

Test Report

AUQ Servo Cylinder Pressure Testing

23106R1BMV2

Version 2

2/28/2025

Prepared By: Margarito Quiroz
Quality Associate

Reviewed By: Brian Morales 2/26/2025
Test Engineer Date

Approved By: Emily Krysinski 2/27/2025
Quality Associate Date



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Version	Date	Comments	Prepared By	Reviewed By	Approved By
1	2/28/2025	Initial release	Margarito Quiroz	Brian Morales	Emily Krysinski
2	2/28/2025	Per vendor request, Test title was changed to AUQ Servo Cylinder Pressure Testing. UltraMotion was relaced with Ultra Motion.	Margarito Quiroz	Brian Morales	Emily Krysinski

Deviation No.	Test Name	Description
-	-	-

Job Name	Subsea Wetmate Build-Up
Job No.	23106
Client Job Number	N/A
Client	Ultra Motion
Delivery Address	N/A
Contact Name	Tom Quartararo
Telephone No.	888-321-9178
Email	tom@ultramotion.com
Controlling Document	23106 Scope of Work

Test Name	Serial No.	Start Date	End Date	Pass	Fail	Record
AUQ Servo Cylinder Pressure Test	10123256	2/21/2025	2/21/2025	X	-	-

Summary of Testing
<p>An Ultra Motion Servo Cylinder underwent Pressure testing in accordance with 23106 Scope of Work. The actuator was tested at different pressurized set points to verify functionality at 15ksi. The actuator experienced no loss of connection or damage after being pressurized. Refer to the Test Data page for detailed results regarding the actuator.</p>

#	Test Name	Serial No.	Group 1
1	Actuator Pressure Test	10123256	X

Date Received	1/13/2025
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Description of Samples	AUQ Servo Cylinder
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Special Handling Instructions	-
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Serial No.	Test Group	Part Name	Part No.	Date Code
10123256	1	Ultra Motion AUQ Servo Cylinder	AUQZ8D-B5M0E4	-

ID No.	Equipment Name	Manufacturer	Model No.	Cal. Date	Cal. Due
WT012	F4T DIN CONTROLLER BOX	WATLOW	F4T	10/31/2024	10/31/2025
VL29	DOUBLE FLANGED PRESSURE VESSEL 6" X 36"	-	-	-	-
PV061	PRESSURE TRANSDUCER	OMEGA	PX01S1-20KG10T	10/31/2024	10/31/2025

Pretest Sample Conditions

Test sample had no visually apparent defects when received.

Posttest Sample Conditions

Test sample had no visually apparent defects after testing.

Test Name	AUQ Servo Cylinder Pressure Testing	Test Start Date	2/21/2025
Job Number	23106	Test End Date	2/21/2025
Client Job Number	N/A		
Test Performed by	Brian Morales, Mehrdad Mostoufi, Daniel Peña		
Serial Number	10123256		
Equipment Used	WT012, VL29		
Test Specification	23106 Scope of Work		

Test Parameters

Note: Actuation consists of full extension and retraction.

1. Test actuator at ambient temp prior to placing in vessel to assure functionality.
2. Mount actuator to test fixture, place in water filled vessel and begin recording pressure.
3. Test actuator submerged in water prior to pressurizing vessel.
4. Pressurize vessel to 7,500 psi and hold for 2 minutes.
5. Actuate test unit.
6. Pressurize vessel to 10,000 psi.
7. Actuate test unit upon reaching 10,000 psi.
8. Hold at pressure for 5 minutes.
9. Actuate test unit after 5 minute hold.
10. Pressurize vessel to 12,500 psi and hold for 2 minutes.
11. Actuate test unit after 2 minute hold.
12. Pressurize vessel to 15,000 psi.
13. Actuate test unit upon reaching 15,000 psi.
14. Hold pressure for 5 minutes minimum.
15. Actuate test unit after 5 minute hold.
16. Bring pressure down at a minimum rate of 500 psi/min to ambient pressure.
17. Stop recording pressure and remove test unit.
18. Inspect test unit for damage and functionality.

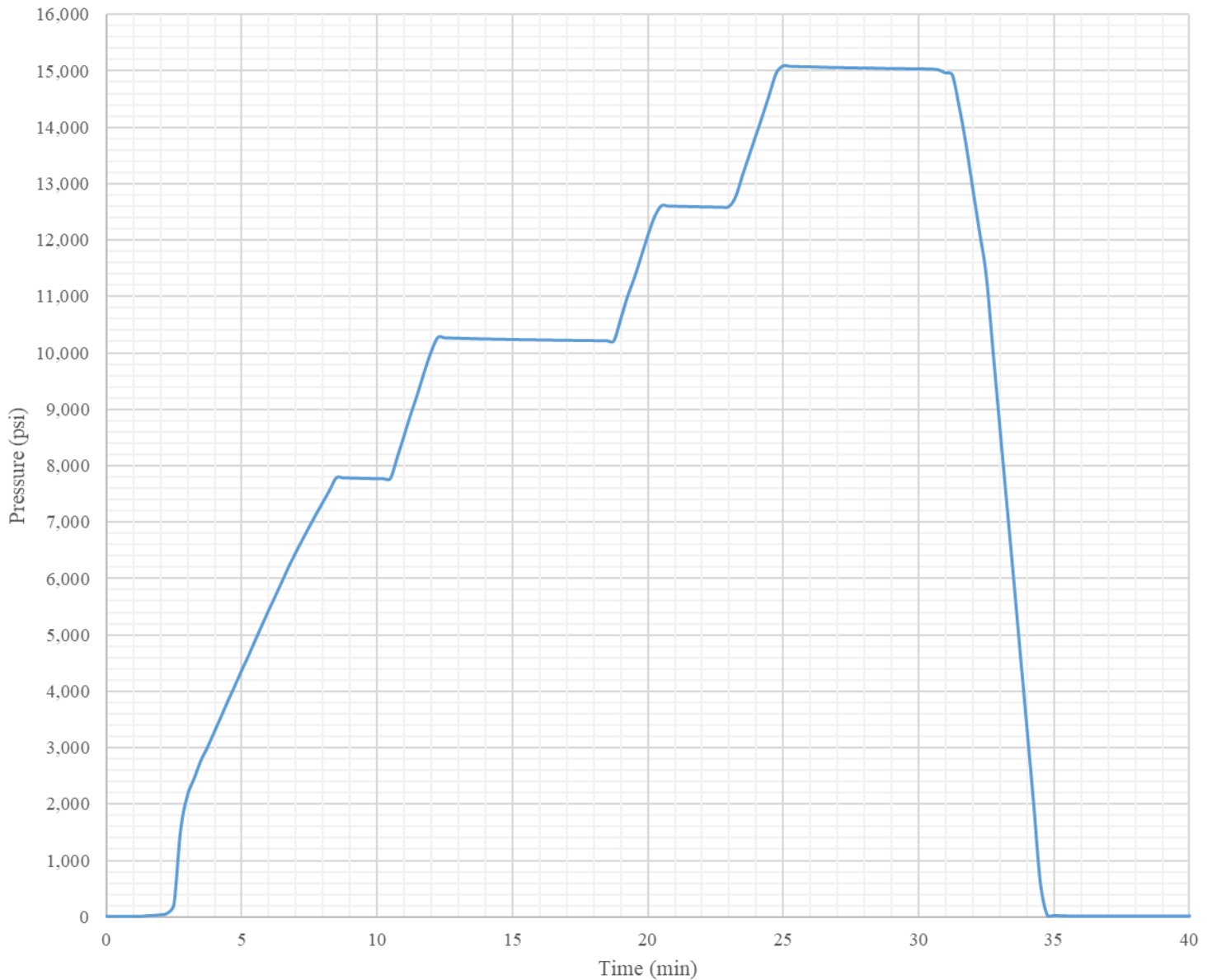
Pass/Fail Criteria:

1. No loss of connection to test unit.
2. Actuation at all pressure intervals with full extension and retraction.
3. No damage to test unit after pressure testing.

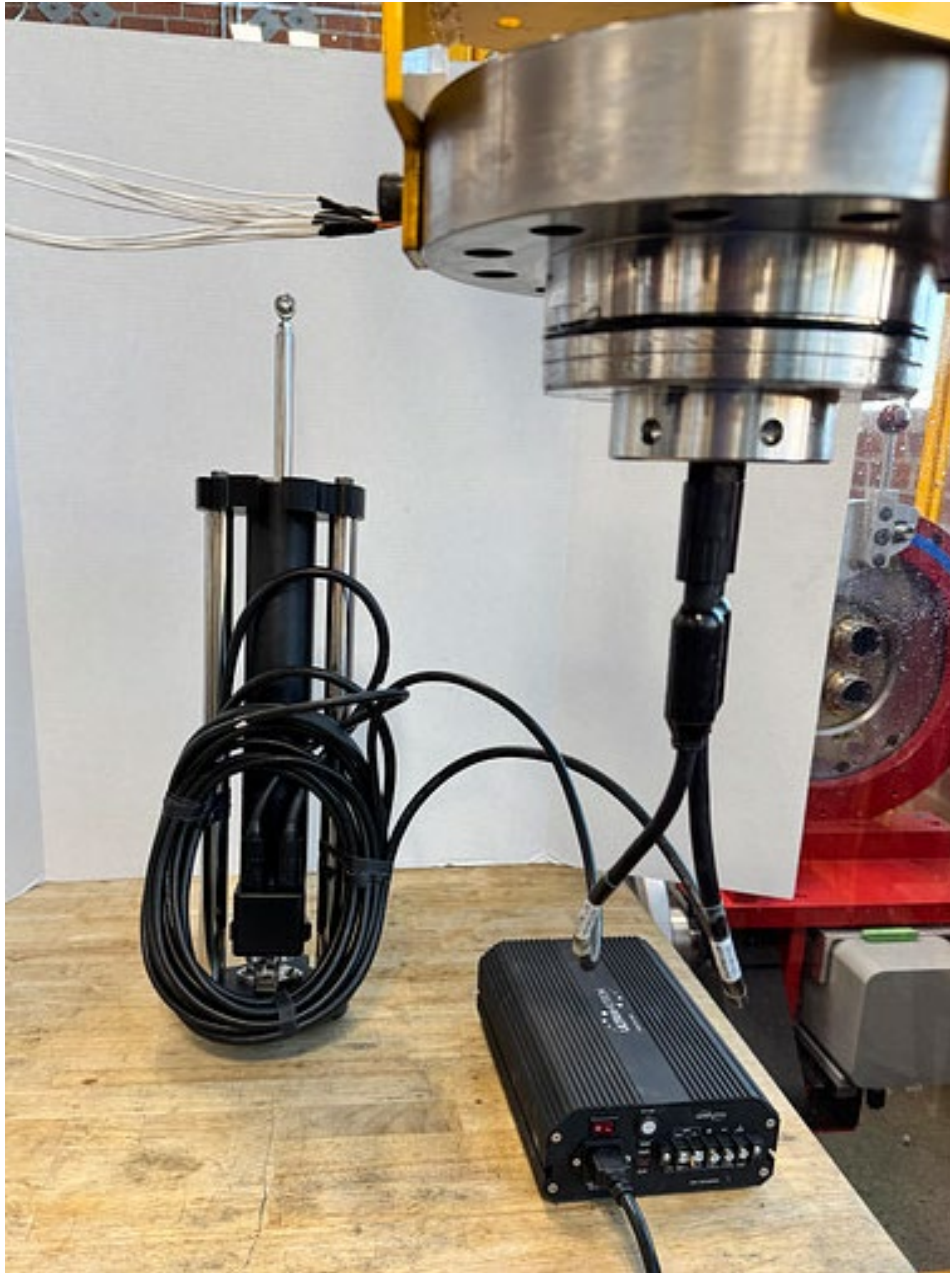
Sample conditions were altered:	Yes	No	Notes:	N/A			Pass	Fail	Record
	-	X					X	-	-
Test Setup Verified by:	Mehrdad Mostoufi				Test Data Reviewed by:	Brian Morales			
Date:	2/18/2025				Date:	2/26/2025			
If applicable, list any Test Deviations:		N/A							
Date:		N/A							

Testing Results			
Pressure (psi)	Hold Time (min)	Pre-Pressure Hold	Post-Pressure Hold
Ambient	-	Actuation verified prior to submerging in water	N/A
7,500	2	Not Tested	Successful actuation
10,000	5	Successful actuation	Successful actuation
12,500	2	Not Tested	Successful actuation
15,000	5	Successful actuation	Successful actuation
Ambient	-	N/A	Successful actuation verified while submerged and after removal
Test Notes			
Intermediate pressure values of 7,500 and 12,500 psi were not actuated upon achieving initial pressure rating but verified post-pressure hold time. The actuation process involved full extension and retraction with software continuously confirming its position at each stage of testing.			

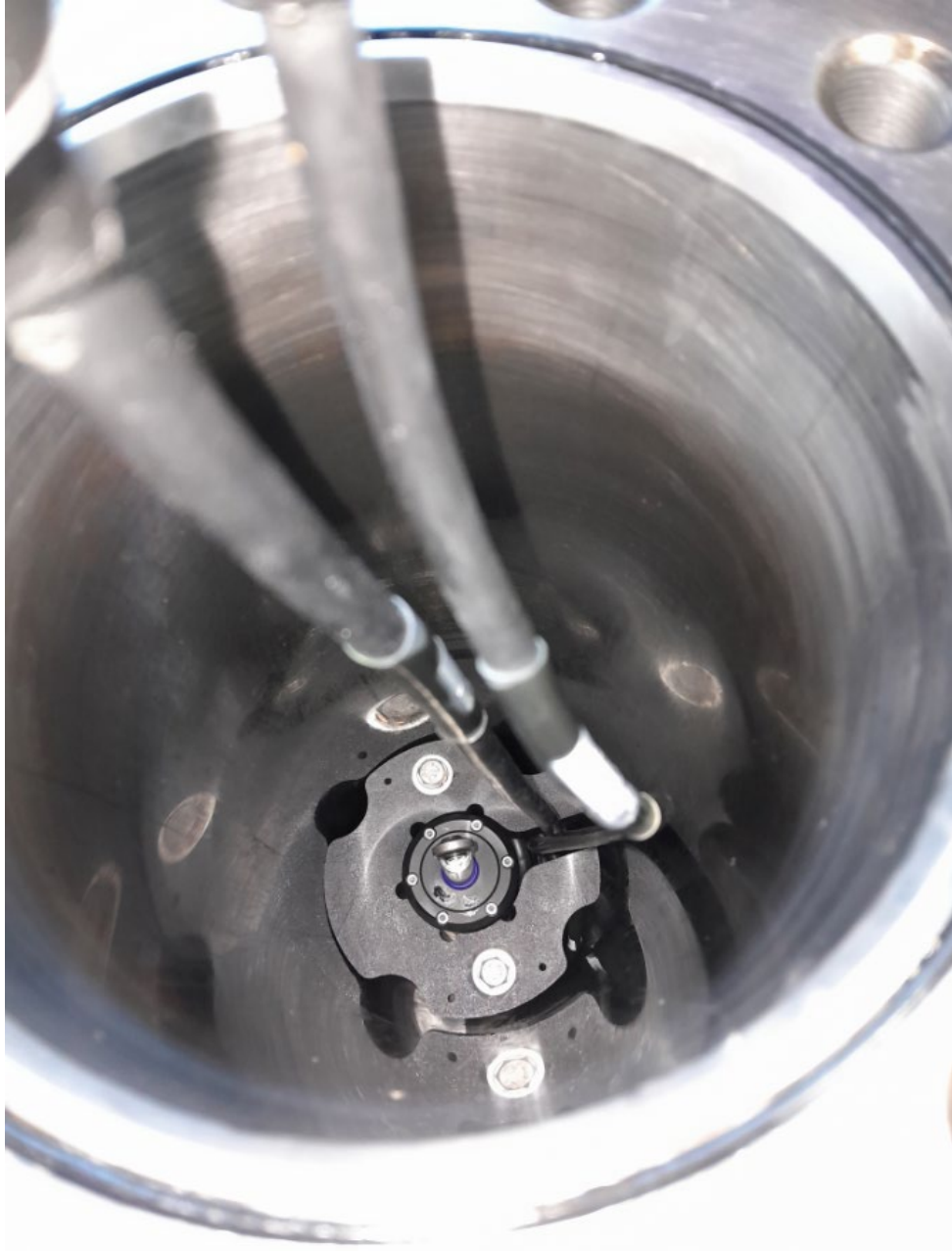
Ultra Motion AUQ Servo Cylinder Testing to 15ksi



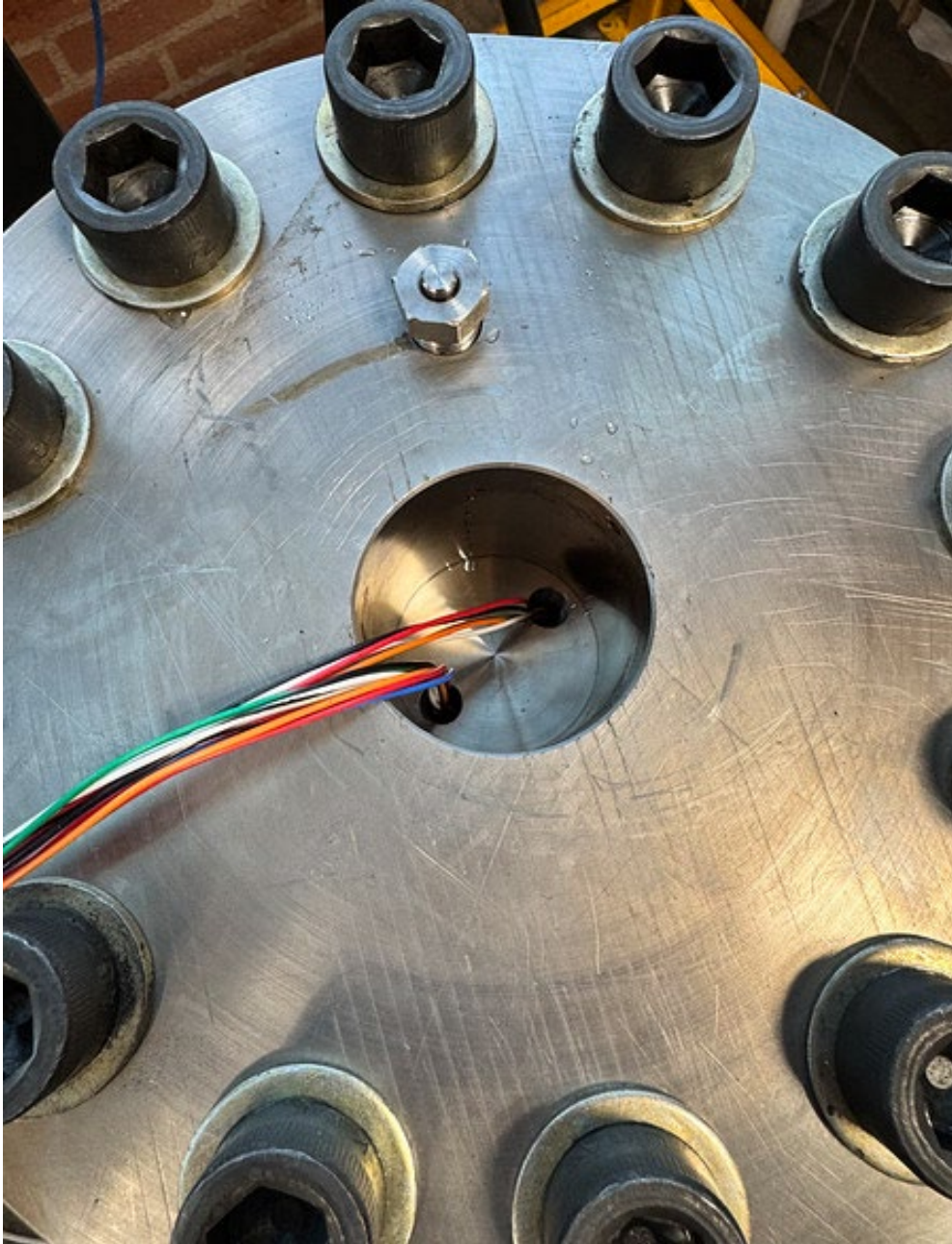
Description	AUQ Servo Cylinder Pressure Test Plot
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



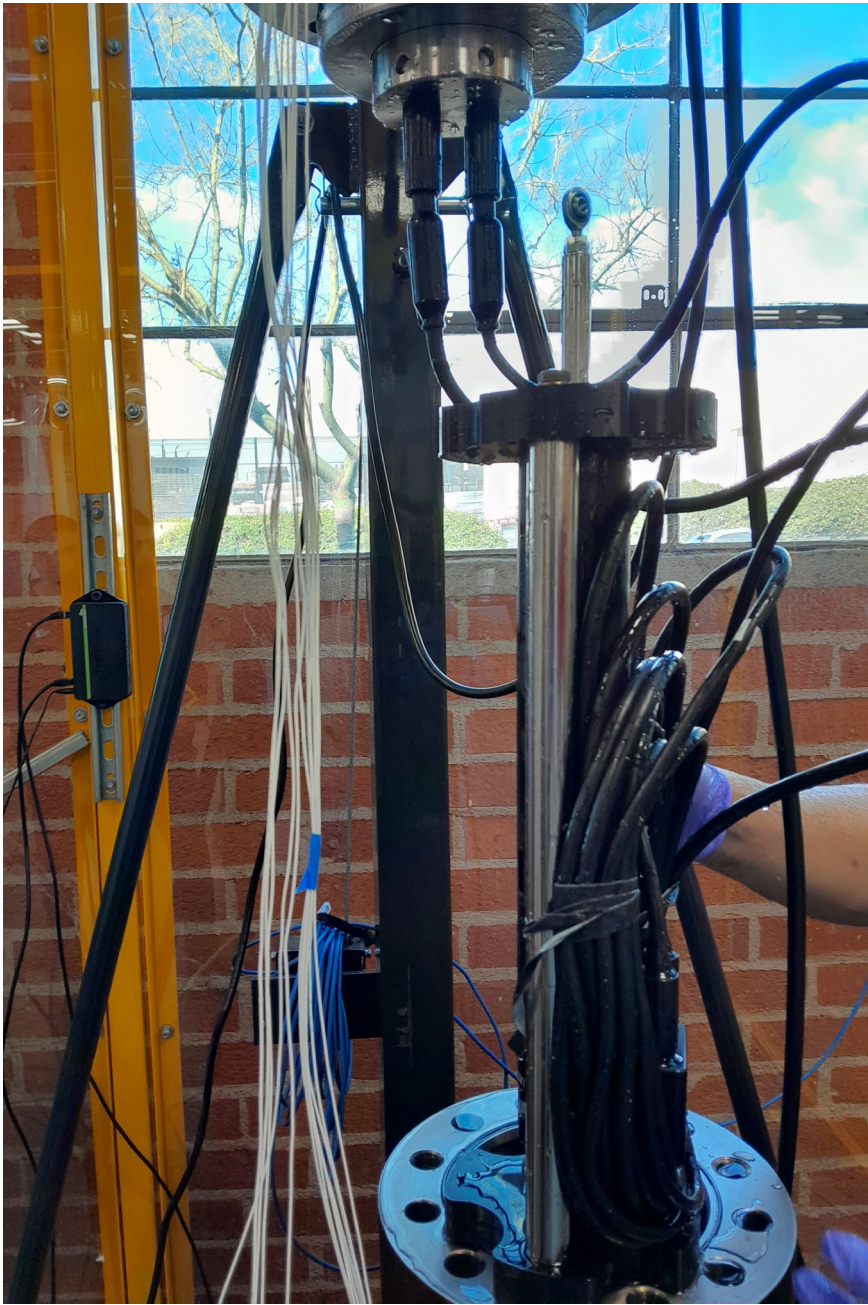
Description	Pre-Pressure setup
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



Description	Actuator in pressure vessel
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



Description	Wire feed through flange
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



Description	Post-Pressure
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



Description	Post pressure actuation, full extension
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



Description	Post pressure inspection
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256



Description	Serialized Units
Test Name	AUQ Servo Cylinder Pressure Test
Part Name	Ultra Motion AUQ Servo Cylinder
Test Group	1
Part No.	AUQZ8D-B5M0E4, Female-Female AU Cable Set-5 Meter, MCBH8MAS, MCBH5MAS
Serial No.	10123256

End of Report