

Field Engineering and Technology**Review of *Aeronautical Engineering* unit standards**

Subfield	Domain	ID
Aeronautical Engineering	Aircraft Mechanical Maintenance	3918-3922, 3924, 3925, 27855, 27859, 27862, 27863, 27865, 27867, 27872
	Aircraft Mechanical Repair and Overhaul	3932, 3933, 3936, 27874-27876
	Aircraft Powerplant Maintenance	3403, 3405, 3406, 3408-3410, 3412, 4001, 23159, 27856-27858, 27860, 27861, 27866, 27868, 27871, 27873
	Aircraft Structures	4074, 27864
	Helicopter Maintenance	4051, 4052, 27869, 27870

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

Date new versions published

July 2014

Planned review date

December 2018

Summary

This is part one of the second stage of a review of all unit standards in the *Aeronautical Engineering* subfield. The review was undertaken in consultation with the aeronautical engineering industry as part of a scheduled review. Aircraft technology has become more sophisticated, and certain skills were not covered by existing unit standards. New unit standards were developed to cover these skills.

Main changes

- Outcomes, evidence requirements, range statements, and explanatory notes were updated to reflect the needs of the aeronautical engineering industry and in line with international regulatory requirements.
- Standards 27855-27876 were designated expiring.
- Standards 28139 and 28140 replaced standard 4074.
- Standard 28144 was developed to fill a specialist area.
- Credits were changed to better reflect the time taken for learning and assessment.
- Standard setting body details were updated following the merging of the Aviation, Tourism and Travel Training Organisation and ServiceIQ.

The last date for assessment of superseded versions of these standards is 31 December 2016. Results will not be accepted where the assessment date is after the last date for assessment of the superseded version of the standard.

Category C and D unit standards will expire at the end of December 2018

Impact on existing organisations with consent to assess

Current consent for			Consent extended to		
Nature of consent	Classification or ID	Level	Nature of consent	Classification or ID	Level
Standard	4074	4	Standard	28139, 28140	5

Impact on Consent and Moderation Requirements (CMR)

None.

Impact on registered qualifications

Key to type of impact	
Affected	The qualification lists a reviewed classification (domain or subfield) in an elective set The qualification lists a standard that has changes to level or credits The qualification lists a C or D category standard
Not materially affected	The qualification lists a standard that has a new title The qualification lists a standard that has a new classification

The following ServiceIQ qualifications are impacted by the outcome of this review and will be updated when they are reviewed as part of the Targeted Review of Qualifications process. The standards that generated the status *Affected* are listed in **bold**.

Ref	Qualification Title	ID
0381	National Certificate in Aeronautical Engineering (Related Technology)	4074
0742	National Certificate in Aeronautical Engineering (Aircraft Manufacture)	4074
1366	National Certificate in Aeronautical Engineering (Gas Turbine Overhaul)	3403, 3405, 3406, 3408, 3412, 4001

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 > Aeronautical Engineering > Aircraft Mechanical Maintenance

ID	Title	Level	Credit	Review Category
3918	Maintain aircraft air conditioning and pressurisation systems	4	12 20	B
3919	Maintain aircraft mechanical flight control systems	4	12 20	B
3920	Maintain aircraft fuel storage and distribution systems	4	12 20	B

ID	Title	Level	Credit	Review Category
3921	Maintain aircraft landing gear systems	4	12 20	B
3922	Maintain aircraft hydraulic systems	4	12 20	B
3924	Maintain aircraft pneumatic systems Maintain aircraft engine air systems	4	10 15	B
3925	Maintain aircraft mechanical ice and rain protection systems	4	4 6	B
27855	Demonstrate introductory skills to maintain aircraft air conditioning and pressurisation systems	3	8	D
27859	Demonstrate introductory skills to maintain aircraft fuel storage and distribution systems	3	8	D
27862	Demonstrate introductory skills to maintain aircraft hydraulic systems	3	8	D
27863	Demonstrate introductory skills to maintain aircraft landing gear systems	3	6	D
27865	Demonstrate introductory skills to maintain aircraft engine air systems	3	10	D
27867	Demonstrate introductory skills to maintain aircraft mechanical flight control systems	3	8	D
27872	Demonstrate introductory skills to maintain aircraft mechanical ice and rain protection systems	3	4	D
28144	Maintain aircraft air conditioning systems	4	15	New

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

ID	Title	Level	Credit	Review Category
3932	Repair and/or overhaul aircraft brake units	4	8 10	B
3933	Repair and/or overhaul aircraft hydraulic system components	4	15	B
3936	Repair and/or overhaul aircraft wheel assemblies	4	6 8	B
27874	Demonstrate introductory skills to repair and/or overhaul aircraft wheel assemblies	3	4	D
27875	Demonstrate introductory skills to repair and/or overhaul aircraft brake units	3	4	D
27876	Demonstrate introductory skills to repair and/or overhaul aircraft hydraulic system components	3	8	D

Engineering and Technology > Aeronautical Engineering > Aircraft Powerplant Maintenance

ID	Title	Level	Credit	Review Category
3403	Inspect aircraft engines	4	6	B
3405	Maintain aircraft engine fuel systems	4	8 10	B

ID	Title	Level	Credit	Review Category
3406	Maintain aircraft engine lubrication systems	4	4 5	B
3408	Maintain aircraft gearboxes and/or transmissions	4	15	B
3409	Maintain aircraft variable pitch propellers and propeller systems	4	10 15	B
3410	Maintain aircraft reciprocating powerplants	4	20	B
3412	Maintain aircraft gas turbine engine thrust reverser systems	4	4 5	B
4001	Maintain aircraft engine ignition systems	4	4	B
23159	Maintain aircraft fixed pitch and/or ground adjustable propellers	4	5	B
27856	Demonstrate introductory skills to maintain aircraft engine fuel systems	3	4	D
27857	Demonstrate introductory skills to maintain aircraft engine ignition systems	3	4	D
27858	Demonstrate introductory skills to maintain aircraft engine lubrication systems	3	4	D
27860	Demonstrate introductory skills to maintain aircraft gearboxes and/or transmissions	3	10	D
27861	Demonstrate introductory skills to maintain aircraft gas turbine powerplants	3	15	D
27866	Demonstrate introductory skills to maintain aircraft reciprocating powerplants	3	15	D
27868	Demonstrate introductory skills to maintain aircraft fixed pitch and/or ground adjustable propellers	3	2	D
27871	Demonstrate introductory skills to inspect aircraft engines	3	4	D
27873	Demonstrate introductory skills to maintain aircraft variable pitch propellers and propeller systems	3	8	D

Engineering and Technology > Aeronautical Engineering > Aircraft Structures

ID	Title	Level	Credit	Review Category
4074	Visually inspect aircraft metal and composite structures	4	5	C
28139	Visually inspect aircraft composite structures	4	5	
28140	Visually inspect aircraft metal structures	4	5	
27864	Demonstrate introductory skills to visually inspect aircraft metal and composite structures	3	5	D

Engineering and Technology > Aeronautical Engineering > Helicopter Maintenance

ID	Title	Level	Credit	Review Category
4051	Maintain helicopter drive trains	4	8 10	B

ID	Title	Level	Credit	Review Category
4052	Maintain helicopter flight control systems	4	12 20	B
27869	Demonstrate introductory skills to maintain helicopter drive trains	3	5	D
27870	Demonstrate introductory skills to maintain helicopter flight control systems	3	8	D