

GALAXY AEROSPACE (M) SDN. BHD

Suite 11-14, MRO Centre, Malaysian International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200, Subang, Selangor Darul Ehsan, Malaysia Tel: +603-77347226 Fax: +603-77347526

WORKSHOP CAPABILITY PROCEDURE

GAM/WCP

ISSUE 1 Amendment 07

This document must be read in conjunction with GAM Workshop Management Procedure GAM/WMP latest amendment

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WORKSHOP CAPABILITY PROCEDURE		
Issue No. 1		
Amendment No. 07		

PART 0.1 Authorisation

The Workshop Capability Procedure; document no. **GAM/WCP ISSUE 1 Amendment 07** is hereby approved by the Engineering Manager and accepted by QAM.

The Engineering Manager is responsible to ensure that the policies, procedures and instruction contained in this manual are adhered to by all persons employed in the Engineering Department in the execution of their duties.

PREPARED BY	APPROVED BY	ACCEPTED BY
- Jai	SH	Sut "
HAMIDAH BINTI HAMA Workshop In-Charge	SYAFRUL YAMANI BIN SAFRUDDIN Engineering Manager	OMAR BIN AHMAD Quality Assurance Manager
Date: 18 April 2022	Date: 18 April 2022	Date: 18 April 2022

DOCUMENT REFERENCE:	GAM/WCP	DATE:	18 April 2022
AMENDMENT:	07	PAGE:	Part 0.2 1 of 1



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Issue No.	1	
Amendment No. 07		

PART 0.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

AMEND. DATE	ISSUE NO	AMEND. NO	DETAILS OF AMENDMENT	
14 April 2020	1	Initial	Initial issue of GAM Workshop Capability Procedure (WCP)	
12 October 2020	1	01	Inclusion of Part 2.1.11 KANNAD ELT Series.	
15 January 2021	1	02	Inclusion of SAFT battery part number 2758.	
16 February 2021	1	03	Inclusion of AW139 Aerosekur float part number.	
1 March 2021	1	04	Inclusion of additional Concorde battery.	
15 September 2021	1	05	Changes from DCAM to CAAM and AN29A to CAD 8708	
21 October 2021	1	06	WCP 2.1.11 – Kannad ELT Series (Amendment 02).	
18 April 2022	1	07	Inclusion of AW139 and AW189 Life Raft.	

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PART 0.3 DISTRIBUTION LIST

Copy Number	Holder	Format
01	Quality Assurance Manager	Hard Copy (Master Copy)
02	Accountable Manager, O2 Engineering Manager and GAM Personnel Soft Copy (GAMS Personnel)	
03	Workshop	Hard Copy

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PART 1 WORKSHOP CAPABILITY

1.1 Workshop Capability List

PART 2 WORKSHOP CAPABILITY PROCEDURE

2.1 Workshop Capability Procedure

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PART 2				
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PREPARED BY	APPROVED BY	ACCEPTED BY
- Jai	SH	Smt."
HAMIDAH BINTI HAMA Workshop In-Charge	SYAFRUL YAMANI BIN SAFRUDDIN Engineering Manager	OMAR BIN AHMAD Quality Assurance Manager
Date: 18 April 2022	Date: 18 April 2022	Date: 18 April 2022

DOCUMENT REFERENCE:	GAM/WCP	DATE:	18 April 2021
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PART 0.6 ADMINISTRATION AND CONTROL

For means of administration and control of this document, refer WMP Part 0.8.

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PART 1.1 WORKSHOP CAPABILITY LIST

Refer to the latest revision of GAM Workshop Capability List (GAM/CAAM/WCL)

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PART 2.1 Workshop Capability Procedure

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2.1.1	ARTEX Aviation ELT Series	01	AVIONICS
2.1.2	SAFT Aircraft Battery Ni-Cad Series	02	AVIONICS
2.1.3	MarathonNorco Aircraft Battery Ni-Cad Series	01	AVIONICS
2.1.4	Concorde Aircraft Battery Lead-Acid Series	02	AVIONICS
2.1.5	Aerosekur Float Series	01	SAFETY EQUIPMENT
2.1.6	RESERVED		
2.1.7	RESERVED		
2.1.8	RESERVED		
2.1.9	RESERVED		
2.1.10	Gill Aircraft Battery Lead-Acid Series	01	AVIONICS
2.1.11	KANNAD ELT Series	02	AVIONICS
2.1.12	Inflatable Life Raft In-Type F11R & F14R Valise	INITIAL	SAFETY EQUIPMENT

DOCUMENT REFERENCE:	GAM/WCP	DATE:	18 April 2022
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WORKSHOP CAPABILITY PROCEDURE FOR ARTEX AVIATION ELT SERIES

GAM/WCP/PART 2.1.1

AMENDMENT - 01

OWNER:

GALAXY AEROSPACE SDN. BHD

CAAM AMO/2016/02

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	16/07/2021
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PART 1.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

Date of Amendment	Amdt. No.	Details of Amendment
03/03/2020	Initial	Initial issue of GAM/WCP/PART 2.1.1
16/07/2021	01	Changes from DCAM to CAAM and AN29A to CAD 8708. Part 1.11.4 Scope Group a.II - Category C6 change to W2.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	16/07/2021
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PART 1.3 LIST OF EFFECTIVE PAGES

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1.11	1	01	16/07/2021				
1.12	1	Initial	03/03/2020				
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PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its' ARTEX Emergency Locator Transmitter (ELT) servicing workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with ARTEX Emergency Locator Transmitter (ELT). The offer includes battery replacement and re-programming.
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. MCAR 2016.
- b. CAAM Civil Aviation Directives CAD 8708.
- c. GAM Maintenance Organisation Exposition GAM/MOE.
- d. GAM Workshop Procedure Manual GAM/WMP.
- e. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-03.
- f. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-10.
- g. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-11.
- h. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-1.
- i. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-21.
- j. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-30.
- k. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-31.
- I. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-33.
- m. ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-36.
- n. ARTEX A3-06-2824 Handheld Programmer Operations Manual Y1-03-0272.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	16/07/2021
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PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/19/0018	Y	Initial	20/03/2019
02	GAM/MOC/21/0027	Y	01	16/07/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	16/07/2021
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PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

a. This section details the GAM capability to perform servicing to the ARTEX Emergency Locator Transmitter (ELT)

1.7.2 Scope of Capability

- a. Service for workshop capability to be carried out by GAM for ARTEX Emergency Locator Transmitter (ELT) are as per follows:
 - i. Battery Replacement
 - ii. Re-programming ELT
 - iii. Re-programming Programming Adapter (PA)
- b. Repair for failures found during self-test, programming or battery replacement, the ELT must be repaired by the manufacturer or by an approved repair centre (list on ARTEX Emergency Locator Transmitter website).

1.7.3 Model of Component under Workshop Capability

Components	Model/ Series	Part Number
	B406-4	453-5004
	C406 Series	453-5000, 453-5001, 453-5002, 453-5003, 453-5060, 453-5061
Emergency Locator Transmitter (ELT)	G406-4	453-5012
(Battery Replacement)	ME406 Series	453-6603, 453-6604, 453-6611
	ELT1000	A3-06-2749-1
	ELT 3000 Series	A3-06-2796-8, A3-06-2796-9
	B406 Series	453-0003, 453-0004, 453-0005, 453-5004
	C406 Series	453-5000, 453-5001, 453-5002, 453-5003, 453-5006, 453-5056, 453-5060, 453-5061
Emergency Locator Transmitter (ELT)*	G406 Series	453-5100, 453-5102
(Programming)	110-406 Series	453-0006, 453-0406 453-0407, 453-0421 453-0423, 453-0424
	ME406 Series	453-6603, 453-6604 453-6611, 453-6650
	ELT1000	A3-06-2749-1

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	03/03/2020
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Components	Model/ Series	Part Number
	ELT 345	A3-06-2880
	ELT 3000 Series	A3-06-2796-8, A3-06-2796-9
Programming	C406-N Programming Adaptor	453-5068 (Blank), 453-5078 (Pre- Programmed)
Adaptor (PA) (Programming)	ELT 3000 Programming Adaptor	A3-06-2868 (Pre- Programmed), A3-06-2869 (Blank)

^{*}All ELT's stated is listed under document number Y1-03-0272, "A3-06-2824 Handheld Programmer Operations Manual" latest revision; Table 1: ELT Data.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	03/03/2020
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PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

Model/Series	Manuals
B406-4	ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-03 of the latest revision.
C406 Series	 P/N: 453-5002, 453-5003 ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62- 10 of the latest revision P/N: 453-5000, 453-5001 ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62- 11 of the latest revision P/N: 453-5060, 453-5061 ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62- 13 of the latest revision
G406-4	ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-21 of the latest revision
ME406 Series	 P/N: 453-6603, 453-6604 ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62- 30 of the latest revision P/N: 453-6611 ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62- 31 of the latest revision
ELT1000	ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-33 of the latest revision.
ELT 3000 Series	ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-36 of the latest revision.
Programming ELT's listed under A3-06-2824 (TPS 8700) Handheld Programmer Operations Manual; Table 1: ELT Data.	ARTEX A3-06-2824 Handheld Programmer Operations Manual Y1-03-0272 of the latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	03/03/2020
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C406-N Programming Adaptor	ARTEX Emergency Locator Transmitter Description, Operation, Installation and Maintenance Manual 25-62-13 of the latest revision
ELT 3000 Programming Adaptor	Description, Operation, Installation and Maintenance Manual Y1-03-0269 of the latest revision

Note: These documents are available for download on the ARTEX ELT website.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.1	DATE:	03/03/2020
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PART 1.9 EQUIPMENT AND TOOL REQUIREMENT

1.9.1 List of Equipment and Tool Requirement

		USA	AGE
		D N	L Z
DESIGNATION	CHARACTERISTIC	PROGRAMMING	BATTERY REPLACEMENT
Programming Equipment	ARTEX 8700 Handheld Programmer with Programming kits supplied by ARTEX to Authorised Programmer	Х	
Laptop OR PC with minimum of Windows XP minimum and Internet connection.	Commercially available	Χ	Х
Corpas-Sarsat 121.5Mhz and 406Mhz Decoder	ARTEX 8700 Handheld programmer with Sarcalc Tester program OR equivalent.	Х	х
Standard Mechanic's Tools	Commercially available		Х
Torque Screwdriver	Commercially available		Х
Label Maker	Commercially available	Х	
Digital Multimeter (Capable to measure Voltage and Current)	Commercially available		Х

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PART 1.10 APPROVED FACILITY

1.10.1 Minimum Requirement of Facility

1.10.1.1 ARTEX ELT

ARTEX ELT			
Type of Maintenance	Requirements		
Battery Replacement and Programming	No special requirements except for the environment should be at the temperature of between 15°C and 35°C.		

1.10.2 Approved Facility for the Maintenance

- a. Avionics Workshop consists of Avionics Room, Lead Acid Battery Room and Ni-Cad Battery Room. GAM has identified Avionics Room under Avionics Workshop at the Galaxy Aerospace (M) Sdn Bhd headquarters (GAM HQ) as the Specific Approved Facility for all maintenance activities of ARTEX Emergency Locator Transmitter (ELT).
- b. Avionics Room is equipped with sufficient lighting, air conditioned, workbench, workstation and a laptop computer, internet connection, fire extinguisher, fire escape plan, ESDS workstation, INCOMING, HOLDING, OUTGOING and QUARANTINE area, equipment storage cabinet and racks for manuals.
- c. As there are no special requirements called for by the OEM except for minor requirements on testing and assembly types of maintenance, it has been decided that any maintenance facility that can meet with the requirements are considered suitable for carrying out the maintenance work on the ELTs.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

1.10.2.1 ARTEX ELT All Series and Programming Adapter

Type of Maintenance	Requirements		
Battery Replacement and Programming	 a. Specific Approved Facility at GAM HQ. Avionics Room Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1, 1.10.2 (c) and approved by CAAM 		

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1.10.3 Approved Facility – ARTEX ELT Workshop (Avionics Room), GAM HQ



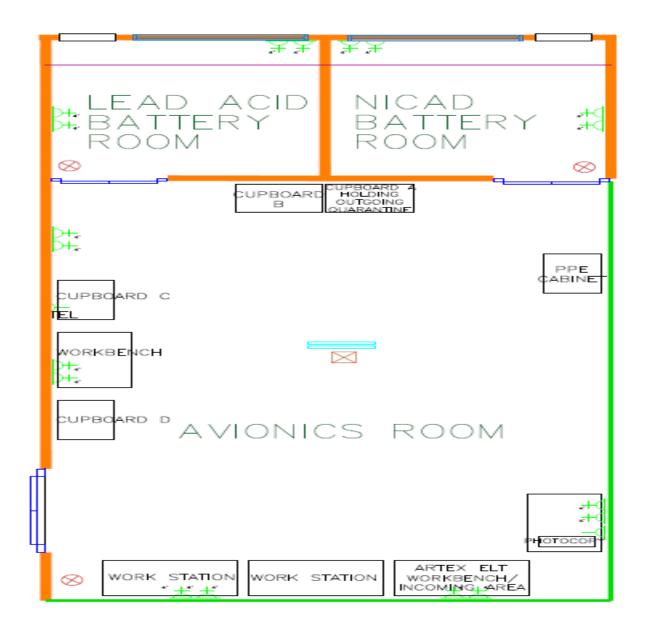
REFERENCE



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1.10.3.1 Approved Facility – ARTEX ELT Workshop (Avionics Room), GAM HQ





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PART 1.11 CERTIFYING PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B2 Company Approval Holder on type.
- b. For a Company Approval Holder on Category C; Component C6 on ARTEX ELTs and ARTEX Programming Adapter.

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C6 on ARTEX ELTs and ARTEX Programming Adapter are listed in as per table below.

Scope Group	Approval Holders
a.I	B2 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.ll	B2 and W2 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

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PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. Specific training is required by ARTEX for Certifying Personnel to perform the maintenance.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

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PART 1.13 SAMPLE WORKSHEET

1. ARTEX ELT B/C/G 406 Series Battery Pack Replacement

Refer attachment I

2. ARTEX ELT 1000 Battery Pack Replacement

Refer attachment II

3. ARTEX ELT 3000 Battery Pack Replacement

Refer attachment III

4. ARTEX ELT ME406 Series Battery Pack Replacement

Refer attachment IV

5. ARTEX ELT & PA Programming

Refer attachment V

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ATTACHMENT I

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ATTACHMENT IV

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ATTACHMENT V

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WORKSHOP CAPABILITY PROCEDURE FOR SAFT AIRCRAFT BATTERY NI-CAD SERIES

GAM/WCP/PART 2.1.2

AMENDMENT - 02

OWNER:

GALAXY AEROSPACE SDN. BHD

CAAM AMO/2016/02

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.1 1 of 1



PART 1.2 AMENDMENT RECORD

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Date of Amendment	Amdt. No.	Details of Amendment
03/03/2020	Initial	Initial issue of GAM/WCP/PART 2.1.2
15/01/2021	01	Corrections/Changes on Part 1.5.2 Reference - CMM 24-38-51 for new SAFT battery Part Number – 2758 added, Part 1.11.4 Scope Group a.II - Category C5 change to W1, and Part 1.7.3 Model of Component under Workshop Capability - Inclusion of new SAFT battery Part Number – 2758.
19/07/2021	02	Changes from DCAM to CAAM and AN29A to CAD 8708.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	19/07/2021
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PART 1.3 LIST OF EFFECTIVE PAGES

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1.3	1	02	19/07/2021				
1.4	1	Initial	03/03/2020				
1.5	1	02	19/07/2021				
1.6	1	02	19/07/2021				
1.7	1	01	15/01/2021				
1.8	1	01	15/01/2021				
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PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its SAFT Ni-Cad Aircraft Battery workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with SAFT Aircraft Battery Ni-Cad. The offer includes the maintenance of battery for periodical checks, regular checks, general overhaul, disassembly and reassembly, cleaning and testing and repair and replacement.
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. MCAR 2016.
- b. CAAM Civil Aviation Directives CAD 8708.
- c. GAM Maintenance Organization Exposition GAM/MOE.
- d. GAM Workshop Procedure Manual GAM/WMP.
- e. SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-33-96.
- f. SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-39-06.
- g. SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-30-00.
- h. SAFT Operating and Maintenance Manual for Ni-Cd Aircraft Batteries OMM 24-30-99.
- i. SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-38-51.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.5 1 of 1



PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/19/0020	Y	Initial	20/03/2019
02	GAM/MOC/21/0004	Y	01	15/01/2021
03	GAM/MOC/21/0028	Y	02	19/07/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.6 1 of 1



PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

a. This section details the GAM capability to perform maintenance checks and service to the specified SAFT Aircraft Battery Ni-Cad Series

1.7.2 Scope of Capability

- a. Maintenance for workshop capability to be carried out by GAM for SAFT Aircraft Battery Ni-Cad Series are as per follows:
 - i. Periodical Check
 - ii. Regular Check
 - iii. General Overhaul
 - iv. Cleaning and Testing
 - v. Disassembly and Reassembly
 - vi. Repair & Replacement

1.7.3 Model of Component under Workshop Capability

Components	Model/ Series	Part Number
		151CH1
		151CH2
		1606-1
		1656-1
Nickel-Cadmium		1756
Aircraft Battery		2758
		2778-1
		4071-1
		4071-2
		40208-2

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	15/01/2021
AMENDMENT:	01	PAGE:	Part 1.7 1 of 1



PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

Part Number	Manuals			
151CH1	SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-33-96 Latest Revision.			
1606-1	SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-39-06 Latest Revision.			
2758	SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-38-51 Latest Revision.			
2778-1	SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-30-00 Latest Revision.			
151CH2, 1656-1, 1756, 4071-1, 4071-2 and 40208-2	SAFT Operating and Maintenance Manual for Ni-Cd Aircraft Batteries OMM 24-30-99 Latest Revision.			

Note: Login to https://mysaft.saftbatteries.com/ for the latest revision of SAFT Aircraft Battery CMM, IPL and Service Bulletins / Letters.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	15/01/2021
AMENDMENT:	01	PAGE:	Part 1.8 1 of 1



PART 1.9 EQUIPMENT AND TOOL REQUIREMENT

1.9.1 List of Equipment and Tool Requirement

		U	JSAGE	
DESIGNATION	CHARACTERISTIC	PERIODICAL CHECK	REGULAR CHECK	GENERAL OVERHAUL
Battery Charger and Discharger	Constant Current Charging Range 0 – 25 ADC Constant Current Load Bank Range 0 – 50 ADC	x	x	x
Servicing Kits	SAFT Battery Tool Kit P/N: 416161 and 416160	x	X	x
Digital Insulation Multimeter (Capable to measure Voltage and Current)	Commercially available	х	х	х
Standard Mechanic's Tools	Commercially available	X	X	X
Infrared Thermometer	Commercially available		Х	Х
Torque Wrench	Commercially available	Х	Х	Х
Stiff Bristle Brush (non-metallic)	Commercially available	Х	Х	Х
Heat Gun	Commercially available			X

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.9 1 of 1



PART 1.10 APPROVED FACILITY

1.10.1 Minimum Requirement of Facility

1.10.1.1 Ni-Cad Battery Workshop

Battery				
Type of Maintenance Requirements				
Charging and Discharge Testing	No special requirements except for the environment should be well-ventilated at the temperature of between +15°C and +30°C and relative humidity < 85%			
Disassembly and Reassembly	No special requirements except for the area should be clean and free from dust.			

1.10.2 Approved Facility for the Maintenance

- a. Avionics Workshop consists of Avionics Room, Lead Acid Battery Room and Ni-Cad Battery Room. GAM has identified Ni-Cad Battery Room under Avionics Workshop at the Galaxy Aerospace (M) Sdn Bhd headquarters (GAM HQ) as the Specific Approved Facility for all maintenance activities of SAFT Aircraft Battery Ni-Cad Series
- b. Ni-Cad Battery Room is equipped with sufficient lighting, air conditioned, wall mounted ventilation fan, workbench, workstation and a laptop computer, internet connection, fire extinguisher, fire escape plan, INCOMING, HOLDING, OUTGOING and QUARANTINE area.
- c. As there are no special requirements called for by the OEM except for minor requirements on charging and discharge testing and assembly types of maintenance, it has been decided that any maintenance facility that can meet with the two requirements are considered suitable for carrying out the maintenance work on the battery.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

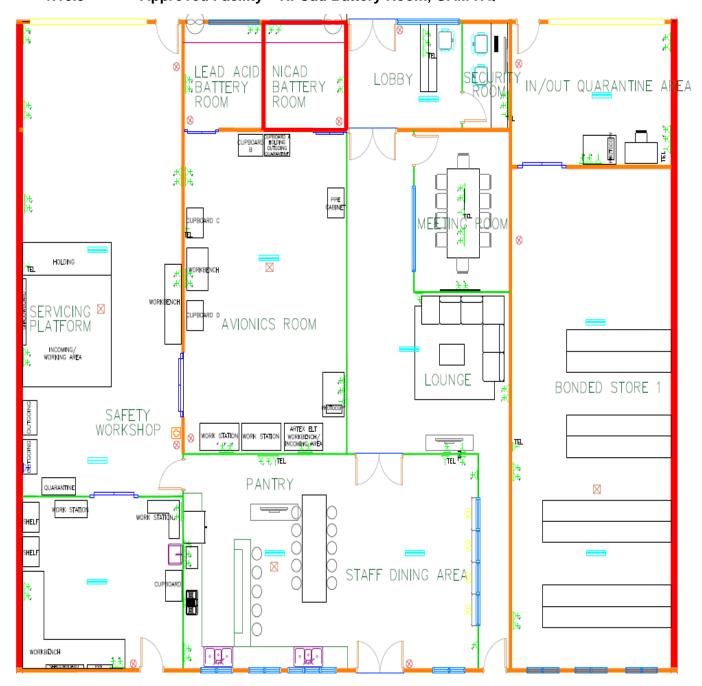
1.10.2.1 SAFT Aircraft Battery Ni-Cad Series

Type of Maintenance	Requirements
Periodical Check, Regular Check, General Overhaul, Cleaning and Testing, Disassembly and Reassembly, Repair and Replacement	 a. Specific Approved Facility at GAM HQ. Ni-Cad Battery Room Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1, 1.10.2 (c) and approved by CAAM

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.10 1 of 3



1.10.3 Approved Facility – Ni-Cad Battery Room, GAM HQ



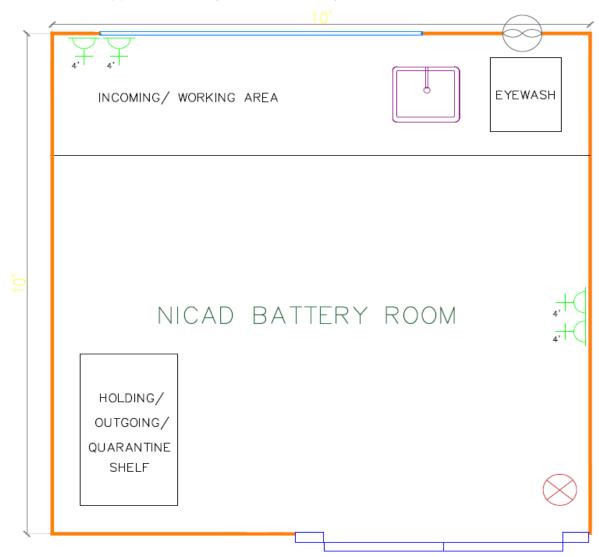
REFERENCE



DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.10 2 of 3



1.10.3.1 Approved Facility – Ni-Cad Battery Room, GAM HQ





DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.10 3 of 3



PART 1.11 CERTIFYING PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B2 Company Approval Holder on type.
- b. For a Company Approval Holder on Category C5; Component C5 on SAFT Aircraft Battery Ni-Cad Series

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C5 on SAFT Aircraft Battery Ni-Cad Series are listed in are table as below.

Scope Group	Approval Holders
a.l	B2 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.II	B2 and W1 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	15/01/2021
AMENDMENT:	01	PAGE:	Part 1.11 1 of 1



PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. No specific training is required by SAFT for Certifying Personnel to perform the maintenance.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.12 1 of 1



PART 1.13 SAMPLE WORKSHEET

1. SAFT Battery Workshop Worksheet

Refer attachment I

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 1 of 2



ATTACHMENT I

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.2	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 2 of 2

WORKSHOP CAPABILITY PROCEDURE FOR MARATHONNORCO AIRCRAFT BATTERY NI-CAD SERIES

GAM/WCP/PART 2.1.3

AMENDMENT - 01

OWNER:

GALAXY AEROSPACE SDN. BHD

CAAM AMO/2016/02

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.1 1 of 1



PART 1.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

Date of Amendment	Amdt. No.	Details of Amendment	
03/03/2020	Initial	Initial issue of GAM/WCP/PART 2.1.3	
		1. Part 1.5.2: Change from DCAM to CAAM and AN29A to CAD 8708.	
15/09/2021	01	 Part 1.7.3: Model of Component under Workshop Capability: Correction on typographical error for battery type BTP-179 to BTSP-179 and CA-9-20-A to CA-9-20A. All battery part number which previously reflect the battery type has been changed accordingly. Removal of battery type: PTSP-440, SP-138, SP-747, TSP-1708L and TM³-44-4. Inclusion of new battery type: CTSP-280-1, TSP-1760L, M³-1760L-1, M³-460L-1, M³-460L-1A and M³-460L-2. Part 1.11.4: Scope Group a.II – Change from category C5 to W1 as per GAM MOE Issue 2, Revision 4. 	

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.1 1 of 1



PART 1.3 LIST OF EFFECTIVE PAGES

Latest Amendment Number: 01 Date: 15/09/2021

Page Ref.	Page No.	Amdt. No.	Dated	Page Ref.	Page No.	Amdt. No.	Dated
1.1	1	01	15/09/2021				
1.2	1	01	15/09/2021				
1.3	1	01	15/09/2021				
1.4	1	Initial	03/03/2020				
1.5	1	01	15/09/2021				
1.6	1	01	15/09/2021				
1.7	1 - 2	01	15/09/2021				
1.8	1	Initial	03/03/2020				
1.9	1	Initial	03/03/2020				
1.10	1 - 3	Initial	03/03/2020				
1.11	1	01	15/09/2021				
1.12	1	Initial	03/03/2020				
1.13	1 - 3	Initial	03/03/2020				
					_		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.1 1 of 1



PART 1.4 TABLE OF CONTENT 1.1 Title Page 1.2 Amendment Record List of Effective Pages 1.3 Table of Contents 1.4 1.5 Introduction Register of Issued MOC 1.6 Description, Scope of Capability and 1.7 1.8 List of Approved Maintenance Data List of Equipment and Tool Requirement 1.9 Approved Facility 1.10 Certifying Personnel 1.11 **Training Requirement** 1.12 1.13 Sample of Workshop Worksheet

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.4 1 of 1



PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its' MarathonNorco Ni-Cad Aircraft Battery workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with MarathonNorco Aircraft Battery Ni-Cad. The offer includes maintenance of battery for charging and inspection, capacity test, reconditioning, cleaning and testing, disassembly and reassembly and repair and replacement.
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. MCAR 2016
- b. CAAM Civil Aviation Directives CAD 8708.
- c. GAM Maintenance Organisation Exposition GAM/MOE.
- d. GAM Workshop Procedure Manual GAM/WMP.
- e. MarathonNorco Operating and Maintenance Manual for Nickel-Cadmium Aircraft Batteries 24-34-00.
- f. MarathonNorco Operating and Component Maintenance Manual for Marathon Micro Maintenance (M³) Nickel-Cadmium Aircraft Batteries 24-34-08.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.5 1 of 1



PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/19/0019	Y	Initial	20/03/2019
02	GAM/MOC/21/0038	Y	01	15/09/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.1 1 of 1



PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

a. This section details the GAM capability to perform maintenance checks and service to the specified MarathonNorco Aircraft Battery Ni-Cad Series.

1.7.2 Scope of Capability

a. Maintenance for workshop capability to be carried out by GAM for MarathonNorco Aircraft Battery are as per follows:

REFERENCE MANUAL

- i. Charging and Inspection
- ii. Capacity Test
- iii. Reconditioning
- iv. Cleaning and Testing
- v. Disassembly and Reassembly
- vi. Repair and Replacement

1.7.3 Model of Component under Workshop Capability

MarathonNorco Operating and Maintenance Manual for Nickel-Cadmium Aircraft Batteries 24-34-00 **Part Number Part Number Battery Type Battery Type** ATCA-21H 29486-001 CA-176 29487-001 ATSP-44 CA-376 30978-002 29490-001 BTCA-5-20 PTSP-400-1 29094-002 31406-002 BTMA-5 CTSP-280-1 31995-002 29360-001 BTMA-5-20 29630-002 SP-170A 30554-01C BTSP-179 31346-001 SP-376 30596-001 BTSP-400 30441-001 SP-900A 30130-001 CA-4 SP-1700 30135-001 18826-003 CA-7 24540-007 STSP-901 31618-001 CA-9 STSP-930 24382-019 30464-001 CA-9-20A TCA-21H-1 28855-001 29300-001 CA-10N 15890-003 TCA-21H-20 29345-001 CA-20H 27990-001 TCA-109L-1 32864-001 CA-20H-20 TCA-1069L 29341-001 33296-001 CA-21H-1 TCA-1742 27515-002 31718-002 CA-91-20 29206-001 TSP-46-1 32669-001 CA-103 27662-021 **TSP-280** 30986-001

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
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Battery Type	Part Number	Battery Type	Part Number
TSP-283	31908-001	TSP-1760L	31918-001
TSP-400WB	31560-001	TSP-1742	31718-001
TSP-414	31921-002	TSP-1749L	33283-001
TSP-442	31714-001	TSP-9117A	31455-001
TSP-900A	30131-001	TSP-9117B	31455-002
TSP-1735	30402-001		

REFERENCE MANUAL					
MarathonNorco Operating and Component Maintenance Manual for Marathon Micro Maintenance (M³) Nickel-Cadmium Aircraft Batteries 24-34-08					
Battery Type Part Number Battery Type Part Number					
M ³ -17-2	32855-001	M ³ -44-25	33275-001		

Battery Type	Part Number	Battery Type	Part Number
M ³ -17-2	32855-001	M ³ -44-25	33275-001
M ³ -1760L-1	31918-003	M ³ -44-27	33204-002
M ³ -25-1 Mod A	33082-001	M ³ X-23-1	32955-002
M ³ -25-1	33082-002	M ³ X-33-2	33181-002
M ³ -28-1	33206-001	M ³ X-33-4	33181-004
M ³ -44-1	32663-001	M ³ -460L-1	31006-004
M ³ -44-7	32824-001	M ³ -460L-1A	31006-006
M ³ -44-15	32890-001	M ³ -460L-2	31006-005
M ³ -44-22	33204-001		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.1 2 of 2



PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

Model	Manuals
Micro Maintenance (M³ Universal) Nickel-Cadmium Aircraft Battery	MarathonNorco Operating and Component Maintenance Manual for Marathon Micro Maintenance (M³) Nickel- Cadmium Aircraft Batteries 24-34-08 Latest Revision.
Nickel-Cadmium Aircraft Battery	MarathonNorco Operating and Maintenance Manual for Nickel-Cadmium Aircraft Batteries 24-34-00 Latest Revision.

Note: Refer to http://www.mnaerospace.com/ for the latest revision of MarathonNorco Aircraft Battery CMM, IPL and Service Bulletins / Letters.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
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PART 1.9 EQUIPMENT AND TOOL REQUIREMENT

1.9.1 List of Equipment and Tool Requirement

		U	JSAGE	
		CHARGING & TESTING	EST	LY / BLY
DESIGNATION	DESIGNATION CHARACTERISTIC		CAPACITY TEST	DISASSEMBLY / REASESSEMBLY
Battery Charger and Discharger	Constant Current Charging Range 0 – 25 ADC Constant Current Load Bank Range 0 – 50 ADC	x	X	x
Servicing Kits	MarathonNorco Maintenance Kit P/N: 33178-001 and 32480-001	x	X	х
Digital Insulation Multimeter (Capable to measure Voltage and Current)	Commercially available	х	X	х
Standard Mechanic's Tools	Commercially available	X	X	X
Infrared Thermometer	Commercially available	Х	Х	Х
Vernier Caliper	Commercially available	Х	Х	Х
Torque Wrench	Commercially available	Х	X	Х
Stiff Bristle Brush (non-metallic)	Commercially available	Х	X	Х
Heat Gun	Commercially available	X		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.9 1 of 1



PART 1.10 APPROVED FACILITY

1.10.1 Minimum Requirement of Facility

1.10.1.1 Ni-Cad Battery Workshop

Battery			
Type of Maintenance Requirements			
Charging and Discharge Testing	No special requirements except for the environment should be well-ventilated at the temperature of between +15°C and +35°C.		
Disassembly and Reassembly	No special requirements except for the area should be clean and free from dust.		

1.10.2 Approved Facility for the Maintenance

- a. Avionics Workshop consists of Avionics Room, Lead Acid Battery Room and Ni-Cad Battery Room. GAM has identified Ni-Cad Battery Room under Avionics Workshop at the Galaxy Aerospace (M) Sdn Bhd headquarters (GAM HQ) as the Specific Approved Facility for all maintenance activities of MarathonNorco Aircraft Battery Ni-Cad Series.
- b. Ni-Cad Battery Room is equipped with sufficient lighting, air conditioned, wall mounted ventilation fan, workbench, workstation and a laptop computer, internet connection, fire extinguisher, fire escape plan, INCOMING, HOLDING, OUTGOING and QUARANTINE area.
- c. As there are no special requirements called for by the OEM except for minor requirements on charging and discharge testing and assembly types of maintenance, it has been decided that any maintenance facility that can meet with the two requirements are considered suitable for carrying out the maintenance work on the battery.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

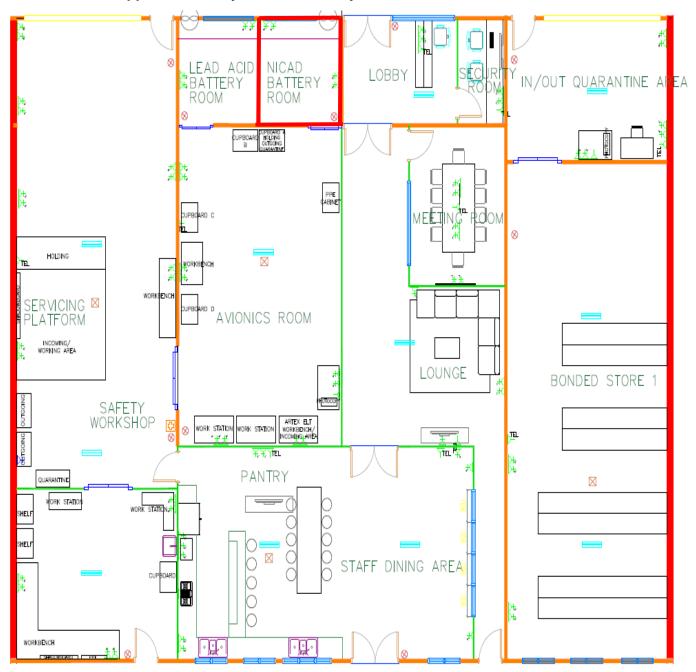
1.10.2.1 MarathonNorco Aircraft Battery Ni-Cad Series

Type of Maintenance	Requirements
Charging and Inspection, Capacity Test, Reconditioning, Cleaning and Testing, Disassembly and Reassembly Repair and Replacement	 a. Specific Approved Facility at GAM HQ. Ni-Cad Battery Room Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1, 1.10.2 (c) and approved by CAAM

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.10 1 of 3



1.10.3 Approved Facility – Ni-Cad Battery Room, GAM HQ

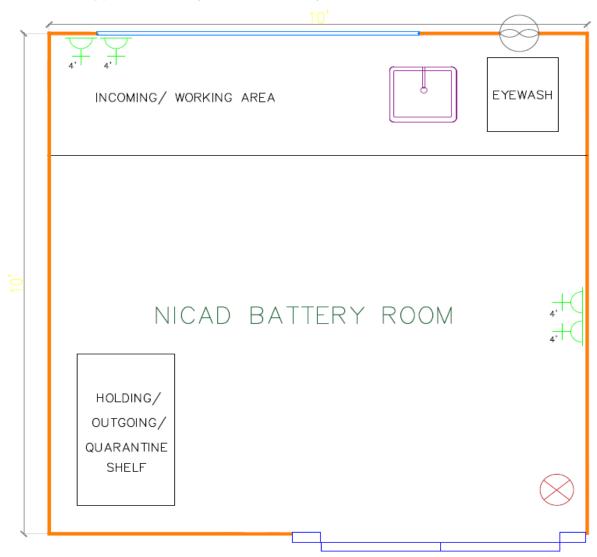


Fire Extinguisher Emergency Light Smoke Detector Shutter Sliding door Window First Aid Kit Sink Ventilation Fan

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
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1.10.3.1 Approved Facility - Ni-Cad Battery Room, GAM HQ





DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.10 3 of 3



PART 1.11 CERTIFYNG PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B2 Company Approval Holder on type.
- b. For a Company Approval Holder on Category C; Component C5 on MarathonNorco Aircraft Battery Ni-Cad Series.

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C5 on MarathonNorco Battery are listed as table below.

Scope Group	Approval Holders
a.I	B2 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.ll	B2 and W1 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	15/09/2021
AMENDMENT:	01	PAGE:	Part 1.1 1 of 1



PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. No specific training is required by MarathonNorco for Certifying Personnel to perform the maintenance.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
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PART 1.13 SAMPLE WORKSHEET

1. Micro Maintenance (M3) Nickel-Cadmium Aircraft Battery Workshop Worksheet Refer attachment I

2. Nickel-Cadmium Aircraft Battery Workshop Worksheet Refer attachment II

OCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 1 of 3



ATTACHMENT I

OCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
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ATTACHMENT II

OCUMENT REFERENCE:	GAM/WCP/PART 2.1.3	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 3 of 3

WORKSHOP CAPABILITY PROCEDURE FOR CONCORDE AIRCRAFT BATTERY LEAD-ACID SERIES

GAM/WCP/PART 2.1.4

AMENDMENT - 02

OWNER:

GALAXY AEROSPACE SDN. BHD

CAAM AMO/2016/02

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.1 1 of 1



PART 1.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

Date of Amendment	Amdt. No.	Details of Amendment
03/03/2020	Initial	Initial issue of GAM/WCP/PART 2.1.4
01/03/2021	01	Corrections/Changes on Part 1.8.1 Minimum Requirement of Approved Manuals Model / Type - Description, Part 1.10.1.1 Charging and Capacity Testing - temperature range, Part 1.11.4 Scope Group a.II - Category C change to W1, and Part 1.7.3 Model of Component under Workshop Capability - Inclusion of new Concorde battery Part Number – RG-12LSA, RG-25, RG-35A, RG-35AXC, RG24-9, RG24-10, RG24-11, RG24-11M, RG24-12, RG24-15M, RG24-16, RG24-17, RG-145-1, RG-206, RG-209, RG-213, RG-222, RG-223, RG-224, RG-235, RG-292-102, RG-292-103A, RG-330, RG-380E/40B, RG-380E/40D, RG-380E/40K, RG-380E/40KS, RG-380E/40L, RG-380E/40LS, RG-380E/44, RG-380E/44KS, RG-380E/46KS, RG-380E/46L, RG-380E/46LS, RG-380E/46K, RG-380E/53LS, RG-380E/53K, RG-380E/53KS, RG-380E/53L, RG-380E/53LS, RG-390E/53K, RG-380E/55, RG-390E/25L, RG-390E/25L, RG-390E/25S, RG-390E/25, RG-390E/25, RG-390E/25, RG-390E/25, RG-390E/25, RG-390E/25, RG-390E/25, RG-390E/25, RG-390E/30, RG-390E/25, RG
19/07/2021	02	Changes from DCAM to CAAM and AN29A to CAD 8708.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.2 1 of 1



PART 1.3 LIST OF EFFECTIVE PAGES

Latest Amendment Number: 02 Date: 19/07/2021

Page Ref.	Page No.	Amdt. No.	Dated	Page Ref.	Page No.	Amdt. No.	Dated
1.1	1	02	19/07/2021				
1.2	1	02	19/07/2021				
1.3	1	02	19/07/2021				
1.4	1	Initial	03/03/2020				
1.5	1	Initial	03/03/2020				
1.6	1	02	19/07/2021				
1.7	1 - 2	02	19/07/2021				
1.8	1	01	01/03/2021				
1.9	1	Initial	03/03/2020				
1.10	1 - 3	01	01/03/2021				
1.11	1	01	01/03/2021				
1.12	1	Initial	03/03/2020				
1.13	1 - 2	Initial	03/03/2020				

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.3 1 of 1



PART 1.4 TABLE OF CONTENT 1.1 Title Page 1.2 Amendment Record List of Effective Pages 1.3 Table of Contents 1.4 1.5 Introduction Register of Issued MOC 1.6 Description, Scope of Capability and 1.7 1.8 List of Approved Maintenance Data List of Equipment and Tool Requirement 1.9 Approved Facility 1.10 Certifying Personnel 1.11 **Training Requirement** 1.12 1.13 Sample of Workshop Worksheet

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.4 1 of 1



PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its' Concorde Aircraft Battery workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with Concorde Aircraft Battery Lead-Acid. The offer includes maintenance of battery for charging and inspection, capacity testing and repair and disposal.
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. MCAR 2016
- b. CAAM Civil Aviation Directives CAD 8708.
- c. GAM Maintenance Organisation Exposition GAM/MOE
- d. GAM Workshop Procedure Manual GAM/WMP
- e. Concorde RG Series Main Aircraft Battery Component Maintenance Manual 24-30-71 Document Number 5-0171.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.5 1 of 1



PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/19/0026	Y	Initial	05/04/2019
02	GAM/MOC/21/0011	Y	01	01/03/2021
03	GAM/MOC/21/0029	Y	02	19/07/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	19/07/2021
AMENDMENT:	02	PAGE:	Part 1.6 1 of 1



PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

- a. This section details the capability to perform maintenance check
- b. s to specified Concorde Aircraft Battery Lead-Acid Series.

1.7.2 Scope of Capability

- a. Maintenance for workshop capability to be carried out by GAM for Concorde Aircraft Battery Lead-Acid Series are as per follows:
 - i. Charging and Inspection
 - ii. Capacity Testing
 - iii. Repair and Disposal

1.7.3 Model of Component under Workshop Capability

	MODEL / TYPE				
General Aviat	ion Batteries - Conco	rde RG Series Main Aircra	aft Battery		
Concorde Part Number	Rated Capacity C1 (Ah)	Concorde Part Number	Rated Capacity C1 (Ah)		
RG-12LSA	11	RG24-11M	11		
RG-25	22	RG24-12	11		
RG-25XC	24	RG24-15	13.6		
RG-35A	29	RG24-15M	13.6		
RG-35AXC	33	RG24-16	13.6		
RG24-9	8.5	RG24-17	16		
RG24-10	8.5	RG24-20	19		
RG24-11	11				

	MODEL / TYPE				
Turbine Starti	ng Batteries - Concor	de RG Series Main Aircra	ıft Battery		
Concorde Part Number	Rated Capacity C1 (Ah)	Concorde Part Number	Rated Capacity C1 (Ah)		
RG-145-1	17	RG-223	17		
RG-206	17	RG-224	24		
RG-209	22	RG-235	44		
RG-213	13	RG-292-102	17		
RG-222	17	RG-292-103A	24		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.7 1 of 2



Concorde Part Number	Rated Capacity C1 (Ah)	Concorde Part Number	Rated Capacity C1 (Ah)
RG-325	25	RG-390E	28
RG-330	30	RG-390E/25	25
RG-350	17	RG-390E/25L	25
RG-355	17	RG-390E/25LS	25
RG-380E/40B	38	RG-390E/25S	25
RG-380E/40D	38	RG-390E/30	30
RG-380E/40K	38	RG-390E/30L	30
RG-380E/40KS	38	RG-390E/30LS	30
RG-380E/40L	38	RG-390E/30S	30
RG-380E/40LS	38	RG-390E/L	28
RG-380E/44	42	RG-390E/LS	28
RG-380E/44K	42	RG-390ES	28
RG-380E/44KS	42	RG-400E/13	13
RG-380E/44L	42	RG-407	27
RG-380E/44LS	42	RG-41/53	53
RG-380E/46	46	RG-418-1	28
RG-380E/46K	46	RG-42	17
RG-380E/46KS	46	RG-427	34
RG-380E/46L	46	RG-442	44
RG-380E/46LS	46	RG-445E	18
RG-380E/53K	53	RG-47	17
RG-380E/53KS	53	RG-49	17
RG-380E/53L	53	RG-500	17
RG-380E/53LS	53	RG-600-1	17
RG-380E/60B	48	RG-600-2	17
RG-380E/60K	48	RG-624	24
RG-380E/60KS	48	RG-641	17
RG-380E/60L	48	RG-76	44
RG-380E/60LS	48	RG-91	22

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.7 2 of 2



PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

Model / Type	Manuals
	Concorde RG Series Main Aircraft Battery Component Maintenance Manual 24-30-71 Document Number 5-0171 Latest Revision.

Note: Refer to http://www.concordebattery.com/main_air_tech.php for the latest Concorde Aircraft Battery CMM, IPL and Service Bulletins / Letters.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.8 1 of 1



PART 1.9 EQUIPMENT, TOOL and CONSUMABLE REQUIREMENT

1.9.1 List of Equipment, Tool and Consumable Requirement

		US/	AGE
DESIGNATION	CHARACTERISTIC	CHARGING	CAPACITY
Battery Charger and Discharger	Constant Current Charging Range 0 – 25 ADC Constant Current Load Bank Range 0 – 55 ADC Constant Voltage Charging Range 14.00 – 14.25 VDC and 28.00 – 28.50 VDC	X	x
Digital Multimeter (Capable to measure Voltage and Current)	Commercially available	X	х
Standard Mechanic's Tools	Commercially available	X	X
Lint-Free Cloth	Commercially available	X	X

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.9 1 of 1



PART 1.10 APPROVED FACILITY

1.10.1 Minimum Requirement of Facility

1.10.1.1 Lead-Acid Battery Workshop

Battery		
Type of Maintenance	Requirements	
Charging and Capacity Testing	No special requirements except for the environment should be well-ventilated at the temperature of between +21°C and +25°C.	
Repair and Disposal	No special requirements except for the area should be clean and free from dust.	

1.10.2 Approved Facility for the Maintenance

- a. Avionics Workshop consists of Avionics Room, Lead-Acid Battery Room and Ni-Cad Battery Room. GAM has identified Lead-Acid Battery Room under Avionics Workshop at the Galaxy Aerospace (M) Sdn Bhd headquarters (GAM HQ) as the Specific Approved Facility for all maintenance activities of Concorde Aircraft Battery Lead-Acid Series.
- b. Lead-Acid Battery Room is equipped with sufficient lighting, air conditioned, wall mounted ventilation fan, workbench, workstation and a laptop computer, internet connection, fire extinguisher, fire escape plan, INCOMING, HOLDING, OUTGOING and QUARANTINE area.
- c. As there are no special requirements called for by the OEM except for minor requirements on charging and discharge testing types of maintenance, it has been decided that any maintenance facility that can meet with the two requirements are considered suitable for carrying out the maintenance work on the battery.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

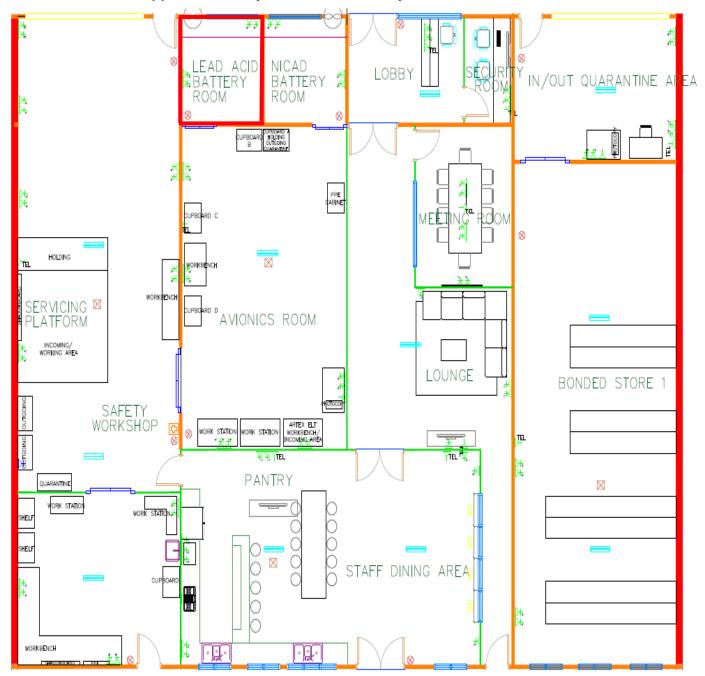
1.10.2.1 Concorde Aircraft Battery Lead-Acid Series

Type of Maintenance	Requirements
Charging and Inspection, Capacity Testing, Repair and Disposal	 a. Specific Approved Facility at GAM HQ. Lead Acid Battery Room Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1, 1.10.2 (c) and approved by CAAM

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.10 1 of 3



1.10.3 Approved Facility – Lead-Acid Battery Room, GAM HQ



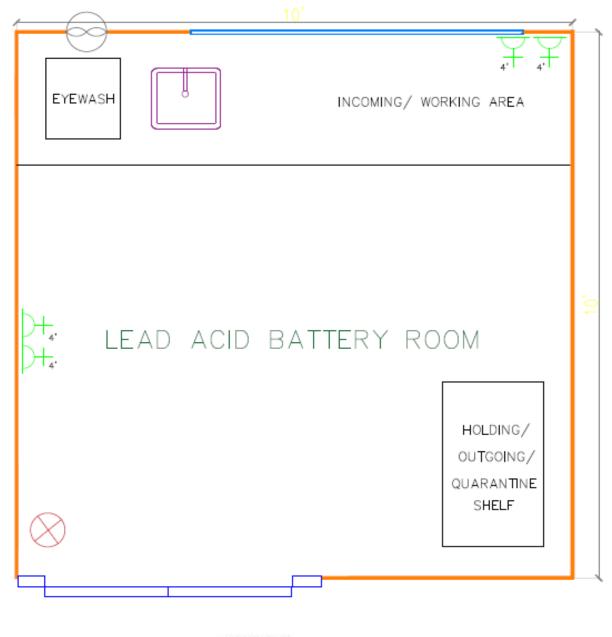
REFERENCE



DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.10 2 of 3



1.10.3.1 Approved Facility – Lead-Acid Battery Room, GAM HQ



REFERENCE



DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.10 3 of 3



PART 1.11 CERTIFYING PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B2 Company Approval Holder on type.
- b. For a Company Approval Holder on Category C; Component C5 on Concorde Aircraft Battery Lead-Acid Series.

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C5 on Concorde Battery are listed as table below.

Scope Group	Approval Holders
a.I	B2 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.ll	B2 and W1 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	01/03/2021
AMENDMENT:	01	PAGE:	Part 1.11 1 of 1



PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. No specific training is required by Concorde for Certifying Personnel to perform the maintenance.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.12 1 of 1



PART 1.13 SAMPLE WORKSHEET

1. Concorde RG Series Main Aircraft Battery Workshop Worksheet Refer attachment I

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 1 of 2



ATTACHMENT I

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.4	DATE:	03/03/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 2 of 2

WORKSHOP CAPABILITY PROCEDURE FOR GILL LEAD-ACID SERIES AIRCRAFT BATTERIES

GAM/WCP/PART 2.1.10

AMENDMENT - 01

OWNER:

GALAXY AEROSPACE SDN. BHD

CAAM AMO/2016/02

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.1 1 of 1



PART 1.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

Date of Amendment	Amdt. No.	Details of Amendment		
03/02/2021	Initial	Initial issue of GAM/WCP/PART 2.1.10		
19/07/2021	01	Changes from DCAM to CAAM and AN29A to CAD 8708. Part 1.13 - Sample of Workshop Worksheet. i. Battery service manual was highlighted for each sample of worksheet. Item no 5 and 6 removed. ii. 2 more pages added on this part.		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.2 1 of 1



PART 1.3 LIST OF EFFECTIVE PAGES

Latest Amendment Number: 01 Date: 19/07/2021

Page Ref.	Page No.	Amdt. No.	Dated	Page Ref.	Page No.	Amdt. No.	Dated
1.1	1	01	19/07/2021				
1.2	1	01	19/07/2021				
1.3	1	01	19/07/2021				
1.4	1	Initial	03/02/2021				
1.5	1	01	19/07/2021				
1.6	1	01	19/07/2021				
1.7	1 - 2	Initial	03/02/2021				
1.8	1	Initial	03/02/2021				
1.9	1	Initial	03/02/2021				
1.10	1 - 3	Initial	03/02/2021				
1.11	1	Initial	03/02/2021				
1.12	1	Initial	03/02/2021				
1.13	1 - 5	01	19/07/2021				

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.3 1 of 1



PART 1.4 TABLE OF CONTENT 1.1 Title Page 1.2 Amendment Record 1.3 List of Effective Pages Table of Contents 1.4 1.5 Introduction Register of Issued MOC 1.6 Description, Scope of Capability and 1.7 1.8 List of Approved Maintenance Data 1.9 List of Equipment and Tool Requirement Approved Facility 1.10 Certifying Personnel 1.11 **Training Requirement** 1.12 1.13 Sample of Workshop Worksheet

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.4 1 of 1



PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its' Gill Lead-Acid Aircraft Battery workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with Gill Lead-Acid Aircraft Battery. The offer includes maintenance of battery for charging, capacity testing and filling (activation).
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. MCAR 2016.
- b. CAAM Civil Aviation Directives CAD 8708.
- c. GAM Maintenance Organisation Exposition GAM/MOE.
- d. GAM Workshop Procedure Manual GAM/WMP.
- e. Gill Teledyne Battery Products Dry-Charged Lead-Acid Aircraft Battery Service Manual Q01-1120 latest revision.
- f. Gill Teledyne Battery Products Component Maintenance Manual 7000 Series LT Valve-Regulated Lead-Acid Batteries Q01-1101 latest revision.
- g. Gill Teledyne Battery Products Component Maintenance Manual LT Valve-Regulated Lead-Acid Batteries Q01-2001 latest revision.
- h. Gill Teledyne Battery Products Component Maintenance Manual LT Valve-Regulated Lead-Acid Batteries Q01-4000 latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.5 1 of 1



PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/20/0026	Y	Initial	13/04/2020
02	GAM/MOC/21/0030	Y	01	19/07/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.6 1 of 1



PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

a. This section details the capability to perform maintenance checks to specified Gill Lead-Acid Aircraft Battery.

1.7.2 Scope of Capability

- a. Maintenance for workshop capability to be carried out by GAM for Gill Lead-Acid Aircraft Battery are as per follows:
 - i. Charging
 - ii. Capacity Testing
 - iii. Filling (Activation)

1.7.3 Model of Component under Workshop Capability.

MODEL / SERIES			
	Gill Dry-Charged Lea	d-Acid Aircraft Battery	
Gill Part Number	1 Hour Rate (C1)	Gill Part Number	1 Hour Rate (C1)
G-25	18Ah	G-247	19Ah
G-35	23Ah	GE-50E	31Ah
G-35M	23Ah	GE-51E	22Ah
G-240	8Ah	GE-54E	10Ah
G-241	8Ah	G-638E	37Ah
G-242	10Ah	G-6381E	43Ah
G-243	10Ah	G-639E	24Ah
G-244	18Ah	G-640E	14Ah
G-245	18Ah	G-641	18Ah
G-246	19Ah		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
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MODEL / SERIES			
Gill 7	000 Series LT Valve-Re	egulated Lead-Acid Bat	teries
Gill Part Number	1 Hour Rate (C1)	Gill Part Number	1 Hour Rate (C1)
7025-20	20Ah	7639-25	25Ah
7025-24	24Ah	7639-27	27Ah
7035-28	28Ah	7639-30LT	30Ah
7035-34	34Ah	7639-34	34Ah
7242-14	14Ah	7641-20	20Ah
7242-16	16Ah	7638-36	36Ah
7243-14	14Ah	7638-44	44Ah
7243-16	16Ah	7638-44T	44Ah
7246-20	20Ah	7638-44ST	44Ah
7246-20AT	20Ah	7638-48P	48Ah
7407-28	28Ah	7638-53	53Ah

MODEL / SERIES			
Bell Helicopter LT Valve-Regulated Lead-Acid Batteries			
Gill Part Number	1 Hour Rate (C1)	Gill Part Number	1 Hour Rate (C1)
7407-28	28Ah	7638-44	44Ah
7639-25	25Ah	7638-53	53Ah
7638-36	36Ah		

MODEL / SERIES			
Embraer (Phenom 100 and 300) LT Valve-Regulated Lead-Acid Batteries			
Gill Part Number 1 Hour Rate (C1) Gill Part Number 1 Hour Rate (C1)		1 Hour Rate (C1)	
7639-27	27Ah	7638-36	36Ah
7639-30LT	30Ah	7638-48P	48Ah
7639-34	34Ah		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.7 2 of 2



PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

Model/Series	Manuals
Gill Dry-Charged Lead-Acid Aircraft Battery	Gill Teledyne Battery Products Dry-Charged Lead-Acid Aircraft Battery Service Manual Q01-1120 latest revision.
Gill 7000 Series LT Valve- Regulated Lead-Acid Batteries	Gill Teledyne Battery Products Component Maintenance Manual 7000 Series LT Valve-Regulated Lead-Acid Batteries Q01-1101 latest revision
Bell Helicopter LT Valve- Regulated Lead-Acid Batteries	Gill Teledyne Battery Products Component Maintenance Manual LT Valve-Regulated Lead-Acid Batteries Q01-2001 latest revision.
Embraer (Phenom 100 and 300) LT Valve-Regulated Lead-Acid Batteries	Gill Teledyne Battery Products Component Maintenance Manual LT Valve-Regulated Lead-Acid Batteries Q01-4000 latest revision.

Note: Refer to http://www.gillbatteries.com/Products/Maintenance for the latest Gill Aircraft Battery Component Maintenance Manual, Service Manual & Material Safety Data Sheet

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.8 1 of 1



PART 1.9 EQUIPMENT, TOOL and CONSUMABLE REQUIREMENT

1.9.1 List of Equipment, Tool and Consumable Requirement

		USA	AGE	
DESIGNATION	CHARACTERISTIC	CHARGING & TESTING	CAPACITY TEST	FILLING (ACTIVATION)
Battery Charger and Discharger	Constant Current Charging Range 0 – 25 ADC Constant Current Load Bank Range 0 – 50 ADC Constant Voltage Charging Range 13.90 – 14.50 VDC and 28.20 – 29.00 VDC	X	x	X
Digital Multimeter (Capable to measure Voltage and Current)	Commercially available	X	X	х
Standard Mechanic's Tools	Commercially available	X	X	Х
Hydrometer	Range 1.110 to 1.300 s.g. units	X	X	X
Infrared Thermometer	Commercially available	X	X	X
Safety Goggle	Commercially available	X	X	Х
Acid Resistant Gloves	Commercially available	X	X	Х
Acid Resistant Apron	Commercially available	X	X	X

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.9 1 of 1



PART 4.10 APPROVED FACILITY

1.10. Minimum Requirement of Facility

1.10.1.1 Lead-Acid Battery Workshop

Battery		
Type of Maintenance	Requirements	
Charging, Capacity Testing and Filling (Activation)	Charging should be conducted in a well-ventilated area at ambient conditions ranging from 65°F to 80°F (18.3°C to 26.6°C). Area should be clean and free from dust.	

1.10.2 Approved Facility for the Maintenance

- a. Avionics Workshop consists of Avionics Room, Lead-Acid Battery Room and Ni-Cad Battery Room. GAM has identified Lead-Acid Battery Room under Avionics Workshop at the Galaxy Aerospace (M) Sdn Bhd headquarters (GAM HQ) as the Specific Approved Facility for all maintenance activities of Gill Aircraft Battery Lead-Acid Series.
- b. Lead-Acid Battery Room is equipped with sufficient lighting, air conditioned, wall mounted ventilation fan, workbench, workstation and a laptop computer, internet connection, fire extinguisher, fire escape plan, INCOMING, HOLDING, OUTGOING and QUARANTINE area and equipment storage cabinet.
- c. As there are no special requirements called for by the OEM except for minor requirements on charging and discharge testing types of maintenance, it has been decided that any maintenance facility that can meet with the two requirements are considered suitable for carrying out the maintenance work on the battery.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

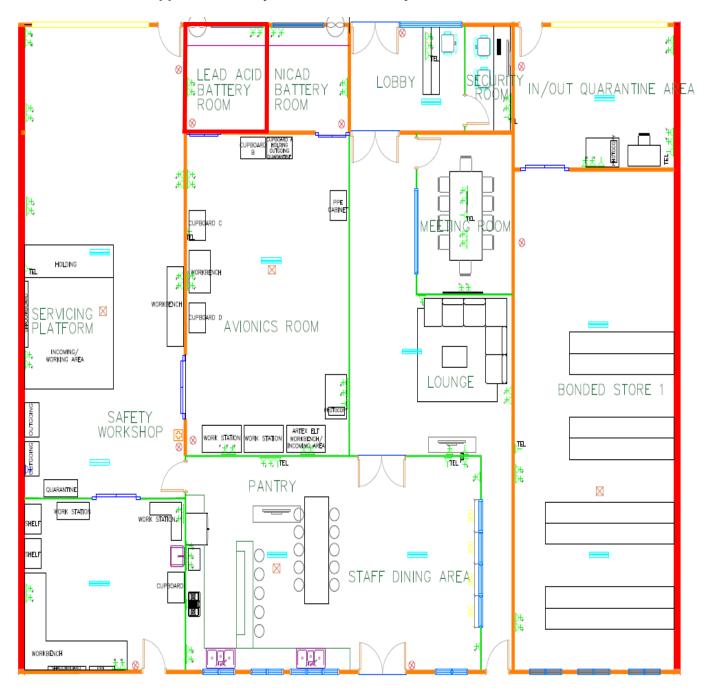
1.10.2.1 Gill Aircraft Battery Lead-Acid Series

Type of Maintenance	Requirements
Charging, Capacity Testing and Filling (Activation)	 a. Specific Approved Facility at GAM HQ. Lead Acid Battery Room Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1, 1.10.2 (c) and approved by CAAM

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
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1.10.3 Approved Facility – Lead Acid Battery Room, GAM HQ



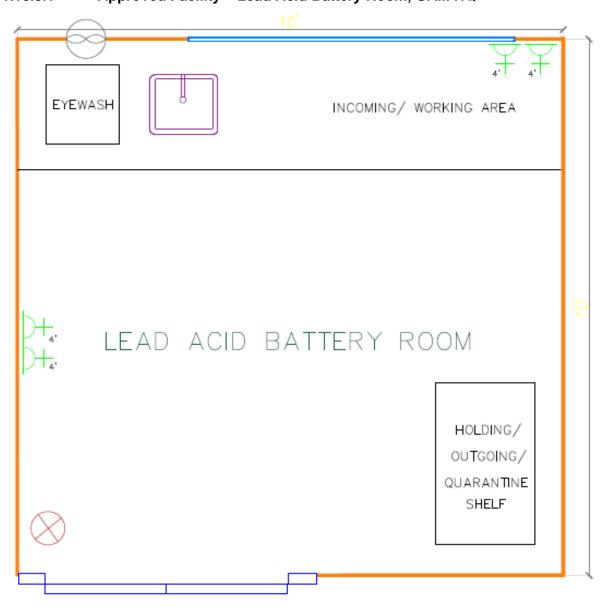
REFERENCE



DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.10 2 of 3



1.10.3.1 Approved Facility – Lead Acid Battery Room, GAM HQ



REFERENCE



DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.10 3 of 3



PART 1.11 CERTIFYING PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B2 Company Approval Holder on type.
- b. For a Company Approval Holder on Category C; Component C5 on Gill Aircraft Battery Lead-Acid Series.

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C5 on Gill Battery are listed as table below.

Scope Group	Approval Holders
a.I	B2 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.ll	B2 and W1 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.11 1 of 1



PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. No specific training is required by Gill for Certifying Personnel to perform the maintenance.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	03/02/2021
AMENDMENT:	INITIAL	PAGE:	Part 1.12 1 of 1



PART 1.13 SAMPLE WORKSHEET

1. Gill Teledyne Battery Products Dry-Charged Lead-Acid Aircraft Battery Workshop Worksheet. (Q01-1120)

Refer attachment I

2. Gill Teledyne Battery Products Component Maintenance Manual 7000 Series LT Valve-Regulated Lead-Acid Batteries Workshop Worksheet. (Q01-1101)
Refer attachment II

3. Gill Teledyne Battery Products Component Maintenance Manual LT Valve-Regulated Lead-Acid Batteries Workshop Worksheet. (Q01-2001) Refer attachment III

4. Gill Teledyne Battery Products Component Maintenance Manual LT Valve-Regulated Lead-Acid Batteries Workshop Worksheet. (Q01-4000)

Refer attachment IV

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.13 1 of 5



ATTACHMENT I

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
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ATTACHMENT II

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
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ATTACHMENT III

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
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ATTACHMENT IV

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.10	DATE:	19/07/2021
AMENDMENT:	01	PAGE:	Part 1.13 5 of 5

WORKSHOP CAPABILITY PROCEDURE FOR KANNAD ELT SERIES

GAM/WCP/PART 2.1.11

AMENDMENT - 02

OWNER:

GALAXY AEROSPACE SDN. BHD

CAAM AMO/2016/02

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	21/10/2021
AMENDMENT:	02	PAGE:	Part 1.1 1 of 1



PART 1.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

Date of Amendment	Amdt. No.	Details of Amendment	
12/10/2020	Initial	Initial issue of GAM/WCP/PART 2.1.11	
19/07/2021	01	Changes from DCAM to CAAM and AN29A to CAD 8708. Part 1.11.4 Scope Group a.II - Category C6 change to W2.	
21/10/2021	02	Part 1.5.2: and Part 1.8.1: – New document reference for Kannad ELT/Dongle Programming Training.	

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	21/10/2021
AMENDMENT:	02	PAGE:	Part 1.2 1 of 1



PART 1.3 LIST OF EFFECTIVE PAGES

Latest Amendment Number: 02 Date: 21/10/2021

Page Ref.	Page No.	Amdt. No.	Dated	Page Ref.	Page No.	Amdt. No.	Dated
1.1	1	02	21/10/2021				
1.2	1	02	21/10/2021				
1.3	1	02	21/10/2021				
1.4	1	Initial	12/10/2020				
1.5	1	02	21/10/2021				
1.6	1	02	21/10/2021				
1.7	1 - 2	Initial	12/10/2020				
1.8	1 - 2	02	21/10/2021				
1.9	1	Initial	12/10/2020				
.1.10	1 - 3	Initial	12/10/2020				
1.11	1	01	19/07/2021				
1.12	1	Initial	12/10/2020				
1.13	1 - 5	Initial	12/10/2020				
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DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	21/10/2021
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PART 1.4 TABLE OF CONTENT 1.1 Title Page 1.2 Amendment Record 1.3 List of Effective Pages 1.4 Table of Contents 1.5 Introduction Register of Issued MOC 1.6 Description, Scope of Capability and 1.7 1.8 List of Approved Maintenance Data 1.9 List of Equipment and Tool Requirement Approved Facility 1.10 Certifying Personnel 1.11 Training Requirement 1.12 1.13 Sample of Workshop Worksheet

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
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PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its' Kannad Emergency Locator Transmitter (ELT) servicing workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with Kannad Emergency Locator Transmitter (ELT). The offer includes battery replacement, ELT and Dongle re-programming.
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. MCAR 2016.
- b. CAAM Civil Aviation Directives CAD 8708.
- c. GAM Maintenance Organisation Exposition GAM/MOE.
- d. GAM Workshop Procedure Manual GAM/WMP.
- e. Kannad Emergency Locator Transmitter (ELT, Standard) Level 2 Component Maintenance Manual with Illustrated Parts List 25-63-05 of the latest revision.
- f. Kannad Emergency Locator Transmitter (ELT, Compact Family) Level 2 Component Maintenance Manual with Illustrated Parts List 25-63-07 of the latest revision.
- g. Kannad Emergency Locator Transmitter (ELT, Integra Family) Level 2 Component Maintenance Manual with Illustrated Parts List 25-63-08 of the latest revision.
- h. Kannad ELT Programming Training, Document No DOC21053 of the latest revision.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	21/10/2021
AMENDMENT:	02	PAGE:	Part 1.5 1 of 1



PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/20/0049	Y	Initial	12/10/2020
02	GAM/MOC/21/0031	Y	01	19/07/2021
03	GAM/MOC/21/0071	Y	02	21/10/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	21/10/2021
AMENDMENT:	02	PAGE:	Part 1.6 1 of 1



PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

a. This section details the GAM capability to perform servicing to the Kannad Emergency Locator Transmitter (ELT)

1.7.2 Scope of Capability

- a. Service for workshop capability to be carried out by GAM for Kannad Emergency Locator Transmitter (ELT) are as per follows:
 - i. Programming of ELT and Programming Dongle.
 - ii. ELT Battery Replacement.
 - iii. Component Repair / Replacement Limitation up to Level 2.
- b. Repair beyond of Level 2 for failures found during visual inspection, self-test, programming or battery replacement, the ELT must be repaired by the manufacturer or by an approved repair center (list on https://www.orolia.com/support/kannad).

1.7.3 Model of Component under Workshop Capability

Model	Variant	Name	Part Number
	А	KANNAD 406 AP	S1820502-01
	В	KANNAD 406 AP	S1820502-02
	С	KANNAD 406 AF	S1821502-01
	D	KANNAD 406 AF	S1821502-02
	E	KANNAD 406 AF-H	S1822502-01
	F	KANNAD 406 AF-H	S1822502-02
	G	KANNAD 406 AS	S1823502-01
Standard ELT's	Н	KANNAD 406 AS	S1823502-02
(Battery Replacement)	J	KANNAD 406 AS-TNC	S1823502-03
	K	KANNAD 121 AF	S1824502-01
	L	KANNAD 121 AF	S1824502-02
	М	KANNAD 121 AF-H	S1826502-02
	N	KANNAD 406 AF (6D)	S1821502-06
	Р	KANNAD 406 SURVIVAL	S1823502-05
	Q	KANNAD 406 AP-H	S1820502-04
Compact Family ELT's	А	KANNAD 406 AF-COMPACT	S1840501-01
(Battery Replacement)	В	KANNAD 406 AF-COMPACT (ER)	S1840501-04

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
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Model	Variant	Name	Part Number
	Α	AP INTEGRA (ER)	S1850501-01
	В	AP INTEGRA	S1850501-02
	С	AF INTEGRA (ER)	S1851501-01
	D	AF INTEGRA	S1851501-02
	Е	AF-H INTEGRA (ER)	S1852501-01
Integra Family ELT's	F	AF-H INTEGRA	S1852501-02
(Battery Replacement)	G	AP-H INTEGRA (ER)	S1854501-01
	Н	AP-H INTEGRA	S1854501-02
	J	AP INTEGRA (ER-N)	S1850501-03
	K	AF INTEGRA (ER-N)	S1851501-03
	L	AF-H INTEGRA (ER-N)	S1852501-03
	М	AP-H INTEGRA (ER-N)	S1854501-03
	-	Standard ELT's	As per listed above
	-	Compact ELT's	As per listed above
	-	Integra ELT's	As per listed above
	-	Programming Dongle	S1820514-01
Standard ELT's	-	Programming Dongle, A320	S1820514-04
Compact Family ELT's	-	Programming Dongle, A330 & A340	S1820514-05
Integra Family ELT's Programming Dongle (Programming)	-	Programming Dongle Assembly	S1820514-06
	-	Programming Dongle Integra Long Range (A330-A340-A380)	S1820514-07
	-	Programming Dongle Integra/SA (A318-A319-A320-A321-A320 NEO Family)	S1820514-11
	-	Attachable Programming Dongle	S1820514-12

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.7 2 of 2



PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

Model	Manuals		
Standard ELT's	Kannad Emergency Locator Transmitter (ELT, Kannad) Level 2 Component Maintenance Manual with Illustrated Parts List 25-63-05 of the latest revision.		
Compact Family ELT's	Kannad Emergency Locator Transmitter (ELT, Compact Family) Level 2 Component Maintenance Manual with Illustrated Parts List 25-63-07 of the latest revision.		
Integra Family ELT's	Kannad Emergency Locator Transmitter (ELT, Integra Family) Level 2 Component Maintenance Manual with Illustrated Parts List 25-63-08 of the latest revision.		
Programming all ELT and Programming Dongle	Kannad ELT Programming Training, Document No DOC21053 of the latest revision.		

Note: Service Letters / Service Bulletins are available for download on

https://www.orolia.com/support/kannad

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	21/10/2021
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PART 1.9 EQUIPMENT AND TOOL REQUIREMENT

1.9.1 List of Equipment and Tool Requirement

USAGE **PROGRAMMING** BATTERY REPLACEMENT **DESIGNATION CHARACTERISTIC** Programming Equipment for PR600 Χ Χ KANNAD ELTs COSPAS-SARSAT 121.5Mhz Beacon Tester BT200 Χ Χ and 406Mhz Decoder Laptop OR PC with minimum of Windows XP minimum and Commercially available Χ Χ Internet connection. Label Maker Χ Χ Commercially available Digital Multimeter (Capable to measure Voltage Χ and Commercially available Milliampere) **Torque Screwdriver** Χ Commercially available Standard Mechanic's Tools Χ Commercially available

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
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PART 1.10 APPROVED FACILITY

1.10.1 Minimum Requirement of Facility

1.10.1.1 ARTEX ELT

ARTEX ELT		
Type of Maintenance	Requirements	
Battery Replacement and Programming	No special requirements except for the environment should be at the temperature of between 15°C and 35°C.	

1.10.2 Approved Facility for the Maintenance

- a. Avionics Workshop consists of Avionics Room, Lead Acid Battery Room and Ni-Cad Battery Room. GAM has identified Avionics Room under Avionics Workshop at the Galaxy Aerospace (M) Sdn Bhd headquarters (GAM HQ) as the Specific Approved Facility for all maintenance activities of Kannad Emergency Locator Transmitter (ELT).
- b. Avionics Room is equipped with sufficient lighting, air conditioned, workbench, workstation and a laptop computer, internet connection, fire extinguisher, fire escape plan, ESDS workstation, INCOMING, HOLDING, OUTGOING and QUARANTINE area, equipment storage cabinet and racks for manuals.
- c. As there are no special requirements called for by the OEM except for minor requirements on testing and assembly types of maintenance, it has been decided that any maintenance facility that can meet with the requirements are considered suitable for carrying out the maintenance work on the ELTs.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

1.10.2.1 ARTEX ELT All Series and Programming Adapter

Type of Maintenance	Requirements	
Battery Replacement and Programming	 a. Specific Approved Facility at GAM HQ. Avionics Room Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1, 1.10.2 (c) and approved by CAAM 	

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
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1.10.3 Approved Facility – Kannad ELT Workshop (Avionics Room), GAM HQ



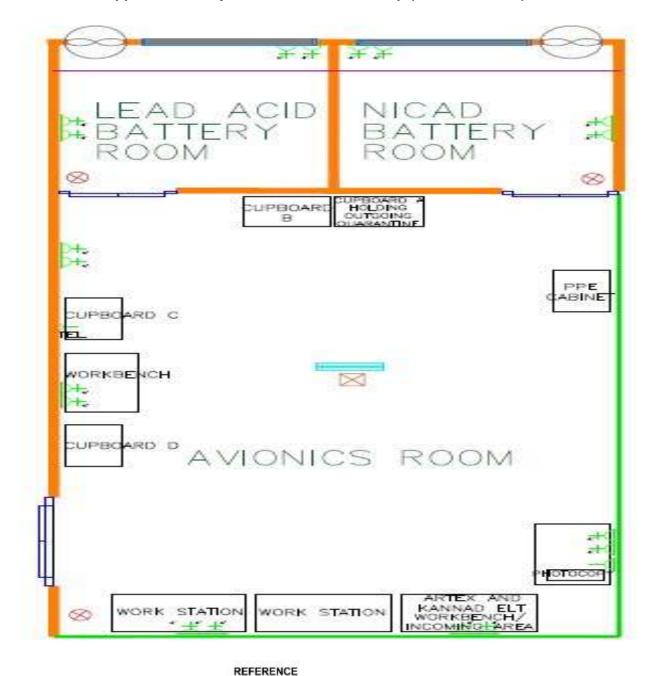
REFERENCE



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1.10.3.1 Approved Facility - Kannad ELT Workshop (Avionics Room), GAM HQ



Fire Extinguisher Emergency Light Smoke Detector Shutter Sliding door Window First Aid Kit Sink Ventilation Fan

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.10 3 of 3



PART 1.11 CERTIFYING PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B2 Company Approval Holder on type.
- b. For a Company Approval Holder on Category C; Component C6 on Kannad ELT's and Programming Dongle.

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C6 on Kannad ELT's and Programming Dongle are listed in as per table below.

Scope Group	Approval Holders
a.l	B2 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.II	B2 and W2 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

DOCUMENT REFERENCE:	I GAW/WCF/FART Z.T.TT		19/07/2021
AMENDMENT:	01	PAGE:	Part 1.11 1 of 1



PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. Specific training is not required by Kannad for Certifying Personnel to perform the maintenance.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
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PART 1.13 SAMPLE WORKSHEET

1. KANNAD ELT and Dongle Programming

Refer attachment I

2. KANNAD Standard ELT's Battery Replacement

Refer attachment II

3. KANNAD Compact Family ELT's Battery Replacement

Refer attachment III

4. KANNAD Integra Family ELT's Battery Replacement

Refer attachment IV

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ATTACHMENT I

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ATTACHMENT II

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ATTACHMENT III

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ATTACHMENT IV

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.11	DATE:	12/10/2020
AMENDMENT:	INITIAL	PAGE:	Part 1.13 5 of 5

WORKSHOP CAPABILITY PROCEDURE FOR INFLATABLE LIFE RAFT TYPE F11R VALISE AND TYPE F14R VALISE

GAM/WCP/PART 2.1.12

DOCUMENT REFERENCE:	I GAW/WCP/PART 2.1.12		18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.2 1 of 1



PART 1.2 AMENDMENT RECORD

Each amendment of this document will be accompanied by a letter of transmittal showing the pages to be removed and those to be inserted. All pages will show the date of issue which can be cross checked with the list of effective pages to ensure it's current.

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18 April 2022	Initial	Initial issue of GAM/WCP/PART 2.1.12

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.12	DATE:	18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.2 1 of 1



PART 1.3 LIST OF EFFECTIVE PAGES

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1.4	1 of 1	1	Initial	18 April 2022
1.5	1 of 1	1	Initial	18 April 2022
1.6	1 of 1	1	Initial	18 April 2022
1.7	1 of 1	1	Initial	18 April 2022
1.8	1 of 2	1	Initial	18 April 2022
	2 of 2	1	Initial	18 April 2022
1.9	1 of 1	1	Initial	18 April 2022
1.10	1 of 3	1	Initial	18 April 2022
	2 of 3	1	Initial	18 April 2022
	3 of 3	1	Initial	18 April 2022
1.11	1	1	Initial	18 April 2022
1.12	1	1	Initial	18 April 2022
1.13	1 of 2	1	Initial	18 April 2022
	2 of 2	1	Initial	18 April 2022

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.3 1 of 1



PART 1.4	TABLE OF CONTENT
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1.2	Amendment Record
1.3	List of Effective Pages
1.4	Table of Contents
1.5	Introduction
1.6	Register of Issued MOC
1.7	Description, Scope and Model of Component under Workshop Capability
1.8	List of Approved Maintenance Data
1.9	Equipment and Tool Requirement
1.10	Approved Facility
1.11	Certifying Personnel
1.12	Training Requirement
1.13	Sample Worksheet

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
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PART 1.5 INTRODUCTION

1.5.1 Introduction

- a. This Workshop Capability Procedure is to address how GAM manages its Life raft workshop capabilities and activities and supporting MOE 2.9 Repair Procedure and Workshop Procedures Manual.
- b. GAM can now offer its expertise and MRO services to all carriers operating with Life raft to perform service of 1-year inspection task on Life raft system.
- c. This Workshop Capability Procedure covers GAM Capability, processes and certification within GAM Workshop Approval/System.

1.5.2 Reference

- a. Malaysia Civil Aviation Regulation MCAR 2016
- b. CAAM Civil Aviation Directives CAD 8708 CAAM Authorized Release Certificate (CAAM Form 1)
- c. CAAM Civil Aviation Directives CAD 8601 Maintenance Organisation Approval
- d. GAM Maintenance Organisation Exposition (GAM/CAAM/MOE)
- e. GAM Workshop Management Procedure GAM/WMP
- f. Interactive Electronic Technical Publication (IETP)

39-A-25-60-00-00A-028A-A Emergency - General 89-A-25-60-00-00A-028A-A Emergency - General

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.5 1 of 1



PART 1.6 REGISTER OF ISSUED MOC

Item	MOC Number	Significant Y/N	Rev. no.	Dated
01	GAM/MOC/21/0006	Υ	Initial	22/01/2021
02	GAM/MOC/21/0083	Y	Initial	06/12/2021

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.6 1 of 1



PART 1.7 DESCRIPTION, SCOPE AND MODEL OF COMPONENT UNDER WORKSHOP CAPABILITY

1.7.1 Description

a. This section details the GAM capability to perform maintenance checks and service of 1-year inspection to Life raft.

1.7.2 Scope of Capability

- a. Maintenance for workshop capability to be carried out by GAM to service Life raft are as follows:
 - i. Disassembly / Reassembly
 - ii. Detailed Inspection
 - iii. Leak Check
 - iv. Repair
 - v. Inspection & Replacement
- c. Repair for failure or defect found during inspection which is out of limit or not covered within the approved manual must be repaired by the manufacturer or by an approved repair center.

1.7.3 Model of Component under Workshop Capability

Components	Model/ Series	Part Number
	F11R Inflatable Life Raft (AW139)	3G2560V00332
		3G2560V00432
		3G2560V00431
		3G2560V00331
		3G2560V00433
Life raft System		3G2560V00333
		3G2560V00434
		3G2560V00334
		3G2560V00831
		3G2560V00731
	F14R Inflatable Life Raft	8G2560V00131
	(AW189)	8G2560V00231

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
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PART 1.8 LIST OF APPROVED MAINTENANCE DATA

1.8.1 Minimum Requirement of Approved Manuals

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
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Series	Series Manuals		
Series F14R Inflatable Life raft	INTERACTIVE ELECTRONIC TECHNICAL PUBLICATION (IETP) - 89-A-25-63-09-01A-530A-B Life raft container (left/right) — Disassemble Procedure. - 89-A-25-63-09-01A-710A-B Life raft container (left/right) — Assemble Procedure. - 89-A-25-63-09-01A-100D-B Life raft container (left/right) — Unfold/fold Procedure - 89-A-25-63-09-01A-31AA-B Life raft container (left/right) — Function Test - 89-A-25-63-10-00A-343A-B Personal locator beacon (Life raft container) — BIT operation (crew). - 89-A-25-63-10-00A-520A-B Personal locator beacon (Life raft container) — Remove procedure. - 89-A-25-63-09-01A-720A-B Personal locator beacon (Life raft container) — Install		

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.8 2 of 2



PART 1.9 EQUIPMENT AND TOOL REQUIREMENT

1.9.1 List of Equipment and Tool Requirement

Description	P/N	GAM I/D
Belt Welder	304355A	ST053
Welding Tester	304356A	ST052
Hose with adapter	304691A	ST068
Raft adapter	-	ST220F
Plastic scraper	-	ST251
Spatula (Wooden)	-	ST391F
Vacuum device	-	ST054
Digital Manometer	-	CTE48
Safety Pin (SEI)	11046009	ST392F
Beacon, Dummy	303965A	ST757F
Magnifying 10x	-	G2323
Raft Repacking kit	304696A	ST393F
Cap, recoil	11044009	ST394F,ST395F
Plug, protection	AGS595C	ST396F,ST397F
Round needle for raft stitching		ST398F
Sleeker		ST400F
Rachet strap		ST401F,ST402F,ST403F,ST404F

DOCUMENT REFERENCE:	GAM/WCP/PART 2.1.8	DATE:	18 April 2022
AMENDMENT:	Initial	PAGE:	Part 1.9 1 of 1



PART 1.10 APPROVED FACILITY

1.10.1 Minimum Requirement of Facility

1.10.1.1 Safety Equipment Workshop

Life raft					
Type of Maintenance	Requirements				
Fold/Unfold, Detailed Inspection, Leak Check, Repair, Inspection & Replacement	 No special requirements except for the: - Environment should be at the temperature of between 15°C and 35°C. Worktable should be clean and free from dust, sharp object, fluids or other unwanted materials (e.g. solvents or greases) on the worktable. Worktable must be of sufficient dimensions. The table flat must be smooth and it has no sharp objects that can cause damage to the Life raft. 				

1.10.2 Approved Facility for the Maintenance

- a. GAM has identified Safety Equipment Workshop at the Galaxy Aerospace (M) Sdn Bhd Operation Centre (OC) for all maintenance activities in the respective workshop.
- b. Safety Equipment Workshop is equipped with sufficient lighting, air conditioned, workbench, workstation and a desktop computer, internet connection, fire extinguisher, fire escape plan, INCOMING, HOLDING, OUTGOING and QUARANTINE area, equipment storage cabinet and racks.
- c. As there are no special requirements called for by the OEM except for minor requirements on inspection and leak check types of maintenance, it has been decided that any maintenance facility that can meet with the two requirements are considered suitable for carrying out the maintenance work on the life raft.
- d. List of approved maintenance facilities for the purpose of this capability are tabled below:

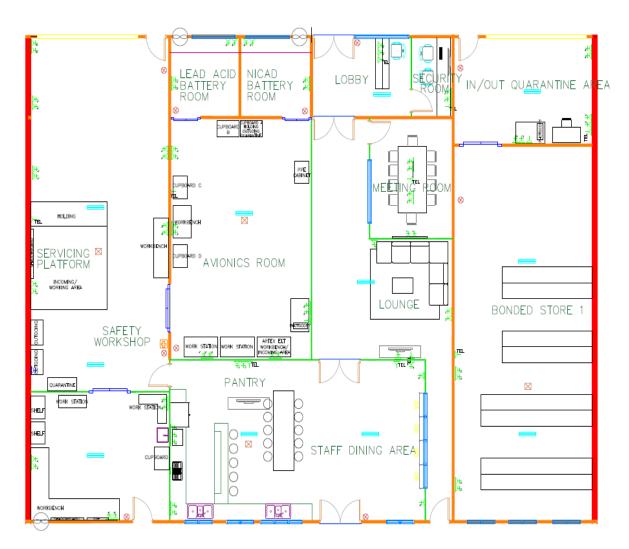
1.10.2.1 Life raft

Type of Maintenance	Requirements
Fold/Unfold, Detailed Inspection, Leak Check, Repair, Inspection & Replacement	 a. Specific Approved Facility at GAM HQ. Safety Equipment Workshop Galaxy Aerospace (M) Sdn Bhd. Suite 11-14, Helicopter Centre, Malaysia International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200 Subang, Selangor, Malaysia. b. Any CAAM AMO maintenance facility that can comply to the minimum facility requirement in para. 1.10.1.1 and approved by CAAM

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1.10.2 Approved Facility – Safety Equipment Workshop, GAM Operation Centre (OC)



corridor

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PART 1.11 CERTIFYING PERSONNEL

1.11.1 Requirement for Certifying Personnel (WMP Part 1.7.5)

- a. For aircraft requirement is a B1 Company Approval Holder on type.
- b. For a Company Approval Holder on Category W; Component C6 on Life raft.

1.11.2 Minimum Qualification for Company Approval

a. As laid down in MOE Part 3.4.

1.11.3 Assessment on Certifying Personnel

a. Certifying Personnel are subjected to Technical Competency Assessment i.a.w MOE Part 3.4.

1.11.4 List of Company Approval Holders

a. List of Current Approval Holders of Component C6 on Life raft are listed in are table as below.

Scope Group	Approval Holders
a.I	B1 Category Approval Holder on type Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.
a.ll	W2 Category Approval Holder as listed in GAM/Q-001 (List of Approval Holder) of the latest revision.

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PART 1.12 TRAINING REQUIREMENT

1.12.1 Requirement of Training for Certifying Personnel

- a. Specific training is required by certifying personnel to perform the maintenance. The training shall be performed by OEM / OEM recognized training organization / CAAM 145 organization.
- b. Certifying Personnel shall need to comply with the minimum training requirement as required by MOE Part 3.4.

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PART 1.13 SAMPLE WORKSHEET

a) F11R (AW139) Inflatable Life Raft Workshop Worksheet

	NOWNER:	ARCRAFT	CSN*		81811117	rancanestna:ww	1-101.1227
DAGES	FACILITY: GAM SAFETY	AFRERAFT	CSO				
	WORKSHOP	TSN*			*********	0.001:000/00/00	141-
	N: 0 / 0 / 0 DUT: 0 / 0 / 0	* F APPLICABLE			SHEET: 1	DF fl	
EMER	nfor mining: GENCY LIFE RAFT ASSY ANN 139 LIFE RAFT <u>FEET</u>] -	IUAL INSPECTION	Raised by and BAHIRA D / D / (UN UN	Other requir	ements/information N/A	
ITEM		Description			Technician	*Approval Holder	Date
	T	EMERGENCY L	IFE RAFT A 88Y ANNUAL	LINSPECTIO	N	T	_
	COMPONENT DETAIL:						
	Description Left-hand life raft asset	P/N	8/N	D.O.M		1	
	Life raft assembly	7				1	1
	Reservoir assemb	ily					
	Cylinder Last Hydro Date	e	Pressure			1	
			,				
		WARNING	s	. 1			
							1
			ed by sharp or abras				1
			dges tools when yo			1	1
	or move the life raft		fe raft on surfaces w	hich			1
			a. Do not wear clothe	es that			1
	have sharp edges o can damage the life		a. Do not wear clothe	es that			
	can damage the life	raft fabric.					
	can damage the life - Be careful not to p	raft fabric.	ble. The high pressu	ire In the			
	Be careful not to p charge vessel can p	raft fabric. oull the control ca possibly cause a f	ble. The high pressu ire of the subsystem	ire In the			
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	- Be careful not to p charge vessel can p the leak of the high	raft fabric. oull the control ca possibly cause a f	ble. The high pressu ire of the subsystem	ire In the			
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	 can damage the life Be careful not to p charge vessel can p the leak of the high personnel. 	raft fabric. pull the control ca possibly cause a f pressure gas can Caution	ble. The high pressu Ire of the subsystem I cause injury to the	ire in the n. <u>Also</u>			
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b) F14R (AW189) Inflatable Life Raft Workshop Worksheet

AMERIPACIATY OAM BAPETY WORKSHOP DATE OUT 1 07 19 AMEDIA TO 1 1500 DATE OUT 1 07 19 BASENDAY INSIDE EMERICANCY LIFE MAPT A 88Y ANNUAL INSPECTION EMERICANCY LIFE MAPT A 88Y ANNUAL INSPECTION DESCRIPTION EMERICANCY LIFE MAPT A 88Y ANNUAL INSPECTION COMPONENT DETAIL: Description PIN SIN D.O.M Left-hand life raft assembly Left-hand life raft assembly Reservoir assembly Cylinder Last Hydro Date WARNINGS The life raft surface is easily damaged by sharp or abrasive object. Do not use pointed or sharp edges tools when you touch or move the life raft. Do not put the life raft on surfaces which have sharp edges or abrasive objects. Do not wear clothes that can damage the life raft fabric. Be careful not to pull the control cable. The high pressure in the charge vessel can possibly cause a fire of the subsystem. Also the leak of the high pressure gas can cause injury to the personnel. Caution Only approved persons are permitted to do this procedure. LAW AW189 AMP 89-A-25-63-09-01A-530A-B. 1.1 Remarks: "The work recorded above has been carried cut in accordance with the requirements of the Malaystan Chill Addition Regulation for the time being long and in that respect the alercal of equipment is considered the for release to service.	CLIEN	T/OWNER:	AIRCRAFT REC		CSN ⁴		WORKSHOPY	WORKSHEET NO: WY	N-W(22)
DATE OUT 10 10 10 TADY THE MARKET 1 1 OP 3 TADY DEVOLUTION PRAISED for making: EMERGENCY LIFE RAFT A 83Y ANNUAL IN SPECTION COMPONENT DETAIL: Description Left-hand life raft assembly Life raft assembly Life raft assembly Reservoir assembly	RAPE	FACILITY: GAM RAFFETY	AIRCRAFT 6/N		CSO*				
PRESENTED TRAINER PROBLEMENT PAINT AS BY ANNUAL INSPECTION COMPONENT DETAIL: Description Description COMPONENT DETAIL: Description Description Pin Sin D.O.M Left-hard life raft assembly Left-hard life raft assembly Reservoir assembly Cylinder Last Hydro Date Pressure WARNINGS The life raft surface is easily damaged by sharp or abrasive object. Do not use pointed or sharp edges tools when you touch or move the life raft to not put the life raft on surfaces which have sharp edges or abrasive objects. Do not wear clothes that can damage the life raft fabric. Be careful not to pull the control cable. The high pressure in the charge vessel can possibly cause a fire of the subsystem. Also the leak of the high pressure gas can cause injury to the personnel. Caution Only approved persons are permitted to do this procedure. 1. Life raft container (leftright) — DISASSEMBLE PROCEDURE LAW AW189 AMP 89-A-25-63-09-01A-530A-8.	DASC						WORKORDE	R REF: DAM-WS-W	0.12-
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COMPONENT DETAIL: Description	ITEM		Description				Technician		Da
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