

Revision 3

2 October 2023

Aircraft Maintenance Engineer Licence— Certificate of Inspection Authorisation (Subject 025)

General

Civil Aviation Authority (CAA) advisory circulars (ACs) contain information about standards, practices, and procedures that the Director has found to be an **acceptable means of compliance** with the associated rule.

Consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate AC.

Purpose

This AC describes an acceptable means of compliance for creating syllabus content for written examinations that will cover all facets for certificates of inspection authorisation.

Related Rules

This AC relates specifically to Civil Aviation Rule Part 66 Subpart E – *Certificate of Inspection Authorisation*.

Change Notice

Revision 3 adds a note about the online application process, adds new references and corrects minor formatting errors.

Version History

The version history is outlined below:

Revision No.	Effective Date	Summary of Changes
AC66-2.32, Rev 0	1 Dec 2008	The initial issue of this AC was created to contain, unchanged, all the information (resource study material, scope and outline syllabus) for Certificates of IA (Subject 025) previously promulgated in AC66-2.2.
AC66-2.32, Rev 1	14 Feb 2014	Amended the reference to Annual Review of Airworthiness to the current term Review of Airworthiness.
AC66-2.32, Rev 2	31 Aug 2021	Amended the source material references and provides greater detail on subject matter requirements for the Certificate of IA.
AC66-2.32, Rev 3	2 Oct 2023	Adds a note about the online application process Adds new references. Corrects minor formatting errors.

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Eligibility requirements

Rule 66.203(b)(4) requires an applicant for a certificate of inspection authorisation to have passed a written examination conducted by the holder of a maintenance training organisation certificate or a restricted maintenance training organisation certificate or by the Director.

These written examinations should comply with the syllabus contained in this AC.

An application to sit an examination may be made directly to ASPEQ. Refer to <https://caanz.aspeqexams.com/home> for examination information.

Note: From October 2023, to add a new rating to your LAME licence, you can apply online for this through **MyAviation**, CAA's online portal for licensing requests, instead of filling in paper forms. Click the 'Online services' button on the CAA home page to get started.

Knowledge Levels

This syllabus provides for the subject material covered in the certificate of IA written examinations.

Each topic within the syllabus has a level number which provides an indication of the degree or level of knowledge required. There are three level numbers, and they are defined as follows:

Level 1: General appreciation of principles and a broad understanding of the subject.

Level 2: Comprehension of principles and salient features. Simple relevant calculations may be required.

Level 3: Detailed knowledge of all aspects of the subject including relevant calculations.

Subject 025 Inspection Authorisation

Resource study material	
1.	Civil Aviation Act 1990 and Civil Aviation Act 2023
2.	Civil Aviation Rules as specified under topic code
3.	Civil Aviation ACs as specified under topic code
4.	Airworthiness Directives
5.	IA Course Study Guide and Notes

	Area of study and background reading	Level	Syllabus content
1.	INSPECTION AUTHORISATION <ul style="list-style-type: none"> Rule Part 66 Subpart E AC66-1, Aircraft Maintenance Engineer Licence - General Civil Aviation Act 1990 AC43-9, Modifications, Repairs, and the CAA337 	3	Describe the eligibility requirements and qualifications needed to gain a Certificate of IA. Determine when and how a Certificate of IA may be awarded.
		3	Describe the Privileges for a Certificate of IA holder with regards to: <ul style="list-style-type: none"> i. Mechanical IA and ii. Avionic IA. Explain the limitations for Certificate of IA holders with regards to: <ul style="list-style-type: none"> i. Mechanical IA and ii. Avionic IA.
		3	Explain the conditions, validity and expiry periods for the Certificate of IA.
		3	Explain recent experience including currency requirements for Certificate of IA holders. Detail the record of experience requirements.
		3	State the conditions necessary to exercise the privileges for Certificate of IA holders.

	Area of study and background reading	Level	Syllabus content
2.	AIRWORTHINESS <ul style="list-style-type: none"> • Part 1 • Part 21 • Rule Part 43 subpart D, F & G • Rule Part 91 subpart F & G • Part 115 • Part 121 • Part 125 • Part 135 • Part 133 • All Part 21 ACs • UK CAA CAP 562 	2	Describe the aircraft certification life cycle.
		3	<p>Explain the meaning for an airworthy condition.</p> <p>Explain who are responsible for and why with regards to maintaining Aircraft Airworthiness.</p> <p>State the rule parts detailing the requirements for maintaining an aircraft in an airworthy condition.</p>
		3	<p>Describe the different types and categories for airworthiness certificates including requirements for the issue of the certificate.</p> <p>Explain the limitations for each type and category airworthiness certificate.</p> <p>Explain the effects on airworthiness certificates with regards to circumstances such as:</p> <ul style="list-style-type: none"> i. during inspections, and ii. special flight permit/s.
		1	Describe the certification procedures for products and parts and be able to locate and identify required information.
		3	<p>Explain the purpose of the Type Certificate including searching and identifying State of Design Type Certificates.</p> <p>Explain Type Certificate holder responsibilities include expiring certificates and deleted certificates.</p> <p>Explain how the type certificate determines and affects airworthiness.</p> <p>Detail the information required on Type Certificates.</p> <p>Explain the reason for Type Acceptance Certificate.</p> <p>Describe the information included in Type Acceptance Reports.</p>
3	<p>Explain the reason for Type Certificate Data Sheets (TCDS) including:</p> <ul style="list-style-type: none"> i. information to maintain products and parts 		

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			<p>ii. searching and identifying where specific information may be found.</p> <p>Understand how TCDS information is used with regards to acceptable technical data.</p>
		2	Detail the information found on FAA TCDS.
		2	Detail the information found on UK TCDS. Identify status and support for UK TCDS.
		3	<p>Explain the purpose of Supplemental Type Certificates (STC).</p> <p>Describe the responsibilities for an STC owner, the STC installer, and the operator of an installed STC.</p> <p>Describe the limitations and advantages for an STC.</p>
3.	REVIEW OF AIRWORTHINESS <ul style="list-style-type: none"> • Part 1 • Part 21 • Part 39 • Part 43 • Part 47 • Part 66 • Part 91 • Part 119 • Part 135 • AC21-4, Special Category – Amateur-build Aircraft Airworthiness Certificates • All Part 43 ACs 	3	<p>Explain the operator requirements and responsibilities with regards to the review of airworthiness.</p> <p>Detail the review of airworthiness tolerance for different due time and completion date scenarios.</p>
		2	Describe the means and requirements for aircraft identification.
		2	Determine and describe the requirements of modification and repair status for each category airworthiness certificate.
		3	<p>Explain the relationship between the Type Certificate, conformity Inspections, and acceptable technical data.</p> <p>Identify the maintenance compliance documentation.</p> <p>Identify the aircraft conformity inspection documentation.</p> <p>Determine which maintenance activities, repairs and modifications require conformity inspections.</p> <p>State the aircraft types not requiring Type Certificate conformity inspections.</p>

	Area of study and background reading	Level	Syllabus content
	<ul style="list-style-type: none"> • ACs in the 91 series, including: <ul style="list-style-type: none"> ○ AC91-6, Aircraft Technical Log ○ AC91-12, Aircraft Maintenance Programmes ○ AC91-14, Light Aircraft Maintenance Programmes - Aeroplanes ○ AC91-18, Aircraft Software Configuration Management ○ AC91-19, Piston Engine TBO Mixed Agricultural and Other Operations • AC21-11 & AC91-23, Electrical Load Analysis • The CAA 337 form • CAN 05-002 		<p>Explain the relationship between repairs and acceptable technical data.</p> <p>Describe the requirements for aircraft registration markings.</p>
3		<p>Explain the purpose of the Airworthiness Directive (AD).</p> <p>Describe the process for identifying ADs with regard aircraft and products.</p> <p>Explain the process for repetitive Ads.</p> <p>State AD tolerance and latitudes and when they may be applied.</p> <p>Understand the inter-relationship between ADs, Type Certificates, STC, maintenance programmes, Service Bulletins (letters etc), and records.</p> <p>Explain the Alternative Means of Compliance (AMOC).</p>	
3		<p>Describe the rules and certification requirements for logbook and technical log entries and Review of Airworthiness.</p> <p>Describe the requirements and process for Amateur built aircraft with regards to the review of airworthiness and logbook review.</p>	
3		<p>Describe the process and requirements for Maintenance Records with regards to:</p> <ol style="list-style-type: none"> i. Maintenance due ii. Release to service iii. ADs, SBs iv. Modification & repairs v. Duplicate inspections. <p>Detail the process and limitations for applying a review of airworthiness tolerance.</p>	
3		<p>Explain the Part 91 Inspections and Extensions allowance.</p>	
3		<p>Describe the different types of inspections and airworthiness limitations including:</p>	

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			<ul style="list-style-type: none"> i. Annual ii. Progressive/ phase/ zonal iii. 100 hourly iv. Regulatory v. Out of Phase. <p>Describe the limitations and requirements for Time Between Overhaul (TBO) and component finite life maintenance.</p>
		3	<p>State where the Approved Maintenance Programmes may be found and identified.</p> <p>Explain an escalation program.</p> <p>Describe the requirements for a temporary escalation.</p> <p>Explain the OMEL arrangement.</p>
		3	<p>Determine by calculation Weight and Balance information.</p> <p>State the definition for:</p> <ul style="list-style-type: none"> i. Empty Weight ii. Empty Weight Centre of Gravity iii. Unusable Fuel iv. Undrainable Fuel. <p>Demonstrate use of the Forms CAA2102 and CAA2173.</p> <p>Relate the interdependence for weight and balance with the Flight Manual and Type Certificate data sheet.</p>
		2	<p>Explain the Flight Manual relationship between the Type Certificate, Type Acceptance Report, airworthiness certificate category and STCs.</p> <p>Describe the contents of a Flight Manual and supplements.</p> <p>Relate the operator's responsibility with regard the Flight Manual and supplements.</p>

	Area of study and background reading	Level	Syllabus content
		2	With regards to the review of airworthiness, relate the requirements for aircraft equipment lists IE Part 91 Subpart F including inoperative and role equipment and ICAs.
		2	Relate the requirements for the Manufacturer's Service Information including airworthiness limitations, SBs, service letters and the like when linked to the manufacturer's inspection schedule and/or Type Certificate.
		3	Detail what is involved with a review of airworthiness Aircraft Condition Inspection.
		3	Explain the IA responsibilities to the aircraft owner with regards to the review of airworthiness. Include defects, completion period and reporting.
4.	MAJOR REPAIRS AND MODIFICATIONS <ul style="list-style-type: none"> • Part 1 • Part 21 • Part 43 • AC00-5, Parts Documentation -CAA Form One-Authorised Release Certificate 	3	State the definition for: <ol style="list-style-type: none"> i. Design Change ii. Maintenance iii. Major Repair iv. Major Modification v. Technical Data. Explain how to determine if and when a modification/repair is major.
	<ul style="list-style-type: none"> • AC21-5, Approval of modifications covering aircraft ferry fuel systems and overweight operation 	3	Describe how aircraft and type certified products can be changed. Explain the modification or repair process.
	<ul style="list-style-type: none"> • AC21-8, Design Changes - 	3	Explain the certification of conformity process including what is required, when inspections are carried out and documentation needed. Explain who and when can perform the certification of conformity, including: <ol style="list-style-type: none"> i. Manufacturer ii. Part 145 and Part 146 organisations iii. Avionic IA certificate holder. iv. Mechanical IA certificate holder.

	Area of study and background reading	Level	Syllabus content
	Supplemental Type Certificate		Describe the certification of conformity recording requirements.
	<ul style="list-style-type: none"> • AC21-11 & AC91-23, Electrical Load Analysis • AC43-9, Modifications, Repairs and the Form CAA337 • AC43-14, Aircraft maintenance • CAA 337 	3	<p>Describe the two-fold purpose of CAA Form 337.</p> <p>Detail what kind of modification/repair requires the CAA Form 337.</p> <p>Describe the contents of the CAA Form 337.</p> <p>Explain who is responsible and what is required to fill in each section of the CAA Form 337.</p> <p>Describe the responsibilities of the completed CAA Form 337 for:</p> <ol style="list-style-type: none"> i. Part 146 Design Organisations ii. Conformity signee/s iii. Persons certifying release-to-service
		3	<p>Explain the difference between Acceptable and Approved Technical Data.</p> <p>Identify international and CAA Acceptable and Approved Technical Data.</p> <p>Explain the data approval process include who can and who cannot approve technical data.</p> <p>Describe how proprietary information is handled.</p> <p>Describe the differences between one-aircraft-only approval and an approval for duplication.</p>
5.	<p>MISCELLANEOUS ITEMS</p> <ul style="list-style-type: none"> • Part 12 • Part 19 • Part 21 • AC00-1, Acceptability of parts • AC12-1, Mandatory occurrence 	3	<p>List the particular requirements for a material, part or appliance to be eligible for installation, including the responsibilities for:</p> <ol style="list-style-type: none"> i. Person performing maintenance ii. Operator iii. Part 145 organisation iv. Part 148 organisation. <p>Describe the documentation requirements for Aircraft Parts.</p> <p>Define the identification methods for acceptable and unacceptable parts.</p>

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	<p>notification and information</p> <ul style="list-style-type: none"> AC21-6, Identification of product and parts - Identification information, provision, and replacement CAA Rule development process Notice of proposed rule-making (NPRM) webpage on the CAA website Regulatory enforcement policy Civil Aviation Act 1990 Civil Aviation Act 2023 		<p>Explain the parts manufacturing approval (PMA) and STC PMA parts requirements and limitations.</p> <p>Describe the traceability requirements for military parts.</p>
		3	<p>Explain and describe the Mandatory Occurrence Reports in relation to defect incidents, aircraft systems and in-service defects.</p> <p>Describe the investigation process and reports.</p>
		1	<p>Explain the rule development and change process including:</p> <ol style="list-style-type: none"> NPRMs Public submissions Pending rule publication.
		2	<p>State the information required for Data Plates on:</p> <ol style="list-style-type: none"> Aircraft Engines Propellers. <p>Describe when Data Plates can be removed and reproduction requirements.</p> <p>Detail the location requirements for Data Plates.</p>
		2	<p>Describe the circumstances in which a CAA employee may gain access to records aircraft and facilities.</p> <p>Describe the process following a formal investigation by CAA.</p>
		2	<p>State when an operator must provide Aircraft Statistical Data.</p>
6.	<p>FORMS</p> <ul style="list-style-type: none"> Part 91 	3	<p>Describe the use for CAA Form One & Form Two.</p> <p>Include the requirements and limitations for each.</p>
		3	<p>Describe the logbook requirements.</p>

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	<ul style="list-style-type: none"> • AC00-1, Acceptability of parts • AC00-5, Parts Documentation -CAA Form One- Authorised Release Certificate • AC43-3, Engine and propeller overhaul and testing • AC91-6, Aircraft technical log • CAA Form One & Two • CAA2101 Logbook • CAA006 Tech Log 	3	<p>Detail instructions to complete logbook entries.</p> <p>Explain the purpose of the Tech Log.</p> <p>Explain the limitations of the Tech Log.</p> <p>Describe the Tech Log requirements.</p>