

**Field      Engineering and Technology**

**Review of *Aeronautical Engineering* unit standards**

<b>Subfield</b>	<b>Domain</b>	<b>ID</b>
Aeronautical Engineering	Aircraft Powerplant Maintenance	3401, 3403-3413, 4001, 23159, 28136, 28142, 29134
	Aircraft Powerplant Repair and Overhaul	3402, 3414-3422, 3424, 20635-20637, 23160-23164, 28137, 28143

ServiceIQ has completed the review of the unit standards listed above.

**Date new versions published**

**March 2020**

**Planned review date**

**December 2024**

**Summary**

This is the seventh set of a wider review of all unit standards in the *Aeronautical Engineering* subfield. The review was undertaken in consultation with the Aeronautical Engineering industry which included Air New Zealand, Royal New Zealand Air Force, Air New Zealand Engine Workplace, and Nelson Marlborough Institute of Technology, to ensure the standards' relevance, as the technology associated with aircraft has become more sophisticated. The consultation for the review took place in May 2019.

The initial meeting was held at ServiceIQ in Wellington with industry around a table. The standards were taken back to the workplace and suggestions were made to ServiceIQ regarding changes to be incorporated. The unit standards were checked, and content confirmed that these standards reflect the needs of the aeronautical engineering industry and are in line with international regulatory requirements.

**Main changes**

- Unit standards were transferred to the current template and terminology was updated accordingly.
- Outcomes, performance criteria, range statements, and guidance information were updated to reflect the needs of the aeronautical engineering industry, and in line with international regulatory requirements.
- Stems of some of range statements were amended.
- Titles for some standards were amended to better reflect the content.

**The last date for assessment of superseded versions of Category B unit standards is December 2021**

**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 > Aeronautical Engineering > Aircraft Powerplant Maintenance

ID	Title	Level	Credit	Review Category
3401	Assemble aircraft propellers after shipment	4	3	B
3403	Inspect aircraft engines	4	6	B
3404	Maintain aircraft gas turbine auxiliary power units	4	15	B
3405	Maintain aircraft engine fuel systems	4	10	B
3406	Maintain aircraft engine lubrication systems	4	5	B
3407	Maintain aircraft fire protection systems	4	5	B
3408	Maintain aircraft gearboxes and/or transmissions <b>Maintain aircraft gearboxes or transmissions</b>	4	15	B
3409	Maintain aircraft variable pitch propellers and propeller systems	4	15	B
3410	Maintain aircraft reciprocating powerplants	4	20	B
3411	Maintain aircraft gas turbine engine power augmentation or restoration systems	4	4	B
3412	Maintain aircraft gas turbine engine thrust reverser systems	4	5	B
3413	Maintain aircraft gas turbine powerplants	4	20	B
4001	Maintain aircraft engine ignition systems	4	4	B
23159	Maintain aircraft fixed pitch and/or ground adjustable propellers <b>Maintain aircraft fixed pitch or ground adjustable propellers</b>	4	5	B
28136	Demonstrate knowledge of aircraft gas turbine powerplant maintenance practices	4	10	B
28142	Demonstrate knowledge of aircraft reciprocating powerplant maintenance practices	4	8	B
29134	Describe aircraft powerplant maintenance practices	3	10	B

Engineering and Technology > Aeronautical Engineering > Aircraft Powerplant Repair and Overhaul

ID	Title	Level	Credit	Review Category
3402	Balance aeronautical rotating assemblies	3	4	B
3414	Repair and/or overhaul aircraft fixed pitch propeller assemblies <b>Repair or overhaul aircraft fixed pitch propeller assemblies</b>	4	12	B
3415	Repair and/or overhaul aircraft gas turbine engine fuel system components <b>Repair or overhaul aircraft gas turbine engine fuel system components</b>	4	12	B
3416	Repair and/or overhaul aircraft reciprocating engine fuel system components <b>Repair or overhaul aircraft reciprocating engine fuel system components</b>	4	12	B
3417	Repair and/or overhaul aircraft gas turbine engine fuel control units <b>Repair or overhaul aircraft gas turbine engine fuel control units</b>	4	12	B
3418	Repair and/or overhaul aircraft gearboxes and transmissions <b>Repair or overhaul aircraft gearboxes and transmission components</b>	4	15	B

ID	Title	Level	Credit	Review Category
3419	Repair and/or overhaul aircraft engine lubrication system components <b>Repair or overhaul aircraft engine lubrication system components</b>	4	8	B
3420	Repair and/or overhaul aircraft reciprocating engines <b>Repair or overhaul aircraft reciprocating engines</b>	4	25	B
3421	Repair and/or overhaul aircraft gas turbine engine power augmentation or restoration system components <b>Repair or overhaul aircraft gas turbine engine power augmentation or restoration system components</b>	4	4	B
3422	Repair and/or overhaul aircraft gas turbine engine thrust reverser system components <b>Repair or overhaul aircraft gas turbine engine thrust reverser system components</b>	4	4	B
3424	Repair and/or overhaul aircraft variable pitch propeller assemblies <b>Repair or overhaul aircraft variable pitch propeller assemblies</b>	4	20	B
20635	Test aircraft reciprocating powerplants on a test bed	5	6	B
20636	Test aircraft turbo-prop or turbo-shaft powerplants on a test bed	5	24	B
20637	Test aircraft turbo-fan or turbo-jet powerplants on a test bed	5	20	B
23160	Install, operate, and remove aircraft powerplants from a test bed	4	8	B
23161	Repair and/or overhaul aircraft gas turbine compressor sections <b>Repair or overhaul aircraft gas turbine compressor sections</b>	4	20	B
23162	Repair and/or overhaul aircraft gas turbine combustion sections <b>Repair or overhaul aircraft gas turbine combustion sections</b>	4	20	B
23163	Repair and/or overhaul aircraft powerplant turbine sections <b>Repair or overhaul aircraft powerplant turbine sections</b>	4	20	B
23164	Disassemble and assemble aircraft gas turbine engines	4	15	B
28137	Demonstrate knowledge of aircraft gas turbine powerplant repair and overhaul practices	4	5	B
28143	Demonstrate knowledge of aircraft reciprocating powerplant repair and overhaul practices	4	5	B