Intertek | Architectural Testing

# PERFORMANCE TEST REPORT

**Rendered to:**

**FALL PROTECTION DISTRIBUTORS, LLC**

**PRODUCTS: Spanner Plate and Adapter Plate**

**Report No.:** **F6078.01-106-31**
**Report Date:** **04/15/16**
**Test Record Retention Date:** **03/22/20**

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# PERFORMANCE TEST REPORT

Rendered to:

FALL PROTECTION DISTRIBUTORS, LLC
7436 Evesborough Lane
New Port Richey, Florida 34655

| | |
|---|---|
| Report No.: | F6078.01-106-31 |
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**Products**: Spanner Plate and Adapter Plate

**Project Summary**: Architectural Testing, Inc., an Intertek company ("Intertek-ATI"), was contracted by Fall Protection Distributors, LLC to evaluate the maximum loading properties of their spanner plates and adapter plates. The product description, test procedures, and test results are reported herein.

**Test Method**: The test specimens were evaluated in accordance with general engineering principles using compressive and shear loading procedures.

**Product Descriptions**: The spanner plates and adapter plates were submitted to Intertek-ATI by Fall Protection Distributors, LLC and consisted of eight aluminum adjustable roof bracket adapter plates, hardware and anchors for standing seam roof applications. Commercially supplied adjustable roof brackets, supplied by Fall Protection Distributors, LLC, were installed on the adapter plates by Intertek-ATI for product performance evaluation. Four aluminum spanner plates measuring nominally 12" wide x 27" length x 3/8" thick were received prepared with four 7" long (parallel to plate length) x 3/8" wide machined slots to mount the supplied standing seam roof anchors.

The material was tested as-received with the exception of machining the spanner plates to accept loading adapters that were fabricated by Intertek-ATI. Fall Protection Distributors, LLC provided a commercial swivel roof anchor to be used as a template to design the loading adapter and spanner plate hardware used for this evaluation. Refer to the product related photos in Appendix A.

**Test Procedures and Test Results**: The testing procedures and results obtained from testing are reported as follows. All conditioning of test specimens and test conditions were at standard laboratory conditions unless otherwise reported. Refer to the test related photos in Appendix A.

**Test Procedures and Test Results**: (Continued)

### Adapter Plate Loading

Adapter plate assemblies were attached to mock standing seam roof section on a 45° angle to simulate a 12-12 pitch. Specimens were individually secured to the base of a Satec Model MII 50 UD Universal Test Machine (ICN: Y002011) and loaded at a computer controlled rate of 0.50 in/min until failure was achieved.

**Adapter Plate Evaluation Results**

| Sample Description | | Maximum Load (lbf) | Deflection at Max Load (in) | Load at Yield (lbf) |
|---|---|---|---|---|
| Specimen No | Clamped | | | |
| **1** | Yes | 4,228 | 0.292 | 4,228 |
| **2** | No | 2,980 | 0.313 | 2,980 |
| **3** | Yes | 3,314 | 0.312 | 3,314 |
| **4** | No | 3,307 | 0.391 | 3,307 |
| **5** | Yes | 3,508 | 0.395 | 3,508 |
| **6** | No | 2,970 | 0.286 | 2,970 |
| **7** | Yes | 3,405 | 0.350 | 3,321 |
| **Mean** | | **3,387** | **0.334** | **3,375** |

### Spanner Plate Loading

Spanner plates and anchors were attached vertically to a mock roof section consisting of two standing seam roof seams. Specimens were individually secured to the base of a Satec Model MII 50 UD Universal Test Machine (ICN: Y002011) and loaded at a computer controlled rate of 0.25 in/min to specific load intervals. Spanner plate deflection was measured at a pre-determined peak load and also when the load is released to document permanent set conditions. All specimens were then loaded until failure was achieved.

**Spanner Plate Evaluation**

| Specimen No | Load Interval (lbf) | Hold Time (min) | Maximum Load (lbf) | Deflection (in) | Permanent Set (in) |
|---|---|---|---|---|---|
| **1** | 3600 | 2 | 3,610 | 0.515 | None |
| | 5000 | 1 | 5,010 | 0.690 | 0.065 |
| | Load to Failure | | 10,000 | 2.183 | N/A |
| **2** | 3600 | 2 | 3,610 | 0.514 | None |
| | 5000 | 1 | 5,010 | 0.743 | 1.04 |
| | Load to Failure | | 10,700 | 2.862 | N/A |
| **3** | 3600 | 2 | 3,610 | 0.368 | None |
| | 5000 | 1 | 5,020 | 0.498 | 0.071 |
| | Load to Failure | | 12,400 | 3.523 | N/A |

Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period.

Results obtained are tested values and were secured using the designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For INTERTEK-ATI:


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Attachments (pages) This report is complete only when all attachments listed are included.
Appendix A - Photographs (7)

## Revision Log

| Rev. # | Date | Page(s) | Revision(s) |
|---|---|---|---|
| 0 | 04/15/16 | N/A | Original report issue |

# APPENDIX A

## Photographs

**Photo No. 1**
**Adapter Plate Test - Roof Bracket (No Clamp) - Pre-Test Condition**

**Photo No. 2**
**Adapter Plate Test - Roof Bracket (No Clamp) - Post Test Condition**

**Photo No. 3**
**Adapter Plate Test - Roof Bracket (with Clamp) - Pre-Test Condition**

**Photo No. 4**
**Adapter Plate Test - Roof Bracket (with Clamp) - Post Test Condition**

**Photo No. 5**
**Spanner Plate Loading Test Set-Up**

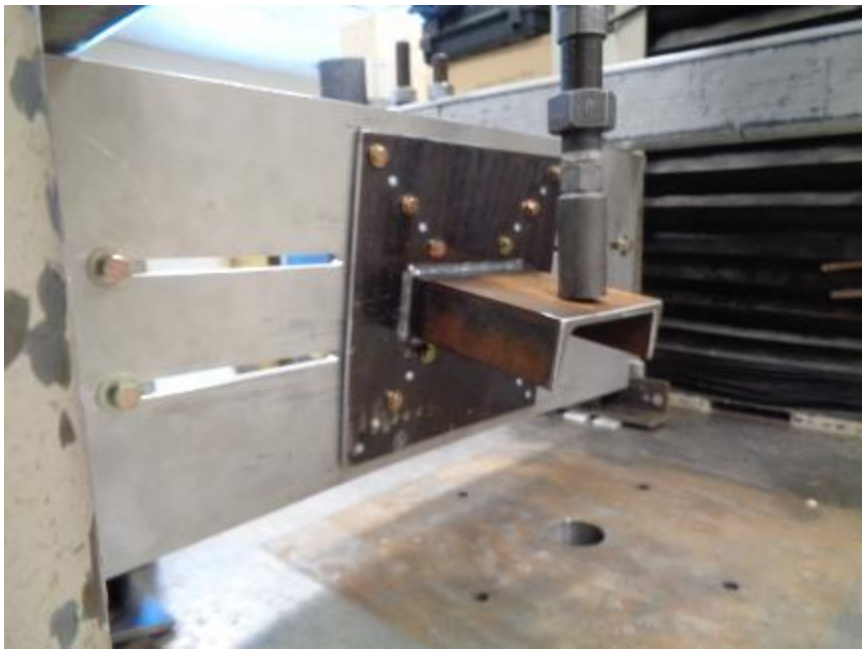

**Photo No. 6**
**Spanner Plate Loading Test in Progress**

**Photo No. 7**
**Spanner Plate Deflection - 3600 lbf Applied Load**

**Photo No. 8**
**Spanner Plate Deflection - 3600 lbf Load Released**

**Photo No. 9**
**Spanner Plate Deflection - 5000 lbf Applied Load**

**Photo No. 10**
**Spanner Plate Deflection - 5000 lbf Load Released**

**Photo No. 11**
**Spanner Plate Failure Test in Progress**

**Photo No. 12**
**Spanner Plate Failure Test - Anchor Failure**