



**Jordan Civil Aviation Regulatory Commission**

## **Guidance Procedure: AWS 04**

### **Manned Balloon Continuing Airworthiness and Maintenance**

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Issue : 01  
Rev : 00  
September 2020



**Record of Revisions**

| <b>Issue</b> | <b>Revision</b> | <b>Date</b> | <b>Reason for the change<br/>(include chapter/subchapter and a short<br/>description)</b> |
|--------------|-----------------|-------------|---|
| 01           | 00              | Sep. 2020   | First Issue   |



### List of Effective Pages

| Page | Issue | Rev | Date      |
|------|-------|-----|-----------|
| 1    | 01    | 00  | Sep. 2020 |
| 2    | 01    | 00  | Sep. 2020 |
| 3    | 01    | 00  | Sep. 2020 |
| 4    | 01    | 00  | Sep. 2020 |
| 5    | 01    | 00  | Sep. 2020 |
| 6    | 01    | 00  | Sep. 2020 |
| 7    | 01    | 00  | Sep. 2020 |
| 8    | 01    | 00  | Sep. 2020 |
| 9    | 01    | 00  | Sep. 2020 |
| 10   | 01    | 00  | Sep. 2020 |
| 11   | 01    | 00  | Sep. 2020 |
| 12   | 01    | 00  | Sep. 2020 |
| 13   | 01    | 00  | Sep. 2020 |
| 14   | 01    | 00  | Sep. 2020 |
| 15   | 01    | 00  | Sep. 2020 |
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## 0. Introduction

### 0.1. Definitions and abbreviations

For the purposes of this Guidance, the following definitions shall apply:

- ‘balloon’ means a manned lighter-than-air aircraft which is not power-driven and sustains flight through the use of either a lighter-than-air gas or an airborne heater, including gas balloons, hot-air balloons, mixed balloons and, although power-driven, hot-air airships;
- ‘gas balloon’ means a free balloon that derives its lift from a lighter-than-air gas;
- ‘tethered gas balloon’ means a gas balloon with a tether system that continuously anchors the balloon to a fixed point during operation;
- ‘free balloon’ means a balloon that is not continuously anchored to a fixed point during operation;
- ‘hot-air balloon’ means a free balloon that derives its lift from heated air;
- ‘mixed balloon’ means a free balloon that derives its lift from a combination of heated air and a lighter-than-air, non-flammable gas;
- ‘hot-air airship’ means a power-driven hot-air balloon, whereby the engine does not create any portion of lift;
- ‘principal place of business’ means the head office or registered office of the operator of the balloon within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised;
- ‘pilot-in-command’ means the pilot designated as being in command and charged with the safe conduct of the flight;
- ‘crew member’ means a person assigned by an operator to perform duties on board the balloon or, where the duties are directly related to the operation of the balloon, on the ground;
- ‘flight crew member’ means a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period;
- ‘aircraft flight manual (AFM)’ means the document containing the applicable and approved operating limitations and information with respect to the balloon;

#### Abbreviations

|      |   |
|------|---|
| BMOE | Maintenance And Continuing Airworthiness Management Organization Exposition                 |
| BMO  | Organization Responsible For Balloon Continuing Airworthiness Management and/or Maintenance |
| CARC | Jordan Civil Aviation Regulatory Commission   |
| CAMO | Continuing Airworthiness Management Organization  |
| CRS  | Certificate of Release to Service   |
| C/S  | Certifying Staff  |
| CC/S | Component Certifying Staff  |
| JCAR | Jordan Civil Aviation Regulation  |
| MOR  | Mandatory Occurrence Reporting  |
| OEM  | Original Equipment Manufacturer   |
| S/S  | Support Staff   |
| TCH  | Type Certificate Holder   |

### 0.2. Purpose

This guidance procedure is designed to be used by Balloon Operators and the assigned inspector when:

Evaluating the compliance of the continuing airworthiness of manned balloons registered under CARC Civil Aircraft Registry including any component for installation thereto with JCAR Part-M.



### 0.3. Distribution

This procedure should be published on CARC official website. The holders of this procedure are CARC airworthiness standards inspectors and the key management (post holders) of CARC approved maintenance organizations (Part 145 and M Subpart F Maintenance Organizations), CARC approved continuing airworthiness organizations and Balloon Operators as applicable. Holders are responsible to download this procedure and follow its guidelines.

### 0.4. Amendments

This procedure will be reviewed each time there is a regulation change that affects it and as long as it is considered necessary by CARC.

Any amendment to this procedure will go through CARC's document control procedure; the amendment should be approved by the Chief Commissioner/CEO and becomes effective only after incorporation to this procedure and publishing it on CARC official website. Entry into force and application

This Guidance shall enter into force on the twentieth day following that of its publication in CARC Official Website.

It shall apply from 1st October 2020.

### 0.5. Competent Authority

CARC is the competent authority designated, where the operator has its principal place of business or, where the operator has no principal place of business, the place where the operator is established or resides.

### 0.6. Demonstration of Compliance

An operator shall, when so requested by the competent authority which is verifying continued compliance by the operator in accordance with Part ARO1.075 and Part M of JCAR, demonstrate compliance with the essential requirements set out in Part 21 and with the requirements of this guidance.

## 1. Objective and scope applicability

- 1.1 This guidance procedure is applicable to JCAR Part-M applicant, CARC approved Part-M CAMOs (hereafter referred as continuing airworthiness organizations), CARC approved maintenance organizations (Part 145 and M Subpart F Maintenance Organizations) and Balloon Operators, the provisions of this guidance procedure are complementary to the requirements of Part-M regulation "as amended" and does not supersede or replace the associated regulatory requirements.
- 1.2 This guidance procedure establishes common technical requirements and administrative procedures for the continuing airworthiness of manned balloons registered under CARC Civil Aircraft Registry including any component for installation thereto.
- 1.3 This guidance procedure is based on JCAR Part-M requirements as amended, the provisions of this procedures should apply to all manned balloon operators certified by CARC.
- 1.4 All balloon operators should establish a Balloon Organization to maintain the balloons and to manage the continuing airworthiness thereof, as stipulated in JCAR Part-M.
- 1.5 BMO may subcontract specific maintenance tasks to other organization. In such cases, the BMO should ensure that the subcontracted maintenance is performed to an acceptable standard. In any case, the operator is ultimately responsible for the airworthiness of its balloon.
- 1.6 BMO should establish procedures acceptable to CARC to comply with the applicable requirements and provisions of JCAR Part-M as amended.



- 1.7 BMO should establish a reporting system to comply with requirements of JCAR Part-M as amended and CARC Guidance Procedure AWS 30.
- 1.8 Personnel qualified to carry out maintenance and/or manage and control continuing airworthiness tasks should meet the requirements of JCAR Part-M and JCAR Part-66 as amended .
- 1.9 Certificates of release to service and authorized release certificates issued should meet the requirements of JCAR Part M as amended.
- 1.10 Operators of balloons shall operate the balloon in accordance with the requirements set out in the operational provisions of JCAR as applicable.

## 2. Airworthiness responsibility

It is the responsibility of the operator to establish a BMO to ensure that:

- 2.1 The continuing airworthiness and maintenance management are compliant with JCAR Part-M.
- 2.2 It should monitor the subcontractor's response to the provisions of the arrangements, employing/ or engaging such technical resources as are necessary to achieve the subcontracted task(s).
- 2.3 It should have sufficient numbers of qualified personnel available to perform the required maintenance tasks and issue certificates of release to service.
- 2.4 Sufficient number of competent ground handling personnel are available for the loading/unloading of the basket, packing/unpacking of the envelope and hot/cold inflation.
- 2.5 The BMO is responsible for the continuing airworthiness and safety of the balloon and should ensure that no flight takes place unless:
  - a. The balloon is registered in Jordan in a manner acceptable to CARC.
  - b. The balloon is in an airworthy condition and safe for the intended flight.
  - c. Any safety and emergency equipment is fitted correctly and is serviceable.
  - d. The certificate of airworthiness and airworthiness review certificate remain valid.
  - e. The maintenance of the balloon is performed in accordance with an approved maintenance schedule/ program.
  - f. A certificate of release to service should be issued by appropriately authorized certifying staff on behalf of the organization when it has been verified that all maintenance ordered has been properly carried out by the organization, taking into account the availability and use of the maintenance data and that there are no non-compliances which are known to endanger flight safety. A certificate of release to service should be issued before flight at the completion of any maintenance. However, the responsibility for defining the airworthiness status of the balloon is the responsibility of the BMO/operator.
  - g. The balloon should have a Type Certificate issued by the State of Design and accepted by CARC in accordance with JCAR Part 21 and CARC Guidance Procedure AWS 01.
  - h. An application for the issuance of certificate of airworthiness using CARC Form 18-0118 or an airworthiness review certificate should be made in a manner acceptable to CARC together with an airworthiness review report and recommendation according to JCAR Part-M and CARC Form 18-0304.
  - i. safety and emergency equipment to be carried by balloons in flight, as applicable:
    - i. Projecting object on Trapeze, basket or other equipment, that could cause injury to the occupants, must be padded.
    - ii. Handheld fire extinguishers of an approved type for manned balloon.



- iii. Restraint harness should be installed for each passenger in commercial/private operations.
- iv. An altimeter (if installed) as in the balloon flight manual (AFM) otherwise a Portable Global Positioning System (GPS).
- v. A rate of climb indicator (if installed) as in AFM otherwise a Portable Global Positioning System (GPS).
- vi. First Aid Kit.
- vii. A fuel quantity gauge.
- viii. An envelope temperature indicator.
- ix. Burner re-lighter/matches.
- x. Portable VHF Air Communication Equipment (as required by Airspace requirement).
- xi. Portable Global Positioning System (GPS), an industry standard which measure and record flight data (altitude, speed, time and latitude and longitude), and data stored within the last 24 months period.

2.6 The certificate of airworthiness of a balloon should be automatically suspended:

- a. If the balloon is not inspected and maintained in accordance with an approved maintenance schedule/ program and its maintenance is not certified by qualified personnel holding authorizations from an approved BMO.
- b. If mandatory modifications/inspections/airworthiness directives/ repairs as required are not carried out.
- c. If modifications/repairs affecting airworthiness of the balloon not approved by the Type Certificate Holder and by CARC are carried out;
- d. If a balloon suffers major damage or reveals any major defect which may render the balloon unsafe for flight until such a time the damage/ defect is rectified.
- e. If the balloon is flown beyond the flight manual limitations until defects are rectified.

2.7 The instructions for Continued Airworthiness

The organization shall maintain and comply with the instructions for Continued Airworthiness to cover:

- a. detailed description of the balloon and its components, systems and installations;
- b. handling instructions;
- c. basic control and operating information describing how the balloon's components, systems and installations operate;
- d. servicing information;
- e. a maintenance schedule against which the balloon must be inspected and maintained;
- f. maintenance and inspection instructions;
- g. repair instructions;
- h. trouble-shooting information;
- i. airworthiness limitations that set forth each mandatory replacement time, inspection interval and related inspection procedure.

2.8 The Operator should establish a procedure acceptable to CARC to ensure that pilots discharge the following responsibilities:

- a. Ensure that all servicing/maintenance is carried out including pre-flight checks.
- b. That defects affecting airworthiness or safe operation of the balloon are recorded in the Technical Log.



- c. Defects are rectified before flight, by appropriately qualified persons, or are deferred in a manner acceptable to CARC and in accordance with the established procedure.
- d. The pre-flight checks may be carried out by the pilot or another qualified person but need not be carried out by an approved BMO.

2.9 Airworthiness Directives (ADs) and Type Certificate Holder technical information are complied with as required.

- a. The BMO should establish procedures to ensure that Airworthiness Directives are complied with as required.
- b. When the Type Certificate Holder technical information is received, matters of significant airworthiness importance should be attended to promptly.
- c. A record of all Airworthiness Directives and non-mandatory modifications should be kept. The record should list all ADs generally applicable to the type, including those not specifically applicable to the individual balloon, including reason for non-applicability, this information is normally recorded in the balloon logbook.
- d. The BMO should ensure that the balloon Type Certificate Holder is aware that they are operators of their balloon so that all relevant technical information, details of in-service experience of the balloon and amendments to technical data, are received and embodied in a timely manner. This is especially important where the Operator is not the original owner of the balloon, or it has been leased from the owner.
- e. The BMO should hold and make available to concerned person the necessary technical data e.g. CARC publications, the Type Certificate Holder's manuals, any relevant technical information and any other related literature appropriate to the balloon types.
- f. The BMO should establish procedures to control and update the technical library and to disseminate the relevant information to the concerned staff.
- g. The BMO should notify any changes to its address and key personnel to CARC in accordance with the BMOE.

2.10 Weighing

- a. The weighing of the balloon shall be accomplished by the manufacturer of the balloon or by an approved maintenance organization.
- b. The organization shall ensure that the mass of the balloon has been established by actual weighing prior to its initial entry into service. The accumulated effects of modifications and repairs on the mass shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The balloon shall be reweighed if the effects of modifications or repairs on the mass are not known.
- c. New balloons that have been weighed at the factory may be placed into operation without reweighing if the mass records have been adjusted for alterations or modifications to the balloon. Balloons transferred from one operator to another operator do not have to be weighed prior to use by the receiving operator, unless the mass cannot be accurately established by calculation.
- d. The initial empty mass for a balloon is the balloon empty mass determined by a weighing performed by the manufacturer of the balloon before the initial entry into service.
- e. The mass of a balloon is revised whenever the cumulative changes to the balloon empty mass due to modifications or repairs exceed  $\pm 10\%$  of the initial empty mass. This may be done by weighing the balloon or by calculation.



### 3. Balloon maintenance and continuing airworthiness management organisation exposition

- 3.1 The organization responsible for Balloon Maintenance and Continuing Airworthiness Management Exposition (BMOE) should define how the BMO meets the requirements of JCAR Part –M and this Guidance Procedure. The procedures to control continuing airworthiness functions should be contained in the BMOE.

The Balloon Approved Organization Exposition (BMOE) should contain the following, as applicable:

- a. A statement signed by the accountable manager to confirm that the organization will comply with JCARs as applicable and the exposition at all times. Whenever the accountable manager changes it is important to ensure that the new accountable manager signs the statement at the earliest opportunity.
  - b. The organization's scope of work.
  - c. The title(s) and name(s) of key person(s) as identified in 5.1, 5.2 and 5.3.
  - d. An organization chart showing associated chains of responsibility.
  - e. A list of the qualified personnel.
  - f. A general description and location of the facilities.
  - g. Procedures specifying how the BMO complies with JCARs as applicable.
  - h. The BMOE amendment procedures.
  - i. The list of approved balloon maintenance schedule/ program for those balloons which are part of the operator's certificate.
- 3.2 The BMOE and its amendments should be approved by CARC. Minor amendments to the exposition may be approved indirectly through an indirect approval procedure. The indirect approval procedure should define the criteria for minor amendments eligible for indirect approval. The indirect approval procedure should be established in the exposition and should be approved by CARC.

### 4. Facilities

- 4.1 The BMO should provide suitable office accommodation at appropriate locations for personnel actively involved in the maintenance, continuing airworthiness and maintenance management tasks. In addition, as part of the office accommodation, the staff should be provided with an area where they may study maintenance instructions and complete and keep maintenance records in a proper manner.
- 4.2 Storage facilities for serviceable balloon components should be clean, secure, controlled and well ventilated and Type Certificate Holder's storage recommendations should be followed. Storage racks should be strong enough to hold components and provide sufficient support for large components such that the component is not distorted during storage.
- 4.3 Unserviceable components should be segregated from serviceable components.
- 4.4 All serviceable and unserviceable components should be clearly identified.

### 5. Personnel requirement

- 5.1 The organization should appoint an accountable manager, acceptable to CARC who has corporate authority for ensuring that all continuing airworthiness management activities and all maintenance required can be financed and carried out to the standard required by JCARs as applicable.

- 5.2 The accountable manager should designate a nominated post holder(s) for continuing airworthiness management and maintenance. The post holder should report to the accountable manager. This person should be responsible for the management and supervision of continuing airworthiness activities/maintenance management. The nominated post holder should be acceptable to CARC.
- 5.3 The BMO should appoint a person(s) responsible for the quality system, safety management and compliance monitoring or for the conduct of organizational reviews, safety management and for evaluation of suppliers and subcontractors. If it is practically not feasible for the organization to hire such a person(s), then a contracted auditor may be engaged to perform such reviews/evaluations. The auditor should be acceptable to CARC.
- 5.4 The organization should have sufficient qualified personnel for the expected work.
- 5.5 All personnel required by para 5.2 and 5.3 should be able to demonstrate relevant knowledge, background and appropriate experience related to balloon continuing airworthiness and maintenance.
- 5.6 All personnel involved in balloon continuing airworthiness and maintenance tasks including ground handling personnel should have attended Human Factors training.
- 5.7 The records of the qualification of all personnel actively involved in continuing airworthiness and maintenance management tasks should be maintained.
- 5.8 For the accountable manager and the post holders, deputation procedure should be established to cater for prolonged absences.
- 5.9 Subject to CARC approval, the positions required by the para 5.1, 5.2, 5.3 and 5.4 may be combined.
- 5.10 Additional personnel qualification requirement
- 5.11 The following scheduled intervals are the standard requirements and are used here as a guide. The manufacturer's requirements may vary therefore the inspectors should always refer to the manufacturers requirements.
- a. Pre-flight inspections "A" can be performed by the pilot of the balloon or by a crewmember that in the opinion of CARC is suitably qualified.
  - b. Annual or 100 hrs inspection "B"
    - i. Should only be performed and released by the certifying staff holding Aircraft Maintenance License issued by CARC in accordance with JCAR Part 66 and hold a certification authorization issued by BMO quality department.
    - ii. CARC may validate other ICAO contracting states licenses approved for free balloons if there are no Jordanian certifying staff holding Aircraft Maintenance License issued by CARC.
    - iii. This check requires a Certificate of Release (CRS).
  - c. Any other schedule inspection will be handled as in (b) above.
  - d. Unscheduled Maintenance. A prior approval from CARC will be required, the basis of any approval will depend on the manufacturer's recommendation and the scope and complexity of the intended maintenance.



## 6. Maintenance schedule/ program

- 6.1 Maintenance of each balloon should be carried out in accordance with an approved balloon maintenance schedule/ program.
- 6.2 The balloon maintenance schedule/ program and any subsequent amendments should be approved by CARC in accordance with CARC Guidance Procedure AWS 29 and Maintenance Program Assessment Checklist CARC Form 18-0344 and Application Form for Maintenance Program Approval CARC Form 18-0343.
- 6.3 The balloon maintenance schedule/ program should establish compliance with:
  - a. Instructions issued by CARC.
  - b. Instructions for continuing airworthiness promulgated by the Type Certificate Holder.

Instruction issued by CARC can encompass all types of instructions from a specific task for a particular balloon to a complete recommended maintenance schedule/ program for certain balloon types that can be used by the owner/operator directly. These instructions may be issued by CARC in the case of absence of specific recommendation of the Type Certificate Holder.

- 6.4 The balloon maintenance schedule/ program should contain details, including frequency, of all maintenance to be carried out, including any specific tasks linked to the type and the specificity of operations.
- 6.5 Maintenance schedule/ program should be based upon the relevant chapters of the maintenance manual or any other maintenance data containing information on scheduling. Furthermore, an owner or operators maintenance schedule/ program should also take into account any maintenance data containing information on scheduling of components.
- 6.6 The balloon maintenance schedule/ program should be subject to periodic reviews by the BMO and amended when necessary. These reviews will ensure that the schedule continues to be valid and adequate in light of the operating experience whilst taking into account the modification status utilization, age and new and/or modified maintenance instructions promulgated by the type certificate holder or the state of design.

## 7. Certification of maintenance

- 7.1 The following categories of personnel may issue the certificate of release to service:
  - a. Holder of maintenance license issued in accordance with JCAR Part 66; and
  - b. Holder of authorization issued by the BMO quality department.
- 7.2 A certificate of release to service should be issued by appropriately authorized qualified personnel on behalf of the organization when it has been verified that all maintenance required has been properly carried out by the organization, taking into account the availability and use of the applicable maintenance data and that there are no non-compliances which are known to endanger the flight safety.
- 7.3 A certificate of release to service should be issued before flight at the completion of any maintenance.
- 7.4 The certificate of release to service should contain the following statement:  
 'Certifies that the work specified except as otherwise specified was carried out in accordance with JCAR Airworthiness Regulation and in respect to that work the Balloon/Balloon component is considered ready for release to service'. Reference should also be made to the approved continuing airworthiness/maintenance management organization approval number.





- 7.5 A component maintained by the BMO or a subcontracted organization should be released using CARC authorized release certificate CARC Form 18-0227 in accordance with BMOE procedures. Any component maintenance should be performed in accordance with approved maintenance data. The form should include when the maintenance took place relative to any life or overhaul limitation in terms of calendar/flying hours /landings etc., as appropriate.
- 7.6 The maintenance data may be type certificate holder's instructions or the approved balloon maintenance schedule/ program, maintenance manual, component maintenance manual etc...
- 7.7 Balloon components / parts and materials used thereon should be covered by a release certificate, or equivalent document acceptable to CARC issued by the BMO or the sub-contracted organization.

## 8. Technical log

- 8.1 The Operator's Technical Log system should be approved by CARC.

The Technical Log should contain the following information unless cross-referred elsewhere:

- a. Details of the registered name and address of the Operator, the balloon type and the complete registration marks of the balloon.
  - b. Instructions on how to complete the Technical Log.
  - c. Sector record pages pre-serialized of a design acceptable to CARC.
  - d. Each sector record page should include provision to record:
    - i. The balloon type and registration.
    - ii. Mark and Color.
    - iii. Year of Manufacture.
    - iv. The date, place and time of take-off and landing.
    - v. Name and address of the operator (the address may be omitted if it is printed on the title page of the log).
    - vi. Particulars of defects and rectification actions taken.
    - vii. Box for pre-flight inspection.
    - viii. The fuel state at departure.
    - ix. A pre-printed Certificate of Release to Service (CRS) with provision for CRS signature, date and authority for issue, in such a location as to be readily identifiable with the defect entry to which it relates.
    - x. The running total of flying hours so that flying hours remaining to the next inspection can be readily determined and the date of such inspections; and the post-flight signature of the balloon pilot and the date.
    - xi. The Sector Record Page layout should be divided to show clearly what is required to be completed in preparation for the next flight.
  - e. Provision to record Acceptable Deferred Defects (ADD) which are awaiting rectification.
    - i. The BMO may develop procedures more suited to their methods of defect control and to permit, for example, recording of rectification attempts.
    - ii. The BMOs should ensure that procedures for deferring defects are effective in practice and results in defects remaining unrectified for a minimum period of time.
    - iii. Details of the defect, Sector Record Page serial number, signature of person authorizing deferment and date should be entered on the ADD record.
    - iv. On rectification of the defect, it is necessary to enter the rectification details on the current Sector Record Page.
- 8.2 At the end of every flight, the balloon pilot should enter the following details:
    - a. The times when the balloon took off and landed.





- b. Particulars of any defect known to him if it affects the airworthiness or safe operation of the balloon.
  - c. Pilot signature and the date.
  - d. If there are no defects the balloon pilot should make an entry to this effect.
- 8.3 Operators may use a single form (in triplicate) to fulfil the functions of the Technical Log, Sector Record Pages, Load sheet and Passenger Manifest. A completed sector record page copy should be kept on ground prior to flight if the original technical log is carried on board.

## 9. Maintenance records and retention

- 9.1 The prime objective is to have secure and easily retrievable records with comprehensive and legible contents. The balloon maintenance records should be kept in a place safe from fire, floods and theft. They should contain basic details of all serialized balloon components and all other significant components installed, to ensure traceability of such installed balloon component documentations and associated maintenance data and records.
- 9.2 The maintenance records should be combination of both paper and electronic format. The records should remain legible throughout the required retention period. Paper systems should use robust material which can withstand normal handling and filing.
- 9.3 Computer systems may be used to control maintenance and/or record details of maintenance work carried out. Computer systems used for maintenance should have at least one backup system which should be updated at least within 24 hours of any maintenance. Each terminal is required to contain program safeguards against the ability of unauthorized personnel to alter the database.
- 9.4 The BMO should ensure that a system has been established to keep the following records for the periods specified in JCAR Part M:
- a. All detailed maintenance records in respect of the balloon and any service life-limited component fitted thereto; and
  - b. The total time in service (hours, calendar time, and landings) of the balloon and all service life limited components; and
  - c. The time in service (hours, calendar time, and landings) as appropriate, since last scheduled maintenance of the component subjected to a service life limit; and
  - d. The current status of airworthiness directives applicable to the balloon and components.

## 10. Subcontracting and subcontractors evaluation

- 10.1 The BMO may need to sub-contract specific maintenance activities to a sub-contractor. In such cases, the BMO should provide a clear work order to the maintenance sub-contractor. The fact that the BMO has sub-contracted specific maintenance tasks should not prevent it from checking at the sub-contracted maintenance facilities on any aspect of the sub-contracted work to satisfy its responsibility for the airworthiness of the balloon.
- 10.2 Selection and continuous engagement of maintenance sub-contractor should be done by the BMO based on an evaluation performed by the person identified in para 5.3.
- 10.3 Selection should ensure that the sub-contractor has the industrial capacity to undertake the required maintenance.
- 10.4 For balloon maintenance (other than component maintenance) the BMO should not sub-contract scheduled maintenance inspections for which it has been approved, unless agreed with CARC. The



BMO should contract scheduled maintenance inspection for which it is not approved to CARC approved organizations.

- 10.5 The BMO should be responsible for ensuring that the sub-contracted maintenance is performed to an acceptable standard so that safety is not compromised.

## 11. Organization review

- 11.1 The purpose of organizational review is to ensure that the BMO continues to meet JCAR requirements.

As a core minimum, the organizational review system should have the following features, which should be described in the exposition.

- a. Identification of the person responsible for the organizational review program as per para 5.3.
- b. By default, this person should be independent from the tasks being reviewed. He may be a contracted auditor as per para 5.3.

To maintain independence of review, the organization may have two persons performing the review, where one of them reviews the tasks performed by the other reviewer.

- c. Identification and qualification criteria for the person(s) responsible for performing the organizational reviews. These persons should have thorough knowledge of the regulations and of the maintenance organization procedures as specified in section 5.0. They should also have knowledge of audits acquired through training or through experience preferable as an auditor,
- d. Details of the organizational review program.
- e. Checklist(s) covering all items necessary to be satisfied that the organization delivers a safe product and complies with the regulation. All procedures described in the BMO Exposition should be addressed.
- f. A schedule for the accomplishment of the checklist items. Each item should be checked at least every 12 months. The organization may choose to conduct one full review annually or to conduct several partial reviews.

- 11.2 Organizational review program elements:

- a. Identification of frequency, scope and content (including processing of CARC findings).
- b. Planning and performance of the review.
- c. Use of organizational review checklist and forms.
- d. Processing and correction of review findings.
- e. Reporting.

Each checklist item should be answered using an appropriate combination of:

- a. Scope of work.
- b. Maintenance data.
- c. Tools and equipment.
- d. Stores.
- e. Certification of maintenance.
- f. Personnel.
- g. Maintenance sub-contracted.

- h. Technical records and record keeping.
- i. Occurrence reporting procedure.

Corrective and preventive actions should be approved by the person(s) responsible for the organizational review program and implemented within a specified time frame.

Once the person(s) responsible for the organizational review program is satisfied that the corrective action is effective, closure of the finding should be recorded along with a summary of the corrective action.

The accountable manager should be notified of all significant findings and on a regular basis, of the overall result of the organizational review program.

### 11.3 Management of findings.

All findings should be defined, recorded, notified and corrected as per the BMOE.

## 12. Occurrence reporting

- 12.1 The organization should report to CARC, and the organization responsible for the design of the balloon or component any condition of the balloon or component identified by the organization that has resulted or may result in an unsafe condition that hazards seriously the flight safety in accordance with JCAR M.202 and CARC Guidance Procedure AWS 30.

The organization should submit such report to CARC within a maximum of 72 hours from the time of occurrence.

All occurrence reports should be reviewed with the aim of continuous improvement of the system by identifying possible corrective and preventive actions. This should be done in order to find precursors (e.g. notified difficulties in using current procedures and tools, systematic deviations from procedures, unsafe behaviors,... etc.)

- 12.2 The organization should establish an internal occurrence reporting system as detailed in the exposition to enable the collection and evaluation of such reports, including the assessment and extraction of those occurrences to be reported under 12.1.

An internal occurrence reporting system should enable and encourage free and transparent reporting of any safety related occurrence. This will be facilitated by the establishment of a just culture. An organization should ensure that personnel are not inappropriately punished for reporting or co-operating with occurrence investigations.

The internal reporting procedures should ensure that the loop is closed and ensure that the actions are taken internally to address safety hazards. Feedback to reporters, both on an individual and more general basis is important to ensure their continued support for the scheme.

- 12.3 Where an organization is contracted by the BMO to carry out scheduled maintenance inspections, the contract or the work order should include a provision to require the contracted organization to report occurrences to the BMO.

- 12.4 knowledge of audits acquired through training or through experience preferable as an auditor.

