

Field Engineering and Technology

Review of *Motor Industry* unit standards

Subfield	Domain	ID
Motor Industry	Automotive Administration	248, 5783, 22786
	Automotive Electrical and Electronics	888, 890, 898, 905, 907, 909, 915, 966, 976, 2326, 5433, 5436, 5456, 5462, 15377, 15378, 21089, 21092-24095, 24113, 24117, 24118, 24124, 24126-24134, 24138, 24145-24150, 24654

MITO New Zealand Incorporated (trading as MITO) has completed the review of the unit standards listed above.

Date new versions published

March 2021

Planned review date

December 2025

Summary

MITO reviewed motor industry unit standards to ensure they are fit-for-purpose for the industry sectors.

MITO was supported by the motor industry's working groups including subject matter experts and MITO representatives. The standards were circulated to the working groups' networks, and a consultation period was held. Feedback received was actioned where appropriate.

Main changes

- Purpose statements, guidance information, references, outcomes, performance criteria, and range statements were amended to ensure they are accurate and fit for purpose, reflect the standard content and to ensure clarity for users.
- Titles were amended for some standards to better reflect outcomes.

The last date for assessment of superseded versions of Category B unit standards is December 2022

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 Administration

ID	Title	Level	Credit	Review Category
248	Describe an apprenticeship employment agreement for the automotive and related industries Demonstrate knowledge of apprenticeship training agreements and negotiation	2	1	B
5783	Identify, interpret, and apply legal requirements relevant to the workplace in the motor industry Identify, interpret, and apply legal requirements relevant to the workplace in the automotive industry	5	8	B
22786	Maintain stock and carry out stocktaking duties in the motor or related industries Maintain stock and carry out stocktaking duties in the automotive industry	3	3	B

Engineering and Technology > Motor Industry > Automotive Electrical and Electronics

ID	Title	Level	Credit	Review Category
888	Overhaul starter motors from light vehicles	3	3	B
890	Diagnose and rectify faults in motorcycle or ATV electrical starting and charging systems, and overhaul starter motors	4	4	B
898	Identify a wiring diagram and translate information to a circuit in the motor and related industries Identify an automotive wiring diagram and translate information to a circuit	3	3	B
905	Overhaul heavy duty electric pre-engaged and axial-type starter motors	4	5	B
907	Install entertainment systems in vehicles, test and rectify installation faults, and replace components Install entertainment systems in vehicles and test and rectify installation faults	4	4	B
909	Install electrical accessories in vehicles, and test for and rectify faults	3	2	B
915	Service multiple battery installations on vehicles, machines, and/or units Service multiple lead-acid battery installations on vehicles, machines or units	3	3	B
966	Make up and install electronic circuitry to suit specific applications and components Make up and install electronic circuitry and components in a vehicle or machine	5	5	B
976	Specify the lighting requirements for a passenger coach or special purpose vehicle	5	4	B
2326	Overhaul an ignition distributor	3	2	B
5433	Demonstrate knowledge of electrical and electronic applications for marine use Demonstrate knowledge of electrical and electronic systems for marine use	4	8	B
5436	Diagnose and rectify faults in marine charging and starting systems Diagnose and rectify faults in a marine charging and starting system	4	4	B

ID	Title	Level	Credit	Review Category
5456	Demonstrate knowledge of the operation and testing of automotive alternators and alternator controls Describe the operation and testing of automotive alternators and alternator controls	3	4	B
5462	Demonstrate knowledge of automotive electronic ignition system operation	4	5	B
15377	Diagnose and rectify faults in a motorcycle electronic ignition system	4	4	B
15378	Diagnose and rectify faults in a motorcycle contact breaker battery ignition system	4	4	B
21089	Demonstrate knowledge of hybrid electric vehicle (HEV) technology, and service requirements Describe and analyse hybrid electric vehicle technology, and service requirements	5	6	B
21092	Demonstrate knowledge of, and interpret, complex automotive wiring diagrams and circuitry Demonstrate knowledge of complex automotive wiring diagrams and circuitry	5	6	B
21093	Demonstrate knowledge of, and use, portable computer diagnostic equipment to test vehicle systems	5	4	B
24094	Demonstrate knowledge of windscreen wiper and headlamp cleaning systems	3	1	B
24095	Test for and rectify automotive wiper system faults	4	2	B
24113	Demonstrate knowledge of automotive instruments and gauges, and testing and rectifying system faults	4	2	B
24117	Demonstrate knowledge of direct and alternating current electric motors used in forklifts and their repair procedures	4	3	B
24118	Prepare to and rectify faults in forklift direct or alternating current electric motors and speed control systems	4	5	B
24124	Demonstrate knowledge of vehicle powertrain electronic control systems, and testing and rectifying faults	4	3	B
24126	Diagnose and rectify faults in heavy vehicle or machine electrical starting and charging systems Diagnose and rectify faults in a heavy vehicle or machine electrical 12 or 24 volt starting and charging systems	4	5	B
24127	Demonstrate knowledge of automotive lighting requirements and lighting circuit diagnosis Describe automotive lighting requirements and lighting circuit diagnosis	4	3	B
24128	Diagnose and rectify lighting circuit faults on vehicles or machines	4	4	B
24129	Create and measure automotive series-parallel circuits, and calculate values of power in automotive circuits	3	2	B
24130	Demonstrate knowledge of inductance, capacitors and chokes, and alternating current used in automotive applications	3	3	B
24131	Demonstrate knowledge of electronic components and their application in the automotive industry	3	5	B

ID	Title	Level	Credit	Review Category
24132	Demonstrate knowledge of integrated electronic devices, multiplexing, and microprocessors in the motor industry Demonstrate knowledge of integrated electronic devices, multiplexing, and microprocessors in the automotive industry	3	4	B
24133	Identify, remove and replace a vehicle or machine wiring harness sub-assembly	4	2	B
24134	Test for and rectify faults in electronically controlled systems used on heavy vehicles or machines Test for and rectify faults in electronically controlled systems used on a heavy vehicle or machine	4	5	B
24138	Install an immobiliser system in a vehicle	3	2	B
24145	Remove and replace a traction steering hydraulic controller on a forklift Remove, replace and calibrate a traction, steering or hydraulic controller on a forklift	3	2	B
24146	Adjust controller systems on materials handling equipment Adjust or calibrate controller systems on materials handling equipment	3	4	B
24147	Inspect components, test equipment for condition, and rectify equipment faults in battery powered forklifts	4	6	B
24148	Demonstrate knowledge of engine management systems	3	3	B
24149	Demonstrate knowledge of overhauling starter motors from light vehicles Describe overhauling starter motors	3	2	B
24150	Demonstrate knowledge of overhauling automotive alternators Describe overhauling automotive alternators	3	2	B
24654	Test and rectify faults in automotive alternator circuits, and overhaul an automotive alternator	3	4	B