



SAFETY BULLETIN


Feb 2023

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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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Subjects of the Month:

EASA and MLIT announce the start of the validation of Volocopter's VoloCity by Japan's Civil Aviation Bureau

21 Feb 2023

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EASA and MLIT announce the start of the validation of Volocopter's VoloCity by Japan's Civil Aviation Bureau

Today, Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) accepted a type certification application for an aircraft under development from Volocopter GmbH. This is the third type certification application for an eVTOL in Japan and the first for a European manufacturer.

It marks the beginning of the cooperation between MLIT and EASA in the field of certification of these new concepts of air mobility. As part of the process, MLIT's JCAB will join EASA in a concurrent certification process and proceed with relevant activities related to the safety and airworthiness compatibility of the aircraft in accordance with existing regulations.


Volocopter GmbH, located in Bruchsal, Germany, is currently undergoing a type certification process by the EASA of its VoloCity aircraft aiming at showing compliance of the type to EASA's latest SC-VTOL regulations. These advanced regulations and their complementary Means of Compliance (MoC), are currently being used by EASA in the certification of several eVTOL aircraft.

Japan's Civil Aviation Bureau will cooperate with the EASA on this concurrent type certification in accordance with established aircraft design and manufacturing procedures while supporting the development of a common set of requirements in the process.



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What about this month:

[FAA Regulations](#) | [Federal Aviation Administration](#)

FAA Regulations

All Current & Historical Regulations

- [Current Federal Aviation Regulations](#)
- [Historical Federal Aviation Regulations](#)
- [Historical Civil Air Regulations](#)
- [Regulations.gov](#)

Air Carriers & Operators


- [Certification: Air Carriers and Commercial Operators](#)
- [Hazardous Materials Regulations and Dangerous Goods Advisory Bulletins](#)
- [Part 205 Insurance and Part 298 Exemptions](#)
- [Operating Requirements: Domestic, Flag and Supplemental Operations](#)
- [Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft](#)
- [Overflight Fees](#)

Pilots, Flight & Ground Instructors

- [General Operating and Flight Rules \(14 CFR Part 91\)](#)
- [Certification: Pilots, Flight Instructors, and Ground Instructors \(14 CFR Part 61\)](#)
- [Pilot Schools \(14 CFR Part 141\)](#)


Commercial Space Transportation

- [Legislation & Policies](#)
- [Regulations & Guidelines](#)
- [Advisory Circulars](#)

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Top Tasks

- [Look up Federal Regulations](#)
- [Read 14 CFR Part 91](#)
- [Read 14 CFR Part 61](#)
- [Read 14 CFR Part 119](#)
- [Find a handbook or manual](#)

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FAA regulations

Draft ACs

Advisory Circular

AC 90-89C - Amateur-Built Aircraft and Ultralight Flight Testing Handbook

AC 150/5200-37A - Safety Management Systems for Airports

AC 33.83-2 - Turbine Engine Vibration Test

AC 120-72A - Maintenance Human Factors Training

New and Revised FAA Airports Series 150 Advisory Circulars (ACs)

[New and Revised FAA Airports Series 150 Advisory Circulars \(ACs\)](#)

Forms - Orders & Notices

Order JO 7350.9DD - Location Identifiers

Notice 8900.651 - Revised/New FAA Forms for Mechanic, Inspection Authorization, Parachute Rigger, and Repairman Applications

Order JO 7340.2M - Contractions

Notice (GENOT) JO 7340.731 - CANCELLATION OF ICAO THREE LETTER DESIGNATOR (3LD) "PTM" AND ASSOCIATED CALL SIGN "POSTMAN"

Notice (GENOT) JO 7340.730 - ICAO THREE LETTER DESIGNATOR (3LD) "PRV" AND ASSOCIATED CALL SIGN "PRE VAT"

Order JO 7400.10E - Special Use Airspace

Notice JO 7210.943 - Local Conferences

Notice JO 1000.30 - Application of the Acceptable Level of Risk (ALR) to Space Missions in the National Airspace System (NAS)

Notice JO 7340.729 - Foreign ICAO 3LD Additions, Modifications, and Deletions (excluding U.S.)

Notice 8900.650 - Clarification on the Operational Evaluation Process

Notice JO 7210.942 - Local Conferences (Cancelled)

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EASA regulations

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

Rules

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

Commission Implementing Regulation (EU) 2023/217 of 1 February 2023 correcting Regulation (EU) No 965/2012, as regards some inconsistencies in requirements introduced by Implementing Regulation (EU) 2019/1387, and Regulations (EU) 2021/1296 and (EU) 2021/2237.

The European Commission published the Implementing Regulation (EU) 2023/203 of October 27, 2022. With this publication, the regulatory framework paving the way for a cyber-resilient aviation system has been completed.

Implementing Regulation (EU) 2023/203 lays down rules for the identification and management of information security risks in aviation organisations and aviation competent authorities, including EASA. This regulation follows the Delegated Regulation (EU) 2022/1645 published on September 23, 2022, applicable to approved design and production organisations, as well as aerodrome operators and apron management service providers.

Part-IS introduces requirements for the identification and management of information security risks which could affect information and communication technology systems and data used for civil aviation purposes. It sets requirements for detection of information security events, identifying those which are considered information security incidents, and responding to, and recovering from, those information security incidents to a level commensurate with their impact on aviation safety.

Part-IS provisions will be applicable from October 16, 2025 for organisations in the scope of the delegated act and from February 22, 2026 for all other organisations and competent authorities covered by the implementing act.

Commission Implementing Regulation (EU) 2023/203 of 27 October 2022 laying down rules for the application of Regulation (EU) 2018/1139 of the European Parliament and of the Council, as regards requirements for the management of information security risks with a potential impact on aviation safety for organisations covered by Commission Regulations (EU) No 1321/2014, (EU) No 965/2012, (EU) No 1178/2011, (EU) 2015/340, Commission Implementing Regulations (EU) 2017/373 and (EU) 2021/664, and for competent authorities covered by Commission Regulations (EU) No 748/2012, (EU) No 1321/2014, (EU) No 965/2012, (EU) No 1178/2011, (EU) 2015/340 and (EU) No 139/2014, Commission Implementing Regulations (EU) 2017/373 and (EU) 2021/664 and amending Commission Regulations (EU) No 1178/2011, (EU) No 748/2012, (EU) No 965/2012, (EU) No 139/2014, (EU) No 1321/2014, (EU) 2015/340, and Commission Implementing Regulations (EU) 2017/373 and (EU) 2021/664

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Easy access Rules

Easy Access Rules for Air Traffic Management/Air Navigation Services (Regulation (EU) 2017/373)

Easy Access Rules for Standardised European Rules of the Air (SERA)

Easy Access Rules for Small Rotorcraft (CS-27)

Agency Decisions

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

07/02/2023 CS-29 Amendment 11

Regular update of the Certification Specifications for Large Rotorcraft (CS-29)

07/02/2023 CS-27 Amendment 10

Regular update of the Certification Specifications for Small Rotorcraft (CS-27)

07/02/2023 ED Decision 2023/001/R

Enhancement of the safety assessment processes for rotorcraft designs' | Regular update of the Certification Specifications for Small Rotorcraft (CS-27), and Large Rotorcraft (CS-29)

Notices of Proposed Amendment


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

Opinion No 01/2023

Regulatory framework on the conformity assessment of ATM/ANS systems and ATM/ANS constituents (ATM/ANS equipment) for the safe and seamless operation of the European ATM network.

The objectives of this Opinion are to put forward a proposal regarding:

- ✓ the conformity assessment of certain ATM/ANS equipment (i.e. ATM/ANS systems and ATM/ANS constituents) as well as regarding the approval of organisations involved in its design and/or production;
- ✓ the adaptation of the implementing rules adopted on the basis of Regulation (EC) No 552/2004 to the framework under Regulation (EU) 2018/1139 as required by the legislator in accordance with Article 140(2) of the referenced Regulation, while ensuring continuous compliance with those rules by optimising the use of resources during the demonstration of compliance and reducing the administrative burden, as well as enabling the clear allocation of responsibilities to the affected parties and maximising the synergies with existing processes.

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The proposed amendments will increase legal certainty and support the implementation of the seamless operation of the European Air Traffic Management network (EATMN) at all times and for all phases of flight.

The proposed new regulations and the amending ones are expected to maintain safety or even increase it through enhanced commonality, continuous compliance, and oversight of the interoperability of the EATMN while reducing the regulatory burden, increasing cost-effectiveness, and improving harmonisation among the affected parties in terms of system technical requirements.

In order to achieve these objectives, this Opinion proposes new Regulations on conformity assessment of certain ATM/ANS equipment, approval of organisations involved in the design and/or production of ATM/ANS equipment, airspace usage requirements (AUR) and amendments to Commission Implementing Regulation (EU) 2017/373 as regards conformity assessment of ATM/ANS systems and ATM/ANS constituents and interoperability of the EATMN as well as to Regulation (EU) No 923/2012 as regards interoperability of the EATMN.

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ASECNA

AIP ASECNA

Regulations

AMDT 03/2023 - March 20, 2023 - AMDT 03/23 - UPDATING BULLETIN

AIC NR 16/A/23FC - March 16, 2023 - FG - EQUATORIAL GUINEA - New measures on COVID-19 pandemic

AIC NR 15/A/23FC - March 16, 2023 - FK - CAMEROON - Operational aerodromes and heliports

AIP SUP NR 30/A/23GO - March 15, 2023 - GOGS - CAP SKIRRING (SENEGAL) - Works in progress around RWY/14/32

AIP SUP NR 29/A/23GO - March 15, 2023 - DX - TOGO - Update of aeronauticals informations

AIRAC/AIP SUP NR 28/A/23GO - March 15, 2023 - GOOO - DAKAR OCEANIC FIR (SENEGAL) - Creation of report points

AIRAC/AIP SUP NR 27/A/23GO - March 14, 2023 - DFOO - BOBO DIOULASSO (BURKINA FASO) - Update of operational hours

AIP SUP NR 09/A/22FM - March 07, 2023 - FMST - TOLIARY (MADAGASCAR) - Update of aeronautical data

AIP SUP NR 03/B/23GO - March 07, 2023 - GOOO - DAKAR NOF - Checklist of valid AIP supplements "B"

AIP SUP NR 24/A/23FC - March 07, 2023 - FOOG - PORT-GENTIL (GABON) - Unvalaibility of Jet A1

AIP SUP NR 23/A/23FC - March 07, 2023 - FOOL - LIBREVILLE/ LEON M'BA (GABON) - Update of aeronautical information

AIC NR 14/A/23FC - March 07, 2023 - FTJ - NDJAMENA (CHAD) - 2022 Meteorological data

AIP SUP NR 10/B/22FM - March 07, 2023 - FMMM - MADAGASCAR NOF - Checklist of valid AIP SUP "B"

AIP SUP NR 09/B/22FM - March 07, 2023 - FMSG - FARAFANGANA (MADAGASCAR) - Status of the A/G FAC 118,4MHZ (U/S)

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AIP SUP NR 08/B/22FM - March 07, 2023 - FMSG - FARAFANGANA (MADAGASCAR) - Status of the A/G FAC 5484KHZ (U/S)

AIRAC/AIP SUP NR 26/A/23GO - March 06, 2023 - DIAP - ABIDJAN (IVORY COAST) - Update of RMAC chart

AIP SUP NR 02/B/23GO - March 02, 2023 - DBBP - PARAKOU (BENIN) - Closure of the RWY 04/22 due to degradation

VALID NOTAM - GO - March 02, 2023 - DAKAR NOF - Checklist of valid NOTAM

AIP SUP NR 22/A/23FC - March 02, 2023 - BRAZZAVILLE NOF - Checklist of valid AIP supplements "A"

AIP SUP NR 03/B/23FC - March 02, 2023 - BRAZZAVILLE NOF - Checklist of valid AIP supplements "B"

AIP SUP NR 21/A/23FC - March 02, 2023 - BRAZZAVILLE NOF - Checklist of valid AIP supplements "A"

VALID NOTAM - FM - March 02, 2023 - ANTANANARIVO NOF - Checklist of valid NOTAM

AIP SUP NR 08/A/22FM - March 01, 2023 - FM MM - MADAGASCAR NOF - Checklist of valid AIP SUP "A"

AIP SUP NR 07/B/22FM - March 01, 2023 - FM MM - MADAGASCAR NOF - Checklist of valid AIP SUP "B"

AIP SUP NR 25/A/23GO - March 01, 2023 - GOOO - DAKAR NOF - Checklist of valid AIP supplements "A"

AIP SUP NR 24/A/23GO - February 27, 2023 - GOOO - DAKAR NOF - Checklist of valid AIP supplements "A"


AIP SUP NR 01/B/23GO - February 27, 2023 - GA - MALI - Closure aerodromes of Bougouni(GABG); Bafoulabe (GABF); Koutiala (GAKO); Manantali (GAMN); Teriyabougou (GATY) due to works

AIP SUP NR 20/A/23FC - February 23, 2023 - FC - CONGO - Update of aeronautical data

AIP SUP NR 22/A/23GO - February 21, 2023 - GOOO - DAKAR NOF - Checklist of valid AIP supplements "A"

AIP SUP NR 21/A/23GO - February 21, 2023 - GOGG - ZIGUINCHOR (SENEGAL) - Closing airport

AIP SUP NR 20/A/23GO - February 21, 2023 - GOSS - SAINT LOUIS (SENEGAL) - Closing airport

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Notam

[Consultation NOTAM \(asecna.aero\)](http://asecna.aero)

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French regulations

JORF

joe_20230222_0045_0026 - Décret n° 2023-120 du 20 février 2023 pris en application de l'article L. 6143-4 du code des transports

joe_20230217_0041_0047 - Arrêté du 14 février 2023 portant délégation de signature (direction générale de l'aviation civile - direction du transport aérien)

joe_20230215_0039_0015 - Arrêté du 10 février 2023 portant création d'une zone interdite temporaire identifiée ZIT Belin-Béliet dans la région de Belin-Béliet (Gironde), dans la région d'information de vol de Bordeaux

joe_20230211_0036_0001 - LOI n° 2022-1726 du 30 décembre 2022 de finances pour 2023 (rectificatif)

OSAC-DSAC

Guide pour les exploitations d'aéronefs autres que les aéronefs motorisés complexes à des fins non commerciales - Ed1V1 du 13 décembre 2022 (PDF - 1.29 Mo)

Guide Formations des Equipages Avion - Ed1 V3 Rev1 février 2023

R5_CAT_F1 - Formulaire de déclaration d'intention : Certificat de Transporteur Aérien - R5-CAT-F1 - Ed1 V2 Rev1 du 28/02/2023 (PDF - 803.44 Ko)

Guide autorisation de survols basses hauteurs Ed3 V4 mars 23.pdf

Guide autorisation de survols basses hauteurs Ed3 V4 mars 23.pdf


Bulletin officiel de la DGAC

[Bulletin Officiel des Ministères de la Transition écologique et solidaire et de la Cohésion des territoires et des Relations avec les collectivités territoriales \(developpement-durable.gouv.fr\)](https://www.developpement-durable.gouv.fr/Bulletin-Officiel-des-Ministres-de-la-Transition-ecologique-et-solidaire-et-de-la-Cohesion-des-territoires-et-des-Relations-avec-les-collectivites-territoriales)

TREA2301241S - décision du 6 février 2023 portant homologation des tarifs de la redevance pour service rendu au titre des missions de coordination et de facilitation d'horaires sur les aérodromes.


TREA2302381S - décision du 25 janvier 2023 portant délégation de signature (direction de la sécurité de l'aviation civile sud).

TREA2302265S - décision du 23 janvier 2023 portant organisation de la direction de la sécurité de l'aviation civile sud-est.

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TREA2303041S - décision du 31 janvier 2023 portant délégation de l'organisation des services aériens entre Poitiers et Lyon (Saint-Exupéry) au syndicat mixte de l'aéroport de Poitiers-Biard.

TREA2303181S - Décision du 31 janvier 2023 portant délégation de l'organisation des services aériens entre la rochelle et Lyon (Saint-Exupéry) au syndicat mixte des aéroports de la rochelle – île de ré- et Rochefort Charente-Maritime.

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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>

[4 Ways FLIR Thermal Studio Makes Drone Inspections More Efficient | Teledyne FLIR](#)

4 Ways FLIR Thermal Studio Makes Drone Inspections More Efficient



The new SIRAST™ professional drone provides high-resolution radiometric thermal imagery for industrial and utilities inspection. Compatibility with FLIR Thermal Studio Suite™ enables pilots to efficiently manage thousands of thermal images and videos with advanced processing features needed for predictive maintenance on critical components, system troubleshooting, and increased productivity.

To successfully capture accurate drone inspection data, you need to fly in the right conditions and in the right relationship to your target. But that's just one important element. It is just as important that your images are correctly processed and that your findings are reported accurately. FLIR Thermal Studio software is a powerful tool that lets you optimize your images, take accurate measurements, batch process images, and report your findings, all with a single program.

Image Optimization – Thermal Tuning and Color Palettes


Image optimization depends upon adjusting the image so that it displays the temperature differences you need to see. This does not relate to temperature measurement. Thermal Studio's image optimization capabilities only affect how the image looks: they will not impact temperature measurement.

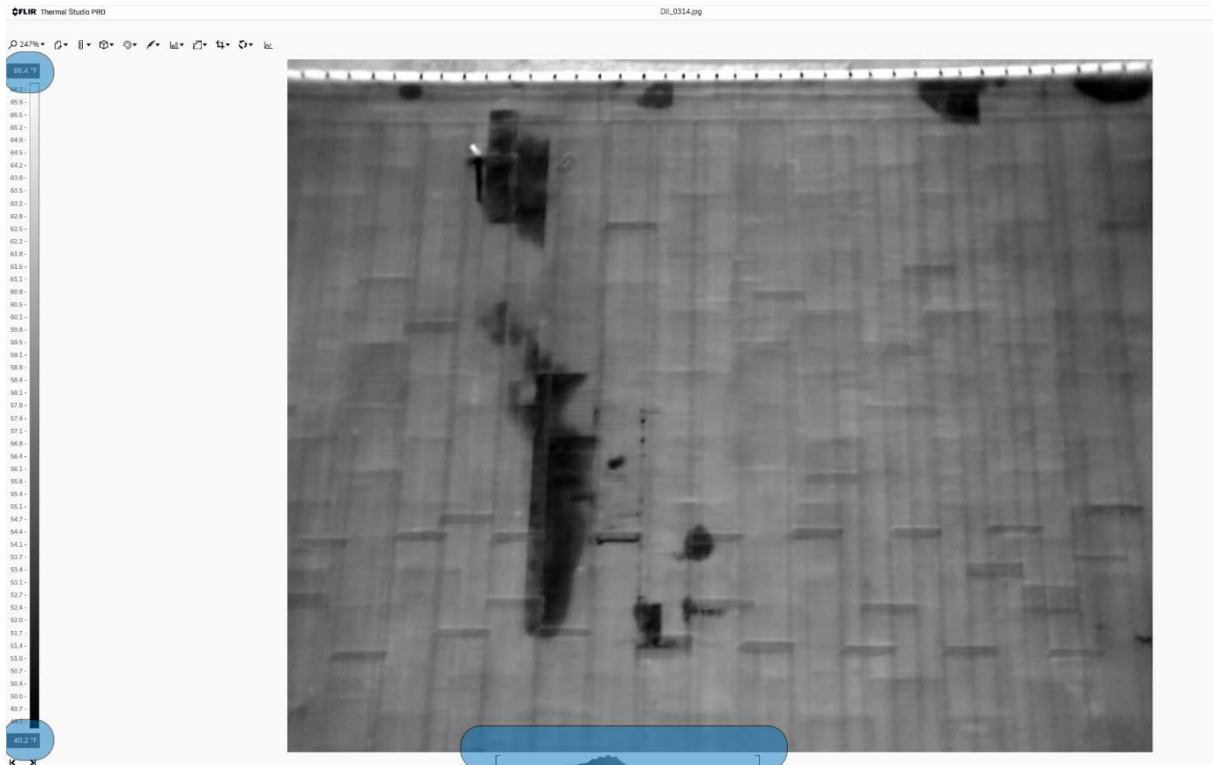
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Manually adjusting the image's Span and Level is a process called thermal tuning. A thermal imager can detect temperatures that are much hotter and colder than what you're looking at, but provide no useful information outside of the temperatures that are actually in the scene. Span refers to the window of temperatures seen in an image, and Level refers to the mid-point of the Span. Span is analogous to the contrast levels on your television, while Level is the similar to brightness.




In this image of a flat commercial roof, the Span is 45.1°F to 83.1°F: these metrics can be seen on the scale to the left of the image, along its vertical axis. Everything above 83.1°F is white, everything below 45.1°F is black, and everything in between is assigned a color or shade of grey. Those colors or shades provide the visual details you need, but sometimes the Auto Adjust feature doesn't put those colors on the temperatures you need to see. The span of temperatures that have colors assigned to them can be adjusted by either typing numbers in the scale to the left of the image or by dragging the brackets on the horizontal bar below the image.

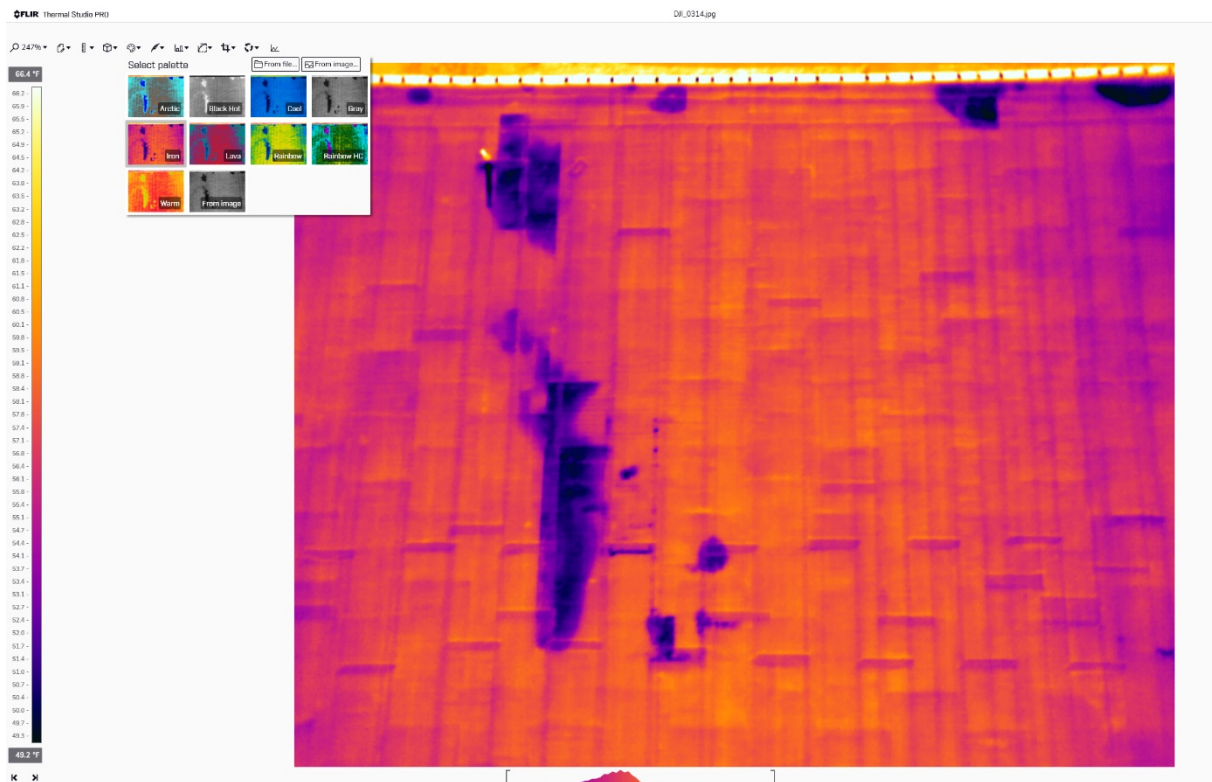
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In the same image, the roof has some thermal anomalies. To see them better, you can thermally tune the image. For example, by adjusting the span to 49.2°F -66.4°F, the anomalies that could indicate moisture damage (and which did upon further investigation) can be clearly seen.

The image's color palette can also be adjusted in Thermal Studio. Because thermal imagers create pictures of invisible heat energy, colors are applied to different intensities of thermal energy to allow visualization of those thermal differences. Thermal Studio offers multiple color palettes to provide thermal images that can be understood easily.

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The most common color palettes are grey scale – White Hot and Black Hot. As the name suggests, in White Hot, the hottest thing in the image is white, the coldest thing is black, and everything between the two is displayed as a shade of grey. In the Black Hot palette, the reverse is true. Thermal Studio allows you to select from several standard color palettes to produce the most effective result.

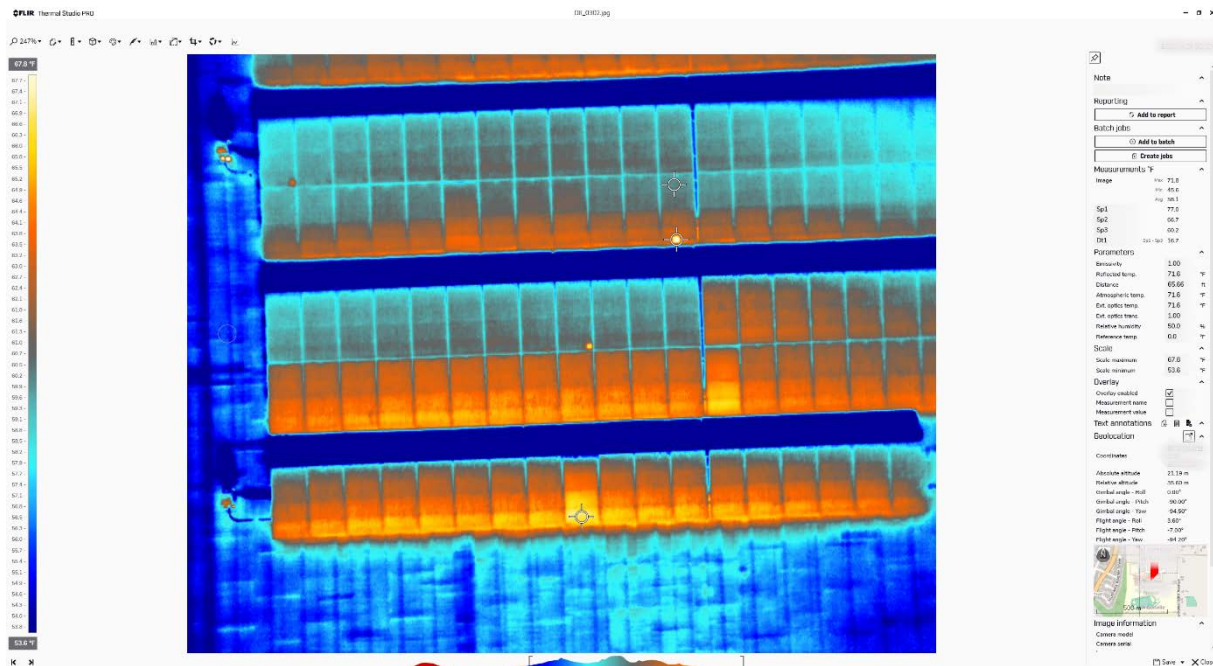
The palette you consider best will depend on the thermal contrast within the image, how your eye responds to color differences, and personal preference. Note that some color palettes, like Rainbow HC, were designed to enhance temperature differences in scenes that contain minimal inherent temperature differences. This means that using a high contrast (HC) color palette for a scene with a high degree of contrast may make slight temperature differences harder to see.

Changing color palettes does nothing to the image's underlying temperature data, so you can feel free to try different ones and pick the one you like.

Temperature Measurement

Converting the apparent temperatures you see in flight to corrected true temperatures is a complex process. Thermal Studio includes several tools to help you generate accurate measurements.

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Measurement tools are displayed under the ruler icon. They fall into two categories: Spot and Area tools. The Spot tool measures a specific target. Select the Spot option and click on the item you want to measure to get the average temperature of the 4x4 pixel square inside that Spot circle. The measurement will be displayed in the right sidebar under the Measurements heading. You can position an unlimited number of Spot tools on an image. You can also use the Delta tool to automatically compare the temperature difference between spots.

Area tools work in the same fundamental way, but use different shapes. Area tools provide readings for the hottest and coldest pixels within a designated area and the average temperature of all the pixels within that area. Area tools can be rectangular, circular, ellipses, lines, or freeform polygons.

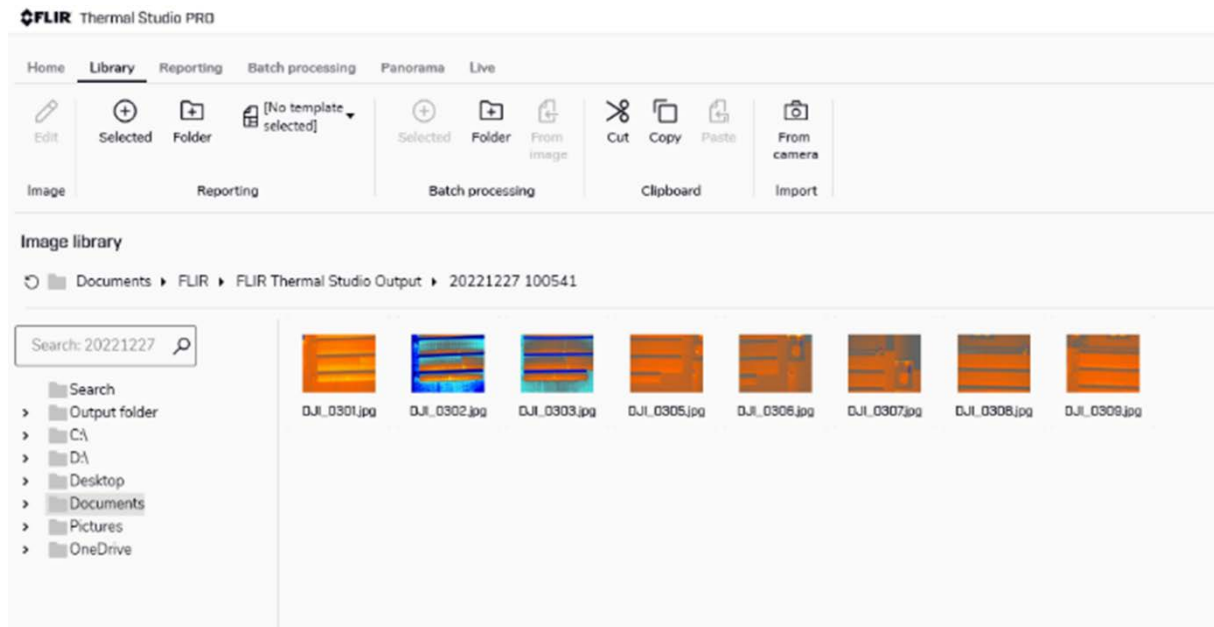
The Parameters section of the right sidebar displays all the adjustable variables that compensate for the differences in material, surface conditions, reflected temperatures, and atmospheric factors that impact the accuracy of your temperature readings. Remember that thermal cameras detect infrared radiation rather than temperature. They calculate temperatures based on the intensity of the radiation and the compensations you enter for emissivity, reflected temperature, ambient temperature, humidity, and distance to the target. If these parameters are not entered correctly, the temperature calculations will be incorrect.

Batch Processing

Using drones rather than handheld cameras for thermal inspections provides significant advantages, including the ability to inspect expansive areas quickly and to capture many images in the process. Roof and solar inspections usually require capturing large datasets of thousands of images to create orthomosaics and other collective data products.

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Thermal Studio's Batch Processing function is a tremendous time saver for drone pilots. Batch processing lets you select time images you want to process, then apply the same color palette, temperature scale, temperature measurement parameters, and more to the entire dataset in seconds. This can save hours otherwise spent preparing images for reports and entire datasets for stitching.




Batch Processing is straightforward in Thermal Studio. From Library, select the images to be processed. In the Batch Processing section, choose Selected, then choose the options you want to apply to the batch of images. In this example, all of the selected images will be changed to a different color palette. Select the color palette and begin processing. The images will be changed to the new color palette in seconds. You can also set them all to the same Span and Level settings, or even add temperature measurement tools to all of the images at once.

Reporting


Flying the drone and gathering thermal data from inspections is only useful if that information can be communicated. Thermal Studio is a reporting powerhouse, and it is incredibly flexible and easy to use.

After thermally tuning your image, measuring your anomalies, and finalizing your analysis, Thermal Studio provides an option to add the image to a report and select the report template you want to use. You can also create your own. Thermal Studio automatically generates a report that contains all of your measurement data and provides notes fields for commentary and recommendations. The report can be sent to anyone with the Thermal Studio software. They can view your live thermal images or export the report as a PDF for anyone to see.

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Conclusion


Using the SIRAS professional drone with a thermal camera provides critical information for industrial inspection, including roof, utilities, solar, and more. Teledyne FLIR's Thermal Studio is the single piece of software that drone operators need. It provides essential functions for optimizing thermal images, batch processing, and reporting findings to employers and clients. Please visit FLIR Thermal Studio for more information.

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NAT OPS Bulletin


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

No update

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IOSA

[IATA - IOSA](#)


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Safety Alerts

Date Posted	Affected Product(s)	Effective Date	Subject and Additional Information
Mar 10, 2023	National Flight Data Digest and NASR Subscriber Files	NASR Feb 23, 2023 NFDD Jan 9, 2023	PUW VOR/DME Frequency Error. See the 23-07 NASR Safety Alert (PDF) for complete information.
Mar 9, 2023	Enroute IFR Charting Products	Jun 15, 2023 or Later	Foreign Data on Enroute IFR Aeronautical Charts. See the 23-01 ENR Charting Notice (PDF) for complete information.
Feb 24, 2023	National Flight Data Digest	Apr 20, 2023	ATS Airways in NFDD 034. See the 23-06 NASR Safety Alert (PDF) for complete information.
Feb 22, 2023	Airport Diagrams	Oct 5, 2023	Airport Diagrams - Addition of Lighting and Navigational Aids. See the 23-03 CS Charting Notice (PDF) for complete information.
Feb 21, 2023	National Flight Data Digest and NASR Subscriber Files	NASR Feb 23, 2023 NFDD Jan 25, 2023	74XS Airport Data error. See the 23-05 NASR Safety Alert (PDF) for complete information.
Feb 15, 2023	Digital Terminal Procedures Publication - DDTPPE230223.zip	Feb 23, 2023	PDF Compare Processing Error. See the 23-02 TERM Safety Alert (PDF) for complete information.

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Date Posted	Affected Product(s)	Effective Date	Subject and Additional Information
Feb 15, 2023	Chart Supplements U.S. and Alaska	Aug 10, 2023	Publications will no longer contain the Key to Aerodrome Forecast (TAF) and Aviation Routine Weather Report (METAR) in the Procedures section. See the 23-02 CS Charting Notice (PDF) for complete information.
Feb 15, 2023	Chart Supplement Pacific	Aug 10, 2023	CS PAC publication will no longer contain the Class C airspace procedure text in the Procedures section. See the 23-01 CS Charting Notice (PDF) for complete information.
Feb 10, 2023	NASR 56-Day Subscriber Files	Feb 23, 2023	Vance AFB, OK Class D and Class E2 boundaries do not correctly exclude the Enid Class E4 airspace. See the 23-04 NASR Safety Alert (PDF) for complete information.
Feb 2, 2023	NASR 28-Day Subscriber Files	Feb 23, 2023	In the FIX.txt file of the 28-Day NASR Subscription, the latitude for RANAY waypoint is in error. See the 23-03 NASR Safety Alert (PDF) for complete information.
Feb 2, 2023	NASR 28-Day Subscriber Files	Feb 23, 2023	8 fixes contain errors in Fix/Nav Makeup for HLN mag bearings. See the 23-02 NASR Safety Alert (PDF) for complete information.

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Safety information bulletin

FAA

[All Information for Operators \(InFOs\) \(faa.gov\)](https://www.faa.gov)

[All Safety Alerts for Operators \(SAFOs\) \(faa.gov\)](https://www.faa.gov)

[Dynamic Regulatory System \(faa.gov\)](https://www.faa.gov)

01/02/2023	2023-02	DE HAVILLAND AIRCRAFT OF CANADA LTD. DHC-8	Broken Aileron Cable and Non-reversible Filtering of Control Position Data for Flight Data Recording
28/02/2023	SAIB 2023-01	ROBINSON HELICOPTER COMPANY R22 Safety Information Bulletin Airworthiness	Main Rotor - Potential Wear on Main Rotor Blade Spindle Bearings

EASA

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

01/02/2023	2023-02	DE HAVILLAND AIRCRAFT OF CANADA LTD. DHC-8	Broken Aileron Cable and Non-reversible Filtering of Control Position Data for Flight Data Recording
06/02/2023	2022-10R1	Safety Information Bulletin Airworthiness	DURBAL Metallwarenfabrik and Maedler Pushrod Ends Production Deficiency
17/02/2023	2022-02R1	Safety Information Bulletin ATM/ANS Operations	Global Navigation Satellite System Outage Leading to Navigation / Surveillance Degradation
27/02/2023	BEA-2023-01	EMBRAER EMB-500 EMB-505 EMB-545/-550 EMBRAER S.A. EMB-135 EMB-145 ERJ 170 ERJ 190 Safety Information Bulletin Airworthiness	Rotary Switches Pull-to-Turn Feature inspection
28/02/2023	SAIB 2023-01	ROBINSON HELICOPTER COMPANY R22 Safety Information Bulletin Airworthiness	Main Rotor - Potential Wear on Main Rotor Blade Spindle Bearings

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Conflict zone information bulletin

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

Airspace of Afghanistan CZIB-2017-08R12

STATUS

ACTIVE

Issued date 31/01/2023

Revision

- ✓ 11/08/2022 - Germany issued AIC 17/22 superseding AIC 14/22
- ✓ 17/08/2022 - Italy issued NOTAM 1A6073/2022 replacing A2056/2022
- ✓ 06/10/2022 - Germany (LBA) issued AIC 20/22 superseding AIC 17/22
- ✓ 31/10/2022 - The CZIB description was changed regarding altitude restrictions and validity was extended for three months
- ✓ 24/11/2022 - French DGAC issued AIC France A24/22 canceling and superseding A 10/22
- ✓ 31/01/2023 - The CZIB validity was extended for six months and referenced publications updated

Referenced publication(s):

- ✓ United Kingdom AIP ENR 1.1 and V0020/21 NOTAMN issued 26 August 2021 (see Appendix 1)
- ✓ United States Federal Aviation Administration KICZ A0029/21 - issued 30 August 2021 and US DoD (DINS) NOTAM A0699/21 issued 08 September 2021 (see Appendix 2)
- ✓ French AIC France A 24/22 issued 24 November 2022 (see appendix 3)
- ✓ German AIC 01/23 issued on 26 January 2023 (see Appendix 4)
- ✓ Canada AIC 3/23 issued 3 January 2023 (see Appendix 5)
- ✓ Spanish AIP SUP 44/22 issued 21 April 2022 (see Appendix 6)

Affected Airspace

Afghanistan airspace, Kabul Flight Information Region (FIR OAKX).

Affected Countries

[Afghanistan](#)


Applicability Applies to operators

Description

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Due to the current security situation in Afghanistan since the withdrawal of western military forces and the Taliban takeover of the country in August 2021, there is a continued possible threat to civil aviation resulting in a HIGH risk to operations at altitudes below FL 320.

Extremist non-state actor groups remain active and might sporadically target aviation facilities in multiple ways, including direct rocket or mortar attacks, indirect fire or suicide bombers.

Additionally, there is an aviation safety concern due to the absence or limited Air Traffic Service (ATS) capacities across the entire country.

Recommendation(s)

EASA advises air operators not to conduct flights over FIR Kabul (OAKX) below FL 320.

Operators should take this information and any other relevant information into account in their own risk assessments, alongside any available guidance or directions from their national authority as appropriate. Latest operational information on ‘Closures and warnings’ issued by means of ICAO State Letters, NOTAMs, AICs/AIPs, EASA CZIB may be found in the [Network Manager NOP Portal](#) (password protected version).

Valid until

31/07/2023

Appendix 1


Source: United Kingdom AIP ENR 1.1 Section 1.4

Security - Hazardous Situation in Afghanistan UK registered air operators are recommended not to enter FIR KABUL (OAKX) below 25,000 FT above ground level (AGL). Potential risk from anti-aircraft weaponry. Excluded from this recommendation are airways P500 and G500 for transiting overflights. Contact UK Department for Transport +44 (0)207-082 6639 or +44 (0)207-944 5999 out of hours.

Appendix 2

Source: United States Federal Aviation Administration KICZ A0029/21 and US DoD - (DINS) NOTAM A0699/21

KICZ A0029/21 - SECURITY.. UNITED STATES OF AMERICA FLIGHT PROHIBITION AGAINST CERTAIN FLIGHTS IN THE KABUL FLIGHT INFORMATION REGION (OAKX)
SECURITY..UNITED STATES OF AMERICA PROHIBITION AGAINST CERTAIN FLIGHTS IN THE KABUL FLIGHT INFORMATION REGION (OAKX)

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THOSE PERSONS DESCRIBED IN PARAGRAPH A (APPLICABILITY) BELOW ARE PROHIBITED FROM OPERATING AT ALL ALTITUDES IN THE KABUL FLIGHT INFORMATION REGION (FIR)(OAKX), EXCEPT AS PROVIDED IN PARAGRAPH B (PERMITTED OPERATIONS) AND PARAGRAPH C (ALLOWANCES) BELOW, DUE TO THE RISK POSED BY EXTREMIST/MILITANT ACTIVITY, LACK OF RISK MITIGATION CAPABILITIES, AND DISRUPTIONS TO AIR TRAFFIC SERVICES.

A. APPLICABILITY. THIS NOTAM DOES NOT APPLY TO THE UNITED STATES DEPARTMENT OF DEFENSE. IT DOES APPLY TO: ALL U.S. AIR CARRIERS AND COMMERCIAL OPERATORS; ALL PERSONS EXERCISING THE PRIVILEGES OF AN AIRMAN CERTIFICATE ISSUED BY THE FAA, EXCEPT WHEN SUCH PERSONS ARE OPERATING U.S.-REGISTERED AIRCRAFT FOR A FOREIGN AIR CARRIER; AND ALL OPERATORS OF AIRCRAFT REGISTERED IN THE UNITED STATES, EXCEPT WHEN THE OPERATOR OF SUCH AIRCRAFT IS A FOREIGN AIR CARRIER.

B. PERMITTED OPERATIONS. THIS NOTAM DOES NOT PROHIBIT PERSONS DESCRIBED IN PARAGRAPH A (APPLICABILITY) ABOVE FROM CONDUCTING FLIGHT OPERATIONS IN THE

ABOVE-NAMED AREA WHEN SUCH OPERATIONS ARE AUTHORIZED EITHER BY ANOTHER AGENCY OF THE UNITED STATES GOVERNMENT WITH THE APPROVAL OF THE FAA OR BY A DEVIATION, EXEMPTION, OR OTHER AUTHORIZATION ISSUED BY THE FAA ADMINISTRATOR. OPERATORS MUST CALL THE FAA WASHINGTON OPERATIONS CENTER AT 202-267-3333 TO INITIATE COORDINATION FOR FAA AUTHORIZATION TO CONDUCT OPERATIONS.

C. ALLOWANCES. USE OF JET ROUTES P500-G500 IS AUTHORIZED FOR TRANSITING OVERFLIGHTS.

D. EMERGENCY SITUATIONS. IN AN EMERGENCY REQUIRING IMMEDIATE DECISION AND ACTION FOR THE SAFETY OF THE FLIGHT, THE PILOT IN COMMAND OF AN AIRCRAFT MAY

DEVIATE FROM THIS NOTAM TO THE EXTENT REQUIRED BY THAT EMERGENCY. THIS NOTAM IS AN EMERGENCY ORDER ISSUED UNDER 49 USC 40113(A), 44701(A)(5), AND 46105(C).

ADDITIONAL INFORMATION IS PROVIDED AT:

[HTTPS://WWW.FAA.GOV/AIR_TRAFFIC/PUBLICATIONS/US_RESTRICTIONS/](https://www.faa.gov/air_traffic/publications/us_restrictions/)

SFC – FL999, 30 AUG 19:55 2021 UNTIL PERM. CREATED: 30 AUG 19:59 2021

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US DoD - Defense Internet NOTAM Service (DINS) - NOTAM A0699/21

A0699/21 NOTAMN

Q) OAKX/QAFXX/IV/NBO/E/000/999/000

A) OAKX OAKB

B) 2109061045 C) 2112032359

E) FOLLOWING NOTAM IS ISSUED ON REQUEST

OF KABUL INT'L NOTAM OFFICE, AFGHANISTAN.

AFGHANISTAN FIR IS UNCONTROLLED CLASS G AIRSPACE,

ALL AIRCRAFT ARRIVING OR DEPARTING KABUL AIRPORT

(OAKB) SHALL HAVE APPROVED FLIGHT PLAN AT LEAST

24 HOURS BEFORE.

CREATED: 08 Sep 2021 11:14:00

SOURCE: OPKCYNYX

Appendix 3

Source: AIC France 24/22 issued 24 November 2022

From 25/11/2021 and until further notice, pilots in command of aircraft performing air services mentioned in paragraph 1.1 are requested not to penetrate into the airspace of Afghanistan (FIR KABUL - OAKX), except for routes P500 / G500 on which a flight level above or equal to FL320 is requested to be maintain at all times in the KABUL FIR (OAKX).


Appendix 4

Source: German AIC 01/23 issued on 26 January 2023

SECURITY - HAZARDOUS SITUATION IN AFGHANISTAN

Civil German air operators are recommended not enter FIR KABUL (OAKX) below FL330. Potential risk from terrorist attacks, anti-aviation weaponry and missing civil-military air traffic coordination.

Excluded from this recommendation are flights at and above FL330.

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Civil German air operators are advised to take potential risk into account in their risk assessment and routing decisions within FIR KABUL (OAKX) at or above FL330. Potential risk from missing civil-military air traffic coordination.

Appendix 5

Source: Transport Canada AIC 3/23 issued on 03 January 2023

Afghanistan – Level 2 – Issued July 28, 2021

SECURITY – HAZARDOUS SITUATION IN AFGHANISTAN. Canadian Air Operators and owners of aircraft registered in Canada are recommended not to enter FIR Kabul FIR (OAKX). Potential risk from extremist and militant activity and limited risk mitigation capabilities.


Excluded from this guidance are airways P500 and G500 for transiting overflights at or above flight level FL320.

Appendix 6

Source: Spanish AIP SUP 44/22

Until 21 April 2023 (estimated), Spanish air carriers are requested not to conduct any flights in KABUL FIR (OAKX), due to potential risk to civil aviation from heightened military activity, dedicated anti-aviation weapon, missing civil-military air traffic coordination and limited risk mitigation capabilities.

An exception may be acceptable for transiting overflight operations above FL260 on routes P500 and G500.


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Certification Up date

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

EASA

[Type Certificate Data Sheets \(TCDS\) | EASA \(europa.eu\)](#)

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Master MEL-OSD

MMEL

BE-300_Rev_11

SE_Rev_2

EMB-120_Rev_11

MMEL BD-100-1A10 Rev 8, Bombardier Challenger, BD-100-1A10 (Models CL-300, CL-350 & CL-3500)

Document Title:

Summary: Outlines the Master Minimum Equipment requirements and procedures for BD-100-1A10. Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.

References:

Title 14 of the Code of Federal Regulations (14 CFR)

- [Part 91](#), General Operating and Flight Rules.
- [Part 125](#), 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.
- [Part 135](#), Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

[MMEL Policy Letter PL-25](#), MMEL and MEL Definitions.

[MMEL Policy Letter PL-105](#), Automatic Dependent Surveillance-Broadcast (ADS-B) System.

[MMEL Policy Letter PL-132](#), Portable Emergency Equipment.

Documents for [Draft](#) [Document](#) (PDF)

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Comments Due: March 20, 2023

How to Email comments to:
Comment: [Email Comments](#)

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Document

Title: MMEL BE-200 Rev 15, Textron Aviation Model 200 and F90

Summary: Outlines the Master Minimum Equipment requirements and procedures for Textron Aviation aircraft model 200 and F90. Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.

References:

Title 14 of the Code of Federal Regulations (14 CFR)

- [Part 91](#), General Operating and Flight Rules.
- [Part 121](#), Operating Requirements: Domestic, Flag, and Supplemental Operations.
- [Part 125](#), 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.
- [Part 129](#), Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged In Common Carriage.
- [Part 135](#), Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

[MMEL Policy Letter PL-25](#), MMEL and MEL Definitions.

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[MMEL Policy Letter PL-36](#), FAR Part 91 MEL Approval & Preamble.

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Comments Due: March 31, 2023

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Document

Title: MMEL PC-24 Rev 4a, Pilatus Aircraft Ltd. PC-24

Summary: Outlines the Master Minimum Equipment requirements and procedures for Pilatus Aircraft Ltd. model PC-24. Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.

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Document

Title: MMEL BE-200 Rev 15, Textron Aviation Model 200 and F90

References:

Title 14 of the Code of Federal Regulations (14 CFR)

- [Part 91](#), General Operating and Flight Rules.
- [Part 121](#), Operating Requirements: Domestic, Flag, and Supplemental Operations.
- [Part 125](#), 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.
- [Part 129](#), Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged In Common Carriage.
- [Part 135](#), Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

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Comments Due: March 31, 2023

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 Comment: [Email Comments](#)

Document

Title: MMEL GVI Rev 5, Gulfstream Aerospace GVI (G650), GVI (G650ER)

Summary: Outlines the Master Minimum Equipment requirements and procedures for Gulfstream Aerospace aircraft models GVI-G650 and GVI-G650ER. Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.


References:

Title 14 of the Code of Federal Regulations (14 CFR)

- [Part 91](#), General Operating and Flight Rules.

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Document

Title: MMEL GVI Rev 5, Gulfstream Aerospace GVI (G650), GVI (G650ER)

- [Part 121](#), Operating Requirements: Domestic, Flag, and Supplemental Operations.
- [Part 125](#), 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.
- [Part 129](#), Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged In Common Carriage.
- [Part 135](#), Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

[MMEL Policy Letter PL-25](#), MMEL and MEL Definitions.

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Comments Due: April 14, 2023

How to Email comments to:

Comment: [Email Comments](#)

Document Title: MMEL G-V, GIV-X, GV-SP Rev 11, Gulfstream Aerospace, GV, GV-SP, GV-SP (G550), GV-SP (G500 5000 SERIES) GIV-X, GIV-X (G450), GIV X (G350)

Summary: Outlines the Master Minimum Equipment requirements and procedures for Gulfstream Aerospace aircraft models GV, GV-SP, GV-SP (G550), GV-SP (G500 5000 SERIES) GIV-X, GIV-X (G450), GIV-X (G350). Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.

References:


Title 14 of the Code of Federal Regulations (14 CFR)

- [Part 91](#), General Operating and Flight Rules.
- [Part 121](#), Operating Requirements: Domestic, Flag, and Supplemental Operations.

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Document Title: MMEL G-V, GIV-X, GV-SP Rev 11, Gulfstream Aerospace, GV, GV-SP, GV-SP (G550), GV-SP (G500 5000 SERIES) GIV-X, GIV-X (G450), GIV X (G350)

- [Part 125](#), 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.
- [Part 129](#), Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged In Common Carriage.
- [Part 135](#), Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

[MMEL Policy Letter PL-25](#), MMEL and MEL Definitions.
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[MMEL Policy Letter PL-36](#), FAR Part 91 MEL Approval & Preamble.

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Comments Due: April 14, 2023


How to **Email comments to:**
Comment: [Email Comments](#)

Document Title: MMEL B-787 Rev 18, Boeing 787, All Models

Summary: Outlines the Master Minimum Equipment requirements and procedures for the Boeing 787 All Models Aircrafts. Provides lists/tables and resources for use by inspectors, pilots, technicians, and others in the field and public sector.

References: ***Title 14 of the Code of Federal Regulations (14 CFR)***

- [Part 91](#), General Operating and Flight Rules.
- [Part 121](#), Operating Requirements: Domestic, Flag, and Supplemental Operations.
- [Part 125](#), Certification and Operations: Airplanes Having A Seating Capacity of 20 or More Passengers or A Maximum Payload Capacity of

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Title: MMEL B-787 Rev 18, Boeing 787, All Models

6,000 Pounds or More; and Rules Governing Persons On Board Such Aircraft.

- [Part 129](#), Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged In Common Carriage.
- [Part 135](#), Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft.

[MMEL Policy Letter PL-25](#), MMEL and MEL Definitions.

[MMEL Policy Letter PL-34](#), MMEL and MEL Preamble.

[MMEL Policy Letter PL-36](#), FAR Part 91 MEL Approval & Preamble.

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Last updated: Friday, March 17, 2023

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FAA Safety Briefing

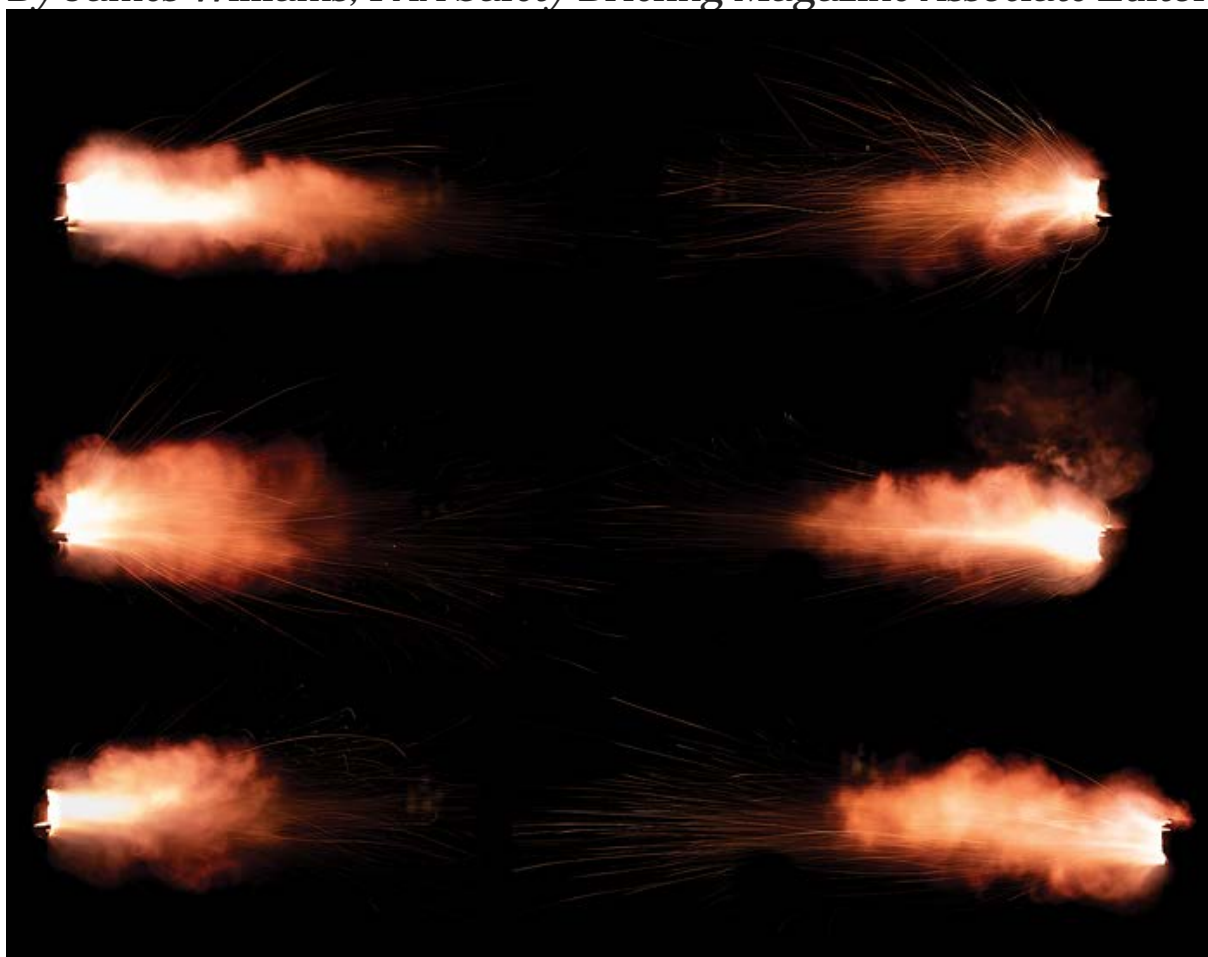
[FAA Safety Briefing Magazine | Federal Aviation Administration](#)

Difficult and Exhausting

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How a “Simple” Thing Like an Exhaust System Can Create Deadly Difficulties

By James Williams, FAA Safety Briefing Magazine Associate Editor



It seems so simple: just a metal tube to safely carry hot exhaust gases away from the aircraft. What could possibly go wrong?

As it turns out, quite a bit. General aviation (GA) exhaust system failures have been indicated in many accidents over the years, leading to concern from the [General Aviation Joint Safety](#)

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[Committee \(GAJSC\)](#). Between 2011 and 2019, 23 GA accidents and incidents involved exhaust systems. This isn't a new concern. [National Transportation Safety Board \(NTSB\)](#) recommendations date back to the 1980s concerning exhaust systems, and prior agency concerns are documented back to the 1940s. That said, it's important to recognize that the solutions to these difficulties are a mix of modern technology and old-fashioned upkeep.

There are three general types of exhaust failures: muffler failures/blockages, exhaust leaks causing noxious gases or fumes to permeate the cabin, and exhaust cracks causing heat damage and/or fire. While there can be some overlap among the three, this framework offers a helpful way to think about preventing an exhaust-related accident.




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All Blocked Up

We may scoff at calling the exhaust parts of the powerplant a “system,” but it is more than just a bunch of crudely welded pipe sections. In highly competitive environments like Formula 1 racing, the exhaust systems are an area of an intense engineering competition. The racing teams continually try to maximize output while minimizing weight with exhaust system designs. The competition got so out of hand that officials had to limit the number of exhaust systems the teams could use per season. While our GA aircraft exhausts are not nearly as refined, the same principle applies because even small constrictions or blockages can cause degraded performance or worse.

The unfortunate pilots of an amphibious Maule M-7 in Oregon found this out in the worst possible way. After an uneventful taxi and run-up, the pilots began a takeoff on a paved runway and lifted off with about 1,000 feet of runway remaining. The airplane struggled to gain altitude once it departed ground effect, and the pilot realized they would not clear the 50-foot-tall trees on the other side of the river they were approaching. The pilot decided to attempt a water landing but failed to retract the wheels on the floats, causing the airplane to nose over into the water. The pilot was killed, and his passenger received minor injuries.

The ensuing investigation revealed that both mufflers had suffered broken baffles, and the baffling in the right muffler had managed to rotate 180 degrees from its intended position, reducing exhaust flow

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from that muffler by 89%. The NTSB concluded that the loss of power caused by the separated baffling was the probable cause of the accident.

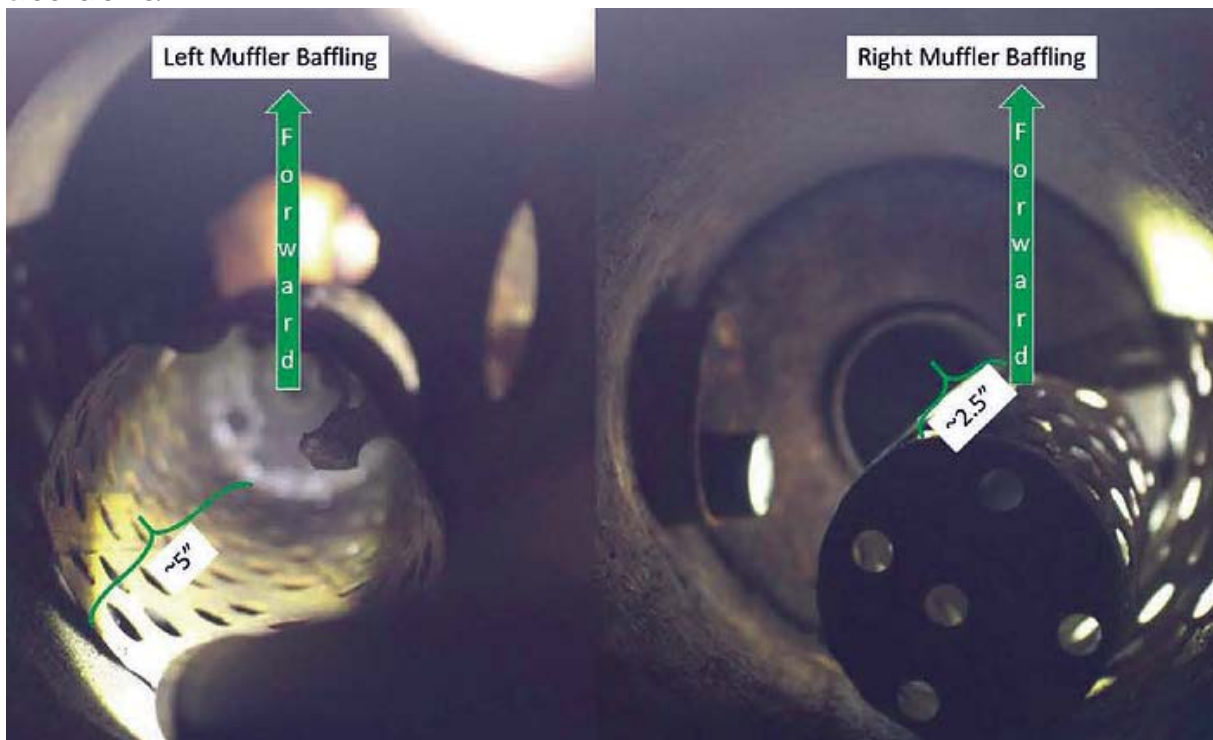



Photo of the baffling that rotated inside the muffler leading to the accident referenced in this article. (Photo courtesy of NTSB)

Out Cold

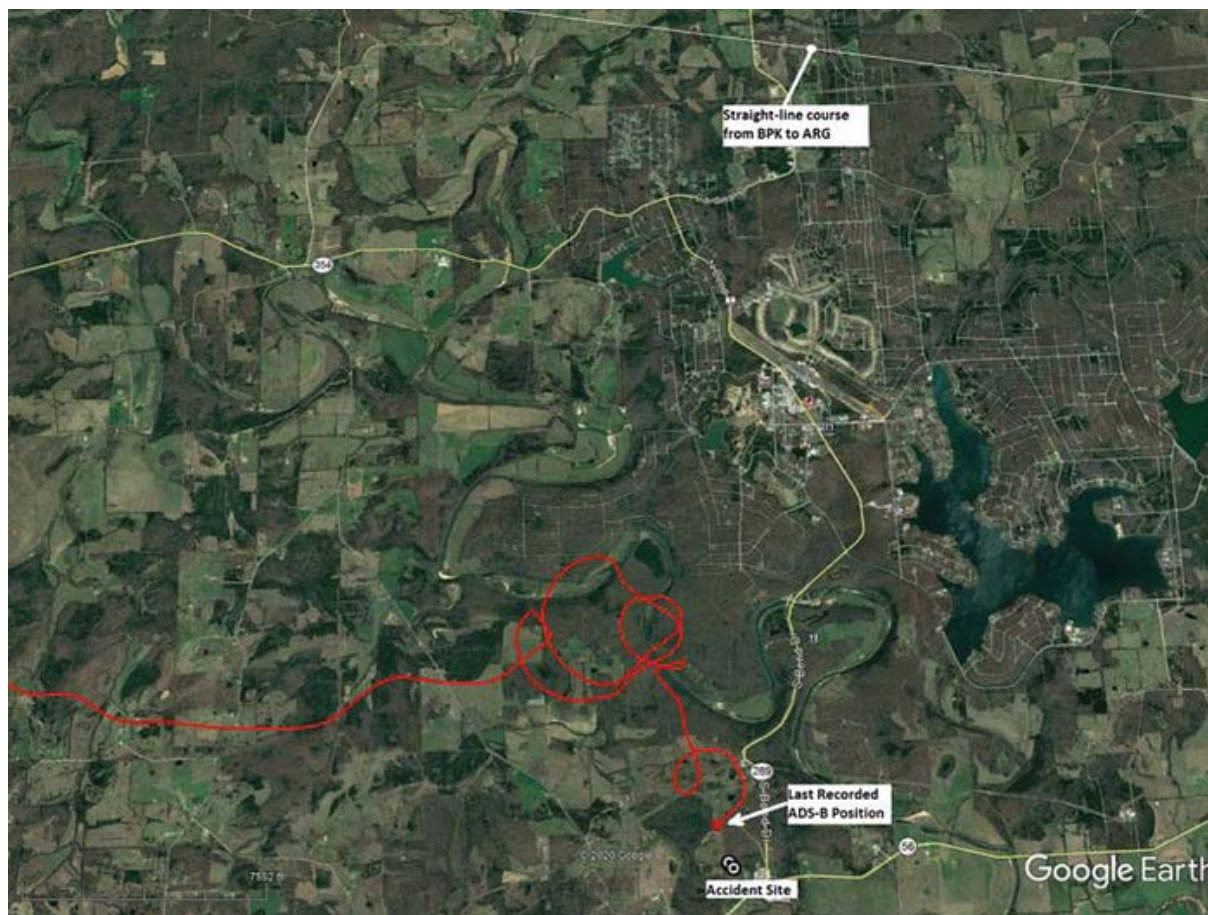
One of the fears I acquired during my flight training was the use of cabin heat. No matter how cold it was, I always had an unwarranted fear of sliding that lever over and enjoying one of nature's great ironies. While internal combustion engines are great at providing propulsive power in a space and weight-efficient package, they aren't great at transforming their fuel into kinetic energy. Most cars probably only convert 30-ish percent of that available energy into work, while our technologically less advanced aircraft piston engines

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are likely dipping into the 20s. But this major downside comes with one key advantage, most of that energy is transformed into “waste heat” that we can harness. My fear arose from how we harvest that heat. Generally speaking, many GA airplanes use a shroud that wraps around the muffler to circulate outside air around the hot part and then into the cabin. In theory, it’s a great system that recycles “waste heat” into a warm cabin at no cost to performance and with no additional fuel burn.

As the saying goes, though, there’s no free lunch. The drawback to this marvelous act of recycling is that any crack or leak in the muffler area covered by the shroud would allow exhaust gases, and most critically, carbon monoxide (CO), into the cabin. CO is an odorless, colorless, and tasteless gas that very easily bonds to the oxygen-carrying system in the blood at a far higher strength than oxygen. This means that once CO locks on, that red blood cell can no longer take oxygen from the lungs and to the rest of the body where it’s needed. This impairs your ability to function and can ultimately be fatal even if you aren’t at the controls of an airplane. That’s why it was always a risk-reward calculation between cabin comfort and CO risk.

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The flight path of the last 7.5 minutes of the referenced CO poisoning accident. (Photo courtesy of NTSB)

Unfortunately, a flight instructor and a private pilot ended up on the wrong side of that calculus in late 2020. The instructional flight departed from outside Little Rock. It made a brief stop at an airport near the origination point, then flew up to northern Arkansas over a couple of airports before turning east southeast and requesting an IFR clearance to Walnut Ridge Airport (ARG) from Memphis Center. After initial radar and radio contact, the flight briefly proceeded before radar contact was lost and radio contact became intermittent. Efforts to contact the missing flight by ATC and aircraft in the area continued, but to no avail. The flight continued, but not directly toward the destination airport. The flight's last seven and a half

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minutes were an increasingly wobbly and looping mess ending just south of Franklin, Ark. The ADS-B track looked like a VFR into IMC accident despite it being clear below 5,000 feet above ground level (AGL) and 10 miles of visibility in daylight conditions.

Both pilots were killed, and the NTSB examination of the wreckage determined that there was cracking in the muffler that predated the accident leading to CO poisoning. Toxicology reports from the flight instructor confirmed this finding.



The wreckage of the muffler from the CO poisoning accident. (Photo courtesy of NTSB)

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Fire in the Hole

The last group of accidents is the one that really captures our attention: Fire. I've long known that fire is the one thing that truly scares me in aviation. Don't get me wrong: many potentially dangerous situations deserve consideration, but fire occupies a special place in my mind. Faulty exhaust systems can either be a direct source or create a source for fire. Many components in the engine compartment can be sensitive to high heat, including wiring and fuel lines (both of which can lead to fires if damaged).

There are three general types of exhaust failures:

- 1) Muffler failures/blockages
- 2) Exhaust leaks
- 3) Exhaust cracks

The pilots and passengers of a Piper *Malibu Mirage* encountered such a situation. Thankfully no one was killed, but unfortunately two of the five on board suffered serious injuries when the airplane caught fire in 2018. Immediately after takeoff, the pilot noticed an odor of smoke. After a very brief attempt to troubleshoot the issue, he decided to turn the aircraft back to the airport. At that point, smoke began to pour into the cockpit. Shortly afterward, the engine


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made a loud noise, the oil pressure dropped to zero, and the engine lost all power. The pilot determined it was impossible to reach the airport and made a forced landing in a field. All five occupants were able to exit the airplane and get clear as the fire burned the forward section of the airplane in front of the cockpit. The local fire department arrived quickly and extinguished the blaze before it spread to the rest of the aircraft.

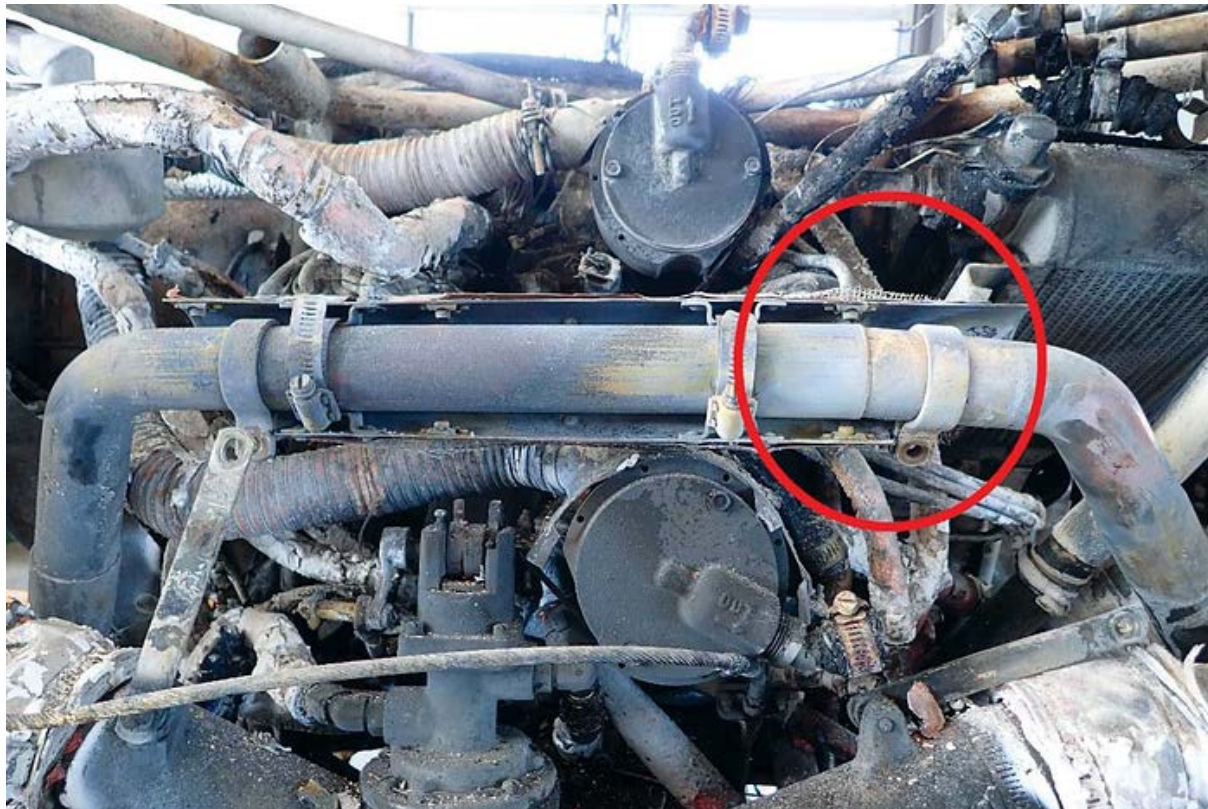


A post-accident photo of the fire damage to the nose of the airplane. (Photo courtesy of NTSB)

The NTSB investigation determined that the aviation maintenance technician (AMT) completing a service bulletin on the exhaust system immediately preceding the flight failed to follow proper procedure when reassembling the exhaust leading to the leak and fire. Contributing was the AMT's supervisor, who failed to oversee

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the process and relied on a post-maintenance inspection where the error would not be visible.



The source of the inflight fire on the Piper Malibu Mirage. (Photo courtesy of NTSB)

Easing Your Difficulties

So what are we to do? It takes a mix of diligence, teamwork, and technology. The first and easiest thing to do is step up your preflight of the engine compartment. Look for obvious damage to the exhaust and indications of wear, damage, or staining to nearby components. This can be an excellent way to catch small leaks that can lead to larger cracks. If it's an airplane you fly regularly, consider taking periodic photos of the engine compartment so you can compare them. With almost everyone carrying a high-quality camera in their

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pocket, it's an easy way to detect slow-moving trends. That way, you have a basis for comparison when something looks off, but you can't remember if it was that way last time. This might not work as well with every airplane but doing the best you can to get a good view of the compartment (like using a flashlight) improves your odds of avoiding adversity.

The next step is to team up with a good AMT and work out a plan. At what interval is your exhaust system inspected per the service manual? What does that inspection include? Do you and/or your AMT feel that is sufficient? There is no requirement to inspect the inside of the exhaust during a 100-hour or annual inspection using a borescope or other means. While we tend to think of an exhaust as a permanent part of our engine, perhaps that thinking should shift to view it as an exceptionally long-lived wear part. Look at it more like brake pads or tires; monitor the exhaust system's condition carefully and replace items before a failure. You may want to talk to your AMT about setting a schedule for periodic inspections and add that item to the nearest annual, 100-hour, or another shop visit. This practice might add a bit of downtime and cost, but it's money well spent.

Another thing you and your AMT can do is report any issues encountered to the FAA's Service Difficulty Report System (SDRS). The SDRS (sdrs.faa.gov) allows the aviation community members to upload a report if they experience an issue with a part. It allows the FAA to collect data on service issues before they lead to accidents. Gathering data on some component failures during an accident

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investigation can be difficult. Having trained with accident investigators, I find it truly amazing what they can determine from what appears to be bent metal. Even so, there are usually limitations on what they can categorically declare, especially in cases of fire where much of the evidence may be consumed. Having information from much earlier in the failure chain provides a better look at the cause of the failure and how it might be prevented. GAJSC has struggled with a lack of data on exhaust failures so catching them early is critical.

With GA aircraft exhaust systems, even small constrictions or blockages can cause degraded performance or worse.

The final leg of this triad is technology, particularly CO detection. CO detectors aren't new. But the ones that I was most familiar with were the little orange dot that was usually affixed to the panel; it would change color in the presence of CO gas. While they certainly work and are very cost-effective (in the vicinity of \$5), these devices lack any kind of alarm, meaning you must actively scan them.

Paradoxically this means that if CO is potentially impairing you, you must actively monitor a small dot on the panel while continuing all your other tasks. That is precisely the kind of thing that CO poisoning makes more challenging.



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Photo of a headset that features a CO detector. (Photo courtesy of Lightspeed Aviation)

Modern CO detectors come in wide varieties; most include an audible alarm and/or visual annunciation, so you don't have to actively monitor them. Some will even log CO levels during flights in reports that you can access later, allowing you to detect small changes over time that may be below the levels that cause impairment, but that could indicate the start of a problem. There are both installed and portable options. One headset manufacturer has even integrated a CO detector into one of its products. You can also find CO detectors integrated into portable ADS-B In units. So even if you only rent airplanes, there are still plenty of options. They are available at many different price points, so a modern CO detector should be a part of your aviation kit every bit as much as your headset and electronic flight bag (EFB). Even the most expensive CO detectors are very cheap insurance against CO impairment.

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Through these three methods, we can help reduce exhausting difficulties for you and the rest of the pilot community, making the skies safer for everyone.

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5	978-92-9265-286-9-1	Amendement no 48, Annexe 6 — Exploitation technique des aéronefs - Partie 1 — Aviation de transport commercial international — Avions			Click Here
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8	DOC-30000-002-01	WCAR-2 World Civil Aviation Report			Click Here
9	DOC-30000-003-01	WCAR-3 World Civil Aviation Report		3	Click Here
10	DOC-30000-004-01	WCAR-4 World Civil Aviation Report		3	Click Here

Lasers

[Lasers | Federal Aviation Administration \(faa.gov\)](#)

Thursday, February 9, 2023

The FAA is continuing its awareness campaign and working with law enforcement to reduce laser strikes throughout the country. Pointing lasers at aircraft creates a serious safety risk to pilots and may damage their vision.

Pointing a laser at an aircraft is a federal offense. The FAA works closely with federal, state and local law enforcement agencies to pursue civil and criminal penalties against people who purposely aim a laser at an aircraft. The agency may take enforcement action against people who violate Federal Aviation Regulations by shining lasers at aircraft, and can impose civil penalties of up to \$11,000 per violation. The FAA can impose civil penalties up to \$30,800 against people who commit multiple laser violations.

The substantial number of reported incidents clearly show that laser strikes on aircraft remain a serious threat to aviation safety.

Laser Incidents Per Year

Year Number of Laser Incidents

2022 9,457

2021 9,723

2020 6,852

2019 6,136

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2018	5,663
2017	6,754
2016	7,398
2015	7,346
2014	3,894
2013	3,960
2012	3,482
2011	3,591
2010	2,836
2009	1,527
2008	913
2007	590
2006	384

The increase in the number of reported laser strikes is due to a number of factors. This includes:

- The availability of inexpensive laser devices
- The abundance of lasers for sale in stores and online
- The number of lasers being given as gifts
- Stronger power levels that enable lasers to hit aircraft at higher altitudes
- Green lasers, which are more visible to the human eye than red lasers
- Greater awareness by pilots to report laser incidents, due in large part to the FAA's extensive outreach program

The FAA's guidance for agency investigators and attorneys stresses that laser violations should not be addressed through warning notices or counseling. The agency seeks moderately high civil penalties for inadvertent violations, but maximum penalties for deliberate violations. Violators who are pilots or mechanics face revocation of their FAA certificate in addition to the civil penalties.

In addition to the federal law, some cities and states also have laws against shining a laser at aircraft. Federal, state, and local prosecutors have sentenced laser violators to jail time, community service, probation and additional financial penalties for court costs and restitution.

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The FAA strongly encourages people to report laser incidents, whether they are pilots, air traffic controllers or members of the public.

2023 Market Outlook

<https://www.jetaviva.com/news/2023-market-outlook/>

Predicting the future is a risky business. You can take all the information in the world, draw logical and supportable conclusions, and still get it dead wrong.

Recently, a statistic has been shared around the business aviation industry that only 10% of new entrants into charter, fractional, and whole aircraft ownership were forecasted to remain. This conclusion was supported by the theory that these clients would return to commercial air travel because the airline schedules were improving.


Well, Southwest Airlines and the FAA certainly changed that outlook. Normal holiday travel issues and winter weather were compounded by the Southwest scheduling debacle, resulting in over 15,000 flights being canceled. On the day of the NOTAM outage, over 10,000 commercial airline flights were grounded – all because one system failed for 90 minutes.

I'm going to go out on a limb and predict that these widespread cancellations and delays are a good thing for business aviation.


But regardless of what the airlines do to support our industry – we should also take that 10% figure as a direct challenge. The future of our industry depends on the long-term retention of these “first-time buyers.” We've long held that there were many who could afford it, but fewer who felt the expense was worth the investment. COVID tipped the scales. Going forward, the industry's success will depend on how we continue to serve and support these new clients.

This is especially true for longtime aircraft owners. An excess of buyers enables higher aircraft values. The last year proved that our industry has the capacity to stretch the laws of supply and demand. Aircraft inventory has been steadily increasing since February of 2022. It's currently recovered to mid-2021 levels and looks to continue climbing. However, for most of last year, despite the increase in supply – prices also continued to rise. The key is demand. Business aviation customers are the variable we must seek to protect at all costs.

At jetAVIVA we are taking this call to action seriously. Our position in the market affords us the ability to service hundreds of clients each year, and we are doubling down on the level of support we provide them. We're adding to our team of sales professionals in critical markets. We've grown our organization to expand our capacity in market tracking, technical services, and transactions. We are standing by our commitment to be “Relationship First” – for the duration of the customer's time in business aviation.

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Our forecast for 2023 is a return to normalized transaction dynamics: a better balance between buyer and seller priorities. The increase in available inventory will buoy the purchaser's position better than in previous years, and sellers should plan and price accordingly. Economic pressures will further stabilize the market; however I remain optimistic that demand will hold – and this will be another good year for those looking to buy, sell, and trade.

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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>

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

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

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