

Field Engineering and Technology

Review of *Aeronautical Engineering* unit standards

Subfield	Domain	ID
Aeronautical Engineering	Aeronautical Composites	4020-4024, 23601
	Aircraft Mechanical Maintenance	3918-3922, 3924-3928, 7243, 7244, 20632, 20633, 28144, 30695
	Helicopter Maintenance	4050-4052, 4060-4064, 22888, 22889, 28138
	Helicopter Repair and Overhaul	4053-4059, 17668, 17669

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 first 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. The reviewed unit standards were checked, and content confirmed that they reflect the needs of the aeronautical engineering industry and are in line with international regulatory requirements.

Main changes

- Outcomes, performance criteria, range statements, and guidance information were updated where required to reflect the needs of the aeronautical engineering industry, and in line with international regulatory requirements.
- Standard 31982 was developed to fill specialist areas.
- The titles for unit standards 4053-7, 17768, 17769 and 28138 were updated for clarity.

The last date for assessment of superseded versions of Category B unit standards is December 2021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

ID	Title	Level	Credit	Review Category
4020	Design tooling used to fabricate and repair aeronautical composite components	4	25	B
4021	Manufacture tooling used to fabricate and repair aeronautical composite components	4	35	B

ID	Title	Level	Credit	Review Category
4023	Fabricate and repair composite aeronautical components at room temperature	4	40	B
4024	Fabricate and repair composite aeronautical components at elevated temperatures	4	42	B
23601	Repair composite aeronautical components	4	20	B

Engineering and Technology > Aeronautical Engineering > Aircraft Mechanical Maintenance

ID	Title	Level	Credit	Review Category
3918	Maintain aircraft air conditioning and pressurisation systems	4	20	B
3919	Maintain aircraft mechanical flight control systems	4	20	B
3920	Maintain aircraft fuel storage and distribution systems	4	20	B
3921	Maintain aircraft landing gear systems	4	20	B
3922	Maintain aircraft hydraulic systems	4	20	B
3924	Maintain aircraft engine air systems	4	15	B
3925	Maintain aircraft mechanical ice and rain protection systems	4	6	B
3926	Maintain aircraft in storage	4	6	B
3927	Maintain aircraft water and waste systems	4	8	B
3928	Maintain aircraft windows	4	4	B
7243	Demonstrate knowledge of aircraft mechanical system maintenance practices	4	15	B
7244	Demonstrate knowledge of electrical and electronic applications to aircraft mechanical systems	3	10	B
20632	Trestle or shore an aircraft	4	4	B
20633	Defuel aircraft	4	4	B
28144	Maintain aircraft air conditioning systems	4	15	B
30695	Maintain aircraft electrical fly-by-wire flight control systems	4	10	B

Engineering and Technology > Aeronautical Engineering > Helicopter Maintenance

ID	Title	Level	Credit	Review Category
4050	Maintain helicopter belt-drive systems	4	4	B
4051	Maintain helicopter drive trains	4	10	B
4052	Maintain helicopter flight control systems	4	20	B
4060	Maintain helicopter rescue winches	4	8	B
4061	Assemble and statically balance helicopter rotors	4	4	B
4062	Service a helicopter	4	6	B
4063	Track and dynamically balance helicopter main rotors	4	10	B
4064	Track and dynamically balance helicopter tail rotors	4	8	B
22888	Ground run helicopters	5	10	B
22889	Maintain helicopter emergency floatation systems	4	6	B
28138	Maintain helicopter gearboxes and/or transmissions Maintain helicopter gearboxes or transmissions	4	15	B

Engineering and Technology > Aeronautical Engineering > Helicopter Repair and Overhaul

ID	Title	Level	Credit	Review Category
4053	Repair and/or overhaul helicopter belt-drive components Repair or overhaul helicopter belt-drive components	4	4	B

ID	Title	Level	Credit	Review Category
4054	Repair and/or overhaul helicopter engine cooling fan assemblies Repair or overhaul helicopter engine cooling fan assemblies	4	4	B
4055	Repair and/or overhaul helicopter driveshaft assemblies Repair or overhaul helicopter driveshaft assemblies	4	4	B
4056	Repair and/or overhaul helicopter rotor free-wheel units Repair or overhaul helicopter rotor free-wheel units	4	4	B
4057	Repair and/or overhaul helicopter rotor hubs Repair or overhaul helicopter rotor hubs	4	15	B
4058	Repair helicopter composite rotor blades	4	10	B
4059	Repair helicopter metal rotor blades	4	10	B
17668	Repair and/or overhaul helicopter rescue hoists Repair or overhaul helicopter rescue hoists	4	12	B
17669	Repair and/or overhaul helicopter cargo suspension hooks Repair or overhaul helicopter cargo suspension hooks	4	4	B
31982	Repair or overhaul helicopter gearboxes and transmissions	4	10	New