

FIELD ENGINEERING AND TECHNOLOGY**Review of *Aeronautical Engineering* unit standards**

Subfield	Domain	Id
Aeronautical Engineering	Aeronautical Non Destructive Testing	4084-4097
	Aircraft Furnishings and Equipment	4002-4005, 4007-4011
	Aircraft Servicing	3902, 3904, 3908, 3909, 3911- 3915, 3917, 3929, 3930
	Helicopter Maintenance	4050-4052, 4061
	Helicopter Repair and Overhaul	4053-4059, 17668, 17669

The Aviation, Tourism and Travel Training Organisation has completed the review of the unit standards listed above that were registered in June 1995, April 1996, and October 2000.

Date new versions published

June 2006

Planned review date

December 2011

Summary of review and consultation process

The Aviation, Tourism and Travel Training Organisation (ATTTO) carried out the review following indications from industry that, as there had been no formal review of the unit standards carried out since their original registration, they may no longer be current. These unit standards had passed their anticipated expiry date and required review to consider their relevance and fitness for purpose. Therefore, in conjunction with consultative groups, a review was initiated by the ATTTO.

Expert panels, drawn from representatives from Air New Zealand, the Royal New Zealand Air Force, Christchurch Engine Centre, Flightline Aviation Limited, Safe Air Limited, Hawker Pacific and the Civil Aviation Authority of New Zealand, were selected to determine the skills and knowledge required for the Aeronautical Non Destructive Testing (NDT), Aircraft Furnishings and Equipment, Aircraft Servicing, Helicopter Maintenance, and Helicopter Repair and Overhaul domains; discuss whether the existing unit standards would still be fit for purpose; and to identify any gaps where further unit standards would need to be developed due to the advancement of technology.

Drafts of new and reviewed unit standards were circulated, through the expert panel, to wider industry for feedback. All feedback was considered, and where appropriate, incorporated into the unit standards. Several drafts were developed in order to accommodate the needs of as many stakeholders as possible; the Aeronautical Engineering Advisory Group then endorsed these. The review was used to address issues of currency, accuracy, and changes in technology.

Please note that this is the fourth stage of several to review all of the unit standards in the Aeronautical Engineering subfield.

Main changes resulting from the review

The review process has resulted in the following changes to the unit standards:

- Unit standards 4084, 4088, 4089, and 4090 have had performance criteria moved from element 2 to element 1.
- Amendments have been made to titles, elements, performance criteria, entry information, and special notes.
- The level of unit standard 3904 has been increased to more accurately reflect the level of the learning required.
- The credit value of unit standards 4052, 4057, and 17669 has been increased to more accurately reflect the content and amount of time taken to assess against the unit standards.
- Unit standards 22888 and 22889 have been developed to fill a gap in the skills base.
- Unit standards have been updated to incorporate industry and technological advances.

Impact on existing provider accreditations

None.

Impact on Accreditation and Moderation Action Plan (AMAP)

None.

Impact on existing qualifications

Qualifications that contain the reviewed standards or classifications are tabled below.

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

In the following tables, qualifications that contain unit standards and classifications in both categories are identified in the *Affected* table, with the items that generated the *Affected* status in **bold**.

The following Aviation, Tourism and Travel Training Organisation qualifications are affected by the outcome of this review and will be reviewed in 2006 following the completion of the review of the unit standards in the Aeronautical Engineering subfield.

Qualification title	Classification or standard in the qualification
National Certificate in Aircraft Servicing [Ref: 0171]	3904
National Certificate in Aeronautical Engineering (Aircraft Manufacture) [Ref: 0742]	4086

Summary of main changes to standards' Ids, classification, titles, levels, and credits

The following summary shows the changes made to the standards as a result of the review. 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

Subfield Aeronautical Engineering
 Domain Aeronautical Non Destructive Testing

Id	Title	Level	Credit	Review Category
4084	Carry out non destructive testing (NDT) inspections using eddy current methods Carry out aeronautical NDT inspections using eddy current methods	4	28	B
4085	Carry out non destructive testing (NDT) inspections using radiographic gamma ray methods Carry out aeronautical NDT inspections using radiographic gamma ray methods	4	28	B
4086	Carry out non destructive testing (NDT) inspections using liquid penetrant methods Carry out aeronautical NDT inspections using liquid penetrant methods	4	10	B
4087	Carry out non destructive testing (NDT) inspections using magnetic particle methods Carry out aeronautical NDT inspections using magnetic particle methods	4	10	B
4088	Carry out non destructive testing (NDT) inspections using ultrasonic testing methods Carry out aeronautical NDT inspections using ultrasonic testing methods	4	28	B
4089	Carry out optically aided non destructive testing (NDT) inspections Carry out optically aided aeronautical NDT inspections	4	12	B
4090	Carry out non destructive testing (NDT) inspections using radiographic x-ray methods Carry out aeronautical NDT inspections using radiographic x-ray methods	4	28	B
4091	Evaluate and interpret test indications found using eddy current non destructive testing (NDT) methods Evaluate and interpret test indications found using eddy current NDT methods	5	83	B

Id	Title	Level	Credit	Review Category
4092	Evaluate and interpret indications found using radiographic gamma ray non destructive testing (NDT) methods Evaluate and interpret indications found using radiographic gamma ray NDT methods	5	83	B
4093	Evaluate and interpret indications found using liquid penetrant non destructive testing (NDT) methods Evaluate and interpret indications found using liquid penetrant NDT methods	5	20	B
4094	Evaluate and interpret indications found using magnetic particle non destructive testing (NDT) methods Evaluate and interpret indications found using magnetic particle NDT methods	5	28	B
4095	Evaluate and interpret indications found using ultrasonic non destructive testing (NDT) methods Evaluate and interpret indications found using ultrasonic NDT methods	5	83	B
4096	Evaluate and interpret test indications found using optically aided non destructive testing (NDT) methods Evaluate and interpret test indications found using optically aided NDT methods	5	12	B
4097	Evaluate and interpret indications found using radiographic x-ray non destructive testing (NDT) methods Evaluate and interpret indications found using radiographic x-ray NDT methods	5	83	B

Domain Aircraft Furnishings and Equipment

Id	Title	Level	Credit	Review Category
4002	Repair aircraft incubators	4	4	B
4003	Fabricate and/or repair aircraft carpets	4	8	B
4004	Maintain and/or repair aircrew flying clothing and associated equipment	4	15	B
4005	Maintain inflatable aeronautical safety equipment	4	15	B
4007	Maintain aircraft cabin and crew seats	4	8	B
4008	Fabricate and/or repair aircraft medical stretchers	4	4	B
4009	Apply plastic trim to aircraft interiors	4	4	B
4010	Fabricate and/or repair fabric items for aircraft interiors	4	8	B
4011	Fabricate and/or repair aircraft seat belts and harness assemblies	4	8	B

Domain Aircraft Servicing

Id	Title	Level	Credit	Review Category
3902	Clean the gas path of aircraft gas turbine engines	3	2	B
3904	Compensate aircraft compasses	3 4	2	B
3908	Replenish aircraft undercarriage oleos (shock struts)	3	2	B
3909	Replenish aircraft engine power augmentation or restoration systems	3	2	B
3911	Replenish aircraft hydraulic systems	3	2	B
3912	Replenish aircraft de-icing systems	3	2	B
3913	Replenish aircraft liquid oxygen systems	3	2	B
3914	Replenish aircraft gaseous oxygen systems	3	2	B
3915	Replenish aircraft pneumatic systems	3	2	B
3917	Transport aircraft	4	4	B
3929	Prepare aircraft for storage	3	8	B
3930	Remove aircraft from storage and prepare for service	3	4	B

Domain Helicopter Maintenance

Id	Title	Level	Credit	Review Category
4050	Maintain helicopter belt-drive systems	4	4	B
4051	Maintain helicopter drive trains	4	8	B
4052	Maintain helicopter flight control systems	4	8 12	B
4061	Assemble and statically balance helicopter rotors	4	4	B
22888	Ground run helicopters	5	10	New
22889	Maintain helicopter emergency floatation systems	4	4	New

Domain Helicopter Repair and Overhaul

Id	Title	Level	Credit	Review Category
4053	Repair and/or overhaul helicopter belt-drive components	4	4	B
4054	Repair and/or overhaul helicopter engine cooling fan assemblies	4	4	B
4055	Repair and/or overhaul helicopter driveshaft assemblies	4	4	B
4056	Repair and/or overhaul helicopter rotor free-wheel units	4	4	B
4057	Repair and/or overhaul helicopter rotor hubs	4	8 12	B
4058	Repair helicopter composite rotor blades	4	8	B
4059	Repair helicopter metal rotor blades	4	8	B
17668	Repair and/or overhaul helicopter rescue hoists	4	12	B
17669	Repair and/or overhaul helicopter cargo suspension hooks	4	2 4	B