

Field **Engineering and Technology**

Review of *Aeronautical Engineering* - Core unit standards

Subfield	Domain	ID
Aeronautical Engineering	Aeronautical Engineering - Core	3894-3900, 5428, 7245-7247, 27731, 28030-28032, 28034, 28035, 28037-28039, 28463-28471, 29818-29820

ServicelQ 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 fifth set 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. A new unit standard was developed to cover these skills.

Main changes

- Outcome statements of some unit standards were updated to reflect the needs of the aeronautical engineering industry.
- Guidance information was updated in all unit standards to align with international regulatory requirements.
- Range statements of some standards were adjusted to clearly specify requirements for assessment.
- A new unit standard was developed to fill specialist areas related to safety management systems for an aviation environment.
- Titles of unit standards 28030, 28037, 28039 and 29820 were updated to accurately reflect the content of unit standards.

The last date for assessment of superseded versions of Category B unit standards is December 2021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

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 > Aeronautical Engineering - Core

ID	Title	Level	Credit	Review category
3894	Use aeronautical industry publications and documentation	3	10	B
3895	Apply aeronautical engineering maintenance practices	3	10	B

ID	Title	Level	Credit	Review category
3896	Select, use, and maintain aeronautical engineering tools and equipment	3	12	B
3897	Apply avionic trade practices	4	10	B
3898	Demonstrate knowledge of aircraft instrument systems	4	10	B
3899	Demonstrate knowledge of aircraft radio communications and navigation systems	4	10	B
3900	Demonstrate knowledge of aircraft electrical systems	4	10	B
5428	Demonstrate knowledge of aircraft construction and maintenance practices	3	14	B
7245	Demonstrate knowledge of avionic electronic theory	4	20	B
7246	Apply avionic repair skills	4	18	B
7247	Apply avionic maintenance practices	4	20	B
27731	Demonstrate knowledge of working within an aeronautical engineering workplace	3	4	B
28030	Demonstrate knowledge of composite materials used in aircraft structure Demonstrate knowledge of composite materials and components used in aircraft structure	3	6	B
28031	Demonstrate knowledge of human performance in aeronautical engineering	3	5	B
28032	Apply aeronautical engineering work and safety practices	3	10	B
28034	Demonstrate knowledge of non-complex aircraft alternating current (AC) electrical systems	3	4	B
28035	Interpret and use non-complex aircraft direct current (DC) electrical load circuit diagrams to repair faults	3	4	B
28037	Apply troubleshooting techniques to locate avionic defects Apply troubleshooting techniques to locate avionic defects in aeronautical engineering	5	10	B
28038	Demonstrate knowledge of troubleshooting techniques to locate mechanical and electrical defects	3	5	B
28039	Apply troubleshooting techniques to locate mechanical defects Apply troubleshooting techniques to locate mechanical defects in aeronautical engineering	5	10	B
28463	Apply aeronautical engineering knowledge and skills to maintain generic aircraft electrical systems	4	15	B
28464	Apply aeronautical engineering knowledge and skills to maintain generic aircraft fluid systems	4	15	B
28465	Apply aeronautical engineering knowledge and skills to maintain generic aircraft instrument systems	4	15	B
28466	Apply aeronautical engineering knowledge and skills to maintain generic aircraft mechanical systems	4	15	B
28467	Apply aeronautical engineering knowledge and skills to maintain generic aircraft piston engines	4	15	B
28468	Apply aeronautical engineering knowledge and skills to maintain generic aircraft propellers	4	8	B
28469	Apply aeronautical engineering knowledge and skills to maintain generic aircraft radio systems	4	15	B
28470	Apply aeronautical engineering knowledge and skills to maintain generic aircraft turbine engines	4	15	B
28471	Apply aeronautical engineering knowledge and skills to maintain generic helicopter rotors	4	10	B

ID	Title	Level	Credit	Review category
29818	Carry out chemical cleaning process of aeronautical components	4	24	B
29819	Carry out mechanical cleaning process of aeronautical components	4	16	B
29820	Carry out water based cleaning process of aeronautical components Carry out water-based cleaning process of aeronautical components	3	10	B
31990	Demonstrate knowledge of the fundamentals of safety management systems for an aviation environment	4	5	New