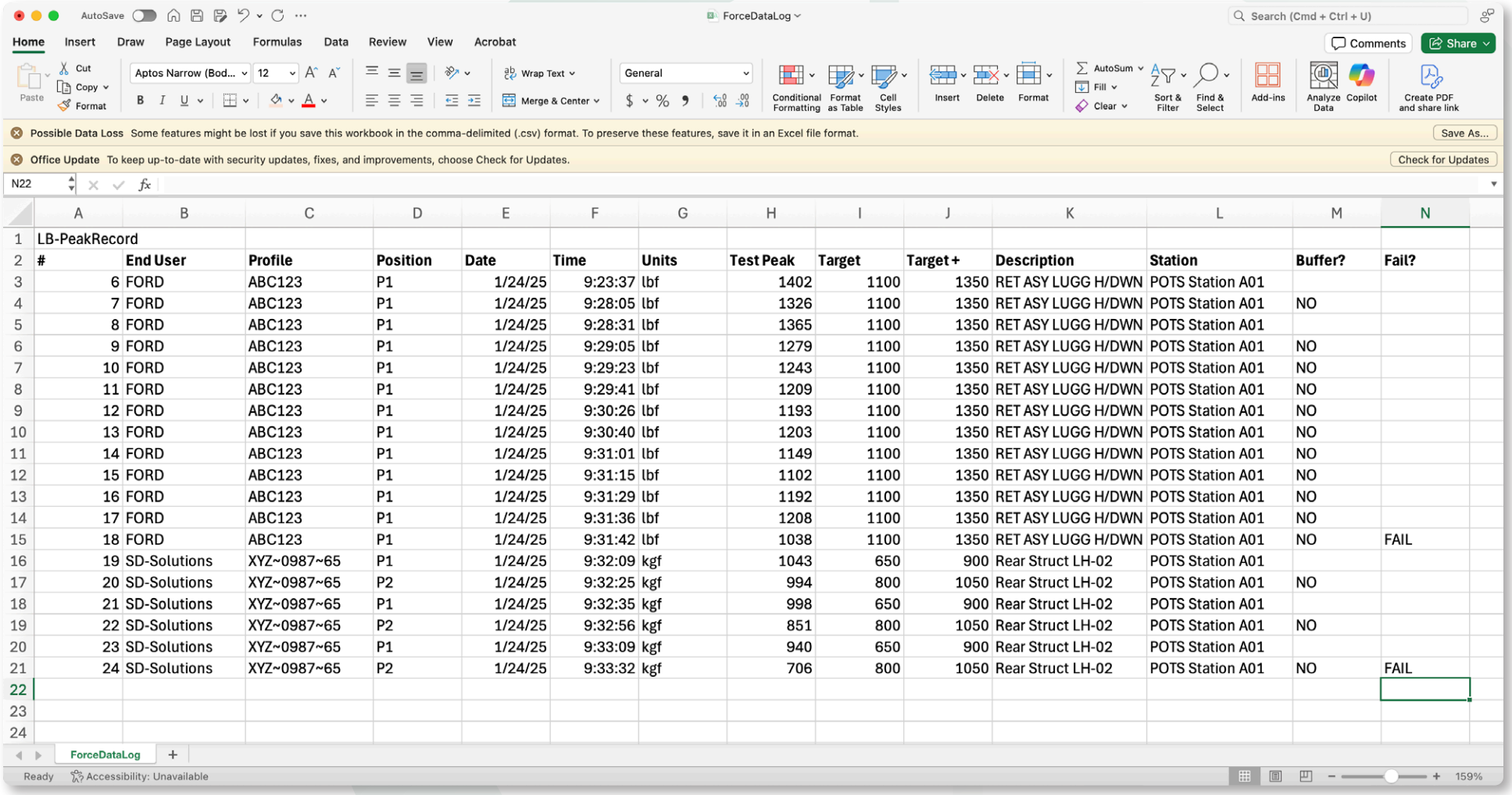
DATA LOGGING OVERVIEW

ON THE SMARTFORCE PUSH-OUT TEST SYSTEM



LB-PeakRecord

#	End User	Profile	Position	Date	Time	Units	Test Peak	Target	Target +	Description	Station	Buffer?	Fail?
6	FORD	ABC123	P1	1/24/25	9:23:37	lbf	1402	1100	1350	RET ASY LUGG H/DWN	POTS Station A01		
7	FORD	ABC123	P1	1/24/25	9:28:05	lbf	1326	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
8	FORD	ABC123	P1	1/24/25	9:28:31	lbf	1365	1100	1350	RET ASY LUGG H/DWN	POTS Station A01		
9	FORD	ABC123	P1	1/24/25	9:29:05	lbf	1279	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
10	FORD	ABC123	P1	1/24/25	9:29:23	lbf	1243	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
11	FORD	ABC123	P1	1/24/25	9:29:41	lbf	1209	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
12	FORD	ABC123	P1	1/24/25	9:30:26	lbf	1193	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
13	FORD	ABC123	P1	1/24/25	9:30:40	lbf	1203	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
14	FORD	ABC123	P1	1/24/25	9:31:01	lbf	1149	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
15	FORD	ABC123	P1	1/24/25	9:31:15	lbf	1102	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
16	FORD	ABC123	P1	1/24/25	9:31:29	lbf	1192	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
17	FORD	ABC123	P1	1/24/25	9:31:36	lbf	1208	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
18	FORD	ABC123	P1	1/24/25	9:31:42	lbf	1038	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	FAIL
19	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:09	kgf	1043	650	900	Rear Struct LH-02	POTS Station A01		
20	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:25	kgf	994	800	1050	Rear Struct LH-02	POTS Station A01	NO	
21	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:35	kgf	998	650	900	Rear Struct LH-02	POTS Station A01		
22	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:56	kgf	851	800	1050	Rear Struct LH-02	POTS Station A01	NO	
23	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:33:09	kgf	940	650	900	Rear Struct LH-02	POTS Station A01		
24	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:33:32	kgf	706	800	1050	Rear Struct LH-02	POTS Station A01	NO	FAIL

The ProLine SmartForce Push-Out Test System features an **exportable test data log** that links test results with the parts tested — No more paper test sheets with illegible handwriting (or skipped entries). **This is a standard feature of the SmartForce system, not a paid upgrade.** The data exports on a microSD card inserted in the control unit, or it can be emailed directly from the Push Out Test System if it is connected to a network.

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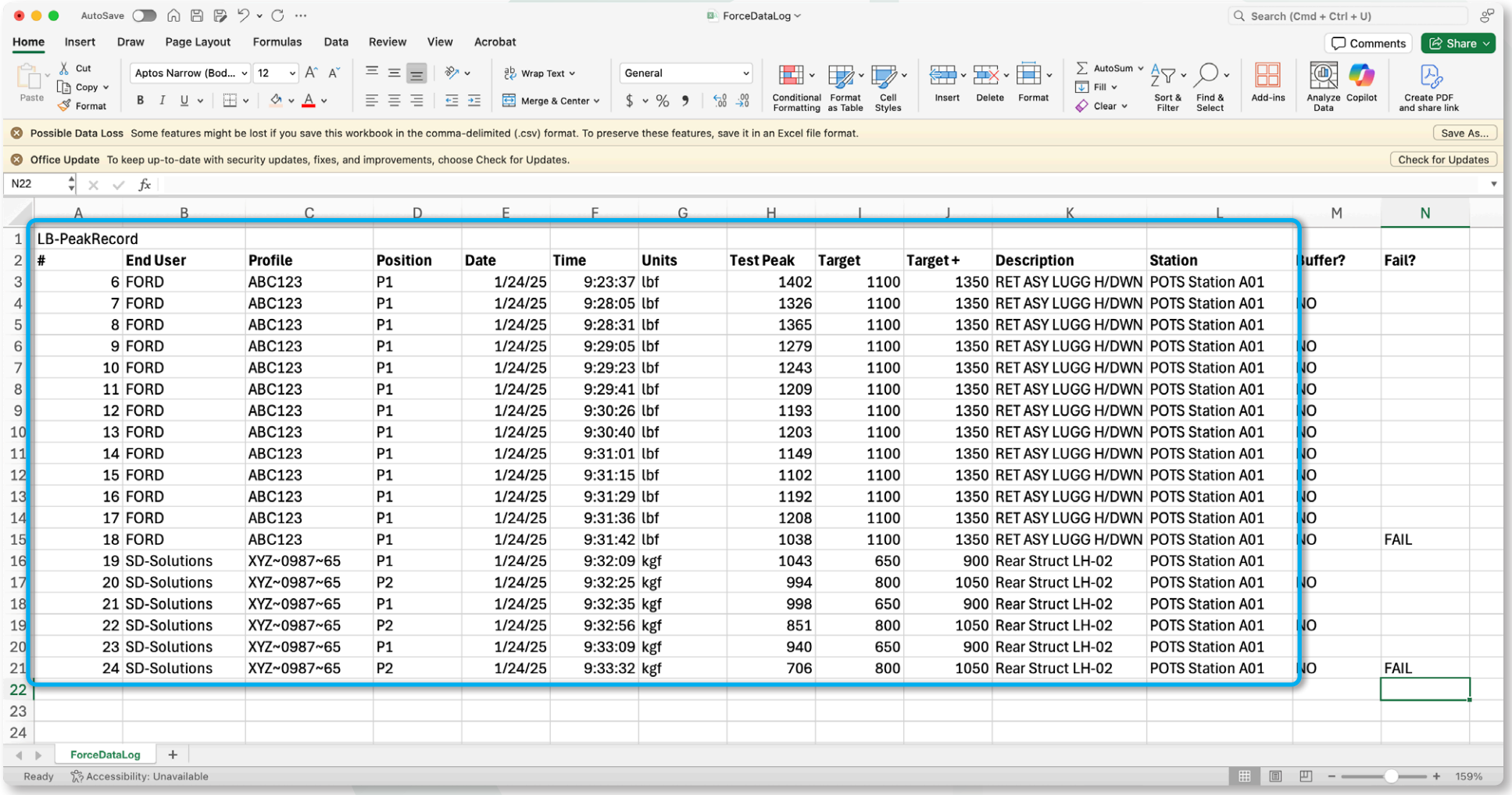
DATA LOGGING OVERVIEW

ON THE SMARTFORCE PUSH-OUT TEST SYSTEM



LB-PeakRecord

#	End User	Profile	Position	Date	Time	Units	Test Peak	Target	Target +	Description	Station	Buffer?	Fail?
6	FORD	ABC123	P1	1/24/25	9:23:37	lbf	1402	1100	1350	RET ASY LUGG H/DWN	POTS Station A01		
7	FORD	ABC123	P1	1/24/25	9:28:05	lbf	1326	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
8	FORD	ABC123	P1	1/24/25	9:28:31	lbf	1365	1100	1350	RET ASY LUGG H/DWN	POTS Station A01		
9	FORD	ABC123	P1	1/24/25	9:29:05	lbf	1279	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
10	FORD	ABC123	P1	1/24/25	9:29:23	lbf	1243	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
11	FORD	ABC123	P1	1/24/25	9:29:41	lbf	1209	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
12	FORD	ABC123	P1	1/24/25	9:30:26	lbf	1193	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
13	FORD	ABC123	P1	1/24/25	9:30:40	lbf	1203	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
14	FORD	ABC123	P1	1/24/25	9:31:01	lbf	1149	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
15	FORD	ABC123	P1	1/24/25	9:31:15	lbf	1102	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
16	FORD	ABC123	P1	1/24/25	9:31:29	lbf	1192	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
17	FORD	ABC123	P1	1/24/25	9:31:36	lbf	1208	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
18	FORD	ABC123	P1	1/24/25	9:31:42	lbf	1038	1100	1350	RET ASY LUGG H/DWN	POTS Station A01	NO	FAIL
19	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:09	kgf	1043	650	900	Rear Struct LH-02	POTS Station A01		
20	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:25	kgf	994	800	1050	Rear Struct LH-02	POTS Station A01	NO	
21	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:35	kgf	998	650	900	Rear Struct LH-02	POTS Station A01		
22	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:56	kgf	851	800	1050	Rear Struct LH-02	POTS Station A01	NO	
23	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:33:09	kgf	940	650	900	Rear Struct LH-02	POTS Station A01		
24	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:33:32	kgf	706	800	1050	Rear Struct LH-02	POTS Station A01	NO	FAIL

The data output from the SmartForce system is in a **.CSV format readable by common spreadsheet programs** such as Microsoft Excel or Google Sheets — **No expensive and finicky proprietary software required.** You've never been so excited to see a simple spreadsheet. The exported data can be sorted easily by end user, part or individual weld position, among other fields.

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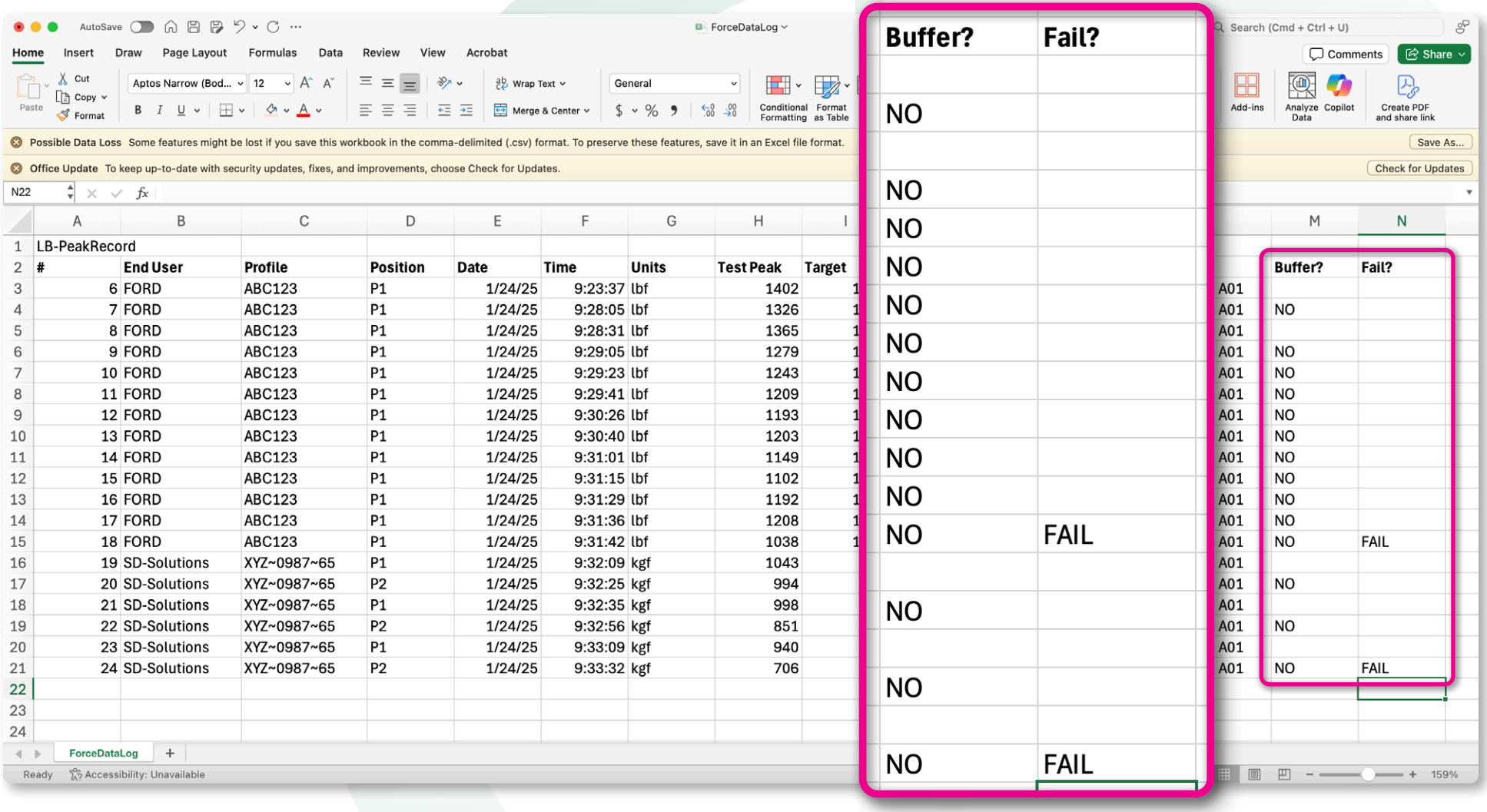
DATA LOGGING OVERVIEW

ON THE SMARTFORCE PUSH-OUT TEST SYSTEM



LB-PeakRecord

#	End User	Profile	Position	Date	Time	Units	Test Peak	Target	Buffer?	Fail?
6	FORD	ABC123	P1	1/24/25	9:23:37	lbf	1402	1		
7	FORD	ABC123	P1	1/24/25	9:28:05	lbf	1326	1	NO	
8	FORD	ABC123	P1	1/24/25	9:28:31	lbf	1365	1		
9	FORD	ABC123	P1	1/24/25	9:29:05	lbf	1279	1	NO	
10	FORD	ABC123	P1	1/24/25	9:29:23	lbf	1243	1	NO	
11	FORD	ABC123	P1	1/24/25	9:29:41	lbf	1209	1	NO	
12	FORD	ABC123	P1	1/24/25	9:30:26	lbf	1193	1	NO	
13	FORD	ABC123	P1	1/24/25	9:30:40	lbf	1203	1	NO	
14	FORD	ABC123	P1	1/24/25	9:31:01	lbf	1149	1	NO	
15	FORD	ABC123	P1	1/24/25	9:31:15	lbf	1102	1	NO	
16	FORD	ABC123	P1	1/24/25	9:31:29	lbf	1192	1	NO	
17	FORD	ABC123	P1	1/24/25	9:31:36	lbf	1208	1	NO	
18	FORD	ABC123	P1	1/24/25	9:31:42	lbf	1038	1	NO	FAIL
19	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:09	kgf	1043			
20	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:25	kgf	994		NO	
21	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:35	kgf	998			
22	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:56	kgf	851		NO	
23	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:33:09	kgf	940			
24	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:33:32	kgf	706		NO	
									NO	FAIL

Sample calculated fields created by user. Another common option for data analysis would be Conditional Formatting to highlight failed tests.

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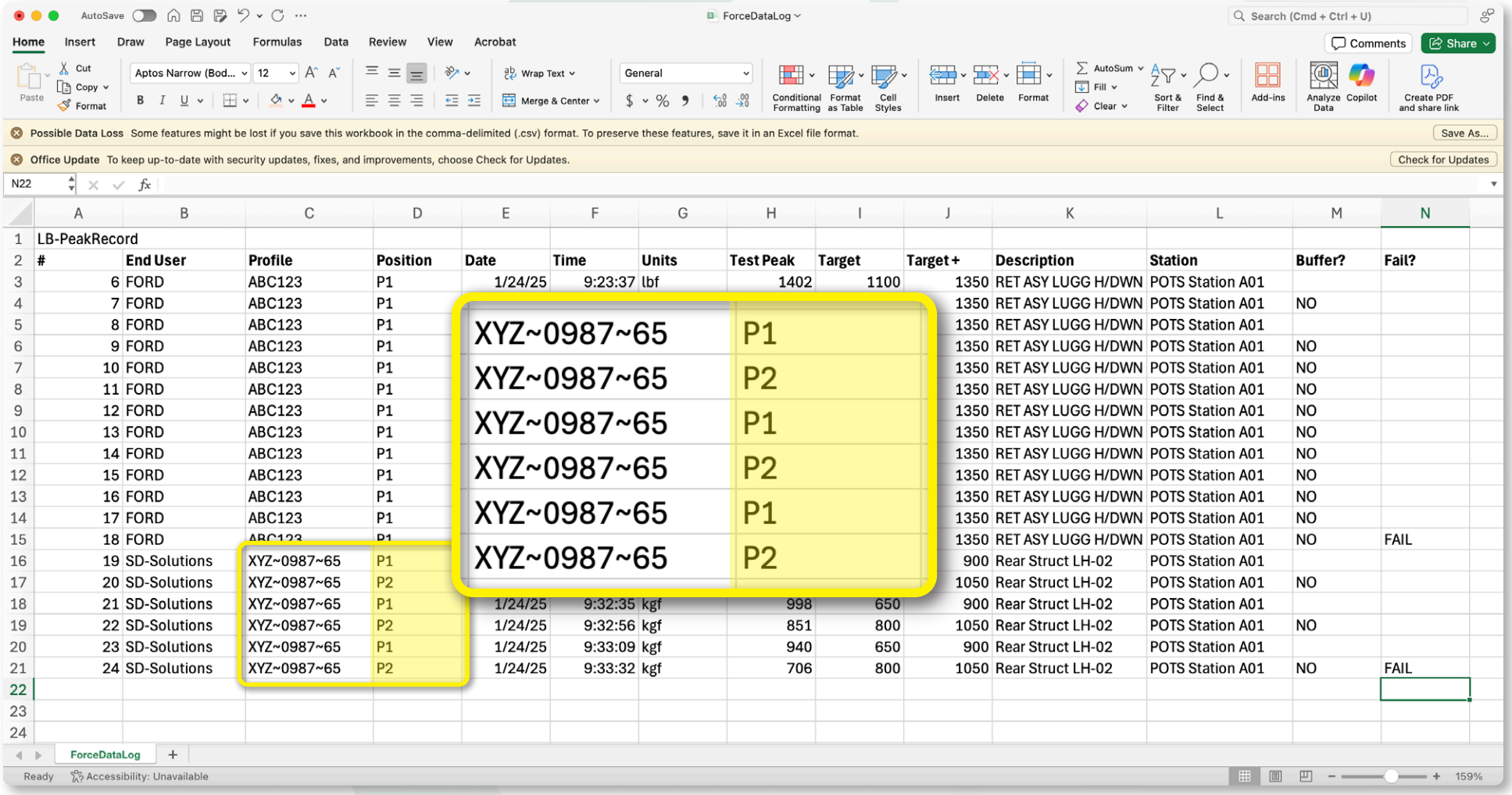
DATA LOGGING OVERVIEW

ON THE SMARTFORCE PUSH-OUT TEST SYSTEM



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	LB-PeakRecord													
2	#	End User	Profile	Position	Date	Time	Units	Test Peak	Target	Target +	Description	Station	Buffer?	Fail?
3	6	FORD	ABC123	P1	1/24/25	9:23:37	lbf	1402	1100	1350	RET ASY LUGG H/DWN	POTS Station A01		
4	7	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
5	8	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01		
6	9	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
7	10	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
8	11	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
9	12	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
10	13	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
11	14	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
12	15	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
13	16	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
14	17	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	
15	18	FORD	ABC123	P1						1350	RET ASY LUGG H/DWN	POTS Station A01	NO	FAIL
16	19	SD-Solutions	XYZ~0987~65	P1						900	Rear Struct LH-02	POTS Station A01		
17	20	SD-Solutions	XYZ~0987~65	P2						1050	Rear Struct LH-02	POTS Station A01	NO	
18	21	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:35	kgf	998	650	900	Rear Struct LH-02	POTS Station A01		
19	22	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:56	kgf	851	800	1050	Rear Struct LH-02	POTS Station A01	NO	
20	23	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:33:09	kgf	940	650	900	Rear Struct LH-02	POTS Station A01		
21	24	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:33:32	kgf	706	800	1050	Rear Struct LH-02	POTS Station A01	NO	FAIL
22														
23														
24														

XYZ~0987~65	P1
XYZ~0987~65	P2
XYZ~0987~65	P1
XYZ~0987~65	P2
XYZ~0987~65	P1
XYZ~0987~65	P2

The parts include Profiles and Weld Positions, to segment different welds on the same part. Some parts may include multiple fastener types and/or be welded by different weld heads in the same part nest. Some advanced stampings may even vary in thickness from one weld location to the next.

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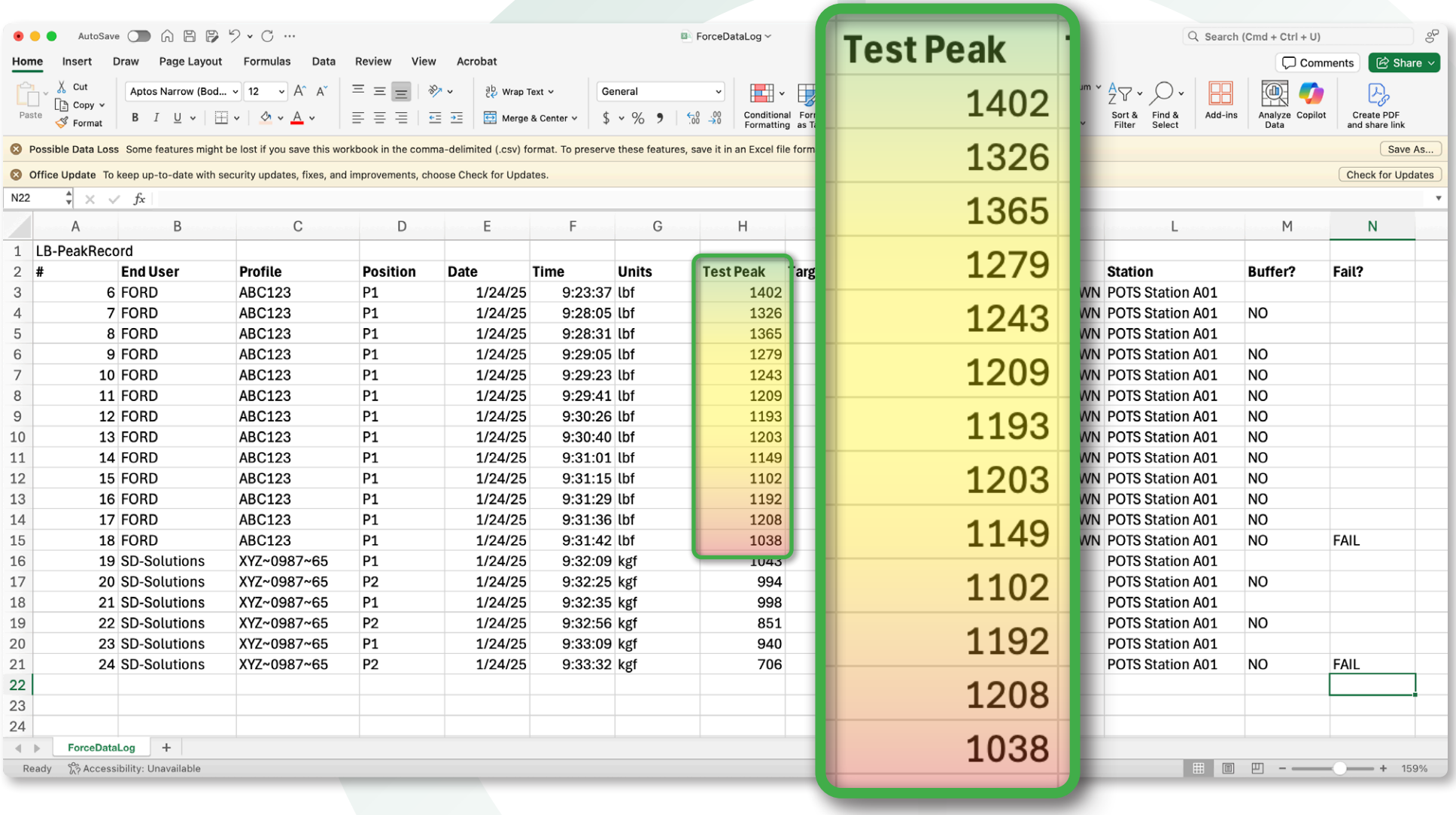
ON THE SMARTFORCE PUSH-OUT TEST SYSTEM



LB-PeakRecord												
#	End User	Profile	Position	Date	Time	Units	Test Peak		Station	Buffer?	Fail?	
6	FORD	ABC123	P1	1/24/25	9:23:37	lbf	1402		POTS Station A01			
7	FORD	ABC123	P1	1/24/25	9:28:05	lbf	1326		POTS Station A01	NO		
8	FORD	ABC123	P1	1/24/25	9:28:31	lbf	1365		POTS Station A01			
9	FORD	ABC123	P1	1/24/25	9:29:05	lbf	1279		POTS Station A01	NO		
10	FORD	ABC123	P1	1/24/25	9:29:23	lbf	1243		POTS Station A01	NO		
11	FORD	ABC123	P1	1/24/25	9:29:41	lbf	1209		POTS Station A01	NO		
12	FORD	ABC123	P1	1/24/25	9:30:26	lbf	1193		POTS Station A01	NO		
13	FORD	ABC123	P1	1/24/25	9:30:40	lbf	1203		POTS Station A01	NO		
14	FORD	ABC123	P1	1/24/25	9:31:01	lbf	1149		POTS Station A01	NO		
15	FORD	ABC123	P1	1/24/25	9:31:15	lbf	1102		POTS Station A01	NO		
16	FORD	ABC123	P1	1/24/25	9:31:29	lbf	1192		POTS Station A01	NO		
17	FORD	ABC123	P1	1/24/25	9:31:36	lbf	1208		POTS Station A01	NO		
18	FORD	ABC123	P1	1/24/25	9:31:42	lbf	1038		POTS Station A01	NO	FAIL	
19	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:09	kgf	1043		POTS Station A01			
20	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:25	kgf	994		POTS Station A01	NO		
21	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:35	kgf	998		POTS Station A01			
22	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:56	kgf	851		POTS Station A01	NO		
23	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:33:09	kgf	940		POTS Station A01			
24	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:33:32	kgf	706		POTS Station A01	NO	FAIL	

Test Peak
1402
1326
1365
1279
1243
1209
1193
1203
1149
1102
1192
1208
1038

On this example part, it is apparent that there was a consistent decline in weld quality over time, even though it did not "fail" until the last part tested. When used correctly, the first welds in the buffer zone would trigger an evaluation before the expensive root cause analysis and part scrapping that follows a single weld failure.

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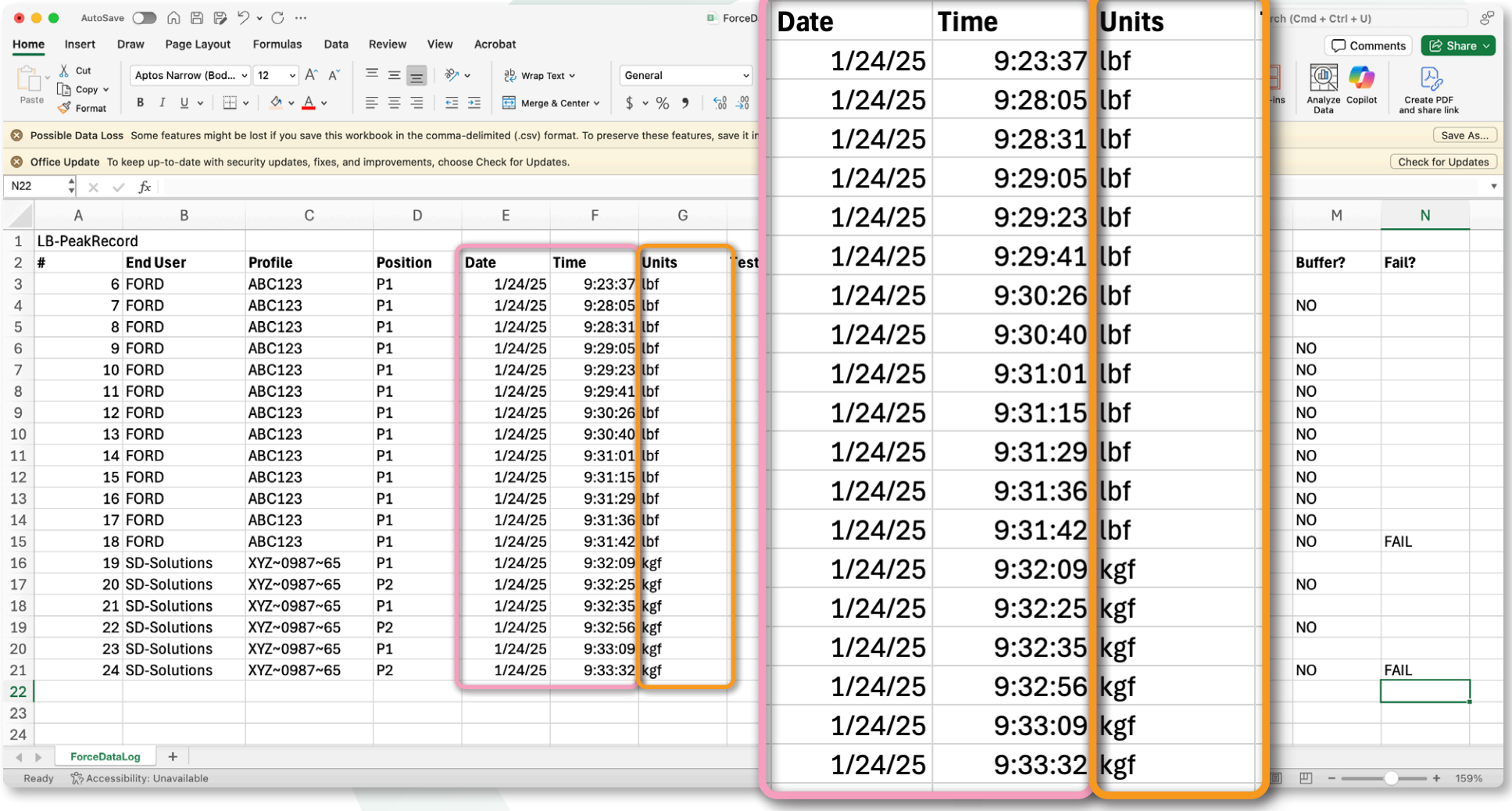
DATA LOGGING OVERVIEW

ON THE SMARTFORCE PUSH-OUT TEST SYSTEM



	A	B	C	D	E	F	G
1	LB-PeakRecord						
2	#	End User	Profile	Position	Date	Time	Units
3	6	FORD	ABC123	P1	1/24/25	9:23:37	lbf
4	7	FORD	ABC123	P1	1/24/25	9:28:05	lbf
5	8	FORD	ABC123	P1	1/24/25	9:28:31	lbf
6	9	FORD	ABC123	P1	1/24/25	9:29:05	lbf
7	10	FORD	ABC123	P1	1/24/25	9:29:23	lbf
8	11	FORD	ABC123	P1	1/24/25	9:29:41	lbf
9	12	FORD	ABC123	P1	1/24/25	9:30:26	lbf
10	13	FORD	ABC123	P1	1/24/25	9:30:40	lbf
11	14	FORD	ABC123	P1	1/24/25	9:31:01	lbf
12	15	FORD	ABC123	P1	1/24/25	9:31:15	lbf
13	16	FORD	ABC123	P1	1/24/25	9:31:29	lbf
14	17	FORD	ABC123	P1	1/24/25	9:31:36	lbf
15	18	FORD	ABC123	P1	1/24/25	9:31:42	lbf
16	19	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:09	kgf
17	20	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:25	kgf
18	21	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:32:35	kgf
19	22	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:32:56	kgf
20	23	SD-Solutions	XYZ~0987~65	P1	1/24/25	9:33:09	kgf
21	24	SD-Solutions	XYZ~0987~65	P2	1/24/25	9:33:32	kgf
22							
23							
24							

Date	Time	Units
1/24/25	9:23:37	lbf
1/24/25	9:28:05	lbf
1/24/25	9:28:31	lbf
1/24/25	9:29:05	lbf
1/24/25	9:29:23	lbf
1/24/25	9:29:41	lbf
1/24/25	9:30:26	lbf
1/24/25	9:30:40	lbf
1/24/25	9:31:01	lbf
1/24/25	9:31:15	lbf
1/24/25	9:31:29	lbf
1/24/25	9:31:36	lbf
1/24/25	9:31:42	lbf
1/24/25	9:32:09	kgf
1/24/25	9:32:25	kgf
1/24/25	9:32:35	kgf
1/24/25	9:32:56	kgf
1/24/25	9:33:09	kgf
1/24/25	9:33:32	kgf

M	N
Buffer?	Fail?
NO	
NO	
NO	
NO	
NO	
NO	
NO	
NO	
NO	
NO	
NO	FAIL
NO	
NO	
NO	FAIL

Each test is dated and time stamped for traceability.

Do various users require push-out tests in different units of measure? The SmartForce stores test units by part profile in kilograms force (kgf), pounds force (lbf), newtons (N), and kilonewtons (kN).

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