

## ETHIOPIAN CIVIL AVIATION AUTHORITY



## GUIDELINES for AIRLINE INDUSTRY in the COVID-19 RECOVERY PHASE

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This Advisory Circular is issued to provide information and guidance on health and safety measures required of all Air Operator Certificate (AOC) holders to restart flight operations post COVID-19 lockdown hitherto in place as a result of the COVID-19 pandemic. It is therefore imperative for Airlines to ensure the implementation of the guidelines contained in this document in order to ensure safe, efficient, secure and orderly flight operations post COVID-19 pandemic to provide the flying public with the confidence that the airlines and aircraft are safe and free from COVID-19 infection.

These guidelines have been approved by the undersigned for use by all Air Operator Certificate (AOC) holders of ECAA.

Approved by:

  
Wosanyetch Hunegnaw (Col.)  
Director General



## 1. Purpose

The purpose of this document is to provide guidelines for air operators to consider when identifying and addressing the safety threats associated with a return to normal operations following the COVID-19 pandemic.

More specifically, this document is intended to support the operators' management systems in identifying the hazards stemming from return to normal operations and in establishing mitigations to reduce the associated risks to an acceptable level.

The use of the term 'Airline:' in this document is intended to only lay emphasis on Scheduled Aircraft Operators but should be understood to mean all Air Operators Certificate (AOC) holders including Unscheduled Aircraft Operators involved in commercial operations.

## 2. Introduction

The aviation world has been heavily impacted by the COVID-19 pandemic. The moratorium on scheduled passenger flights caused the air operations with passengers to be drastically reduced, if not fully suspended, and an unprecedented number of aircraft have been grounded. This shockwave is unprecedented and literally put air transportation to a standstill, with a few exceptions, causing severe financial pressure on air operators, as well as on their service providers.

Currently, there is uncertainty as to when the situation will return to normal. However, indications are that a gradual lifting of travel restrictions amongst countries is now going to motivate operators to start resuming passenger flights. At this point in time, the operator's safety management system (SMS) and compliance monitoring function play an essential role in managing the associated risks and ensuring a safe return to normal operations.

This document provides guidance on the role of the management system in the context of the return to normal operations phase, in order to support the operator's decision-making process in such a context. The operator's senior management is responsible to ensure the availability of adequate resources, as a lack of staff responsible for safety management and compliance monitoring will result in a reduced capability to control risks.

## 3. Management systems in the context of a safe return to normal operations

The shutdown and return to service have led to many changes to the operating environment. These will continue to evolve until we reach a "new normal". This means that organization's need to address the management of change effectively and regulators need to engage with organizations to ensure that the results are safe and effective.

The initial recovery phase will be characterized by significant uncertainty. Business and financial pressure will remain very high, as most operators may not be in a position to operate in a profitable way for weeks or months. As a consequence, operators will endeavour to reduce any cost not directly related to their operations, and some may be tempted to include key safety functions in their budget cuts.

As the complex aviation system restarts, new hazards will undoubtedly emerge. Additionally, there are currently a substantial number of deviations, extensions and eroded safety buffers. That means that the aviation system is not the same as that which was operating previously and our perception of what can safely be achieved should be challenged.

Moreover, operators will be eager to take new business opportunities, which may entail additional risks or different challenges compared to what they were used to in the past. This is not an issue as long as the risks associated to such opportunities are properly assessed and effective mitigation measures are put in place. If, on the contrary, commercial and financial pressure leads to insufficient consideration to safety, this may bring multiple unmanaged risks into the resumption of operations, with a potentially catastrophic outcome. Some signals already indicate that safety boundaries have been stretched during the crisis, such as unsafe cargo transportation in the passenger cabin, improper storage of aircraft, etc.

Therefore, now more than ever, the operators have to rely on their Management System and its core elements during the recovery phase: risk management, compliance and safety assurance functions are the backbone of a safe return to normal operations. Based on the outcome of this process, the air operator should review the Safety Review Board (SRB) frequency in order to timely take and record appropriate safety actions.

### 3.1 Management of change

Operators have never faced such an extensive disruption of their operations and cannot rely on previous experience when analyzing the possible scenarios and solutions. Furthermore, they do not have sufficient and reliable data to identify all emerging hazards, affecting air operations as well as continuing airworthiness, aerodrome operations, and air navigation services. Unfortunately, the consequences of such hazards concentrate upon the air operator.

Furthermore, the recovery phase may require significant changes in the operator's business model and operational procedures; an inadequate documentation and communication of changes may introduce additional risks. Poor control of changes has significantly contributed to serious incidents and accidents in aviation history.

Therefore, during the return to normal operations phase, operators need to focus on the implementation of a robust management of change process in order to successfully identify new risks, determine effective mitigation measures and implement strategies for deploying changes accordingly.

The management of change process relies on a sound hazard identification and risk assessment (HIRA). Safety management and compliance monitoring staff need to approach the hazard identification phase holistically:

- (1) New hazards may be the consequences of rushed business decisions taken under severe financial pressure.
- (2) The new operational environment may encompass additional hazards induced by the way the operator reacted to the crisis. For instance:
  - (a) Staff reduction may have safety consequences on several organizational areas;
  - (b) Operations can be significantly altered by new procedures, sanitary measures, or unusual restrictions;
  - (c) Operators may increasingly operate on short-term contracts requiring flights to unfamiliar destinations.
- (3) Proactive measures to identify hazards will be needed in rapidly changing operating circumstances, since occurrence data will take time to build up.
- (4) Existing hazards may remain and should be accounted for in the overall hazard identification process.

- (5) Each identified hazard must be evaluated and prioritized, and decisions must be taken on the most appropriate actions to reduce or eliminate the consequences of the associated risks to an acceptable level.

### **3.2 The compliance monitoring (Quality Assurance) function**

The compliance monitoring function plays an important role during the recovery phase.

Internal compliance monitoring function activities, such as audits and inspections, may have come to a slowdown or a stop during the crisis. When restarting operations, it is important that the compliance monitoring (Quality Assurance) manager and his/her staff evaluate any activities that could not take place, as well as the new operational context, in order to prioritize compliance verifications and to establish means to conduct such activities remotely, in case COVID-19 restrictions still apply.

This evaluation should also take into account all exemptions granted by the national competent authority and still used, as well as the new types of operations (i.e. transport of cargo in passenger compartment, revised crew training and checking procedures, etc.). The combined effect of multiple exemptions should also be assessed.

The compliance monitoring (Quality Assurance) manager should thus adapt the compliance monitoring programme to focus on the areas of greater risk, in coordination with the safety manager, and inform the accountable manager accordingly.

### **3.3 Safety performance monitoring and measurement**

The operator should pay attention to any signal hinting to a reduction in the safety margins in the context of return to normal operations. These margins may be lower than those set in pre-crisis operations. The operator's safety performance monitoring and measurement processes are key to assess safety levels during return to normal operations and provide an indication on whether the management system is delivering as expected in such challenging circumstances.

The coordinated functioning of the operational, safety and compliance monitoring organizational units is essential. Effective decision-making relies upon the collection of qualitative and quantitative safety information that indicates whether operations are being conducted at the accepted level of safety. Appropriate feedback needs to reach the operator's senior management, as the accountable manager is ultimately responsible for ensuring that safety remains within the boundaries that were deemed to be tolerable when endorsing the risk assessments.

Safety surveys may be used to collect feedback on new or adapted operations during the restart phase. Such feedback should provide assurance that the activities achieve the expected safety levels and help in the identification of possible improvements, feeding the HIRA process and closing the loop.

Safety audits are also a valid tool to monitor the implementation of actions taken to mitigate risks. The safety and compliance monitoring functions should use these audits to be proactive in hazard identification, to validate the suitability of established mitigation measures or to propose other mitigations for consideration in the context of HIRA. Operators should either plan ad-hoc safety audits for the most critical operations performed during the recovery phase or include additional verifications in the scope of its prioritized compliance monitoring activities.

## 4. Managing emerging risks

While operators strive to resume activities, the COVID-19 crisis has significantly changed their operational context. Regulatory reliefs and alternative means of compliance may have introduced deviations to well-established procedures, and temporary revisions to operations manuals may have been issued under significant time pressure.

In preparing for a gradual resumption of their activities, operators should take time to assess the risks associated with operating in such a new and uncertain environment. Crews and front-line personnel may have to implement new or modified procedures under significant pressure, thus working out of their comfort zone.

The following paragraphs illustrate several examples of typical emerging risks to be considered in this phase.

### 4.1 Operational aspects

Regulatory reliefs may have been granted in a short timeframe during the crisis, in order to support operators to cope with the most urgent needs. Such deviations/reliefs affect different technical domains and may have been granted by different inspectors; as a consequence, while each exemption should include appropriate risk mitigations, their cumulative effect on safety may not have been fully assessed; possibly, an exemption may affect the mitigations required by another exemption. Deviations leading to reduced crews' recency and/or training and checking may lead to an erosion of crews' competence, which may become critical when having to apply abnormal or emergency procedures. This combined with fatigue or aircraft systems' failures, may lead to undesirable outcomes.

Airspace restrictions, degraded or unavailable air navigation services and limitations in aerodrome services may also force the operator to conduct flights in an unfamiliar operational context.

It is thus important for operators restarting their activities to consider the additional risks that may be introduced by the combination of multiple regulatory reliefs with unfamiliar operations, such as in the following scenario:

- (a) A flight carrying cargo in the passenger compartment ;
- (b) A flight to a destination outside its approved area of operations;
- (c) A flight with a schedule that exceeds the standard flight duty periods; and
- (d) A flight by a crew that does not meet the standard recency and training/checking requirements.

Furthermore, during the recovery phase, operators will have to operate with a combination of exemptions and normal operating procedures: for example, some crew rosters and flight plans may be based on specific exemptions, while others may not. This "mixed operation" scenario may require additional consideration in terms of organizational processes.

### 4.2 Airworthiness aspects

The following elements should be taken into account and must be rectified before resumption of normal operations:

- (1) The execution of several maintenance tasks may have been deferred;
- (2) Excessive use of the MEL or the delayed rectification of defects or a combination of these may affect aircraft systems, leading to an increased flight crew workload or deactivated alarms detrimental to the flight crew situation awareness.

- (3) Aircraft returning to service after it has been stored for a long period may present hidden defects and technical failures, possibly in emergency systems: associated failures may include aircraft that have not been adequately protected by covers; fuel contamination; wildlife ingress; and a lack of maintenance.
- (4) The introduction of new destinations or stop-overs may increase the risk of improper execution of line maintenance tasks, when performed under temporary contracts without the possibility to perform a thorough evaluation of the maintenance provider(s).
- (5) The maintenance tasks required due to prolonged parking of aircraft during COVID-19 at intervals defined in the Aircraft Maintenance Manual (AMM) may have not been performed properly. To keep the aircraft and its engines/systems /components in a functional state and prevent any degradation so that no excessive failure rate is experienced when the aircraft is returned to service, maintenance tasks required due to prolonged parking of aircraft must be performed properly.
- (6) Aircraft databases such as Traffic Alert and Collision Avoidance System (TCAS), Terrain Awareness Warning System (TAWS), Navigation Database (NavDB), charts, etc. may have not been updated as required.
- (7) Airplanes configured with passenger cabins may have been used to carry cargo only or to carry additional cargo without passengers onboard, and proper return of the cabin back to the configuration certified for passenger transportation is mandatory.

### 4.3 Organizational and human factors aspects

Operations during the recovery phase may be affected by several organizational and human factors. Most staff will return to duty with a certain level of psychological stress, and operators should evaluate the need to provide targeted support in specific cases. Front-line staff may not feel “fit” for the duties but be willing to “go the extra mile” in order to support their organization.

Traditional human factor issues, such as distraction, can be exacerbated by COVID-19 related concerns and lead to slips, lapses and mistakes impacting critical actions, such as lowering the landing gear or arming/disarming the door slides. Just culture principles may be at stake, due to fear that in times of crisis, mistakes may be treated as willful misconduct.

Financial pressure during the recovery phase may lead management to seize business opportunities (e.g. charter flights) without a proper risk assessment, or to tolerate violations such as dispatch of flights with unserviceable equipment beyond the acceptable limits. The perceived pressure may also lead crews and maintenance personnel to accept “cutting corners” in order to avoid costly delays and flight cancellations.

Financial pressure may also interfere with sound decision-making in various contexts:

- (1) Flight crews may avoid to request extra fuel or refrain from performing a go-around when the situation dictates;
- (2) Maintenance staff may overlook required actions, while striving to avoid a delayed departure;
- (3) Front-line staff may believe that deviations from the SOPs are justified in the context of the crisis;
- (4) The risks induced by fatigue may also be increased, as operations may stretch flight duty periods to the limits, possibly in combination with reduced rest times (longer sanitary procedures, less expensive hotels far away from the airport, unavailability of local crew transportation, etc.).



## 5. General Requirements

- 5.1 ECAA considers that the operator's safety management system (SMS) and compliance monitoring (quality assurance) functions shall play an essential role in managing the risks associated with the gradual recovery of air operations with passengers in the challenging context created by the COVID-19 crisis, and in ensuring a safe return to normal operations.
- 5.2 The financial pressure generated by the prolonged grounding will require operators to implement significant cost reduction measures across their entire organization. However, operators should consider their management systems as an essential enabler of the overall recovery strategy, as operations may resume with a combination of weakened safety barriers (e.g. crew competence) and increased risks (e.g. psychological stress of front-line personnel). Serious incidents or accidents during the recovery phase may put the operator's survival at risk.
- 5.3 The operator's senior management should communicate to all staff the importance of safety in the context of recovery, in order to minimize the likelihood that front-line personnel may feel entitled, or even obliged, to "cut corners" or deviate from the approved SOPs in order to cope with the situation.
- 5.4 Senior management should also promote an integrated approach to safety management and compliance monitoring, supporting a management of change process based on a reliable hazard identification and risk assessment; both activities need to be tailored to the operator's specific operational context.
- 5.5 Finally, the compliance monitoring (quality assurance) function should verify that operations are conducted in accordance with the applicable procedures, as amended in the light of the changed operational context, including the implementation of any required mitigating measures in order to achieve the expected safety levels.
- 5.6 Organizations shall develop an Operations Resumption Plan to manage exceptional circumstances stemming from the COVID-19 outbreak.
- 5.7 Organizations with a formally established Emergency Response Plan (ERP) shall activate it to allow a safe return to normal operations.
- 5.8 The Operation Resumption Plan shall be supplemented by a comprehensive Management of Change to identify and address hazards (that have aviation safety impact) resulting from, but not limited to:
  - a) Lack of financial resources;
  - b) Unavailability of staff (e.g. Post Holders and other key personnel);
  - c) Lack of currency and competency checks of aviation personnel (e.g. Pilots, Aircraft Technicians, Cabin Crew, Airport Operations Teams, Airside drivers and other staff who support the safe operation of aircraft);
  - d) Unavailability of recurrent training;
  - e) Flexibility measures adopted by ECAA;
  - f) Flexibility measures adopted by the organization and may have safety impact;
  - g) Incomplete internal surveillance (including contracted organizations, suppliers) required to maintain validity (e.g. due audits, findings not closed);
  - h) Unavailability of infrastructures (e.g. aircraft parked on runways, taxiways and other hard standing areas);
  - i) Concerns related to Continuing airworthiness of aircraft placed under storage or preservation period;



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- j) Unavailability of contracted organizations / suppliers (e.g. simulators, maintenance organizations, flight inspection organizations);
- k) Serviceability of equipment, tools or infrastructure (e.g. due to calibration not completed);
- l) Unavailability of a responsive supply chain for spare parts, etc.
- m) Status of complementary facilities, such as adjacent Air Navigation Service Providers;
- n) Any other concern resulting from non-compliance with applicable rules or internal procedures (e.g. organizational culture, the reporting system, SMS effectiveness, internal findings);
- o) Appropriate Aerodrome RFFS Categories; and
- p) Identification and Risk Assessment of specific areas where regulatory compliance cannot be met.

5.9 The Operation Resumption Plan shall be coordinated with others stakeholders (such as suppliers or other organizations that support their operations, in particular when they are located outside the country to ensure an orderly, safe and efficient transition from emergency operations or no operations and back to normal operation. The Operation Resumption Plan shall also be supplemented by a preliminary plan with list of hazard and their associated risk assessment.

**6. ACTIONs REQUIRED TO RESUME NORMAL OPERATIONS**

Airline’s restart plan must provide assurance of safe operations both from the technical perspective of flight operations (i.e. to address issues like aircraft disinfection, aircraft de-preservation, flight crew recurrency/proficiency etc.) and from the perspective of putting measures in place to protect passengers from COVI-19 infection (compliance with **COVID-19** Aviation Health Safety Protocol Operational Guidelines for the management of air passengers and aviation personnel in relation to the COVID-19 pandemic).

**SUMMARY OF ACTIONS REQUIRED**

<b>N O.</b>	<b>FINCTIONAL AREAS</b>	<b>ACTION REQUIRED</b>
1	<b>AIRWORTHINESS (Aircraft Maintenance Requirements)</b>	<p><b>When resuming return to normal operations, air operators are required to justify that:</b></p> <ul style="list-style-type: none"> <li>• aircraft maintenance programs are current in line with the Manufacturer’s Maintenance Planning Data (MPD);</li> <li>• Aircraft maintenance practices and requirements due to prolonged parking are complied with as defined by the TC Holder within the Aircraft Maintenance Manual (AMM) to show that the aircraft and its engines/systems/components are kept in a functional state and prevent any degradation is prevented so that no excessive failure rate is experienced when the aircraft is returned to service;</li> <li>• Aircraft storage procedures are implemented while aircraft is grounded ensuring that aircraft each has been adequately protected by covers; there is no fuel contamination; there is no wildlife ingress;</li> <li>• aircraft have been disinfected properly during the lockdown with disinfectant materials that have been specified in the aircraft maintenance manual (AMM);</li> </ul>

		<ul style="list-style-type: none"> <li>• each aircraft in operator’s fleet is returned to service properly as regards to aircraft disinfection;</li> <li>• Mandatory Continued Airworthiness Instructions have been accomplished properly and timely;</li> <li>• Before the aircraft is used for passenger service, proper return of the cabin back to the configuration certified for passenger transportation for aircraft that were used to carry cargo in the passenger cabin;</li> <li>• There is provision of PPEs for maintenance personnel; and</li> <li>• Partnership and pooling of aircraft maintenance resources (skilled labor, tooling, equipment etc.) and arrangement for aircraft spares are in place.</li> </ul>
2	FLIGHT OPERATIONS	<p><b>Flight Crew: Evidences of:</b></p> <ul style="list-style-type: none"> <li>• Current Medical certificate</li> <li>• Instrument Check</li> <li>• Check Airman status</li> <li>• Refresher courses</li> <li>• Evidence of COVID-19 SOPs</li> </ul> <p><b>Flight crew whose simulator training are due for renewal and are unable to access training facility are to submit evidence of LPC /OPC (LPC reviewed syllabus –Alternative means of compliance with simulator exercises)</b></p> <p><b>Cabin Crew: Evidences of:</b></p> <ul style="list-style-type: none"> <li>• Medical certificates</li> <li>• Drills</li> <li>• Recency</li> <li>• Refresher courses</li> <li>• Evidence of COVID -19 SOPs</li> </ul> <p><b>Dispatchers/Flight Operations Officers: Evidences of :</b></p> <ul style="list-style-type: none"> <li>• Licenses</li> <li>• Recency</li> <li>• Refresher courses</li> </ul> <p><b>Evidence of COVID-19 SOPs to cover:</b></p> <ul style="list-style-type: none"> <li>• Compliance with requirements stipulated in COVID-19 Aviation Health Safety Protocol Operational Guidelines for the management of air passengers and aviation personnel in relation to the COVID-19 pandemic;</li> <li>• DGR signage at check-in counters to limit carriage of hand sanitizers; and</li> <li>• Transportation of human remains and COVID-19 infected persons.</li> </ul>

## Appendix A - Requirements for Aerodrome Operators

Aerodrome operators together with relevant stakeholders, such as air navigation service providers, airlines and ground handlers should at least consider the following when preparing for an increase of air traffic:

1. Overall inspection of the paved, unpaved surfaces and surroundings, paying attention to:
  - general cleanliness, presence of foreign object debris, possible dust or sand build ups affecting friction levels, and any signs of damage to the pavement surface, which could pose a risk to the aircraft operations;
  - leakages and depressions due to long term parked aircraft;
  - presence of wildlife, which might have increased in the absence of regular operations;
  - the state of the vegetation to ensure that lights, signs and markers are not obstructed;
  - condition of movement area markings to ensure adequate visibility;
2. The proper functioning of the electrical power supply systems for air navigation facilities and lighting system, including signs.
3. Rescue and firefighting level of protection in accordance with the expected traffic and rescue and firefighting services vehicles and equipment are properly functioning.
4. Alarm system for the notification of rescue and firefighting services is functioning.
5. Communication systems used during normal and emergency operations are functioning.
6. Aircraft parked on the manoeuvring area do not infringe the obstacle limitation surfaces, the critical and sensitive areas of radio navigation aids serving the active runway(s) and the line of sight of air traffic control.
7. Information on such closed parts of the manoeuvring area is made available through a notice to airmen (NOTAM).
8. Emergency access roads of rescue and firefighting vehicles to the active runway(s) are unobstructed.
9. If parts of the manoeuvring area are closed due to parked aircraft, the airfield ground lighting for these sections exclusively are switched off and a NOTAM is issued.
10. Availability and competency of staff to carry out their tasks and human factor associated risks due to reduced activity levels.
11. Any reported actions are planned and implemented, before resuming operations if needed, including training, inspections, compliance monitoring, corrective action plans.
12. The published information in Aeronautical Information Publication (AIP), AIP Supplement (AIP-SUP) and NOTAM are in respect to the actual aerodrome operational situation.
13. Facilities and equipment used for aircraft fueling provide the aircraft with uncontaminated fuel and of the correct specification.
14. Construction or maintenance work sites are appropriately marked and lighted. For ongoing changes or when resuming construction works, ensure internal work in progress procedures and mitigating measures are still relevant and implemented.