

**NPA/24/27**

**Title of Proposal:** Equipment Not Basic to the Air System

**RA(s) or Manual Chapter(s):** RA 1340

**Organizations and / or business sectors affected:** Aviation Duty Holders, Accountable Managers (Military Flying), Type Airworthiness Authorities, Type Airworthiness Managers, DE&S Commodity DT LoAN holders, Release To Service Authorities

**RFC Serial No:** MAA/RFC/2022/050, 2022/056, 2022/118, 2022/239, 2022/258, 2023/041, 2023/042

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N/A	N/A	N/A	N/A

**Cross-references to Other Documents or Relevant Sources**

**Other MRP Amendments:** N/A

**Service Inquiry Recommendations:** N/A

**AAIB Recommendations:** N/A

**Other Investigation Recommendations:** N/A

**Any Other Document:** N/A

**Feedback Notes for the Regulated Community**

The Regulated Community are invited to offer feedback about the proposed amendment in the following areas:

- Air or Flight Safety impact
- Operational impact
- Errors or omissions
- Timescale for implementation
- Cost of implementation
- Amendment to internal processes/orders

- Resourcing the outcome of change
- (Contract amendments because of the change)

The format for feedback is available within a single Excel Template file on both internal and external MAA websites; it is important to use this format to ensure that your responses are considered and answered correctly.

**Summary of Proposed Amendment**

**Objective:** To ensure the RA remains aligned with changes to the Regulated Community, coherent with the rest of the MRP, and the removal of contradictory requirements and potential confusion.

**Changes made:** Updated to include: Incorporation of Gender Neutral terminology, Replacing outdated terminology, and clarity that the RA does not relate to equipment that forms part of the Air System’s Type Design

**Impact Assessment:** Minimal impact. The regulatory requirements have not fundamentally changed but have been amended to improve coherency and consistency of terminology and to provide greater clarity.

**Consultation Period Ends:** 10 June 2024

The consultation period for this proposed amendment ends on the stated date. Please send your feedback, using the Response Form, via email to [DSA-MAA-MRPEnquiries@mod.gov.uk](mailto:DSA-MAA-MRPEnquiries@mod.gov.uk)

*MAA Approval*

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► This RA has been substantially re-written; for clarity no change marks are presented – please read RA in entirety ◀

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

### Rationale

*Equipment Not Basic to the Air System (ENBAS)<sup>1</sup> comprise items which are carried onboard / attached to the Air System to support delivery of the required capability but are not included within either the Air System design drawings or Certification of the Type Design<sup>2</sup>. Failure to properly identify and assess all ENBAS in the Air System Safety Case (ASSC)<sup>3</sup> could lead to unmanaged Hazards and a lack of appropriate Risk mitigation. Therefore, all ENBAS requires a Safety Assessment prior to inclusion in the Release To Service (RTS)<sup>4</sup> or appropriate Military Permit To Fly (MPTF)<sup>5</sup>.*

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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) Operating Duty Holders (ODH) / Accountable Managers (Military Flying) (AM(MF)) **shall** ensure ENBAS is addressed in their ASSC and included in the RTS / appropriate MPTF.

### Acceptable Means of Compliance 1340(1)

#### Equipment Not Basic to the Air System

1. ODHs / AM(MF)s **should** ensure that ASSC include a Safety Assessment (SA) for carriage, fitment and operation of ENBAS that is proportionate for the Hazards and Risk to Life (RtL) presented by the equipment.
2. The RTS Authority (RTSA) **should** ensure that all ENBAS is included in the RTS<sup>6</sup> and that a SA has been completed by the Type Airworthiness Authority (TAA)<sup>7, 8</sup> or Commodity Letter of Airworthiness Notification (LoAN) holder<sup>9</sup>.
3. The TAA **should** ensure that all ENBAS is included in the appropriate MPTF and that a SA has been completed.
4. The SA **should** define the configuration and approved operating environment for the equipment to which it applies<sup>10</sup>.
5. The SA **should** identify the limitations and procedures necessary to achieve safe carriage (including secure stowage when not in use), fitment and operation of the intended configuration.
6. Relevant detail from the SA **should** be included in the Air System Document Set (ADS)<sup>11</sup> and local orders.
7. The SA **should** be reviewed on changes to the equipment or its operating context.

<sup>1</sup> Examples of ENBAS are provided in Guidance Material.

<sup>2</sup> Type Design requirements are regulated via RA 5810 – Military Type Certificate (MRP Part 21 Subpart B) and RA 5305 – In-Service Design Changes. Making any permanent change to the Air System structure or systems is classed as a design change.

<sup>3</sup> Refer to RA 1205 – Air System Safety Cases.

<sup>4</sup> Refer to RA 1300 – Release To Service.

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

<sup>6</sup> RA 1300 – Release To Service details occasions when Operational Emergency Clearances (OEC) or Clearance with Limited Evidence (CLE) may be required.

<sup>7</sup> Refer to RA 5012 – Type Airworthiness Safety Assessment.

<sup>8</sup> 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.

<sup>9</sup> Refer to RA 5013 – Air Safety Management of Equipment and Commodity Items.

<sup>10</sup> Where the SA is from the Commodity LoAN holder (RA 5013 refers), the TAA is responsible for ensuring their Air System provides an operating environment that meets the requirements of the equipment SA.

<sup>11</sup> Refer to RA 1310 – Air System Document Set.

**Acceptable  
Means of  
Compliance  
1340(1)**

8. Troop Insertion and Extraction Systems (TIES), Helicopter Under-Slung Load Equipment (HUSLE) and cargo restraint equipment **should** be approved for use by the Joint Air Delivery Trials Evaluation Unit (JADTEU)<sup>12</sup>.

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**Equipment Not Basic to the Air System**

9. Due to the broad scope of potential ENBAS items it is not practical to list them all, but the following example categories will be sufficient to allow intelligent decisions to be made. The responsibility for deciding whether an item of equipment requires a change to the Type Design lies with the TAA<sup>13</sup>. The key criterion being that any equipment which necessitates change to the Air System<sup>14</sup> cannot be ENBAS. Similarly items which are carried internally but are not required to be used in flight, such as equipment to support maintenance at the destination, is classified as cargo and not ENBAS<sup>15</sup>. Categories of ENBAS include but are not limited to:

- a. Aero Medical Equipment (AME)<sup>16</sup>.
- b. Handheld viewing aids.
- c. Hand-launched ordnance.
- d. Personal weapons which can be used in flight.
- e. TIES, HUSLE and cargo restraint equipment.
- f. Portable Electronic Devices (PED).
- g. Aircrew Equipment Assemblies (AEA) / Survival Equipment (SE) which are worn or carried onboard, but which do not provide or receive services from the Aircraft. Examples include Aircrew coveralls, armoured-capable life preservers, multi-seat life rafts and high-altitude breathing apparatus<sup>17</sup>.
- h. Items of Role Equipment which attach to the Aircraft where the only entry required in the technical documentation that authorizes the flight is to update the weight and balance<sup>18</sup>.

10. This RA is not applicable to:

- a. AEA / SE that directly interfaces with the Aircraft and which is essential for conduct of flying operations. Examples include helmets, integrated Head Up Displays and counter-pressure garments; these items will be included within Type Certification<sup>2</sup>.
- b. Items classified as cargo (which are regulated by the Movement and Transport Safety Regulator as directed by JSP 800)<sup>19</sup>.
- c. Air Launched Weapons (ALW)<sup>20</sup>.
- d. Airborne Equipment<sup>21</sup>.
- e. Items of Role Equipment which require permanent change to the Aircraft such as mounting frames, dedicated TIES attachment points, or dispensers that can be left permanently fitted; these will be included within the Air System Type Design.

<sup>12</sup> Refer to the publications on the JADTEU SharePoint site. Organizations without SharePoint access **should** contact JADTEU direct.

<sup>13</sup> Refer to RA 5301 – Air System Configuration Management.

<sup>14</sup> Such as by drilling holes for attachment points, updating onboard software or running cables to connect a discrete power supply or avionics input; these are changes to the Type Design.

<sup>15</sup> Refer to RA 2309(9) – Carriage of Loose Articles and Stores for Aircraft Commander responsibilities to ensure safe stowage.

<sup>16</sup> AME covers a broad range of equipment which may contain liquids or compressed gases, may be battery operated or require connection to auxiliary power sockets; detailed procedures for secure stowage and operating conditions will be required.

<sup>17</sup> The RTS / appropriate MPTF will need to reflect the approved equipment schedules listed in DAP108B-0001-1 (AEA / SE Air System Clearance Schedules).

<sup>18</sup> For instance, an external surveillance pod which attaches to an existing carrier and only connects to the power supply.

<sup>19</sup> Refer to JSP 800: Defence Movement and Transport Regulations.

<sup>20</sup> Refer to RA 1350 – Air Launched Weapons.

<sup>21</sup> Refer to RA 1345 – The Compendium of Airborne Equipment Release Certificates.

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- f. Other equipment changes that would affect the Air System Type Design, or for which dedicated Type Certification requirements apply<sup>22, 23</sup>.
11. Each SA will consist of a claim (or number of claims), a structured and explicit argument, and supporting body of evidence for use in a defined context, that together provide a compelling, comprehensible, and valid case which supports the inclusion of ENBAS in the host ASSC. ODH / AM(MF) will be supported by TAA / Commodity LoAN Holder SAs<sup>7, 9</sup>.
12. The RTS / appropriate MPTF will include limitations and procedures for safe operation of some ENBAS. Examples may include Aircraft attitude and speed for conduct of relevant operations; or phases of flight where operation of equipment (such as medical devices) is prohibited. Test and Evaluation activity may be required to generate evidence to support the SA, such as Human Factors Integration for equipment operation or safe separation from the Aircraft for hand launched ordnance<sup>24</sup>.
13. Procedures will also need to consider safe restraint of equipment when not in use and dealing with potential emergencies such as battery fires in electronic equipment.
14. JADTEU publications identify approved items of cargo restraint equipment,<sup>25</sup> TIES and HUSLE, and approved configurations and procedures for their use. Therefore any SA will need to exploit this information, referencing engagement with JADTEU to seek additional support where applicable ENBAS items are not yet included in JADTEU publications. Where equipment is approved for use by JADTEU, the supplier of that equipment will not require Design Approved Organization Scheme (DAOS) approval.
15. PEDs / Electronic Flight Bags (EFB) may be classified as ENBAS when their only connection to the Air System is via an existing auxiliary power supply and / or an existing fixed aerial connection; any dedicated wiring for connection to Air System avionics or power will make the equipment part of the Type Design. Guidance on mitigating the Hazards with PEDs / EFBs is available via the Civil Aviation Authority (CAA) website<sup>26</sup>. Also, Aviation Duty Holder / AM(MF) are required to publish orders for use of PEDs<sup>27</sup> to augment the limitations that will be required in the RTS / MPTF, based upon the relevant SA.
16. The requirement for DAOS approval will need to be considered,<sup>28</sup> addressing queries to [DSA-MAA-OA-DAOSGroup@mod.gov.uk](mailto:DSA-MAA-OA-DAOSGroup@mod.gov.uk) when clarification is required. If MAA confirm there is no DAOS requirement the SA will need to state how the intent of using a competent organization is met.

<sup>22</sup> Refer to RA 5810 – Military Type Certificate (MRP Part 21 Subpart B).

<sup>23</sup> Refer to RA 5305 – In-service Design Changes.

<sup>24</sup> Refer to RA 2370 – Test and Evaluation.

<sup>25</sup> DAP 105F-0706-1 (Internal Cargo Restraint Nets) details items approved by DE&S Air Commodities Delivery Team.

<sup>26</sup> The [CAA site](#) provides PED Safety advice and also links to the applicable [European Union Aviation Safety Agency AMC](#) detail for EFB Safety guidance.

<sup>27</sup> Refer to RA 2360 – Portable Electronic Devices, regarding devices that are not cleared via the RTS / appropriate MPTF.

<sup>28</sup> Refer to RA 1005 – Contracting with Competent Organizations.

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