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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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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 knowledge, 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 and aircraft maintenance personnel 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 measure 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 measure 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 operators operating scheduled/Charter/ non-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 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.

4.3.3 Notwithstanding the provision of para 4.3.2, if a crew undergoes post flight medical at first point of landing and if it tests negative he/she may continue the remaining sector and shall be grounded at last station of the duty cycle.

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 at first port of landing 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 at first departure airport during a flight duty period. 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 operate 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 Flying training institutes, shall ensure that:

- a) Each instructor shall undergo pre-flight breath-analyzer examination before undertaking first flight of the day.
- b) At least 40% of student pilots shall be subjected to Pre-flight breath-analyzer examination for alcohol consumption and this percentage shall be on daily basis.
- c) Breath-analyzer examination shall be recorded on camera and recording shall be preserved for six months.
- d) The breath-analyzer examination shall be conducted by Doctor holding MBBS degree/trained Paramedics/Emergency Medical Technician (EMT)/B.Sc. (Nursing)/ trained safety officer of flying training institute.
- e) In case any instructor/student pilot is found Breath –Analyzer positive the second test shall be conducted in the presence of CFI/Flight clerk [as per the procedure laid down in para 6.5 of this CAR](#). The flight safety officer shall report all breath-analyzer positive/[missed](#) cases to DGCA in form and manner prescribed in this CAR.

Note:- Flying training institutes shall ensure that as part of training flight safety officer shall be familiarised on the use of breath-analyzer equipment and requirement/ procedures prescribed in this CAR.

4.3.7 In case of diversion of flights, due to unforeseen circumstances, to an airport or in AOG (Aircraft on Ground) condition, 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/ [flight Crew](#) 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 [such as](#) mouthwash/tooth gel/[perfume or any such product](#) which has alcoholic content. [This may result into positive breath analyser test](#). 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 AND CALIBRATION PROCEDURE

5.1 EQUIPMENT USAGE AND CALIBRATION

5.1.1 Operators shall make available at least two serviceable breath-analyzer equipment [fuel cell technology based](#), capable of giving accurate digital value up to three decimal places with a memory to store and recall at least last 1000 records.

5.1.2 The breath-analyzer equipment shall be used only in auto mode.

5.1.3 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.

5.1.4 The breath-analyzer equipment shall be calibrated after 10,000 blows/~~six months~~/at a frequency as recommended by the equipment manufacturer **whichever is earlier. The BA equipment shall be calibrated** 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.

5.2 CALIBRATION AGENCIES

5.2.1 The operator shall ensure the following with respect to the calibration agencies/labs contracted for calibration of their breath analyser equipment:

5.2.1.1 The contracted agencies/ labs engaged in calibration of their Breath Analyser Equipment carries out the calibration in accordance with the procedure and recommendations laid down by the manufacturer and should have ISO certification to undertake the calibration activity. The contracted agencies/labs issues a calibration certificate bearing a unique number for each calibration of Breath Analyser Equipment.

5.2.1.2 Calibration agency maintains at least following record:

- (i) Manual containing the calibration procedure prescribed by the manufacturer.
- (ii) **Incoming Record:** Calibration Agency maintains daily incoming record of BA equipment received for calibration. Record should clearly indicate Serial no. of the Equipment, Date and Time of receipt, Mode of receipt, Date of Last calibration, Name of the operator or BA test agency.
- (iii) **Dispatch Record:** The agency maintains dispatch record of the equipment including Date/time of dispatch, Mode of dispatch, Mode of Payment, Invoice number (Transaction Reference in case of online payment), Calibration Certificate number and validity.
- (iv) Calibration records of the equipment used in calibration process of Breath Analyser Equipment.

5.2.1.3 All the records in para 5.2 are preserved for a period of two years.

5.2.2 Operator shall facilitate the DGCA inspection for checking the compliance of the above mentioned requirements.

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/aerodrome operator/ Private organizations, holding the facility to carry out breath-analyzer test 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.

6.3 Before each test, the Doctor/Paramedics/EMT shall obtain a reading of 0.000 on the instrument. 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 20-25 minutes. Once a crew/maintenance personnel undertaking aircraft taxi operation, is detected positive, medical personnel as in para 6.1 on duty, shall provide the performa as per Appendix-I and the crew/maintenance personnel shall give declaration in respect of the use of equipment (same or alternate) for conduct of second test on that performa.

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 on the equipment being used, to verify the serviceability and correctness of the breath-analyzer equipment. 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.

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 [or to operate flight from destination involving ramp to ramp transfer](#), the additional crew member shall be subjected to pre-flight breath-analyser examination [at the starting station](#).

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) [by the operator](#). [The detailed information shall also be submitted through eGCA portal of DGCA](#).

6.10 All the Scheduled operators shall ensure that the breath-analyzer examination is recorded on camera and recording is to be preserved for six months. Non-scheduled operators [and State Govt. aircraft operators](#) shall also ensure the compliance of this requirement at base station.

7. CARRIAGE OF VIP

7.1 Notwithstanding the provision of para 4.3.5, 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, i.e the provision of post flight in lieu of pre-flight breath-analyzer shall not be applicable.

8. ENFORCEMENT ACTION ON PRE-FLIGHT BREATH-ANALYZER POSITIVE/MISSED TEST

8.1 Enforcement action on pre-flight breath-analyzer positive/misssed breath-analyzer test are as follows:

No.	Nature of Violation	Enforcement action
(a)	First time breath-analyzer test positive or Missed breath-analyzer test	03 months suspension of license/approval
(b)	Second time breath-analyzer test positive or Breath-analyzer test positive in one instance and missed breath-analyzer test in another instance	03 years suspension of license/approval
(c)	Second time missed breath-analyzer test or One missed breath-analyzer test and another missed breath-analyzer test in post flight	01 year suspension of license/approval
(d)	Third time breath-analyzer test positive	Cancellation of license/approval
(e)	Status of Trainership i.e. Examiner/Instructor/Line Training Captain/Check Pilot or Line Check Cabin Crew detected positive for alcohol consumption	Loss of approval rating/authorisation for 03 years in addition to penal action as per nature of violation
(f)	Maintenance personnel detected breath-analyzer test positive	Action as per para 8.1 (a) and 8.1 (b)
(g)	All BA violations except first time missed BA in pre/post flight medical	Endorsement on license/SEP card
(h)	Expatriate pilot, operating in India is detected positive for alcohol consumption during pre-flight breath-analyzer examination	FATA shall be canceled and shall not be considered again

9. ENFORCEMENT ACTION ON POST-FLIGHT BREATH-ANALYZER POSITIVE/MISSED TEST

9.1 Enforcement action on post-flight breath-analyzer positive/misused breath-analyzer test are as follows:

No.	Nature of Violation	Enforcement Action
(a)	Crew tests positive in post flight breath-analyzer test for the first time .	01 year suspension of License/approval and action initiated as per schedule VIA of Aircraft Rules 1937 Cancellation of FATA in case of Expatriate pilot
(b)	First time missed post flight breath-analyzer test	03 months suspension of license/approval
(c)	Breath-analyzer test positive in pre-flight in one instance and breath-analyzer test positive in post-flight in another instance or vice versa	04 year suspension of license/approval
(d)	Status of Trainership i.e. Examiner/Instructor/ Line Training Captain/Check Pilot or Check Cabin Crew detected positive for alcohol consumption during post-flight breath-analyzer examination	Loss of ratings/ authorization for a period of three years in addition to penal action as per nature of violation
(e)	Crew tests second time breath-analyzer test positive in post flight	License/approval shall be cancelled and action initiated as per schedule VIA of Aircraft Rules 1937
(f)	Crew missed ed post flight breath-analyzer test second time or Missed post flight breath-analyzer test in one instance and missed pre-flight BA in another instance	01 year suspension of license/approval
(g)	Crew test breath-analyzer test positive in post flight in one instance and missed ed breath-analyzer test in another instance or vice versa	03 year suspension of license/approval
(h)	All BA violations except first time missed BA in post flight medical	Endorsement on license/ SEP card

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 centres 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.

(Vikram Dev Dutt)
Director General of Civil Aviation

(NAME OF THE ORGANISATION)

PRE/POST-FLIGHT MEDICAL EXAMINATION FOR ALCOHOL

Sl. No.

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

NameFlight No. Sector..... Pilot/Cabin Crew/Maintenance

Personnel (License No. /Approval No.)

Emp. No. Place Date

Time Hrs.

Signature

To be filled up by the Doctor / Medical Personnel

1. Breath-analyzer Result (Reading to be indicated in writing) Negative/Positive

Declaration of Crew Member
(Tick the option applicable)

2. I wish to undergo confirmatory test on the same Breath- Analyzer Equipment.
Or
I wish to undergo confirmatory test on the alternate Breath- Analyzer Equipment

(Name & Signature of Crew Member)

Declaration by Doctor / Medical Personnel

The choice of Breath- Analyzer Equipment has been exercised by the crew.

(Name &Signature of Medical Officer)

To be filled up by the Doctor / Medical Personnel

3. Result of first test at..... hrs%BAC
4. Result of Control Test at.....hrs%BAC
5. 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 Doctor/
Trained Paramedics/ Emergency
Medical Technician/Nurse

Time

Time

PRE/POST-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	BA Equipment Number	Signature of Medical Officer	Remarks