

## Test Report



Gravitec Systems Inc.  
21291 Urdahl Road NW  
Poulsbo, WA 98370



**Test Report #:** 210138-AHD-04  
**Service Address:** Gravitec Systems Inc.  
21291 Urdahl Road NW  
Poulsbo, WA 98370

**Customer Contact:** Daniel Minehart  
**Client Name:** SkySaver, Inc.  
**Client Address:** 729 Ocean Parkway  
Brooklyn, NY 11230

## Test Sample Information

**Manufacturer:** SkySaver, Inc  
**Description:** See "Sampling Details" below  
**Model/Part #:** ---  
**Lot/Batch #:** ---  
**Serial #:** 24 (assigned)

<input checked="" type="checkbox"/>	<b>Evacuation Harness</b> for assisted or self rescue only
<input type="checkbox"/>	<b>Full Body Harness</b> meeting Z359.11 fall arrest requirements

<input checked="" type="checkbox"/>	Qualification Testing
<input type="checkbox"/>	Verification Testing
<input type="checkbox"/>	Informational Testing

Per ANSI Z359.7, Qualification Testing is initial testing conducted on new or revised products consisting of a minimum of 3 test samples. Verification Testing consists of a minimum of 1 sample and is intended to ensure continued product compliance for an existing product that has gone through Qualification Testing in the past.

**Sample Receipt Date:** 5/20/2015  
**Environmental Conditioning:** Ambient, procedure does not require conditioning  
**Sampling Details/Deviations and Sample Condition:** Evacuation harness featuring a metal mounting plate in dorsal area for attachment of automatic descender  
Sample is constructed with:  
\* a heavier weight, thicker, courser and stiffer weave webbing than webbing commonly used for seat belts,  
\* Cobra buckles,  
\* the edges of the 6 slots of the mounting plate were wrapped (by client) with duct tape to shield the webbing connections from the metal edges of the plate.  
Sample received in new and good working condition. No previous tests performed on this sample.

## Test Information

### Testing Method (Standard and Section): ANSI Z359.4-2013, 4.3.1.2 Dynamic Performance Testing (for Rescue Attachments on Full Body Harnesses and Evacuation Harnesses)

1. The drop test structure, test torso, test lanyard of 4 feet (1.2m) length, and quick release mechanism shall be in accordance with 4.1.1, 4.1.3, 4.1.5, and 4.1.9 respectively.
2. The test sample shall be put on the test torso as though the torso was a person and adjusted for a snug fit.
3. Attach one end of the test lanyard to the appropriate attachment element of the sample and the other end to the test structure.
4. Raise the test torso to a level, which will allow a 2 foot (0.6m) free fall upon release of the test torso.
5. The test torso shall be lifted to a point no more than 12 inches (305mm) horizontally from the anchorage.
6. Release the torso with the quick release mechanism.
7. After the drop, the torso is to remain suspended for a period of one minute.
8. During the post fall suspension period, measure the angle at rest.
9. After test, evaluate the sample according to 3.2.2.1.3 or 3.2.2.2.6 appropriate (for full body or evacuation harness).

### Acceptance Criteria: ANSI Z359.4-2013, 3.2.2.2.6 Dynamic Performance of Evacuation Harness

1. The harness shall not release the test torso when dynamically tested.
2. No load bearing element shall break or separate from the self-rescue harness.
3. The test torso shall remain suspended for one minute after drop testing.
4. The angle at rest between the torso vertical centerline and the vertical shall not exceed 30 degrees after the torso comes to rest.

**Gravitec Test Procedure ID:** TP ANSI Z359.4-2013, 4.3.1.2 DPT HAR

**Job #:** 210138  
**Test Code:** AHD  
**Test ID #:** 4  
**File Name:** 210138-AHD-04

**Test Weight (lbs):** 220  
**Free Fall (in):** 24  
**Load Cell:** B3\_253074  
**DAQ Module:** 1521EBB

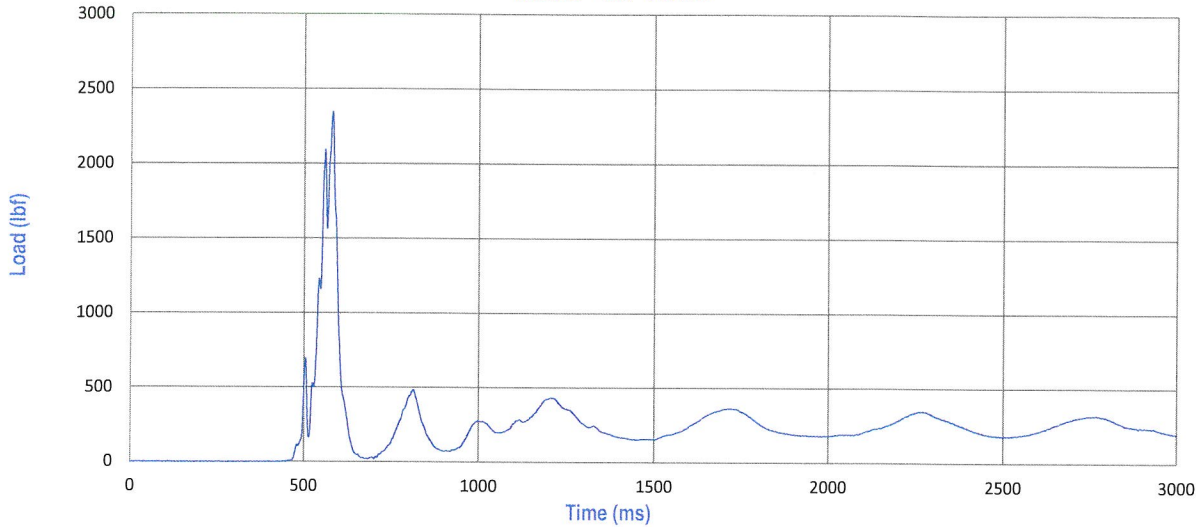
**Test Date:** 7/2/2015  
**Time:** 11:59 AM  
**Temp. (°F):** 71  
**Humidity (%):** 47

## Test Instrumentation

ANSI Compliant Test Structure, 5k Load Cell/Data Acquisition System, ANSI Compliant 220 lbs ± 2 lbs Test Torso, ANSI Compliant Test lanyard, Quick Release Mechanism, Portable Floor Scale, Zip Level, Digital Protractor, Tape Measure, Digital Timer, Digital Thermometer, miscellaneous connecting hardware

## Drop Test Results

**Load vs. Time**



	<u>Acceptance Criteria</u>	<u>Test Results</u>	<u>Exp. Uncertainty</u>	<u>Pass/Fail</u>
<b>Torso Not Released:</b>	CHECK	CHECK	---	PASS
<b>No Load Bearing Breakage:</b>	CHECK	CHECK	---	PASS
<b>Time Requirement (sec):</b>	60 Minimum	> 61	± 1	PASS
<b>Angle at Rest (°):</b>	30.0 Maximum	20.4	± 0.8	PASS
<b>Peak Force (lbf):</b>	For information	2347.8	± 6.9	N/A

**Test Comments/Notes:**

None

**Opinions and Interpretations:**

None

**Manager Name:** Dave Lough

**Signature:** **Date:** 7/06/15

**Engineer Name:** Larry Cimino, PE

**Signature:** **Date:** 7-06-15

The results of this test only apply to the item tested.  
All instrumentation used in testing is traceable to NIST.

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% level of confidence using a coverage factor of k=2. Where limits of acceptability are applicable, false accept risk is limited to 2% or less by guard-banding the limit of acceptability with the expanded uncertainty value.

This laboratory is accredited to ISO 17025 by ACLASS ANSI-ASQ National Accreditation Board for tests conducted under its scope of accreditation.

The contents of this test report are confidential. This information should NOT be shared or reproduced except in full, without written approval from Gravitec Systems Inc.

Testing to the clauses referenced in this report does not infer compliance to the ANSI Z359 standard in its entirety.

