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## SUMMARY OF STATIC LOAD TESTING OF HOIST BUCKETS

### Ergodyne

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Respectfully submitted,

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## **INTRODUCTION**

This report presents the results of static load tests conducted on samples of hoist buckets. The testing was authorized by Mr. Brent Velenchenko of Ergodyne on August 10, 2016. The testing and data analysis were completed August 18, 2016.

## **OBJECTIVE**

The scope of our work was limited to performing static load tests on the hoist buckets and providing a report of the results.

## **CONCLUSIONS**

Seven (7) of the Hoist Buckets held their required load in various orientations for 60 minutes.

One (1) Bucket Top Model #5938 labeled A held its required load in Upside Down Load test for 60 minutes.

One (1) Bucket Top Model #5937 labeled C delivered on September 08 2016 held it's required in Upside Down Load test for 60 minutes.

See Test Results section for individual sample data.

## **SAMPLE IDENTIFICATION**

Nine (9) hoist buckets were submitted. The following is a list of the supplied information about each bag.

- One (1) Model #5940 - Leather Bottom Bucket-Swivel; Test weight 750 pounds static

- One (1) Model #5945 - XL Leather Bottom Bucket – Swivel; Test weight 750 pounds static

- One (1) Model #5930 – Leather Bottom Bucket; Test weight 750 pounds static

- One (1) Model #5935 – XL Leather Bottom Bucket; Test weight 750 pounds static

- One (1) Model #5970 – Large Poly Bucket-Swivel; Test weight 500 pounds static

- One (1) Model #5975 – Large Poly Bucket; Test weight 500 pounds static

- One (1) Model #5960 – Canvas Leather Bottom Bucket-D-rings; Test weight 750 static

Four (6) Bucket Tops were submitted for testing. These were used during the Upside Down Load test. The following is a list of the supplied information about each top.

- Two (2) Model #5938 – Top; Test weight 300 pounds static, Labeled A and B

- Two (2) Model #5937 – Top; Test weight 300 pounds static, Labeled A and B

- Two (2) Model # 5937 – Top; Test weight 300 pounds static delivered on September 08 2016, Labeled C and D

## **METHODS**

### **Static Load Test of Hoist Buckets**

#### Upright Load Test

The buckets were suspended in their normal upright positions using the metal ring or swivel integrated into the lifting strap. When no metal ring or swivel was integrated a clevis was used to suspend the buckets by lifting strap. Each test consisted of a static load for 60 minutes. Each bucket was loaded with weight specified by manufacture before being suspended. Following each test, the bags were inspected for damage.

#### Upside Down Load Test

The buckets were suspended upside down using a steel disc and lifting eye inserted through the bottom of the bucket. Model #5940 and Model #5945 were loaded with 300 pounds. A bucket top (Model #5938) for bucket Model #5940 was attached before suspending the load. Again a bucket top (Model #5937) for bucket Model #5945 was attached before suspending the load. The buckets were suspended for 60 minutes. Following each test, the buckets were inspected for damage.

## TEST DATA

Bag/Pouch Specimen	Static Load	Orientation	Attachment Method	Duration	Failure Mode	Damage
Model #5940	750 lb	Upright	Swivel	60 Minutes	Passed Test	No noticeable
Model #5940T Top #5938 A	300 lb	Upside Down	Lifting Eye Through Bottom of Bag	60 Minutes	Passed Test	No noticeable
Model #5945	750 lb	Upright	Swivel	60 Minutes	Passed Test	Ripping at basket leather strap mount
Model #5945T Top #5937 C	300 lb	Upside Down	Lifting Eye Through Bottom of Bag	60 Minutes	Passed Test	No noticeable
Model #5930	750 lb	Upright	Strap	60 Minutes	Passed Test	Ripping at basket leather strap mount
Model #5935	750 lb	Upright	Strap	60 Minutes	Passed Test	Ripping at basket leather strap mount
Model #5970	500 lb	Upright	Swivel	60 Minutes	Passed Test	No noticeable
Model #5975	500 lb	Upright	Strap	60 Minutes	Passed Test	No noticeable
Model #5960	750 lb	Upright	D-ring	60 Minutes	Passed Test	Ripping at basket leather strap mount

### Static Load Test Results

**Note:** Product samples listed in this summary report represent passing samples only. One or more failing and/or invalid/incomplete results may have been removed from the summary as requested by Ergodyne to specifically summarize approved products according to Ergodyne standards. Please refer to the full test report ESP023598.1 for details on all samples.