

## RA 1340 - Equipment Not Basic to the Air System

### Rationale

*Equipment Not Basic to the Air System (ENBAS) is the generic term used for weapons<sup>1</sup>, Role Equipment, releasable stores, Airborne Equipment, Aircrew Equipment Assemblies, Carry-on Equipment and other items used to support<sup>2</sup> the operation of the Air System<sup>3</sup>; such equipment will form part of the Air System Safety Case (ASSC)<sup>4</sup> and it is fundamental that these are included in the Release To Service (RTS) **▶ or appropriate Military Permit To Fly (MPTF)<sup>5</sup>. ◀** Not having all ENBAS identified and understood (eg use, limitations, etc) in the RTS **▶ or appropriate MPTF◀** and ASSC could result in the Air System's stakeholders incorrectly utilizing the ENBAS. To ensure ENBAS are correctly and completely identified and understood within the RTS **▶ or appropriate MPTF◀** and ASSC, Safety Assessments are required for each equipment type. The ENBAS defined in the RTS **▶ or appropriate MPTF◀** are the definitive ENBAS for the Air System, and allow for peacetime training, exercise, contingency, threat and war conditions.*

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#### 1340(1): Equipment Not Basic to the Air System

### Regulation 1340(1)

#### Equipment Not Basic to the Air System

1340(1) ENBAS **shall** be authorized in the RTS **▶ or appropriate MPTF. ◀**

### Acceptable Means of Compliance 1340(1)

#### Equipment Not Basic to the Air System

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1. The **▶ Type Airworthiness Authority (TAA) and / or Type Airworthiness Manager (TAM)<sup>6</sup>◀ should:**

a. Assure **▶ themselves◀** that each item of ENBAS used to support the operation of the Air System has a Safety Assessment completed to **▶ their◀** satisfaction, including but not limited to:

- (1) Aircraft all up mass.
- (2) Centre of Gravity of the Aircraft during: carriage, release and jettison.
- (3) Aircraft performance and handling characteristics.
- (4) Structural loading.
- (5) Electrical loading.
- (6) Equipment restraint and stability.
- (7) Electro-magnetic compatibility.
- (8) Environmental factors eg:
  - (a) Vibration.
  - (b) Humidity.

<sup>1</sup> **▶ In this RA, "weapons" refers to: hand-held weapons (eg pistols, rifles, etc) and Air Launched Weapons (as defined in MAA02: MAA Master Glossary). ◀**

<sup>2</sup> This RA is not applicable to items properly classified as cargo. Cargo is regulated by the Movement and Transport Safety Regulator as directed by JSP 800: **▶ Defence Movement and Transport Regulations. ◀**

<sup>3</sup> ENBAS does not include Ground Support Equipment, test equipment or equipment not intended for carriage during flight or equipment that does not affect the Airworthiness and / or Air Safety of the Air System. ENBAS does include elements relevant to the Remote Pilot Station of a Remotely Piloted Air System.

<sup>4</sup> Refer to RA 1205 - Air System Safety Cases.

<sup>5</sup> **▶ Refer to RA 1305 – Military Permit To Fly (In-Service), (Special Case Flying) and (Single Task); Refer to RA 5880 – Military Permit To Fly (Development) (MRP Part 21 Subpart P).**

<sup>6</sup> Where the Air System is Civilian-Owned, ownership of regulatory responsibility by either the TAA or 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. Dependant on the agreed split of TAW responsibilities TAM may be read in place of TAA as appropriate throughout this RA. ◀

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- (c) Contamination (fuels, oils etc).
  - (d) If applicable; pressurization and depressurization.
  - (e) Temperature.
  - (f) Illumination (night vision device compatibility if required).
- (9) If applicable, safe separation of the ENBAS from the Aircraft during release and jettison, including avoidance of Aircraft self-damage.
- (10) Critical factors such as gust susceptibility, wind, turbulence and aerodynamics.
- (11) Failure modes, effects and their criticality to the ENBAS and the **▶ Air System. ◀**
- b. Consider human factors.
  - c. Consider all aspects of the operation of equipment when carried on the Air System, when making a Release To Service Recommendation (RTSR) **▶ or appropriate MPTF Recommendation. ◀**
  - d. Ensure ENBAS used to support the Air System is captured in, or referenced from the Air System Document Set<sup>7</sup> (ADS).
  - e. Communicate all hazards to the Operating Duty Holder **▶ or Accountable Manager (Military Flying) for their ◀** consideration.
  - f. Ensure all **▶ Airborne Equipment and Air Launched Weapons related ◀** ENBAS have a completed Certificate of Design<sup>8</sup>.
  - g. For complex, novel or high risk ENBAS, employ the services of an Independent Safety Auditor and an Independent Technical Evaluator<sup>9</sup>.
  - h. Ensure Test and Evaluation is carried out and completed<sup>10</sup> for its intended role.
  - i. **▶ Assure themselves that the Airworthiness of Helicopter Under-Slung Load Equipment (HUSLE)<sup>11, 12</sup> is assessed to their satisfaction before making an RTSR or appropriate MPTF Recommendation. This **should** include a Safety Assessment and as a minimum contain, in addition to the above:**
    - (1) **Emergency procedures during under-slung load operations.**
    - (2) **Floor loading.**
    - (3) **The elasticity of strops.**
    - (4) **The type of delivery concerned.**
  - j. **Assure themselves that the Airworthiness of Cargo restraint equipment is assessed to their satisfaction before making an RTSR or appropriate MPTF Recommendation. This should include a Safety Assessment. ◀**
- ▶ ◀**
2. **▶ ◀**
- a. **▶ ◀**
  - b. **▶ ◀**
  - c. **▶ ◀**
  - d. **▶ ◀**

<sup>7</sup> Refer to RA 1310 – Air System Document Set.

<sup>8</sup> Refer to RA 5103 – Certification of Design.

<sup>9</sup> Refer to RA 1220 – Delivery Team Airworthiness and Safety.

<sup>10</sup> Refer to RA 1013 – Air Systems Operating Centre Director – Provision of Airworthy and Safe Systems and RA 2370 - Test and Evaluation.

<sup>11</sup> **▶ HUSLE and JADTEU publications can be found located on the JADTEU Publications Intranet webpage.**

<sup>12</sup> **Troop Insertion and Extraction Systems (TIES) is not HUSLE. ◀**

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3. The RTSA **should** consider the RTSR ▶◀ and if content provide an entry in the RTS<sup>13</sup>.
4. ▶The Sponsor<sup>4</sup> **should** consider the MPTF Recommendation and if content authorize the entry in the appropriate MPTF.◀

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### Equipment Not Basic to the Air System

#### Safety Assessment

5. Responsibility for the provision of the Safety Assessment for ENBAS normally rests with the procuring Delivery Team Leader (DTL) ▶and / or TAA.◀
6. When addressing ENBAS in the ASSC, the advice of the ▶◀ TAA will have primacy ▶◀.

#### Airborne Equipment (AE) and Air Launched Weapons (ALW)

7. Notwithstanding the completeness of AE<sup>14</sup> and ALW<sup>15</sup> releases in respect to the equipment itself, the safety of carriage, release, jettison and despatch from a particular Air System still has to be addressed as part of the ASSC and RTS. The ▶◀ RTS thus gives authority for the use of the AE or ALW in Service.
8. Only AE cleared through a specific RTS entry may be operated on a military registered Aircraft. Clearance for use of AE from one Aircraft type cannot be assumed to read across to another Aircraft type or mark.
9. The risks to the Air System prior to completion of safe separation of the AE and ALW ▶will◀ be considered in the Safety Assessment and the ASSC and will be updated to ▶assure◀ that all such risks are addressed. The RTSA will ensure that all these aspects are detailed in the ▶◀ RTS and, where appropriate, are carried forward into the rest of the ADS.

#### Aircrew Equipment Assembly (AEA)

10. An AEA will be declared safe for use by a statement based on the Safety Assessment, issued by the providing DTL<sup>16</sup>, ▶and / or TAA◀ for the purpose of In-Service use. The providing DTL, ▶and / or TAA◀ will ensure that ▶a proportional◀ Safety Assessment of each AEA details the extent of the clearance, and the limitations of the AEA for specific Air System, or roles, in Service operation. AEA details can be found in ▶DAP108B-0001-1<sup>17</sup>.◀
11. The ▶◀ TAA will ensure that the AEA Safety Assessment fully supports the proposed use on ▶the◀ Air System. ▶Where limited Safety and Certification evidence exists for the AEA, the TAA needs to be satisfied that the use of the AEA remains within the Air System's Design Safety Target. The TAA◀ will also include any limitations on the use of the AEA in the ▶RTS or appropriate MPTF◀ where they affect, or contribute to, limitations that affect the Air System.

#### Miscellaneous Items of Carry-on Equipment

12. ▶Items of Carry-on Equipment, where they are required to support the operation of the Air System, are classed as ENBAS.◀ ENBAS classed as Carry-on Equipment have included in the past: Electronic Flight Bags<sup>18</sup>, laptop computers, cameras, tool kits, survival equipment not classed as AEA, binoculars, aeromedical equipment, high altitude breathing apparatus and electronic tablets.

<sup>13</sup> Refer to RA 1300 – Release To Service.

<sup>14</sup> Refer to RA 1345 – The Compendium of Airborne Equipment Release Certificates.

<sup>15</sup> Refer to RA 1350 – Air Launched Weapon Release ▶◀.

<sup>16</sup> This may or may not be the Air Commodities Delivery Team.

<sup>17</sup> ▶Refer to DAP108B-0001-1 - Aircrew Equipment Assemblies – Platform Schedules.◀

<sup>18</sup> TAAs may wish to consult ▶Commission Regulation (EU) No 965/2012 and Commission Implementing Regulation (EU) 2018/1975◀ for Electronic Flight Bags.

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