
BHUTAN CIVIL AVIATION AUTHORITY



BCAA Guidance on On the Job Training (OJT) for the first type rating in any Category or subcategory of a BCAR-66 Aircraft Maintenance Licence

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Foreword

This guidance material on On-the-Job Training (OJT) for the first type rating in any category or subcategory of a BCAR-66 Aircraft Maintenance License has been developed to provide a structured framework and guidance for complying with the OJT requirements set forth in BCAR-66.A.45

This document is intended for all stakeholders, including BCAR-145 approved maintenance organizations, supervisors, assessors, and trainees. It outlines detailed procedures and expectations for conducting OJT, ensuring that maintenance tasks are performed under professional supervision and assessed rigorously.

It is important to note that the provision of this guidance material is complimentary to the requirements of BCAR-66 “as amended,” including any other BCAA requirements. It does not supersede or replace the associated regulatory requirements clause. Instead, it serves to support and clarify the existing requirements to ensure a comprehensive and consistent approach to OJT implementation.

This guidance material has been approved by the Head of the Authority and will be available on the official website of the Bhutan Civil Aviation Authority.



Head of Authority

DIRECTOR
Bhutan Civil Aviation Authority
Paro · Bhutan



Revision history and effective pages

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1. Introduction

OJT should not be confused with Practical Training which is conducted by BCAR-147 Approved Training Organisations.

OJT is a supervised event rather than an instructed one and should include one to one supervision and involve actual work task performance on aircraft/components, covering line and/or base maintenance tasks. The completion of the pre-agreed tasks should be in a logbook format, issued by the BCAR-145 organisation to the student and carried out under the direct supervision of an engineer approved to complete the tasks. These tasks constitute further ‘type contact’ to consolidate the Theory and Practical training and to gain experience in performing safe maintenance on their first type in each subcategory.

The organisation providing the on-the-job training should provide trainees a schedule or plan indicating the list of tasks to be performed under supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or group of tasks is countersigned by the corresponding supervisor. The logbook format and its use should be clearly defined.

For the endorsement of the first type rating in each BCAR-66 aircraft maintenance licence subcategory the completion of on-the-job training is required, as stated in BCAR-66.A.45. This is mandatory for group 1 aircraft. For groups 2 and 3 aircraft, OJT is not required if an oral examination is conducted in place of type training (Theory and Practical). If type training is conducted, OJT will again be required (GM 66.A.45). See Appendix C of this document for clarification.

The engineer must supply evidence of completing the following for each first type in each licence sub-category:

BCAR-147 organisation

- Theory training and examination
- Practical training and assessment

BCAR-145 organisation

- On the Job training (OJT) and assessment *

Note: * OJT is only required for the initial type in each licence category or sub-category:

For example; if a basic B1/B2 licence is endorsed with the Airbus A320 type in the B1 category and the engineer wishes to add the A320 in the B2 category, he/she will have to complete B2 related OJT representative of that aircraft and its systems.

If the same engineer adds the B1.3 category to the basic licence and wishes to add the first helicopter type, he/she must complete OJT representative of that first helicopter type. Endorsement of any subsequent types in each of the categories will not require OJT.

2. Training Privileges

OJT may only be carried out under the control of a maintenance organisation appropriately approved to maintain the particular type concerned. It is not mandatory for a maintenance organisation to deliver OJT but in either case, the Maintenance Organisation Exposition (MOE) must indicate applicability.

Up to 50% of the required OJT can be undertaken before the aircraft theoretical type training starts.

3. Logbook content

At least 50% of the tasks contained in Appendix II to AMC to BCAR-66, shall be completed where relevant to the particular aircraft type and licence subcategory applied for. Tasks other than those in Appendix II to AMC to BCAR-66 can be considered as replacements when they are relevant. Tasks should be chosen for their variety, complexity, diversity, frequency, safety and novelty etc. (AMC to section 6 of Appendix III to BCAR-66 item 4). Tasks should also be achievable and relevant to the aircraft type.

There are no stipulations as to who creates the list, only that it is relevant to the type.

The logbook should contain a statement that a record of the completed tasks or group of tasks have been selected and completed based upon their variety and complexity. It is recognised that some organisations have less exposure to more technically difficult tasks, for example line stations. Consideration should be taken for the repetition of the tasks that are available, to allow for the requisite experience to be gained in conducting safe maintenance. Substantial repetition must be considered by the surveyor and be proportionate and within reason. Where possible the organisation should detail tasks that it expects to perform on a regular basis.

NOTE: *It should be remembered that potential OJT participants may not have had any previous experience on the type concerned and that the only contact they have had was during Theory and Practical type training.*

Task completion and feedback should be observed and stated in the approved logbook by the direct supervisor, who should oversee the entire task process and confirm completion in the logbook. The experience should be carried out on the specific aircraft type that is required for endorsement on the license.

Logbooks should be created for each licence category i.e. B1, B2 or B1&B2 that they intend to support and detail the required diversity and complexity of tasks to support an application. An alternative to the use of a logbook to demonstrate the record of OJT may be agreed by the BCAA on a case-by-case basis.

Tasks need not always be direct reflection of the regulation and may be included depending upon the needs or the organisation and its operations.

Typically examples of this maybe those such as:

- De-icing – Not relevant in hot or humid locations or operations
- Hoists – Relevant to helicopter hoist operations
- Floats – Relevant to marine or amphibious aircraft / helicopters
- Survey – Inspections related to survey equipment and modifications

Production Planning

The maintenance organisation should detail their procedure in Section 3.15 of the MOE (BCAR-145), how they will plan their tasks around the maintenance of the aircraft and availability of the accepted Supervisors, considering, as a minimum:

- Human Factors
- Workload
- Any critical tasks being performed

Supervision & Assessment

The procedure referred to in Section 3.15 of the MOE shall detail the complete process for the supervision of any OJT task and should also detail what to do if the applicant does not have a positive assessment i.e., fails the OJT assessment during the period of OJT. The organisation may wish to include the following:

- Additional Training
- 2nd Re-assessment (only if the failure was marginal)
- Further experience to be gained

All of the above should be considered and a rationale provided within the supporting procedure.

Safe Release of the Aircraft upon completion of the OJT

The organisation shall also detail their procedure ensuring that any aircraft being released from maintenance having had applicants undertaking OJT meets the BCAR-145 requirements for issue of a CRS, taking into account the following:

- Performance of any critical task (i.e a task that meets the requirements of BCAR-145.A.48)
- Human Factors (Supervisors may be distracted from the task if they are supervising OJT)
- Any other factors such as lighting, facilities, shift handover, etc.

4. Simulation

The use of simulators in OJT is not allowed, as the overall objective is to gain actual experience of conducting safe maintenance on live aircraft (AMC to section 6 of Appendix III to BCAR-66 item 3).

5. OJT Assessment

A final assessment of the completed OJT documentation is carried out to confirm the trainee has completed the required diversity and quantity of tasks (AMC to section 6 of Appendix III to BCAR-66 item 8).

NOTE: *This is not an assessment of the student directly.*

The final assessment should detail a statement/confirmation that the completion of the required diversity and quantity of OJT has been completed and that the supervisor reports and feedback (whether included in the logbook or retained separately) have been completed. (See Appendix D of this document)

6. Approving the conduct of the OJT by the BCAA

In order to hold the OJT privilege, the organisation must carry out the following:

- Provide a copy of their supporting internal quality audit.
- Update their MOE with a thorough procedure either defined in Section 3.15 or referred out to a separate local procedure. Then provide the latest version to the BCAA for approval.
- Define a list of Approved Supervisors/Assessors, this list may refer to the list of Certifying staff in Section 1.6 or the staff responsible be named in Section 3.15. either way the organization should nominate the supervisors/assessors. Also copies of their current authorisation should be included.
- Develop an OJT logbook for the type(s) of aircraft that they wish to conduct the OJT on. The organization must have the type on their scope of approval and the logbook should be clearly identified as to whether it is for B1 or B2 staff. (A sample list of OJT tasks can be found in Appendix II to BCAR-66).
- The OJT logbook should then be retained indefinitely for review by the BCAA or other such agencies for review.

To facilitate the approval of the OJT process by the BCAA, the organization shall produce the relevant worksheets or logbook, scheduling the list of tasks to be performed, for each type and a compliance report demonstrating how the OJT meets the requirements of BCAR-66. This could be as simple as a short narrative referencing the MOE procedures, Supervisors, Assessors, the 50% requirements and the regulation complied with. Alternatively, organizations may wish to use a format similar to the Aircraft Maintenance Engineer's Logbook published by the BCAA (Available on BCAA's website) but this should be populated with the tasks to be accomplished and agreed with the BCAA.

OJT shall cover a cross section of tasks acceptable to the BCAA. The OJT tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Each task shall be signed off by the student and countersigned by a designated supervisor. The tasks listed shall refer to an actual job card/work sheet, etc.

The final assessment of the completed OJT is mandatory and shall be performed by an appropriately qualified, designated assessor.

Approval will be indicated through the inclusion and acceptance of procedures in the organization's MOE Section 3.15 or referenced in a Procedures manual (AMC to section 6 of Appendix III to BCAR-66 item 9) and shall include processes such as:

- The assessment of the completed OJT
- The certification technique for the completed OJT, e.g., issuing a Certificate of Completion
- The qualification/training of the Supervisors and Assessors.

These processes and the records they produce will be audited during the organisation's oversight period by the BCAA.

It shall have been started and completed within the 3 years preceding the application for a type rating endorsement.

7. Qualifications

Supervisors play the biggest role in OJT and they should therefore:

- Have the relevant certifying privileges for the task.
- Be competent for the selected tasks
- Be safety orientated.
- Be capable to coach, mentor and when necessary, determine the need for extra or additional training
- Be designated by the approved maintenance organisation to carry out supervision

Assessors should have training and experience on the assessment process being undertaken and be authorised to do so by the organisation (AMC to section 6 of Appendix III to BCAR-66 item 8).

The assessment could conceivably be carried out by an administrator trained in the documentation's usage and completion parameters, e.g. the required number of tasks in the logbook being completed, the correct signatures in the correct boxes etc. This would obviously vary from one organisation to another.

The organisation should demonstrate a process that explains the qualification and authorisation of these personnel and how they are managed.

8. What happens next?

The maintenance organisation should present the student with evidence of OJT completion that can be submitted to BCAA, with the Certificates of Recognition for Theory and Practical training, for their licence to be endorsed with the type rating.

In order to facilitate the verification of such evidence by BCAA, demonstration of the OJT shall consist of:

- Detailed worksheets/logbook, and
- A compliance report demonstrating how the OJT meets the requirements of BCAR-66.

The regulation does not state the nature of the compliance report, however the sample demonstrated in Appendix D gives an example of acceptable means:

- Certificate of Completion – (See sample in Appendix D)
- A letter/statement of confirmation of completion
- The completed approved OJT logbook

For audit purposes, they should contain a reference to the BCAR-66 requirements the OJT complies with and be cross referenced to the student's original OJT logbook.

Records of the completed OJT logbooks should be retained by the BCAR-145 organisation to facilitate subsequent audits by BCAA.

APPENDIX A – Abbreviations

Abbreviations	
BCAA	Bhutan Civil Aviation Authority
OJT	On the Job Training
AMC	Acceptable Means of Compliance
MOE	Maintenance Organisation Exposition
CRS	Certificate of Release to Service

APPENDIX B – Definitions

- a) **OJT:** On the Job Training within a BCAR-145 environment.
- b) **Practical Training:** Practical Instruction delivered in BCAR-147 approved course.
- c) **Simulators:** Devices that mimic real aircraft operations.
- d) **Certificate of Recognition:** BCAR-147 document used to demonstrate successful completion of approved Theory and Practical training only.
- e) **Type training:** Combination of Theoretical and Practical training.
- f) **Type examination:** Written examinations consisting of multi choice questions. Oral examination for types that are not supported by dedicated BCAR-147 Type training and carried out by BCAA.

APPENDIX C – Aircraft Rating Requirements

Aircraft rating requirements			
Aircraft Groups	B1/B3 licence	B2 licence	C licence
Group1 <ul style="list-style-type: none"> • Complex motorpowered aircraft. • Multiple engine helicopters. • Aeroplanes certified above FL290. • Aircraft equipped with fly-by-wire. • Other aircraft when defined by the BCAA. 	(For B1)		
	Individual TYPE RATING Type training: - Theory + examination - Practical +assessment PLUS OJT (for first aircraft in licence subcategory)	Individual TYPE RATING Type training: Theory + examination Practical + assessment PLUS OJT (for first aircraft in licence subcategory)	Individual TYPE RATING Type training: - Theory + examination
Group2	(For B1.1, B1.3, B1.4)		
Subgroups: 2a: single turboprop aeroplanes (*) 2b: single turbine engine helicopters (*)	Individual TYPE RATING (type training + OJT) or (type examination + practical experience)	Individual TYPE RATING (type training + OJT) or (type examination + practical experience)	Individual TYPE RATING type training or type examination
2c: single piston engine helicopters (*) (*) Except those classified in Group 1.	Full SUBGROUP RATING (type training + OJT) or (type examination + practical experience) on at least 3 aircraft representative of that subgroup Manufacturer SUBGROUP RATING (type training + OJT) or (type examination + practical experience) on at least 2 aircraft representative of that manufacturer subgroup	Full SUBGROUP RATING based on demonstration of practical experience Manufacturer SUBGROUP RATING based on demonstration of practical experience	Full SUBGROUP RATING type training or type examination on at least 3 aircraft representative of that subgroup Manufacturer SUBGROUP RATING type training or type examination on at least 2 aircraft representative of that manufacturer subgroup

Aircraft rating requirements			
Aircraft Groups	B1/B3 licence	B2 licence	C licence
Group3 Piston engine aeroplanes (except those classified in Group 1)	(For B1.2) Individual TYPE RATING (type training + OJT) or (type examination + practical experience)	Individual TYPE RATING (type training + OJT) or (type examination + practical experience)	Individual TYPE RATING type training or type examination
	Full GROUP 3 RATING based on demonstration of practical experience Limitations: <ul style="list-style-type: none"> • Pressurized aeroplanes • Metal aeroplanes • Composite aeroplanes • Wooden aeroplanes • Metal tubing & fabric Aeroplanes 	Full GROUP 3 RATING based on demonstration of appropriate experience	Full GROUP 3 RATING based on demonstration of practical experience
Piston engine non-pressurized aeroplanes of 2000 kg MTOM and below	(For B3) FULL RATING "Piston engine non - pressurized aeroplanes of 2000 kg MTOM and below" based on demonstration of practical experience Limitations: <ul style="list-style-type: none"> • Metal aeroplanes • Composite aeroplanes • Wooden aeroplanes • Metal tubing & fabric aeroplanes 	Not applicable	Not applicable

APPENDIX D - Sample Certificate of Completion / Compliance Report

CERTIFICATE OF COMPLETION (Compliance Report)

Reference: BCAA.145.**

The Certificate is issued to:

Date of Birth:

Place of Birth:

NAME AND ADDRESS OF ORG

Reference: BCAA.145.**

A maintenance organisation approved to provide On the Job Training (OJT) in accordance with BCAR-145.

This certificate conforms that the above-named person has completed the OJT course of training stated below and complies with the following.

(TYPE RATING AS PER PART 66 List)

Requirement	Confirmed
OJT completed at an approved BCAR-145 Organisation	YES / NO
Completed OJT covers a representative cross section of tasks from BCAR-66, Appendix II	YES / NO
Minimum 50% of applicable tasks to the category completed and are representative in nature	YES / NO
No more that 50% of the OJT completed before the completion of the BCAR-147 Type training	YES / NO
OJT Logbook assessed including Supervisors comments	YES / NO

Compliance Statement:

The competence of the delegate has been assessed together with the contents of this logbook, which contains the sufficient diversity and quantity of tasks to meet the requirements of BCAR-66 for the first type rating as per AMC to Section 6 of Appendix III to BCAR-66, (item 8).

Signed:

Quality Manager

Date: