

Audit Report			
Report No. IAR-2023/089			
Area / Scope GAM-AMO/Worksho			
Date of audit 28/11/2023			

Α	AUDIT DETAILS		
1.	Audit Type / Category	Tick where applicable  □ Scheduled □ Vendor □ Surveillance □ Product □ Variation to approval	
		Specify: To include additional Saft part no into GAM Workshop Capability List.	
2.	Audit Reference	<ol> <li>CAD 8601 Maintenance Organisation Approval (CAAM Part 145) Iss 01 Rev 00 dated 01 May 2021;</li> <li>GAM/CAAM/MOE Iss 3 Rev 1, dated 26 October 2022;</li> <li>Workshop Management Procedure Iss 2 Rev 1, dated 03 July 2023; and</li> <li>Draft Workshop Capability Procedure GAM/WCP/Part 2.1.2 Amendment 04 dated 21/11/2023.</li> </ol>	
3.	Auditor(s)	Omar bin Ahmad (Lead Auditor)	
4.	Auditee(s)	Hamidah binti Hama     Mior Mohd Adib bin Mior Sallehhuddin	
5.	Location	GAM Operation Center, No 11-14, Helicopter Centre, Malaysian International Aerospace Centre, Sultan Abdul Aziz Shah Airport, 47200, Subang, Selangor Darul Ehsan, Malaysia	
В	AUDIT SUMMAR	Υ	

### 1. **General Information**

The audit was carried out to evaluate the compliance and adequacy of procedure (readiness) of the workshop operation for the additional part number requested into the Workshop Capability List. The additional part number was requested for external interested clients or Galaxy Aerospace future maintenance contract. MOC Ref. No.: GAM/MOC/23/0052 refers.

Below are the details of the additional part number requested:

No.	Battery Type
1.	276CH1
2.	285CH
3.	409CH2
4.	447CH1
5.	447CH8
6.	505CH
7.	505CH2
8.	1277
9.	1656
10.	1656-6

No.	Battery Type
11.	1658
12.	1658-6
13.	2376-1
14.	2376-5
15.	2378-2
16.	2520
17.	2778
18.	2778-4
19.	4059
20.	4071-3

No.	Battery Type
21.	4076-10
22.	4076-15
23.	4076-23
24.	4078
25.	4078-2
26.	4078-19
27.	23180
28.	23186
29.	40176-4
30.	40678-2



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The audit was carried out with reference to the latest revision of CAD 8601, Maintenance Organisation Exposition (MOE), Engineering Procedure Manual (EPM) and AMO Audit Checklist.

Review of the supporting documents, key personnel interviews, and workplace observations comprise the audit technique.

The scope of audit area covers:

- (a) Facilities requirements;
- (b) Personnel requirements;
- (c) Maintenance Data / Documentation; and
- (d) Equipment / Special tools / Materials / Spare.

### 2. Facilities

- (a) The additional part number requested are for the maintenance carried out at an approved maintenance facilities as listed below:
  - (i) Ni-Cad Battery Room,
     Galaxy Aerospace (M) Sdn. Bhd. Operation Centre (GAM OC),
     Suite 11-14, Helicopter Centre,
     Malaysia International Aerospace Centre,
     Sultan Abdul Aziz Shah Airport,
     47200 Subang, Selangor, Malaysia.

### 3. Personnel

(a) There are 4 component certifying staff qualified to perform the task.

No.	Name	GAM ID	Approval No.	Date attended formalized product training
1.	Mior Mohd Adib bin Mior Sallehhuddin	8110	C001	02-09 Jan 2019
2.	Mohammad Fakhqursy bin Haniz	8235	C004	18-21 Jul 2022
3.	Mohammad Zakwan Izzat bin Zainudin	8062	C005	01-04 Sep 2022
4.	Nina Na'ilah binti Ruslan	8145	C006	01-04 Sep 2022

(b) An interview with Mior Mohd Adib was conducted for his understanding on the company procedure. The interview was acceptable. Personnel was able to provide copy of his certification authorization upon requested by the auditor.



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(c) Training records for all the certifying staff involved in this activity were reviewed and found that all of them had attended the current mandatory training as stated in the MOE Part 3.4.5. No additional training required for inclusion of new battery type.

## 4. Maintenance Data / Documentation

(a) The applicable battery type and reference manuals are as follow:

No.	Battery Type	Reference Manual	
1.	276CH1	SAFT Component Maintenance Manual with Illustrated Parts List	
1.		CMM 24-30-24 Latest Revision.	
2.	285CH	SAFT Component Maintenance Manual with Illustrated Parts List	
۷.		CMM 24-38-58 Latest Revision.	
3.	409CH2	SAFT Component Maintenance Manual with Illustrated Parts List	
0.		CMM 24-30-25 Latest Revision.	
4.	505CH	SAFT Component Maintenance Manual with Illustrated Parts List	
т.		CMM 24-38-54 Latest Revision.	
5.	505CH2	SAFT Component Maintenance Manual with Illustrated Parts List	
J.		CMM 24-38-55 Latest Revision.	
6.	1656-6	SAFT Component Maintenance Manual with Illustrated Parts List	
0.		CMM 24-31-19 Latest Revision.	
7.	1658-6	SAFT Component Maintenance Manual with Illustrated Parts List	
٠.		CMM 24-31-20 Latest Revision.	
8.	2376-5	SAFT Component Maintenance Manual with Illustrated Parts List	
<u> </u>		CMM 24-30-00 Latest Revision.	
9.	2378-2	SAFT Component Maintenance Manual with Illustrated Parts List	
<u> </u>		CMM 24-30-00 Latest Revision.	
10.	2520	SAFT Component Maintenance Manual with Illustrated Parts List	
10.		CMM 24-31-11 Latest Revision.	
11.	2778-4	SAFT Component Maintenance Manual with Illustrated Parts List	
' ' '		CMM 24-31-91 Latest Revision.	
12.	4059	SAFT Component Maintenance Manual with Illustrated Parts List	
		CMM 24-38-52 Latest Revision.	
13.	4076-10	SAFT Component Maintenance Manual with Illustrated Parts List	
14.	4076-23	CMM 24-31-41 Latest Revision.	
15.	4078-2	SAFT Component Maintenance Manual with Illustrated Parts List	
16.	40678-2	CMM 24-31-15 Latest Revision.	
17.	23180	SAFT Component Maintenance Manual with Illustrated Parts List	
18.	23186	CMM 24-30-05 Latest Revision.	



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19.	40176-4	SAFT Component Maintenance Manual with Illustrated Parts List CMM 24-32-03 Latest Revision.	
20.	447CH1		
21.	447CH8		
22.	1277		
23.	1656		
24.	1658	SAET Operating and Maintanance Manual for Ni Cd Aircraft Batteries	
25.	2376-1	SAFT Operating and Maintenance Manual for Ni-Cd Aircraft Batteries OMM 24-30-99 Latest Revision.	
26.	2778	OWIN 24-30-99 Latest Nevision.	
27.	4071-3		
28.	4076-15		
29.	4078		
30.	4078-19		

- (b) The Publication Master List Issue No. GAM/WS/P-13-2023 dated 06-10-2023 was reviewed during the audit, found the Illustrated Parts List for the additional SAFT part no requested were not listed in the Publication Master List. (NCR 01 raised).
- (c) The latest revision of SAFT Aircraft Battery CMM, IPL and Service Bulletins / Letters can be obtained from the website (https://saft4u.saft.com/en/user/login).
- (d) The workshop worksheet used to record the maintenance activities was the same worksheet template used for the other existing approved SAFT Aircraft Battery Type.

#### 5. Tools & Equipment's/Components/Spares

- (a) Tools / equipment / material was checked for availability and serviceability in accordance with the relevant maintenance data for the intended scope of maintenance.
- (b) List of tools / equipment found for tool control. The tool location and calibration due were also identified in the list for ease of monitoring.
- (c) List of equipment and tools available for the intended maintenance were as follows:

Description	P/N available during audit	QA Remarks
Battery Charger and	123020-001	CTE/250
Discharger (Christie)		
Servicing Kits	32480-001 and 33178-001	ST011 and ST239
Digital Insulation Multimeter	FLUKE 1587	CTE/74
(Capable to measure voltage		CTE/340
and current)		
Standard Mechanic's Tools	Commercially available	Commercially available
Infrared Thermometer	Commercially available	Commercially available



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		0	D0010-	T. C.		
		Climatic	BS2185	ST252		
	Temperature	Chamber				
	Sensor Test	Fluke	51 II	CTE/114		
	Unit –	Thermocouple				
		Thermometer				
	Vernier Caliper Torque Wrench Stiff Bristle Brush (non-		Commercially available	CTE/173, CTE/266, CTE/277		
			Commercially available	CTE/363, CTE/81, CTE/115,		
			commercially available	CTE/362		
			Commercially available	Commercially available		
	metallic)	(	Commercially available			
	Heat Gun		Commercially available	Commercially available		
			,	,		
7.	Conclusion					
	There was one	minor NCRs rais	sed during this audit and no m	ajor finding was found during the		
	audit. The audit	was determined	to be satisfactory in general. F	Respective auditee shall also take		
	the necessary a	ction to all issues	s highlighted by the auditor duri	ng the audit.		
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С	PREPARATION	AND APPROVA	AL			
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# Appendix 1

ITEM	GAM ID	DESCRIPTION	P/N OR MODEL	S/N	CALIBRATION DUE	LOC
1	CTE/340	FLUKE 1587 Insulation Multimeter	FLUKE 1587	5850084	SENT FOR CALIBRATION	L1
2	CTE/74	FLUKE 1587 Insulation Multimeter	FLUKE 1587	45330115	28-MAR-2024	L1
3	CTE/60	BC-9000 Battery Charger/ DC Power Supply (KIT)	4169	00000328	10-JULY-2024	L3
4	CTE/61	BC-8000 Battery Capacity/ Discharge Tester/ Battery Charger/ DC Power Supply (KIT)	4168	00001063	SENT FOR CALIBRATION	L2
5	CTE/64	GEDORE TBN 10 Preset Insulated Torque Wrench (30 ibf.in)	1050TW141	1JT000675	26-APR-2024	L1(2
6	CTE/65	GEDORE TSN 25 Preset Insulated Torque Wrench (115 ibf.in)	30150TW141	1JT000510	26-APR-2024	L1(2
7	CTE/66 C	UNI-T Infrared Thermometers	UT300S	N/A	21-MAR-2024	L1(4
8	CTE/67	Thermohygrometer (Spare)	HTC-1	N/A	27-APR-2024	L1(5
9	CTE/71	BC-7000 Battery Capacity Tester (KIT)	4167	00000213	03-FEB-2024	L3
10	CTE/363	Insulated Torque Wrench 1/4' Drive (10 - 50 ibf.in)	1050TW141	0918912697	01-JUN-2024	L2
11	CTE/81	Insulated Torque Wrench 1/4' Drive (30 - 150 ibf.in)	30150TW141	19083696	SENT FOR CALIBRATION	L1(3
12	CTE/108	HANNA Waterproof Tester	HI98129	1706302	08-JUL-2024	L1(5
13	CTE/111	Kennedy Quick Set Torque Screwdriver	QS50IH	6DS100456	SENT FOR CALIBRATION	L1(2
14	CTE/173	Vernier Caliper, Plastic	4113203	N/A	27-JAN-2024	L1(1
15	CTE/114	Fluke Thermocouple Thermometer	FLUKE 51 II	51008731MV	27-JAN-2024	L1
16	CTE/115	Insulated Torque Wrench 1/4' Drive (30 - 150 ibf.in)	30150TW141	0721903005	29-MAR-2024	L1(3
17	CTE/238	GO-NO-GO GAUGE	BS1073M	N/A	26-JAN-2024	L1(4
18	CTE/264	AC OUTLET ANALYSER WITH UK PLUG	776-8315	2146008	SENT FOR CALIBRATION	L1
19	CTE/266	Digital Calliper 5 Digit (0.01mm-150mm)	29422	N/A	24-MAR-2024	L1(1
20	CTE/277	Digital Calliper (0.01mm-150mm)	29422	N/A	25-MAY-2024	L1(1
21	CTE/362	Insulated Torque Wrench 1/4' Drive (30 - 150 ibf.in)	30150TW141	21121377	01-JUN-2024	L2
22	CTE/296	Datalogger Temperature	RS-172	210727891	24-MAY-2024	L1(6
23	CTE/298	Digital Hydrometer	DH-10C	AA021282	22-JUN-2024	L1
24	CTE/358	TORQUE SCREWDRIVER	151SP	0423400261	07-JUN-2024	L1(2
25	CTE/250	CHRISTIE REFLEX CHARGER ANALYZER RF80-M	N/A	123020-001	17-FEB-2024	NICA BATTE ROOI

List of Calibrated Tool