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Civil Aviation Authority of Sri Lanka

Guidance Material for Flight Inspection

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Guidance Material for flight inspection

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Foreword

The CAASL is the State's regulatory agency charged with the responsibility for the initial certification of organizations and personnel entering the civil aviation arena in Sri Lanka and conducting post certification safety oversight and surveillance on such organizations or personnel to ensure continued compliance with the applicable international standards, recommended practices and associated published requirements.

The CAASL has developed this guidance material to complement existing SARPs to provide guidance on flight inspection and to serve as a reference for ANSP to develop their own specific practices and procedures to provide additional guidance on planning, execution and delivery of flight inspection within Sri Lanka which specifies the arrangements and procedures that would be in place in the conduct of the proposed activities to enable the CAASL to ascertain whether or not the ANSP has understood clearly, actual and potential obligations within the governing legislative framework and taken adequate and reasonable measures to provide an efficient and regular services conforming to the applicable safety and security requirements. The CAASL requires these Manuals and Documents to be prepared conforming to published standards.

As an organization which set standards to the industry personnel, the CAASL shall always be taking a professional approach and be exemplary in the discharge of its regulatory obligations and services. It is however observed that due to lack of uniformity of procedures, the CAASL has been issuing for the use and guidance of both CAASL Staff and industry personnel, the Manual and Documents of varying standards, maintenance of which have become a problem. The Standards for CAASL Manuals / Documents have been prepared with this objective eliminating this problem. All employees of the CAASL are expected to be familiar with these standards and apply them consistently when formulating Manuals and Documents for the use or guidance of the CAASL employees or industry personnel. This Manual has been prepared in strict accordance with the procedures explained in this Manual and therefore it may be used as a reference when developing CAASL Manuals/ Documents. Also it may be issued to industry personnel to have a clear understanding of the standards expected by the CAASL from them.

Captain Themiya Abeywickrama,
Director General of Civil Aviation and
Chief Executive Officer,
Civil Aviation Authority of Sri Lanka

05.05.2022

Abbreviations

AIP	Aeronautical Information Publication
ANSP	Air Navigation Service Provider
AOC	Air Operator's Certificate
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Service
CNS	Communication, Navigation and Surveillance
COVID-19	Coronavirus Disease 2019
CRM	Crew Resource Management
DME	Distance Measuring Equipment
DVOR	Doppler VHF Omni-Directional Range
EFB	Electronic Flight Bag
FISP	Flight Inspection Service Provider
FL	Flight Level
FTL	Flight Time Limitation
GNSS	Global Navigation Satellite System
GP	Glide path
ICAO	The International Civil Aviation Organization
ICASC	The International Committee for Airspace Standards and Calibration
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LOC	Localizer
LSALT	Lowest Safe Altitude
MSA	Minimum Sector Altitude
MRVA	Minimum Radar Vectoring Altitude
NAVAID	Navigation Aid
NDB	Non Directional Beacon
NOTAM	Notice to Airmen
PAPI	Precision Approach Path Indicator
RePL	Remote Pilot License
RPAS	Remotely Piloted Aircraft Systems
SARPs	Standards and Recommended Practices
SMS	Safety Management System
SSR	Secondary Surveillance Radar
TAR	Test Accuracy Ratios
TSO	Technical Standard Orders
VASI	Visual Approach Slope Indicator
VHF	Very High Frequency
VMC	Visual Meteorological Conditions

1 CHAPTER - INTRODUCTION

1.1 OBJECTIVE

1.1.1 In accordance with 2.2 of Implementing Standard 034 and ICAO Document 8071 requirements, flight inspection has to be conducted periodically to ensure accuracy, reliability and integrity of the signals-in-space of all Navigational Aids installed in Sri Lanka meeting the SARPs in Annex 10 Volume I and corresponding Implementing Standard "IS 034" promulgated by CAASL.

1.1.2 This guidance material focuses on

1. Flight inspection for Navigational Aids
2. Flight inspection of Surveillance facilities
3. Flight inspection for VHF Communication Coverage

1.1.3 This guidance material introduces and describes different stages in flight Calibration of Navigational Aids including planning, conducting and accepting the Inspection report.

1.2 SCOPE

1.2.1 This guidance material describes general reference in conducting flight inspection, including resources planning, roles and responsibilities of involving parties and identification of stakeholders. It also provides guideline in communication with stakeholders and criteria on planning and scheduling flight inspection.

1.2.2 This document includes sample flight inspection checklists for Instrument Landing System (ILS) including visual aids, Doppler Very High Frequency Omni-Directional Range (DVOR), Distance Measuring Equipment (DME), and Non Directional Beacon (NDB), discusses about the arrangement for flight inspection at night and also emergency flight inspections. The samples referred in this document are for guidance purposes only and not to be used as templates.

1.2.3 This document also includes samples for flight performance checks on Secondary Surveillance Radar (SSR) and Very High Frequency (VHF) Communication Coverage.

1.2.4 Reference is also given on the sample flight inspection system performance specifications and associated Test Accuracy Ratios (TAR) and the workflow on reporting of flight inspection results. Sample flight inspection records and reports are also shared in this document to make reference with.

2 CHAPTER - PLANNING FOR FLIGHT INSPECTION

2.1 GENERAL

2.1.1 General Setup and Resources Planning

2.1.1.1 General setup - flight inspection arrangements:

(a) Engagement of FISP (Flight Inspection Service Provider)

2.1.1.2 Engagement of FISP will be:

(a) More cost effective when State has small number of facilities to be flight inspected;

(b) More feasible when the State may not have the necessary expertise;

(c) More flexible to change FISP to meet the required service performance; and

(d) Less control when an emergency flight inspection is required.

2.1.1.3 General planning before flight inspection includes the following:

(a) Determine the type of flight inspection required (commissioning, routine or special)

(b) Identify facilities to be flight inspected;

(c) Identify a Point of Contact from ANSP for the liaison with Flight Inspection Crew / Team.

(d) Determine type of aircraft used for flight inspection, for example using jet aircraft for high level (i.e. FL350 and above) radar coverage check;

(e) Flight Inspection planning shall be carried out as per the regulations published in 2.2 of IS 034.

(f) If the third party flight inspection service provider is from another state, the flight movement is considered as a non-schedule aircraft flying into territory of Sri Lanka. Flight Inspection planning shall be carried out as per Sri Lanka AIP (Aeronautical Information Publication) GEN 1.2 section 3.1 (Page Ref GEN 1.2-1) on Procedures for non-scheduled / private flights into and over the territory of Sri Lanka: (https://www.airport.lk/aasl/AIS/AMDT%20WEB/AIP%20FROM%2030%20JAN%202020/htm/30.htm)

(g) Check with Air Traffic Control units concerned on where the inspection aircraft can park and identify any traffic/timing restrictions for its taking off and landing. Referring to Referring to Sri Lanka AIP GEN 4.1 section 2.1.3 (Page Ref GEN 4.1-1), Exemptions are applied for landing and parking charges for the flight inspection Aircraft as prescribed by DGCA. (https://www.airport.lk/aasl/AIS/AMDT%20WEB/AIP%20FROM%2030%20JAN%202020/htm/111.htm)

(h) Plan the time of flight inspection, after consulting operations at ATS units referring to predefined flight schedules;

(i) Develop draft flight inspection schedule and flight inspection profiles as well as proposed date for brief and debrief;

(j) Notify parties involved/affected by draft flight inspection schedule and flight inspection profiles. Parties involved/affected could be ATC, runway maintenance team, military, ground handlers, Navigational Aids & Surveillance facilities managers/ maintenance staff of particular Aerodrome and other surrounded aerodromes, airfield lighting / Precision Approach Path Indicator (PAPI) maintenance team;

(k) Conduct flight inspection briefing with involved / affected parties;

(l) Issue NOTAMs (Notices to Airmen) to notify the withdrawal of Navigational Aid due to flight calibration process,

(m) Develop list of contact details of parties involved in the flight inspection.

2.1.2 Roles and Responsibilities of the Flight Inspection Service Provider (FISP) Including Crew Resources Management

FISP is the main party to provide safe and reliable flight inspection services. Selection of an appropriate FISP is a key successful factor for flight inspection.

2.1.2.1 Roles

(a) Assist Air Navigation Service Provider (ANSP) in planning, scheduling and conducting the flight inspection;

(b) Be familiar with the airspace / airport to conduct safe and efficient flight inspection with minimum impact to normal traffic; and

2.1.2.2 Responsibilities

(a) Obtain surveyed reference point(s) for Global Navigation Satellite System (GNSS) for precision flight inspection on ILS;

(b) Obtain all the necessary permits to fly over areas for its flight inspection;

(c) Closely coordinate with ATC and ground technical personnel to prepare and conduct flight inspection including the provision of flight profiles for ATC assessment;

(d) Share Safety Management System (SMS)/Quality Management System (QMS) related documents as appropriate to the ANSP;

(e) Keep good archived records of flight inspection results of the equipment / system being inspected where the records can be archived by ANSP in future concurrence and provide advice if there is any anomaly trend of result observed;

(f) Feedback to the ANSP on overall flight inspection process discuss and assist to resolve problems encountered; and

(g) Crew Resource Management (CRM) is to clearly define the roles and responsibilities of each crew member and to establish close collaboration among the crew members.

2.1.3 Roles and Responsibilities of the Flight Inspector

A flight inspector will be checking on equipment / system status. He / she must be proficient and have a good understanding on the characteristics of various equipment / systems to be flight inspected as well as familiarize himself / herself with relevant procedures to perform flight inspection on that equipment / system.

2.1.3.1 Roles

(a) Contribute in early planning of the flight inspection;

(b) Coordinator between ANSP and the flight inspection service provider;

(c) Perform equipment checking in flight inspection and alert ANSP in real time of any out-of-tolerance conditions or anomaly observed during the flight inspection;

(d) Assist ANSP to identify and analyze any anomaly / adverse trends observed; and

(e) Prepare flight inspection records and reports.

2.1.3.2 Responsibilities

(a) Provide advice to ANSP in planning the flight inspection tasks;

(b) Assist in preparing flight inspection procedures for checking a specific equipment / system;

(c) Coordinate with the rest of flight inspection team (e.g. pilots) for ad-hoc and flexible arrangement of flight inspection procedures (e.g. re-check on a specific run);

(d) Observe the measured results of flight inspection and checks against the relevant tolerance limits;

(e) Keep records of the measurement results and notifies ANSP for any trend/anomaly observed;

(f) Assist ANSP from the flight inspection perspective for the rectification on any anomaly observed; and

(g) Coordinate any real time changes to the flight inspection schedule due to unforeseen circumstances such as inclement weather, aircraft or aircrew problem.

2.1.4 Roles and Responsibilities of ANSP

The ANSP is ultimately responsible for management of the flight inspection. It is therefore vital that ANSP takes an active role throughout the flight inspection.

2.1.4.1 Roles

(a) Types of ANSP Personnel

(i) Ground technical personnel maintaining navigational and landing aids, surveillance radars, airfield lighting and PAPIs, etc.; and

(ii) Air Traffic Controllers – En-route, Approach and Tower.

2.1.4.2 Responsibilities of Electronics and Air Navigation Engineering (E&ANE) Division of ANSP

(a) Plan with minimum lead time of six months from the due date of flight inspection to accommodate unforeseen delays.

(b) A certified and competent external third party flight Inspection service provider shall be selected.

(c) Ensure that a FISP selected is having a proper Safety Management System (SMS)/Quality Management System (QMS).

(d) Verify the on-board equipment used for the flight Calibration process carry a valid calibration certificates which will be effective beyond the planned period of the flight calibration.

(e) Informing DGCA on the particulars of the Flight Inspection of Radio & Visual Navigational Aids and requesting permission to land/parking at applicable aerodromes prior commencing the Flight inspection tasks as per the approved procedure.

(f) Ensure that all systems and facilities to be flight inspected are operational and in a condition suitable for flight inspection on the scheduled dates;

(g) Ensure all systems and facilities are regularly flight inspected, complying with the CAASL's regulatory requirement on the periodicity of flight inspection;

(h) Provide draft schedule of systems and facilities to be flight inspected to the flight inspection service provider to facilitate early planning;

(i) Summary of all occurrences pertaining to Navigational Aids shall be made available to the Flight calibration team.

(j) Assist in obtaining Ministry of Defence (MOD) security clearance, Civil Aviation Authority clearance and any other relevant clearances for flight inspection crew to access aircraft/ Navigational aid sites if necessary;

2.1.4.3 Responsibilities of Air Navigation Services (ANS) Division of ANSP

(a) Provide necessary geographical information of systems & facilities under flight inspection, for example latitude and longitude (co-ordinates) of all navigation facilities;

(b) Coordinate for the authorizations for flight inspection aircraft to fly below established minimum altitudes, together with all other necessary air traffic authorizations to accomplish the flight inspection;

(c) Engage qualified staff to be present during flight inspection;

(d) Survey or assist to survey the reference point(s) for Global Navigation Satellite System (GNSS) for precision flight inspection on ILS;

(e) Coordinate flight inspection briefing and debriefing;

(f) Review flight inspection profiles with ATC and arrange discussion with FISP for any clarification, if required;

(g) Ensure that FISP obtains necessary permits to fly over areas for the planned flight inspection;

(h) Issue necessary NOTAMs for flight inspection;

(i) Review flight inspection reports;

(j) Publish addition or / and amendments to AIP regarding systems / facilities after flight inspection;

(k) Make arrangement for flight inspection crew to call ATC before the start of each session for co-ordination purposes;

(l) Place warning signs (placards) on the relevant ATC desks well before commencing flight inspection/calibration process.

(m) ATC to facilitate flight inspection and accord it priority, whenever possible;

(n) ATC to be conversant with flight inspection profiles.

(o) Submission of the Flight Inspection report and the relevant certifications to the Civil Aviation Authority.

2.2 FLIGHT INSPECTION COORDINATION AND PREPARATION

2.2.1 Identification of Stakeholders

The proper conduct of flight inspection requires dedicated efforts from all key stakeholders.

2.2.1.1 Flight Inspection Service Provider (FISP)

(a) FISP plays a vital role in flight inspection and is expected to be conversant with the relevant ICAO and local standards and requirements for fight inspection of various CNS equipment.

(b) FISP is expected to be familiar with the flight profiles to be conducted and local airport / airspace environment in order to perform flight inspection in an efficient and effective manner.

(c) FISP should be familiar with details of permits / approvals required for flying in airspace to ensure a successful and effective flight inspection.

(d) The flight inspection team consists of three types of staff, namely pilots, flight inspectors and aircraft engineers.

(i) Pilots – mainly communicate with air traffic controllers to perform flight inspection profiles

(ii) Flight Inspector – mainly coordinate with ground maintenance personnel or systems supplier engineer to take, report and calibrate measurement reading to ensure the equipment under inspection performs within the relevant tolerance limits.

(iii) Aircraft Engineer – support staff to deal with daily maintenance and problems encountered on the flight inspection aircraft.

2.2.1.2 ANSP - Air Traffic Controller

(a) ANSP should assign air traffic controller(s) in handling the flight inspection aircraft, in which the flight path might cross multiple sectors and affect normal traffic patterns.

(b) Subject to different airport and airspace, temporary holding of ground and / or air traffic might be required to allow the flight inspection aircraft to conduct dedicated profiles unaffected.

(c) Air traffic controller handling flight inspection aircraft has to work closely with the flight inspection pilot and keep a very close eye on the aircraft position to keep it clear from normal traffic.

2.2.1.3 ANSP - Maintenance Personnel from Air Navigation Engineering and Electrical Engineering Division

The Maintenance Personnel from Air Navigation Engineering are responsible for equipment maintenance and adjustment during the flight inspection. The Maintenance Personnel from Electrical Engineering are responsible for adjustment of PAPIs during the flight inspection. They have to work closely with the flight inspector to ensure the measured reading is within tolerance limit and ensure the equipment is safe for operational use. Prior to the flight inspection, the ground maintenance personnel shall also ensure the equipment is operational and in a condition suitable for flight inspection.

2.2.1.4 Other Supporting Personnel

To facilitate daily flight inspection mission, there might be logistics support required for the flight and ground crews of the flight inspection team to travel between airport and their accommodation. Immigration, Customs and Exercise clearance support might also be required to facilitate timely operation of flight inspection activities.

2.2.1.5 Military

Sri Lanka Air Force should be informed on the civilian flight inspection schedule to ensure military flights and civilian flight inspection aircraft routes are de-conflicted. The civilian flight inspection aircraft should take note of the military no fly zones, prohibited areas and restricted areas.

2.2.2 Communication with Stakeholders

2.2.2.1 A thorough understanding of the details of flight inspection arrangements is crucial to the successful completion of a flight inspection. All stakeholders should know their roles and duties to render the best support to the flight inspection activities.

2.2.2.2 To facilitate clear communication among stakeholders, ANSP in consultation with the FISP, should consider preparing a comprehensive but concise daily programme for sharing among all

stakeholders. The daily programme would include information on equipment / facility to be inspected, estimated start and end time, parties involved and their roles, useful contacts, etc. (see sample at Attachment A to this chapter).

2.2.2.3 In addition, the ANSP should also consider preparing a detailed flight inspection check sheet for each equipment / facility to document the planned flight inspection profiles to be conducted (preferably with diagrams for easy visualization) and estimated duration for each run. This check sheet could greatly facilitate air traffic controllers and airport stakeholders to assess any potential impact to airport / airspace operations and to aid communication during the flight inspection (see sample at Attachment B to this chapter). Appropriate NOTAM should also be issued to ensure airlines and pilots are kept informed of the flight inspection schedule and time.

2.2.2.4 Before the commencement of each session of flight inspection, an in-briefing involving all key stakeholders is recommended to ensure all are familiar with their roles and responsibilities in supporting the daily flight inspection as well as any issues requiring special attention. This also allows all stakeholders to exchange comments about the daily arrangement, for instance the flight profiles sequence, and helps to spot early issues that would potentially hinder normal ATC operations and flight inspection.

2.2.2.5 Contingency plan, including backup flight inspection date(s) due to unexpected ad-hoc event such as inclement weather or technical fault, should also be discussed with key stakeholders during the in-briefing.

2.2.2.6 During the flight inspection, it is essential that the ground maintenance personnel maintains direct communication with the on-board flight inspector so that any required adjustment of ground facilities or any recheck can be done expeditiously.

2.2.2.7 During the flight inspection period, daily de-briefing among flight inspection crews, ANSP, ATC and ground maintenance personnel would allow quick feedback on any issues encountered during the flight inspection so as to make timely fine-tuning when necessary for the subsequent flight inspection. This allows individual stakeholder to make adjustment / enhancement arrangement

promptly such as issuance / cancellation of NOTAM, co-ordination / cancellation of runway closures, etc.

2.2.2.8 After the completion of each session of flight inspection, a de-briefing involving all stakeholders would help all to strive for continuous improvements on overall flight inspection arrangement, with parties sharing their views and suggestions as well as to share results and resulting actions of the flight inspection.

2.2.3 Consideration in the Planning and Scheduling of Flight Inspection

When planning and scheduling flight inspections, a number of key factors have to be considered so as to minimize potential interruptions to normal operations.

2.2.3.1 Flight Inspection Aircraft Type

2.2.3.1.1 The aircraft should be a multi-engine type capable of safe flight within the intended operational envelope with one engine inoperative, fully equipped and instrumented for night and instrument flight operations.

2.2.3.2 Traffic Volume

Flight inspection should be accommodated during lean traffic periods, so that the event could be accommodated without disruptions and minimum impact to normal air traffic.

2.2.3.3 Seasonal Weather Condition

Heavy rainfall, lightning and other severe weather conditions may impact or delay flight inspection activities. As such, the fight inspection program should be scheduled to avoid bad weather seasons as far as practicable.

2.2.3.4 Major Military Flying Exercises

Planning of flight inspection should avoid disruption with a period of major military flying exercises. This is because during the latter, many forbidden flying areas / zones may be activated and such activations could affect the normal flight inspection.

2.2.3.5 Types of Flight Inspections

Depending on type of flight inspections as some ILS commissioning checks, procedure validation, etc., may have to be carried out in the daytime with suitable visual conditions.

2.2.3.6 Contingency Arrangement

(a) Back-up communication system shall be available at all times to communicate with the calibration aircraft from/to NAV Aid site.

(b) The back-up/contingency flight inspection date(s) could be inserted as buffer date(s) in between the planned flight inspection activities, or after all the planned flight inspection activities as an extended arrangement or for any unplanned date cancellation.

2.2.3.7 Flight Inspection Priorities

Table 1- Flight Inspection Priority

Priority	Type	Description
1	Accident/ Incident	Accident or incident investigation requiring immediate response.
2	Restoration	Restore a commissioned facility after an unscheduled outage.
3	Periodic	A regularly scheduled inspection of a commissioned facility.
4	Commissioning	A comprehensive inspection of a newly installed facility.
5	Site Evaluation	An inspection to determine the environmental effects on the performance of a planned navigational aid.

2.3 FLIGHT INSPECTION AT NIGHT

Select feasible lean periods of traffic to conduct Flight Inspections.

In an event where the lean period falls during the night period, consider the following conditions.

To reduce the risk in flight inspection at night, FISP crews should be familiar with the airspace and airport environment including the height of terrain and structures along and close to the flight inspection path. Air traffic controllers have to pay special attention to the altitude and flight path of the flight inspection aircraft to avoid any deviation from the planned safe flight path.

Night operations should be considered as any flight inspection being performed 30 minutes after sunset until 30 minutes before sunrise.

2.3.1 Crew Resource Management (CRM)

2.3.1.1 Flight inspection operations at night present additional risks that must be identified, assessed with necessary mitigations and documented. Night flying operations should only be conducted by experienced pilots who are current and proficient at night flying and who understand well the risks associated with night-time flight inspection.

2.3.1.2 A dual pilot operation should be considered for a normal night flight inspection operation to mitigate against the higher risks involved for night operations.

2.3.2 Night Duty Periods

2.3.2.1 FISPs operate under their own Air Operator's Certificate (AOC) and Flight Time Limitation (FTL) which would normally include duty periods for their specific night operations. Consideration should be given to the preceding duty period prior to any planned night duty to ensure the crew, including the flight inspector, have enough rest periods before and after the night duties.

2.3.2.2 Limitations should be imposed for night duty work in immediate succession.

2.3.2.3 Upon the conduction of a single night duty, or two consecutive night duties, there should be a minimum interval of rest time for the FISP crews before the commencement of the next duty turn.

2.3.3 Operational Requirements

2.3.3.1 Where a requirement exists for flight inspection of ILS or other NAVAID installations at night, the following operational requirements should be met.

2.3.3.1.1 Aircraft Related - In addition to the normal equipment required for a night operation, the following equipment should be functioning normally:

(a) Both aircraft altimeters;

(b) Radar altitude indicators;

(c) Auto-Pilot;

(d) All flight instrument displays;

(e) Up-to-date database for flight inspection equipment map display (If applicable);

(f) Electronic Flight Bag (EFB), if applicable; and

(g) Approach plate holders with adequate lighting.

2.3.3.1.2 ANSP Related – The following is recommended to be provided by the ANSP prior to any night flight inspection operation:

(a) ATC should provide an Instrument Flight Rules (IFR) service;

(b) ANSP should provide a full surveillance service within the area of operation;

(c) Runway edge, centreline, approach lighting and PAPI's shall be serviceable and operating normally;

(d) All obstacle lighting shall be operational within the designated area of operation;

(e) The weather conditions for the night inspection must be Visual Meteorological Conditions (VMC) below the 25/10 NM Minimum Sector Altitude (MSA) or Minimum Radar Vectoring Altitude (MRVA) / Radar Lower Safe Altitude (LSALT); and

(f) ATC to provide any aerodrome QNH changes expeditiously.

2.3.3.1.3 Pilot Related - Prior to the commencement of any night inspection operation, a skyline plot of the obstructions in the approach path must be obtained from the ANSP. The pilot should compare the intended inspection runs and adjustments made to the minimum operating altitude as necessary.

2.3.3.2 Where flight crews have not conducted a daylight operation into an aerodrome, then prior to conducting a night inspection task, the crew should first fly the approach in daylight conditions to assess the obstacle clearance within the approach area.

2.3.3.3 Areas surrounding the inspection runs should be predominantly level, clear of terrain and obstacles.

2.3.3.4 The crew should designate an alternate Aerodrome for recovery, prior to commencement of night operations.

2.3.3.5 To raise the flight crew situational awareness and to reduce fatigue, the autopilot should be used whenever possible.

2.3.3.6 Flights should be conducted under the IFR.

2.3.3.7 Flight Inspection Profiles - Flight inspection at night should be conducted using the following minimum altitudes:

(a) Level runs, Orbits and Part Orbits should not be conducted below the sector minima.

(b) Not below sector minima until established on a flight inspection approach run, when established within full-scale deflection of the localizer descent may occur.

2.3.3.8 Localizer (LOC) offset approaches that involve flights more than half scale (5 Dots) indications should be flown during daylight.

2.3.3.9 Where a LOC part orbit altitude needs to be increased for a night operation, a range change may be required to ensure that the localizer coverage area correlates with the published Glide Path (GP) angle.

2.3.3.10 GP approach profiles that involve flight with more than half scale "FLY UP" indications should be flown during daylight e.g. GP lower edge (5 dots Fly Up) runs.

2.3.3.11 GP level runs need to encompass coverage and clearance at a minimum angle of 0.45θ, however, increasing the height to be at MSA for this measurement will inevitably mean an increase in the start range to achieve this, with the possibility that the GP coverage tolerance may not be met beyond 10 NM. As an alternate solution, the GP level run profile could be flown with the addition of the night profile run during daylight and the measurements used as a reference transfer standard between the two profiles.

2.4 EMERGENCY FLIGHT INSPECTION ARRANGEMENT

2.4.1 Post-Accident Investigation

2.4.1.1 A flight inspection may be requested following an accident or incident by the investigating authority to verify the NAVAID system performance is satisfactory and able to continue to support the published instrument approach procedures and ANSP operations.

2.4.1.2 For a FISP, this type of inspection should be accorded highest priority and an appropriate response time should be contractually agreed between the ANSP and the service provider.

2.4.1.3 Pre-Flight Requirements – The flight inspector will be required to obtain the following information:

(a) Equipment configuration at the time of the accident i.e. transmitter in operation;

(b) Instrument approach procedures used; and

(c) Any additional information required to support the investigation.

2.4.1.4 The flight inspector will need to coordinate the system configuration with the maintenance personnel and perform as a minimum, an inspection of the facility which may include the instrument procedure used if applicable. It is important to note that no equipment adjustments should be made during this inspection and if required, should be performed in a separate special inspection to facilitate investigation.

2.4.1.5 In the event of an accident or incident, ANSP should do all that is reasonably practicable to ascertain that a Navigational Aid is operating correctly. For this reason, ANSP should have equipment suitable for making field measurements available.

2.4.2 Post-Incident Investigation

2.4.2.1 Where a runway excursion by an aircraft has occurred and damage has been sustained to a NAVAID, Navigational Aid Engineering Division of ANSP will determine the repairs required to the facility and whether a ground or flight inspection is required to return the facility back into service. However, the following considerations should be given when determining the need for a flight inspection:

(a) Antenna array replacements that will affect the radiated pattern;

(b) Cable replacements that affect transmission line lengths;

(c) Replacement or re-positioning of an ILS near field monitor if the system does not contain integral course monitoring;

(d) Major repair work to the LOC antenna distribution unit or when the center line phasor has been adjusted;

(e) Adjustment or corrective maintenance on phasing or width controls that results in figures outside the monitor site acceptance figures;

(f) Any work performed on the GP antenna distribution unit;

(g) Adjustments to GP integral monitor probes, cables or monitor combiner unit; or

(h) Damage to ILS critical areas ground in the beam forming areas that need re-grading.

2.4.2.2 In the event of an accident or incident, ANSP should do all that is reasonably practicable to ascertain that the facility is operating correctly. For this reason, all aerodromes should have equipment suitable for making field measurements available.

2.5 CONSIDERATIONS ON FLIGHT INSPECTION PERIODICITY DURING PANDEMIC

2.5.1 There might be occasions that the flight inspection could be affected by external factor with global impact, such as the COVID-19 pandemic. With such a huge global impact, cross-country deployment of flight inspection aircraft might become difficult, as Sri Lanka who do not have their own FISP. As such, Civil Aviation Authority of Sri Lanka should assess and consider the flight inspection periodicity on radio Navigational Aids to secure continuous service or keep minimum impact to service.

2.5.2 ICAO has published a reference note on the considerations of radio Navigational Aids flight inspection practices during the pandemic and restoration to service after temporary removal from service, refer to the following link :)

https://www.icao.int/safety/OPS/OPS-Normal/Pages/Flight-inspection-for-radio-aids.aspx.

ATTACHMENT A

SAMPLE FLIGHT INSPECTION PROGRAMME

1. Sample Routine Flight Inspection Program

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Remarks
In-briefing at (time)						In-briefing with flight inspection team
	XX VOR OFF (time)	XX VOR F/I (start time)				XX VOR – periodic F/I after annual maintenance
			XX ILS maintenance (off time)	XX Tx 1 F/I (start time) XX Tx 2 F/I (start time)		XX ILS - periodic F/I after annual maintenance
					De-briefing	De-briefing with flight inspection team

Notes for ATC and/or Aerodrome Operator:

- Expected period and end time for VOR and ILS flight inspection
- Runway closure and maintenance requirements

ATTACHMENT B

SAMPLE FLIGHT INSPECTION PROFILES

1. VOR/DME Routine Inspection

EXAMPLE VOR/DME INSPECTION PROCEDURES LIST					Profile Version
Facility ID			[Facility ID]	Routine Inspection	
Target Completion Time (LT)	Run No.	Flight Procedure	Procedure Description	Facility Transmitter Number	Items To Be Inspected
xxxx-xxxx		Radial xxx°	xxNM-xxNM, QNH xxxxFT	VOR/ DME No.1	e.g. Reference Radial/Alignment Check
		Radial xxx°	xxNM-xxNM, QNH xxxxFT	VOR/ DME No.2	e.g. Reference Radial/Alignment Check
		Radial xxx°	xxNM-xxNM, QNH xxxxFT	VOR/ DME No.1 Only	e.g. VOR Monitor Alarm Check
		Radial xxx°	xxNM-xxNM, QNH xxxxFT		
		Radial xxx°	xxNM-xxNM, QNH xxxxFT	VOR/ DME No.1	e.g. VOR Monitor Alarm Normal
		Orbiting (C.C.W. / C.W.)	Radius: xx NM, QNH xxxxFT	VOR/ DME No.1	Mean Alignment Error, Bends, Roughness, DME Range Error
		Orbiting (C.C.W. / C.W.)	Radius: xxNM, QNH xxxxFT	VOR/ DME No.2	Mean Alignment Error, Bends, Roughness, DME Range Error

2. Routine Inspection (ILS Tx1)

EXAMPLE ILS INSPECTION PROCEDURES LIST					Profile Version	
Runway		ILS Name	ID	ILS Identification	Routine Inspection	
Target Completion Time (LT)	Run No.	Flight Procedure	Procedure Description		Facility Transmitter Number	Items To Be Inspected
xxxx-xxxx		e.g. Threshold Parking	Runway		Loc No. 01 and 02	e.g Monitor Alarm Check
xxxx-xxxx		e.g. Level Run	xxNM-xxNM QNH xxxxFT		GP No.1	e.g. Width (including alarm), Symmetry SBP, etc.
xxxx-xxxx		e.g. Level Arc	xxNM, +xx°/-xx °, QNH xxxxFT		LOC No.1	e.g. Width (including alarm), Symmetry, Clearance, etc.
xxxx-xxxx		e.g. Approach with low pass	Initial From xxNM and QNH xxxxFT		DME No.1; LOC/GP No.1	e.g. DME and Runway Lighting, Path Angle, Datum, Mod Sum, Structure, etc.

3. Routine Inspection (ILS Tx2)

EXAMPLE ILS INSPECTION PROCEDURES LIST					Profile Version	
Runway		ILS Name	ID	ILS Identification	Routine Inspection	
Target Completion Time (LT)	Run No.	Flight Procedure	Procedure Description		Facility Transmitter Number	Items To Be Inspected
xxxx-xxxx		e.g. Level Run	xxNM-xxNM QNH xxxxFT		GP No.2	e.g. Width (including alarm), Symmetry SBP, etc.
xxxx-xxxx		e.g. Level Arc	xxNM, +xx°/-xx °, QNH xxxxFT		LOC No.2	e.g. Width (including alarm), Symmetry, Clearance, etc.
xxxx-xxxx		e.g. Approach with low pass	Initial From xxNM and QNH xxxxFT		DME No.2; LOC/GP No.2	e.g. DME and Runway Lighting, Path Angle, Datum, Mod Sum, Structure, etc.

Remarks:

- Any protection to ILS sensitive area should be applied

ATTACHMENT C

FLIGHT INSPECTION PERIODICITY CONSIDERATIONS FOR RADIO NAVIGATIONAL AIDS DURING A PANDEMIC AND RELATED RECOVERY PHASE

1. Introduction

1.1. The main purpose of the document is to ensure that flight inspection will be able to maintain safe operation of Navigational Aids during a pandemic and will not be on the critical path to aviation recovery after the pandemic.

1.2. The need to maintain regular ground and flight checks of Navigational Aids to ensure that they are available during the pandemic and the recovery is highlighted in the document.

1.3. Delaying of implementation of new Navigational Aids if necessary.

2. CAASL Requirements on Flight Inspection Periodicity

2.1. The fundamental provision addressing flight inspection in general is the Standard in Implementing Standard IS 034, Chapter 2.2 as per the following.

2.2 Ground and flight testing

2.2.1 Radio navigation aids of the types covered by the specifications in IS 034 Chapter 3 and available for use by aircraft engaged in national and international air navigation shall be the subjected to periodic ground and flight tests.

Note.— Guidance on the ground and flight testing of ICAO standard facilities, including the periodicity of the testing, is contained in ICAO Annex 10 Volume I Attachment C and in the Manual on Testing of Radio Navigation Aids (Doc 8071).

2.2.2 Periodicity of Testing

2.2.2.1 All Navigational Aids except NDBs shall be fight tested calibrated at a regular time intervals not greater than 365 days.

2.2.2.2 With respect to NDBs, time interval shall not be greater than 730 days for flight testing.

2.2.2.3 All Navigational Aids shall be ground tested at a regular time interval not greater than 30 Days.

2.2.2.4 Any deviation to the conditions stated in above 2.2.2.1 & 2.2.2.2 shall be approved by the DGCA.

3. Health Safety Procedures

3.1. If the flight calibration is conducted during a pandemic situation, both ANSP and FISP shall conform to the health protocols prevalent.

3 CHAPTER - CONDUCTING FLIGHT INSPECTION

3.1 FLIGHT INSPECTION PROCEDURES

3.1.1 Flight Inspection Procedures Manual

3.1.1.1 Each FISP should provide evidence of operating to a Flight Inspection Procedure Manual. This manual provides assurance to the customer that the necessary compliance checks are being carried out as intended by ICAO Doc 8071 and can help with demonstrating compliance.

3.1.2 Instrument Landing System (ILS)

3.1.2.1 Key requirements:

(a) Airborne antenna should be calibrated for field strength through the frequency range and different orientations. This should also include frequency response and polar patterns. This data should be available for verification.

(b) The antenna should have TSO compliance for IFR operations. Location and installation of the antenna should be in accordance with the following:

i. Recordings should show minimum propeller modulation.

ii. Aircraft should be fitted with airworthy ILS/DME/Markers equipment approved for IFR flight.

iii. The system should be capable of recording the required parameters against the reference system, at a rate greater than 5 samples per second.

iv. The antenna should also have the appropriate TSO rating as required by IFR flight.

v. The system should be capable of recording the parameters as outlined in Doc 8071 within the accuracy specified.

3.1.2.2 Flight Profiles for ILS flight checks:

(a) Alignment runs normally commencing as required by the published procedure or 10NM for periodic Inspections.

(b) 6-10NM arc profiles, forty degrees either side of the runway centre-line.

3.1.2.3 Parameters to be recorded as applicable for the items being checked:

(a) Receiver course deviation for all systems include Localizer/ Glide path/ markers/ DME

(b) Aircraft position fixing system deviation

(c) The difference (a) minus (b)

(d) Receiver input signal level

(e) Modulation levels

(f) Frequency spectrum (optional)

3.1.2.4 Careful consideration should be made with regard to the procedures used and the purpose of the check.

3.1.2.5 FISP should be able to provide a table of parameters to include with comparisons against the provisions specified in Doc 8071.

3.1.2.6 A sample checklist of commissioning and periodic flight inspection items for ILS is presented below.

Check Item	Commission	Periodic
Identification	X	X
Modulation Balance	X	R
Modulation Depth	X	X
Polarization	X	R
Front Course Alignment	X	X
Course Structure	X	X
Course Sector Width and Symmetry	X	R
Off-course DDM Clearance	X	-
Coverage or Usable Distance	X	-
Monitor Alarm – Front Course Alignment (Position Alarm)	X	X
Monitor Alarm - Course Sector Width (Width Alarms)	X	X
Monitor Alarm - Off-Course DDM Clearance	X	X
Monitor Alarm – Coverage	X	-
Dual Equipment	X	X (1)
Flyability	X	X
Associated Navigational Aids (Navigational Aids)	X	X (2)

LEGEND:	R	=	To action on request
	X	=	To action
	-	=	Not required
	(1)	=	Alignment, Modulation Depth and Identification Only
	(2)	=	Includes runway visual aids

3.1.3 Doppler Very High Frequency Omni-Directional Range (DVOR)

3.1.3.1 Key requirements:

(a) Airborne antenna should be calibrated for field strength, and data should be available for verification. The antenna should have TSO compliance for IFR operations.

(b) Recordings should show minimum propeller modulation.

(c) Aircraft should be fitted with airworthy DVOR equipment approved for IFR flight.

(d) The system should be capable of recording the required parameters against the reference system, at a rate greater than 5 samples per second.

(e) The antenna should also have the appropriate TSO rating as required by IFR flight.

(f) The system should be capable of recording the parameters as outlined in Doc 8071, within the accuracy specified.

3.1.3.2 Parameters to be recorded as applicable for the items being checked:

(a) Receiver course deviation

(b) Aircraft position fixing system deviation

(c) The difference (a) minus (b)

(d) Receiver input signal level

(e) Modulation levels

(f) Modulation index

3.1.3.3 A sample checklist of commissioning and periodic flight inspection items for DVOR is presented below.

Check	Commission	Periodic
Identification	X	X
Voice	X	X
9960 Hz/30 Hz Levels	X	X
Vertical Polarisation	X	-
Orbit	X	X
En route Radials	X	R
Terminal Radials and Procedures	X	X (2)
Radial Plan	X	-
Intersections and Changeover Points	X	-
Off-track Coverage	X	-
VOR/DME Sector Altitude Coverage	X	R
High Angle Coverage	X	R
Receiver Checkpoint	X	X
VOR Monitor Checks	X	X
Dual Equipment	X	X
Transmitter Differential	X	-
Standby Power	X	-
Associated Navigational Aids (Navigational Aids)	X	X (1)

LEGEND: R = To action on request
X = To action
- = Not required
(1) = An appearance inspection of the VASI/PAPI is to be included if not otherwise subject to a routine inspection
(2) = Final approach radial(s) only, profile as published

3.1.4 Distance Measuring Equipment (DME)

3.1.4.1 Key requirements:

Airborne Antenna should be calibrated for field strength and data should be available for verification. This should consider cables and connectors.

3.1.4.2 A sample checklist of commissioning and periodic flight inspection items for DME is presented below.

Check	**Commission**	**Periodic**
Identification	X	X
DME System Distance Accuracy	X	X
Coverage - Terminal Procedures	X	X
Coverage – En-route Radials	X	-
Coverage - Off-track	X (1)	-
Coverage - Steps, Intersections and Changeover Points	X	-
Sector Coverage	X (1)	-
Dual Equipment	X	X (2)
Standby Power	X	-
Associated Navigational Aids (Navigational Aids)	X	X

LEGEND: X = To action
- = Not required
(1) = As specified by Navigation Services
(2) = Identification only for second transponder

3.1.5 Secondary Surveillance Radar (SSR)

3.1.5.1 The requirements are very dependent on the engineering assessment requirements and expected coverage volume.

3.1.5.2 Some considerations are:

(a) Altitude;
(b) Range;
(c) Delay to alert; and
(d) Minimum radar coverage elevation.

3.1.5.3 According to ICAO Doc 8071, SSR facilities, after being commissioned and set into operational service, do not require a periodic flight inspection.

3.1.5.4 Special flight inspections may be conducted as part of a measurement campaign after major equipment modifications, or for specific problem investigation.

4 CHAPTER - REPORTING OF FLIGHT INSPECTION RESULTS

4.1 FLIGHT INSPECTION REPORTS

4.1.1 After each daily flight inspection, the flight inspector should prepare the flight inspection report. The formal flight inspection report signed by the responsible captain and flight inspector should be provided after the flight inspection. The contents of flight inspection report include the following items:

(a) Location
(b) Identification
(c) Flight inspection date(s)
(d) Facility inspected
(e) Type of inspection
(f) Inspected items
(g) Results
(h) NOTAM
(i) Facility status
(j) Remarks
(k) Aircraft registration number

4.1.2 A sample flight inspection report is provided in Attachment A to this Chapter for reference.

4.2 FLIGHT INSPECTION RECORDS

4.2.1 Flight inspection records and flight inspection data sheet should be provided by flight inspector. The contents of flight inspection record comprise of the following items:-

(a) Airport name
(b) Aircraft registration number
(c) Date of inspection
(d) Inspector's name
(e) Flight hours
(f) Facility type and identification
(g) Run numbers
(h) Transmitter number
(i) Flight inspection results of each run

4.2.2 A sample Flight Inspection Report is provided in Attachment B to this Chapter for reference.

ATTACHMENT A - SAMPLE FLIGHT INSPECTION REPORTS

1. Sample Flight Inspection Report for ILS/DME

1.LOCATION:					2.RUNWAY NO:	
3.DATE(S) OF INSPECTION:					4.IDENTIFICATION:	
5.TYPE OF		SITE EVALUATION		PERIODIC		SPECIAL
INSPECTION		COMMISSIONING		SURVEILLANCE		INCOMPLETE
6.FACILITY		LOCALIZER		GLIDE SLOPE		DME
INSPECTED		LIGHTING SYSTEM		7. AIRCRAFT NO**:**		
8.CATELOGY:				9.FREQUENCY:		
10.COMMISSIONED COURSE WIDTH:				11.COMMISSIONED PATH ANGLE:		

12.LOCALIZER

FLIGHT INSPECTION ITEMS	TX1		TX2	
	INITIAL	FINAL	INITIAL	FINAL
IDENTIFICATION				
MODULATION				
ALIGNMENT				
COURSE STRUCTURE—Z1/RNG				
COURSE STRUCTURE—Z2/RNG				
COURSE STRUCTURE—Z3/RNG				
COURSE STRUCTURE—Z4/RNG				
COURSE STRUCTURE—Z5/RNG				
VERTICAL POLARIZATION/RNG				
WIDTH/SYMMETRY				
MEAN WIDTH(HALF)/SYMMETRY				
CLEARANCE 90/DEG				
CLEARANCE 150/DEG				
MOD.BALANCE(COS/CLR)				
Z5 ROLL OUT RESULT:				

USABLE DISTANCE				
MONITOR				
WIDTH ALARM(NARROW)/SYM				
WIDTH ALARM(WIDE)/SYM				
CLEARANCE 90 (WIDE ALARM)				
CLEARANCE 150(WIDE ALARM)				
ALIGNMENT ALARM(+)				
ALIGNMENT ALARM(-)				

13.GLIDE SLOPE

FLIGHT INSPECTION ITEMS	TX1		TX2	
	INITIAL	FINAL	INITIAL	FINAL
ANGLE /REFERENCE DATUM HEIGHT				
MODULATION				

PILOT IN CHARGE:	FLIGHT INSPECTOR:	AIRCRAFT NUMBER:

2. Sample Flight Inspection Report for Runway Approach Lights and PAPI

1.LOCATION:							2.RUNWAY NO:				
3.DATE/DATES OF INSPECTION:											
4.TYPE OF INSPECTION		SITE EVALUATION		COMMISSIONING		PERIODIC		SURVEILLANCE		SPECIAL	INCOMPLETE
5.FACILITY INSPECTED		PAPI				RUNWAY LIGHTS				APPROACH LIGHTS	
6.COMMISSIONED PAPI ANGLES		NO.1	NO.2		NO.3		NO.4		PATH ANGLE		
	LEFT										
	RIGHT										
7.PAPI INSPECTION RESULTS											
ACTUAL PAPI ANGLES		NO.1	NO.2		NO.3		NO.4		PATH ANGLE		
	LEFT										
	RIGHT										

ITEMS CHECKED	SAT	UNSAT	ITEMS CHECKED	SAT	UNSAT
COVERAGE ANGLE			VISIBLE DISTANCE		
INTENSITY LEVEL			INTENSITY COINCIDENCE		
NO. OF INOPERATIVE LIGHTS			COINCIDENCE WITH ILS		
8.APPROACH LIGHTS RESULTS INSPECTION RESULTS					
ITEMS CHECKED	SAT	UNSAT	ITEMS CHECKED	SAT	UNSAT
LAMP ALINMENT			VISIBLE DISTANCE		
INTENSITY LEVEL			INTENSITY COINCIDENCE		
NO. OF INOPERATIVE LIGHTS			LIGHTS CATEGORY		
9.RUNWAY LIGHTS INSPECTION RESULTS					
ITEMS CHECKED	SAT	UNSAT	ITEMS CHECKED	SAT	UNSAT
LAMP ALINMENT			VISIBLE DISTANCE		
INTENSITY LEVEL			NO. OF INOPERATIVE LIGHTS		
RUNWAY END LIGHTS			LANDING ZONE LIGHTS		

10.FACILITY STATUS	PAPI	RUNWAY LIGHTS	APPROACH LIGHTS	11.NOTAM's:
UNRESTRICTED				
RESTRICTED				
UNUSABLE				

12.REMARKS:		
PILOT IN CHARGE'S SIGNATURE:	FLIGHT INSPECTOR'S SIGNATURE:	AIRCRAFT NO:

3. Sample Flight Inspection Report for DVOR/DME

1.LOCATION:						2.IDENTIFICATION:				
3.FLIGHT INSPECTION DATE(S):				4.FACILITY INSPECTED			VOR		DME	
5.TYPE OF INSPECTION		SITE EVALUATION		PERIODIC		SPECIAL				
		COMMISSIONING		SURVEILLANCE		INCOMPLETE				

6.ORBIT RESULTS

NO.	TX NO.	FLIGHT LEVEL (FL) (MSL)	ORBIT RADIUS(NM)	MEAN BEARING ERROR	MEAN RANGE ERROR
1	**1**				
2	**2**				

7.RADIAL RESULTS

RADIAL USE								
AZIMUTH								
TX NO.								
MSL ALTITUDE								
DISTANCE FROM								
DISTANCE TO								
ALIGNMENT ERROR								
MAX BEND/RANGE								
ROUGHNESS/RANGE								
POLARIZATION								
TRANSMITTER DIFF								
MOD30HZ AM								
MOD30HZ FM								
MOD9960HZ								
MINIMUM SS								

DME RANGE ERROR								
INTERFERENCE								

8.MONITORS

TX NO.	REFERENCE RADIAL	MSL	RANGE	ALIGNMENT	ALARM+	ALARM-

9.ORBIT BEARING ERROR (TX NO.1)

9.ORBIT BEARING ERROR (TX NO.2)

10.GROUND RECEIVER CHECK POINT

GROUND CHECK POINT	TX NO.	BEARING READING	RANGE READING

11.GENERAL	TX1		TX2	
	SAT	UNSAT	SAT	UNSAT
STANDBY POWER				
VOICE				
VOR IDENTIFICATION				
DME IDENTIFICATION				

<table>
<tr><td colspan="2">DME ACCURACY</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">DME COVERAGE</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="3">12.FACILITY STATUS
<table><tr><td>STATUS</td><td>VOR</td><td>DME</td></tr><tr><td>UNRESTRICTED</td><td></td><td></td></tr><tr><td>RESTRICTED</td><td></td><td></td></tr><tr><td>UNUSABLE</td><td></td><td></td></tr></table></td><td colspan="3">13.NOTAM’s:</td></tr>
<tr><td colspan="6">14.REMARKS:</td></tr>
<tr><td colspan="2">PILOT IN CHARGE’S SIGNATURE:</td><td colspan="2">FLIGHT INSPECTOR’S SIGNATURE:</td><td colspan="2">AIRCRAFT NO:</td></tr>
</table>

ATTACHMENT B - SAMPLE FLIGHT INSPECTION RECORDS

1. Sample Flight Inspection Record

Flight Inspection Record / Log Sheet					
Airport Name:		Aircraft Registration Number:		Date of Inspection:	
Flight Hours:		Total Number of Run:		Inspector Name:	
Facility Type:		Identification:		Frequency:	
Temperature:		Air Pressure:			
Run Number	**Transmitter**	**Profile**	**Result Summary**		**Finding**

APPENDIX 1

1. Use of Drones/RPAS technology for Flight Inspection

1.1. Certified entity using Drones/RPAS technology for Flight Inspection

1.1.1. Flight Inspection Service Provider utilizing Drones/RPAS technology should be certified by a Civil Aviation Authority of a contracting state or a certifying agency certified by a Civil Aviation Authority of a contracting state.

1.1.2. Organizations or institutes utilizing Drones/ RPAS for flight inspection should have an established safety management system (SMS) which is accepted/approved by a Civil Aviation Authority of a contracting state to ensure flight safety of Drones/RPAS. During an event of the C2 link failure, mechanism should be placed for the safe return of RPAS to the point of departure or defined location of landing.

1.1.3. Flight inspection should be carried out by a certified Remote pilot with a valid Remote Pilot License (RePL) issued by a contracting state to perform Flight inspection and the required documents to be produced by FISP during the selection process.

1.1.4. Onboard flight instruments utilized for the calibration of Ground based Navigational Aids should be calibrated by a certified entity authorized by a contracting state. Initial and recurrent calibration certificates should be produced to the ANSP during the selection process.

1.1.5. Last three Flight Inspection reports using the same type of drone/RPAS should be submitted by the FISP during the selection process. Out of three inspections at least 02 should have been performed at international airports outside the country of registration.

1.1.6. The maximum flyable altitude/ceiling of the Drone/RPAS should be decided upon the nature of the mission.

1.1.7. Prior to the commencement of Flight Inspection using Drone/RPAS, FISP or ANSP should obtain an operational approval from Civil Aviation Authority of Sri Lanka.

1.1.8. Flight Inspection using Drone/RPAS should conform to the conditions mentioned in paragraph 2.1.2, 2.1.3 and 2.1.4 of Chapter 2 of this SLCAP 2360 – Guidance Material for Flight Inspection.