



Your Optimized Rig

The Right Equipment to Make
YOUR Rig Safe and Profitable



ANTITRUST POLICY STATEMENT FOR SPRAY POLYURETHANE FOAM ALLIANCE MEETINGS

- It is and shall remain the policy of the Spray Polyurethane Foam Alliance (“SPFA”), and it is the continuing responsibility of every SPFA member company, SPFA meeting or event participant, as well as SPFA staff and leadership to comply in all respects with federal and state antitrust laws. No activity or discussion at any SPFA meeting or other function may be engaged in for the purpose of bringing about any understanding or agreement among members to (1) raise, lower or stabilize prices; (2) regulate production; (3) allocate markets; (4) encourage boycotts; (5) foster unfair or deceptive trade practices; (6) assist in monopolization; or (7) in any way violate or give the appearance of violating federal or state antitrust laws.
- Any concerns or questions regarding the meaning or applicability of this policy, as well as any concerns regarding activities or discussions at SPFA meetings should be promptly brought to the attention of SPFA’s Executive Director and/or its legal counsel.



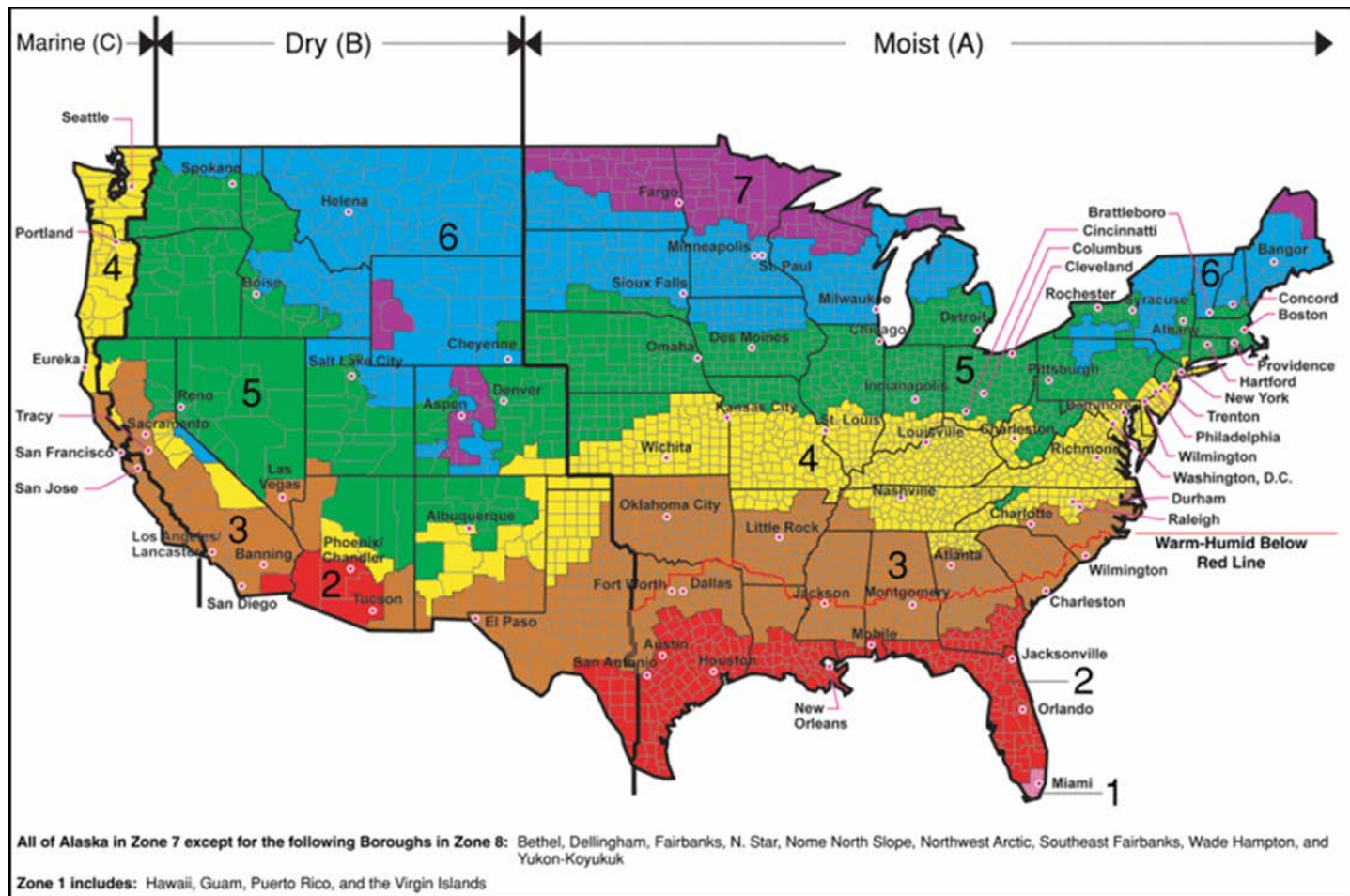
Rig Purchase Considerations

- No “One Size Fits All” Solution
- Rig Supplier Should Be a Business Consultant
- Difficult Equipment Upgradeability
- Product Support/Warranty



What Size Rig?







Applications

- Residential
- Commercial
- Roofing
- Slab Jacking
- Specifications
 - Temperatures
 - Pressures



Materials

- Foam
 - Open Cell
 - Closed Cell
 - Roofing
- Polyurea
 - Specifications
 - Temperatures
 - Pressures



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Component Selection

- Proportioner
- Hose/Spray Gun
- Material Supply Package
- Genset
- Compressor
- PPE
- Heater



Proportioners

- Drive
 - Electric
 - Hydraulic
 - Air
 - Integrated
- Power
 - 1ph. Vs 3ph
- Pressure
 - Low (2000 psi)
 - High (3500 psi)
- Heat
 - Delta “T” Requirements
- Hose Length
 - 200’ vs 300” vs 400’





Spray Hose

- Spray Hose
 - 1/2" vs 3/8" vs 1/4"
 - Combination
- Pressure
 - Low Pressure (2000 psi)
 - High Pressure (3500 psi)
- RTD (Resistance Temperature Detector)
 - Location





Spray Gun

- Air Purge
 - Fusion AP
 - P2
- Manual Purge
 - GX-7
- Liquid Purge
 - Fusion CS





Material Supply System

- Material Packaging/ Volume Requirements
 - Totes
 - Stick Pump
 - Diaphragm Pump
 - Wall Mount vs Tote Mount
 - 55 Gallon Drums
 - Stick Pump
 - Diaphragm Pump
 - Wall Mount vs Drum Mount
 - 30 Gallon Drums
 - Stick Pump
 - Diaphragm Pump
 - Wall Mount vs Drum Mount





Proper Power

- Calculating Requirements (1ph vs 3ph)
- Main (220v)
 - Proportioner
 - Primary Heater Size
 - Air Compressor
 - Heater
- Minor (110v)
 - Air Dryer
 - Heater/Air Conditioner
 - Lights, Outlets, Tools, Etc.





Power Source

- Generator
 - 30KW vs 40KW vs 60KW
 - Reactor(s), Air Compressor, Heater/Air Conditioner, Air Dryer, Lights, Tools, Ambient Air Pump
- Shore Power
 - Licensed Electrician
 - 1ph or 3ph
 - Shore Cable
 - Correct Size?
 - Brown Power





Proper Air

- Calculating CFM Requirements
 - Spray Gun
 - Transfer Pumps
 - Respiratory Protection
 - Hood vs Mask
 - 1 or 2 Worker System
 - Cool Tubes
 - Pneumatic Proportioner
 - Pneumatic Tools



Air Compressor

- Compressor Types
 - Piston
 - Screw/Rotary Screw
 - Hydrovane
- Continuous Run
- Air Filtration
 - Stage 1 Water Separator
 - Stage 2 Refrigerated Air Dryer
 - Stage 3 Coalescing



Person Protective Equipment

- Respirators
 - SAR Supplied Air Respirator
 - High Pressure (filtration panel)
 - Single vs Dual
 - Full Face Respirator
 - Hood
 - Ambient Systems
 - Single vs Dual
 - APR Air Purifying Respirator
 - Half and Full Face Respirators
 - P100 Organic Vapor Cartridge





Layout

- Separate Compartment
 - Work Area/Gen Room
- Weight Distributed
 - Balanced Full/Empty
- GVWR
 - CDL Requirements
 - Tow Vehicle





Recap

- No “One Size Fits All” Solution
- Rig Supplier Should Be a Business Consultant
- Little “Trade-in” Value
- Very Hard to Upgrade Individual Pieces of Equipment



Visit Us in Booth 703

MCC Equipment & Service Center

Visit Us in Booth 407



Spray Foam Equipment Technology

Tryg Waterhouse



Equipment Line-up

High Production Polyurethane Equipment



A-2
E-30



H-40/30i
E-30i



H-30



Reactor 2 Models

Electric



E-30

Hydraulic



H-30/40/50

Electric Integrated



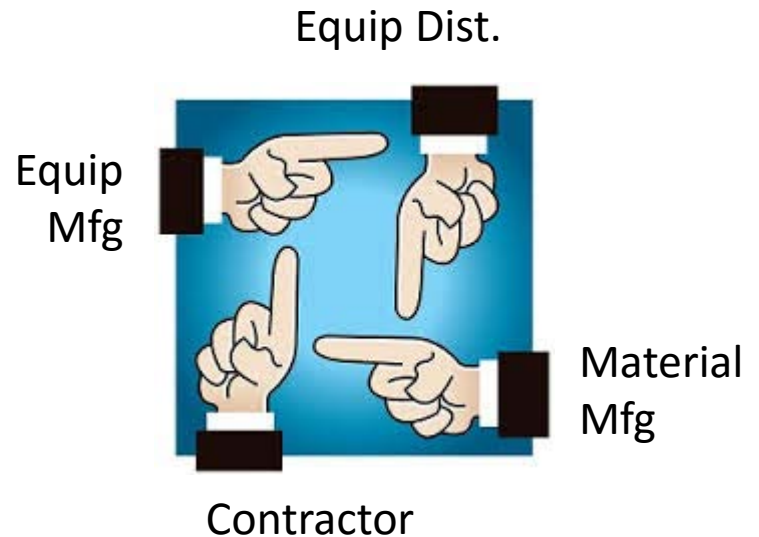
E-30i



Advancing the Industry!

Harder to spray bad foam

- Eliminate the blame game
- Minimize down time





Reactor 2 Features



Graco

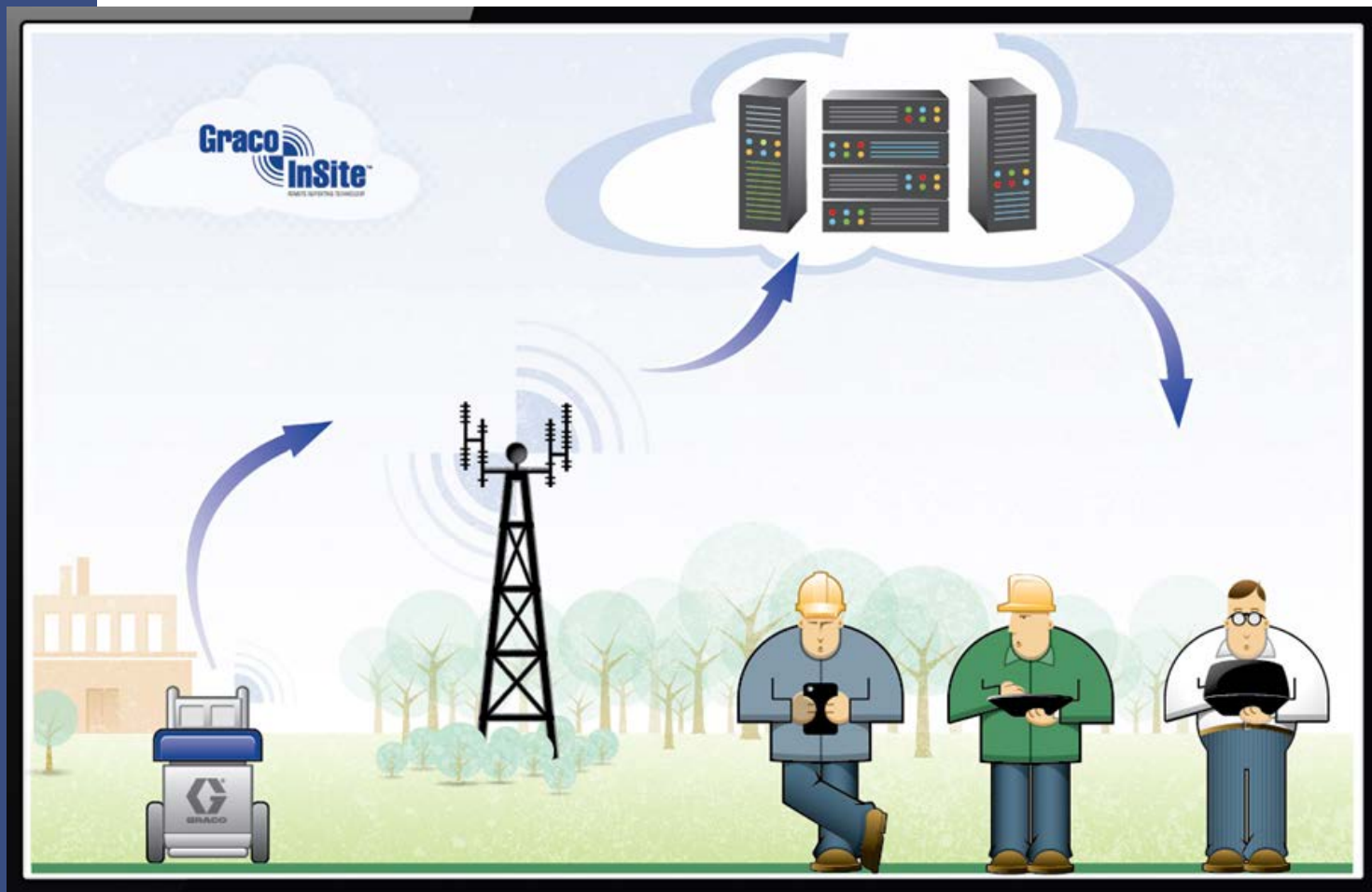


te™
CHNOLOGY

Inlet Temp/Pressure
Sensor







Graco Insite





Insite Dashboard

		Daily				Daily Power On Time (hours)	Daily Cycle Count	Cycle Count (Resettable)
Temp A (Actual/Set-point) (°F)	Temp E (Actual/Set-point) (°F)	Last Reactor Data		Data and Location		3.76	1775	4094
116 / 115	115 / 115	Dec 19, 2013 10:17:16 AM		   		3.83	0	Not Available
150 / 140	142 / 140					3.28	144	154
103 / 103	103 / 103	— / 80	1015 / 900	1034 / 900		3.0	688	689
110 / 107	109 / 107	107 / 107	1184 / 1050	1184 / 1050		1.18	694	49294
						3.69	1799	1808
						1.51	234	234
						2.58	499	0
						2.62	195	309



Reporting: Job Log



Job Log

355233053126627

2014-01-03 13:15:13

Date	Time	Temp A (°F)	Temp B (°F)	Temp Hose (°F)	Set Temp A (°F)	Set Temp B (°F)	Set Temp Hose (°F)	Pressure A (psi)	Pressure B (psi)	Set Pressure (psi)	Lifetime Cycle Counts	Resettable Cycle Count	Inlet Temp A/B (°F)	Inlet Pressure A/B (psi)	Ambient Temp (°F)
2013-12-18	14:50:10	--	--	--	--	--	--	--	--	--	--	--	--/--	--/--	81.0
2013-12-18	14:50:14	--	--	--	--	--	--	--	--	--	--	--	--/--	--/--	81.0
2013-12-18	14:52:12	88.0	88.0	91.0	--	--	--	288.0	312.0	--	--	2319	62.0/62.0	146.0/87.0	--
2013-12-18	14:53:10	88.0	88.0	91.0	--	--	--	281.0	312.0	--	--	2319	62.0/62.0	148.0/87.0	--
2013-12-18	14:54:08	88.0	87.0	91.0	--	--	--	281.0	312.0	--	--	2319	62.0/62.0	149.0/87.0	--
2013-12-18	14:55:06	87.0	87.0	90.0	--	--	--	281.0	311.0	--	--	2319	63.0/63.0	150.0/86.0	--
2013-12-18	14:56:04	87.0	87.0	90.0	--	--	--	276.0	305.0	--	--	2319	63.0/63.0	151.0/86.0	--
2013-12-18	14:57:02	87.0	87.0	90.0	--	--	--	274.0	304.0	--	--	2319	63.0/63.0	151.0/86.0	--
2013-12-18	14:58:00	87.0	87.0	90.0	--	--	--	274.0	304.0	--	--	2319	63.0/63.0	152.0/85.0	--
2013-12-18	14:58:58	87.0	86.0	90.0	--	--	--	274.0	304.0	--	--	2319	64.0/63.0	152.0/85.0	--

Reporting: Daily Usage



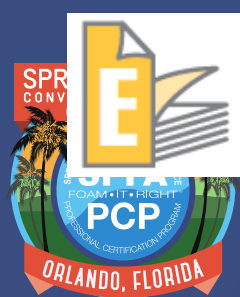
Daily Usage

355233055270571

K2

2014-01-27 19:24:48

Date	Cycle Count	Material Usage (gallons)	Actual Spray Time (hrs)	Power On Time (hrs)
2013-12-02	2210	60.5	1.6	4.1
2013-12-03	989	27	2.3	4.1
2013-12-04	910	25	1.8	3.8
2013-12-05	2701	74	2.3	5.3
2013-12-06	854	23.5	1	3.3
2013-12-07	0	0	0	0
2013-12-08	0	0	0	0
2013-12-09	367	10	0.5	2.7
2013-12-10	0	0	0	0
2013-12-11	16	0.5	0	3.6
2013-12-12	59	1.5	0.1	0.2
2013-12-13	3778	103	4.1	5.9
2013-12-14	0	0	0	0
2013-12-15	0	0	0	0
2013-12-16	0	0	0	0
2013-12-17	0	0	0	0
2013-12-18	0	0	0	0
2013-12-19	4381	119.5	3.7	5.5



Reporting: Event Log



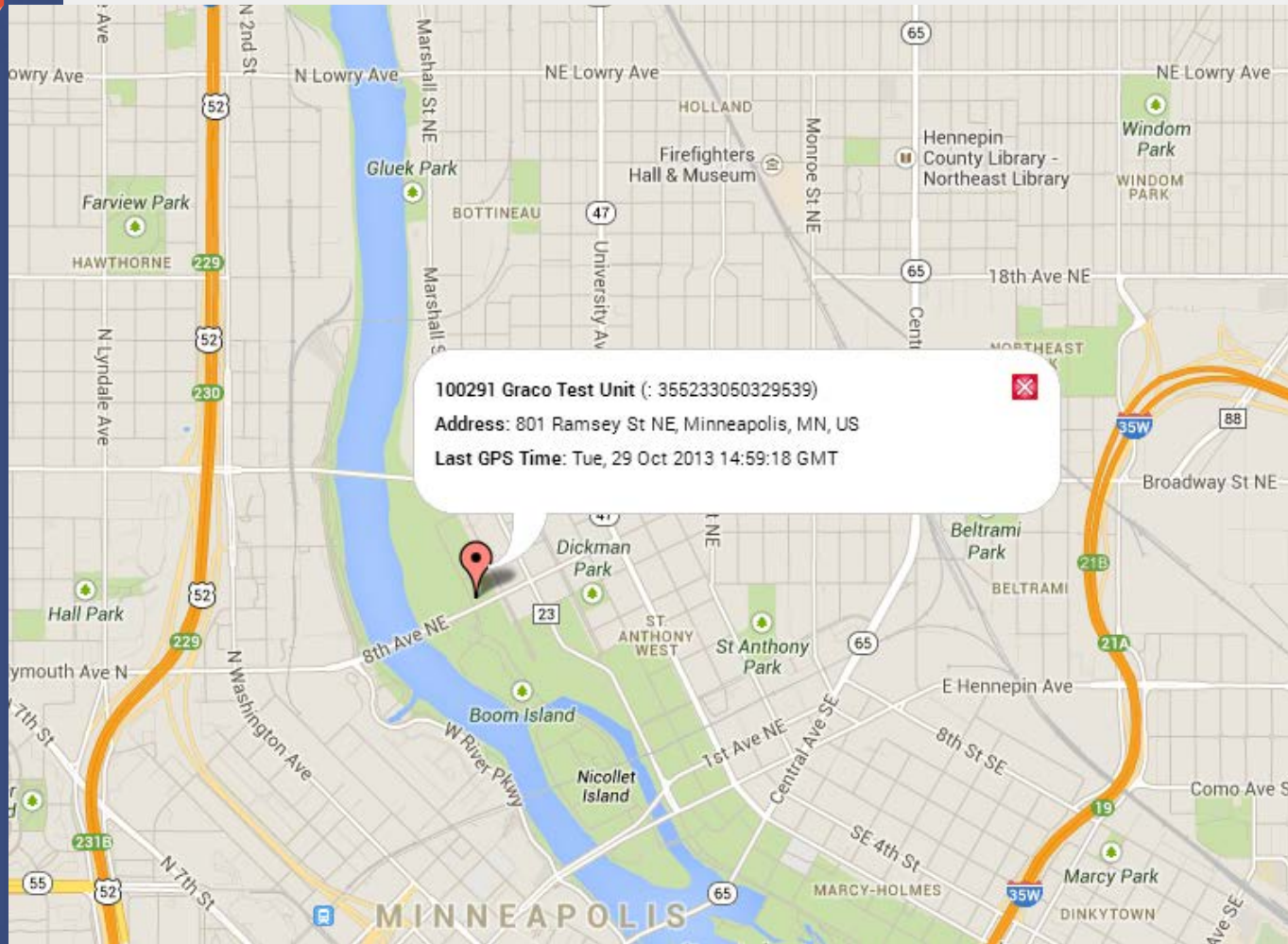
EVENT LOG

355233053126627

2014-01-20 09:48:10

Event Date	Event Time	Event Code	Event Description
2014-01-17	12:22:55	DE0X	Cycle Switch Err.
2014-01-17	13:18:25	DE0X	Cycle Switch Err.
2014-01-17	13:19:23	DE0X	Cycle Switch Err.
2014-01-17	13:20:21	DE0X	Cycle Switch Err.
2014-01-17	13:20:21	DE0X	Cycle Switch Err.
2014-01-17	13:21:19	DE0X	Cycle Switch Err.
2014-01-17	13:22:17	DE0X	Cycle Switch Err.
2014-01-17	13:22:17	DE0X	Cycle Switch Err.
2014-01-17	13:23:21	DE0X	Cycle Switch Err.
2014-01-17	15:28:09	FAUX	USB Busv

GPS: Spray Rig





Daily Summary Email



Daily Report

Data for: October 3, 2013

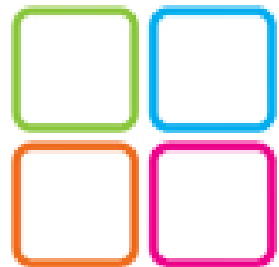
Name	Machine	Time of First Spray Data	Time of Last Spray Data	Daily Cycle Count	Daily Material Usage (gal)	Daily Power On Time (hrs)	Actual Spray Time (hrs)	Pressure Set Point (psi)	Temp A/B Set Point (°F)	Hose Set Point (°F)
Graco Test Unit #2	E-30	01:18:11	13:24:39	771	21	8.5	1.6	1100	117/118	120
V2Graco	E-30	04:09:28	15:14:22	1250	22	6.5	1.2	1350	122/122	120
TC lab	H-40	03:09:11	11:24:53	3050	79	7.6	3.5	---	125/125	125
Freeman2	E-30	09:12:47	23:59:13	628	60	4.3	2.4	1000	115/115	115

October 4, 2013, 6:00 AM



Remote Reporting Technology

- Graco partnered with 2-track Solutions, LLC
- Using cellular signal to connect & send data to cloud server
- \$34.99-\$39.99 monthly data rate



2-track



What's the End Result?



Easier Operation

Improved Durability

Easier Troubleshooting

