

30 Sep 2020

MAA/RN/2020/13 – MAA Regulatory Publications Additional Supporting Material for Regulatory Article (RA) 2375 – Qualification, Approval and Use of Flight Simulator Training Devices Issue 4

Issue

1. RA 2375 - Qualification, Approval and Use of Flight Simulator Training Devices Issue 4 was published under Notice of Authorized Amendment on 30 Sep 20. The MAA recognizes that a period of change management is required to enable organizations to become fully compliant with the revised regulation. Therefore, an approved implementation plan has been developed.

Scope

2. This Regulatory Notice (RN) provides additional detail to support the transition and implementation from Issue 3 to Issue 4 of RA 2375, including specific guidance relating to the transition for Senior Responsible Owners (SRO), Aviation Duty Holders (ADH) and Accountable Managers (Military Flying) (AM(MF)).

Aim

3. This RN will ensure that SRO, ADH and AM(MF) are aware of the mechanisms for implementation of RA 2375 Issue 4 from its publication date.

Implementation

4. This guidance is effective immediately.

Background

5. The Strategic Defence and Security Review 2010 and 2015 directed a greater use of synthetic training devices across the Defence Air Environment. This direction has been further supported, within the RAF, by the RAF Command Plan 16 and the recently published ASTRA Directive. A STRAWMAN paper published by the Air Warfare Centre, titled Synthetic V Live Training, highlights where the RAF may be struggling to deliver against the synthetic ambition.

6. The implementation of RA 2375 Issue 4 aims to ensure that future Flight Simulator Training Devices (FSTD) are qualified appropriately for the use they are intended, and ongoing assurance is maintained. It also aims to ensure that existing FSTD are qualified, in order to quantify their capability and assure that they are being appropriately used within the bounds of that capability, with any associated risks identified to, and owned by the SRO, ADH and AM(MF).

Transition Arrangements

7. RA 2375 - Qualification, Approval and Use of Flight Simulator Training Devices Issue 4 is effective from 30 Sep 20 with the following transitional caveats. This RN affords SRO, ADH and AM(MF) time to understand, assess and prepare for the changes brought about by this change in regulation in order to ensure a safe and considered transition. Points applicable to transition are as follows:

- a. **New FSTD Programmes.** New FSTD acquisitions that are not beyond Strategic Outline Case or Outline Business Case prior to 30 Sep 20 will be required to comply with RA 2375 Issue 4 from 30 Sep 20.
- b. **New FSTD in Development.** For new FSTD that are in the development stage beyond Outline Business Case on 30 Sep 20, compliance with RA 2375 Issue 4 should be achieved by 30 Sep 21.
- c. **In-Service FSTD.** It is recognized that In-Service FSTD will have had some form of acceptance testing but may not be fully compliant with this change to RA 2375 Issue 4. It is also

recognized that where a third party has been contracted to provide FSTD services contracts may need amending to enable compliance. Therefore, compliance with RA 2375 Issue 4 should be achieved by 30 Sep 22. Any relevant legacy data may be used as supporting evidence to achieve compliance.

MAA Website

8. Until 30 Sep 20 the current RA will remain on the MAA Regulatory Publications (MRP) page.
9. From 30 Sep 20, RA 2375 - Qualification, Approval and Use of Flight Simulator Training Devices Issue 4 will replace the current RA on the MRP page. To enable continued compliance with Issue 3 during the transition arrangements as detailed in this RN, Issue 3 is at Annex A. Prior to the compliance dates stated in para 7, there is no requirement to apply for a waiver to continue to use RA 2375 Issue 3.

Queries

10. Any observations or requests for further guidance on the content of this RN should be submitted by email to DSA-MAA-MRPEnquiries@mod.gov.uk.

MAA Head of Operating Assurance

Annex:

- A. RA 2375 - Qualification, Approval and Use of Flight Simulator Training Devices Issue 3

RA 2375 - Approval and Use of Flight Simulator Training Devices

Rationale

► *Flight Simulator Training Devices (FSTD) may be used as either preparation or substitution for live sorties in United Kingdom (UK) military Air Systems. However, FSTD vary considerably in fidelity and because of this their use must not prejudice the safe operation of that Air System. Careful consideration is therefore required to ensure the FSTD is fit for purpose.* ◀

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2375(1): Approval of Flight Simulator Training Devices

2375(2): Use of Flight Simulator Training Devices

Regulation 2375(1)

Approval of Flight Simulator Training Devices

2375(1) Aviation Duty Holders ► (ADH) ◀ and Accountable Managers (Military Flying) (AM(MF)) **shall** approve for use the FSTD within their Area of Responsibility.

Acceptable Means of Compliance 2375(1)

Approval of Flight Simulator Training Devices

1. FSTD approvals **should** be renewed and recorded at least annually, or after any significant modification to the live ► Air System, ◀ or the simulator, or its use, that has a potential impact on the safe operation of the live ► Air System. ◀ In doing so, the approver **should** assess material differences between the simulator and the 'as flown' ► Air System ◀ configuration as part of his Air System Safety Case¹ ◀.

Guidance Material 2375(1)

Approval of Flight Simulator Training Devices

2. When assessing the fidelity of a FSTD the following considerations, as a minimum, are applicable:

- a. Handling characteristics throughout the flight envelope.
- b. Performance characteristics throughout the flight envelope.
- c. Mission realism.
- d. Accuracy of cockpit layout.
- e. Realistic systems architecture (eg software menus etc).
- f. Representative visuals with sufficient acuity.

3. Fidelity Assessments will normally be made by a current and qualified Test Pilot assisted by ► Qualified Aircrew Instructors (Qualified AI) ◀ who are current and qualified on type.

Regulation 2375(2)

Use of Flight Simulator Training Devices

2375(2) ► ADH ◀ and ► ◀ AM(MF) **shall** determine the extent that ► FSTD ◀ can be used as a substitute for live flying based on the fidelity of the system being used.

Acceptable Means of Compliance 2375(2)

Use of Flight Simulator Training Devices

4. ► ADH ◀ and AM(MF) **should** assess FSTD for their fidelity to be used to support flying training, currency and competency requirements including conversion to type and instrument flying. Consequently, ► ADH ◀ and AM(MF) **should** specify in orders the amount of synthetic flying time and the training exercises that may be conducted in such FSTD, and the periods in which these apply. Currency and training

¹ ► Refer to RA 1205 - Air System Safety Cases. ◀

**Acceptable
Means of
Compliance
2375(2)**

hours flown in the FSTD **should** be recorded in the relevant section of the Aircrew logbook.

5. Where ►FSTD◄ substitutes for 'live' flying training, currency and competency requirements, including conversion to type and instrument flying, due consideration to other Regulatory Articles (RA) concerning 'live' flying **should** be applied, where appropriate.

**Guidance
Material
2375(2)****Use of Flight Simulator Training Devices**

6. Due consideration of other RA will include areas such as: ►Qualified AI◄; rules of the air; flight procedures; role specific operations; ►Air System◄ emergencies etc. However, medical requirements, Authorization and Aircrew fatigue management, for example, may be relaxed.

Only valid
in accordance with
MAAIRN/2020/13