

ENGINEERING SUMMARY REPORT

REPORT NO. ESR-11067

REPORT DATE: 03/20/25

Revision: A

Amphenol Corporation Aerospace Operations
Sidney, NY 13838-1395

TITLE: 38999 Vibration Test on Enhanced Ratchet 2M 805	Project No.	0798139
	CLT	11067

Distribution: Test Lab, C. Cole, J. Sheeler, J. Swider, R. Barnes, P. Cook, N. Patel, K. Christoffersen

Purpose: Evaluate performance of Enhanced Ratchet 2M 805 prototypes.

Conclusions: The Enhanced Ratchet 2M 805 prototypes are capable of meeting MIL-DTL-38999 performance requirements.

Recommendations: Enhanced Ratchet 2M 805 connectors meet the performance of the criteria described within; they can move into production.

References: MIL-DTL-38999; EIA-364-28 VI J

Summary:

Size 8, 9, 11 and 12 Enhanced Ratchet 2M 805 prototype connectors were subjected to 38999 Vibration testing to prove out the performance of their design. The following table shows an outline of the different tests performed organized by the work order submitted to Amphenol's test lab.

CLT	Connectors Tested	Description	Results
11067	Enhanced Ratchet 2M 805 Size 8, 9, 11, 12	38999 Vibration Testing, 5G2 PSD profile at ambient temperature.	All connectors tested meet requirements.

Prepared: C. Cole	Approved:	Witnessed:
Date: 03/20/2025	Date:	Date:

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Summary (continued):

CLT 11067 Test Outline:

The Enhanced Ratchet 2M 805 test sequence was developed to test the performance of the ratcheting system under an elevated vibration profile for size 8, 9, 11, and 12 connectors.

CLT 111067 Test Samples

The following samples were subjected to the Vibration test. All samples were prepared with nominal OD wire.

Sample ID	AAO Part Number	Size-Arrangement	Connector Type	Sample Plating Finish
1R1	XP10-790582-04P	8-04	Wall Mount Recpt.	Passivated Stainless
1P1	XP10-79060C-04S	8-04	Straight Plug	Passivated Stainless
1R2	XP10-790583-10P	9-10	Wall Mount Recpt.	Passivated Stainless
1P2	XP10-79060D-10S	9-10	Straight Plug	Passivated Stainless
1R3	XP10-790585-19P	11-19	Wall Mount Recpt.	Passivated Stainless
1P3	XP10-79060F-19S	11-19	Straight Plug	Passivated Stainless
1R4	XP10-790586-26P	12-26	Wall Mount Recpt.	Passivated Stainless
1P4	XP10-79060G-26S	12-26	Straight Plug	Passivated Stainless

CLT 11067 Tests Performed

Group 1 - 2 Mated Pairs, Samples to be prepped with nominal od wire.	Requirements MIL-DTL-38999 Section	Test Section MIL-DTL-38999	Qty Tested/ Qty Passed	Date of Test
Random Vibration	3.27	4.5.23.2.4	4 Pair/4 Pair	2/17/25-2/25/25

See Appendix A for Detailed Data Sheets.

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APPENDIX A

CLT 11067 Test Results

Prepared: C. Cole	Approved:	Witnessed:
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Vibration		Temp. (°C) (15-35)	R.H. (%) (20-80)	CLT 11067	Report D25-0018
Test Equipment & Tools		Ambient	Ambient	Operator:	Date
ID	Description	Cal Date	Due Date	A. Hosier	See Vibration Report
				Reviewed:	Date

Vibration per MIL-DTL-38999N paragraphs 3.27 and 4.5.23.2.4, using 5G2 PSD profile from Figure 25 at ambient temperature. The duration of the test to be 8 hours in the longitudinal direction and 8 hours in the perpendicular direction. Microsecond discontinuity to be monitored per EIA-364-46. For complete details of testing reference separate Vibration Report.

Sample ID	AAO Part Number	Status
Pair #1	XP10-79060C-04S	Compliant
	XP10-790582-04P	
Pair #2	XP10-79060D-10S	Compliant
	XP10-790583-10P	
Pair #3	XP10-79060F-19S	Compliant
	XP10-790585-19P	
Pair #4	XP10-79060G-26S	Compliant
	XP10-790586-26P	

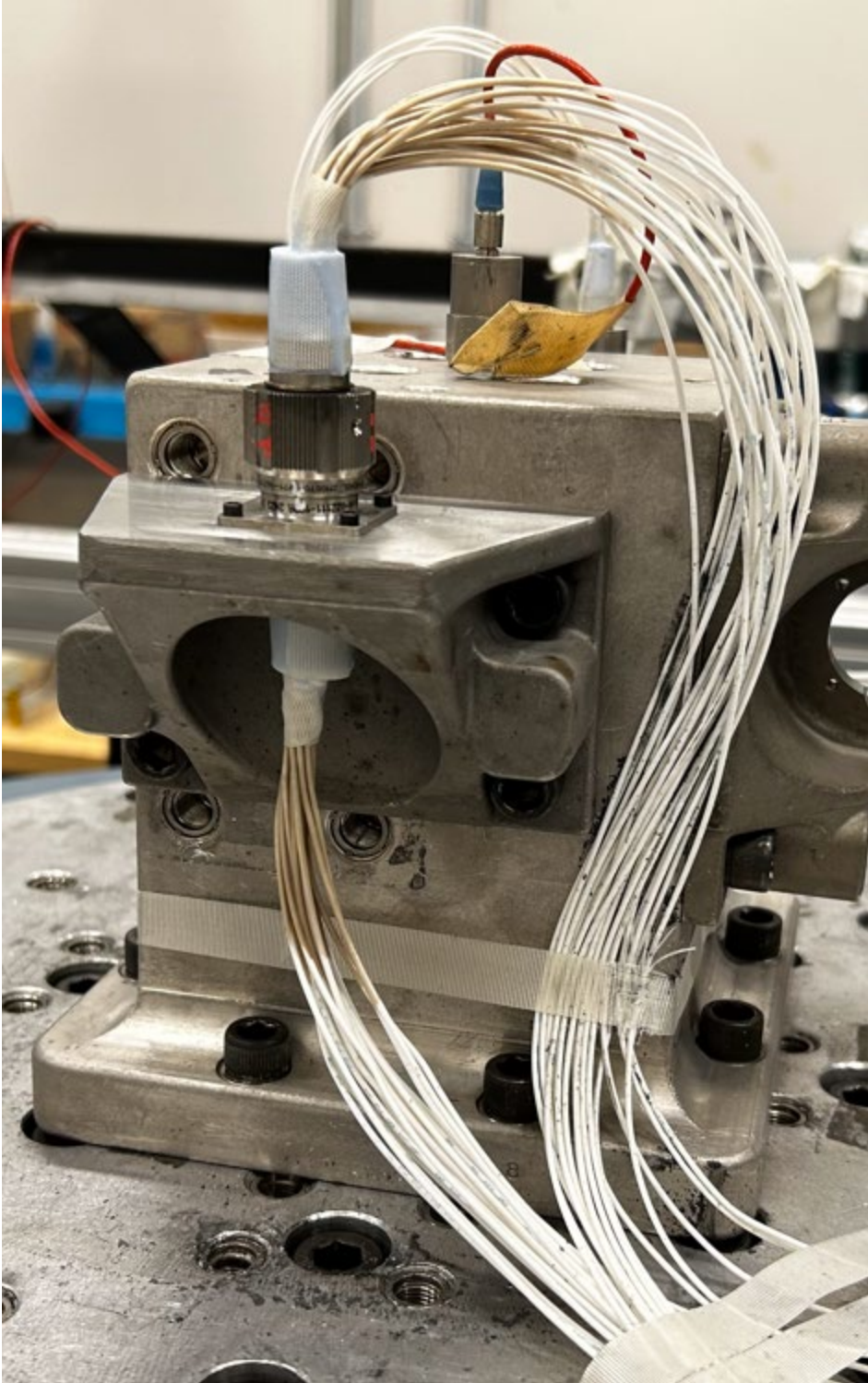
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