BHUTAN CIVIL AVIATION AUTHORITY

Guidance Material

GM-AIR-12

Guidance on Aircraft certifying staff and support staff

Issue 01

September 2026

Foreword

This Guidance Material (GM) is explanatory and interpretative material developed by the Bhutan Civil Aviation Authority (BCAA) to assist in the application of the requirements of BCAR-145 and the associated Acceptable Means of Compliance (AMC). It provides examples, best practices, and clarifications to facilitate a consistent understanding and application of the regulatory requirements without introducing additional regulatory obligations.

This GM has been developed to assist maintenance organisations in the preparation, revision, and maintenance of a Maintenance Organisation Exposition (MOE) in accordance with the requirements of BCAR-145. It is intended to promote a standardized approach to the development of an MOE by outlining the BCAA's expectations regarding its structure, content, and level of detail necessary to demonstrate compliance with the applicable requirements.

The BCAA encourages organisations to use this GM as a practical reference when developing or revising their MOE to facilitate an efficient review and approval process.

The scope, applicability, purpose, and entry into force of this GM are provided in para 0.3, 0.4, and 0.5, respectively.

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0. Introduction

0.1 Revision History

Issue	Issue date	Summary of Change
Issue 01	04 September 2026	First issue

0.2 Definitions & Abbreviations

Abbreviations	
AMC	Acceptable Means of Compliance
AML	Aircraft Maintenance Licence
AMO	Aircraft Maintenance Organization
BARNs	Bhutan Air Navigation Regulations
BCAA	Bhutan Civil Aviation Authority
BCAR	Bhutan Civil Aviation Requirements
AMTO	Approved Maintenance Training Organization
AOG	Aircraft On Ground
C/S	Certifying Staff
CC/S	Component Certifying Staff
EASA	European Union Aviation Safety Agency
EU	European Union
ESM	Engine Shop Manual
FAA	Federal Aviation Administration (U.S.A)
GM	Guidance Material
ILAC	International Laboratory Accreditation Cooperation
IORS	Internal Occurrence Reporting System
MOA	Maintenance Organization Approval
MOAP	Maintenance Organization Approval Procedures
MOE	Maintenance Organization Exposition
MOR	Mandatory Occurrence Reporting
NDT	Non-Destructive Testing
NDI	Non-Destructive Inspection
OEM	Original Equipment Manufacturer
PMA	Parts Manufacturer Approval
PPB	Principal Place of Business
SRM	Structural Repair Manual
S/S	Support Staff
STCH	Supplemental Type Certificate Holder
TCCA	Transport Canada Civil Aviation
TCH	Type Certificate Holder
WH	Working Hours

0.3 Scope & Applicability

BCAA is the Competent Authority for BCAR-145 organisations. Having their principal place of business located within and outside of Bhutan, and the BCAA is responsible for the approval of these maintenance organisations and for establishing procedures detailing how BCAR-145 applications and approvals are managed.

The provisions of this user guide are complementary to the requirements of BCAR-145 requirement, "as amended", and does not supersede or replace the associated regulatory requirements.

0.4 Purpose

This user guide is designed to be used by maintenance organization and the BCAA inspector when:

- The maintenance organization is:
    - Defining the Certifying staff (C/S) and support staff (S/S) qualification procedure in the MOE.
    - Assessing each individual Certifying staff (C/S) and support staff (S/S) before granting a BCAR-145 individual organization.
- BCAA inspector is:
    - Evaluating the Certifying staff (C/S) and support staff (S/S) qualification procedure.
    - Ensuring by sampling that Certifying staff (C/S) and support staff (S/S) BCAR-145 individual organization issued are compliant with the minimum criteria addressed in this guidance.

0.5 Entry into Force

This User Guide comes into force 30 days after publication on the BCAA website. Within this time frame the maintenance organisation shall assess the impact of this User Guide on the organisation's procedures and when relevant, propose a revision of the affected procedures to the BCAA.

The entry into force date of this User Guide does not supersede the need to comply with any other entry into force date(s) established by applicable regulatory requirements.

0.6 Associated Instructions

BCAA has developed associated instructions including Guidance, Checklists, Forms and Templates, that detail specific matters which have to be considered as an integral part of this GM. The organisations must refer to BCAA website (www.bcaa.gov.bt) for further information and necessary guidance.

0.7 Communication

All documents and correspondences between the maintenance organization and BCAA shall be in the English/Dzongkha language. The official email is airworthiness@bcaa.gov.bt.

1. A/C certifying staff & support staff.

1.1 A/C certifying staff & support staff definition.

This user guide is only intended to cover the case of aircraft certifying staff and support staff involved in maintenance of complex motor-powered aircraft.

Organizations involved in maintenance of other than complex motor-powered aircraft, are recommended to review and endorse in their exposition the applicable elements of this User Guide and to contact BCAA for further guidance.

1.1.1 A/C Certifying Staff (C/S)

A/C Certifying Staff (C/S) means staff authorized by a maintenance organization to release an Aircraft[1] to service, under the BCAR-145 approval, following line or base maintenance.

1.1.2 Support Staff (S/S).

Support Staff (S/S) means staff authorized by the BCAR-145 organization to support the Category "C" certifying staff in managing and releasing the A/C to service after base maintenance activity while not necessarily holding certification privileges[2]. 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.

1.1.3 BCAR-66 AML categories and subcategories

A BCAR-66 AML can be issued for categories and subcategories as indicated in BCAR-66.A.3.
The privileges associated to each category are indicated in BCAR-66.A.20.

1.2 Individual authorization procedures.

A/C C/S and S/S authorization procedures, (initial and renewal) together with the related qualification criteria, shall be detailed within the Maintenance Organization Exposition (refer also to the GM-AIR-08 Guidance on BCAR-145 Maintenance Organisation Exposition).

BCAR-145.A.30 (g) (h) requires the A/C C/S and S/S to be qualified in accordance with BCAR-66. However, paragraph BCAR-145.30 (j), enables a maintenance organization, by derogation, to have C/S and S/S qualified according to the Appendix IV to BCAR-145. Therefore, two cases may apply:

A. Staff qualified in accordance with BCAR-66. This means that the proposed A/C C/S and S/S holds a BCAR-66 aircraft maintenance license (refer to check list 1, enclosed in this user guide);
B. Staff qualified in accordance with Appendix IV to BCAR-145. This means that the proposed A/C C/S and S/S does not hold a BCAR-66 license (refer to check list 2, enclosed in this user guide).

[1] A/C means any machine that can derive support in the atmosphere from the reactions of the air other than reactions of the air against the earth's surface;
[2] This means that B1/ B2 support staff may not necessarily hold B1/B2 line maintenance certifying staff privileges.

1.3 Aircraft certifying staff and support staff qualified to BCAR-66.

1.3.1 License and scope.

The proposed C/S and S/S shall hold a valid BCAR-66 license issued by the BCAA.

The organization shall ensure that the BCAR-145 C/S - S/S individual authorization does not exceed the scope addressed in the BCAR-66 license.

Any limitation on the BCAR-66 license shall be listed on the BCAR-145 C/S - S/S individual authorization. In the case of BCAR-66 license in category B1, B2, C, the BCAR-145 individual authorization may only be granted for those categories when the relevant aircraft type rating is endorsed in the license, as specified in BCAR-66.A.45.

In the case of BCAR-66 license in category A, no aircraft type rating endorsement is expected in the license. In order for the maintenance organizations to issue a category A BCAR-145 individual authorization on a certain aircraft type, the related task training requirements shall be met. Further guidance to establish compliance of task training requirement is provided in this User Guide chapter 1.4.5.3.

1.3.2 Age.

The A/C C/S and S/S age shall be at least 21 years.

1.3.3 Additional training.

The A/C C/S and S/S shall be able to demonstrate he/she received, as appropriate, training on:

- the MOE and internal procedures applicable to A/C C/S and S/S (including issuance of CRS);
- Initial Safety Training (including Human Factors)[3].
- Fuel Tank Safety phase 2;
- Electrical Wiring Interconnection System (refer to EASA AMC 20-22 for further details);
- Customer`s operator procedures, such as but not limited to the customer`s ATL, work cards, work package, list of independent inspection items, deferred items procedures, MEL, etc.
- Any additional training(s) justified during the assessment performed by the Organization (e.g. human factor, aviation legislation, etc..).

1.3.4 Additional aircraft training.

The BCAR-145 organization need to be aware that:

- type training courses covering certain, but not all the models/variants included in a type rating, are valid for the purpose of endorsing the full type rating in the BCAR-66 aircraft maintenance license (e.g. a license endorsed with the rating Airbus A318/A319/A320/A321 (CFM56) after attending type training covering only the Airbus 320 (CFM56)).
- some systems and technology present in the particular aircraft being maintained may not have been covered by the training/examination/experience required to obtain the license and ratings. (e.g. Work being carried out on a model/variant for which the technical design and maintenance techniques have significantly evolved from the original model used in the type training; or specific technology and options selected by each customer which may not have been covered by the type training).

[3] Having completed a Module 9 HF training does not supersede the need to comply with the initial HF training in accordance with 145.A.30 (e). However, credit may be taken from the module 9 Human Factor training for the topics which are common in both trainings, provided the Module 9 HF training has been completed within the previous two years.

As a consequence, the maintenance organizations ensure that A/C C/S and S/S have received additional training, as appropriate, on the differences for the particular model/variant and/or the particular configuration of the aircraft intended to be maintained by the maintenance organizations. This additional training may take various forms depending on the complexity of the differences to be covered (e.g. read and sign document, on the job training, classroom training, etc.). In any case the additional training process shall be detailed in the MOE.

Note: the additional aircraft training described in this chapter must not be confused with the case where the differences that need to be covered are related to different BCAR-66 aircraft type ratings. In such case the chapter 1.4.5.2 of this User Guide applies. Such cases also involve necessarily an extension of the individual authorization following an assessment by the maintenance organizations, and in the case of BCAR-66 license holders the type endorsement in the license remains as a pre-requisite.

1.3.5 Maintenance experience.

The maintenance organizations shall ensure that C/S and S/S can demonstrate recent experience on the A/C type intended to be endorsed in the BCAR-145 individual authorization.
The recent maintenance experience shall be understood as meeting the requirement of 6 month of experience in two years period preceding the intended date of issuance of the individual authorization.

Further guidance is provided in GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.

1.3.6 Additional criteria for the renewal of individual authorization.

The C/S and S/S shall receive recurrent training related to up-to-date information on relevant technologies, Human Factors, FTS, Organization procedures (including changes in Aviation legislations), EWIS as applicable to the organization scope of approval and individual authorization held.

The C/S and S/S shall demonstrate a 6 month of experience during the two-year period preceding the renewal of authorization.

Further guidance is provided in *GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.*

1.3.7 Assessment.

The aim of the assessment is to ensure compliance of the A/C C/S and S/S with the relevant BCAR-145 requirements, with the criteria defined in this user guide and to ensure that each A/C C/S and S/S possesses the expected competency associated to his/her job function (proposed scope of work, Authorization category), before granting him/her an initial BCAR-145 C/S - S/S individual authorization, to renew or to extend the scope of his/her already existing authorization. This assessment shall also take into consideration attitude and behaviour.

As a consequence, the organization shall demonstrate through a competency assessment that the C/S and S/S:

- Meets the qualification criteria addressed above;
- Has the relevant knowledge, skills and ability to perform the maintenance tasks related to his/her job function including the relevant language knowledge;
- Is able to determine when the A/C is ready to release to service and when it shall not be released to service.

In the case of initial authorization or extension of the scope of an already existing authorization, the competency assessment must:

- Be specifically tailored to the aircraft type (s) intended to be covered by the certifying staff authorization;
- The competency assessment shall include evaluation of “On the Job Performance” and /or “testing of knowledge” by appropriately qualified personnel;

- In addition, it is recommended that the assessment form contains an open text field where the person responsible for the assessment records the questions raised, comments or any other information useful to support the recommendation for the pass/fail result. A “box-ticking” exercise would be pointless.

1.3.7.1 Check List 1: Topics to be reviewed before to grant /extend/ renew a BCAR-145 C/S - S/S individual authorisation, for staff qualified to BCAR-66.

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of authorization under BCAA approval:** *A, B1, B2, B3, C*	**A/C type:**

	BCAR-145 Requirements	**Checked & compliant**	**Reference of the document provided.**	**BCAA additional Guidance Material**
License & Scope	Does the C/S - S/S holds a valid BCAR-66 license?	☐		
	Does the scope of work of the C/S - S/S remain within the scope of work defined by the BCAR-66 AML and is any limitation listed license endorsed in the BCAR-145 C/S - S/S individual authorization?	☐		
	In the case of BCAR-145 C/S - S/S individual authorization in category B1, B2 or C, are the relevant A/C type ratings of the individual authorization endorsed in the BCAR-66 License?	☐		
	In the case of cat. "A" BCAR-66 AML was the relevant task training completed?	☐		
Age	Is the C/S - S/S more than 21 years old?	☐		
Additional Training	Has the C/S - S/S received an Initial Safety Training (including Human Factor)?	☐		
	Has the C/S - S/S received an appropriate training to the MOE and associated procedures/lists?	☐		
	Has the C/S - S/S received the initial FTS training as per Appendix IV to AMC to BCAR-145.A.30 (e)?	☐		
	Has the C/S - S/S received the EWIS training (refer to EASA AMC 20-22 for further details)?	☐		
	Has the C/S - S/S received training to the Customer`s operator procedures, such as but not limited to the customer`s ATL, work cards, work pack, list of independent inspection items, MEL, etc.?	☐		
additional aircraft training	Has the C/S and S/S received additional training, as appropriate, on the differences for the particular model/variant and/or the particular configuration of the aircraft intended to be maintained by the maintenance organization?	☐		
Maintenance experience	Can the C/S and S/S demonstrate recent experience on the A/C type (or similar aircraft) intended to be endorsed in the BCAR-145 individual authorization?	☐		GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.
In addition to the above points, the following applies for renewal of existing BCAR-145 C/S - S/S individual authorisation				
Renewal of BCAR-145 C/S – S/S individual authorization	Has the certifying staff/support staff received recurrent training that covers up-to-date information on relevant technologies, safety/Human Factors, FTS, Organization procedures (including changes in Aviation legislations), EWIS as applicable to the organization scope of approval and individual authorization held?	☐		
	Has the certifying staff/support staff demonstrated a 6 month of experience during the two-year period preceding the renewal of the authorization?	☐		GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.
When all the above points are positive, the following applies				
Assessment	Has the certifying staff/Support staff been assessing for competency including a language skill evaluation.	☐		Refer to the table "Summary of topics to be Assessed for A/C certifying and support staff"
	Has any additional training been identified and performed, as required, following the internal assessment?	☐		

1.3.8 Summary of topics to be assessed before to grant /extend/ renew a BCAR-145 C/S - S/S individual organization, for staff qualified to BCAR-66.

Purpose of the Assessment

☐ Initial grant ☐ Extension ☐ Renewal

The competency assessment shall include evaluation of "On the Job Performance" and /or "testing of knowledge" by appropriately qualified personnel

	I QUALIFICATION	Open text field box[4]
I.1.	Refer to the check list 1 "Topics to be Reviewed Before to Grant /Extend/ Renew an Individual Authorization for C/S & S/S Qualified to BCAR-66".	
	II KNOWLEDGE	Open text field box[4]
II.1.	Knowledge of safety management, human factors, human performance and limitations and just culture	
II.2.	Knowledge of organization capabilities, privileges and limitations (scope of approval, etc.)	
II.3.	Knowledge of BCAR-M, BCAR-145 (and any other relevant regulations)	
II.4.	Knowledge of relevant parts of the MOE and associated procedures	
II.5.	Knowledge of safety risks linked to the working environment	
II.6.	Knowledge on CDCCL (when relevant)	
II.7.	Knowledge on EWIS (when relevant)	
II.8.	Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects	
II.9.	Knowledge of safety risks linked to the working environment	
	III UNDERSTANDING	Open text field box[4]
III.1.	Understanding of professional integrity, behavior and attitude towards safety	
III.2.	Understanding of conditions for ensuring continuing airworthiness of aircraft and components	
III.3.	Understanding of his/her own human performance and limitations	
III.4.	Understanding of personnel authorizations and limitations	
III.5.	Understanding of critical task	
	IV ABILITY	Open text field box[4]
IV.1	Ability to supervise the performance of tasks carried out by non-C/S personnel (e.g. mechanics, etc.)	
IV.2	Ability to compile and control completed work cards	
IV.3	Ability to consider human performance and limitations	
IV.4	Ability to determine required qualifications for task performance	
IV.5	Ability to identify and rectify existing and potential unsafe conditions	
IV.6	Ability to check and document proper accomplishment of maintenance tasks	
IV.7	Ability to identify and properly plan performance of critical task	
IV.8	Ability to prioritize tasks and report discrepancies	
IV.9	Ability to process the work requested by the operator	
IV.10	Ability to properly process removed, uninstalled and rejected parts	
IV.11	Ability to properly record and sign for work accomplished	
IV.12	Ability to determine the acceptability of parts to be installed prior to fitment	
IV.13	Ability to understand work orders, work cards and refer to and use applicable maintenance data	
IV.14	Ability to use information systems	
IV.15	Ability to use, control and be familiar with required tooling and/or equipment	
IV.16	Teamwork, decision-making and leadership skills	
IV.17	Adequate communication and literacy skills: The A/C certifying staff shall be able to demonstrate a working knowledge of the language in which the maintenance data is published.	
Note: This list shall not be considered as exhaustive. It remains the responsibility of the maintenance organization to adjust it.		

[4] open text field where the person responsible for the assessment records the questions raised, comments or any other information useful to support the recommendation for the pass/fail result

1.4 A/C certifying and support staff not qualified to BCAR-66.

The organization shall ensure that A/C C/S and S/S *not qualified to BCAR-66 are compliant with the following BCAR-145 requirements.*

1.4.1 Appendix IV paragraph 1.(a)

"*The proposed* A/C C/S and S/S *shall hold a valid national license or a certifying staff organization issued under the national regulations".*

The basic license (national license) must have been evaluated in all categories by the BCAR-145 organization and in particular any differences compared to ICAO Annex I must be addressed (refer to Appendix IV to BCAR-145)

The national license to be considered depending on the organization location is summarized in the table "Summary of Topics to be assessed for Aircraft C/S & S/S Not Qualified to BCAR-66" of this user guide.

1.4.2 Appendix IV paragraph 1 (b)

"*The organization shall ensure that the organization does not exceed the scope addressed in the national license".* The proposed authorization privileges must have been evaluated to ensure they do not exceed the scope of the national license. The organization shall compare the scope of the national license and the scope of work of the BCAR-66 "C", "B1", "B2" and "A" categories and implement the necessary limitation. The result of the comparison shall be summarized in the MOE 1.6.

Any limitation addressed in the national license or in the A/C C/S and S/S organization issued under the national regulations shall be reported in the BCAR-145 C/S - S/S individual organization.

The organization can also endorse an A/C type in the BCAR-145 C/S - S/S individual organization that is not endorsed on the national license provided compliance is met with the other Appendix IV requirements.

In the case of national regulations using the same C/S - S/S codes (A, B1, B2 and C) of BCAR-66, this condition does not release the organization to compare the scope of the national licence and the scope of work of the BCAR-66 "C", "B1", "B2" and "A" categories and implement the necessary limitation.

1.4.3 Appendix IV paragraph 1 (c)

The A/C C/S and S/S shall be able to demonstrate he/she received:

- a training on human factors referred to in module 9 of Appendix I to Annex BCAR-66. The organization shall ensure and be in a position to demonstrate that the Human factor training syllabus and the training level are compliant to the syllabus and the level (B1 /B2) of training of Appendix I to BCAR-66. The demonstration process is left to the discretion of the organization.

- a training on aviation legislation referred to in module 10 of Appendix I to BCAR-66: The organization shall ensure and be in a position to demonstrate that the aviation legislation training syllabus and the training level are compliant to the syllabus and the level (B1 /B2) of training of Appendix I to BCAR-66. The demonstration process is left to the discretion of the organization.

A proposed A/C C/S or S/S is considered compliant with Appendix IV 1.(c) without further need of investigation, if one of the following evidences is available:

- examination certificate of recognition (CoR) issued by an BCAR-147 AMTO for the relevant module 9 or 10, or;

- when only a statement issued by an BCAR-147 AMTO can be provided, stating that the person has attended the relevant module 9 or 10 according to the corresponding BCAR-66 syllabus, then the maintenance organizations shall also ensure that that the course is carried out according to a detailed syllabus including level of training as per BCAR-66 Module 9

and/or 10 as applicable (the duration of the course need to be specified to demonstrate the adequacy to cover all subjects).

When selecting a non-BCAR-147 organization to provide the Human Factor training and/or Aviation Legislation, the BCAR-145 quality department shall be in a position to demonstrate as a minimum that:

- the course is carried out according to a detailed syllabus including level of training as per BCAR-66 Module 9 and/or 10 as applicable (the duration of the course need to be specified to demonstrate the adequacy to cover all subjects);
- the Qualification criteria for instructors is defined;
- a maximum number of Training Hours per day is defined (HF principal to be considered);
- a maximum of trainees per group of trainees (28 person).

1.4.4 Appendix IV paragraph 1 (d)

The A/C C/S and S/S shall be able to demonstrate:

- 3 years of maintenance experience for line maintenance certifying staff in category "A";
- 5 years of maintenance experience for line maintenance certifying staff and base maintenance support staff in category "B1", "B2";
- 8 years for base maintenance certifying staff in category "C".

In addition, the organization shall ensure that the A/C C/S and S/S can demonstrate recent experience.
The recent maintenance experience shall be understood as meeting the requirement of 6 month of experience in two years period preceding the intended date of issuance of the individual authorization (refer to BCAR-145.A.35.(c) for further details). This concept, is the same applicable for the renewal of the authorization as described in the following chapter related to "additional training" requirements.

Further guidance is provided in *GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.*

1.4.5 Appendix IV paragraph 1 (e) (f)

1.4.5.1 A/C Type training for category B1, B2 C/S, S/S and category C c/s

The A/C C/S and S/S shall be able to demonstrate that he/she received type training and passed the examination at the relevant category level (depending on the category of authorization), referred to in Appendix III to BCAR-66 for each aircraft type intended to be endorsed in the BCAR-145 C/S - S/S individual organization.

In the case of category C C/S, for the first aircraft type to be endorsed in the BCAR-145 C/S - S/S individual organization, the type training and examination shall be at the category level B1, B2.

An A/C type training is made up of two parts:

a) Theoretical element: composed by theoretical training and examination;
b) Practical element: composed by practical training and assessment[5].

The standard requirement to be met and to be reflected in the MOE 3.4 "certifying staff and support staff qualification and training procedures" is that the theoretical and practical element of the aircraft type training is completed at a BCAR-147 Approved Maintenance Training Organization.

[5] This point (b) is not applicable to level 1 type training (e.g. category "C" certifying staff who has already one A/C type in his/her organization)

1.4.5.2 Type training for differences

In order to meet the requirement of Appendix IV Paragraph 1. (e) (f), a person may also be qualified by a type training for differences (including both the theoretical and practical element) which has been received in an approved BCAR-147 organization.

The following requirements need to be met:

- The applicant for BCAR-145 C/S - S/S individual organization, needs to cover the differences between two different aircraft type ratings of the same manufacturer as determined by BCAA (refer to the aircraft type ratings provided in appendix I to AMC to BCAR-66, as amended); For example, a person who already completed a type training on the A320(CFM 56) and needs to be qualified also on the A320 (V2500), does not need to complete a full aircraft type training on the A320(V2500), but may only complete a type training for differences between the two aircraft type ratings (e.g. engine plus aircraft interfaces);
- Differences training shall cover both theoretical and practical elements of type rating training.
- A type rating shall only be endorsed on BCAR-145 C/S - S/S individual organization after differences training when the applicant also complies with one of the following conditions:
  - having already endorsed on the BCAR-145 C/S - S/S individual organization the aircraft type rating from which the differences are being identified, or;
  - having completed the type training requirements for the aircraft from which the differences are being identified, but has not yet been endorsed in the BCAR-145 C/S - S/S individual organization.

1.4.5.3 Tasks training for category A C/S

Those persons whose scope of work does not exceed those of a category “A” certifying staff may receive task training in lieu of a complete type training.

Task training shall be carried out by a BCAR-147 AMTO or an BCAR-145 AMO appropriately approved on the specific aircraft type for which the BCAR-145 C/S individual organization is to be issued. This training shall include practical hands-on training and theoretical training for each task authorized. Satisfactory completion of the task training shall be demonstrated by an examination or by workplace assessment carried out by the BCAR-147 AMTO or BCAR-145 AMO which has delivered the training.

It is the responsibility of the maintenance organizations issuing the category “A” BCAR-145 C/S individual organization to ensure that the task training covers all the tasks to be authorized. This is particularly important in those cases where the task training has been provided by an organization (BCAR-147 AMTO or BCAR-145 AMO) different from the one issuing the organization.

When the maintenance organizations intends to issue the category “A” BCAR-145 C/S individual organization based upon a complete type training delivered by an BCAR-147 AMTO, a demonstration shall be performed and documented that the type training (theoretical and practical elements) covers the tasks to be authorized.

1.4.6 Additional aircraft training.

The BCAR-145 organization need to consider that:

- type training may have covered certain, but not all the models/variants included in a type rating (e.g. A type training on Boeing 747-200/300 (GE CF6) which did not cover the Freighter model);
- some systems and technology present in the particular aircraft being maintained may not have been covered by the training/examination/experience (e.g. Work being carried out on a model/variant for which the technical design and maintenance techniques have significantly evolved from the original model used in the type training; or specific

technology and options selected by each customer which may not have been covered by the type training).

As a consequence, the maintenance organizations shall ensure that A/C C/S and S/S have received additional training, as appropriate, on the differences for the particular model/variant and/or the particular configuration of the aircraft intended to be maintained by the maintenance organizations. This additional training may take various forms depending on the complexity of the differences to be covered (e.g. read and sign document, on the job training, classroom training, etc.).

Note: the additional aircraft training described in this chapter must not be confused with the case where the differences that need to be covered are related to different BCAR-66 aircraft type ratings. In such case the chapter 1.4.5.2 of this User Guide applies. Such cases also involve necessarily an extension of the BCAR-145 C/S - S/S individual organization following an assessment by the maintenance organizations, and in the case of BCAR-66 license holders the type endorsement in the license remains as a pre-requisite.

1.4.7 Additional training.

The A/C C/S and S/S shall be able to demonstrate he/she received, as appropriate, training on:

- Initial Safety training (including Human Factor)[6];
- the MOE and internal procedures applicable to A/C C/S and S/S (including issuance of CRS);
- Fuel Tank Safety phase 2;
- Electrical Wiring Interconnection System (refer to EASA AMC 20-22 for further details);
- Customer`s operator procedures, such as but not limited to the customer`s ATL, work cards, work package, list of independent inspection items, deferred items procedures, MEL;
- Any additional training(s) justified during the assessment performed by the organization (e.g. human factor, aviation legislation, etc..).

1.4.8 Additional criteria for the renewal of individual authorization.

The C/S and S/S shall receive recurrent training that covers up-to-date information on relevant technologies, Human Factors, FTS, EWIS, Organization procedures (including changes in Aviation legislations), as applicable to the organization scope of approval and individual authorization held.

The 6 months maintenance experience in 2 years shall be understood as consisting of two elements duration and nature of the experience.

Further guidance is on this subject is provided in *GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.*

1.4.9 Assessment.

Refer to paragraph 1.3.7 “Assessment”.

[6] Having completed a Module 9 HF training does not supersede the need to comply with the initial HF training in accordance with 145.A.30.(e). However, credit may be taken from the module 9 Human Factor training for the topics which are common in both trainings, provided the Module 9 HF training has been completed within the previous two years

1.4.10. Check List 2: Topics to be reviewed before to grant /extend/ renew a BCAR-145 C/S - S/S individual authorisation, for staff not qualified to BCAR-66.

BCAA oversight activities may be performed using a representative sampling of C/S and S/S records. However, AMO remains responsible for ensuring that all individual authorisation files comply with the applicable requirements.

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of BCAR-145 C/S - S/S individual authorisation:** *BCAA Category A", "B1", "B2" or "C"*	**A/C type:**

	BCAR-145 Requirements	**Checked & compliant**	**Reference of the document provided**	**BCAA additional Guidance Material**
BCAR-145 Appendix IV(a)	Does the C/S - S/S hold a valid licence or a certifying staff authorisation issued under the country's National regulations in compliance with ICAO Annex 1?	☐		
	Are there any differences between national license that need to be addressed?	☐		
BCAR-145 Appendix IV(b)	Does the scope of work of the C/S - S/S remain within the scope of work defined by the National licence/certifying staff authorisation and Is any limitation listed in the National license endorsed in the BCAR-145 C/S - S/S individual authorisation?	☐		Refers to MOE guidance: Category and associated privileges of the national license to be addressed in the MOE 1.6.
BCAR-145.35(m)	Is the C/S - S/S staff more than 21 years old?	☐		
BCAR-145 Appendix IV(c)	Has the C/S - S/S demonstrated that he/she has received training on human factors referred to in module 9 of Appendix I to BCAR-66)?	☐		
	Has the C/S - S/S demonstrated that he/she has received training on aviation legislation referred to in module 10 of Appendix I to BCAR-66)?	☐		
	Has the provided training (module 9 and module 10) been evaluated for compliance with Appendix I to BCAR-66) In terms of syllabus and level (B1/B2) of training (refers 1.4.3)?	☐		
BCAR-145 Appendix IV(d)	Has the C/S - S/S staff demonstrate the required maintenance experience **BCAA Category "A" = 3 years** **BCAA Category "B1","B2" = 5 years** **BCAA Category "C" = 8 years.**	☐	Record the number of years	
	Can the C/S - S/S demonstrate recent experience on the A/C type intended to be endorsed in the BCAR-145 individual authorization?	☐		GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of BCAR-145C/S - S/S individual authorisation:** *BCAA Category A", "B1", "B2" or "C"*	**A/C type:**

	BCAR-145 Requirements	**Checked & compliant**		**Reference of the document provided**	**BCAA additional Guidance Material**
BCAR-145 Appendix IV (e) (f)	Has the C/S - S/S demonstrated he/she followed a task or a type training and pass the examination at the relevant category, referred to in Appendix III to BCAR-66? Note: Category "C" certifying staff shall demonstrate he/she received type training and passed examination at the category C level referred to in Appendix III to BCAR-66 for each aircraft type in his /her BCAR-145 individual authorisation, except that for the first aircraft type, training and examination shall be at the category B1, B2 or B3 level of Appendix III.				
	Is the theoretical part of the type training provided by an approved BCAR-147 organisation?	Y☐	N☐		
	Is the practical element of the training provided by an approved BCAR-147 organisation?	Y☐	N☐		
	Is the task training provided by an approved BCAR-145 or BCAR-147 organisation?	☐			
Additional Aircraft training	Has the C/S and S/S received additional training, as appropriate, on the differences for the particular model/variant and/or the particular configuration of the aircraft intended to be maintained by the maintenance organisations	☐			
Additional Training	Has the certifying staff/support staff received an Initial Safety Training (including Human Factor)?	☐			
	Has the C/S and S/S received an appropriate training to the MOE and associated procedures/lists?	☐			
	Has the C/S and S/S received the initial FTS training as per Appendix IV to AMC to BCAR-145.A.30 (e)?	☐			
	Has the C/S and S/S received the EWIS training (refer to EASA AMC 20-22 for further details).	☐			
	Has the C/S and S/S received training to the Customer`s operator procedures, such as but not limited to the customer`s ATL, work cards, work package, list of independent inspection items, deferred items procedures, MEL, etc?	☐			
In addition to the above points, the following applies for renewal of existing BCAR-145 individual authorisation					

Certifying Staff Name:	**Purpose of the review** ☐ Initial grant ☐ Extension ☐ Renewal	**Intended scope of BCAR-145C/S - S/S individual authorisation:** *BCAA Category A", "B1", "B2" or "C"*	**A/C type:**

	BCAR-145 Requirements	**Checked & compliant**	**Reference of the document provided**	**BCAA additional Guidance Material**
Renewal of BCAR-145 individual authorisation	Has the C/S and S/S received recurrent training that covers up-to-date information on relevant technologies, safety/Human Factors, FTS, Organisation procedures (including changes in Aviation legislations), EWIS, as applicable to the organisation scope of approval and individual authorization held?	☐		
	Has the C/S and S/S demonstrated a 6 month of experience during the two year period precedingthe renewal of BCAR-145 C/S - S/S individual authorisation?	☐		GM-AIR-09 Guidance on Demonstration of 6/24 Months Maintenance Experience.
When all the above points are positive, the following applies				
Assessment	Has the C/S and S/S been assess for competency including a language skill evaluation.	☐		Refer to the table "Summary of topics to be Assessed for A/C certifying staff"

1.4.11 Summary of topics to be assessed before to grant /extend/ renew an BCAR-145 C/S - S/S individual organization, for staff not qualified to BCAR-66.

Purpose of the Assessment: ☐ Initial grant ☐ Extension ☐ Renewal

The competency assessment shall include evaluation of "On the Job Performance" and /or "testing of knowledge" by appropriately qualified personnel

	I QUALIFICATION	Open text field box[8]
I.1.	Refer to the check list 2 "Topics to be Reviewed Before to Grant /Extend/ Renew an Individual Authorization for C/S & S/S Not Qualified to BCAR-66".	
	II KNOWLEDGE	Open text field box[7]
II.1.	Knowledge of safety management, human factors, human performance and limitations and just culture	
II.2.	Knowledge of organizationcapabilities, privileges and limitations (scope of approval, etc.)	
II.3.	Knowledge of BCAR-M, BCAR-145 (and any other relevant regulations)	
II.4.	Knowledge of relevant parts of the MOE and associated procedures	
II.5.	Knowledge of safety risks linked to the working environment	
II.6.	Knowledge on CDCCL (when relevant)	
II.7.	Knowledge on EWIS (when relevant)	
II.8.	Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences, incorrect maintenance data and existing or potential defects	
II.9.	Knowledge of safety risks linked to the working environment	
	III UNDERSTANDING	Open text field box[7]
III.1.	Understanding of professional integrity, behavior and attitude towards safety	
III.2.	Understanding of conditions for ensuring continuing airworthiness of aircraft and components	
III.3.	Understanding of his/her own human performance and limitations	
III.4.	Understanding of personnel authorizations and limitations	
III.5.	Understanding of critical task	
	IV ABILITY	Open text field box[7]
IV.1	Ability to supervise the performance of tasks carried out by non C/S personnel (e.g.mechanics, etc.)	
IV.2	Ability to compile and control completed work cards	
IV.3	Ability to consider human performance and limitations	
IV.4	Ability to determine required qualifications for task performance	
IV.5	Ability to identify and rectify existing and potential unsafe conditions	
IV.6	Ability to check and document proper accomplishment of maintenance tasks	
IV.7	Ability to identify and properly plan performance of critical task	
IV.8	Ability to prioritize tasks and report discrepancies	
IV.9	Ability to process the work requested by the operator	
IV.10	Ability to properly process removed, uninstalled and rejected parts	
IV.11	Ability to properly record and sign for work accomplished	
IV.12	Ability to determine the acceptability of parts to be installed prior to fitment	
IV.13	Ability to understand work orders, work cards and refer to and use applicable maintenance data	
IV.14	Ability to use information systems	
IV.15	Ability to use, control and be familiar with required tooling and/or equipment	
IV.16	Teamwork, decision-making and leadership skills	
IV.17	Adequate communication and literacy skills: The A/C certifying staff shall be able to demonstrate a working knowledge of the language in which the maintenance data is published. In addition, should the language of the maintenance data not be English, then English language working knowledge is required to: • Understand Airworthiness directives.	

Note: This list shall not be considered as exhaustive. It remains the responsibility of the maintenance organizationto adjust it.

[8] open text field where the person responsible for the assessment records the questions raised, comments or any other information useful to support the recommendation for the pass/fail result

1.4.12. National license(s) to be considered for BCAR-145 organisation.

BCAR-145 organization with Principal Place of Business (PPB[9]) and facilities outside Bhutan						
Specific case	**Possible options for qualification**	**Applicability**		**Qualification allowed by**		**Possible alternatives to BCAR-66**
		BCAR-145.A.30 (j)(1)	**BCAR-145.A.30 (j)(2)**	**BCAR-145.A.30 (j)(1)**	**BCAR-145.A.30 (j)(2)**	
for **all facilities** in country A being the country where the PPB is	BASE MAINTENANCE: qualification in accordance with aviation regulations of country **A;** subject to compliance with the requirements in Appendix IV	YES	N/A	**Country A**	N/A	Country A
	LINE MAINTENANCE: qualification in accordance with aviation regulations of country **A;** subject to compliance with the requirements in Appendix IV	N/A	YES	N/A	**Country A**	Country A
for **base maintenance** facility in country **B** different from PPB	BASE MAINTENANCE: qualification in accordance with aviation regulations of country **B;** subject to compliance with the requirements in Appendix IV	YES	N/A	**Country B**	N/A	Country B
for **line maintenance** station in country **C**	LINE MAINTENANCE: qualification in accordance with aviation regulations of country **A or of country C;** subject to compliance with the requirements in Appendix IV	YES PPB registered in (A)	YES based in C	**Country A**	**Country C**	Country A Country B
For line maintenance stations in Bhutan	qualification in accordance with BCAR-66 145. A.30 (g),(h) ONLY.	N/A	N/A	NONE	NONE	NONE
NOTE: "Qualified in accordance with national aviation regulations" means that the qualification must have been issued or recognised (validated) in accordance with that national regulation. For recognition of licences from other authorities the criteria in Appendix IV to BCAR-145 are not relevant. However, in order for the BCAR-145 organization to grant the BCAR-145 C/S - S/S individual organization, the person must meet the requirements defined in Appendix IV to BCAR-145						

[9] PPB: Means the head office or the registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised.

1.5 Management of the BCAR-145 C/S - S/S individual organization.

1.5.1 List of A/C certifying staff and support staff.

The management of the list of A/C C/S and S/S shall be detailed within the MOE 1.6 and approved by BCAA.

1.5.2 BCAR-145 C/S - S/S individual organization.

The organization is responsible to ensure that:

- The national license or a certifying staff organization issued under the national regulations remains valid; and
- The A/C C/S and S/S has followed the recurrent training within the two year period.

As a consequence, the organization must align the validity of BCAR-145 C/S - S/S individual organization accordingly.

1.6 One-off authorizations

1.6.1 Applicability.

This chapter is intended to clarify the applicability of the one-off certification authorization privilege as per BCAR-145.A.30 (j) (5).

BCAR-145 text	**clarification on applicability and limitations**
BCAR-145.A.30 (j) (5) states**:** "In the following unforeseen cases, where an **aircraft is grounded** at a location **other than the main base** where no appropriate certifying staff are available, the **organization contracted to provide maintenance** support may issue a one-off certification authorization to …..":	*The applicability is limited to the following cases:* • *The* maintenance organizations *has a maintenance contract with the customer operator (*), and* • *an AOG condition occurs outside the* maintenance organizations *main base* *(*) in the case of large aircraft and aircraft used for commercial air transport the* maintenance organizations*, "contracted to provide maintenance" and issuing the one-off authorization, is intended to be the maintenance organization directly contracted by the CAMO Operator as per BCAR-M.A.201.(h).2 and holding a contract as outlined in Appendix XI to AMC to BCAR-M.*
BCAR-145.A.30 (j) (5) (i) states: "…..one of its employees holding equivalent type organizations on aircraft of similar technology, construction and systems; or…"	*In order to establish when two aircraft can be considered as similar, refer to AMC 66.A.20.(b).2*
BCAR-145.A.30 (j) (5) (ii) states: "….to any person with not less than five years maintenance experience and holding a valid ICAO aircraft maintenance licence rated for the aircraft type requiring certification provided there is no organization appropriately approved under this BCAR at that location and the contracted organization obtains and holds on file evidence of the experience and the license of that person."	*Only an aircraft maintenance license issued in accordance with ICAO Annex I and (in addition) with the appropriate aircraft type endorsed in the license is eligible for meeting the requirement.*
All such cases as specified in this subparagraph shall be reported to the BCAA within seven days of the issuance of such certification organization. The organization issuing the one-off organization shall ensure that any such maintenance that could affect flight safety is re-checked by an appropriately approved organization.	*In addition to the notification to the BCAA, it is the responsibility of the* maintenance organizations *to establish a coordination with the customer operator, to ensure the CAMO is informed of:* • *the issuance of a one-off organization;* • *the need of a maintenance task performed under a one-off organization to be re-checked by an appropriately approved* maintenance organization

1.6.2 MOE.

In the case this privilege is intended to be used, procedures need to be endorsed in the MOE, addressing in particular the following aspects:

- In the MOE 3.4:
  - process in place and involvement of the Quality Manager in issuing the one-off authorization;
  - minimum records to be associated with the issuance of the one-off organization in order to allow a verification that the regulatory requirements are met;
- In the MOE 2.16:
  - records of the maintenance carried out under the one-off authorization;
  - notification process to BCAA within 7 days;
  - How the organization will make sure that any maintenance release under a one-off authorization that could affect flight safety will be re-checked by an appropriately approved organization.

1.7 Privileges of C/S and S/S

The fact that a person was previously holding an BCAR-145 C/S - S/S individual organization in another maintenance organizations does not automatically authorize the receiving organization to grant the same privilege to such staff. Privileges are not transferable.

In the case of an A/C Certifying Staff (C/S) and/or support staff (S/S) moving from one BCAR-145 organization to another, the receiving organizations required to assess such staff based on its approved MOE procedures for granting an BCAR-145 C/S - S/S individual organization. This also includes an assessment of all trainings, with particular attention to type training not followed in an BCAR-147 organization[10];

As highlighted in this GM, the level of the assessment is different depending if the person is holding an BCAR-66 AML or holding a national license issued under the national regulations.

1.8 Records.

The quality system shall review and archive in an exhaustive manner the relevant files resulting from the implementation of this procedure.

This means that the organization shall keep records of all evidence associated to the A/C BCAR-145 C/S - S/S individual organization (certificates, experience log book, diploma, recurrent training evidences (which includes demonstration of type training when not followed in an approved BCAR-147 organization), and assessment evidence (including assessment results which could be in a form chosen by the organization).

[10] In this case the receiving organization intending to nominate the A/C Certifying Staff (C/S) and/or support staff (S/S) is required to demonstrate compliance of the type training. The fact that the person was already approved in another maintenance organizations for the related aircraft type does not replace the need of such demonstration, which may be difficult if the detailed training records are not accessible by the receiving organisation.