

FASTPLANK INC.

TEST REPORT

TEST REPORT ISSUED TO

FastPlank Inc.
4115 – 72 Ave. SE
Calgary, AB T2C 2G5
Canada

SPECIFICATION(S) / STANDARD(S)

AAMA 508-21

PRODUCT SERIES & TYPE

Aluminum 6" Siding Rain Screen System

EVALUATION PROPERTIES

Pressure Equalization, Static Water Penetration Resistance, Dynamic Water Penetration Resistance

REPORT NUMBER

105139889COQ-012

TEST DATE(S)

05/03/23

ISSUE DATE

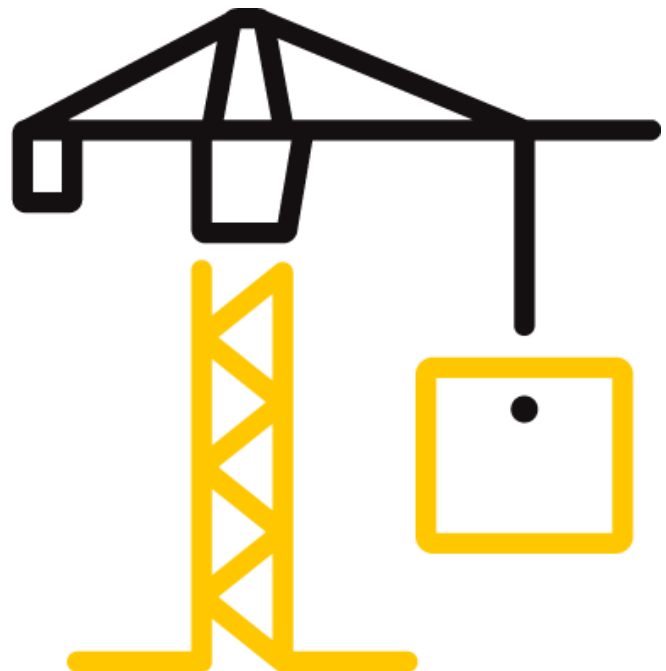
05/25/23

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TEST REPORT FOR FASTPLANK INC.

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SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by FastPlank Inc. to perform testing on the Aluminum 6" Siding Rain Screen System in accordance with the following standard/specifications:

- AAMA 508-21, *Voluntary Test Method and Specification for Pressure Equalized Rain Screen Wall Cladding Systems*

Results obtained are tested values and were secured by using the designated test method. Testing was conducted at the Intertek test facility in Coquitlam, BC.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Jason Komorski	REVIEWED BY:	David Park
TITLE:	Technician – Building Products	TITLE:	Reviewer – Building Products
SIGNATURE:		SIGNATURE:	
DATE:	05/25/23	DATE:	05/25/23

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SECTION 2

SUMMARY OF TEST RESULTS

A summary of results are as indicated in the table below:

Evaluation Property	Results
Pressure Equalization	Pass
Static Water Penetration Resistance	Pass – 720 Pa (15.0 psf)
Dynamic Water Penetration Resistance	Pass – 34.3 m/s (76.7 mph)

Details of the tested results can be found in Section 9 of this report.

SECTION 3

TEST METHOD

The specimen was tested and evaluated in accordance with the following:

- **AAMA 508-21**, *Voluntary Test Method and Specification for Pressure Equalized Rain Screen Wall Cladding Systems*

SECTION 4

MATERIAL SOURCE

Intertek representative, Kareem Abdelghany, randomly sampled the aluminum siding product on September 15, 2022. The sample selection process was conducted at Suite #101, 4441 76 Ave, Calgary, AB, T2C 2G8, Canada. The product was selected in accordance with recognized independent sampling procedures and was received at the Evaluation Center on October 17, 2022 (Coquitlam ID# VAN22101791814-001).

SECTION 5

EQUIPMENT

ASSET #	DESCRIPTION	CAL DUE DATE
60650	Fenestration Control Unit	05/14/23
60651	Water Spray Assembly	05/14/23
60652	Water Spray Assembly	05/14/23
ITS1	Water Spray Assembly	05/14/23
63170	Micro Mule	08/06/23
INT00712	Rain Screen Pressure Box	02/08/24

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SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Jason Komorski	Intertek B&C
David Park	Intertek B&C
Maika Boila	Fastplank Inc.

SECTION 7

TEST PROCEDURE

CONDITIONING

Sample materials were maintained in standard laboratory conditions for a minimum of 48 hours at a temperature of $73 \pm 4^{\circ}\text{F}$ ($23 \pm 2^{\circ}\text{C}$) and relative humidity of $50 \pm 5\%$.

AIR LEAKAGE

The Air Leakage (Air Infiltration) was conducted in accordance with ASTM E283 while following the procedures of AAMA 508. As per AAMA 508, using a chamber pressure of 75 Pa (1.57 psf), air leakage was induced in the system to provide a leakage rate of $0.6 \text{ L/s}\cdot\text{m}^2$.

PRESSURE EQUALIZATION

The Pressure Equalization test was tested in accordance with ASTM E1233 and evaluated to AAMA 508. The test was performed at a specified pressure differential of 240 Pa (5 psf) to 1200 Pa (25 psf) for a minimum of 100 cycles.

STATIC WATER PENETRATION RESISTANCE

The Static Water Penetration test was tested in accordance with ASTM E331 and evaluated to Section 6.1 of AAMA 508. This test was performed at the specified pressure differential of 720 Pa (15 psf) and a water spray rate of at least 204 L/m^2 per hour (5.0 U.S. gal/ft² per hour). The test was run for fifteen minutes, during which the pressure and water spray were continuously applied.

DYNAMIC WATER PENETRATION RESISTANCE

The Dynamic Water Penetration test was tested in accordance with AAMA 501.1 and evaluated to Section 6.1 of AAMA 508. The test was performed using an approximate wind speed of 34.3 m/s (76.7 mph), pressure differential equivalence of 720 Pa (15.0 psf), generated using a Wind Generator, and a water spray rate of at least 204 L/m^2 per hour (5.0 U.S. gal/ft² per hour). This test consisted of fifteen minutes, during which the wind and water spray were continuously applied.

DEVIATION FROM STANDARD METHOD

There were no noted deviations from the test standards used in the evaluation reported herein.

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TEST SPECIMEN DESCRIPTION

Series/Model: 6" Aluminum Fastplank Siding

Product Type: Rain Screen Aluminum Siding System

Overall Test Size: 96" wide by 96" high

Configuration: Vertical joint located mid-span

Construction of the Aluminum Rain Screen Siding System was performed as per the drawings provided by the client, within Section 12 of this report.

1x length of starter track profile was secured to the bottom of the wall, secured with #12 x 1-1/2" hex head screws with a gasketed washer, spaced 406 mm (16") o.c., into each steel stud of the wall assembly. A J-track backplate profile was used for the sides, top and the vertical joint at mid-span, secured with #12 x 1-1/2" hex head screws with a gasketed washer. Along the top, fasteners were spaced and 406 mm (16") o.c. into each steel stud of the wall assembly. Along the sides and mid-span vertical, fasteners were used at the top and bottom of the profile and spaced 152 mm (6") o.c. by the same fasteners that are used for the clip at each end of the siding profile, as described below. Each length of 6" siding profile was set in place and secured along the top with 3x clips, one at each end, and one alternating between left and right center stud for each row of siding. Each clip was secured to the corresponding stud with a #12 x 1-1/2" hex head screw with a gasketed washer. Each backplate profile then had a top cap profile snapped into place over the corresponding backplate.

Pressure Equalization Test Wall Set-Up: A 96" wide by 96" high steel stud wall was constructed using 16 ga. 2x6 steel studs placed at 16" on center. The wall was then sheathed with 1/2" thick clear poly carbonate sheet. The rain screen panel system was then installed onto the clear polycarbonate in a manner consistent as mentioned above. The jamb and header ends of the rain screen system to the test buck was sealed using sheathing tape as to eliminate the non-typical end terminations from evaluation. The exterior of the test unit was sealed to the wood buck with tuck tape and silicone.

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SECTION 9

TEST RESULTS

AIR LEAKAGE RESISTANCE

Air leakage test data is indicated in the following table:

Test Pressure for all samples	75 Pa
Overall Area of each sample	5.94 m ² (63.98 ft ²)
Air Leakage	0.6 L/s*m ² (0.12 cfm/ft ²)
No. of 1/8" Holes Drilled	66

PRESSURE EQUALIZATION

During the Pressure Equalization test cycling at a pressure differential from 240 Pa (5 psf) to 1200 Pa (25 psf) for 100 cycles the systems lag times was below the required 0.08 seconds and the differential between the cavities and cyclic wind pressure did not exceed 50% of the maximum test pressure. Refer to Section 13 for a graph on one cycle during this test. The tested specimen **met** the performance requirements for Pressure Equalization of AAMA 508.

STATIC WATER PENETRATION RESISTANCE

During the 15-minute test period, using a pressure differential of 720 Pa (15 psf), there was no continuous stream of water on the substrate nor did the water mist or droplets that total more than 5% of the surface area. The sample **met** the performance requirements for Static Water Penetration of ASTM E331.

DYNAMIC WATER PENETRATION RESISTANCE

During the 15-minute test period, using wind speed of approximately 34.3 m/s (76.7 mph), there was no continuous stream of water on the substrate nor did the water mist or droplets that total more than 5% of the surface area. The sample **met** the performance requirements for Dynamic Water Penetration of AAMA 501.1.

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SECTION 10

CONCLUSION

The test specimen met the specified performance requirements as described in Section 9.

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SECTION 11

PHOTOGRAPHS



Photo No. 1 – Aluminum Siding - Rain Screen System



Photo No. 2 – Aluminum Siding - Rain Screen System – AAMA 501.1 test setup

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Photo No. 3
Siding profile

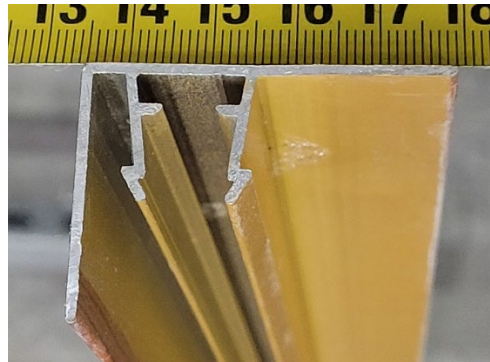


Photo No. 4
J-Trim top cap



Photo No. 5
J-Trim backplate



Photo No. 6
Vertical Trim top cap

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Photo No. 7
Vertical Trim backplate



Photo No. 8
Installation clip profile



Photo No. 9
Spacer channel profile along top of assembly

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Photo No. 10
Starter track profile



Photo No. 11
Installation fasteners



Photo No. 12
Fastener locations at top corner



Photo No. 13
Fastener locations at mid-span

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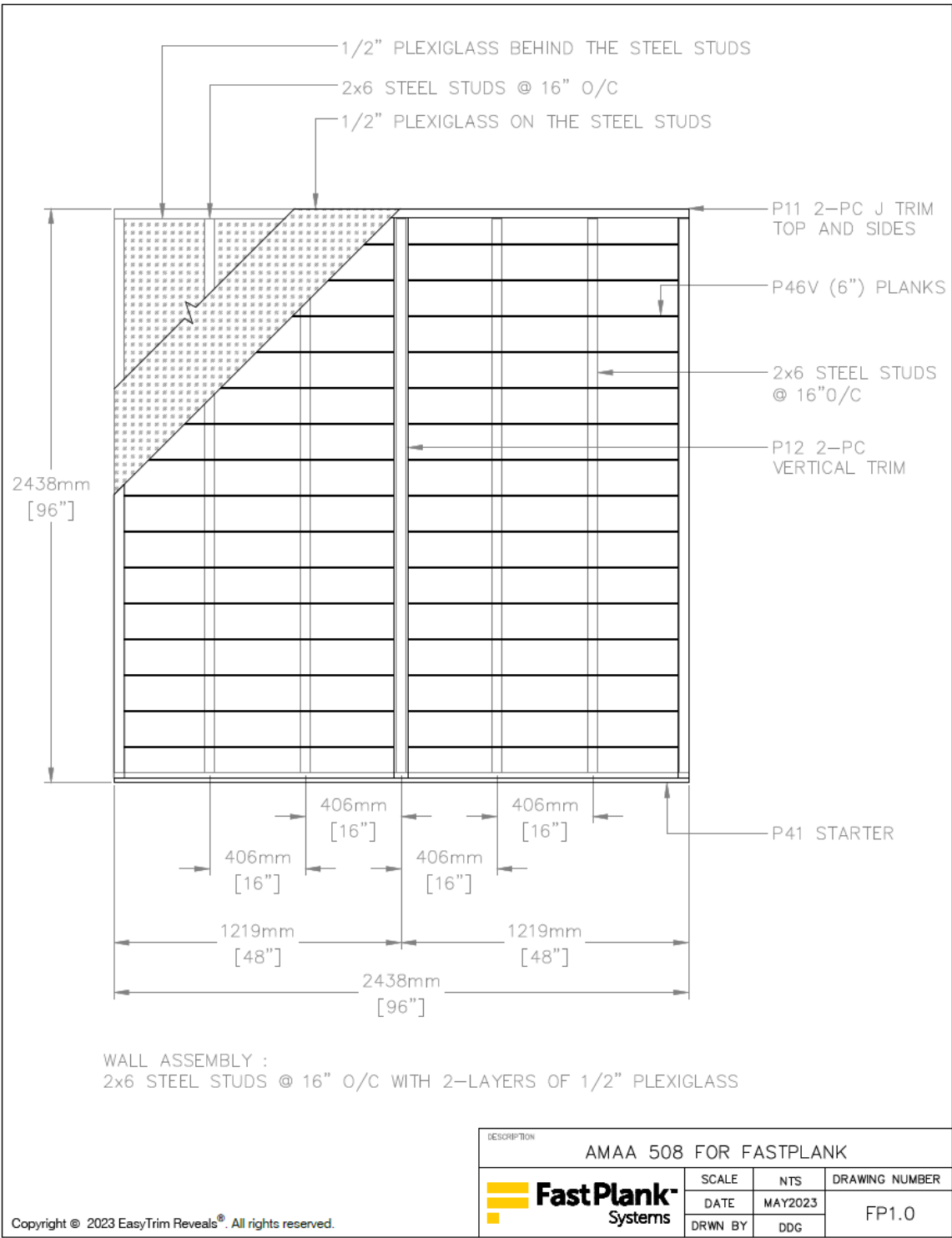
SECTION 12

DRAWINGS

The drawings for the Aluminum Rain Screen Siding System, as provided by the client, have been reviewed by Intertek B&C and are representative of the sample reported herein. Sample construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

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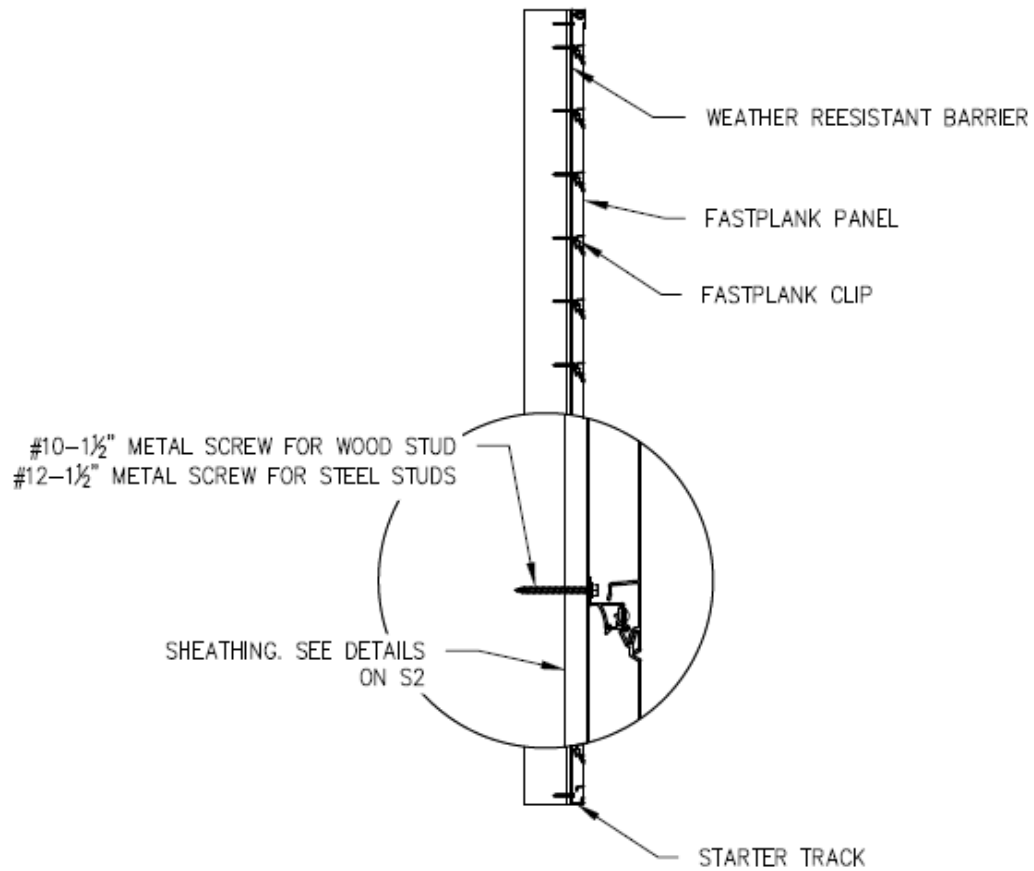
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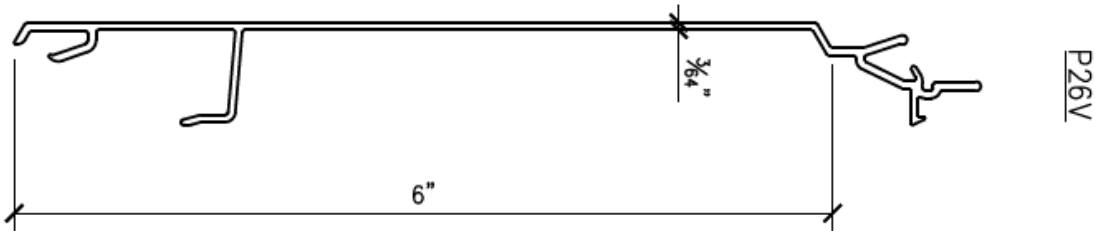
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B
1 FASTPLANK ELEVATION
NOT-TO-SCALE

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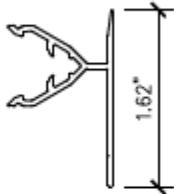
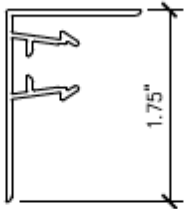
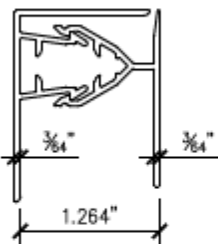
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ASSEMBLY

TOP CAP

BACKPLATE

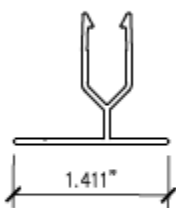
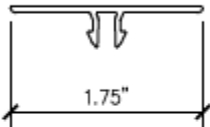
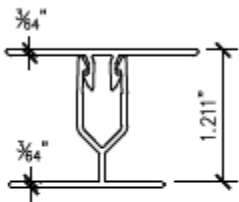


A
4 P11 J-TRIM CLIP
NOT-TO-SCALE

ASSEMBLY

TOP CAP

BACKPLATE



B
4 P12 VERTICAL TRIM
NOT-TO-SCALE

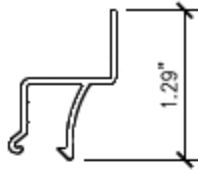
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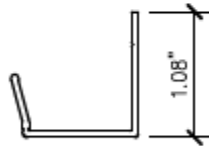
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FASTPLANK CONNECTOR
NOT-TO-SCALE



PERFORATED STARTER TRACK
NOT-TO-SCALE

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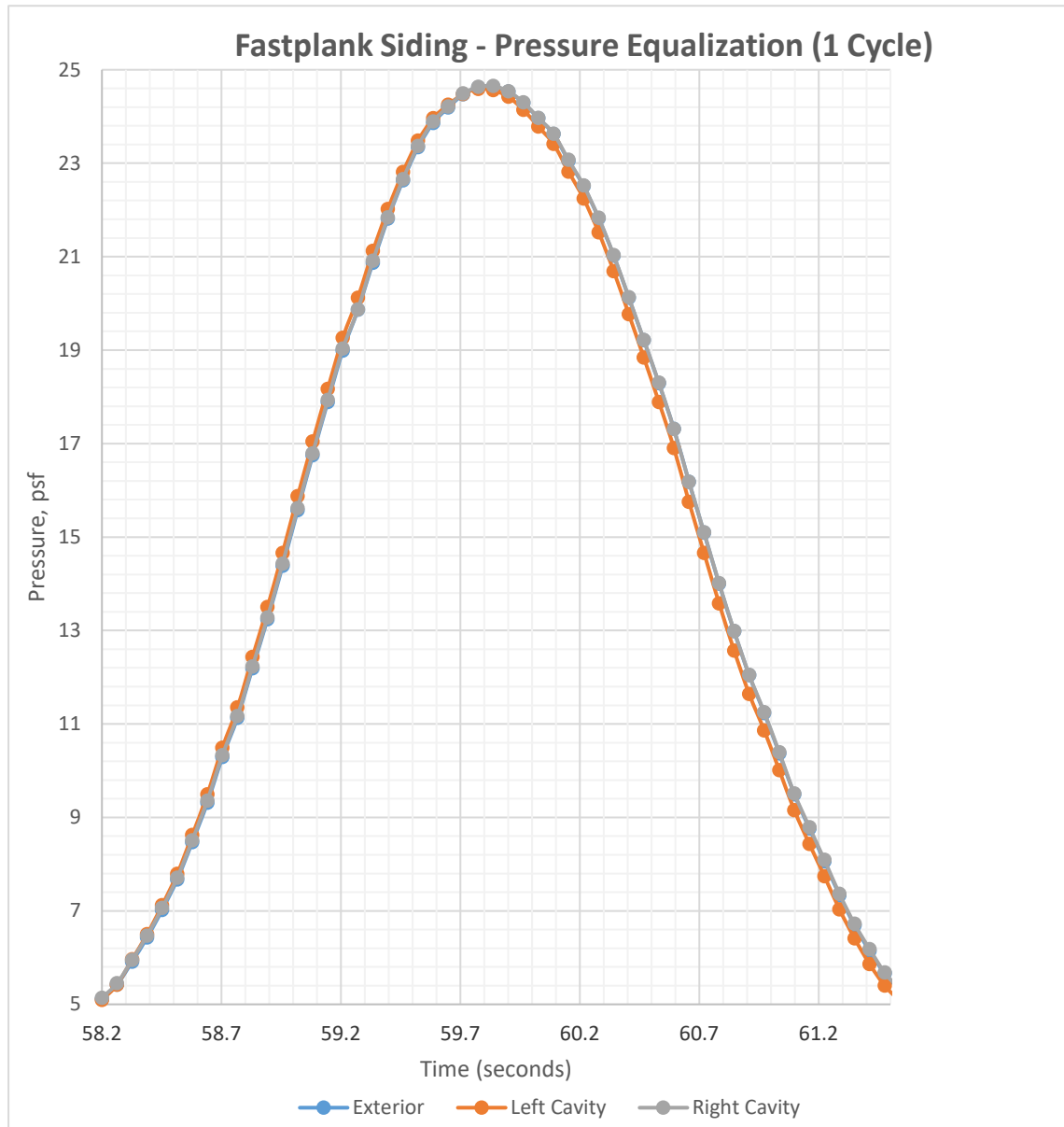
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SECTION 13

PRESSURE EQUALIZATION GRAPH



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SECTION 14

REVISION LOG

REVISION #	DATE	SECTION	REVISION
0	05/25/23	N/A	Original Report Issue