



GOVERNMENT OF INDIA
OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION
TECHNICAL CENTRE, OPP SAFDURJUNG AIRPORT, NEW DELHI

CIVIL AVIATION REQUIREMENTS
SECTION 2 - AIRWORTHINESS
SERIES 'X', PART VI
20TH AUGUST 1977

EFFECTIVE: FORTHWITH

Subject: Aircraft Log Books.

1. **INTRODUCTION:** - Rule 67 of the Aircraft Rules 1937, stipulates that following Log books shall be kept and maintained in respect of all aircraft registered in India.
 - i. Journey Log Book or an equivalent document acceptable to DGCA.
 - ii. Aircraft Log Book
 - iii. Engine Log Book for each engine installed in the aircraft.
 - iv. a propeller Log Book for every variable pitch propeller installed in the aircraft.
 - v. A Radio Apparatus Log Book, for aircraft fitted with radio apparatus.
 - vi. A Flight Log Book as notified in CAR Series 'C' Part II
 - vii. Any other logbook required by the Director General.

The committee of enquiry, which investigated the fatal accident to a light aircraft, recommended maintaining a standardized Flight report Book on board all categories of small aircraft. The Government has accepted this recommendation.

To comply with the above recommendations the format of JLB has been modified in order to record flight time, various aircraft and engine parameters, pilot defect report and technical and rectification action taken, the fuel and oil quantity uplifted, transit inspection etc., for each sector, of flight for all categories of aircraft. A standard format is attached as Appendix A to this CAR.

This CAR stipulates the contents of Journey Log Book besides maintenance of other logbooks mentioned above.

This Civil Aviation Requirement is issued under the provision of Rule 133A.

2. **APPLICABILITY:** This CAR is applicable to all aircraft operators engaged in Scheduled, Non Scheduled, State Government, Aerial Work, Private, flying club operations and other operators engaged in the aircraft operations and maintenance.

3. FORMAT OF JOURNEY LOG BOOK (JLB):

3.1 Scheduled Operators:-

Scheduled Operators may maintain Flight Report Book (FRB) or Tech Log as an equivalent document to Journey Log Book. The Regional Airworthiness Office shall approve the contents of each page of FRB or Tech Log. This document shall be carried on board the aircraft for all flights. The QC Manual shall include the content and the manner of maintaining this document, its scrutiny by the Quality Control Department and its preservation depending upon the type of aircraft operated by them. The FRB/Tech Log besides giving other information shall have the following information.

- i. Aircraft nationality and registration
- ii. Date of flight (s)
- iii. Names 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.

3.2 Non-Scheduled, State Government, Private, Aerial work, Flying Clubs and other Operators:-`

Non-Scheduled, State Government, Private, Aerial work, Flying Clubs and other Operators are required to carry JLB in the revised format as given in Appendix A. This can be called as JLB or FRB or Tech log, which is henceforth referred to as "Document". Each operator may print his own document.

This document shall contain pages as given in the annex depending upon the type of aircraft operated by them. The Regional Airworthiness Office shall approve the contents of each page of the document. This document shall be carried on board the aircraft for all flights. The QC Manual shall contain the content and the manner of maintaining this document depending upon the type of aircraft operated by them, its scrutiny by the Quality Control Department and its preservation. Any change in the format of the document requires approval of the Regional Airworthiness Office /Sub Regional Airworthiness Office. The document besides recording various information SHALL contain the minimum information given below: -

- i) Aircraft nationality and registration
- ii) Date of flight (s)
- iii) Names 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.

Appendix A of the Journey log Book shall be in duplicate. The second copy each of the filled pages shall be retained on ground along with Engineering documents and first copy be carried on board as part of the document.

4. Aircraft, Engine, Propeller and Radio Apparatus Log Book:

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 on his own. Each logbook shall be in three sections: -

The first section will contain records of

- a) hours flown date wise,
- b) all routine inspection/maintenance, including "Flight Release" 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 Log Book may be identified by an identification number mentioned on the routine inspection sheet.

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.

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. A total DGCA mandatory modifications status of the aircraft, engine and its components shall be reflected even though they are not applicable.

5. GENERAL REQUIREMENTS

- 5.1 All the Pages of a Log Book shall be serially numbered. Also each logbook should be serially numbered.
- 5.2 A Log Book shall contain a detailed engineering record of the life of the aircraft, engine, propeller, radio apparatus including full particulars of all accidents, overhauls, replacements, repairs and modifications.

- 5.3 The entries in the Log Book shall be completed within 48 hours of the completion of the work. In case the aircraft is away from the main base, the "entry" containing the work details and certification thereof shall be completed in duplicate, and one copy shall be mailed to main base for placing in the Log Book and the other copy shall be kept along with Journey Log Book.
- 5.4 The Quality Control Manager, in the case of approved firms and the operator of the aircraft in the case of private aircraft, shall be responsible for the proper maintenance of Log Book. Omission to make Log Book entries shall render the aircraft, engine, propeller, radio apparatus as unairworthy and the authorized officer of the Regional Airworthiness Office may require such inspection as considered necessary by him to restore the airworthiness.
- 5.5 Entries in the Log Book shall be made in ink or indelible pencil and signed and dated by appropriately licensed AME/Approved individual carrying out the work or by a person, specially authorized by DGCA for the same, quoting, beneath the signature, the Licence/Approval/ Authorization number.

Note: Computerised records of aircraft and components are acceptable. Wherever records are computerized, hard copies may not be required. The operator should satisfy and demonstrate the accuracy of the system and procedure for creating backups to the Regional office. The procedure of using computerized records shall be documented in the MOE or equivalent document.

6. RECORDING OF FLIGHT TIME FOR THE PURPOSE OF MAINTENANCE PLANNING: -

6.1 Flight Time:

- (i) In respect of an aeroplane, means the total time from the moment the aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight
- (ii) In respect of a helicopter, means the total time from the moment the helicopter's rotor blade start turning until the moment it finally comes to rest at the end of the flight, and the rotor blades are stopped

6.2 Note: Flight time as herein defined is synonymous with the term "block to block" time, or "chock to chock" time in general usage which is calculated from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.

6.3 Flight time for the aircraft, engine, VP propellers and radio apparatus shall be recorded in the appropriate Log Books.

6.4 Note: Where the manufacturer has defined maintenance periodicity on the basis of actual Flight Time i.e Chocks OFF to Chocks ON or any other consideration like power etc., operator may follow the same with approval of Regional Airworthiness Office. The approved Quality Control Manual should detail the procedure followed for calculating the flight time for the purpose of maintenance of aircraft and components.

7. CERTIFICATE OF MAINTENANCE:

7.1 All work involving repair, overhaul, replacement, modification, special inspection performed on the aircraft, is required to be covered with the issuance of "Certificate of Maintenance" signed by appropriately licensed AME/Approved or authorised individuals.

7.2 Significance of signatures in the Log Book :

Signatures appearing in the appropriate column of Log Book against the relevant entry shall be taken as issuance of certificate, signifying that the work has been performed in accordance with approved procedures, using approved equipment and material and in accordance with the directives issued by DGCA

7.3 Overhauls :

Details of overhaul work, including any test data, should be entered in the appropriate Log Book. A Certificate of Maintenance must be appended to the entry for all overhaul work recorded in log books. Test data should be preserved with cross-reference in the logbooks for trace ability.

7.4 Repairs :

A summary of the repair should be entered in the appropriate log book, together with an indication of the reason for the repair. Details of repair work should be preserved with cross-reference in the logbooks for trace ability.

7.5 Replacements :

When a component having its own log book (i.e. an engine or a variable-pitch propeller) is removed from an aircraft, the reason for removal should be entered in that log book, e.g. 'metal in oil filter', 'time expired'. In addition, an entry should be made in the aircraft log book stating the serial number of the component removed, the serial number of the replacement component and the position the component occupies on the aircraft.

When an engine is changed, the hours flown and the serial numbers and part numbers, as appropriate, of lifed parts, which are not changed with the engine, should be entered in the log book of the replacement engine and in the aircraft log book.

When a component, not having an individual log book, is removed, the reason for removal and its serial number, and in some cases the part number, of the item should be entered in Aircraft Log Book and also, with the exception of standard parts such as split pins, nuts and washers, the origin and numbers of release note.

When a serviceable part is removed from one aircraft and fitted on to another, the number of flying hours logged for the part should be entered in the appropriate log book together with an identification (i.e. registration letters) of the aircraft/engine from which it was removed.

Where a replacement involves disturbing a flying or engine control system, or any system associated therewith, a duplicate inspection must be made, in accordance with CAR Section 2 Series 'F' Part XI and a certified entry to that effect included in the log book.

8. MODIFICATIONS :

After embodiment of a modification, an entry must be made in the appropriate Log Book quoting the number and title of the modification and, as applicable.

Whenever a major component is changed, the modification standard, particularly in regard to mandatory modification of the replacement component should be entered in the appropriate log book.

9. CARRIAGE OF LOG BOOKS ON BOARD:

Journey Log Book/FRB or any other equivalent document acceptable to DGCA shall be carried on board during flight unless the aircraft is engaged in local flights i.e. making a series of flights over the same airport, on any day. Other Log Books shall not be carried during flight and shall be maintained at the main base. However, if an aircraft is likely to remain away from its main base, where Log Books are maintained, "working copies" of Log Books giving necessary information as required for effecting due maintenance shall be carried on board. On return to main base, entries shall be transferred from the "working copies" to the regular Log Book, within 48 hours of the return to main base.

10. PRESERVATION :

Log Books shall be preserved for periods shown as under :-

- i. The aircraft log books shall be preserved until such time as the aircraft is permanently withdrawn from use and its Certificate of Registration is cancelled by the Director General.
 - ii. Provided that in the case of an aircraft meeting with an accident resulting in damage beyond economical repairs the aircraft log book shall be preserved for a period of two years after the date of the accident.
- a) The engine and propeller log books shall be preserved for a period of one year after the engine propeller are permanently withdrawn from use.
 - b) Other log books shall be preserved for two years from the date of the last entry therein. Where log books in respect of aircraft, engines or variable pitch propellers or radio apparatus are not kept in the manner and form prescribed in this rule, the aircraft shall be deemed as not being maintained in an airworthy condition.



(P.K.Chattopadhyay)
Deputy Director General of Civil Aviation

FORMAT OF JOURNEY LOG BOOK

JOURNEY LOG BOOK

Name of the operator

.....

VT- _____

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INFORMATION INSTRUCTIONS :-

The contents of the JLB shall be as approved by DGCA.

First page of the JLB will be issued by DGCA.

It shall be carried on board the aircraft during every flight.

Entries in this logbook in respect of each journey shall be correctly made by the crew and the pilot-in-command of the aircraft shall ensure that such entries are made in accordance with the requirements of Rule 67 of the Indian Aircraft Rules, 1937.

Entries shall be made in ink or indelible pencil and shall be made before presenting the logbook to the Aerodrome, Customs, Health or other authorities concerned on completion of the flight. The entries shall be certified by the signature of the commander or person in charge for each flight (except as provided in para 5 below)

In this book must be entered all relevant data and particulars concerning each flight. In the case of series of short flights in a close circuit, carried out with the same purpose and under the control of the same responsible commander it will suffice in respect of columns 6, 7 and 8 to enter the time of departure and of the last arrival and the total duration of the whole of these flights as well as the number of landings.

A flight comprises the period between the time of departure and the time of next landing. A separate folio shall be used for each separate journey but a series of flights forming part of one journey may be entered on one folio.

All columns shall be invariably filled.

AIRCRAFT

- a) Aircraft Nationality and Registration Marks. VT__.....
- b) Classification of aircraft (Category, Sub Division).....
- c) Main Base.....
- d) Constructor
- e) Type.....
- f) Constructor Serial Number.....

OPERATOR

- g) Name of the Operator.....
- h) Address.....

OWNER

- i) Name of the owner.....
- j) Address.....

PLACE OF ISSUE -----
DATE-----

Signature -----

FLIGHT SECTOR REPORT

Operators Name: -

Appendix A

Aircraft Type :				VT-				OIL RECORD IN LTS.													
Name of the Captain Name of the Co-pilot Name of the FE Name(s) of the cabin crew				Eng Oil		AME /CHPL No		Sign		Time		Date									
SECTOR DETAILS											FUEL RECORDS IN LTS										
Date	From	To	Dep Time	Arr Time	Block Time	Airborne Time	Night Flying	Total No of Idgs	Sign of Pilot in Command	Transit Inspn Sign of AME/Approved person	Fuel in tank before flight	Fuel Uplift	Total Fuel	AME/C HPL No.	Sign Time						
Sector 1																					
Sector 2																					
Sector 3																					
PILOTS DEFECT REPORT											Total Upliftment		Note : Fuel Check as per DGCA requirement carried out.								
PILOT'S SPECIAL REPORT																					
Defect details						Rectification Action						(Pilots Licence No. Signature)									
Sector Time Date Pilots Signature_____						Date --- Time ----- -----											AME Signature----				
Sector Time Date Pilots Signature_____						Date --- Time ----- -----											Licence No--				
Sector Time Date Pilots Signature_____						Date --- Time ----- -----											AME Signature----				
Parameters to be recorded at Stabilized cruise by pilot as per the applicable engine installed The parameters may be recorded as per the performance log depending on the type of engine installed. (refer A to D on the next page)											Pilot's Acceptance certificate. Certified that the conditions stipulated in CAR Section 2 series O Pt----- have been complied with.										
											Sector 1 -----Sign with date & time										
											Sector 2 -----Sign with date & time										
											Sector 3 -----Sign with date & time										

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The parameters to be recorded by the pilot for performance log will depend on the type of engine installed. The operator may customize the performance log accordingly.

A Performance log (Piston Engine) Fixed Wing

Sector	Time	Alt	IAS	RPM	Eng oil Pr	Eng oil Temp	MAP	CHT

Note: Parameters to be recorded, provided, trend monitoring procedure is given by the manufacturer and followed by the operator
Parameters to be recorded under stabilized engine conditions and the sector time is not less than 60 minutes

OR

B Performance log (Piston Engine) Helicopter

Sector	Time Record	Alt	IAS	OAT	NR RPM	Eng Oil Pr	Eng oil Temp	Manifold pressure	CHT

Note: Parameters to be recorded, provided, trend monitoring procedure is given by the manufacturer and followed by the operator
Parameters to be recorded under stabilized engine conditions and the sector time is not less than 60 minutes

OR

C Performance log (Jet engine) FIXED WING

Sector	Time	Alt	OAT	IAS	EGT		thrust N1/ EPR		N2		FUEL FLOW		Eng oil Pr		Eng Temp oil		Vib	
					P	S	P	S	P	S	P	S	P	S	P	S	P	S

Note: Parameters to be recorded, provided, trend monitoring procedure is given by the manufacturer and followed by the operator
Parameters to be recorded under stabilized engine conditions and the sector time is not less than 60 minutes

OR

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D Performance log for JET ENGINE Helicopters :-

Sector	Time	Alt	IAS	OAT	MGT	Torque	
						P	S

Note : Parameters to be recorded at every sector.

Deferred Maintenance (MEL release)

Date Time	Sector	Defect reported by AME/ Pilot	Details of defect	Deferred To	AME 's Sign and Lic. No.	Rectification carried out.	Attended statin. Time date	AME's Sign and Lic. No.

- END -