

ENVIRONMENTAL TEST REPORT

For

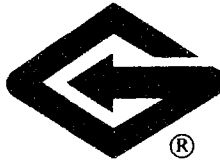
POSEY COMPANY

ON

FOUR (4) HIP PROTECTOR FOAM PADS &
TWO (2) TUBE TREAD FLOOR MATS

GARWOOD LABORATORIES, INC.

- DSCC-VQ Approved
- Certified to ISO-9002



Tel: 562-949-2727
Fax: 562-949-8757

Report No.: R25664
Rev.: N/C
Page 1 of 7

May 28, 2003

Since 1954

ENVIRONMENTAL TEST REPORT

ON
FOUR (4) HIP PROTECTOR FOAM PADS AND
TWO (2) TUBE TREAD FLOOR MATS
FOR
POSEY COMPANY

PERFORMED For: POSEY COMPANY
5635 Peck Road
Arcadia, CA 91006

PERFORMED By: GARWOOD LABORATORIES, INC.
7829 Industry Ave.
Pico Rivera, CA 90660

Garwood Laboratories, Inc., does hereby certify that all inspection(s) and test(s) have been performed in accordance with the documents referenced herein with exceptions as noted in this report. The results in this report pertain only to the specified equipment tested. This report shall not be reproduced, except in full, without the written authorization of Garwood Laboratories, Inc.

Prepared By:



R.M. "RICK" CLEMENS, Technical Writer

Approved By:


WILLIAM FLOWER, Quality Assurance Manager



Approved By:


VIC VIRGILIO, Laboratory Manager



ENVIRONMENTAL TEST REPORT

TABLE OF CONTENTS

<u>PARA.</u>		<u>PAGE</u>
	TITLE PAGE.....	1
	TABLE OF CONTENTS.....	2
	DISCLAIMER.....	3
1.0	PURPOSE.....	4
2.0	REFERENCES.....	4
3.0	SUMMARY.....	5
4.0	TEST CONDITIONS AND EQUIPMENT	6
5.0	TEST SEQUENCE.....	7
6.0	TEST METHODS AND RESULTS.....	7 – A29
6.1	Impact Absorption.....	7
	Appendix A: Environmental Test Data, Log Sheets.....	A1 – A29



TESTING SERVICES SINCE 1954

7829 Industry Ave.
Pico Rivera, CA 90660

GARWOOD LABORATORIES, INC.

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: **R25664**
Page No.: **3 of 7**

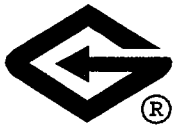
ENVIRONMENTAL TEST REPORT

DISCLAIMER

UNLESS OTHERWISE STATED, THIS REPORT ANALYZES A PRODUCT AGAINST CRITERIA ESTABLISHED BY A CUSTOMER'S SPECIFICATIONS OR REFERENCED STANDARDS. THE ANALYSIS AND CONCLUSIONS EXPRESSED HEREIN RELATE ONLY TO THE TESTS PERFORMED BY GARWOOD AS DESCRIBED HEREIN. PRODUCT AND PROCESS SPECIFICATIONS MAY BE CHANGED BY THE MANUFACTURER. SUCH CHANGES MAY RENDER THE REPORT INAPPLICABLE OR INACCURATE FOR THE READER'S PURPOSES. THE READER SHOULD OBTAIN INFORMATION RELEVANT TO THE READER'S NEEDS DIRECTLY FROM THE MANUFACTURER OF THE PRODUCT ANALYZED HEREIN.

THE CONCLUSIONS EXPRESSED IN THIS REPORT ARE SUBJECT TO CHANGE WITHOUT NOTICE AS A RESULT OF CHANGES IN THE MANUFACTURE OF THE PRODUCT TESTED HEREIN, CHANGES TO SPECIFICATIONS, OR TO MANUFACTURING PROCESSES.

GARWOOD LABORATORIES, INC. MAKES NO WARRANTY OR GUARANTEE AS TO THE QUALITY, CHARACTER, PERFORMANCE, OR CONDITION OF THE PRODUCT THAT IS THE SUBJECT OF THIS REPORT; PROCESSES OR SERVICES RECORDED IN THIS REPORT, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OR GUARANTEE OF MERCHANTABILITY OR FITNESS FOR USE FOR A PARTICULAR PURPOSE. GARWOOD LABORATORIES, INC. FURTHER DISCLAIMS ANY LIABILITY FOR ANY DAMAGE, DIRECT OR INDIRECT, SPECIAL OR CONSEQUENTIAL, SUFFERED RESULTING FROM ANY RELIANCE ON THIS REPORT OR ITS CONCLUSIONS. GARWOOD LABORATORIES, INC. DOES NOT WARRANT OR GUARANTEE THE PRODUCT OR PROCESSES RECORDED HEREIN, NOR SHOULD ANY PART OF THIS REPORT BE INTERPRETED TO CONSTITUTE AN ENDORSEMENT OR RECOMMENDATION OF ANY PRODUCTS, PROCESSES OR SERVICES.



ENVIRONMENTAL TEST REPORT

1.0 PURPOSE

- 1.1 The purpose of this report is to present the procedures employed and the results obtained, while conducting the Environmental Test of Impact Absorption on four (4) Hip Protector Foam Pads, and two (2) Tube Tread Floor Mats noted in Table I, submitted by Posey Company.

TABLE I

TUBE TREAD FLOOR MATS
Green
Grey
HIP PROTECTORS
Black
Blue
Red
White

- 1.2 The Environmental Test specified herein was performed in accordance with the references of Para. 2.0 of this report.
- 1.3 The test sequence of the program is noted in Para. 5.0, of this report.

2.0 REFERENCES

- 2.1 5078 Posey Company Purchase Order,
- 2.2 S.O.W. Posey Company Statement of Work
- 2.3 ISO 10012-1 Quality Assurance Requirements for Measuring Equipment
- 2.4 ANSI/NCSL Z540-1-1994 Calibration Laboratories and Measuring and Test Equipment General Requirements



ENVIRONMENTAL TEST REPORT

3.0 SUMMARY

- 3.1 Four (4) Hip Protector Foam Pads and two (2) Tube Tread Floor Mats were subjected to and completed the specified Impact Absorption Test with results recorded on accompanying data sheets.
- 3.2 The four (4) Hip Protector Foam Pads and two (2) Tube Tread Floor Mats were subjected to the requirements of the specified Impact Absorption Test, as conducted by Garwood Laboratories, Inc., in accordance with the references shown in Para. 2.0 of this report. Pass or Fail criteria to be determined by Posey Company.
- 3.3 The four (4) Hip Protector Foam Pads and two (2) Tube Tread Floor Mats were then returned to Posey Company for further evaluation after completion of testing.



ENVIRONMENTAL TEST REPORT

4.0 TEST CONDITIONS AND EQUIPMENT**4.1 Ambient Conditions:**

Unless otherwise specified herein, all tests were performed at an atmospheric pressure of 28 ± 2.5 inches of mercury absolute, a temperature of $75 \pm 15^\circ\text{F}$, and a relative humidity of $50 \pm 30\%$.

4.2 Instrumentation and Equipment:

4.2.1 Measuring and test equipment utilized in the performance of these tests, was calibrated in accordance with ISO 10012-1, former MIL-STD-45662A, and ANSI/NCSL Z540-1-1994, by Garwood Laboratories, Inc., or a commercial facility, utilizing reference standards (or interim standards) whose calibrations have been certified as being traceable to the National Institute of Standards & Technology (NIST). All reference standards utilized in the above calibration system are supported by certificates, reports, or data sheets attesting to the date, accuracy, and conditions under which the results furnished were obtained. All subordinate standards, measuring and test equipment are supported by like data, when such information is essential to achieve the accuracy control required by the procedure.

4.2.2 Garwood Laboratories, Inc. attests that the commercial sources providing calibration services on the above referenced equipment, other than the NIST Standards, are in fact capable of performing the required services to the satisfaction of Garwood Laboratories, Inc. Quality Assurance. Certifications of all calibrations performed are retained on file in the Garwood Laboratories, Inc. Quality Assurance Department and are available for inspection upon request by customer representatives.

4.2.3 The test equipment utilized during this test program is listed on individual Data Sheets, beginning on page number A1 of Appendix A of this report.

4.3 Tolerances:

4.3.1 Unless otherwise stated, test conditions were maintained within the tolerances specified in the references of Para. 2.0 of this report.



ENVIRONMENTAL TEST REPORT

5.0 TEST SEQUENCE

5.1 The Impact Absorption Test was conducted on May 21, 2003.

6.0 TEST METHODS AND RESULTS**6.1 IMPACT ABSORPTION:**

(Ref.: Posey Co., S.O.W.)

- 6.1.1 Four (4) Hip Protectors, and two (2) Tube Tread Floor Mats, P/N: N/A, S/N: N/A, consisting of the samples noted in Table I, were subjected to the following Impact Absorption Test.
- 6.1.2 Each of the four (4) Hip Protectors and two (2) Tube Tread Floor Mats were placed under an instrumented weight, with a diameter of six (6) inches, weighing 72 Lbs. Prior to test, a baseline drop was performed, dropping the instrumented weight onto the bare surface.
- 6.1.3 The instrumented weight was then raised, using a guided drop tester, to the specified height of twenty-four (24) inches, and dropped on the sample. This was then repeated three (3) times on each sample, for a total of four (4) drops per sample, allowing the material to recover for a minimum period of three (3) minutes between drops.
- 6.1.4 Upon completion of each drop the test items were visually inspected.
- 6.1.5 The four (4) Hip Protectors and two (2) Tube Tread Floor Mats completed the Impact Absorption Test with Impact data recorded on accompanying data sheets. See data sheets.
- 6.1.6 The four (4) Hip Protectors, and two (2) Tube Tread Floor Mats, P/N: N/A, S/N: N/A, consisting of the samples noted in Table I, completed the Impact Absorption Test, as conducted by Garwood Laboratories, Inc., in accordance with Posey Company Statement of Work. All pass or fail criteria to be determined by Posey Company.
- 6.2 The four (4) Hip Protectors and two (2) Tube Tread Floor Mats were returned to Posey Company for evaluation following completion of testing.



TESTING SERVICES SINCE 1954

GARWOOD LABORATORIES, INC.

7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: R25664

ENVIRONMENTAL TEST DATA

APPENDIX A



Since 1954

GARWOOD LABORATORIES, INC.

TESTING AND ENGINEERING SERVICES

DSCC-VQ Approved
ISO 9002 Certification

NRTL Recognized

7829 Industry Ave., Pico Rivera, CA 90680

Tel: (562) 949-2727

Fax: (562) 949-8757

JOB NO.: 25664
Page No.: A-1

*** CLASSICAL SHOCK DATA SHEET ***

Customer: Posey Company Date: 21 May 03
 Test Title: Impact Witness? NO Photos: —
 Test Item: Hip Protectors / Tubetread Floor Mats Quantity: 6
 Part/Model No.: N/A Serial No(s): N/A
 Per Specification: Ref. Posey S.O.W & Report No: R24983-2 Rev.: — Method/Para.: 6.0

Type of Waveform: Half sine Peak Amplitude (g's): 3000
 Input Direction: Vert only Duration of Pulse (ms): N/A
 Pulses per Direction: 4 Total Number of Pulses: 24

DATE	TIME	AXIS	SHOCK NO.	LOG ENTRIES	Initials
21 May 03	1400	Vert	—	Begin set-up on a drop tower CH#1	ML
	—		—	Response. Dropping a 6" Diameter	
	—		—	weight weighing 72 lbs. Dropping	
	—		—	from a G-wired 24".	
	1440		—	Obtaining cal pulses	
	ML 1442		—	Completed	
	1448		1	Impact tubetread floor mat (Gray)	
	1452		2	Impact floor mat (Green)	
	1455		3	Impact floor mat (Gray)	
	1458		4	Impact floor mat (Green)	
1501	5	Impact floor mat (Gray)			
1503	6	Impact floor mat (Green)			
1508	7	Impact floor mat (Gray)			
1510	8	Impact floor mat (Green)			
1514	vert	9	Impact Hip pad (Black)	ML	

TEST EQUIPMENT LIST

Asset No.	Description	Manufacturer	Model No.	Calibration Date	Cal Recall Date
2552	Control	SD	2552B	12-9-02	6-9-03
2215	Signal Cond.	Dutron	4125	5-24-02	5-24-03
2435	Accelerometer	Dutron	3200AHT	8-27-02	8-27-03
2041	Shock Tower	Turbo Machine	ED50	Maint	only

Sub-Page: 1 of 3 Test Technician(s): ML Test Engineer(s): SGM
 Inspector: GL DCMC: —



JOB NO.: 25664
Page No.: A-2

*** CLASSICAL SHOCK DATA SHEET ***

Customer: Posey Company Date: 21 May 03
 Test Title: Impact Witness? NO Photos: —
 Test Item: Hip Protector / Tubetread Floor Mats Quantity: 6
 Part/Model No.: N/A Serial No(s): N/A
 Per Specification: Ref. Posey S.O.W + Report No: R24983-2 Rev.: — Method/Para.: 6.0

Type of Waveform: Half sine Peak Amplitude (g's): 3000
 Input Direction: Vert Only Duration of Pulse (ms): N/A
 Pulses per Direction: 4 Total Number of Pulses: 24

DATE	TIME	AXIS	SHOCK NO.	LOG ENTRIES	Initials
21 May 03	1517	Vert	10	Impact Pad (Blue)	MB
	1520		11	Impact Pad (Red)	
	1523		12	Impact Pad (White)	
	1528		13	Impact Pad (Black)	
	1534		14	Impact Pad (Blue)	
	1536		15	Impact Pad (Red)	
	1541		16	Impact Pad (White)	
	1544		17	Impact Pad (Black)	
	1547		18	Impact Pad (Blue)	
	1554		19	Impact Pad (Red)	
	1556		20	Impact Pad (White)	
	1600		21	Impact Pad (Black)	
	1603		22	Impact Pad (Blue)	
	1605		23	Impact Pad (Red)	
	1607		24	Impact Pad (White)	

TEST EQUIPMENT LIST

Asset No.	Description	Manufacturer	Model No.	Calibration Date	Cal Recall Date

Sub-Page: 2 of 3 Test Technician(s): MB Test Engineer(s): SJM
 Inspector: GL 1 QA DCMC:



Since 1954

GARWOOD LABORATORIES, INC.

TESTING AND ENGINEERING SERVICES

DSCC-VQ Approved
ISO 9002 Certification

NRTL Recognized

7829 Industry Ave., Pico Rivera, CA 90660

Tel: (562) 949-2727

Fax: (562) 949-8757

JOB NO.: 25664

Page No.: A-3

*** CLASSICAL SHOCK DATA SHEET ***

Customer: Posey Company Date: 21 May 03
 Test Title: Impact Witness? NO Photos: ---
 Test Item: Hip Protectors / Tube tread Floor Mats Quantity: 6
 Part/Model No.: N/A Serial No(s): N/A
 Per Specification: Ref. Posey S.O.W & Report No. R24983 Rev.: --- Method/Para.: 6.0

Type of Waveform: Half sine Peak Amplitude (g's): 3000
 Input Direction: Vert Only Duration of Pulse (ms): N/A
 Pulses per Direction: 4 Total Number of Pulses: 24

DATE	TIME	AXIS	SHOCK NO.	LOG ENTRIES	Initials
<u>21 May 03</u>	<u>1607</u>	<u>---</u>	<u>---</u>	<u>Test completed.</u>	<u>MR</u>
<u>Results: Returned to Customer for evaluation</u>					<u>MR</u>
<u>---</u>					<u>MR</u>
<u>---</u>					<u>---</u>
<u>---</u>					<u>---</u>
<u>---</u>					<u>---</u>
<u>---</u>					<u>---</u>
<u>---</u>					<u>---</u>
<u>---</u>					<u>---</u>

TEST EQUIPMENT LIST

Asset No.	Description	Manufacturer	Model No.	Calibration Date	Cal Recall Date
<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>
<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>

Sub-Page: 3 of 3 Test Technician(s): MR Test Engineer(s): S971
 Inspector: --- DCMC: ---



TESTING SERVICES SINCE 1954

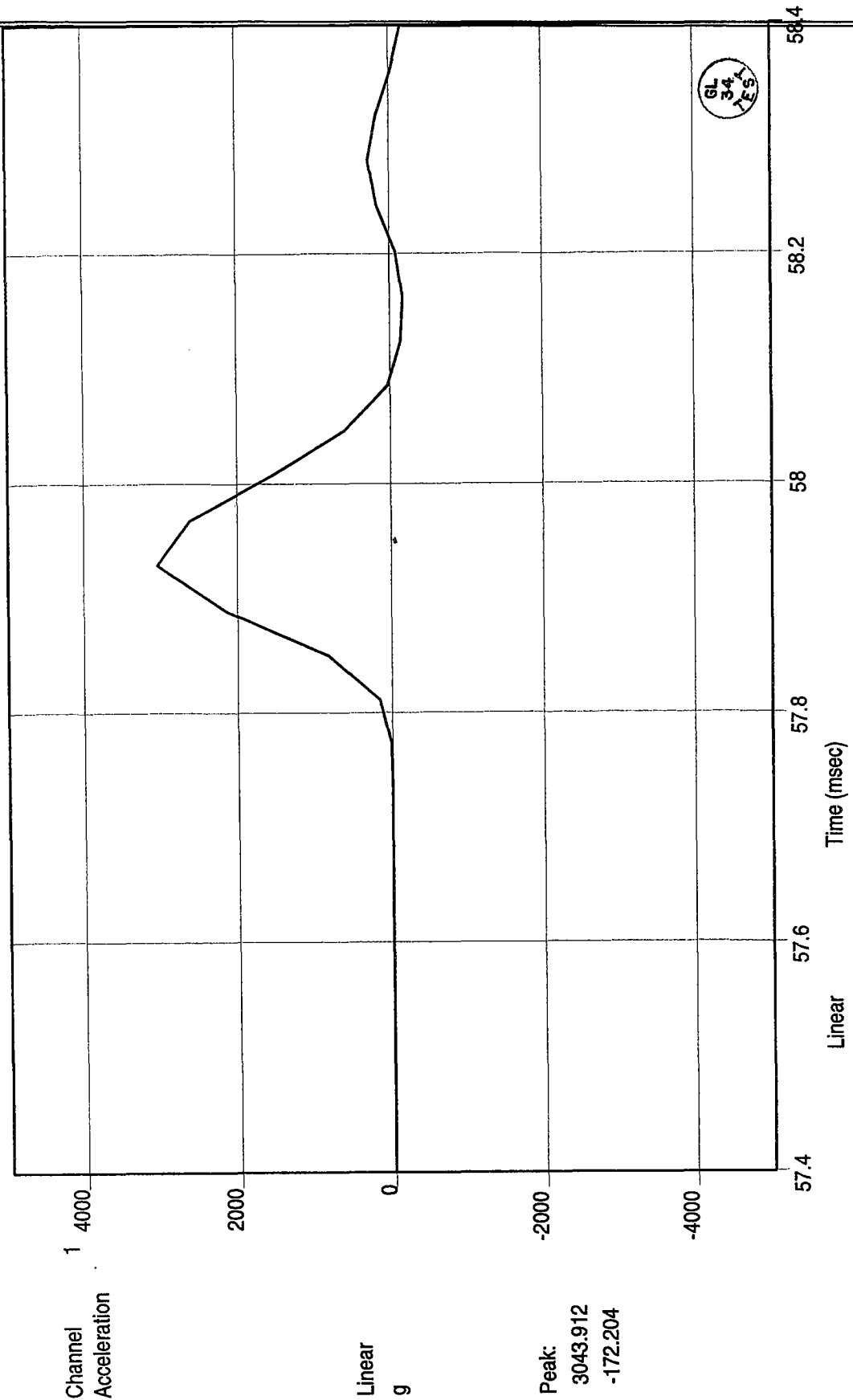
GARWOOD LABORATORIES, INC.

7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: R25664

Page No. A - 4



RESPONSE

25,664 POSEY COMPANY HIP PROTECTORS/TUBE TREAD FLOOR MATS

Capture Name: POSEY.002

14:40:32.3
Wed May 21 2003

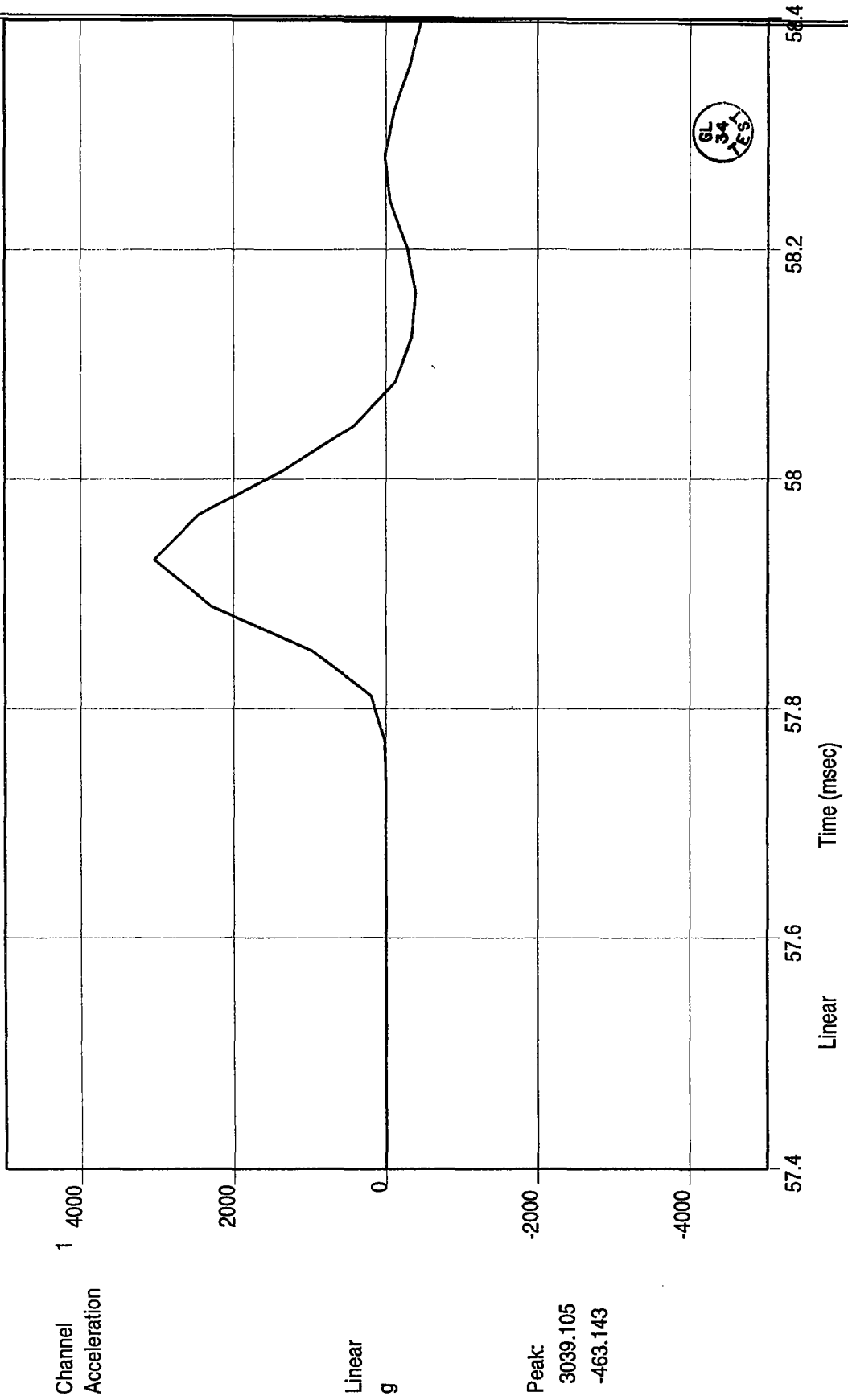
Peak:
3043.912
-172.204



7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: R25664
Page No. A - 5



25,664 POSEY COMPANY HIP PROTECTORS/TUBE TREAD FLOOR MATS

Capture Name: POSEY.002

14:42:45.7
Wed May 21 2003



7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: R25664
Page No. A - 6

GARWOOD LABORATORIES, INC. TESTING SERVICES SINCE 1954

Channel
Acceleration

1
4000

2000

Linear
g

0

Peak:

238.363
-76.093

-4000

57.4 57.5

Linear

58

Time (msec)

58.5

59

59.5

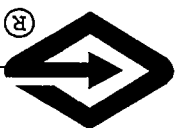
60

RESPONSE



14:48:11.3
Wed May 21 2003

25.664 POSEY COMPANY HIP PROTECTORS/ TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GRAY)
Capture Name: POSEY.003



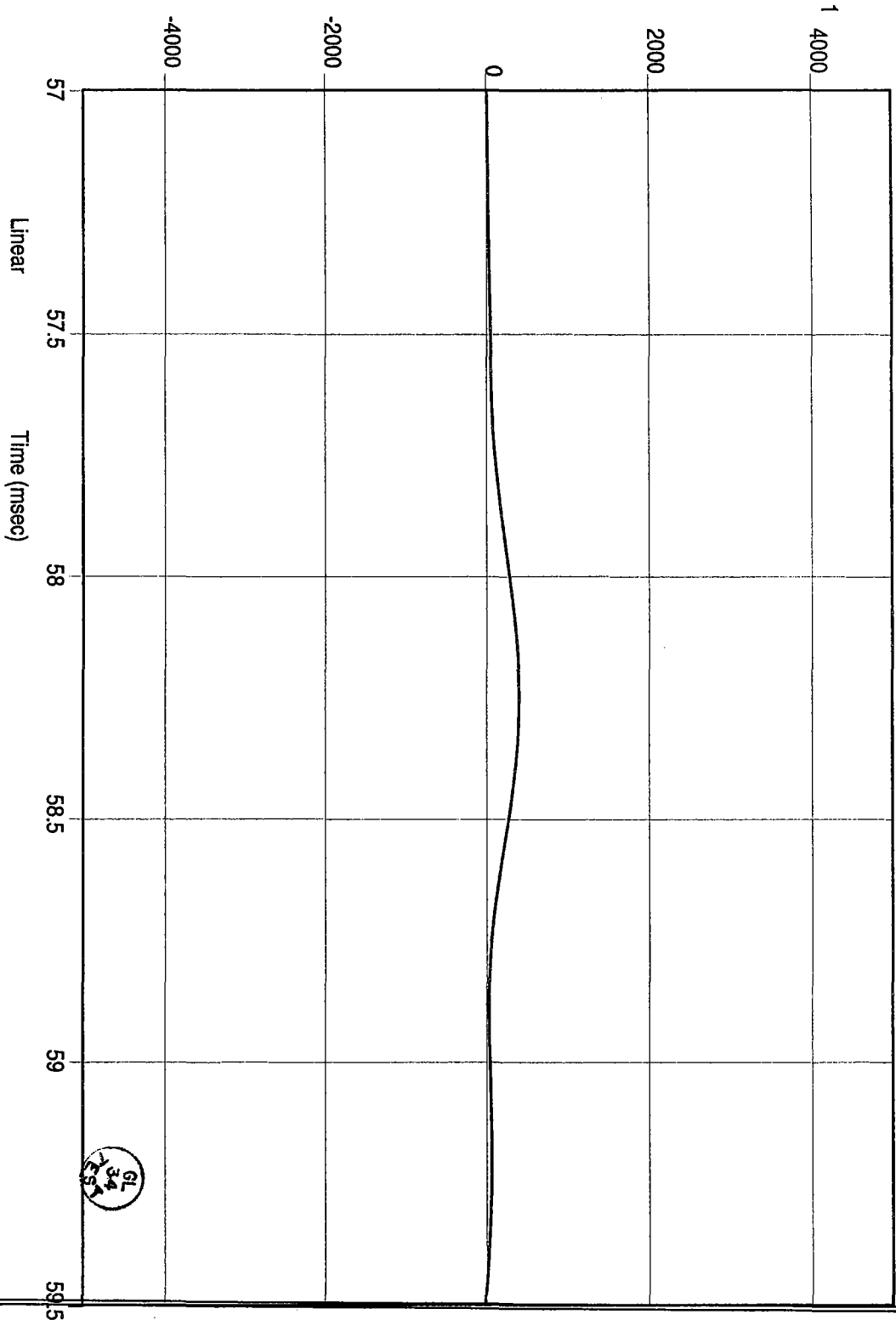
7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

GARWOOD LABORATORIES, INC. TESTING SERVICES SINCE 1954

REPORT NO.: R25664
Page No. A-7

Channel 1
Acceleration



14:52:40.3
Wed May 21 2003

25,664 POSEY COMPANY HIP PROTECTORS/ TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GREEN)
Capture Name: POSEY.003





7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

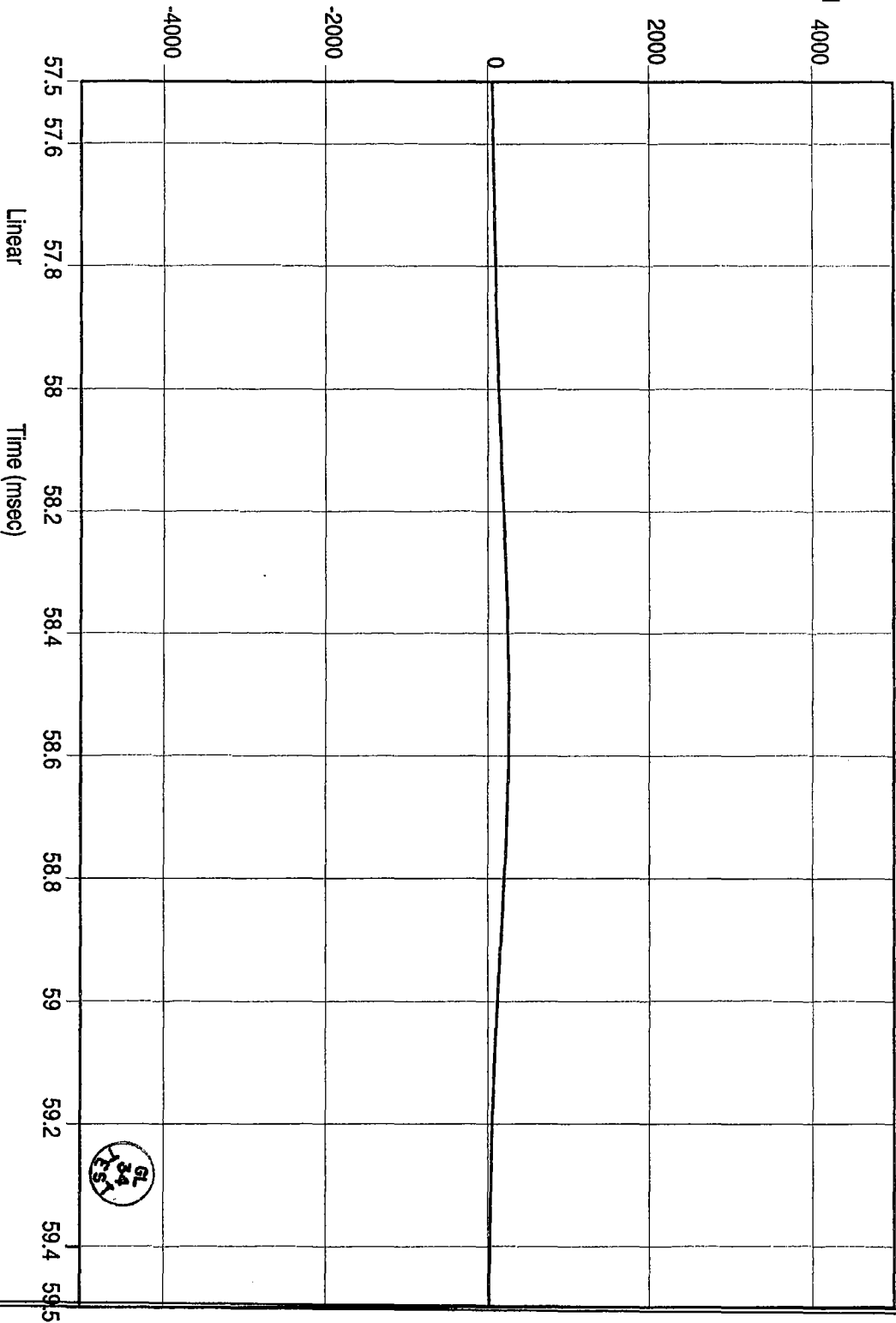
REPORT NO.: R25664
Page No. A-8

GARWOOD LABORATORIES, INC. TESTING SERVICES SINCE 1954

Channel 1
Acceleration

Linear
g

Peak:
259.762
-86.681



14:55:49.2
Wed May 21 2003

25,664 POSEY COMPANY HIP PROTECTORS/ TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GRAY) #2
Capture Name: POSEY.003

RESPONSE



TESTING SERVICES SINCE 1954

7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (662)949-2727
Fax: (562)949-8757

GARWOOD LABORATORIES, INC.

REPORT NO.: R25664
Page No. A-9

Channel
Acceleration

1 4000

2000

Linear
g

0

Peak:

425.327

-152.880

-4000

57

Linear

57.5

Time (msec)

58

58.5

RESPONSE

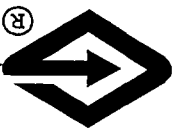
59

59.5



14:58:40.9
Wed May 21 2003

25,664 POSEY COMPANY HIP PROTECTORS/TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GREEN) #2
Capture Name: POSEY.003

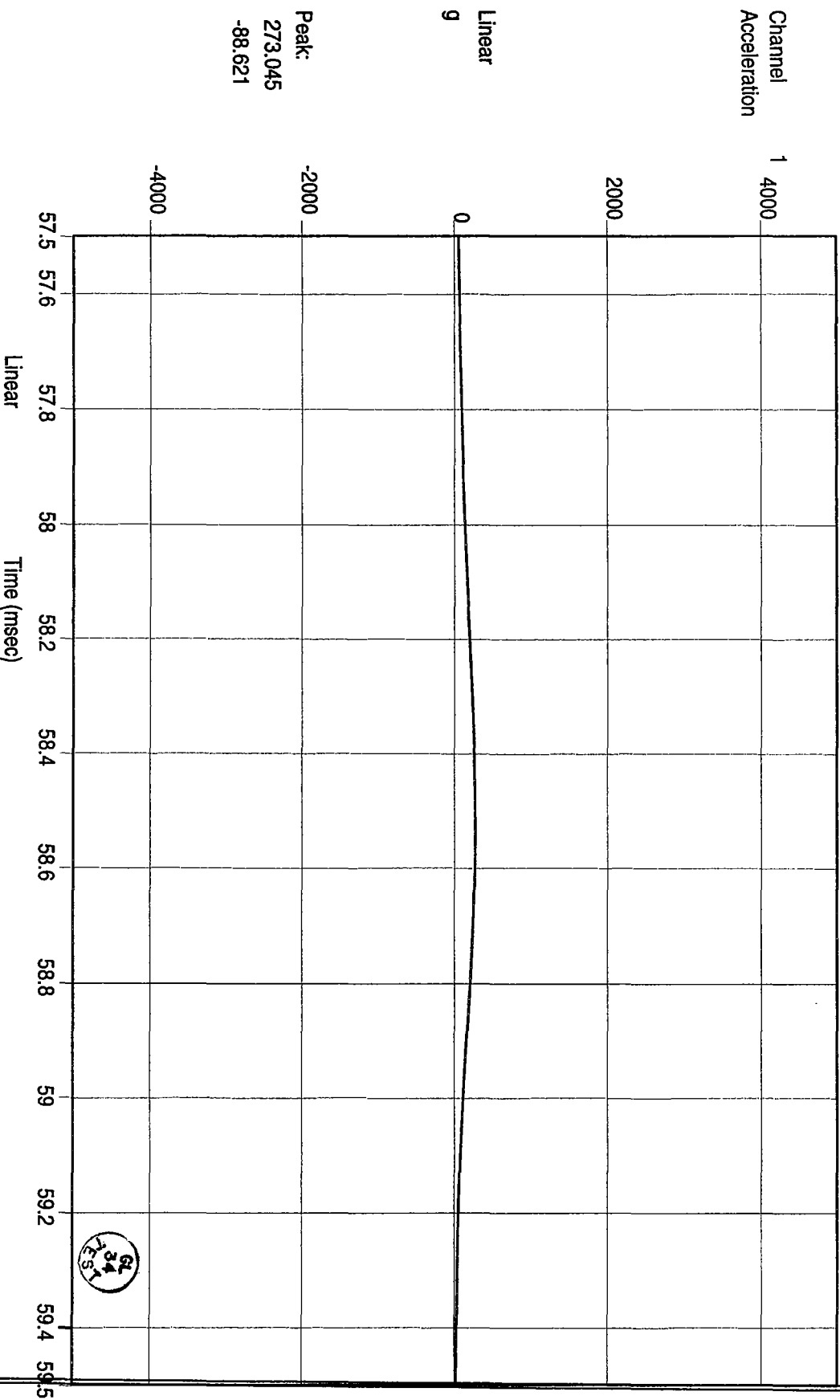


7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: R25664
Page No. A - 10

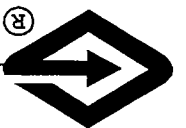
GARWOOD LABORATORIES, INC. TESTING SERVICES SINCE 1954



15:01:08.6
Wed May 21 2003

25.664 POSEY COMPANY HIP PROTECTORS/ TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GRAY) #3
Capture Name: POSEY.003

RESPONSE



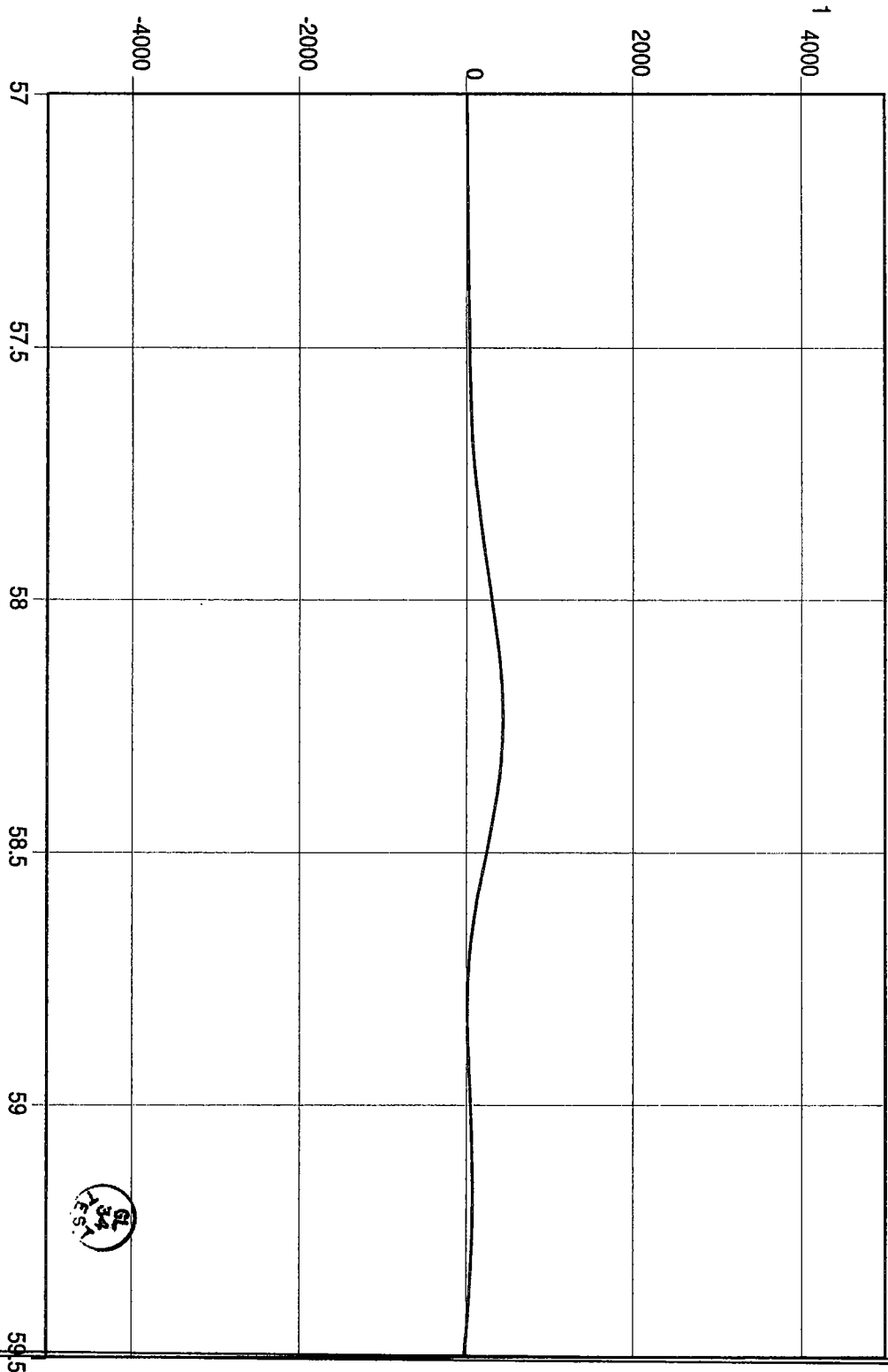
7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

GARWOOD LABORATORIES, INC. TESTING SERVICES SINCE 1954

REPORT NO.: R25664
Page No. A - 11

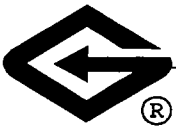
Channel 1
Acceleration



Peak:
440.036
-160.214

15:03:38.6
Wed May 21 2003

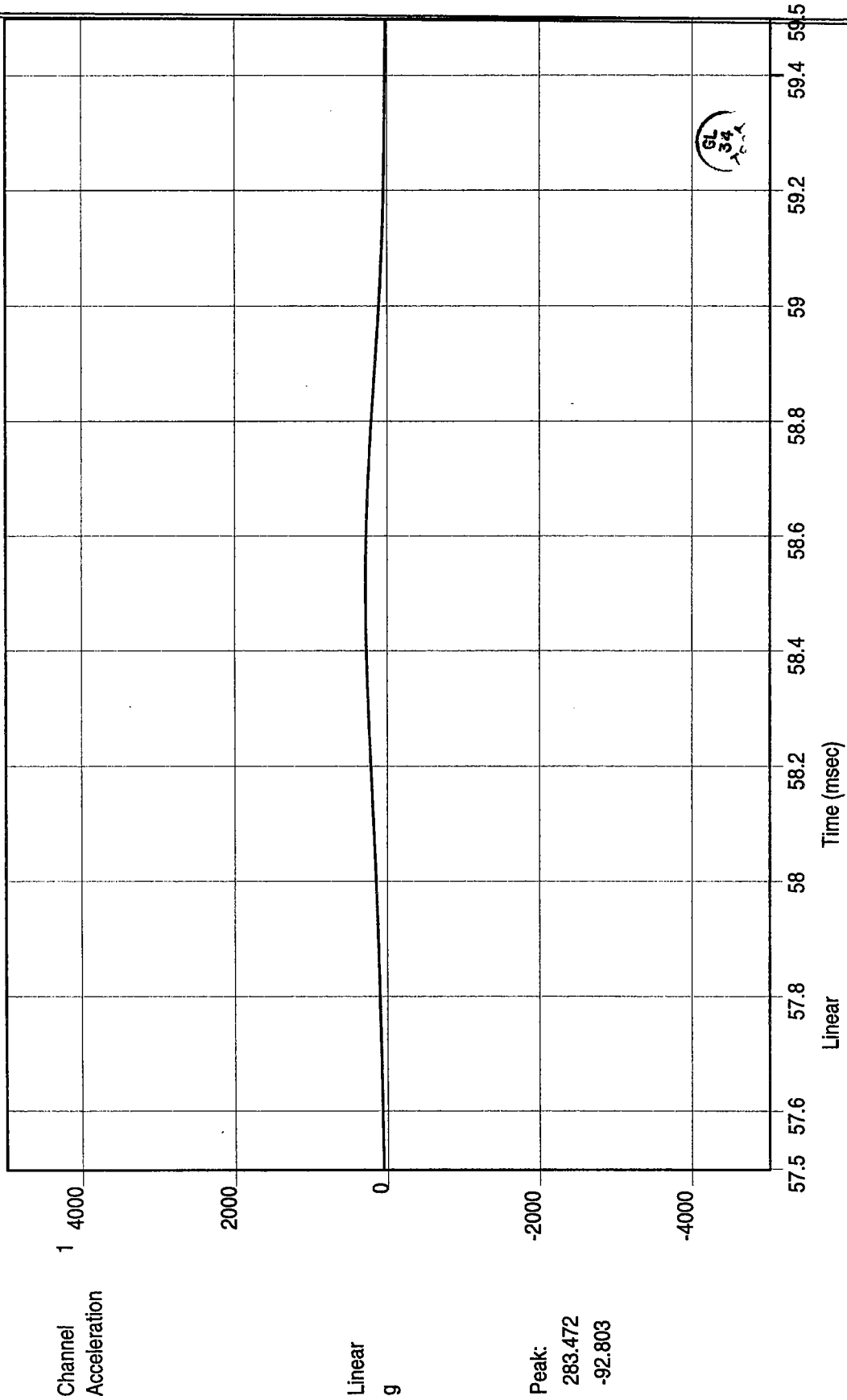
25.664 POSEY COMPANY HIP PROTECTORS/ TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GREEN) #3
Capture Name: POSEY.003
RESPONSE



7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (562)949-2727
Fax: (562)949-8757

REPORT NO.: R25664
Page No. A - 12



25,664 POSEY COMPANY HIP PROTECTORS/TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GRAY) #4

Capture Name: POSEY.004

15:08:21.2
Wed May 21 2003

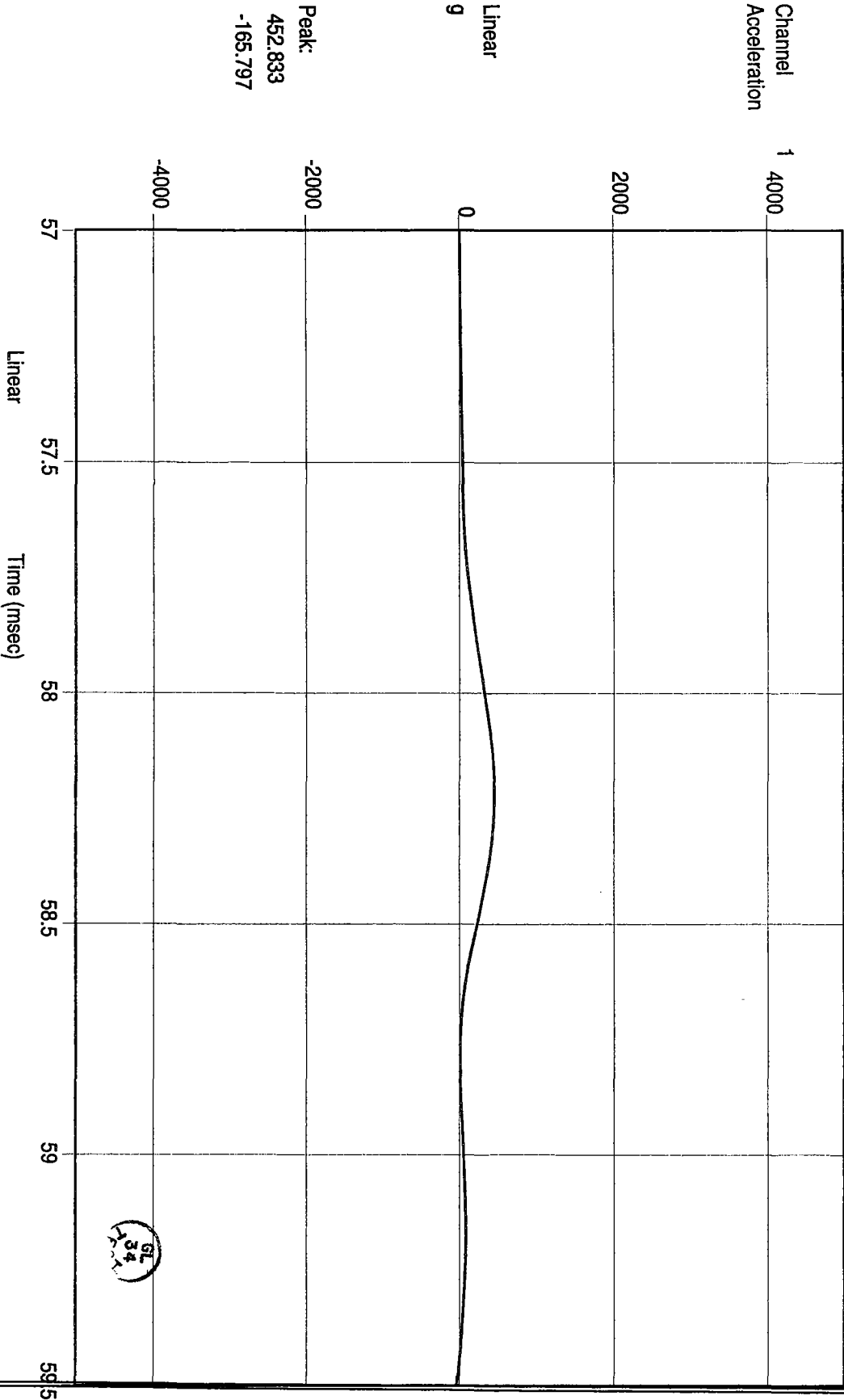


7829 Industry Ave.
Pico Rivera, CA 90660

Tel: (662)949-2727
Fax: (662)949-8757

GARWOOD LABORATORIES, INC. TESTING SERVICES SINCE 1964

REPORT NO.: R25664
Page No. A-13



15:10:38.5
Wed May 21 2003

25,664 POSEY COMPANY HIP PROTECTORS/TUBE TREAD FLOOR MATS
TUBE TREAD FLOOR MATS (GREEN) #4
Capture Name: POSEY.004