



# SAFETY BULLETIN

## March 2021

### THE SMOKE EVENT

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Notre Safety Bulletin n'est pas une institution pour les professionnels de l'aéronautique, ni une analyse de chacun des règlements. Il n'a pour vocation que d'informer les utilisateurs de moyens aériens sur les diverses activités de l'aéronautique.

Il appartient à chacun d'utiliser ces informations dans le cadre de ses activités.

Soyez professionnel, préparez vos voyages par une petite analyse des conséquences d'un déplacement.

Our Safety Bulletin is not an institution for aviation professionals, nor is it an analysis of each of the regulations. Its purpose is only to inform users of air assets about the various activities of aeronautics.

It is up to everyone to use this information in the course of their activities.

Be professional, prepare your travels with a little analysis of the consequences of a trip.

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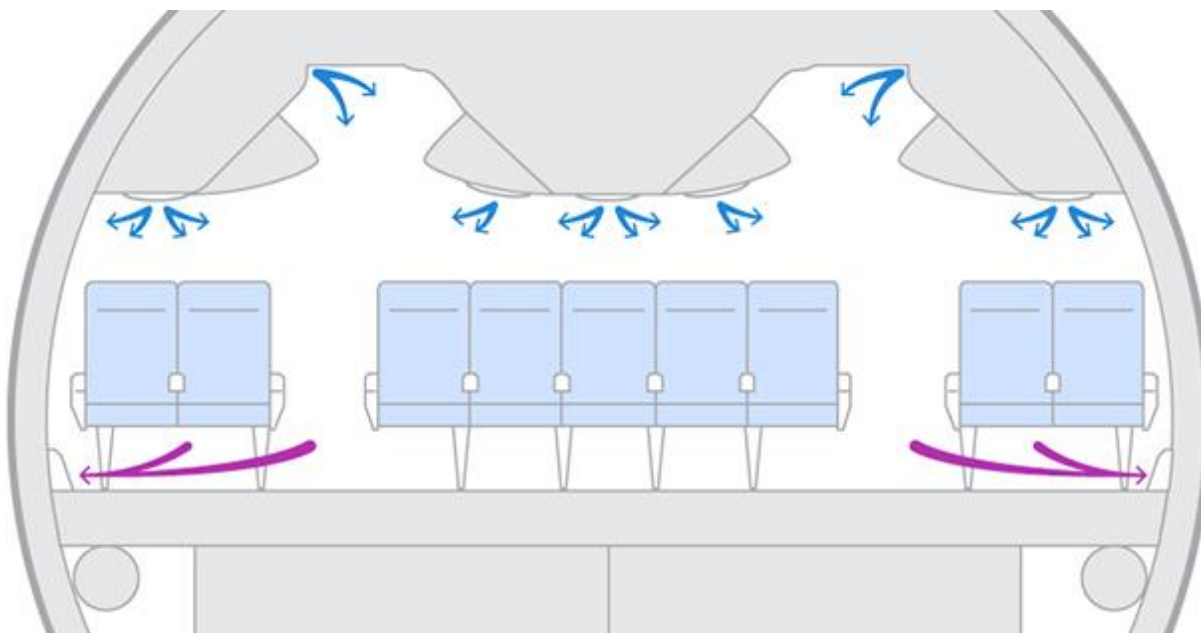
## Subject of the Month:

### Face a smoke EVENT

[Safety First magazine - issue 12 \(airbus.com\)](https://www.airbus.com/first-magazine/issue-12)

### Aircraft Cabin Air Flow

*see attached*



This simplified illustration shows typical airliner cabin air flow. After entering through the engines, some air is diverted and mixed 50/50 with cabin air cleaned by HEPA filters. The air circulates primarily from ceiling to exhaust vents in the floor. While fresh air flows in, a similar amount flows out and leaves the aircraft. During most phases of flight, the 50/50 ratio is maintained and cabin air is completely exchanged for fresh air every two to three minutes.

Section 326 of the FAA Reauthorization Act of 2018 (PDF) requires the FAA to provide access to educational materials enhancing air carrier training on how to react to smoke or fumes on flights. On March 1, 2021, the FAA Flight Standards Service published an Information for Operators (InFO) (PDF) informing stakeholders of this site, recommending they consider incorporating such content and reporting procedures into crewmember and Aircraft Maintenance Technician (AMT) training. The FAA has also commissioned a multi-year research study on cabin air quality as directed by Congress.

- Aviation Safety Reporting System (ASRS)
- InFO 16009 (PDF) – Title 14 of the Code of Federal Regulations (14 CFR) Part 121, §121.703 "Service Difficulty Reports (SDR)"
- SAFO 18003 (PDF) – Procedures for Addressing Odors, Smoke and/or Fumes in Flight

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- Airliner Cabin Environment Research
- Advisory Circular 25-9A – Smoke Detection, Penetration, and Evacuation Tests and Related Flight Manual Emergency Procedures
- Aircraft Cabin Bleed Air Contaminants: A Review – Abstract, Full Text (PDF, 326 KB)
- NASA AMES Research Center: Do You Smell Smoke? Issues in the Design and Content of Checklists for Smoke, Fire, and Fumes (PDF)

### ***Airliner Cabin Environment Research***

In 2004, the FAA's Office of Regulation and Certification established a National Center of Excellence (COE) for Airliner Cabin Environment Research, which in 2007 was broadened and renamed to the National Air Transportation COE for Research in the Intermodal Transport Environment (ACERite). The ACERite COE brought together airliner cabin environment expertise from academic, industry, and government organizations.

Over the next decade, the FAA sponsored numerous cabin air environment research projects. Key research included: 1) health and safety effects of the airline cabin environment on passengers and crewmembers, 2) the efficiency and effectiveness of aircraft environmental control systems, and 3) the study of emerging technologies with the potential to eliminate bleed air contaminants and purify aircraft air supplies.

The resources listed originated from Airline Cabin Environment Research (ACER)

- [Bleed-Air Sensing: Wireless Sensor Networks in Mock-up Cabin](#) (PDF, 2.9 MB)
- [Development and Validation of the Method for the Detection of Tricresyl Phosphates by GC/MS](#) (PDF, 430 KB)
- [Effects of Hydrogen Peroxide on Common Aviation Textiles](#) (PDF, 2 MB)
- [Exposure to Flame Retardants in Commercial Aircraft](#) (PDF, 606 KB)
- [Field Evaluation of Whole Airliner Decontamination Technologies - Wide-Body Aircraft With Dual-Use Application for Railcars](#) (PDF, 707 KB)
- [Field Evaluation of Whole Airliner Decontamination Technologies for Narrow-Body Aircraft](#) (PDF, 387 KB)
- [Health Effects of Aircraft Cabin Pressure In Older and Vulnerable Passengers](#) (PDF, 1.2 MB)
- [In-Flight/Onboard Monitoring: ACER's Component for ASHRAE 1262, Part 2](#) (PDF, 1.9 MB)
- [Inactivating Influenza Viruses on Surfaces Using Hydrogen Peroxide or Triethylene Glycol at Low Vapor Concentrations](#) (PDF, 570 KB)
- [Infectious Disease Transmission in Airliner Cabins](#) (PDF, 9.3 MB)
- [Ozone in Passenger Cabins: Concentrations and Chemistry](#) (PDF, 613 KB)
- [Ozone Initiated Chemistry and Its Impact on Cabin Air Quality](#) (PDF, 7.8 MB)
- [Presentation - What can we learn from measuring contaminants on recirculation filters?](#) (PDF, 427 KB)
- [Presentation - Bleed Air Contaminant Particulate Measurements](#) (PDF, 2.2 MB)
- [Presentation - Portable In-flight Recorder and Particle Sensing](#) (PDF, 1.2 MB)
- [Presentation - Risk to Ozone and ozone-derived oxidation products on commercial aircraft](#) (PDF, 5.9 MB)
- [Proposed Test Plans for a Study of Bleed Air Quality in Commercial Airliners](#) (PDF, 620 KB)
- [Quantifying Exposure to Pesticides on Commercial Aircraft](#) (PDF, 850 KB)
- [Report to the FAA on the Airliner Cabin Environment](#) (PDF, 3.4 MB)

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- [Sensors and Prognostics to Mitigate Bleed Air Contamination Events](#) (PDF, 2.6 MB)

### ***AC 25-9A - Smoke Detection, Penetration, and Evacuation Tests and Related Flight Manual Emergency Procedures***

Provides guidelines for the conduct of certification tests relating to smoke detection, penetration, and evacuation and to evaluate related Airplane Flight Manual (AFM) procedures. These guidelines may be used to reduce the number of decisions based solely on judgment in conducting tests and evaluating test results. While not mandatory this AC offers a method of demonstrating compliance with the applicable airworthiness requirements.

#### ***Flight crew response***

[AERO - Flight Crew Response to In-Flight Smoke, Fire, or Fumes \(boeing.com\)](#)

Smoke, fire, or fume (SFF) events can occur suddenly in commercial airplanes. Yet information about the source of the event may be vague, incomplete, inaccurate, or contradictory. Additionally, there is a wide range of possible sources and situations.

Historically, airlines have provided flight crews with checklists to help them identify and deal with smoke, fire, and fumes. Until recently, manufacturer and airline checklists varied in format and content. In response to this situation, Boeing worked together with airlines, pilots, and other manufacturers to develop a philosophy and a checklist template to standardize and optimize flight crew responses to non-alerted SFF events (i.e., events not annunciated to the flight crew by onboard detection systems).

These efforts have produced a set of new, industry standard procedures that:


- Define a common approach for manufacturers and airlines to take when developing checklists.
- Define a common set of actions for pilots to expect across multiple models.
- Create an SFF checklist template that addresses key issues that were widely divergent in the industry.

### **PROVIDING THE BEST POSSIBLE CREW GUIDANCE**

The objective of the checklist template is to provide the best possible crew guidance for managing in-flight SFF events while acknowledging that every SFF situation is different.

As a result, flight crews worldwide now have a single integrated checklist that can be used across all non-alerted SFF events (see fig. 1). The guidance provided by the new template addresses:

- SFF source identification.
- Actions to perform regardless of source.
- Crew communication.
- Timing for diversion and landing initiation.

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- Smoke or fumes removal.
- Additional actions to perform if smoke persists.
- Loss of capability and operational consequences.

STEP	ACTION	RESPONSE
1	Diversion may be required.	
2	Oxygen masks (if required)	On, 100%
3	Smoke goggles (if required)	On
4	Crew and cabin communications	Establish
5	Manufacturer's initial steps	Accomplish
<b>Anytime smoke or fumes become the greatest threat, accomplish separate <i>Smoke or Fumes Removal Checklist</i>.</b>		
6	Source is immediately obvious and can be extinguished quickly: If YES → go to Step 7. If NO → go to Step 9.	
7	Extinguish the source. If possible, remove power from affected equipment by switch or circuit breaker on the flight deck or in the cabin.	
8	Source is visually confirmed to be extinguished: If YES → consider reversing manufacturer's initial steps. Go to Step 17. If NO → go to Step 9.	
9	Remaining minimal essential manufacturer's action steps [These are steps that do not meet the "initial steps" criteria but are probable sources.]	Accomplish
10	Initiate a diversion to the nearest suitable airport while continuing the checklist.	
<b>Warning: If the smoke/fire/fumes situation becomes unmanageable, consider an immediate landing.</b>		
11	Landing is imminent: If YES → go to Step 16. If NO → go to Step 12.	
12	"X" system actions [These are further actions to control/extinguish source.] If dissipating, go to Step 16.	Accomplish
13	"Y" system actions [These are further actions to control/extinguish source.] If dissipating, go to Step 16.	Accomplish
14	"Z" system actions [These are further actions to control/extinguish source.] If dissipating, go to Step 16.	Accomplish
15	SFF continues after all system-related steps are accomplished: Consider landing immediately. Go to Step 16.	
16	Review Operational Considerations.	
17	Accomplish <i>Smoke or Fumes Removal Checklist</i> , if required.	
18	Checklist complete.	

Figure 1: Smoke, fire, or fumes (SFF) checklist template

Boeing used this template to develop new SFF checklists for all passenger models of the 737, 747, 757, 767, and 777 airplanes and is in the process of developing and evaluating similar checklists for the MD-80, MD-

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90, 717, MD-10, and MD-11 airplanes. The template is designed to be used by all manufacturers and operators to standardize and optimize flight crew responses to non-alerted SFF events.

### ***Boeing engineering DESIGN POSITION***

Engineering design by airplane manufacturers, oversight by regulators, and maintenance practices by operators combine to minimize occurrences of smoke, fumes, and fire in the pressurized areas of airplanes. When smoke does occur, timely and appropriate action by the flight and cabin crews is imperative. Boeing has analyzed in-service smoke, fumes, and fire events and reviewed airplane systems and crew procedures for its commercial airplane models.

An in-flight fire or smoke event is a time-critical situation that demands immediate action by the flight and cabin crews. Cigarettes aside, any smoke in an airplane is not normal. Crew response must be timely and use available airplane controls and non-normal procedures.

To help ensure that appropriate steps are taken, the following issues need to be understood:

1. Operational consequences and safety risks of smoke events.
2. Analysis of past smoke events and review of crew procedures.
3. Recommended crew action for known and unknown smoke sources.
4. Capabilities for the remainder of the flight.

## **1. OPERATIONAL CONSEQUENCES AND SAFETY RISKS OF SMOKE EVENTS**

Although most smoke events in the pressurized area of an airplane are resolved and rarely affect continued safe flight, landing, or egress, smoke is always a significant issue with operational consequences. These consequences include flight cancellations, flight schedule disruptions, air turnbacks, airplane diversions, declared emergencies, airport emergency equipment responses, airplane evacuations, accommodations for displaced passengers, diminished goodwill, and extensive unscheduled maintenance following non-normal procedures such as overweight landing inspection, recharging of oxygen, and repacking of escape slides.

Direct crew response to smoke and fumes originating from readily accessible equipment, referred to as known smoke, is key to minimizing operational consequences. Timely and prudent crew response to smoke events of undetermined origin, or unknown smoke, minimizes risks during the remaining flight, landing, and egress.

Based on past smoke events, Boeing and other air transport industry leaders are pursuing initiatives to further reduce the likelihood of in-flight smoke. In addition to enhancements to airplane design and maintenance (see “Aging Airplane Systems Investigation,” Aero no. 7, July 1999), these initiatives include improvements to the procedures used by the flight and cabin crews during a smoke event in the pressurized area of the airplane.



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## 2. ANALYSIS OF PAST SMOKE EVENTS AND REVIEW OF CREW PROCEDURES

Boeing performed an analysis of reported in-service events that involved smoke, fumes, fire, and overheating in the pressurized areas of its airplanes between November 1992 and June 2000. Data were compiled for each model and included the following: the area affected in the pressurized area of the airplane, the smoke source perceived by the flight crew, the smoke source identified by the maintenance crew, the category of the smoke source, the airplane system or equipment involved, the means of detection (typically sight or smell by passengers or crew), and the effect on flight completion. (Note: The term smoke in the preceding list and in the remainder of this article refers to odors, smells, fumes, or overheating as well as visible smoke.)

The smoke events under study were categorized into three classes: air conditioning, electrical, and material. Air-conditioning smoke events were cases in which incoming bleed air was contaminated, perhaps from engine oil or contaminated outside air. Electrical events were cases in which electrically powered equipment overheated or emitted smoke or fumes. Material events involved material that gave off smoke or fumes such as food burning in an oven, lavatory waste ignited by a discarded cigarette, or spilled chemicals in the cargo compartment.

Figure 1 depicts a summary profile of air-conditioning, electrical, and material smoke events for each airplane model included in the study. This format enables comparison across airplane models of the three major smoke source categories. For each model, the number of events in each source category was divided by the total number of smoke events for that model, yielding the percentage contributions depicted in the profile. (Note: The three categories for each model may not sum to 100 percent because of insufficient information available to categorize an event.) The models in figure 1 are listed in order of airplane complexity, starting with the most complex on the left. Larger airplanes with more complex systems show a predominance of smoke events of electrical origin, compared with air-conditioning and material smoke events.

For each airplane model, the air-conditioning, electrical, and material events were subdivided by airplane system. Figure 2 illustrates such a detailed categorization of smoke event sources for a representative model. The subcategories within the electrical category include systems or functions such as environmental control, electrical power, galleys, and flight deck equipment. Presenting the smoke sources in percentages by airplane system or function allows comparison of multiple models with different fleet sizes, ages, and missions.

Data also were collected on how the crews perceived the in-flight smoke events on all models. The data were grouped in a structure similar to the flight crew Quick Reference Handbook (QRH) produced by airplane manufacturers and operators. Figure 3 shows such a portrayal for a representative model. Most smoke events occurred with the flight crew on board. For many in-flight events, flight crews took action consistent with having identified the smoke source, such as removing electrical power to (i.e., depowering) that equipment. There was a significant number of events in which crew actions suggest that the smoke source could not be identified while in flight. For smoke events in which the flight crew could not determine the smoke source, most were subsequently determined by maintenance crews to be of electrical origin.

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### 3. RECOMMENDED CREW ACTION FOR KNOWN AND UNKNOWN SMOKE SOURCES

The Boeing QRH includes procedural steps for smoke, fumes, fire of air-conditioning and electrical origin, and smoke removal. When a flight crew has determined that smoke is of air-conditioning origin, the Boeing QRH procedure is to isolate the air source, halting the introduction of contaminated air into the pressurized area of the airplane. An example of air-conditioning smoke is from engine oil, followed by abnormal engine parameters and odor in the cabin and flight deck. Once the crew has isolated the incoming engine bleed air, continuing fresh air from another source should quickly improve cabin air quality.

When a flight crew determines smoke is of electrical origin, the Boeing QRH procedure is to depower the affected equipment. For example, if a flight crew sees smoke from a window-heating element, appropriate action would be to switch off that electrical equipment. An example of known smoke in the cabin would be a flight attendant seeing and smelling smoke from a coffee maker; after turning off electrical power to that galley, the smoke stops and subsequent surface temperatures are normal. The key to properly handling a known smoke event is for the crew to be confident of both the smoke source and the effectiveness of removing electrical power.

Known smoke sources. Many smoke events involve smoke or fumes produced by equipment readily accessible to the crew. Often, the event source can be identified by direct observation, such as seeing smoke exiting a piece of equipment, tracing a smell to its strongest location, or feeling an unusually warm surface.

For a known smoke event, confirming that the situation has been resolved is as important as identifying the source. The smoke or fumes must dissipate and any overheating condition must improve for the crew to be confident the situation is under control. Only if the crew can confidently identify the smoke source and confidently ascertain that the condition is under control should continuation of the flight be considered. Hand-held extinguishers ought to be at the ready, as the crew continues monitoring the equipment during the remainder of the flight.

Factors to evaluate in deciding include the level of confidence in identifying the smoke source, success in extinguishing the source, functionality of the remaining systems, success in removing cabin smoke, passenger distress, and position of the airplane along the intended route. Any combination of these factors may make a diversion or turnback the appropriate choice.

Completing a planned flight has its advantages given the significant operational costs of substitute equipment, schedule disruption, potential passenger compensation, and diminished goodwill. The best prospect for minimum disruption from a smoke event comes from crew training in responding to smoke, crew familiarity with smoke-clearing procedures, and direct power control to cabin amenities (e.g., an electrical power cutoff switch at each galley location). If the crew cannot confirm that a persistent onboard smoke or fire situation is completely resolved, however, Boeing recommends the earliest possible descent, landing, and evacuation of the airplane.

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Unknown smoke sources. A crew may not be able to identify a smoke source because of the location of the failed equipment or because of air circulation throughout the pressurized cabin. Unknown smoke sources include environmental control systems, equipment cooling fans, door heaters, plumbing heaters, avionics equipment, fluorescent lights, and wiring faults. The serious consequences of compromised structural integrity, system function, or survivable environment warrant timely and prudent action by the crew. Review of historical data on the rare fire events that resulted in hull loss indicates that the time from first indication of smoke to an out-of-control situation may be very short — a matter of minutes. For this reason, flight crew actions when responding to unknown smoke must be timely and appropriate.

QRH procedural steps for addressing an undetermined electrical smoke source call for the removal of electrical power for specific systems not necessary for safe flight, landing, and egress. This accounts for the majority of systems with a significant history of in-service smoke events. Also, as directed by the Boeing QRH non-normal checklist, the crew should plan to land at the nearest suitable airport. During the remainder of the flight, the crew should be alert to any new signs that suggest the smoke source and remain mindful of operational functions needed to accomplish the diversion.

Many unknown smoke situations are later attributed to electrical sources, substantiating the positive step of depowering specific equipment not necessary for the remaining flight, landing, and egress. Flight-critical systems do not have a significant smoke-event history.

#### 4. CAPABILITIES FOR THE REMAINDER OF THE FLIGHT

QRH procedural steps to remove power from affected equipment must ensure that sufficient system capability remains to accommodate adverse weather, a replanned route, and an approach into an unfamiliar airport. In-service data show that inordinate depowering of airplane systems beyond QRH procedures is not likely to be of benefit in an unknown smoke situation. Further, such action would significantly reduce airplane capabilities for the remainder of the flight.

During the study, several depowering strategies beyond current procedures were considered but ultimately not incorporated into the Boeing QRH non-normal checklists based on a risk-benefit evaluation. The elements of continued safe flight and landing were determined according to four safety requirements: controlled flight path, controlled airplane energy, navigation, and survivable environment. Conditions during the remainder of the flight could necessitate the availability of flight management system navigation, autopilot, multiple communication channels, first officer's displays, smoke detection, fire suppression, cabin lighting, and electrical power for removing smoke.

Exterior lighting illustrates the important difference between a prudent crew response and an inordinate depowering of airplane systems during an unknown smoke event. Equipment used for red anti-collision strobes includes high-energy components, such as a high-intensity flasher, and is an occasional source of smoke in the pressurized area of the airplane. From this standpoint, using the overhead switch to depower red anti-collision strobes may be beneficial during an unknown smoke event. Turning off all exterior

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lighting, however, would be an overreaction that would increase the risk of traffic conflict without commensurate likelihood of addressing the smoke source.

Without complicated troubleshooting-type procedures, it is a practical impossibility to depower all potential sources of unknown smoke without compromising necessary systems. The key to depowering potential unknown smoke sources while protecting necessary airplane functions involves balancing a series of risk assessments. Because the QRH must facilitate timely and prudent crew action appropriate for a broad range of scenarios, the QRH procedures cannot resort to a severely depowered electrical configuration. Boeing QRH procedures are developed with the understanding that, at a flight crews' discretion, additional action may be taken that is deemed necessary to ensure safe flight.

If a flight crew considers action beyond the QRH procedures, the action must be based on the particular situation and knowledge of airplane system operation. Procedural alternatives that may be reasonable near a familiar airport under visual meteorological conditions may not be appropriate in adverse weather or unfamiliar surroundings with a compromised airplane. The crew may also have additional flight deck effects or information beyond those explicitly identified in the QRH (e.g., tripped circuit breakers, synoptic information, or reports from cabin crew) that may assist in identifying the smoke source.

A flight crew in an extreme situation will benefit from airplane system knowledge that would be inappropriate to detail in time-critical procedures. For example, on most Boeing-designed two-engine airplanes, the right electrical bus powers a higher proportion of nonessential equipment, while the left electrical bus powers the higher proportion of flight-critical equipment.

The best response to an event of unknown smoke combines use of prudent QRH non-normal checklists and flight crew discretion based on the particular situation and a thorough knowledge of airplane systems.

### ***TIPS ON MINIMIZING SMOKE EVENTS***

The following tips are based on the review and analysis of in-flight smoke events on Boeing airplanes between November 1992 and June 2000:

- Although not a serious risk for propagating fire, several events occurring immediately before or after airplane departure were attributed to engine or auxiliary power unit (APU) maintenance activity during the previous ground leg. Most operators have ground crew procedures for engine or APU runs following maintenance. For an operator with concerns in this area, a review of ground procedures that require engine or APU run may be appropriate.
- Some known smoke events are directly preventable. Paper may come into contact with hot lighting, either in the cabin or crew rest areas. Food may be left in an oven or a coffeepot heated while empty.
- Smoke or actual fire events have been initiated by repeated circuit breaker resets during ground troubleshooting. Even when performed on the ground, circuit breaker resets should be performed

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cautiously. Important considerations are the number of reset attempts, cooling time between reset attempts, and the stationing of maintenance crew monitoring for unusual sounds or smell.

- A flight crew may be able to identify unknown smoke as air-conditioning smoke based on subsequent indication. In an air-conditioning smoke event caused by leaking engine oil, the first symptom noticed by the crew may be a burning odor of unknown origin. Subsequent engine indications might clarify an abnormal engine situation, and the corresponding bleed air source can be isolated.

## Training and Preparing for a New Flight Environment

A recent study of general aviation accidents suggests that in addition to pilot proficiency, transition training and experience in diverse flight environments can improve a pilot's ability to recognize and successfully respond to new challenges.



## Challenge Accepted

As pilots, it's always good to take on new challenges — whether it's flying a new type of aircraft or in a totally new environment. There's lots to learn from these experiences and they can certainly increase the fun factor with flying.

As with any new aeronautical endeavor, always be cautious and keenly aware of your limitations. It's important to ensure you are proficient enough to handle any of the challenges presented with unfamiliar environments. Let's look at a few ways you can expand your horizons to bolster safety and foster the fun of flying.



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### ***Shifting Gears***

your horizons is to get checked out in a different category or class of aircraft. Maybe you'd like to step up to the latest twin-engine technology. Or perhaps you'd prefer the more classic feel of a vintage tail dragger. Or it could be that the thrill of flying engine-less in a glider is beckoning you.

Another good challenge to consider is flying to a new location or environment. Does the versatility of flying with skis or floats sound appealing? How about snapping a few photos of some majestic mountaintops? Or experiencing the rugged remoteness that only backcountry flying offers?



Once you determine what new type of flying motivates you the most, you can design some great experiences to expand your flight envelope. The idea here is that a list of fun activities will enable you to build experience, stay proficient, and develop skills to help you become a safer pilot. Think of it as a “choose your own adventure” style of becoming a more well-balanced aviator.

One additional note on changing to a different type of aircraft: it's best to banish the notions of moving “up” and “down” when it comes to aircraft transition. Any pilot who has transitioned from a standard category airplane to a light sport aircraft (LSA) will attest to the very real challenges involved in moving to a lower-performance airplane. Bottom line: whether moving to a more capable aircraft or to a simpler machine, every bird we fly deserves, and indeed demands, the utmost level of respect from its pilot.

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### ***Flying For a Cause***

Another way to expand your horizons is directing your flight activity to a good cause. Volunteer service flying has multiple benefits when done properly. It can provide opportunities to sharpen your skills, value to the individuals and organizations you help, and enhance the public perception of general aviation. Keep in mind that this type of flying carries a lot of responsibility, and it does require effort to do it right. Be sure to seek out the appropriate guidance and requirements first.

### ***Details Matter***

Whichever type of aircraft or flying experience you choose, you'll want to get some quality training to maximize safety, utility, and fun. Comprehensive transition training and practice will ensure you'll get the most out of the machine — and yourself.

Each new operational environment presents unique challenges and opportunities. The trick is to know what you're getting into and how to operate safely and confidently in unfamiliar environments. For that you'll need to do some research.

A good place to start is with the Chart Supplement — formerly known as the Airport/Facility Directory — and your local VFR charts which will give you airport, terrain, and some obstruction information. The FAA's From the Flight Deck video series can also help you get a better sense of what to expect at an

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unfamiliar field too. These videos combine airport surface footage along with diagrams and visual graphics to clearly identify hot spots and other safety-sensitive items.

Magazine articles can be good general sources of information for exploring new areas, as can aircraft type clubs and pilot clubs/associations. However, your best sources of information will always be the pilots and instructors who regularly operate in the environment. It's well worth the time and effort to seek them out for guidance.

### ***Slow and Steady***

Be patient when tackling a new flying challenge, and work your way up taking incremental steps. If it's flying to a new environment, like a high-density altitude area, start with a decently-sized airport with longer runways. That will give you a feel for the longer takeoff runs and lower climb performance.

### ***Watch: Training and Preparing for a New Flight Environment in 57 Seconds***

[https://youtu.be/\\_rulsZinERc](https://youtu.be/_rulsZinERc)

### ***Resources***

The FAA Safety Briefing magazine has written extensively on this subject. Please read the following for more great tips on expanding your horizons!

### **ICAO partners with IATA and CANSO on new runway safety training initiative**

With the coming into effect this November of its new Global Reporting Format for Runway Surface Conditions (GRF), ICAO has agreed to partner with the International Air Transport Association (IATA) and the Civil Air Navigation Services Organisation (CANSO) on a new joint GRF training programme.

The new online course has been specifically designed for air traffic controllers and aeronautical information service staff, and will be available for enrolment in April of this year on the ICAO Global Aviation Training website. It complements existing courses developed in cooperation with Airports Council International (ACI) for airport operations staff, and with IATA for flight crews.

“Runway safety continues to remain aviation’s biggest safety challenge, representing more than half of all accidents reported to ICAO for commercial operations,” emphasized ICAO Secretary General Dr. Fang Liu.

“We have been collaborating in recent years on numerous initiatives to reduce runway safety-related accidents and incidents worldwide, and the hard work undertaken to forge international consensus on the new GRF, in addition to this new collaborative training course supporting it, should help to deliver substantial runway safety performance improvements.”



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The ICAO GRF will be effective as of 4 November 2021, and establishes a new methodology for assessing and reporting runway surface conditions to improve take-off and landing performance. The new agreement is the first of its kind between the three international organizations, and sets the stage for future collaboration on global safety enhancement initiatives.



[ICAO SAM RUNWAY SAFETY - GRF](#)

[IATA - Home](#)

[Home | CANSO](#)

[Global Aviation Training \(GAT\) \(icao.int\)](#)

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## Travelcare for travelers and crewmembers

USA Advice

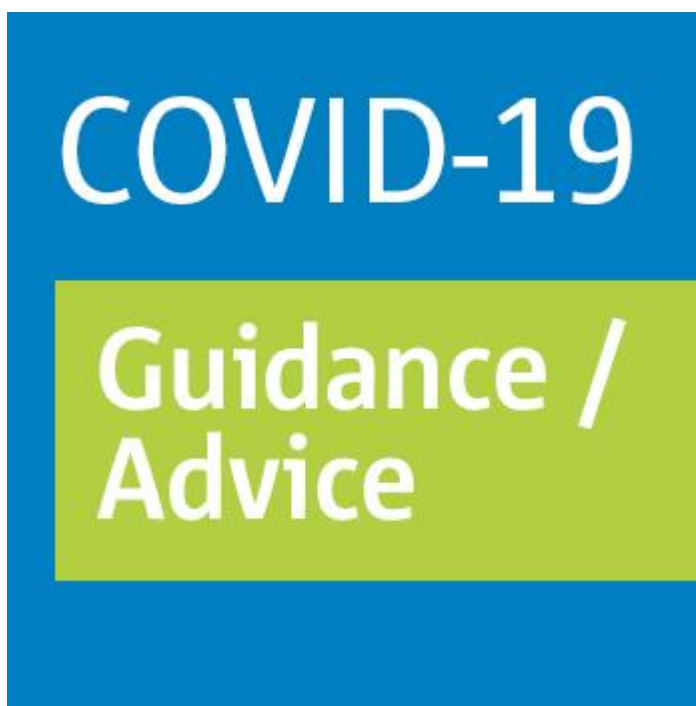
UK Advice

EASA advice

### ***Guidelines for the continued granting of exemptions in accordance with Article 71 of Regulation (EU) 2018/1139 (The Basic Regulation) to aircrew as per Regulation (EU) No 1178/2011, Regulation (EU) 2018/395 and Regulation (EU) 2018/1976***

This document provides guidelines for national competent authorities (NCAs) in using Article 71 BR for extending the exemption regime for pilots that still face significant issues when seeking compliance with requirements of the Aircrew Regulation, the Balloon Regulation or the Sailplane Regulation, in the course of the continuing COVID-19 pandemic.

The revised guidelines emphasise the additional consideration and necessary changes to address the ICAO target exemptions framework that will become applicable after March 31, 2021 and the specific timeline considerations on the extension of the theoretical knowledge examinations validity period.



### ***Guidelines for handling exemptions from crew training and checking requirements in the field of commercial air transport operations under Article 71 of Regulation (EU) 2018/1139 (The Basic Regulation)***

This document provides guidelines for national competent authorities (NCAs) in using Article 71 BR for extending the exemption regime for CAT operators that still face significant issues when seeking compliance with crew training and testing requirements in the course of the continuing COVID-19 pandemic.

This document includes a job aid for NCAs to ensure that all provisions of Article 71(1) and Article 71(2) BR are complied with.

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The revised guidelines emphasise the additional consideration and necessary changes to address the ICAO target exemptions framework that will become applicable after March 31, 2021 and the specific timeline considerations on the extension of the theoretical knowledge examinations validity period.

***EASA publishes updated versions of the guidelines for Aircrew and Air Operations on the use of extended exemptions***

EASA is publishing an updated version of the guidelines for Aircrew and Air Operations (Issue 2) on the use of extended exemptions as per article 71 of the Basic Regulation.

The revised guidelines emphasise the additional consideration and necessary changes to address the ICAO target exemptions framework that will become applicable after March 31, 2021 and the specific timeline considerations on the extension of the theoretical knowledge examinations validity period.

These two guidelines will support national competent authorities in the continued use of Article 71 of Regulation (EU) 2018/1139 for granting exemptions from the applicable requirements of Regulation (EU) No 965/2012, Regulation (EU) No 1178/2011, Regulation (EU) 2018/395, and Regulation (EU) 2018/1976.


- Guidelines on Air Operations
- Guidelines on Aircrew

***EASA publishes Safety Information Bulletin SIB 2021-06 Vaccination of Aircrew - Operational Recommendations.***

The European Union Aviation Safety Agency published a Safety Information Bulletin containing operational recommendations related to the vaccination of air crew.

The WHO recommends to prioritise transport workers, which include aircrew, in phase 3 of the vaccination, unless they have additional risk factors, in which case they would be prioritised on an individual basis. Nevertheless, several States have included among their priority lists for phase 1 and/or phase 2 the crew members involved in helicopter emergency medical services and air ambulance services, some of whom may have already received one dose of vaccine prior to the issuance of this SIB.

In the documentation provided by the EMA, as part of the assessment process of the vaccine, as well as other published studies regarding the vaccines approved for use in Europe, it can be noticed that some adverse reactions can result following the vaccination. These side effects are generally mild and usually common to any type of vaccine, e.g. headache, mild fever, nausea, pain at the site of injection, dizziness, gastrointestinal disorders, lymphadenopathy, thromboembolic events, etc. These side effects have shown to be more frequent between 12 and 48 hours following the vaccination and, in isolated cases, with a potential extended duration of up to 7 days. Severe side effects are extremely rare and were cited to be more frequent among the persons with multiple allergies and tend to appear immediately, in the first 30 minutes following the vaccination. Side effects were also reported more frequent following the second dose of the vaccine.


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Although the vast majority of side effects reported so far are mild and do not put into question in any way the safety of the approved vaccines, they may be further enhanced by in-flight conditions while at cruise level, such as lower air pressure and mild hypoxic environment.

At this time, no evidence is available regarding the impact of in-flight conditions on the severity of the side effects, nor on the resulting impact on the performance of the crew members during their safety related tasks. For these reasons, taking into account that these vaccines are new pharmacological products, EASA issued the current SIB providing recommendations for the National Competent Authorities (NCAs), aircraft operators, aero-medical centres (AeMCs), aero-medical examiners (AMEs) and aircrew members in order to ensure that the side effects described above do not interfere with the completion of any safety related tasks.

### **French Advice (in French)**

joe\_20210320\_0068\_0014 - Décret n° 2021-296 du 19 mars 2021 modifiant le décret n° 2020-1310 du 29 octobre 2020 prescrivant les mesures générales nécessaires pour faire face à l'épidémie de covid-19 dans le cadre de l'état d'urgence sanitaire

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## What about this month:

[Explorer \(icao.int\)](https://www.icao.int)

[Women in Aviation](#)

As part of International Women's Day (IWD), ICAO TV introduces the Women in Aviation series. The series is a space for discussion on diversity, gender equality and the advancement of women in the aviation industry.

[Women in Aviation - ICAO TV](#)

### ICAO Council approves new pandemic response and recovery measures

The ICAO Council approved six new COVID-19 recommendations and amended two others, as countries continue to address latest information and cooperate to optimize the role of international air transport in global pandemic recovery and ensure the speedy resumption of air travel.

The new and amended recommendations and updated guidelines are contained in the High-Level Cover Document and 'Take-off' Guidelines issued by the Council's Aviation Recovery Task Force (CART), established shortly after the pandemic was identified by the World Health Organization (WHO).

"Following the emergence of new virus variants, the vaccine rollouts, and other innovations to battle COVID-19, the work of CART has targeted specific issues related to testing and vaccination of passengers as part of a State's multilayer risk management strategy with the ultimate objective of restoring public confidence in air travel and getting passengers to fly again. After the 70% decrease in air traffic, international air transport can now see the light at the end of the tunnel thanks also to these new recommendations and guidelines" commented ICAO Council President Salvatore Sciacchitano.





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“The Council has also taken into account the latest position of the WHO, which specifies that proof of COVID-19 vaccination should not be made a condition for international travel,” he noted.

Specific areas relating to the transport of vaccines on commercial aircraft have been newly addressed by the CART, requiring attention and action on behalf of pharmaceutical manufacturers, airline and airport operators, and national aviation regulators. These include addenda to the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air to help better ensure that vaccines are safely handled, transported, and accepted to promote their rapid and effective global distribution.

“The CART’s multi-layer risk management strategy has proven to be very helpful. Phase III highlights the interoperability of testing protocols and proof-of-results certification, vaccination for crew and passengers, as well as on appropriate masks for air travel. In addition, guidance on Public Health Corridors has been updated to facilitate the establishment of such arrangements on a bilateral or multilateral level,” commented CART Chairperson Mr. Estanislao Esono Anguesomo of Equatorial Guinea.

Air crew were also the focus of new recommendations pertaining to regulatory alleviations and the continuous need of service providers and air transport essential personnel, including pilots and controllers, to maintain the validity of their certificates, licenses, and other professional accreditations and approvals.

The ICAO Manual on Testing and Cross-Border Risk Management Measures, first issued last November, has also been updated during CART Phase III to provide more detailed guidance on risk management and Public Health Corridors, information on recent scientific evidence regarding COVID-19 testing, as well as a new section on vaccination and its interdependencies with other tools available to States as part of their multilayer risk management framework. This work benefitted from the close collaboration of ICAO’s Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation and of the WHO and industry groups.

Recognizing that the COVID-19 crisis has required countries to confront difficult trade-offs associated with health, economic, and social challenges and that public health still remains the overriding priority, the Council endorsed the CART’s call that countries adequately consider aviation’s crucial role in the fight against the pandemic when defining related national policy and spending priorities.

“As these new guidelines emphasize, global supply chains, emergency and humanitarian response, and the swift distribution of vaccines to needful populations everywhere rely fundamentally on air transport,” highlighted President Sciacchitano. “In light of aviation’s important role as an enabler and multiplier of economic activity, national authorities are being called upon to ensure that the guidance presented here is fully considered by all relevant decision-makers.”

In welcoming the Phase III approval by Council, ICAO Secretary General Dr. Fang Liu appreciated the recognition by States of the critical importance of air transport to current global priorities, in addition to “the tremendous efforts on behalf of the ICAO Secretariat for coordinating the expert advice and rapid updates the CART Phase III process has required.”

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Dr. Liu also drew attention to the continuing role being played by ICAO in support of more effective and aligned regional and international pandemic cooperation in support of the CART objectives and emphasized that current roadmaps and coordination mechanisms were being amended to adjust to the Phase III changes.

The Council also agreed to convene a high-level conference with Ministerial participation in October to muster the political will of States and obtain commitment towards a full recovery of international air transport.



New and revised CART Phase II Guidance

### ***Recommendation 12 (Revised)***

Member States should plan to put in place the necessary measures to mitigate risks associated with prolonged regulatory alleviations, and to avoid extending alleviations (both core and extended COVID-19 Contingency Related Differences (CCRDs)) beyond 31 March 2021. States that are in need of alternative actions to enable service providers and personnel to maintain the validity of their certificates, licenses, and other approvals during the COVID-19 pandemic should use the Targeted Exemptions (TE) system from 1 April 2021. In addition, States are encouraged to facilitate cross-border access to medical and training facilities, including flight simulation training devices used for flight crew (national and foreign) and Air Traffic Controllers (ATCOs) to maintain their certifications, recency of experience, and proficiency.

### ***Recommendation 14 (Revised)***

States considering the formation of a Public Health Corridor (PHC) should actively share information with each other to implement PHCs in a harmonized manner. To facilitate the implementation, the ICAO Implementation Package (iPack) on establishing a PHC is available to States, in addition to PHC-specific tools published on the ICAO website and the App providing a template PHC arrangement between States.

### ***Recommendation 15***

Member States are urged to implement Addenda Nos. 1 and 2 to the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) without delay in order to facilitate the transport of COVID-19 vaccines and to permit certain dangerous goods to be carried on board aircraft to provide for a safe, sanitary operating environment for passengers and crew. If any State wishes to be more restrictive, they are reminded of their obligation to file a State variation to the Technical Instructions.

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### ***Recommendation 16***

Member States are encouraged to consider the temporary lifting of restrictions to air cargo operations, including but not limited to granting extra-bilateral rights, in particular for all-cargo services, to foreign airlines to facilitate the transportation of essential goods, supplies and COVID-19 vaccines.

### ***Recommendation 17***

Member States should implement testing certificates based on the protocol, minimum dataset and implementation approaches outlined in the ICAO Manual on Testing and Cross-Border Risk Management Measures (Doc 10152) to facilitate air travel. States are encouraged to request evidence of testing that is secure, trustworthy, verifiable, convenient to use, compliant with data protection legislation and internationally/globally interoperable. Existing solutions should be considered and could incorporate a visible digital seal. This may be applicable to vaccination certificates.

### ***Recommendation 18***

Member States should facilitate access for air crew to vaccination as quickly as possible within the World Health Organization (WHO) Strategic Advisory Group of Experts on Immunization (SAGE) Stage III recommendations.

### ***Recommendation 19***

Vaccination should not be a prerequisite for international travel. At such time as evidence shows that vaccinated persons would not transmit the SARS-CoV-2 virus or would present a reduced risk of transmitting the virus, Member States may exempt such individuals from testing and/or quarantine measures, in accordance with a State's accepted risk threshold, national framework, the COVID-19 situation and the multilayered risk mitigation framework described in the Take-off: Guidance for Air Travel through the COVID-19 Public Health Crisis.

### ***Recommendation 20***

Member States should ensure that ICAO's CART guidance is taken into consideration by the wider State administration in the decision-making processes on national recovery planning.



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## FAA regulations



**Federal Aviation  
Administration**

Press Release - For Immediate Release \* Date: March 22, 2021

Contact: [pressoffice@faa.gov](mailto:pressoffice@faa.gov)

You are subscribed to News updates for the Federal Aviation Administration. A new Press Release is now available. We've included a copy of the release in this email.

WASHINGTON — The United States is leading the way to a new era of commercial space transportation with a final rule that streamlines the licensing process for private sector launch and reentry operations.

“Innovation in commercial space transportation is increasing dramatically, and policy needs to keep up. This rule will help us to prepare for future U.S. leadership in commercial space transportation by facilitating the continued economic growth and innovation of the American aerospace industry and ensuring the highest level of public safety,” said U.S. Transportation Secretary Pete Buttigieg.

The new rule took effect on March 21 and arose from a directive of the National Space Council to encourage American leadership in space commerce. The rule aims to support greater innovation, flexibility and efficiency in commercial space operations. It also seeks to keep pace with the dramatic increase in the \$400 billion global space industry that is expected to generate revenues of \$1.1 trillion or more by 2040.

The rule streamlines and modernizes the Federal Aviation Administration (FAA) commercial space launch and reentry licensing regulations by eliminating obsolete requirements, replacing most prescriptive requirements with performance-based criteria and reducing duplicative regulations.

It also establishes a single set of licensing and safety regulations for several types of commercial space operations and vehicles. For example, one license could support multiple launches and reentries at multiple locations—a game-changing innovation that will make this process more efficient.

“With the streamlined rule we can make sure launch vehicles aren’t tethered to the launch pad with red tape and at the same time protect public safety during commercial space operations,” said FAA Administrator Steve Dickson.

The number of FAA-licensed commercial space launches has dramatically accelerated from only one in 2011 to a record 39 in 2020—a 3800% increase in just ten years. For 2021, the FAA is forecasting 50 or more FAA-licensed launch and reentry operations.

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The new rule will better fit today's constantly evolving aerospace industry whose technological advancements are lowering the cost of launch operations and opening new markets for satellites, space tourism and potentially suborbital point-to-point regional and intercontinental travel.

## Background

In addition to the rule, to meet the increasing demand for commercial space transportation services, the FAA is working with current active license holders to authorize planned operations or modify current licenses. The agency is also talking with a number of new entrants interested in applying for licenses. As of now, 11 companies hold 23 FAA-issued launch or reentry licenses.

State and local governments are also looking to establish launch and reentry sites to provide additional operational capacity and serve as economic hubs. In the U.S., there are presently 12 FAA-licensed spaceports, in addition to Federal government and private launch sites.

Additionally, the FAA reorganized its Office of Commercial Space to meet the burgeoning private sector licensing demand and established the Office of Spaceports. The agency is also continuing to test and deploy new technologies to further enable the safe and efficient integration of commercial space operations with other types of air traffic in the National Airspace System.

An FAA license is required to conduct any commercial launch or reentry, the operation of any launch or reentry site by U.S. citizens anywhere in the world, or by any individual or entity within the United States.

Since 1989, the FAA has licensed or permitted more than 450 commercial space launches and reentries. During that time there have been no fatalities, serious injuries or significant property damage to members of the public.

## ***FAA Approves Renewal of Orbital Sciences Launch Operator Licenses***

After completing a comprehensive review, the FAA approved the renewal of two Launch Operator Licenses for Orbital Sciences, LLC, a subsidiary of Northrop Grumman.

The licenses are valid for five years and authorize the company to conduct flights of its Pegasus launch vehicle from the Wallops Flight Facility in Virginia and the Cape Canaveral Space Force Station in Florida. Orbital Sciences must still receive FAA authorization for specific launches.

The Pegasus operates by being attached to a carrier aircraft and launched while airborne to deliver payloads to low earth orbit.

The FAA's top priority in regulating commercial space transportation is that launch and reentry operations are safe for the public. The agency protects public safety by licensing commercial launch and reentry activities and monitoring regulatory compliance in all phases of FAA-licensed operations. It also issues safety approvals for launch and reentry vehicles, various safety systems and the personnel performing licensed activities.

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An FAA license is required to conduct any commercial launch or reentry, the operation of any launch or reentry site by U.S. citizens anywhere in the world, or by any individual or entity within the United States.

#### [Handbooks & Manuals \(faa.gov\)](#)

- [Aviation Mechanic Airframe – AMA](#)(PDF)
- [Aviation Mechanic General – AMG](#)(PDF)
- [Aviation Mechanic Powerplant – AMP](#)(PDF)
- [Inspection Authorization – IAR](#)(PDF)
- [Advanced Ground Instructor – AGI](#)(PDF)
- [Flight Instructor Airplane – FIA](#)(PDF)
- [Fundamentals of Instruction – FOI](#)(PDF)
- [Airline Transport Helicopter – ATH](#)(PDF)
- [Airline Transport Multiengine Class Rating – ATM 121](#)(PDF)
- [Airline Transport Single Engine Class Rating – ATS 135](#)(PDF)
- [Commercial Pilot Airplane – CAX](#)(PDF)
- [Military Competence, Non-Category – MCN](#)(PDF)
- [Light Sport Airplane](#)(PDF)
- [Private Pilot Airplane – PAR](#)(PDF)
- [Private Pilot Helicopter – PRH](#)(PDF)
- [Private Pilot Glider – PGL](#)(PDF)
- [Unmanned Aircraft General — Small — UAG](#)(PDF)
- [Dispatcher – ADX](#)(PDF)
- [Instrument Rating Airplane – IRA](#)(PDF)
- [Instrument Rating Helicopter – IRH](#)(PDF)
- [Parachute Rigger – RIG](#)(PDF)


#### **Draft ACs**

**150/5390-2D** - Draft AC 150/5390-2D, Heliport Design

#### **Advisory Circular**

**AC 91-92** - Pilot's Guide to a Preflight Briefing

**AC 20-185A** - Airworthiness Approval of Synthetic Vision Systems, Synthetic Vision Guidance Systems and Aircraft State Awareness Synthetic Vision Systems

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## Forms - Orders & Notices

**JO 7210.930** - Administration of Facilities; En Route Operations and Services

**JO 7340.630** - DELETE ICAO THREE LETTER DESIGNATOR (3LD) AND ASSOCIATED CALL SIGN “TXA/OKAY AIR” AND “TXS/TEXAIR”; ADD ICAO 3LD “TXA” AND ASSOCIATED CALL SIGN “TEXAIR”

**JO 7340.631** - ICAO THREE LETTER DESIGNATOR (3LD) “MAK” AND ASSOCIATED CALL SIGN “MAKLEE”

**8900.585** - Continuous Airworthiness Maintenance Program (CAMP) Guidance and Policy

**8900.586** - Operator Use of Engineering Change Authorizations (EA), Engineering Change Orders (EO), and/or Other Acceptable Maintenance Methods Applicable to Minimum Equipment List (MEL) Items

**8900.583** - Portable Electronic Flight Bag Battery Replacement Intervals

**JO 7340.629** - COMPANY NAME CHANGE: MOUNTAIN CREST FARM, LLC

**JO 7340.628** - ICAO THREE LETTER DESIGNATOR (3LD) “JIT” AND ASSOCIATED CALL SIGN “JET IT”

**8900.584** - How to Document Regulatory Compliance Actions and Enforcement Actions in SAS, including Specific Instructions for Passenger Interference Cases in the EIS

**JO 7220.4B** - FAA Certification of Pilot Weather Briefer

**JO 7340.627** - COMPANY NAME CHANGE: VOLO AVIATION, LLC (STRATFORD, CT)

**JO 7360.4** - CHANGE TO FAA ORDER JO 7360.1, APPENDIX A, APPENDIX B, AND APPENDIX C, AIRCRAFT TYPE DESIGNATORS

**8900.582** - Suspected Illegal Charter Investigations Reporting

**JO 7110.779** - Boeing 777X Wake Turbulence Categorization

**Form AC 8050-98** - AIRCRAFT SECURITY AGREEMENT

**Form AC 8050-88A** - AFFIDAVIT OF OWNERSHIP LIGHT-SPORT AIRCRAFT MANUFACTURER'S

**Form AC 8050-88** - AFFIDAVIT OF OWNERSHIP FOR AMATEUR-BUILT AND OTHER NON-TYPE CERTIFICATED AIRCRAFT

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**Form AC 8050-5** - DEALER'S AIRCRAFT REGISTRATION CERTIFICATE APPLICATION

**Form AC 8050-4** - CERTIFICATE OF REPOSSESSION OF ENCUMBERED AIRCRAFT

**Form AC 8050-2** - AIRCRAFT BILL OF SALE

**Form AC 8050-1B** - Aircraft Registration Renewal Application

**8900.581** - OpSpec A131, Contract Training—Standardized Curricula

**Form AC 8050-1** - AIRCRAFT REGISTRATION APPLICATION

**8900.580** - TSpec B005, Special Rule Curricula, and Continuation TSpecs B105 and B106

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## EASA regulations

[Approval Data Library | EASA \(europa.eu\)](#)

### Rules

[Regulations | EASA \(europa.eu\)](#)

**EASA Form 9** - FAA Recommendation

**EASA Form 16** - EASA US Part-145 Approvals

**Final Certification Memorandum on Airplane Flight Manual revisions for changes in mass with and without effect on the certified noise levels - Issue 02**

**Working Arrangement between Civil Aviation Authority of the United Kingdom and EASA on the EU SAFA Programme**

### Easy access Rules

#### ***EASA publishes updated Easy Access Rules for Part-21 in pdf and online format***

The updated Easy Access Rules for Airworthiness and Environmental Certification (Regulation (EU) No 748/2012) are now available for free download from the EASA website in:

- an easy-to-read pdf format with advanced navigation features through links and bookmarks
- an online format compatible with tablets and mobiles, with filters for creating a tailored view as well as enhanced search functions.

This Revision from March 2021 incorporates ED Decision 2021/001/R (AMC and GM to Part 21 — Issue 2, Amendment 11).

As it is generated through the eRules platform, this Easy Access Rules document will be updated regularly to incorporate further changes and evolutions to its content.

#### ***EASA publishes Easy Access Rules for AMC-20 Amendment 20 on ageing-aircraft requirements in pdf and online format***

Amendment 20 of AMC-20 (Easy Access Rules for Acceptable Means of Compliance for Airworthiness of Products, Parts and Appliances) is now available for free download from the EASA website in:

- an easy-to-read pdf format with advanced navigation features through links and bookmarks
- an online format compatible with tablets and mobiles, with filters for creating a tailored view as well as enhanced search functions.

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This Amendment incorporates the elements of ED Decision 2020/023/R on acceptable means of compliance (AMC) and guidance material (GM) to the new ageing-aircraft requirements introduced into Part-26.

Being generated through the eRules platform, this Easy Access Rules document will be updated regularly to incorporate further changes and evolutions to its content.

### ***EASA publishes updated Easy Access Rules for Continuing Airworthiness***

This revision from February 2021 incorporates:

- amending Regulation (EU) 2020/1159 as regards the compliance of the M.A.302 Aircraft Maintenance Programme with additional airworthiness requirements established in Part-26 (Regulation (EU) 2015/640)
- the related ED Decision 2020/023/R.

As it is generated through the eRules platform, the document will be updated regularly to incorporate further changes and evolutions to the content.

### **Agency Decisions**

[Overview](#) | [EASA \(europa.eu\)](#)

**ED Decision 2021/002/R** - Update of the AMC & GM to Subpart FC of Part-ORO (evidence-based training (EBT))

- Acceptable means of compliance and guidance material to Annex I (Definitions) — Issue 1, Amendment 12
- AMC and GM to Part-ARO — Issue 3, Amendment 11
- AMC and GM to Part-ORO — Issue 2, Amendment 17
- AMC and GM to Part-FCL — Issue 1, Amendment 11
- AMC and GM to Part-ARA — Issue 1, Amendment 11

### **Evidence-based training (EBT)**

Following the adoption of:

Commission Implementing Regulation (EU) 2020/2036 of 9 December 2020 amending Regulation (EU) No 965/2012 as regards the requirements for flight crew competence and training methods and postponing dates of application of certain measures in the context of the COVID-19 pandemic; and

Commission Implementing Regulation (EU) 2020/2193 of 16 December 2020 amending Regulation (EU) No 1178/2011 as regards the requirements for flight crew competence and training methods, and as regards the reporting, analysis and follow-up of occurrences in civil aviation,

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the objective of this Decision is to facilitate the implementation of the newly introduced or amended flight crew training requirements that are intended to improve pilot competencies by updating the associated acceptable means of compliance (AMC) and guidance material (GM).

The present Decision and the adoption of the above-mentioned Regulations are parts of a global safety initiative endorsed by the International Civil Aviation Organization (ICAO), whose objective is to determine the relevance of the existing pilot training according to aircraft generation. In particular, they constitute a second step in the context of European Union rulemaking actions to implement EBT. The first step was completed in 2015 with the publication of ED Decision 2015/027/R that provided guidance material to allow the implementation of a ‘mixed EBT’ which maintains the current operator proficiency check (OPC) and licence proficiency check (LPC). This Decision completes the second step initiated by the above-mentioned Regulations that amended Regulation (EU) No 965/2012 (Air OPS Regulation) and Regulation (EU) No 1178/2011 (Aircrew Regulation) to allow authorities to approve the baseline EBT, which replaces OPC and LPC. This will allow a single philosophy of recurrent training within the airline. EBT is intended to improve safety by enhancing the capability of flight crews to operate the aircraft in all flight regimes by recognising and managing unexpected situations. The EBT concept is designed to maximise learning and minimise formal checking. Further work is foreseen in the context of the activities of RMT.0599 to allow expansion of EBT to the operator conversion course and initial type rating, as well as to other types of aircraft (e.g. helicopters and business jets).

The impact assessment (IA) detailed in NPA 2018-07 and Opinion No 08/2019 showed that the implementation of EBT by the operator on a voluntary basis is the preferred option in regulating recurrent training and checking of flight crew. The IA illustrates that the adopted rules in combination with the AMC & GM issued with this Decision contribute to significant improvement in safety by strengthening the competencies of flight crews while providing a cost-efficient and socially acceptable framework.

#### **ED Decision 2021/001/R - AMC and GM to Part 21 — Issue 2, Amendment 11**

The European Union Aviation Safety Agency (EASA) issues, as necessary, acceptable means of compliance (AMC) and guidance material (GM) to Annex I (Part 21) to Regulation (EU) No 748/2012 to illustrate the means for stakeholders to establish compliance with the Regulation or to illustrate the meaning of a requirement. These AMC or GM require regular amendments to take specific safety issues into consideration and introduce new or amend the existing acceptable means of compliance or procedures.

The objective of this Decision is to:

- address a safety recommendation following an accident that occurred in Norway on 29 April 2016;
- resolve certain recurrent implementation issues by improving the text of the AMC and GM to Annex I (Part 21);
- leave no room for misinterpretation of the Regulation, as noticed during design organisation approval (DOA) holder initial investigations and surveillance activities, by including clarifications;
- align the means of compliance with the current industry practices; and



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- remove unnecessary guidance material and correct typographical errors.

Decision 2021/001/R amends the AMC and GM to Annex I (Part 21) to Regulation (EU) No 748/2012.

The amendments are expected to increase the efficiency of implementing Annex I (Part 21) and ensure alignment with the current industry practices.

## Notices of Proposed Amendment

[Notices of Proposed Amendment \(NPAs\) | EASA \(europa.eu\)](#)


### NPA 2021-03 - regular update of the Certification Specifications for Simulator Data — CS-SIMD

The objective of this Notice of Proposed Amendment (NPA) is to provide stakeholders with additional guidance on the processes, procedures, and requirements related to operational suitability data (OSD) for simulator data. The guidance is based on best practice and experience gained since the initial issue of the Certification Specifications and Guidance Material for Simulator Data (CS-SIMD) in 2014. The scope of the NPA was extended to include flight simulation training devices (FSTDs) for which a qualification standard is not laid down in Regulation (EU) No 748/2012 (the ‘Initial Airworthiness Regulation’). Such a standard needs be defined in special conditions.

To this end, this NPA proposes to:

- extend the applicability of CS-SIMD to categories of aircraft other than aeroplanes and helicopters;
- provide further guidance on the interaction between the data provider and the European Union Aviation Safety Agency (EASA), their responsibilities and tasks;
- describe the different steps of the process and flow of data from data gathering by the data provider until the determination of the validation data as finally used in the master qualification test guide (MQTG);
- clarify the means for substantiating the scope of validation source data (VSD);
- create diagrams to visualise the various validation data road map (VDR) approval processes, including cases where interim qualification steps are necessary; and
- clarify the terminology and provide additional guidance on its use.

he proposed amendments are expected to facilitate the applicants’ compliance with the OSD requirements for simulator data (SIMD) and improve efficiency by rendering the process of evaluating applications for OSD certification more comprehensible. Overall, the proposed amendments are expected to have a moderate safety benefit and no social or environmental impacts.

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## ASECNA

[AIP ASECNA](#)

**Regulations**

**Notam**

[Consultation NOTAM \(asecna.aero\)](#)

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## French regulations

### JORF

**joe\_20210331\_0077\_0054** - Arrêté du 26 mars 2021 modifiant l'arrêté du 12 juillet 2010 relatif à l'exploitation de services de transport aérien par la société Air Austral

**joe\_20210330\_0076\_0047** - Arrêté du 25 mars 2021 fixant la liste des aérodromes et groupements d'aérodromes et le tarif de la taxe d'aéroport applicable sur chacun d'entre eux ainsi que le tarif de la majoration de la taxe d'aéroport

**joe\_20210328\_0075\_0041** - Arrêté du 23 mars 2021 portant création d'une zone réglementée identifiée LF-R 292 Houéville, dans la région d'Houéville (Vosges), dans la région d'information de vol de Reims

**joe\_20210328\_0075\_0040** - Arrêté du 23 mars 2021 portant création d'une zone réglementée identifiée LF-R 263 Septfonds, dans la région de Septfonds (Tarn-et-Garonne), dans la région d'information de vol de Bordeaux

**joe\_20210328\_0075\_0039** - Arrêté du 23 mars 2021 portant création d'une zone réglementée identifiée LF-R 238 Longages, dans la région de Longages (Haute-Garonne), dans la région d'information de vol de Bordeaux

**joe\_20210328\_0075\_0038** - Arrêté du 23 mars 2021 portant création d'une zone réglementée identifiée LF-R 187 Cessales, dans la région de Cessales (Haute-Garonne), dans la région d'information de vol de Bordeaux

**joe\_20210328\_0075\_0037** - Arrêté du 23 mars 2021 portant suppression d'une zone réglementée identifiée LF-R 161, dans la région de Sarran (Corrèze), dans la région d'information de vol de Bordeaux

**joe\_20210328\_0075\_0036** - Arrêté du 23 mars 2021 portant création d'une zone interdite dans la région de Grenoble (Isère), identifiée LF-P 14 Grenoble, dans la région d'information de vol de Marseille

**joe\_20210328\_0075\_0035** - Arrêté du 23 mars 2021 portant création d'une zone interdite dans la région de Creys-Mépieu (Isère), identifiée LF-P 11 Creys Malville, dans la région d'information de vol de Marseille

**joe\_20210325\_0072\_0043** - Arrêté du 15 mars 2021 portant modification de l'arrêté du 19 février 2021 portant pérennisation de l'expérimentation du service technique du centre en route de la navigation aérienne Sud-Est

**joe\_20210325\_0072\_0017** - Arrêté du 18 mars 2021 portant suppression d'une zone dangereuse identifiée LF-D 70 Gramat dans la région de Gramat (Lot), dans la région d'information de vol de Bordeaux

**joe\_20210325\_0072\_0016** - Arrêté du 18 mars 2021 portant création d'une zone interdite identifiée LF-P 50 Gramat dans la région de Gramat (Lot), dans la région d'information de vol de Bordeaux

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**joe\_20210325\_0072\_0015** - Arrêté du 18 mars 2021 portant création d'une zone interdite identifiée LF-P 51 Mutzig dans la région de Strasbourg (Bas-Rhin), dans la région d'information de vol de Reims

**joe\_20210325\_0072\_0014** - Arrêté du 18 mars 2021 portant création d'une zone interdite identifiée LF-P 52 Le Bouchet dans la région d'Itteville (Essonne), dans la région d'information de vol de Paris

**joe\_20210325\_0072\_0013** - Arrêté du 18 mars 2021 portant suppression d'une zone réglementée identifiée LF-R 91 Belin dans la région de Belin-Béliet (Gironde), dans la région d'information de vol de Bordeaux

**joe\_20210325\_0072\_0012** - Arrêté du 18 mars 2021 portant création d'une zone réglementée identifiée LF-R 289 Sanguinet dans la région de Cazaux (Gironde), dans la région d'information de vol de Bordeaux

**joe\_20210325\_0072\_0011** - Arrêté du 18 mars 2021 portant création d'une zone réglementée identifiée LF-R 290 Carcans dans la région de Carcans (Gironde), dans la région d'information de vol de Bordeaux

**joe\_20210325\_0072\_0010** - Arrêté du 18 mars 2021 portant création d'une zone réglementée identifiée LF-R 293 Moulainville dans la région de Moulainville (Meuse), dans la région d'information de vol de Reims

**joe\_20210325\_0072\_0009** - Arrêté du 18 mars 2021 portant création d'une zone réglementée identifiée LF-R 294 Landivisiau dans la région de Landivisiau (Finistère), dans la région d'information de vol de Brest

**joe\_20210325\_0072\_0008** - Arrêté du 18 mars 2021 portant suppression d'une zone interdite temporaire au-dessus de la centrale nucléaire de Creys-Malville (Isère) identifiée ZIT 11 Creys-Malville, dans la région d'information de vol de Marseille

**joe\_20210325\_0072\_0007** - Arrêté du 18 mars 2021 portant suppression d'une zone interdite temporaire au-dessus du site industriel de Grenoble (Isère) identifiée ZIT 14 Grenoble, dans la région d'information de vol de Marseille

**joe\_20210325\_0072\_0006** - Arrêté du 18 mars 2021 portant suppression d'une zone interdite temporaire au-dessus du centre d'étude nucléaire de Miramas (Bouches-du-Rhône) identifiée ZIT 17 Miramas, dans la région d'information de vol de Marseille -

**joe\_20210319\_0067\_0012** - Arrêté du 18 mars 2021 portant création d'une zone interdite temporaire dans la région de Calais (Pas-de-Calais) identifiée ZIT Calais, dans la région d'information de vol de Paris - **Active**  
**H 24 du 20 mars 2021 à 20 heures au 23 mars 2021 à 20 heures.**

**joe\_20210318\_0066\_0047** - Décret n° 2021-294 du 16 mars 2021 modifiant le décret n° 2020-1388 du 13 novembre 2020 portant dérogation aux critères d'éligibilité d'une liaison aérienne à une prise en charge financière par l'Etat et à la limitation de la participation financière de l'Etat sur les liaisons aériennes métropolitaines soumises à des obligations de service public

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**joe\_20210316\_0064\_0026** - Arrêté du 19 février 2021 modifiant l'arrêté du 26 décembre 2016 fixant la liste des sites ou services de la direction générale de l'aviation civile en application de l'arrêté du 26 décembre 2016

**joe\_20210311\_0060\_0049** - Arrêté du 10 mars 2021 portant création d'une zone interdite temporaire dans la région de Dammartin-en-Goële (Seine-et-Marne), identifiée Dammartin, dans la région d'information de vol de Paris

**joe\_20210305\_0055\_0044** - Arrêté du 26 février 2021 modifiant l'arrêté du 3 août 2007 relatif à l'exploitation de services de transport aérien par la société Corsair

**joe\_20210305\_0055\_0043** - Arrêté du 19 février 2021 modifiant l'arrêté du 4 avril 2019 portant création d'une expérimentation du service technique du service de la navigation aérienne Sud-Est

**joe\_20210305\_0055\_0042** - Arrêté du 19 février 2021 modifiant l'arrêté du 22 juin 2017 portant création d'une expérimentation du service technique du centre en route de la navigation aérienne Est

**joe\_20210305\_0055\_0041** - Arrêté du 19 février 2021 portant pérennisation de l'expérimentation du service technique du centre en route de la navigation aérienne Sud-Est

## OSAC-DSAC

Guide gestion risques psychologiques addictions **Ed1 V2\_05022021**

**G5200Ed3v0** - Guide de rédaction du manuel des spécifications de l'organisme de formation Partie-147 (MTOE)

**P4503Ed0v0** - Approbation pour remise en service selon le règlement (UE) n°1321/2014 Partie-145 d'un aéronef exploité en transport aérien commercial sous licence


**G4001Ed4v0 (1)** - Guide général Partie-M et Partie-ML

**L0100Ed0v0 (1)** - Répertoire des documents

## Bulletin officiel de la DGAC

**TRAA2104196S** - Décision du 16 mars 2021 portant délégation de l'organisation des services aériens entre Brive et paris (Orly) au syndicat mixte pour la création, l'aménagement et la gestion de l'aérodrome de Brive Souillac.

**TRAA2107805S\_extrait** - Décision du 8 mars 2021 portant renouvellement de la personnalité qualifiée du référent déontologue de la direction générale de l'aviation civile.

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## European Centre for Cybersecurity in Aviation (ECCSA)

See : <https://www.easa.europa.eu/eccsa>

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## U.A.S. – Drones

See : <https://www.easa.europa.eu/eccsa>

### EASA issues guidelines for management of drone incidents at airports

COLOGNE, March 8, 2021 – The European Union Aviation Safety Agency (EASA) published guidance to help aviation operators and national authorities manage drone incidents near airports, a response to a number of recent events which have disrupted Europe's air traffic at considerable expense to aviation operators, bringing inconvenience for passengers and posing a potential safety threat.

EASA's "Drone Incident Management at Aerodromes" manual addresses unauthorised drone usage in the vicinity of airports. Such incidents may occur by accident -- when individuals are simply not aware of the problems their actions may create – or due to individuals acting with deliberate intent to disrupt, such as activists. At the extreme, the actions may have criminal or terrorist motivation.


The manual includes guidance on how to ascertain whether a criminal offence has been committed, developed with input from law enforcement authorities.

"The root problem here is that these activities are unauthorised, and therefore by definition take place in ignorance or avoidance of the rules that have been defined for safe drone operations," said EASA Executive Director Patrick Ky. "Our aim is to offer guidance and best practice advice to help aerodrome operators to prepare for such incidents and take the right steps when they occur, so as to minimise the extent of the disruption while ensuring that aviation operations remain safe."

Since the start of 2020, major drone-incident disruptions have occurred at large airports such as Madrid, Frankfurt and Riga, as well as Manchester in the U.K. The latest major event, also in Frankfurt, caused again flight diversions on February 21, 2021. Many smaller events also occur. With air traffic currently down due to COVID-19, many other incidents that could cause interference between aircraft and drones may go undetected.

The recommendations are addressed to all aerodromes in the scope of the European Aviation System (currently over 500) and other aviation actors, such as Air Traffic Control and air operators. The intention is to provide a user-friendly guide that can also be applied at small aerodromes, which may not have the resources to develop the more extensive plans, involving detection systems, that are currently being tested and deployed by larger operators.

The document is split into three parts: the first of which is publicly available. It describes the challenges and raises awareness for the issue. The other parts are addressed specifically to those parties involved in management of these incidents and are not being widely published due to the varied nature of the threat.

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## NAT OPS Bulletin

[NAT OPS Bulletins - All Documents \(icao.int\)](https://www.icao.int/NatOps/Bulletins/)

No update this month



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## IOSA

### IATA - IOSA

Related documents can also be found here:

- [IOSA Support Program](#) (pdf)
- [IOSA Guidance for Safety Monitoring under COVID-19 Ed. 4](#) (pdf)
- [IPM Ed 12 – Temporary Appendix - Revision 1](#) (pdf)
- [ISM Ed 13 - Remote Audit - Revision 1](#) (pdf)
- [IAH P&G Ed 11 - Temporary Appendix](#) (pdf)
- [IOSA Operator Alert 18 - IPM IAH updates](#) (pdf)

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## Safety Alerts

*See attached*

Sunny Swift: See and Avoid Issue / [29easa-sunny-swift-flight-instructor-issue29-en](#)

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## Safety information bulletin

Privacy and data protection are extremely important to Qatar Airways. As a valued Privilege Club member and with transparency being a top priority for us, we wish to inform you of an issue that was notified to us by a third-party IT supplier.

We have been notified by SITA Passenger Service System (US) Inc. (SITA) of a data security incident impacting their servers, involving the passenger data of many airlines.

The incident involved hackers penetrating SITA's systems who accessed a limited set of customer data. The data in question relates to names, membership numbers, tier status and in some cases meal and seat preferences. Unfortunately, some of our Privilege Club members were impacted and this data was exposed. Please be assured that this was not a breach of Qatar Airways' systems.

While SITA has confirmed to us that password data is not affected, we nonetheless recommend that you change your Privilege Club password as a precaution - you can reset it here. As best practice, we recommend our members update their Privilege Club password regularly anyway. Otherwise, no further action is required from you.

To learn more about the security incident, please visit SITA's website here or browse our FAQs.

All official communications on this matter from Qatar Airways are sent from @qatarairways.com.qa or @qatarairways.com or @qr.qatarairways.com or @q miles.com or @qr.qmiles.com domains.

When clicking on a link in an email, please verify that your browser has opened a genuine qatarairways.com or qmiles.com or qatardutyfree.com.qa website address.

Sincerely,

Rajan Mohan

SVP Digital – Commercial

**FAA**

[All Information for Operators \(InFOs\) \(faa.gov\)](#)

[All Safety Alerts for Operators \(SAFOs\) \(faa.gov\)](#)

[https://rgl.faa.gov/Regulatory and Guidance Library/rgSAIB.nsf/MainFrame?OpenFrameSet](https://rgl.faa.gov/Regulatory%20and%20Guidance%20Library/rgSAIB.nsf/MainFrame?OpenFrameSet)

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04/03/2021	InFO 21002	Cabin Air Quality Educational Materials.
16/06/2021	SAFO21002	Fraudulent or Intentionally False Reproduction and/or Alteration of a Genuine Certificate of Flammability Test
31/03/2021	AIR-21-07	Piper PA-28 and PA-32 aeroplanes - Verification of Correct Washers used with Wing Spar Attach Bolts

## EASA

[EASA Safety Publications Tool \(europa.eu\)](https://easa.europa.eu)

04/03/2021	2018-04R2	Environmentally Assisted Cracking in certain Aluminium Alloys
17/03/2021	AIR-21-05	Cirrus SR22 aeroplanes - Tornado Alley Turbo, Inc. (STC-installed) Turbocharger Inlet Check Valves
19/03/2021	2021-05	Airbus Helicopters AS 350 B2 and AS 350 B3 helicopters - Fuel Shut-off Lever Modification
25/03/2021	2021-06	Vaccination of aircrew - Operational Recommendations
31/03/2021	AIR-21-07	Piper PA-28 and PA-32 aeroplanes - Verification of Correct Washers used with Wing Spar Attach Bolts

## Suspected Unapproved Parts Details

Product AIRBUS A320

Part name EEC (Electronic Engine Control)

Part Number 808050-4-068

Serial Number 2520-0109

REMARK: EASA has been informed that the subject part was found. The part has been recertified by an approved maintenance organisation. A new EASA Form 1 with the number 2446569-1-ES was issued.

The new documentation regarding to the recertification of the part is in accordance with the implementing rules of the Basic regulation (EU) 2018/1139. For this reason, the Electronic Engine Control with the P/N 808050-4-068 and S/N 2520-0109 is now withdrawn from the EASA SUP list, as the recertified part is now eligible for installation on an aircraft.

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## Conflict zone information bulletin

[Conflict Zone Information Bulletin \(CZIB's\) | EASA \(europa.eu\)](#)

No update this month

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## Certification Up date

Proposed Certification Memorandum CM-SA-001 - Net Safety Benefit - Issue 01

FAA do not need to be followed in this part? due to ECFR – See part Regulation or safety Bulletins for completion.

**FSBR PC-24 Rev 2, Pilatus PC-24, Pilatus Aircraft Limited and FSBR SF-50 Rev 3, Cirrus Design Corporation SF50**

EASA

Deviation “DEV-E25.981-01” to CS 25.981(b)(3), M25.1(a), M25.1(b) and M25.2(b) of appendix M of CS 25 amdt. 15 for fuel tank - Issue 01

Certification Memorandum on display of attitude at night for VFR approval in rotorcraft

Proposed Certification Memorandum CM-S-011 - Compliance with CS 27/29.952 (a)(4) for Helicopter external installations - Issue 02

Proposed Equivalent Safety Finding ref. ESF-B25.143-01 on "Electronic Flight Control Systems – Normal Load Factor Limiting System" - Issue 01

Proposed Special Condition SC-B22.151-01 - sustainer supported aerotow issue 01

### *Certification Information*


## 2021

- 2021-16: Transfer of STC 10066248 Rev. 4 from GVH Aerospace Ltd (United Kingdom) to GVH Aerospace Ltd (Ireland)
- 2021-15: Decision to accept Holmberg GmbH & Co. HG request to surrender ETSOA LBA.O.10.919/6 JTSO + LBA.O.10.919/11 JTSO + LBA.O.10.919/21 JTSO
- 2021-14: Partial revocation of EASA Type Certificate No. EASA.E.060 affecting the RB211 Trent 556B-61, RB211 Trent 556B2-61 and RB211 Trent 560-61 engine models upon surrender by ROLLS-ROYCE DEUTSCHLAND Ltd. & Co KG

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- 2021-13: Decision to accept Lufthansa Technik AG request to surrender ETSOA EASA.21O.10058201 + EASA.21O.10058202
- 2021-12: Transfer of STC 10013975 Rev. 14 from Safran Aircraft Engines SAS to SMA Aero Engines GmbH
- 2021-11: Decision to revoke ETSOAs EASA.21O.1172, EASA.21O.1225, EASA.21O.1226 of BRIGITTE BUCHSEIN & FA. BUCHSEIN UND HERMESDORF GbR
- 2021-10: Transfer of various STCs from “Air Plus Maintenance GmbH” DOA EASA 21J.085 to “air plus engineering GmbH” DOA EASA 21J.779
- 2021-09: Notice of intent to revoke the EASA Type Certificate for A-1 airship series & the EASA Type Certificate for the A-60 and A-60+ airship models issued to AMERICAN BLIMP CORPORATION due to non-compliance with Commission Implementing Regulation (EU) No. 2019/2153 on the fees and charges levied by EASA
- 2021-08: Notice of intent to revoke ETSOA No. EASA.21O.113 issued to ISOTH'AIR PRODUCTION due to non-compliance with Commission Implementing Regulation (EU) No. 2019/2153 on the fees and charges levied by EASA
- 2021-07: Notice of intent to revoke the EASA Type Certificate for the Seastar Corp. TSC-1A, TSC-1A1 and TSC-1A2 aircraft models (FAA TC/TCDS No. A15EA) due to non-compliance with Commission Implementing Regulation (EU) No. 2019/2153 on the fees and charges levied by EASA
- 2021-06: Notice of intent to revoke EASA Type Certificate No. EASA.BA.007 for the AL-30 tethered gas balloon issued to AERONAUTICAL CENTER AUGUR LTD. due to non-compliance with Commission Implementing Regulation (EU) No. 2019/2153 on the fees and charges levied by EASA



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- 2021-05: Decision to revoke Air Plus Maintenance GmbH  
ETSOAs LBA.O.10.986/2 JTSC, EASA.21O.10038036,  
EASA.21O.10055186 Rev. A, EASA.21O.10058303,  
EASA.21O.10058477
- 2021-04: Transfer of STCs from GVH Aerospace Ltd (United  
Kingdom) to GVH Aerospace Ltd (Ireland)
- 2021-03: Request from ROLLS-ROYCE DEUTSCHLAND Ltd & Co  
KG for partial surrender of the EASA Type Certificate No.  
EASA.E.060 affecting the Trent 556B-61, Trent 556B2-61 and Trent  
560-61 engine model
- 2021-02: Transfer of STCs from RUAG Schweiz AG to RUAG AG
- 2021-01: Partial revocation of EASA Type Certificate No.  
EASA.E.063 affecting the Tay 651-54 engine model upon request  
for surrender by Rolls-Royce Deutschland Ltd. & Co KG

## 2020

- 2020-22: Decision to accept Freni Brembo S.p.A. request to  
surrender  
ETSOAs EASA.21O.10062216/21O.1007624/21O.10071625/21O.1  
0064168
- 2020-21: Request from ROLLS-ROYCE DEUTSCHLAND Ltd & Co  
KG for partial surrender of the EASA Type Certificate No.  
EASA.E.063 affecting the Tay 651-54 engine model
- 2020-20: Request by TELEDYNE CONTROLS FLIGHT DATA  
COMPANY for surrender of EASA STCs No 10027424 &  
EASA.A.S.02662
- 2020-19: Suspension of EASA Type Certificate No. EASA.BA.025  
for Notheisz Hot Air Balloons, TOMI Series AX-6, AX-7, AX-8, AX-9  
and AX-10

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- 2020-18: Suspension of EASA Type Certificate No. EASA.BA.119 for NOUVELLE MANUFACTURE D'AEROSTATS Hot Air Balloons, MA-40 models
- 2020-17: Notice of intent to revoke EASA Type Certificate No. EASA.BA.119 for NOUVELLE MANUFACTURE D'AEROSTATS Hot Air Balloons, MA-40 models only
- 2020-16: Notice of intent to revoke EASA Type Certificate No. EASA.BA.025 for Notheisz Hot Air Balloons, TOMI Series AX-6, AX-7, AX-8, AX-9 and AX-10
- 2020-15: Decision to accept TENENCIA, Ltd. request to surrender ETSOA authorisation EASA.21O.10045442
- 2020-14: Decision to accept TENENCIA, Ltd. request to surrender ETSOA Authorisations EASA.21O.10049463 + EASA.21O.10064166
- 2020-13: Transfer of STC 10072752 and Minor Change Approval 10049150 from ADIUVA COMPAGNIA GENERALE to SMART ELICOTTERI S.P.A.
- 2020-12: Transfer of STCs due to change of Company registration for Air Ambulance Technology GmbH
- 2020-11: Decision to accept GENESYS AEROSYSTEMS, Inc. request to surrender ETSOA EASA.IM.21O.1028 Rev. A + EASA.IM.21O.753 Rev. A
- 2020-10: Decision to accept SENNHEISER ELECTRONIC GmbH & Co. KG request to surrender various ETSO authorisations
- 2020-09: Decision to accept L3HARRIS Aviation Products, Inc. request to surrender ETSO authorisations
- 2020-08: Decision to accept UNIMOR RADIOCOM SP.Z.O.O. request to surrender ETSOA CAA PL Z-FC-23/02
- 2020-07: Decision to revoke the ETSO authorisation EASA.21O.931

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- 2020-06: Decision to accept TENENCIA, Ltd. request to surrender a number of ETSO authorisation
- 2020-05: Request to Surrender of Various STCs from LD Aviation Prague, s.r.o.
- 2020-04: Acceptance of surrender of EASA Type Certificate No. EASA.E.236 for the Viper 521, Viper 522 and Viper 601-22 engine models installed in HS125 Series aircraft
- 2020-03: Acceptance of partial surrender of EASA Type Certificate EASA.E.061 for the RB211-535E4-B-75 engine model
- 2020-02: Surrender of STC 10040427 from AIM Aviation (Henshalls) Ltd.
- 2020-01: Surrender of STCs 10044656, 10045392, 10059450 from AIM Aviation (Henshalls) Ltd.

## 2019


- 2019-49: Transfer of Type Certificates EASA.A.061/A.091/A.444 from PZL Warszawa Okecie S.A. to Airbus Poland Spolka Akcyjna
- 2019-48: Acceptance of surrender of CAA Czech Republic Type Certificate No. 01-02 for the Lom Praha s.p. V-546 propeller type
- 2019-47: Acceptance of surrender of CAA Czech Republic Type Certificate No. 98-05 for the Lom Praha s.p. V-541 propeller type affecting the V-541 and V-541-2000 propeller models
- 2019-46: Acceptance of surrender of CAA Czech Republic Type Certificate No. 96-01 for the Lom Praha s.p. V-341 propeller type
- 2019-45: Acceptance of surrender of CAA Czech Republic Type Certificate No. 92-09 for the Lom Praha s.p. V-231 propeller type affecting the V-231, V-231P and V-231R propeller models
- 2019-44: Acceptance of surrender of CAA Czech Republic Type Certificate No. 95-02 for the Lom Praha s.p. V-532 propeller type

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- 2019-43: Acceptance of surrender of UK CAA (formerly known as UK ARB) Type Certificates for the GE Aviation Systems Ltd. t/a Dowty Propellers, R175, R187 and R350 propeller types
- 2019-42: Transfer of STC from 365 Aerospace Ltd to 365 Aerospace DDS Ltd
- 2019-41: Transfer of Supplement Type Certificate 10056170 from CRANFIELD AEROSPACE SOLUTIONS LIMIT to TAMARACK AEROSPACE GROUP, INS.
- 2019-40: Request for surrender of the Type Certificates for the Viper 521, Viper 522 and Viper 601-22 engine models installed in HS125 Series aircraft
- 2019-39: Reissuance of Type Certificates for Balony Kubicek due to change of Company address
- 2019-38: Transfer of Type Certificate EASA.E.239 from W-MOTOR SERVICE s.r.o. to PARMA-TECHNIK s.r.o.
- 2019-37: Surrender of EASA Supplemental Type Certificate N° 10017118
- 2019-36: Reissuance of TCs for Costruzioni Aeronautiche TECNAM S.P.A. due to company name change
- 2019-35: Notification of request for partial surrender EASA.E.061 for the RB211-535E4-B-75 engine model
- 2019-34: Transfer of TC EASA.A.381 from Daher Aerospace to Cougar Aircraft Corp LLC
- 2019-33: Notice of intend to surrender EASA STC 10017118
- 2019-32: Transfer of various STCs from 365 Aerospace Ltd. to 365 Aerospace DDS Ltd.
- 2019-31: Transfer of STC 10070213 from Safran Seats GB Ltd to Safran Seats

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- 2019-30: Transfer of STC 10062368 from Jamco to STC TWENTY ONE Limited
- 2019-29: Transfer of STC 10043003+10043005 from IPR Conversions to PMV Engineering
- 2019-28: Transfer of STC 10046600+10065350 from Tenencia to Inter-Tec Services Ltd.
- 2019-27: Revocation of validated Type Certificate for the Brantly B-2, B-2A and B-2B rotorcraft models (FAA TC No. 2H2) due to non-compliance with Commission Regulation (EU) No. 319/20141 on the fees and charges levied by the European Union Aviation Safety Agency
- 2019-26: Notice of intent to revoke various European Technical Standard Order Authorisations issued to GEMELLI S.p.A. due to non-compliance with Commission Regulation (EU) No. 319/2014 on the fees and charges levied by the European Aviation Safety Agency
- 2019-25: Notice of intent to revoke the EASA Type Certificate for R. HUNT PROPELLER COMPANY R002-100 and R003-100 propeller models
- 2019-24: Transfer of grandfathered CAA UK AAN09877 from Short Brothers to Viking Air (TCCA A-117) - EASA new TC EASA.IM.A.666
- 2019-23: Transfer of EASA TC EASA.IM.A.665 (SD3 Series) from Short Brothers PLC to Viking Air Limited
- 2019-22: Request by LOM PRAHA s.p. for surrender of Type Certificate No. CZ 01-02 for the V-546 propeller
- 2019-21: Request by LOM PRAHA s.p. for surrender of Type Certificate No. CZ 98-05 for the V-541 propeller affecting the V-541 and V-541-2000 propeller models

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- 2019-20: Request by LOM PRAHA s.p. for surrender of Type Certificate No. CZ 96-01 for the V-341 propeller
- 2019-19: Request by LOM PRAHA s.p. for surrender of Type Certificate No. CZ 92-09 for the V-231 propeller affecting the V-231, V-231P and V-231R propeller models
- 2019-18: Revocation of EASA TC No. EASA.R.012 affecting Leonardo S.p.A. EH101-300 helicopter model
- 2019-17: Request by LOM PRAHA for surrender of Type Certificate No. CZ 95-02 for the V-532 propeller
- 2019-16: Request by GE Aviation Systems, trading as Dowty Propellers, to surrender the type certificates for R175, R187 and R350 propeller types
- 2019-15: Revocation of LBA Authorisation LBA.O.10.941/1INTSO (L3 Aviation Products, Inc.)
- 2019-14: Decision to revoke ETSOA EASA.IM.21O.493 Rev. A and EASA.IM.21O.1075
- 2019-13: Revocation of Type Certificate No. UK BA17 and EASA Type Certificate Data Sheet No. EASA.A.390
- 2019-12: Surrender of EASA TC No. EASA.R.012 affecting Leonardo S.p.A. EH101-300 helicopter model
- 2019-11: Transfer of EASA TC EASA.IM.A.610 from Game Composites Ltd to Game Composites LLC
- 2019-10: Transfer of Supplemental Type Certificate from Comtech Aviation Services PTY LTD to Comtech Global Aviation Services S.L.
- 2019-09: Revocation of JTSA authorisation CAA.O.00006 of Thales UK Limited
- 2019-08: Revocation of ETSOA certificates upon request for surrender L3 Aviation Products, Inc.

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- 2019-07: Request by Marshall of Cambridge Aerospace Ltd. (MA) to surrender EASA Type Certificate No. EASA.A.390 affecting Slingsby T67 Firefly series
- 2019-06: Accomplishment of transferring all EASA civil Type Certificates held by Rolls Royce plc to Rolls Royce Deutschland
- 2019-05: Amendment to EASA Certification Information 2018-18 - Reactivation of erroneously surrendered EASA Supplemental Type Certificate No. 10032054
- 2019-04: Intention to transfer all EASA civil Type Certificates held by Rolls Royce plc to Rolls Royce Deutschland
- 2019-03: Transfer of Supplemental Type Certificate 10040333, 10040926 and EASA.A.S.01055 from Babcock Mission Critical Services Espana S.A.U. to Babcock Mission Critical Services Fleet Management S.A.U.
- 2019-02: Revocation of EASA Type Certificate No. EASA.BA.512 / EASA Type Certificate Data Sheet No. EASA.BA.512 for Lindstrand HS-110 hot air airship and issue of Specific Airworthiness Specification EASA.SAS.AS.512
- 2019-01: Revocation of Type Certificate No. DGAC-F TC 167 for Rene FOURNIER RF9 aircraft model due to non-compliance with Commission Regulation (EU) No. 319/2014 on the fees and charges levied by the European Union Aviation Safety Agency


## 2018

- 2018-22: Transfer of Type Certificate for the CT from Flight Design GmbH to Flight Design general aviation GmbH
- 2018-21: Notification of cancellation of SOCATA's (now DAHER) intent to surrender a Type Certificate (TC) No. 190 and of the intent to transfer this TC



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- 2018-20 : Revocation of EASA ETSOA No. EASA.21O.10038458 Rev. A upon request to surrender of Zodiac Seats UK, Ltd.
- 2018-19: Transfer of Type Certificate for the Virus SW 121 from Pipistrel d.o.o. to Pipistrel Vertical Solutions d.o.o.
- 2018-18: Revocation of several Supplemental Type Certificates upon surrender by LUFTHANSA TECHNIK AG **Amended by 2019-05**
- 2018-17: Revocation of EASA Type Certificate for Sabreliner Aviation L.L.C. NA-265-65 aircraft model (FAA TCDS No. A2WE)
- 2018-16: notice to transfer of STC 10064698 from STC Twenty One Ltd to Donica International Limited
- 2018-15: Notice of intent to revoke EASA Type Certificate No. EASA.BA.025 for Notheisz Hot Air Balloons, TOMI Series AX-6, AX-7, AX-8, AX-9 and AX-10
- 2018-14: Notice of intent to revoke EASA Type Certificate No. EASA.BA.512 for Lindstrand HS-110 hot air airship model
- 2018-13: Notice of intent to revoke the EASA Type Certificate for the Sabreliner Aviation L.L.C. NA-265-65 aircraft model issued on the basis of FAA TC/TCDS No. A2WE due to non-compliance with Commission Regulation (EU) No. 319/2014
- 2018-12: Revocation of Type Certificates No. DGAC-F TC 187 for the RF47 aircraft model, No. DGAC-F TC 76 for the RF6B aircraft series and No. DGAC-F TC 28 for the RF3 & RF4 aircraft series
- 2018-11: Notification of cancellation of EASA's intent to revoke EASA Type Certificates No. EASA.IM.A.298 for the Bellanca and Champion 8 aircraft series and No. EASA.IM.A.297 for the Bellanca and Champion 7 aircraft series
- 2018-10: Revocation of various certificates upon request for surrender of Rockwell Collins, Inc.

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- 2018-07 Amdt. 01: Extension comment period - Notice of intent to revoke EASA Type Certificates No. EASA.IM.A.240 for the PA-25 aircraft series due to non-compliance with Commission Regulation (EU) No. 319/2014<sup>1</sup> on the fees and charges levied by the European Aviation Safety Agency
- 2018-09: Notice of intent to revoke EASA Type Certificates No. EASA.A.307 for RF47 aircraft model, No. EASA.A.375 for RF6B aircraft series, No. EASA.A.376 for RF3 & RF4 aircraft series and EASA Type Certificate for RF9 aircraft model due to non-compliance with Commission Regulation (EU) No. 319/2014 on the fees and charges levied by the European Aviation Safety Agency
- 2018-08: Notice of intent to revoke EASA Type Certificates No. EASA.IM.A.298 for the Bellanca and Champion 8 aircraft series & No. EASA.IM.A.297 for the Bellanca and Champion 7 aircraft series due to non-compliance with Commission Regulation (EU) No. 319/2014<sup>1</sup> on the fees and charges levied by the European Aviation Safety Agency
- 2018-07: Notice of intent to revoke EASA Type Certificates No. EASA.IM.A.240 for the PA-25 aircraft series due to non-compliance with Commission Regulation (EU) No. 319/2014<sup>1</sup> on the fees and charges levied by the European Aviation Safety Agency - ***Amended by 2018-07 Amdt. 01***
- 2018-06: Revocation of EASA ETSOA No. EASA.21O.1204 (Air Précision SAS)
- 2018-05: Revocation of ETSOA Authorisations EASA.21O.459 Rev. A, EASA.21O.10018466, EASA.21O.10018467
- 2018-04: Notice of intent to revoke EASA Type Certificates No. EASA.IM.R.119 for the Brantly B-2, B-2A and B-2B rotorcraft models and No. EASA.IM.R.511 for the Brantly 305 rotorcraft model due to

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non-compliance with Commission Regulation (EU) No. 319/2014<sup>1</sup> on the fees and charges levied by the European Aviation Safety Agency


- 2018-03: Request by SOCATA to surrender a Type Certificate (TC)
- 2018-02: Surrender of EASA Type Certificate No. EASA.R.105 affecting SA 365 C and SA366 G1 helicopter models
- 2018-01: Transfer of Supplemental Type Certificate from SAS Technical Service AB to MAP Aircraft Part 21 AS

## 2017

- 2017-20: Revocation of Luftfahrt-Bundesamt Authorisation No. LBA.O.31.252/1 JTSO
- 2017-19: Transfer of Type Certificate for the DA 62, from Diamond Aircraft Industries GmbH, Austria, to Diamond Aircraft Industries, Inc., Canada
- 2017-18: Transfer of Type Certificate for the DA 40 – Series, from Diamond Aircraft Industries GmbH, Austria, to Diamond Aircraft Industries, Inc., Canada
- 2017-17: Revocation of EASA Supplemental Type Certificate No. 10048112 upon request for surrender by Dunlop Aircraft Tyres Limited
- 2017-16: Request for partial surrender of EASA Type Certificate No. EASA.R.105 affecting SA 365 C and SA 366 G1 helicopter models
- 2017-15: Revocation of EASA Supplemental Type Certificates No. EASA.A.S.03711 (10015258) and No. EASA.A.S.03692 (10015250) upon request for surrender by TUIfly (formerly known as Hapag-Lloyd Fluggesellschaft GmbH)
- 2017-14: Acceptance of surrender of the EASA grandfathered Type Certificate A-220 for Convair 340 and 440 aircraft

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- 2017-13: Revocation of EASA Certification Information notice to revoke the European Technical Standard Order (ETSO) Authorisation No. EASA.21O.748, EASA.21O.749, EASA.21O.1051, EASA.21O.10055168, EASA.21O.10052398 REV. A
- 2017-12: Revocation of EASA Supplemental Type Certificate No 10047377 following request for cancellation from Steinbach & Associates, Inc.
- 2017-11: Request by Kelowna Flightcraft to surrender the grandfathered EASA Convair 340 and 440 aircraft Type Certificate A-220
- 2017-10: EASA Certification Information Acceptance of surrender of UK ARB (now CAA UK) Type Certificate No. BA 4
- 2017-09: Request by TUIfly GmbH (formerly known as Hapag-Lloyd Fluggesellschaft GmbH) to surrender two EASA Supplemental Type Certificates
- 2017-08: Transfer of Supplemental Type Certificate from TUIfly GmbH to Paustian Airtex GmbH
- 2017-07: Transfer of Type Certificate for hot air balloons MA series from Llopis balloons to Nouvelle Manufacture d'Aerostats
- 2017-06: Revocation of ETSOA No. EASA.21O.10057982
- 2017-05: Revocation of various ETSOA certificates due to the revocation of the APDOA No. EASA.AP123
- 2017-04: Transfer of Supplemental Type Certificate from ALTITUDE AEROSPACE INTERIORS Ltd to AIM AVIATION (JECCO) LIMITED
- 2017-03: Request for partial surrender of EASA Type Certificate No. EASA.E.064 affecting certain Rolls-Royce Deutschland Ltd & Co KG Spey 500 series engine models
- 2017-02: Revocation of DGAC France Authorisation No. F.O.124

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- 2017-01: Revocation of DGAC France Authorisation No. F.O.011 upon refusal of PRONAL to pay the fees (ref. EC No. 593/2007, Annex, Table 6) for this authorization.

## 2016

- 2016-10: Transfer of Type Certificate from S.C. Constructii Aeronautice S.A. to Aeroclubul Romaniei
- 2016-09: Transfer of Type Certificate from EADS Deutschland GmbH to Airbus Defence and Space GmbH
- 2016-08: Revocation of ETSOA No. EASA.21O.999
- 2016-07: Revocation of ETSOA No. EASA.21O.1000
- 2016-06: Transfer of Supplemental Type Certificate from Jamco Aero Design & Engineering Private Ltd to STC Twenty One Limited
- 2016-05: Revocation of various ETSOAs of Ameri-King Corporation due to bankruptcy termination of their TSO authorizations
- 2016-04: Revocation of EASA.21O.661
- 2016-03: Revocation of Type Certificate No. Mo 99 for engine model AR 318-02 and Type Certificate No. Mo 100 for engine models CT7-6 AF and CT7-6A AF upon surrender by GE Avio S.r.l.
- 2016-02: Revocation of various ETSOAs of EAE electronics with IntermaS-Elcom GmbH as legal successor IntermaS-Elcom GmbH due to the revocation of EASA.AP227
- 2016-01: Revocation of various ETSOAs upon request to surrender by Crossbow Technology Inc.


## 2015

- 2015-12: Revocation of various ETSOAs

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- 2015-11: Revocation of EASA ETSOA No. EASA.IM.21O.663 due to bankruptcy of Hoover Industries and termination of their TSO authorization
- 2015-10: Revocation of Luftfahrt-Bundesamt Authorisation No. LBA.N-O.10.915/024 JTSO upon request to surrender by ACR Electronics Inc.
- 2015-09: Revocation of DGAC France approvals No. 953130, 973200 and 973201 upon request to surrender by TEAM trading as CobhamAvionics
- 2015-08: Revocation of EASA.21O.1071 due to the cancellation of the EASA.AP299
- 2015-07: Revocation of EASA.21O.796, EASA.21O.1266, EASA.21O.485 REV. B, EASA.21O.490, REV. D, EASA.21O.491, REV. B, EASA.21O.531, REV. B, EASA.21O.675, REV. A upon cancellation of EASA.AP260.
- 2015-06: Transfer of RTC EASA.A.588 from Aircraft Design & Certification Ltd. to Light Wing AG
- 2015-05: Transfer of EASA STC 10028652 from Atlantic Aero to TruAtlantic Mfg
- 2015-04: Revocation of EASA.21O.569, F.O.042 and F.O.023 upon request to surrender by DR&DIndustries
- 2015-03: Revocation of EASA.21O.191, F.O.050 and F.O.070 upon request to surrender by Michelin - LPAV
- 2015-02: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.510/2 JTSO upon request to surrender by PS Engineering Inc.
- 2015-01: Transfer of Supplemental Type Certificates from UNI AIR to Business and Commuter Aircraft

Supplemental Type Certificate No: EASA.A.S.03350 (10015037),  
10041337, 10038465, EASA.A.S.03669 (10015241),

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EASA.A.S.03349 (10015036), EASA.A.S.03008 (10014805),  
EASA.A.S.03215 10014951), EASA.A.S.03546 Rev1 (10015172),  
10031744, EASA.A.S.00306 Rev1 (10031335), 10039277


## 2014

- 2014-07: Revocation of EASA ETSOA No. EASA.IM.210.10033583 upon request to surrender by Chelton Avionics, Inc. dba Wulfsberg Electronics
- 2014-06: Revocation of EASA ETSOA No. EASA.21O.090 upon request to surrender by Sun Path Products Inc.
- 2014-05: Revocation of EASA Type Certificate no. EASA.E.073 affecting certain ARRIEL1 turboshaft models upon surrender by Turbomeca
- 2014-04: Revocation of EASA Type Certificate No. EASA.A.064 affecting certain A320 aircraft models upon surrender by Airbus
- 2014-03: Request for partial surrender of Type Certificate EASA.A.064 affecting aircraft model A320-111
- 2014-02: Revocation of Supplemental Type Certificates upon transfer from Airbus SAS to Airbus Operations GmbH (Annex 2)
- 2014-01: Surrender of Supplemental Type Certificate STC 10034009 from Aircraft Technical Development Inc.

## 2013

- 2013-17: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.911/62 upon request to surrender by Dittel Messtechnik GmbH.
- 2013-16: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.922/53 upon request to surrender by Dittel Messtechnik GmbH.
- 2013-15: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.911/45 upon request to surrender by Dittel Messtechnik GmbH.



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- 2013-14: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.911/44 upon request to surrender by Dittel Messtechnik GmbH.
- 2013-13: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.930/32 upon request to surrender by Dittel Messtechnik GmbH.
- 2013-12: Revocation of Luftfahrt-Bundesamt Authorisation No. 10.923/22 upon request to surrender by Dittel Messtechnik GmbH.
- 2013-11: Revocation of European Technical Standard Order (ETSO) Authorisation EASA.21O.1306 upon request to surrender by Dittel Messtechnik GmbH.
- 2013-10: Request by TURBOMECA to surrender the Type Certificate for the Arriel 1A turboshaft engine
- 2013-09: Transfer of Type Certificate for Hot Air Balloons CS, JZ and JZX series from Altisph'Air to Ballons Chaize, SARL
- 2013-08: Request by Aupa Dyn'Aero to surrender the Type Certificate EASA.A.369 and EASA.A.370 for the CAP 20 and CAP 10 aeroplanes
- 2013-07: Revocation of CAA UK Accessory Approval E15815 upon request to surrender by Threesixty Aerospace Limited
- 2013-06: Transfer of Supplemental Type Certificate from ACI Systèmes to Jet Business and Commuter Aircraft
- 2013-05: Revocation of European Technical Standard Order (ETSO) Authorisation EASA.21O.1180 upon request to surrender by Threesixty Aerospace Limited
- 2013-04: Transfer of Supplemental Type Certificate from Jet Aviation Flugzeugwartung GmbH to Jet Aviation Basel AG
- 2013-03: Transfer of Supplemental Type Certificates from Avionics Mobile Design Services Ltd to 328 Design GmbH

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- 2013-02: Revocation of European Technical Standard Order (ETSO) Authorisation EASA.21O.909 upon request to surrender by Barco n.v.
- 2013-01: Transfer of Supplemental Type Certificate from Stephen D. Mac Lellan to Securaplan Technologies Inc.

## 2012

- 2012-03: Transfer of Type Certificates for the NH-300C, NH-500D and AMD-500N helicopters and issuance of EASA TCDS EASA.R.143 and EASA.R.144
- 2012-02: Transfer of Supplemental Type Certificates from Air Berlin Luftfahrttechnik Düsseldorf GmbH to Air Berlin Technik GmbH
- 2012-01: Request by BAE Systems (Operations) Ltd to surrender the United Kingdom Air Registration Board (ARB) (now CAA UK) Type Certificate for the Handley Page Aircraft Limited HP 137 Jetstream Mark 1 and Scottish Aviation Limited Jetstream Series 200.

## 2011

- 2011-12: Revocation of European Technical Standard Order (ETSO) Authorisation EASA.21O.458 upon request to surrender by EADS Deutschland GmbH
- 2011-11: Revocation of EASA Type Certificate for the Agusta Bell 102 helicopter
- 2011-10: Request by AGUSTA S.p.A. to surrender the Type Certificate for the Agusta Bell 102 helicopter
- 2011-09: Revocation of EASA Type Certificate for the Silvercraft SH-4 helicopter
  - Revocation decision 2011-52067

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- 2011-08: Change of Type Certificate Holder Withdrawal of Type Certificate for GAE50R engine model
- 2011-07: Revocation of DGAC France Type Certificate No. M-8 affecting certain TURMO IV turboshaft engine models upon surrender by Turbomeca
- 2011-06: Revocation of DGAC France Type Certificate No. M-2 upon surrender by Turbomeca
- 2011-05: Revocation of DGAC France Type Certificate No. 80 upon surrender by Eurocopter
- 2011-04: Revocation of DGAC France Type Certificate No. 74 upon surrender by Airbus
- 2011-03: Revocation intent of EASA Type Certificate for the Silvercraft SH-4 helicopter
- 2011-02: Request by TURBOMECA to surrender the Type Certificate for the ASTAZOU XVIII A turboshaft engine
- 2011-01: Request by TURBOMECA to surrender the Type Certificate for the TURMO IV A turboshaft engine.

## 2010

- 2010-07: Surrender of DGAC France Type Certificate No.80
- 2010-06: Withdrawal of RATIER-FIGEAC support for the FH146 propeller
- 2010-05: Surrender of DGAC France Type Certificate No.74
- 2010-04: Transfer of Supplemental Type Certificates from Airbus Deutschland GmbH to Airbus SAS
- 2010-03: Issuance of EASA Type Certificates covering the ALOUETTE ASTAZOU and ALOUETTE III helicopters. Withdrawal of ALOUETTE II models

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- 2010-02: Withdrawal of RATIER-FIGEAC support for the FH146 propeller. Open for comments until 26 March 2010
- 2010-01: Revocation of Type Certificate EASA TC no. A.188 by Airbus for British Aerospace BAC One Eleven, Series 200, 300, 400, 500 and 475

## 2009


- 2009-17: Revocation of EASA TC R.002 issued to Eurocopter regarding models SA330F and SA330G.
- 2009-16: Withdrawal of TURBOMECA support for the ASTAZOU XIV C, XIV C1, XIV E, XIV E1, XIV C1, XVI F and XVI F1 turboprop engines - open for comments until 14/12/09.
- 2009-15: Request for Surrender of Models SA 330 F and SA 330 G on TC EASA.R.002. Open for comments until 8 November 2009.
- 2009-14: Revocation of Basik Air Concept European Technical Standard Order (ETSO) Authorisation EASA.21O.171 for X-FAST Parachute
- 2009-13: Revocation of European Technical Standard Order (ETSO) Authorisation EASA.IM.21O.752 upon surrender by Chelton Avionics, Inc. dba Wulfsberg Electronics
- 2009-12: Transfer of Type Certificate of BO105 LS A-3 helicopter from EUROCOPTER Canada Ltd. to EUROCOPTER Deutschland GmbH, Germany
- 2009-11: Withdrawal of TURBOMECA support for the BASTAN VI C1 turboprop engine
- 2009-10: Revocation of VZLU, a.s. Propeller Type Certificates 97-01 for V 237 and 96-04 for V 230 series propellers issued by Czech Republic

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- 2009-09: Suspension of EASA Type Certificate EASA.IM.A.171 by the European Aviation Safety Agency for the Eclipse Model EA500 aircraft for administrative reasons.
- 2009-08: Request by VZLU, a. s. from Czech Republic to surrender Type Certificate 97-01 and 96-04 issued by CAA Czech Republic for the V 237 and V 230 series propellers. Open for comments until 29 June 2009
- 2009-07: Withdrawal of TURBOMECA support for the BASTAN VI C1 turboprop engine. Open for comments until 19 June 2009
- 2009-06 : Request by Airbus to surrender Type Certificate EASA.A.188 for British Aerospace BAC One Eleven, Series 200, 300, 400, 500 and 475. Open for comments until 22 May 2009
- 2009-05: Withdrawal of TURBOMECA support for ASTAZOU II C, II D, II E, II F, II G, II J and II K turboprop engines.
- 2009-04: Withdrawal of TURBOMECA support for ASTAZOU II C, II D, II E, II F, II G, II J and II K turboprop engines.
- 2009-03: Revocation of MICROTURBO Type Certificate M-11 (DGAC France) for TRS 18-046-1, TRS 18-1 and TRS 18-1-202 turbojet engines.
- 2009-02: Revocation of DGAC France Type Certificate (Certificat de Navigabilité de Type) No. 31 for Nord 262 Aircraft upon surrender by Airbus
- 2009-01: Revocation of Supplemental Type Certificate EASA.A.S.0093 for Airbus A340-642 "Rear Fuselage - Frame 67-71 - Tail Strike Repair" upon surrender by Virgin Atlantic Airways

## 2008


- 2008-08: Revocation of Type Certificate EASA.R.501 issue 1 for PZL Kania upon surrender by PZL Swidnik S.A.

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- 2008-07: Revocation of Lufthansa Technik AG Supplemental Type Certificate LBA TA0533 for Boeing 757-200 "Installation eines Zonal Drying System"
- 2008-06: MICROTURBO request for Surrender DGAC Type Certificate M-11 for TRS 18-046-1, TRS 18-1 and TRS 18-1-202 turbojet engines.
- 2008-05: Airbus Surrender of Type Certificate Nr. 31 for NORD 262, 262A, 262B, 262C
- 2008-04: EASA acceptance of TURBOMECA's withdrawal of their support for ARTOUSTE II B, B1, C, C1, and C2 engines, installed in EUROCOPTER SE3130 and SE313 B ALOUETTE II helicopters
- 2008-03: Withdrawal of TURBOMECA support for ARTOUSTE II B, B1, C, C1, and C2 engines, installed in EUROCOPTER SE3130 and SE313 B ALOUETTE II helicopters
- 2008-02: Revocation of Porsche engine LBA TCs L-4502, 4602 and 4609 for the engine models 678/1 B, 678/1 M, 678/0 B, 678/0 M, 678/3, 678/3A, 678/4, PFM 3200 N01, PFM 3200 N02, PFM 3200 N03, PFM 3200 N00 and PFM 3200 T03
- 2008-01: Revocation of STC LBA TA0259 for Airbus A330-322 upon surrender by Lufthansa Technik AG

## 2007

- 2007-10: Withdrawal of TURBOMECA support for MARBORE II C, C1, C2, C3 & MARBORE VI C, C1, C2 engines, installed in MS 760 Paris I, MS 760 A Paris IA and MS 760 B Paris II aircraft
- 2007-10 Transfer STCs EASA.A.S.03274 (LBA TA0717), EASA.A.S.03273 (LBA TA0719), EASA.A.S.03272 (LBA TA0721) from ASL Aircraft Services to EADS Elbe Flugzeugwerke


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- 2007-09: Revocation of European Technical Standard Order (ETSO) Authorisation EASA.210.386 Revision A upon surrender by Terma A/S
- 2007-08: Surrender of Porsche engine Type Certificates No. L-4502, 4602 and 4609
- 2007-07: Revocation of type certificate DGAC/EASA TC no 46 (SA 321 F) upon surrender by Eurocopter France
- 2007-06: Revocation of type certificate DGAC/EASA TC no 44 (SA 321 J and SA 321 JA) upon surrender by Eurocopter France
- 2007-05: for the Transfer of Type Certificate EASA.A.188 for BAC One Eleven -200, -300, -400, -475 and -500 series from BRITISH AEROSPACE to AIRBUS, Blagnac, France.
- 2007-03: Surrender EUROCOPTER TC 46
- 2007-02: Surrender EUROCOPTER TC 44
- 2007-01: for the Transfer of Type Certificate of HR200 and R2000 series aircraft from APEX AIRCRAFT to ALPHA AVIATION


## 2006

- 2006-02: for the surrender of C.160.P "Transall" Type Certificate
- 2016-07: Revocation of ETSOA No. EASA.21O.1000
- 2016-06: Transfer of Supplemental Type Certificate from Jamco Aero Design & Engineering Private Ltd to STC Twenty One Limited
- 2016-05: Revocation of various ETSOAs of Ameri-King Corporation due to bankruptcy termination of their TSO authorizations
- 2016-04: Revocation of EASA.21O.661
- 2016-03: Revocation of Type Certificate No. Mo 99 for engine model AR 318-02 and Type Certificate No. Mo 100 for engine models CT7-6 AF and CT7-6A AF upon surrender by GE Avio S.r.l.



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- 2016-02: Revocation of various ETSOAs of EAE electronics with IntermaS-Elcom GmbH as legal successor IntermaS-Elcom GmbH due to the revocation of EASA.AP227
- 2016-01: Revocation of various ETSOAs upon request to surrender by Crossbow Technology Inc.

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## Master MEL-OSD


### MMEL

Document Title:	MMEL PC-12/47E Rev 4, Pilatus Aircraft LTD., PC-12/47E
Summary:	Outlines the Master Minimum Equipment requirements and procedures for Pilatus Aircraft model PC-12/47E. Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.
Documents for Download:	<a href="#">Draft</a> <a href="#">Document</a> (PDF) <a href="#">Draft Document Comment Grid</a> (MS Word)
Reference:	<p><b><i>Title 14 of the Code of Federal Regulations (14 CFR)</i></b></p> <ul style="list-style-type: none"> <li>• <a href="#">Part 91</a>, General Operating and Flight Rules</li> <li>• <a href="#">Part 121</a>, Operating Requirements: Domestic, Flag, and Supplemental Operations</li> <li>• <a href="#">Part 125</a>, Certification and Operations: Airplanes Having A Seating Capacity of 20 or More Passengers or A Maximum Payload Capacity of 6,000 Pounds or More; and Rules Governing Persons On Board Such Aircraft</li> <li>• <a href="#">Part 129</a>, Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged In Common Carriage</li> <li>• <a href="#">Part 135</a>, Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.</li> </ul> <p> <a href="#">MMEL Policy Letter PL-25</a>, MMEL and MEL Definitions  <a href="#">MMEL Policy Letter PL-34</a>, MMEL and MEL Preamble  <a href="#">MMEL Policy Letter PL-36</a>, FAR Part 91 MEL Approval &amp; Preamble. </p>

### OSD – FSBR

[Operational Evaluation Guidance Material \(OE GM\)](#) / [Operational Evaluation Reports \(OEB\)](#) / [Operational Suitability Data \(OSD\)](#) | [EASA \(europa.eu\)](#)

No update this month

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## Safety Briefing

### EASA

**Final Equivalent Safety Finding on "Enhanced Stall Protection" - Issue 02** - Applicable to Large Aeroplanes

### FAA

No update this month

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## Publications

**Doc 8168 – Vol. II** - Procedures for Air Navigation Services (PANS) - Aircraft Operations - Volume II  
Construction Of Visual & Instrument Flight Procedures

**Doc 8585/195** - Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services

ICAO COVID 2021 03 10 Economic Impact TH Toru[3]

monthly\_monitor\_Jan\_2021

*see attached*

Air et cosmos – la crise un catalyseur de tendance pré existantes

*see attached*

Design & Certification Newsletter - 2021/03

*see attached*

## EUROCONTROL

*see attached*

**Aviation Intelligence Unit - Think Paper #9 - 1 March 2021**

**Think Paper #8** - Impact of COVID-19 on European Aviation in 2020 and Outlook 2021

**Think Paper #7** - Does taxing aviation really reduce emissions?

**Think Paper #6** - Arriving on time: the passenger priority


**Think Paper #5** - Effects on the network of extra standby aircraft and Boeing 737 MAX grounding

**Think Paper #4** - The aviation network - Decarbonisation issues

**Think Paper #3** - Cybersecurity in aviation

**Think Paper #2** - Air traffic flow management (ATFM) regulations: a power for good

**Think Paper #1** - Fuel tankering in European skies: economic benefits and environmental impact

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## EASA Risk Review 2020

### *The aviation sector was massively disrupted....*

As a result of the COVID-19 pandemic, civil aviation in 2020 was reduced to a fraction of its normal activities. Given the level of disruption, it will take some time before the consequences are fully understood. Some organisations have been forced to cease operations and many others are asking how they will survive until traffic picks up again.

To address this challenge, EASA has set up a task force with representatives of national authorities and aviation stakeholders to prepare for the Return to Normal Operations (RNO). The Agency, working with the European Centre for Disease Prevention and Control (ECDC), established the Aviation Health Safety Protocol, which sets out coherent health safety measures to protect both passengers and aviation industry staff. With the support of national authorities a monitoring process has been put in place by EASA to assess the implementation of this protocol by airports, airlines and passengers. Data shows that air travel does not increase the risk of catching COVID-19.

....leading to a new safety landscape



Prior to the crisis, the safety landscape was stable and known. We are now faced with a totally new situation where new risks have emerged. In conjunction with its safety partners and in particular the National Aviation Authorities of the EU Member States, EASA has identified and captured these new risks in the Agency's safety risk registers. These risks include dealing with the rapid storage and de-storage of aircraft, management of wildlife hazards due to the reduced amount of aviation activity, and the degradation of skills

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and knowledge of aviation personnel caused by their reduced activity. Supported by EASA's collaborative approach, EASA established a COVID-19 Safety Risk Portfolio that listed the identified risks together with appropriate mitigations. . The Agency has worked relentlessly and collectively to ensure that safety has not been compromised, despite the most brutal crisis ever experienced by aviation. This has highlighted the resilience of the EASA Safety Risk Management process. Over 20 different guidelines have been provided to the industry, covering important topics including crew training and checking, the carrying of cargo in passenger compartments and the carriage of vaccines. Additionally, in these different times, a virtual annual EASA Safety Conference took place, which brought our external partners together to further strengthen the recovery process.

### ***The rise of cyber-security and security threats impacting safety....***

As a mechanical effect of its digital transformation, the aviation sector is subject to an ever-growing number of cyber-attacks. This year has seen a significant increase in cyber-events impacting some of Europe's major aviation organisations, thereby exposing systemic vulnerabilities in this area. Conflict zones is also a growing concern, as tragically illustrated by the downing of a B737 in Iran in January 2020.

.... is calling for an integrated risk management approach

These considerable challenges have highlighted the importance of integrated management, there by underscoring why the Agency has been devoting significant resources to physical and cyber-security risk management, where it impacts safety. This will lead to the development of a total system approach in terms of risk intelligence, i.e. our capacity to identify and mitigate risks from safety or security origins.

The Agency has now to federate the European initiatives in order to ensure cyber-security resilience of the aviation system. Similarly for the conflict zones the Agency, in collaboration with the European Commission and the Member States, has decided to set up an operational platform that will provide quick alerts to air space users of situations requiring high attention and or action, thereby helping to reduce risks in almost real-time.



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### ***Preparing for 2021***

EASA will continue to work with its safety partners to evolve the safety system and look to the future by further developing the Data4Safety Programme. This programme makes use of the most advanced technologies of big data and data science to collect, aggregate and analyse aviation data in one platform in order to identify and assess systemic safety risks in aviation in Europe. This will significantly augment our current techniques and enable improved detection of potential risks.

In June 2021, the SAFE 360 conference will enable the 360° industry-wide review of the most critical safety issues that are currently impeding recovery. An important objective for the Agency will be to further work on integrating safety, security and cyber-security risks to ensure a total system risk management approach. Such a consolidation of safety activities and intelligence capabilities will greatly enhance the European Aviation Community's reactivity to aviation risks. There are also a wide range of safety actions planned in the European Plan for Aviation Safety (EPAS) that will further strengthen the aviation system as we return to normal operations.

### ***Commercial aviation safety worldwide***

With reference to worldwide safety data, in 2020 there were 10 fatal accidents involving commercial air transport large aeroplanes and 327 fatalities. These preliminary figures are in line with those of the past 10 years, despite the significant downturn in traffic in 2020.

There was a 51% reduction of seats offered by airlines overall in 2020, (source ICAO): the number of accidents is the same as 2015 and the number of fatalities is close to those in 2016.

EASA Member States' operators did not contribute to the number of global fatal accidents and fatalities in 2020, however worldwide it has been quite a difficult year for aviation safety.

Of the 327 total fatalities recorded in 2020, just over half that number resulted from the accidental shooting down of the Ukraine International Airlines B737 over Iran on 8 January 2020, killing 176 passengers and crew. This accident happened before the COVID-19 pandemic had impacted the worldwide commercial aviation system.

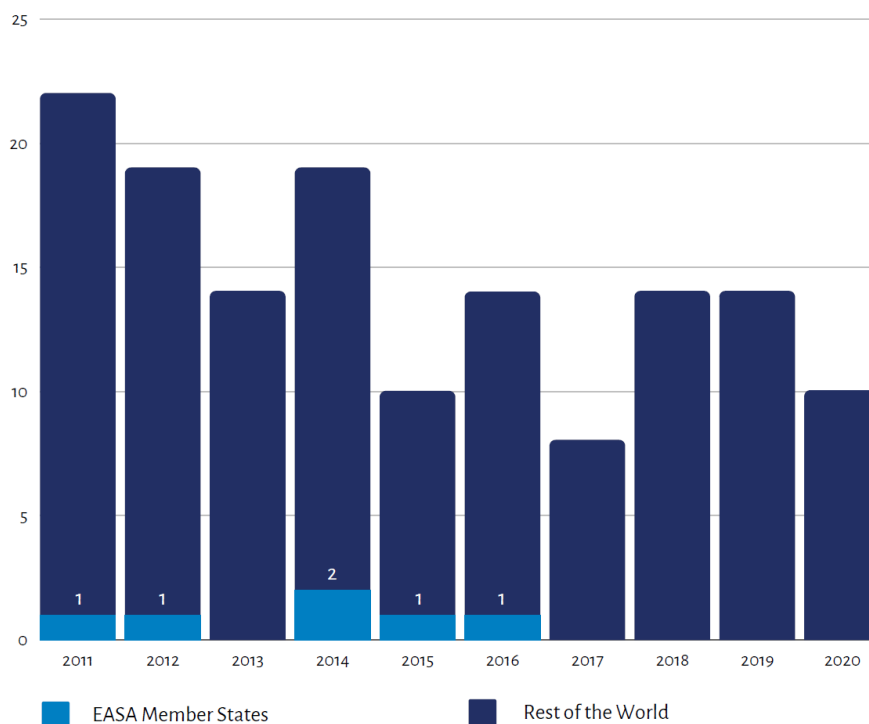
### ***Aviation safety in the EASA Member States***

There were no fatal accidents in commercial airline operations involving an EASA Member State operator in 2020.

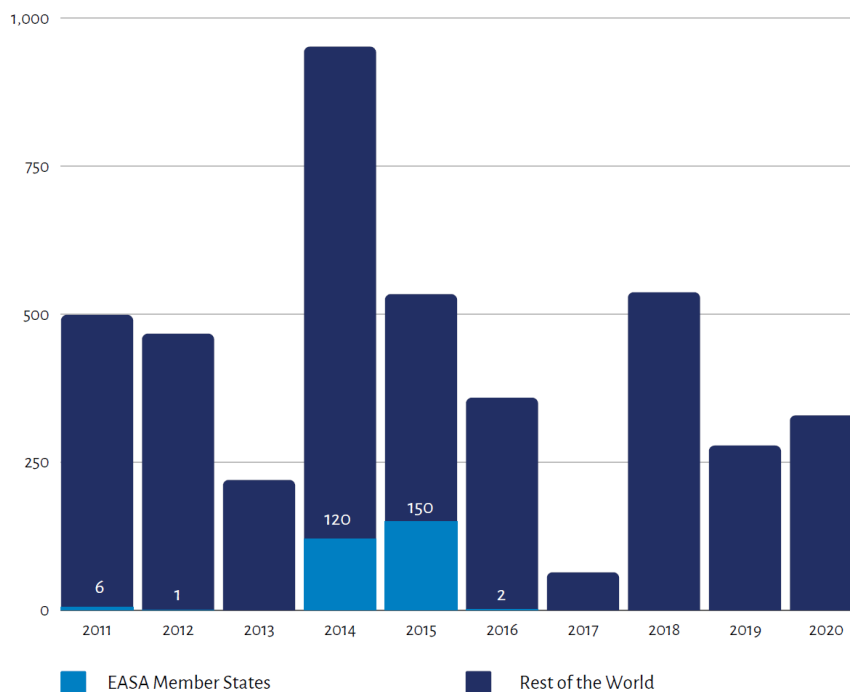


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### Number of fatal accidents




### Number of fatalities



### Fatal Accidents in 2020

According to our preliminary data, the following fatal accidents occurred during 2020:

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- 8 January – B737 crashed shortly after take-off from Tehran, Iran, with 176 fatalities.
- 5 February – B737 overran the runway while landing in poor weather at Istanbul, Turkey, with 3 fatalities.
- 29 March – IAI Westwind crashed on take-off from Manila-Ninoy Aquino Airport, Philippines, with 8 fatalities.
- 4 May – EMB120 medical supply flight crashed on approach to Bardale, Somalia, with 6 fatalities.
- 5 May – Learjet 35A crashed on approach to Esquel Airport, Argentina, with 3 fatalities.
- 8 May – B737 collided with a person on landing at Austin-Bergstrom International Airport, USA, with 1 fatality to the person on the ground.
- 22 May – A320 crashed during its second approach to land at Karachi-Jinnah International Airport, Pakistan, with 98 fatalities including one person on the ground.
- 7 August – B737 crashed during its second approach to land at Kozhikode-Calicut Airport, India, with 21 fatalities.
- 13 August – L410 crashed in Kahuzi-Biega National Park while en route to Bukavu-Kavumu Airport, Democratic Republic of the Congo, with 4 fatalities.
- 22 August – An26 crashed shortly after take-off from Juba Airport, South Sudan, with 7 fatalities.

### **Fatigue Risk Management in Cargo Ops**

15 Mar '21 13:00 - 16:00

### **The Air Transport Monthly Monitor for February 2021**

The air transport industry is not only a vital engine of global socio-economic growth, but it is also of vital importance as a catalyst for economic development. Not only does the industry create direct and indirect employment and support tourism and local businesses, but it also stimulates foreign investment and international trade.

Informed decision-making is the foundation upon which successful businesses are built. In a fast-growing industry like aviation, planners and investors require the most comprehensive, up-to-date, and reliable data. ICAO's aviation data/statistics programme provides accurate, reliable and consistent aviation data so that States, international organizations, aviation industry, tourism and other stakeholders can:

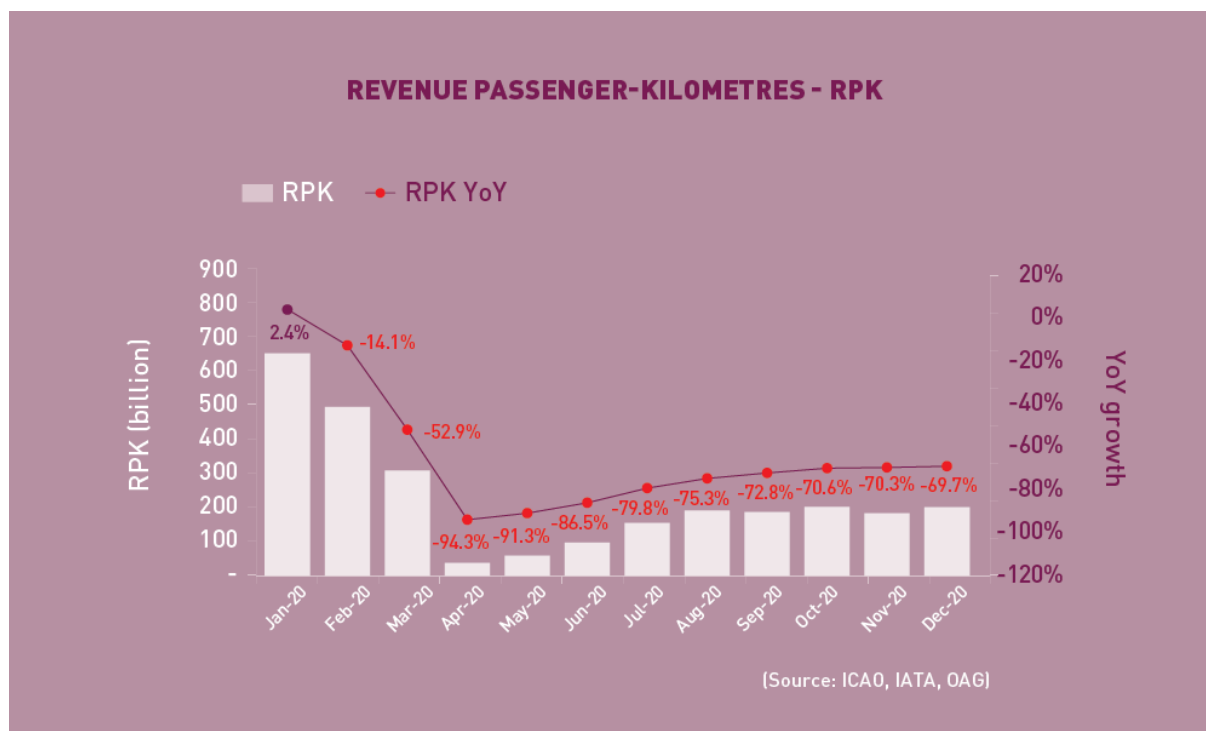
- make better projections;
- control costs and risks;
- improve business valuations; and
- benchmark performance.

The UN recognized ICAO as the central agency responsible for the collection, analysis, publication, standardization, improvement and dissemination of statistics pertaining to civil aviation. Because of its status as a UN specialized agency, ICAO remains independent from outside influences and is committed to

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consistently offering comprehensive and objective data. Every month ICAO produces this Air Transport Monitor, a monthly snapshot and analysis of the economic and aviation indicators.

### **Passenger traffic**



### **Revenue Passenger-Kilometres – RPK**

World passenger traffic fell by -69.7% YoY in December 2020, +0.6 percentage point up from the decline in the previous month. Elevated COVID-19 cases and the resulting travel restrictions continued to weigh on air travel. Subsequent to the initial rebound from the lowest point in April throughout the summer, passenger traffic recovery has stalled with several months of moderate improvements. For 2020 as a whole, the total number of passengers was down -60% YoY to 1.8 billion, back to 2003 levels. China domestic traffic demonstrated the swiftest recovery among all markets.

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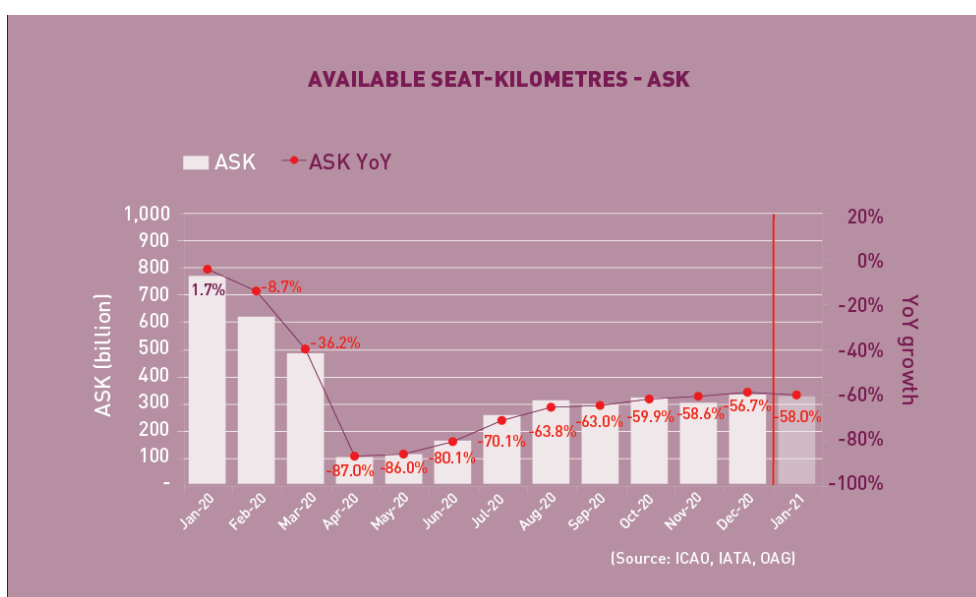
## Capacity



### International Traffic vs. Tourist Arrivals

International passenger traffic fell by -85.3% YoY in December 2020, +3.0 percentage points up from the decline in the previous month. There have been no clear signs of improvement in international travel since the peak of the crisis in April. The number of international passengers in 2020 was far below 2019 levels and was down -74% YoY.

The international tourist arrivals also remained stagnant and followed a similar trend as international passenger traffic.

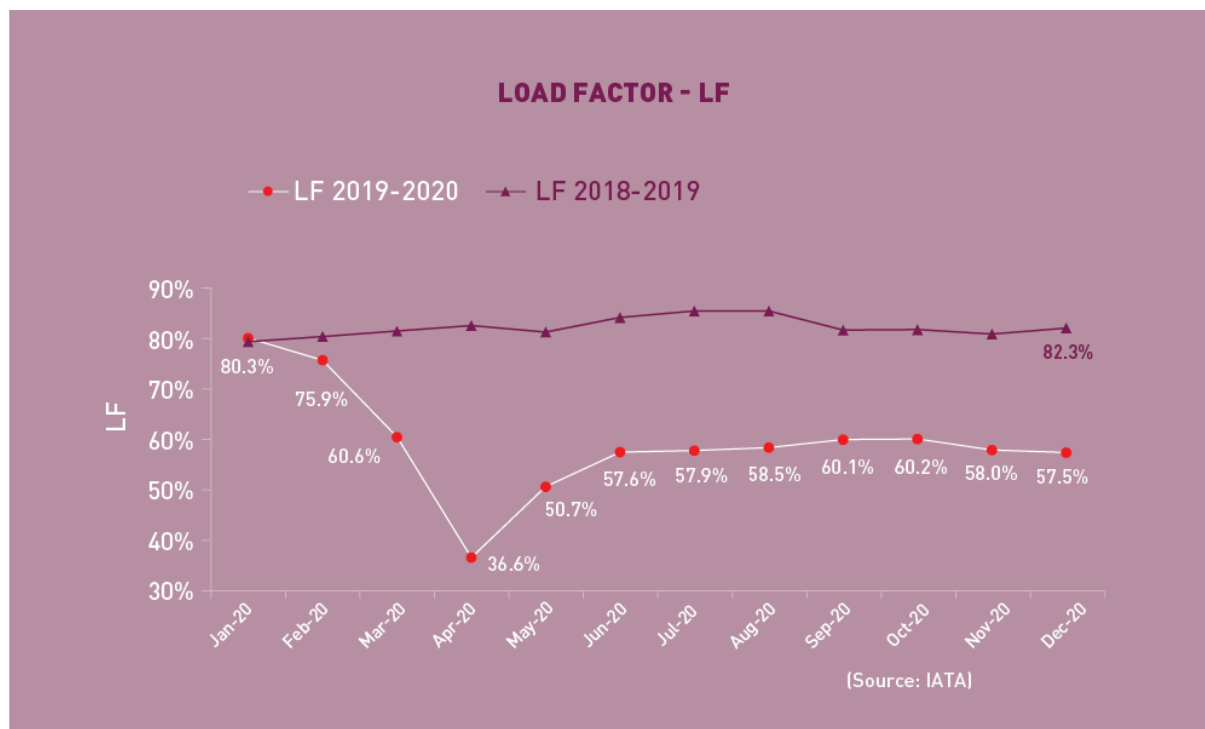


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Available Seat-Kilometres – ASK

Capacity worldwide fell by -56.7% YoY in December 2020, +1.9 percentage points up from the decline in the previous month (-58.6%). In response to the renewed outbreaks across the world and ease of peak holiday travel, the capacity decline in January 2021 is expected to accelerate to -58.0% YoY.

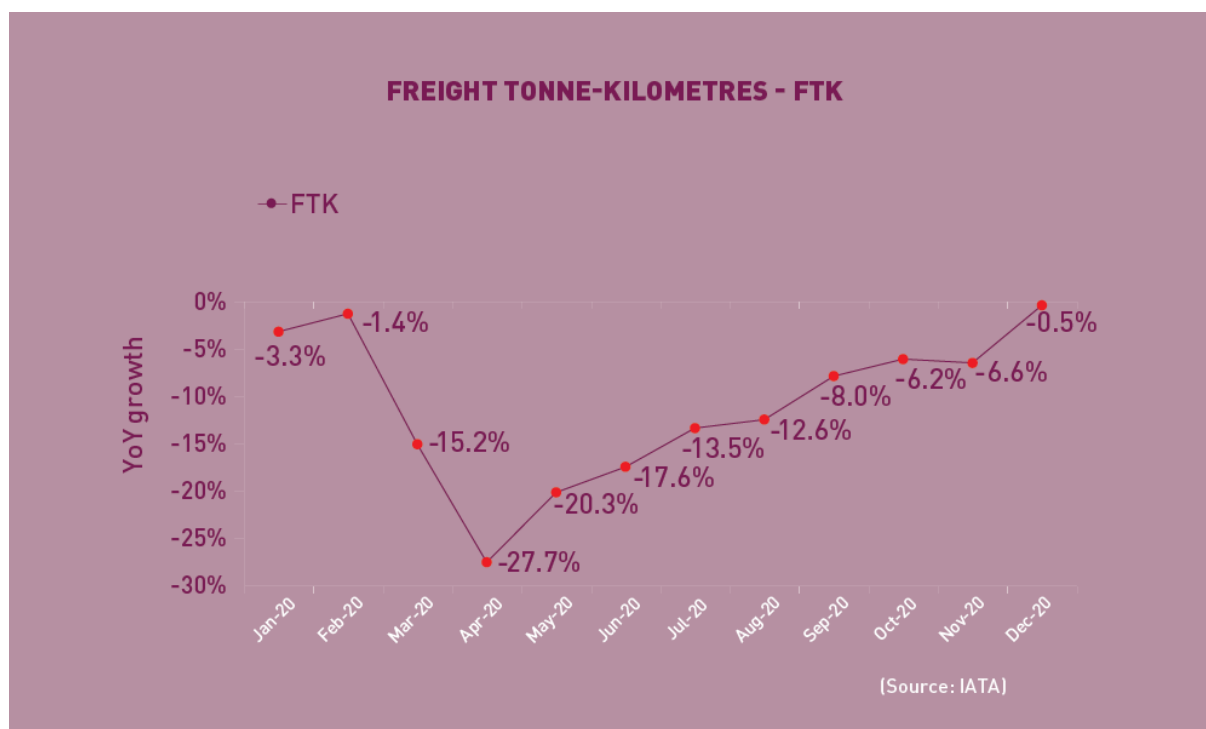
### **Freight Traffic**



### **Load Factor**

The passenger Load Factor reached 57.5% in December 2020, -0.5 percentage point lower than the previous month. As the decline in air travel demand was faster than the capacity cut, the December LF was -24.8 percentage points lower than the rate in the same period of 2019.

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#### Freight Tonne-Kilometres – FTK

World freight traffic reported a decline of -0.5% YoY in December 2020, +6.1 percentage points up from the fall in the previous month. December marked another month of a robust rebound in air cargo with traffic recovering to over 99% of the pre-crisis levels. In contrast to the depressed air travel, cargo traffic recovered swiftly benefiting from the continued demand for goods and supplies during the pandemic. Overall, air cargo traffic fell by -10.6% YoY in 2020, much lower than the decline in passenger traffic. Solid improvements were observed in all regions, specifically in Africa and North America, where traffic has already bounced back to 2019 levels and achieved positive growth.

#### ***Top 15 Airports (Ranked by aircraft departures, passengers, and volume of freight)***

Note: Figures include total scheduled and non-scheduled services

December 2020: -26.6%, -41.3%, and +8.0% YoY in terms of aircraft departures, passengers, and freight for the Top 15

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### AIRPORTS RANKING BY NUMBER OF DEPARTURES

Airports	Departures	YoY
Atlanta GA, US (ATL)	26,127	↓ -29.5%
Dallas/Fort Worth TX, US (DFW)	23,982	↓ -22.0%
Chicago IL, US (ORD)	21,302	↓ -44.9%
Guangzhou, CN (CAN)	20,734	↓ -1.8%
Denver CO, US (DEN)	20,326	↓ -24.6%
Charlotte NC, US (CLT)	17,363	↓ -29.2%
Los Angeles CA, US (LAX)	16,499	↓ -43.9%
Beijing, CN (PEK)	16,030	↓ -35.6%
Shenzhen, CN (SZX)	15,767	↓ -2.8%
Phoenix AZ, US (DVT)	14,769	↓ -18.0%
Phoenix AZ, US (PHX)	14,110	↓ -28.9%
Kunming, CN (KMG)	14,050	↓ -3.0%
Tokyo, JP (HND)	13,679	↓ -30.2%
New Delhi, IN (DEL)	13,468	↓ -35.4%
Xi'an, CN (XIY)	13,442	↓ -6.2%

In terms of aircraft departures, the Top 15 airports reported a combined fall of -26.6% YoY. While US and Chinese airports continued to dominate the Top 15, Tokyo and New Delhi, appeared on the list for the first time since May 2020. Atlanta ranked 1st with -29.5% decline, followed by Dallas/Fort (-22.0%). Guangzhou reported the smallest fall at -1.8%, followed by Shenzhen (-2.8%).

### AIRPORTS BY NUMBER OF PASSENGERS

Airports	Passengers	YoY
Guangzhou, CN (CAN)	2,433,024	↓ -22.9%
Shenzhen, CN (SZX)	1,915,639	↓ -15.8%
Beijing, CN (PEK)	1,842,361	↓ -54.8%
Atlanta GA, US (ATL)	1,794,223	↓ -60.5%
Dallas/Fort Worth TX, US (DFW)	1,760,257	↓ -44.9%
Kunming, CN (KMG)	1,724,022	↓ -8.4%
Xi'an, CN (XIY)	1,606,284	↓ -14.8%
Shanghai, CN (SHA)	1,595,046	↓ -17.3%
Denver CO, US (DEN)	1,581,594	↓ -45.4%
New Delhi, IN (DEL)	1,453,468	↓ -53.9%
Hangzhou, CN (HGH)	1,418,626	↓ -9.7%
Chengdu, CN (CTU)	1,356,744	↓ -41.1%
Tokyo, JP (HND)	1,184,350	↓ -67.0%
Mexico City, MX (MEX)	1,179,992	↓ -47.6%
Charlotte NC, US (CLT)	1,163,744	↓ -46.3%

In terms of passengers, the Top 15 airports posted a total fall of -41.3% YoY. Ten airports in Asia/Pacific ranked in the Top 15, including eight Chinese airports, New Delhi and Tokyo. Guangzhou retained 1st



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place, followed by Shenzhen and Beijing. Kunming and Hangzhou reported the smallest contraction at around less than -10%. Mexico City made it to the list for the first time since 2020.

AIRPORTS RANKING BY NUMBER OF FREIGHT		
Airports	Freights	YoY
Hong Kong SAR, CN (HKG)	437,000	↑ 0.9%
Memphis TN, US (MEM)	426,525	↑ 22.1%
Shanghai, CN (PVG)	354,104	↓ -0.7%
Louisville KY, US (SDF)	303,132	↑ 3.6%
Anchorage AK, US (ANC)	277,283	↑ 21.7%
Incheon, KR (ICN)	264,391	↑ 14.8%
Taipei, CN (TPE)	235,959	↑ 16.5%
Doha, QA (DOH)	209,474	↑ 7.4%
Tokyo, JP (NRT)	207,469	↑ 14.3%
Los Angeles CA, US (LAX)	202,333	↑ 20.6%
Dubai, AE (DXB)	192,974	↓ -11.9%
Miami FL, US (MIA)	190,149	↑ 11.7%
Frankfurt, DE (FRA)	177,405	↑ 11.7%
Guangzhou, CN (CAN)	170,530	↑ 1.1%
Paris, FR (CDG)	156,300	↓ -7.1%

In terms of freight, the Top 15 airports reported a YoY increase of +8.0%, recording the seventh consecutive monthly growth since June. The majority of the Top 15 recorded YoY growth, except for Shanghai, Dubai, and Paris. Hong Kong rose marginally at +0.9% while retained the 1st position. US airports recorded stronger growth overall, with Memphis up by +22.1%.

#### Top 15 Airline Groups (Ranked by RPK)

TOP 15 AIRLINE GROUPS (RANKED BY RPK)			
RPK (billion)	YoY	% Share of World Total	Cumulative % Share
China Southern 15.6	↓ -34.1%	7.7%	7.7%
Air China 10.4	↓ -46.3%	5.1%	12.8%
American 10.3	↓ -64.3%	5.1%	18.0%
China Eastern 9.7	↓ -46.6%	4.8%	22.8%
United 9.7	↓ -67.1%	4.8%	27.6%
Delta 9.5	↓ -66.0%	4.7%	32.3%
Southwest 7.1	↓ -61.9%	3.5%	35.8%
AF-KLM 7.0	↓ -69.7%	3.5%	39.3%
Hainan Airlines 6.4	↓ -29.5%	3.2%	42.5%
Emirates 4.9	↓ -81.9%	2.4%	44.9%
Aeroflot 4.6	↓ -59.1%	2.3%	47.2%
IAG 4.6	↓ -79.5%	2.3%	49.5%
Turkish Airlines 4.0	↓ -67.6%	2.0%	51.5%
Lufthansa Group 3.9	↓ -81.9%	1.9%	53.4%
LATAM Airlines Group 3.8	↓ -65.5%	1.9%	55.3%
<b>Top 15 Total RPKs</b> 112billion	<b>↓ -63.3%</b>	<b>55.3%</b>	(Source: ICAO, airline's webistes)
<b>World Total RPKs</b> 202 billion	<b>↓ -69.7%</b>	<b>100%</b>	Note: Total scheduled and non-scheduled services

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December 2020: -63.3% YoY in terms of RPK for the Top 15

In terms of RPK, the Top 15 airline groups accounted for 55.3% of the world's total RPK in December 2020 and declined by -63.3% YoY. This decline was 6.4 percentage points smaller than the fall in the world's average RPK, with all airlines in the Top 15 posting contractions.

The Top 15 airline list was the same as November, nonetheless, rankings fluctuated due to the epidemic divergence across countries. The top 7 were dominated by airlines in China and the US, the two largest domestic markets.

The three major Chinese airlines reported moderated recovery due to the new outbreaks and resulting restrictions, but they still demonstrated the strongest resilience. China Southern and Air China retained the Top 2 positions while China Eastern slipped to 4th. Hainan Airlines moved one position down to 9th; however, it recorded the fastest recovery among the Top 15.

For the first time since the lowest point in April, American ranked within the Top 3, surpassed China Eastern. United, Delta, and Southwest occupied the places of 5th to 7th, with YoY traffic decline at around -60%, a slight slowdown from November.

Traffic declines of airlines in Europe eased somewhat owing to increased travel during the holiday season. AF-KLM climbed up one position to 8th, whereas the others dropped one position and ranked between 11th and 14th.

Both Emirates and LATAM posted smaller falls and ranked 10th and 15th, respectively.

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## Sites de surveillance

<https://flightsafety.org/toolkits-resources/>

<https://aviation-safety.net>

<http://www.skybrary.aero>

<https://asrs.arc.nasa.gov/>

[Bulletin Officiel des Ministères de la Transition écologique et solidaire et de la Cohésion des territoires et des Relations avec les collectivités territoriales \(developpement-durable.gouv.fr\)](#)

[SIA - La référence en information aéronautique - Page d'accueil \(aviation-civile.gouv.fr\)](#)

[Info sécurité DGAC | Ministère de la Transition écologique \(ecologie.gouv.fr\)](#)

<http://www.developpement-durable.gouv.fr/Objectif-Securite-lebulletin.html>

<http://www.bea.aero/>

<http://ad.easa.europa.eu/sib-docs/page-1>

<https://www.easa.europa.eu/eccsa>

<http://www.jigonline.com/all-bulletins/>

[Accueil \(defense.gouv.fr\)](#)

[ECCSA - Technology Watch | EASA \(europa.eu\)](#)