

**Field      Engineering and Technology****Review of *Motor Industry* unit standards**

<b>Subfield</b>	<b>Domain</b>	<b>ID</b>
Motor Industry	Automotive Electrical and Electronics	897, 24136, 24137
	Engines	3400, 24273, 24274, 24807

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

**Date new versions published**

**January 2018**

**Planned review date**

**December 2022**

**Summary**

As a result of the Targeted Review of Qualifications process, MITO has reviewed the unit standards listed above and developed new unit standards to reflect the graduate profile outcomes in the New Zealand Certificate qualifications and to meet MITO's ongoing unit standard review schedule.

The development of these unit standards has resulted in fit for purpose assessment content being made available to industry that reflect current industry practice.

MITO's automotive industry working group endorsed the development of the new unit standards. 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**

- Seven unit standards were reviewed and replaced with three new unit standards.
- 19 new unit standards were developed to align with the graduate profile outcomes of the new qualifications.

**Category C unit standards will expire at the end of December 2020****Impact on existing organisations with consent to assess**

<b>Current consent for</b>			<b>Consent extended to</b>		
<b>Nature of consent</b>	<b>Classification or ID</b>	<b>Level</b>	<b>Nature of consent</b>	<b>Classification or ID</b>	<b>Level</b>
Subfield	Motor Industry	3	Standards	30886, 30888	4
Domain	Engines	3	Standards	30886, 30888	4
Standard	897	4	Standard	30876	4
Standard	3400	3	Standard	30886	4
Standard	24273	4	Standard	30886	4
Standards	24274, 24807	3	Standard	30888	4

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

All changes are in **bold**.

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

### Engineering and Technology > Motor Industry > Automotive Electrical and Electronics

ID	Title	Level	Credit	Review Category
897	Diagnose and rectify faults in light vehicle starting and charging systems	4	5	C
<b>30876</b>	<b>Diagnose and rectify faults in vehicle or machine charging and starting systems</b>	<b>4</b>	<b>6</b>	
24136	Demonstrate knowledge of traction type batteries and their service requirements	3	2	D
24137	Service traction type batteries used on electric materials handling equipment	3	3	D
<b>30873</b>	<b>Carry out diagnostic procedures using an automotive scan tool</b>	<b>4</b>	<b>8</b>	<b>New</b>
<b>30874</b>	<b>Carry out automotive diagnostic procedures using an oscilloscope</b>	<b>4</b>	<b>8</b>	<b>New</b>
<b>30875</b>	<b>Service hybrid electric and battery electric vehicle or machine high voltage systems</b>	<b>4</b>	<b>5</b>	<b>New</b>
<b>30877</b>	<b>Service multiple automotive batteries</b>	<b>4</b>	<b>3</b>	<b>New</b>
<b>30878</b>	<b>Service traction batteries</b>	<b>4</b>	<b>3</b>	<b>New</b>
<b>30879</b>	<b>Demonstrate knowledge of hybrid electric and battery electric vehicle or machine systems and safety</b>	<b>4</b>	<b>5</b>	<b>New</b>
<b>30880</b>	<b>Describe automotive electronic components, actuators, sensors and signals</b>	<b>3</b>	<b>5</b>	<b>New</b>
<b>30881</b>	<b>Describe automotive scan tools and oscilloscopes</b>	<b>4</b>	<b>5</b>	<b>New</b>
<b>30882</b>	<b>Describe servicing requirements of multiple automotive batteries and traction batteries</b>	<b>3</b>	<b>3</b>	<b>New</b>
<b>30883</b>	<b>Describe charging and starting system diagnosis</b>	<b>3</b>	<b>3</b>	<b>New</b>

### Engineering and Technology > Motor Industry > Automotive Pneumatics

ID	Title	Level	Credit	Review Category
<b>30884</b>	<b>Demonstrate knowledge of a heavy vehicle or machine air starting system</b>	<b>3</b>	<b>2</b>	<b>New</b>

## Engineering and Technology &gt; Motor Industry &gt; Automotive Preventive Maintenance

ID	Title	Level	Credit	Review Category
30885	<b>Demonstrate knowledge of automotive diagnostic and repair procedures</b>	3	5	New

## Engineering and Technology &gt; Motor Industry &gt; Engines

ID	Title	Level	Credit	Review Category
3400	Check a four stroke petrol engine for condition using hand held test equipment	3	4	C
24273	Test a four stroke petrol engine using relevant test equipment and determine engine condition	4	2	C
<b>30886</b>	<b>Diagnose the mechanical condition on an engine</b>	<b>4</b>	<b>4</b>	
24274	Carry out general repairs to a cylinder head that does not require machining	3	2	C
24807	Remove, disassemble, inspect, reassemble, and refit an engine cylinder head	3	4	C
<b>30888</b>	<b>Remove, inspect and refit a cylinder head</b>	<b>4</b>	<b>4</b>	
<b>30887</b>	<b>Replace an automotive timing belt or chain</b>	<b>4</b>	<b>4</b>	<b>New</b>
<b>30889</b>	<b>Demonstrate knowledge of replacing automotive timing belts and chains</b>	<b>3</b>	<b>2</b>	<b>New</b>
<b>30890</b>	<b>Demonstrate knowledge of equipment used to test engine mechanical condition</b>	<b>3</b>	<b>2</b>	<b>New</b>
<b>30891</b>	<b>Describe engine disassembly, inspection and reassembly</b>	<b>3</b>	<b>3</b>	<b>New</b>