



Factory Production Certificate

Part# 599501-00

Product Name: EXO3 Plugged Unit

Serial #: 20J100898

Certificate Generation Date: Mon, Mar 20, 2023

Pressure Leak Test : Cycle Results: PASS

Operator: **Carol Flory**

(This test applies air pressure on the sonde in a controlled chamber and measures pressure decay to determine a leak rate. If a leak rate outside the limits is detected it will fail the test)

Cycle Start Test Date (MM/DD/YYYY)	3/20/2023	Leak Rate High Limit	0.01
		Leak Rate Low Limit	0.0
Test Result	PASS	Actual Leak Rate	5.21976798772816E-03

Functional Test Results: Cycle Results:

Operator:

(This test is a verification of the final sonde functional tests, a summary of test results is presented below)

Bluetooth Test		Port 1 Test	PASS
Internal Pressure		Port 2 Test	PASS
Communication Test	PASS	Port 3 Test	PASS
Cable Power Test	PASS	Port 4 Test	PASS
Battery Power Test	PASS	Port 5 Test (EXO2 Only)	
SD Card Test		Port 6 Test (EXO2 Only)	
LED Indicator Test		Port 7 Test (EXO2 Only)	
PCB Serial Number		AUX Port Test (EXO2 Only)	
Depth Sensor (if equipped)			
Final Test Results			

Statement of Results:

This "Factory Production Certificate" is provided for informational purposes only. This limited summary of factory test results during the manufacturing process. All sensors and sondes must be user calibrated before initial use following acceptable operating procedures. Routine calibration and maintenance of the EXO platform is necessary to achieve accurate water quality data.

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 10:43:53 AM

Calibration End Time: 3/20/2023 10:44:13 AM

Parameter: Wiper Position (volt)

Instrument:

Type: EXO3

Name: Sonde 20J100898

Serial Number: 20J100898

Firmware Version: 1.0.86

Sensor:

Type: Wiper

Serial Number: 20H102881

Firmware Version: 3.0.11

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

Pre Calibration Home Voltage: 1.200 V

Post Calibration Home Voltage: 1.187 V

Wiper Brush Replacement Date: <Unknown>

Notes:

Calibration Points:

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 11:00:28 AM

Calibration End Time: 3/20/2023 11:04:39 AM

Parameter: pH

Instrument:

Type: EXO3

Name: Sonde 20J100898

Serial Number: 20J100898

Firmware Version: 1.0.86

Sensor:

Type: pH

Serial Number: 20J100817

Firmware Version: 3.0.0

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

pH Range: 4.00 pH - 7.00 pH

Delta Slope 179.0 mV

mV per Decade 59.68

pH Range: 7.00 pH - 10.00 pH

Delta Slope 172.9 mV

mV per Decade 57.64

Sensor Module Replacement Date: 3/20/2023

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 7.23 pH

Post Calibration Value: 7.00 pH

Raw Calibration Value: -13.5 mV

Temperature: 20.083 °C

Standard Value: 7.00 pH

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 10:45:10 AM

Calibration End Time: 3/20/2023 10:51:13 AM

Parameter: DO (% Sat)

Instrument:

Type: EXO3

Name: Sonde 20J100898

Serial Number: 20J100898

Firmware Version: 1.0.86

Sensor:

Type: DO

Serial Number: 22A106732

Firmware Version: 3.0.5

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

DO Cap Serial Number: 23A103718

DO Cap Replacement Date: 3/20/2023

DO Gain: 1.06

DO (mg/L): 9.58 mg/L

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 94.4 % Sat

Post Calibration Value: 99.9 % Sat

Raw Calibration Value: 0.0 % Sat

Temperature: 17.253 °C

Standard Value: 100.0 % Sat

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Barometer: 760.0 mmHg

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 10:54:02 AM

Calibration End Time: 3/20/2023 10:58:35 AM

Parameter: Cond ($\mu\text{S}/\text{cm}$)

Instrument:

Type: EXO3

Name: Sonde 20J100898

Serial Number: 20J100898

Firmware Version: 1.0.86

Sensor:

Type: Wiped Conductivity And Temperature

Serial Number: 20G104597

Firmware Version: 3.0.5

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

Cell Constant: 0.53

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 8785.0 $\mu\text{S}/\text{cm}$

Post Calibration Value: 10000.0 $\mu\text{S}/\text{cm}$

Raw Calibration Value: 0.0 $\mu\text{S}/\text{cm}$

Temperature: 19.549 $^{\circ}\text{C}$

Standard Value: 10000.0 $\mu\text{S}/\text{cm}$

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True



Factory Production Certificate

Part# 599501-00

Product Name: EXO3 Plugged Unit

Serial #: 20J100899

Certificate Generation Date: Mon, Mar 20, 2023

Pressure Leak Test : Cycle Results: **PASS**

Operator: **Carol Flory**

(This test applies air pressure on the sonde in a controlled chamber and measures pressure decay to determine a leak rate. If a leak rate outside the limits is detected it will fail the test)

Cycle Start Test Date (MM/DD/YYYY)	3/20/2023	Leak Rate High Limit	0.01
		Leak Rate Low Limit	0.0
Test Result	PASS	Actual Leak Rate	3.84848102738589E-03

Functional Test Results: Cycle Results:

Operator:

(This test is a verification of the final sonde functional tests, a summary of test results is presented below)

Bluetooth Test		Port 1 Test	PASS
Internal Pressure		Port 2 Test	PASS
Communication Test	PASS	Port 3 Test	PASS
Cable Power Test	PASS	Port 4 Test	PASS
Battery Power Test	PASS	Port 5 Test (EXO2 Only)	
SD Card Test		Port 6 Test (EXO2 Only)	
LED Indicator Test		Port 7 Test (EXO2 Only)	
PCB Serial Number		AUX Port Test (EXO2 Only)	
Depth Sensor (if equipped)			
Final Test Results			

Statement of Results:

This "Factory Production Certificate" is provided for informational purposes only. This limited summary of factory test results during the manufacturing process. All sensors and sondes must be user calibrated before initial use following acceptable operating procedures. Routine calibration and maintenance of the EXO platform is necessary to achieve accurate water quality data.

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 12:58:36 PM

Calibration End Time: 3/20/2023 12:58:40 PM

Parameter: Wiper Position (volt)

Instrument:

Type: EXO3

Name: Sonde 20J100899

Serial Number: 20J100899

Firmware Version: 1.0.86

Sensor:

Type: Wiper

Serial Number: 20H102882

Firmware Version: 3.0.11

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

Pre Calibration Home Voltage: 1.200 V

Post Calibration Home Voltage: 1.201 V

Wiper Brush Replacement Date: <Unknown>

Notes:

Calibration Points:

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 12:36:26 PM

Calibration End Time: 3/20/2023 12:43:13 PM

Parameter: pH

Instrument:

Type: EXO3

Name: Sonde 20J100899

Serial Number: 20J100899

Firmware Version: 1.0.86

Sensor:

Type: pH

Serial Number: 20J100818

Firmware Version: 3.0.0

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

pH Range: 4.00 pH - 7.00 pH

Delta Slope 176.9 mV

mV per Decade 58.97

pH Range: 7.00 pH - 10.00 pH

Delta Slope 178.9 mV

mV per Decade 59.64

Sensor Module Replacement Date: 3/20/2023

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 7.16 pH

Post Calibration Value: 7.00 pH

Raw Calibration Value: -9.2 mV

Temperature: 20.666 °C

Standard Value: 7.00 pH

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 12:50:27 PM

Calibration End Time: 3/20/2023 12:51:13 PM

Parameter: DO (% Sat)

Instrument:

Type: EXO3

Name: Sonde 20J100899

Serial Number: 20J100899

Firmware Version: 1.0.86

Sensor:

Type: DO

Serial Number: 20H103032

Firmware Version: 3.0.5

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

DO Cap Serial Number: 23A103719

DO Cap Replacement Date: 3/20/2023

DO Gain: 1.07

DO (mg/L): 9.56 mg/L

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 93.5 % Sat

Post Calibration Value: 100.0 % Sat

Raw Calibration Value: 0.0 % Sat

Temperature: 17.351 °C

Standard Value: 100.0 % Sat

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Barometer: 760.0 mmHg

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 12:46:48 PM

Calibration End Time: 3/20/2023 12:48:50 PM

Parameter: Cond ($\mu\text{S}/\text{cm}$)

Instrument:

Type: EXO3

Name: Sonde 20J100899

Serial Number: 20J100899

Firmware Version: 1.0.86

Sensor:

Type: Wiped Conductivity And Temperature

Serial Number: 20G104598

Firmware Version: 3.0.5

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

Cell Constant: 0.53

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 8827.9 $\mu\text{S}/\text{cm}$

Post Calibration Value: 9999.9 $\mu\text{S}/\text{cm}$

Raw Calibration Value: 0.0 $\mu\text{S}/\text{cm}$

Temperature: 20.074 $^{\circ}\text{C}$

Standard Value: 10000.0 $\mu\text{S}/\text{cm}$

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 12:52:37 PM

Calibration End Time: 3/20/2023 12:56:28 PM

Parameter: Turbidity (FNU)

Instrument:

Type: EXO3

Name: Sonde 20J100899

Serial Number: 20J100899

Firmware Version: 1.0.86

Sensor:

Type: Turbidity

Serial Number: 22A101409

Firmware Version: 3.0.4

Status: Completed

Technician: <Unknown>

QC Score: Good

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 0.03 FNU

Post Calibration Value: 0.00 FNU

Raw Calibration Value: 0.00 FNU

Temperature: 19.286 °C

Standard Value: 0.00 FNU

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Point #2:

Pre Calibration Value: 121.55 FNU

Post Calibration Value: 123.99 FNU

Raw Calibration Value: 0.00 FNU

Temperature: 20.368 °C

Standard Value: 124.00 FNU

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True



Factory Production Certificate

Part# 599501-00

Product Name: EXO3 Plugged Unit

Serial #: 20J100897

Certificate Generation Date: Mon, Mar 20, 2023

Pressure Leak Test : Cycle Results: PASS

Operator: Carol Flory

(This test applies air pressure on the sonde in a controlled chamber and measures pressure decay to determine a leak rate. If a leak rate outside the limits is detected it will fail the test)

Cycle Start Test Date (MM/DD/YYYY)	3/20/2023	Leak Rate High Limit	0.01
		Leak Rate Low Limit	0.0
Test Result	PASS	Actual Leak Rate	5.49453496932983E-03

Functional Test Results: Cycle Results: Operator:

(This test is a verification of the final sonde functional tests, a summary of test results is presented below)

Bluetooth Test		Port 1 Test	PASS
Internal Pressure		Port 2 Test	PASS
Communication Test	PASS	Port 3 Test	PASS
Cable Power Test	PASS	Port 4 Test	PASS
Battery Power Test	PASS	Port 5 Test (EXO2 Only)	
SD Card Test		Port 6 Test (EXO2 Only)	
LED Indicator Test		Port 7 Test (EXO2 Only)	
PCB Serial Number		AUX Port Test (EXO2 Only)	
Depth Sensor (if equipped)			
Final Test Results			

Statement of Results:

This "Factory Production Certificate" is provided for informational purposes only. This limited summary of factory test results during the manufacturing process. All sensors and sondes must be user calibrated before initial use following acceptable operating procedures. Routine calibration and maintenance of the EXO platform is necessary to achieve accurate water quality data.

Calibration Report

Last Calibration Time: 2/27/2023 9:17:57 AM

Calibration Start Time: 3/20/2023 8:43:06 AM

Calibration End Time: 3/20/2023 8:43:39 AM

Parameter: Wiper Position (volt)

Instrument:

Type: EXO3

Name: Sonde 20J100897

Serial Number: 20J100897

Firmware Version: 1.0.86

Sensor:

Type: Wiper

Serial Number: 20H102880

Firmware Version: 3.0.11

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

Pre Calibration Home Voltage: 1.200 V

Post Calibration Home Voltage: 1.178 V

Wiper Brush Replacement Date: <Unknown>

Notes:

Calibration Points:

Calibration Report

Last Calibration Time: 2/27/2023 8:50:50 AM

Calibration Start Time: 3/20/2023 8:45:27 AM

Calibration End Time: 3/20/2023 8:56:16 AM

Parameter: pH

Instrument:

Type: EXO3

Name: Sonde 20J100897

Serial Number: 20J100897

Firmware Version: 1.0.86

Sensor:

Type: pH

Serial Number: 20J100816

Firmware Version: 3.0.0

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

pH Range: 4.00 pH - 7.00 pH

Delta Slope 174.1 mV

mV per Decade 58.02

pH Range: 7.00 pH - 10.00 pH

Delta Slope 176.3 mV

mV per Decade 58.75

Sensor Module Replacement Date: 3/20/2023

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 3.57 pH

Post Calibration Value: 7.00 pH

Raw Calibration Value: -10.3 mV

Temperature: 19.855 °C

Standard Value: 7.00 pH

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 9:04:51 AM

Calibration End Time: 3/20/2023 9:08:13 AM

Parameter: DO (% Sat)

Instrument:

Type: EXO3

Name: Sonde 20J100897

Serial Number: 20J100897

Firmware Version: 1.0.86

Sensor:

Type: DO

Serial Number: 22A106703

Firmware Version: 3.0.5

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

DO Cap Serial Number: 23A103712

DO Cap Replacement Date: 3/20/2023

DO Gain: 1.06

DO (mg/L): 9.63 mg/L

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 93.9 % Sat

Post Calibration Value: 100.1 % Sat

Raw Calibration Value: 0.0 % Sat

Temperature: 17.015 °C

Standard Value: 100.0 % Sat

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Barometer: 760.0 mmHg

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 8:59:21 AM

Calibration End Time: 3/20/2023 9:02:18 AM

Parameter: Cond ($\mu\text{S}/\text{cm}$)

Instrument:

Type: EXO3

Name: Sonde 20J100897

Serial Number: 20J100897

Firmware Version: 1.0.86

Sensor:

Type: Wiped Conductivity And Temperature

Serial Number: 20G104596

Firmware Version: 3.0.5

Status: Completed

Technician: <Unknown>

QC Score: Good

Sensor Specific

Cell Constant: 0.54

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: 8759.2 $\mu\text{S}/\text{cm}$

Post Calibration Value: 10000.1 $\mu\text{S}/\text{cm}$

Raw Calibration Value: 0.0 $\mu\text{S}/\text{cm}$

Temperature: 19.480 $^{\circ}\text{C}$

Standard Value: 10000.0 $\mu\text{S}/\text{cm}$

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Report

Last Calibration Time: <Unknown>

Calibration Start Time: 3/20/2023 9:09:34 AM

Calibration End Time: 3/20/2023 9:14:28 AM

Parameter: Turbidity (FNU)

Instrument:

Type: EXO3

Name: Sonde 20J100897

Serial Number: 20J100897

Firmware Version: 1.0.86

Sensor:

Type: Turbidity

Serial Number: 20H103273

Firmware Version: 3.0.4

Status: Completed

Technician: <Unknown>

QC Score: Good

Notes:

Calibration Points:

Calibration Point #1:

Pre Calibration Value: -0.66 FNU

Post Calibration Value: 0.00 FNU

Raw Calibration Value: 0.00 FNU

Temperature: 19.332 °C

Standard Value: 0.00 FNU

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True

Calibration Point #2:

Pre Calibration Value: 122.42 FNU

Post Calibration Value: 124.00 FNU

Raw Calibration Value: 0.00 FNU

Temperature: 19.481 °C

Standard Value: 124.00 FNU

Type: None

Manufacturer: None

Lot Number: None

Is Stable: True