



Civil Aviation Authority
SAFETY NOTICE
Number: SN-2020/013



Issued: 27 July 2020

Returning Aircraft to Service from ‘Extended Parking’

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any ‘in-house’ or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	Aerodrome Operators and Ground Handling Service Providers
Air Traffic:	Not primarily affected
Airspace:	Not primarily affected
Airworthiness:	Continuing Airworthiness Management Organisations and Maintenance organisations (Part 145, subpart F and Part-CAO), and owner/operators responsible for aircraft placed in storage or extended ‘parked condition’
Flight Operations:	All aircraft operators who have aircraft placed in storage or extended ‘parked’ condition
Licensed/Unlicensed Personnel:	Flight crew and licenced engineers involved in preparing aircraft for return to service

1 Introduction

- 1.1 As a result of the COVID-19 economic impact, a significant number of aircraft have been ‘parked’ (extended downtime) with only routine maintenance activity and oversight being conducted. Industry experience shows that when returning such aircraft to operational service, there are additional hazards that should be considered by maintenance and flight crew as part of their preparations.
- 1.2 This Safety Notice is published to advise operators and all concerned of measures and precautions to be considered to safely return aircraft to normalised operation following the COVID-19 shut-down.

2 Continuing Airworthiness Intelligence

- 2.1 During the period of lockdown and the subsequent return to service (RTS) of some aircraft, the continued airworthiness department at the Civil Aviation Authority (CAA) have continued to monitor and assess all incoming mandatory occurrence reports (MOR) and have noted some specific trends. Examples of MORs relating to incomplete maintenance, that may be in part be attributable to aircraft being parked for extended downtime, are listed below. Some of the issues identified were only discovered during, or after, a subsequent check flight.
 - engine borescope ports found loose/finger tight

- a flap access panel found missing but with the screws still in place during a pre-input inspection after the aircraft had been flown to a different base for maintenance
 - Crew unable to carry out an 'auto-start' where the 4 igniter circuit breakers were pulled, with no tech log entry
 - Aircraft flown with sector record page missing - additional tasks were not recorded on the current day sector record page and a CRS was not issued by the engineer
 - depletion of aircraft park brake accumulator pressure
 - multiple airworthiness directives (AD) and Never Exceed Period (NEP) overruns
 - potable water quantity indication systems giving false readings
- 2.2 Even when an approved Aircraft Maintenance Programme (AMP) has been correctly followed, there are threats associated with a return to flying of parked/stored aircraft. A recent rejected take-off due to unreliable airspeed indications was discovered to be caused by insect larvae in the pitot tube drain, even though approved pitot probe covers had been used and the pitot system flushed in accordance with manufacturers guidance. This event is the subject of an Air Accident Investigation Branch (AAIB) investigation.
- 2.3 Operators should also be aware of concerns around the inappropriate application of the fuel biocide Kathon FP1.5. A Japan Transport Safety Board Serious Incident report (B787 both engines below idle on approach with subsequent L and R ENG FAIL EICAS messages) has determined the failures to be attributable to the incorrect dosage of biocide ~ Kathon FP1.5. This is the second serious event this year that has been attributable to the incorrect dosage of biocide (refer to [EASA SIB 2020-06](#)).
- 2.4 Furthermore, as the recent FAA Emergency Airworthiness Directive (AD#2020-16-51) demonstrates, aircraft storage may result in unexpected corrosion of specific systems with significant safety implications. The Airworthiness Directive pertains to a check valve forming part of the engine bleed system in various Boeing 737 models.

3 Aircraft Return to Service Considerations

- 3.1 Operators should identify areas where safety concerns may arise as aircraft and personnel are prepared for return to service and consider means of mitigating any impact. Some examples are listed below but these are by no means exhaustive.
- 3.2 Airworthiness:
- The continuing airworthiness management organisation (CAMO) and owner/operator should fully understand the work required to reactivate the aircraft from parking/storage, including overdue maintenance, recently published data and Airworthiness Directives (AD)
 - The CAMO should liaise with the Part-145 organisation, providing clear instructions on the work to be carried out
 - The CAMO should carry out production planning in conjunction with the Part-145 organisation to fully understand the certification of tasks and the timeline for aircraft stand up
 - Any system upgrades with potential flight operations implications (particularly which relate to Flight Crew Operating Manuals/MEL) should be coordinated so that the operating crew are aware of any upgrades/embodiments
 - The CAMO/Flight Ops/Ground Ops/Part-145 organisation should all be aware of Human Factors regarding the furloughing of staff and any potential re-organisations which may affect the re-introduction to service of the aircraft
 - The recency and experience of staff in CAMO/Part-145 organisation should be considered and addressed

3.3 Flight Crew:

- Pilot recency, experience on type and competency should be appropriate to the flight
- Scope of the flight should be considered and understood (simple ferry flight or any system function requirements)
- Comprehensive briefing should be received from maintenance personnel concerning aircraft status and any work carried out on the aircraft whilst parked
- Additional time requirements for external/internal checks (greater vigilance due to the possibility of system degradation, unreported ground damage, incorrect switch position, equipment not properly stowed etc)
- Ground handling considerations (are the ground crew familiar with aircraft type and company procedures and what is their recent exposure to ground handling?) and the importance of good communications with all parties (crew, maintenance, ground agents, maintenance/operations control etc)
- Thorough briefing including Threat and Error Management; an understanding that dispatch reliability is higher and maintenance problems fewer for airplanes in regular service and crew should be ready for the 'unexpected'

3.4 Ground Handling:

- Ground crews should be appropriately qualified in aircraft type/company specific procedures and have been made aware of any relevant changes implemented during COVID-19
- Ground crews should be informed of changes to the aerodrome environment, implemented during COVID-19, which may create additional hazards when performing related duties. For example, revised taxiway/stand configurations and 'non-standard' parking arrangements may increase the likelihood of error, collision and/or jet blast during towing/pushback operations
- Ground Service Equipment (GSE) may not have been used regularly in recent months, so particular focus on serviceability and correct operation is essential to prevent the likelihood of damage/injury. Daily and pre-trip inspections should be conducted in accordance with required standards and the connection/disconnection processes to/from the aircraft, should be undertaken with extra care and attention
- Pre-departure safety checks should be sufficiently thorough to ensure that: the apron and intended path of the aircraft are clear of obstructions; all servicing panels and/or doors are closed; there is no visible damage on the aircraft and all equipment associated with 'parked' aircraft has been removed. Whilst maintenance and flight crews will be tasked with similar duties, ground crews provide the last line of defence
- Where any doubts or questions regarding operational procedures exist, ground crews should be encouraged to openly communicate with flight crews to seek a coordinated resolution to prevent a subsequent incident

4 Compliance/Action to be Taken

- 4.1 Operators should ensure that they have appropriate procedures and oversight for returning 'parked' aircraft to regular service within their management systems. Consideration should be made to crew qualification for the task, recent experience and any special briefing or checklist requirements. Original Equipment Manufacturer (OEM) guidance for the return to service of parked aircraft should be followed (and requested if not already available)
- 4.2 Operators should make use of the varied guidance material that is available in helping to develop their strategies for return to normalised operations. Some of this material is referenced below.

5 Reference Material

[EASA COVID-19 references.](#)

[EASA 'Guidelines for return to service of aircraft from storage in relation to the COVID-19 pandemic'](#).

[EASA guidance document 'The role of operators' management systems in the COVID-19 recovery phase'](#).

[CAA Safety Notice 2020/011 Human Factors Considerations for Organisations During Covid-19 Restart Activities](#)

Operator Maintenance Check Flight requirements described in Community Regulation (EU) No. 965/2012, Annex VIII, SPO.SPEC.MCF.100.

[FAA Emergency Airworthiness Directive \(AD#2020-16-51\) Boeing Company Model 737-300,-400,-500,-600,-700,-800,-900.](#)

OEM type specific guidance for short term storage maintenance considerations.

6 Queries

- 6.1 Any queries or requests for further guidance as a result of this communication should be addressed to the appropriate Inspecting Officer (AW, FOI or IO) as applicable.
- 6.2 Otherwise queries should be addressed to commsflightops@caa.co.uk.

7 Cancellation

- 7.1 This Safety Notice will remain in force until further notice.