RA 1702 – MOD-Approved Aerial Delivery Equipment

Rationale

The delivery of equipment from Aircraft using MOD-approved¹ Aerial Delivery Equipment (ADE)²,³ is a key enabler of military capabilities. Failure to manage MOD-approved ADE activity appropriately could result in increased Risk to Life (RtL) to personnel, 3rd parties, or damage to Aircraft. This Regulatory Article (RA) identifies the Regulations to ensure organizations⁴ understand the Safety aspects of their MOD-approved ADE activity and to enable a suitable regulatory framework to be applied. This will ensure that MOD-approved ADE used is safe to operate and is being operated safely throughout its life.

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Applicability

Applicability

- 1. RA 1702 is applicable for the conduct of MOD-approved ADE activities. This includes Aerial Despatch activities conducted by:
 - a. UK Military Aerial Despatch units.
 - b. ADE trials activity for MOD-approved ADE.
 - c. Civilian-Operated (in-Service) delivery.

Definitions

Definitions Relevant to this RA

- 2. **Aerial Delivery Equipment (ADE)**. Equipment and ancillary items, including Airdrop Platform where used, to deliver Cargo to Drop Zones. (Sourced from: AAP-06)
- 3. **Parachuting Operating Duty Holder (ODH)**. An Accountable individual, who is at minimum a 2* Crown Servant, with formal delegated Responsibilities for actively managing Air Safety for operation of Airborne Equipment (AE) via an effective Air Safety Management System⁵ to ensure that associated RtL is As Low As Reasonably Practicable (ALARP) and Tolerable within their defined Areas of Responsibility.
- 4. **Parachuting Commander**. A 2* Crown Servant who is in the direct Chain of Command of the unit participating in the activity. They have a personal Duty of Care (DoC)⁶ for their troops throughout the activity.
- 5. **Airborne Equipment Safety Case (AESC)**. A structured argument, supported by a body of evidence, that provides a compelling, comprehensible and valid case that AE is safe for a given application in a given environment. It is through-life, pan-Defence Lines of Development and addresses a combination of the physical components, procedures and human resources organized to deliver the capability. AE is not an Air System and so use of the term Air System Safety Case is inappropriate.

¹ "MOD-approved" is defined as any equipment that has been approved by the MOD (by the Airborne Equipment (AE) Type Airworthiness Authority (TAA)) for inclusion in the Compendium of Airborne Equipment Release Certificates (CAERC).

² Refer to MAA02 – MAA Master Glossary.

³ The use of "MOD-approved ADE" includes the associated ancillary equipment.

⁴ This includes the Aviation Duty Holder (ADH), Accountable Manager (Military Flying) (AM(MF)), Continuing Airworthiness Management Organization, Delivery Team, Maintenance Approved Organization Scheme, Design Approved Organization Scheme, and operators of AE authorized to conduct Aerial Despatch descents for any given AE.

⁵ Refer to the Regulatory intent of RA 1200 – Air Safety Management Systems.

⁶ Duty of Care is a legal Responsibility that applies at every level to all Defence activities.

Definitions

However, the Regulatory intent of RA 1205⁷ can be applied to AESC as they are equally relevant.

Regulation 1702(1)

Governance Responsibilities

1702(1) MOD-approved ADE **shall** be operated under the authority of the Aviation Duty Holder (ADH) / Accountable Manager (Military Flying) (AM(MF)), the Parachuting ODH and / or the Parachuting Commander.

Acceptable Means of Compliance 1702(1)

Governance Responsibilities

- 6. The ADH / AM(MF) is legally Accountable for ensuring that RtL associated with operating Aircraft under their Area of Responsibility (AoR) to deliver MOD-approved ADE is ALARP and Tolerable. This **should** be achieved by:
 - a. Ensuring that the RtL associated with the use of MOD-approved ADE is reflected in the claims made in the Air System Safety Case (ASSC)⁷ for the Aircraft within their AoR.
 - b. Discharging RtL and DoC Responsibilities associated with MOD-approved ADE in accordance with (iaw) Annex A.
- 7. Where MOD-approved ADE is used from foreign military-registered or civil-registered Aircraft, the Parachuting ODH and / or Parachuting Commander as the Accountable individual(s) **should** ensure the activity is ALARP and Tolerable (Annex A refers).
- 8. The Parachuting ODH **should**:
 - a. Have their nomination endorsed by the Director Military Aviation Authority (D MAA) iaw MAA03 Annex G⁸. The Parachuting ODH and the ADH may be the same person.
 - b. Ensure that the RtL is ALARP and Tolerable for personnel using MOD-approved ADE and to other 3rd parties that might be affected after the ADE has left the Aircraft⁹.
 - c. Be responsible and Accountable for the safe operation of MOD-approved ADE within their AoR and only authorize MOD-approved ADE that has an Approval in the Compendium of Airborne Equipment Release Certificates (CAERC) provided by the AE TAA.
 - d. Define the Responsibility for the transfer of RtL management, in consultation with the ADH / AM(MF), between flying activity and MOD-approved ADE activity (DH delineation).
 - e. Ensure that Aerial Despatchers and Drop Zone Safety personnel are Suitably Qualified and Experienced Persons (SQEP).
- 9. The Headquarters 1 Gp Air Staff Orders (HQ 1 Gp ASOs), or equivalent ADH Orders, Air Mobility Operations Manual Parts A and B, Air System Release To Service (RTS), and CAERC **should** be used as the definitive documents for the use of all MOD-approved ADE.
- 10. The Parachuting Commander **should** publish orders and instructions that detail how the Responsibilities at Annex A will be allocated.
- 11. In order to ensure that Aerial Despatchers are appropriately Competent and current, Parachuting Commanders **should** publish orders specifying how this is monitored.

⁷ Refer to RA 1205 – Air System Safety Cases.

⁸ Refer to MAA03: Military Aviation Authority Regulatory Processes.

⁹ Defined as the point at which the parachute assembly clears the Aircraft and is free direct contact with it or any associated wake turbulence.

Acceptable Means of Compliance 1702(1)

12. All units conducting parachuting activities using MOD-approved ADE **should** ensure that the correct Notice to Aviation and / or Notice to Mariners action has been put in place for the duration of the activity.

Guidance Material 1702(1)

Governance Responsibilities

- 13. It is essential that, throughout the flying and MOD-approved ADE activities, the ADH / AM(MF), Parachuting ODH and Parachuting Commander understand their Responsibilities, communicate as required with each of the stakeholders involved and have robust orders and instructions. The table at Annex A illustrates these Responsibilities throughout the activity.
- 14. Fundamental to effective governance and Risk Management is a clear understanding of when the Responsibility for the management of RtL and / or DoC associated with the MOD-approved ADE activities is transferred between stakeholders.

Regulation 1702(2)

Regulatory Requirements

1702(2) The through life requirements with MOD-approved ADE **shall** be adhered to by the ADH / AM(MF), the Parachuting ODH, the Parachuting Commanders and the AE² TAA responsible for their operation.

Acceptable Means of Compliance 1702(2)

Regulatory Requirements

- 15. The ADH / AM(MF) is legally Accountable for ensuring that RtL associated with operating Aircraft within their AoR to deliver MOD-approved ADE is ALARP and Tolerable. This **should** be achieved by:
 - a. Ensuring that the RtL associated with the use of MOD-approved ADE is reflected in the claims made in the ASSC for the Aircraft under their AoR.
 - b. Discharging RtL Responsibilities associated with MOD-approved ADE iaw Annex A.
- 16. The Parachuting ODH **should** ensure that the RtL associated with the operation and deployment of MOD-approved ADE is reflected in the claims made in the appropriate AESC¹⁰.
- 17. ADH / AM(MF), the Parachuting ODH, the Parachuting Commanders and organizations¹¹ responsible for MOD-approved ADE **should** comply with the intent of the elements (Regulations, AMCs, or GM) of the RAs listed at Annex B, noting that there are Air System specific requirements in the RAs that are not relevant to MOD-approved ADE. The Continuing Airworthiness (CAw) requirements, and any appropriate equivalent or MOD-approved ADE specific information, **should** (where possible) be identified by the CAMO and listed in the CAw Management Exposition. The Type Airworthiness (TAw) requirements, and any appropriate equivalent or MOD-approved ADE specific information, **should** (where possible) be identified by the Design Organization and listed in the Design Organization Exposition.
- 18. The AE TAA **should** ensure that the MOD-approved ADE is safe to operate within the limitations of the CAERC.
- 19. Wherever possible, the AE TAA **should** ensure that all MOD-approved ADE has a valid Certificate of Design¹².
- 20. The AE TAA **should** inform the ADH of all identified equipment contributions to RtL.

¹⁰ Refer to RA 1700 – Airborne Equipment, for definition.

¹¹ This includes the ADH, Continuing Airworthiness Management Organizations (CAMO), Delivery Team, Maintenance Approved Organization Scheme, Design Approved Organization Scheme and operators of ADE authorized to conduct Aerial Despatch descents for any given ADE.

¹² Refer to the Regulatory intent of RA 5103 – Certification of Design.

Acceptable Means of Compliance 1702(2)

- MOD-approved ADE **should** be included within the CAERC¹³. It **should** be authorized for use on specific Aircraft through the relevant CAERC entry and despatch Air System's RTS¹⁴ or applicable Military Permit to Fly (MPTF)^{15, 16}.
- 22. The CAERC should:
 - Be certified by the AE TAA and authorized by the Delegated Release To Service Authority (DRTSA) (RAF).
 - Record all Operational Emergency Clearances (OEC) and Clearances with Limited Evidence (CLE)14, and be suitably marked.
 - Be subject to a 5 yearly review by the DRTSA (RAF).
 - d. Follow the format shown in RA 1701 Annex C¹³.
- The master copy of the CAERC is held by the RTS Authority (RTSA) (RAF). All pages within the CAERC should show the issue status of the document and amendment status for the specific page.
- Where the despatching Aircraft is not on the UK Military Aircraft Register any limitations or restrictions **should** be incorporated into the CAERC.
- RA 1167¹⁷ **should** be complied with for the use of Contracting Civil-Registered Air Systems for Military Purposes.
- The Parachuting ODH's Chief Air Engineer (CAE) should manage CAw by ensuring that MOD-approved ADE is maintained iaw the Regulatory intent of RA 4800 to RA 4849: MRP Part 145. To help ensure the Airworthiness of MOD-approved ADE, an approved Mil CAMO is required law the Regulatory intent of RA 4947¹⁸.
- Maintenance and packing. The Parachuting ODH's CAE should ensure appropriate processes in place to ensure the individuals conducting Maintenance and packing of MOD-approved ADE are SQEP.
- Supervision of MOD-approved ADE operations. The Parachuting ODH should ensure MOD-approved ADE operations, including Maintenance and packing, are supervised by SQEP.
- Authorization of MOD-approved ADE operations. The Parachuting ODH **should** ensure MOD-approved ADE operations, including Maintenance and packing, are authorized by SQEP.

Guidance Material 1702(2)

Regulatory Requirements

- Supervision of MOD-approved ADE operations. Some of the supervisory processes detailed in RA 230519 may be considered suitable for the supervision of MOD-approved ADE activities.
- Authorization of MOD-approved ADE operations. Some of the Authorization processes detailed in RA 230620 may be considered suitable for the Authorization of MOD-approved ADE activities.
- The MRP are specifically written with respect to Air Systems. Their application is equally suitable for aspects of MOD-approved ADE activities and to the Risk management framework²¹ necessary to allow ADH / AM(MF), Parachuting ODH and other members of the Aerial Delivery Community to ensure RtL is managed appropriately.

¹³ Refer to RA 1701 – MOD-Approved Airborne Forces Equipment.

¹⁴ Refer to RA 1300 – Release To Service.

¹⁵ Refer to RA 1305 – Military Permit To Fly (In-Service), (Special Case Flying) and (Single Task).

¹⁶ Refer to RA 5880 – Military Permit To Fly (Development) (MRP Part 21 Subpart P).

¹⁷ Refer to RA 1167 – Contracting Civil-Registered Air Systems for Military Purposes.

 ¹⁸ Refer to RA 4947 – Continuing Airworthiness Management - MRP Part M Sub Part G.
 ¹⁹ Refer to RA 2305 – Supervision of Flying.

²⁰ Refer to RA 2306 – Authorization of Flights.

²¹ Refer to the Regulatory intent of RA 1200 - Air Safety Management, and RA 1210 - Ownership and Management of Operating Risk (Risk to Life).

Guidance Material 1702(2)

Endorsement / approval of the CAERC.

- 33. The CAERC will be amended once all evidence has been collated. Recommended amendments, with supporting evidence, will be presented to the AE TAA for endorsement. The AE TAA will provide a recommendation to the DRTSA (RAF).
- 34. The DRTSA (RAF) approval process will take into consideration the Aircraft that the ADE is to be despatched from.
- 35. The CAERC, certified by the AE TAA and authorized by the DRTSA (RAF) (along with supporting evidence), will be passed to the TAAs²² of the despatching UK military-registered Aircraft.
- 36. The TAA of the despatching Aircraft will:
 - a. Provide recommendation to the DRTSA (RAF) of the despatching Aircraft to authorize the use of the ADE within their Aircraft RTS.
 - b. Return the completed Acknowledgement Sheet to the AE TAA, detailing the acceptance of the ADE for use on the Aircraft or stating the reason for non-acceptance.
- 37. A matrix, which identifies the compatibility between Aircraft types and ADE, controlled by the RTSA (RAF), will be maintained on the MOD Intranet alongside the CAERC.
- 38. For the purposes of this RA, Risk management and ADH / AM(MF) Responsibilities of MOD-approved ADE undergoing Test and Evaluation trials is managed by the Air and Space Warfare Centre (ASWC) ADH chain. Trials activity using equipment that is not yet MOD-approved, or that is used on a civilian or foreign military Aircraft undergoing development, requires Subject Matter Experts to define who is responsible for RtL to manage the additional Risks. These activities must comply with the Regulatory intent of RA 2370²³ and advice will be sought from the ASWC.

Regulation 1702(3)

Operating MOD-approved Aerial Delivery Equipment

1702(3) The Parachuting ODH **shall** ensure the RtL associated with operating MOD-approved ADE is managed within their AoR and that Safety Responsibilities associated with the activity are properly defined.

Acceptable Means of Compliance 1702(3)

Operating MOD-approved Aerial Delivery Equipment

39. The Parachuting ODH **should** publish orders and instructions that include, where relevant to the activity, as a minimum the periodicity of currency training for emergency procedures.

Guidance Material 1702(3)

Operating MOD-approved Aerial Delivery Equipment

40. Nil.

Regulation 1702(4)

Air Despatcher Requirements

1702(4) Air Despatchers **shall** be appropriately trained, qualified, experienced and assured to operate ADE.

²² Where the Air System is not UK MOD-owned, 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. Dependent on the agreed delegation of TAw responsibilities TAM may be read in place of TAA as appropriate throughout this RA.

²³ Refer to RA 2370 – Test and Evaluation.

Acceptable Means of Compliance 1702(4)

Air Despatcher Requirements

41. The Parachuting ODH **should** define in orders the Air Despatcher eligibility, qualifications and experience required for the safe conduct of ADE activity utilizing MOD-approved ADE within their AoR.

Guidance Material 1702(4)

Air Despatcher Requirements

42. The Despatch Crew Commander, Qualified Air Despatch Instructor and Master Air Despatcher Qualifications are awarded to Air Despatchers by the Approving Officer once the appropriate standard during an approved training course has been met.

Annex A MOD-approved ADE DoC and RtL Duty Holder (DH) Responsibilities

Aerial Despatch Equipment	MOD-approved ADE	MOD-approved ADE
Aircraft	UK military-registered	Non-UK military-registered*
Individual with personal DoC ^{24, 25} – on Aircraft / Aerial Despatch descent	Parachuting Commander	Parachuting Commander
DH – on Aircraft	ADH / AM(MF) (RtL)	Parachuting ODH (RtL)
DH – Aerial Despatch descent	Parachuting ODH (RtL)	Parachuting ODH (RtL)

The table above illustrates those responsible for the management of the MOD's DoC and RtL DH responsibilities.

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^{*} Non-UK includes foreign military Aircraft and civil Aircraft. If civil Aircraft is chartered for MOD-approved ADE activities, then guidance in RA 1167¹⁷, **should** be followed.

²⁴ "DoC Owner" refers to the individual responsible for managing the MOD's DoC for the personnel undertaking the specific activity.

²⁵ DoC as defined in JSP 815 Part 2. This includes the requirement to ensure the Aerial Despatchers are trained and fit for the activity.

Annex B

List of RAs related to MOD-approved ADE²⁶

RA Series	RA Number / Title
1000	RA 1002 – Airworthiness Competent Persons
Series	RA 1003 – Delegation of Airworthiness Authority and Notification of Air Safety Responsibility
	RA 1005 – Contracting with Competent Organizations
	RA 1006 – Delegation of Engineering Authorizations
	RA 1010 – Head of Establishment Aviation Responsibilities and Aviation Duty Holder /
	Accountable Manager (Military Flying) Establishment Responsibilities
	RA 1011 – Military Continuing Airworthiness Manager Responsibilities
	RA 1013 – Air Systems Operating Centre Director – Provision of Airworthy and Safe Systems
	RA 1014 – Design Organizations and Co-ordinating Design Organizations – Airworthiness Responsibilities
	RA 1015 – Type Airworthiness Management – Roles and Responsibilities
	RA 1016 – Military Continuing Airworthiness Management
	RA 1020 – Aviation Duty Holder - Roles and Responsibilities
	RA 1021 – Release to Service Authorities - Roles and Responsibilities
	RA 1022 – Senior Operator - Air Safety Responsibilities
	RA 1023 – Chief Air Engineer – Air Safety Responsibilities
	RA 1028 – Contractor Flying Approved Organization Scheme
	RA 1030 – Defence Aeronautical Information Management
	RA 1032 – Aviation Duty Holder-Facing Organizations and Accountable Manager (Military
	Flying)-Facing Organizations - Roles and Responsibilities
	RA 1167 – Contracting Civil-Registered Air Systems for Military Purposes
	RA 1200 – Air Safety Management
	RA 1202 – Cyber Security for Airworthiness and Air Safety
	RA 1205 – Air System Safety Cases
	RA 1207 – Air Safety Data Management and Exploitation
	RA 1208 – Flight Data Monitoring
	RA 1210 – Ownership and Management of Operating Risk (Risk to Life)
	RA 1223 – Airworthiness Information Management
	RA 1225 – Air Safety Documentation Audit Trail
	RA 1230 – Design Safety Targets
	RA 1300 – Release To Service
	RA 1305 – Military Permit to Fly (In-Service), (Special Case Flying) and (Single Task)
	RA 1310 – Air System Document Set
	RA 1380 – Performance Based Navigation
	RA 1400 – Flight Safety
	RA 1410 – Occurrence Reporting and Management
	RA 1420 – Service Inquiries and Non-Statutory Inquiries
	RA 1430 – Aircraft Post Crash and Incident Management and Significant Occurrence
	Management
	RA 1440 – Air Safety Training
4000	RA 4009 – Aviation Engineering Orders and Local Procedures
Series	RA 4051 – Airborne Checks
	RA 4103 – Removal of Body Fluid Contamination from Aircraft
	RA 4213 – Control of Air System Components used in Ground Test Facilities
	RA 4253 – Loose Articles Recovery
	RA 4600 – Aircraft Assisted Escape Systems – Safety and Maintenance
	RA 4800 – General Requirements (MRP Part 145)
	RA 4801 – Certifying Staff
	RA 4802 – Scope of the MRP Part 145 (MRP 145.A.10) - Approved Maintenance
	Organizations only
	RA 4803 – Method of Application for Approval (MRP 145.A.15) - Approved Maintenance
	Organizations only
	RA 4804 – Terms of Approval (MRP 145.A.20) - Approved Maintenance Organizations only
	RA 4805 – Facility Requirements (MRP 145.A.25)
	RA 4806 – Personnel Requirements (MRP 145.A.30)

²⁶ The Parachuting ODH is responsible for determining the applicability of the Regulations, Acceptable Means of Compliance, and Guidance Material within each RA listed in this annex.

RA Series	RA Number / Title
1	RA 4807 – Certifying Staff and Support Staff (MRP 145.A.35)
	RA 4808 – Equipment Tools and Material (MRP 145.A.40)
	RA 4809 – Acceptance of Components (MRP 145.A.42)
	RA 4810 – Technical Information (MRP 145.A.45)
	RA 4811 – Maintenance Planning (MRP 145.A.47)
	RA 4812 – Certification of Air System Release and Component Release (MRP 145.A.50)
	RA 4813 – Maintenance Records (MRP 145.A.55)
	RA 4814 – Occurrence Reporting (MRP 145.A.60)
	RA 4815 – Maintenance Procedures and Safety and Quality Policy (MRP 145.A.65) RA 4816 – Maintenance Organization Exposition (MRP 145.A.70) - Approved Maintenance
	Organizations only
	RA 4817 – Privileges of the Organization (MRP 145.A.75)
	RA 4818 – Limitations on the Organization (MRP 145.A.80) - Approved Maintenance
	Organizations only
	RA 4819 – Changes to the Organization (MRP 145.A.85) - Approved Maintenance
	Organizations only
	RA 4820 – Continued Validity of Approval (MRP 145.A.90) - Approved Maintenance
	Organizations only
	RA 4821 – Findings (MRP 145.A.95) - Approved Maintenance Organizations only
	RA 4941 – Application - MRP Part M Sub Part G
	RA 4943 – Continuing Airworthiness Management Exposition - MRP Part M Sub Part G
	RA 4945 – Personnel Requirements - MRP Part M Sub Part G RA 4947 – Continuing Airworthiness Management - MRP Part M Sub Part G
	RA 4947 – Continuing All Worthiness Management - MRP Part M Sub Part G
	RA 4951 – Quality System - MRP Part M Sub Part G
	RA 4954 – Continued Validity of Approval - MRP Part M Sub Part G
	RA 4955 – Findings - MRP Part M Sub Part G
	RA 4956 – Military Continuing Airworthiness Management Organization Tasks Performed by
	Other Organizations - MRP Part M Sub Part G
	RA 4961 – Aircraft Maintenance Programme and Military Continuing Airworthiness
	Management Organization Responsibilities for Air System Release - MRP Part M Sub
	Part C
	RA 4962 – Special Instructions (Technical) - MRP Part M Sub Part C
	RA 4963 – Modifications and Repairs - MRP Part M Sub Part C
	RA 4964 – Continuing Airworthiness Management Records - MRP Part M Sub Part C
	RA 4965 – Local Manufacture Assurance – MRP Part M Sub Part C RA 4966 – Military Continuing Airworthiness Management Organization Instructions – MRP
	Part M Sub Part C
5000	RA 5010 – Type Airworthiness Strategy
Series	RA 5011 – Type Airworthiness Safety Management System
	RA 5012 – Type Airworthiness Safety Assessment
	RA 5013 – Air Safety Management of Equipment and Commodity Items
	RA 5103 – Certificate of Design
	RA 5212 – Weight and Moment Determination
	RA 5301 – Air System Configuration Management
	RA 5305 – In-Service Design Changes
	RA 5320 – Air System Maintenance Schedule – Design and Validation
	RA 5405 – Special Instructions (Technical) RA 5406 – Aircrew Publications
	RA 5406 – Aircrew Publications RA 5407 – Support Policy Statement
	RA 5724 – Life Extension Programme
	RA 5725 – Out of Service Date Extension Programme
	RA 5726 – Integrity Management
	RA 5805 – Airworthiness Directives and Service Bulletins (MRP Part 21 Subpart A)
	RA 5815 – Instructions for Sustaining Type Airworthiness
	RA 5825 – Fault Reporting and Investigation
	RA 5835 – Production Organizations (MRP Part 21 Subpart G)
	RA 5850 – Military Design Approved Organization (MRP Part 21 Subpart J)
	RA 5855 – Parts and Appliances (MRP Part 21 Subpart K)
	RA 5865 – Repairs (MRP Part 21 Subpart M)
	RA 5875 – (European) Technical Standard Order (MRP Part 21 Subpart O)
	RA 5880 – Military Permit to Fly (Development) (MRP Part 21 Subpart P)

RA Series	RA Number / Title
	RA 5885 – Identification of Products, Parts and Appliances (MRP 21 Subpart Q)