

Ultrasonic Wind Sensor Analysis

Report Number: 050813-Z1940001 **Date Tested:** May 8, 2013

Description: Ultrasonic Wind Sensor **Model Number:** WS425S

Serial Number: Z1940001 **RMA Number:** 139173

Customer: MONTEREY BAY AQUARIUM RESEARCH **Procedure:** 11603119
City, State: MOSS LANDING CA.

Reason for Return: EVALUATE

Problem Found: BROKEN TRANSDUCERS, OLD FIRMWARE

Action Taken: REPLACED ARRAY, UPGRADED FIRMWARE

Final Test Results

Zero Wind Calibration	Wind Tunnel Verification	Sensor Current Test	Heater Test
Pass	Pass	Pass	N/A

Analog Output Test	RS-232 Test	SDI-12	RS-485 Test
Pass	Pass	Pass	N/A

Wind Speed Results

*Wind Tunnel Wind Speed Reading (mph)	*Unit Under Test Wind Speed Reading	Unit Under Test $\pm$ Tolerance, mph	Error	Status
0.0	0.0	0.3	0.0	Pass
24.5	24.6	0.7	0.1	Pass

Wind Direction Results

*Wind Direction Degrees	*Unit Under Test Wind Direction	Unit Under Test $\pm$ Tolerance, °	Error	Status
170	170	2	0	Pass
290	290	2	0	Pass
50	50	2	0	Pass

* Each wind speed and direction measurement represents the average of 10 consecutive readings.

Prior to measurement the wind tunnel was verified against a NIST traceable reference standard (WS425). Even though the wind tunnel is tested against a NIST reference standard, the results are not directly traceable to NIST.



Technical Operator
Paul Joyce