DEF STAN 00-970 NOTICE OF PROPOSED AMENDMENT (Def Stan 00-970-NPA)

TITLE OF PROPOSAL: ACAS Requirements

Stage of Amendment: Issue 1

Def Stan 00-970 NPA Serial No:	2015-006		
Unsatisfactory Report Serial No:	*N/A*		
MAA Originator:	Grade/Rank C2	Name [redacted]	Post DSA-MAA-Cert-ADS1a

Affected Part: (including paragraphs)	Part 13 Clause 1.1.9
Cross-reference to other relevant amendment proposals or documents:	

ADS Point of Contact details		
Rank/Grade and Name:	As above	
Telephone Number mil/civ;	9679 35109	030 679 35109
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Part 1 (for issue to User Community)

INTRODUCTION *(Not more than 250 words)*

Enter here a brief explanation of why NPA is being issued, i.e. what does the amendment hope to achieve, by when and how:

The changes to the ACAS requirements in this NPA are necessary to support the MAA requirement that platforms should provide Collision Warning System capabilities to help mitigate the Mid-Air Collision risk. These requirements have been developed to provide functional requirements for all aircraft types, based on internationally agreed definitions and industry standards applicable at the time of drafting. It is important to note that specific systems are not specified in either the requirements or AMC, the intent of the requirement being for TAAs and Design Organisations to consider all elements of the platform performance and it's environment in order to provide the level of functionality defined, using appropriate systems selected or developed for that purpose.

The new text will be clearly identifiable within Annex A.

SUMMARY OF PROPOSED AMENDMENT

Change: *See Annex A*

Impact Assessment:

Objective: The requirement for Airborne Collision Avoidance Systems (ACAS) to mitigate the Mid-Air Collision (MAC) risk.

Risk Assessment: The impact of not incorporating the recommended changes is the possibility of misinterpretation of the requirement

Courses of Action.

1. ***Do nothing.*** Maintain existing requirements which only affect Transport aircraft.

2. ***Partial Amendment*** No option proposed.

3. ***Full Amendment.*** The selection of specific ACAS systems to military aircraft should be considered on a platform by platform basis, and this requirement when incorporated into Def Stan 00-970 will take account of this; the Duty Holder chain will be called upon to demonstrate that the chosen system provides demonstrable benefits to reduce the MAC risk.

Preferred Course of Action. Full Amendment

Costs and Benefits:

1. ***Do nothing: MAA could not support such inaction. Not recommended***

2. ***Partial Amendment: Not recommended.***

3. ***Full Amendment:*** **As a result of the MAA identification of mid-air collision (MAC) as a strategic Air Safety risk full amendment is the recommended action.**

Consultation period ends: 15/APR/2016

The consultation period for this proposed amendment ends on the stated date. Please send your feedback via email to DSA-MAA-Cert-ADSGroup@mod.uk.

Part 2 (for MAA internal use)

Log of Comments (to be completed once the consultation period has ended).

Comment reference	Date	From (name)	Post	Précis or Topic of Comment	MAA Response
None					

Recap of Proposal: *Changes as per Annex A no comments have been received.*

Recommendation. *That the Head of Certifictaion approve this NPA to go forward for incorporation into Def Stan 00-970.*

Approval. That part 13 is amended as per annex A as approved by Head of Certification at the next scheduled up-issue of def Stan 00-970.

Accepted changes will be authorised at the following levels:

- Changes requiring retrospective mandation: 2 * Director Technical
- Changes not requiring retrospective mandating, but introduce novel or contentious requirements or resulting in major changes to requirements: 2 * Director Technical
- Changes not requiring retrospective mandating but having a significant engineering impact: 1* Head of Reg & Cert
- Changes not requiring retrospective mandating but having a Minor engineering impact: OF4/B2 Head of ADS
- Changes deemed as administrational only: OF3/C1.

Approved by:

Signature:	[redacted]
Name:	[redacted]
Rank/Grade:	Cdre
Post:	Head of Reg/Cert
Date signed:	18 July 2016
Date for amendment to be incorporated:	19 Sep 2016

Part 3 - NOTIFICATION OF AUTHORIZED AMENDMENT (Def Stan 00-970 NAA)

Document Part:	*13*	Sub-Part:	***1.1.9***

Unsatisfactory Report Reference:	*N/A*	NPA Reference:	***2015-006***

Originator:	[redacted]	Date:	***03 May 2106***

Amendment to be Incorporated on	**19 Sep 2016**

APPROVAL

This Def Stan 00-970 NAA has been approved by the Head of Reg/Cert on behalf of Director MAA

INCORPORATION

The amendment will be incorporated in issue 17

[redacted]

Signed (IAW part 2).

For D MAA

Annex A

Current Text

Requirement	Compliance	Guidance
A – Fixed Wing		
1.1.9 For Military Transport Type Aircraft Refer to IR OPS CAT.IDE.A.155		
B – Rotorcraft		
1.1.9 N/A to Rotorcraft at this time.		

New Text

Requirement	Compliance	Guidance
1.1.9. AIRBORNE COLLISION AVOIDANCE SYSTEM		
1.1.9.1 All crewed aircraft types shall be fitted with an Airborne Collision Avoidance System (ACAS).	An assessment should be carried out to determine the most appropriate system for the intended role, usage and operating environment of the aircraft type. The selected system should provide: a) Awareness to the crew of traffic in the vicinity of the aircraft which may contribute to the risk of Mid-Air Collision. b) Traffic Advisory – An indication given to the flight crew that a certain intruder aircraft is a potential collision threat. c) Resolution Advisories – An indication given to the flight crew recommending a manoeuvre or a manoeuvre restriction to avoid collision with an intruder aircraft.	This requirement has been developed to provide a technical aid to the management of the Mid-Air Collision (MAC) risk. Issues which are to be considered when assessing the system to be selected should include: a) The operational and performance characteristics of the platform. b) The types of airspace in which the aircraft is expected to operate. c) The likely systems which other aircraft may use as a result of airspace control mandates. Information sources and specifications for ACAS are: a) TCAS II: 1. EASA AMC 20-15 Airworthiness Certification Considerations for the Airborne Collision Avoidance System (ACAS II) with

		optional Hybrid Surveillance, or 2. FAA AC 20-151 – Airworthiness Approval of Traffic Collision Avoidance Systems (TCAS II) Version 7.0 and 7.1 and associated mode S Transponders. b) These may be supported by European Technical Standards Orders or FAA Technical Standards Orders as follows: 1. For TAS – E/TSO C–147 - Traffic Advisory System (TAS) Airborne Equipment. 2. For TCAS I – E/TSO C-118 - Traffic Alert And Collision Avoidance System Airborne Equipment, TCAS I. 3. For TCAS II – E/TSO C-119 - Traffic Alert And Collision Avoidance System Airborne Equipment, TCAS II With Hybrid. Note: Use of equipment that complies with E/TSO on its own may not meet the functional requirement. Appropriate Design Organisation advice should be sought to ensure that installed performance achieves the requirements. Additional definitions and guidance is available in ICAO Aircraft Collision Avoidance System (ACAS) Manual, ICAO –SARPs-9863.