

**Vehicle Research and Test Center
2004 Honda Odyssey MPV into
Flat Frontal Barrier at 56.4 km/h
TRC Inc. Test Number: 040803**

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Section 1.0

Purpose and Test Procedure

Purpose

This test was conducted for National Highway Traffic Safety Administration (NHTSA) and Vehicle Research and Test Center (VRTC) by Transportation Research Center Inc. (TRC Inc). The purpose of this test was to determine the vehicle and occupant response of the subject vehicle, a 2004 Honda Odyssey MPV.

Test Procedure

This test was conducted per VRTC instructions. Data was obtained relative to FMVSS 208, “Occupant Crash Protection”.

The test vehicle was instrumented with nine (9) accelerometers to measure longitudinal axis accelerations; two (2) accelerometers to measure lateral axis accelerations; two (2) accelerometers to measure vertical axis accelerations, and two (2) airbag event data channels. The vehicle's specified impact velocity range was 55.5 to 57.1 km/h. The vehicle impacted a flat frontal barrier equipped with one hundred thirty-four (134) load cells.

The test vehicle contained three (3) Part 572O small adult female anthropomorphic test devices (dummies). The dummies were positioned in the left front, right front, and 3rd row right outboard designated seating positions according to the dummy placement procedure specified in NHTSA Laboratory Test Procedure TP-208-12. The 3rd row right dummy was positioned using the draft TP-208-12 procedure dated February 15, 2004

The driver dummy was instrumented with head (primary and redundant), chest (primary and redundant), pelvis, left foot, and right foot accelerometers to measure longitudinal, lateral, and vertical accelerations; upper and lower neck load cells to measure forces and moments; a chest displacement potentiometer to measure chest deflection; left and right femur load cells to measure axial forces, knee potentiometers to measure displacements, and upper and lower tibia load cells to measure forces and moments.

The right front passenger dummy was instrumented with head (primary and redundant) chest (primary and redundant) and pelvis accelerometers to measure longitudinal, lateral, and vertical accelerations; upper and lower neck load cells to measure forces and moments; a chest displacement potentiometer to measure chest deflection; and left and right femur load cells to measure axial forces.

The 3rd row right passenger dummy was instrumented with head, chest, and pelvis accelerometers to measure longitudinal, lateral, and vertical accelerations; upper and lower neck

load cells to measure forces and moments; a chest displacement potentiometer to measure chest deflection; and left and right femur load cells to measure axial forces.

The 267 data channels were digitally sampled and recorded at 12,500 samples per second and processed per the NHTSA Laboratory Test Procedure.

The crash event was recorded by one (1) real-time panning motion picture camera, eight (8) high-speed digital motion picture cameras operating at 1000 frames per second.

The vehicle and occupant data are summarized in Section 2.0. The vehicle, occupant, and camera measurements are presented in Section 3.0. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the dummy certification data. Appendix D contains miscellaneous test information. Appendix E contains an INSIA report that was the basis for the Structural Measurements presented in Table 9 of this report.

Section 2.0

Load Cell Barrier Impact Test Summary

Test Results Summary

This 56.4 km/h frontal load cell barrier test was conducted by TRC Inc. on August 3, 2004.

The test vehicle, a 2004 Honda Odyssey MPV, was equipped with a 6-cylinder engine, automatic transmission, power steering, and power brakes. The vehicle's test weight was 2146.2 kg. The vehicle's fuel system contained 69.7 liters of Stoddard for the test. The vehicle's impact speed was 56.4 km/h. The vehicle's maximum static crush was 618 mm.

The driver's 36 ms Head Injury Criteria (HIC) was 112. The driver's 15 ms Head Injury Criteria (HIC) was 57. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 32.4 g. The driver's maximum chest deflection was 24 mm. The driver's left and right femur maximum axial compression forces were 1820 N and 1769 N, respectively. The driver's neck injury criteria (NIJ) were: tension-extension 0.43, tension-flexion 0.22, compression-extension 0.16 and compression-flexion 0.00. The driver's tibia indices were: upper left leg 0.59, upper right leg 0.54, lower left leg 0.62 and lower right leg 0.65.

The right front passenger's 36 ms HIC was 368. The right front passenger's 15 ms HIC was 234. The right front passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 38.1 g. The right front passenger's maximum chest deflection was 14 mm. The right front passenger's left and right femur maximum axial compression forces were 3311 N and 3590 N, respectively. The right front passenger's NIJ were: tension-extension 0.49, tension-flexion 0.15, compression-extension 0.24 and compression-flexion 0.16.

The right rear passenger's 36 ms HIC was 1615. The right rear passenger's 15 ms HIC was 1056. The right rear passenger's chest maximum resultant acceleration with three (3) ms minimum duration was 52.8 g. The right rear passenger's maximum chest deflection was 37 mm. The right rear passenger's left and right femur maximum axial compression forces were 759 N and 640 N, respectively. The left and right femur maximum axial tensal forces

were 3519 N and 3140 N, respectively. The right rear passenger's NIJ were: tension-extension 1.17, tension-flexion 0.91, compression-extension 0.37 and compression-flexion 0.08.

Data Acquisition Explanations

The vehicle's top of engine X-axis acceleration channel, TENXG, exceeded full-scale at approximately 55 milliseconds and recorded no useful data after that.

The vehicle's right front brake caliper X-axis acceleration channel, RFCXG, recorded questionable data throughout the test.

The vehicle's left front brake caliper X-axis acceleration channel, LFCXG, exceeded full-scale at approximately 76 milliseconds and recorded no useful data after that.

The vehicle's driver side primary airbag fire channel, DABETA, did not record a fire event until approximately 142 milliseconds.

The vehicle's driver side secondary airbag fire channel, DABETB, did not record a fire event.

The vehicle's passenger side primary airbag fire channel, PABETA, did not record a fire event.

Table 1 Crash Test Summary

Test type:	Flat Frontal Load Cell Barrier	
Test date:	08/03/04	
Test time:	12:18	
Ambient temperature:	21° C	
Vehicle:	2004 Honda Odyssey MPV	
Vehicle test weight:	2146.2 kg	
Impact angle: ¹	0°	
Impact velocity: ²	Primary = 56.4 km/h Secondary = 56.4 km/h	
Maximum static crush:	618 mm	
Average rebound:	725 mm	
Dummies:	Driver #416	Passenger #048
Type:	5th Female	5th Female
Location:	Left Front	Right Front
Restraint:	Seat belt, Airbag	Seat belt, Airbag
Number of data channels:	60	30
Dummies:	Rear Passenger #070	
Type:	Hybrid III 5 th	
Location:	3 rd Row Right	
Restraint:	3-point seat belt	
Number of data channels:	30	
Number of cameras:		
High-speed	8	
Real-time	1	

¹ With respect to tow track centerline.

² Speed trap measurement (± .08 km/h accuracy)

Table 2 Test Vehicle Information

Vehicle manufacturer:	Honda of America Mfg., Inc.		
Make/model:	Honda/Odyssey		
VIN:	5FNRL185X4B002267		
Model year:	2004		
Body style:	MPV		
Color:	Dark Grey		
Engine data:			
Type:	V		
Cylinders:	6		
Displacement:	3.5 liters		
Transmission data:	<u>4</u> Speed, <u>X</u> FWD,	<u> </u> Manual, <u> </u> RWD,	<u> X </u> Automatic, <u> </u> 4WD
Date vehicle received:			
Odometer reading:	176 miles		
Dealer's name and address:	Vehicle provided by VRTC		
<u>Accessories:</u>			
Power steering	Yes	Automatic transmission	Yes
Power brakes	Yes	Automatic speed control	Yes
Power seats	No	Tilting steering wheel	No
Power windows	Yes	Telescoping steering wheel	Yes
Tinted glass	Yes	Air conditioning	Yes
Radio	Yes	Anti-skid brake	Yes
Clock	Yes	Rear window defroster	Yes
Other	Power mirrors		

Certification data from vehicle's label:

Vehicle manufactured by:	Honda Mfg. of Alabama, LLC.	
Date of manufacture:	08/03	
VIN:	5FNRL185X4B002267	
GVWR:	2570 kg	(5665 lbs.)
GAWR: Front:	1285 kg	(2833 lbs.)
Rear:	1290 kg.	(2845 lbs)

Table 2 Test Vehicle Information, continued

Tires on vehicle (mfr., line, size): Bridgestone, Potenza, P225/60R1698T

Tire pressure with maximum
capacity vehicle load:

Front:	250 kPa
Rear:	250 kPa

Spare tire (mfr., line, size): Goodyear, Temporary, T135/80D16

Type of seats:	Front:	Bucket
	2 nd Row:	Bucket
	3 rd Row:	Bench

Type of front seat backs: Manual

Maximum width: 1950 mm

Wheelbase: 3000 mm

Location of "Recommended Tire Pressure" label:

The label was located on the driver B-pillar.

Data from vehicle's "Recommended Tire Pressure" label:

Recommended tire size: P225/60R16

Recommended cold

tire pressure:	Front:	36 psi	(250 kPa)
tire pressure:	Rear:	36 psi	(250 kPa)

Seating capacity:	Front:	2
	Mid:	2
	Rear:	3
	Total:	7

Vehicle capacity weight: 525 kg

Test vehicle attitude:

Delivered attitude:	LF	768 mm;	RF	778 mm;	LR	770 mm;	RR	772 mm
Fully loaded attitude	LF	746 mm;	RF	752 mm;	LR	738 mm;	RR	737 mm
Pre-test attitude:	LF	747 mm;	RF	751 mm;	LR	735 mm;	RR	738 mm
Post-test attitude:	LF	792 mm;	RF	800 mm;	LR	758 mm;	RR	725 mm

Table 2 Test Vehicle Information, continued

Weight of test vehicle as received (with maximum fluids):

Right front	584.0	kg	Right rear	409.5	kg
Left front	544.0	kg	Left rear	421.5	kg
Total front weight	1128.0	kg	(57.6 % of total vehicle weight)		
Total rear weight	831.0	kg	(42.4 % of total vehicle weight)		
Total delivered weight	1959.0	kg			

Calculation of test vehicle's target test weight:

GVWR = Gross Vehicle Weight Rating = 2570.0 kg

UDW = Unloaded Delivered Weight = 1959.0 kg

VCW = Vehicle Capacity Weight = 525.0 kg

DSC = Designated Seating Capacity = 7

RCLW¹ = Rated Cargo and Luggage Weight = 49.0 kg

Target test weight = UDW + RCLW + (No. of Part 572O dummies X 49 kg)

Target test weight = 1959.0 + 49.0 + (3) 49.0 = 2155.0 kg

Weight of test vehicle with required dummies and 40.2 kg of cargo weight:

Right front	589.8	kg	Right rear	480.8	kg
Left front	599.2	kg	Left rear	476.4	kg
Total front weight	1189.0	kg	(55.4% of total vehicle weight)		
Total rear weight	957.2	kg	(44.6% of total vehicle weight)		
Total test weight	2146.2	kg			

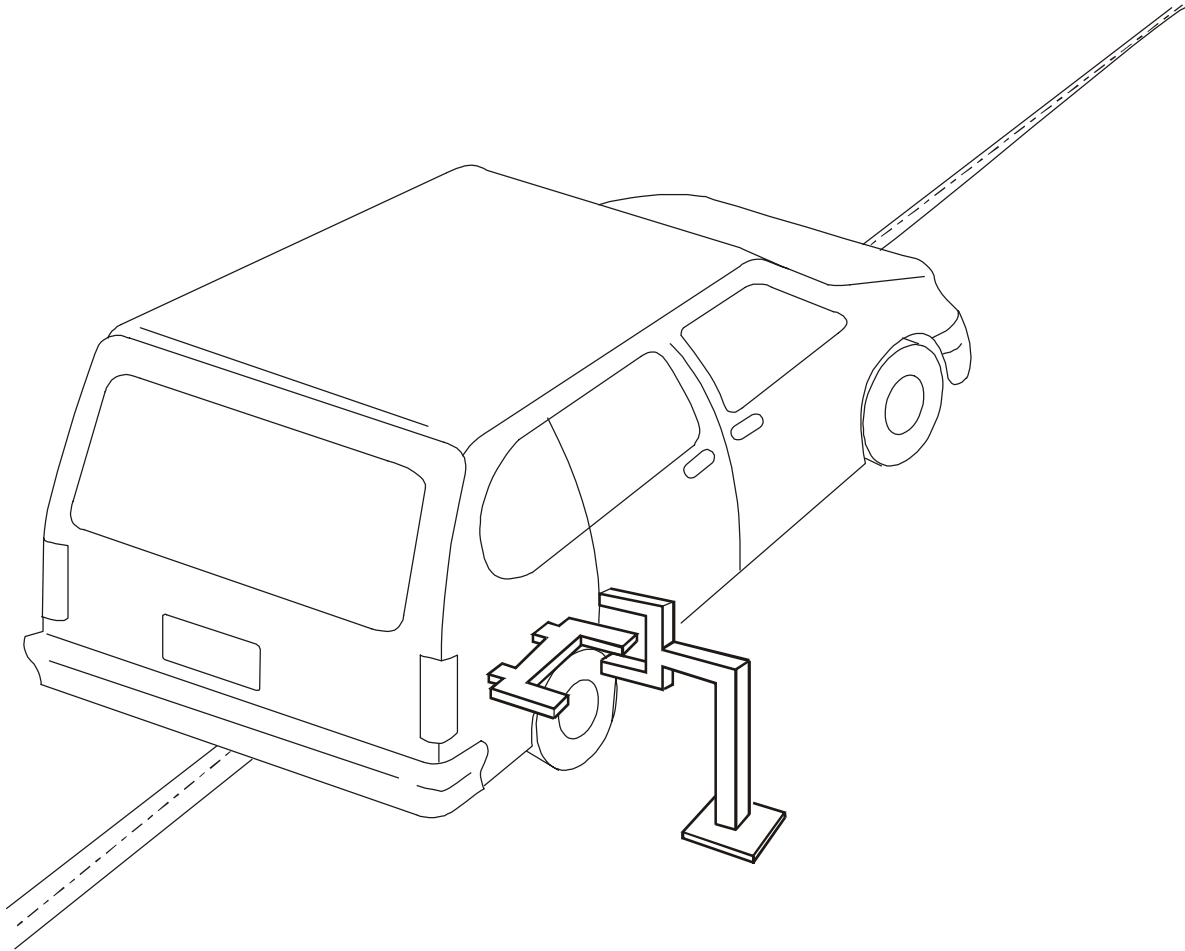
Distance of the CG behind front axle: 1338 mm

Weight of ballast secured in vehicle: None

Components removed to meet target test weight: Rear hatch lid, exhaust system, and second row seat.

¹ Rated Cargo and Luggage Weight = Vehicle Capacity Weight - (Designated Seating Capacity x 68 kg)

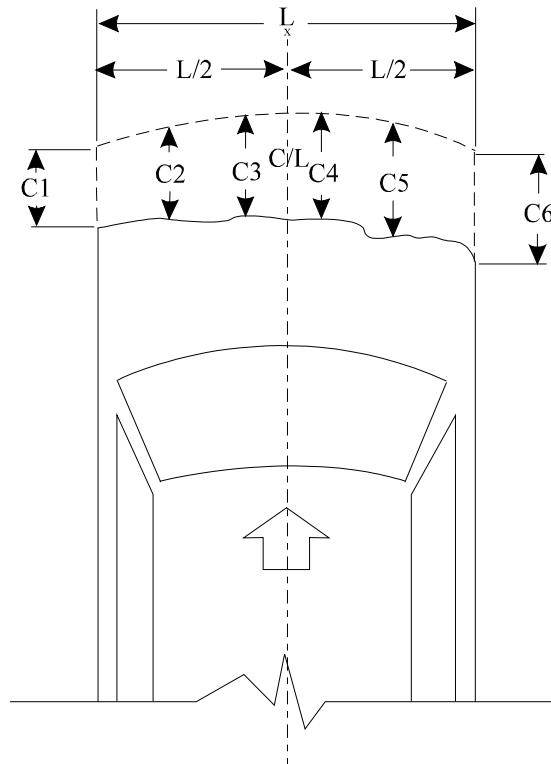
Figure 1 Impact Velocity Measurement System



The final vane clears the final emitter/receiver pair 50 mm before impact.

The vanes have 610 mm spacing.

Figure 2 Vehicle Crush



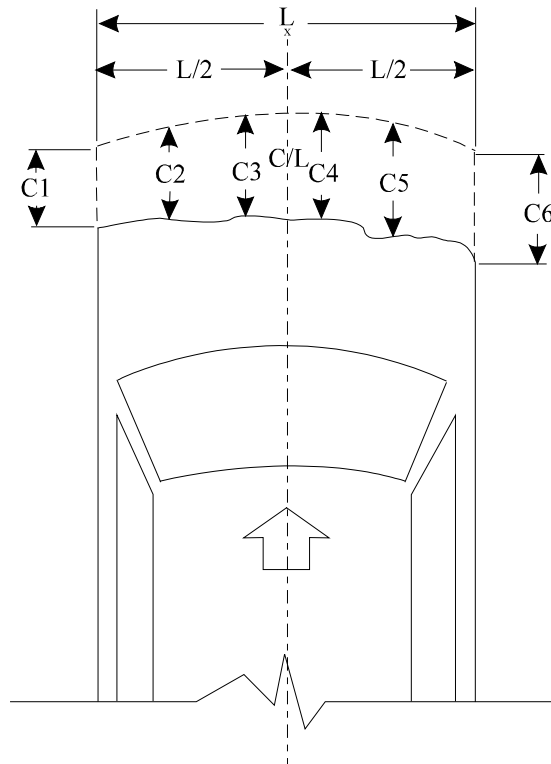
Notes: L is pre-test length of contact surface.
C1 through C6 are spaced equally apart.
CL is vehicle centerline.
Measured with bumper fascia.

Vehicle: 2004 Honda Odyssey MPV

	Pre-test	Post-test	Crush ¹
L	1524 mm		
C1	4901 mm	4440 mm	461 mm
C2	4998 mm	4435 mm	563 mm
C3	5065 mm	4482 mm	583 mm
C4	5065 mm	4475 mm	590 mm
C5	5002 mm	4412 mm	590 mm
C6	4914 mm	4393 mm	521 mm
CL	5095 mm	4493 mm	602 mm

¹ The difference for point C2, measured with the front bumper, is included in the NHTSA Database Submission as Damage Profile Distance 2.

Figure 2 Vehicle Crush, continued



Notes: L is pre-test length of contact surface.
C1 through C6 are spaced equally apart.
CL is vehicle centerline.
Measured without bumper fascia.

Vehicle: 2004 Honda Odyssey MPV

	Pre-test	Post-test	Crush ¹
L	1220 mm		
C1	4881 mm	4403 mm	478 mm
C2	4971 mm	4504 mm	467 mm
C3	5017 mm	4405 mm	612 mm
C4	5017 mm	4399 mm	618 mm
C5	4980 mm	4397 mm	583 mm
C6	4896 mm	4390 mm	506 mm
CL	5030 mm	4394 mm	636 mm

¹ The difference for points C1, 3, and 4, measured with the front bumper, is included in the NHTSA Database Submission as Damage Profile Distances 1, 3, and 4.

Figure 3 Vehicle Accelerometer Placement

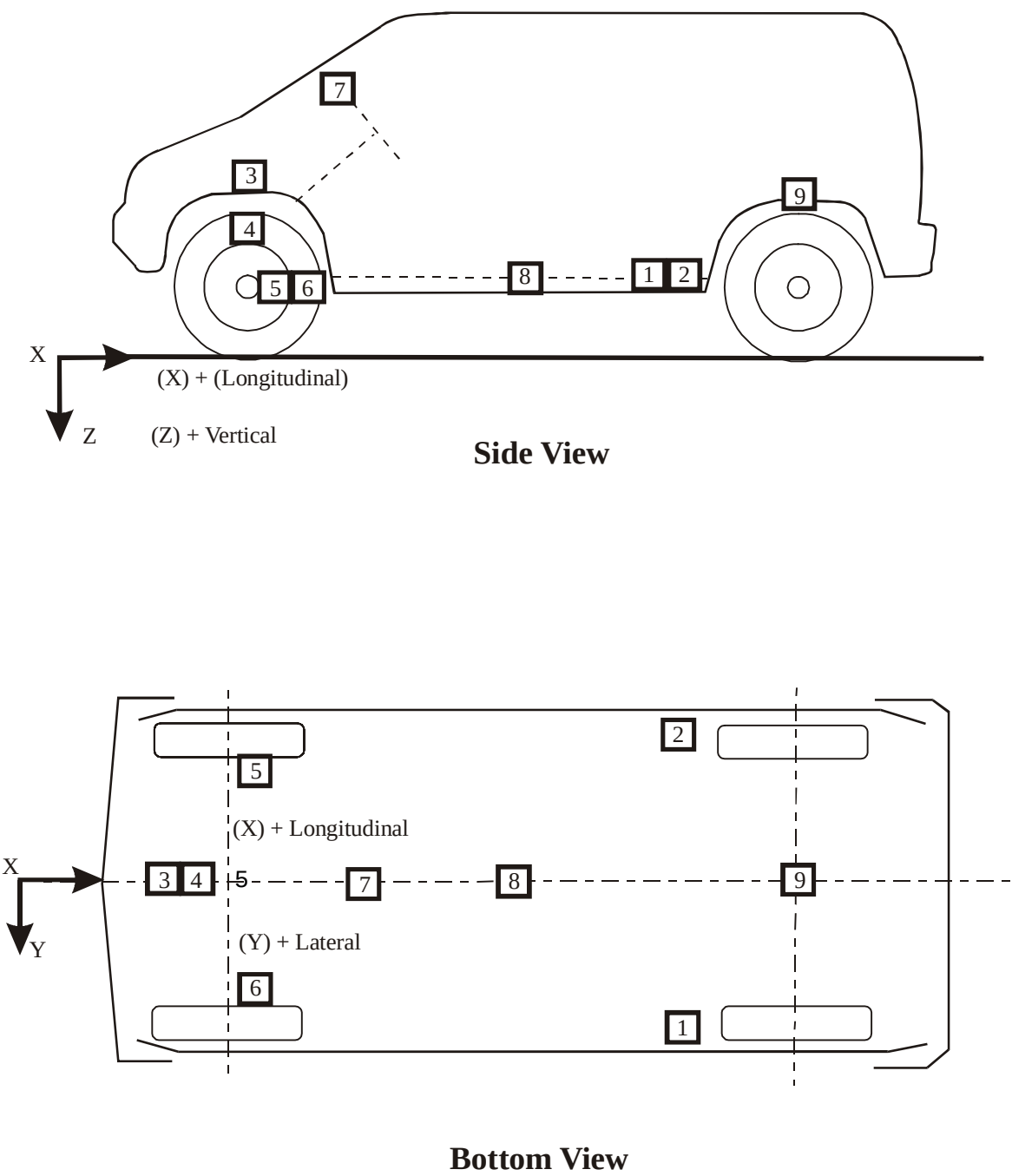


Table 3 Vehicle Accelerometer Locations and Data Summary

Accel. No.	Location	Coordinates (millimeters)			Positive Direction		Negative Direction	
		X*	Y*	Z*	Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	Left Rear Seat Crossmember	2288	735	410				
	Longitudinal X				2.0	160.4	32.9	67.2
2	Right Rear Seat Crossmember	2288	735	397				
	Longitudinal X				2.2	163.5	36.0	67.1
3	Top of Engine	4340	0	922				
	Longitudinal ¹ X				----	----	----	----
4	Bottom of Engine	4415	250	173				
	Longitudinal X				39.3	40.6	172.8	29.8
5	Right Front Brake Caliper	4295	750	295				
	Longitudinal ¹ X				----	----	----	----
6	Left Front Brake Caliper	4295	750	294				
	Longitudinal ¹ X				----	----	----	----
7	Instrument Panel Top Center	3595	0	1175				
	Longitudinal X				3.6	156.2	42.1	60.2

Table 3 Vehicle Accelerometer Locations and Data Summary, continued

Accel. No.	Location	Coordinates (millimeters)			Positive Direction		Negative Direction	
		X*	Y*	Z*	Max. (g)	Time (ms)	Max. (g)	Time (ms)
8	Vehicle Center of Gravity	3130	0	360				
	Longitudinal X				2.1	161.1	32.4	66.4
	Lateral Y				9.8	68.0	9.4	58.2
	Vertical Z				36.1	17.7	50.7	21.0
	Resultant				51.2	21.0		
9	Rear Deck	250	0	498				
	Longitudinal X				24.5	24.1	56.8	28.3
	Lateral Y				7.4	62.1	8.3	69.4
	Vertical Z				11.8	29.4	12.8	66.7
	Resultant				57.4	28.4		

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Down)

All measurements accurate to within ± 3 mm.

¹ See Data Acquisition Explanations

Table 4 Post-Impact Data

Visible dummy contact points:

	<u>Driver</u>	<u>Right Front Passenger</u>	<u>Right Rear Passenger</u>
Head	Airbag, head restraint	Airbag, head restraint	Head restraint, C-pillar
Chest	Airbag	Airbag	None
Abdomen	None	None	None
Left knee	Knee bolster	Glove box	None
Right knee	Knee bolster	Glove box	None

Door opening:

	<u>Left</u>	<u>Right</u>
Front	Easy	Easy
Rear	Easy	Easy

Seat back failure:

Left	None
Right	None

Seat track shift:

Left	None
Right	None

Glazing damage: None

Other notable impact effects: None

Table 5 Dummy Data Summary

<u>Maximum Acceleration¹</u>								
	Head				Chest			
	X	Y	Z	R	X	Y	Z	R
Driver	-25.0 g	-9.6 g	15.2 g	27.8 g	-31.8 g	-6.2 g	-12.6 g	33.1 g
Front Pass.	-49.6 g	13.5 g	17.9 g	51.3 g	-38.9 g	4.5 g	10.0 g	38.9 g
3 rd Row								
Right Pass.	-53.1 g	-18.0 g	89.9 g	97.3 g	-53.2 g	-9.6 g	19.8 g	53.4 g

<u>Maximum Femur Compressive Force</u>		
	Left Femur	Right Femur
Driver	1820 N	1769 N
Front Passenger	3311 N	3590 N
3 rd Row Right	759 N	640 N

<u>Head Injury Criteria²</u>			
36 millisecond			
	HIC	Start Time t ₁	End Time t ₂
Driver	112	71.52 ms	107.52 ms
Front passenger	368	58.16 ms	94.16 ms
3 rd Row Right	1615	79.52 ms	115.52 ms

15 millisecond			
	HIC	Start Time t ₁	End Time t ₂
Driver	57	87.28 ms	102.32 ms
Front passenger	234	71.20 ms	86.24 ms
3 rd Row Right	1056	83.20 ms	98.24 ms

Table 5 Dummy Data Summary, continued

Chest Maximum Resultant Acceleration³

	Acceleration	Start Time t ₁	End Time t ₂
Driver	32.4 g	56.42 ms	59.42 ms
Front passenger	38.1 g	74.94 ms	77.94 ms
3 rd Row Right	52.8 g	79.19 ms	82.19 ms

Maximum Chest Deflection

Driver	24 mm
Front passenger	14 mm
3 rd Row Right	37 mm

Neck Injury Calculations (Nij)²

	NTF	NTE	NCF	NCE
Driver	0.22	0.43	0.00	0.16
Front passenger	0.15	0.49	0.16	0.24
3 rd Row Right	0.91	1.17	0.08	0.37

Upper Neck Axial Force

	Tension	Compression
Driver	918 N	142 N
Front passenger	919 N	131 N
3 rd Row Right	3354 N	293 N

¹ See Report Sign Convention in Appendix D.

² As defined in FMVSS No. 208.

³ Defined as equal to or exceeding 0.003 sec. duration.

Figure 4 Load Cell Barrier Mnemonics

Row	Column															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
9						LC0906	LC0907	LC0908	LC0909	LC0910	LC0911					
8	LC0801	LC0802	LC0803	LC0804	LC0805	LC0806	LC0807	LC0808	LC0809	LC0810	LC0811	LC0812	LC0813	LC0814	LC0815	LC0816
7	LC0701	LC0702	LC0703	LC0704	LC0705	LC0706	LC0707	LC0708	LC0709	LC0710	LC0711	LC0712	LC0713	LC0714	LC0715	LC0716
6	LC0601	LC0602	LC0603	LC0604	LC0605	LC0606	LC0607	LC0608	LC0609	LC0610	LC0611	LC0612	LC0613	LC0614	LC0615	LC0616
5	LC0501	LC0502	LC0503	LC0504	LC0505	LC0506	LC0507	LC0508	LC0509	LC0510	LC0511	LC0512	LC0513	LC0514	LC0515	LC0516
4	LC0401	LC0402	LC0403	LC0404	LC0405	LC0406	LC0407	LC0408	LC0409	LC0410	LC0411	LC0412	LC0413	LC0414	LC0415	LC0416
3	LC0301	LC0302	LC0303	LC0304	LC0305	LC0306	LC0307	LC0308	LC0309	LC0310	LC0311	LC0312	LC0313	LC0314	LC0315	LC0316
2	LC0201	LC0202	LC0203	LC0204	LC0205	LC0206	LC0207	LC0208	LC0209	LC0210	LC0211	LC0212	LC0213	LC0214	LC0215	LC0216
1	LC0101	LC0102	LC0103	LC0104	LC0105	LC0106	LC0107	LC0108	LC0109	LC0110	LC0111	LC0112	LC0113	LC0114	LC0115	LC0116

Figure 5 Load Cell Barrier Configuration

					109	044	134	115	110	064					
133	039	085	059	116	013	119	107	095	103	129	058	126	108	025	070
027	111	072	106	056	114	068	157	049	131	018	084	062	078	127	021
036	052	010	034	026	022	030	016	035	092	043	076	001	087	096	015
090	065	079	055	031	054	050	089	130	082	083	123	032	121	009	037
040	007	071	094	067	086	118	101	073	047	099	080	097	048	061	005
125	004	051	042	011	117	066	045	077	029	100	102	091	012	017	081
120	063	124	093	046	122	002	060	105	020	069	041	112	074	128	075
053	008	028	038	003	014	024	006	132	023	033	019	113	098	104	088

LOAD CELL SERIAL NUMBERS



Track C/L

Table 6 Load Cell Barrier Data Summary

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 1	1	202	15.7	-581	45.6
	2	325	15.6	-1,133	41.4
	3	374	15.8	-838	43.9
	4	240	6.0	-759	19.4
	5	258	4.9	-21,109	49.4
	6	359	4.9	-15,728	29.9
	7	398	4.3	-5,647	50.6
	8	410	23.0	-6,688	50.4
	9	218	23.0	-4,255	32.6
	10	344	4.5	-5,029	31.2
	11	332	5.1	-21,764	47.5
	12	306	6.2	-8,470	38.9
	13	351	15.3	-293	22.6
	14	413	20.2	-256	12.0
	15	239	20.3	-1,186	88.2
	16	205	20.5	-98	18.1

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 2	1	279	15.7	-5,519	86.3
	2	303	15.5	-3,495	84.7
	3	242	15.4	-2,493	58.2
	4	279	5.8	-3,296	32.8
	5	331	5.6	-9,705	37.3
	6	362	4.7	-2,251	18.3
	7	256	3.5	-6,799	50.3
	8	47	165.8	-21,923	34.6
	9	53	-1.3	-17,225	33.8
	10	350	4.0	-8,966	30.9
	11	418	4.3	-9,953	29.8
	12	335	5.7	-14,804	31.3
	13	218	6.2	-5,271	46.6
	14	373	20.2	-2,257	53.0
	15	237	20.3	-1,523	89.8
	16	179	15.1	-94	18.0

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 3	1	248	15.8	-4,434	47.8
	2	247	7.4	-2,588	53.4
	3	331	6.4	-9,621	57.3
	4	1,276	5.5	-111,132	17.5
	5	1,451	5.4	-56,469	16.3
	6	618	2.2	-47,936	25.2
	7	358	-0.6	-37,693	29.9
	8	519	16.6	-26,242	33.8
	9	363	-1.8	-46,756	33.1
	10	377	-0.2	-54,695	29.0
	11	671	2.9	-51,006	24.4
	12	1,222	5.4	-71,634	16.2
	13	1,030	5.4	-81,963	25.7
	14	146	6.1	-1,248	52.1
	15	83	6.3	-1,420	34.8
	16	73	14.9	-1,140	89.3

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 4	1	272	15.7	-679	40.7
	2	246	7.4	-1,947	19.4
	3	373	7.0	-3,703	54.2
	4	410	6.5	-10,240	16.2
	5	358	5.0	-1,677	11.8
	6	248	3.4	-5,013	32.3
	7	56	-0.6	-4,911	32.3
	8	64	-3.4	-7,379	32.7
	9	37	297.0	-22,819	32.5
	10	58	0.1	-51,343	31.3
	11	165	2.9	-46,385	30.3
	12	234	4.6	-13,203	15.8
	13	235	6.2	-8,836	16.6
	14	139	6.7	-3,411	54.1
	15	35	5.9	-2,024	22.6
	16	107	15.0	-145	28.8

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 5	1	253	15.8	-1,314	79.1
	2	259	7.4	-3,603	36.6
	3	329	7.4	-5,515	44.1
	4	310	6.7	-5,625	80.5
	5	501	6.8	-8,208	81.0
	6	363	5.7	-4,584	31.9
	7	394	5.4	-1,976	33.0
	8	353	5.0	-11,593	32.6
	9	394	4.9	-19,851	32.2
	10	236	4.9	-10,050	31.5
	11	291	5.6	-14,457	30.6
	12	163	5.0	-4,337	30.9
	13	159	5.7	-7,286	85.2
	14	147	14.6	-7,135	51.2
	15	182	21.0	-2,525	28.7
	16	30	15.1	-387	35.2

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 6	1	290	16.0	-3,135	46.6
	2	270	7.8	-5,116	40.1
	3	289	16.1	-4,415	24.9
	4	375	7.4	-2,072	20.9
	5	316	6.8	-3,258	16.7
	6	389	6.7	-3,701	16.2
	7	326	6.1	-2,760	14.2
	8	365	6.0	-5,432	20.2
	9	282	5.8	-4,320	13.7
	10	241	5.8	-2,970	14.3
	11	134	4.8	-4,877	16.9
	12	99	5.3	-1,027	16.4
	13	198	14.2	-2,562	84.8
	14	111	14.7	-7,615	73.8
	15	102	14.9	-5,255	52.0
	16	153	31.6	-4,319	51.3

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 7	1	171	-0.2	-2,465	64.6
	2	291	8.5	-4,461	83.1
	3	272	8.1	-2,369	26.1
	4	283	7.8	-1,741	62.6
	5	264	7.1	-1,221	49.9
	6	285	6.9	-1,612	27.2
	7	269	6.4	-758	34.6
	8	228	6.0	-1,874	27.3
	9	185	5.4	-1,336	26.9
	10	252	-0.1	-1,294	27.0
	11	131	5.8	-2,029	25.2
	12	102	5.7	-1,514	24.7
	13	224	20.5	-1,107	27.0
	14	310	21.2	-2,943	28.0
	15	189	42.6	-5,067	49.0
	16	134	22.9	-3,964	81.5

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 8	1	173	22.0	-124	13.2
	2	242	8.9	-1,121	61.7
	3	269	8.7	-819	62.3
	4	185	8.1	-337	13.0
	5	263	8.0	-261	13.2
	6	226	23.7	-288	14.0
	7	204	23.7	-338	27.6
	8	161	6.3	-374	14.6
	9	132	6.0	-332	27.9
	10	93	5.5	-306	28.2
	11	79	6.2	-244	17.0
	12	104	20.6	-302	17.4
	13	27	5.5	-2,510	52.3
	14	66	14.8	-2,665	37.6
	15	171	22.3	-140	18.6
	16	176	22.9	-174	19.1

Table 6 Load Cell Barrier Data Summary, continued

Location	Column	Positive Direction		Negative Direction	
		Max. (N)	Time (ms)	Max. (N)	Time (ms)
Load Cell Row 9	6	206	23.5	-294	14.6
	7	228	23.4	-280	14.9
	8	165	23.1	-254	15.1
	9	33	6.7	-358	15.6
	10	191	3.4	-264	16.2
	11	130	20.7	-310	17.1

Section 3.0

Vehicle, Occupant, and Camera Measurements

Table 7 Fuel System Data

Vehicle year/make/ model/body style:	2004/Honda/Odyssey/MPV
Fuel system capacity:	75.7 liters (from owner's manual)
Usable capacity:	75.7 liters
Test volume range:	69.6 liters to 71.2 liters (92% to 94% of usable)
Actual test volume:	69.7 liters
Test fluid type:	Stoddard
Specific gravity:	0.764
Kinematic viscosity:	0.99 centistoke
Test fluid color:	Purple
Did electric fuel pump operate with ignition switch "on" and the engine not operating?	No
Details of fuel system:	The fuel tank is located under the second row seats. The fuel filler neck runs through the left rear wheel well to the left rear quarter panel where the fuel cap is located. The fuel lines run forward from the fuel tank inside of the left frame rail.

Figure 6 Pre-Test And Post-Test Measurement Points

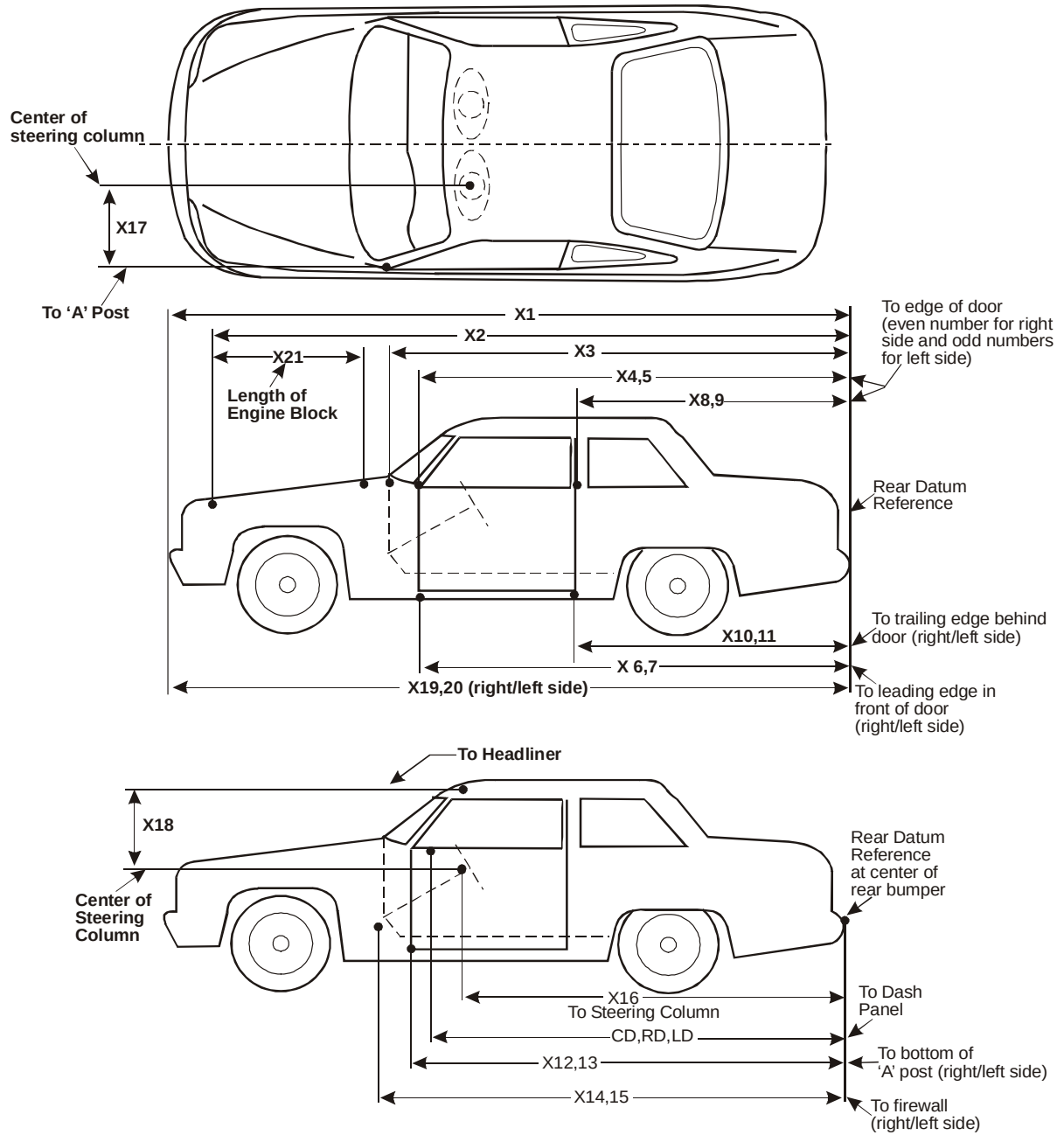


Table 8 Impacted Vehicle Measurements
Vehicle Make/Model: 2004 Honda Odyssey MPV
Test Number: 040803

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5095	4493	602
X2	Rear Surface of Vehicle to Front of Engine Block	4515	4198	317
X3	Rear Surface of Vehicle to Firewall	4153	4141	12
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3620	3626	-6
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3624	3618	6
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3597	3594	3
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3603	3593	10
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2580	2586	-6
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2595	2590	5
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2599	2593	6
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2605	2598	7
X12	Rear Surface of Vehicle to Bottom of " A " Post on Right Side	3620	N/A ¹	N/A ¹
X13	Rear Surface of Vehicle to Bottom of " A " Post on Left Side	3625	N/A ¹	N/A ¹
X14	Rear Surface of Vehicle to Firewall-Right Side	4249	4218	31
X15	Rear Surface of Vehicle to Firewall-Left Side	4236	4217	19
X16	Rear Surface of Vehicle to Steering Wheel Center	3225	3239	-14
X17	Center of Steering Column to " A " Post	313	268	45
X18	Center of Steering Column to Headliner	447	430	17
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4914	4393	521
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4901	4440	461
X21	Length of Engine Block	540	540	0

All measurements are in millimeters.

¹ Measurement point could not be located post-test.

Table 9 Vehicle Structural Measurements¹

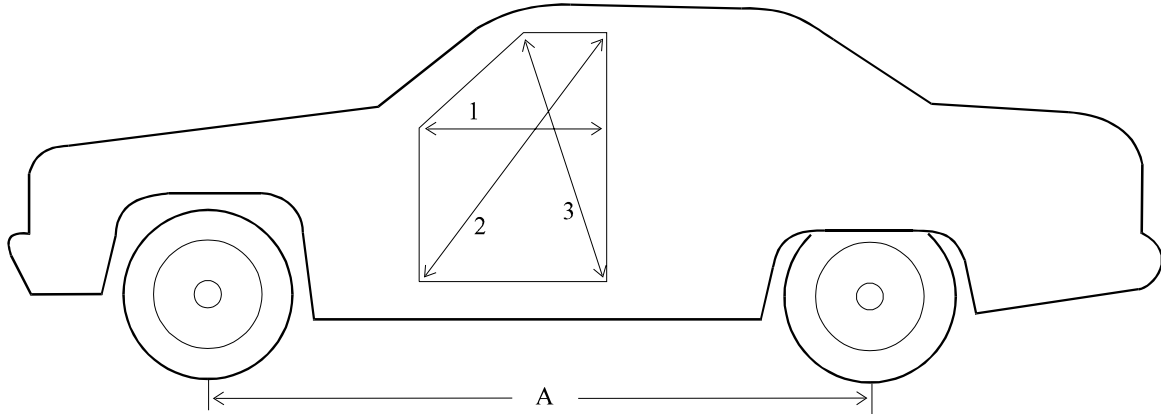
	Elements	Pre-Test
1	Total Length	5095
2	Total Width	1950
3	Bumper Top Height	493
4	Bumper Bottom Height	420
5	Longitudinal Member Top Height	508
6	Longitudinal Member Bottom Height	388
7	Distance Between Longitudinal Members	1110
7'	Longitudinal Member Width	70
8	Engine Top Height	904
9	Engine Bottom Height	189
10	Engine and Gearbox Width	840
11	Front Bumper - Engine Distance	470
12	Front Shock Absorber Fixing Height	949
13	Bonnet Leading Edge Height	755
14	Front Shock Absorber Fixing Width	1270
15	Front Bumper - Front Axle Distance	973
16	Front Axle - A Pillar Distance	520
17	A Pillar - B Pillar Distance	1075
18	B Pillar - Rear Axle Distance	1445
19	B Pillar - C Pillar Distance	1075
20	Roof Sill Bottom Height	1552
21	Roof Sill Top Height	1622
22	Floor Sill Bottom Height	20
23	Floor Sill Top Height	347

All distance measurements are in millimeters.

¹ Taken from INSIA report, “Structural Survey of Cars, Methodology of the Main Resistant Elements in the Car Body”, March 1999. This report is included in Appendix E.

Figure 7 Vehicle Intrusion Measurements

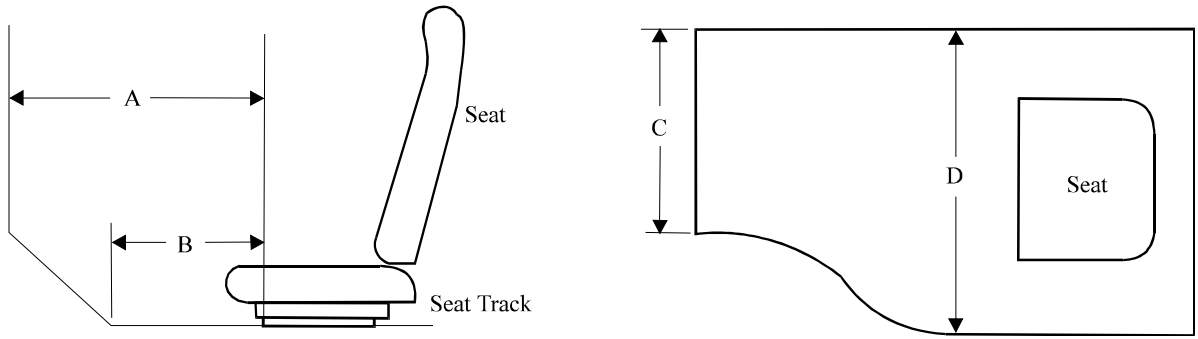
Door Opening Width



Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	1012 mm	1575 mm	1255 mm	1012 mm	1575 mm	1260 mm
Post-Test	1012 mm	1575 mm	1264 mm	1012mm	1575 mm	1260 mm
Difference	0 mm	0 mm	-9 mm	0 mm	0 mm	0 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	3000 mm	3000 mm
Post-Test	2890 mm	2858 mm
Difference	110 mm	142 mm

Figure 8 Vehicle Intrusion Measurements
Static Footwell Deformation



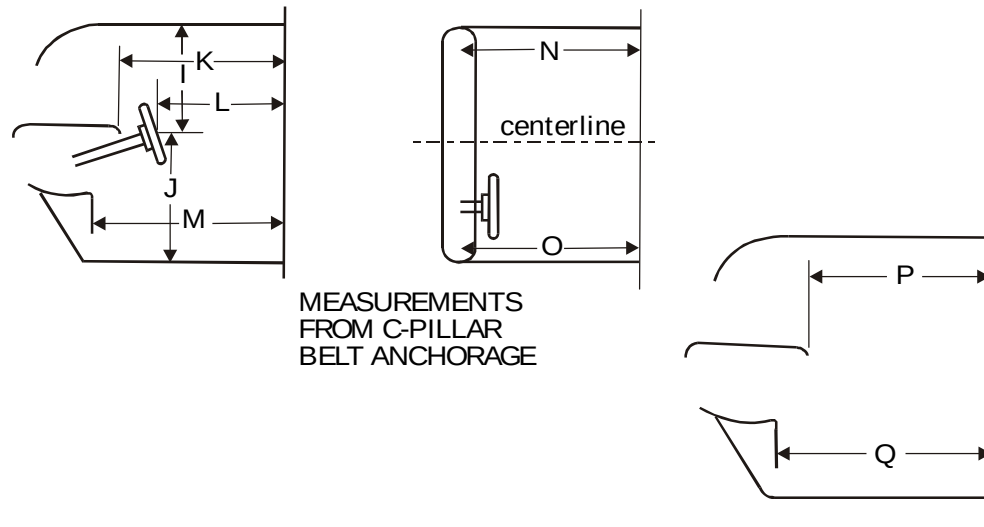
Driver's Side

Measurement	Pre-Test	Post-Test	Difference
A	640 mm	655 mm	-15 mm
B	530 mm	564 mm	-34 mm
C	470 mm	477 mm	-7 mm
D	485 mm	477 mm	8 mm

Passenger's Side

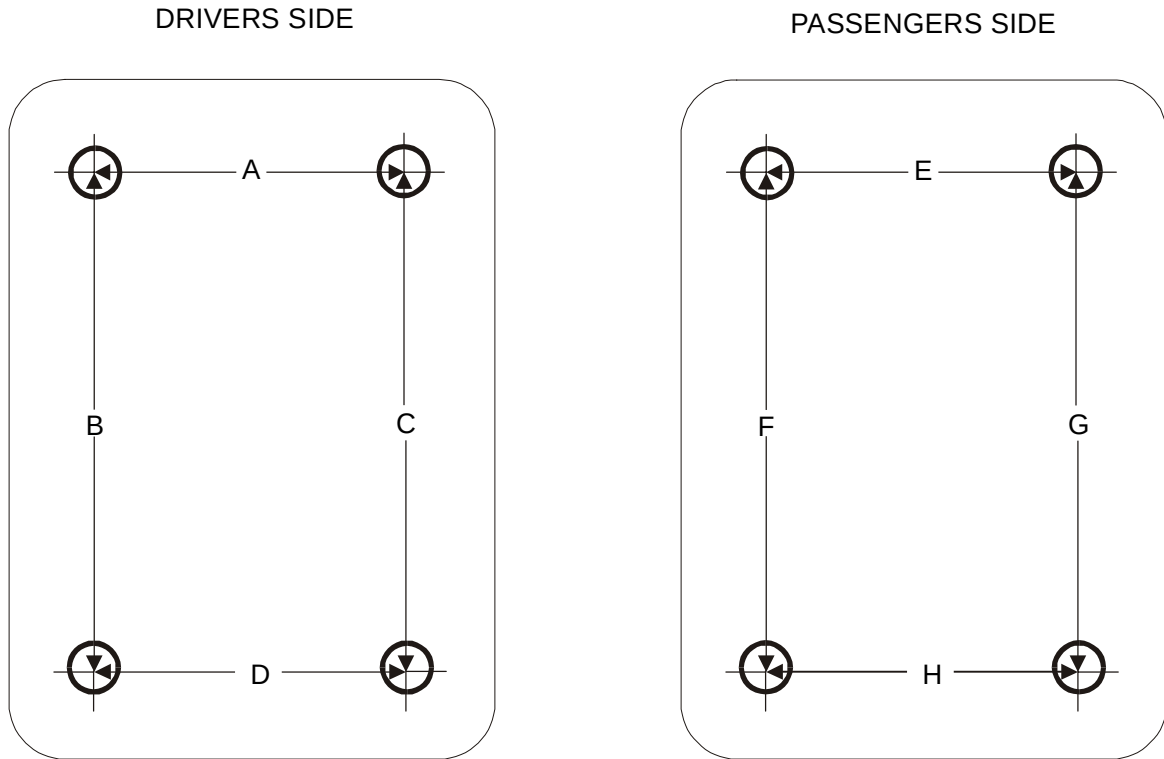
Measurement	Pre-Test	Post-Test	Difference
A	650 mm	640 mm	10 mm
B	535 mm	555 mm	-20 mm
C	365 mm	380 mm	-15 mm
D	460 mm	455 mm	5 mm

Figure 9 Vehicle Intrusion Measurements
Static Passenger Compartment Intrusion



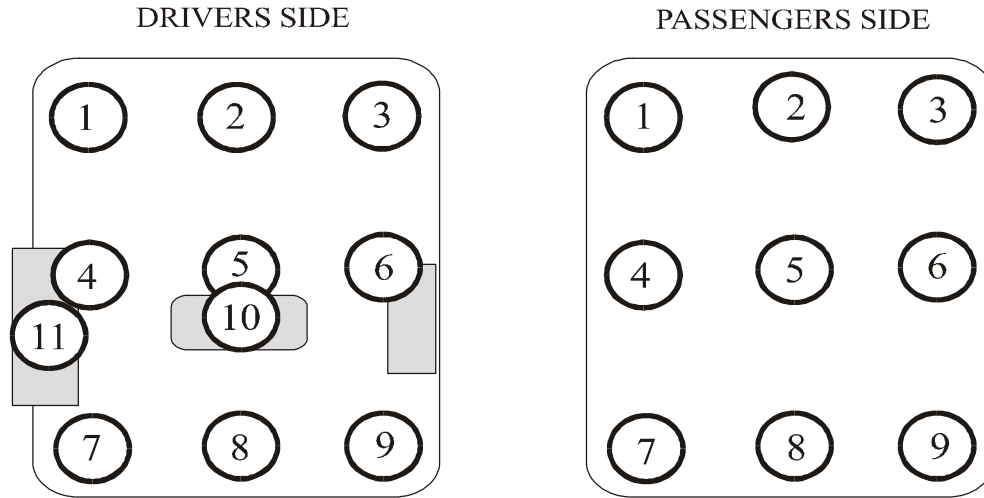
Measurement	Pre-Test	Post-Test	Difference
I	447 mm	430 mm	17 mm
J	750 mm	770 mm	-20 mm
K (driver's side)	2020 mm	2019 mm	1 mm
L	1766 mm	1762 mm	4 mm
M (driver's side)	2042 mm	2037 mm	5 mm
N (passenger's side)	2082 mm	2027 mm	55 mm
O (driver's side)	1975 mm	1976 mm	-1 mm
P (passenger's side)	2020 mm	2015 mm	5 mm
Q (passenger's side)	2080 mm	2080 mm	0 mm

Figure 10 Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	470 mm	477 mm	-7 mm
B	490 mm	486 mm	4 mm
C	465 mm	394 mm	71 mm
D	485 mm	477 mm	8 mm
E	365 mm	380 mm	-15 mm
F	600 mm	533 mm	67 mm
G	515 mm	495 mm	20 mm
H	460 mm	455 mm	5 mm

Figure 11 Vehicle Toeboard Measurements



Pre-Test				Driver Toe Pan			Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	3610	-656	13	3577	-651	-3	3577	-651	-3	33	-5	16
2	3729	-422	56	3612	-405	-10	3612	-405	-10	117	-17	66
3	3714	-212	79	3510	-217	22	3510	-217	22	204	5	57
4	3577	-670	100	3552	-666	87	3552	-666	87	25	-4	13
5	3649	-420	142	3573	-412	97	3573	-412	97	76	-8	45
6	3606	-218	150	3485	-220	117	3485	-220	117	121	2	33
7	3528	-688	204	3521	-685	197	3521	-685	197	7	-3	7
8	3519	-438	216	3479	-427	202	3479	-427	202	40	-11	14
9	3490	-218	224	3410	-224	198	3410	-224	198	80	6	26
10	3506	-413	36	3379	-441	-52	3379	-441	-52	127	28	88
11	3497	-567	222	3494	-564	216	3494	-564	216	3	-3	6

Pre-Test				Passenger Toe Pan			Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	3730	243	63	3503	232	-7	3503	232	-7	227	11	70
2	3730	412	56	3582	378	-9	3582	378	-9	148	34	65
3	3621	611	4	3549	600	-17	3549	600	-17	72	11	21
4	3705	235	157	3535	210	94	3535	210	94	170	25	63
5	3669	416	126	3557	391	84	3557	391	84	112	25	42
6	3568	632	77	3516	630	63	3516	630	63	52	2	14
7	3615	314	191	3530	281	174	3530	281	174	85	33	17
8	3526	440	209	3477	437	212	3477	437	212	49	3	-3
9	3531	667	201	3508	661	195	3508	661	195	23	6	6

Reference: +X forward from rear bumper; +Y rightward from vehicle centerline; +Z downward from vehicle reference point

Table 10 Vehicle Intrusion of Upper Instrument Panel

Driver Instrument Panel - Lower

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
Left	3284	-548	-225	3278	-554	-237	6	6	12
Right	3292	-240	-218	3269	-246	-246	23	6	28

Driver Knees

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
Left	3210	-569	-327	3200	-579	-338	10	10	11
Right	3252	-267	-303	3234	-275	-330	18	8	27

Passenger Knees

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
Left	3243	324	-263	3223	319	-282	20	5	19
Right	3237	554	-269	3232	549	-288	5	5	19

Steering Column

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	3048	-423	-522	3050	-437	-550	-2	14	28

Driver Front Outboard Seat Attachment Bolt

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	2958	-651	207	2957	-650	208	1	-1	-1

Passenger Front Outboard Seat Attachment Bolt

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	2958	640	203	2954	641	214	4	-1	-11

Knee intrusions are points measured pre and post, which are located just above where the four knees would be expected to contact the instrument panel.

+X: Forward from rear bumper

+Y: Rightward from centerline

+Z: Downward from vehicle reference point

Table 11 Frontal Profile Measurements

Bottom of Front Bumper

Pre-Test				Post-Test			Difference ¹		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4886	-760	-430	4434	-750	-437	452	-10	7
2	4988	-460	-439	4470	-457	-460	518	-3	21
3	5059	-152	-436	4494	-151	-460	565	-1	24
4	5060	153	-442	4482	150	-459	578	3	17
5	4997	460	-441	4438	458	-453	559	2	12
6	4910	768	-449	4363	760	-432	547	8	-17

Top of Front Bumper

Pre-Test				Post-Test			Difference ²		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4901	-767	-537	4440	-748	-542	461	-19	5
2	4998	-459	-533	4435	-459	-553	563	0	20
3	5065	-154	-536	4482	-154	-562	583	0	26
4	5065	154	-534	4475	155	-554	590	-1	20
5	5002	460	-539	4412	461	-544	590	-1	5
6	4914	767	-550	4393	750	-522	521	17	-28

Center of Grill

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4791	-775	-678	5061	-744	-678	350	-31	0
2	4899	-466	-665	5029	-440	-681	490	-26	16
3	4950	-158	-650	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
4	4948	157	-652	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³	N/A ³
5	4907	468	-668	5020	460	-696	507	8	28
6	4817	777	-682	4995	767	-660	442	10	-22

Front of Hood

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4740	-772	-771	4398	-746	-947	342	-26	176
2	4871	-460	-750	4442	-448	-880	429	-12	130
3	4906	-152	-766	4495	-153	-867	411	1	101
4	4901	150	-766	4480	151	-856	421	-1	90
5	4864	459	-757	4447	449	-880	417	10	123
6	4762	767	-780	4438	743	-954	324	24	174

¹ The difference for point C6, measured at the top of the bumper, is included in the NHTSA Database Submission as Damage Profile Distance 6.

² The difference for point C5, measured at the top of the bumper, is included in the NHTSA Database Submission as Damage Profile Distance 5.

³ Measurement point could not located post-test.

Table 12 Additional Requested Measurements

Type of measurement	
Height of the lowest edge of the bottom row of load cells	130 mm
Height of lowest structure on test vehicle	145 mm
Mid-hood height of test vehicle	982 mm
Height of test vehicle hood 2 feet rearward of front bumper	1003 mm

Vertical impact point deviation - Vehicle 4 mm low at impact

Table 13 Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial #416)	Front Passenger (Serial #048)
WA	Windshield angle	31.0°	N/A
SWA	Steering wheel angle	29.6°	N/A
SCA	Steering column angle	60.4°	N/A
SA ¹	Seat back angle	6.9°	8.8°
HZ	Head to roof	295 mm	295 mm
HH	Head to header	374 mm	376 mm
HW	Head to windshield	705 mm	719 mm
HR	Head to side header	290 mm	285 mm
NR	Nose to rim	322 mm	N/A
NA	Nose to rim angle	3.0°	N/A
CD	Chest to dash	486 mm	430 mm
CS	Steering wheel to chest	235 mm	N/A
RA	Rim to abdomen	101 mm	N/A
KDL	Left knee to dash	74 mm	77 mm
KDR	Right knee to dash	83 mm	84 mm
KDA	Outboard knee to dash angle	33.0°	27.0°
PA	Pelvic angle	22.2°	19.9°
TA	Tibia angle	62.9°	56.9°
KK	Knee to knee	208 mm	170 mm
ST ²	Striker to head	570 mm	554 mm
	Striker to head angle	-60.8°	-60.7°
SK ²	Striker to knee	744 mm	704 mm
	Striker to knee angle	0.6°	3.6°
SH ²	Striker to H-point	420 mm	393 mm
	Striker to H-point angle	9.0°	12.7°
SHY	Striker to H-point (Y dir.)	296 mm	285 mm
HS	Head to side window	370 mm	349 mm
HD	H-point to door	218 mm	220 mm
AD	Arm to door	175 mm	185 mm

The seat back angle (SA°) is measured relative to vertical, all other angles are measured relative to horizontal.

¹ Measured at the head restraint support post.

² A negative angle indicates the measurement point was above the striker.

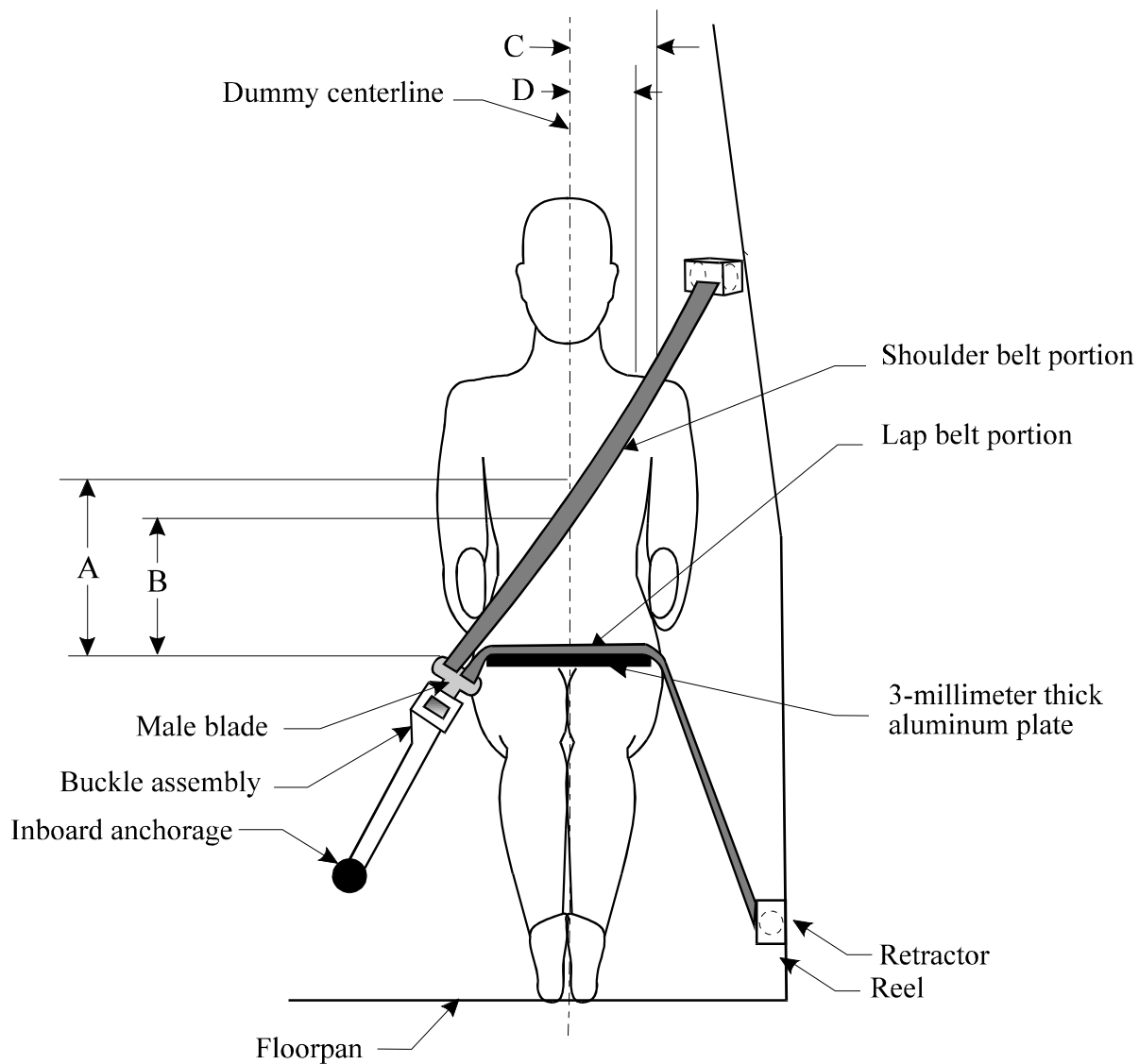
Table 13 Dummy Measurement Data for Front Seat Occupants, continued

Designation	Type of Measurement	3 rd Row Right (Serial #070)
WA	Windshield angle	N/A
SWA	Steering wheel angle	N/A
SCA	Steering column angle	N/A
SA	Seat back angle	24.6°
HZ	Head to roof	293 mm
HH	Head to header	N/A
HW	Head to windshield	N/A
HR	Head to side header	360 mm
NR	Nose to rim	N/A
NA	Nose to rim angle	N/A
CD	Chest to dash	N/A
CS	Steering wheel to chest	N/A
RA	Rim to abdomen	N/A
KDL	Left knee to dash	N/A
KDR	Right knee to dash	N/A
KDA	Outboard knee to dash angle	N/A
PA	Pelvic angle	22.0°
TA	Tibia angle	75.6°
KK	Knee to knee	165 mm
ST	Striker to head	N/A
	Striker to head angle ¹	N/A
SK	Striker to knee	N/A
	Striker to knee angle ¹	N/A
SH	Striker to H-point	N/A
	Striker to H-point angle ¹	N/A
SHY	Striker to H-point (Y dir.)	N/A
HS	Head to side window	452 mm
HD	H-point to door	135 mm
AD	Arm to door	120 mm

The seat back angle (SA°) is measured relative to vertical, all other angles are measured relative to horizontal.

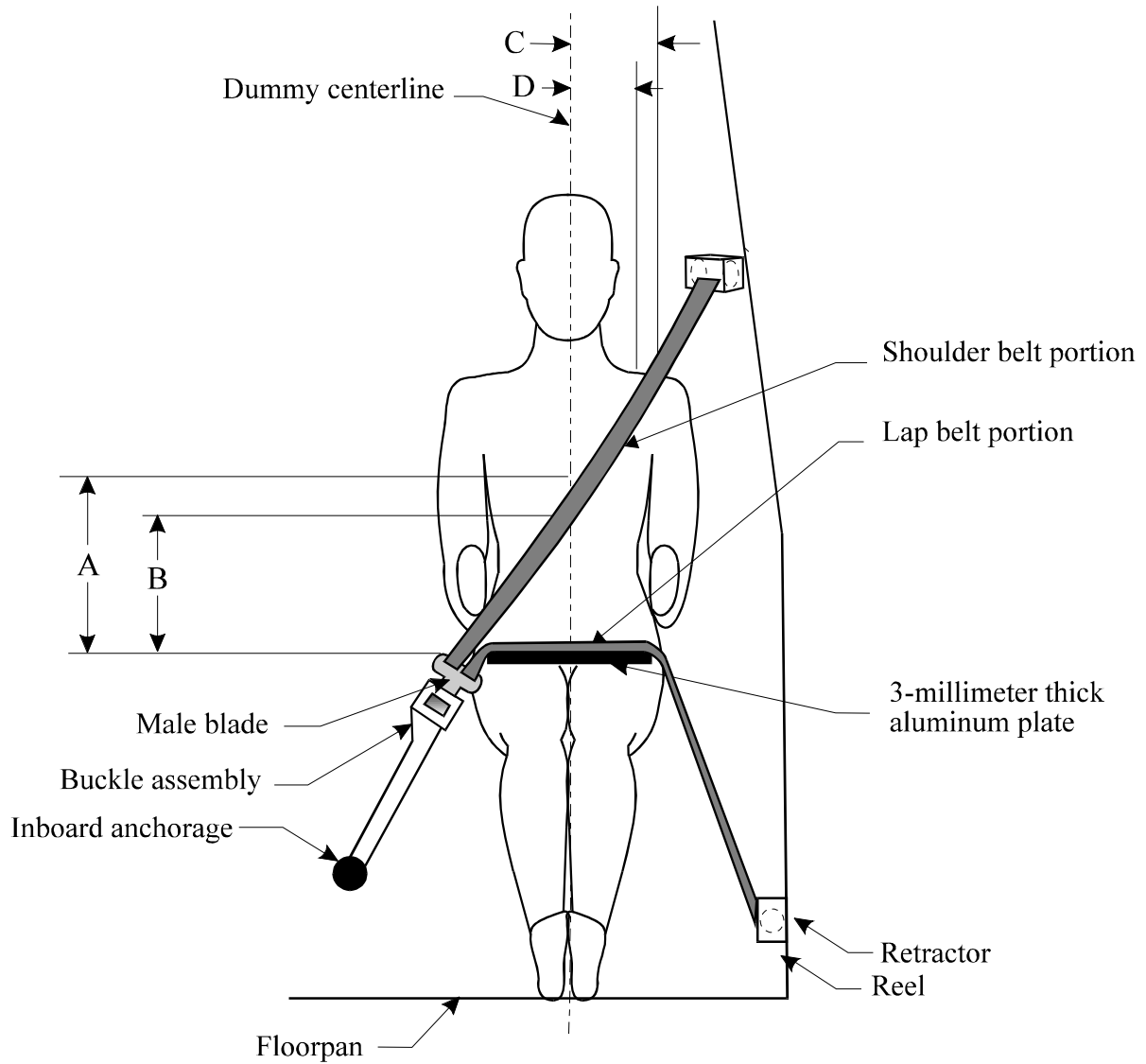
¹ A negative angle indicates that the measurement point was located above the striker.

Figure 12 Seat Belt Positioning Data



	Driver Dummy	Front Passenger Dummy
A - Top surface of aluminum plate to belt upper edge	310 mm	300 mm
B - Top surface of aluminum plate to belt lower edge	225 mm	200 mm
C - Dummy centerline to outer edge of belt at chest flesh top	120 mm	130 mm
D - Dummy centerline to inner edge of belt at chest flesh top	64 mm	65 mm

Figure 12 Seat Belt Positioning Data, continued



	3 rd Row Right Dummy
A - Top surface of aluminum plate to belt upper edge	295 mm
B - Top surface of aluminum plate to belt lower edge	195 mm
C - Dummy centerline to outer edge of belt at chest flesh top	140 mm
D - Dummy centerline to inner edge of belt at chest flesh top	80 mm

Figure 13 Camera Positions

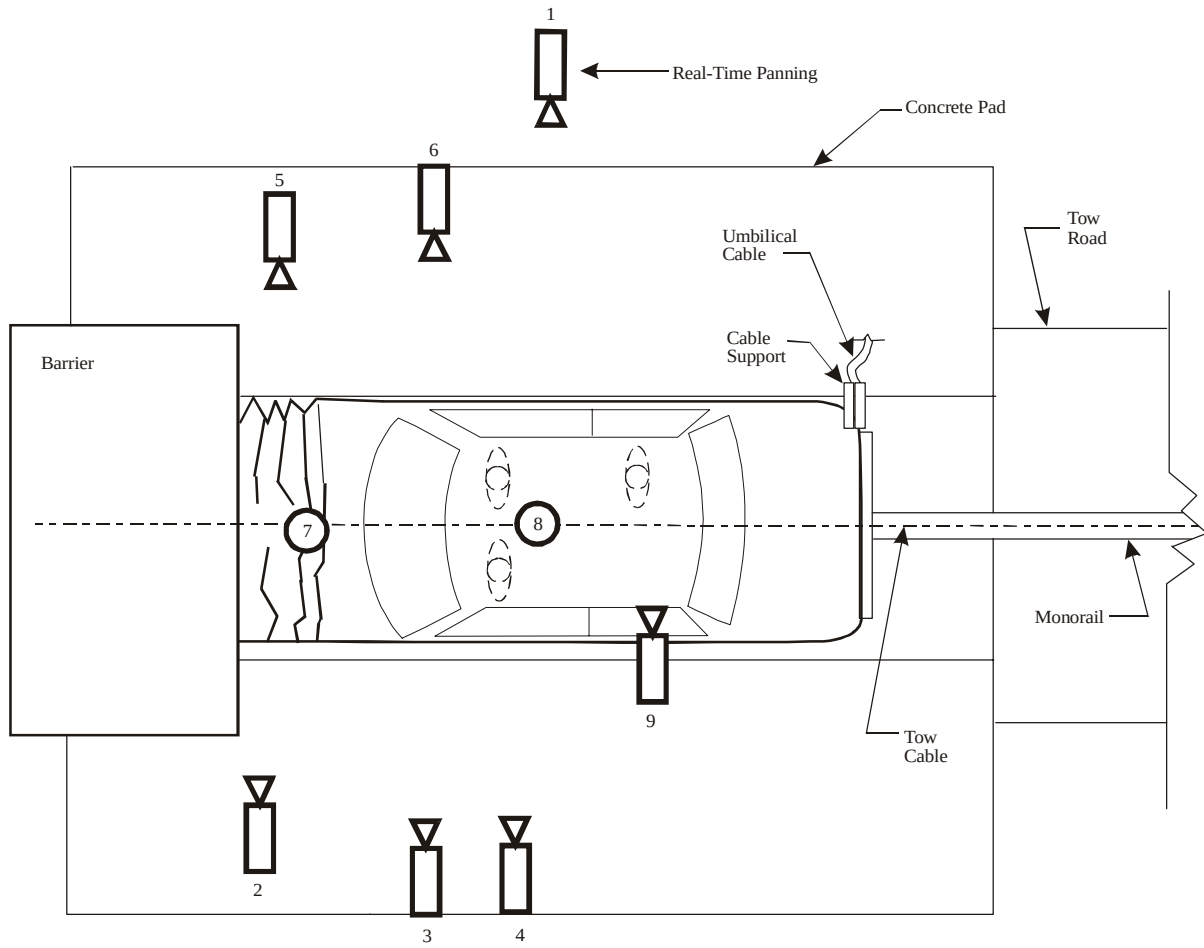


Table 11 Camera Information

Camera Number	Location	Type	Lens (mm)	Speed (frames/s)	Purpose of Camera Data
1	Panning	Panasonic	Zoom	30	Vehicle dynamics
2	Left side barrier face	Visario	50	1000	Vehicle crush
3	Left side perpendicular	Visario	25	1000	Vehicle dynamics
4	Left side	Redlake	Zoom	1000	Dummy kinematics
5	Right side barrier face	Visario	50	1000	Vehicle crush
6	Right side perpendicular	Visario	20	1000	Vehicle dynamics
7	Overhead tight	Visario	50	1000	Vehicle crush
8	Overhead wide	Visario	12.5	1000	Vehicle crush
9	Left view of rear passenger	Redlake	8	1000	Dummy kinematics

Appendix A

Photographs



Figure A-1 Pre-Test Front View



Figure A-2 Post-Test Front View



Figure A-3 Pre-Test Left Front View



Figure A-4 Post-Test Left Front View



Figure A-5 Pre-Test Left Side View



Figure A-6 Post-Test Left Side View



Figure A-7 Pre-Test Right Rear View



Figure A-8 Post-Test Right Rear View



Figure A-9 Pre-Test Right Side View



Figure A-10 Post-Test Right Side View



Figure A-11 Pre-Test Overhead View



Figure A-12 Post-Test Overhead View



Figure A-13 Post-Test Overhead Close-up View

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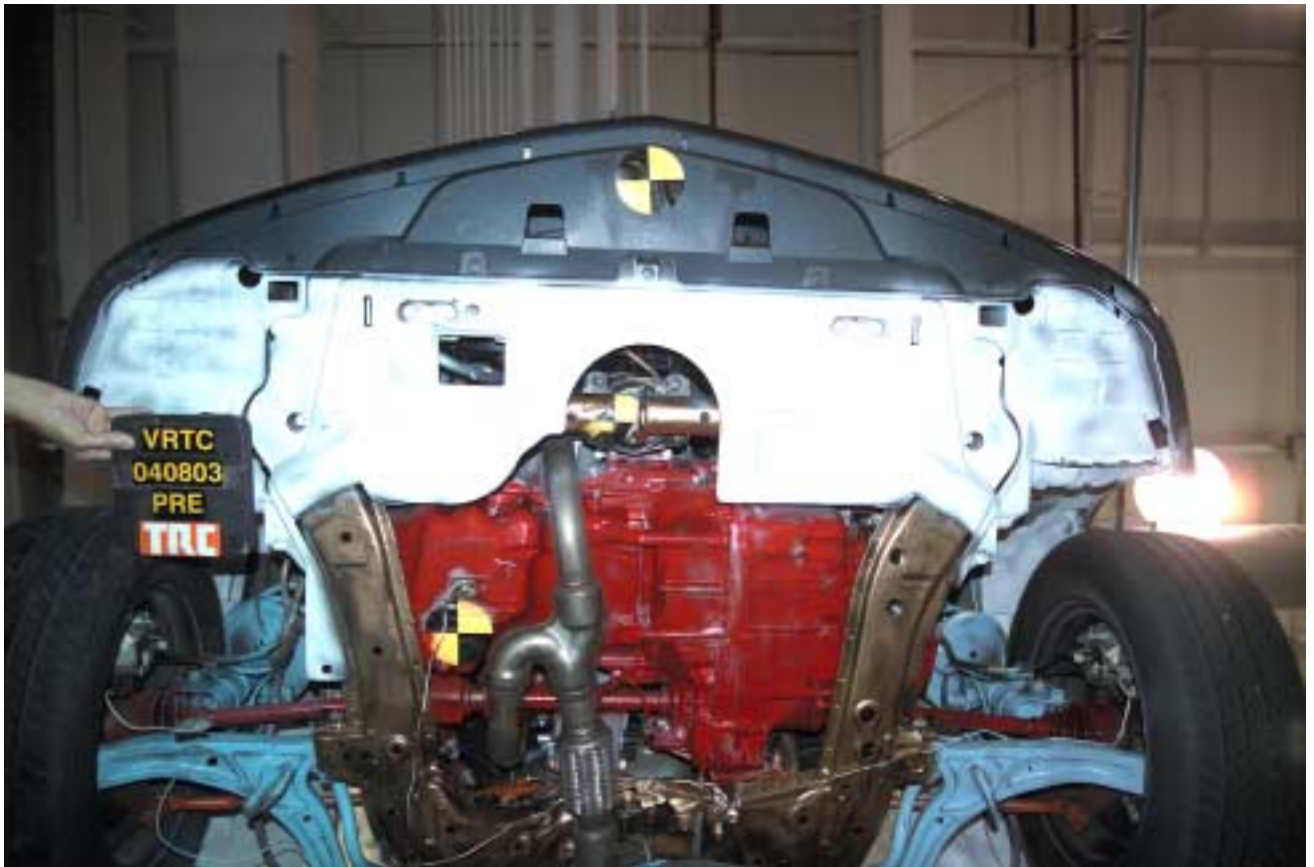


Figure A-14 Pre-Test Front Underbody View



Figure A-15 Post-Test Front Underbody View

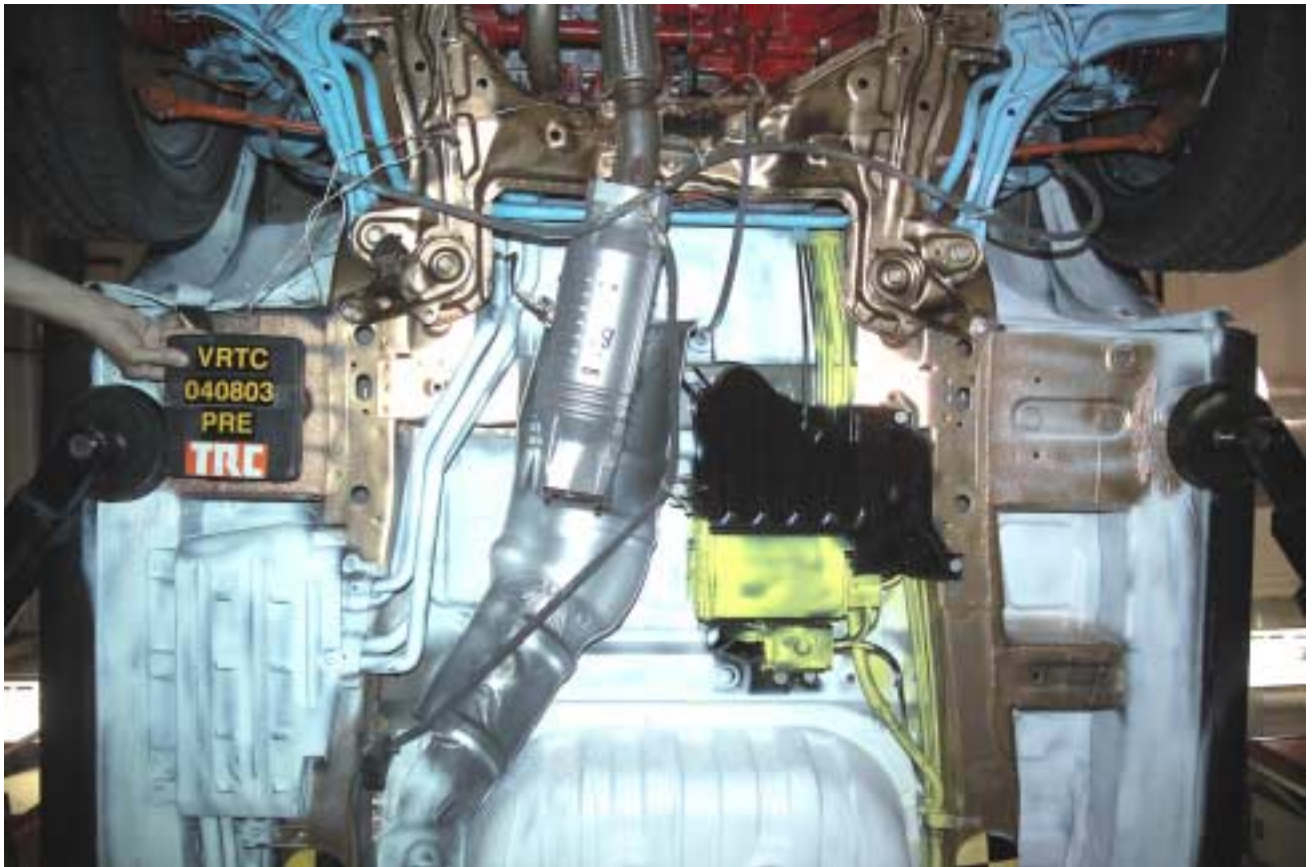


Figure A-16 Pre-Test Front Mid Underbody View



Figure A-17 Post-Test Front Mid Underbody View



Figure A-18 Pre-Test Mid Underbody View



Figure A-19 Post-Test Mid Underbody View



Figure A-20 Pre-Test Rear Mid Underbody View



Figure A-21 Post-Test Rear Mid Underbody View



Figure A-22 Pre-Test Rear Underbody View



Figure A-23 Post-Test Rear Underbody View



Figure A-24 Pre-Test Fuel Tank View



Figure A-25 Post-Test Fuel Tank View



Figure A-26 Pre-Test Fuel Filler Neck View



Figure A-27 Post-Test Fuel Filler Neck View



Figure A-28 Pre-Test Fuel Filler Cap View



Figure A-29 Post-Test Fuel Filler Cap View



Figure A-30 Pre-Test Engine Compartment View



Figure A-31 Post-Test Engine Cowl View



Figure A-32 Pre-Test Windshield View



Figure A-33 Post-Test Windshield View



Figure A-34 Pre-Test Driver and Passenger Dummies Front View



Figure A-35 Post-Test Driver and Passenger Dummies Front View



Figure A-36 Pre-Test Driver Dummy Position - View 1



Figure A-37 Post-Test Driver Dummy Position - View 1



Figure A-38 Pre-Test Driver Dummy Position - View 2



Figure A-39 Post-Test Driver Dummy Position - View 2



Figure A-40 Pre-Test Driver Dummy Position - View 3



Figure A-41 Post-Test Driver Dummy Position - View 3



Figure A-42 Pre-Test Driver Dummy Position - View 4



Figure A-43 Post-Test Driver Dummy Position - View 4

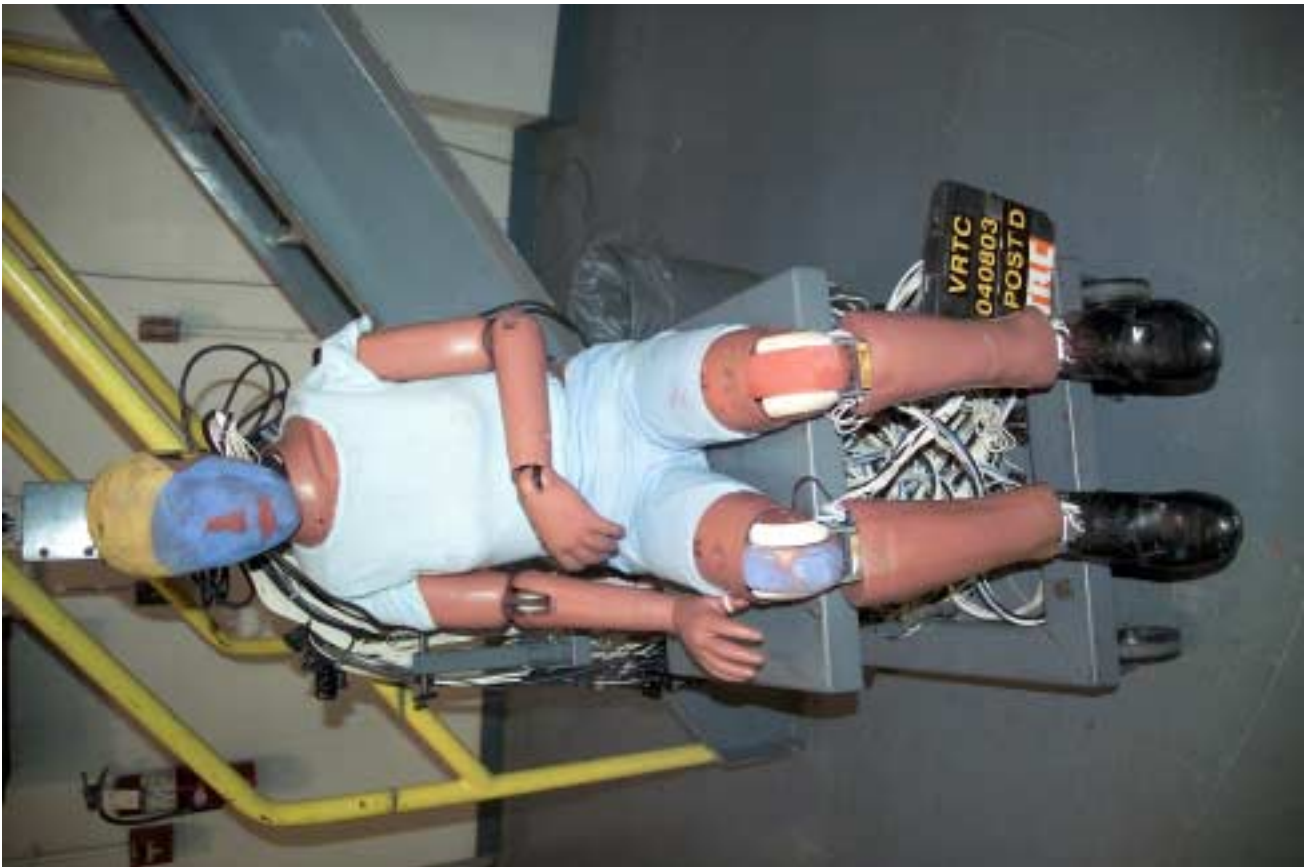


Figure A-44 Post-Test Driver Dummy Overall View



Figure A-45 Post-Test Driver Dummy Head Contact - View 1



Figure A-46 Post-Test Driver Dummy Head Contact - View 2



Figure A-47 Post-Test Driver Dummy Head Contact - View 3

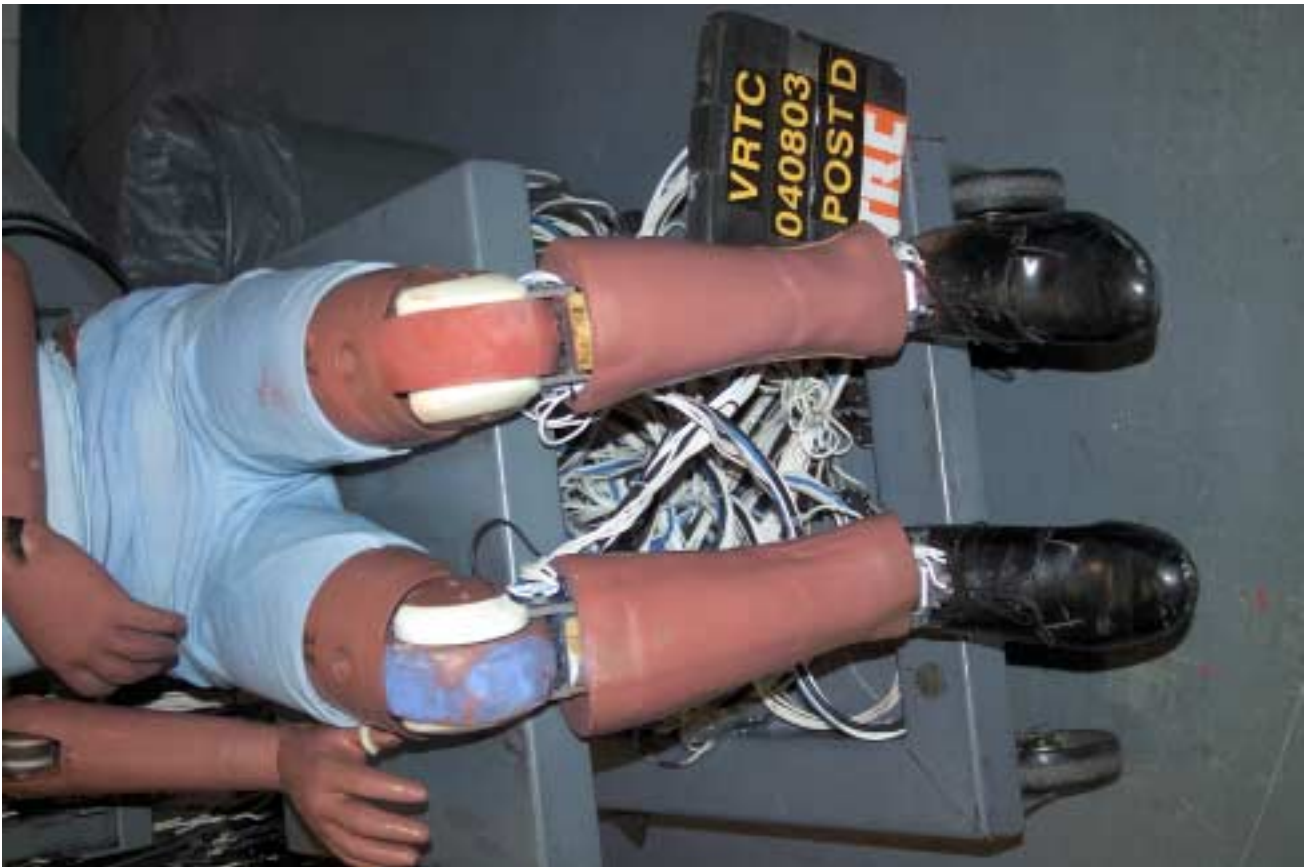


Figure A-48 Post-Test Driver Dummy Knee Contact - View 1



Figure A-49 Post-Test Driver Dummy Knee Contact - View 2



Figure A-50 Post-Test Driver Dummy Knee Contact - View 3

Intentionally Left Blank



Figure A-51 Pre-Test Front Passenger Dummy Position - View 1



Figure A-52 Post-Test Front Passenger Dummy Position - View 1



Figure A-53 Pre-Test Front Passenger Dummy Position - View 2



Figure A-54 Post-Test Front Passenger Dummy Position - View 2



Figure A-55 Pre-Test Front Passenger Dummy Position - View 3



Figure A-56 Post-Test Front Passenger Dummy Position - View 3



Figure A-57 Pre-Test Front Passenger Dummy Position - View 4



Figure A-58 Post-Test Front Passenger Dummy Position - View 4



Figure A-59 Post-Test Front Passenger Dummy Overall View



Figure A-60 Post-Test Front Passenger Dummy Head Contact - View 1



Figure A-61 Post-Test Front Passenger Dummy Head Contact - View 2



Figure A-62 Post-Test Front Passenger Dummy Head Contact - View 3



Figure A-63 Post-Test Front Passenger Dummy Knee Contact - View 1



Figure A-64 Post-Test Front Passenger Dummy Knee Contact - View 2



Figure A-65 Pre-Test Rear Passenger Dummy - View 1



Figure A-66 Post-Test Rear Passenger Dummy - View 1



Figure A-67 Pre-Test Rear Passenger Dummy - View 2



Figure A-68 Post-Test Rear Passenger Dummy - View 2



Figure A-69 Post-Test Rear Passenger Dummy Overall View



Figure A-70 Post-Test Rear Passenger Dummy Head Contact - View 1



Figure A-71 Post-Test Rear Passenger Dummy Head Contact - View 2



Figure A-72 Post-Test Rear Passenger Dummy Head Contact - View 3



Figure A-73 Post-Test Rear Passenger Dummy Knee Contact View

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Figure A-74 Vehicle Certification Label View



Figure A-75 Vehicle Tire Load Label View



Figure A-76 Pre-Test Barrier View



Figure A-77 Post-Test Barrier View

Appendix B

Data Plots



Transportation Research Center, Inc.

Head Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

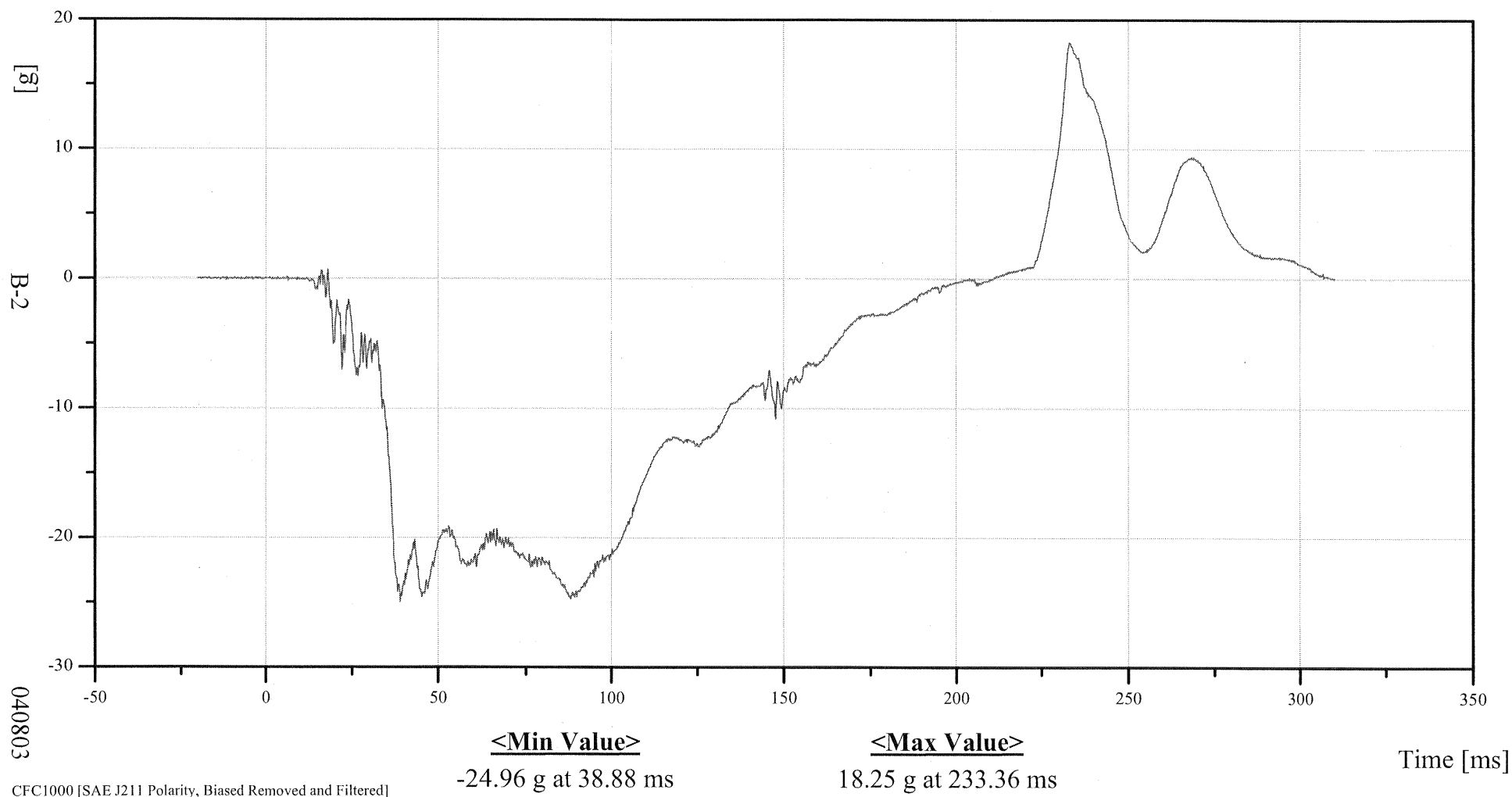
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDXG1





Transportation Research Center, Inc.

Head Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

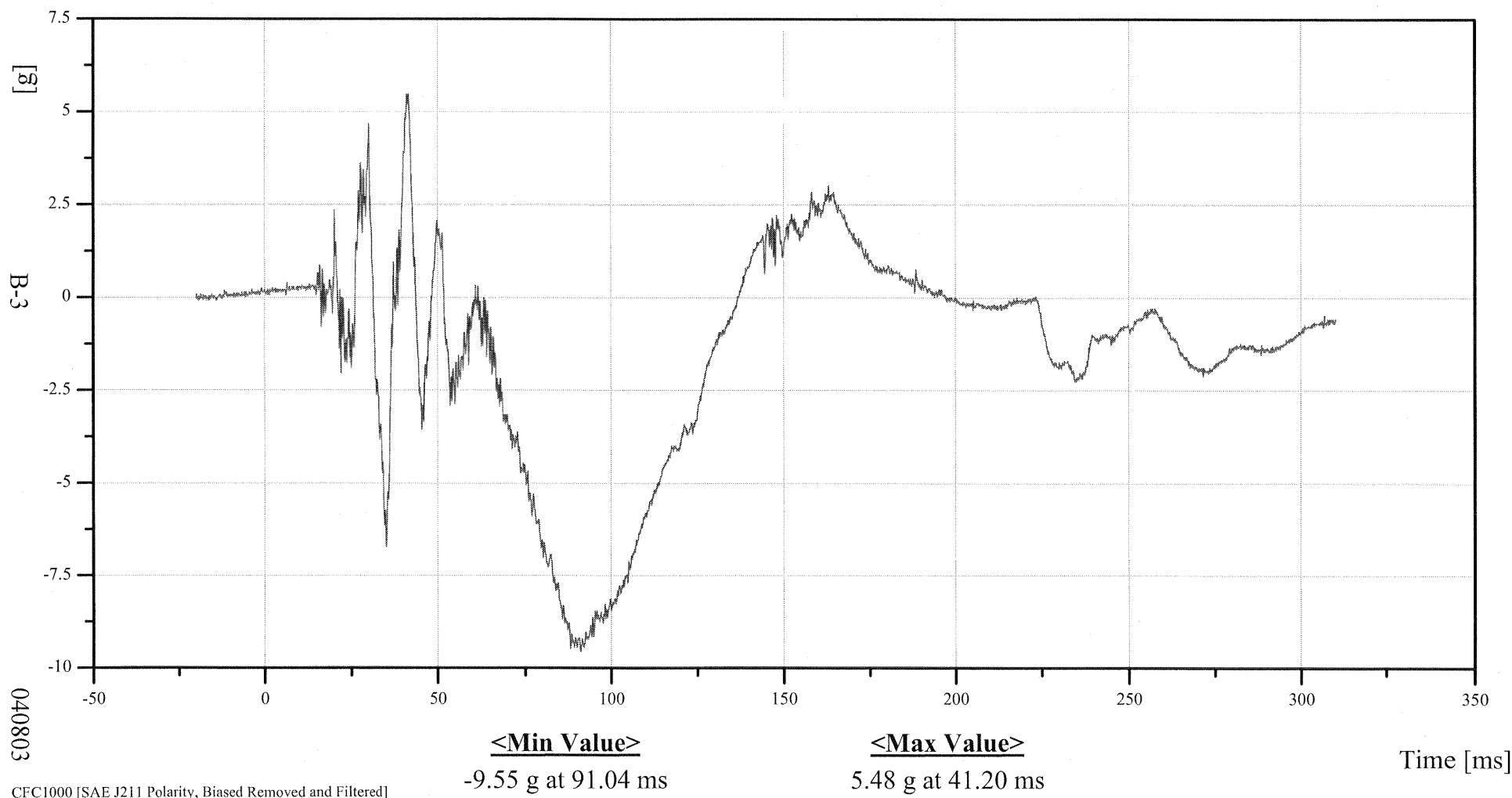
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDYG1





Transportation Research Center, Inc.

Head Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

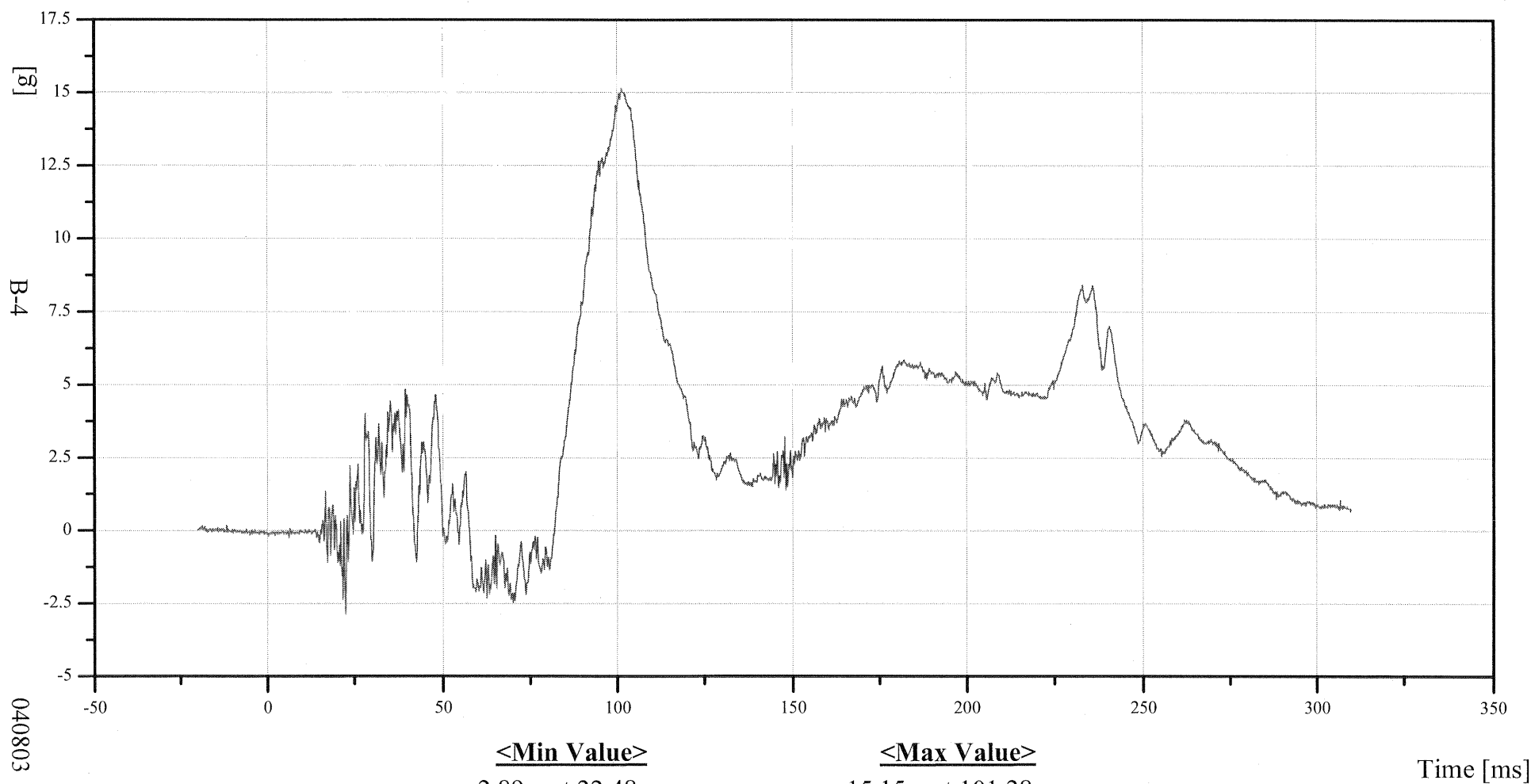
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDZG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]

-2.89 g at 22.48 ms

15.15 g at 101.28 ms



Transportation Research Center, Inc.

Head Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

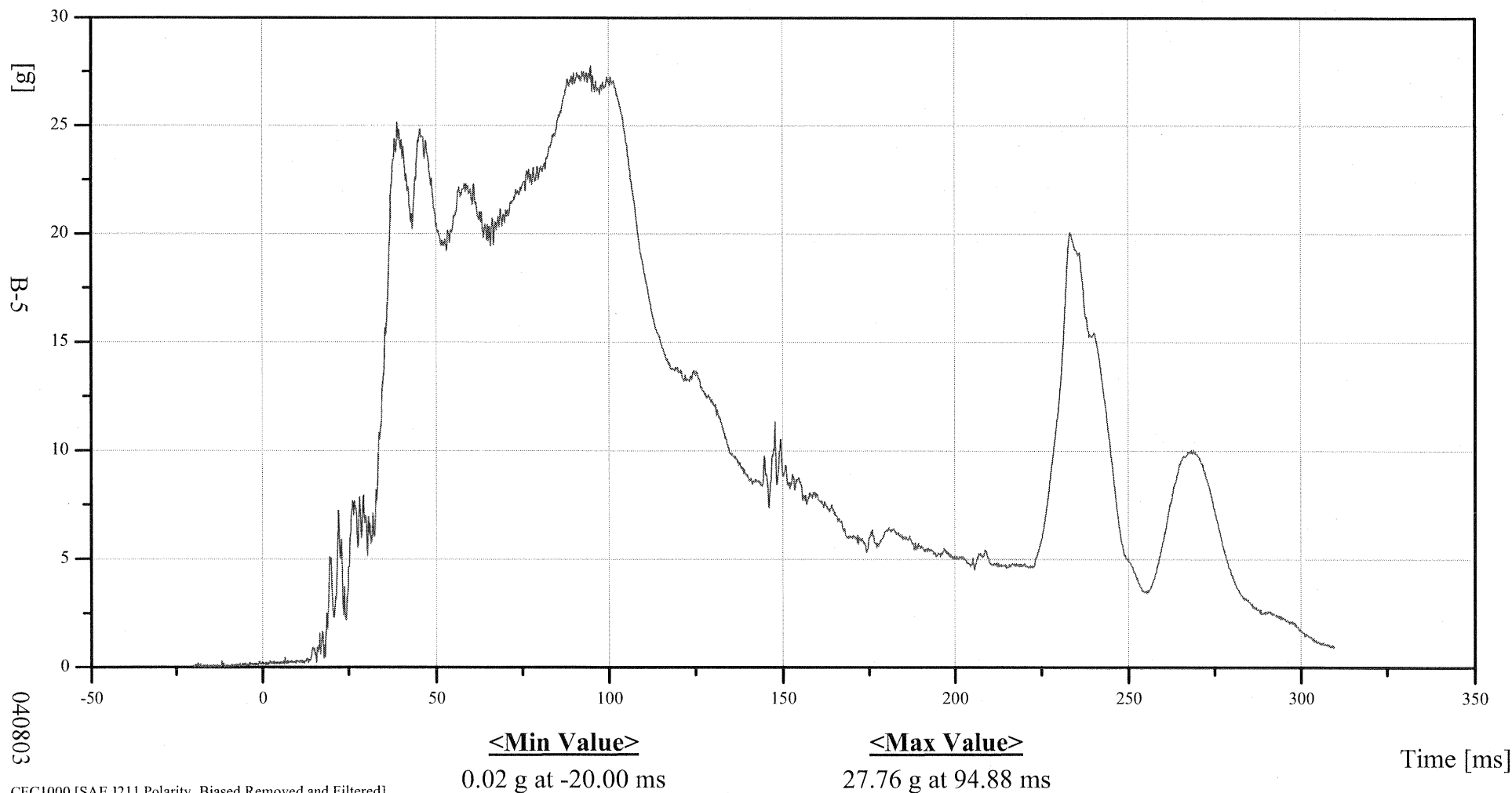
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDRG1





Transportation Research Center, Inc.

Head Accel Red X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

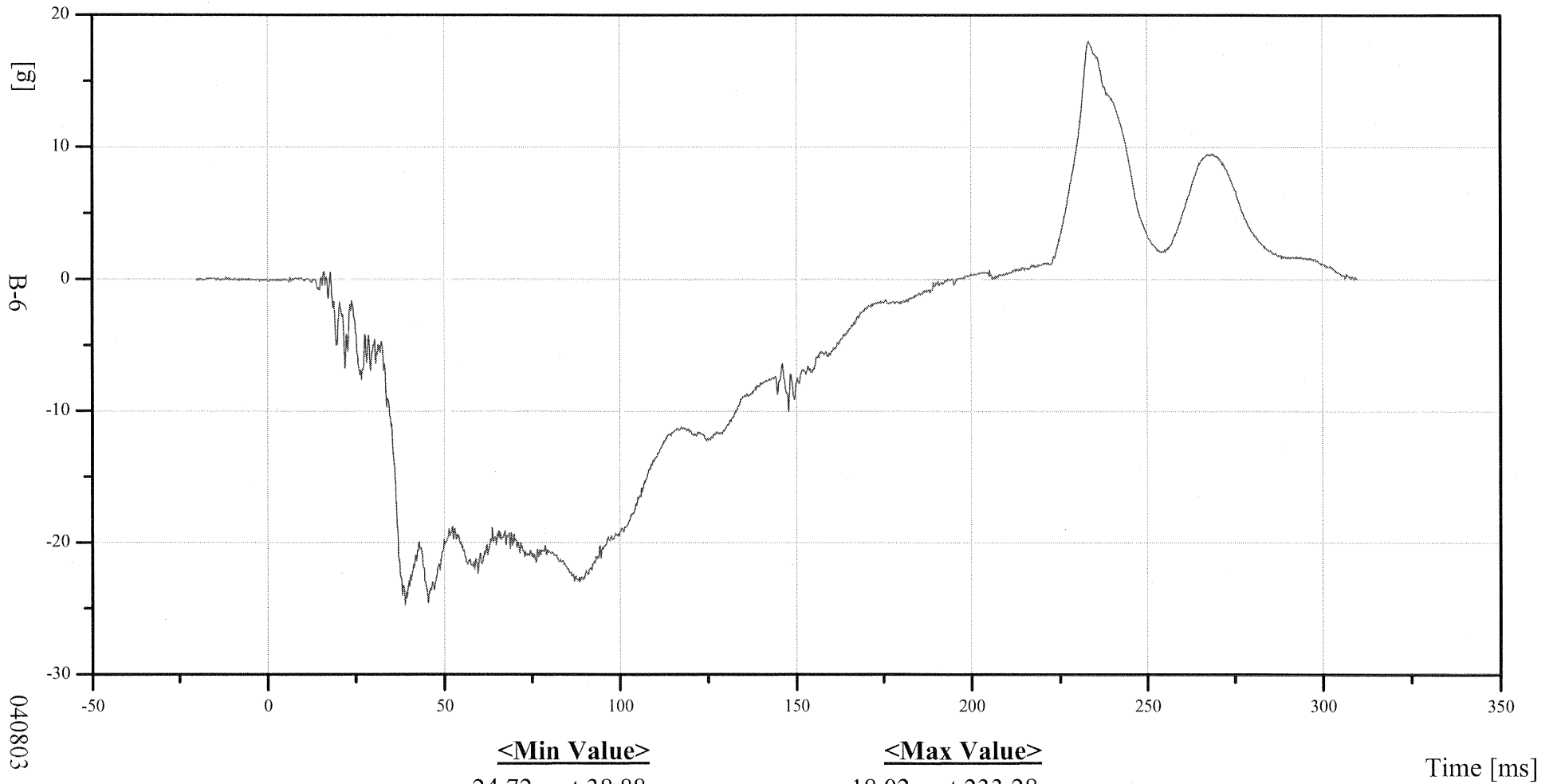
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDXR1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Head Accel Red Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

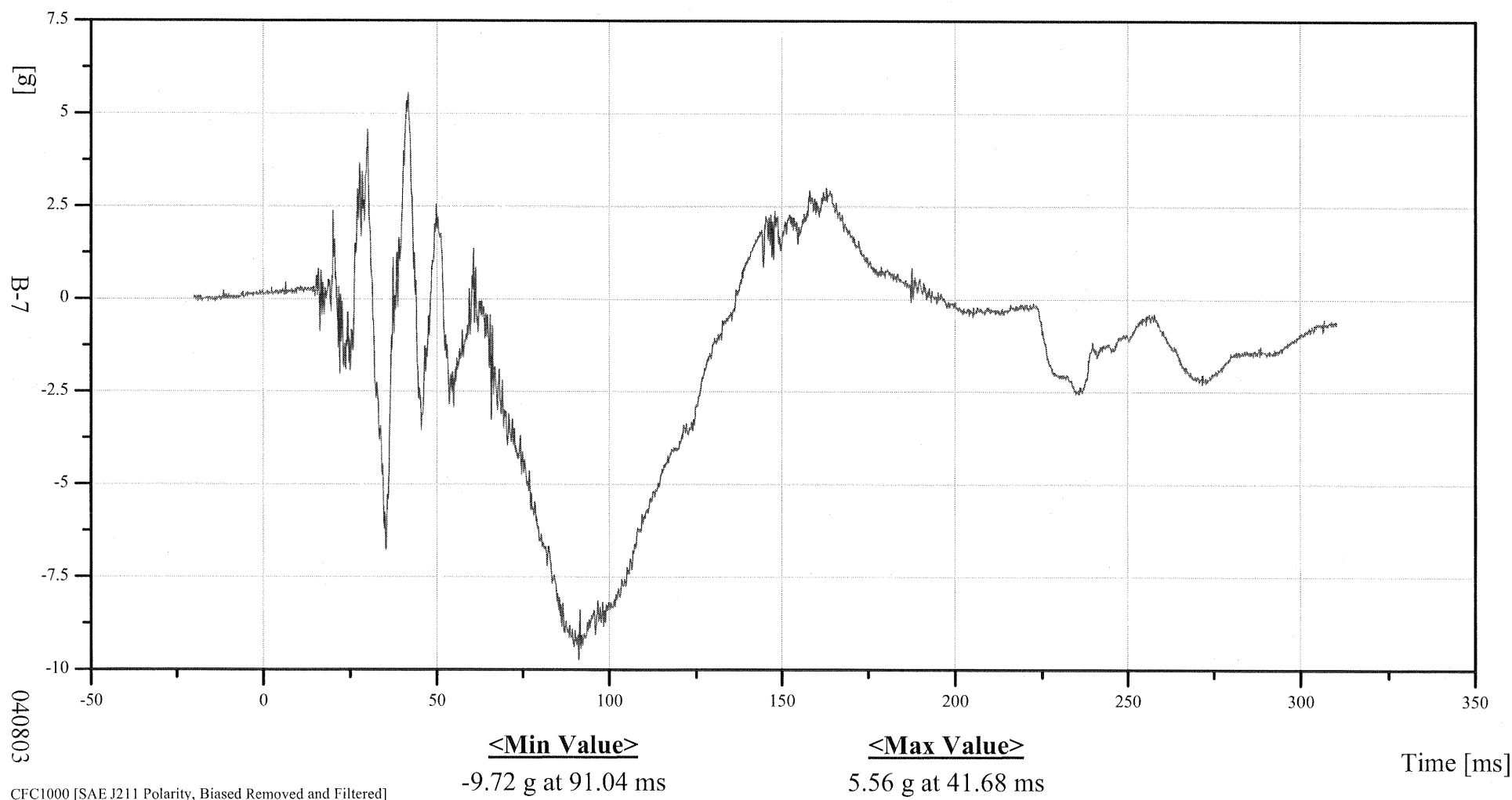
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDYR1





Transportation Research Center, Inc.

Head Accel Red Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

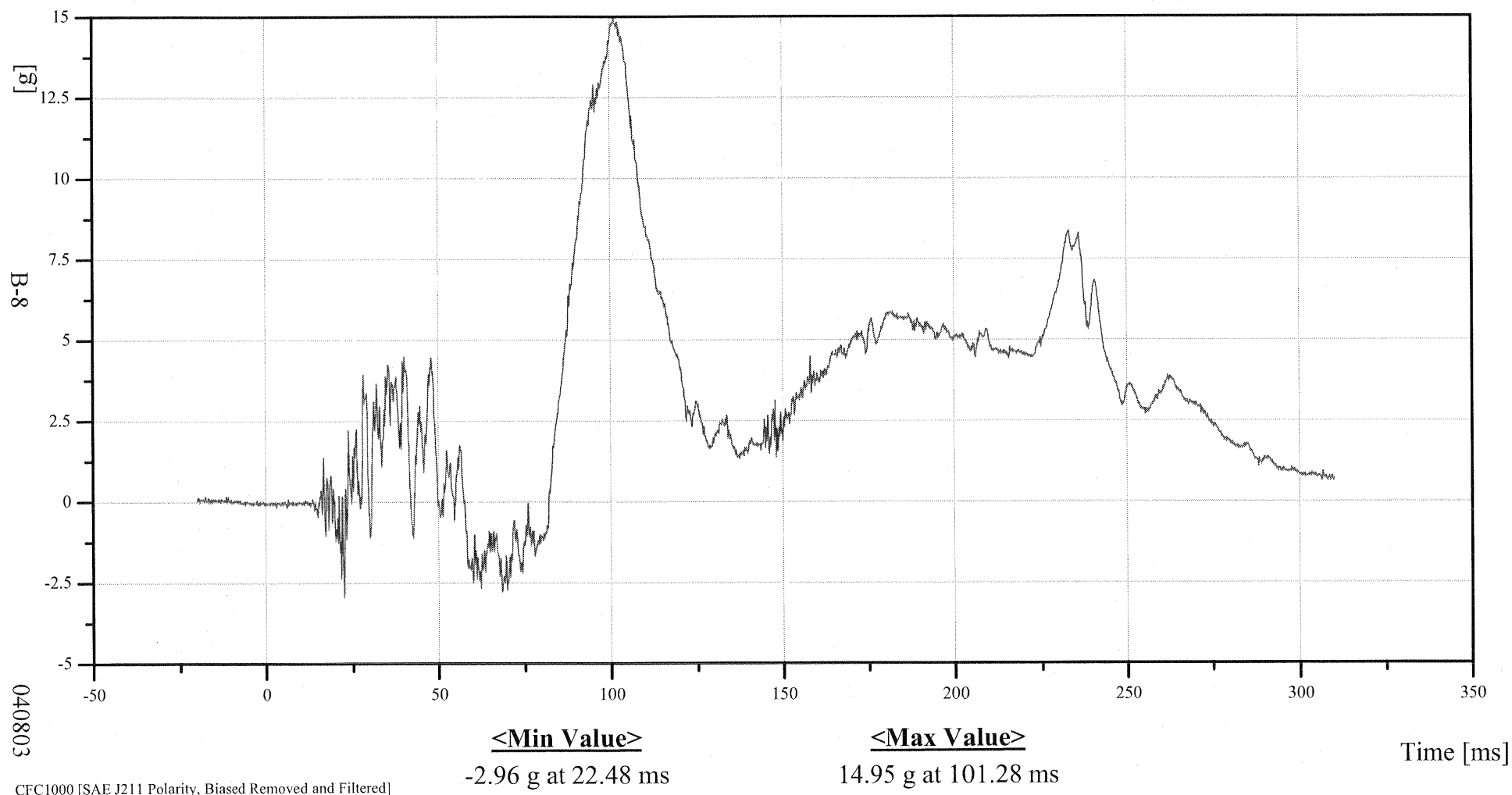
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDZR1





Transportation Research Center, Inc.

Neck Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

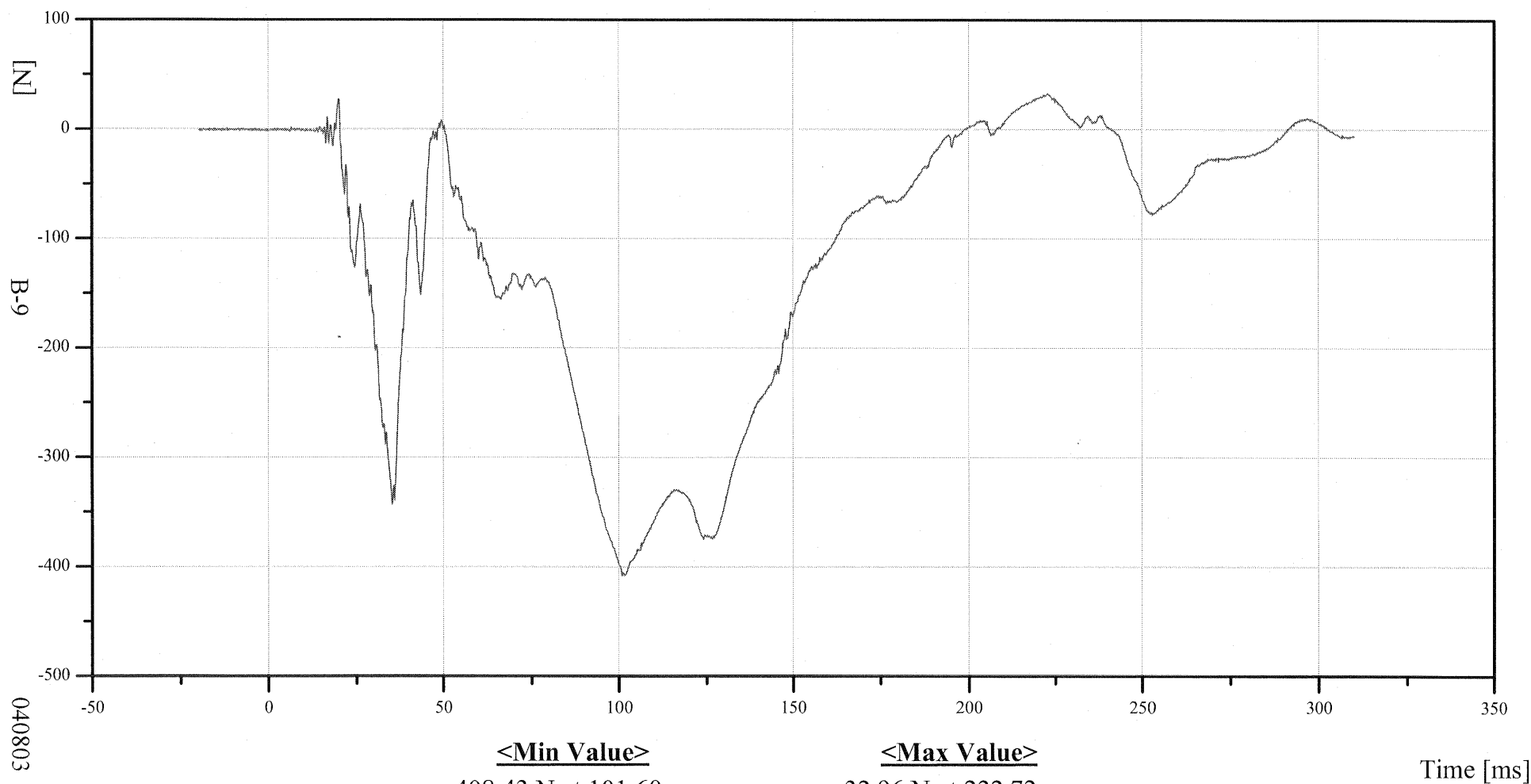
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKXF1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

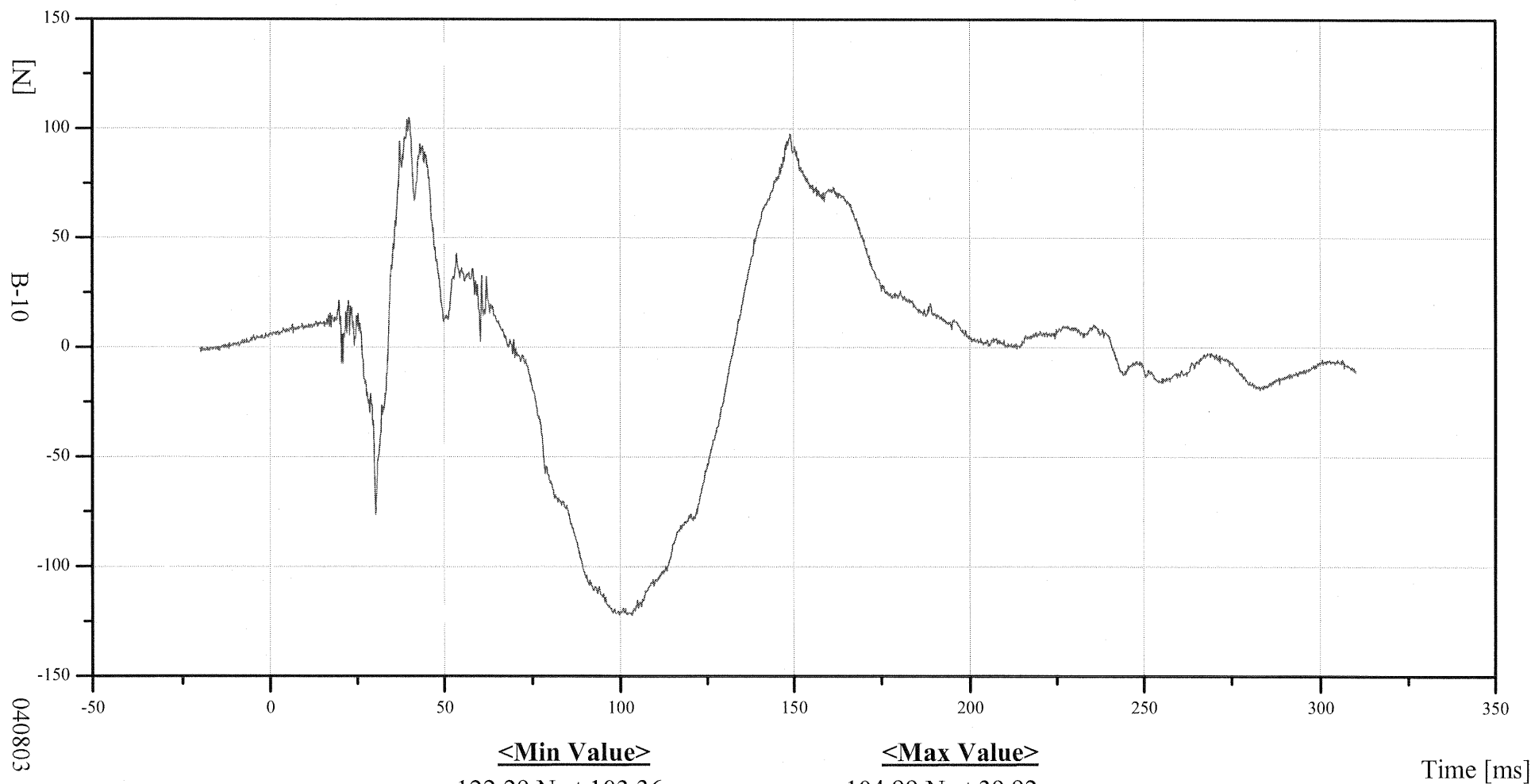
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKYF1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

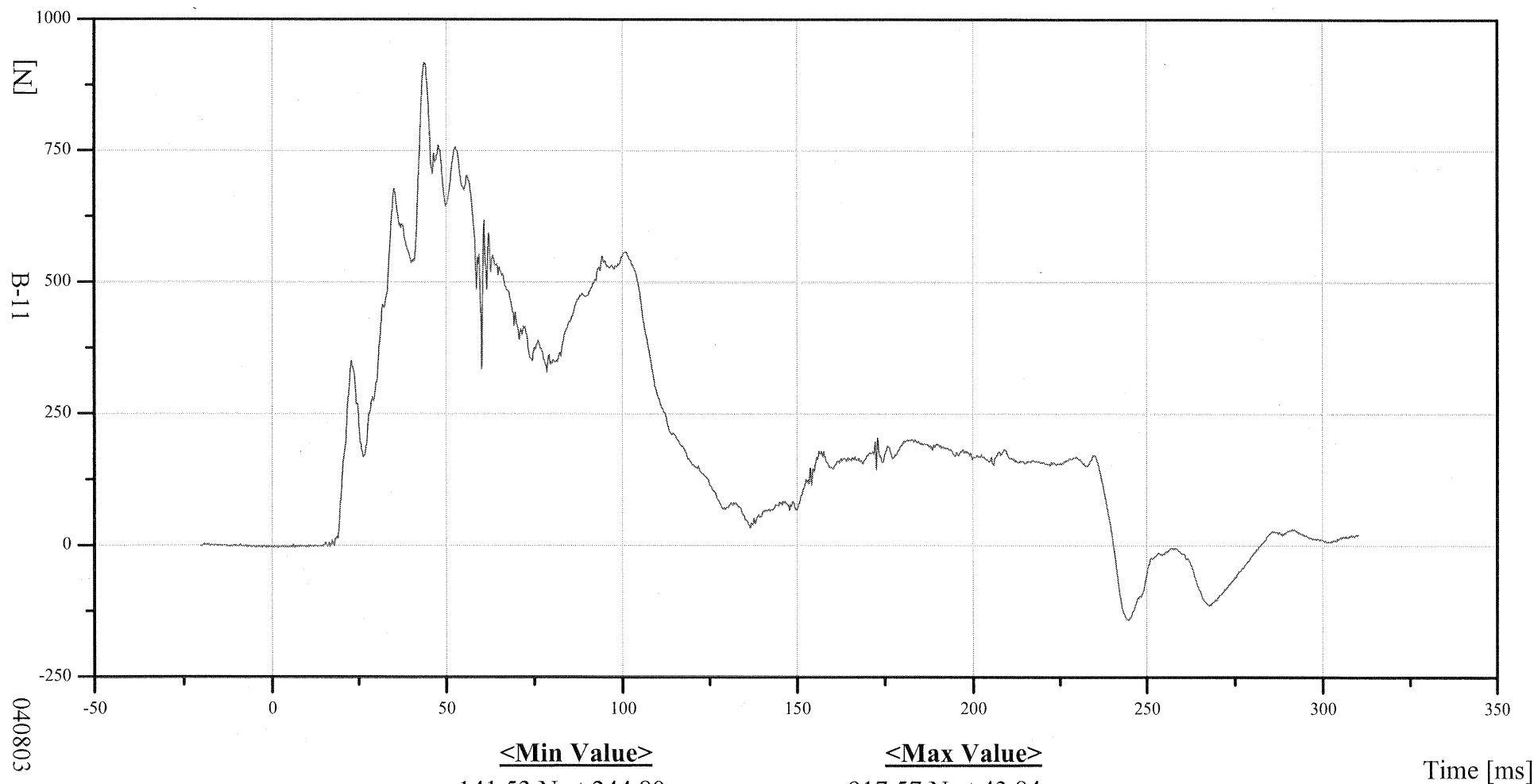
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKZF1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

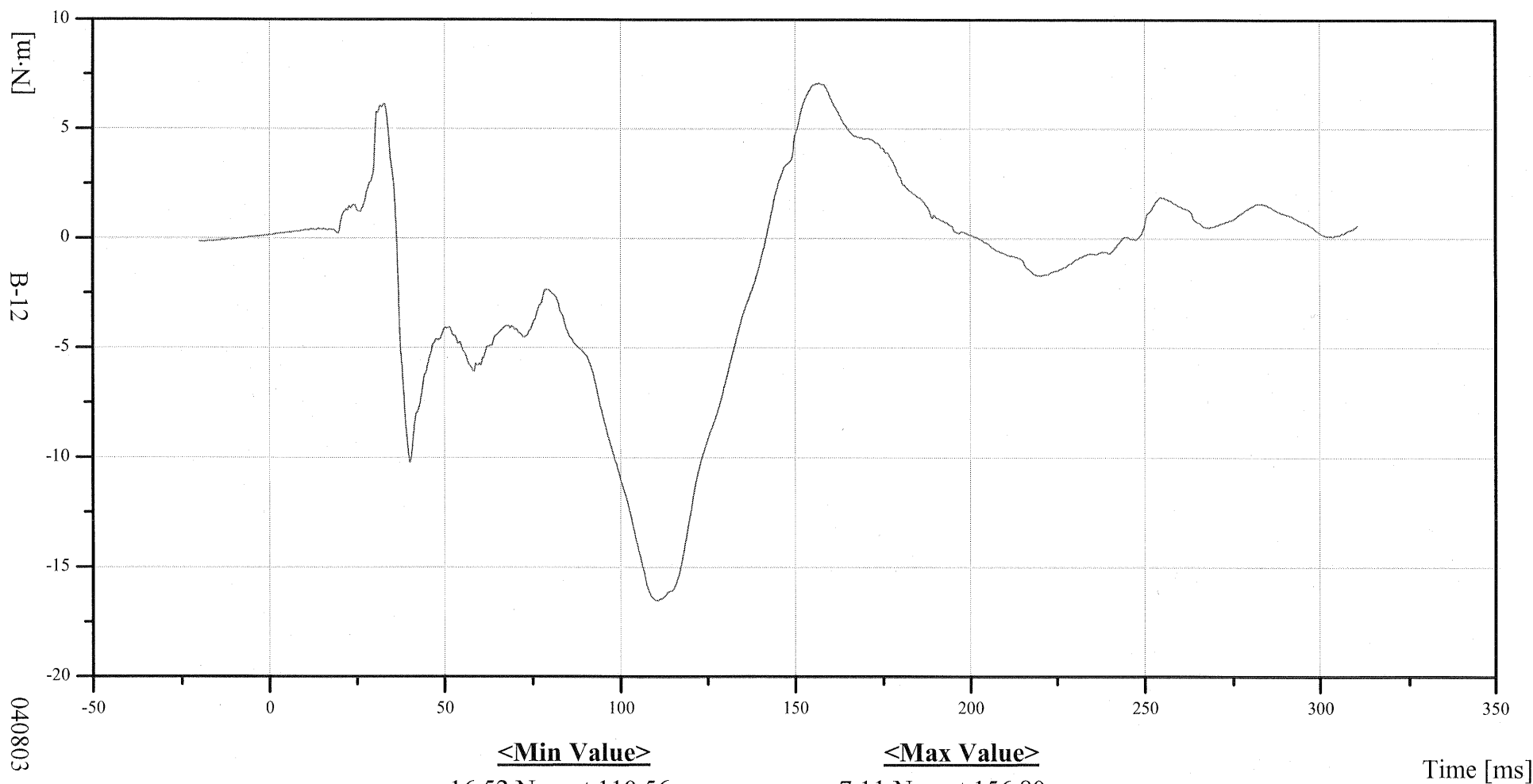
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKXM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

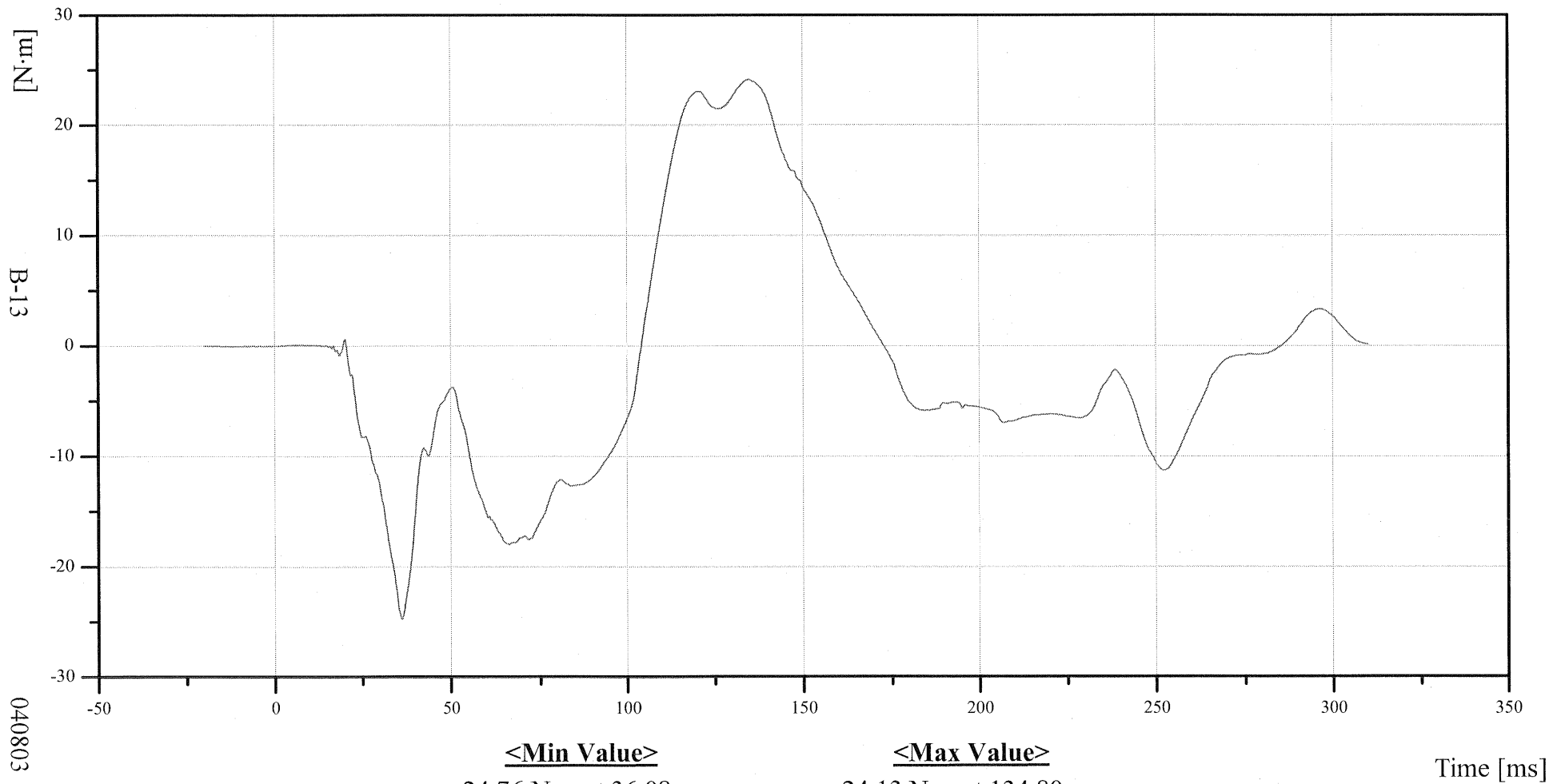
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKYM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Moment Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

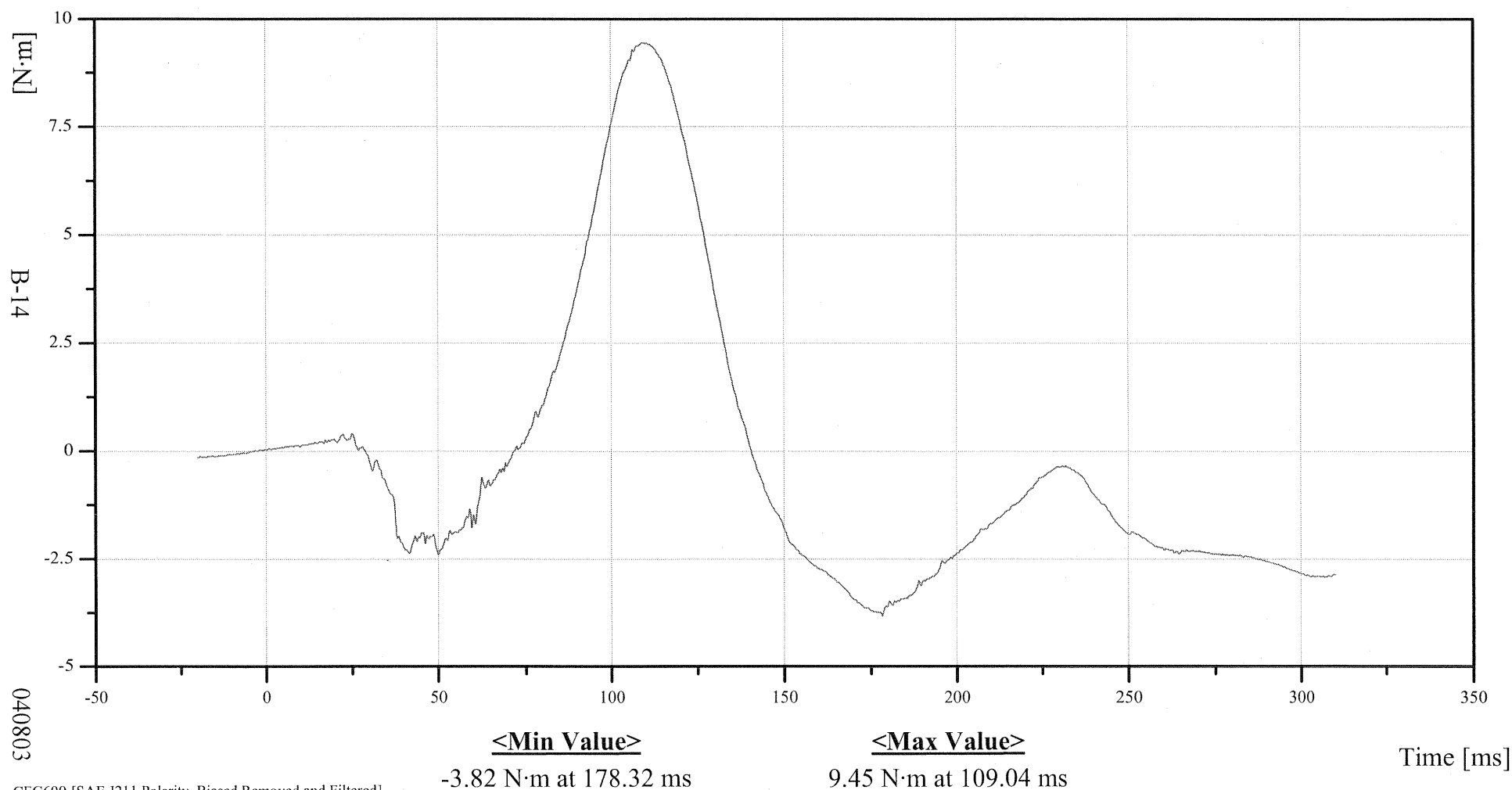
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKZM1





Transportation Research Center, Inc.

Neck Lwr Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

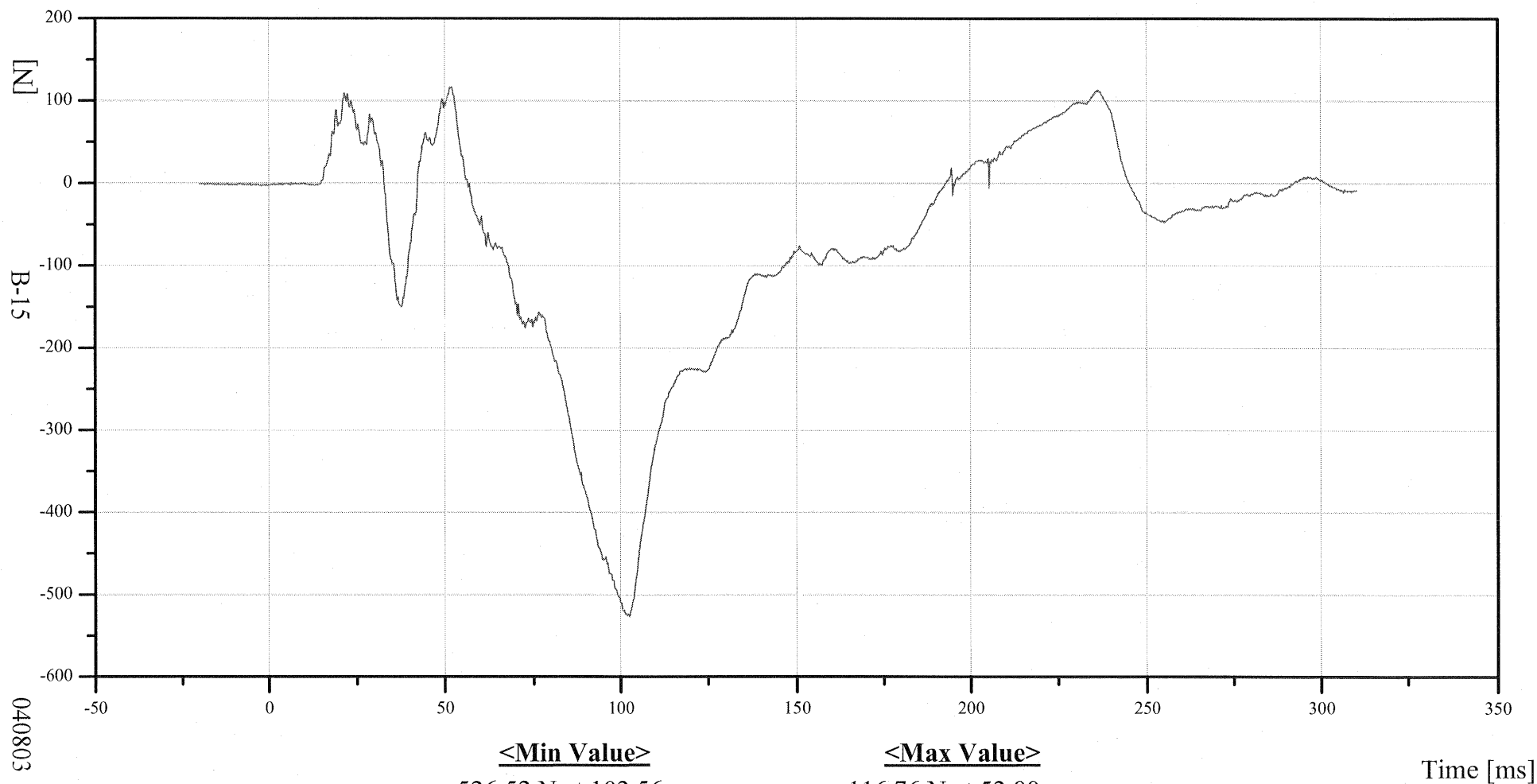
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLXF1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

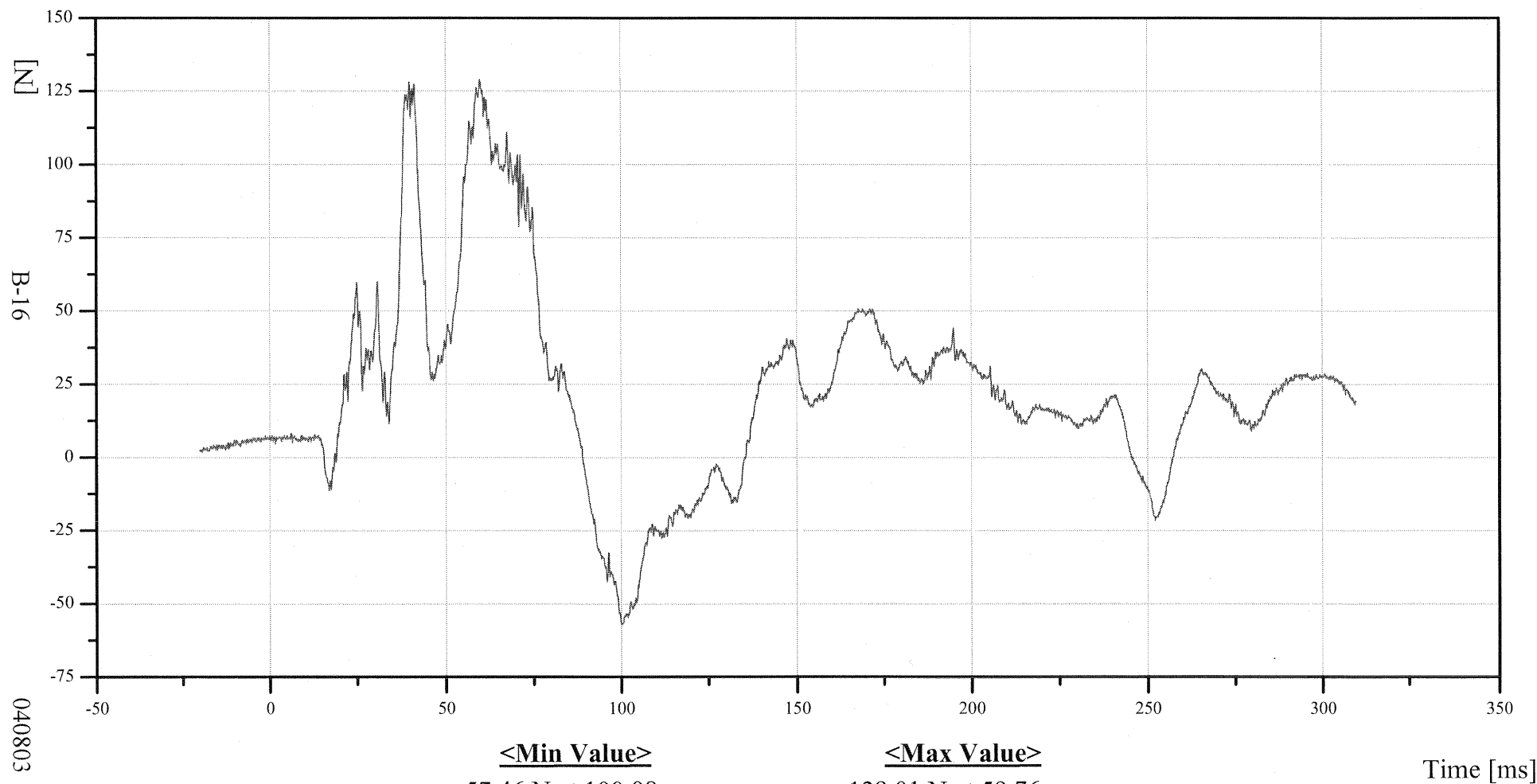
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLYF1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

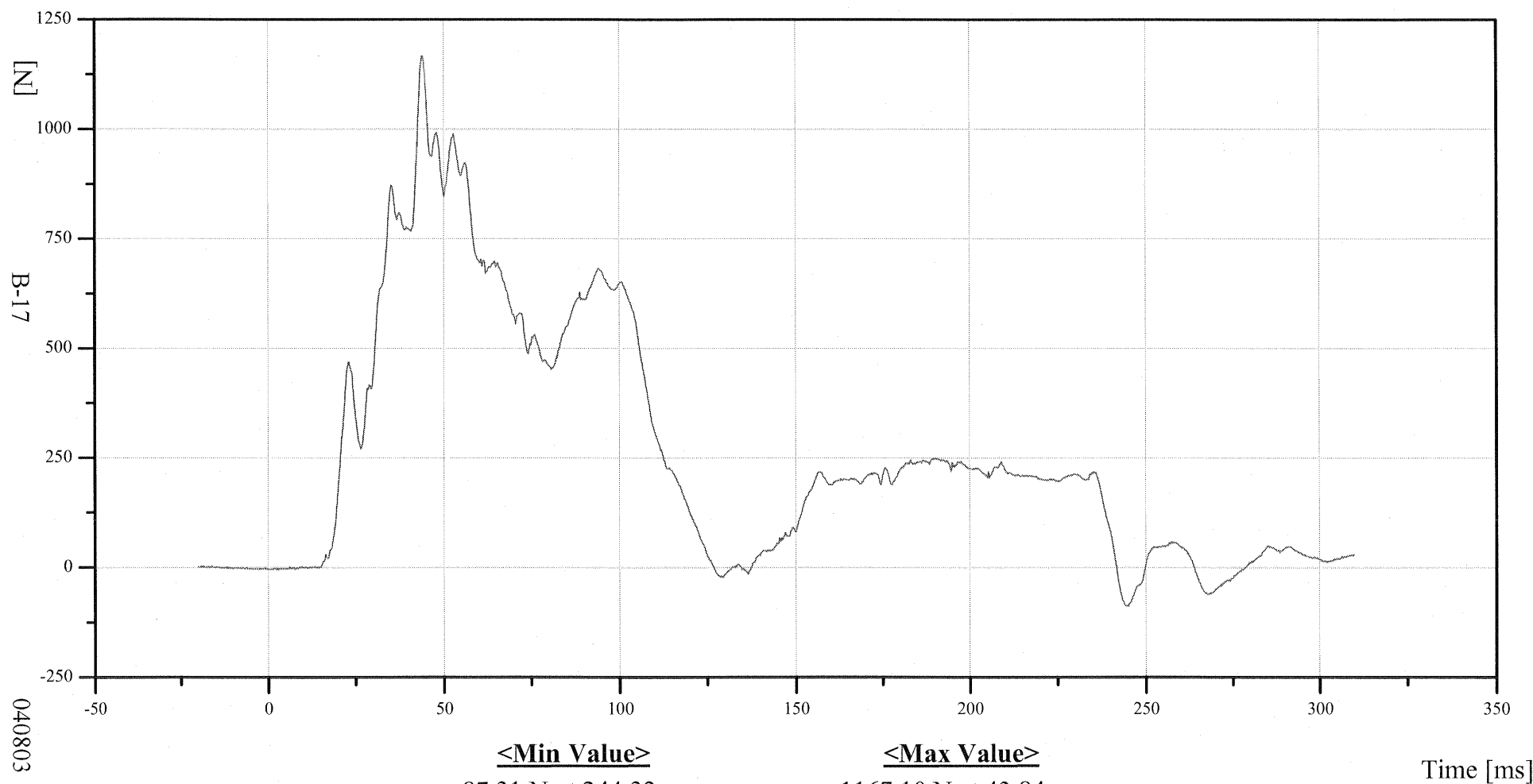
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLZF1



040803

CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

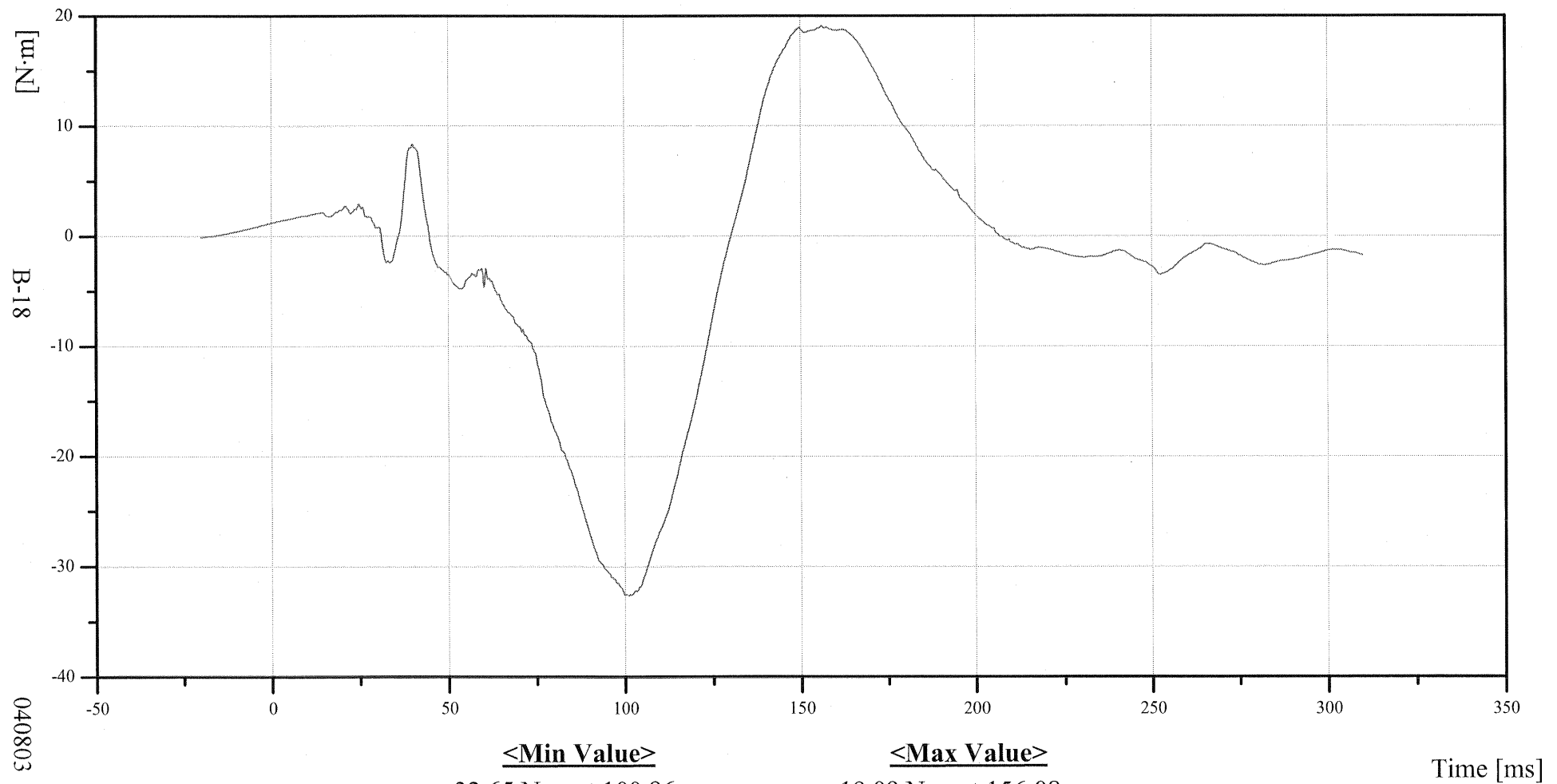
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLXM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

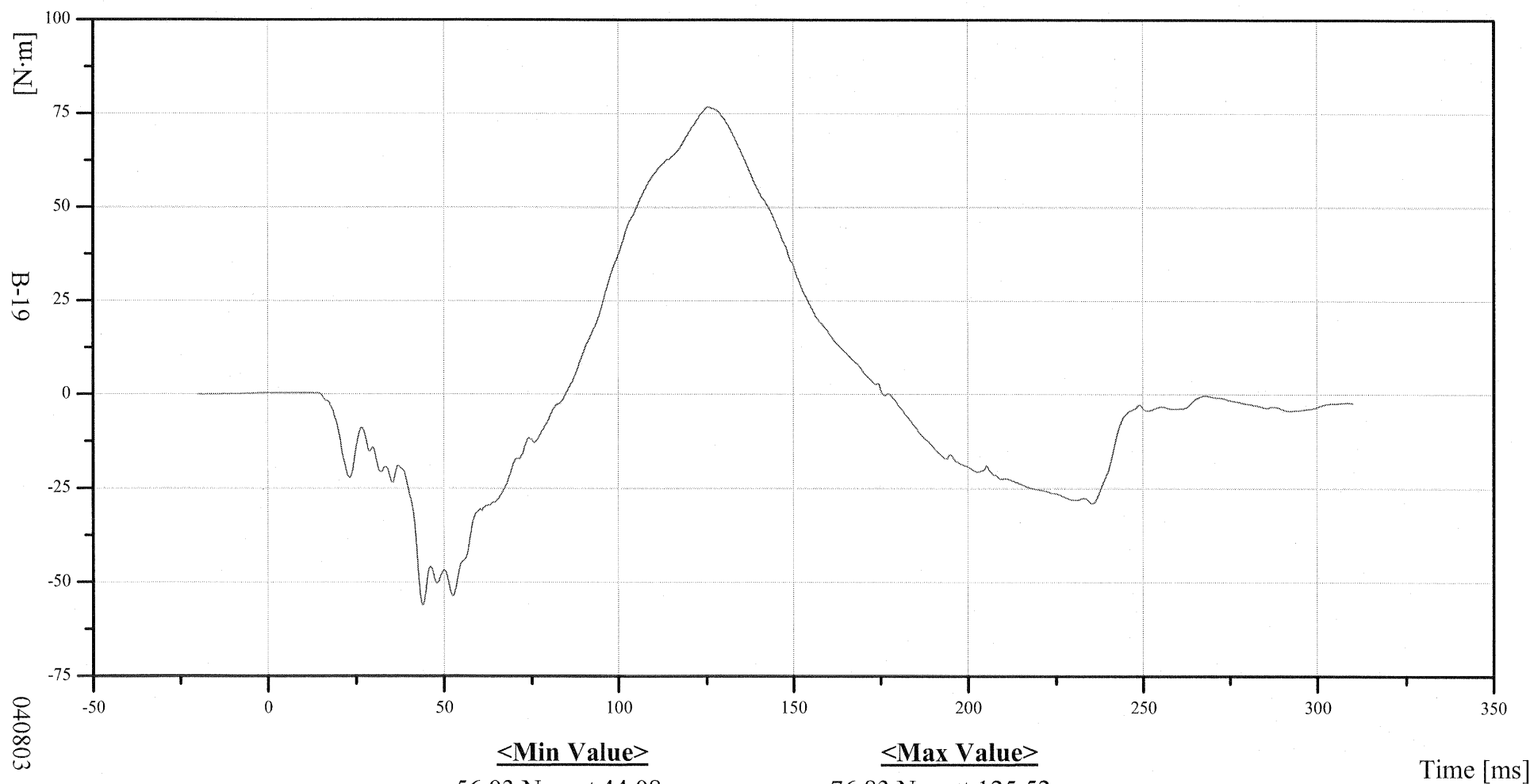
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLYM1



CF600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

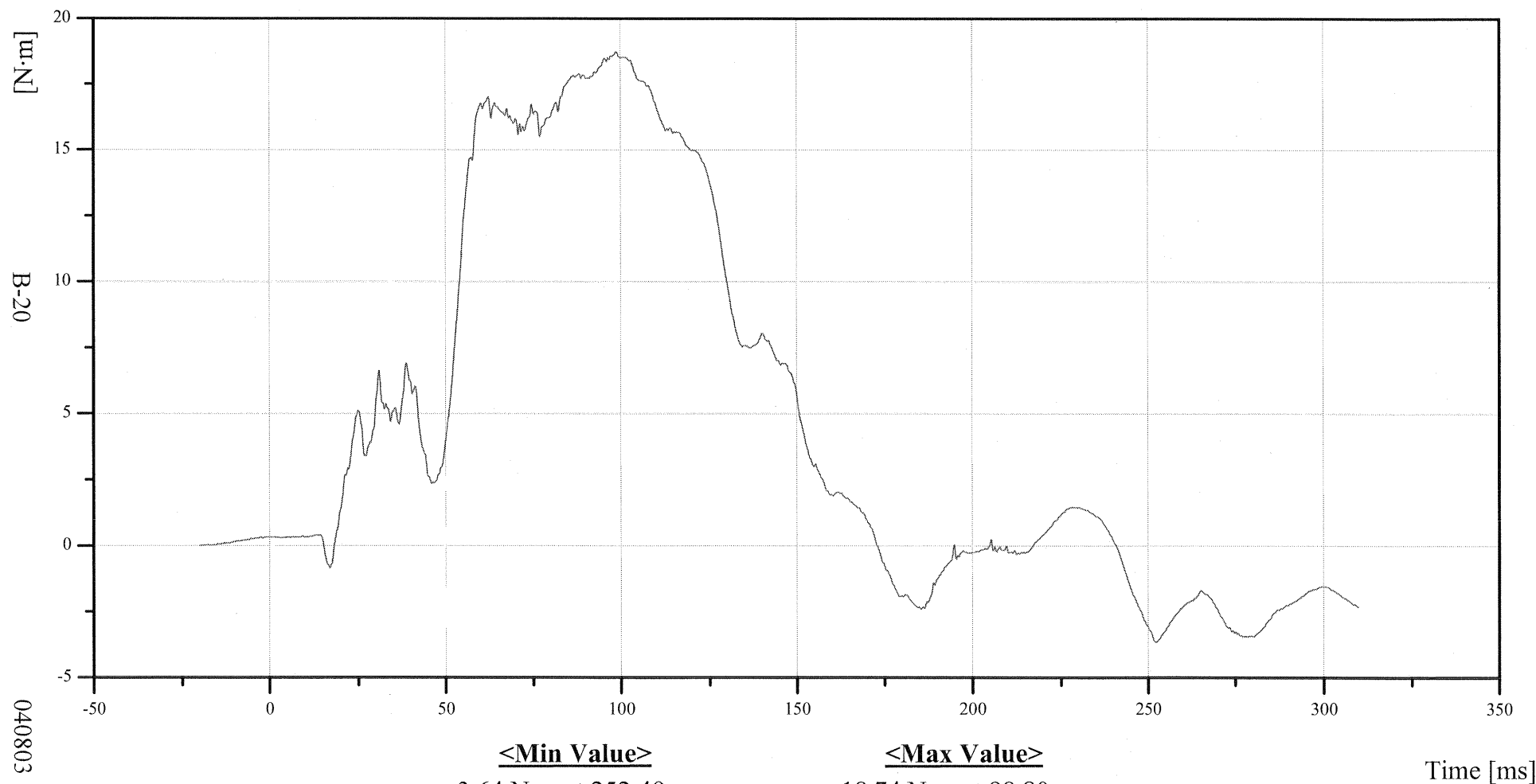
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLZM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

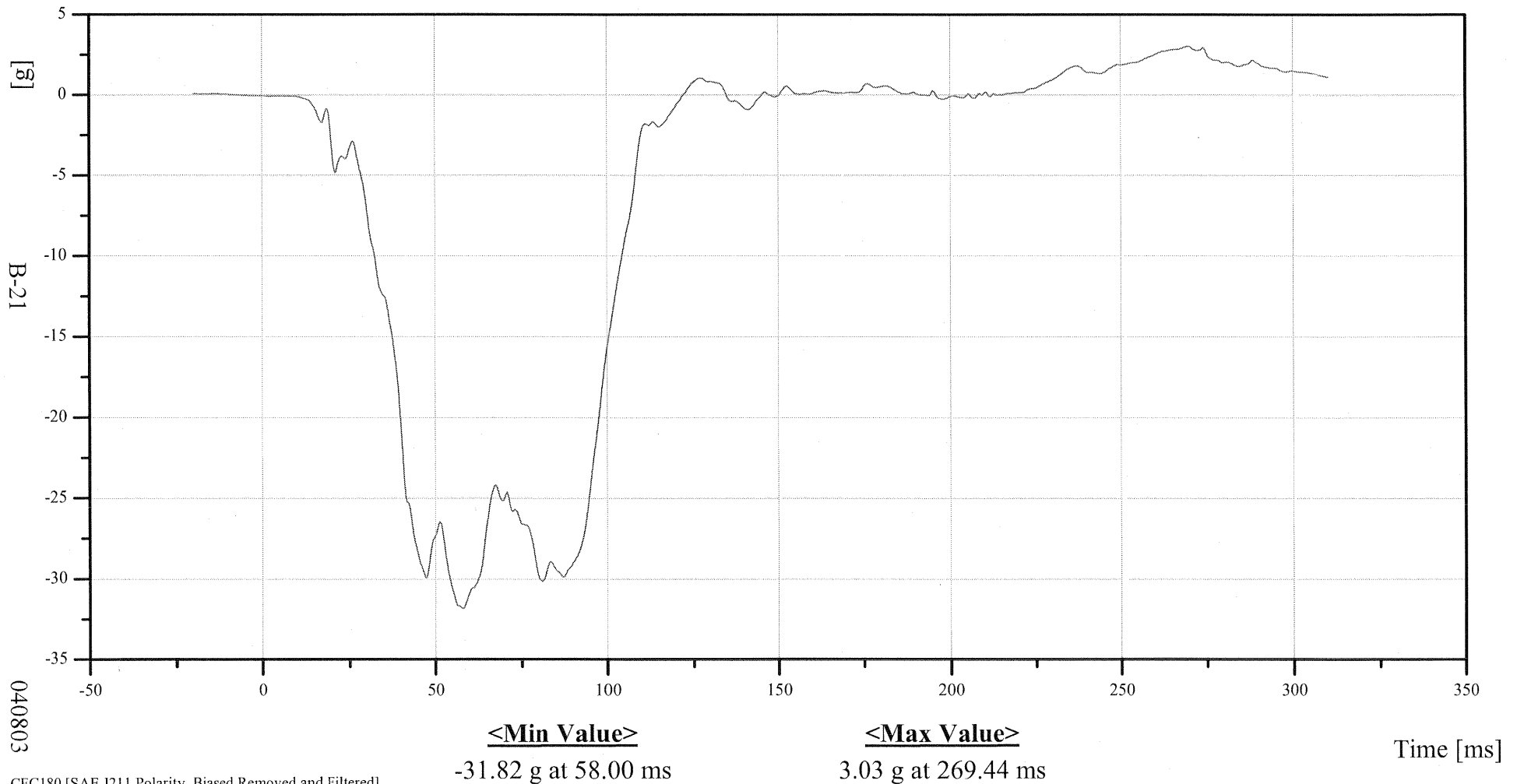
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXG1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

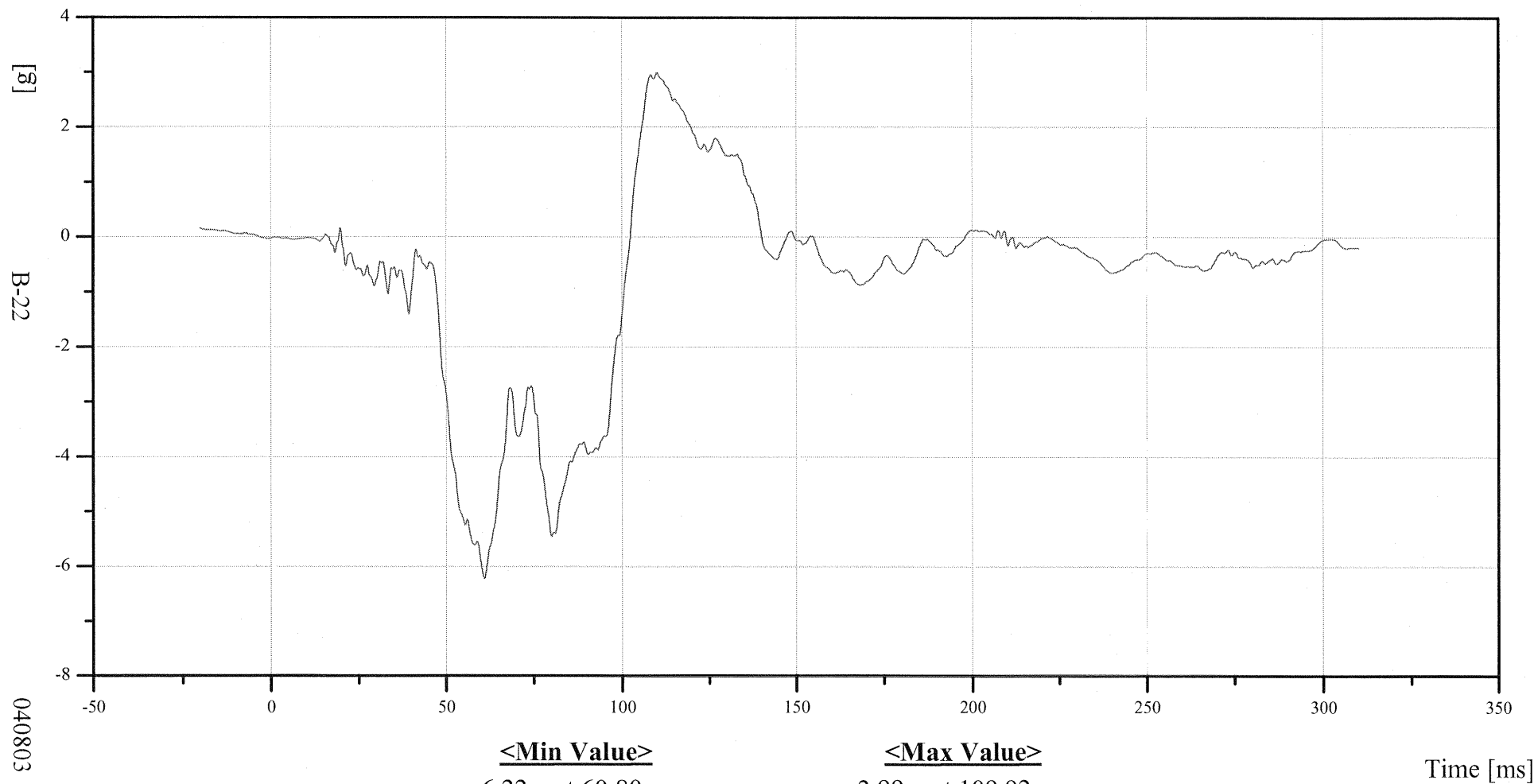
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTYG1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

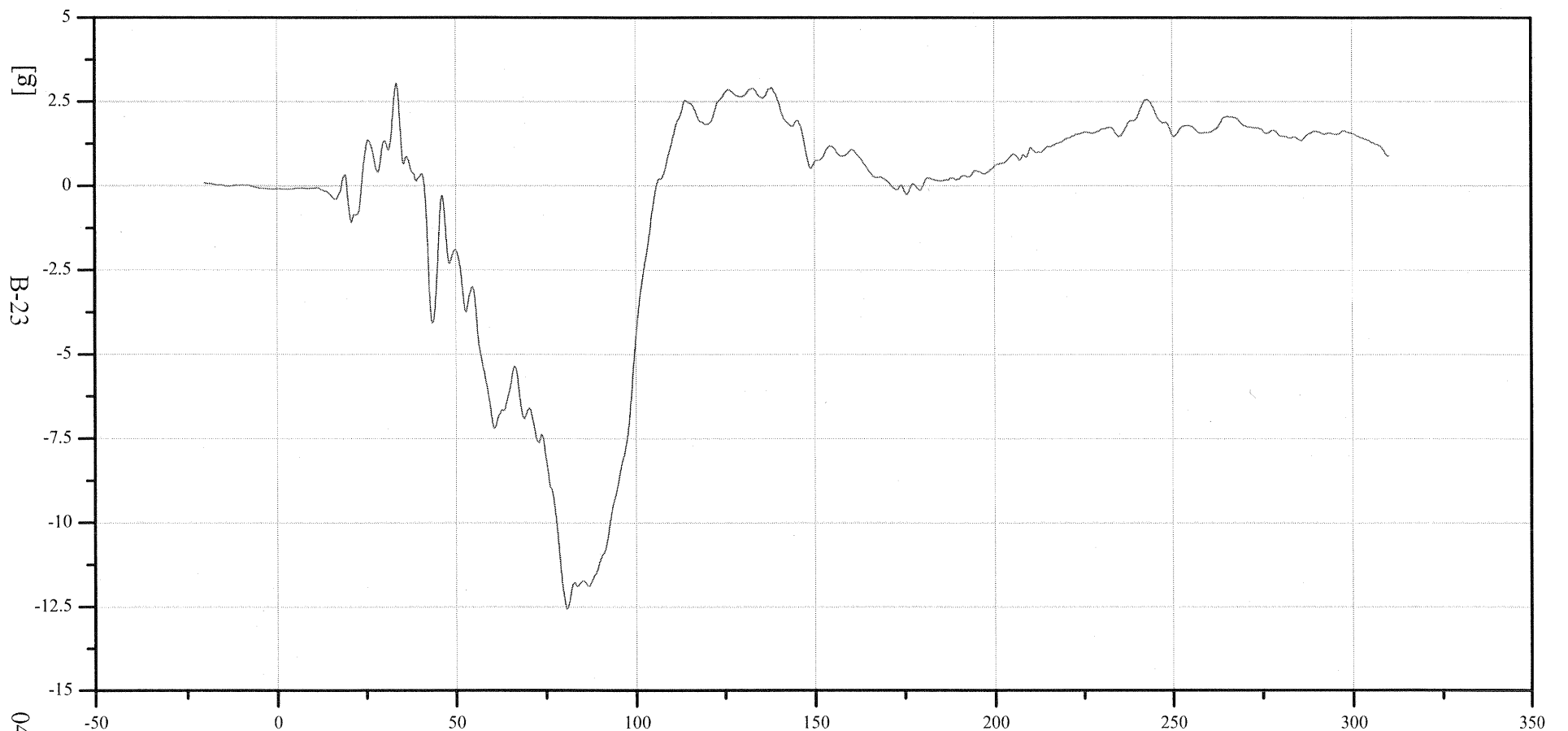
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTZG1



040803

CFC180 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>
-12.56 g at 80.80 ms

<Max Value>
3.04 g at 33.52 ms

Time [ms]



Transportation Research Center, Inc.

Chest Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

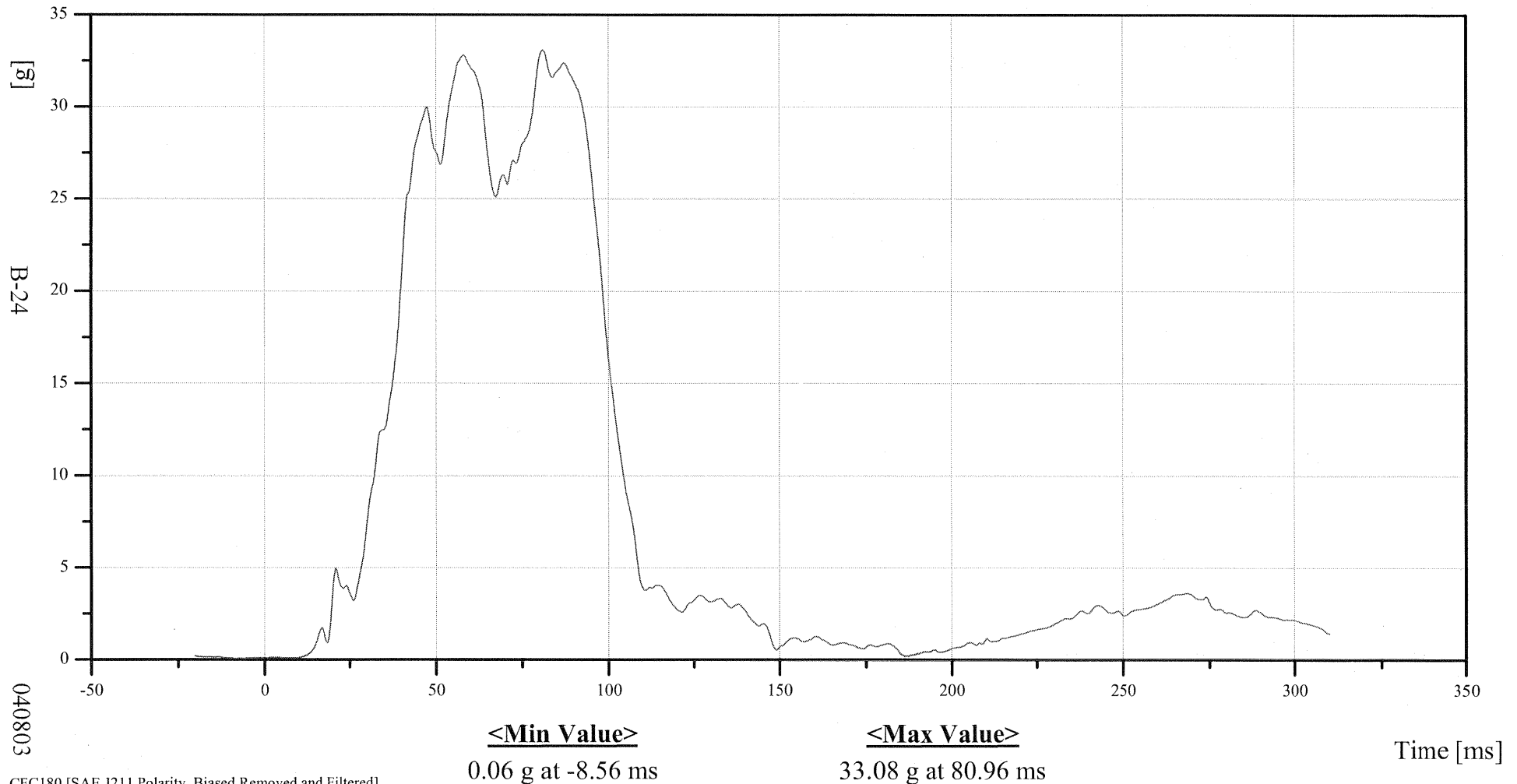
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTRG1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel Red X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

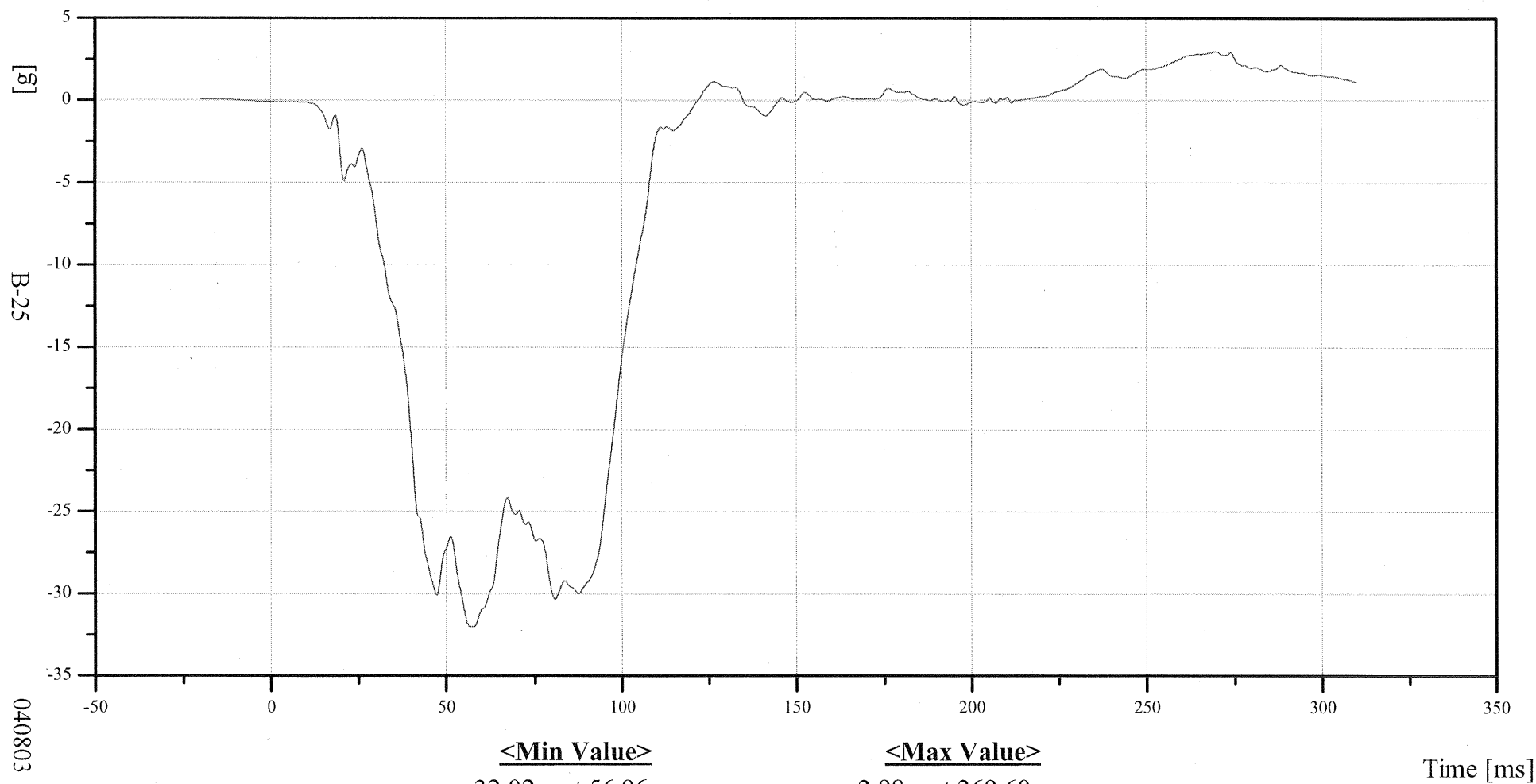
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXR1



040803

CFC180 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>
-32.02 g at 56.96 ms

<Max Value>
2.98 g at 269.60 ms

Time [ms]



Transportation Research Center, Inc.

Chest Accel Red Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

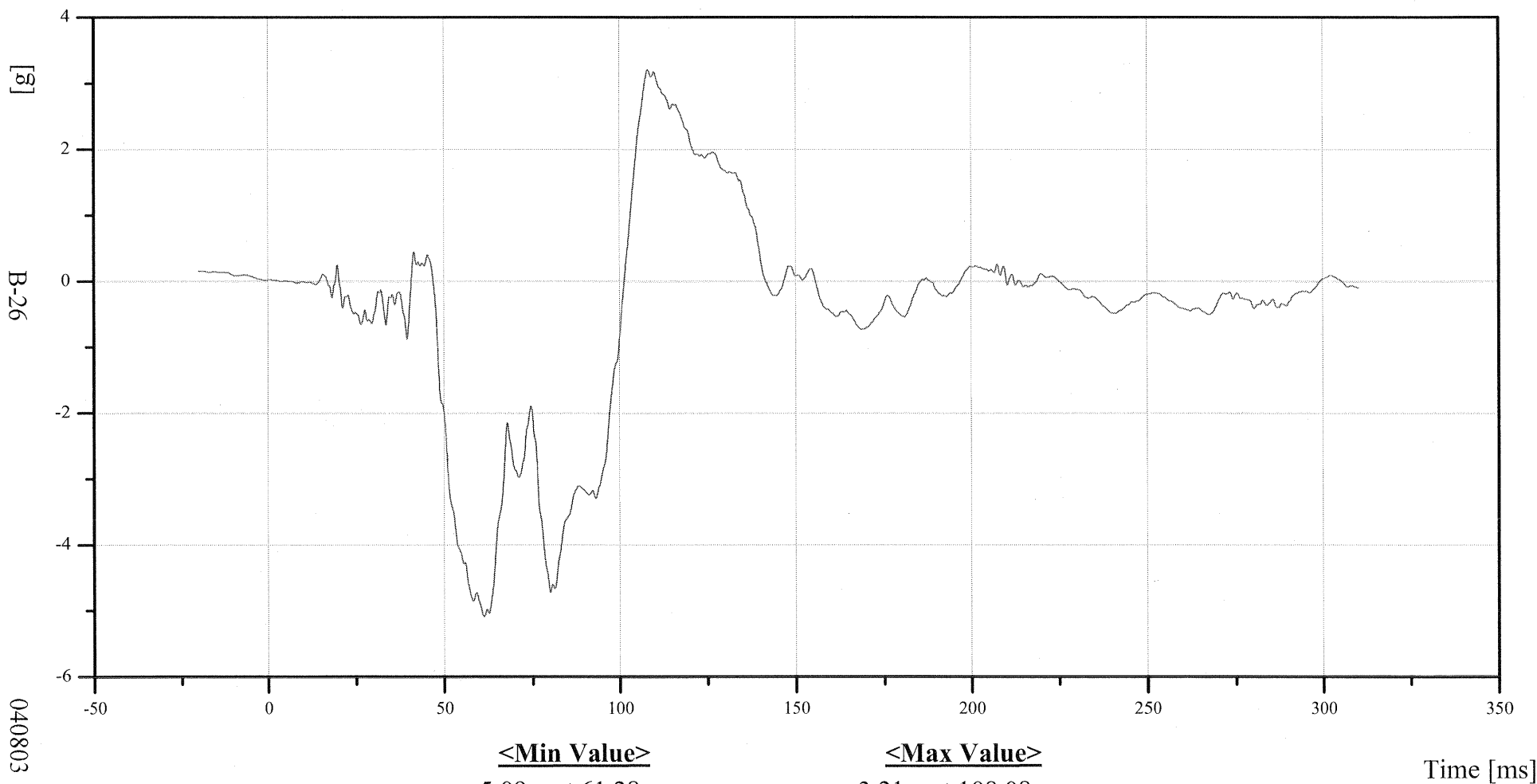
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTYR1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel Red Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

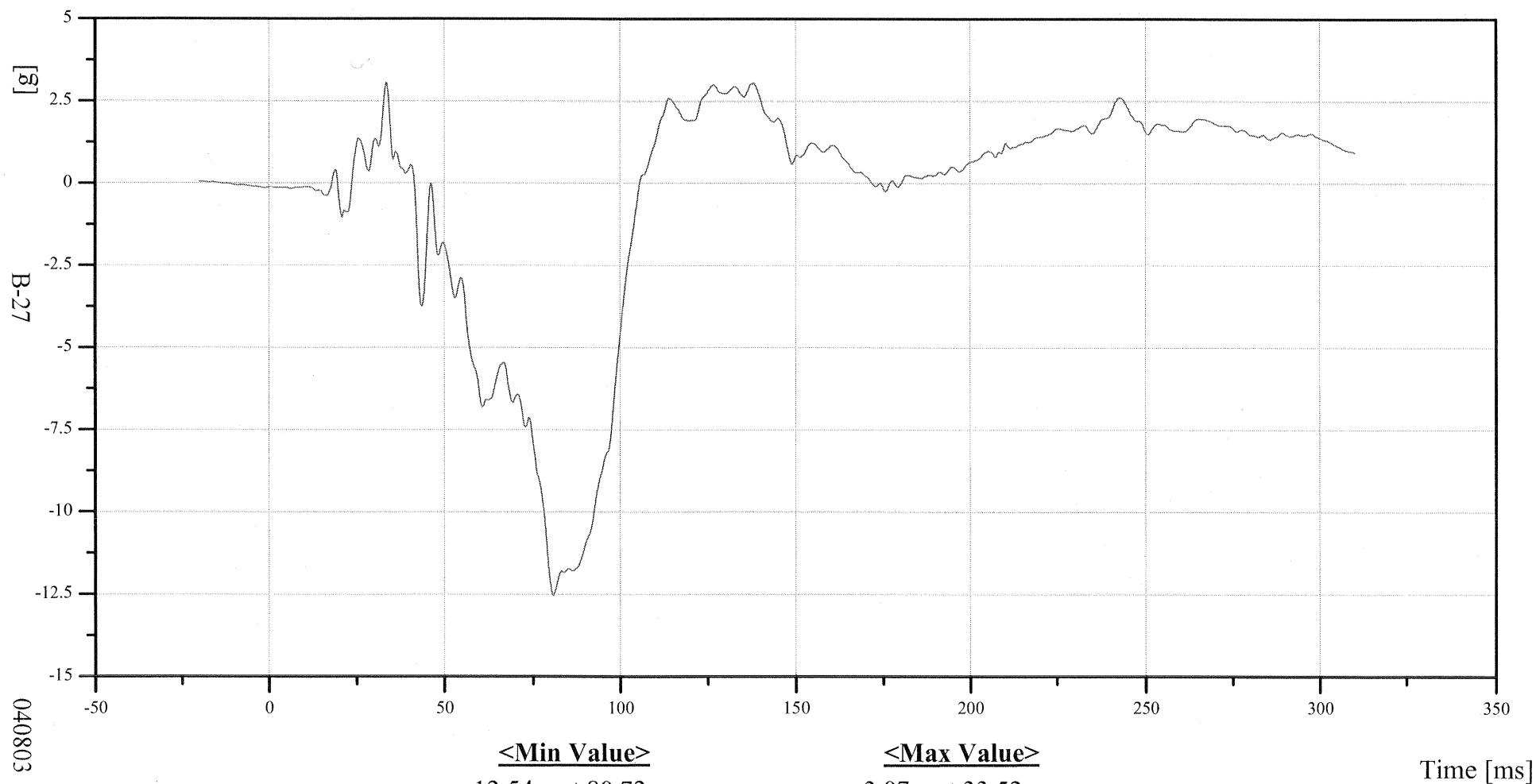
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTZR1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Deflection X 516

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

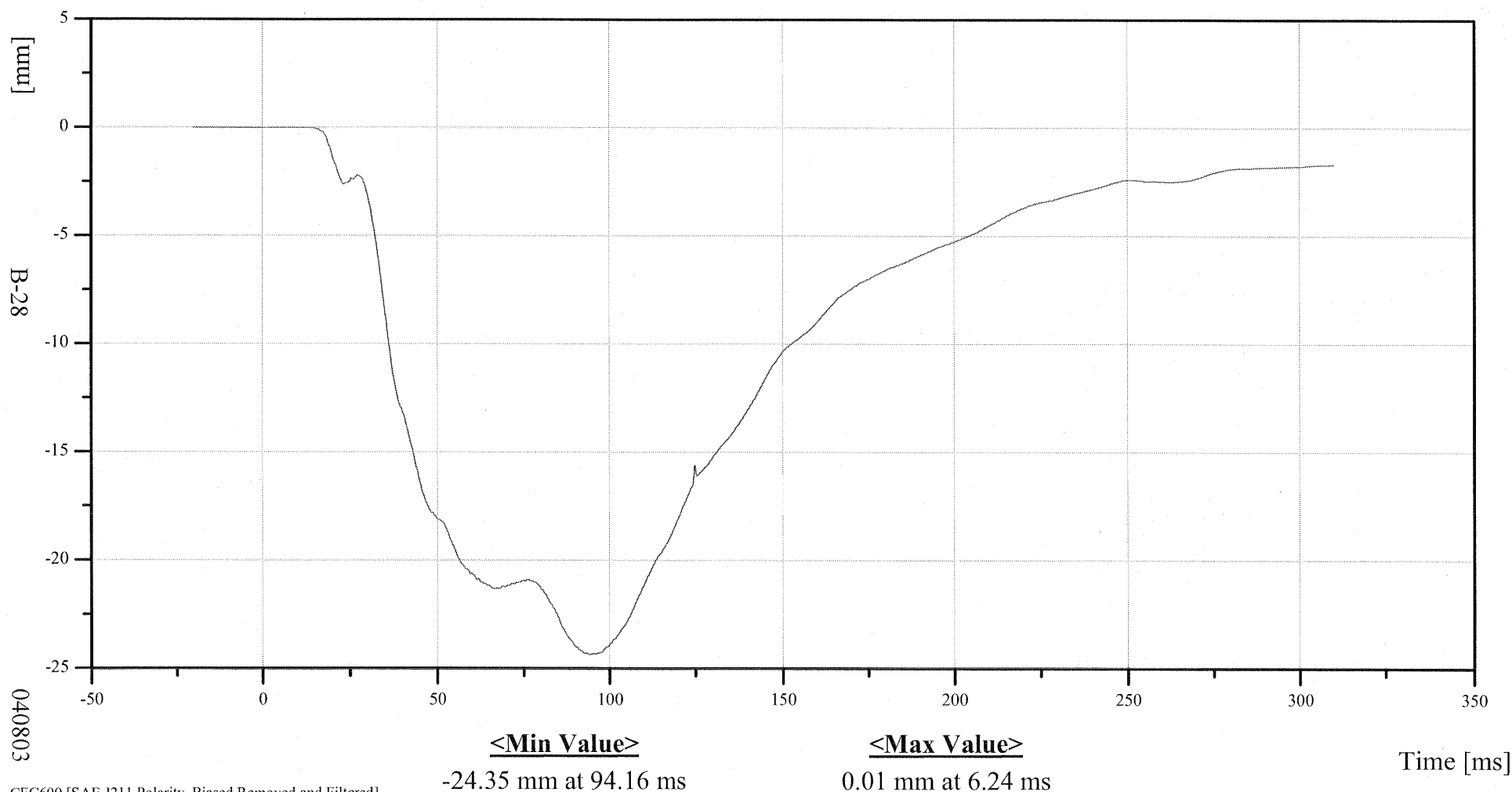
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXD1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Pelvis Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

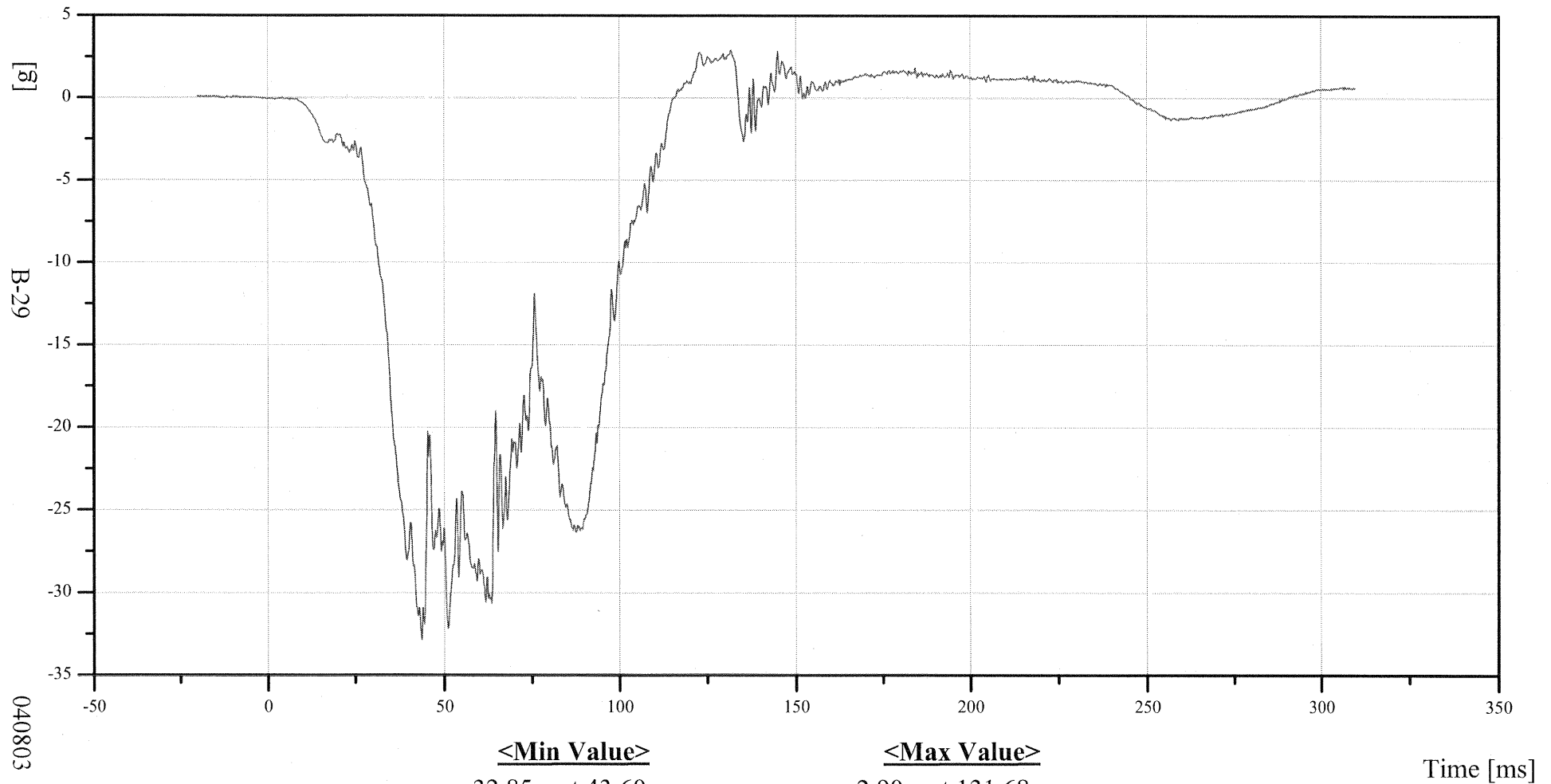
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVXG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Pelvis Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

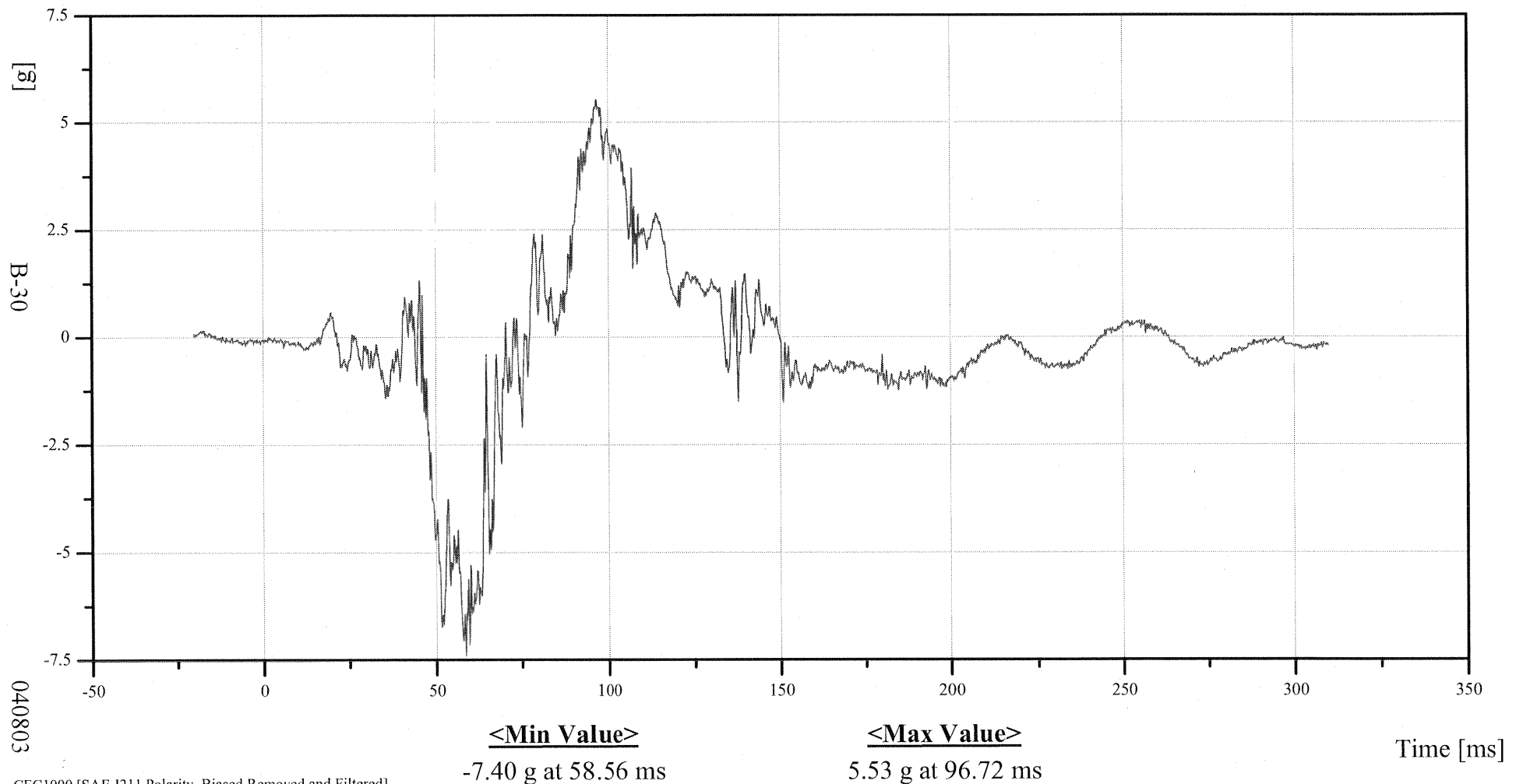
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVYG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Pelvis Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

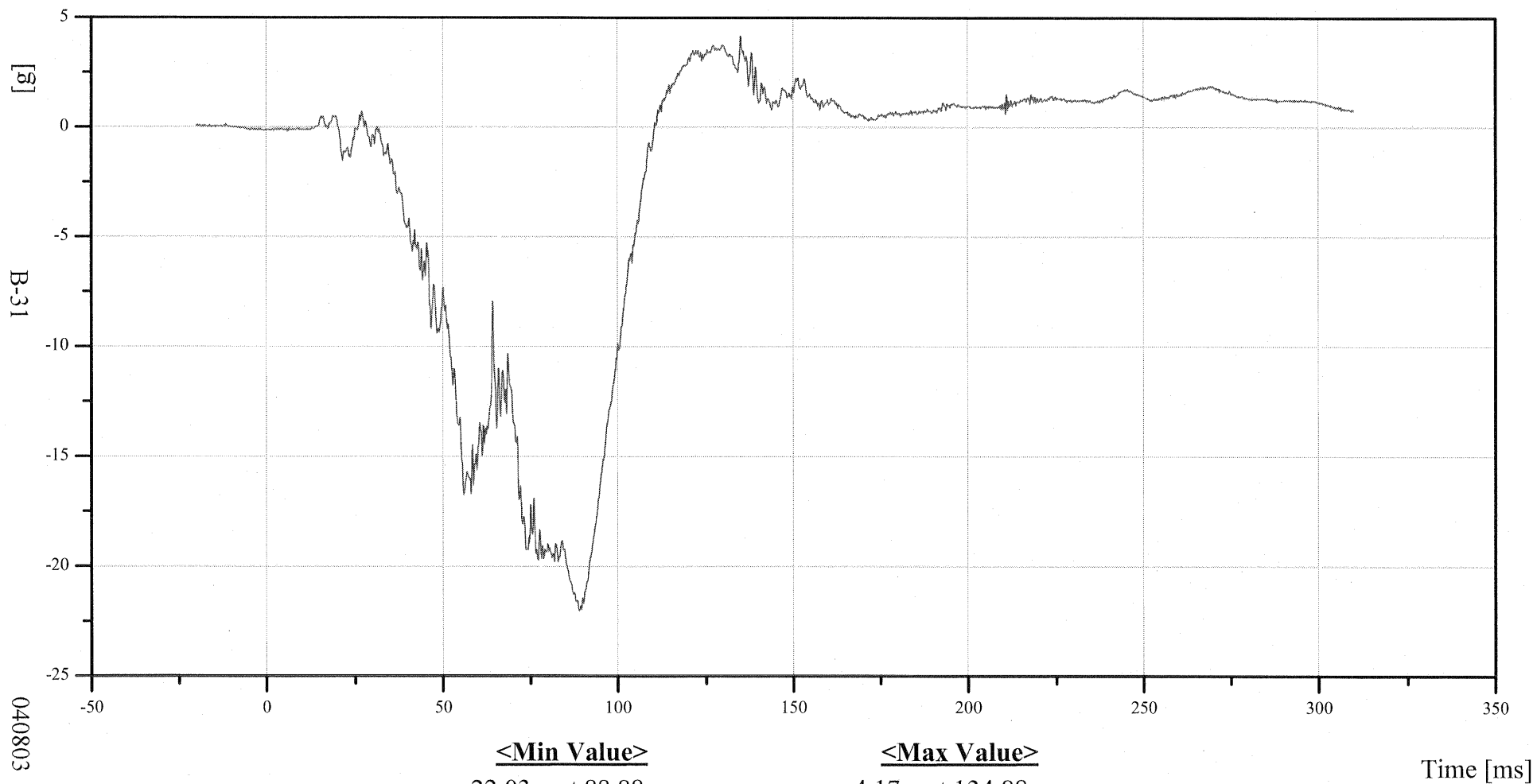
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVZG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Pelvis Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

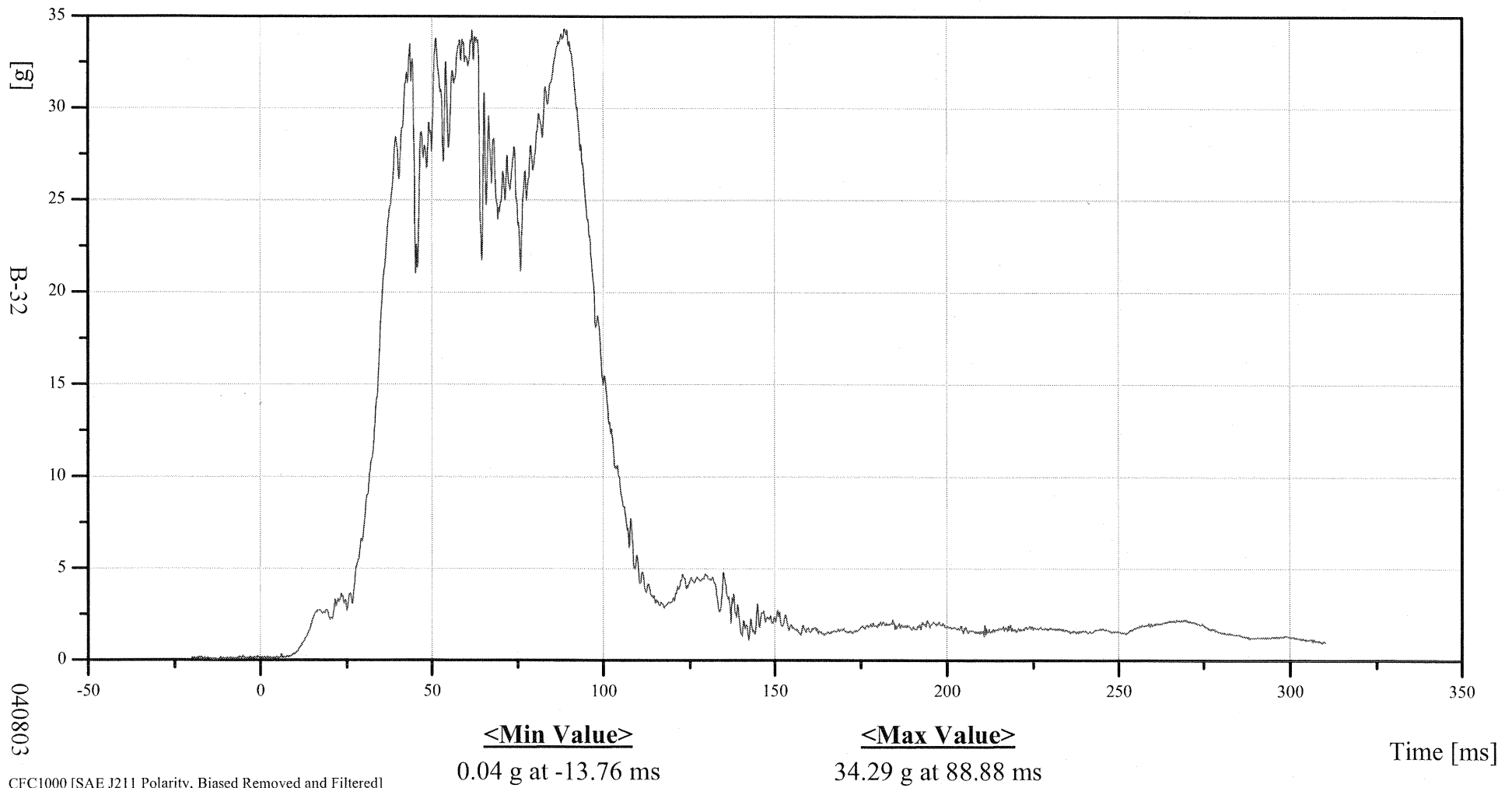
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVRG1





Transportation Research Center, Inc.

Left Femur Force Z #8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

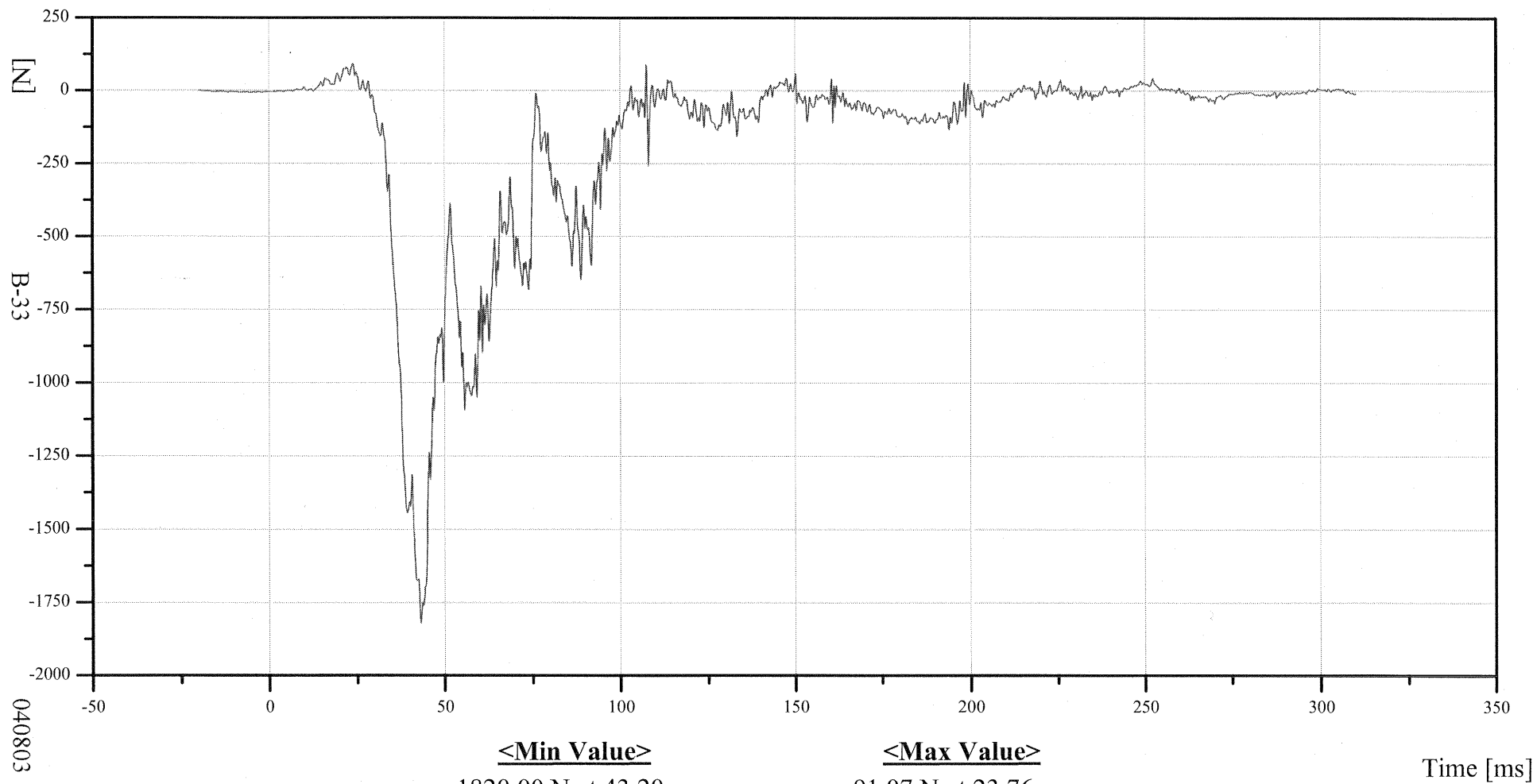
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LFMZ1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Knee Displacement

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

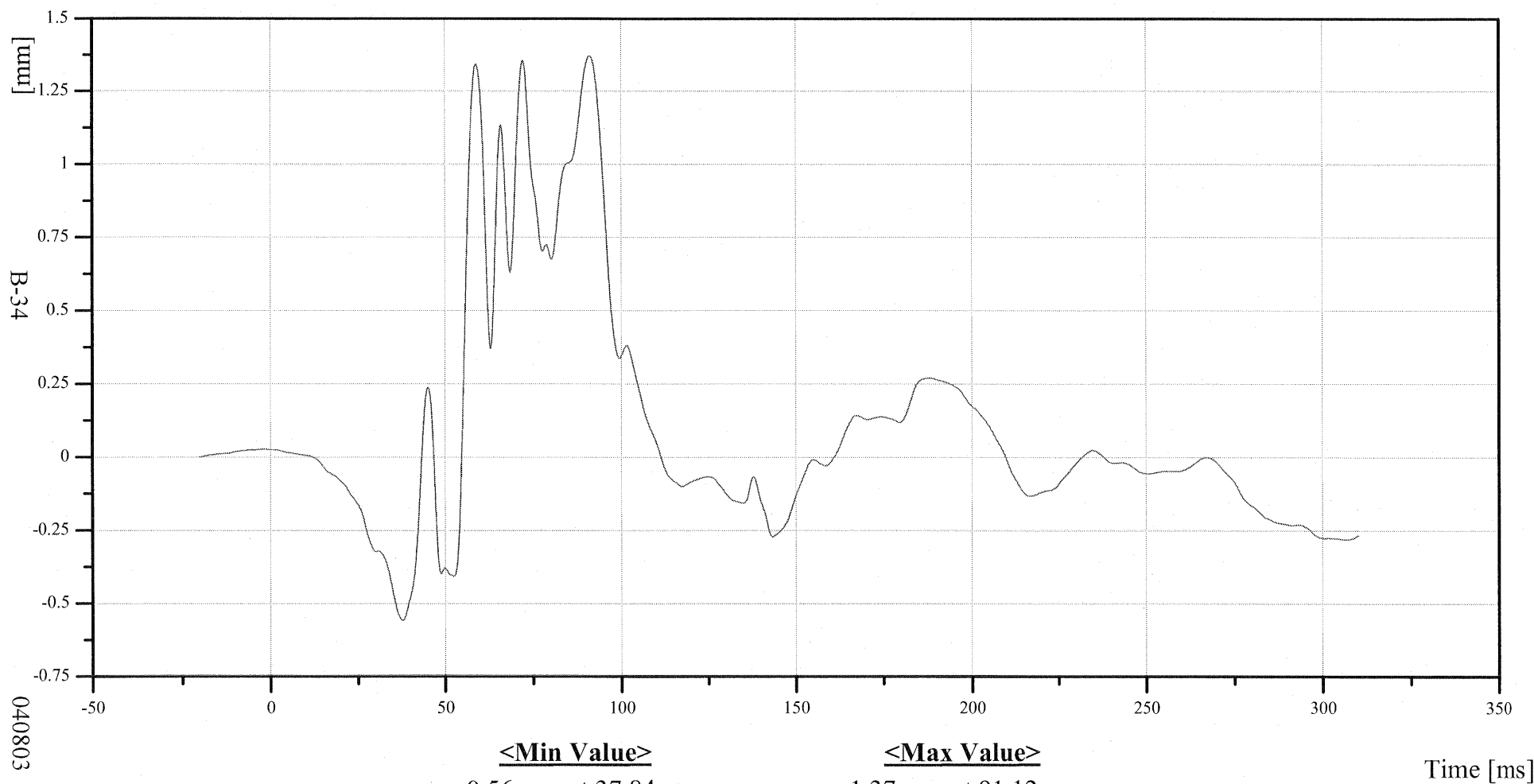
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

KNLXD1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Upr Tibia Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

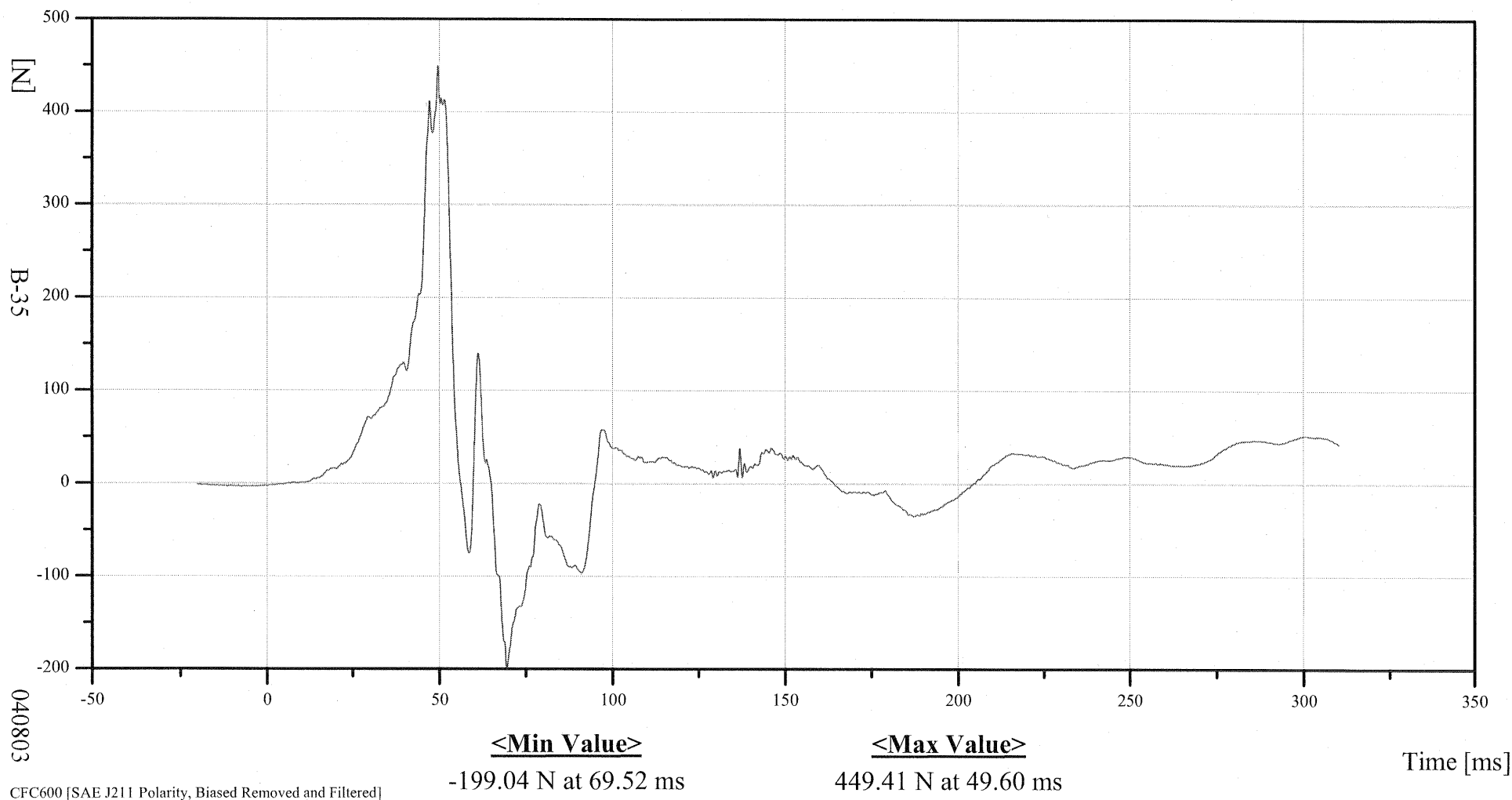
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBLXF1





Transportation Research Center, Inc.

Left Upr Tibia Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

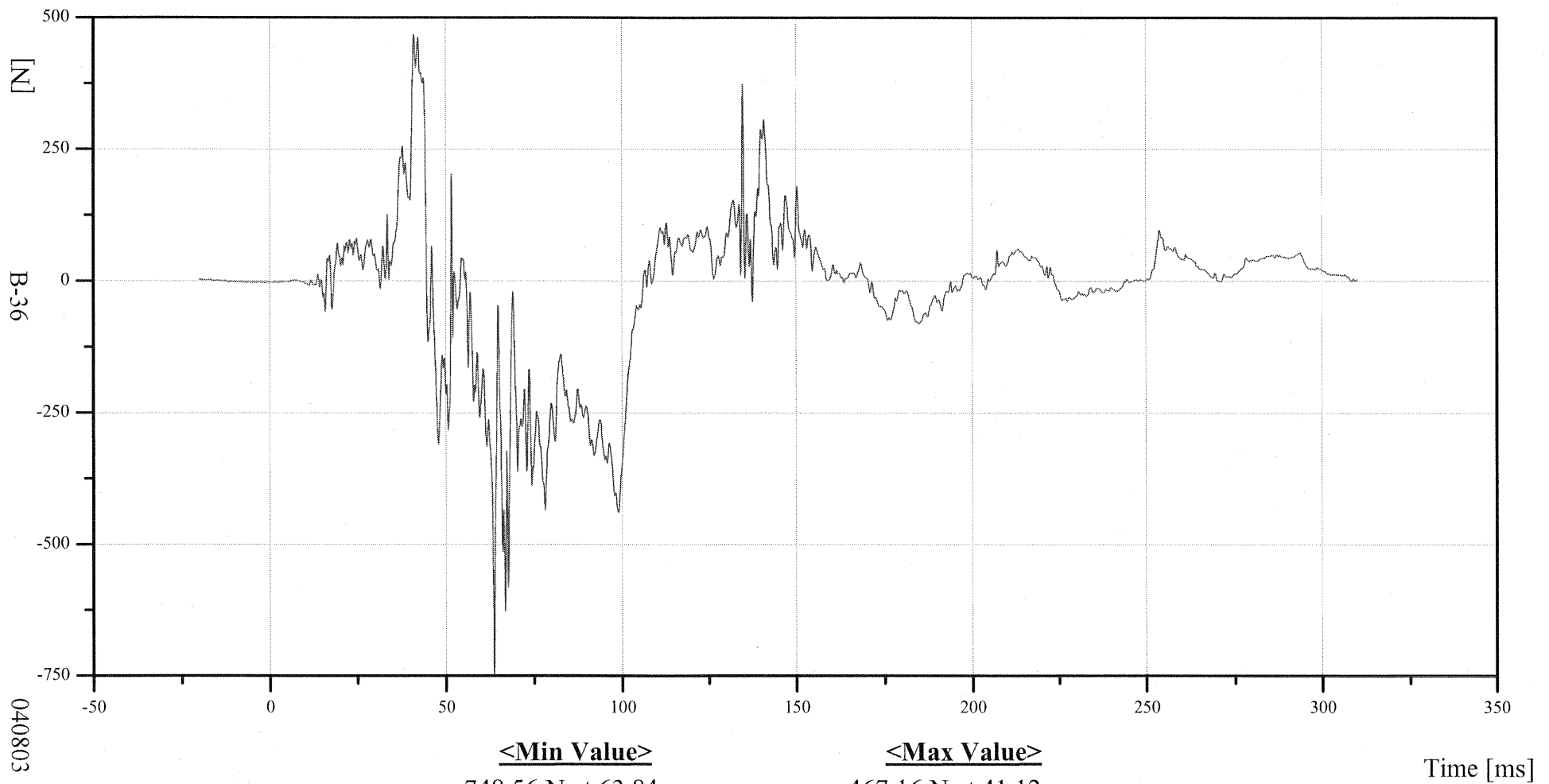
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBLZF1



040803

CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Upr Tibia Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

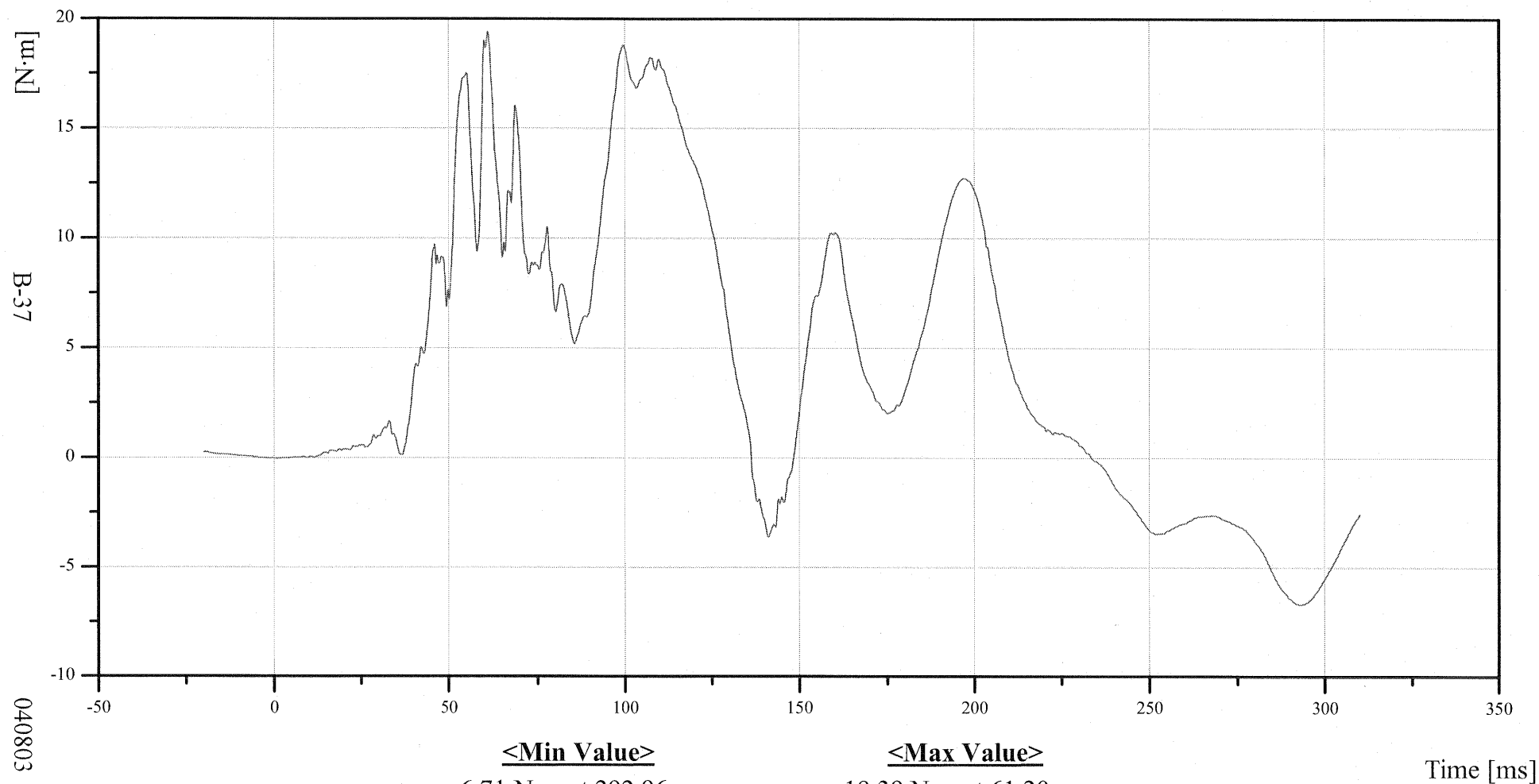
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBLXM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Upr Tibia Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

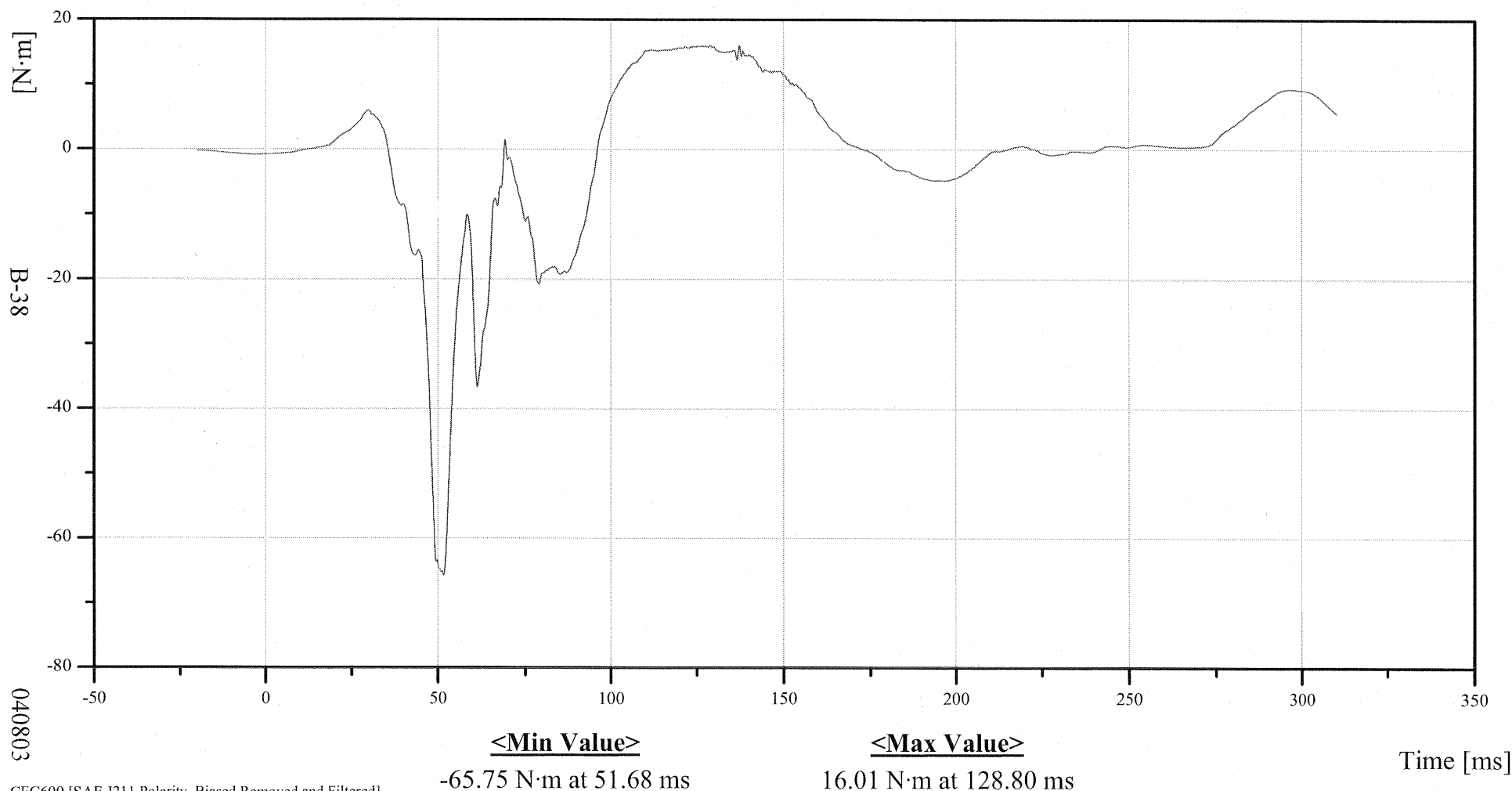
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBLYM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Tibia Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

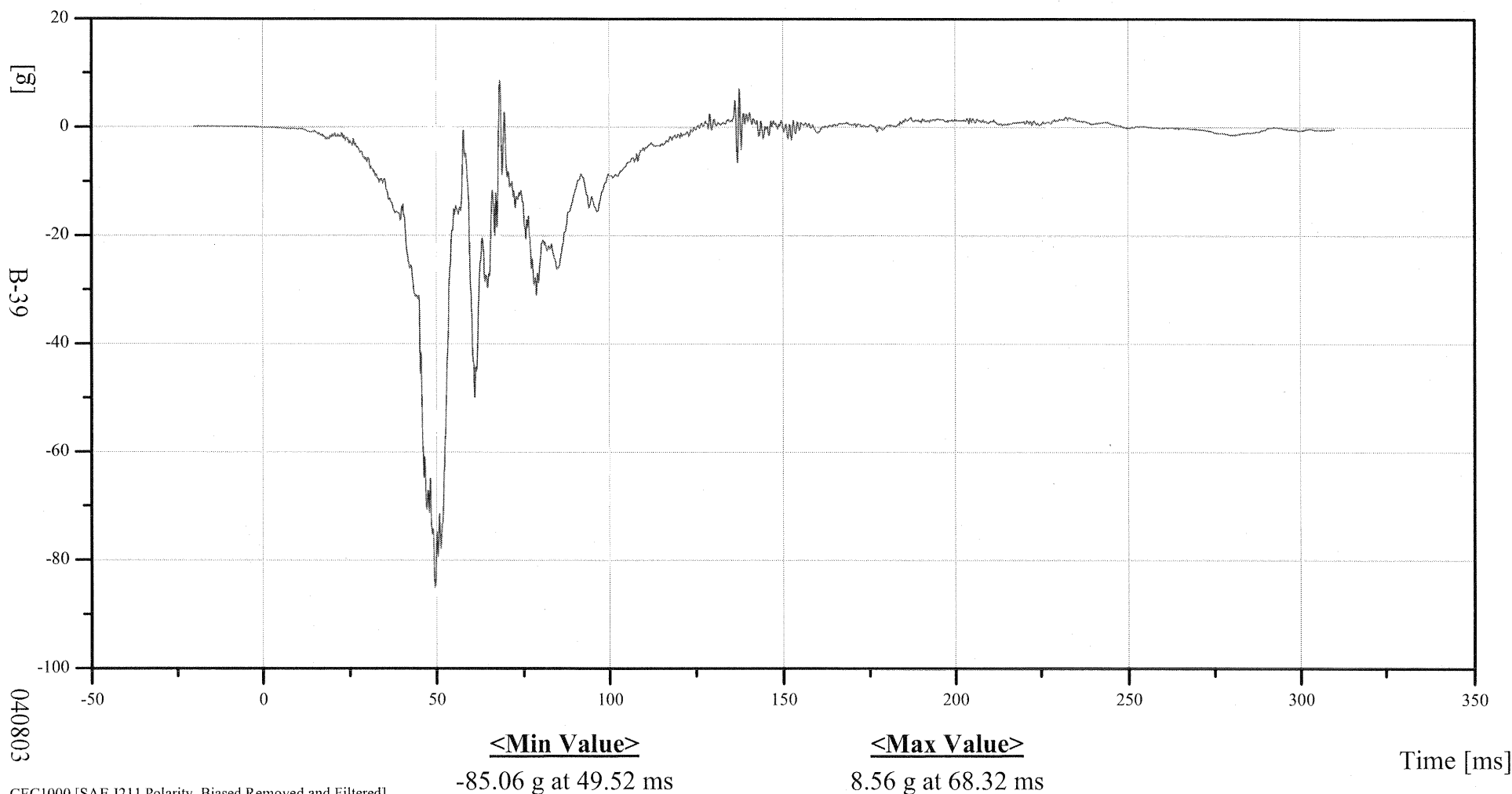
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBLXG1





Transportation Research Center, Inc.

Left Tibia Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

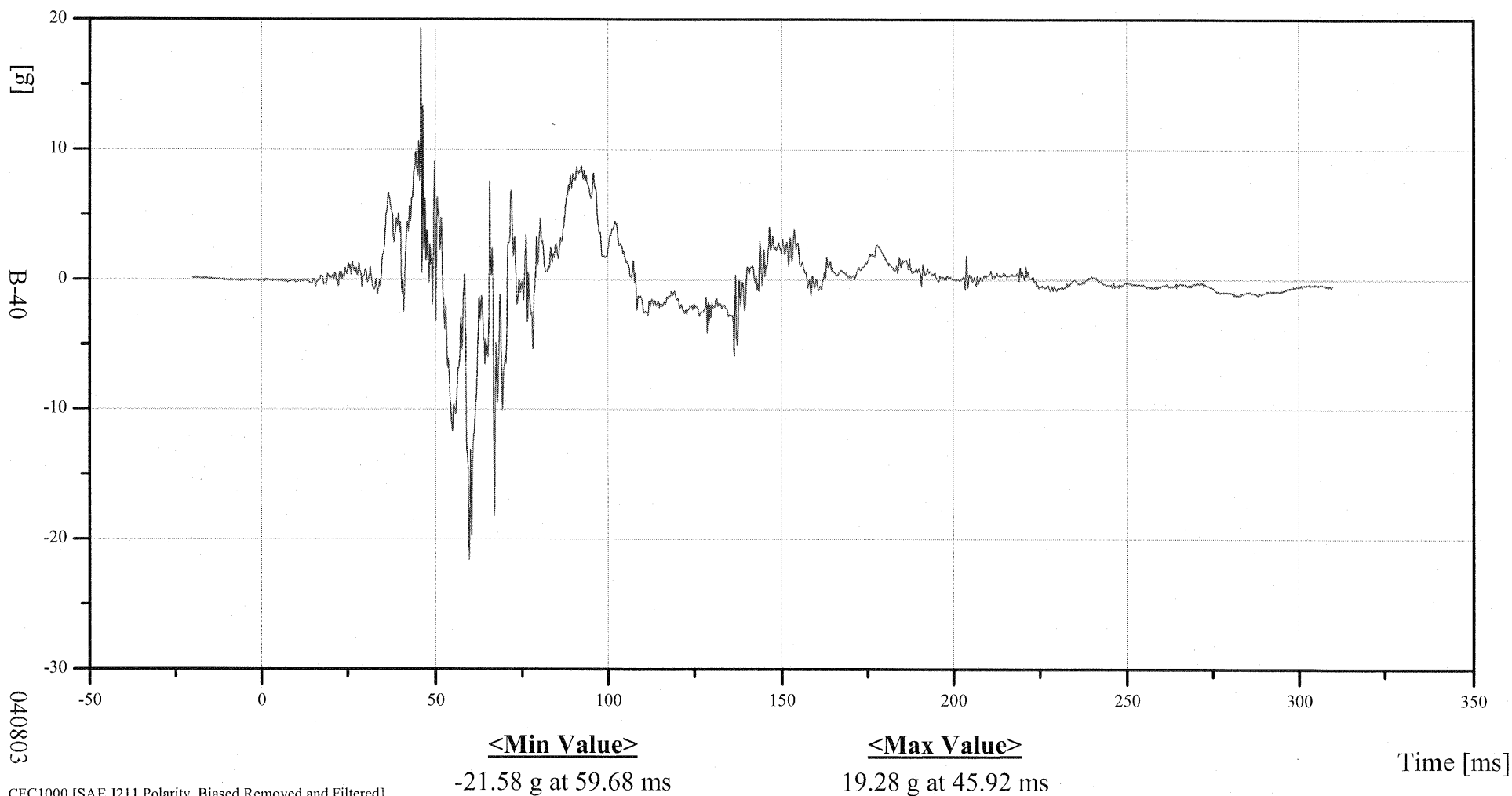
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBLYG1





Transportation Research Center, Inc.

Left Lwr Tibia Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

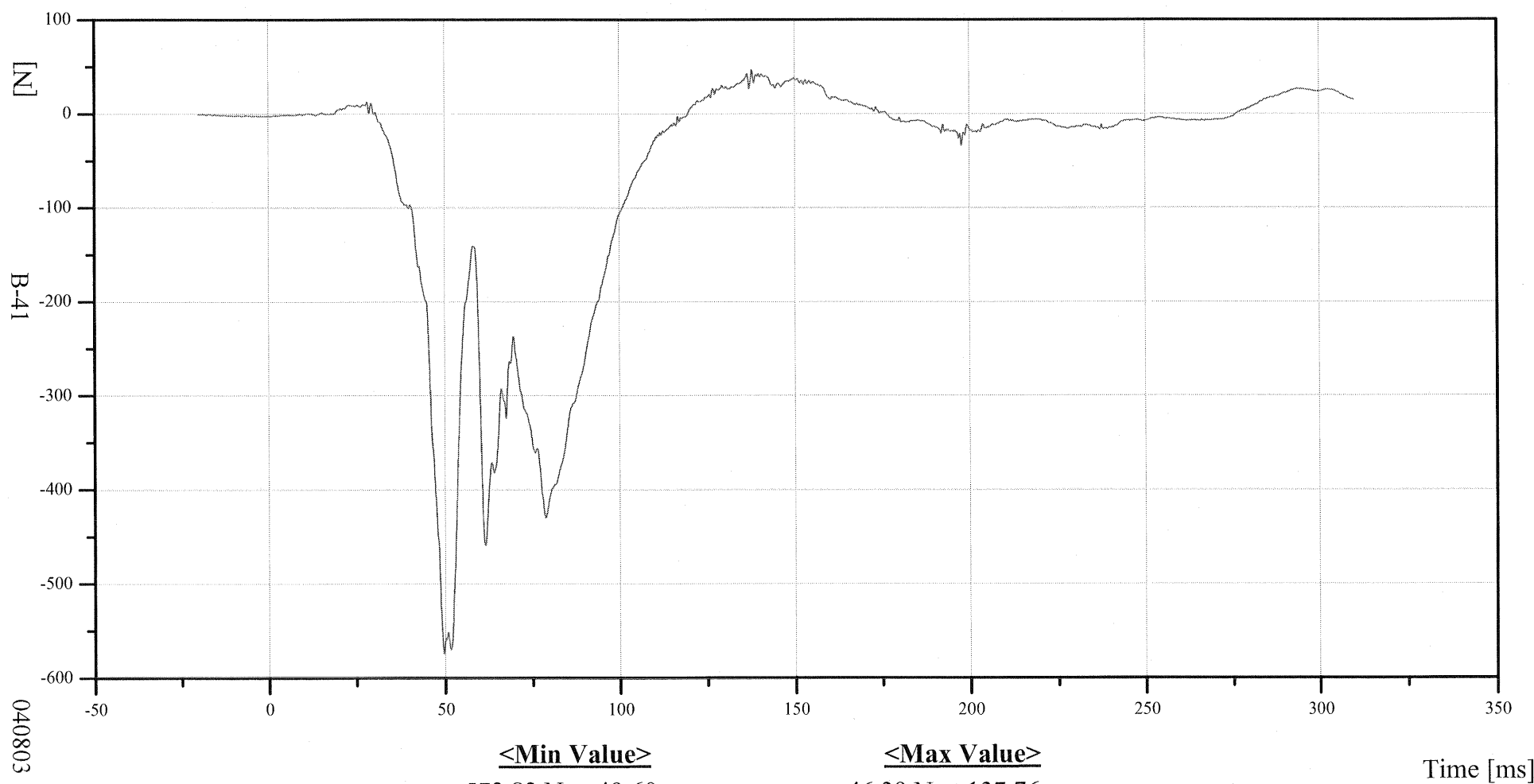
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANLXF1



CF600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Lwr Tibia Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

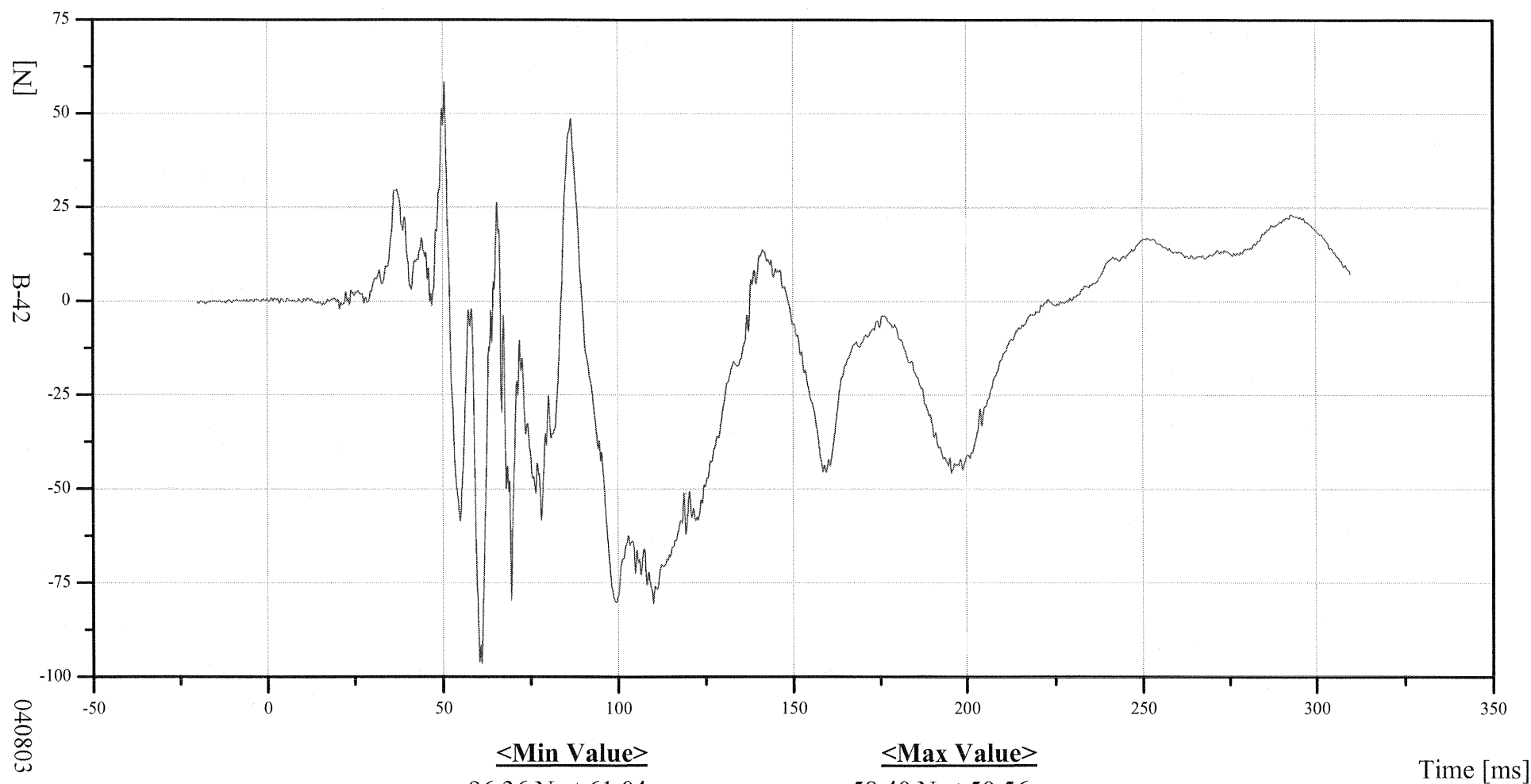
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANLYF1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Lwr Tibia Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

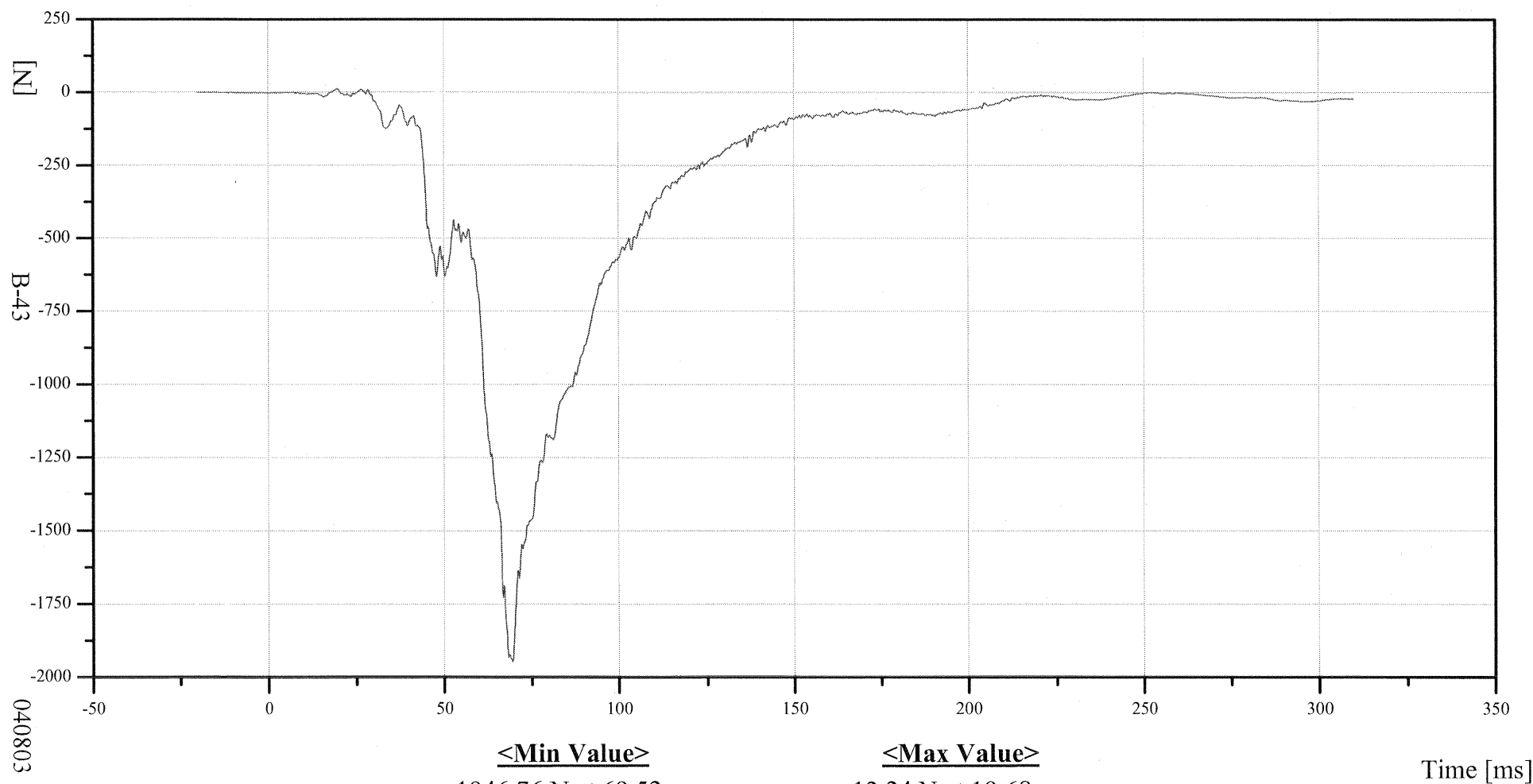
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANLZF1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Lwr Tibia Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

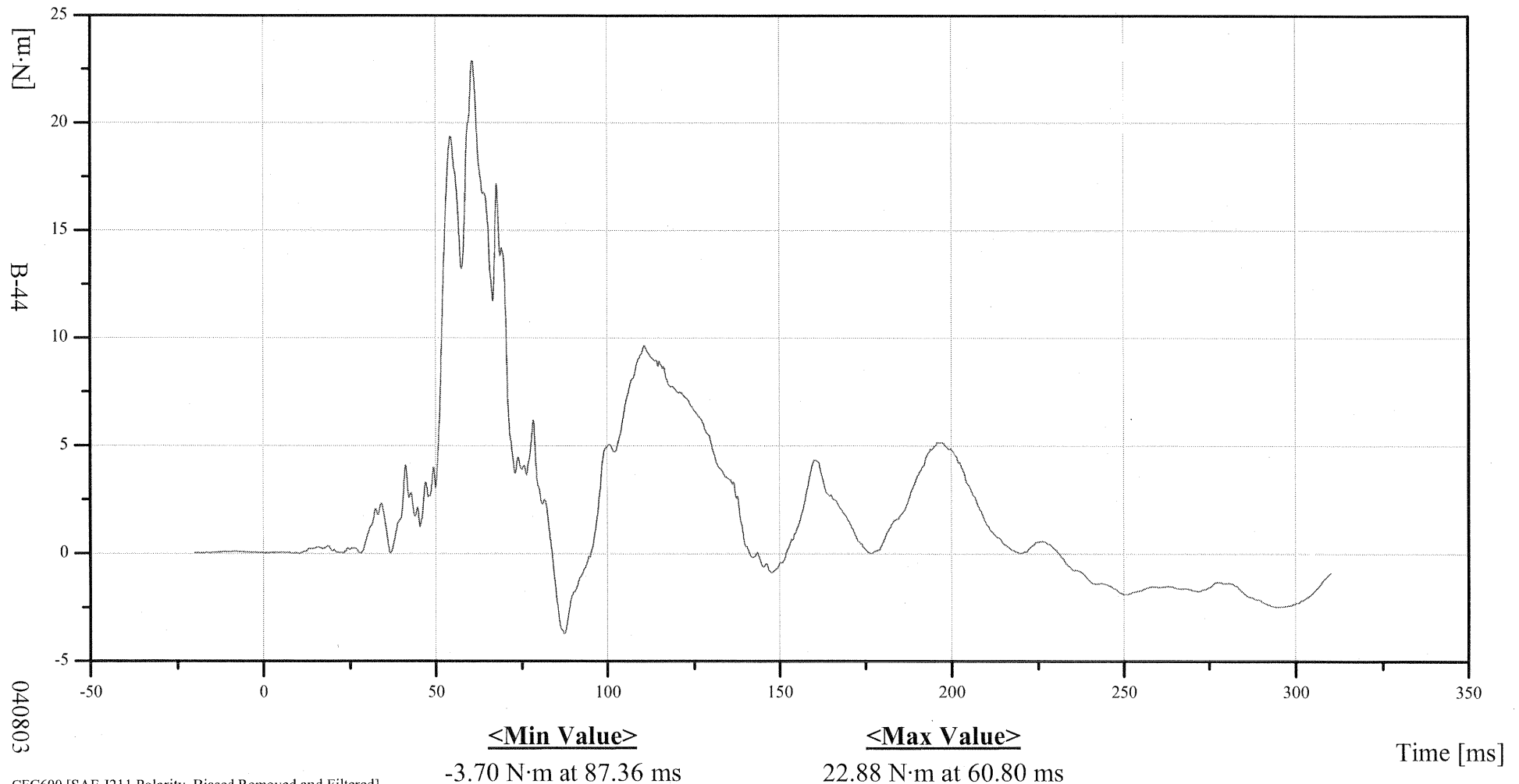
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANLXM1





Transportation Research Center, Inc.

Left Lwr Tibia Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

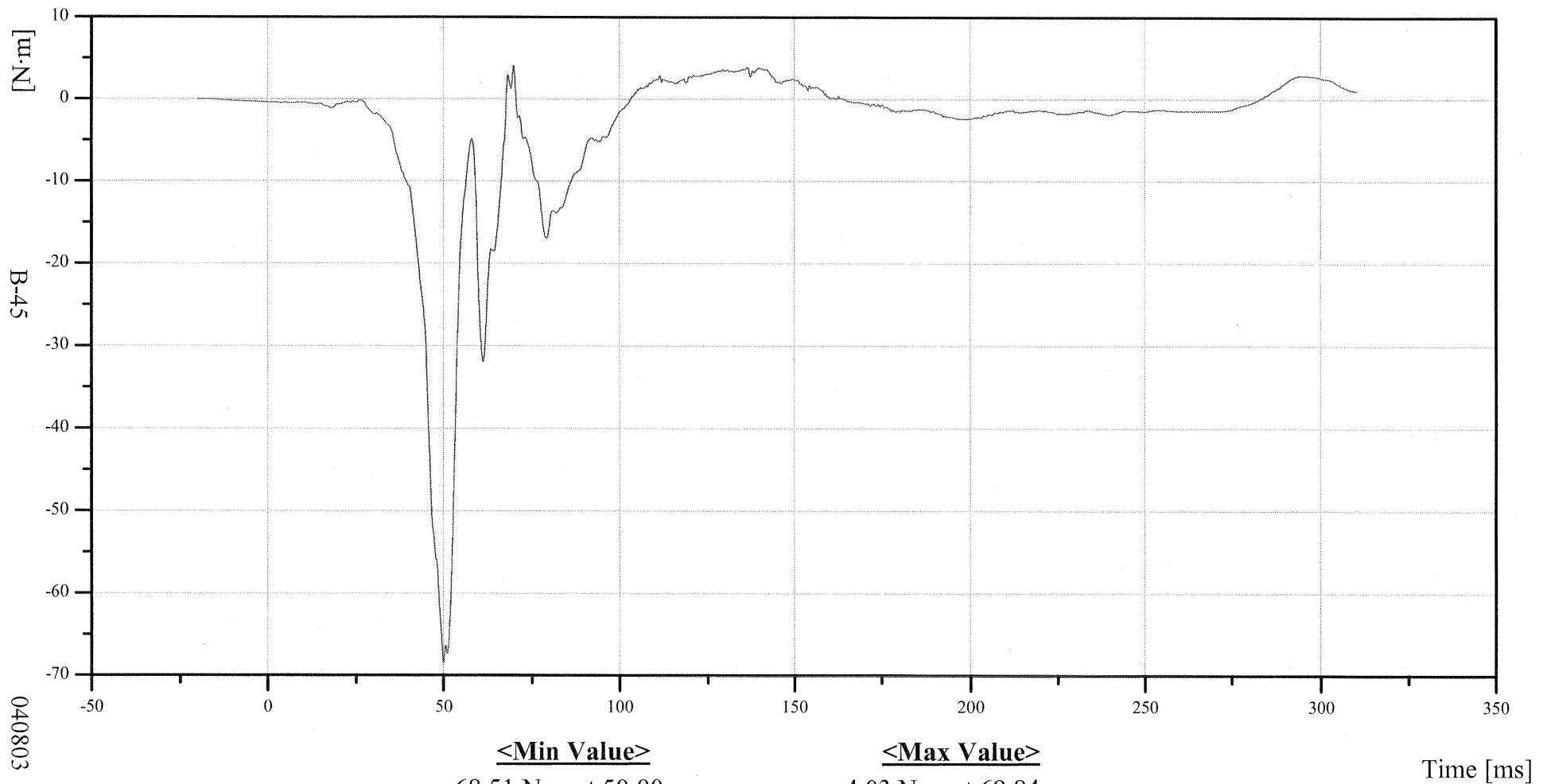
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANLYM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Foot Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

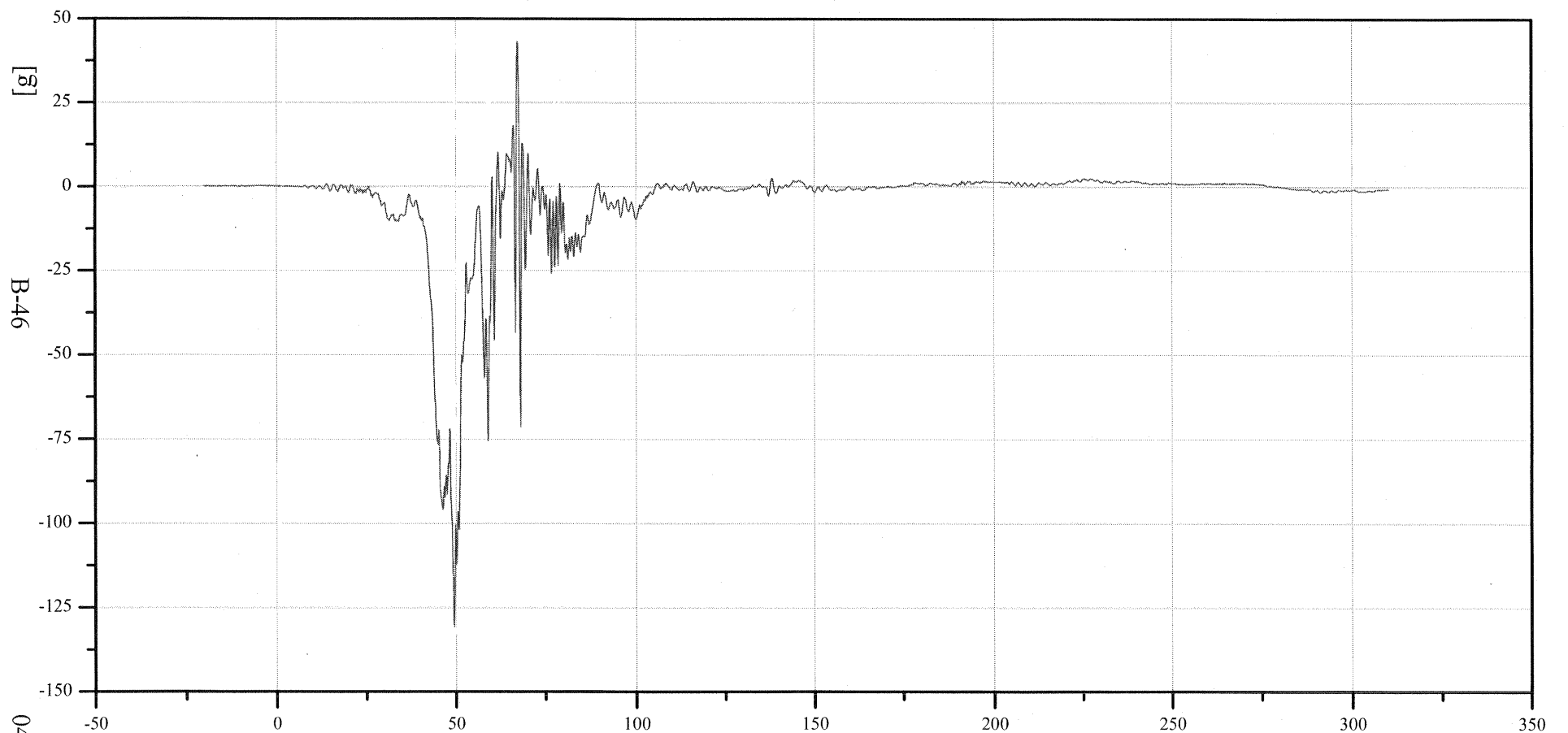
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTLXG1



040803

CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>

-130.65 g at 49.44 ms

<Max Value>

43.16 g at 67.20 ms

Time [ms]



Transportation Research Center, Inc.

Left Foot Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

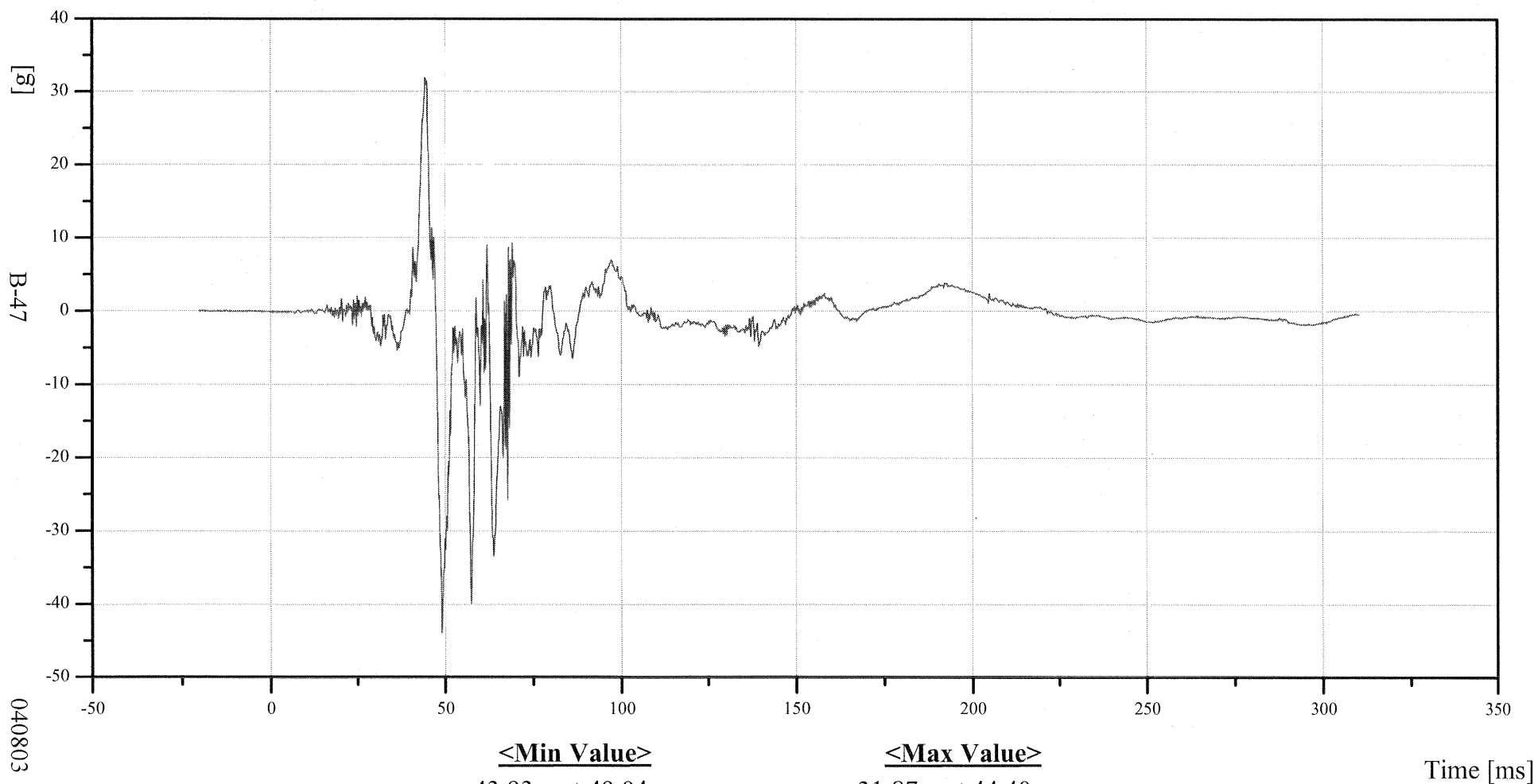
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTLYG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Foot Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

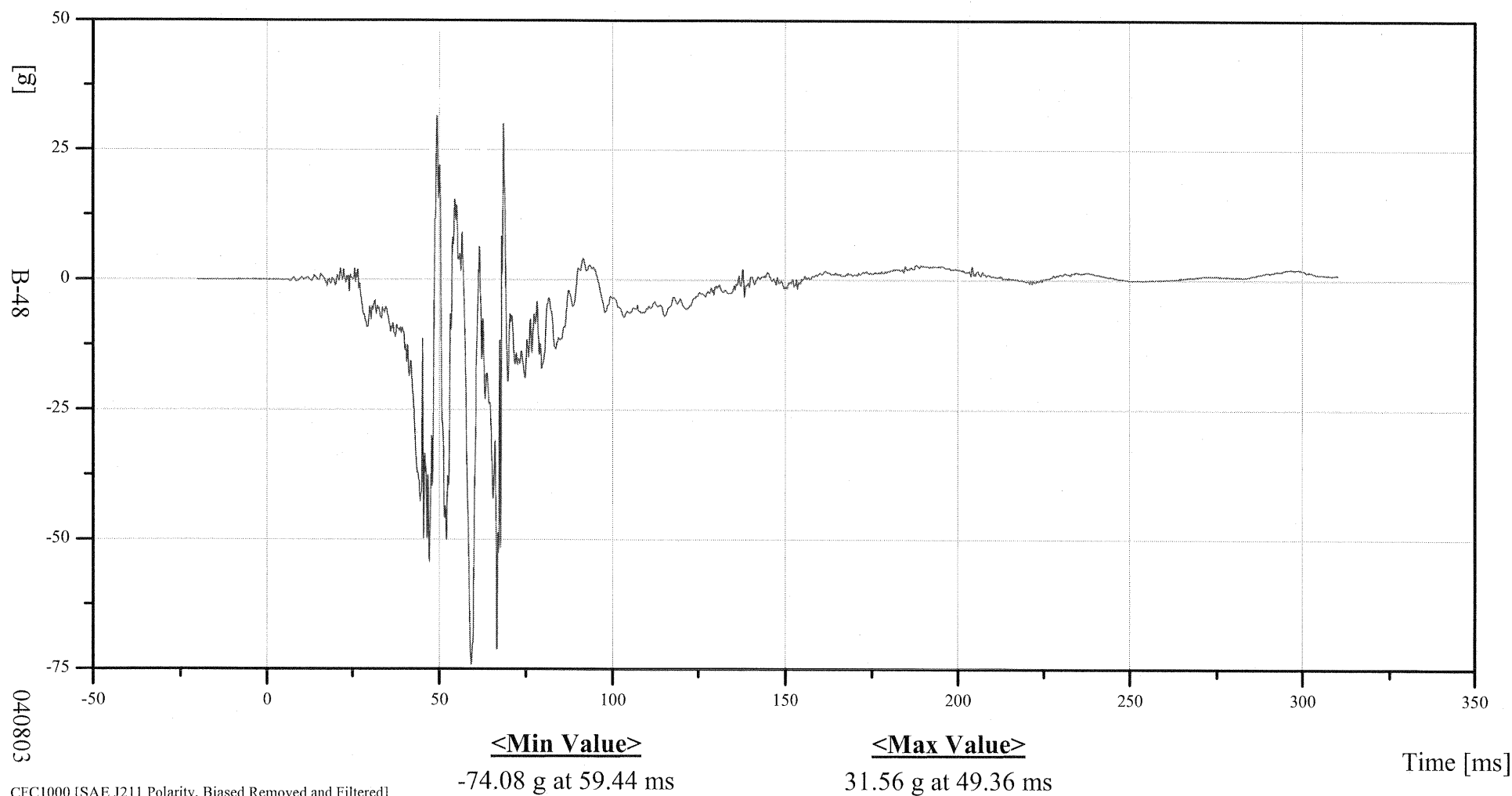
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTLZG1





Transportation Research Center, Inc.

Foot Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

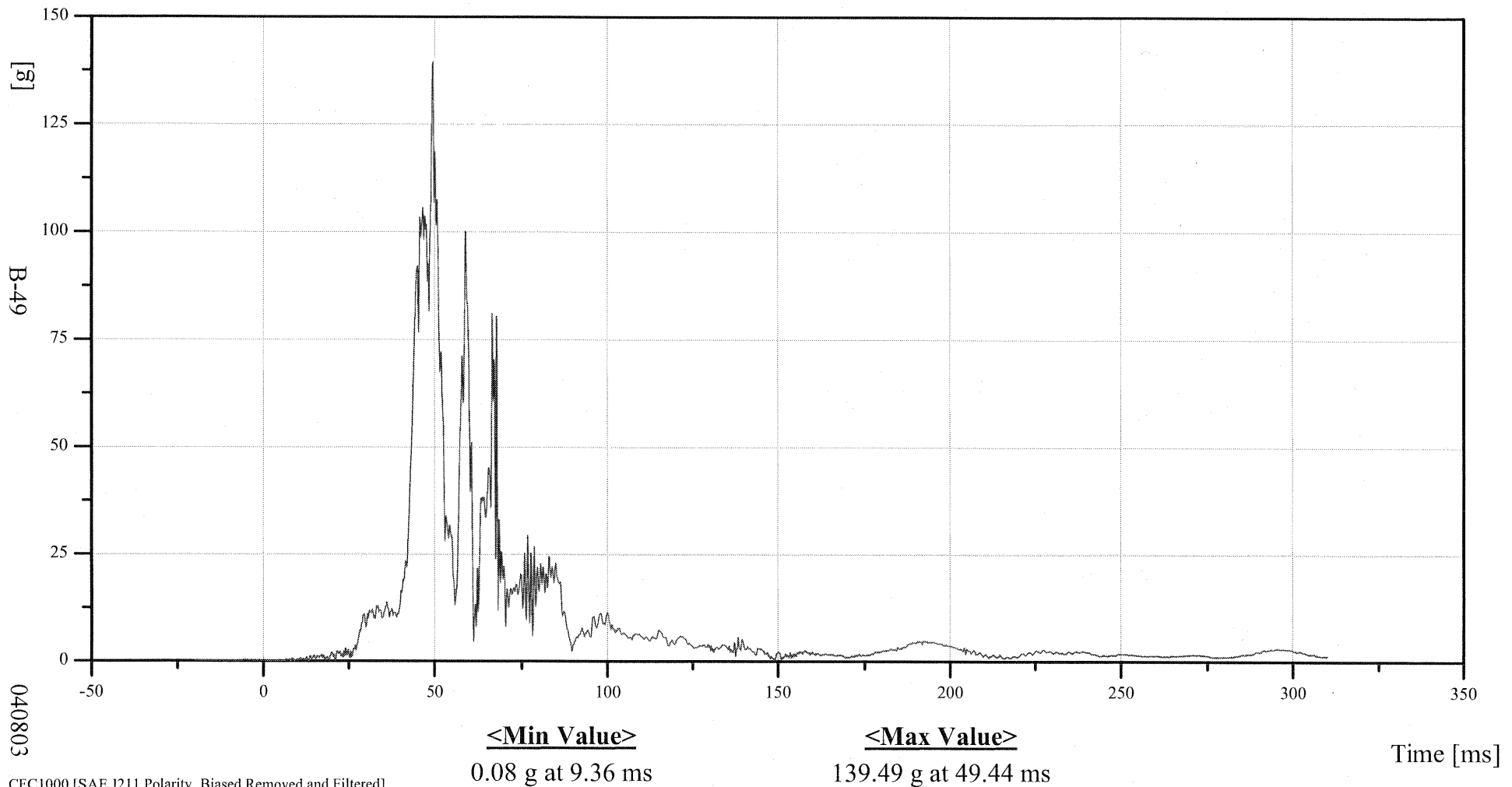
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTLRG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Femur Force Z 507

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

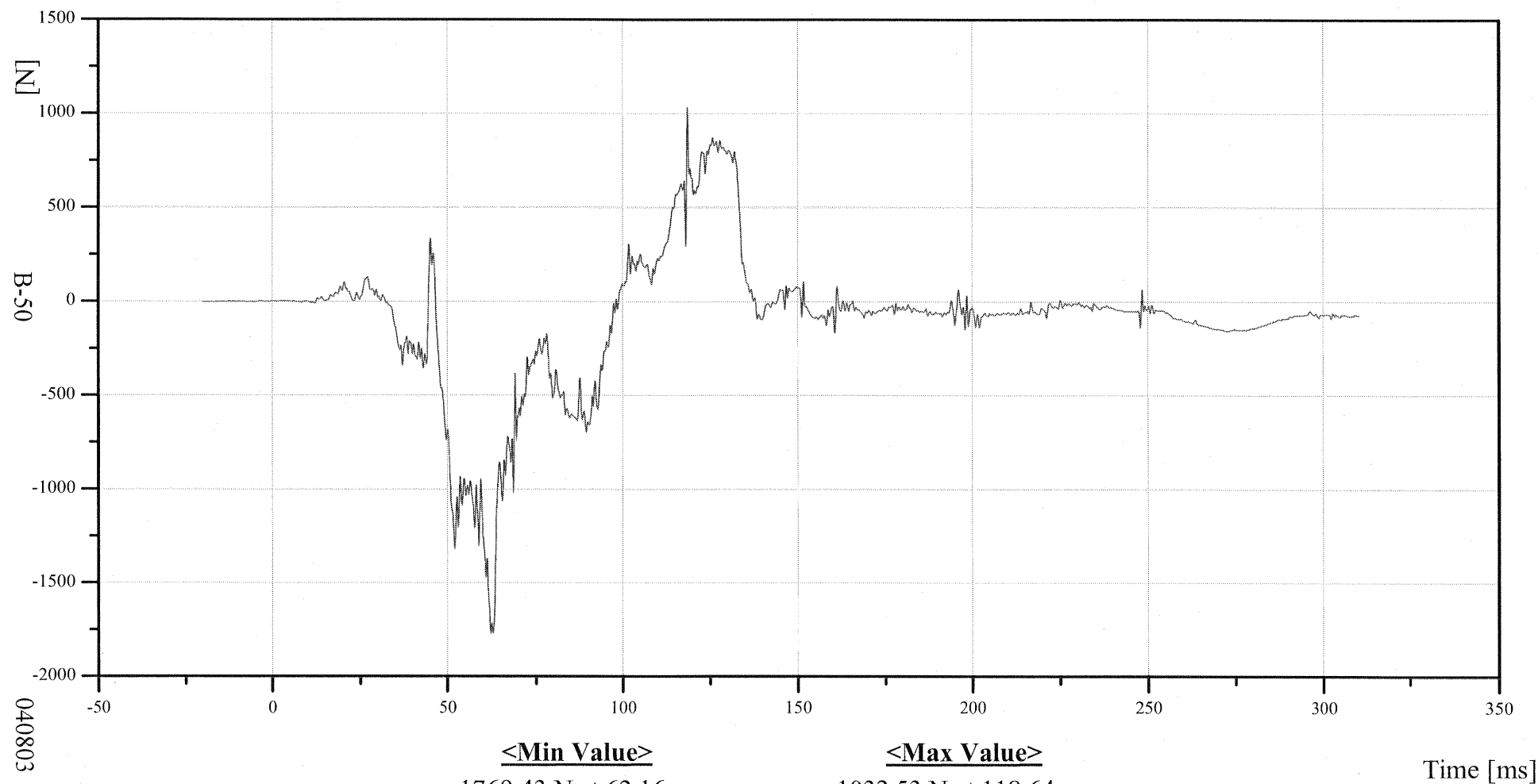
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RFMZ1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Knee Displacement

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

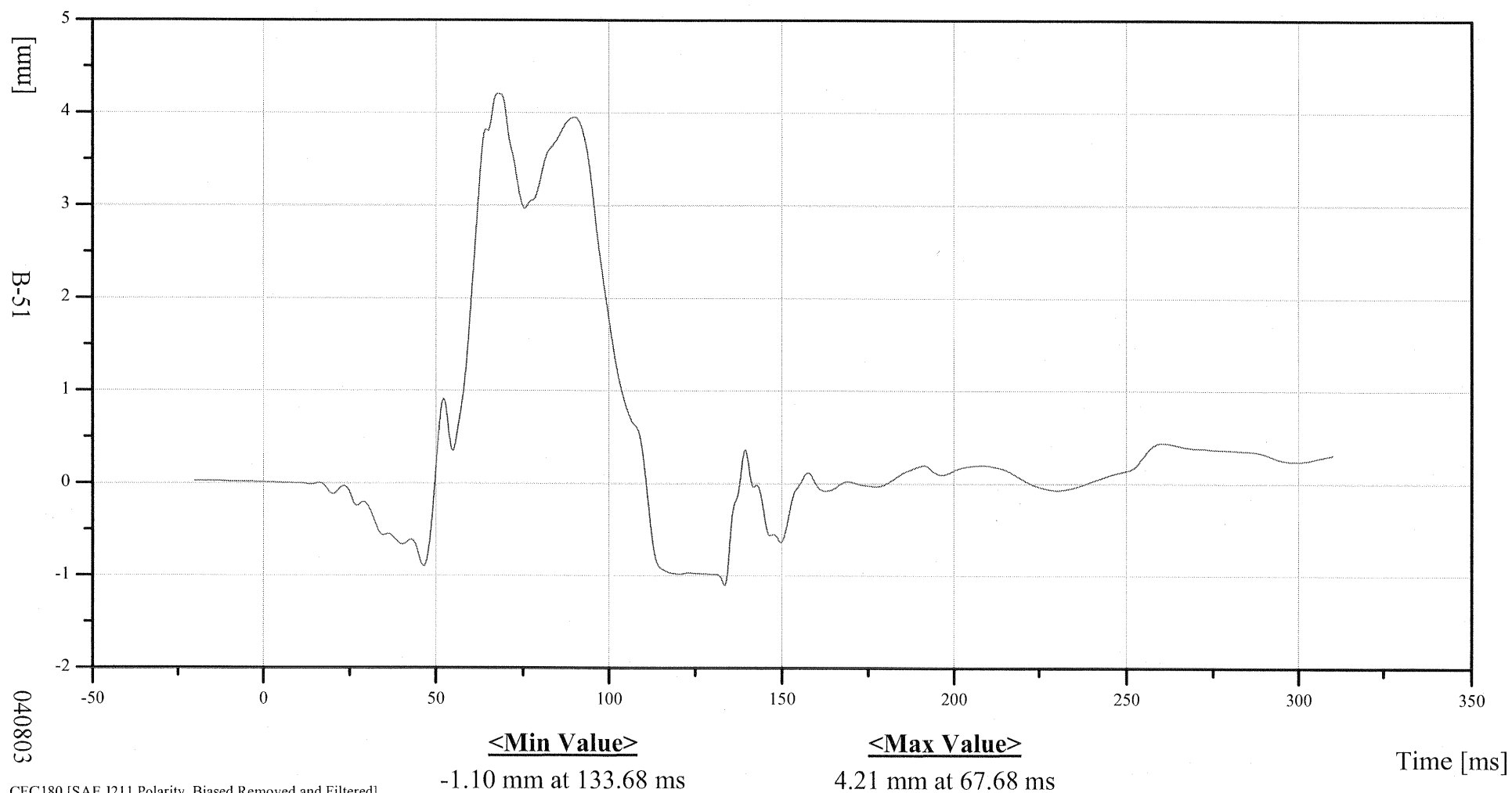
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

KNR XD1



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Upr Tibia Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

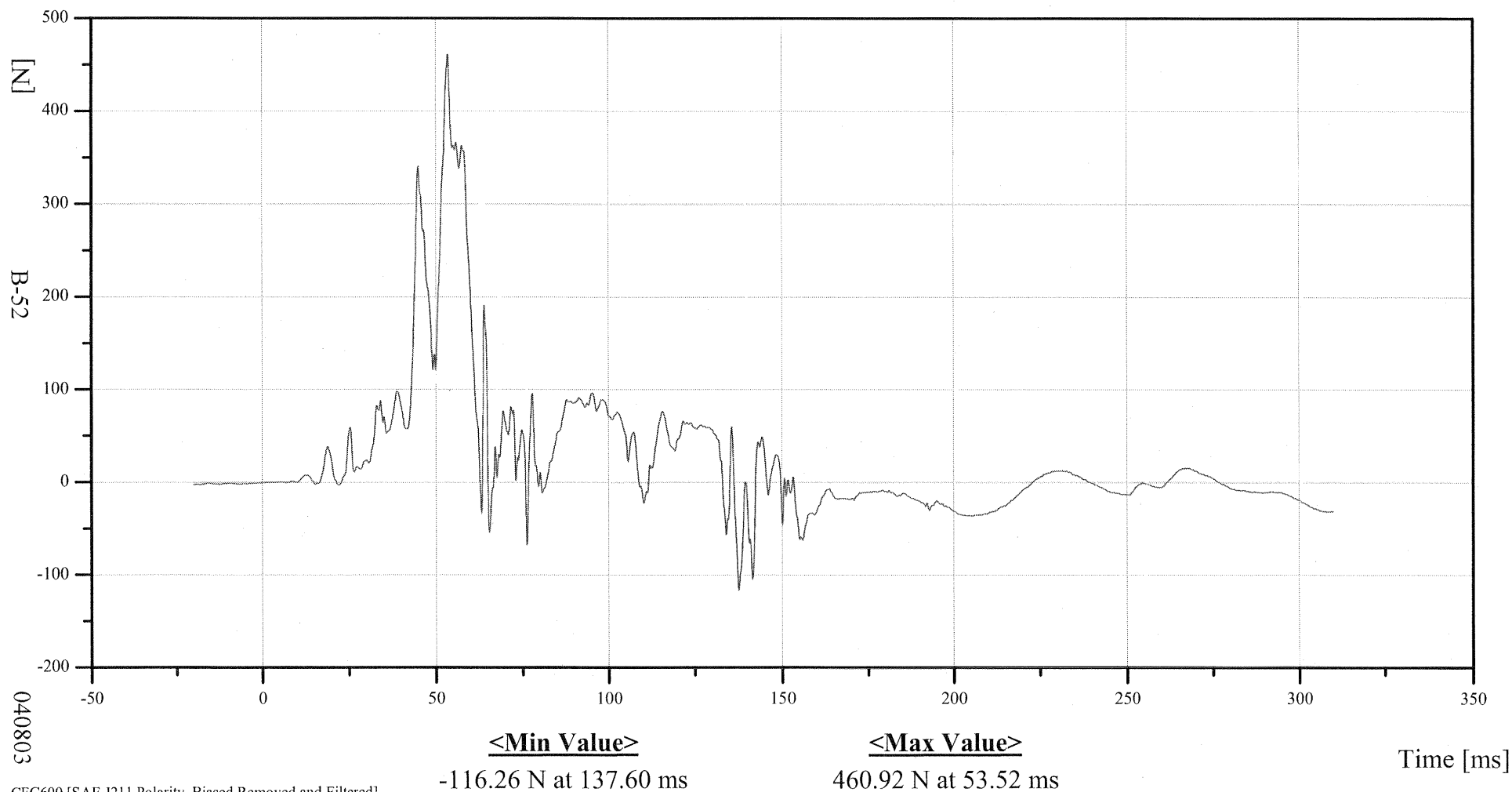
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBRXF1





Transportation Research Center, Inc.

Right Upr Tibia Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

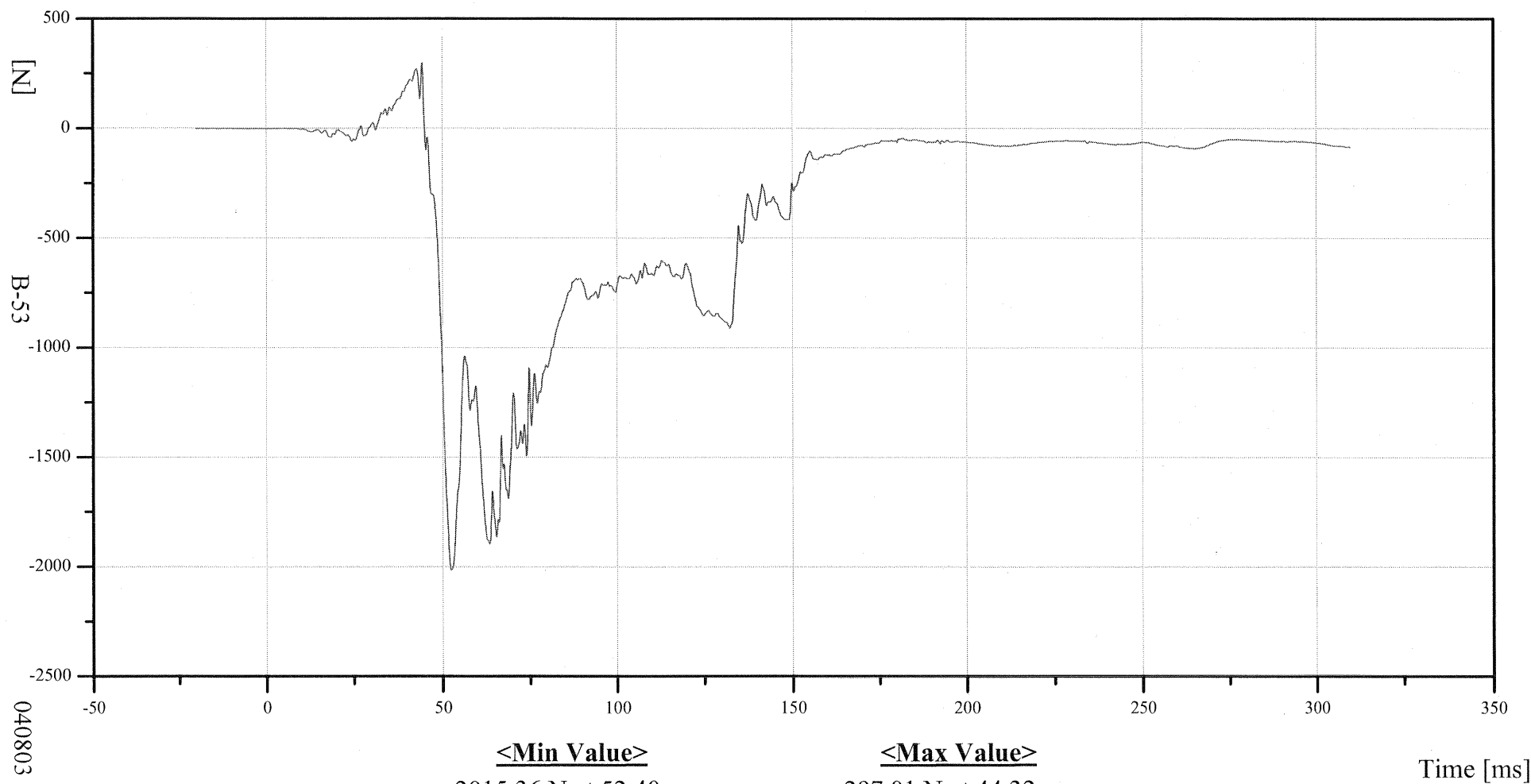
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBRZF1



040803
CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Upr Tibia Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

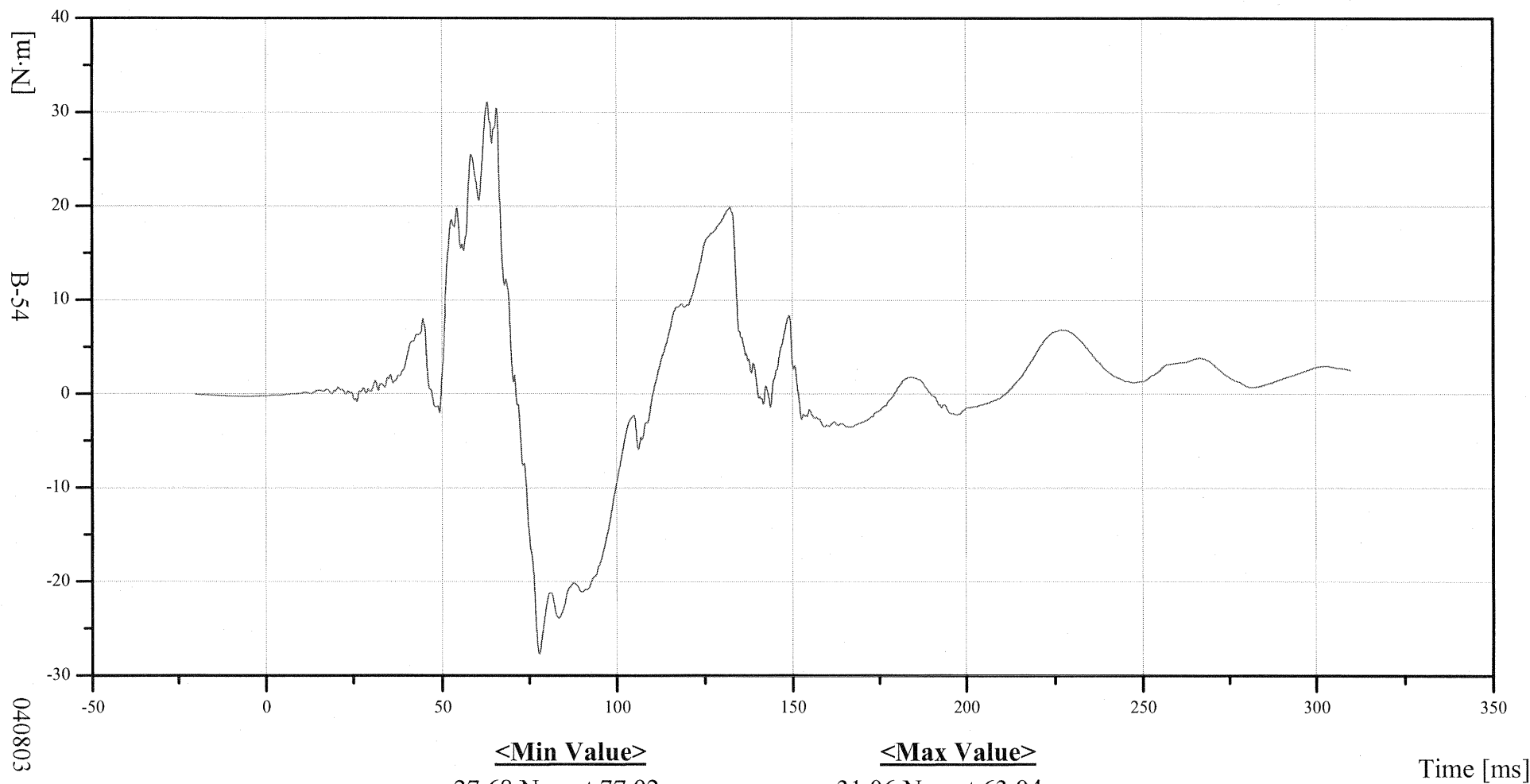
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBRXM1



040803

CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Upr Tibia Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

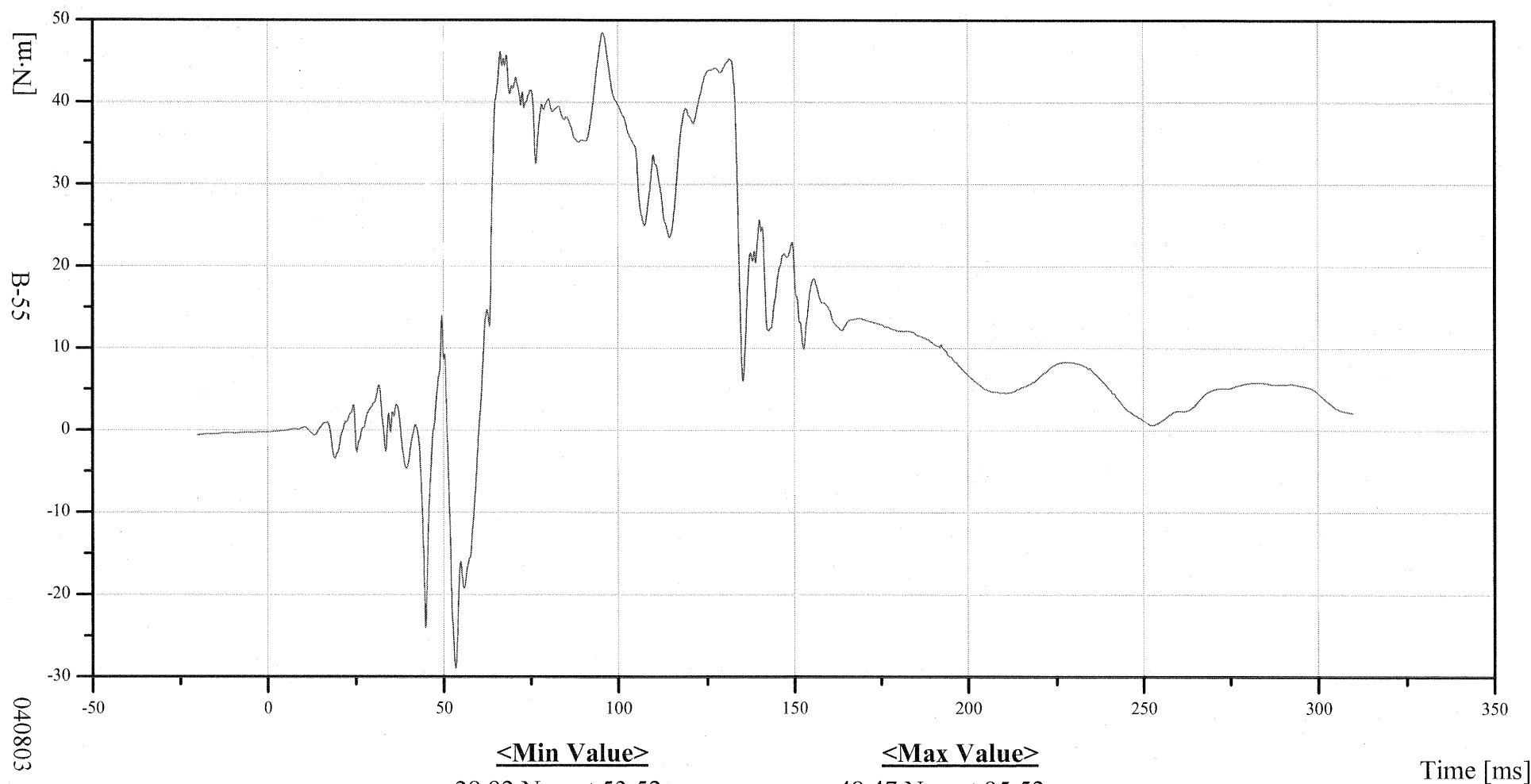
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBRYM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Tibia Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

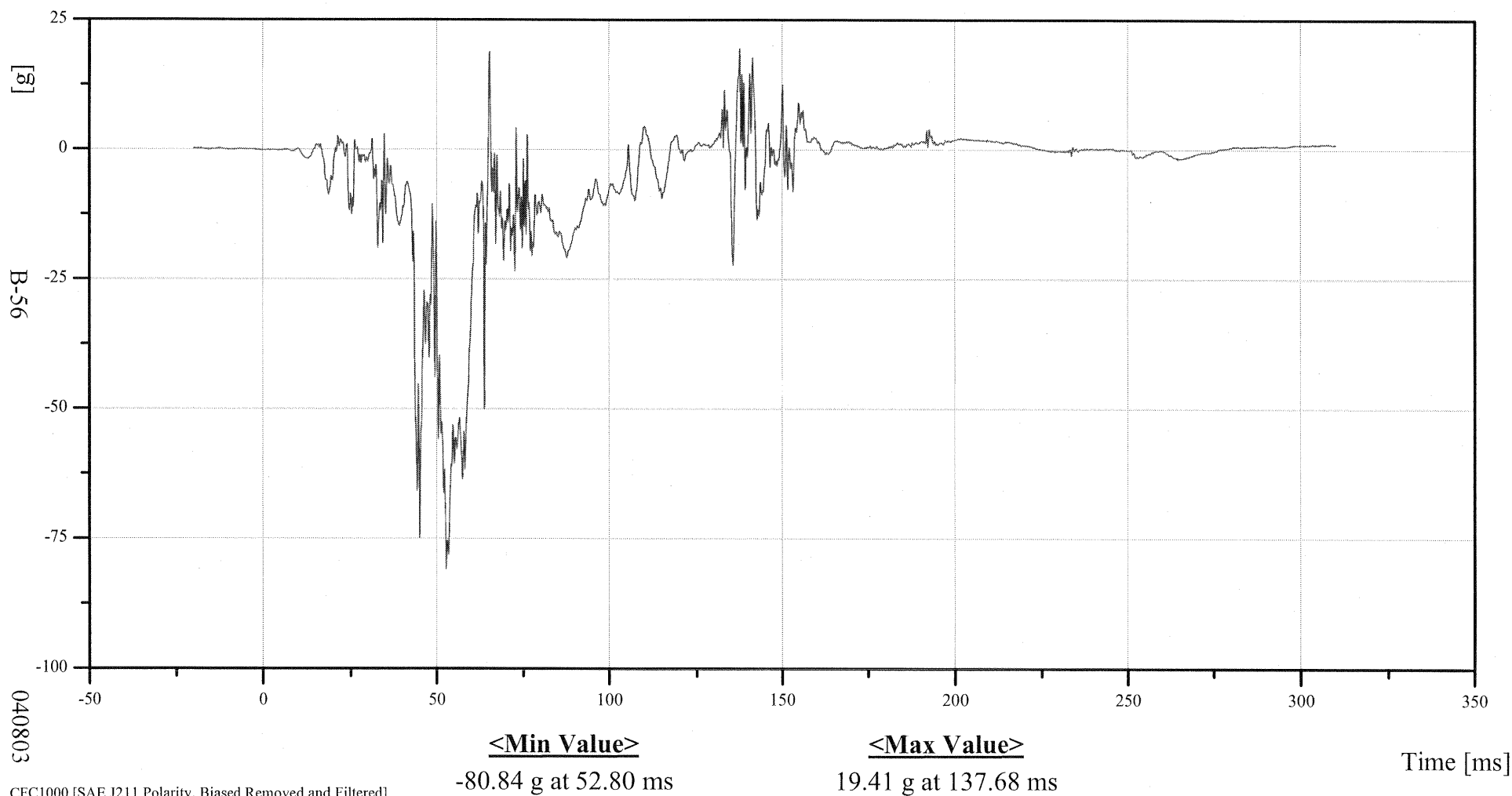
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBRXG1





Transportation Research Center, Inc.

Right Tibia Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

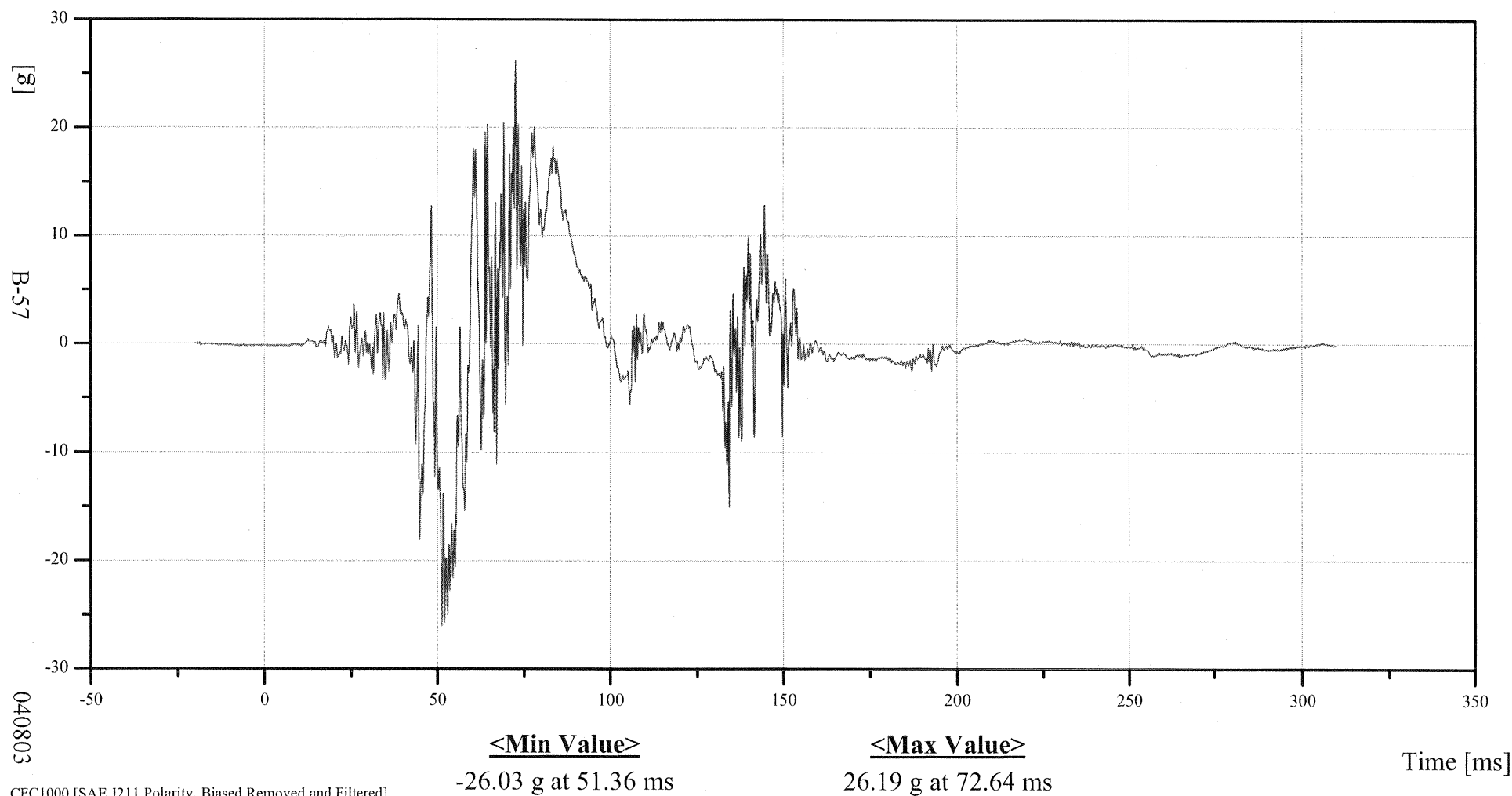
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TBRYG1





Transportation Research Center, Inc.

Right Lwr Tibia Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

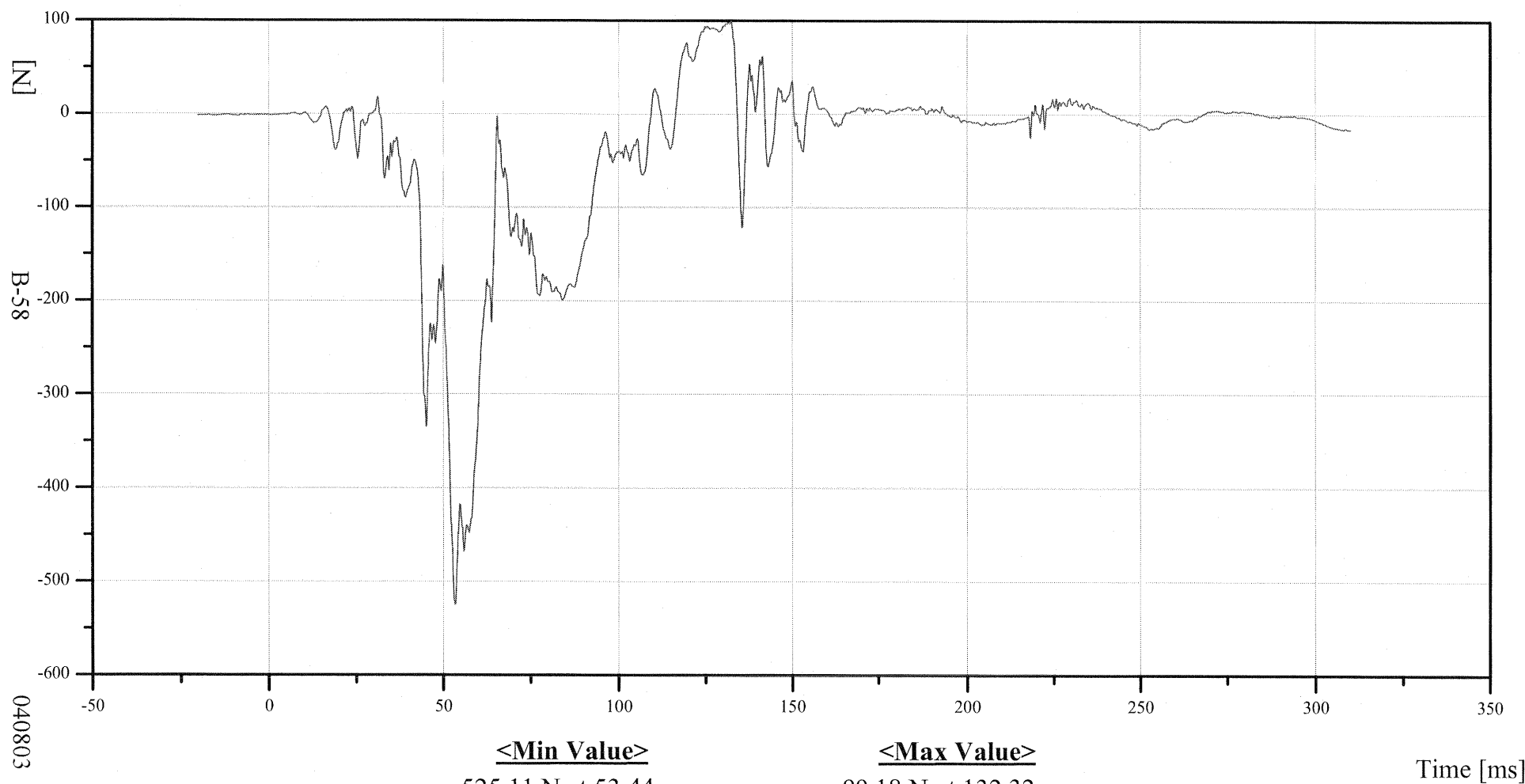
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANRXF1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Lwr Tibia Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

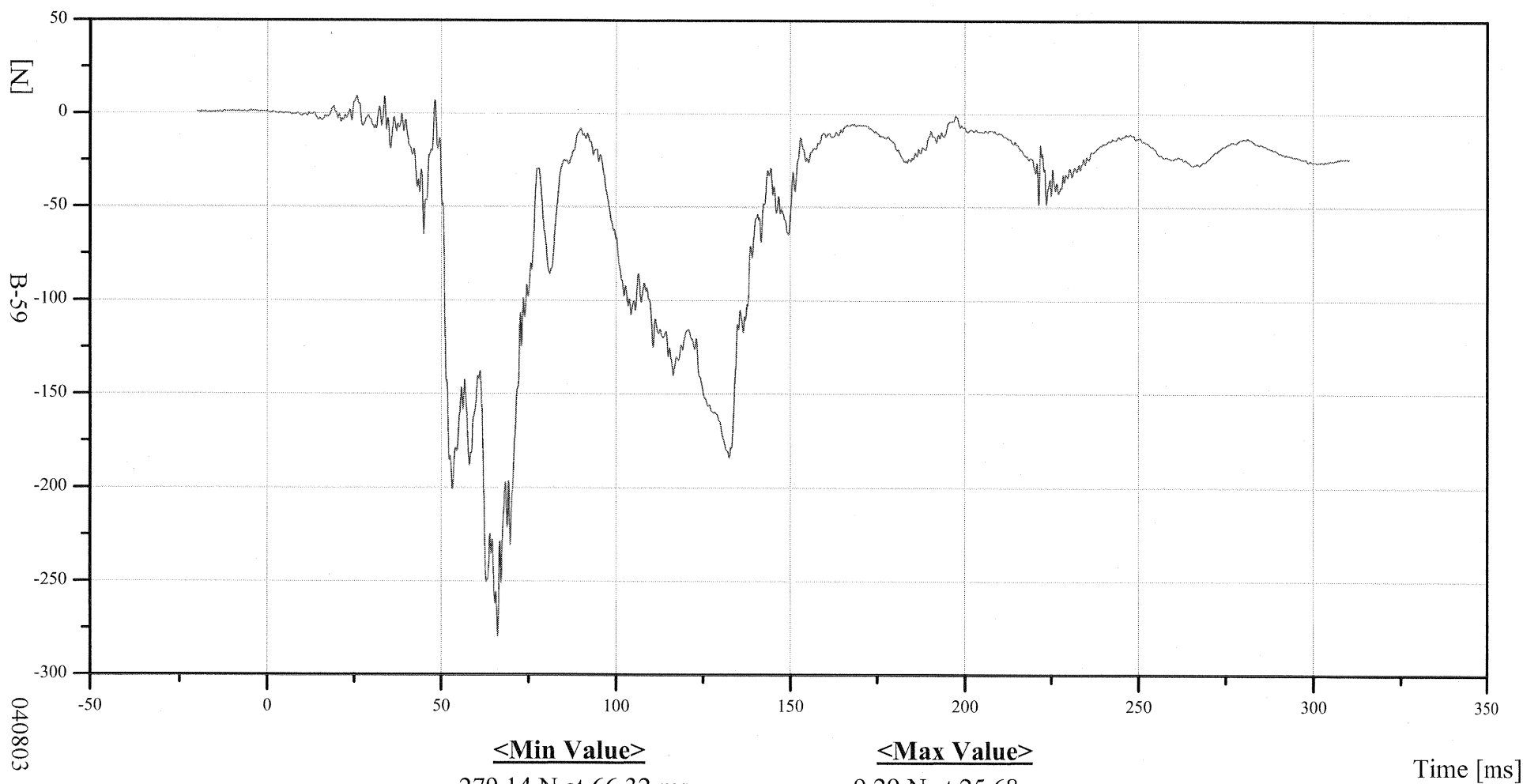
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANRYF1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Lwr Tibia Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

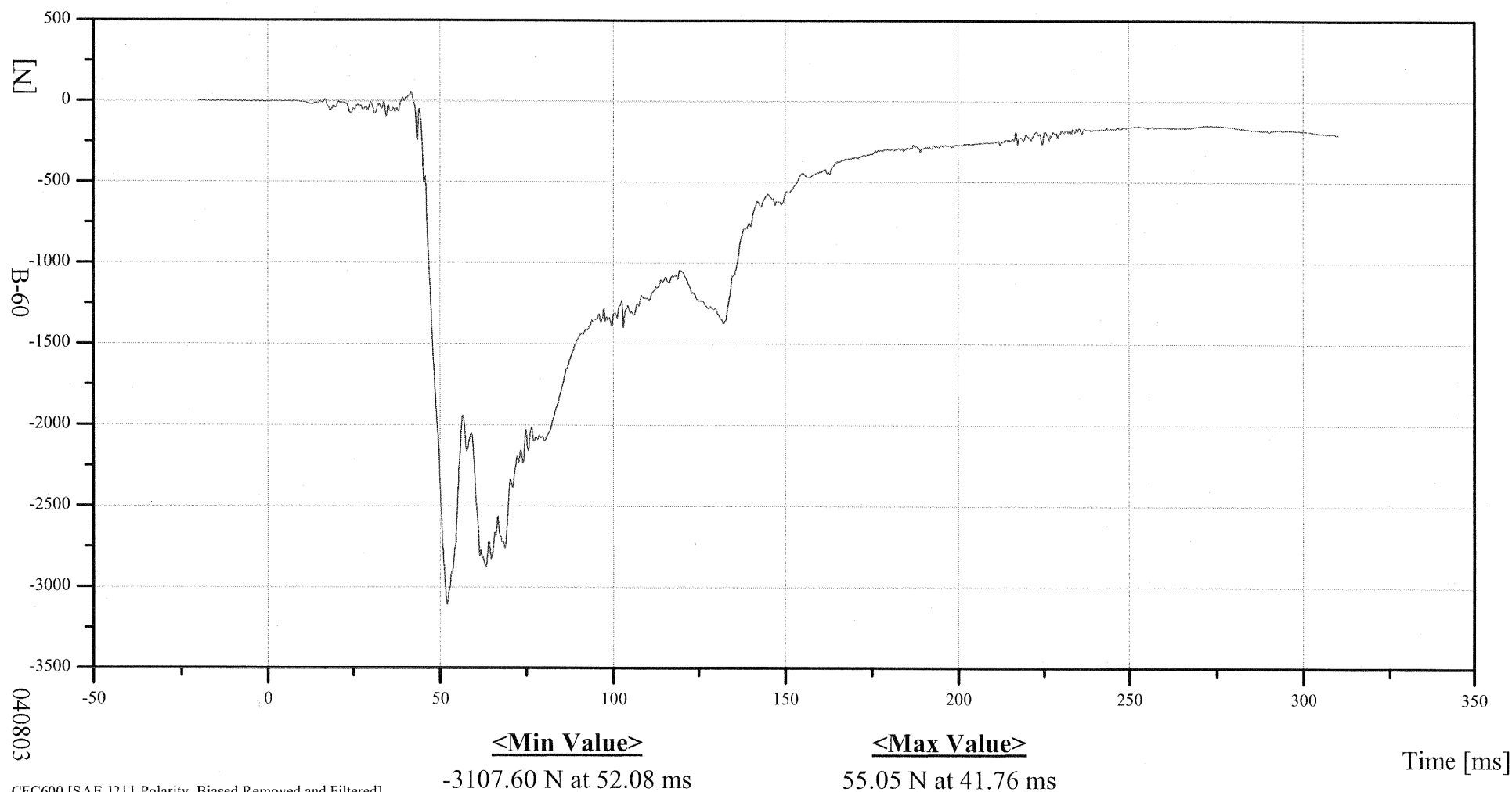
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANRZF1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Lwr Tibia Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

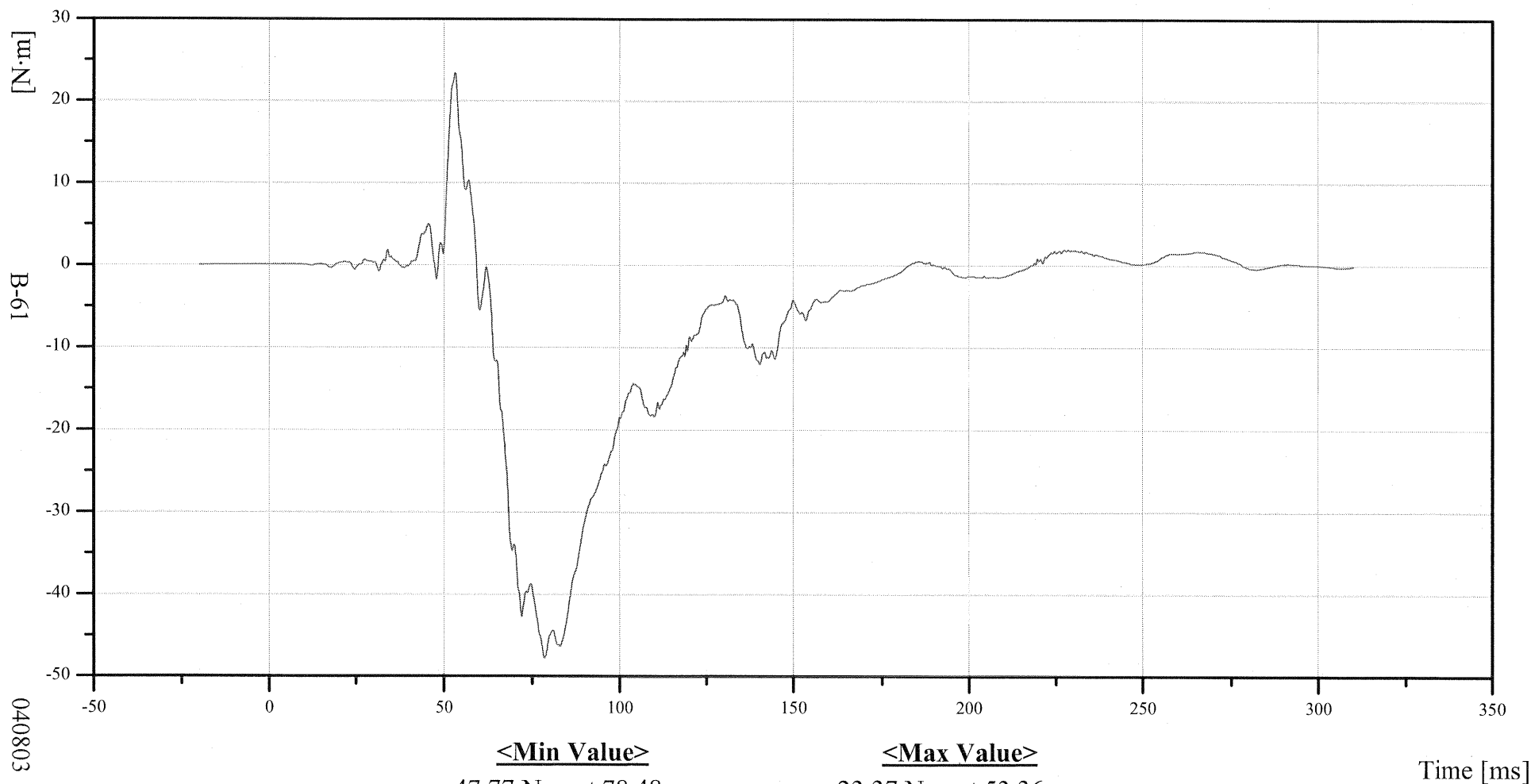
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANRXM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Lwr Tibia Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

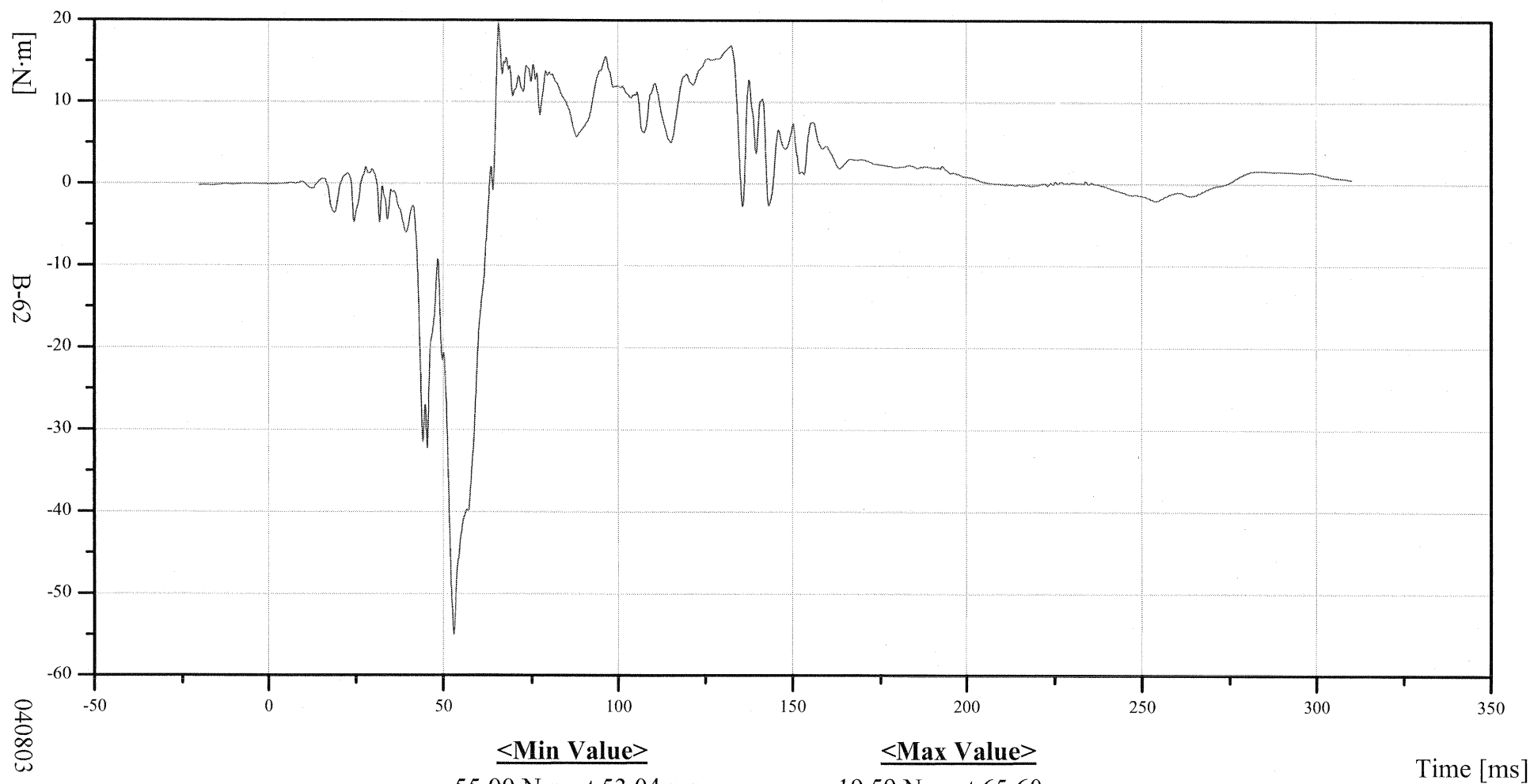
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

ANRYM1



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Foot Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

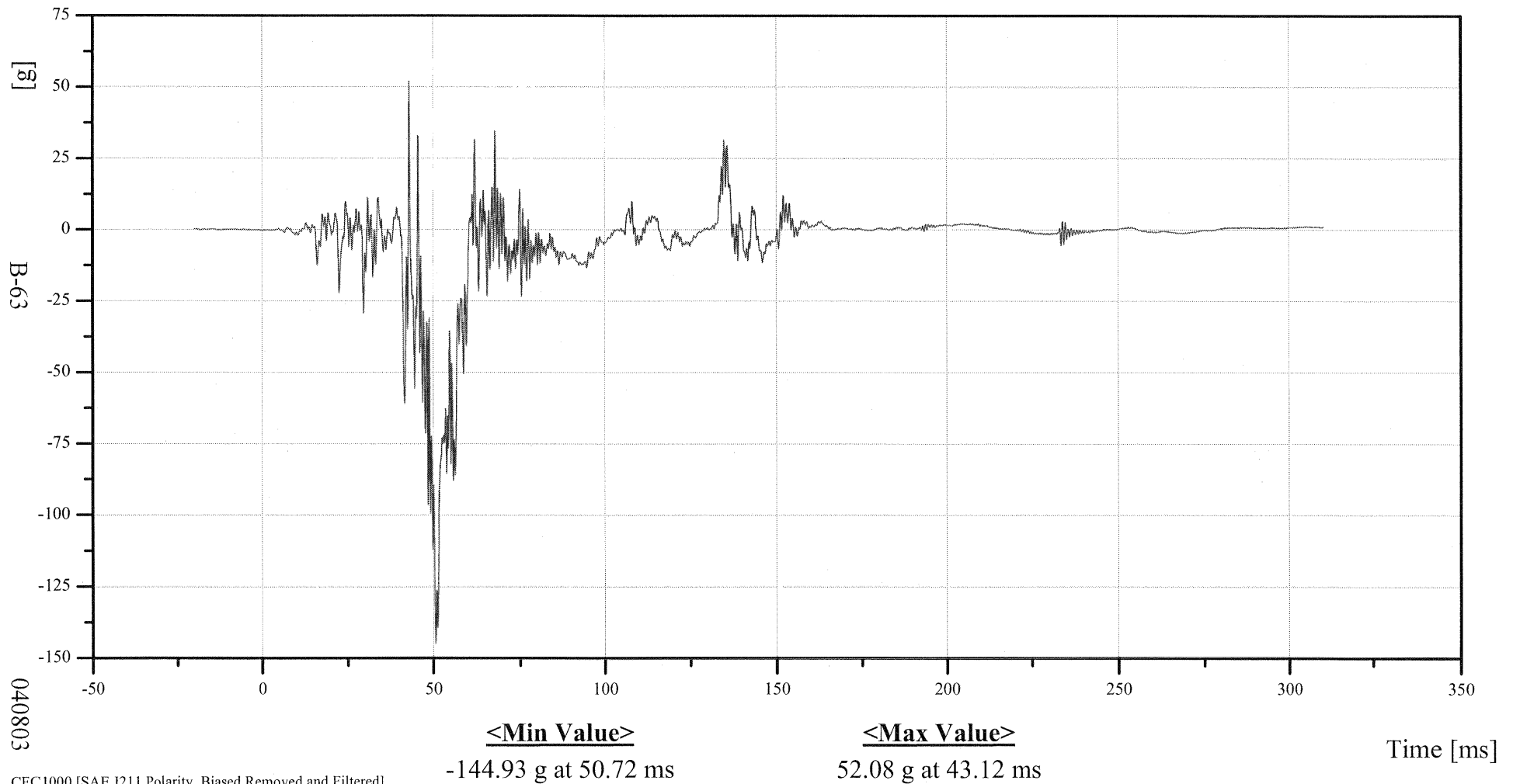
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTRXG1





Transportation Research Center, Inc.

Right Foot Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

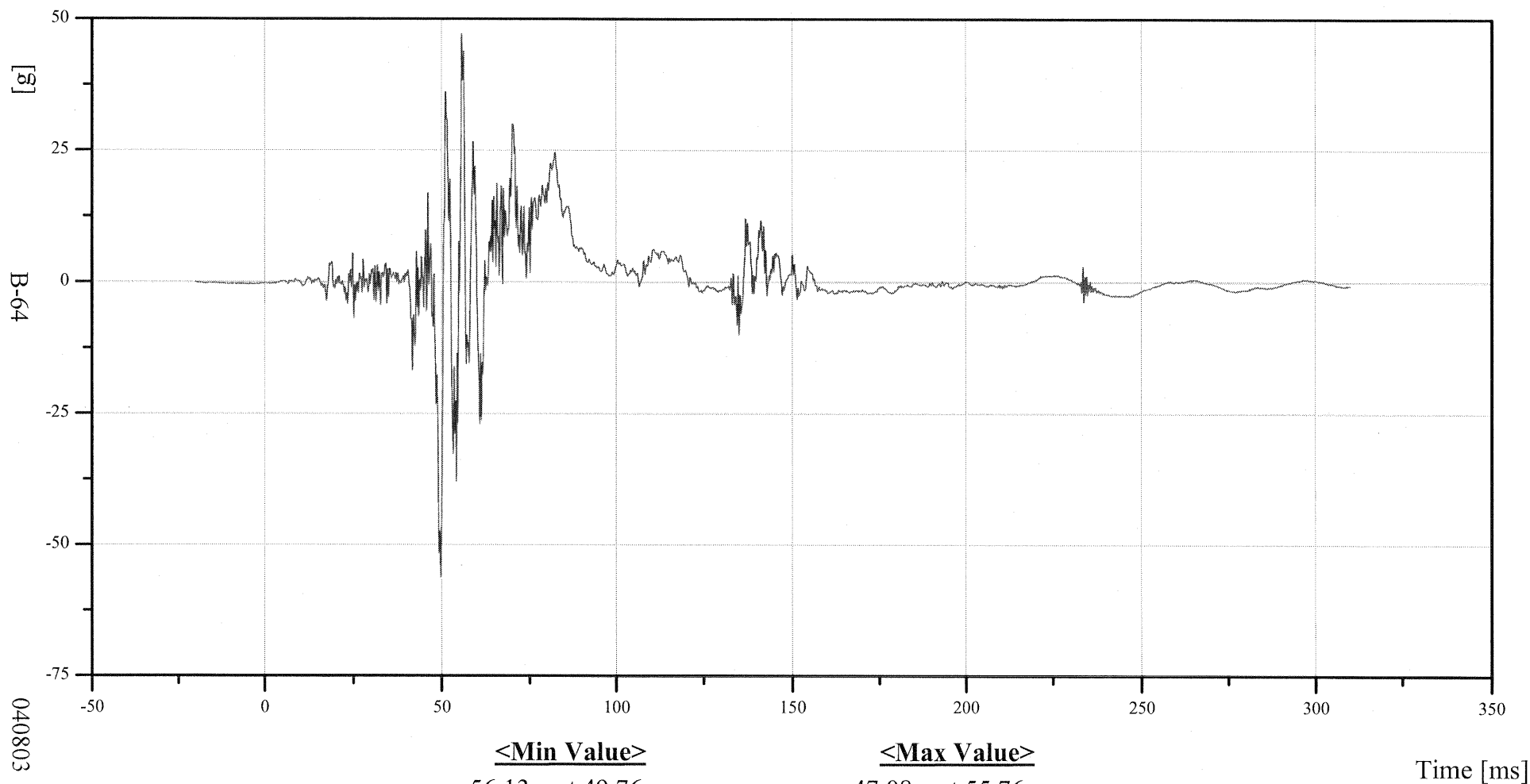
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTRYG1



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Foot Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

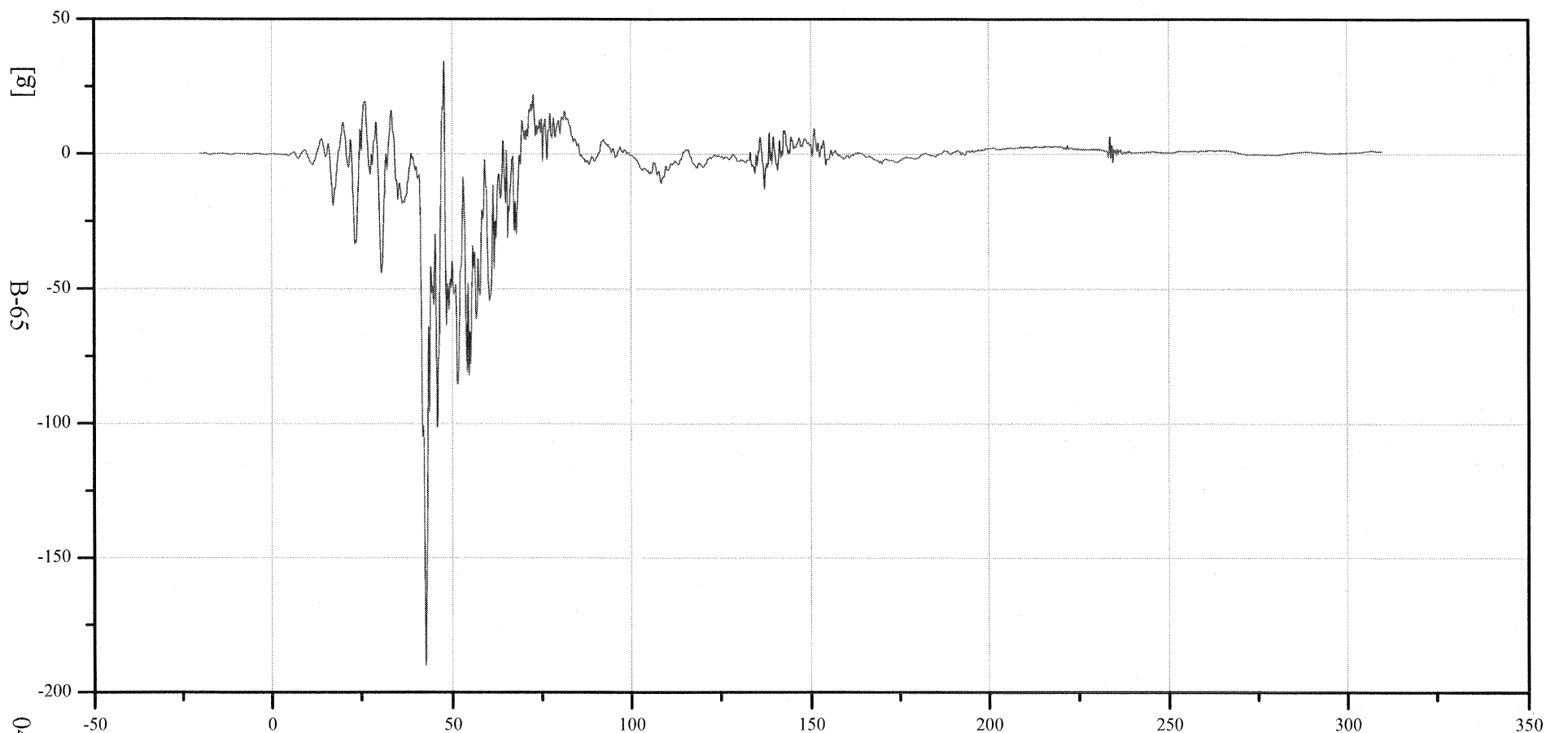
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTRZG1



040803

<Min Value>

-189.98 g at 42.72 ms

<Max Value>

34.14 g at 47.76 ms

Time [ms]

CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Foot Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

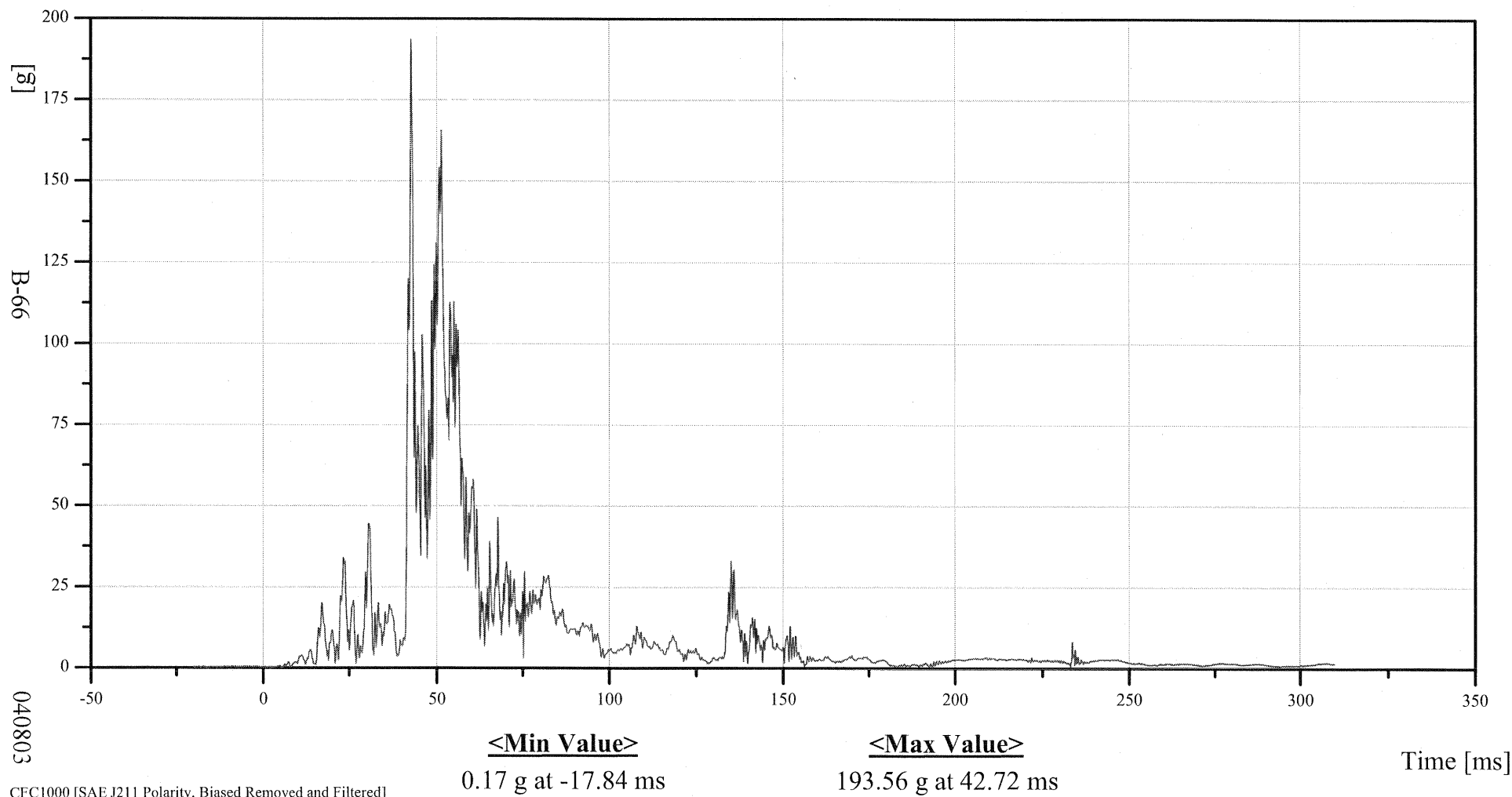
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

FTRRG1





Transportation Research Center, Inc.

Head Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

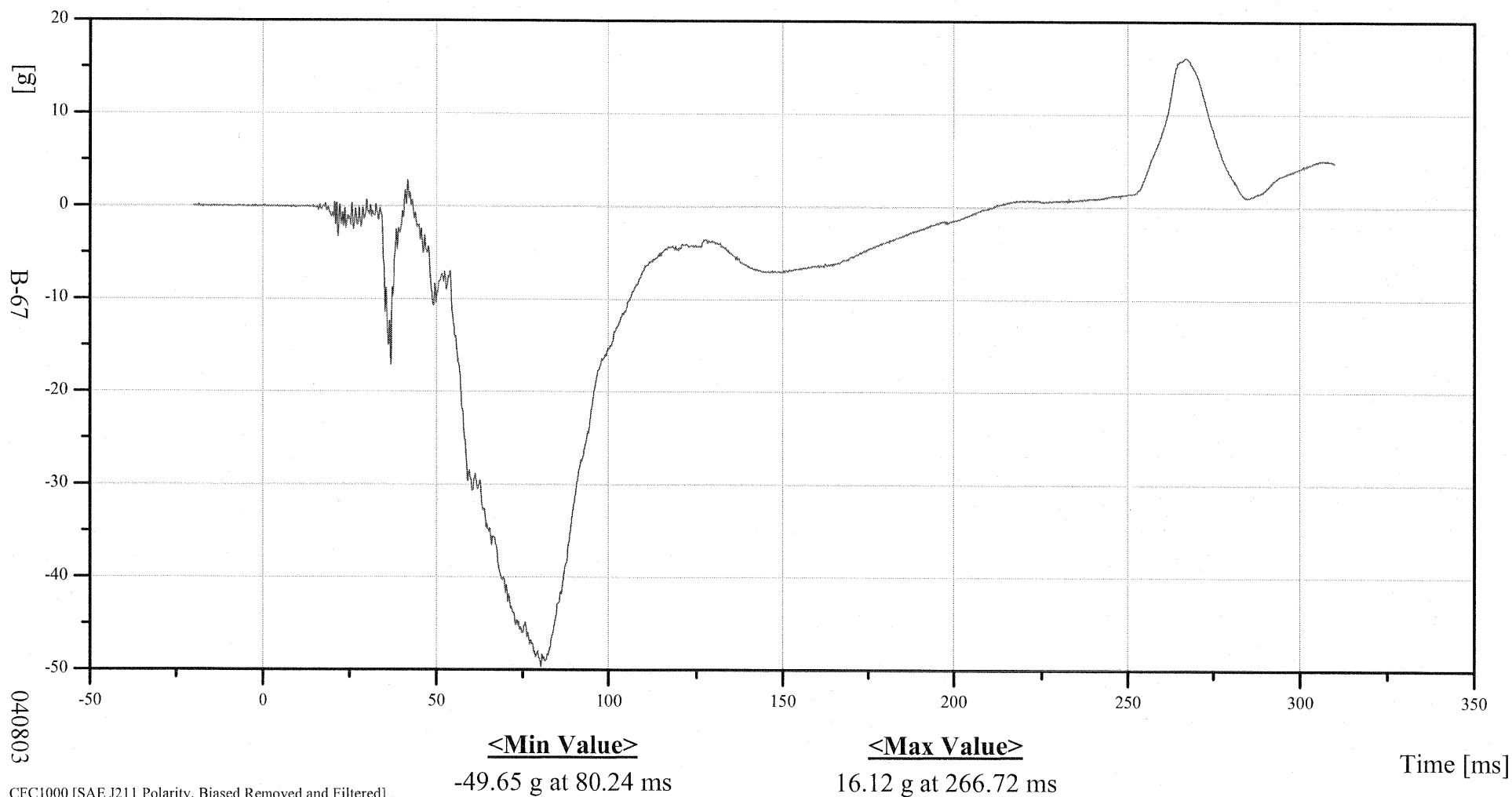
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDXG2





Transportation Research Center, Inc.

Head Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

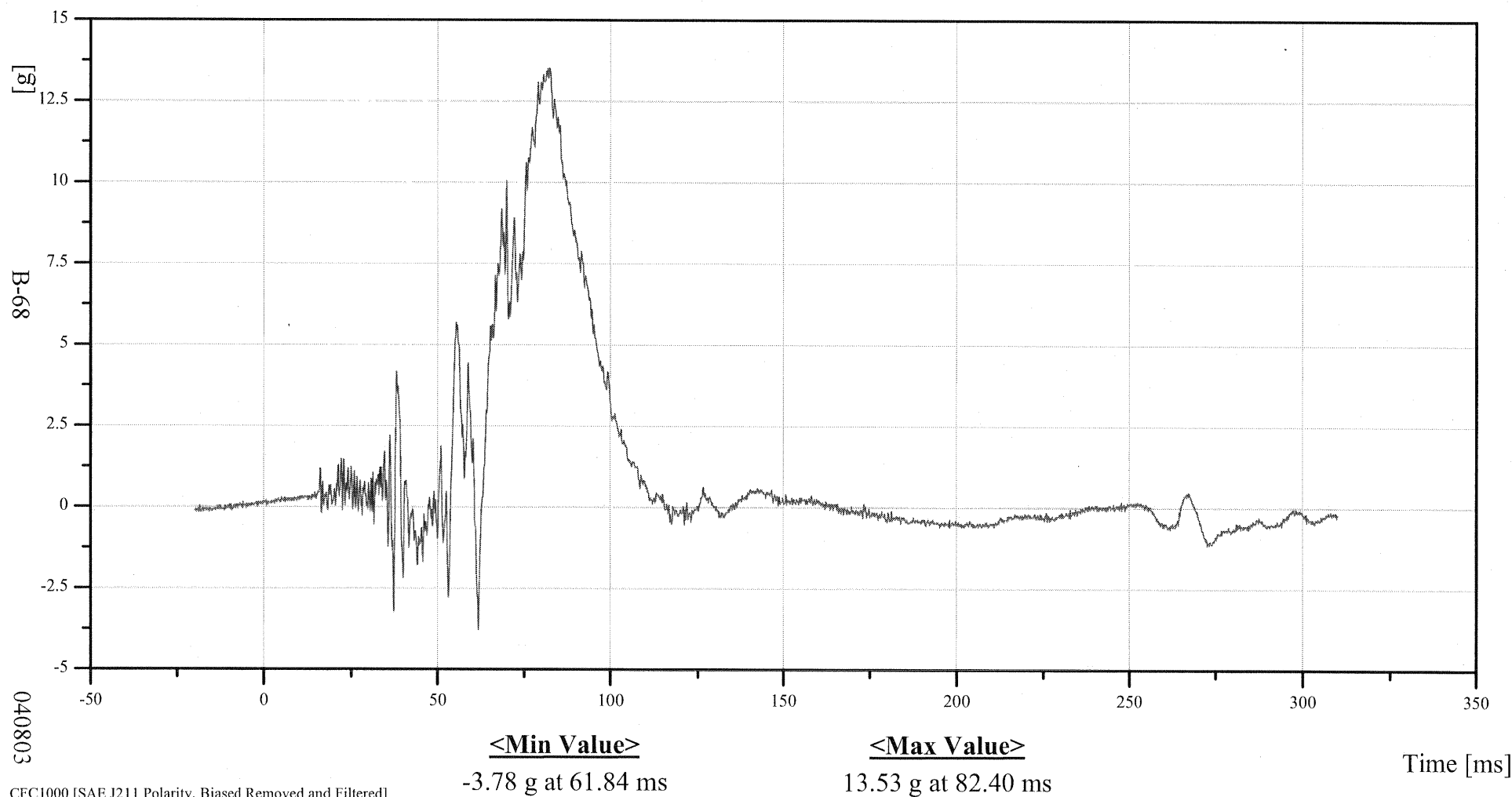
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDYG2





Transportation Research Center, Inc.

Head Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

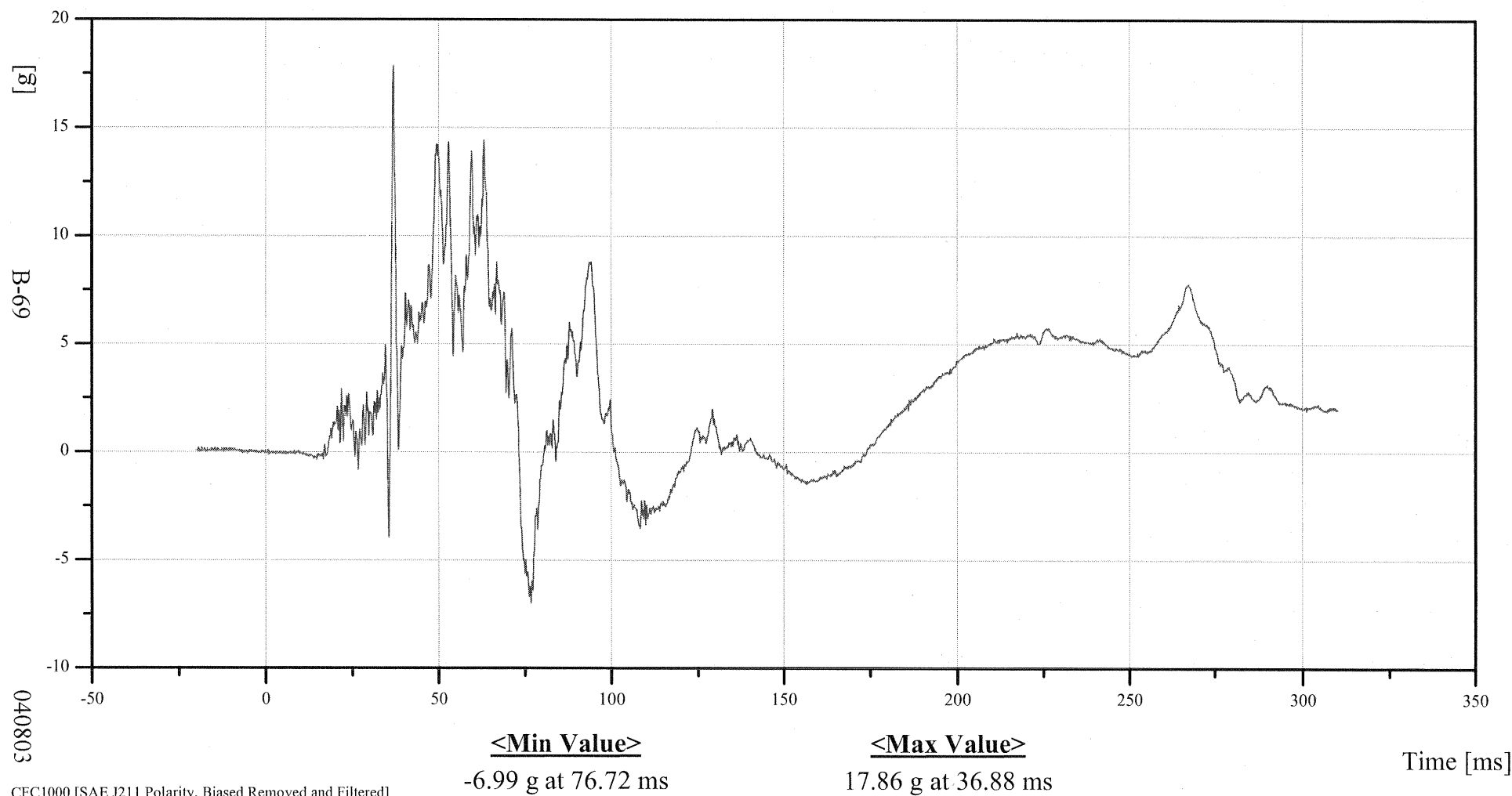
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDZG2





Transportation Research Center, Inc.

Head Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

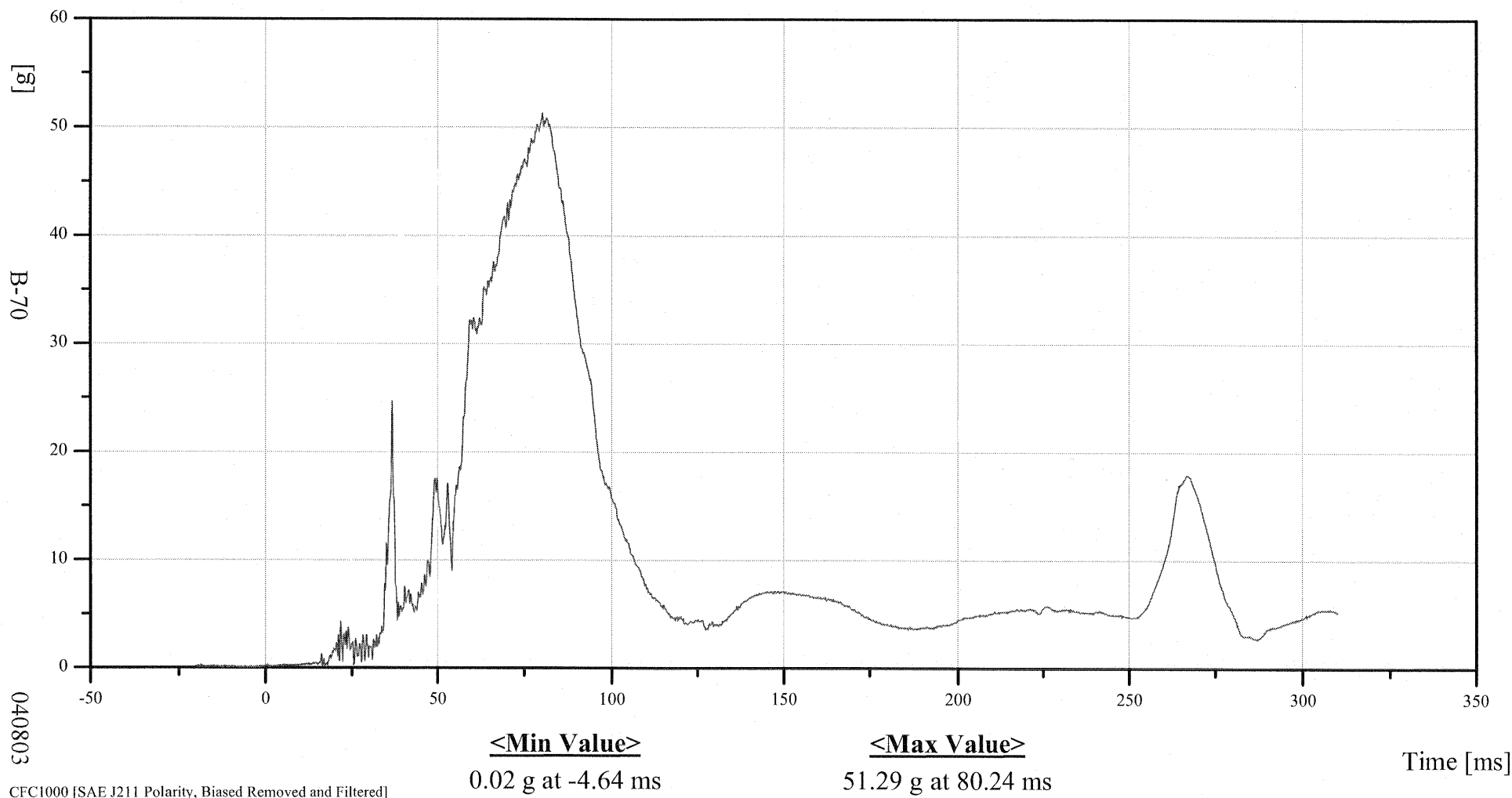
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDRG2



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Head Accel X Red

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

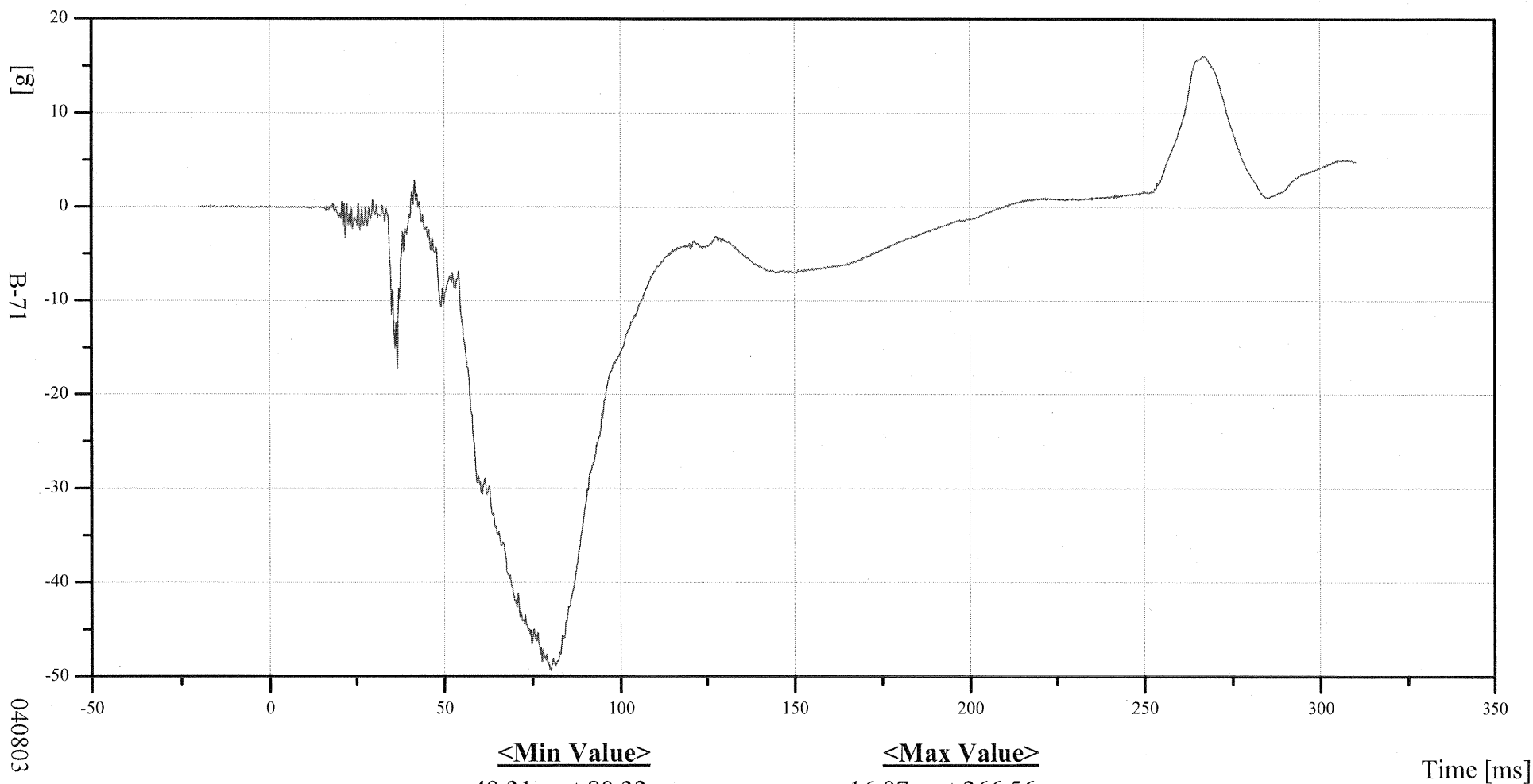
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDXR2



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Head Accel Y Red

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

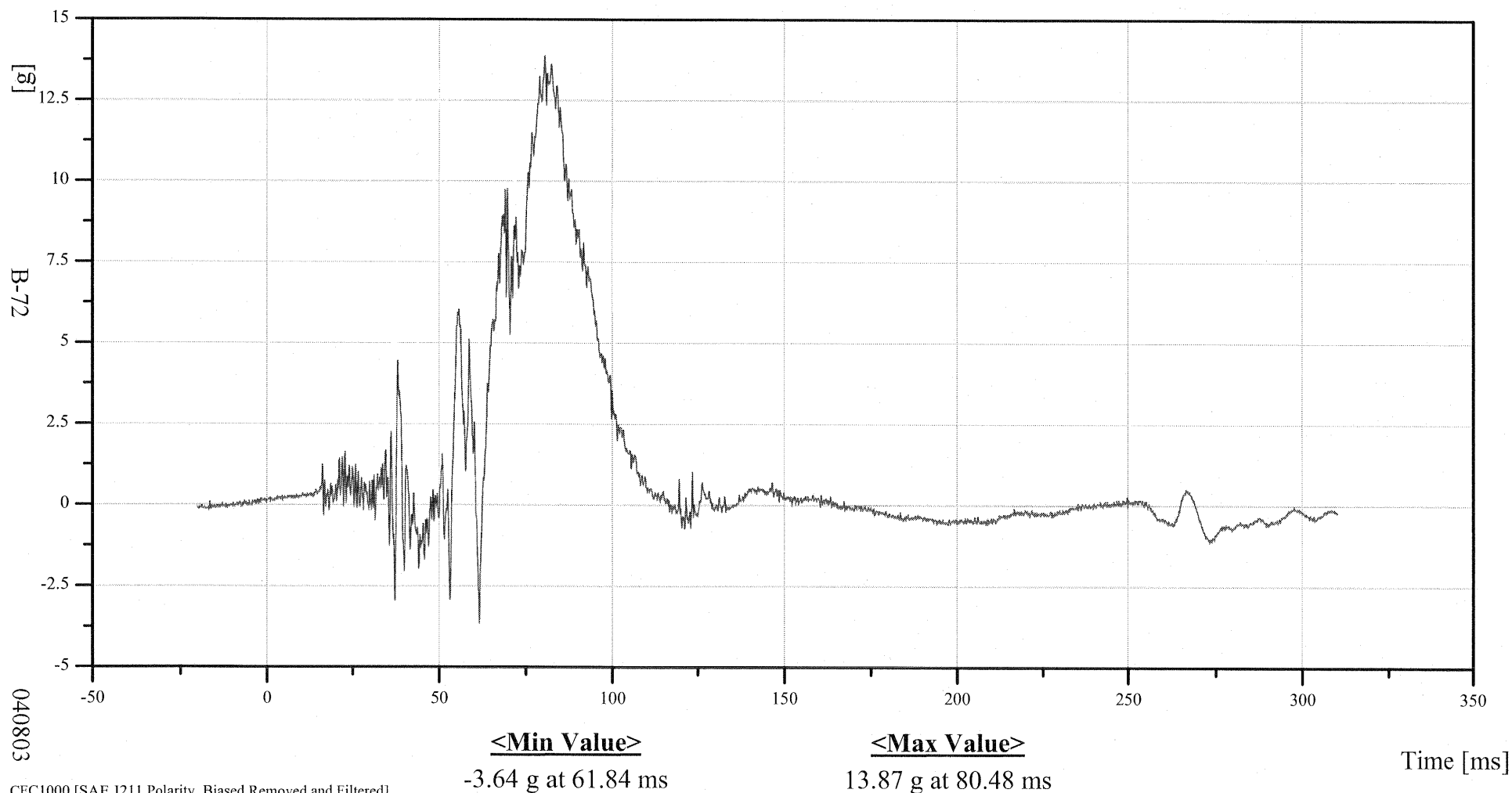
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDYR2





Transportation Research Center, Inc.

Head Accel Z Red

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

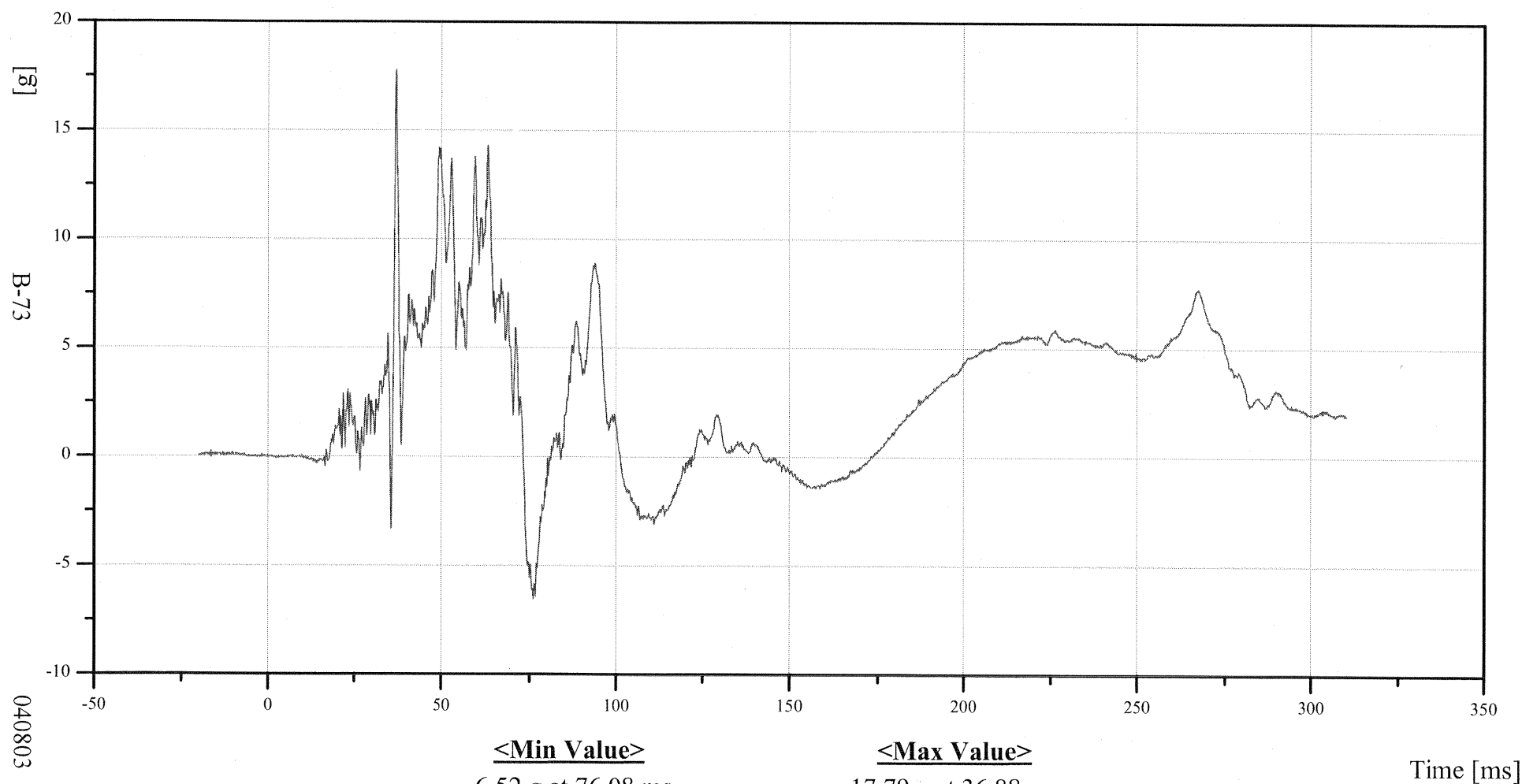
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDZR2



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

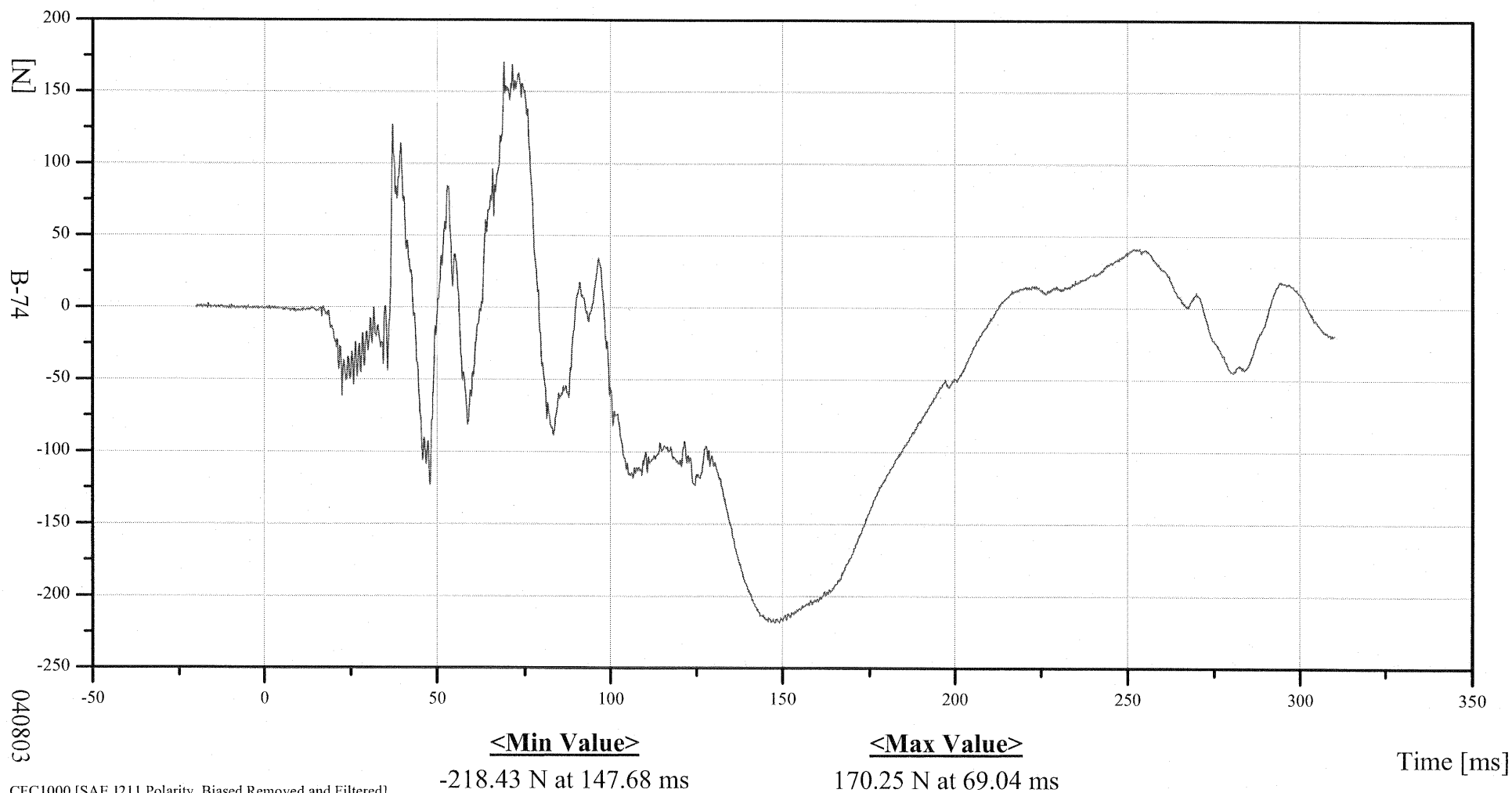
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKXF2



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

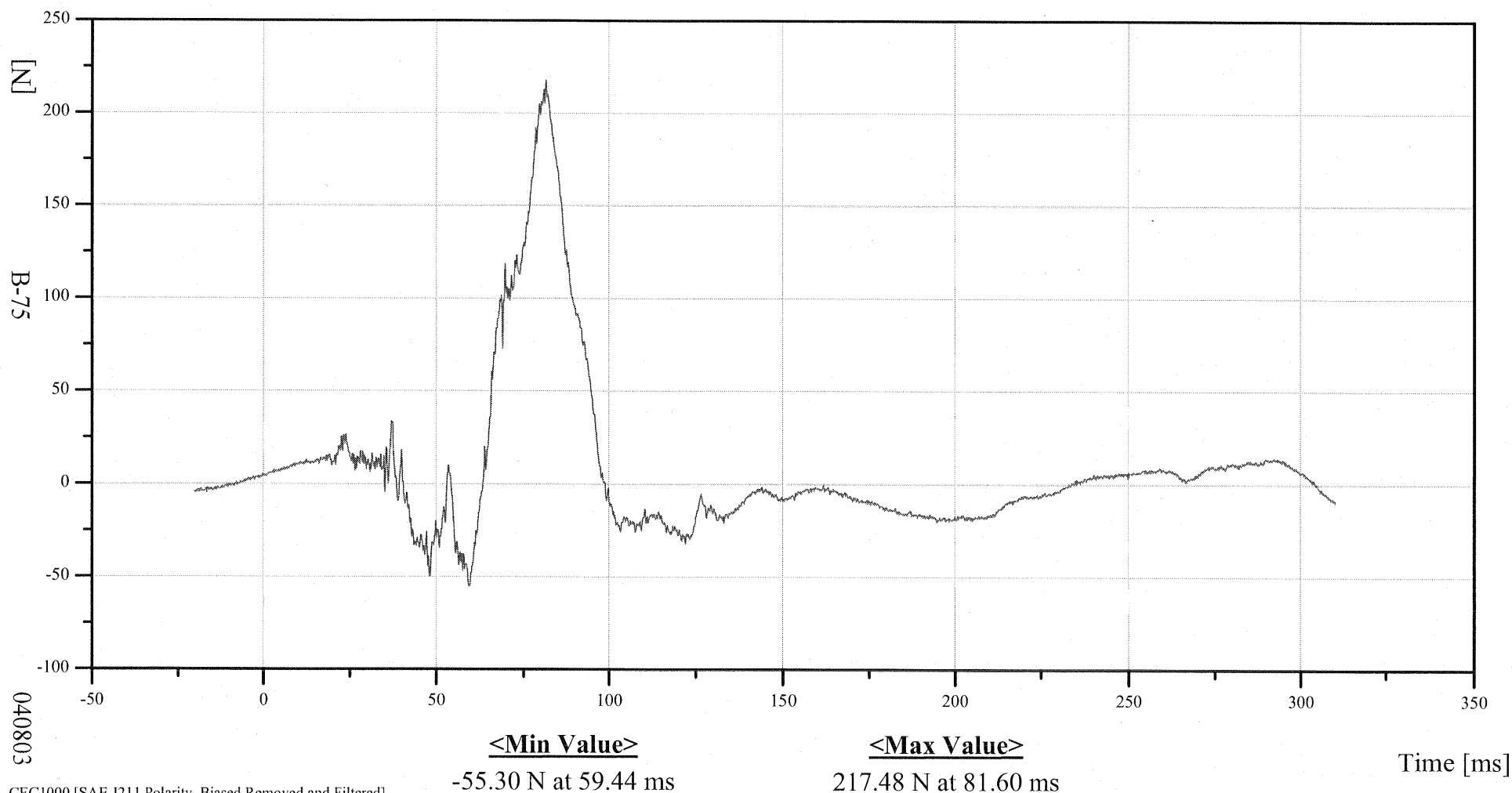
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKYF2





Transportation Research Center, Inc.

Neck Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

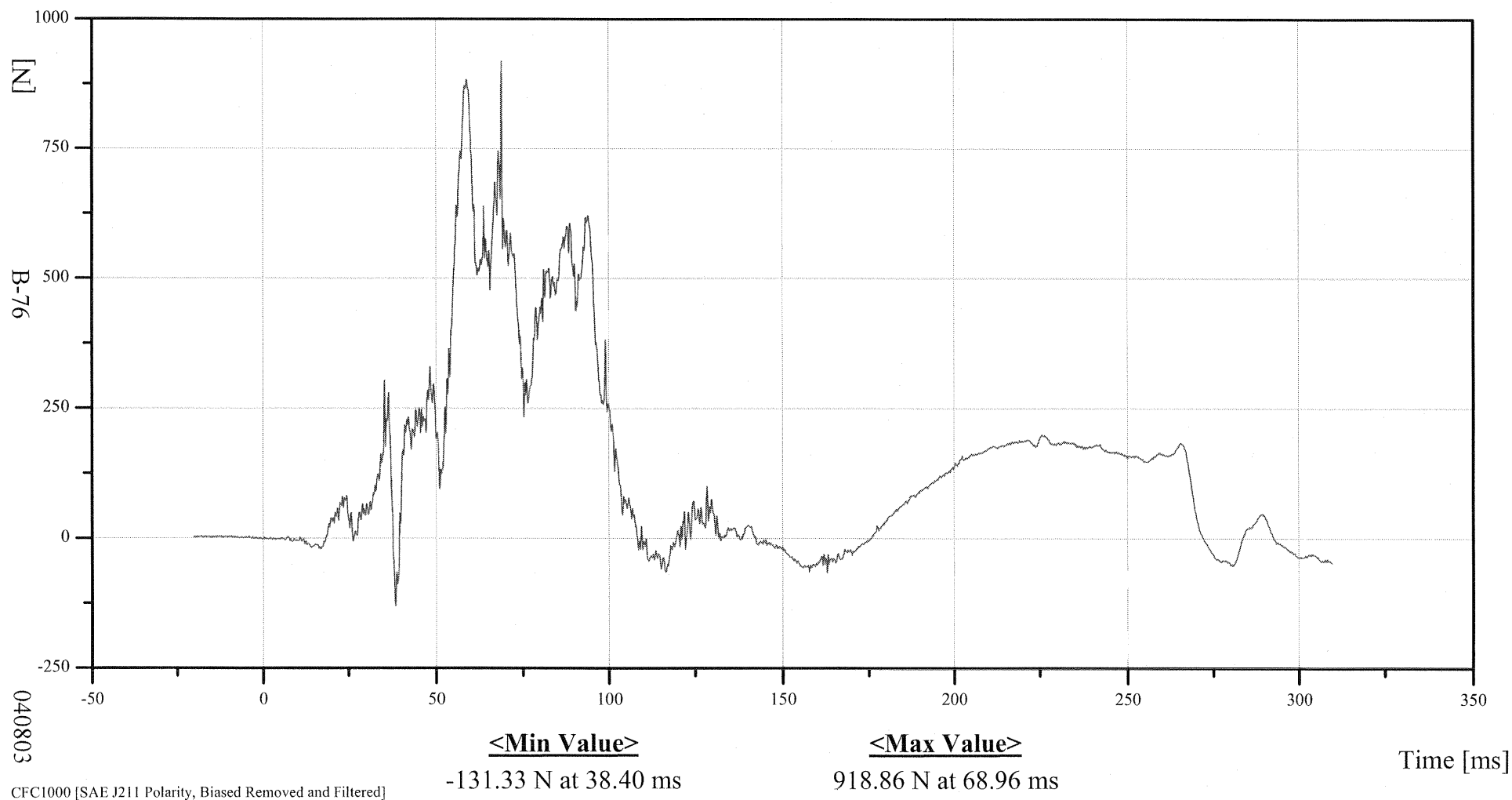
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKZF2





Transportation Research Center, Inc.

Neck Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

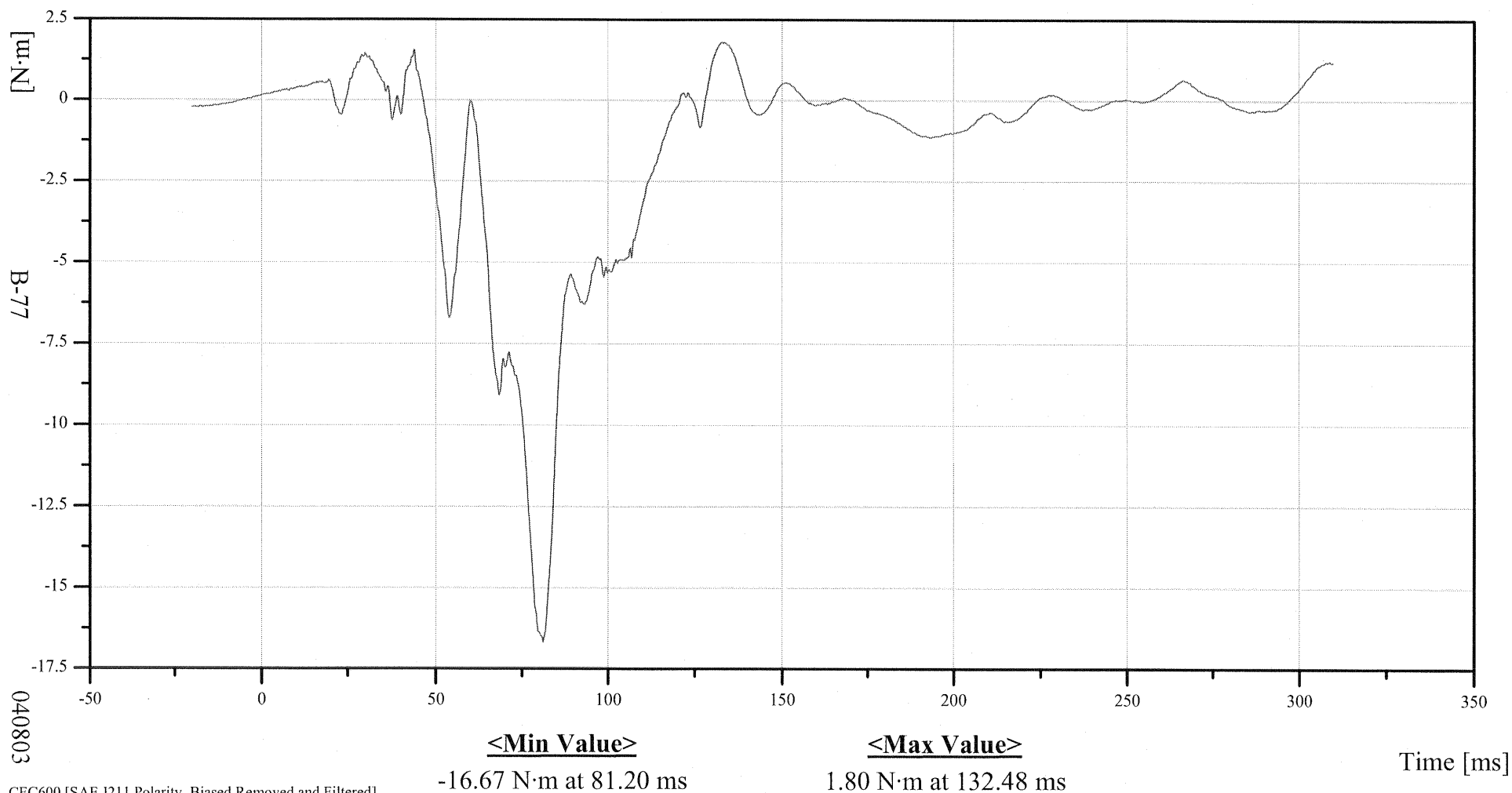
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKXM2



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

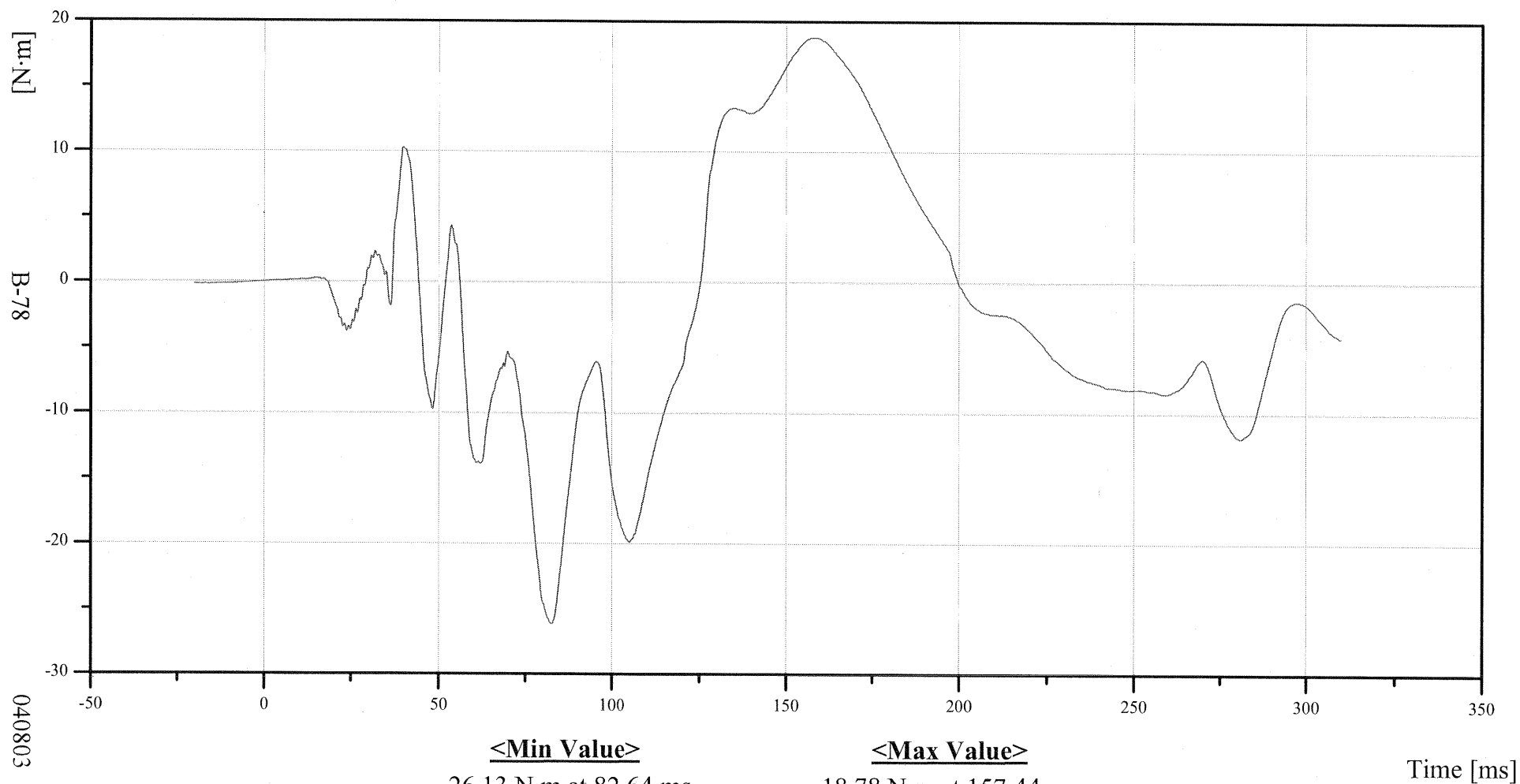
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKYM2



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Moment Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

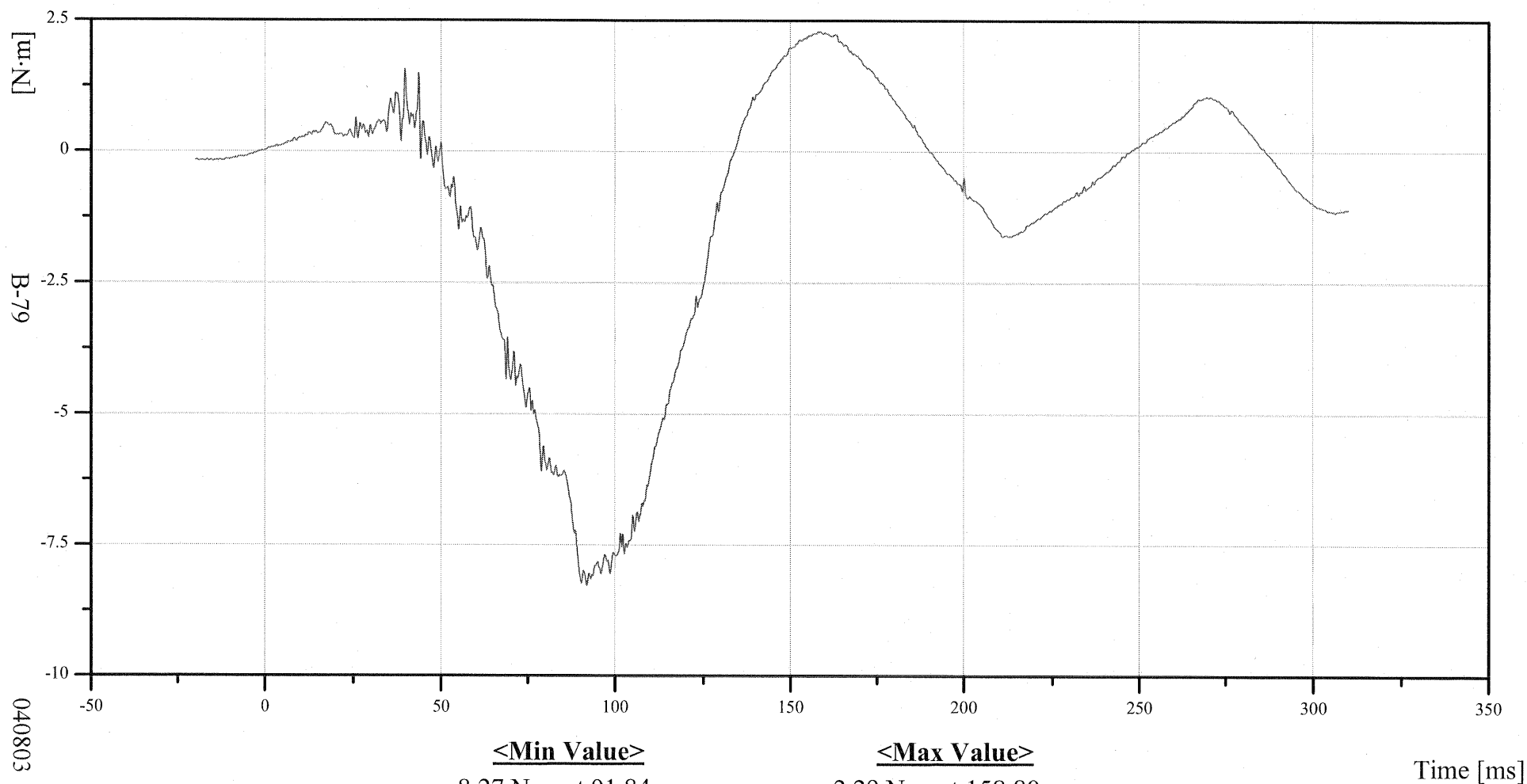
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKZM2



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

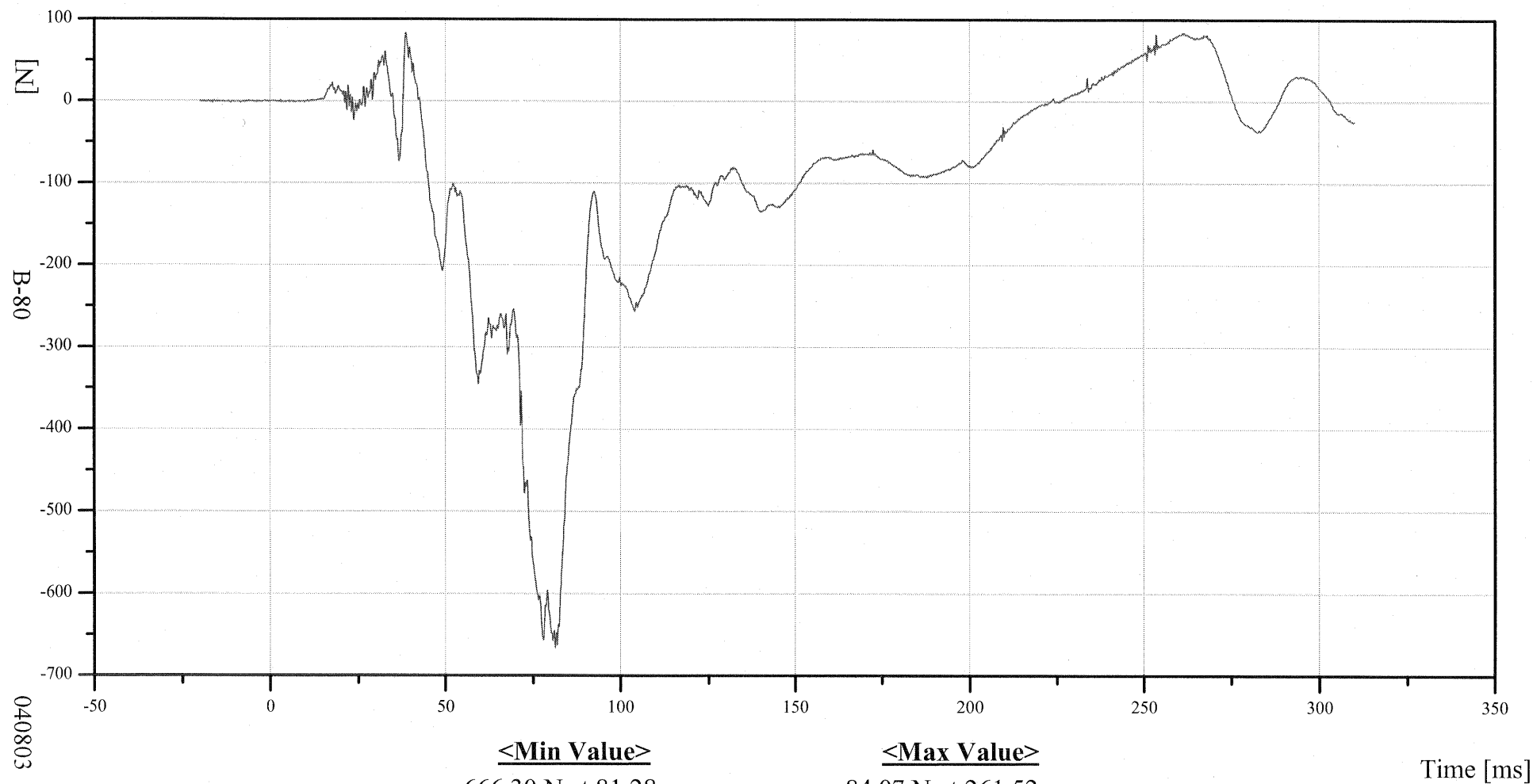
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLXF2



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

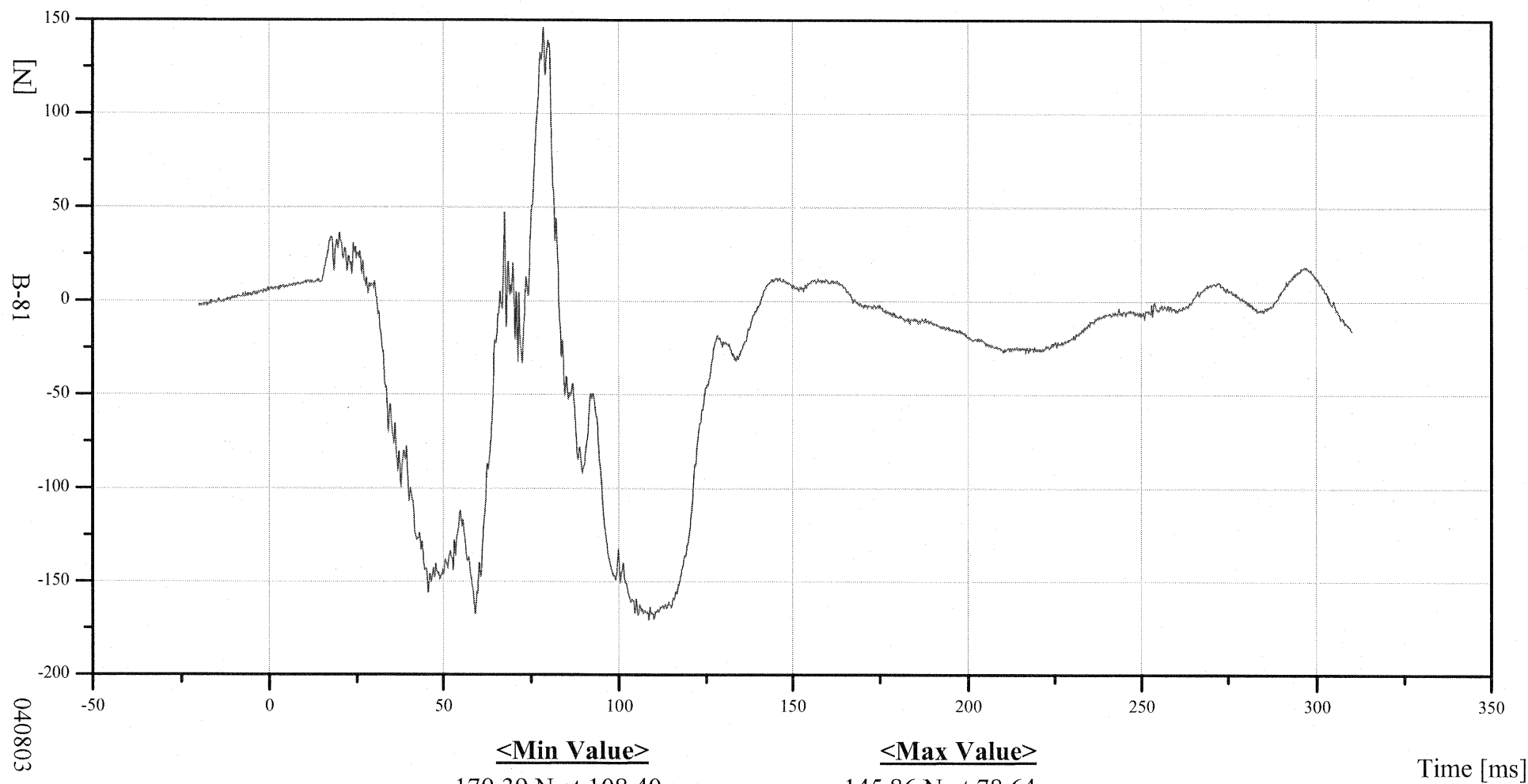
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLYF2



040803

CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

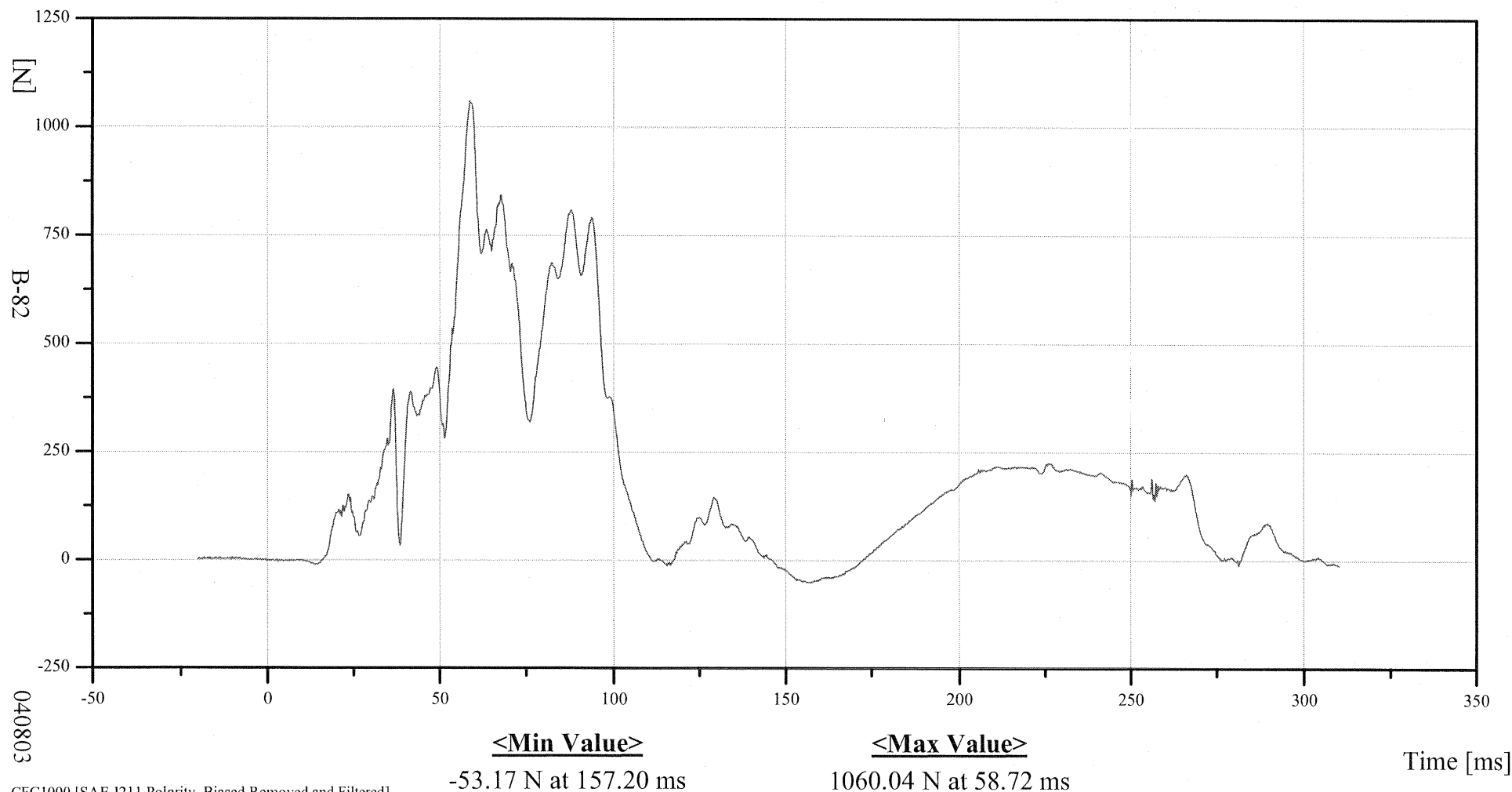
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLZF2



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

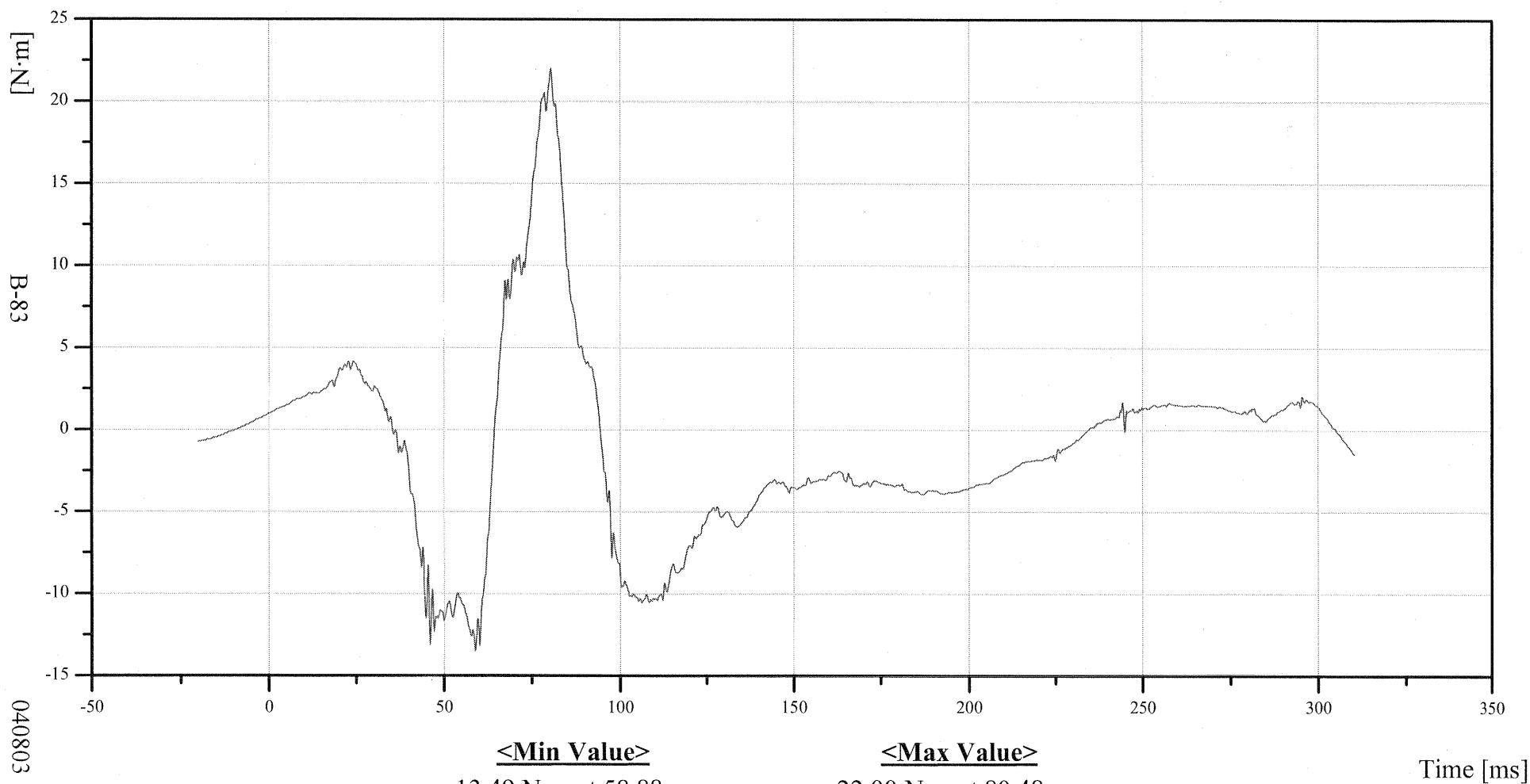
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLXM2



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

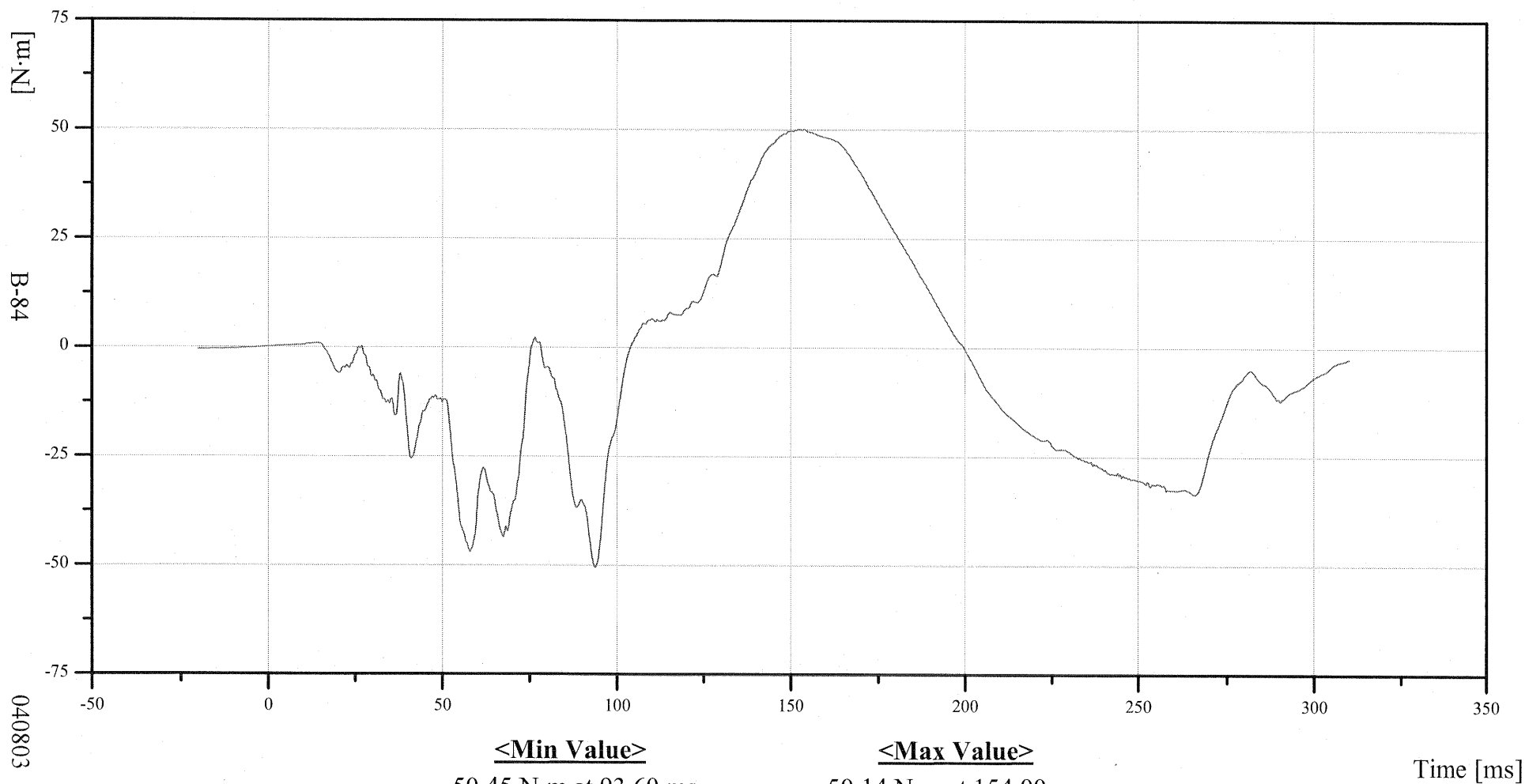
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLYM2



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]

-50.45 N·m at 93.60 ms

50.14 N·m at 154.00 ms



Transportation Research Center, Inc.

Neck Lwr Moment Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

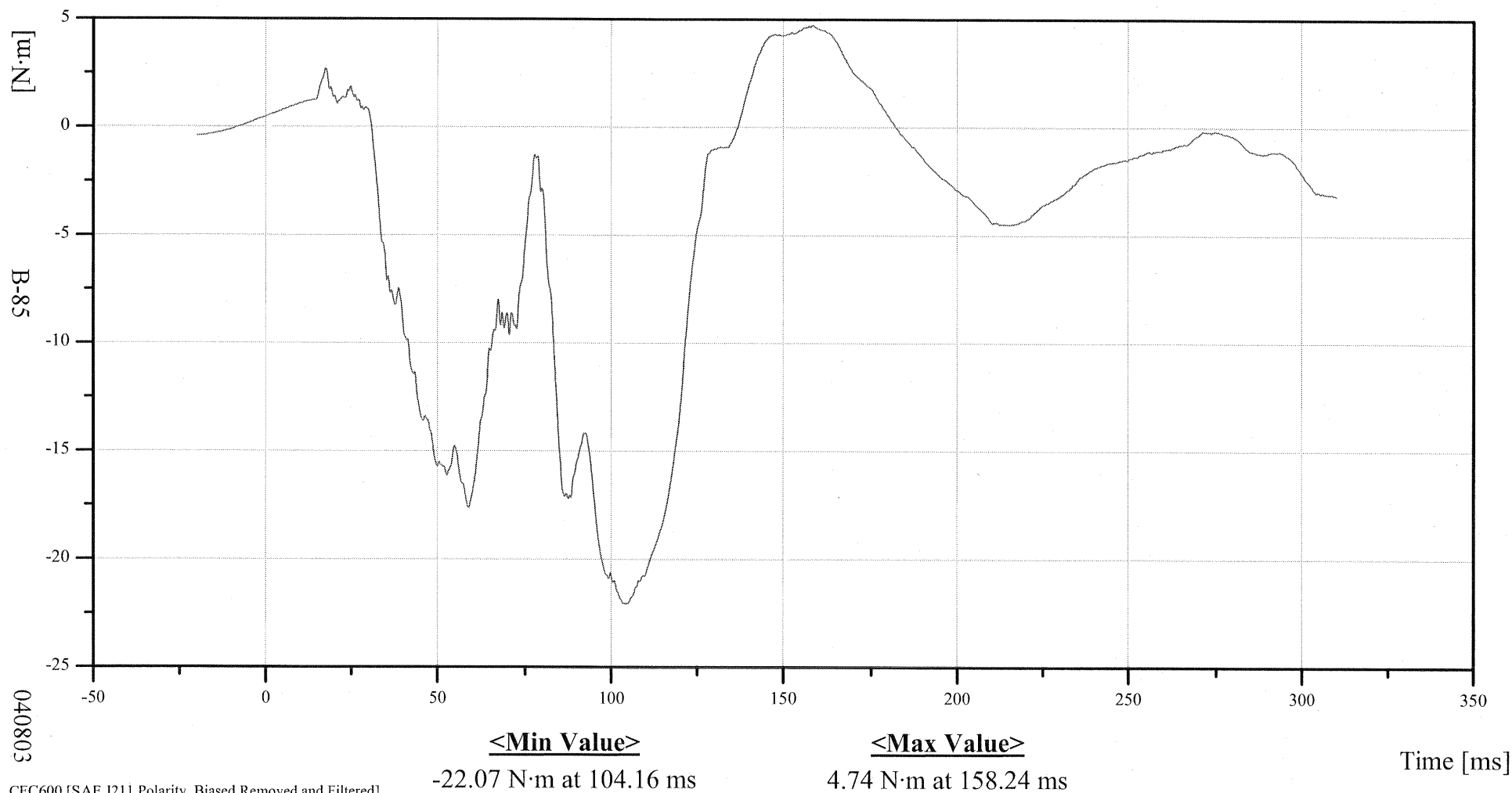
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLZM2





Transportation Research Center, Inc.

Chest Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

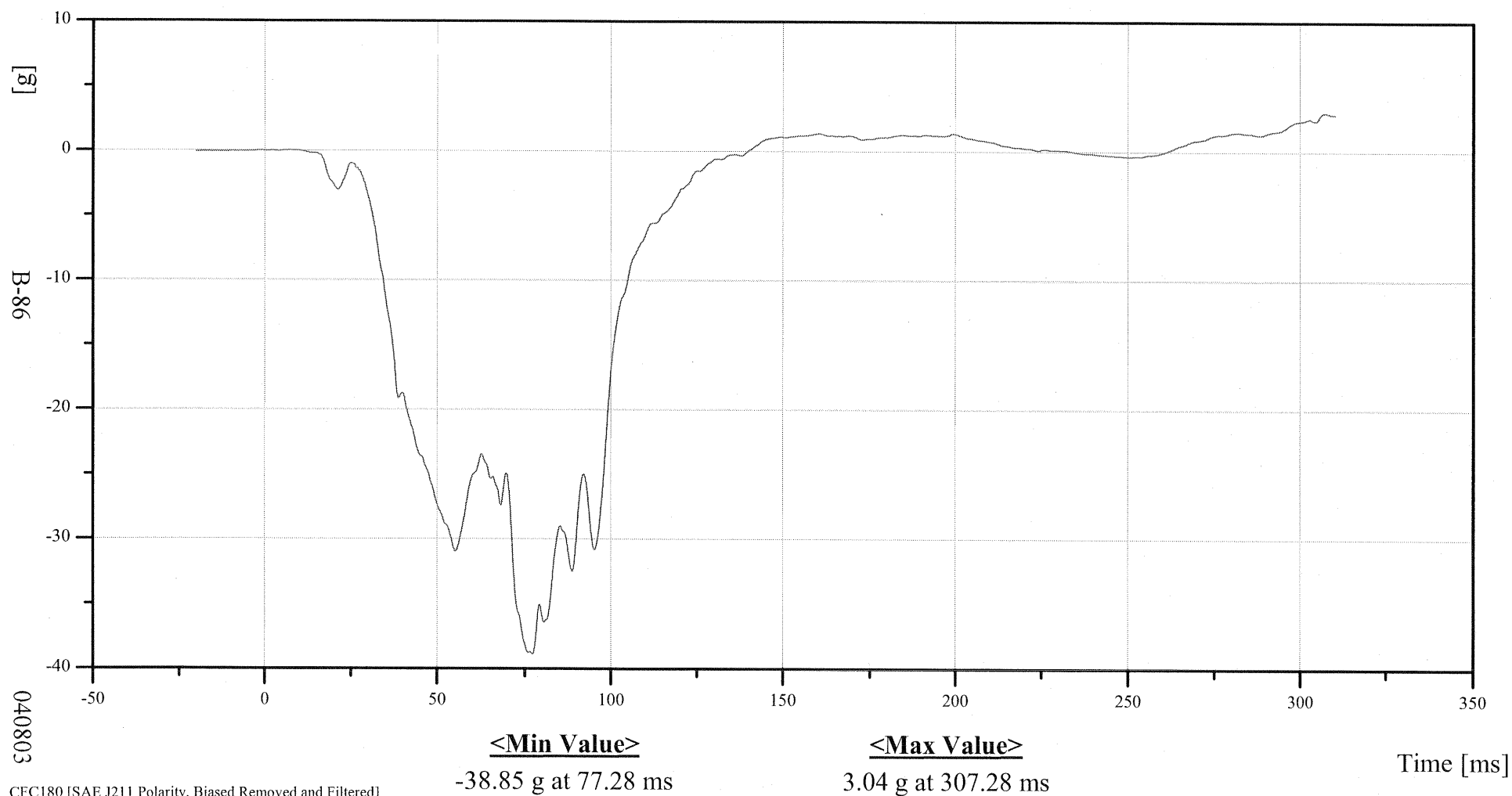
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXG2





Transportation Research Center, Inc.

Chest Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

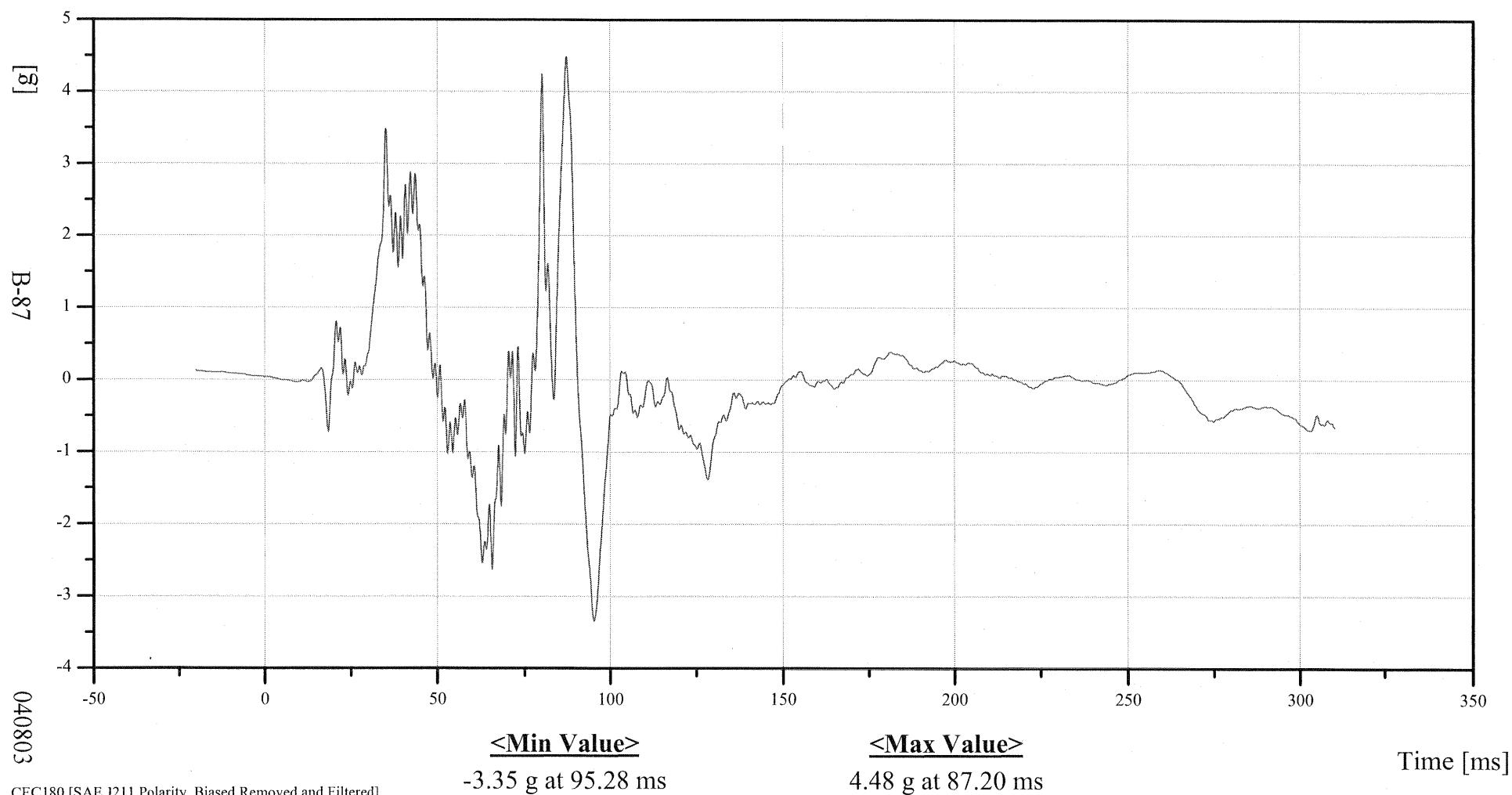
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTYG2





Transportation Research Center, Inc.

Chest Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

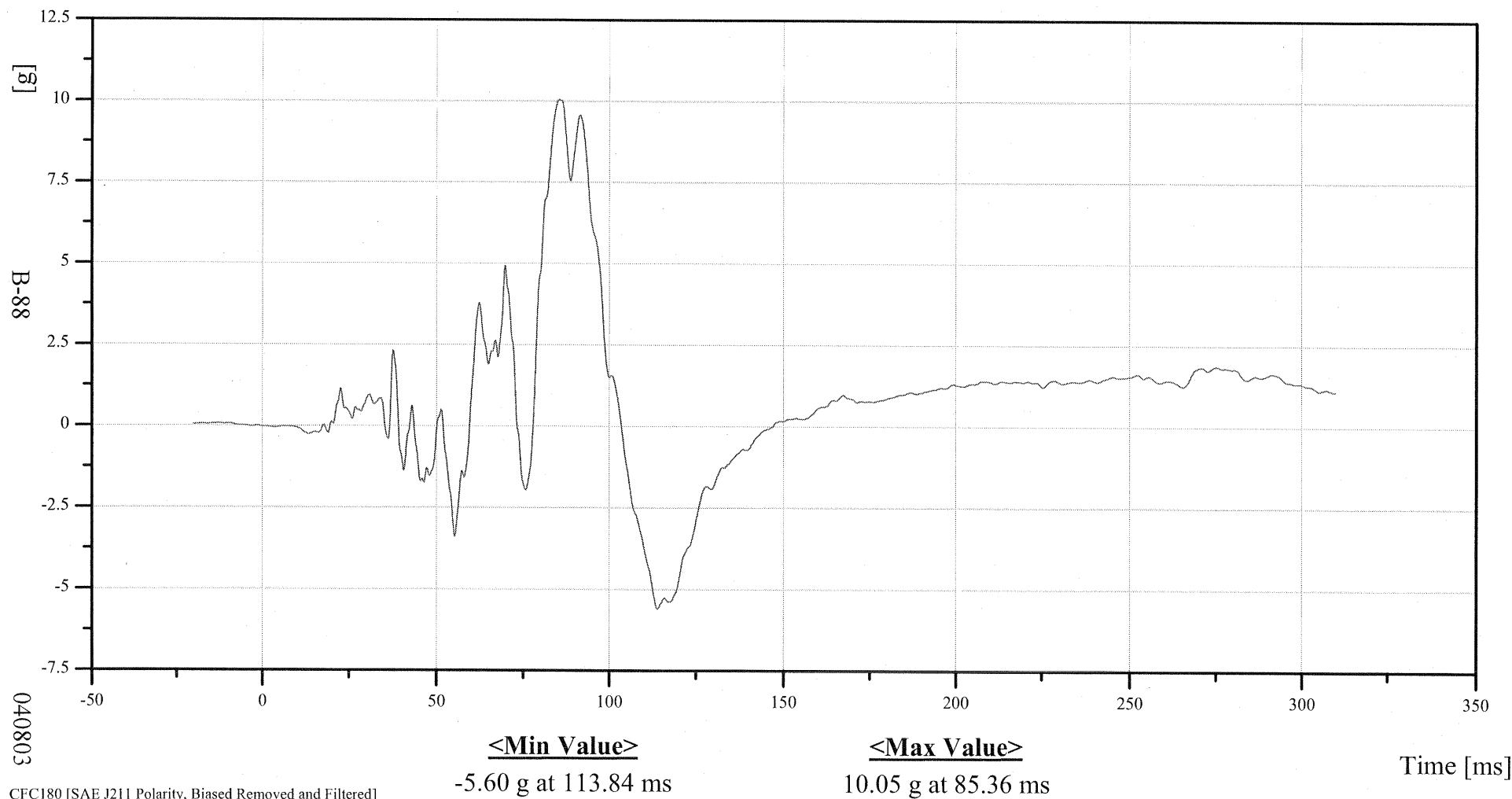
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTZG2





Transportation Research Center, Inc.

Chest Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

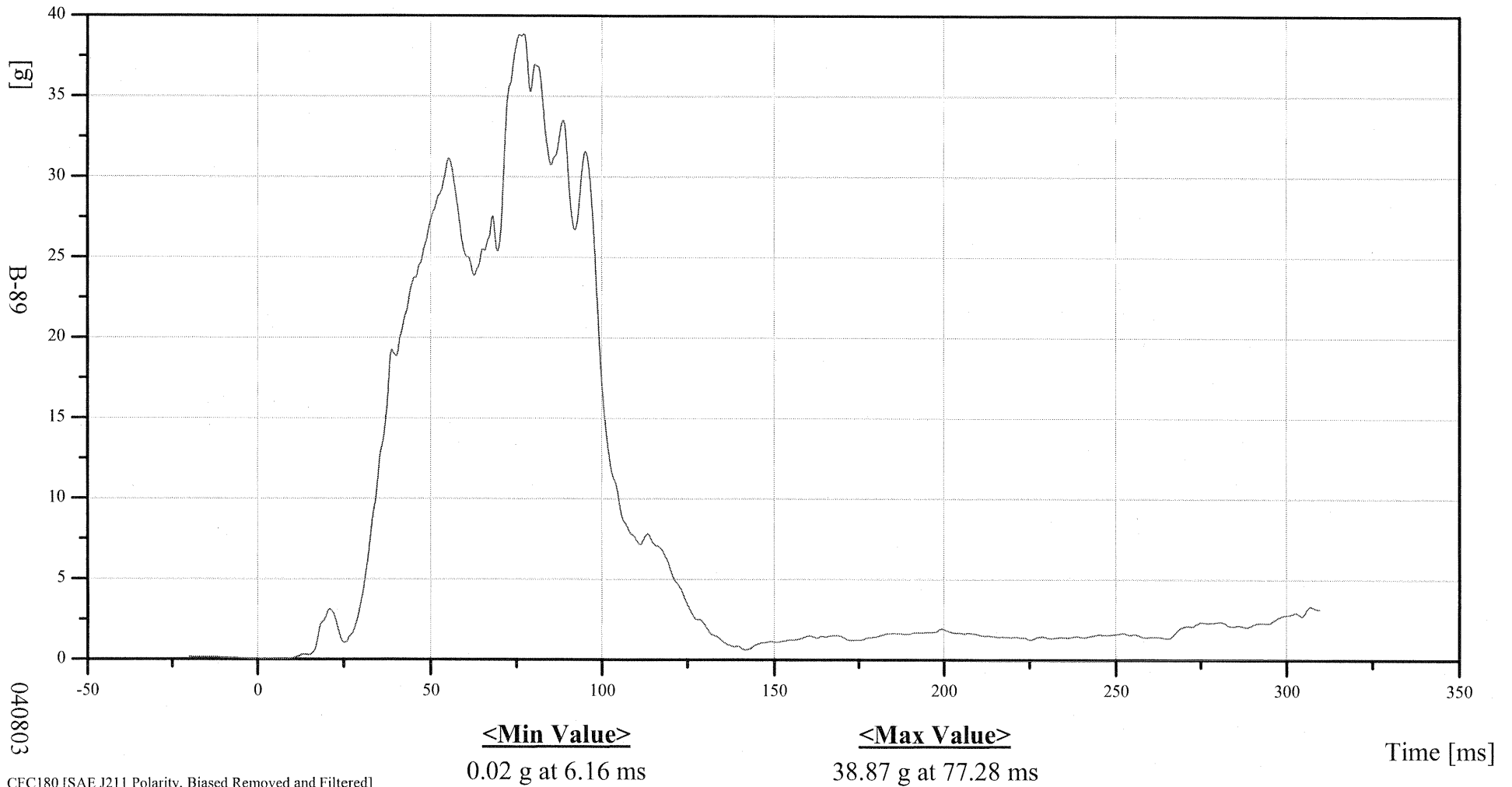
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTRG2





Transportation Research Center, Inc.

Chest Accel X Red

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

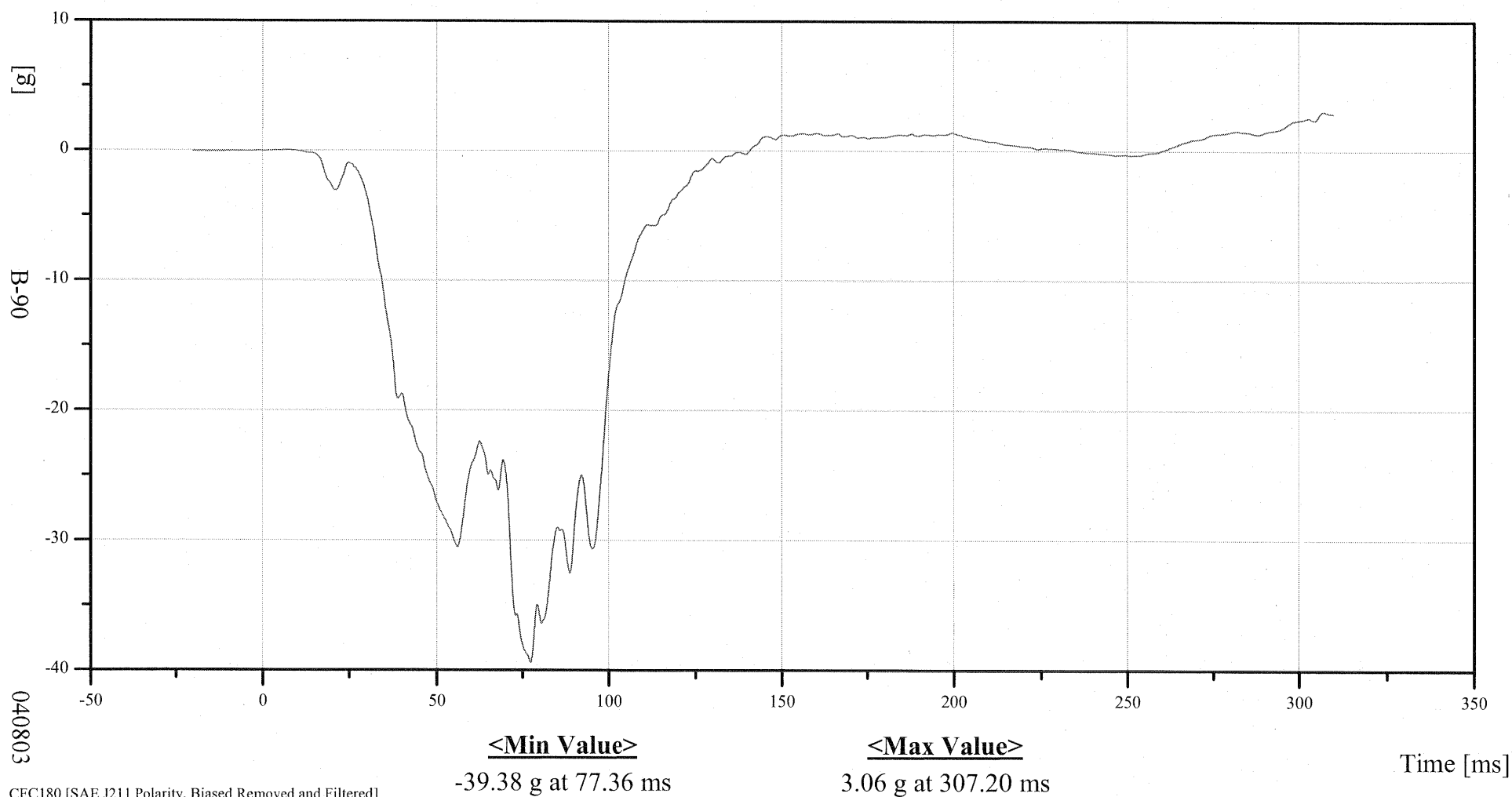
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXR2





Transportation Research Center, Inc.

Chest Accel Y Red

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

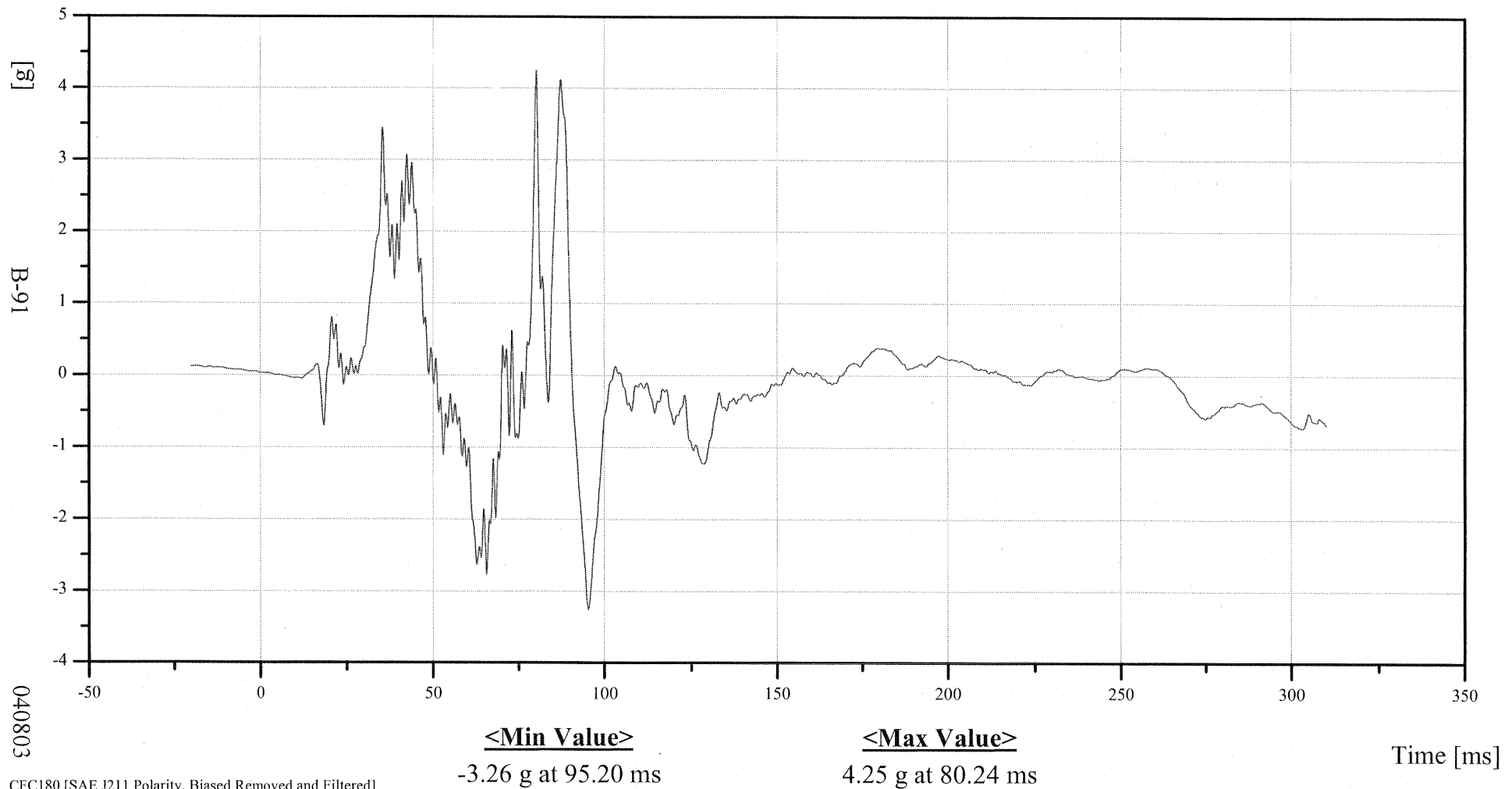
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTYR2



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel Z Red

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

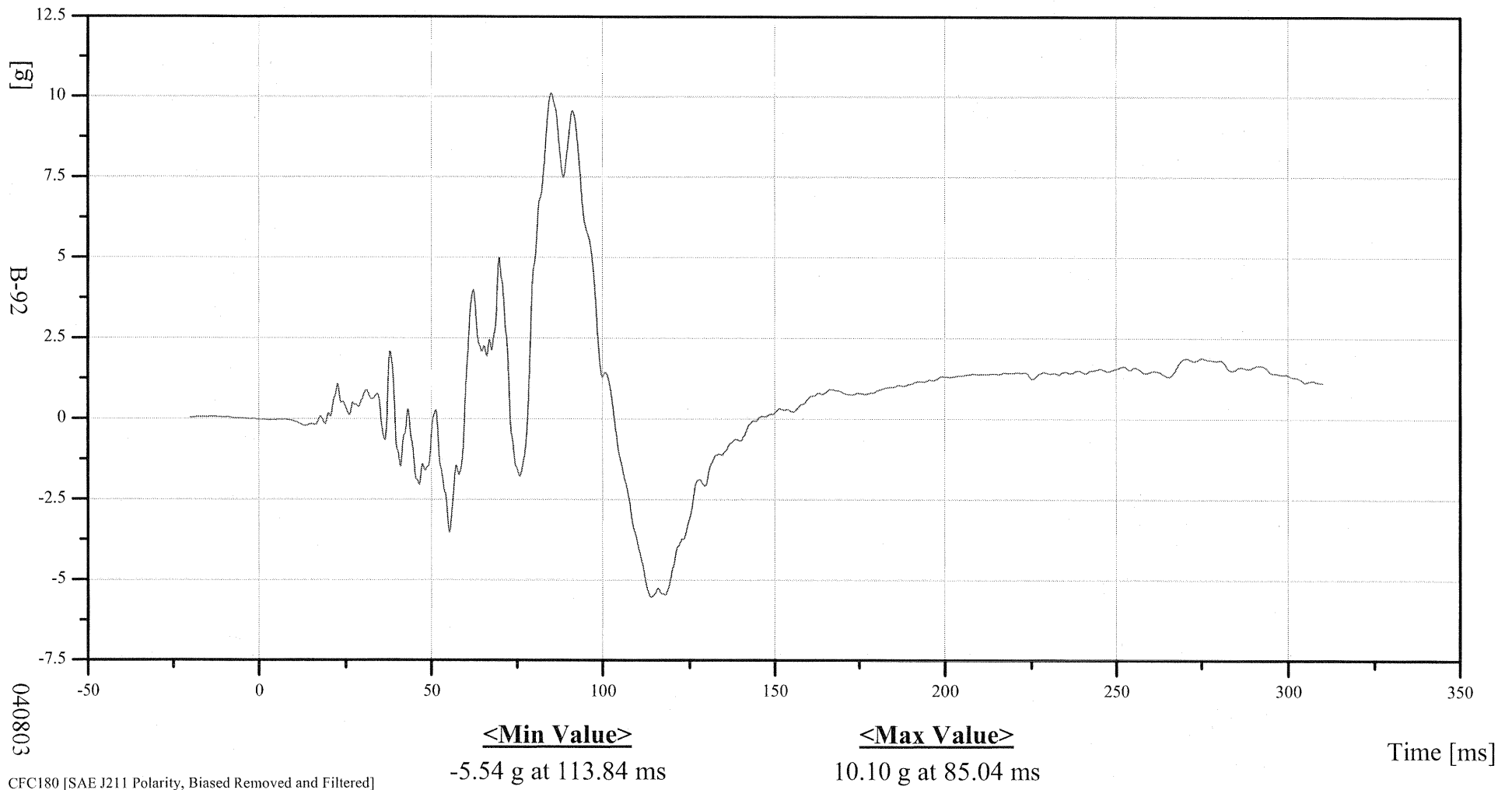
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTZR2





Transportation Research Center, Inc.

Chest Deflection X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

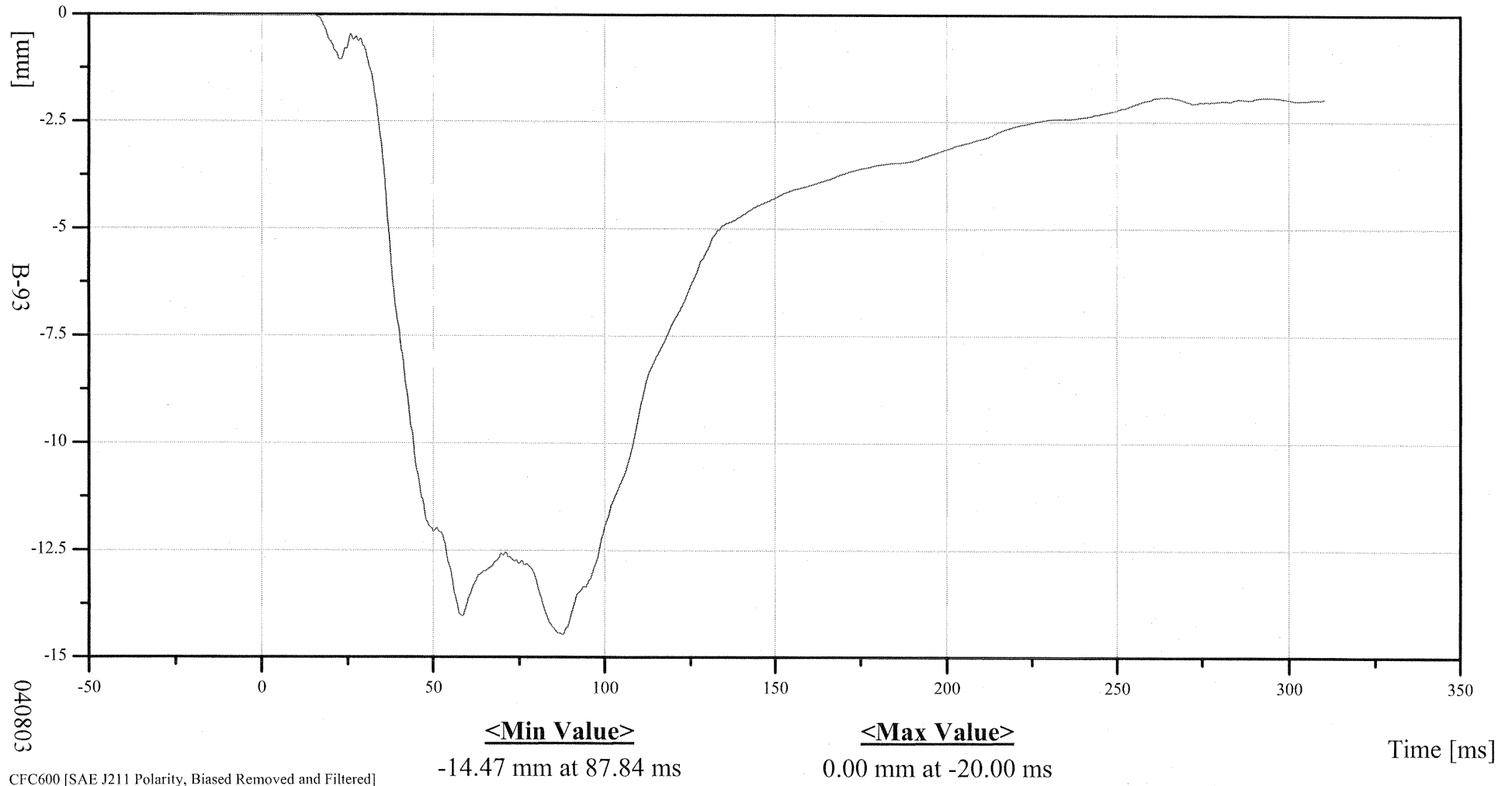
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXD2





Transportation Research Center, Inc.

Pelvis Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

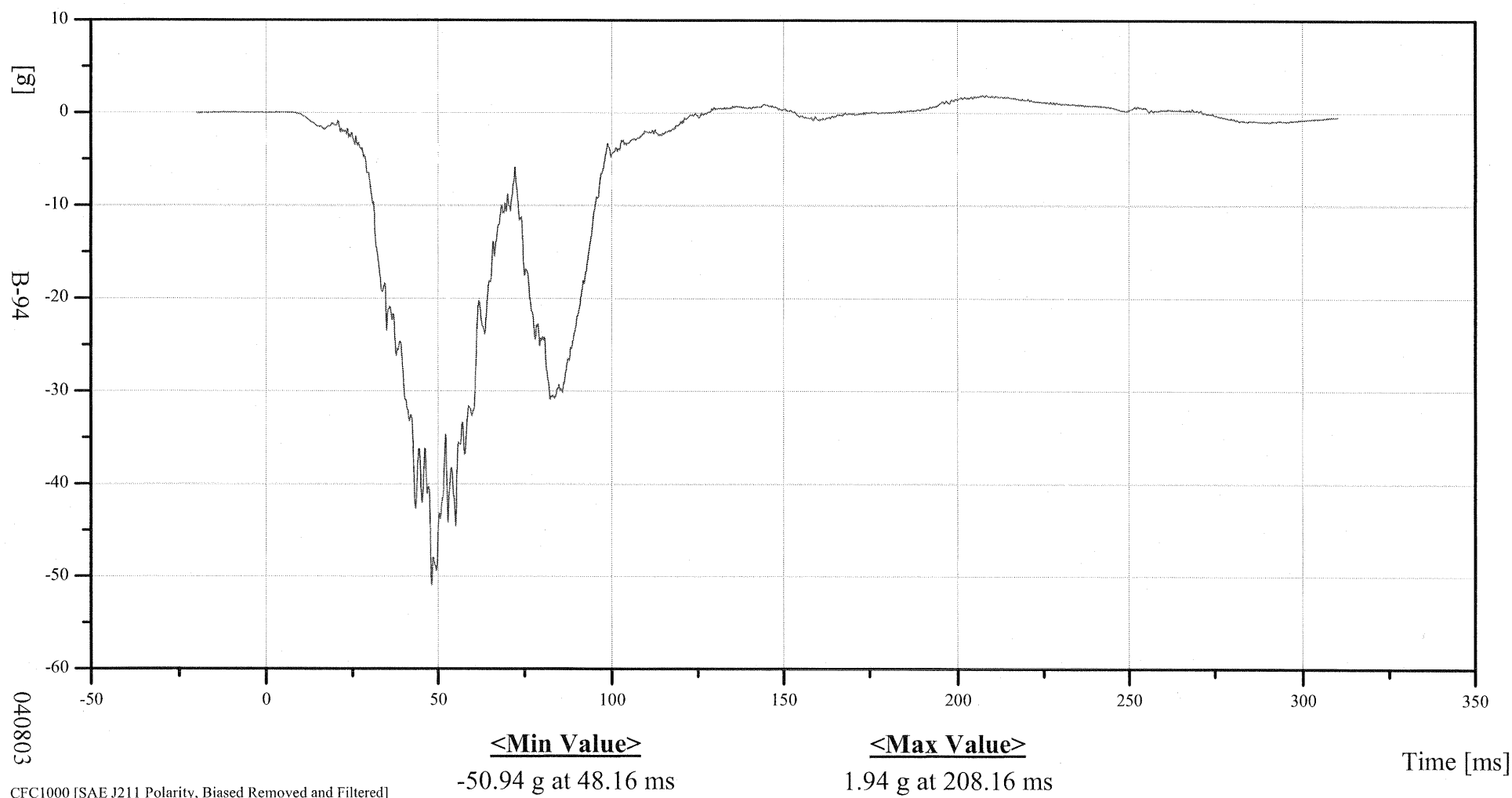
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVXG2





Transportation Research Center, Inc.

Pelvis Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

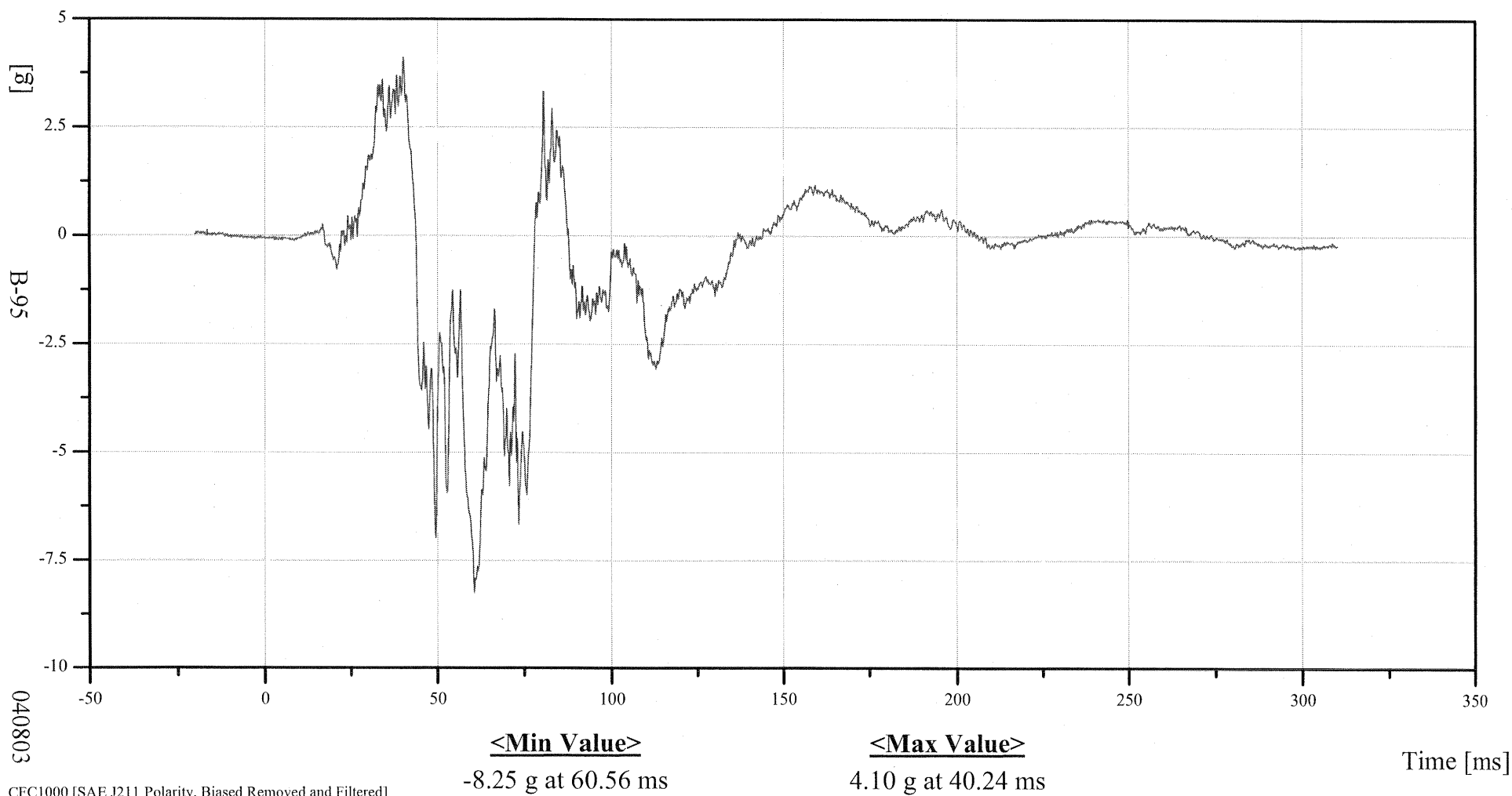
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVYG2





Transportation Research Center, Inc.

Pelvis Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

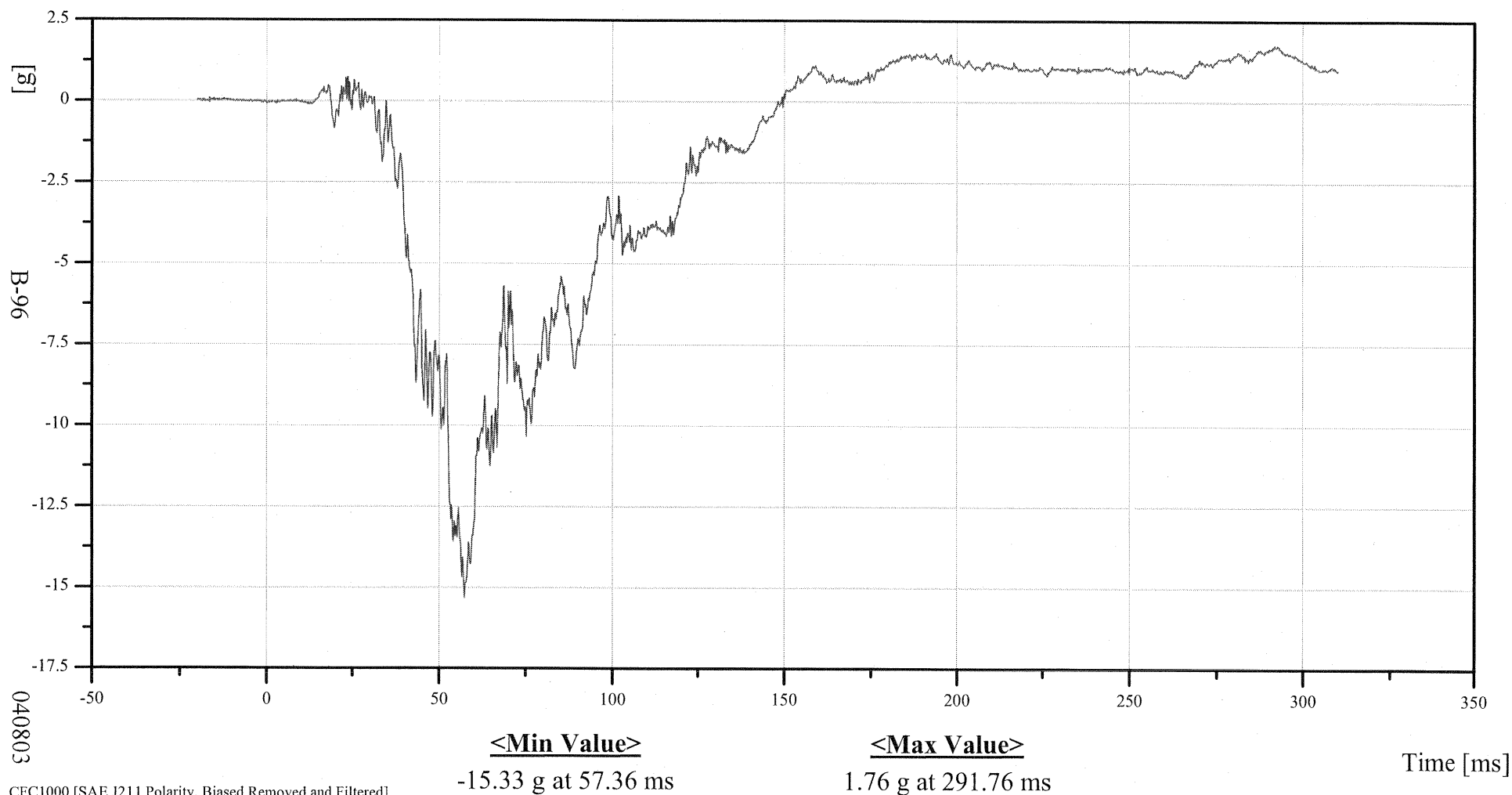
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVZG2





Transportation Research Center, Inc.

Pelvis Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

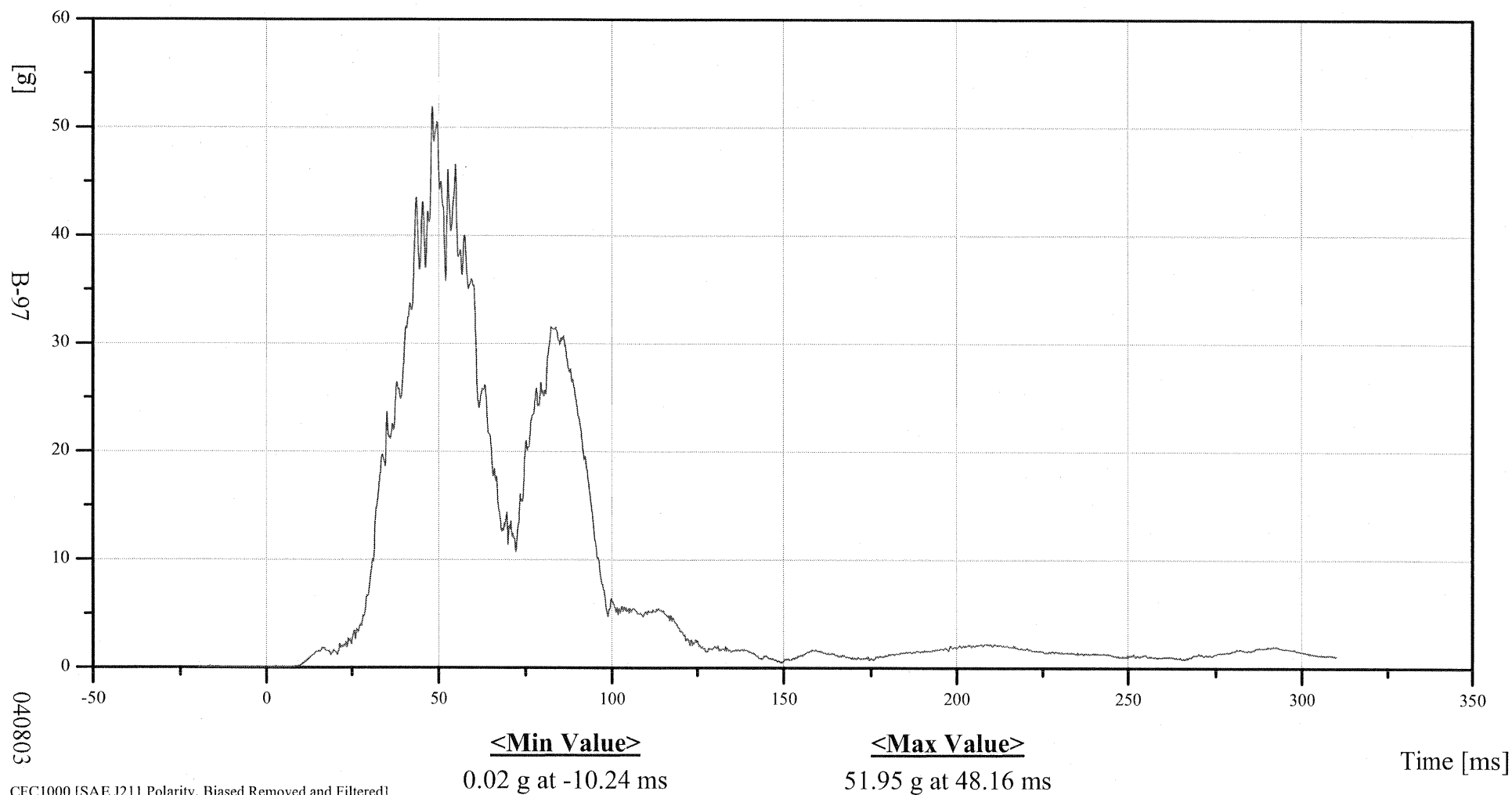
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVRG2





Transportation Research Center, Inc.

Left Femur Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

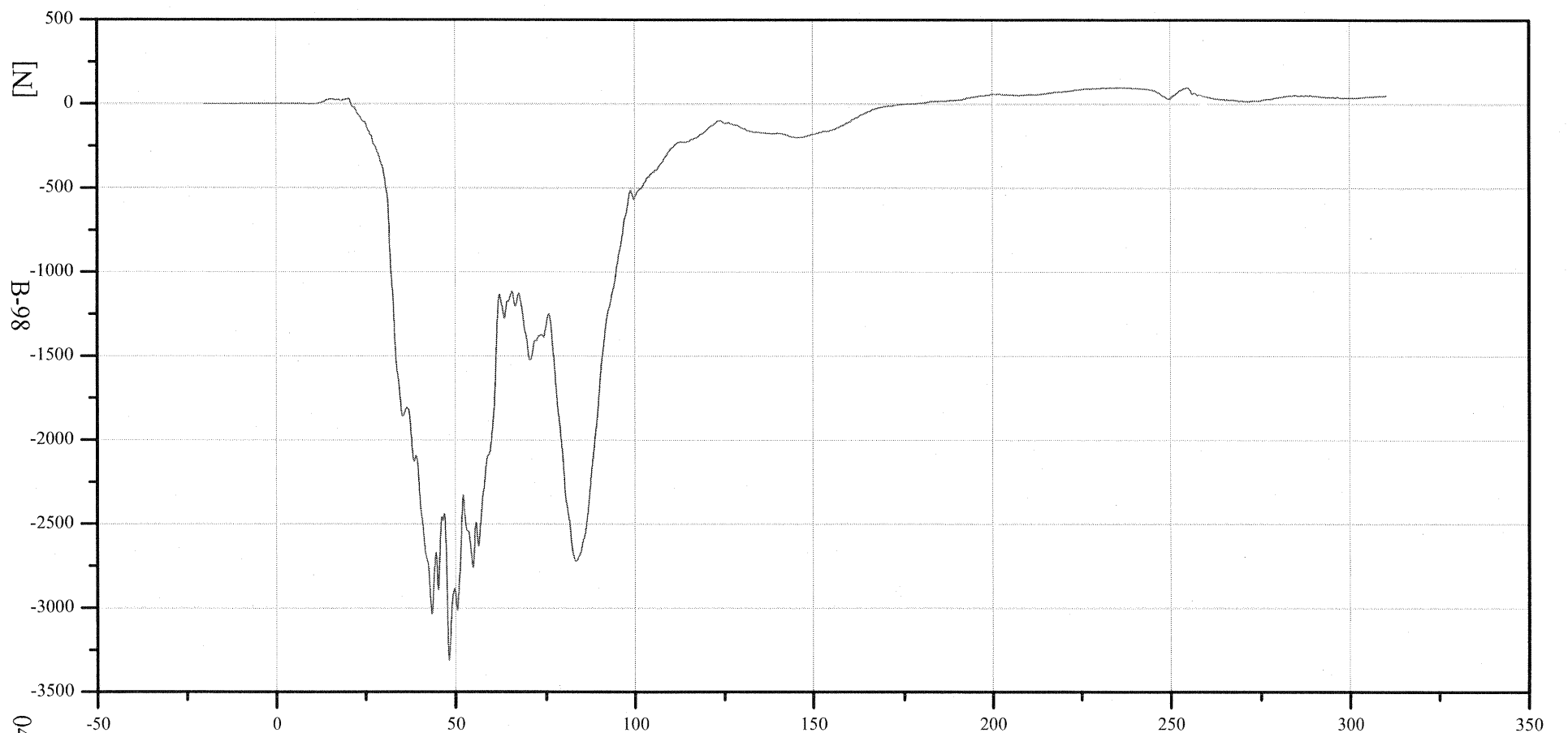
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LFMZ F2



040803

CFC600 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>

-3310.84 N at 48.24 ms

<Max Value>

99.09 N at 234.80 ms

Time [ms]



Transportation Research Center, Inc.

Right Femur Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

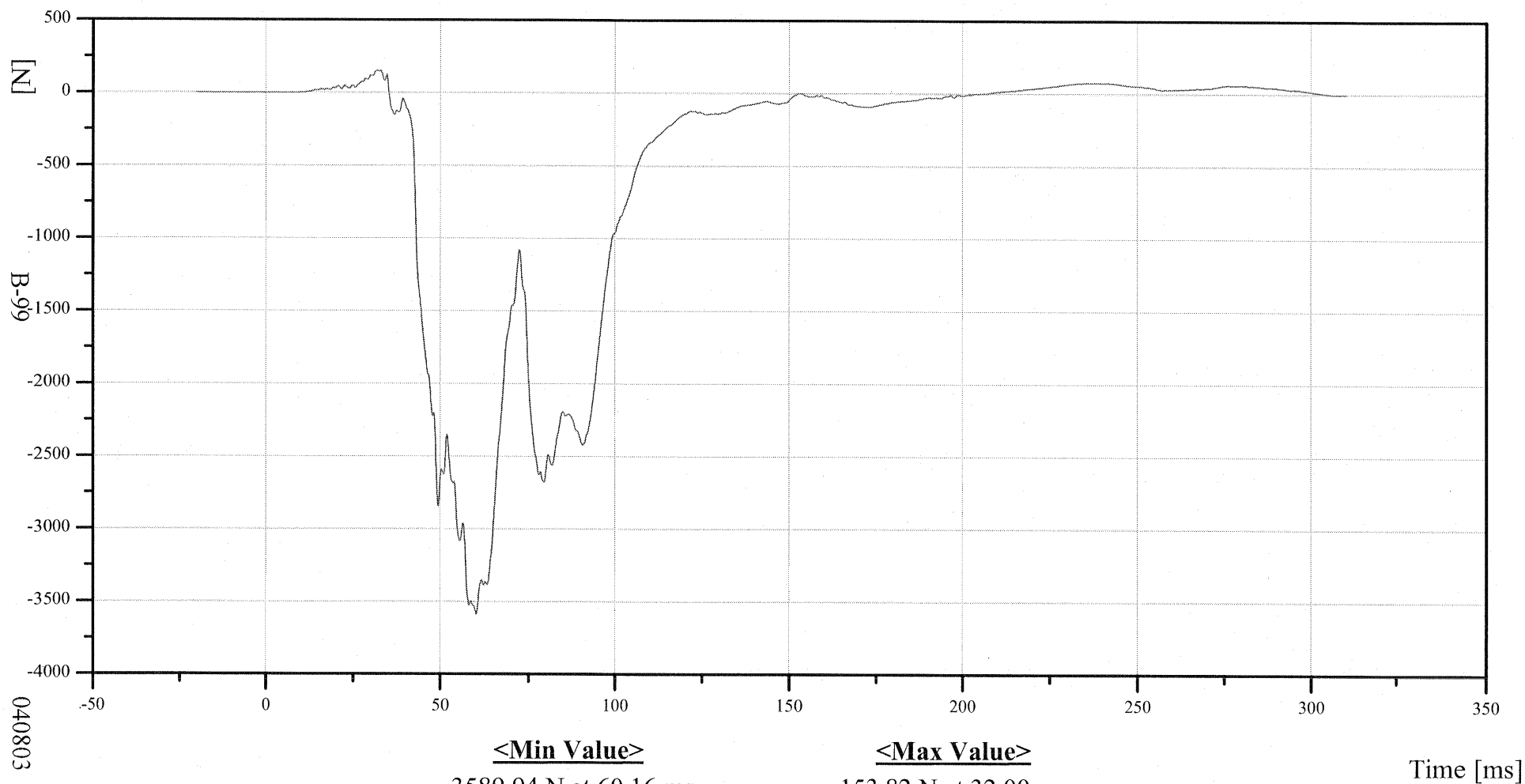
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RFMZF2



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Date: 08/03/2004

Time: 12:26:49

Customer: VRTC

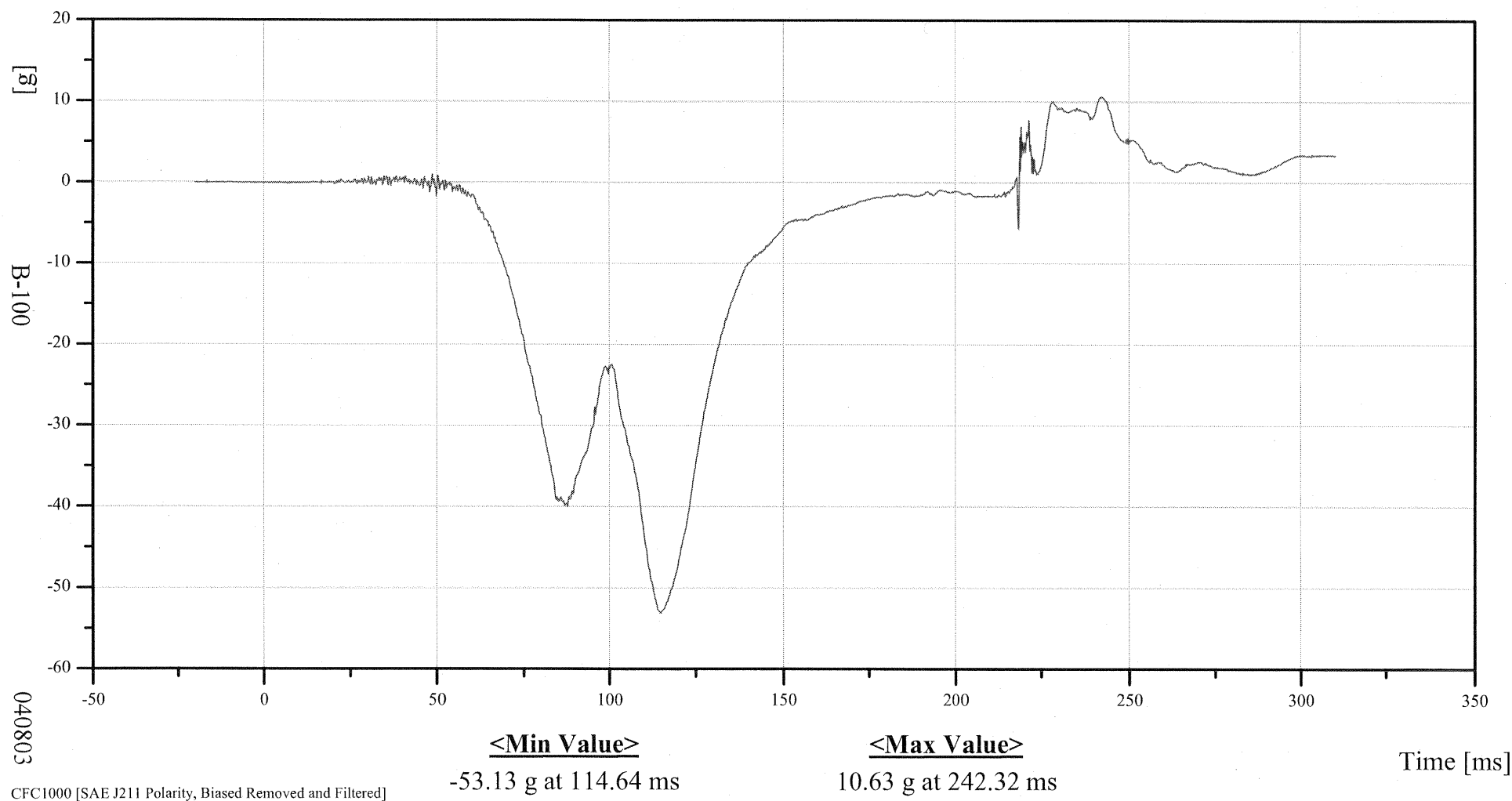
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDXG9





Transportation Research Center, Inc.

Head Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

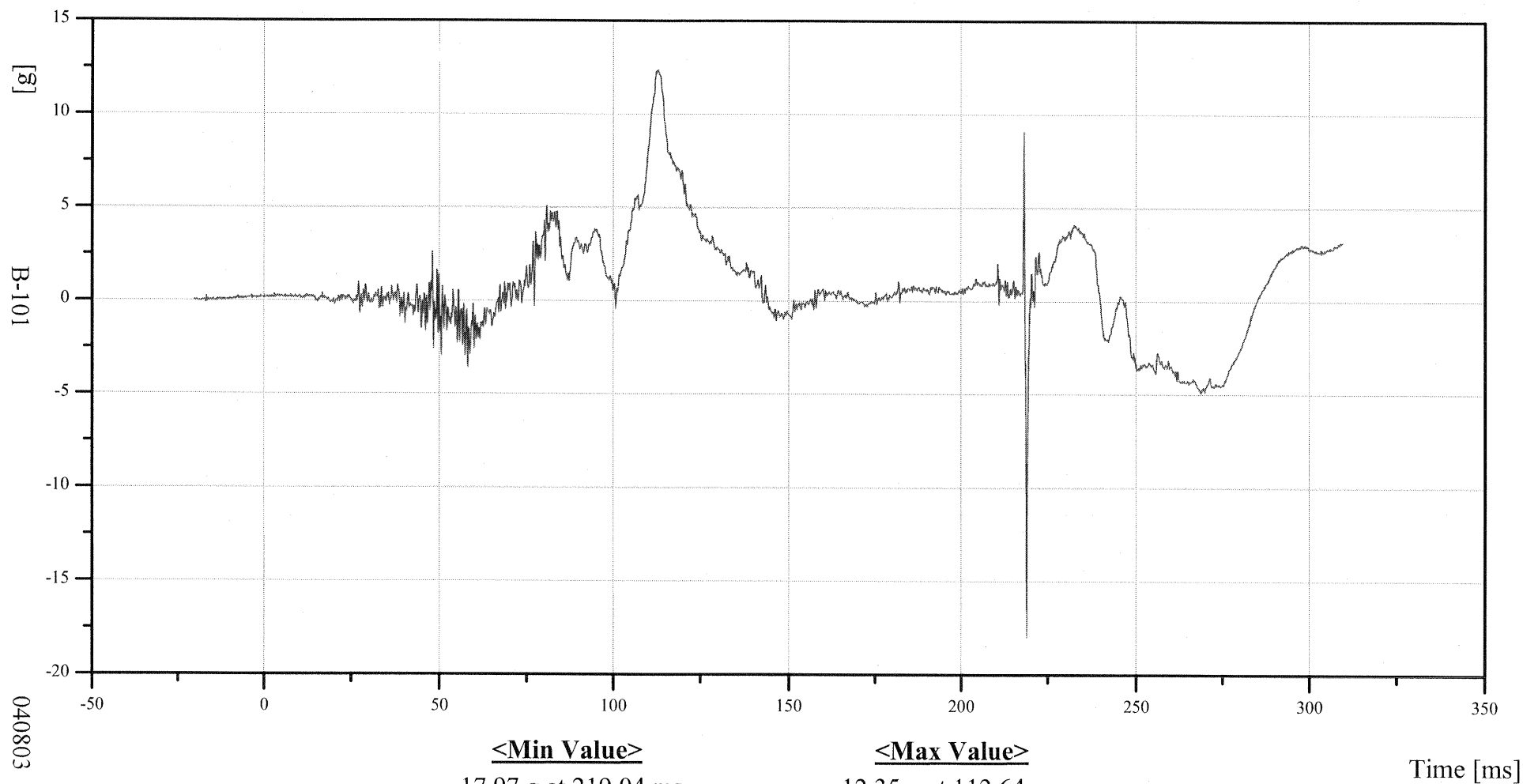
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDYG9



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Head Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

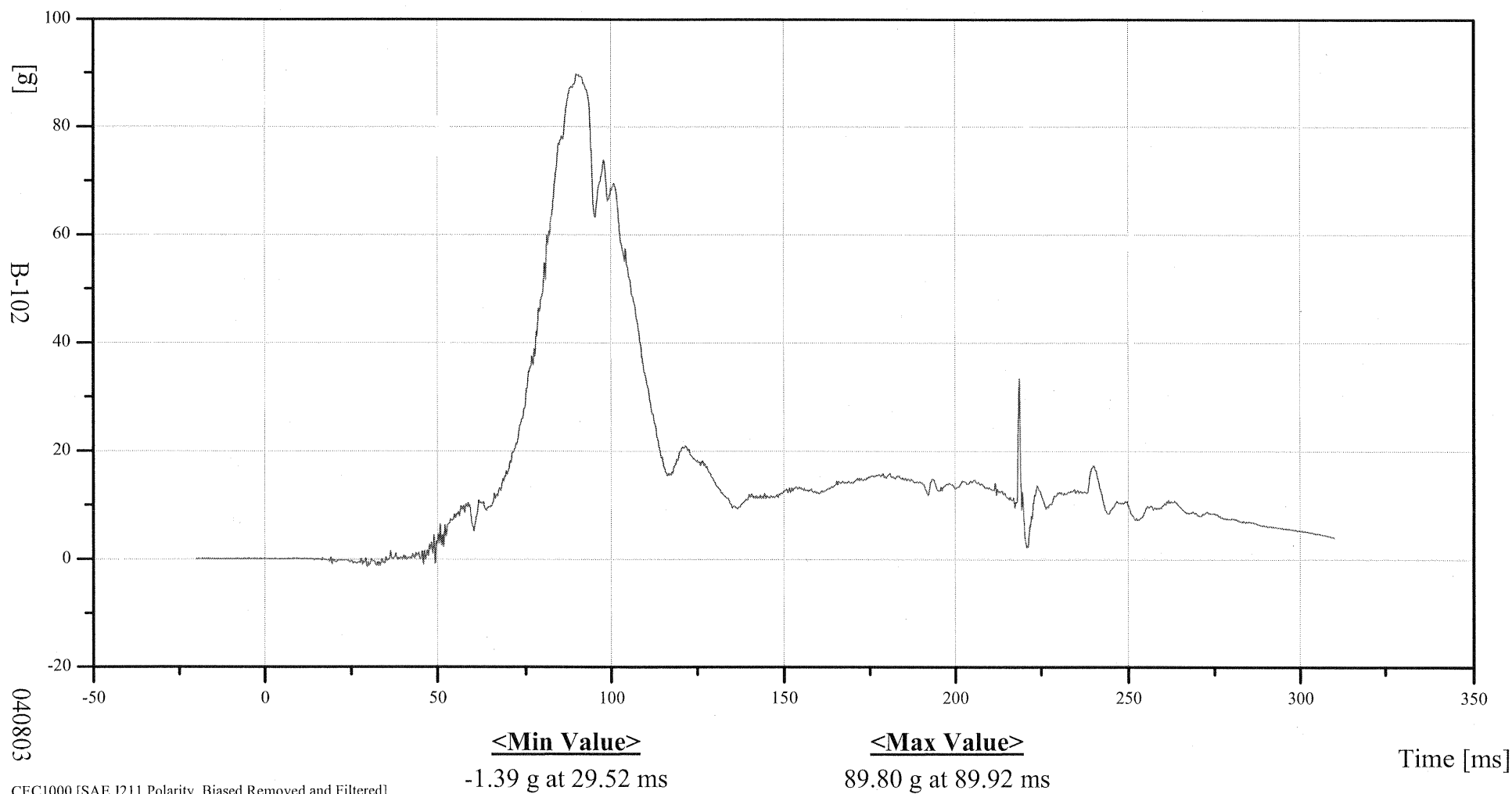
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDZG9



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Head Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

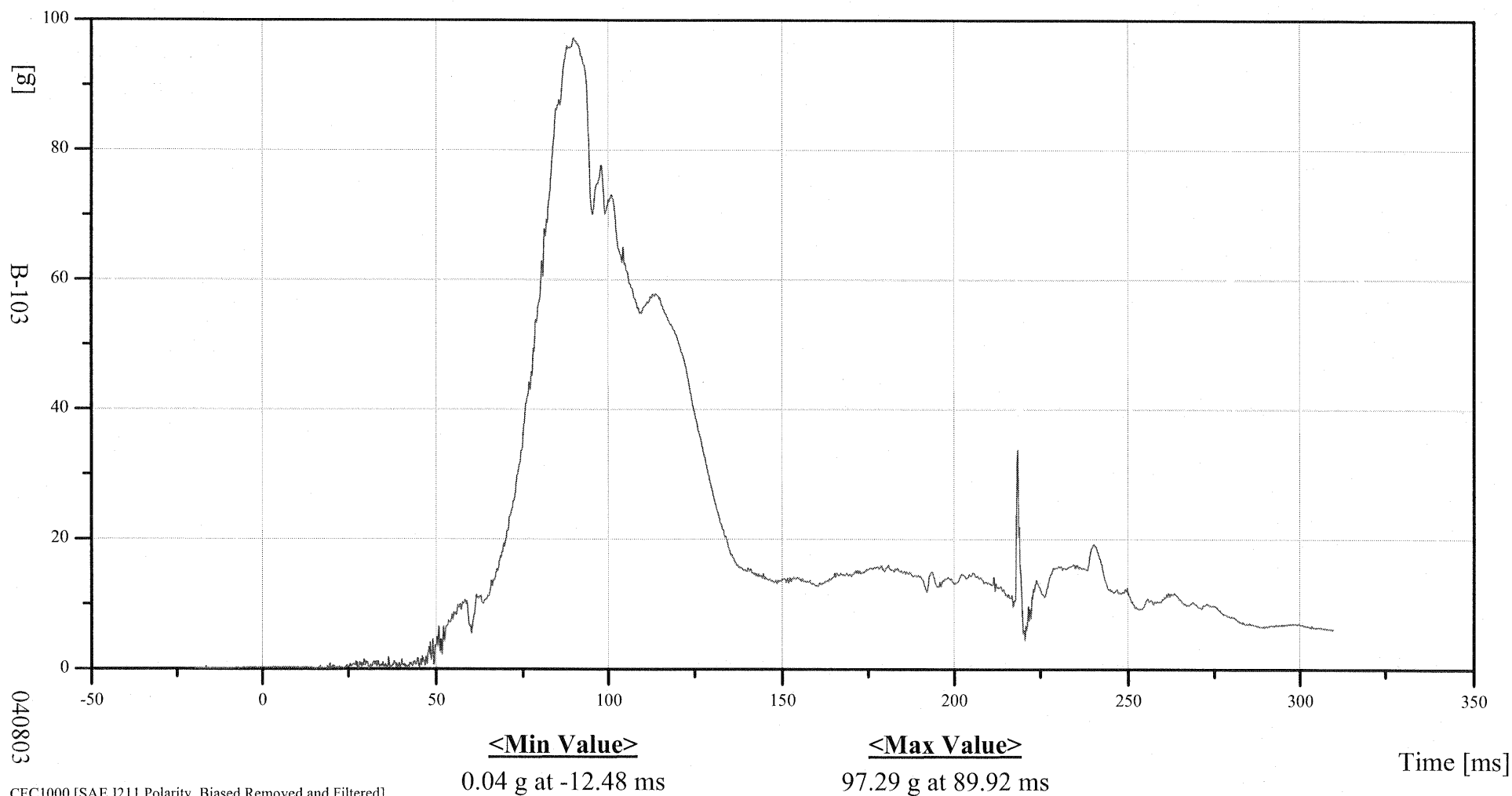
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

HEDRG9





Transportation Research Center, Inc.

Neck Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

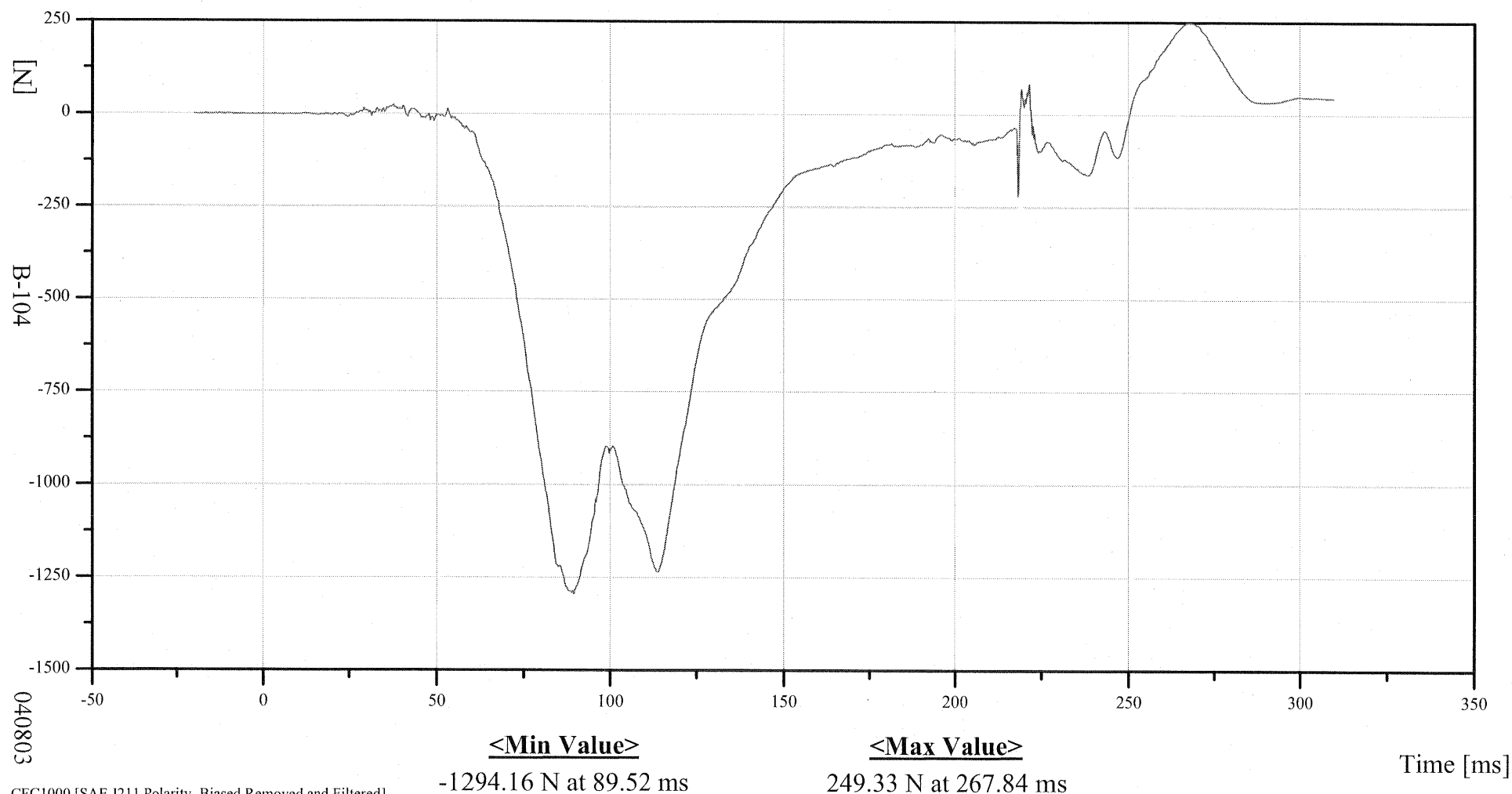
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKXF9





Transportation Research Center, Inc.

Neck Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

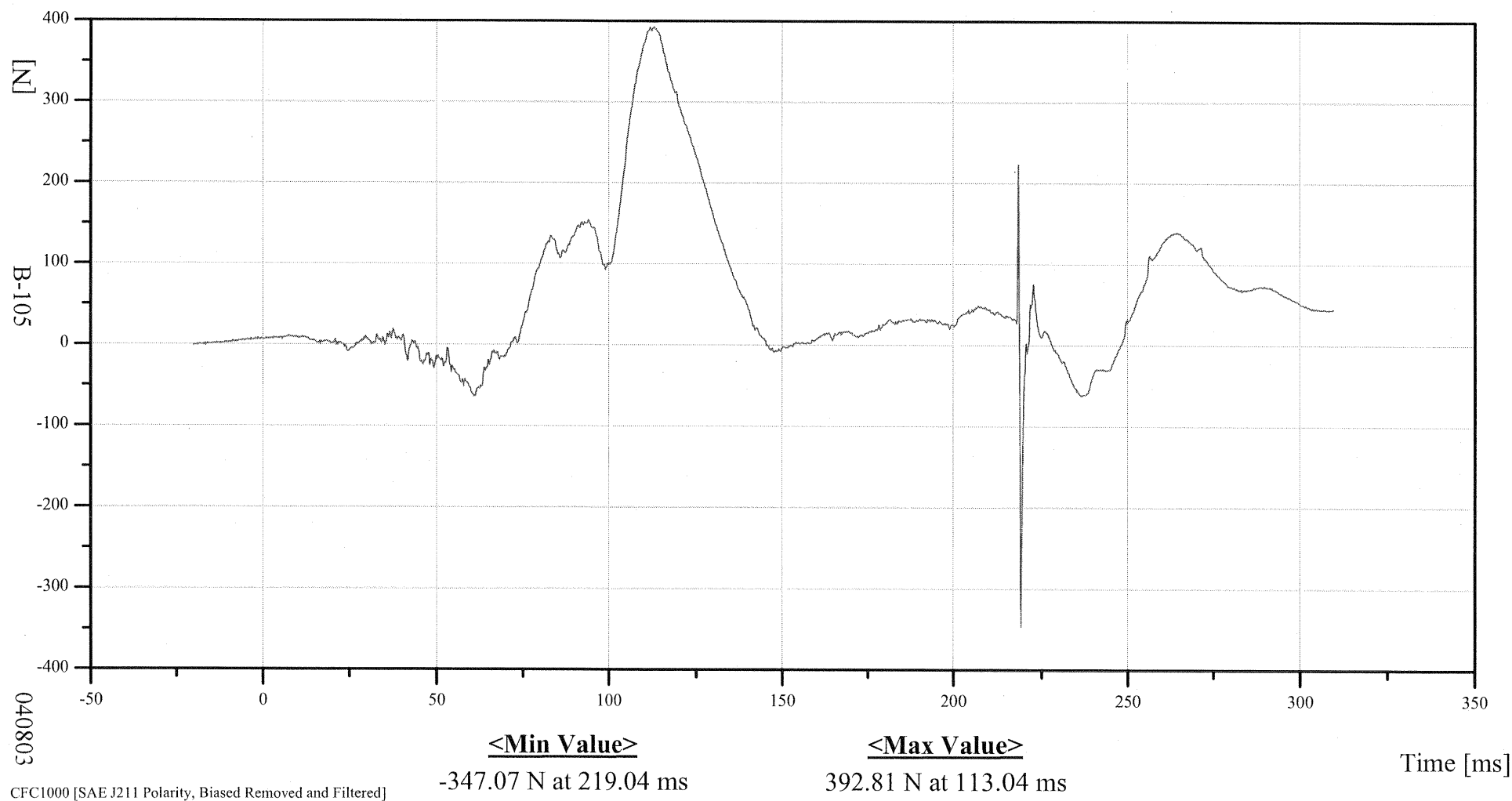
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKYF9





Transportation Research Center, Inc.

Neck Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

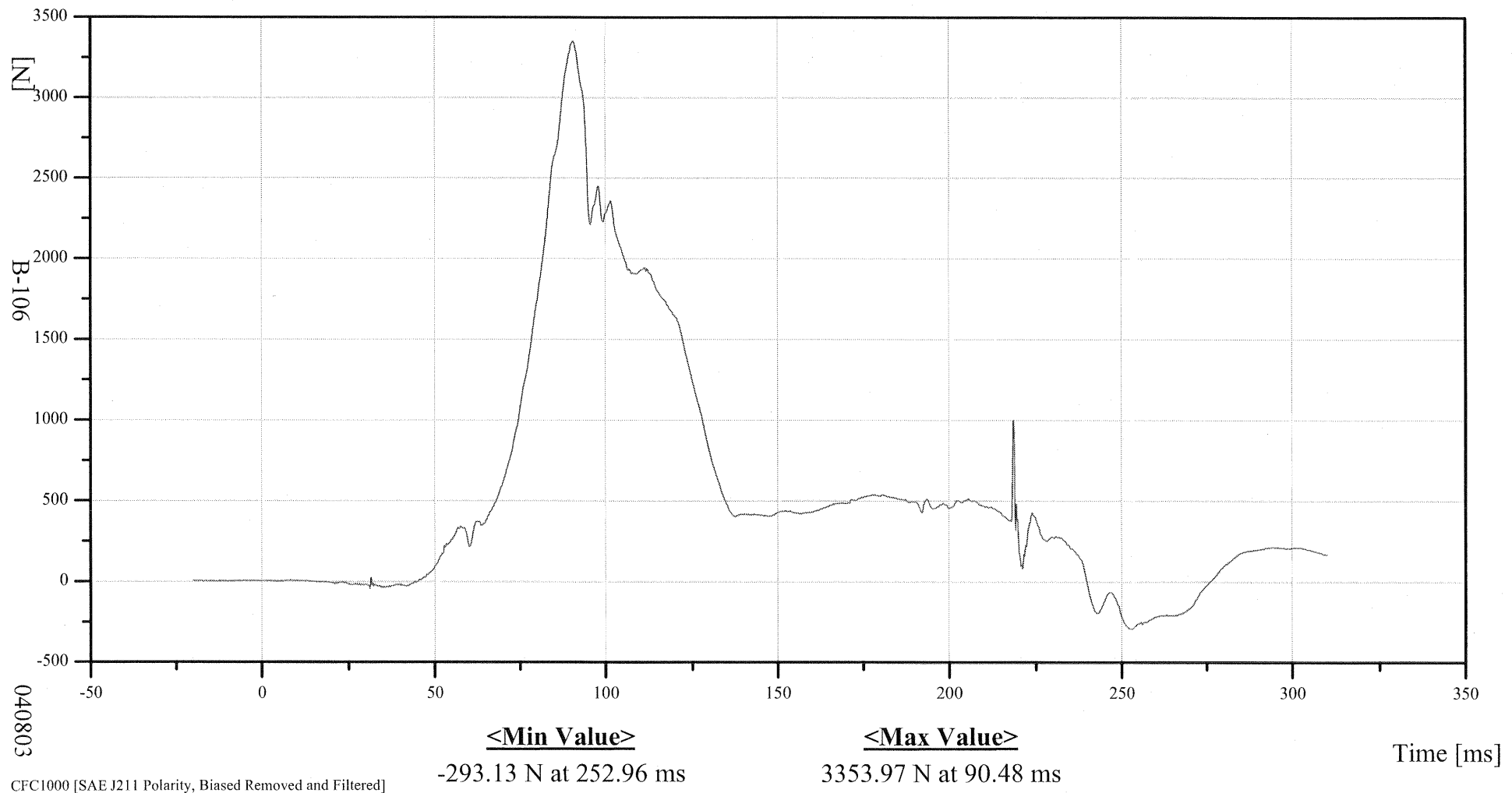
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKZF9





Transportation Research Center, Inc.

Neck Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

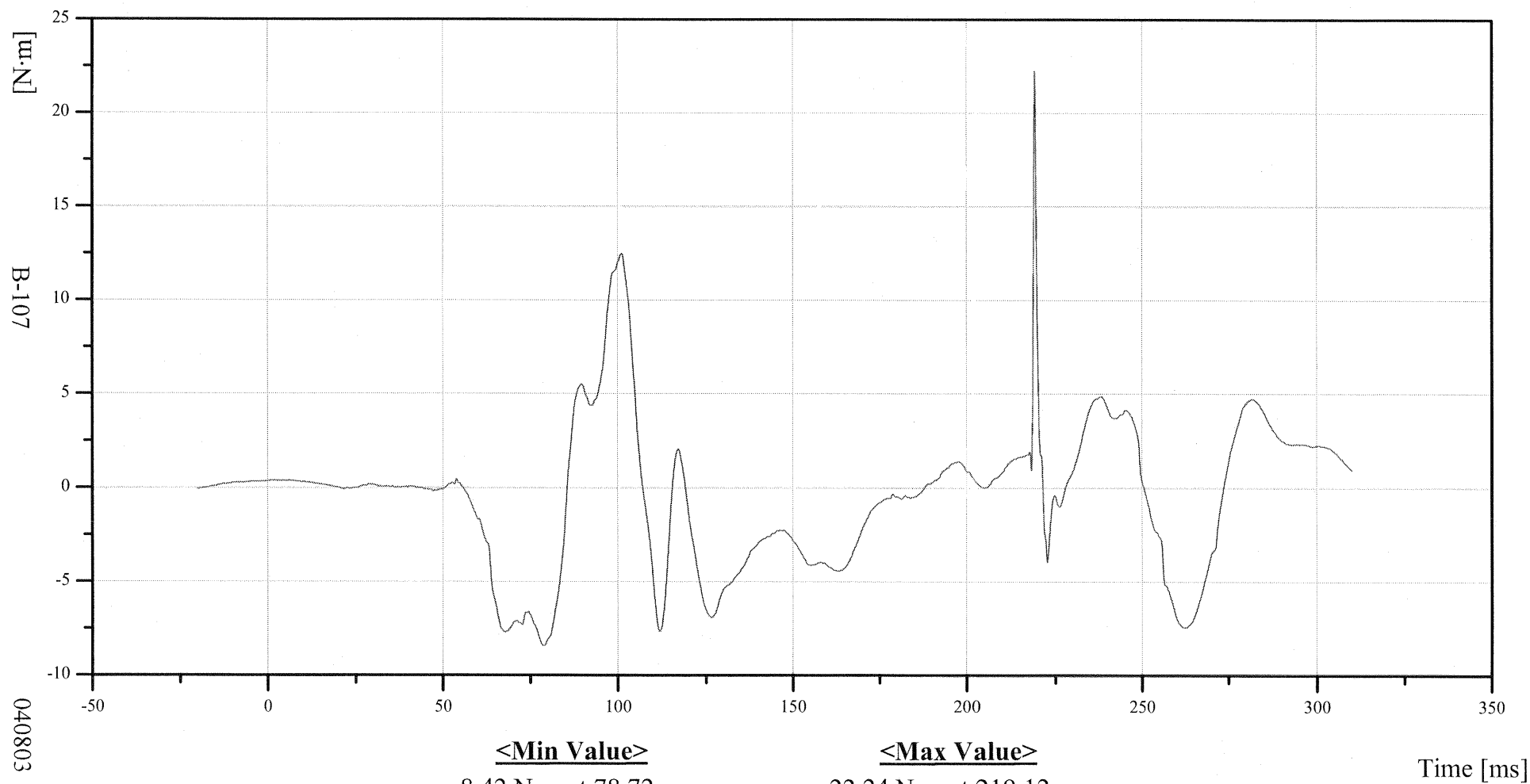
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKXM9



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

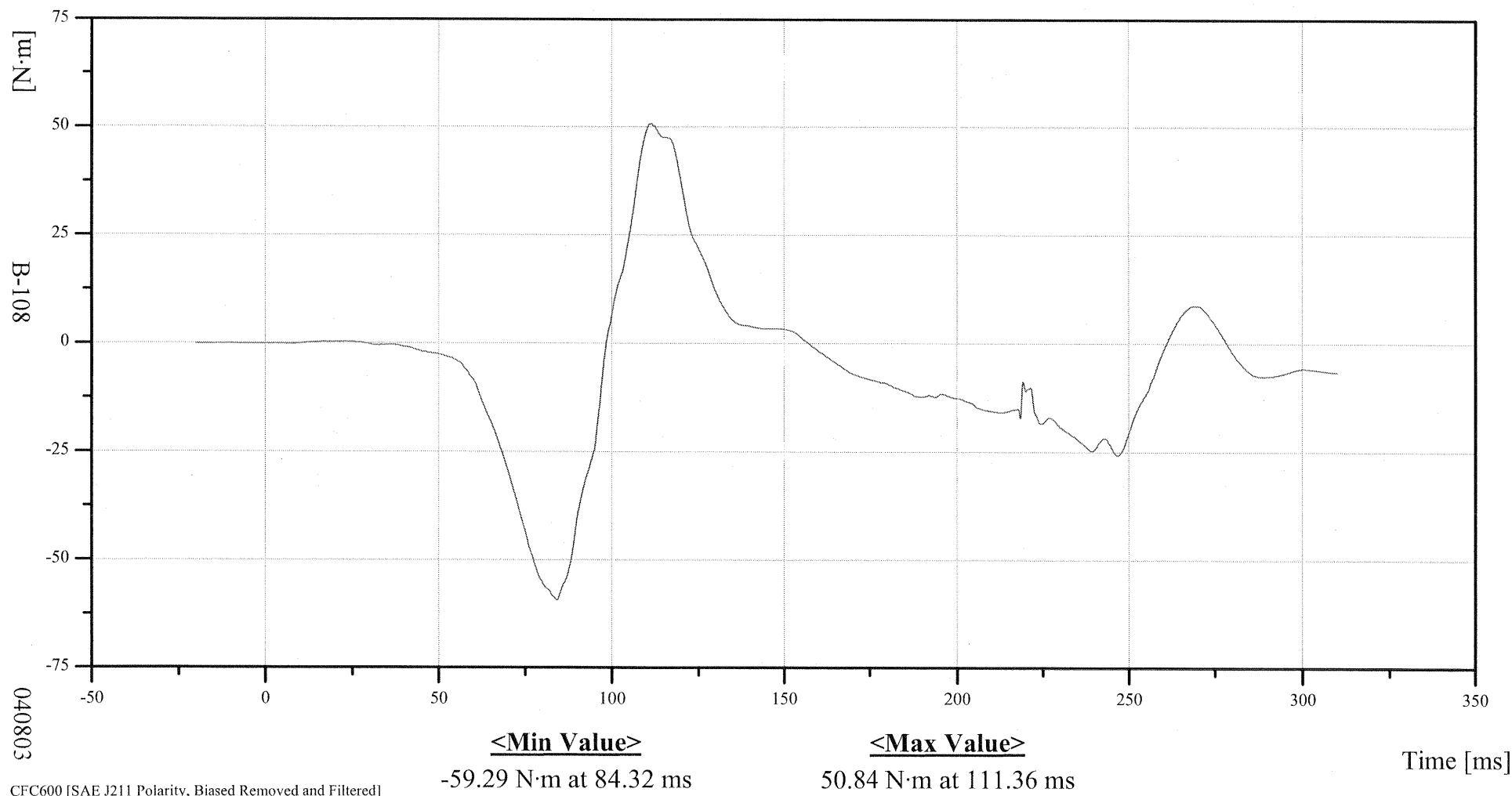
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKYM9





Transportation Research Center, Inc.

Neck Moment Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

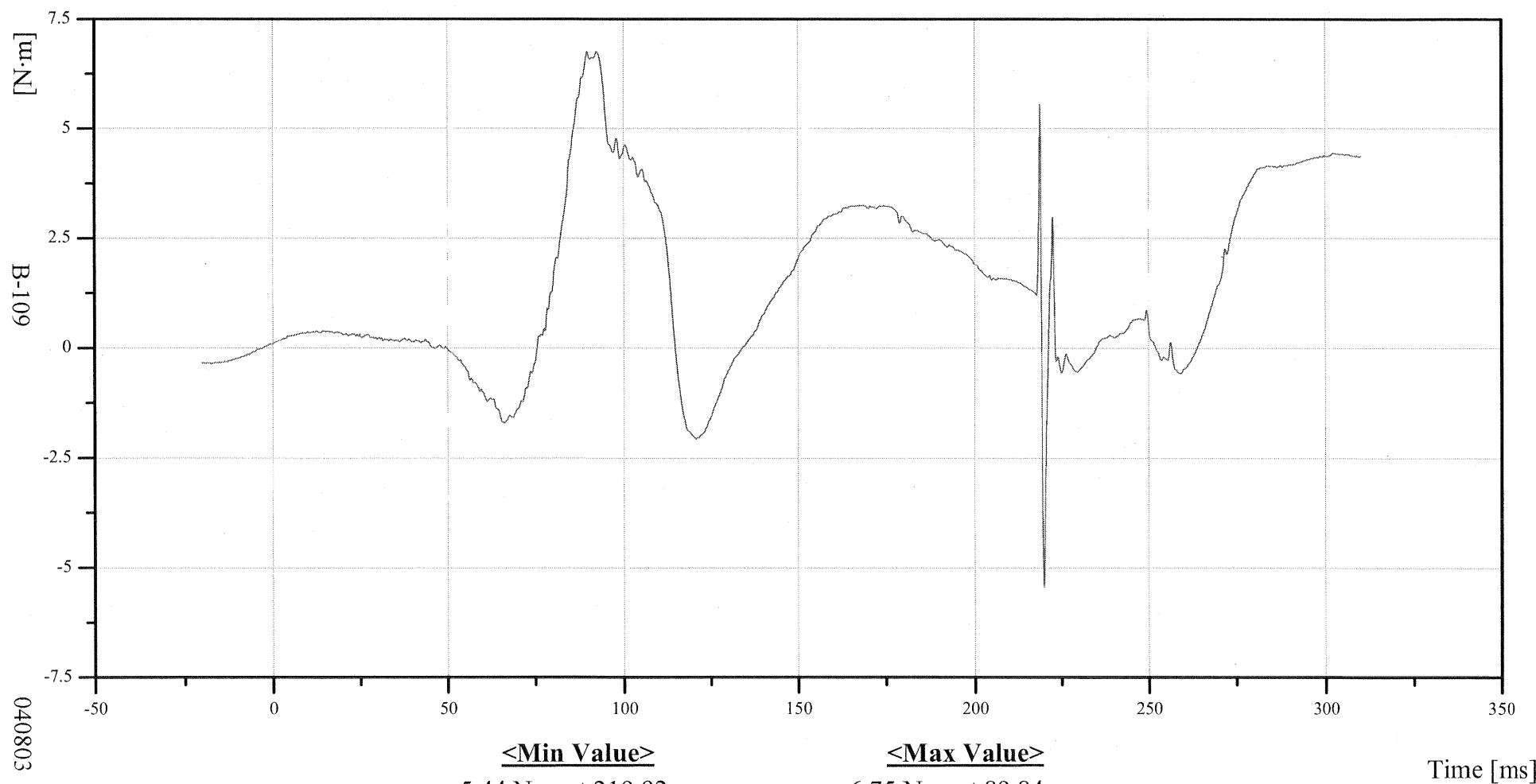
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NEKZM9



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

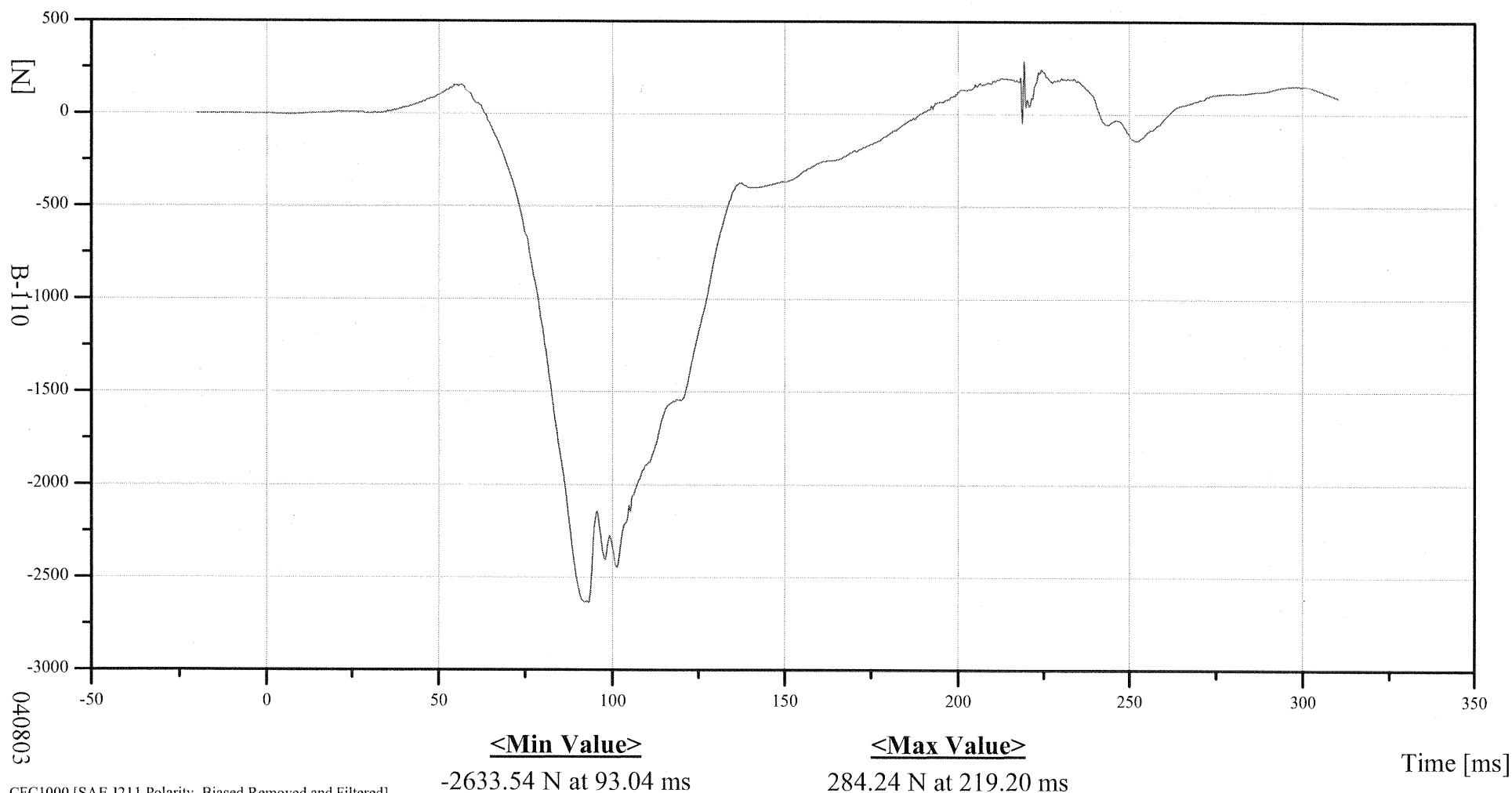
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLXF9



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

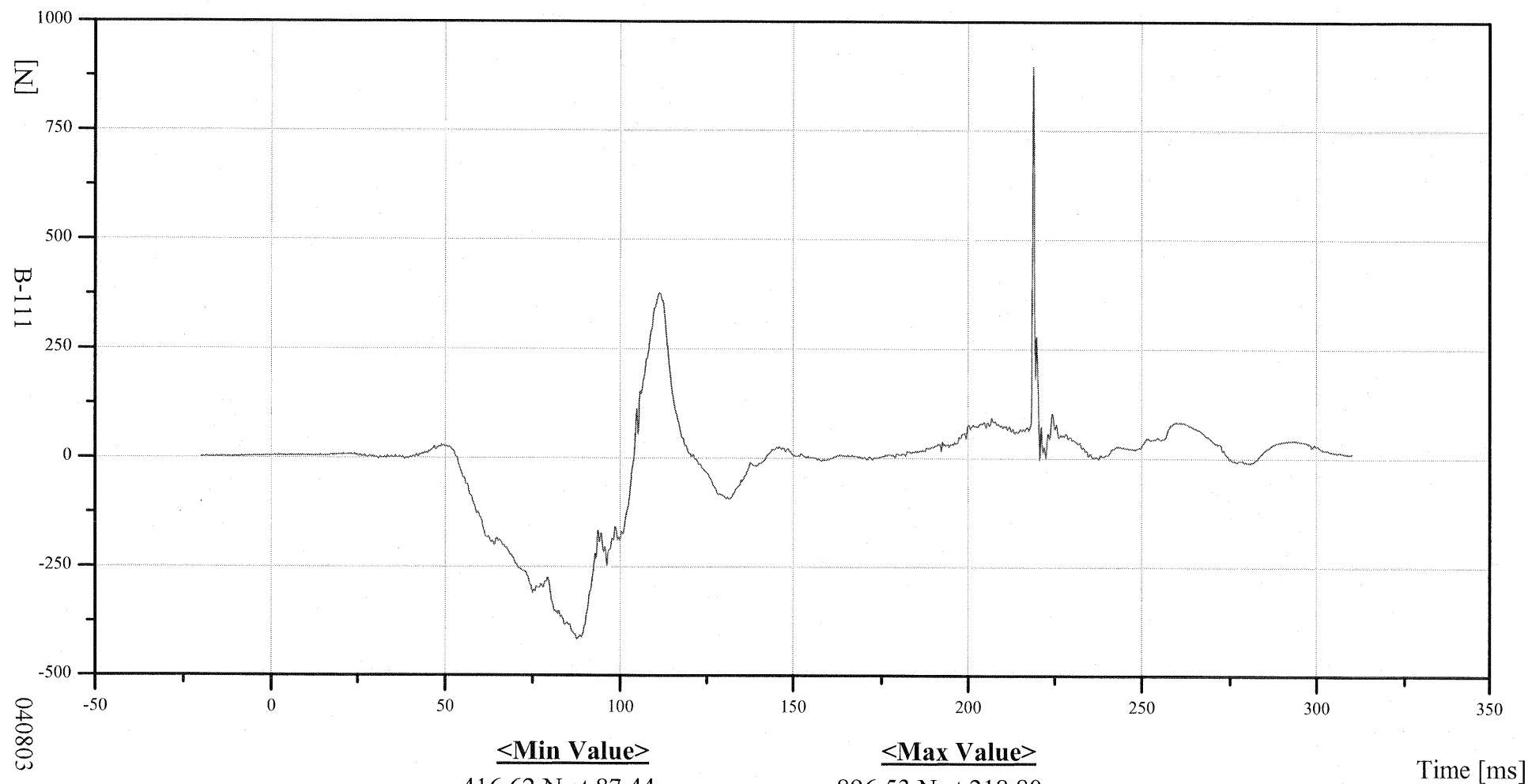
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLYF9



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

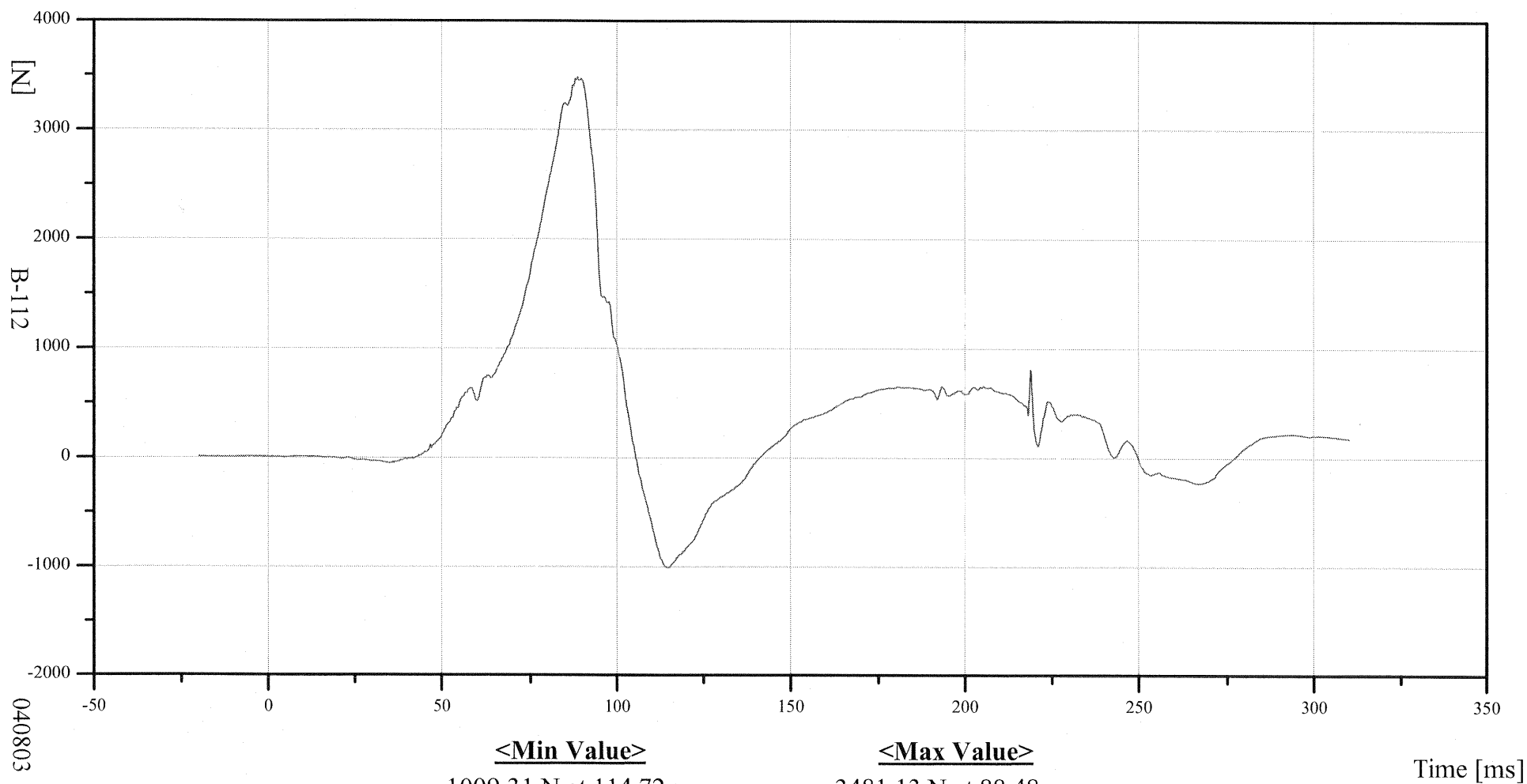
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLZF9



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

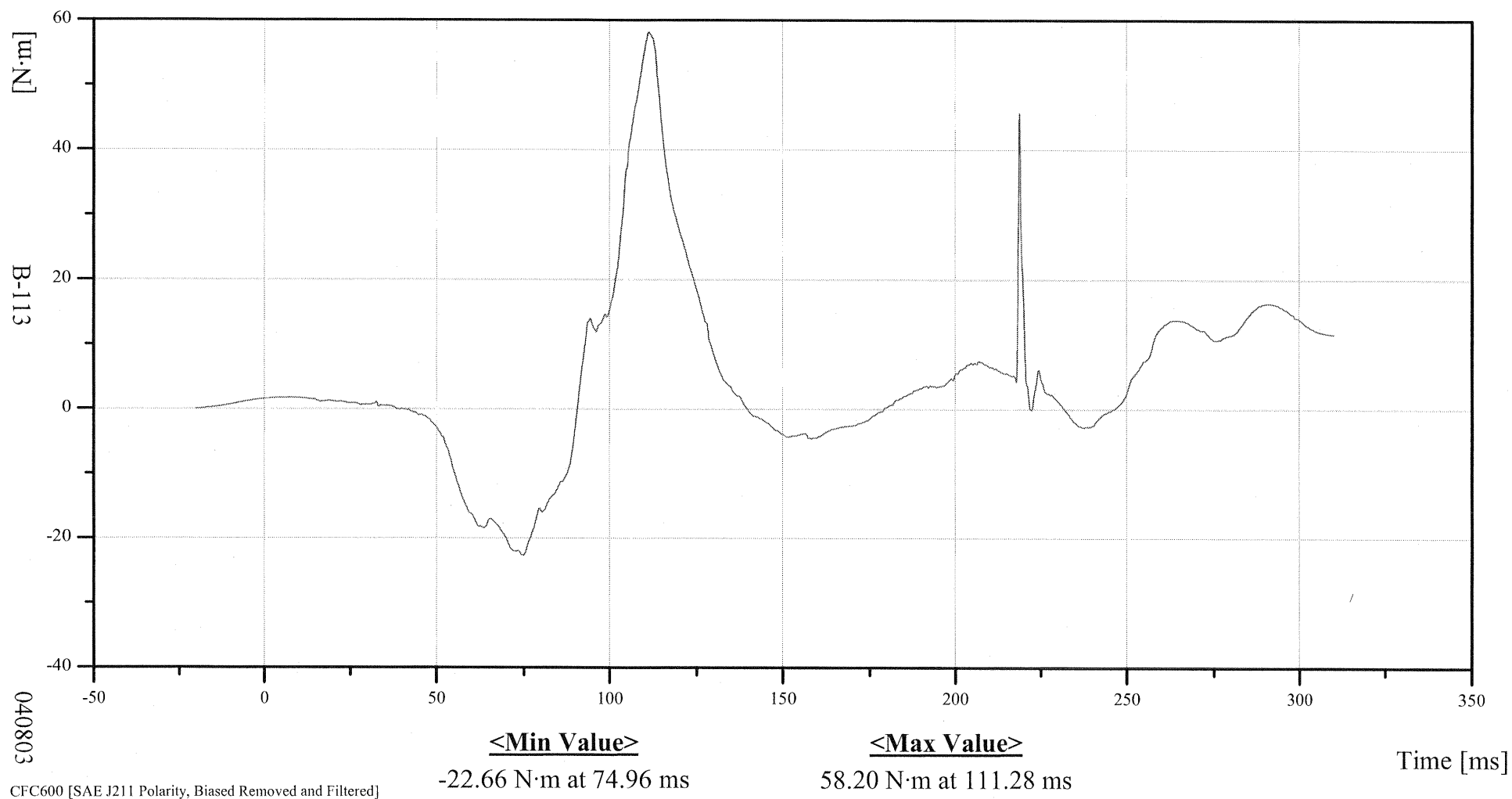
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLXM9





Transportation Research Center, Inc.

Neck Lwr Moment Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

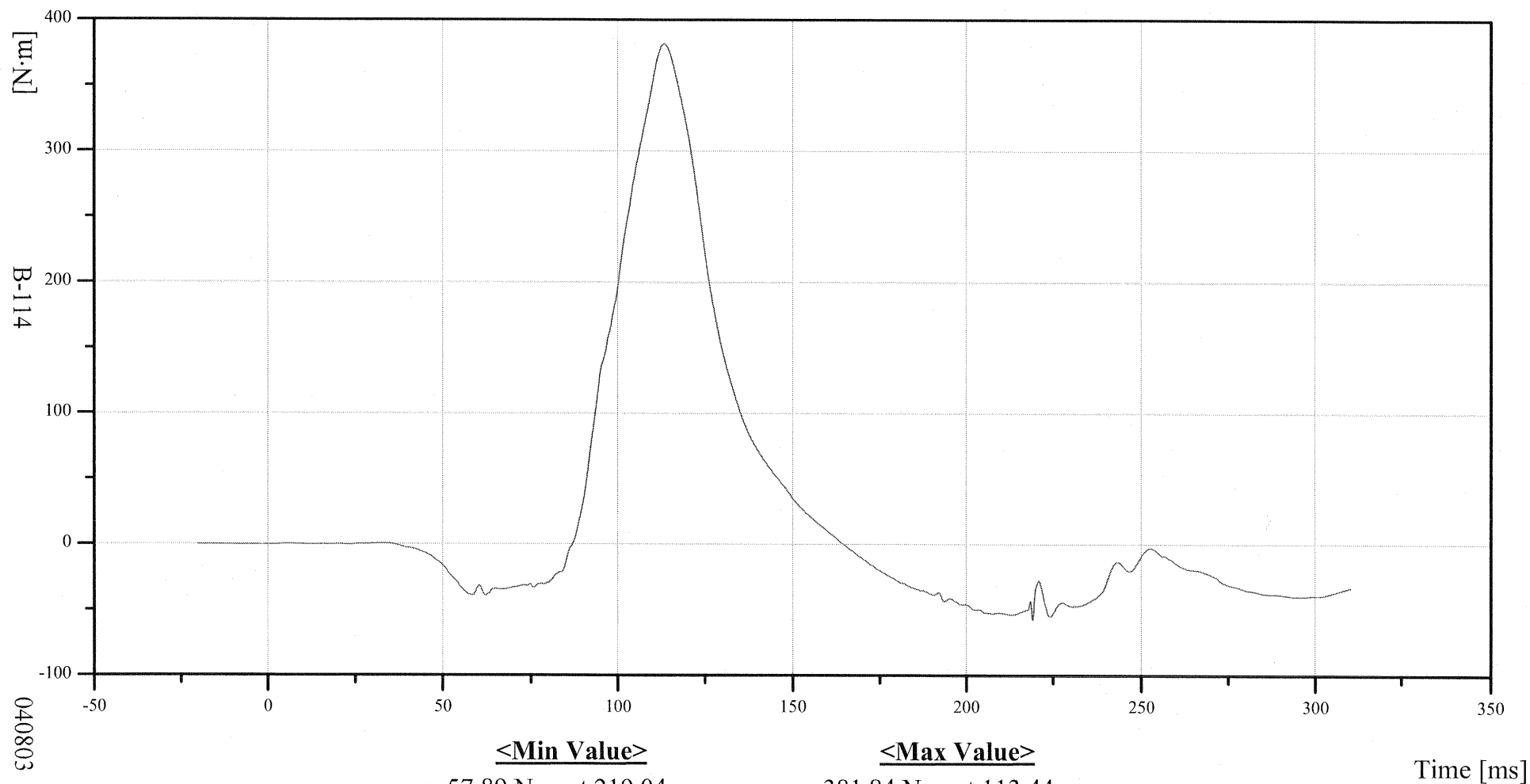
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLYM9



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Neck Lwr Moment Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

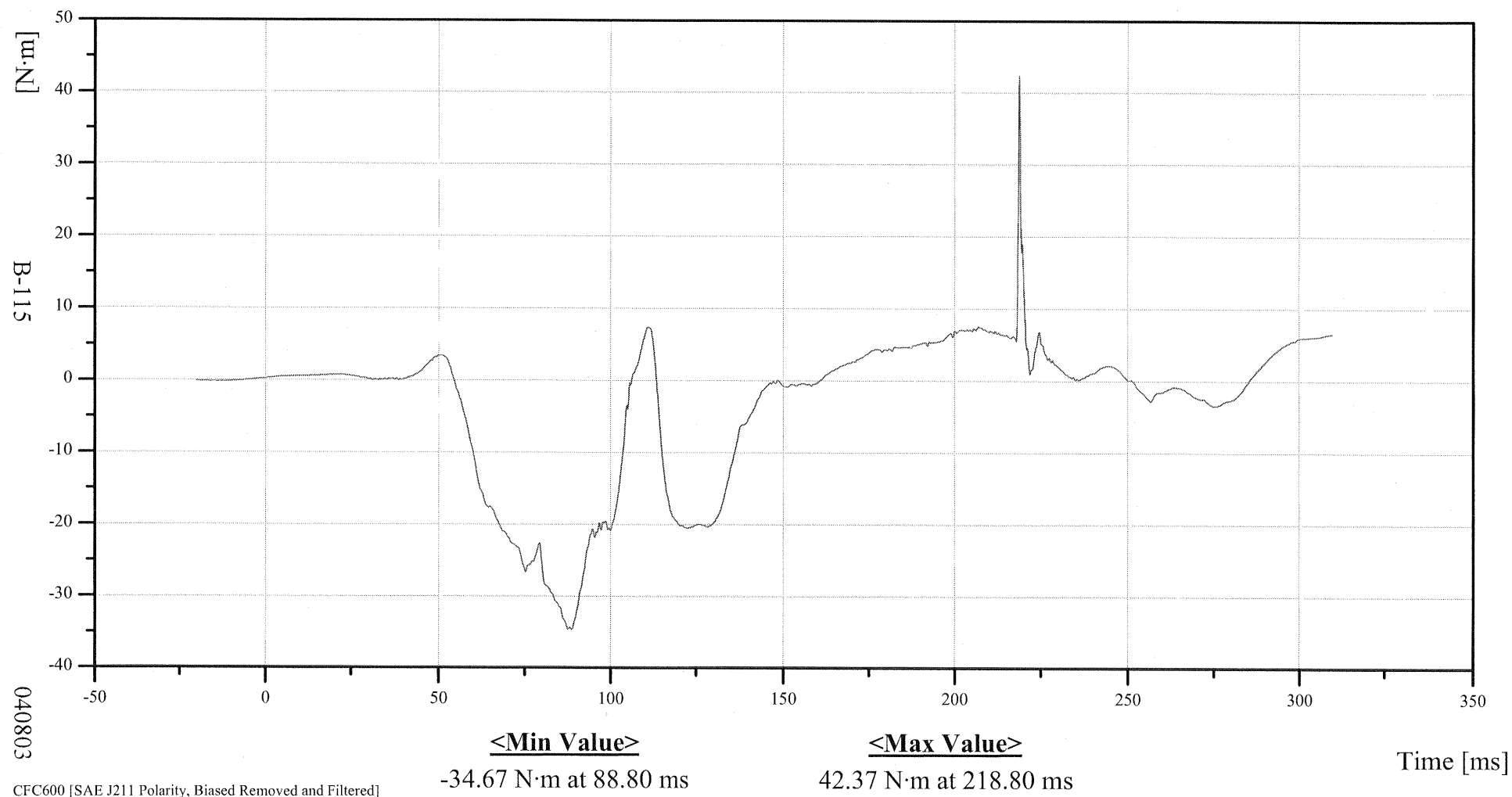
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

NKLZM9





Transportation Research Center, Inc.

Chest Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

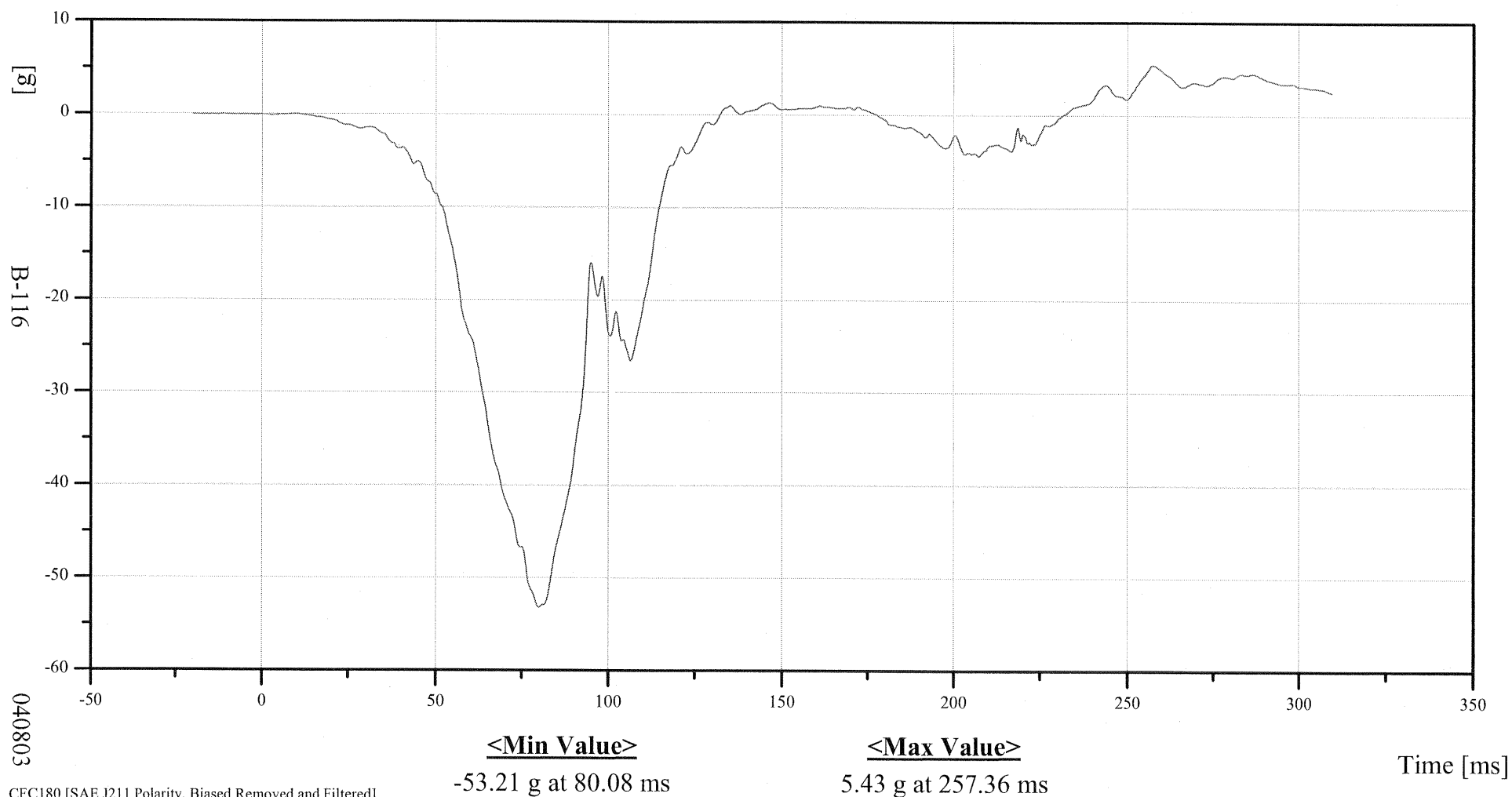
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXG9





Transportation Research Center, Inc.

Chest Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

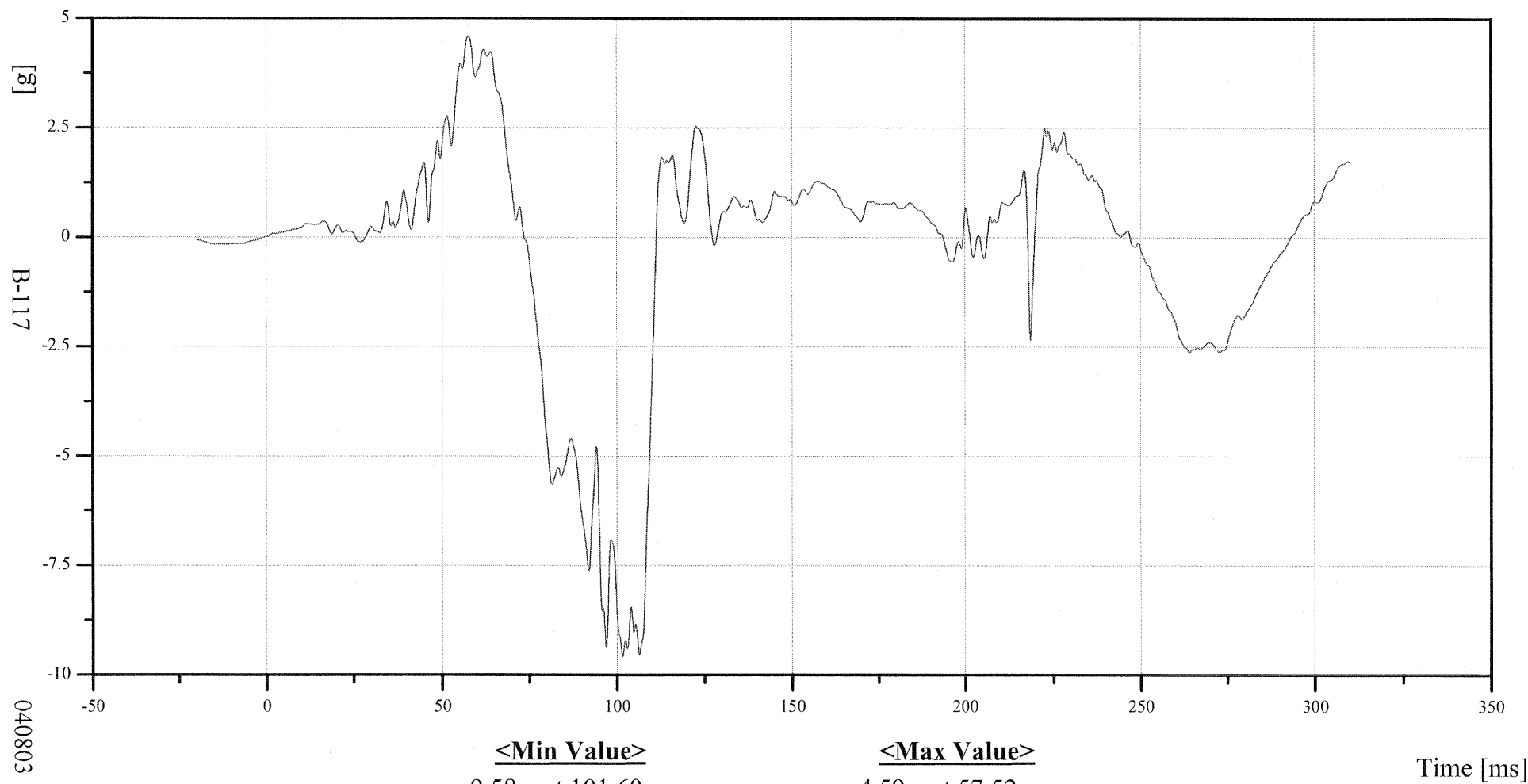
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTYG9



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

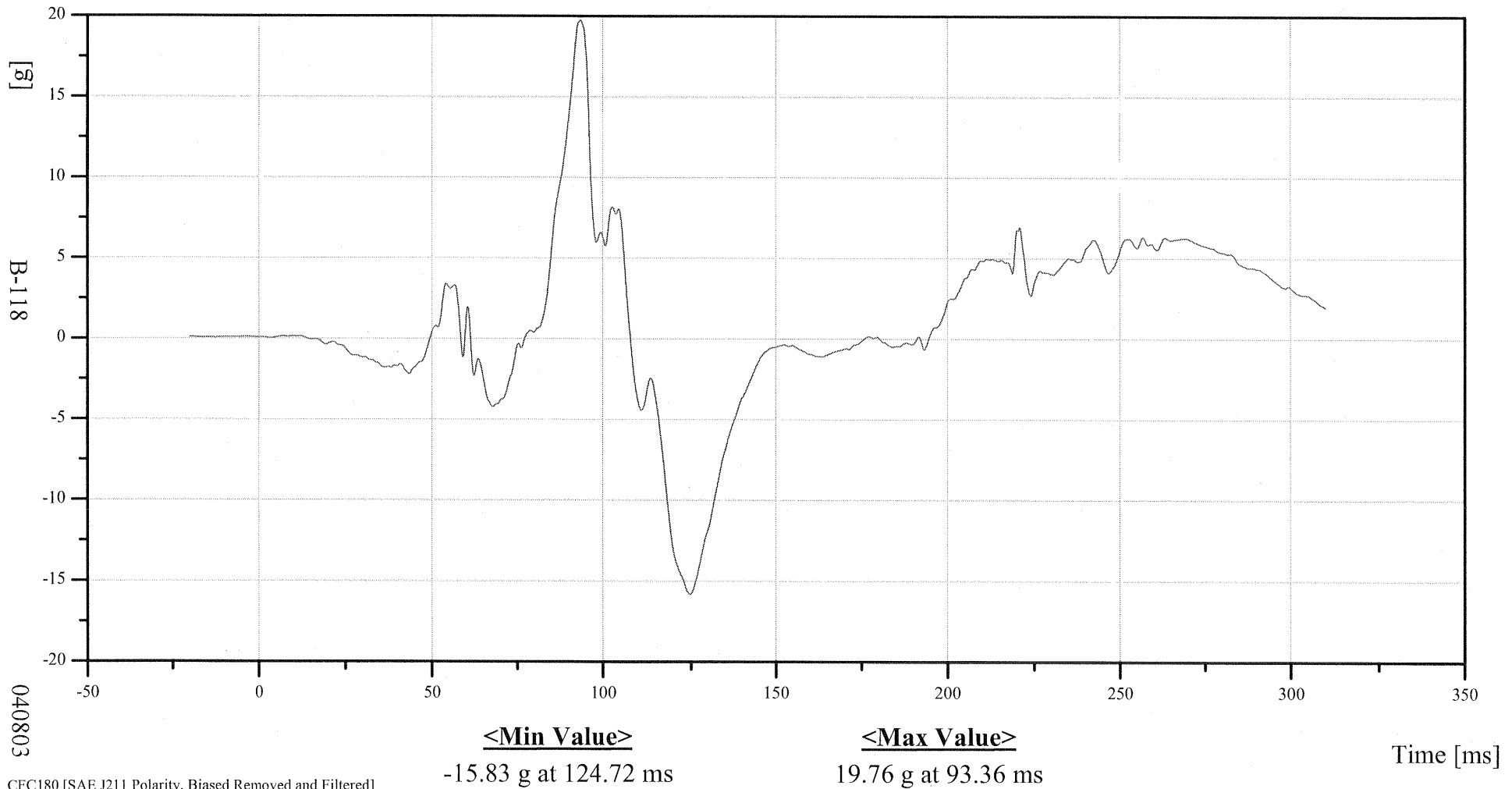
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTZG9





Transportation Research Center, Inc.

Chest Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

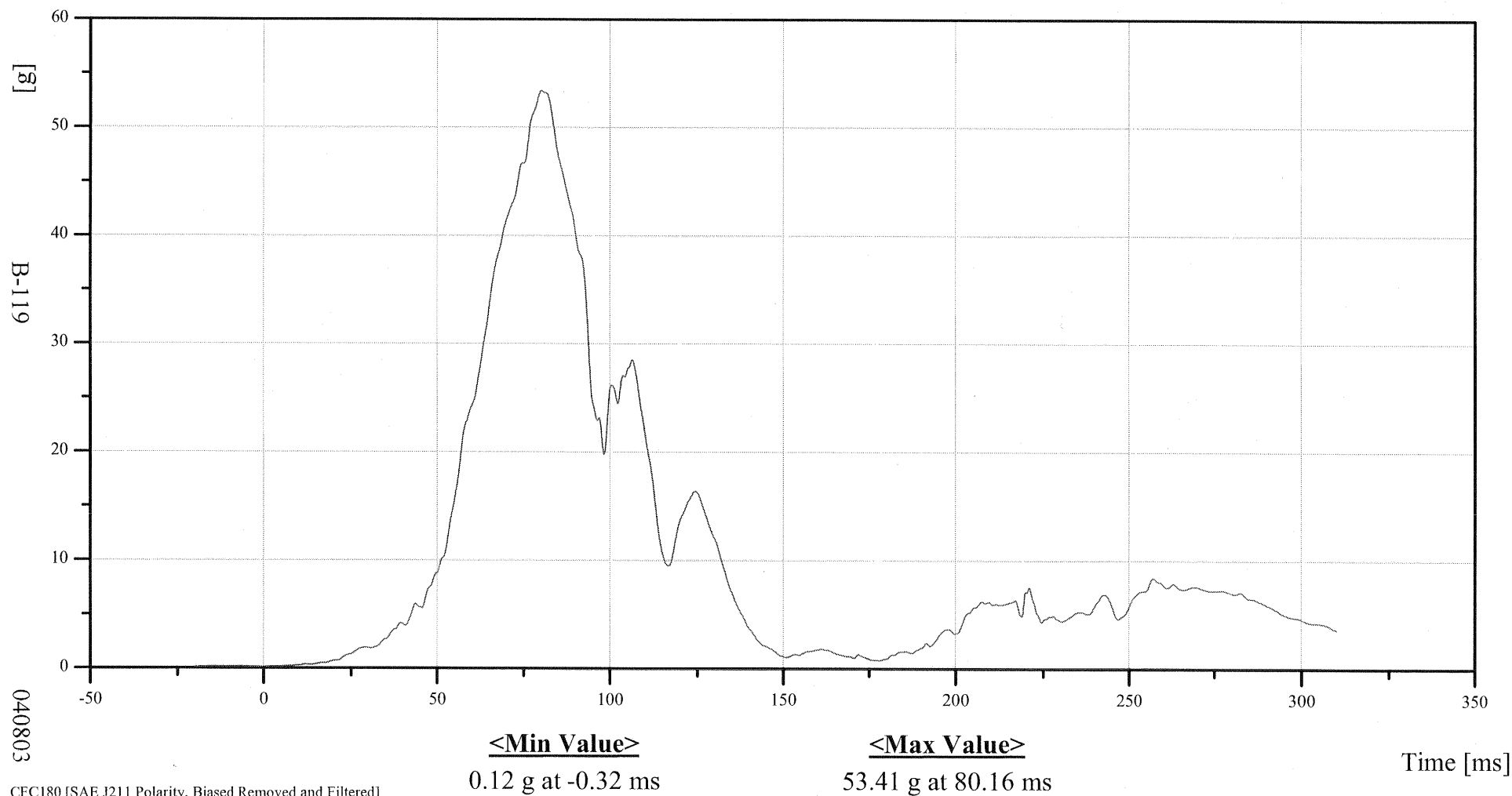
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTRG9



CFC180 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Chest Deflection X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

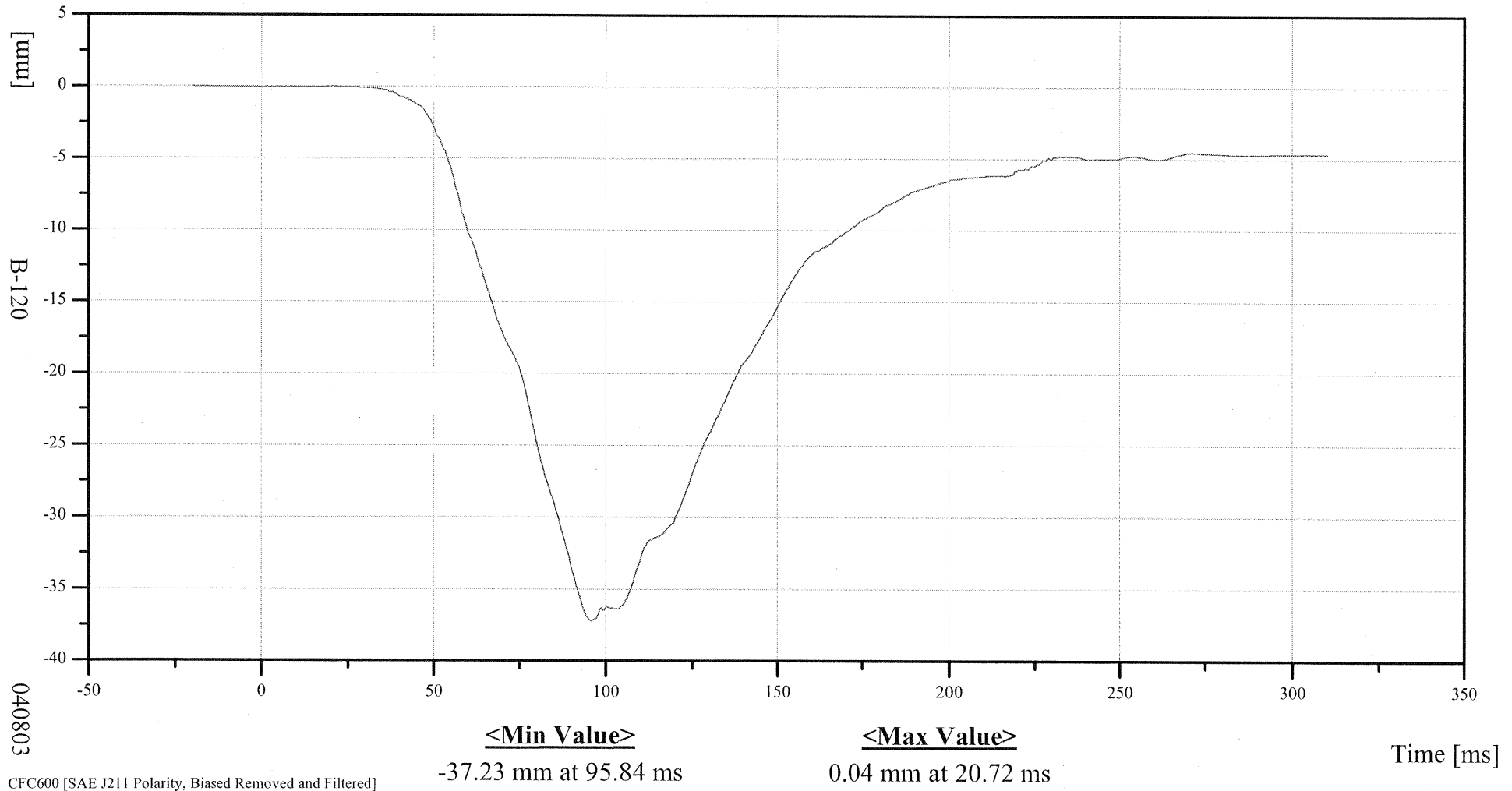
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

CSTXD9





Transportation Research Center, Inc.

Pelvis Accel X

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

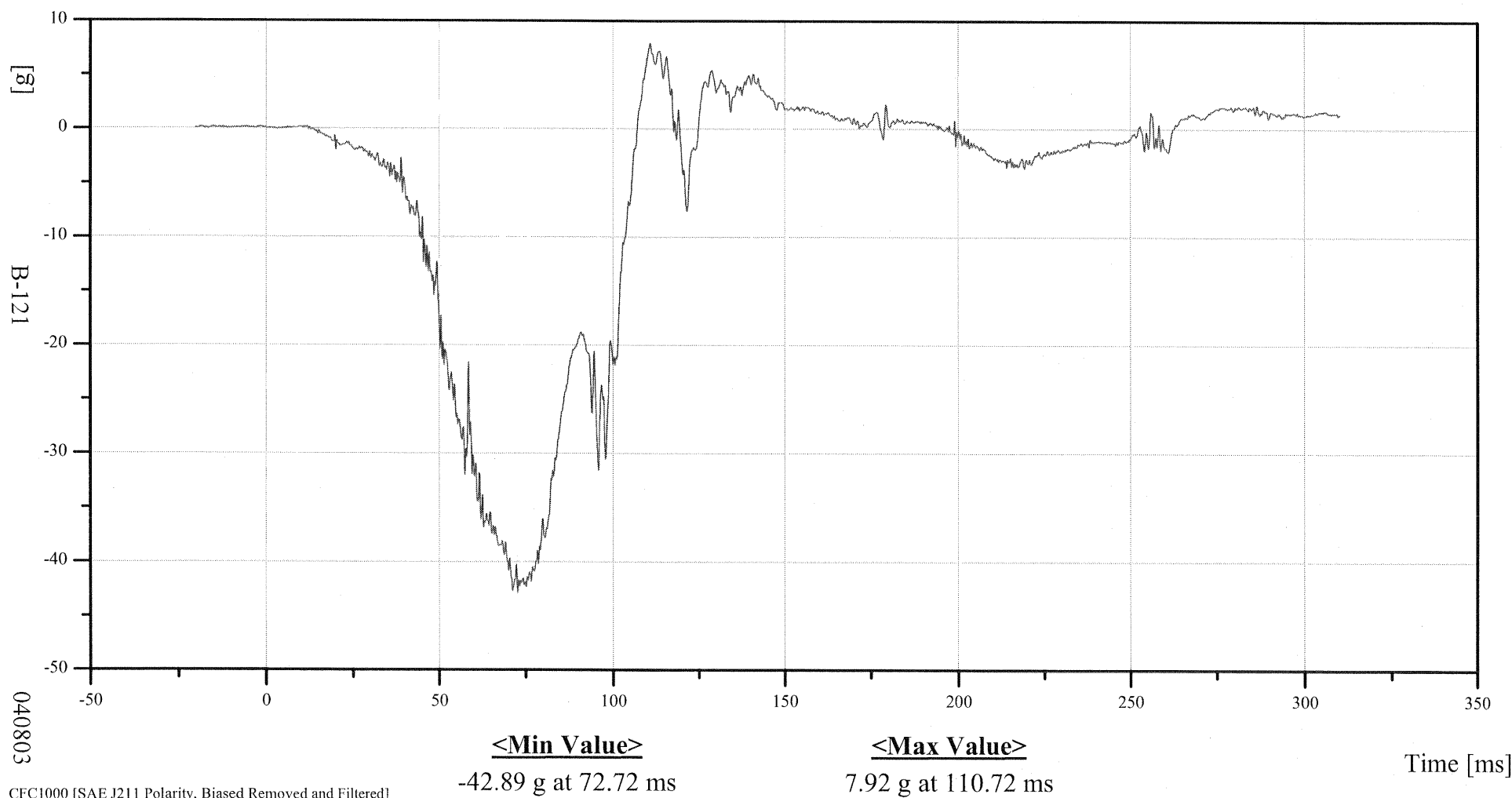
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVXG9





Transportation Research Center, Inc.

Pelvis Accel Y

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

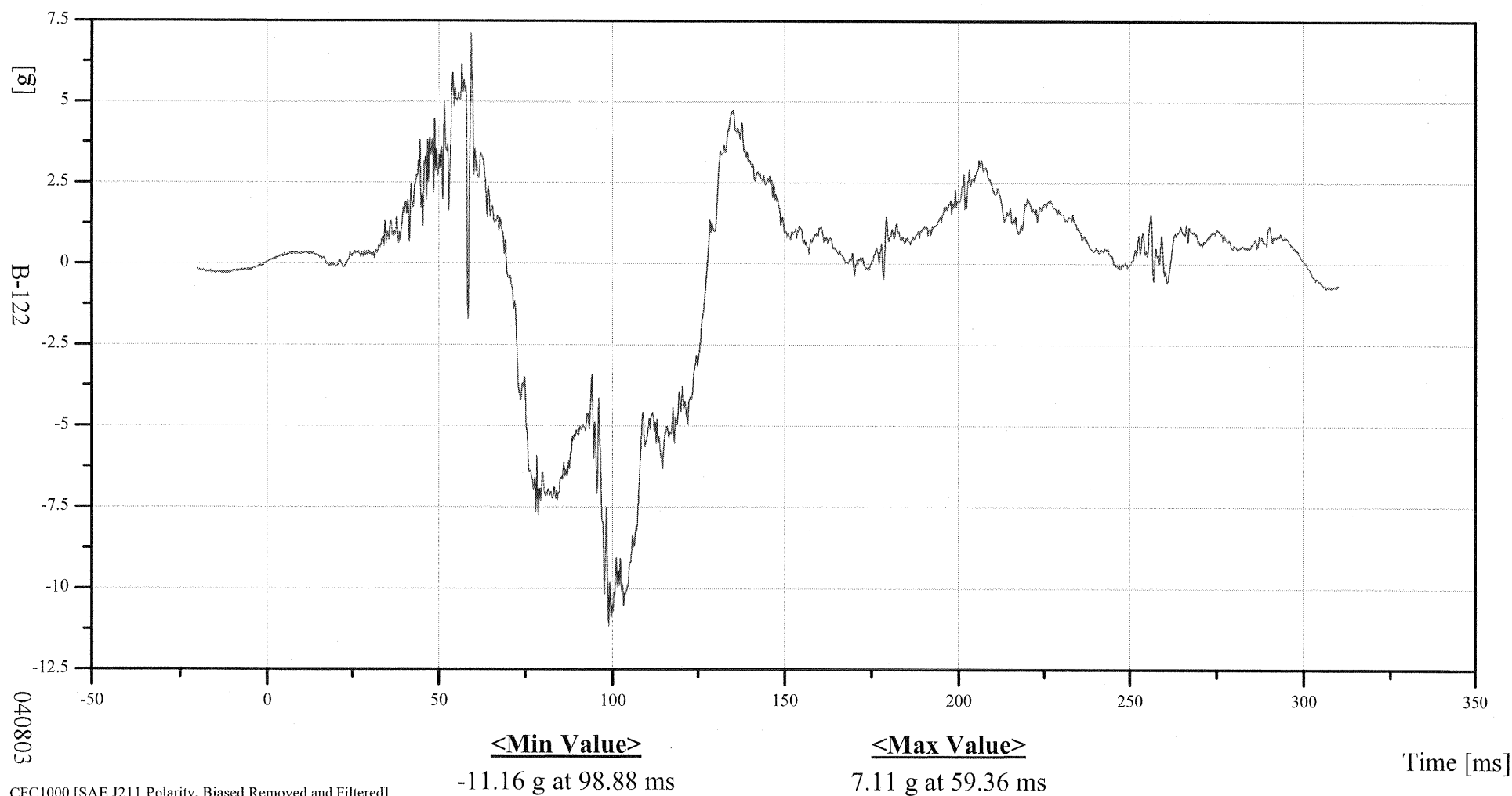
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVYG9





Transportation Research Center, Inc.

Pelvis Accel Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

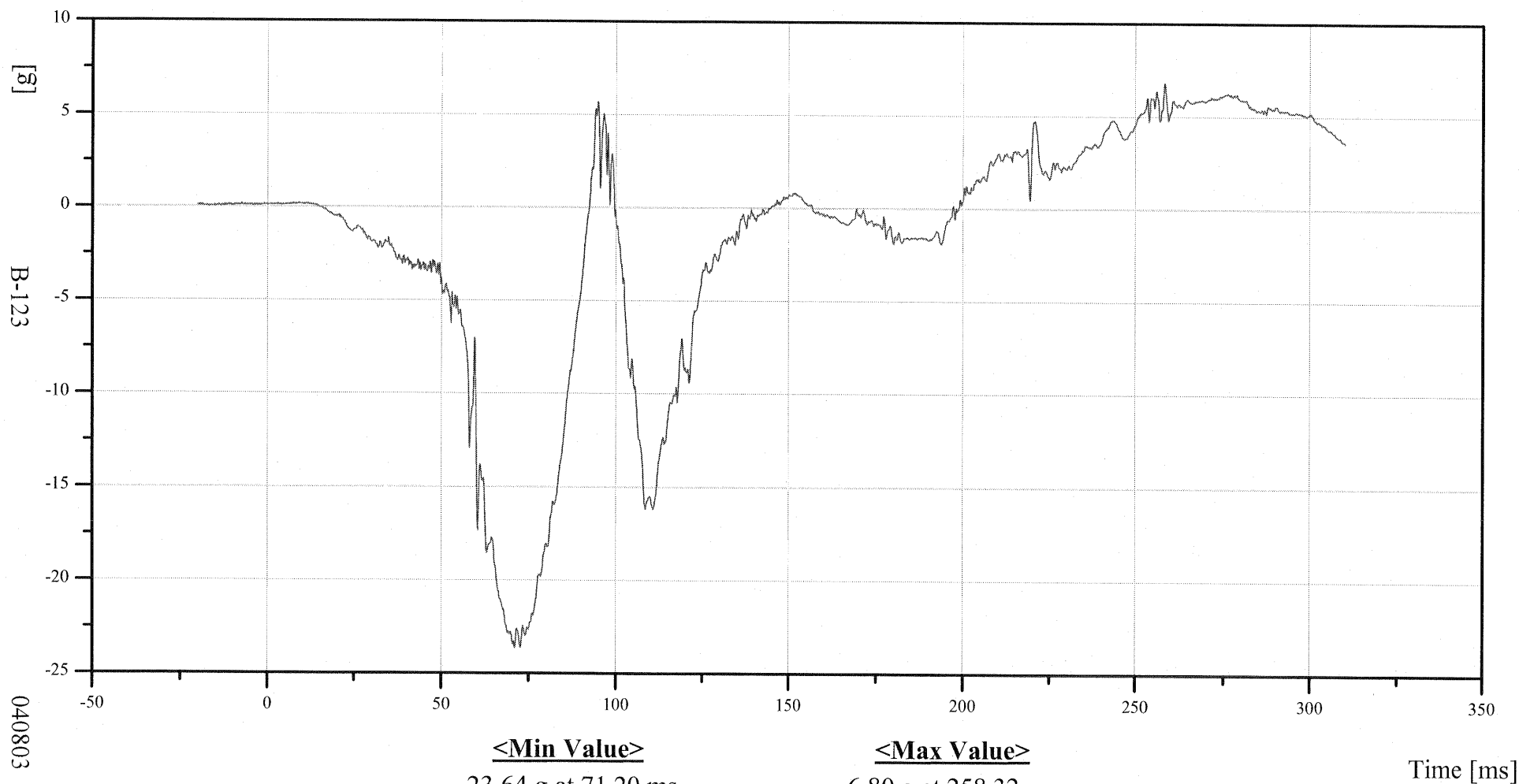
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVZG9



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Pelvis Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

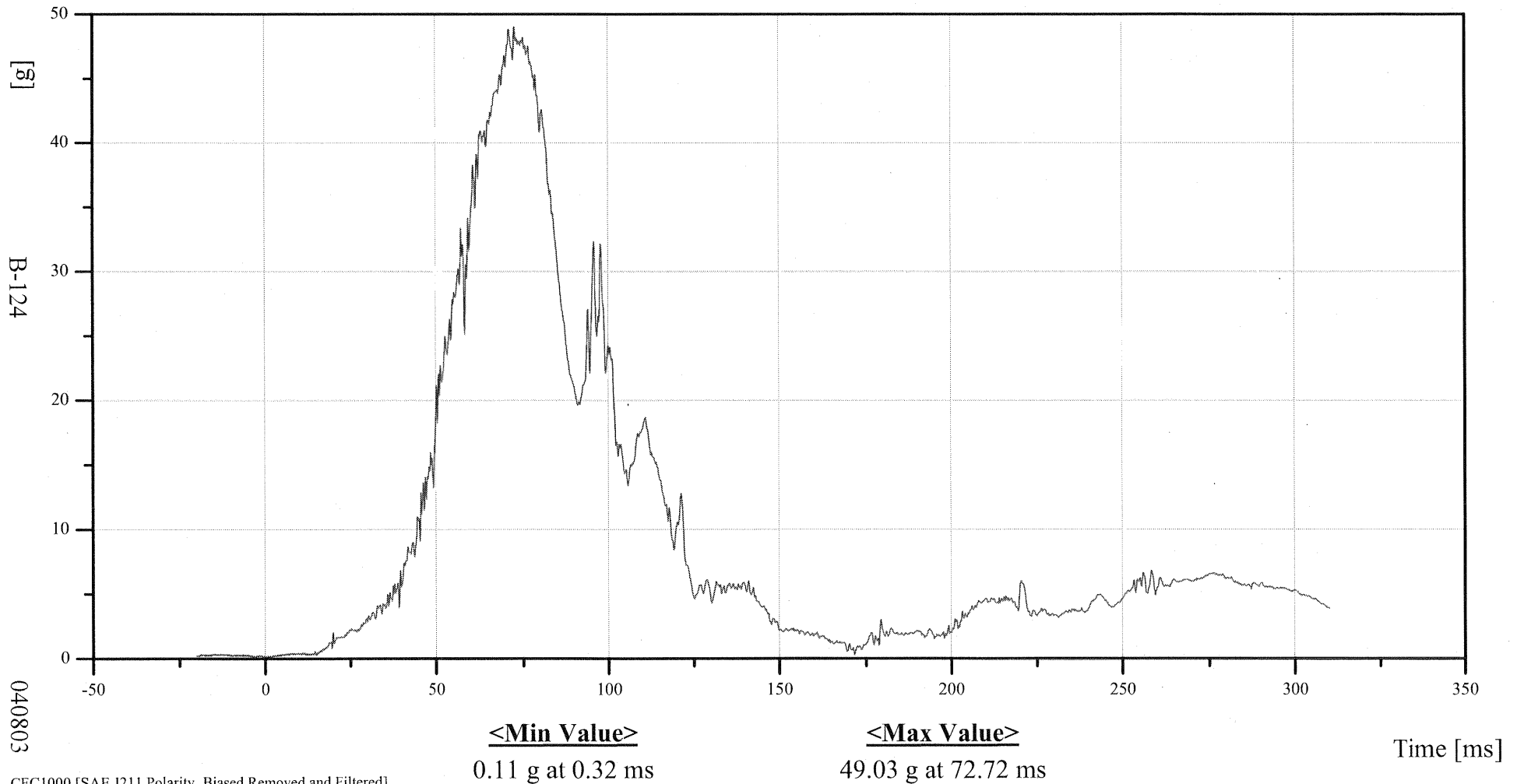
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PEVRG9





Transportation Research Center, Inc.

Left Femur Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

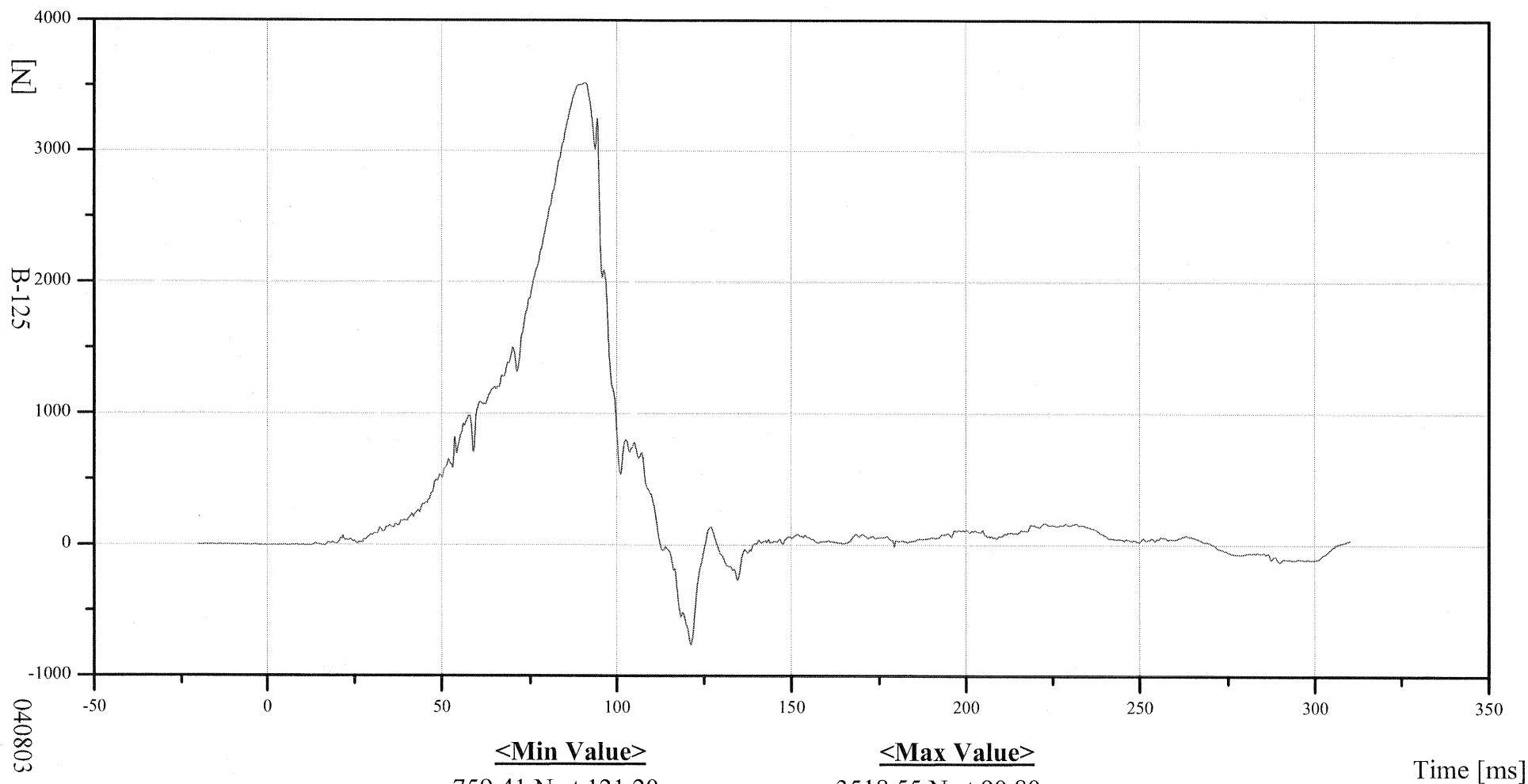
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LFMZ9



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Femur Force Z

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

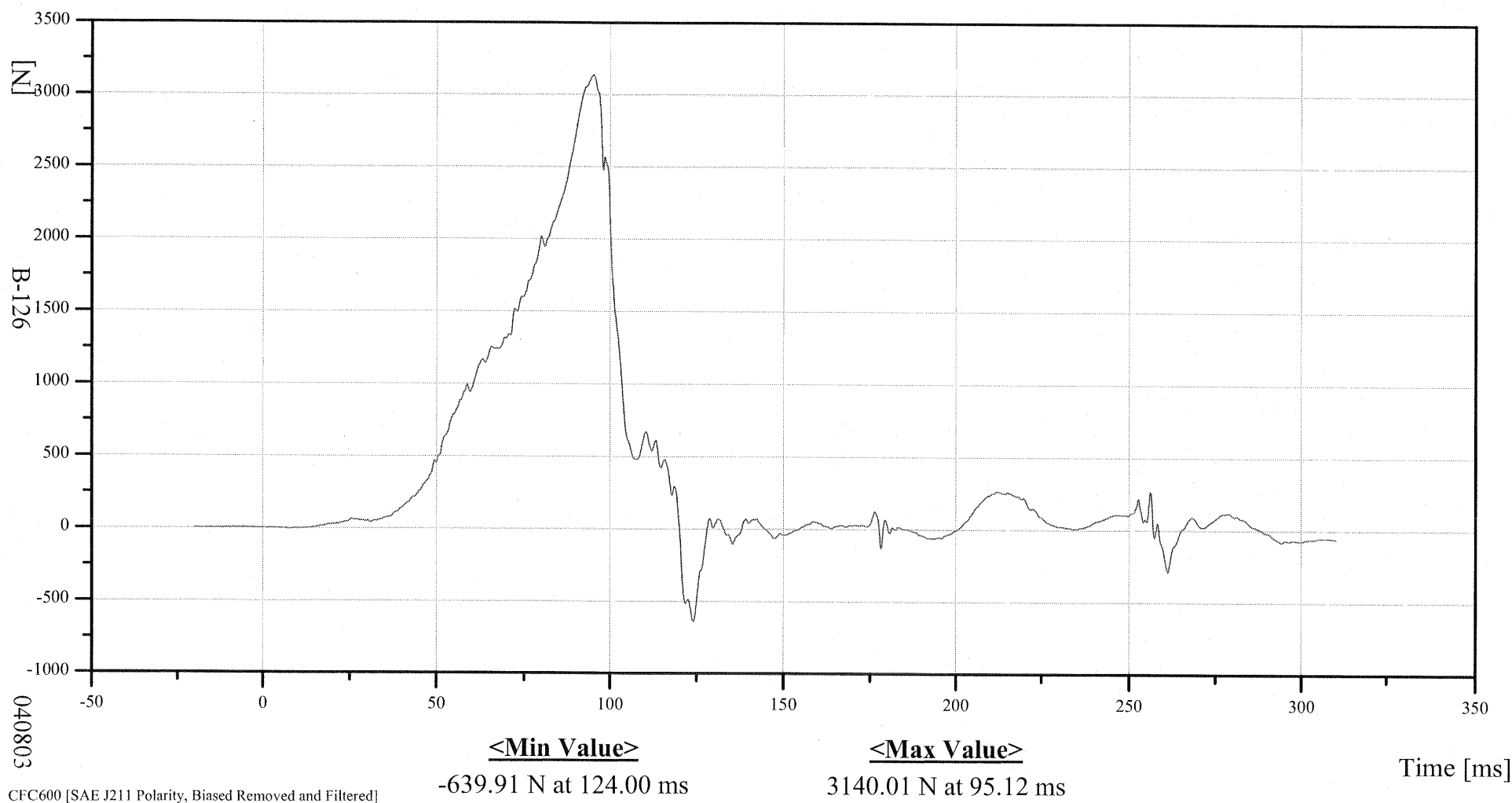
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RFMZ9



CFC600 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Left Rear Seat Cross-member X-axis Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

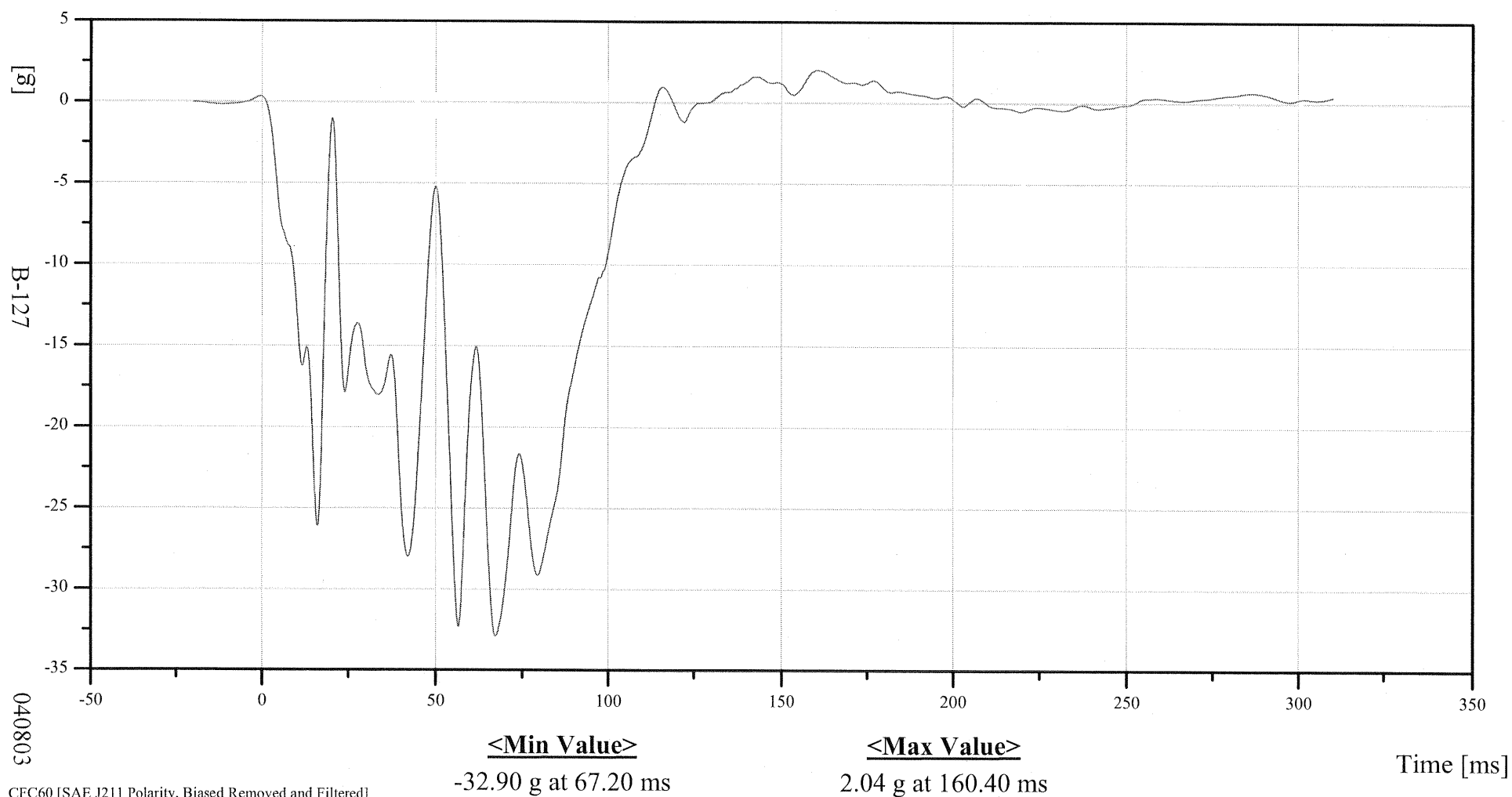
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LSXXG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Right Rear Seat Cross-member X-axis Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

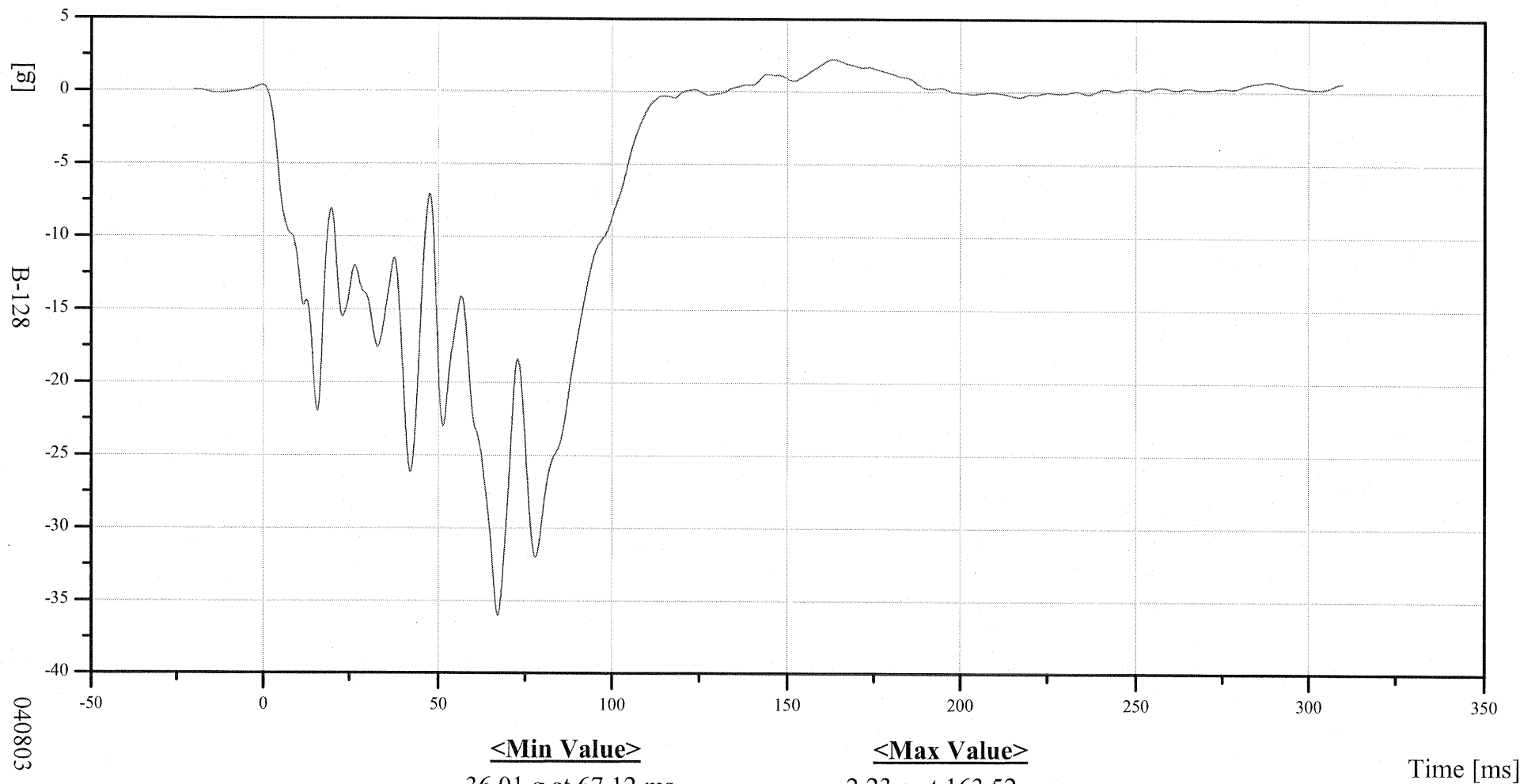
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RSXXG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Top of Engine X-axis Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

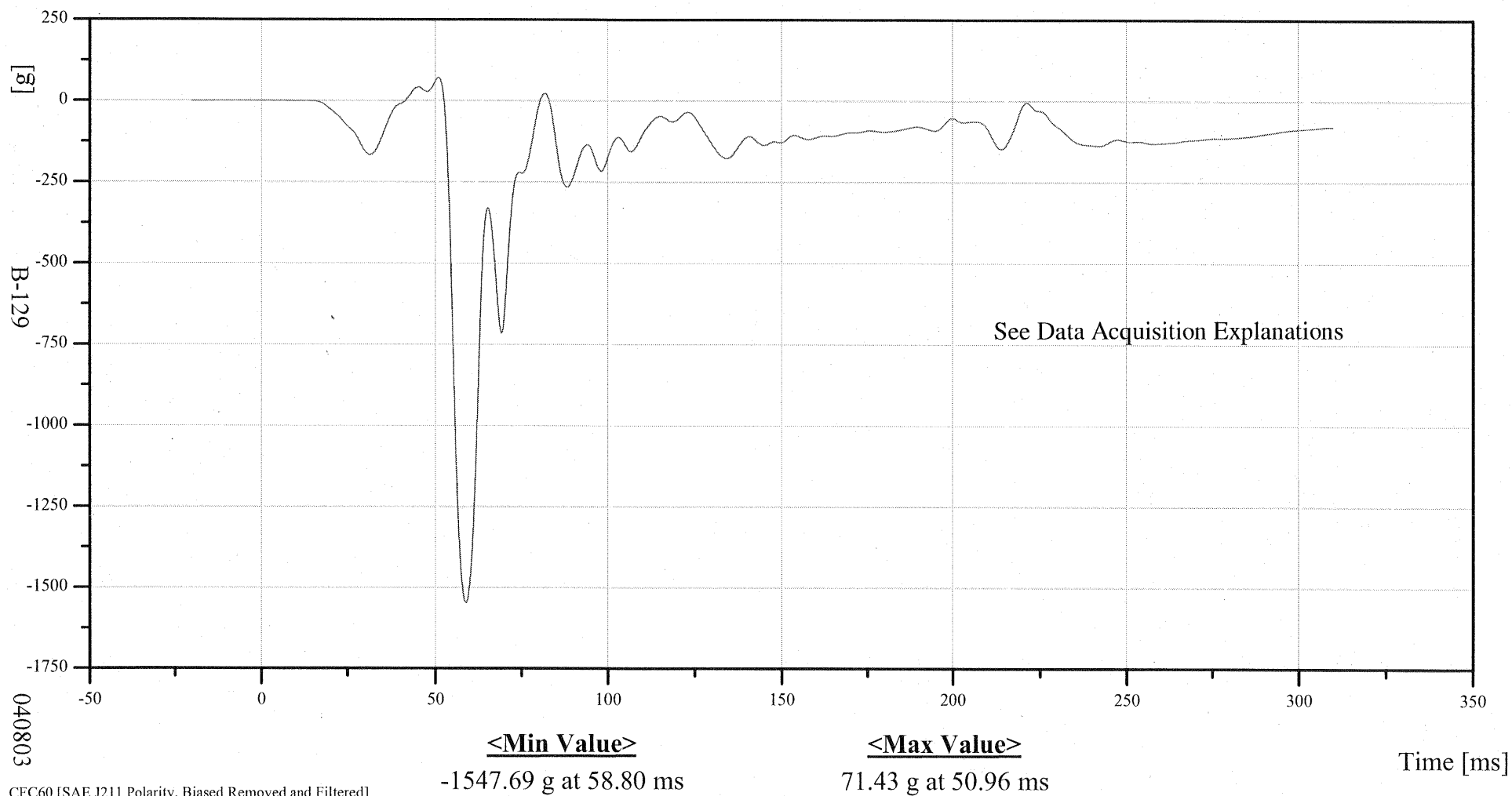
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

TENXG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

Bottom of Engine X-axis Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

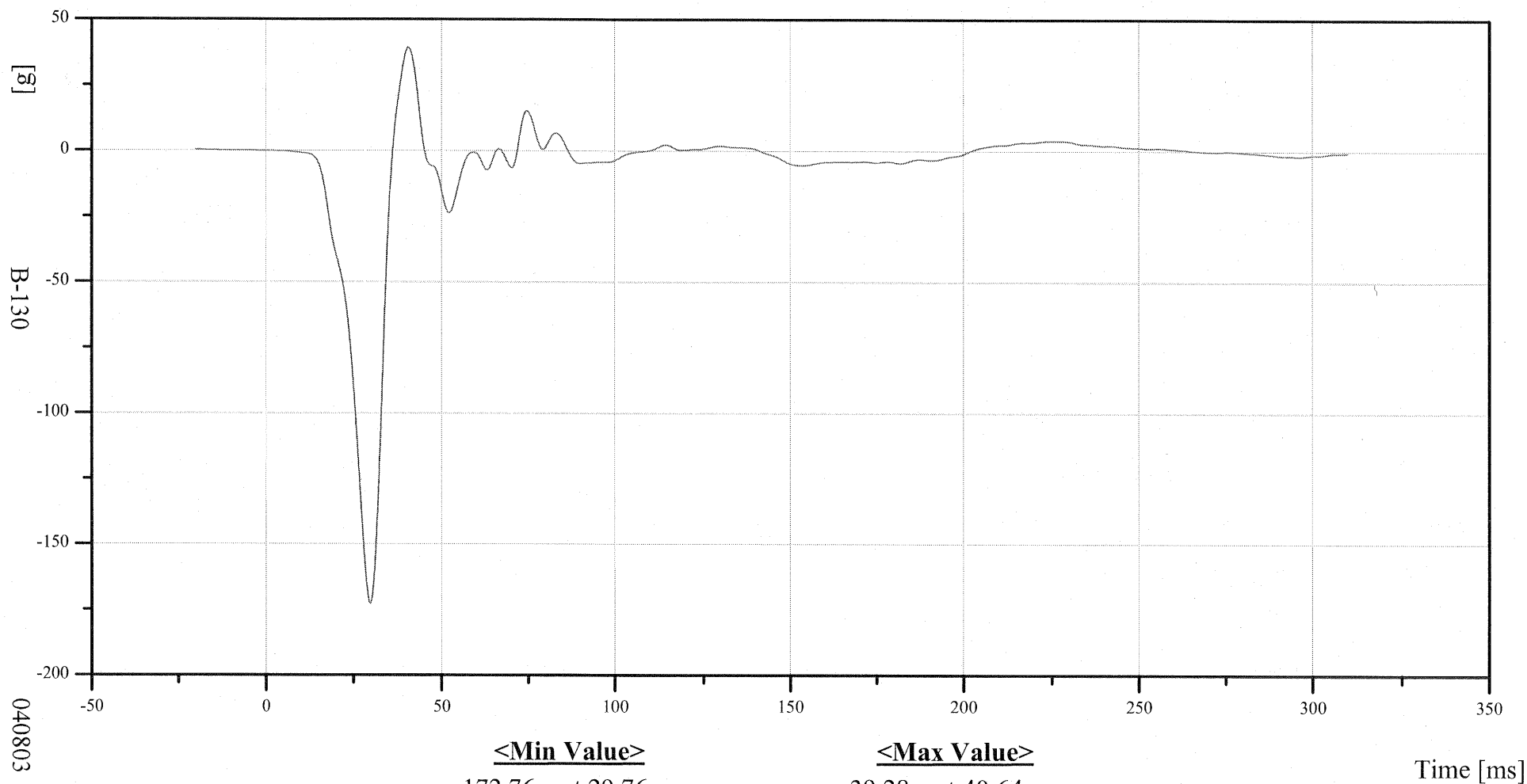
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

BENXG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]

-172.76 g at 29.76 ms

39.28 g at 40.64 ms



Transportation Research Center, Inc.

Right Front Brake Caliper X-axis acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

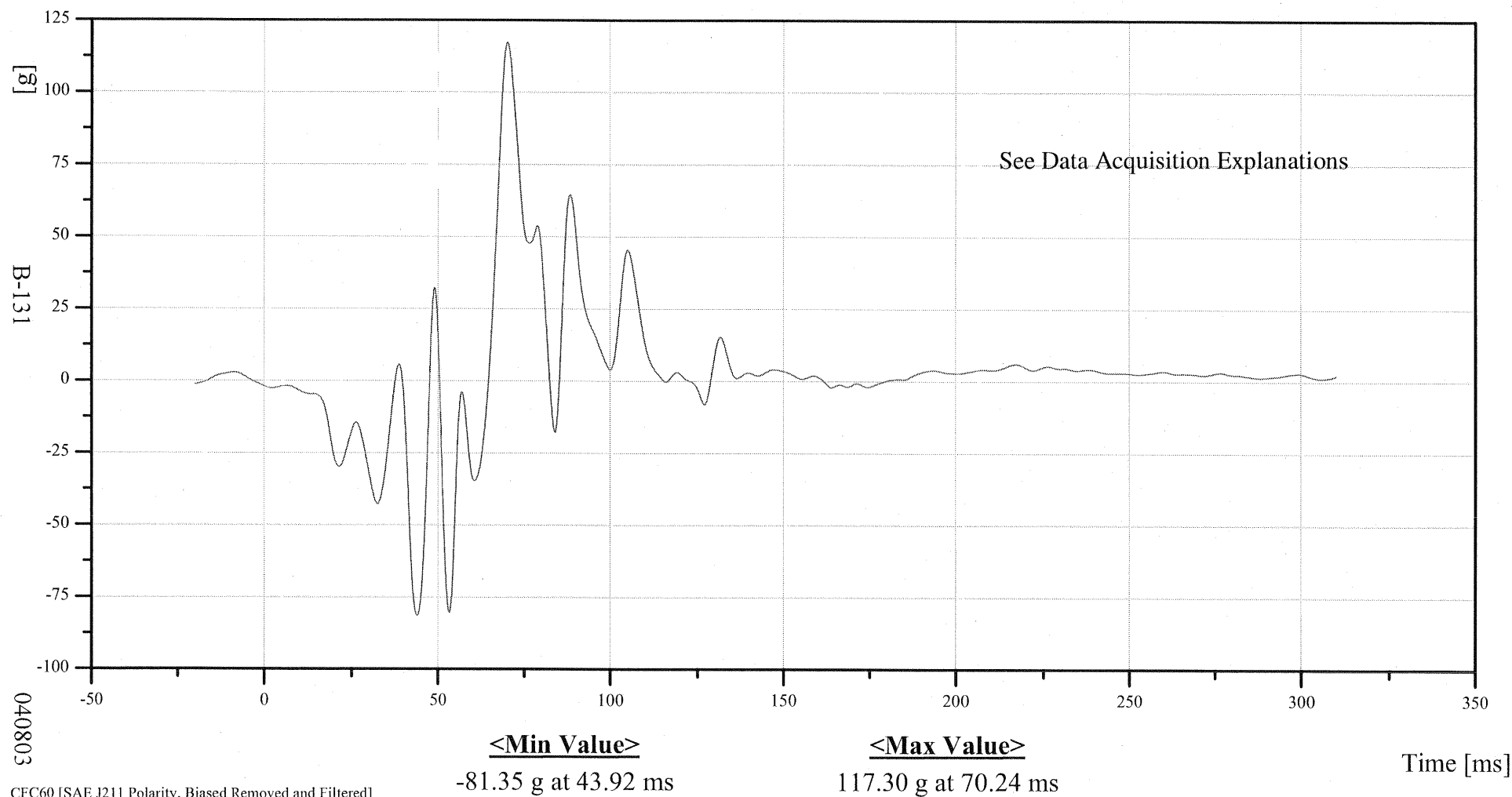
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RFCXG





Transportation Research Center, Inc.

Left Front Brake Caliper X-axis acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

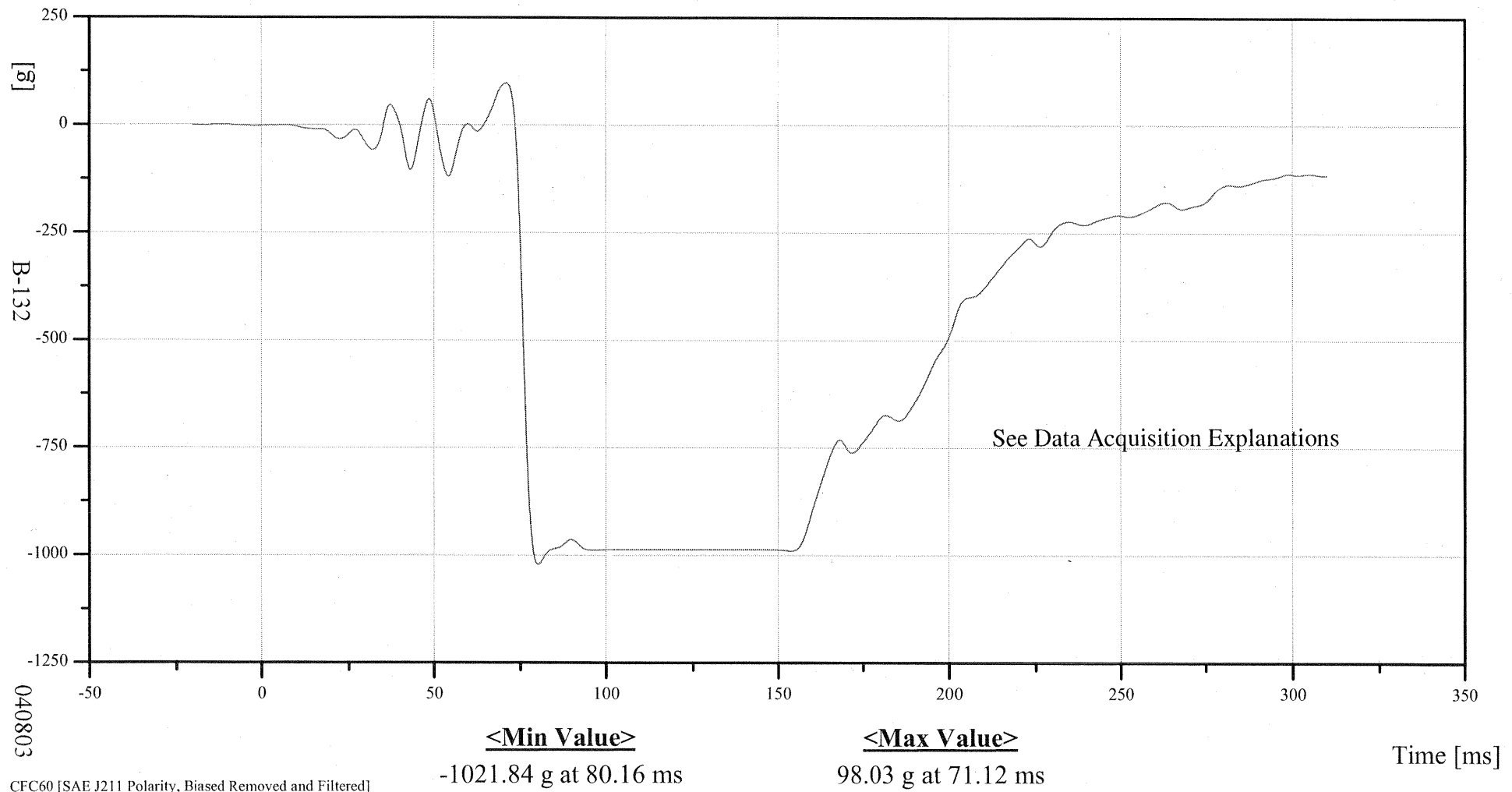
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LFCXG





Transportation Research Center, Inc.

Instrument Panel Top Center X-axis Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

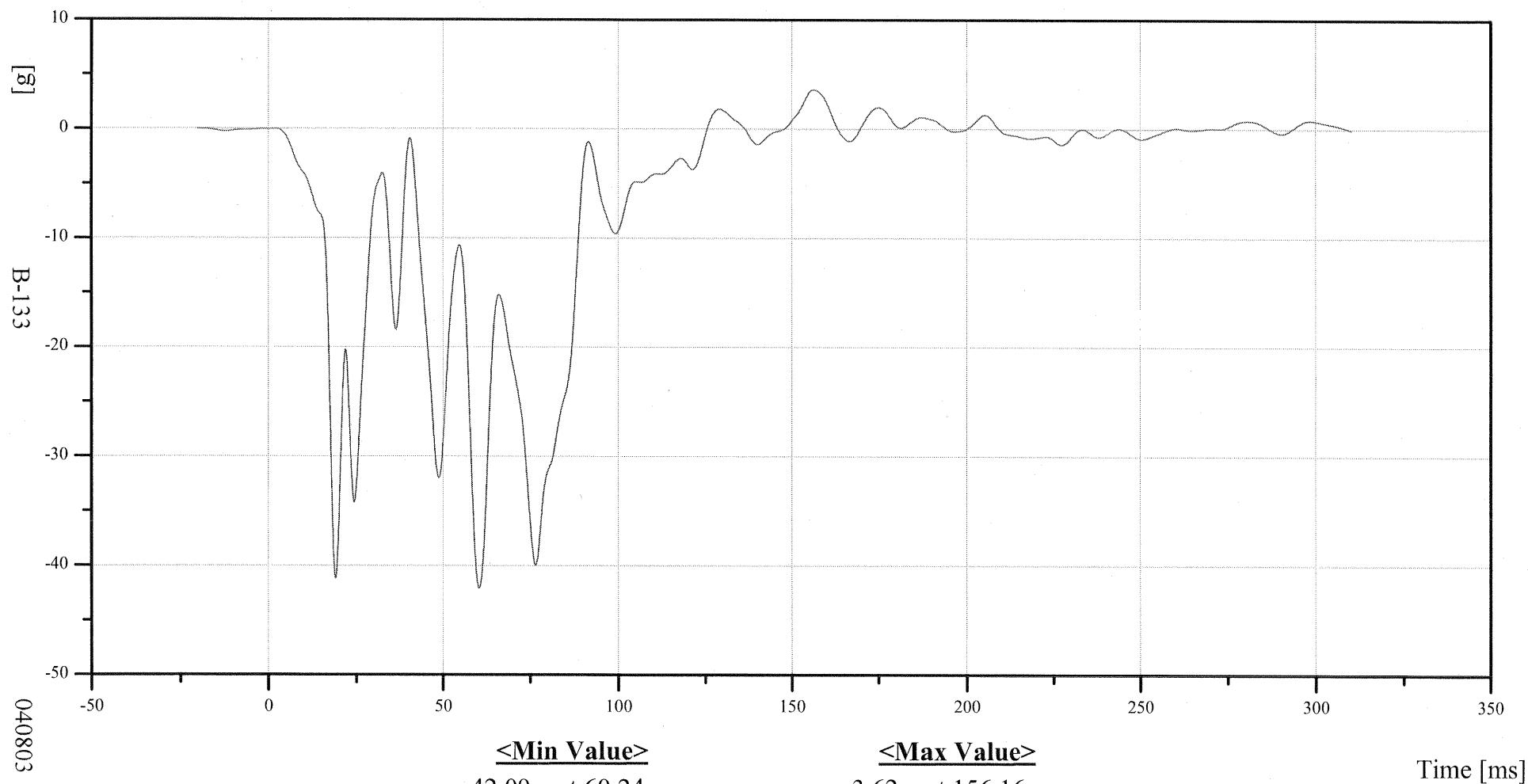
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

DPCXG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

VEHICLE CG X-AXIS

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

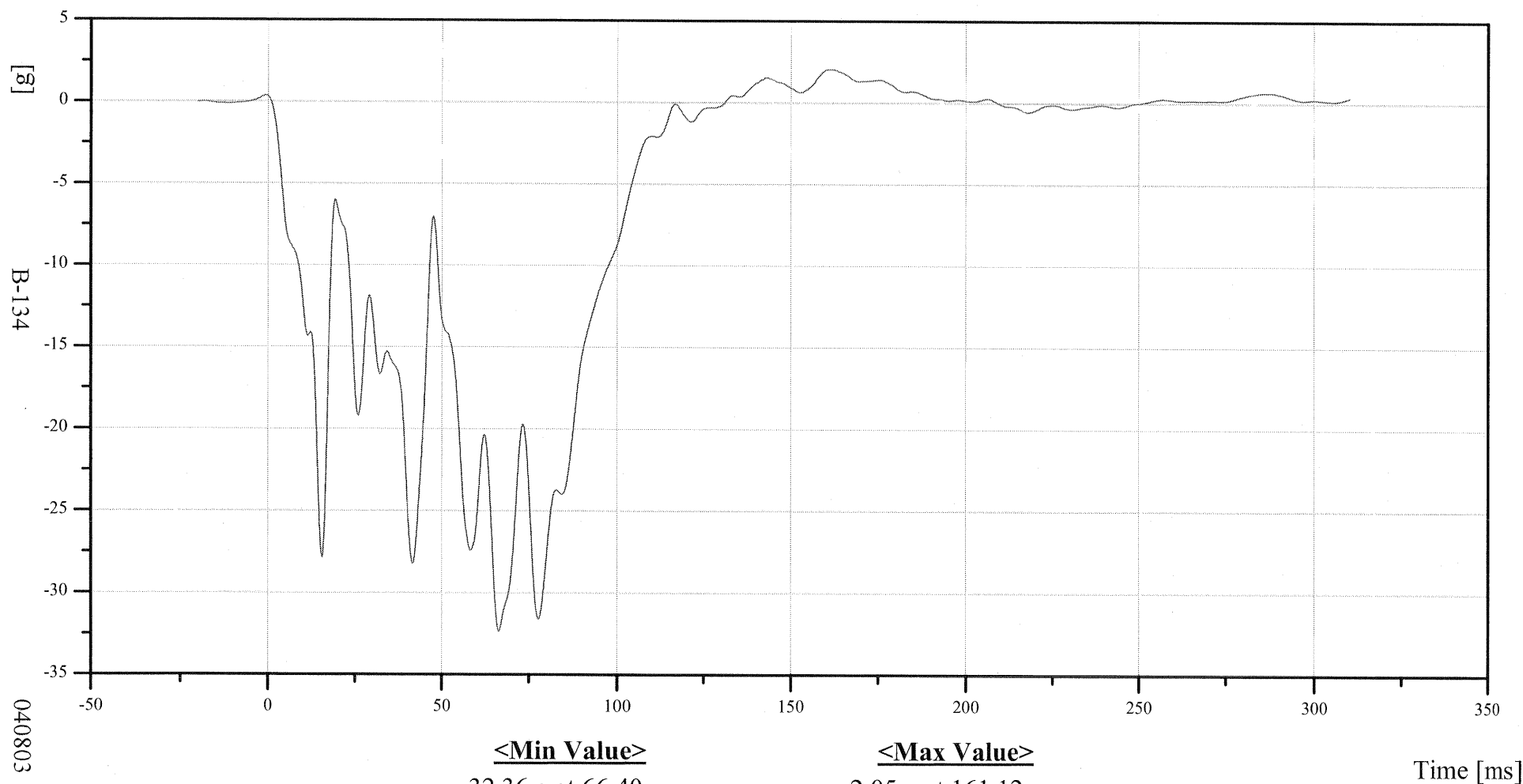
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

VCGXG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

VEHICLE CG Y-AXIS

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

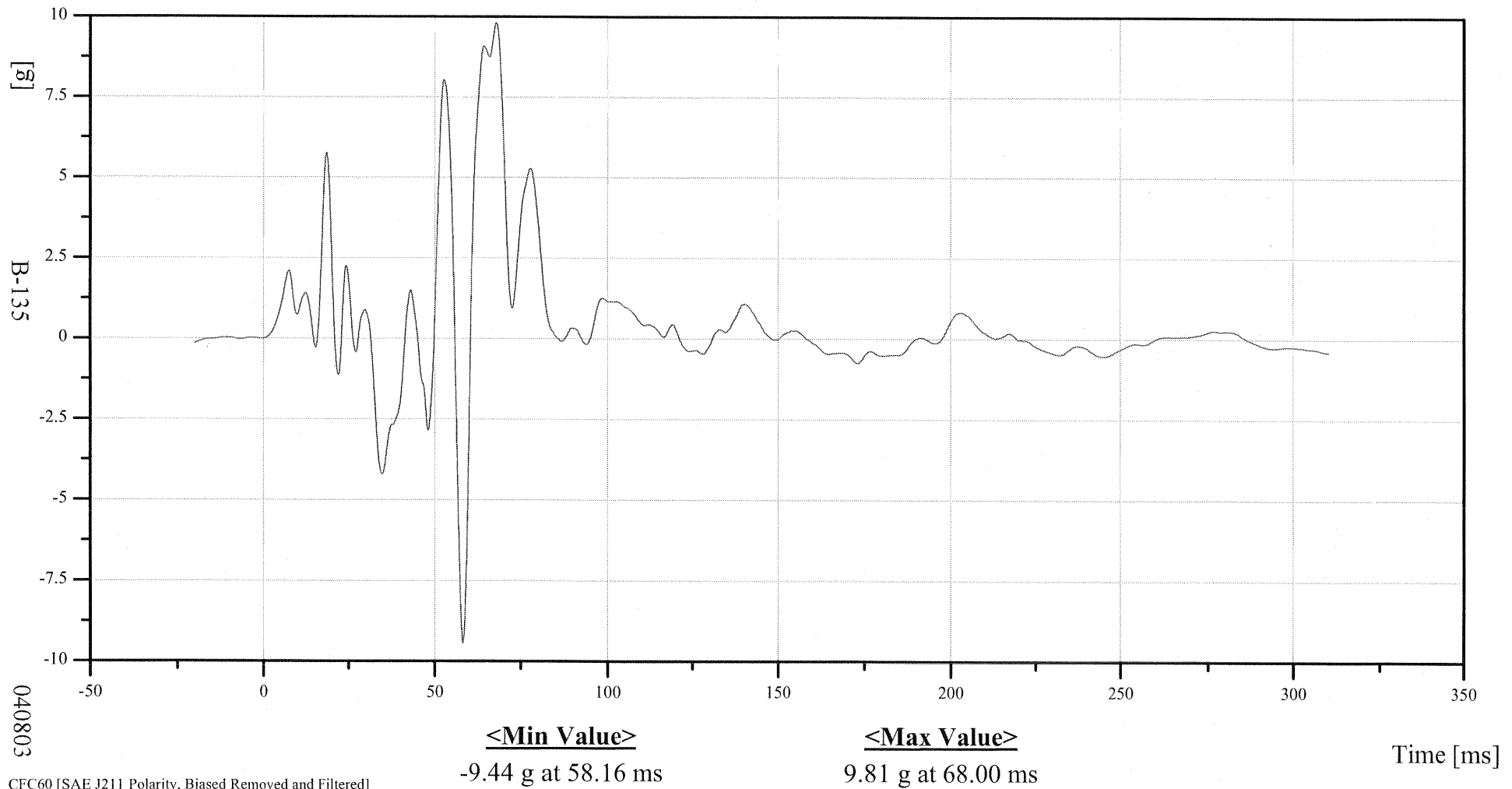
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

VCGYG



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

VEHICLE CG Z-AXIS

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

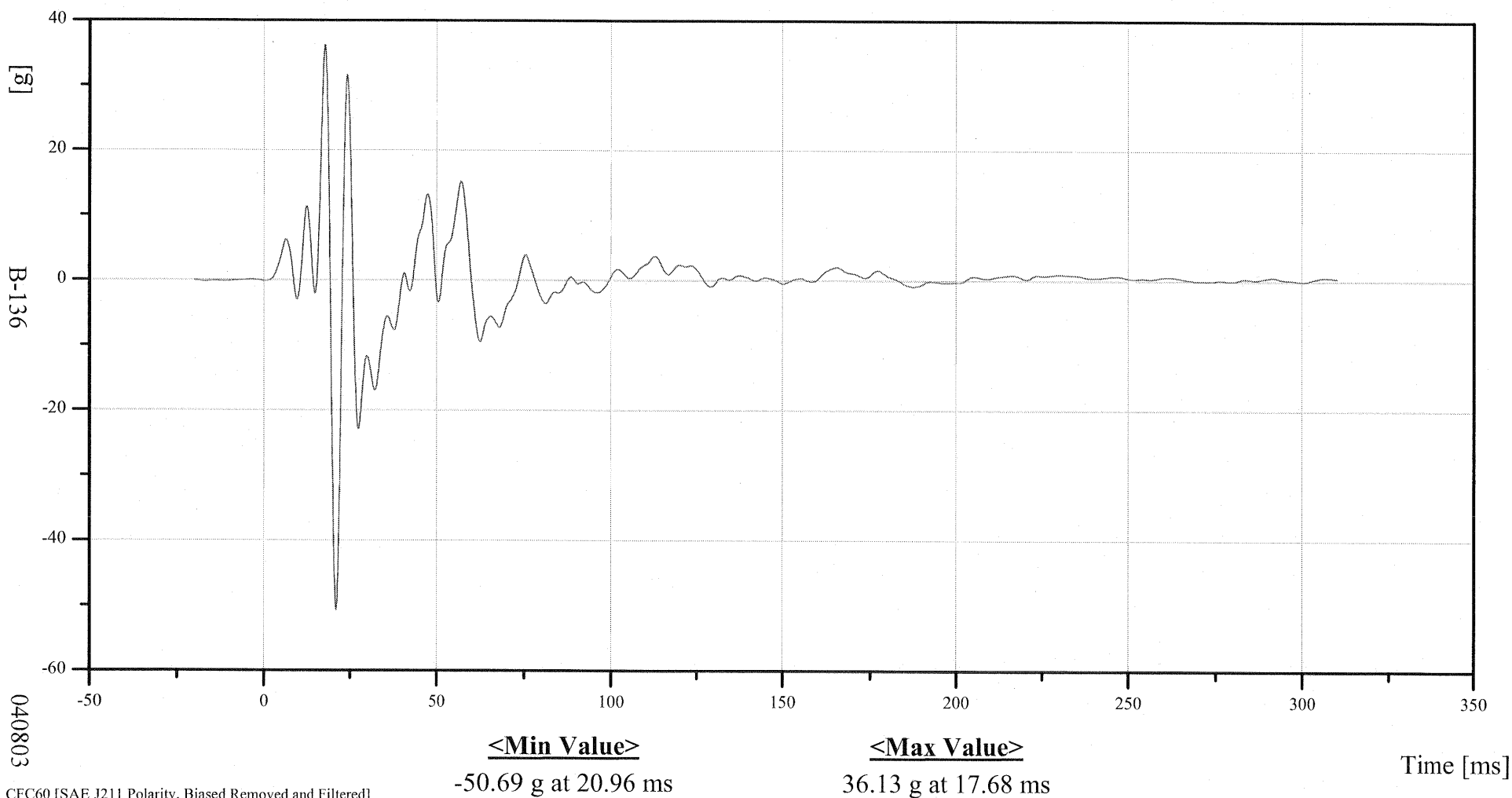
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

VCGZG





Transportation Research Center, Inc.

Vehicle Center of Gravity Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

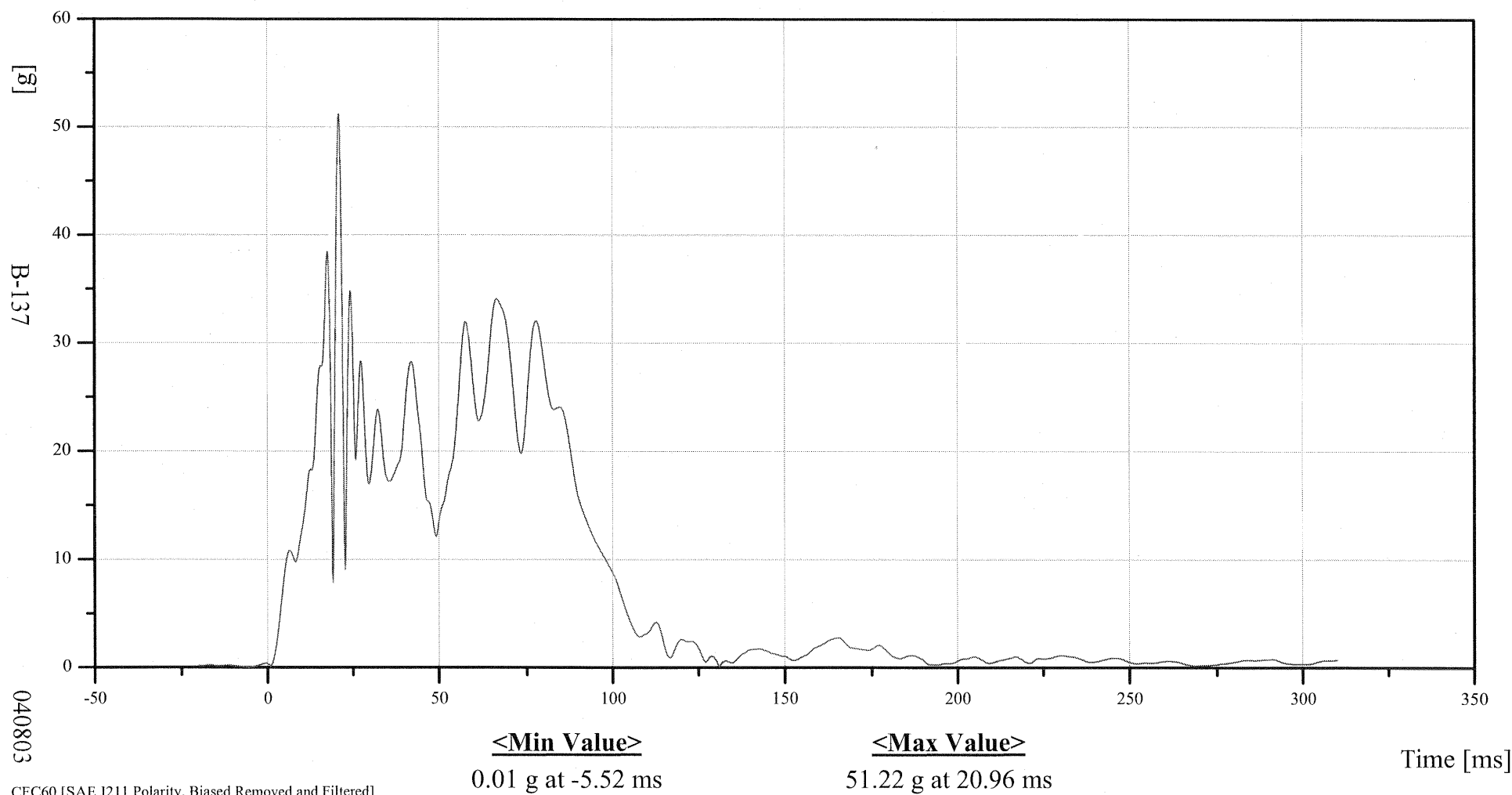
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

VCGRG





Transportation Research Center, Inc.

RR DECK X-AXIS

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

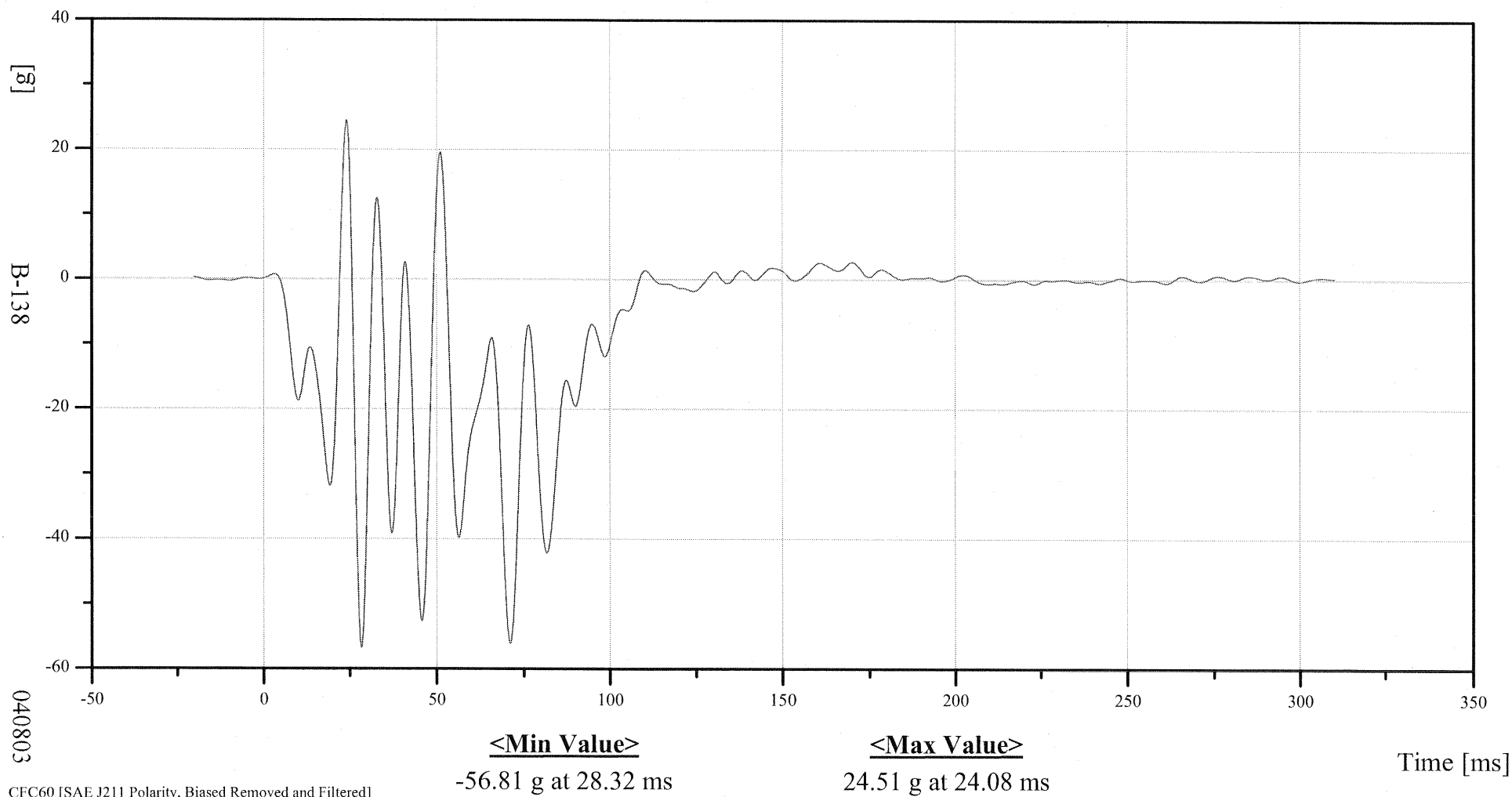
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RDKXG





Transportation Research Center, Inc.

RR DECK Y-AXIS

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

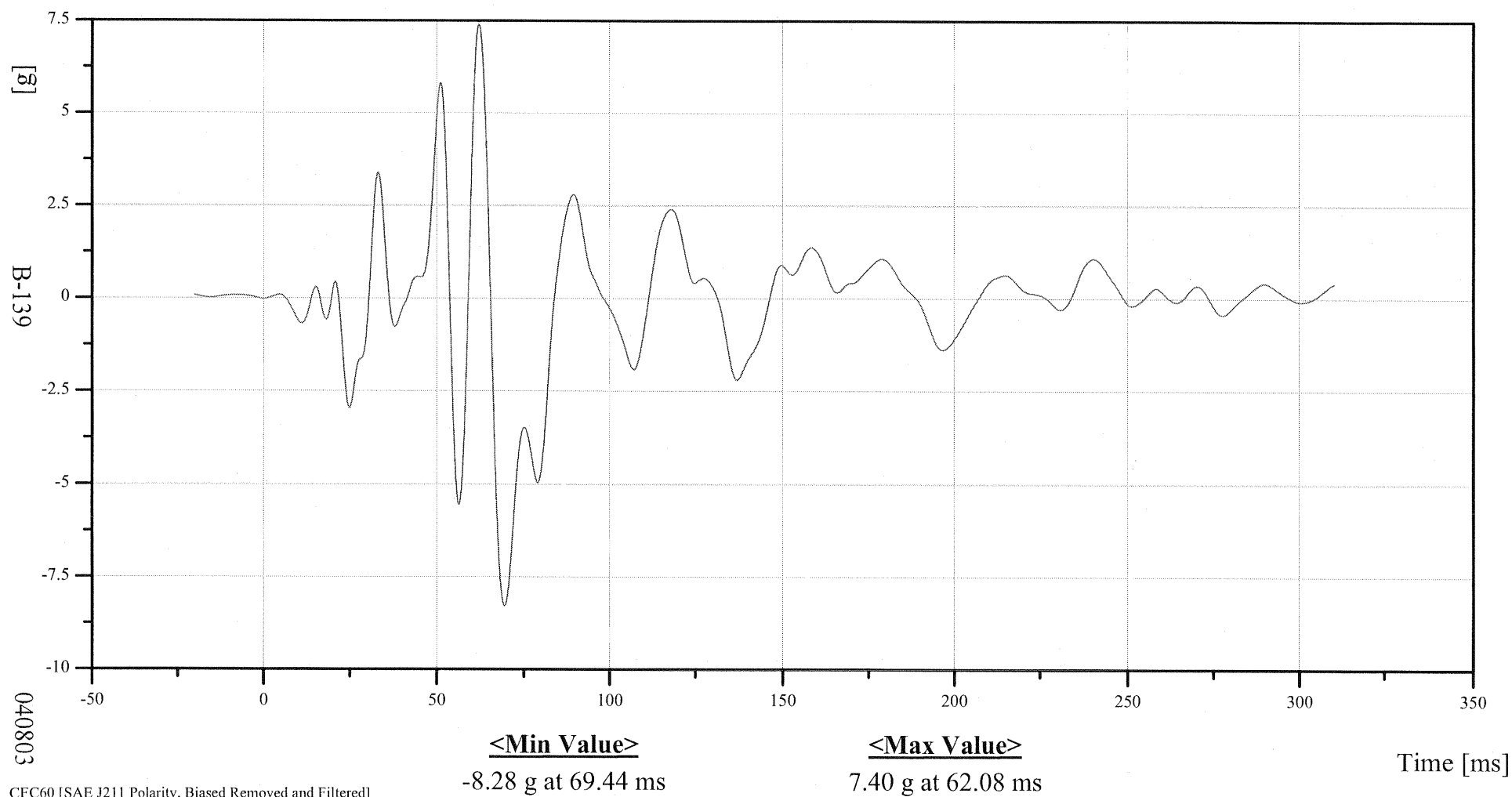
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RDKEYG





Transportation Research Center, Inc.

RR DECK Z-AXIS

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

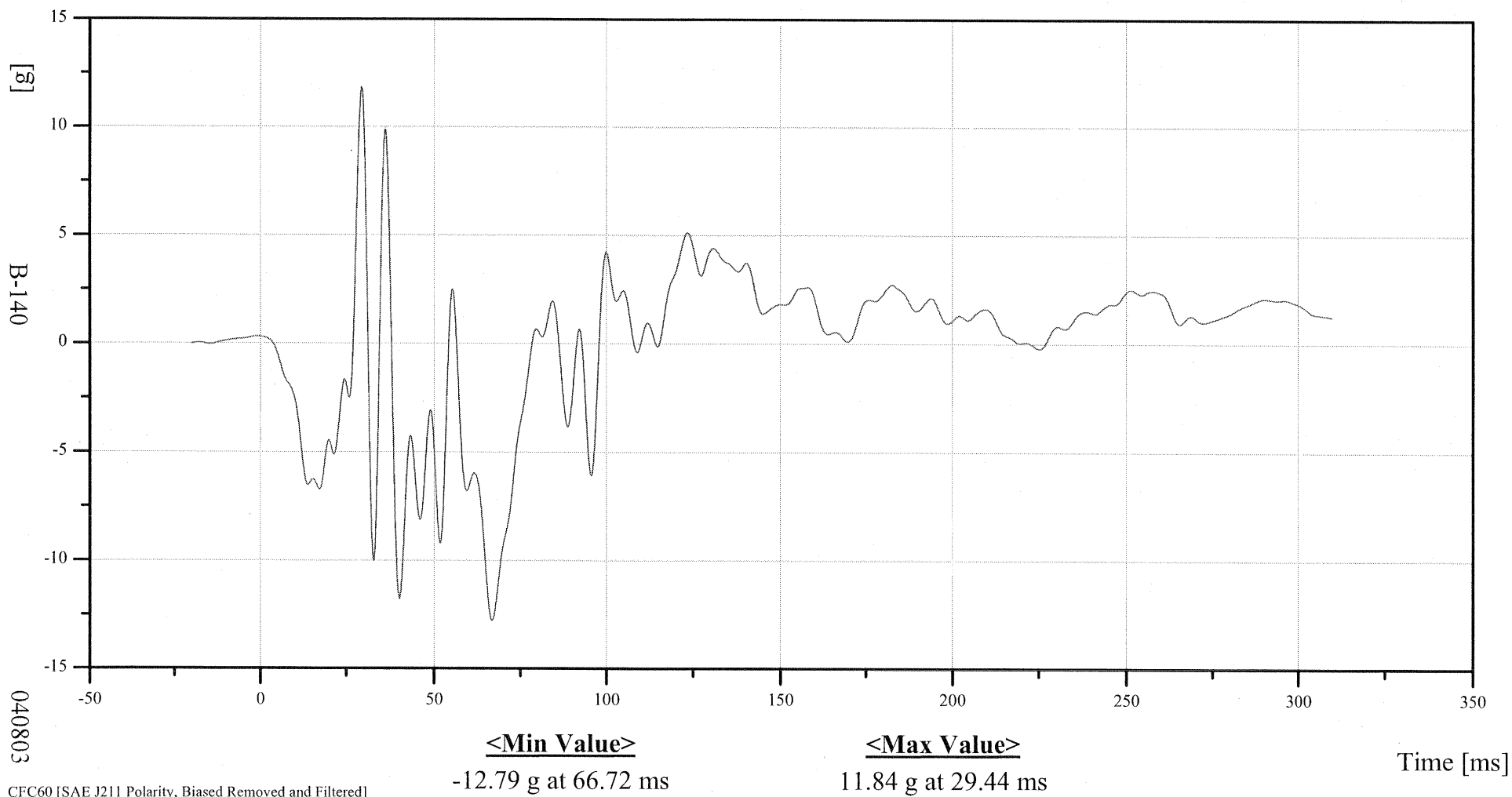
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RDKZG





Transportation Research Center, Inc.

Rear Deck Resultant Acceleration

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

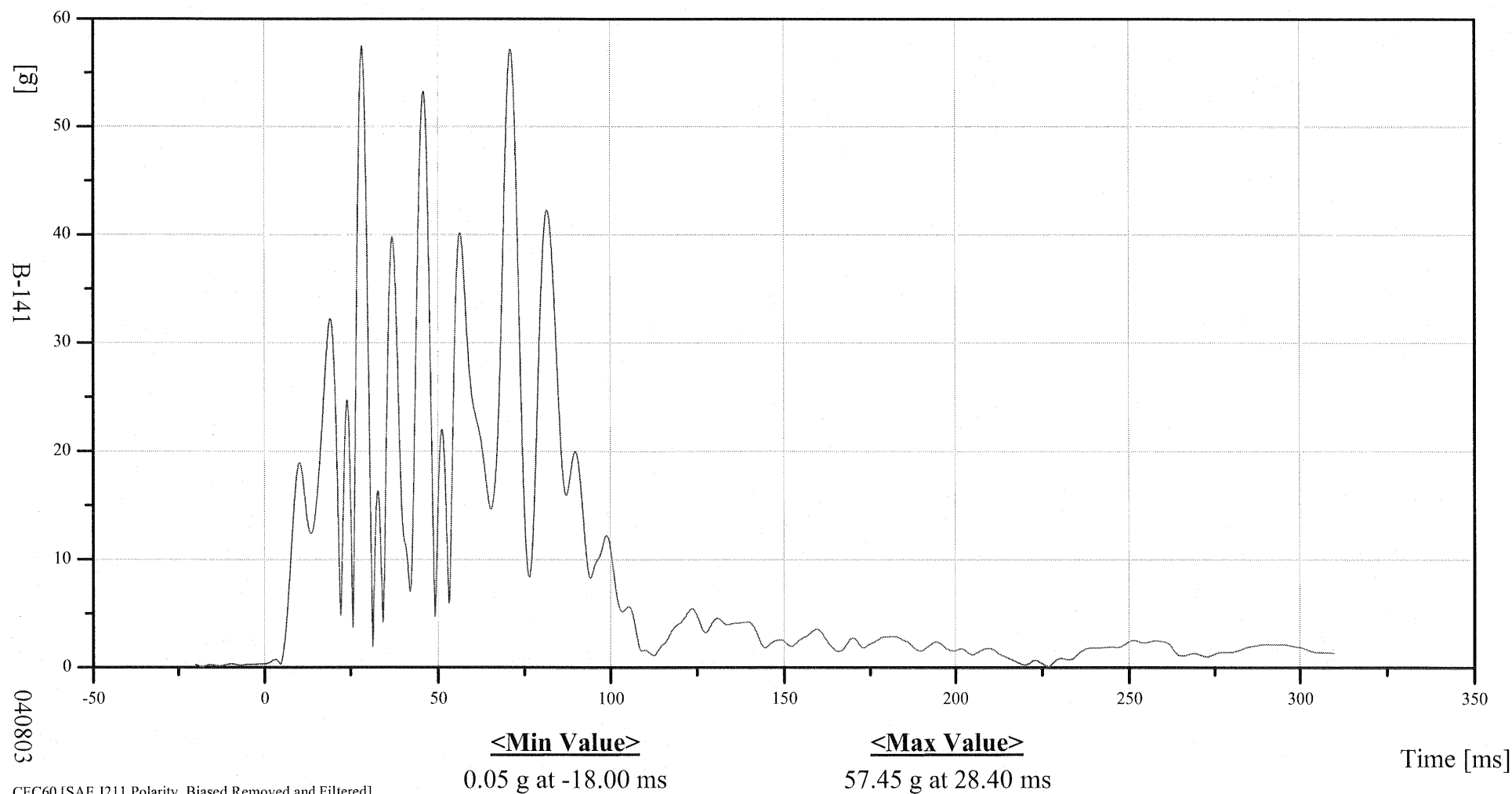
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

RDKRG





Transportation Research Center, Inc.

DRIVER AIRBAG EVENT - WIRE A

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

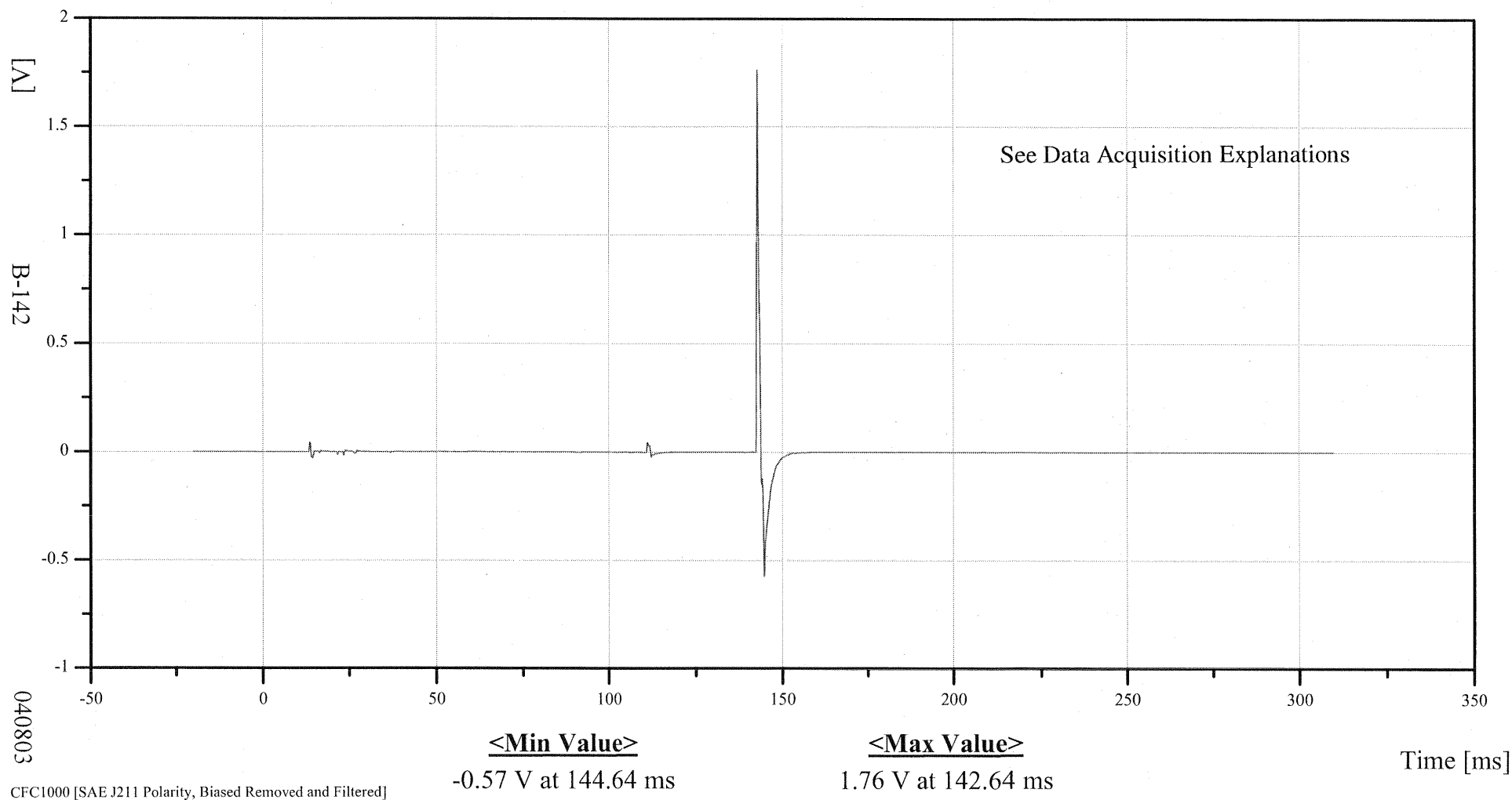
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

DABETA





Transportation Research Center, Inc.

DRIVER AIRBAG EVENT- WIRE B

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

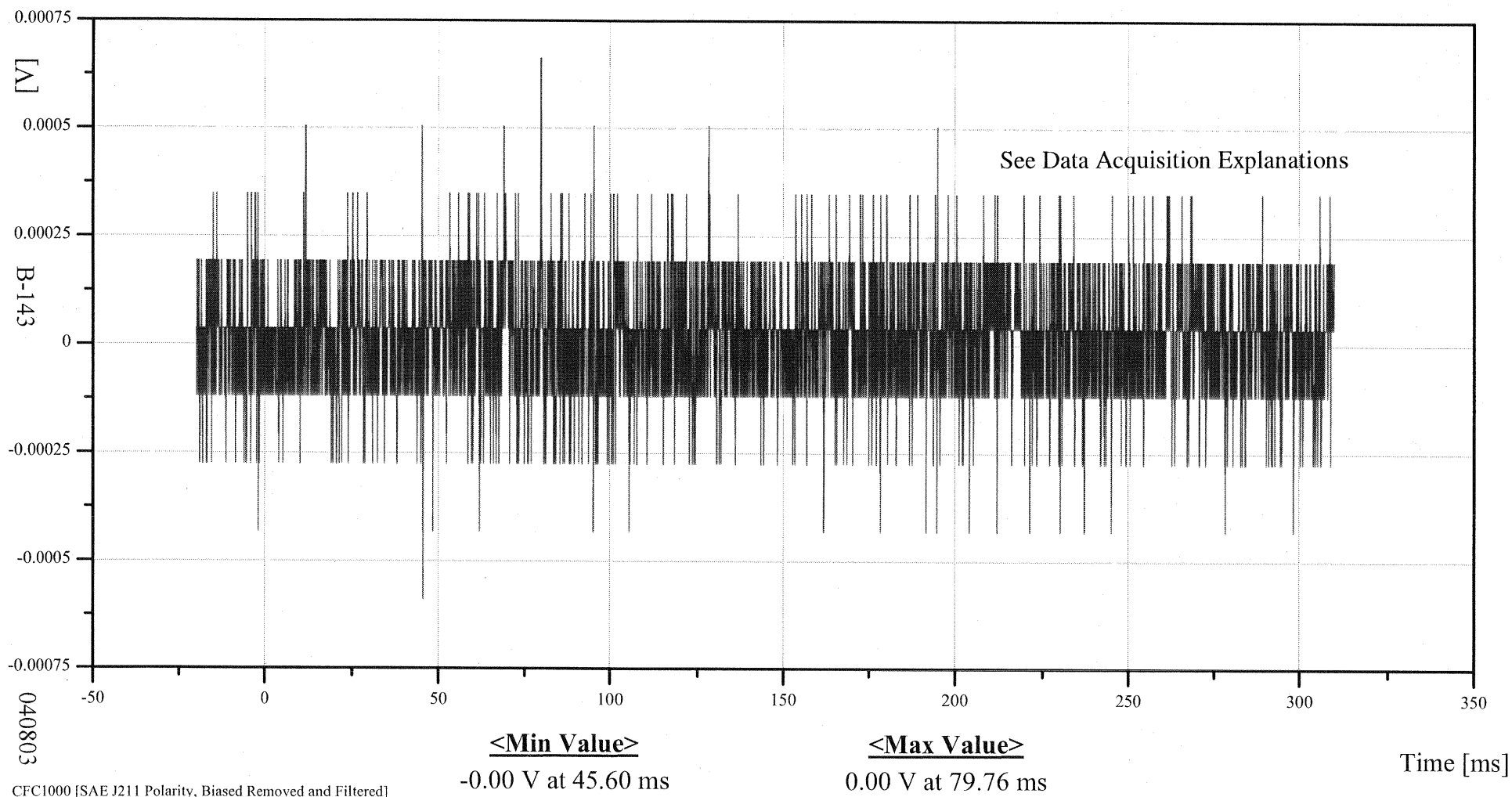
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

DABETB





Transportation Research Center, Inc.

PASSENGER AIRBAG EVENT - WIRE A

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

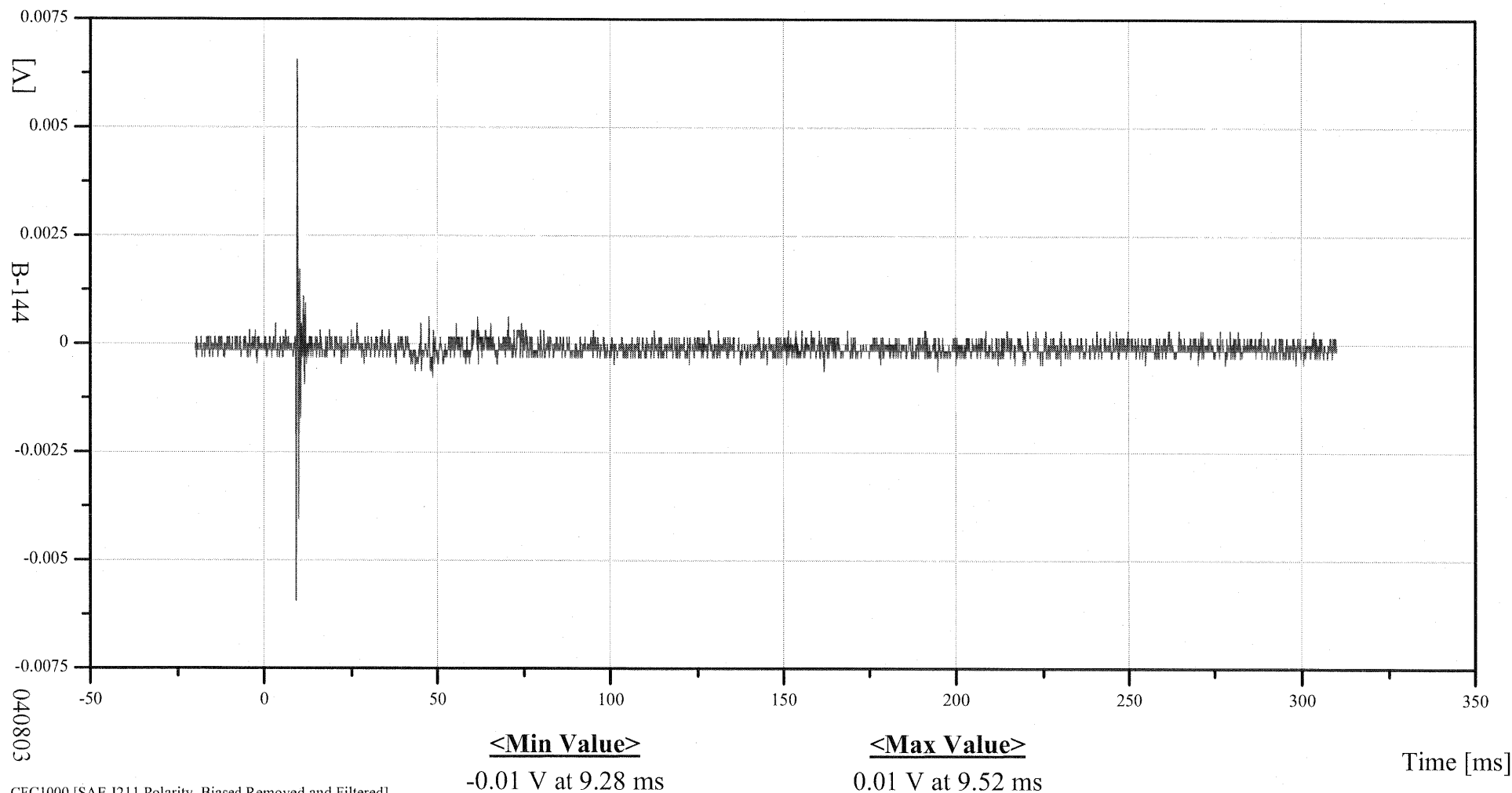
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PABETA





Transportation Research Center, Inc.

PASSENGER AIRBAG EVENT - WIRE A

Date: 08/03/2004

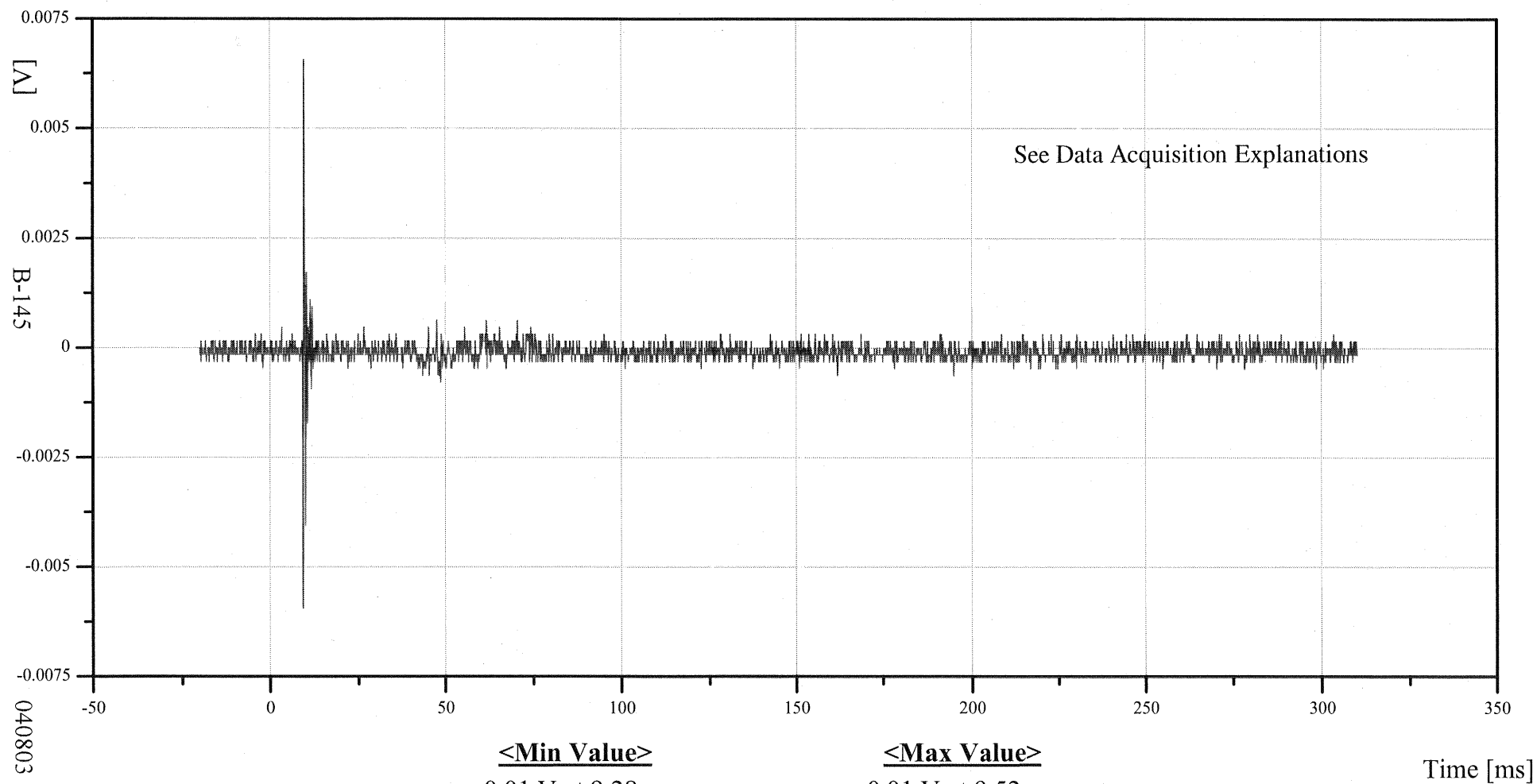
Time: 12:26:49

Test Lab: CTF

Customer: VRTC

Test Number: 040803

PABETA



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

PASSENGER AIRBAG EVENT - WIRE B

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

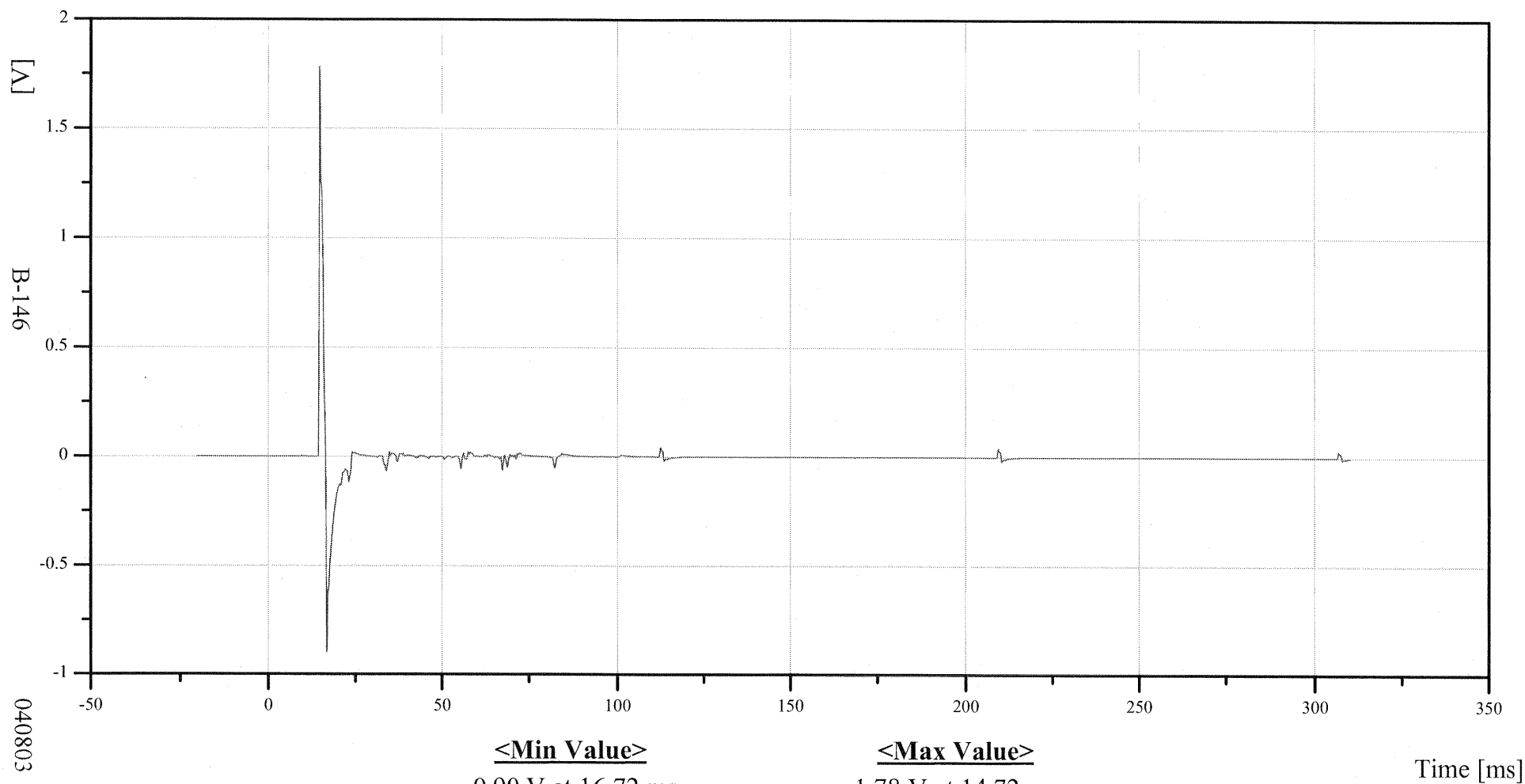
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

PABETB



CFC1000 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

RT 3RD ROW RR PASS. SHLDR BELT FORCE

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

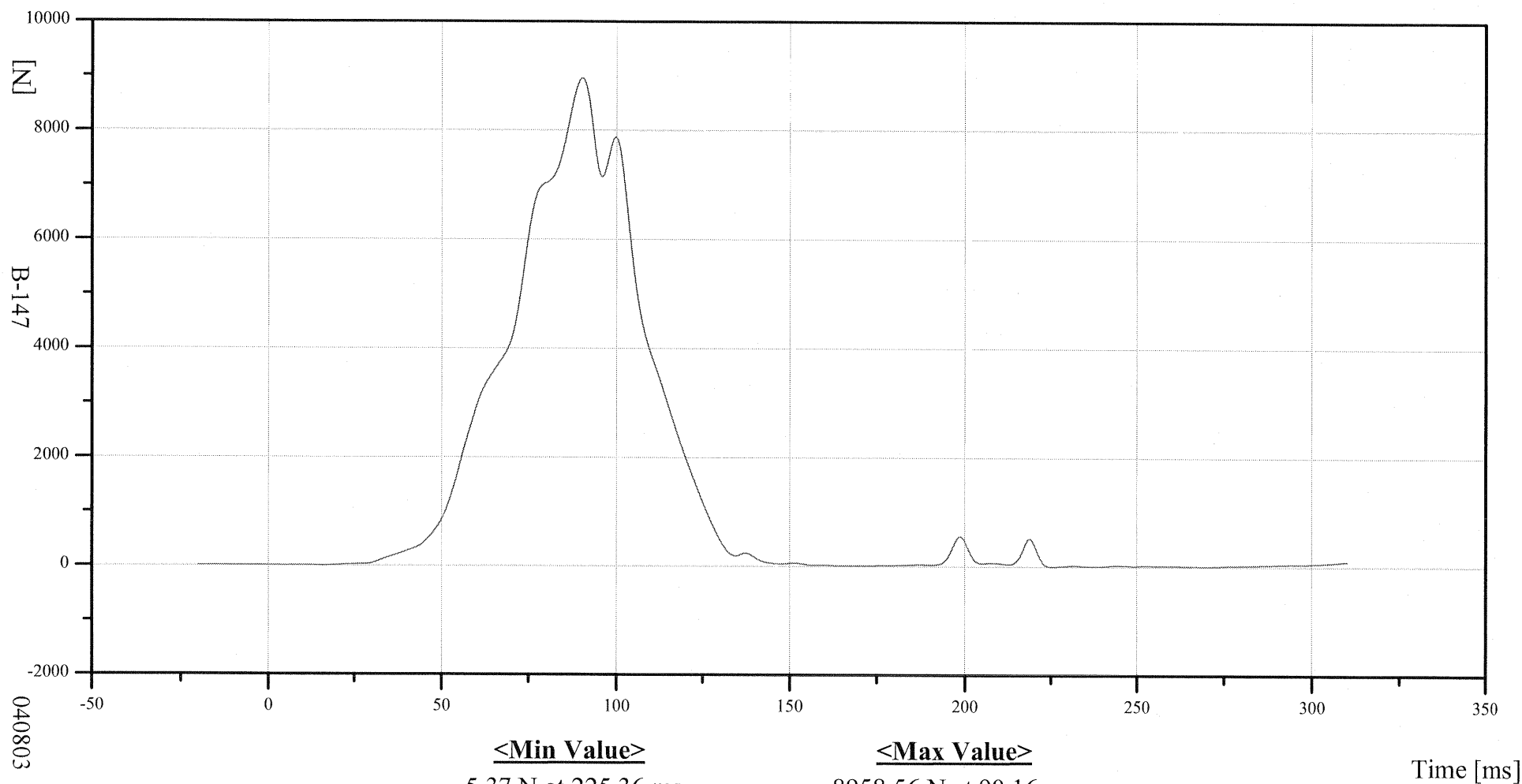
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

SHBF9



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

RT 3RD ROW RR PASS. LAP BELT FORCE

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

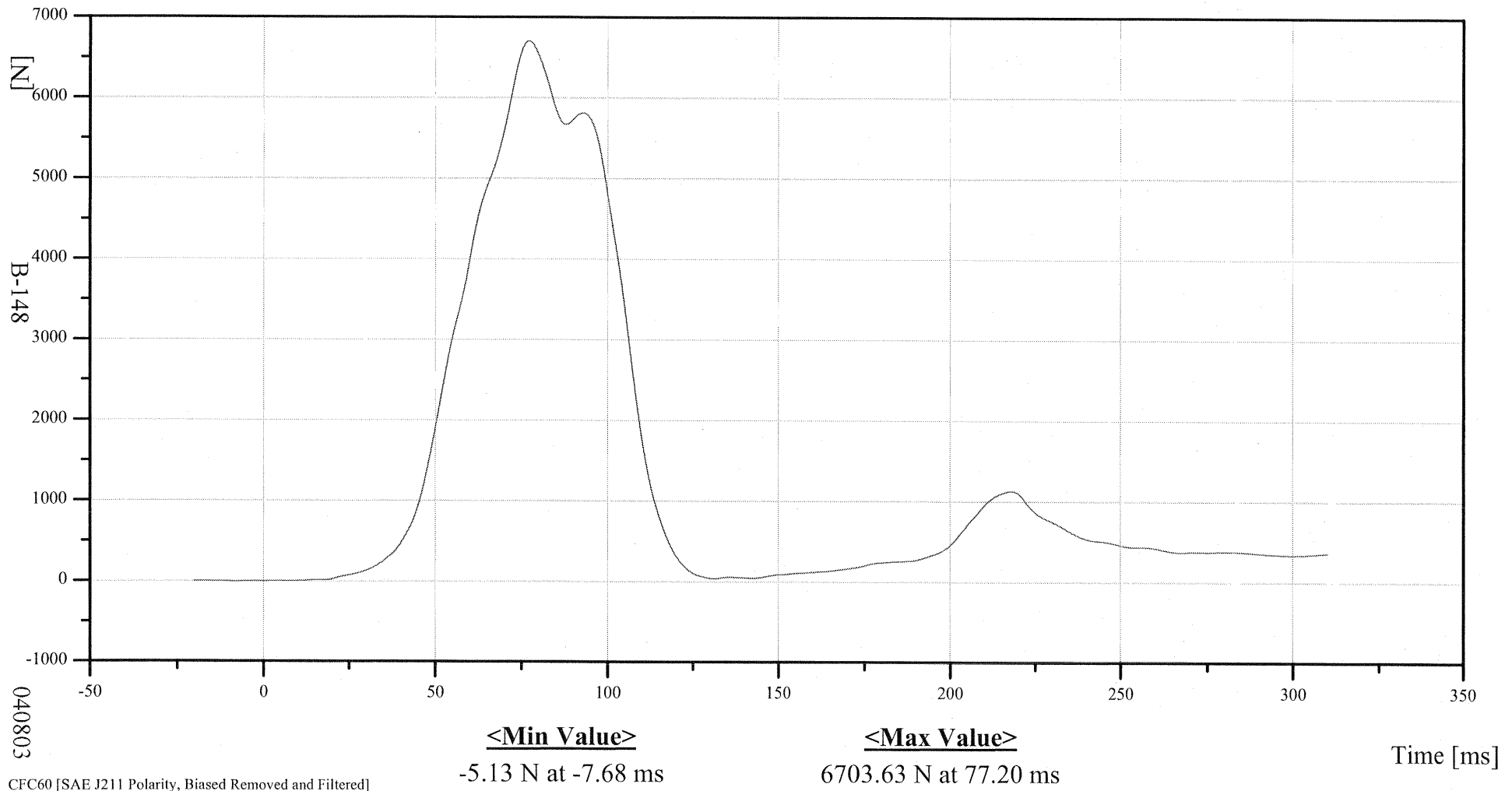
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LBOF9





Transportation Research Center, Inc.

ROW 1 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

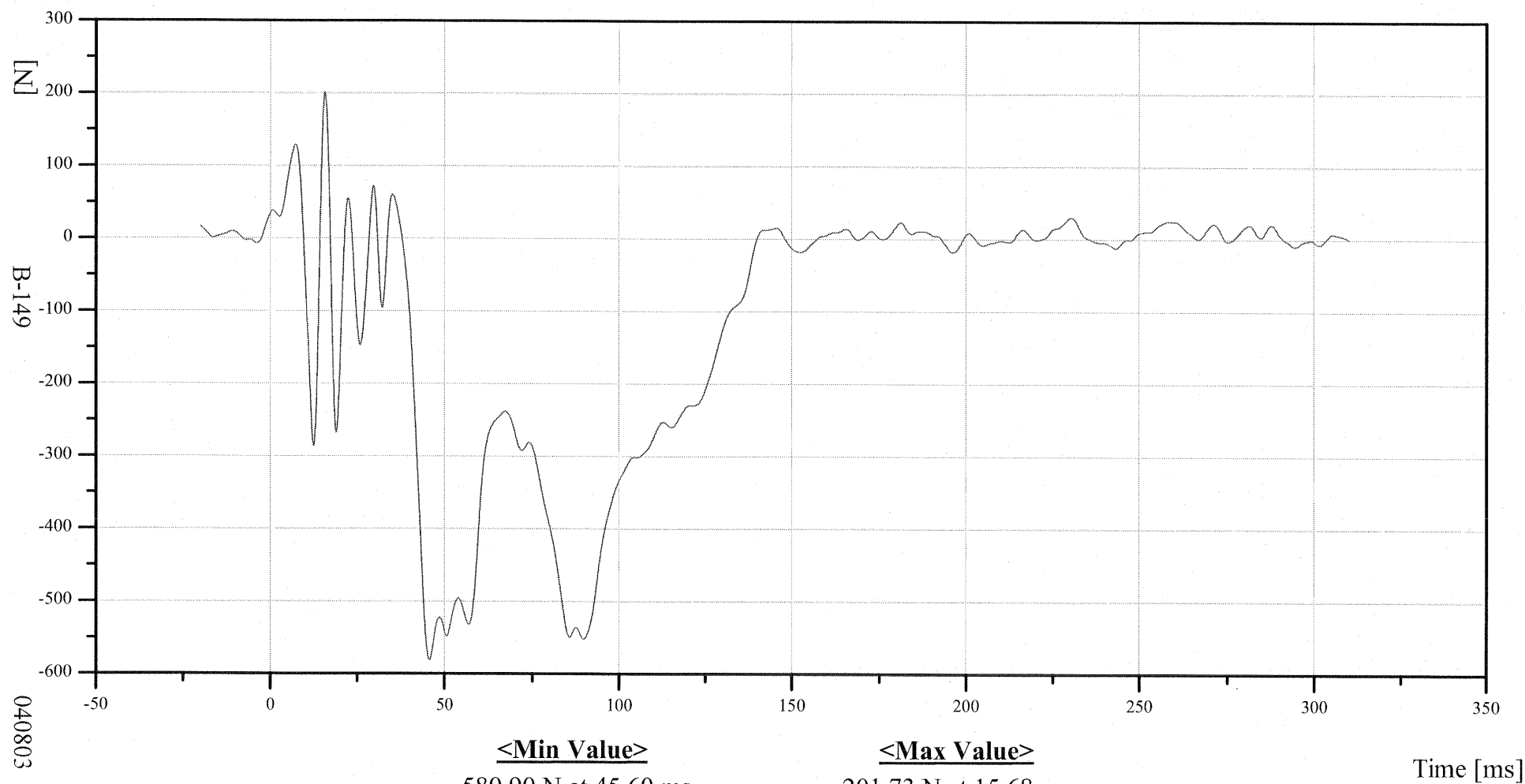
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0101



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

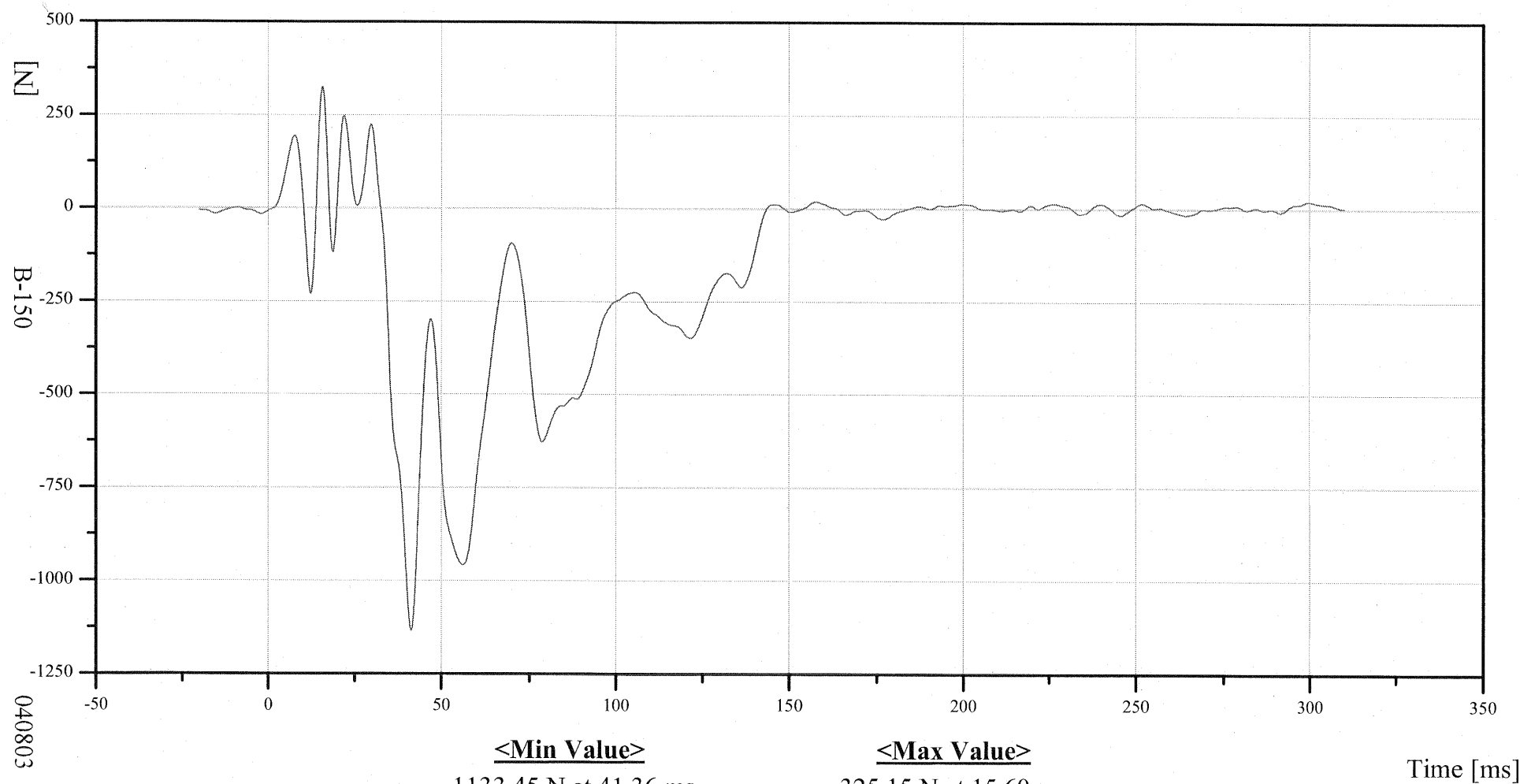
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0102



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

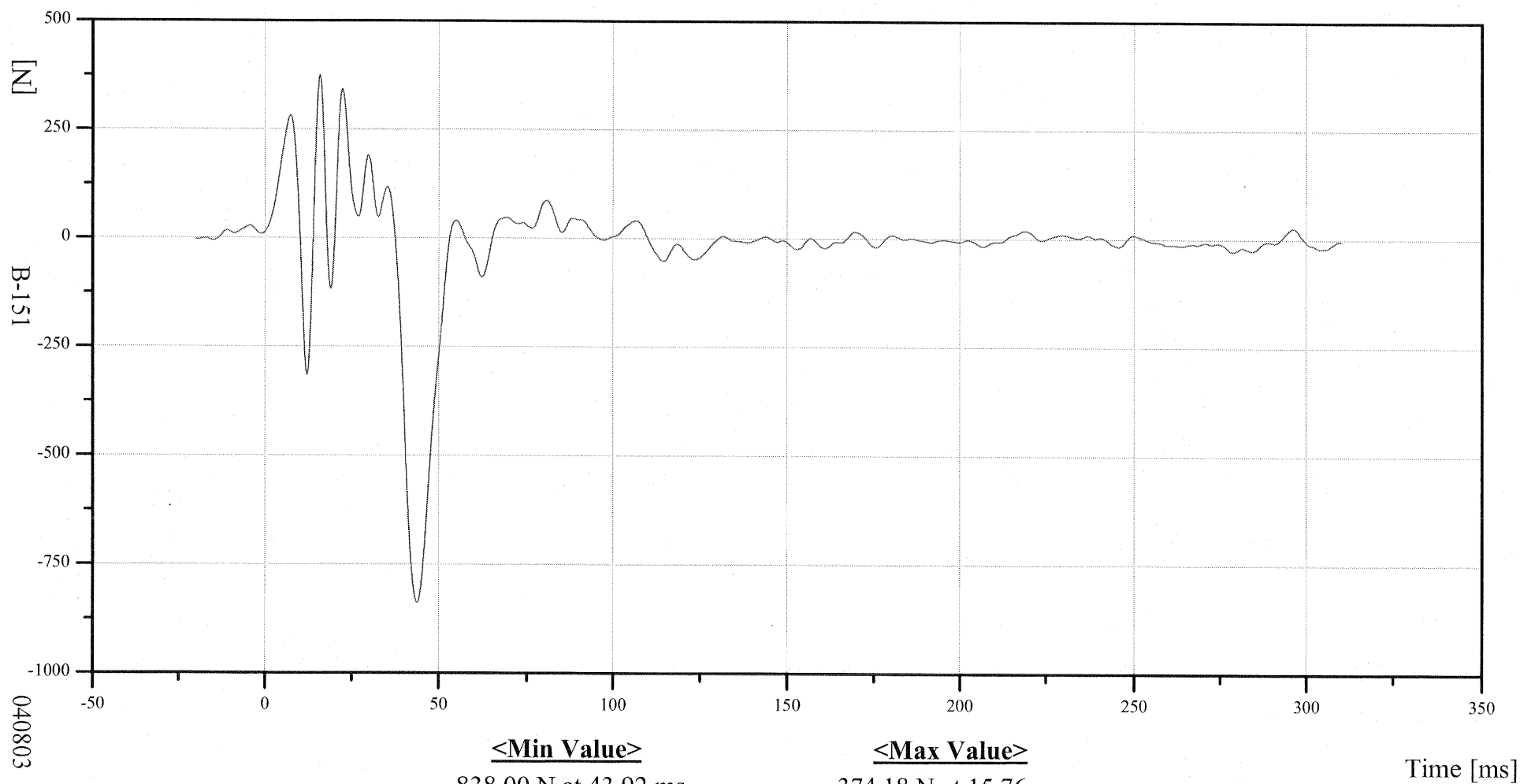
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0103



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

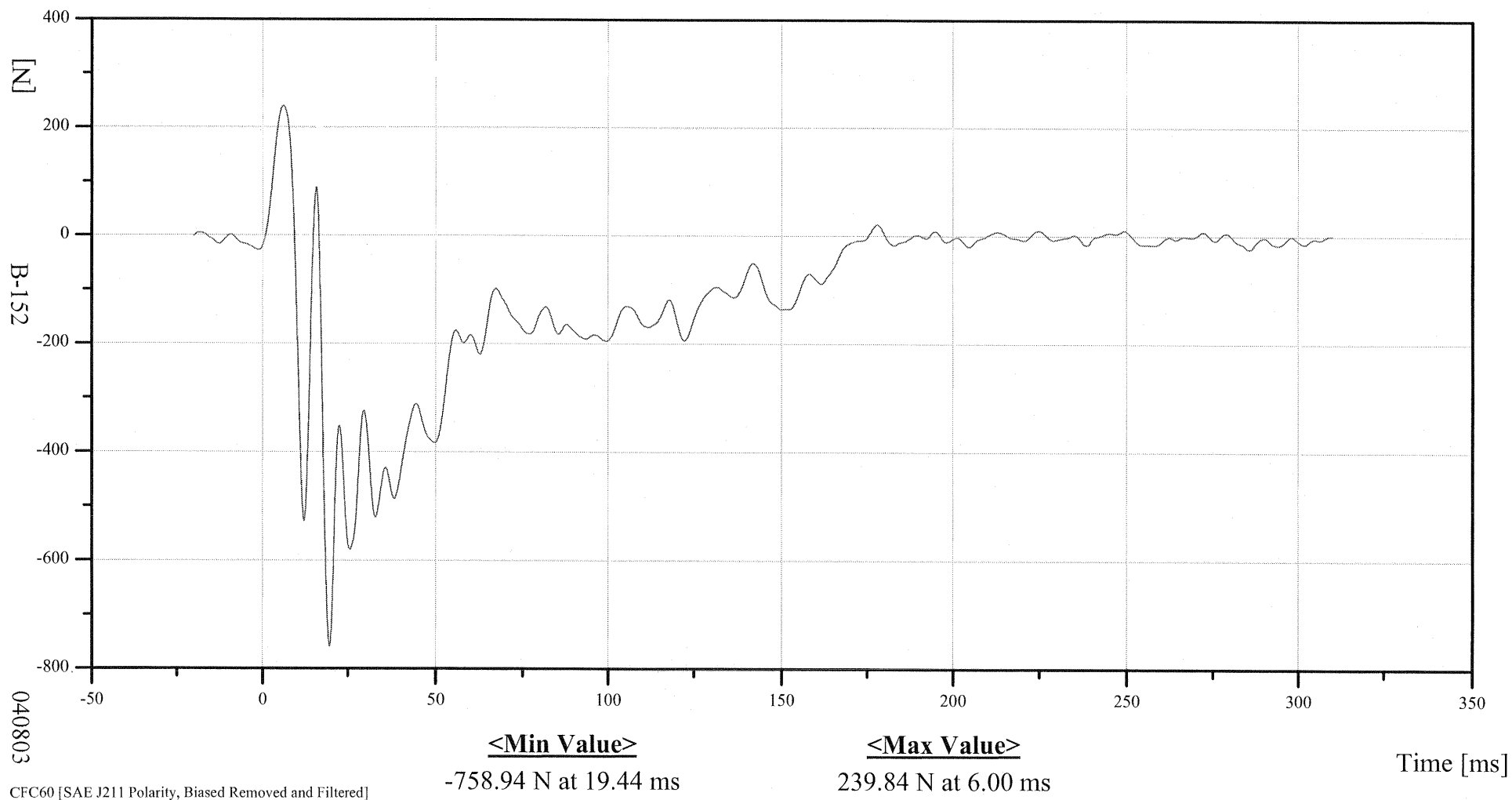
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0104





Transportation Research Center, Inc.

ROW 1 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

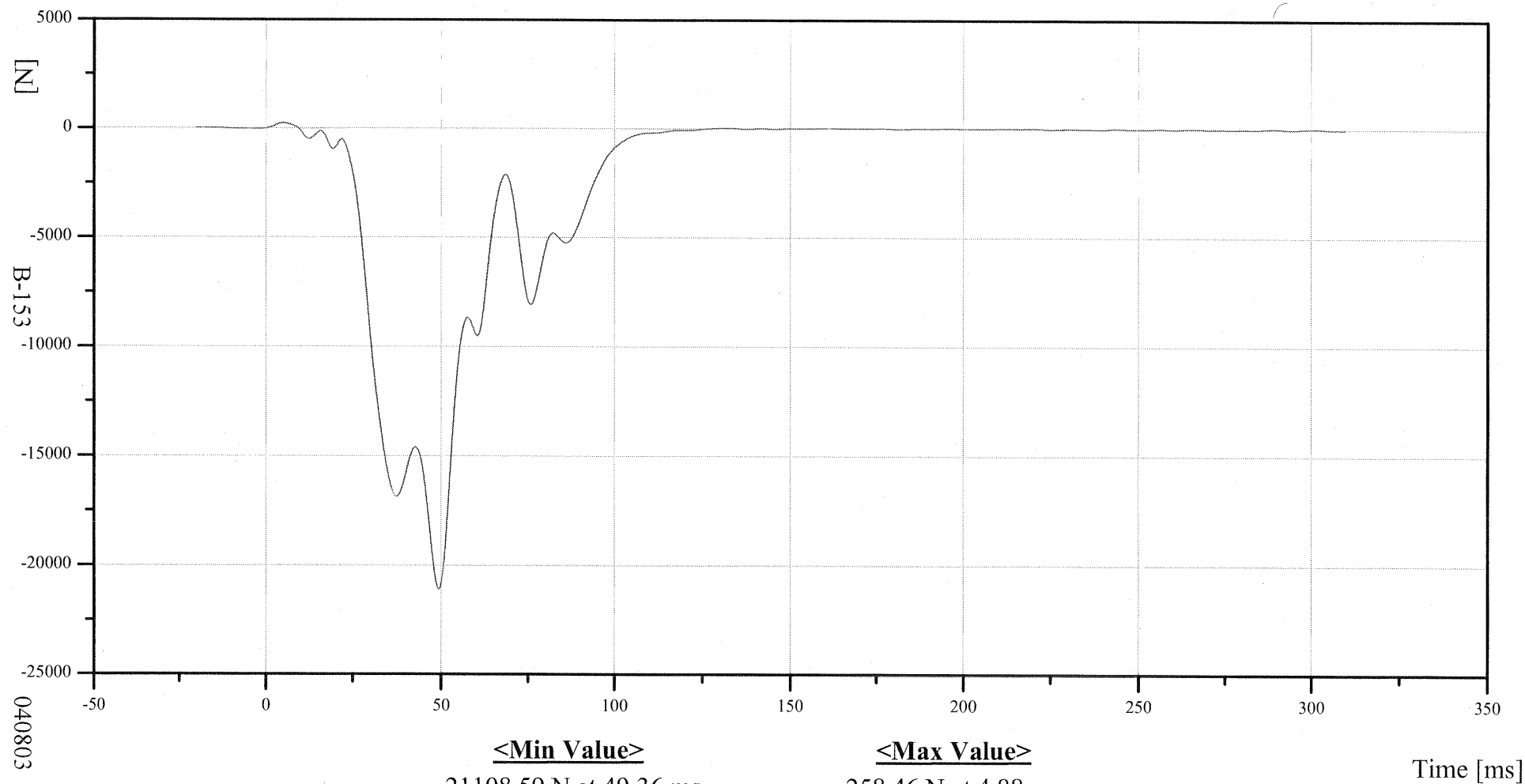
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0105



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

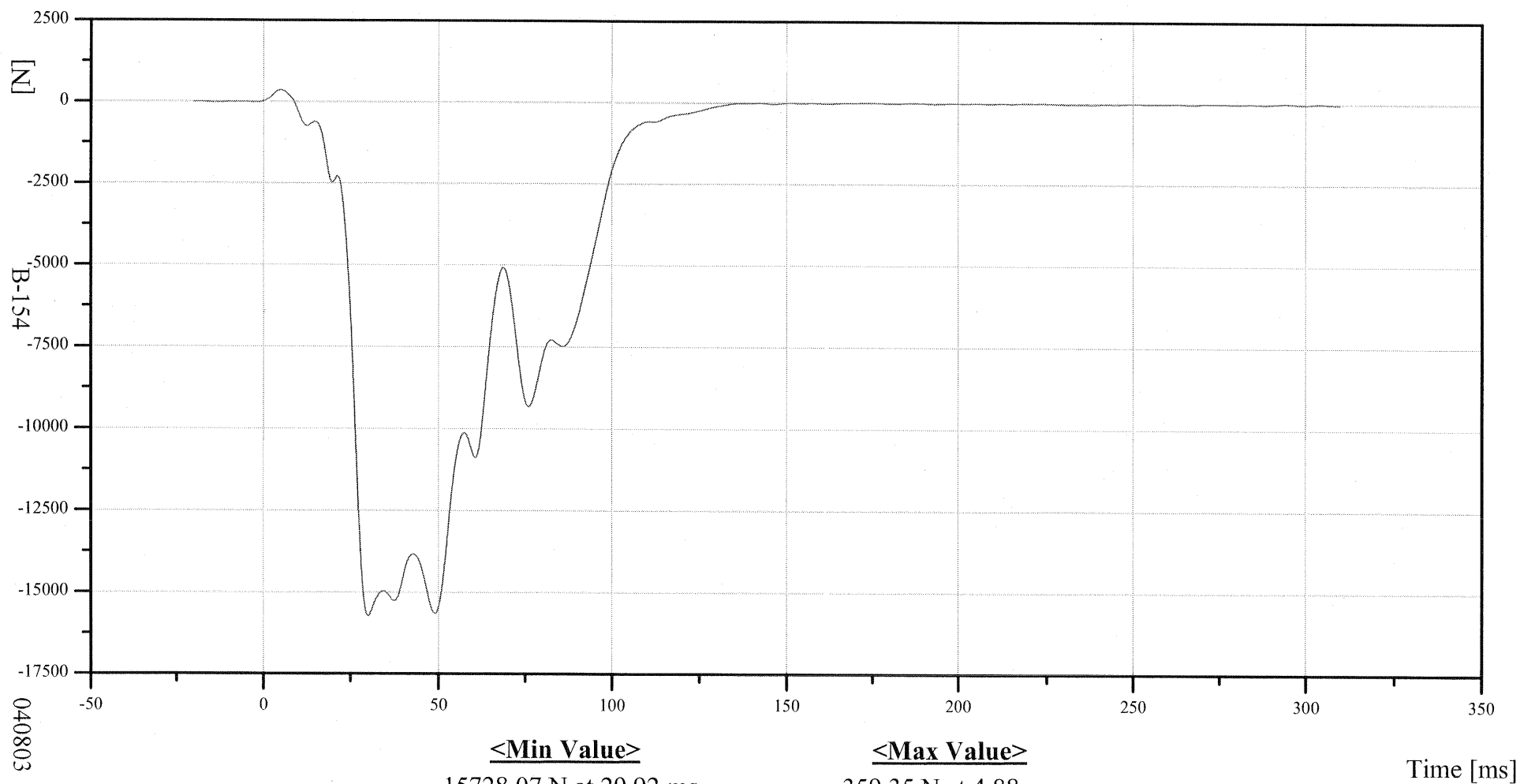
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0106



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

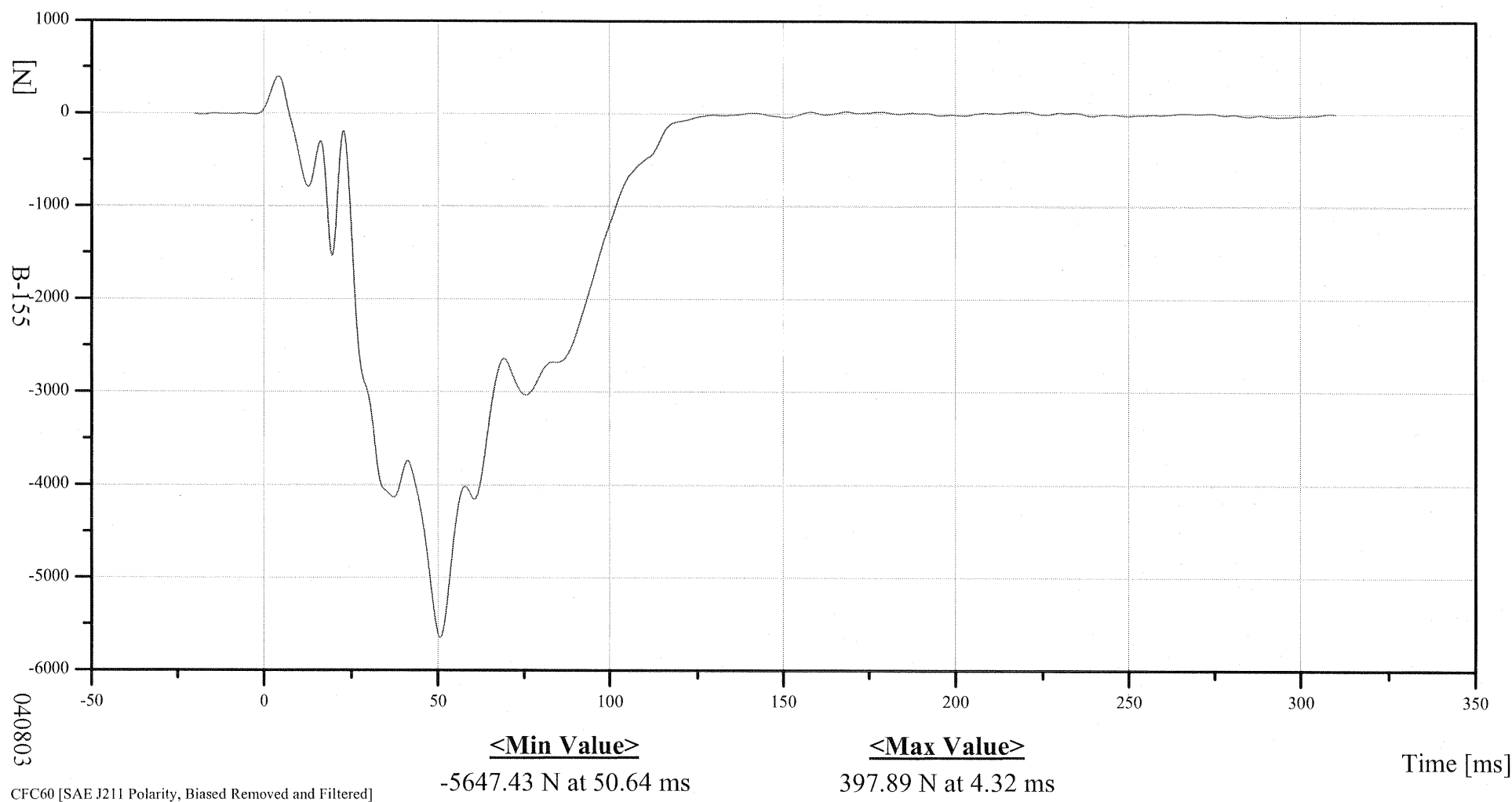
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0107





Transportation Research Center, Inc.

ROW 1 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

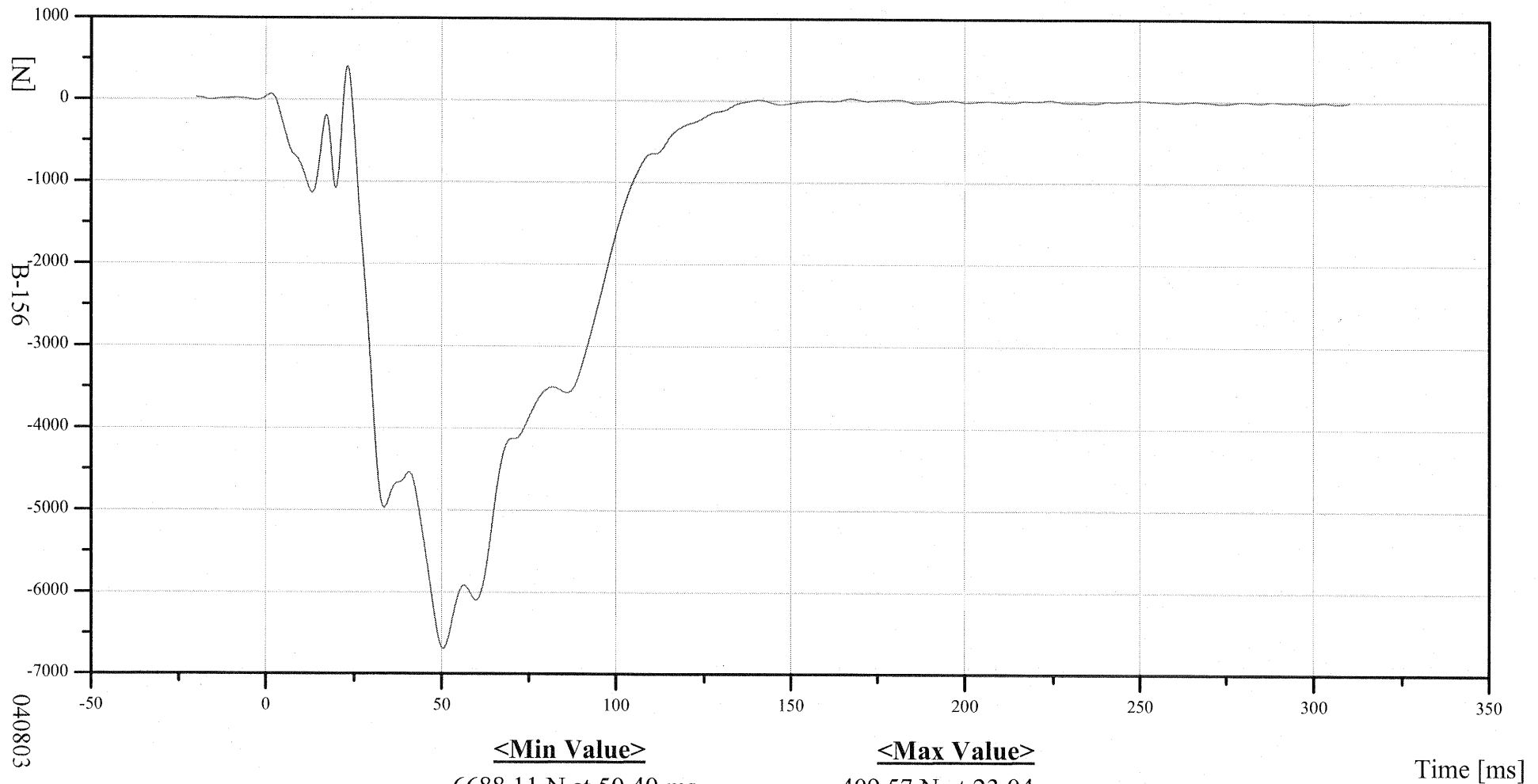
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0108



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

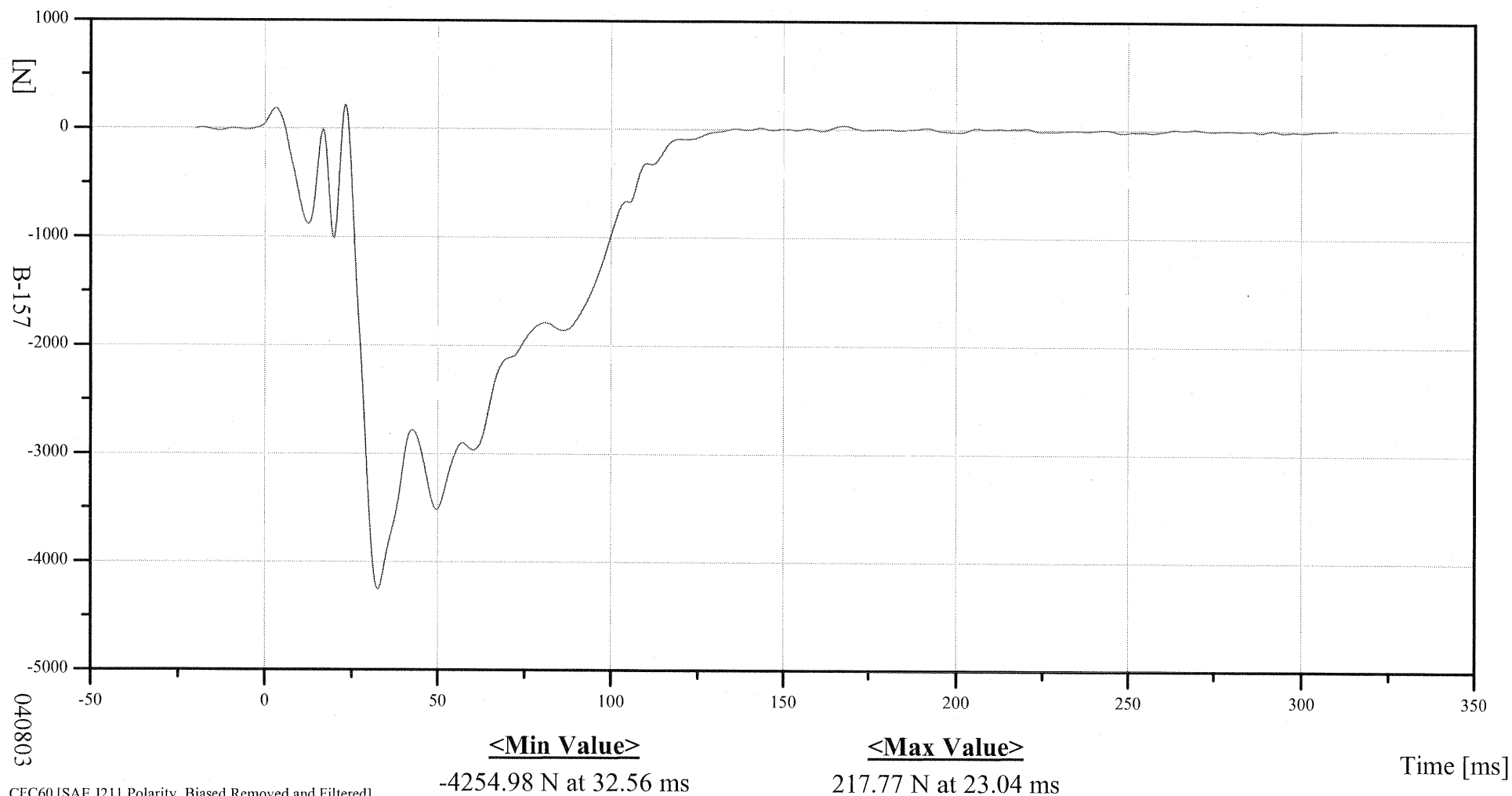
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0109





Transportation Research Center, Inc.

ROW 1 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

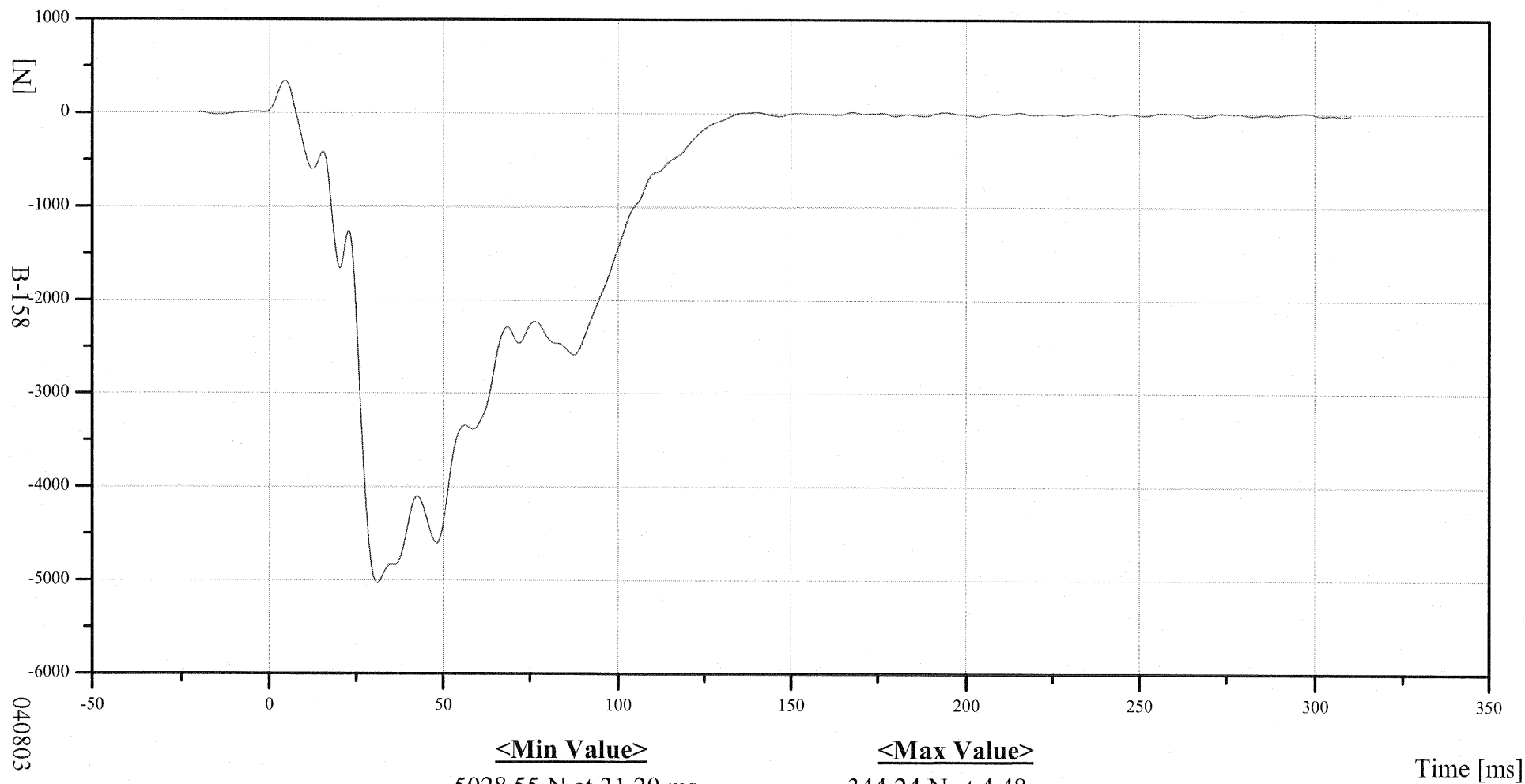
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0110



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

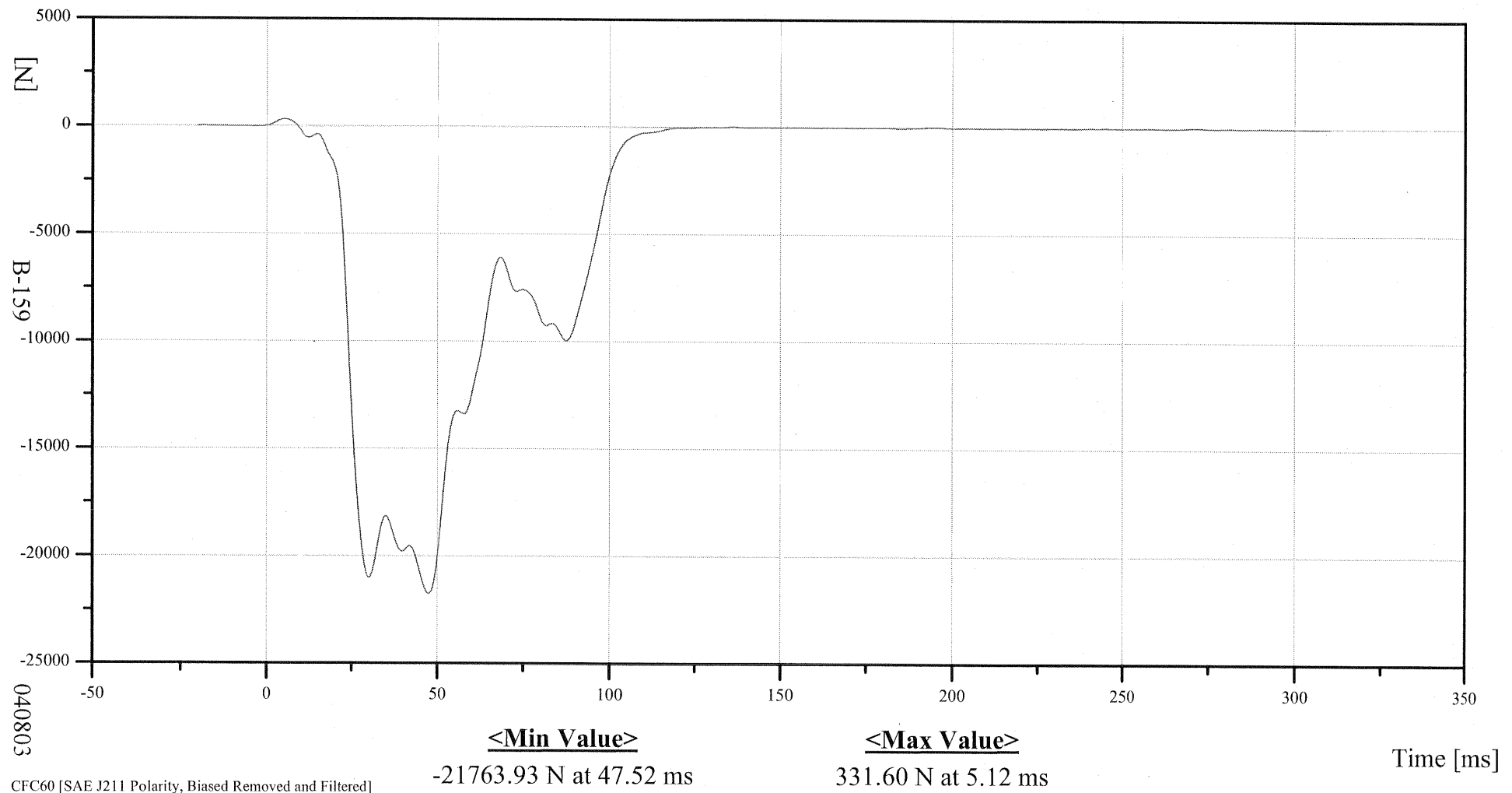
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0111





Transportation Research Center, Inc.

ROW 1 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

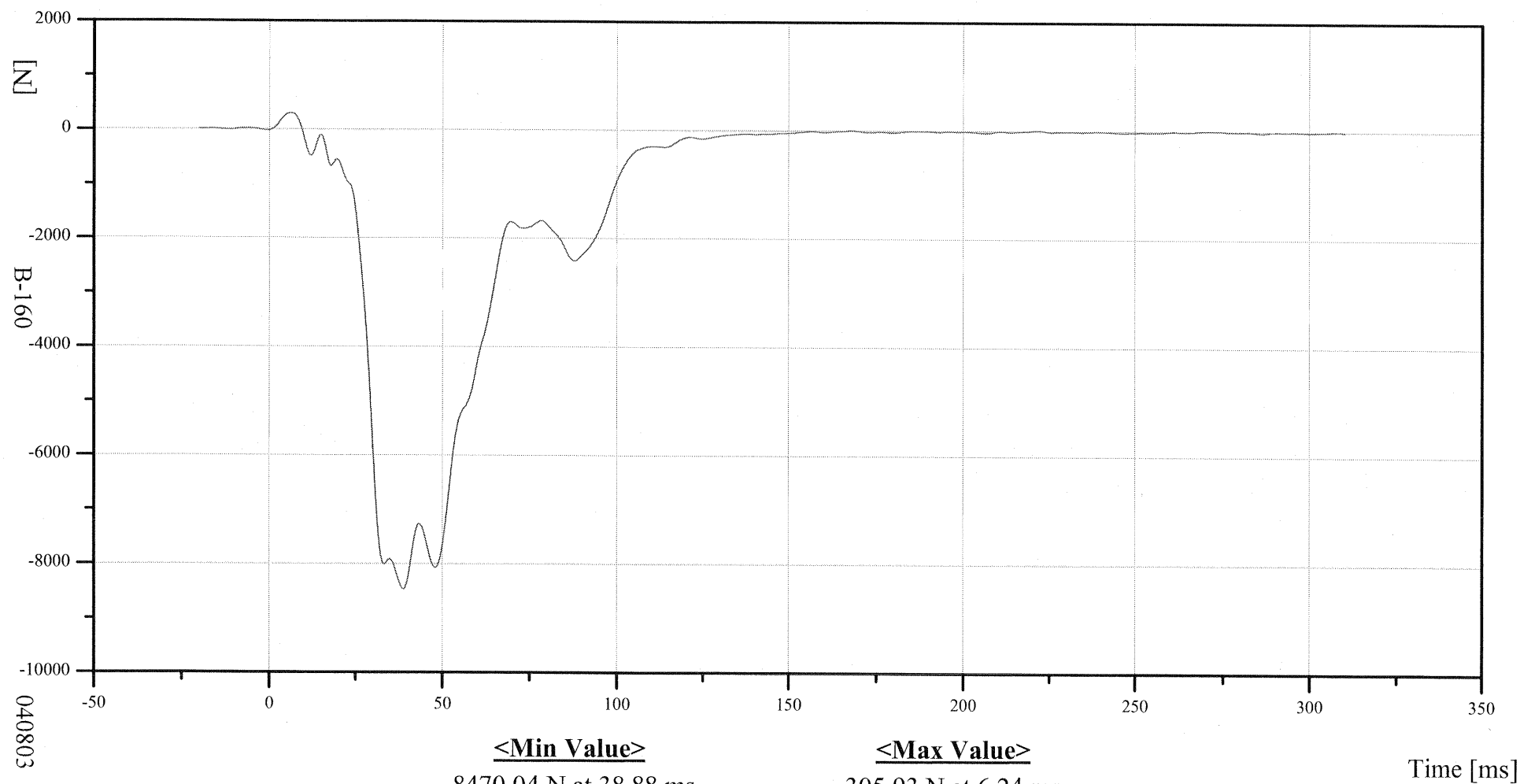
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0112



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

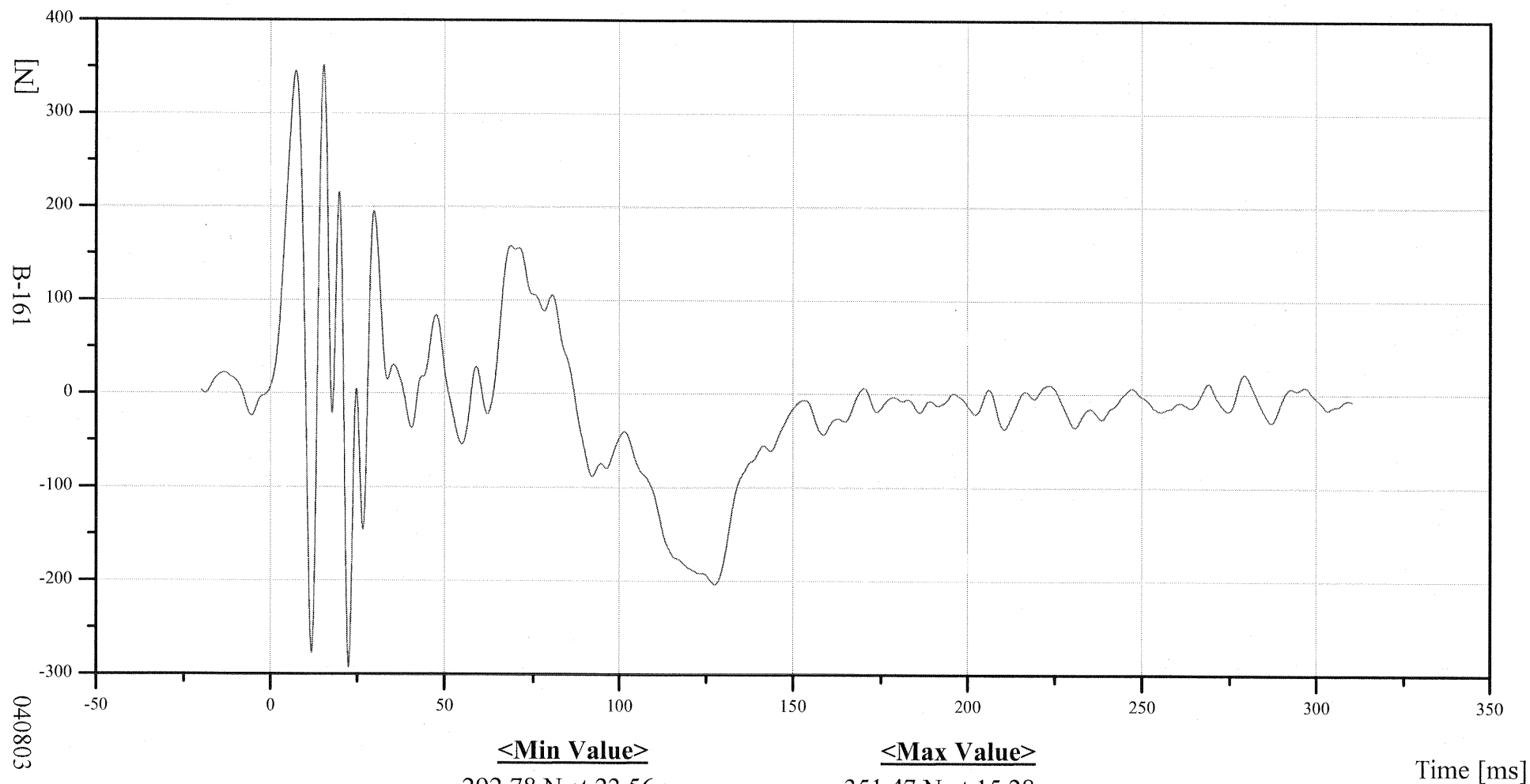
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0113



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

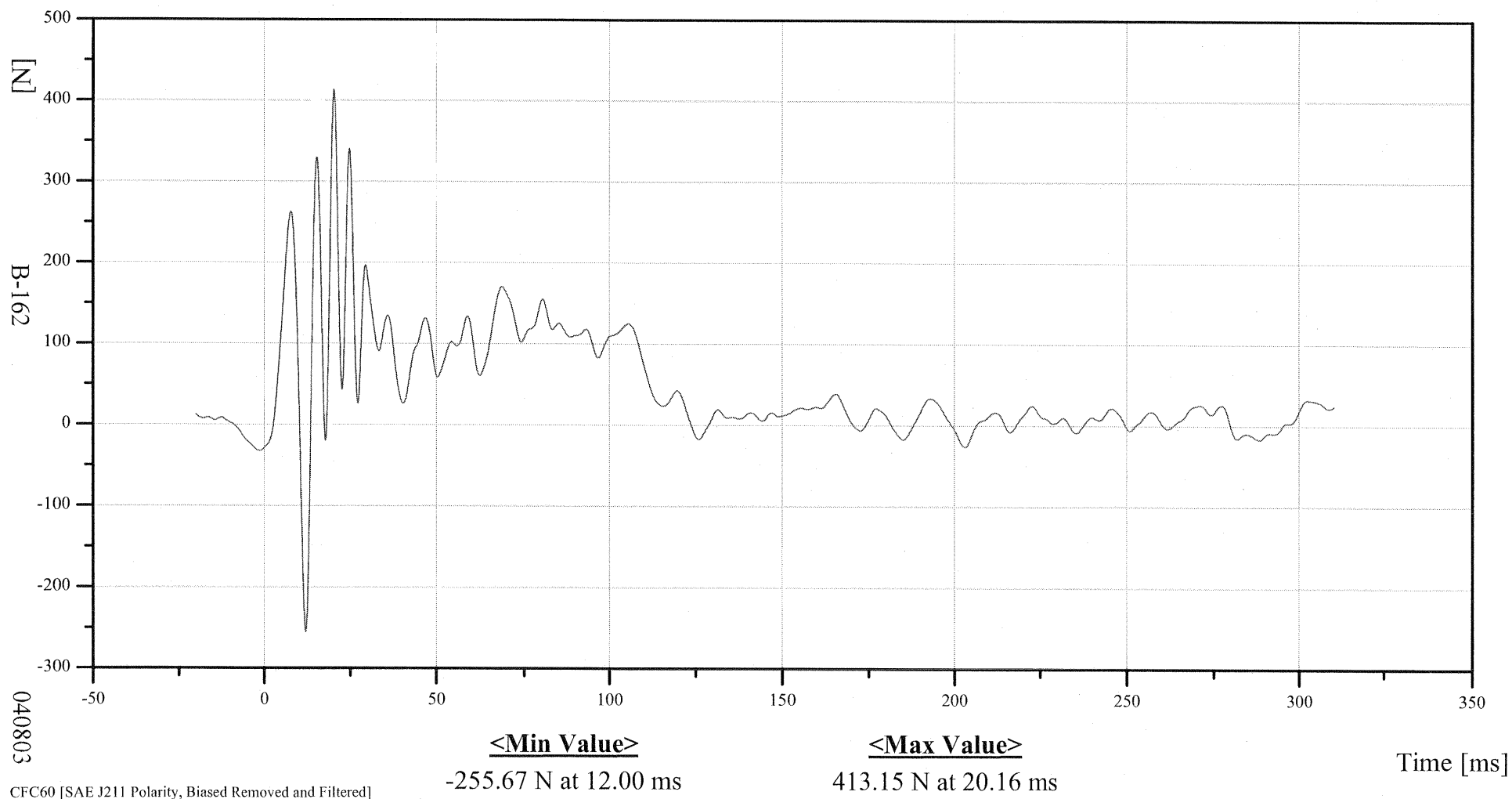
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0114





Transportation Research Center, Inc.

ROW 1 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

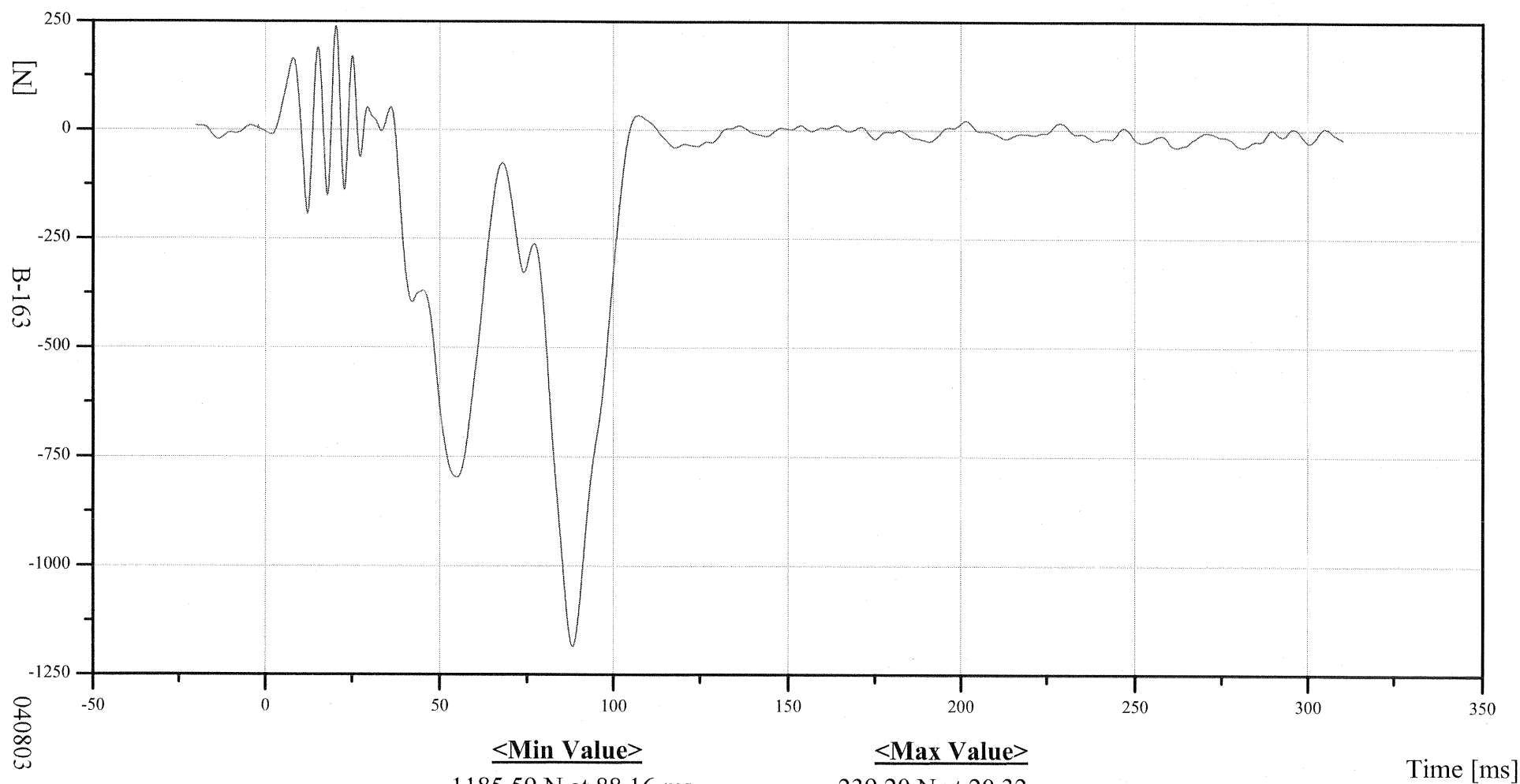
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0115



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 1 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

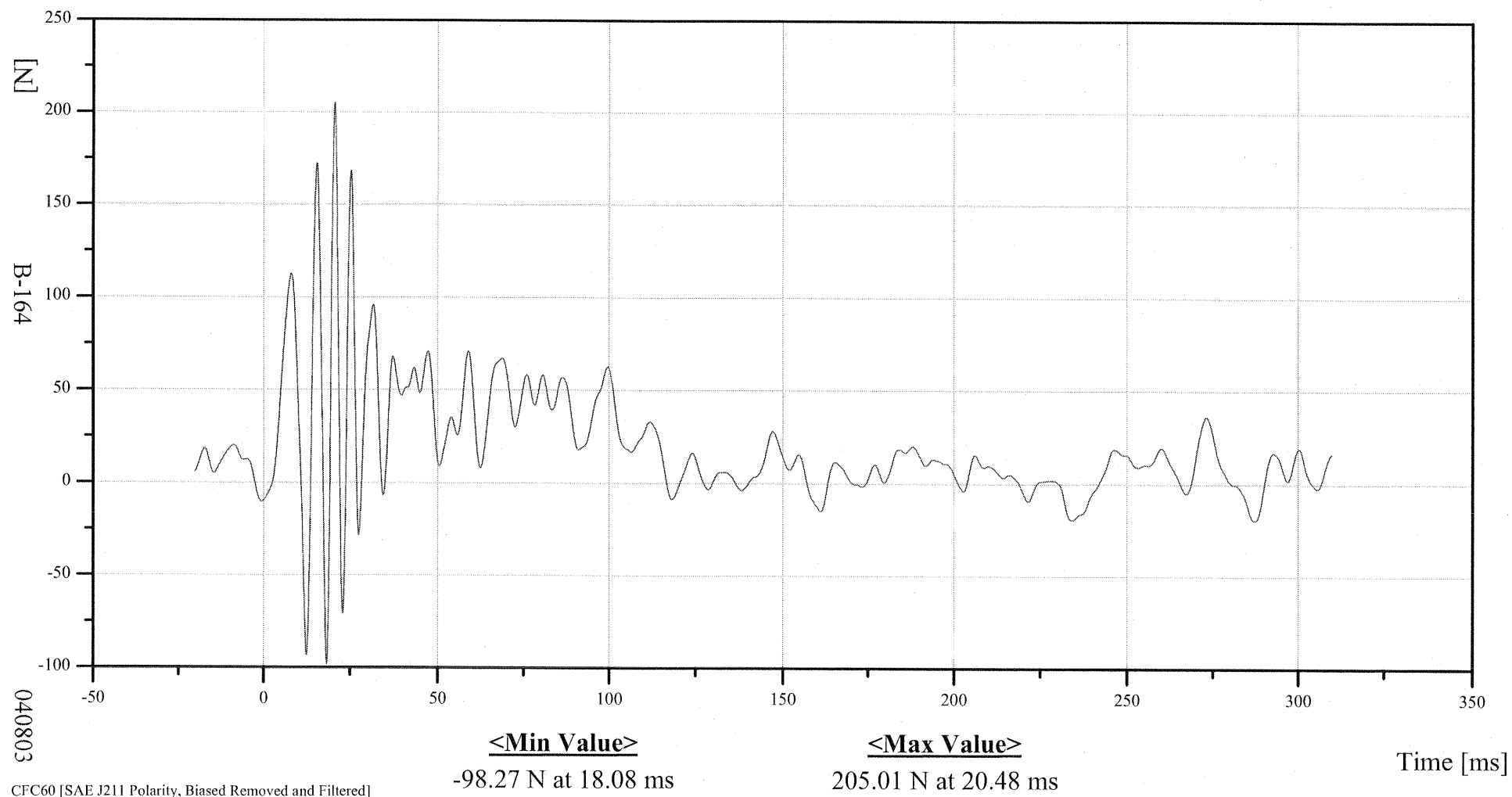
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0116





Transportation Research Center, Inc.

ROW 2 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

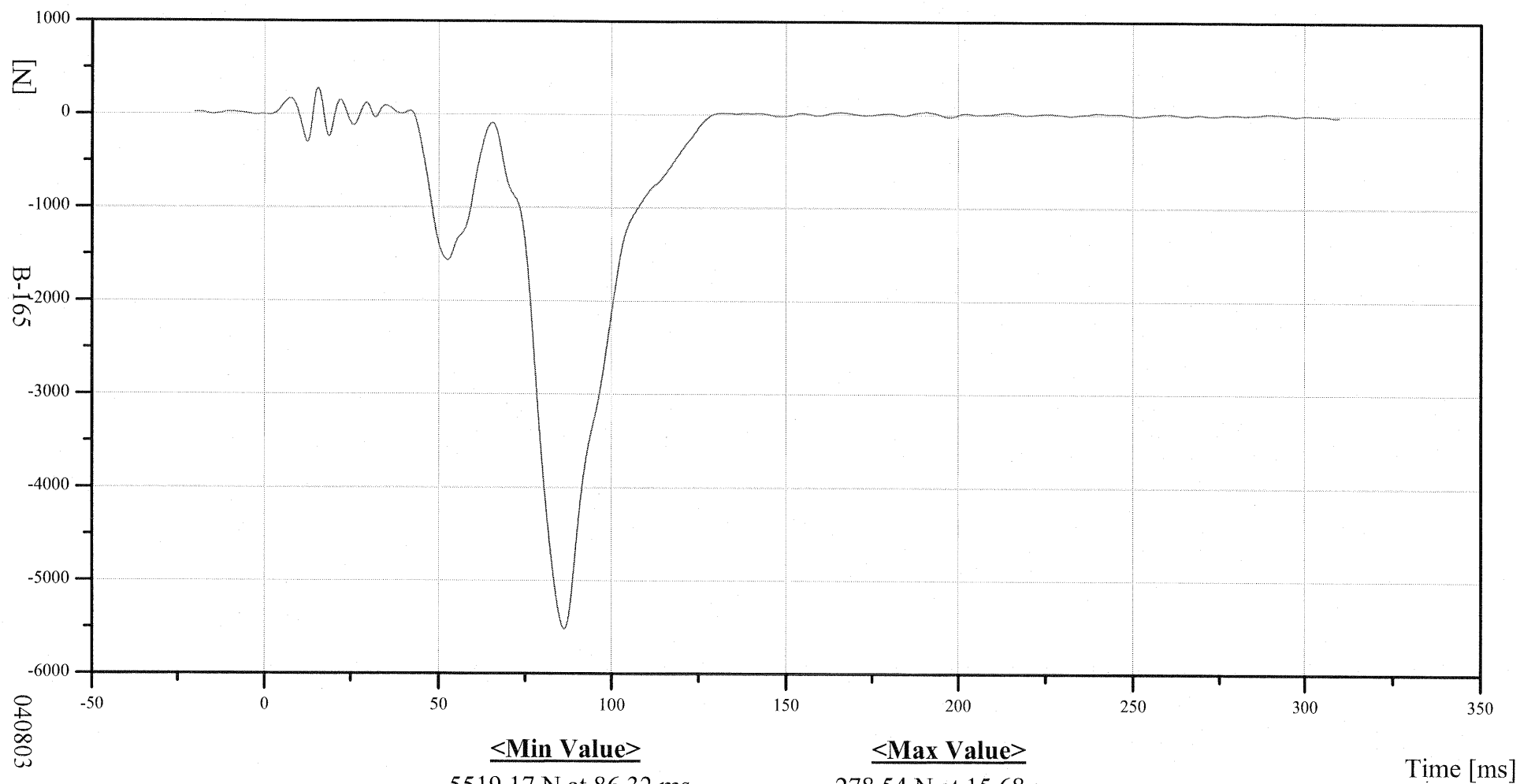
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0201



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

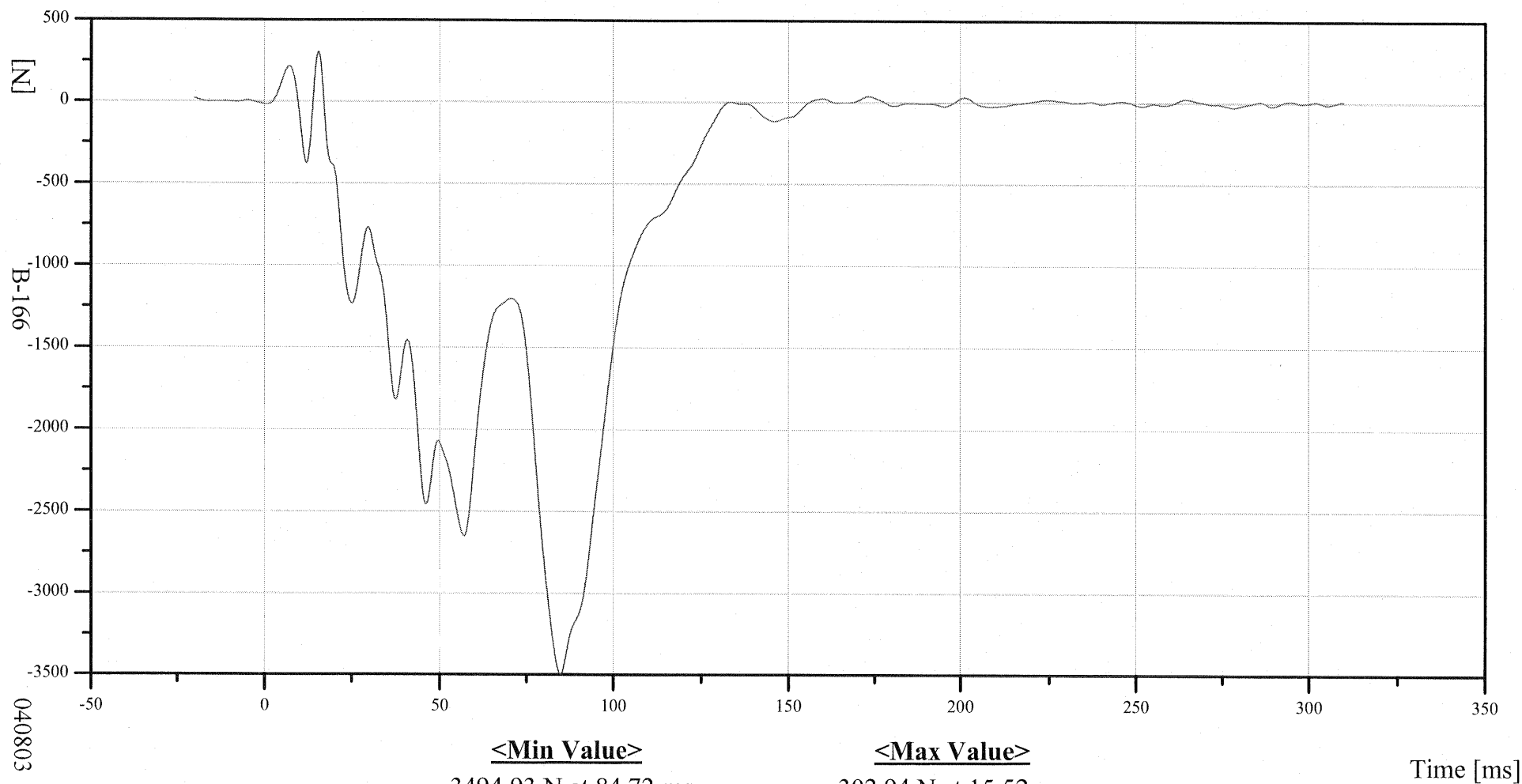
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0202



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

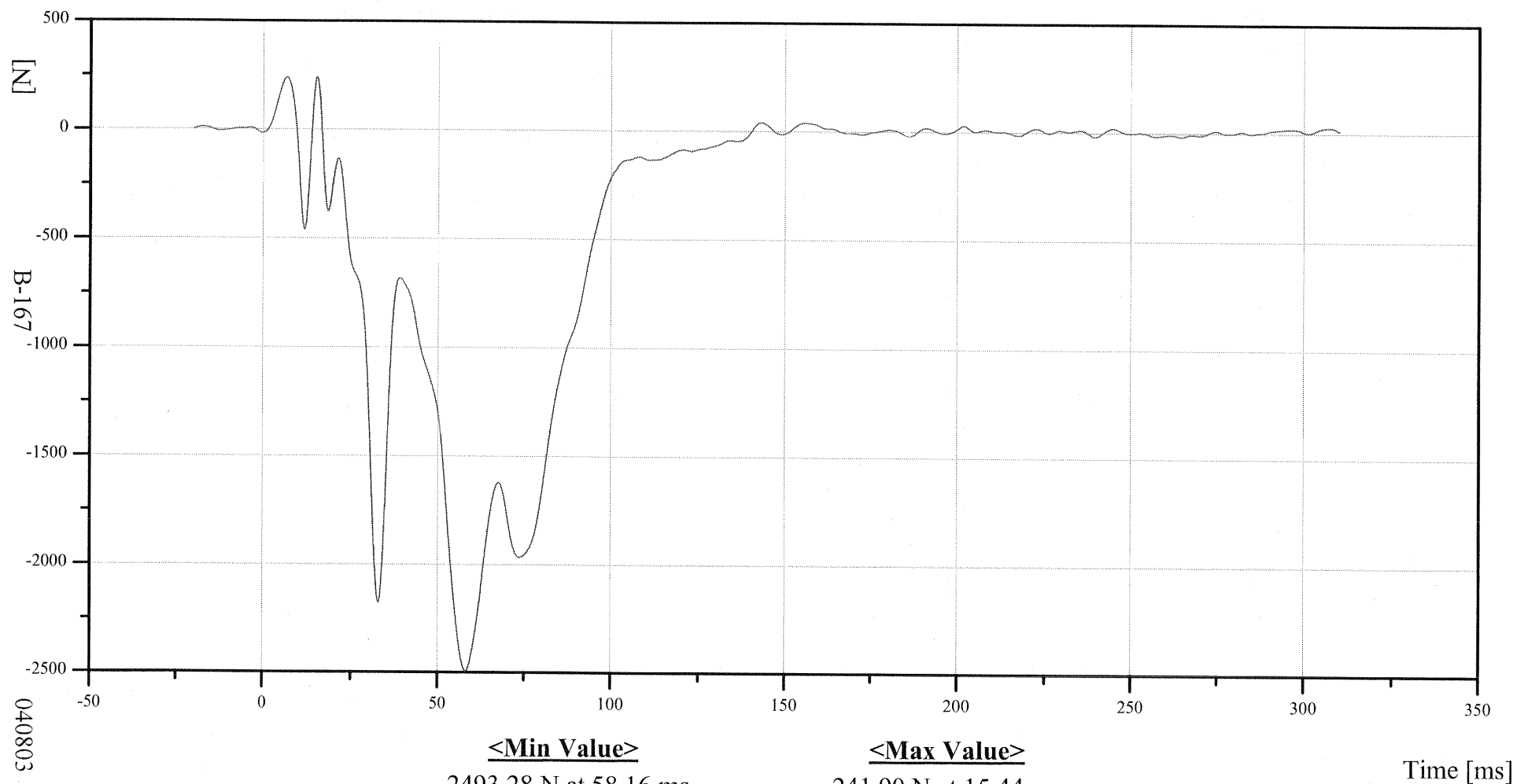
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0203



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

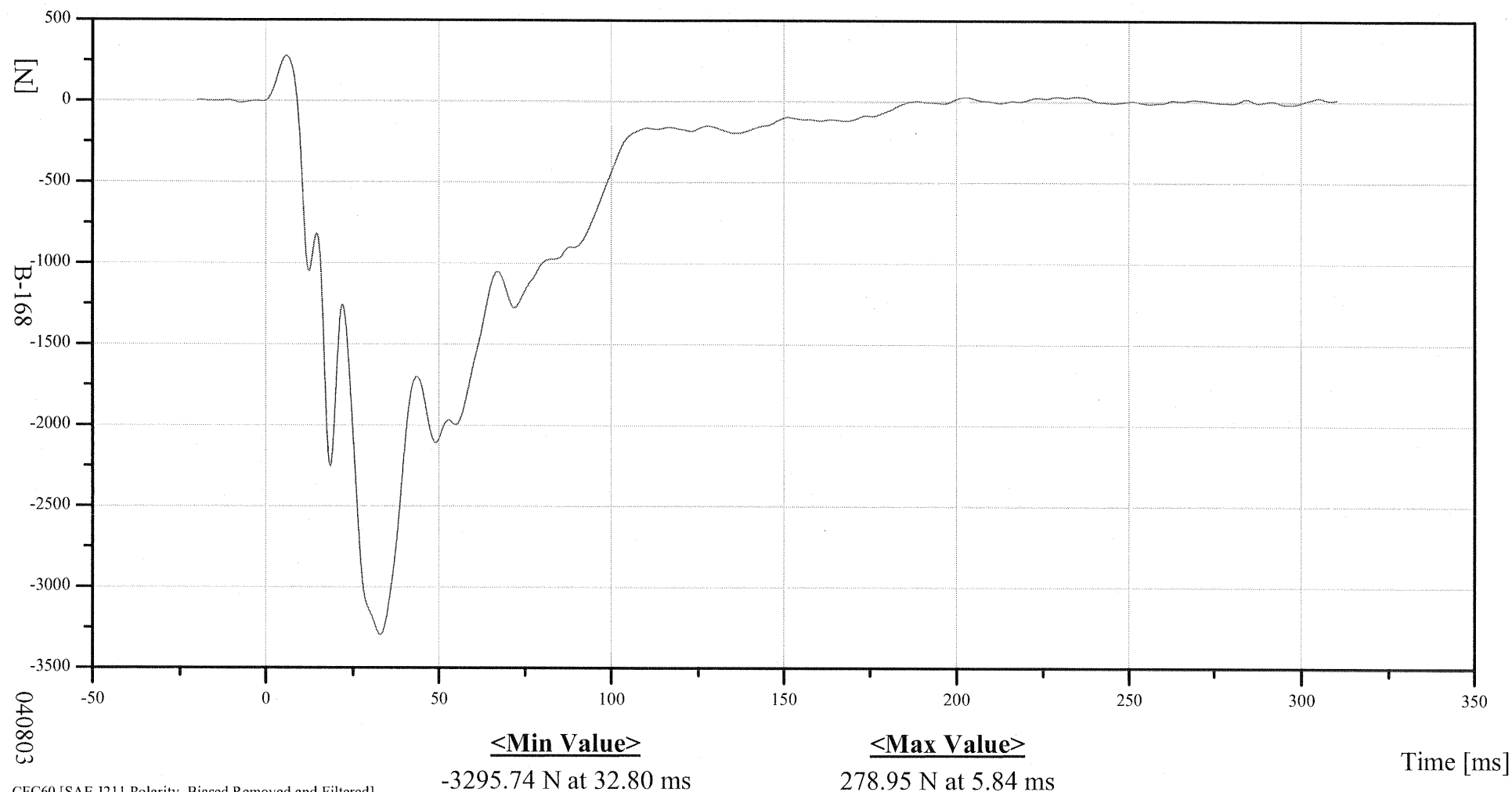
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0204





Transportation Research Center, Inc.

ROW 2 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

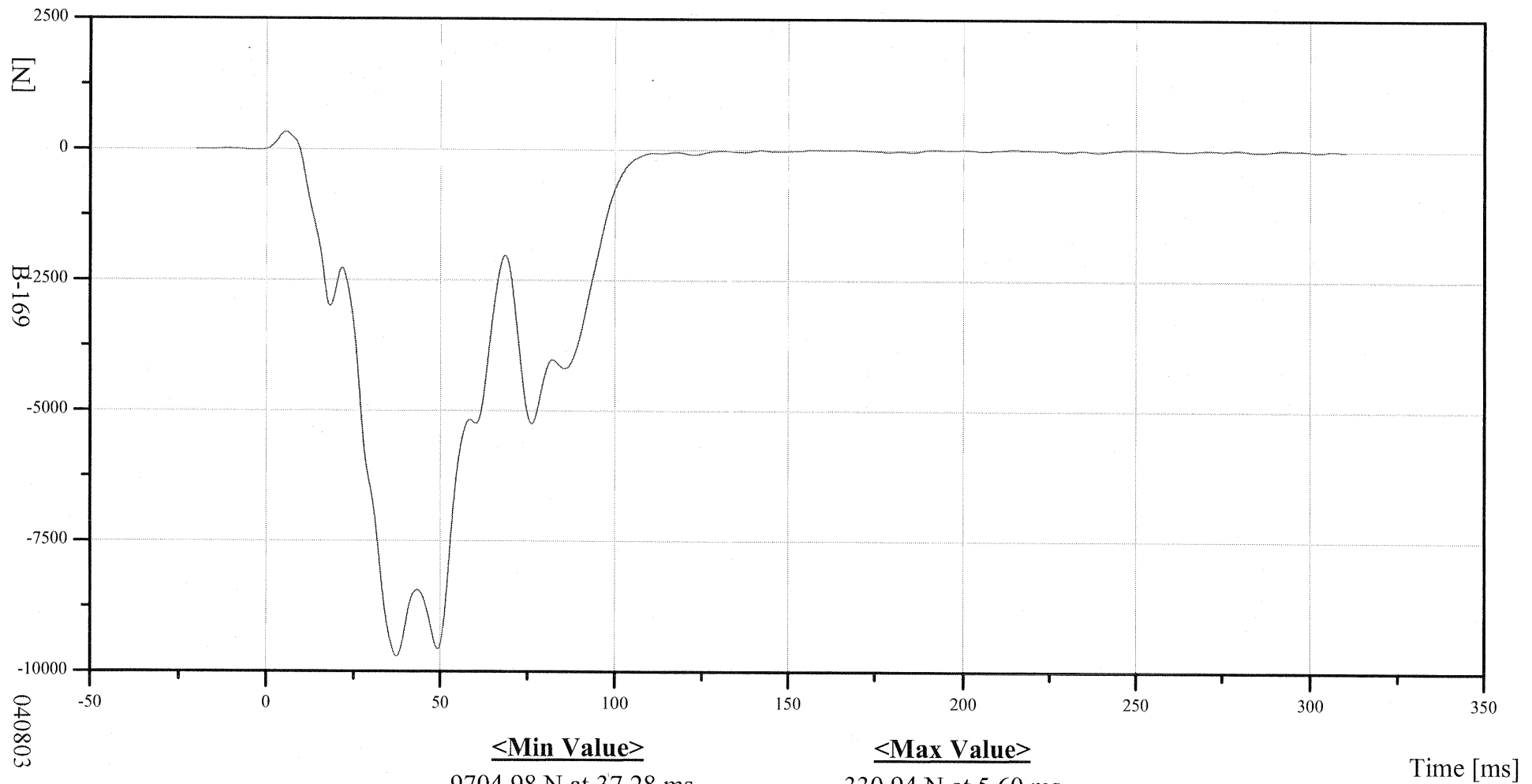
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0205



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

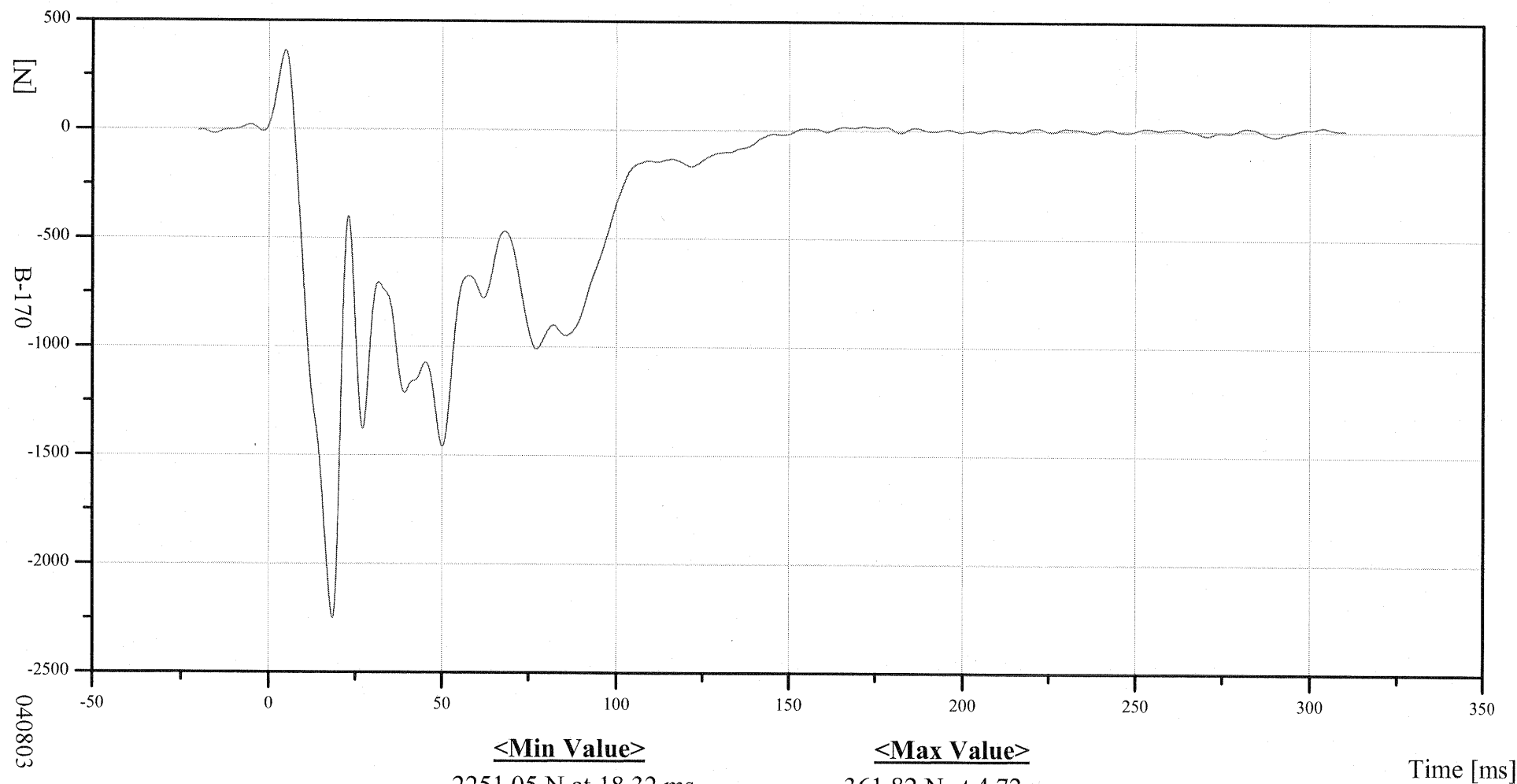
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0206



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

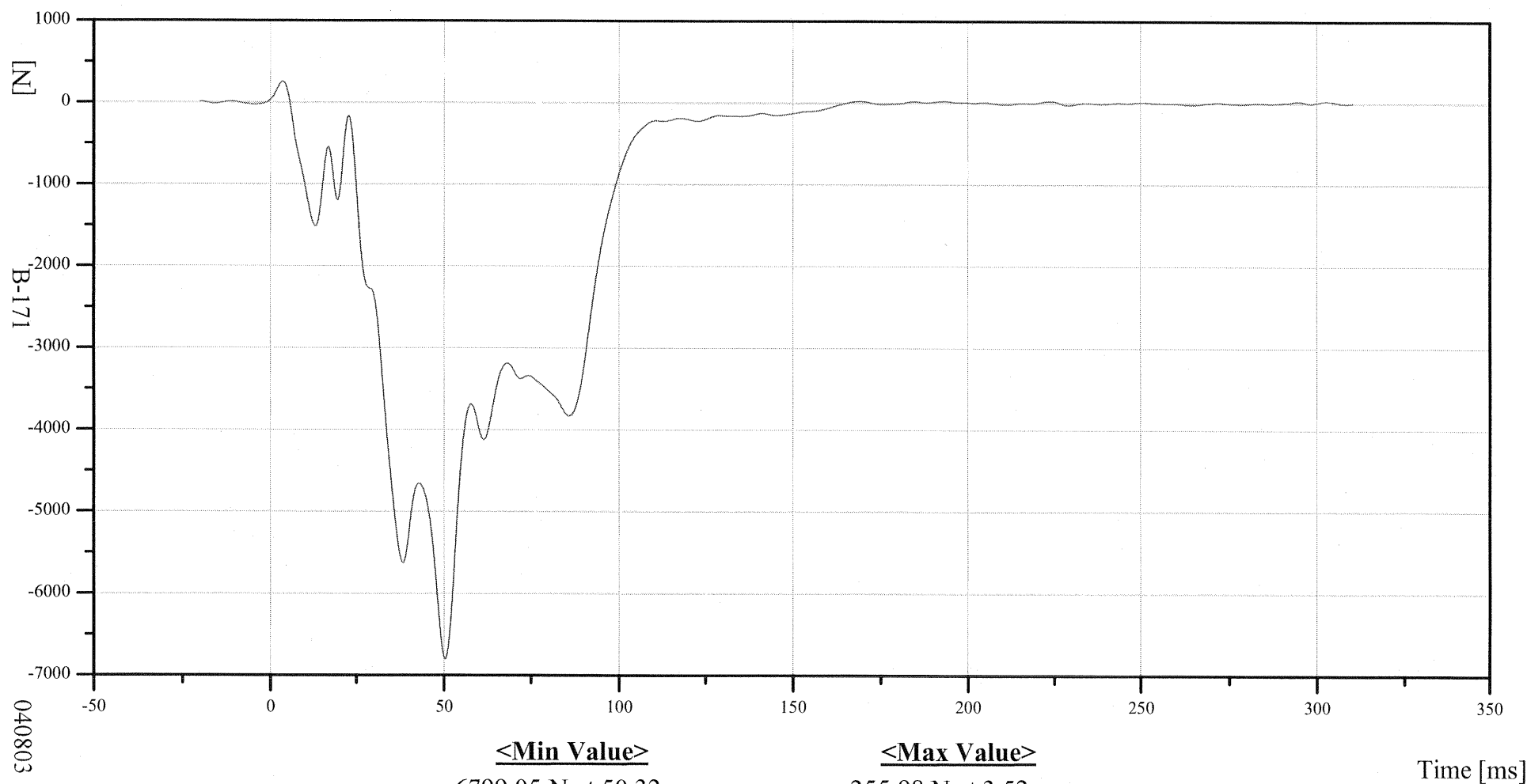
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0207



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

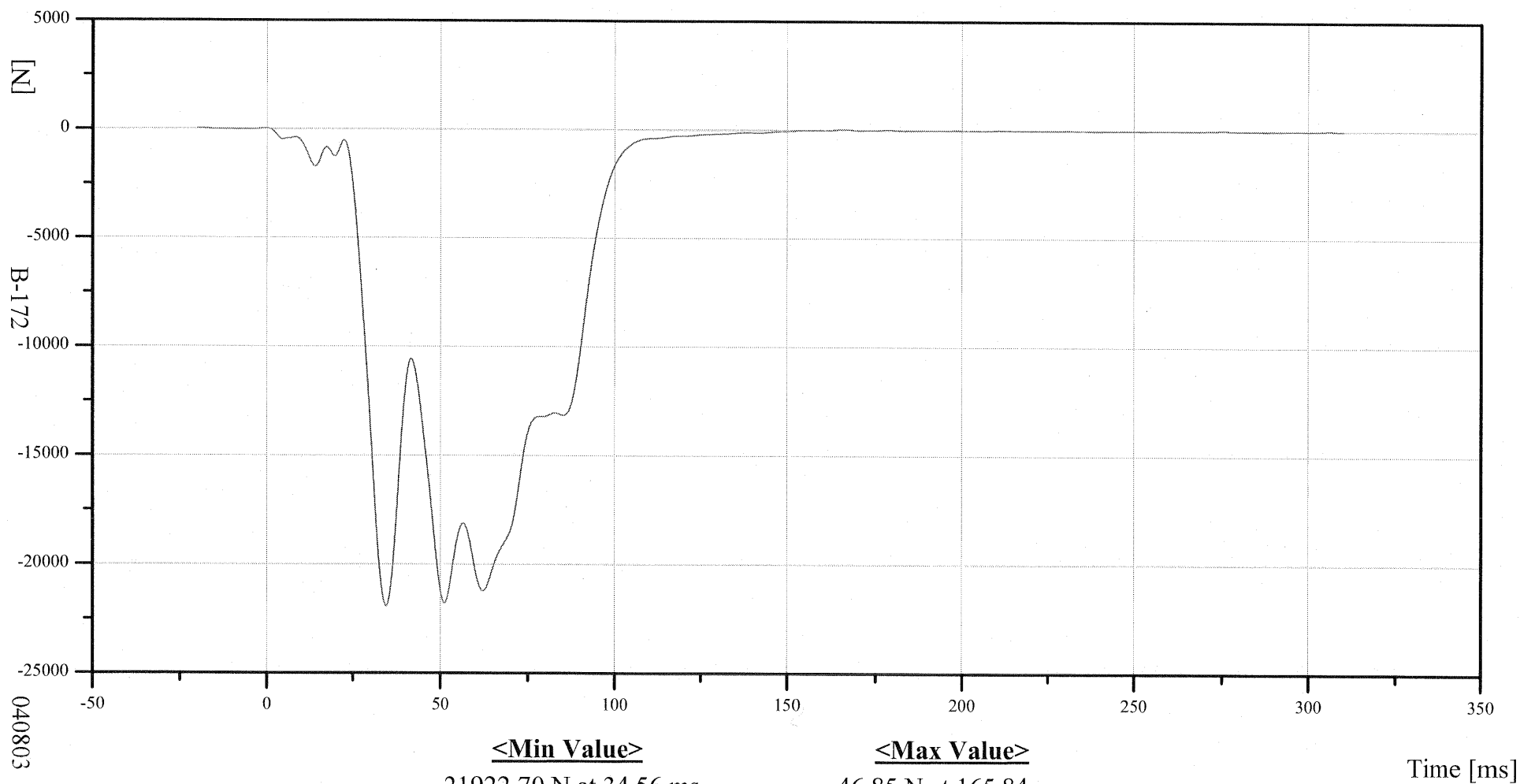
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0208



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

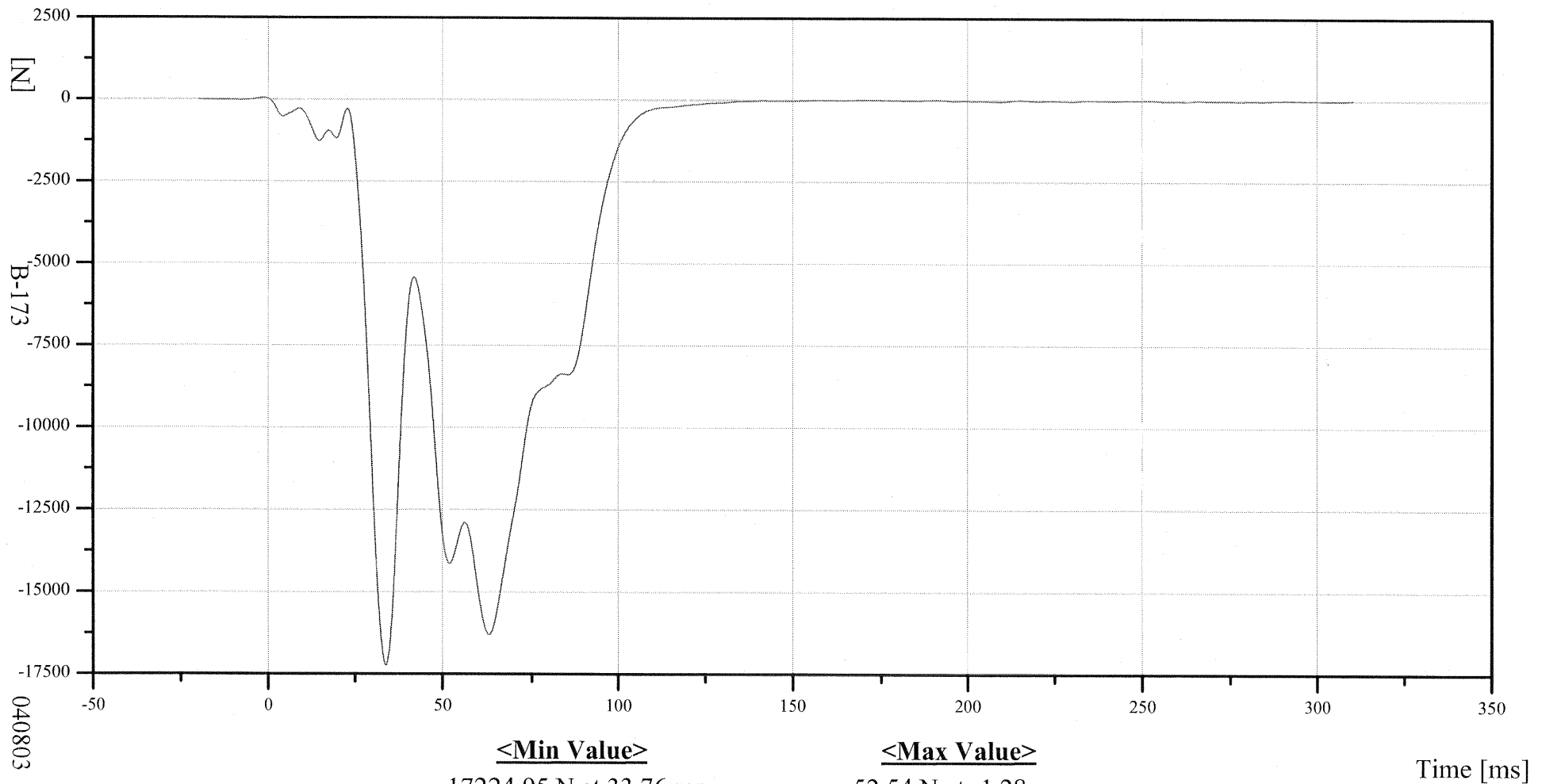
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0209



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

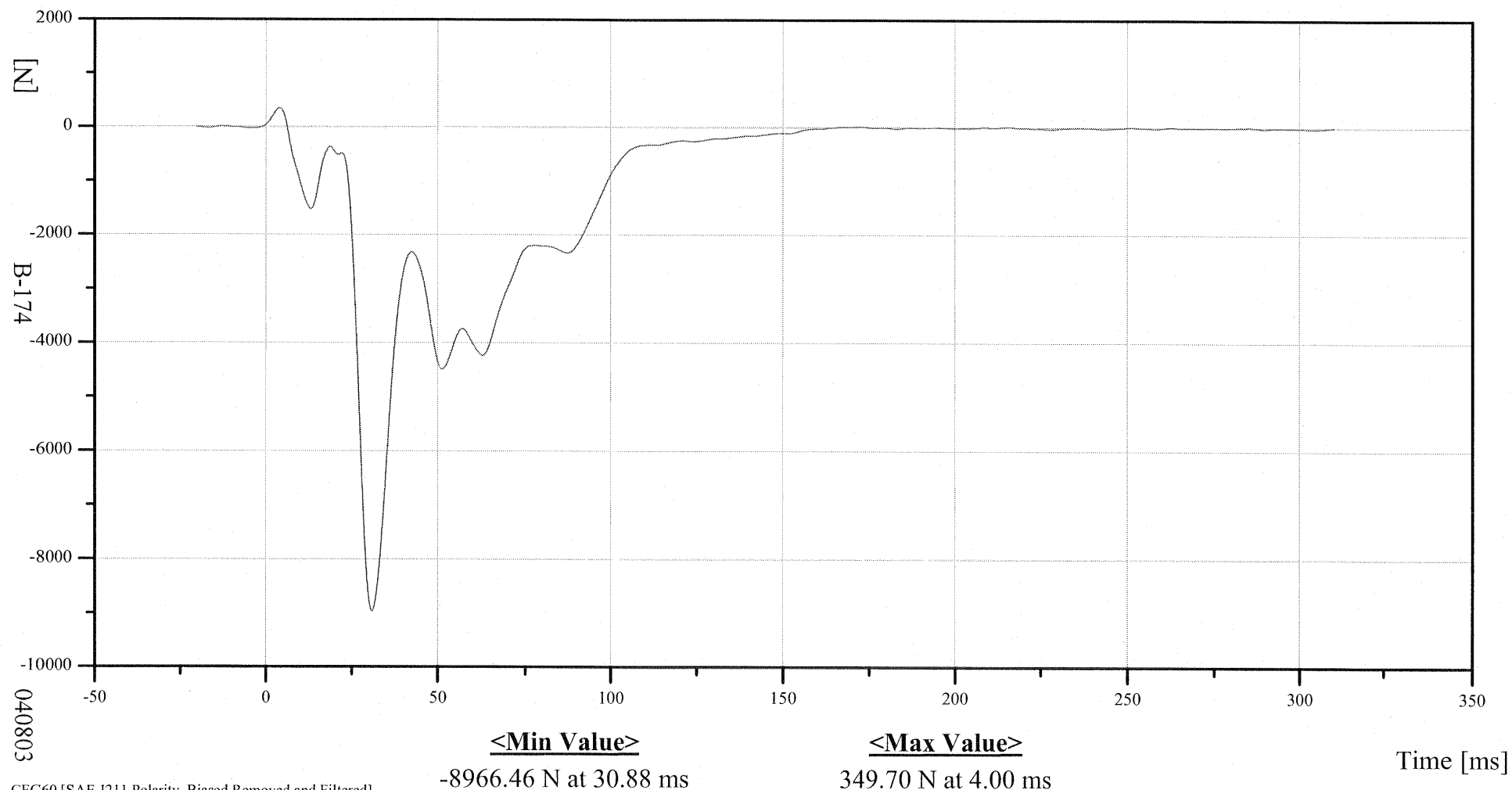
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0210



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

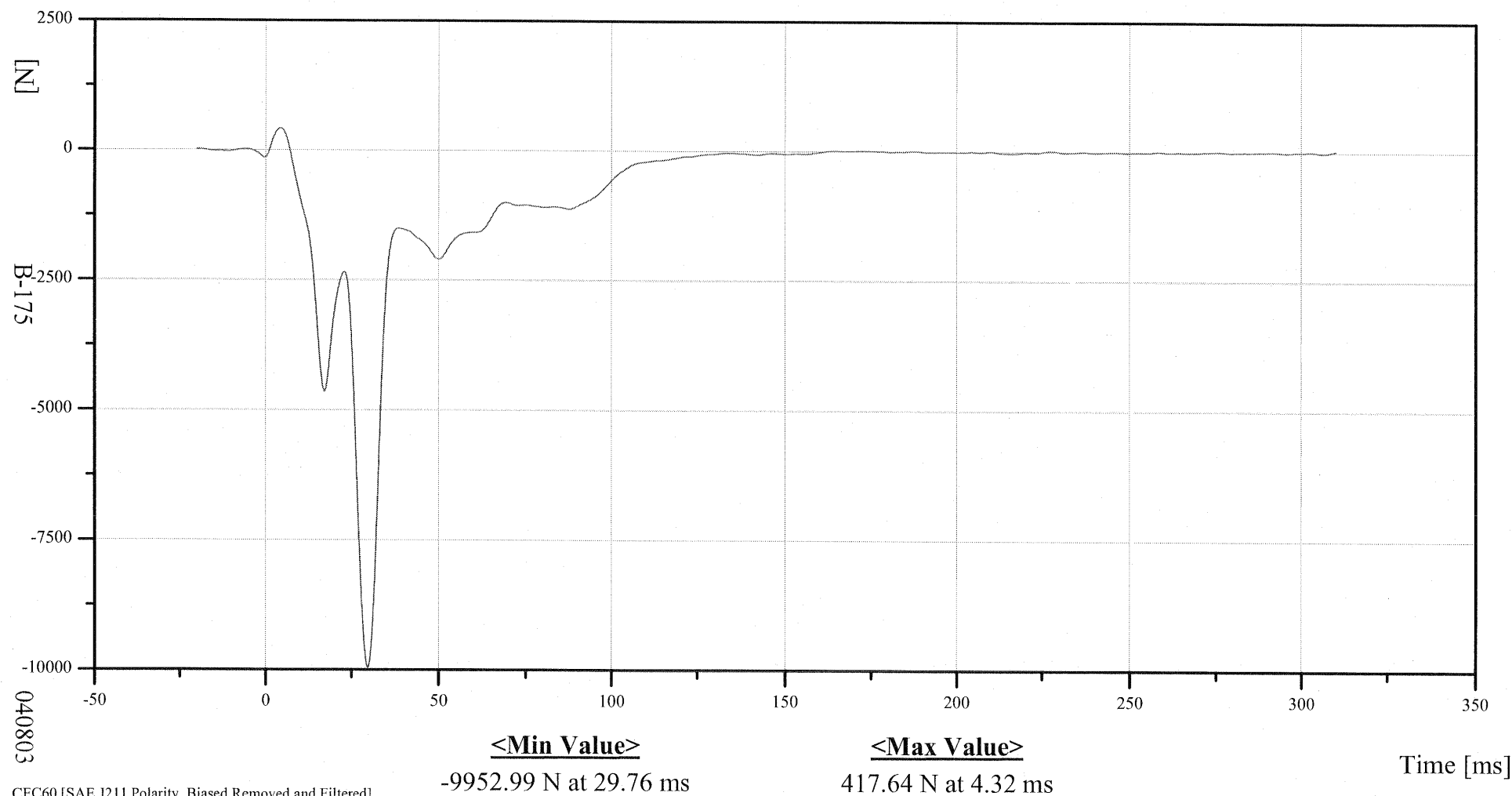
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0211





Transportation Research Center, Inc.

ROW 2 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

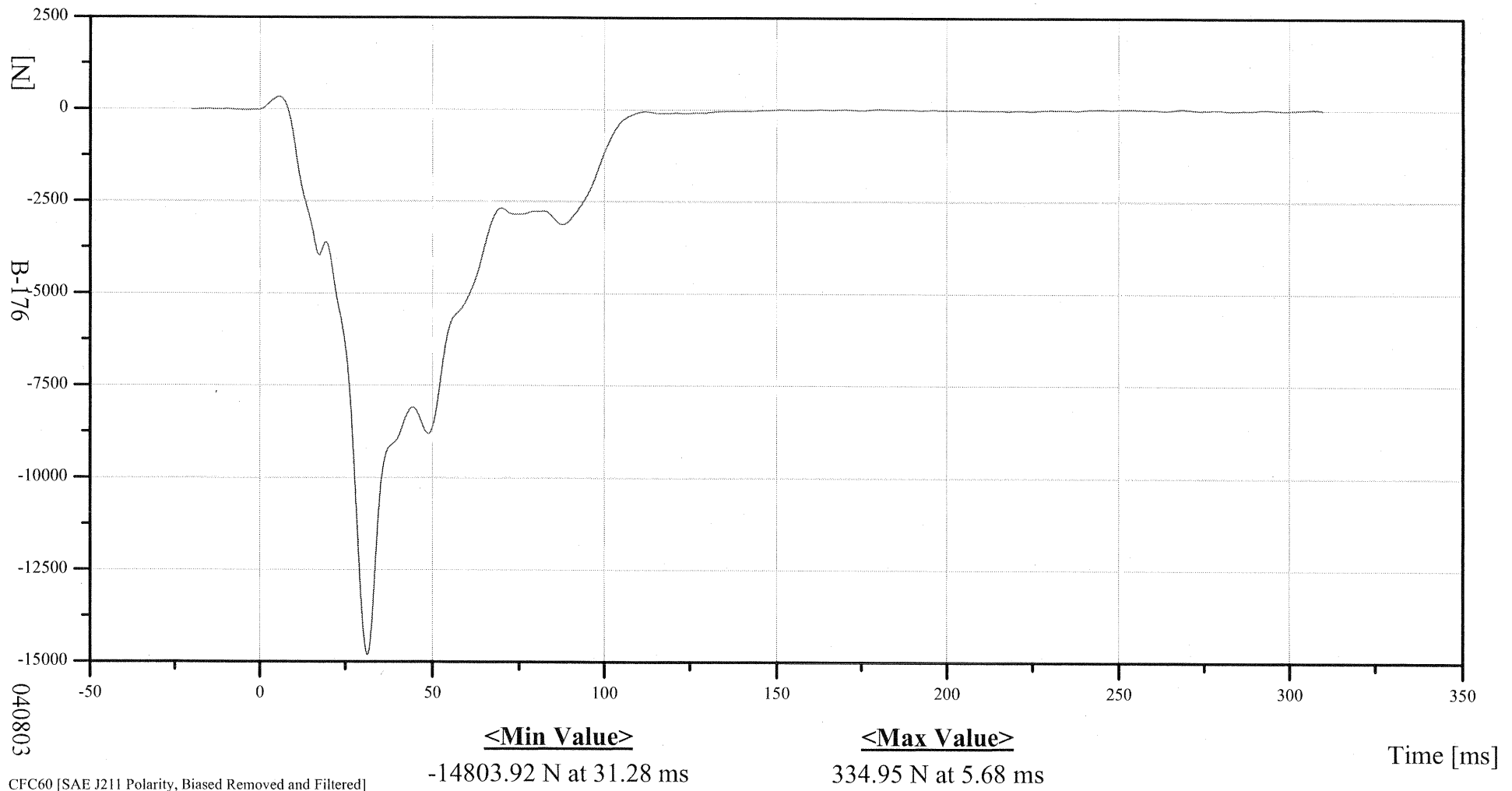
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0212





Transportation Research Center, Inc.

ROW 2 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

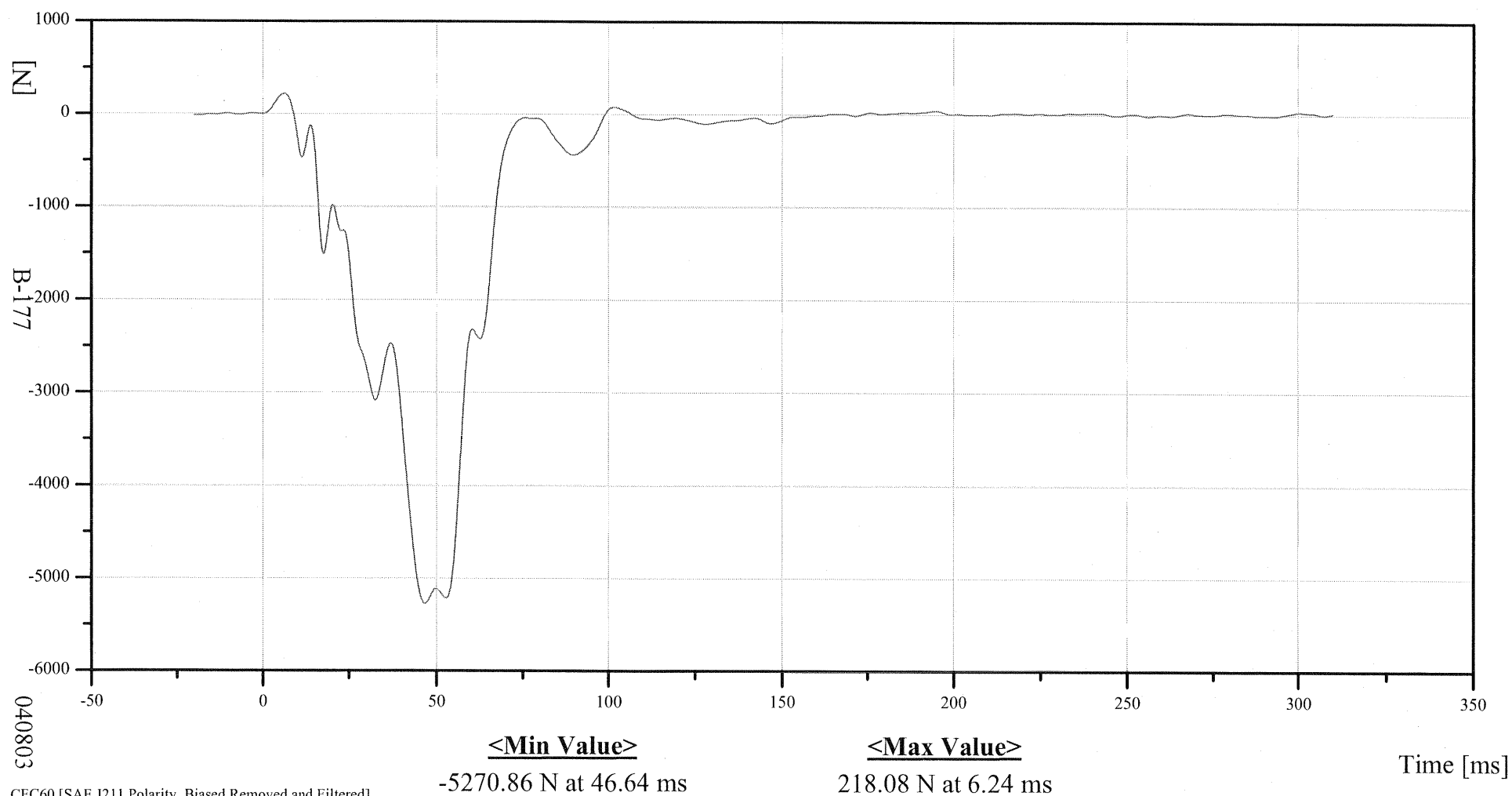
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0213





Transportation Research Center, Inc.

ROW 2 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

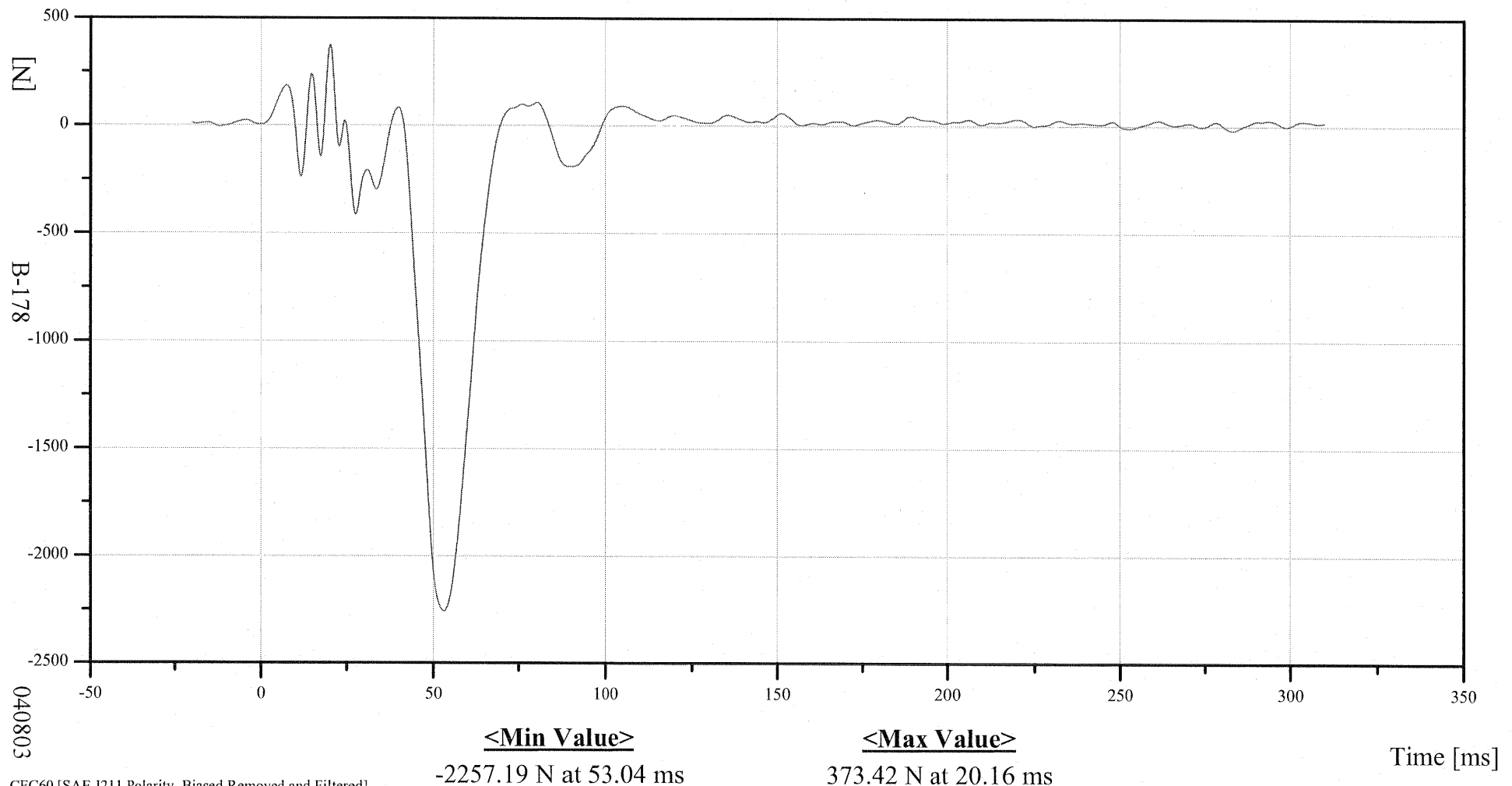
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0214



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

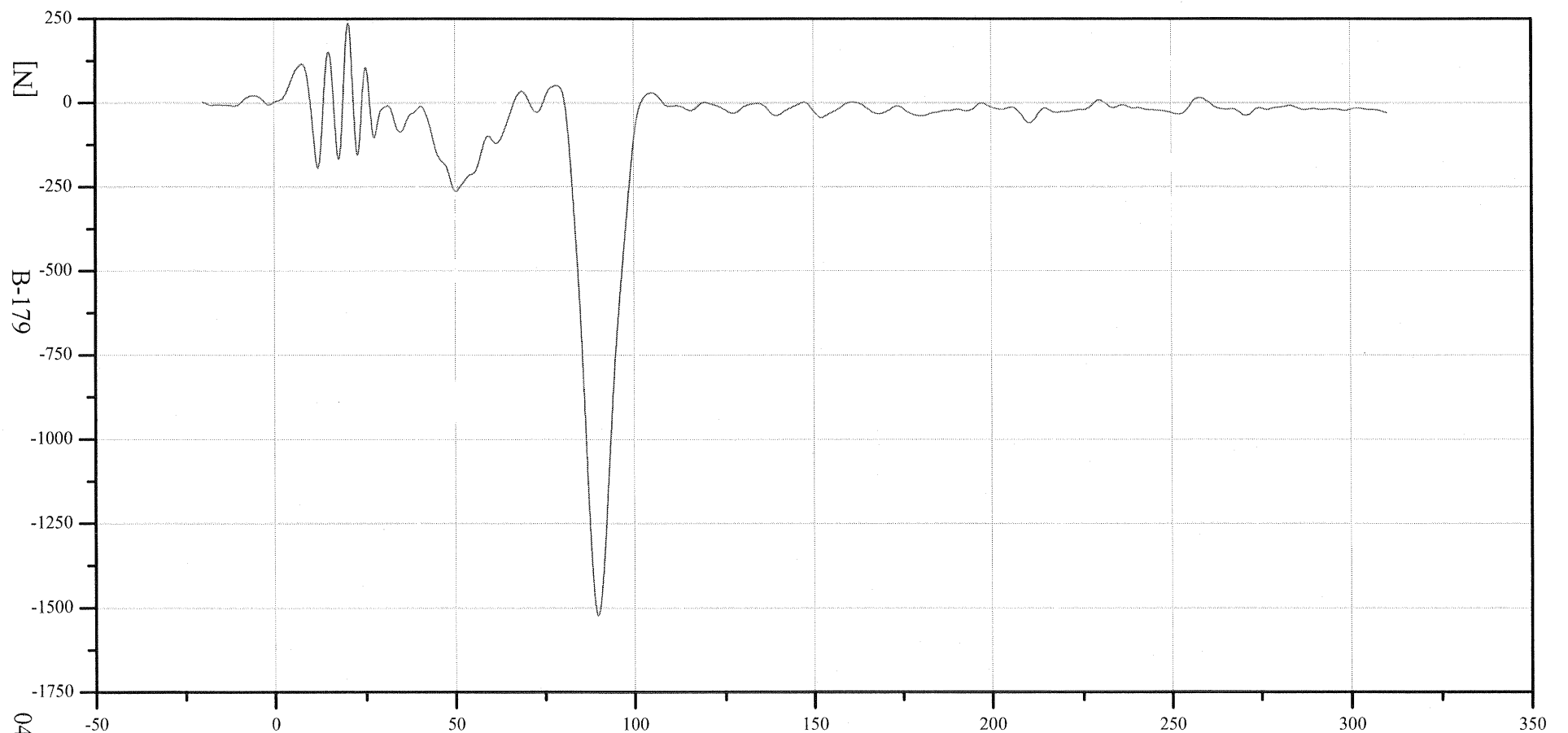
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0215



040803

<Min Value>

-1523.37 N at 89.76 ms

<Max Value>

237.03 N at 20.32 ms

Time [ms]

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 2 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

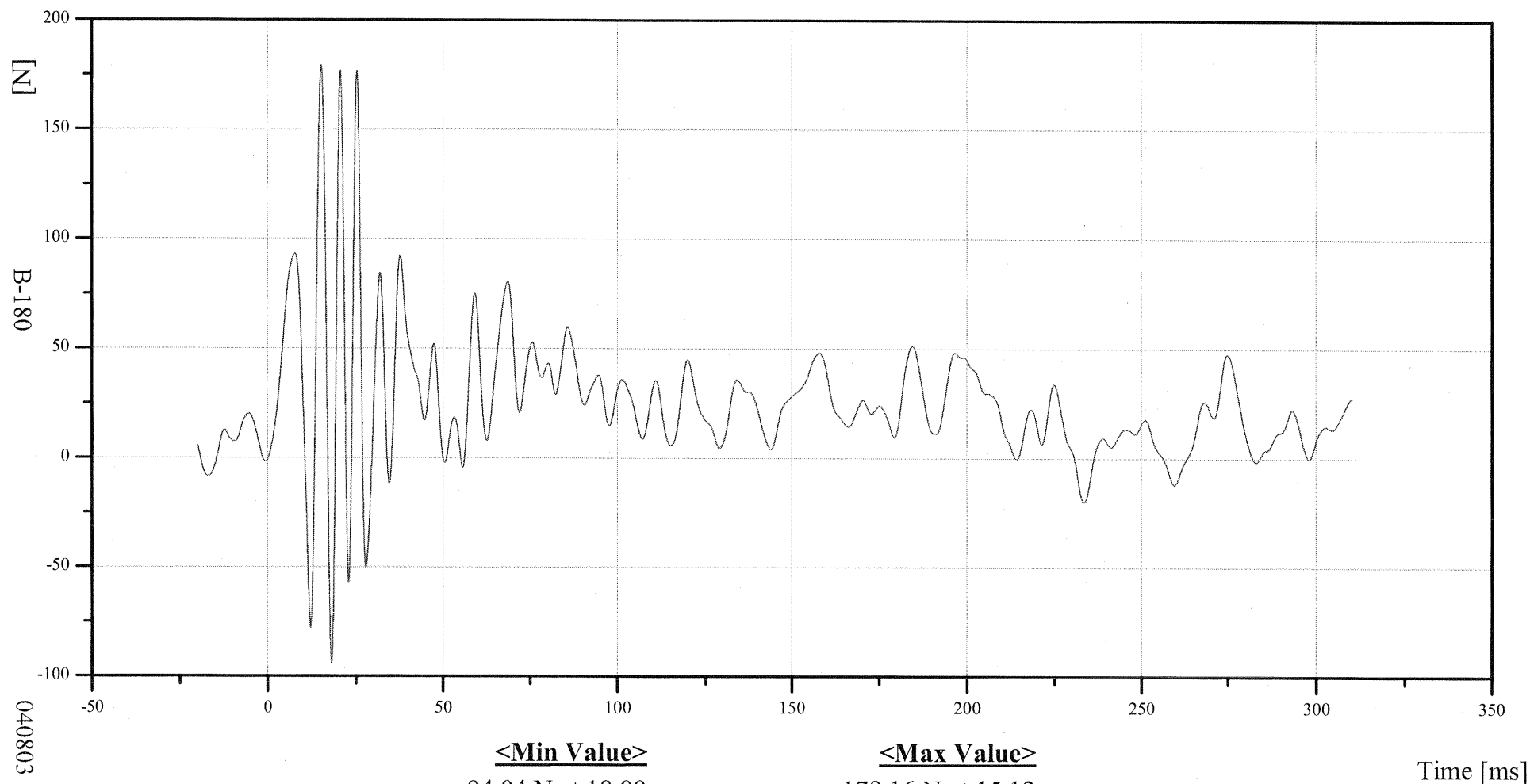
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0216



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

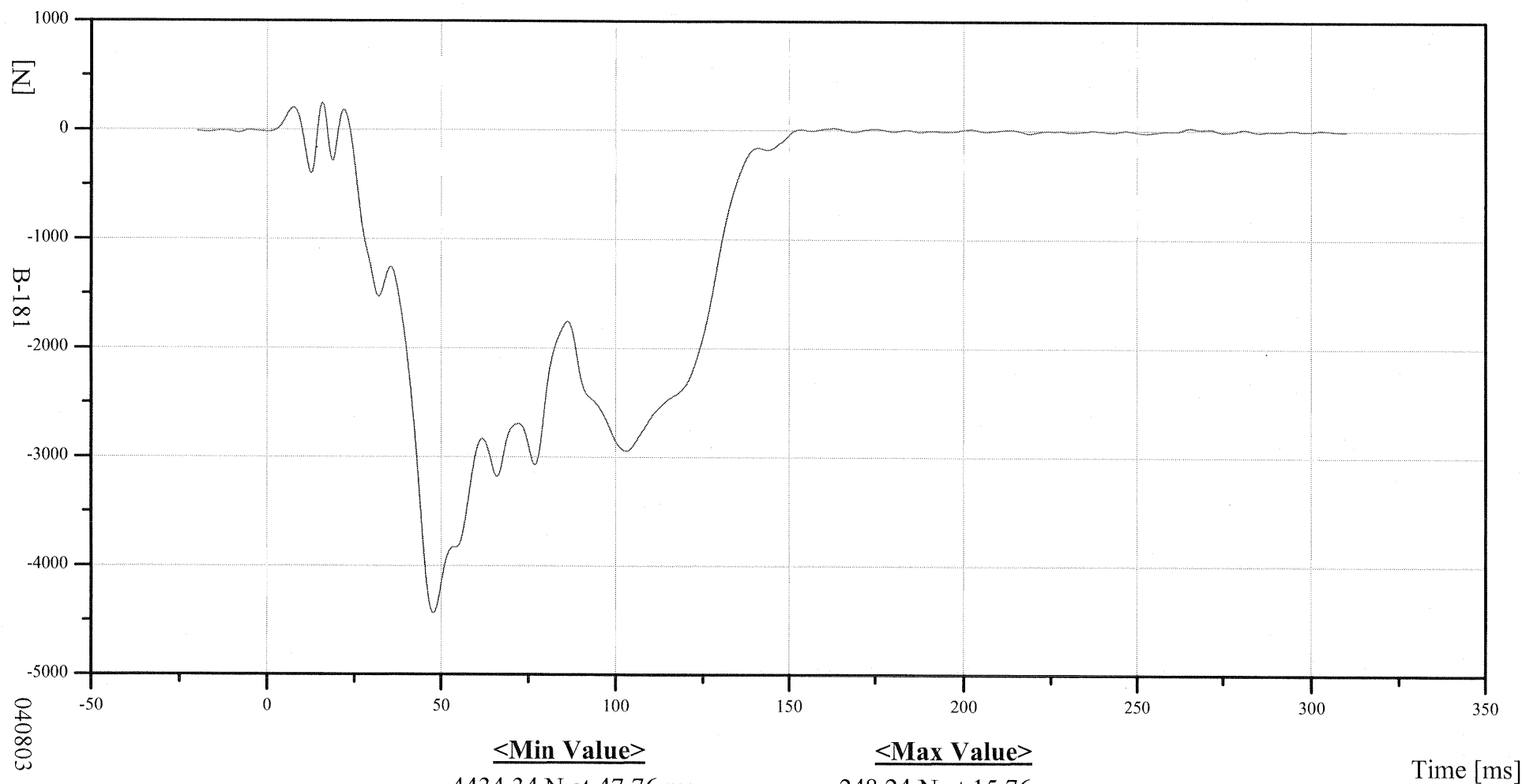
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0301



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

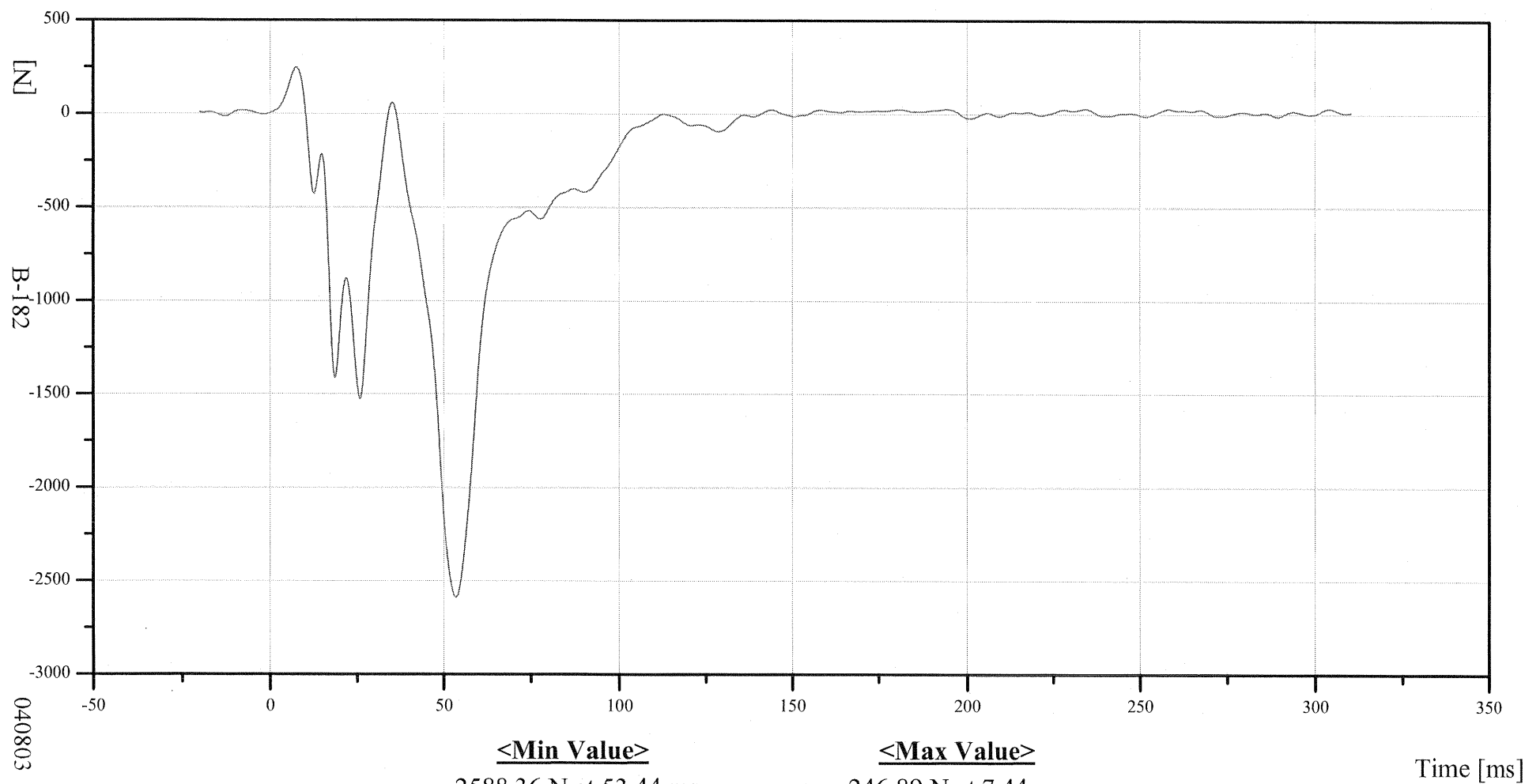
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0302



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

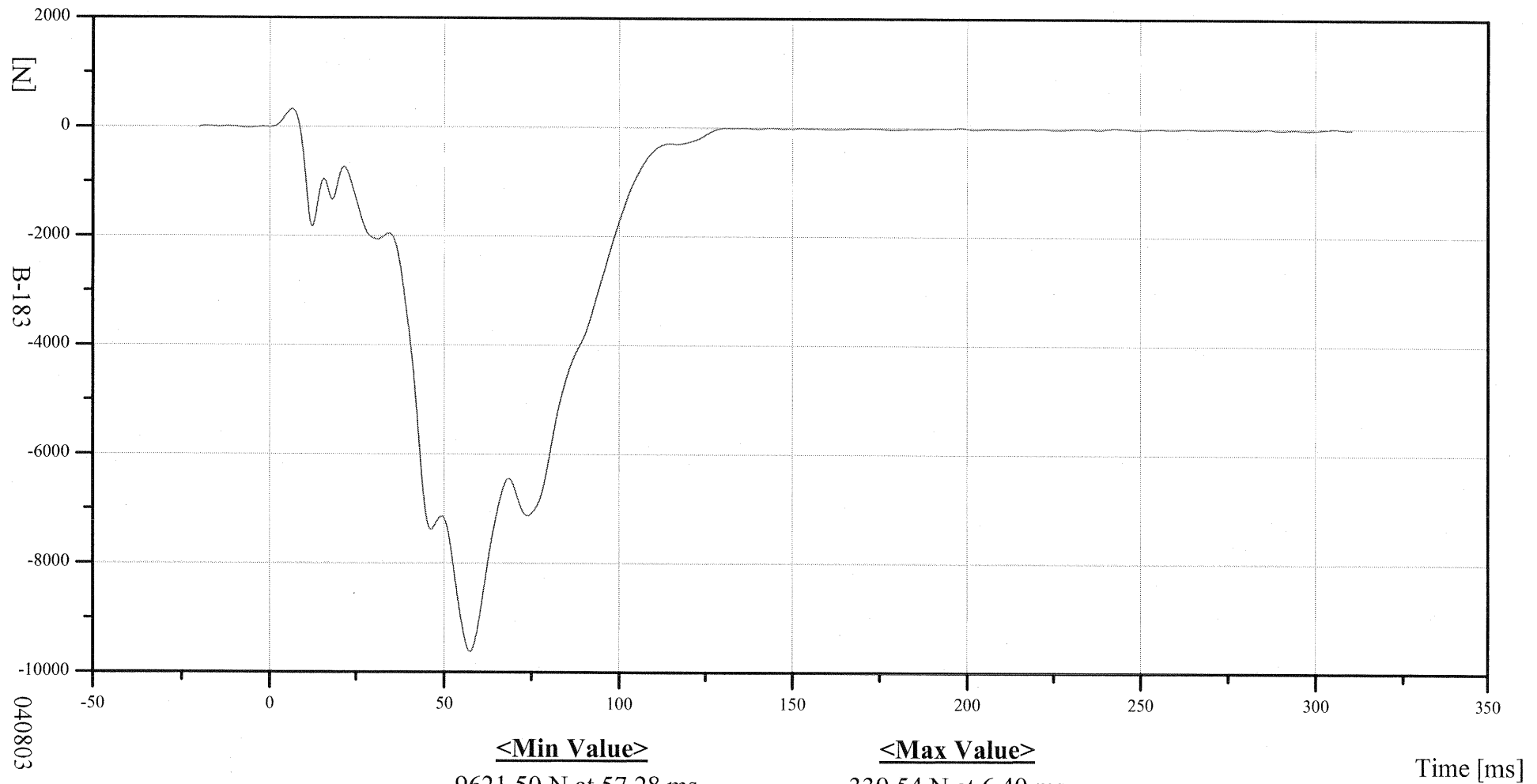
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0303



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>
-9621.50 N at 57.28 ms

<Max Value>
330.54 N at 6.40 ms

Time [ms]



Transportation Research Center, Inc.

ROW 3 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

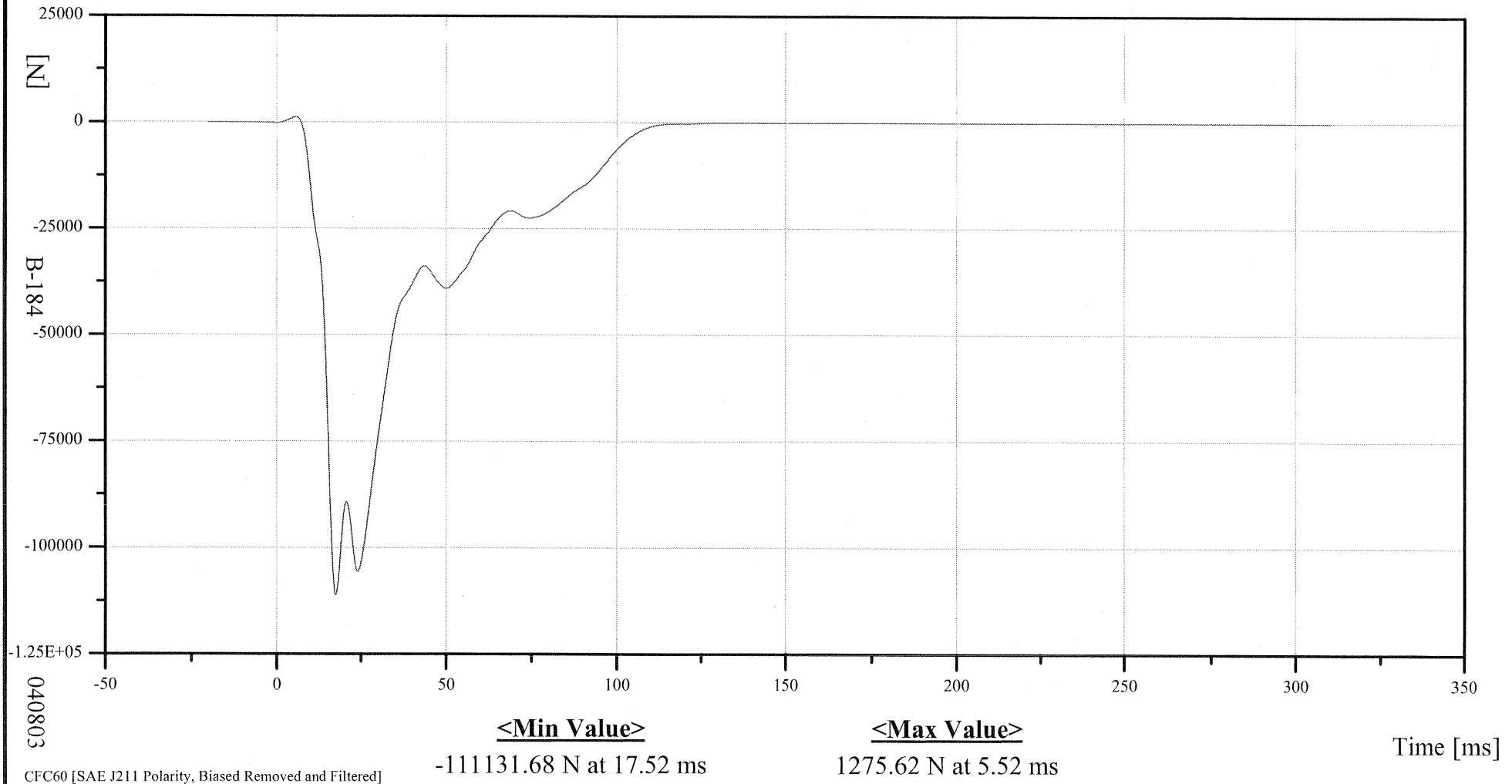
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0304





Transportation Research Center, Inc.

ROW 3 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

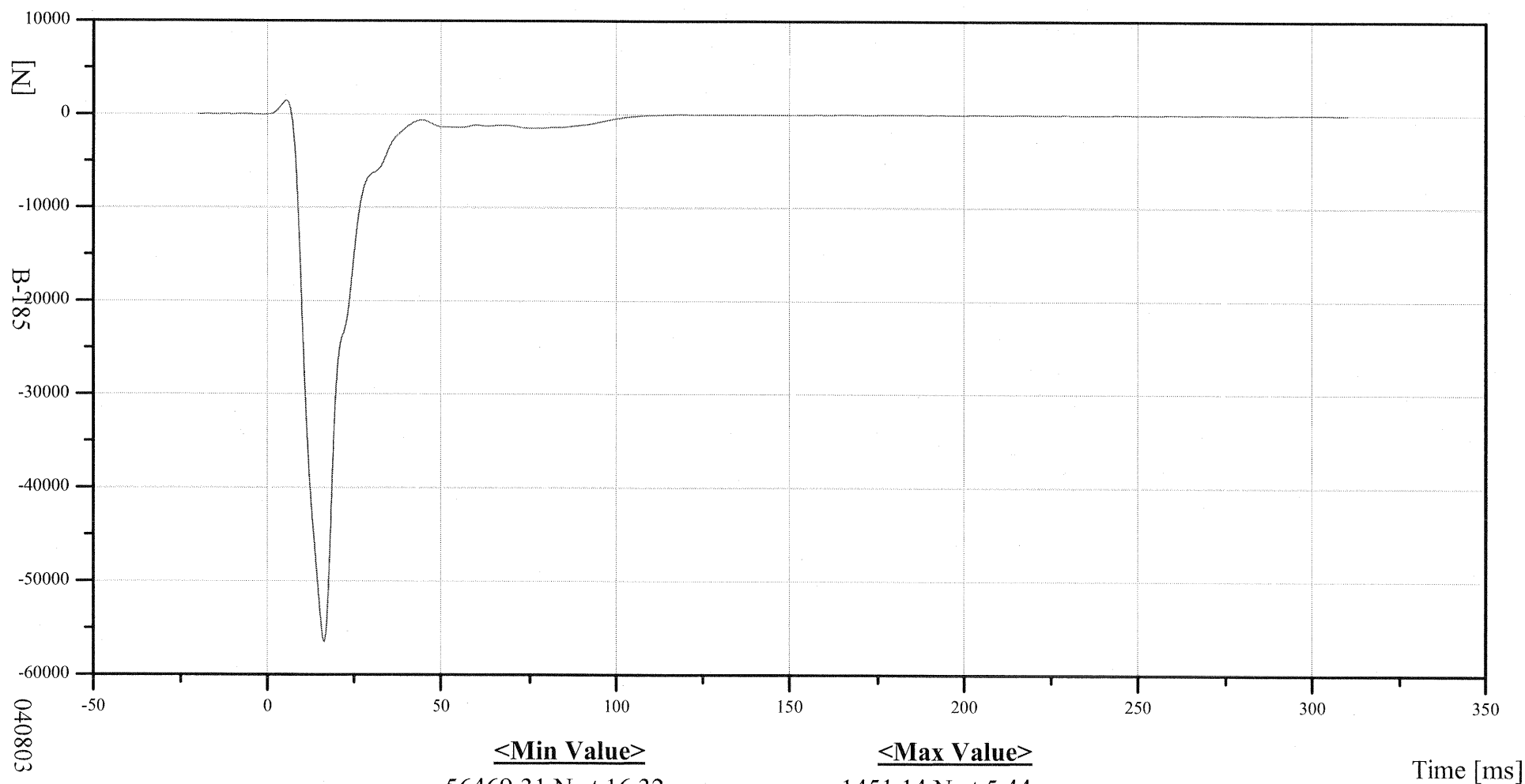
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0305



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

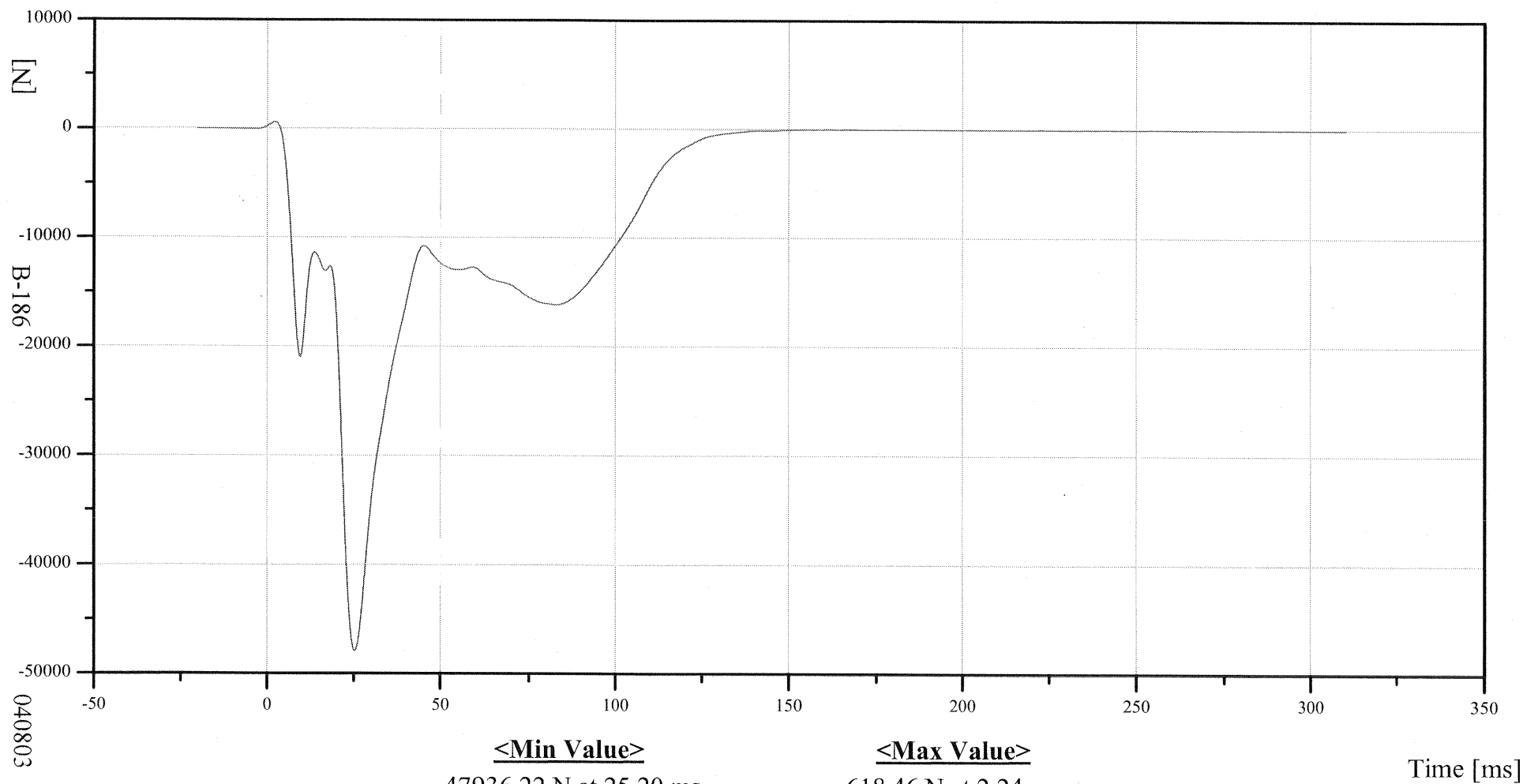
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0306



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

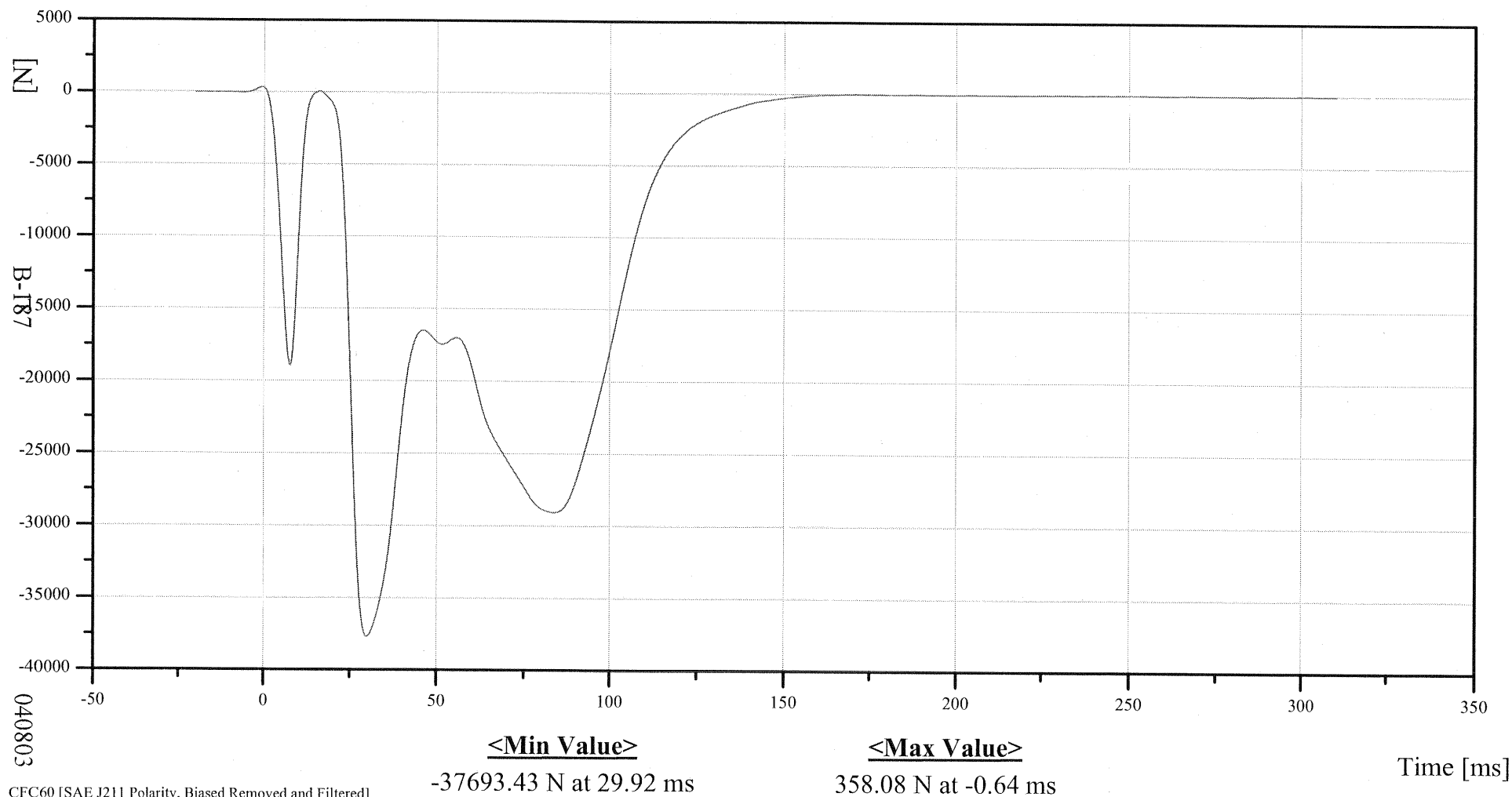
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0307



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

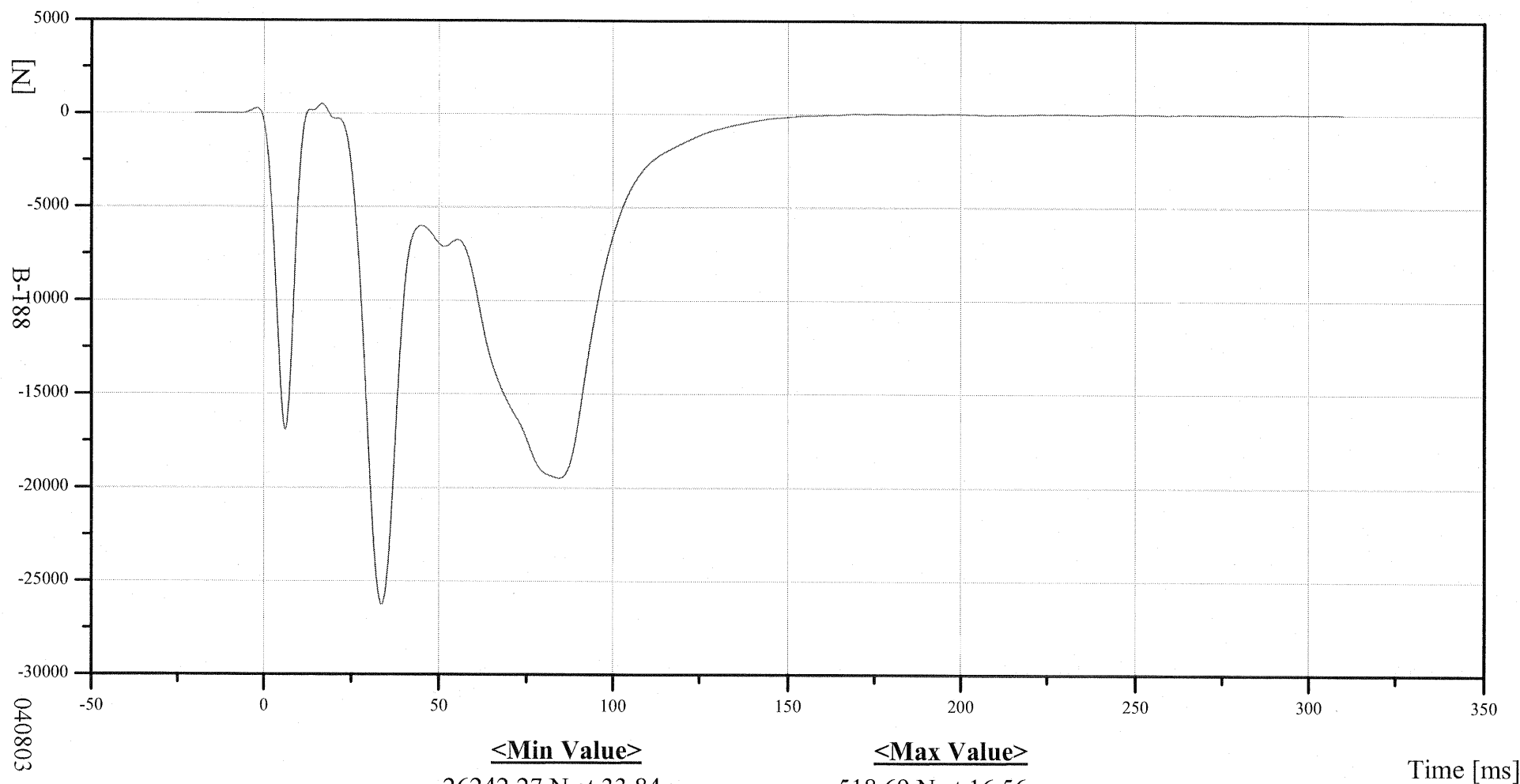
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0308



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

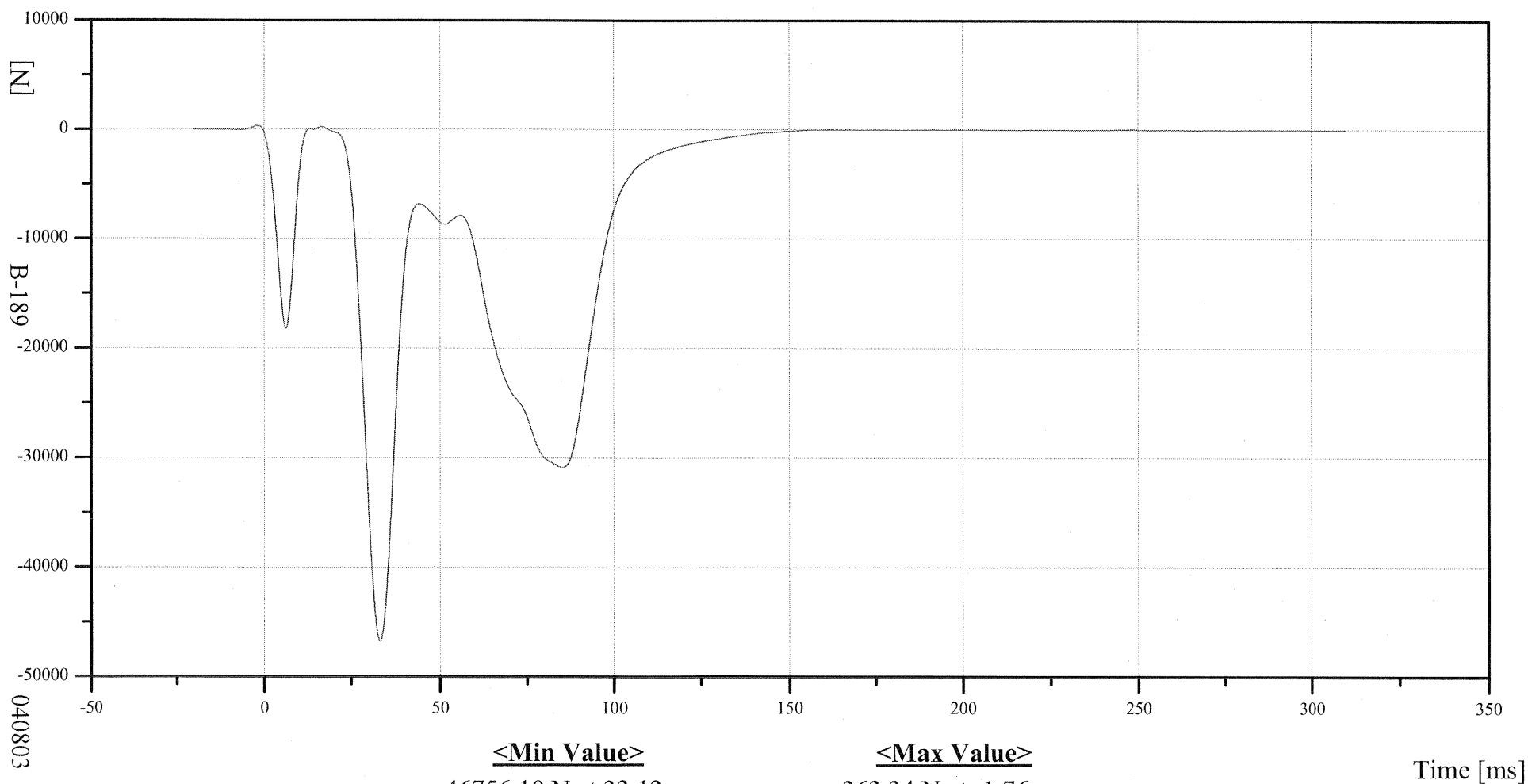
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0309



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

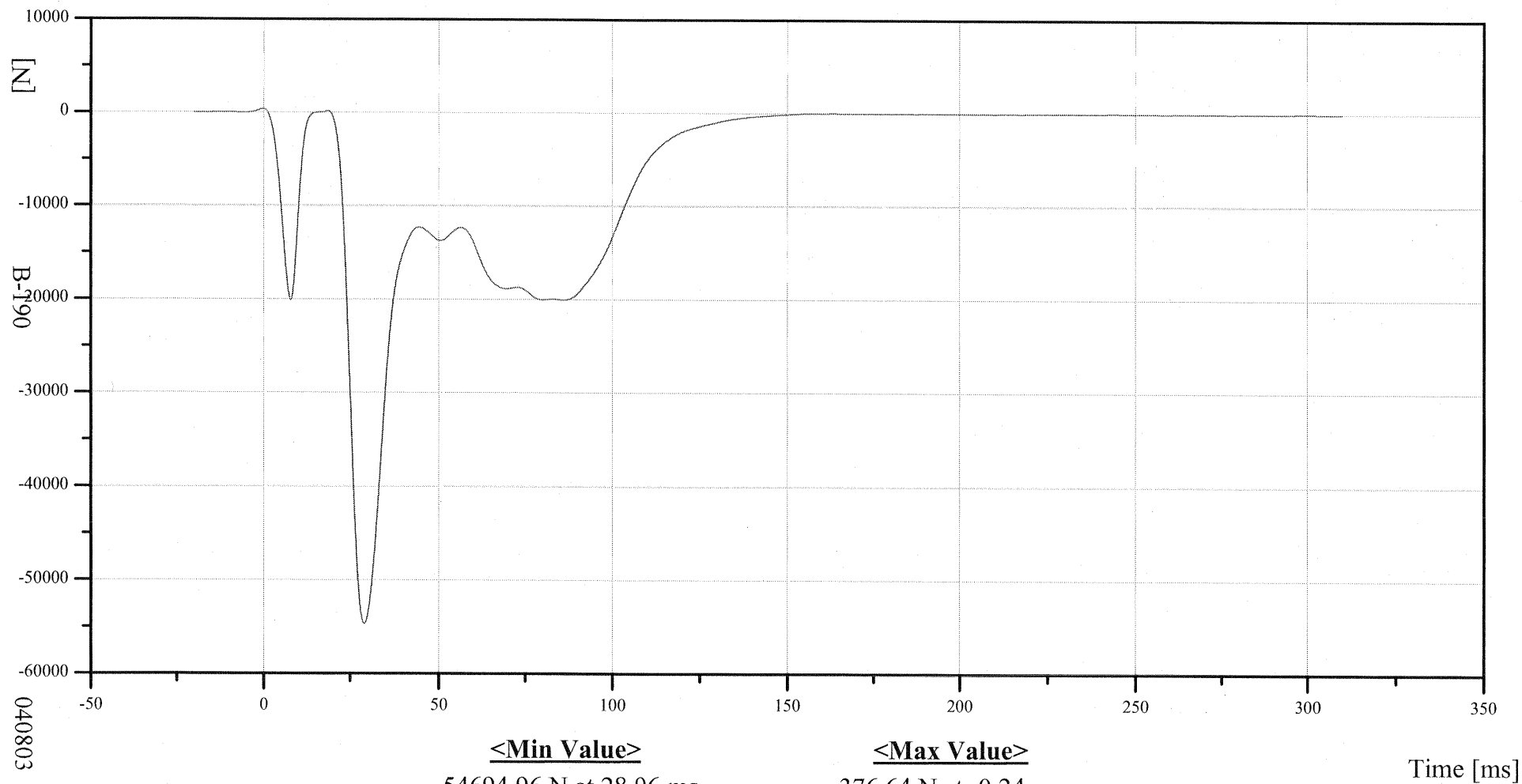
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0310



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

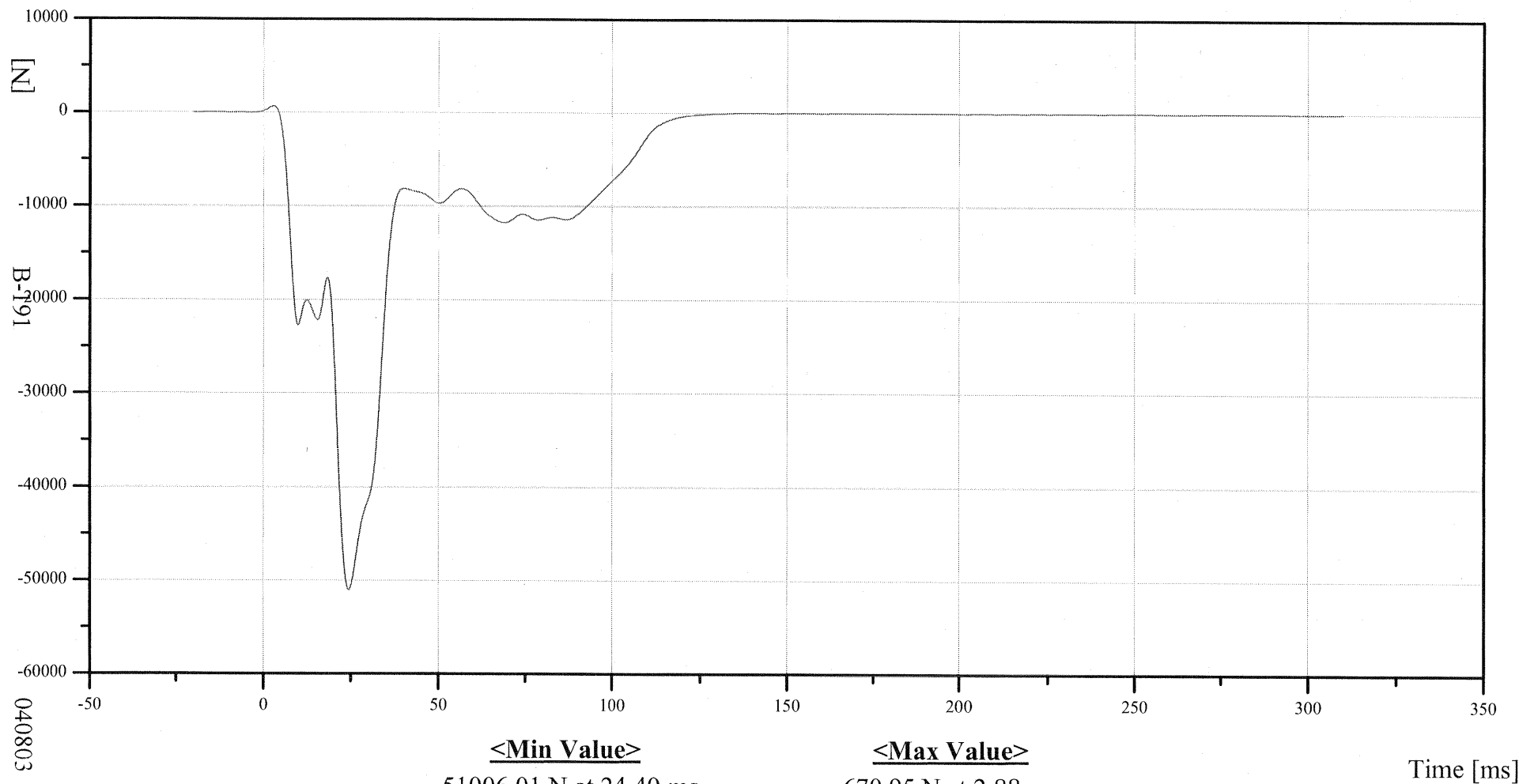
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0311



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

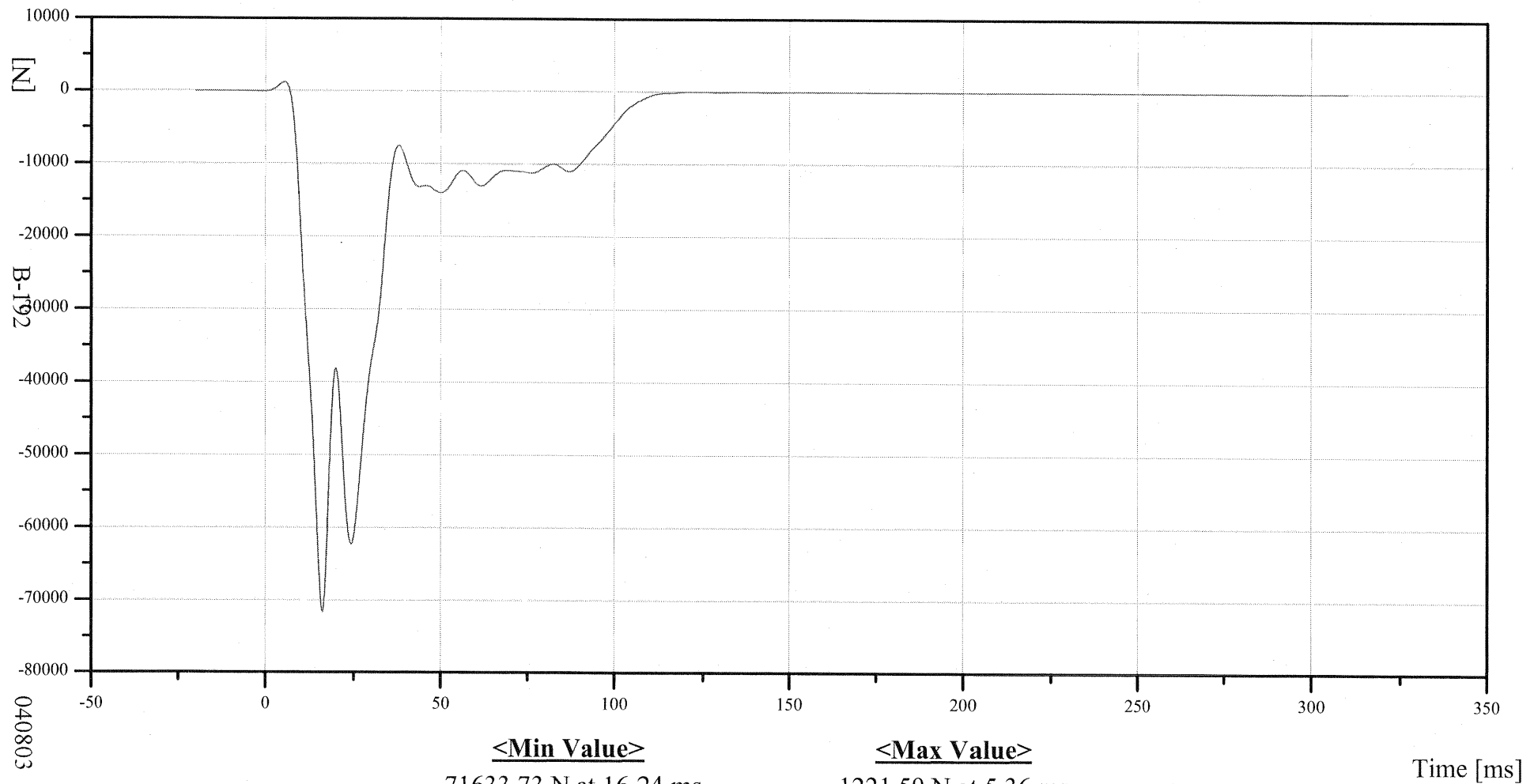
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0312



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

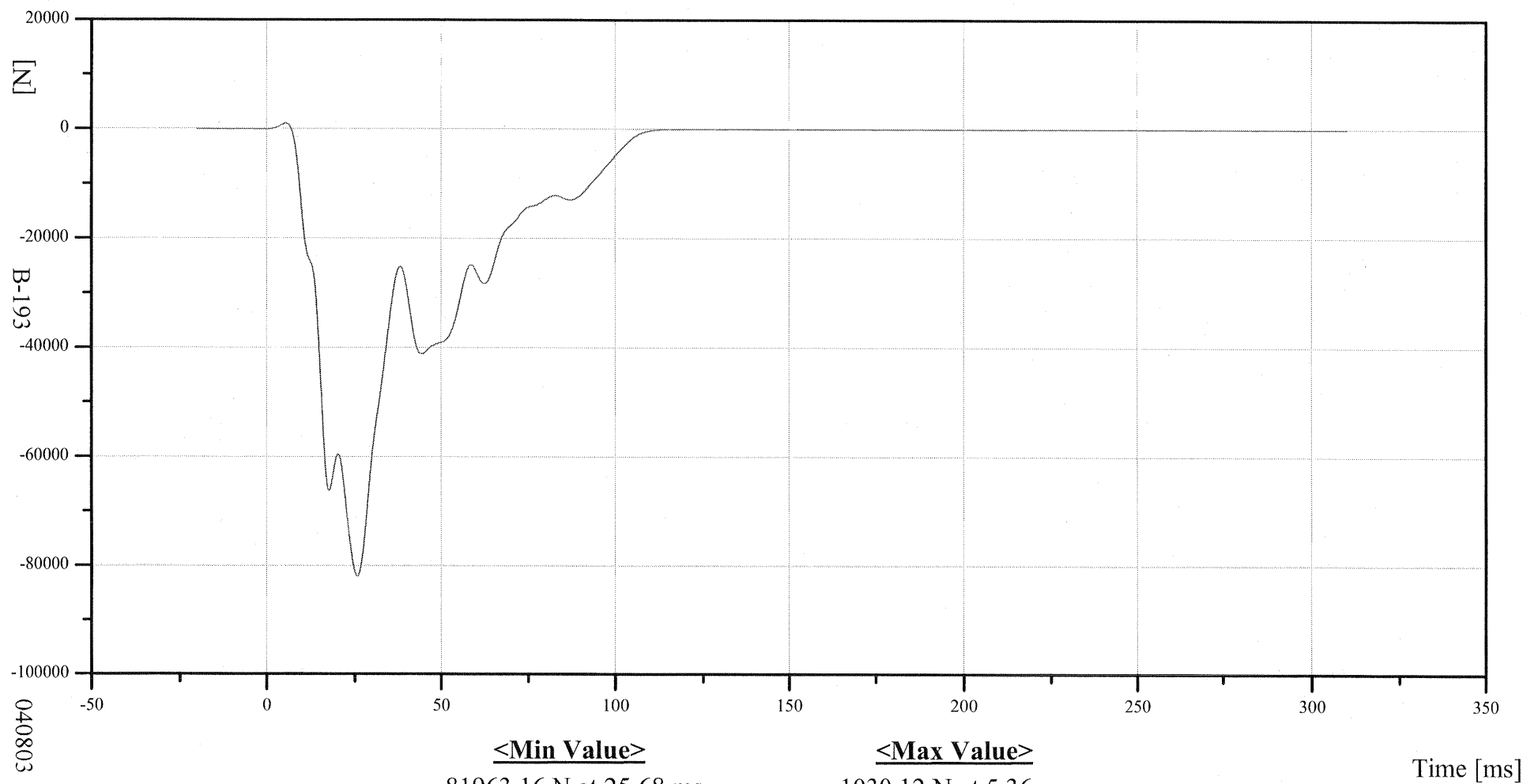
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0313



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

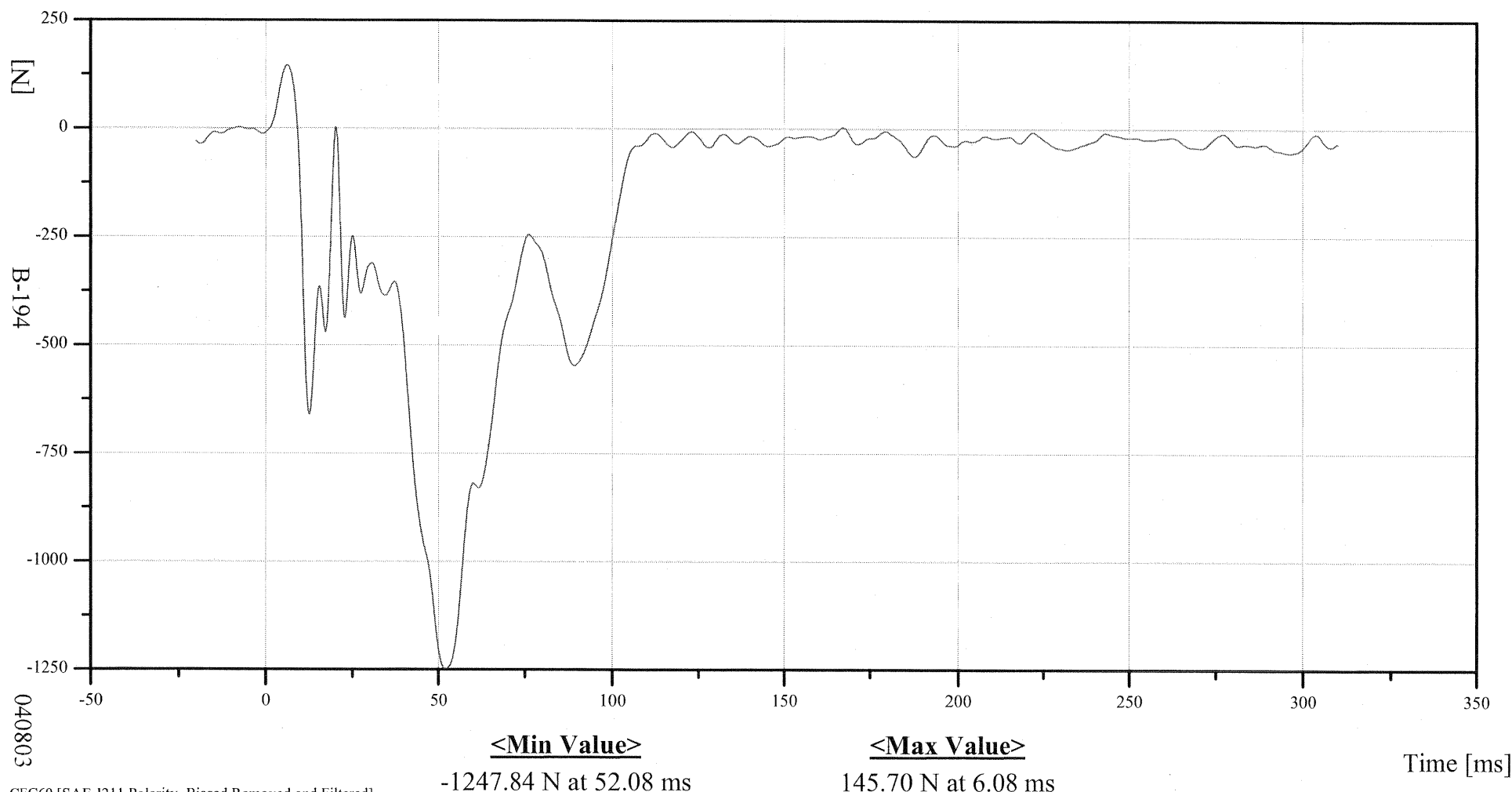
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0314





Transportation Research Center, Inc.

ROW 3 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

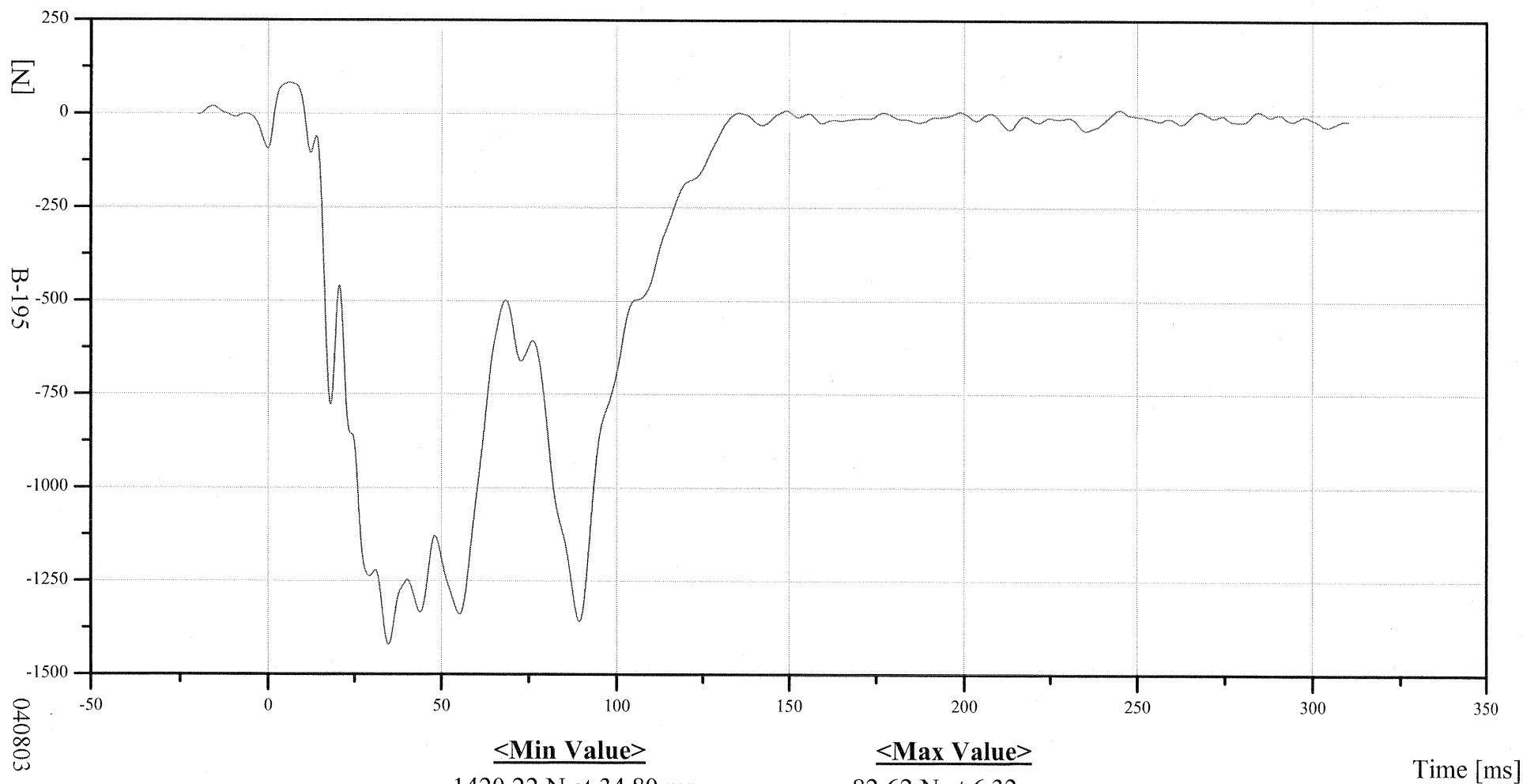
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0315



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 3 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

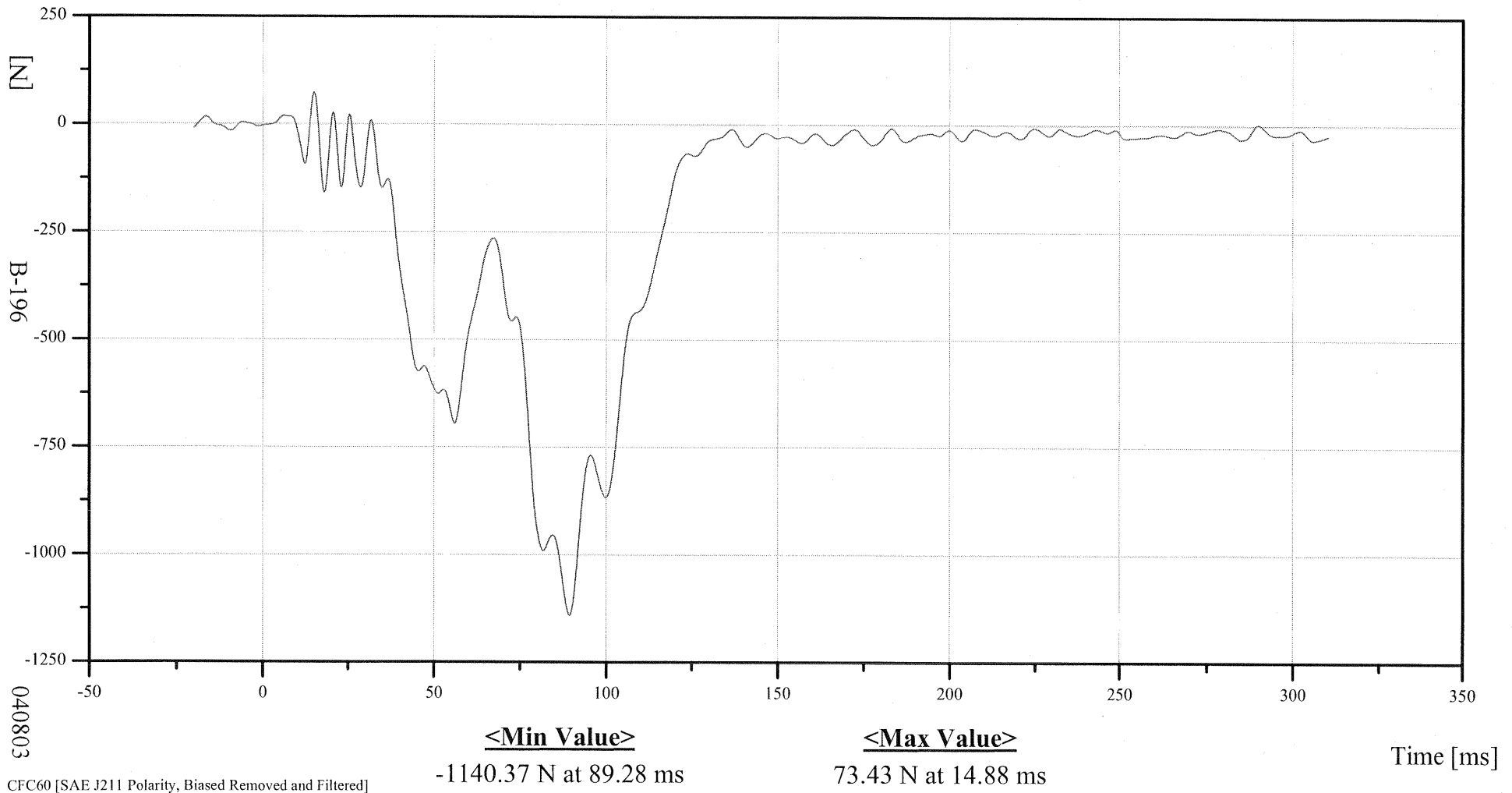
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0316





Transportation Research Center, Inc.

ROW 4 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

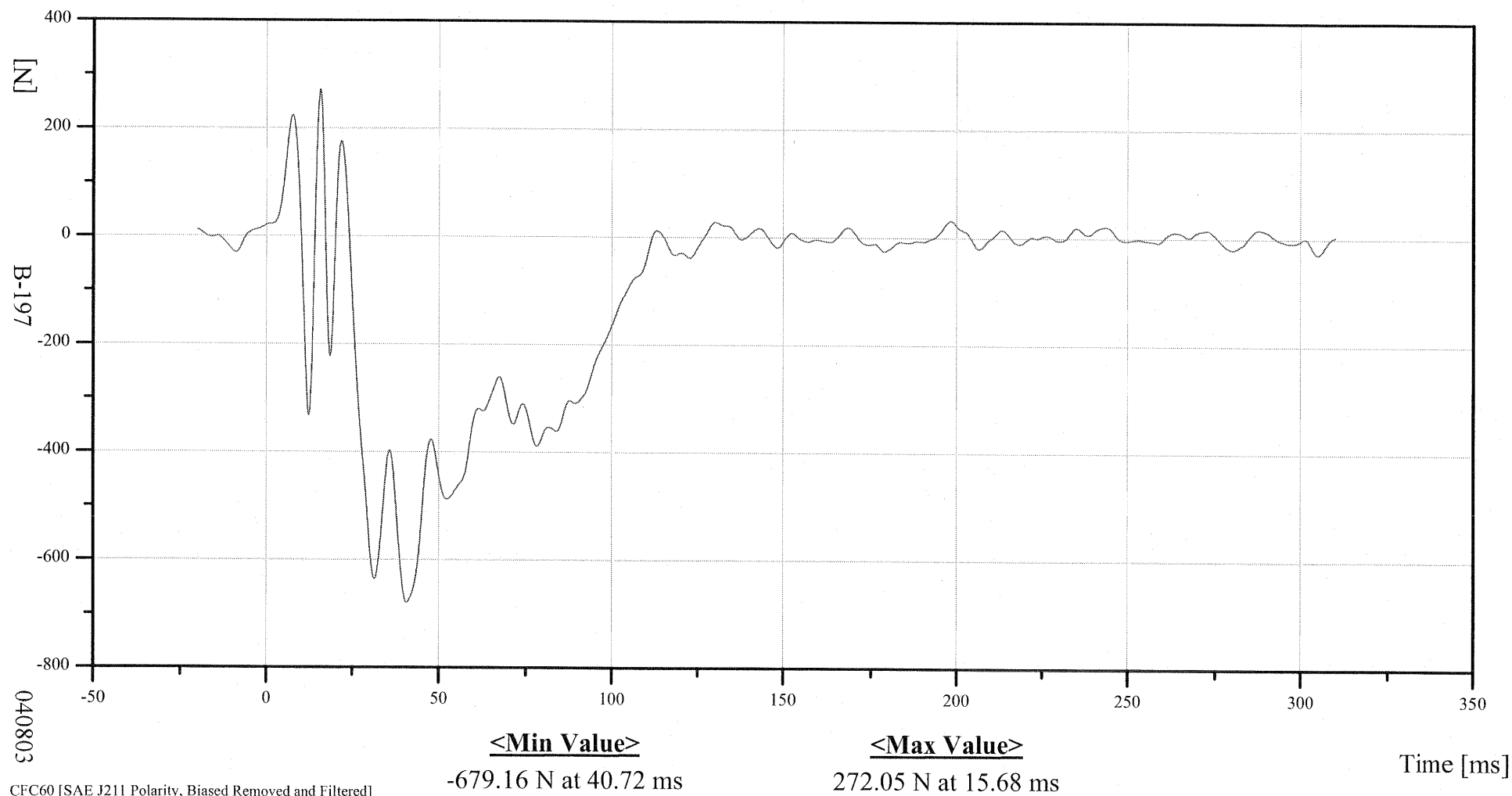
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0401





Transportation Research Center, Inc.

ROW 4 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

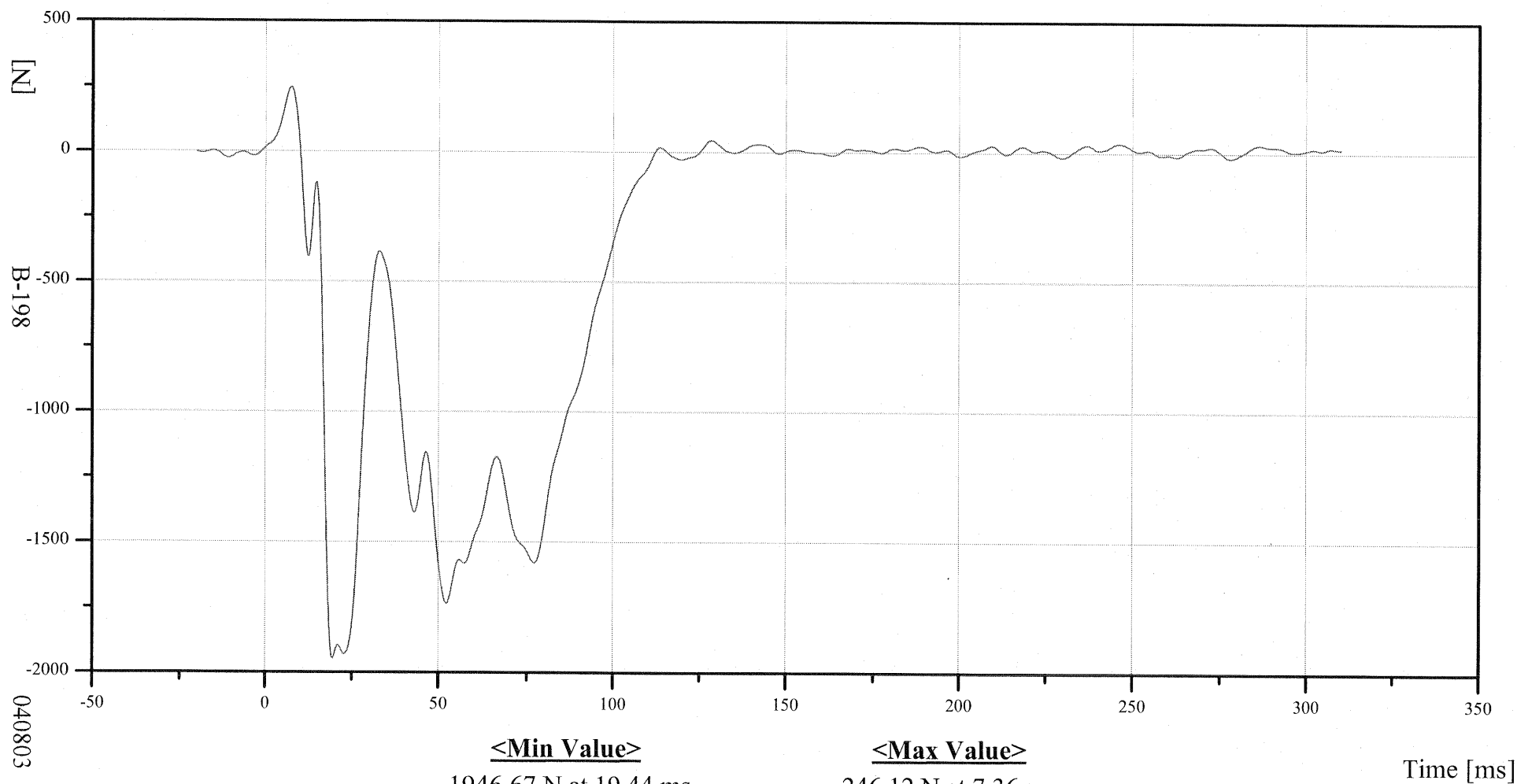
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0402



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

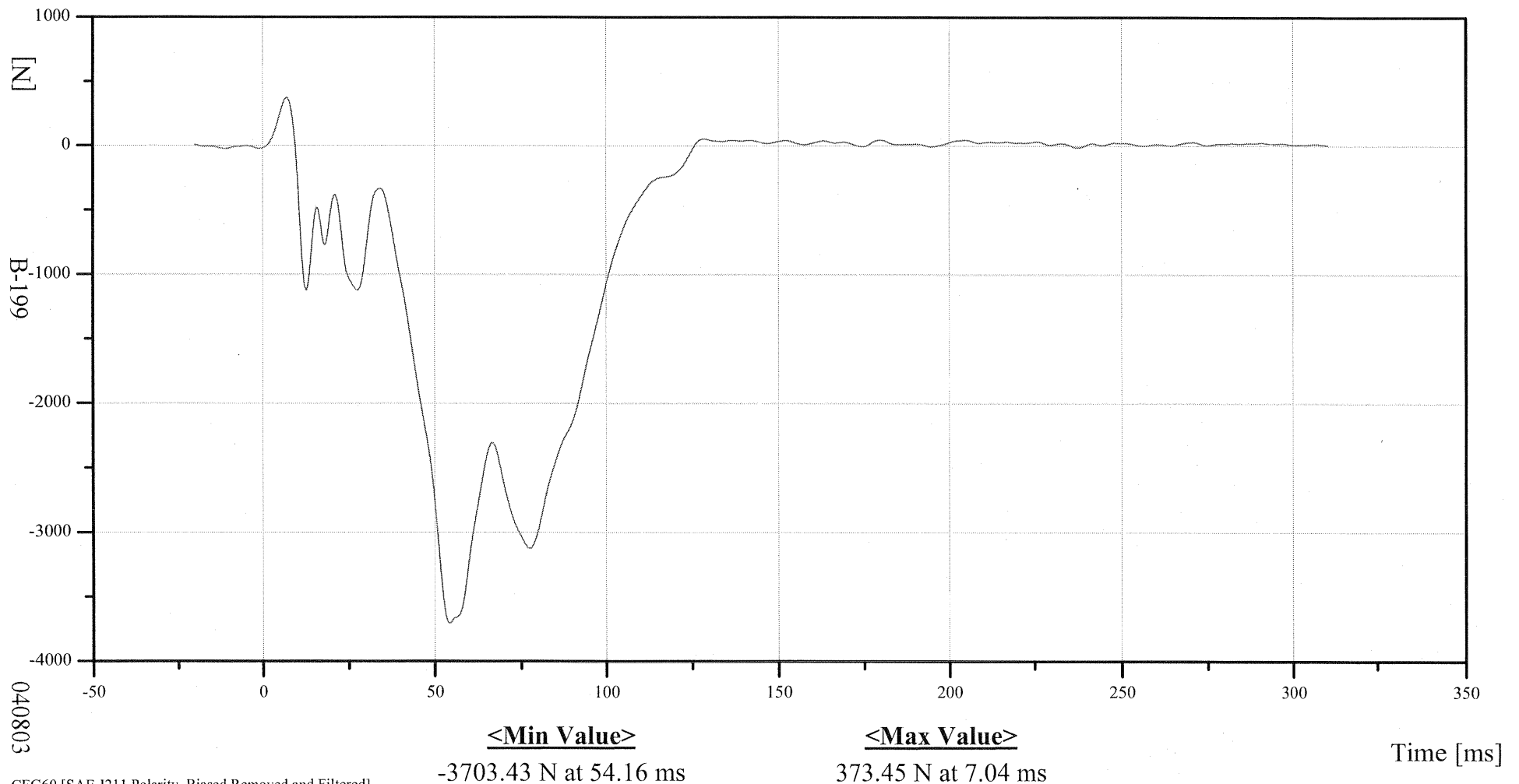
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0403





Transportation Research Center, Inc.

ROW 4 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

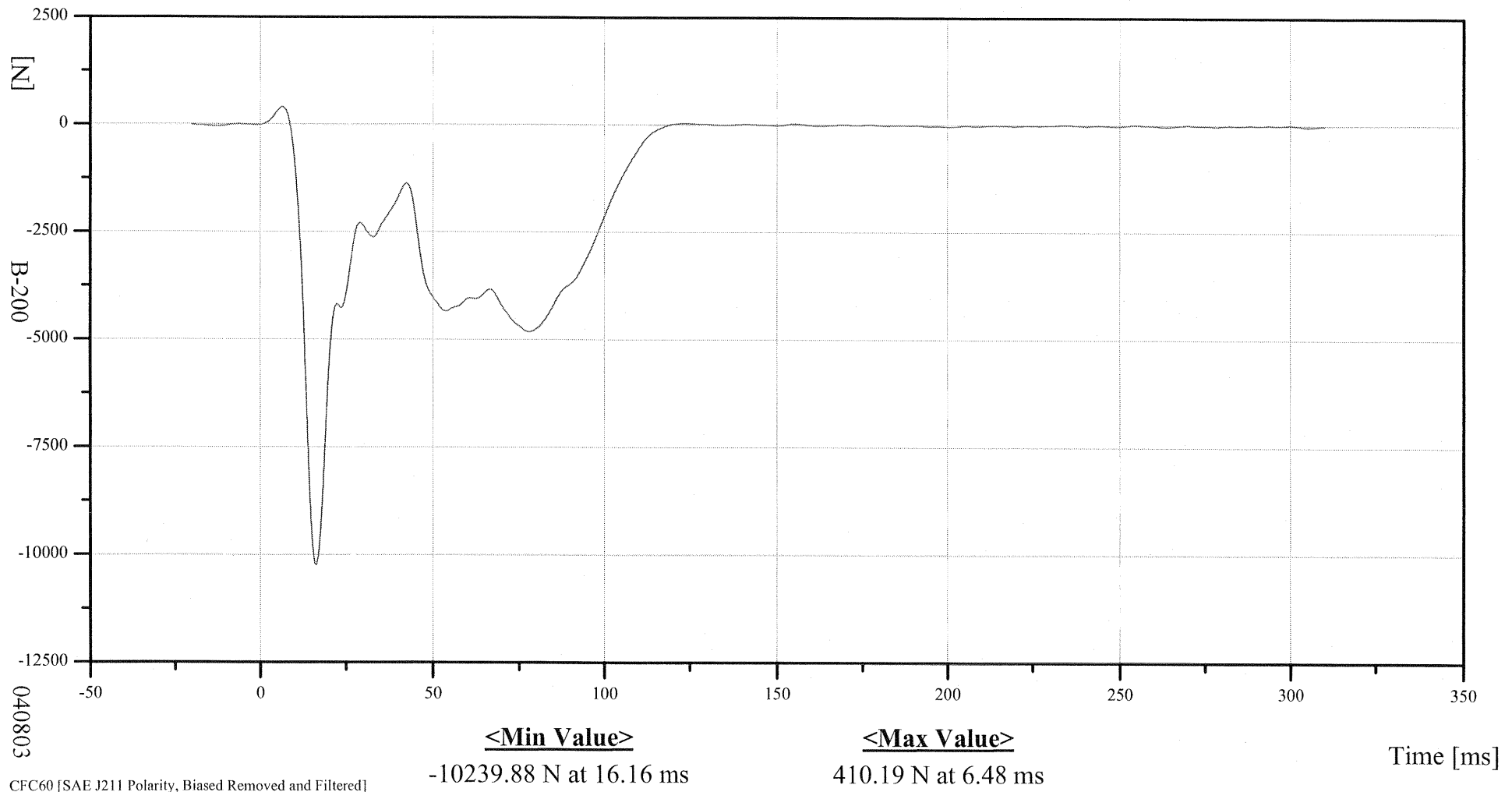
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0404





Transportation Research Center, Inc.

ROW 4 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

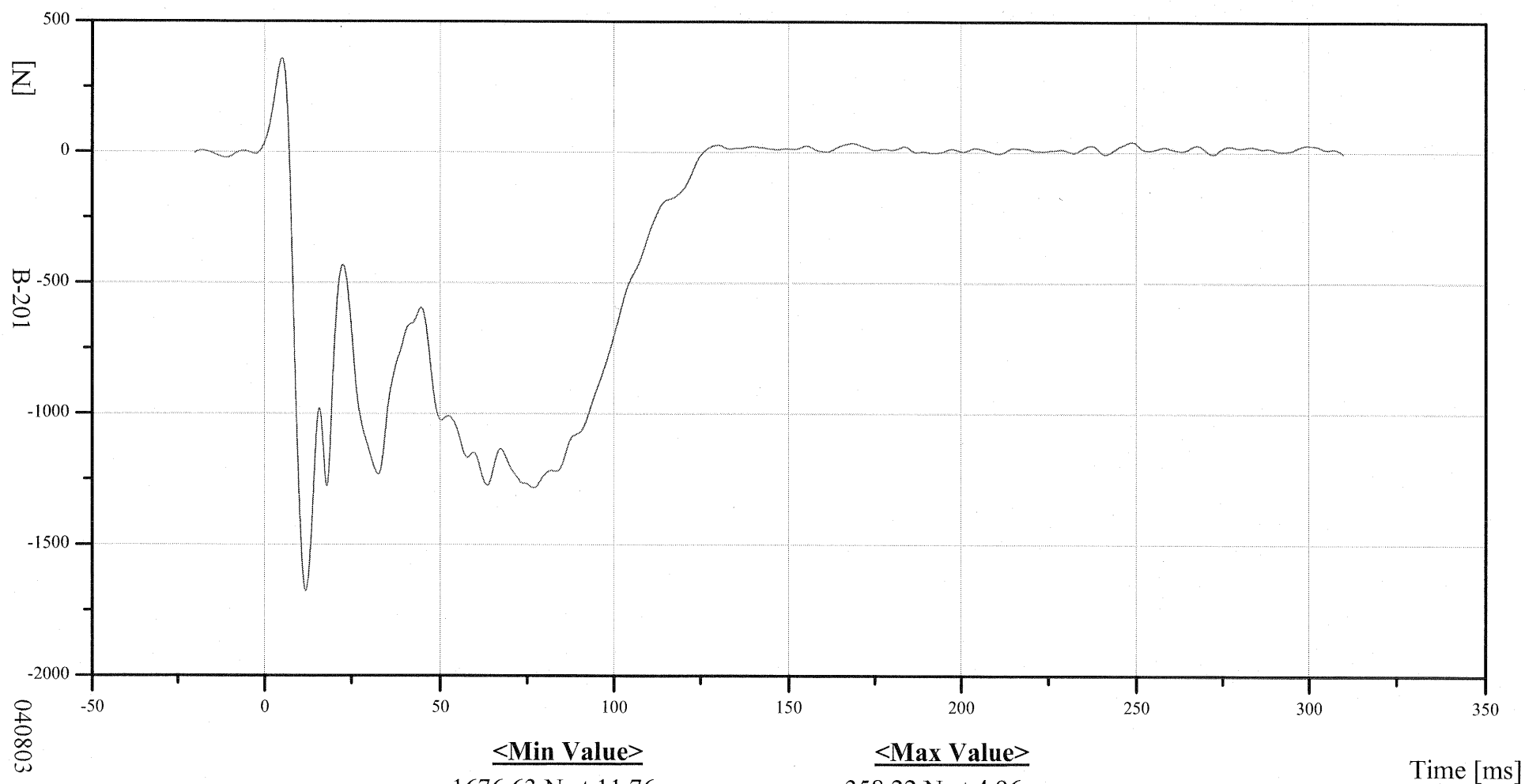
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0405



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

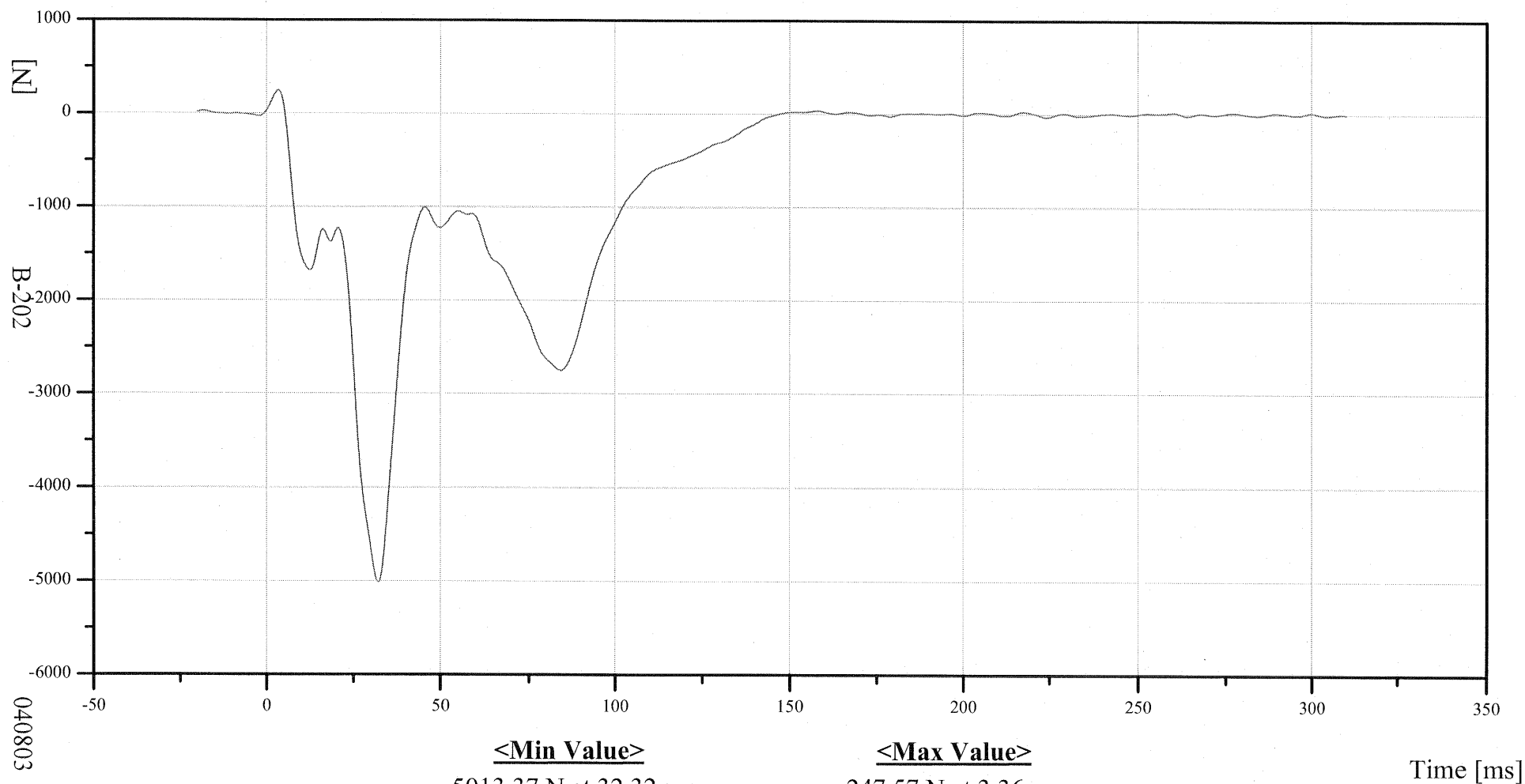
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0406



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

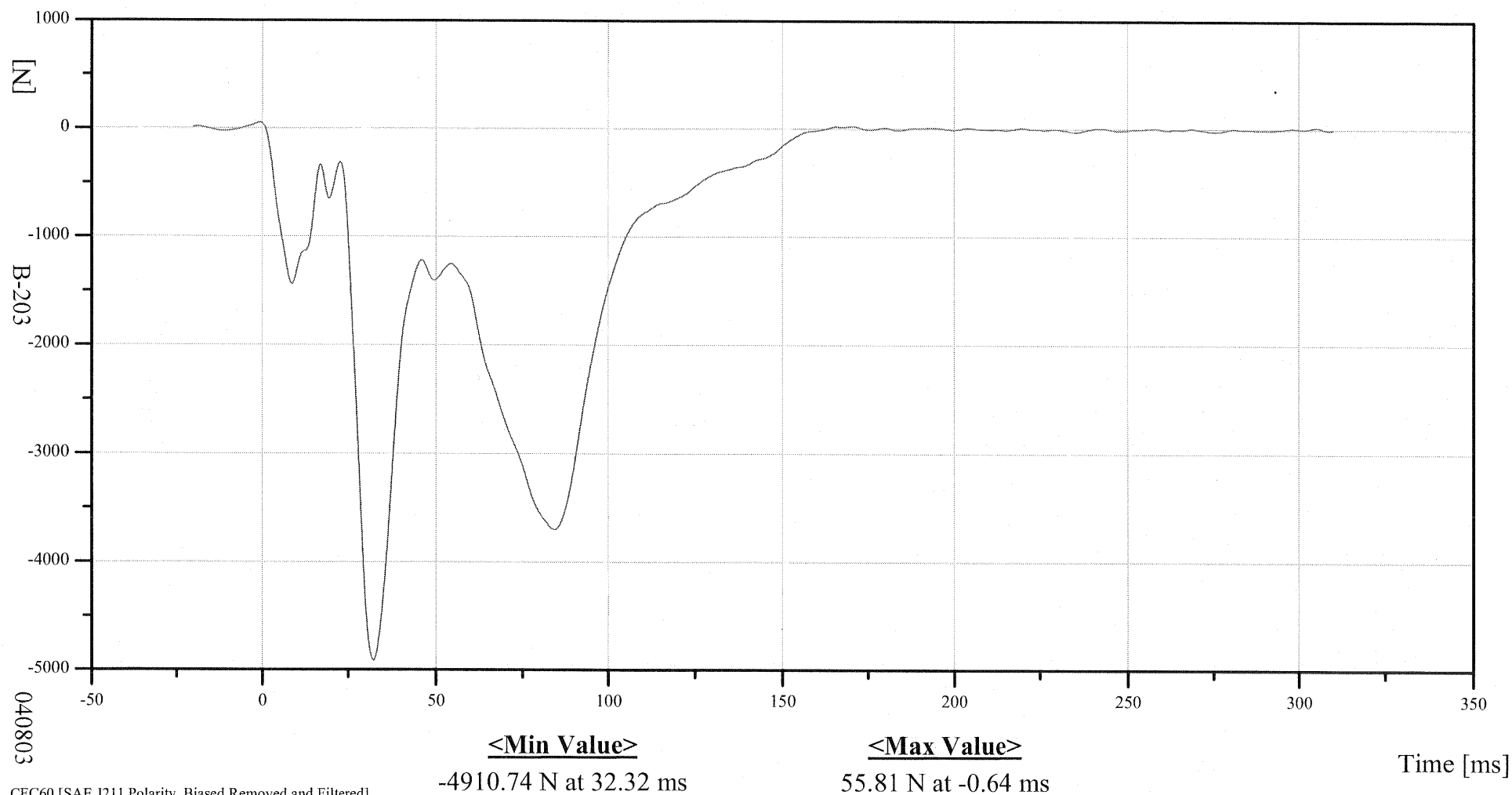
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0407





Transportation Research Center, Inc.

ROW 4 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

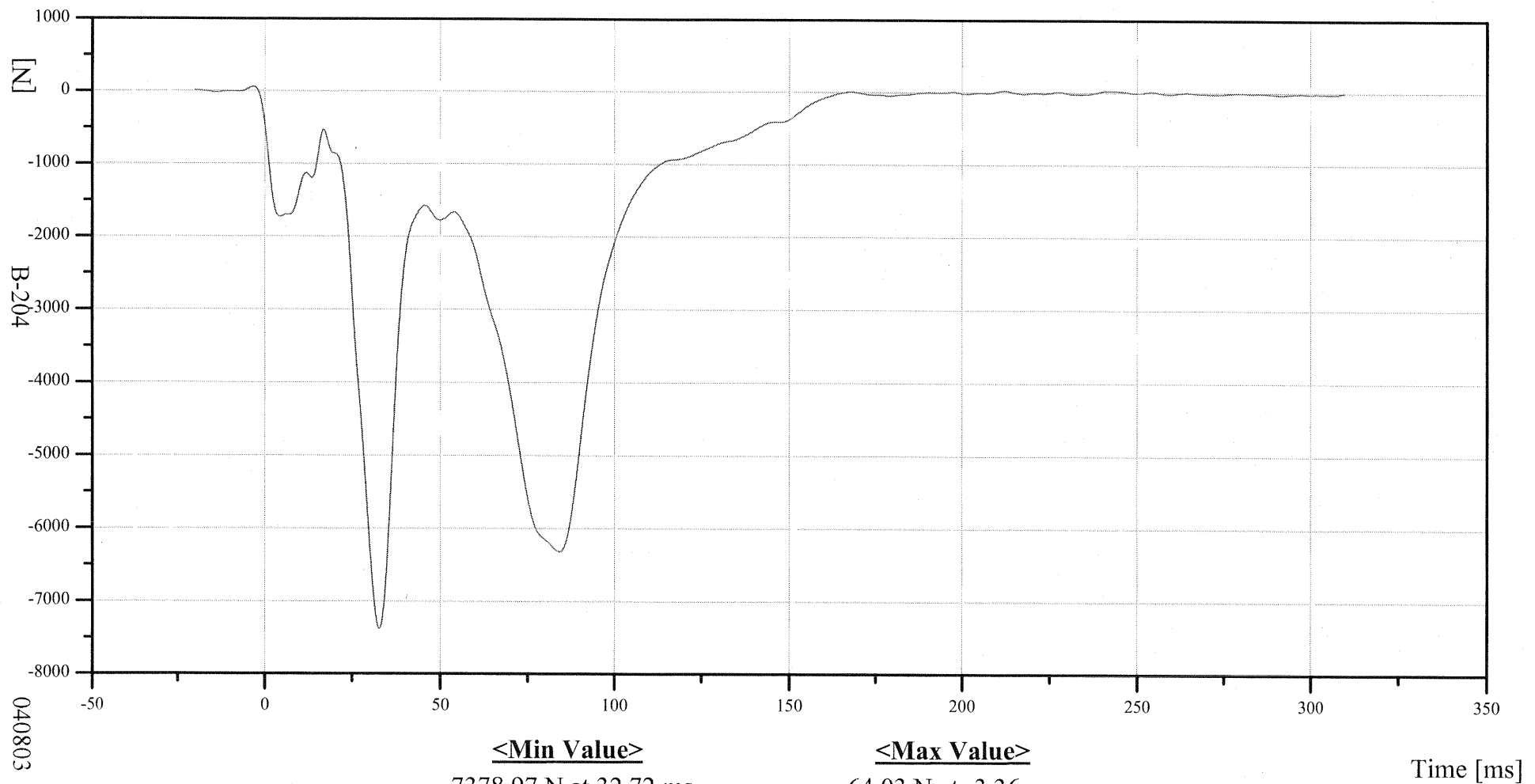
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0408



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

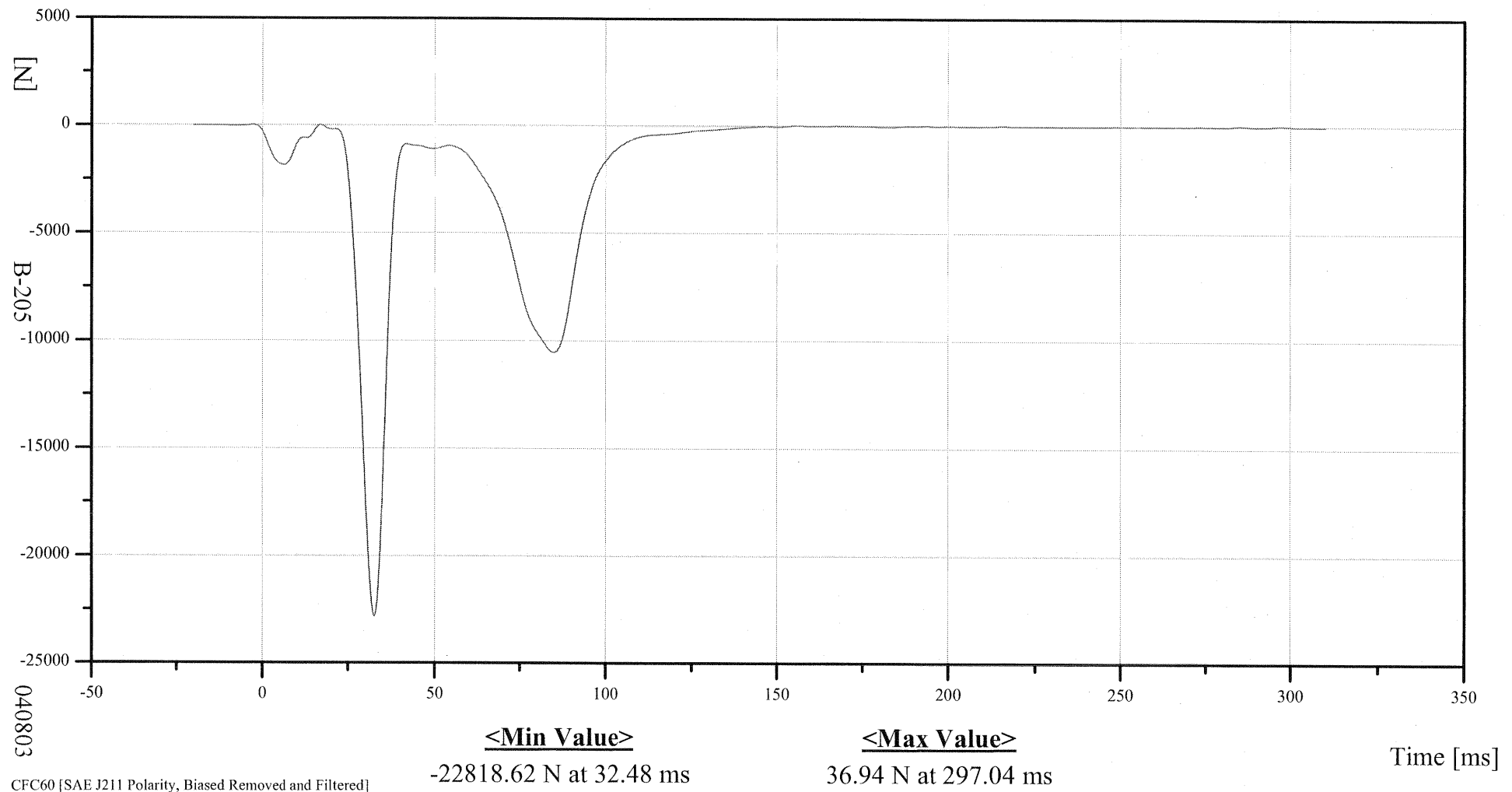
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0409





Transportation Research Center, Inc.

ROW 4 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

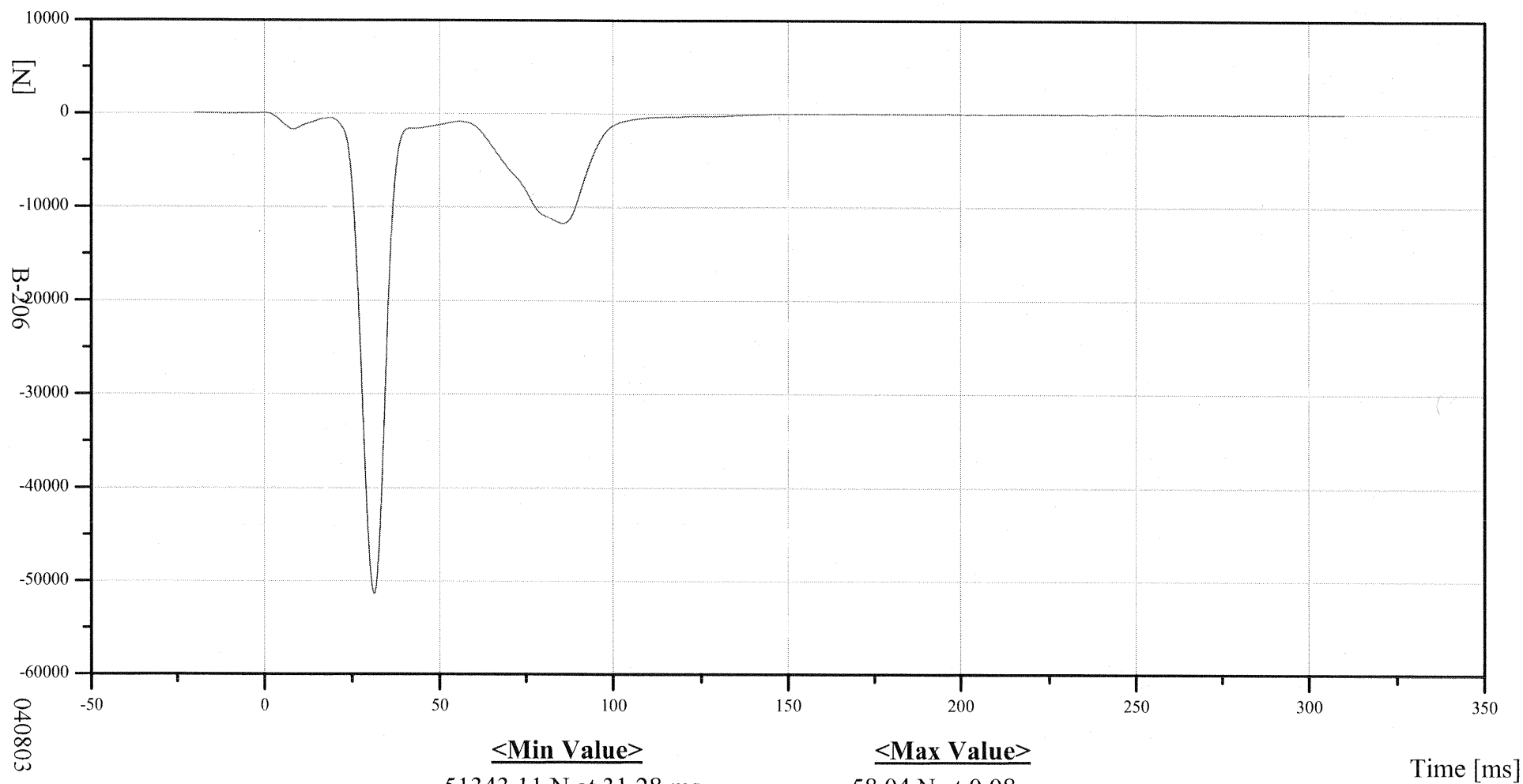
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0410



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

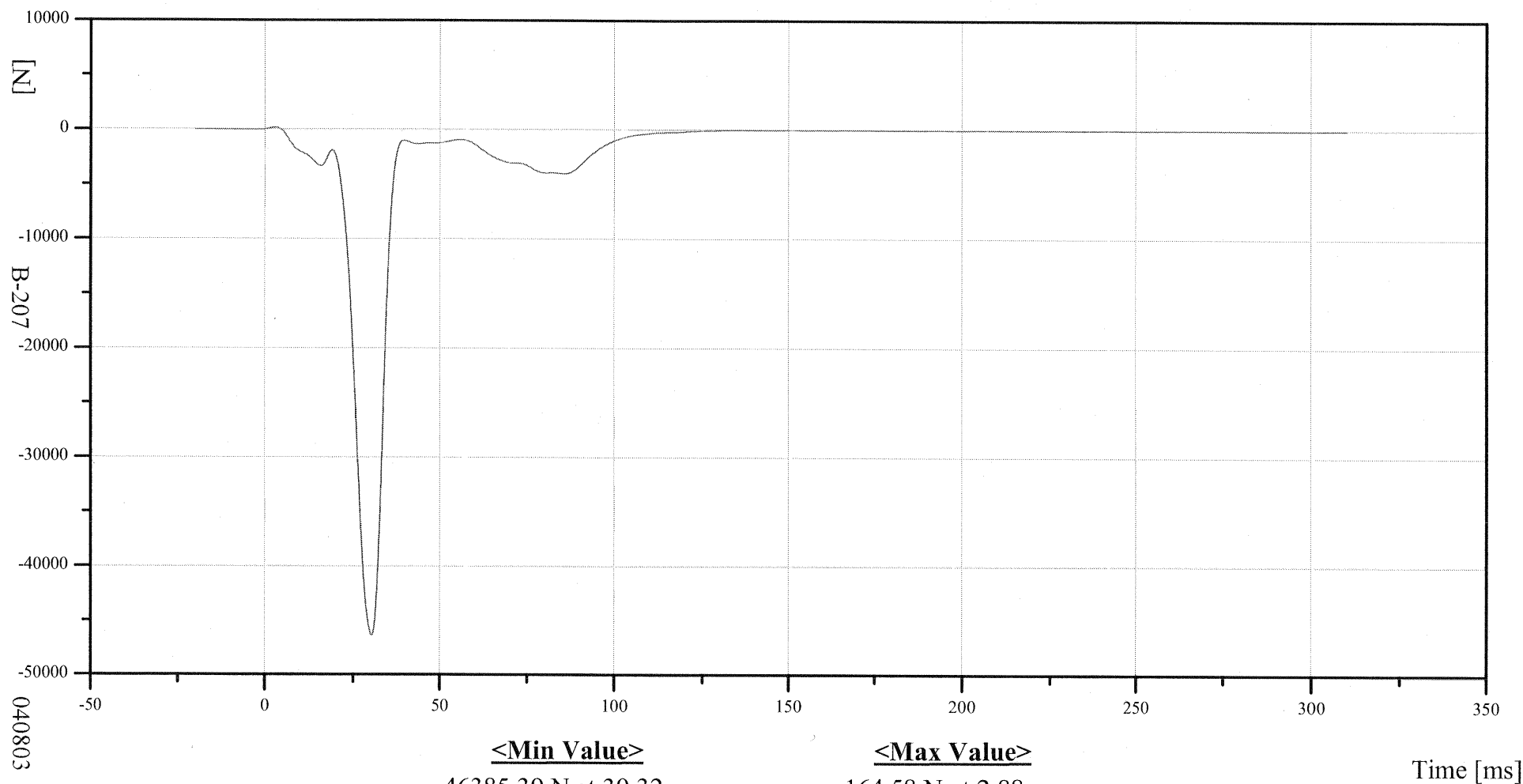
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0411



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

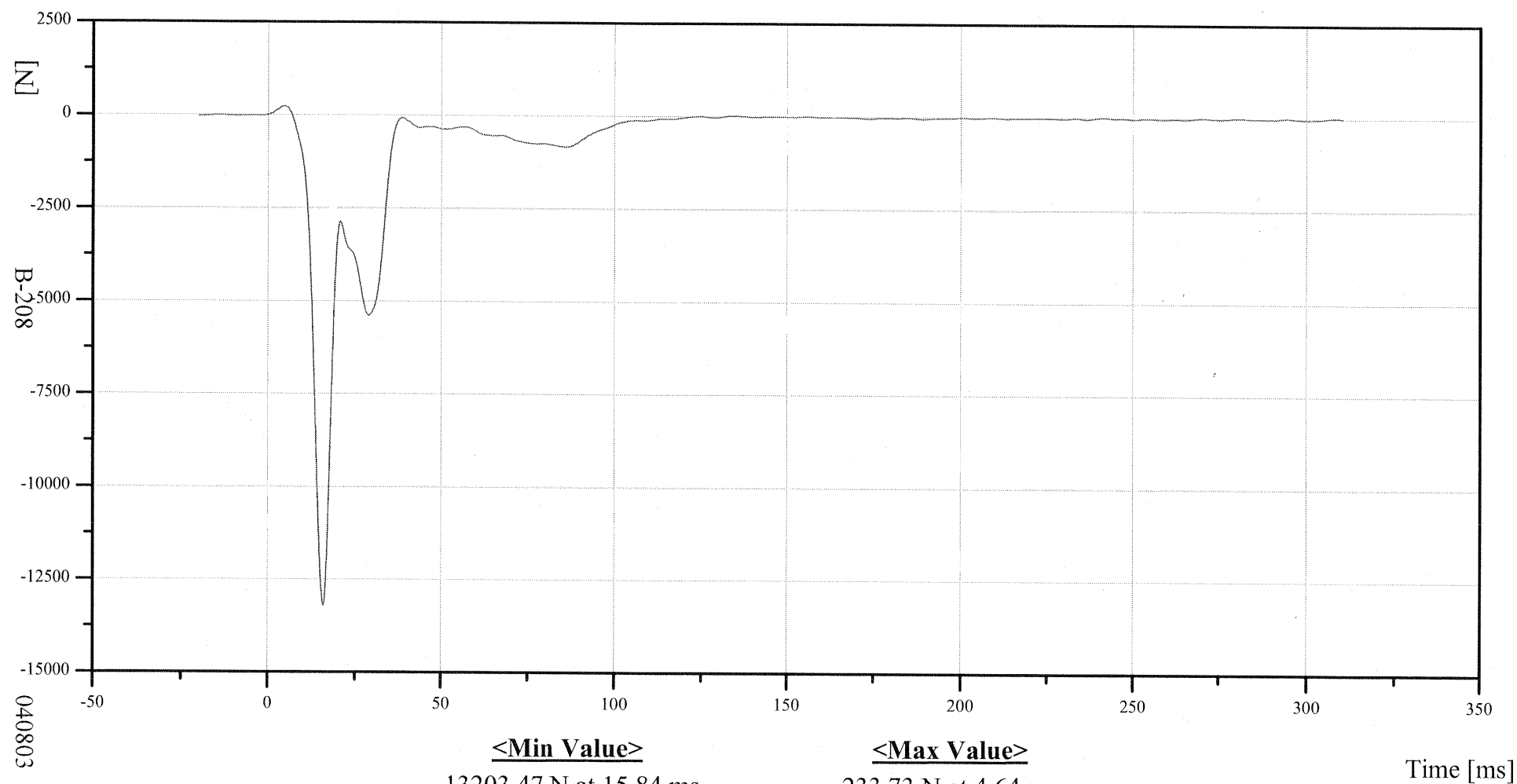
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0412



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

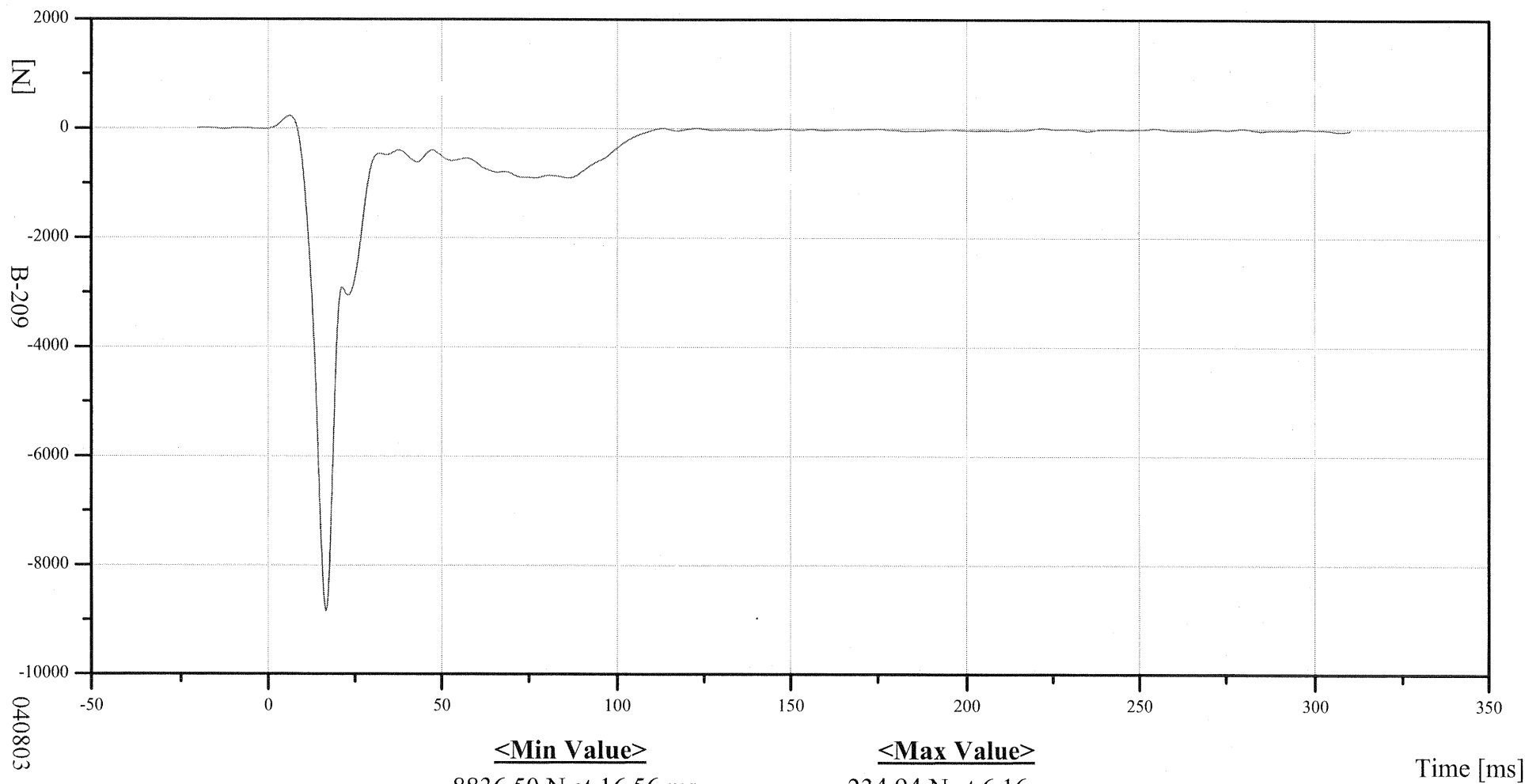
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0413



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

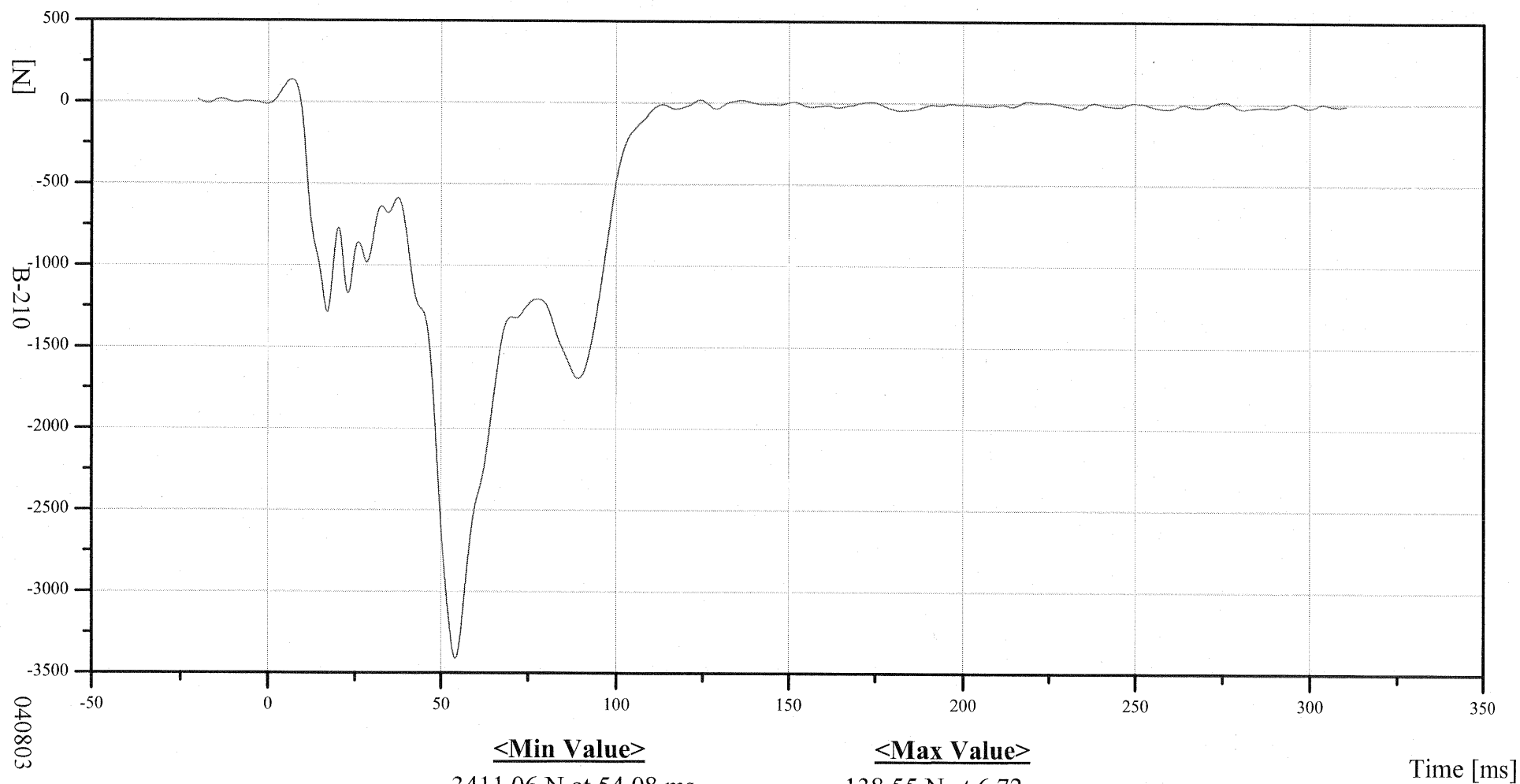
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0414



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 4 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

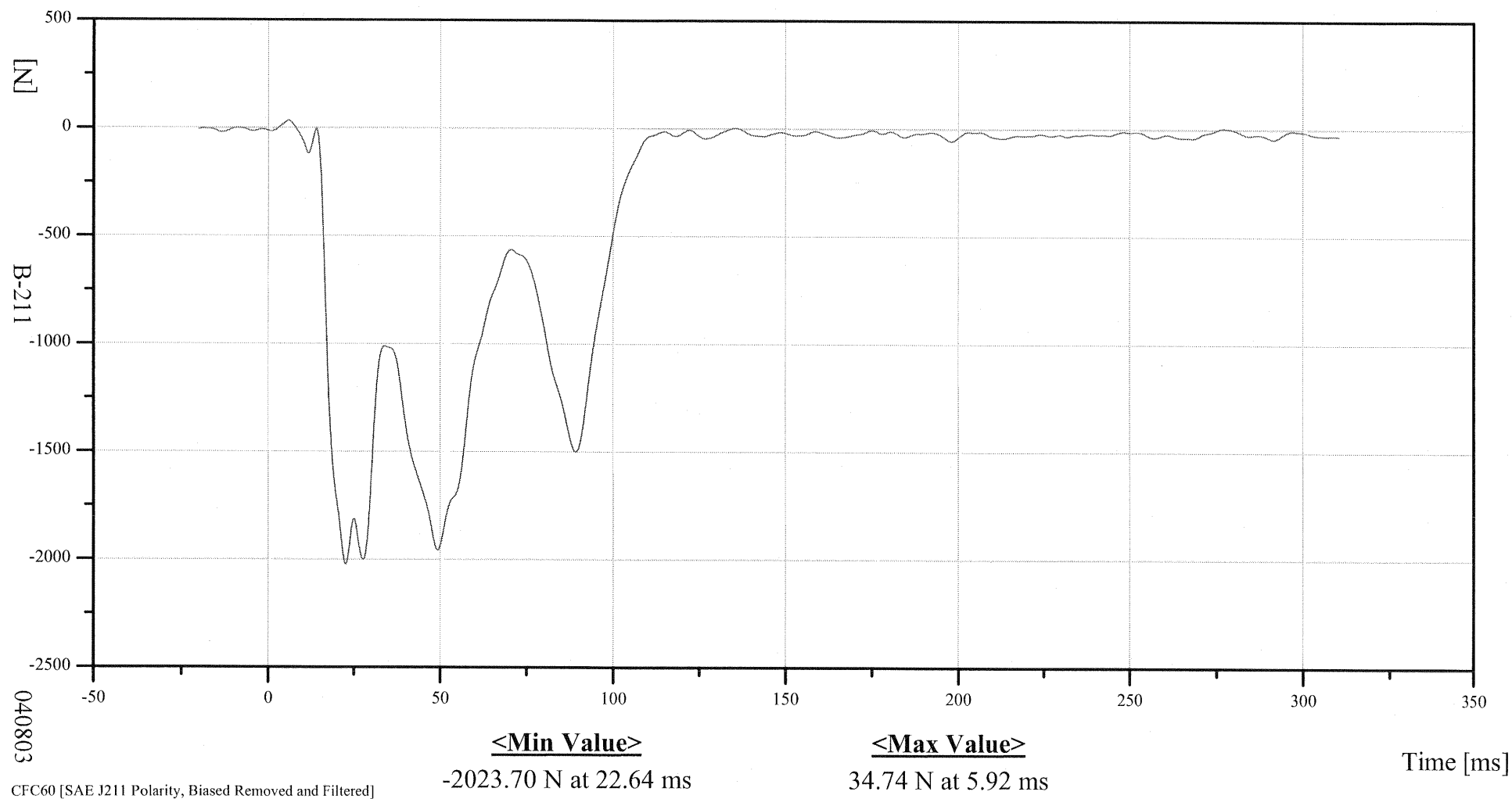
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0415





Transportation Research Center, Inc.

ROW 4 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

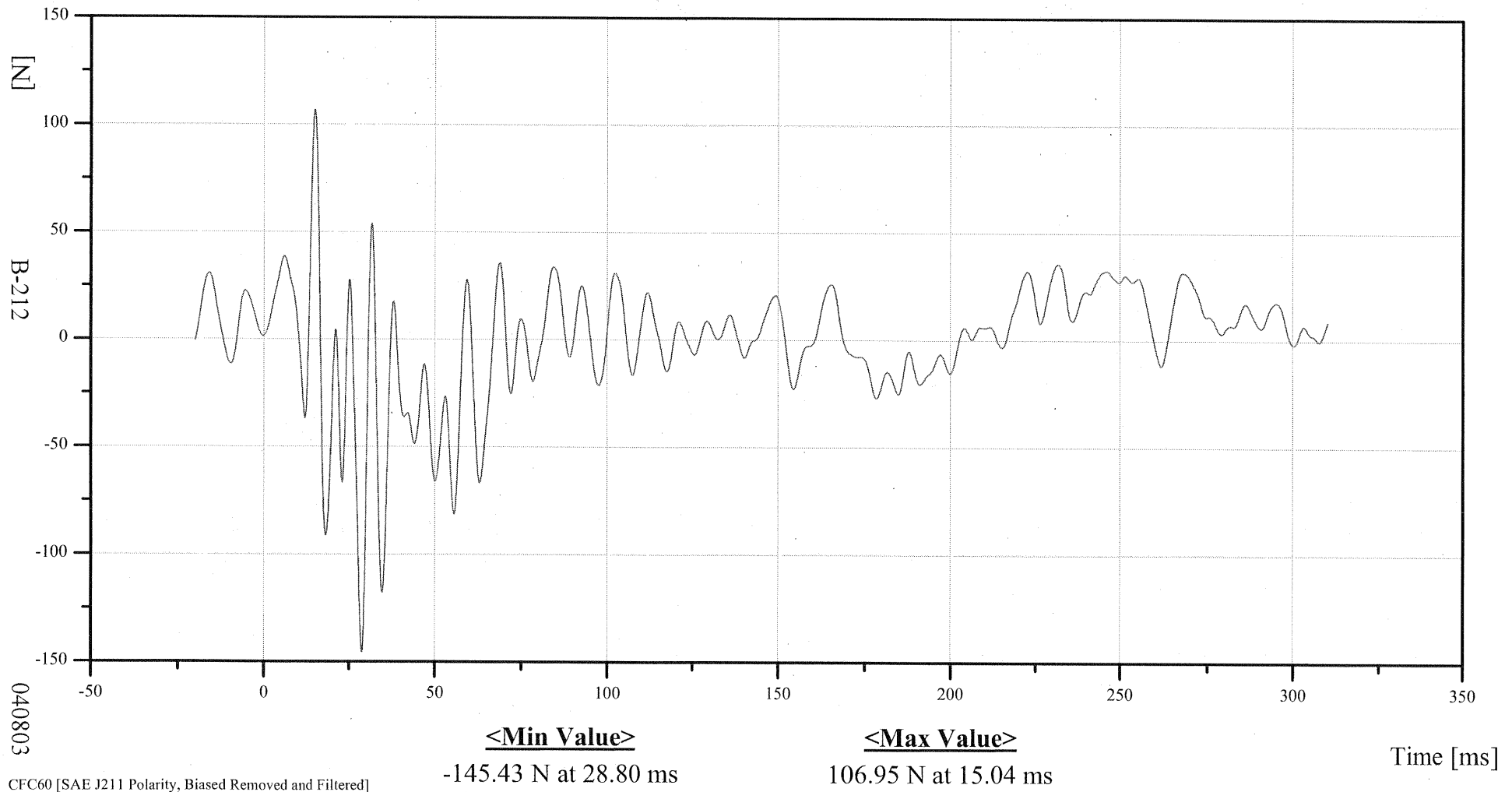
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0416





Transportation Research Center, Inc.

ROW 5 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

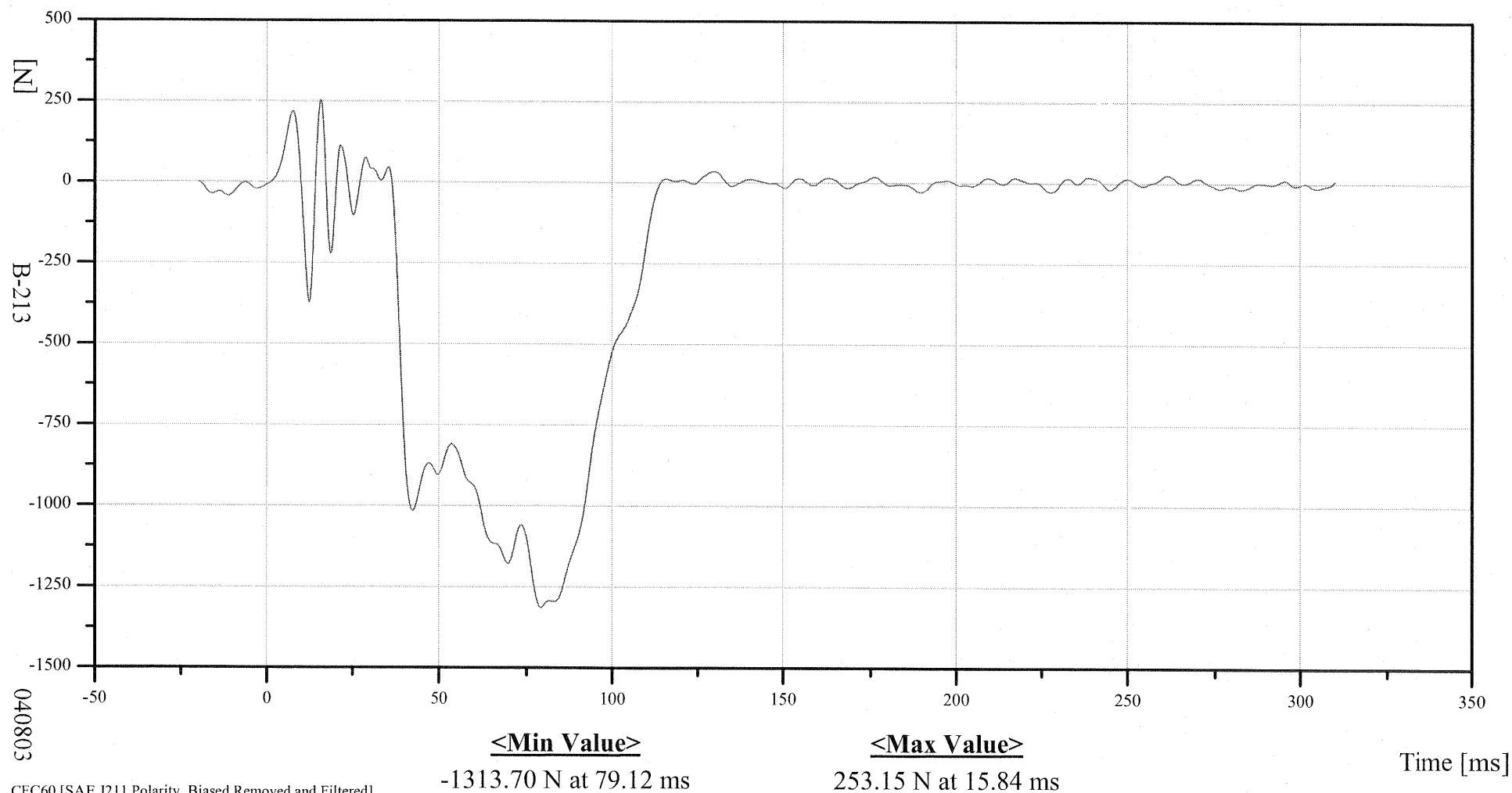
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0501





Transportation Research Center, Inc.

ROW 5 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

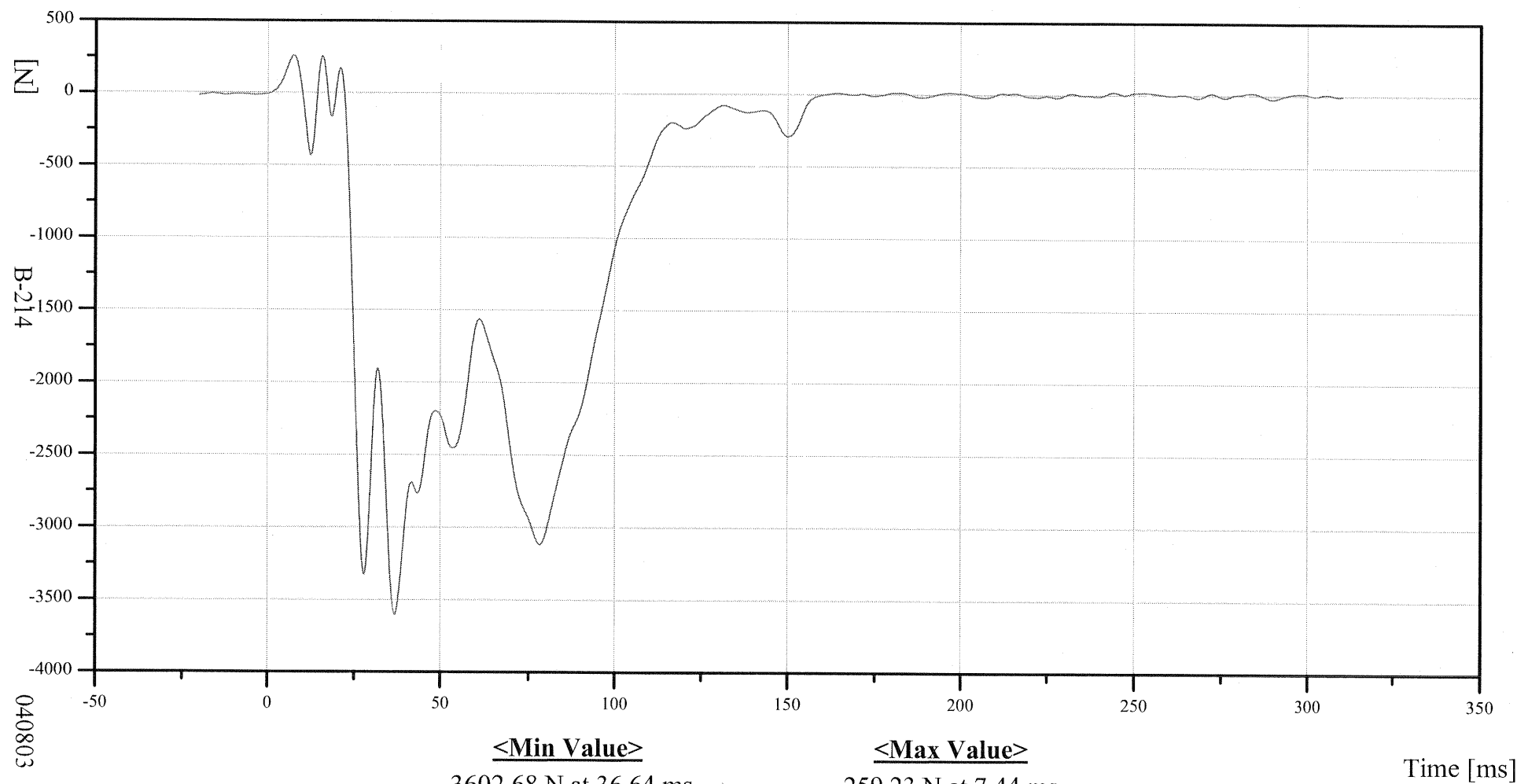
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0502



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

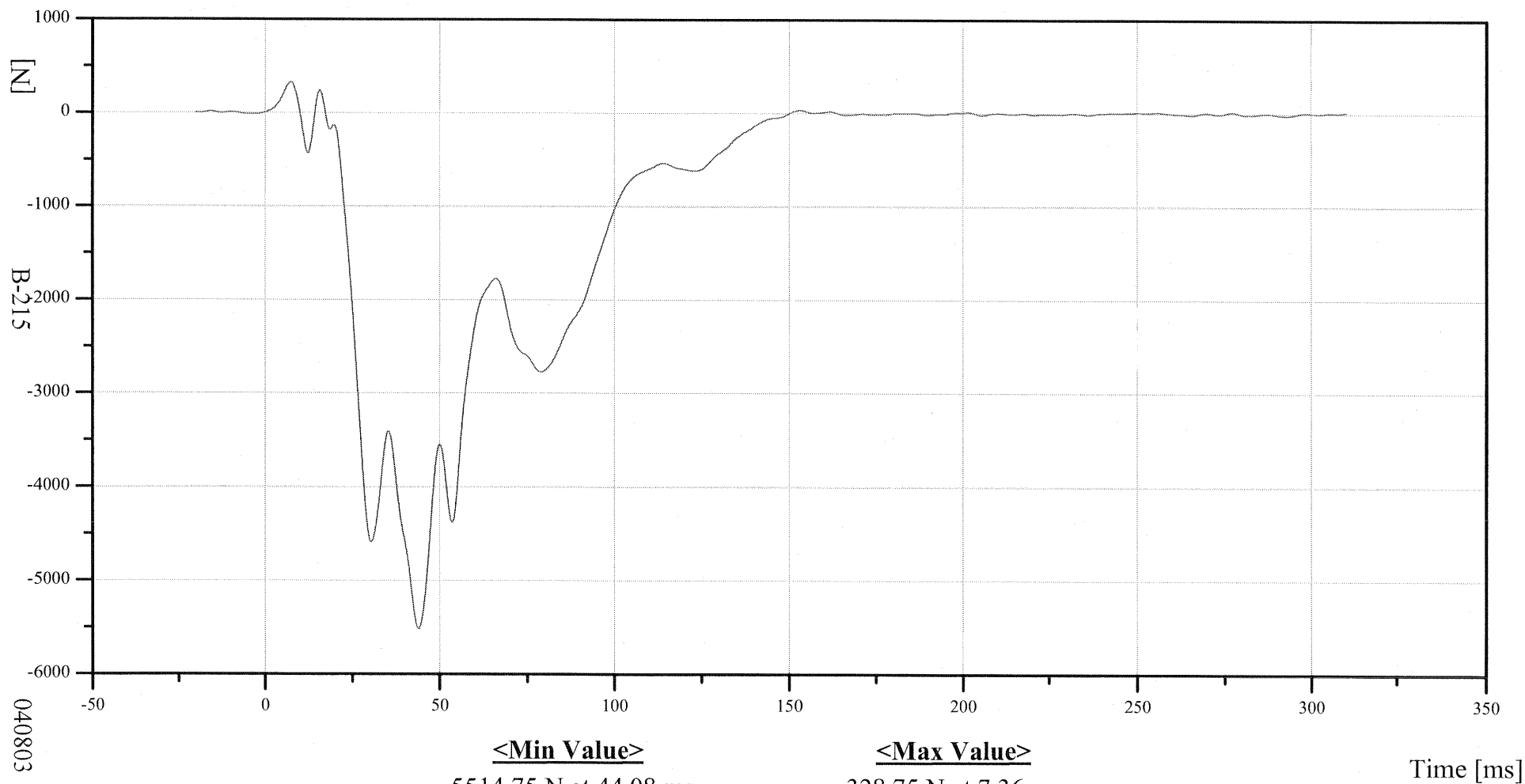
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0503



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

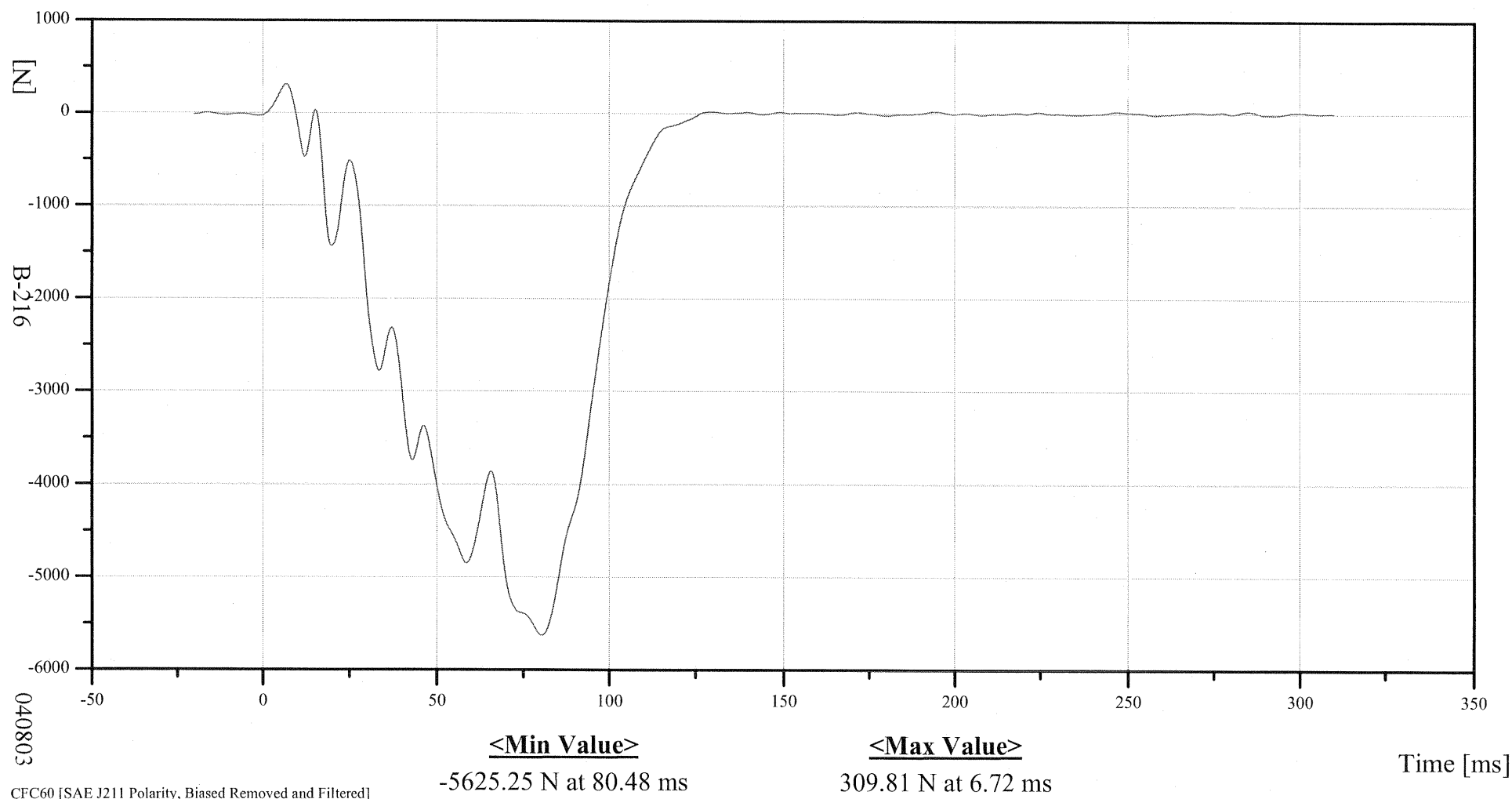
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0504





Transportation Research Center, Inc.

ROW 5 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

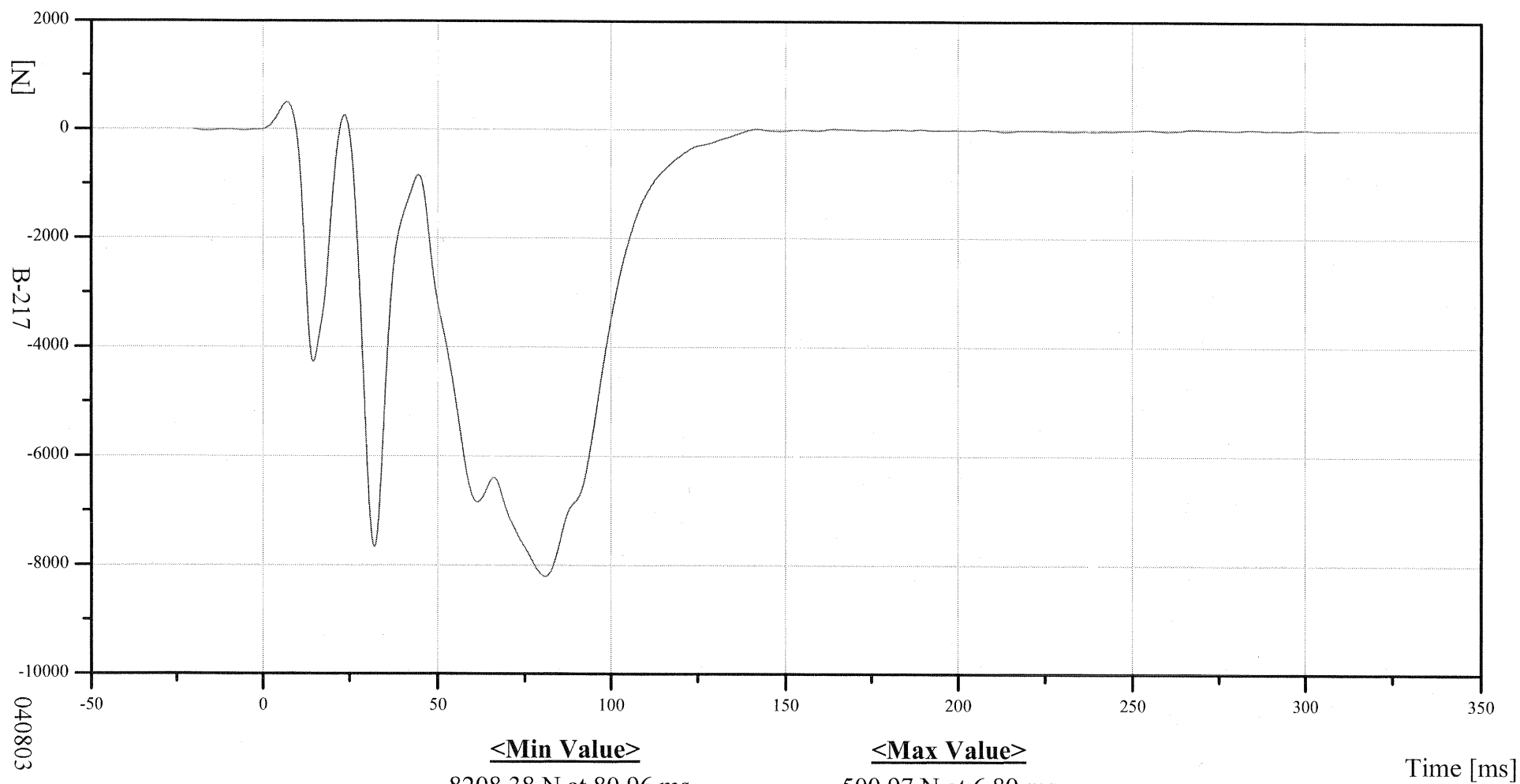
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0505



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

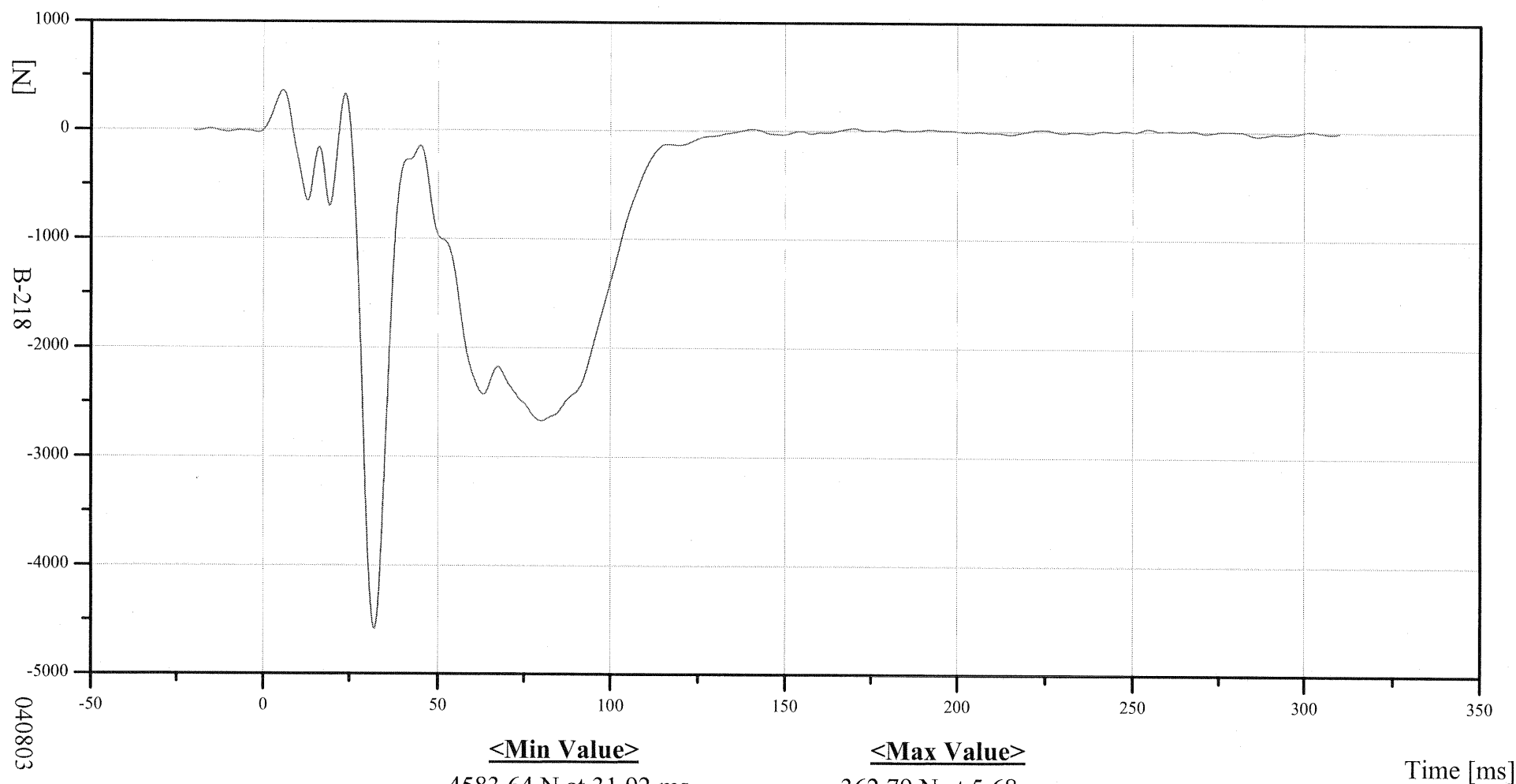
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0506



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

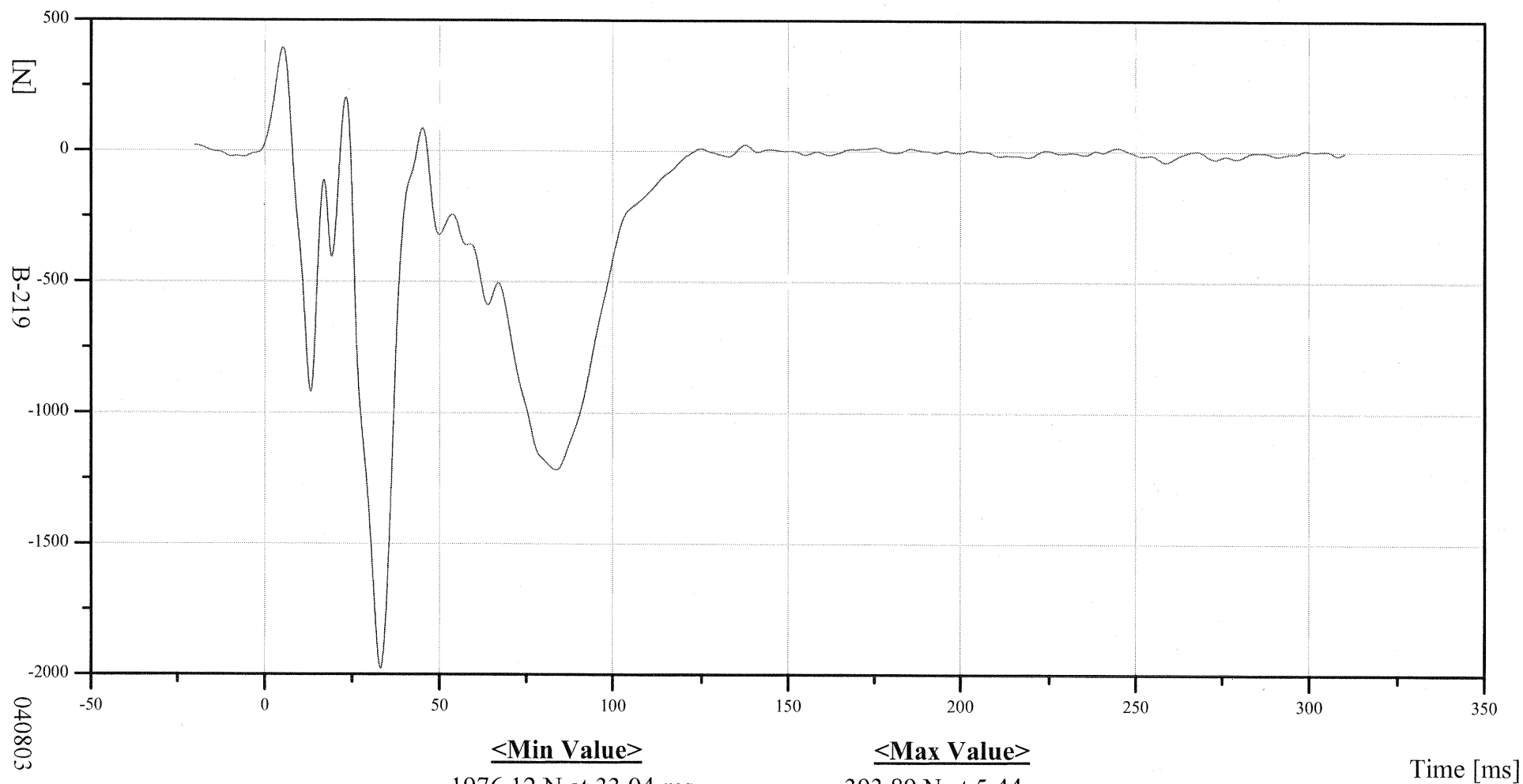
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0507



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>
-1976.12 N at 33.04 ms

<Max Value>
393.89 N at 5.44 ms

Time [ms]



Transportation Research Center, Inc.

ROW 5 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

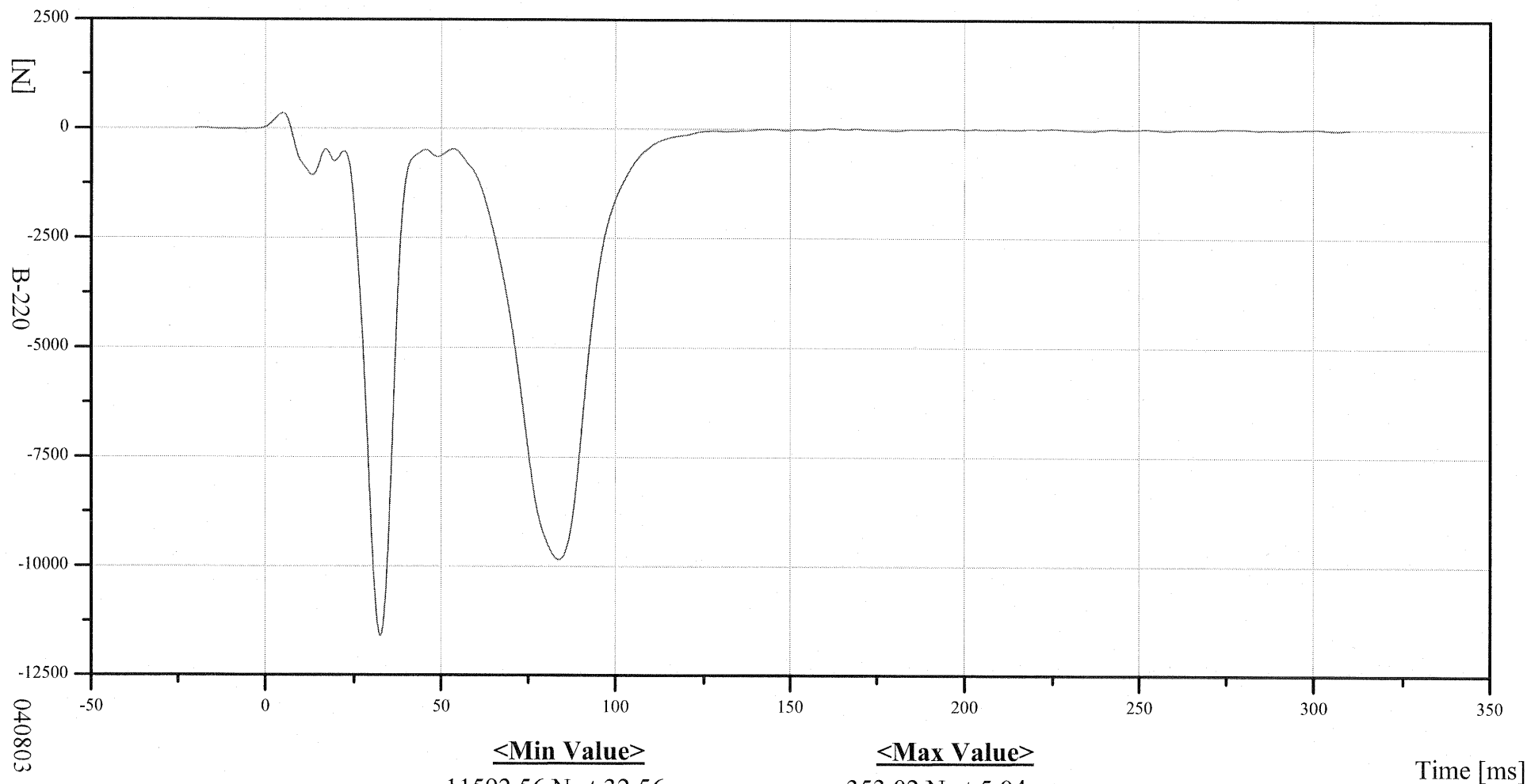
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0508



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

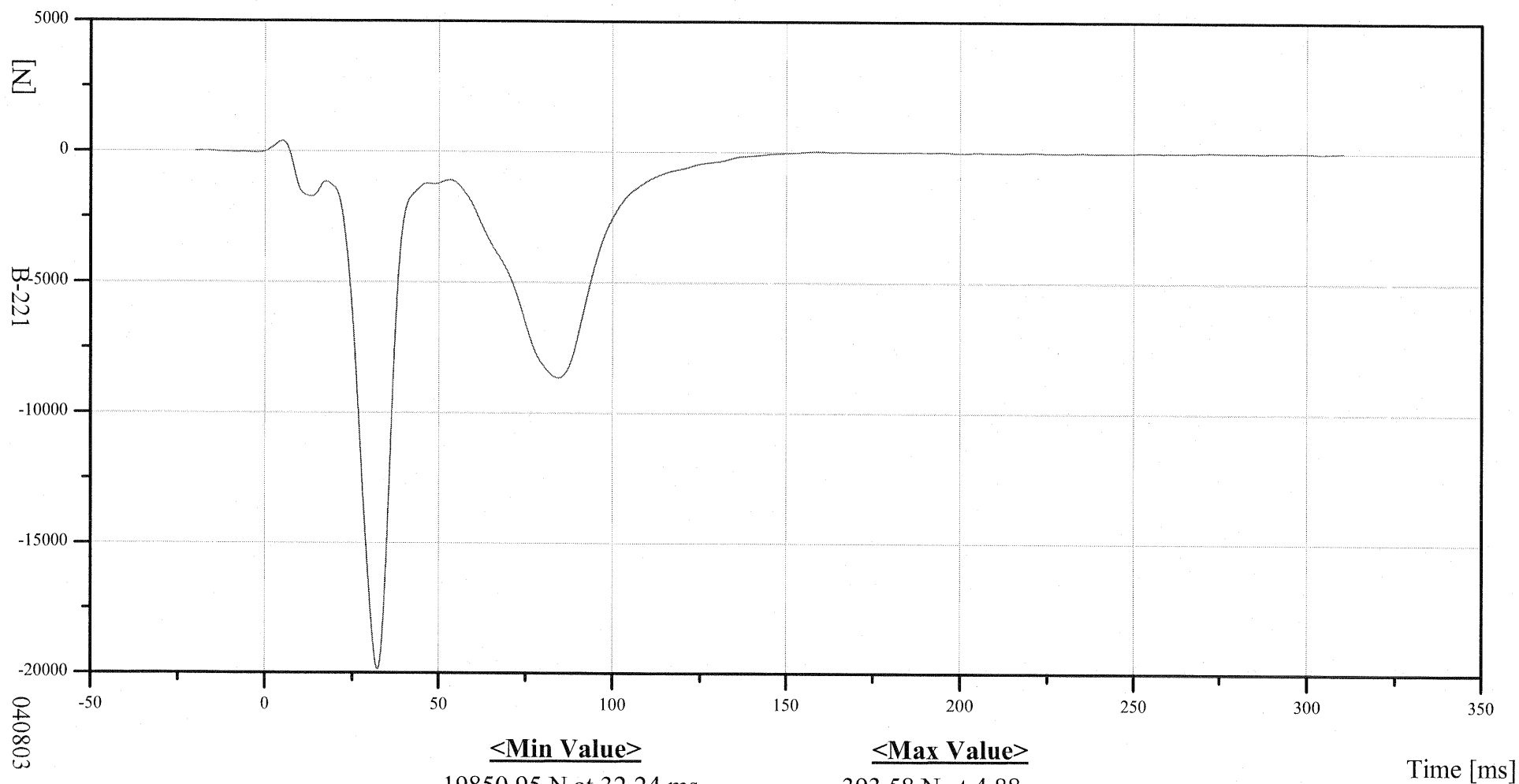
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0509



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

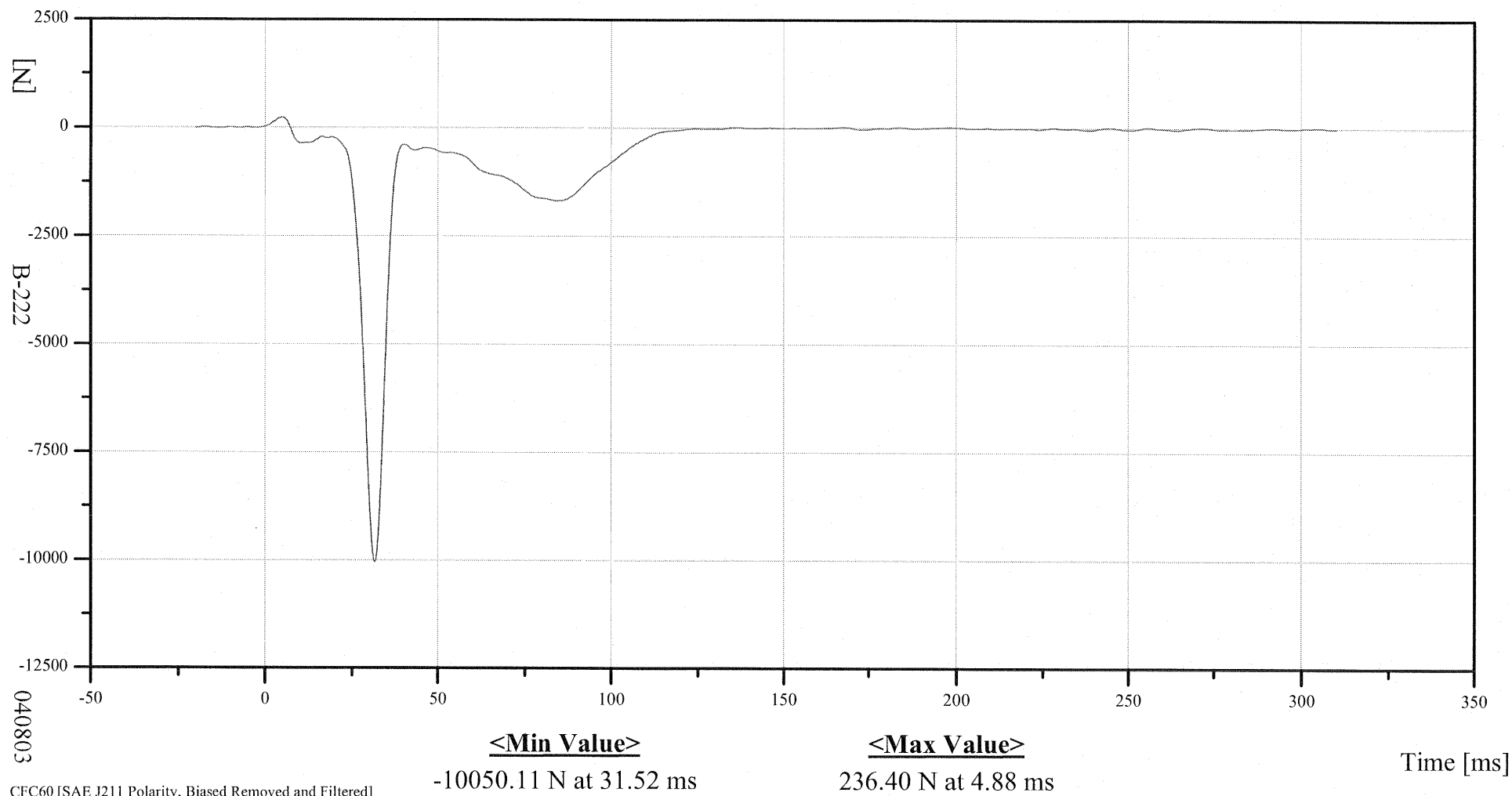
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0510



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

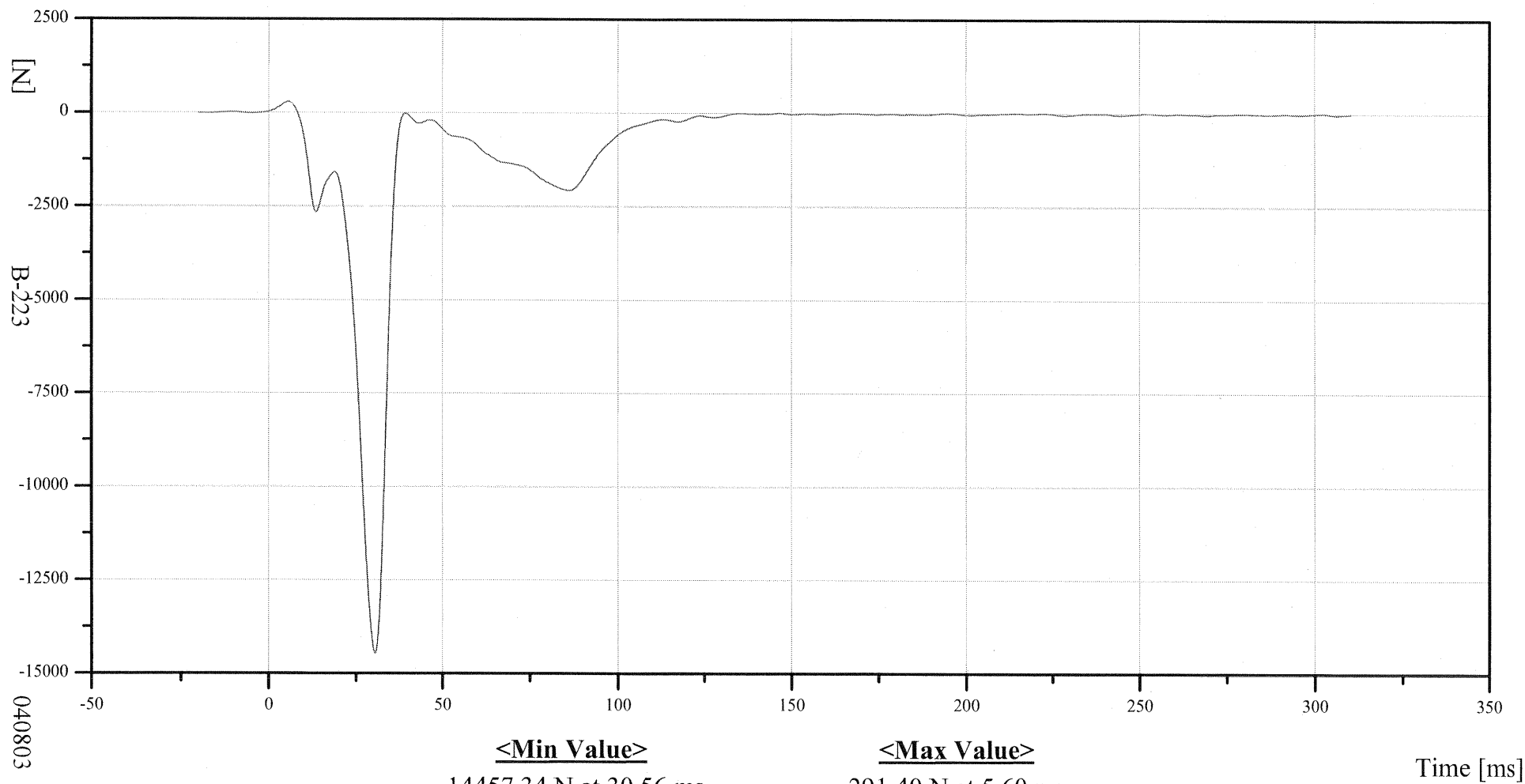
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0511





Transportation Research Center, Inc.

ROW 5 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

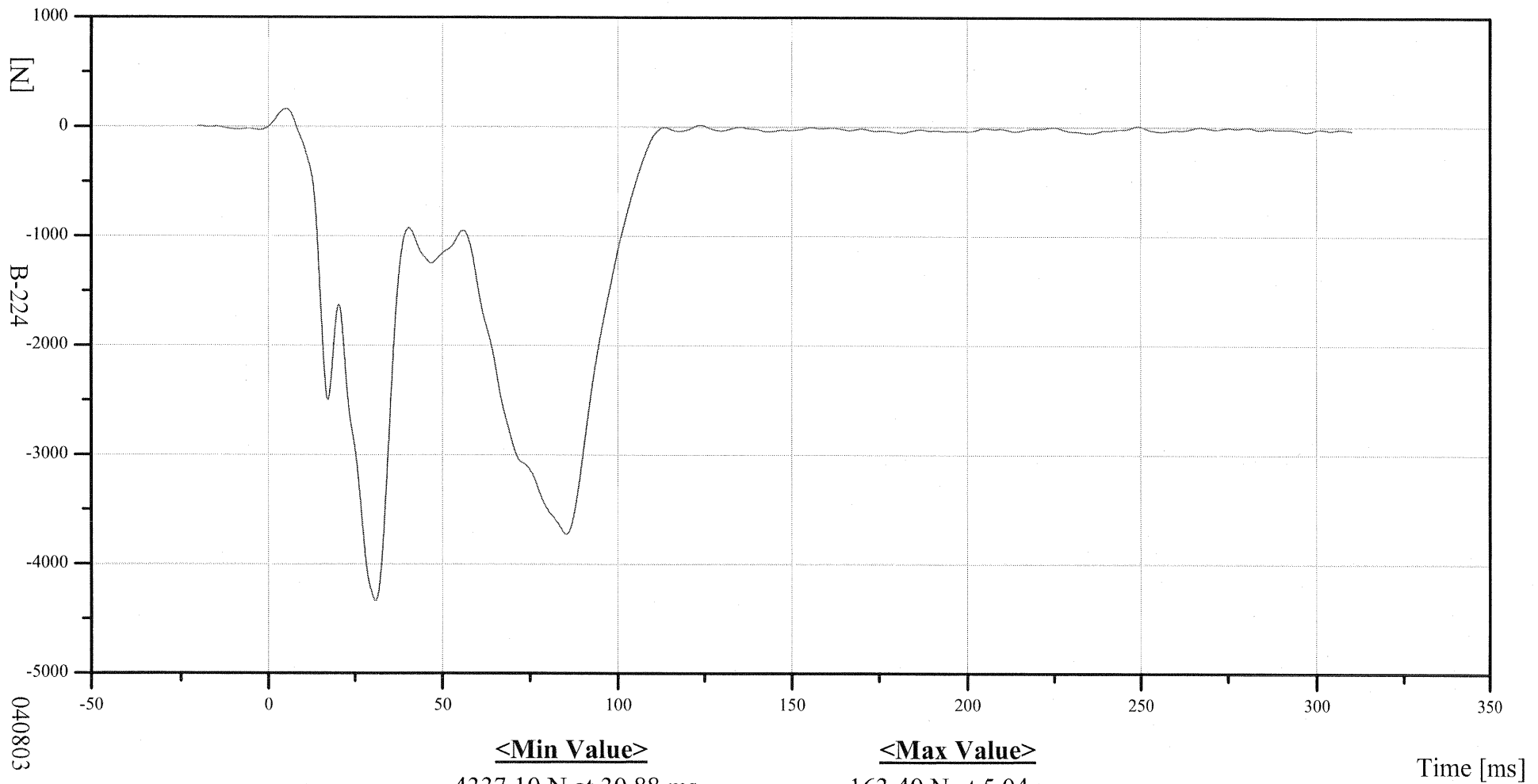
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0512



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

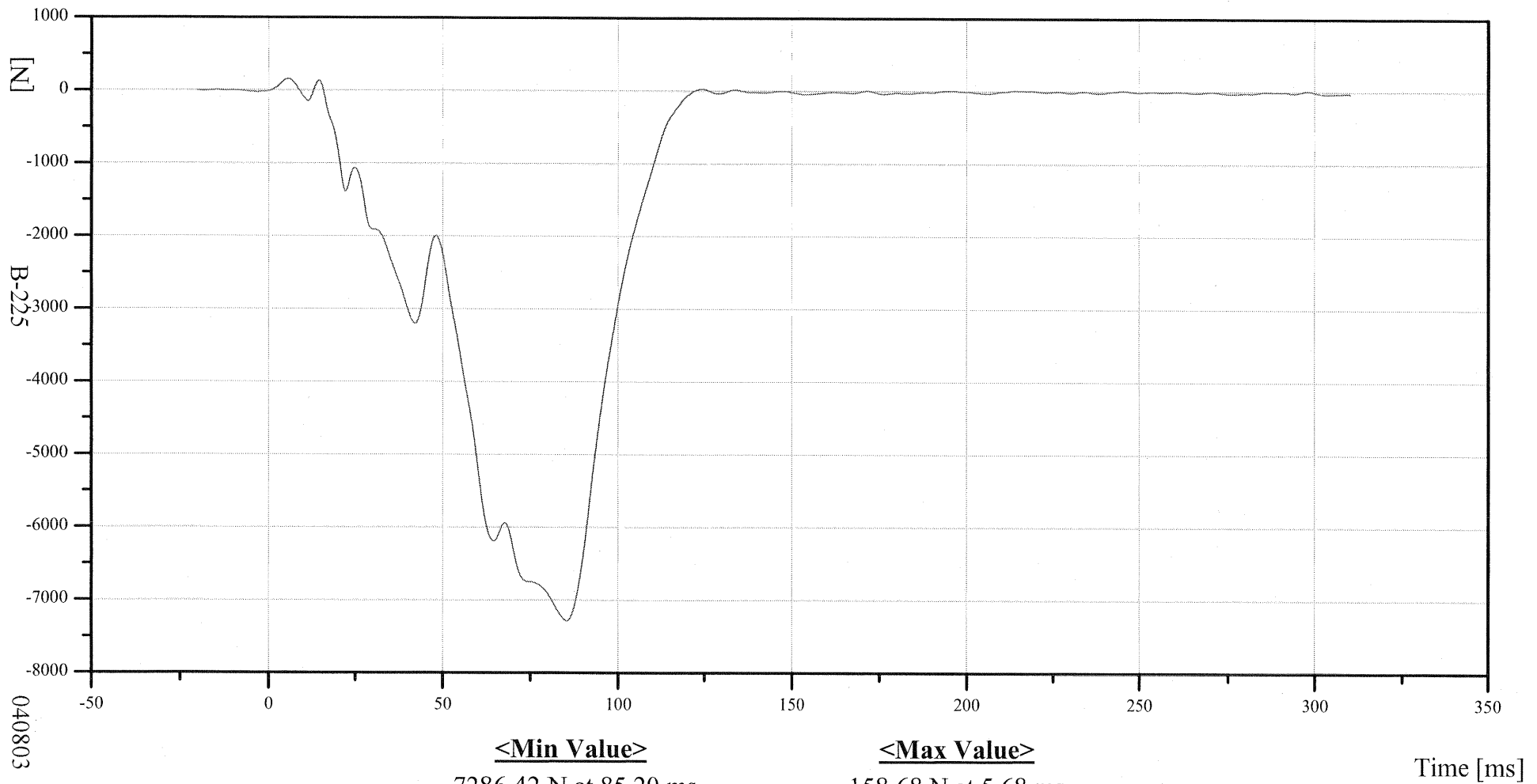
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0513



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

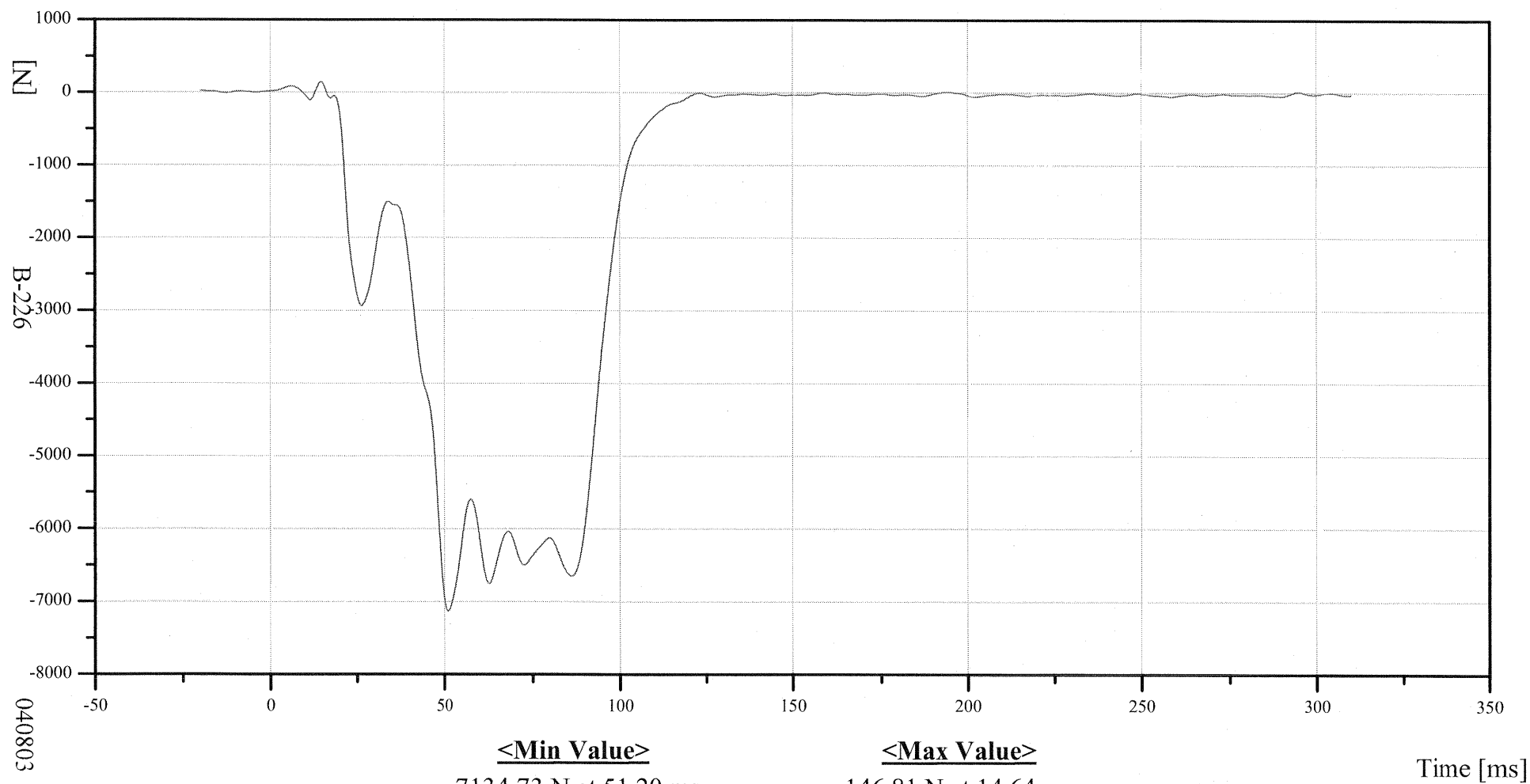
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0514



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 5 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

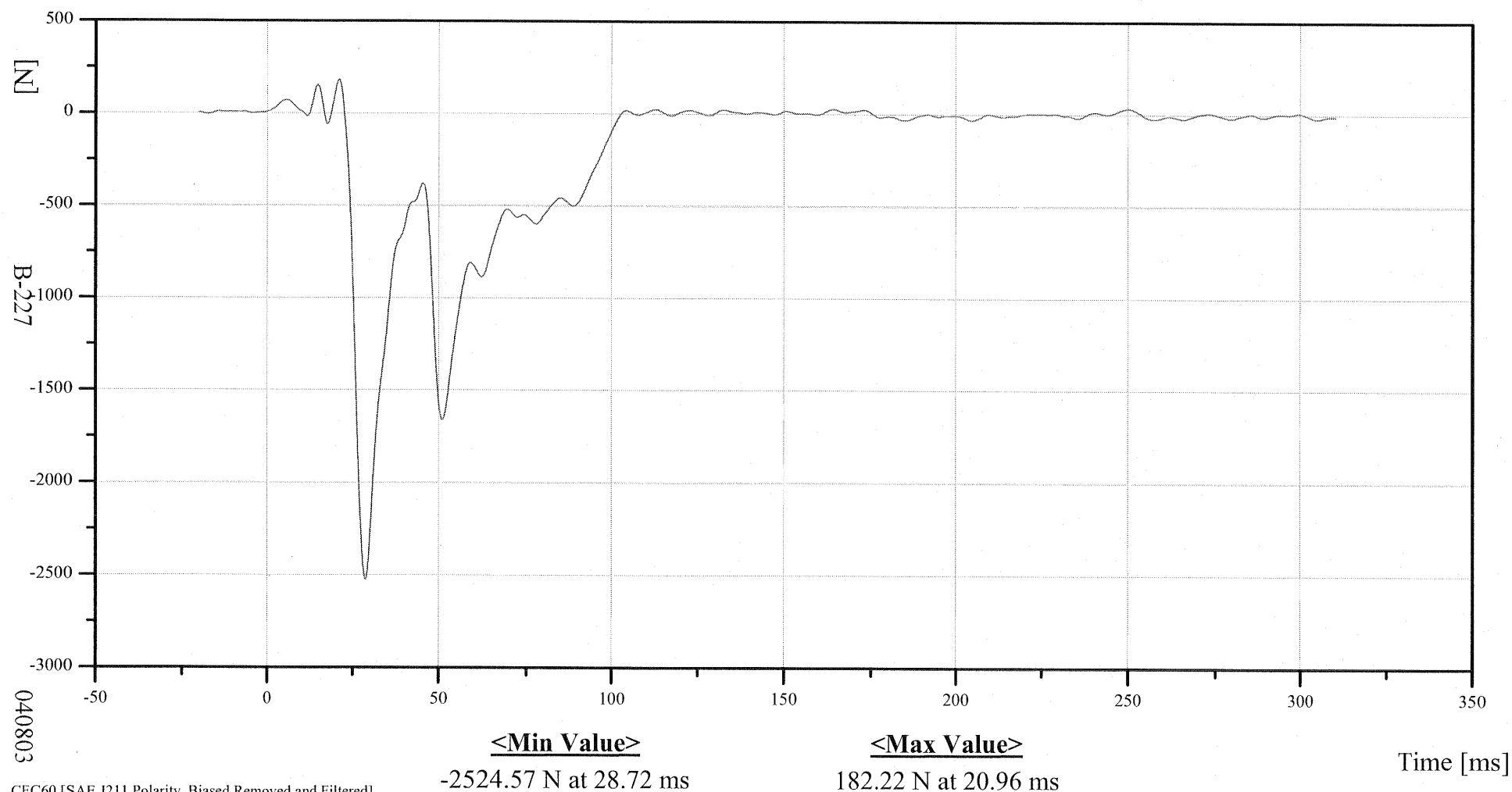
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0515





Transportation Research Center, Inc.

ROW 5 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

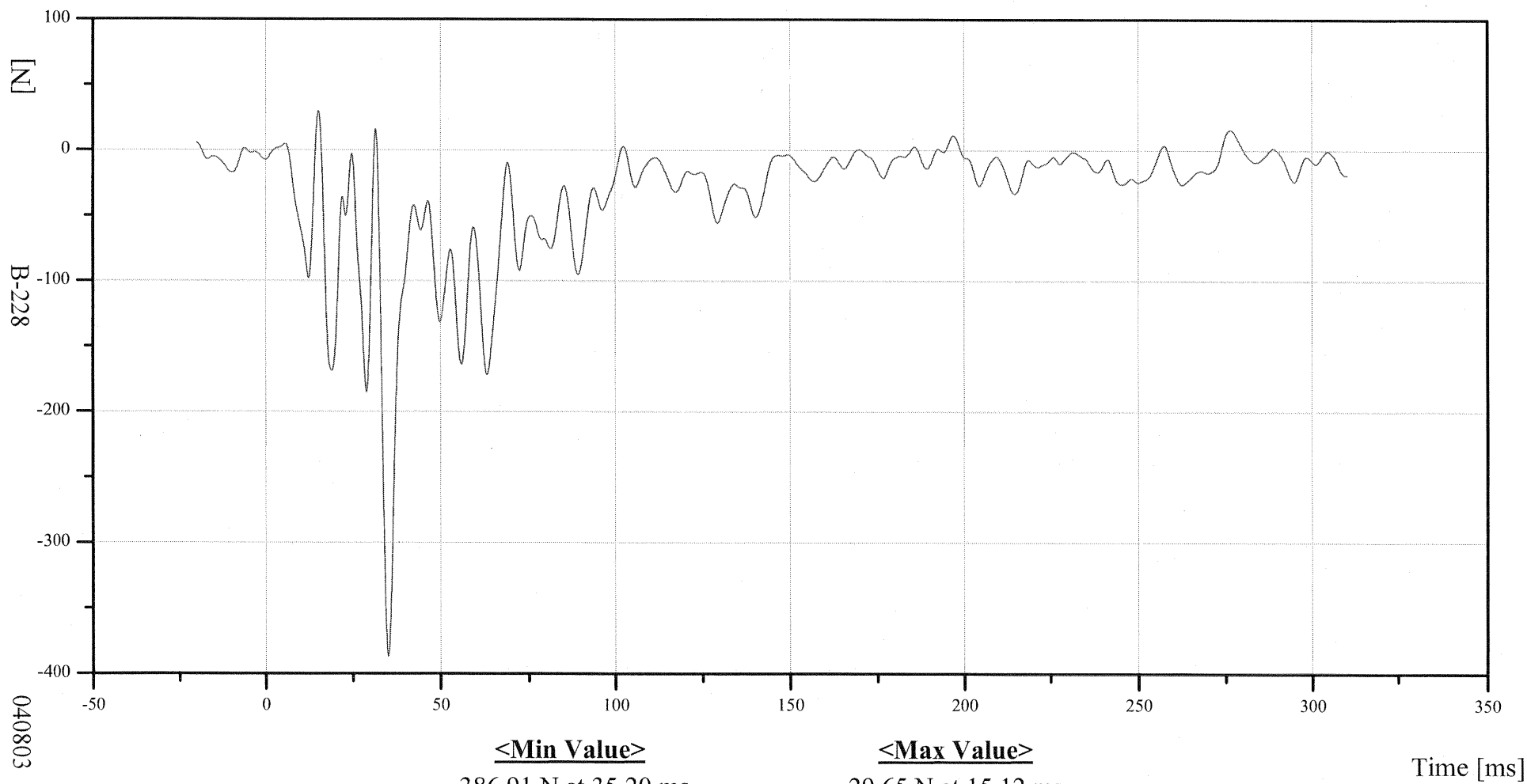
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0516



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

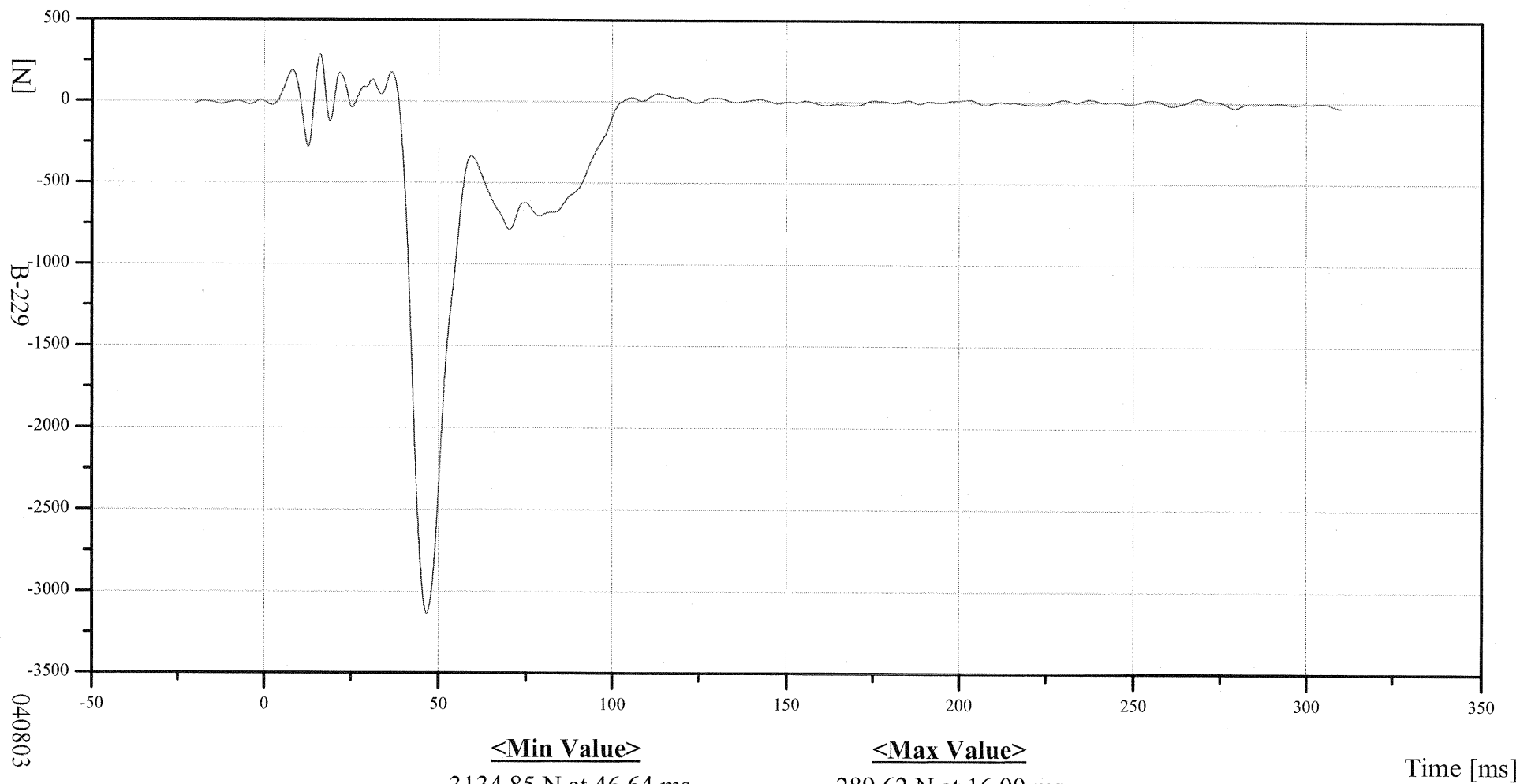
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0601



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

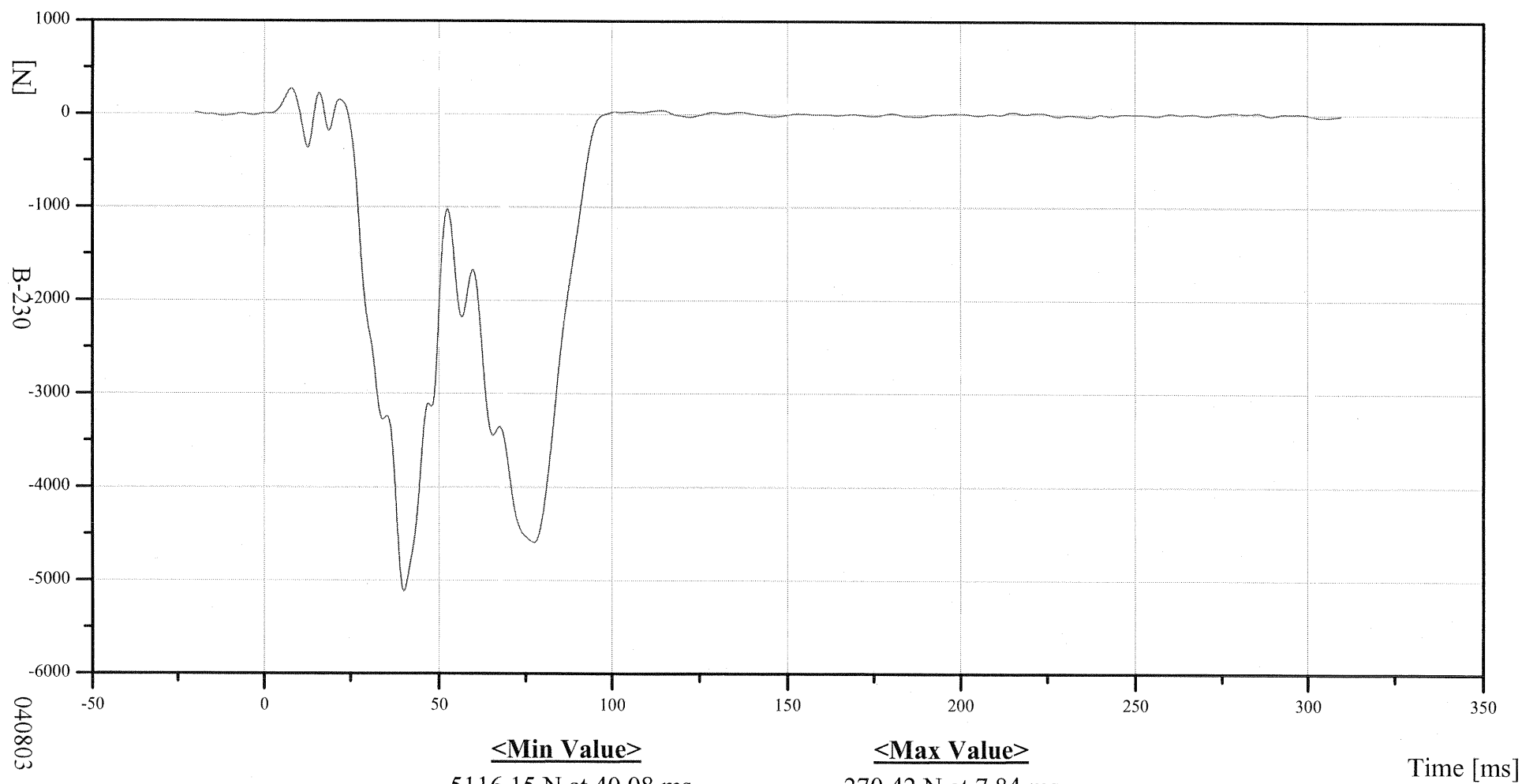
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0602



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

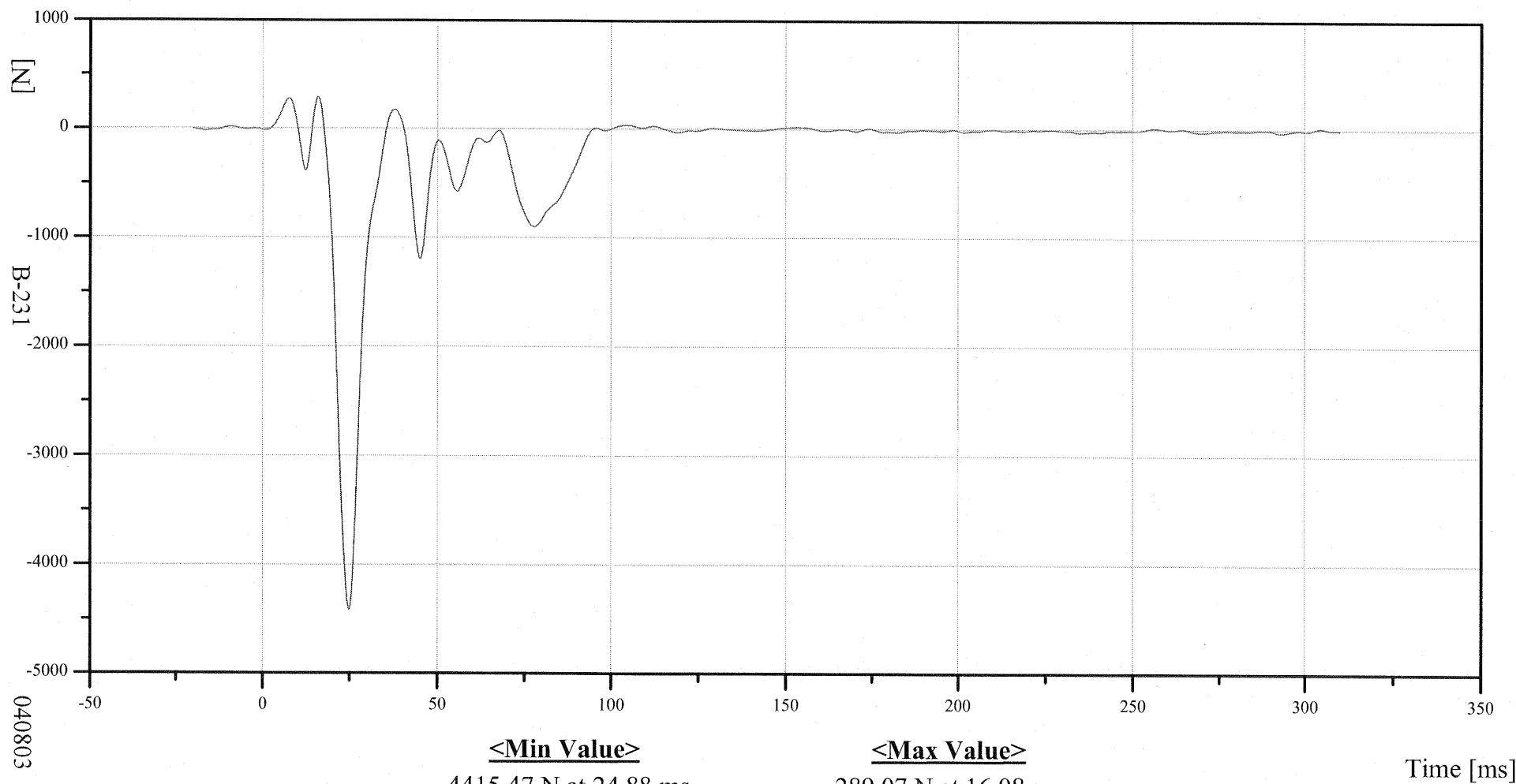
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0603



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

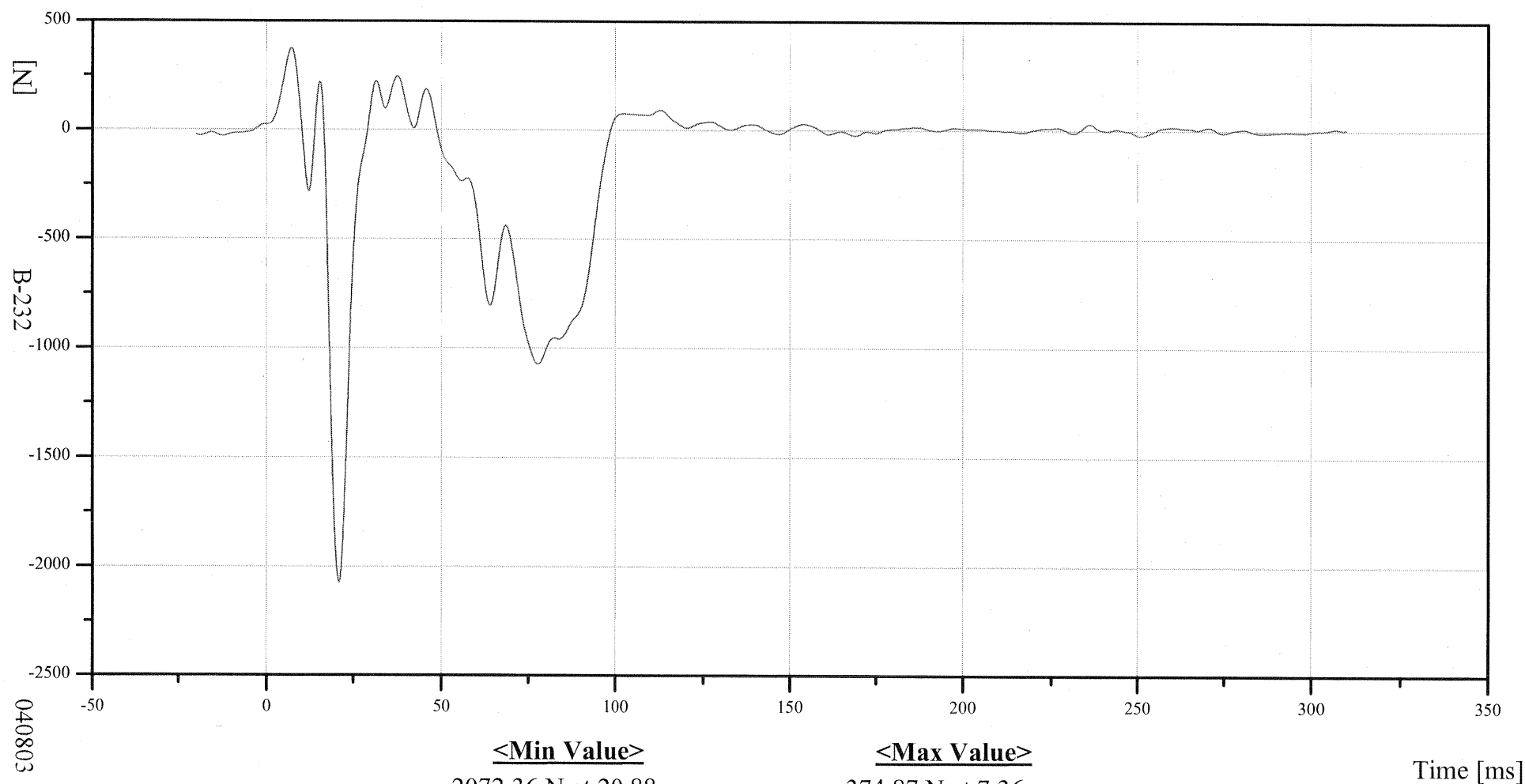
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0604



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

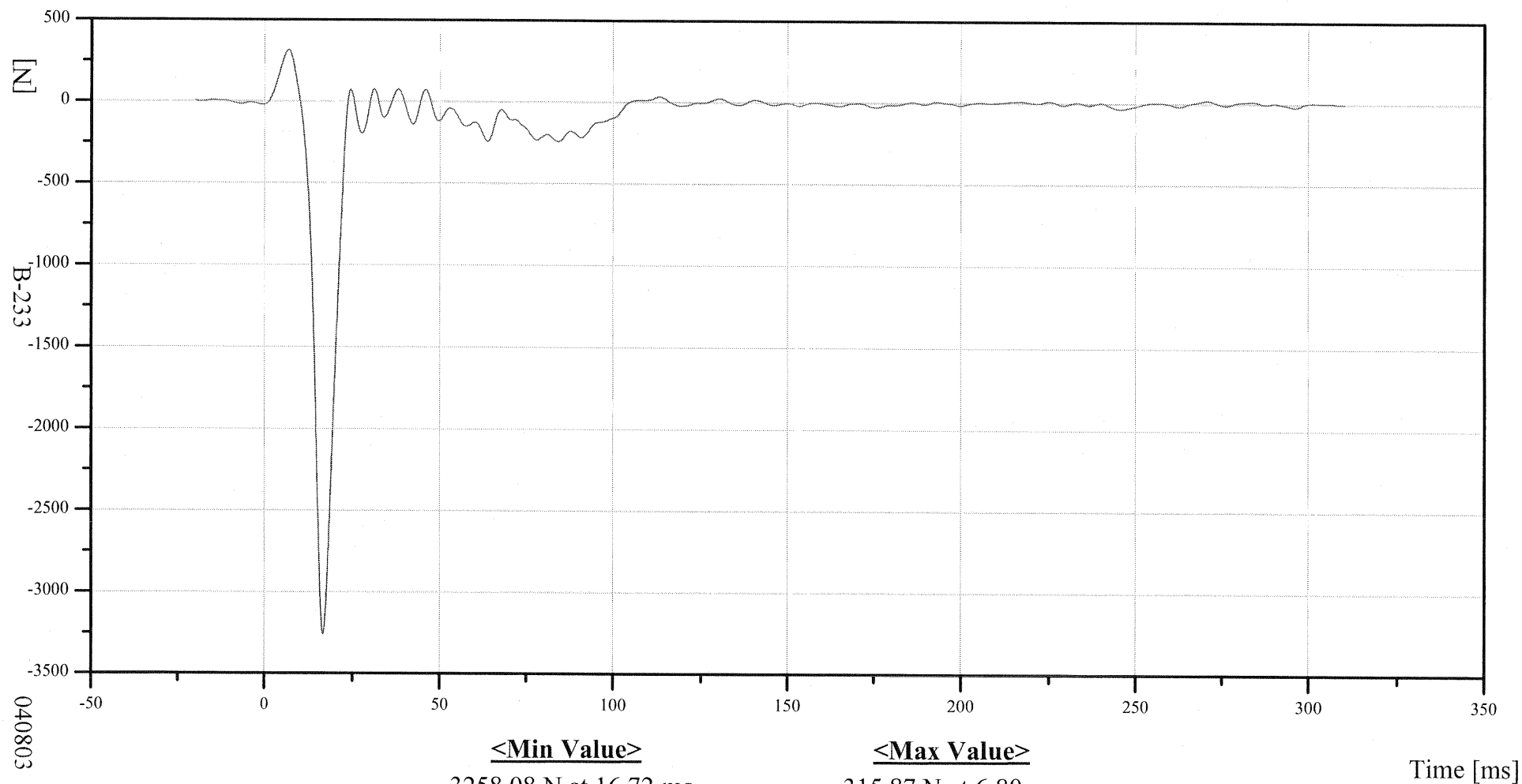
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0605



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

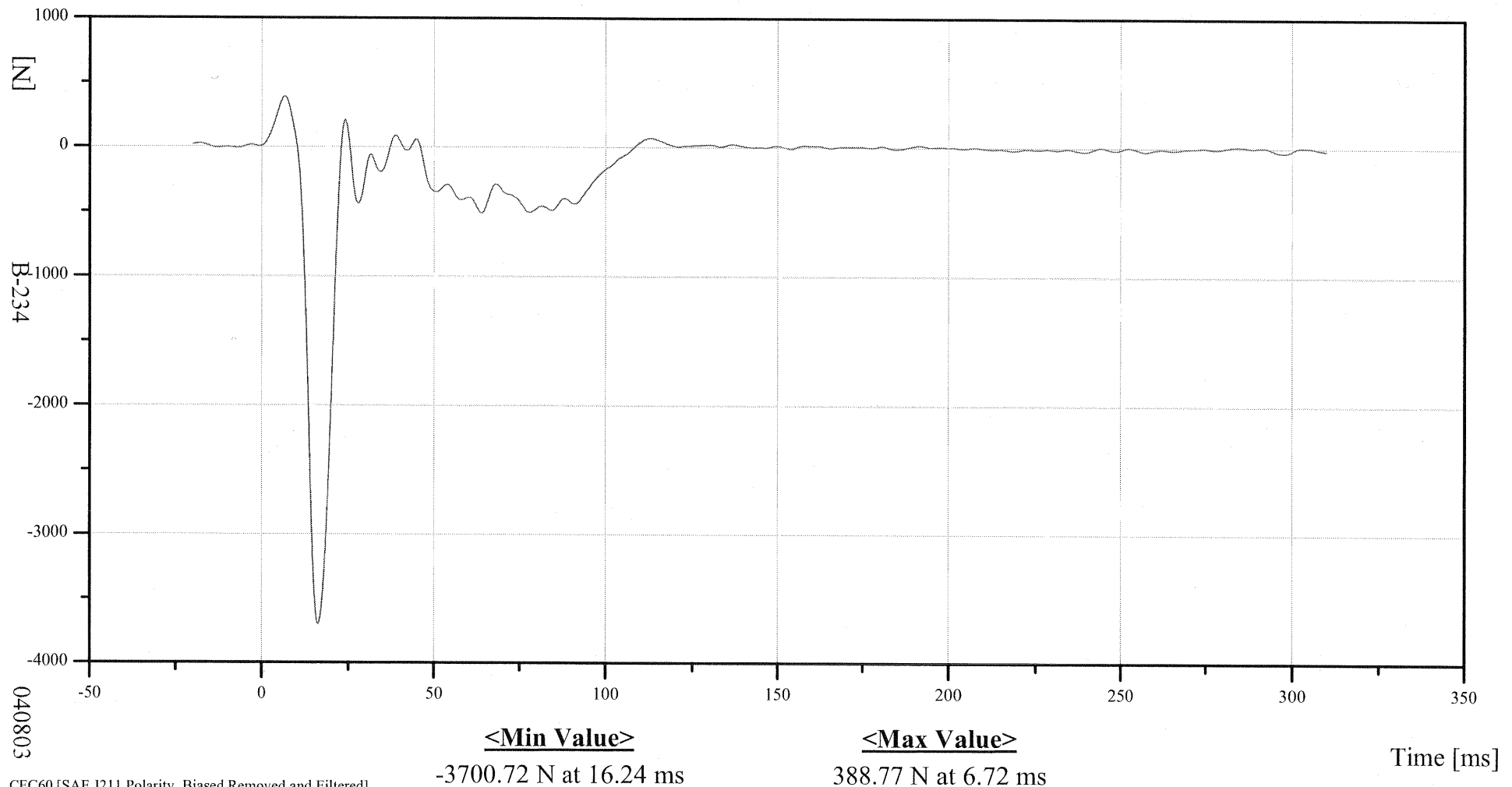
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0606





Transportation Research Center, Inc.

ROW 6 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

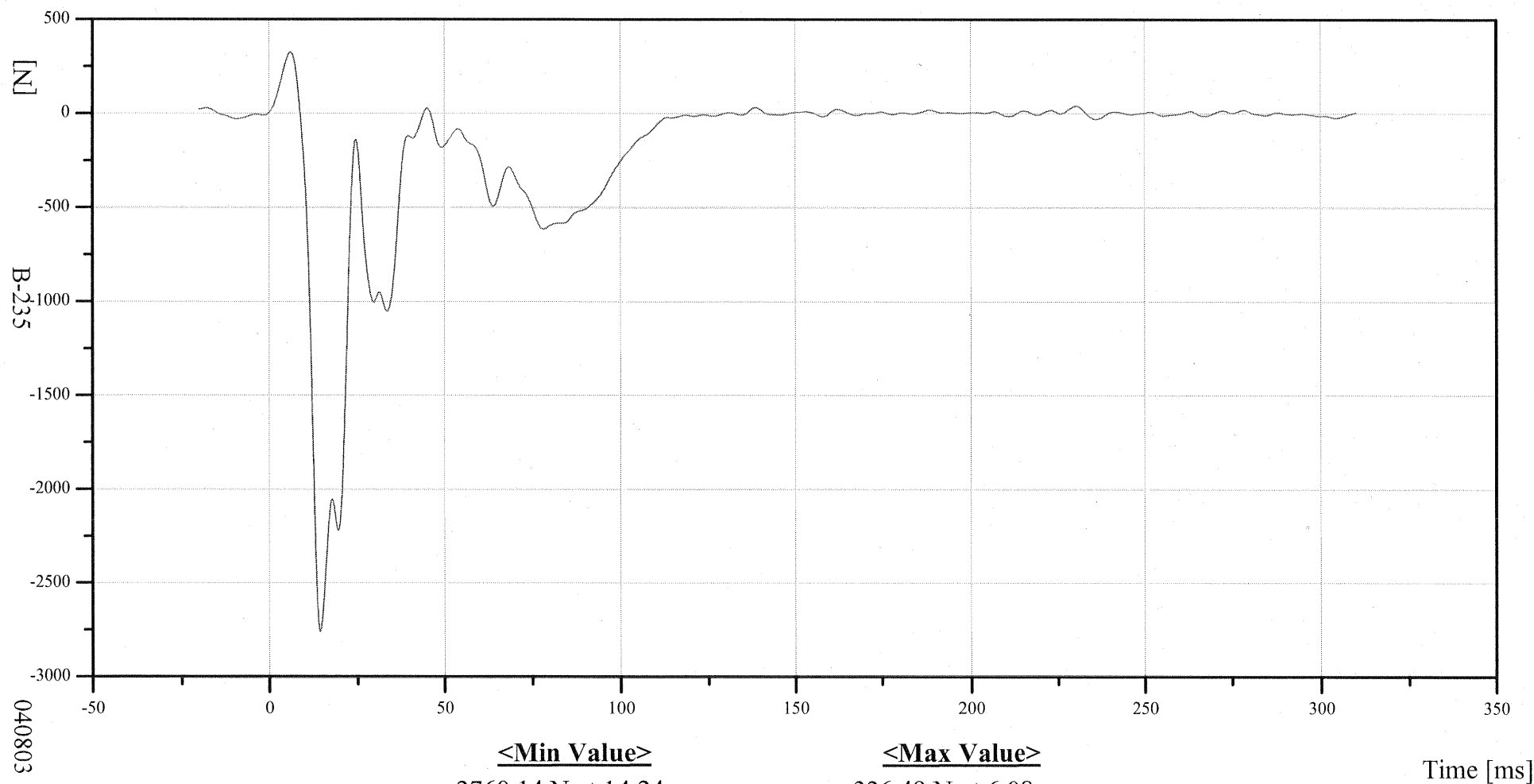
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0607



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

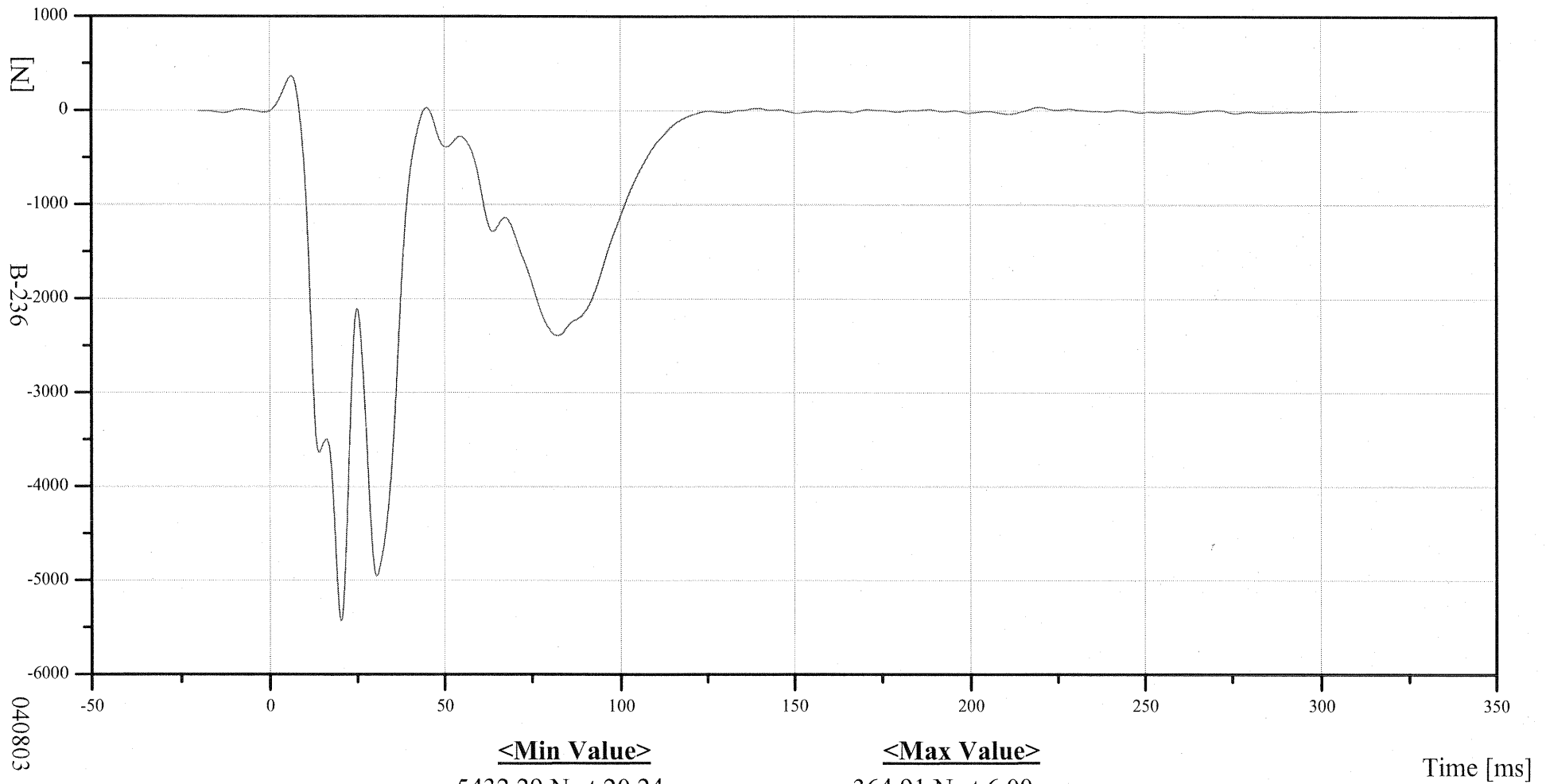
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0608



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

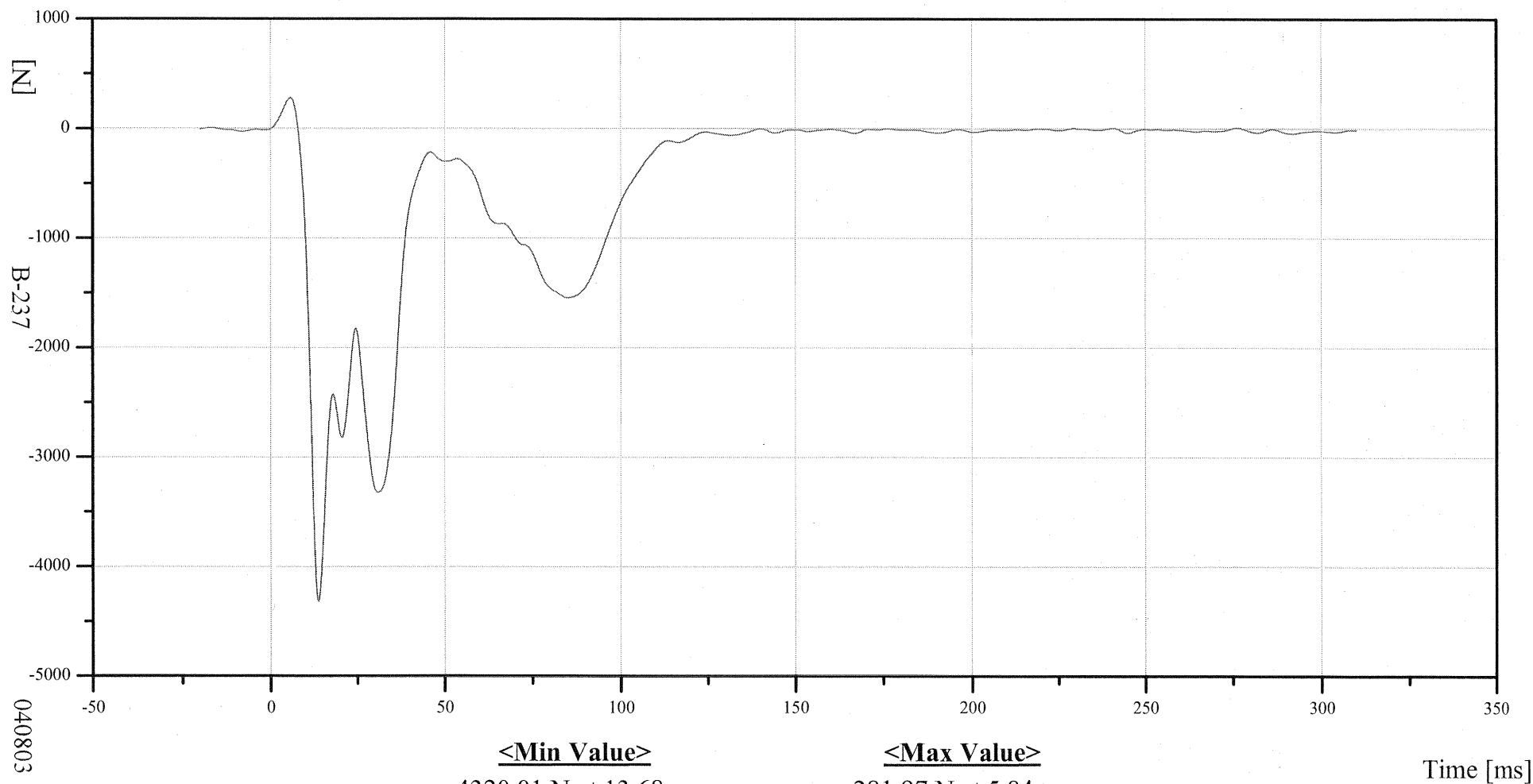
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0609



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

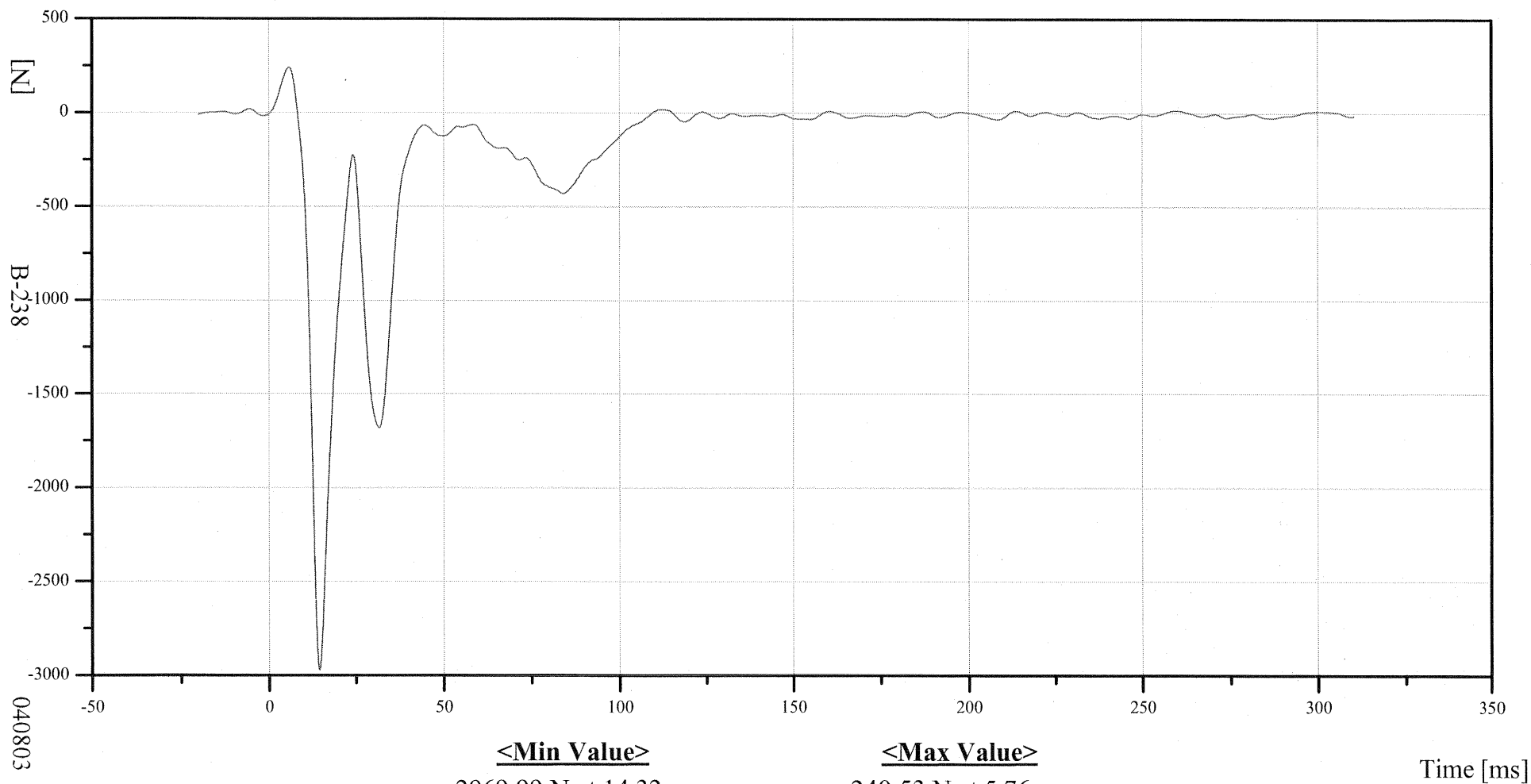
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0610



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

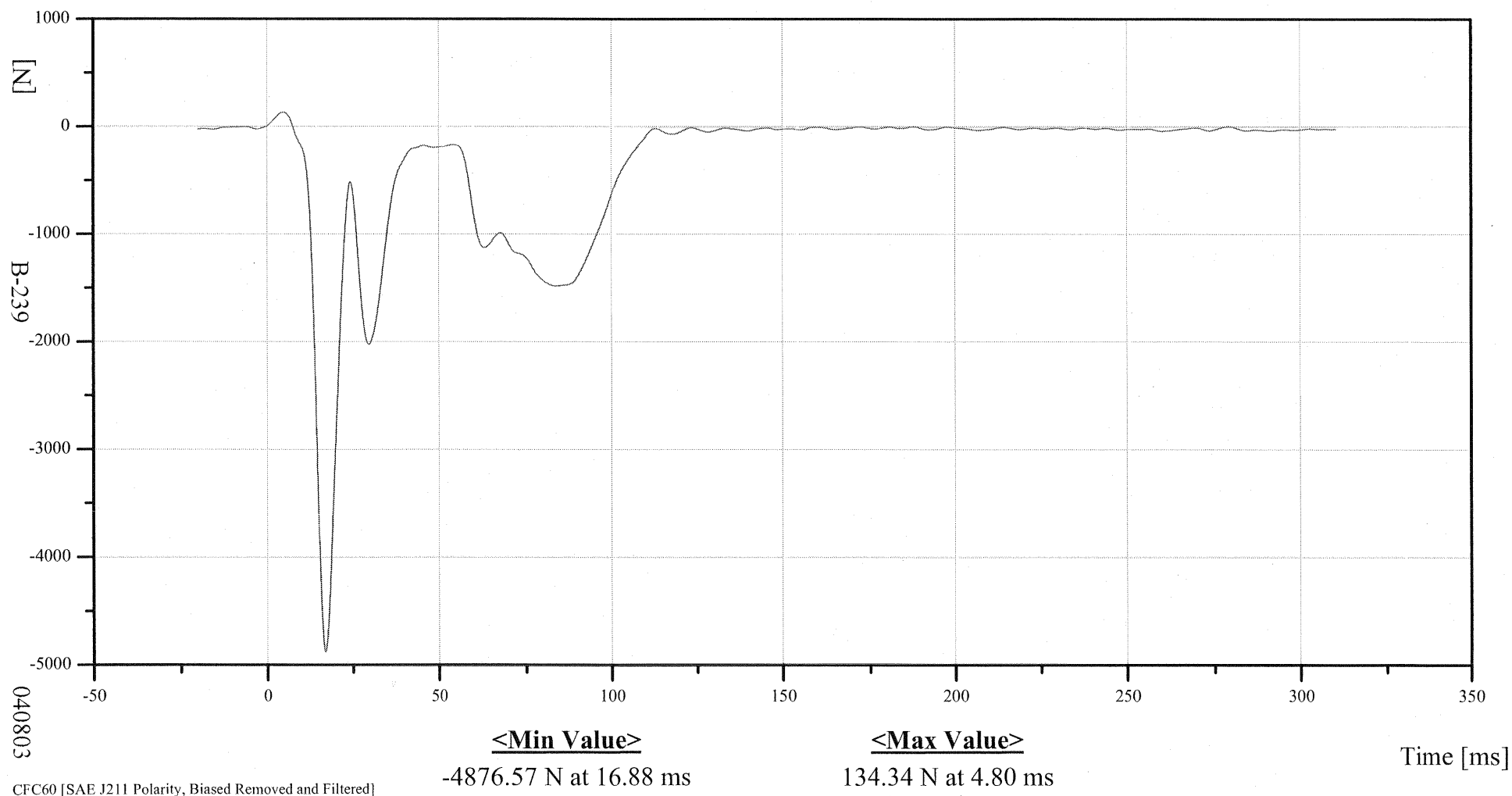
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0611





Transportation Research Center, Inc.

ROW 6 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

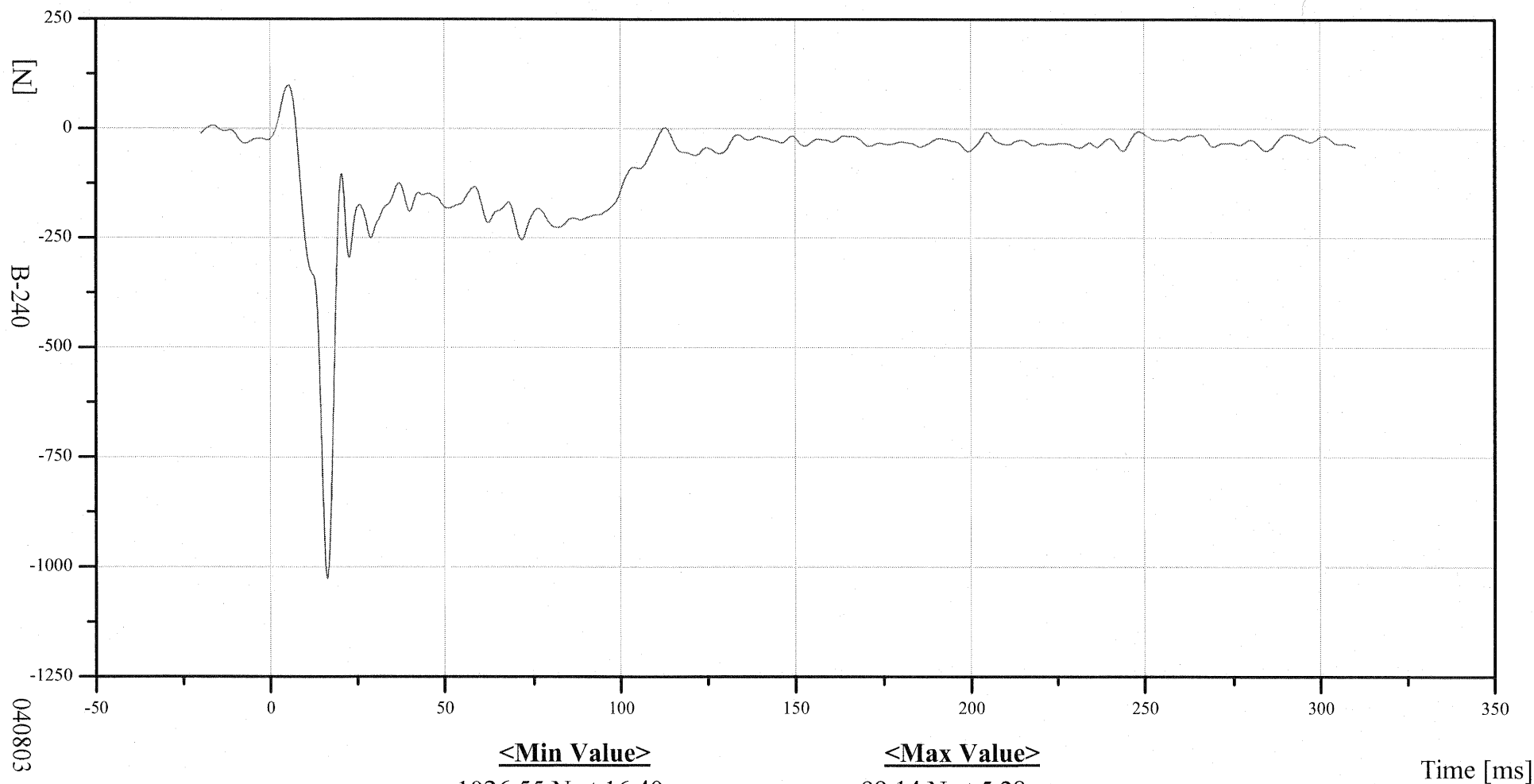
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0612



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

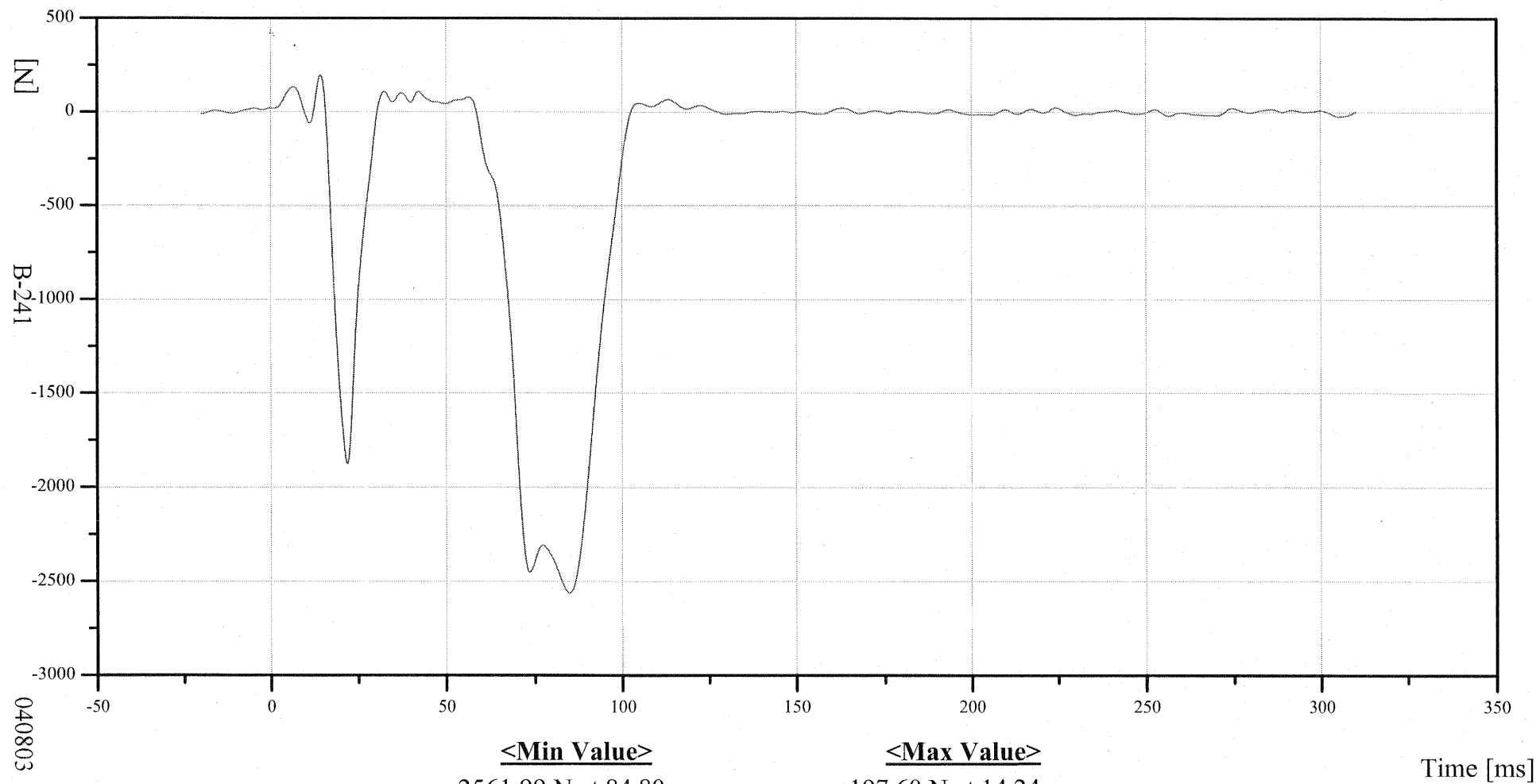
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0613



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

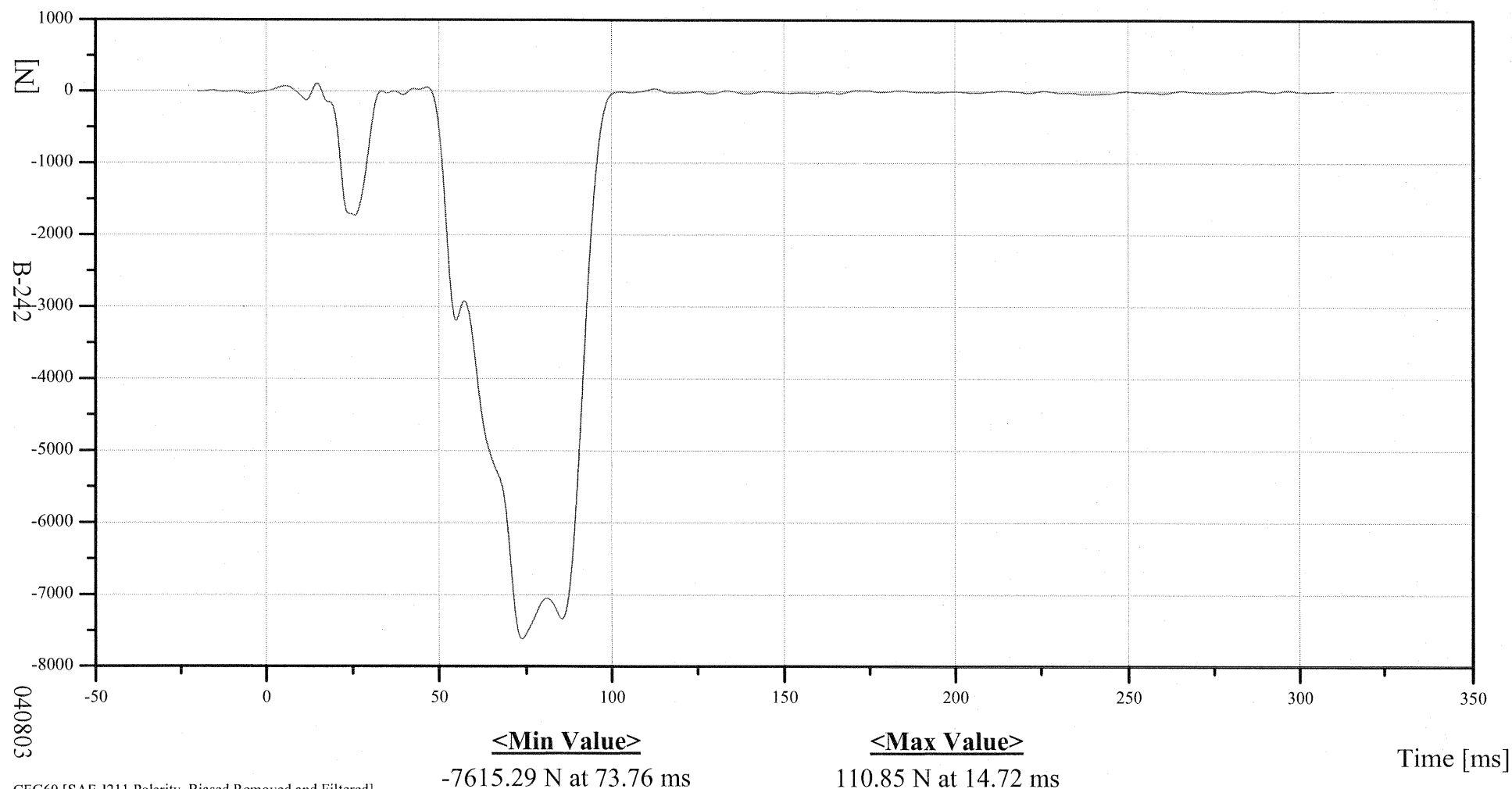
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0614





Transportation Research Center, Inc.

ROW 6 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

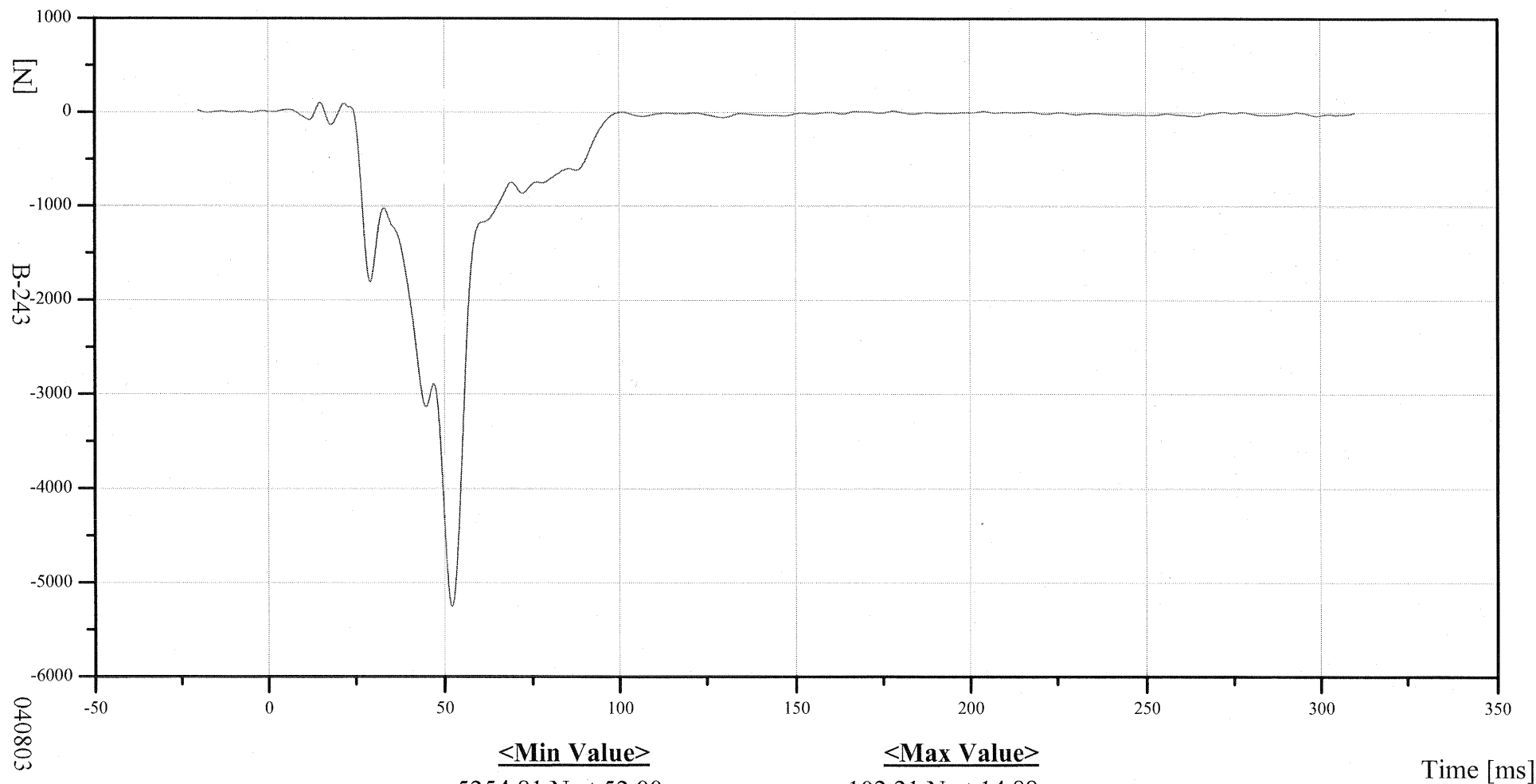
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0615



040803
CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 6 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

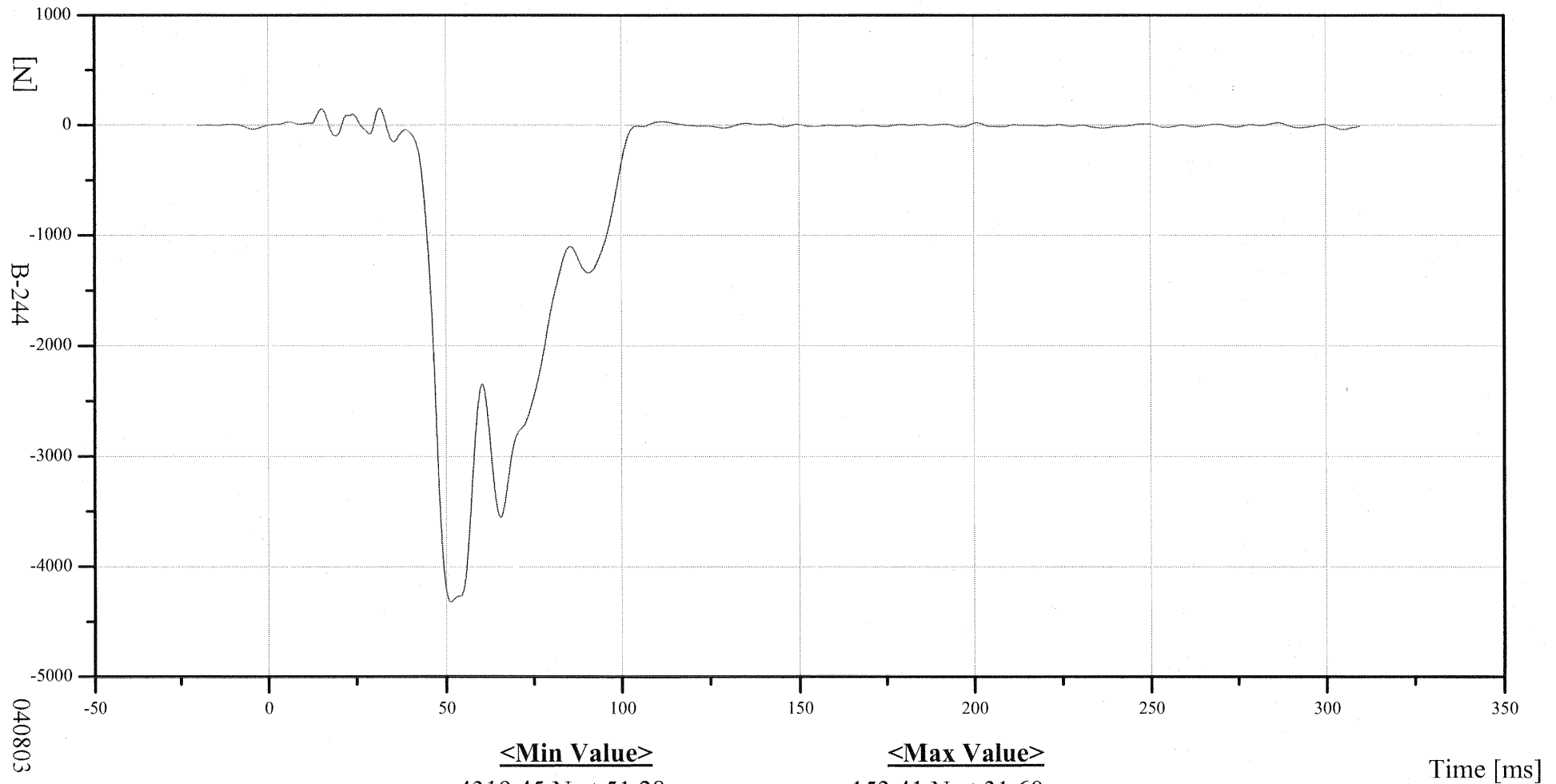
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0616



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

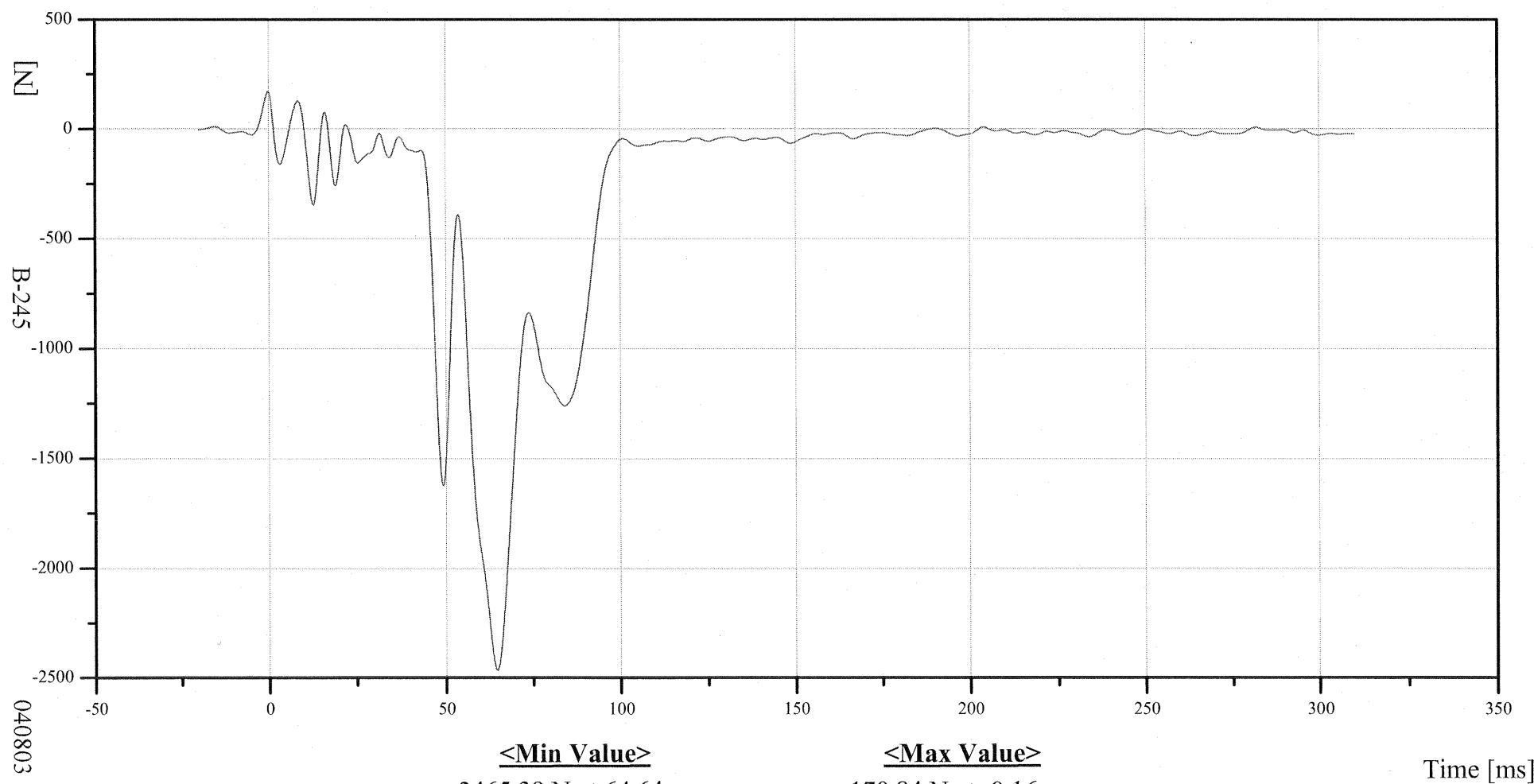
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0701



040803
CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

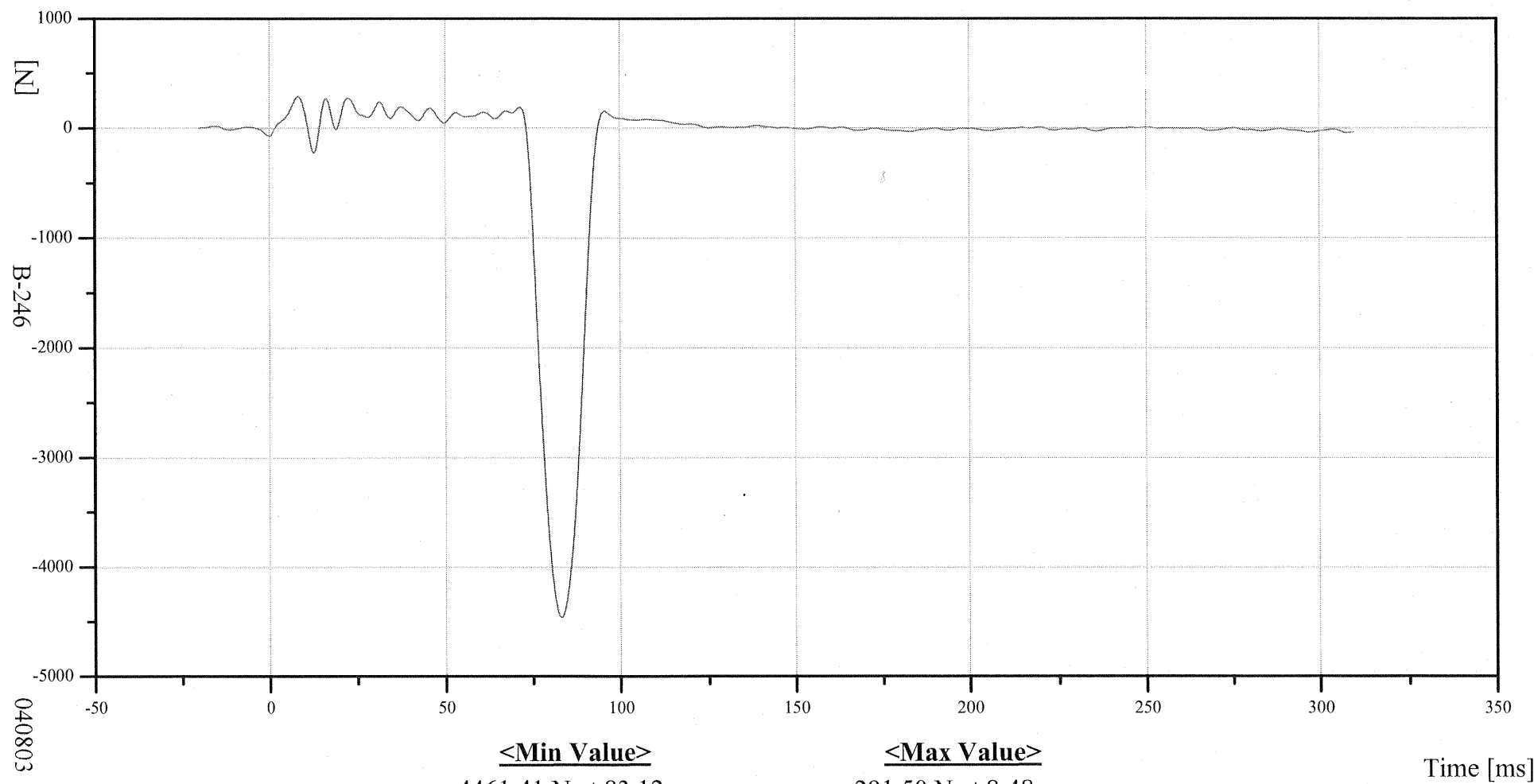
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0702



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

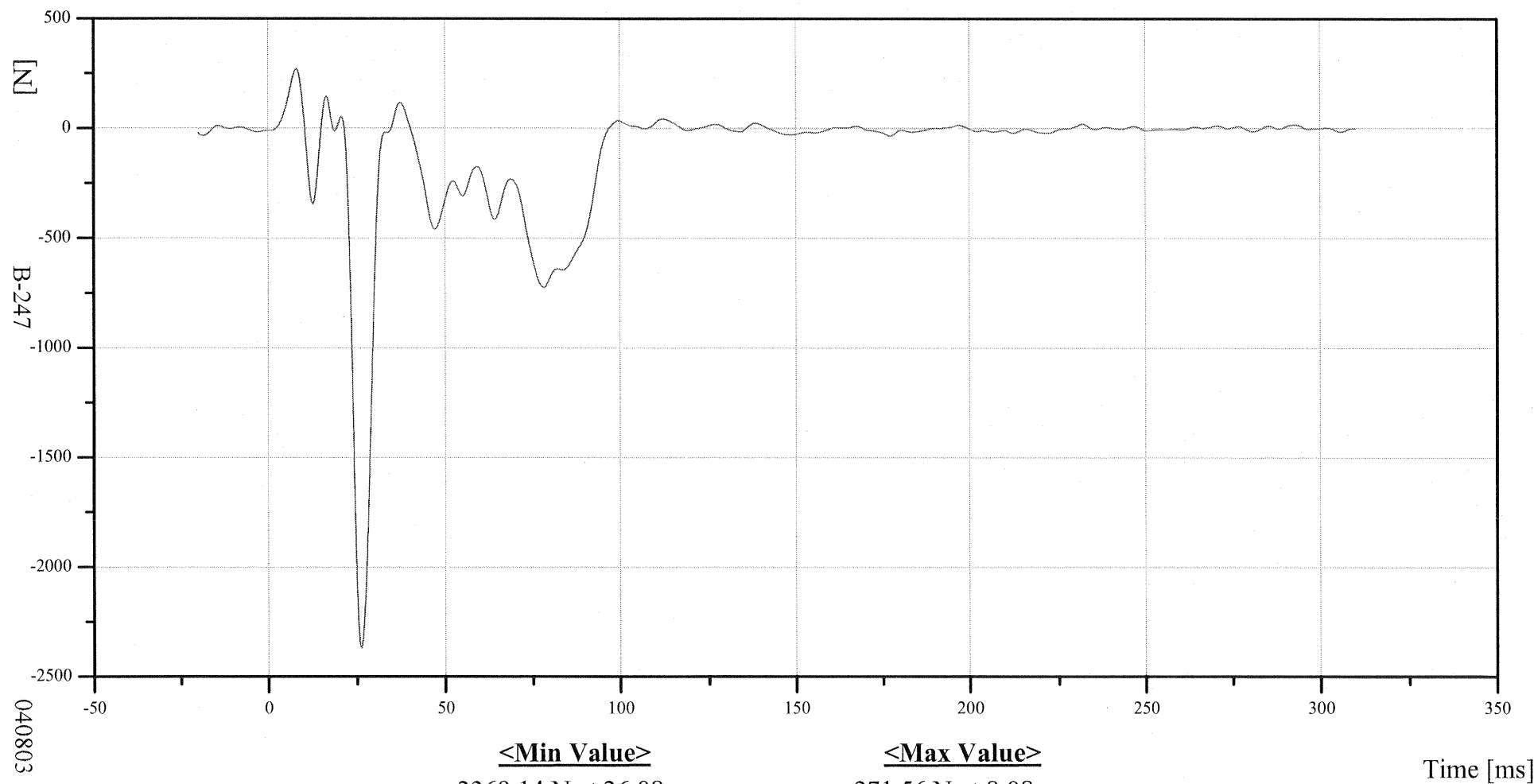
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0703



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

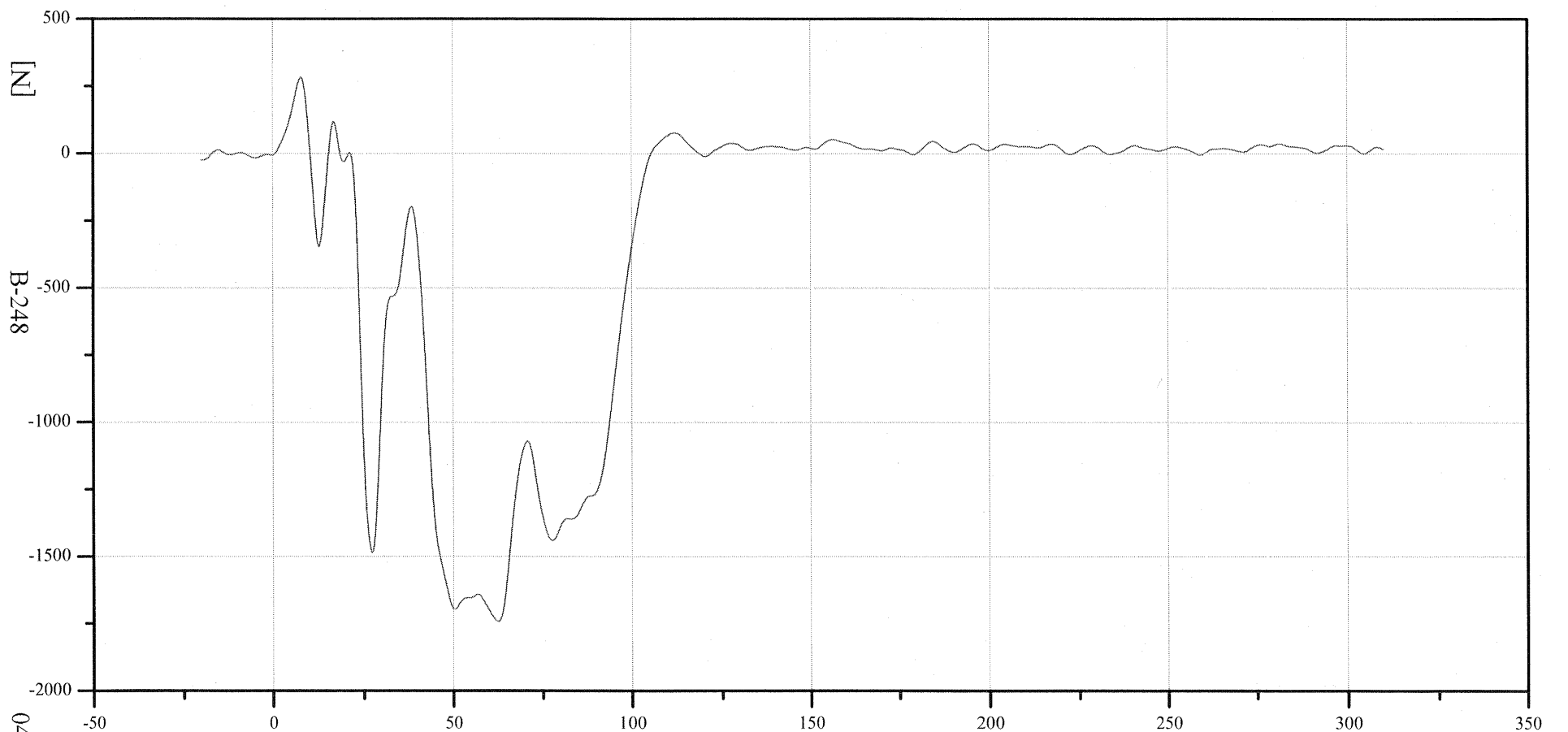
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0704



<Min Value>

-1741.45 N at 62.56 ms

<Max Value>

283.17 N at 7.76 ms

Time [ms]

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

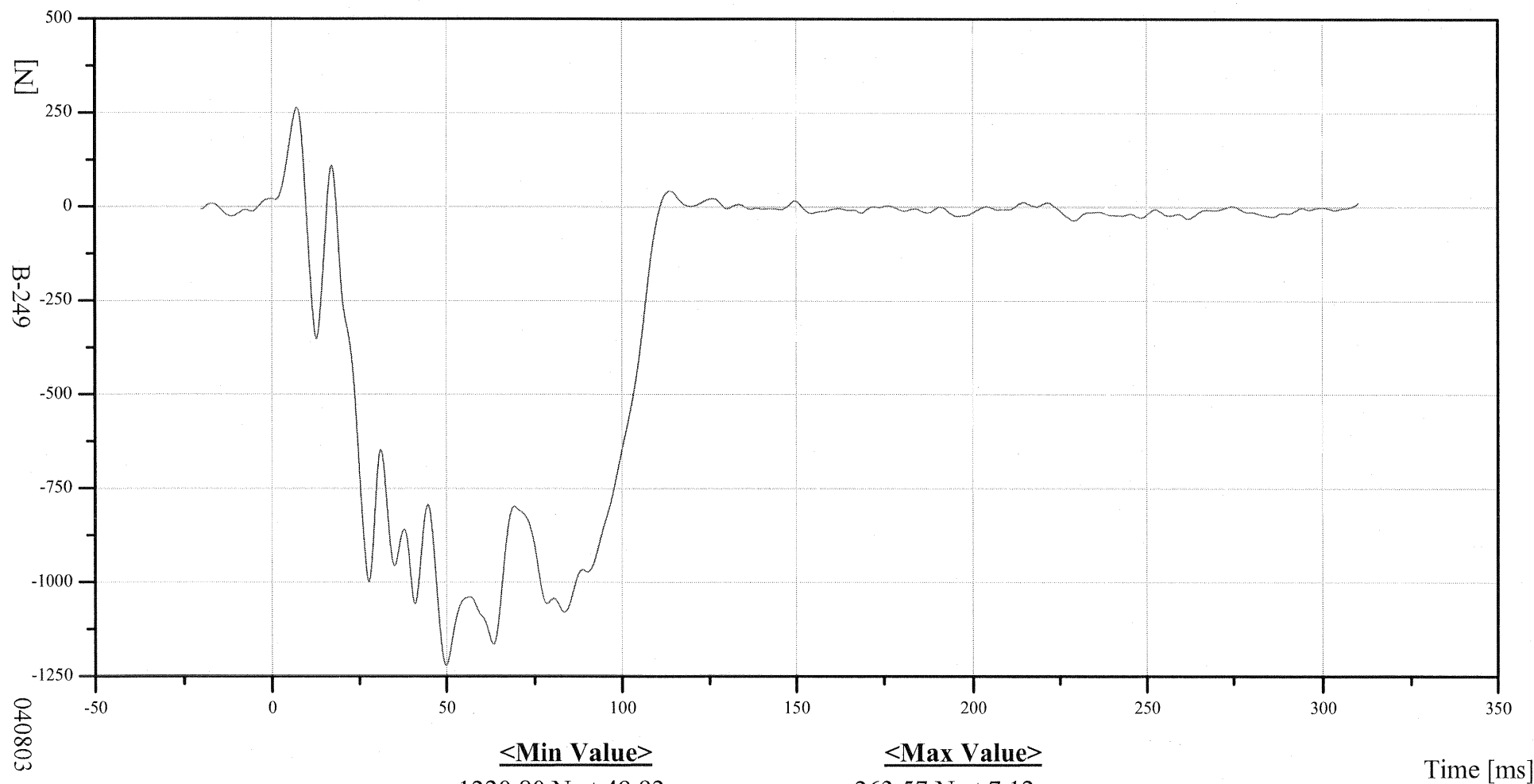
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0705



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

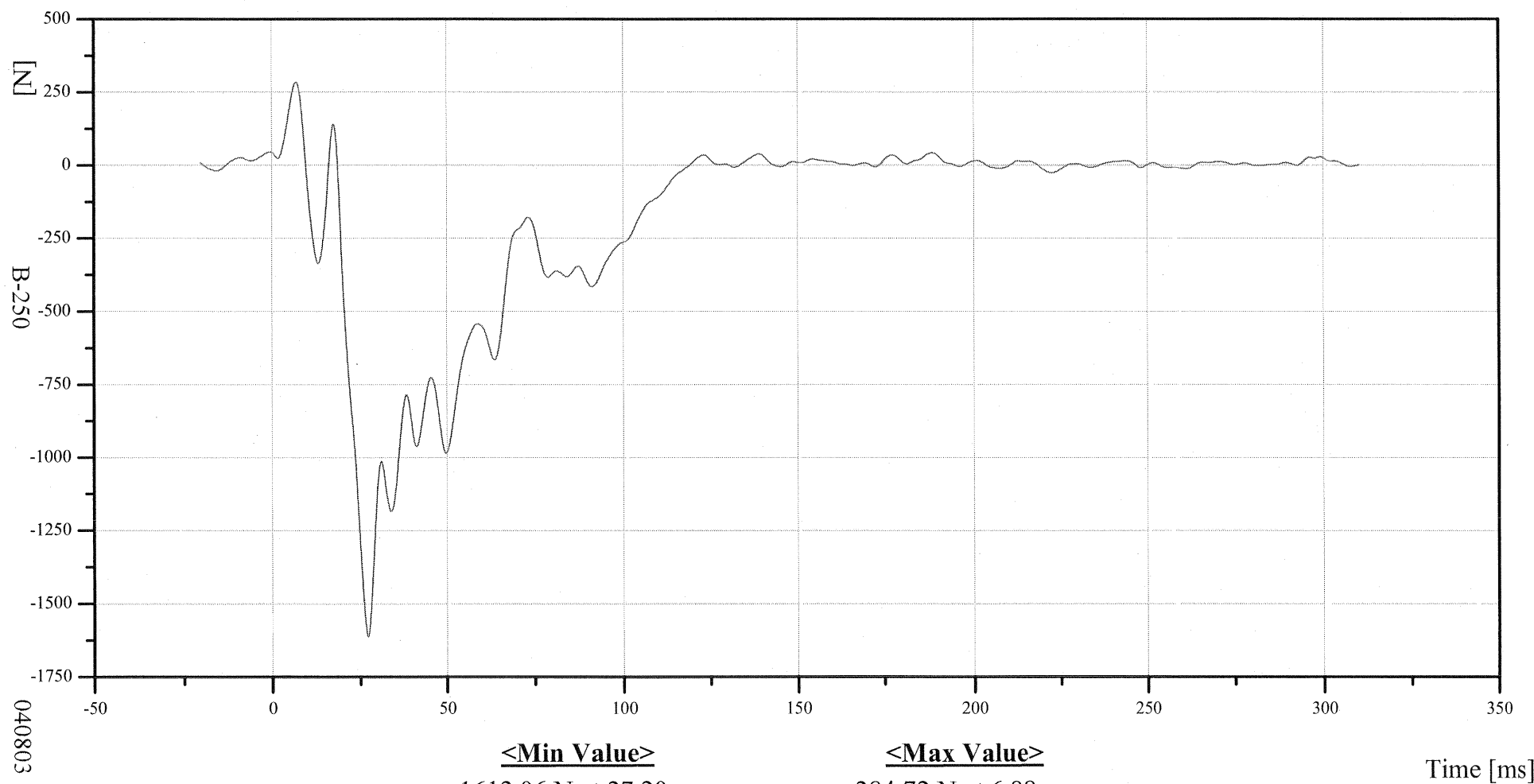
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0706



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

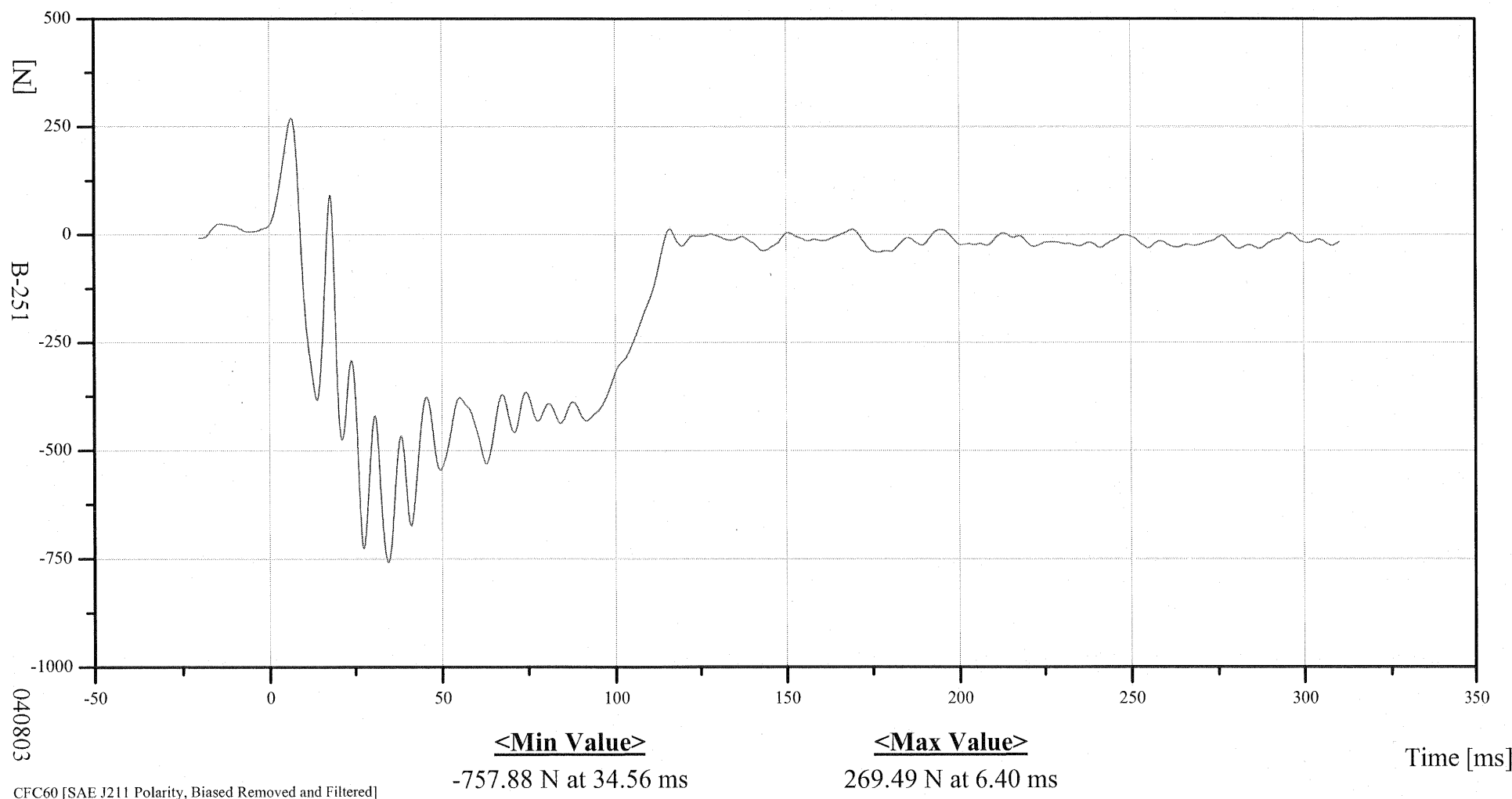
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0707





Transportation Research Center, Inc.

ROW 7 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

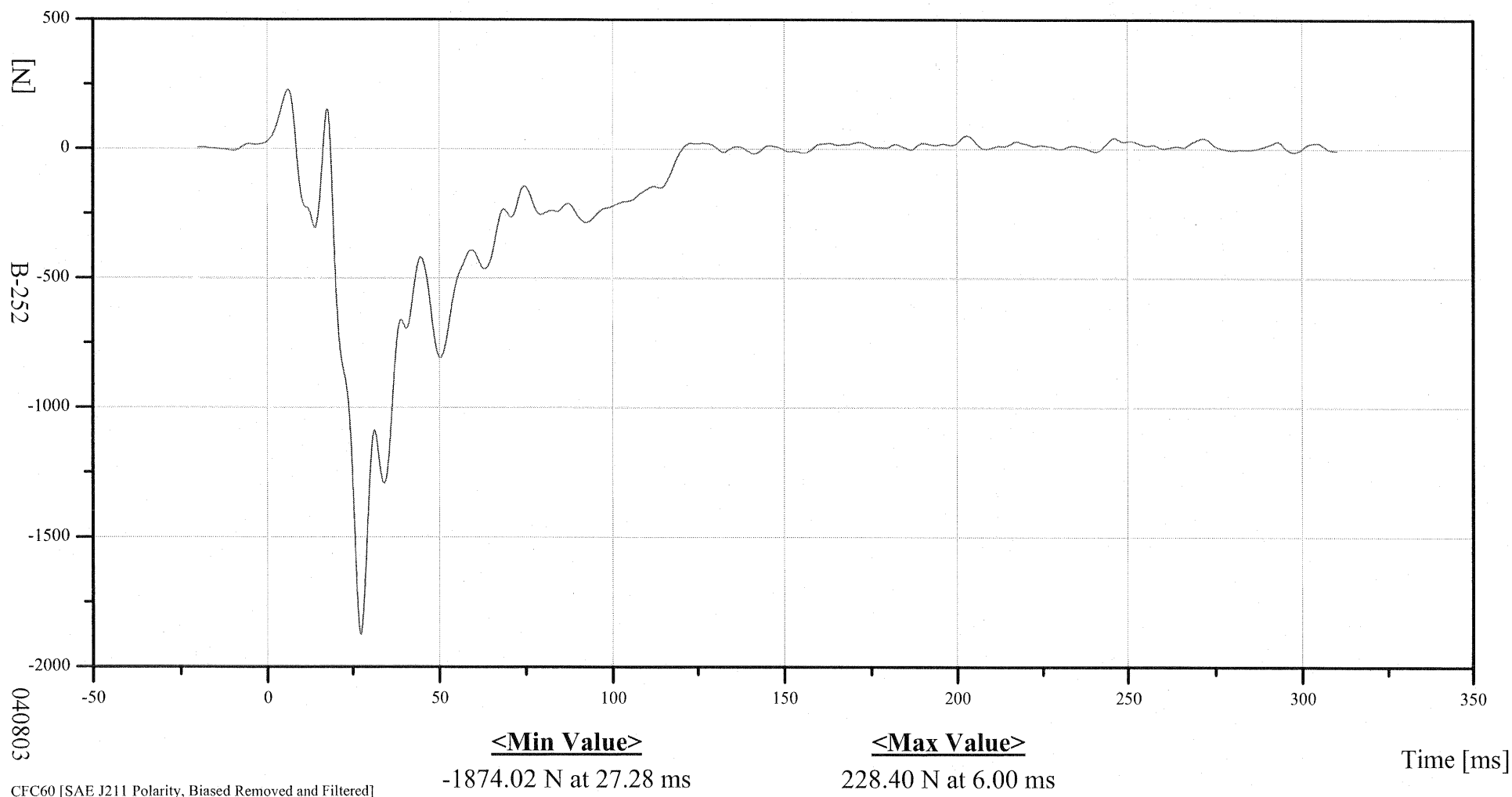
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0708





Transportation Research Center, Inc.

ROW 7 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

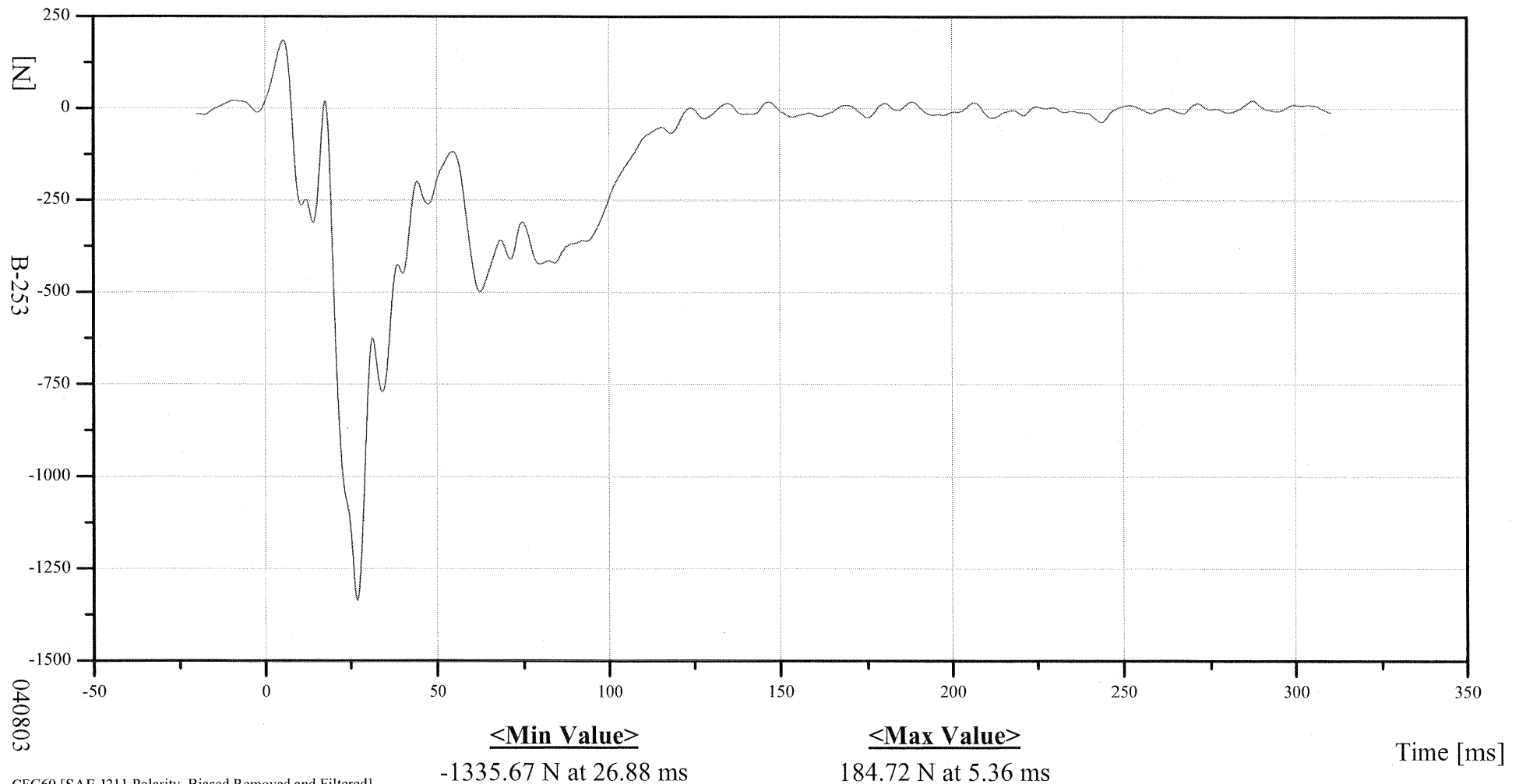
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0709





Transportation Research Center, Inc.

ROW 7 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

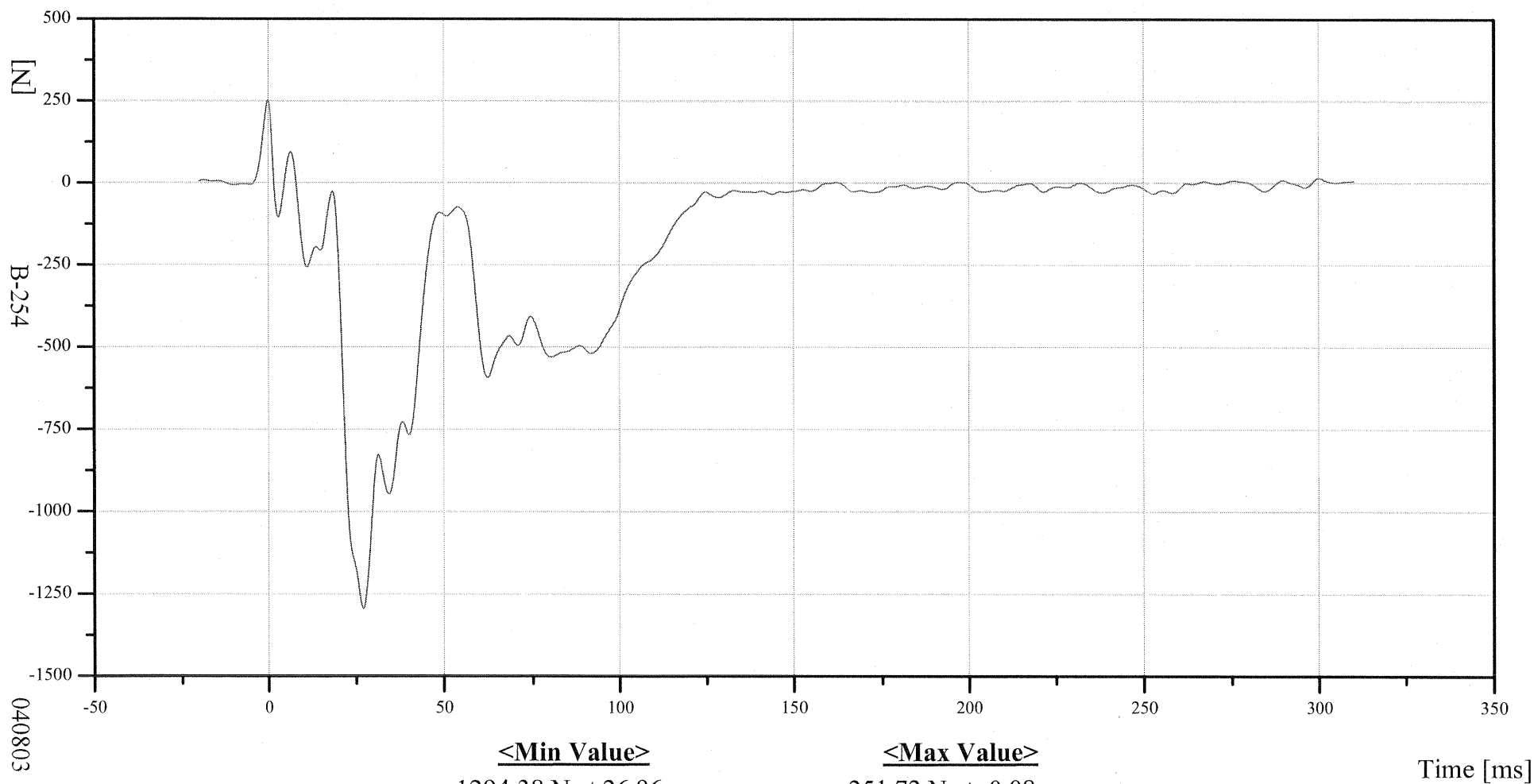
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0710



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

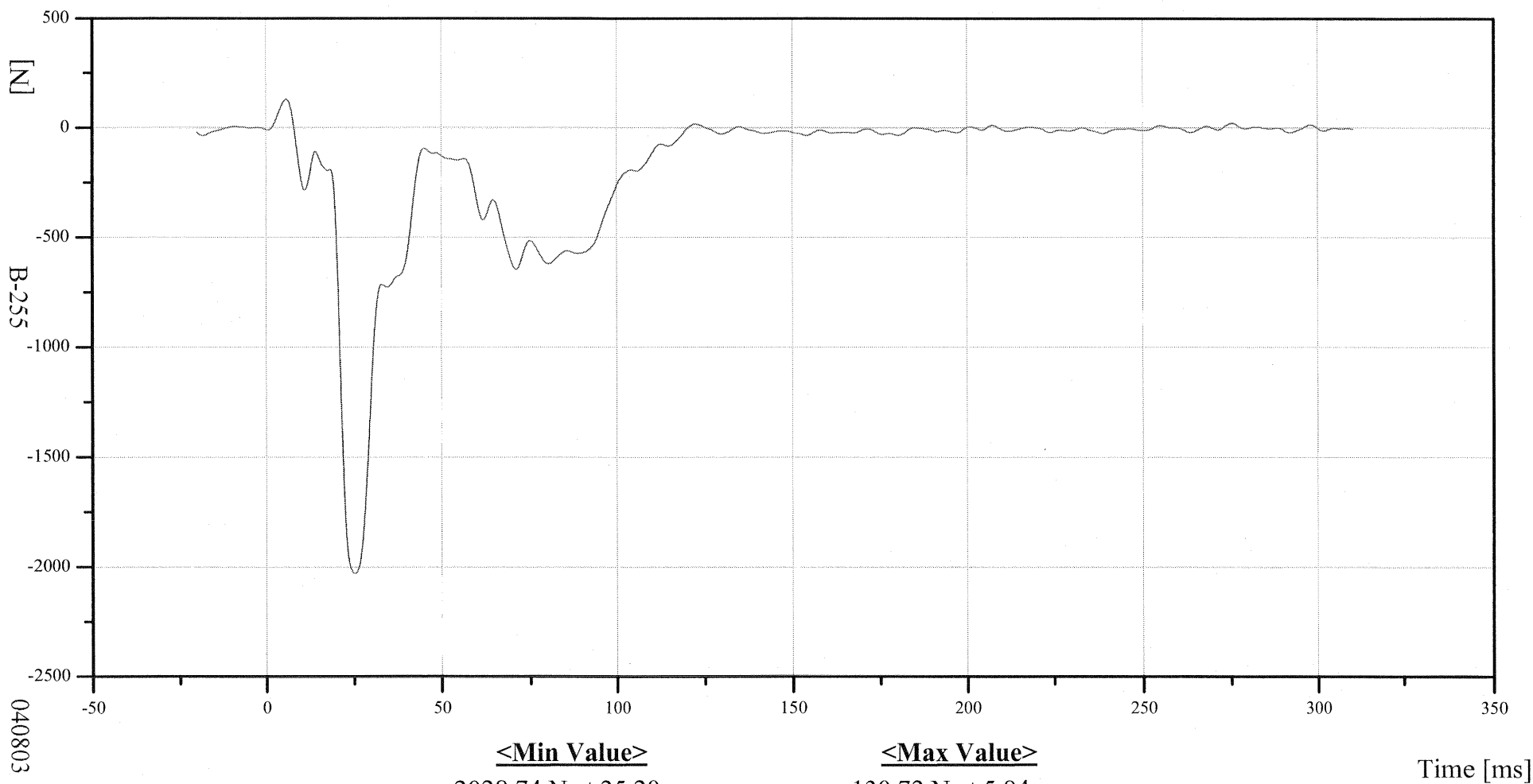
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0711



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]

<Min Value>

-2028.74 N at 25.20 ms

<Max Value>

130.72 N at 5.84 ms

Time [ms]



Transportation Research Center, Inc.

ROW 7 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

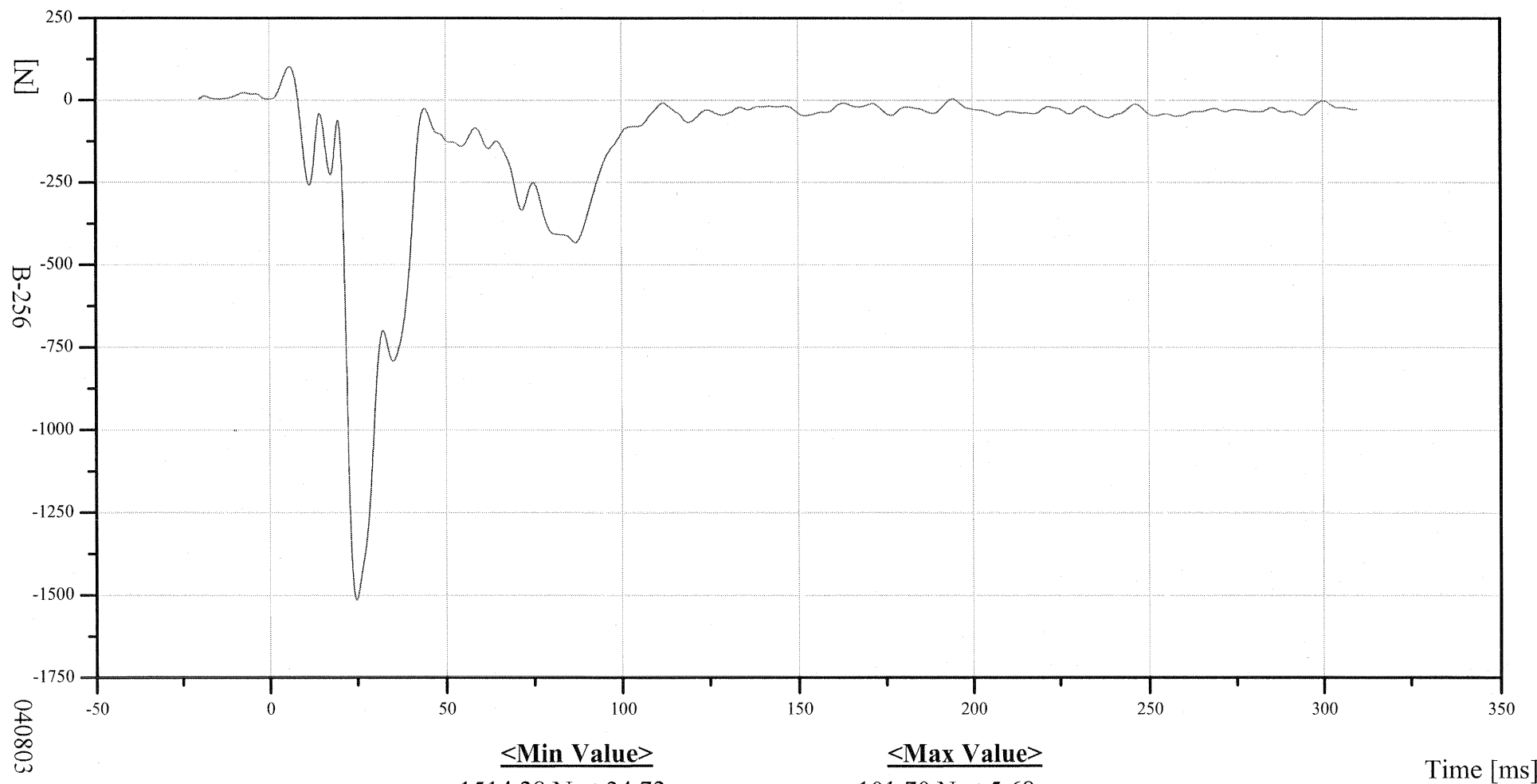
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0712



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

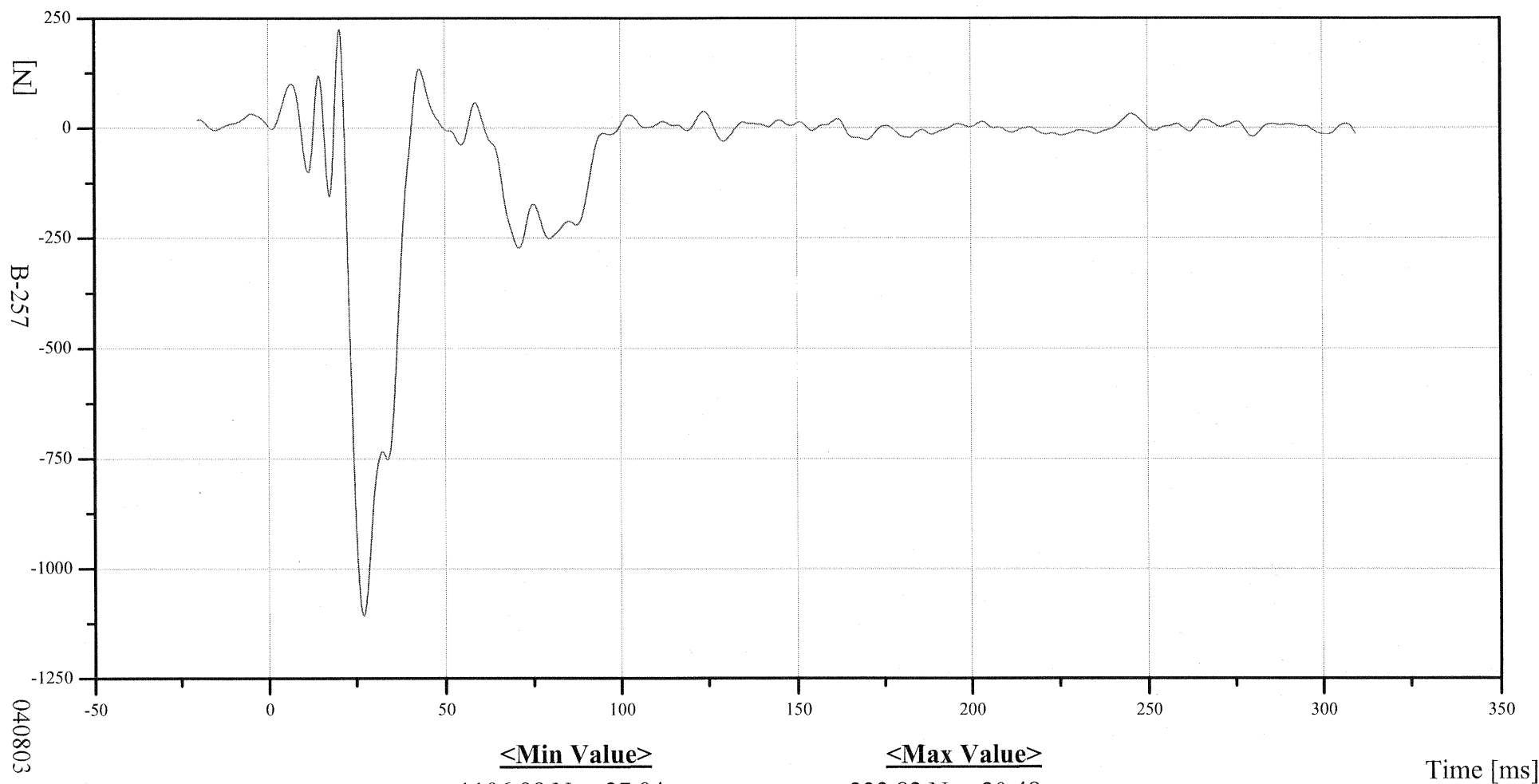
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0713



040803
CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

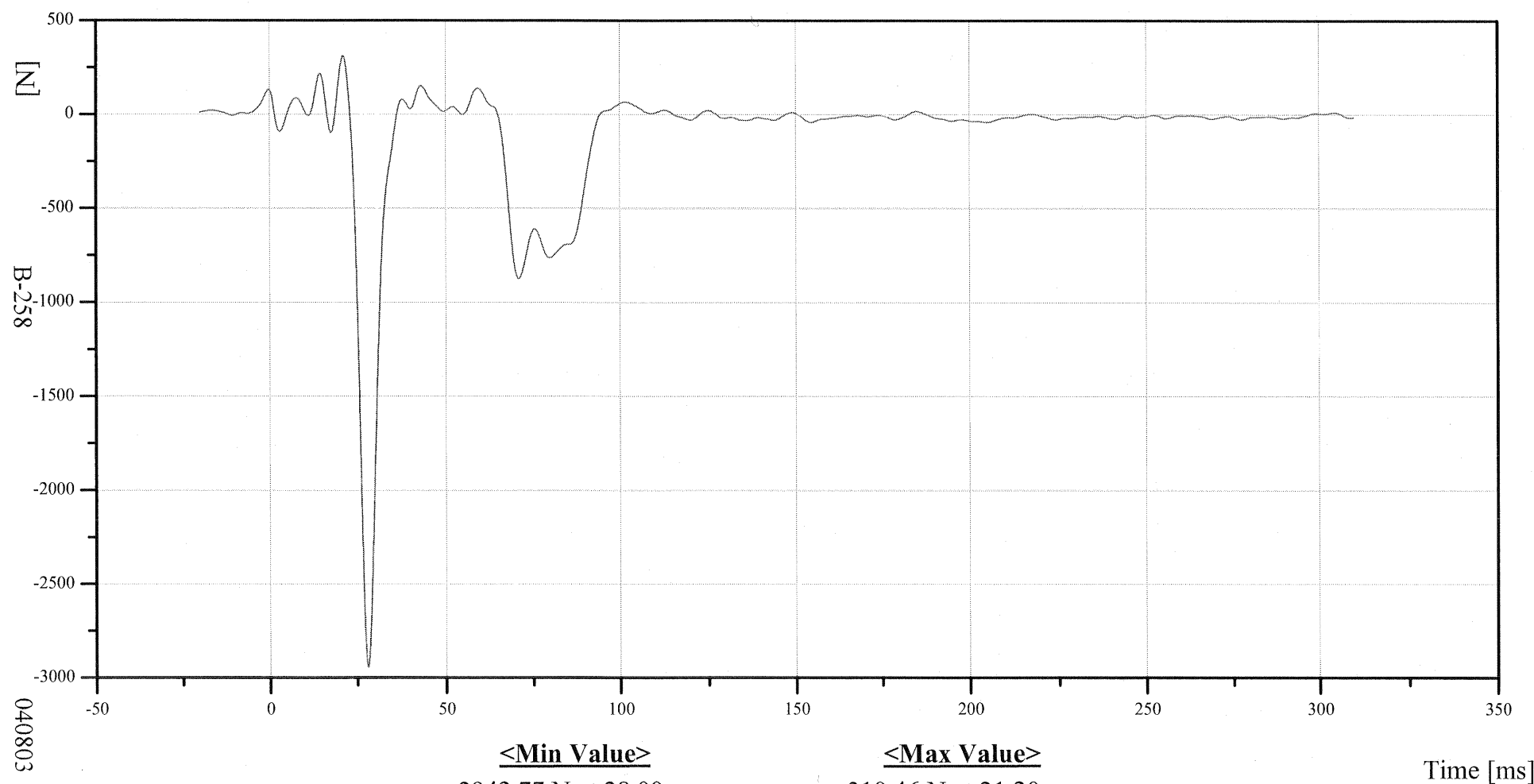
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0714



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

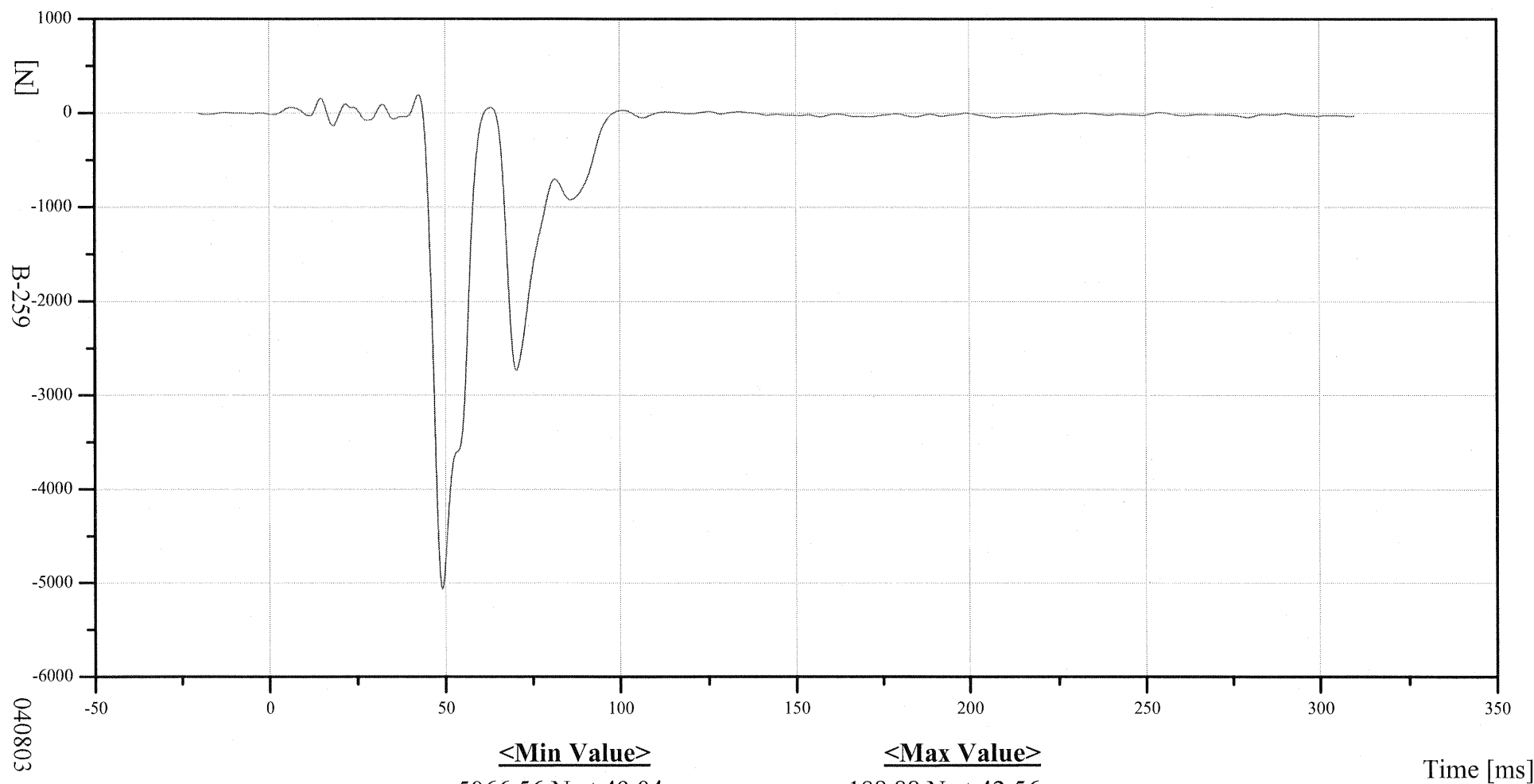
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0715



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 7 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

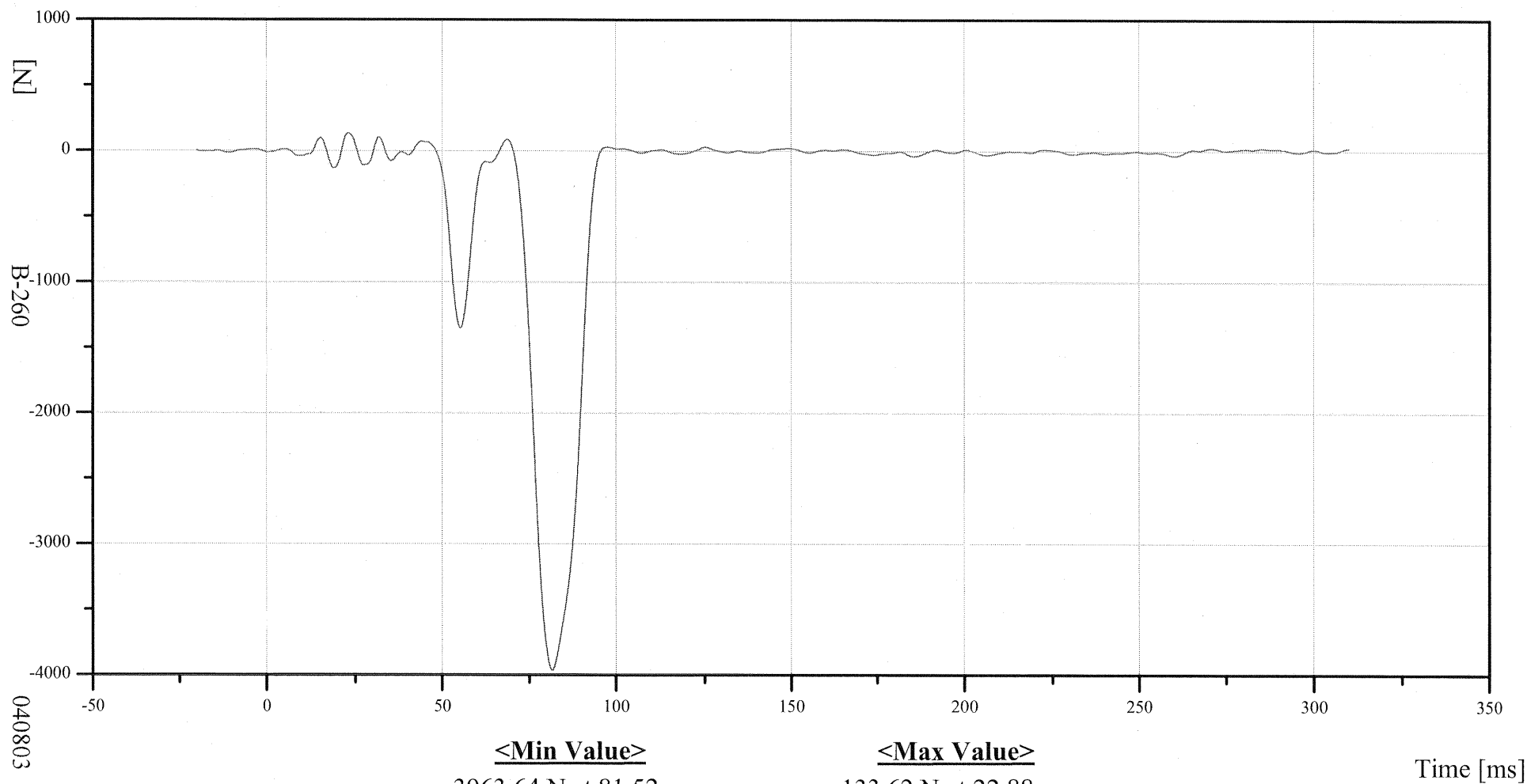
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0716



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 1

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

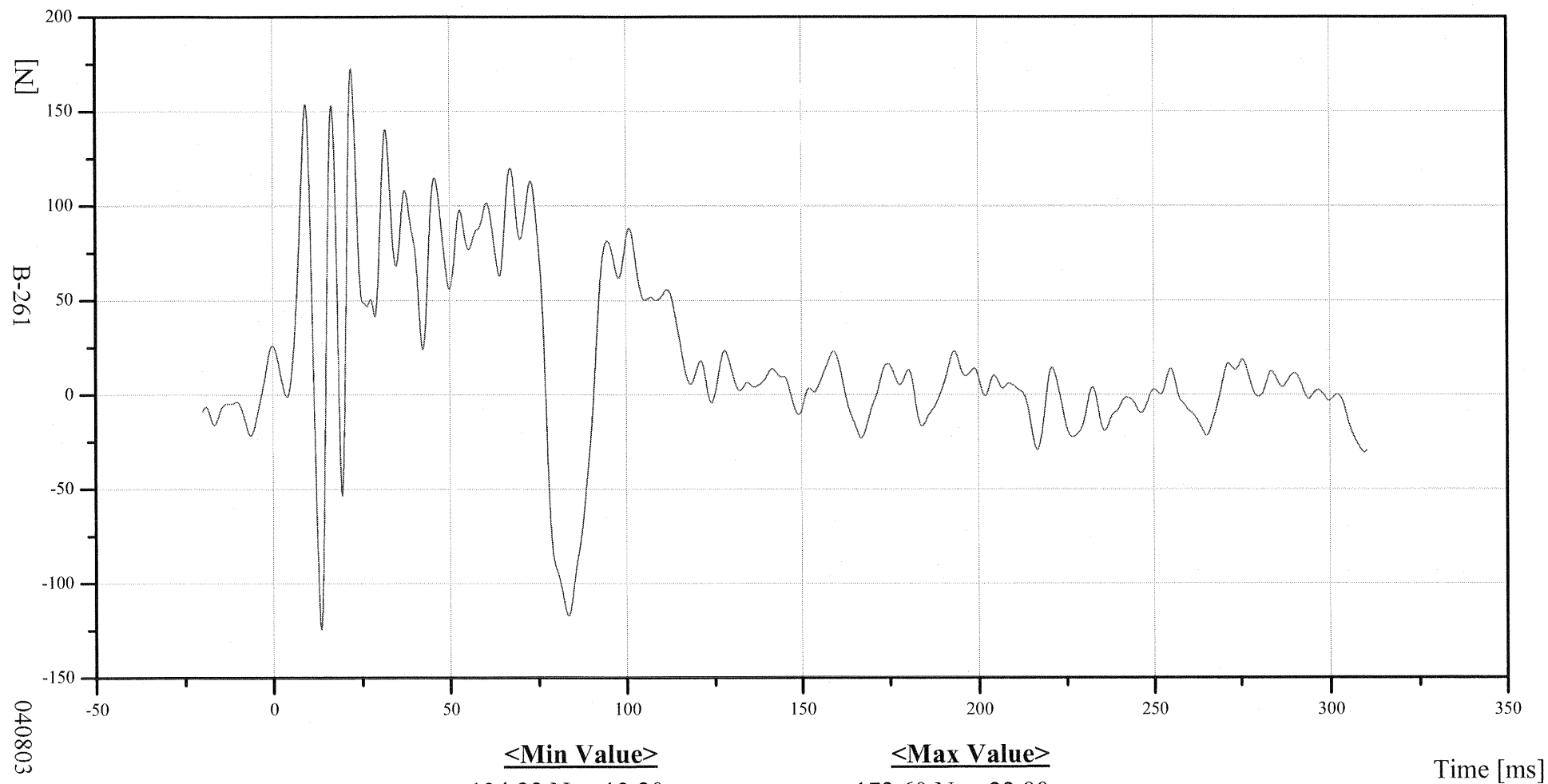
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0801



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 2

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

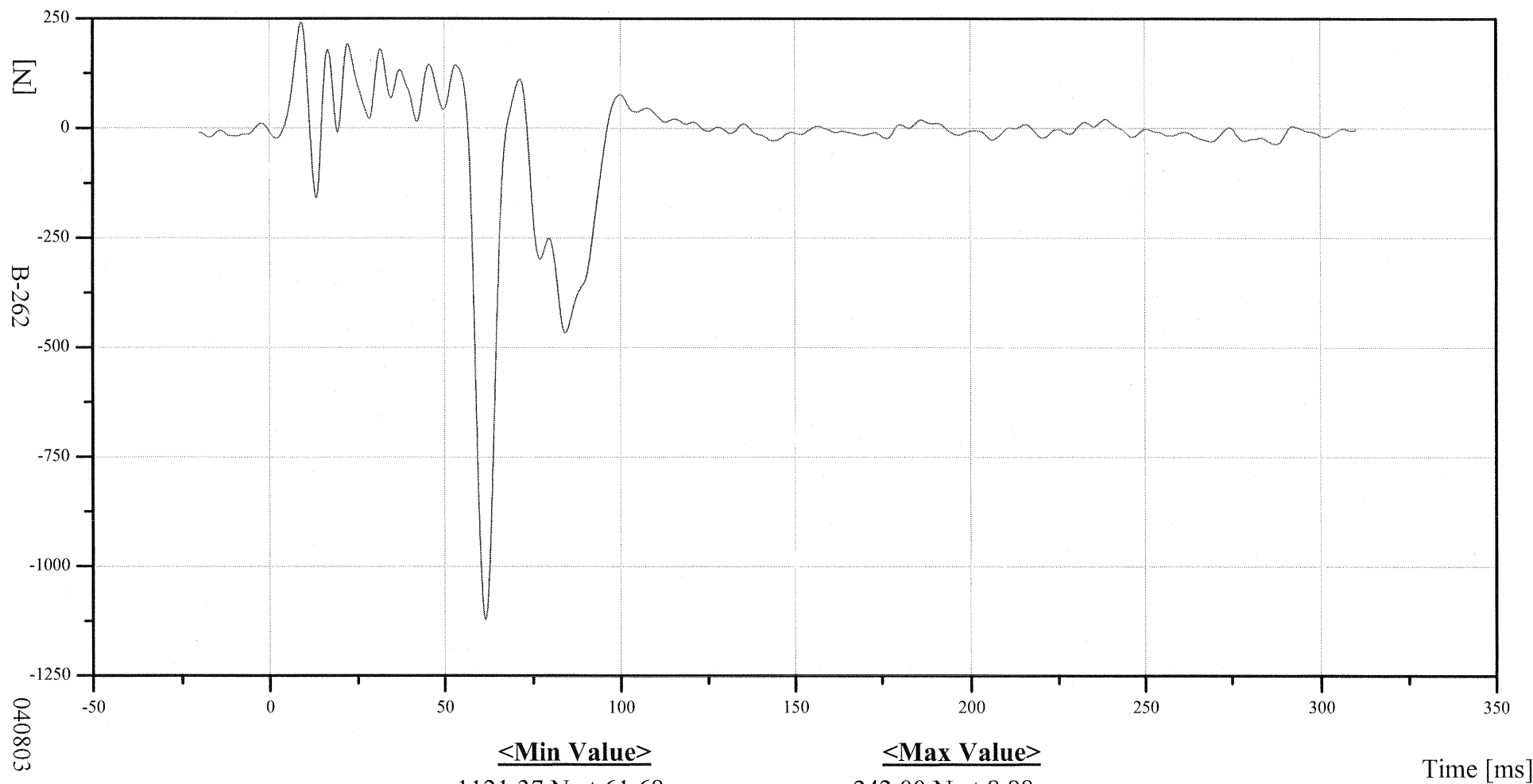
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0802



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 3

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

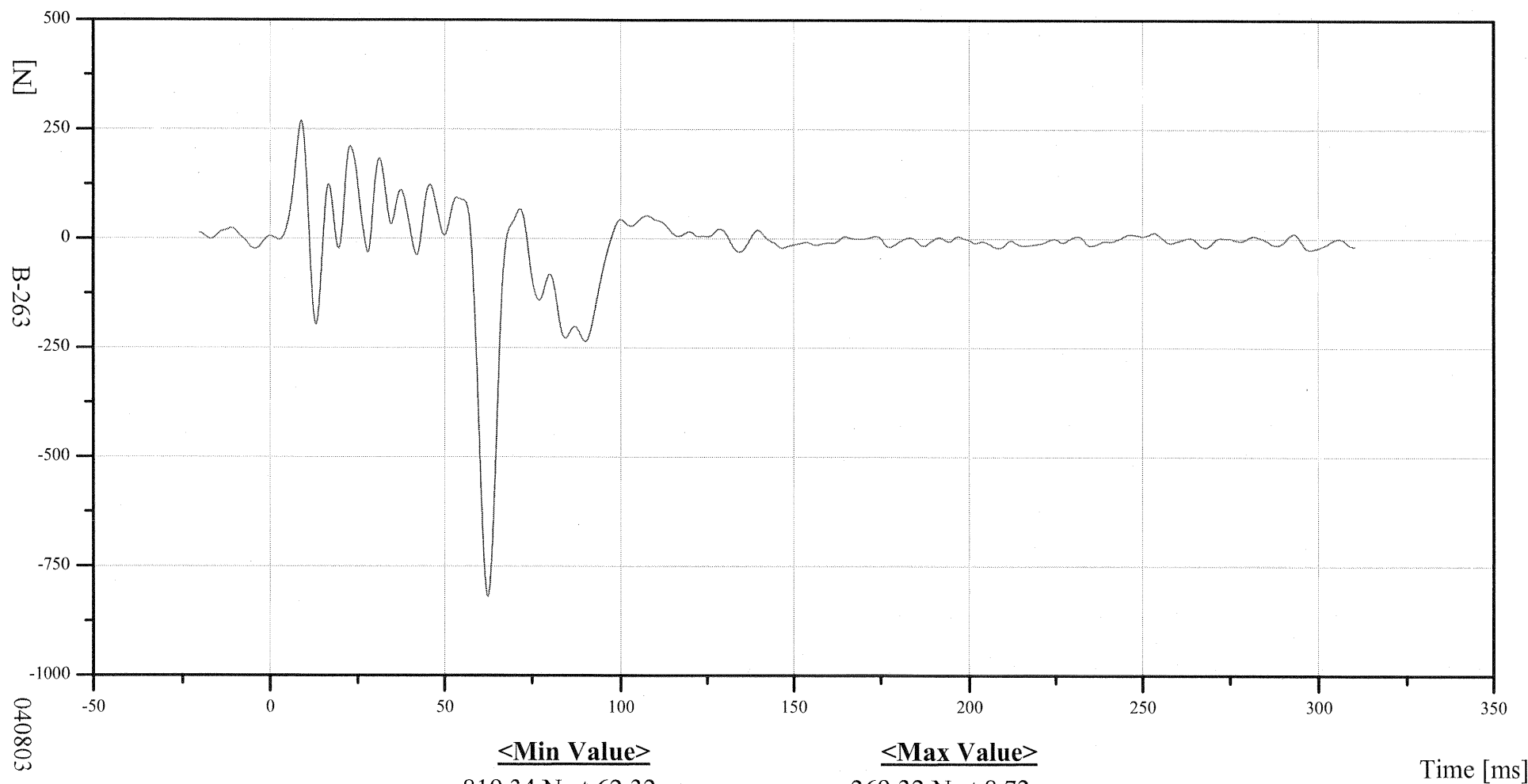
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0803



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 4

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

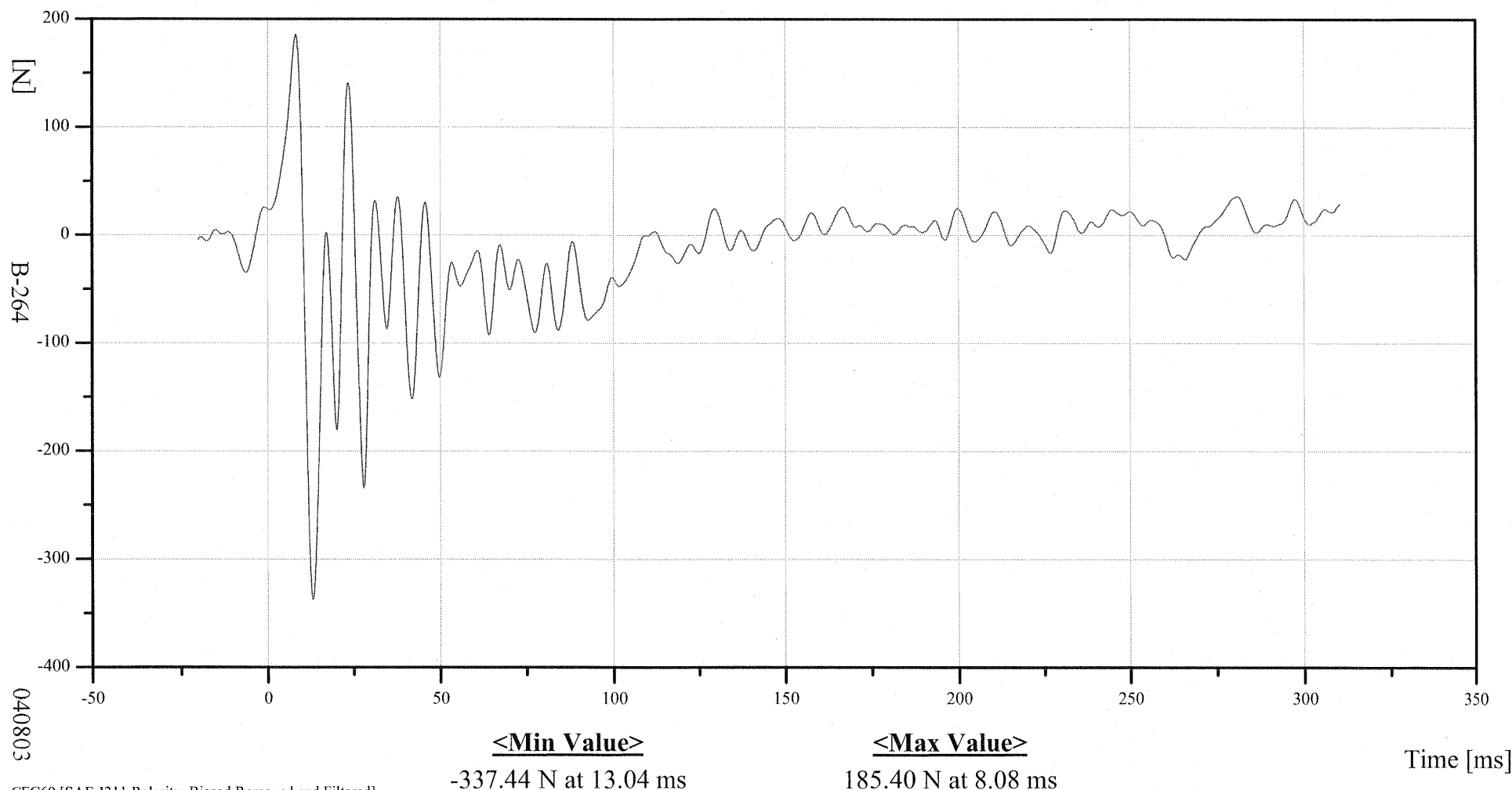
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0804





Transportation Research Center, Inc.

ROW 8 COLUMN 5

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

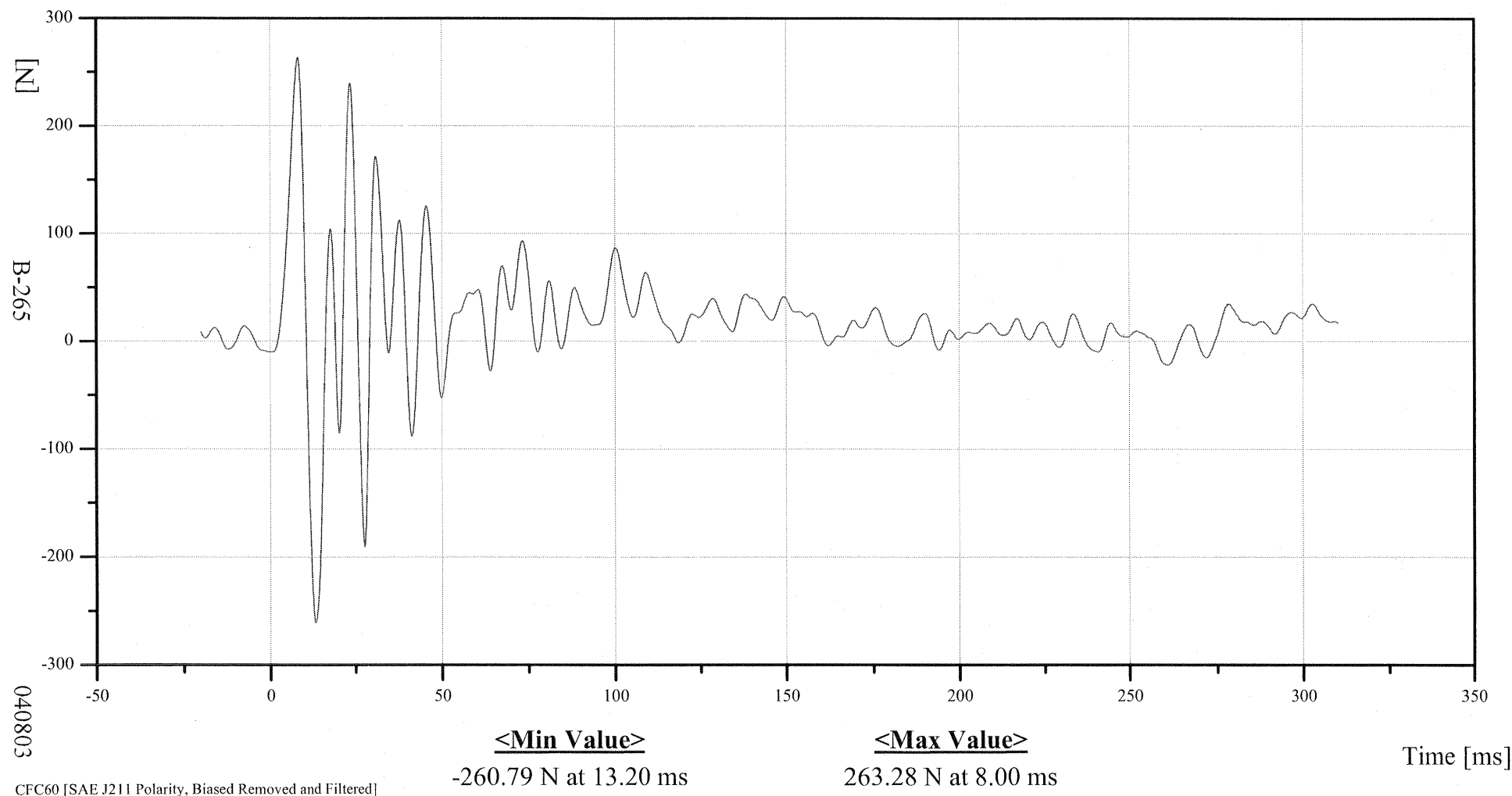
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0805





Transportation Research Center, Inc.

ROW 8 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

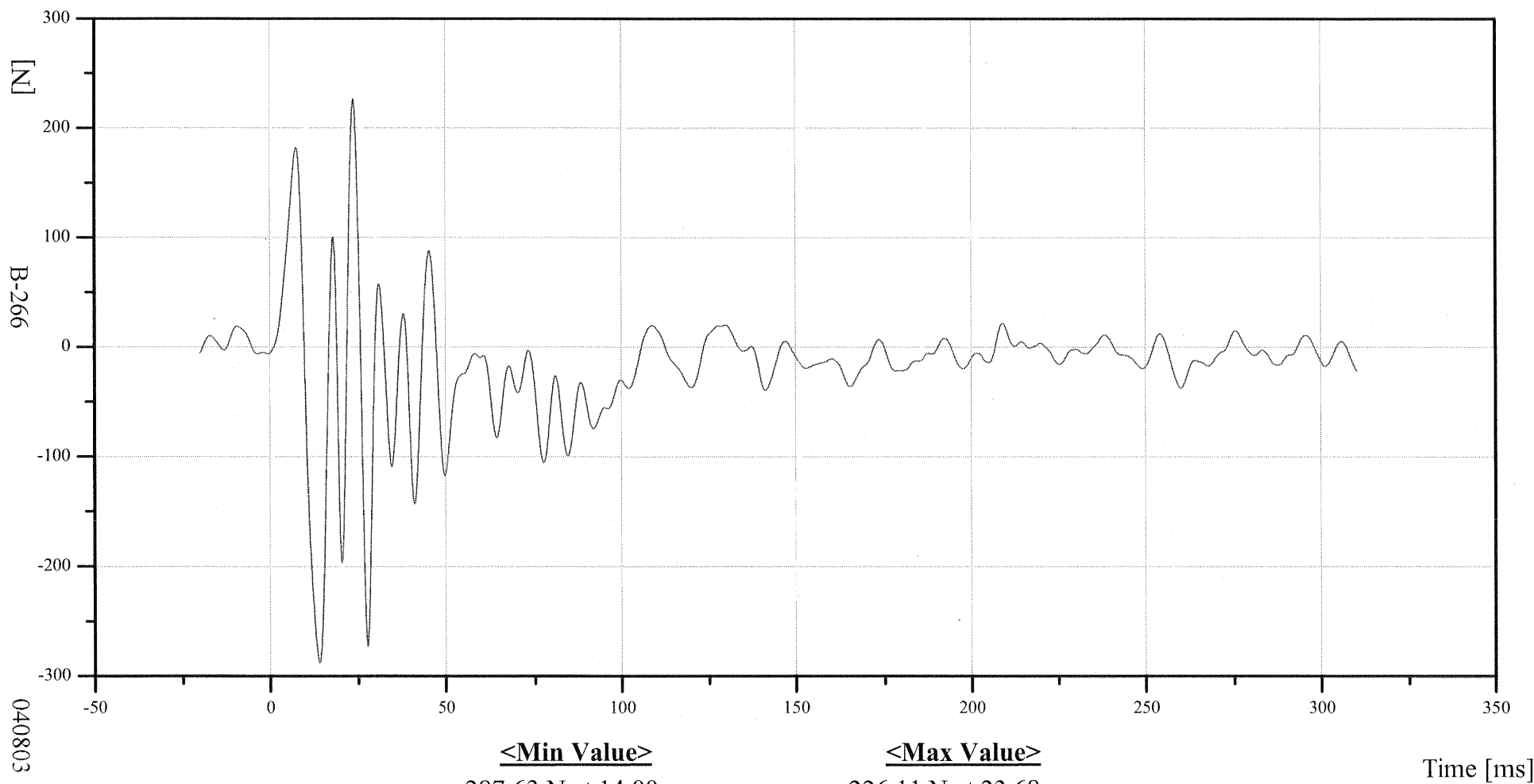
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0806



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

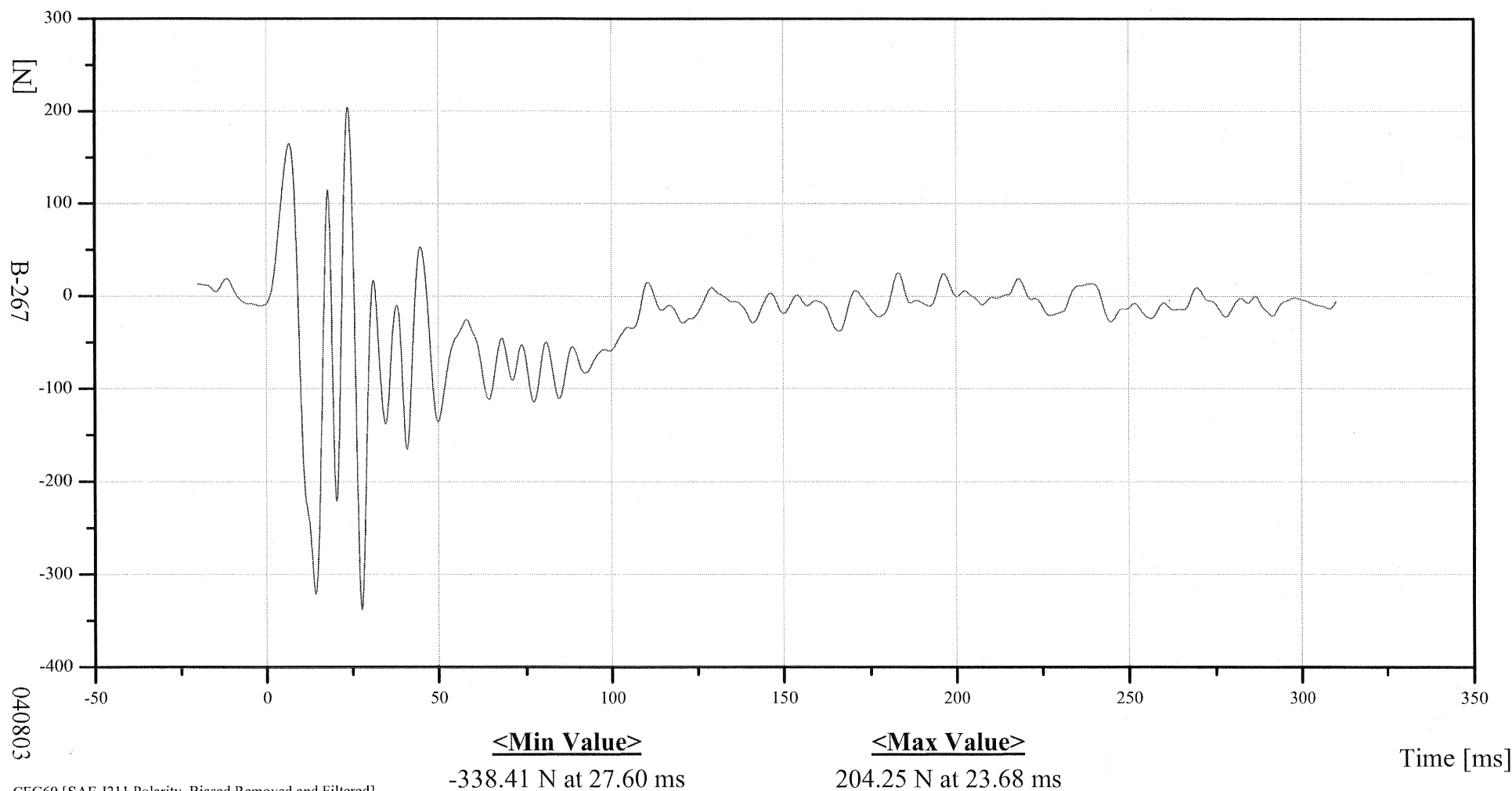
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0807





Transportation Research Center, Inc.

ROW 8 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

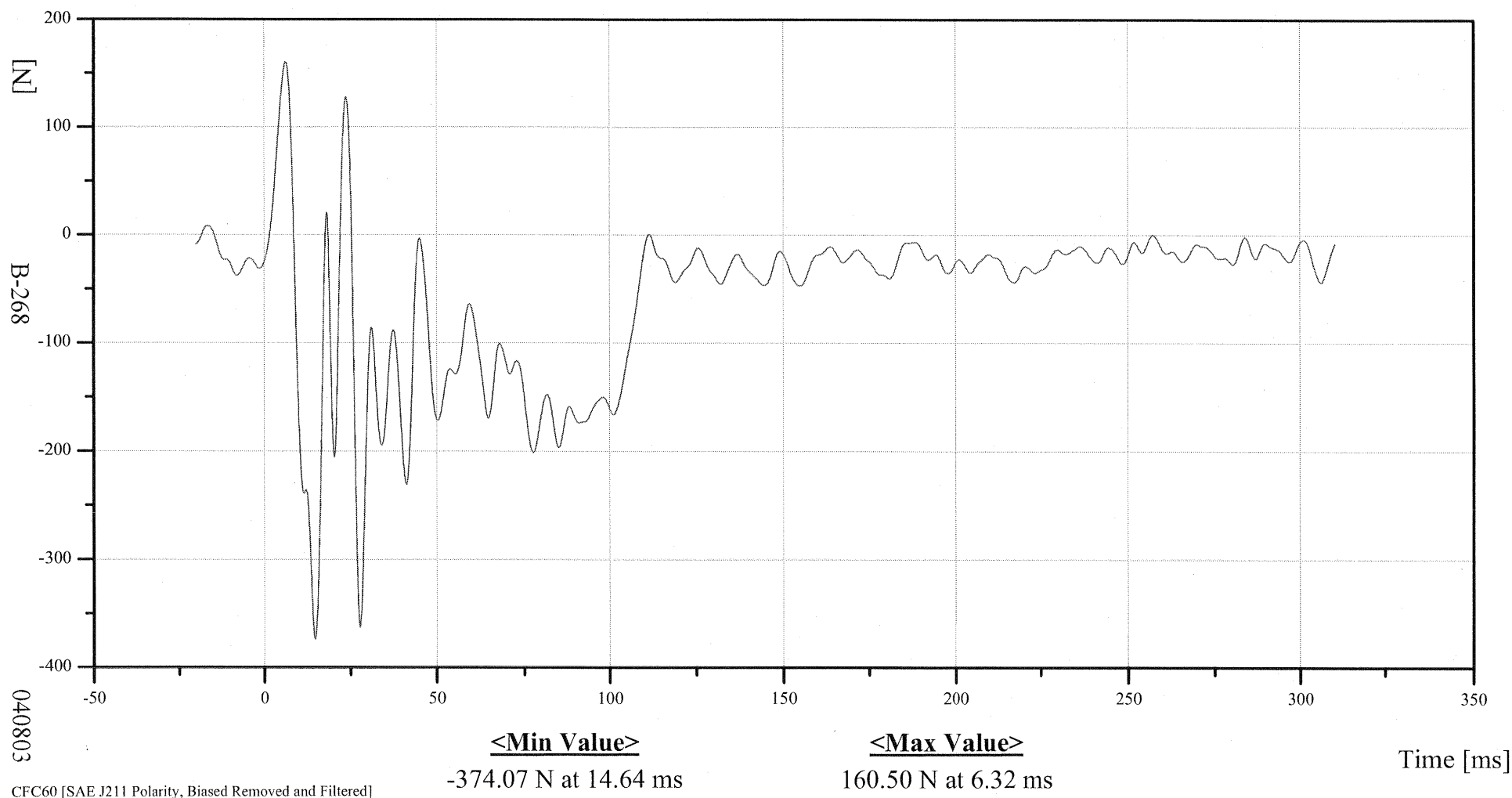
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0808





Transportation Research Center, Inc.

ROW 8 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

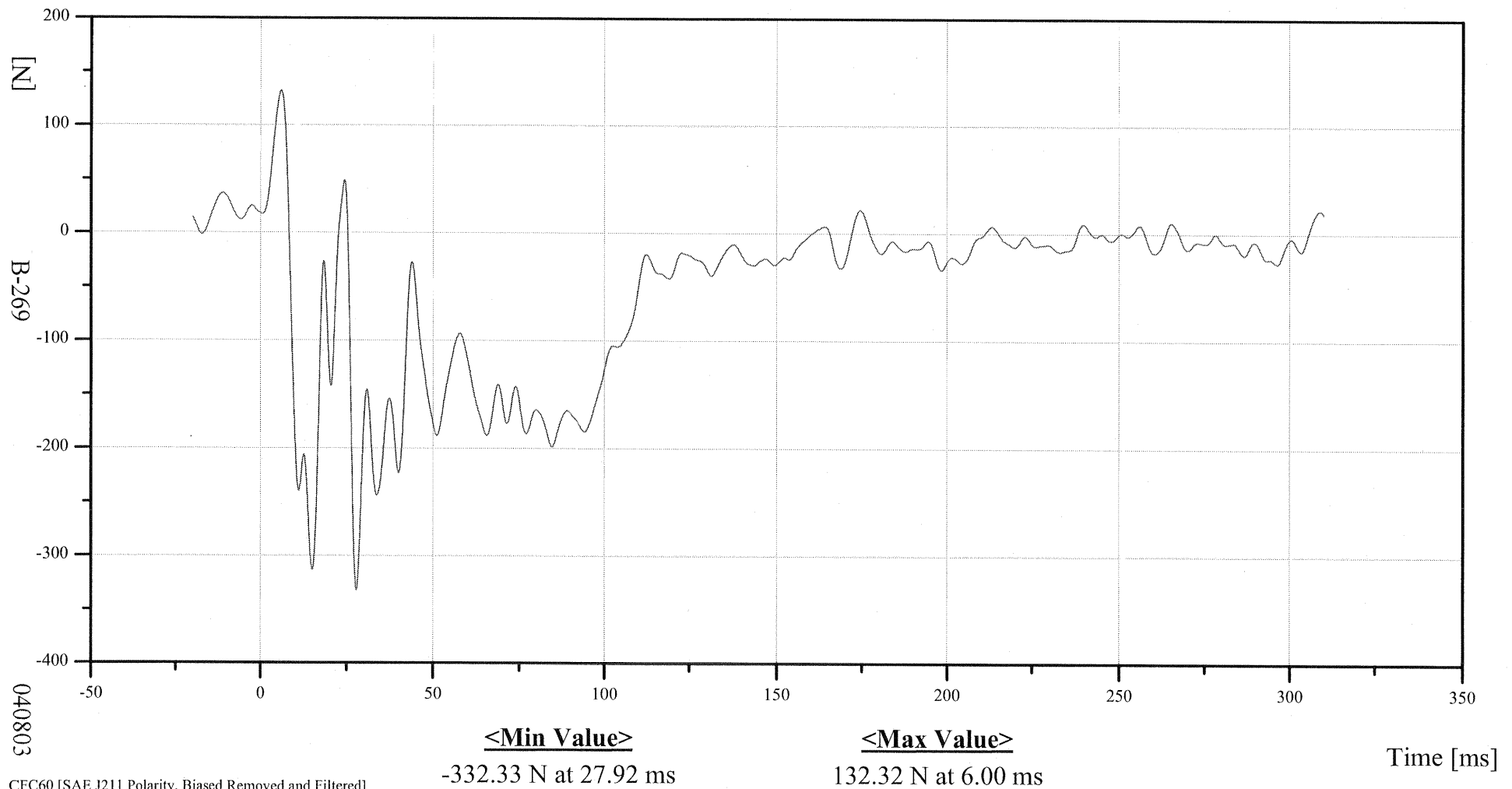
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0809





Transportation Research Center, Inc.

ROW 8 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

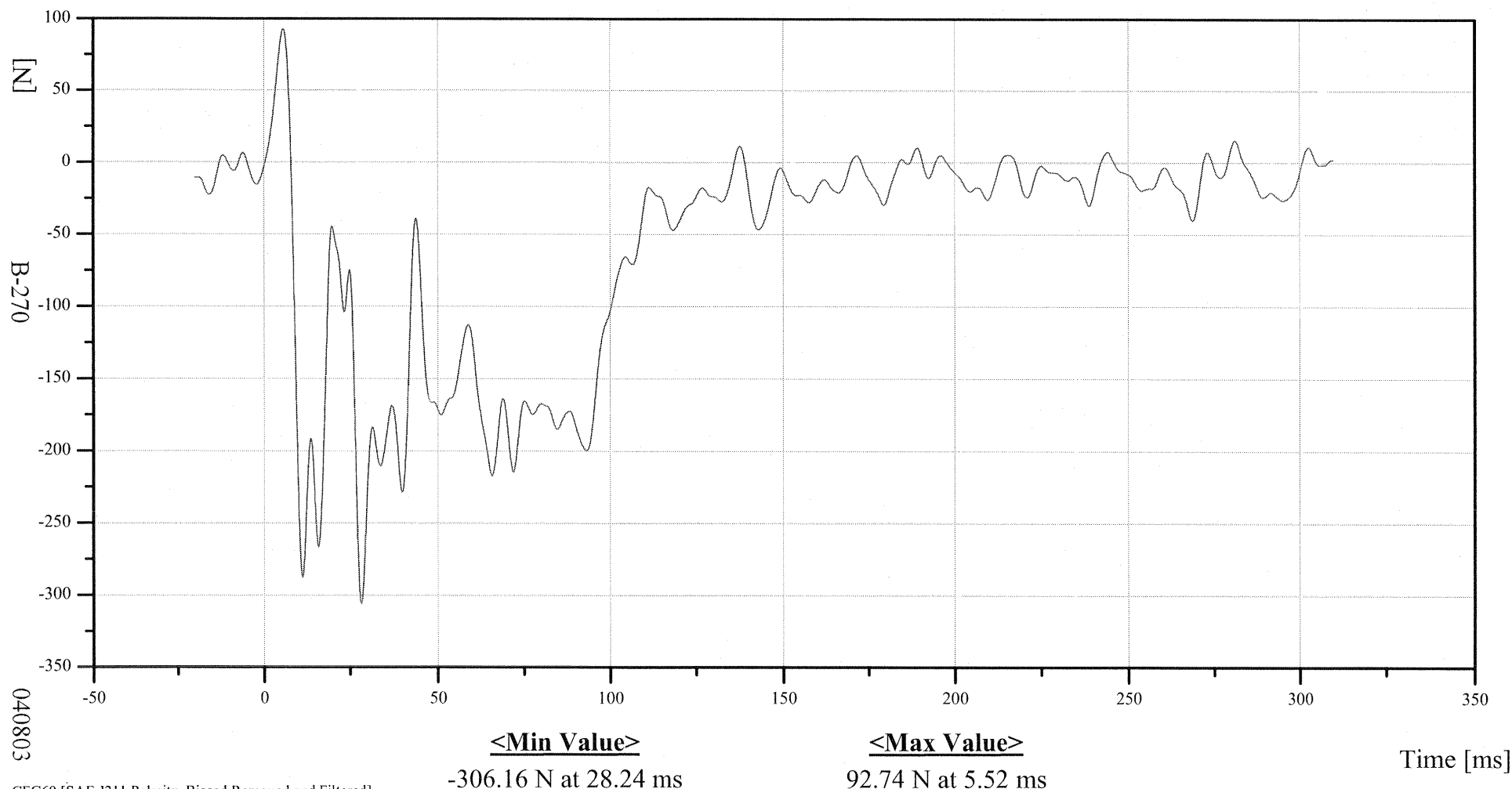
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0810



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

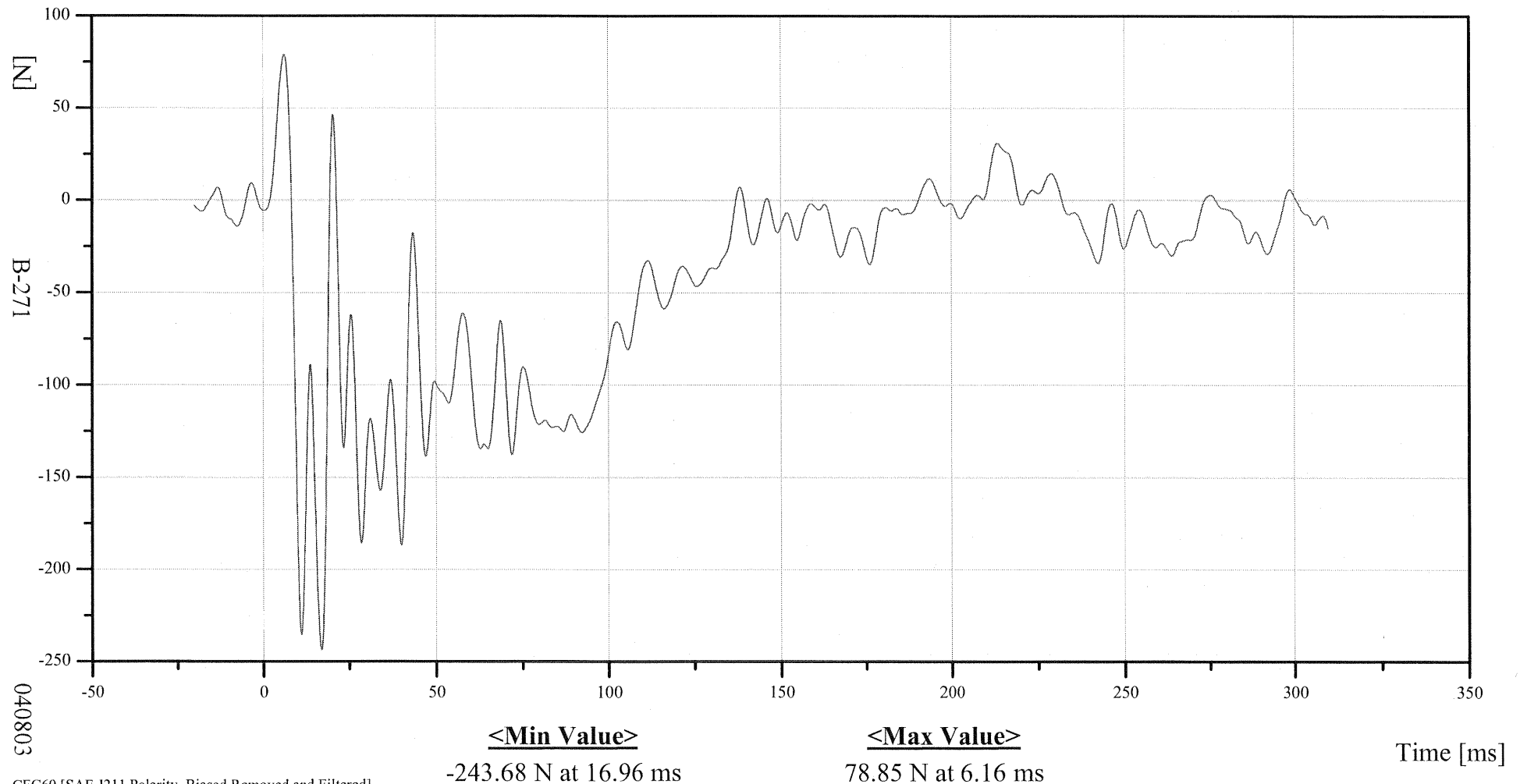
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0811



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 12

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

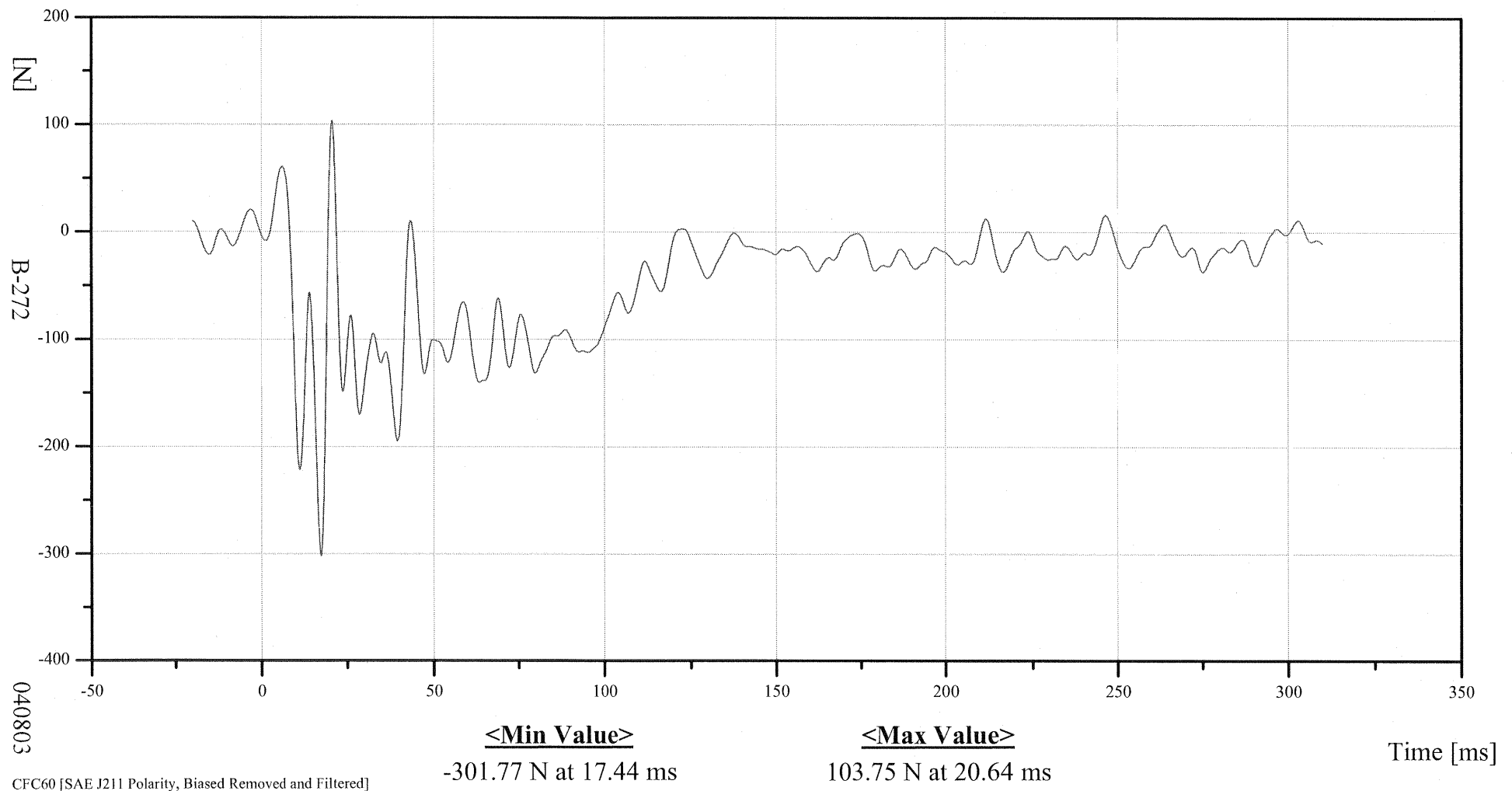
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0812





Transportation Research Center, Inc.

ROW 8 COLUMN 13

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

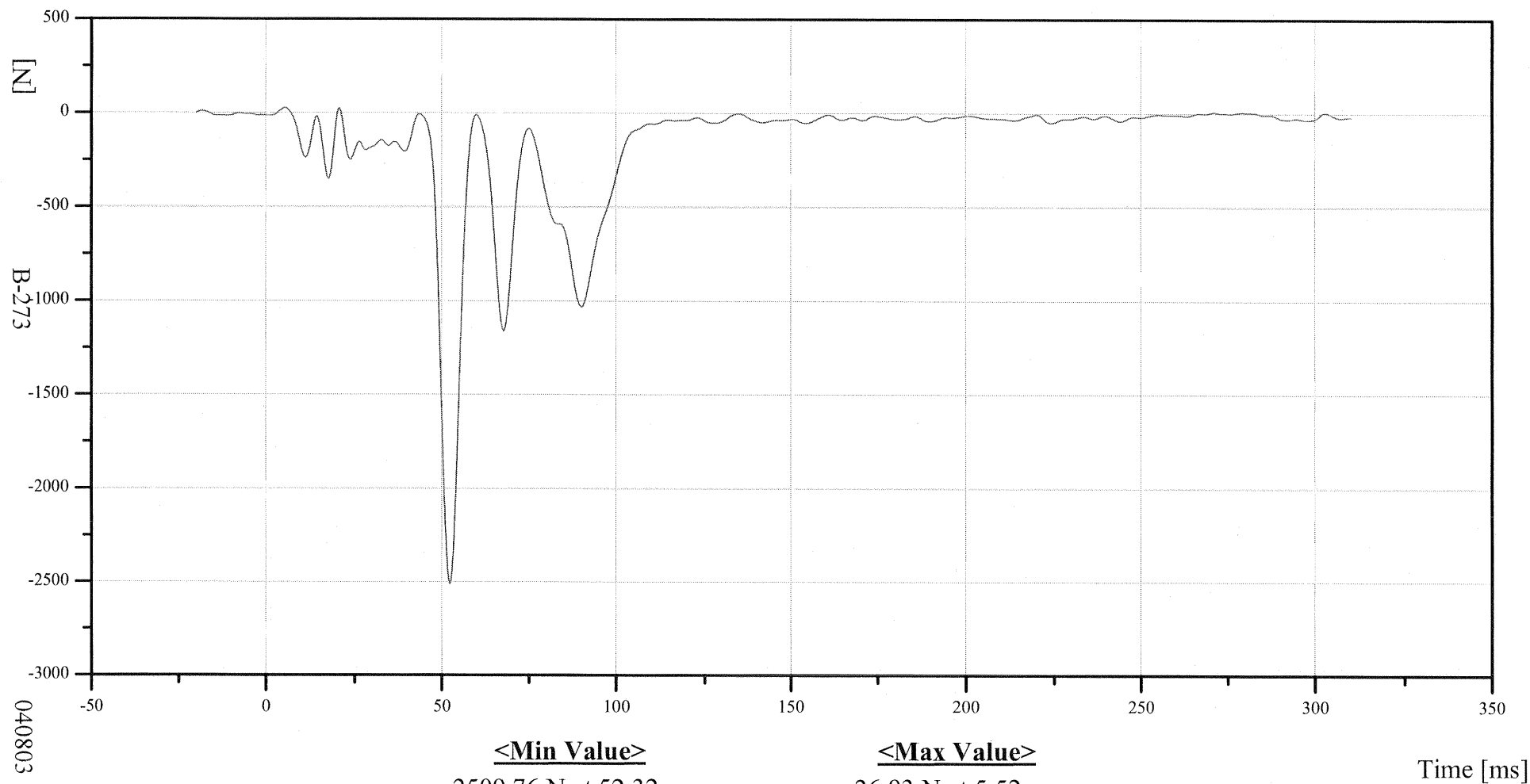
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0813



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 14

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

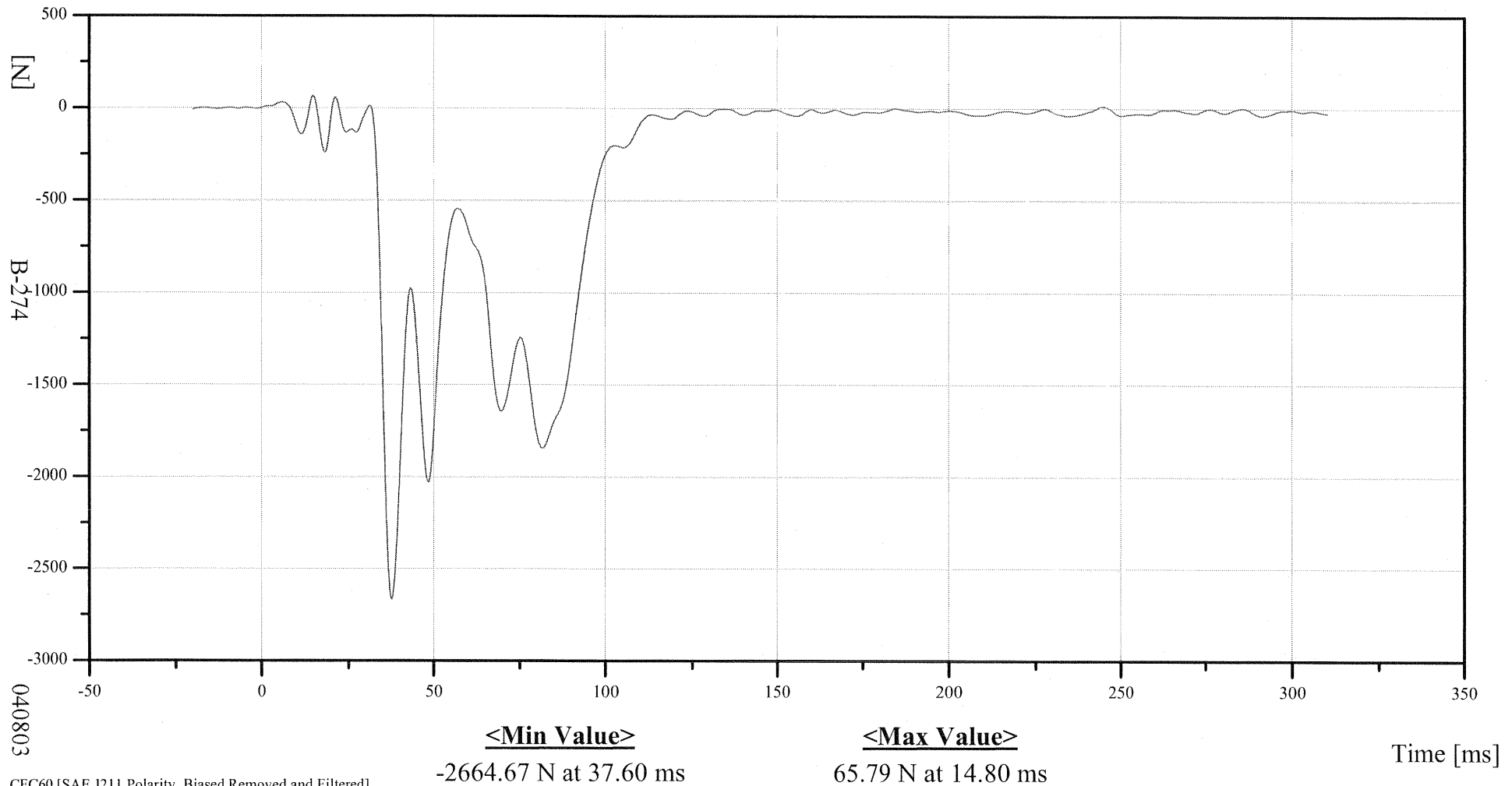
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0814





Transportation Research Center, Inc.

ROW 8 COLUMN 15

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

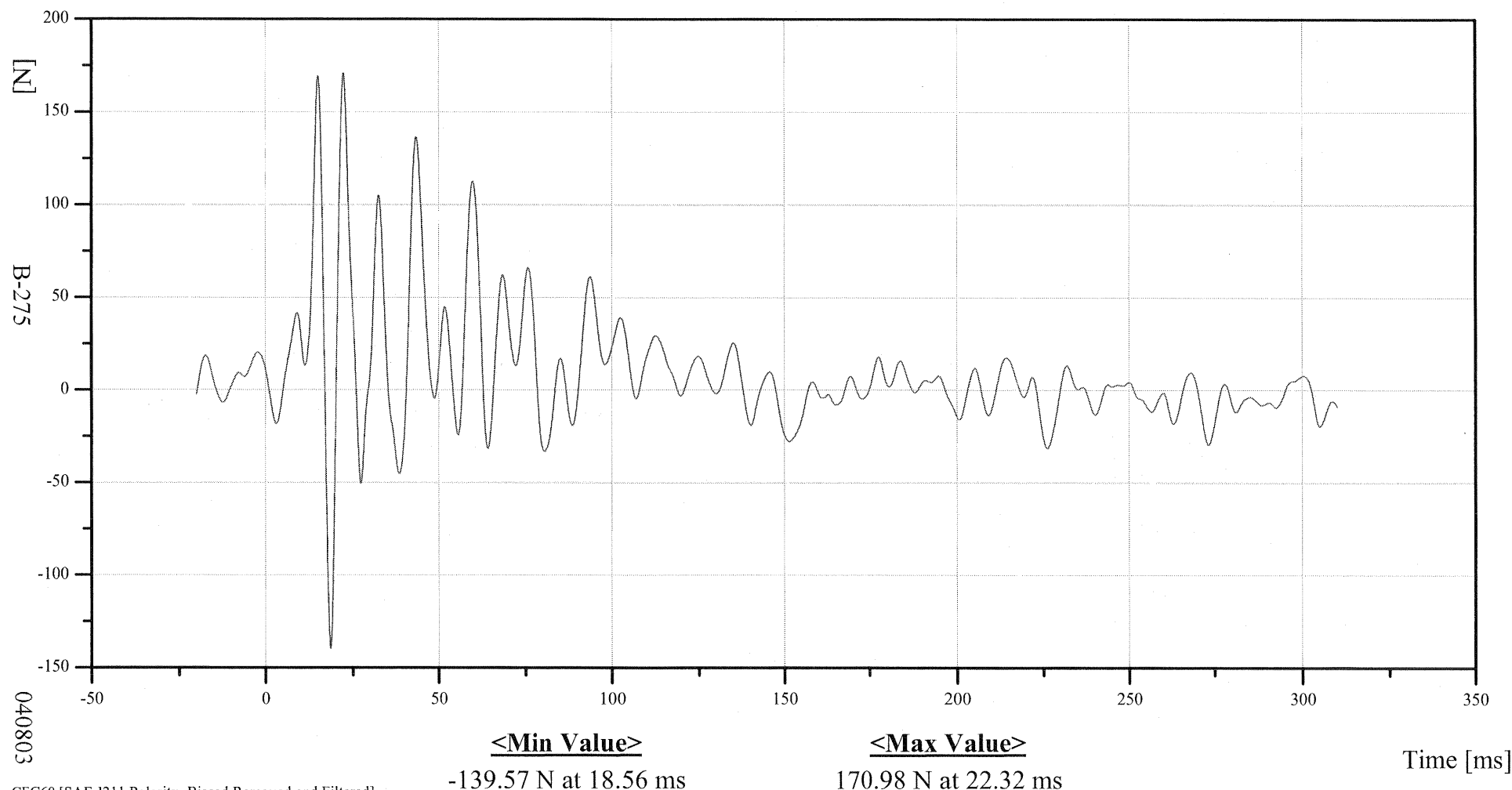
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0815



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 8 COLUMN 16

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

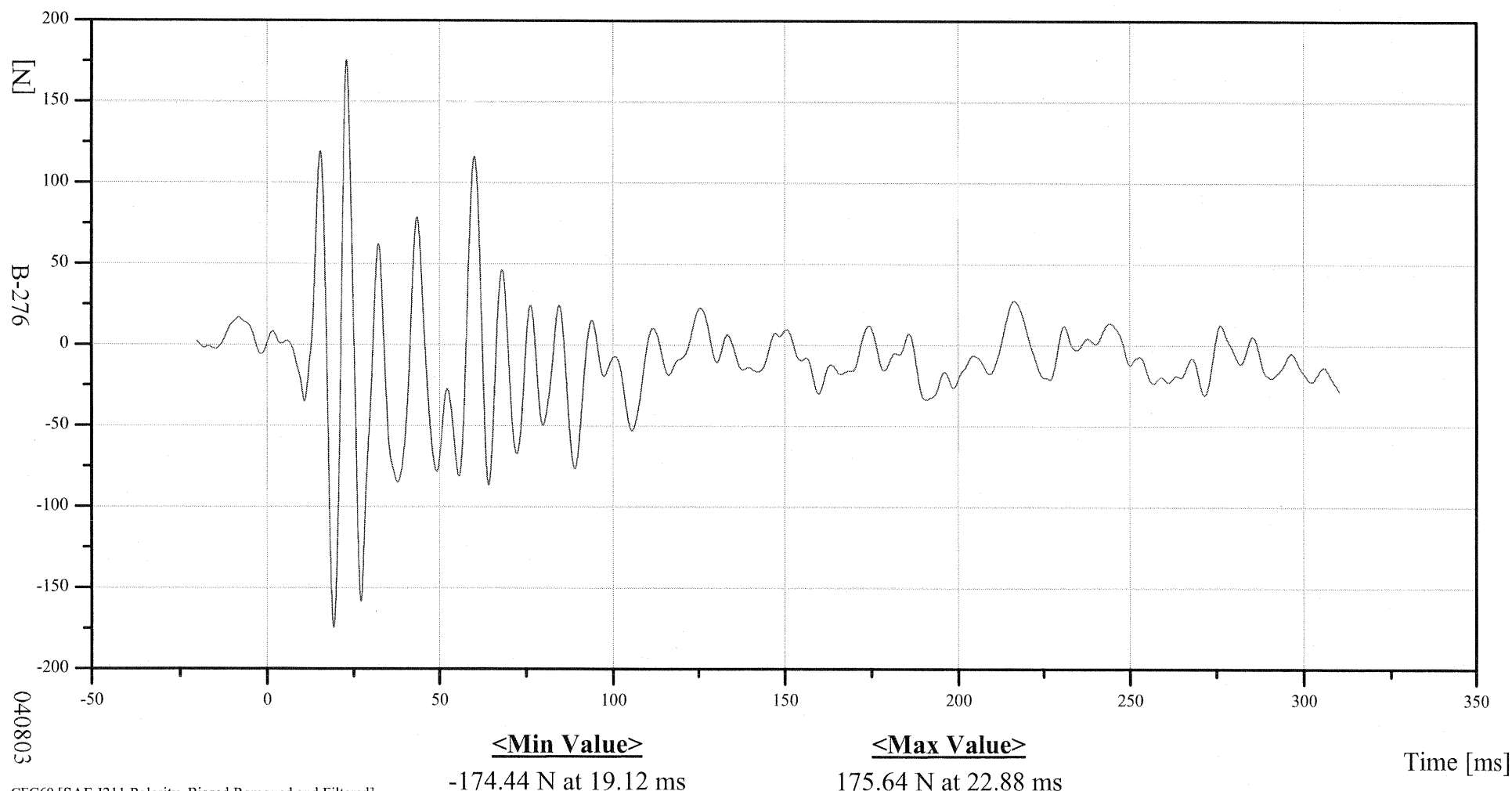
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0816





Transportation Research Center, Inc.

ROW 9 COLUMN 6

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

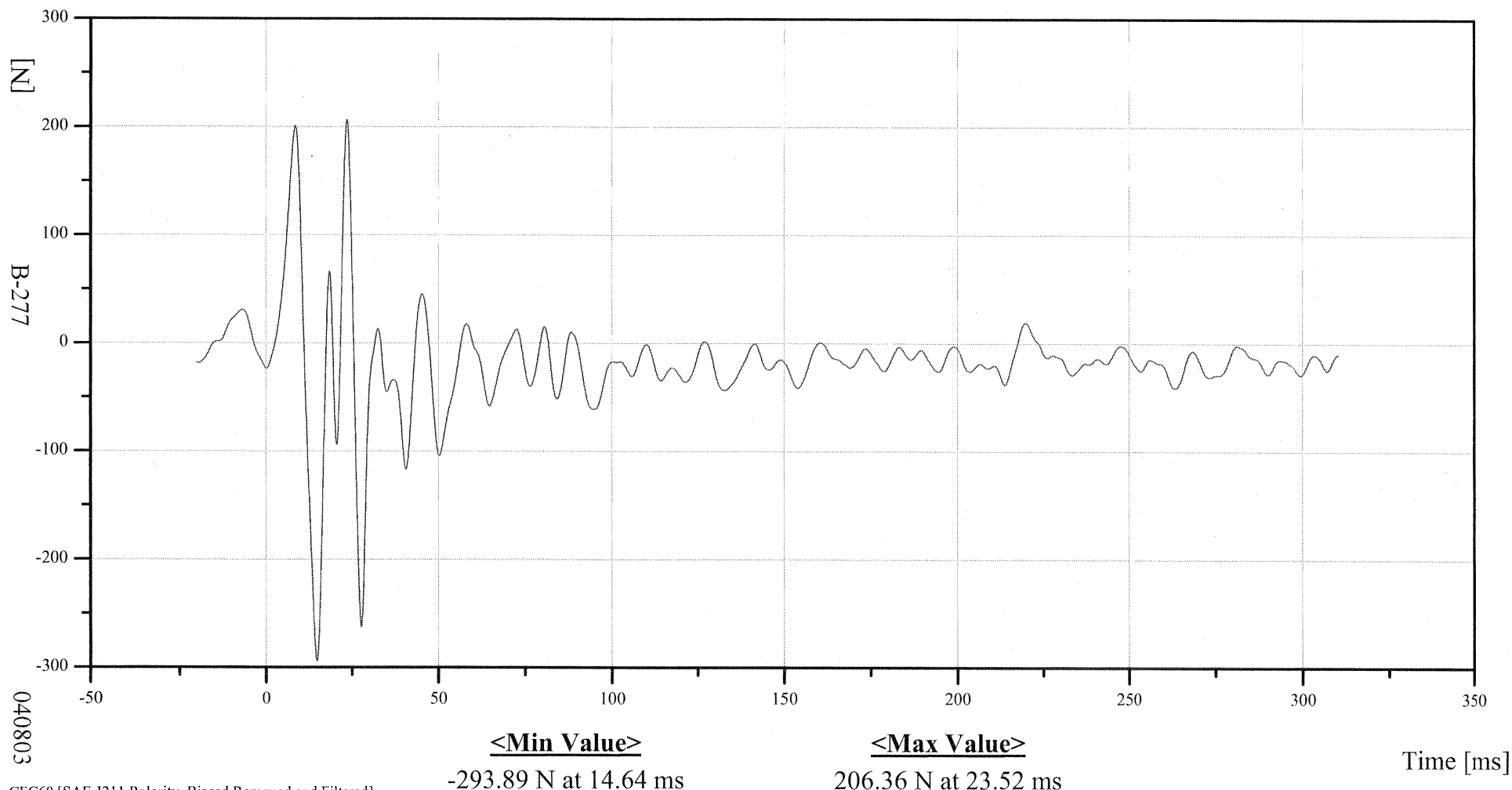
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0906





Transportation Research Center, Inc.

ROW 9 COLUMN 7

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

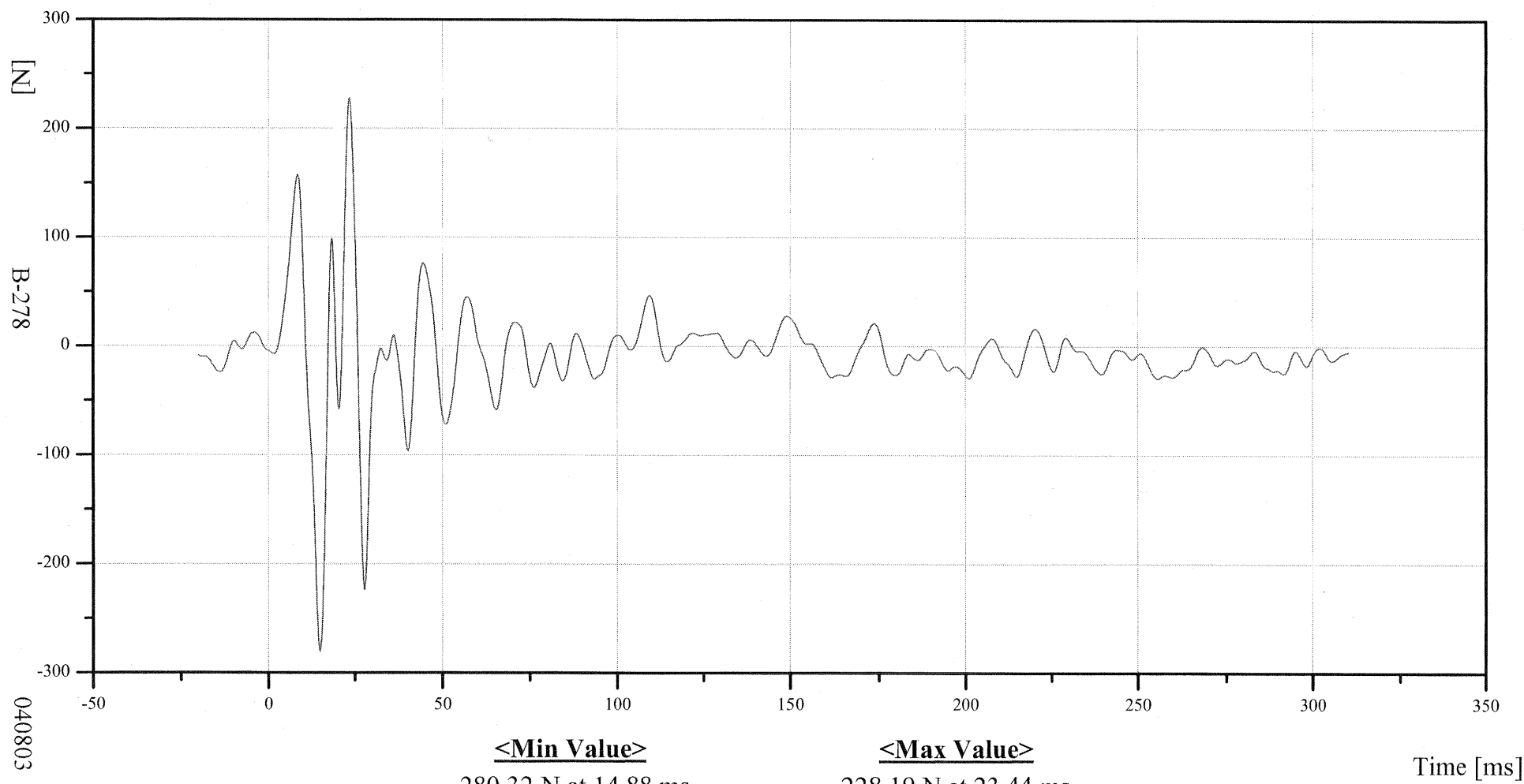
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0907



CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 9 COLUMN 8

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

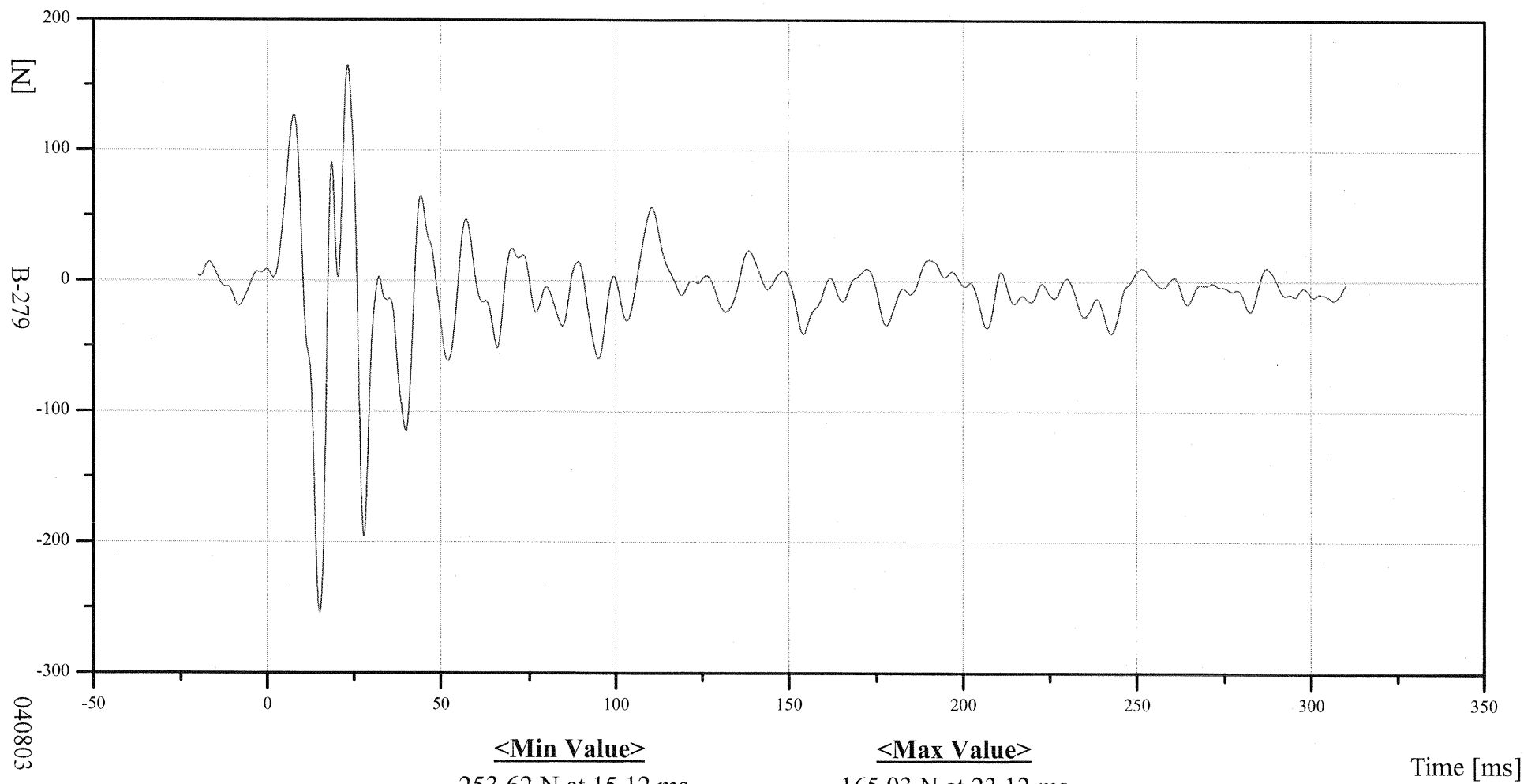
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0908



040803

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 9 COLUMN 9

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

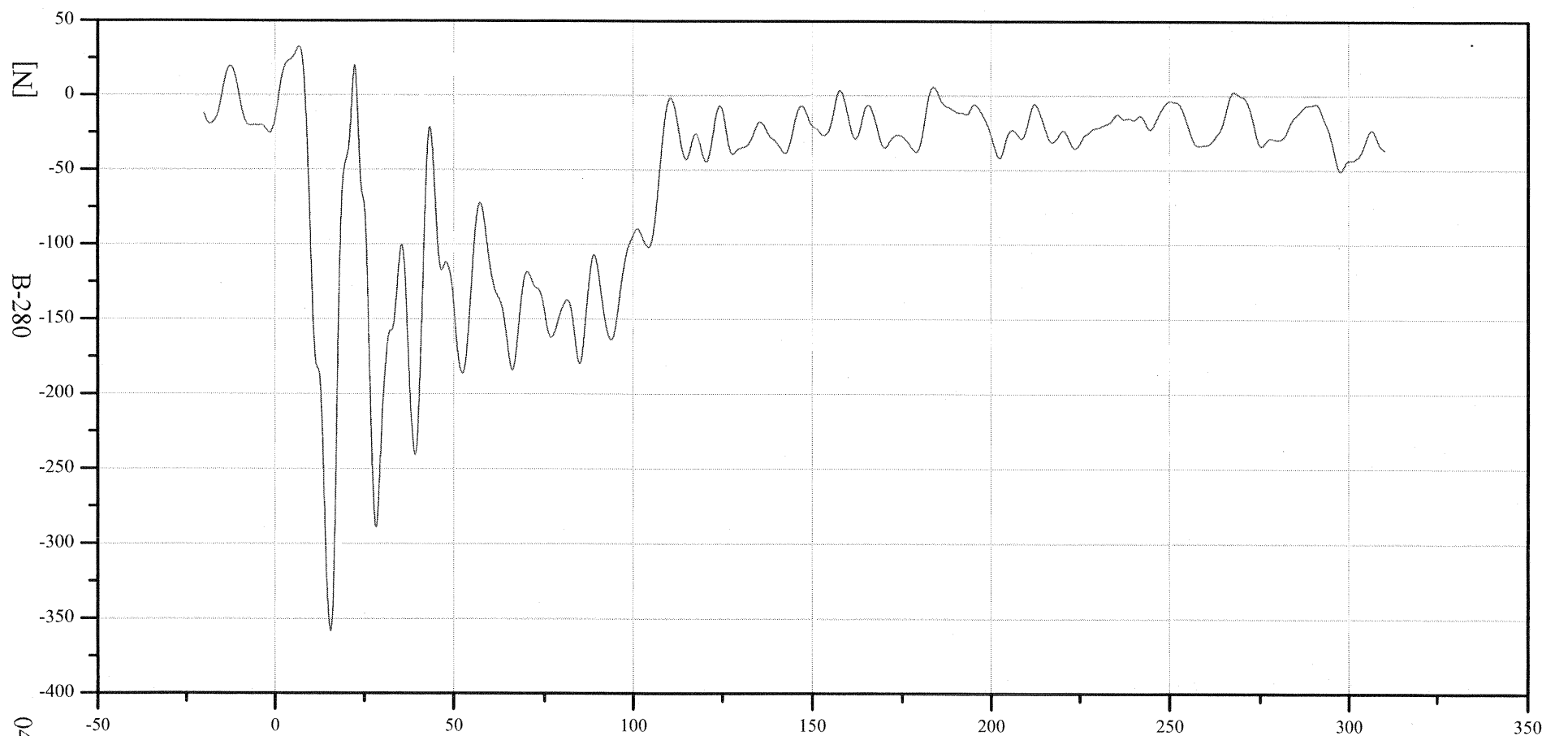
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0909



040803

<Min Value>

-358.18 N at 15.60 ms

<Max Value>

32.65 N at 6.72 ms

Time [ms]

CFC60 [SAE J211 Polarity, Biased Removed and Filtered]



Transportation Research Center, Inc.

ROW 9 COLUMN 10

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

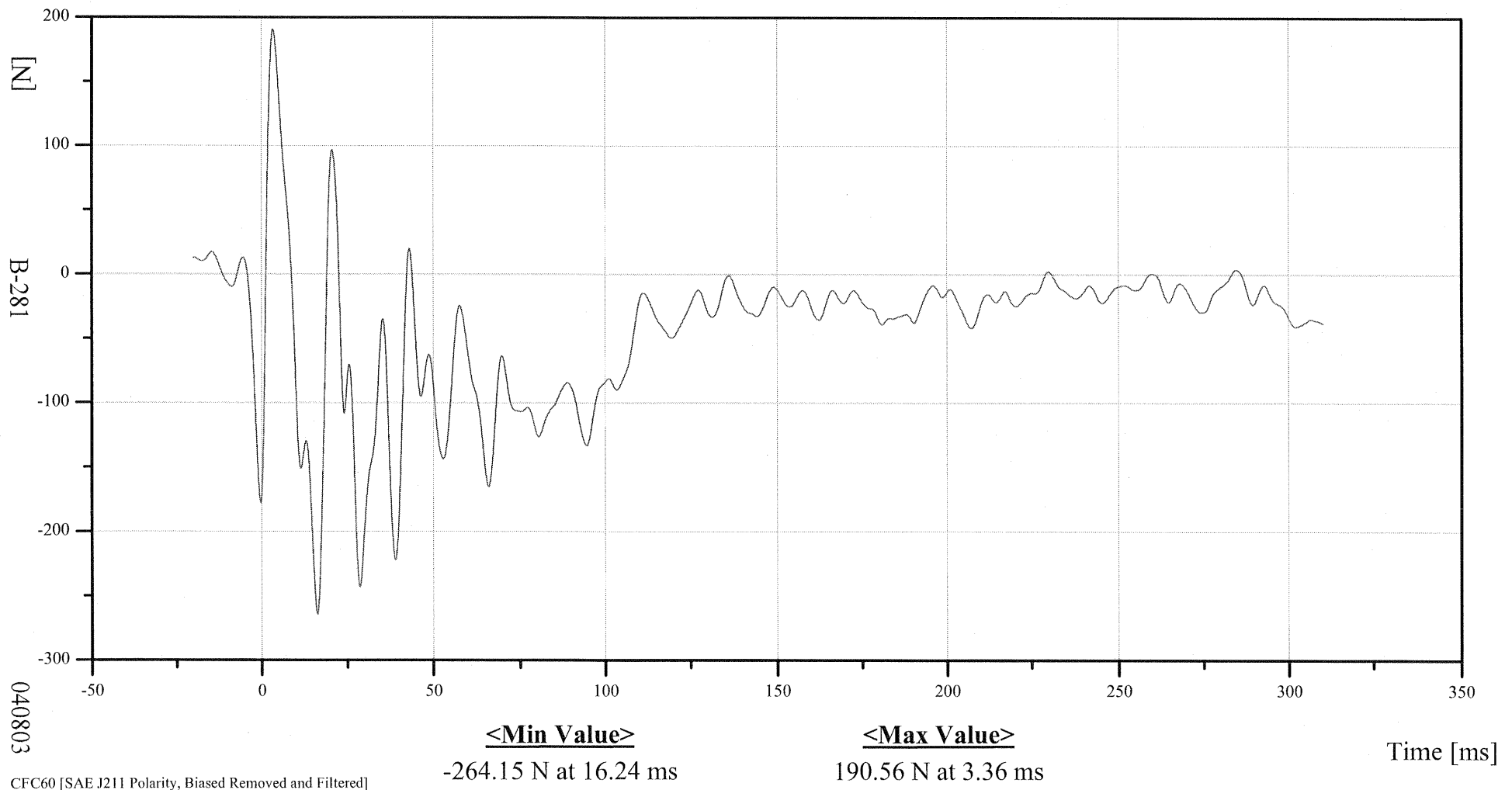
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0910





Transportation Research Center, Inc.

ROW 9 COLUMN 11

Date: 08/03/2004

Time: 12:26:49

Test Lab: CTF

Customer: VRTC

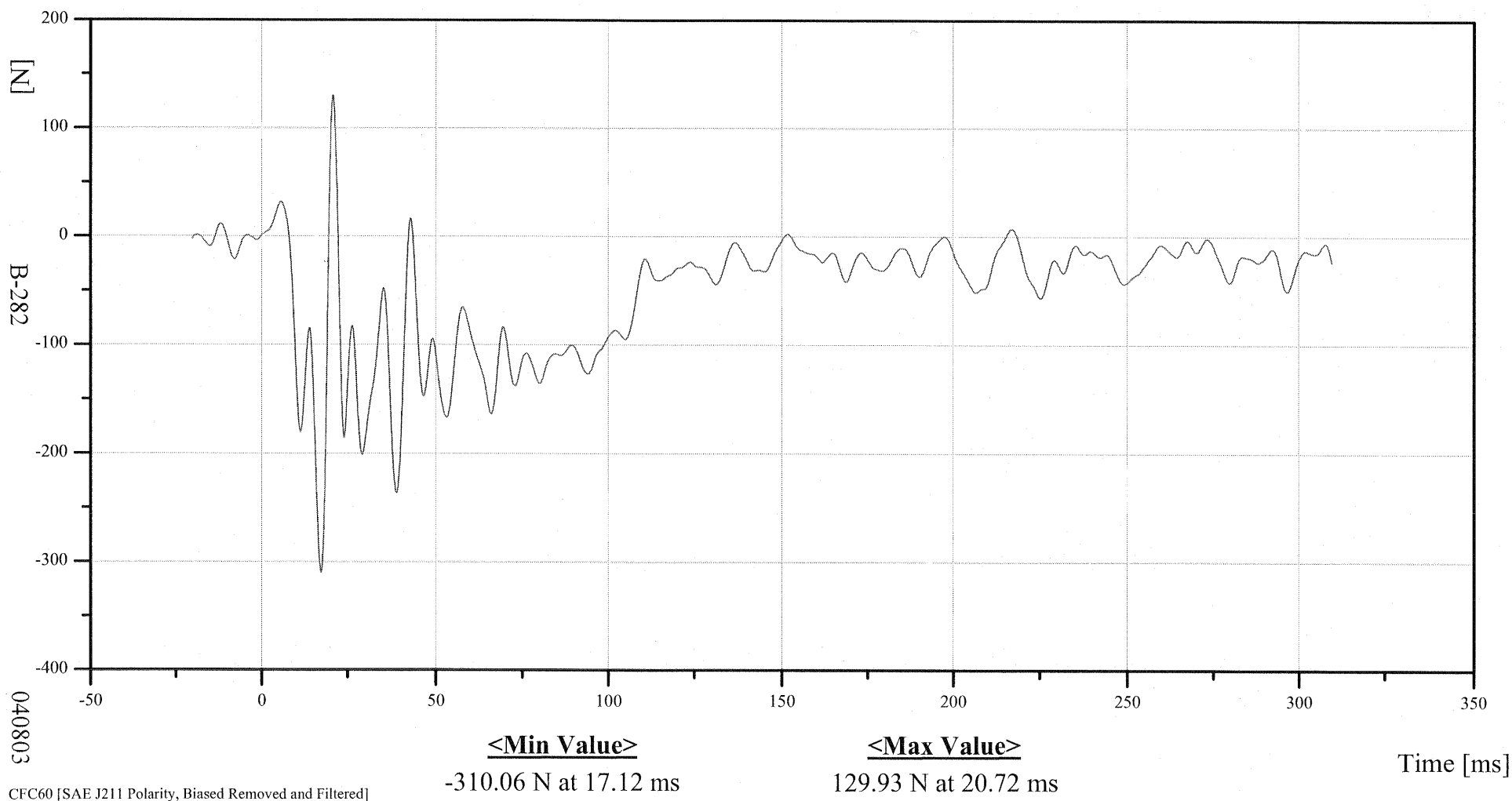
Test Number: 040803

Position #1 - HIII 5th Female (416)

Position #2 - HIII 5th Female (048)

Position #9 - HIII 5th Female (070)

LC0911



Appendix C

Dummy Certification Data

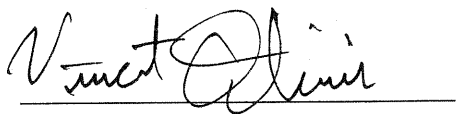
Pre-Test Calibration

Driver Dummy S/N 416

Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 416 Calibration No. 25
With FLX Legs

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	776	Yes
B	Shoulder Pivot Height	431.8 - 457.2	442	Yes
C	Hip Pivot Height	81.3 - 86.3	83	Yes
D	Hip Pivot from Backline	144.8 - 149.8	145	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	73	Yes
F	Thigh Clearance	119.4 - 134.6	127	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	248	Yes
H	Head Back to Backline	43.2 - 48.2	46	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	281	Yes
J	Elbow Rest Height	182.8 - 203.2	188	Yes
K	Buttock Knee Length	520.7 - 546.1	542	Yes
L	Popliteal Height	355.6 - 376.0	353	No
M	Knee Pivot Height	393.7 - 419.1	410	Yes
N	Buttock Popliteal Height	414.0 - 439.4	433	Yes
O	Chest Depth without Jacket	175.3 - 190.5	180	Yes
P	Foot Length	218.5 - 233.7	219	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	480	Yes
S	Head Breadth	137.1 - 147.3	144	Yes
T	Head Depth	177.8 - 188.0	181	Yes
U	Hip Breadth	299.7 - 314.9	300	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	86	Yes
X	Head Circumference	528.3 - 548.7	539	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	868	Yes
Z	Waist Circumference	759.5 - 789.9	772	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	340	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician



Approved



Transportation Research Center Inc.

5720 Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 416 Calibration No. 25 - 4

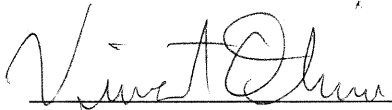
Test Date 07/16/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.10 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.22 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.30 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.26 m/s	Yes
Peak D Plane Rotation	77 - 91 °	79.6 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	74.26 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	88.56 ms	Yes

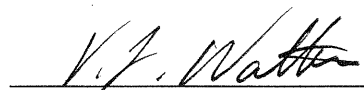
Test meets specifications.

Comments:

Technician



Approved



07.16.2004 09:29:08 509



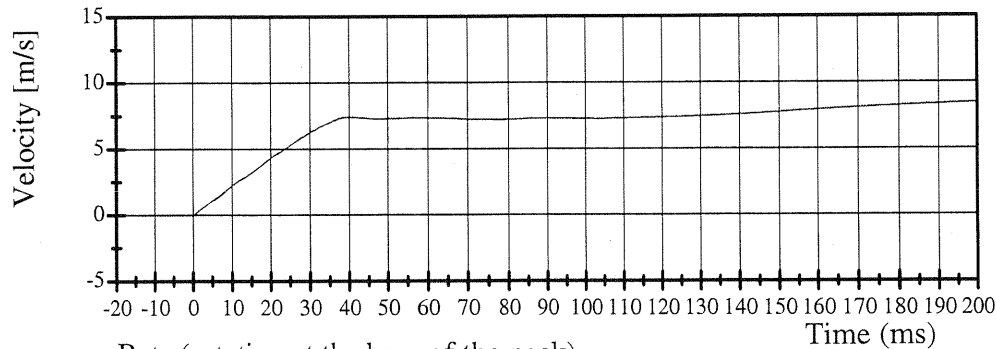
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 4

Test Date 07/16/2004

Integrated Pendulum Velocity

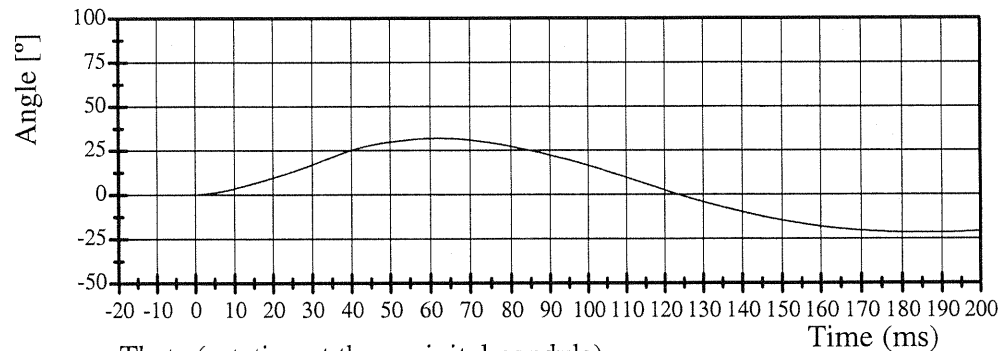


Filter Class: 180

Max: 9.0 m/s at 261.2 ms

Min: -0.0 m/s at -0.6 ms

Beta (rotation at the base of the neck)

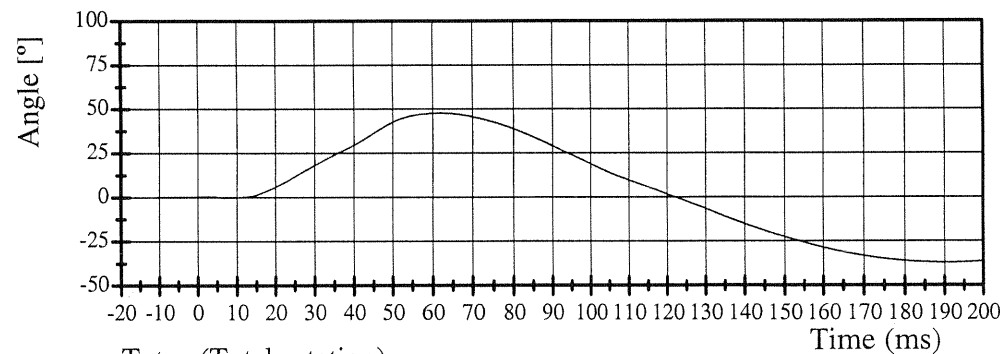


Filter Class: 60

Max: 32.0 ° at 62.3 ms

Min: -21.6 ° at 185.4 ms

Theta (rotation at the occipital condyle)

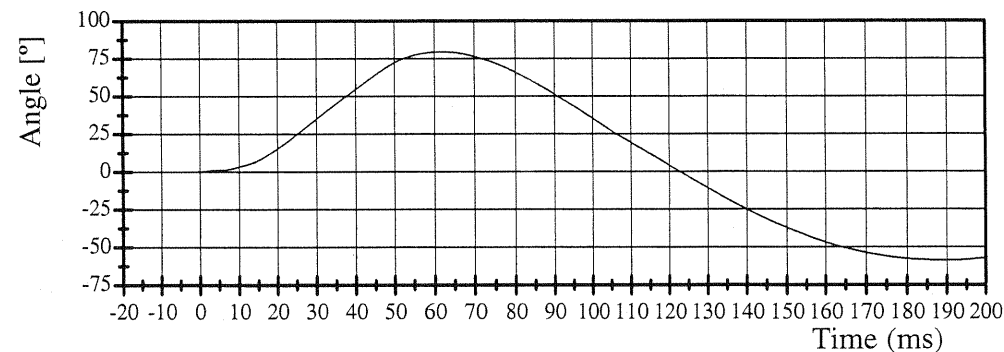


Filter Class: 60

Max: 47.6 ° at 62.2 ms

Min: -37.1 ° at 190.6 ms

Totan (Total rotation)



Filter Class: 60

Max: 79.6 ° at 62.2 ms

Min: -58.6 ° at 189.7 ms

07.16.2004 09:29:09 509



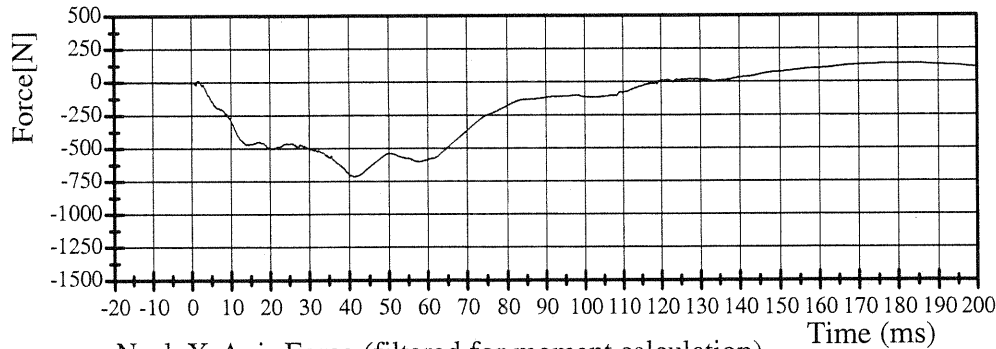
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 4

Test Date 07/16/2004

Neck X-Axis Force

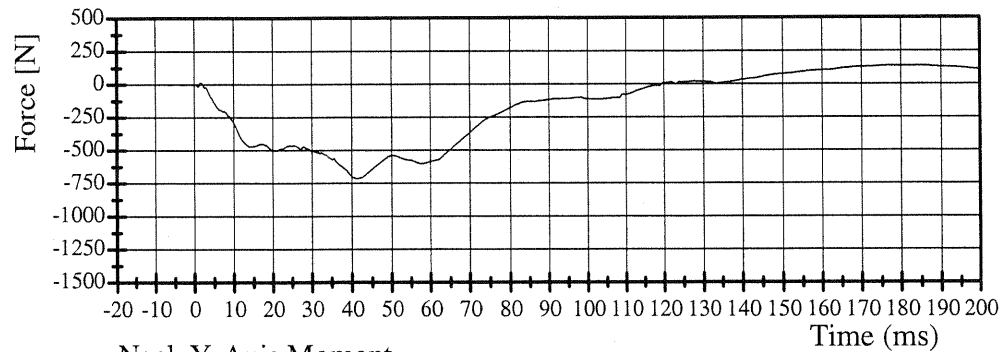


Filter Class: 1000

Max: 138.5 N at 176.9 ms

Min: -713.1 N at 41.3 ms

Neck X-Axis Force (filtered for moment calculation)

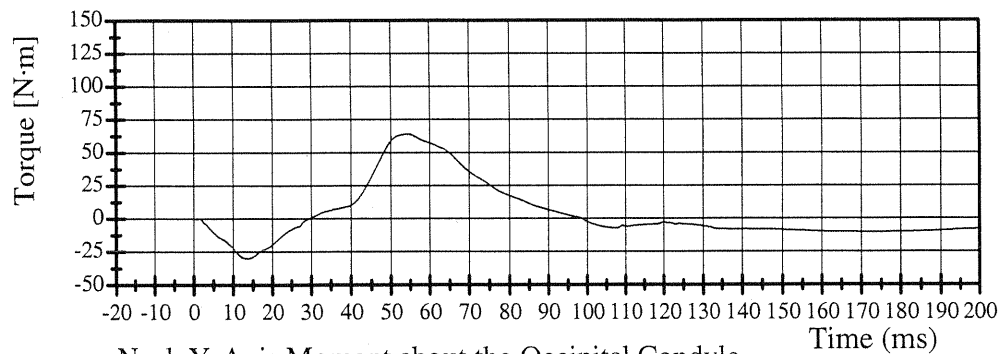


Filter Class: 600

Max: 137.9 N at 176.9 ms

Min: -712.2 N at 41.4 ms

Neck Y-Axis Moment

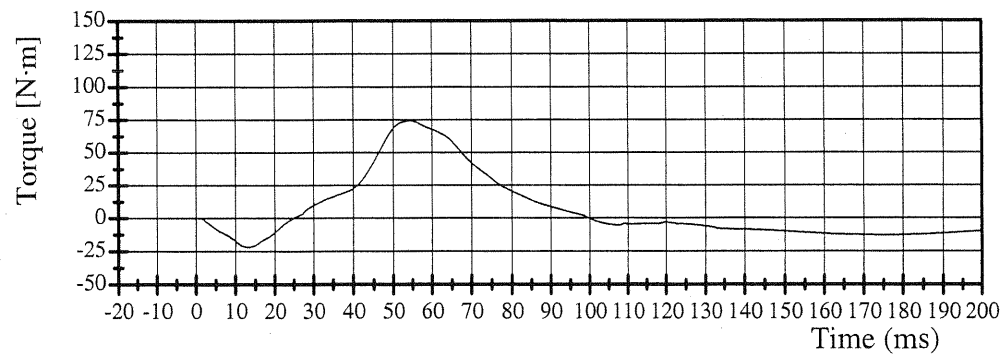


Filter Class: 600

Max: 64.1 N·m at 54.2 ms

Min: -30.1 N·m at 13.7 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 74.3 N·m at 54.3 ms

Min: -21.8 N·m at 13.4 ms

07.16.2004 09:29:10 509



Transportation Research Center Inc.

5720 Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 416 Calibration No. 25 - 3

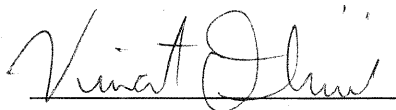
Test Date 07/16/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.15 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.81 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.50 m/s	Yes
30 ms	4.60 - 5.60 m/s	5.12 m/s	Yes
Peak D Plane Rotation	99 - 114 °	106.4 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-60.40 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	104.32 ms	Yes

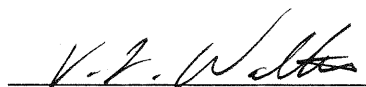
Test meets specifications.

Comments:

Technician



Approved



07.16.2004 10:41:31 593



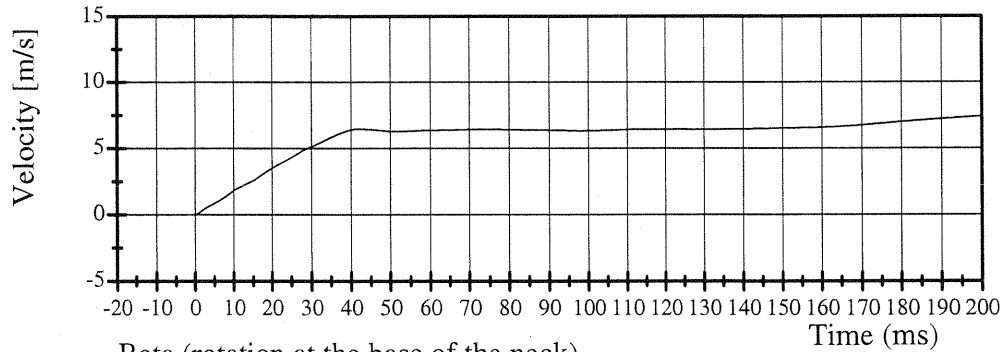
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 3

Test Date 07/16/2004

Integrated Pendulum Velocity

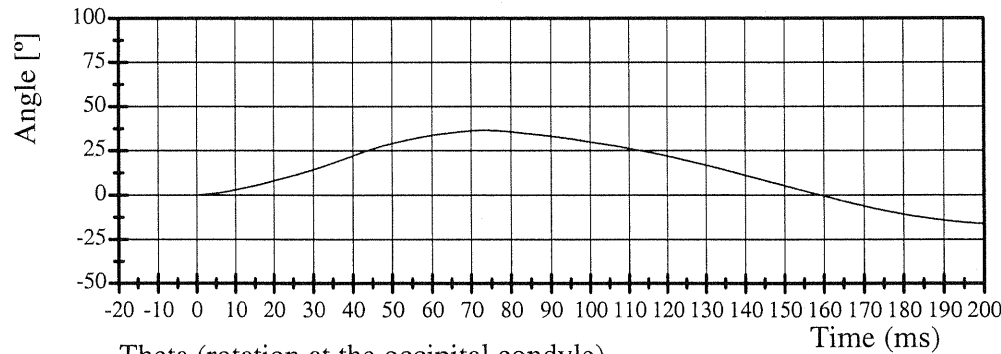


Filter Class: 180

Max: 8.2 m/s at 952.6 ms

Min: -0.0 m/s at -29.5 ms

Beta (rotation at the base of the neck)

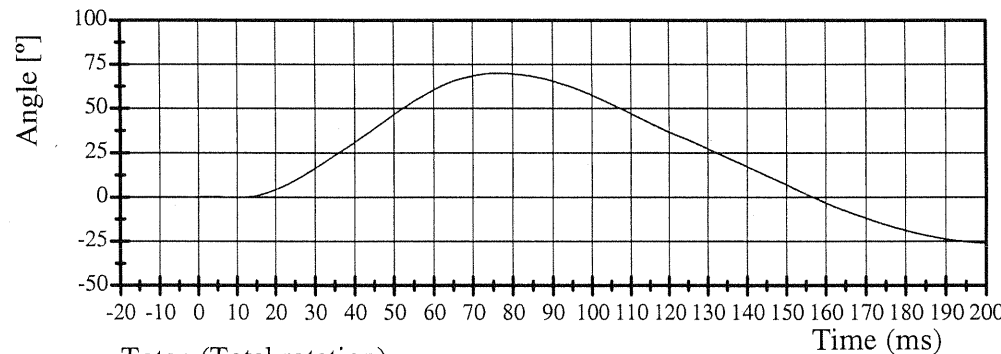


Filter Class: 60

Max: 36.5 ° at 73.3 ms

Min: -16.5 ° at 208.1 ms

Theta (rotation at the occipital condyle)

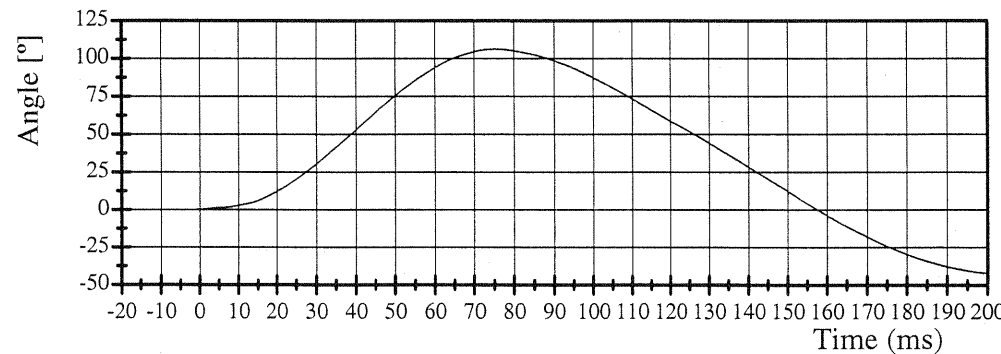


Filter Class: 60

Max: 70.0 ° at 76.2 ms

Min: -26.2 ° at 204.3 ms

Totan (Total rotation)



Filter Class: 60

Max: 106.4 ° at 75.0 ms

Min: -42.7 ° at 205.4 ms

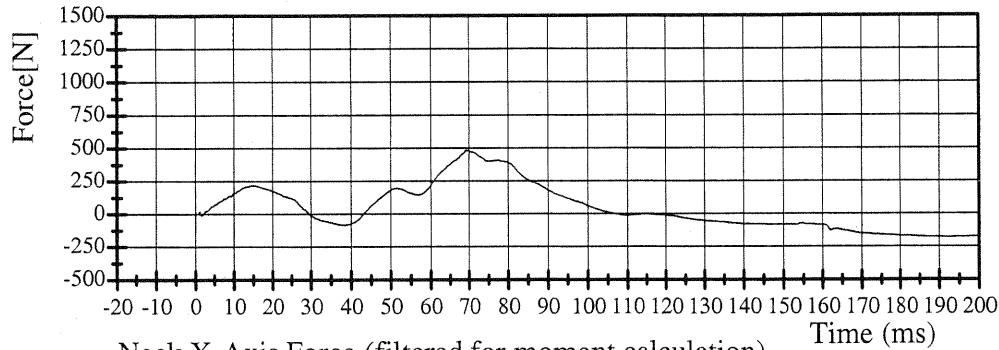
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 3

Test Date 07/16/2004

Neck X-Axis Force

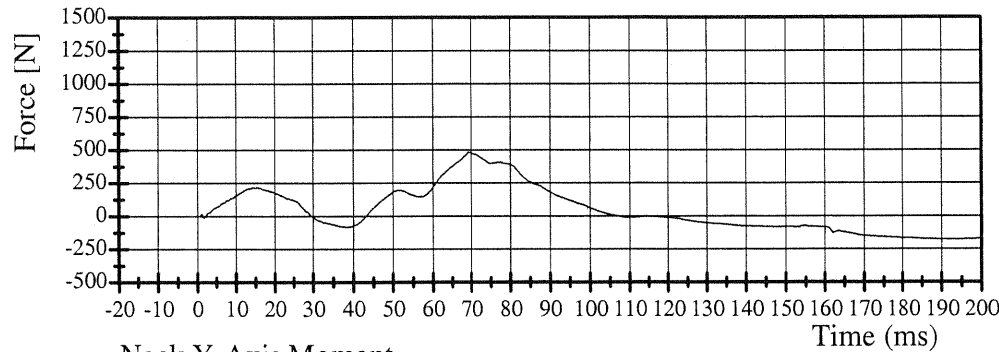


Filter Class: 1000

Max: 482.8 N at 69.5 ms

Min: -178.2 N at 191.4 ms

Neck X-Axis Force (filtered for moment calculation)

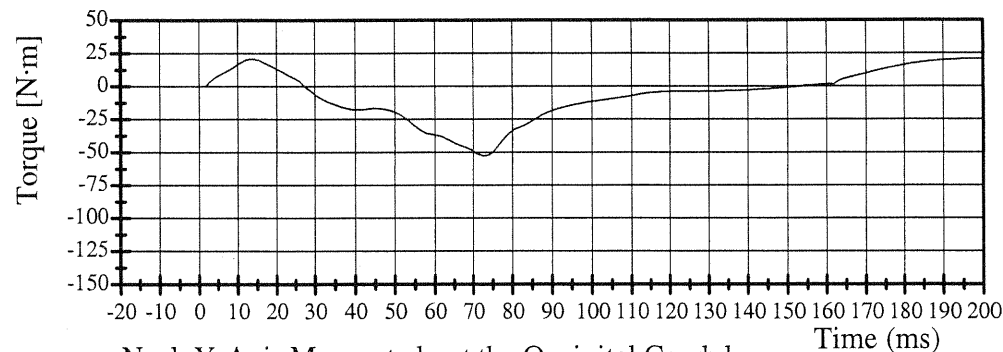


Filter Class: 600

Max: 482.6 N at 69.4 ms

Min: -178.1 N at 191.4 ms

Neck Y-Axis Moment

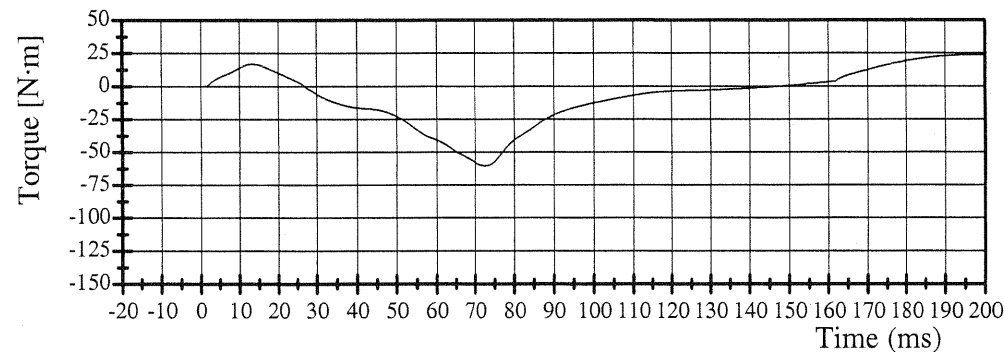


Filter Class: 600

Max: 20.7 N·m at 197.0 ms

Min: -52.6 N·m at 72.9 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 23.8 N·m at 196.9 ms

Min: -60.4 N·m at 72.6 ms

Transportation Research Center Inc.

5720 Thor Left Knee Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 1

Test Date 07/15/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3543 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Olchini

Approved

V. J. Walter

07.15.2004 14:41:13 1787



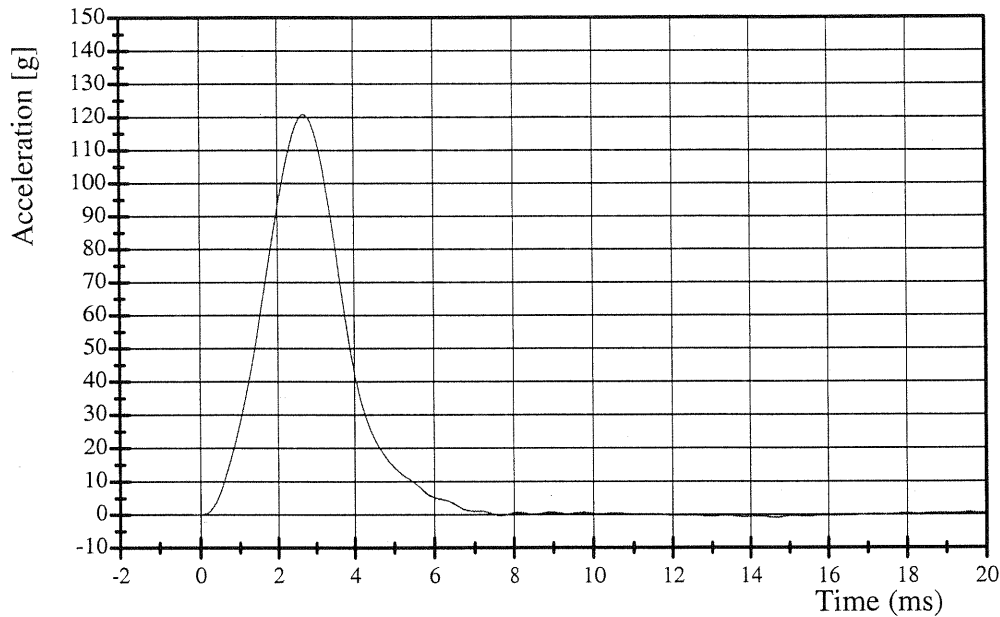
Transportation Research Center Inc.

5720 Thor Left Knee Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 1

Test Date 07/15/2004

Pendulum Deceleration

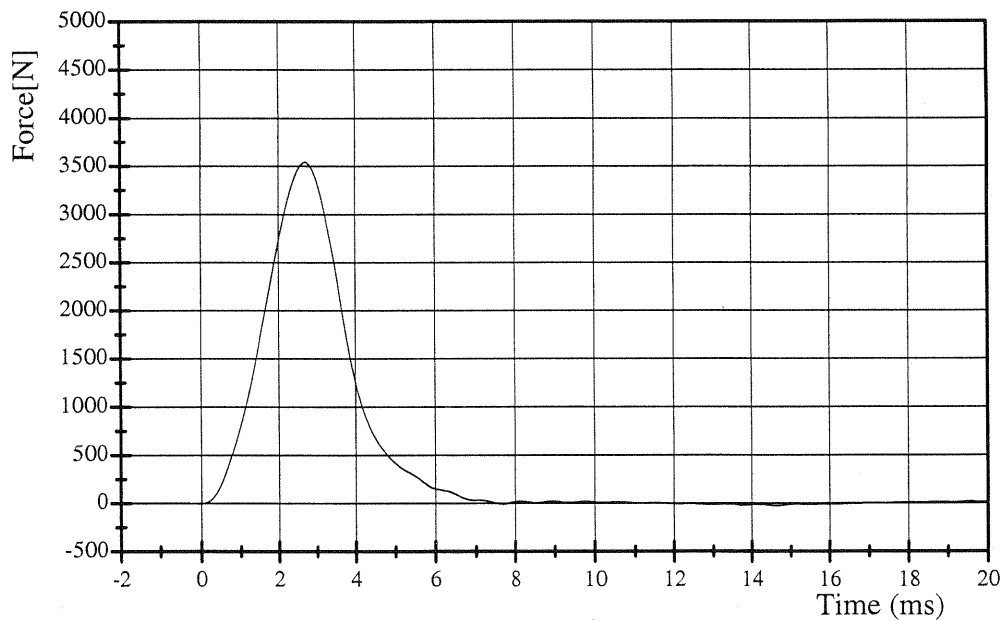


Filter Class: 600

Max: 120.8 g at 2.7 ms

Min: -0.9 g at 14.6 ms

Pendulum Force



Filter Class: 600

Max: 3542.9 N at 2.7 ms

Min: -26.0 N at 14.6 ms

07.15.2004 14:41:14 1787



Transportation Research Center Inc.

5720 Thor Right Knee Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 1

Test Date 07/15/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3472 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliver

Approved

V. L. Watter

07.15.2004 14:47:33 1787



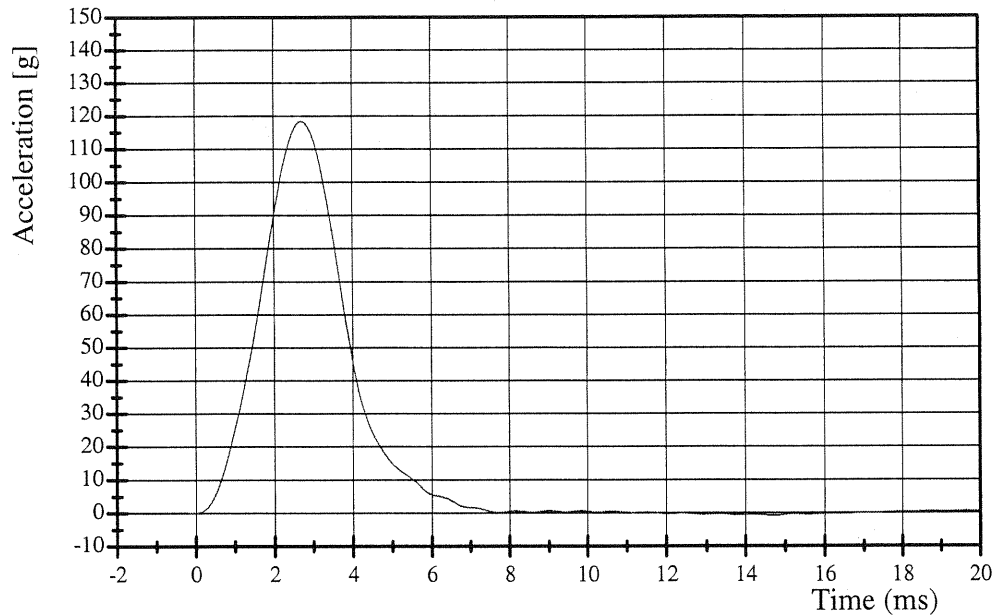
Transportation Research Center Inc.

5720 Thor Right Knee Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 1

Test Date 07/15/2004

Pendulum Deceleration

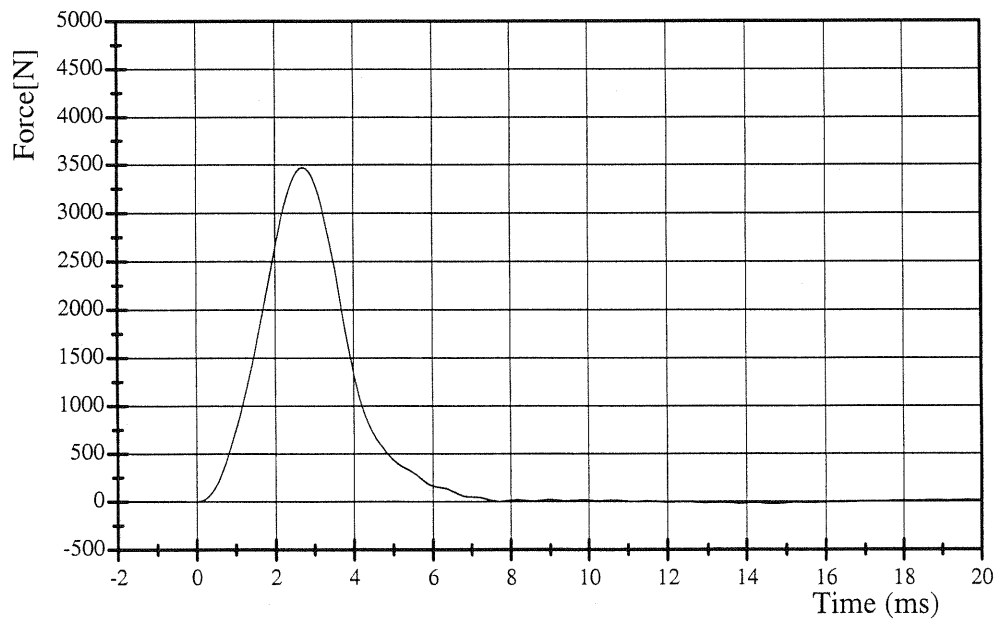


Filter Class: 600

Max: 118.4 g at 2.7 ms

Min: -0.8 g at 14.7 ms

Pendulum Force



Filter Class: 600

Max: 3472.4 N at 2.7 ms

Min: -23.3 N at 14.7 ms

07.15.2004 14:47:34 1787



Transportation Research Center Inc.

5720 Thor Left Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 1

Test Date 07/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.73 m/s	Yes
Knee Displacement	-15.5 - (-12.7) mm	-13.3 mm	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliverio

Approved

V. F. Walker

07.19.2004 14:28:22 1175



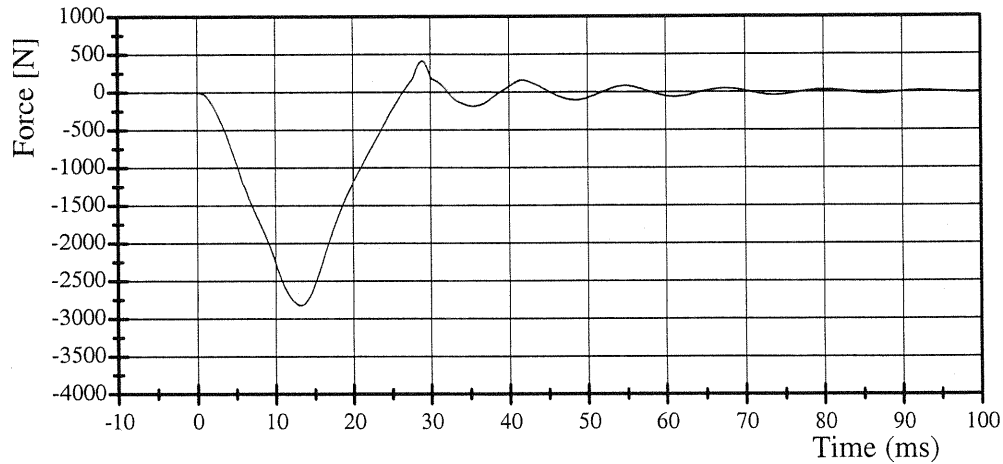
Transportation Research Center Inc.

5720 Thor Left Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 1

Test Date 07/19/2004

Femur Force

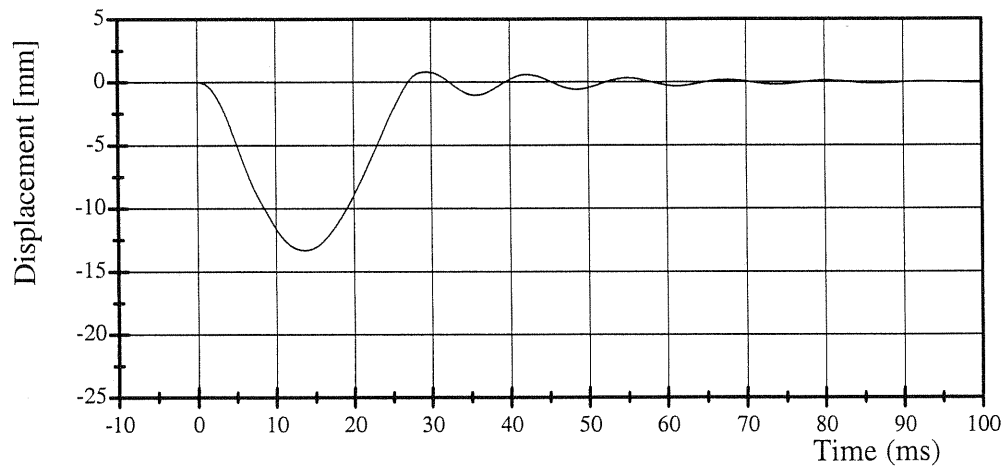


Filter Class: 600

Max: 413.3 N at 29.0 ms

Min: -2822.9 N at 13.2 ms

Tibia Displacement

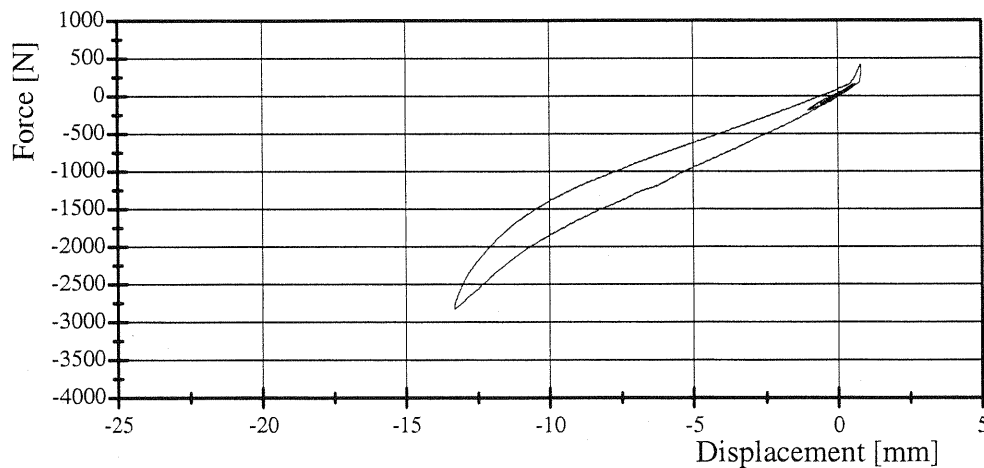


Filter Class: 180

Max: 0.8 mm at 29.4 ms

Min: -13.3 mm at 13.6 ms

Femur Force vs Tibia Displacement



07.19.2004 14:28:23 1175



Transportation Research Center Inc.

5720 Thor Right Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 25 - 2

Test Date 07/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.73 m/s	Yes
Knee Displacement	-15.5 - (-12.7) mm	-13.0 mm	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliver

Approved

V. K. Walter

07.19.2004 13:30:19 1179

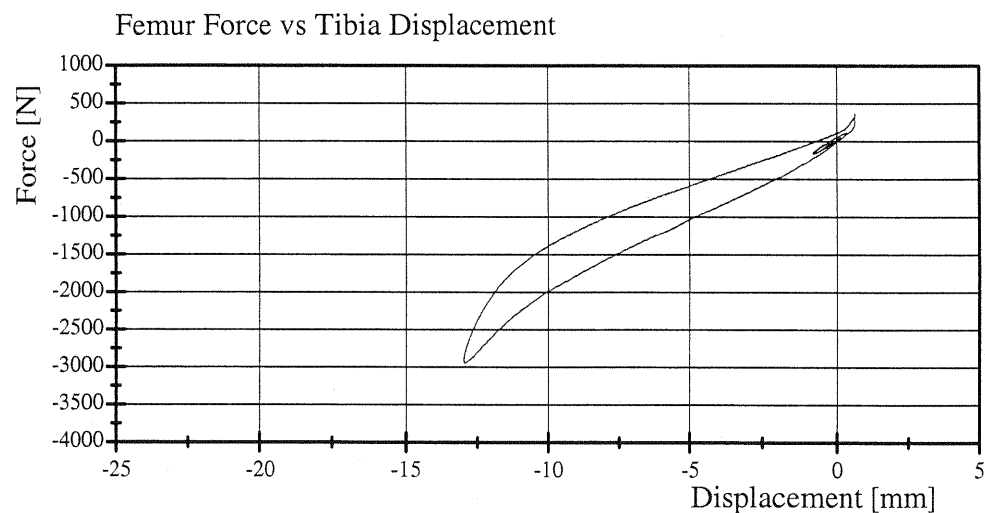
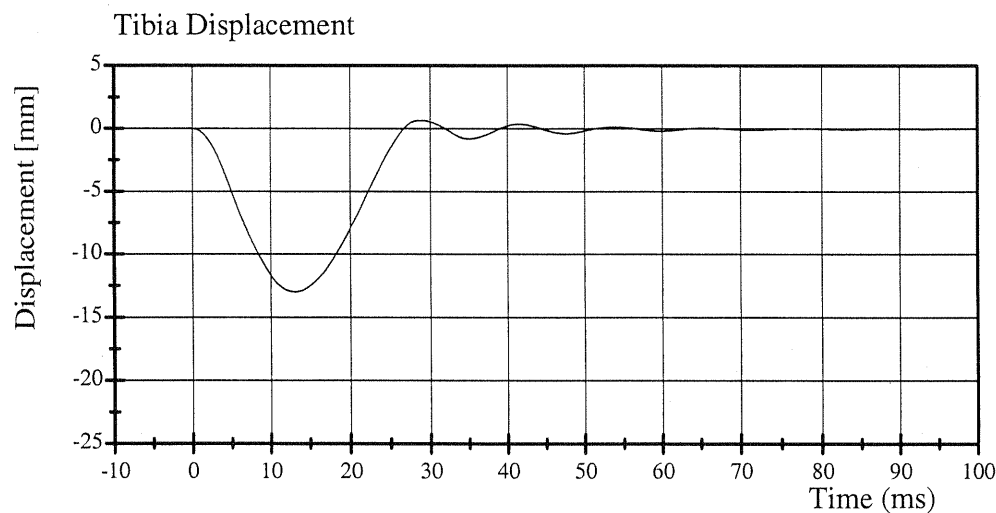
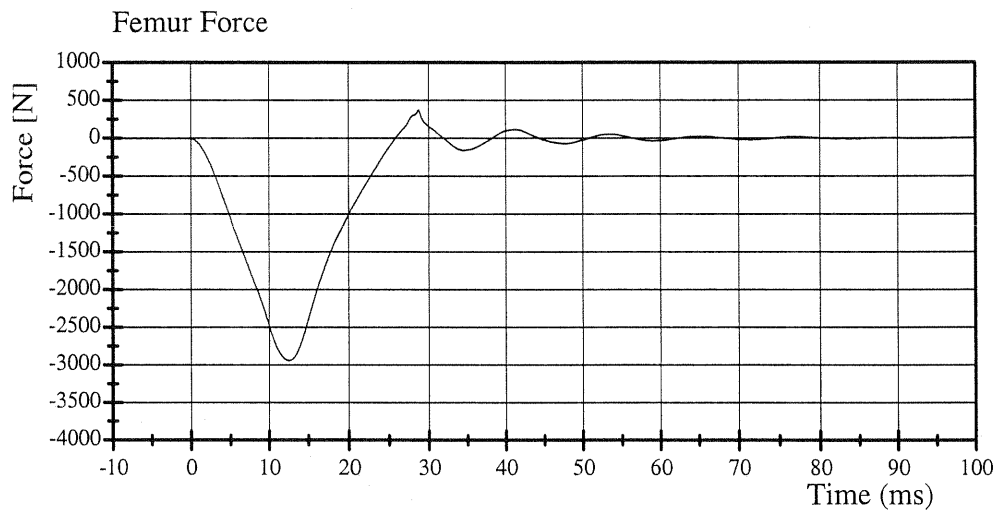


Transportation Research Center Inc.

5720 Thor Right Knee Slider Test

HIH 5th Female Serial No. 416 Calibration No. 25 - 2

Test Date 07/19/2004



07.19.2004 13:30:20 1179



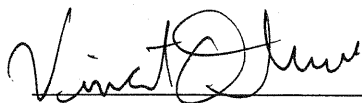
Post-Test Calibration

Driver Dummy S/N 416

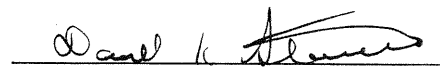
Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 416 Calibration No. 26

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	784	Yes
B	Shoulder Pivot Height	431.8 - 457.2	449	Yes
C	Hip Pivot Height	81.3 - 86.3	85	Yes
D	Hip Pivot from Backline	144.8 - 149.8	146	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	82	Yes
F	Thigh Clearance	119.4 - 134.6	125	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	249	Yes
H	Head Back to Backline	43.2 - 48.2	47	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	281	Yes
J	Elbow Rest Height	182.8 - 203.2	195	Yes
K	Buttock Knee Length	520.7 - 546.1	540	Yes
L	Popliteal Height	355.6 - 376.0	356	Yes
M	Knee Pivot Height	393.7 - 419.1	407	Yes
N	Buttock Popliteal Height	414.0 - 439.4	429	Yes
O	Chest Depth without Jacket	175.3 - 190.5	180	Yes
P	Foot Length	218.5 - 233.7	222	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	476	Yes
S	Head Breadth	137.1 - 147.3	144	Yes
T	Head Depth	177.8 - 188.0	182	Yes
U	Hip Breadth	299.7 - 314.9	300	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	85	Yes
X	Head Circumference	528.3 - 548.7	543	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	873	Yes
Z	Waist Circumference	759.5 - 789.9	771	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	340	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician



Approved



Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 2

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	56 %	Yes
Peak Resultant Acceleration	250 - 300 g	290.4 g	Yes
Peak Lateral Acceleration	15 g Max	-5.0 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Vincent D. King

Approved

Paul R. Hume

08.09.2004 13:44:39 607

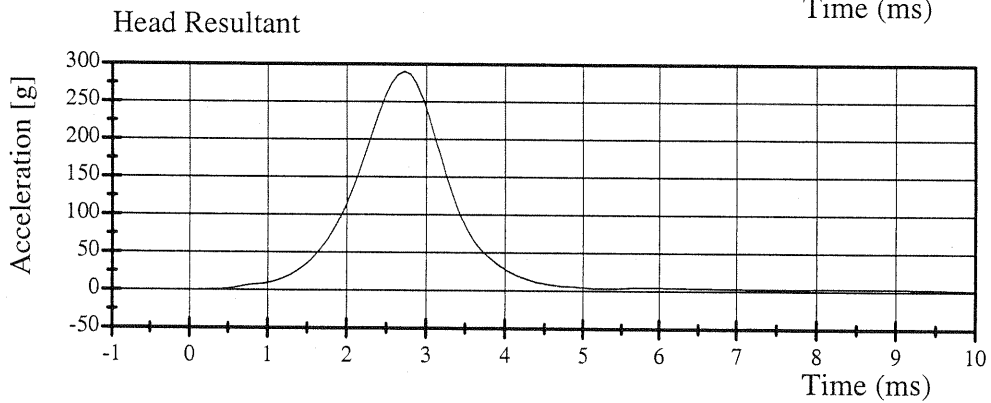
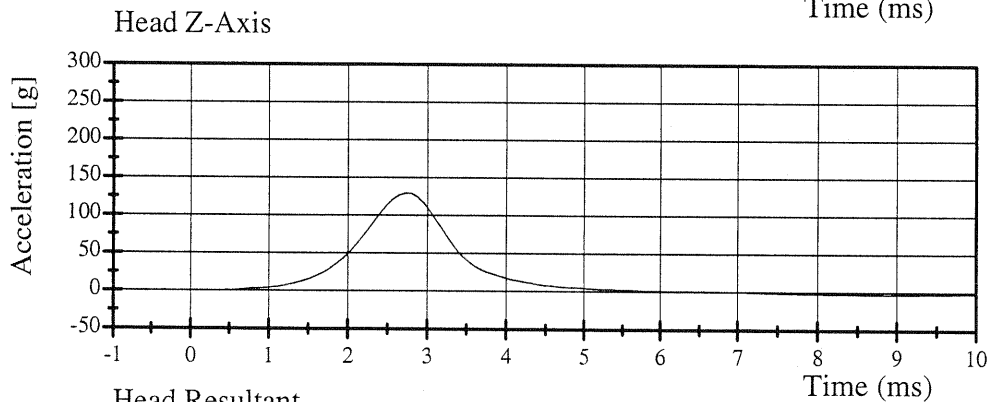
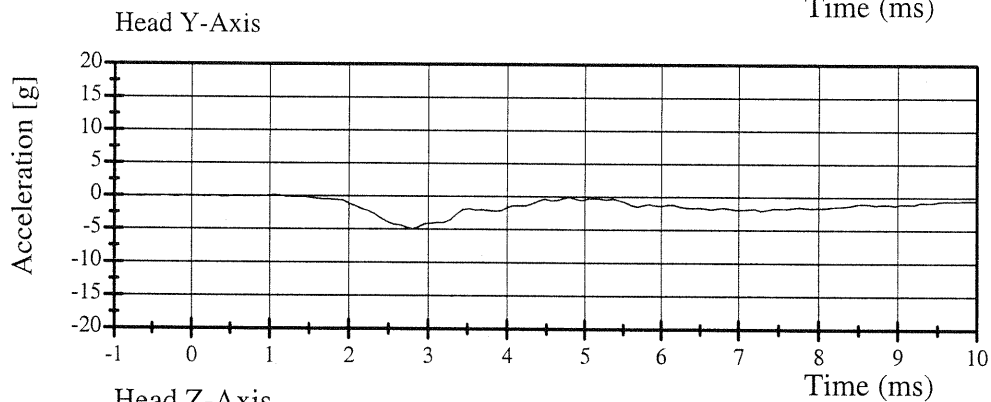
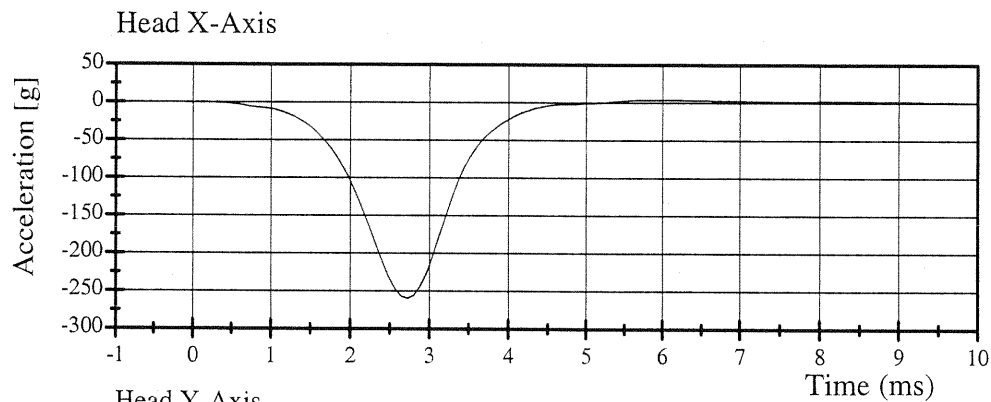


Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 2

Test Date 08/09/2004



08.09.2004 13:44:40 607



Transportation Research Center Inc.

5720 Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	22.0 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.10 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.36 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.60 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.62 m/s	Yes
Peak D Plane Rotation	77 - 91 °	80.4 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	73.60 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	87.28 ms	Yes

Test meets specifications.

Comments:

Technician

Vincent Allen

Approved

Paul A. Bennett

08.09.2004 07:45:27 509



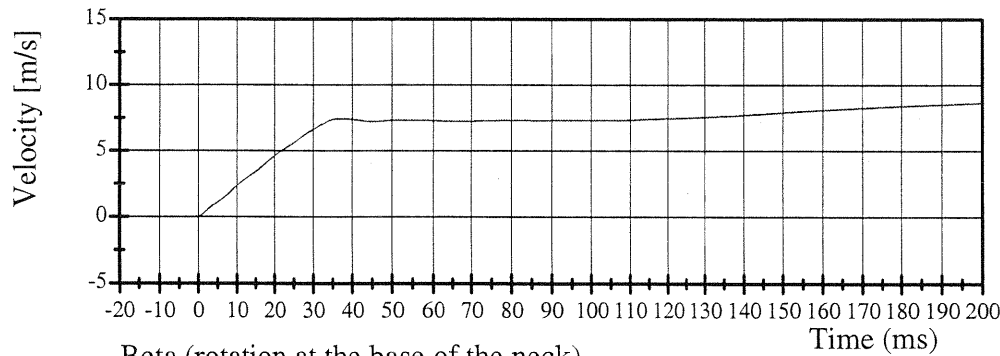
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Integrated Pendulum Velocity

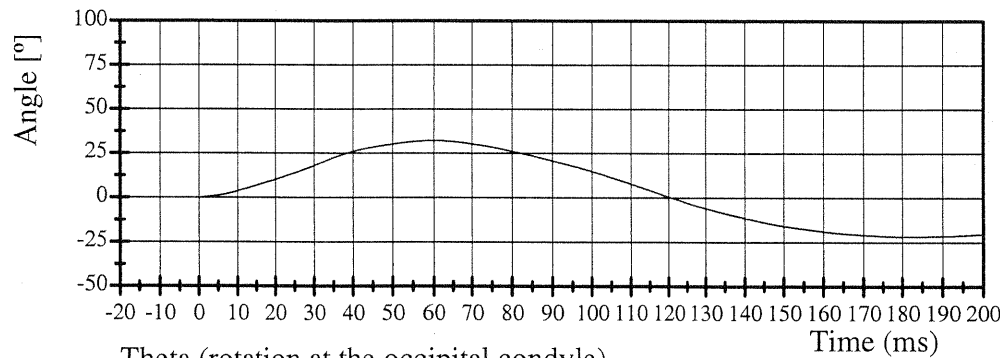


Filter Class: 180

Max: 9.3 m/s at 959.3 ms

Min: -0.0 m/s at -0.6 ms

Beta (rotation at the base of the neck)

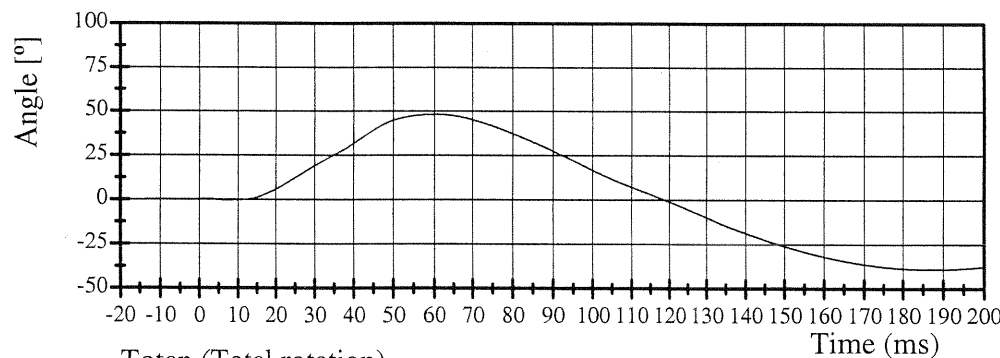


Filter Class: 60

Max: 32.3 ° at 60.1 ms

Min: -21.8 ° at 182.4 ms

Theta (rotation at the occipital condyle)

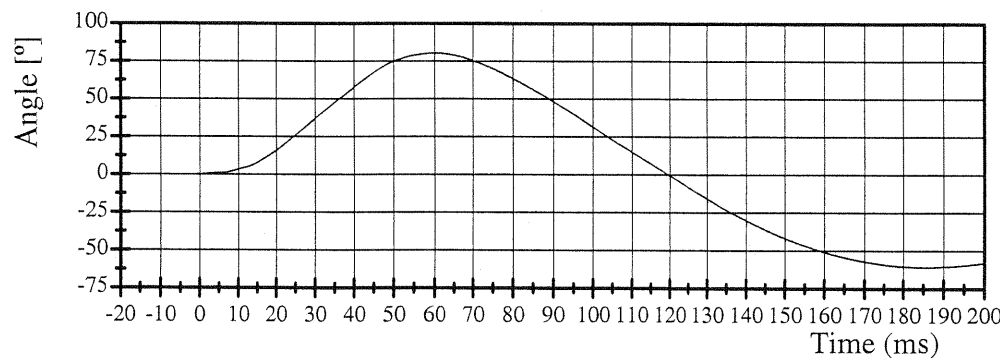


Filter Class: 60

Max: 48.2 ° at 60.3 ms

Min: -39.0 ° at 187.7 ms

Totan (Total rotation)



Filter Class: 60

Max: 80.4 ° at 60.2 ms

Min: -60.7 ° at 185.6 ms

08.09.2004 07:45:28 509



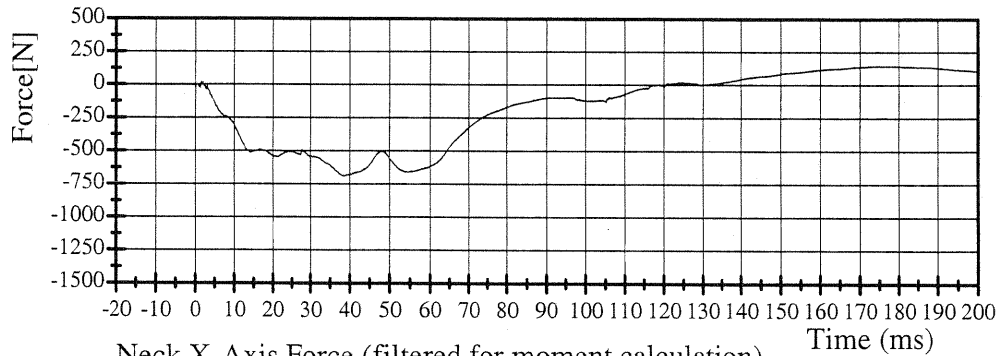
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Neck X-Axis Force

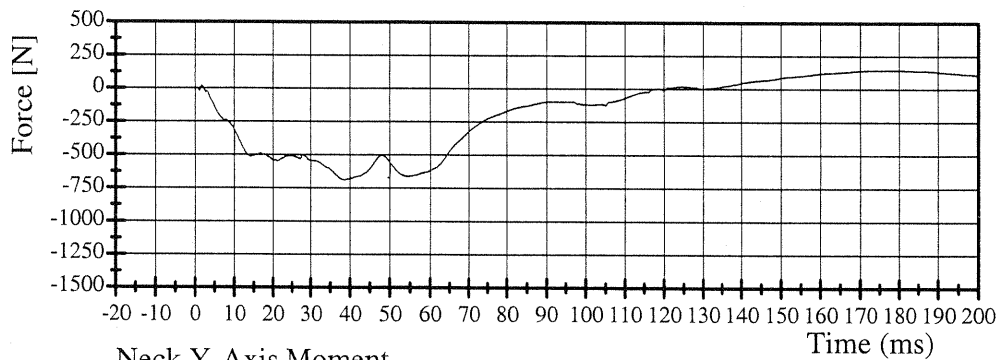


Filter Class: 1000

Max: 145.0 N at 178.0 ms

Min: -687.9 N at 38.6 ms

Neck X-Axis Force (filtered for moment calculation)

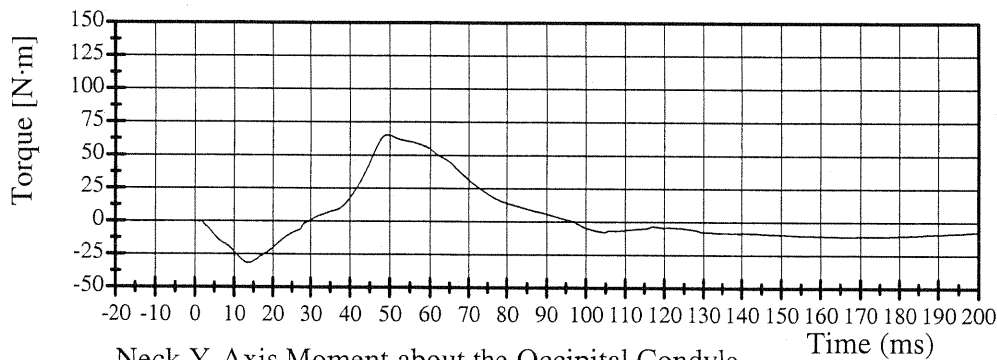


Filter Class: 600

Max: 144.2 N at 179.8 ms

Min: -687.9 N at 38.6 ms

Neck Y-Axis Moment

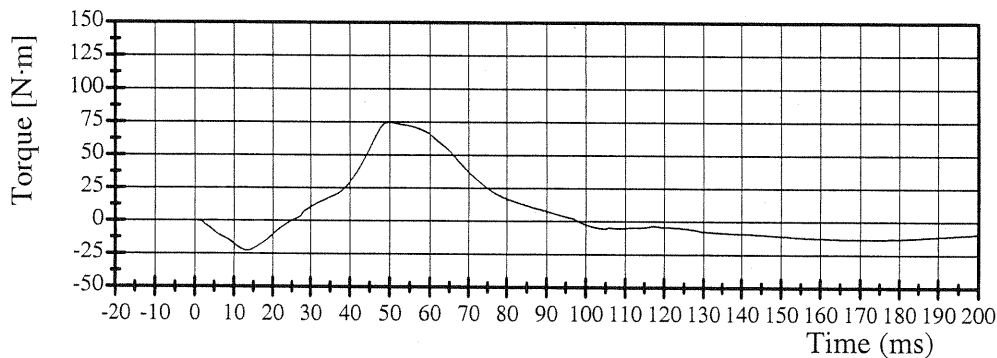


Filter Class: 600

Max: 65.3 N·m at 49.4 ms

Min: -31.5 N·m at 13.8 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 74.9 N·m at 49.9 ms

Min: -22.6 N·m at 13.4 ms

08.09.2004 07:45:30 509



Transportation Research Center Inc.

5720 Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.08 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.89 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.64 m/s	Yes
30 ms	4.60 - 5.60 m/s	5.26 m/s	Yes
Peak D Plane Rotation	99 - 114 °	105.8 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-60.79 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	103.28 ms	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliveri

Approved

David C. Oliveri

08.09.2004 08:31:42 597



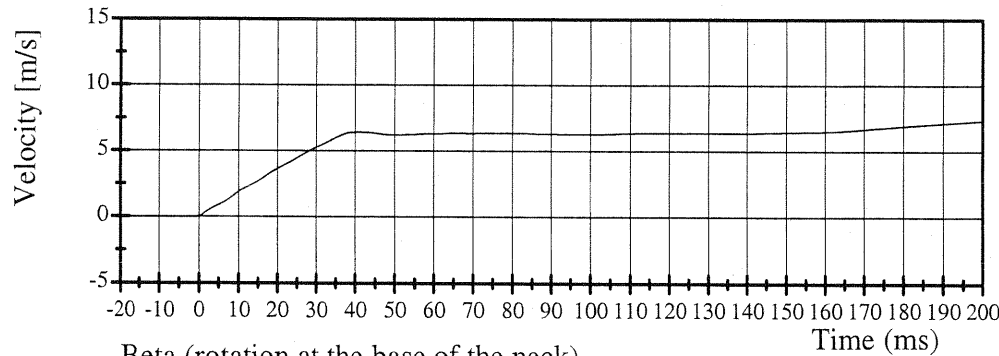
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Integrated Pendulum Velocity

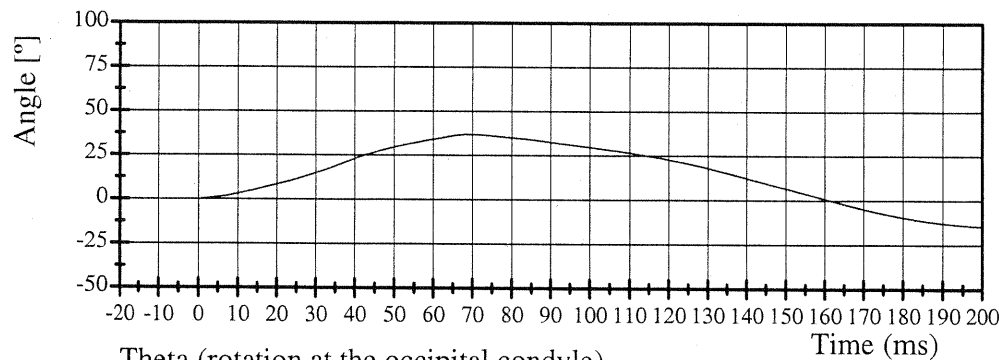


Filter Class: 180

Max: 8.0 m/s at 952.2 ms

Min: -0.0 m/s at -0.8 ms

Beta (rotation at the base of the neck)

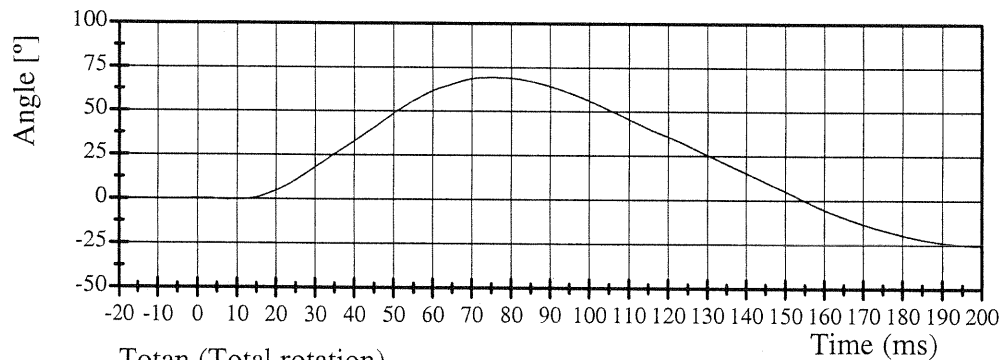


Filter Class: 60

Max: 36.8 ° at 69.0 ms

Min: -14.8 ° at 206.4 ms

Theta (rotation at the occipital condyle)

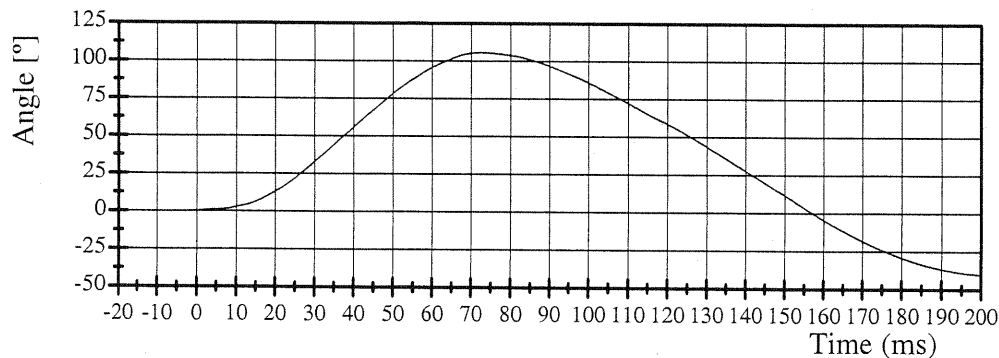


Filter Class: 60

Max: 69.3 ° at 75.1 ms

Min: -25.5 ° at 202.8 ms

Totan (Total rotation)



Filter Class: 60

Max: 105.8 ° at 72.5 ms

Min: -40.3 ° at 204.2 ms

08.09.2004 08:31:43 597



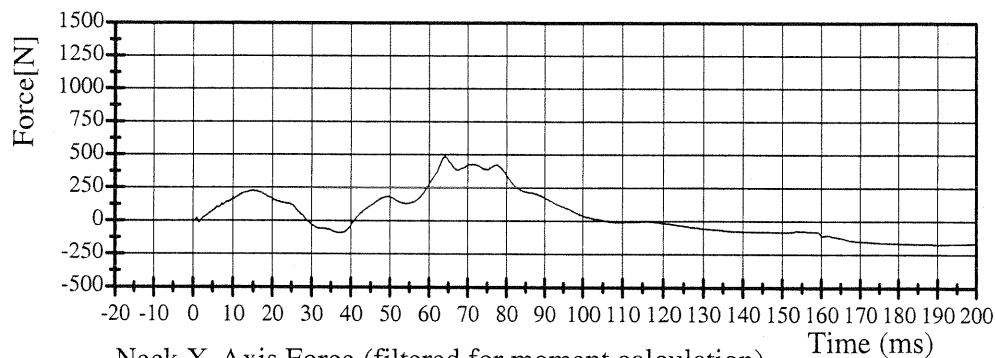
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Neck X-Axis Force

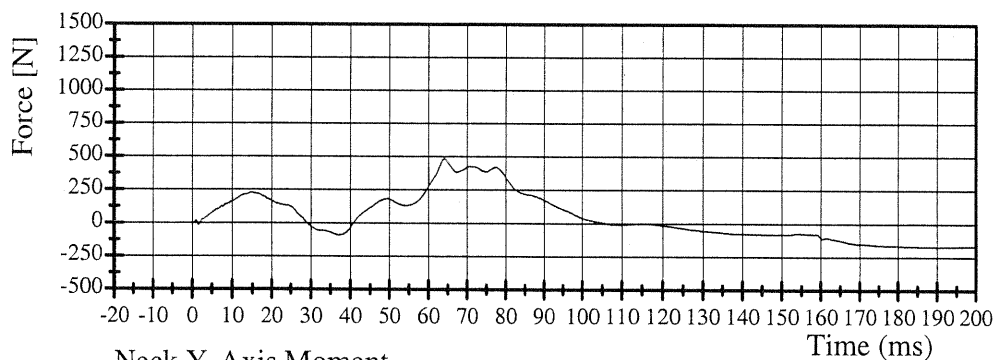


Filter Class: 1000

Max: 484.3 N at 64.1 ms

Min: -172.1 N at 191.6 ms

Neck X-Axis Force (filtered for moment calculation)

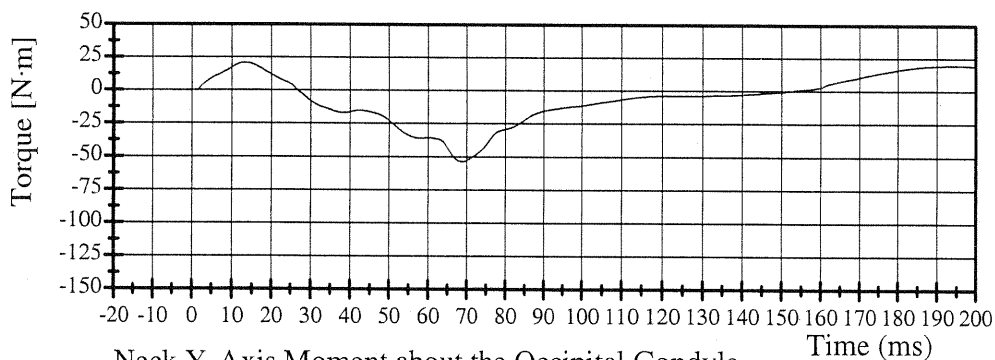


Filter Class: 600

Max: 484.0 N at 64.2 ms

Min: -171.7 N at 191.5 ms

Neck Y-Axis Moment

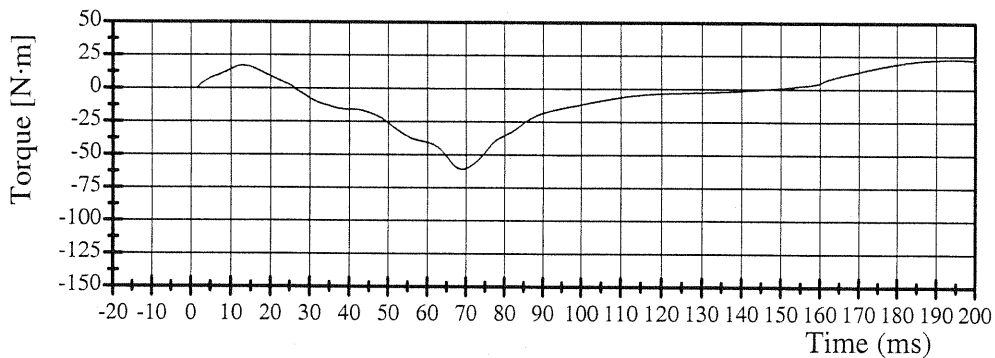


Filter Class: 600

Max: 20.9 N·m at 13.0 ms

Min: -53.6 N·m at 68.9 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 22.7 N·m at 195.3 ms

Min: -60.8 N·m at 69.0 ms

08.09.2004 08:31:44 597



Transportation Research Center Inc.

5720 Thorax Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

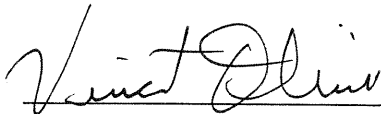
Test Date 08/10/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.60 m/s	Yes
Maximum Chest Deflection	-58.0 - (-50.0) mm	-52.7 mm	Yes
Peak Impact Probe Force Within Compression Corridor	3900 - 4400 N	4279 N	Yes
Peak Force Between 18 mm and 50 mm	4600 N	4266 N	Yes
Internal Hysteresis	69 - 85 %	71 %	Yes

Test meets specifications.

Comments:

Technician



Approved



08.10.2004 10:45:47 1011



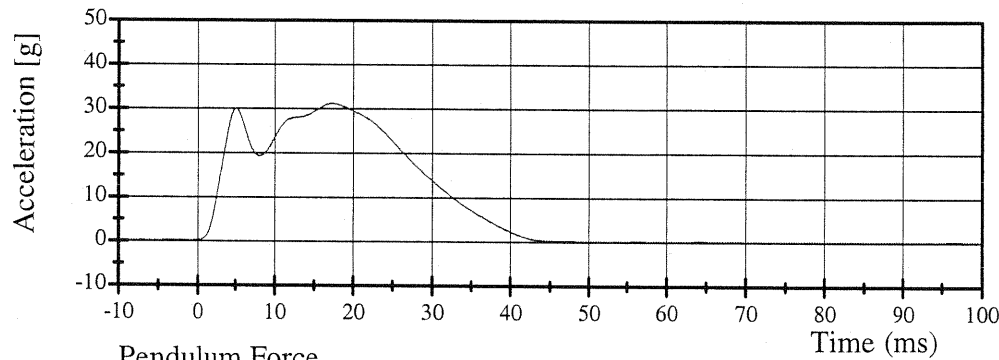
Transportation Research Center Inc.

5720 Thorax Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/10/2004

Pendulum Deceleration

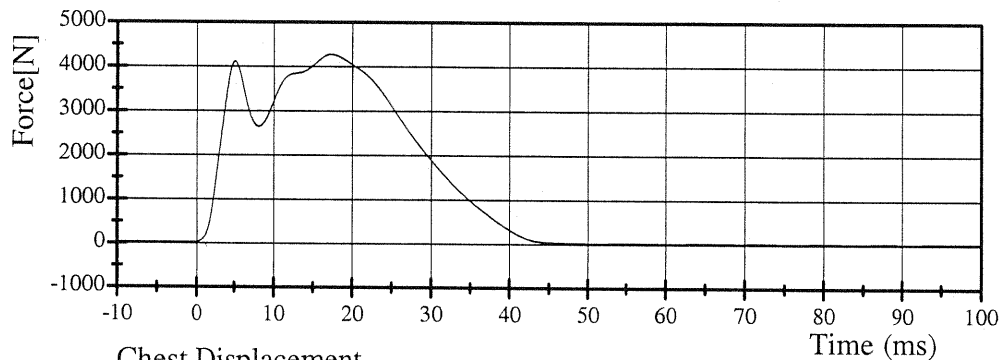


Filter Class: 180

Max: 31.2 g at 17.3 ms

Min: -1.5 g at 444.6 ms

Pendulum Force

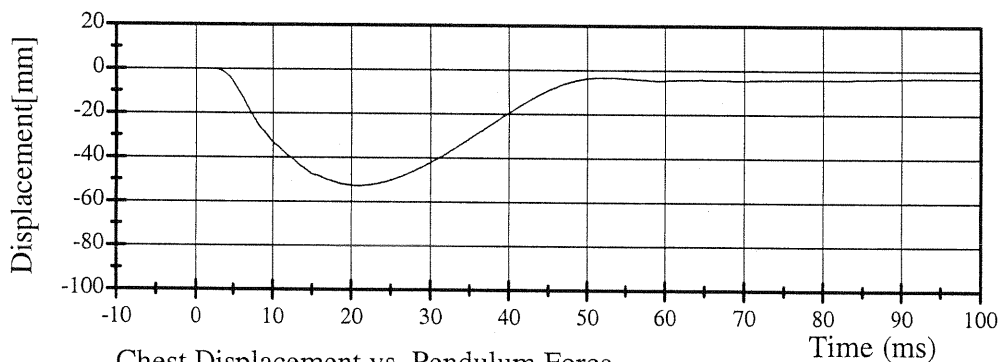


Filter Class: 180

Max: 4279.1 N at 17.3 ms

Min: -200.2 N at 444.6 ms

Chest Displacement

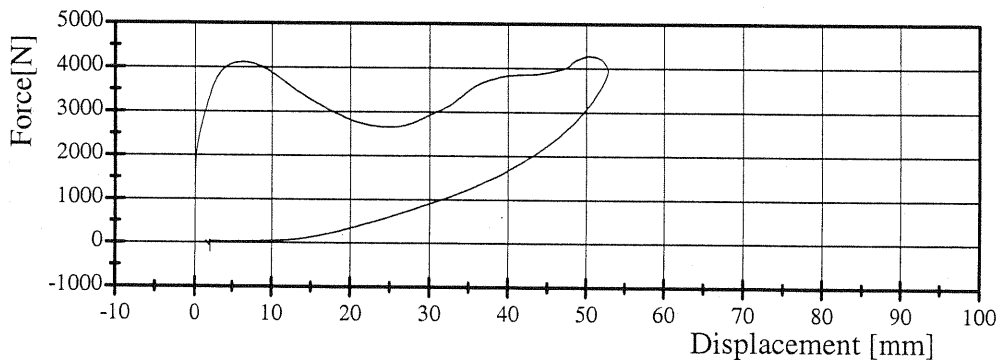


Filter Class: 600

Max: 0.0 mm at -63.8 ms

Min: -52.7 mm at 20.9 ms

Chest Displacement vs. Pendulum Force



08.10.2004 10:45:48 1011



TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 10-Aug-04

TRC, INC. TEST NO: 416C26TF1 572 O SN416 TORSO FLEX CAL 26

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.6 ° C
RELATIVE HUMIDITY	10 – 70 %	59 %
INITIAL ANGLE OF UNSUPPORTRED DUMMY	<= 20° REFERENCED TO VERTICAL	17.8°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	387.8N
RETURN ANGLE		22.5°
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	4.7 °
RATE	0.5° - 1.5°/sec	0.98 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN

Vincent D. Smith

Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3625 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliver

Approved

David H. Oliver

08.09.2004 13:31:19 1848



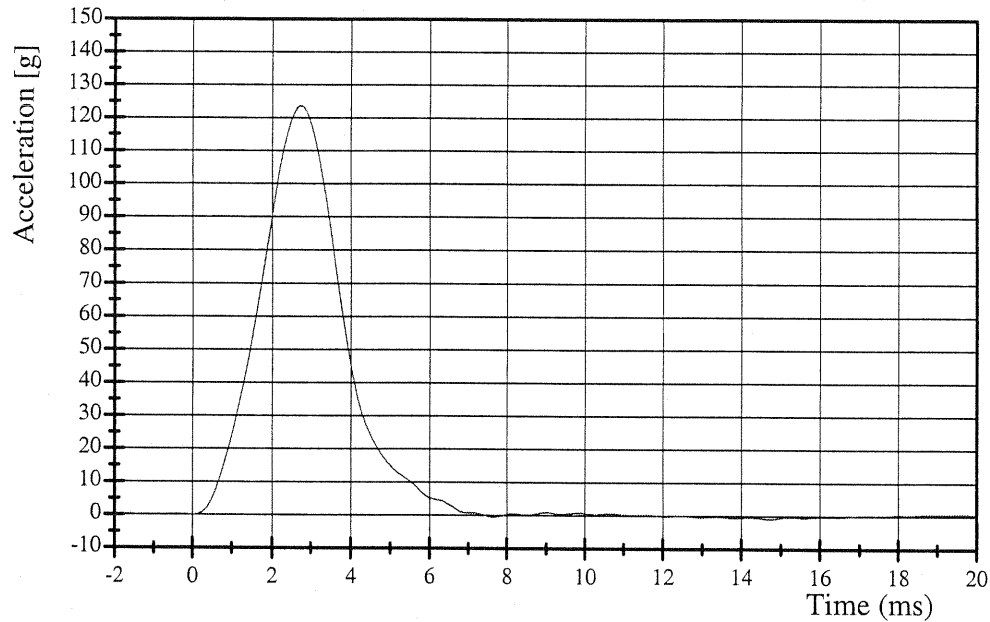
Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Pendulum Deceleration

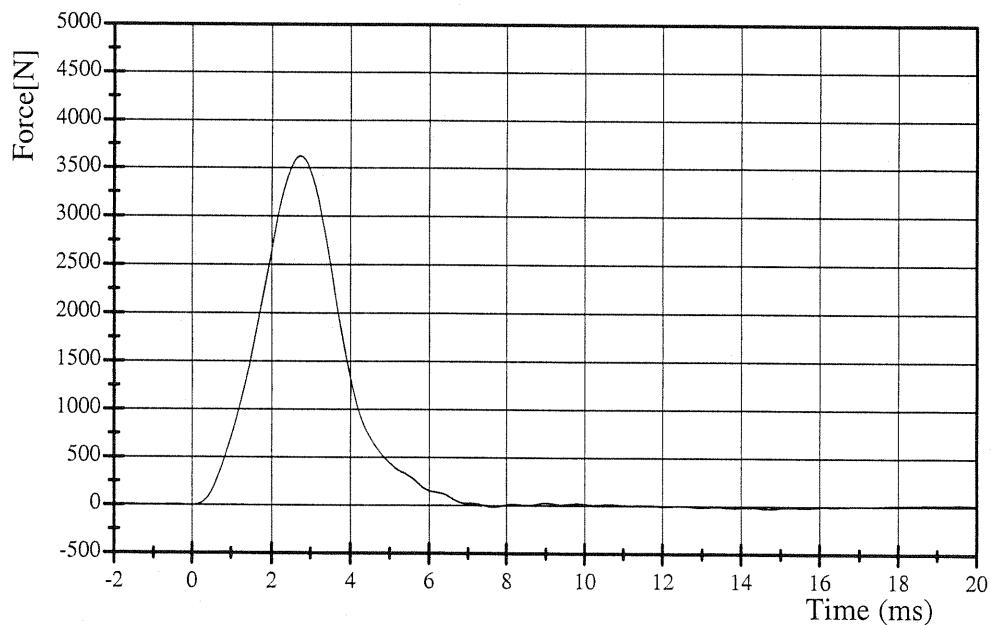


Filter Class: 600

Max: 123.6 g at 2.7 ms

Min: -0.9 g at 14.7 ms

Pendulum Force



Filter Class: 600

Max: 3625.2 N at 2.7 ms

Min: -25.0 N at 14.7 ms

08.09.2004 13:31:20 1848



Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3578 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliver

Approved

David A. Brown

08.09.2004 13:39:07 1850



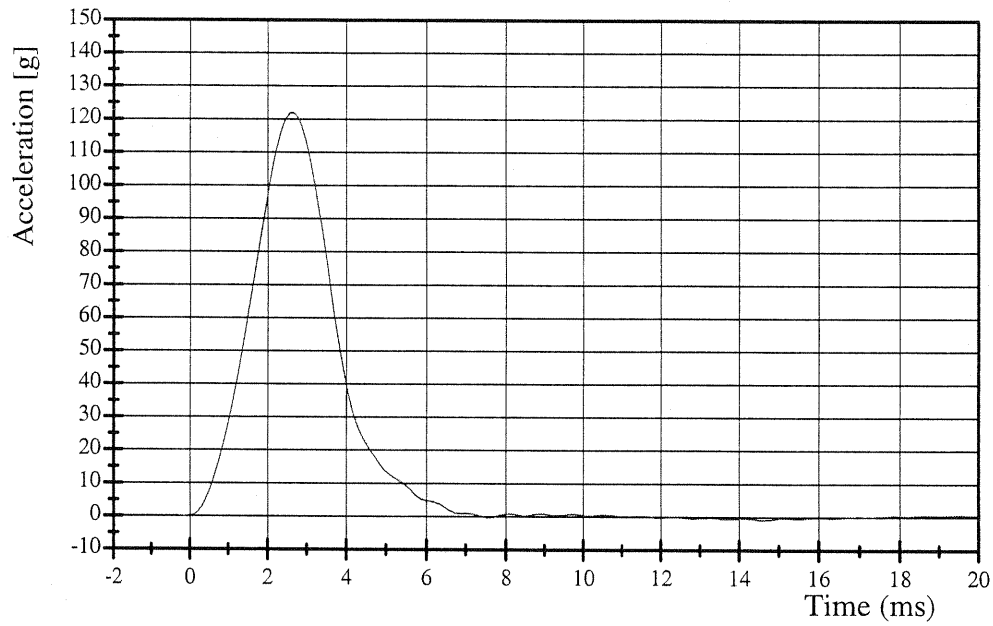
Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/09/2004

Pendulum Deceleration

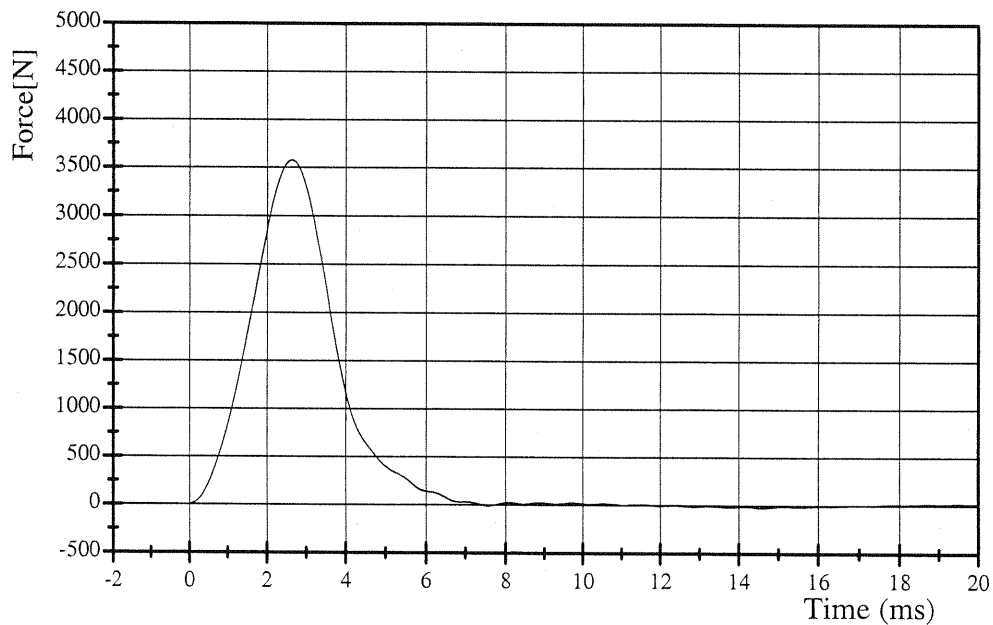


Filter Class: 600

Max: 122.0 g at 2.6 ms

Min: -0.8 g at 14.6 ms

Pendulum Force



Filter Class: 600

Max: 3578.3 N at 2.6 ms

Min: -24.6 N at 14.6 ms

08.09.2004 13:39:08 1850



Transportation Research Center Inc.

5720 Thor Left Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 2

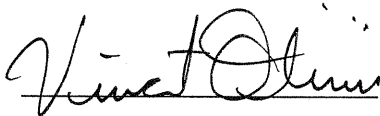
Test Date 08/10/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.78 m/s	Yes
Knee Displacement	-15.5 - (-12.7) mm	-13.7 mm	Yes

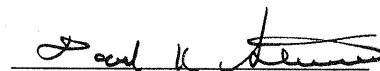
Test meets specifications.

Comments:

Technician



Approved



08.10.2004 07:48:17 1182

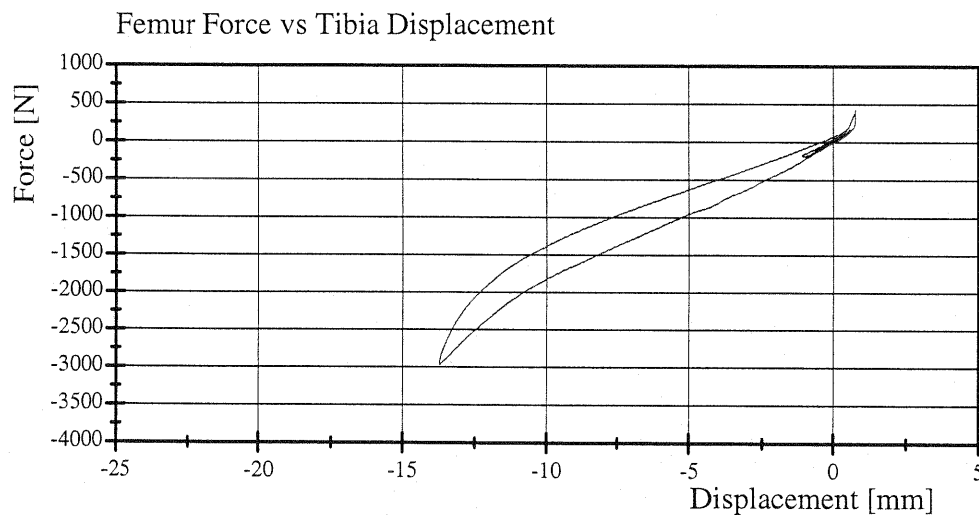
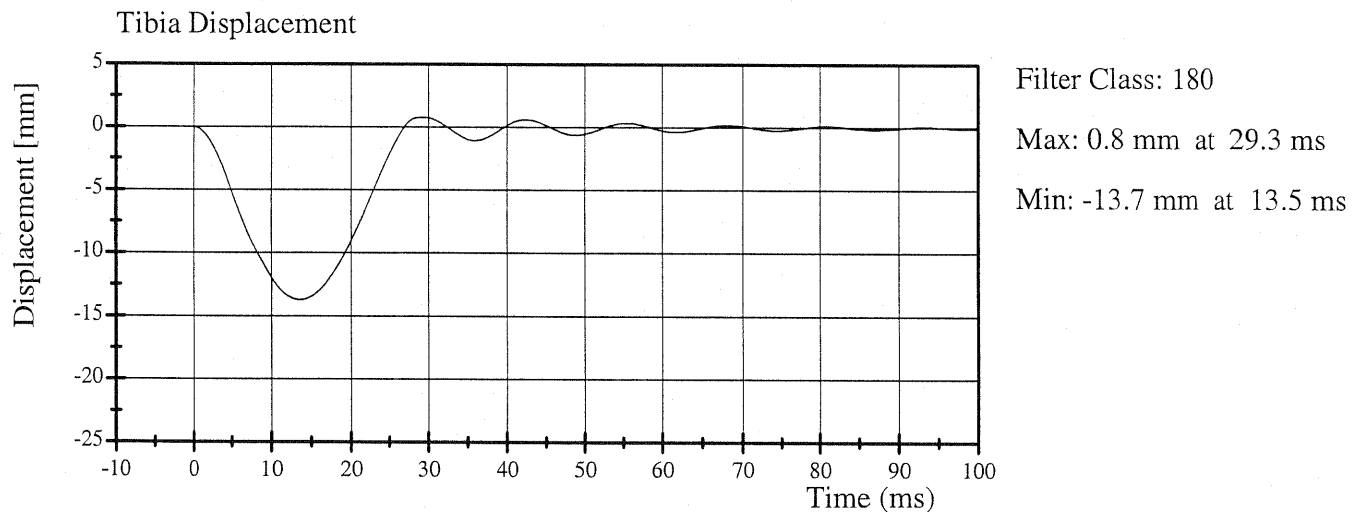
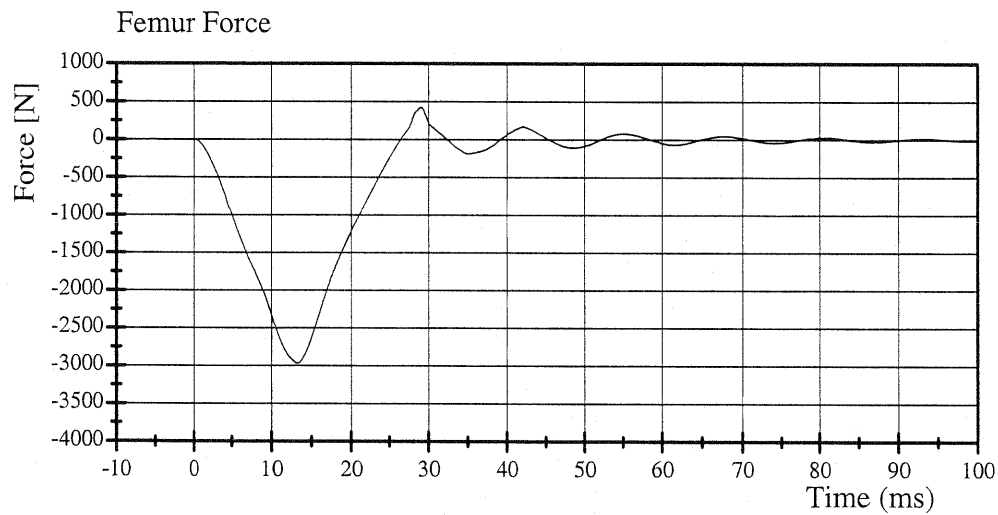


Transportation Research Center Inc.

5720 Thor Left Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 2

Test Date 08/10/2004



08.10.2004 07:48:18 1182



Transportation Research Center Inc.

5720 Thor Right Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/10/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.78 m/s	Yes
Knee Displacement	-15.5 - (-12.7) mm	-13.2 mm	Yes

Test meets specifications.

Comments:

Technician

Vincent Olm

Approved

David H. [Signature]

08.10.2004 08:23:02 1181

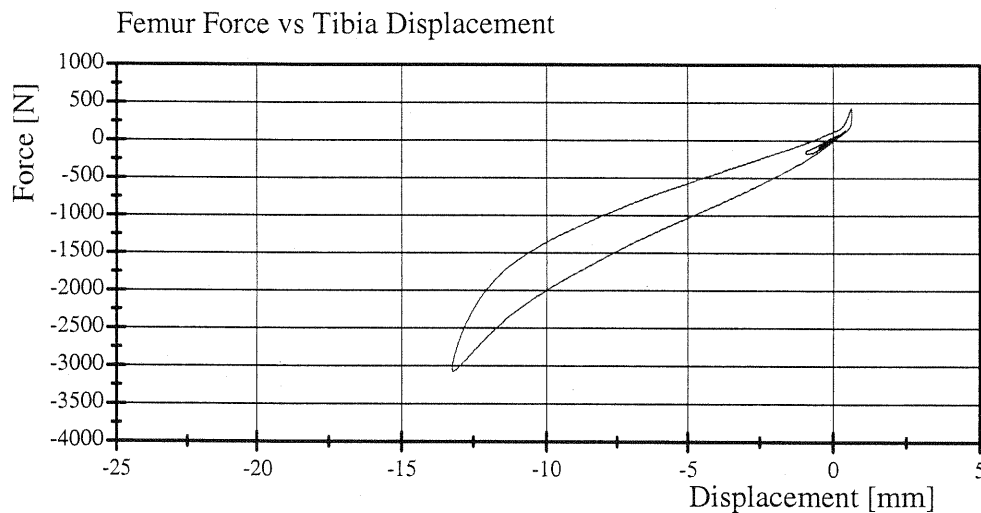
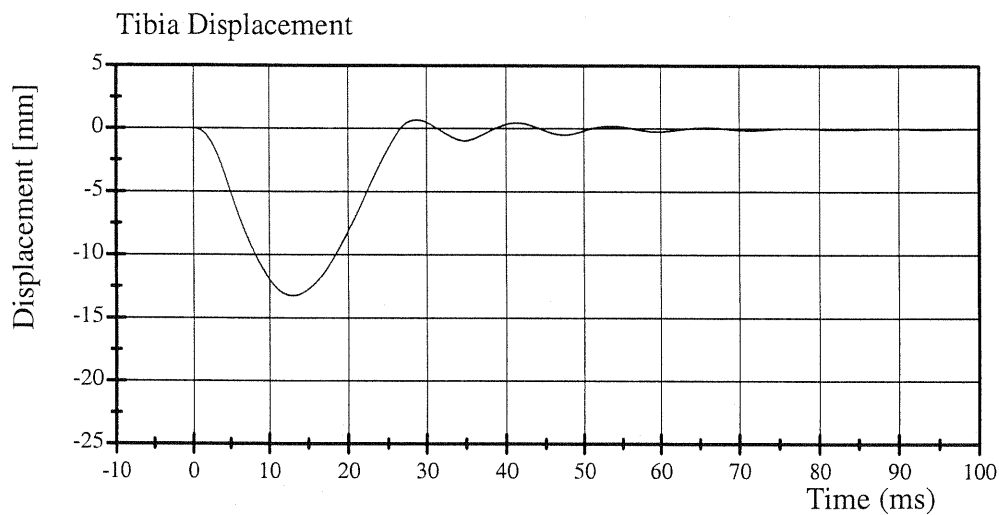
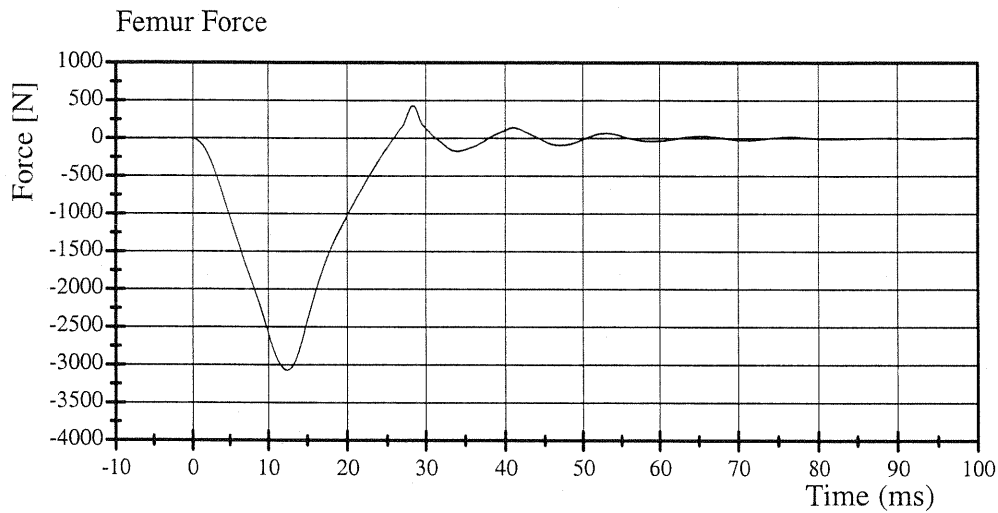


Transportation Research Center Inc.

5720 Thor Right Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 26 - 1

Test Date 08/10/2004



08.10.2004 08:23:03 1181



Pre-Test Calibration

Front Passenger Dummy S/N 048

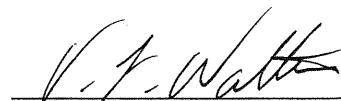
Transportation Research Center Inc.
5720 HIII 5th Dummy
External Dimensions
Serial No. 048 Calibration No. 16

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	784	Yes
B	Shoulder Pivot Height	431.8 - 457.2	450	Yes
C	Hip Pivot Height	81.3 - 86.3	84	Yes
D	Hip Pivot from Backline	144.8 - 149.8	145	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	78	Yes
F	Thigh Clearance	119.4 - 134.6	126	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	247	Yes
H	Head Back to Backline	43.2 - 48.2	44	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	284	Yes
J	Elbow Rest Height	182.8 - 203.2	192	Yes
K	Buttock Knee Length	520.7 - 546.1	543	Yes
L	Popliteal Height	355.6 - 376.0	357	Yes
M	Knee Pivot Height	393.7 - 419.1	396	Yes
N	Buttock Popliteal Length	414.0 - 439.4	428	Yes
O	Chest Depth without Jacket	175.3 - 190.5	184	Yes
P	Foot Length	218.5 - 233.7	220	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	482	Yes
S	Head Breadth	137.1 - 147.3	140	Yes
T	Head Depth	177.8 - 188.0	184	Yes
U	Hip Breadth	299.7 - 314.9	303	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	83	Yes
X	Head Circumference	528.3 - 548.7	543	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	861	Yes
Z	Waist Circumference	759.5 - 789.9	786	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	350	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician



Approved



Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Peak Resultant Acceleration	250 - 300 g	258.5 g	Yes
Peak Lateral Acceleration	15 g Max	-11.3 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved



07.28.2004 09:27:40 612



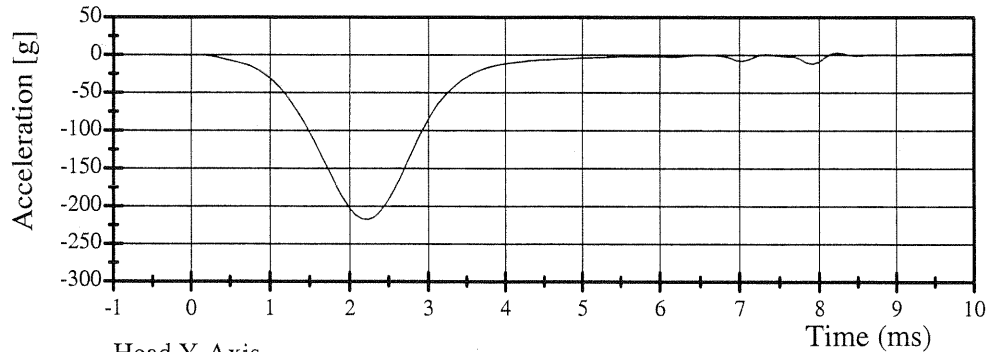
Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Head X-Axis

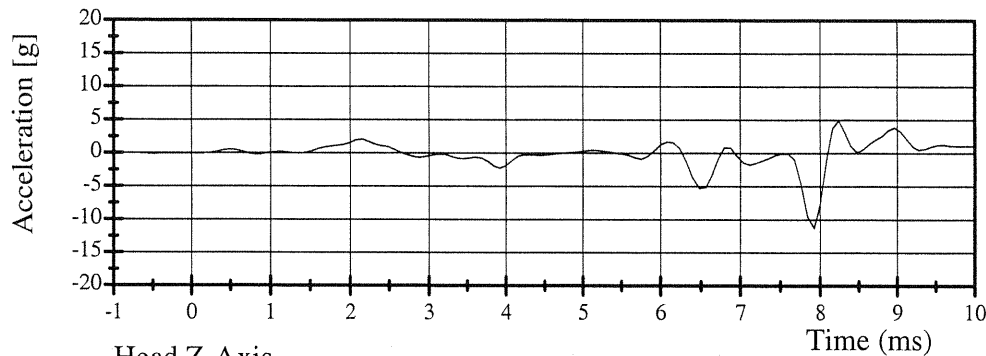


Filter Class: 1000

Max: 3.2 g at 8.2 ms

Min: -217.5 g at 2.2 ms

Head Y-Axis

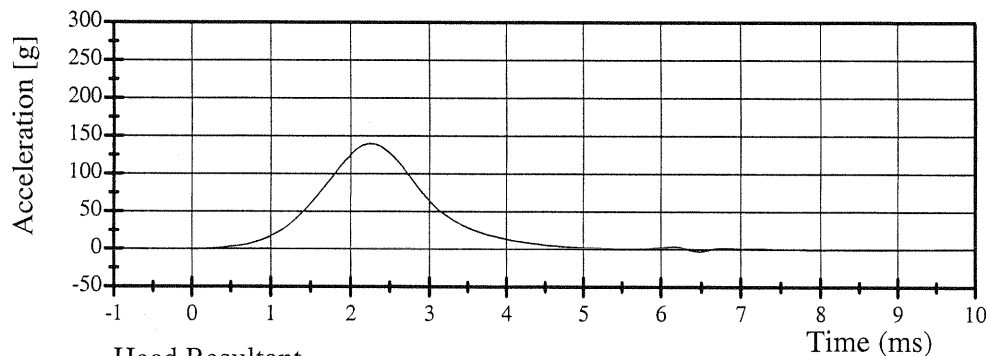


Filter Class: 1000

Max: 4.9 g at 8.2 ms

Min: -11.3 g at 7.9 ms

Head Z-Axis

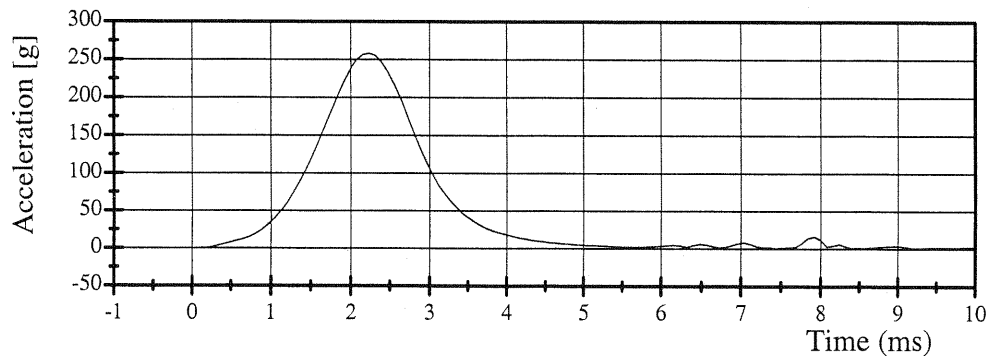


Filter Class: 1000

Max: 139.7 g at 2.2 ms

Min: -2.9 g at 6.5 ms

Head Resultant



Filter Class: 1000

Max: 258.5 g at 2.2 ms

Min: 0.0 g at 3.4 ms

07.28.2004 09:27:41 612



Transportation Research Center Inc.

5720 Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.06 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.37 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.61 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.54 m/s	Yes
Peak D Plane Rotation	77 - 91 °	79.5 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	76.30 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	89.60 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



07.28.2004 08:30:55 510



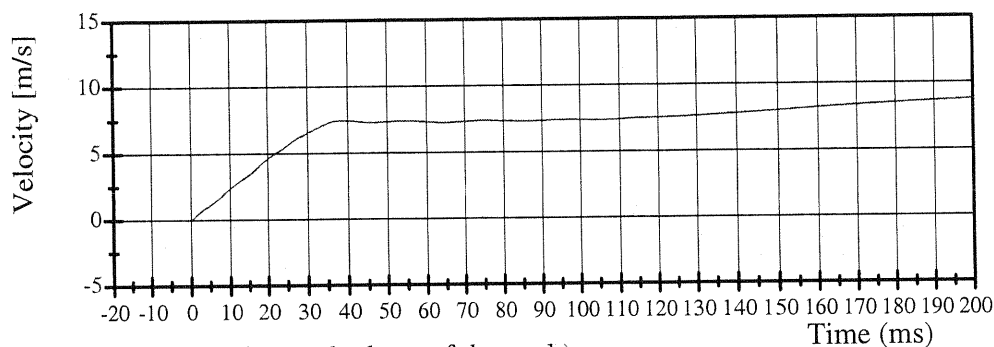
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Integrated Pendulum Velocity

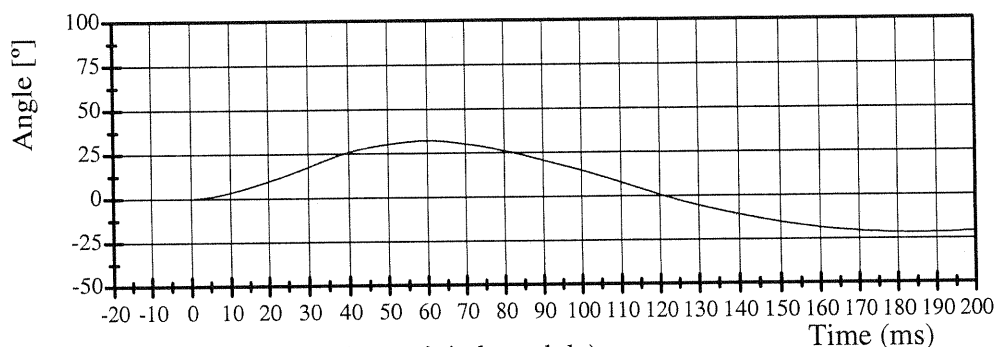


Filter Class: 180

Max: 9.6 m/s at 959.2 ms

Min: -0.0 m/s at -0.7 ms

Beta (rotation at the base of the neck)

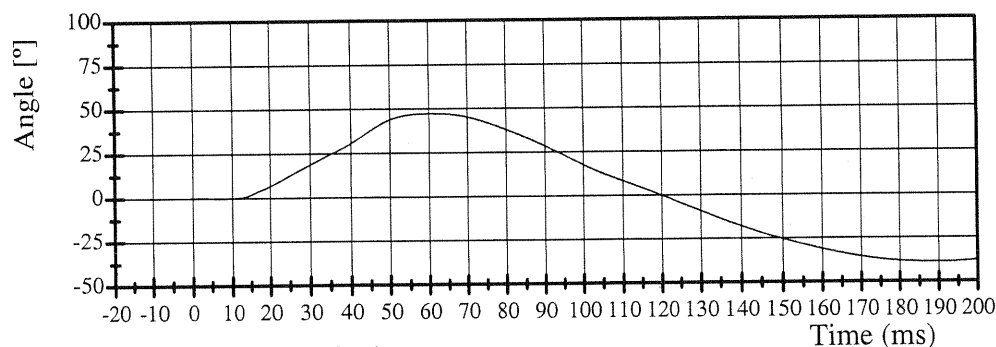


Filter Class: 60

Max: 32.2 ° at 60.1 ms

Min: -21.8 ° at 185.5 ms

Theta (rotation at the occipital condyle)

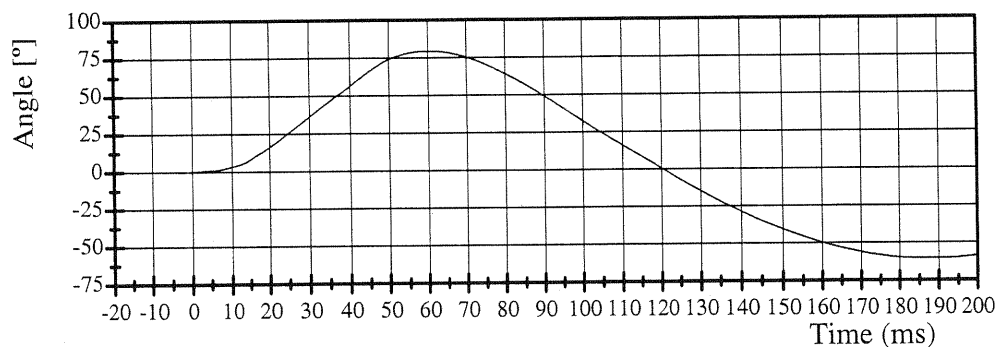


Filter Class: 60

Max: 47.3 ° at 60.4 ms

Min: -38.8 ° at 190.0 ms

Totan (Total rotation)



Filter Class: 60

Max: 79.5 ° at 60.2 ms

Min: -60.5 ° at 187.4 ms

07.28.2004 08:30:56 510



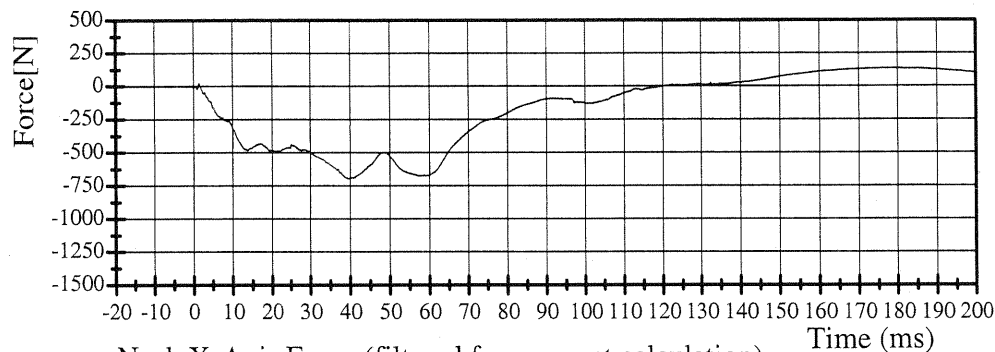
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Neck X-Axis Force

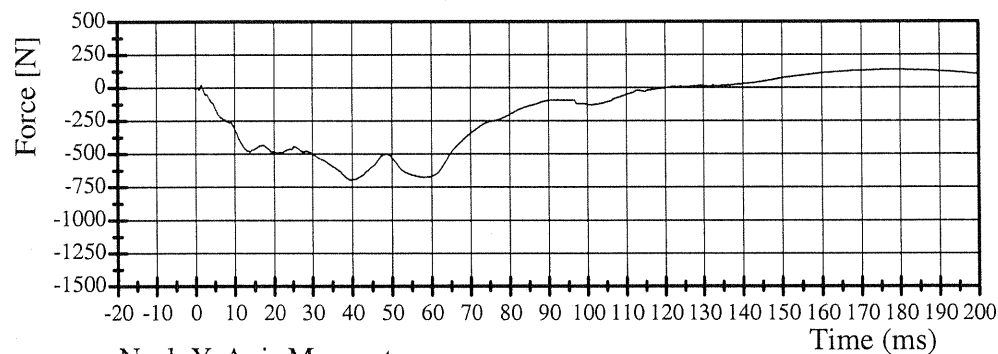


Filter Class: 1000

Max: 135.9 N at 179.0 ms

Min: -695.5 N at 39.7 ms

Neck X-Axis Force (filtered for moment calculation)

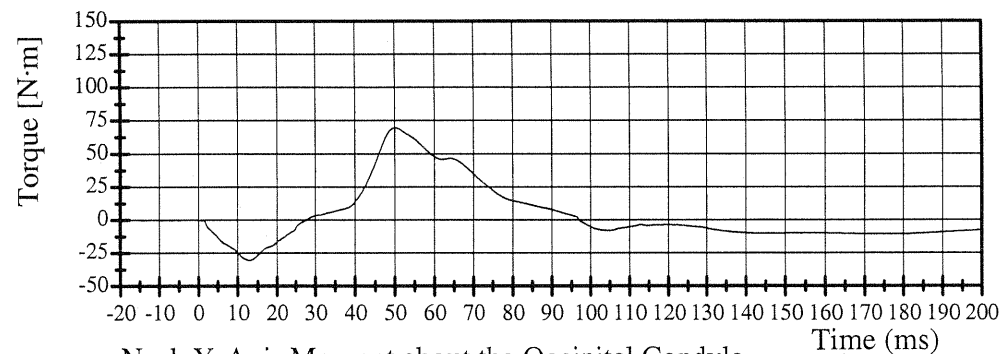


Filter Class: 600

Max: 135.7 N at 179.1 ms

Min: -695.1 N at 39.6 ms

Neck Y-Axis Moment

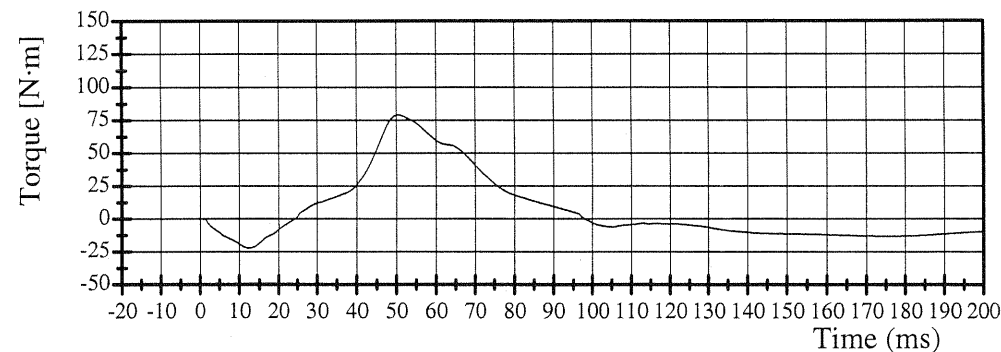


Filter Class: 600

Max: 69.6 N·m at 50.2 ms

Min: -30.4 N·m at 12.8 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 79.2 N·m at 50.5 ms

Min: -22.1 N·m at 12.6 ms

07.28.2004 08:30:57 510



Transportation Research Center Inc.

5720 Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

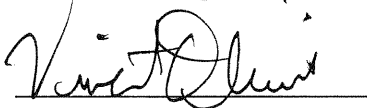
Test Date 07/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.11 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.72 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.39 m/s	Yes
30 ms	4.60 - 5.60 m/s	5.04 m/s	Yes
Peak D Plane Rotation	99 - 114 °	107.8 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-53.80 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	108.96 ms	Yes

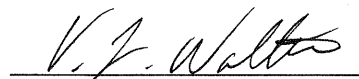
Test meets specifications.

Comments:

Technician



Approved



07.28.2004 09:01:17 594



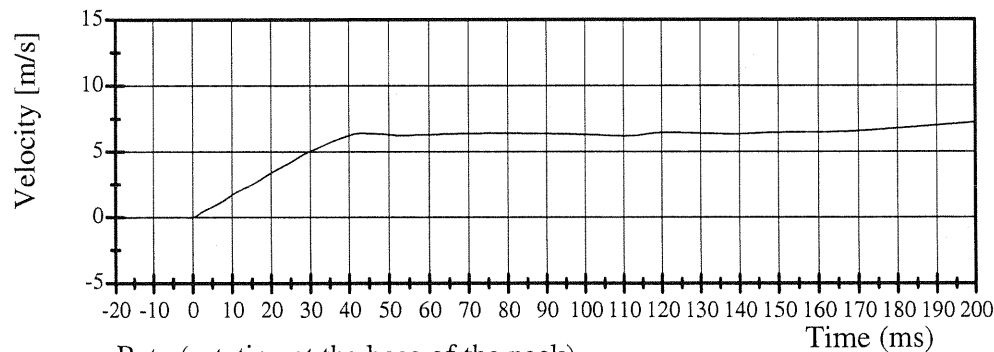
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Integrated Pendulum Velocity

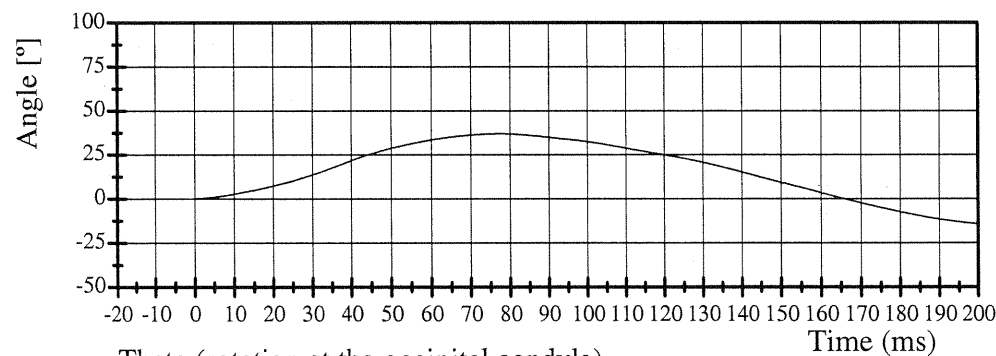


Filter Class: 180

Max: 8.1 m/s at 92.5 ms

Min: -0.0 m/s at -0.6 ms

Beta (rotation at the base of the neck)

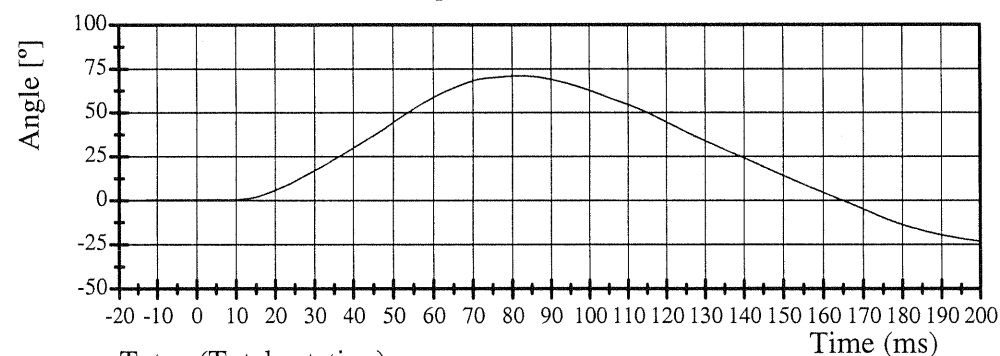


Filter Class: 60

Max: 37.0 ° at 77.3 ms

Min: -15.5 ° at 213.0 ms

Theta (rotation at the occipital condyle)

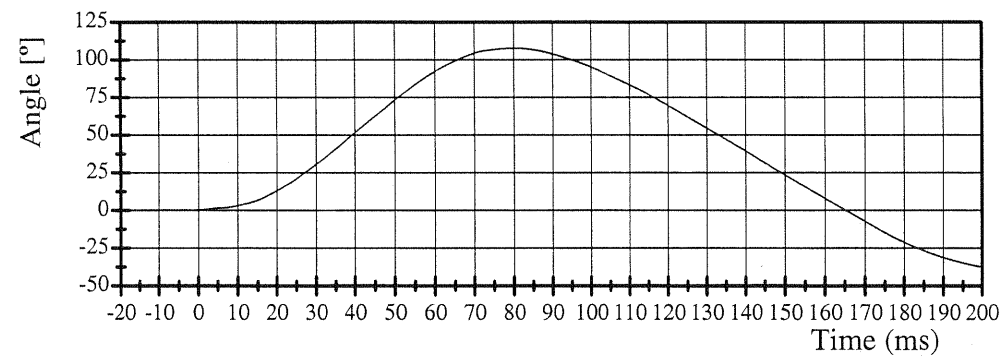


Filter Class: 60

Max: 71.0 ° at 82.2 ms

Min: -24.6 ° at 211.2 ms

Totan (Total rotation)



Filter Class: 60

Max: 107.8 ° at 80.2 ms

Min: -40.1 ° at 211.8 ms

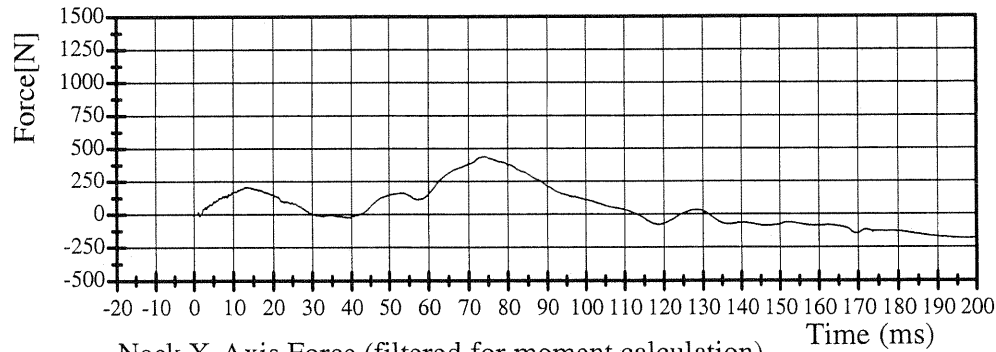
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Neck X-Axis Force

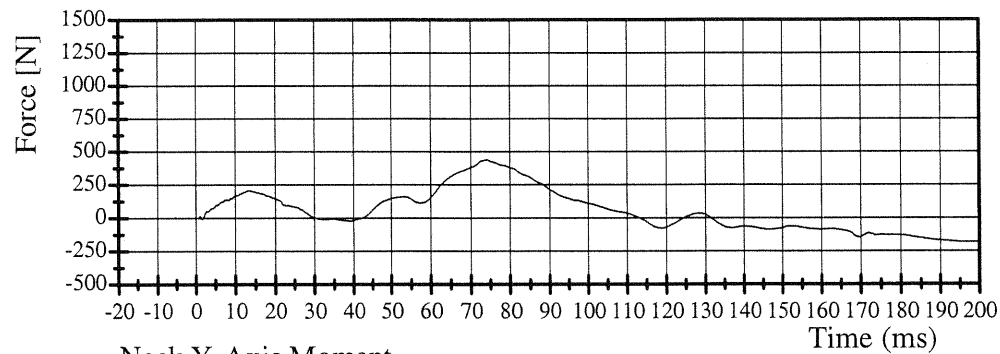


Filter Class: 1000

Max: 438.7 N at 74.0 ms

Min: -182.9 N at 196.8 ms

Neck X-Axis Force (filtered for moment calculation)

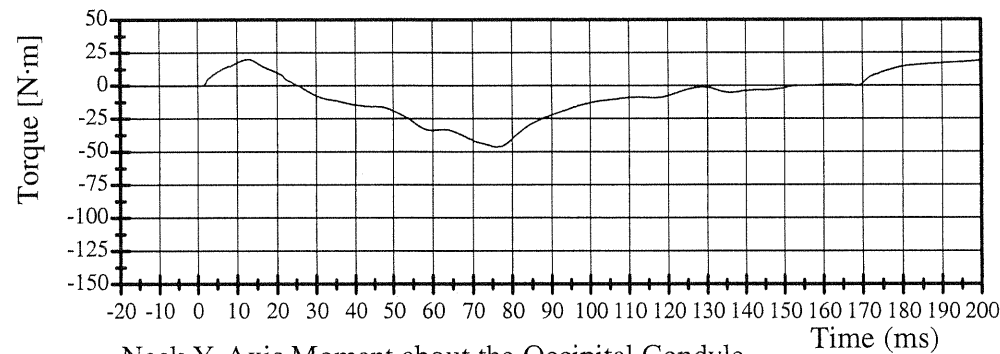


Filter Class: 600

Max: 438.3 N at 74.1 ms

Min: -182.8 N at 196.9 ms

Neck Y-Axis Moment

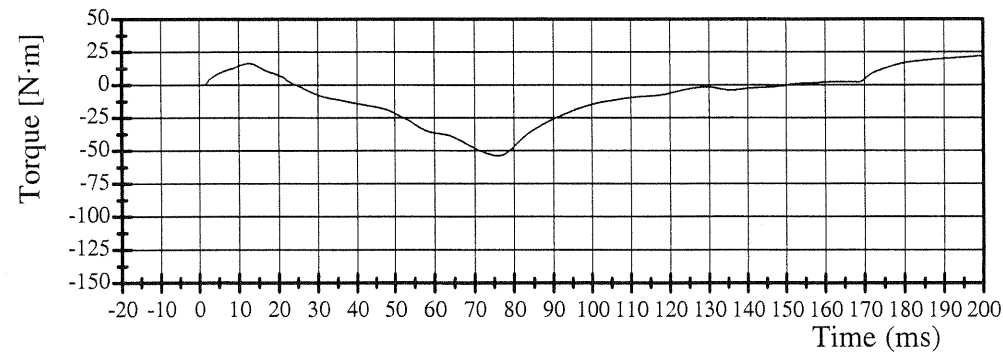


Filter Class: 600

Max: 20.0 N·m at 12.8 ms

Min: -46.3 N·m at 76.0 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 22.8 N·m at 206.8 ms

Min: -53.8 N·m at 75.8 ms

07.28.2004 09:01:19 594



Transportation Research Center Inc.

5720 Thorax Test

HHH 5th Female Serial No. 048 Calibration No. 16 - 1

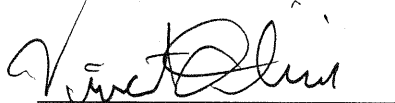
Test Date 07/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.74 m/s	Yes
Maximum Chest Deflection	-58.0 - (-50.0) mm	-54.9 mm	Yes
Peak Impact Probe Force Within Compression Corridor	3900 - 4400 N	4399 N	Yes
Peak Force Between 18 mm and 50 mm	4600 N	4339 N	Yes
Internal Hysteresis	69 - 85 %	74 %	Yes

Test meets specifications.

Comments:

Technician



Approved



07.28.2004 13:54:28 970



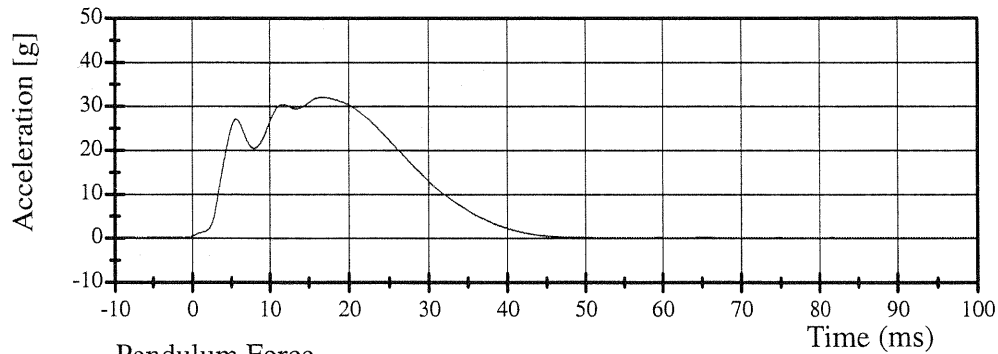
Transportation Research Center Inc.

5720 Thorax Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Pendulum Deceleration

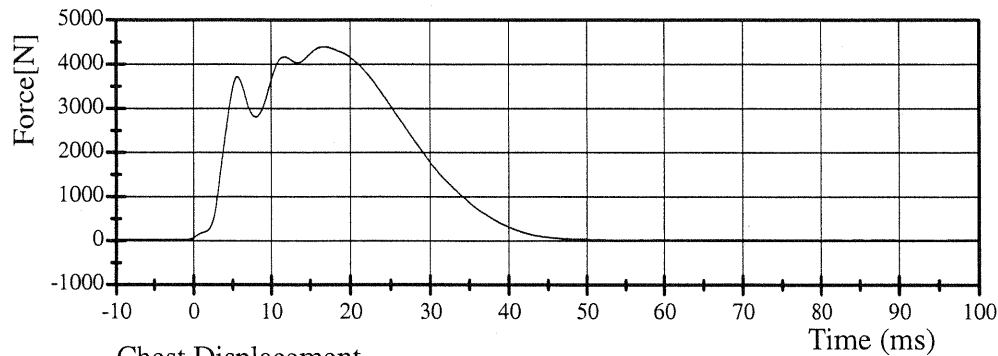


Filter Class: 180

Max: 32.1 g at 16.8 ms

Min: -0.0 g at -67.9 ms

Pendulum Force

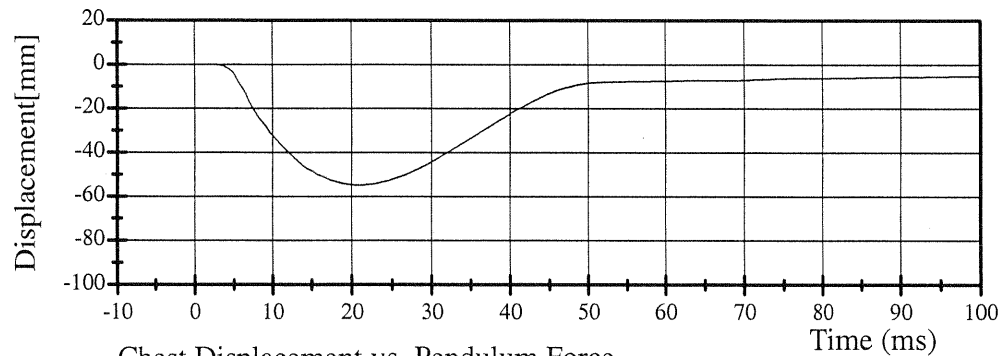


Filter Class: 180

Max: 4399.5 N at 16.8 ms

Min: -6.3 N at -67.9 ms

Chest Displacement

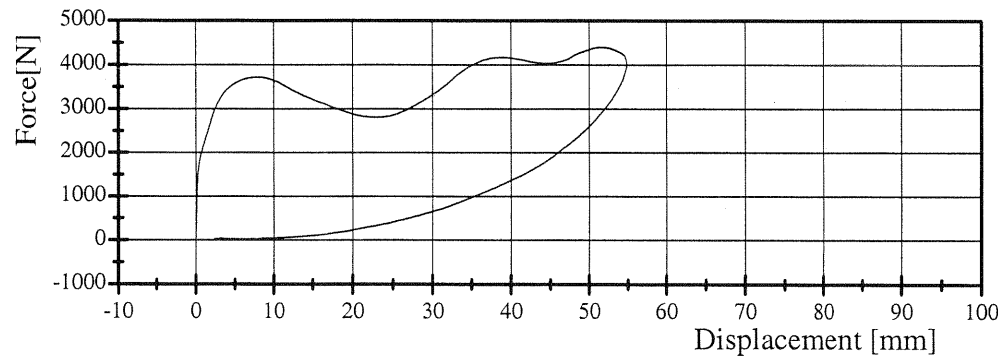


Filter Class: 600

Max: 0.0 mm at -77.5 ms

Min: -54.9 mm at 21.0 ms

Chest Displacement vs. Pendulum Force



07.28.2004 13:54:29 970



TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 28-Jul-04

TRC, INC. TEST NO: 048C16TF3 572 O SN048 TORSO FLEX CAL 16

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.1 ° C
RELATIVE HUMIDITY	10 – 70 %	53 %
INITIAL ANGLE OF UNSUPPORTRED DUMMY	<= 20° REFERENCED TO VERTICAL	18.2 °
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	328.8 N
RETURN ANGLE		21.6 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	3.4 °
RATE	0.5° - 1.5 °/sec	.98 °/sec

TEST MEETS SPECIFICATIONS

Comments:

Torqued Lumbar Spine to 11 in-lbs

TECHNICIAN



Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3551 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliveri

Approved

V. J. Walter

07.28.2004 10:24:03 1728



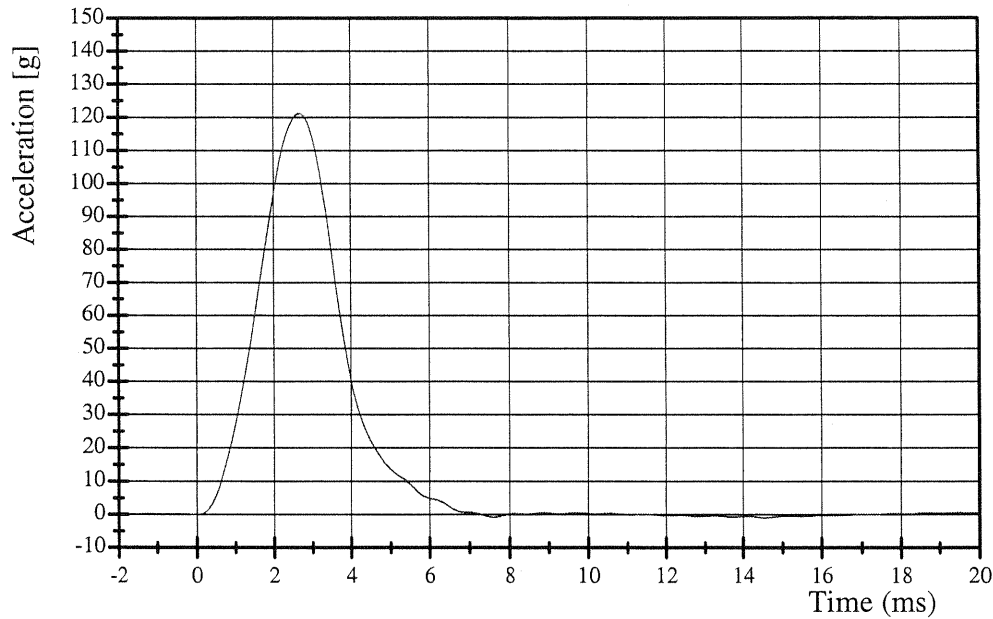
Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Pendulum Deceleration

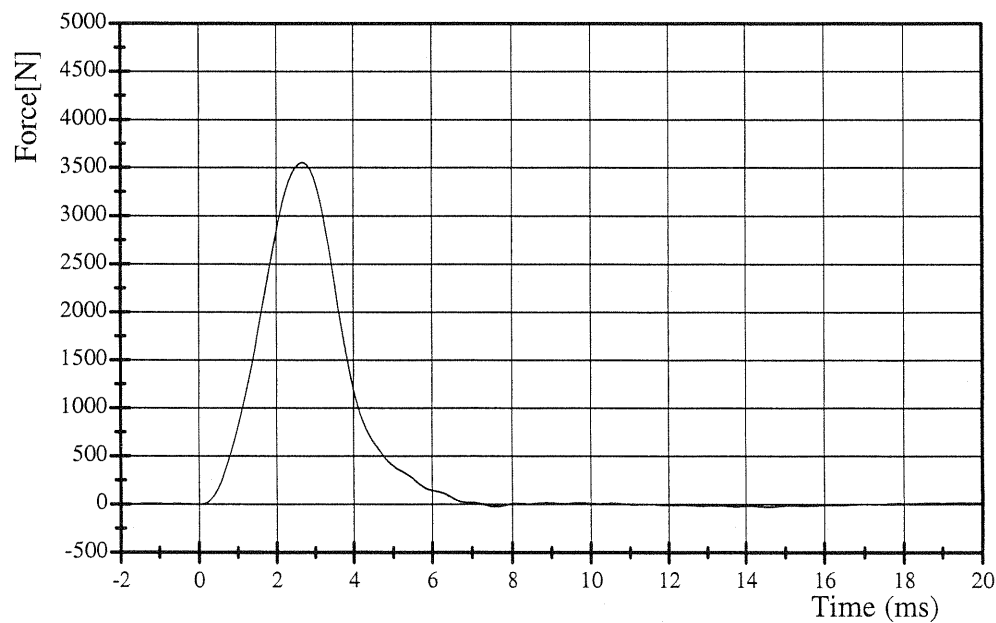


Filter Class: 600

Max: 121.1 g at 2.6 ms

Min: -1.0 g at 14.6 ms

Pendulum Force



Filter Class: 600

Max: 3551.2 N at 2.6 ms

Min: -28.7 N at 14.6 ms

07.28.2004 10:24:03 1728



Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

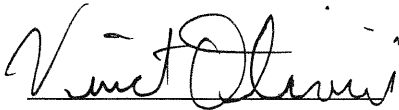
Test Date 07/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3718 N	Yes

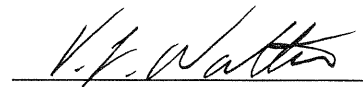
Test meets specifications.

Comments:

Technician



Approved



07.28.2004 10:29:32 1733



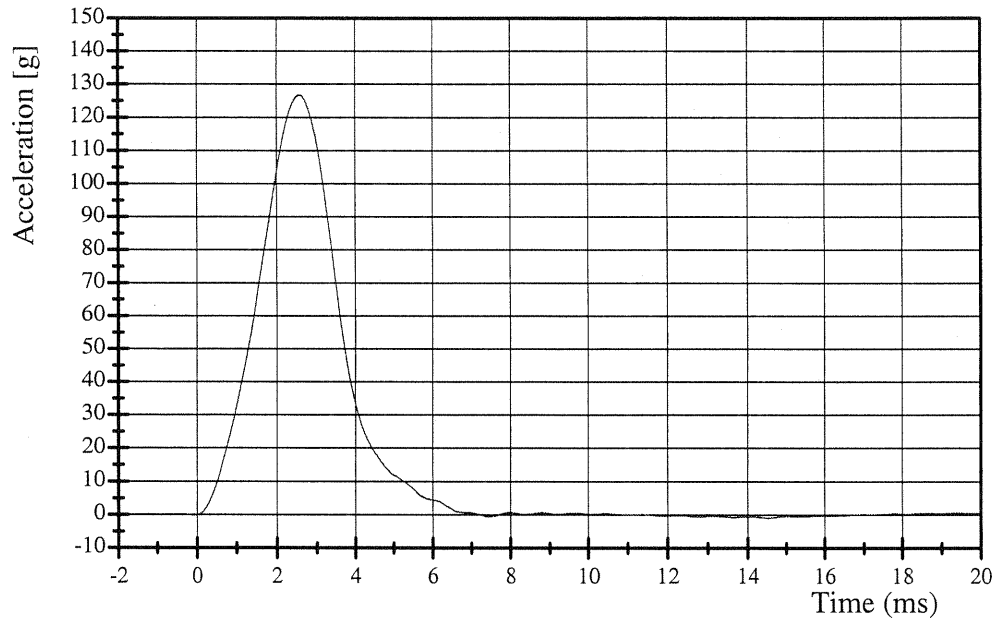
Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 048 Calibration No. 16 - 1

Test Date 07/28/2004

Pendulum Deceleration

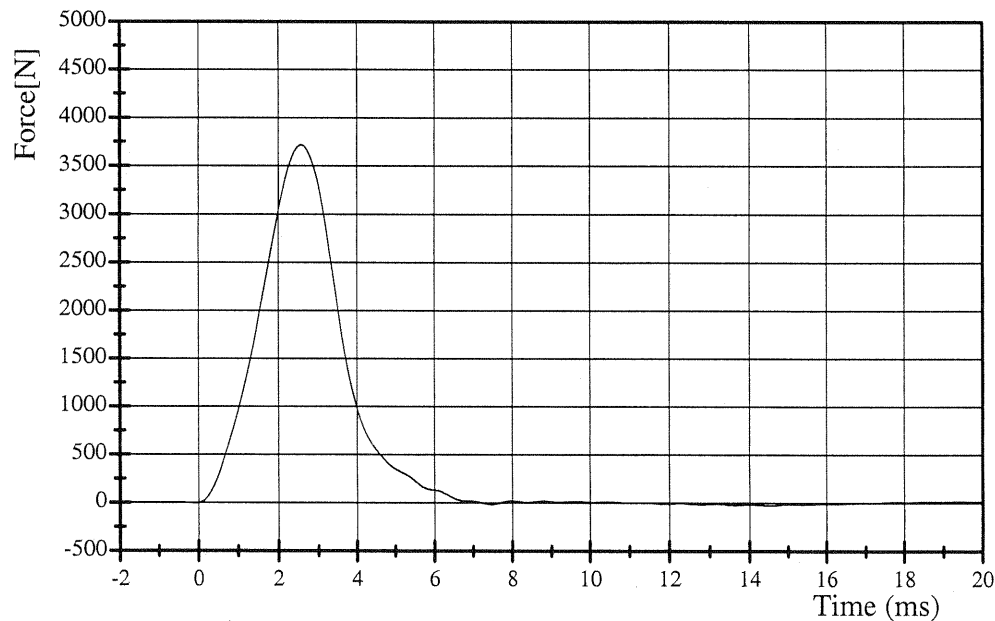


Filter Class: 600

Max: 126.8 g at 2.6 ms

Min: -0.9 g at 14.5 ms

Pendulum Force



Filter Class: 600

Max: 3717.9 N at 2.6 ms

Min: -27.6 N at 14.5 ms

07.28.2004 10:29:33 1733



Pre-Test Calibration

3rd Row Right Dummy S/N 070

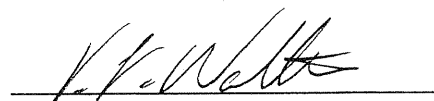
Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 070 Calibration No. 03
Date:

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	784	Yes
B	Shoulder Pivot Height	431.8 - 457.2	451	Yes
C	Hip Pivot Height	81.3 - 86.3	85	Yes
D	Hip Pivot from Backline	144.8 - 149.8	148	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	77	Yes
F	Thigh Clearance	119.4 - 134.6	129	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	247	Yes
H	Head Back to Backline	43.2 - 48.2	45	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	280	Yes
J	Elbow Rest Height	182.8 - 203.2	194	Yes
K	Buttock Knee Length	520.7 - 546.1	539	Yes
L	Popliteal Height	355.6 - 376.0	358	Yes
M	Knee Pivot Height	393.7 - 419.1	397	Yes
N	Buttock Popliteal Height	414.0 - 439.4	417	Yes
O	Chest Depth without Jacket	175.3 - 190.5	185	Yes
P	Foot Length	218.5 - 233.7	220	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	477	Yes
S	Head Breadth	137.1 - 147.3	140	Yes
T	Head Depth	177.8 - 188.0	181	Yes
U	Hip Breadth	299.7 - 314.9	303	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	85	Yes
X	Head Circumference	528.3 - 548.7	542	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	860	Yes
Z	Waist Circumference	759.5 - 789.9	777	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	350	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician



Approved



Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 070 Calibration No. 04 - 1

Test Date 07/27/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	58 %	Yes
Peak Resultant Acceleration	250 - 300 g	256.4 g	Yes
Peak Lateral Acceleration	15 g Max	-1.9 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Vivian Oliver

Approved

V. L. Watters

07.27.2004 16:12:46 609

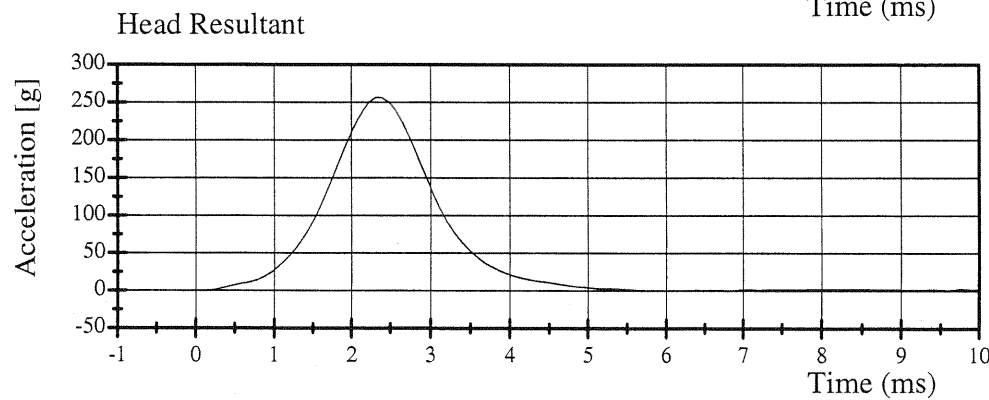
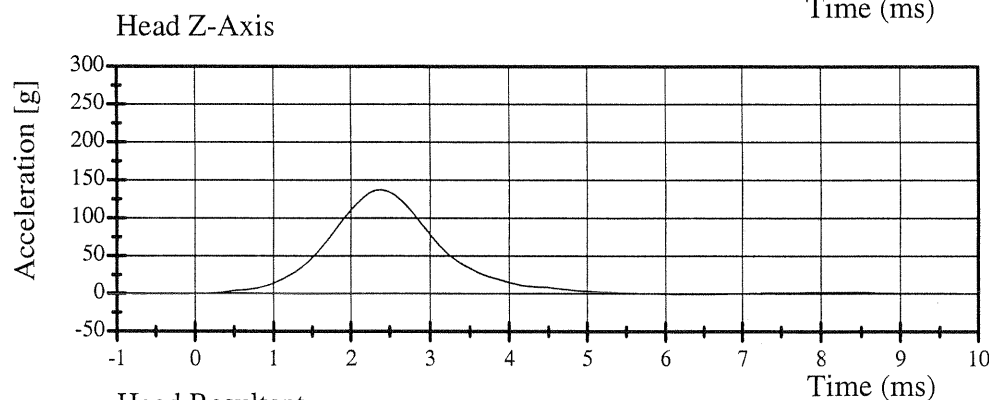
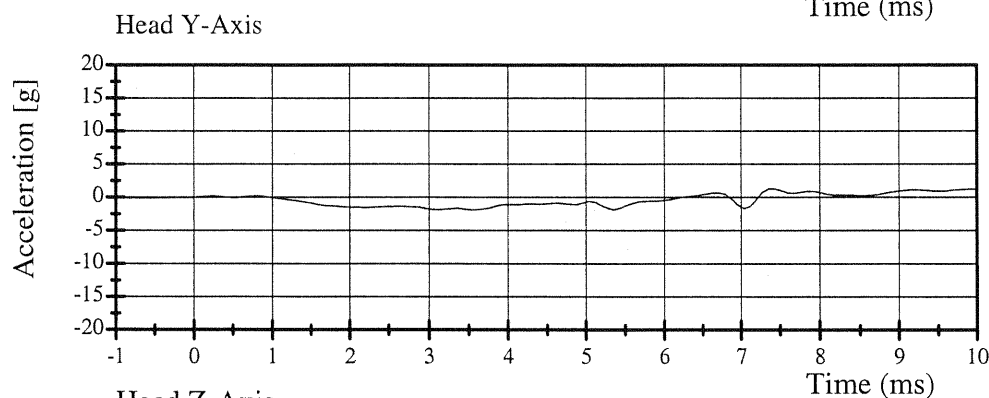
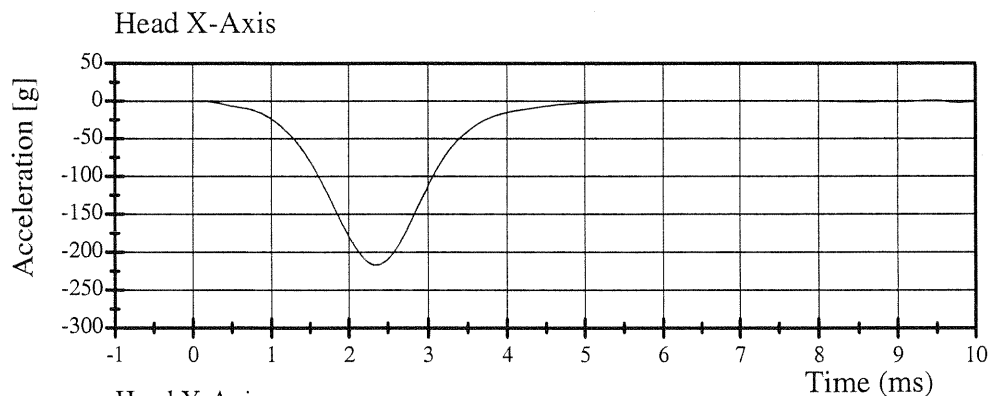


Transportation Research Center Inc.

5720 Head Drop Test

HHH 5th Female Serial No. 070 Calibration No. 04 - 1

Test Date 07/27/2004



07.27.2004 16:12:46 609



Transportation Research Center Inc.

5720 Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

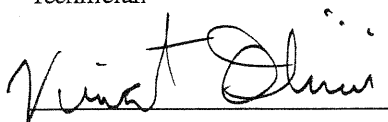
Test Date 07/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.10 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.44 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.71 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.67 m/s	Yes
Peak D Plane Rotation	77 - 91 °	79.6 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	70.28 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	89.12 ms	Yes

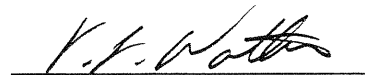
Test meets specifications.

Comments:

Technician



Approved



07.19.2004 11:03:12 509

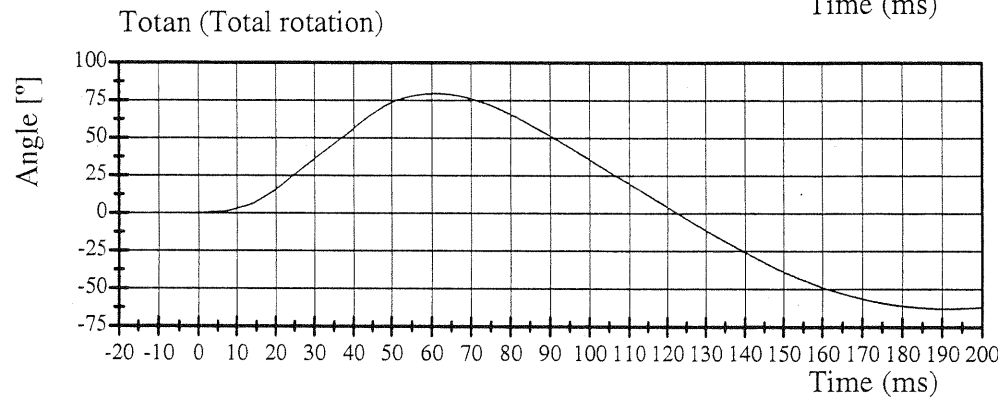
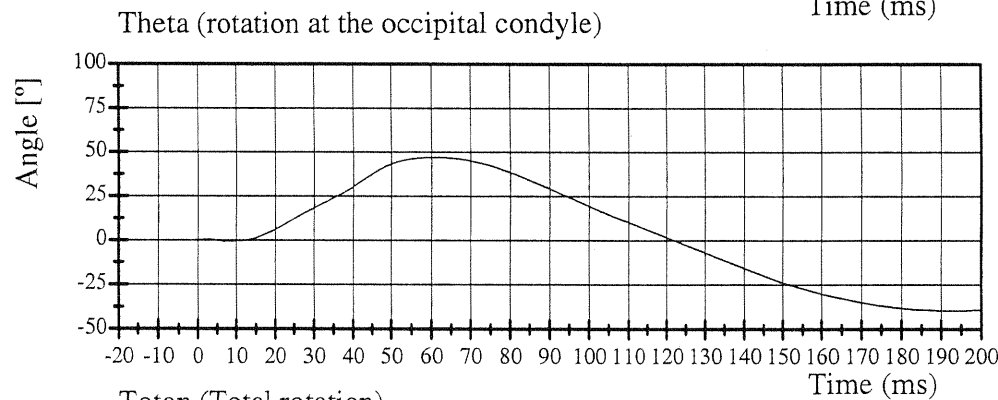
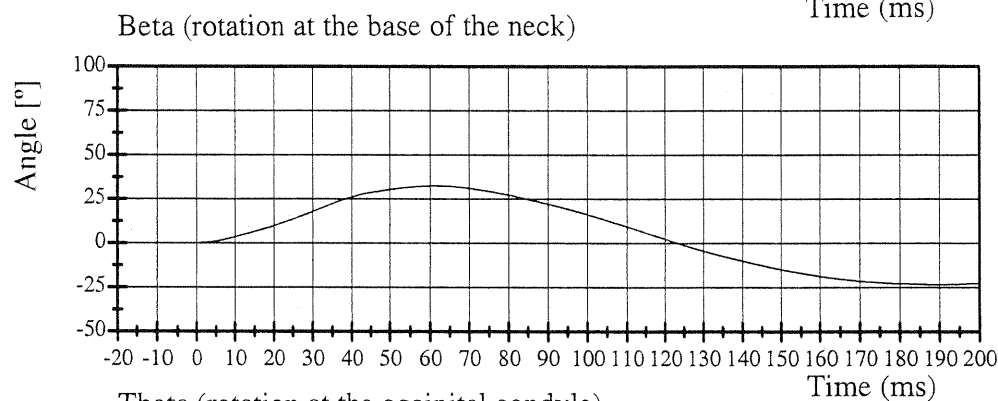
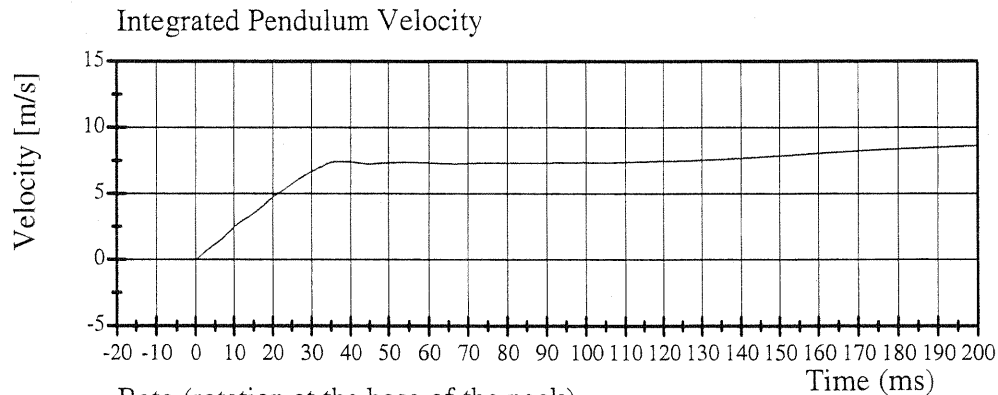


Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/19/2004



07.19.2004 11:03:13 509



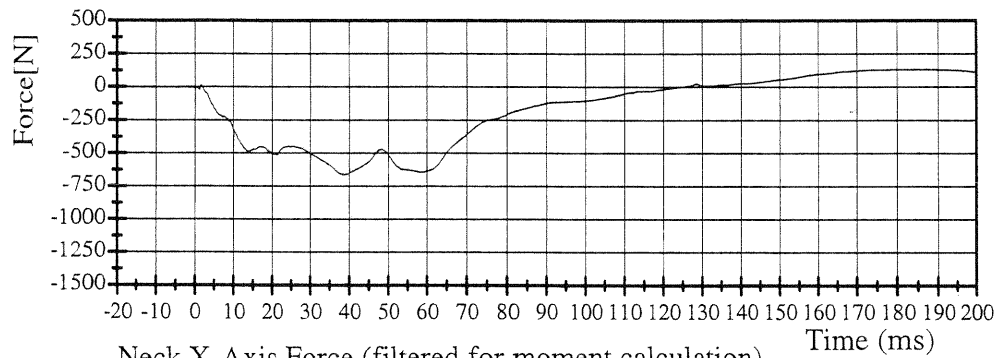
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/19/2004

Neck X-Axis Force

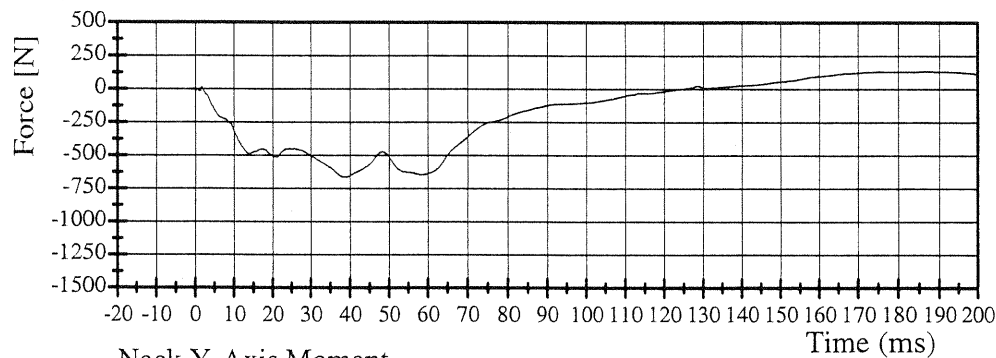


Filter Class: 1000

Max: 134.5 N at 187.0 ms

Min: -661.9 N at 38.7 ms

Neck X-Axis Force (filtered for moment calculation)

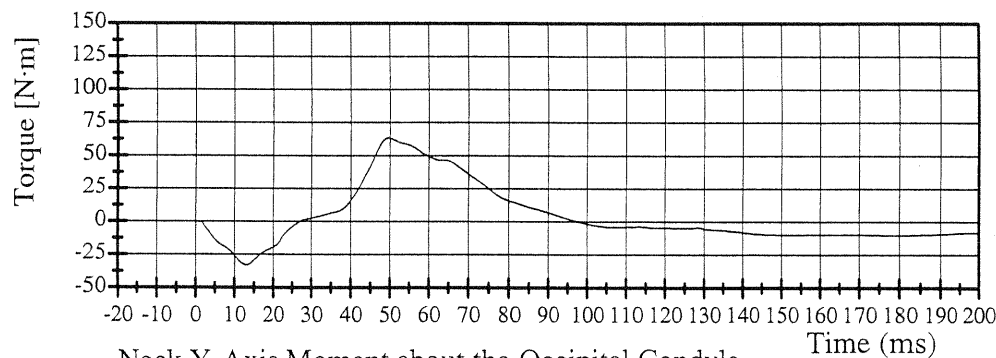


Filter Class: 600

Max: 134.2 N at 187.1 ms

Min: -661.7 N at 38.7 ms

Neck Y-Axis Moment

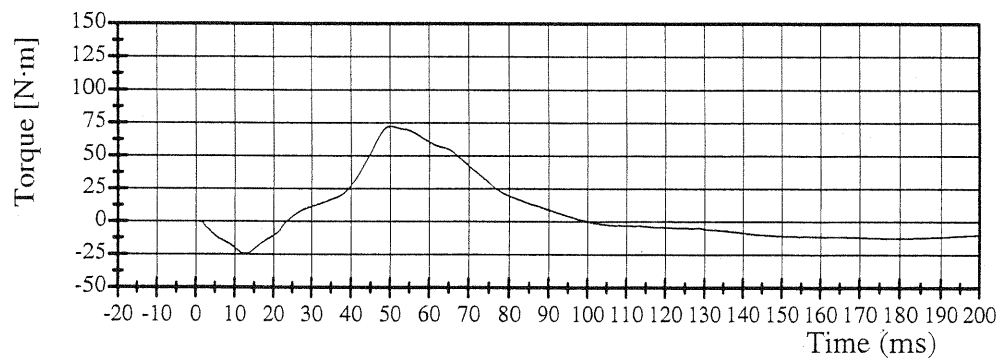


Filter Class: 600

Max: 63.4 N·m at 49.6 ms

Min: -32.8 N·m at 13.2 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 72.4 N·m at 50.1 ms

Min: -24.5 N·m at 12.8 ms

07.19.2004 11:03:14 509



Transportation Research Center Inc.

5720 Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

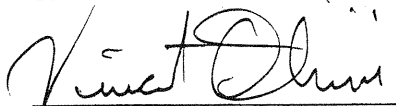
Test Date 07/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.08 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.81 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.52 m/s	Yes
30 ms	4.60 - 5.60 m/s	5.09 m/s	Yes
Peak D Plane Rotation	99 - 114 °	112.7 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-56.45 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	110.40 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



07.19.2004 11:35:27 596



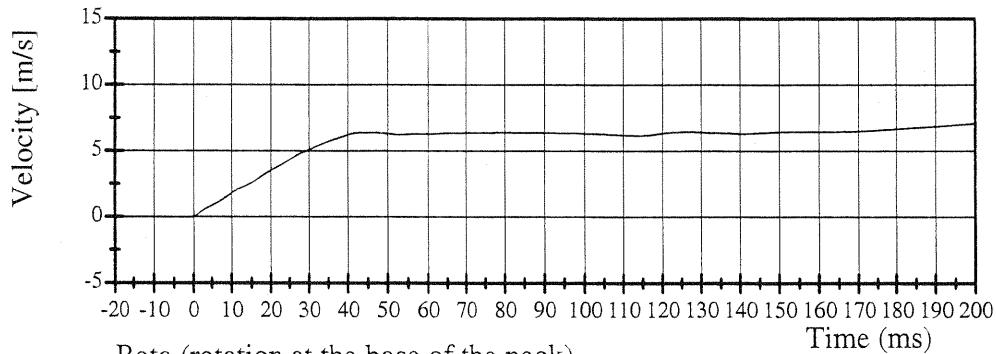
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/19/2004

Integrated Pendulum Velocity

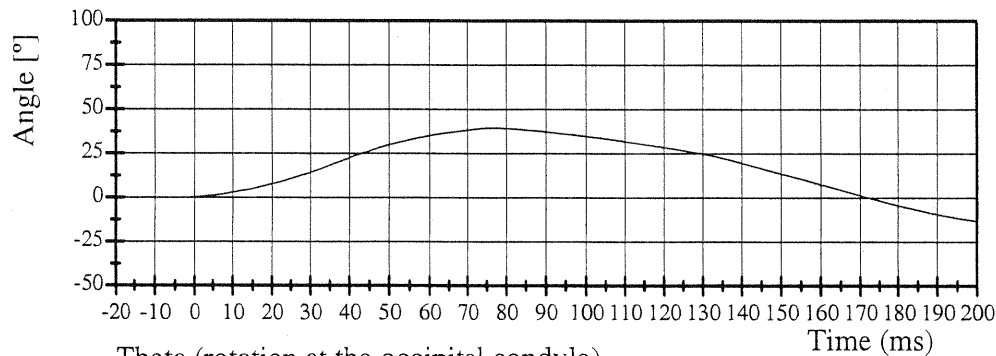


Filter Class: 180

Max: 8.0 m/s at 276.9 ms

Min: -0.0 m/s at -0.7 ms

Beta (rotation at the base of the neck)

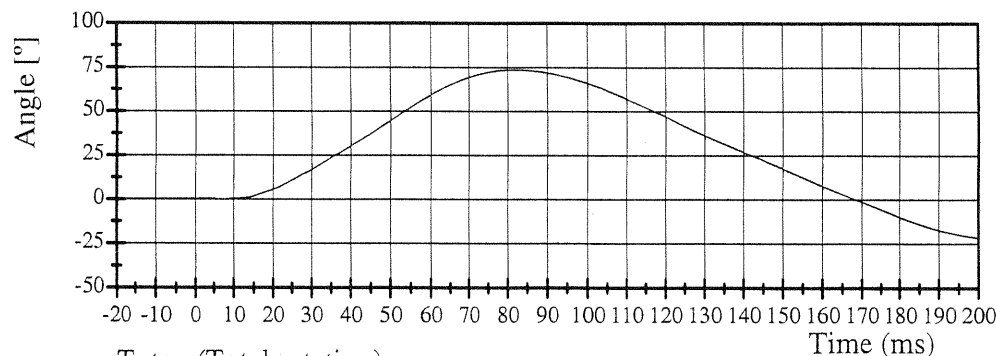


Filter Class: 60

Max: 39.5 ° at 76.3 ms

Min: -16.0 ° at 219.2 ms

Theta (rotation at the occipital condyle)

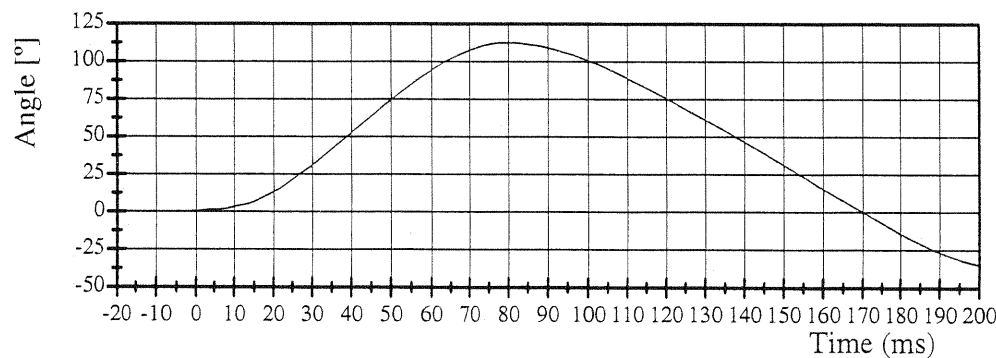


Filter Class: 60

Max: 73.6 ° at 81.7 ms

Min: -24.8 ° at 218.3 ms

Totan (Total rotation)



Filter Class: 60

Max: 112.7 ° at 79.9 ms

Min: -40.8 ° at 218.6 ms

07.19.2004 11:35:28 596



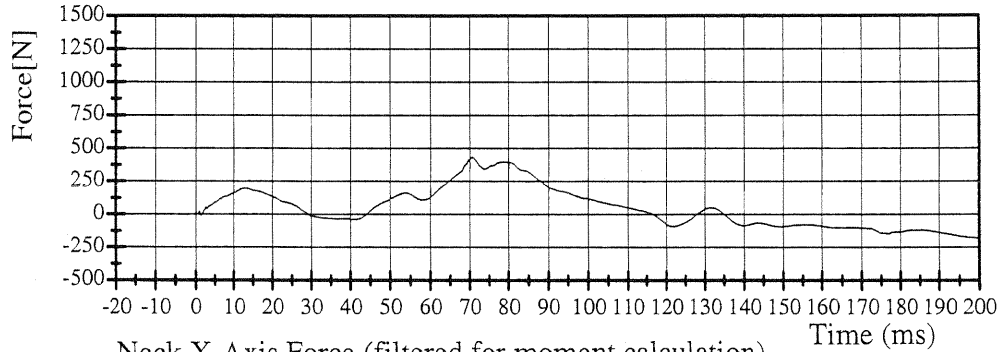
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/19/2004

Neck X-Axis Force

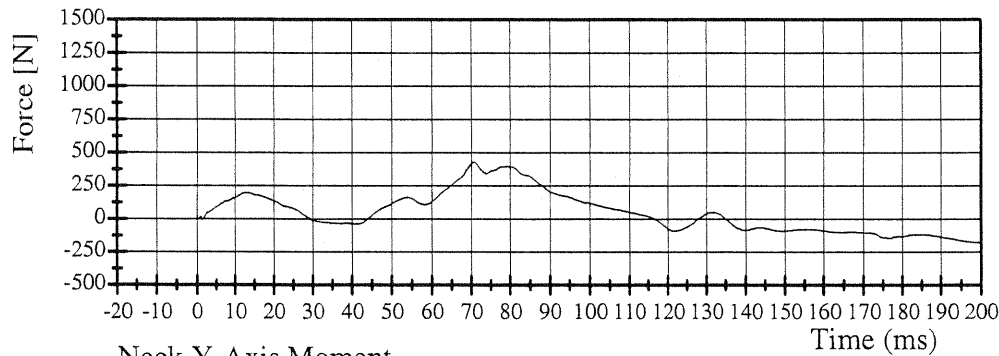


Filter Class: 1000

Max: 431.6 N at 70.7 ms

Min: -182.8 N at 204.4 ms

Neck X-Axis Force (filtered for moment calculation)

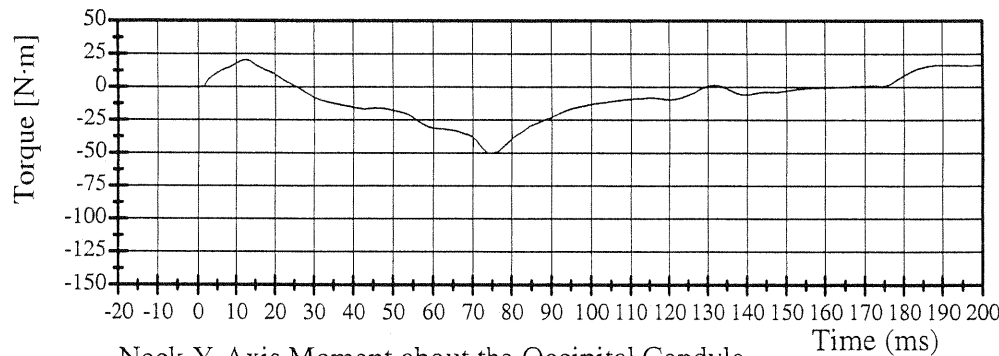


Filter Class: 600

Max: 430.6 N at 70.6 ms

Min: -182.2 N at 204.4 ms

Neck Y-Axis Moment

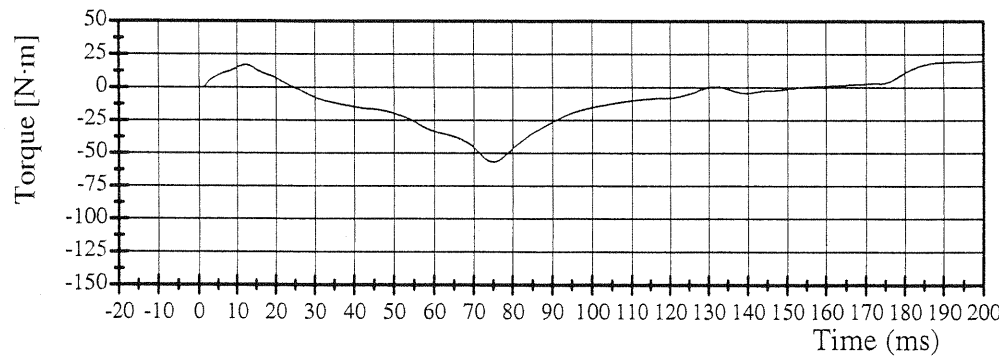


Filter Class: 600

Max: 20.6 N·m at 12.4 ms

Min: -50.1 N·m at 74.5 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 22.3 N·m at 212.5 ms

Min: -56.4 N·m at 75.0 ms

Transportation Research Center Inc.

5720 Thorax Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

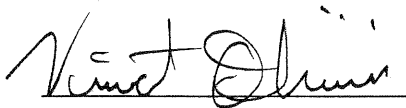
Test Date 07/16/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.74 m/s	Yes
Maximum Chest Deflection	-58.0 - (-50.0) mm	-55.7 mm	Yes
Peak Impact Probe Force Within Compression Corridor	3900 - 4400 N	4249 N	Yes
Peak Force Between 18 mm and 50 mm	4600 N	4171 N	Yes
Internal Hysteresis	69 - 85 %	73 %	Yes

Test meets specifications.

Comments:

Technician



Approved



07.16.2004 11:29:04 999



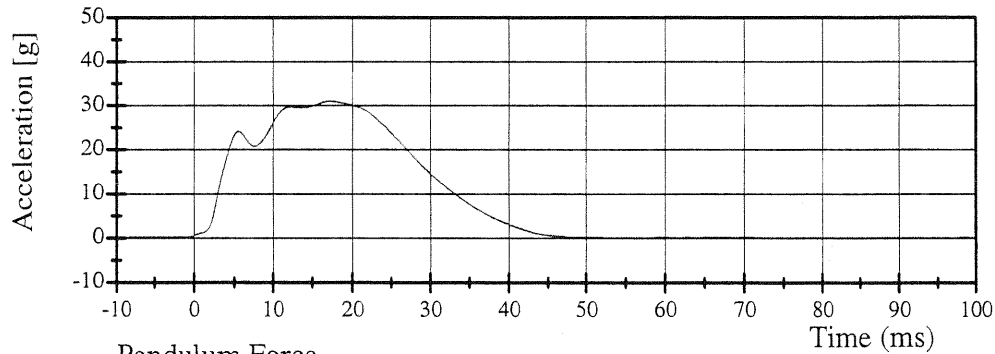
Transportation Research Center Inc.

5720 Thorax Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/16/2004

Pendulum Deceleration

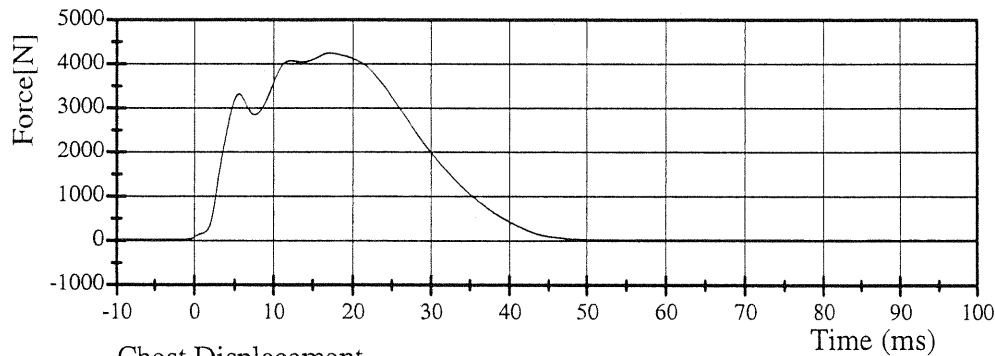


Filter Class: 180

Max: 31.0 g at 17.2 ms

Min: -0.2 g at 237.7 ms

Pendulum Force

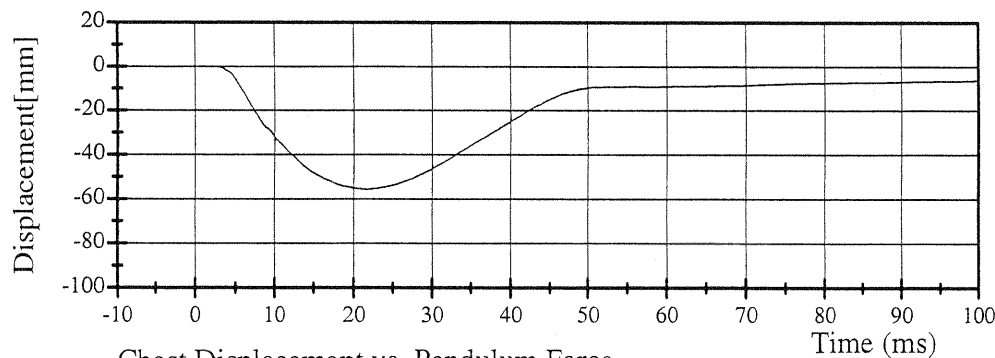


Filter Class: 180

Max: 4249.3 N at 17.2 ms

Min: -29.5 N at 237.7 ms

Chest Displacement

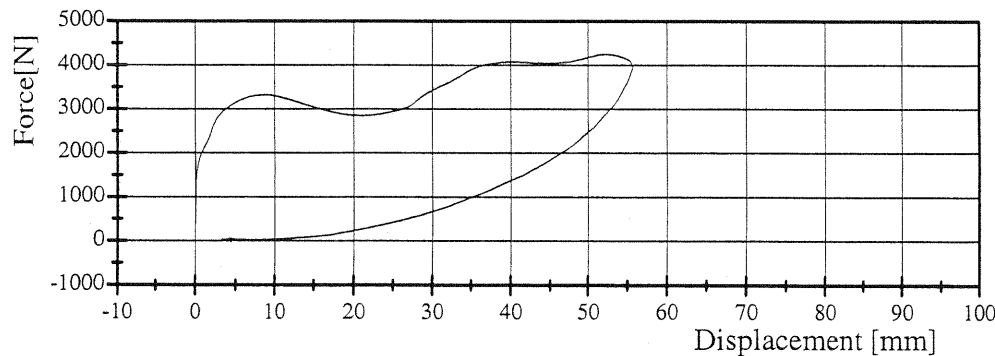


Filter Class: 600

Max: 0.0 mm at -79.2 ms

Min: -55.7 mm at 21.8 ms

Chest Displacement vs. Pendulum Force



07.16.2004 11:29:05 999



TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 15-Jul-04

TRC, INC.

TEST NO: 070C3TF1

572 O SN070 TORSO FLEX CAL 03

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.6 ° C
RELATIVE HUMIDITY	10 – 70 %	51 %
INITIAL ANGLE OF UNSUPPORTRED DUMMY	<= 20° REFERENCED TO VERTICAL	14.4 °
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	383.1 N
RETURN ANGLE		18.6 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	4.2 °
RATE	0.5° - 1.5°/sec	0.95 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN



Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/15/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3685 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Shinn

Approved

K. J. Walte

07.15.2004 14:53:30 1792

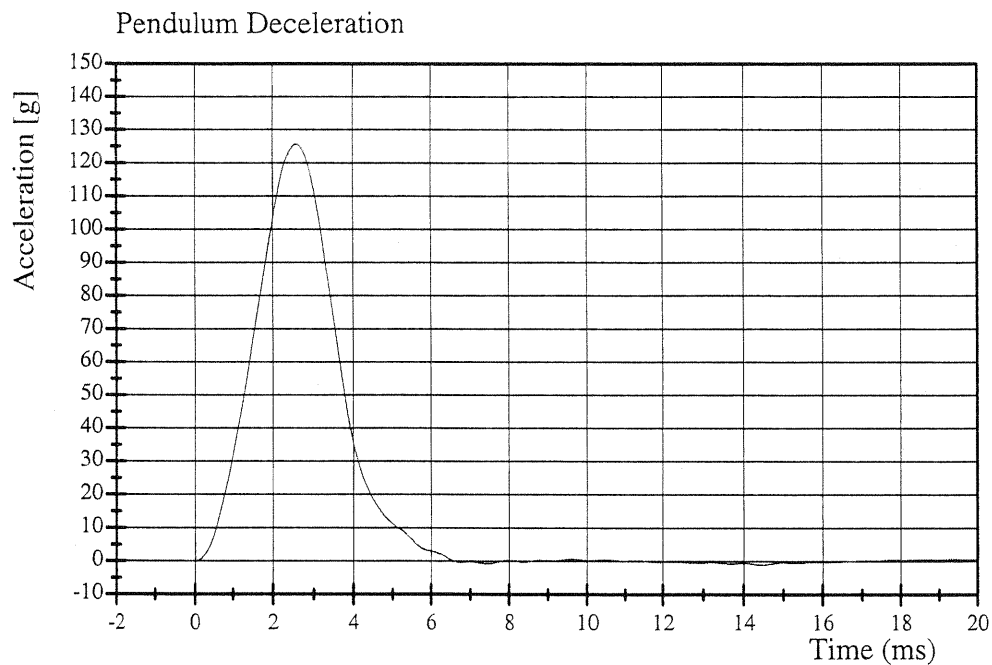


Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

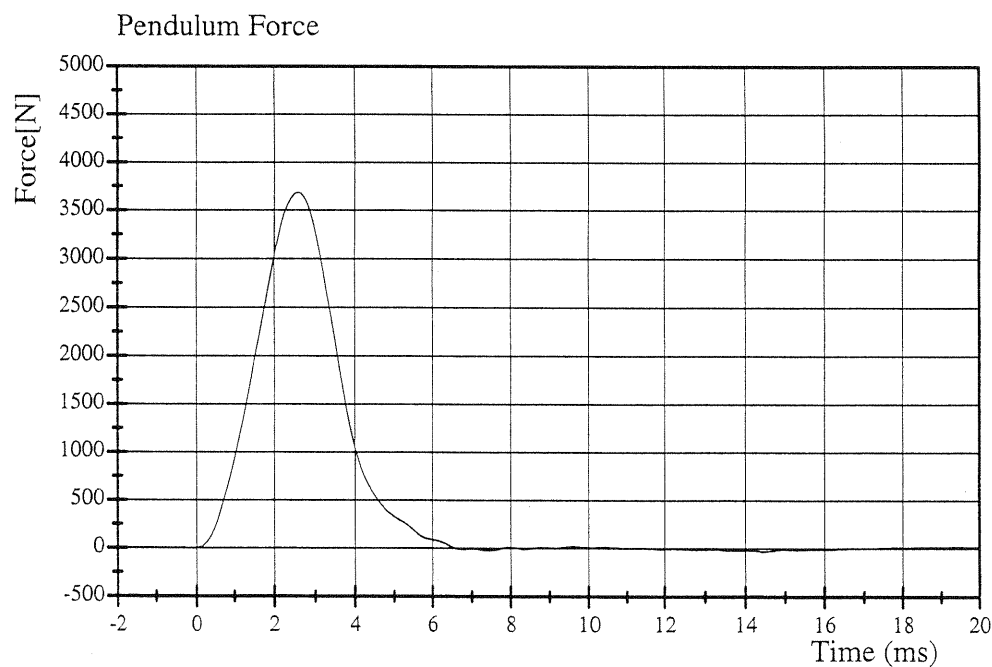
Test Date 07/15/2004



Filter Class: 600

Max: 125.7 g at 2.6 ms

Min: -1.1 g at 14.5 ms



Filter Class: 600

Max: 3685.2 N at 2.6 ms

Min: -32.2 N at 14.5 ms

07.15.2004 14:53:31 1792



Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

Test Date 07/15/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3651 N	Yes

Test meets specifications.

Comments:

Technician

Vincent D. Smith

Approved

V.L. Watts

07.15.2004 15:02:04 1791

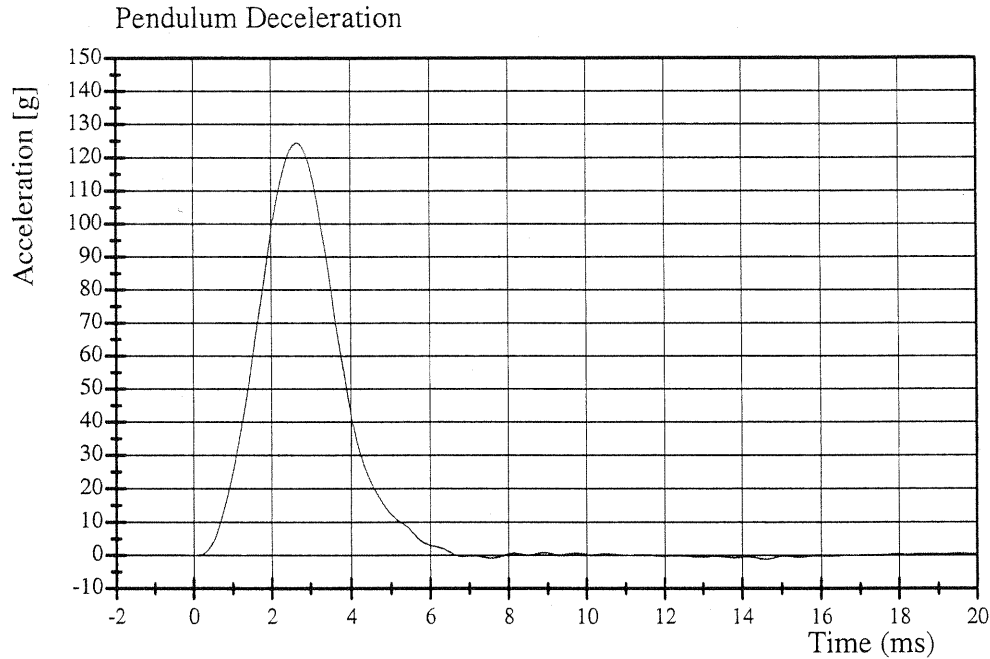


Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 070 Calibration No. 03 - 1

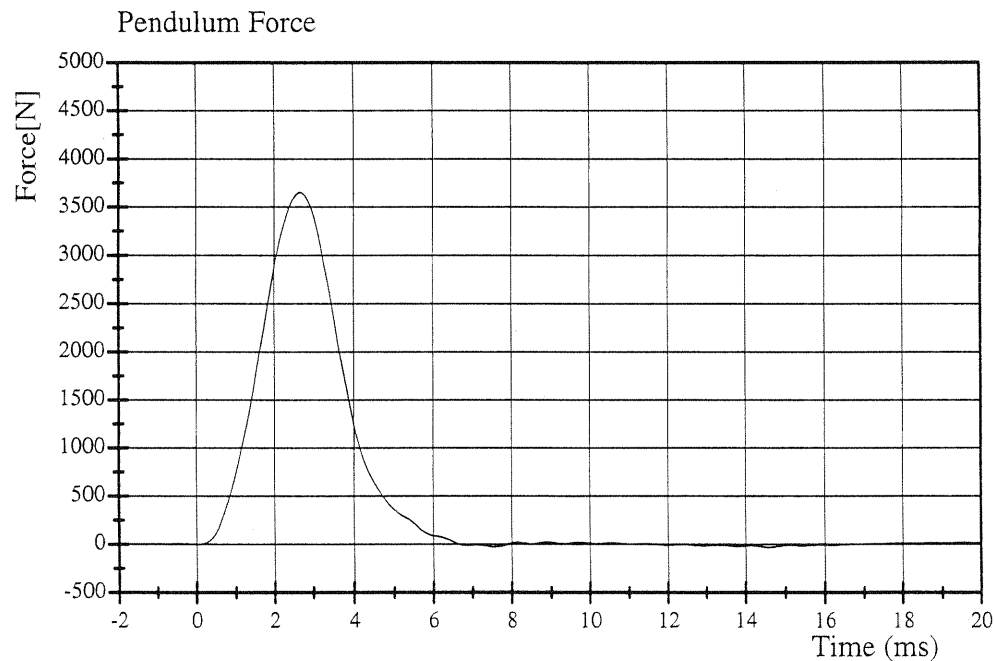
Test Date 07/15/2004



Filter Class: 600

Max: 124.5 g at 2.6 ms

Min: -1.1 g at 14.6 ms



Filter Class: 600

Max: 3650.6 N at 2.6 ms

Min: -32.2 N at 14.6 ms

07.15.2004 15:02:05 1791



Post-Test Calibration

3rd Row Right Dummy S/N 070

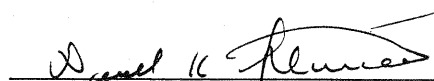
Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 070 Calibration No. 05
Date:

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	786	Yes
B	Shoulder Pivot Height	431.8 - 457.2	449	Yes
C	Hip Pivot Height	81.3 - 86.3	86	Yes
D	Hip Pivot from Backline	144.8 - 149.8	147	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	77	Yes
F	Thigh Clearance	119.4 - 134.6	128	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	247	Yes
H	Head Back to Backline	43.2 - 48.2	45	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	280	Yes
J	Elbow Rest Height	182.8 - 203.2	194	Yes
K	Buttock Knee Length	520.7 - 546.1	539	Yes
L	Popliteal Height	355.6 - 376.0	358	Yes
M	Knee Pivot Height	393.7 - 419.1	397	Yes
N	Buttock Popliteal Height	414.0 - 439.4	417	Yes
O	Chest Depth without Jacket	175.3 - 190.5	184	Yes
P	Foot Length	218.5 - 233.7	220	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	477	Yes
S	Head Breadth	137.1 - 147.3	140	Yes
T	Head Depth	177.8 - 188.0	181	Yes
U	Hip Breadth	299.7 - 314.9	303	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	85	Yes
X	Head Circumference	528.3 - 548.7	542	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	860	Yes
Z	Waist Circumference	759.5 - 789.9	777	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	350	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician



Approved



Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Peak Resultant Acceleration	250 - 300 g	271.6 g	Yes
Peak Lateral Acceleration	15 g Max	4.0 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Vincent Oliver

Approved

Paul K. Klement

08.09.2004 14:03:54 608



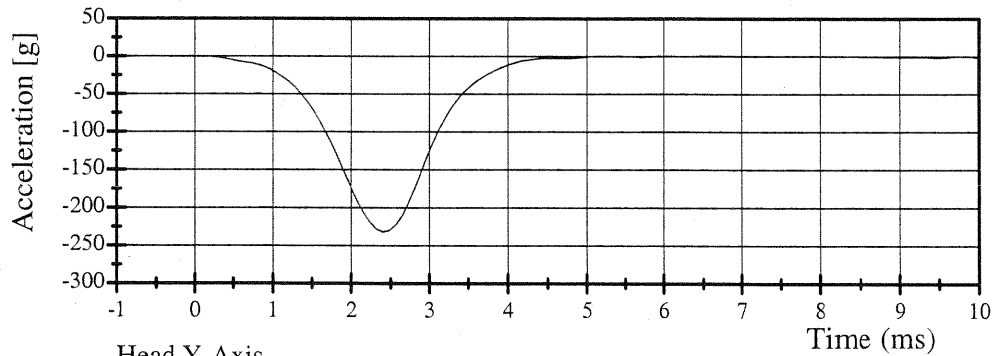
Transportation Research Center Inc.

5720 Head Drop Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Head X-Axis

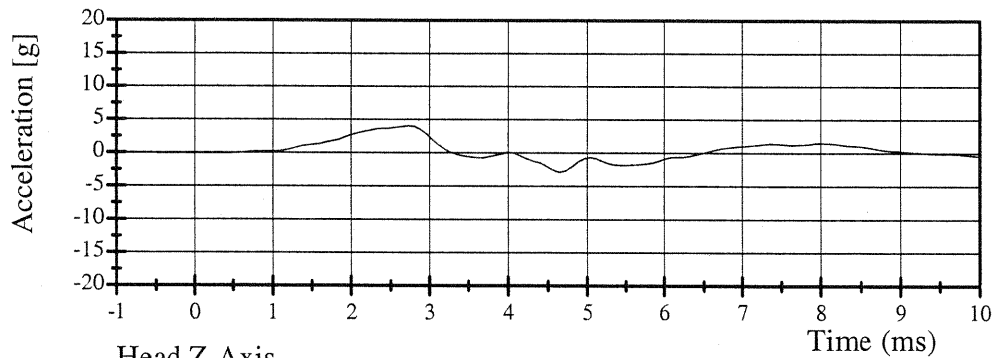


Filter Class: 1000

Max: 1.2 g at 6.6 ms

Min: -231.7 g at 2.4 ms

Head Y-Axis

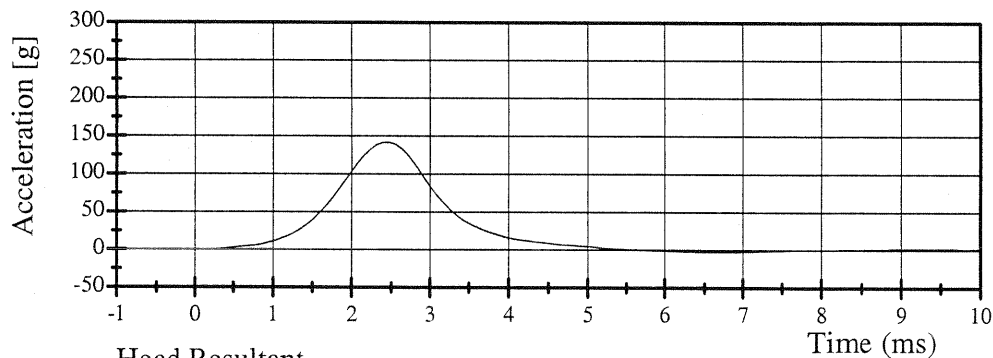


Filter Class: 1000

Max: 4.0 g at 2.7 ms

Min: -2.9 g at 4.6 ms

Head Z-Axis

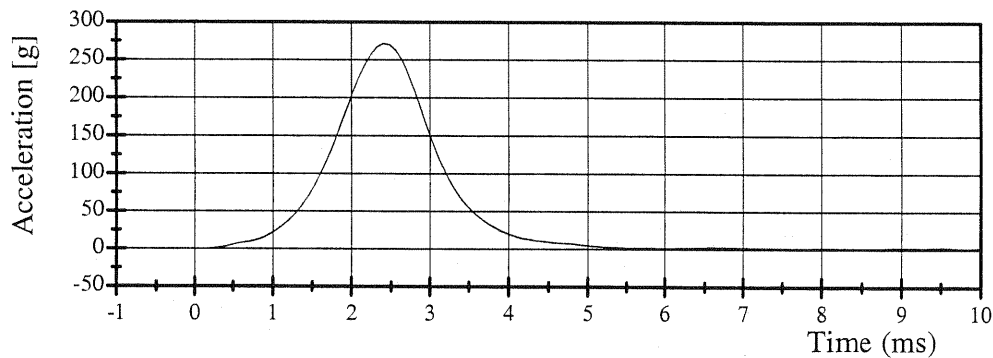


Filter Class: 1000

Max: 141.7 g at 2.5 ms

Min: -2.4 g at 6.7 ms

Head Resultant



Filter Class: 1000

Max: 271.6 g at 2.4 ms

Min: 0.0 g at 0.3 ms

08.09.2004 14:03:55 608



Transportation Research Center Inc.

5720 Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 070 Calibration No. 05 - 2

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.10 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.46 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.80 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.85 m/s	Yes
Peak D Plane Rotation	77 - 91 °	85.1 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	69.10 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	91.04 ms	Yes

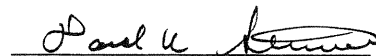
Test meets specifications.

Comments:

Technician



Approved



08.09.2004 11:59:04 511



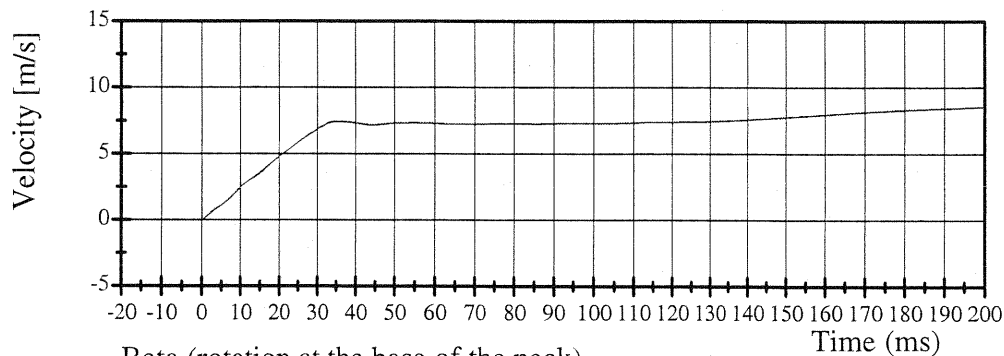
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 2

Test Date 08/09/2004

Integrated Pendulum Velocity

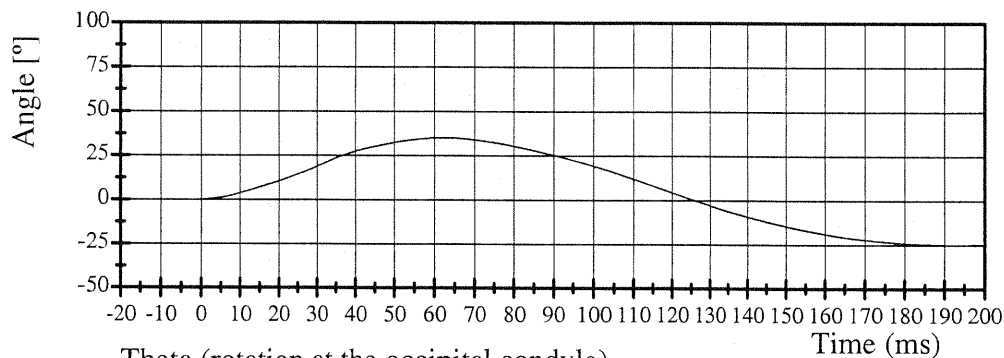


Filter Class: 180

Max: 9.2 m/s at 273.4 ms

Min: -0.0 m/s at -0.6 ms

Beta (rotation at the base of the neck)

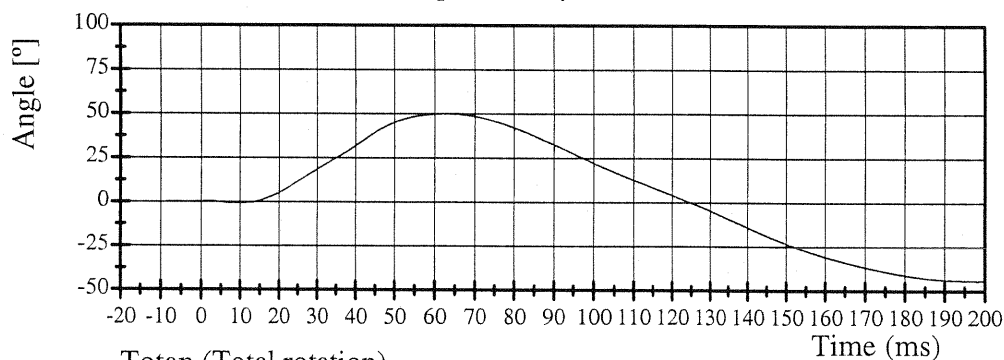


Filter Class: 60

Max: 35.1 ° at 62.2 ms

Min: -25.1 ° at 193.0 ms

Theta (rotation at the occipital condyle)

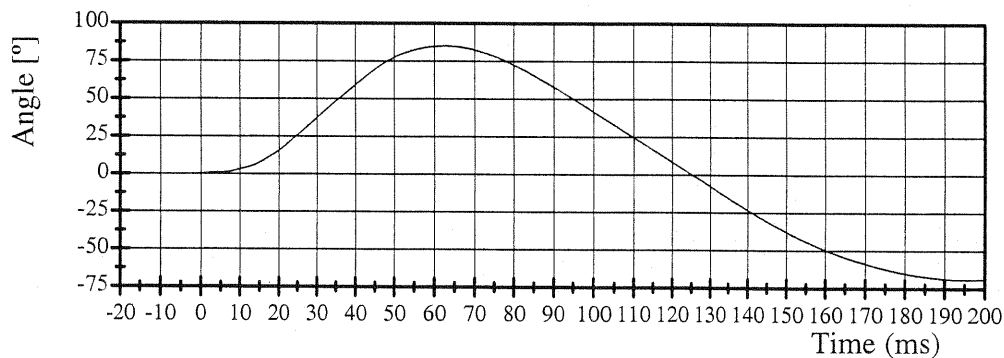


Filter Class: 60

Max: 50.0 ° at 63.1 ms

Min: -44.1 ° at 198.1 ms

Totan (Total rotation)



Filter Class: 60

Max: 85.1 ° at 62.7 ms

Min: -69.1 ° at 194.4 ms

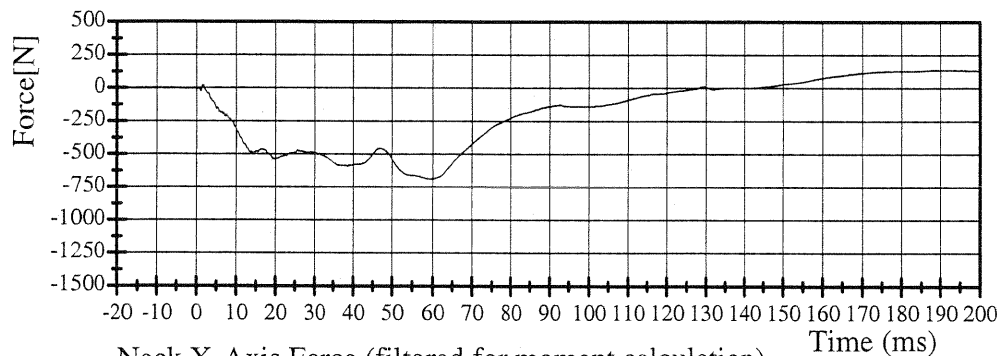
Transportation Research Center Inc.

5720 Neck Flexion Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 2

Test Date 08/09/2004

Neck X-Axis Force

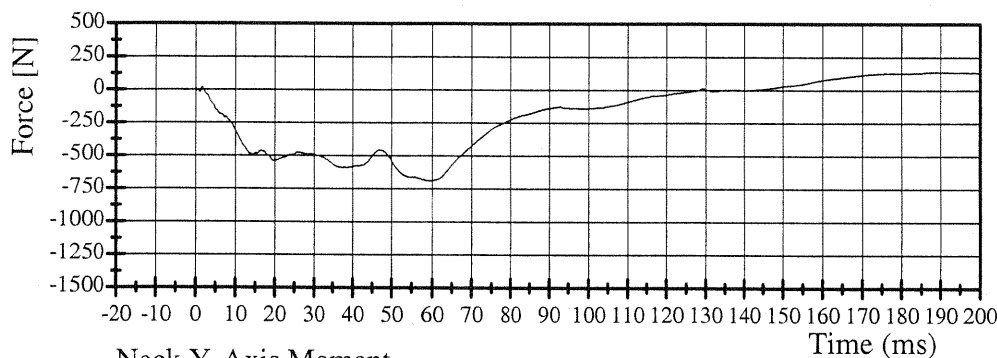


Filter Class: 1000

Max: 138.8 N at 188.9 ms

Min: -688.8 N at 59.4 ms

Neck X-Axis Force (filtered for moment calculation)

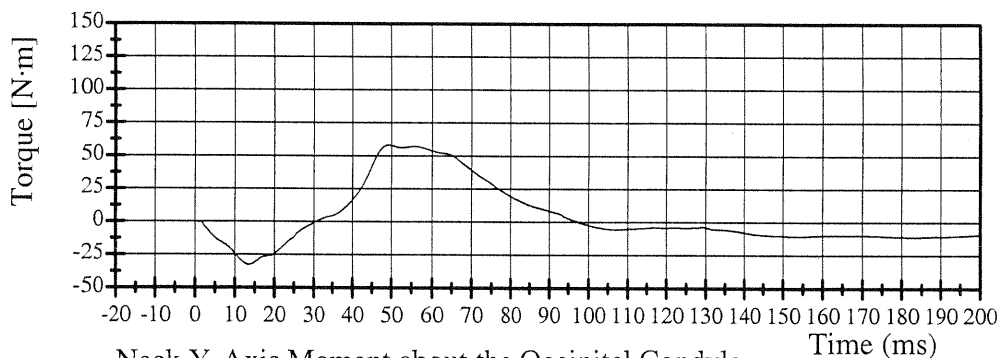


Filter Class: 600

Max: 138.2 N at 188.9 ms

Min: -688.6 N at 59.4 ms

Neck Y-Axis Moment

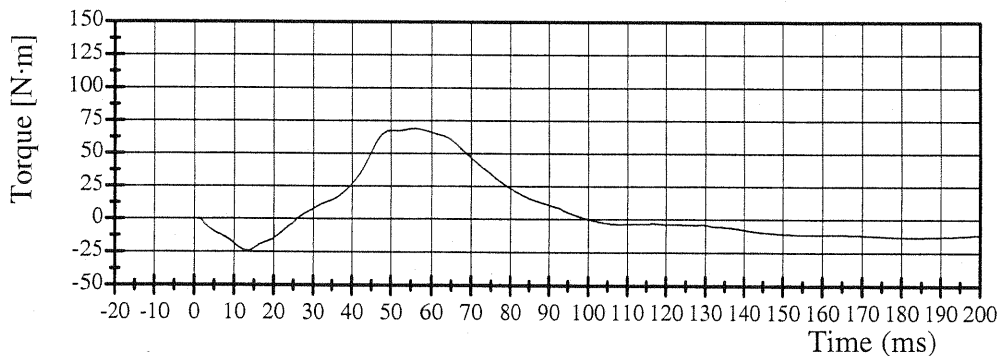


Filter Class: 600

Max: 58.3 N·m at 49.4 ms

Min: -32.7 N·m at 13.4 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 69.1 N·m at 55.8 ms

Min: -24.1 N·m at 13.3 ms

Transportation Research Center Inc.

5720 Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	56 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.11 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.74 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.47 m/s	Yes
30 ms	4.60 - 5.60 m/s	5.15 m/s	Yes
Peak D Plane Rotation	99 - 114 °	113.2 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-60.11 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	111.04 ms	Yes

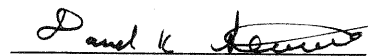
Test meets specifications.

Comments:

Technician



Approved



08.09.2004 12:29:10 592



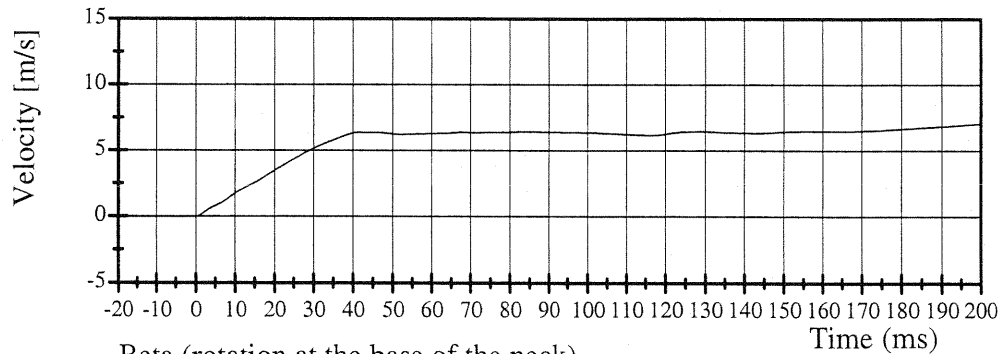
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Integrated Pendulum Velocity

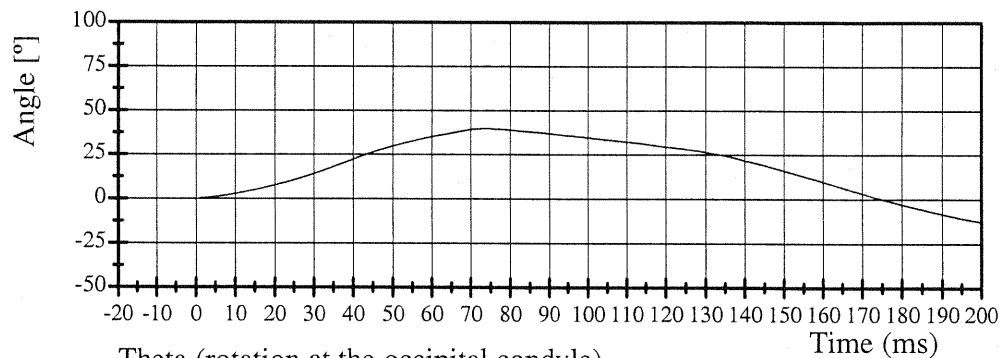


Filter Class: 180

Max: 8.2 m/s at 952.6 ms

Min: -0.0 m/s at -0.2 ms

Beta (rotation at the base of the neck)

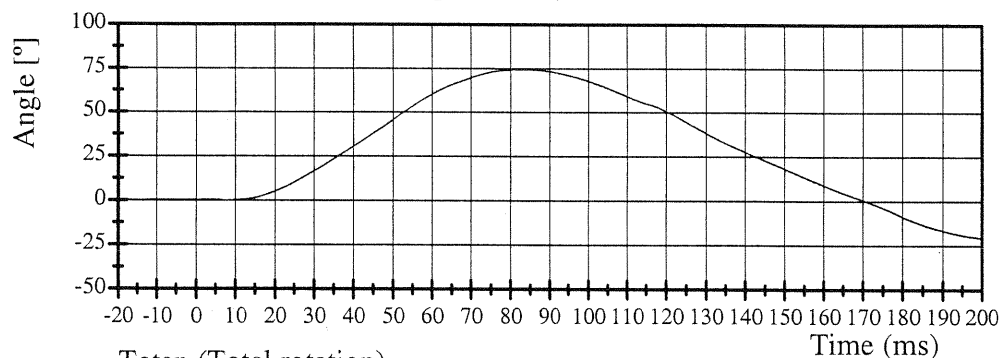


Filter Class: 60

Max: 39.7 ° at 73.8 ms

Min: -16.3 ° at 221.2 ms

Theta (rotation at the occipital condyle)

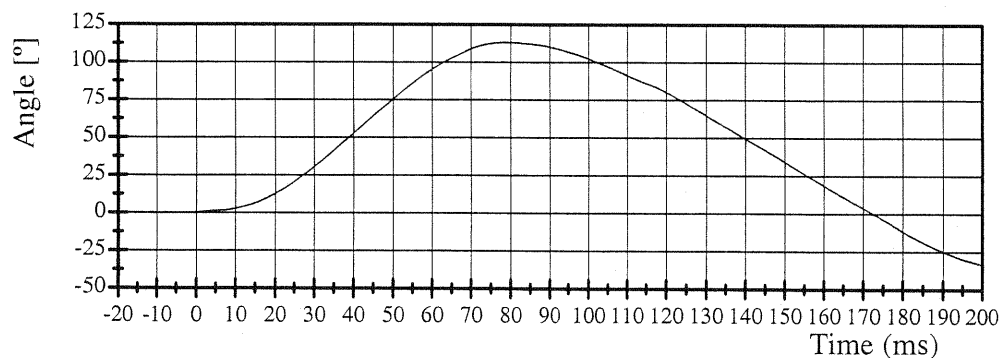


Filter Class: 60

Max: 74.4 ° at 83.2 ms

Min: -24.8 ° at 222.5 ms

Totan (Total rotation)



Filter Class: 60

Max: 113.2 ° at 79.1 ms

Min: -41.1 ° at 221.8 ms

08.09.2004 12:29:10 592



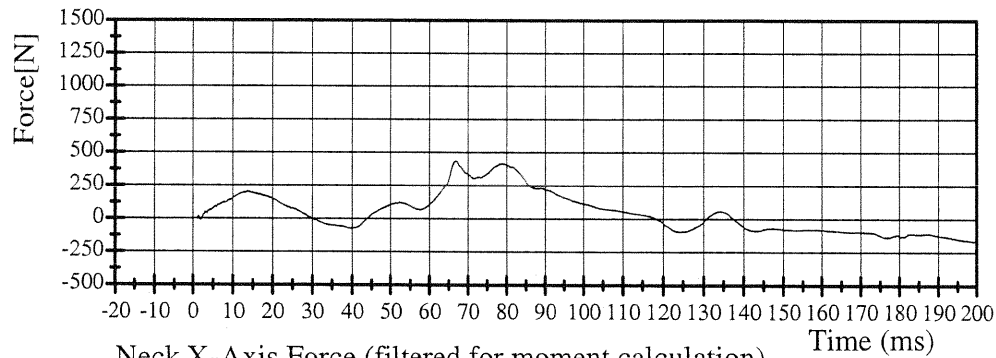
Transportation Research Center Inc.

5720 Neck Extension Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Neck X-Axis Force

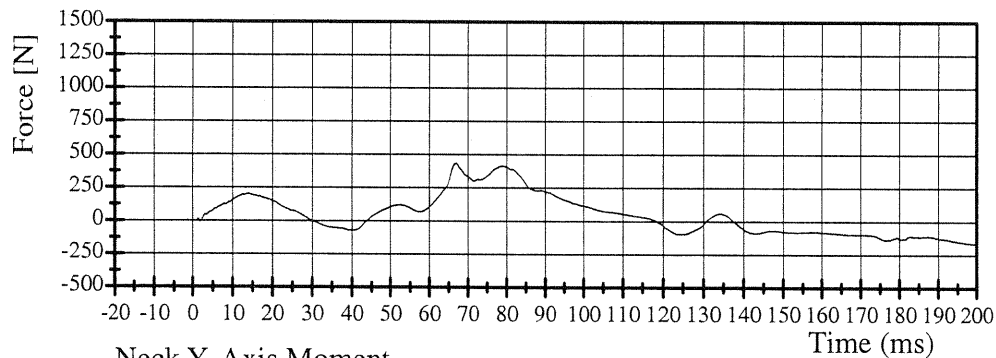


Filter Class: 1000

Max: 436.2 N at 66.9 ms

Min: -176.5 N at 205.8 ms

Neck X-Axis Force (filtered for moment calculation)

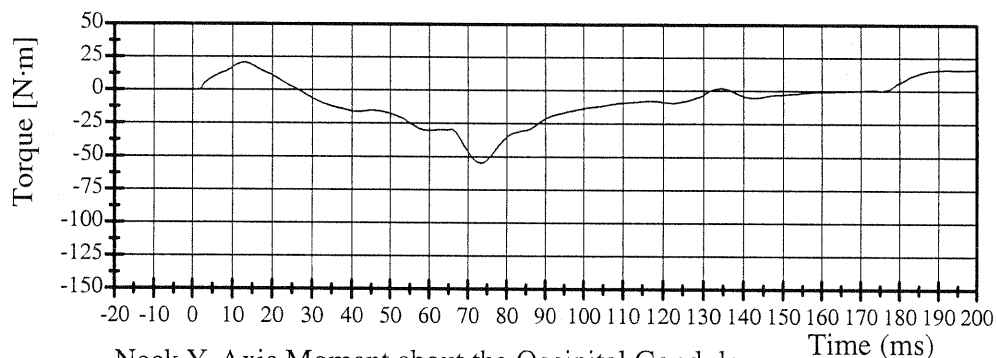


Filter Class: 600

Max: 435.0 N at 66.9 ms

Min: -175.3 N at 205.8 ms

Neck Y-Axis Moment

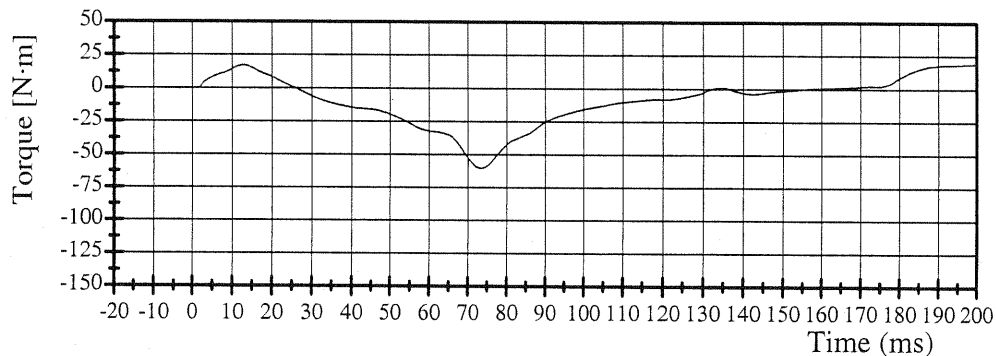


Filter Class: 600

Max: 20.6 N·m at 12.6 ms

Min: -54.5 N·m at 73.4 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 21.9 N·m at 215.4 ms

Min: -60.1 N·m at 73.5 ms

08.09.2004 12:29:12 592



Transportation Research Center Inc.

5720 Thorax Test

HHH 5th Female Serial No. 070 Calibration No. 05 - 1

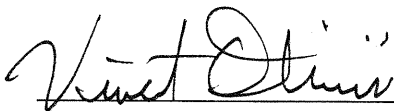
Test Date 08/10/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	56 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.74 m/s	Yes
Maximum Chest Deflection	-58.0 - (-50.0) mm	-54.9 mm	Yes
Peak Impact Probe Force Within Compression Corridor	3900 - 4400 N	4274 N	Yes
Peak Force Between 18 mm and 50 mm	4600 N	4225 N	Yes
Internal Hysteresis	69 - 85 %	73 %	Yes

Test meets specifications.

Comments:

Technician



Approved



08.10.2004 07:39:37 1016



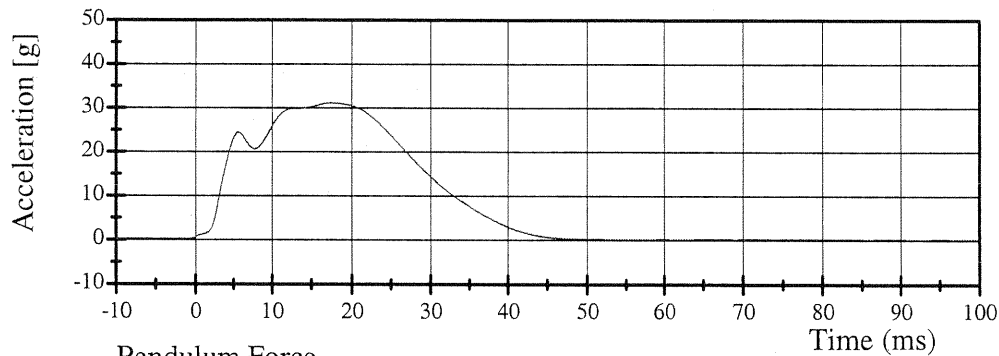
Transportation Research Center Inc.

5720 Thorax Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/10/2004

Pendulum Deceleration

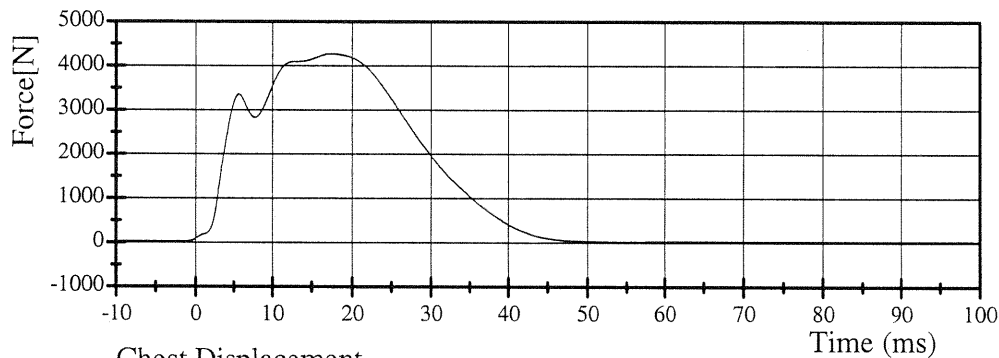


Filter Class: 180

Max: 31.2 g at 17.4 ms

Min: -0.2 g at 245.1 ms

Pendulum Force

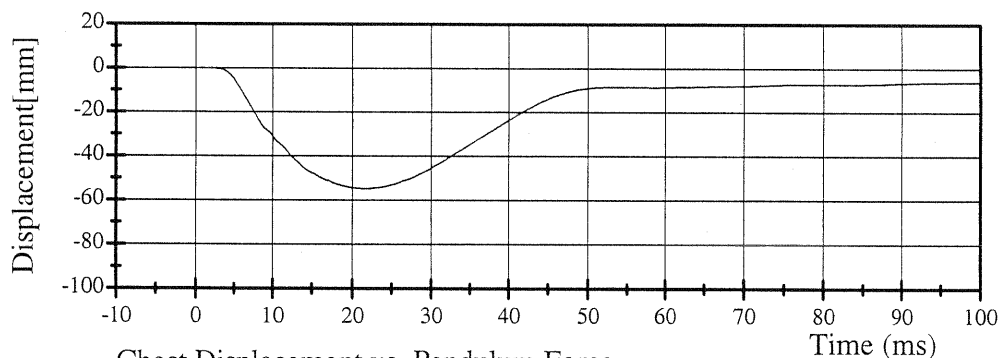


Filter Class: 180

Max: 4273.5 N at 17.4 ms

Min: -29.0 N at 245.1 ms

Chest Displacement

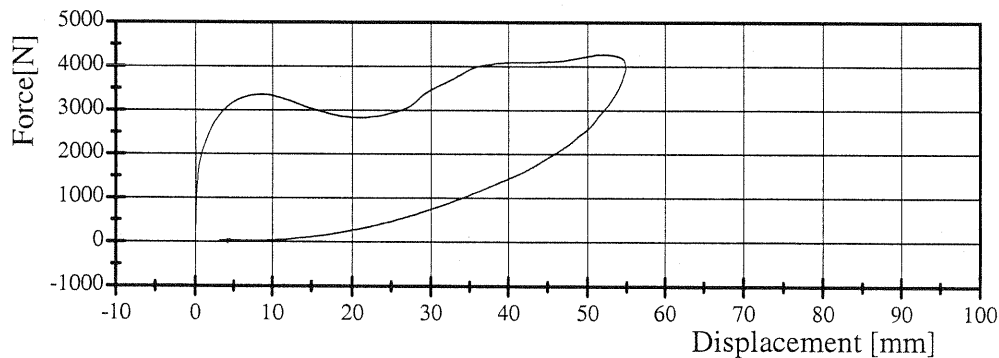


Filter Class: 600

Max: 0.0 mm at -45.4 ms

Min: -54.9 mm at 21.8 ms

Chest Displacement vs. Pendulum Force



08.10.2004 07:39:38 1016



TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 09-Aug-04

TRC, INC. TEST NO: 070C05TF2 572 O SN070 TORSO FLEX CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.4° C
RELATIVE HUMIDITY	10 – 70 %	52 %
INITIAL ANGLE OF UNSUPPORTRED DUMMY	$\leq 20^{\circ}$ REFERENCED TO VERTICAL	19.0 °
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	330.6 N
RETURN ANGLE		23.6 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	$\pm 8^{\circ}$ OF INTIAL ANGLE	4.6 °
RATE	0.5° - 1.5°/sec	0.96 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN

Vincent Oliver

Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

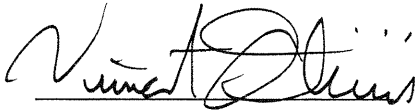
Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.07 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3714 N	Yes

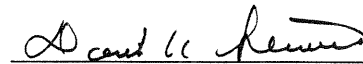
Test meets specifications.

Comments:

Technician



Approved



08.09.2004 13:22:26 1850

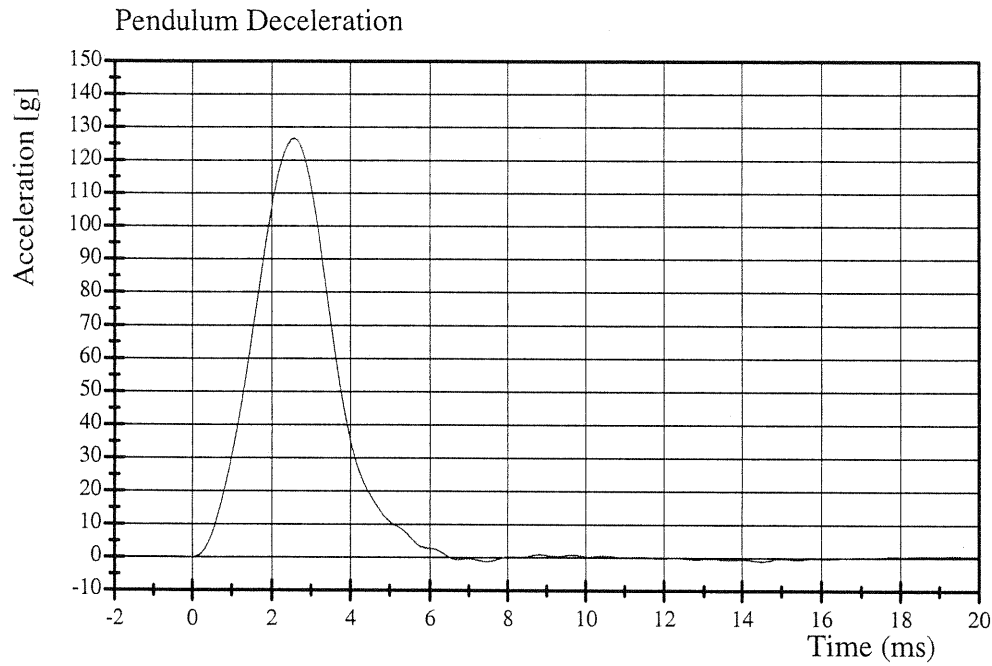


Transportation Research Center Inc.

5720 Right Knee Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

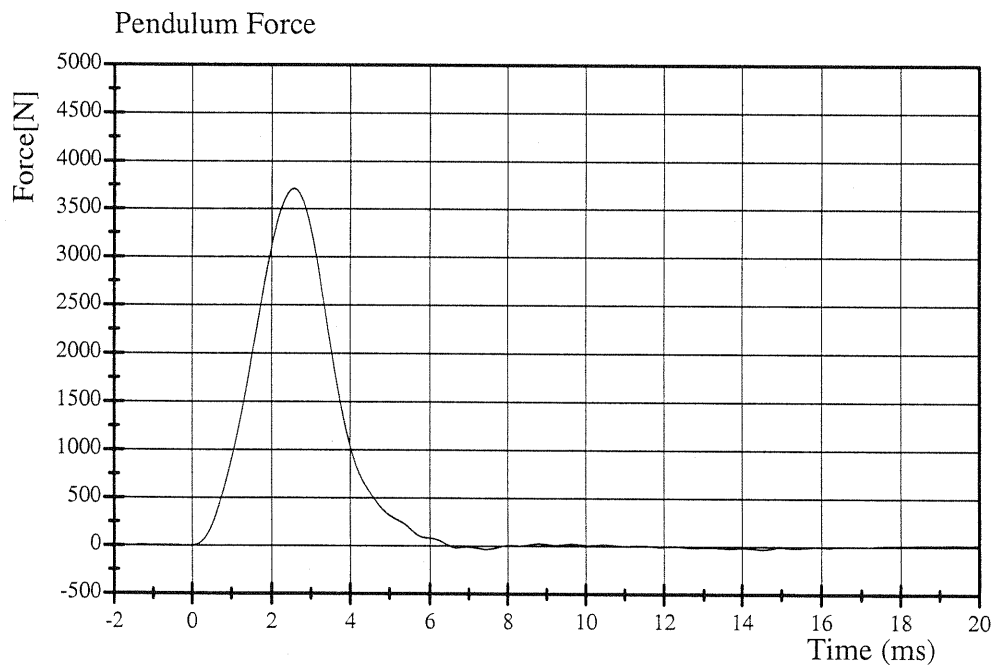
Test Date 08/09/2004



Filter Class: 600

Max: 126.7 g at 2.6 ms

Min: -1.2 g at 7.4 ms



Filter Class: 600

Max: 3714.4 N at 2.6 ms

Min: -35.3 N at 7.4 ms

08.09.2004 13:22:27 1850



Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.08 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3661 N	Yes

Test meets specifications.

Comments:

Technician

Vincent Dineen

Approved

David K. Hammer

08.11.2004 14:31:31 1848



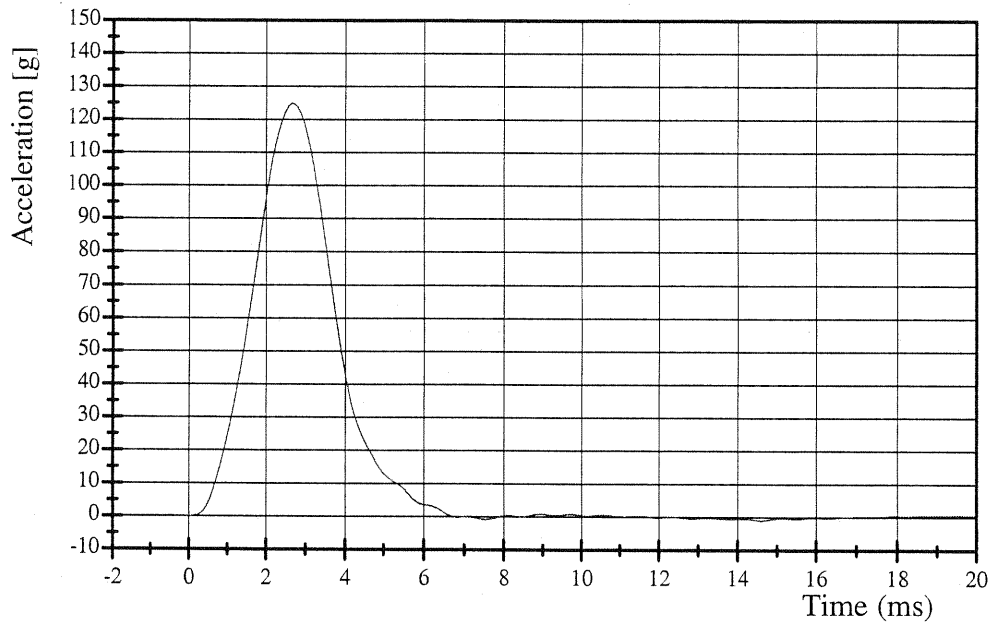
Transportation Research Center Inc.

5720 Left Knee Test

HIII 5th Female Serial No. 070 Calibration No. 05 - 1

Test Date 08/09/2004

Pendulum Deceleration

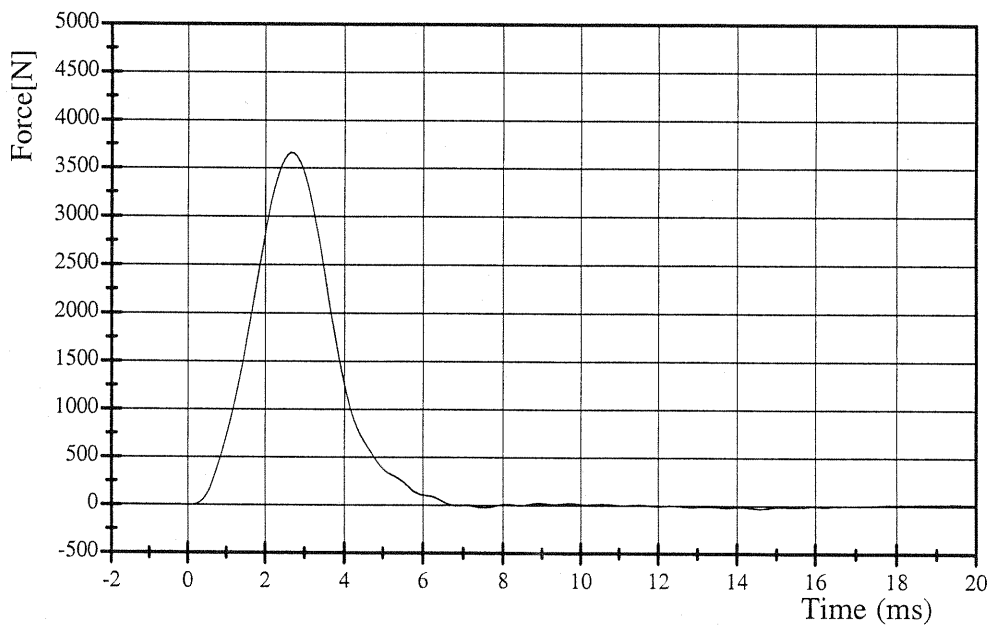


Filter Class: 600

Max: 124.9 g at 2.6 ms

Min: -1.0 g at 14.6 ms

Pendulum Force



Filter Class: 600

Max: 3661.2 N at 2.6 ms

Min: -29.3 N at 14.6 ms

08.11.2004 14:31:32 1848



Appendix D

Miscellaneous Test Information

Channel Report

8/3/2004 10:10:07 AM

Name of Test 040803

System MINIDAU

Name of DAU DAU8

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
8001	03E03E20-N20	HEDXG1	Head Accel X	Fwd	1185.0024 g	+	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8002	02A18-N10	HEDYG1	Head Accel Y	Lft	1189.6176 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8003	02A09-F15	HEDZG1	Head Accel Z	Up	1203.9580 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8004	01L26-F02	HEDXR1	Head Accel Red X	Rwd	1212.6207 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8005	02A09-F13	HEDYR1	Head Accel Red Y	Lft	1197.6681 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8006	02A16-A06	HEDZR1	Head Accel Red Z	Up	1202.5322 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8007	IF-205-161-FX	NEKXF1	Neck Force X	Hd	13342.908 N	-	1/8/2004	OK 416v	FTSS	IF-205
8008	IF-205-161-FY	NEKYF1	Neck Force Y	Hd	13322.883 N	+	1/8/2004	OK 416v	FTSS	IF-205
8009	IF-205-161-FZ	NEKZF1	Neck Force Z	Hd	20037.217 N	+	1/8/2004	OK 416v	FTSS	IF-205
8010	IF-205-161-MX	NEKXM1	Neck Moment X	Rt Ear	423.35854 N·m	-	1/8/2004	OK 416v	FTSS	IF-205
8011	IF-205-161-MY	NEKYM1	Neck Moment Y	Chin	424.87566 N·m	+	1/8/2004	OK 416v	FTSS	IF-205
8012	IF-205-161-MZ	NEKZM1	Neck Moment Z	Chn	423.27097 N·m	+	1/8/2004	OK 416v	FTSS	IF-205
8013	3251-108-FX	NKLXF1	Neck Lwr Force X	Hd	13349.505 N	-	1/7/2004	OK 416v	Denton	3251
8014	3251-108-FY	NKLYF1	Neck Lwr Force Y	Hd	13370.705 N	+	1/7/2004	OK 416v	Denton	3251
8015	3251-108-FZ	NKLZF1	Neck Lwr Force Z	Hd	20002.203 N	+	1/7/2004	OK 416v	Denton	3251
8016	3251-108-MX	NKLXM1	Neck Lwr Moment X	Rt Ear	423.32409 N·m	-	1/7/2004	OK 416v	Denton	3251
8017	3251-108-MY	NKLYM1	Neck Lwr Moment Y	Chn	423.92659 N·m	+	1/7/2004	OK 416v	Denton	3251
8018	3251-108-MZ	NKLZM1	Neck Lwr Moment Z	Chn	423.28812 N·m	+	1/7/2004	OK 416v	Denton	3251
8019	02A16-A04	CSTXG1	Chest Accel X	Fwd	597.41687 g	+	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8020	C02B19-F02	CSTYG1	Chest Accel Y	Lft	594.09529 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8021	C02B19-F06	CSTZG1	Chest Accel Z	Up	603.36517 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8022	B02A25-N08	CSTXR1	Chest Accel Red X	Rwd	596.85290 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8023	03E03E19-N02	CSTYR1	Chest Accel Red Y	Lft	602.06281 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8024	C02B19-F04	CSTZR1	Chest Accel Red Z	Up	594.40801 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8025	14CB1-2897-416	CSTXD1	Chest Deflection X 516	Strnm	99.386887 mm	+	1/8/2004	OK 416v	Servo	14CB1-2897
8026	C02B19-F03	PEVXG1	Pelvis Accel X	Rwd	604.16536 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8027	02A16-A27	PEVYG1	Pelvis Accel Y	Lft	603.51452 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8028	C02B19-F01	PEVZG1	Pelvis Accel Z	Up	602.46152 g	-	7/7/2004	OK 416v	Entran	EGE-73B6Q-200
8029	2430-736	LFMZFI	Left Femur Force Z #8	Knee	33358.582 N	+	1/8/2004	OK 416v	GSE	2430
8030	150-121VR-0226	KNLXD1	Left Knee Displacement	Tib	39.857385 mm	+	5/29/2003	--- 416v	Space Age	150-0121VR
8031	4825J-91-FX	TBLXF1	Left Upr Tibia Force X	Tib	11089.730 N	+	9/4/2003	OK 416v	Denton	4825J
8032	4825J-91-FZ	TBLZF1	Left Upr Tibia Force Z	Tib	11122.449 N	+	9/4/2003	OK 416v	Denton	4825J

D-2

040803

Channel Report

8/3/2004 10:10:07 AM

Name of Test 040803

System MINIDAU

Name of DAU DAU9

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
9001	4825J-91-MX	TBLXM1	Left Upr Tibia Moment X	Ank	394.68354 N·m	+	9/4/2003	OK 416v	Denton	4825J
9002	4825J-91-MY	TBLYM1	Left Upr Tibia Moment Y	Ank	395.93577 N·m	+	9/4/2003	OK 416v	Denton	4825J
9003	99H30-Z01	TBLXG1	Left Tibia Accel X	Fwd	1178.0918 g	+	7/12/2004	OK 416v	Entran	EGE-73BQE0-20
9004	99108-F26	TBLYG1	Left Tibia Accel Y	Rt	1206.2800 g	+	7/12/2004	OK 416v	Entran	EGE-73BQE0-20
9005	4826J-92-FX	ANLXF1	Left Lwr Tibia Force X	Ank	11120.247 N	+	9/4/2003	OK 416v	Denton	4826J
9006	4826J-92-FY	ANLYF1	Left Lwr Tibia Force Y	Ank	11113.246 N	+	9/4/2003	OK 416v	Denton	4826J
9007	4826J-92-FZ	ANLZF1	Left Lwr Tibia Force Z	Ank	11117.123 N	+	9/4/2003	OK 416v	Denton	4826J
9008	4826J-92-MX	ANLXM1	Left Lwr Tibia Moment X	Ank	394.88912 N·m	+	9/4/2003	OK 416v	Denton	4826J
9009	4826J-92-MY	ANLYM1	Left Lwr Tibia Moment Y	Ank	397.10098 N·m	+	9/4/2003	OK 416v	Denton	4826J
9010	00L13-F29	FTLXG1	Left Foot Accel X	Fwd	1205.9032 g	+	7/9/2004	OK 416v	Entran	EGE-73B6Q-200
9011	01G25-N08	FTLYG1	Left Foot Accel Y	Rt	1216.4583 g	+	7/9/2004	OK 416v	Entran	EGE-73B6Q-200
9012	BD88J	FTLZG1	Left Foot Accel Z	Dn	1179.0812 g	+	7/20/2004	OK 416v	Endevco	7264-2KM5T
9013	2430-742	RFMZF1	Right Femur Force Z 507	Knee	33376.618 N	+	1/8/2004	OK 416v	GSE	2430
9014	150-121VL-0205	KNRDX1	Right Knee Displacement	Tib	39.915491 mm	+	5/29/2003	--- 416v	Space Age	150-0121VL
9015	4825J-90-FX	TBRXF1	Right Upr Tibia Force X	Tib	11127.487 N	+	9/3/2003	OK 416v	Denton	4825J
9016	4825J-90-FZ	TBRZF1	Right Upr Tibia Force Z	Tib	11114.040 N	+	9/3/2003	OK 416v	Denton	4825J
9017	4825J-90-MX	TBRXM1	Right Upr Tibia Moment X	Ank	394.78389 N·m	+	9/3/2003	OK 416v	Denton	4825J
9018	4825J-90-MY	TBRYM1	Right Upr Tibia Moment Y	Ank	396.99520 N·m	+	9/3/2003	OK 416v	Denton	4825J
9019	02102110-N18	TBRXG1	Right Tibia Accel X	Fwd	1201.5377 g	+	7/8/2004	OK 416v	Entran	EGE-73B6Q-200
9020	98H10-F05	TBRYG1	Right Tibia Accel Y	Rt	1199.9110 g	+	6/30/2004	OK 416v	Entran	EGE-73BQ-2000
9021	4826J-93-FX	ANRXF1	Right Lwr Tibia Force X	Ank	11108.760 N	+	9/4/2003	OK 416v	Denton	4826J
9022	4826J-93-FY	ANRYF1	Right Lwr Tibia Force Y	Ank	11106.480 N	+	9/4/2003	OK 416v	Denton	4826J
9023	4826J-93-FZ	ANRZF1	Right Lwr Tibia Force Z	Ank	11110.160 N	+	9/4/2003	OK 416v	Denton	4826J
9024	4826J-93-MX	ANRXM1	Right Lwr Tibia Moment X	Ank	395.33504 N·m	+	9/4/2003	OK 416v	Denton	4826J
9025	4826J-93-MY	ANRYM1	Right Lwr Tibia Moment Y	Ank	396.87121 N·m	+	9/4/2003	OK 416v	Denton	4826J
9026	02102105-F18	FTRXG1	Right Foot Accel X	Fwd	1210.2817 g	+	7/9/2004	OK 416v	Entran	EGE-73B6Q-200
9027	02102105-F03	FTRYG1	Right Foot Accel Y	Rt	1195.4963 g	+	7/9/2004	OK 416v	Entran	EGE-73B6Q-200
9028	00L13-F72	FTRZG1	Right Foot Accel Z	Dn	1177.8749 g	+	7/9/2004	OK 416v	Entran	EGE-73B6Q-200
9030	P28853	HEDXG2	Head Accel X	Rwd	1223.7093 g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
9031	P28852	HEDYG2	Head Accel Y	Lft	1211.9490 g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
9032	P28760	HEDZG2	Head Accel Z	Up	1175.1744 g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180

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040803

Channel Report

8/3/2004 10:10:07 AM

Name of Test 040803

System MINIDAU

Name of DAU DAUA

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.	Group	Mfg.	Model
0001	P29631	HEDXR2	Head Accel X Red	Rwd	1213.0536	g	-	7/1/2004	OK 048tr	Endevco	7264C-2K-2-180
0002	P30332	HEDYR2	Head Accel Y Red	Lt	1221.1337	g	-	7/1/2004	OK 048tr	Endevco	7264C-2K-2-180
0003	P30408	HEDZR2	Head Accel Z Red	Up	1223.5280	g	-	7/1/2004	OK 048tr	Endevco	7264C-2K-2-180
0004	1716A-858-FX	NEKXF2	Neck Force X	Hd	13336.459	N	-	3/22/2004	OK 048tr	Denton	1716A
0005	1716A-858-FY	NEKYF2	Neck Force Y	Hd	13341.046	N	+	3/22/2004	OK 048tr	Denton	1716A
0006	1716A-858-FZ	NEKZF2	Neck Force Z	Hd	20042.276	N	+	3/22/2004	OK 048tr	Denton	1716A
0007	1716A-858-MX	NEKXM2	Neck Moment X	Rt Ear	423.49931	N·m	-	3/22/2004	OK 048tr	Denton	1716A
0008	1716A-858-MY	NEKYM2	Neck Moment Y	Chn	424.45208	N·m	+	3/22/2004	OK 048tr	Denton	1716A
0009	1716A-858-MZ	NEKZM2	Neck Moment Z	Chn	424.54394	N·m	+	3/22/2004	OK 048tr	Denton	1716A
0010	5045J-78-FX	NKLXF2	Neck Lwr Force X	Hd	13355.815	N	+	10/22/2003	OK 048tr	Denton	5045J
0011	5045J-78-FY	NKLYF2	Neck Lwr Force Y	Hd	13371.441	N	+	10/22/2003	OK 048tr	Denton	5045J
0012	5045J-78-FZ	NKLZF2	Neck Lwr Force Z	Hd	20042.675	N	+	10/22/2003	OK 048tr	Denton	5045J
0013	5045J-78-MX	NKLXM2	Neck Lwr Moment X	Lt Ear	423.76725	N·m	+	10/22/2003	OK 048tr	Denton	5045J
0014	5045J-78-MY	NKLYM2	Neck Lwr Moment Y	Chn	424.04552	N·m	+	10/22/2003	OK 048tr	Denton	5045J
0015	5045J-78-MZ	NKLZM2	Neck Lwr Moment Z	Chn	423.68498	N·m	+	10/22/2003	OK 048tr	Denton	5045J
0016	P28854	CSTXG2	Chest Accel X	Fwd	598.83040	g	+	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
0017	P28381	CSTYG2	Chest Accel Y	Lft	604.70774	g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
0018	P28297	CSTZG2	Chest Accel Z	Up	596.12518	g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
0019	P33910	CSTXR2	Chest Accel X Red	Rwd	596.31959	g	-	4/19/2004	OK 048tr	Endevco	7264C-2K-2-180
0020	P33845	CSTYR2	Chest Accel Y Red	Lft	602.27499	g	-	4/19/2004	OK 048tr	Endevco	7264C-2K-2-180
0021	P34092	CSTZR2	Chest Accel Z Red	Up	594.95450	g	-	4/19/2004	OK 048tr	Endevco	7264C-2K-2-180
0022	6209-2038-0436	CSTXD2	Chest Deflection X	Strnm	99.969540	mm	+	3/20/2004	OK 048tr	JDK	6209-2038
0023	P28280	PEVXG2	Pelvis Accel X	Rwd	603.59563	g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
0024	P28316	PEVYG2	Pelvis Accel Y	Lft	603.93738	g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
0025	P28400	PEVZG2	Pelvis Accel Z	Up	596.93139	g	-	2/13/2004	OK 048tr	Endevco	7264C-2K-2-180
0026	2121-0160	LFMZ2	Left Femur Force Z	Knee	20032.866	N	+	3/22/2004	OK 048tr	Denton	2121
0027	2121-0161	RFMZ2	Right Femur Force Z	Knee	20022.290	N	+	3/22/2004	OK 048tr	Denton	2121
0028	J18661	HEDXG9	Head Accel X	Rwd	1196.4623	g	-	7/8/2004	OK 070v	Endevco	7264-2000T
0029	AAMD5	HEDYG9	Head Accel Y	Lft	1166.1618	g	-	7/8/2004	OK 070v	Endevco	7264-2000LC
0030	AJ4R6	HEDZG9	Head Accel Z	Up	1176.8004	g	-	7/8/2004	OK 070v	Endevco	7264-2KM5T
0031	1716AJ-1563-FX	NEKXF9	Neck Force X	Hd	13358.937	N	+	7/7/2004	OK 070v	Denton	1716AJ
0032	1716AJ-1563-FY	NEKYF9	Neck Force Y	Hd	13335.694	N	+	7/7/2004	OK 070v	Denton	1716AJ

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Channel Report

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System MINIDAU

Name of DAU DAUC

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	1716AJ-1563-FZ	NEKZF9	Neck Force Z	Hd	20004.688	N	+	7/7/2004	OK	070v	Denton	1716AJ
0002	1716AJ-1563-MX	NEKXM9	Neck Moment X	Lt Ear	424.79089	N·m	+	7/7/2004	OK	070v	Denton	1716AJ
0003	1716AJ-1563-MY	NEKYM9	Neck Moment Y	Chn	423.76023	N·m	+	7/7/2004	OK	070v	Denton	1716AJ
0004	1716AJ-1563-MZ	NEKZM9	Neck Moment Z	Chn	424.01586	N·m	+	7/7/2004	OK	070v	Denton	1716AJ
0005	3251-107-FX	NKLXF9	Neck Lwr Force X	Hd	13336.563	N	-	7/8/2004	OK	070v	Denton	3251
0006	3251-107-FY	NKLYF9	Neck Lwr Force Y	Hd	13321.746	N	+	7/8/2004	OK	070v	Denton	3251
0007	3251-107-FZ	NKLZF9	Neck Lwr Force Z	Hd	20046.671	N	+	7/8/2004	OK	070v	Denton	3251
0008	3251-107-MX	NKLXM9	Neck Lwr Moment X	Rt Ear	424.75244	N·m	-	7/8/2004	OK	070v	Denton	3251
0009	3251-107-MY	NKLYM9	Neck Lwr Moment Y	Chn	424.53831	N·m	+	7/8/2004	OK	070v	Denton	3251
0010	3251-107-MZ	NKLZM9	Neck Lwr Moment Z	Chn	424.25154	N·m	+	7/8/2004	OK	070v	Denton	3251
0011	AAJY4	CSTXG9	Chest Accel X	Fwd	597.53442	g	+	7/8/2004	OK	070v	Endevco	7264-2000LC
0012	AKAA4	CSTYG9	Chest Accel Y	Lft	606.99106	g	-	7/8/2004	OK	070v	Endevco	7264-2KM5T
0013	ACC63	CSTZG9	Chest Accel Z	Up	608.38815	g	-	7/8/2004	OK	070v	Endevco	7264-2000T
0014	14CB1-2897-070	CSTXD9	Chest Deflection X	Strnm	100.66837	mm	+	7/13/2004	OK	070v	Servo	14CB1-2897
0015	AGN83	PEVXG9	Pelvis Accel X	Rwd	606.23024	g	-	7/8/2004	OK	070v	Endevco	7264-2000LC
0016	J35770	PEVYG9	Pelvis Accel Y	Lft	598.45978	g	-	7/8/2004	OK	070v	Endevco	7264-2000TZ
0017	J20014	PEVZG9	Pelvis Accel Z	Up	604.55779	g	-	7/8/2004	OK	070v	Endevco	7264-2KM5T
0018	IF-625-140-FZ	LFMZ9	Left Femur Force Z	Knee	20028.007	N	+	7/14/2004	OK	070v	FTSS	IF-625
0019	IF-625-141-FZ	RFMZ9	Right Femur Force Z	Knee	20027.616	N	+	7/14/2004	OK	070v	FTSS	IF-625
0020	P33069	LSXXG	Left Rear Seat Cross-member	RR	1003.1937	g	-	2/27/2004	OK	-1	Endevco	7264C-2K-2-180
0021	P33535	RSXXG	Right Rear Seat Cross-member	RR	982.57465	g	-	3/17/2004	OK	-1	Endevco	7264C-2K-2-180
0022	P30027	TENXG	Top of Engine X-axis	FWD	1466.7780	g	+	7/9/2004	OK	-1	Endevco	7264C-2K-2-180
0023	P34214	BENXG	Bottom of Engine X-axis	FWD	1538.0918	g	+	6/7/2004	OK	-1	Endevco	7264C-2K-2-180
0024	P32666	RFCXG	Right Front Brake Caliper	RR	982.81984	g	-	6/7/2004	OK	-1	Endevco	7264C-2K-2-180
0025	P34973	LFCXG	Left Front Brake Caliper X-axis	FWD	987.88299	g	+	6/7/2004	OK	-1	Endevco	7264C-2K-2-180
0026	P33533	DPCXG	Instrument Panel Top Center	FWD	1002.1530	g	+	3/17/2004	OK	-1	Endevco	7264C-2K-2-180
0027	P32767	VCGXG	VEHICLE CG X-AXIS	FWD	1004.3942	g	+	2/27/2004	OK	-1	Endevco	7264C-2K-2-180
0028	P33974	VCGYG	VEHICLE CG Y-AXIS	LT	1010.4598	g	-	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0029	P33874	VCGZG	VEHICLE CG Z-AXIS	UP	987.34958	g	-	4/19/2004	OK	-1	Endevco	7264C-2K-2-180
0030	P33851	RDKXG	RR DECK X-AXIS	FWD	1007.8938	g	+	3/31/2004	OK	-1	Endevco	7264C-2K-2-180
0031	P33585	RDKYG	RR DECK Y-AXIS	RT	1004.1972	g	+	3/17/2004	OK	-1	Endevco	7264C-2K-2-180
0032	P33812	RDKZG	RR DECK Z-AXIS	UP	986.81674	g	-	3/31/2004	OK	-1	Endevco	7264C-2K-2-180

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Name of Test		System		MINIDAU		Name of DAU		DAUD				
Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model		
0001	ABFire1	DABETA	DRIVER AIRBAG EVENT -	IP30	5.12	V	+ 4/19/2004	OK	-1	FLUKE	Y8101A	
0002	ABFire2	DABETB	DRIVER AIRBAG EVENT-	IP21	5.12	V	+ 4/19/2004	OK	VRTC	FLUKE	Y8101A	
0003	ABFire3	PABETA	PASSENGER AIRBAG EVENT	IP10	5.12	V	+ 4/19/2004	OK	VRTC	FLUKE	Y8101A	
0004	ABFire4	PABETB	PASSENGER AIRBAG EVENT	IP31	5.12	V	+ 4/19/2004	OK	VRTC	FLUKE	Y8101A	
0005	3419T-828	SHBF9	RT 3RD ROW RR PASS.	4A	13329.966	N	+ 6/15/2004	OK	-1	Lebow	3419T	
0006	3419T-829	LBOF9	RT 3RD ROW RR PASS. LAP	613	13341.011	N	+ 6/15/2004	OK	-1	Lebow	3419T	

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System MINIDAU

Name of DAU DAUE

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model	
0001	EVENT	EVENT	EVENT		5.12	V	+ 4/19/2004	OK	-1	TRC	Event
0002	398390053	LC0101	ROW 1 COLUMN 1		500056.15	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0003	398390008	LC0102	ROW 1 COLUMN 2		500176.82	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0004	398390028	LC0103	ROW 1 COLUMN 3		499943.36	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0005	398390038	LC0104	ROW 1 COLUMN 4		500056.15	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0006	398390003	LC0105	ROW 1 COLUMN 5		500005.61	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0007	398390014	LC0106	ROW 1 COLUMN 6		499994.14	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0008	398390024	LC0107	ROW 1 COLUMN 7		499692.08	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0009	398390006	LC0108	ROW 1 COLUMN 8		499822.32	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0010	398390132	LC0109	ROW 1 COLUMN 9		499750.85	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0011	398390023	LC0110	ROW 1 COLUMN 10		499692.08	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0012	398390033	LC0111	ROW 1 COLUMN 11		499933.11	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0013	398390019	LC0112	ROW 1 COLUMN 12		500122.10	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0014	398390113	LC0113	ROW 1 COLUMN 13		500176.82	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0015	398390098	LC0114	ROW 1 COLUMN 14		500125.03	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0016	398390104	LC0115	ROW 1 COLUMN 15		499816.96	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0017	398390088	LC0116	ROW 1 COLUMN 16		499750.85	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0018	398390120	LC0201	ROW 2 COLUMN 1		499822.32	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0019	398390063	LC0202	ROW 2 COLUMN 2		500252.81	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0020	398390124	LC0203	ROW 2 COLUMN 3		500176.82	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0021	398390093	LC0204	ROW 2 COLUMN 4		499822.32	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0022	398390046	LC0205	ROW 2 COLUMN 5		500125.03	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0023	398390122	LC0206	ROW 2 COLUMN 6		500176.82	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0024	398390002	LC0207	ROW 2 COLUMN 7		500176.82	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0025	398390060	LC0208	ROW 2 COLUMN 8		500298.02	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0026	398390105	LC0209	ROW 2 COLUMN 9		499933.11	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0027	398390020	LC0210	ROW 2 COLUMN 10		499692.08	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0028	398390069	LC0211	ROW 2 COLUMN 11		500240.10	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0029	398390041	LC0212	ROW 2 COLUMN 12		499816.96	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0030	398390112	LC0213	ROW 2 COLUMN 13		499994.14	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0031	398390074	LC0214	ROW 2 COLUMN 14		500125.03	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875
0032	398390128	LC0215	ROW 2 COLUMN 15		500176.82	N	- 12/10/2003	---	VRTC	KYOWA	F99-1875

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0033	398390075	LC0216	ROW 2 COLUMN 16	500125.03	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0034	398390125	LC0301	ROW 3 COLUMN 1	500176.82	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0035	398390004	LC0302	ROW 3 COLUMN 2	500298.02	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0036	398390051	LC0303	ROW 3 COLUMN 3	500298.02	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0037	398390042	LC0304	ROW 3 COLUMN 4	499816.96	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0038	398390011	LC0305	ROW 3 COLUMN 5	500057.13	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0039	398390117	LC0306	ROW 3 COLUMN 6	500298.02	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0040	398390066	LC0307	ROW 3 COLUMN 7	499692.08	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0041	398390045	LC0308	ROW 3 COLUMN 8	499943.36	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0042	398390077	LC0309	ROW 3 COLUMN 9	500056.15	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0043	398390029	LC0310	ROW 3 COLUMN 10	499750.85	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0044	398390100	LC0311	ROW 3 COLUMN 11	499874.29	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0045	398390102	LC0312	ROW 3 COLUMN 12	500056.15	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0047	398390012	LC0314	ROW 3 COLUMN 14	499943.36	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
0048	398390017	LC0315	ROW 3 COLUMN 15	500252.81	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875

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Name of Test 040803

System MINIDAU

Name of DAU DAUF

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
0001	398390081	LC0316	ROW 3 COLUMN 16		500180.72	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0002	398390040	LC0401	ROW 4 COLUMN 1		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0003	398390007	LC0402	ROW 4 COLUMN 2		499933.11	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0004	398390071	LC0403	ROW 4 COLUMN 3		500056.15	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0005	398390094	LC0404	ROW 4 COLUMN 4		499994.14	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0006	398390067	LC0405	ROW 4 COLUMN 5		499943.36	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0007	398390086	LC0406	ROW 4 COLUMN 6		500176.82	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0009	398390118	LC0407	ROW 4 COLUMN 7		500056.15	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0010	398390101	LC0408	ROW 4 COLUMN 8		500056.15	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0011	398390073	LC0409	ROW 4 COLUMN 9		500056.15	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0012	398390047	LC0410	ROW 4 COLUMN 10		500298.02	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0013	398390099	LC0411	ROW 4 COLUMN 11		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0014	398390080	LC0412	ROW 4 COLUMN 12		499708.66	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0015	398390097	LC0413	ROW 4 COLUMN 13		500180.72	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0016	398390048	LC0414	ROW 4 COLUMN 14		500056.15	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0017	398390061	LC0415	ROW 4 COLUMN 15		499933.11	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0018	398390005	LC0416	ROW 4 COLUMN 16		500240.10	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0019	398390090	LC0501	ROW 5 COLUMN 1		500240.10	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0020	398390065	LC0502	ROW 5 COLUMN 2		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0021	398390079	LC0503	ROW 5 COLUMN 3		499816.96	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0022	398390055	LC0504	ROW 5 COLUMN 4		500180.72	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0023	398390031	LC0505	ROW 5 COLUMN 5		499750.85	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0024	398390054	LC0506	ROW 5 COLUMN 6		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0025	398390050	LC0507	ROW 5 COLUMN 7		500056.15	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0026	398390089	LC0508	ROW 5 COLUMN 8		499750.85	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0027	398390130	LC0509	ROW 5 COLUMN 9		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0028	398390082	LC0510	ROW 5 COLUMN 10		500005.61	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0029	398390083	LC0511	ROW 5 COLUMN 11		499994.14	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0030	398390123	LC0512	ROW 5 COLUMN 12		499750.85	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0031	398390032	LC0513	ROW 5 COLUMN 13		499874.29	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0032	398390121	LC0514	ROW 5 COLUMN 14		500180.72	N	- 12/10/2003	---	VRTC	KYOWA F99-1875

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Name of Test 040803

System MINIDAU

Name of DAU	DAUG
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Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model				
D-10	0001	398390009	LC0515	ROW 5 COLUMN 15		499933.11	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0002	398390037	LC0516	ROW 5 COLUMN 16		499933.11	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0003	398390036	LC0601	ROW 6 COLUMN 1		499994.14	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0004	398390052	LC0602	ROW 6 COLUMN 2		499692.08	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0005	398390010	LC0603	ROW 6 COLUMN 3		500056.15	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0006	398390034	LC0604	ROW 6 COLUMN 4		499874.29	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0007	398390026	LC0605	ROW 6 COLUMN 5		500019.53	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0008	398390022	LC0606	ROW 6 COLUMN 6		499994.14	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0009	398390030	LC0607	ROW 6 COLUMN 7		499994.14	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0010	398390016	LC0608	ROW 6 COLUMN 8		500056.15	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0011	398390035	LC0609	ROW 6 COLUMN 9		499692.08	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0012	398390092	LC0610	ROW 6 COLUMN 10		500298.02	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0013	398390043	LC0611	ROW 6 COLUMN 11		500176.82	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0014	398390076	LC0612	ROW 6 COLUMN 12		499692.08	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0015	398390001	LC0613	ROW 6 COLUMN 13		499933.11	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0016	398390087	LC0614	ROW 6 COLUMN 14		500176.82	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0017	398390096	LC0615	ROW 6 COLUMN 15		499943.36	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0018	398390015	LC0616	ROW 6 COLUMN 16		499692.08	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0019	398390027	LC0701	ROW 7 COLUMN 1		500180.72	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0020	398390111	LC0702	ROW 7 COLUMN 2		499994.14	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0021	398390072	LC0703	ROW 7 COLUMN 3		500125.03	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0022	398390106	LC0704	ROW 7 COLUMN 4		499933.11	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0023	398390056	LC0705	ROW 7 COLUMN 5		500180.72	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0024	398390114	LC0706	ROW 7 COLUMN 6		499755.97	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0025	398390068	LC0707	ROW 7 COLUMN 7		500331.76	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0026	398390057	LC0708	ROW 7 COLUMN 8		500180.72	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0027	398390049	LC0709	ROW 7 COLUMN 9		499692.08	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0028	398390131	LC0710	ROW 7 COLUMN 10		500125.03	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0029	398390018	LC0711	ROW 7 COLUMN 11		499750.85	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0030	398390084	LC0712	ROW 7 COLUMN 12		500122.10	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875	
	0400	0031	398390062	LC0713	ROW 7 COLUMN 13		499874.29	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875
		0032	398390078	LC0714	ROW 7 COLUMN 14		499933.11	N	-	12/10/2003	---	VRTC	KYOWA	F99-1875

Channel Report

8/3/2004 10:10:09 AM

Name of Test 040803

System MINIDAU

Name of DAU DAUH

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Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
0001	398390127	LC0715	ROW 7 COLUMN 15		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0002	398390021	LC0716	ROW 7 COLUMN 16		499874.29	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0003	398390133	LC0801	ROW 8 COLUMN 1		499874.29	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0004	398390039	LC0802	ROW 8 COLUMN 2		499750.85	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0005	398390085	LC0803	ROW 8 COLUMN 3		500298.02	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0006	398390059	LC0804	ROW 8 COLUMN 4		500125.03	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0007	398390116	LC0805	ROW 8 COLUMN 5		500176.82	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0008	398390013	LC0806	ROW 8 COLUMN 6		499933.11	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0009	398390119	LC0807	ROW 8 COLUMN 7		500122.10	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0010	398390107	LC0808	ROW 8 COLUMN 8		500122.10	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0011	398390095	LC0809	ROW 8 COLUMN 9		499755.97	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0012	398390103	LC0810	ROW 8 COLUMN 10		499750.85	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0013	398390129	LC0811	ROW 8 COLUMN 11		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0014	398390058	LC0812	ROW 8 COLUMN 12		499874.29	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0015	398390126	LC0813	ROW 8 COLUMN 13		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0016	398390108	LC0814	ROW 8 COLUMN 14		499755.97	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0017	398390025	LC0815	ROW 8 COLUMN 15		500176.82	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0018	398390070	LC0816	ROW 8 COLUMN 16		500252.81	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0019	398390109	LC0906	ROW 9 COLUMN 6		500122.10	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0020	398390044	LC0907	ROW 9 COLUMN 7		500122.10	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0021	398390134	LC0908	ROW 9 COLUMN 8		499960.94	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0022	398390115	LC0909	ROW 9 COLUMN 9		499755.97	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0023	398390110	LC0910	ROW 9 COLUMN 10		499692.08	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0024	398390064	LC0911	ROW 9 COLUMN 11		499943.36	N	- 12/10/2003	---	VRTC	KYOWA F99-1875
0025	398390091	LC0313	ROW 3 COLUMN 13		500176.82	N	- 12/10/2003	---	VRTC	KYOWA F99-1875

040803

Dummy 416v Type HYBRID III 5th Descriptio VRTC - 416v HYBRID III w/RED.& THOR LEGS ICAL'd 9-4-03 (DKS 7-23-04)J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscal	Caldat	Pos	Flip
HEDXG	Head Accel X	EGE-73B6Q-20003E03E20-N20		Entran	0.0205746 g	2000	7/7/2004	Fwd	0
HEDYG	Head Accel Y	EGE-73B6Q-20002A18-N10		Entran	0.0195632 g	2000	7/7/2004	Lft	1
HEDZG	Head Accel Z	EGE-73B6Q-20002A09-F15		Entran	0.0212632 g	2000	7/7/2004	Up	1
HEDXR	Head Accel Red X	EGE-73B6Q-20001L26-F02		Entran	0.020106 g	2000	7/7/2004	Rwd	1
HEDYR	Head Accel Red Y	EGE-73B6Q-20002A09-F13		Entran	0.0194317 g	2000	7/7/2004	Lft	1
HEDZR	Head Accel Red Z	EGE-73B6Q-20002A16-A06		Entran	0.0193531 g	2000	7/7/2004	Up	1
HD1XG	Head (LT) Accel X	EGE-73B6Q-20002A16-A19		Entran	0.0210447 g	2000	7/7/2004	Fwd	0
HD1ZG	Head (LT) Accel Z	EGE-73B6Q-20002A16-A22		Entran	0.0218403 g	2000	7/7/2004	Up	1
HD2YG	Head (FT) Accel Y	EGE-73B6Q-20002A18-N04		Entran	0.0195438 g	2000	7/7/2004	Lft	1
HD2ZG	Head (FT) Accel Z	EGE-73B6Q-20002A18-N20		Entran	0.0199345 g	2000	7/7/2004	Up	1
HD3XG	Head (TP) Accel X	EGE-73B6Q-20003F03F09-N05		Entran	0.0191798 g	2000	7/7/2004	Fwd	0
HD3YG	Head (TP) Accel Y	EGE-73BQ-200098H14-K10		Entran	0.0179668 g	2000	6/30/2004	Lft	1
NEKXF	Neck Force X	IF-205	IF-205-161-FX	FTSS	0.000186274 N	8896	1/8/2004	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	IF-205	IF-205-161-FY	FTSS	0.00017548 N	8896	1/8/2004	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	IF-205	IF-205-161-FZ	FTSS	0.000092918 N	13344	1/8/2004	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	IF-205	IF-205-161-MX	FTSS	0.0058424 N·m	282.5	1/8/2004	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	IF-205	IF-205-161-MY	FTSS	0.00605557 N·m	282.5	1/8/2004	Chin to Strnm	0
NEKZM	Neck Moment Z	IF-205	IF-205-161-MZ	FTSS	0.0085185 N·m	282.5	1/8/2004	Chn to Lt Shld	0
NKLXF	Neck Lwr Force X	3251	3251-108-FX	Denton	0.000174334 N	13345	1/7/2004	Hd Fd,Cst Rr	1
NKLYF	Neck Lwr Force Y	3251	3251-108-FY	Denton	0.00017327 N	13345	1/7/2004	Hd Lt,Cst Rt	0
NKLZF	Neck Lwr Force Z	3251	3251-108-FZ	Denton	0.00009623 N	13345	1/7/2004	Hd Up,Cst Dn	0
NKLXM	Neck Lwr Moment X	3251	3251-108-MX	Denton	0.0044466 N·m	452	1/7/2004	Rt Ear to Rt Shld	1
NKLYM	Neck Lwr Moment Y	3251	3251-108-MY	Denton	0.00426769 N·m	452	1/7/2004	Chn to Strnm	0
NKLZM	Neck Lwr Moment Z	3251	3251-108-MZ	Denton	0.005282 N·m	339	1/7/2004	Chn to Lt Shld	0
CSTXG	Chest Accel X	EGE-73B6Q-20002A16-A04		Entran	0.020903 g	2000	7/7/2004	Fwd	0
CSTYG	Chest Accel Y	EGE-73B6Q-200C02B19-F02		Entran	0.0187351 g	2000	7/7/2004	Lft	1

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Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscal	Caldat	Pos	Flip
CSTZG	Chest Accel Z	EGE-73B6Q-200C02B19-F06		Entran	0.0188572 g	2000	7/7/2004	Up	1
CSTXR	Chest Accel Red X	EGE-73B6Q-200B02A25-N08		Entran	0.0194962 g	2000	7/7/2004	Rwd	1
CSTYR	Chest Accel Red Y	EGE-73B6Q-20003E03E19-N02		Entran	0.0223792 g	2000	7/7/2004	Lft	1
CSTZR	Chest Accel Red Z	EGE-73B6Q-200C02B19-F04		Entran	0.0175788 g	2000	7/7/2004	Up	1
STUXG	Sternum Upr Accel X	EGE-73B6Q-200B02A09-F08		Entran	0.0209767 g	2000	7/7/2004	Fwd	0
STMXG	Sternum Mid Accel X	EGE-73B6Q-20002A16-A05		Entran	0.021901 g	2000	7/7/2004	Fwd	0
STLXG	Sternum Lwr Accel X	EGE-73B6Q-20003F03F09-N18		Entran	0.0168275 g	2000	7/7/2004	Fwd	0
CSTXD	Chest Deflection X 516	14CB1-2897	14CB1-2897-416	Servo	1.7463 mm	100	1/8/2004	Strnm Away Frm Spn	0
!LMBXF	Lumbar Force X	2152	2152-076-FX	Denton	0.000144364 N	13344.6	6/1/2001	Cst Fd,Pel Rr	1
!LMBYF	Lumbar Force Y	2152	2152-076-FY	Denton	0.000143967 N	13344.6	6/1/2001	Cst Lt,Pel Rt	0
!LMBZF	Lumbar Force Z	2152	2152-076-FZ	Denton	0.000058433 N	17793	6/1/2001	Cst Up,Pel Dn	0
!LMBXM	Lumbar Moment X	2152	2152-076-MX	Denton	0.002374243 N-m	677.9	6/1/2001	Rt Shld to Rt Hip	1
!LMBYM	Lumbar Moment Y	2152	2152-076-MY	Denton	0.002370998 N-m	677.9	6/1/2001	Strnm to Frt of Legs	0
PEVXG	Pelvis Accel X	EGE-73B6Q-200C02B19-F03		Entran	0.0172949 g	2000	7/7/2004	Rwd	1
PEVYG	Pelvis Accel Y	EGE-73B6Q-20002A16-A27		Entran	0.0212091 g	2000	7/7/2004	Lft	1
PEVZG	Pelvis Accel Z	EGE-73B6Q-200C02B19-F01		Entran	0.0193147 g	2000	7/7/2004	Up	1
LFMZF	Left Femur Force Z #8	2430	2430-736	GSE	0.0000700839 N	13344	1/8/2004	Knee Fd,Pel Rr	0
RFMZF	Right Femur Force Z 507	2430	2430-742	GSE	0.000066696 N	13344	1/8/2004	Knee Fd,Pel Rr	0
KNLXD	Left Knee Displacement	150-0121VR	150-121VR-022653	Space Age	23.356 mm	40	5/29/2003	Tib Fd,Hld Fem	0
TBLXF	Left Upr Tibia Force X	4825J	4825J-91-FX	Denton	0.0002668719 N	8896.4	9/4/2003	Tib Fd,Knee Rr	0
TBLZF	Left Upr Tibia Force Z	4825J	4825J-91-FZ	Denton	0.000108313 N	8896.4	9/4/2003	Tib Dn,Knee Up	0
TBLXM	Left Upr Tibia Moment X	4825J	4825J-91-MX	Denton	0.01029557 N-m	282.4	9/4/2003	Ank Lt,Hld Knee	0
TBLYM	Left Upr Tibia Moment Y	4825J	4825J-91-MY	Denton	0.010263008 N-m	282.4	9/4/2003	Ank Fd,Hld Knee	0
TBLXG	Left Tibia Accel X	EGE-73BQE0-2	99H30-Z01	Entran	0.0188957 g	2000	7/12/2004	Fwd	0
TBLYG	Left Tibia Accel Y	EGE-73BQE0-2	99108-F26	Entran	0.0235803 g	2000	7/12/2004	Rt	0
ANLXF	Left Lwr Tibia Force X	4826J	4826J-92-FX	Denton	0.00026461 N	8896.4	9/4/2003	Ank Fd,Knee Rr	0
ANLYF	Left Lwr Tibia Force Y	4826J	4826J-92-FY	Denton	0.0002632637 N	8896.4	9/4/2003	Ank Rt,Knee Lft	0
ANLZF	Left Lwr Tibia Force Z	4826J	4826J-92-FZ	Denton	0.0001076053 N	8896.4	9/4/2003	Ank Dn,Knee Up	0

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscal	Caldat	Pos	Flip
ANLXM	Left Lwr Tibia Moment X	4826J	4826J-92-MX	Denton	0.01029021 N·m	282.4	9/4/2003	Ank Lt,Hld Knee	0
ANLYM	Left Lwr Tibia Moment Y	4826J	4826J-92-MY	Denton	0.01039794 N·m	282.4	9/4/2003	Ank Fd,Hld Knee	0
FTLXD	Left Foot Disp. X	PD210-4B	FLX102X	Contelec	3.15 °	318	7/21/2004	Inversion	1
FTLYD	Left Foot Disp. Y	PD210-4B	FLX102Y	Contelec	3.15 °	318	7/21/2004	Dorsiflexion	0
FTLZD	Left Foot Disp. Z	PD210-4B	FLX102Z	Contelec	3.15 °	318	7/21/2004	External Rotation	1
FTLXG	Left Foot Accel X	EGE-73B6Q-20000L13-F29		Entran	0.0212289 g	2000	7/9/2004	Fwd	0
FTLYG	Left Foot Accel Y	EGE-73B6Q-20001G25-N08		Entran	0.023383 g	2000	7/9/2004	Rt	0
FTLZG	Left Foot Accel Z	7264-2KM5T	BD88J	Endevco	0.0334028 g	2000	7/20/2004	Dn	0
KNRXD	Right Knee Displacement	150-0121VL	150-121VL-020590	Space Age	23.322 mm	40	5/29/2003	Tib Fd,Hld Fem	0
TBRXF	Right Upr Tibia Force X	4825J	4825J-90-FX	Denton	0.0002675127 N	8896.4	9/3/2003	Tib Fd,Knee Rr	0
TBRZF	Right Upr Tibia Force Z	4825J	4825J-90-FZ	Denton	0.0001086506 N	8896.4	9/3/2003	Tib Dn,Knee Up	0
TBRXM	Right Upr Tibia Moment X	4825J	4825J-90-MX	Denton	0.010211906 N·m	282.4	9/3/2003	Ank Lt,Hld Knee	0
TBRYM	Right Upr Tibia Moment Y	4825J	4825J-90-MY	Denton	0.010317505 N·m	282.4	9/3/2003	Ank Fd,Hld Knee	0
TBRXG	Right Tibia Accel X	EGE-73B6Q-20002I02I10-N18		Entran	0.0224274 g	2000	7/8/2004	Fwd	0
TBRYG	Right Tibia Accel Y	EGE-73BQ-200098H10-F05		Entran	0.0185521 g	2000	6/30/2004	Rt	0
ANRXF	Right Lwr Tibia Force X	4826J	4826J-93-FX	Denton	0.00026337 N	8896.4	9/4/2003	Ank Fd,Knee Rr	0
ANRYF	Right Lwr Tibia Force Y	4826J	4826J-93-FY	Denton	0.000264938 N	8896.4	9/4/2003	Ank Rt,Knee Lft	0
ANRZF	Right Lwr Tibia Force Z	4826J	4826J-93-FZ	Denton	0.0001076727 N	8896.4	9/4/2003	Ank Dn,Knee Up	0
ANRXM	Right Lwr Tibia Moment X	4826J	4826J-93-MX	Denton	0.010118 N·m	282.4	9/4/2003	Ank Lt,Hld Knee	0
ANRYM	Right Lwr Tibia Moment Y	4826J	4826J-93-MY	Denton	0.01040396 N·m	282.4	9/4/2003	Ank Fd,Hld Knee	0
FTRXD	Right Foot Disp. X	PD210-4B	FLX101X	Contelec	3.15 °	318	7/21/2004	Eversion	1
FTRYD	Right Foot Disp. Y	PD210-4B	FLX101Y	Contelec	3.15 °	318	7/21/2004	Dorsiflexion	0
FTRZD	Right Foot Disp. Z	PD210-4B	FLX101Z	Contelec	3.15 °	318	7/21/2004	Internal Rotation	1
FTRXG	Right Foot Accel X	EGE-73B6Q-20002I02I05-F18		Entran	0.0211521 g	2000	7/9/2004	Fwd	0
FTRYG	Right Foot Accel Y	EGE-73B6Q-20002I02I05-F03		Entran	0.020394 g	2000	7/9/2004	Rt	0
FTRZG	Right Foot Accel Z	EGE-73B6Q-20000L13-F72		Entran	0.0206991 g	2000	7/9/2004	Dn	0

Dummy 048tr Type HYBRID III 5th Descriptio TRC - 048t HYBRID III 5th Female w/ Red. accels CAL DUE 8-13-04(DKS 7-21-04)J211

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscal	Caldat	Pos	Flip
HEDXG	Head Accel X	7264C-2K-2-180P28853		Endevco	0.02092 g	2000	2/13/2004	Rwd	1
HEDYG	Head Accel Y	7264C-2K-2-180P28852		Endevco	0.02347 g	2000	2/13/2004	Lft	1
HEDZG	Head Accel Z	7264C-2K-2-180P28760		Endevco	0.02723 g	2000	2/13/2004	Up	1
HEDXR	Head Accel X Red	7264C-2K-2-180P29631		Endevco	0.0183511 g	2000	7/1/2004	Rwd	1
HEDYR	Head Accel Y Red	7264C-2K-2-180P30332		Endevco	0.0220675 g	2000	7/1/2004	Lt	1
HEDZR	Head Accel Z Red	7264C-2K-2-180P30408		Endevco	0.019021 g	2000	7/1/2004	Up	1
NEKXF	Neck Force X	1716A	1716A-858-FX	Denton	0.000191 N	8896.4	3/22/2004	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-858-FY	Denton	0.0001863 N	8896.4	3/22/2004	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-858-FZ	Denton	0.0000964 N	13344.6	3/22/2004	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-858-MX	Denton	0.0060148 N·m	282.5	3/22/2004	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-858-MY	Denton	0.0058842 N·m	282.5	3/22/2004	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-858-MZ	Denton	0.008375 N·m	282.5	3/22/2004	Chn to Lt Shld	0
NKLXF	Neck Lwr Force X	5045J	5045J-78-FX	Denton	0.00017114 N	13344.6	10/22/200	Hd Rr,Cst Fd	0
NKLYF	Neck Lwr Force Y	5045J	5045J-78-FY	Denton	0.00017248 N	13344.6	10/22/200	Hd Lt,Cst Rt	0
NKLZF	Neck Lwr Force Z	5045J	5045J-78-FZ	Denton	0.000095319 N	13344.6	10/22/200	Hd Up,Cst Dn	0
NKLXM	Neck Lwr Moment X	5045J	5045J-78-MX	Denton	0.004195175 N·m	451.9	10/22/200	Lt Ear to Lt Shld	0
NKLYM	Neck Lwr Moment Y	5045J	5045J-78-MY	Denton	0.004439035 N·m	451.9	10/22/200	Chn to Strnm	0
NKLZM	Neck Lwr Moment Z	5045J	5045J-78-MZ	Denton	0.0057545 N·m	338.95	10/22/200	Chn to Lt Shld	0
CSTXG	Chest Accel X	7264C-2K-2-180P28854		Endevco	0.0225 g	2000	2/13/2004	Fwd	0
CSTYG	Chest Accel Y	7264C-2K-2-180P28381		Endevco	0.02171 g	2000	2/13/2004	Lft	1
CSTZG	Chest Accel Z	7264C-2K-2-180P28297		Endevco	0.01952 g	2000	2/13/2004	Up	1
CSTXR	Chest Accel X Red	7264C-2K-2-180P33910		Endevco	0.01908 g	2000	4/19/2004	Rwd	1
CSTYR	Chest Accel Y Red	7264C-2K-2-180P33845		Endevco	0.01977 g	2000	4/19/2004	Lft	1
CSTZR	Chest Accel Z Red	7264C-2K-2-180P34092		Endevco	0.01831 g	2000	4/19/2004	Up	1
CSTXD	Chest Deflection X	6209-2038	6209-2038-0436	JDK	1.6792 mm	100	3/20/2004	Strnm Away Frm Spn	0
PEVXG	Pelvis Accel X	7264C-2K-2-180P28280		Endevco	0.02175 g	2000	2/13/2004	Rwd	1

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Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscal	Caldat	Pos	Flip
PEVYG	Pelvis Accel Y	7264C-2K-2-180P28316		Endevco	0.02569 g	2000	2/13/2004	Lft	1
PEVZG	Pelvis Accel Z	7264C-2K-2-180P28400		Endevco	0.02092 g	2000	2/13/2004	Up	1
LFMZF	Left Femur Force Z	2121	2121-0160	Denton	0.0000983 N	13344.6	3/22/2004	Knee Fd,Pel Rr	0
RFMZF	Right Femur Force Z	2121	2121-0161	Denton	0.0000995 N	13344.6	3/22/2004	Knee Fd,Pel Rr	0

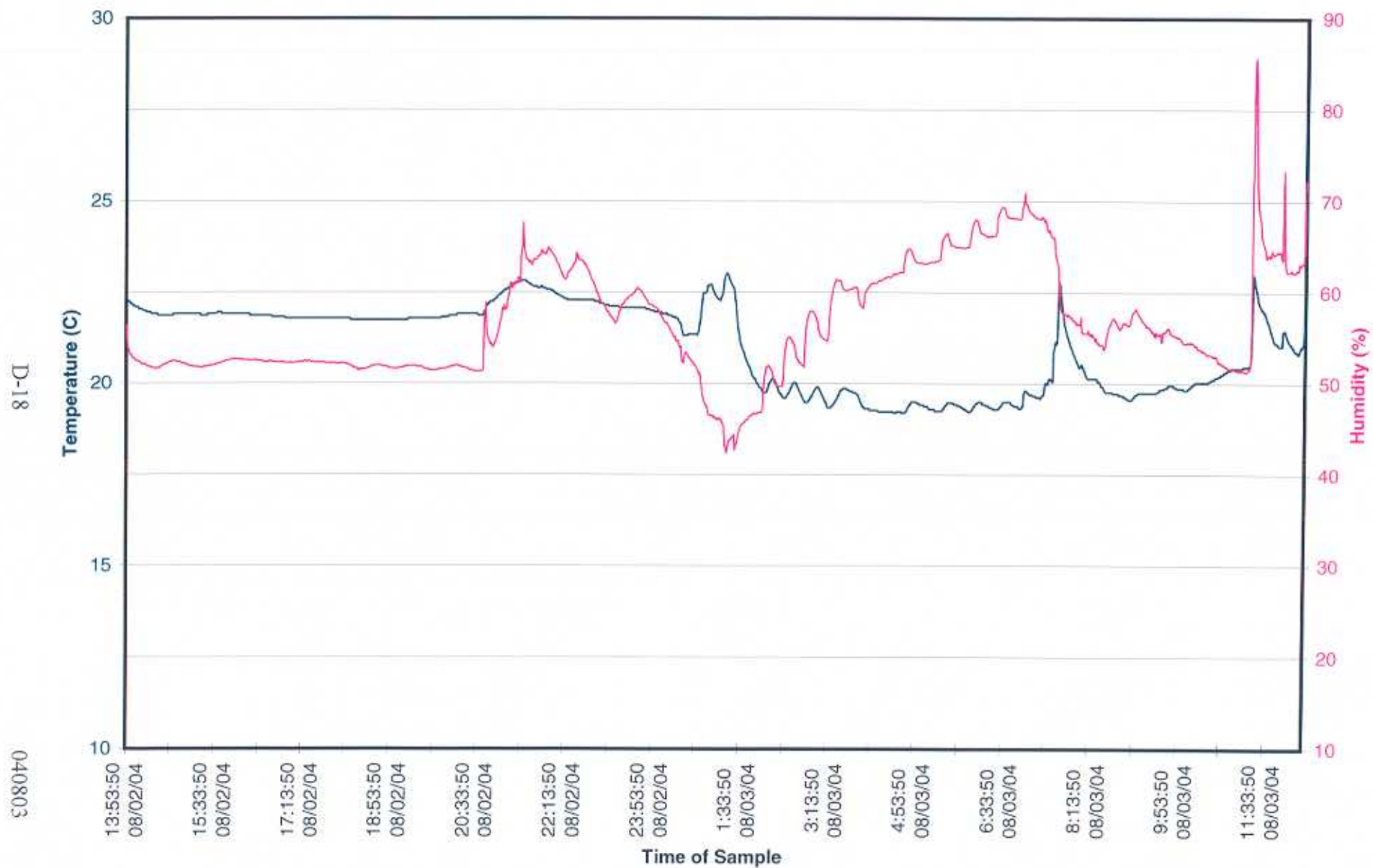
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Dummy	070v	Type	HYBRID III 5th	Descriptio	VRTC - 070v HYBRID III 5th Female ICAL'd 7-7-04 (DKS 7-19-04)J211					
Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/U	Fullscal	Caldat	Pos	Flip	
HEDXG	Head Accel X	7264-2000T	J18661	Endevco	0.0305663 g	2000	7/8/2004	Rwd	1	
HEDYG	Head Accel Y	7264-2000LC	AAMD5	Endevco	0.0258263 g	2000	7/8/2004	Lft	1	
HEDZG	Head Accel Z	7264-2KM5T	AJ4R6	Endevco	0.0217539 g	2000	7/8/2004	Up	1	
NEKXF	Neck Force X	1716AJ	1716AJ-1563-FX	Denton	0.0001888 N	8896.4	7/7/2004	Hd Rr,Cst Fd	0	
NEKYF	Neck Force Y	1716AJ	1716AJ-1563-FY	Denton	0.0001811 N	8896.4	7/7/2004	Hd Lt,Cst Rt	0	
NEKZF	Neck Force Z	1716AJ	1716AJ-1563-FZ	Denton	0.0000955 N	13344.6	7/7/2004	Hd Up,Cst Dn	0	
NEKXM	Neck Moment X	1716AJ	1716AJ-1563-MX	Denton	0.0058227 N·m	282.5	7/7/2004	Lt Ear to Lt Shld	0	
NEKYM	Neck Moment Y	1716AJ	1716AJ-1563-MY	Denton	0.0058088 N·m	282.5	7/7/2004	Chn to Strnm	0	
NEKZM	Neck Moment Z	1716AJ	1716AJ-1563-MZ	Denton	0.0083276 N·m	282.5	7/7/2004	Chn to Lt Shld	0	
NKLXF	Neck Lwr Force X	3251	3251-107-FX	Denton	0.0001753 N	13345	7/8/2004	Hd Fd,Cst Rr	1	
NKLYF	Neck Lwr Force Y	3251	3251-107-FY	Denton	0.0001763 N	13345	7/8/2004	Hd Lt,Cst Rt	0	
NKLZF	Neck Lwr Force Z	3251	3251-107-FZ	Denton	0.0000953 N	13345	7/8/2004	Hd Up,Cst Dn	0	
NKLXM	Neck Lwr Moment X	3251	3251-107-MX	Denton	0.004336 N·m	452	7/8/2004	Rt Ear to Rt Shld	1	
NKLYM	Neck Lwr Moment Y	3251	3251-107-MY	Denton	0.0043072 N·m	452	7/8/2004	Chn to Strnm	0	
NKLZM	Neck Lwr Moment Z	3251	3251-107-MZ	Denton	0.0056926 N·m	339	7/8/2004	Chn to Lt Shld	0	
CSTXG	Chest Accel X	7264-2000LC	AAJY4	Endevco	0.0267767 g	2000	7/8/2004	Fwd	0	
CSTYG	Chest Accel Y	7264-2KM5T	AKAA4	Endevco	0.0221975 g	2000	7/8/2004	Lft	1	
CSTZG	Chest Accel Z	7264-2000T	ACC63	Endevco	0.024752 g	2000	7/8/2004	Up	1	
CSTXD	Chest Deflection X	14CB1-2897	14CB1-2897-070	Servo	1.72407 mm	100	7/13/2004	Strnm Away Frm Spn	0	
PEVXG	Pelvis Accel X	7264-2000LC	AGN83	Endevco	0.0234601 g	2000	7/8/2004	Rwd	1	
PEVYG	Pelvis Accel Y	7264-2000TZ	J35770	Endevco	0.0244437 g	2000	7/8/2004	Lft	1	
PEVZG	Pelvis Accel Z	7264-2KM5T	J20014	Endevco	0.023525 g	2000	7/8/2004	Up	1	
LFMZF	Left Femur Force Z	IF-625	IF-625-140-FZ	FTSS	0.0000622 N	22240	7/14/2004	Knee Fd,Pel Rr	0	
RFMZF	Right Femur Force Z	IF-625	IF-625-141-FZ	FTSS	0.0000619 N	22240	7/14/2004	Knee Fd,Pel Rr	0	

2004 HONDA ODYSSEY VAN INTO FLAT LCB AT 35 MPH / 040803



Appendix E

INSIA Report on Structural Measurements

STRUCTURAL SURVEY OF CARS. MEASUREMENT METHODOLOGY OF THE MAIN RESISTANT ELEMENTS IN THE CAR BODY

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March, 1999

REPORT DOCUMENTATION PAGE**Title:**

STRUCTURAL SURVEY OF CARS. MEASUREMENT METHODOLOGY OF THE MAIN RESISTANT ELEMENTS IN THE CAR BODY

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28031 – Madrid – Spain

Supplementary notes:

Under contract to:

THE EUROPEAN COMMUNITY

Project: "Improvement of Crash Compatibility between Cars"

Contract N°: RO – 97 – SC.1064

Abstract:

The main aim of this working package -*Structural Survey of Cars*- is the reduction of incompatibilities, both structural and geometric, between passenger vehicles and their potential collision partners. The understanding of these incompatibilities needs a previous step for the knowledge of the existing car fleet.

Firstly, it is necessary to select the main resistant elements in the car body. These elements have to be chosen from the point of view of the sort of collision that we want to study, that is to say, frontal and side impacts.

Detailed measurements have been taken from exterior and interior elements, spread to a total number of 74 models selected from the main vehicle manufacturers at Spain. All of them are being sold this year. Using the information available from the previous measurements in vehicles, the geometric characteristics of the main resistant elements involved in the geometric compatibility between cars will be defined.

This report shows the methodology followed to get these measurements.

Subject terms:

Crash compatibility, geometric compatibility, resistant elements, measure methodology

Date:

March, 1999

1.- METHODOLOGY.

Detailed measurements have been taken from exterior and interior elements. Using the information available from the previous measurements in vehicles, the geometric characteristics of the main resistant elements involved in the geometric compatibility between cars have been defined. These elements are presented in the following figures, and have been divided in two main groups according to the vehicle zones studied in this project.

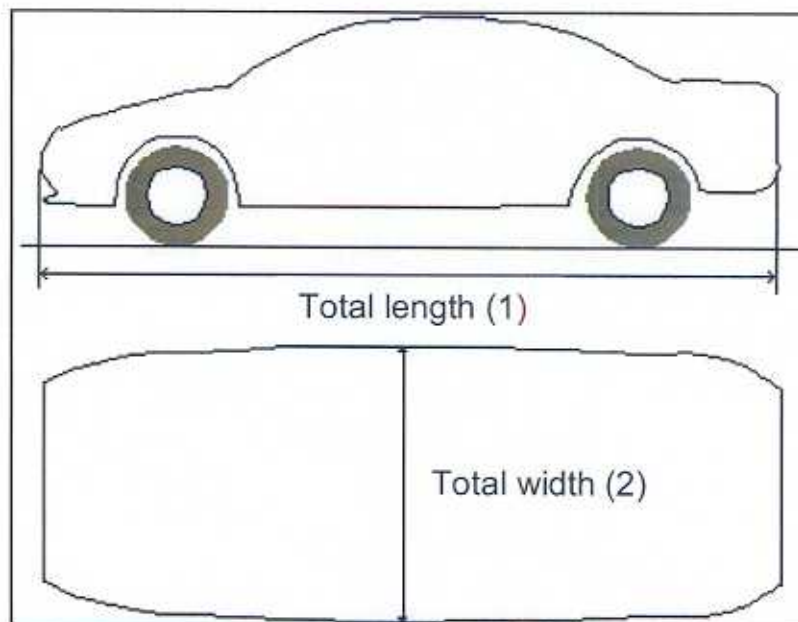


Figure 1.- Definition of the main resistant elements. General dimensions.

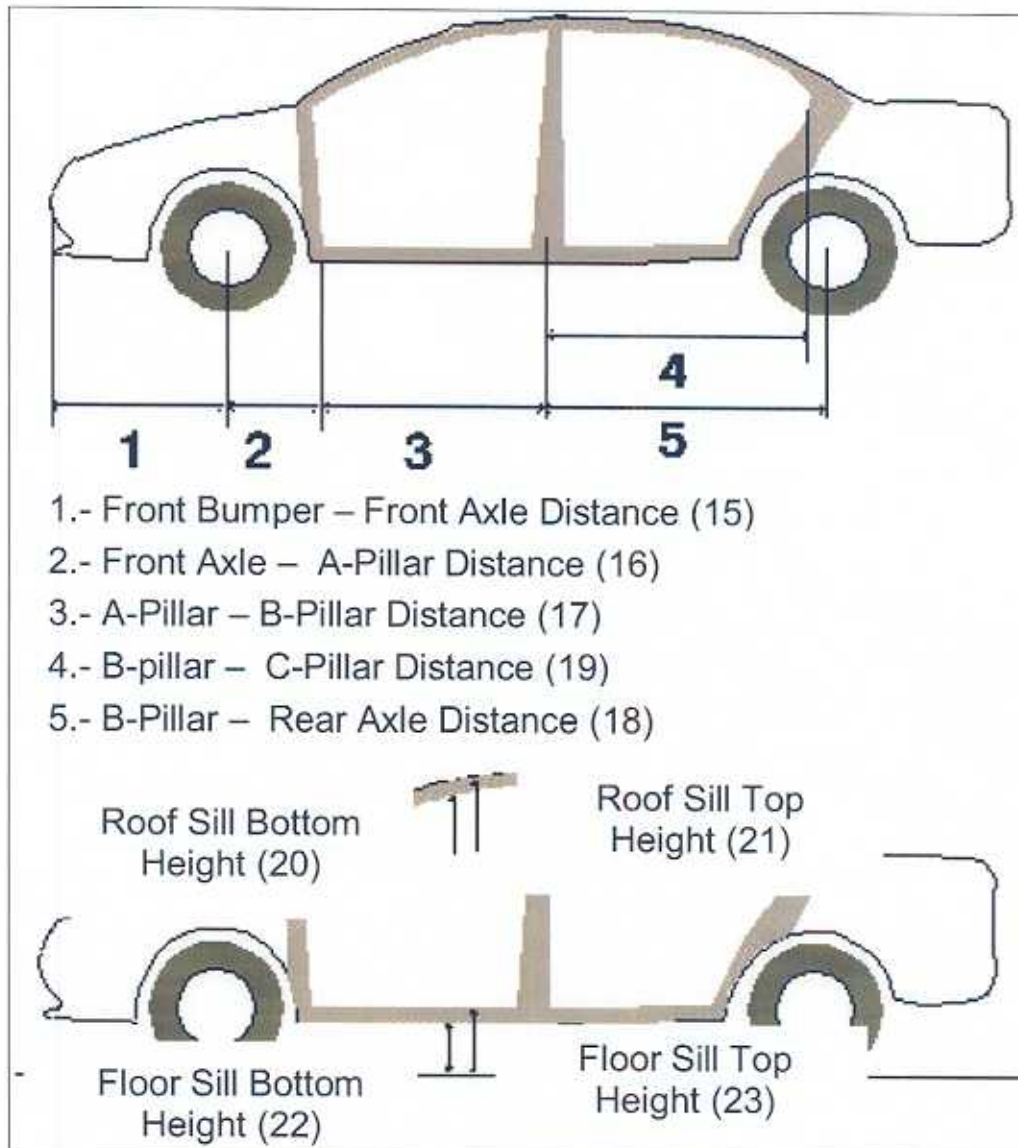


Figure 2.- Definition of the main resistant elements. Side elements.

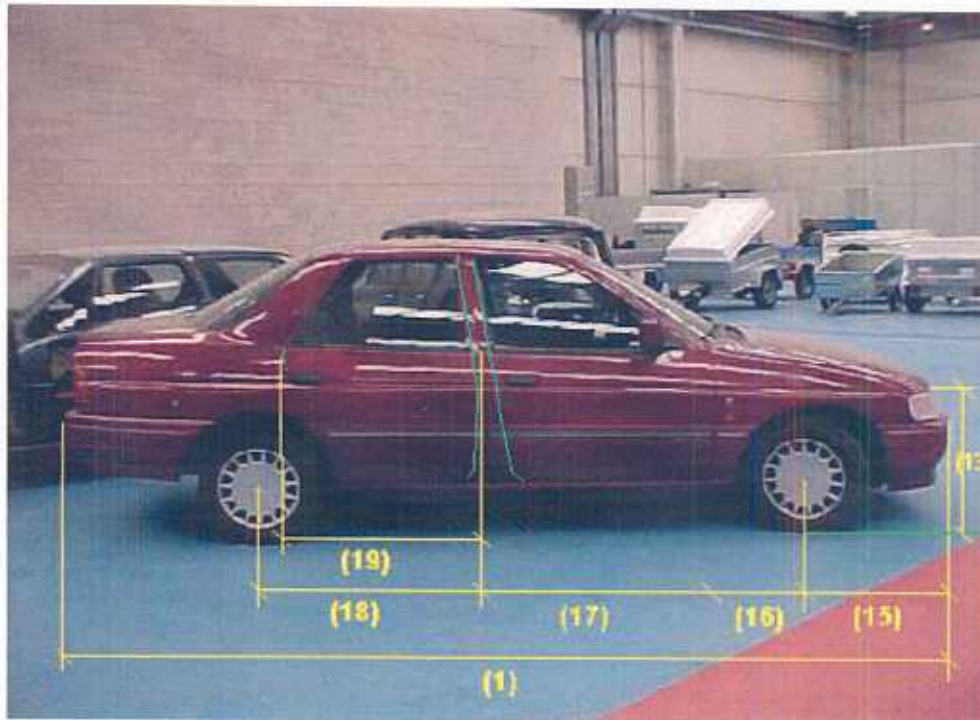


Figure 3.-
Measurements of
the side resistant
elements (outer).

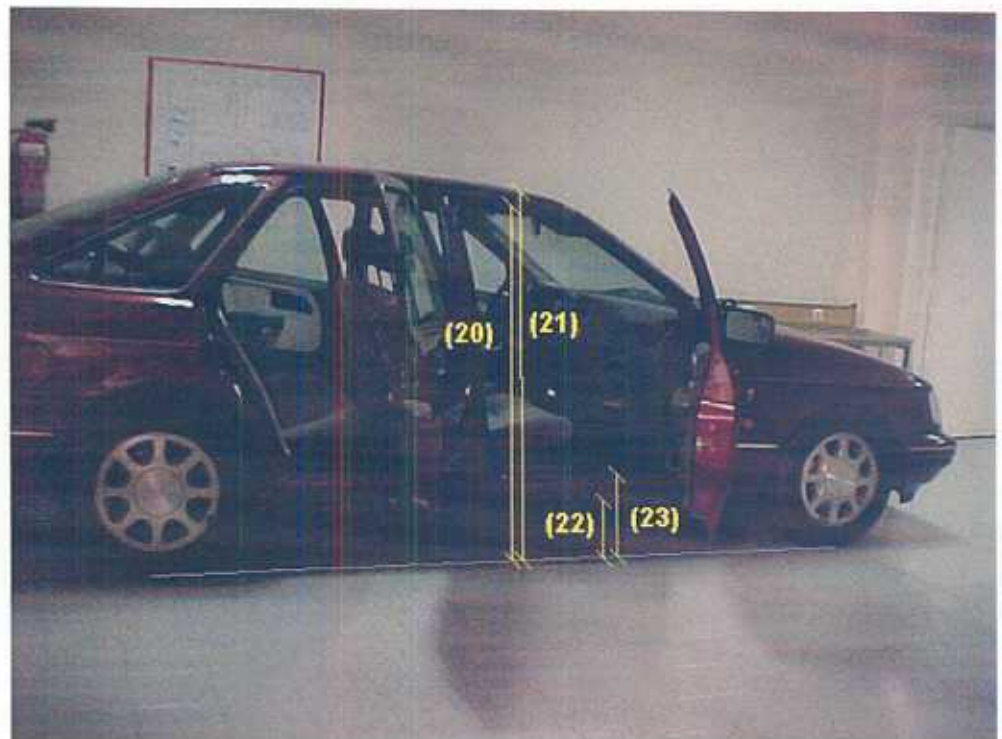


Figure 4.- Measurements
of the side resistant
elements (inner).

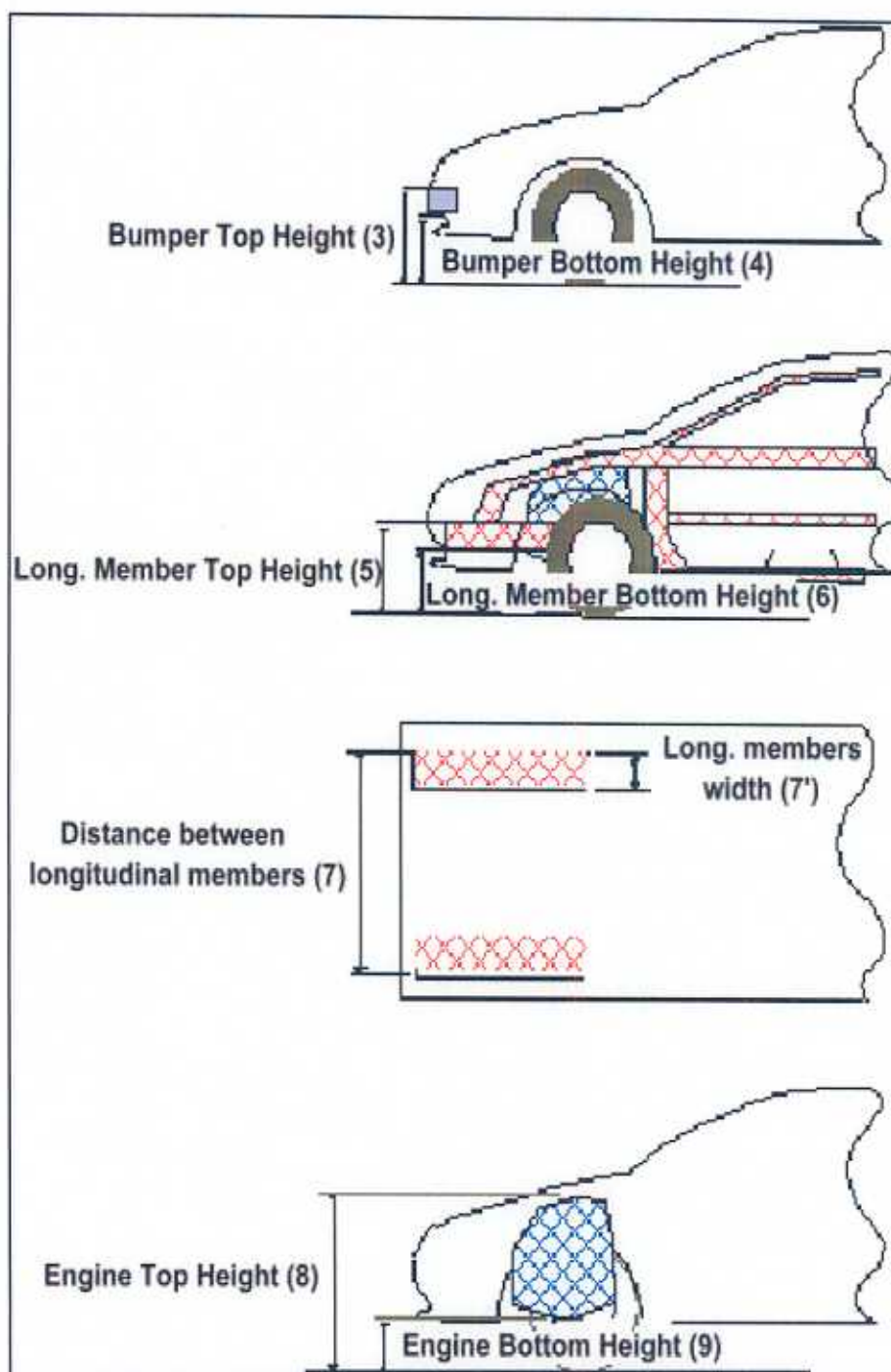


Figure 5.- Definition of the main resistant elements. Front elements.

Figure 6.-
Measurements of the
main resistant elements.
Front elements 1.

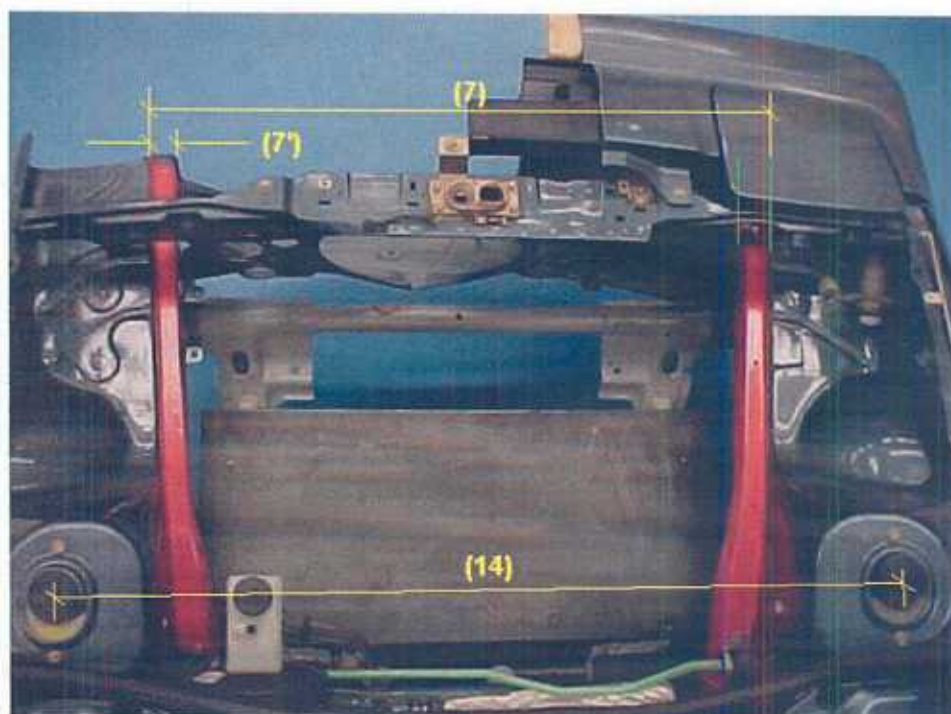
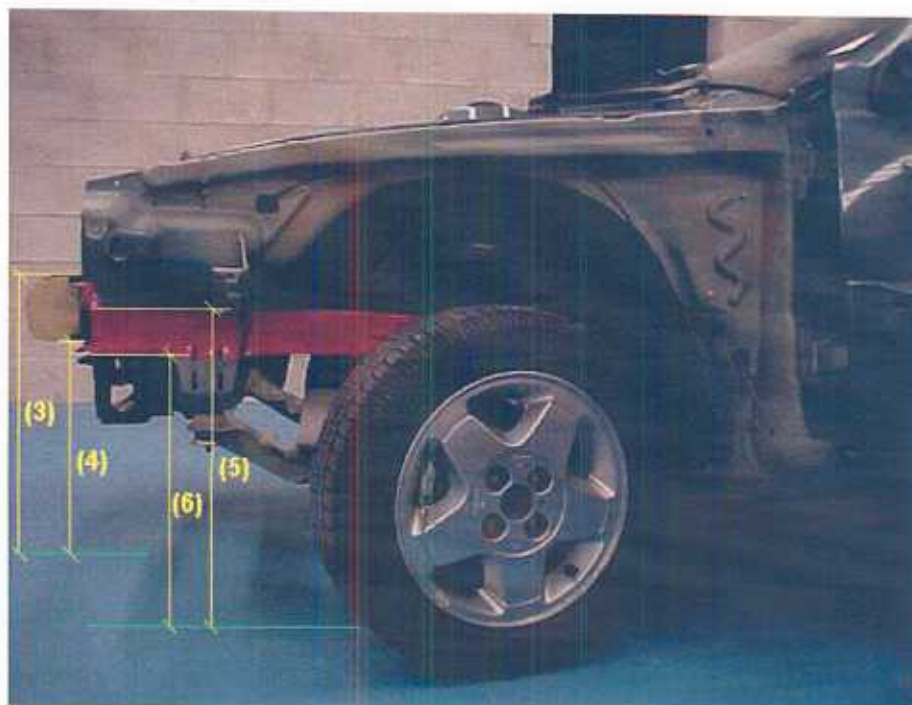


Figure 7.-
Measurements
of the main
resistant
elements. Front
elements 2.

Figure 8.-
Measurements of
the main resistant
elements. Front
elements 3.

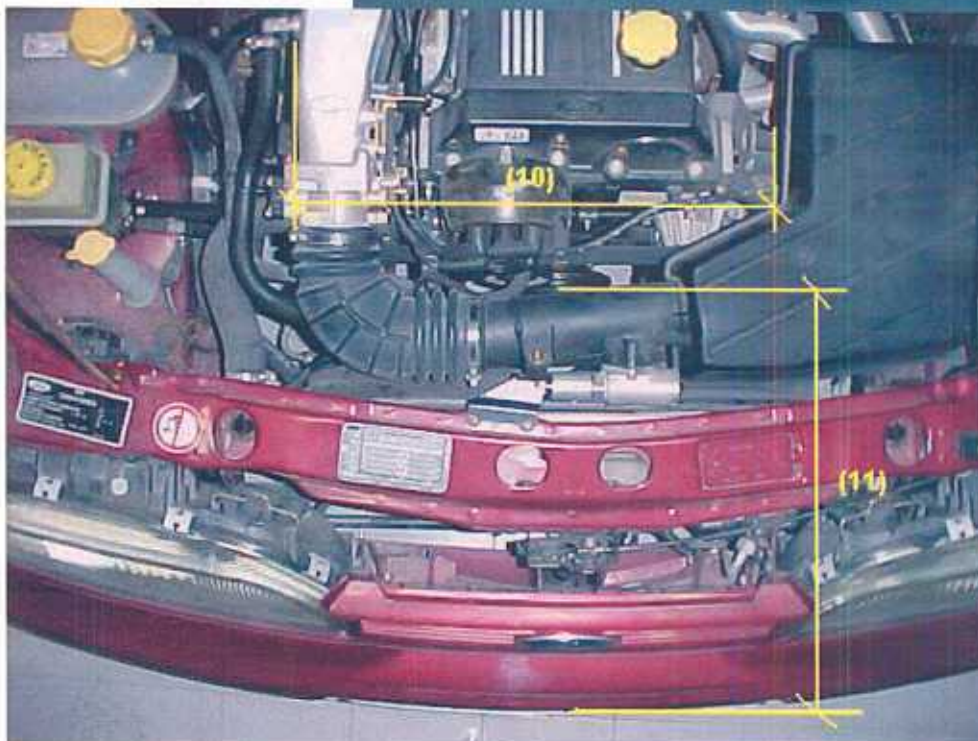
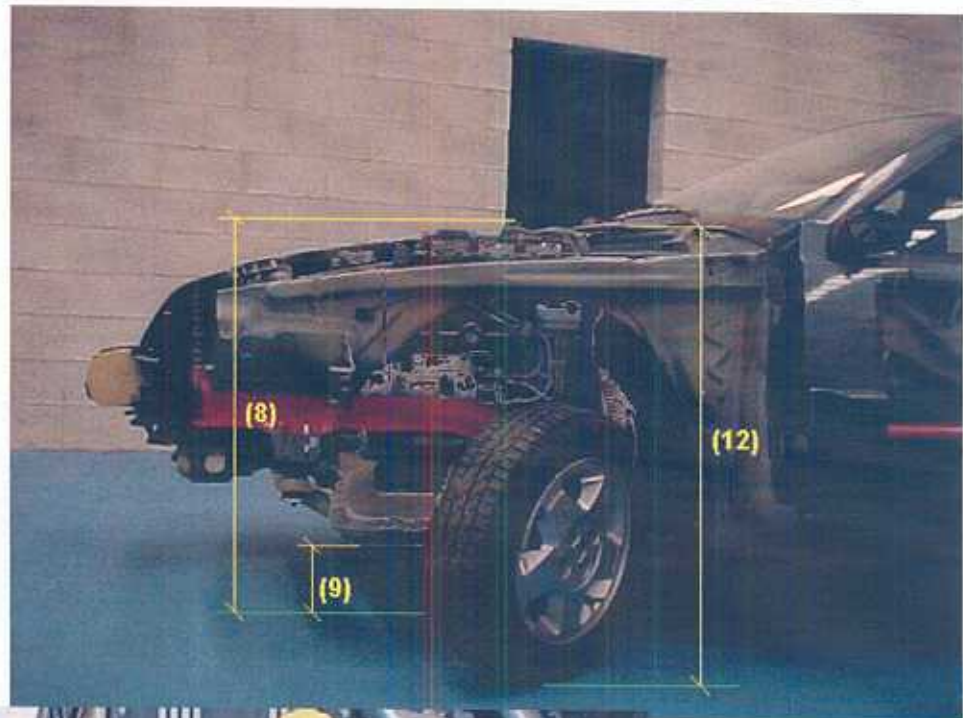


Figure 9.-
Definition of
the main
resistant
elements. Front
elements
(Longitudinal
engine).

The procedure considered to measure these elements is described as follows, where it is indicated the location of these ones in the Excel Sheet (SURVEY.XLS) into brackets:

FRONT ELEMENTS

- **Total Length –(1)- (Side & Front Sheets - C column):** distance between the point in the front bumper further on and the point in the rear bumper further back.
- **Weight (Side & Front Sheets - D column):** mass, including an average driver weight (70 kg), and the fuel tank mass (at half-capacity).
- **Total Width –(2)- (Side & Front Sheets - E column):** distance between the outer side points in a transverse plane of the vehicle (middle plane between the front and rear axles).
- **Bumper bottom height –(4)- (Front Sheet G column):** distance between the ground and the lowest point on the front bumper, being a resistant member (aerodynamic elements under the front bumper are not considered).
- **Bumper top height –(3)- (Front Sheet H column):** distance between the ground and the highest point on the front bumper, being a resistant member (aerodynamic elements are not considered).
- **Longitudinal member top height –(5)- (Front Sheet I column):** distance between the ground and the highest point on the longitudinal members, measured approximately in the front bumper-longitudinal member joint (when accessible).
- **Longitudinal member bottom height –(6)- (Front Sheet J column):** distance between the ground and the lowest point on the longitudinal members, measured approximately in the front bumper-longitudinal member joint.
- **Distance between longitudinal members (Front Sheet K column):** transverse distance between extreme points in longitudinal members, measured approximately in the front bumper-longitudinal member joint.

Depending on the accessibility of these members, the extreme points are the inner points (I) or the outer points (O).

- **Longitudinal member width -7'- (Front Sheet L column):** width of one of the longitudinal members, measured approximately in the front bumper-longitudinal member joint.

- **Engine top height (8) (Front Sheet N column):** distance between the ground and the highest point on the engine that can be a resistant member in case of accident (usually, the highest point on the head, or the highest point of the inlet or exhaust manifolds).
- **Engine bottom height (9) (Front Sheet M column):** distance between the ground and the lowest point on the engine (usually, the lowest point on the crankcase).
- **Engine and Gearbox width (10) (Front Sheet O & P columns):**
 - *Transverse configuration engine:* distance between extreme points in the gearbox-cylinder block unit or others resistant members attached to the cylinder block unit, i.e. fan belts (from a front point of view).
 - *Longitudinal configuration engine:* distance between extreme points in the cylinder block unit (from a front point of view).
- **Front bumper - Engine distance (11) (Front Sheet Q column):** distance between the point in the front bumper further on and the point in the engine further on that is a resistant element, i.e. the further on point of the exhaust manifold placed in the front of the engine.
- **Front shock absorber fixing width (14) (Front Sheet R column):** transverse distance between the front shock absorber - body car joints.
- **Front shock absorber fixing height (12) (Front Sheet S column):** distance between the ground and the front shock absorber-body car joint.
- **Bonnet leading edge height (Front Sheet T column):** distance between the ground and the bonnet edge further on.

SIDE ELEMENTS

- **Front bumper - Front axle distance (15) (Side Sheet G column):** distance between the point in the front bumper further on and the middle point in the front tyre-road contact patch.
- **Front axle - A Pillar distance (16) (Side Sheet H column):** distance between the middle point in the front tyre-road contact patch and the point in the A-pillar further back.
- **A Pillar - B Pillar distance (17) (Side Sheet I column):** distance between the point in the A-pillar further back and the middle point in the B-pillar.
- **B Pillar - C Pillar distance (19) (Side Sheet J column):** distance between the middle point in the B-pillar and the point in the C-pillar further back (only 4/5-door vehicles).
- **B Pillar - Rear axle distance (18) (Side Sheet K column):** distance between the middle point in the B-pillar and the middle point in the rear tyre-road contact patch.
- **Roof sill bottom height (20) (Side Sheet L column):** distance between the ground and the lowest point on the roof sill, measured in the front door middle point.
- **Roof sill top height (21) (Side Sheet M column):** distance between the ground and the highest point on the roof sill (usually located in the sill-roof joint), measured in the front door middle point.
- **Floor sill bottom height (22) (Side Sheet N column):** distance between the ground and the lowest point on the floor sill, measured in the front door middle point.
- **Floor sill top height (23) (Side Sheet O column):** distance between the ground and the highest point on the floor sill, measured in the front door middle point.

NOTE

- N/A: dimension not available.