

RA 4600 – Aircraft Assisted Escape Systems – Safety and Maintenance ▶◀

Rationale

Maintenance personnel may be required to maintain and / or work in the vicinity of Aircraft Assisted Escape Systems (AAES) and / or Crew Escape Systems (CES) fitted to Aircraft or in storage areas. Inadvertent operation of an AAES or CES¹, or its failure to operate correctly, has the potential to Cause serious Injury or death. ▶This RA◀ details the Safety precautions and additional Maintenance checks required for AAES.

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Regulation 4600(1)

Aircraft Assisted Escape Systems Safety Precautions

4600(1) ▶The Chief Air Engineer (CAE)² and / or◀ the Military Continuing Airworthiness Manager (Mil CAM)³ **shall** ensure that ▶aviation engineering◀ orders and / or ▶local◀ procedures▶⁴◀ are promulgated detailing the Safety precautions applicable to AAES▶⁵◀.

Acceptable Means of Compliance 4600(1)

Aircraft Assisted Escape Systems Safety Precautions

1. The fitment, removal or position setting of AAES Safety devices, or associated system Safety devices, **should** be conducted in accordance with (iaw) Technical Information (TI).
2. ▶The CAE² and / or the Mil CAM³ aviation engineering◀ orders and / or ▶local◀ procedures▶⁴◀ **should** be promulgated by Approved Maintenance Organizations in the Maintenance Organization Exposition (MOE)⁶ or by Military Maintenance Organizations in Aviation Engineering Standing Orders ▶or equivalent,◀ and as a minimum **should** state:
 - a. Training and Competence requirements for Maintenance personnel requiring access to AAES Hazard zones⁷.
 - b. AAES Safety device Configuration for the movement of Aircraft into hangars or shelters.
 - c. ▶Aviation engineering orders and / or local◀ procedures▶⁴◀ for un-trained Maintenance personnel or visitors requiring access to AAES Hazard zones.
3. Maintenance personnel requiring access to AAES Hazard zones **should** be assessed as Competent⁸ and **should** be re-assessed every 12 months⁹.
4. AAES that have been removed from an Aircraft for Maintenance **should** be stored in a location or facility that has a valid Explosives Licence¹⁰.

¹ For the purpose of this Regulatory Article (RA) AAES is to be read to include CES.

² ▶Refer to RA 1023 – Chief Air Engineers – Air Safety Responsibilities.◀

³ Refer to RA 1011 – Military Continuing Airworthiness Manager Responsibilities.

⁴ ▶Refer to RA 4009 – Aviation Engineering Orders and Local Procedures.

⁵ Sponsorship of each aviation engineering order and / or local procedure is to be clearly documented iaw RA 4009(1): Aviation Engineering Orders and Local Procedures.◀

⁶ Refer to RA 4816(1): Content of an Maintenance Organization Exposition (MRP 145.A.70(a)).

⁷ Hazard zones are storage areas, cockpits, or cabins, where AAES is held or installed. This is inclusive of installed and uninstalled AAES hazard zones as defined in the TI.

⁸ Refer to RA 4806(5): Personnel Competences and Authorization (MRP145.A.30(e)).

⁹ DAP109A-0100-2(N/A/R)1 AAES Part 4 Leaflet 1 – Training Policy for AAES.

¹⁰ Refer to DSA 03 – OME, Part 2, In-Service and Operational Safety Management of OME, Chap 9 and Chap 10 Sect 8, Annex C.

**Guidance
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Aircraft Assisted Escape Systems Safety Precautions

5. Personnel ►will◀ be re-trained if any significant changes are made to the AAES.
6. Ordnance, Munitions and Explosives ►will◀ be stored in explosives licenced locations or facilities¹⁰. Such storage facilities are not to be used for storage of other equipment, material or dangerous goods.

**Regulation
4600(2)**

Aircraft Assisted Escape Systems Maintenance Responsibilities

- 4600(2) The ►CAE² and / or the◀ Mil CAM►³◀ shall strictly control the Maintenance of AAES►⁵◀. Whenever an AAES or associated component is disturbed or subject to Maintenance activity, the AAES or associated component **shall** be subject to Maintenance checks, vital checks and Independent Inspection.

**Acceptable
Means of
Compliance
4600(2)**

Aircraft Assisted Escape Systems Maintenance Responsibilities

7. Maintenance personnel required to work on AAES **should** be assessed as Competent and authorized⁸.
8. Mandatory checks **should** be conducted at critical stages during the assembly and installation of AAES. The following terminology **should** be used:
 - a. **Maintenance checks** – Maintenance checks **should** be carried out whenever an AAES component undergoes any form of Maintenance in a bay or as part of the bay activity in a licensed explosives area.
 - b. **Vital checks** – Vital checks **should** be carried out at defined stages during the process of installing an AAES, or a component part of an AAES in an Aircraft. Vital checks **should** be undertaken at the Aircraft, or in a licensed explosives area associated with the Aircraft Maintenance activity.
 - c. **Independent checks** – Independent checks **should** be made at the Aircraft after installation of an AAES, or a component part of an AAES.
9. Maintenance, Vital and Independent checks **should** be recorded in the Maintenance Log¹¹.
10. The movement of AAES Safety devices is a Maintenance activity and **should** be undertaken iaw MRP Part 145 requirements.

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Aircraft Assisted Escape Systems Maintenance Responsibilities

11. **Maintenance checks** are checks for correct assembly, locking and function to ensure the reliable operation of the AAES. These checks are carried out because they cannot be readily undertaken during or after installation or re-installation of the component in an Aircraft. The relevant Maintenance checks are detailed in the appropriate bay Maintenance schedule.
12. **Vital checks** are checks for correct assembly, routeing, locking and function to ensure the reliable operation of the AAES, which cannot be readily undertaken before installation or re-installation commences, or after it has been completed. Details of each vital check are contained in the appropriate Aircraft Maintenance schedule or procedure.
13. **Independent Checks** provide final visual confirmation that all locking, routeing and installation processes have been carried out correctly. The detail of each independent check is contained in the appropriate Aircraft Maintenance schedule or procedure. They may be divided by sub-system, eg CES independent check, canopy system independent check and ejection seat independent check.

¹¹ Refer to RA 4813(1): Recording and Retention of Maintenance Work (MRP 145.A.55(a)).