

RA 5815 – Instructions for Sustaining Type Airworthiness

Rationale

Instructions for Sustaining Type Airworthiness (ISTA) are a subset of the Air System Document Set (ADS)¹ and include the combined suite of methods, inspections, processes, and procedures necessary to support the Maintenance² and operation of an Air System and associated Products, Parts, Appliances, Airborne Equipment and Air Launched Weapons within its certified limits³. Failure to create and maintain ISTA will result in stakeholders being unable to ensure that the Air System is safe to operate. To maintain safe operation, ISTA need to be provided and amended through-life in a coherent and expedient manner so that they continue to reflect the Type Certification Basis (TCB).

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Regulation 5815(1)

Provision and Amendments to Instructions for Sustaining Type Airworthiness

- 5815(1) The Type Airworthiness Authority (TAA)⁴ **shall** approve^{5, 6} and provide a complete set of ISTA to the Operating Duty Holder / Accountable Manager (Military Flying). In doing so, the TAA **shall** ensure that:
- ISTA is developed in accordance with (iaw) the TCB⁷, ▶8◀.
 - ISTA is amended through-life, incorporating change requests.
 - The DO or Commodity Chief Engineer (CE) provides amendments to the ISTA for an Air System or related Products, Parts and Appliances.

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- The TAA **should** ensure that ISTA are made available to the Military Continuing Airworthiness Manager (Mil CAM)⁹ at the earliest opportunity.
- If the availability of some elements of ISTA, associated with overhaul and heavy Maintenance, are delayed until after the Air System and associated Products, Parts and Appliances has entered service, the TAA **should** ensure that they are available before the relevant calendar backstop or flight hours / cycles limit is reached.
- The TAA **should** develop and maintain ISTA through-life iaw the requirements of the ADS management plan¹. Additionally, the TAA **should** ensure that their contribution to the ADS management plan details the processes for the management of change requests. The processes **should** include as a minimum, the management of changes resulting from:
 - Air System Maintenance schedule review¹⁰.

¹ Refer to RA 1310 – Air System Document Set.

² Refer to RA 4810 – Technical Information (MRP 145.A.45).

³ ISTA can be considered an equivalent to civil Instructions for Continuing Airworthiness.

⁴ Where the Air System is not UK MOD-owned, Type Airworthiness (TAW) management regulatory Responsibility by either the TAA or Type Airworthiness Manager (TAM) needs to be agreed within the Sponsor's approved model; 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. Dependant on the agreed delegation of TAW Responsibilities TAM may be read in place of TAA as appropriate throughout this RA.

⁵ Refer to RA 1003 – Delegation of Airworthiness Authority and Notification of Air Safety Responsibility.

⁶ The TAA may privilege a Design Organization (DO) to issue information and instructions. Refer to RA 5850 (11): Privileges (MRP Part 21.A.263).

⁷ Refer to RA 5810 – Military Type Certificate (MRP Part 21 Subpart B) ▶◀.

▶◀ Refer to the RA 1600 series for Uncrewed Air Systems. ◀

⁹ Refer to RA 4948 – Documentation – MRP Part M Sub Part G.

¹⁰ Refer to RA 5320 – Air System Maintenance Schedule – Design and Validation.

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- b. An Air Safety Occurrence¹¹.
 - c. A Narrative Fault Report.
 - d. An Unsatisfactory Feature Report (UFR).
 - e. Changes to Type Design¹² or In-Service design changes¹³.
 - f. Repairs¹⁴.
 - g. Special Instructions (Technical) (SI(T))¹⁵.
4. The TAA **should** ensure that the DO or Commodity CE:
- a. Develops ISTA iaw the TCB⁷, where applicable.
 - b. Provides details of the Quality Assurance process for the development of ISTA¹.
 - c. Provides a plan for the validation process¹.
 - d. Makes changes to ISTA available to the TAA at the earliest opportunity.
 - e. Details how changes to the ISTA are promulgated.
5. The following ISTA, as a minimum, **should** be provided¹⁶:
- a. A Maintenance Manual containing all procedures required by Maintenance organizations to maintain the Air System or equipment in a serviceable condition and to diagnose typical Faults (Topic 1).
 - b. Modification Instructions (Topic 2).
 - c. Orders and Instructions issued by the TAA (Topic 2(N/A/R)1).
 - d. Illustrated Parts Catalogue (Topic 3).
 - e. Maintenance Schedules containing all necessary servicing procedures and detailing all Preventive Maintenance requirements through-life, including associated Safety warnings and cautions necessary to minimize the Risk to Life for Maintenance personnel (Topic 5).
 - f. Repair Schemes (Topic 6).
 - g. Weapon Loading / off-loading Procedures (Topic 5A6), if appropriate.
 - h. Weight & Balance Data Manual (Topic 9), if appropriate.
 - i. Sub-system Diagrams required to support Maintenance, Fault diagnosis and Repairs (Topic 10).
 - j. Ground Handling Instructions (Topic 12A).
 - k. Electrical Wiring Interconnection Systems.
 - l. Airworthiness limitations (including where appropriate any Airworthiness Directive, Service Bulletin).
 - m. Emergency Rescue and Mishap Response Information.

North Atlantic Treaty Organization (NATO) Stock Numbers (NSN)

6. Where Products, Parts and Appliances are provisioned through the MOD Supply System, the TAA or Commodity CE **should** ensure the NSNs and associated NATO Commercial And Government Entity codes are included in the Illustrated Part Catalogue against the relevant part numbers.

Repairs

7. Where repaired Products, Parts or Appliances are released back into service before the changes to the applicable ISTA have been completed, the TAA **should**

¹¹ Refer to RA 1410 – Occurrence Reporting and Management.

¹² Refer to RA 5820 – Changes in Type Design (MRP Part 21 Subpart D).

¹³ Refer to RA 5305 – In-Service Design Changes.

¹⁴ Refer to RA 5865 – Repairs (MRP Part 21 Subpart M).

¹⁵ Refer to RA 5405 – Special Instructions (Technical).

¹⁶ The Topic numbers in brackets are legacy military references. Equivalent ISTA titles are acceptable.

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ensure this is for a limited period and that the conditions of which, are agreed between the TAA and the holder of the Repair design approval¹⁴.

8. If ISTA changes are issued by the holder of the Repair design approval after the Repair has been first approved, these **should** be submitted to the TAA for approval.

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9. If required by the TAA, the following ISTA may also be provided¹⁶:

- a. Preservation, Packing, Transport and Storage Instructions (Topic 7).
- b. Air Transport Operations Manual (Topic 11).
- c. Cross-servicing Guide (Topic 12B).
- d. Engine Ground Running Reference Cards (Topic 12C).

10. Guidance for the layout and technical content of ISTA is detailed in Defence Standard 00-601 Part 1¹⁷.

11. The provision of ISTA for new materiel is normally developed as an element within the project Integrated Logistic Support plan.

12. UFRs may be made by means of a MOD Form 765 UFR. UFRs are routed via the TAA and / or Commodity CE, and if appropriate, to the DO.

13. Where Repairs are approved by the TAA but do not have sufficiently wide application they may not be included as Repair Schemes in the provided ISTA¹⁴.

14. Where the DO or Commodity CE is in doubt whether ISTA prepared by a contractor or subcontractor meets the requirements, they will consult the TAA; this is particularly important when a subcontractor offers existing ISTA.

15. The DO is responsible for obtaining and supplying the required ISTA to their subcontractors. They need to ensure that these documents are properly maintained during the period of the sub-contract and withdraw them on completion of the sub-contract.

16. The DO, subcontractor or Commodity CE is responsible for the management and retention of all ISTA master materiel that they have prepared until that Responsibility is transferred or terminated¹⁸.

17. The DO or Commodity CE will provide the TAA with the ISTA for items that require in-situ Maintenance as part of a higher assembly, for incorporation in the higher assembly's Maintenance instructions, for integration purposes.

18. The TAA or Commodity CE will provide Maintenance instructions on Government Furnished Assets.

19. The DO must ensure that the copyright of all ISTA supplied in satisfaction of a contract is vested in them or that they have written permission from any other copyright holder to make use of such materiel. The Crown requires free licence to reproduce the ISTA in whole or in part for any UK Government purpose iaw DefCon 90¹⁹.

20. Emergency Rescue and Mishap Response Information will be provided to the Defence Aerodrome Rescue Fire Fighting Service Providers²⁰.

Advance Information Leaflets (AIL)

21. AIL provide for the rapid issue of a temporary amendment to the ISTA in advance of formal amendment. It will be written using the same conventions as the

¹⁷ Refer to Defence Standard 00-601 Part 1 – AIR S1000D Business Rules.

¹⁸ Refer to RA 5301 – Air System Configuration Management.

¹⁹ Refer to Defence Condition 90 – Copyright. (Available in the Knowledge in Defence Commercial Toolkit).

²⁰ Refer to STANAG 3896 – Aerospace Emergency Rescue and Mishap Response Information (Emergency Services). The TAA or Commodity CE will confirm what ISTA can be released via Resilience Direct.

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parent ISTA and include a terminating note detailing a validity statement and details on amendment action.

SI(T)

22. SI(T)¹⁵ may contain information which supersedes that contained in the ISTA and may call for a publication amendment.