DEFENCE AVIATION SAFETY AUTHORITY

APPROVAL CERTIFICATE

AUS.DASA.M.0001

Pursuant to Defence Aviation Safety Regulation M and subject to the conditions specified below, the Authority hereby certifies

FORCES COMMAND

Building MD001, Gallipoli Barracks
Lloyd St, Enoggera
QLD 4051

DARN0-000070

as a CONTINUING AIRWORTHINESS MANAGEMENT ORGANISATION

In compliance with Section A, Subpart G of DASRM, approved to manage the continuing airworthiness of the aircraft listed in the attached schedule of approval and may, when authorised, develop and control the Aircraft Maintenance Program as specified in DASRM-M.A.700(02) and, when stipulated, issue Military Airworthiness Review Certificates as specified in DASRM-M.A.710.

CONDITIONS

1. This approval is limited to that specified in the scope of approval section of the approved Continuing Airworthiness Management Exposition as referred to in Section A, Subpart G of DASRM.
2. This approval requires compliance with the procedures specified in the Continuing Airworthiness Management Exposition.
3. This approval is valid whilst the Continuing Airworthiness Management Organisation remains in compliance with DASRM.
4. Where the Continuing Airworthiness Management Organisation contracts or tasks under its Quality System the service of another organisation(s), this approval remains valid subject to such organisation(s) fulfilling applicable contractual obligations.
5. Subject to compliance with the conditions 1 to 4, this approval shall remain valid for an unlimited duration unless the approval has been surrendered, suspended, revoked or revoked.

For and on behalf of the Defence Aviation Safety Authority.

Date of issue: 30/09/2016
issue number 1

JD Hood
Air Commodore
FORCOMD CAMO

LTCOL Heath Smith
Deputy CAM

17 November 2016
Scope

• FORCOMD CAMO (phase 1)

• phase 1 transition journey
  – victories, issues, frustrations

• phase 2 transition plan

• lessons identified
FORCOMD CAMO

Email
CAMO.HQFORCOMD@defence.gov.au

Role – Aviation Branch

- Principal support organisation for COMD FORCOMD in his role as the Army Military Air Operator Accountable Manager

- Responsibilities include:
  - Airworthiness
  - Safe air operations
  - capability management of existing aviation and support systems
  - Acceptance into Operational Service of aviation and support systems being acquired on behalf of Army
  - specialist aviation support (including aviation medicine and psychology)
  - Training Requirement Advisor for AAAvn and related RAEME employment categories
  - control in-year expenditure of each individual Army Aviation Product Schedule’s allocated budget
  - provide capability advice to AHQ on Army Aviation sustainment funding
Aviation Branch

- COMD FORCOMD
  - MAJGEN P Gilmore
  - Military Air Operator – Accountable Manager

- DG Aviation
  - BRIG G Lawler
  - Military Air Operator – Representative
  - Continuing Airworthiness Management Organisation
    - Accountable Manager
DASR 145 ORGANISATIONS

**AIRBUS AMO**
1. Maint Planning
2. Maint of aircraft by aircrew
3. Maint of product, parts and appliances
4. Ensuring compliance with pre and post-flight inspections
5. Coordinate schedules maint
6. Certificate of release to service
7. Management of defects
8. Incorporation of mods and repairs
9. Replacement of life limited parts
10. Maint check flights
11. Error capturing methods
12. Aircraft Continuing Airworthiness Records System
13. Occurrence reporting
14. Airworthiness reviews

**16 BDE AMO**

**BDA AMO**

**808 AMO**

DASR M Tasks

**FORCOMD AIR OPERATOR**

**CAMO Quality System**

**FORCOMD CAMO**

**DASR 21J ORGANISATIONS**

**DASR 21J Requests**

**DASR 21J Artefacts**

**CAM SERVICES ORGANISATIONS**

**AIRBUS GP AP**

**AASB**

**TTMU**

DASR M Tasks

1. Fleet Planning
2. Identification of pre and post-flight inspection requirements
3. Ensuring compliance with AD
4. Manage DASR 21J approvals of modifications and repairs
5. Operational and emergency equipment
6. Development of Aircraft Maintenance Program (AMP)
7. Ensuring effectiveness of the AMP
NMAA audits the design organisations

NMAA audits the maint functions of the Pt 145 organisation

Pt 145 Maint Services
16 BDE UNITS
DASR M Tasks

Pt 145 Maint Services
BDA
DASR M Tasks

Pt 145 Maint Services
AIRBUS GROUP AP
DASR M Tasks

DGTA audits CAMO to ensure compliance with DASR

NMAA audits the maint functions of the Pt 145 organisation

CAMO audits Pt M tasks contracted to the Pt 145 org for conformance with the CAME

DGTA audits CAMO to ensure compliance with DASR

HQ FORCOMD
CAMO

CAMO audits Pt M tasks contracted to the CAM Service Provider for conformance with the CAME

Pt M Services
AASB CAM Services Organisation

Pt M Services
Airbus Group AP CAM Services Organisation

Pt M Services
TTMU CAM Services Organisation

DASR 21J Functions
TLMU/LHMU/CHMU

MTCH Functions
TTMU

DASR 21J Functions
AIRBUS GROUP AP

Airbus Group AP CAM Services Organisation

TTMU CAM Services Organisation

AASB CAM Services Organisation

Pt M Services

Pt M Services

Pt M Services

Pt M Services
NMAA audits the design functions of the DASR 21J Org

NMAA audits the main functions of the DASR and TAREG Org

CAMO audits DASRM Tasks conducted by DASR 145/TAREG Org

NMAA audits the CAMO for DASR M Compliance

CAMO audits DASRM Tasks conducted by CAM Services Org
Phase 1 transition journey
Who wants change?

Who wants to change?

Who wants to lead the change?
9-11 Feb: **Initial DASR Transition Workshop**

11 Feb: Part M Cross Reference Matrix Complete

31 Mar: First Draft CAME to DGTA

29 Apr: DGTA feedback returned

03 Jun: Second Draft CAME to DGTA (including CAM-SPs)

Jun: Visits / liaison

22 Jul: First DASR M Readiness Review

29 Jul: Third Draft CAME to DGTA

12 Aug: CAM-SPs finalised

19 Aug: Second DASR M Readiness Review

Sep: Ph 1 transition approval / awareness briefings

01 Oct: **Phase 1 transition**

6 Shortfalls

4 Observations
Victories

• approved, operating

• excellent cooperation between stakeholders
  – DGTA, CASG, 16 Bde, AAvnTC, industry partners

• strength of relationships

• complex operator supported efficiently

• opportunities for enhanced procedural efficiency already apparent

• first CAMO audit complete, second CAMO audit in progress
<table>
<thead>
<tr>
<th>DASR M Requirement</th>
<th>CAME Ref</th>
<th>Auditor</th>
<th>Comments</th>
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Frustrations

- whole of Defence approach
- integration with safe air operations
- collaboration between FEGs
- development of DASR in conjunction with development of means of compliance
  - NPA ‘surprises’
Issues

• CAMO resources
  – oversight, auditing, sustainment

• RP

• AwR

• handling of ‘unexpected arisings / unairworthy conditions’
Unexpected arisings since 01 Oct

- Black Hawk crack(s) --- outside basis of TC
  - MPtF with MAO approved flight conditions

- Chinook cracks(s) --- inside basis of TC

- Tiger TAAI-AS for incorrect assembly of self sealing couplings of fwd MFT

- Taipan TAAI-AS (AD?) for hot refuelling incident
Phase 2 transition plan
Issues

• CAMO resources
  – oversight, auditing, sustainment

• RP

• AwR

• handling of ‘unexpected arisings / unairworthy conditions’
Plan for a plan

• LOGBR-AF phase 2 implementation WG - 09 November

• DCAM to develop in December 16

• Timeline manageable, but stressed by:
  – AwR
  – RP
  – CAMO resources
  – Unexpected arisings / unairworthy conditions
Lessons Identified

• accelerated timeline created risk challenge
• whole of Defence approach
• sequencing of reg development and means of compliance
• integration of ex-tech with ex-OPAW effort
• transition resources
Thanks to DGTA for

NOTHING
Thanks to DGTA for

- training
- engagement
- assistance
- patience
Questions
Who wants change?

Who wants to change?

Who wants to lead the change?
Additional Change
COMD FORCOMD (MAO)

MAJOR GENERAL P.W. GILMORE

MAJGEN F.A. McLachlan
DG AVN (MAO-R / CAMO AM)

BRIG Greg LAWLER

BRIG Scott Benbow
COMD 16 BDE

BRIG Michael Prictor

BRIG Stephen Jobson
• OC1 – Deployable Tp (1st Sqn - Land, Permissive) – Apr 10 (with caveats)
• OC2 – Deployable Sqn (1st Sqn - Land, Non-permissive) – Jul 13 (with caveats)
• OC3 – Deployable Tp (2nd Sqn - Land, Non-Permissive) – Dec 14 (with caveats)
• FOC – Full Operational Capability (Land) – Mar 16
Troop Lift – MRH90 Taipan

ISD Dec 07

Current

**OCA1** Dec-14 1 Tp, HADR/NEO, Land and Embarked, day, night (NVD).
**OCM1** Feb-15 1 Embarked Flight, limited daytime operations.
**OCM2** TBA 2 Embarked Flights, MSH operations, day, night (NVD).
**OCM3** TBA 3 Embarked Flights, MSH operations, day, night (NVD).
**OCL1** Sep-15 1 Tp, AMO, land-based, day, night (NVD).
**OCL2** Feb-16 1 Sqn, AMO, land-based, day, night (NVD).
**OCM1** TBA 1 Embarked Flight, limited daytime operations.
**OCL2** TBA 1 Sqn, Amphibious Ready Group (ARG) operations from LHD.
**OCA2** Dec-15 1 Tp, limited amphibious operations from LHD.
HA, DR and NEO (permissive). Day and night (NVD).
**OCA3** Dec-15 1 Tp, Amphibious Ready Element (ARE) operations from LHD.
HA, DR and NEO. Day and night (NVD).
**OCA4** TBA 1 Sqn, Amphibious Ready Group (ARG) operations from LHD.
**OCL3** Nov-16 2 Sqns, AMO, land-based, day and night (NVD).
**OCS1** Jul-20 1 Tp, Special Operations, land and embarked, day, night (NVD)
**OCS2** Jul-21 1 Sqn, Special Operations, land and embarked, day, night (NVD).
Medium Lift – CH-47F Chinook

**Original**
- TFPS 1
- TFPS 2
- IOC
- OC2
- FOC

**Current**
- TFPS 1
- TFPS 2
- IOC
- FOC
- FOCFT

Key:
- ISD – Mar 15
- IOC – Tp, Low Threat, Land
- OC2 – Tp, High Threat, Land (PWD CH-47D)
- FOC – Sqn, High Threat, Land / Amphib
Special Operations

• S70A-9 Black Hawk
  – SO aviation capability
  – replaced by MRH90
  – robust sustainment system
  – PWD extension
• Amphibious Aviation Capability Realisation Plan
  – Taipan, Tiger and Chinook
  – The focus of 2016/17 is supporting ship integration requirements
  – ARG Certification (TS 17) requires Taipan, Tiger and Chinook to operate concurrently from 2 x LHDs and the LSD
AVN BR RE-STRUCTURE

• DG AVN(+) to Canberra

• Two ‘Aviation Programs’ in line with new Army capability management model (DACM)

• Establishment of the CAMO
Mmaintenance Reform

Output increased through:
- Workforce Technical Output
- Grey Auth/WEETS/Multi Type
- SCT/SST/IMI
- Other initiatives...

To enable the workforce to meet the required output, the Actual output needs to increase and the maintenance required need to decrease.

280,000 hrs 2012 capacity

Military Workforce

What inhibits maintenance?
- Mil Trg
- Logistics
- Assurance
- Engineering
- Delays
- Other

400,000 hrs Maintenance Burden

Maintenance Policy ARH/MRH
Health Report

IETP/IETM/STE/Supply Chain

Other initiatives...

ROE
- 1,700 AFHRs
  @ (18 MMhr/AFhrs)
- 4,000 AFHRs
  @ (12 Mhr/AFhrs)
- 5,900 AFHRs
  @ (35 MMhr/AFhrs)
- 4,400 AFHRs
  @ (35 MMhr/AFhrs)

Other
Pelican commenced due to continual requests for more maintainers, which CA could not afford

Pelican seeks to achieve a sustainable operational capability utilising extant resources.

Plan Pelican originated in 2008, after strategic reviews found Army Aviation maintenance had unsustainable growth in support of new capabilities.

Baseline Analysis in 2012 confirmed that future requirements were not sustainable if 2012 status was applied.

A Program of 26 projects sought to develop solutions to achieve balance between asset and demand.

200+ implementation actions will transition from 2012 situation to a sustainable future state.