Australian Government



Civil Aviation Safety Authority

# ADVISORY CIRCULAR AC 139.C-03 v1.1

# **Serviceability inspections**

Date File ref July 2023 D23/309531 Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Advisory Circulars should always be read in conjunction with the relevant regulations.

# Audience

This advisory circular (AC) applies to:

- aerodrome owners/operators
- The Civil Aviation Safety Authority (CASA).

# Purpose

To ensure the continuing serviceability of the aerodrome, the operator of a certified aerodrome is required to establish an inspection program that will allow for the identification of hazards and prompt corrective action to be taken to address hazardous conditions on the airport. The Part 139 (Aerodromes) Manual of Standards (MOS) sets out minimum inspection requirements and the circumstances in which additional unscheduled inspections are required.

This AC provides supplementary guidance on:

- conducting scheduled and unscheduled serviceability inspections
- items to be inspected/checked
- reporting hazards
- recording the results of inspections
- maintaining inspection records.

# For further information

For further information, contact CASA's Personnel Licensing, Aerodromes and Air Navigation Standards (telephone 131 757).

Unless specified otherwise, all subregulations, regulations, Divisions, Subparts and Parts referenced in this AC are references to the *Civil Aviation Safety Regulations 1998 (CASR)*.

# Status

#### This version of the AC is approved by the Branch Manager, Flight Standards.

Note: Changes made in the current version are annotated with change bars.

Version	Date	Details
v1.1	July 2023	Recently published AC 139.C-04 reference amended, and some further editorial amendments made.
v1.0	June 2020	Initial release of this AC.

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# **1** Reference material

### 1.1 Acronyms

The acronyms and abbreviations used in this AC are listed in the table below.

Acronym	Description
AC	advisory circular
ARFFS	aviation rescue and firefighting service
AROC	aeronautical radio operator certificate
ATC	air traffic control
CAR	Civil Aviation Regulations 1988
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
CTAF	common traffic advisory frequency
FOD	foreign object debris
MAGS	movement area guidance sign
MOS	Part 139 (Aerodromes) Manual of Standards
NOTAM	notice to airmen
VASI	visual approach slope indicator

# 1.2 **Definitions**

Terms that have specific meaning within this AC are defined in the table below. Where definitions from the civil aviation legislation have been reproduced for ease of reference, these are identified by 'grey shading'. Should there be a discrepancy between a definition given in this AC and the civil aviation legislation, the definition in the legislation prevails.

Term	Definition	
aerodrome facility	any of the following physical things at an aerodrome as mention MOS for an aerodrome:	ned in this
	<ul> <li>a. the physical characteristics of any movement area, inc runways, taxiways, taxilanes, shoulders, aprons, prima secondary parking positions, runway strips and taxiwa</li> </ul>	ary and
	b. infrastructure	
	c. structures	
	d. equipment	
	e. earthing points	
	f. cables	
	g. lighting	
	h. signage	
	i. markings	

Term	Definition	
	<ul> <li>j. visual approach slope indicators</li> <li>k. any other similar thing that is physical matter and is used for the operation of aircraft at the aerodrome.</li> </ul>	
aerodrome technical inspection	al an inspection of the facilities, equipment and operation of a certified aerodrome, conducted by, or on behalf of, the aerodrome operator to ensure detection of any deterioration that could make any of the facilities, equipment or operations unsafe for aircraft operations.	
manoeuvring area	that part of the aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.	

### 1.3 References

#### Legislation

Legislation is available on the Federal Register of Legislation website https://www.legislation.gov.au/

Document	Title
Part 139 of CASR	Aerodromes

#### International Civil Aviation Organisation documents

International Civil Aviation Organization (ICAO) documents are available for purchase from http://store1.icao.int/

Many ICAO documents are also available for reading, but not purchase or downloading, from the ICAO eLibrary (<u>https://elibrary.icao.int/home</u>).

Document	Title
ICAO International Standards and Recommended Practices	Annex 14 to the convention on International Civil Aviation - Aerodromes Volume I
Doc 9981	Procedures for air navigation services Aerodromes (PANS Aerodromes)

#### **Advisory material**

CASA's advisory materials are available at https://www.casa.gov.au/publications-and-resources/guidance-materials

Document	Title
AC 139.C-02	Aerodrome personnel
AC 139.C-04	Aerodrome technical inspections and aerodrome manual validations

# 2 Serviceability inspection overview

## 2.1 Introduction

- 2.1.1 A certified aerodrome is required to have a documented inspection program to ensure the:
  - continuing serviceability of the aerodrome
  - timely identification of any hazards
  - detection of deterioration in the condition of an aerodrome facility before the safety of aviation is compromised
  - actions taken are recorded and communicated.
- 2.1.2 Although routine serviceability inspections are planned, additional unscheduled inspections are to occur:
  - following a severe wind event, storm, or period of heavy rain
  - if there is a reason to believe a hazard to aircraft may be present on the manoeuvring area
  - following an incident or accident
  - if a pilot or aviation rescue and firefighting service (ARFFS) provider reports a hazard
  - prior to the commencement of reduced or low visibility operations
  - when requested by CASA
  - when requested by air traffic control (ATC)
- 2.1.3 Lighting systems and pavement seals will require increased frequency of specialised inspections as their time in service increases.
- 2.1.3.1 Depending on the type and frequency of aircraft operations, an aerodrome technical inspection or an aerodrome manual validation is also required. Outcomes of serviceability inspections may be considered by the technical inspector.

### 2.2 Inspection personnel

- 2.2.1 Serviceability inspections are to be completed by trained and competent reporting officer(s).
- 2.2.2 An aerodrome operator should have procedures to verify that the reporting officer tasked with carrying out a serviceability inspection is appropriately trained and has been assessed as competent.
- 2.2.3 Ongoing verification of the reporting officer's knowledge and practical application of the required tasks should occur at adequate intervals. AC 139.C-02 Aerodrome personnel provides further guidance.

### 2.3 Inspection equipment

2.3.1 Reporting officers conducting serviceability inspections should:

- be provided with a two-way radio for communication with ATC if applicable, or for notifying intentions and monitoring the unattended radio frequency e.g. Common Traffic Advisory Frequency (CTAF) used at the aerodrome
- for vehicles operating on the manoeuvring area (runway, runway strip, taxiway, and taxiway strip), the vehicle is to be equipped with a flashing or rotating light that can be seen from all directions. The type and positioning of vehicle lighting is dependent on time (day/night) and the type of operations occurring at the aerodrome:
  - o at an international aerodrome, or an aerodrome with scheduled air transport operations, vehicles are required to display a rotating or flashing light that meets the specifications stated in subsection 14.05(8) of the Part 139 MOS
  - o at all other aerodromes, if a light cannot be placed on top of an airside vehicle, additional lights must be provided in other locations on the vehicle to ensure visibility in all directions at night. During daylight hours only, it is permissible to display the standard manufacturer-fitted vehicle hazard warning lights.
- if there is a ground surveillance system in operation, vehicles operating in areas where the ground surveillance system is operational are also required to be fitted with surveillance equipment that meets the specifications stated in section 14.04 of the Part 139 MOS
- have a checklist to record the inspection occurrence and any findings. Chapter 6.1 of this AC provides guidance on recording inspections.

# 2.4 Foreign object debris

- 2.4.1 When conducting a serviceability inspection, the cleanliness of the movement area is of paramount importance to the safe operation of aircraft, and to those persons working on the aprons and other areas.
- 2.4.2 Foreign object debris (FOD) are fragments of loose material (such as sand, stone, paper, wood, metal, fragments of pavement) that are detrimental to aircraft structures or engines and may impair the operation of aircraft if they strike or are ingested into an aircraft engine.
- 2.4.3 Damage caused by debris is also known as foreign object damage.
- 2.4.4 The impact of damage caused by FOD may include delays or cancellations of flights, damage to engines and actions taken by the aircraft operator to recoup the cost of the impact.
- 2.4.5 FOD also poses a risk to persons working on or near the movement area as jet blast or propeller wash may propel the FOD.

# **3** Type and frequency of inspections

### 3.1 Planned inspections

- 3.1.1 The schedule of planned inspections is to be recorded in the aerodrome manual.
- 3.1.2 A minimum of two serviceability inspections are to be conducted each week, at least 48 hours apart. A serviceability inspection is also required to be completed each day that an air transport movement is scheduled to occur.
- 3.1.3 Whilst the Part 139 MOS sets out minimum inspection requirements, an aerodrome operator should assess the complexity and the conditions of the local operating environment to establish a monitoring and inspection program which is commensurate with their identified risk level. The planned inspection schedule should be adjusted in accordance with the associated risks.
- 3.1.4 For aerodromes with scheduled passenger air transport operations, the inspection is to be completed before the first aircraft movement. If the first movement occurs before sunrise, the core safety critical elements (i.e. FOD, visual aids, significant hazards) are to be completed initially, with the remainder of the inspection to resume as soon as there is sufficient daylight.

## 3.2 Unplanned inspections

3.2.1 In the event an unscheduled serviceability inspection in accordance with section 2.1.2 of this AC is required, the inspection is to be carried out as soon as possible. The reason for the inspection should be included in the inspection report.

# 4 Conducting inspections

### 4.1 Introduction

- 4.1.1 To ensure consistent results, procedures for carrying out serviceability inspections should be documented.
- 4.1.2 Whilst serviceability inspection is predominantly conducted in a vehicle, the higher the speed of the vehicle the potentially less effective the inspection. The speed of the vehicle should therefore be kept as low as practicable.
- 4.1.3 In certain circumstances, such as where the aerodrome has wide runways or multiple taxiway intersections, the inspection may be performed by more than one inspector.
- 4.1.4 Regular inspections carried out by pavement specialists allow a far more comprehensive assessment as part of preventative maintenance.
- 4.1.5 Whilst monitoring by visual inspection will enable the identification of failed lamps, lights should be closely inspected to detect contamination of fittings by dirt and rubber deposits or misalignment. Inspections completed after sunset and prior to sunrise provide clearer visibility of light and colour output of the lighting system.

# 4.2 Operating on the manoeuvring area

#### 4.2.1 Runways

- 4.2.1.1 It is essential that any potential hazards associated with a runway inspection activity are identified and addressed, and that staff with inspection duties have a clear understanding of what is involved and how the task is to be safely carried out.
- 4.2.1.2 To best ensure visibility of aircraft by the person conducting the inspection and the visibility of the vehicle by pilots, runway inspections should be carried out in the direction opposite to that being used for landing or taking off.
- 4.2.1.3 A listening watch is to be maintained on the appropriate radio frequency. At a controlled aerodrome, vehicle drivers operating on the manoeuvring area required to have an Aeronautical Radio Operator Certificate (AROC) so they can read back instructions to the air traffic controller.
- 4.2.1.4 If runway lighting is installed inspections should be undertaken with the lights illuminated in order to identify unserviceable lamps and possible failures of light fittings.
- 4.2.1.5 Where the aerodrome has a high intensity lighting system, inspections of the lighting system selected at high intensity during daylight, and inspections of the low intensity of the light at night, may be considered.
- 4.2.1.6 The times of commencement and completion of the inspection should be noted and reported in the inspection checklist. Outcomes of the inspection should be recorded in accordance with the aerodrome manual procedures.
- 4.2.1.7 At a controlled aerodrome ATC should participate in the development of inspection procedures. These procedures should require:
  - ATC clearance to be obtained before crossing or entering any runway

- on every occasion prior to entering the runway, an entry request should be made to ATC. Likewise, upon leaving the runway, the control tower should be advised when the inspection vehicle has vacated the runway
- if, during an inspection, the control tower requests inspection personnel vacate the runway, the vehicle should move outside the runway before advising the control tower that they have vacated the runway. Inspection personnel should not re-enter the runway until in receipt of a specific clearance to do so. Inspection personnel should not vacate a runway by driving through an instrument landing system (ILS) critical or sensitive area unless specifically instructed to do so by ATC.
- upon completion of the runway inspection, the control tower should be advised of the status of the manoeuvring area as necessary.

#### 4.2.2 Operating on taxiways

- 4.2.2.1 Procedures for carrying out inspections on an active taxiway should also be documented. The following are matters for consideration:
  - a listening watch should be maintained on the appropriate radio frequency
  - the times of commencement and completion of the inspection should be recorded in accordance with the aerodrome manual procedures
  - if taxiway lighting is installed, inspections should be undertaken with the lights illuminated in order to identify unserviceable lamps and possible failures of light fittings.

### 4.3 Items to be inspected/checked

#### 4.3.1 Surface conditions of the movement area (paved)

- 4.3.1.1 The condition of pavement surfaces is an important part of aviation safety. Pavement inspections are required to ensure surfaces are clear of foreign object debris and have no defects that could present a hazard to aircraft or persons.
- 4.3.1.2 As a minimum the inspection should check:
  - the cleanliness of the surfaces to ensure they are free from FOD
  - pavement edges to assure that they are the minimum necessary to allow water to drain off the pavement. A lip no greater than 25 mm is acceptable, anything greater may be hazardous to the directional control of aircraft.
  - for sealing, spalling, bumps, or rutting
  - for any surface cracking including vegetation growth in cracks
  - for water pooling or ponding that may attract birds or result in the aquaplaning of aircraft or vehicles
  - for any holes, erosion, or other signs of pavement distress
  - for rubber build-up or other contaminants which may reduce surface friction, or cause surface damage
  - for any subsurface leaks or pressure
  - vegetation along runway edges that could impede drainage from the pavement surface

 all surface markings associated with aircraft and vehicle movements should be checked for cleanliness and visibility.

#### 4.3.2 Surface conditions of the movement area (unpaved)

- 4.3.2.1 The condition of these surfaces is just as important as paved surfaces, and they should be inspected with the same thoroughness. At a minimum the inspection is to include an empirical assessment of the bearing strength of the runway, and the runway strip if it is available for aircraft operations. The inspection should check:
  - the cleanliness of the surfaces to ensure they are free from FOD
  - for ruts, depressions, wheel tracks, humps, soft ground, or variations from the normal smooth surfaces that could present a hazard
  - for scour and erosion that could cause directional control problems
  - for termite mounds, sink holes, erosion ditches, or other ground obstacles obscured by grass
  - the condition of grass surfaces, ensuring grass height is not excessive
  - for areas of standing water (may be an attraction to birds).
- 4.3.2.2 Procedures for an empirical assessment should be established for the practical guidance of reporting officers tasked to undertake the assessment.

#### 4.3.3 Runway / taxiway strips and runway end safety areas (RESA)

- 4.3.3.1 These surfaces should be inspected to the same level of thoroughness as the movement area surfaces. Hazards to the movement of aircraft that deviate from the defined runway or taxiway should not be present in these areas. As a minimum the inspection should check:
  - there are no ruts, depressions, humps, or variations from the normal smooth surface that could present a hazard to aircraft
  - there are no unassessed objects in these areas, except those that must be located there because of their function (e.g., runway lights, signs, or navigation aids)
  - the base for any equipment is at the same level as the surrounding safety area or no more than 25 mm higher
  - the condition and fit of pit covers
  - the ground has not been eroded around the light bases, pit covers or other fittings that should be flush with the surface.

#### 4.3.4 Aprons

- 4.3.4.1 Inspections may be undertaken in segments to account for the size and complexity of the operation. The inspection should check:
  - surfaces, including aircraft parking positions for surface break up and FOD
  - all painted ground surface markings, any repainting requirements noted
  - service roads and equipment storage areas for general serviceability, condition, cleanliness, and parking discipline.

#### 4.3.5 Markings, markers, and signs

- 4.3.5.1 Markings, markers, and signs provide direction and guidance to pilots during take-off, landing, and taxiing. They also provide direction for the drivers of vehicles to ensure vehicle movements do not create hazards for aircraft operations, other vehicles and pedestrians.
- 4.3.5.2 Markers, markings and signs need to be consistent with the current operations particularly when works are occurring (e.g. runway distance MAGS when there is a displaced threshold, unserviceability markings and markers etc.).
- 4.3.5.3 Signage may be affected by jet blast and should be inspected to ensure:
  - the correct inscription, orientation, and colour
  - they are frangibly mounted (if within the strip areas), secure, easy to read, and in good condition
  - they are free from vegetation growth that would impede visibility
  - there are no signs missing.
- 4.3.5.4 Signs and lighting associated with visual docking guidance systems should be checked for correct functionality and conspicuity.
- 4.3.5.5 Painted markings should be checked for:
  - correct colour
  - blistering
  - chipping
  - fading/discoloration/contrast with the surrounding surface
  - obscurity due to rubber build up.
- 4.3.6 Markers should be checked to ensure they are:
  - correctly positioned and the correct colour
  - free from dirt or vegetation growth and can be easily seen
  - in serviceable condition.

#### 4.3.7 Lighting

- 4.3.7.1 At night and during periods of low visibility lighting is important for safe aerodrome operations. Lights come in different shapes, sizes, colours, and configurations and can be flush mounted or elevated. As a minimum the inspection should check:
  - that all lights are working and are not obscured by vegetation or dirt
  - that the illumination appears to be at consistent levels for lights within the same system
  - runway, taxiway, and runway threshold lights are the correct colour and are oriented correctly
  - lighting on-off and intensity controls are working correctly (remotely operated, manual, or automatic system for controlling the lighting)
  - where provided, stand-by power equipment to ensure that it is ready to operate if required.

- 4.3.7.2 An inspection of all aerodrome ground lighting systems should be made daily or before use. Any deficiencies should be remedied as soon as possible, and the identified lights should again be inspected before use after the remedial action is taken.
- 4.3.7.3 Approach lighting systems should be inspected at adequate, defined frequencies, and cover all elements of the approach lighting system.

#### 4.3.8 Visual aids to navigation

- 4.3.8.1 Visual aids to navigation include the wind direction indicator, ground signals, aerodrome beacon, specialised lighting systems such as visual approach slope indicator (VASI) systems.
- 4.3.8.2 Wind direction indicators should be inspected to ensure:
  - there is no damage to the sleeve fabric or loss of conspicuous colour
  - there is no damage to the assembly or mounting
  - the sleeve can move freely through 360 degrees around the pole
  - where provided, the circle on the ground is blackened and the diameter of the circle is appropriately marked
  - if lit, the lights are correctly aligned and illuminated.
- 4.3.8.3 Where provided, the aerodrome beacon should be checked to ensure that it is visible and working properly.
- 4.3.8.4 Where provided, visual approach slope indicator lights should be checked to ensure:
  - they are working
  - they are not obscured to an approaching aircraft
  - their mounts have not been damaged or disturbed
  - periodic inspections should ensure that VASI is displaying at the correct angle.

#### 4.3.9 Aerodrome fencing and signage

- 4.3.9.1 To safeguard the movement area, the inspection should check:
  - the integrity of fences, gates, and signs that provide a barrier to prevent inadvertent entry of animals, vehicles and persons onto the movement area and other aerodrome operational areas that are restricted
  - gates and doors with controlled access to ensure they are operating correctly
  - gates used exclusively by emergency response vehicles such as crash gates to ensure they are working as intended and are not restricted.

# 4.3.10 Obstacles infringing the take-off, approach, transitional and PANS-OPS surfaces

- 4.3.10.1 A visual inspection of the areas surrounding the aerodrome are necessary to verify that no new objects appear to infringe the protected surfaces, particularly the approach and departure surfaces of all runways.
- 4.3.10.2 Any unauthorised obstacles that are detected are to be immediately reported and procedures taken to remove the object.

- 4.3.10.3 If obstacle lights have been determined, in writing by CASA as essential for aviation safety, they will require monitoring whenever the aerodrome, or any specific runway where the obstacle lights are essential, is available for operations.
- 4.3.10.4 Inspection frequency for obstacle lights depends on the type of aircraft operations. Obstacle lights are to be observed at least once in every:
  - 24-hour period at aerodromes with scheduled international air transport operations occurring at night
  - 48-hour period at aerodromes with scheduled domestic air transport operations occurring at night
  - 7-day period at all other aerodromes, including obstacles with daytime lighting.
- 4.3.10.5 A risk assessment should determine if a higher frequency inspection should be applied.

#### 4.3.11 Wildlife hazard management

- 4.3.11.1 Wildlife hazards form an important part of serviceability inspections and as a minimum the inspection should check:
  - all inspection items identified in a wildlife management plan that has been implemented for the aerodrome (if applicable)
  - the condition of aerodrome fencing
  - the presence of:
    - o birds or animals on or adjacent to operational areas that could present a hazard to aircraft
    - o unusual activity or change in numbers of birds.
  - activity on or adjacent to the aerodrome that could attract birds to create a hazard
  - for water in drainage or ponding areas
  - shelter provided by aerodrome infrastructure (such as buildings, equipment, and gable markers)
  - off airport attraction sources (such as animal sale centres, picnic areas, aeration facilities, waste disposal and landfill areas etc.)
  - the availability and operating condition of any wildlife hazard mitigating equipment.

#### 4.3.12 Aerodrome frequency response unit

4.3.12.1 Where provided, the serviceability inspection is to check that the aerodrome frequency response unit is functioning correctly.

#### 4.3.13 Currency of NOTAMs

4.3.13.1 NOTAMs issued by the aerodrome operator are to be checked for their currency and accuracy.

# 5 Reporting

## 5.1 Identification of an unsafe condition

- 5.1.1 During the inspection, if the reporting officer identifies a change to the condition of an aerodrome facility which may impact the safe operation of an aircraft, immediate actions are to be taken to ensure the continuing safety of aircraft operations and of other personnel at the aerodrome.
- 5.1.2 Markers and lighting that comply with the standards set out in the Part 139 MOS, are to be used to identify areas of the movement area that are unserviceable. Notification to ATC (where present) and the NOTAM office should occur as soon as possible after the condition or hazard is detected. Refer to AC 139.C-05 'Aerodrome reporting and validation' for further guidance. <sup>1</sup>
- 5.1.3 The unsafe condition should be reported as soon as possible for timely rectification. Although repairs may be completed, a technical inspection is to be arranged without delay.
- 5.1.4 When arranging the technical inspection, the following matters are to be complied with:
  - the person performing the technical inspection is to have the required technical qualifications and experience expressed in section 12.10 of the Part 139 MOS
  - a copy of the person's qualifications and relevant experience is to be included in the resulting technical inspection report or maintained as part of the aerodrome manual
  - a copy of the resulting technical inspection report is to be provided to CASA within 30 days of receiving the report
  - a corrective action plan is to be prepared which is to include:
    - o documented support for, or rejection of recommendations
    - o a timeframe for completion
  - technical inspection reports are to be retained for a period of three (3) years.

## 5.2 A significant object is found

- 5.2.1 During the inspection, a reporting officer may find a significant object that could reasonably be expected to have an adverse effect on the safety of aircraft, i.e. an aircraft part that may have fallen from an aircraft etc.
- 5.2.2 At a controlled aerodrome, the reporting officer is to immediately advise ATC if a significant object is found.
- 5.2.3 At an uncontrolled aerodrome matters that may adversely affect aviation safety for aircraft enroute to the aerodrome or aircraft that have recently departed and are of an urgent nature should be reported to Brisbane or Melbourne ATC centre, or the aircraft operator.
- 5.2.4 Items that may affect the safety of aircraft are to be notified to the Australian Transport Safety Bureau (ATSB).

<sup>&</sup>lt;sup>1</sup> Airservices Australia have their own document on reporting <<u>http://www.airservicesaustralia.com/wp-content/uploads/NOTAM-Data-Quality-Requirements-for-Aerodrome-Operators.pdf</u>>

### 5.3 Adverse weather event runway condition reporting

- 5.3.1 After heavy rain, an inspection should be made to assess the runway surface for contamination by water, snow or frost, as a contaminated runway can have an adverse effect on an aircraft's take-off and landing performance and operational safety.
- 5.3.2 Runway surface contamination and issues with any movement areas should be notified immediately to:
  - Air Traffic Control (ATC) (where present)
  - arriving and departing aircraft
  - to the AIS for the issue of a NOTAM for prolonged matters.
- 5.3.3 When a runway condition report is requested or is necessary, the following terminology should be used:
  - dry runway
    - o a runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used
    - o this descriptor is normally only used for a runway that was previously reported as wet, slippery wet, or contaminated.
  - wet runway
    - o the runway surface is covered by any visible dampness or water up to, and including 3 mm deep, within the intended area of use.
  - slippery wet runway
    - o a wet runway where the surface friction characteristics of a significant portion<sup>2</sup> of the runway have been determined to be degraded.
  - contaminated runway
    - contamination of a runway (or a change to this runway condition) is safety critical information and should be reported without delay to ATC, arriving and departing aircraft, and the AIS
    - o a runway is contaminated when a significant portion<sup>31</sup> of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by:
      - (1) snow (dry or wet)
      - (2) frost (frost consists of ice crystals formed from airborne moisture on a surface whose temperature is below freezing. Frost differs from ice in that the frost crystals grow independently and therefore have a more granular texture)
      - (3) standing water (water of depth greater than 3 mm).

<sup>&</sup>lt;sup>3</sup> Significant portion typically means an area of 25% or more in any third of a runway (with the runway subdivided into thirds along its length.

#### 5.3.4 Wherever possible:

- runway reports should identify the runway surface condition for each runway 'third' (sub-dividing the runway into thirds along its length)
- a contaminated runway report should include the estimated or measured depth of contaminant

For example: "Runway 30: Standing water on first third, depth 6mm, wet for the remaining runway".

# 6 Inspection records

### 6.1 Checklist for recording the results of inspections

- 6.1.1 All planned and unscheduled serviceability inspections should be performed using established checklists which:
  - identify the various inspection areas
  - provide a record of the items to be inspected/checked
  - allow the recording of:
    - o the type of inspection being carried out
    - o who completed the inspection
    - o the status or condition of each item inspected/checked (pass or fail)
    - o basic meteorological conditions, i.e. light rain, fog etc.
    - o comments where necessary.
- 6.1.2 Whilst the format of checklists can vary, it is important to develop a checklist that is relevant to the aerodrome and its operations, and identifies all items required to be inspected in accordance with the Part 139 MOS.
- 6.1.3 At the completion of the inspection the reporting officer is to, in accordance with the aerodrome manual procedures, record:
  - the date and time the inspection was completed
  - the results of the inspection
  - a description of any action taken.
- 6.1.4 Deficiencies found during an inspection should be recorded with sufficient detail to ensure appropriate remedial action can be taken. Photographs may be used to support and clarify the nature of the deficiency.
- 6.1.5 A sketch of the aerodrome may assist in marking the location of detected problems.
- 6.1.6 If a checklist is used to record inspection outcomes, the completed checklist should be signed to confirm it has been carried out in accordance with the procedures. Alternatively, outcomes of the inspection should be recorded in the logbook. The use of electronic databases or checklists with the results and any identified deficiencies stored in accordance with the aerodrome manual is acceptable.
- 6.1.7 An effective aerodrome inspection program requires a procedure for the reporting of deficiencies so they can be corrected.
- 6.1.8 Each inspection should include a follow-up mechanism to ensure that appropriate action has been taken including verification that the responsible manager is aware of adverse outcomes or serviceability issues reported by the inspection process.
- 6.1.9 A log of all remedial actions following an inspection should be recorded and verification of their completion should be undertaken.

## 6.2 Maintaining inspection records

6.2.1 Records are to be maintained for a period of at least 2 years from the date the inspection was carried out.