

RA 5406 – Aircrew Publications

Rationale

Aircrew Publications are a subset of the Air System Document Set (ADS)¹ that provide Aircrew with information on the technical details, performance and handling characteristics of an Air System, together with normal and emergency operating procedures and limitations, in an accessible format at the point of need. Failure to create and maintain Aircrew Publications will result in the Aircrew being unable to ensure that the associated Air System is operated safely. To maintain safe operation, Aircrew Publications need to be amended through-life in a coherent and expedient manner so that they continue to reflect the Release To Service (RTS)² or Military Permit To Fly (MPTF)³ cleared configuration of the Air System.

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Regulation

5406(1)

Aircrew Publications

5406(1) The Type Airworthiness Authority (TAA)⁴ **shall** approve and provide a complete set of Aircrew Publications to the Operating Duty Holder (ODH) / Accountable Manager (Military Flying) (AM(MF)).

Acceptable Means of Compliance

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Aircrew Publications

1. The TAA **should** develop Aircrew Publications in accordance with (iaw) the requirements of the ADS management plan¹, ensuring that:
 - a. All related Aircrew Publications are issued before the Air System is required to commence In-Service flying.
 - b. They provide the following as a minimum (but not limited to):
 - (1) Normal and emergency drills in a format suited to use by the Aircrew in the operating environment.
 - (2) Detailed system descriptions including installed avionics, weapons equipment and associated software, Air System operating instructions, handling advice and expanded normal and emergency procedures.
 - (3) Sufficient performance information to permit effective flight planning calculations, enabling adherence to civilian Regulation where applicable, suitable to the Air System role, and supportive of mission management decision making.
 - c. If the need is identified, the following are also provided:
 - (1) A Maintenance procedure suitable for use by the Air System crew iaw their engineering authorizations.
 - (2) A method of determining the Air System suitability for dispatch or continuance on task.
 - (3) ► **Procedures to confirm the performance, mission effectiveness or handling qualities of an Air System or to perform diagnostic analysis of its Systems.** ◀

¹ Refer to RA 1310 – Air System Document Set.

² Refer to RA 1300 – Release To Service.

³ Where an Air System is operated under MPTF, refer to RA 5880 – Military Permit to Fly (Development) (MRP Part 21 Subpart P) or RA 1305 – Military Permit to Fly (In-Service), (Special Case Flying) and (Single Task).

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.

**Acceptable
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- d. Officer Commanding Defence Aircrew Publications Squadron (OC DAPS)⁵ ► and / ◀ or a competent contractor⁶ is appointed to support the TAA in:
- (1) Ensuring the timely and effective management of the production, validation, verification and maintenance of Aircrew Publications¹.
 - (2) Liaising where necessary with an Operating Data Manual (ODM) Agency⁷ to ensure the provenance of performance data by independent scrutiny of the Performance Data Substantiation Document (PDSD), and to maintain consistency and coherence of the ODM with the RTS, MPTF and other Aircrew Publications.
- e. OC DAPS or a competent contractor provide independent Assurance and advice on the acceptability of the Aircrew Publications, iaw Air Acquisition Publication (AAP) 00-002 Defence Aircrew Publications Guide (DAPG) and DAPS Business Processes, as an integral element of the Type Air Safety Assessment (TASA) or Project Safety Assessment⁸.
2. OC DAPS or a competent contractor **should** be:
- a. The Subject Matter Expert (SME) for Aircrew Publications and provides the independent Assurance and advice on the acceptability of Aircrew Publications.
 - b. Responsible for providing independent Air System performance advice to the TAA and ODH / AM(MF).
3. The TAA **should** ensure that OC DAPS or a competent contractor is undertaking the management of production, independent assessment and publication activities for Aircrew Publications, leading to the provision of the information required to support the RTS and MPTF.
4. When DAPS is used to manage the production of Aircrew Publications, the preferred layout and technical content **should** follow that detailed in AAP 00-001⁹. Otherwise the format of new material **should** follow that detailed in Defence Standard 00-601 Part 1¹⁰. In either case, the TAA **should** ensure that the source data is valid or has been validated, and that the content and presentation are verified by the User Authenticator (UA)¹¹ as fit for purpose.
5. The ODH / AM(MF) **should**:
- a. Ensure that the implications of any changes to the RTS and MPTF are evaluated, and that timely action is taken to amend appropriate orders or provide guidance and information to staff under their command.
 - b. Appoint a UA, typically the Standardization / Evaluation office for each Air System. The UA **should** provide verification to OC DAPS or competent contractor and the RTSA that the content and presentation of the Aircrew Publications meet user requirements. However, the advice in the Aircrew Publications **should** reflect what is authorized by the RTS.
6. The Design Organization (DO) **should**:
- a. Provide the TAA with all the information required to ensure that Aircrew Publications reflect the Type Certification Basis of the Air System.
 - b. Maintain the master source material (recommended to the TAA, including all graphics) throughout the life of the Air System and make this material available 'on demand' to the MOD.

⁵ OC DAPS will be issued with terms of reference by the Delegated Release to service Authority (DRTSA) RAF, and counter-signed by DRTSA (RN) and DRTSA (Army).

⁶ Refer to RA 1005 – Contracting with Competent Organizations.

⁷ Refer to AAP 00-002 - Defence Aircrew Publications Guide (DAPG) for definition of an ODM Agency.

⁸ Refer to RA 5011 – Type Airworthiness Safety Management ► System ◀ and RA 5012 - Type Airworthiness Safety Assessment.

⁹ Refer to AAP 00-001 – Defence Aircrew Documentation Specifications.

¹⁰ Refer to Defence Standard 00-601 Part 1 – MOD Business Rules – Contracting for Technical Documentation.

¹¹ Refer to MAA02: MAA Master Glossary.

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- c. Generate appropriate text on ►the◀ 'Effect on Operation and Handling' when an effect on operation and / or handling is identified.
- d. Produce a PDS to support all performance data provided for the Aircrew Publications. The PDS describes how the Air System performance data are derived and validated. The PDS **should** be updated as required to support changes to the provided data.

**Guidance
Material
5406(1)**

Aircrew Publications

- 7. The ODH / AM(MF) may require the TAA to provide operators with information in addition to that listed at paragraph 1. This information will be presented within the Air System's Aircrew Publications.
- 8. Operating data will be provided to the Normal Operating Standard as a minimum. Details of normal, reduced and military operating standards can be found in AAP 00-002⁷.

Air Systems procured with existing civilian or foreign Aircrew Publications

- 9. The TAA may use Aircrew Publications sourced from civilian or foreign sources that allow the ADS requirement to be satisfied, subject to assessment and Assurance by the OC DAPS or a competent contractor. There will be a reasoned 'evidence-based' argument as to why such publications are suitable for use in the Defence Air Environment and how they will be kept up-to-date with the UK military registered Configuration through the life of the Air System.

Advance Warning of Changes

- 10. Aircrew Manuals (AMs) and Flight Reference Cards (FRCs) may contain advance warning notices of changes such as Advance Information Leaflets or Advance Notification of Amendments; nevertheless, users need to be aware that these publications may not fully reflect the latest limitations or procedures due to the following:
 - a. **RTS Limitations.** If limitations are quoted in advanced warning notices of change to the AMs, ODM and FRCs they will be based directly upon those contained in the RTS.
 - b. **Security Classified Limitations.** Information graded higher than OFFICIAL SENSITIVE are not included in the standard RTS, AMs or FRCs; they may be published in classified supplements.

UA

- 11. The UA's tasks will include:
 - a. As Air System SME, maintaining a close working relationship with DAPS and / or the DO.
 - b. Acting as the focal point in providing advice from the operators' perspective.
 - c. Specifying the content of Pilot Notes.
 - d. Verifying the fitness for purpose of Aircrew Publications.
 - e. Co-ordinating proposals from operating units, consideration by the TAA and for taking immediate action if warranted by the urgency of the proposed change.

Electronic Performance Planning Aids (EPPA)

- 12. The TAA will ensure that the Air System performance data is presented for use by Aircrew in a format that preserves the safety standards inherent in the data. The provision of EPPA will be standard unless the stakeholder community is content that the agreed safety target can be met using a traditional ODM, Rapid Planning Data, or where the relative simplicity and volume of data can be presented in the AM / FRCs. Requirements for the procurement and Maintenance of the EPPA can be found in AAP 00-002⁷.

Regulation 5406(2)

Amendments to Aircrew Publications

5406(2) The TAA **shall** ensure that the Aircrew Publications are maintained in coherence with the RTS or MPTF (as applicable) cleared configuration through the life of the Air System.

Acceptable Means of Compliance 5406(2)

Amendments to Aircrew Publications

13. The TAA **should** amend Aircrew Publications through-life iaw the requirements of the ADS management plan¹, ensuring that changes to the design of the Air System affecting Aircrew are promulgated to the DRTSA via RTS Recommendations.

14. For changes to the Air System configuration that are likely to affect Aircrew Publications (especially important for software changes) and the RTS:

a. The TAA **should** identify those responsible for providing all relevant data associated with such changes to OC DAPS or a competent contractor and arrange for any required amendment of the related Aircrew Publications.

b. OC DAPS or a competent contractor **should** determine whether handling, performance or operation is affected and, when tasked, recommend appropriate amendments to the Aircrew Publications, to the TAA.

15. In the case of changes to Type Design or in-service design changes and Special Instructions (Technical) (SI(T)s), the TAA **should** request advice from OC DAPS, UA or a competent contractor to advise whether an entry in the Air System Technical Log¹² is required and provide the wording for such entries.

Guidance Material 5406(2)

Amendments to Aircrew Publications

16. Duty Holder-Facing organizations all have a responsibility to ensure that the ramifications of changes to the Aircrew Publications are notified to staff in a timely fashion, if necessary, by the prompt issue of warnings or orders, and in all cases followed up by the timely amendment of the appropriate publications. It is essential that amendments to Aircrew Publications are developed in the same timescale as the issue of changes to the RTS.

17. For each Air System, the TAA and RTSA will agree their responsibilities for ensuring that amendments to all Aircrew Publications in the ADS are made in a timely fashion to reflect changes to the Air System design, the RTS, and Maintenance policy statements. Where the change to the Air System affects both the Aircrew and ground crew it is crucial that both sets of orders, or amendments to publications, are promulgated simultaneously.

18. The TAA and RTSA will ensure that all changes likely to affect the Aircrew Publications are supported by a TASA / Project Safety Assessment change report that clearly carries forward the ramifications of the change to all relevant parts of the Aircrew Publications. Where appropriate this will include the requirement for the DO to amend the Air System performance data for further consideration by an ODM agency on behalf of the TAA.

19. Most changes to the Aircrew Publications during an Air System's In-Service life result from changes to Type Design, In-Service design changes or SI(T)s. For all changes, the TAA will require the DO to provide OC DAPS with validated information and procedures. To ensure that the operating information available to Aircrew reflects the RTS cleared configuration, it is vital that both the TAA and RTSA keep the OC DAPS fully informed as to the nature of changes. When the source of change to the Aircrew Publications is In-Service experience, and the TAA and RTSA have agreed that it does not require a change to the RTS or ODM, OC DAPS or a competent contractor may initiate the change. In this case OC DAPS will seek validation of the change from the DO, through the Delivery Team, if practicable.

¹² MOD Form 703A1 – List of Modifications and Service Issued Instructions of Direct Operating Interest to Aircrew, MOD Form 703A2 – List of Frequently Moved Modifications and Service Issued Instructions of Direct Operating Interest to Aircrew, or equivalent.