



REPUBLIC OF ALBANIA



ALBANIAN CIVIL AVIATION AUTHORITY

SAFETY INFORMATION

Aviation Turbine Fuel – Use of Jet A Grade Fuel in a Jet A-1 Environment

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Accepted by:

Maksim Et'hemaj

Executive Director of Albanian Civil Aviation Authority





**0.1 Record of Amendments**

The table below describes the dates and reason for the different amendments of the current procedure. A vertical black line on the left-hand side of the page identify the changes with the previous version.

Issue No.	Revision No.	Date	Amended by	Reason
01	00	12.05.2026		Initial Issue

**0.2 Revision table**

Page #.	Issue No.	Revision No.	Date	Edited by

## Safety Information Bulletin

**Subject:** Aviation Turbine Fuel – Use of Jet A Grade Fuel in a Jet A-1 Environment

### Ref. Publications:

- EASA SIB No. 2026-04, dated 08 May 2026
- Regulation (EU) 2018/1139
- Commission Regulation (EU) No 965/2012
- Commission Regulation (EU) No 1321/2014
- Commission Regulation (EU) No 139/2014
- Commission Regulation (EU) No 748/2012
- ASTM D1655-25A
- Def Stan 91-091 Issue 18
- JIG AFQRJOS Issue 36B
- EI/JIG 1530 Standard
- JIG 1, JIG 2 and JIG 4 Standards

Status: Active

Issue date: 12.05.2026.

Valid until: Until further notice or unless reviewed earlier.

### Applicability:

This Safety Information Bulletin is applicable to:

- Air operators subject to the provisions of Commission Regulation (EU) No 965/2012;
- Aerodrome operators;
- Organisations involved in storing and dispensing aviation fuel;
- Fuel suppliers and fuel producers;
- Design Approval Holders (DAH);
- Third Country Operators (TCOs), where applicable;
- All entities involved in aviation fuel handling, storage, supply and operational use within the Republic of Albania.

### Description:

This Safety Information is issued based on information currently available to the Albanian Civil Aviation Authority (ACAA), including information published by EASA, EU Member States and the European Commission, in order to raise awareness of the risks associated with the introduction of Jet A fuel in a Jet A-1

environment.

Due to recent events in the global aviation fuel supply chains, availability of aviation turbine jet fuel of Jet A-1 fuel grade (hereafter referred to as “Jet A-1” in this Safety Information Bulletin) on certain markets might be constrained. Aviation and fuel supply stakeholders are reviewing the feasibility of introducing aviation turbine jet fuel of Jet A fuel grade (hereafter referred to as “Jet A” in this Safety Information Bulletin) at locations traditionally supplied with Jet A-1. In Europe and many other parts of the world, Jet A-1 is predominantly used, typically supplied in accordance with Def Stan 91-091 and ASTM D1655, often harmonised through the Jet A and Jet A-1 Aviation Fuel Quality Requirements For Jointly Operated Systems (AFQRJOS) checklist requirements.

The introduction of ASTM D1655 Jet A into a system historically operating on Def Stan Jet A-1 may introduce operational, airworthiness and human factor risks, particularly when both grades are accepted for use. These risks relate to:

- Differences in fuel properties (in particular reduced freezing point margins of Jet A compared to Jet A-1 and lower electrical conductivity);
- Air operators change management for the transition from Jet A-1 to Jet A operations;
- Fuel handling controls for aerodromes and organisations involved in storing and dispensing aviation fuel;
- Aerodrome change management, in particular communication between organisations involved in storing and dispensing aviation fuel and air operators to prevent incorrect fuel grade information being provided to, or assumed by, air operators;
- Differences between Def Stan 91-091 and ASTM D1655 quality assurance frameworks, including product integrity management, certification, traceability and Sustainable Aviation Fuel (SAF) blending provisions.

The introduction of ASTM D1655 Jet A into a Def Stan 91-091 Jet A-1 environment requires coordination among fuel suppliers, infrastructure operators and aerodromes. To ensure consistency, fragmented and site-specific agreements should be avoided.

### **Applicable Requirements**

Jet A and Jet A-1 are aviation turbine fuel grades defined under internationally recognised specifications: ASTM D1655 for Jet A and Jet A-1 and Def Stan 91-091 solely for Jet A-1. The fuel specifications and grades permitted for use on an aircraft/engine are established through aircraft/engine type certification and documented in the Type Certificate Data Sheet and Aircraft Flight Manual (AFM).

For many aircraft, type certification permits the use of both Jet A and Jet A-1, subject to manufacturer documentation and operator procedures. In most jurisdictions, regulators do not mandate the exclusive use of Jet A-1; rather, they require the use of approved fuel and appropriate communication to flight crews of the fuel grade used.

It is the responsibility of the aircraft operator to ensure that the fuel used for its operations is in accordance with the specifications and limitations listed in the AFM, in accordance with Regulation (EU) No 965/2012, Annex IV, CAT.OP.MPA.175(b)(7).

In accordance with ADR.OPS.B.055 and associated AMC/GM of Regulation (EU) No 139/2014, aerodrome operators should verify that organisations involved in storing and dispensing fuel to aircraft have procedures ensuring the provision of uncontaminated fuel with the correct specifications, including fuel sampling at appropriate stages during the storing and dispensing of fuel to aircraft and marking installations and equipment in a manner appropriate to the grade of the fuel.

It is the responsibility of the fuel supply chain to ensure specification compliance by maintaining fuel quality and cleanliness at each stage of the supply chain in accordance with recognised industry standards, including JIG standards and EI/JIG 1530.

Fuel is typically supplied in accordance with Def Stan 91-091 and ASTM D1655, often harmonised through AFQRJOS requirements, before delivery into airport fuelling systems.

### **Safety Considerations**

Jet A is used daily for flights from and within the USA and Canada. A potential introduction of Jet A in Europe or in other parts of the world would not generate safety concerns provided that its introduction is properly managed.

The transition to Jet A in a Jet A-1 environment, when not properly managed, creates risk of fuel grade confusion, particularly in the communication between fuel suppliers, flight crews and air operators. This may lead to a mismatch between the actual fuel properties and the assumptions used for flight planning, fuel temperature monitoring and crew procedures.

Consequences may include reduced freezing point margins, delayed or inappropriate crew response to low fuel temperature conditions, and potential engine performance degradation or fuel system restrictions.

For example, the incorrect electronic transmission of a Jet A-1 fuel ticket when Jet A has been delivered could result in an aircraft operating outside of its safe operating limits. These risks may be further exacerbated by inconsistent fuel grade availability across aerodromes, increasing the likelihood of mixing fuel grades and associated assumption mismatches.

Fuel handling systems and procedures in Europe are generally based on the assumption that Jet A-1 has a minimum level of fuel electrical conductivity at the point of delivery to the aircraft, which is typically achieved through the addition of Static Dissipator Additive (SDA), where needed, throughout the supply chain.

The introduction of Jet A without SDA could result in lower electrical conductivity which may create a mismatch with these assumptions. Although North America operates without a defined minimum conductivity limit, it cannot be assumed that European infrastructure has been fully risk-assessed for this change, as it has been designed for fuels with specific conductivity characteristics.

In particular, it is not clear to what extent existing European infrastructure, procedures and electrostatic hazard controls across the supply chain would remain fully effective for low conductivity fuels.

From a human factors perspective, the wrong assumption that “jet fuel grades are interchangeable”, in combination with insufficient training on fuel grade differences, may lead to incorrect assumptions and inappropriate flight crew operational decisions.

In addition, in operational conditions, fuel grade information may not always be sufficiently visible or clearly identified, which may contribute to incorrect assumptions.

Furthermore, fuel scarcity or uptake limits at certain aerodromes, compounded with airspace restrictions calling for longer routes, may induce additional operational complexity and limitations, leading to potential impact on route planning, selection of alternates and fuel contingency margins and increased stress on flight crews.

This Safety Information Bulletin is issued to raise awareness of the risks associated with the introduction of Jet A fuel in a Jet A-1 environment, in particular potential mismatches between fuel properties and existing operational, technical and procedural assumptions.

At this time, the safety concern described in this Safety Information Bulletin is not considered to be an unsafe condition that would warrant Airworthiness Directive (AD) action under Regulation (EU) No 748/2012, Part 21.A.3B, nor the issuance of a Safety Directive under Regulation (EU) No 965/2012, Annex II, ARO.GEN.135 or Regulation (EU) No 139/2014, Annex II, ADR.AR.A.040.

### **Recommendation(s):**

The Albanian Civil Aviation Authority recommends that all affected stakeholders:

- In order to minimise potential disturbances to established quality assurance processes in Europe, Jet A fuel should continue to be handled in alignment with Def Stan 91-091 requirements, except for the following parameters:

- o Freezing point: maximum  $-40\text{ }^{\circ}\text{C}$  (ASTM D1655 Jet A);
- o Total acidity: maximum 0.10 mg KOH/g (ASTM D1655).

No other deviations from Def Stan 91-091 requirements are accepted. In particular, electrical conductivity should remain within the range of 50–600 pS/m and traceability of fuel batches should be ensured.

- AFQRJOS Checklist (Issue 36B) should be used in order to support harmonised fuel quality control and fuel handling practices at airports and throughout the supply chain. Fuel certification remains based on ASTM D1655 or Def Stan 91-091. AFQRJOS acts as a harmonised operational overlay and does not constitute a certification standard.

- Where the AFQRJOS Checklist is not applied, equivalent fuel quality control and fuel handling procedures should be demonstrated, including evidence that key safety-related parameters are controlled to an equivalent level.

- In commingled systems, fuel should be used in accordance with the most limiting specification; where applicable, this may result in the fuel being designated and handled as Jet A. Any changes should be kept as

simple as possible, limiting the impact on existing procedures and avoiding unnecessary operational complexity that may increase operational risk.

- For the safe introduction of Jet A into commingled systems, all stakeholders connected to that system should be consulted.
- Training programmes and operational support material should be updated to address fuel-grade differences, mixed-grade conditions and the limitations of assuming that “jet fuel is jet fuel”.

**The Albanian Civil Aviation Authority recommends Fuel Suppliers and Fuel Producers to:**

- Use the Jet A AFQRJOS Checklist to ensure harmonised fuel quality control and fuel handling practices throughout the supply chain; the checklist aligns with the Jet A-1 checklist except for the following parameters: freezing point ( $-40\text{ °C}$ ) and total acidity (maximum  $0.10\text{ mg KOH/g}$ ). Electrical conductivity remains within  $50\text{--}600\text{ pS/m}$  and all other requirements remain equivalent in order to maintain existing quality assurance processes.
- Ensure that primary fuel grade markings and critical fuel quality assurance elements, including fuel grade segregation where applicable, are properly aligned with the fuel grade being supplied.
- Apply a structured management of change process, proportionate to local infrastructure and operational arrangements, when introducing Jet A into supply chains traditionally used for Jet A-1.
- Ensure that all documentation throughout the supply chain clearly identifies Jet A fuel grade and that this information is consistently communicated and remains traceable throughout the supply chain.
- Ensure that Jet A fuel is treated with Static Dissipator Additive (SDA), in accordance with AFQRJOS Checklist requirements, in order to achieve and maintain the required electrical conductivity limits.

**The Albanian Civil Aviation Authority recommends Aerodrome Operators to:**

- Manage the transition of fuel grades by clearly defining responsibilities for coordination, communication and management of change among all involved organisations.
- Ensure that measures are in place to verify compliance with minimum electrical conductivity requirements.
- Ensure that fuel grade markings are adjusted to reflect the actual fuel grade being supplied, particularly at the point of refuelling, in order to ensure correct identification by flight crews.
- Verify that organisations involved in storing and dispensing fuel have procedures ensuring that, in the event of mixing Jet A with Jet A-1, the fuel is designated and handled as Jet A.
- Ensure that the actual fuel grade is published through AIP or NOTAM and, in case of mixing, that Jet A fuel grade is declared in the AIP or NOTAM.
- Require fuel suppliers to inform the aerodrome prior to any transition from Jet A-1 to Jet A fuel.

- Permit the transition only after being fully satisfied that all fuel suppliers operating at the aerodrome have implemented the appropriate fuel grade markings and delivery information.
- Inform the Albanian Civil Aviation Authority when the aerodrome transitions from Jet A-1 operations to Jet A operations.

**The Albanian Civil Aviation Authority recommends Organisations Involved in Storing and Dispensing Aviation Fuel to:**

- Apply a structured management of change process when introducing Jet A into supply chains traditionally used for Jet A-1.
- In case of Jet A use, adjust fuel delivery tickets from Jet A-1 to Jet A.
- Ensure that fuel delivery confirmation, whether electronic or paper-based, correctly states the fuel grade being supplied.
- Ensure that supplied Jet A fuel complies with minimum electrical conductivity requirements.
- Train relevant personnel regarding:
  - o differences between Jet A and Jet A-1;
  - o change-of-grade procedures;
  - o fuel grade identification and documentation;
  - o electrical conductivity controls;
  - o communication with aircraft operators and aerodrome operators.
- Ensure that all above conditions are met and that aerodrome agreement has been obtained prior to implementing change-of-grade procedures.

**The Albanian Civil Aviation Authority recommends Aircraft Operators to:**

- Ensure, through contractual arrangements with fuel suppliers, that the necessary fuel quality adjustments have been implemented when supplying Jet A fuel.
- Ensure that all flight crews and personnel directly involved in ground and flight operations are clearly informed regarding the actual fuel grade in use through established mechanisms such as flight documentation and NOTAMs.
- Ensure that the safety considerations described in this bulletin, particularly those related to fuel grade identification and freezing point, are addressed within safety risk management and management of change processes.

It is recommended that this process considers:

- i. Informing flight crews when Jet A becomes available at aerodromes traditionally supplied with Jet A-1 and ensuring that operational documentation contains clear instructions regarding the use of Jet A;

- ii. Identifying any required updates to training programmes and standard operating procedures, particularly where Jet A use has not previously been considered;
- iii. Informing contracted fuel suppliers where Jet A use is prohibited by the aircraft manufacturer;
- iv. Ensuring that flight crews are trained and instructed regarding operations using Jet A fuel, including contingency procedures;
- v. Assessing the impact on route planning when operating with Jet A fuel.

Note: The simultaneous availability of two fuel grades in environments traditionally using exclusively Jet A-1 may result in mixing of the two fuel grades. Operators should apply instructions provided by the DAH within the AFM for handling such situations. Where such information is not available, the most conservative limitations should be applied.

#### **The Albanian Civil Aviation Authority recommends Design Approval Holders (DAH) to:**

- Assess the safety implications associated with different Jet A / Jet A-1 mixture ratios within aircraft fuel tanks, including freezing-point behaviour, warning thresholds and applicability of procedures, and update published instructions as necessary.
- Provide operators with clear guidance regarding how fuel grade should be reflected in dispatch, flight planning and crew decision-making.

#### **Oversight Activities**

The Albanian Civil Aviation Authority will continue monitoring developments related to aviation fuel supply and associated operational safety impacts.

The Albanian Civil Aviation Authority will focus oversight activities on:

- Air operators and locations with higher exposure to mixed-grade air operations, cold-weather operations and frequent cross-regional flights;
- The application of appropriate management of change processes at aerodromes;
- Promoting occurrence reporting related to fuel grade confusion, low fuel temperature events or unexpected system behaviour.

All stakeholders are reminded that any occurrence and safety-relevant information related to fuel quality, fuel handling and fuel use should be reported to the Albanian Civil Aviation Authority and, where applicable, to EASA through the appropriate aviation safety reporting system.