing faults, on plant or machinery	3	2	C
31276	Automotive Hydraulics	Demonstrate knowledge of heavy vehicle and machine hydraulic systems	4	6	
31277	Automotive Transmission Systems	Demonstrate knowledge of machine hydrostatic drive systems	4	3	

Engineering and Technology > Motor Industry > Engines

ID	Title	Level	Credit	Review Category
31266	Tune a machine petrol engine	4	3	New

Engineering and Technology > Motor Industry > Tractor and Machine Systems

ID	Title	Level	Credit	Review Category
31265	Diagnose and repair faults in agricultural equipment frame and three-point linkage components	4	6	New
31278	Demonstrate knowledge of agricultural equipment undercarriage	3	4	New

Engineering and Technology > Motor Industry > Vehicle Braking Systems

ID	Title	Level	Credit	Review Category
31263	Diagnose and repair faults in machine hydraulic power assisted braking systems	4	6	New
31275	Demonstrate knowledge of a machine hydraulic power assisted braking system	4	3	New