KINGDOM OF BAHRAIN
Ministry of Transportation
and Telecommunications

مملكة البحرين
وزارة المواصلات والاتصالات

CIVIL AVIATION PUBLICATION

CAP 35

AIRCRAFT TECHNICAL LOG SYSTEM

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REVISION RECORD

CAP 35 AIRCRAFT TECHNICAL LOG SYSTEM

Revision No.	Date of Issue
Initial Issue	07 February 2024

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1. Introduction

a. Article 38 of Civil Aviation Law 14 of 2013 requires furnishing of details as required by the respective regulation on the Aircraft Technical Log System and Article 43 requires carriage of Aircraft Technical Logbook / Journey Logbook onboard the aircraft while performing aircraft maintenance and operations.

b. Further Article 88 requires that flight risks and defects & malfunctions are recorded on the Aircraft Technical Log System.

c. ANTR M.A.305 (Aircraft continuing airworthiness record system) and its AMCs / GMs, stipultaes requirements of logbooks (Aircraft Logbook, Engine Logbook(s), Engine Module Log Cards, Propeller Logbook(s), Propeller Log Cards as applicable and the details to be furnished therein.

d. ANTR M.A.306 (Aircraft Technical Log System) and its AMCs / GMs, stipulates the requirement for use of the Aircraft Technical Log system, its approval by BCAA and required details to be furnished therein.

e. Following are the type of documents (not limited to) identified under the Aircraft Technical Log System:

i. Journey Logbook / Technical Logbook or an equivalent document acceptable to BCAA.
ii. Aircraft Logbook
iii. Engine Logbook for each engine installed in the aircraft.
iv. A propeller Logbook for every variable pitch propeller installed in the aircraft (if applicable).
v. A Radio Apparatus Logbook, for aircraft fitted with radio apparatus (Airframe Logbook can be used for making the entries pertaining to Radio Apparatus).
vi. Any other logbook required by the Director General.

f. In addition to the requirements of ANTR M.A.305, ANTR M.A.306 requires that,

An operator shall use an aircraft technical log system containing the following information for each aircraft:

1. Information about each flight, necessary to ensure continued flight safety, and;
2. The current aircraft certificate of release to service, and;
3. The current maintenance statement giving the aircraft maintenance status of what scheduled and out of phase maintenance is next due. The maintenance statement may be kept at the operator's engineering office, and;
4. All outstanding deferred defects rectifications that affect the operation of the aircraft, and;
5. Any necessary guidance instructions on maintenance support arrangements.

g. The aircraft technical log system and any subsequent amendment shall be approved by BCCA.

h. An operator shall ensure that the aircraft technical log is retained for 36 months after the date of the last entry.

2. Purpose

The Purpose of this procedure is to provide guidance to the operator in preparation of Technical Log system, and BCAA Inspectors in order to ensure that the Operator Journey Logbook/Technical Log System / Flight Report Books are standardized to meet the requirements of AMC MA 306 of ANTR M.

2.1 Journey Logbook (JLB) / Operator Technical Log System

The purpose of Technical Log / JLB is to record requisite technical and flight log information of any aircraft in a manner acceptable to BCAA.

2.2 Format of Journey Logbook (JLB) / Operator Technical Log System

The contents of Flight Report Book (FRB) or Tech Log as an equivalent document to Journey Log System should meet the requirements of AMC MA 306 of ANTR M.

The operator's aircraft technical log is a system for also recording defects and malfunctions during the aircraft operation and for recording details of all maintenance carried out on an aircraft between scheduled base maintenance visits. In addition, it is used for recording flight safety and maintenance information the operating crews need to know.

Cabin or galley defects and malfunctions that affect the safe operation of the aircraft or the safety of its occupants are regarded as forming part of the aircraft logbook were recorded by another means.

The operator's aircraft technical log system may range from a simple single section document to a complex system containing many sections but, in all cases, it should include the information specified as per AMC MA 306 (a) of ANTR M.

The Flight Report Book (FRB) or Tech Log as an equivalent document to Journey Logbook shall contain the following information besides the details given under the Chapter 3 below and in accordance with ANTR M.A.305 / 306:

i. Aircraft nationality and registration
ii. Date of flight (s)
iii. Names and details of crewmembers.
iv. Duty assignments of crewmembers.
v. Place of departure.
vi. Place of arrival.
vii. Time of departure.
viii. Time of arrival.
ix. Hours of flight.
x. Incidents, observations, if any.
xi. Signature of pilot in command.

3. Aircraft, Engine, Propeller and Radio Apparatus Logbook

An aircraft logbook, engine logbook(s) and propeller logbook(s) are part of the aircraft continuing airworthiness records, a manufacturer in respect of each newly manufactured

aircraft; engine or propeller may issue a logbook along with the release documents. If he does not, then the owner/ operator may raise a logbook or an equivalent document system on his own with the approval of BCAA. Each such logbook shall preferably have different sections to record the details required by ANTR M.

3.1 The first section will contain records of

a. Hours flown date wise,
b. All routine inspection/maintenance, including "Certificate of Release to Service" inspection and higher checks carried.
c. Test flight,
d. Minor repairs and certification thereof,
e. The information required in the vertical columns,

i. The date of flight,
ii. Total flight time since manufacture,
iii. Time since last overhaul/major inspection, number of landings/cycles, etc.

Note: The routine inspections mentioned in the Logbook may be identified by an identification number mentioned on the routine inspection sheet.

3.2 The second section will consist of differently coloured sheets, ruled horizontally. Each page will bear the caption, namely, "Replacement, Major Repairs & Overhaul". A detailed report of the Replacement, Major Repairs & Overhaul done under these headings shall be certified in this section.

Note: Major repair signifies a repair to a damage, which would affect the safety of the aircraft or the safety of persons on board.

3.3 The third section will consist of a set of still differently colored pages also horizontally ruled, and each page will bear the heading, namely, 'Modification Record'. Details of the modifications/service bulletins including mandatory modification(s) complied with and certified should be recorded along with date and time of compliance in this section.

3.4 A total mandatory modifications status of the aircraft, engine and its components shall be reflected even though they are not applicable. All the Pages of a Logbook shall be serially numbered. Also, each logbook should be serially numbered or in the case of equivalent system it shall show the continuity and traceability.

3.5 The entries in the respective logbook or equivalent system shall be made within 30 days of the completion of the work.

3.6 The entries in the logbook or the equivalent system shall be certified by the respective certifying staff, or a person specifically authorized for this purpose.

3.7 If the logbook or the equivalent system is digitalized / computerized, it shall demonstrate the accuracy of the system and procedure for creating backups to the satisfaction of BCAA. It shall also contain programme to safeguard against unauthorized entries (making and / or altering) and the database. The procedure of using computerized records shall be documented in the MOE and its exposition procedures.

4. Preparation of operator's Technical Log systems (Including Journey Log / Technical Log)

The format of the Technical Log (Journey Log) may be in a manner suitable for the operators, but it shall contain all necessary information as required by ANTR M.A.305 & 306 and its AMCs.

The required details are given below (not limited to):

1. Details of the registered name and address of the operator
2. The aircraft type & Model.
3. The registration marks.
4. Details of when the next scheduled maintenance is due, including, if relevant any out of phase component changes due before the next maintenance check.
5. The current certificate of release to service (CRS), for the complete aircraft, is issued normally at the end of the last maintenance check.
6. Flight Number
7. Nature of Flight (Revenue/Test/Ferry/Training/Position/Demonstration/Flying Display etc.)
8. The date of Flight and Sector
9. Names and details of crewmembers
10. Duty assignments of crewmembers
11. Place of take-off and landing.
12. The times at which the aircraft took off and landed / Departure Time & Arrival Time.
13. The Block Time
14. The Airborne Time / Flight Hours
15. Number of landings
16. Defect (Pilot / Maintenance entry) with time & Date
17. Rectification with time & Date
18. Defect deferment details if any
19. MEL invoked / release with Time & Date

20. MEL revoke with time & Date

21. EDTO related checks & certification

22. RVSM related checks & certification

23. Special Ops (if any & as applicable) related checks & certification

24. Component replacement details (OFF / ON)

25. Fuel Type

26. Any mixing of fuels say JET-A1 & Bio-Fuel and the ratio

27. Fuel Requirements (Lts / Lbs / Kgs)

    i. Arrival Fuel
    ii. Required Fuel
    iii. Fuel Qty before commencement of fueling.
    iv. Planned Fuel
    v. Uplifted Fuel
    vi. Fuel distributions
    vii. Specific Gravity
    viii. Temperature
    ix. Fuel on board (FOB)
    x. Fuel Supplier
    xi. Date of uplift

28. Fuel Checks carried out

29. Hydraulic Fluid Type

30. HYD Fluid Requirements

    i. Mains.
    ii. Standby.

31. Engine Oil uplift details

32. APU Oil uplift details

33. Accessory Gear Box Oil uplift details

34. Ground De-icing details

    i. Fluids / De-icing agent used.
    ii. Mixture ratio (if any)
    iii. Application duration

35. Type of Inspection Carried out (Pre-Flight / Daily / Transit / Weekly etc.)

36. Certificate of Release to Flight details

37. CRS personnel authorization details

38. Pilot-In-Command acceptance certificate

39. Performance log (Airframe / Engine parameters at the stabilized cruise condition) required to monitor the flight performance and to use by the aircraft performance monitoring cell.

40. Special / Significant observations / Incidents if any

41. Any other parameters as deemed necessary for the purpose of aircraft performance monitoring.

The Technical log format can be designed by the operator to the best suited way to accommodate all the above applicable information and submitted to BCAA for acceptance.

The Technical Log may provide as many copies as deemed necessary. However, operator shall ensure that a copy remains in the Technical Log and all the department / section concerned are shared with a copy each for ensuring compliance to the requirement of continued airworthiness and operations.

The Checklist attached as Appendix 1 is required to be submitted to BCAA along with the draft format of the proposed Technical Log for acceptance.

5. Evaluation and acceptance process

The format shall be evaluated by the BCAA to ensure that the Technical Log contains the information applicable to the operator's operational and aircraft requirements. The checklist submitted by the operator should be assessed by the inspector to ensure its completeness and correctness.

When satisfied with the format and contents of the Operator Technical log systems /Journey logbook, the same will be accepted for the use by operator.

Operator Technical log / Journey logbook shall be carried on board during flight and the required information's of the flight are recorded.

BCAA will retain a copy of the accepted Technical Log system in the record keeping system.

The Operator shall indicate the revision numbers and their effective date in their records maintenance system.

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Appendix-1

Checklist – Operator Technical Log

This checklist required to be submitted by the operator while proposing the Technical Log format and its subsequent amendments.

Item No.	Description	Regulation Reference	Technical Log Reference	Remarks if any	BCAA
	Check that the provisions for the following details are provided in the proposed Tch Log				
1	General: i. Is policy existing for entering data and particulars concerning each flight in the case of series of short flights. ii. Is sufficient provision made to make the entries? iii. Is the Sector record page of the Tech Logbook is printed in triplicate(minimum). First copy shall be retained in the book. Second copy shall be sent to the concerned CAMO, after the last flight. Third copy to be removed before the first departure of the day.				
2	Details of the registered name and address of the operator				
3	The aircraft type & model.				
4	The registration marks.				
5	Details of when the next scheduled maintenance is due, including, if relevant any out of phase component changes due before the next maintenance check.				
6	The current certificate of release to service (CRS), for the complete aircraft, is issued normally at the end of the last maintenance check.				
7	Flight Number				
8	Nature of Flight (Revenue/Test/Ferry/Training/Position/ Demonstration/Flying Display etc.)				
9	The date of Flight and Sector				
10	Place of take-off and landing.				

11	The times at which the aircraft took off and landed / Departure Time & Arrival Time.				
12	The Block Time				
13	The Airborne Time / Flight Hours				
14	Number of landings				
15	Defect (Pilot / Maintenance entry) with time & Date				
16	Rectification with time & Date				
17	Defect deferment details if any				
18	MEL invoked / release with Time & Date				
19	MEL revoke with time & Date				
20	EDTO related checks & certification				
21	RVSM related checks & certification				
22	Special Ops (if any & as applicable) related checks & certification				
23	Component replacement details (OFF / ON)				
24	Fuel Type				
25	Any mixing of fuels, say, JET-A1 & Biofuel and the ratio				
26	Fuel Requirements (Lts / Lbs / Kgs) i Arrival Fuel ii Required Fuel iii Fuel Qty before commencement of fuelling. iv Planned Fuel v Uplifted Fuel vi Fuel distributions vii Specific Gravity viii Temperature ix Fuel on board (FOB) x Fuel Supplier xi Date of uplift				
27	Fuel Checks carried out?				
28	Hydraulic Fluid Type				
29	HYD Fluid Requirements i Mains. ii Standby.				
30	Engine Oil uplift details				
31	APU Oil uplift details				
32	Accessory Gear Box Oil uplift details				
33	Ground De-icing details: i Fluids / De-icing agent used. ii. Mixture ratio (if any) iii Application duration.				
34	Type of Inspection Carried out (Pre-				

	Flight / Daily / Transit / Weekly etc.)				
35	Certificate of Release to Flight details				
36	CRS personnel authorization details				
37	Pilot-In-Command acceptance certificate				
38	Performance log (Airframe / Engine parameters at the stabilized cruise condition) required to monitor the flight performance and to use by the aircraft performance monitoring cell.				
39	Special / Significant observations if any.				
40	Any other parameters as deemed necessary for the purpose of aircraft performance monitoring				
41	Are the Tech Log pages serially numbered?				
42	Has the provision made to reflect the BCAA approval reference in the Technical Log?				

Name of the Post holder Proposing:

Signature of the Post Holder Proposing with Date:

Name of the Inspector examined:

Signature of the Inspector examined with Date: