REDACTED

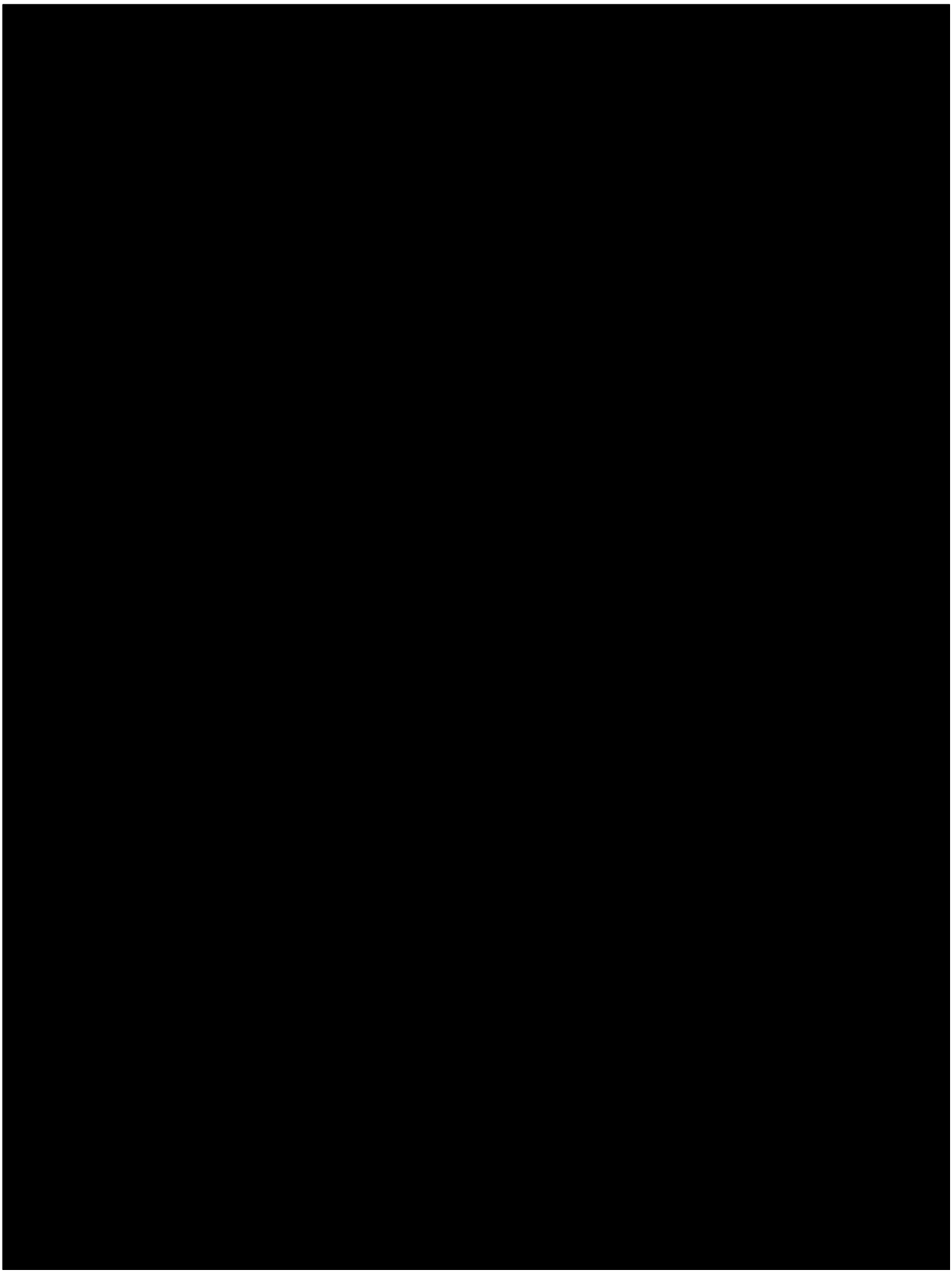
Proprietary / Confidential Information Removed

Survival Factors Attachment 4

Midwest Automotive Compliance Testing and Documents

Cranbury, NJ
HWY14MH012

(123 Pages)



KEY SAFETY SYSTEMS, INC.
A Key Automotive Group Affiliate

7000 NINETEEN MILE ROAD
STERLING HEIGHTS, MI 48314
(586) 726-3800

www.keysafetyinc.com

March 30, 2005

[redacted]
LaVanture Products
2912 Dexter Drive
Elkhart, IN 46514

Subject: FMVSS Standards

Dear [redacted]

In reference to our previous conversations, please again, be assured that all the seat belts assemblies which Key Safety and its divisions furnishes to LaVanture and its customers meet and or exceed FMVSS 209 and FMVSS 302 specifications as required for the automotive industry. To meet these codes the installation of the belt assemblies must also be installed per the required FMVSS standards.

In addition, since we supply many of the same belts to the vehicle manufactures (GM, Ford, Chrysler and Toyota) these assemblies meet all-applicable manufacturing requirements required by those companies.

Should you require copies of the independent laboratory reports and customer certifications please contact me at your earliest convenience.

Quality:
Key Safety has conducted test on 6 samples each product manufactured for LaVanture Products (as applicable):

- Servo Sled test vehicle sensitivity
- Tensile Strength
- Buckle and spring cover separation
- Extraction/Retraction efforts
- Tilt Lock
- Top-level dimensional verification

Level 1 PPAP documentation will be prepared and available for your review for each product. In addition, updated FMVSS 209 and FMVSS 302 Independent Laboratory testing will be conducted on each family of parts. As an indication of the quality you can expect, the Greenville, Alabama facility has been operating at a zero PPM quality rating for over a year.

Please be assured that the Greenville, Alabama delivery rating by every major OEM is 100% on time. The Greenville facility is ISO 14001 and QS9000 certified, as are all of our other plants.

Sincerely,

[redacted]
Service and Aftermarket Business Team Leader

Annual Certificate of Conformance

Key Safety Systems, Inc.
201 Industrial Blvd
Greenville, Alabama 36037

Hereby certifies that the items denoted herein have been inspected and/or tested to the extent necessary to assure compliance with all the requirements of the noted purchase order, drawing, drawing notes and revisions, or applicable specification(s). Inspection records and test reports, which substantiate this statement, are on file at our facility and will be furnished upon request. This Certification of Conformance will be supplied on an annual basis unless otherwise deemed necessary.

Part Name	Part Number
Bkl Asm	E71420000
LaVan BLT/BKL/SLV	E0684401
LaVan BLT/BKL/SLV	E06844NF
LaVan BLT/BKL/SLV	E06844SB
LaVan BLT/BKL/SLV	E06844VE
LaVan BLT/BKL/SLV	E06844VF
LaVan BLT/BKL/SLV	E06844VS
LaVan 2 PT BLT	7804-350
LaVan 2 PT BLT	7804-NF
LaVan 2 PT BLT	7804-SB
LaVan 2 PT BLT	7804-TW
LaVan 2 PT BLT	7804-VE
LaVan 2 PT BLT	7804-VF
LaVan 2 PT BLT	7804-VS
LaVan 2 PT BLT	7805-350
LaVan 2 PT BLT	7805-SB
LaVan 2 PT BLT	7805-VS
LaVan 2 PT BLT	7939-350
LaVan 2 PT BLT	7939-VS
LaVan 2 PT BLT	7806-350
LaVan RETR	E1023901
LaVan RETR	E10239NF
LaVan RETR	E10239SB
LaVan RETR	E10239VE
LaVan RETR	E10239VF
LaVan RETR	E10239VS
Anchor Cover	E14977SB
Anchor Cover	E14977VS
LaVan 3 PT ROB	E222440NF
LaVan 3 PT ROB	E222440SB
LaVan 3 PT ROB	E222440VS
LaVan 3 PT ROB	E222450NF
LaVan 3 PT ROB	E222450SB
LaVan ROB RH	E236400SB

Part Name	Part Number
LaVan 3 PT ROB	E222450VS
LaVan BLT/BKL	E222470NF
LaVan BLT/BKl	E222470SB
LaVan BLT/BKl	E222480SB
LaVan BLT/BKl	E223650NF
LaVan BLT/BKl	E223650SB
LaVan BLT/BKl	E223650VS
LaVan BKL/CBL/SLV	E225400NF
LaVan ROB	E2269901
BELT & RTR RH	E232840NF
BELT & RTR LH	E232850SB
BELT & RTR LH	E232850VS
LaVan ROB RH	E232860NF
LaVan ROB RH	E232860SB
LaVan ROB RH	E232860VS
LaVan ROB LH	E232870NF
LaVan ROB LH	E232870SB
LaVan ROB LH	E232870VS
LaVan Sling ASM	E233790SB
LaVan Sling ASM	E233790VS
LaVan BELT/BKL	E2353901
LaVan ROB RH	E236120SB
LaVan ROB RH	E236120VS
LaVan ROB LH	E236130SB
LaVan FOB	E236140SB
LaVan FOB	E236140VS
LaVan FOB	E236150SB
LaVan FOB	E236150VS
LaVan ROB	E236160SB
LaVan ROB	E236160VS
LaVan ROB	E236170VS
LaVan ROB	E236390SB
LaVan ROB LH	E236390VS
LaVan ROB RH	E236400VS

Annual Certificate of Conformance

Key Safety Systems, Inc.
201 Industrial Blvd
Greenville, Alabama 36037

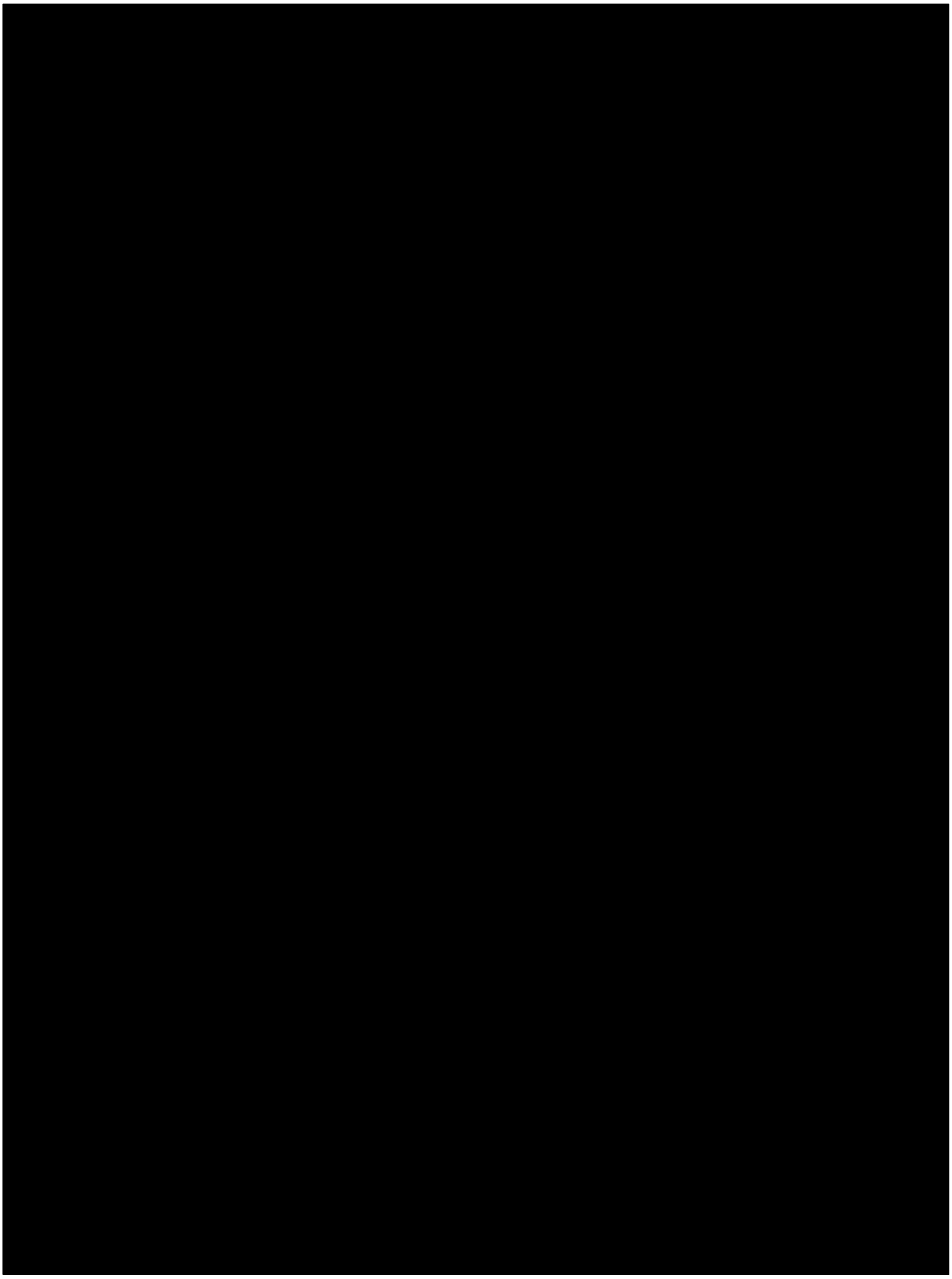
Hereby certifies that the items denoted herein have been inspected and/or tested to the extent necessary to assure compliance with all the requirements of the noted purchase order, drawing, drawing notes and revisions, or applicable specification(s). Inspection records and test reports, which substantiate this statement, are on file at our facility and will be furnished upon request. This Certification of Conformance will be supplied on an annual basis unless otherwise deemed necessary.

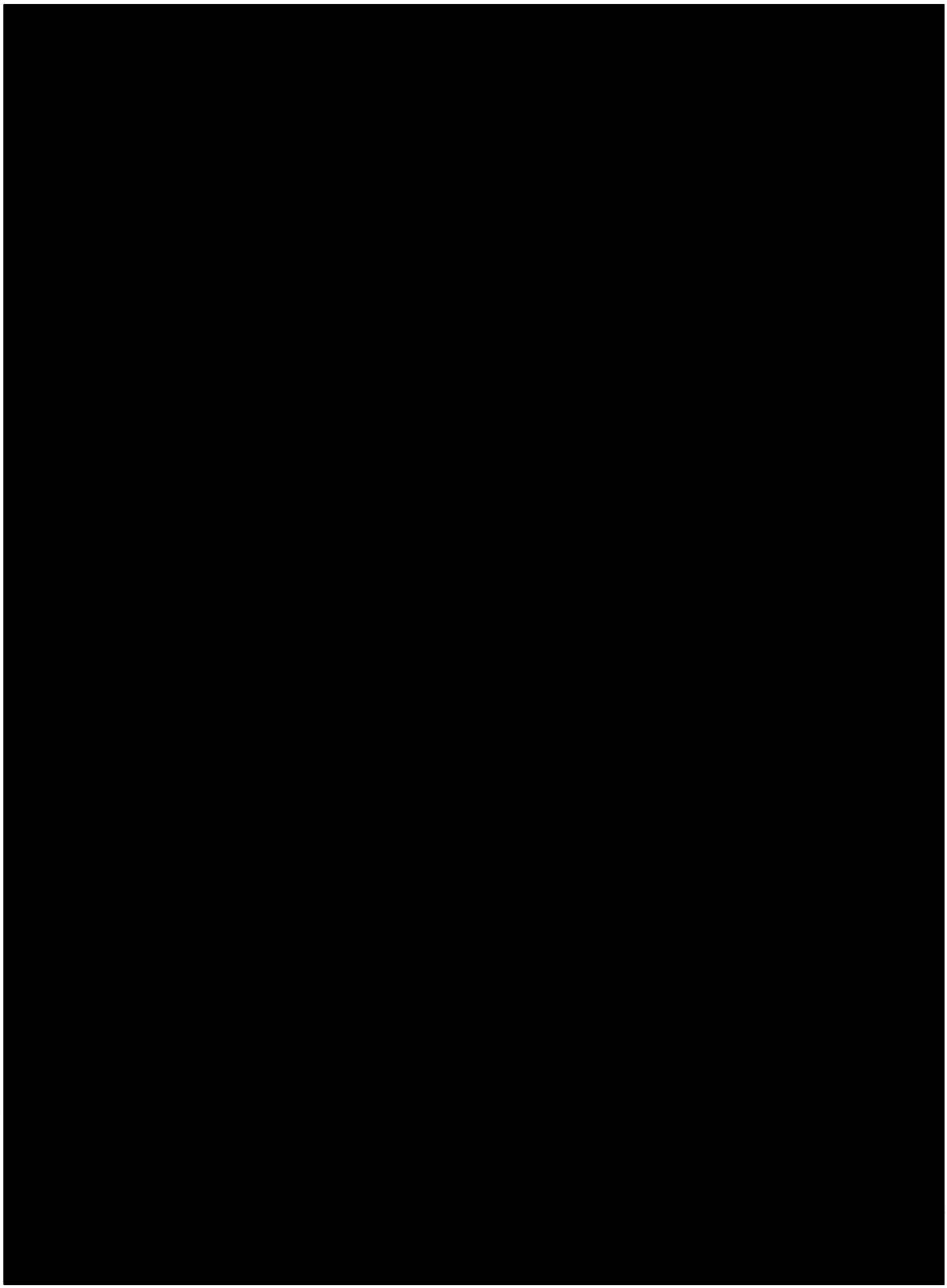
Part Name	Part Number
GF/BKL RH	E24026NF
GF/BKL RH	E24026SB
GF/BKL RH	E24026VS
GF/BKL LH	E24027SB
GF/BKL LH	E24027VS
Cover Adjust Tongue	E2510901-00
GF BKL LH	E26521NF
GF BKL LH	E26521SB
GF BKL LH	E26521VS
LaVan F/R/BKL	E2834101-00
LaVan F/R/BKL	E28341SB-01
LaVan F/R/BKL	E28341VS-00
T-800 F/R MR 2000	E338200NF-03
T-800 F/L MR 2000	E338210NF-03
B-VAN RETR ASM	E342460P6
B-VAN BKL/TNG ASM	E3424670S5
LaVan FOB RH	E242480S5
BKL/BKL	E242490S5
JDC BKL RH	E37228NF
JDC BKL RH	E37228SB

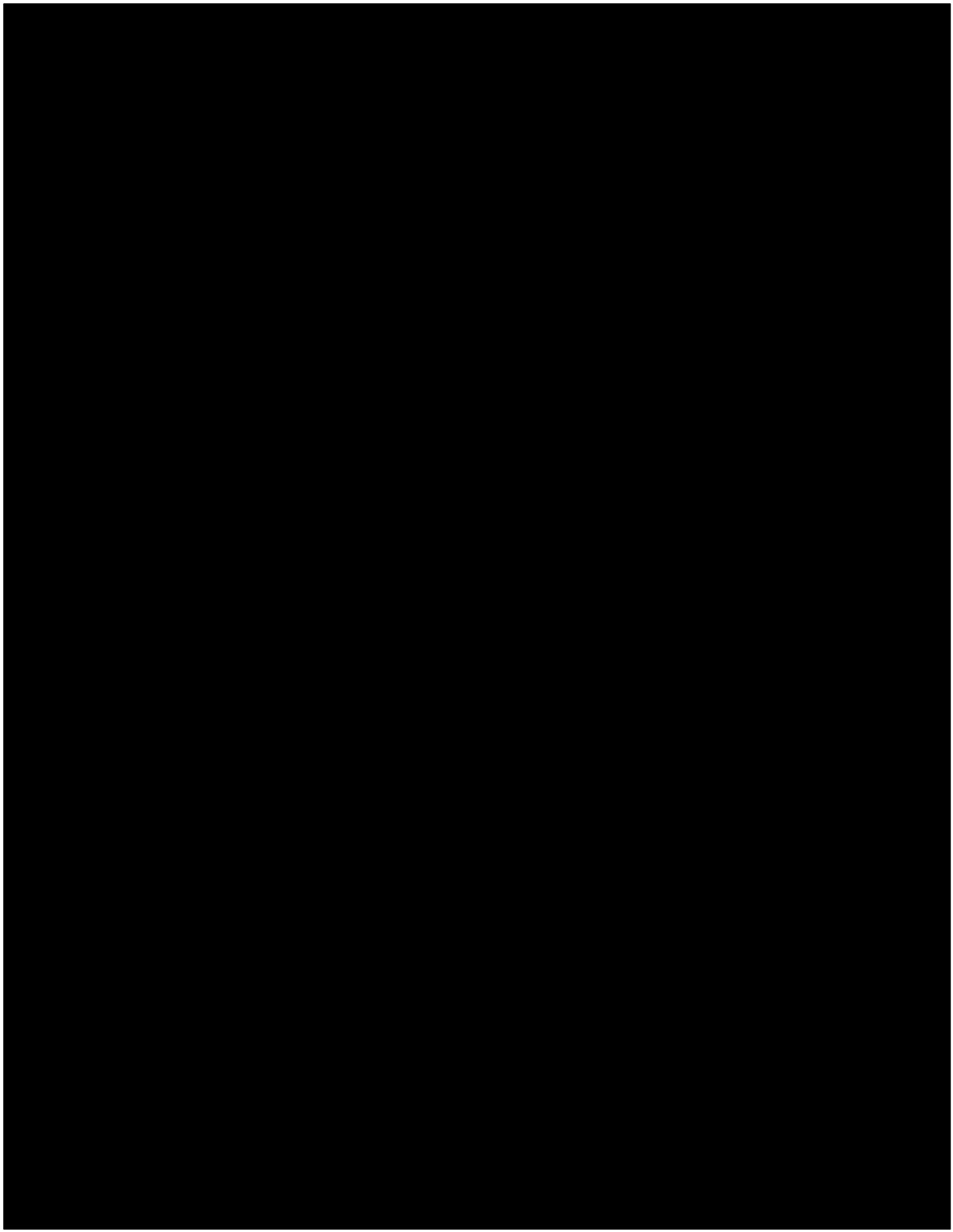
Part Name	Part Number
LaVan ROB RH	E249810NF
LaVan ROB RH	E249810SB
LaVan ROB RH	E249810VS
LaVan ROB LH	E249820NF
LaVan ROB LH	E249820SB
LaVan ROB LH	E249820VS
T800 BKL ASM R	E266040NF-00
T800 BKL ASM L	E266050NF-00
Ext Cab F/S Ctr	E272630NF-01
LaVan R/BLT	E2869801
BKL ASM W/O SW	E2921001-00P
LaVan RETR BLACK	E29343001
LaVan RETR BLACK	E29352001
BKL/TNG ASM	E32049SB
BKL/TNG ASM	E32049VS
BKL/TNG ASM	E3205001
LAP BLT/BKL	E37357A77
BOLT	E3315100-00
JDC BKL RH	E37228VS
JDC BKL LH	E37229SB

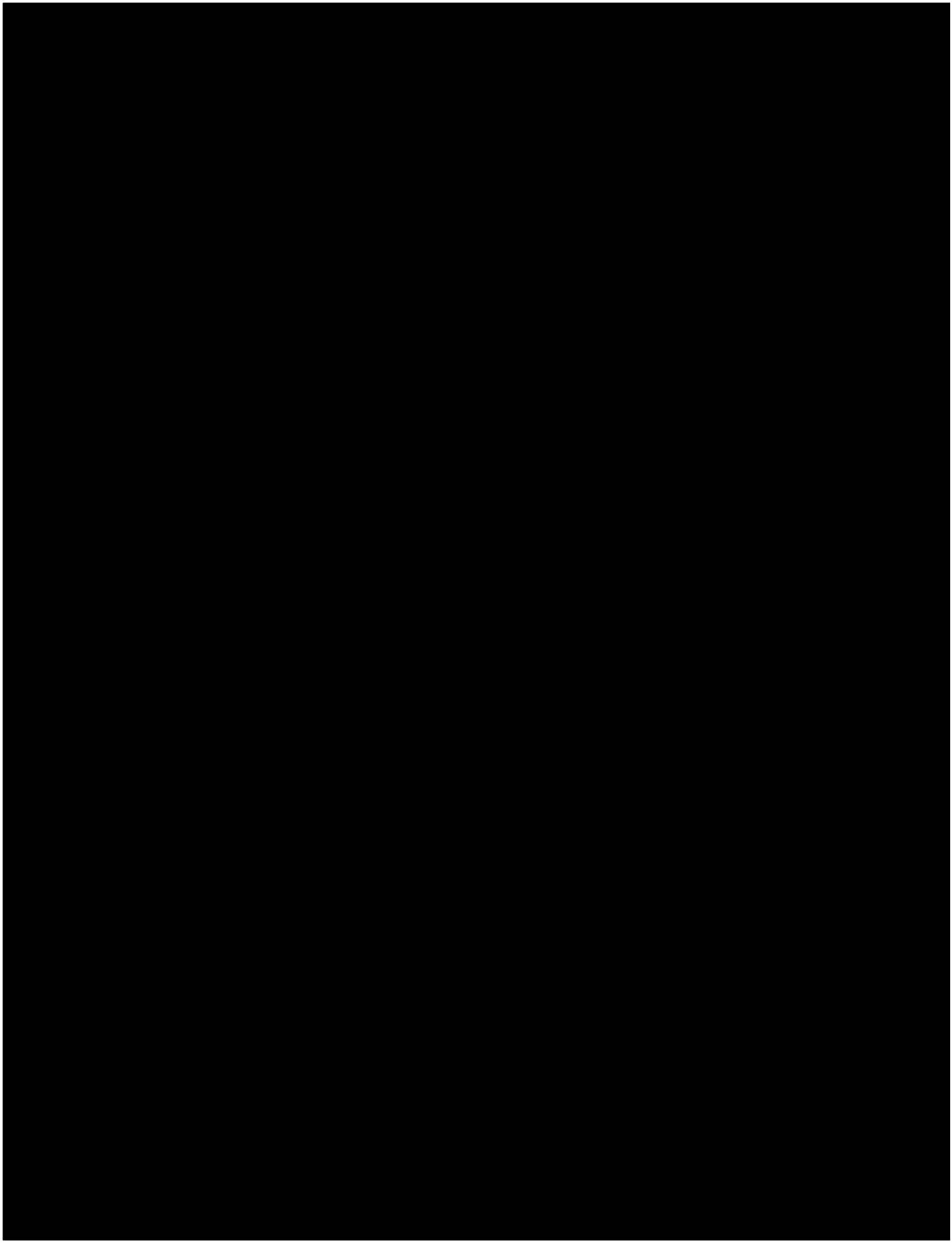
[redacted]
Quality Manager
Key Safety Restraints Systems

[redacted]









STI

STURGIS TECHNOLOGICAL INDUSTRIES
Custom Molders of Urethane Foam and Liquid Composite Parts

[redacted]

301 W. SOUTH ST.
STURGIS, MI 49091
Telephone (616) 651-7475

January 24, 2002

Superior Seating
Gosnen, IN

For your information and also for your customer's; the foams we supply to Superior Seating all meet or exceed the following flammability tests:

FMVSS 302

Cal 117

If you should have any more questions on this please feel free to contact me.

Very truly yours,

[redacted]

CUTTERS

Foam Fabricating, Inc.

CERTIFICATION

May 1, 2001

Attention: Angie

This is to certify that all foam shipped to :

Superior Seating
803 Chicago Ave.
Goshen, IN 46526

and designated as "FR" meets or exceeds the FMVSS-302 standard at the time of shipment.

[redacted]

58050 Charlotte • Elkhart, Indiana 46517 • (219) 522-4442 • Fax (219) 295-8109

C.M.I. AUTOMOTIVE
4380 EAST 11th AVENUE
HIALEAH, FLORIDA 33013
TELEPHONE: (305) 685-9651
TOLL FREE: 1-800-4CMVAN
FAX: (305) 685-3141

CADDY CONSTRUCTION

A VINYL AUTOMOTIVE GRADE MATERIAL MADE FOR INTERIOR DECORATING AND SEATING APPLICATIONS.

SPECIFICATIONS

	CADDY 4241	TEST METHOD
WEIGHT	13.5 -15.5 OSY	ASTMD3776
THICKNESS	28 - 36 MILS	ASTMD751
TENSILE	100 X 60 MIN.	ASTMD5034
ELONGATION	40% X 150% MIN.	ASTMD5034
TRAPEZOID TEAR	20 LBS. MIN.	ASTMD2813
STITCH TEAR	8 LBS. MIN.	ASTMD2813
WYZENBEEK	25,000 CYCLES/MIN.	ASTMD4157
AMBIENT BALLY FLEX	30,000 CYCLES/MIN.	FLA TM #15
UFAC CLASS I	PASS	UFAC FABRIC CLASS TM 1990
FLAMMABILITY	PASS	FMVSS 302
CROCKING	NO STAIN - MIN. 4	AATCC TM 8-1977
TABER ABRASION	CS10-1,000 GRAMS 500 CYCLES - PASS	ASTMD3884
WYZENBEEK ABRASION	3,000 CYCLES - PASS	ASTMD3597

C.M.I. AUTOMOTIVE
4380 EAST 11th AVENUE
HIALEAH, FLORIDA 33013
TELEPHONE: (305) 685-9651
TOLL FREE: 1-800-4CMIVAN
FAX: (305) 685-3141

AVERAGE PROPERTIES OF CRUISER VINYL

TEST PERFORMED/TEST METHOD	
1. Width	54"
2. Length	45 yards
3. Weight	target 23.70 oz/54"
4. Film Thickness	.012
5. Substrate Weight	4.0 oz/yd^2 with foam (target)
6. Adhesion (ASTM D-751)	4.0 minimum lbs/inch
7. Tensile Strenght (Grab Method ASTM D-751-59)	100 lbs
8. Trapezoid Tear Strenght (ASTM D-1117-80)	30-45 lbs
9. Sulfide Stain	manufactured to resist sulfide staining
10. Light Fastness (ASTM G-25-75)	300 hours minimum
11. Cold Crack (CFFA-6)	Minus 10°F, Class A pass
12. Fire Retardency (MVSS-302)	pass
13. Abrasion (Taber - 500 gm. weight)	300 cycles
14. Crocking	pass
15. Seam Strenght (CFFA 4)	18-26 lbs

TRACKER
VINYLS

SPECIFICATIONS

- width 54"
- gauge (thickness) 45 mm ± .05
- tensile strength (ASTM 751) - warp 128.77 lbs. - fill 107.88 lbs.
- elongation (ASTM 751) - warp 58.54% - fill 117.15%
- tear strength - warp 31.11 lbs. - fill 35.08 lbs.
- seam strength - warp 18.0 lbs. - fill 12.91 lbs.
- adhesion (ASTM D751) - warp full - fill full
- lightfastness (AATCC 16 XENON TEST 150) - pass
- abrasion Wyzenbeek 25,000 cycles - pass
- Taber 2,000 cycles - pass
- cold crack Fed. Std. 5874-10 pass @ -20°
- flexing - 15,000 cycles

MEETS THE FOLLOWING FLAMMABILITY CODES:

- MVSS 302
- California tech. 117

THE SIGNATURE SERIES

A Remarkable Color-Twinning process mates premium companion leathers and vinyls to design interiors of enduring beauty and durability.

Sensible Pricing makes the Signature Series especially attractive.

RACER
LEATHER

SPECIFICATIONS

- thickness 1.0 - 1.2 mm
- GM Specs for surface finish:
  - Resistance to wear (ASTM D3884, 500 gr. H-18 wheel, 300 cycles)
  - Cold Crack (ASTM D1912 GM9140 P)
  - Blocking (SAE J912)
  - Compatability (GM9141 P)
  - Grain Retention (GM9142 P)
  - Crazing (GM9143 P)
  - Scuffing & Marking (GM9150 P)
  - Top Coat Adhesion (GM9180 P)
  - Coating Adhesion (ASTM D2097) 50,000 cycles
  - Colorfastness to light (SAE J1885) XENON 225KJ
  - Color Crock (AATCCTM 8) wet/dry min. 4
  - Resistance to yellowing (GM2756 P)
- top grain
- drum dyed
- Wyzenbeek "duck" seam abrasion test 3,000 cycles

MEETS THE FOLLOWING FLAMMABILITY CODES:

- MVSS 302
- California tech. 117

HOW TO ORDER LEATHER:

Leather is sold on a square foot basis in whole hide quantities. Hides average 50 square feet. Use the following figures when estimating quantities needed.

36" X 54" Fabric	Leather	36" X 54" Fabric	Leather
1 yard	= 18 Square Feet	6 yards	= 108 Square Feet
2 yards	= 36 Square Feet	7 yards	= 126 Square Feet
3 yards	= 54 Square Feet	8 yards	= 144 Square Feet
4 yards	= 72 Square Feet	9 yards	= 162 Square Feet
5 yards	= 90 Square Feet	10 yards	= 180 Square Feet

Corporate Headquarters:
4380 East 11th Avenue
Hialeah, Florida 33013
(305) 685-9851
FAX (305) 685-9511
(800) 428-4826

C.M.I. Automotive of Indiana
52742 Lear Court
Elkhart, Indiana 46514
(219) 262-3888
FAX (219) 262-4782
(800) 346-0475

C.M.I. Automotive of Texas
1000 Enterprise Place
Arlington, Texas 76017
(817) 467-2990
FAX (817) 468-2218
(800) 467-2990

ALANTE

Brand Fabric

RECOMMENDED APPLICATIONS:

- Automotive Seating and Trim
- Conference Room Seating
- Executive Seating
- General Office Seating
- Hotel/Motel Room Seating
- Home Office Seating
- Foyer and Lounge Seating
- Residential Seating
- RV Seating and Trim
- Work Station Seating

SPECIFICATIONS:

- Nominal Total Thickness: .0045 inches (45 + 4.5 - 1.5 mils)
- Standard Weight: 29.0 ounces per linear yard
- Abrasion Resistance: Superior abrasion resistance – 100,000 cycles – Wyzenbeek – CFFA-1 (Federal Standard 191A – Method 5304)
- Mildew Resistant
- 1,000 Hours Weathermeter
- Finished Width: 54"
- Roll Length: 40 linear yards

MANUFACTURED TO MEET THE FOLLOWING FLAMMABILITY SPECIFICATIONS*:

- FMVSS - 302
- California Flammability Regulation (Bulletin 117, Section E)
- BIFMA Class A
- UFAC Class 1

* This term and the corresponding data refer to typical performance in the specific test indicated and should not be construed to imply the behavior of this or any other material under actual fire conditions.

www.morbern.com

Morbern

Morbern is an ISO 9001 Certified company

P.O. / C.P. 1207, 80 Boundary Road
Cornwall, Ontario, Canada K6H 5V3
Bell Tel. (613) 932-9811
Fax: (613) 932-0182 - Administration
Fax: (613) 932-9778 - Sales / Production Planning

Morbern Product Directory SPE 4860
18 February 1998

PRODUCT INFORMATION SHEET

BELLOTEX SR/FR ALLANTE

Construction.
The product is an expanded vinyl that is supported by a synthetic looped knitted backing fabric.

Physical attributes
Leatherlike feel,
High tailorability.
Excellent durability characteristics.

Physical properties

Property	Units	Method	Result	Limits
Total weight	ozs/lin yard	ASTM D751	29.0	+/- 1.5
Total thickness	mils	ASTM D751	45	+/- 4.5
Width	inch	Fed Std 191A-5020	54	+ 2 - 0
Tensile strength	pounds	ASTM D751	W. 85 F. 70	+/- 8 +/- 7
Adhesion of coating	pounds/inch	ASTM D751	W. 6.5 F. 6.5	+/- 3.5 +/- 3.5
Tearing strength	pounds	Fed Std 191A-5134	W. 10.5 F. 10.5	+/- 2.5 +/- 2.5
Trapezoid tear strength	pounds	ASTM D1117	W. 24 F. 24	+/- 6 +/- 6
Hexane extraction	%	MI-TLWI 423	7.0	+/- 2
Stretch under load	%	SAE J856	W. 25 F. 150	+/- 7 +/- 25
Permanent set	%	SAE J855	W. 4 F. 24	+/- 2.0 +/- 8.0
Weather resistance (500 hrs)	Hrs	ASTM G23-92 Method 1	Pass No significant colour change or stiffening	
Mildew resistance		ASTM 621-90	No growth or discoloration	
Abrasion resistance	cycles	Wyzenbeek 30,000 rubs #8 Duck	No significant wear	
Blocking resistance		Fed Std 191A 5872	Scale rating 2 max	
Cracking resistance		Fed Std 191A 5851	Rating of good both wet & dry	
Cold resistance	°F	Fed Std 191A 5874	Pass -15	
Flame		FMVSS-302		

		California 117, Sect E BIFMA Class A UFAC Class 1

Note : The information stated is, to the best of our knowledge, accurate. It is offered for verification and reference purposes only.
Moreorn Inc. offers no warranty, and assumes no liability for actual reliance on this information.

104 Pennsylvania Railroad • Linden, NJ • 07036 • Phone: 1-800-354-4401 • Fax 908-862-2072

To Whom It May Concern:

Vinyl Specifications

Spec: 45 gauge x 54"
Backing Cloth: 65% Polyester/35% Rayon Blend Double Knit
Flammability: MVSS-302
Cal-117 Class I
UFAC Class 1
Ultra Violet Resistance: 300 hours (ASTM-G53 QUV)
Cold Crack Resistance: Minus 30 degree F (CFA-6A Keller Method)
Abrasios Resistance: Exceeds 200,00 cycles (CFFA-1/Wyzenbeek #8 Cotton Duck)

If you have any other questions, please give me a call at (800) 354-4401.

Sincerely,

[redacted]
President

104 Pennsylvania Railroad • Linden, NJ • 07036 • Phone: 1-800-354-4401 • Fax 908-862-2072

Specifications for East Coast Vinyl

Manufactured To Meet The Following Codes

- Motor Vehicle Safety Standard 302
- California Tech Bulletin 117
- Heat Sealable

Finishes & Treatments

- Abrasion-Heavy Duty Wyzenbeek/CFFA-1
- Federal Safety Standard 191A-Method 5304
- Cold Crack-10 ° F (-23.3 °C)
- Light Fastness-300 Hours Minimum

Suitable Applications

- Office/General Seating
- Residential
- Marine/RV/Auto

Specifics

- Width: 54" (137 cm)
- Roll: 30 yd (27.43 m)
- Weight: 27-28 oz. (634 gm/m²)

Post-It® Fax Note 7671	Date	# of pages ▶
To	From	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

104 Pennsylvania Railroad • Linden, NJ • 07036 • Phone: 1-800-354-4401 • Fax 908-862-2072

Leather Specifications:

Perform the following tests on one leather sample submitted in accordance with GM specification GM 2756M and the indicated laboratory procedures:

3.2.1 Thickness (ASTM D1813)
3.2.2 Weight (ASTM D3776)
3.2.3 Pliability (GM9151P)
3.2.4 Tensile Strength (ASTM D5034. Grab Method)
3.2.5 Elongation
3.2.6 Tear Strength (ASTM D2261)
3.2.7 Stitch Tear Resistance (Double Hole, ASTM D4705)
3.2.8 Seam Strength (GM9129P)
3.2.9 Resistance to Wear (ASTM D3884, 500 G, 300 Cycles, H-18 wheels)
3.2.9.1 High Wear (500 cycles)
3.2.10 Resistance to Wear (SAE J1530, Duck #10, Wyzenbeek Method, at 3lb load and 4 lb tension, 4000 cycles)
3.2.11 Cold Crack Resistance
3.2.11.1 Cold Crack Resistance (ASTM D1912, Seating & door use only)
3.2.11.3 Cold Crack Resistance, High Impact Leather (GM9032P)
3.2.12 Resistance to Blocking (SAE J912)
As-Received
After 24 h Humidity
3.2.13 Compatibility (GM9141P)
3.2.14 Grain Retention (GM9142P)
3.2.15 Crazing (GM9143P)
3.2.16 Coating Adhesion (ASTM D2097)
3.2.17 Topcoat Adhesion (GM9335P)
As-Recieved
After 24 h Humidity
3.2.18 Resistance to Scuffing and Marring (GM9150P)
3.2.19 Cleanability (GM916P, Procedure A)
3.2.20 Resistance to Consumer Cleaning Products (GM9900P, Procedures A)
3.2.21 Flammability (GM9070P)
As-Recieved
After accelerated aging per GM9200P
3.2.24 Odor (SAE J1351)
3.2.25 Fogging (SAE J1756, 7 d over P_2O_5 then testing)
3.2.26 Fiber Show Through, Perforated Leather only
3.3.12 Resistance to Humidity (24 h @ 38°C and 95 ± 5% R.H.)
3.3.13 Resistance to Sulfur Ion Staining
Sulfide (GM9069P)
Sulfur Dioxide (GM9736P)
3.3.14 Colorfastness to Light
3.3.14.1 Seating and Shift Boot (SAE J1885, 225.6 kJ/m^2)
3.3.16 Color Crock (AATCC8)
3.3.17 Colorfastness to Elevated Temperature (72 h @ 93 ± 2°C)

Any questions please call: 1-800-354-4401

MOLECULAR Chemical Systems™

HR Flexible Polyurethane/Technical Data for HRB-240M-C117

HRB-240M-C117 is an MDI based system developed for high resiliency seating applications. The low viscosity of this formulation makes it easily adaptable to both low-pressure mechanical mix and high-pressure impingement mix dispensing equipment. The system offers exceptional strength properties, rapid demold and void-free parts. Foam produced with this system meets flammability requirements for CAL 117, MVSS302 and FAA25.853(a). **Iso Component:** HRA-M30-33

PHYSICAL Foam Characteristics	PHYSICAL Foam Characteristics
Molded Density, pcf ASTM D1622—98	2.8
Tensile Strength, psi ASTM D3574-Test E	25.14
Tear Strength, ppi ASTM D3574-Test F	1.1
Additional physical properties and burn test results on back of back	

Foam REACTIVITY Hand Mix**	
Component temp	75°F
Cream Time, seconds	10
Mix Time, seconds	5
Rise Time, seconds	67
Demold time, minutes	3.0-3.5
Mold Temperature	115-130°F
Free Rise Density, pcf	2.50

**Reaction times & density are influenced by mix efficiency, component temperatures and ambient conditions.

Typical CHEMICAL Profile		
Property	**Resin Blend HRB-240M-C117**	**Isocyanate HRA-M30-33**
Viscosity @ 75F	1200 cPs	30 cPs
Weight/gallon	8.9 lbs	10.0 lbs
Storage Temperature	60-100 °F	60-100 °F
Shelf Life*	6 mos.	6 mos.
Mix Ratio	100 pbw	53 pbw
Index	110	

*Shelf life dependent on storage conditions. Both components should be stored in tightly capped containers with nitrogen blanketed head-space. Components should be stored in a temperature controlled environment of approximately 75°F. Avoid extreme temperatures and significant changes in temperature. Always have an MSDS available.

BURN TEST RESULTS
CAL 117: PASS
MVSS302: SE (self-extinguishing)
FAA 25.853 (a): PASS

Carpenter Co.
Chemical Systems Division
Customer Service 800-444-5132
www.carpenter.com

HR Flexible Polyurethane/Technical Data for HRB-240M-C117

Additional PHYSICAL Foam Characteristics	
IFD, 15" x 15" x 4" ASTM D3574-Test B	
25% deflection	48.4 lb/50in²
SAG Factor	2.78
Hysteresis	20.65
Elongation ASTM D3574-TestE, Benchmarks	140%
Compression Sets, 50% Deflection ASTM DD, C1	
Un-aged	6%
Humid Aged (J_2)	11%

FABRIC SERVICES

a division of MPR Corporation

Monterey Leather

Item	Test	Requirement
Thickness	ASTM D 1813	1.0mm +/- 0.02mm
Weight	ASTM D3776	2.5 oz/sf +/-.25
Tensile Strength	ASTM D 5034	400N min.
Elongation	ASTM D 5034	60% max.
Tearing Strength	ASTM 4704	22N min.
Abrasion	ASTM D 3884	CS10 Wheel, 500 g Wgt. 1,000 cycles
Cold Flex	SAE J 323 A	-30 c
Adhesion	Tape Test	No lifting, peeling of topcoat
Crocking	AATCC 8	wet/dry 4 min.
Flammability	FMVSS 302	101.4mm/min
Light Fastness	SAE J1885	100 hrs 5 rating 150 hrs 4.5 rating

103 Hinsdale Farms Road Bristol, IN 46507
(574) 848-5100 Fax (574) 848-1776

FABRIC SERVICES

a division of MPR Corporation

White vinyl	PASS
White leather	PASS

PHYSICAL PROPERTIES (cont.)

5.16	Scuff & Mar		PASS
5.17	Grain Retention		PASS
5.18	Cleanability		PASS
5.19	Odor		PASS
5.20	Flammability		Self-extinguished
		After Accel. Age	Self-extinguished
		After Steaming	Self-extinguished
5.21	Pliability (50 g. load)		0.050

COLOR PROPERTIES

6.1	Colorfastness to Light (225.6 kJ/m^2)		PASS
6.2	Colorfastness to Elevated Temperatures		PASS
6.3	Color Crock (Wet/Dry)	As received	PASS/PASS
		After 7 d 70° C	PASS/PASS
6.4	Resistance to Humidity		PASS
6.5	Resistance to Sulfide Ion Staining		
		H_2S	PASS
		SO_2	PASS
6.6	Accelerated Aging		PASS

2 of 2

103 Hinsdale Farms Road Bristol, IN 46507
(574) 848-5100 Fax (574) 848-1776

FABRIC SERVICES

a division of MPR Corporation

Monterey Vinyl

February 24, 2005

TEST REPORT

RM-7859 – Med. Neutral

Specification GM2737M

PHYSICAL PROPERTIES

5.1	Weight		18.2 oz/yd^2
5.2	Thickness		0.034 inches
5.3	Tensile Strength	(Warp Direction) (Fill Direction)	97 lbs. 68 lbs.
5.4	Trap Tear	(Warp Direction) (Fill Direction)	10 lbs. 9 lbs.
5.5	Tongue Tear Strength	(Warp) (Fill)	7.0 lbs. 6.0 lbs.
5.6	Fabric Bond Strength	(Warp) (Fill)	5.8 lbs. 4.8 lbs.
5.7	Stretch & Set	(Warp) (Fill)	25%/3% 180%/38%
5.8	Fogging		98%
5.9	Curling	5 mm	
5.10	Resistance to Wear (Taber)		PASS
5.11	Resistance to Flex		PASS
5.12	Topcoat Adhesion	As received After 24 h humidity	PASS PASS
5.13	Resistance to Cold Crack (-30° C) After Accel. Age		PASS PASS
5.14	Resistance to Blocking	As received After 24 h humidity	PASS PASS
5.15	Compatibility		

1 of 2

103 Hinsdale Farms Road Bristol, IN 46507
(574) 848-5100 Fax (574) 848-1776

FABRIC SERVICES

a division of MPR Corporation

White vinyl	PASS
White leather	PASS

PHYSICAL PROPERTIES (cont.)

5.16	Scuff & Mar		PASS
5.17	Grain Retention		PASS
5.18	Cleanability		PASS
5.19	Odor		PASS
5.20	Flammability		Self-extinguished
		After Accel. Age	Self-extinguished
		After Steaming	Self-extinguished
5.21	Pliability (50 g. load)		0.050

COLOR PROPERTIES

6.1	Colorfastness to Light (225.6 kJ/m^2)		PASS
6.2	Colorfastness to Elevated Temperatures		PASS
6.3	Color Crock (Wet/Dry)	As received	PASS/PASS
		After 7 d 70° C	PASS/PASS
6.4	Resistance to Humidity		PASS
6.5	Resistance to Sulfide Ion Staining		
		H_2S	PASS
		SO_2	PASS
6.6	Accelerated Aging		PASS

2 of 2

103 Hinsdale Farms Road Bristol, IN 46507
(574) 848-5100 Fax (574) 848-1776

FABRIC SERVICES
a division of MPR Corporation

Specifications for Hobnail and Cargoliner

Hobnail:
Construction – 12 oz/yd 2 +/- 10%
Polypropylene fiber with 3 oz/yd +/- 10% latex.

Testing – FMVSS 302 (by lot), weight compliance (by lot), Color (by lot).

Cargoliner:
Construction – 8.5 oz/yd 2 +/- 10%
Polypropylene fiber with Calendared finish.

Testing – FMVSS 302 (by lot), weight compliance (by lot), Color (by lot).

103 Hinsdale Farms Road Bristol, IN 46507
(574) 848-5100 Fax (574) 848-1776

FABRIC SERVICES

103 HINSDALE FARM ROAD
BRISTOL, IN 46507

Telephone 574.848.5100
Fax 574.848.1776

TO: Midwest Automotive Design
53664-1 CR 9
Elkhart, IN 46514
Attn. Curt Mattern

RE: Warrant for Flammability- Purchased Materials

We warrant the following material shipped to Midwest Automotive Design during the 2005 model year will be manufactured, processed, and tested in accordance with FMVS302 Federal Motor Vehicle standard 302. We further warrant that due care documentation generated by our testing and monitoring program will be immediately available upon request, for your reference and further use, as required. All lots of material are tested and records kept for review.

Warrant is for the following material:

Material Name	Part#
Alpine Black 1/4" Lam	875883
Empire 1/4" Lam	25950
Rhonby 1/4" Lam	38655

Date 8/11/05

Signed [redacted]

Name: [redacted]

Title: Director of Q.A.

Atwood Compliance Systems

ATWOOD COMPLIANCE SYSTEMS STATEMENT OF CERTIFIABILITY

Atwood Mobile Products states that all Atwood Compliance Systems offered by the company have been developed to meet the requirements of applicable FMVSS standards. ACS further states that each system was tested as closely as possible to procedures recommended by the National Highway Traffic Safety Administration.

All tests or engineering analyses were conducted by or witnessed by qualified testing personnel and or independent test laboratories and documentation is furnished to affirm the standards used for testing and the results obtained.

ACS also provides detailed guides for the installation of all systems furnished. While these guides are provided, it remains the manufacturer's responsibility to ensure that each system is properly installed.

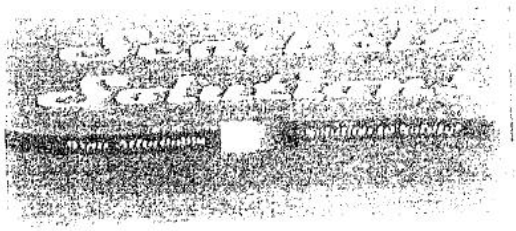
ACS also states that while some components of the completed vehicle's seating systems are not furnished as part of the Atwood Compliance Systems, ACS has provided specific guidelines for their application within the systems. Such items include seats, sofas, seat slides and some fasteners required for attaching these items. It is the conversion manufacturer's responsibility to ensure that the items added conform to ACS guidelines in order to protect certifiability of the systems.

ACS states that all Atwood Compliance Systems offered for sale to final stage manufacturers are certifiable under FMVSS standards when installed under ACS Guidelines. ACS further states that these systems, as offered, do not adversely impact a vehicle's FMVSS 208 certification.

Disclaimer: Atwood does not assume responsibility for the Certification of an installed system that does not us a complete system as required and supplied by Atwood Mobile Products.

Revision – March 1999

Test Report



QUANTITY RECEIVED	QUANTITY ACCEPTED	QUANTITY REJECTED

ITEM	TEST DESCRIPTION	RESULTS	DISPOSITION ACTION APPROVED	REJECTED
1				
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[redacted]

DATE

[redacted]

DATE

Tilt Test Report

Test Information

Part Number: 288A
Sample Description: End release adj. tongue
Test Description: Tilt lock
Lot Number: 002-082213
Sample Date: 8/26/13
Customer: SBS
Technician: Tate
Comment:
Tested: Aug 26, 2013 - 9:12 AM

Test Parameter File: C:\Test Parameters\288A.par

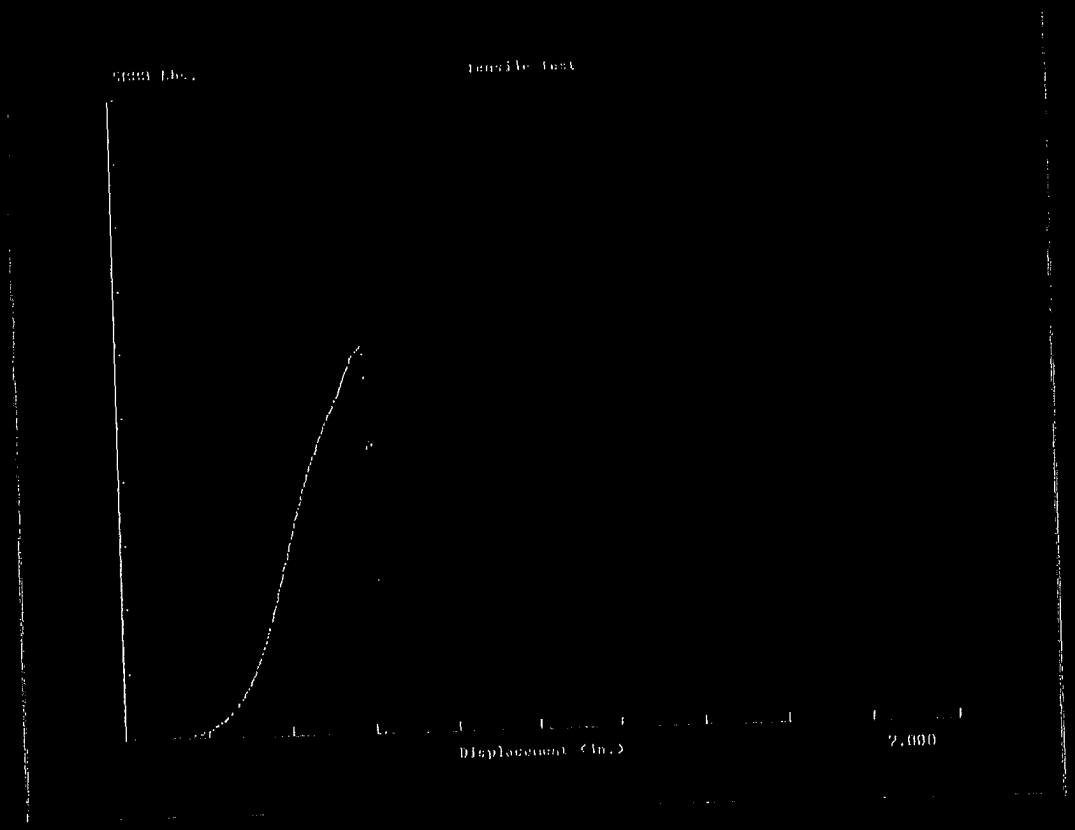
Test Results File: C:\Test Results\288A.csv

Test Results

	Angle	Judgement	Low Limit	High Limit
Tilt Lock	55.4°	OK	0.0°	60.0°

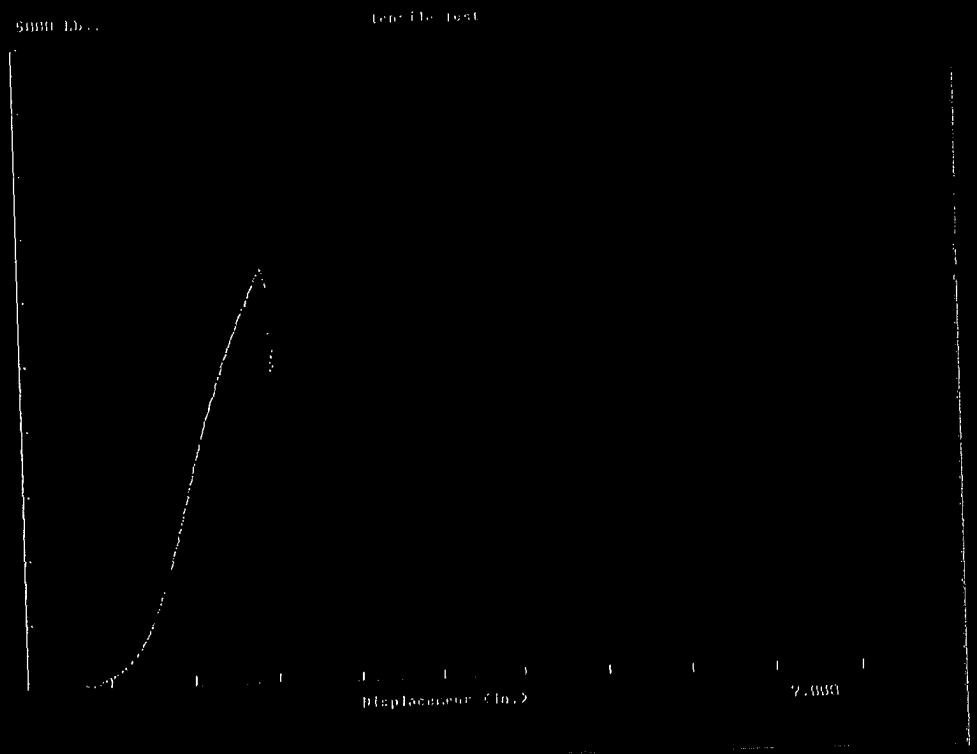
Tensile Test Summary Data
Test Population: 3 5
Test Date: 8/26/2013

	Average	Std. Dev	Coef. of Var.
Modulus:	1,140.2	92.7	8.13
Max. Force:	3,333.4	107.7	3.23
Max. Stress:	1,666.7	53.8	3.23
Max. Strain:	100.000	0.000	0.00



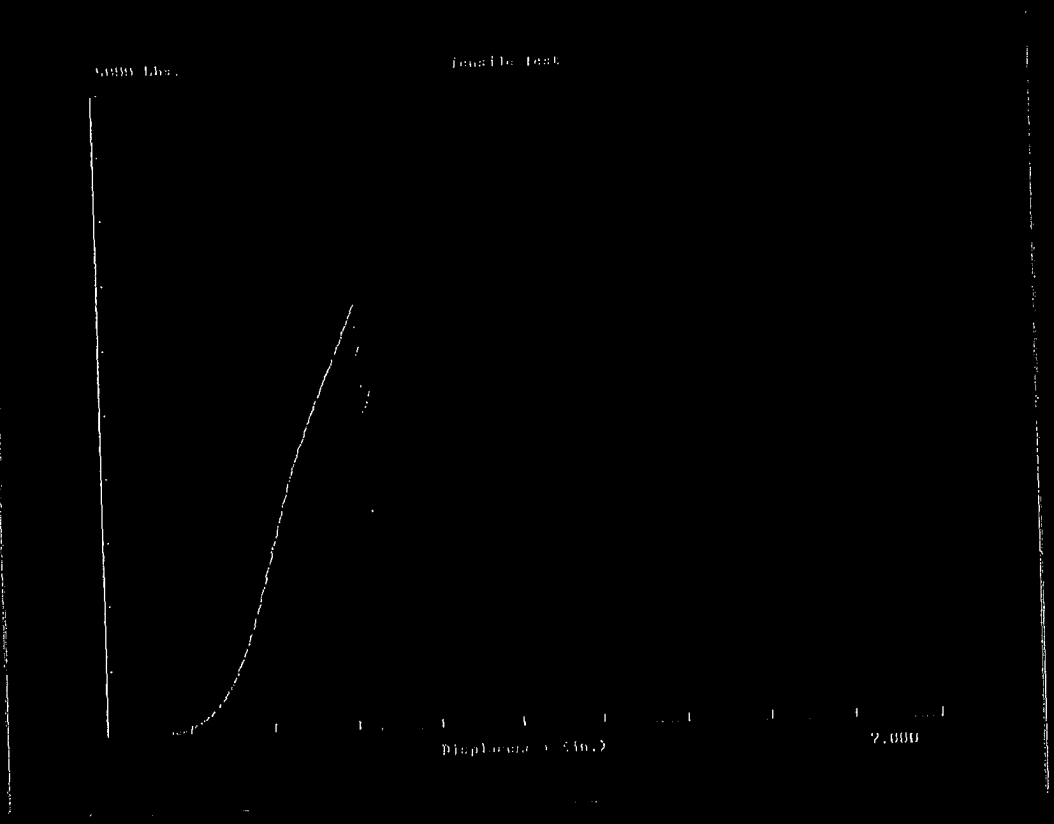
Tensile Test
8/26/2013 9:28:11 AM
Specimen Number 1
Test Description: Breaking strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,135.0 PSI
Poissons Ratio	0.000
Max. Force	3,032.6 Lbs
Max. Defl.	2.146 inches
Peak Stress	1,516.3 PSI
Breaking Stress	0.7120 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



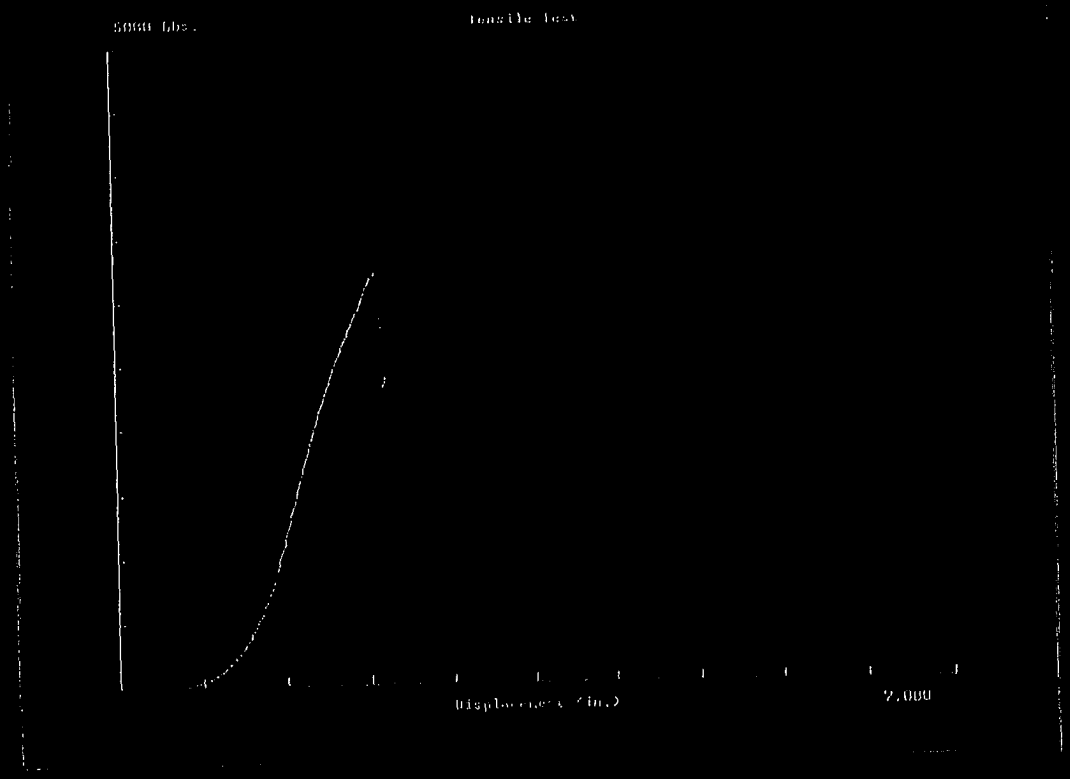
Tensile Test
8/26/2013 9:31:27 AM
Specimen Number 2
Test Description: Breaking strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K. Full Scale: 5000.0 Pounds
Initial Velocity = 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,125.9 PSI
Poissons Ratio	0.000
Max. Force	3,229.0 Lbs
Max. Defl.	2.117 inches
Peak Stress	1,614.5 PSI
Breaking Stress	290.21 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



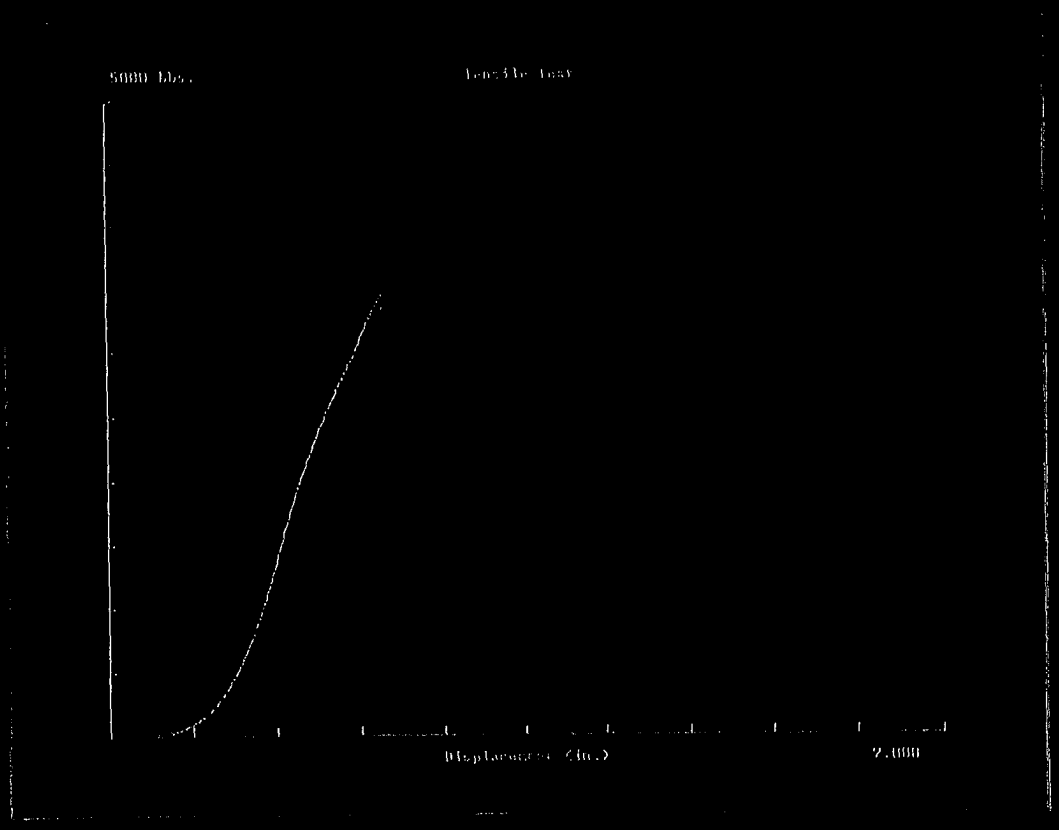
Tensile Test
8/26/2013 9:35:46 AM
Specimen Number: 1 S
Test Description: Breaking strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,058.4 PSI
Poissons Ratio	0.000
Max. Force	3,322.9 Lbs
Max. Defl.	2.259 inches
Peak Stress	1,661.5 PSI
Breaking Stress	1,196.6 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



Tensile Test
8/26/2013 9:37:47 AM
Specimen Number: 2 4
Test Description: Breaking strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity: 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

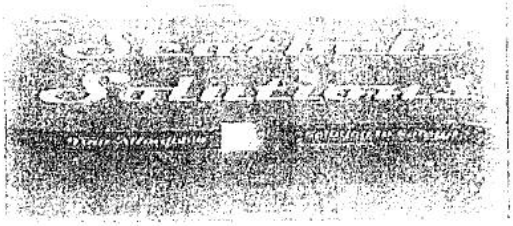
Modulus	1,121.3 PSI
Poissons Ratio	0.000
Max. Force	3,231.3 Lbs
Max. Defl.	2.257 inches
Peak Stress	1,615.7 PSI
Breaking Stress	84.50 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



Tensile Test
8/26/2013 9:48:32 AM
Specimen Number: 3
Test Description: Breaking Strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,240.8 PSI
Poissons Ratio	0.000
Max. Force	3,445.9 Lbs
Max. Defl.	2.292 inches
Peak Stress	1,723.0 PSI
Breaking Stress	59.11 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %

Test Report



8-13-13 (DATE)

8-13-13 (DATE)

ITEM# 306505

DESC .505 30 DEGREE ANGLE

LOT#

QUANTITY RECEIVED	QUANTITY ACCEPTED	QUANTITY REJECTED

ITEM	TEST DESCRIPTION	BREAK STRENGTH	INSPECTION ACTION APPROVED	REJECTED
1	Break Strength Test	6015.9	X	
2	" "	6015.9	X	
3	" "	6029.1	X	
4	" "	6024.1	X	
5	" "	6032.6	X	
6	" "	6032.6	X	
7	" "	6003.2	X	
8	" "	6009.2	X	
9	" "	6034.9	X	
10	" "	6034.9	X	
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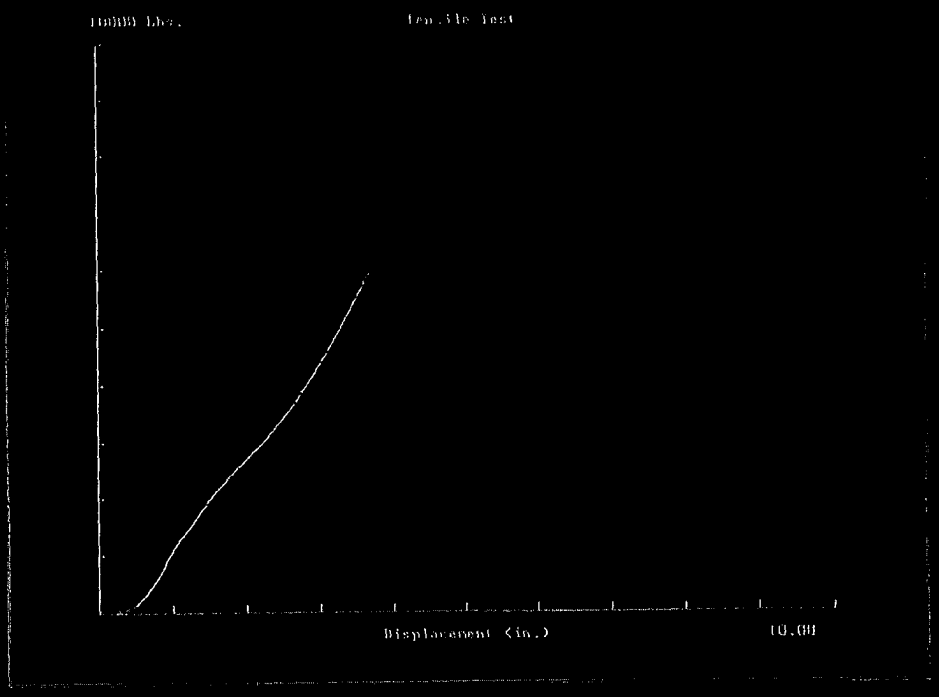
[redacted]

8-13-13
DATE

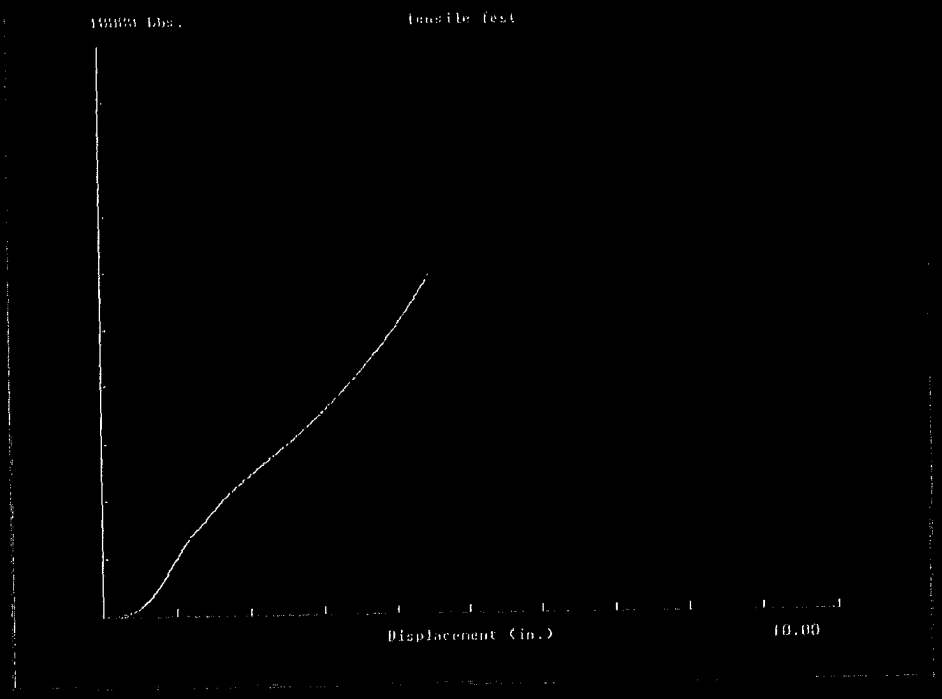
[redacted]

8-13-13
DATE



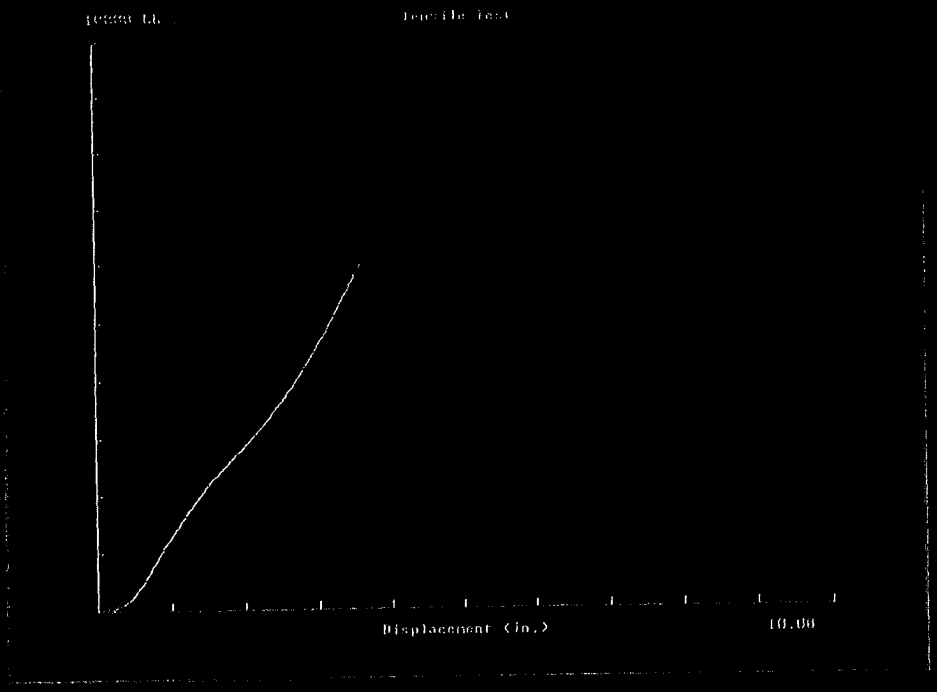
Tensile Test
8/13/2013 3:12:12 PM
Specimen Number 1
MACHINE: MTI-10K, LOAD CELL-10Klbf
PART#: 505 30d
DESCRIPTION: 30deg anchors
LOT#: 134-072913
Load Cell: Interface 10K, Full Scale: 10000 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	778.43 PSI
Max. Force	6,015.9 Lbs
Max. Defl.	3.690 inches
Peak Stress	3,008.0 PSI
Breaking Stress	3,008.0 PSI
Max. Strain	369.0453 %
Proportional Limit Stress	0.0000 PSI
Proportional Limit Strain	0.0000 %
.2% Yield Stress	1,444.5 PSI
.2% Yield Strain	211.9847 %
.5% Yield Stress	1,444.5 PSI
.5% Yield Strain	211.9847 %
Work (Energy)	9,351.79 in-lbs



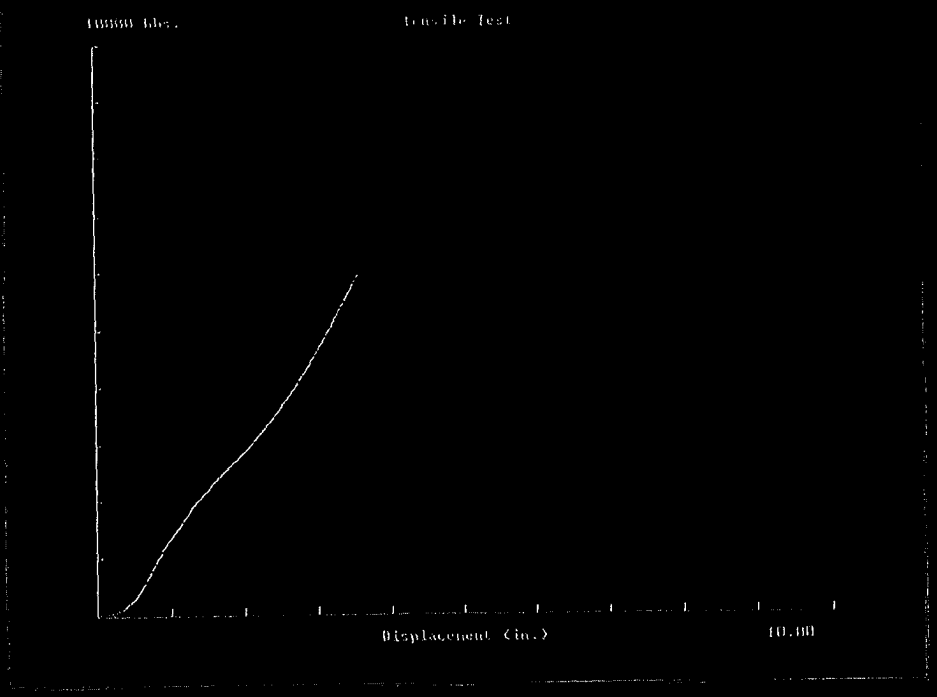
Tensile Test
8/13/2013 3:20:31 PM
Specimen Number 1
MACHINE: MTI-10K, LOAD CELL-10Klbf
PART#: 505 30d
DESCRIPTION: 30deg anchors
LOT#: 134-072913
Load Cell: Interface 10K, Full Scale: 10000 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	610.28 PSI
Max. Force	6,029.1 Lbs
Max. Defl.	4.511 inches
Peak Stress	3,014.5 PSI
Breaking Stress	3,014.5 PSI
Max. Strain	451.1215 %
Proportional Limit Stress	0.0000 PSI
Proportional Limit Strain	0.0000 %
.2% Yield Stress	1,451.8 PSI
.2% Yield Strain	243.2785 %
.5% Yield Stress	1,451.8 PSI
.5% Yield Strain	243.2785 %
Work (Energy)	12,148.17 in-lbs



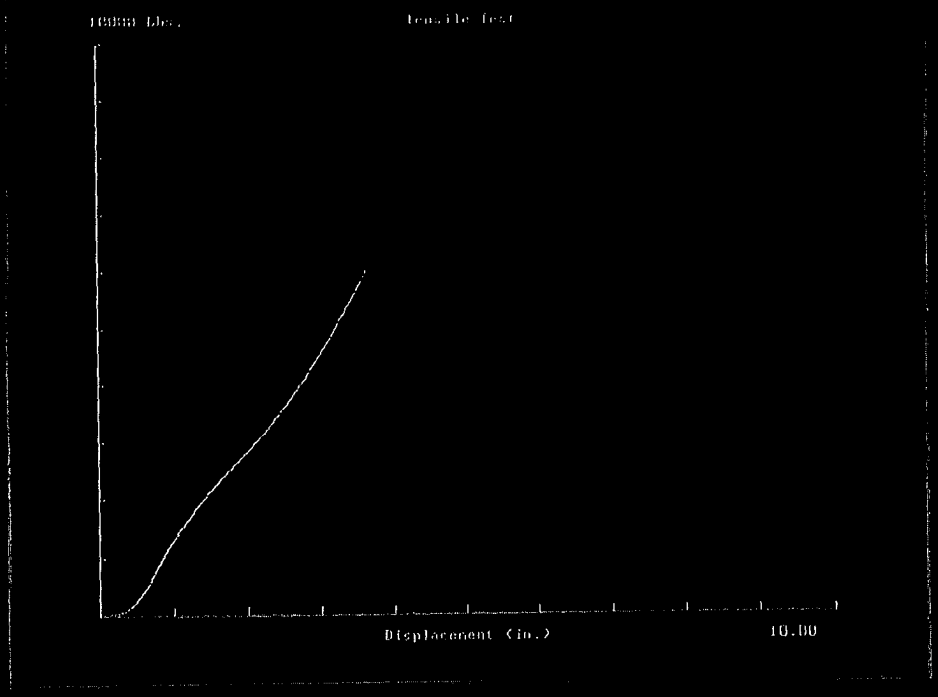
Tensile Test
8/13/2013 3:28:03 PM
Specimen Number 2
MACHINE: MTI-10K, LOAD CELL-10Klbf
PART#: 505 30d
DESCRIPTION: 30deg anchors
LOT#: 134-072913
Load Cell: Interface 10K, Full Scale: 10000 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	764.47 PSI
Max. Force	6,032.6 Lbs
Max. Defl.	3.592 inches
Peak Stress	3,016.3 PSI
Breaking Stress	3,016.3 PSI
Max. Strain	359.1888 %
Proportional Limit Stress	0.0000 PSI
Proportional Limit Strain	0.0000 %
.2% Yield Stress	1,455.9 PSI
.2% Yield Strain	202.9366 %
.5% Yield Stress	1,455.9 PSI
.5% Yield Strain	202.9366 %
Work (Energy)	9,416.53 in-lbs



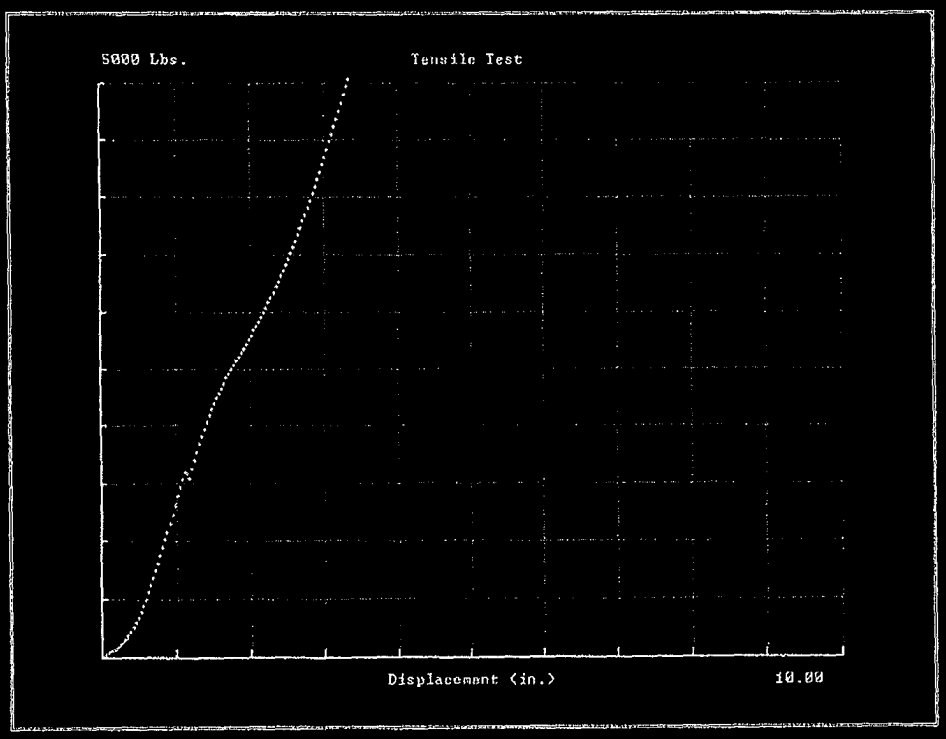
Tensile Test
8/13/2013 3:31:30 PM
Specimen Number 3
MACHINE: MTI-10K, LOAD CELL-10Klbf
PART#: 505 30d
DESCRIPTION: 30deg anchors
LOT#: 134-072913
Load Cell: Interface 10K, Full Scale: 10000 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	759.43 PSI
Max. Force	6,009.2 Lbs
Max. Defl.	3.571 inches
Peak Stress	3,004.6 PSI
Breaking Stress	3,004.6 PSI
Max. Strain	357.0969 %
Proportional Limit Stress	0.0000 PSI
Proportional Limit Strain	0.0000 %
.2% Yield Stress	1,443.7 PSI
.2% Yield Strain	199.3903 %
.5% Yield Stress	1,443.7 PSI
.5% Yield Strain	199.3903 %
Work (Energy)	9,399.02 in-lbs



Tensile Test
8/13/2013 3:40:34 PM
Specimen Number 4
MACHINE: MTI-10K, LOAD CELL-10Klbf
PART#: 505 30d
DESCRIPTION: 30deg anchors
LOT#: 134-072013
Load Cell: Interface 10K, Full Scale: 10000 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

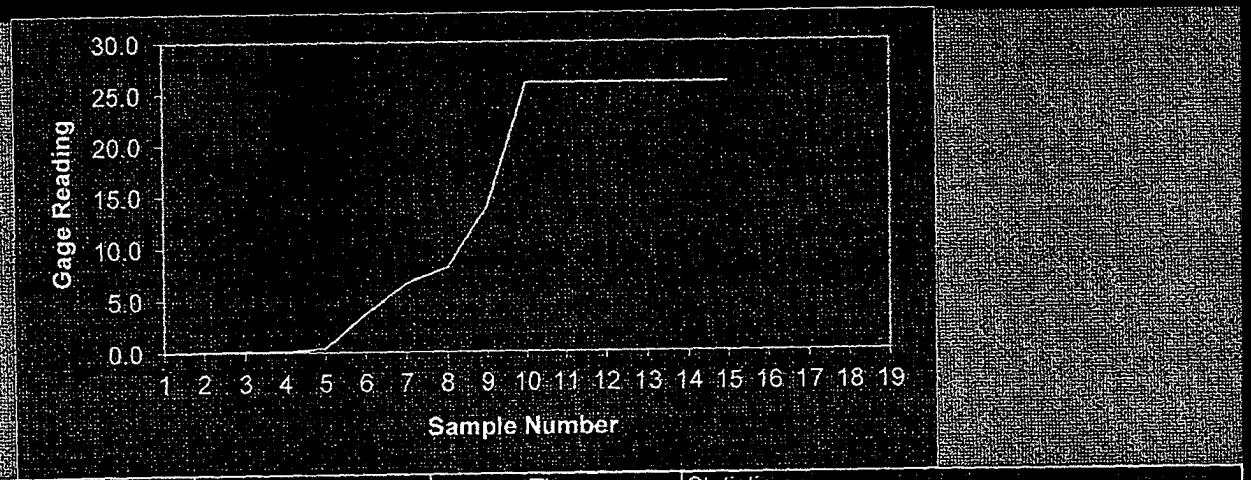
Modulus	746.22 PSI
Max. Force	6,034.9 Lbs
Max. Defl.	3.640 inches
Peak Stress	3,017.5 PSI
Breaking Stress	3,017.5 PSI
Max. Strain	363.9887 %
Proportional Limit Stress	0.0000 PSI
Proportional Limit Strain	0.0000 %
.2% Yield Stress	1,449.3 PSI
.2% Yield Strain	204.1459 %
.5% Yield Stress	1,449.3 PSI
.5% Yield Strain	204.1459 %
Work (Energy)	9,575.55 in-lbs



Tensile Test
8/21/2012 2:50:19 PM
Specimen Number 1
Buckle assembly test ITEM# 388A+288AVS
END FITTINGS USED FLAT .505
DESCRIPTION END RELEASE BUCKLE AND TONGUE W/ CHROME ANCHORS
Lot# V01010627001
Notes: COLOR IS MED NEUTRAL
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

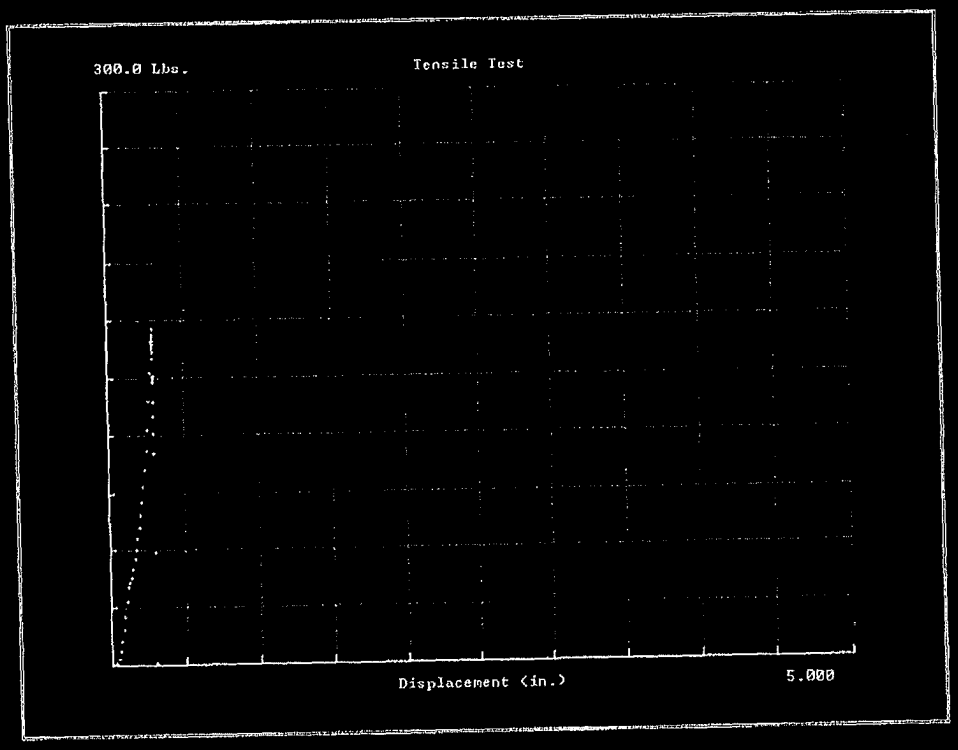
Modulus	1,326.1 PSI
Poissons Ratio	0.000
Max. Force	5,050.3 Lbs
Max. Defl.	3.342 inches
Peak Stress	2,525.2 PSI
Breaking Stress	2,525.2 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %

Imada Force Gauge
Data Input Spreadsheet



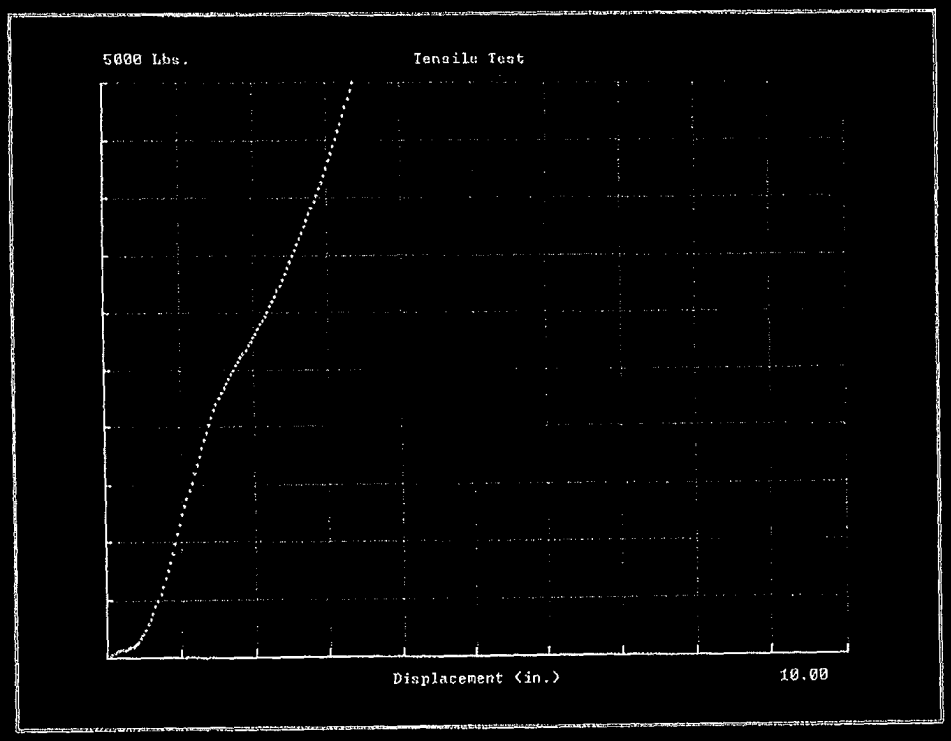
Gauge Reading	Units	Date	Time
0.1	LB(oz)	8/21/2012	14:54:57
0.1	LB(oz)	8/21/2012	14:54:58
0.1	LB(oz)	8/21/2012	14:54:59
0.4	LB(oz)	8/21/2012	14:55:00
3.7	LB(oz)	8/21/2012	14:55:01
6.6	LB(oz)	8/21/2012	14:55:02
8.1	LB(oz)	8/21/2012	14:55:03
13.9	LB(oz)	8/21/2012	14:55:04
26.0	LB(oz)	8/21/2012	14:55:06
26.0	LB(oz)	8/21/2012	14:55:08
26.0	LB(oz)	8/21/2012	14:55:09
26.0	LB(oz)	8/21/2012	14:55:10
26.0	LB(oz)	8/21/2012	14:55:10

Statistics:	
15	NUMBER OF SAMPLE
	MIN
	MAX
12.6000	MEAN
8.1000	MEDIAN
11.5206	STD. DEVIATION
10.8933	AVE. VARIANCE
132.7240	VARIANCE



Tensile Test
8/21/2012 2:57:19 PM
Specimen Number 1
Buckle release test ITEM# 388A+288AVS
LOT# V01010627001
DESCRIPTION END RELEASE B&T
Notes: RELEASE #1
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 1 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

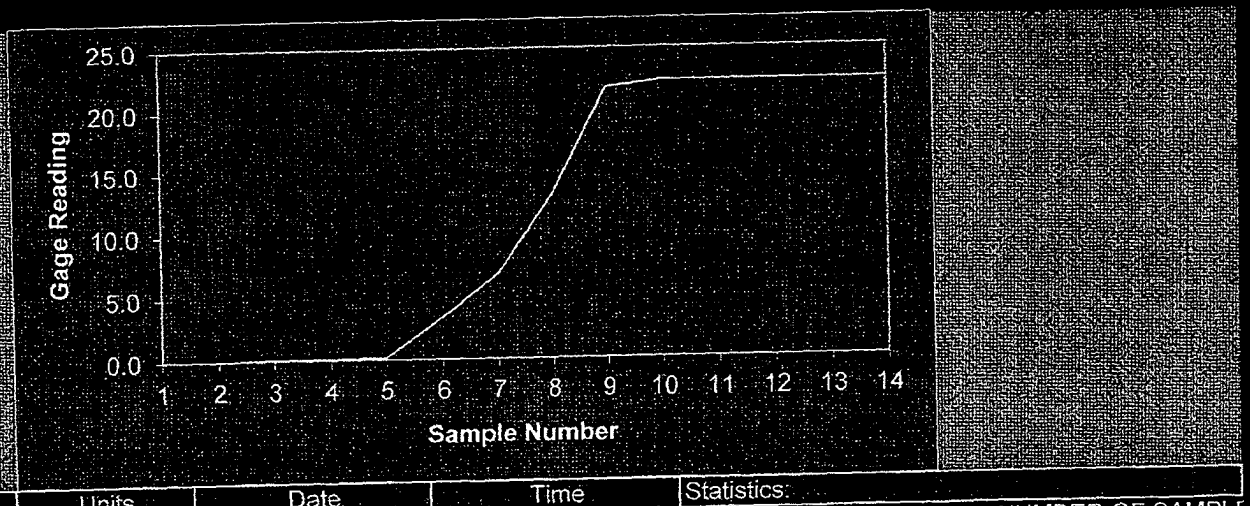
Modulus	214.37 PSI
Poissons Ratio	0.000
Max. Force	176.03 Lbs
Max. Defl.	0.301 inches
Peak Stress	88.02 PSI
Breaking Stress	88.02 PSI
Max. Strain	30.1130 %
.2% Yield Stress	55.63 PSI
.2% Yield Strain	29.7984 %
.5% Yield Stress	55.63 PSI
.5% Yield Strain	29.7984 %



Tensile Test
8/21/2012 3:02:39 PM
Specimen Number 1
Buckle assembly test ITEM# 388A+288AVS
END FITTINGS USED FLAT .505
DESCRIPTION END RELEASE BUCKLE AND TONGUE W/ CHROME ANCHORS
Lot# V01010627001
Notes: COLOR IS MED NEUTRAL
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 3 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

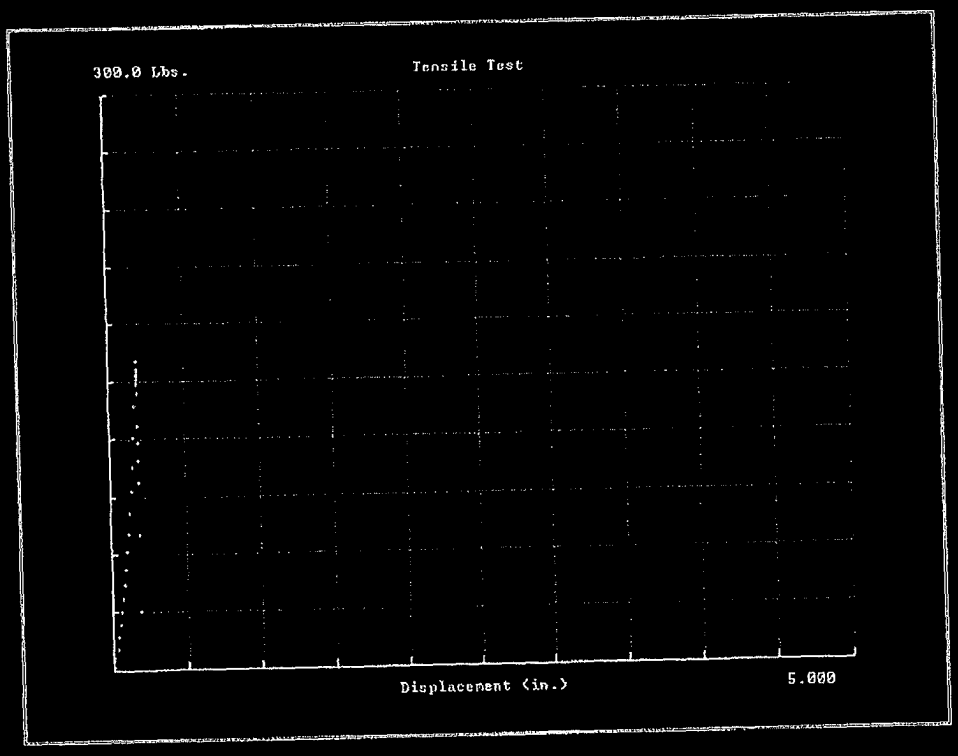
Modulus	1,365.2 PSI
Poissons Ratio	0.000
Max. Force	5,005.6 Lbs
Max. Defl.	3.358 inches
Peak Stress	2,502.8 PSI
Breaking Stress	2,502.8 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %

Imada Force Gauge
Data Input Spreadsheet



Gauge Reading	Units	Date	Time
0.0	LB(oz)	8/21/2012	15:04:07
0.1	LB(oz)	8/21/2012	15:04:09
0.1	LB(oz)	8/21/2012	15:04:10
0.2	LB(oz)	8/21/2012	15:04:11
3.4	LB(oz)	8/21/2012	15:04:12
6.8	LB(oz)	8/21/2012	15:04:13
13.1	LB(oz)	8/21/2012	15:04:14
21.7	LB(oz)	8/21/2012	15:04:15
22.3	LB(oz)	8/21/2012	15:04:17
22.3	LB(oz)	8/21/2012	15:04:18
22.3	LB(oz)	8/21/2012	15:04:19
22.3	LB(oz)	8/21/2012	15:04:20

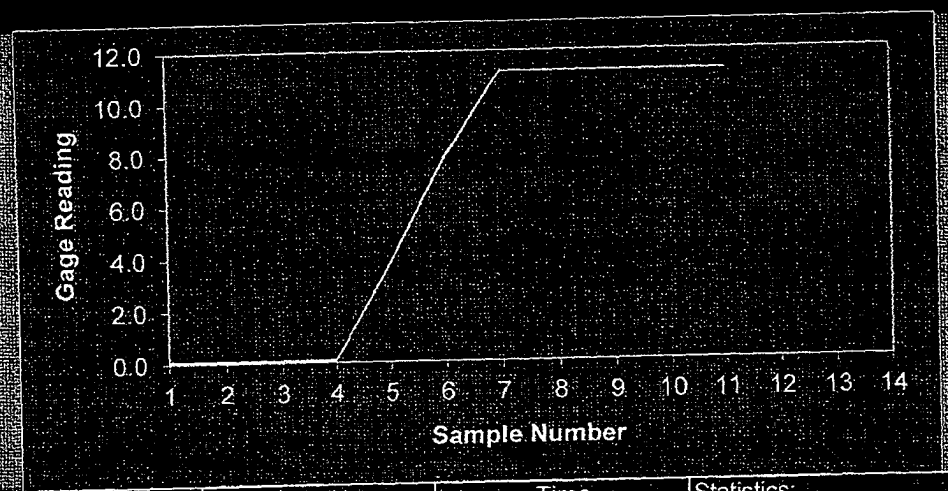
Statistics:	
14	NUMBER OF SAMPLE
	MIN
	MAX
11.2071	MEAN
9.9500	MEDIAN
10.1010	STD. DEVIATION
9.6929	AVE. VARIANCE
102.0292	VARIANCE



Tensile Test
8/21/2012 3:04:37 PM
Specimen Number 1
Buckle release test ITEM# 388A+288AVS
LOT# V01010627001
DESCRIPTION END RELEASE B&T
Notes: RELEASE #2
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 1 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

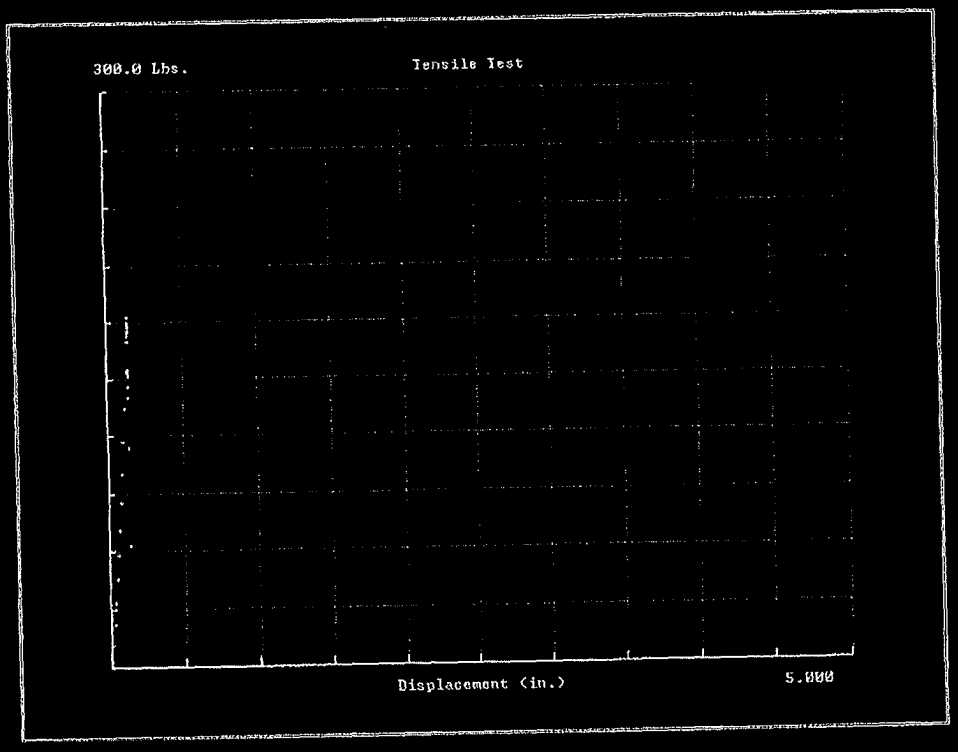
Modulus	386.41 PSI
Poissons Ratio	0.000
Max. Force	161.01 Lbs
Max. Defl.	0.188 inches
Peak Stress	80.51 PSI
Breaking Stress	78.51 PSI
Max. Strain	18.8128 %
.2% Yield Stress	59.38 PSI
.2% Yield Strain	18.8128 %
.5% Yield Stress	59.38 PSI
.5% Yield Strain	18.8128 %

Imada Force Gauge
Data Input Spreadsheet



Gauge Reading	Units	Date	Time
0.1	LB(oz)	8/21/2012	15:20:24
0.1	LB(oz)	8/21/2012	15:20:25
0.1	LB(oz)	8/21/2012	15:20:26
3.8	LB(oz)	8/21/2012	15:20:28
7.9	LB(oz)	8/21/2012	15:20:29
11.2	LB(oz)	8/21/2012	15:20:31
11.2	LB(oz)	8/21/2012	15:20:32
11.2	LB(oz)	8/21/2012	15:20:33
11.2	LB(oz)	8/21/2012	15:20:34

Statistics:	
11	NUMBER OF SAMPLE
	MIN
	MAX
6.1909	MEAN
7.9000	MEDIAN
5.0676	STD. DEVIATION
4.8645	AVE. VARIANCE
25.6808	VARIANCE



Tensile Test
8/21/2012 3:20:46 PM
Specimen Number 1
Buckle release test ITEM# 388A+288AVS
LOT# V01010627001
DESCRIPTION END RELEASE B&T
Notes: RELEASE #3
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 1 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	585.69 PSI
Poissons Ratio	0.000
Max. Force	183.58 Lbs
Max. Defl.	0.144 inches
Peak Stress	91.79 PSI
Breaking Stress	91.79 PSI
Max. Strain	14.4141 %
.2% Yield Stress	76.08 PSI
.2% Yield Strain	14.1047 %
.5% Yield Stress	73.10 PSI
.5% Yield Strain	14.1047 %

Tensile Test Archive File created 8/21/2012

Test Date	Spec. #	File Name	Width-Diameter	Thickness	Modulus	Prop. Limit
8/21/2012	1	C:\MTI_D	2	0.08	1326.15	0
8/21/2012	1	C:\MTI_D	2	0.08	214.37	0
8/21/2012	1	C:\MTI_D	2	0.08	1365.17	0
8/21/2012	1	C:\MTI_D	2	0.08	386.41	0
8/21/2012	1	C:\MTI_D	2	0.08	1263.84	0
8/21/2012	1	C:\MTI_D	2	0.08	585.69	0

* TEST # 3 RESULTS DID NOT PRINT *

Prop. Limit	0.2% Yield	0.2% Yield	0.5% Yield	0.5% Yield	Work		Max Load	Max Defle	Max Stress
0	0	0	0	0		0	5050.33	3.342	2525.17
0	55.63	29.7984	55.63	29.7984		0	176.03	0.301	88.02
0	0	0	0	0		0	5005.64	3.358	2502.82
0	59.38	18.8128	59.38	18.8128		0	161.01	0.188	80.51
0	0	0	0	0		0	5002.06	3.347	2501.03
0	76.08	14.1047	73.1	14.1047		0	183.58	0.144	91.79

Max Strain	Break Load	BreakDeflection	BreakStress	BreakStrain	Secant Mo	Buckle assembly test
100	5050.33	3.342	2525.17	100	0	ITEM# 388A+288AVS
30.113	176.03	0.301	88.02	30.113	0	ITEM# 388A+288AVS
100	5005.64	3.358	2502.82	100	0	ITEM# 388A+288AVS
18.8123	157.03	0.188	78.51	18.8128	0	ITEM# 388A+288AVS
100	5002.06	3.347	2501.03	100	0	ITEM# 388A+288AVS
14.4141	183.58	0.144	91.79	14.4141	0	ITEM# 388A+288AVS

END FITTINGS USED	DESCRIPTION	Lot#
FLAT .505	END RELEASE BUCKLE AND TONGUE W/ CHROME ANCHORS	V01010627001
V01010627001	END RELEASE B&T	RELEASE #1
FLAT .505	END RELEASE BUCKLE AND TONGUE W/ CHROME ANCHORS	V01010627001
V01010627001	END RELEASE B&T	RELEASE #2
FLAT .505	END RELEASE BUCKLE AND TONGUE W/ CHROME ANCHORS	V01010627001
V01010627001	END RELEASE B&T	RELEASE #3

Notes:
COLOR IS MED NEUTRAL

COLOR IS MED NEUTRAL

COLOR IS MED NEUTRAL

Test Report

Synthetic Solutions

QUANTITY RECEIVED	QUANTITY ACCEPTED	QUANTITY REJECTED

ITEM	TEST DESCRIPTION	INSPECTION RESULTS		
		RESULTS	APPROVED	REJECTED
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

[redacted]

[redacted]

Tilt Test Report

Test Information

Part Number: 288A
Sample Description: End release adj. tongue
Test Description: Tilt lock
Lot Number: 002-082213
Sample Date: 8/26/13
Customer: SBS
Technician: Tate
Comment:
Tested: Aug 26, 2013 - 9:12 AM

Test Parameter File: C:\Test Parameters\288A.par

Test Results File: C:\Test Results\288A.csv

Test Results

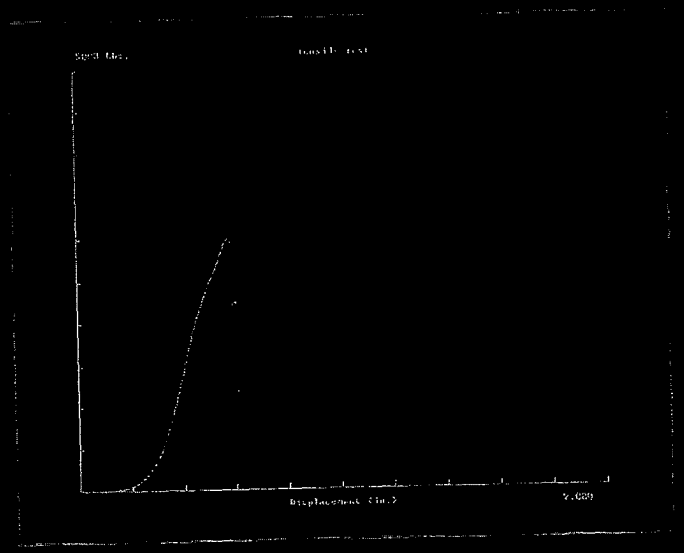
	Angle	Judgement	Low Limit	High Limit
Tilt Lock	[illegible]	[illegible]	0.0°	60.0°

Tensile Test Summary Data

Test Population 3

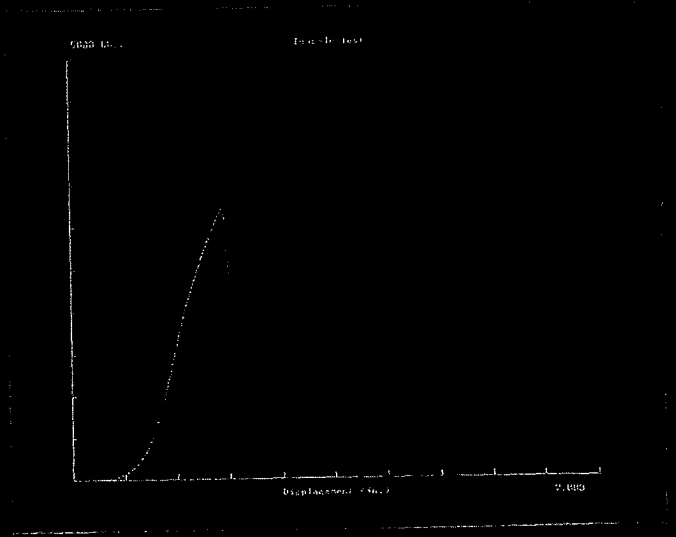
Test Date: 8/26/2013

	Average	Std. Dev	Coef. of Var.
Modulus:	1,140.2	92.7	8.13
Max. Force:	3,333.4	137.7	4.23
Max. Stress:	1,666.7	53.8	3.25
Max. Strain	100.000	0.000	0.00



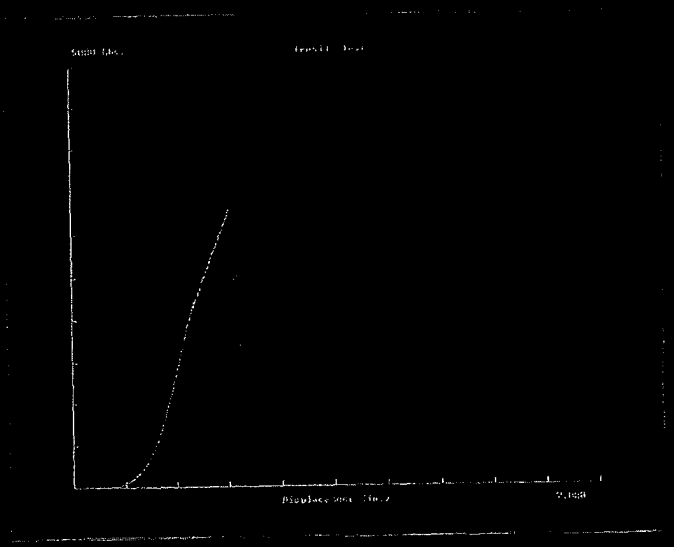
Tensile Test
8/26/2013 9:28:11 AM
Specimen Number: 1
Test Description: Breaking strength test
Item type: 368A+286A
Lot: 002-062213
Load Cell: Interface 5K. Full Scale 5000.0 Pounds
Initial Velocity = 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,135.0 PSI
Poissons Ratio	0.000
Max. Force	3,092.6 Lbs
Max. Defl.	2.146 inches
Peak Stress	1,516.3 PSI
Breaking Stress	0.7120 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



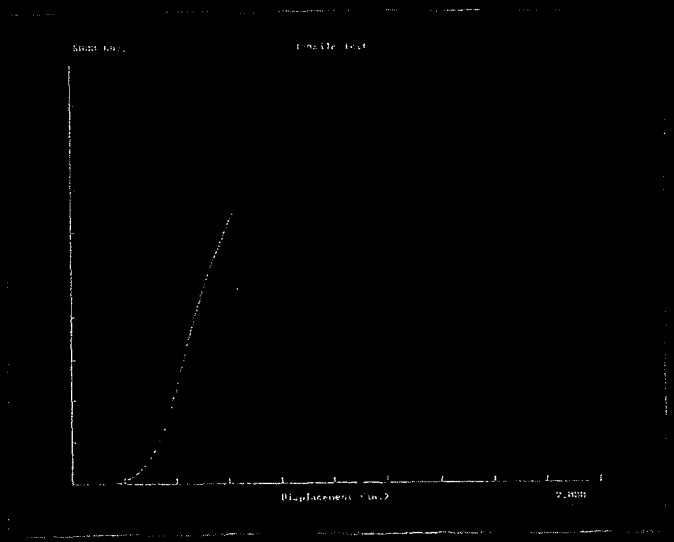
Tensile Test
8/26/2013 9:31:27 AM
Specimen Number 2
Test Description: Breaking strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 in/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,125.9 PSI
Poissons Ratio	0.000
Max. Force	3,229.0 Lbs
Max. Defl.	2.117 inches
Peak Stress	1,614.5 PSI
Breaking Stress	280.21 PSI
Max. Strain	180.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



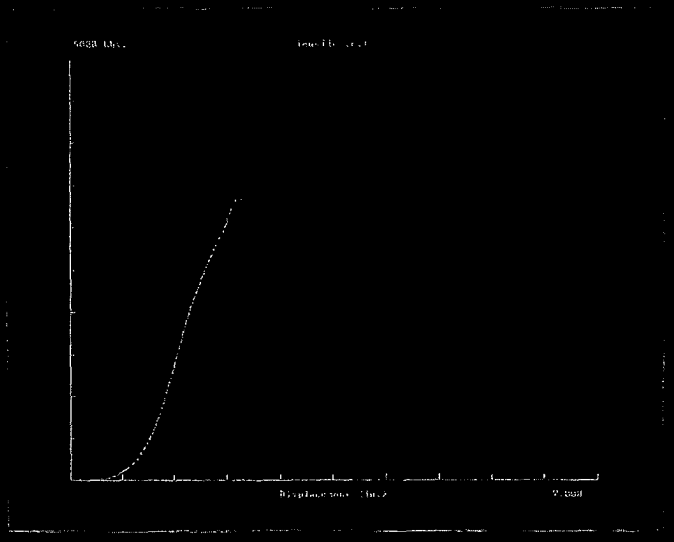
Tensile Test
8/28/2013 9:36:45 AM
Specimen Number: 1
Test Description: Breaking strength test
Item type: 388A/288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 in/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,058.4 PSI
Poissons Ratio	0.000
Max. Force	3,322.9 lbs
Max. Defl	2.259 inches
Peak Stress	1,661.5 PSI
Breaking Stress	1,1965 PSI
Max. Strain	100.0000 %
2% Yield Stress	0.0000 PSI
2% Yield Strain	0.0000 %
5% Yield Stress	0.0000 PSI
5% Yield Strain	0.0000 %



Tensile Test
8/26/2013 9:37:47 AM
Specimen Number: 2
Test Description: Breaking strength test
Item type: 388A-288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 in/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	121.3 PSI
Poissons Ratio	0.000
Max. Force	3,231.3 Lbs
Max. Defl.	2.257 inches
Peak Stress	1,515.7 PSI
Breaking Stress	84.50 PSI
Max. Strain	100.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %



Tensile Test
8/26/2013 9:48:32 AM
Specimen Number: 3
Test Description: Breaking strength test
Item type: 388A+288A
Lot: 002-082213
Load Cell: Interface 5K, Full Scale: 5000.0 Pounds
Initial Velocity = 4 In/min
Strain Measurement by: Crosshead Motion/Gage Length
Width: 2.0000 inches

Modulus	1,240.8 PSI
Poissons Ratio	0.000
Max. Force	3,445.9 Lbs
Max. Defl	2.282 inches
Peak Stress	1,723.0 PSI
Breaking Stress	99.11 PSI
Max. Strain	190.0000 %
.2% Yield Stress	0.0000 PSI
.2% Yield Strain	0.0000 %
.5% Yield Stress	0.0000 PSI
.5% Yield Strain	0.0000 %

American Technology
COMPONENTS, INCORPORATED

To: MIDWEST AUTO DESIGNS-CURT From: [redacted]

Company: Total Pages: 2

Fax Number: 574-522-5828 Fax Number:

Voice Number: Voice Number:

Date: June 24, 2014

Subject: P.O. Fax Curt

Memo:

American Technology
COMPONENTS, INCORPORATED

Purchase Order Confirmation

Customer: Midwest Automotive Design **Date:** 6/24/2014
Cust. No. MIDAD **Contact:** [redacted]
P.O.#: Fax Curt **Est. Ship Date:** 6/25/2014
Email1:
Email2: **Fax:** 574-522-5828
Ship Via: ATC Truck **Drop Ship To:**

Immediate Attention Requested (If Boxes are checked)

☐ Minimum Order Quantity Required ☐ Pricing Discrepancy ☐ Credit Issue ☐ Refer to Quoted Lead-Times
☐ Customer Supplied Parts Required ☐ Non-Stock Item(s) ☐ Component Part Availability

Notes:

Confirmed: [redacted] **Email:** [redacted]
Phone: **Fax:**

Thank you for the order!

2905 LaVanture Place • Elkhart, IN 46514 • (574) 262-1258 • FAX (574) 264-9138

Beam's Industries, Inc.
Certificate of Compliance

Customer: **Midwest Auto Design**
Customer Part Number: **M2439-008,9**
Beam's Part Number: **DSCH8652P**
PO: **N/A**
Quantity: **N/A**

This product is certified to meet the requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 209.

Signe[redacted]

Date: 1/20/2010

Additional Comments:

None

Certificate Control Number: 1386

Beam's Industries, Inc.
Certificate of Compliance

Customer: **Midwest Auto Design**
Customer Part Number: **M2439-007**
Beam's Model Number: **1523, FBK-1006-1**
PO: **N/A**
Quantity: **N/A**

This product is certified to meet the applicable requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 209.

Signed: [redacted]

Date: 1/20/2010

Spec Certificate Control Number: 1141

Beam's Industries, Inc.
Certificate of Compliance

Customer: Superior Seating
Customer Part Number: S2330-001,2,3,4,5,6
Beam's Part Number: DSCH23122P
PO: N/A
Quantity: N/A

This product is certified to meet the requirements of Federal Motor Vehicle Safety Standard (FMVSS) No. 209.

Signed: [redacted]

Date: 5 /7 /2008

Additional Comments:

None

Certificate Control Number: 1182