

**Field      Engineering and Technology****Review of *Electrical Machines* unit standards**

<b>Subfield</b>	<b>Domain</b>	<b>ID</b>
Electrical Engineering	Electrical Machines	1184, 1185, 2014, 5928, 15865, 16413, 16416, 18999, 19469-19471, 24890

The Skills Organisation has completed the review of the unit standards listed above.

**Date new versions published**

**August 2019**

**Planned review date**

**December 2023**

**Summary**

In 2019, these unit standards were reviewed. The review considered which unit standards will be used for the programme to award the New Zealand Certificate in Electrical Engineering (Electromechanical Maintenance and Repair) (Level 4) with optional strand in Electrical Service Technician (EST) [Ref: 2565].

Four on-job unit standards increased in credit value to reflect the actual time taken for trainees to learn and be deemed competent.

The motor rewinding unit standards were reviewed with industry representatives to ensure they are fit for purpose and reflect actual motor rewinding work, and less emphasis on electrical knowledge.

**Main changes**

- Credits for unit standards 1185, 19470 and 19471 were increased to reflect the time taken to learn, practice the skills, and be assessed.
- Unit standard 24890 was increased to 5 credits and increased from Level 2 to Level 3 to reflect a Level 3 capability as actual work is performed without supervision.
- Four unit standards are no longer fit for purpose and were, therefore, designated expiring without replacement.
- Unit standards were updated to align with the current template.
- Guidance information was updated to include current legislation.

**Category D unit standards will expire at the end of December 2024**

**The last date for assessment of superseded versions of Category B unit standards is December 2023**

**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	Electrical Engineering	2	Standard	24890	3

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

All changes are in **bold**.

<b>Key to review category</b>	
<b>A</b>	Dates changed, but no other changes are made - the new version of the standard carries the same ID and a new 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 &gt; Electrical Engineering &gt; Electrical Machines

<b>ID</b>	<b>Title</b>	<b>Level</b>	<b>Credit</b>	<b>Review Category</b>
1184	Test, and locate and diagnose faults in electrical machine windings <b>Test, locate and diagnose faults in electrical machine windings</b>	3	2	B
1185	Prepare electrical machines for rewinding	4	6 <b>8</b>	B
2014	Overhaul a.c. rotating machines and control equipment	4	5	B
5928	Overhaul d.c. rotating machines and control equipment	4	5	D
15865	Demonstrate knowledge of d.c. machines	4	5	D
16413	Fault-find, repair, and test electric motors	4	8	B
16416	Service bearings and seals in electrical rotating machines	2	1	D
18999	Demonstrate advanced knowledge of electrical machines	5	10	D
19469	Demonstrate knowledge of electric machine winding	4	5	B
19470	Rewind electric machines	4	10 <b>15</b>	B
19471	Reassemble and test electric machines following rewinding	4	8 <b>12</b>	B
24890	Lift and transport electrical machines, and associated repair equipment within a motor rewinding workshop environment	2 <b>3</b>	3 <b>5</b>	B