

# TEST REPORT



**REPORT NUMBER: 102332767COQ-001A**  
ORIGINAL ISSUE DATE: November 23, 2016

**EVALUATION CENTER**  
Intertek Testing Services NA Ltd.  
1500 Brigantine Drive  
Coquitlam, BC V3K 7C1  
Canada

Product Type: **Richersons**

Product Series: **4-Panel Folding Door System**

Specification: **Eclipse**

Primary Designator: **AAMA/WDMA/CSA 101/I.S.2/A440-08  
AAMA/WDMA/CSA 101/I.S.2/A440-11  
A440S1-09**

Secondary Designator: **NAFS-08 and NAFS-11  
SP – PG30 – Size Tested 3700 x 2524 mm (147 x 99 in)**

Test Completion Date: **Positive Design Pressure = 1440 Pa (30.1 psf)  
Negative Design Pressure = 1440 Pa (30.1 psf)  
Water Penetration Resistance = 330 Pa (6.9 psf)  
Canadian Air Leakage Resistance = A3**

**June 28, 2016**

*This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.*

# 1 Table of Contents

---

1	Table of Contents .....	2
2	Summary of Results .....	3
2.1.	NAFS-08 SUMMARY .....	3
2.2.	NAFS-11 SUMMARY .....	4
3	Introduction.....	5
4	Test Samples.....	5
4.1.	SAMPLE AND A SSEMBLY DESCRIPTION .....	5
5	Testing and Evaluation Methods .....	9
5.1.	AIR LEAKAGE RESISTANCE.....	9
5.2.	WATER PENETRATION RESISTANCE .....	9
5.3.	UNIFORM LOAD DEFLECTION .....	9
5.4.	UNIFORM LOAD STRUCTURAL.....	9
5.5.	DEVIATION FROM STANDARD METHOD .....	9
6	Test Apparatus .....	10
7	Testing and Evaluation Methods .....	10
7.1.	AIR LEAKAGE RESISTANCE.....	10
7.2.	WATER PENETRATION RESISTANCE.....	10
7.3.	UNIFORM LOAD DEFLECTION .....	11
7.4.	UNIFORM LOAD STRUCTURAL.....	11
8	Conclusion.....	12
APPENDIX A – Drawings .....		4 Pages
APPENDIX B – Photograph .....		6 Pages
APPENDIX C – Revision Table .....		1 Page

## 2 Summary of Results

---

### 2.1. NAFS-08 SUMMARY

A summary of results for AAMA/WDMA/CSA 101/I.S.2/A440-08 “Standard/Specification for windows, doors, and unit skylights”, are as indicated in the table below:

Evaluation Property	Result
Air Leakage Resistance @ 75 Pa (1.6 psf)	US – Pass; Can – A3
Water Penetration Resistance	330 Pa (6.9 psf) <i>*Locking handle was removed from the evaluation</i>
Uniform Load – Deflection	1440 Pa (30.1 psf)
Uniform Load – Structural	2160 Pa (45.1 psf)

Details of the tested results can be found in Section 7 of this report.

Primary and Secondary Designations are as indicated below:

#### **Eclipse 4-Panel Folding Door System**

SP – PG30 – Size Tested 3700 x 2524 mm (147 x 99 in)

#### **Secondary Designation**

Positive Design Pressure = 1440 Pa (30.1 psf)

Negative Design Pressure = 1440 Pa (30.1 psf)

Water Penetration Resistance = 330 Pa (6.9 psf) *\*Locking handle was removed from the evaluation*

Canadian Air Leakage Resistance = A3

**2.2. NAFS-11 SUMMARY**

A summary of results for AAMA/WDMA/CSA 101/I.S.2/A440-11 “Standard/Specification for windows, doors, and unit skylights”, are as indicated in the table below:

<b>Evaluation Property</b>	<b>Result</b>
Air Leakage Resistance @ 75 Pa (1.6 psf)	US – Pass; Can – A3 / Fixed
Water Penetration Resistance	330 Pa (6.9 psf) <i>*Locking handle was removed from the evaluation</i>
Uniform Load – Deflection	1440 Pa (30.1 psf)
Uniform Load – Structural	2160 Pa (45.1 psf)

Details of the tested results can be found in Section 7 of this report.

Primary and Secondary Designations are as indicated below:

**Eclipse 4-Panel Folding Door System**

SP – PG30 – Size Tested 3700 x 2524 mm (147 x 99 in)

**Secondary Designation**

Positive Design Pressure = 1440 Pa (30.1 psf)

Negative Design Pressure = 1440 Pa (30.1 psf)

Water Penetration Resistance = 330 Pa (6.9 psf) *\*Locking handle was removed from the evaluation*

Canadian Air Leakage Resistance = A3

### 3 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for on 3700 mm x 2524 mm (145.7" x 99.4") Eclipse 4-Panel Folding Door System in accordance with:

- AAMA/WDMA/CSA 101/I.S.2/ A440-08 “Standard/Specification for windows, doors, and unit skylights” (NAFS-08)
- AAMA/WDMA/CSA 101/I.S.2/ A440-11 “Standard/Specification for windows, doors, and unit skylights” (NAFS-11)
- A440S1-09 “Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, NAFS – North American Fenestration Standard/Specification for windows, doors, and skylights” (A440S1)

This evaluation began on June 28, 2016 and completed on the same day.

### 4 Test Samples

#### 4.1. SAMPLE AND A SSEMBLY DESCRIPTION

<b>Type (general)</b>	<ul style="list-style-type: none"> <li>• 4-Panel Folding Door System</li> <li>• Outswing Operation</li> </ul>
<b>Series</b>	<ul style="list-style-type: none"> <li>• Eclipse</li> </ul>
<b>Configuration</b>	<ul style="list-style-type: none"> <li>• 3L/1R as viewed from exterior</li> <li>• Panel 1 – Panel 3 – Bi-fold panels.</li> <li>• Panel 4 – Active Panel.</li> </ul>
<b>Test Fixture</b>	<ul style="list-style-type: none"> <li>• Test Buck: 2x6, #2 &amp; better spf, box w/ 2x12, #2 &amp; better spf, cladding, butt joints secured with 4x #8 x 3" deck screws. The 2x12 clad was also butt jointed together with 8x #8x3" deck screws and secured to the 2x6 with #8 x3" flat head screws at every 305 mm (12"). <ul style="list-style-type: none"> <li>• Specimen to Buck: The nailing flange was secured into the 2x6 portion of the test buck by #8x3" flat-head wood screws in every nailing slot, spaced approx. 203 mm (8") o.c. An Additional #8 x 3" flat head screw was used through the jamb at each corner.</li> <li>• Silicone was used to seal all screw heads, joints of the test buck as well as between the buck and nailing flange.</li> </ul> </li> </ul>
<b>Frame</b>	<ul style="list-style-type: none"> <li>• Material: Wood, Fir</li> <li>• Corners: Butt joined, secured together using adhesive and six staples. The jambs were secured to the sill with 4x #8x3" pan head screws and 1x #12x2". A black gasket was used between the ends of the sill and jambs.</li> <li>• The track is fastened to the head, and the screws also go in to the test buck as installation screws. A total of 16x #12 x 3" screws are used, 5x within the first 16" of either end, and the remaining 6x spaced 16" oc.</li> <li>• An aluminium installation flange is secured to the frame and sill profiles with 5/8" self-tapping screws, approx. 102 mm (4") oc.</li> <li>• The corner joints at the head are secured with 5x #8x3" flat head screws.</li> <li>• The corner joints at the sill are secured with 5x #10x2" flat head screws, a gasket is used to seal the ends of the sill.</li> <li>• Reinforcement: None</li> </ul>

<b>Size</b>		<ul style="list-style-type: none"> <li>Overall Size: <ul style="list-style-type: none"> <li>Width: 3700 mm (145.7")</li> <li>Height: 2524 mm (99.4")</li> </ul> </li> </ul>
<b>Panels (4X)</b>		<ul style="list-style-type: none"> <li>Material: Fiberglass Skin – Textured</li> <li>Door Panel: <ul style="list-style-type: none"> <li>Width: 909 mm (35.8")</li> <li>Height: 2412 mm (95.0")</li> </ul> </li> <li>Flush glazed, PVC integrated lite kit secured to the panel with #10x1-3/8" flat head screws, 11x on the sides, 4x on the top and bottom.</li> <li>Glass opening: <ul style="list-style-type: none"> <li>Width: 665 mm (41.7")</li> <li>Height: 1978 mm (95.0")</li> </ul> </li> <li>Top Rail: 1-9/16" x 7/8" Composite, 1-9/16" x 3-1/4" LVL, 1-9/16" x 1-1/4" composite.</li> <li>Hinge Stile: 1-9/16" x 1-1/4" wood cap with a recessed, proud edge. 1-9/16" x 1-1/4" LVL Wood, 1-9/16" x 3/4" composite.</li> <li>Lock Stile: 1-9/16" x 1-1/4" wood cap with a recessed, proud edge. 1-9/16" x 1-1/4" LVL Wood, 1-9/16" x 3/4" composite.</li> <li>Bottom Rail: 1-9/16" x 7/8" PVC composite, 1-9/16" x 7-3/4" foam, 1-9/16" x 1" composite.</li> </ul>
<b>Glazing</b>		<ul style="list-style-type: none"> <li>IGU specification: <ul style="list-style-type: none"> <li>3 mm / 3 mm clear annealed with a 19 mm super-spacer and hot melt butyl.</li> <li>Overall thickness, 25 mm (1")</li> </ul> </li> <li>Laid-in, exterior glazed on top of silicone</li> <li>A full silicone perimeter is used around the exterior seam between the glass and the glazing tower.</li> <li>Two layers of silicone are used around the interior side. The seam between the glass and glazing stop, as well as the glazing stop and slab. Along the entire bottom and up each side approximately 1067 mm (42")</li> <li>Glazing Blocks: None</li> <li>Glazing Stops: PVC</li> </ul>
<b>Hardware</b>	<b>Panel 1</b>	<ul style="list-style-type: none"> <li>Jamb stile: Pivot sets inserted into the Top Track KT 75 and the Sill track KT 795. Top Pivot set secured to the track with a steel cover plate by 4x #8x1" flat head screws. Sill Pivot set secured by 2x #8 screws, cut to 11/16" long. Each secured to the slab with 4x #10 x 1-1/2" flat head screws.</li> <li>Jamb stile: A Wall Pivot (KTE3WPS) was used at the centre point of the stile, secured to panel with 4x #10x1-1/2" flat head screws, secured to frame with 2x #8 flat head screws, cut to 11/16" long.</li> <li>One 16" Flushbolt (KTDBOT) at the top portion of the panel slots directly into the Top Track (KT75), secured to the interior face of the panel by 9x #8x1-1/4" Flat head screws.</li> <li>One 8" Flushbolt (KTDBOT) at the sill of the panel slots directly into the bottom track (KT795) secured to the interior face of the panel with 7x #8x1-1/4" flat head screws.</li> </ul>
	<b>Panel 2</b>	<ul style="list-style-type: none"> <li>Bi-fold stile: Three hinges (KTE3CICS) at the top and bottom and at the middle, shared with panel 1. Each hinge secured by 4x #10x1-1/2" flat head screws. Middle hinge has handle set attached.</li> <li>Roller stile: Carrier set (KTE3CICS) at the top and bottom of the panel, shared with panel 3. Top roller carrier secured by 3x #10x1-1/2" Flat head</li> </ul>

		<p>screws. Bottom roller carrier secured by 4X #10x1-1/2" Flat head screws.</p> <ul style="list-style-type: none"> <li>• Roller stile: One hinge (KTE3CICS) shared with panel 3, secured by 3x #10x1-1/2" Flat head screws.</li> </ul>
	<b>Panel 3</b>	<ul style="list-style-type: none"> <li>• Roller stile: Carrier set (KTE3CICS) at the top and bottom of the panel shared with panel 2. Bottom roller carrier secured by 3x #10x1-1/2" Flat head screws, top roller carrier secured by 4x #10x1-1/2" Flat head screws.</li> <li>• Roller stile: One hinge (KTE3CICS) shared with panel 2, secured by 4x #10x1-1/2" Flat head screws.</li> <li>• Lock stile: 3 corresponding keepers for the multi point lock and deadbolt system, each secured to panel with 2x #8x1-1/4" Flat head screws.</li> <li>• One 16" Flushbolt (KTDBOT) at the top portion of the panel slots directly into the Top Track (KT75), secured to the interior face of the panel by 9x #8x1-1/4" Flat head screws.</li> <li>• One 8" Flushbolt (KTDBOT) at the sill of the panel slots directly into the bottom track (KT795) secured to the interior face of the panel with 7x #8x1-1/4" flat head screws.</li> <li>• Astragal (KT190): Attached to the interior face of the panel with 14x 2" finishing nails and adhered with a layer of silicone.</li> </ul>
	<b>Panel 4 (Swing Door)</b>	<ul style="list-style-type: none"> <li>• Jamb stile: Pivot sets inserted into the Top Track KT 75 and the Sill track KT 795. Top Pivot set secured to the track with a steel cover plate by 4x #8x1" flat head screws. Sill Pivot set secured by 2x #8 screws, cut to 11/16" long. Each secured to the slab with 4x #10 x 1-1/2" flat head screws.</li> <li>• Jamb stile: A Wall Pivot (KTE3WPS) was used at the centre point of the stile, secured to panel with 4x #10x1-1/2" flat head screws, secured to frame with 2x #8 flat head screws, cut to 11/16" long.</li> <li>• Multi-lock bar with deadbolt, latch and two rhino hooks secured to panel with 14x #6x1-1/4" Flat head screws, Lock points including latch and deadbolt located at 6-1/2", 38-1/2", 40-1/4" and 83-1/4" from the bottom corner.</li> <li>• Astragal (KT190): Attached to the exterior face of the panel with 14x 2" finishing nails and adhered with a layer of silicone.</li> </ul>
<b>Drainage</b>	<ul style="list-style-type: none"> <li>• Exterior sill face: 13x 6.5mm holes. approx. 12" apart.</li> <li>• Exterior most facing section of the slider track has a PVC Black Insert (KT23BLVE) with 4 mm slots approx 12" oc.</li> <li>• 6mm holes through the middle portion of the aluminium sill track approx 12" oc.</li> </ul>	
<b>Gaskets and Weather-stripping</b>	<ul style="list-style-type: none"> <li>• Main frame: Inner most portion has 4x lengths of gasket kerf inserted vinyl wrapped closed cell foam weather-strip (KT421) around the perimeter of the frame. The bottom corners have silicone used.</li> <li>• Top Track (KT75): Pile &amp; fin weather-stripping (DS7145-270BL) along the middle of the track.</li> <li>• Panel 1: Interior most side edge of the Jamb stile has a kerf inserted vinyl wrapped closed cell foam weather-stripping (DS416). The interior most side edge of the Jamb stile and the interior and exterior edges of the hinge stile used a closed cell foam weather-stripping (DS416). Each hinge location has a 1/4" thick C-shaped foam gasket used around the hinge, as well as a length of 1/8" x 3/8" closed cell foam across the hinge, in line with the kerf inserted weather-stripping.</li> <li>• Panel 1: Top of the door slab has a pile weather-stripping with no fins adhered to the rail at the hinge side, 3" long.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Panel 2: Exterior and Interior most sections of the stile that meets panel 1 each have a kerf inserted gasket (DS416). The interior length is applied as four strips, as it does not cross the hinge locations. Each hinge location has a 1/4" thick C-shaped foam gasket used around the hinge, as well as a length of 1/8" x 3/8" closed cell foam in between the two hinge fastening plates, in line with the kerf inserted weather-stripping.</li> <li>• Panel 2: Exterior and Interior most sections of the stile that meets panel 3 each have a kerf inserted gasket (DS416). The bottom hinge location has a 1/4" thick C-shaped foam gasket used around the hinge.</li> <li>• Panel 3: The astragal stile has three lengths of different weather-stripping. The exterior-most is a pile with centre-fin, the middle layer is a larger pile without fin, and the interior-most layer is a vinyl wrapped closed cell foam filled weather-stripping (DS416). Each length is kerf inserted. Both lengths of pile weather-stripping are applied as four strips, as they do not cross each keeper locations. Along the astragal was a length of vinyl wrapped closed cell foam weather-strip (KT421).</li> <li>• Panel 3: The hinge side has two lengths of vinyl wrapped closed cell foam weather-stripping (DS416). The exterior side is applied as two strips, as it does not cross each hinge location.</li> <li>• Panel 4: Top of the door slab has a pile weather-stripping with no fins adhered to the rail at the hinge side, 3" long.</li> <li>• Panel 4: Exterior most side of the hinge stile has a kerf inserted vinyl wrapped closed cell foam gasket (DS416) and along the interior side (DS416), applied as two strips, as it does not cross each hinge location. Each hinge location has a 1/4" thick C-shaped foam gasket used around the hinge, as well as a length of 1/8" x 3/8" closed cell foam across the hinge, in line with the kerf inserted weather-stripping.</li> </ul>



## 5 Testing and Evaluation Methods

---

### 5.1. AIR LEAKAGE RESISTANCE

The Air Leakage Resistance test was performed in accordance with ASTM E283-04(2012), “*Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*”. Air infiltration and exfiltration tests were performed using test pressures of 75 Pa (1.57 psf). The maximum air leakage rate was calculated and compared to the allowable air leakage.

### 5.2. WATER PENETRATION RESISTANCE

A four-cycle Water Penetration Resistance test was performed in accordance with ASTM E547-00(2016) “*Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Air Pressure Difference*” (ASTM E547). The test was performed using the specified pressure differential and a water spray rate of at least 204 L/m<sup>2</sup> per hour (5.0 U.S. gal/ft<sup>2</sup> per hour). Each cycle consisted of five minutes with the pressure applied and one minute with the pressure released, during which the water spray was continuously applied.

### 5.3. UNIFORM LOAD DEFLECTION

The Uniform Load Deflection tests were conducted in accordance with ASTM E330-02(2010) “*Standard Test Method for Structural Performance of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference*” (ASTM E330), Procedure A. The tests were performed in both the positive and negative directions. After a 10 second preload (50% of the test load), followed by 1 minute with the pressure released, the tests were conducted at the specified test pressure for a period of 10 seconds. Deflections were measured at the mid-span and at the ends. The end deflections were averaged and subtracted from the mid-span deflection (to eliminate deflections caused by movement at the ends of the structural supporting members). Polyethylene film was used during the positive wind pressure sequences.

### 5.4. UNIFORM LOAD STRUCTURAL

The Uniform Load Structural tests were conducted in accordance with ASTM E330-02(2010) “*Standard Test Method for Structural Performance of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference*” (ASTM E330), Procedure A. After a 10 second preload (50% of test load), followed by 1 minute with the pressure released, the sample was subjected to a Uniform Load Structural test using a specified test pressure for a time of 10 seconds. The test was performed in both the positive and negative directions. After the test loads were released, the permanent deflections were recorded and the specimen was inspected for failure or permanent deformation of any part of the system that would cause any operational malfunction. Polyethylene film was used during the positive wind pressure sequences.

### 5.5. DEVIATION FROM STANDARD METHOD

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

## 6 Test Apparatus

Equipment used during testing is listed as follows:

Test	Equipment	Intertek ID#
Air Leakage Resistance, Water Penetration Resistance, and Uniform Load Deflection / Structural	Fenestration Testing Control Unit	60650
	Water spray assembly	60651
		60652
		60653

## 7 Testing and Evaluation Methods

### 7.1. AIR LEAKAGE RESISTANCE

Air test data is indicated in the following table:

Overall Assembly	
Area:	9.25 m <sup>2</sup> , 99.57 ft <sup>2</sup>
Infiltration rate:	0.04 L/s*m <sup>2</sup> , 0.01 cfm/ft <sup>2</sup>
Exfiltration rate:	0.01 L/s*m <sup>2</sup> , 0.00 cfm/ft <sup>2</sup>
Allowable Leakage Rates	
Maximum allowable air leakage rate (US):	1.5 L/s*m <sup>2</sup> , 0.3 cfm/ft <sup>2</sup>
Maximum allowable air leakage rate (CAN – A3):	0.5 L/s*m <sup>2</sup> , 0.1 cfm/ft <sup>2</sup>

The overall system **met** the US performance requirements as well as the **A3** Canadian performance requirements when evaluated under NAFS-08, NAFS-11 and A440S1.

### 7.2. WATER PENETRATION RESISTANCE

*\*Note - Locking handle was removed from the evaluation*

During the 24-minute test period, using a pressure differential of 330 Pa (6.9 psf), there was no water leakage observed. The system **met** the **(Can) PG45** Water Penetration Resistance performance requirements under NAFS-08, NAFS-11 and A440S1.

**7.3. UNIFORM LOAD DEFLECTION**

Uniform Load Deflection data at Panel 3, along the stile closest to Panel 2:

Test Pressure, Pa (psf)	Deflection Measurements, mm (in.)				Compliance
	Positive		Negative		
	Deflection	Residual	Deflection	Residual	
1440 (30.1)	37.43 (1.47)	0.35 (0.01)	47.18 (1.86)	0.42 (0.02)	Pass <b>DP30</b>
Active Door Stile span, L = 2360 mm (92.91")			Deflection limit, L/175 = N/A		

Uniform Load Deflection data at the Astragal:

Test Pressure, Pa (psf)	Deflection Measurements, mm (in.)				Compliance
	Positive		Negative		
	Deflection	Residual	Deflection	Residual	
1440 (30.1)	29.27 (1.15)	0.60 (0.02)	31.65 (1.25)	0.73 (0.03)	Pass <b>DP30</b>
Astragal span, L = 2360 mm (92.91")			Deflection limit, L/175 = N/A		

After the test loads were released, the specimen was inspected and there was found to be no failure or permanent deformation of any part of the system that would cause any operational malfunction. The system **met** the **DP30** Uniform Load Deflection performance requirements under NAFS-08 and NAFS-11.

**7.4. UNIFORM LOAD STRUCTURAL**

Uniform Load Structural data at Panel 3, along the stile closest to Panel 2:

Test Pressure, Pa (psf)	Residual Deflection Measurements, mm (in.)		Compliance
	Positive	Negative	
2160 (45.1)	0.09 (0.00)	0.56 (0.02)	Pass <b>DP30</b>
Active Door Stile span, L = 2360 mm (92.91")		Residual deflection limit, L*0.4% = 9.44 mm (0.37")	

Uniform Load Structural data at Astragal:

Test Pressure, Pa (psf)	Residual Deflection Measurements, mm (in.)		Compliance
	Positive	Negative	
2160 (45.1)	0.15 (0.01)	0.90 (0.04)	Pass <b>DP30</b>
Astragal span, L = 2360 mm (92.91")		Residual deflection limit, L*0.4% = 9.44 mm (0.37")	

*\*Residual Deflection performance had been evaluated based on Class R requirements*

After the test loads were released, the specimen was inspected and there was found to be no failure or permanent deformation of any part of the system that would cause any operational malfunction. The system **met** the overall **DP30** Uniform Load Structural performance requirements under NAFS-08 and NAFS-11.

## 8 Conclusion

---

The Eclipse 4-Panel Folding Door System tested and described herein achieved the overall performance requirements for SP-PG30 when tested in accordance with NAFS-08, NAFS-11 and A440S1.

### INTERTEK TESTING SERVICES NA LTD.

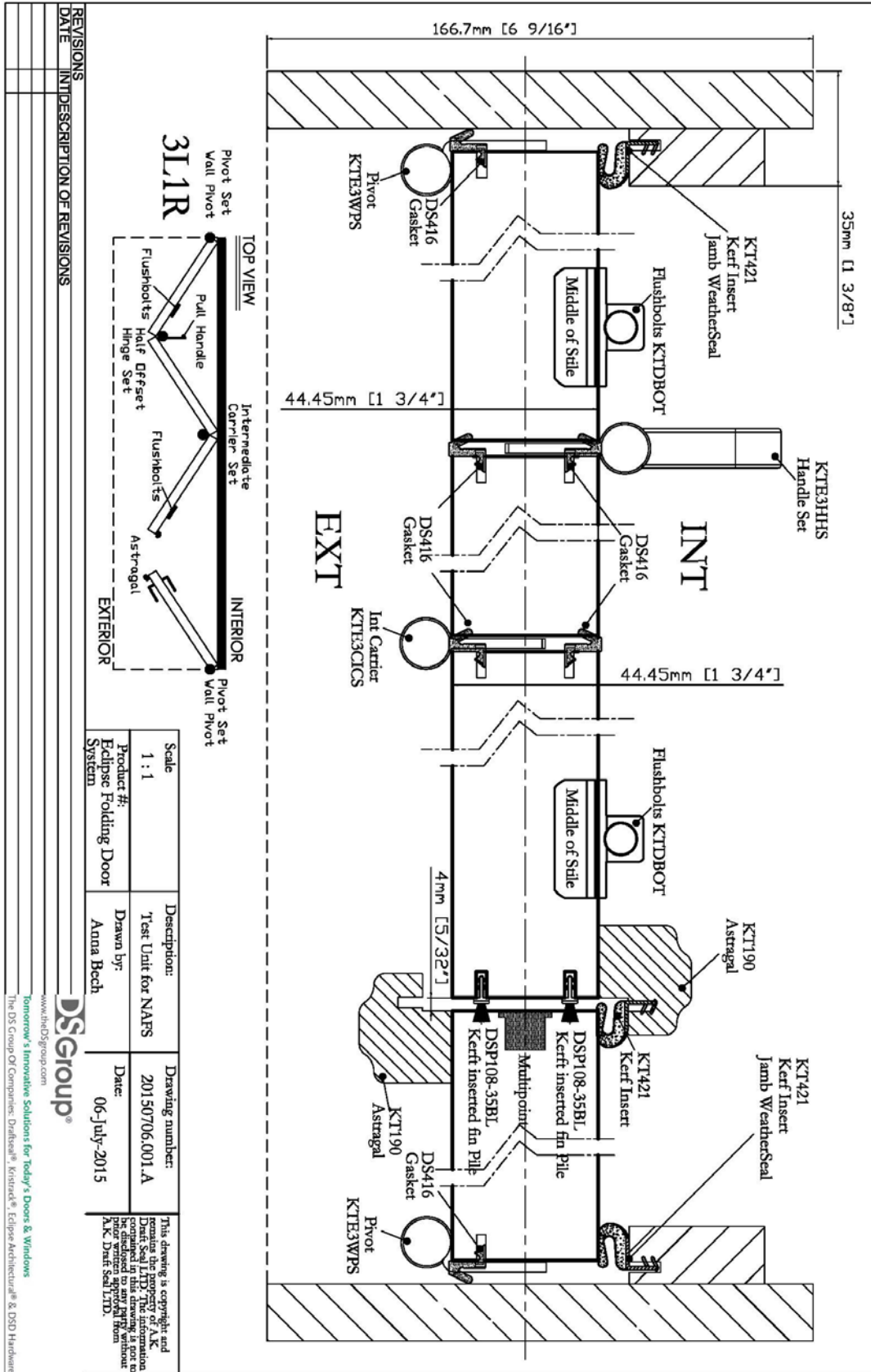
Reported by: \_\_\_\_\_

  
David Park  
**Technician – Building Products**

Reviewed by: \_\_\_\_\_

  
Riccardo DeSantis  
**Manager – Building Products Canada**

**APPENDIX A**  
Drawings – 4 Pages

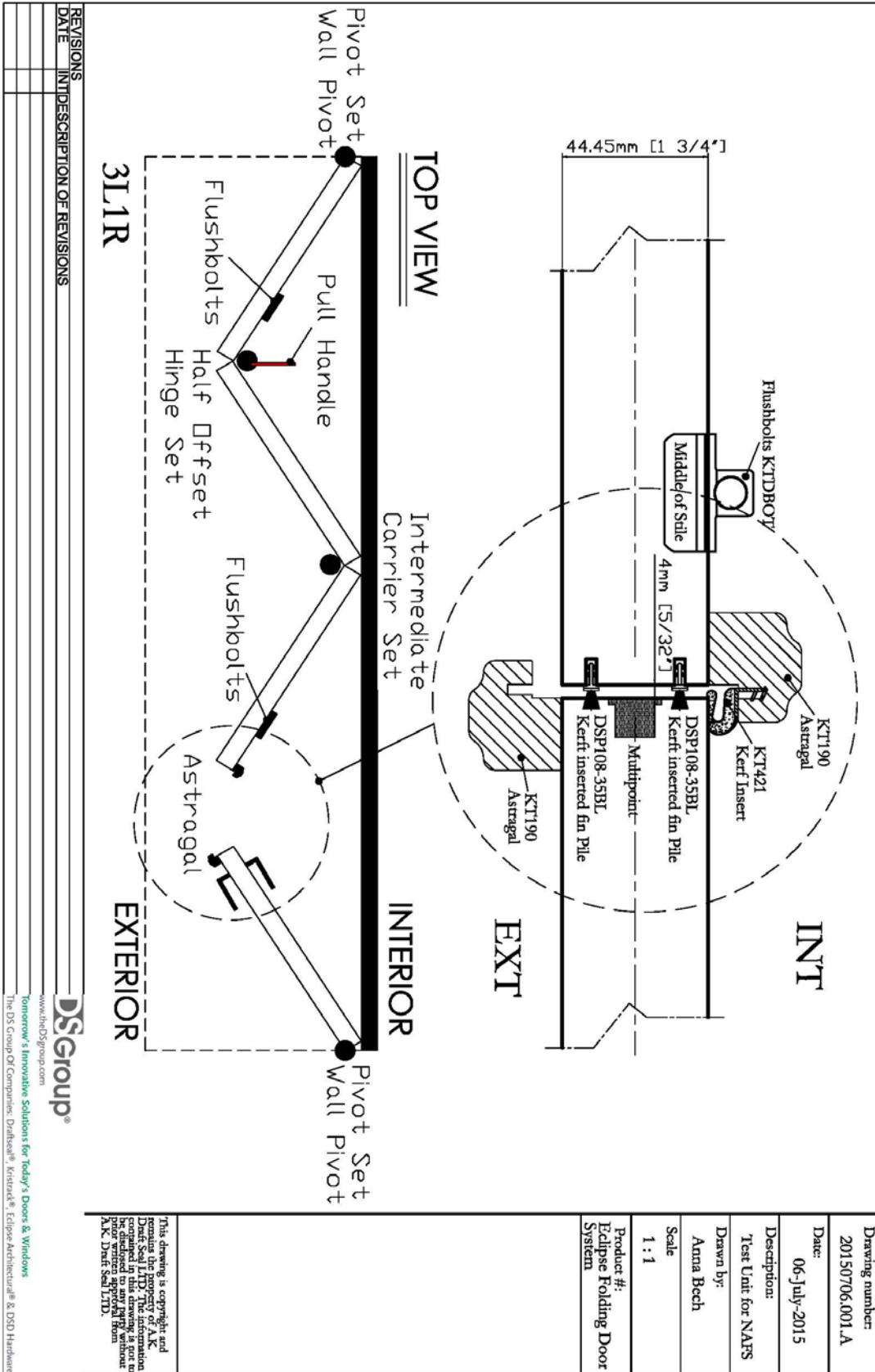


Scale	1 : 1	Description:	Test Unit for NAFS	Drawing number:	20150706.001.A
Product #:	Palimpse Folding Door System	Drawn by:	Anna Bech	Date:	06-July-2015

This drawing is copyright and remains the property of A.K. Design. It shall not be reproduced, copied, or disseminated in any form without the written consent of A.K. Design Ltd.

**DSgroup**  
 Tomorrow's Innovative Solutions for Today's Doors & Windows  
 The DS Group Of Companies: Drakewell®, Kistadek®, Eclipse Architecture® & DSD Hardware

REVISIONS	DATE	INDESCRIPTION OF REVISIONS

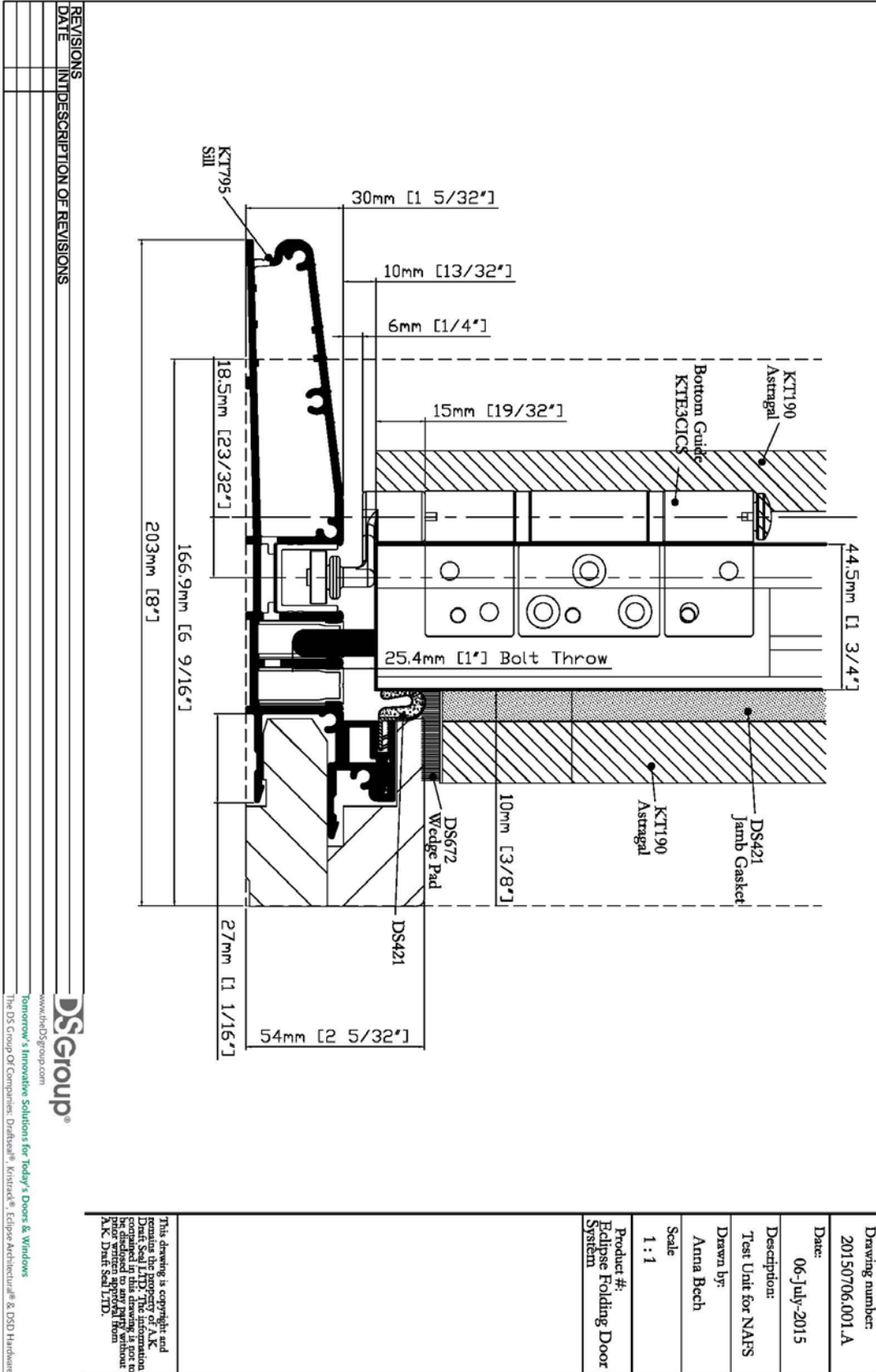


REVISIONS	DATE	DESCRIPTION OF REVISIONS

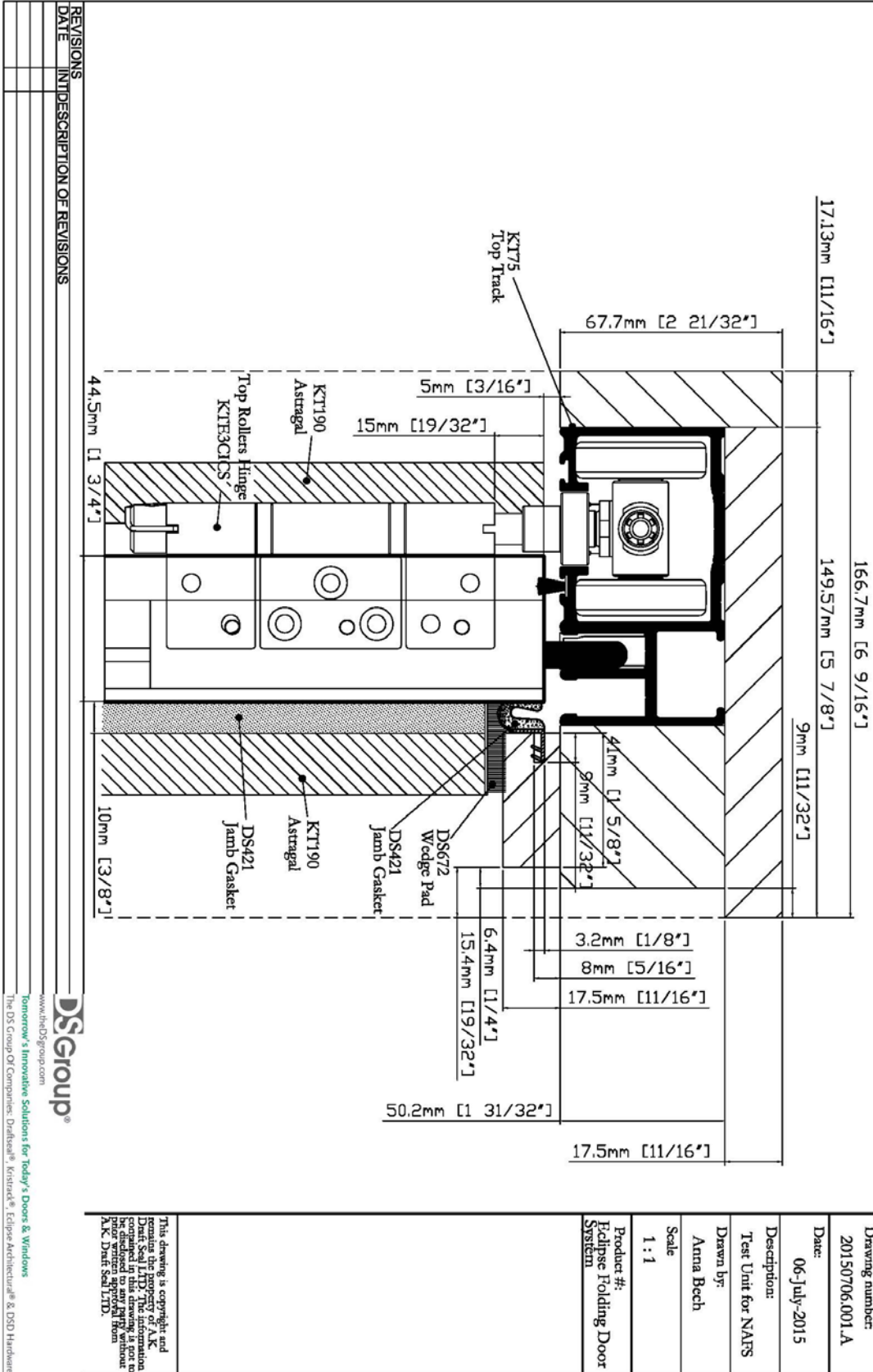
**DSGroup**  
 www.theDSgroup.com  
 Tomorrow's Innovative Solutions for Today's Doors & Windows  
 The DS Group Of Companies: Drake® · Kistade® · Eclipse Architecture® & DSD Hardware

This drawing is copyright and remains the property of A.K. Design. No part of this drawing may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of A.K. Design Ltd.

Drawing number:	20150706001A
Date:	06-July-2015
Description:	Test Unit for NAFS
Drawn by:	Anna Bech
Scale	1 : 1
Product #:	Eclipse Folding Door System







**APPENDIX B**  
Photograph – 6 Pages



Sample – Exterior side

*\*Photo taken after testing had been completed*



Common Frame Profile



Sill Assembly



Head Assembly



Weather-stripping and gaskets



Lengths of weather-stripping on strike side of Panel 3



Head Track with Pile Weather-stripping



Door Panel – Side Stiles



Door Panel – Top Rail



Door Panel – Bottom Rail



Lite Kit Fasteners



Lite Kit Glazing Stop



**APPENDIX C**  
Revision Table – 1 Page

<b><u>Revision Table</u></b>				
<b><u>Date</u></b>	<b><u>Section</u></b>	<b><u>Description</u></b>	<b><u>Technician</u></b>	<b><u>Reviewer</u></b>
Nov 23/16	----	Original Issue Date	----	----