

CAR 145 Issue II is proposed to be amended to include CAR 66 requirements and to harmonise with latest EASA amendments to Part 145. The propose amendments are shown in subsequent affect paragraphs.

The text of the amendment is arranged to show deleted text, new or amended text as shown below:

- (a) deleted text is marked with strikethrough;
- (b) new or amended text is highlighted in grey;
- (c) an ellipsis (...) indicates that the remaining text is unchanged in front of or following the reflected amendment

INDEX

GENERAL

SECTION A –Technical Requirements

AMC1 145.A.30(e)	Personnel Requirements
AMC2 145.A.30(e)	Personnel Requirements
AMC3 145.A.30(e)	Personnel Requirements
AMC4 145.A.30(e)	Personnel Requirements
GM1 145.A.30(e)	Personnel Requirements
GM2 145.A.30(e)	Personnel Requirements
GM3 145.A.30(e)	Personnel Requirements
AMC 145.A.35 (o)	Certifying Staff and support staff
CAR 145.A.36	Records of airworthiness review staff
AMC 145.A.36	Records of airworthiness review staff
CAR. 145.48	Performance of maintenance
CAR 145.A.50	Certification of maintenance
AMC 145.A.50	Certification of maintenance after embodiment of a standard change or standard repair (SC/SR)
AMC 145.A.50 (d)	Certification of maintenance
CAR 145.A.55	Maintenance and airworthiness review records
AMC 145.A.60 (a)	Occurrence reporting

GM 145.A.10 Scope

3.1 145.A.30(b): The minimum requirement is for one full time person who meets the DGCA Licensing requirements for certifying staff and holds the position of "accountable manager, maintenance engineer and is also certifying staff and, if applicable, airworthiness review staff ". No other person may issue a certificate of release to service and therefore if absent, no maintenance may be released during such absence.

AMC 145.A.20 Terms of approval

CLASS	RATING	ATA CHAPTERS
	C5 Electrical Power and lights	24 –33- 85

145.A. 30 PERSONNEL REQUIREMENTS

(e)The organisation shall establish and control the competence of personnel involved in any maintenance, development of maintenance programme, airworthiness review, management and/or quality audits in accordance with a procedure and to a standard agreed by DGCA. In addition to the necessary expertise related to the job function, competence must include an understanding of the application of human factors and human performance issues appropriate to that person's function in the organisation.

(f) The organisation shall ensure that personnel who carry out and/or control a continued airworthiness non-destructive test of aircraft structures and/or components are appropriately qualified for the particular non-destructive test in accordance with DGCA specified standard or equivalent Standard recognised by DGCA. Personnel who carry out any other specialised task shall be appropriately qualified in accordance with officially recognized Standards. By derogation to this paragraph those personnel specified in paragraphs (g) and (h)(1) and (h)(2), qualified in Category B1 accordance with CAR 66 , per DGCA licensing system may carry out and/or control colour contrast dye penetrant tests.

(g) Any organisation maintaining aircraft, except where stated otherwise in point (j), shall in the case of aircraft line maintenance, have appropriate aircraft rated certifying staff qualified as category B1 or B2, per DGCA licensing system and point 145.A.35.

In addition such organisations may also use appropriately task trained certifying staff holding the privileges described in points 66.A.20 (a)(1) and qualified in accordance with CAR-66 and point 145.A.35 to carry out minor scheduled line maintenance and simple defect rectification. The availability of such certifying staff shall not replace the need for Category B1, B2, certifying staff, as appropriate.

(h) Any organisation maintaining aircraft, except where stated otherwise in paragraph (j) shall:

1. in the case of base maintenance of large complex motor-powered aircraft, have appropriate aircraft type rated certifying staff qualified as Category C in

accordance with ~~DGCA licensing system~~ CAR 66 and meeting the requirements of 145.A.35. In addition the organisation shall have sufficient aircraft type rated staff qualified as ~~per DGCA licensing system~~ as category B1, B2 as appropriate in accordance with CAR 66 and 145.A.35 to support the Category C certifying staff.

(i) ~~Type-rated~~ B1 and B2 support staff shall ensure that all relevant tasks or inspections have been carried out to the required standard before the category C certifying staff issues the certificate of release to service.

(ii) The organisation shall maintain a register of any such ~~type-rated~~ B1 and B2 support staff.

(iii) The category C certifying staff shall ensure that compliance with paragraph (i) has been met and that all work required by the customer has been accomplished during the particular base maintenance check or work package, and shall also assess the impact of any work not carried out with a view to either requiring its accomplishment or agreeing with the operator to defer such work to another specified check or time limit.

2. In the case of base maintenance of aircraft other than ~~large complex motor-powered~~ aircraft have either

i. appropriate aircraft rated certifying staff qualified as ~~per DGCA licensing system~~, category B1, B2, B3 and point 145.A.35; or

ii. appropriate aircraft rated certifying staff qualified category C and assisted by support staff as specified in point 145.A.35(a)(i).

(i) Component certifying staff shall comply with Rule 61 and requirements laid down in CAR Section 2 Series 'L' Part X.

(j) By derogation to paragraphs (g) and (h), in relation to the obligation to comply with CAR 66 the organisation may use certifying staff qualified in accordance with the following provisions:

AMC 145.A.30 (d) Personnel requirements

1. Has sufficient staff means that the organisation employs or contracts such staff as detailed in the man hour plan, of which at least half the staff that perform maintenance in each workshop, hangar or flight line on any shift should be employed to ensure organisational stability. ~~Contract staff, being part time or full time should be made aware that when working for the organisation they are subjected to compliance with the organisation's procedures specified in the maintenance organisation exposition relevant to their duties.~~ For the purpose of meeting a specific operational necessity, a temporary increase of the proportion of contracted staff may be permitted to the organisation by the DGCA, in accordance with an approved procedure which should describe the extent, specific duties, and responsibilities for ensuring adequate organisation stability. For the purpose of this sub-paragraph, employed means the person is directly employed as an individual by the maintenance organisation approved under CAR -145 whereas contracted means the person is employed by another organisation and contracted by that organisation to the maintenance organisation approved under CAR-145.

AMC 145.A.30 (e) Personnel requirements

- ~~1. The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors and certifying staff are assessed for competence by 'on the job' evaluation and/or by examination relevant to their particular job role within the organisation before unsupervised work is permitted. A record of the qualification and competence assessment should be kept.~~
- ~~2. Adequate initial and recurrent training should be provided and recorded to ensure continued competence.~~
- ~~3. To assist in the assessment of competence, job descriptions are recommended for each job role in the organisation. Basically, the assessment should establish that:
 - ~~(a) Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the maintenance data.~~
 - ~~(b) Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.~~
 - ~~(c) Specialised services staffs are able to carry out specialised maintenance tasks to the standard specified in the maintenance data and will both inform and await instructions from their supervisor in any case where it is not possible to complete the specialised maintenance in accordance with the maintenance data.~~
 - ~~(d) Supervisors are able to ensure that all required maintenance tasks are carried out and where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the 145.A.30(c) person for appropriate action. In addition, for those supervisors who also carry out maintenance tasks that they understand such tasks should not be undertaken when incompatible with their management responsibilities.~~
 - ~~(e) Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.~~~~
- ~~4. In the case of planners, specialised services staff, supervisors and certifying staff, knowledge of organisation procedures relevant to their particular role in the organisation is important. The aforementioned list is not exclusive and may include other categories of personnel.~~
- ~~5. Quality audit staff are able to monitor compliance with CAR-145 identifying non compliance in an effective and timely manner in order that the organisation may remain in compliance CAR-145.~~
- ~~6. In respect to the understanding of the application of human factors and human performance issues, maintenance, management, and quality audit personnel should be assessed for the need to receive initial human factors training, but in any case all maintenance, management, and quality audit personnel should receive human factors continuation training. This should concern to a minimum:~~

- ~~Post holders, managers, supervisors;~~
- ~~Certifying staff, technicians, and mechanics;~~
- ~~Technical support personnel such as, planners, engineers, technical record staff;~~
- ~~Quality control/assurance staff;~~
- ~~Specialised services staff;~~
- ~~Human factors staff/ human factors trainers;~~
- ~~Store department staff, purchasing department staff;~~
- ~~Ground equipment operators;~~
- ~~Contract staff in the above categories.~~

~~7. Initial human factors training should cover all the topics of the training syllabus specified in GM 145.A.30 (e) either as a dedicated course or else integrated within other training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to meet the particular nature of work for each function within the organisation. For example:~~

- ~~small organisations not working in shifts may cover in less depth subjects related to teamwork and communication;~~
- ~~planners may cover in more depth the scheduling and planning objective of the syllabus and in less depth the objective of developing skills for shift working.~~

~~Depending on the result of the evaluation as specified in paragraph 6, initial training should be provided to personnel within 6 months of joining the maintenance organisation, but temporary staff may need be trained shortly after joining the organisation to cope with the duration of employment.~~

~~Personnel being recruited from another maintenance organisation approved under CAR 145 and temporary staff should be assessed for the need to receive any additional Human factors training to meet the new maintenance organisation's approved under CAR 145 human factors training standard.~~

~~8. The purpose of human factors continuation training is primarily to ensure that staff remain current in terms of human factors and also to collect feedback on human factors issues. Consideration should be given to the possibility that such training has the involvement of the quality department. There should be a procedure to ensure that feedback is formally passed from the trainers to the quality department to initiate action where necessary.~~

~~Human factors continuation training should be of an appropriate duration in each two year period in relation to relevant quality audit findings and other internal/external sources of information available to the organisation on human errors in maintenance.~~

~~9. Human factors training may be conducted by the maintenance organisation itself, or independent trainers or any training organisations acceptable to DGCA.~~

~~10. The Human factors training procedures should be specified in the maintenance organisation exposition.~~

~~11. Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required for maintenance organisations' technical personnel, especially technical personnel involved in the compliance of~~

~~CDCCL tasks Guidance is provided for training to maintenance organisation personnel in Appendix VIII.~~

AMC1 145.A.30(e) Personnel requirements

Competence should be defined as a measurable skill or standard of performance, knowledge and understanding, taking into consideration attitude and behaviour.

The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors, certifying staff and support staff, whether employed or contracted, are assessed for competence before unsupervised work commences and competence is controlled on a continuous basis.

Competence should be assessed by evaluation of:

- on-the-job performance and/or testing of knowledge by appropriately qualified personnel, and
- records for basic, organisational, and/or product type and differences training, and
- experience records.

Validation of the above could include a confirmation check with the organisation(s) that issued such document(s). For that purpose, experience/training may be recorded in a document such as a log book or based on the suggested template in GM 3 to 145.A.30(e).

As a result of this assessment, an individual's qualification should determine:

- which level of on going supervision would be required or whether unsupervised work could be permitted.
- whether there is a need for additional training.

A record of such qualification and competence assessment should be kept.

This should include copies of all documents that attest to qualification, such as the licence and/or any authorisation held, as applicable.

For a proper competence assessment of its personnel, the organisation should consider that:

1. In accordance with the job function, adequate initial and recurrent training should be provided and recorded to ensure continued competence so that it is maintained throughout the duration of employment/contract.
2. All staff should be able to demonstrate knowledge of and compliance with the maintenance organisation procedures, as applicable to their duties.
3. All staff should be able to demonstrate an understanding of human factors and human performance issues in relation with their job function and be trained as per AMC 2 145.A.30(e).
4. To assist in the assessment of competence and to establish the training needs analysis, job descriptions are recommended for each job function in the organisation. Job descriptions should contain sufficient criteria to enable the required competence assessment.

5. Criteria should allow the assessment to establish that, among others (titles might be different in each organisation):

- Managers are able to properly manage the work output, processes, resources and priorities described in their assigned duties and responsibilities in a safe compliant manner in accordance with regulations and organisation procedures.
- Planners are able to interpret maintenance requirements into maintenance tasks, and have an understanding that they have no authority to deviate from the maintenance data.
- Supervisors are able to ensure that all required maintenance tasks are carried out and, where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the 145.A.30(c) person for appropriate action. In addition, for those supervisors, who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.
- Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of defects or mistakes requiring rectification to re-establish required maintenance standards.
- Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance data. They should be able to communicate with supervisors and report accurately when necessary.
- Support staff are able to determine that relevant tasks or inspections have been carried out to the required standard.
- Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.
- Quality audit staff are able to monitor compliance with Part-145 identifying non-compliance in an effective and timely manner so that the organisation may remain in compliance with Part-145.

Competence assessment should be based upon the procedure specified in GM 2 to 145.A.30(e).

AMC2 145.A.30(e) Personnel requirements

In respect to the understanding of the application of human factors and human performance issues, all maintenance organisation personnel should have received an initial and continuation human factors training. This should concern to a minimum:

- Post-holders, managers, supervisors;
- Certifying staff, support staff and mechanics;
- Technical support personnel such as planners, engineers, technical record staff;
- Quality control/assurance staff;
- Specialised services staff;
- Human factors staff/human factors trainers;
- Store department staff, purchasing department staff;
- Ground equipment operators.

1. Initial human factors training should cover all the topics of the training syllabus specified in GM 145.A.30(e) either as a dedicated course or else integrated within other

training. The syllabus may be adjusted to reflect the particular nature of the organisation. The syllabus may also be adjusted to meet the particular nature of work for each function within the organisation. For example:

- small organisations not working in shifts may cover in less depth subjects related to teamwork and communication;
- planners may cover in more depth the scheduling and planning objective of the syllabus and in less depth the objective of developing skills for shift working.

All personnel, including personnel being recruited from any other organisation should receive initial human factors training compliant with the organisation's training standards prior to commencing actual job function, unless their competence assessment justifies that there is no need for such training. Newly directly employed personnel working under direct supervision may receive training within 6 months after joining the maintenance organisation.

2. The purpose of human factors continuation training is primarily to ensure that staff remain current in terms of human factors and also to collect feedback on human factors issues. Consideration should be given to the possibility that such training has the involvement of the quality department. There should be a procedure to ensure that feedback is formally passed from the trainers to the quality department to initiate action where necessary.

Human factors continuation training should be of an appropriate duration in each two year period in relation to relevant quality audit findings and other internal/external sources of information on human errors in maintenance available to the organisation.

3. Human factors training may be conducted by the maintenance organisation itself, or independent trainers, or any training organisations acceptable to the competent authority.

4. The human factors training procedures should be specified in the maintenance organisation exposition.

AMC3 145.A.30(e) Personnel requirements

Additional training in fuel tank safety as well as associated inspection standards and maintenance procedures should be required for maintenance organisations' technical personnel, especially technical personnel involved in the compliance of CDCCL tasks. Further guidance is provided for training to maintenance organisation personnel in Appendix VIII of this CAR

AMC4 145.A.30(e) Personnel requirements

Competence assessment should include the verification for the need of additional EWIS training when relevant.

AMC 145.A.30 (g) Personnel requirements

3 The requirement of having appropriate aircraft type rated certifying staff qualified as category B1, B2, B3, as appropriate, ~~as per DGCA licensing system,~~ in the case of aircraft line maintenance does not imply that the organisation must have type rated personnel at every line station. The MOE should have a procedure on how to deal with defects requiring type rated B1, or B2 ~~or B3~~ certifying staff

4 DGCA may accept that in the case of aircraft line maintenance an organisation has only ~~type-rated B1, B2 or B3~~ certifying staff, as appropriate, provided that the DGCA is satisfied that the scope of work, as defined in the Maintenance Organisation Exposition, does not need the availability of all ~~type-rated B1, B2 or B3~~ certifying staff. Special attention should be taken to clearly limit the scope of scheduled and non-scheduled line maintenance (defect rectification) to only those tasks that can be certified by the available certifying staff category.

AMC 145.A.30.(j) (4) Personnel requirements

2. In addition the limited certification authorisation is subject to the maintenance organisation exposition containing procedures to address the personnel requirements of 145.A.30 (e) and associated AMC and guidance material. **The procedures should be accepted by the DGCA and should include as a minimum:**
~~Such procedures should include as a minimum:~~

- 2.(II) Replacement of ovens, boilers and beverage makers.
d. Replacement of ~~internal and external lights, filaments and flash tubes.~~

GM 1 145.A.30 (e) Personnel requirements (Training syllabus for initial human factors training)

GM2 145.A.30(e) Competence assessment procedure

The organisation should develop a procedure describing the process of competence assessment of personnel. The procedure should specify

- persons responsible for this process,
- when the assessment should take place,
- credits from previous assessments,
- validation of qualification records,
- means and methods for the initial assessment,
- means and methods for the continuous control of competence including feedback on personnel performance,
- competences to be observed during the assessment in relation with each job function,
- actions to be taken when assessment is not satisfactory,
- recording of assessment results.

For example, according to the job functions and the scope, size and complexity of the organisation, the assessment may consider the following (the table is not exhaustive

	Manager	Planners	Supervisor	Certifying staff and support staff	Mechanics	Specialised Service Staff	Quality audit staff
Knowledge of applicable officially recognised standards						X	X
Knowledge of auditing techniques: planning, conducting and reporting							X
Knowledge of human factors, human performance and limitations	X	X	X	X	X	X	X
Knowledge of logistics processes	X	X	X				
Knowledge of organisation capabilities, privileges and limitations	X	X	X	X		X	X
Knowledge of CAR-M, CAR-145 and any other relevant regulations	X	X	X	X			X
Knowledge of relevant parts of the maintenance organisation exposition and procedures	X	X	X	X	X	X	X
Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects		X	X	X	X	X	
Knowledge of safety risks linked to the working environment	X	X	X	X	X	X	X
Knowledge on CDCCL when relevant	X	X	X	X	X	X	X
Knowledge on EWIS when relevant	X	X	X	X	X	X	X
Understanding of professional integrity, behaviour and attitude towards safety	X	X	X	X	X	X	X
Understanding of conditions for ensuring continuing airworthiness of aircraft and components				X			X
Understanding of his/her own human performance and limitations	X	X	X	X	X	X	X
Understanding of personnel authorisations and limitations	X	X	X	X	X	X	X
Understanding critical task		X	X	X	X		X
Ability to compile and control completed work cards		X	X	X			
Ability to consider human performance and limitations	X	X	X	X			X
Ability to determine required qualifications for task performance		X	X	X			

	Managers	Planners	Supervisor	Certifying staff and support staff	Mechanics	Specialised Service staff	Quality audit staff
Ability to identify and rectify existing and potential unsafe conditions			X	X	X	X	X
Ability to manage third parties involved in maintenance activity		X	X				
Ability to identify and properly plan performance of critical task			X	X	X	X	
Ability to prioritise tasks and report discrepancies		X	X	X			
Ability to process the work requested by the operator		X	X	X			
Ability to promote the safety and quality policy	X X		X				
Ability to properly process removed, uninstalled and rejected parts			X	X	X	X	
Ability to properly record and sign for work accomplished			X	X	X	X	
Ability to recognise the acceptability of parts to be installed prior to fitment				X	X		
Ability to split complex maintenance tasks into clear stages		X					
Ability to understand work orders, work cards and refer to and use applicable maintenance data		X	X	X	X	X	X
Ability to use information systems	X	X	X	X	X	X	X
Ability to use, control and be familiar with required tooling and/or equipment			X	X	X	X	
Adequate communication and literacy skills	X	X	X	X	X	X	X
Analytical and proven auditing skills (for example, objectivity, fairness, open-mindedness, determination, ...)							X
Maintenance error investigation skills							X
Resources management and production planning skills	X	X	X				
Teamwork, decision-making and leadership skills	X		X				

GM3 145.A.30(e) Template for recording experience/training

The following template may be used to record the professional experience gained in an organisation and the training received and be considered during the competence assessment of the individual in another organisation.

Aviation Maintenance personnel experience credential		
Name		Given name
Address		
Telephone	E-mail	
Independent worker <input type="checkbox"/>		
Trade Group: airframe <input type="checkbox"/> engine <input type="checkbox"/> electric <input type="checkbox"/> avionics <input type="checkbox"/> other (specify) <input type="checkbox"/>		
Employer's details (when applicable)		
Name		
Address		
Telephone		
Maintenance organisation details		
Name		
Address		
Telephone		
Approval Number		
Period of employment	From:	To:
Domain of Employment:		
<input type="checkbox"/> Planning	<input type="checkbox"/> Engineering	<input type="checkbox"/> Technical records
<input type="checkbox"/> Store department	<input type="checkbox"/> Purchasing	
Mechanics/Technician		
Line Maintenance	<input type="checkbox"/> Base Maintenance	<input type="checkbox"/> Component Maintenance
Servicing	<input type="checkbox"/> Removal/installation	<input type="checkbox"/> Testing/inspection
Scheduled Maintenance	<input type="checkbox"/> Inspection	<input type="checkbox"/> Repair
Trouble-shooting	<input type="checkbox"/> Trouble-shooting	<input type="checkbox"/> Overhaul
	<input type="checkbox"/> Repair	<input type="checkbox"/> Re-treatment
		<input type="checkbox"/> Reassembly
A/C type	A/C type	Component type
Certifying Staff and support staff		
<input type="checkbox"/> Cat. A	<input type="checkbox"/> Cat. B1	<input type="checkbox"/> Cat. B2
<input type="checkbox"/> Cat. C	<input type="checkbox"/> Component type	<input type="checkbox"/> Other (e.g. NDT)
A/C Type	A/C Type	Component Type
A/C Type	A/C Type	Specify
Certification privileges: Yes <input type="checkbox"/> No <input type="checkbox"/>		

<input type="checkbox"/> Specialised services	Speciality (<i>NDT, composites, welding, etc.</i>):
<input type="checkbox"/> Specialised services	Speciality (sheet metal, structures, wireman, upholstery, etc.):
<input type="checkbox"/> Ground equipment operation	
<input type="checkbox"/> Quality control	<input type="checkbox"/> Quality assurance <input type="checkbox"/> Training
Total no. of check boxes <input type="checkbox"/>	
ticked:	

Details of employment	
Training received from the contracting organisation	
Date	Nature of training
Certified by:	
Name:	Date:
Position:	Signature:
Contact details:	
<i>Advisory note: A copy of the present credential will be kept for at least 3 years from its issuance by the maintenance organisation.</i>	

GM 145.A.30(j)(4) Personnel requirements (Flight crew)

1. The person shall be a holder of an ATPL or a CPL, issued in accordance with Schedule II of the Aircraft Rules, 1937.
2. The person shall be a holder of a Flight Engineers Licence, issued in accordance with Schedule II of the Aircraft Rules, 1937.

Familiarisation with basic maintenance procedures, to give additional technical background knowledge, especially with respect to the implication of systems malfunctions, and to train the applicant in maintenance related to the Minimum equipment list (MEL).

145.A.35 Certifying and support staff

(a) In addition to the appropriate requirements of 145.A.30(g) and (h), the organisation --
-- --

(i) "Support staff" means those staff holding an aircraft maintenance engineer licence under CAR 66 in category B1, or B2 with the appropriate aircraft ratings

~~type rated aircraft maintenance licence as appropriate on the aircraft type,~~
working in a base maintenance environment while not necessarily holding certification privileges.

(b) Excepting those cases listed in points 145.A.30 (j) and 66.A.20(a)3(ii) the organisation may only issue a certification authorisation to certifying staff in relation to the categories or subcategories of any type rating listed on the aircraft maintenance licence., subject to the licence remaining valid throughout the validity period of the authorisation and the certifying staff remaining in compliance with the ~~DGCA licensing system. CAR 66~~

(e) The organisation shall establish a programme for continuation training for certifying staff and support staff including a procedure to ensure compliance with the relevant paragraphs of 145.A.35 as the basis for issuing certification authorisations under this CAR to certifying staff, and a procedure to ensure compliance with ~~CAR 66 DGCA licensing system~~

- (i) (i) The organisation shall maintain a record of all certifying staff and support staff . The staff records shall contain:
1. details of any aircraft maintenance licence held under DGCA licensing requirements / CAR 66 and
 2. all relevant training completed.
- m. The minimum age for certifying staff and support staff is ~~18~~ 21 years.

AMC 145.A.35(b) Certifying staff and support staff

The organisation issues the certification authorisation when satisfied that compliance has been established with the appropriate paragraphs of CAR-145 and ~~DGCA Licencing requirements~~ CAR 66 In granting the certification authorisation the maintenance organisation approved under CAR-145 needs to be satisfied that the person holds a valid DGCA CAR 66 aircraft maintenance licence and may need to confirm such fact with DGCA if required.

AMC 145.A.35 (d) Certifying staff and support staff

4. The method of training is intended to be a flexible process and could, for example, include a CAR 147 continuation training course, aeronautical college courses, internal short duration courses, seminars, etc. The elements, general content and length of such training should be specified in the maintenance organisation exposition unless such training is undertaken by an organisation approved under CAR 147 when such details may be specified under the approval and cross referenced in the maintenance organisation exposition.

AMC 145.A.35(f) Certifying staff and support staff

1. As stated in 145.A.35(f), except where any of the unforeseen cases of 145.A.30(j)(5) applies, all prospective certifying staff and support staff should be assessed for competence related to their intended duties in accordance with AMCs 1, 2, 3 and 4 to 145.A.30(e), as applicable.

- ~~2. As stated in 145.A.35 (f), with one exception, all prospective certifying staff are required to be assessed for competence, qualification and capability related to intended certifying duties. There are a number of ways in which such assessment may be carried out but the following points need to be considered to establish an assessment procedure that fits the particular organisation.~~
- ~~3. Competence and capability can be assessed by working the person under the supervision of either another certifying person or a quality auditor for sufficient time to arrive at a conclusion. Sufficient time could be as little as a few weeks if the person is fully exposed to relevant work. It is not required to assess against the complete spectrum of intended duties. When the person has been recruited from another approved maintenance organisation and was a certifying person in that organisation then the organisation should accept a written confirmation from the person responsible for running the quality system about the person.~~
- ~~4. Qualification assessment means collecting copies of all documents that attest to qualification, such as the licence and/or any authorisation held. This should be followed by a confirmation check with the organisation(s) that issued such document(s) and finally a comparison check for differences between the product type ratings on the qualification documents and the relevant product types maintained by the organization.~~
- ~~5. This latter point may reveal a need for product type differences training.~~

AMC 145.A.35 (n) Certifying staff and support staff

1. It is the responsibility of the CAR-145 organisation issuing the **Category A** certifying staff authorisation to ensure that the task training received by this person covers all the tasks to be authorised. This is particularly important in those cases where the task training has been provided by an appropriately approved CAR 147 training organisation or CAR 145 approved organization different from the one issuing the authorisation.

145.A.36 Records of airworthiness review staff

The organisation shall record all details concerning the airworthiness review staff and maintain a current list of all the airworthiness review staff together with their scope of approval as part of the organisation's exposition pursuant to point 145.A.70(a)6.

The organisation shall retain the record for at least three years after the staff referred to in this point have ceased employment (or engagement as a contractor or volunteer) with the organisation or as soon as the authorisation has been withdrawn. In addition, upon request, the maintenance organisation shall provide the staff referred to in this point with a copy of their personal record on leaving the organisation.

The staff referred to in this point shall be given access on request to their personal records.

AMC 145.A.36 Records of airworthiness review staff

The following minimum information, as applicable, should be kept on record in respect of each airworthiness review staff:

(a) name;

(b) date of birth;

(c) certifying staff authorisation;

(d) experience as certifying staff on ELA1 aircraft;

(e) qualifications relevant to the approval (knowledge of relevant parts CAR-M and knowledge of the relevant airworthiness review procedures);

(f) scope of the airworthiness review authorisation and personal authorisation reference;

(g) date of the first issue of the airworthiness review authorisation; and (h)

AMC 145.A.42 (b) Acceptance of components

The CA Form 1 or equivalent identifies the status of an aircraft component. Block 12 "Remarks" on the CA Form 1 in some cases contains vital airworthiness related information which may need appropriate and necessary actions.

AMC 145.A.45 (b) Maintenance data

1. Except as specified in sub-paragraph 5, each maintenance organisation approved under CAR-145 should hold and use the following minimum maintenance data relevant to the organisation's approval class rating: All maintenance related implementing Rules and associated AMCs, approval specifications and Guidance Material, all applicable maintenance requirements and notices which have not been superseded, procedure or directive and all applicable airworthiness directives as well as Critical Design Configuration Control Limitations..

145.A.48 Performance of maintenance

The organisation shall establish procedures to ensure that:

(a) after completion of maintenance a general verification is carried out to ensure that the aircraft or component is clear of all tools, equipment and any extraneous parts or material, and that all access panels removed have been refitted

(b) an error capturing method is implemented after the performance of any critical maintenance task;

(c) the risk of multiple errors during maintenance and the risk of errors being repeated in identical maintenance tasks are minimised; and,

(d) damage is assessed and modifications and repairs are carried out using data specified in point M.A.304.;

145.A.50 Certification of maintenance

- (d) A certificate of release to service shall be issued at the completion of any maintenance on a component whilst off the aircraft. The authorised release certificate or airworthiness approval tag identified as CA Form 1 in Appendix I to this CAR constitutes the component certificate of release to service except if otherwise specified in point M.A.502(b) or M.A.502(e). -----

AMC 145.A.50 Certification of maintenance after embodiment of a Standard Change or Standard Repair (SC/SR)

AMC M.A.801 of the AMC to Part-M contains acceptable means of compliance for the release to service of a SC/SR by an organisation approved in accordance with Part-145.

AMC145.A.50 (b) Certification of maintenance

- 3 The certificate of release to service should relate to the task specified in the ~~manufacturer's~~ (S)TC holder's or operator's instruction or the aircraft maintenance program which itself may cross-refer to a ~~manufacturer's/operator's instruction in a maintenance manual, service bulletin etc.~~ maintenance data

AMC No. 2 to 145.A.50 (d) Certification of maintenance

1. A component which has been maintained off the aircraft needs the ~~issue~~ issuance of a certificate of release to service for such maintenance and another certificate of release to service in regard to being installed properly on the aircraft when such action occurs. ~~In the case of base maintenance this takes the form of a separate task sign-off for the maintenance and installation tasks.~~

2.. In the case of the issue of CA Form 1 for components in storage prior to CAR-145 and CAR-21 ~~became effective~~ and not released on a CA Form 1 or equivalent in accordance with 145.A.42(a) or removed serviceable from a serviceable aircraft or an aircraft which have been withdrawn from service the following applies.

2.3 For the purposes of this ~~paragraph 2~~ AMC No 2 only, appropriately rated means an organisation with an approval class rating for the type of component or for the product in which it may be installed.

2.4 A CA Form 1 issued in accordance with this paragraph 2 should be issued by signing in block 14b and stating "Inspected/~~Tested~~" in block 11. In addition, block 12 should specify:

145.A.55 Maintenance and airworthiness review records

a) The organisation shall record all details of maintenance work carried out. As a minimum, the organisation shall retain records necessary to prove that all requirements have been met for issuance of the certificate of release to service, including subcontractor's release documents, ~~and for the issue of any airworthiness review certificate and recommendation.~~

c) The organisation shall retain a copy of all detailed maintenance records and any associated maintenance data for three years from the date the aircraft or component to which the work relates was released from the organisation. ~~In addition, it shall retain a copy of all the records related to the issue of airworthiness review certificates and recommendations for three years from the date of issue and shall provide a copy of them to the owner of the aircraft~~

1. Where an organisation approved under this CAR terminates its operation, all retained maintenance records covering the last ~~two~~ ~~three~~ years shall be

distributed to the last owner or customer of the respective aircraft or component or shall be stored as specified by DGCA.

GM 145.A.55 (a) Maintenance and airworthiness review records

145.A.65 Safety and quality policy, maintenance procedures and quality system

(a) The organisation shall establish a safety and quality policy for the organisation to be included in the exposition under 145.A.70.

(b) The organisation shall establish procedures agreed by DGCA taking into account human factors and human performance to ensure good maintenance practices and compliance with the applicable requirements established in 145.A.25 to 145.A.95 of this CAR which shall include a clear work order or contract such that aircraft and components may be released to service in accordance with 145.A.50. The procedures under this point shall:

1. ensure that a clear work order or contract has been agreed between the organisation and the organisation requesting maintenance to clearly establish the maintenance to be carried out so that aircraft and components may be released to service in accordance with 145.A.50; and,

2. cover all aspects of carrying out maintenance, including the provision and control of specialised services and lay down the standards to which the organisation intends to work.’.

~~1. The maintenance procedures under this paragraph apply to 145.A.25 to 145.A.95.~~

~~2. The maintenance procedures established or to be established by the organisation under this paragraph shall cover all aspects of carrying out the maintenance activity, including the provision and control of specialised services and lay down the standards to which the organisation intends to work.~~

~~3. With regard to aircraft line and base maintenance, the organisation shall establish procedures to minimise the risk of multiple errors and capture errors on critical systems, and to ensure that no person is required to carry out and inspect in relation to a maintenance task involving some element of disassembly/reassembly of several components of the same type fitted to more than one system on the same aircraft during a particular maintenance check. However, when only one person is available to carry out these tasks then the organisation's work card or worksheet shall include an additional stage for reinspection of the work by this person after completion of all the same tasks.~~

~~4. Maintenance procedures shall be established to ensure that damage is assessed and modifications and repairs are carried out using data approved by DGCA or by an approved CAR 21 design organisation, as~~

-

GM 145.A.65(c)(1) Safety and quality policy, maintenance procedures and quality system

PARA	Comment	HANGAR	ENGINE	MECH	AVIONIC
------	---------	--------	--------	------	---------

			Workshop	Workshop	Workshop
145.36		Yes	No	No	No

145.A.70 Maintenance Organisation Exposition

(a) 'Maintenance organisation exposition' means the document or documents that contain the material specifying the scope of work deemed to constitute approval and showing how the organisation intends to comply with this CAR.

6. a list of certifying staff, and support staff ; and, if applicable, airworthiness review staff and staff responsible for the development and processing of the maintenance programme, with their scope of approval

12. the procedures and quality system established by the organisation under 145.A.25 to 145.A.90; and any additional procedure followed in accordance with CAR M

AMC 145.A.70(a) Maintenance Organisation Exposition

PART 1 MANAGEMENT

1.6 List of certifying staff , support staff. and airworthiness review staff

GM 145.A.70(a) Maintenance organisation exposition

3.145.A.70 (a)(1) to (a)(11) constitutes the 'management' part of the MOE and therefore could be produced as one document and made available to the person(s) specified under 145.A.30 (b) who should be reasonably familiar with its contents. 145.A.70 (a)(6) list of certifying staff and B1 and B2 Support staff may be produced as a separate document.

145. A.85 Changes to the organization

6. the facilities, equipment, tools, material, procedures, work scope or certifying staff and airworthiness review staff that could affect the approval.

Appendix I

Use of the CA Form 1 for maintenance

CA FORM 1

1.DGCA, India		2. AUTHORISED RELEASE CERTIFICATE CA FORM 1			3. Form Tracking Number	
4. Approved Organization Name and Address:					5. Work Order/Contract/ Invoice	
6. Item	7. Description	8. Part No	9. Qty	10. Serial/ Batch No	11. Status/ Work	
12. Remarks						
13 a. Certifies that the items identified above were manufactured in conformity to: <input type="checkbox"/> approved design data and are in condition for safe operation. <input type="checkbox"/> non approved design data specified in block 12.				14 a. CAR 145.A.50 Release <input type="checkbox"/> Other regulation specified to Service in block 12. Certifies that unless otherwise specified in block 12, the work identified in block 11 and described in block 12, was accomplished in accordance with CAR 145 and in respect to that work the items are considered ready for release to service.		
13 b. Authorised Signature		13 c. Approval/Authorisation Number		14 b. Authorised Signature	14 c. Certificate/ Approval Ref No.	
13 d. Name		13 e. Date (dd/mm/yyyy)		14 d. Name	14 e. Date (dd/mm/yy)	
<p>THIS CERTIFICATE DOES NOT AUTOMATICALLY CONSTITUTE AUTHORITY TO INSTALL. WHERE THE USER/INSTALLER PERFORMS WORK IN ACCORDANCE WITH REGULATIONS OF AN AIRWORTHINESS AUTHORITY DIFFERENT THAN THE AIRWORTHINESS AUTHORITY SPECIFIED IN BLOCK 1, IT IS ESSENTIAL THAT THE USER/INSTALLER ENSURES THAT HIS/HER AIRWORTHINESS AUTHORITY ACCEPTS ITEMS FROM THE AIRWORTHINESS AUTHORITY SPECIFIED IN BLOCK 1.</p> <p>STATEMENTS IN BLOCKS 13A AND 14A DO NOT CONSTITUTE INSTALLATION CERTIFICATION. IN ALL CASES AIRCRAFT MAINTENANCE RECORDS MUST CONTAIN AN INSTALLATION CERTIFICATION ISSUED IN ACCORDANCE WITH THE NATIONAL REGULATIONS BY THE USER/INSTALLER BEFORE THE AIRCRAFT MAY BE FLOWN</p>						

Authorised release certificate

CA Form 1

USER /INSTALLER RESPONSIBILITIES

Note:

- ~~1. It is important to understand that the existence of the document alone does not automatically constitute authority to install the part/component/assembly~~
- ~~2. Where the user/installer works in accordance with the national regulations of an Airworthiness Authority different from the Airworthiness Authority specified in block 1, it is essential that the user/installer ensure that his/her Airworthiness Authority accepts parts/components/assemblies from the Airworthiness Authority specified in block 1.~~
- ~~3. Statements 13a and 14a do not constitute installation certification. In all cases the aircraft maintenance record must contain an installation certification issued in accordance with the regulations by user/installer before the aircraft may be flown.~~

FLOWN

CA FORM 6

CAR-145 APPROVAL RECOMMENDATION REPORT						
145 36	Record of Airworthiness review Staff					

CAR -145 APPROVAL RECOMMENDATION REPORT		CA FORM 6
1.6	List of Certifying staff support staff and airworthiness review staff (Note: a separate document may be referenced).	