



सत्यमेव जयते

GOVERNMENT OF INDIA

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

**CIVIL AVIATION REQUIREMENTS**

**SECTION 5 - AIR SAFETY**

**SERIES F PART III**

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**EFFECTIVE: FORTHWITH**

F. No. AV 15011/21/2010-AS

**SUBJECT: Procedure for medical examination of aircraft personnel for alcohol consumption**

**1. INTRODUCTION**

1.1 It is a well-known fact that even when the blood alcohol levels are zero in the body, there could be some effect of hangover, which is mainly due to congeners. These congeners may take 15 to 18 hours to get dissipated and may produce ill effects for up to 36 hours depending upon the amount of alcohol consumed. Even 12 hours after a bout of drink, when blood alcohol level remains zero, there is decrement in task performance. Alcohol present in body even in small quantities jeopardises flight safety on several counts and is likely to adversely affect an aviator well into the hangover period.

1.2 Alcohol also interferes with the enzymatic cellular process or oxidation, causes hypoxia and reduces individual's tolerance with increase in altitude. It is known that a low alcohol blood level between 30 mg% to 50 mg% disturbs the sensor-motor, visual and cortical reaction. Consumption of alcohol results in significant deterioration of psychomotor performance and decreases the amount of mental capacity available to deal with many essential tasks involved in the conduct of safe flight. Should an emergency occur in-flight, the crew member under the influence of alcohol is not capable of dealing with the problem.

1.3 Two ounces of whiskey raises the alcohol level to 50 mg. The amount of alcohol in a can of beer is approx. the same as in a single mixed drink. Wine, champagne, ale and other alcoholic beverages have same effects as liquor, though the concentration of alcohol varies from one beverage to the other.

1.4 Therefore, in the present state of our know ledge, the level of blood alcohol compatible with safe flying is 'Zero', which is also recommended by ICAO. It is equally important to intensify the educational programme for crew members regarding the inherent dangers of flying after consumption of alcohol.

1.5 This Civil Aviation Requirement lays down the procedure to be followed for the breath-analyzer examination of the crew members for consumption of alcohol and actions to be taken by the operators. It also dwells on the procedure to be followed by the authorities concerned in the event of an accident.

1.6 This CAR is issued under the provisions of Rule 24 read with Rule 133A of the Aircraft Rules, 1937 for information, guidance and compliance by all concerned.

## **2. DEFINITIONS**

Crew Member	A person assigned by an operator to duty on an aircraft during a flight duty period.
Flight Crew Member	A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.
Cabin Crew Member	A crew member other than a flight crew member.
Other operating member of crew	Any person, who is present in the cockpit for the purpose of duty, assessment, audit, observation, training, etc.
Maintenance Personnel	Aircraft Maintenance Engineer or any other technically trained person authorized to carry out taxiing of aircraft.
Pre-flight Breath-analyzer Examination	Test conducted on crew member before departure of a flight to measures alcohol in his/her exhaled air so as to determine the concentration of alcohol in the blood.
Post-flight Breath-analyzer Examination	Test conducted on crew member after arrival of a flight to measures alcohol in his/her exhaled air so as to determine the concentration of alcohol in the blood.

## **3. APPLICABILITY**

3.1 Indian operators engaged in scheduled air transport services for carriage of passengers, mail or cargo.

3.2 Indian Non-scheduled/private category operators/flying training institutes, etc.

3.3 Central Government and State Government Civil Aviation Departments, Public Sector companies under Centre and State Government.

#### 4. SAFETY REGULATIONS

4.1 As per the provision of Rule 24 of the Aircraft Rules, 'no person acting as, or carried in aircraft for the purpose of acting as pilot, commander, navigator, engineer, cabin crew or the other operating member of the crew thereof, shall have taken or used any alcoholic drink, sedative, narcotic, or stimulant drug preparation within 12 hours of the commencement of the flight or taken or use any such preparation in the course of the flight, and no such person shall, while so acting or carried, be in state of intoxication or have detectable blood alcohol whatsoever in his breath, urine or blood alcohol analysis or in a state in which by reason of his having taken any alcoholic, sedative, narcotic or stimulant drug or preparation his capacity so to act is impaired, and no other person while in a state of intoxication shall enter or be in aircraft or report for duty.'

4.2 The holders of license/ratings/authorisation/approval shall not exercise the privileges of their licenses/ratings/authorisation/approval while under the influence of any psychoactive substance which might render them unable to safely discharge their duties.

4.3 The operator/crew member/maintenance personnel shall ensure that there is no contravention of Rule 24 of the Aircraft Rules, 1937 by conduct of breath-analyzer examination before operation of flights in India as well as outside India.

4.3.1 For all scheduled flights originating from India, each flight crew member and cabin crew member shall be subjected to pre-flight breath-analyzer examination at first departure airport during a flight duty period.

4.3.2 During a flight duty period, if a crew member enters the terminal building at any transit airport, that crew member shall undergo the pre-flight breath-analyzer examination at that airport before undertaking the flight.

4.3.3 If a crew member operates a flight without undergoing the pre-flight breath-analyzer examination, the Chief of Operations of the concerned airline shall ensure that the involved crew member is off-rostered at the first point of landing and same is reported to DGCA as per the CAR provisions.

4.3.4 For all scheduled flights originating from destinations outside India, post-flight breath-analyzer examination of each flight crew and cabin crew shall be carried out on reaching in India.

4.3.5 For operators other than the scheduled operators, each flight crew and cabin crew of all flights originating from India shall be subjected to pre-flight breath-analyzer examination. However, where infrastructure does not exist, the flight crew and cabin crew shall undergo post-flight breath-analyzer examination. In case the flight crew and cabin crew are away from base station for more than two days and operates a flight from there, the operator shall provide facility for conduct of their pre-flight breath-analyzer examination, which may include Govt./Govt. licensed private hospitals located at the airport or in the city. Such facilities shall be subjected to periodic checks by the DGCA.

- 4.3.6 In case of flying training institutes, instructors and student pilots undertaking solo flying shall undergo pre-flight breath-analyzer examination before first flight of the day.
- 4.3.7 In case of diversion of flights, due to unforeseen circumstances, to an airport where facility for pre-flight breath-analyzer examination is not available, the flight crew and cabin crew shall undergo post-flight breath-analyzer examination at first landing.
- 4.3.8 All maintenance personnel shall be subjected to breath-analyzer examination for alcohol consumption before undertaking any taxi operation of the aircraft.
- 4.3.9 No crew member shall consume any drug/formulation or use any substance mouthwash/tooth gel which has alcoholic content. Any crew member who is undergoing such medication shall consult the company doctor before undertaking flying assignment.
- 4.3.10 Save as provided, representative of Air Safety Directorate/DMS (CA) of DGCA at his discretion may order a breath-analyzer examination of any of the crew members prior to or on completion of a flight.

## **5. EQUIPMENT USAGE**

- 5.1 Operators shall make available at least two serviceable breath-analyzer equipment capable of giving accurate digital value up to three decimal places with a memory to store and recall at least last 1000 records.
- 5.2 The breath-analyzer equipment shall be used only in auto mode.
- 5.3 The breath-analyzer equipment shall be attachable to a printer. At least one serviceable printer for the breath-analyzer equipment shall be available at all times.
- 5.4 The breath-analyzer equipment shall be calibrated after 10,000 blows/six months/at a frequency as recommended by the equipment manufacturer from an agency having ISO certification to undertake the calibration activity. The date of the last calibration shall be appended on the instrument. Record of such calibrations shall be maintained by the operator. It shall be the responsibility of the operator to ensure continued serviceability of the breath-analyzer equipment and maintain such records.

## **6. PROCEDURE FOR PRE-FLIGHT AND POST-FLIGHT BREATH-ANALYZER EXAMINATION**

- 6.1 Operators shall have Doctor holding MBBS degree/trained Paramedics/Emergency Medical Technician (EMT)/B.Sc (Nursing) on full-time employment of the company to conduct pre-flight breath-analyzer examination at a designated place within the airport premises. Alternatively, operators may pool their resources or avail the pre-flight breath-analyzer examination services of Govt. /Govt. licensed private hospitals located in the premises of the airport. Such facilities shall be subjected to periodic checks by the DGCA.

6.2 Post-flight breath-analyzer examination shall be carried out preferably in the aircraft after its arrival. The time consumed in the post-flight breath-analyzer examination shall not be counted towards duty.

6.3 Before each test, the Doctor/Paramedics/EMT shall run an 'air blank' on the instrument and obtain a reading of 0.000. The Doctor/Paramedics/EMT shall also carry out a control test on daily basis and keep a record of printout to ensure serviceability of both the breath-analyzer equipment and the printer.

6.4 Operators shall keep the pre-flight and post-flight breath-analyzer examination record separately in a bound volume with all pages serial numbered. Breath-analyzer examination record shall be maintained as per the format given in Appendix I. Scheduled airlines may maintain breath-analyzer examination records as per the format given in Appendix II.

6.5 If the breath-analyzer examination result is positive, a repeat test shall be carried out after an interval of maximum 15-20 minutes. During this time, the subject crew may be permitted to wash his face and rinse his mouth, if desired. Before the second test is carried out, a control test must be taken with the same equipment to verify the serviceability and correctness of the breath-analyzer. Both the readings so obtained shall be recorded and print out taken. The second test shall be carried out in the presence of a witness either from flight dispatch or operations department of the operator, who shall countersign the test report.

However, if the crew member/maintenance personnel wishes to undergo the confirmatory test on alternate equipment, the breath-analyser test can be done on alternate equipment, provided the crew submits in writing a request for the same and the procedure for the second test is followed. All such instances shall to be reported to DGCA.

6.6 The make, serial number and calibration status of the breath-analyzer shall be recorded in the event the crew member/maintenance personnel is detected positive for alcohol consumption. Under no circumstances third test shall be conducted.

6.7 If the second test is satisfactory, the crew member may be cleared for flight. If the crew member refuses to undergo the second test, it shall be recorded and the concerned crew member shall not operate the flight. In such case, action against the crew member shall be taken in accordance with Para 8.1 of this CAR.

6.8 Additional crew member travelling as a passenger on completion of duty or for positioning to operate flight from the destination may not undergo pre-flight breath-analyzer examination. Such crew member shall be subjected to pre-flight breath-analyzer examination from where he/she undertakes the flight.

However if additional Crew Member is to travel in cockpit, the additional crew member shall be subjected to pre-flight breath-analyser examination.

6.9 All the breath-analyzer examination positive/missed cases shall be promptly reported but not later than 24 hours of occurrence to the concerned Regional Air Safety Offices of the DGCA and Director of Air Safety (HQ).

## **7. CARRIAGE OF VIP**

7.1 Whenever a designated VIP is to be carried on board for the purpose of flying, the operator shall ensure pre-flight breath-analyzer examination of the crew members assigned to operate such flight.

## **8. ACTION ON POSITIVE TEST**

8.1 Any crew member that tests pre-flight breath-analyzer examination positive for the first time/refuses to undergo the pre-flight breath-analyzer examination/refuses to undergo the pre-flight breath-analyzer examination second time upon tested positive during the first test/operates the aircraft without undergoing pre-flight breath-analyzer examination/attempt to evade the pre-flight breath-analyzer examination by leaving the airport premises shall be kept off flying duty and their license/approval suspended for a period of three months.

8.2 In case of a repeat violation of the provisions contained in Para 8.1 of this CAR, the license/approval of the crew member shall be suspended for a period of three years.

8.3 If a crew member violates the proviso contained in Para 8.1 of this CAR in one instance and later violates the proviso contained in Para 9.3 or vice versa, the license/approval of crew member shall be suspended for a period of three years.

8.4 In case of a second repeat violation of the provisions contained in Para 8.1 of this CAR, the license/approval of the crew member shall be cancelled.

8.5 An Instructor/Examiner/Check Pilot/Check Cabin Crew detected positive for alcohol consumption during pre-flight breath-analyzer examination, will lose such ratings/ authorisation for a period of three years in addition to the action mentioned in Para 8.1 and 8.2 of this CAR.

8.6 Maintenance personnel detected positive for alcohol consumption during breath-analyzer examination shall be off-rostered. Penal action on such cases shall be taken as per the provisions of Para 8.1 and 8.2 of this CAR.

8.7 All such violations shall be endorsed on the individual's license by DGCA. It shall be the responsibility of Chief of Flight Safety/Accountable Manager to submit the license/authorisation to DGCA for necessary endorsement.

8.8 Whenever an expatriate pilot, operating in India is detected positive for alcohol consumption during pre-flight breath-analyzer examination, the FATA shall be cancelled and the expatriate pilot shall never be considered for issue of the FATA. In addition, the concerned license issuing authority of the country shall be informed.

## **9. POST-FLIGHT MEDICAL EXAMINATION**

9.1 Any crew member who tests positive for alcohol consumption in a post-flight breath-analyzer examination shall have contravened Rule 24 of the Aircraft Rules 1937. The details of his/her post-flight breath-analyzer examination, licenses, ratings and approvals shall be immediately submitted along with original license/authorization/approval to the Director of Air Safety (HQ), DGCA. Action on such cases shall be taken in accordance with the proviso of Schedule VI of the Aircraft Rules, 1937. Pending action under Schedule VI of the Rules, the involved crew member shall surrender the licenses forthwith.

9.2 In addition to action indicated in Para 9.1 of this CAR, the license/ authorization/ approval of person shall be suspended for a period of one year. In case of an expatriate pilot, the punitive action shall be in accordance with Para 8.7 of this CAR.

9.3 Any crew member that refuses to undergo the post-flight breath-analyzer examination/attempts to evade the post-flight breath-analyzer examination by leaving the airport premises shall be kept off flying duty and their license/approval suspended for a period of three months.

9.4 If a crew member tested breath-analyser positive in pre-flight medical examination in one instance and later tests breath-analyser positive in post-flight medical examination in another instance or vice versa, the license/approval of crew member shall be suspended for the period of four years.

9.5 An Instructor/Examiner/Check Pilot/Check Cabin Crew detected positive for alcohol consumption during post-flight breath-analyzer examination, will lose such ratings/ authorisation for a period of three years in addition to the action mentioned in Para 9.1 of this CAR.

9.6 In case of a repeat violation of the provisions contained in Para 9.1 of this CAR, the license/approval of the crew member shall be cancelled.

## **10. MEDICAL EXAMINATION AFTER ACCIDENT**

10.1 In the event of an accident at an airport or in its near vicinity, the Officer In-charge of the airport shall ensure that the crew members are immediately subjected to medical check-up for consumption of alcohol. The doctor conducting such check-up shall take samples of blood, urine, etc. required for detailed chemical analysis. Such examination and collection of samples shall be done at the Airport Medical Centre, wherever available.

10.2 In case where medical centers are not available at the airports or when the condition of crew members requires immediate hospitalisation, Aerodrome Officer In-charge shall ensure that the sample of the blood, urine, etc. is taken at the nearest hospital. These checks should be expeditiously carried out without any loss of time.

10.3 In case where accident is at a location far away from the airport and the police authorities are able to reach the site before the aerodrome authorities and the crew members are alive, the procedure for collection of blood/urine samples shall be performed by the police at the nearest hospital. Such samples shall be properly preserved.

10.4 For the purpose of chemical analysis, the sample may be forwarded to local forensic laboratory giving the details of tests to be conducted, names of flight/cabin crew, etc.

## 11. PRESERVATION OF RECORDS

11.1 The operator shall maintain separate records of pre-flight and post-flight breath-analyzer examination for the flight crew, cabin crew and maintenance personnel. All the relevant records must be preserved for a period of one year.

## 12. GENERAL

12.1 It shall be the responsibility of the operator to bring to the notice of its crew members/maintenance personnel, the provisions of this CAR during their annual refreshers and records maintained with the acknowledgement from each crew member.

12.2 Each operator shall submit monthly data in respect of Para 8 and 9 of this CAR to the Director of Air Safety (HQ), DGCA latest by 10th of every month for the preceding month.

(B. S. Bhullar)  
Director General of Civil Aviation



(NAME OF THE ORGANISATION)  
PRE-FLIGHT MEDICAL EXAMINATION FOR ALCOHOL

Sl. No. ....

To be filled by Cockpit/Cabin Crew/Maintenance Personnel (in Capital Letters)

Name ..... Flight No. .... Pilot/Cabin Crew/Maintenance  
Personnel (License No. /Approval No.) .....

Emp. No. .... Place ..... Date .....

Time ..... Hrs. ....

Signature .....

To be filled up by the Medical Officer

1. Breath-analyzer Result Negative/Positive  
(Reading to be indicated in writing)
2. ~~If found positive~~ Result of first test .....%BAC
3. Result of second test at..... hrs .....%BAC

Remarks: He/she is not under/under the influence of alcohol at present.

Signature of Witness  
Name and Designation

Signature/Name of Medical Officer  
Trained Paramedics/ Emergency  
Medical Technician/Nurse

Time .....

Time .....

PRE-FLIGHT MEDICAL EXAMINATION FOR ALCOHOL

Place: ..... Date: .....

Name of the Doctor/Trained Paramedics/Emergency Medical Technician: .....

**NOTE:** In case Pilot/Cabin Crew/ Maintenance Personnel is tested 'Positive' in screening test, a separate Form is required to be filled up by the Doctor and countersigned by the witness.

No.	Flight No.	Name (in capital letters) of Pilot/Cabin Crew/ Maintenance Personal/ other Operating Member of Crew	Staff No.	Pilot/Cabin Crew/ Maintenance Personal/other Operating Member of Crew License No./Authorisation No.	Time of Reporting	Signature of Pilot/Cabin Crew/ Maintenance Personal/ other Operating Member of Crew	BA Reading (in %)	Time	Signature of Medical Officer	Remarks