



Farabaugh Engineering and Testing Inc.

Project No. T313-19

Report Date: November 8, 2019

No. of Pages: 8 (inclusive)

PERFORMANCE TEST REPORT

TAS 100-95

TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS PERFORMANCE TEST REPORT

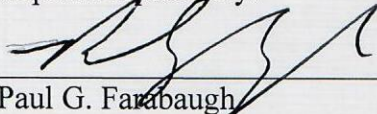
ON

LIFETIME TOOL B.D. VENT AND OTHER VARIOUS ROOF VENTS

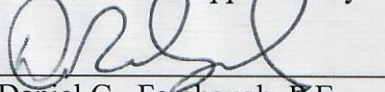
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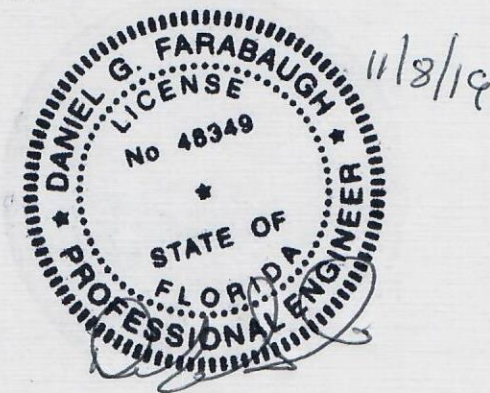
LIFETIME TOOL & BUILDING PRODUCTS LLC
250 AIRPORT ROAD
WINCHESTER, VA 22602

Report Prepared By:


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Reviewed and Approved By:


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TEXAS DEPARTMENT
OF INSURANCE
ACCREDITED LABORATORY

TAS 100-95
TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN
RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS

Objective:

The purpose of this testing was to determine the wind speed across the multiple roof vents that water started to leak from extended piping below each vent. The testing was performed as per Florida Testing Application Standard (TAS) 100-95 and as provided.

Test Specimen

Manufacturer: Lifetime Tool & Building Products LLC
250 Airport Road
Winchester, VA. 22602

Specimens: Lifetime Tool Bath Dryer Vent and other multiple roof vents from various manufacturers.

Test Witness

Daniel G. Farabaugh, PE (Florida PE #0048349)
255 Saunders Station Rd.
Trafford, PA 15085

Test Date Finished:

11/3/19

Deck

The test deck consisted of a 8' long x 4' wide base structure constructed from 2 x 6 wood perimeter supports and 2 x 4 wood intermediate support near center of plywood decking. Plywood sheathing 1/2" thick was installed over the framing supports and attached with 8d ring shank nails at 6" on center at panel edges and 6" on center at intermediate supports.

Installation

30# felt paper was attached to the top of the plywood. Each roof vent was mounted to the top of a simulated roof system with an exposed 4" diameter exhaust pipe that extended thru the decking to underneath the roof system. All roof vents had their flashing plates nailed down and then the top perimeter was covered with flashing tape so as to stop any water from leaking at flashing plate. The top of each vent was exposed to the wind pressure and water that blew across each specimen.

Calibrations

Calibrations of the Windstream, Flow Meter and Water Distribution was performed per TAS 100-95

Test Procedure

- The test assembly was positioned at a 2 on 12 slope. See photo showing actual testing of specimens.
- The test assembly was subjected to wind speed and water spray intervals as follows.
- Water spray rate was at 8.8 (in/hr) with each wind speed tested for 15 minutes and 10 minutes of no wind speed in between each increment of wind speeds recorded.

Test Results

Test Date: 11-3-19

SPECIMEN #	WIND SPEED (35 mph)	WIND SPEED (70 mph)	WIND SPEED (90 mph)	WIND SPEED (110 mph)	COMMENTS
1 (LIFETIME TOOL B. D. VENT)	No Leaks	No Leak	No Leak	No Leak	No leakage thru all wind speeds.
2	No Leaks	Leak	Leak	Leak	
3	Leak	Leak	Leak	Leak	
4	No Leaks	Leak	Leak	Leak	
5	Leak	Leak	Leak	Leak	

Note: No Leak – No water coming thru 4” extended pipe on underneath of specimen
Leak – Water came out of 4” extended pipe underneath.

Summary of Observations

Upon completion of the test wind speeds, visual observation indicated that there was no damage to the exposed roof vents system. See Test Data for indication of leakage thru exposed 4” diameter extended pipe on underneath of specimen.



TOP OF DECKING



BELOW DECKING WITH 4" DIAMETER EXTENDED PIPING



WIND SPEED @ 35 MPH



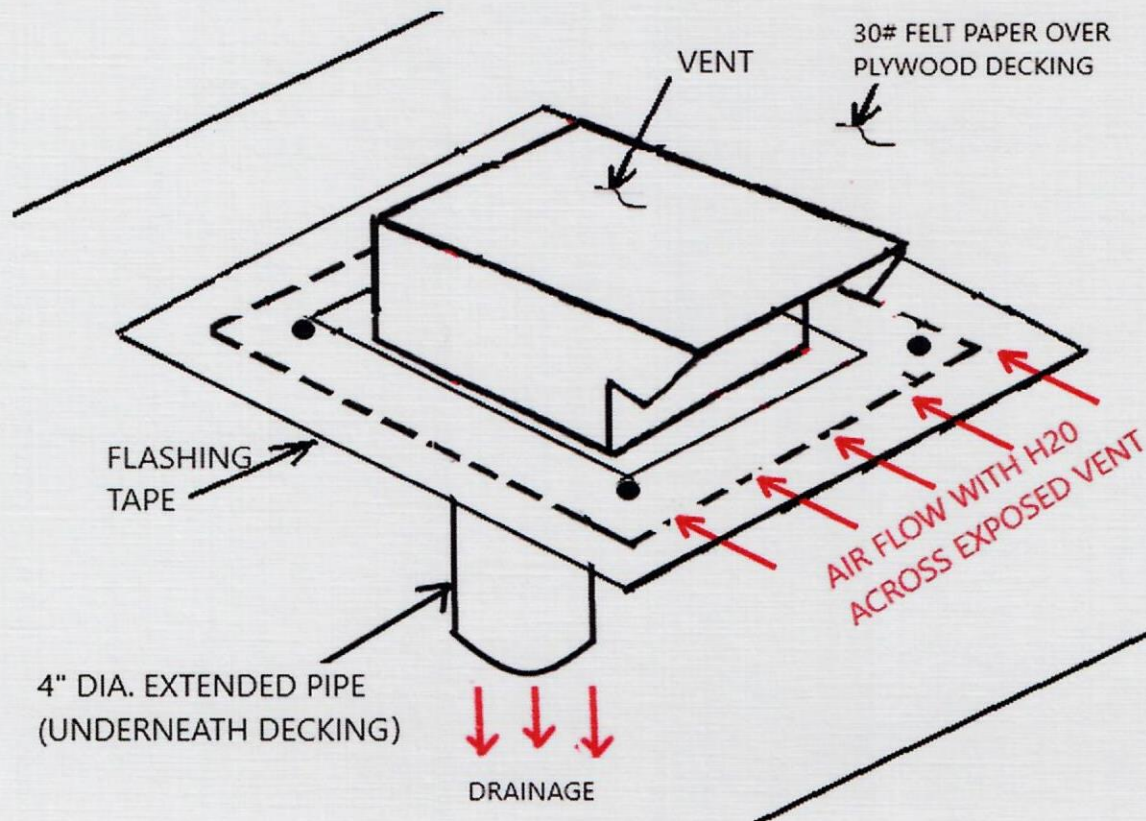
WIND SPEED @ 70 MPH



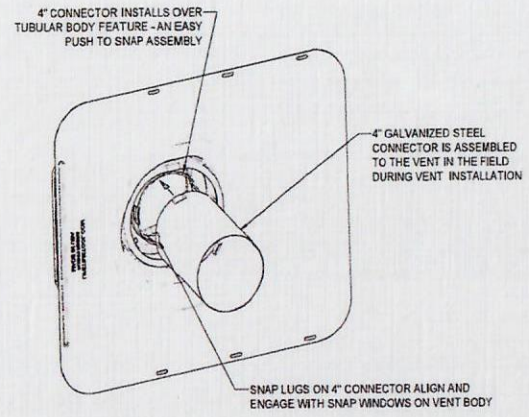
WIND SPEED @ 90 MPH



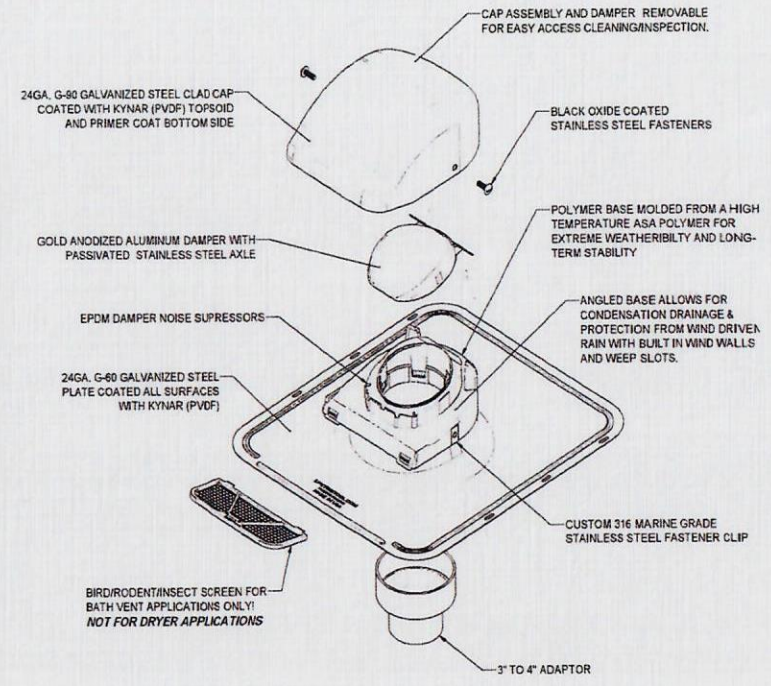
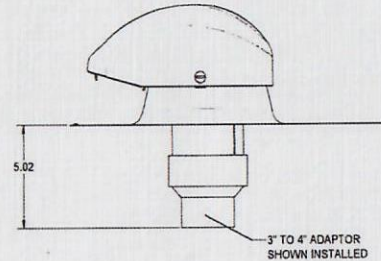
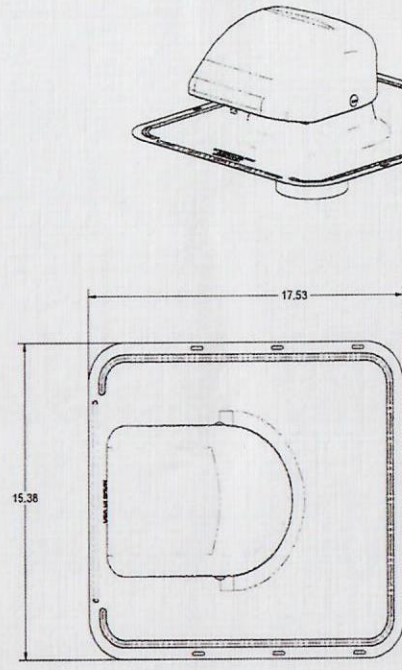
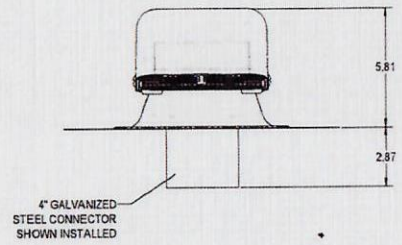
WIND SPEED @ 110 MPH



**TEST SPECIMEN SET UP
(AIR/H2O FLOW ON TOP & DRAINAGE
UNDERNEATH DECKING)**



FIELD ASSEMBLY - PRIOR TO VENT INSTALLATION ON ROOF



LIFETIME BATH/DRYER VENT SHINGLED ROOF

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