



**Australian Government**  
**Civil Aviation Safety Authority**

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I, SHANE PATRICK CARMODY, Acting Director of Aviation Safety, on behalf of CASA, make this instrument under regulation 33B and subregulations 42ZC (6), 230 (4) and 308 (1) of the *Civil Aviation Regulations 1988*.

**[Signed S. Carmody]**

Shane Carmody  
Acting Director of Aviation Safety and  
Chief Executive Officer

17 August 2007

**Civil Aviation Order 100.66 Amendment Order (No. 1) 2007**

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**1 Name of instrument**

This instrument is the *Civil Aviation Order 100.66 Amendment Order (No. 1) 2007*.

**2 Commencement**

- (1) Subject the subsection (2), this instrument commences on the day after it is registered.
- (2) The amendments in items 31, 32, 33 and 36 of Schedule 1 (the *new knowledge requirements*) commence immediately after the commencement of amendments to Appendix 6 of Civil Aviation Order 100.66 that insert units of competency for the new knowledge requirements.

*Note* The units of competency for the new knowledge requirements are being developed by the State and Territory authorities responsible for the Australian Quality Training Framework and will be incorporated within amendments to Appendix 6 of Civil Aviation Order 100.6. These amendments are expected to be made by *Civil Aviation Order 100.66 Amendment Order (No. 2) 2007*.

**3 Amendment of Civil Aviation Order 100.66**

Schedule 1 amends Civil Aviation Order 100.66.

## Schedule 1      Amendment

### [1]      Paragraph 2.1, definition of *avionic system*

*substitute*

***avionics system*** means an aircraft system that transfers or stores analogue or digital data using a wireless, data line or other data transmission medium, and includes the system's components and connectors. Examples of avionics systems include the following:

- (a) autoflight systems (but not including mechanical aspects);
- (b) communication or navigation systems;
- (c) instrument systems;
- (d) in-flight entertainment systems;
- (e) integrated modular avionics (IMA) systems;
- (f) cabin intercommunication data systems;
- (g) cabin network service systems;
- (h) on-board maintenance systems;
- (i) information systems such as air traffic and information management systems and network server systems;
- (j) fly-by-wire systems;
- (k) fibre optic control system.

### [2]      Paragraph 2.1, definition of *complex aircraft*

*substitute*

***complex aircraft*** means an aircraft that CASA considers is a complex aircraft, and lists in an AAC, after taking into account aviation complexity factors including certificated maximum passenger seating capacity, operational ceiling, multi-crew requirements, design philosophy, engine type, and technology such as fly-by-wire control systems.

### [3]      Paragraph 2.1, definition of *examiner, or knowledge examiner, after subparagraph (d)*

*insert*

; (e) conducts RPL evaluations.

### [4]      Paragraph 2.1, definition of *rating*

*after*

***rating***

*insert*

, which includes a restricted rating,

[5] **Paragraph 2.1, new definitions: *excluded State, recognised State, restricted rating***

*insert*

***excluded State*** means a State that CASA considers may not maintain appropriate standards for the issue of maintenance authorisations, however described.

*Note* CASA lists excluded States in an AAC.

***recognised State*** means a State that CASA considers maintains appropriate standards for the issue of authorisations of a kind to which section 4.2 of Annex 1 to the Chicago Convention applies.

*Note 1* Annex 1 to the Chicago Convention deals with personnel licensing.

*Note 2* CASA lists the recognised States in an AAC.

***restricted rating*** means a rating restricted as described in the course plan in accordance with subparagraph 15.7 (c) (iii).

[6] **Paragraph 2.3**

*omit*

For this Order,

*insert*

Subject to paragraphs 2.5 and 2.6, for this Order,

[7] **After paragraph 2.4**

*insert*

2.5 For assessment for a rating, a ***practical/competency assessor*** is an employee of a recognised organisation who:

- (a) meets the minimum qualifications and experience standards set out in the recognised organisation's exposition for an assessor for the rating, including the standards for:
  - (i) planning and organising assessment; and
  - (ii) assessing competence; and
  - (iii) participating in assessment validation; and
- (b) has the minimum relevant vocational or equivalent competencies for the rating that is being assessed, as set out in the exposition; and
- (c) is appointed by the recognised organisation to conduct the assessment for the rating.

*Note* If no standards are set out in the exposition for an assessor for a particular rating, the recognised organisation may not assess for the rating.

- 2.6 For the conduct of RPL evaluations for paragraph 2.5, a *practical/competency assessor* is an employee of a recognised organisation who:
- (a) meets the minimum qualifications and experience standards set out in the recognised organisation's exposition for the conduct of RPL evaluations as part of the assessment for a rating; and
  - (b) is appointed by the recognised organisation to conduct the RPL evaluations.

*Note* If no standards are set out in the exposition for RPL evaluations as part of an assessment for a particular rating, the recognised organisation may not use RPL in assessment for the rating.

**[8] Subparagraph 10.3 (b)**

*omit*

in spite of subparagraph (a),

**[9] After paragraph 10.5**

*insert*

- 10.6 The holder of an authority in subcategory B1.1, B1.2, B1.3 or B1.4 may issue a certificate of release to service following completion of maintenance that is 1 or more of the following for an aircraft to which the subcategory applies:

- (a) starting or running an engine;
- (b) boroscoping an engine;
- (c) rigging of flight controls;
- (d) structural inspection and repair of airframe;

only if:

- (e) the aircraft is maintained by a CAR 30 organisation; and
- (f) the holder of the authority has completed a course of training or experience that gives him or her sufficient knowledge of the aircraft's controls, systems, engines or airframe to ensure that the maintenance does not endanger any person or damage the aircraft.

*Note* Generally, the CAR 30 organisation's satisfaction that the holder has the requisite qualifications and experience will be indicative that the holder has sufficient knowledge.

- 10.7 For subregulation 230 (4) of CAR 1988, the holder of an authority in subcategory B1.3 or B1.4 is authorised to start and run a helicopter engine in connection with carrying out helicopter maintenance, or the provision of helicopter maintenance training, only if the holder may issue a certificate of release to service for the aircraft under paragraph 10.6.

**[10] After subparagraph 13.6 (c)**

*insert*

- ; or (d) if the applicant already holds an authority for a category or subcategory mentioned in subparagraph (a), (b) or (c) and applies for another category or subcategory — for the category or subcategory applied for:
- (i) have accumulated at least *N* years of practical maintenance experience on operating aircraft; and
- Note* ‘*N*’ is defined in paragraph 13.6A.
- (ii) hold each unit of competency listed and coded in Appendix 6 that is marked X or indicated as its alternative for the other category or subcategory; and
  - (iii) before holding a unit of competency mentioned in sub-subparagraph (ii), hold the qualifications or units of competency that are prerequisites for the unit; or
- (e) if the applicant already holds an aircraft maintenance engineer licence under regulation 31 of CAR 1988 and applies for a category or subcategory mentioned in subparagraph (a), (b) or (c) — for the category or subcategory applied for:
- (i) have accumulated at least *N* years of practical maintenance experience on operating aircraft; and
- Note* ‘*N*’ is defined in paragraph 13.6A.
- (ii) hold each unit of competency listed and coded in Appendix 6 that is marked X or indicated as its alternative for the category or subcategory; and
  - (iii) before holding a unit of competency mentioned in sub-subparagraph (ii), hold the qualifications or units of competency that are prerequisites for the unit.

13.6A In sub-subparagraphs 13.6 (d) (i) and (e) (i), *N* is calculated by the formula:

$$A - B = N$$

where:

- (a) *A* is the minimum number of years of practical maintenance experience mentioned in sub-subparagraph 13.6 (a) (i), (b) (i) or (c) (i) as required for the category or subcategory applied for; and
- (b) *B* is the number of years of practical maintenance experience the applicant accumulated on operating aircraft to qualify, and after qualifying, for the category or subcategory, or the aircraft maintenance engineer licence, that the applicant already holds; and
- (c) *N* is deemed to be zero years if it is 0 or a negative number.

*Note* For example, under sub-subparagraph 13.6 (c) (i), an applicant must have accumulated at least 4 years of practical maintenance experience. If the applicant under subparagraph 13.6 (e) took 4 years to qualify for an aircraft maintenance engineer licence under regulation 31 of CAR 1988 and has a further 5 years’ relevant experience, the formula  $A - B = N$  applied becomes  $4 - 9 = -5$  and no further experience is required to qualify for the category or subcategory.

**[11] Subparagraph 13.7 (a)**

*substitute*

- (a) an applicant for a subcategory B1.1 authority is not required to demonstrate, by examination, knowledge of propellers in accordance with item 17 in Part 2 of Appendix 4 unless the authority is to include propellers; and

**[12] After subparagraph 13.7 (b)**

*insert*

- (c) an applicant for a subcategory B1.2 authority is not required to demonstrate, by examination, knowledge of high speed flight in accordance with subitem 11.1.2 of subject module 11 in Part 3 of Appendix 4.

**[13] After paragraph 13.14**

*insert*

**13A Recognition of ADF authorisations for a category or subcategory**

An applicant for a category or subcategory of an authority is taken to comply with subsection 13 for the category or subcategory if:

- (a) he or she holds, or has held, an aircraft maintenance authorisation issued by the Australian Defence Force (*ADF authorisation*); and
- (b) the ADF authorisation corresponds to the category or subcategory applied for; and
- (c) within the 2 years immediately before the application, the person exercised for at least 6 months privileges under the ADF authorisation equivalent to those of a holder of the category or subcategory applied for; and
- (d) a recognised organisation certifies to CASA that the applicant meets the requirements of subsection 13 (other than paragraph 13.12); and
- (e) if the person no longer holds the ADF authorisation, CASA is satisfied that it was not cancelled or revoked for any reason involving fault by the person.

**[14] Subparagraph 14.1 (a)**

*substitute*

- (a) he or she holds, or has held:
  - (i) an authorisation, of a kind to which section 4.2 of Annex 1 to the Chicago Convention applies, other than an authorisation issued by an excluded State; or
  - (ii) an aircraft maintenance authorisation, issued by the national defence force of a Contracting State, other than an authorisation issued by the national defence force of an excluded State; and

**[15] Subparagraph 14.1 (d)**

*substitute*

(d) either:

- (i) the authorisation is, or was, one mentioned in sub-subparagraph (a) (i) and was issued by the NAA of a recognised State; or
- (ii) a recognised organisation certifies to CASA that the applicant meets the requirements of subsection 13 (other than paragraph 13.12); and

(e) if the person no longer holds the authorisation mentioned in sub-subparagraph (a) (i) or (a) (ii) — CASA is satisfied that it was not cancelled or revoked for any reason involving fault by the person.

**[16] Paragraph 14.2**

*omit*

subparagraph 14.1 (a)

*insert*

sub-subparagraph 14.1 (a) (i)

**[17] Subparagraph 14.2 (c)**

*substitute*

(c) either:

- (i) the foreign company authorisation mentioned in subparagraph (a) was issued by a company in a recognised State; or
- (ii) a recognised organisation certifies to CASA that the applicant's foreign company authorisation is not from an excluded State and that he or she meets the requirements of subsection 13 (other than paragraph 13.12).

**[18] Paragraph 15.4**

*omit*

For paragraph 15.3,

*insert*

Subject to paragraph 15.7, for paragraph 15.3,

**[19] Paragraph 15.6**

*omit*

For paragraph 15.2,

*insert*

Subject to paragraph 15.7, for paragraph 15.2,

**[20] After paragraph 15.6**

*insert*

15.7 The training and assessment for a restricted rating for an aircraft type may be in:

- (a) a subset of the theoretical elements mentioned in Part 2 of Appendix 7 that are indicated for the category or subcategory by the numerical level of the type training; and
- (b) the corresponding practical elements mentioned in Part 3 of Appendix 7 that are appropriate for the category or subcategory and the rating;

only if the recognised organisation:

- (c) provides in the course plan a description of:
  - (i) the training and assessment in the subset of theoretical elements and its corresponding practical elements; and
  - (ii) the persons eligible to undertake the training and assessment; and
  - (iii) the restrictions for the rating to which the training and assessment relates; and
- (d) ensures that all documents required under this Order in connection with the training and assessment describe the rating as a restricted rating.

**[21] Sub-subparagraph 16 (b) (i)**

*substitute*

- (i) he or she holds, or has held, an authorisation of a kind to which section 4.2 of Annex 1 to the Chicago Convention applies, other than an authorisation issued by an excluded State; and

**[22] Sub-subparagraph 16 (b) (ii)**

*omit*

holds a rating

*insert*

holds, or has held, a rating

**[23] Sub-subparagraph 16 (b) (iii)**

*omit*

or

*insert*

and

- (iv) if any authorisation or rating mentioned in sub-subparagraph 16 (b) (i) or (ii) is no longer held by the person — satisfies CASA that it was not cancelled or revoked for any reason involving fault by the person; or

**[24] Sub-subparagraph 16 (c) (i)**

*omit*

holds a current authorisation,

*insert*

holds, or has held, an authorisation

**[25] Sub-subparagraph 16 (c) (iv)**

*substitute*

- (iv) if any authorisation mentioned in sub-subparagraph 16 (c) (i) or (ii) is no longer held by the person — satisfies CASA that it was not cancelled or revoked for any reason involving fault by the person; or
- (d) he or she holds, or has held:
  - (i) an aircraft maintenance authorisation issued by:
    - (A) the Australian Defence Force; or
    - (B) the national defence force of a Contracting State other than an authorisation issued by the national defence force of an excluded State; and
  - (ii) a rating-equivalent endorsed on the authorisation that corresponds to the rating sought; and
  - (iii) within the 2 years immediately before the application to CASA, exercised for at least 6 months privileges under the rating-equivalent that were equivalent to those exercised by the holder of an authority endorsed with the rating; and
  - (iv) if any authorisation or a rating-equivalent mentioned in sub-subparagraph 16 (d) (i) or (ii) is no longer held by the person — satisfies CASA that it was not cancelled or revoked for any reason involving fault by the person.

**[26] Appendix 2, new ATA chapter designators of maintenance**

*insert (in the appropriate numerical position)*

- 05 Time limits and maintenance checks
- 18 Vibration and noise analysis (blade tracking)
- 22 Autoflight
- 70 Standard practices-engines
- 81 Turbines
- 82 Water injections
- 83 Accessory gear-boxes
- 84 Propulsion augmentation

**[27] Appendix 2, Note 2**

*omit*

within ATA chapters

**[28] Appendix 3, new ATA chapter designators of maintenance**

*omit*

25 Equipment — furnishing (electronic emergency equipment and cabin entertainment equipment)

*insert (in the appropriate numerical position)*

05 Time limits and maintenance checks

25-60 Equipment — furnishing (electronic emergency equipment and cabin entertainment equipment)

42 Integrated modular avionics

46 Information Systems

**[29] Appendix 4, Part 3, Module 3**

*omit*

3.13 C theory

*insert*

3.13 AC theory

**[30] Appendix 4, Part 3, Module 11, the heading**

*substitute*

**Module 11 Aeroplane aerodynamics, structures and systems**

	<b>Level of knowledge for the category</b>		
	<b>A1</b>	<b>B1.1</b>	<b>B2</b>
<b>A2</b>	<b>B1.2</b>		

**[31] Appendix 4, Part 3, Module 11, subitem 11.5.1, Instrument systems**

*after*

Angle of attack indication, stall warning systems;

*insert*

Glass cockpit;

**[32] Appendix 4, Part 3, Module 11**

*add at the end*

<b>11.19 Integrated modular avionics (ATA42)</b>	<b>1</b>	<b>2</b>	—
Functions that may be typically integrated in the integrated modular avionics (IMA) modules include: bleed management, air pressure control, air ventilation and control, avionics and cockpit ventilation control, temperature control, air traffic communication, avionics communication router, electrical load management, circuit breaker monitoring, electrical system BITE, fuel management, braking control, steering control, landing gear extension and retraction, tyre pressure indication, oleo pressure indication, brake temperature monitoring.			
<b>11.20 Cabin intercommunication data systems (ATA44)</b>	<b>1</b>	<b>2</b>	—
These systems provide an interface between cockpit/cabin crew and cabin systems. These systems support data exchange of the different related LRU's and they are typically operated via flight attendant panels.			
<b>11.21 Cabin network service (ATA44)</b>	<b>1</b>	<b>2</b>	—
Typically consists on a server, typically interfacing with, among others, the following systems: (a) data or radio communication systems; (b) in-flight entertainment system. The cabin network service may host functions such as the following: (a) pre-departure or departure reports; (b) e-mail or intranet and internet access; (c) passenger database.			
<b>11.22 Information systems such as Air Traffic and Information Management Systems and Network Server Systems (ATA46)</b>	<b>1</b>	<b>2</b>	—

**[33] Appendix 4, Part 3, Module 12, item 12.17**

*substitute*

<b>12.17 Integrated modular avionics (ATA42)</b>	<b>1</b>	<b>2</b>	—
Functions that may be typically integrated in the integrated modular avionic (IMA) modules include: bleed management, air pressure control, air ventilation and control, avionics and cockpit ventilation control, temperature control, air traffic communication, avionics communication router, electrical load management, circuit breaker monitoring,			

electrical system BITE, fuel management, braking control, steering control, landing gear extension and retraction, tyre pressure indication, oleo pressure indication, brake temperature monitoring.			
<b>12.18 On board maintenance systems (ATA45)</b>	1	2	—
Central maintenance computers; Data loading system; Electronic library system; Printing; Structure monitoring (damage tolerance monitoring).			
<b>12.19 Information systems such as Air Traffic and Information Management Systems and Network Server Systems (ATA46)</b>	1	2	—

**[34] Appendix 4, Part 3, Module 13, paragraph (b) of item 13.7, level of knowledge for category B2**

*substitute*

3

**[35] Appendix 4, Part 3, Module 13, item 13.8, level of knowledge for category B2**

*substitute*

3

**[36] Appendix 4, Part 3, Module 13**

*add at the end*

<b>13.11 Air-conditioning and cabin pressurisation (ATA21)</b>			
<i>13.11.1 Air supply</i>	—	—	2
Sources of air supply including engine bleed, APU and ground cart.			
<i>13.11.2 Air-conditioning</i>	—	—	3
Air-conditioning systems; Air cycle and vapour cycle machines; Distribution systems; Flow, temperature and humidity control system.			

<i>13.11.3 Pressurisation</i>	—	—	3
Pressurisation systems; Control and indication including control and safety valves; Cabin pressure controllers.			
<i>13.11.4 Safety and warning devices</i>	—	—	3
Protection and warning devices.			
<b>13.12 Fire protection (ATA26)</b>			
(a) Fire and smoke detection and warning systems; Fire extinguishing systems; System tests.	—	—	3
(b) Portable fire extinguisher	—	—	1
<b>13.13 Fuel systems (ATA28)</b>	—	—	3
System lay-out; Fuel tanks; Supply systems; Dumping, venting and draining; Cross-feed and transfer; Indications and warnings; Refuelling and defuelling; Longitudinal balance fuel systems.			
<b>13.14 Ice and rain protection (ATA30)</b>	—	—	3
Ice formation, classification and detection; Anti-icing systems: electrical, hot air and chemical; De-icing systems: electrical, hot air, pneumatic and chemical; Rain repellent; Probe and drain heating; Wiper systems.			
<b>13.15 Integrated modular avionics (ATA42)</b>	—	—	3
Functions that may be typically integrated in the Integrated Modular Avionic (IMA) modules are, among others: bleed management, air pressure control, air ventilation and control, avionics and cockpit ventilation control, temperature			

control, air traffic communication, avionics communication router, electrical load management, circuit breaker monitoring, electrical system BITE, fuel management, braking control, steering control, landing gear extension and retraction, tyre pressure indication, oleo pressure indication, brake temperature monitoring.			
<b>13.16 Cabin intercommunication data systems (ATA44)</b>	—	—	3
These systems provide an interface between the cockpit/cabin crew and cabin systems. These systems support data exchange of the different related LRUs and they are typically operated via flight attendant panels.			
<b>13.17 Cabin network service (ATA44)</b>	—	—	3
Typically consists on a server, typically interfacing with, among others, the following systems: (a) data or radio communication systems; (b) in-flight entertainment system. The cabin network service may host functions such as: (a) access to pre-departure or departure reports; and (b) e-mail or intranet and internet access; and (c) passenger database.			
<b>13.18 Information systems such as Air Traffic and Information Management Systems and Network Server Systems (ATA46)</b>	—	—	3
<b>13.19 Indications and warnings</b>	—	—	3
Hydraulic system; Landing gear; Oxygen; Pneumatic and vacuum.			

**[37] Appendix 5, paragraph 5.6 (a)**

*omit*

basic

**[38] Appendix 5, subclause 7.6**

*omit*

accountable manager

*insert*

including a knowledge examiner or assessor who conducts RPL evaluations,

**[39] Appendix 5, after paragraph 14.1 (o)**

*insert*

- (p) the organisation’s procedure for assessing that a student who applies for an authority or rating meets the eligibility requirements mentioned in subparagraphs 5 (a) and (b) of this Order;

*Note* The requirements relate to minimum age (21) and English language ability.

- (q) the organisation’s procedure for confirming to CASA each student’s:
  - (i) eligibility mentioned in subparagraph (p); and
  - (ii) training outcomes following successful completion of training mentioned in subparagraphs 15.1 (a) and 15.1 (b).

**[40] Appendix 7, Part 2, Type training theoretical elements**

*substitute*

**Part 2**

**Type training theoretical elements**

The elements in the syllabus below that are specific to the aircraft type must be covered. Additional elements arising from technological changes must also be covered.

In the table, the numbers 1, 2 and 3 indicate the theoretical elements to be covered for the category or subcategory and the training level required for the element.

Introductory training must include the following:

<b>Introductory elements of training — all aircraft</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
05	Time limits and maintenance checks	1	1	1	1	1
06	Dimensions and areas, for example weights, maximum take off weight (MTOW)	1	1	1	1	1
07	Lifting and shoring	1	1	1	1	1

<b>Introductory elements of training — all aircraft</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
08	Levelling and weighing	1	1	1	1	1
09	Towing and taxiing	1	1	1	1	1
10	Parking, mooring, storing and return to service	1	1	1	1	1
11	Placards and markings	1	1	1	1	1
12	Servicing	1	1	1	1	1
	Standard practices — only type particular	1	1	1	1	1

<b>Helicopters</b>						
<b>ATA</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
18	Vibration and noise analysis (blade tracking)	—	—	3	3	—
60	Standard practices rotor	—	—	3	3	—
62	Rotor(s)	—	—	3	3	—
63	Rotor drive(s)	—	—	3	3	—
64	Tail rotor	—	—	3	3	—
65	Tail rotor	—	—	3	3	—

<b>Helicopters</b>						
<b>ATA</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
	drive					
66	Folding blades and pylon	—	—	3	3	—
67	Rotors flight control	—	—	3	3	—
	Airframe structure (helicopter)	—	—	3	3	—
	Emergency flotation equipment	—	—	3	3	1

<b>Aeroplane structures</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
51	Standard practices and structures (damage classification, assessment and repair)	3	3	—	—	1
52	Doors	3	3	—	—	1
53	Fuselage	3	3	—	—	1
54	Nacelles and pylons	3	3	—	—	1
55	Stabilisers	3	3	—	—	1
56	Windows	3	3	—	—	1
57	Wings	3	3	—	—	1
	Flight control surfaces (all)	3	3	—	—	1
	Zonal and	1	1	1	1	1

<b>Aeroplane structures</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
	station identification systems					

<b>Aeroplane systems</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B.2</b>
	Instrument systems in mechanical systems	3	3	3	3	3
21	Air-conditioning	3	3	3	3	3
21-00	Safety and warning devices	3	3	3	3	3
21-10/20	Air supply	3	3	3	3	2
21-30	Pressurisation	3	3	3	3	3
22	Autoflight	2	2	2	2	3
23	Communications	2	2	2	2	3
34	Navigation	2	2	2	2	3
24	Electrical power	3	3	3	3	3
25	Equipment and furnishings	3	3	3	3	1
25-60	Electronic emergency equipment	1	1	1	1	3
26	Fire protection	3	3	3	3	3
27	Flight controls	3	3	3	3	2
27	Systems operation: electrical and fly-by-wire	3	—	—	—	3
28	Fuel systems	3	3	3	3	2
28-40	Fuel systems	3	3	3	3	3

<b>Aeroplane systems</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B.2</b>
	indications					
29	Hydraulic power	3	3	3	3	1
30	Ice and rain protection	3	3	3	3	3
31	Indicating and recording systems	3	3	3	3	3
32	Landing gear	3	3	3	3	1
33	Lights	3	3	3	3	3
35	Oxygen	3	3	—	—	1
36	Pneumatic	3	3	3	3	1
37	Vacuum	3	3	3	3	1
38	Water and waste	3	3	—	—	1
41	Water ballast	3	3	—	—	1
42	Integrated modular avionics	2	2	2	2	3
44	Cabin systems	2	2	2	2	3
45	Central maintenance systems (CMS) <small>(except if the element is covered in the element for ATA chapter 31)</small>	3	3	3	—	3
46	Information systems	2	2	2	2	3
50	Cargo and accessory compartments	3	3	3	3	1

<b>Turbine engines</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
49	Airborne	3	—	—	—	1

<b>Turbine engines</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
	auxiliary power (APUs)					
70	Standard practices-engines	3	—	3	—	1
70-00	Constructional arrangement and operation (namely, installation, inlet, compressors, combustion section, turbine section, bearings and seals, lubrications systems)	3	—	3	—	1
70-00	Engine performance	3	—	3	—	1
71	Powerplant	3	—	3	—	1
72	Engine turbine and turbo prop and ducted fan and unducted fan	3	—	3	—	1
73	Engine fuel and controls	3	—	3	—	1
73-20	FADEC	3	—	3	—	3
74	Ignition	3	—	3	—	3
75	Air	3	—	3	—	1
76	Engine controls	3	—	3	—	1
77	Engine indicating systems	3	—	3	—	3
78	Exhaust	3	—	3	—	1
79	Oil	3	—	3	—	1
80	Starting	3	—	3	—	1
82	Water injections	3	—	3	—	1
83	Accessory	3	—	3	—	1

<b>Turbine engines</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
	gear-boxes					
84	Propulsion augmentation	3	—	3	—	1

<b>Piston engines</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
70	Standard practices-engines	—	3	—	3	1
70-00	Construc-tional arrange-ment and operation (installation, inlet, compressors, combustion section, turbine section, bearings and seals, lubrications systems)	—	3	—	3	1
10-10	Engine storage and preservation	—	3	—	3	—
26	Fire protection (engine)	—	3	—	3	3
71	Powerplant	—	3	—	3	1
71	Engine per-formance	—	3	—	3	1
71	Engine monitoring and ground operations	—	3	—	3	—
73	Engine fuel and control	—	3	—	3	1

<b>Piston engines</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
73-20	FADEC	—	3	—	3	3
74	Ignition	—	3	—	3	3
76	Engine controls	—	3	—	3	1
77	Engine indicating	—	3	—	3	3
79	Oil	—	3	—	3	1
80	Starting	—	3	—	3	1
81	Turbines					
82	Water injections	—	3	—	3	1
83	Accessory gear-boxes	—	3	—	3	1
84	Propulsion augmentation	—	3	—	3	1

<b>Aeroplane propellers</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
30-60	Propeller ice protection	3	3	—	—	—
60	Standard practices – propeller	3	3	—	—	1
60-00	Propeller maintenance	3	3	—	—	1
61	Propellers/ Propulsion	3	3	—	—	1
61-00	Propeller	3	3	—	—	—

<b>Aeroplane propellers</b>						
<b>ATA chapter</b> <i>(where applicable)</i>	<b>Theoretical elements</b>	<b>Aeroplane turbine</b>	<b>Aeroplane piston</b>	<b>Helicopter turbine</b>	<b>Helicopter piston</b>	<b>Avionics</b>
		<b>B1.1</b>	<b>B1.2</b>	<b>B1.3</b>	<b>B1.4</b>	<b>B2</b>
	construction					
61-20	Propeller pitch control	3	3	—	—	—
61-20	Propeller synchronising	3	3	—	—	1
61-20	Propeller electronic control	2	2	—	—	3

**[41] Appendix 7, Part 3, Practical elements, second paragraph**

*omit*

Such OJT would include

*insert*

Such OJT may include

**[42] Appendix 7, Part 3, Practical elements, paragraph (a)**

*omit*

replacements, rigging and functional checks such as engine run, etc, if required;

*insert*

replacements and functional checks;