



**RETLIF
TESTING
LABORATORIES**

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Rapid Decompression Test Report

On

Avionics Switch

Part Number: CF 020400-062

Customer Name: Amphenol Military High Speed

Customer P.O.: 461138

Date of Report: December 15, 2022

Test Report No.: R-18001

Test Start Date: December 7, 2022

Test Finish Date: December 7, 2022

Lead Env. Test Technician: R. King

Approved By: N. Mirabile

Report Prepared By: J. Kennedy

Government Source Inspection: Not Applicable



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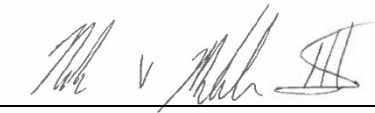
Report No. R-18001

Certification and Signatures

We certify that this report is a true report of the results obtained from the tests of the equipment stated and relates only to the equipment tested. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.



Ronald King
Lead Environmental Test Technician



Nicholas Mirabile
Assistant Environmental Laboratory Supervisor

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This report must not be used by the client to claim product endorsement by ANSI National Accreditation Board (ANAB).



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Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document:

Revision	Date	Pages Affected
-	December 15, 2022	Original Release



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Report No. R-18001

Test Program Summary

Test Report Number:	R-18001
Customer:	Amphenol Military High Speed
Address:	191 Delaware Avenue
	Sidney, NY 13838
Manufacturer:	Amphenol Military High Speed
Test Sample:	Avionics Switch
Part Number:	CF 020400-062
Serial Number:	Qual #1

Test Purpose

The purpose of this test program was to determine if the Avionics Switch could withstand the anticipated rapid decompression extremes in accordance with the method requirements of MIL-STD-810G as modified by Lockheed Martin Corporation Document Number: U2-SPEC-000027-0P.

Test Environment

All testing was performed at the Retlif Testing Laboratories, Ronkonkoma, New York facility. The test method was performed in the environment specified within the test standard.

Test Specification

Lockheed Martin Corporation, General Specification for U-2 Program Equipment and Components: Environmental Requirements, Document Number: U2-SPEC-000027-0P, Dated: June 21, 2019.

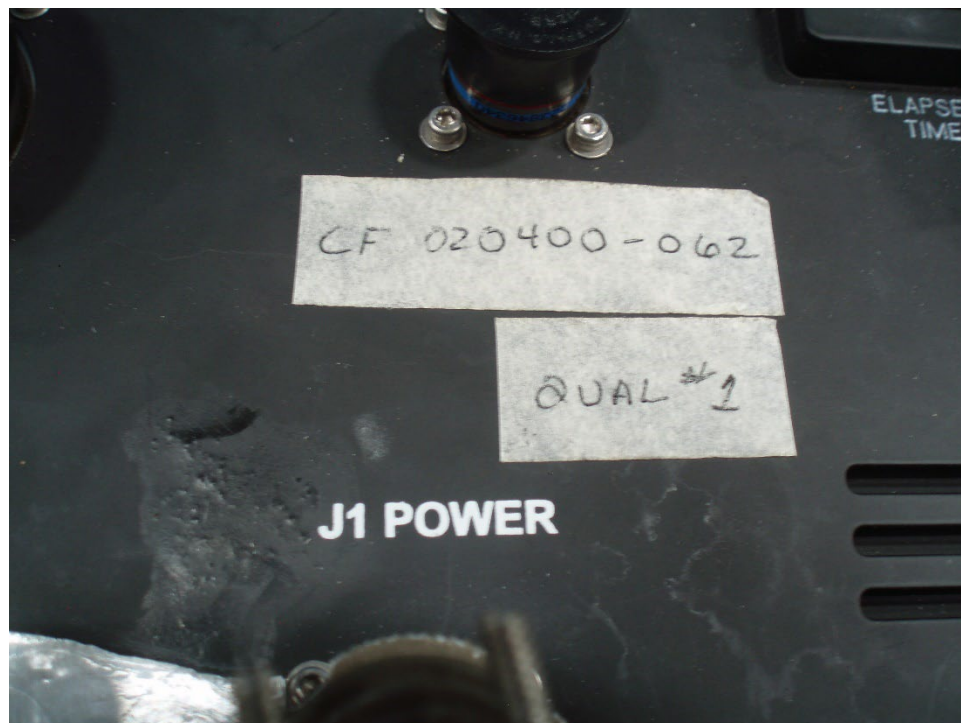


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EUT Identification Plate

The following photograph depicts the ID Label of the EUT:



Mode of Operation

During the performance of all testing specified herein, the equipment under test (EUT) was energized and establishing and maintaining links on all ports.

Acceptability Criteria

The following was considered EUT acceptability:

- No apparent physical damage
- Successful completion of Post Test ATP performed at Amphenol Military High Speed's facilities
- No damage, the EUT shall pass a post test functional

Input Voltage

The Avionics Switch was powered by 28 VDC with a nominal current of 2.5 Amperes.

Modifications

No modifications were made to the EUT during the course of this testing program in order to demonstrate compliance with the specified requirements.



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Test Method and Results

The following test method was performed on the Avionics Switch as shown in Table 1.

Table 1 - Test Method and Results

Testing Date	Test Method	Test Results
December 7, 2022	Rapid Decompression	Complied

Decision Rule

The following decision rule was applied to determine compliance based on the response or physical state of the test sample during or after testing in accordance with Retlif Testing Laboratories Quality Procedure RQP-005:

- Complied: The functional characteristics of the EUT remain within acceptable tolerance. No evidence of unacceptable EUT or Test conditions.
- Did Not Comply: The functional characteristics of the EUT does not remain within the acceptable tolerance. Any evidence of unacceptable EUT or Test conditions.



The test method listed above is included in Retlif Testing Laboratories ANSI National Accreditation Board (ANAB), ISO/IEC 17025 Scope of Accreditation, Certificate Number: L2320.



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**Rapid Decompression
Test Data**



Retlif Testing Laboratories

Report No. R-18001

TEST DATA SHEET	
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Test Method	Rapid Decompression	
Customer	Amphenol Military High Speed	
Job Number	R-18001	
Test Sample	Avionics Switch	
Part Number	CF 020400-062	
Serial Number	Qual #1	
Test Specification	Lockheed Martin Document Number: U2-Spec-000027-0P	Para: 4.3.2.2
Operating Mode	Energized and monitored	
Technician	R. King	
Date	12/07/22	
Notes:	Rapid decompression from 31,000Ft to 70,000Ft in 0.90 seconds or less. Test to be performed at ambient temperature conditions.	

[illegible]

Results:	There was no apparent visual damage noted as a result of this test. The EUT operated properly where required during, and after exposure. The Avionics Switch met the requirements of the Rapid Decompression test.
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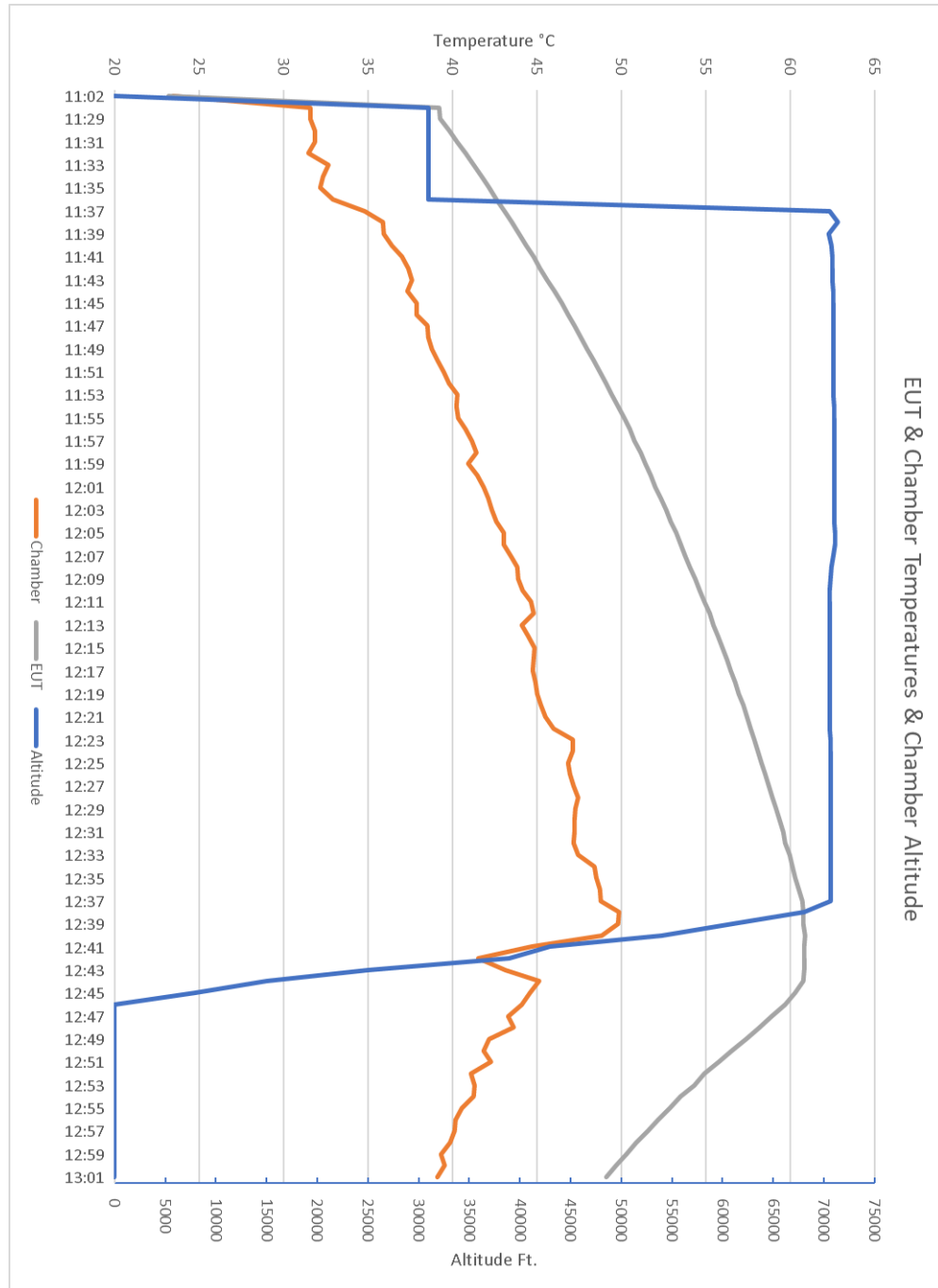


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Customer:	Amphenol Military High Speed	Job No.:	R-18001	Page:	2	of	3
Test Sample:	Avionics Switch	Technician:	R. King				
Part No:	CF 020400-062	Date:	12/07/22				
Test Method:	Rapid Decompression	Notes:	EUT & chamber temperatures & altitude.				

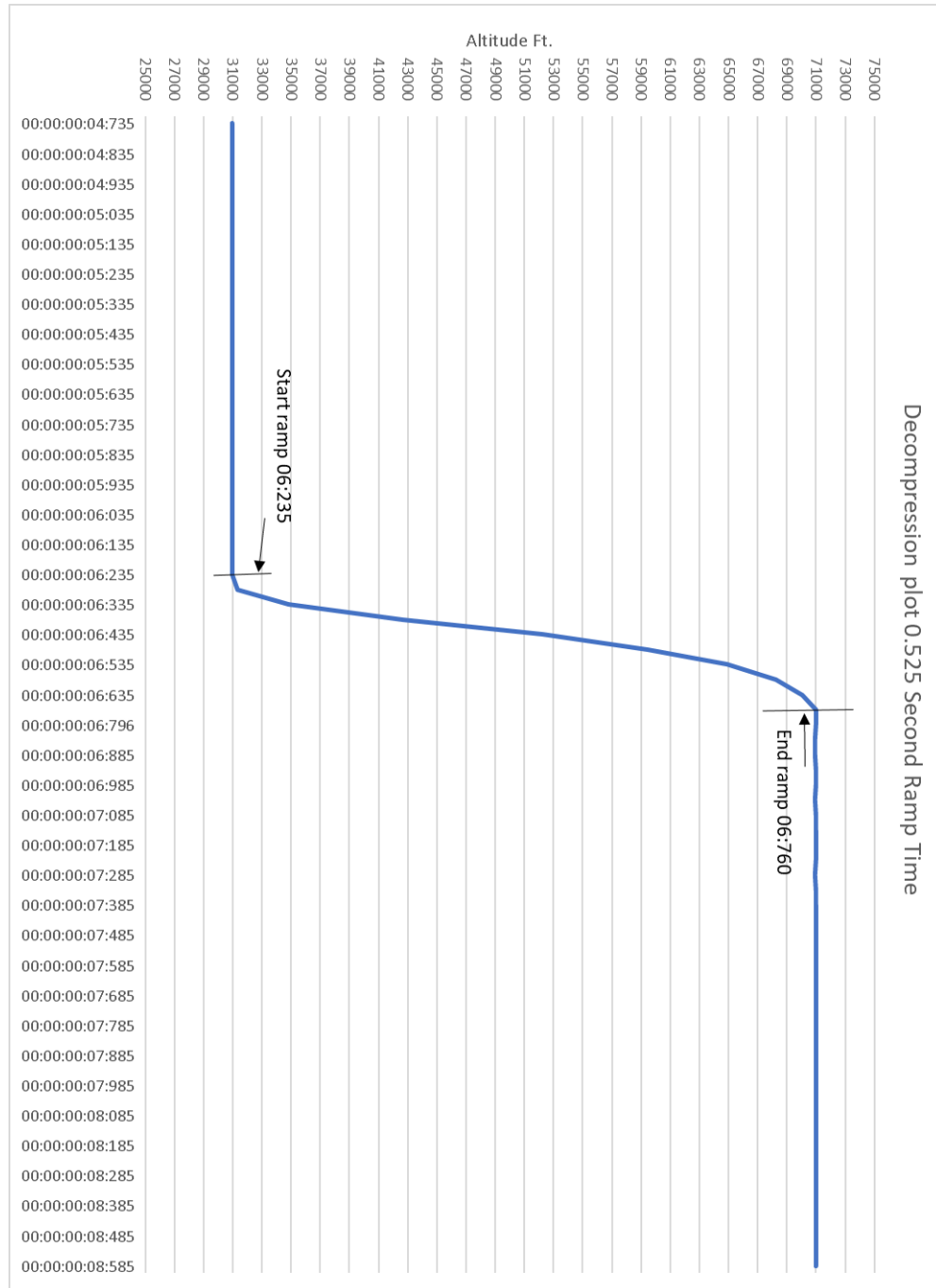


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Customer:	Amphenol Military High Speed	Job No.:	R-18001	Page:	3	of	3
Test Sample:	Avionics Switch	Technician:	R. King				
Part No:	CF 020400-062	Date:	12/07/22				
Test Method:	Rapid Decompression	Notes:	Altitude ramp chart.				



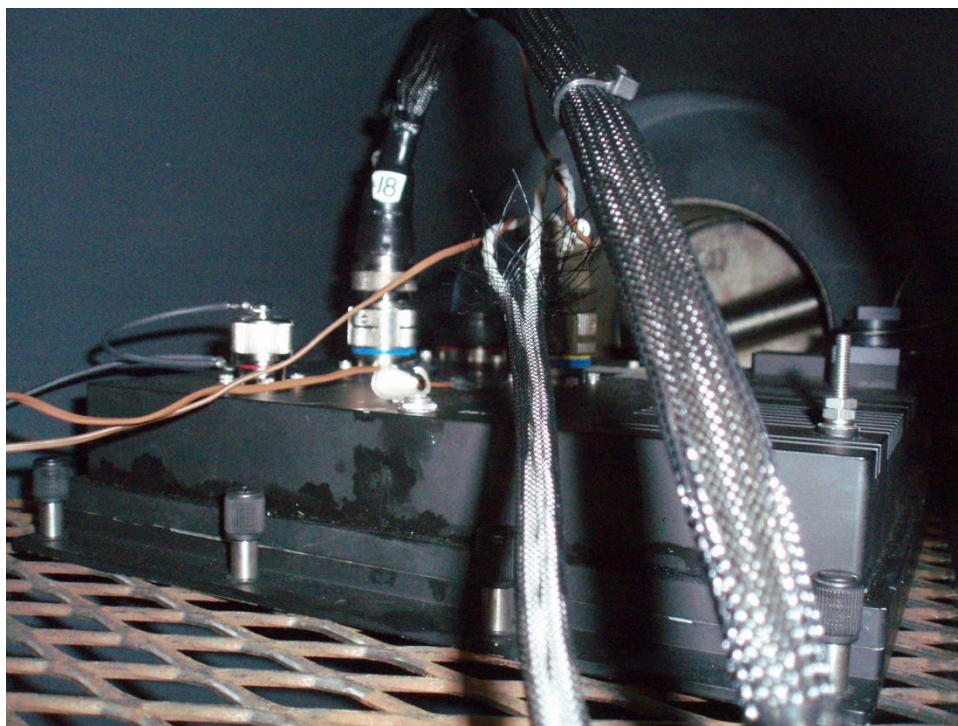
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Test Photographs Rapid Decompression



Test Setup



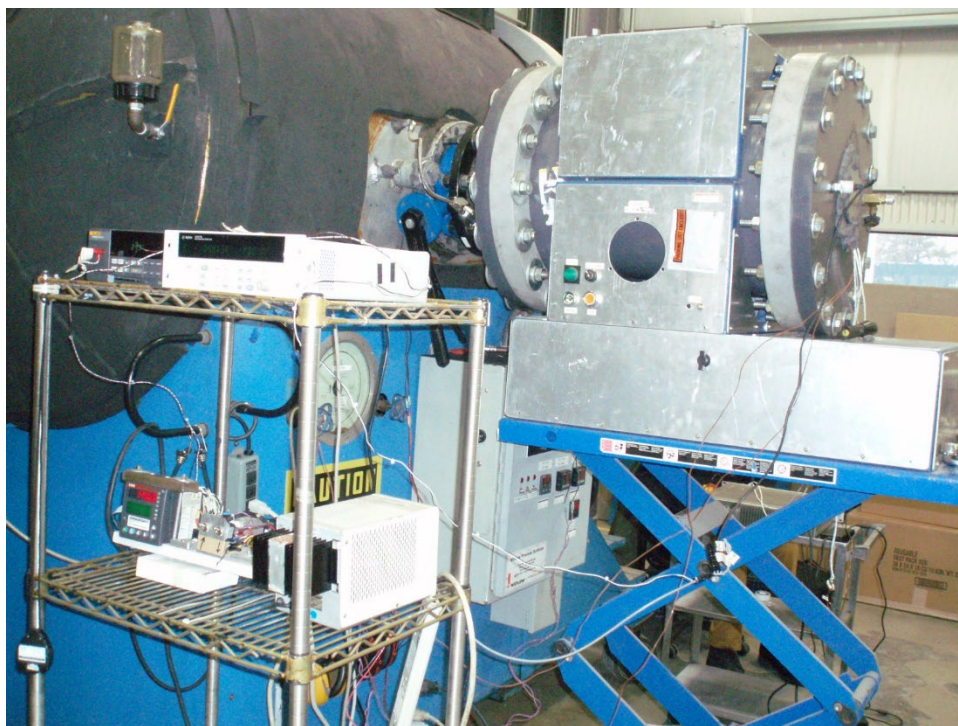
Test Setup



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Test Photographs Rapid Decompression



Support Equipment



Support Equipment



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Equipment List Rapid Decompression

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
1536	ACCUSPLIT	AX725	STOPWATCH, 0 - 60 sec	CTA82558	6/30/2023
1630	WATLOW	F4DH-KKKK-21AF	CONTROLLER, PROGRAMMABLE	013717-0824	No Calibration
1780	ASHCROFT	G37M0215F215 #A-XRH	TRANSDUCER, PRESSURE, 0 - 15 PSIA	8061513163	10/31/2023
696	BK PRECISION	1730	POWER SUPPLY, DC, 30V/3A	263-02519	Calibrate Before Use
768	AMERICAN RESEARCH	77-70K	CHAMBER, EXPLOSION, 0 - 70,000Ft/77cuFt	101	6/30/2023
768G	WALLACE & TIERNAN	FA-129	GAUGE, ALTITUDE, 0.5 - 31 INHG VAC	EE 02255	3/31/2023
795	AGILENT / HP	34970A	DATA LOGGER, N/A	US37042393	6/30/2023
982	FLUKE	2635A	DATA LOGGER	6564300	9/30/2023



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