

Field Engineering and Technology

Review of *Motor Industry* unit standards

Subfield	Domain	ID
Motor Industry	Automotive Preventive Maintenance	24341, 24342
	Tractor and Machine Systems	15471, 23937-23939
	Tyres	21722, 24458-24460
	Vehicle Bodywork	399, 912, 2345, 5467, 21713, 22798, 24081, 24082
	Vehicle Braking Systems	936, 974, 15473, 15474, 15476, 15477, 15479, 24407-24411, 24414, 24416-24423, 24425
	Vehicle Recovery	3387, 23941, 23943
	Vehicle Steering and Suspension	883, 884, 972, 2312, 3398, 24025, 24426-24428, 24433-24435, 24438, 24441

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

Date new versions published

July 2021

Planned review date

December 2025

Summary

MITO reviewed and revised 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.

The last date for assessment of superseded versions of Category B unit standards is December 2022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

ID	Title	Level	Credit	Review Category
24341	Carry out general service checks on non-electric forklifts and forklift attachments	3	4	B
24342	Carry out general service checks on electric forklifts and forklift attachments	3	4	B

Engineering and Technology > Motor Industry > Tractor and Machine Systems

ID	Title	Level	Credit	Review Category
15471	Demonstrate knowledge of materials handling machine types, their applications, operation, and safety precautions	2	4	B
23937	Demonstrate knowledge of tractor and agricultural machine safety frame and cab requirements, and inspection and repairs	4	2	B
23938	Inspect and fit tractor and agricultural machine safety frames, and repair guarding	4	3	B
23939	Install and repair materials handling equipment attachments Install and repair or replace materials handling equipment attachments	3	4	B

Engineering and Technology > Motor Industry > Tyres

ID	Title	Level	Credit	Review Category
21722	Balance wheels off a vehicle in the motor industry Balance a wheel off a vehicle in the motor industry	2	2	B
24458	Prepare to repair, and repair punctures in tubes and tubeless tyres on light vehicles	3	5	B
24459	Demonstrate knowledge of tractor and agricultural machinery tyres and wheels	3	4	B
24460	Remove and refit wheels from tractors and agricultural machinery	3	2	B

Engineering and Technology > Motor Industry > Vehicle Bodywork

ID	Title	Level	Credit	Review Category
399	Detail and groom a vehicle	2	4	B
912	Remove, repair, and replace vehicle body interior components	3	3	B
2345	Diagnose faults in heavy vehicle and equipment chassis	4	3	B
5467	Remove and replace light vehicle bolt-on mechanical components	3	8	B
21713	Use and maintain power tools and equipment in the motor body industry	2	3	B

ID	Title	Level	Credit	Review Category
22798	Remove and install direct glazed windscreens and side and rear glass on vehicles	4	6	B
24081	Prepare and fabricate a new motor body panel in the motor body industry	3	6	B
24082	Demonstrate knowledge of fabricating a new motor body panel in the motor body industry	3	2	B

Engineering and Technology > Motor Industry > Vehicle Braking Systems

ID	Title	Level	Credit	Review Category
936	Make up brake pipes for a particular braking application	3	1	B
974	Diagnose and rectify faults in a car or light commercial vehicle anti-lock braking system (ABS) Diagnose and rectify faults in a car or light commercial vehicle anti-lock braking system	5	4	B
15473	Diagnose and rectify brake system faults on ride-on outdoor powered equipment	4	3	B
15474	Demonstrate knowledge of, diagnose, and rectify faults in a motorcycle anti-lock braking system	5	4	B
15476	Demonstrate knowledge of pneumatic brakes on heavy vehicles and machines	3	4	B
15477	Demonstrate knowledge of braking systems on truck and trailer combinations	3	4	B
15479	Diagnose and rectify pneumatic brake faults on heavy vehicles, trailers, and machines	4	6	B
24407	Demonstrate knowledge of brake lining friction materials	3	2	B
24408	Inspect braking system for safe operation on light vehicles, and inspect hydraulic components off the vehicle	3	3	B
24409	Prepare and overhaul hydraulic braking system components from light vehicles	3	2	B
24410	Demonstrate knowledge of machining brake disc rotors and brake drums	3	1	B
24411	Machine brake disc rotors and brake drums	3	2	B
24414	Demonstrate knowledge of the brake bonding process	4	1	B
24416	Demonstrate knowledge of wheel tractor braking systems	3	3	B
24417	Diagnose and rectify faults in wheel tractor braking systems Diagnose and repair faults in wheel tractor braking systems and carry out routine maintenance	4	5	B
24418	Demonstrate knowledge of foundation (drum) brakes on heavy vehicles and machines Demonstrate knowledge of drum brakes on heavy vehicles and machines	3	2	B
24419	Inspect and repair foundation (drum) brakes on heavy vehicles and machines Inspect and repair drum brakes on heavy vehicles or machines	3	3	B
24420	Demonstrate knowledge of hydraulic brakes and testing hydraulic brakes on heavy vehicles or machines	3	2	B
24421	Test and repair hydraulic brake system components on heavy vehicles or machines	4	3	B

ID	Title	Level	Credit	Review Category
24422	Demonstrate knowledge of heavy vehicle and equipment disc brakes	3	2	B
24423	Inspect and repair heavy vehicle and equipment disc brakes	3	3	B
24425	Bleed a heavy equipment or tractor mineral oil braking system	2	1	B

Engineering and Technology > Motor Industry > Vehicle Recovery

ID	Title	Level	Credit	Review Category
3387	Respond to vehicle and/or machine breakdown Respond to vehicle or machine breakdown	3	1	B
23941	Demonstrate knowledge of salvage and recovery procedures to recover heavy vehicles and on-road machines Demonstrate knowledge of recovery procedures to recover heavy vehicles and on-road machines	3	3	B
23943	Demonstrate knowledge of flat towing a light vehicle	3	1	B

Engineering and Technology > Motor Industry > Vehicle Steering and Suspension

ID	Title	Level	Credit	Review Category
883	Check and adjust vehicle front and rear wheel alignment	3	4	B
884	Dismantle, inspect, and overhaul vehicle manual steering boxes and rack assemblies	3	2	B
972	Repair track gear systems on machines	4	5	B
2312	Repair road transport heavy vehicle steering systems	4	4	B
3398	Disassemble, inspect, and overhaul power steering boxes and power steering rack assemblies	4	3	B
24025	Diagnose suspension and manual steering faults on light vehicles	3	2	B
24426	Demonstrate knowledge of diagnosing and rectifying vehicle power-assisted steering system faults	4	2	B
24427	Test, diagnose, and rectify vehicle hydraulic power-assisted steering system faults	4	2	B
24428	Overhaul a power steering pump	4	2	B
24433	Diagnose suspension failure on a heavy vehicle and repair components	4	6	B
24434	Demonstrate knowledge of heavy machine and equipment suspension systems, and diagnosing system failure	3	3	B
24435	Diagnose and repair faults in heavy machine and equipment suspension systems	4	4	B
24438	Demonstrate knowledge of tractor or machine wheel steering systems and fault diagnosis and repair procedures	3	2	B
24441	Diagnose and rectify faults in steer axle and linkage systems on a forklift	4	3	B