AIRFLOW PROS

INSTRUMENT CALIBRATION LIST

INSTRUMENT	MANUFACTURER	MODEL / SERIAL #	CALIBRATION DATE	CALIBRATION DUE DATE
AC/DC Clamp-on	Amprobe	AMP-220 / 200501511	3/11/2024	3/11/2025
Pressure and Flow Gauge	retrotec	DM32 20A / 412969	3/14/2023	3/14/2025
Module Sensor	Evergreen Telemetry	MS-T&H-101 / 2100109B	2/16/2024	2/16/2025
Stroboscope / Photo-Tach	Extech	461825 / H437765	3/11/2024	3/11/2025
Water Meter	Dwyer	490W-6-HKIT / 08Q2MX	12/11/2023	12/11/2024
Humidity Sensor	Evergreen Telemetry	PR-TH-1 / 2100110	2/16/2024	2/16/2024
Anemometer	Amprobe	TMA-10A / 061022-1	3/12/2024	3/12/2025
Tachometer	Extech	461895 / H396140	3/11/2024	3/11/2025
Temp Probe	Evergreen Telemetry	PR-T-5 / 2100210	2/16/2024	2/16/2025
Pressure Module	Evergreen Telemetry	S-PVF-1 / 2100328C	2/16/2024	2/16/2025
Immersion Temp Probe	Evergreen Telemetry	PR-T-4-6 / 2100239	2/16/2024	2/16/2025

Hoover Instrument Service, Inc.
401 North Home Road
Mansfield, Ohio 44906-2398
(419) 529-3226 Fax(419) 529-9360

To: **Airflow Pros**
1001 Eastwind Drive - Suite 203
Westerville, OH 43081

Test Report # 64180
P.O.#
Date: 3/11/24

Condition as Received ☒ Returned ☒ In Tolerance ☒ Out of Tolerance ☐ Data on Next Sheet ☐

Make: **Amprobe**
Description: **ac/dc clamp-on**
Model # **AMP-220**
Mfg Serial # **200501511**
Customer #
RH % 36 Temperature: 21 °C

Accuracy:
acv = +/- 1% +/- 5d
aca = +/- 1.8% +/- 5d
dcv = +/- 1% +/- 5d
dca = +/- 2% +/- 5d
res = +/- 1% +/- 5d

Accuracy of Standard:
acv = +/- 0.5% dcv = +/- 0.03%
aca = +/- 0.5% dca = +/- 0.3%
res.= +/- 0.1%

DCV Hoover	DCV Customer	ACV Hoover	ACV Customer	Resistance Hoover	Resistance Customer
50.00	49.9	50.00	49.9	100.0	100.0Ω
100.0	99.9	100.0	99.8	1.000 K	1.000KΩ
150.0	149.9	150.0	149.8	10.000 K	10.00KΩ
250.0	249.8	250.0	249.9		
500.0	499.8	500.0	499.9		
DCA		**ACA**			
25.0	24.90	25.0	24.93		
50.0	49.72	50.0	49.95		
75.0	74.7	75.0	74.8		
100.0	99.7	100.0	100.0		
200.0	199.9	200.0	200.4		
300.0	301.4	300.0	302.7		
400.0	401.7	400.0	402.5		
500.0	502.5	500.0	505.5		

Services Performed:
☐ Cleaned ☐ Movement Repaired ☐ Pointer Repaired ☐ Reset Pointer
☐ Zero Adjusted ☐ Adjust Calibration ☐ Repaired ☒ Batteries

☐ Calibration Location On Site

Test Instruments Used:			Due Date:
Amprobe	#BDM40-UA	s/n 07110052	6/24
Shallcross	#830	s/n 21107	4/24

Notes:

Calibration Procedure: **5075-33** Revision: **0**

Calibration Cycle: **1 year**

Tested By: [signature] Quality Control: [signature]

Certificate of Gauge Calibration

Issued by: **Retrotec**
Calibration Date: **2023-03-14**

Certificate Number: **412969 013923**
Results: **As Left**

1060 E Pole Rd.
Everson, WA, USA 98247
T: +1 (360) 738-9835
E: calibration@retrotec.com W: www.retrotec.com

AC-1943

This calibration laboratory has been assessed by the ANSI-ASQ National Accreditation Board and meets the requirements of international standard ISO/IEC 17025.

Instrument:

Description:	Pressure and Flow Gauge
Manufacturer:	Retrotec
Model Number:	DM32 20A
Serial Number:	412969

Calibrated by: Tina Lukyanets

Tina Lukyanets

Signature

Issue Date: 2023-03-14

Environmental conditions:

Temperature:	68°F ±10°F
Relative Humidity:	50% ±30%
Mains Voltage:	120V ±10V
Mains Frequency:	60Hz ±1Hz

Comments:

Results recorded as received. No adjustment performed.

This calibration applies only to the unit listed on this certificate.

Calibration Information:

The Device was calibrated against laboratory standards whose values are traceable to recognized national standards. The uncertainty represents an expanded uncertainty using a coverage factor of k=2 to approximate a 95% confidence level. In tolerance conditions are based on test results falling within specified limits without taking uncertainty into account. The uncertainty evaluation has been carried out in accordance with ISO/IEC 17025 requirements.

Calibration Procedure:

CP-35-01

EVERGREEN TELEMETRY

Certificate of Calibration

Airflow Pros

Manufacturer	Evergreen Telemetry	Calibration Environment		
Temperature Product	Module Sensor	Temperature	74	°F
Model	MS - T&H - 101	Rel. Humidity	28	%
SN	2100109B	Bar. Pressure	28.8	in Hg

☒ As Found ☒ As Left ☒ In Tolerance ☐ Out of Tolerance

Calibration Data

Measurement Variable	Test Point	Cal Standard	Allowable Range Min	Allowable Range Max	Test Instrument	
Cal Lab Probe & Test Module	Spec					
Temperature (°F)	1	78.6	-0.3	+0.3	78.8	
	2	242.4	-2.6	+2.6	243.0	
	3	-44.1	-1.6	+1.6	-43.9	

Indicates out of tolerance condition -----↑

Calibration Standard SN & Dates

Variable	System ID	Calibration Last	Calibration Due
Temperature	16320239	12-Sep-23	12-Sep-25

This instrument has been checked for accuracy, calibrated to manufacturer's specifications, and found to be within the specified tolerance unless otherwise stated. It has been calibrated using measurement standards traceable to the National Institue of Standards and Technology, or accepted intrinsic standards of measurement, or derived by the ratio type of self calibrated techniques.

Calibrated By

16-Feb-2024 — Calibration Date

16-Feb-2026 — Date Due

602.574.6192 ■ info@evergreentelemetry.com ■ www.evergreentelemetry.com ■ 33 S Sycamore, Mesa, AZ 85202

Hoover Instrument Service, Inc.
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Mansfield, Ohio 44906-2398
(419) 529-3226 Fax(419) 529-9360

To: **Airflow Pros**
1001 Eastwind Drive - Suite 203
Westerville, Ohio 43081

Test Report # 64187
P.O.#
Date: 3/11/24

Condition as Received ☒ Returned ☒ In Tolerance ☒ Out of Tolerance ☐ Data on Next Sheet ☐

Make: **Extech**

Description: **stroboscope / photo-tach**

Model # **461825**

Mfg Serial # **H437765**

Customer #

RH % 36 Temperature: 21 °C

Accuracy:
+/- 0.1 RPM +/- 2d

Accuracy of Standard:
strobe = +/- 0.05%
photo = +/- 0.0008%

Hoover	Customer	Hoover RPM Photo-Tach	Customer RPM Photo-Tach	Hoover RPM Stroboscope	Customer RPM Stroboscope
		300.0	300.0	300.0	300.0
		600.0	600.0	600.0	600.0
		900.0	899.9	900.0	900.0
		1800	1800	1800	1800
		3600	3600	3600	3600
		7200	7200	7200	7199

Services Performed:
☐ Cleaned ☐ Movement Repaired ☐ Pointer Repaired ☐ Reset Pointer
☐ Zero Adjusted ☐ Adjust Calibration ☐ Repaired ☐ Batteries

☐ Calibration Location On Site

Test Instruments Used:			Due Date:	Notes:
Altek	#40A	s/n 195587	8/24	
Sperry	#TACH-1	s/n L301594	4/24	

Calibration Procedure: **5023-2** Revision: **1**

Calibration Cycle: **1 year**

Tested By: Quality Control:

CERTIFICATE OF NIST CALIBRATION

Dwyer Instruments, 102 Highway 212, Michigan City, IN 46360 USA T: +1 800.872.9141 +1 219.879.8000 F: +1 219.872.9057

ID/Serial#:	08Q2MX	Date: 12/11/2023	Date Due: 12/11/2024	By: 3968

Customer Information		Device Under Test (DUT)	
AIRFLOW PROS 1001 EASTWIN DRIVE SUITE 203 WESTERVILLE, OH 43081	ID/Serial#:	08Q2MX	
	Model:	490W-6-HKIT	
	Description:	Hydronic Differential Pressure Manometer	
	MFR:	Dwyer Instruments	
	Accuracy:	2% Of Reading	
	Red Sensor:	DWY-H200-08Q2MX	Device ID
	Blue Sensor:	DWY-L200-08Q2MX	Device ID

Address Where Calibration Was Performed		Calibration Standard Information		
Dwyer Instruments Inc 3999 Hupp Rd Kingsbury, IN 46345	Instrument Reference:			
	Status:	As Received ☐	After Repair ☐	New ☑
	Test Range:	0 - 200 PSI		
	Notes:			
		Certificate No: 23DWY09-1351		
		Sales order No: S932879		
		Purchase order No: CREDITCARD		

Reference Standards Used

Module	ID#	Last Cal	Due Date
MW-MFC015	22DWYPSL-1296	3/17/23	3/17/24
MW-PM293	22DWYPSL-1183	12/14/22	12/14/23
MW-PM294	22DWYPSL-1245	1/3/23	1/3/24
Master Gauge Accuracy:		0.05%	

As Found/As Left Calibration Data - All Data on PSI

RESULT	Target Test Point	Reference Standard Reading	Error Percentage
PASS	-0.473	-0.470	-0.0016
PASS	119.539	119.470	0.0346
PASS	199.235	199.460	-0.1123
PASS	1.247	-0.020	0.6337
PASS	99.912	99.590	0.1609
PASS	50.369	49.640	0.3643
PASS	39.597	39.540	0.0285
PASS	79.601	79.490	0.0557
PASS	159.424	159.470	-0.0229
PASS	149.537	149.510	0.0135

This document certifies that only the device under test (DUT) identified above has been calibrated against a reference standard having an accuracy as listed.

Calibrated By: ML A Job Function: Technician

EVERGREEN TELEMETRY

Certificate of Calibration

Airflow Pros

Manufacturer	Evergreen Telemetry	Calibration Environment		
Product	Humidity Sensor	Temperature	74	°F
Model	PR-TH-1	Rel. Humidity	28	%
SN	2100110	Bar. Pressure	28.8	in Hg

☐ As Found ☒ As Left ☒ In Tolerance ☐ Out of Tolerance

Calibration Data

Measurement Variable	Test Point	Cal Standard	Allowable Range Min	Allowable Range Max	Test Instrument	
Temperature (°F)	Spec					
	1	39.2	-1.0	1.0	39.5	
	2	78.4	-1.0	1.0	78.5	
	3	86.6	-1.0	1.0	86.5	
	4	128.8	-2.0	2.0	128.8	
Barometric Pressure (in Hg)	Spec		-2% - 0.1	+ 2% + 0.1		
	1	20.0			20.0	
	2	28.7			28.8	
	3	33.0			33.0	
Humidity %RH 10 to 90%	Spec		-3	3		
	1	6.3			6.5	
	2	24.7			25.9	
	3	62.1			61.8	
	4	86.4			85.1	

Indicates out of tolerance condition -------↑

Calibration Standard

Variable	System ID	Calibration Last	Calibration Due
Temperature	16320239	12-Sep-23	12-Sep-25
Pressure	2205000006	13-Sep-23	13-Sep-25
Pressure	1208000080	13-Feb-23	13-Feb-25
Humidity	20558772	12-Sep-23	12-Sep-24

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Temperature accuracy (dry bulb) varies across the operating range:

Temperature over 32-100F +/- 1.0 F
Temperature over 100-158F +/- 2.0 F

Calibrated By

16-Feb-2024 Calibration Date

16-Feb-2025 Date Due

602.574.6192 ■ info@evergreentelemetry.com ■ www.evergreentelemetry.com ■ 33 S Sycamore, Mesa, AZ 85202

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(419) 529-3226 Fax(419) 529-9360

To: **Airflow Pros**
1001 Eastwind Drive - Suite 203
Westerville, OH 43081

Test Report # 64181
P.O.#
Date: 3/12/24

Condition as Received ☒ Returned ☒ In Tolerance ☒ Out of Tolerance ☐ Data on Next Sheet ☐

		Hoover	Customer	Hoover	Customer	Hoover	Customer
Make:	**Amprobe**			**feet/minute**		**temperature fahrenheit**	
Description:	**anemometer**			335	340	69.2	69.5
Model #	**TMA-10A**			530	542		
Mfg Serial #	**061022-1**			750	764		
Customer #				1000	1018		
RH % 38	Temperature: 21 °C			1250	1272		

Accuracy:
Temp = +/- 1.5 °F
+/- 2% of F.S.

Accuracy of Standard:
+/- 5 ft/min
Temp = +/- 0.5 °F

Services Performed:
☐ Cleaned ☐ Movement Repaired ☐ Pointer Repaired ☐ Reset Pointer
☐ Zero Adjusted ☐ Adjust Calibration ☐ Repaired ☒ Batteries

☐ Calibration Location On Site

Test Instruments Used:			Due Date:
Tegam	#855	s/n T-113227	12/24
TSI	#8330	s/n 95030100	6/24

Notes:

Calibration Procedure: **5075-23** Revision: **0**

Calibration Cycle: **1 year**

Tested By: [signature] Quality Control: [signature]

Hoover Instrument Service, Inc.
401 North Home Road
Mansfield, Ohio 44906-2398
(419) 529-3226 Fax(419) 529-9360

To: **Airflow Pros**
1001 Eastwind Drive - Suite 203
Westerville, OH 43081

Test Report # 64188
P.O.#
Date: 3/11/24

Condition as Received ☒ Returned ☒ In Tolerance ☒ Out of Tolerance ☐ Data on Next Sheet ☐

Make: **Extech**
Description: **tachometer**
Model # **461895**
Mfg Serial # **H396140**
Customer #
RH % 36 Temperature: 21 °C
Accuracy: +/- 0.05% +/- 1d
Accuracy of Standard: +/- 0.0008%

Hoover	Customer	Hoover	Customer	Hoover	Customer
		RPM			
		600.0	599.9		
		900.0	899.9		
		1800.0	1799		
		3000.0	3000		
		3600.0	3600		
		6000.0	6000		
		7200.0	7199		

Services Performed:
☐ Cleaned ☐ Movement Repaired ☐ Pointer Repaired ☐ Reset Pointer
☐ Zero Adjusted ☐ Adjust Calibration ☐ Repaired ☐ Batteries

☐ Calibration Location On Site

Test Instruments Used:	Due Date:	Notes:
Altek #40A s/n 195587	8/24	

Calibration Procedure: **5023** Revision: **4**

Calibration Cycle: **1 year**

Tested By: Quality Control:

EVERGREEN TELEMETRY

Certificate of Calibration

Airflow pros

Manufacturer	Evergreen Telemetry			Calibration Environment		
Temperature Product		Module	Probe	Temperature	74	°F
Model			PR-T-5	Rel. Humidity	28	%
SN			2100210	Bar. Pressure	28.8	in Hg

☒ As Found ☒ As Left ☒ In Tolerance ☐

Calibration Data

Measurement Variable	Test Point	Cal Standard	Allowable Range Min	Allowable Range Max	Test Instrument	
Cal Lab Module & Test Probe	Spec					
Temperature (°F)	1	78.5	-0.3	+0.3	78.5	
	2	242.4	-2.6	+2.6	242.3	
	3	-43.8	-1.6	+1.6	-43.6	

Indicates out of tolerance condition -----↑

Calibration Standard SN & Dates

Variable	System ID	Calibration Last	Calibration Due
Temperature	16320239	12-Sep-23	12-Sep-25

This instrument has been checked for accuracy, calibrated to manufacturer's specifications, and found to be within the specified tolerance unless otherwise stated. It has been calibrated using measurement standards traceable to the National Institue of Standards and Technology, or accepted intrinsic standards of measurement, or derived by the ratio type of self calibrated techniques.

Calibrated By

16-Feb-2024 — Calibration Date

16-Feb-2026 — Date Due

602.574.6192 ■ info@evergreentelemetry.com ■ www.evergreentelemetry.com ■ 33 S Sycamore, Mesa, AZ 85202

EVERGREEN TELEMETRY

Certificate Of Calibration

Airflow Pros

Manufacturer	Evergreen Telemetry	Calibration Environment		
Product	Pressure / Velocity Module	Temperature	74	°F
Model	S-PVF-1	Rel. Humidity	28	%
SN	2100328C	Bar. Pressure	28.8	in Hg

☒ As Found ☑ As Left ☒ In Tolerance ☐ Out of Tolerance

Calibration Data

Measurement Variable	Test Point	Cal Standard	Allowable Range Min	Allowable Range Max	Test Instrument	
Barometric Pressure (in Hg)	Spec		-2% - 0.1	+ 2% + 0.1		
	1	20.0			20.1	
	2	28.8			28.9	
	3	33.0			33.1	
Differental Pressure (in wc)	Spec		-2%-.001	+2%+.001		
	1	10.00			9.982	
	2	2.000			1.996	
	3	0.5000			0.5002	
	4	0.0500			0.0501	
	5	-10.00			-10.031	
	6	-0.0500			-0.0501	
			-3% - 7	+3% + 7		
Via Pitot >>	7	0.00071 / 107			108	
Velocity Pressure >> (inW.C. / FPM) -3% -7	8	0.0158 / 503			504	

Indicates out of tolerance condition ----------↑

NIST-Traceable Lab Calibration Standards

Variable	System ID	Calibration Last	Calibration Due
Pressure	7481227	8-Mar-23	8-Mar-25
Pressure	7568470	8-Mar-23	8-Mar-25
Pressure	7871917	12-Sep-23	12-Sep-25
Pressure	7870754	12-Sep-23	12-Sep-25
Pressure	2205000006	13-Sep-23	13-Sep-25
Pressure	1208000080	13-Feb-23	13-Feb-25
Pressure	41001F6C	27-Apr-23	27-Apr-25
Velocity	2100191A	24-Feb-23	24-Feb-25
Velocity	2100190A	1-May-23	1-May-25

This instrument has been checked for accuracy, calibrated to manufacturer's specifications, and found to be within the specified tolerance unless otherwise stated. It has been calibrated using measurement standards traceable to the National Institue of Standards and Technology, or accepted intrinsic standards of measurement, or derived by the ratio type of self calibrated techniques.

Calibrated By

16-Feb-2024 Calibration Date

16-Feb-2026 Date Due

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EVERGREEN TELEMETRY

Certificate of Calibration

Airflow pros

Manufacturer	Evergreen Telemetry			Calibration Environment		
Temperature Product		Module	Probe	Temperature	74	°F
Model			PR-T-4-6	Rel. Humidity	28	%
SN			2100239	Bar. Pressure	28.8	in Hg

☒ As Found ☒ As Left ☒ In Tolerance ☐

Calibration Data

Measurement Variable	Test Point	Cal Standard	Allowable Range Min	Allowable Range Max	Test Instrument	
Cal Lab Module & Test Probe	Spec					
Temperature (°F)	1	78.6	-0.3	+0.3	78.8	
	2	242.4	-2.6	+2.6	243.0	
	3	-44.1	-1.6	+1.6	-43.9	

Indicates out of tolerance condition -----↑

Calibration Standard SN & Dates

Variable	System ID	Calibration Last	Calibration Due
Temperature	16320239	12-Sep-23	12-Sep-25

This instrument has been checked for accuracy, calibrated to manufacturer's specifications, and found to be within the specified tolerance unless otherwise stated. It has been calibrated using measurement standards traceable to the National Institue of Standards and Technology, or accepted intrinsic standards of measurement, or derived by the ratio type of self calibrated techniques.

Calibrated By

16-Feb-2024 — Calibration Date

16-Feb-2026 — Date Due

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