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DEPARTMENT OF CIVIL AVIATION  
**Airworthiness Notices**

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**INSPECTION OF FLIGHT RECORDER SYSTEMS (FLIGHT DATA RECORDER,  
COCKPIT VOICE RECORDER AND AIRBORNE IMAGE RECORDER)**

1. The requirements for flight data recorder and cockpit voice recorder to be installed on aircraft expected to operate under AOC issued by the Department of Civil Aviation Myanmar are described in MCAR Part 7. In addition to those requirements, this Notice provides requirements of the inspection to be performed by Myanmar Air Operators on the flight data recorder and cockpit voice recorder systems on aircraft operated under their AOC. Operational checks and evaluations of recordings from the FDR and CVR systems shall be conducted to ensure the continued serviceability of the recorders.
2. Prior to the first flight of the day, the built-in test features on the flight deck for the CVR, FDR and Flight Data Acquisition Unit (FDAU), when installed, shall be monitored and confirm serviceability
3. Annual inspections shall be carried out as follows:
  - (a) the read-out of the recorded data from the FDR and CVR shall ensure that the recorder operates correctly for the nominal duration of the recording;
  - (b) the analysis of the FDR shall evaluate the quality of the recorded data to determine if the bit error rate (including those errors introduced by recorder, the acquisition unit, the source of the data on the aeroplane and by the tools used to extract the data from the recorder) is within acceptable limits and to determine the nature and distribution of the errors;
  - (c) a complete flight from the FDR shall be examined in engineering units to evaluate the validity of all recorded parameters. Particular attention shall be given to parameters from sensors dedicated to the FDR. Parameters taken from the aircraft's electrical bus system need not be checked if their serviceability can be detected by other aircraft systems;
  - (d) the read-out facility shall have the necessary software to accurately convert the recorded values to engineering units and to determine the status of discrete signals;
  - (e) an annual examination of the recorded signal on the CVR shall be carried out by re-play of the CVR recording. While installed in the aircraft, the CVR shall record test signals from each aircraft source and from relevant external sources to ensure that all required signals meet intelligibility standards;
  - (f) where practicable, during the annual examination, a sample of in-flight recordings of the CVR shall be examined for evidence that the intelligibility of the signal is acceptable; and

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- (g) an annual examination of the recorded images on the Airborne Image Recorder (AIR) shall be carried out by replay of the AIR recording. While installed in the aircraft, the AIR shall record test images from each aircraft source and from relevant external sources to ensure that all required images meet recording quality standards.
4. Flight recorder systems shall be considered unserviceable if there is a significant period of poor quality data, unintelligible signals, or if one or more of the mandatory parameters is not recorded correctly.
  5. A report of the annual inspection shall be made available on request to the State's regulatory authority for monitoring purposes and shall be submitted to the Department of Civil Aviation Myanmar prior to the renewal of Certificate of Airworthiness.
  6. Air operator shall analyse the report of the annual inspection for determination that recording system is functioning correctly.
  7. Calibration of the FDR system:
    - (a) the FDR system shall be re-calibrated at least every five years or in accordance with the recommendations of the sensor manufacturer to determine any discrepancies in the engineering conversion routines for the mandatory parameters, and to ensure that parameters are being recorded within the calibration tolerances; and
    - (b) when the parameters of altitude and airspeed are provided by sensors that are dedicated to the FDR system, there should be a re-calibration performed as recommended by the sensor manufacturer, or at least every two years.
  8. The air operators shall maintain up-to-date and sufficient documentation concerning FDR parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance information and ensure their availability to accident investigation authorities. The documentation needs to be sufficient to ensure that accident investigation authorities have the necessary information to read out the data in engineering units.
  9. The air operators must incorporate the procedure in their Maintenance Control Manual (or) Continuing Airworthiness Management Exposition for maintain up-to-date and sufficient documentation concerning FDR parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance information and ensure their availability to accident investigation authorities.