

## Test Report



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



**Test Report #:** 210133-THS-05  
**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:** Evacuation harness featuring a metal mounting plate in dorsal area for attachment of automatic descender  
**Model/Part #:** ---  
**Lot/Batch #:** ---  
**Serial #:** 05 (assigned)

**Sample Receipt Date:** 4/7/2015

**Sampling Details/Deviations and Sample Condition:** Sample is constructed with:  
\* a heavier weight, thicker, courser and stiffer weave webbing than webbing commonly used for seat belts,  
\* eased or beveled metal edges in the 6 slots of the mounting plate and duct tape wrapping the edge 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 (Applicable Standard and Section):** ASTM F1772-12, 12.1.2 Upright Position of the Torso

1. The harness shall be loaded up to  $800 \pm 10\text{N}$  in the upright position of the torso. Under this load, adjust the torso and harness so that the attachment points are approximately symmetric about the vertical axis of the torso.
2. With the torso in an upright position, a tensile force shall be applied to the lower ring, increasing to  $16 + 0.3/-0 \text{ kN}$  ( $3,597 + 67/0 \text{ lbf}$ ) over a period of  $2 \pm 0.25 \text{ min}$ . This tensile force shall be held for a  $1 \pm 0.25 \text{ min}$ .
3. The tension then shall be completely released over a maximum of 1 min.
4. The tensile force shall be reapplied and increased to  $16 + 0.3/-0 \text{ kN}$  ( $3,597 + 67/0 \text{ lbf}$ ) as before and held for  $3 \pm 0.25 \text{ min}$  before release.

**Acceptance Criteria (Applicable Standard and Section):**

1. No load-bearing part shall break completely.
2. The harness shall not be released from the torso.
3. The webbing in all buckles and adjusting devices shall slip no more than 20 mm (0.7874 inches).

**Job #:** 210133  
**Test Code:** THS  
**Test ID #:** 5  
**File Name:** 210133-THS-05

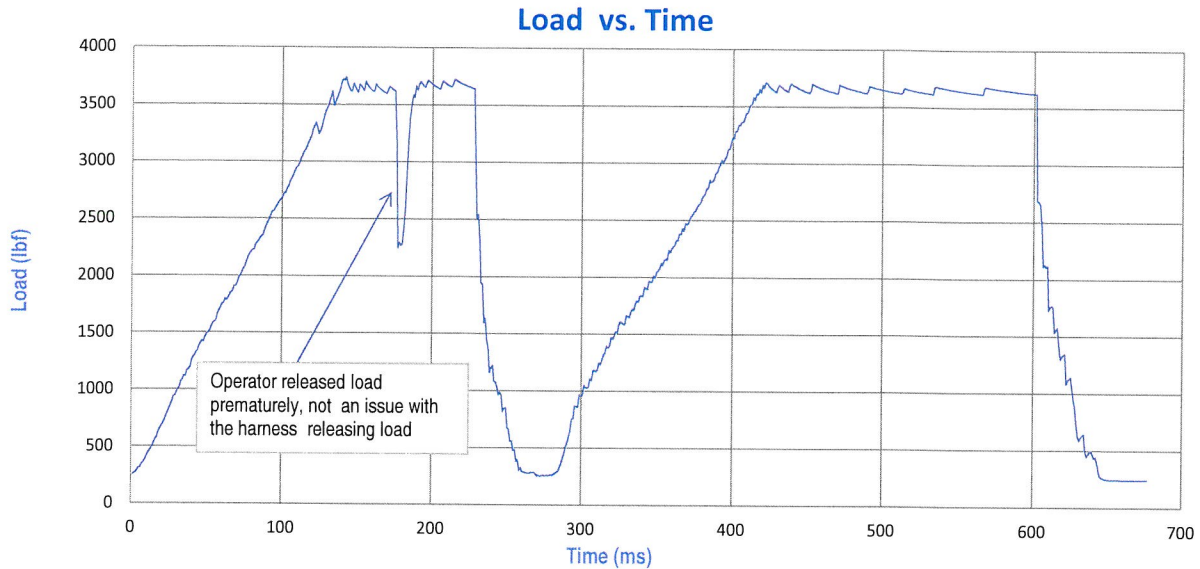
**Test Date:** 4/10/2015  
**Time:** 2:11 PM  
**Temp. (°F):** 72  
**Humidity (%):** 35

**Load Cell:** SN 251081 (C0)  
**DAQ Module:** 1445A1C

### Test Instrumentation

5k Load Cell/Data Acquisition System, ANSI Compliant Test Structure, Hydraulic Ram, ANSI Compliant Test Torso, Digital Timer, Misc. Connecting Hardware

## Test Data Graph



## Test Results and Comments

	<u>Acceptance Criteria</u>	<u>Test Results</u>	<u>Exp. Uncertainty</u>	<u>Pass/Fail</u>
Tensile Load (lbf):	3,597 Minimum (16 kN)	3662.1 Average	± 6.9	PASS
Time Requirement (sec):	45 Minimum	77	± 1	
Tensile Load (lbf):	3,597 Minimum (16 kN)	3647.6 Average	± 6.9	PASS
Time Requirement (sec):	165 Minimum	184	± 1	
Slippage (in):	0.789 Maximum	0 to 0.25	± 0.125	PASS
Complete breakage of load-bearing part		None	-	PASS
Release of test torso		Not Released	-	PASS

### Test Comments/Notes:

A mock-up descender with fixed cable (supplied by client) was installed on the mounting plate to simulate actual harness use. The procedures of this test were performed under ambient conditions per Section 11.1. **F1772 references the UIAA torso; this test was conducted with the ANSI Z359 test torso.** The ANSI torso has straight legs and sloped shoulders; the UIAA torso that has bent legs and straight shoulders.

### Opinions and Interpretations:

None

Manager Name: Dave Lough

Signature:  Date: 4/17/15

Engineer Name: Larry Cimino, PE

Signature:  Date: 4-17-2015

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.

