RA 1910 - Quality Assurance of aviation fuel from non-UK MOD Sources

Rationale

There may be a requirement to uplift aviation fuel from non-UK MOD Aerodromes►1◄. There is ►a◄ Risk that the fuel available may not match the grade, specification and ►◄ quality required by the consumer Air System. This can be mitigated by application of processes and / or local orders to ensure appropriate actions are taken when uplifting non-UK MOD aviation fuels.

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1910(1) Aviation Duty Holders (ADH) and Accountable Managers (Military Flying) (AM(MF)) **shall** ensure that non-UK MOD sourced fuel is uplifted from an appropriate source and to the appropriate ►grade, specification and◄ quality.

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1. When UK MOD ►sourced◄ fuel[2] is not available, the ADH / AM(MF) **should** ensure that fuel of an acceptable grade is uplifted from a:

   a. North Atlantic Treaty Organization (NATO) supply chain,

   b. UK or Overseas Territories Licensed Aerodrome supply chain,

   c. ►UK Civil Aviation Authority (CAA) Certified Aerodrome supply chain,◄

   d. European Aviation Safety Agency (EASA) Certified Aerodrome supply chain,

   e. Federal Aviation Administration (FAA) Certified Aerodrome supply chain, or

   f. Certified Commercial Airport supply chain.

2. When fuel is not available from a UK MOD source or those supply chains listed in paragraph 1, the ADH / AM(MF) **should** ensure that:

   a. For planned occurrences, the fuel quality is checked at a suitable point prior to uplift (eg via use of an Advanced Party).

   b. For unplanned and operational requirements:

      (1) The minimum quantity required is uplifted.

      (2) On arrival at a UK MOD supported site, the remaining Aircraft fuel is sampled and tested (eg by 1710 Naval Air Squadron (1710NAS)) and Type Airworthiness Authority (TAA)►3◄ advice sought as required.

3. Uplifted fuel found to be not suitable, in accordance with (iaw) the Release To Service (RTS)[4] or ►appropriate◄ Military Permit to Fly (MPTF)[5], or deemed to be contaminated **should** be removed from the Aircraft (prior to next flight)[6], except where

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[1] ►This includes UK and non-UK Aerodromes that are not owned by the UK MOD.◄

[2] "UK MOD ►sourced◄ fuel" is deemed to be either: supplied by a UK MOD supplier / source; or fuel that complies with JSP 317 aviation fuel quality control and Assurance procedures and where fixed Bulk Fuel Installations are audited by the MOD's Fuel and Gas Safety Regulator.

[3] ►Where the Air System is Civilian-Owned, ownership of regulatory responsibility by either the TAA or Type Airworthiness Manager (TAM) needs to be agreed within the Sponsor's approved model for Type Airworthiness (TAw) management; refer to RA 1162 – Air Safety Governance Arrangements for Civilian Operated (Development) and (In-Service) Air Systems or refer to RA 1163 – Air Safety Governance Arrangements for Special Case Flying Air Systems.◄

[4] Refer to RA 1300 – Release To Service.

[5] Refer to ►RA 1305 – Military Permit to Fly (In-Service), (Special Case Flying) and (Single Task) or◄ RA 5880 – Military Permit to Fly ►(Development)◄ (MRP 21 Subpart P).

[6] iaw the Air System's Technical Instructions.

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deemed operationally essential►[7]◄, and the Continuing Airworthiness Management Organization informed.

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4. All Licensed Aerodromes[8] within the UK must, iaw the Air Navigation Order[9]►◄, ensure their fuel is fit for use in Aircraft.

5. All Licensed Aerodromes within UK Overseas Territories must, iaw the Air Navigation (Overseas Territories) Order[10], ensure their fuel is fit for use in Aircraft.

6. UK Unlicensed Aerodromes are guided to comply with the Air Navigation Order[11].

7. EASA Certified Aerodromes[12, 13] ►will◄ ensure their fuel is fit for purpose, uncontaminated and of the correct specification. Furthermore, EASA Air Operation Regulations require that Certified Aerodromes detail their procedures and management systems within an Operations Manual[14].

8. ►UK CAA Certified Aerodromes[15] will ensure their fuel is fit for purpose, uncontaminated and of the correct specification.◄

9. FAA Certified Aerodromes[16] ►will◄ ensure their fuel is fit for purpose, uncontaminated and of the correct specification.

10. Certified Commercial Airports across the majority of the world, self-regulate the quality of fuel at uplift with no International Civil Aviation Organization / CAA mandatory requirements. Whilst absolute confirmation cannot be given as a result the participation of the Energy Institute / Joint Inspection Group standard 1530►[17]◄, [18] ►◄ testing regimes and the International Air Transport Association Fuel Quality Pool mean that reasonable confidence can be taken in the quality of fuel at any Certified Commercial Airport.

11. Aviation fuel Quality Assurance (QA) is based on certification at the point of manufacture and subsequent procedures to verify that the quality remains within specification limits through to delivery to the Air System tanks. Documentation is an essential part of this process; and when fuel is not available from a UK MOD source or those supply chains listed in paragraph 1, ADHs and AM(MF)s are strongly encouraged to obtain copies of test certificates as evidence of fuel quality. Key documents likely to be available from a supplier are:

a. **Refinery Certificate of Quality (RCQ)**. Produced at the point of manufacture; it is the definitive original document describing the quality of a batch of aviation fuel.

b. **Certificate of Analysis**. Issued by a laboratory downstream from the point of manufacture; it contains determinations of the properties required in the relevant specification.

c. **Recertification Test Certificate**. Produced where there is a risk of cross contamination, ie multiproduct pipelines or ocean-going tankers. The results are

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[7] ►Refer to RA 1020 – Aviation Duty Holder and Aviation Duty Holder-Facing Organizations – Roles and Responsibilities.◄
[8] A list of UK CAA Licensed Aerodromes is available here: https://www.caa.co.uk/Commercial-industry/Airports/Aerodrome-licences/Licences/Aerodrome-licences-and-boundary-maps.
[9] Refer to ►◄ The Air Navigation Order 2016 ►Part 8, Chapter 1, Article 220.◄
[10] Refer to Statutory Instrument 2013 No. 2870 – The Air Navigation (Overseas Territories) Order 2013.
[11] Refer to CAP 793 – Safe Operating Practices.
[12] A list of EASA Certified Aerodromes is available here: ►https://www.easa.europa.eu/domains/aerodromes.◄
[13] Refer to EU Regulation (EU) No 2018/1139.
[14] Refer to EU Commission Regulation (EU) No 965/2012.
[15] ►A list of UK CAA Certified Aerodromes is available here: https://www.caa.co.uk/Commercial-industry/Airports/Aerodrome-licences/Certificates/UK-certificated-aerodromes.◄
[16] Refer to FAA Regulation 121.373 – Continuing analysis and surveillance.
[17] ►Refer to EI / JIG 1530 – Quality assurance requirements for the manufacture, storage and distribution of aviation fuels to airports.◄
[18] http://www.energyinst.org/technical/safety/aviation/1530.

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compared to the original RCQ to ensure the quality of the product has not been compromised during transfer.

d. **Release Certificate**. An operational document linked to one or more laboratory test certificates; it authorizes any transfer of aviation fuel (including to airports), confirming compliance with a relevant specification.

12. When fuel is not available from a UK MOD source or those supply chains listed in paragraph 1, additional field tests are undertaken and results recorded as part of the overall QA process; these include Periodic Tests, Appearance Checks, Membrane Filtration Tests, Control Checks, Conductivity and Microbiological Tests. Copies of such reports may also be available on request from the supplier.

13. Advice and guidance on fuel testing, retrospective fuel analysis and technical assurance can be obtained from the Defence Strategic Fuels Authority[19] (Bulk Fuels, JSP 317) or 1710NAS[20] (Aircraft samples).

14. The Air System's RTS or MPTF will include details of the normal and alternative fuel grades and specifications that are compatible.

15. ►◄

[19] Email ►UKStratCom-DefSp-DSFATechMulti@mod.gov.uk.◄
[20] Email NAVY1710NAS-MIGCIS@mod.gov.uk.

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