

**Vehicle Research and Test Center
Moving Deformable Barrier into
2005 Toyota Corolla LE at 53.3 km/h
TRC Inc. Test Number: 050817**

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**Final Report
August - September 2005**

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Section 1.0

Purpose and Test Procedure

Purpose

This 48/24 km/h (32.9 mph) 90° side impact test was conducted for the 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 evaluate side impact protection in a moving deformable barrier impact test. The subject vehicle was a 2005 Toyota Corolla LE 4-door.

Test Procedure

This test was conducted in accordance with VRTC instructions for a moving deformable barrier into a vehicle side impact test. Data was obtained relative to FMVSS 214, "Side Impact Protection" performed using SID-IIs (Build D) anthropomorphic test devices (dummies).

A 2005 Toyota Corolla LE 4-door was impacted on the driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 53.3 km/h (33.1 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, Ohio on August 17, 2005. Pre-test and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SID-IIs) are included in Appendix A.

The moving deformable barrier was equipped with a 214 style deformable barrier face and five (5) accelerometers to measure longitudinal, lateral, and vertical axis accelerations. The barrier's specified impact velocity range was 52.1 to 53.8 km/h.

Two restrained Side Impact Dummies (SID-IIs) were placed in the driver (Pos. #1) and left rear (Pos. #4) designated seating positions according to the instructions specified in the Federal Register Part 572-214 Section S8.3 and S12.3 (May 17, 2004). Both SID-IIs were certified prior to this test and were restrained by 3-point seat belts and a curtain airbag deployed from the headliner. The driver dummy was additionally restrained by a torso airbag.

Both dummies were instrumented with head, shoulder, spine, thorax, abdomen, and pelvis accelerometers to measure longitudinal, lateral, and vertical accelerations. Both dummies were also instrumented with upper neck, shoulder, lumbar, acetabulum, iliac wing, and femur load cells to measure forces and moments, and five (5) rib and one (1) shoulder deflection potentiometers.

The 199 data channels were digitally sampled and recorded at 12,500 samples per second and processed per SAE J211 March 1995.

The crash event was recorded by one (1) real-time panning motion picture camera and ten (10) high-speed digital motion picture cameras. The pre- and post-test conditions were recorded by one (1) real-time motion picture camera.

The side impact test summary data are presented in Section 2.0. The summary of FMVSS 214 data are presented in Section 3.0. The occupant, camera, vehicle, and barrier measurements are presented in Section 4.0. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the dummy verification data. Appendix D contains test equipment and instrumentation calibration information. Appendix E contains a copy of the INSIA Report on Structural Measurements.

Section 2.0

Moving Deformable Barrier Side Impact Test Summary

Test Results Summary

This moving deformable barrier side impact test was conducted by TRC Inc. on August 17, 2005.

The test vehicle, a 2005 Toyota Corolla LE 4-door, was equipped with a 1.8-liter transverse engine, automatic transmission, power steering, power brakes, dual stage front airbags, side curtain airbags, and side front torso airbags. The vehicle's test weight was 1325.8 kg. The moving deformable barrier's impact speed was 53.3 km/h. The moving deformable barrier impacted 4 mm to the left of the target point (356 mm rearward of front axle).

Injury Criteria Data Summary		
	Driver	Left Rear Passenger
HIC (15 ms)	55	330
HIC (36 ms)	78	330
Lower Spine Acceleration (g)	59	57
Pelvic Force Summation (N)	4,655	3,182

Data Acquisition Explanations

The driver's spine rib 1 X-axis acceleration data channel, 11THS01RIS2ACXA, did not record any useful data throughout the test. The resultant was also affected.

The vehicle's left side sill at rear seat Y-axis acceleration data channel, 14SILBFR0000ACYA, recorded questionable data throughout the test.

The vehicle's left lower B-post Y-axis acceleration data channel, 14BPILLO0000ACYA, exceeded full scale at approximately 28 milliseconds and recorded no useful data after that.

The vehicle's left middle B-post Y-axis acceleration data channel, 14BPILMI0000ACYA, exceeded full scale at approximately 54 milliseconds and recorded no useful data after that.

The vehicle's left lower A-post Y-axis acceleration data channel, 14APILLO0000ACYA, exceeded full scale at approximately 8 milliseconds and recorded no useful data after that.

The vehicle's left front seat track Y-axis acceleration data channel, 11SETRFR0000ACYA, recorded questionable data throughout the test.

The vehicle's left front door centerline Y-axis acceleration data channel, 11DOOR000001ACYA, exceeded full scale at approximately 7 milliseconds.

Table 1 Crash Test Summary

Test mode:	Moving deformable barrier side impact		
Test date:	08/17/05		
Test time:	13:33		
Ambient temperature:	22° C		
Vehicle year/make/ model/body style:	2005/Toyota/Corolla LE/4-door		
Vehicle test weight:	1325.8 kg		
Impact angle ¹ :	270°		
Impact velocity ² :	53.3 km/h		
Maximum vehicle static crush:	185 mm		
Maximum barrier static crush:	98 mm		
Number of data channels:			
Number of cameras:	High-speed	10	Real-time 1
<u>Dummies:</u>	<u>Driver #056</u>		<u>Passenger #020</u>
Type:	SID-IIs		SID-IIs
Location:	Left front		Left rear
Restraint:	Seat belt, side curtain airbag, side torso airbag		Seat belt, side curtain airbag
<u>Seat track position for test:</u>			
Driver:	Full forward; seat height at middle of geometric range of travel		
Passenger:	Fixed		
<u>Seat back position for test:</u>			
Driver:	8.5°; measured at the head restraint support post		
Passenger:	Fixed		
<u>Head restraint position for test:</u>			
Driver:	Full down		
Passenger:	Full down		
Steering column position:	Middle of geometric range of travel		

¹ With respect to tow track centerline.

² Speed trap measurement ($\pm .08$ km/h accuracy)

Table 2 General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2005/Toyota/Corolla LE/4-door		
VIN:	1NXBR30E65Z475840		
Model year:	2005		
Body style:	4-door		
Color:	Tan		
Engine data:			
Cylinders:	4		
Displacement	1.8 liters		
Cylinder placement:	Straight		
Engine placement:	Transverse		
Transmission data:	<u>4</u> speed, ___ manual, <u>X</u> automatic, <u>X</u> overdrive		
Final drive:	<u>X</u> FWD, ___ RWD, ___ 4WD		
Date vehicle received:	08/09/2005		
Odometer reading:	269		
Dealer's name and address:	Vehicle supplied by VRTC		

Accessories:

Power steering	Yes	Automatic transmission	Yes
Power brakes	Yes	Automatic speed control	Yes
Power seats	No	Tilting steering wheel	Yes
Power windows	Yes	Telescoping steering wheel	No
Tinted glass	Yes	Air conditioning	Yes
Radio	Yes	Anti-skid brake	
Clock	Yes	Rear window defroster	Yes
Other	None	Power door locks	Yes

Certification data from vehicle's label:

Vehicle manufactured by:	New United Motor Manufacturing Inc.
Date of manufacture:	01/05
VIN:	1NXBR30E65Z475840
GVWR:	3585 lbs.
GAWR: Front:	1885 lbs.
Rear:	1720 lbs.

Table 2 General Test and Vehicle Parameter Data, Continued

Tires on vehicle (mfr., line, size): Goodyear, Integrity, P195/65R15

Tire pressure with maximum capacity vehicle load:

Front:	44 psi	(300 kPa)
Rear:	44 psi	(300 kPa)

Spare tire (mfr., line, size): Firestone, Temp, T125/70R16

Type of seats:

Front	Bucket
Rear	Bench

Maximum width: 1700 mm

Wheelbase: 2600 mm

Location of “Recommended Tire Pressure” label:

The label was located on driver side B-pillar.

Data from vehicle’s “Recommended Tire Pressure” label”:

Recommended tire size: P195/65R15

Recommended cold tire pressure:

Front:	30 psi	(210 kPa)
Rear:	30 psi	(210 kPa)

Vehicle Capacity Data:

Number of Occupants (Designated seating capacity):

Front	2
Rear	3
Total	5

Vehicle capacity weight: 385.0 kg

Rated cargo/luggage weight¹ 45.0 kg

Test vehicle attitude:

Delivered attitude:	LF	684 mm;	RF	685 mm;	LR	707 mm;	RR	706 mm
Fully loaded attitude:	LF	664 mm;	RF	670 mm;	LR	658 mm;	RR	664 mm
Pre-test attitude:	LF	681 mm;	RF	682 mm;	LR	670 mm;	RR	670 mm
Post-test attitude:	LF	687 mm;	RF	666 mm;	LR	639 mm;	RR	638 mm

¹ RCLW = VCW - (68 kg * designated seating capacity)

Table 2 General Test and Vehicle Parameter Data, Continued

Test vehicle attitude:

	Left Sill Pitch	Right Sill Pitch	Front Bumper L-R Roll	Rear Bumper L-R Roll
As Delivered:	-0.7°	-0.7°	-0.3°	-0.2°
As Tested:	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Fully Loaded:	-0.2°	-0.2°	-0.9°	-0.5°

Negative Pitch Angle = Vehicle front down

Negative Roll Angle = Driver side down

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

Right front	355.0 kg	Right rear	219.5 kg
Left front	369.0 kg	Left rear	229.5 kg
Total front weight	724.0 kg	(61.7 % of total vehicle weight)	
Total rear weight	449.0 kg	(38.3 % of total vehicle weight)	
Total delivered weight	1173.0 kg		

Calculation of test vehicle's target test weight:

Total Delivered Weight (UDW) =	1173.0 kg
Rated Cargo/Luggage Weight (RCLW) =	45.0 kg
Weight of 2 SID-IIs Dummies @ 57 kg each =	114.0 kg
Target test weight =	1332.0 kg

Weight of test vehicle with required dummies and 38.8 kg of cargo weight:

Right front	374.6 kg	Right rear	285.8 kg
Left front	373.8 kg	Left rear	291.6 kg
Total front weight	748.4 kg	(56.4% of total vehicle weight)	
Total rear weight	577.4 kg	(43.6% of total vehicle weight)	
Total test weight	1325.8 kg	(6.2 kg under target test weight)	

¹ Pitch and roll measurements not recorded prior to test.

Table 2 General Test and Vehicle Parameter Data, Continued

Weight of ballast secured in vehicle: None

Components removed to meet target test weight: Front fascia, front bumper beam, transmission cooler, radiator and fan assembly, alternator, (2) headlights, exhaust system, right side hubcaps, rear deck lid, (2) taillights, rear fascia, rear bumper beam, bumper beam mounting brackets, rear right headrest, right front headrest, 8 gallons of Stoddard

Location of Vehicle's CG: 1132 mm rearward of front wheel centerline

Fuel System Data:

Usable fuel system capacity 50.0 liters (from owner's manual)

Actual test volume: 46.6 liters (93% of usable)

Table 3 Post-Impact Data

Test number: 050817
Test date: 08/17/05
Test time: 13:33
Test type: Moving deformable barrier left side impact
Impact angle: 270°
Ambient temperature
at impact area: 22° C
Required impact velocity range: 52.1 to 53.8 km/h

MDB impact velocity:

Primary: 53.3 km/h
Secondary: 53.4 km/h
Distance from vehicle to barrier:
Entering velocity trap: 661 mm
Exiting velocity trap: 51 mm

Location of Impact Point On Test Vehicle Side To Be Impacted:

Wheelbase = 2600 millimeters
Intended impact point is 360 millimeters rearward of front axle centerline
(which is 940 millimeters forward of the wheelbase midpoint)
Actual Impact Point is 356 millimeters rearward of front axle centerline

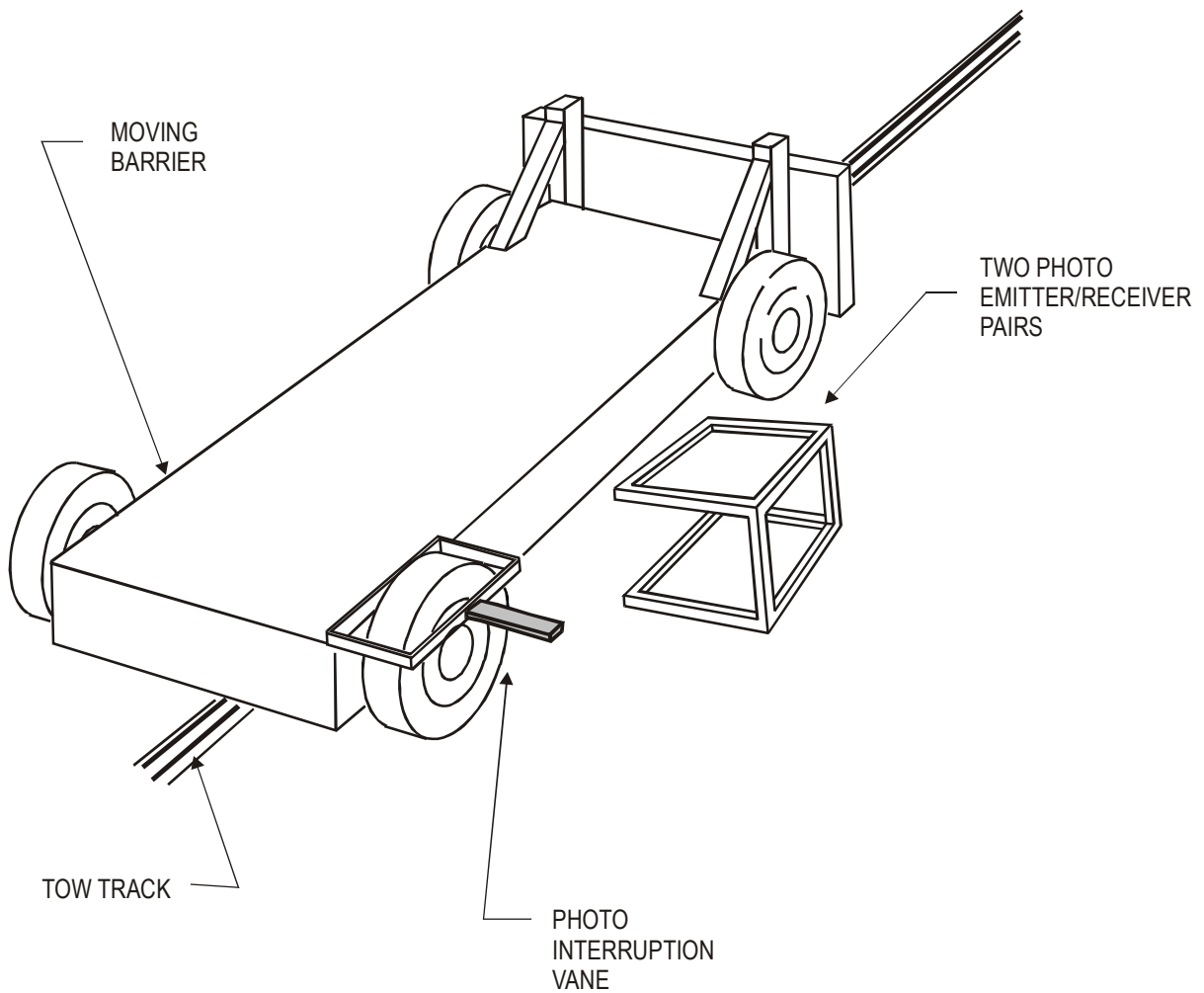
Impact Point:

Actual Impact Point is 4 mm left of nominal impact ref. line (Lateral)
Actual Impact Point is 2 mm up from nominal impact point (Vertical)

Maximum Exterior Static Crush:

1. Level 1 (291 mm above ground) = 71 mm
2. Level 2 (610 mm above ground) = 185 mm
3. Level 3 (650 mm above ground) = 173 mm
4. Level 4 (924 mm above ground) = 112 mm
5. Level 5 (1428 mm above ground) = 0 mm
Maximum Post-Test Intrusion = 185 mm

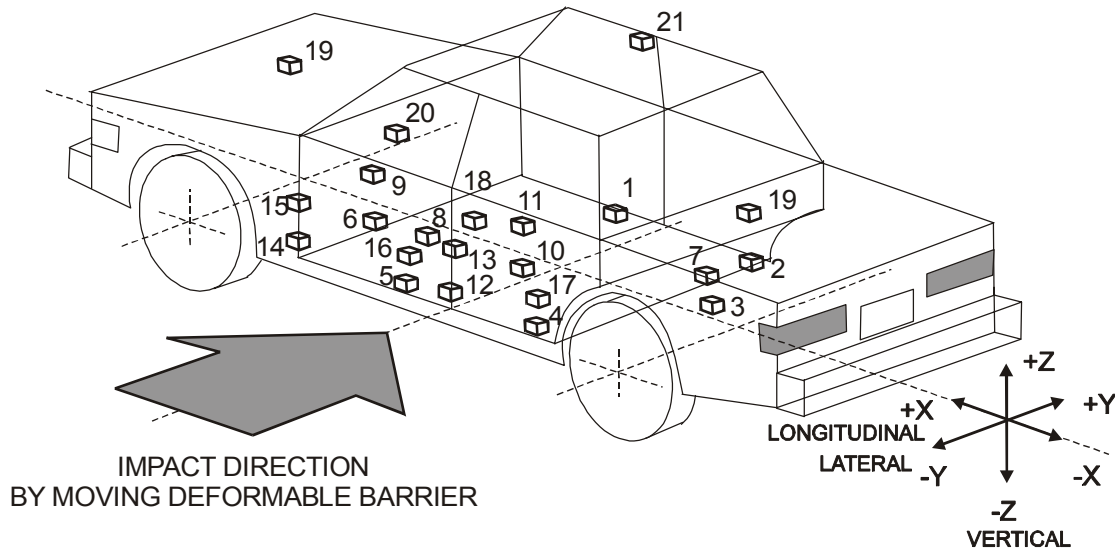
Figure 1 Impact Velocity Measurement System



The final vane clears the final emitter/receiver pair 51 millimeters before impact.

The vanes have 610-millimeter spacing.

Figure 2 Vehicle Accelerometer and String Potentiometer Placement



- 1-Right Front Side Sill
- 2-Right Side Sill at Rear Seat
- 3-Rear Floorpan above Axle
- 4-Left Side Sill at Rear Seat
- 5-Left Front Side Sill
- 6-Left Front Door Centerline
- 7-Right Rear Occupant Compartment
- 8-Left Front Door Mid-Rear
- 9-Left Front Door Upper Centerline
- 10-Left Rear Door Mid-Rear
- 11-Left Rear Door Upper Centerline

- 12-Left Side Lower B-pillar
- 13-Left Side Middle B-pillar
- 14-Left Side Lower A-pillar
- 15-Left Side Middle A-pillar
- 16-Left Side Front Seat Track at H-point
- 17-Left Rear Seat Track at H-point
- 18-Vehicle Center of Gravity
- 19-Engine Top
- 20-Firewall
- 21-Right Side Roof Rail

Table 4 Test Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction		Negative Direction	
			Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	Right Side Sill at Front Seat	X	4.3	48.0	-9.9	11.0
		Y	23.5	6.6	-2.9	124.2
		Z	4.4	70.2	-6.8	22.1
2	Right Side Sill At Rear Seat	X	4.4	48.4	-10.0	11.0
		Y	23.3	7.2	-3.3	73.1
		Z	3.6	67.2	-8.2	26.5
3	Rear Floorpan Above Axle	X	3.6	51.8	-9.2	23.3
		Y	24.7	39.8	-1.8	94.1
		Z	9.1	18.1	-6.9	43.0
4	Left Side Sill at Rear Seat ¹	Y	54.5	8.6	-23.3	15.8
5	Left Side Sill at Front Seat	Y	51.2	9.4	-29.7	119.8
6	Left Front Door Centerline ¹	Y	----	----	----	----
7	Right Rear Occupant Compartment	Y	23.5	7.1	-3.2	72.4
8	Left Front Door Mid-Rear	Y	49.4	4.2	-30.9	22.6
9	Left Front Door Upper Centerline	Y	63.6	7.2	-77.1	27.9
10	Left Rear Door Mid-Rear	Y	87.8	6.1	-38.3	30.3
11	Left Rear Door Upper Centerline	Y	154.1	8.2	-47.1	25.7
12	Left Lower B-Pillar ¹	Y	----	----	----	----
13	Left Middle B-Pillar ¹	Y	----	----	----	----
14	Left Lower A-Pillar ¹	Y	----	----	----	----
15	Left Middle A-Pillar	Y	43.4	3.7	-11.5	19.7
16	Left Front Seat Track ¹	Y	64.1	18.4	-10.8	193.0
17	Left Rear Seat Track	Y	32.6	22.4	-2.3	72.8
18	Vehicle Center of Gravity	X	10.4	21.1	-16.1	17.1
		Y	63.7	20.3	-35.0	25.0
		Z	57.6	29.1	-38.6	24.7
	Resultant		72.3	29.6		

¹ See Data Acquisition Explanations.

Table 4 Test Vehicle Accelerometer Data Summary, Cont'd.

Accel. No.	Location		Positive Direction		Negative Direction	
			Max. (g)	Time (ms)	Max. (g)	Time (ms)
19	Top of Engine	X	12.4	72.1	-13.6	31.5
		Y	20.3	40.6	-6.6	97.7
20	Firewall	X	4.6	50.2	-12.3	32.5
		Y	14.8	24.0	-2.5	123.1
21	Right Roof Rail	X	6.2	55.6	-5.0	29.0
		Y	19.8	50.5	-2.8	229.0

For acceleration data sign convention see Report Sign Convention in Appendix D.

Table 5 Moving Deformable Barrier (MDB) Summary

MDB Face Manufacturer And Serial Number:

Cellbond, EH311

Position Of Impactor (MDB) On Monorail:

Crabbed 27° to the left

MDB Specifications:

Overall Width of Framework Carriage = 1251 mm

Overall Length of MDB (Incl. honeycomb impact face) = 4014 mm

Wheelbase of Framework Carriage = 2591 mm

Track of Framework Carriage (Front & Rear) = 1881 mm

C.G. Location Rearward of Front Axle = 1134 mm

MDB Weight:

Left Front = 493.0 kg Left Rear = 194.2 kg

Right Front = 275.8 kg Right Rear = 404.6 kg

Total Front = 768.8 kg Total Rear = 598.8 kg

Total MDB Weight = 1367.6 kg

Impact Angle (MDB C/L to Target Vehicle C/L) = 90 degrees

Impact Speed = 53.3 km/h

Maximum Static Crush of Honeycomb Impact Face:

1. Row A at Center of Bumper Level = 98 millimeters

2. Row B at Top of Bumper Level = 42 millimeters

3. Row C at Mid Level = 24 millimeters

4. Row D at Top of Stack Level = 79 millimeters

Instrumentation:

Number of MDB Data Channels = 5

Section 3.0

Summary of FMVSS 214 Data

Table 6 Dummy Injury Criteria Data

Driver Dummy S/N 056

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
Head Acceleration (g)					
Longitudinal	X	3.9	309.8	-14.5	51.8
Lateral	Y	15.1	57.5	-2.1	304.0
Vertical	Z	22.4	46.0	-2.3	88.0
Resultant		29.4	50.6		
HIC (36 ms)		78			
Upper Neck Force (N)					
X-Axis Shear		431.6	49.8	-4.9	16.0
Y-Axis Shear		229.8	48.4	-26.9	269.0
Z-Axis Axial		742.4	46.6	-201.2	88.1
Upper Neck Moment (N-m)					
About X-Axis		12.5	46.4	-9.3	189.8
About Y-Axis		21.2	77.3	-28.1	47.0
About Z-Axis		14.4	75.3	-8.6	214.0
Shoulder Acceleration (g)					
Longitudinal	X	56.3	25.0	-33.9	13.0
Lateral	Y	32.1	25.4	-62.3	13.4
Vertical	Z	83.2	17.8	-110.8	26.9
Resultant		117.2	27.0		
Shoulder Force (N)					
Longitudinal	X	105.0	52.2	-157.6	40.4
Lateral	Y	989.2	34.0	-60.6	74.6
Vertical	Z	107.2	51.5	-242.8	111.8
Shoulder Displacement (mm)					
Lateral	Y	18.1	40.9		
Upper Spine Acceleration (g)					
Longitudinal	X	3.0	69.4	-17.9	40.6
Lateral	Y	34.5	41.4	-2.5	70.6
Vertical	Z	6.9	34.6	-5.2	112.0
Resultant		38.7	41.2		

Table 6 Dummy Injury Criteria Data, Cont'd.

Driver Dummy S/N 056

Location	Positive Direction Max. Time (ms)	Negative Direction Max. Time (ms)
Spine Rib 1 Acceleration (g)		
Longitudinal ¹ X	----	----
Lateral Y	40.0 36.6	-3.8 71.8
Vertical Z	3.9 53.4	-10.0 32.6
Resultant ¹	----	
Spine Rib 2 Acceleration (g)		
Longitudinal X	2.9 14.9	-9.4 35.1
Lateral Y	44.4 36.6	-4.5 64.6
Vertical Z	4.3 53.4	-8.5 32.6
Resultant	45.8 36.3	
Spine Rib 3 Acceleration (g)		
Longitudinal X	2.8 15.0	-10.5 35.1
Lateral Y	50.0 36.4	-5.6 62.2
Vertical Z	3.3 65.0	-9.6 32.6
Resultant	51.8 36.2	
Lower Spine Acceleration (g)		
Longitudinal X	3.0 15.0	-11.7 30.3
Lateral Y	57.1 36.1	-6.9 62.2
Vertical Z	3.5 65.0	-9.2 32.7
Resultant	58.6 35.9	
Spine Rib 5 Acceleration (g)		
Longitudinal X	3.1 15.0	-12.5 30.3
Lateral Y	61.2 35.7	-8.3 62.6
Vertical Z	3.2 19.5	-9.6 36.0
Resultant	62.8 35.6	
Lumbar Moment (N-m)		
Longitudinal X	72.3 37.8	-11.0 25.4
Lateral Y	16.6 120.4	-12.9 49.9
Vertical Z	12.3 35.4	-7.8 251.6

Table 6 Dummy Injury Criteria Data, Cont'd.

Driver Dummy S/N 056

Location	Positive Direction Max. Time (ms)		Negative Direction Max. Time (ms)		
Thorax Rib 1 Acceleration (g)					
Longitudinal X	11.9	39.1	-30.5	32.3	
Lateral Y	47.0	32.4	-8.4	65.8	
Vertical Z	30.9	42.7	-17.5	59.1	
Resultant	63.2	32.5			
Thorax Rib 1 Displacement (mm)					
Lateral Y	14.5	39.2			
Thorax Rib 2 Acceleration (g)					
Longitudinal X	16.3	10.9	-29.1	32.5	
Lateral Y	64.0	33.4	-35.5	15.4	
Vertical Z	28.0	41.2	-12.8	21.4	
Resultant	70.1	33.3			
Thorax Rib 2 Displacement (mm)					
Lateral Y	15.9	38.3			
Thorax Rib 3 Acceleration (g)					
Longitudinal X	19.0	10.9	-36.1	32.6	
Lateral Y	96.7	33.4	-38.6	15.4	
Vertical Z	20.2	34.2	-12.8	13.4	
Resultant	103.4	33.4			
Thorax Rib 3 Displacement (mm)					
Lateral Y	16.7	37.9			
Abdomen Rib 1 Acceleration (g)					
Longitudinal X	15.3	50.2	-38.1	32.5	
Lateral Y	66.5	40.5	-16.6	48.7	
Vertical Z	73.6	32.8	-14.2	24.9	
Resultant	101.9	32.7			
Abdomen Rib 1 Displacement (mm)					
Lateral Y	22.5	38.6			

Table 6 Dummy Injury Criteria Data, Cont'd.

Driver Dummy S/N 056

Location		Positive Direction Max. Time (ms)		Negative Direction Max. Time (ms)	
Abdomen Rib 2 Acceleration (g)					
Longitudinal	X	11.1	29.3	-28.7	33.8
Lateral	Y	60.2	32.9	-17.3	30.1
Vertical	Z	13.9	44.5	-42.4	41.5
Resultant		77.1	41.5		
Abdomen Rib 2 Displacement (mm)					
Lateral	Y	25.7	37.8		
Pelvis Acceleration (g)					
Longitudinal	X	6.7	110.8	-12.8	35.3
Lateral	Y	58.4	33.0	-7.2	101.1
Vertical	Z	5.7	30.1	-5.3	41.9
Resultant		59.1	33.0		
Left Acetabulum Force (N)					
Lateral	Y	2841.8	31.2	-28.0	113.0
Left Illiac Wing Force (N)					
Lateral	Y	2040.6	35.8	-45.7	85.8
Pelvis Force Summation (N)					
Lateral	Y	4,655	33.2		
Left Femur Force (N)					
X-Axis		45.5	17.0	-152.5	37.2
Y-Axis		100.4	43.8	-143.9	35.0
Z-Axis		400.0	38.0	-24.1	13.8
Left Femur Moment (N-m)					
About Longitudinal		4.6	120.2	-50.9	34.1
About Lateral		10.7	64.8	-37.6	34.6
About Vertical		2.9	122.1	-25.1	81.9

Table 6 Dummy Injury Criteria Data, Cont'd.

Driver Dummy S/N 056

Location	Positive Direction		Negative Direction	
	Max.	Time (ms)	Max.	Time (ms)
Right Femur Force (N)				
X-Axis	106.6	38.7	-110.0	29.0
Y-Axis	233.0	30.8	-314.8	51.8
Z-Axis	522.7	44.6	-332.4	23.0
Right Femur Moment (N-m)				
About Longitudinal	11.0	86.3	-136.9	38.4
About Lateral	31.7	35.9	-15.3	41.8
About Vertical	5.9	21.0	-27.0	37.8

Positive Direction:

Longitudinal: Forward

Lateral: Rightward

Vertical: Downward

Negative Direction:

Longitudinal: Rearward

Lateral: Leftward

Vertical: Upward

¹ See Data Acquisition Explanations.

Table 6 Dummy Injury Criteria Data, Cont'd.

Left Rear Passenger Dummy S/N 020

Location	Positive Direction Max. Time (ms)		Negative Direction Max. Time (ms)	
Head Acceleration (g)				
Longitudinal X	17.6	180.7	-6.4	69.4
Lateral Y	76.6	57.0	-40.5	181.1
Vertical Z	9.0	182.5	-19.0	64.6
Resultant	78.1	57.0		
HIC (36 ms)	330			
Upper Neck Force (N)				
X-Axis Shear	79.0	181.4	-359.6	73.6
Y-Axis Shear	64.4	181.4	-366.0	64.0
Z-Axis Axial	573.3	182.3	-1522.3	62.6
Upper Neck Moment (N-m)				
About X-Axis	58.4	54.3	-9.8	99.0
About Y-Axis	19.8	73.7	-7.9	196.2
About Z-Axis	3.8	280.7	-14.8	55.8
Shoulder Acceleration (g)				
Longitudinal X	76.2	75.2	-47.4	94.1
Lateral Y	120.8	23.8	-135.3	35.6
Vertical Z	207.6	27.1	-197.7	92.2
Resultant	209.0	27.1		
Shoulder Force (N)				
Longitudinal X	137.1	76.1	-134.9	36.6
Lateral Y	236.3	93.8	-1349.5	50.5
Vertical Z	256.7	97.7	-635.8	57.0
Shoulder Displacement (mm)				
Lateral Y	32.6	55.5		
Upper Spine Acceleration (g)				
Longitudinal X	9.8	160.3	-17.5	54.2
Lateral Y	51.0	51.1	-6.9	159.2
Vertical Z	7.7	58.9	-3.6	29.5
Resultant	53.4	51.3		

Table 6 Dummy Injury Criteria Data, Cont'd.

Left Rear Passenger Dummy S/N 020

Location		Positive Direction Max. Time (ms)		Negative Direction Max. Time (ms)	
Spine Rib 1 Acceleration (g)					
Longitudinal	X	9.2	168.9	-17.8	67.8
Lateral	Y	41.3	48.1	-6.0	159.1
Vertical	Z	21.0	65.2	-19.5	39.6
Resultant		43.4	51.0		
Spine Rib 2 Acceleration (g)					
Longitudinal	X	8.3	37.2	-15.7	67.8
Lateral	Y	42.8	46.6	-5.6	76.5
Vertical	Z	20.3	65.1	-20.2	39.7
Resultant		44.5	46.2		
Spine Rib 3 Acceleration (g)					
Longitudinal	X	7.6	37.2	-14.0	65.0
Lateral	Y	45.5	45.6	-6.4	76.6
Vertical	Z	20.4	65.2	-20.9	39.9
Resultant		49.3	41.3		
Lower Spine Acceleration (g)					
Longitudinal	X	6.3	169.8	-12.8	76.1
Lateral	Y	53.0	41.4	-8.1	65.1
Vertical	Z	20.1	65.3	-21.0	40.1
Resultant		56.7	41.2		
Spine Rib 5 Acceleration (g)					
Longitudinal	X	5.8	168.2	-12.4	76.1
Lateral	Y	65.5	41.5	-8.5	181.8
Vertical	Z	19.9	65.2	-21.7	40.2
Resultant		68.6	41.3		
Lumbar Moment (N-m)					
Longitudinal	X	79.6	43.7	-20.0	131.4
Lateral	Y	30.1	46.3	-15.2	112.5
Vertical	Z	15.8	67.8	-16.6	179.8

Table 6 Dummy Injury Criteria Data, Cont'd.

Left Rear Passenger Dummy S/N 020

Location		Positive Direction Max. Time (ms)		Negative Direction Max. Time (ms)	
Thorax Rib 1 Acceleration (g)					
Longitudinal	X	76.4	77.3	-33.8	48.1
Lateral	Y	67.9	43.0	-48.7	76.8
Vertical	Z	49.4	54.3	-87.6	48.7
Resultant		96.8	48.6		
Thorax Rib 1 Displacement (mm)					
Lateral	Y	28.3	53.4		
Thorax Rib 2 Acceleration (g)					
Longitudinal	X	40.4	74.2	-34.3	44.1
Lateral	Y	125.8	42.6	-64.5	74.1
Vertical	Z	54.8	33.0	-51.0	44.6
Resultant		128.1	42.6		
Thorax Rib 2 Displacement (mm)					
Lateral	Y	29.8	51.9		
Thorax Rib 3 Acceleration (g)					
Longitudinal	X	26.6	55.9	-45.5	30.7
Lateral	Y	148.8	28.8	-78.1	32.2
Vertical	Z	29.9	34.6	-40.0	82.0
Resultant		151.3	28.8		
Thorax Rib 3 Displacement (mm)					
Lateral	Y	35.3	50.0		
Abdomen Rib 1 Acceleration (g)					
Longitudinal	X	80.6	41.1	-108.0	36.2
Lateral	Y	194.7	29.4	-75.1	39.3
Vertical	Z	36.3	79.5	-28.7	73.0
Resultant		194.7	29.3		
Abdomen Rib 1 Displacement (mm)					
Lateral	Y	33.2	49.1		

Table 6 Dummy Injury Criteria Data, Cont'd.

Left Rear Passenger Dummy S/N 020

Location	Positive Direction Max. Time (ms)		Negative Direction Max. Time (ms)	
Abdomen Rib 2 Acceleration (g)				
Longitudinal X	57.5	43.8	-77.1	35.1
Lateral Y	108.8	44.9	-26.5	69.8
Vertical Z	32.7	46.5	-41.4	70.1
Resultant	123.3	35.4		
Abdomen Rib 2 Displacement (mm)				
Lateral Y	20.9	48.4		
Pelvis Acceleration (g)				
Longitudinal X	12.2	50.3	-19.9	46.2
Lateral Y	76.1	34.0	-7.4	57.0
Vertical Z	8.3	48.8	-10.3	32.2
Resultant	77.0	34.0		
Left Acetabulum Force (N)				
Lateral Y	2756.6	35.3	-2.2	95.2
Left Illiac Wing Force (N)				
Lateral Y	667.9	41.4	-78.6	59.4
Pelvis Force Summation (N)				
Lateral Y	3,182	36.6		
Left Femur Force (N)				
X-Axis	248.6	42.6	-123.8	55.6
Y-Axis	112.4	65.1	-1359.1	46.4
Z-Axis	920.7	54.2	-926.4	35.8
Left Femur Moment (N-m)				
About Longitudinal	155.2	35.9	-22.6	51.8
About Lateral	24.7	64.0	-61.4	36.7
About Vertical	89.6	42.8	-4.1	152.9

Table 6 Dummy Injury Criteria Data, Cont'd.

Left Rear Passenger Dummy S/N 020

Location	Positive Direction		Negative Direction	
	Max.	Time (ms)	Max.	Time (ms)
Right Femur Force (N)				
X-Axis	18.7	34.1	-574.7	47.1
Y-Axis	753.3	47.1	-248.3	43.4
Z-Axis	997.3	41.1	-61.0	187.6
Right Femur Moment (N-m)				
About Longitudinal	135.6	51.4	-62.0	35.4
About Lateral	45.1	55.4	-19.9	152.0
About Vertical	83.6	50.7	-24.5	151.3

Positive Direction:

Longitudinal: Forward

Lateral: Rightward

Vertical: Downward

Negative Direction:

Longitudinal: Rearward

Lateral: Leftward

Vertical: Upward

Table 7 Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Side curtain airbag, Head restraint	Side curtain airbag, head restraint
Shoulder	Side torso airbag	Door panel
Abdomen	Side torso airbag, door panel	None
Left knee	Door panel	Door panel
Right knee	None	None

Door opening:

	<u>Left</u>	<u>Right</u>
Front	Jammed and latched	Easy
Rear	Jammed and latched	Easy

Seat movement:

	<u>Seat back failure</u>	<u>Seat shift</u>
Left Front	None	None
Left Rear	None	None

Glazing damage: Impacted side windows broken

Other notable impact effects: None

Section 4.0

Occupant, Vehicle, Camera, and Barrier Information

Table 8 Vehicle Structural Measurements^{1,2}

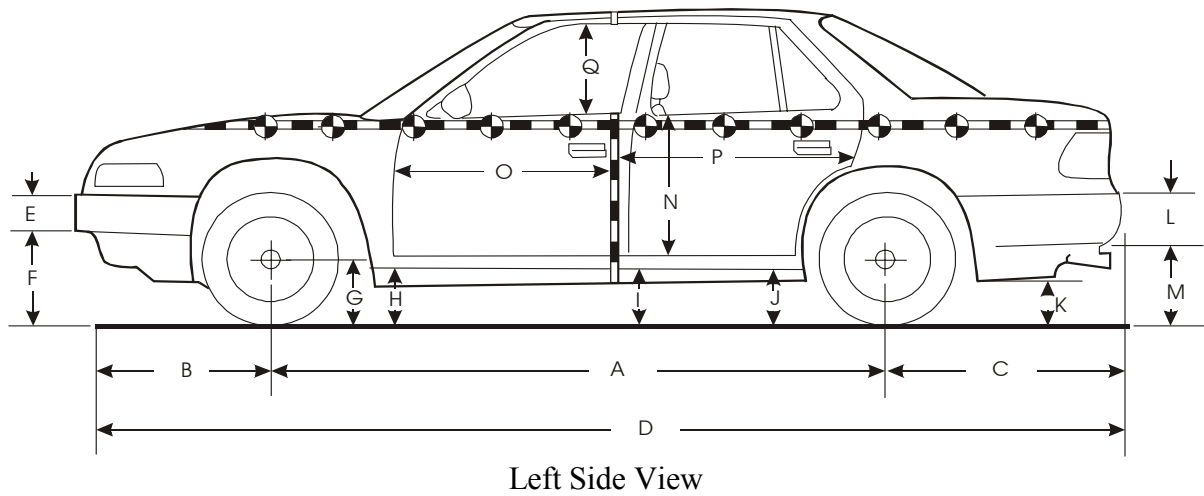
	Elements	Pre-Test
1	Total Length	4530
2	Total Width	1700
3	Bumper Top Height	529
4	Bumper Bottom Height	429
5	Longitudinal Member Top Height	559
6	Longitudinal Member Bottom Height	409
7	Distance Between Longitudinal Members	1014
7'	Longitudinal Member Width	65
8	Engine Top Height	811
9	Engine Bottom Height	184
10	Engine and Gearbox Width	790
11	Front Bumper - Engine Distance	485
12	Front Shock Absorber Fixing Height	862
13	Bonnet Leading Edge Height	759
14	Front Shock Absorber Fixing Width	1140
15	Front Bumper - Front Axle Distance	950
16	Front Axle - A Pillar Distance	465
17	A Pillar - B Pillar Distance	991
18	B Pillar - Rear Axle Distance	1150
19	B Pillar - C Pillar Distance	966
20	Roof Sill Bottom Height	1365
21	Roof Sill Top Height	1387
22	Floor Sill Bottom Height	309
23	Floor Sill Top Height	334

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.

² The vertical measurements from the ground are adjusted based on the test vehicle’s pre-test attitude measurements.

Figure 3 Pre-Test And Post-Test Measurement Points



Note: All dimensions are in millimeters with tolerance of ± 3 mm

Code	Measurement Description	Pre-Test	Post-Test	Change
A	Wheelbase	2600	2599	1
B	Front Axle to Front Surface of Vehicle	950	915	35
C	Rear Axle to Rear Surface of Vehicle	980	958	22
D	Total Length at Centerline	4530	4520	10
E	Front Bumper Thickness	150	150	0
F	Front Bumper Bottom to Ground	410	432	22
G	Sill Height at Front Wheel Well	299	299	0
H	Sill Height at Front Door Leading Edge	247	278	-31
I	Sill Height at "B" Pillar	245	313	-68
J1	Sill Height at Rear Wheel Well	186	232	-46
J2	Pinch Weld Height at Rear Wheel Well	238	306	-68
K	Sill Height Aft of Rear Wheel Well	315	254	-61
L	Rear Bumper Thickness	184	184	0
M	Rear Bumper Bottom to Ground	470	396	74
N	Sill Height to Window Bottom Sill	720	635	85
O	Front Door Leading Edge to Impact CL	772	766	6
P	Rear Door Trailing Edge to Impact CL	1235	1234	1
Q	Front Window Opening	403	309	94
R	Right Side Length	4350	4367	-17
S	Left Side Length	4355	4345	10
T	Vehicle Width at "B" Post	1326	1206	120

D = Length at centerline

E&L = Bumper Thickness

R = Right Side Length

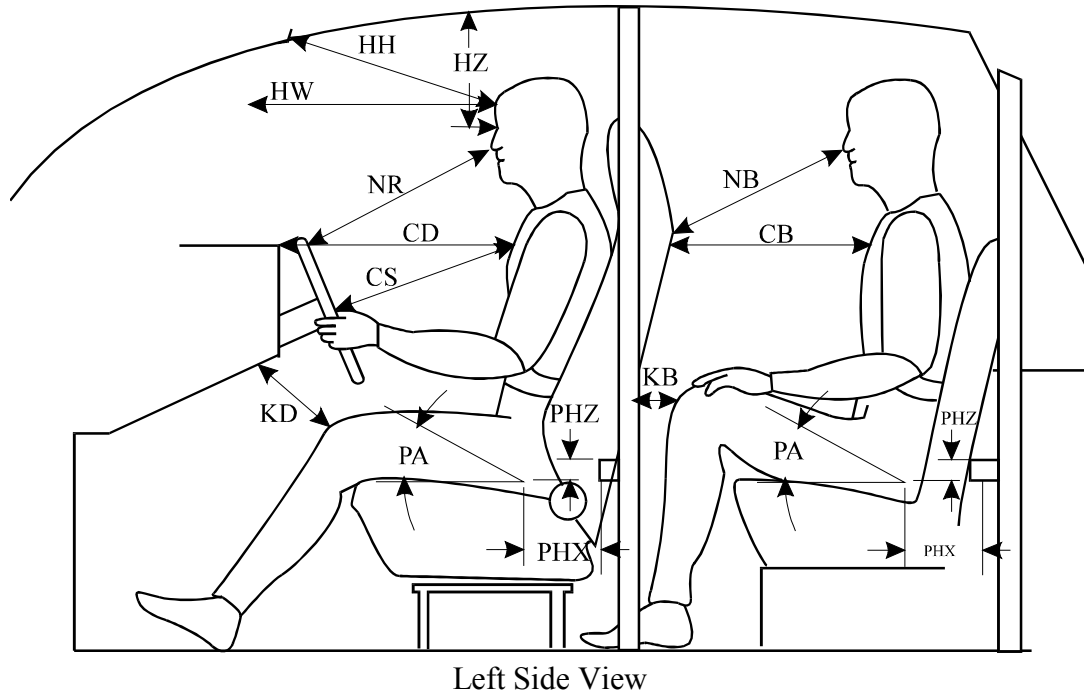
S = Left Side Length

T = Width at B-pillar

J1 = To Pinch Weld

J2 = To Sill

Figure 4 SID-IIs Longitudinal Clearance Dimensions



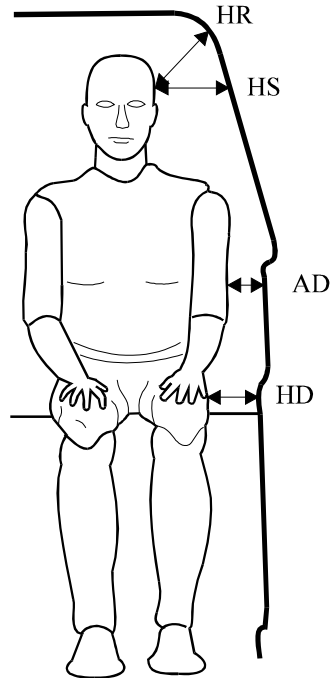
Note: All measurements were recorded using TRC Inc.'s FARO Arm with a tolerance of ± 0.1 mm.

Measurement	Driver SID-IIs # 056	Left Rear Pass. SID-IIs # 020
HH	196	N/A
HW	494	N/A
HZ	162	N/A
NR/NB	217	861
CD/CB	N/A ¹	837
CS	160	N/A
KDL(KDA°)/KBL(KBA°)	16/(43.0°)	395/(3.5°)
KDR(KDA°)/KBR(KBA°)	37/(5.6°)	392/(2.5°)
PA°	20.5°	19.8°
PHX	348	291
PHZ	199	319

Note: 2-door vehicle shown. Rear dummy PHX and PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

¹ Measurement point not recorded.

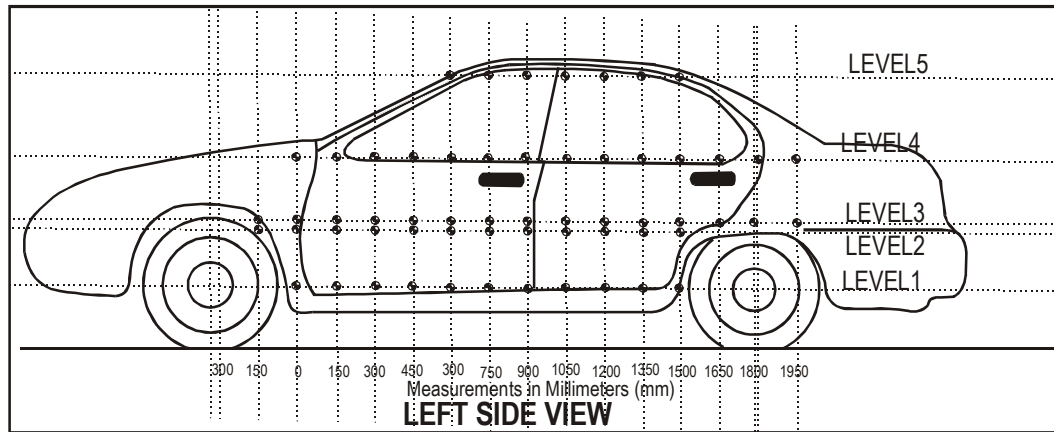
Figure 5 SID-IIs Lateral Clearance Dimensions



Note: All measurements were recorded using TRC Inc.'s FARO Arm with a tolerance of ± 0.1 mm.

Measurement	Driver SID-IIs # 056	Left Rear Pass. SID-IIs # 020
HR	207	260
HS	319	358
AD	149	141
HD	180	204

Figure 6 Vehicle Side Measurements



Level 5 - Window Top

Level 4 - Window Sill

Level 3 - Mid-Door

Level 2 - Occupant H-Point

Level 1 - Axle Centerline Height or Sill Top Height

Measurements Are Taken When The Vehicle Is In The “As Tested” Configuration.

Measurements along the vertical 750 mm line shown above:

Level 5 @ Window Top	=	<u>1428</u>	mm
Level 4 @ Window Sill	=	<u>924</u>	mm
Level 3 @ Mid Door	=	<u>650</u>	mm
Level 2 @ Occupant H-Point	=	<u>610</u>	mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>291</u>	mm

Table 9 Vehicle Exterior Crush Profiles - All Levels

Location	Height		(mm) From Impact Point													
			-1200	-1050	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750
Level 1 Side Sill	291	Pre	---	---	---	---	---	---	---	---	801	799	798	798	797	796
		Post	---	---	---	---	---	---	---	---	756	728	727	727	726	725
		Crush	---	---	---	---	---	---	---	---	45	71	71	71	71	71
Level 2 H-Point	610	Pre	---	---	---	---	---	---	---	844	839	836	836	836	837	838
		Post	---	---	---	---	---	---	---	822	774	666	666	665	681	687
		Crush	---	---	---	---	---	---	---	22	65	170	170	171	156	151
Level 3 Mid-Door	650	Pre	---	---	---	802	837	---	---	844	839	837	837	838	839	840
		Post	---	---	---	796	833	---	---	823	783	664	687	681	704	714
		Crush	---	---	---	6	4	---	---	21	56	173	150	157	135	126
Level 4 Window Sill	924	Pre	---	---	---	689	719	743	758	770	776	783	789	794	798	802
		Post	---	---	---	685	716	739	753	760	756	752	727	703	731	773
		Crush	---	---	---	4	3	4	5	10	20	31	62	91	67	29
Level 5 Window Top	1428	Pre	---	---	---	---	---	---	---	---	---	---	---	---	---	546
		Post	---	---	---	---	---	---	---	---	---	---	---	---	---	554
		Crush	---	---	---	---	---	---	---	---	---	---	---	---	---	-8

All measurements were recorded using TRC Inc.'s FARO Arm with a tolerance of ± 0.1 mm.

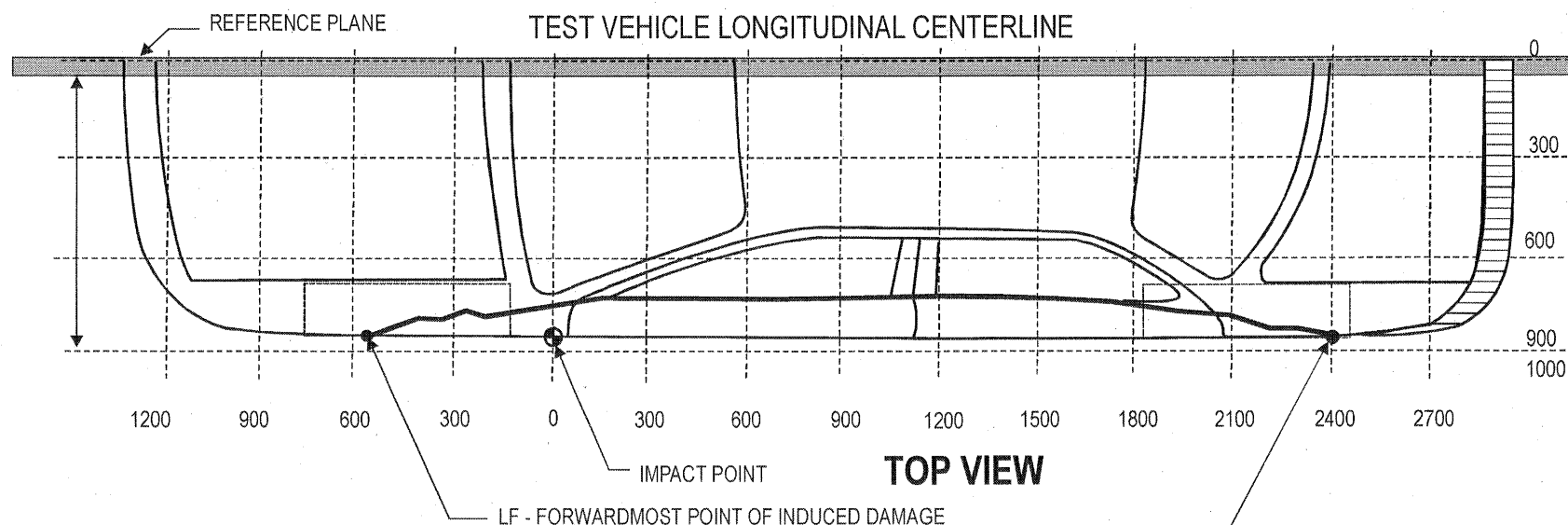
Table 9 Vehicle Exterior Crush Profiles - All Levels, Cont'd.

Location	Height		(mm) From Impact Point												
			900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700
Level 1 Side Sill	91	Pre	795	793	792	791	790	789	789	---	---	---	---	---	---
		Post	724	727	724	731	743	761	795	---	---	---	---	---	---
		Crush	71	66	68	60	47	28	-6	---	---	---	---	---	---
Level 2 H-Point	610	Pre	838	839	837	835	833	832	832	838	---	---	---	819	800
		Post	716	747	652	657	668	676	713	768	---	---	---	---	---
		Crush	122	92	185	178	165	156	119	70	---	---	---	---	---
Level 3 Mid-Door	650	Pre	840	841	838	837	835	833	833	837	---	---	---	818	801
		Post	742	754	675	681	688	684	721	777	---	---	---	---	---
		Crush	98	87	163	156	147	149	112	60	---	---	---	---	---
Level 4 Window Sill	924	Pre	805	809	811	812	813	814	813	828	809	805	798	789	775
		Post	815	860	701	700	702	721	775	816	809	835	854	853	850
		Crush	-10	-51	110	112	111	93	38	12	0	-30	-56	-64	-75
Level 5 Window Top	1428	Pre	552	555	559	563	566	568	570	564	---	---	---	---	---
		Post	561	564	570	578	586	597	608	610	---	---	---	---	---
		Crush	-9	-9	-11	-15	-20	-29	-38	-46	---	---	---	---	---

All measurements were recorded using TRC Inc.'s FARO Arm with a tolerance of ± 0.1 mm.

Figure 7 Vehicle Damage Profile Distances

NOTE: All measurements were recorded using TRC Inc.'s FARO Arm with a tolerance of plus or minus 0.1 mm.



MEASUREMENT CONVENTIONS:

Forward of the impact point (towards front of vehicle) is considered negative (-)

Rearward of the impact point (towards rear end of vehicle) is considered positive (+)

DPD Measurements	Pre-Test (mm)	Post-Test (mm)	Static Crush (mm)
6: LF = -150 mm (Level 2)	844	822	22
5: 300 mm (Level 2)	836	666	170
4: 750 mm (Level 2)	838	687	151
3: 1200 mm (Level 2)	837	652	185
2: 1500 mm (Level 2)	833	668	165
1: LR = 1950 mm (Level 2)	838	768	70

Full length of induced damage was 2100 mm.

Figure 8 Exterior Static Crush For Impactor Face

(Grid as looking at MDB from front)

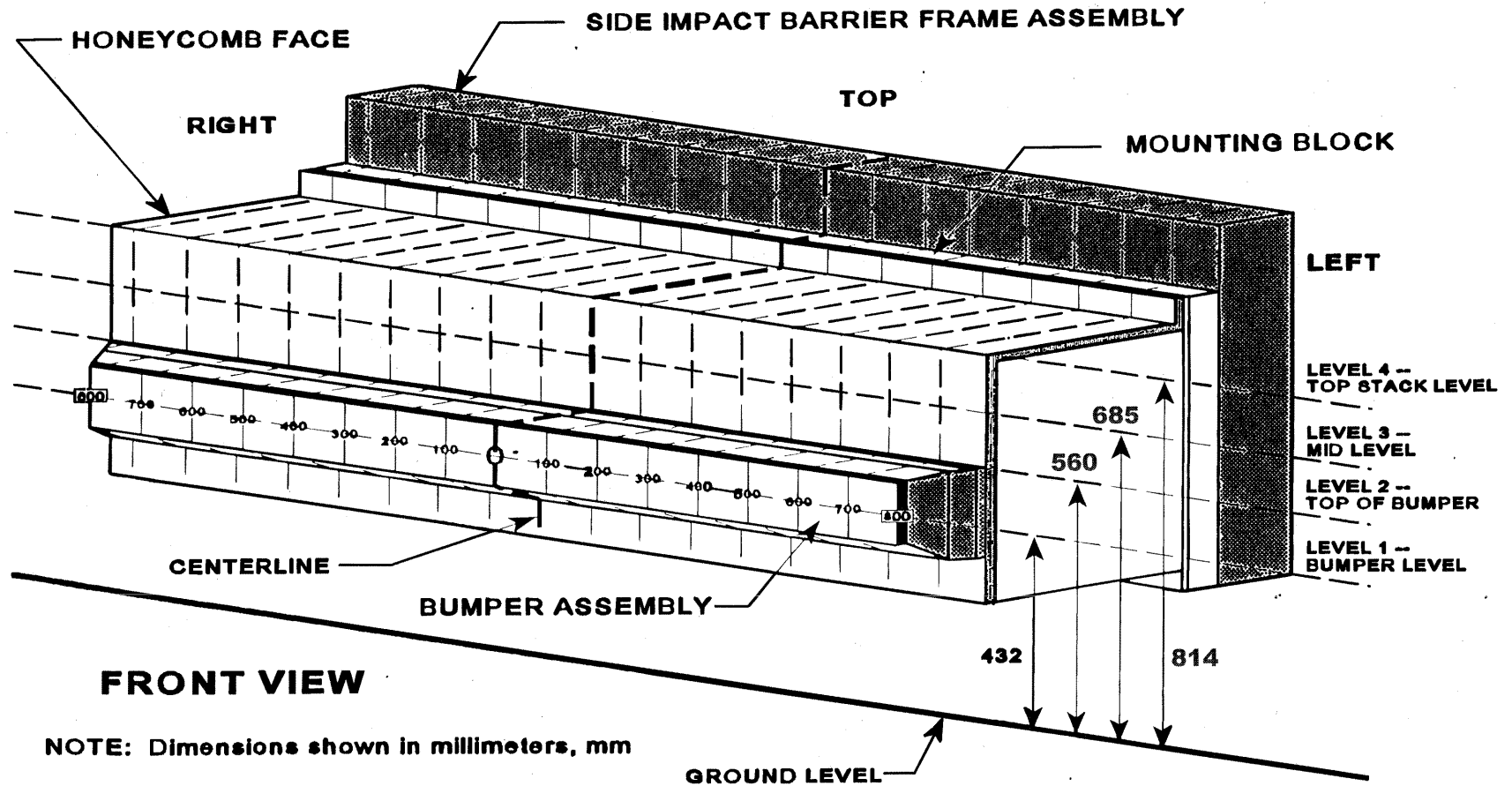


Table 10 Exterior Static Crush For Impactor Face

		Distance Right of Center (mm)										Distance Left of Center (mm)							
Location	Height At CL	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800	
Top Stack Level - Level D	814	-42	-8	6	9	5	-6	-33	-24	-5	-5	0	0	-2	-7	-20	-43	-98	
Mid Level Level C	685	-20	2	2	2	0	-2	-8	-9	-2	-4	-7	-5	-5	-10	-8	-11	-42	
Top Bumper Level-Level B	560	-24	-20	-17	-12	-14	-14	-15	-14	-14	-13	-13	-11	-14	-16	-17	-19	-22	
Mid Bumper Level - Level A	432	-79	-75	-71	-70	-68	-68	-67	-66	-65	-66	-66	-66	-67	-67	-68	-69	-72	

All measurements were recorded using TRC Inc.'s FARO Arm with a tolerance of ± 0.1 mm.

Table 11 Deformable Barrier Face Profiles

Deformable Barrier Face Profile

Level D - Top Stack

Pre-Test

Index	Xmm	Ymm	Zmm
1	-384	803	-52
2	-384	704	-52
3	-384	604	-53
4	-385	504	-53
5	-385	404	-54
6	-385	304	-54
7	-385	203	-53
8	-385	103	-53
9	-385	3	-53
10	-385	-97	-53
11	-385	-196	-54
12	-385	-296	-53
13	-385	-396	-54
14	-385	-496	-54
15	-385	-596	-54
16	-384	-695	-53
17	-385	-796	-54

Post-Test

Index	Xmm	Ymm	Zmm
1	-343	786	-92
2	-376	692	-90
3	-390	593	-87
4	-393	493	-84
5	-389	393	-83
6	-379	293	-82
7	-352	196	-83
8	-360	95	-80
9	-379	-3	-76
10	-380	-103	-74
11	-385	-202	-70
12	-384	-302	-67
13	-383	-402	-64
14	-378	-502	-61
15	-365	-601	-59
16	-341	-698	-59
17	-287	-780	-72

Difference

Index	Xmm	Ymm	Zmm
1	-42	17	41
2	-8	12	37
3	6	10	34
4	9	11	31
5	5	11	29
6	-6	11	28
7	-33	8	31
8	-24	8	27
9	-5	6	23
10	-5	7	21
11	0	6	17
12	0	6	13
13	-2	6	10
14	-7	6	7
15	-20	5	5
16	-43	2	5
17	-98	-16	18

Table 11 Deformable Barrier Face Profiles, Cont'd.

Deformable Barrier Face Profile Cont'd.

Level C - Mid Level

Pre-Test			
Index	Xmm	Ymm	Zmm
18	-384	803	-182
19	-384	705	-182
20	-384	604	-182
21	-384	504	-183
22	-384	404	-183
23	-384	305	-183
24	-384	204	-183
25	-384	103	-183
26	-384	4	-183
27	-385	-97	-183
28	-385	-196	-184
29	-385	-297	-184
30	-385	-397	-183
31	-384	-496	-184
32	-384	-596	-183
33	-384	-696	-183
34	-384	-796	-183

Post-Test			
Index	Xmm	Ymm	Zmm
18	-364	787	-216
19	-386	691	-213
20	-386	590	-212
21	-386	491	-212
22	-384	391	-212
23	-382	292	-211
24	-376	191	-210
25	-375	93	-208
26	-382	-6	-205
27	-381	-107	-203
28	-378	-206	-199
29	-380	-307	-197
30	-380	-407	-193
31	-374	-506	-190
32	-377	-606	-187
33	-374	-706	-184
34	-342	-798	-188

Difference			
Index	Xmm	Ymm	Zmm
18	-20	16	35
19	2	14	31
20	2	13	30
21	2	13	29
22	0	13	29
23	-2	13	28
24	-8	12	27
25	-9	11	26
26	-2	10	22
27	-4	10	19
28	-7	10	16
29	-5	10	13
30	-5	10	10
31	-10	10	7
32	-8	10	4
33	-11	10	0
34	-42	2	5

Table 11 Deformable Barrier Face Profiles, Cont'd.

Deformable Barrier Face Profile Cont'd.

Level B - Top of Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
35	-384	804	-307
36	-384	705	-308
37	-384	605	-308
38	-384	505	-308
39	-384	406	-308
40	-384	305	-308
41	-384	205	-307
42	-385	105	-308
43	-385	4	-309
44	-384	-95	-307
45	-384	-195	-307
46	-384	-296	-308
47	-384	-396	-308
48	-384	-495	-309
49	-384	-596	-308
50	-384	-695	-308
51	-384	-795	-308

Post-Test

Index	Xmm	Ymm	Zmm
35	-360	791	-328
36	-364	692	-331
37	-367	591	-333
38	-372	492	-333
39	-370	392	-335
40	-370	291	-335
41	-370	191	-334
42	-371	91	-332
43	-371	-9	-330
44	-371	-109	-326
45	-371	-209	-323
46	-373	-309	-317
47	-370	-410	-317
48	-369	-510	-313
49	-367	-609	-310
50	-365	-710	-307
51	-362	-809	-303

Difference

Index	Xmm	Ymm	Zmm
35	-24	13	21
36	-20	13	24
37	-17	14	25
38	-12	13	25
39	-14	14	27
40	-14	14	27
41	-15	14	26
42	-14	14	24
43	-14	13	20
44	-13	14	18
45	-13	14	15
46	-11	13	10
47	-14	14	9
48	-16	15	5
49	-17	13	2
50	-19	14	-1
51	-22	14	-5

Table 11 Deformable Barrier Face Profiles, Cont'd.

Deformable Barrier Face Profile Cont'd.

Level A - Mid Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
52	-478	793	-437
53	-486	696	-436
54	-486	596	-436
55	-486	497	-436
56	-486	397	-436
57	-486	297	-436
58	-487	196	-437
59	-487	97	-437
60	-487	-4	-438
61	-487	-103	-438
62	-487	-203	-438
63	-487	-303	-438
64	-487	-403	-439
65	-486	-504	-439
66	-486	-604	-439
67	-486	-703	-440
68	-470	-800	-442

Post-Test

Index	Xmm	Ymm	Zmm
52	-399	779	-465
53	-411	681	-465
54	-415	581	-464
55	-417	482	-463
56	-418	381	-462
57	-419	281	-460
58	-420	180	-459
59	-421	81	-457
60	-422	-29	-455
61	-420	-119	-457
62	-421	-219	-454
63	-420	-320	-453
64	-420	-419	-452
65	-419	-520	-451
66	-418	-620	-450
67	-417	-719	-448
68	-398	-816	-444

Difference

Index	Xmm	Ymm	Zmm
52	-79	15	28
53	-75	15	30
54	-71	15	28
55	-70	15	27
56	-68	15	25
57	-68	15	24
58	-67	16	22
59	-66	16	21
60	-65	25	17
61	-66	16	19
62	-66	16	16
63	-66	16	15
64	-67	16	14
65	-67	16	12
66	-68	16	10
67	-69	16	9
68	-72	16	3

Figure 9 Deformable Barrier Face Profiles

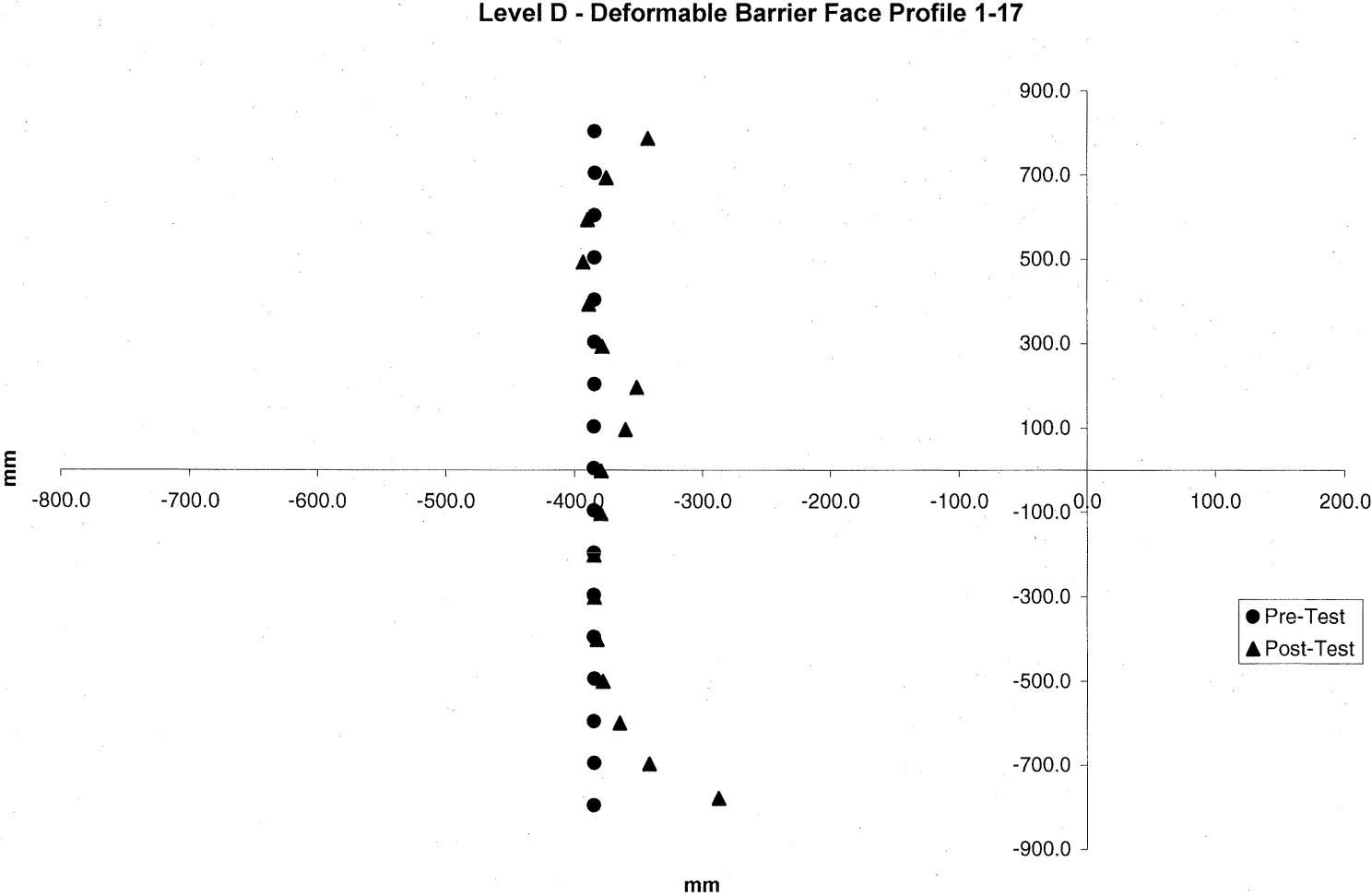


Figure 9 Deformable Barrier Face Profiles, Cont'd.

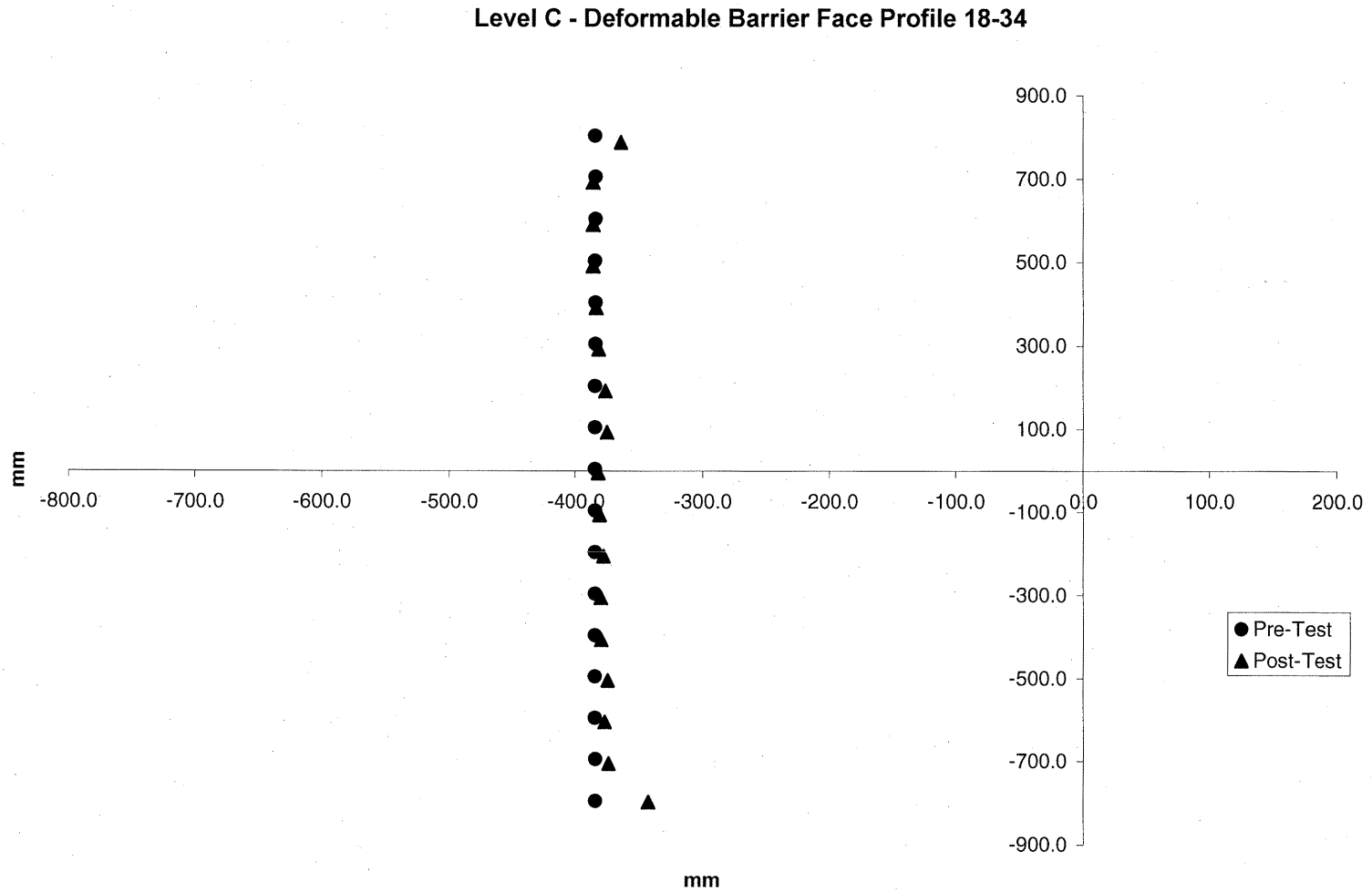


Figure 9 Deformable Barrier Face Profiles, Cont'd.

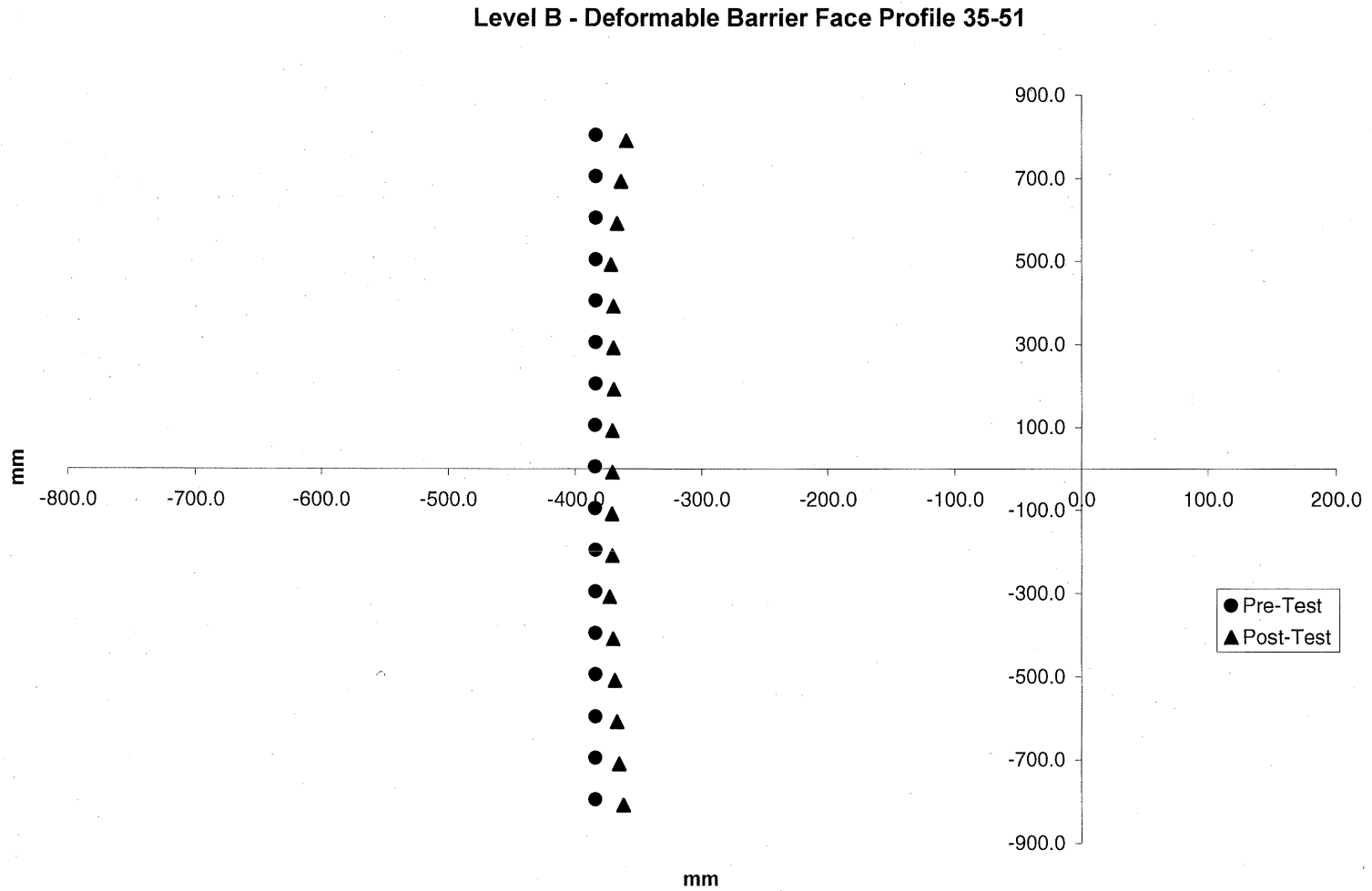


Figure 9 Deformable Barrier Face Profiles, Cont'd.

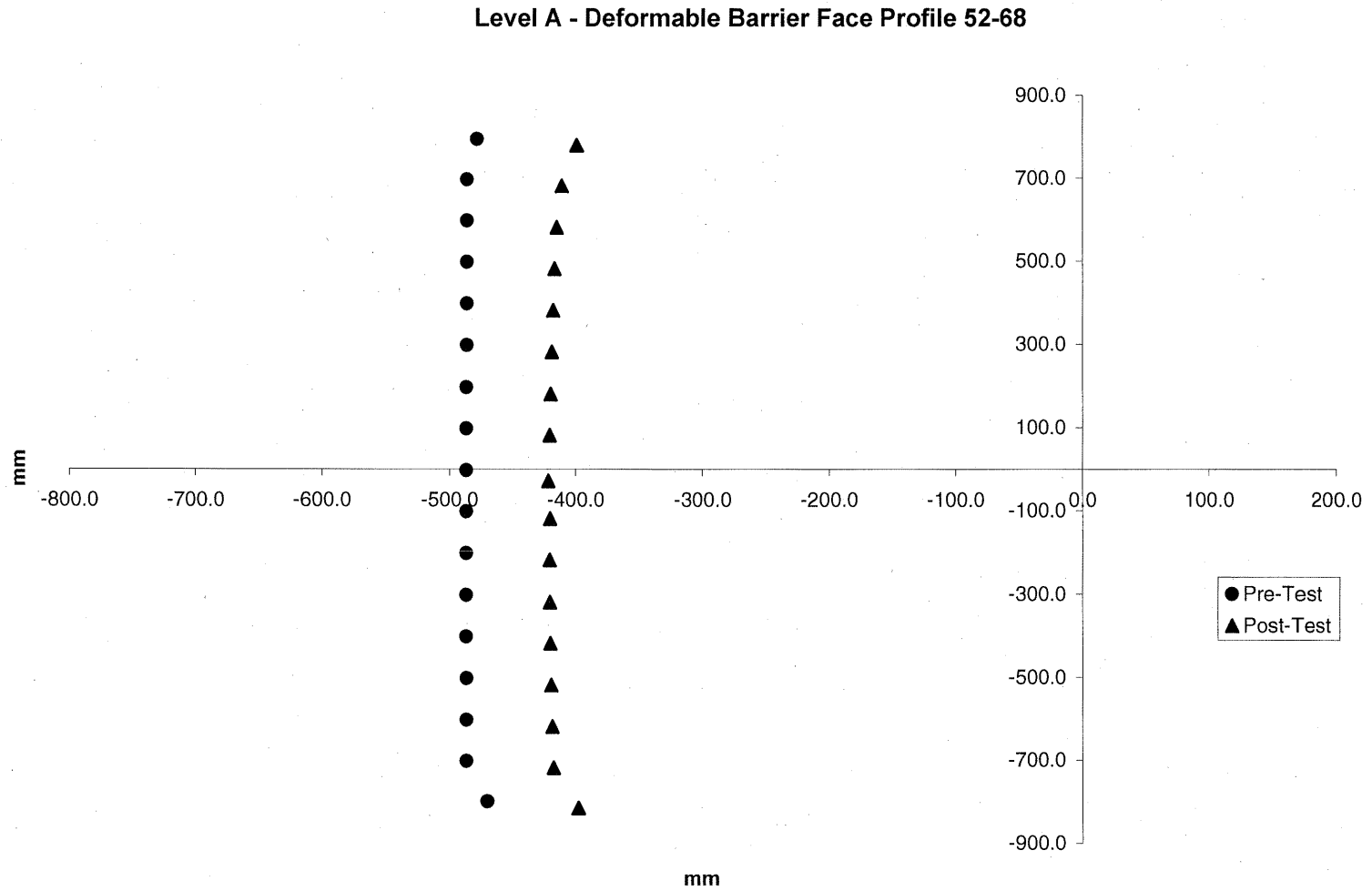
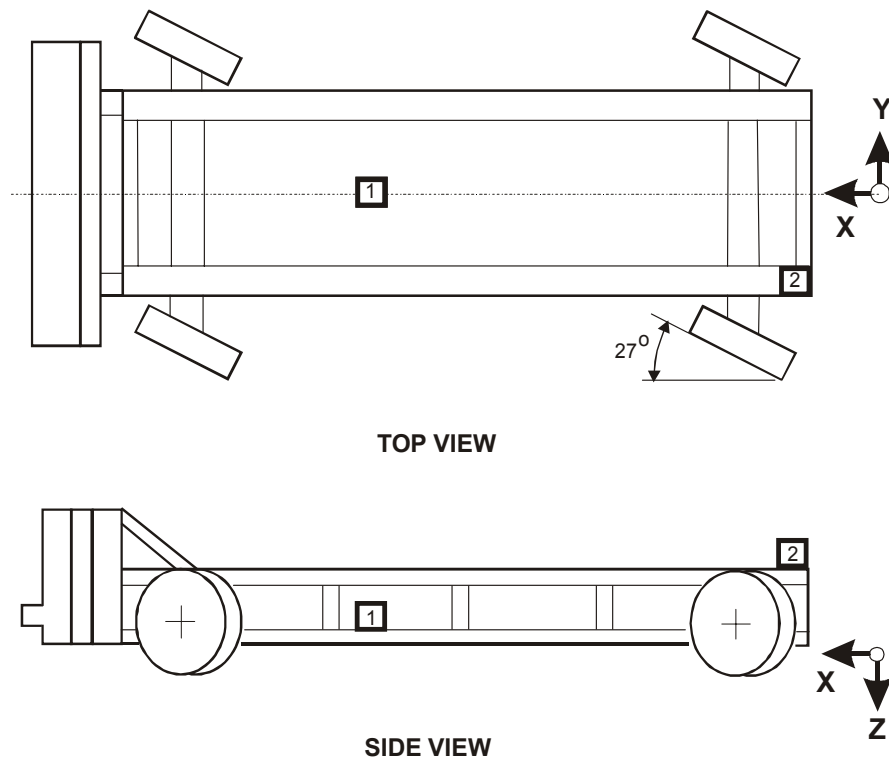


Figure 10 MDB Accelerometer Locations and Data Summary



Accel. No.	Location	Coordinates (millimeters)			Positive Direction		Negative Direction	
		X*	Y*	Z*	Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	MDB Center of Gravity	1853	0	-519				
	Longitudinal X				2.1	92.2	-18.4	39.8
	Lateral Y				2.9	55.8	-6.7	31.0
	Vertical Z				7.0	52.2	-4.3	20.9
	Resultant R				19.3	38.9		
2	Rear Frame Member	411	-738	-628				
	Longitudinal X				1.5	87.2	-20.6	37.4
	Lateral Y				2.0	34.6	-2.5	55.2

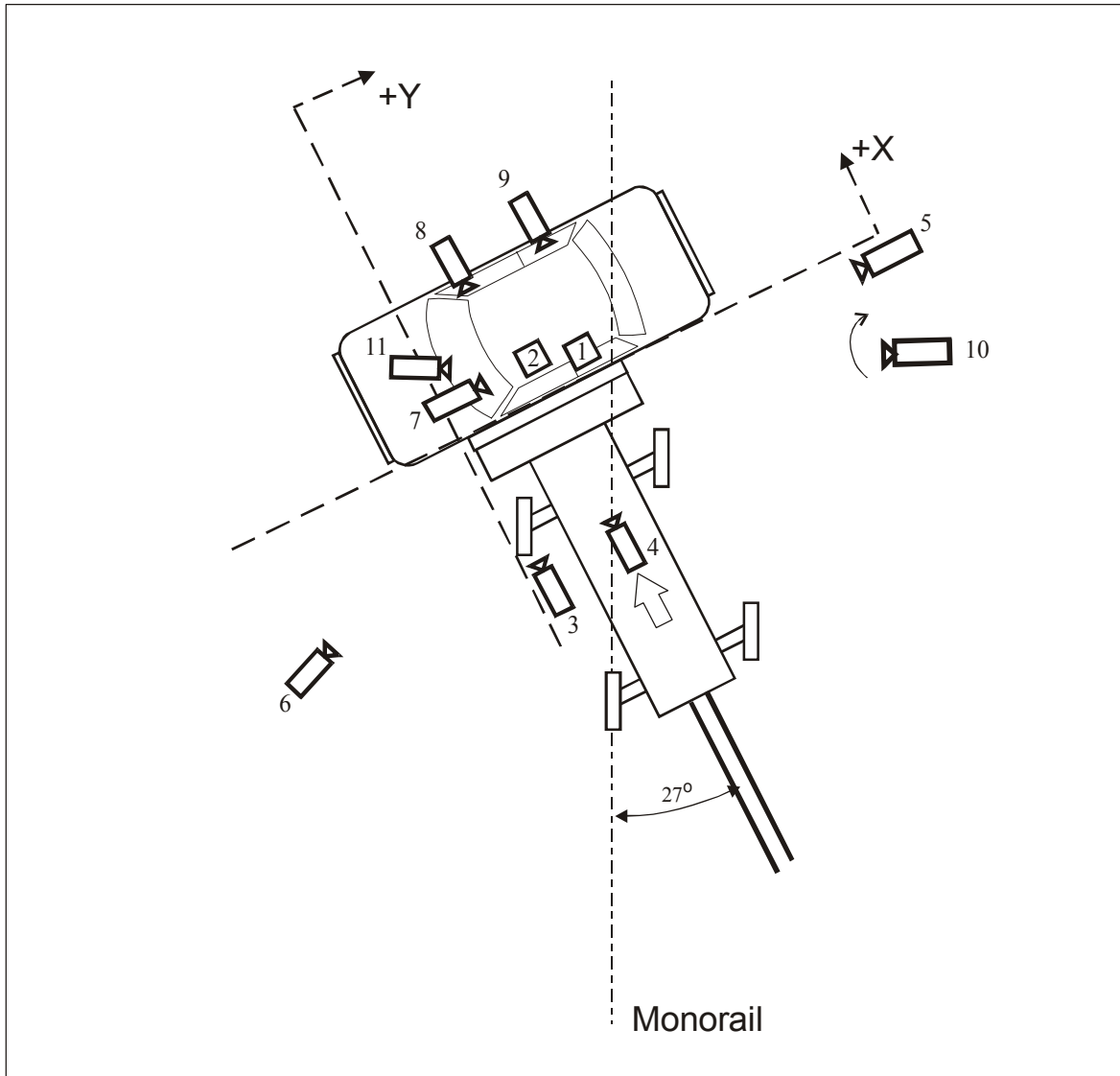
*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Down)

All measurements accurate to within ± 3 mm.

Figure 11 Camera Positions



Impact
Area

Table 12 Camera Information

Camera Number	Location	Location, mm			Angle (deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Overhead wide	250	2150	-5750	-77.5	12.5	1000
2	Overhead tight	370	1800	-5750	-85.5	50	1000
3	Onboard MDB left side	-1750	-40	-720	-0.5	13	1000
4	Onboard MDB center	-2480	830	-1353	-5.2	25	1000
5	Right wide	0	7950	-975	2.4	12.5	1000
6	Left quarter wide	-2130	-4700	-1020	4.1	25	1000
7	Onboard vehicle front	450	-1400	-1200	3.6	25	1000
8	Onboard side front door	1600	0	-1140	12.1	12.5	1000
9	Onboard side rear door	1600	850	-1140	12.2	12.5	1000
10	Real-time Panning-Video	N/A	N/A	N/A	N/A	Zoom	24
11	Onboard vehicle driver hip	750	-1250	-1620	30.7	50	1000

+X: Forward (referenced to MDB) from impact point

+Y: Rightward (referenced to MDB) from impact point

+Z: Downward from ground level

Appendix A

Photographs

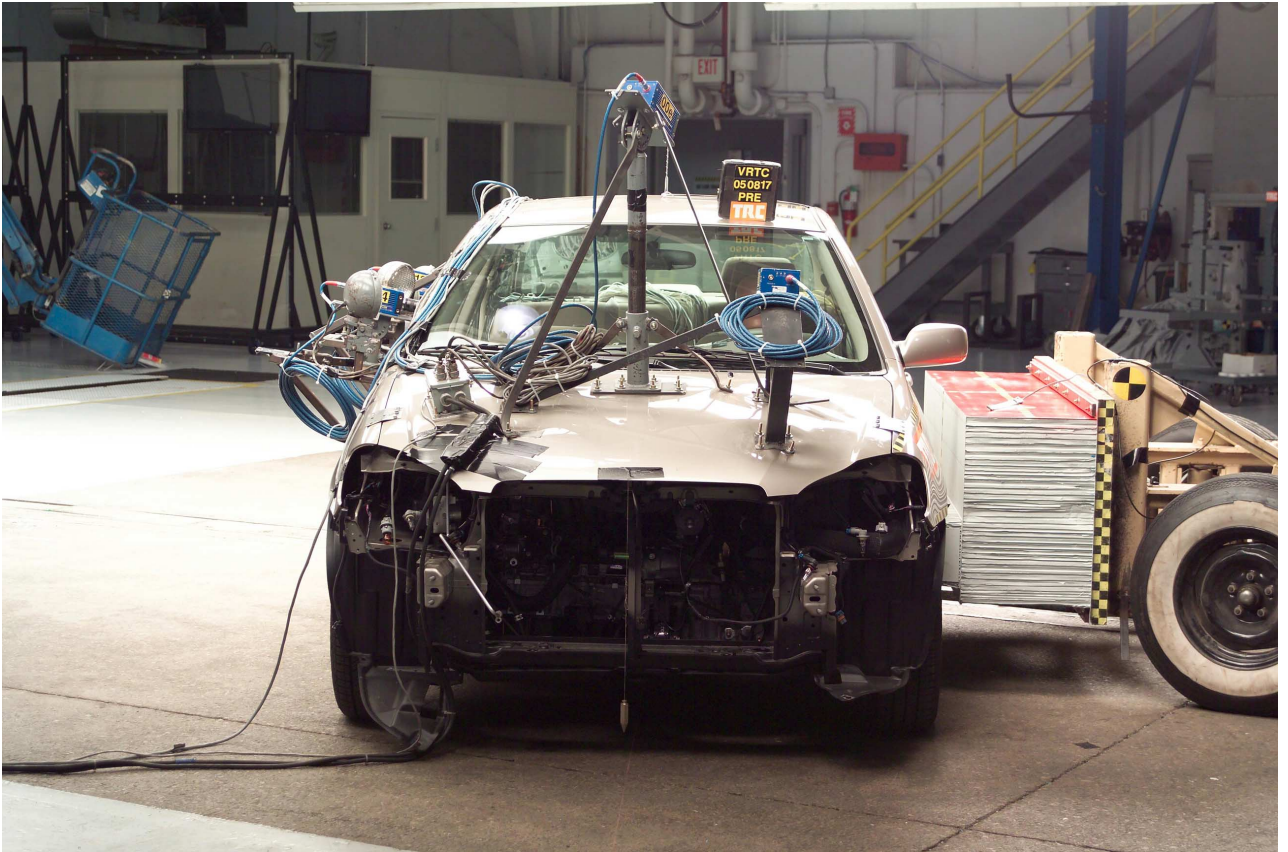


Figure A-1 Pre-Test Front View

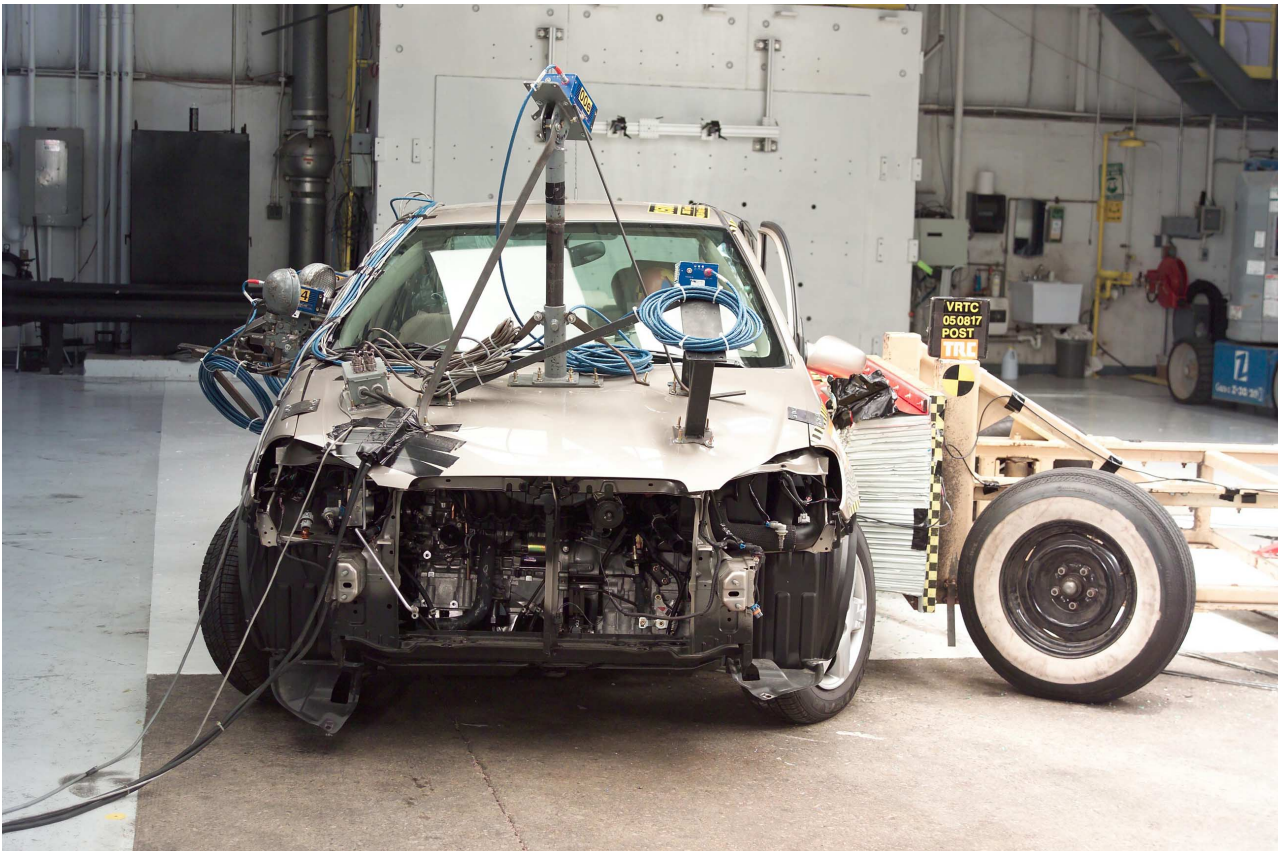


Figure A-2 Post-Test Front View



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 Left Rear View



Figure A-8 Post-Test Left Rear View



Figure A-9 Pre-Test Rear View



Figure A-10 Post-Test Rear View



Figure A-11 Pre-Test Right Rear View



Figure A-12 Post-Test Right Rear View



Figure A-13 Pre-Test Right Side View



Figure A-14 Post-Test Right Side View

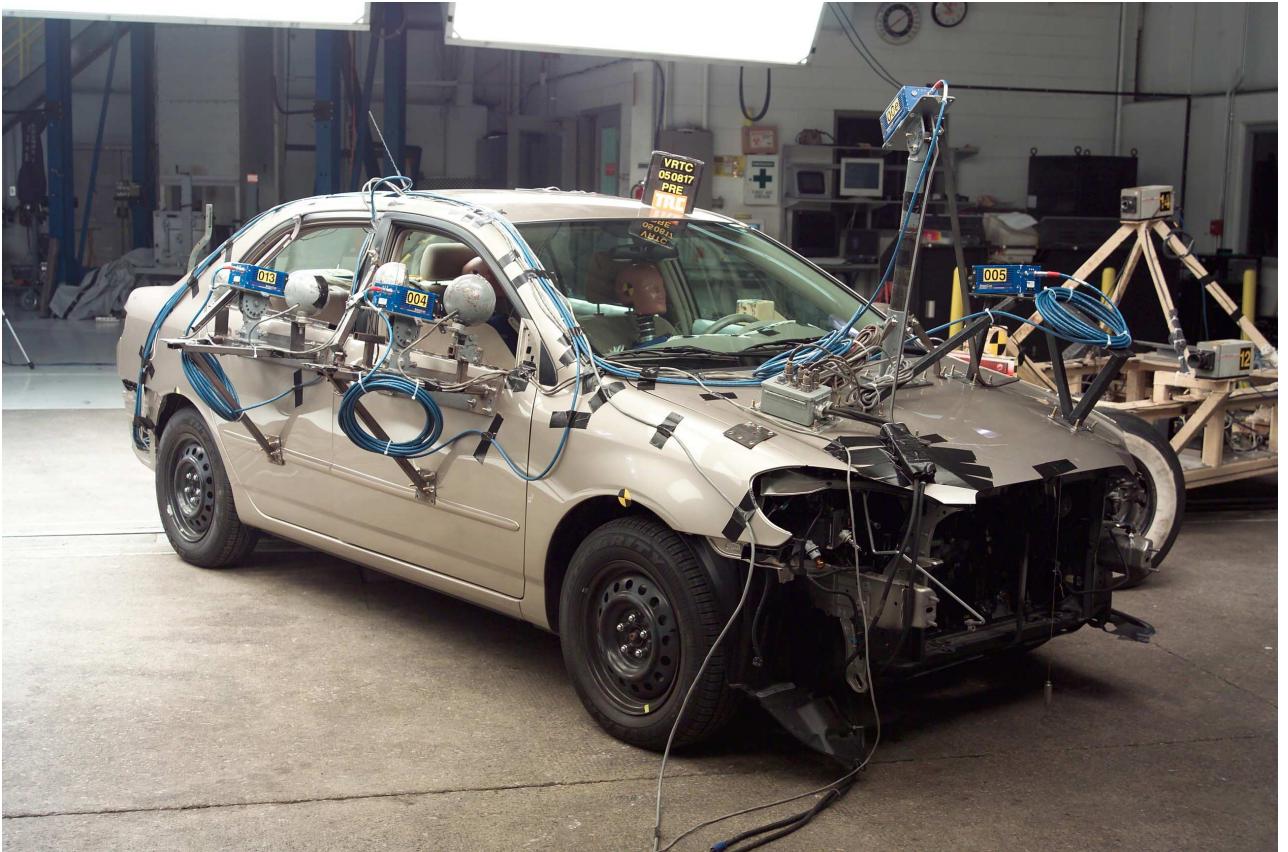


Figure A-15 Pre-Test Right Front View



Figure A-16 Post-Test Right Front View

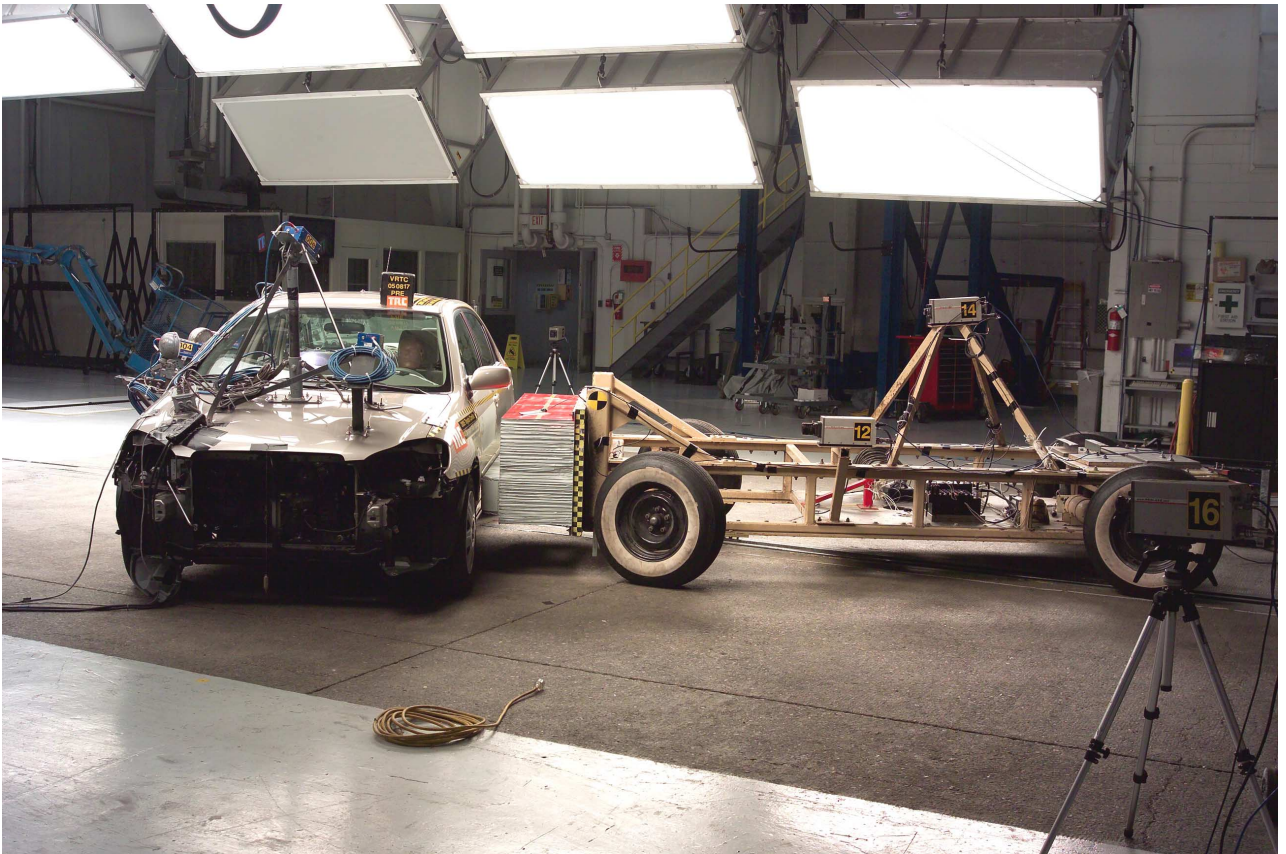


Figure A-17 Pre-Test Front View with MDB in Position



Figure A-18 Post-Test Front View with MDB in Position

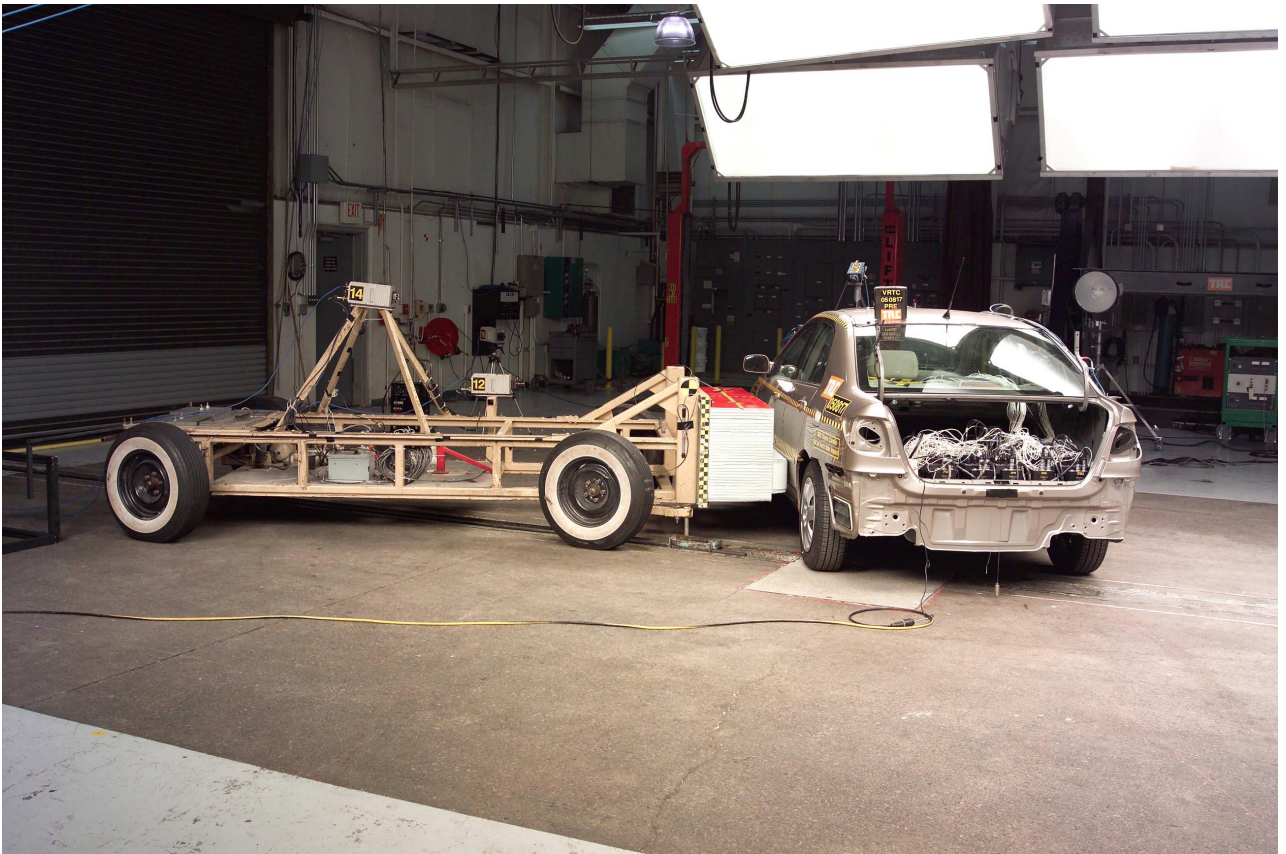


Figure A-19 Pre-Test Rear View with MDB in Position

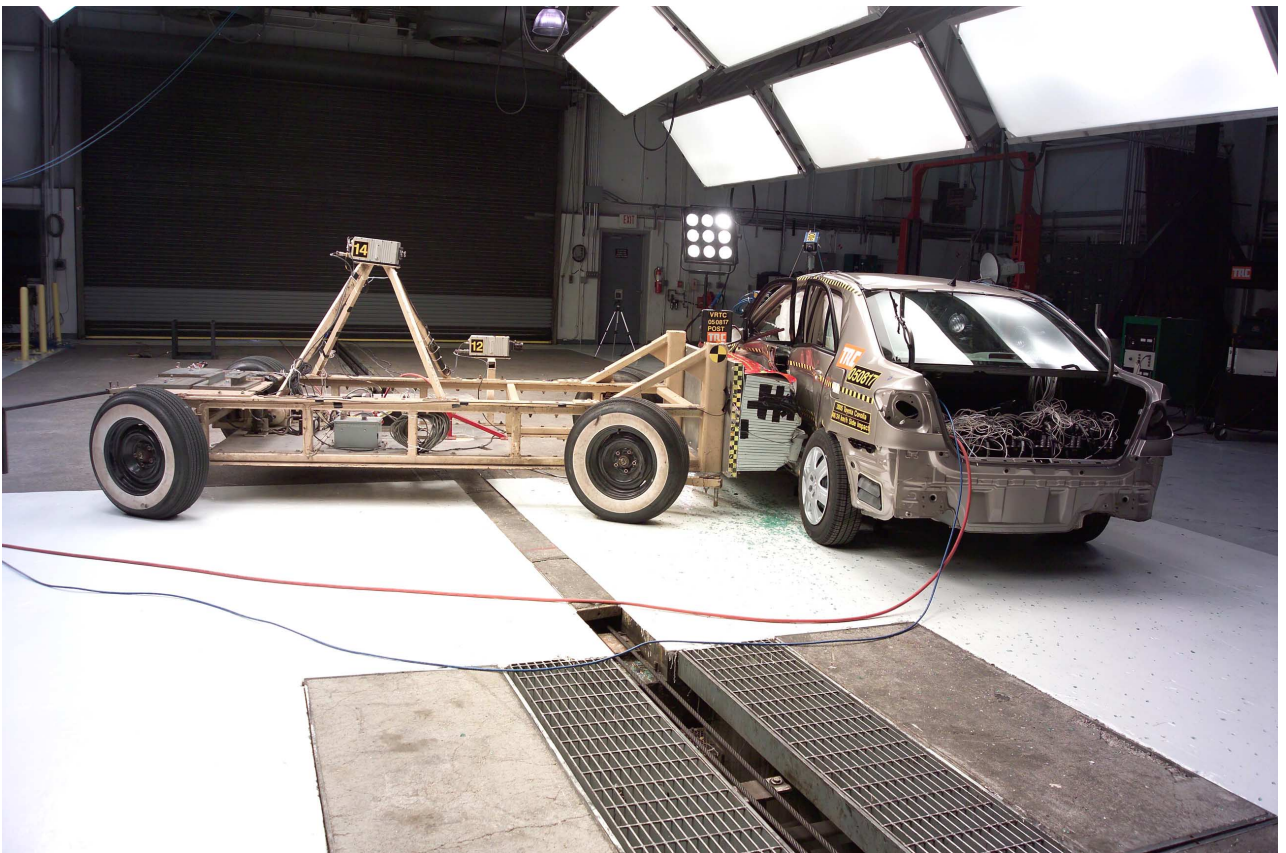


Figure A-20 Post-Test Rear View with MDB in Position



Figure A-21 Pre-Test Left Side View of MDB with Impactor Face in Position

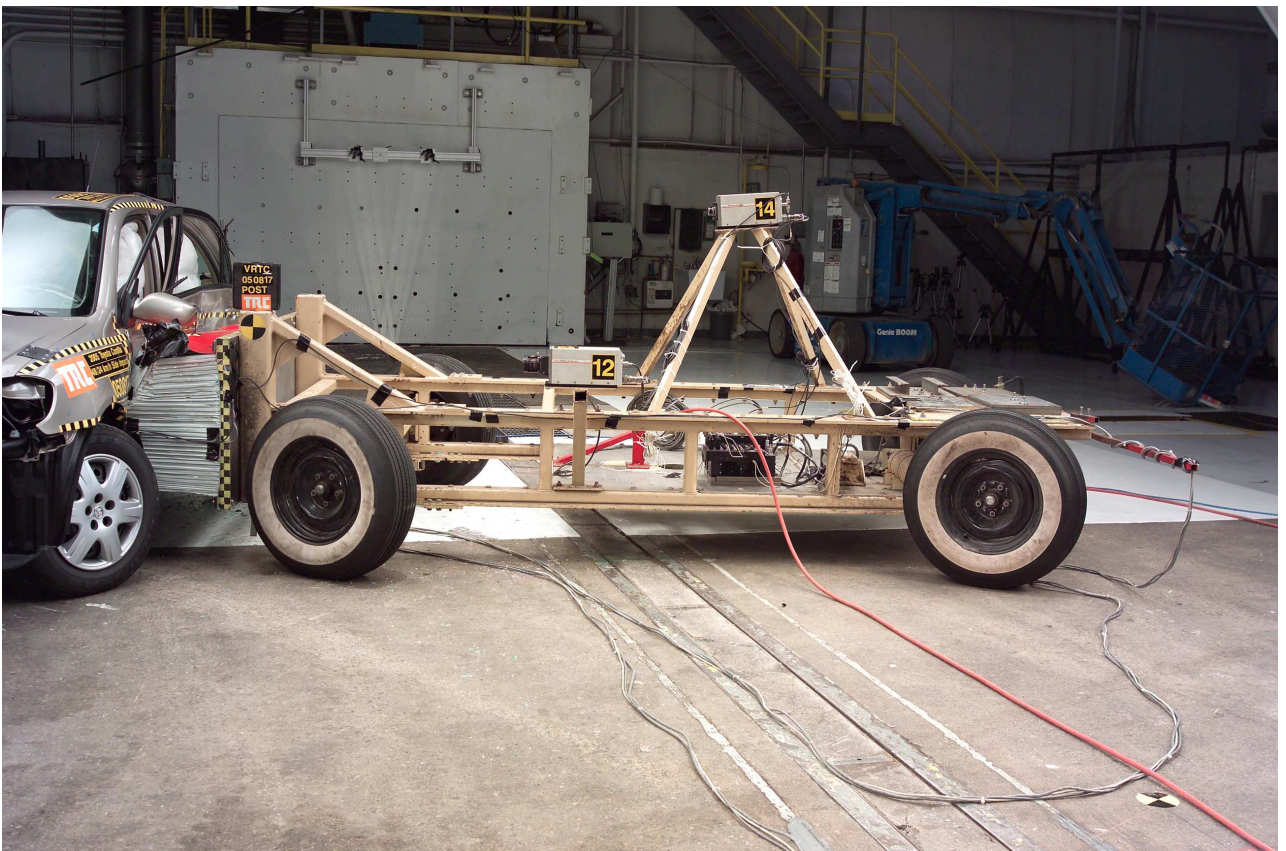


Figure A-22 Post-Test Left Side View of MDB with Impactor Face in Position

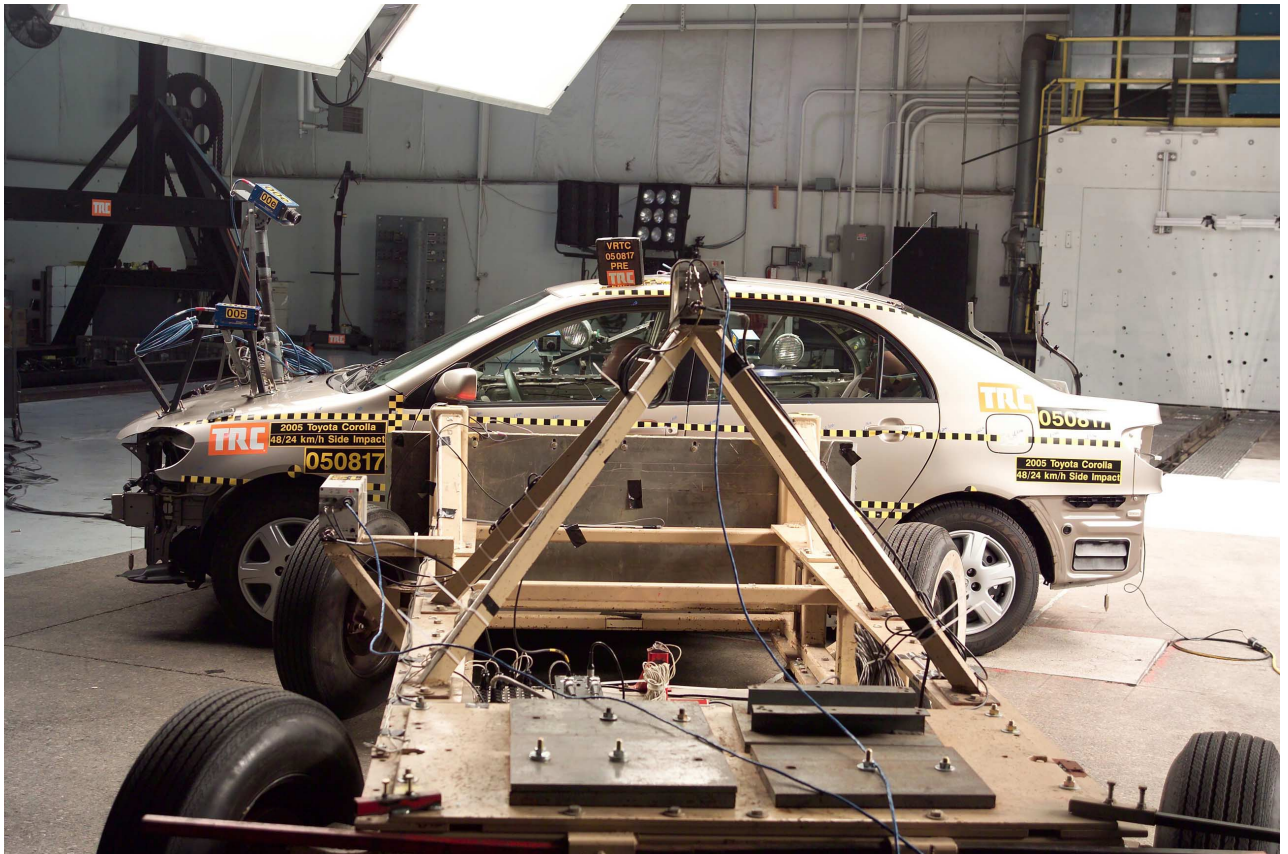


Figure A-23 Pre-Test Rear View of MDB with Impactor Face in Position

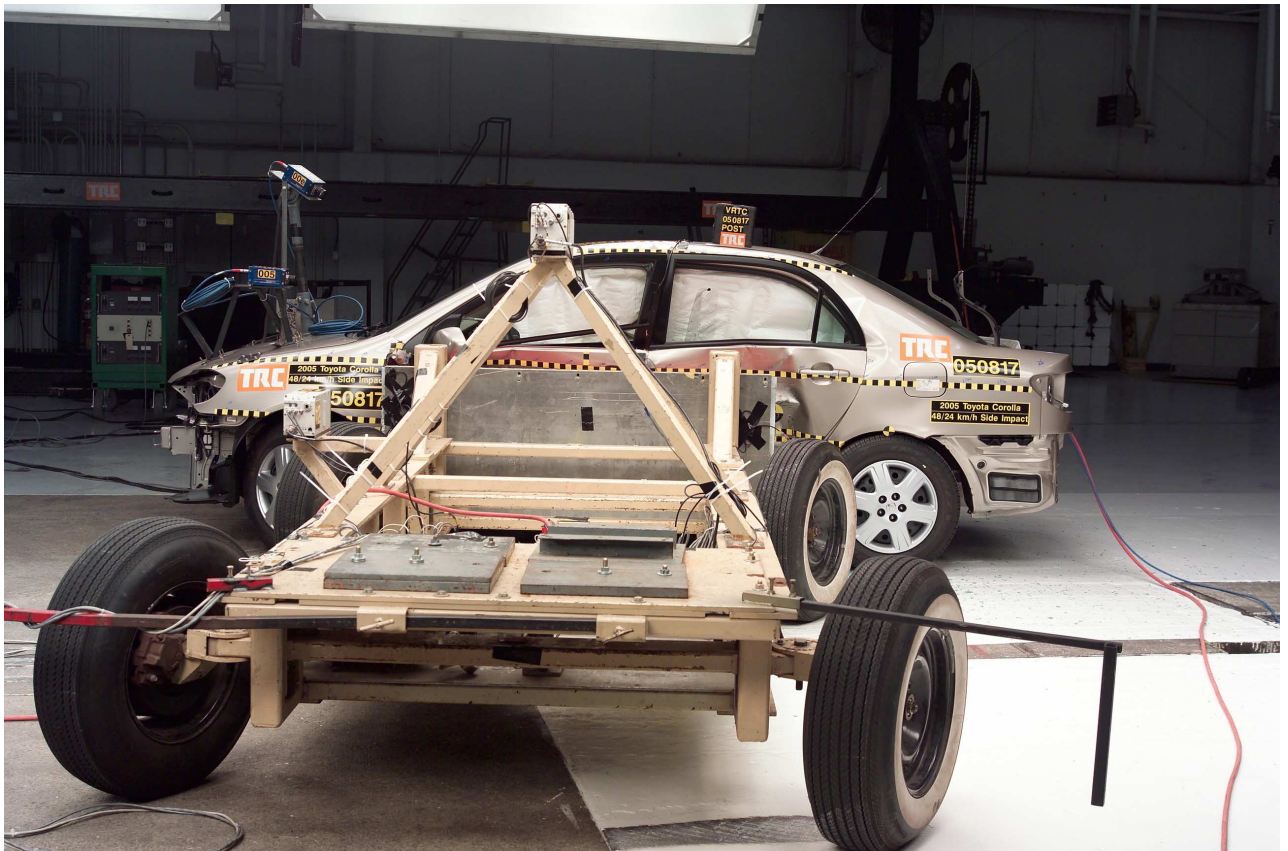


Figure A-24 Post-Test Rear View of MDB with Impactor Face in Position



Figure A-25 Pre-Test Right Side View of MDB with Impactor Face in Position

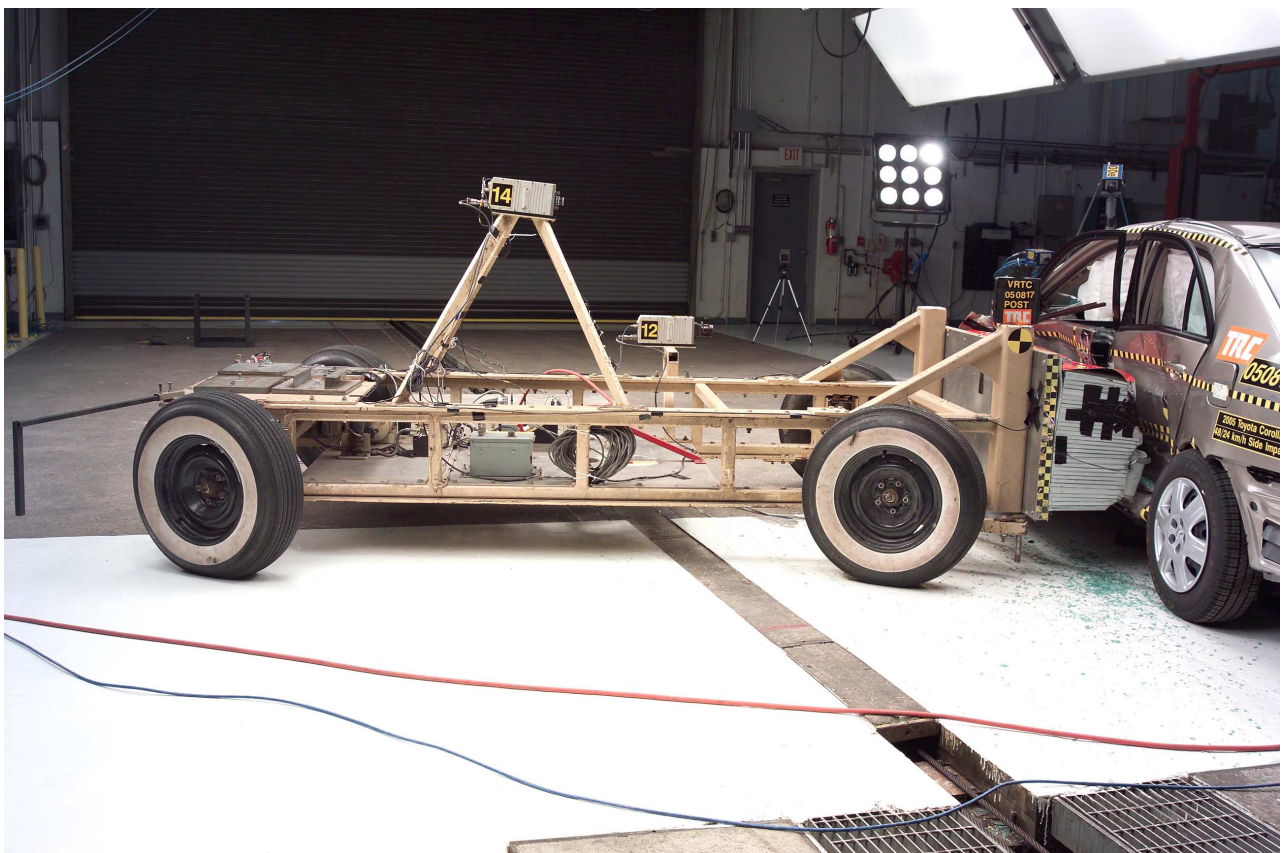


Figure A-26 Post-Test Right Side View of MDB with Impactor Face in Position

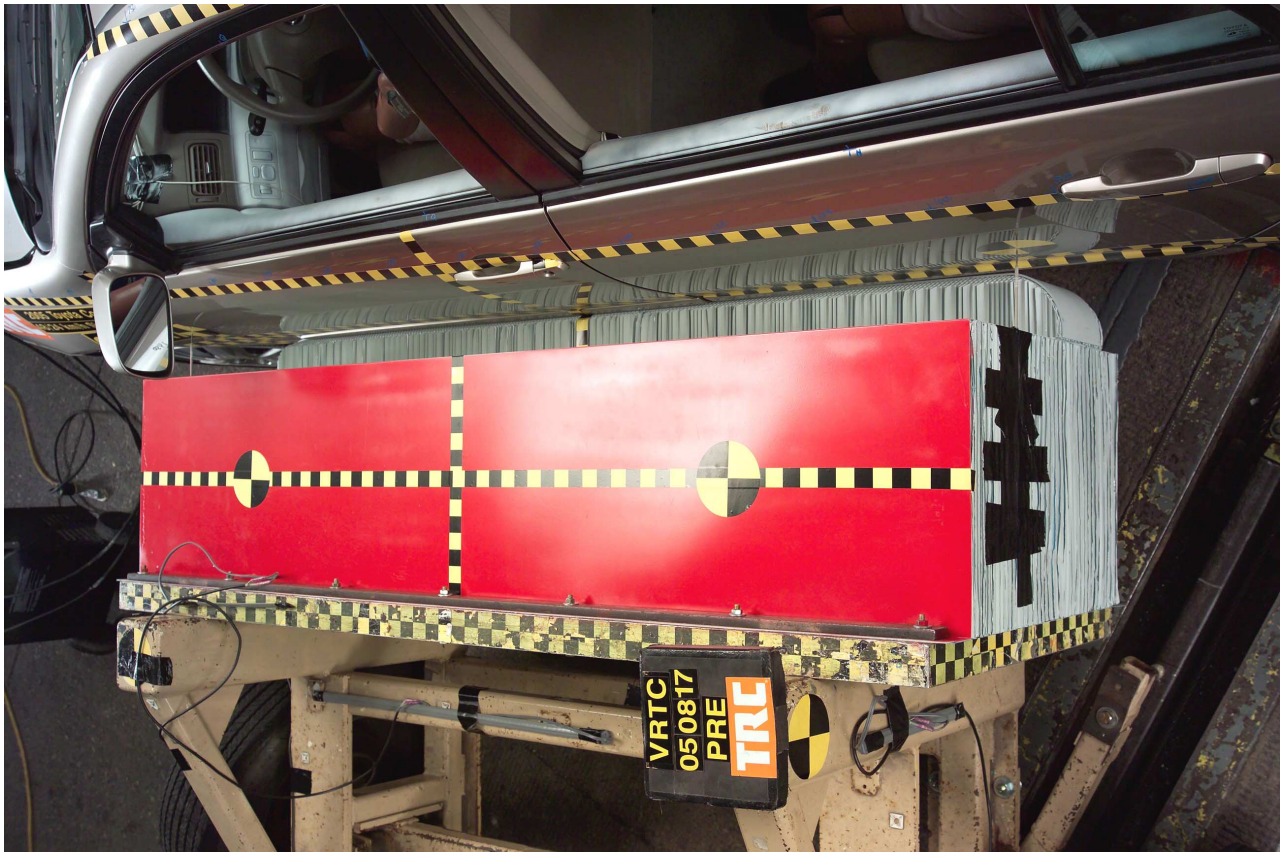


Figure A-27 Pre-Test Overhead View of MDB Aligned with Vehicle



Figure A-28 Post-Test Overhead View of MDB

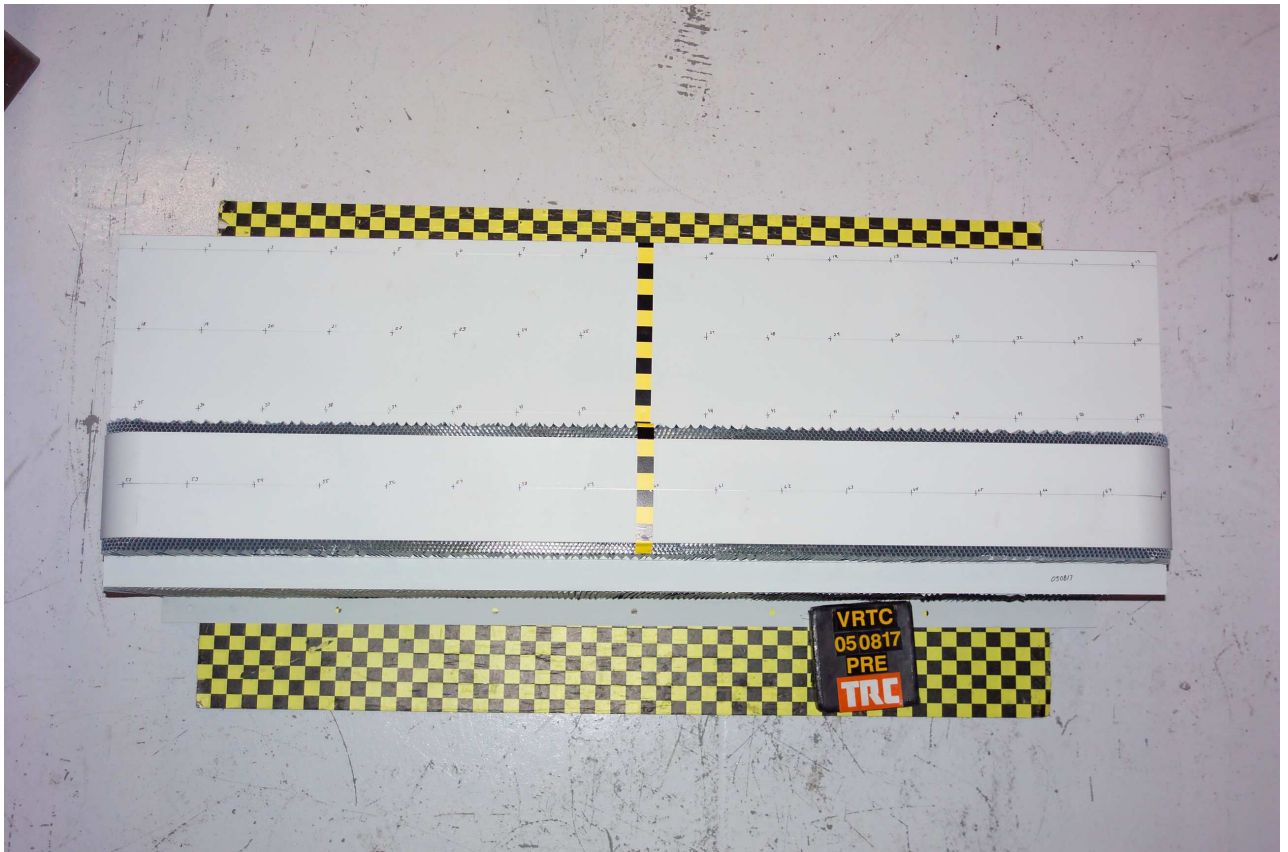


Figure A-29 Pre-Test Frontal View of Impactor Face



Figure A-30 Post-Test Frontal View of Impactor Face

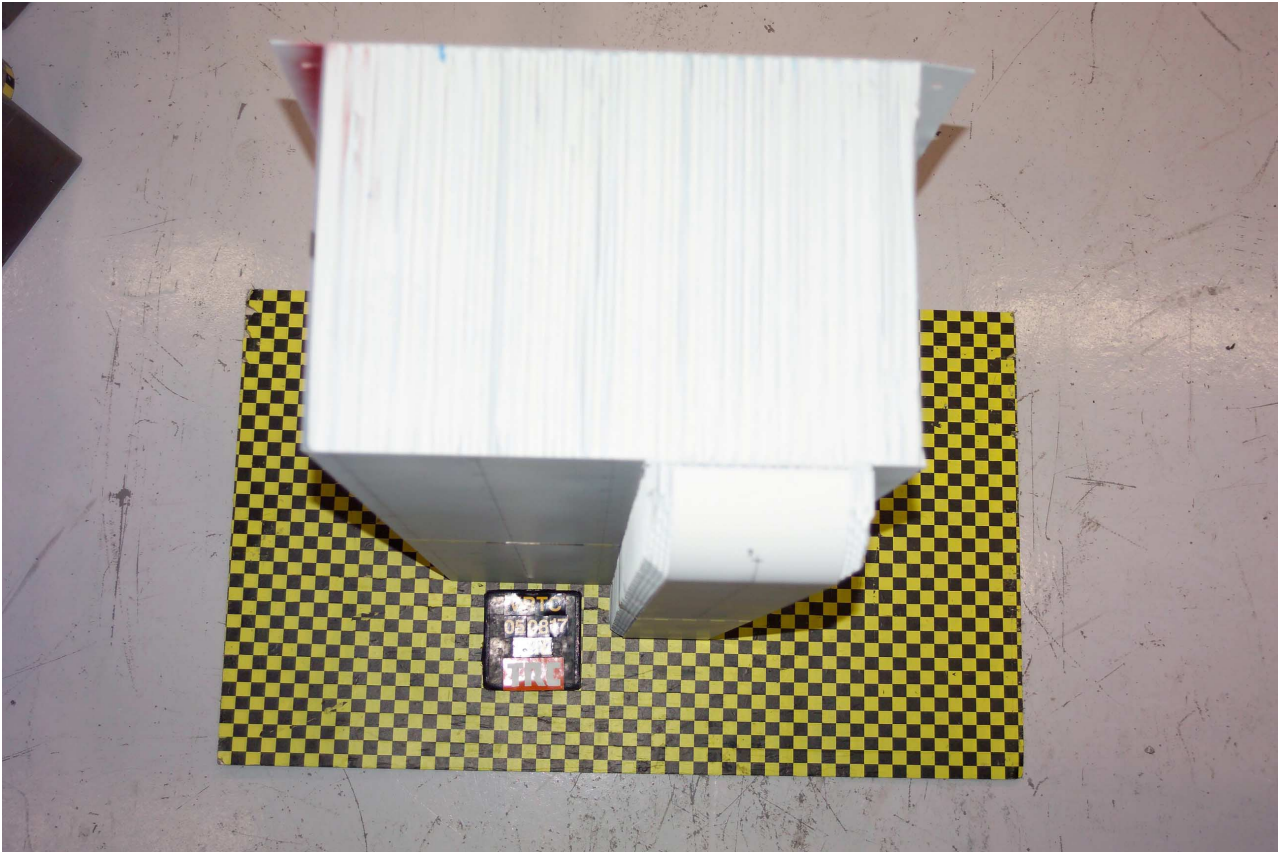


Figure A-31 Pre-Test Left Side View of Impactor Face

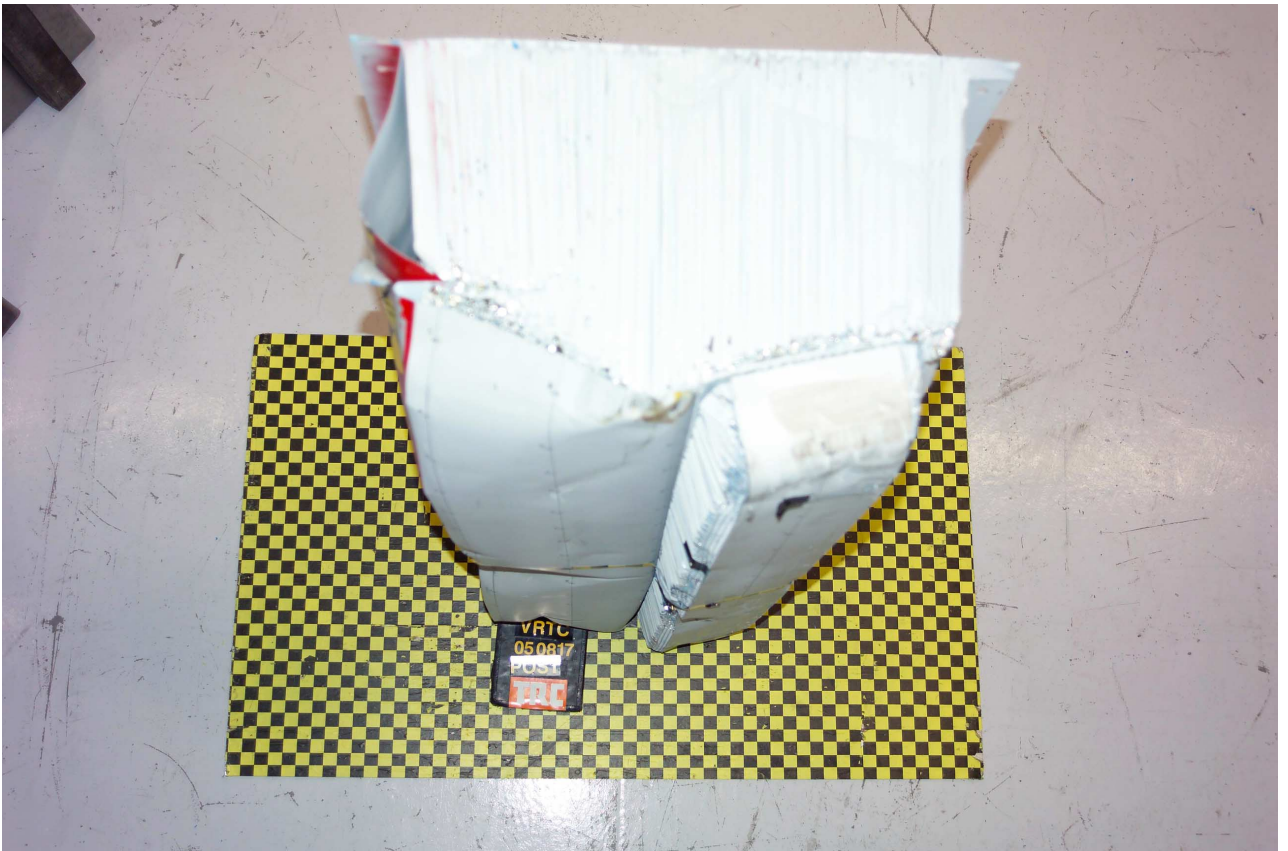


Figure A-32 Post-Test Left Side View of Impactor Face

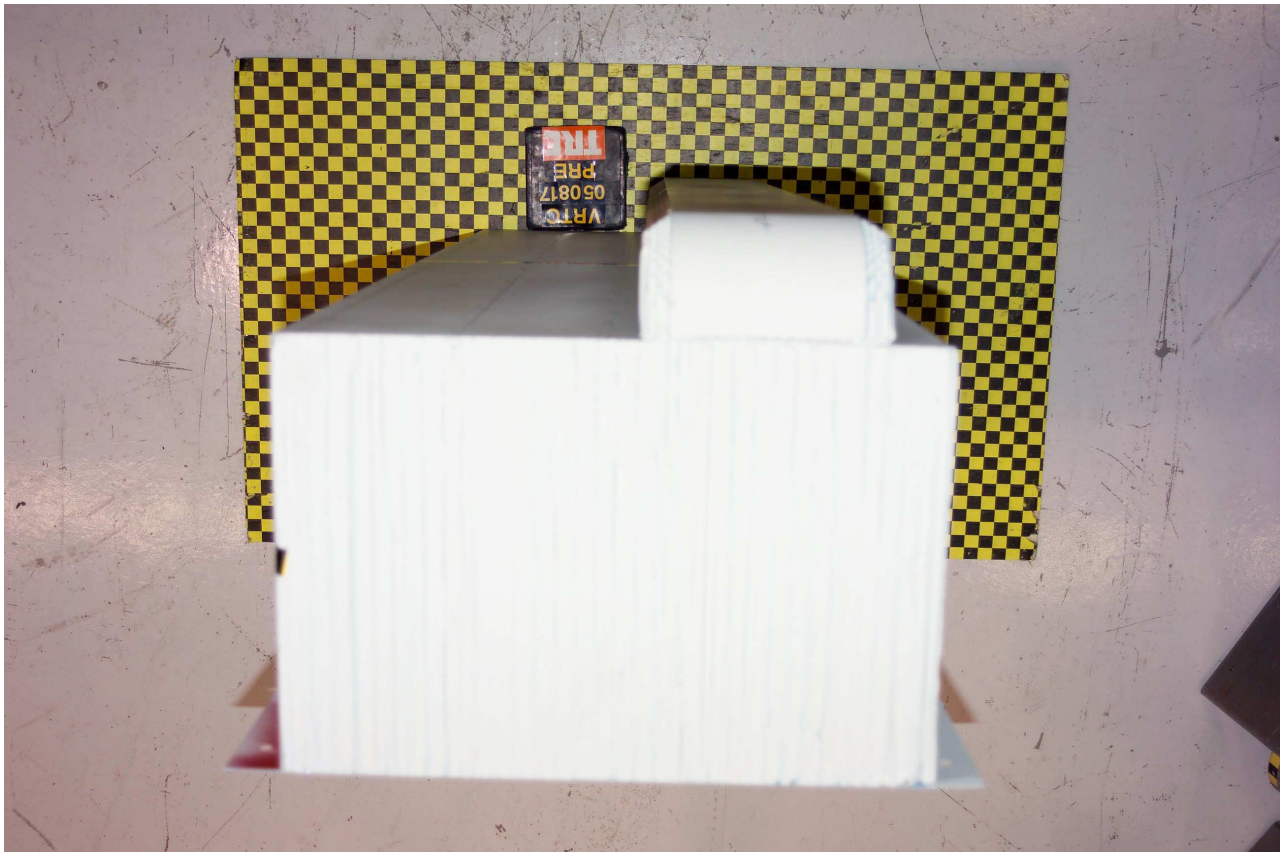


Figure A-33 Pre-Test Right Side View of Impactor Face

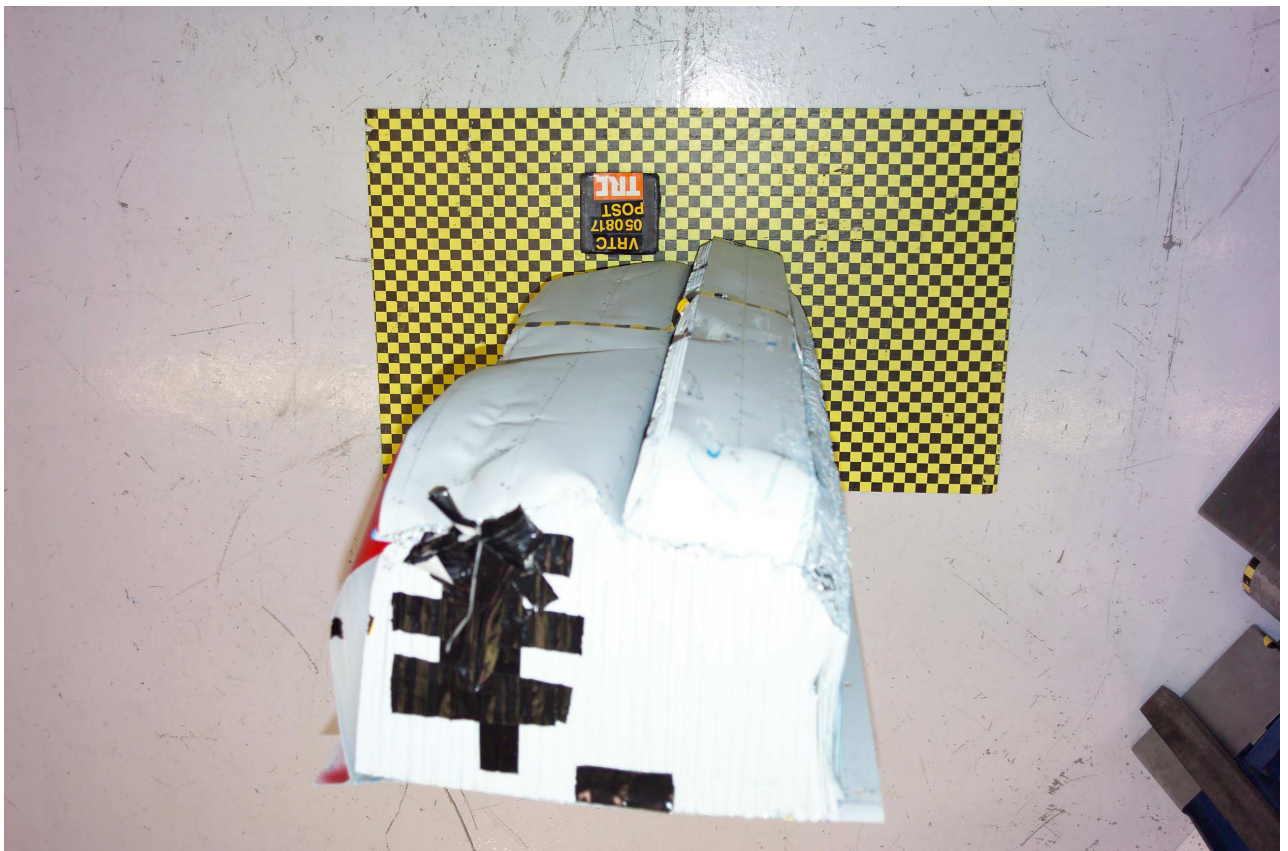


Figure A-34 Post-Test Right Side View of Impactor Face

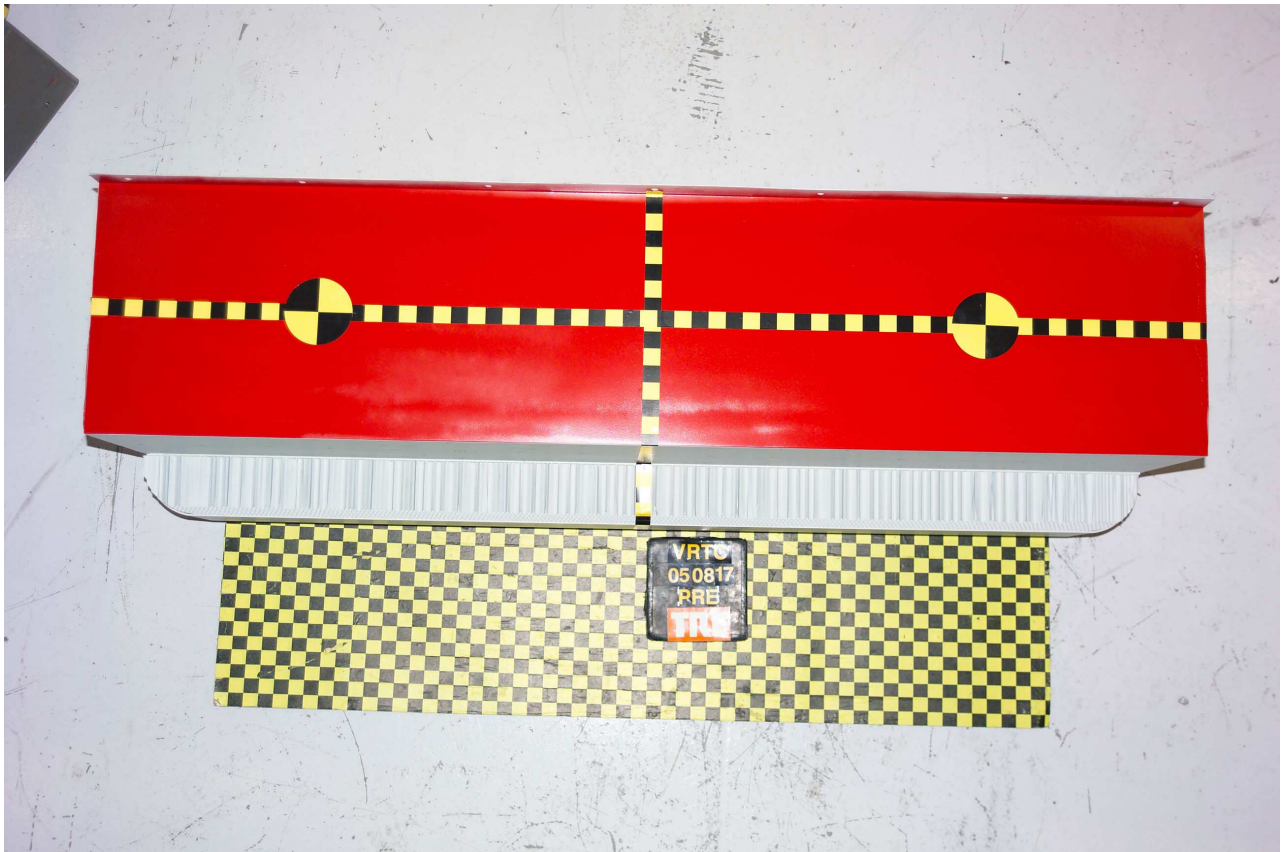


Figure A-35 Pre-Test Top View of Impactor Face

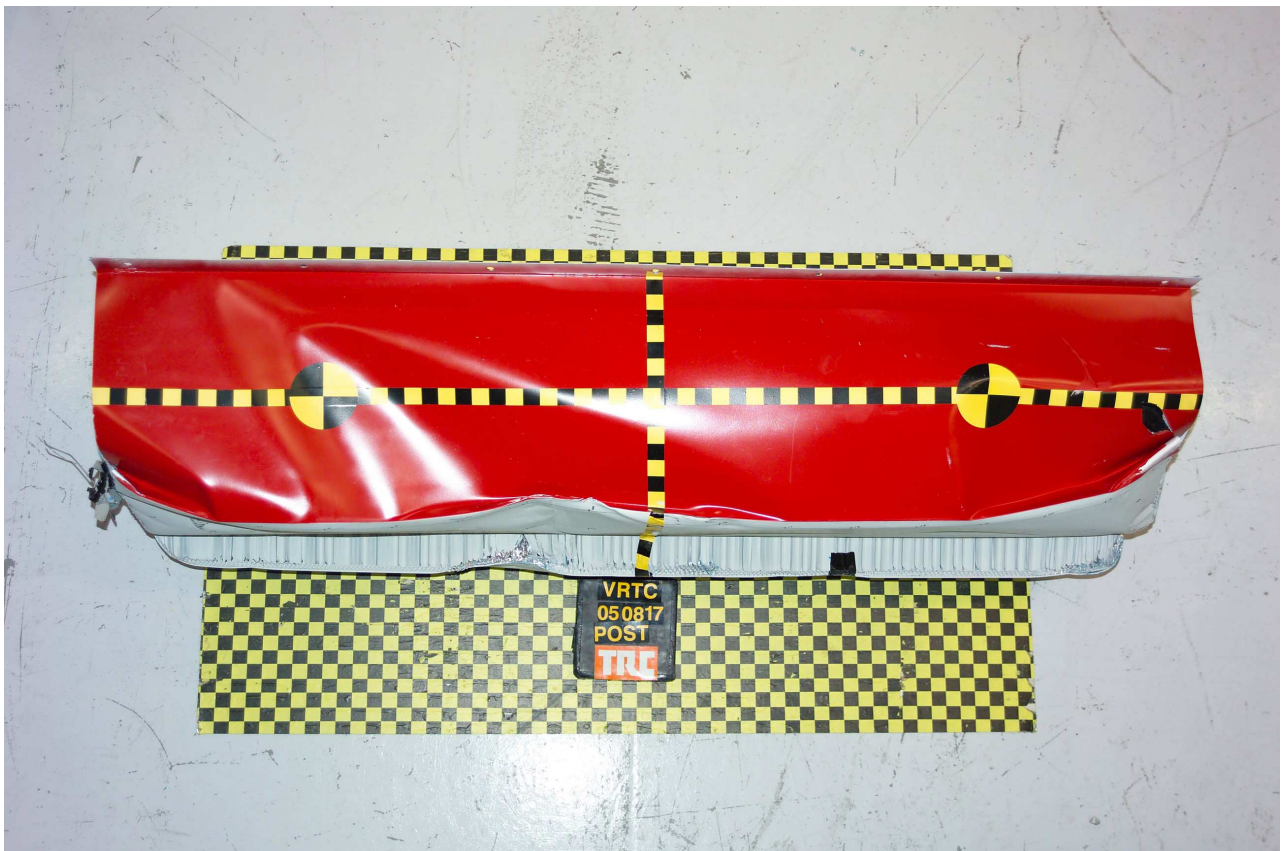


Figure A-36 Post-Test Top View of Impactor Face

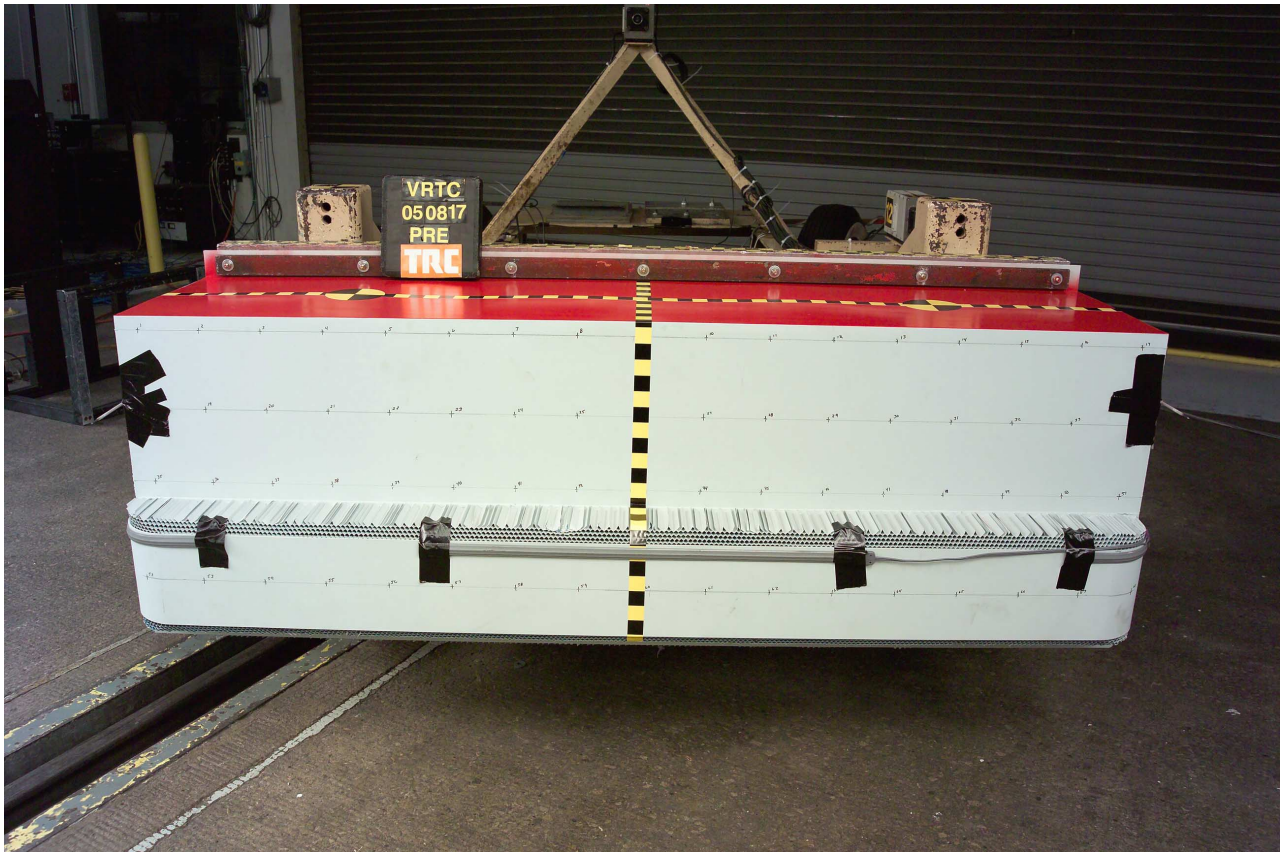


Figure A-37 Pre-Test View of MDB Showing Contact Switches in Place



Figure A-38 Post-Test View of MDB Showing Contact Switches in Place



Figure A-39 Pre-Test Primary Impact Point View



Figure A-40 Post-Test Primary Impact Point View



Figure A-41 Pre-Test Secondary Impact Point View



Figure A-42 Post-Test Secondary Impact Point View



Figure A-43 Pre-Test Fuel Filler Cap View



Figure A-44 Post-Test Fuel Filler Cap View



Figure A-45 Pre-Test Right Occupant Compartment View of Front SID-IIs



Figure A-46 Post-Test Right Occupant Compartment View of Front SID-IIs



Figure A-47 Pre-Test Right Occupant Compartment View of Rear SID-IIs



Figure A-48 Post-Test Right Occupant Compartment View of Rear SID-IIs



Figure A-49 Pre-Test Left View of Front SID-IIs - View 1



Figure A-50 Post-Test Left View of Front SID-II's View



Figure A-51 Pre-Test Left View of Front SID-IIs - View 2

Intentionally Left Blank



Figure A-52 Pre-Test Left View of Front SID-IIs and Door Clearance



Figure A-53 Post-Test Left View of Front SID-IIs and Door Clearance



Figure A-54 Pre-Test Left View of Rear SID-IIs - View 1



Figure A-55 Post-Test Left View of Rear SID-IIs View



Figure A-56 Pre-Test Left View of Rear SID-IIs - View 2

Intentionally Left Blank

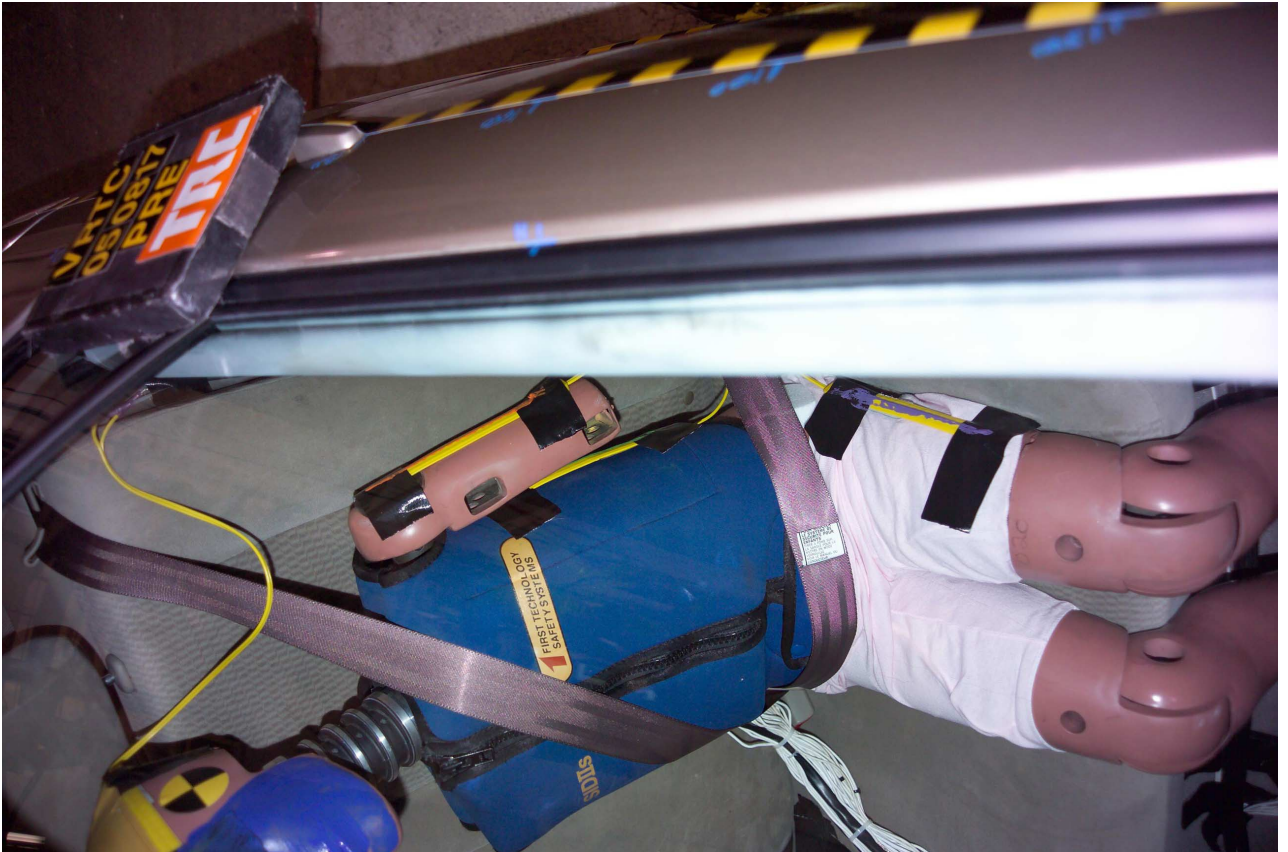


Figure A-57 Pre-Test Left View of Rear SID-IIs and Door Clearance



Figure A-58 Post-Test Left View of Rear SID-IIs and Door Clearance



Figure A-59 Pre-Test Interior of Front Door



Figure A-60 Post-Test Interior of Front Door Showing SID-II's Impact Locations



Figure A-61 Post-Test Front SID-II Contact - View 1



Figure A-62 Post-Test Front SID-II Contact - View 2



Figure A-63 Pre-Test Interior of Rear Door

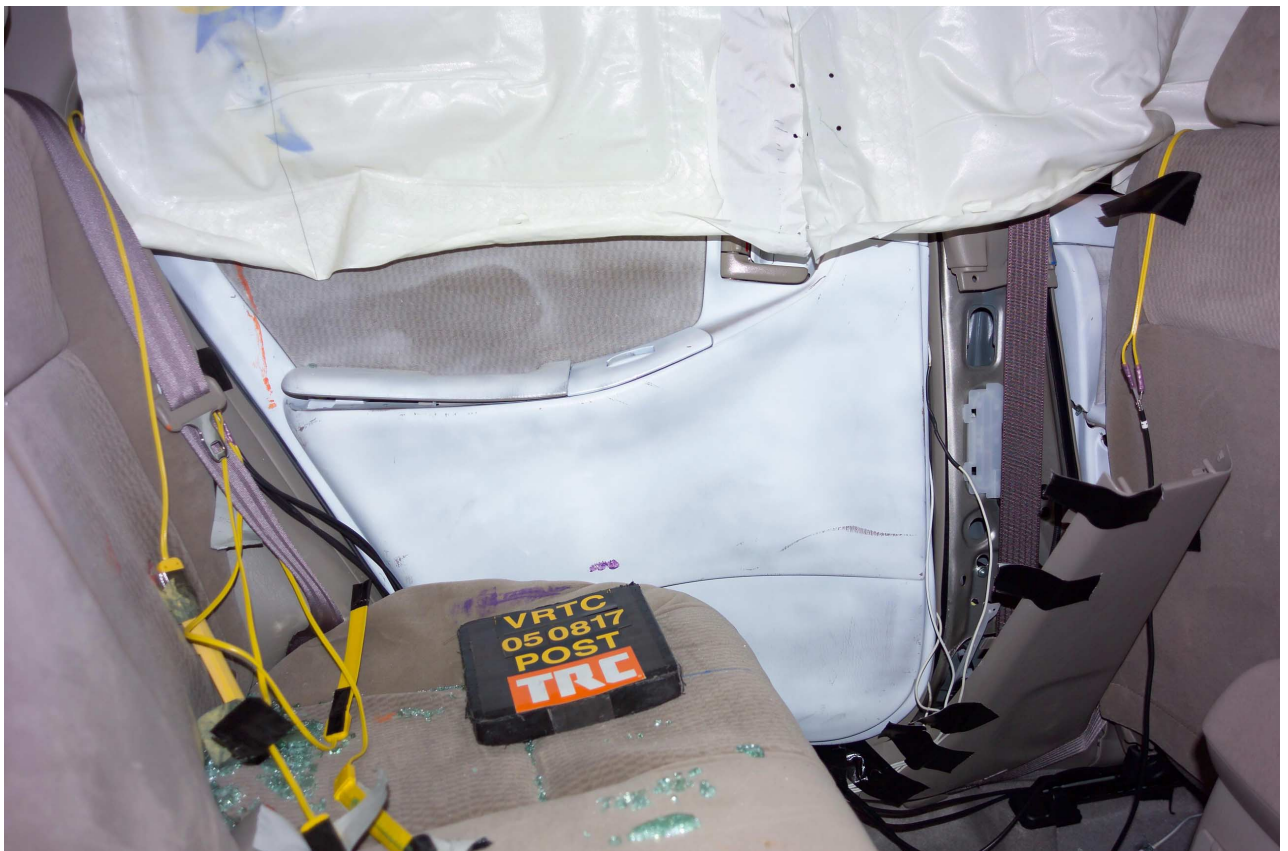


Figure A-64 Post-Test Interior of Rear Door Showing SID-II's Impact Locations



Figure A-65 Post-Test Rear SID-IIs Contact - View 1



Figure A-66 Post-Test Rear SID-II Contact - View 2



Figure A-67 Post-Test Rear SID-IIs Contact - View 3

Intentionally Left Blank



Figure A-68 Pre-Test Barrier Face Front View

Intentionally Left Blank



Figure A-69 Pre-Test Barrier Face Left Side View



Figure A-70 Post-Test Barrier Face Left Side View



Figure A-71 Pre-Test Barrier Face Right Side View



Figure A-72 Post-Test Barrier Face Right Side View

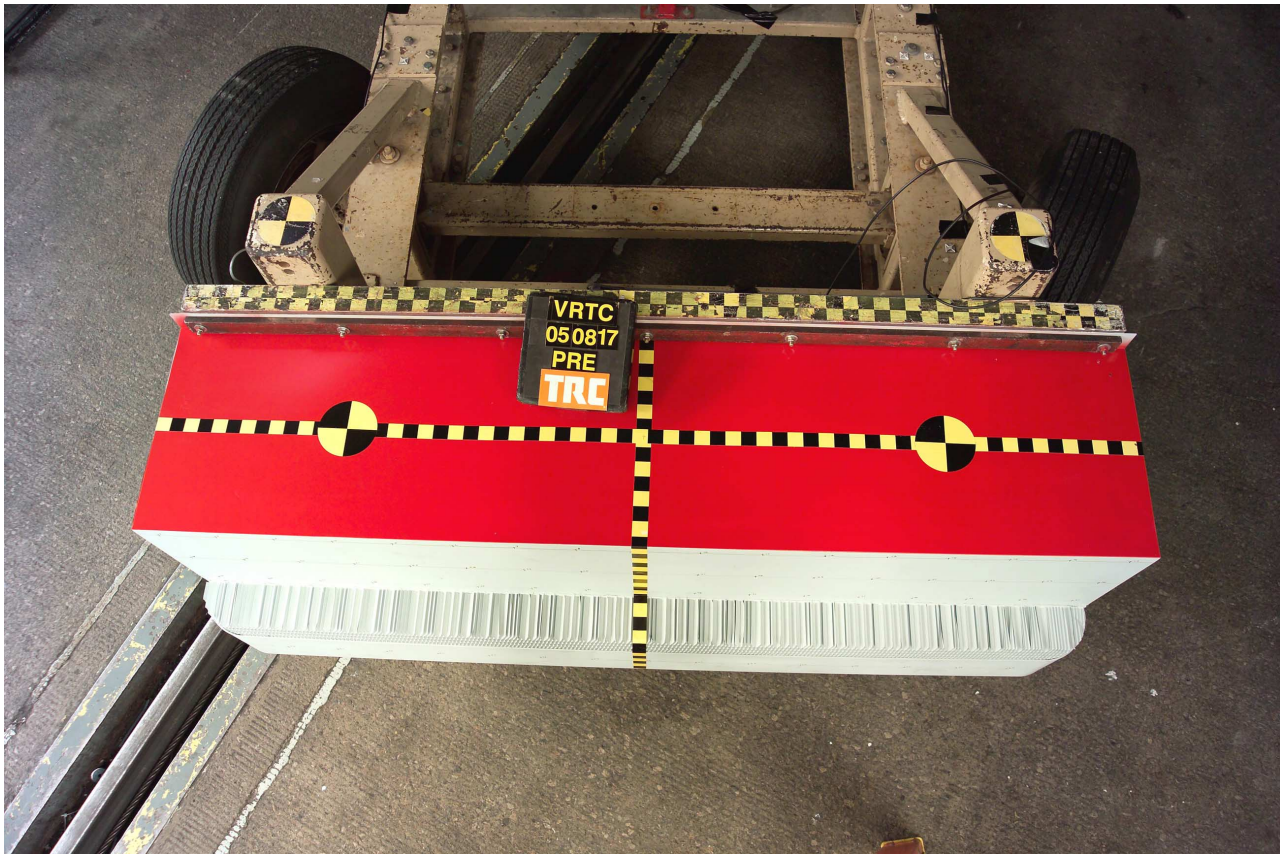


Figure A-73 Pre-Test Barrier Face Overhead View



Figure A-74 Post-Test Barrier Face Overhead View

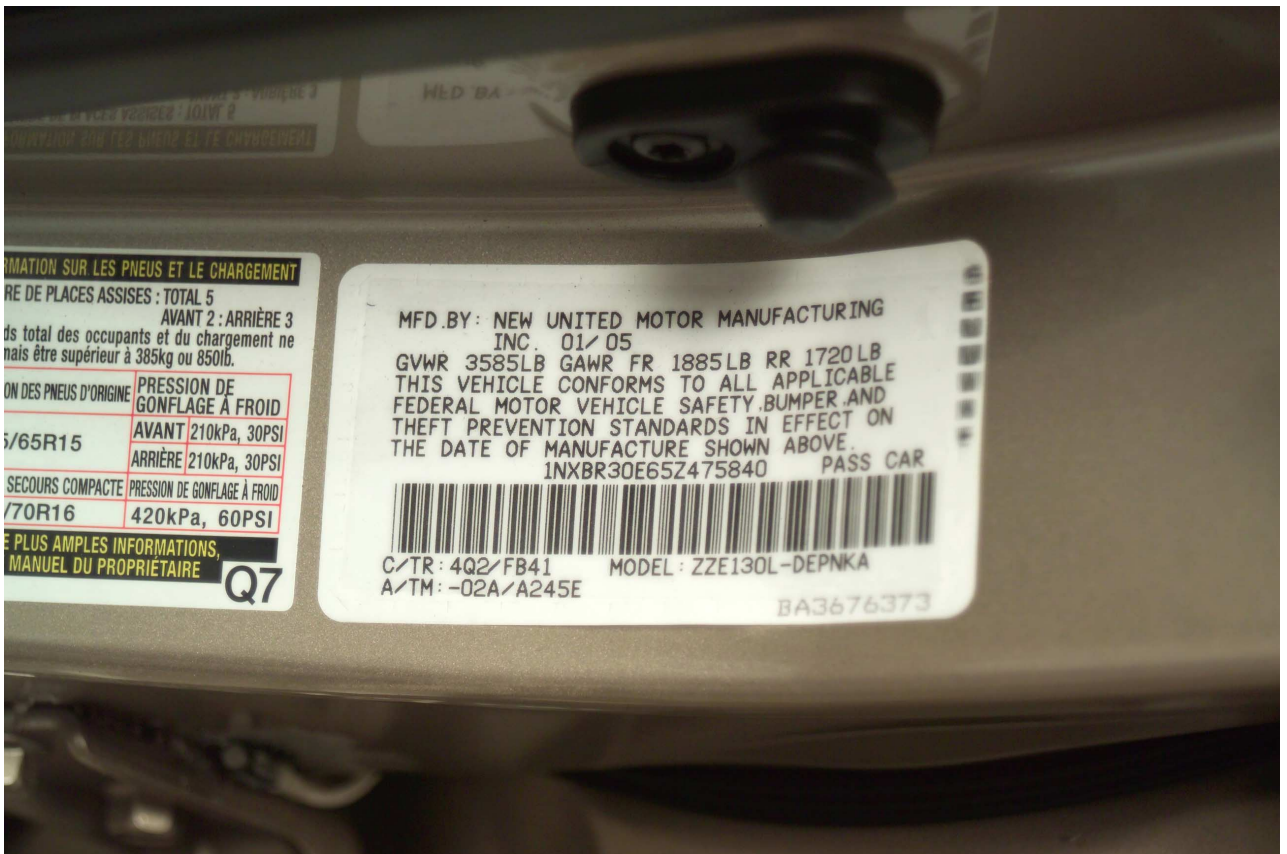


Figure A-75 Vehicle Certification Label View

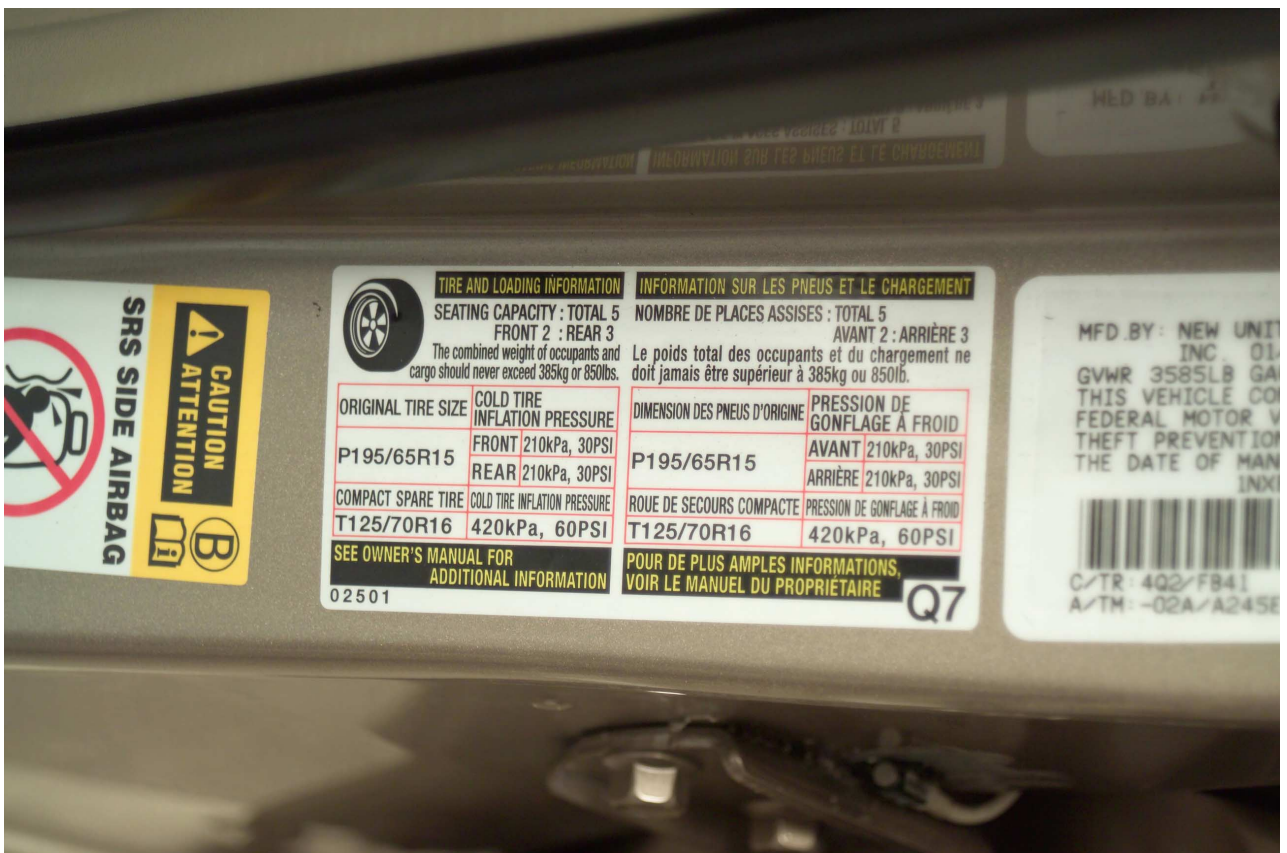


Figure A-76 Vehicle Tire Load Label View

Appendix B

Data Plots



MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Head Accel X

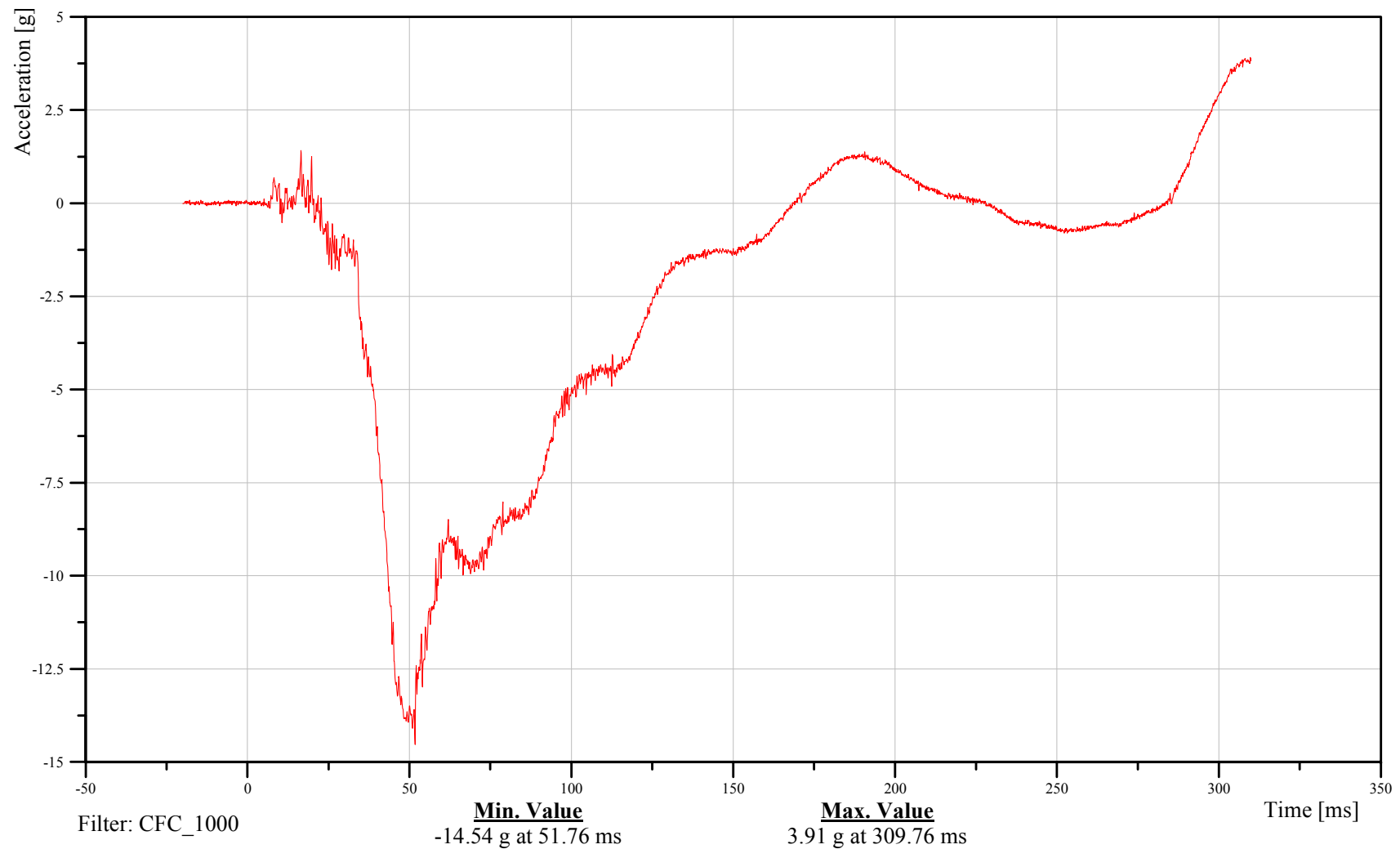
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11HEADCG00S2ACXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Head Accel Y

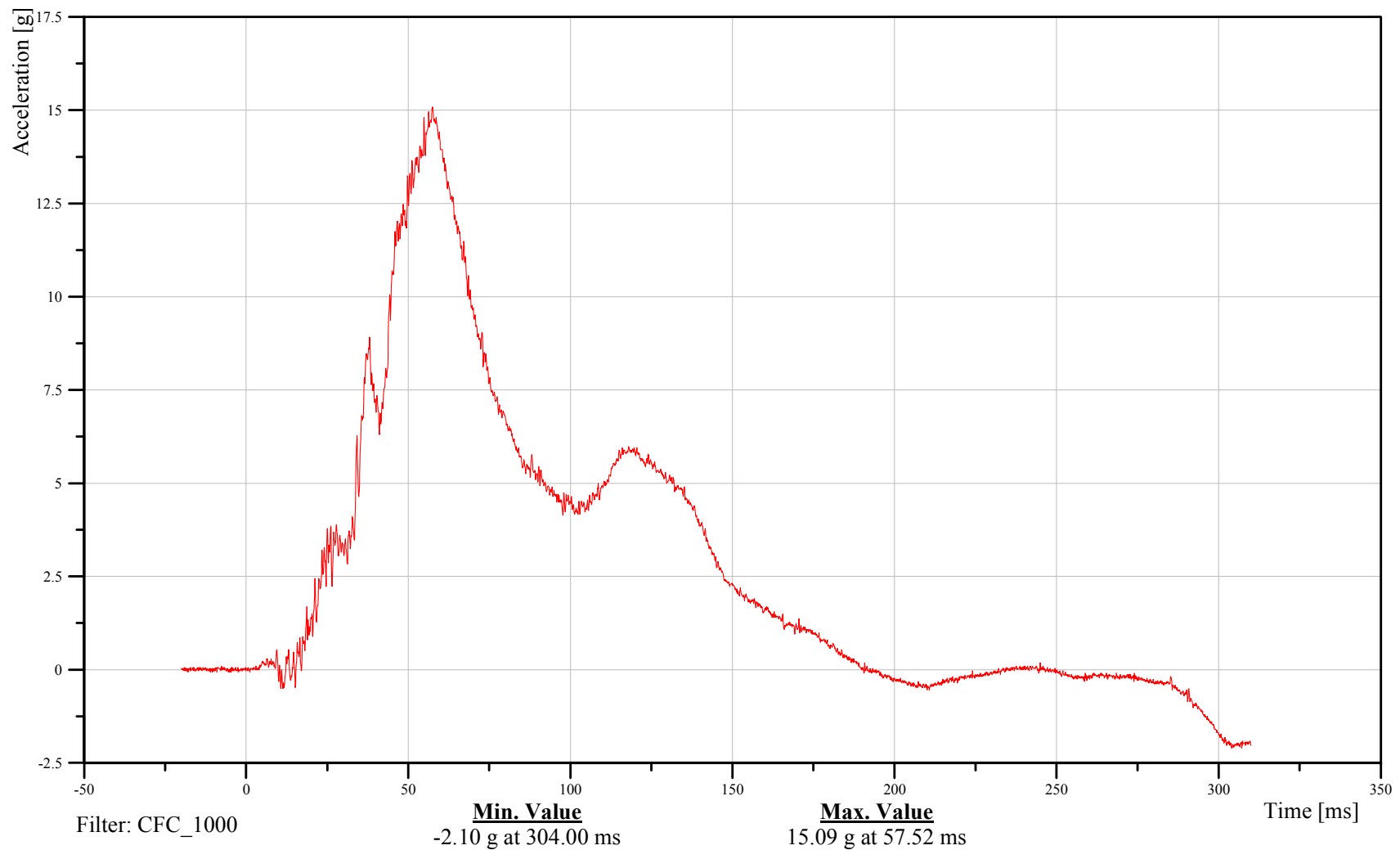
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Time: 13:44

Customer: VRTC

11HEADCG00S2ACYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Head Accel Z

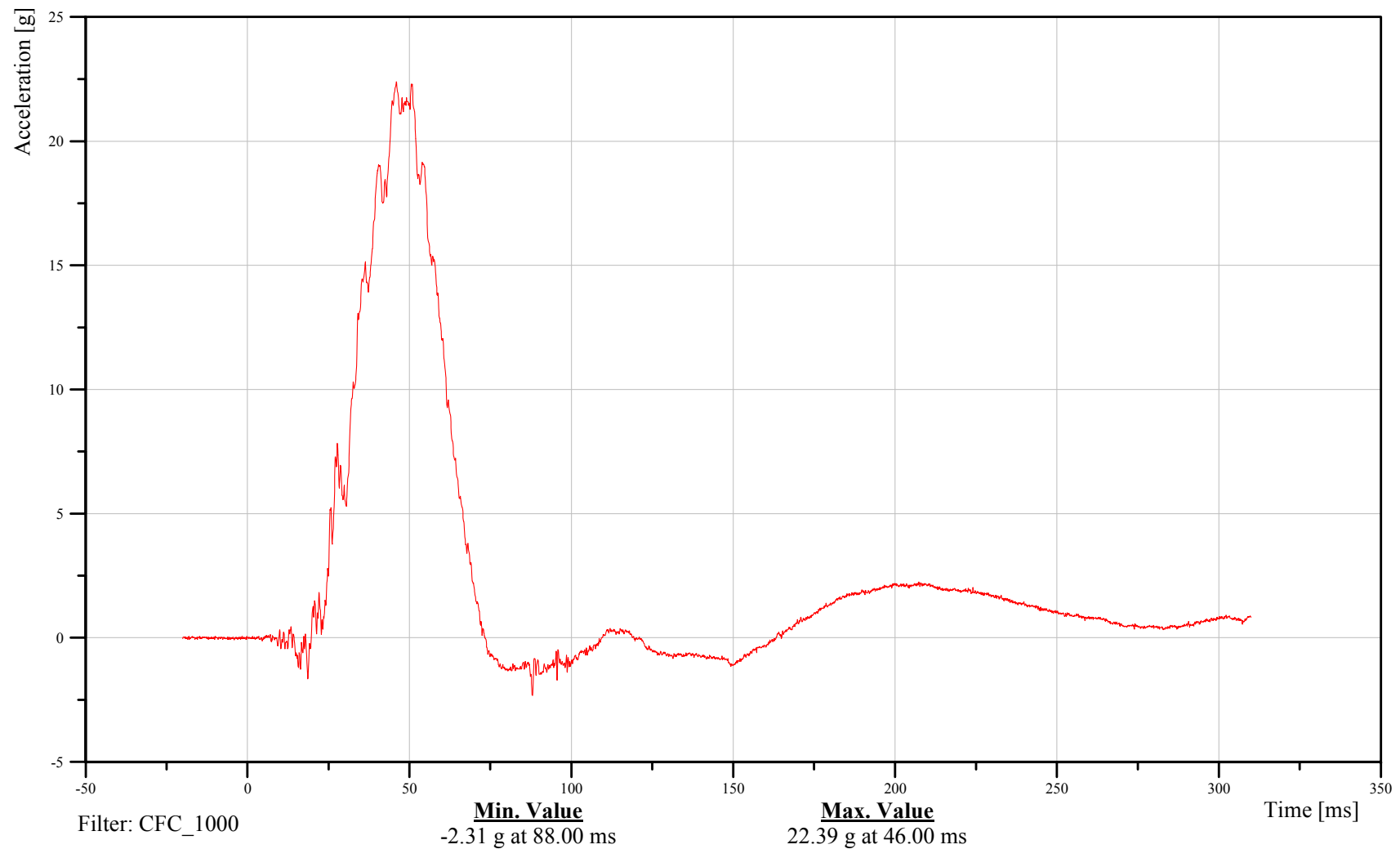
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11HEADCG00S2ACZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Head Accel Resultant

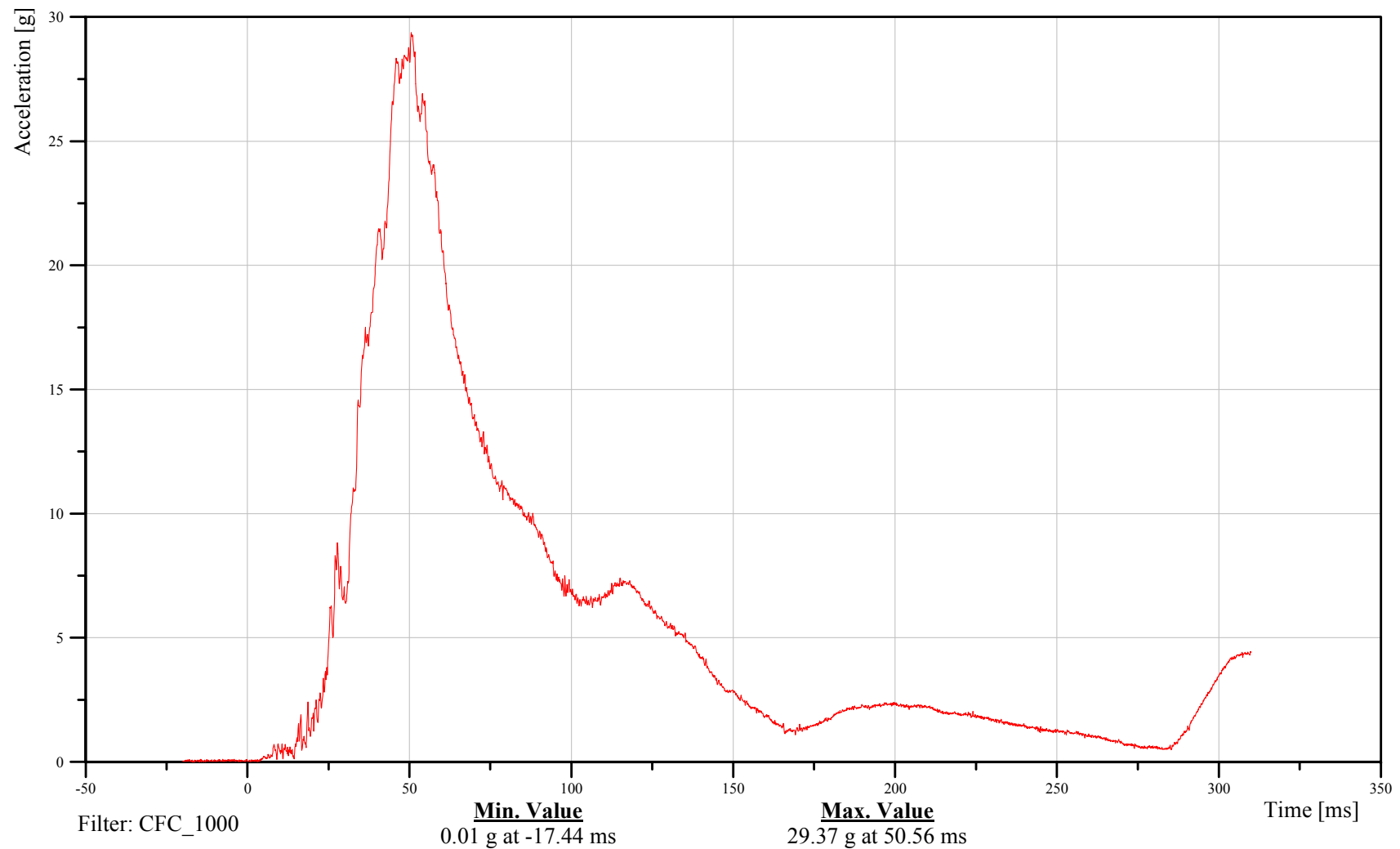
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11HEADCG00S2ACRA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Neck Force X

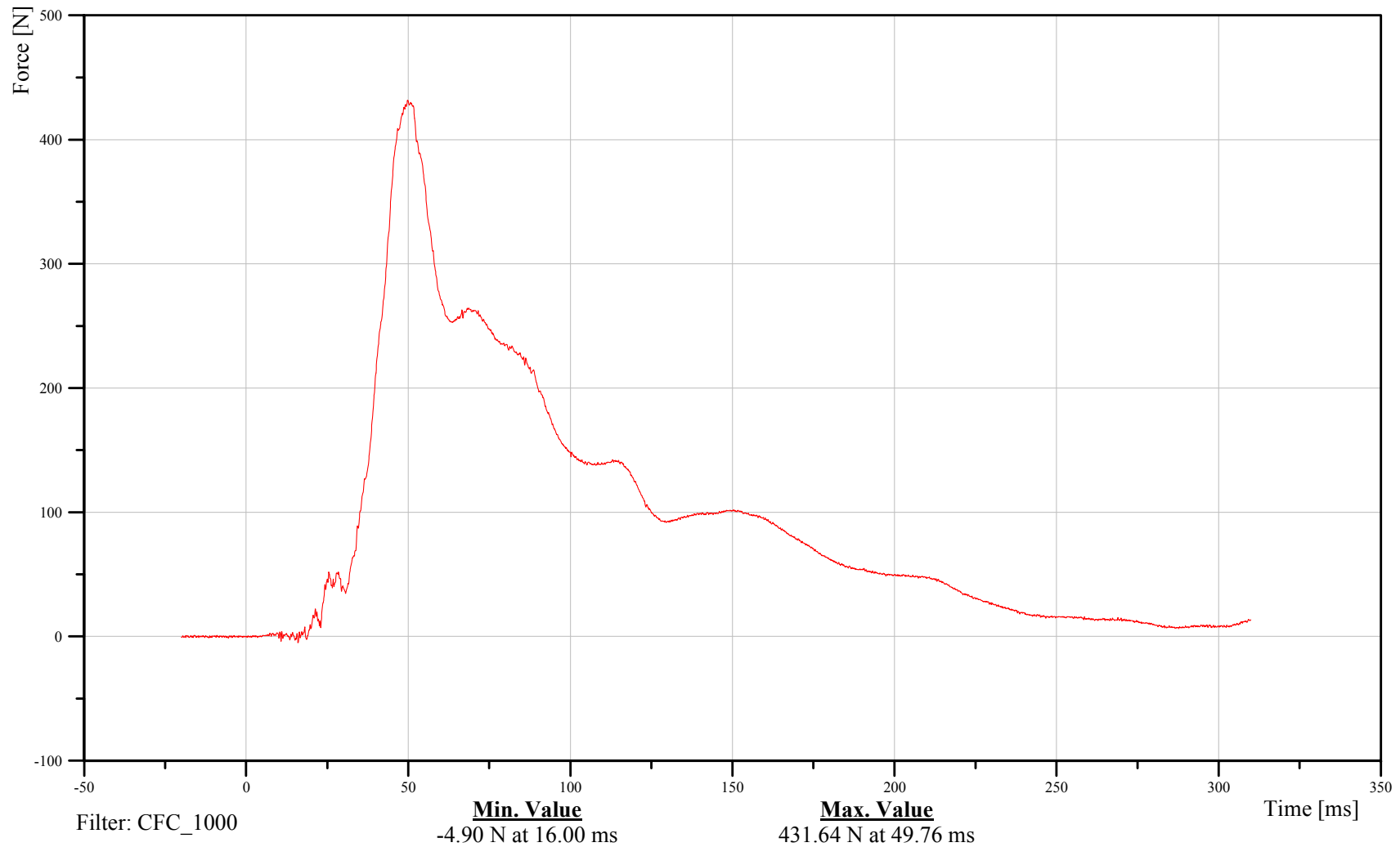
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11NECKUP00S2FOXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Neck Force Y

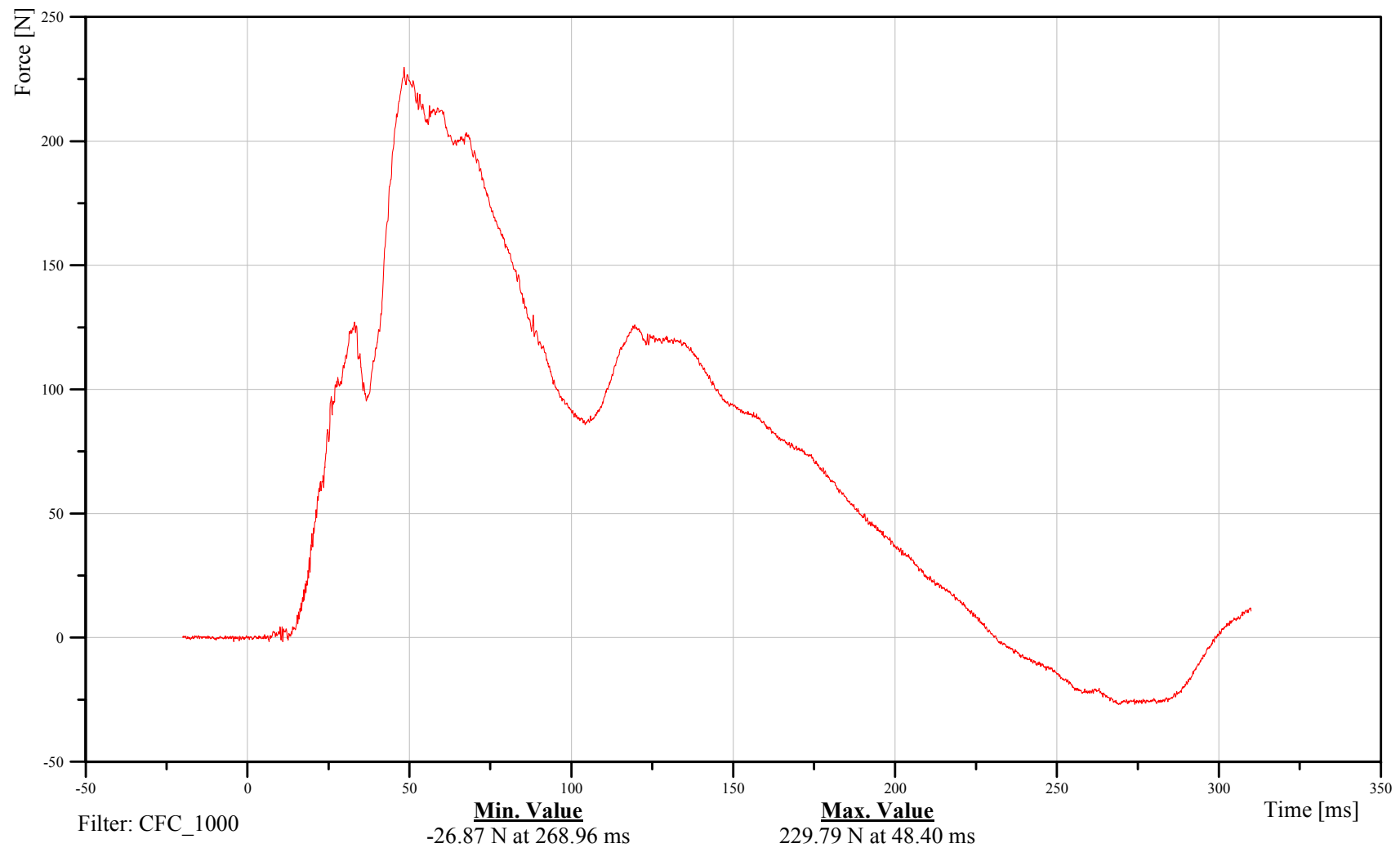
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11NECKUP00S2FOYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Neck Force Z

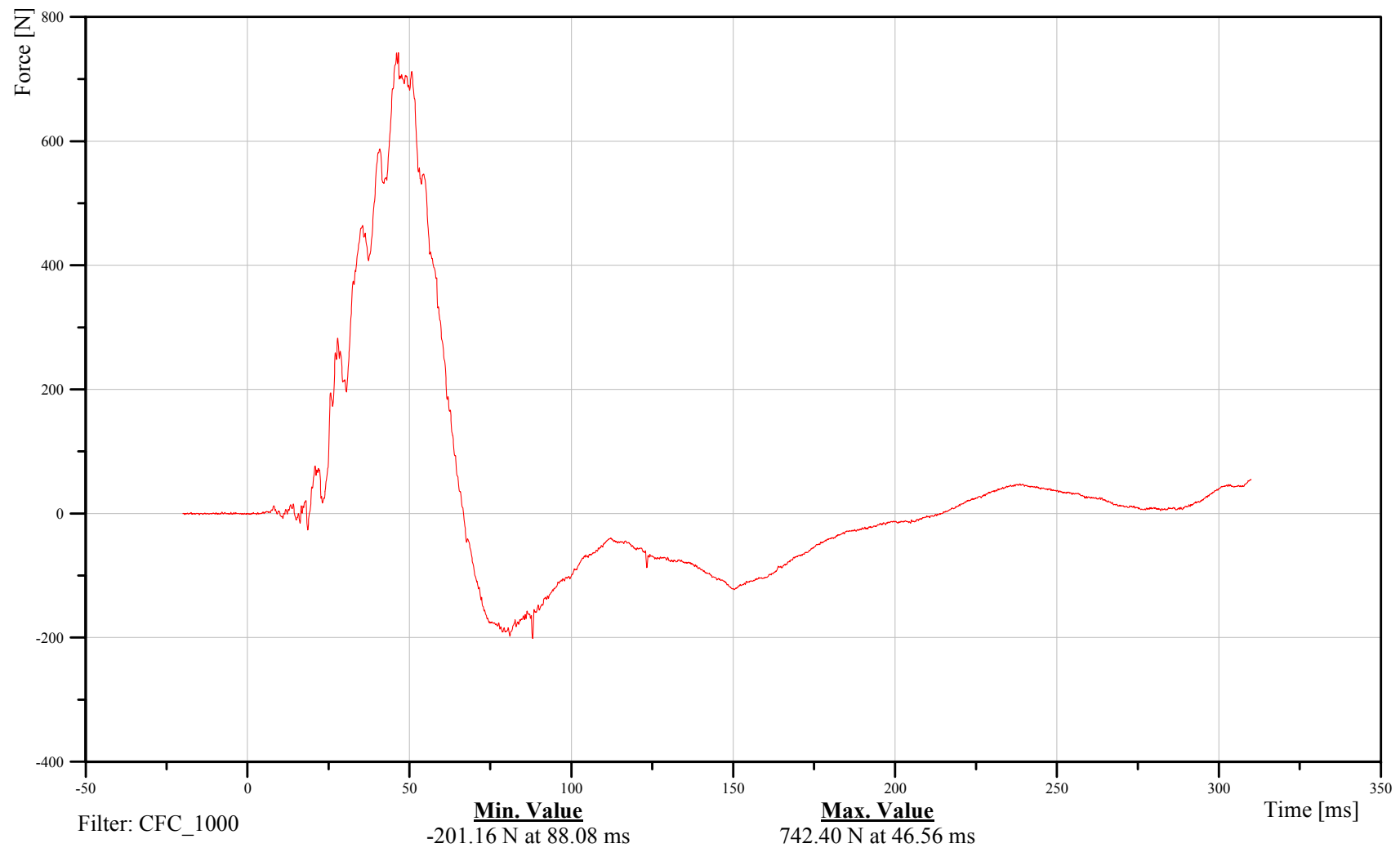
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11NECKUP00S2FOZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Neck Moment X

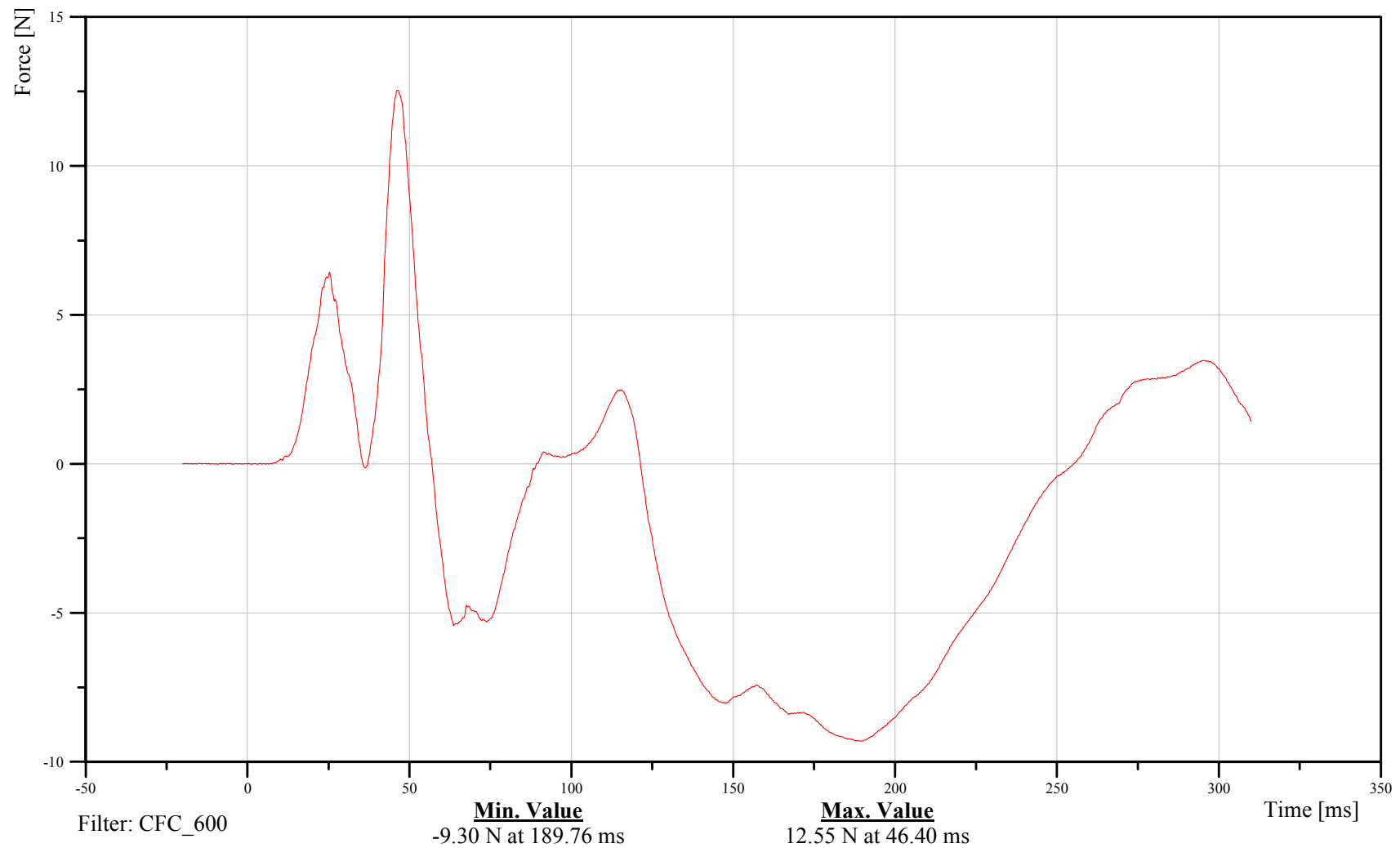
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11NECKUP00S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

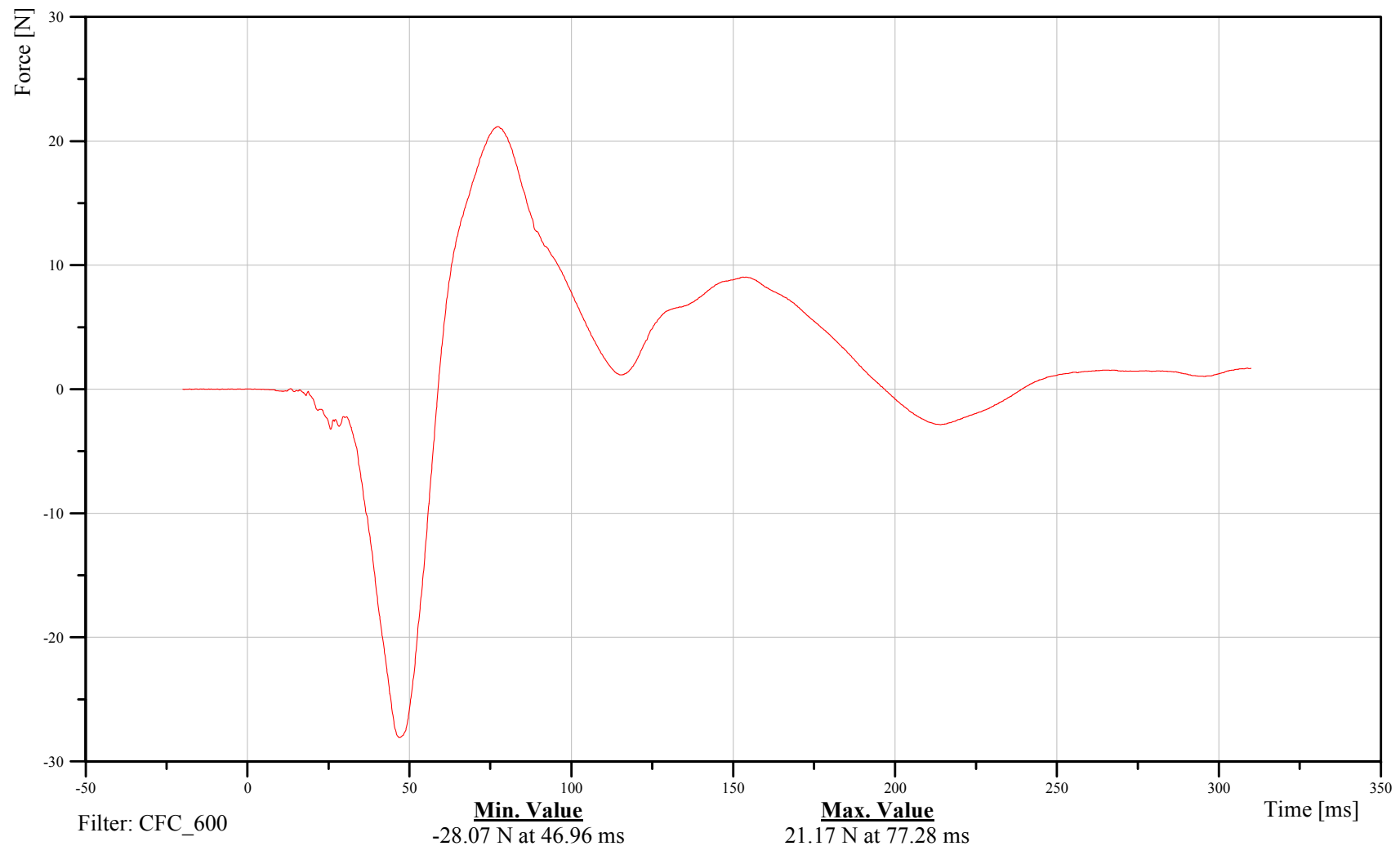
Driver Neck Moment Y

Customer: VRTC

11NECKUP00S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

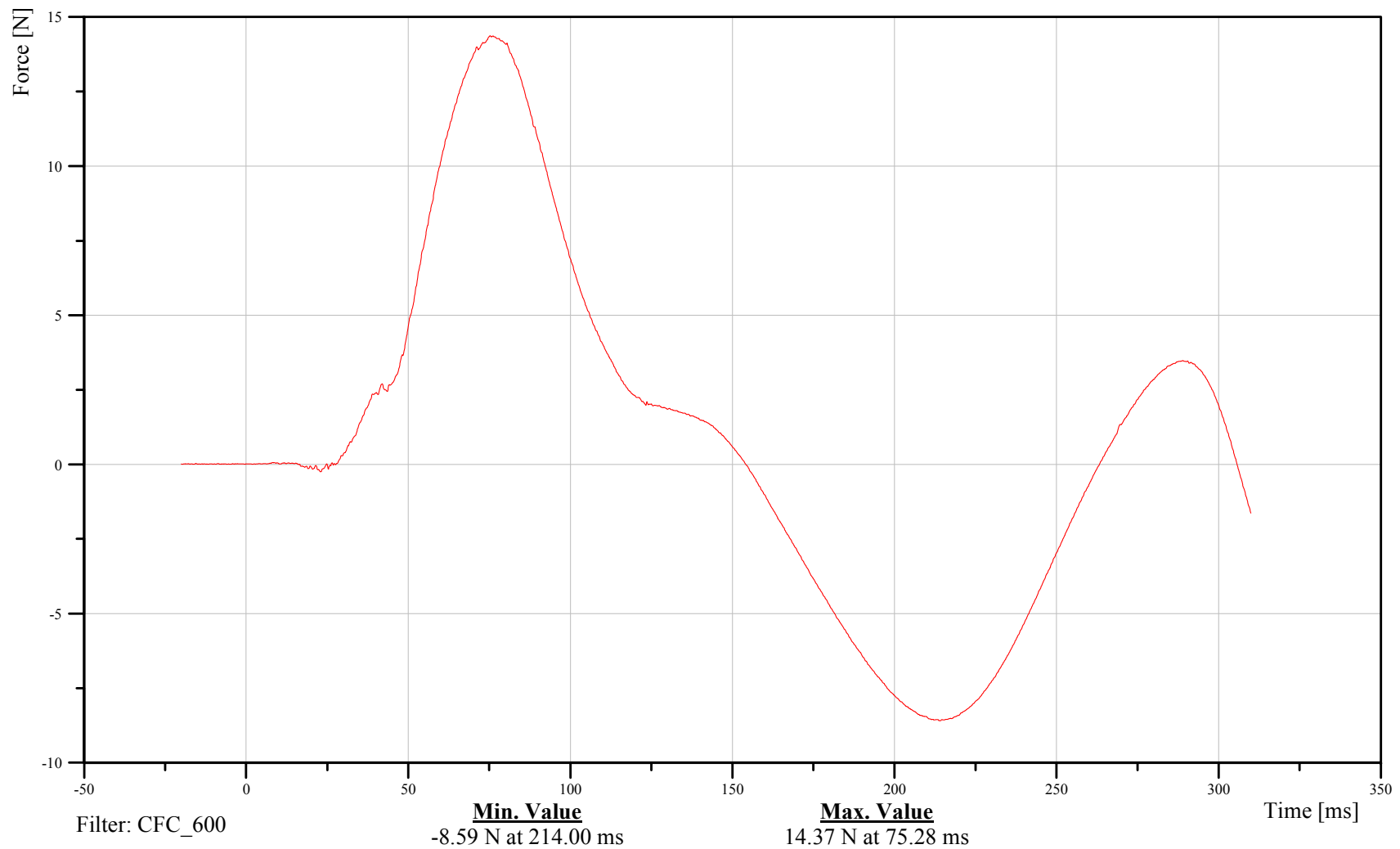
Driver Neck Moment Z

Customer: VRTC

11NECKUP00S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Accel X

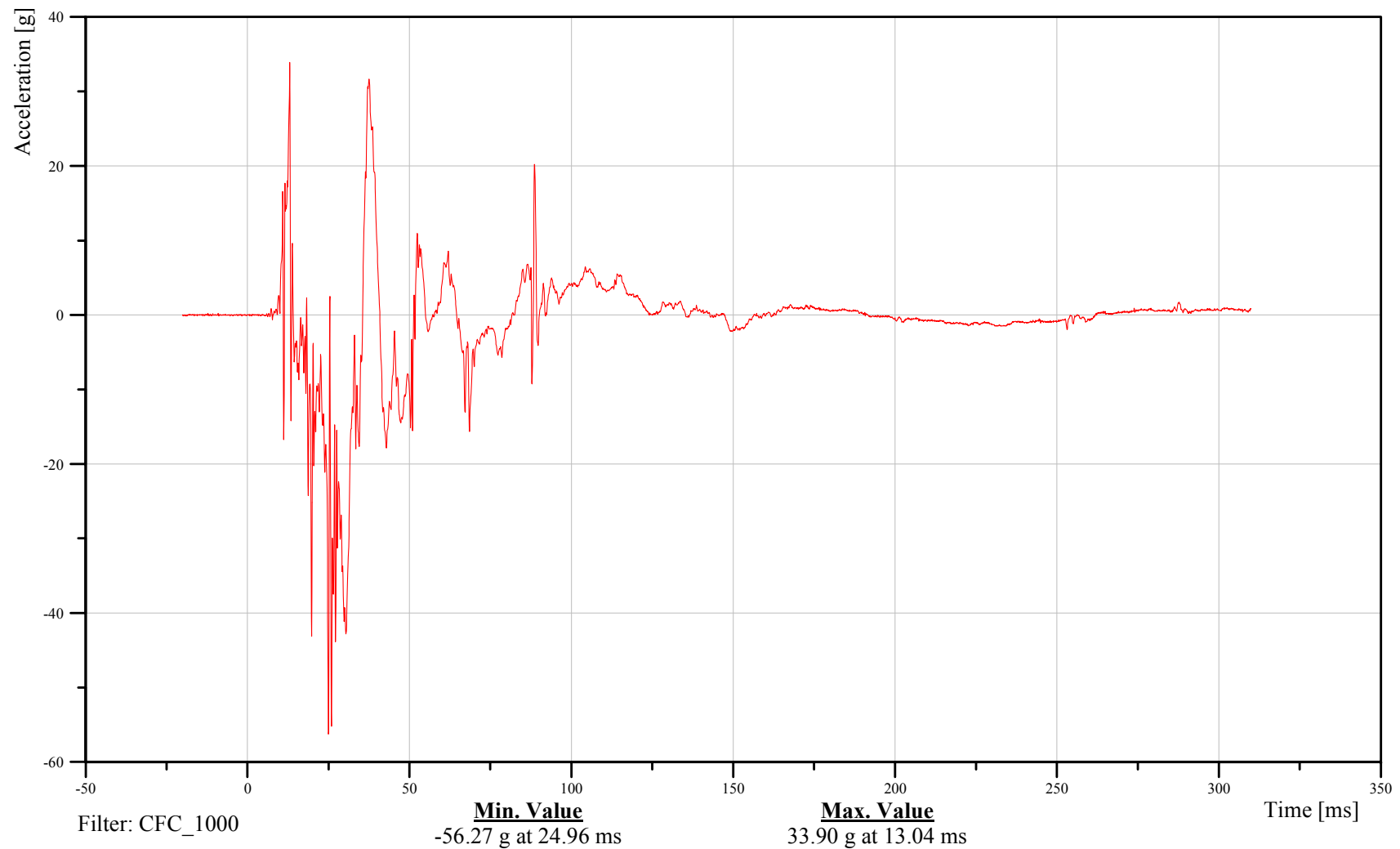
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2ACXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Accel Y

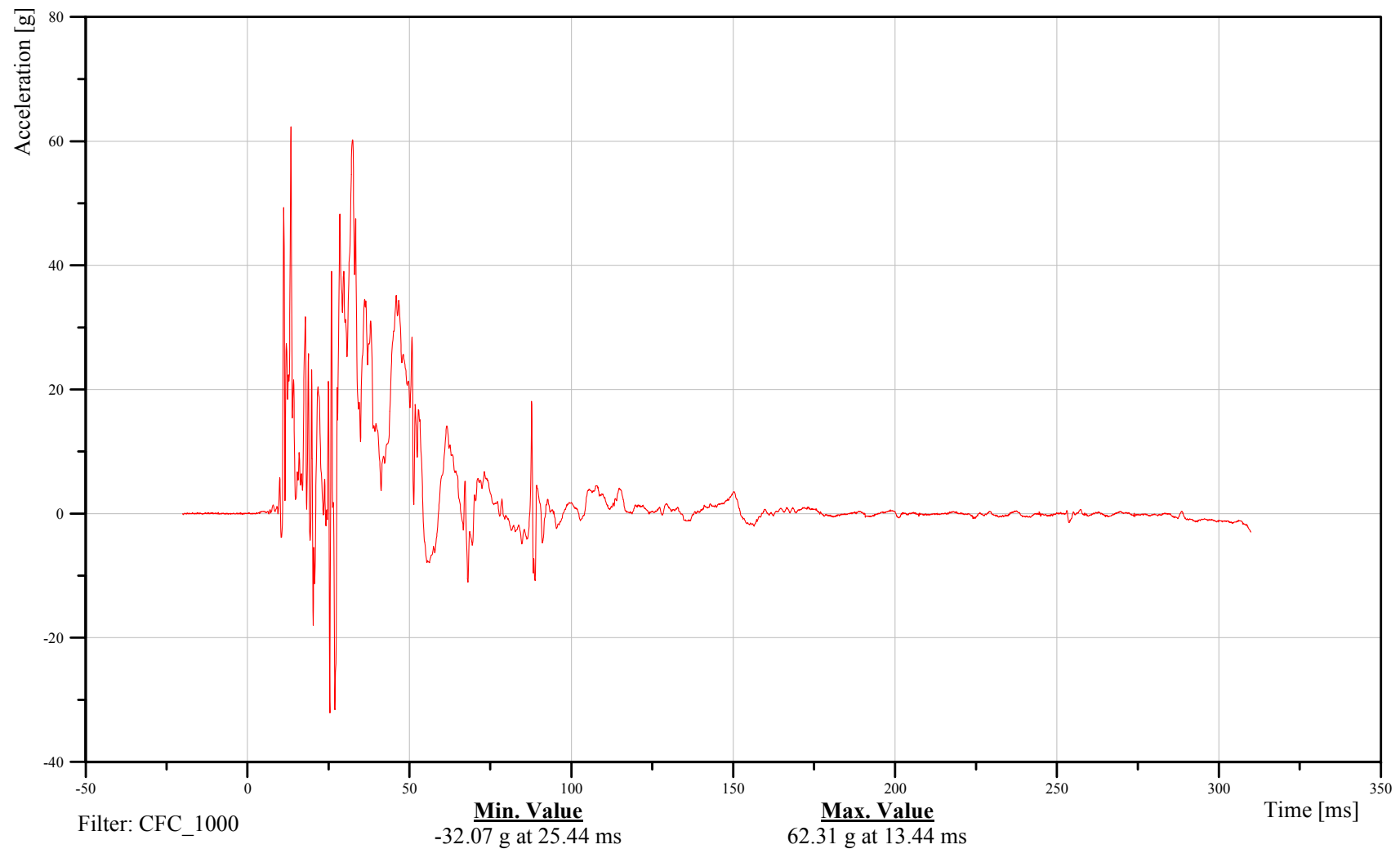
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2ACYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Accel Z

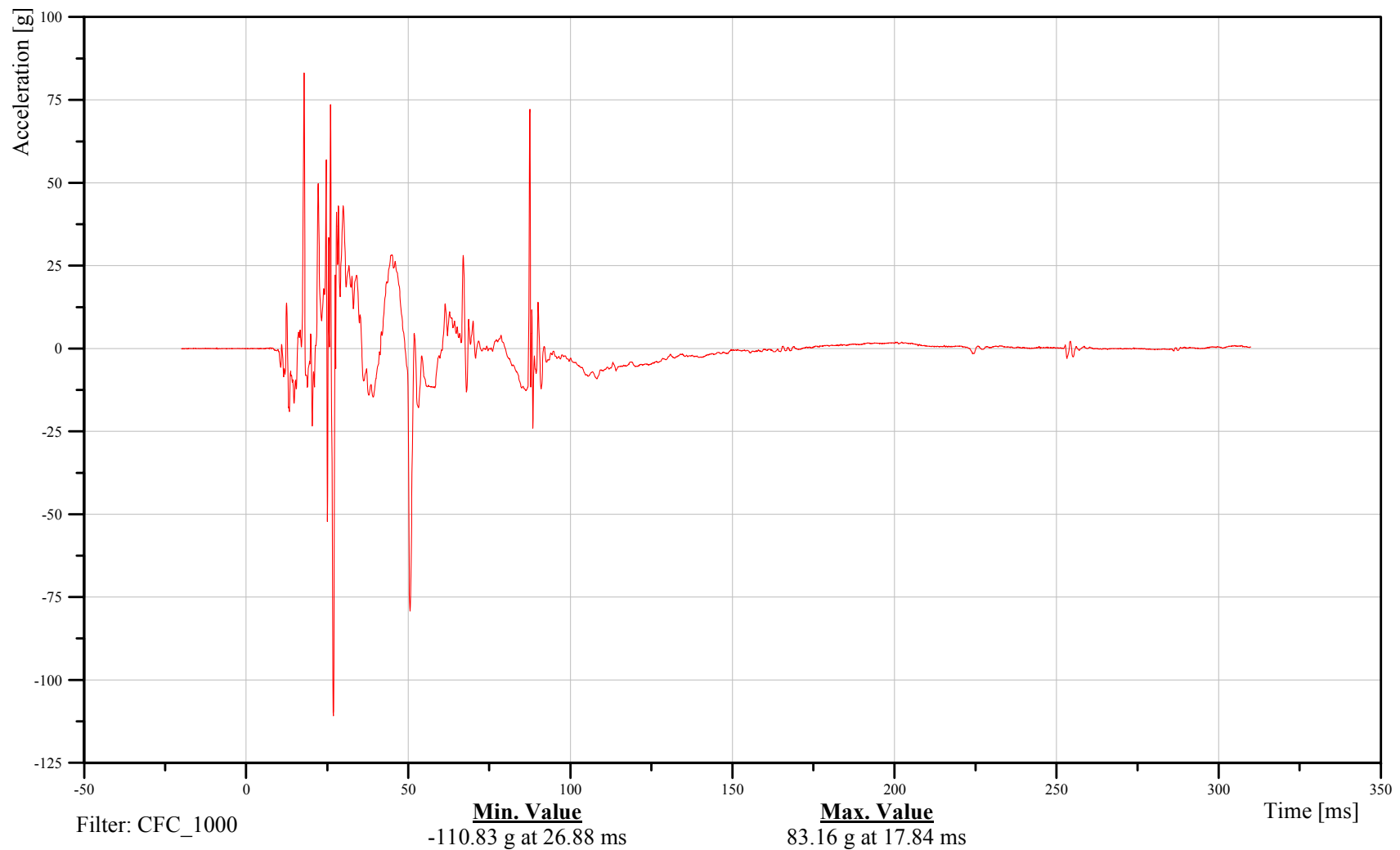
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2ACZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Accel Resultant

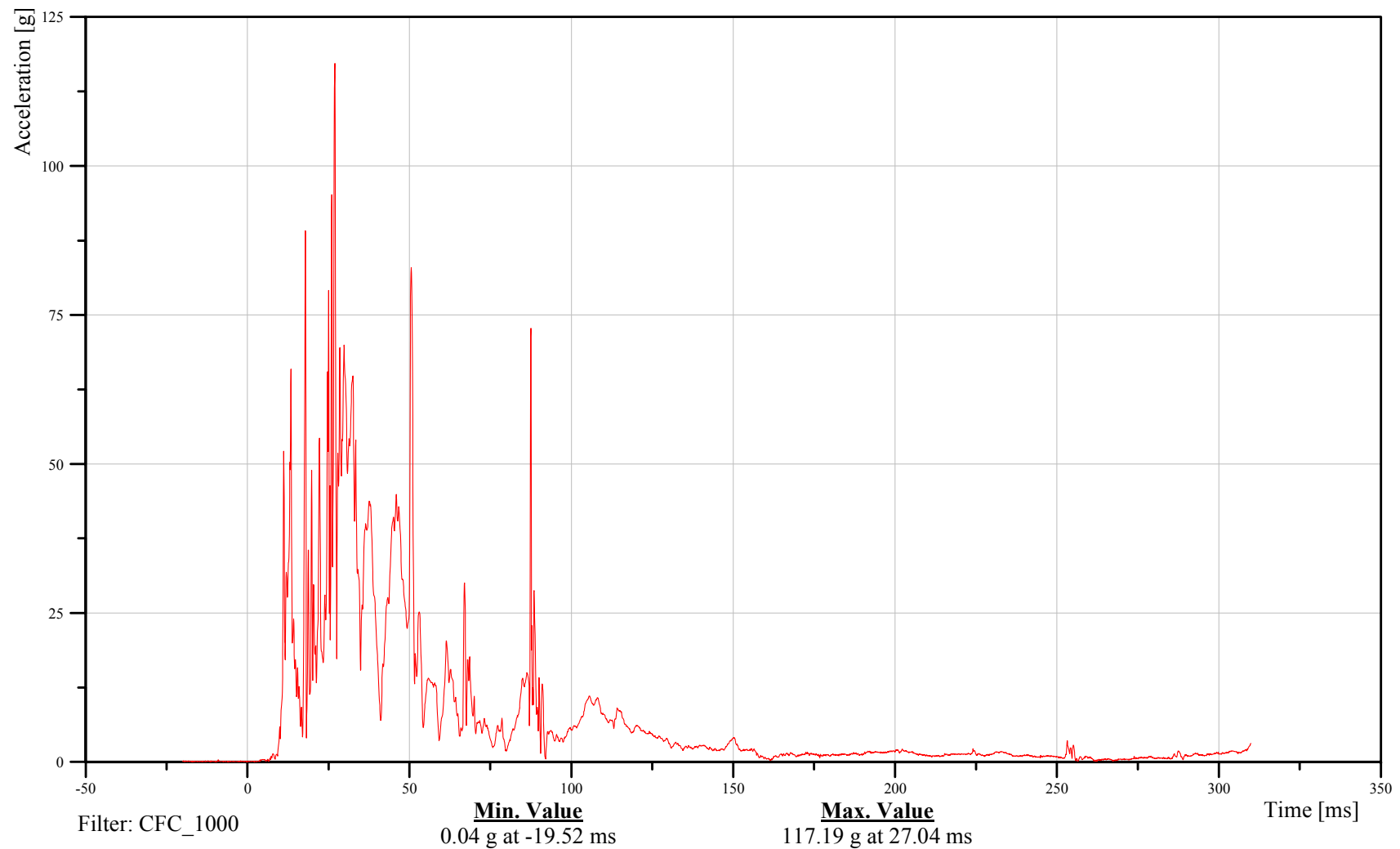
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2ACRA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Force X

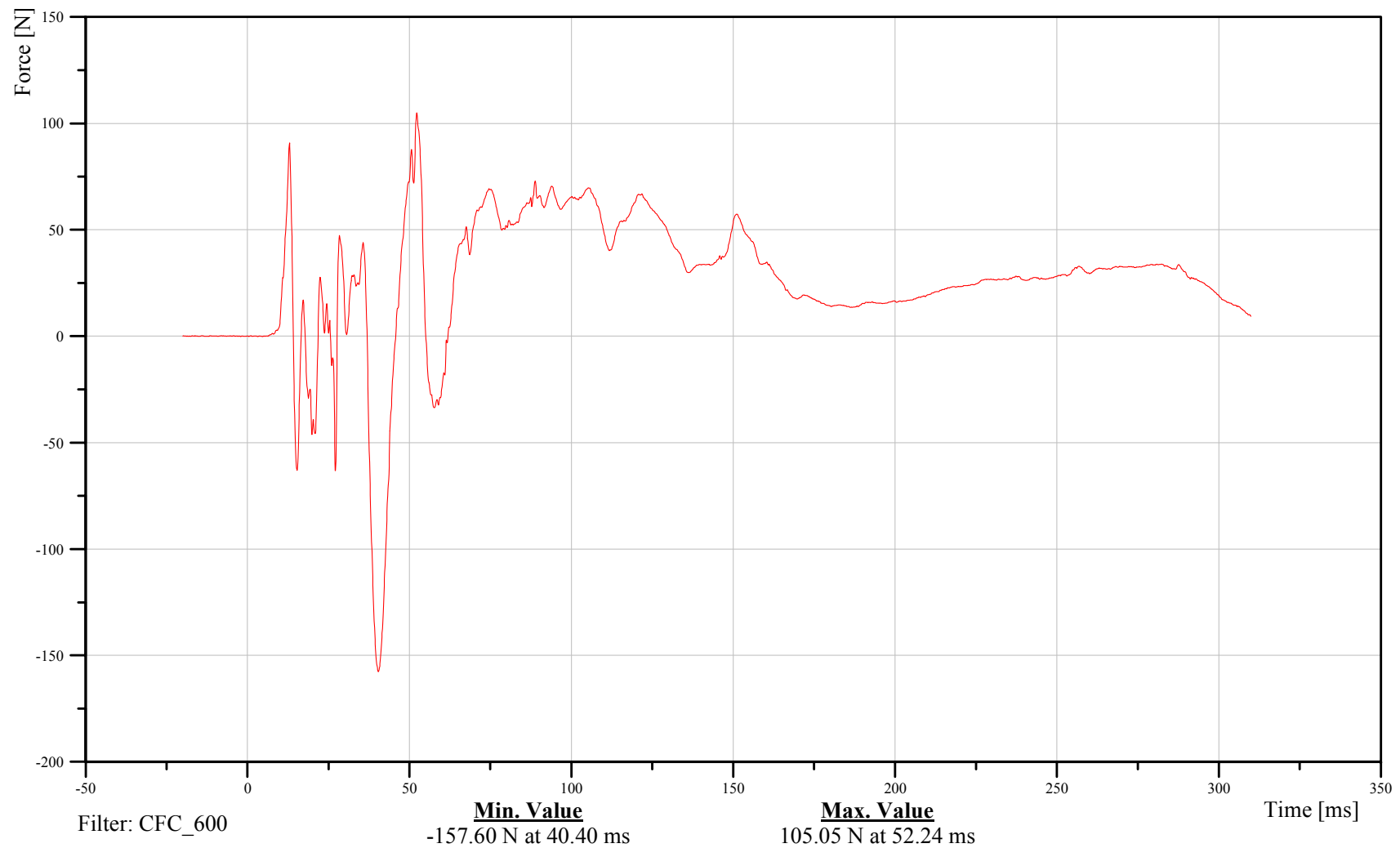
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2FOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Force Y

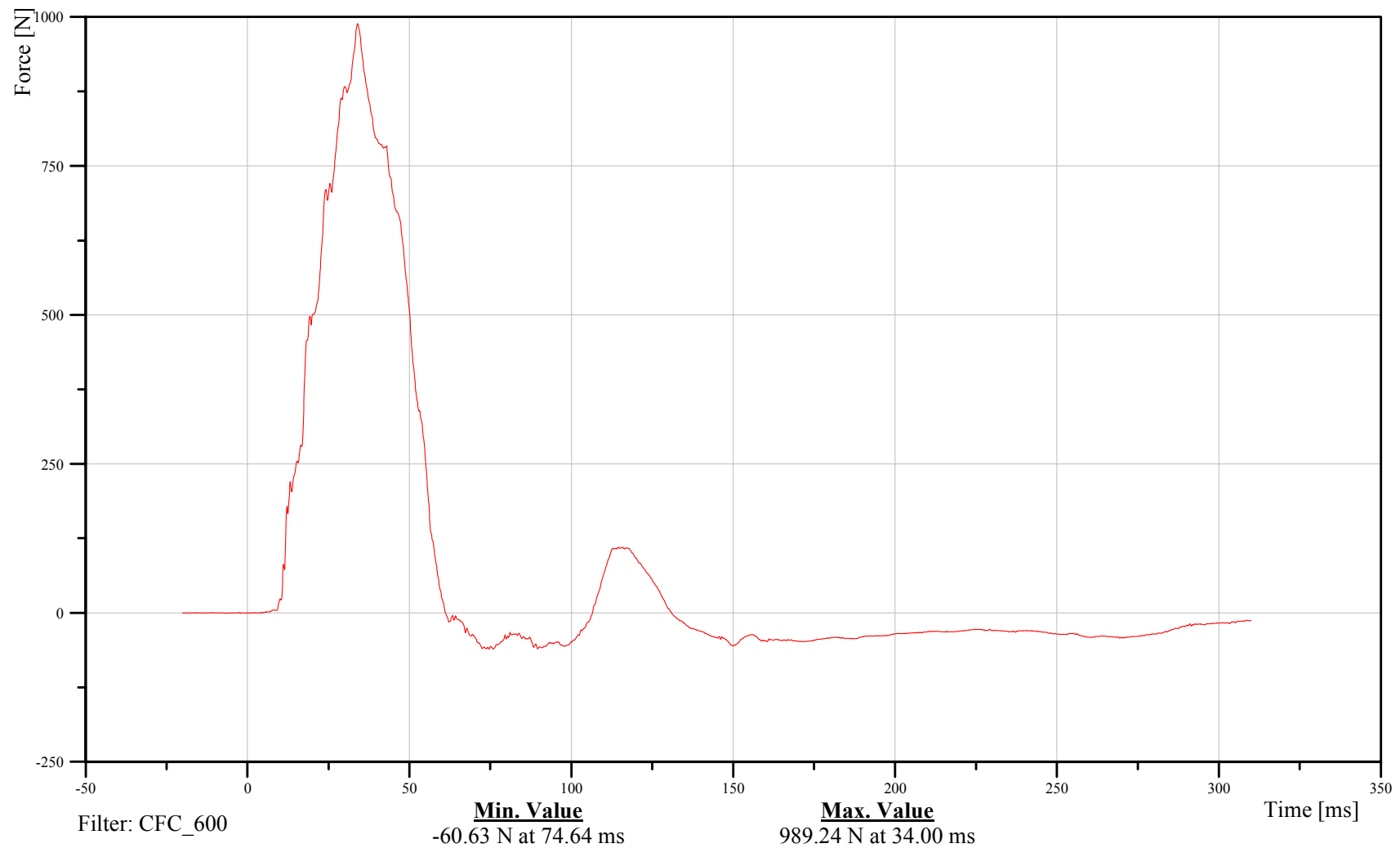
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Force Z

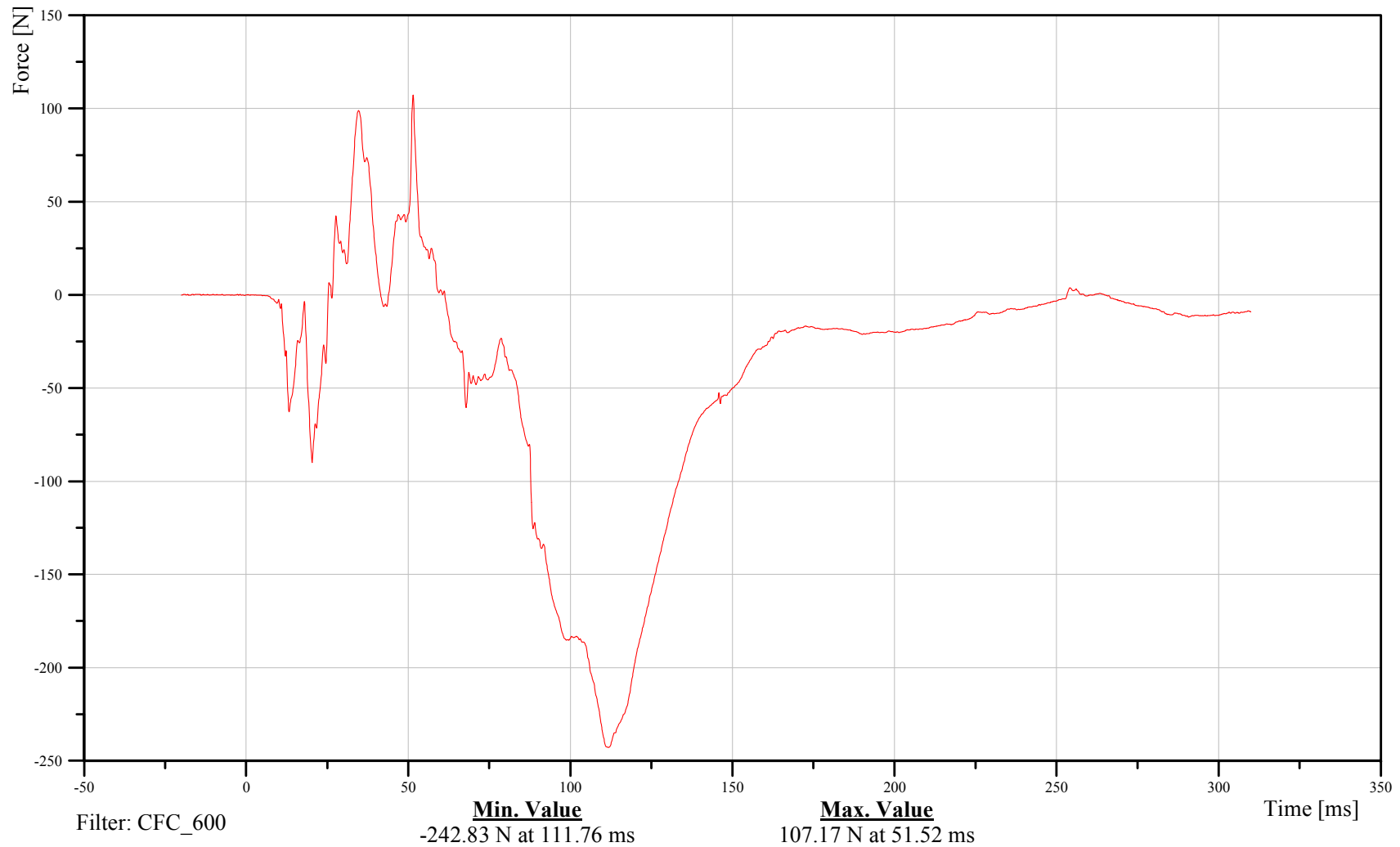
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHLDLE00S2FOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Upper Spine Accel X

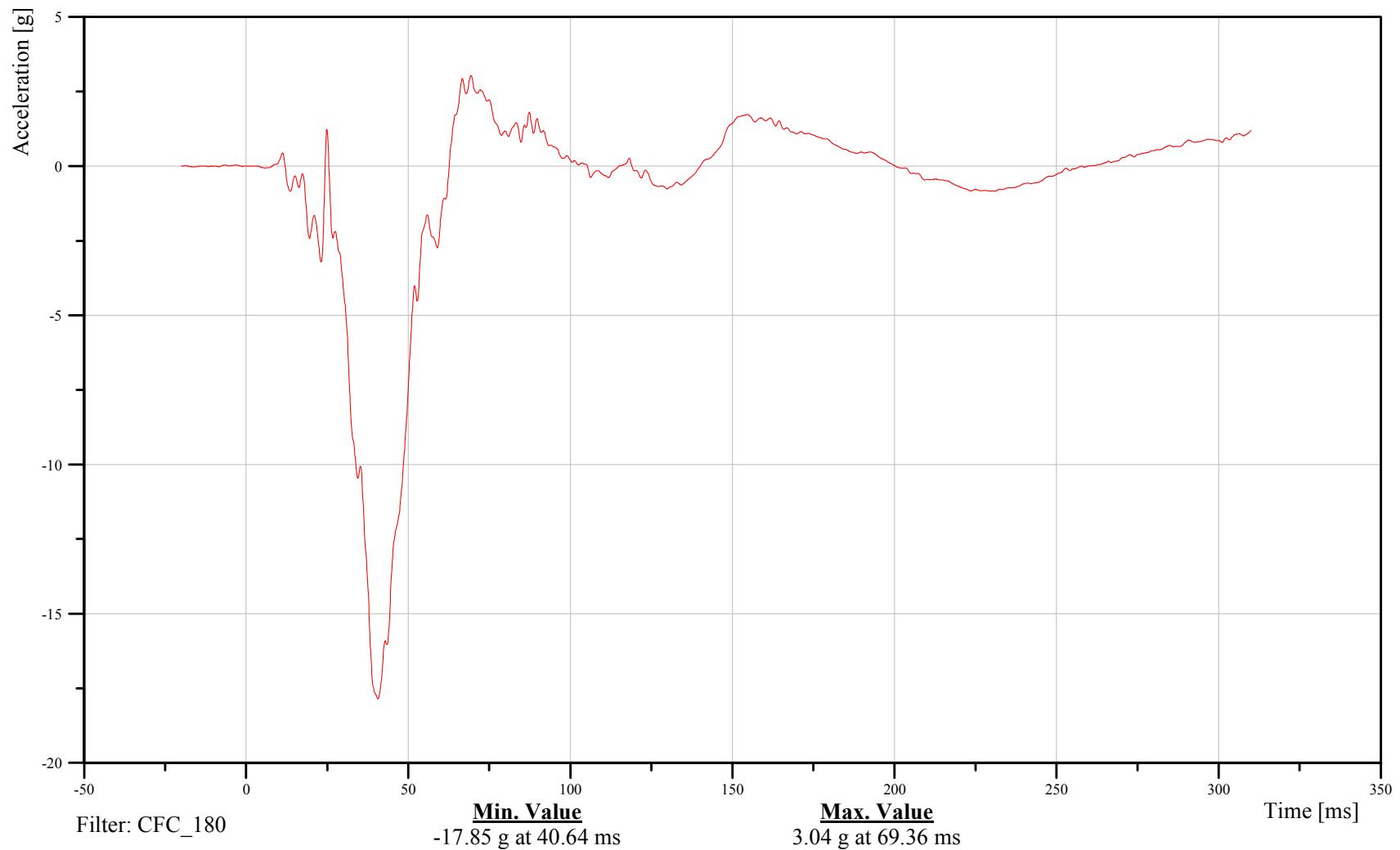
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN0100S2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Upper Spine Accel Y

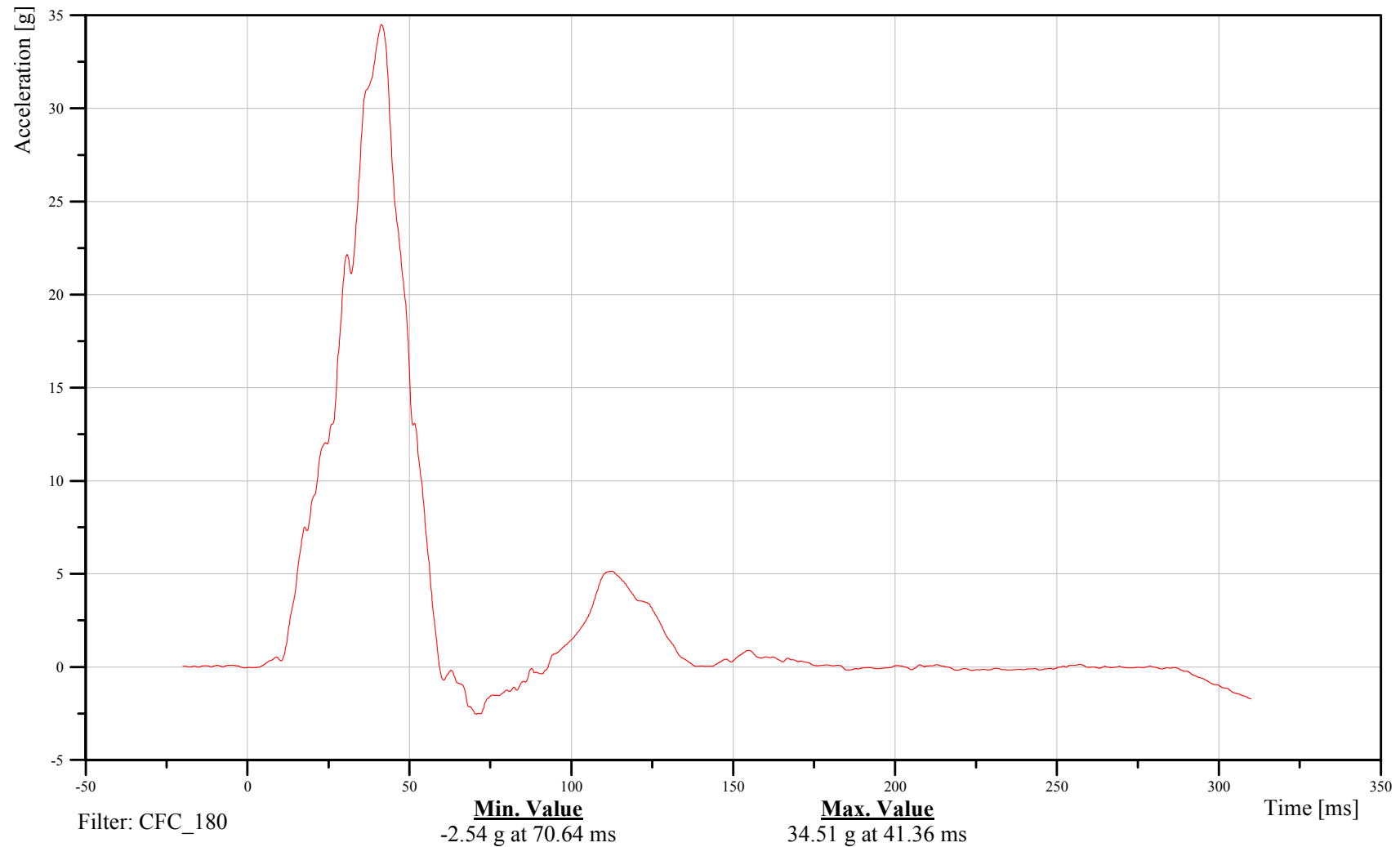
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN0100S2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Upper Spine Accel Z

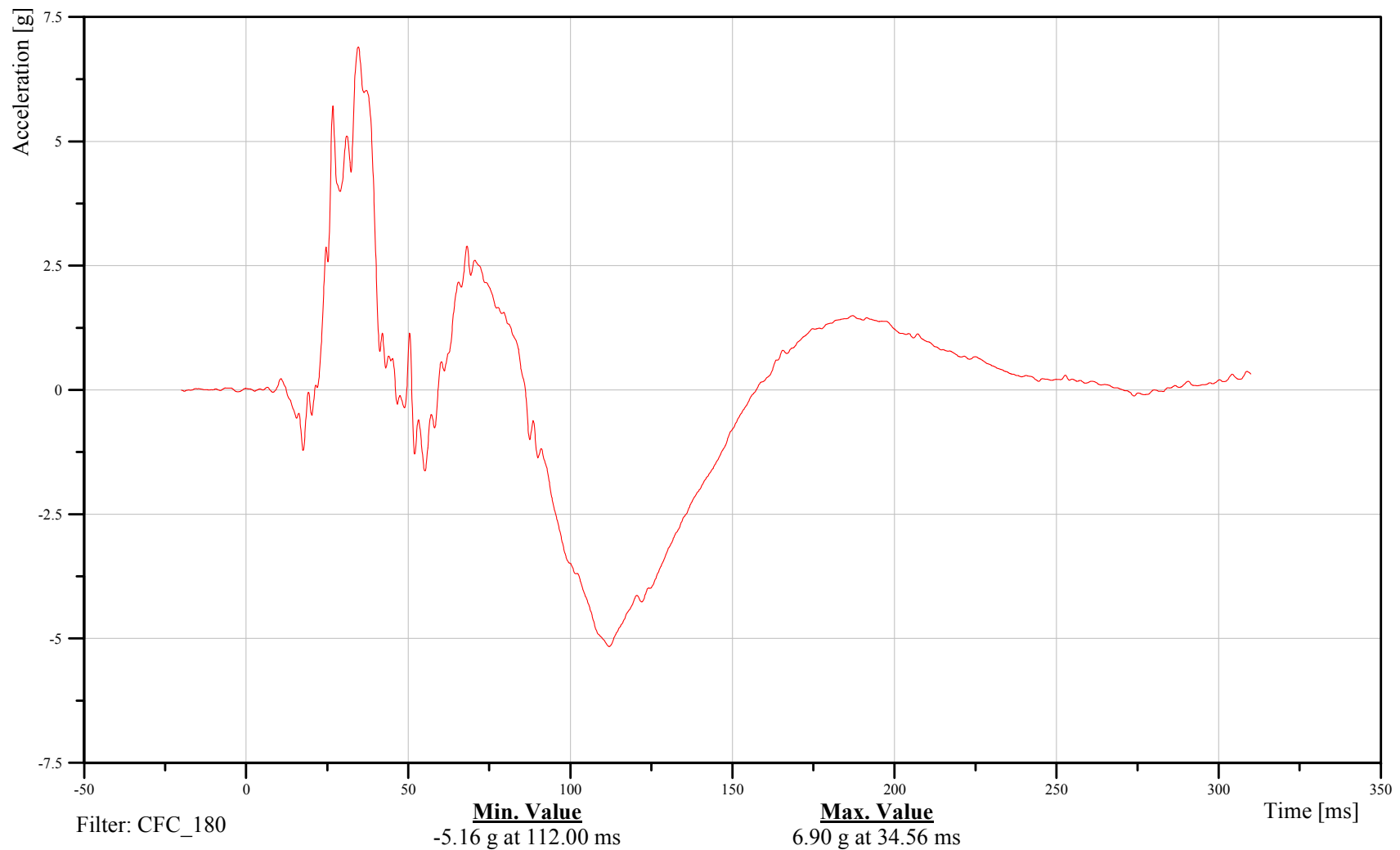
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN0100S2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Upper Spine Resultant

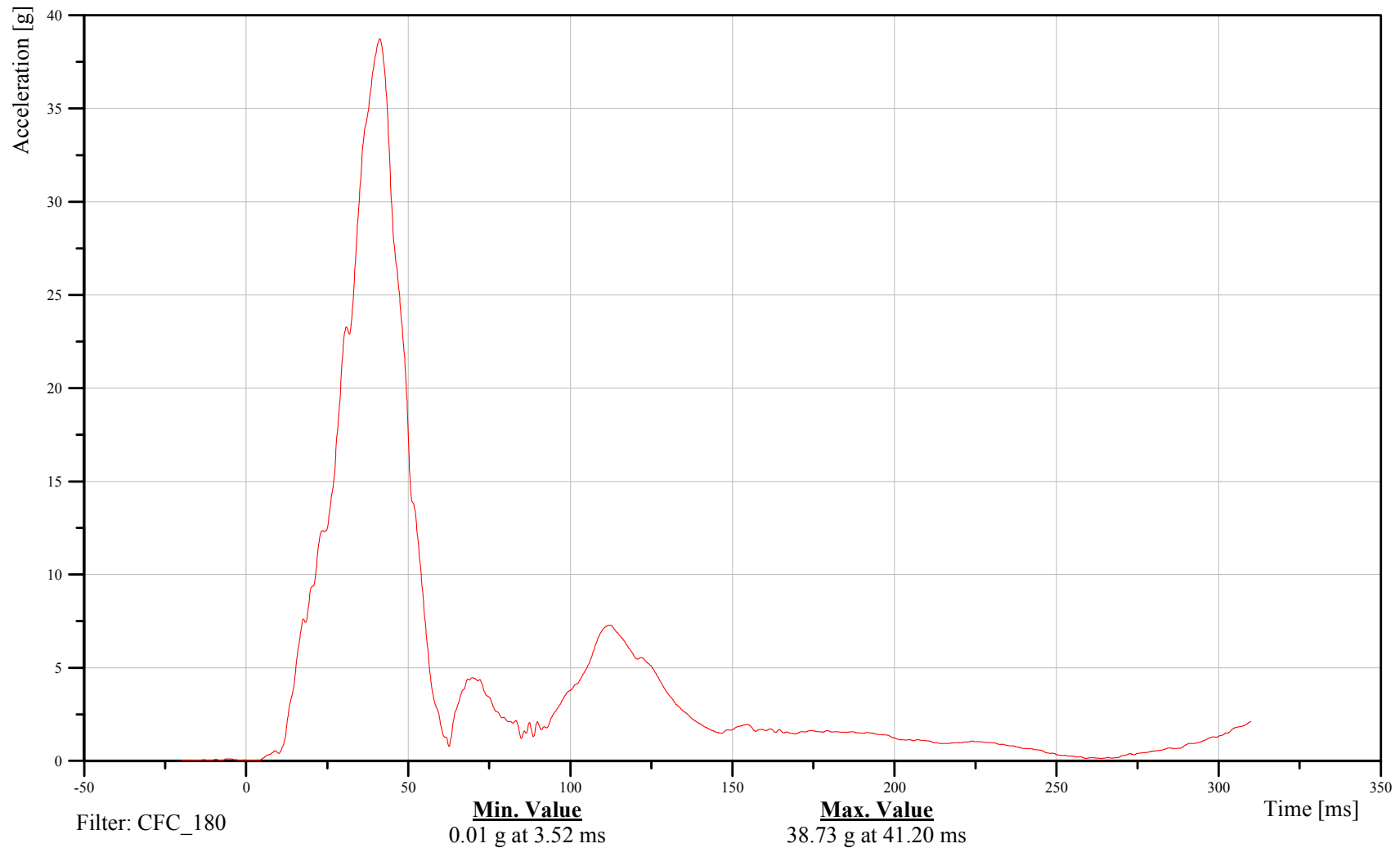
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN0100S2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 1 Accel X

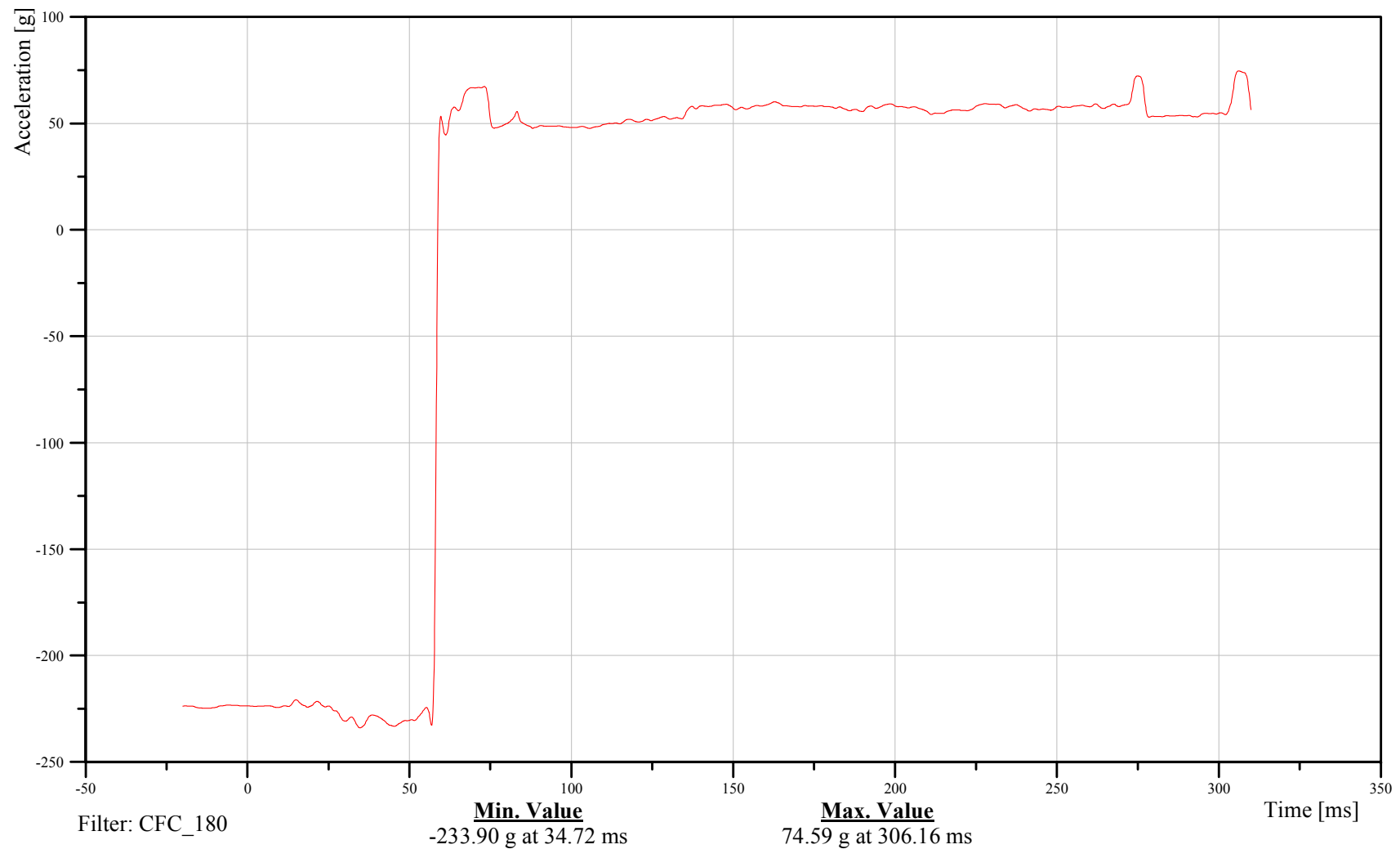
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP01RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 1 Accel Y

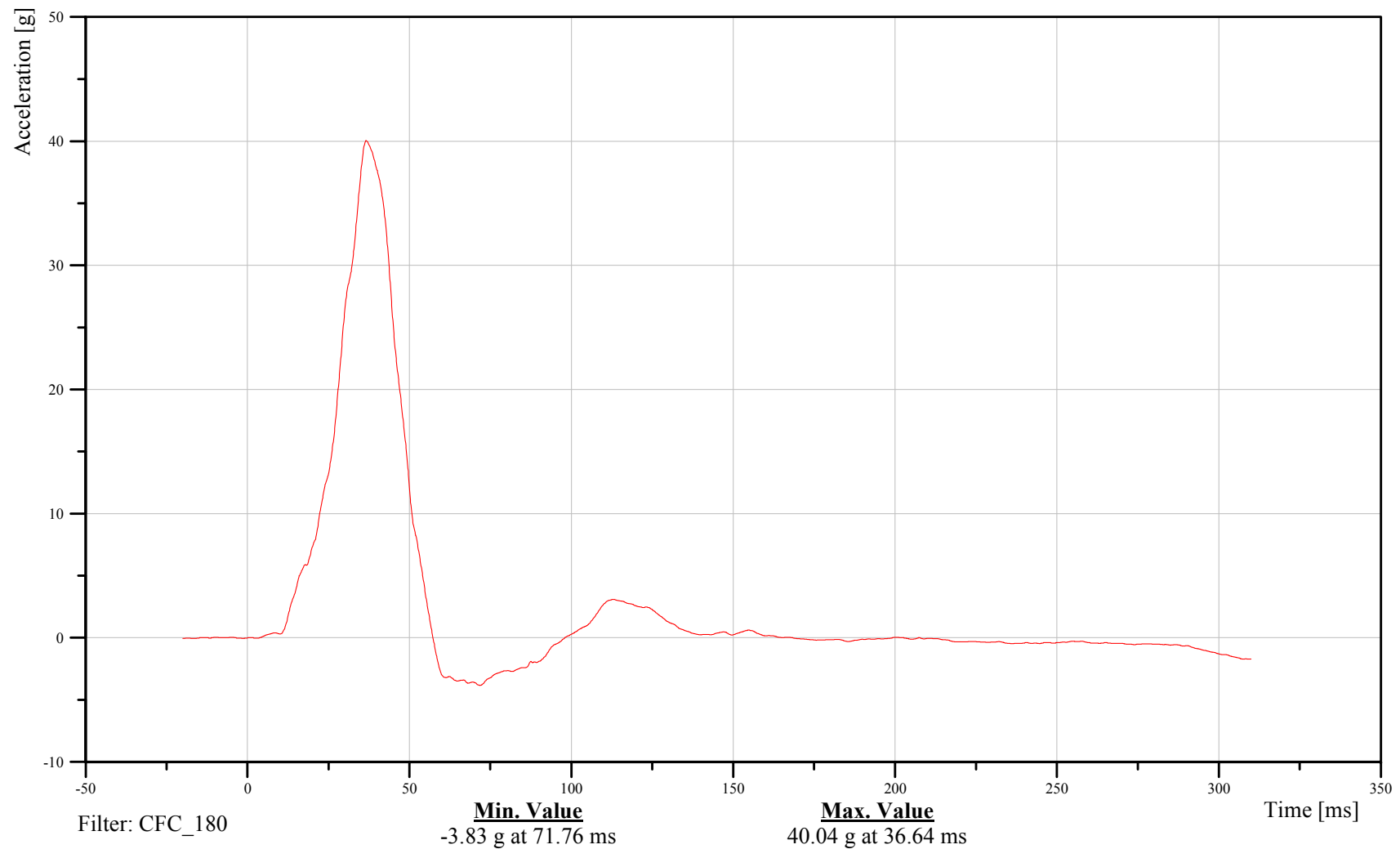
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP01RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 1 Accel Z

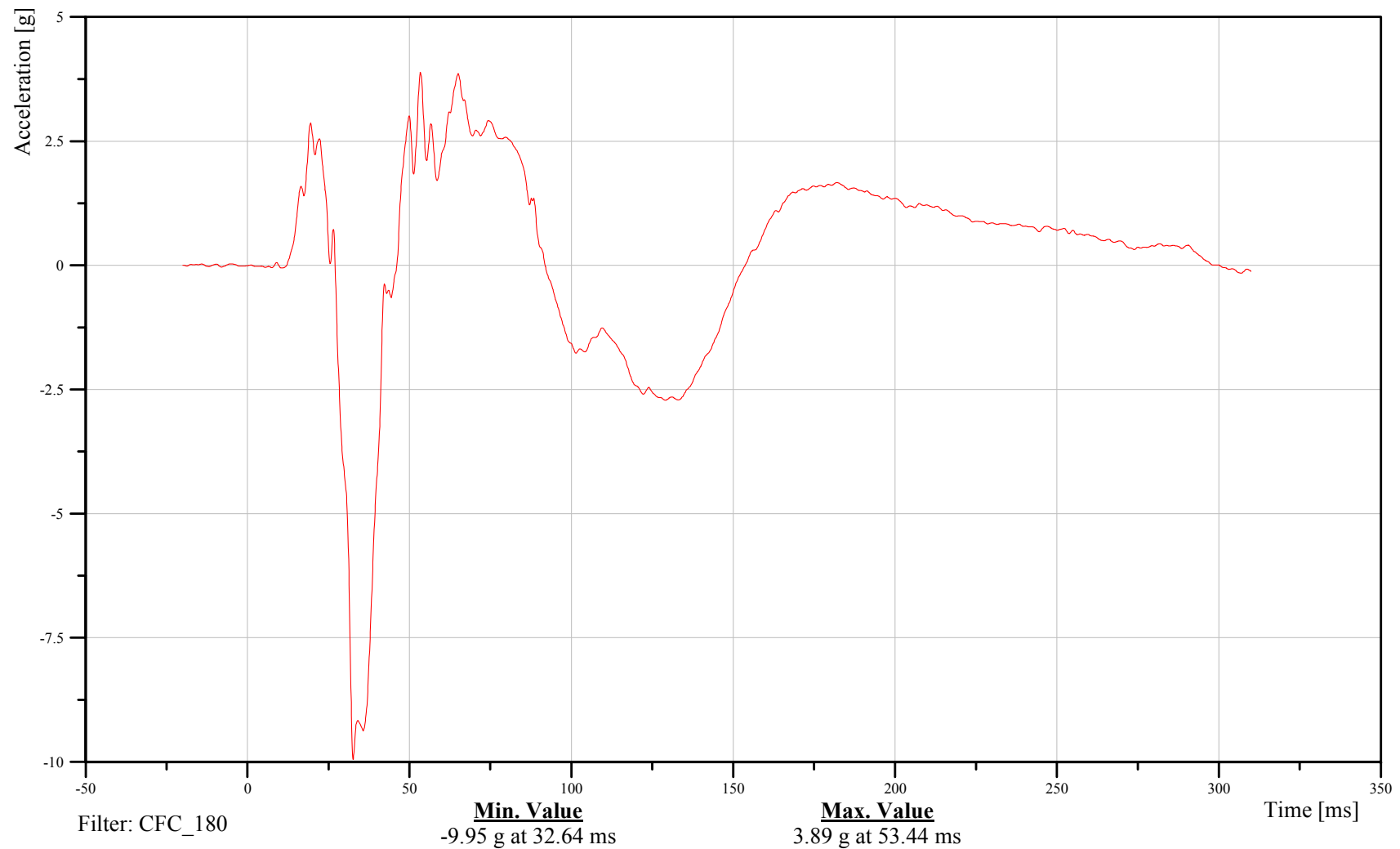
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP01RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 1 Accel Resultant

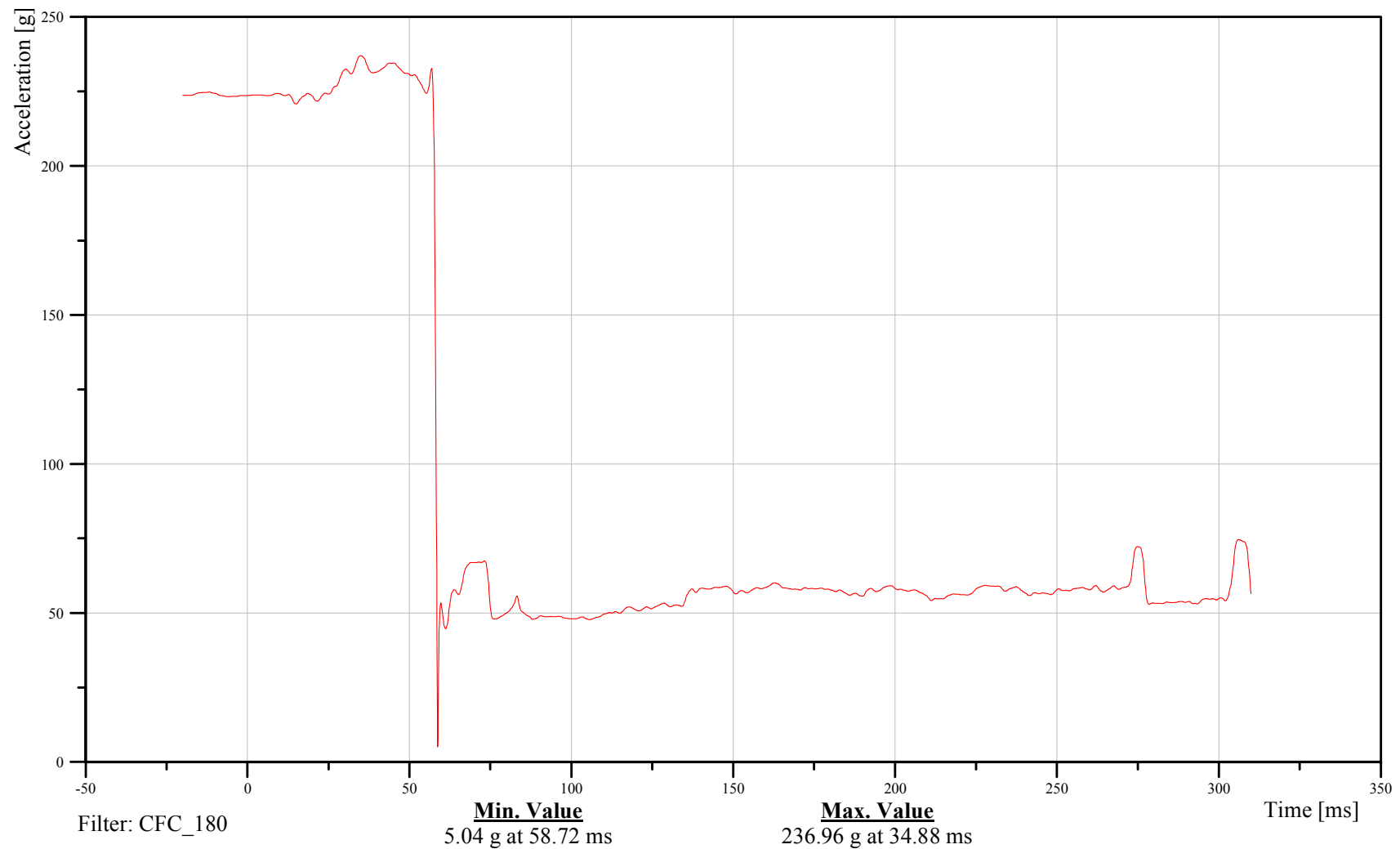
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP01RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 2 Accel X

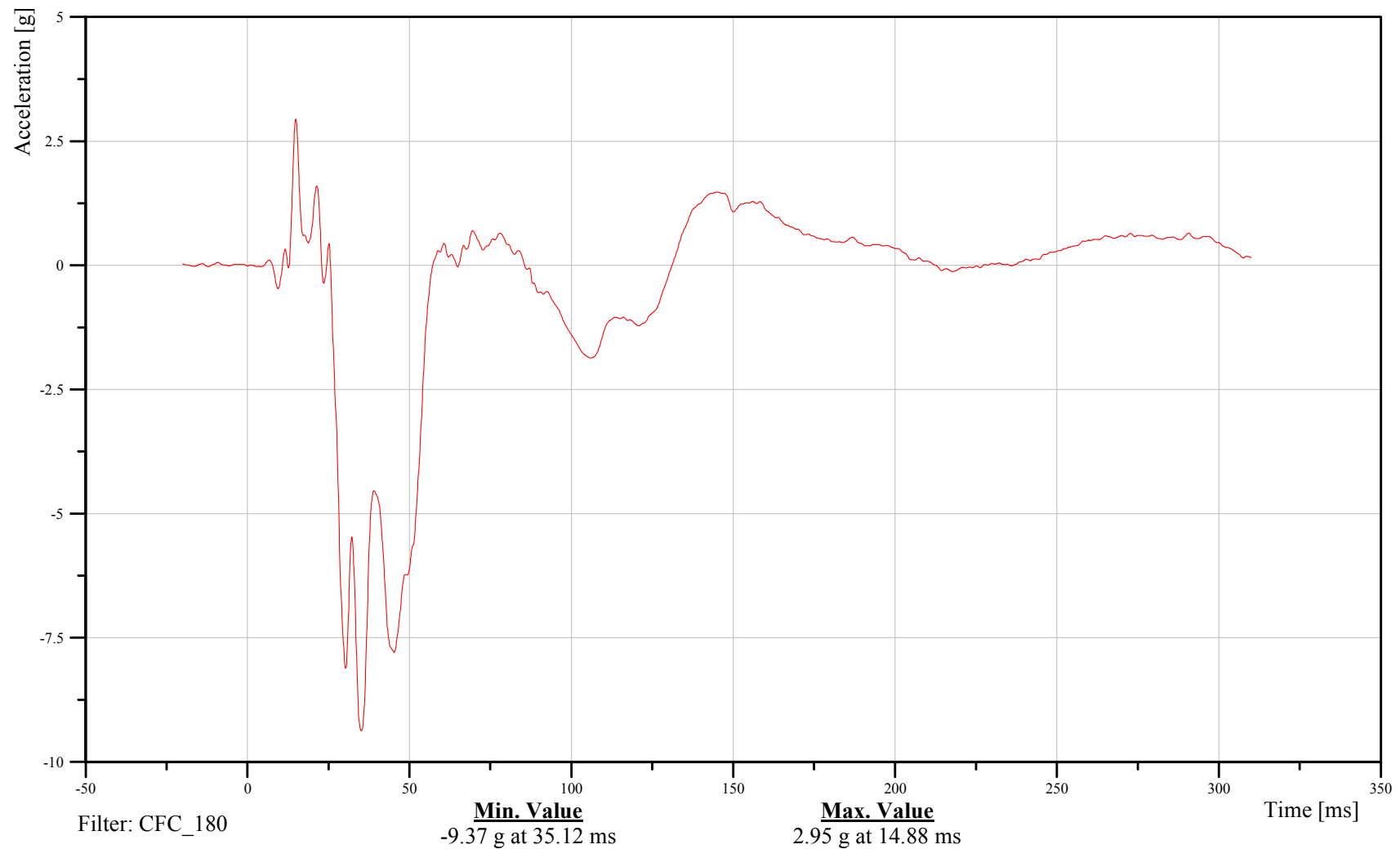
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP02RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 2 Accel Y

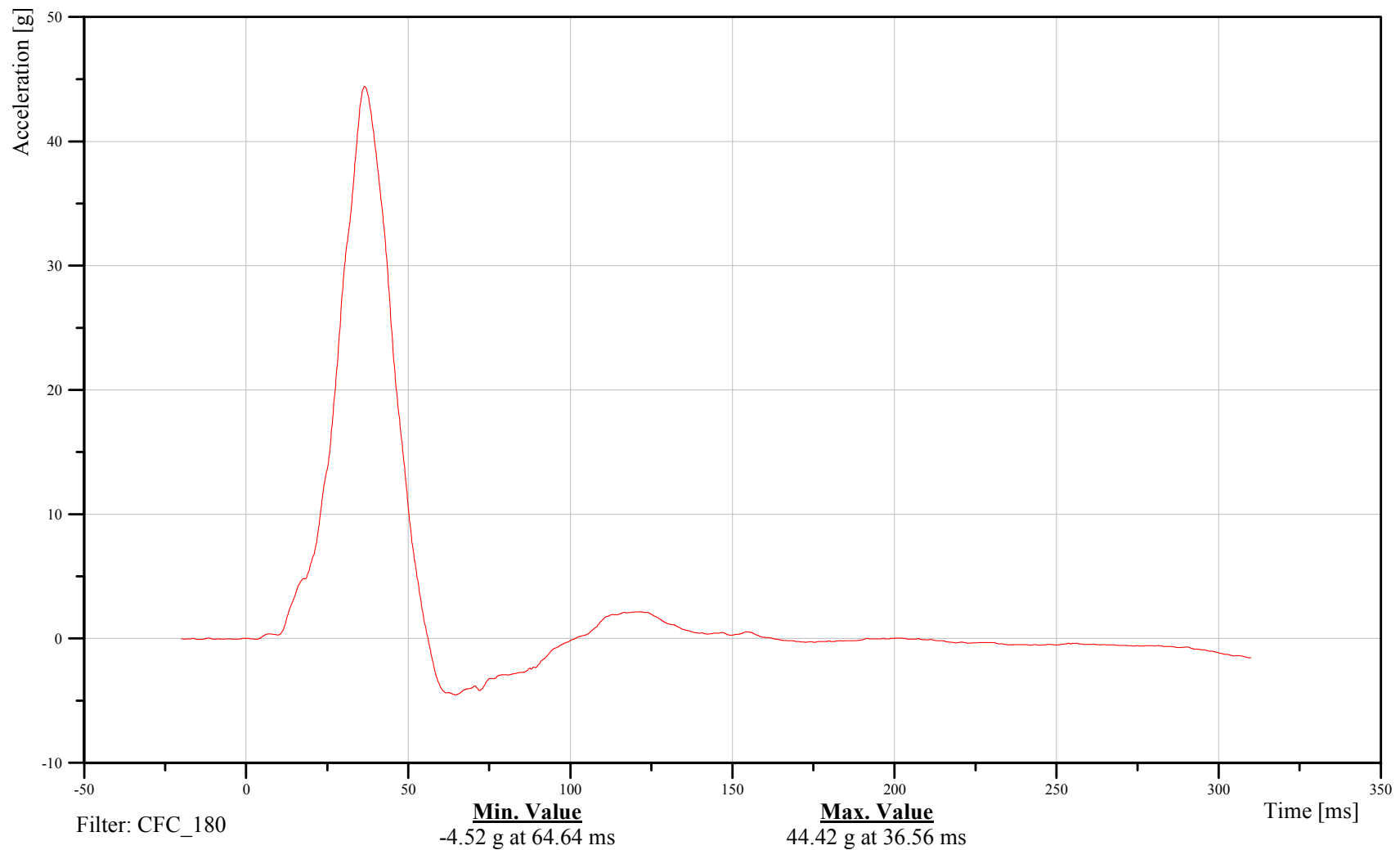
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP02RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 2 Accel Z

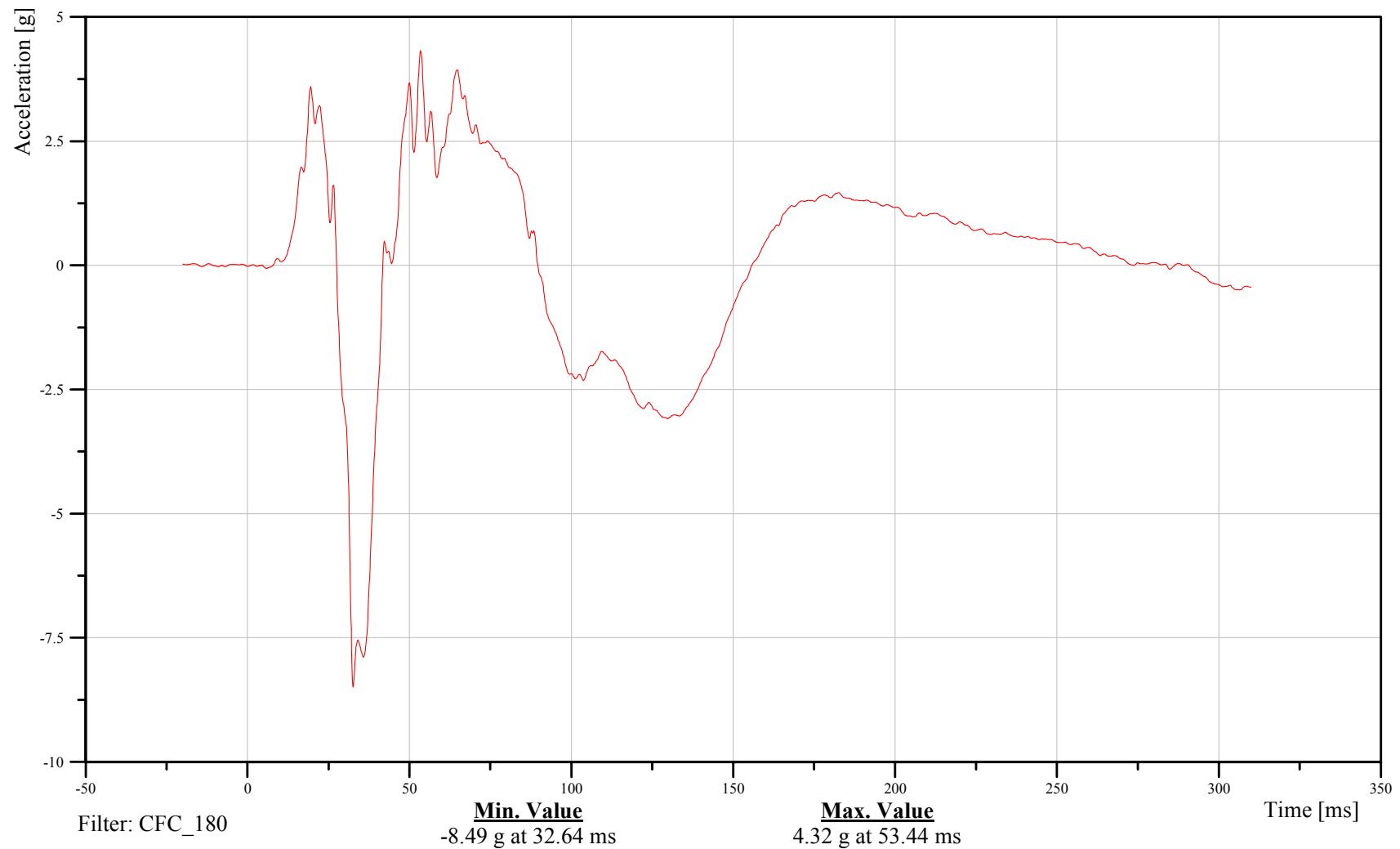
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP02RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 2 Accel Resultant

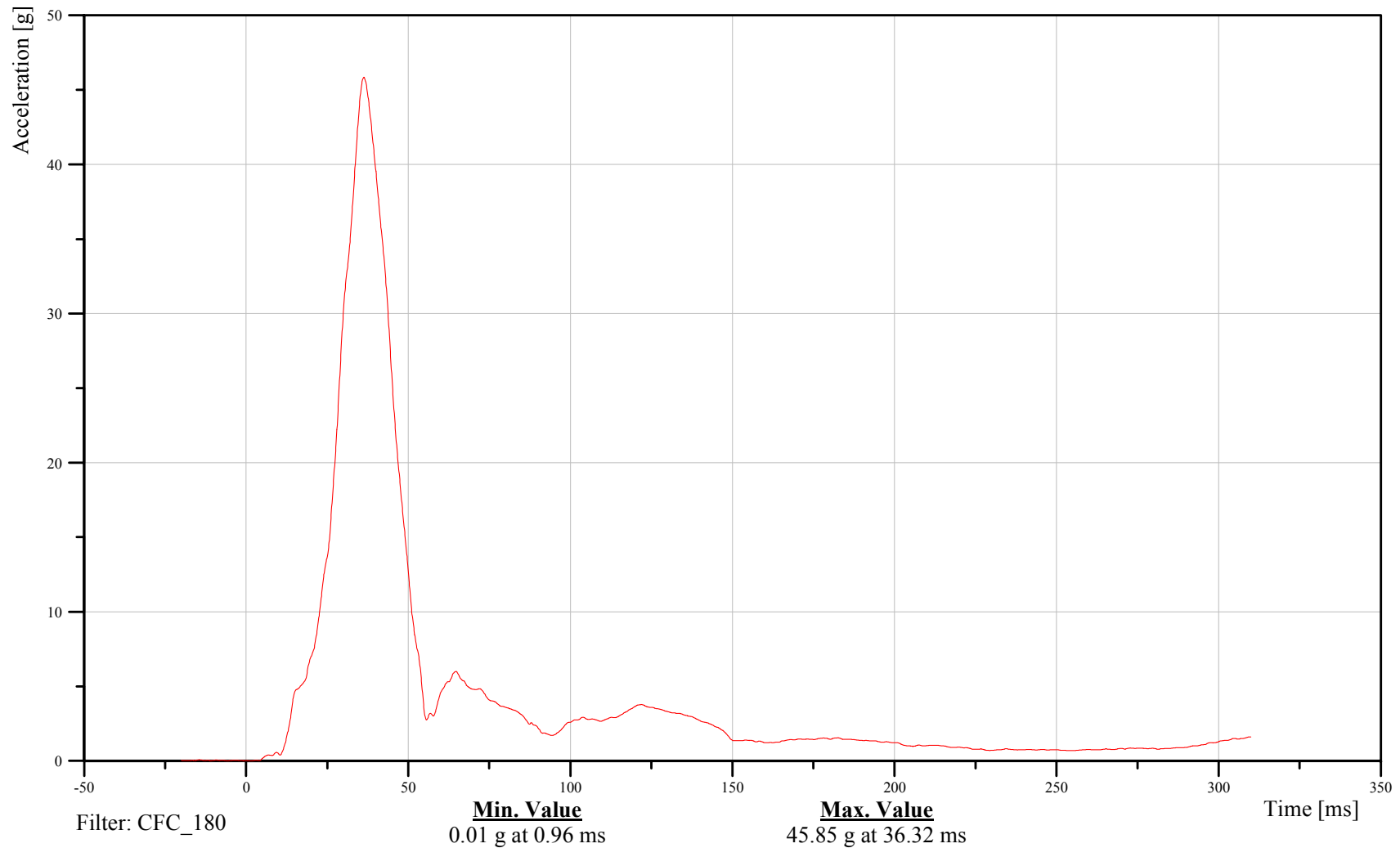
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP02RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 3 Accel X

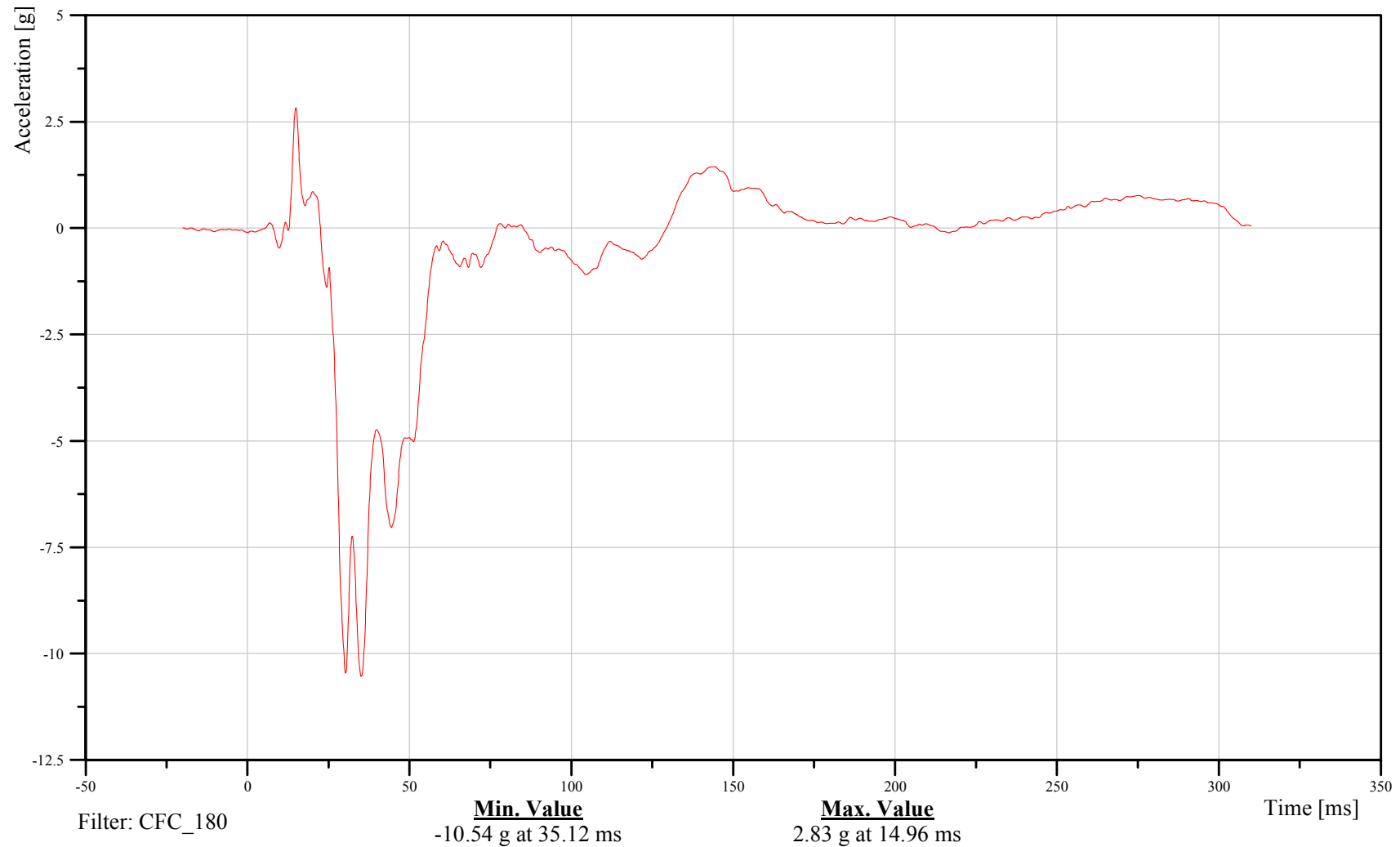
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP03RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 3 Accel Y

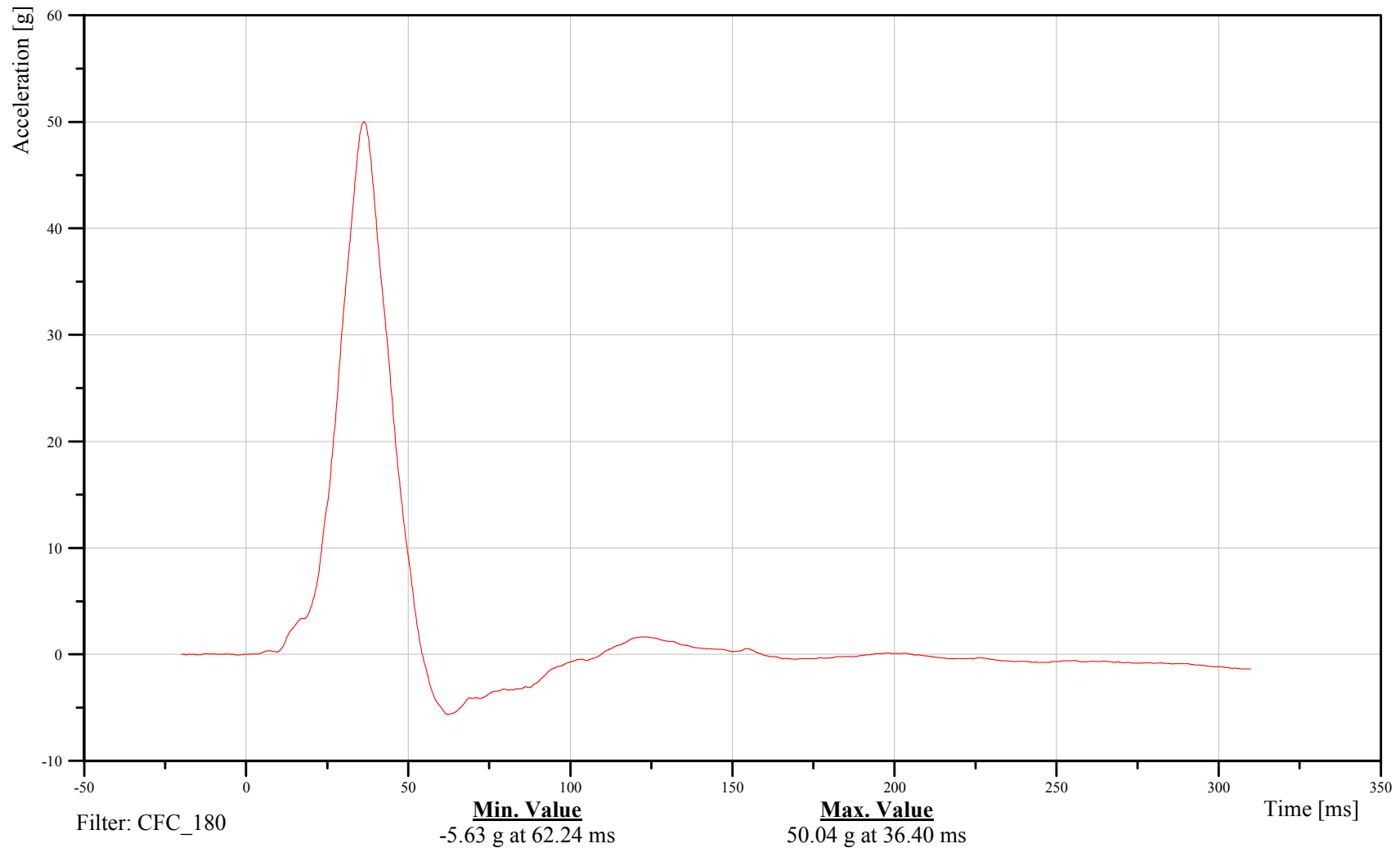
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP03RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 3 Accel Z

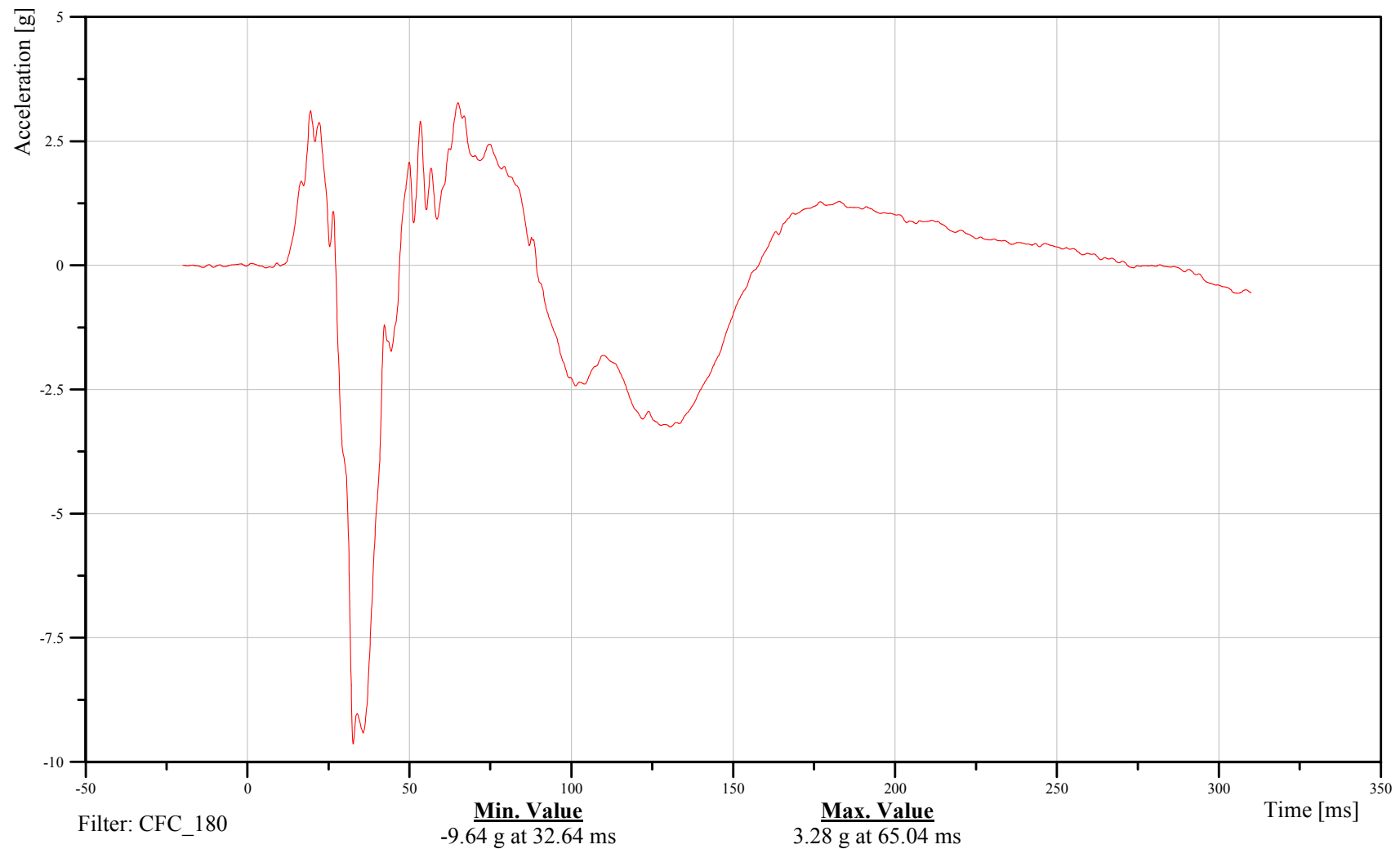
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP03RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 3 Accel Resultant

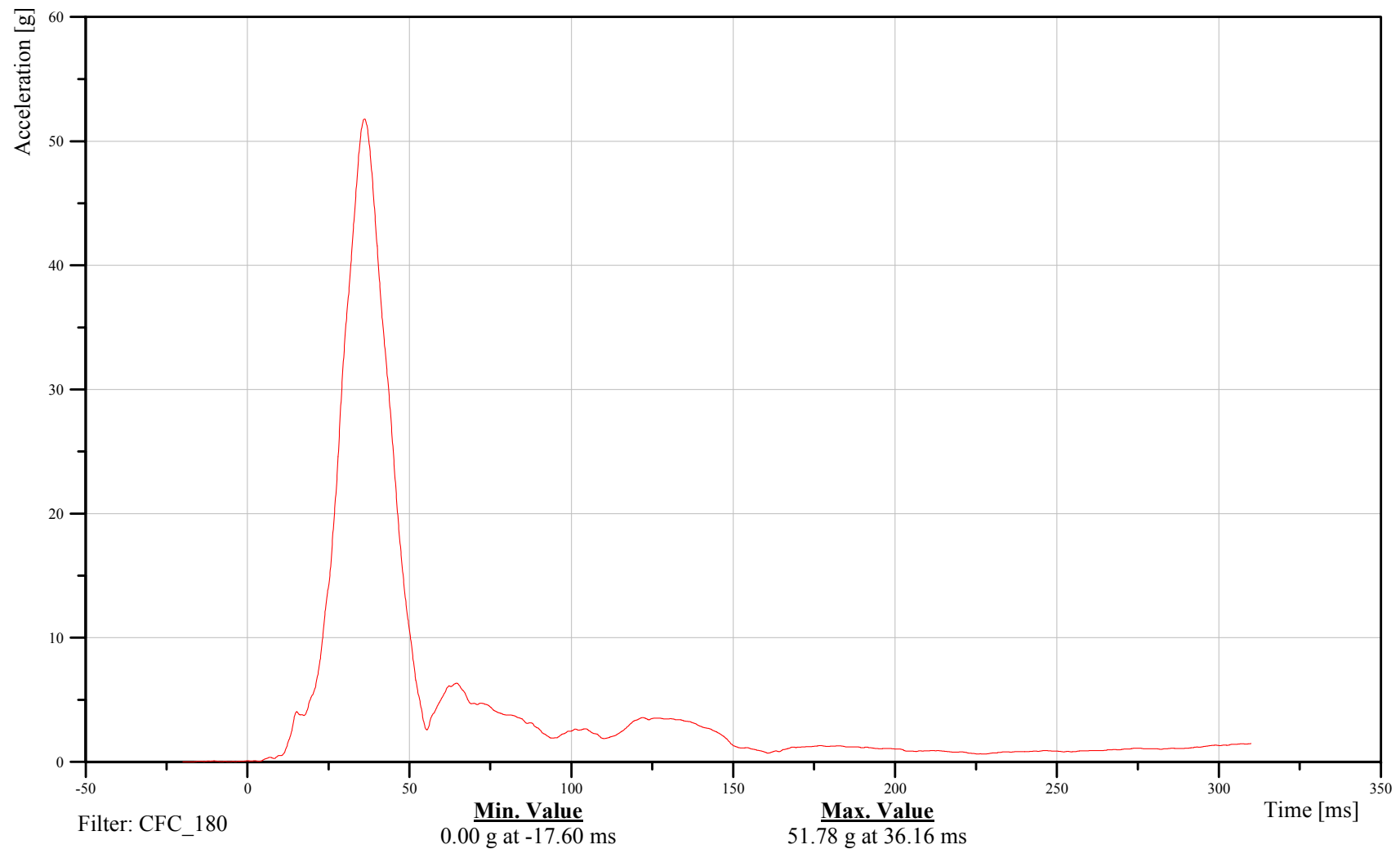
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11THSP03RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Lower Spine Accel X

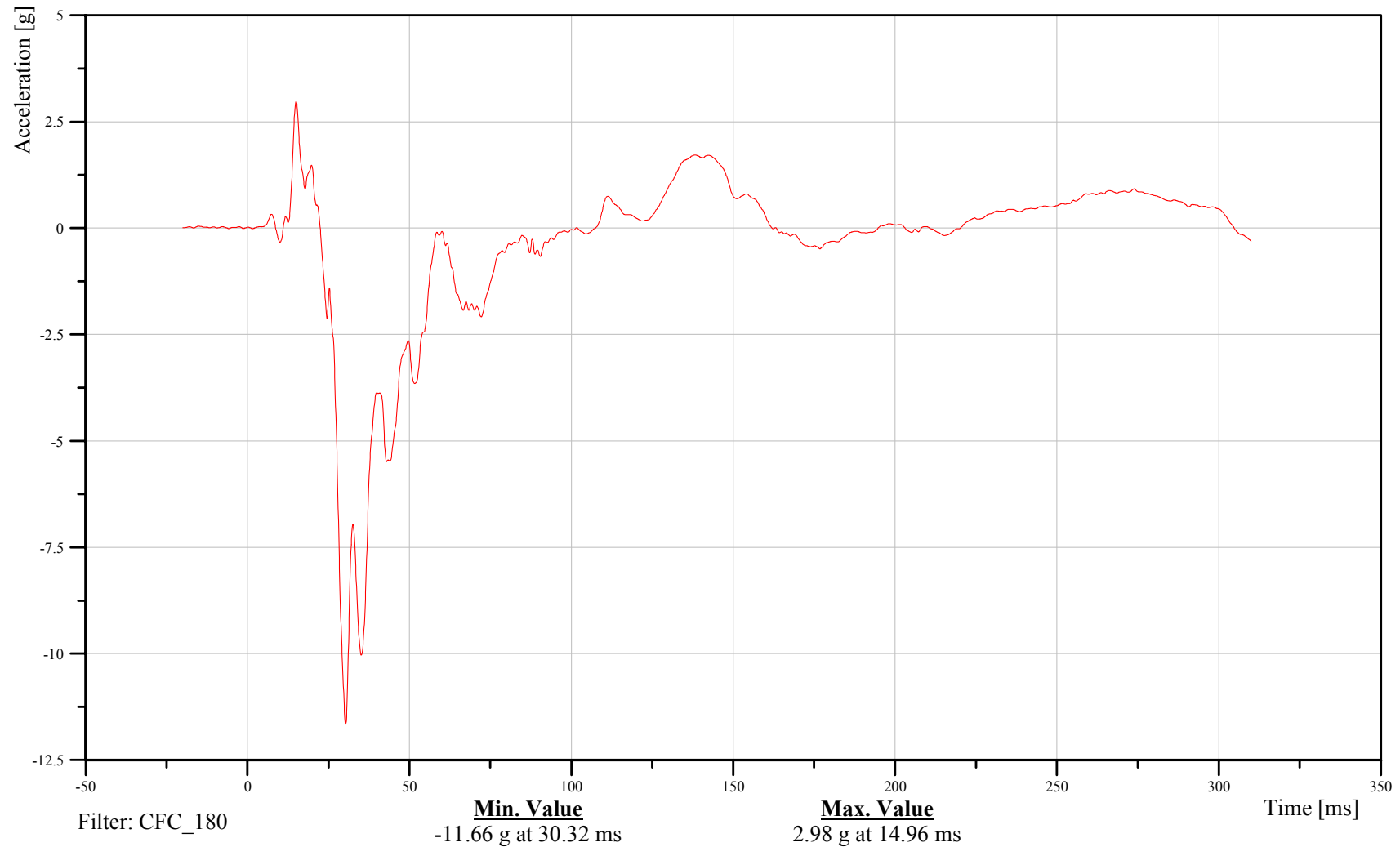
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN1200S2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Lower Spine Accel Y

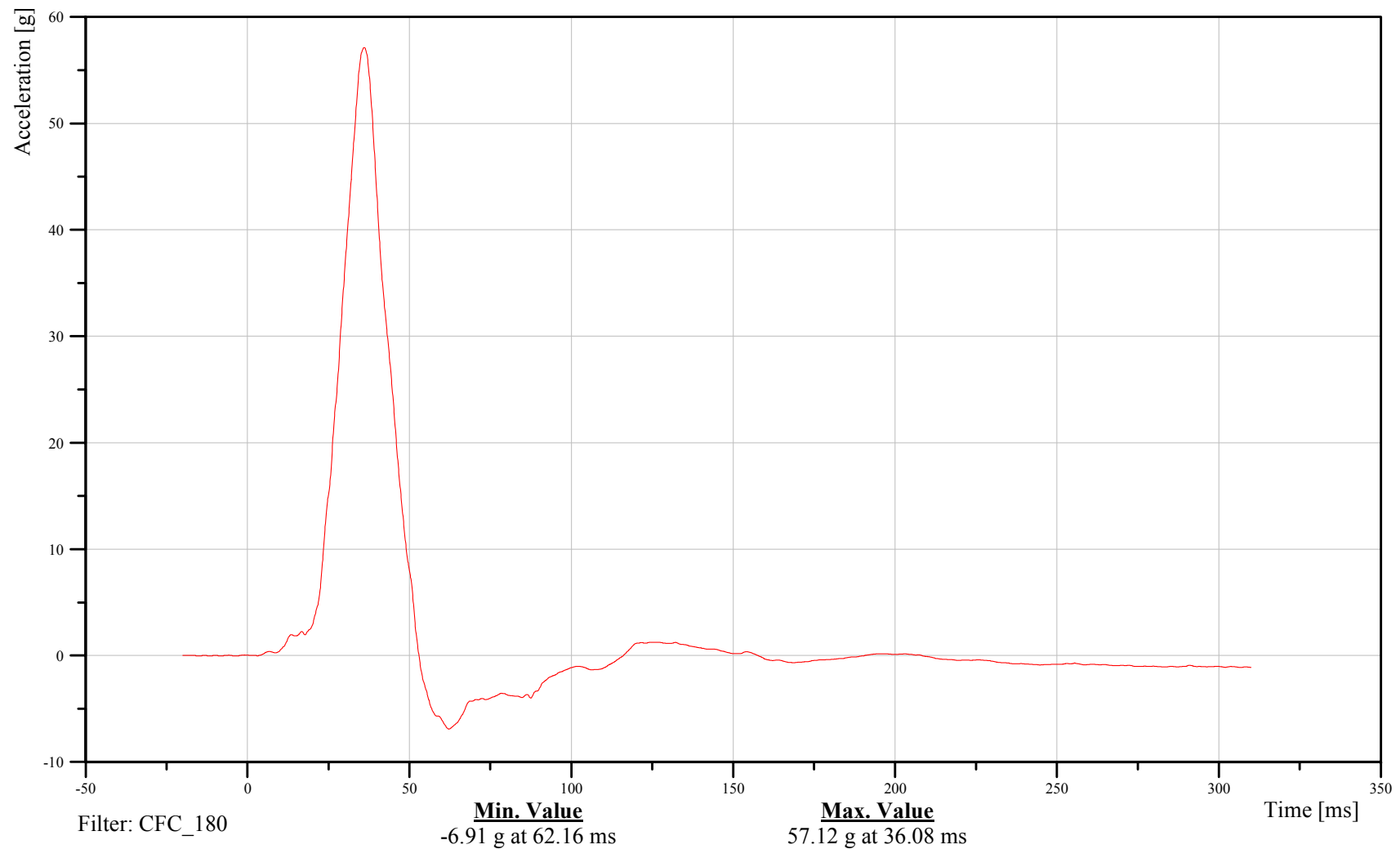
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN1200S2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Lower Spine Accel Z

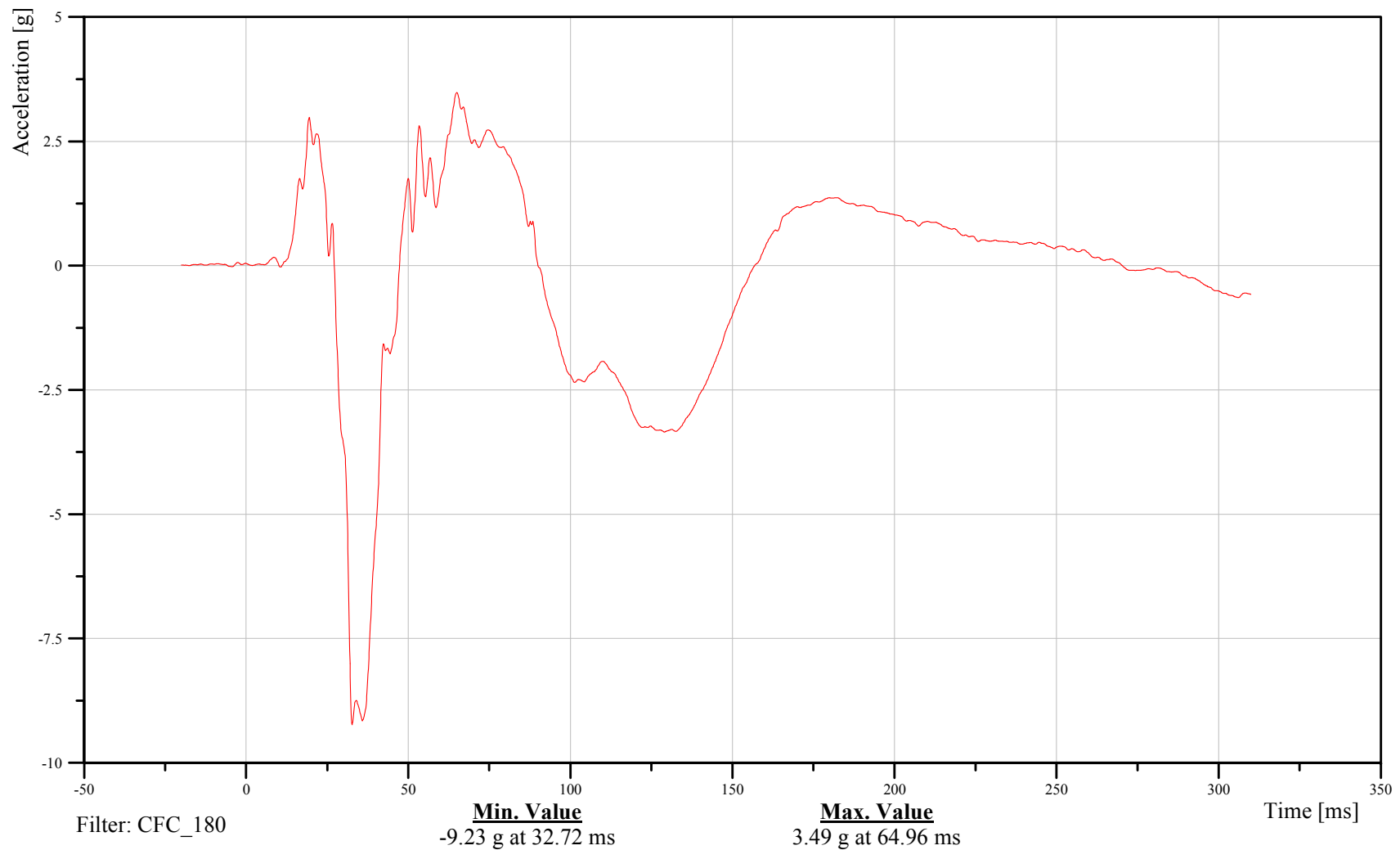
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SPIN1200S2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

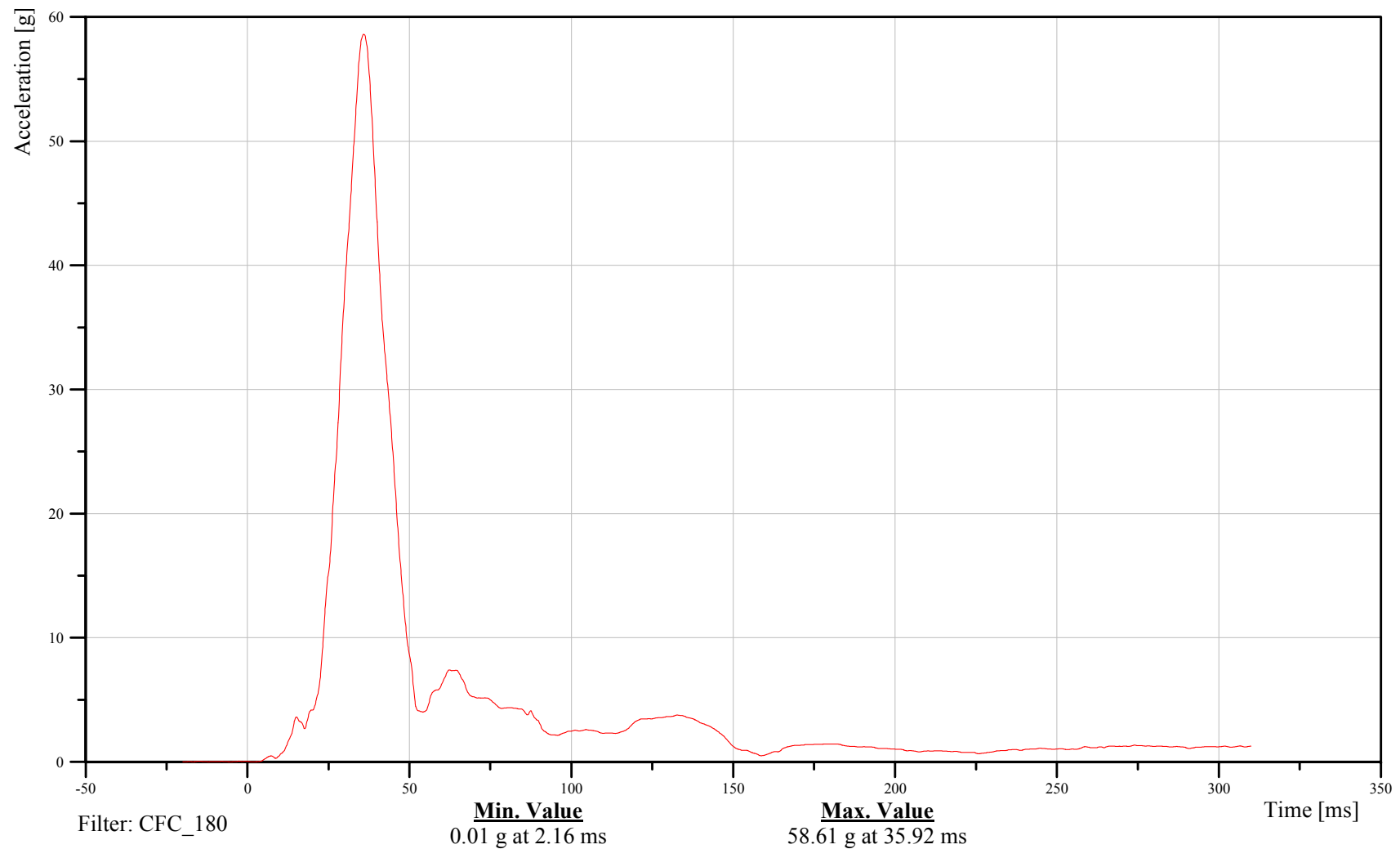
Driver Lower Spine Accel Resultant

Customer: VRTC

11SPIN1200S2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 5 Accel X

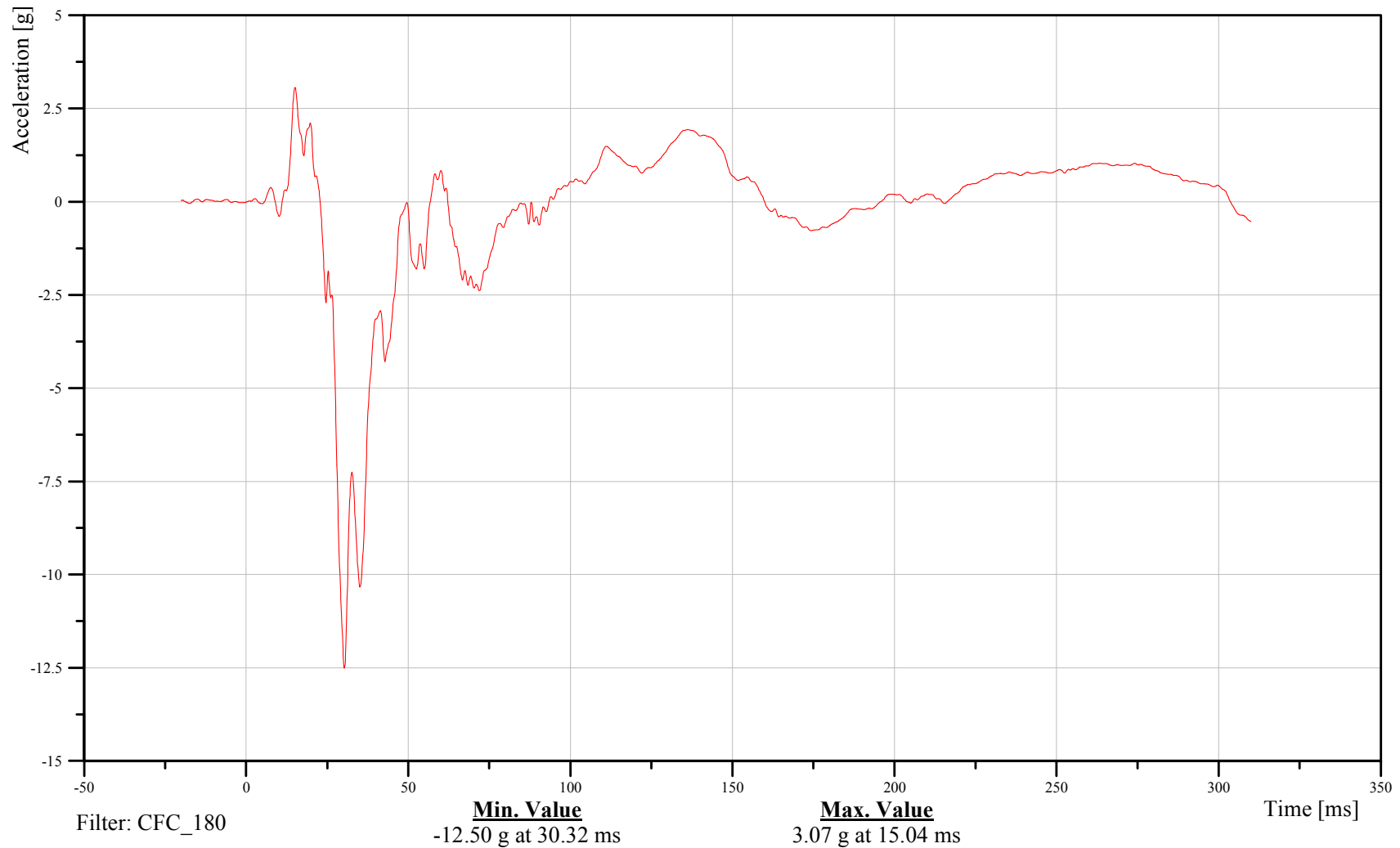
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABSP02RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 5 Accel Y

Date: 08/17/2005

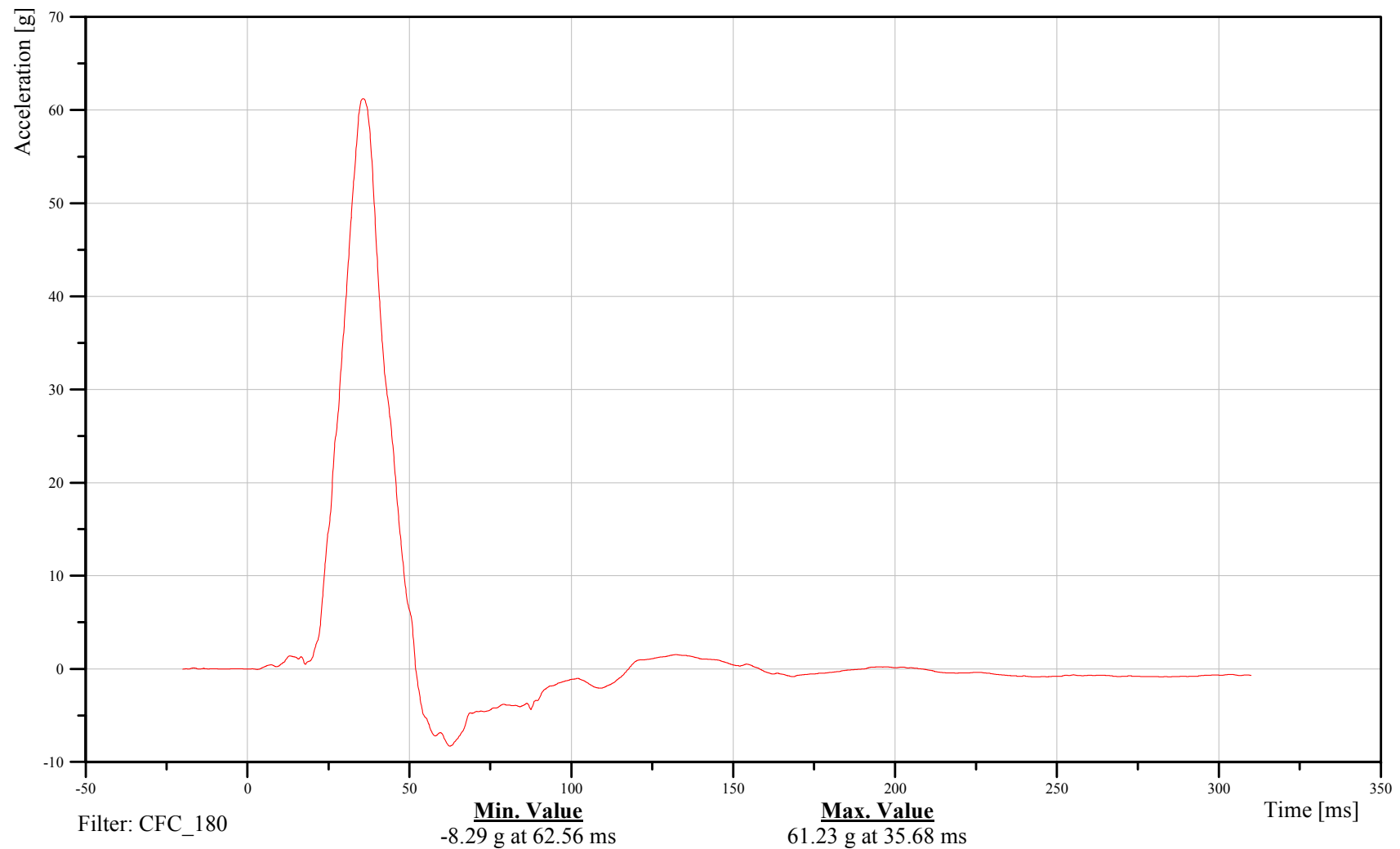
Time: 13:44

Customer: VRTC

11ABSP02RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 5 Accel Z

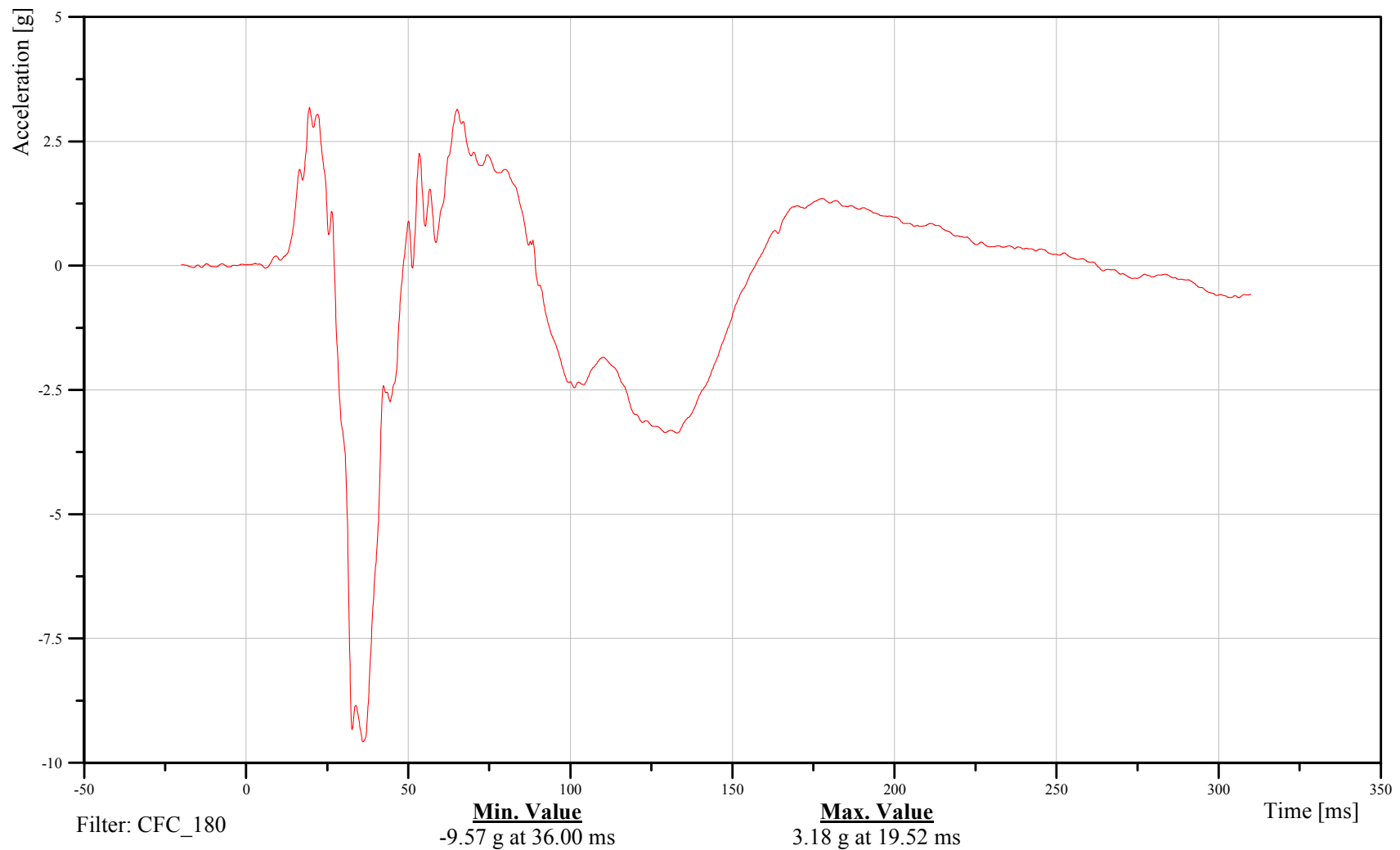
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABSP02RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Spine Rib 5 Accel Resultant

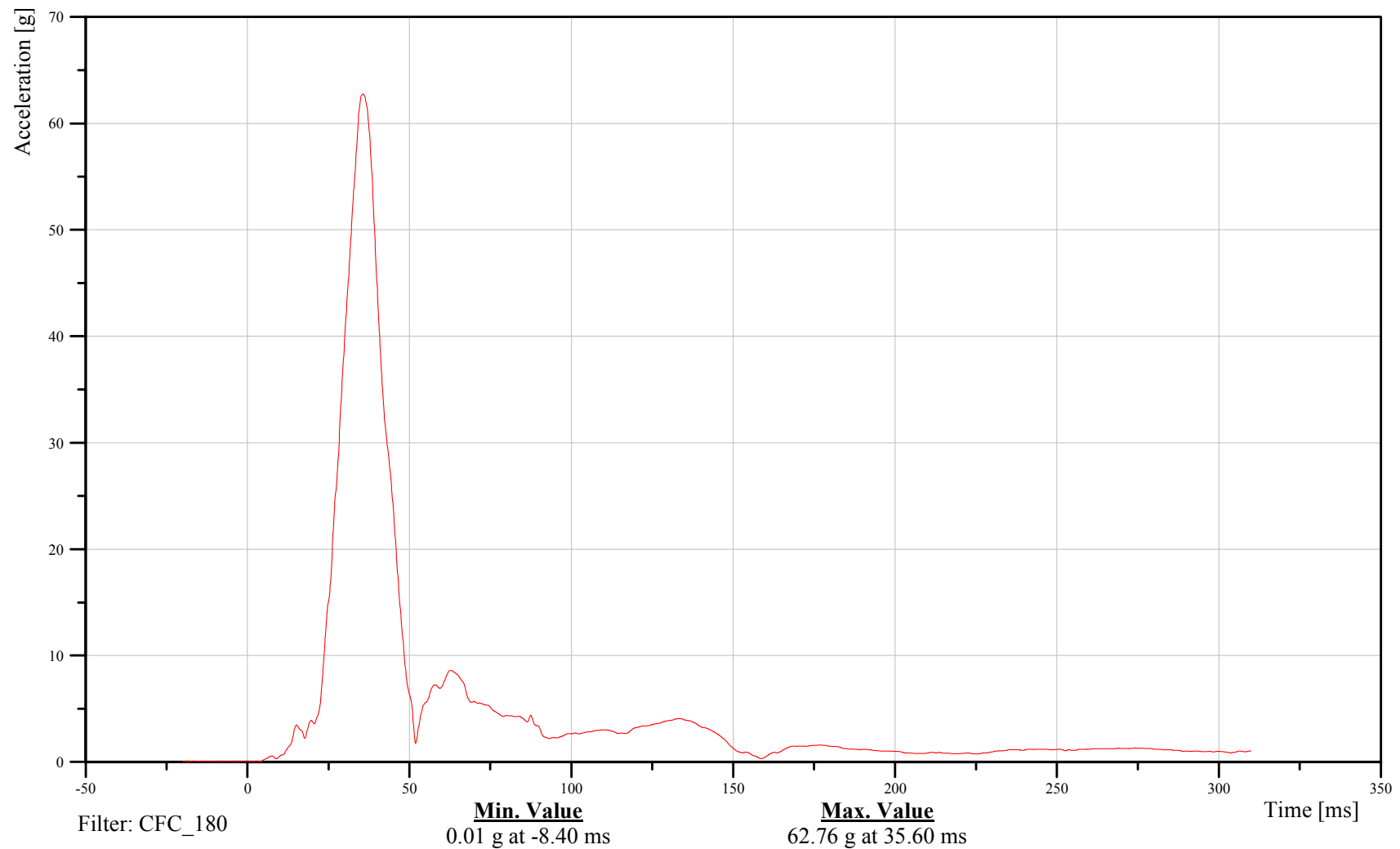
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABSP02RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Lumbar Moment X

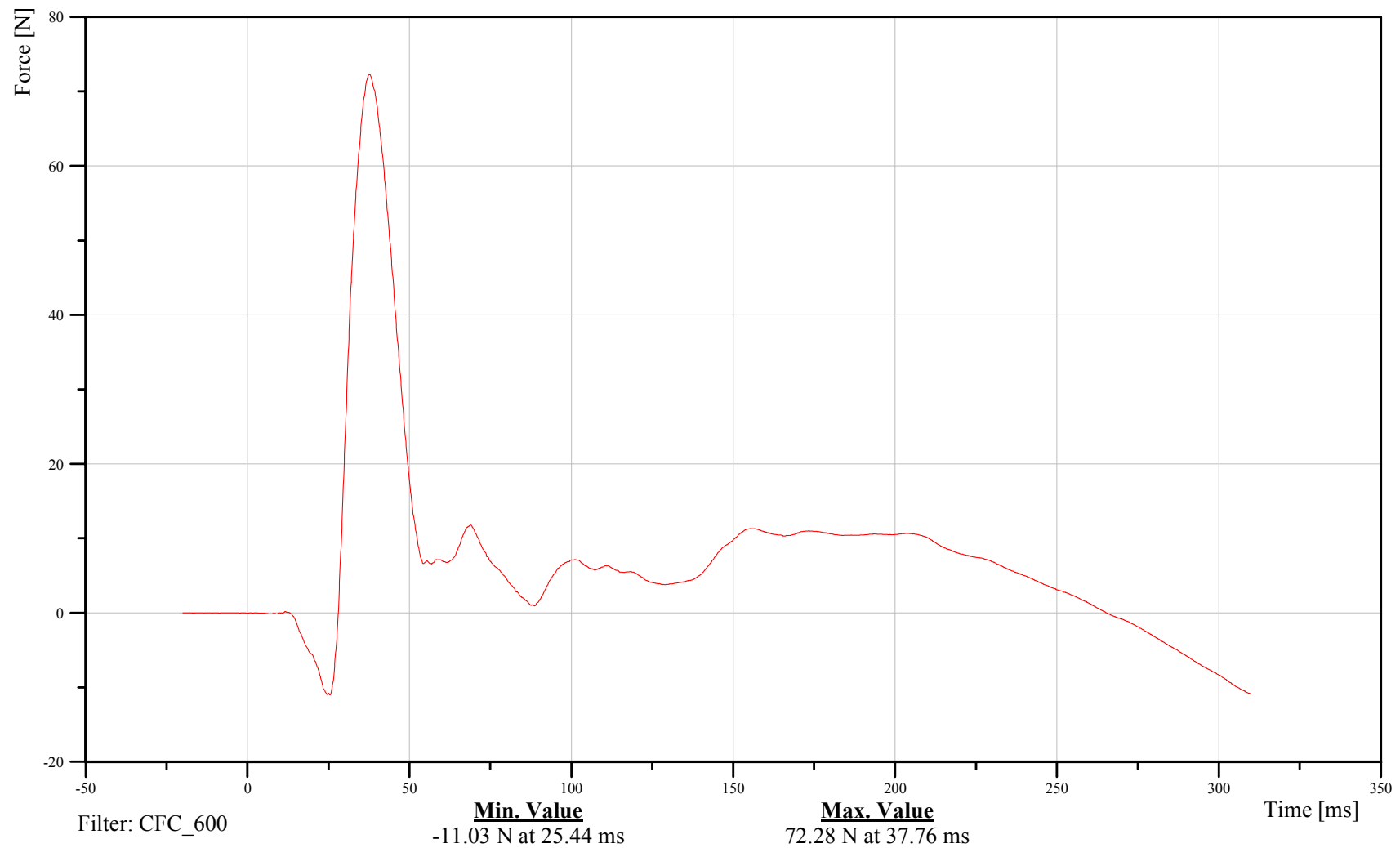
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11LUSP0000S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Lumbar Moment Y

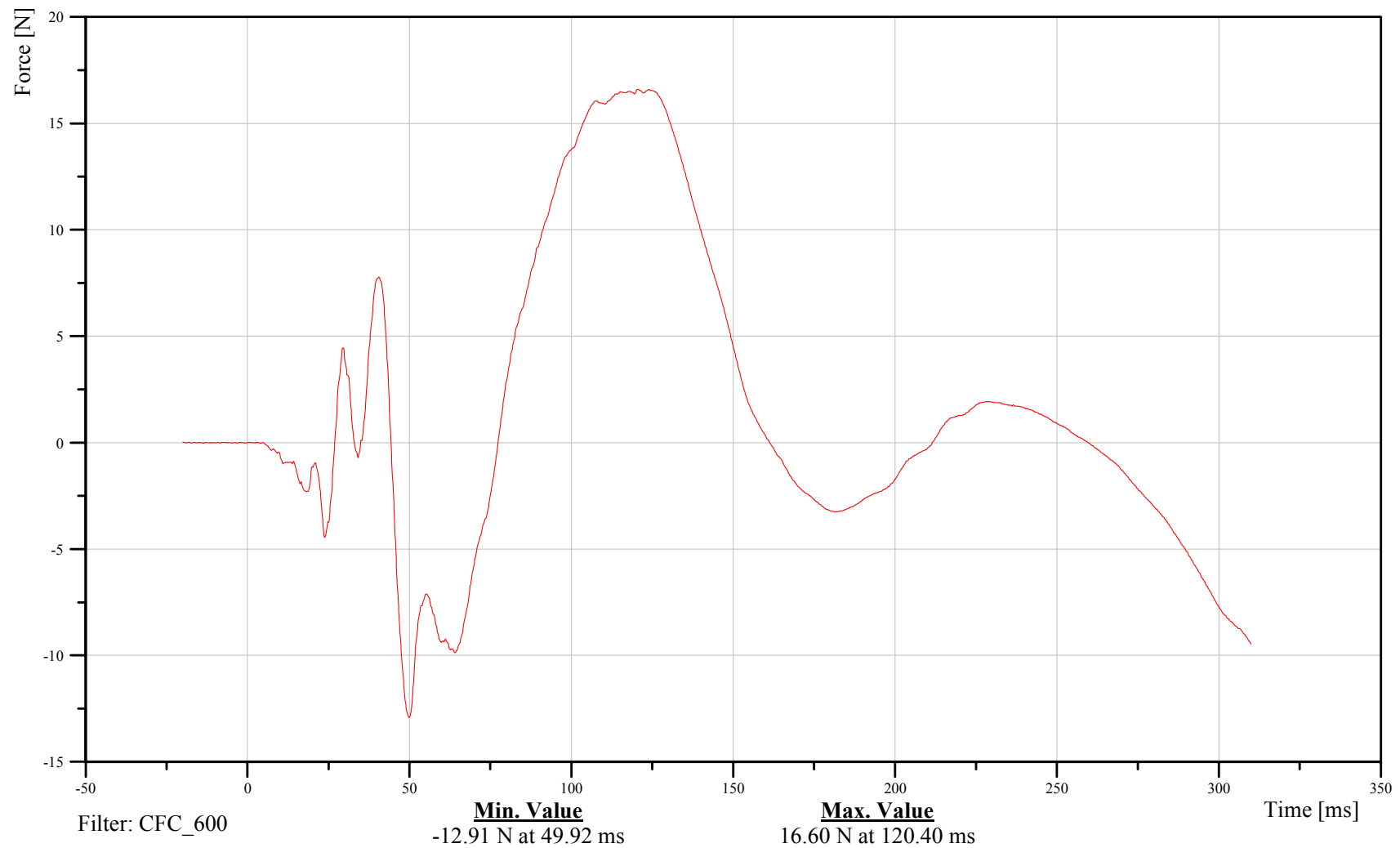
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11LUSP0000S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Lumbar Moment Z

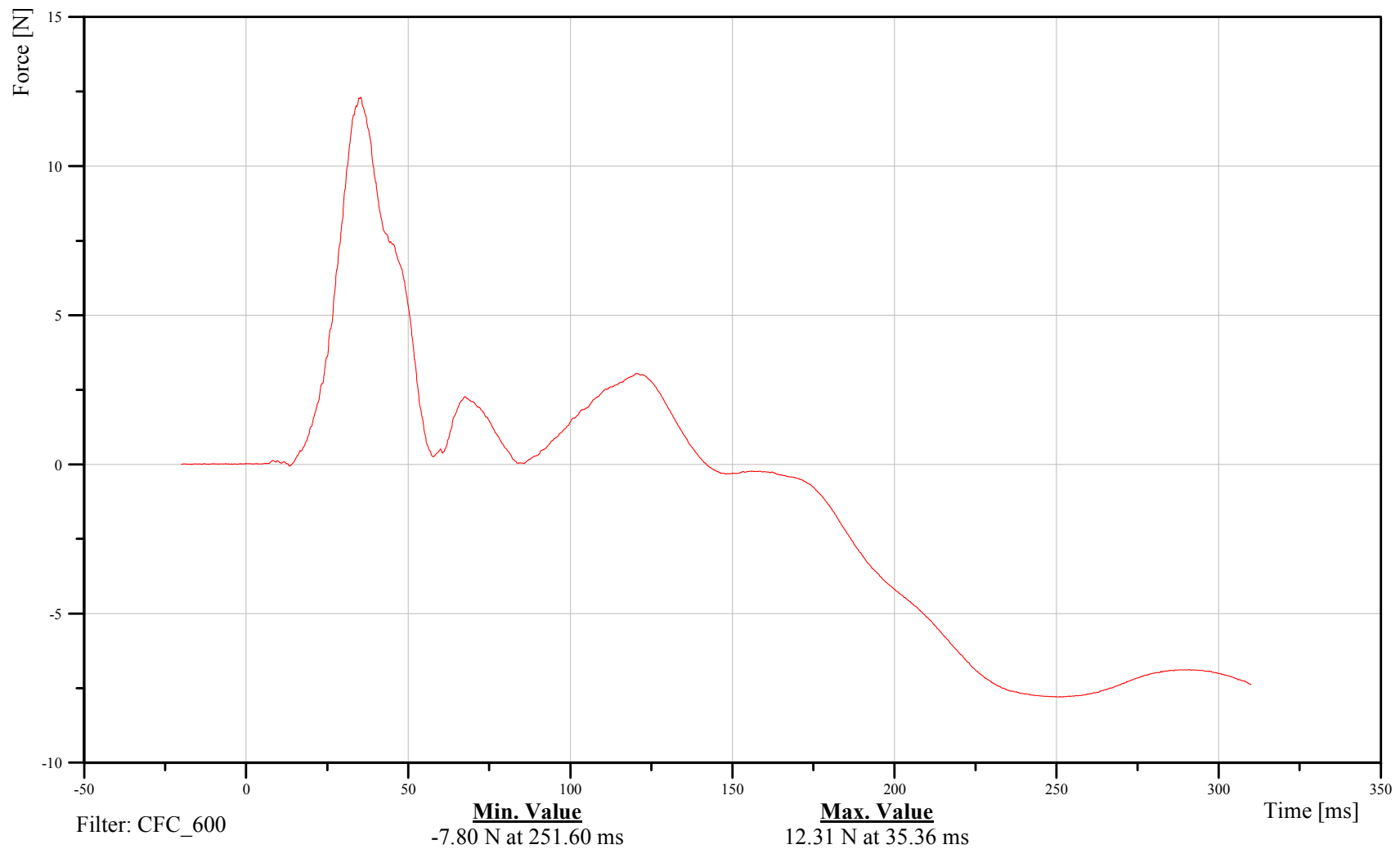
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11LUSP0000S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 1 Accel X

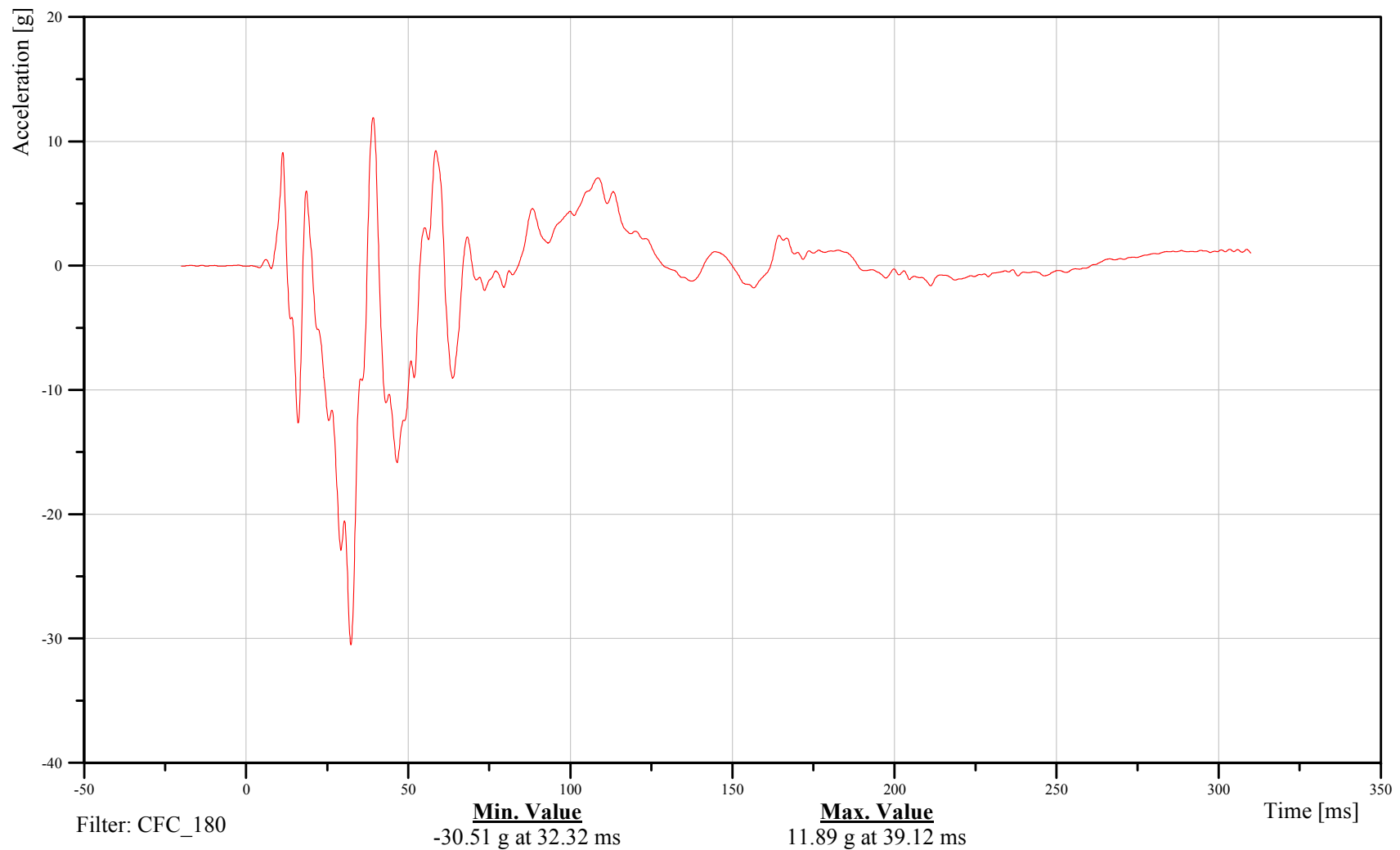
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI01LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 1 Accel Y

Date: 08/17/2005

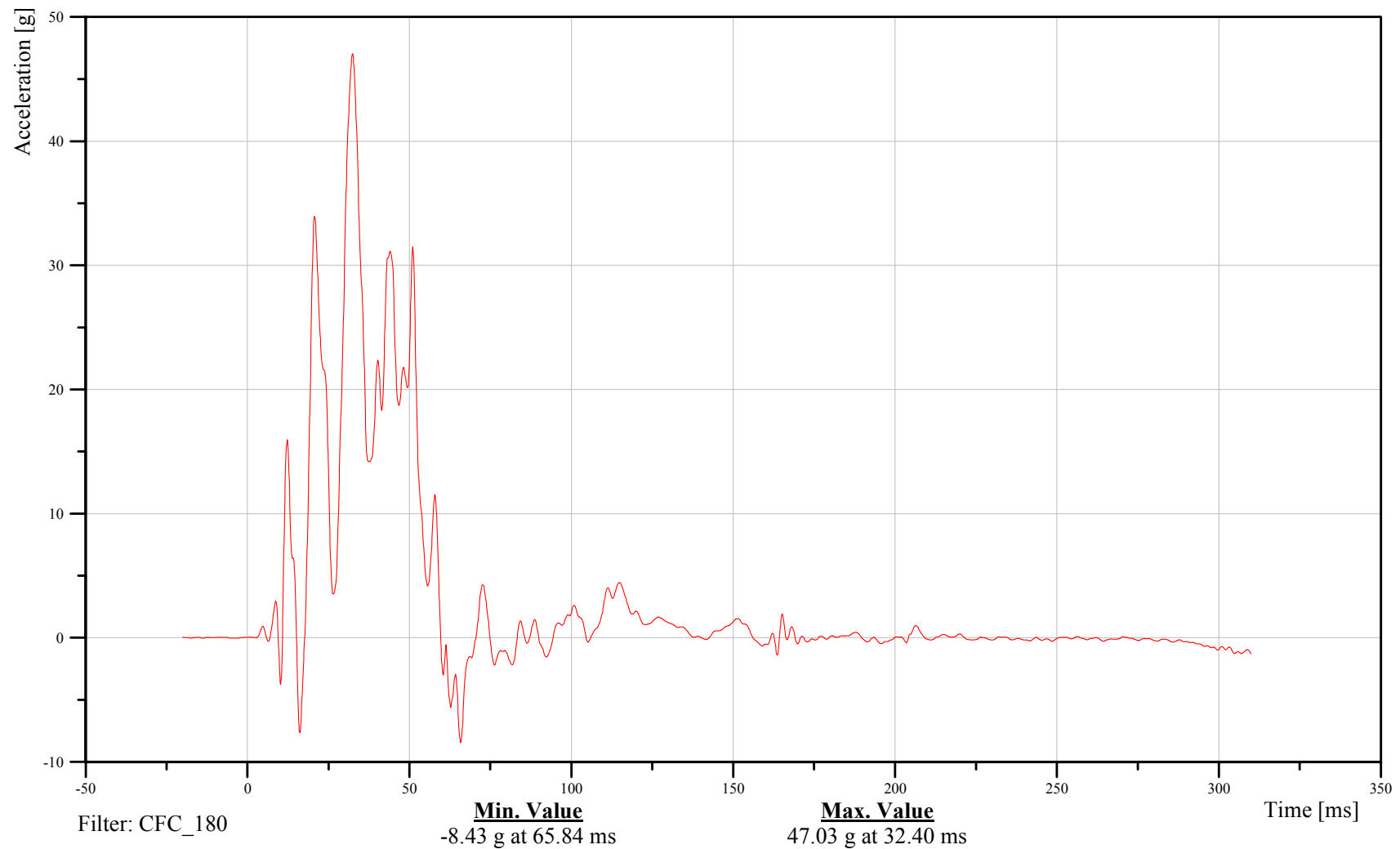
Time: 13:44

Customer: VRTC

11TRRI01LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 1 Accel Z

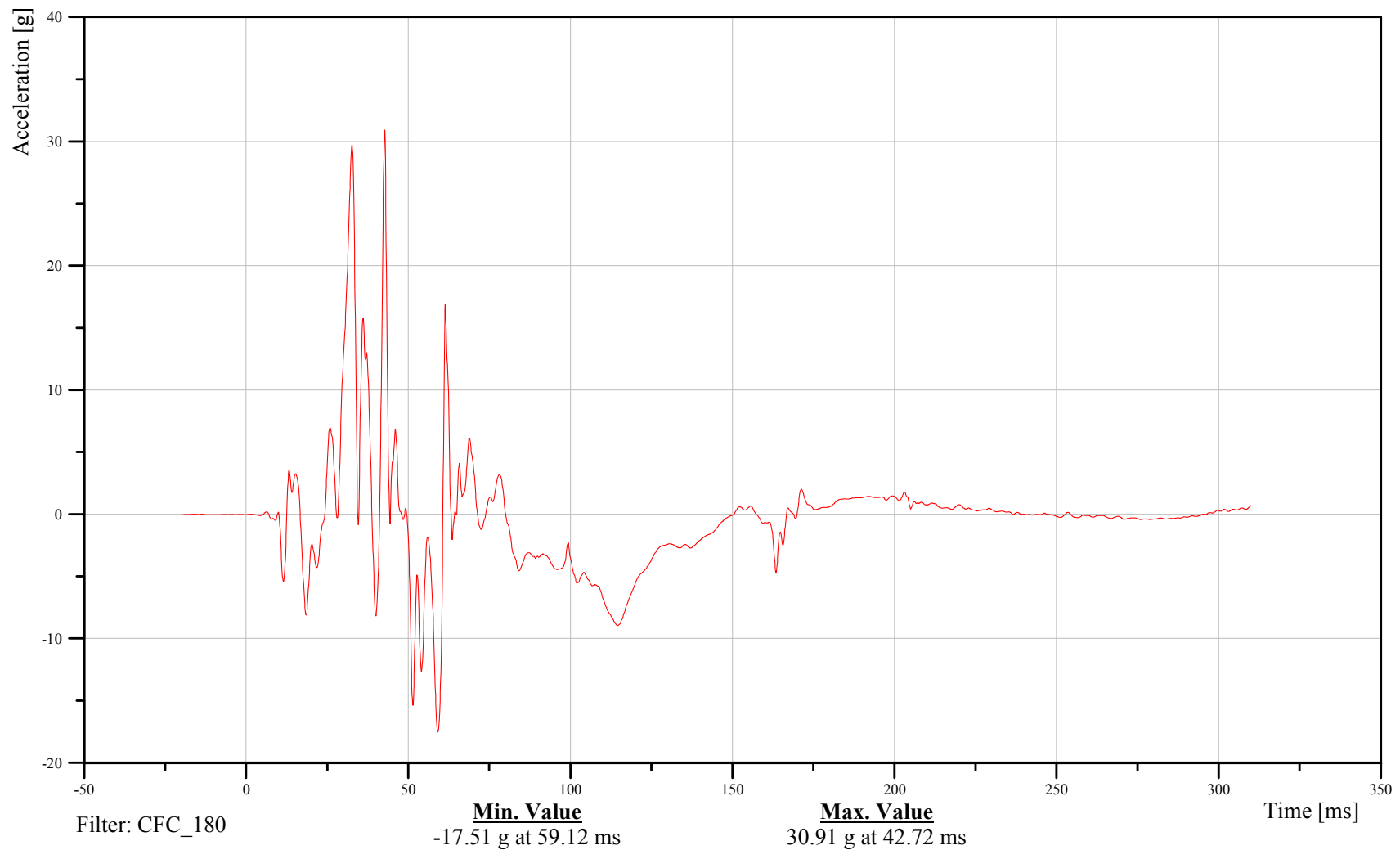
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI01LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 1 Accel Resultant

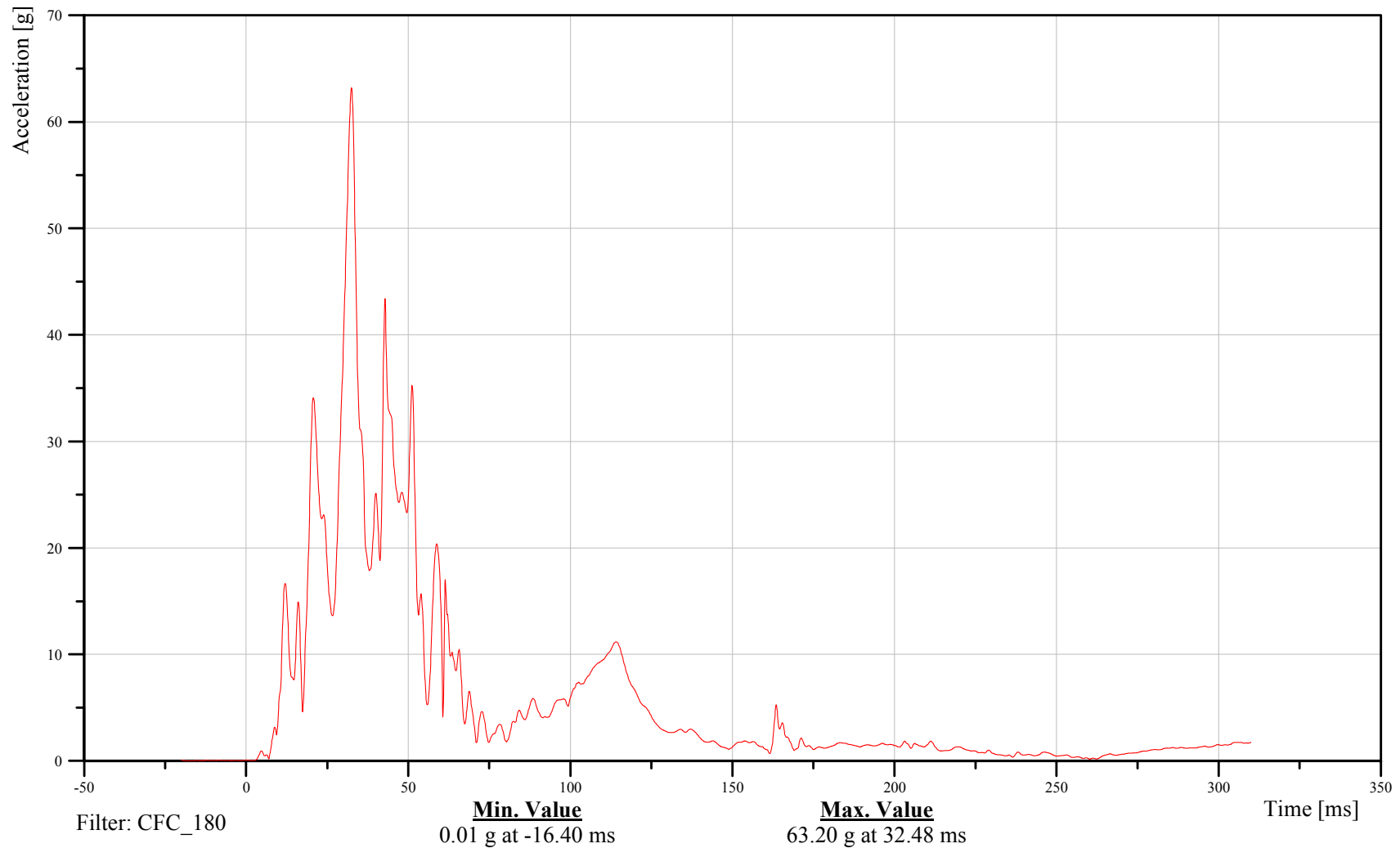
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI01LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 2 Accel X

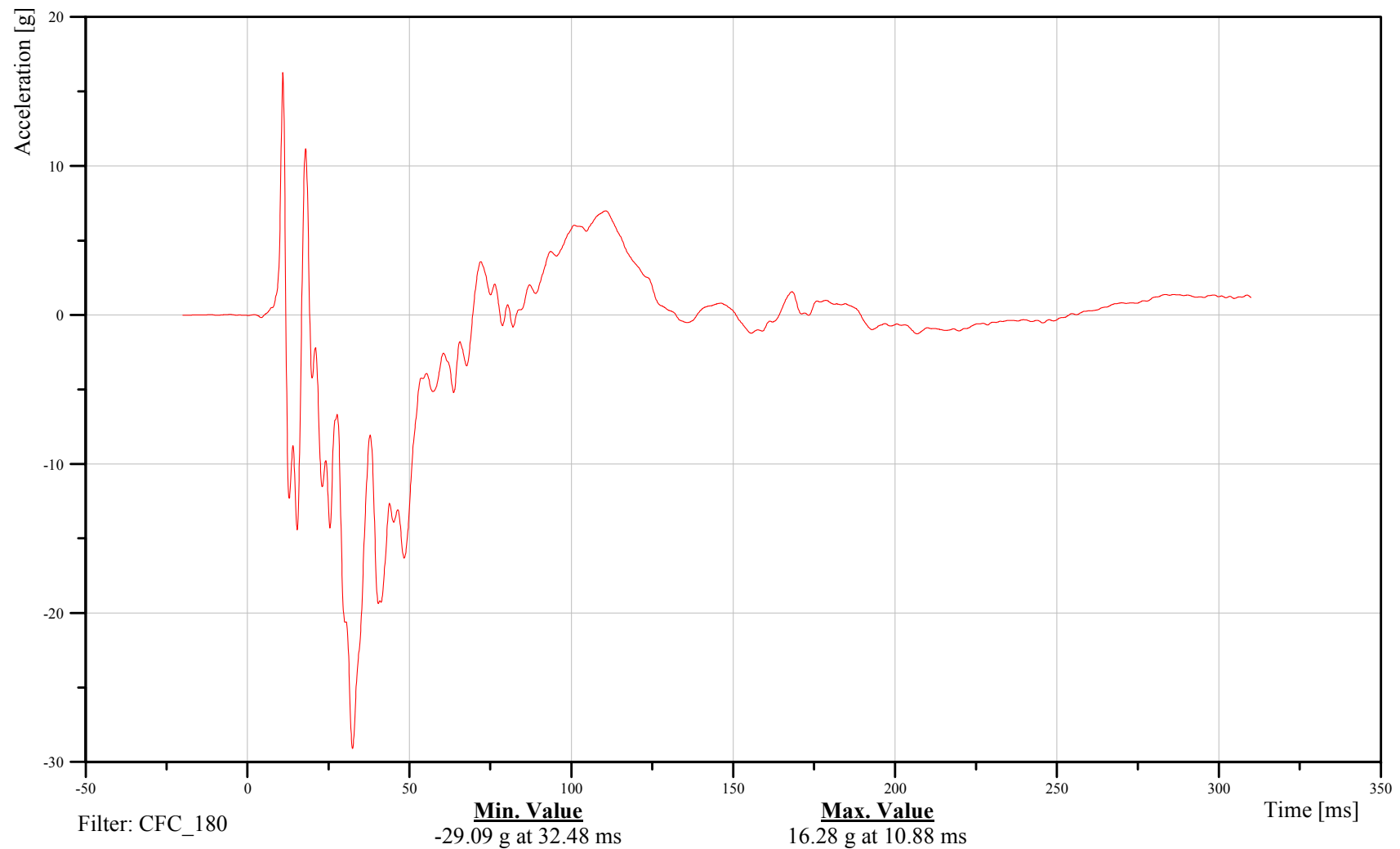
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI02LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 2 Accel Y

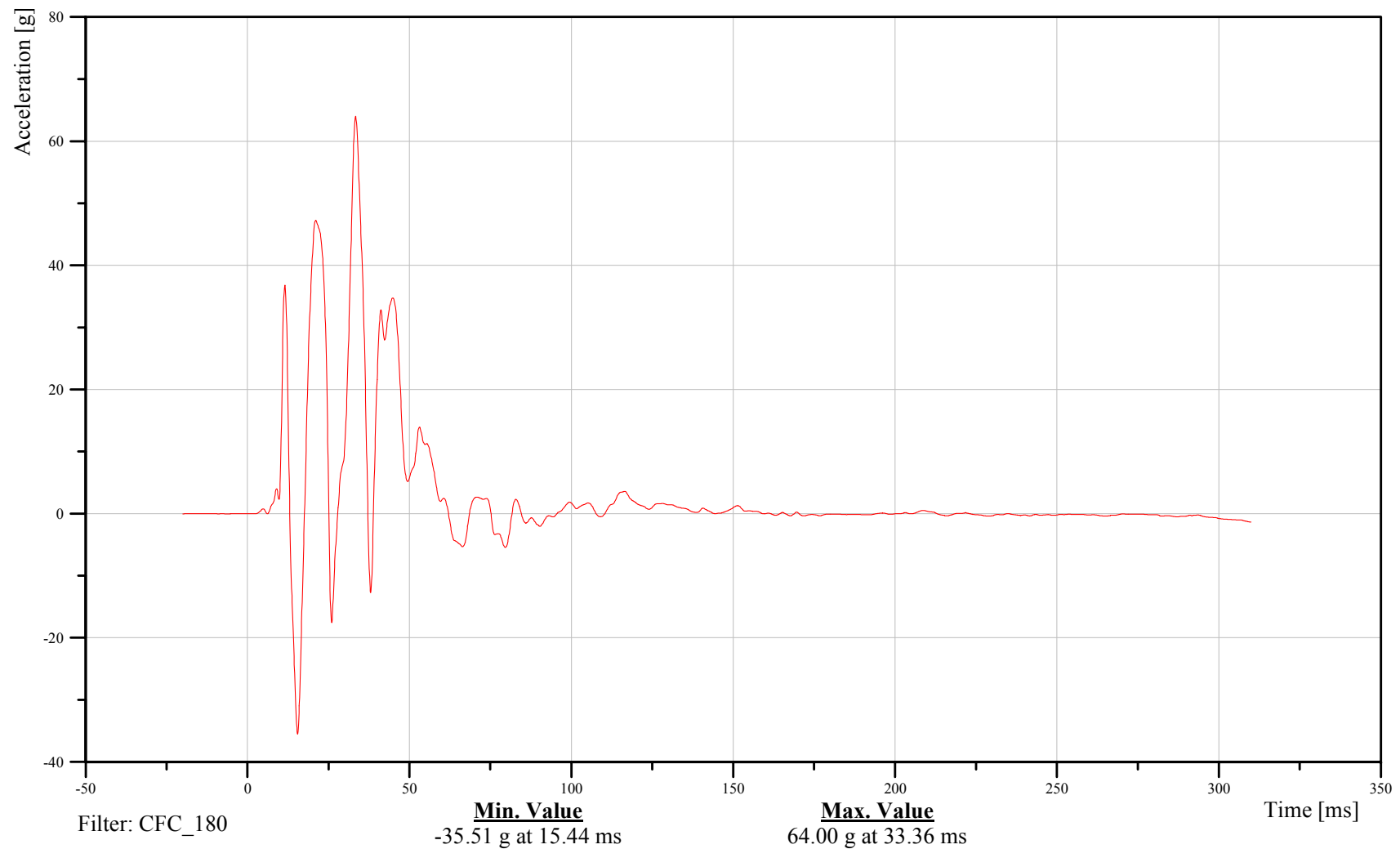
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI02LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 2 Accel Z

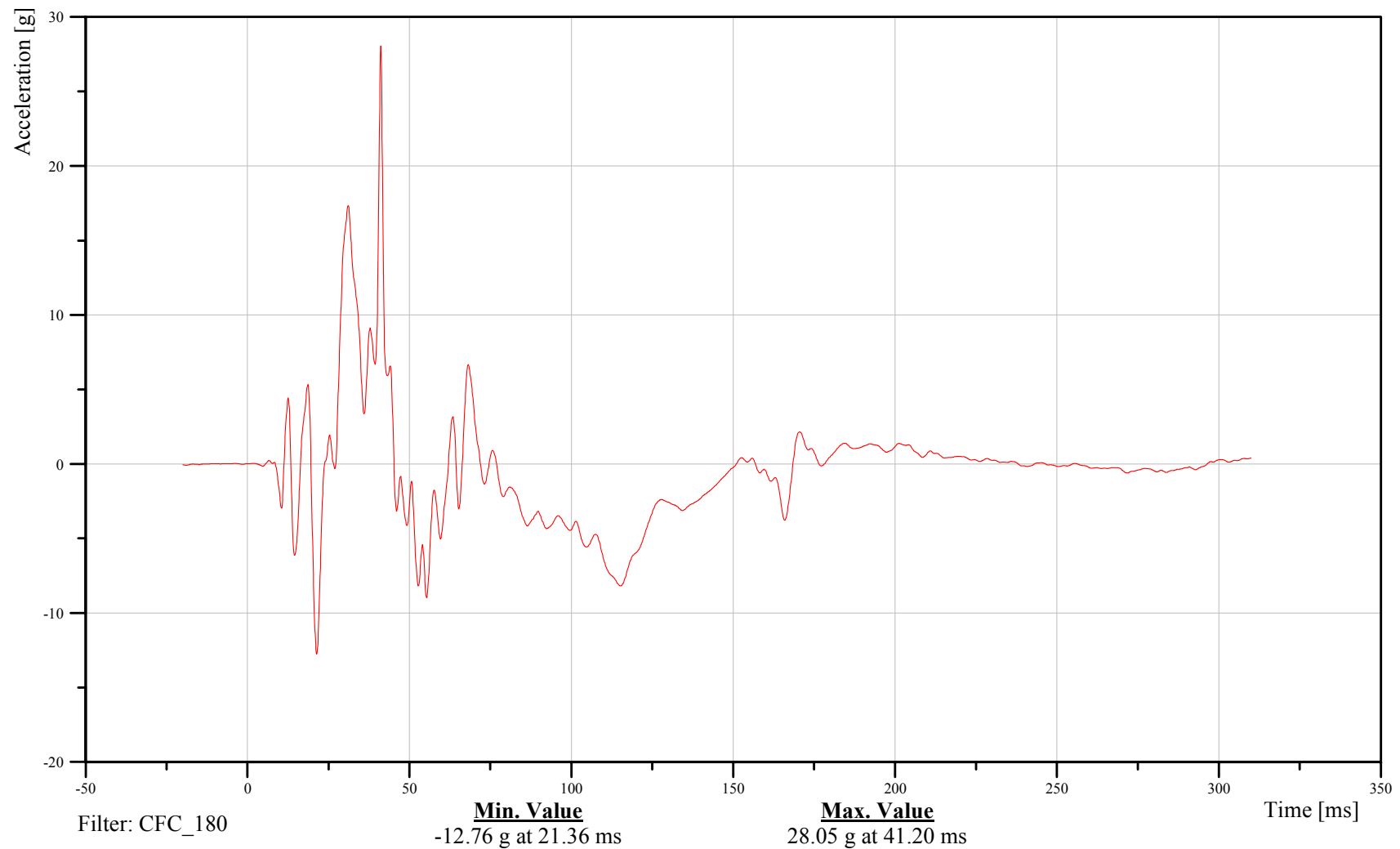
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI02LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 2 Accel Resultant

Date: 08/17/2005

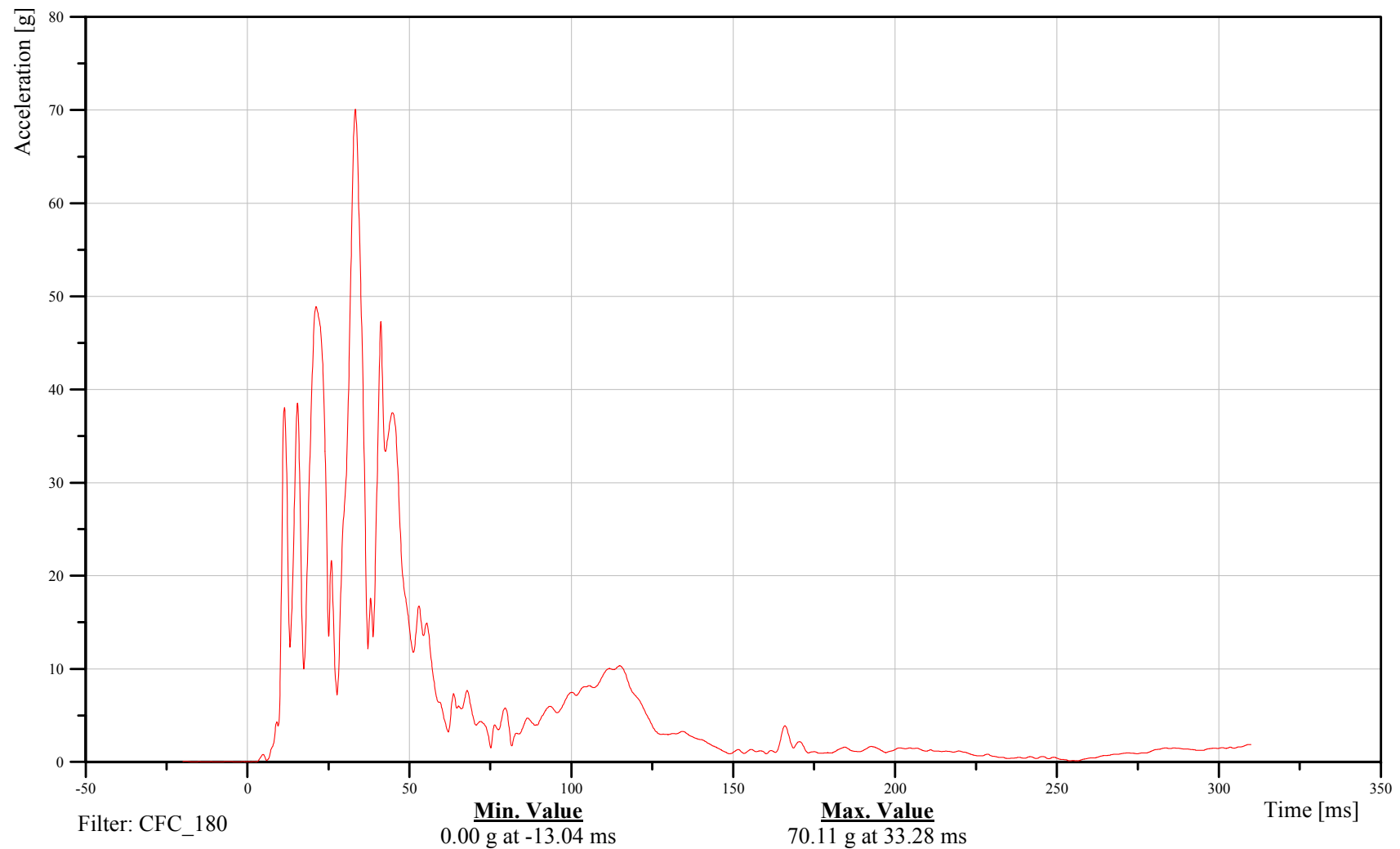
Time: 13:44

Customer: VRTC

11TRRI02LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 3 Accel X

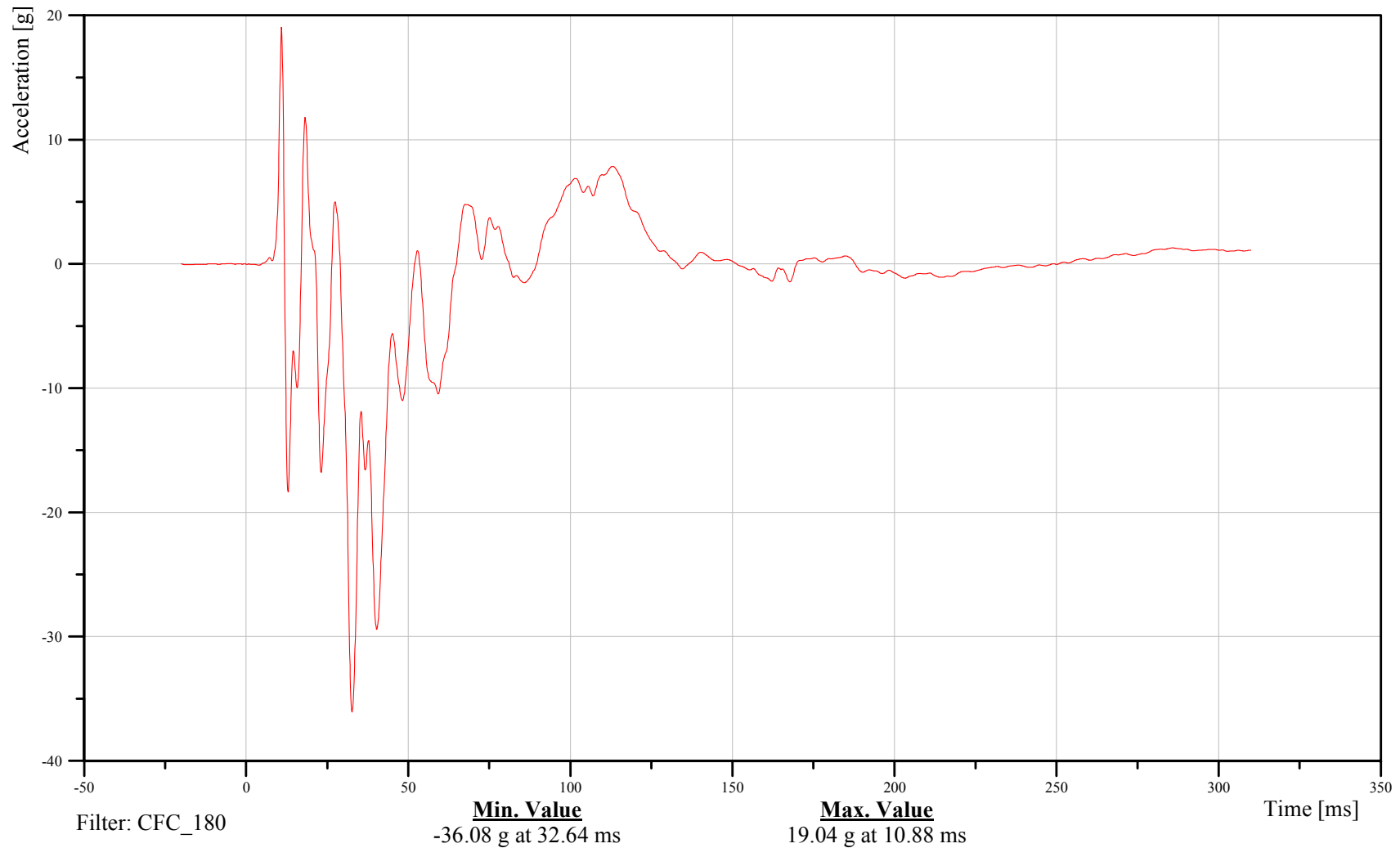
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI03LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 3 Accel Y

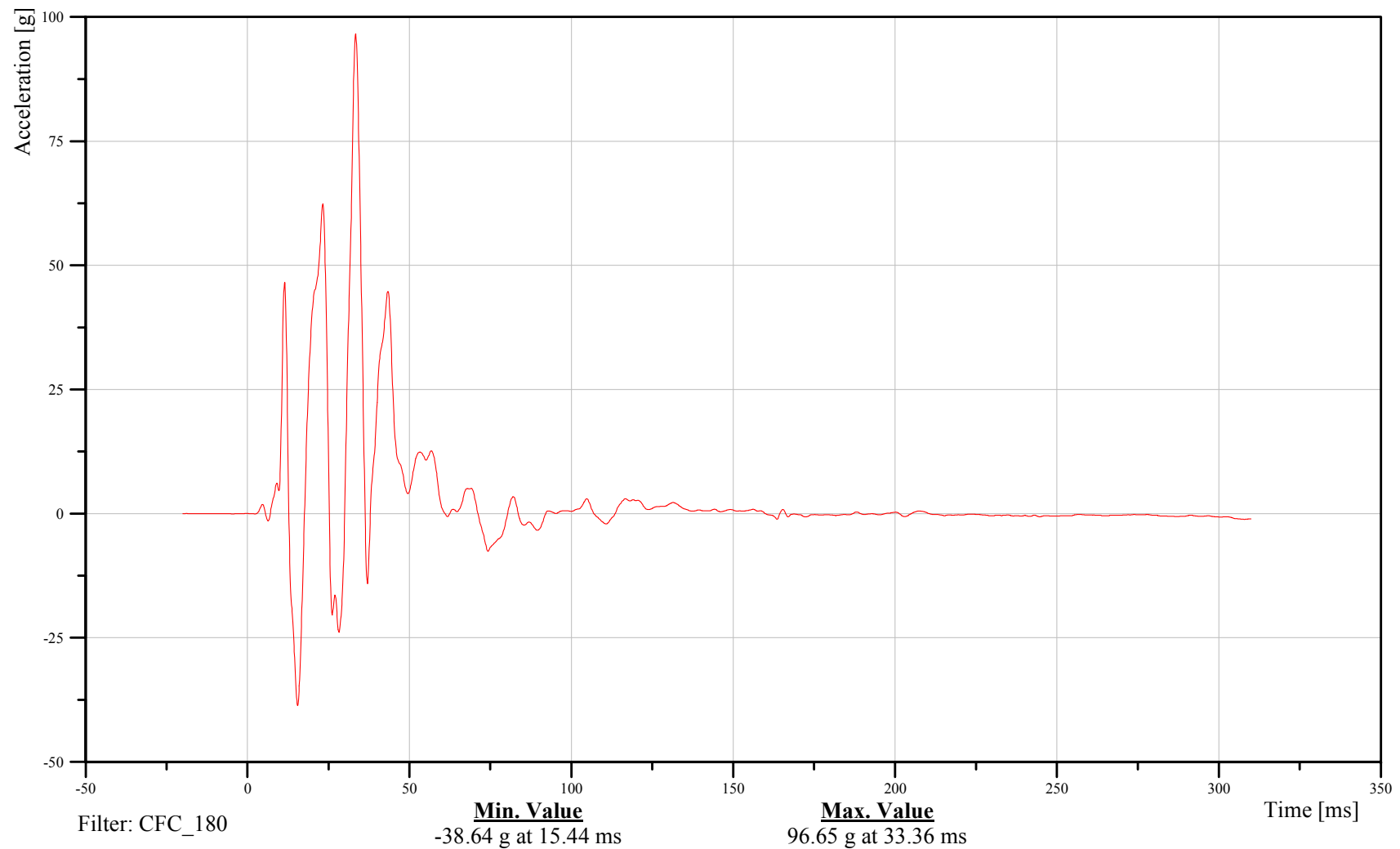
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI03LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 3 Accel Z

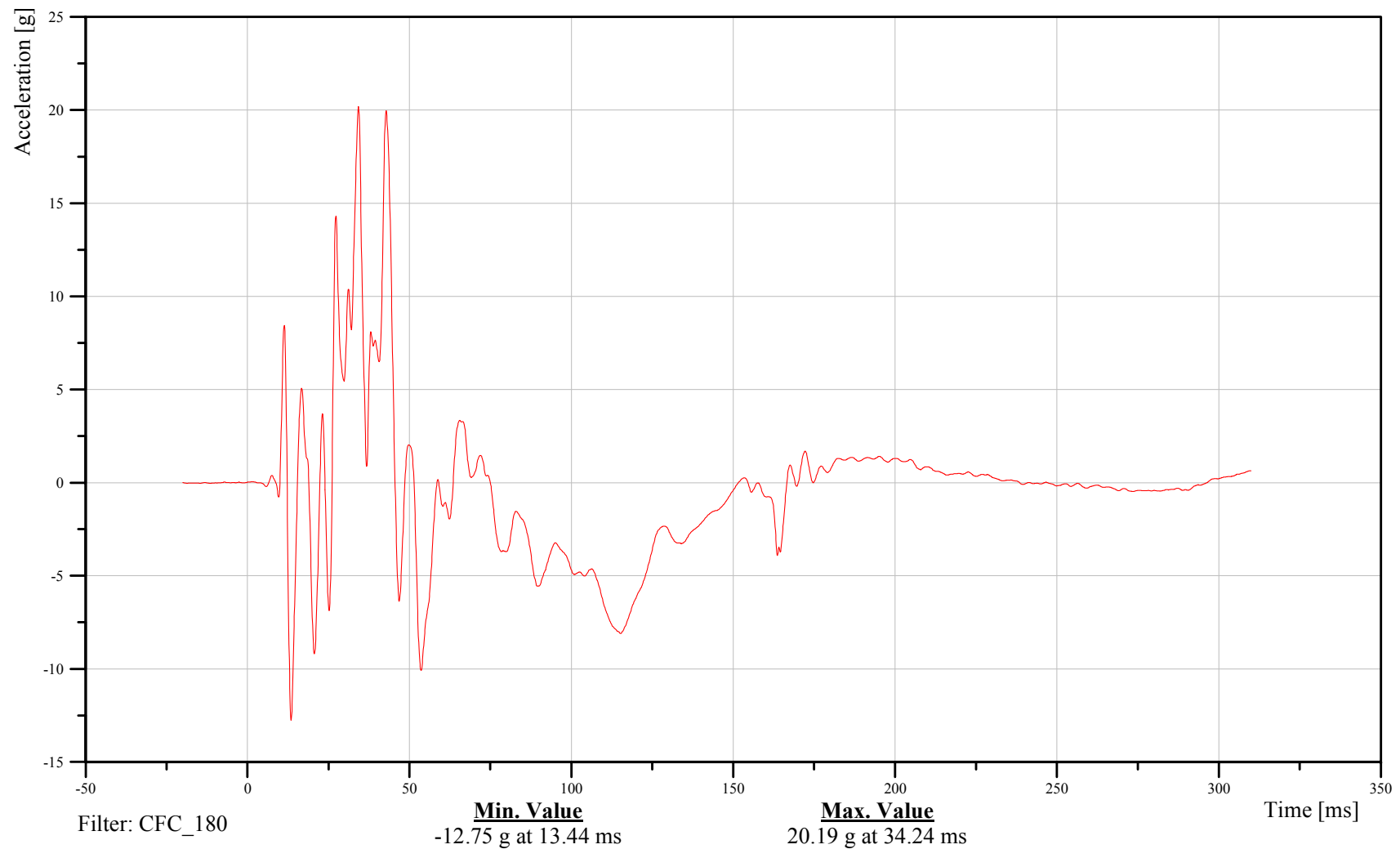
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI03LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 3 Accel Resultant

Date: 08/17/2005

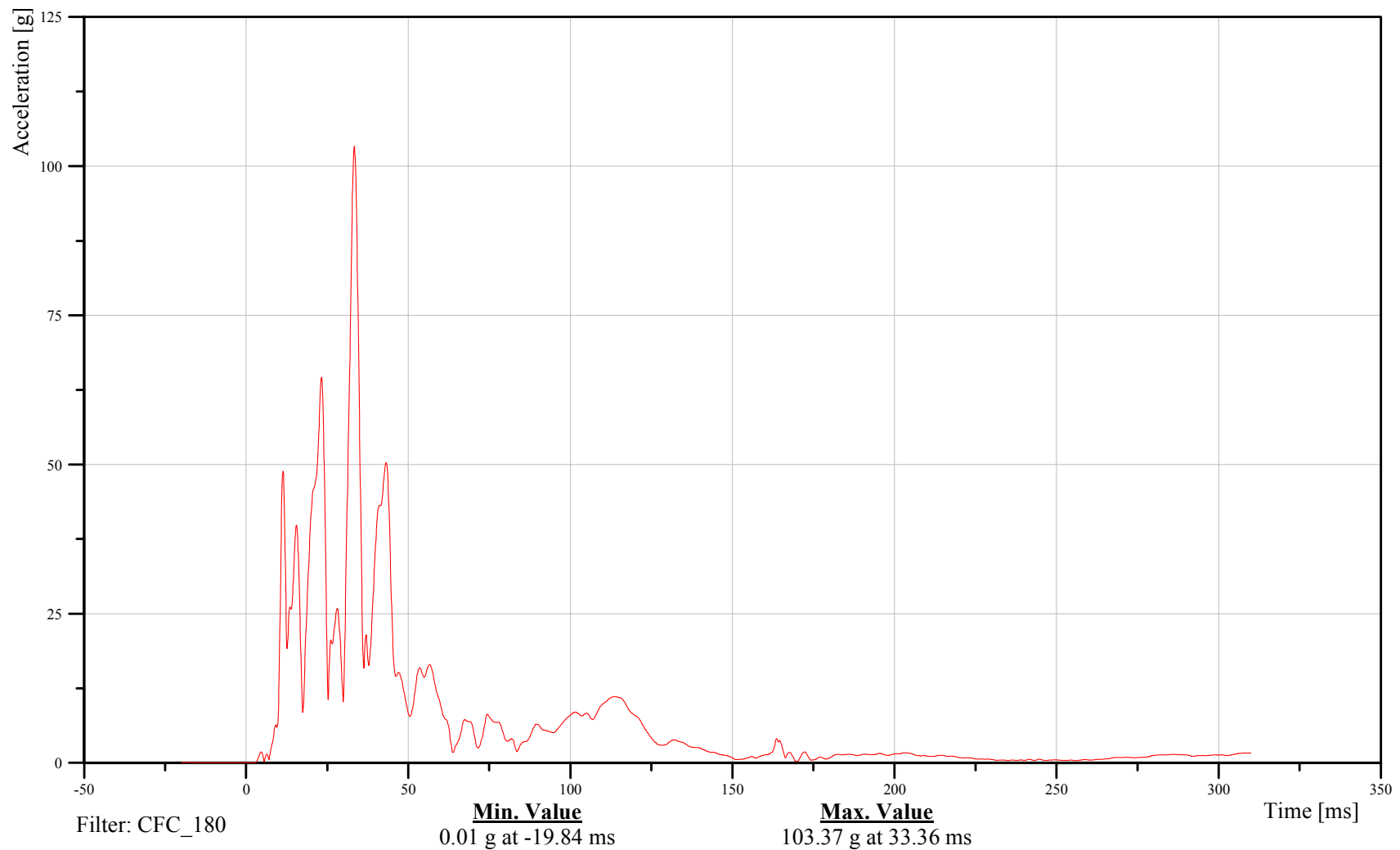
Time: 13:44

Customer: VRTC

11TRRI03LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 1 Accel X

Date: 08/17/2005

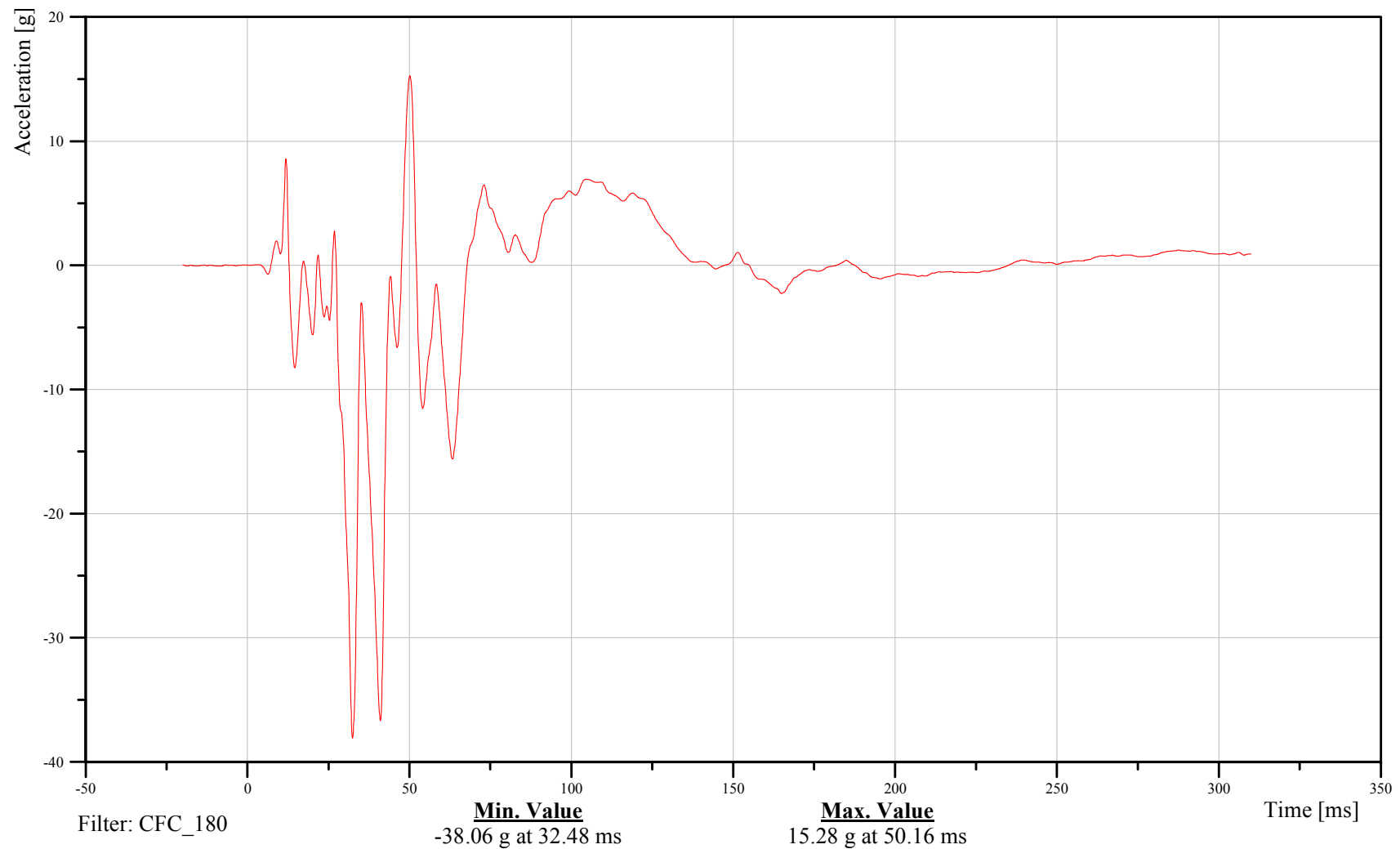
Time: 13:44

Customer: VRTC

11ABRI01LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 1 Accel Y

Date: 08/17/2005

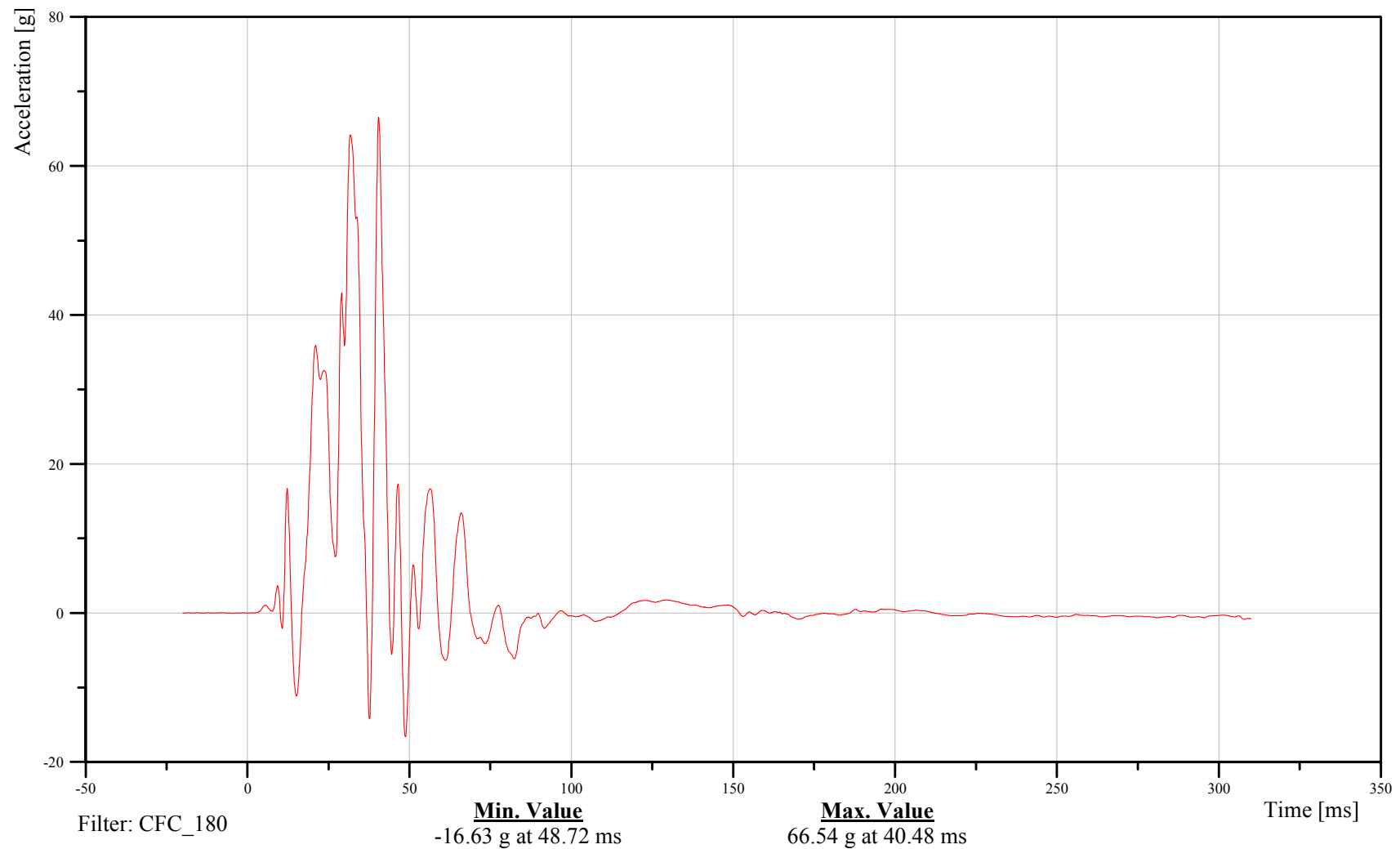
Time: 13:44

Customer: VRTC

11ABRI01LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 1 Accel Z

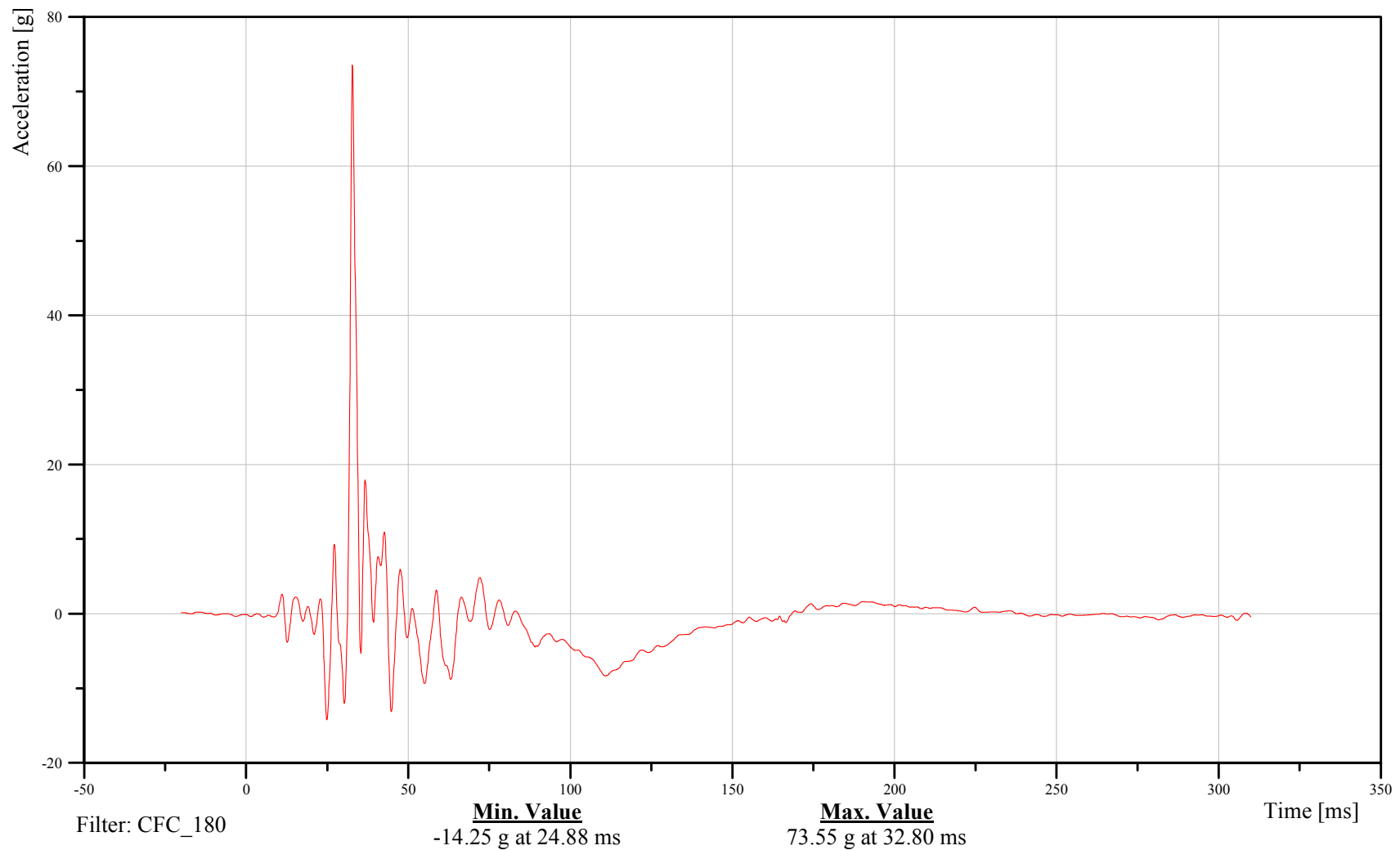
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABRI01LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 1 Accel Resultant

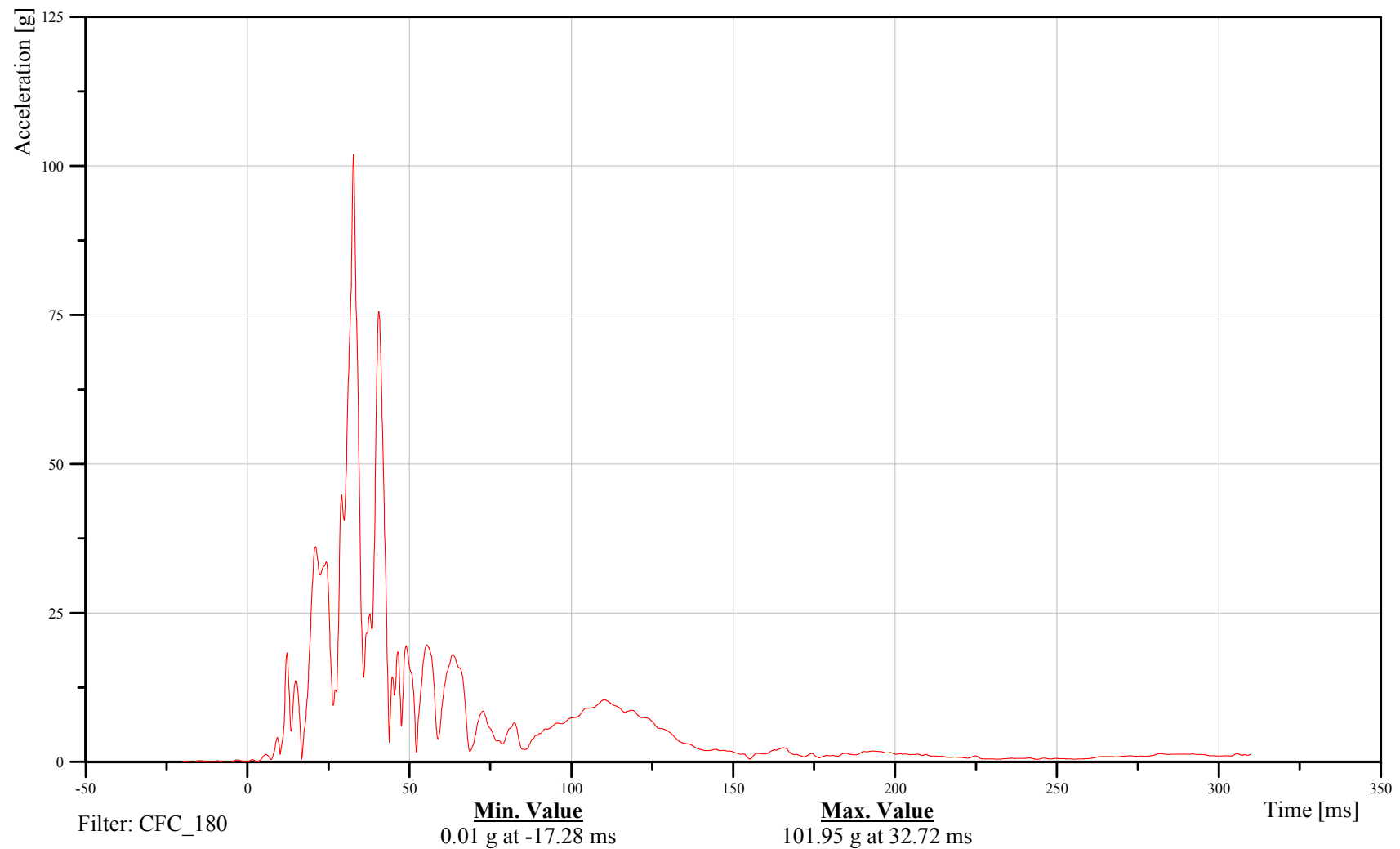
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABRI01LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 2 Accel X

Date: 08/17/2005

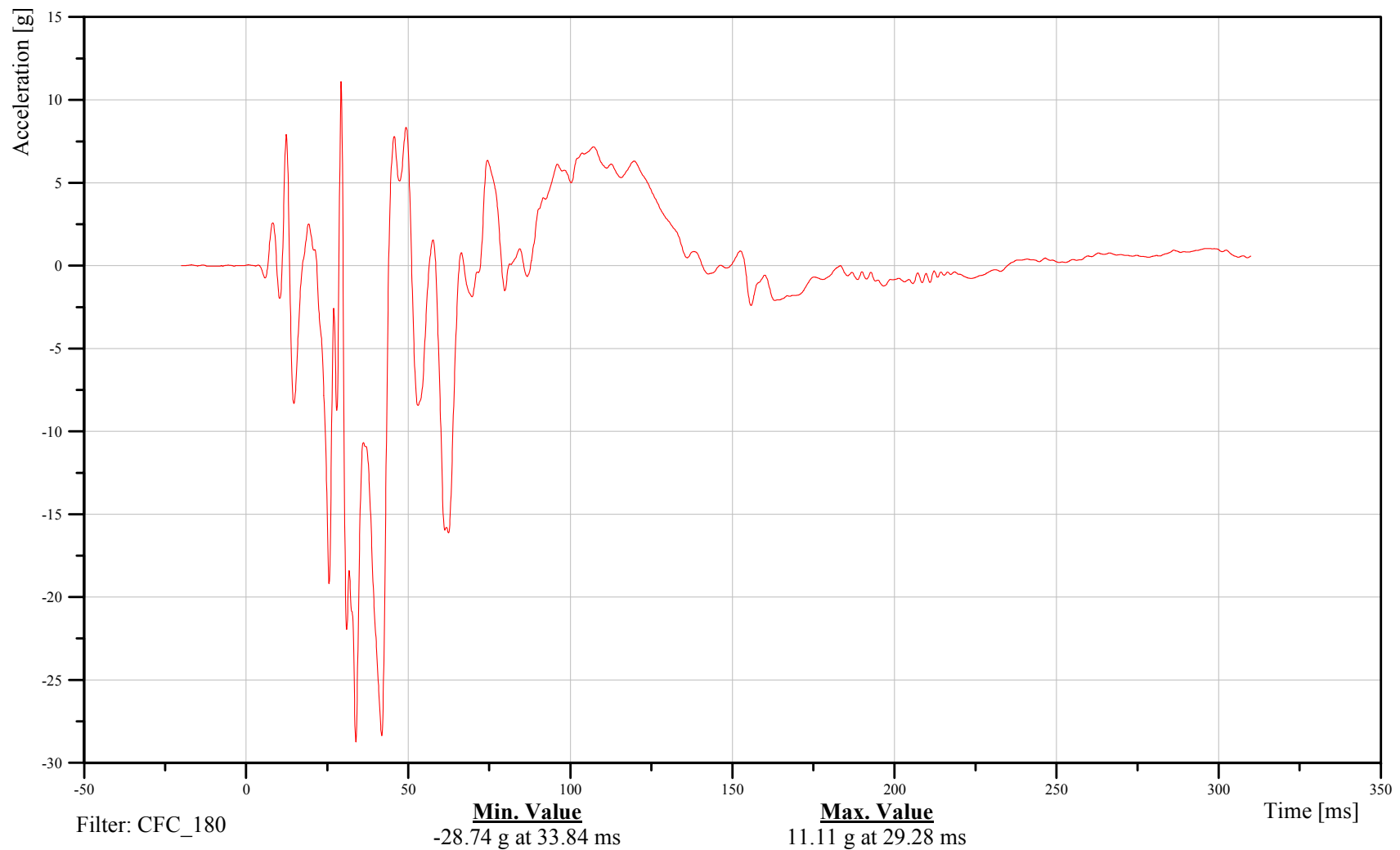
Time: 13:44

Customer: VRTC

11ABRI02LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 2 Accel Y

Date: 08/17/2005

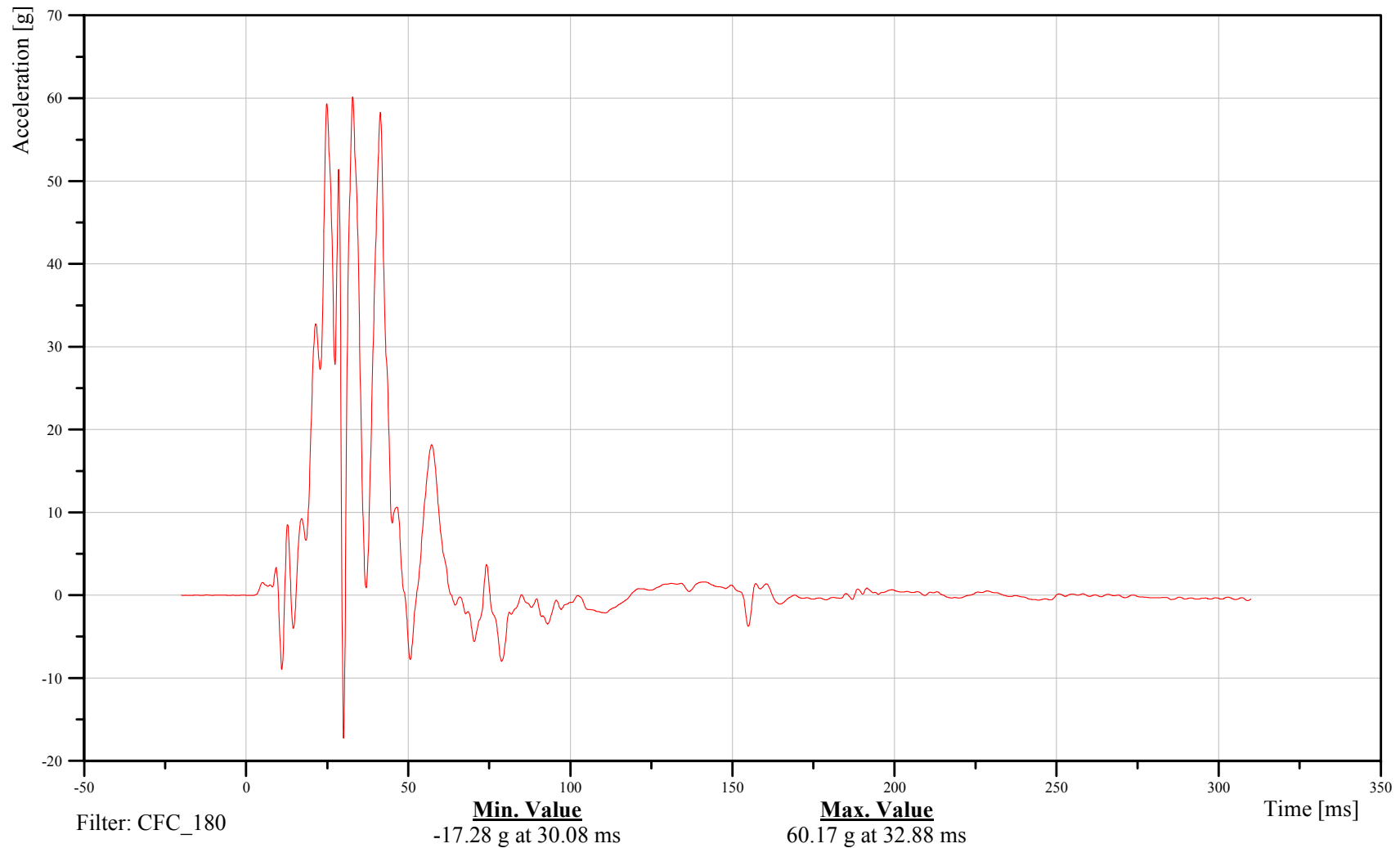
Time: 13:44

Customer: VRTC

11ABRI02LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 2 Accel Z

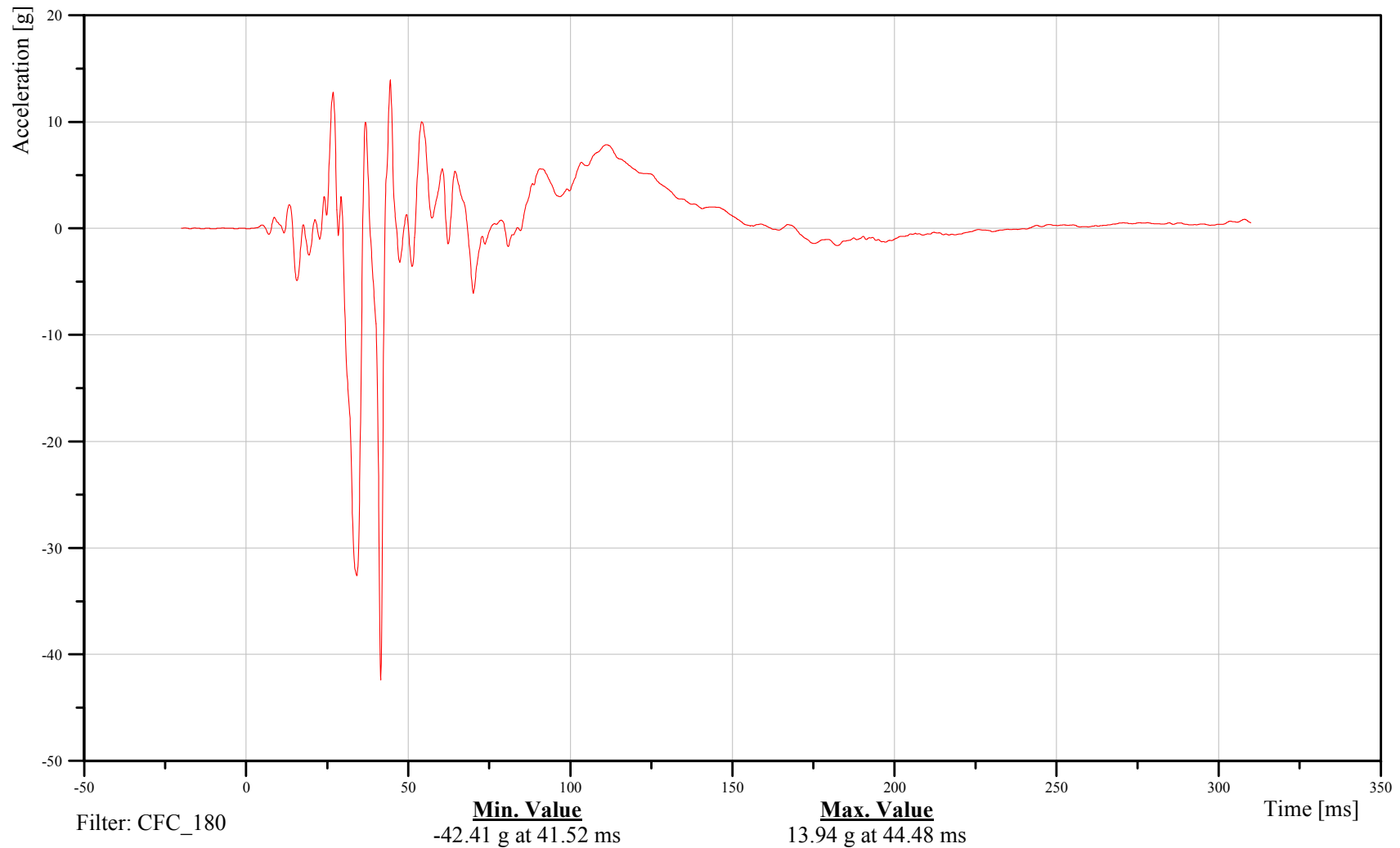
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABRI02LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 2 Accel Resultant

Date: 08/17/2005

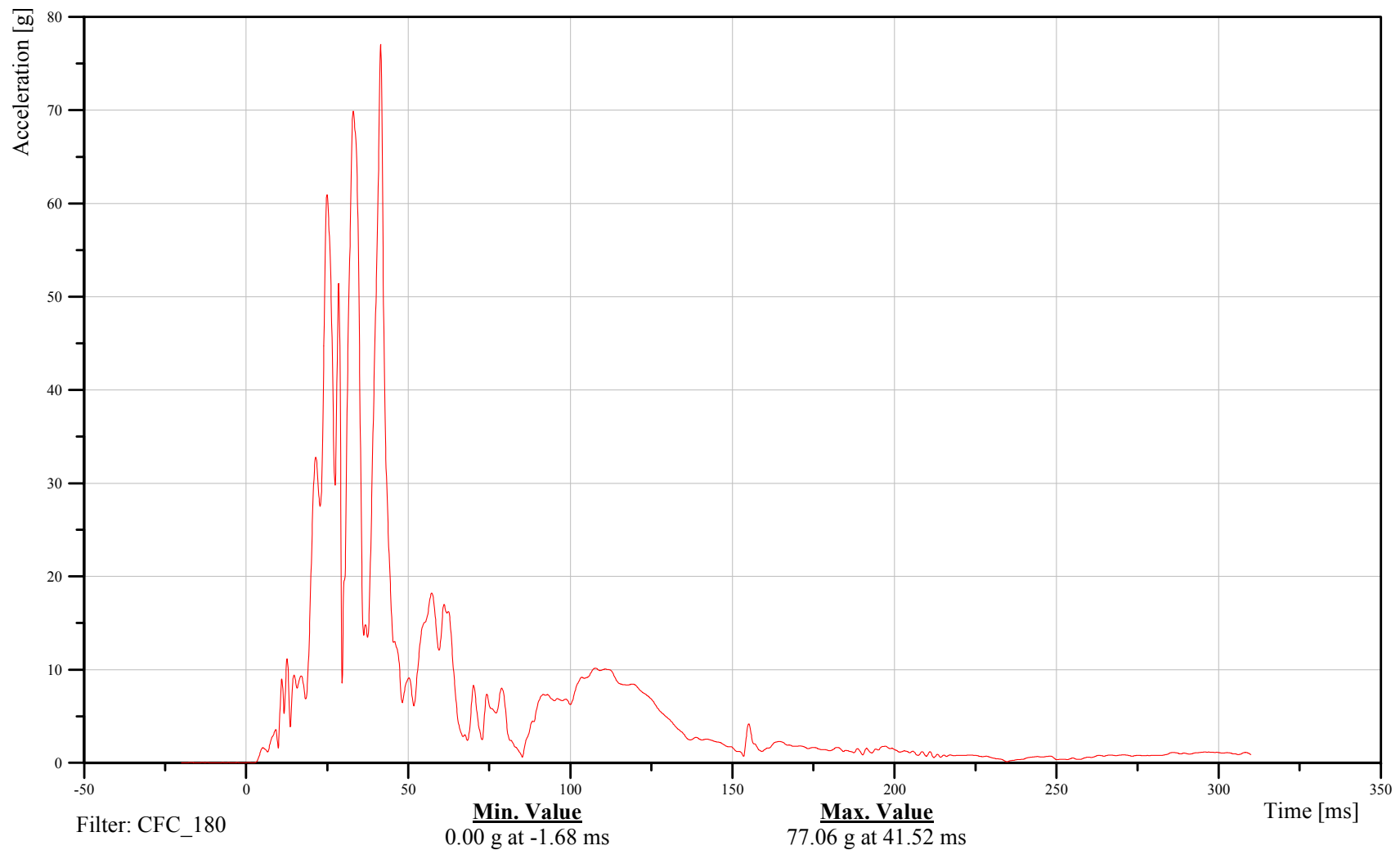
Time: 13:44

Customer: VRTC

11ABRI02LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Shoulder Disp. Y

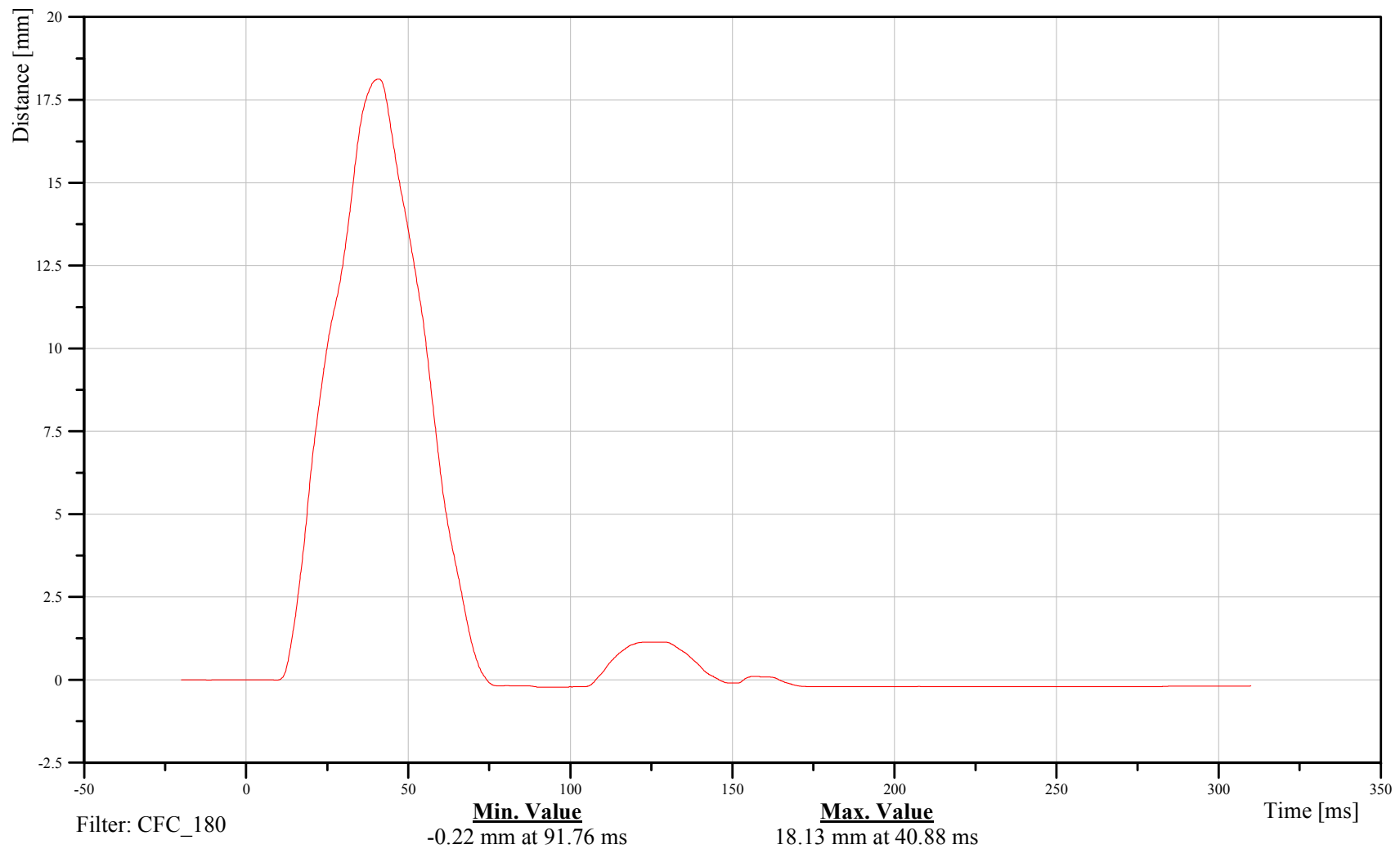
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SHRILE00S2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 1 Disp. Y

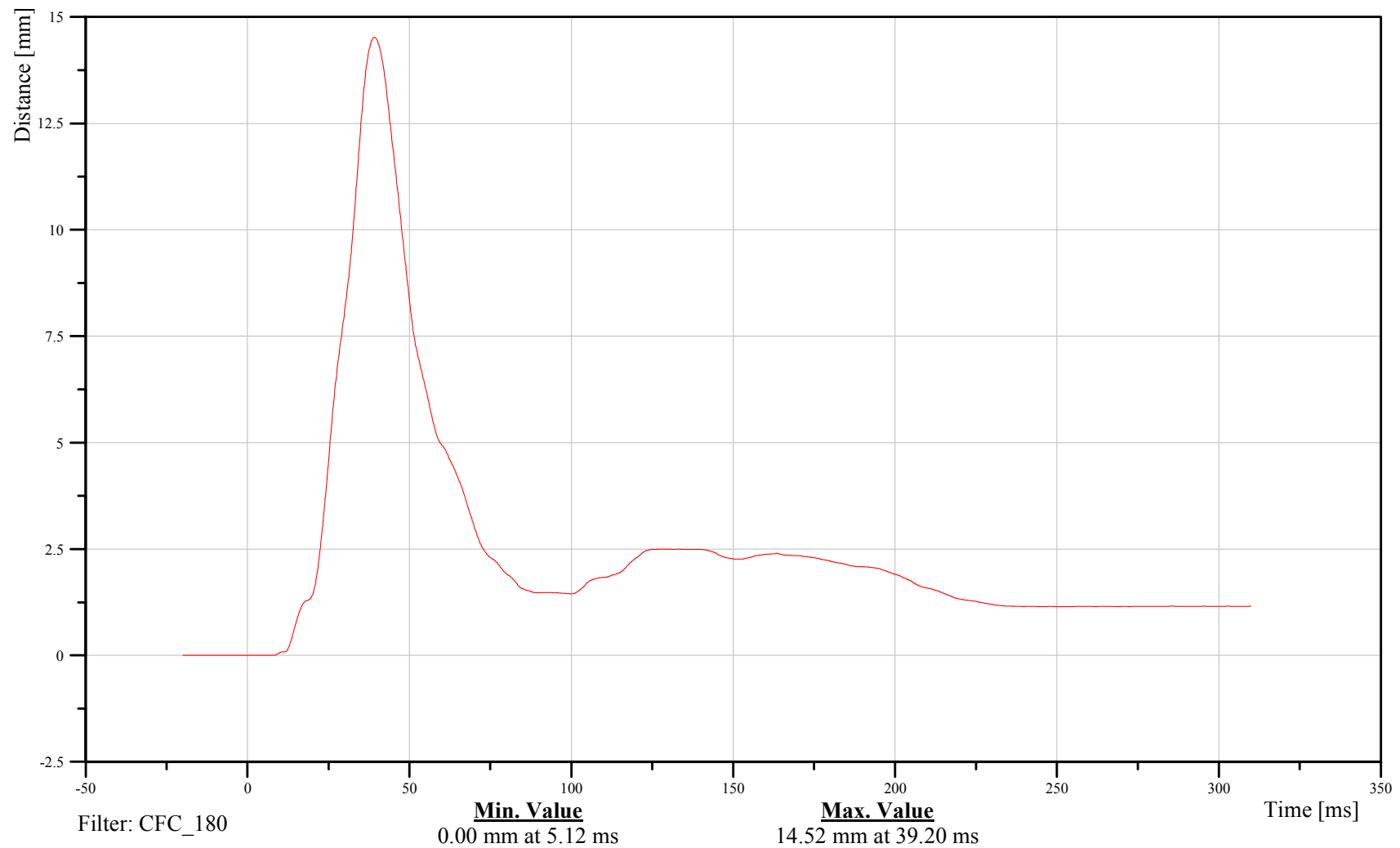
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI01LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 2 Disp. Y

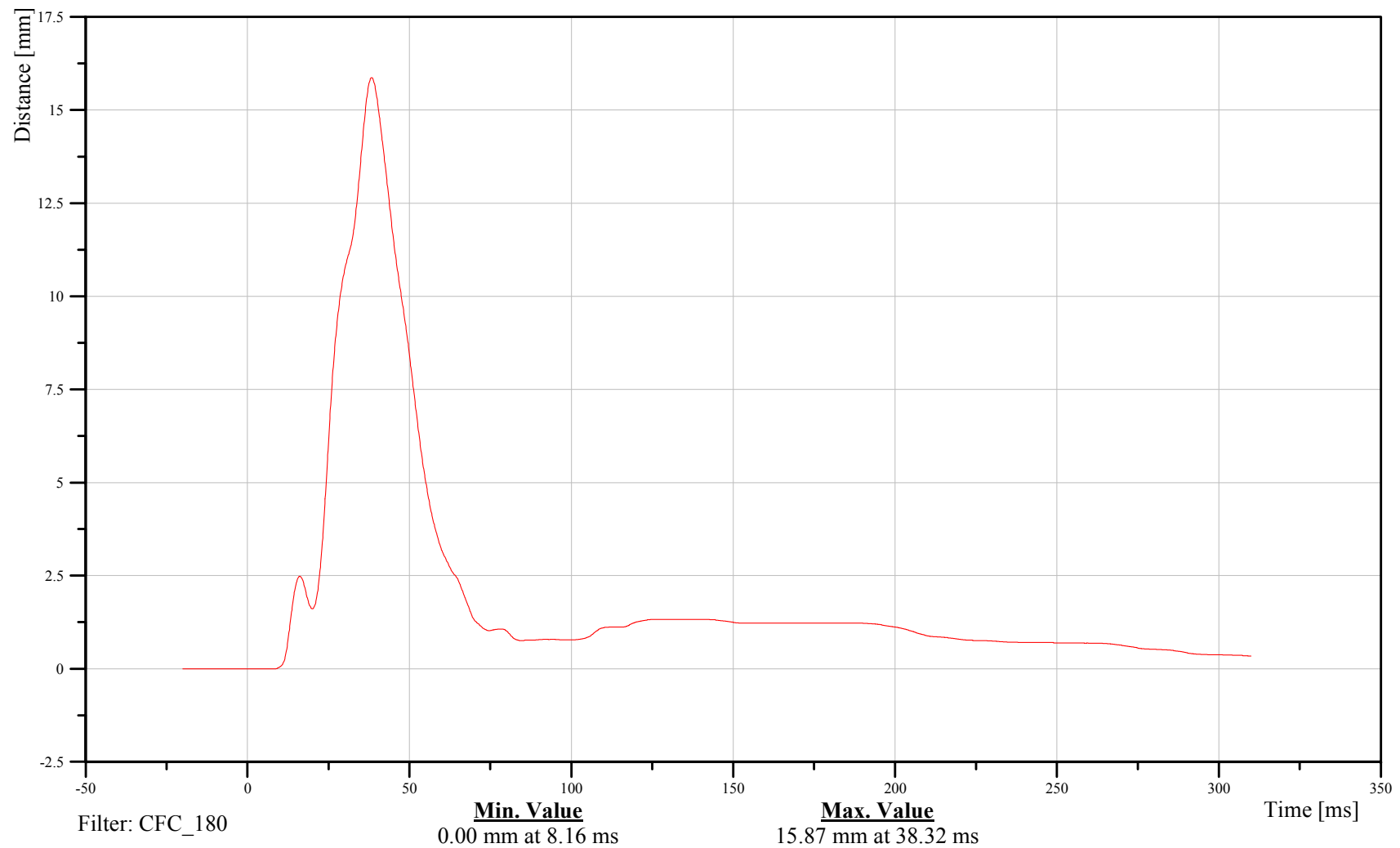
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI02LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Thorax Rib 3 Disp. Y

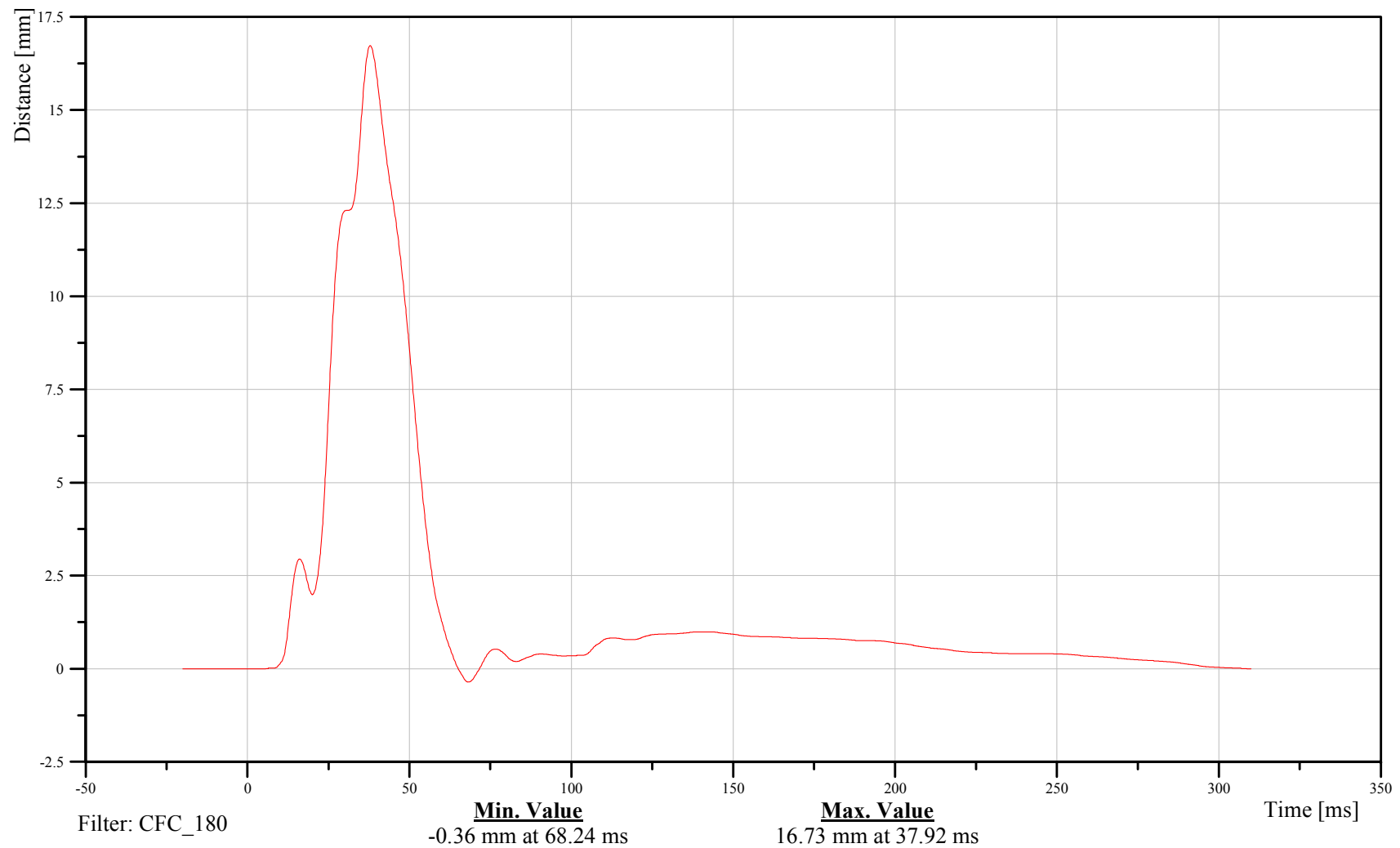
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11TRRI03LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 1 Disp. Y

Date: 08/17/2005

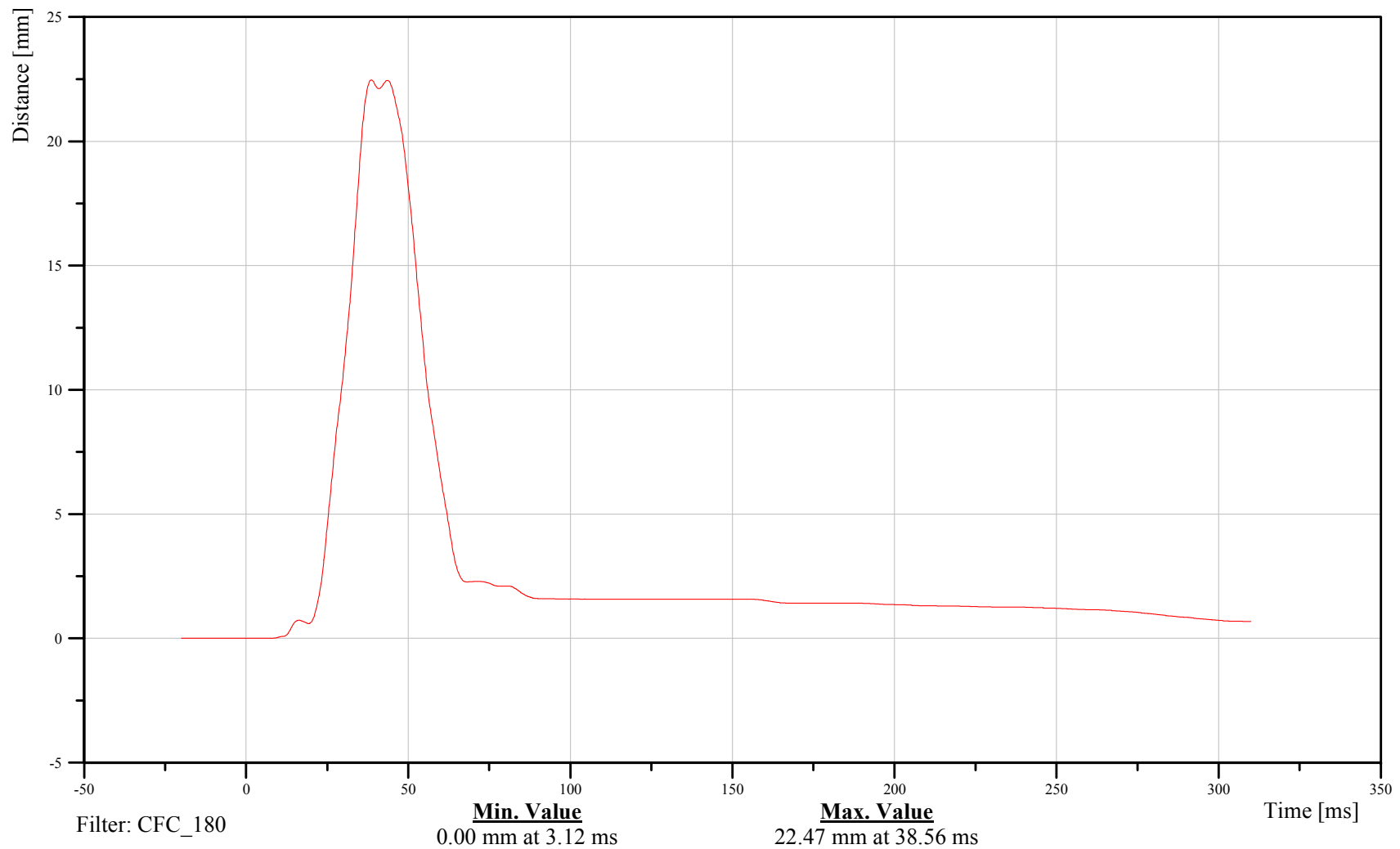
Time: 13:44

Customer: VRTC

11ABRI01LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Abdomin Rib 2 Disp. Y

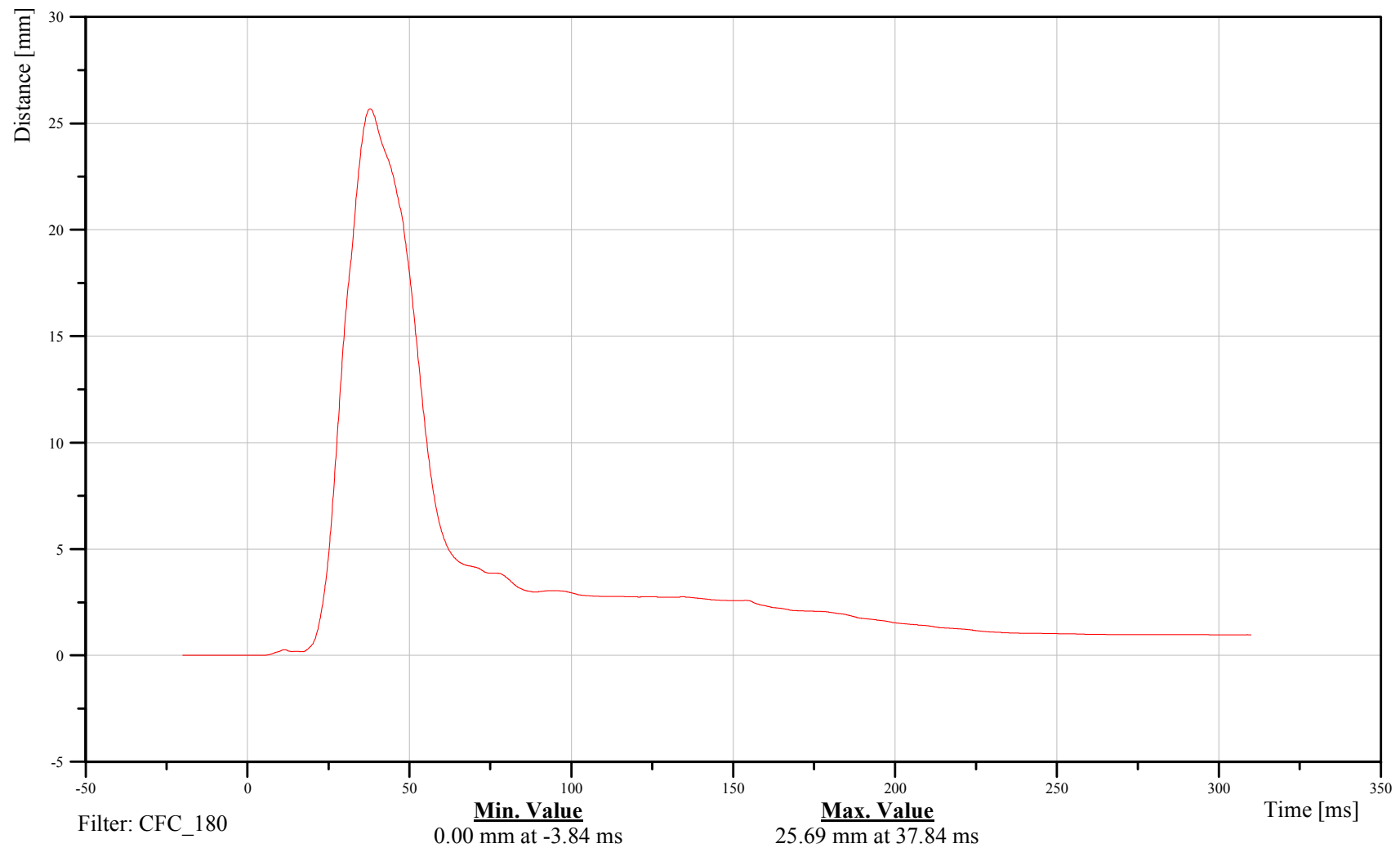
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ABRI02LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Pelvis Accel X

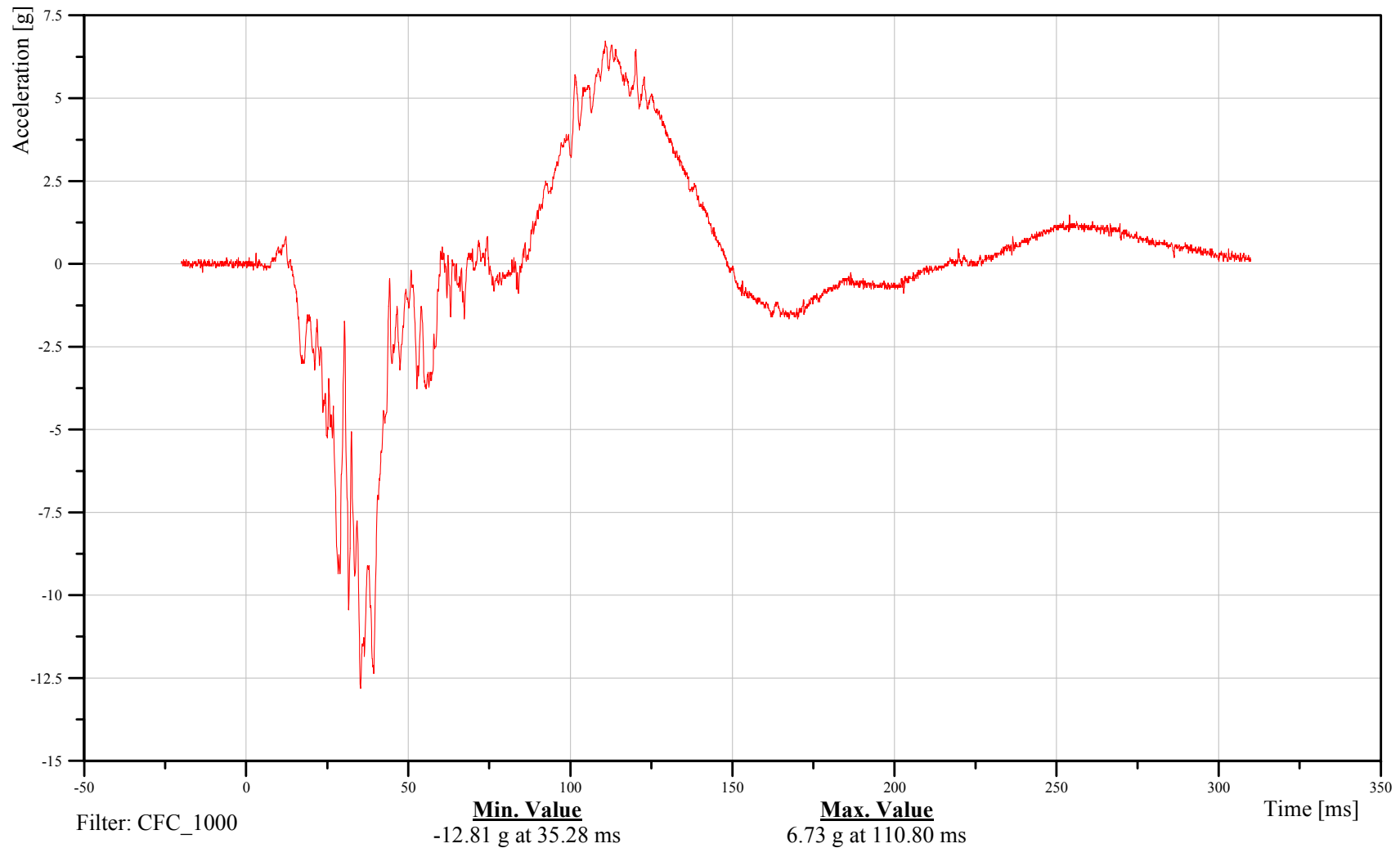
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11PELVCG00S2ACXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Pelvis Accel Y

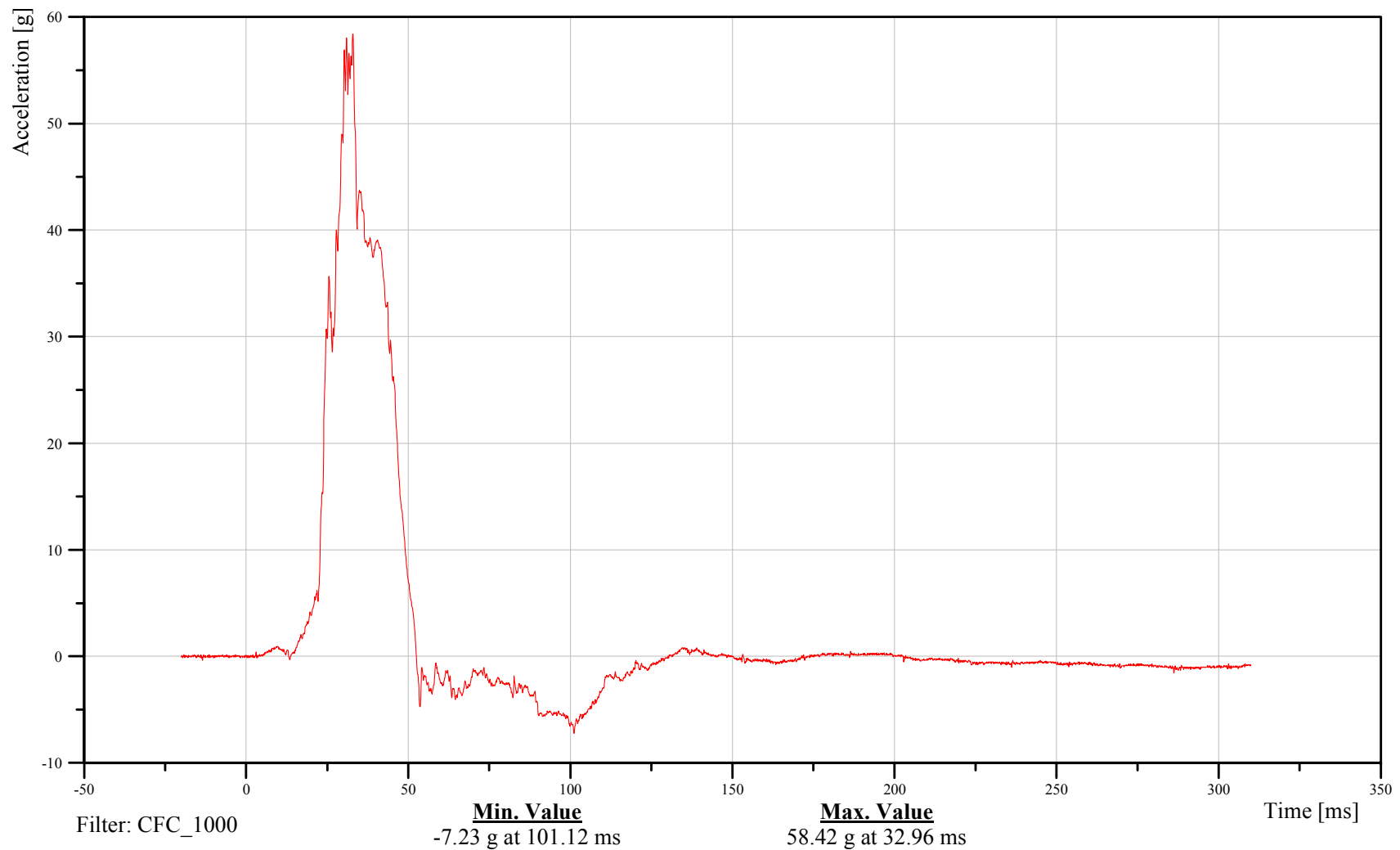
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11PELVCG00S2ACYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Pelvis Accel Z

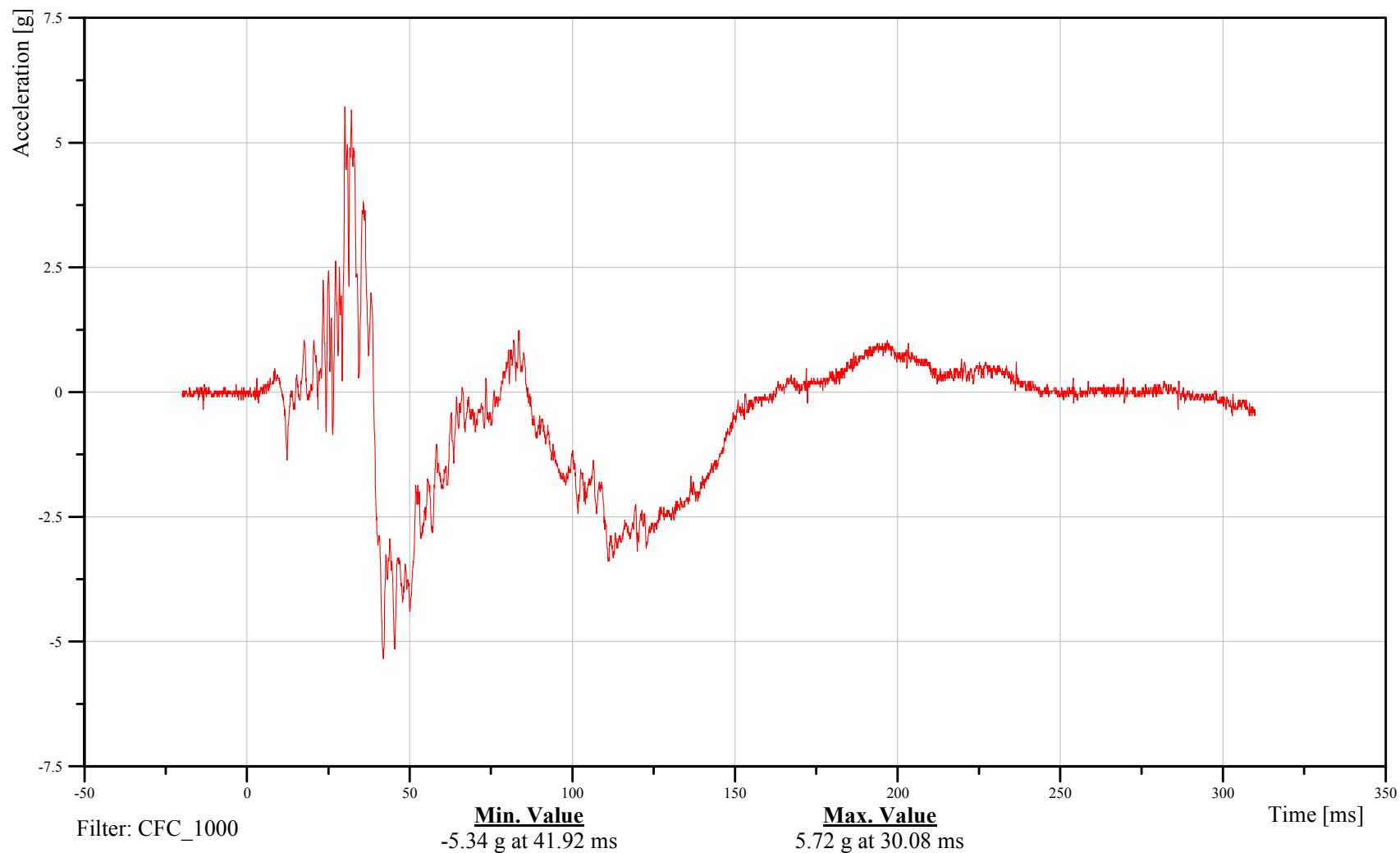
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11PELVCG00S2ACZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Pelvis Accel Resultant

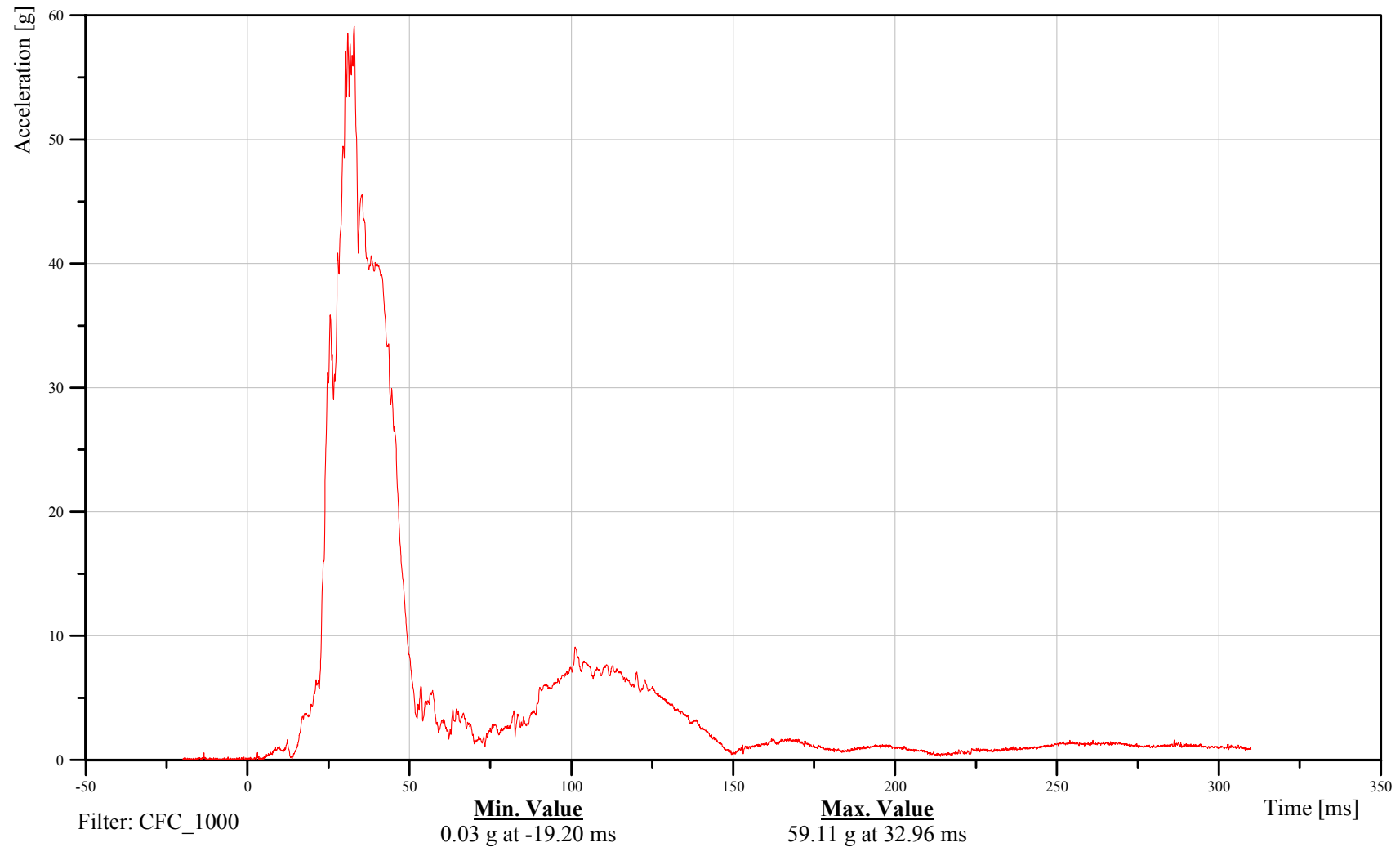
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11PELVCG00S2ACRA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Acetabulum Force Y

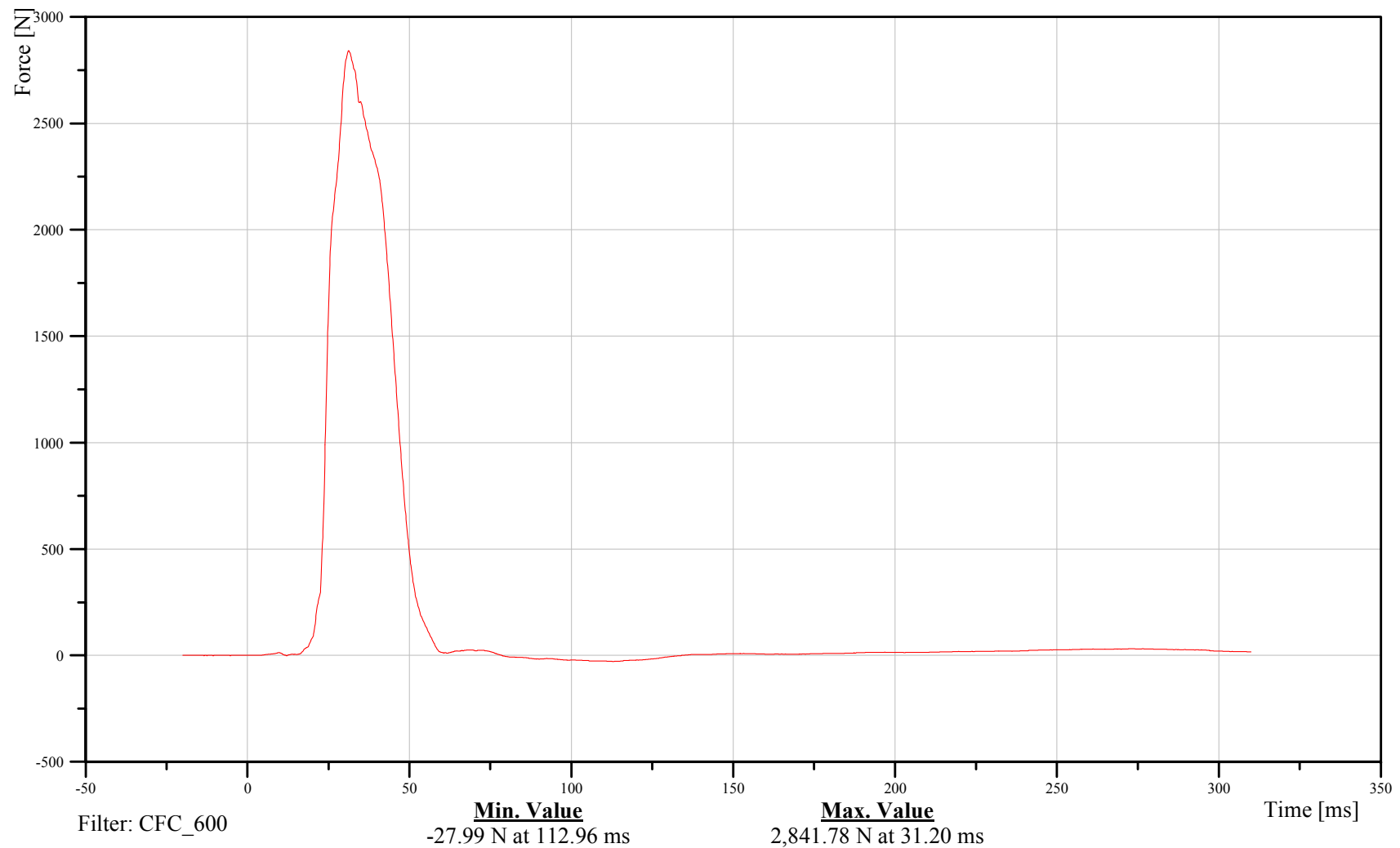
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ACTBLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Illiac Wing Force Y

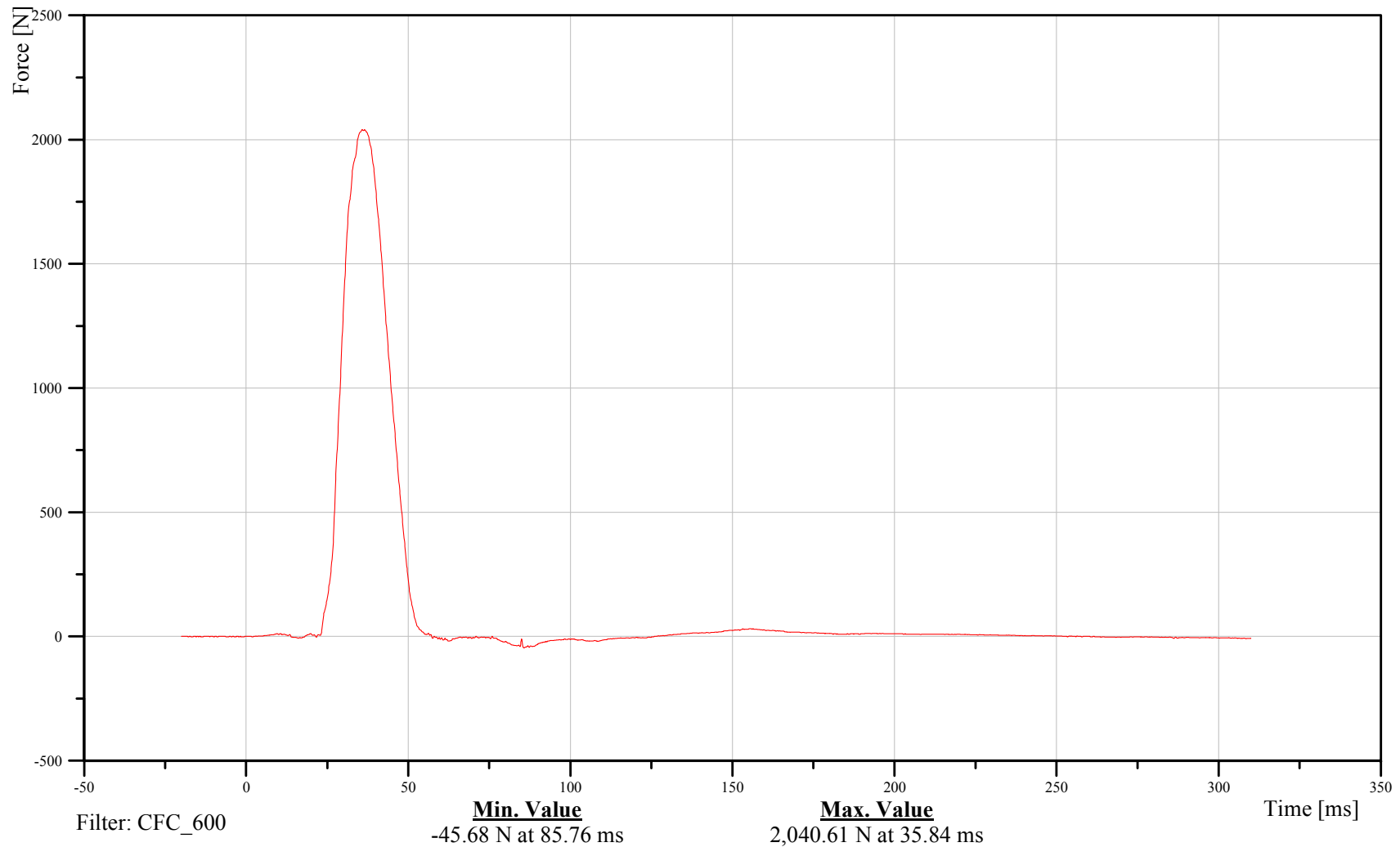
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11ILACLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Femur Force X

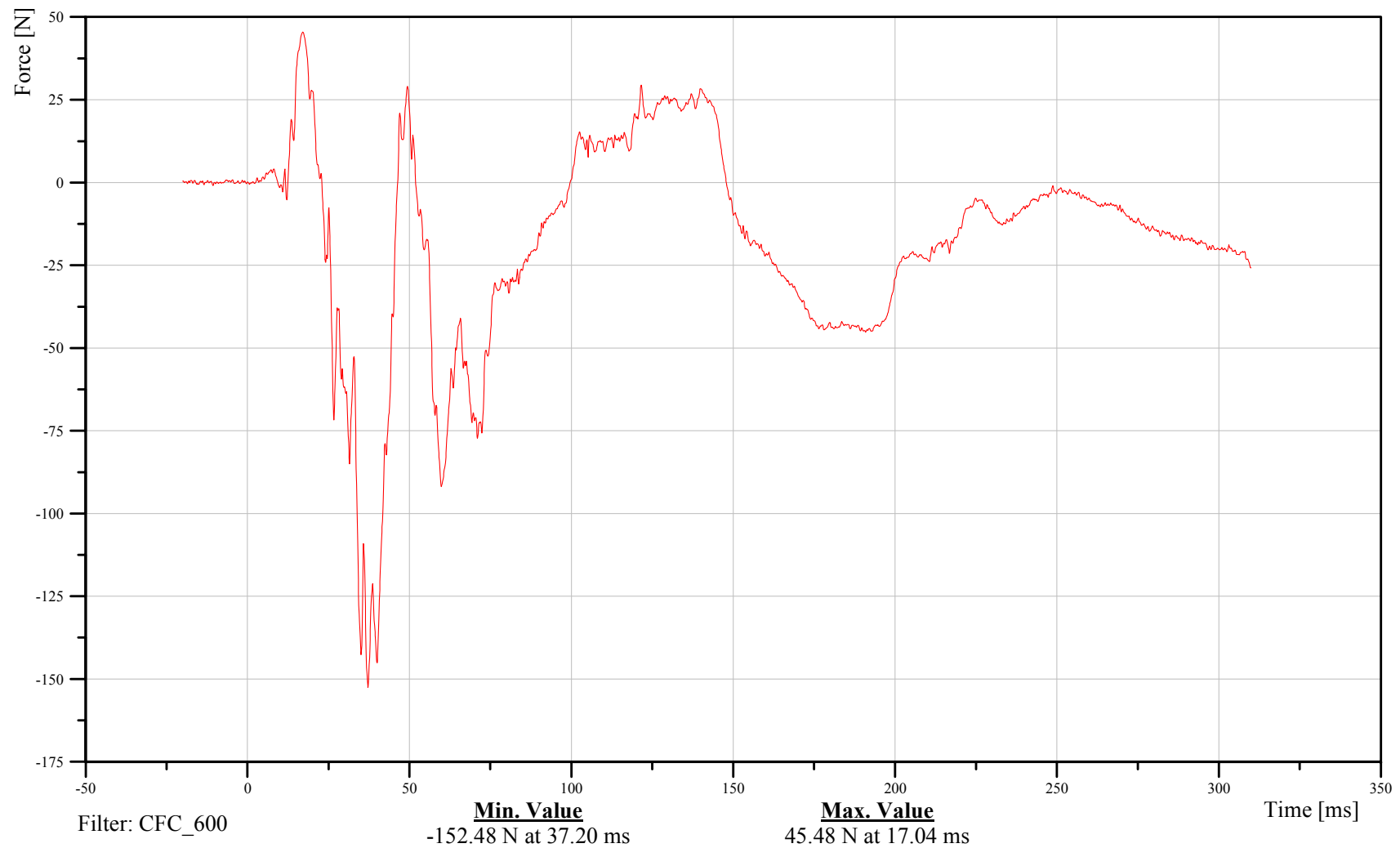
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRLE00S2FOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Femur Force Y

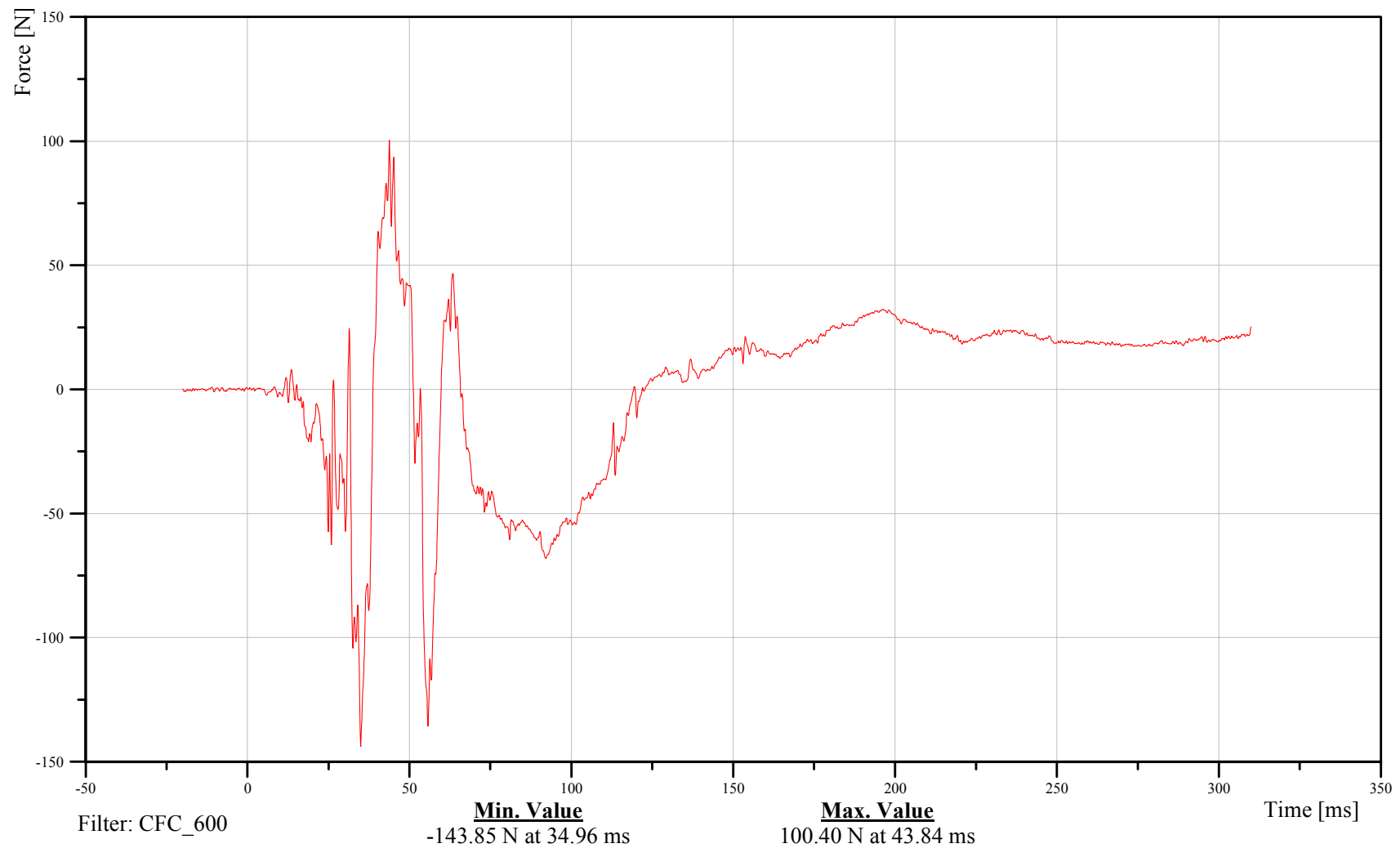
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Femur Force Z

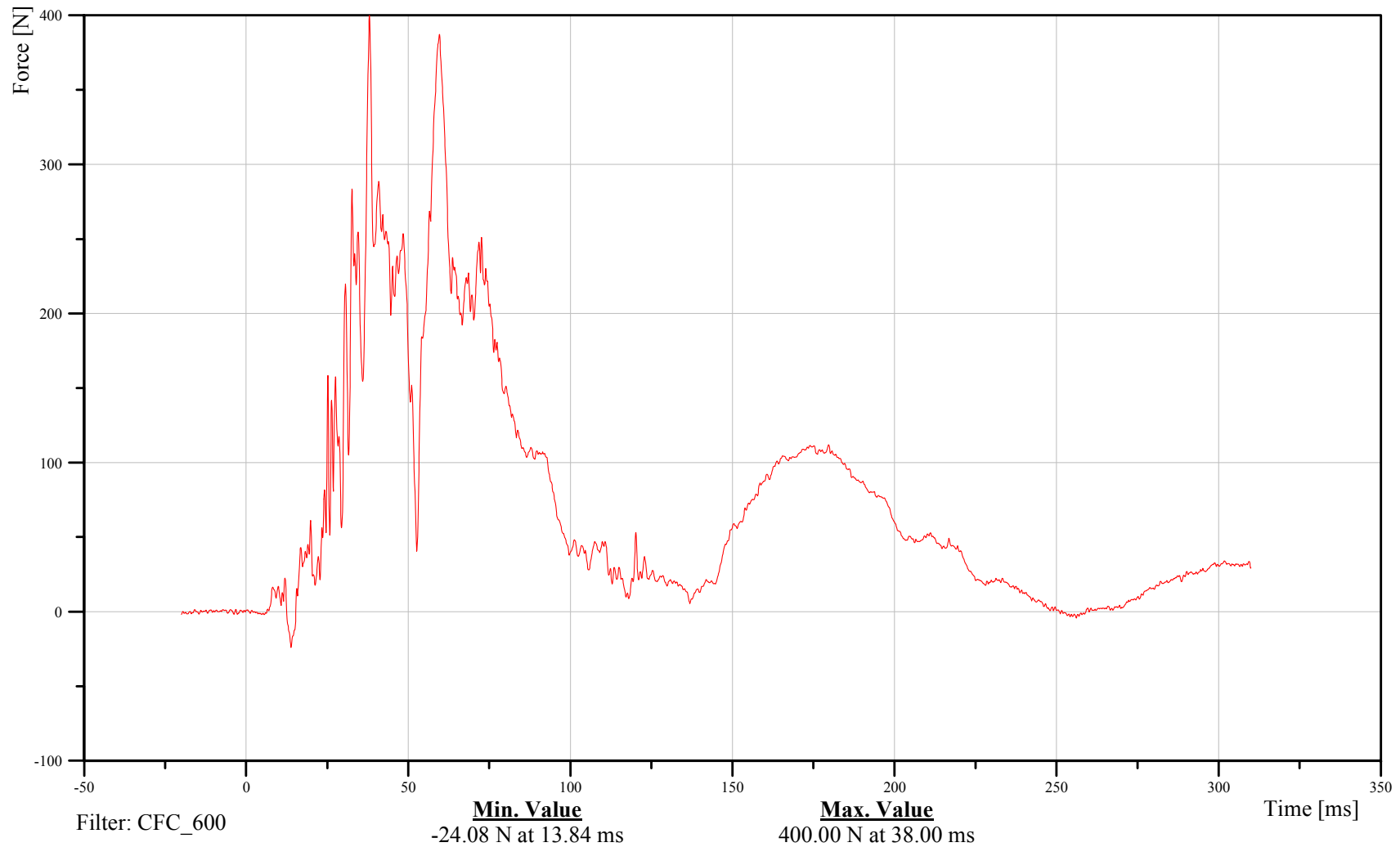
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRLE00S2FOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Femur Moment X

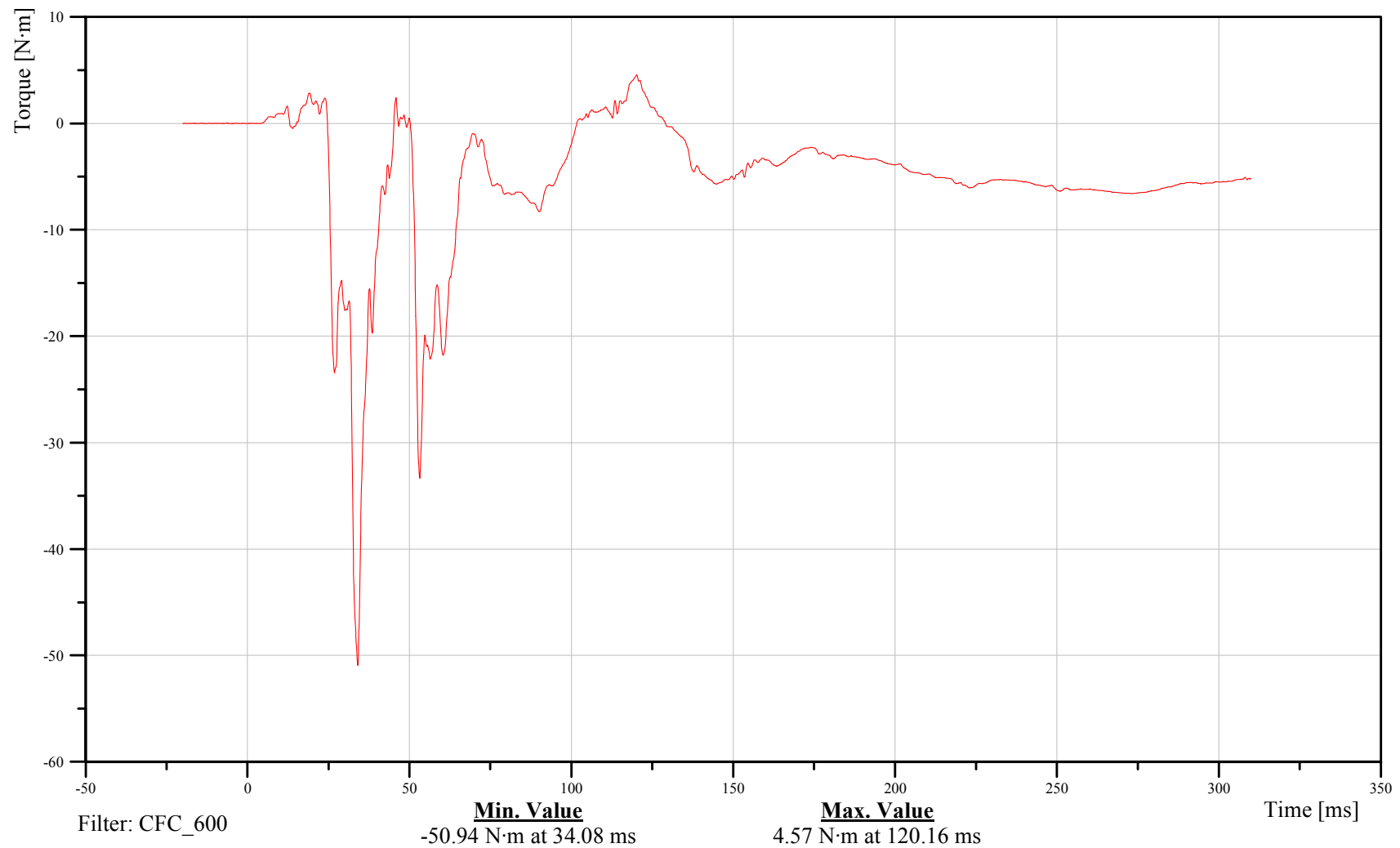
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRLE00S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Femur Moment Y

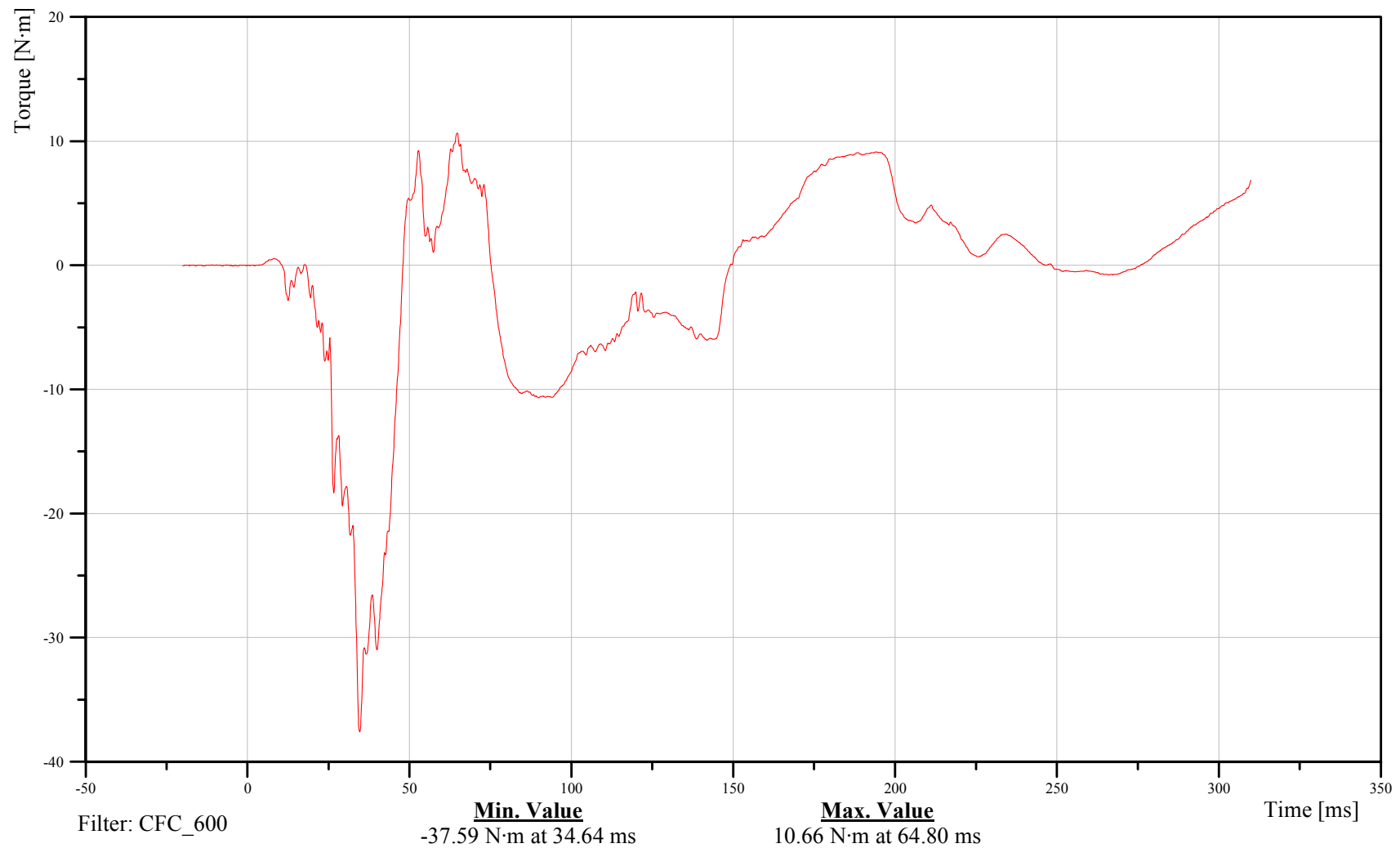
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRLE00S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Left Femur Moment Z

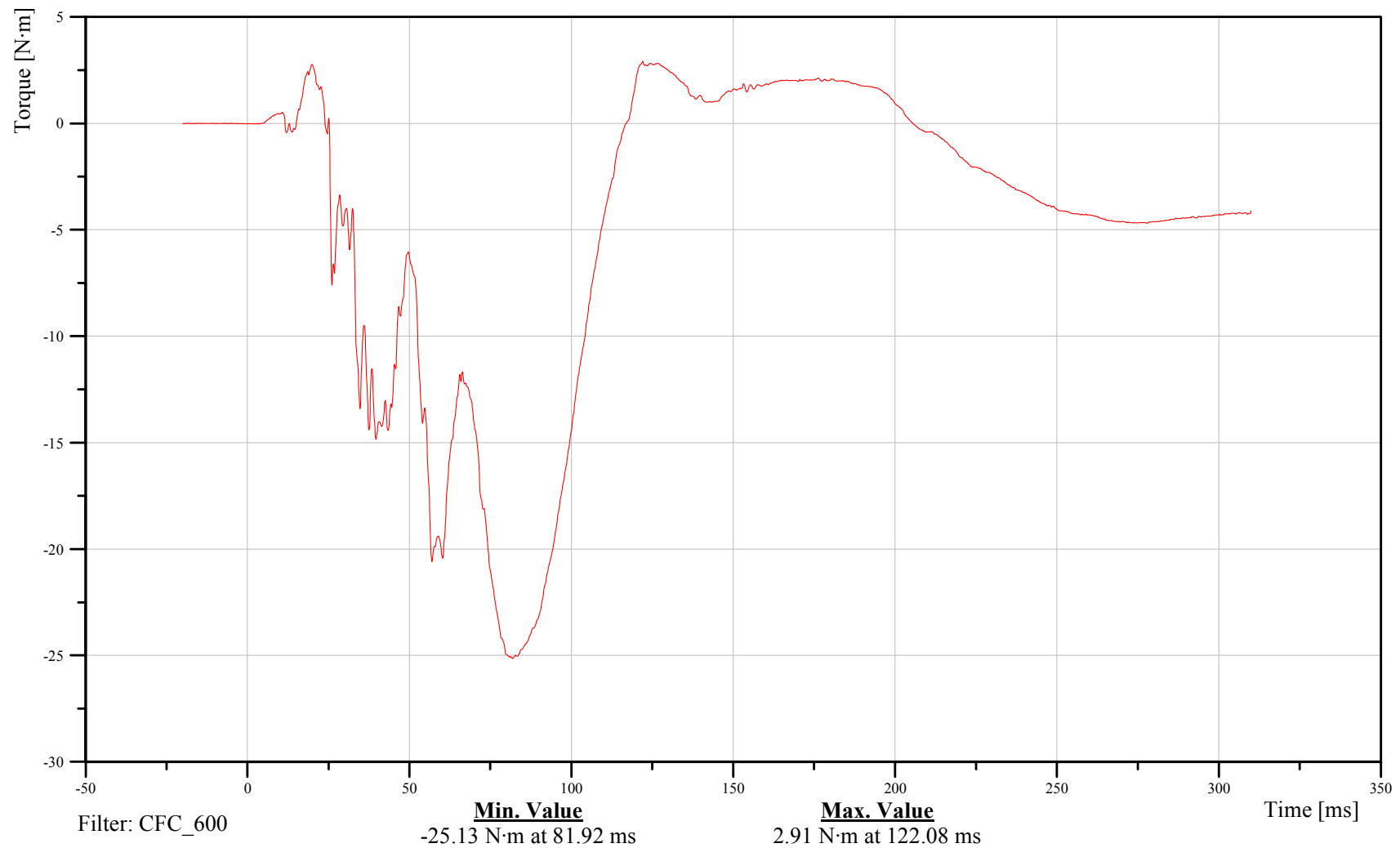
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRLE00S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Right Femur Force X

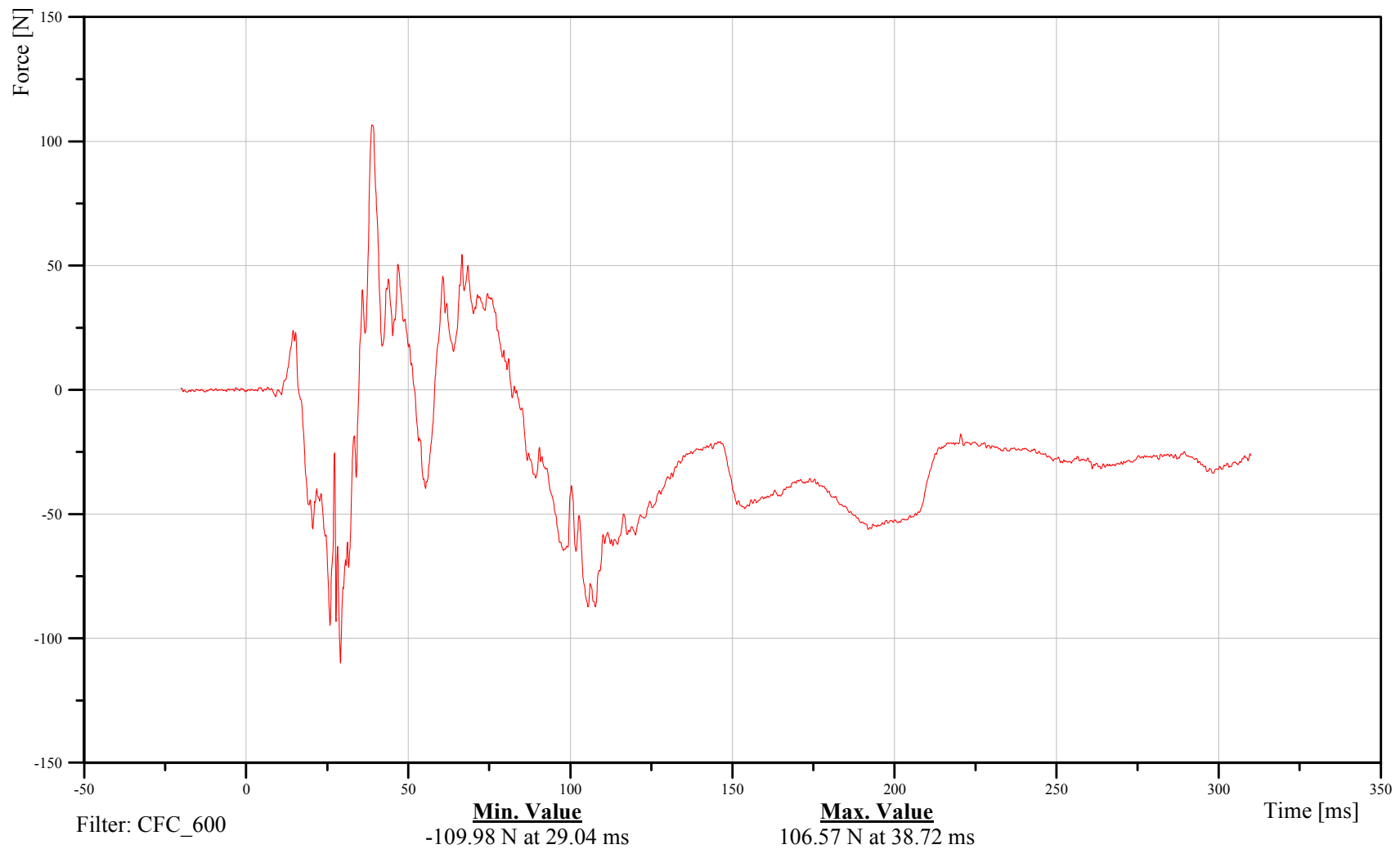
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRRI00S2FOX B

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Right Femur Force Y

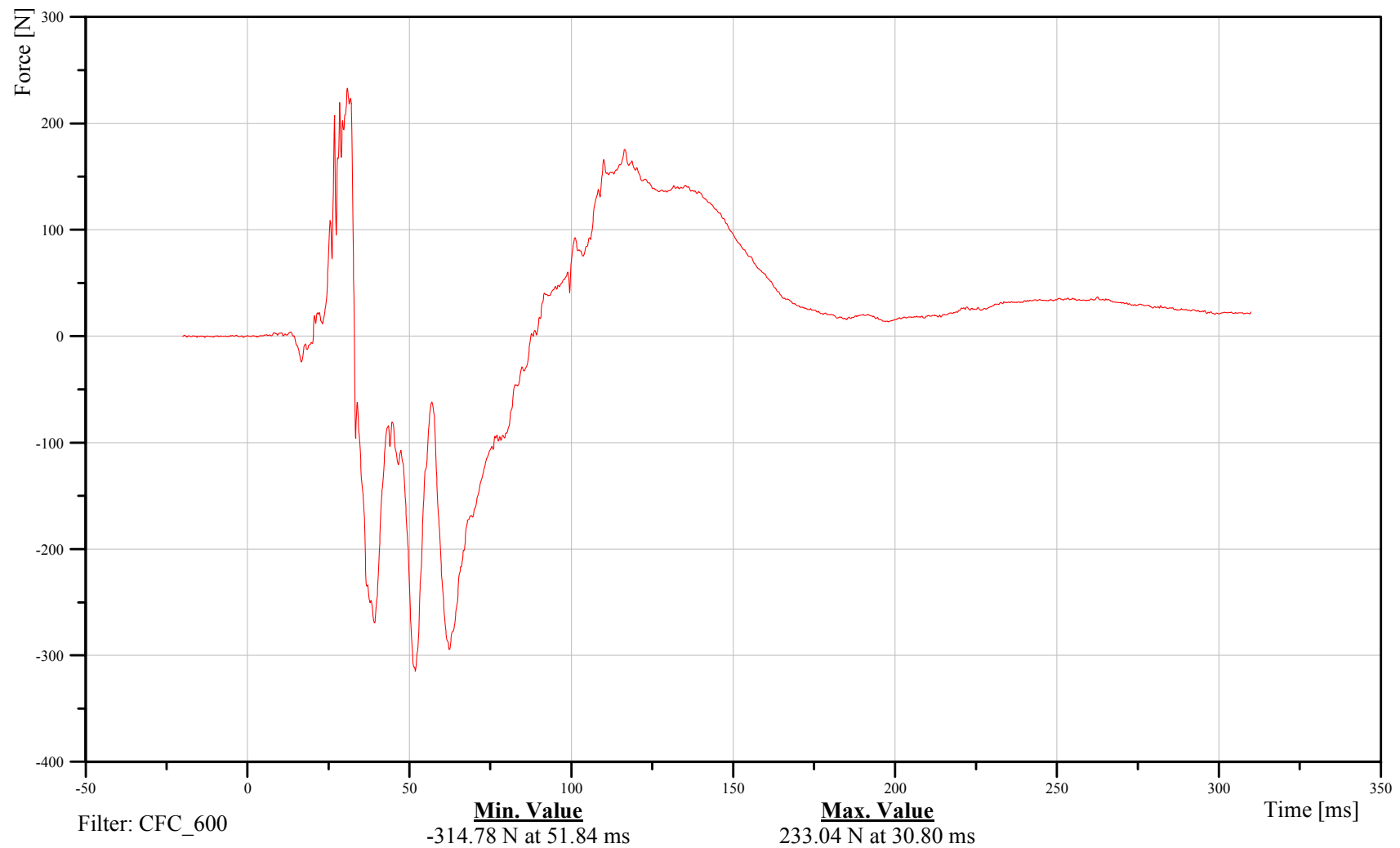
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRRI00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Right Femur Force Z

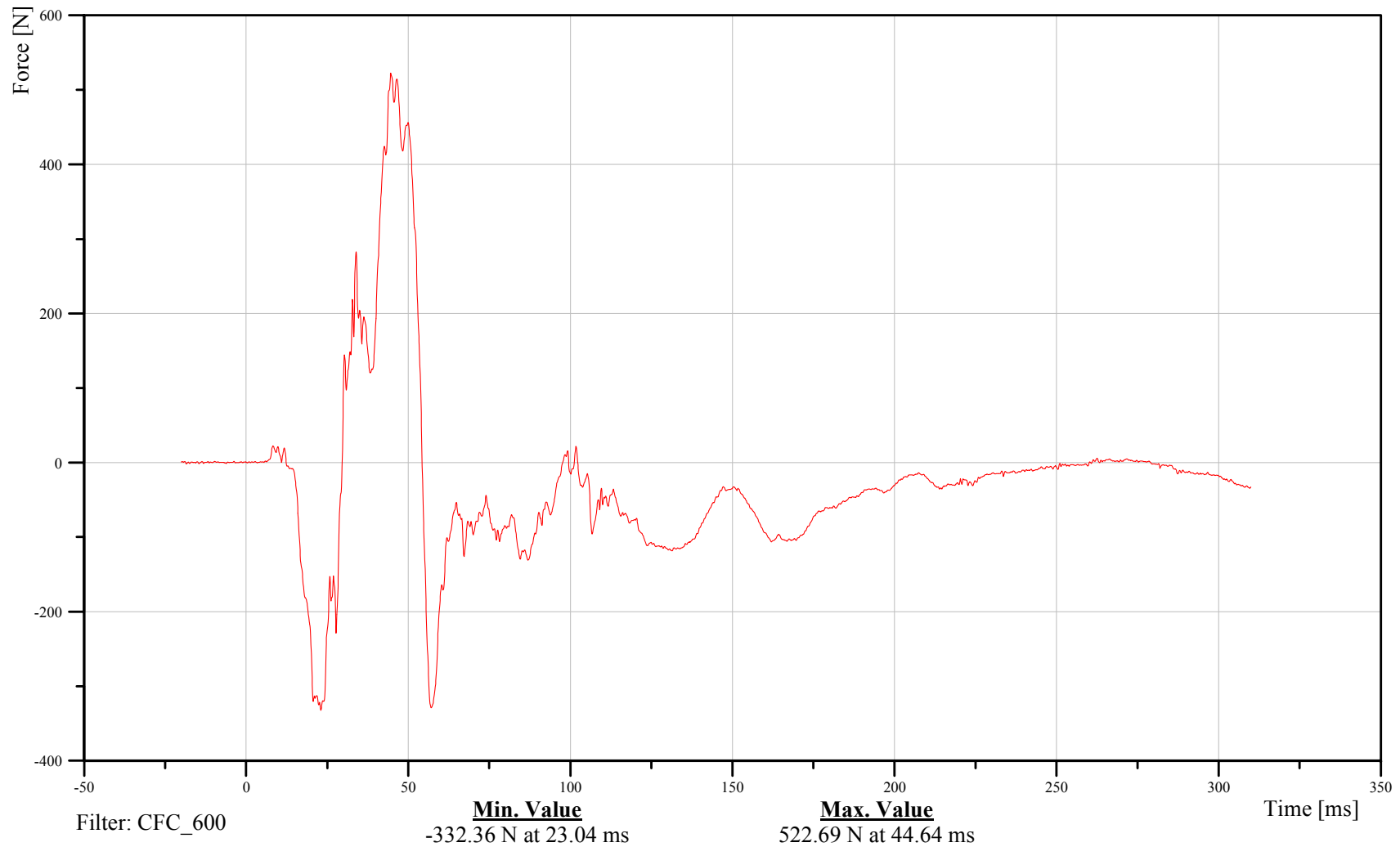
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRRI00S2FOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Right Femur Moment X

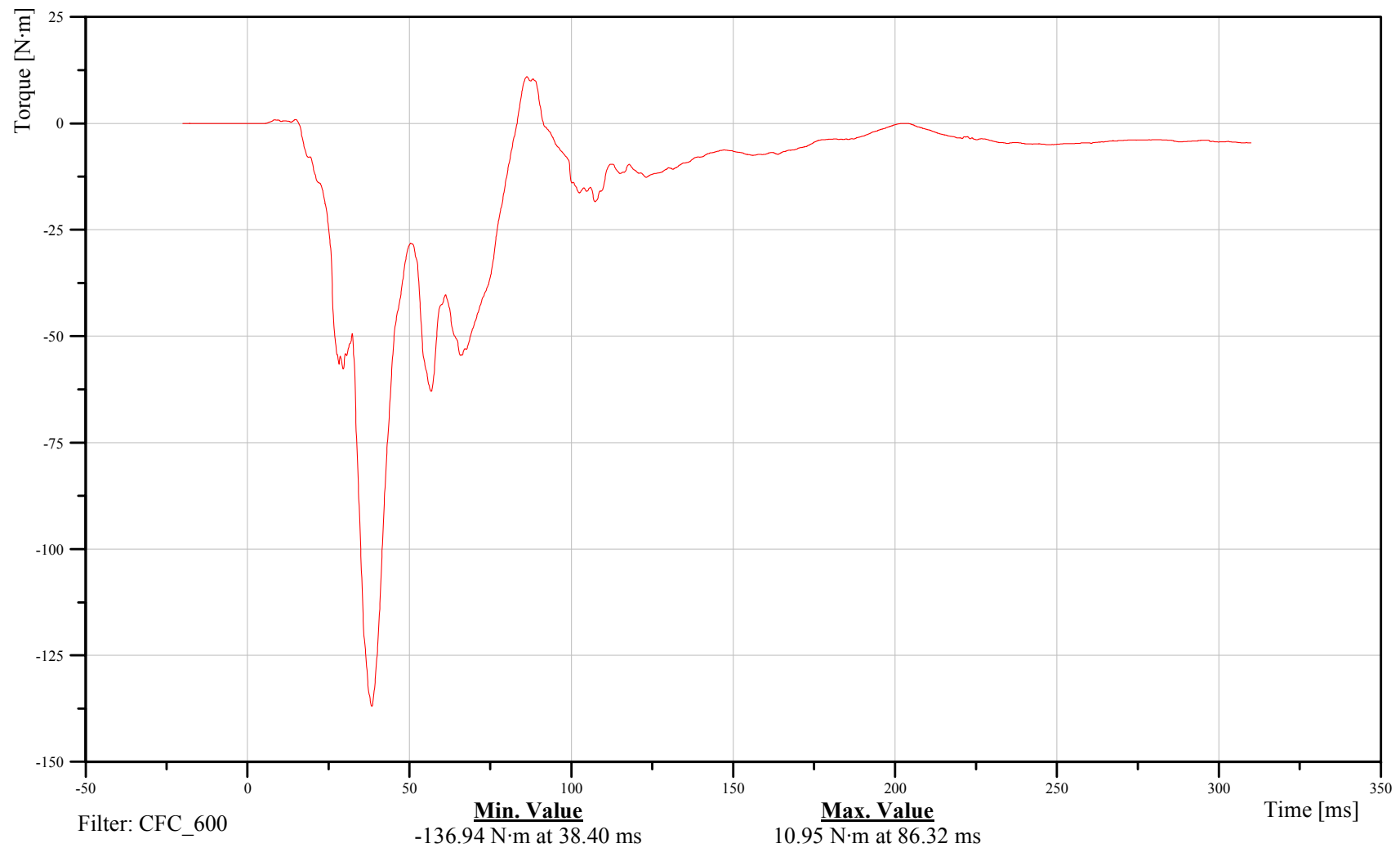
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRRI00S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Right Femur Moment Y

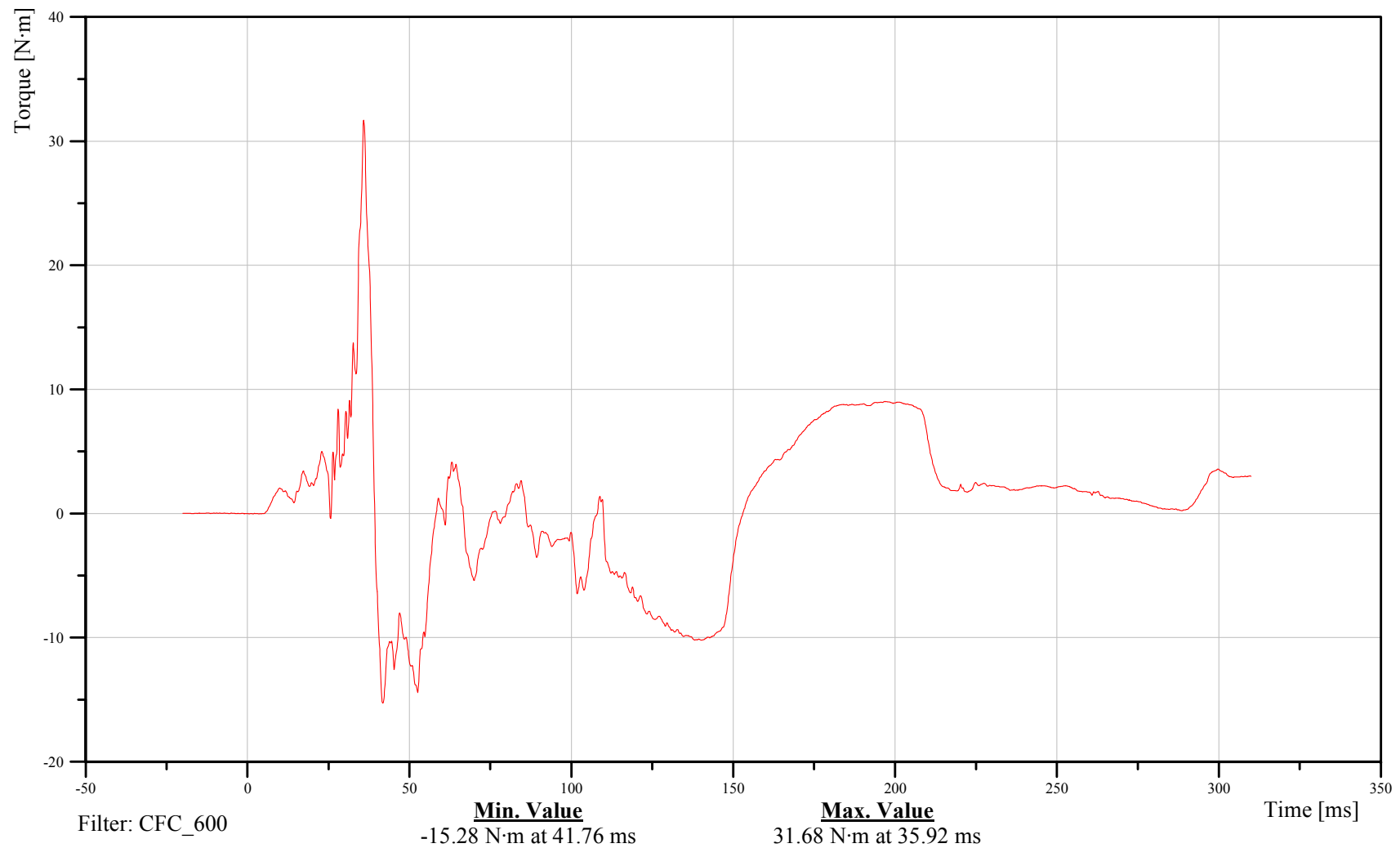
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRRI00S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Right Femur Moment Z

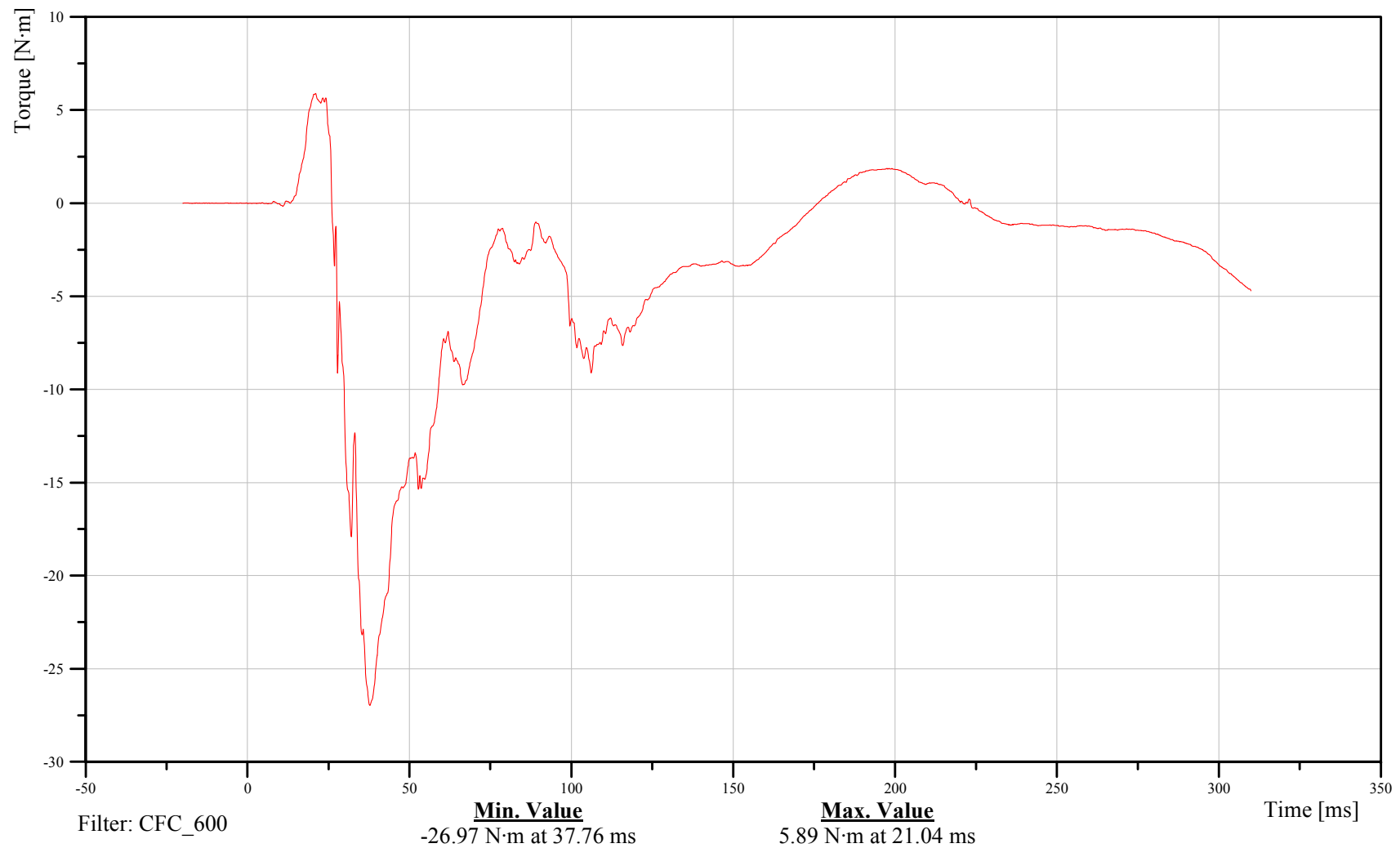
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11FEMRRI00S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Head Accel X

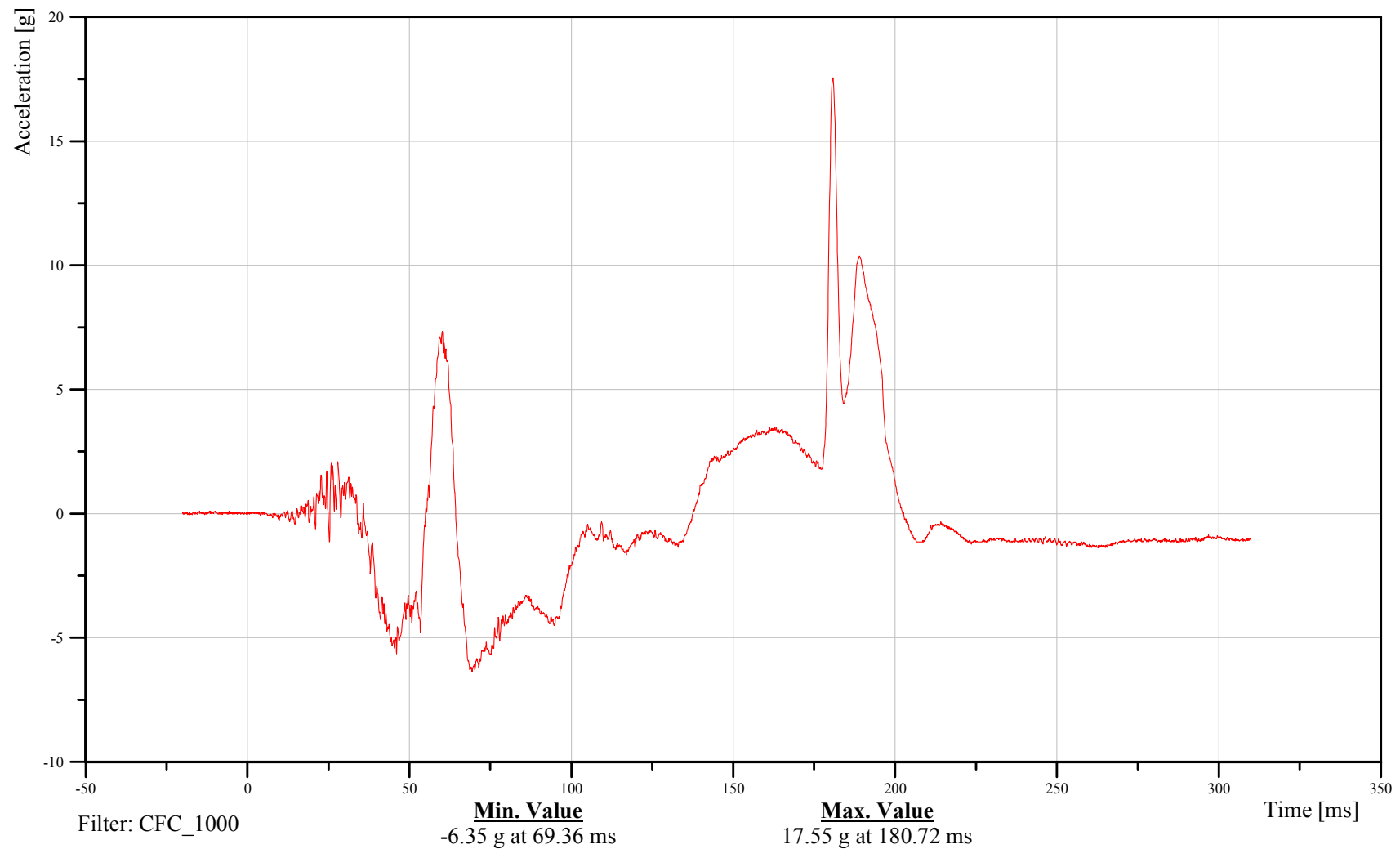
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14HEADCG00S2ACXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Head Accel Y

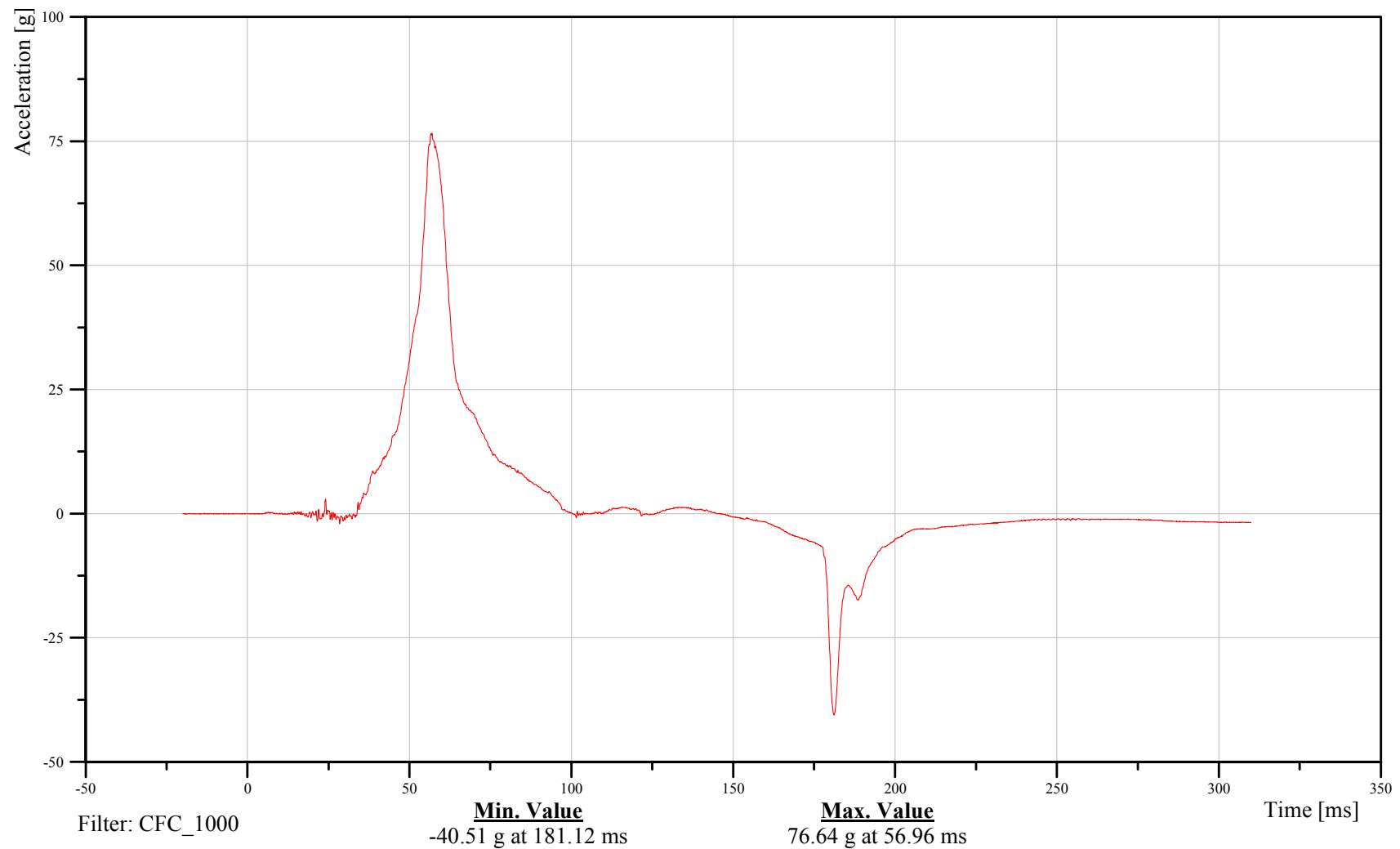
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14HEADCG00S2ACYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Head Accel Z

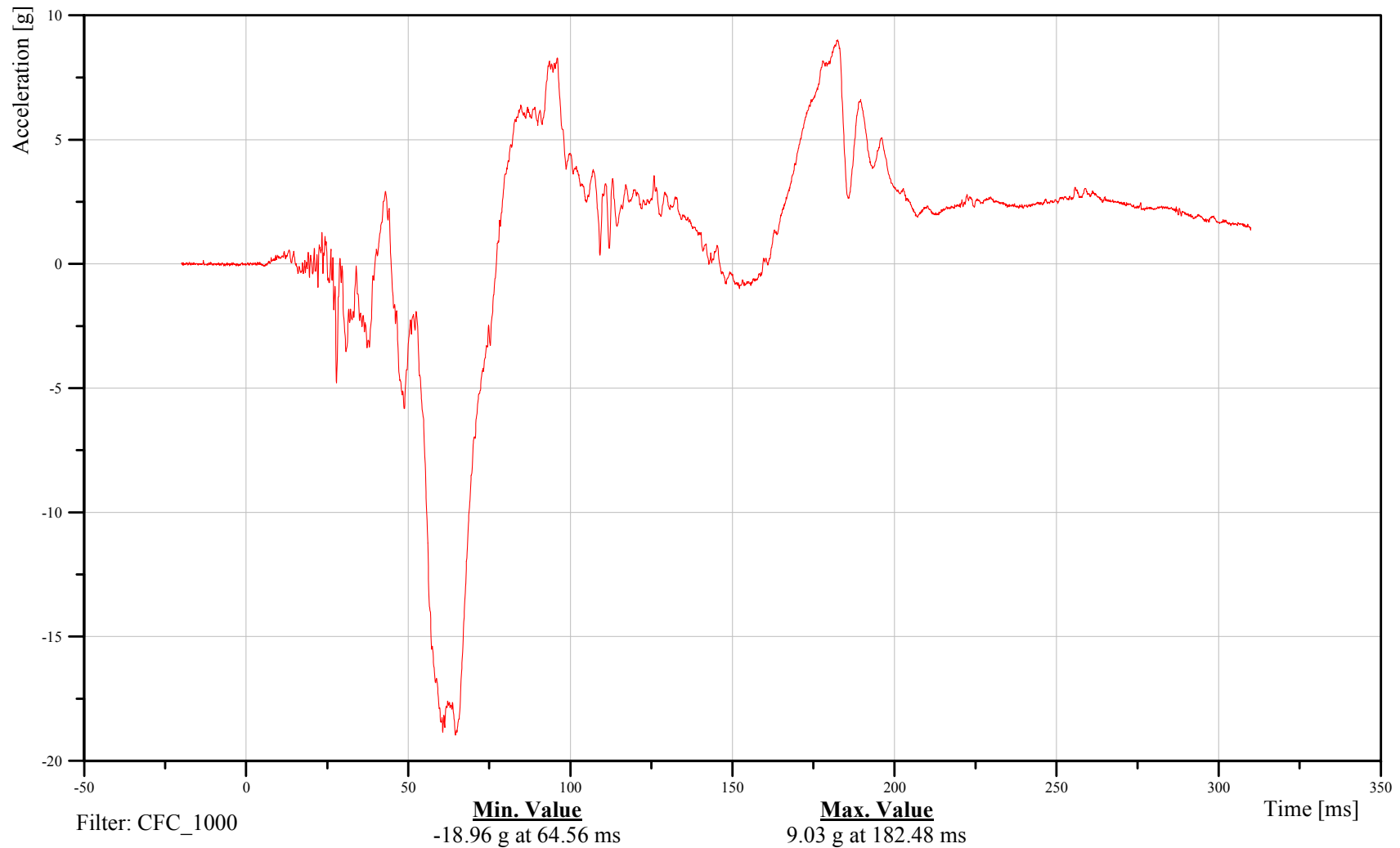
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14HEADCG00S2ACZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Head Accel Resultant

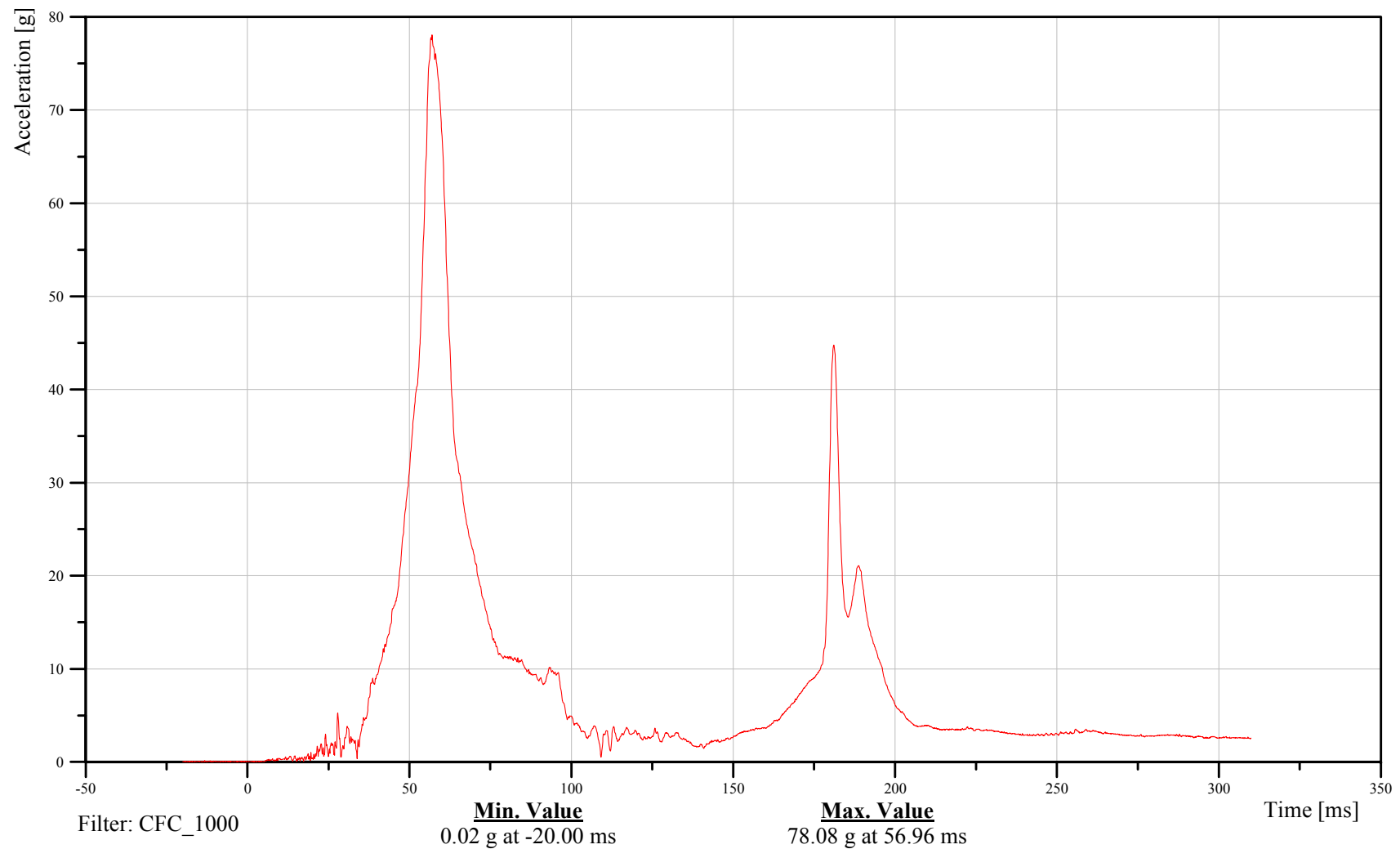
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14HEADCG00S2ACRA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

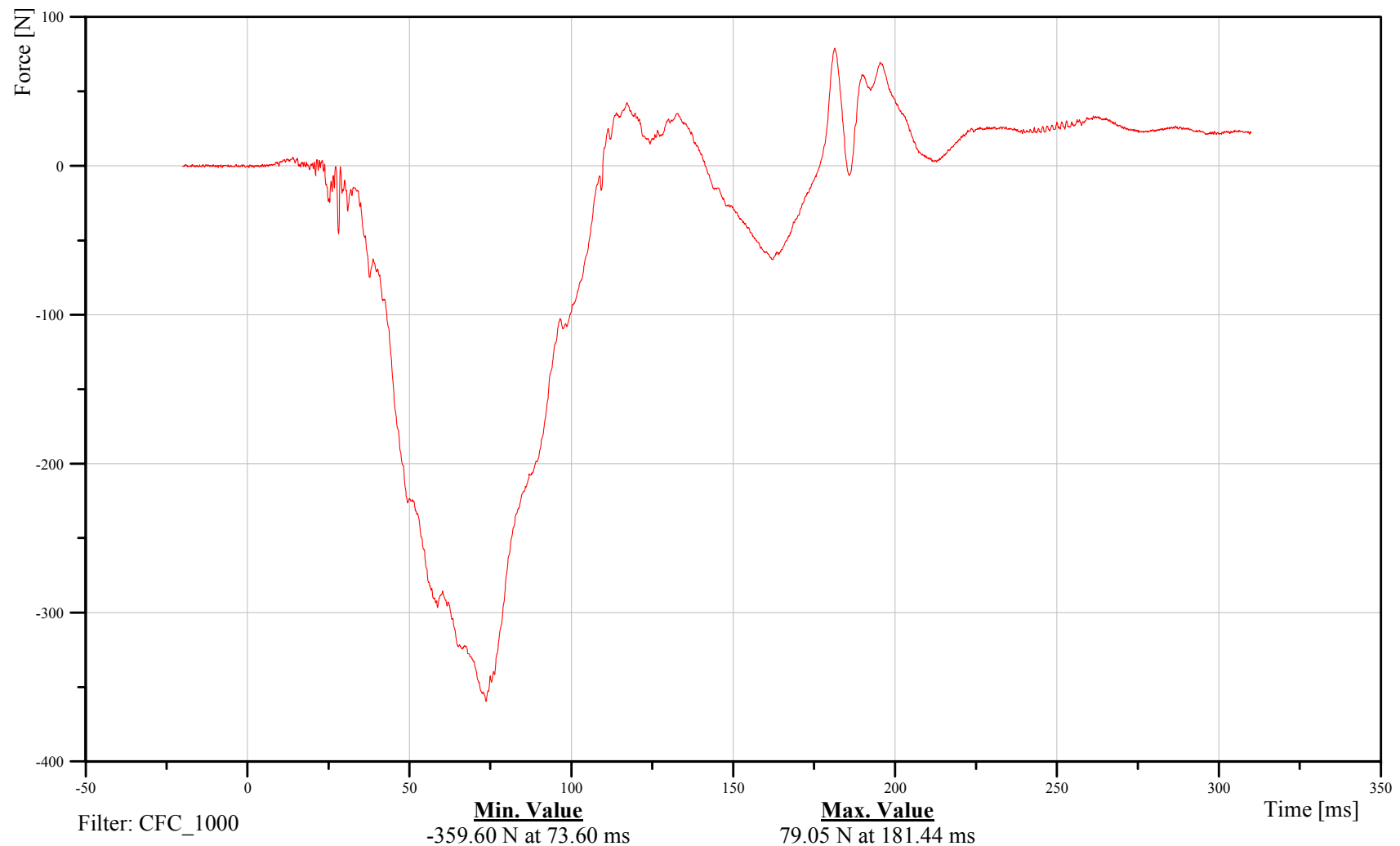
LR Pass. Neck Force X

Customer: VRTC

14NECKUP00S2FOXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

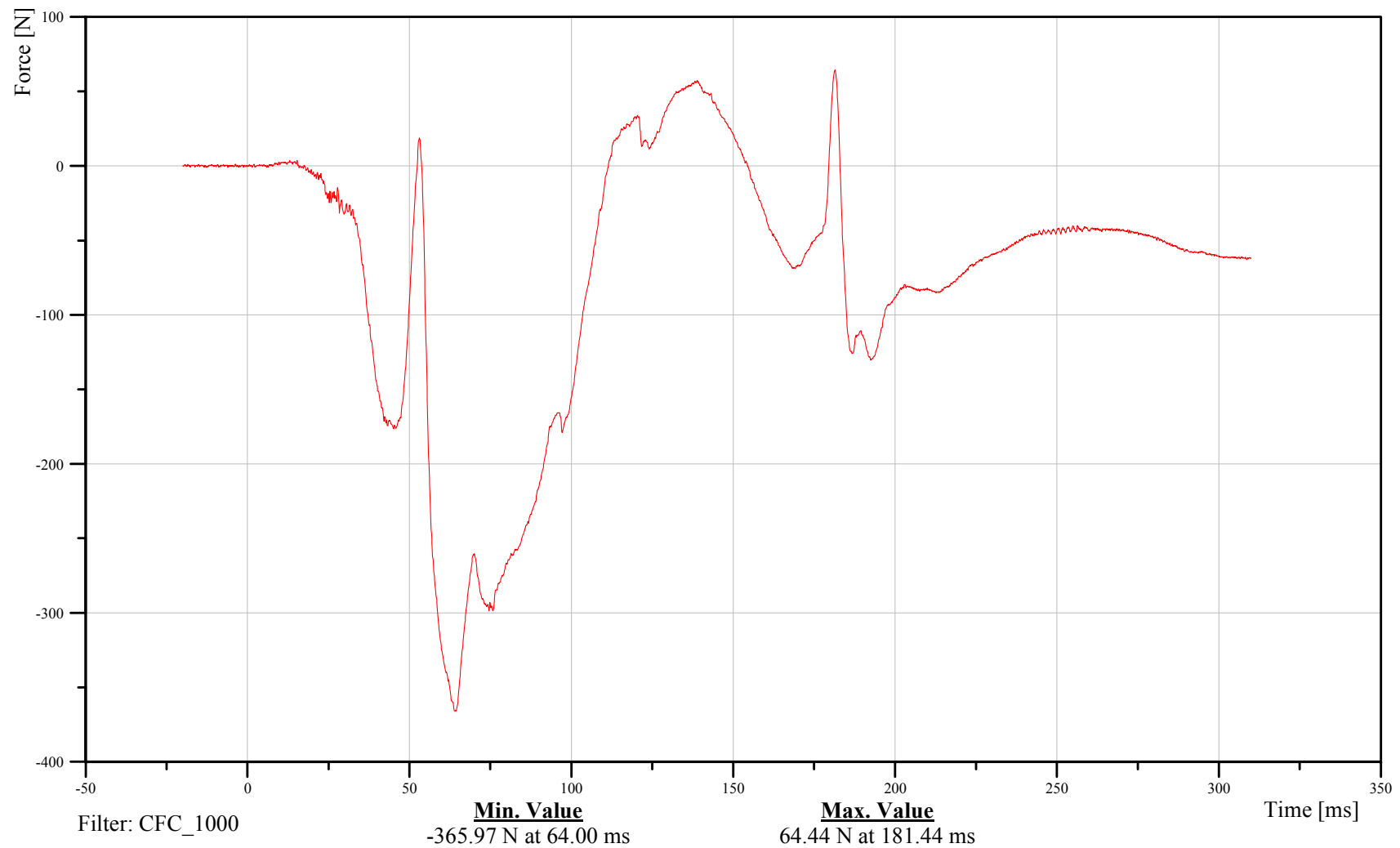
LR Pass. Neck Force Y

Customer: VRTC

14NECKUP00S2FOYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Neck Force Z

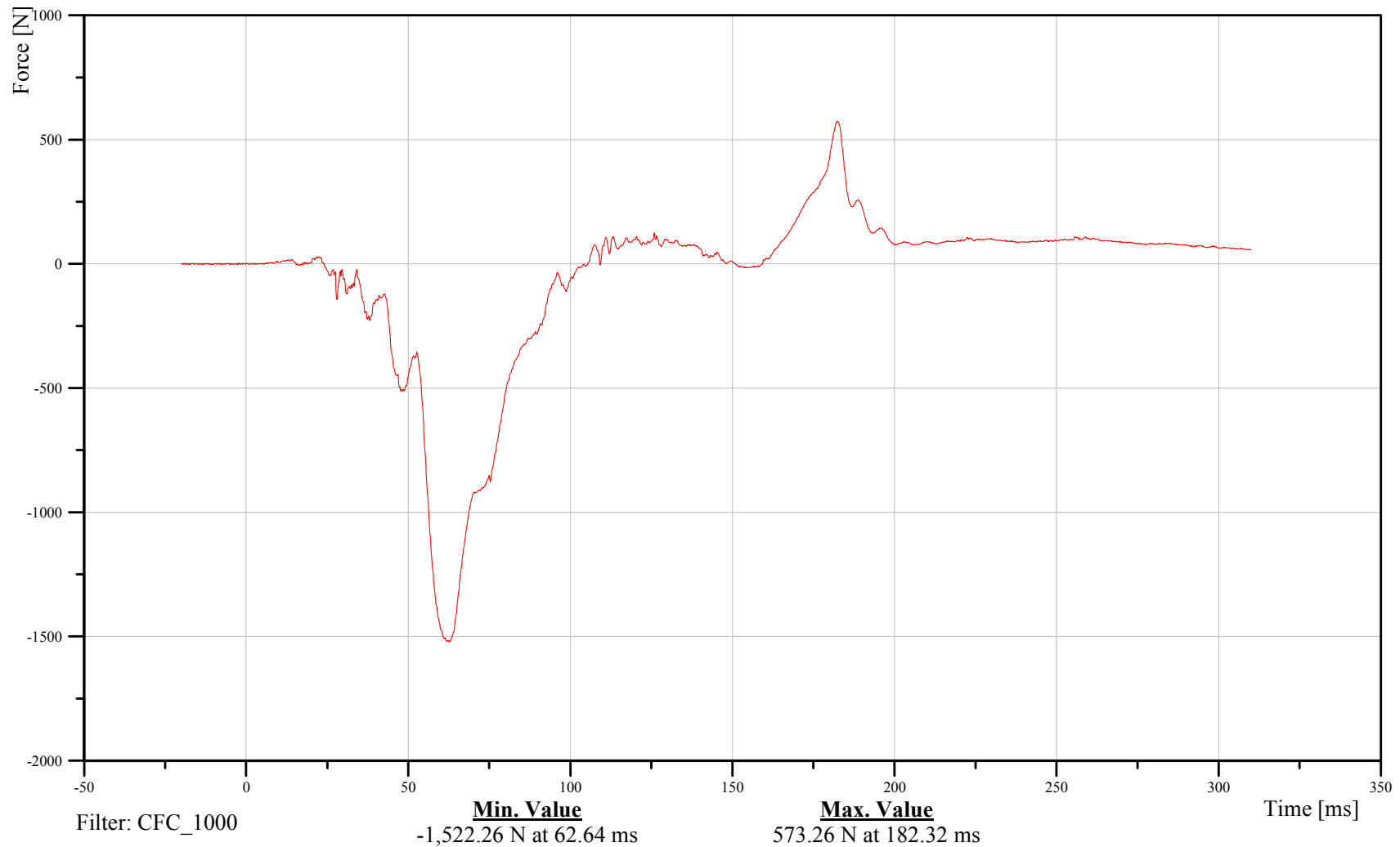
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14NECKUP00S2FOZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Neck Moment X

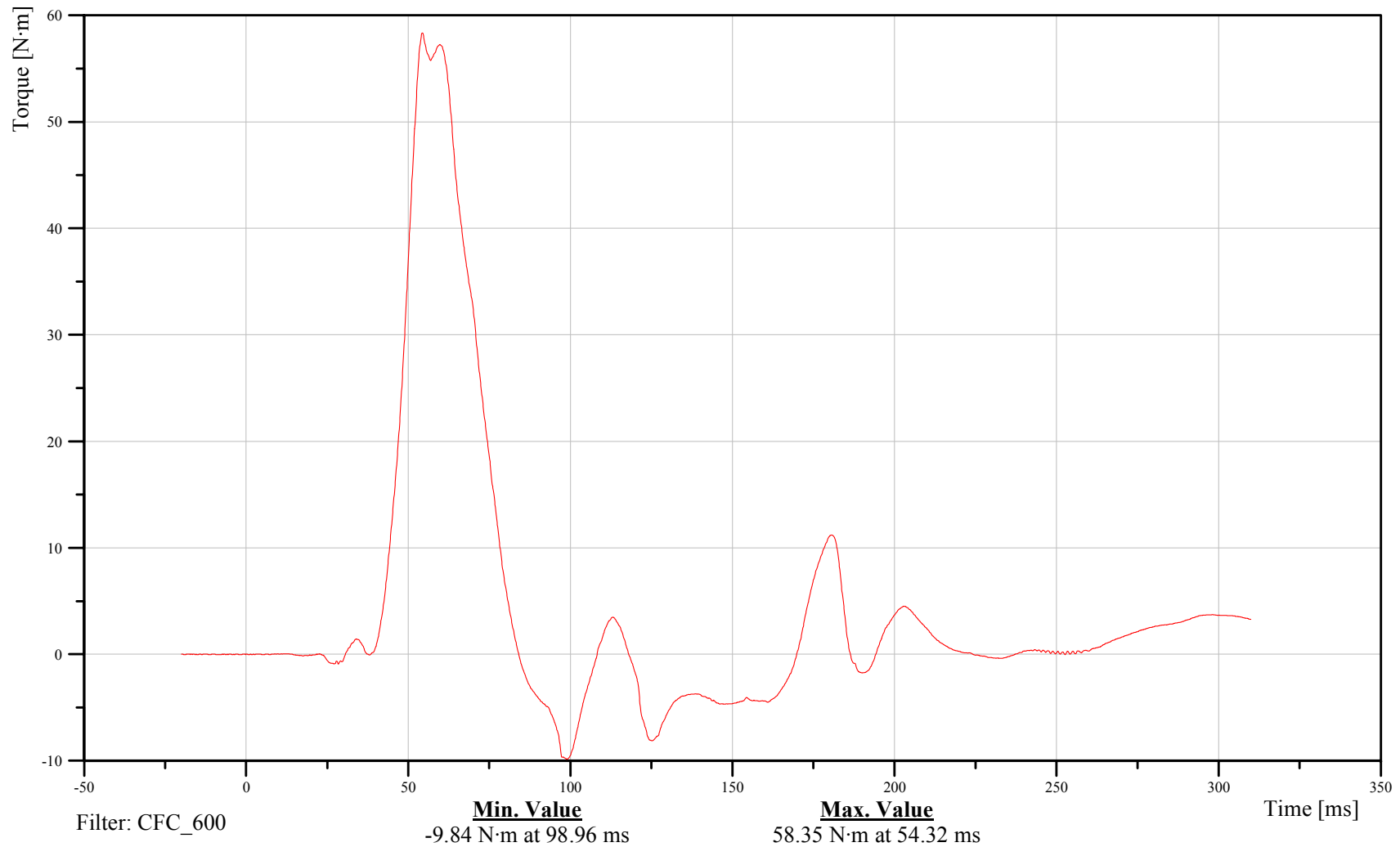
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14NECKUP00S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Neck Moment Y

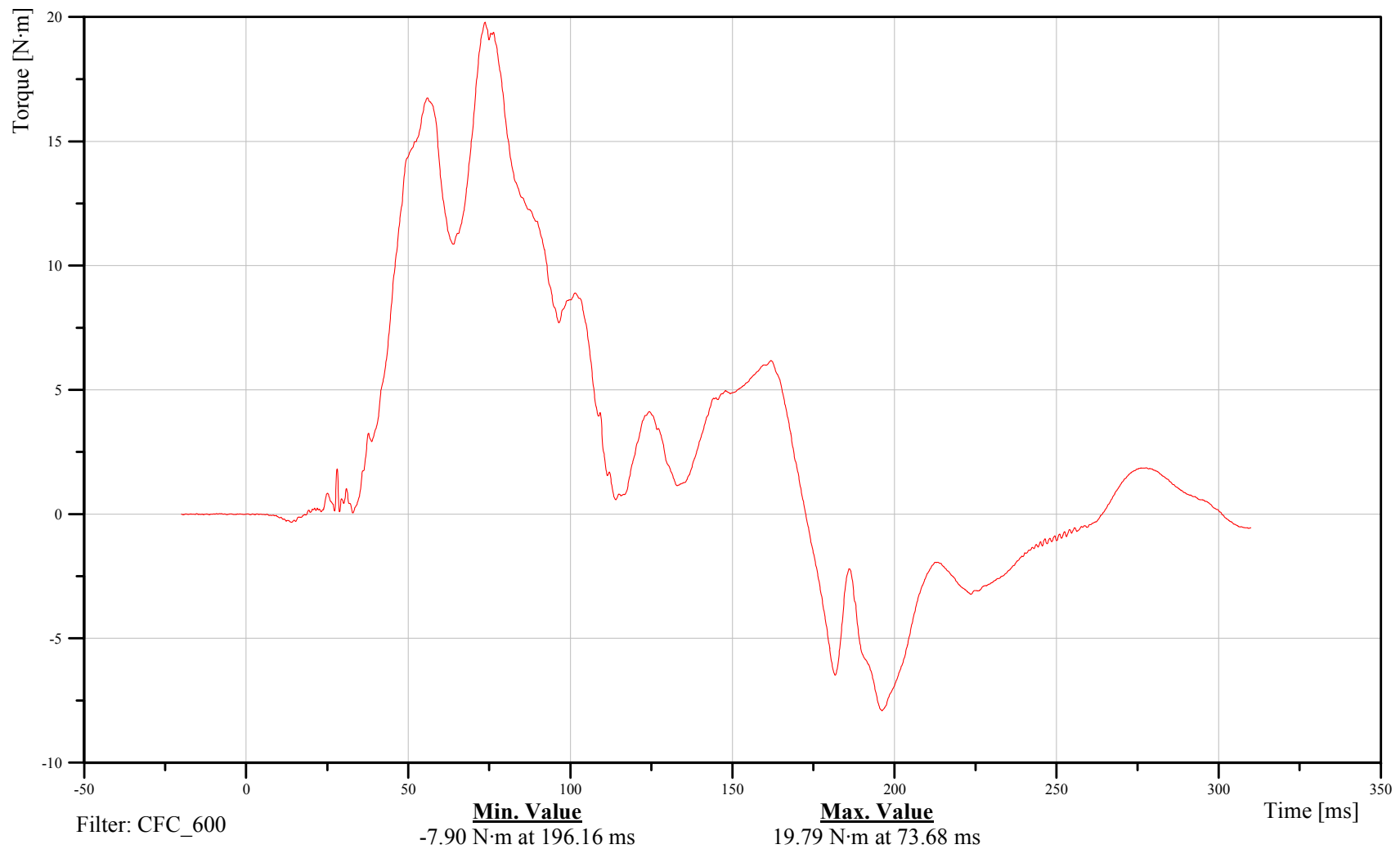
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14NECKUP00S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Neck Moment Z

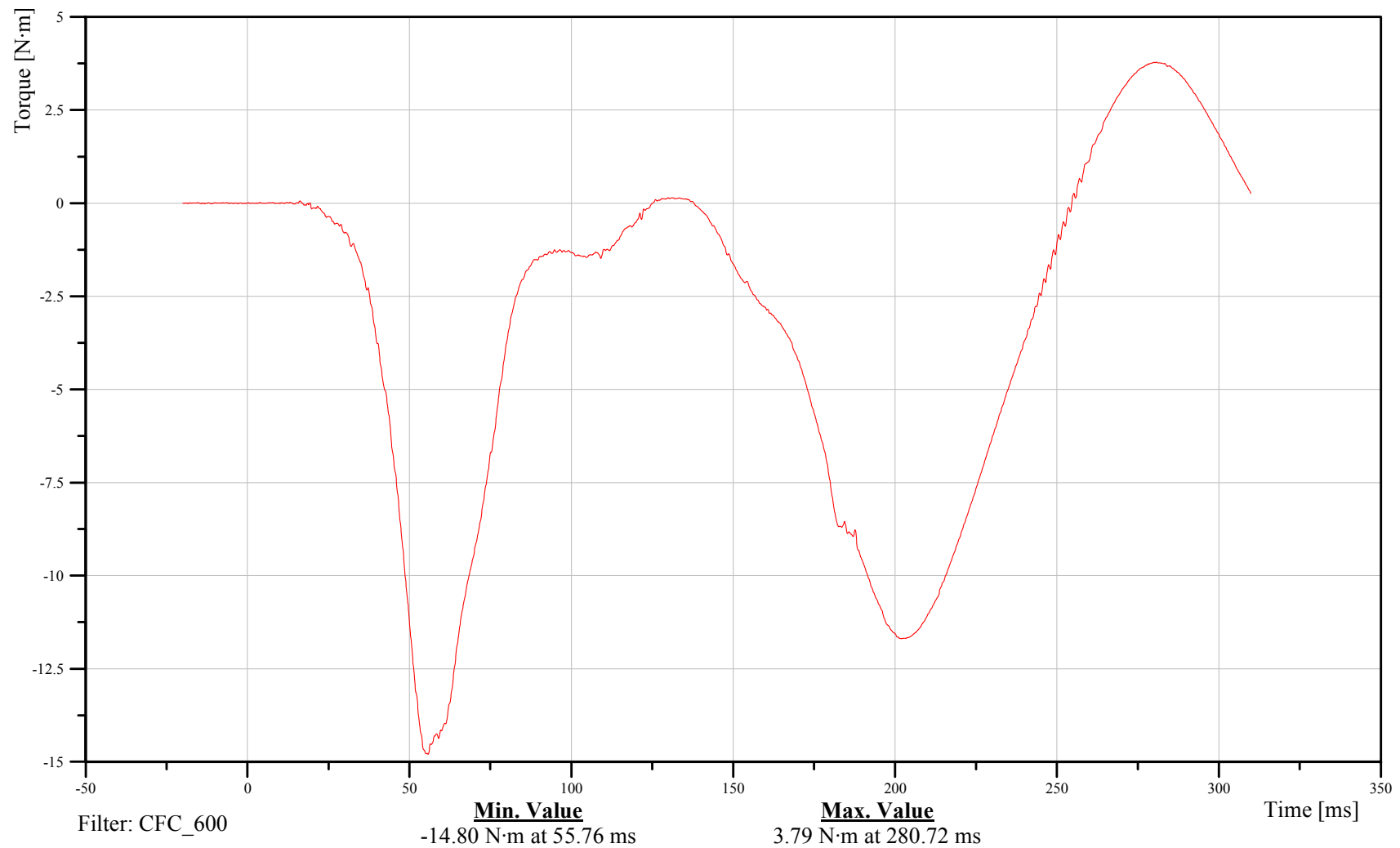
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14NECKUP00S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Accel X

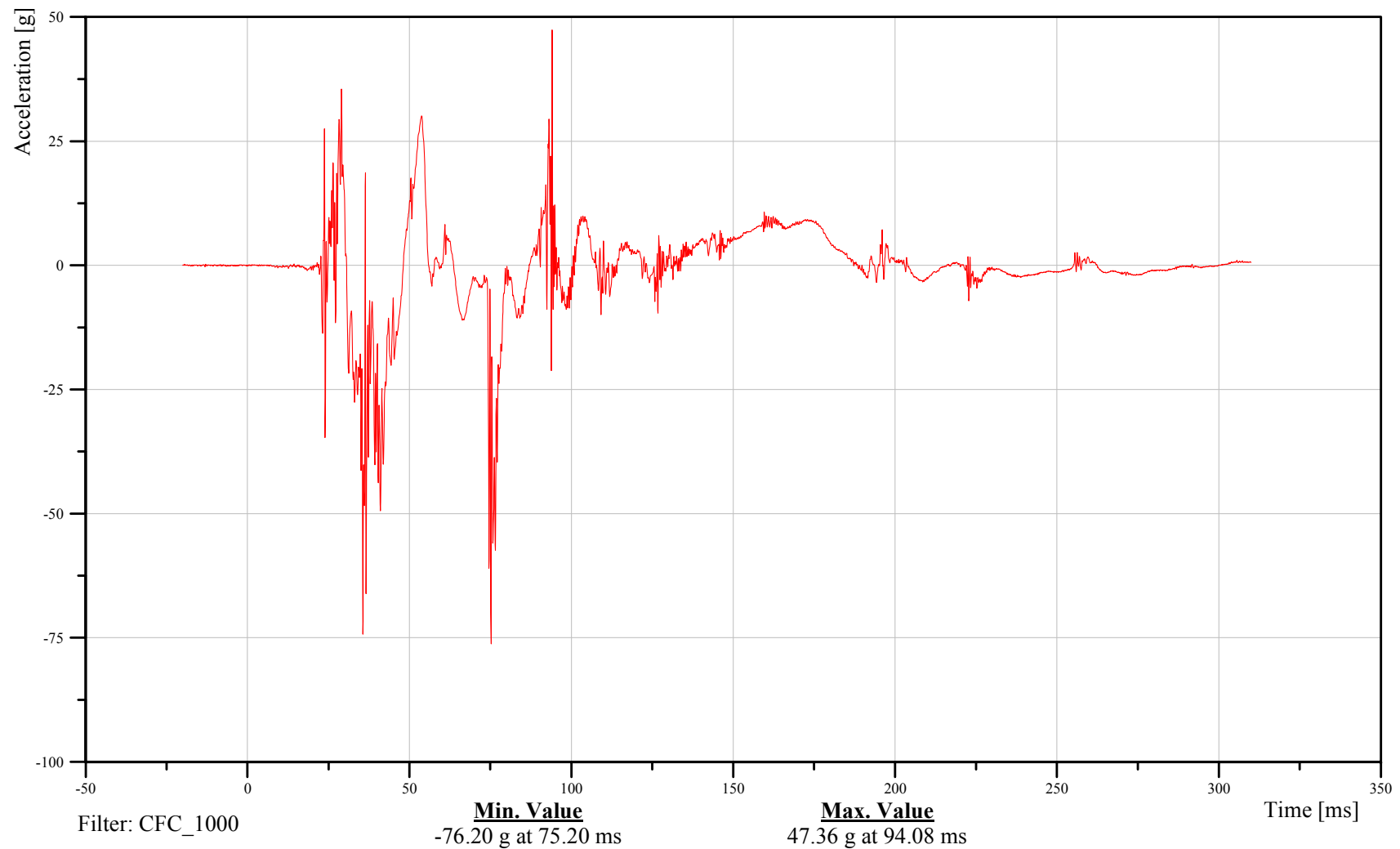
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2ACXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Accel Y

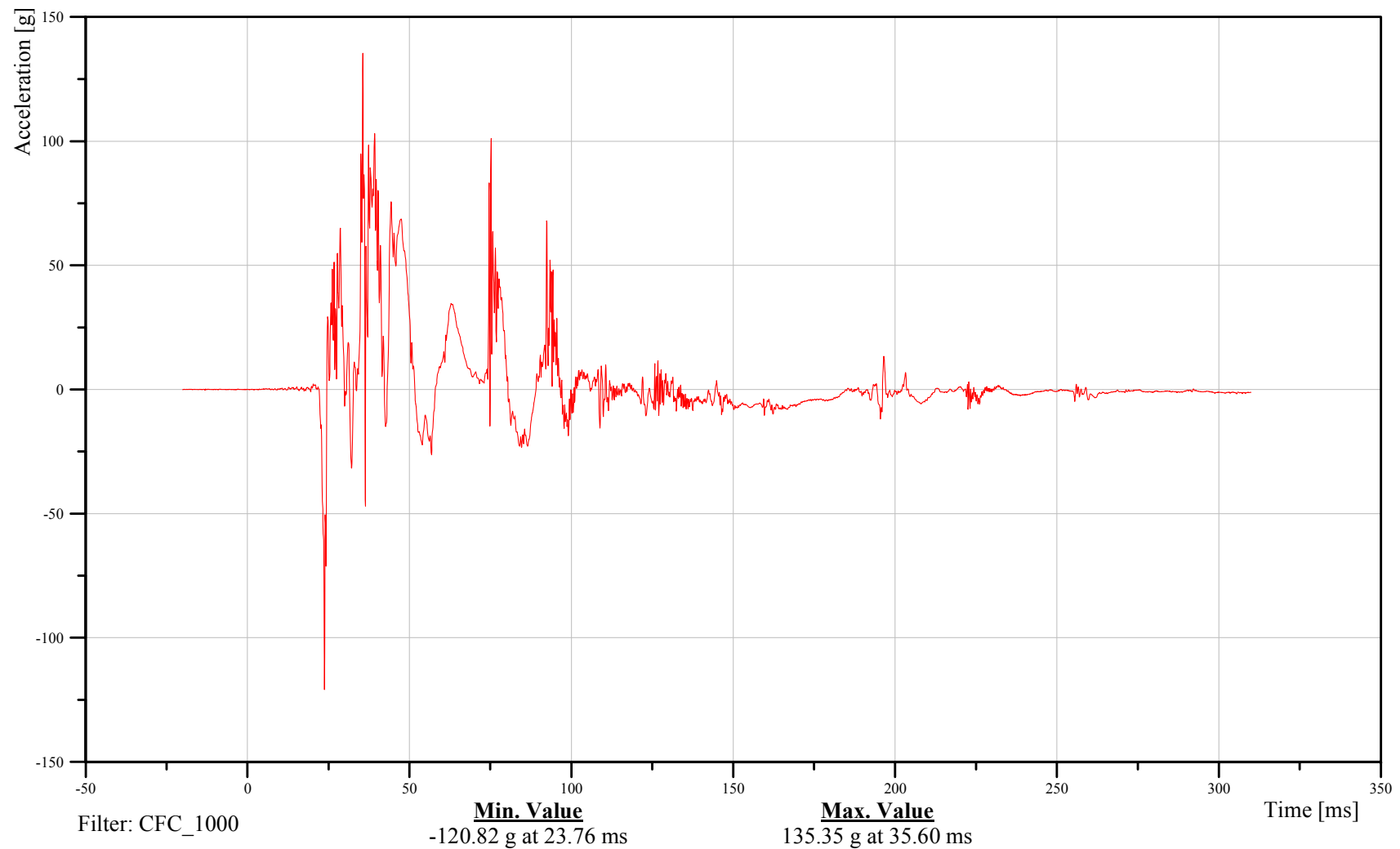
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2ACYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Accel Z

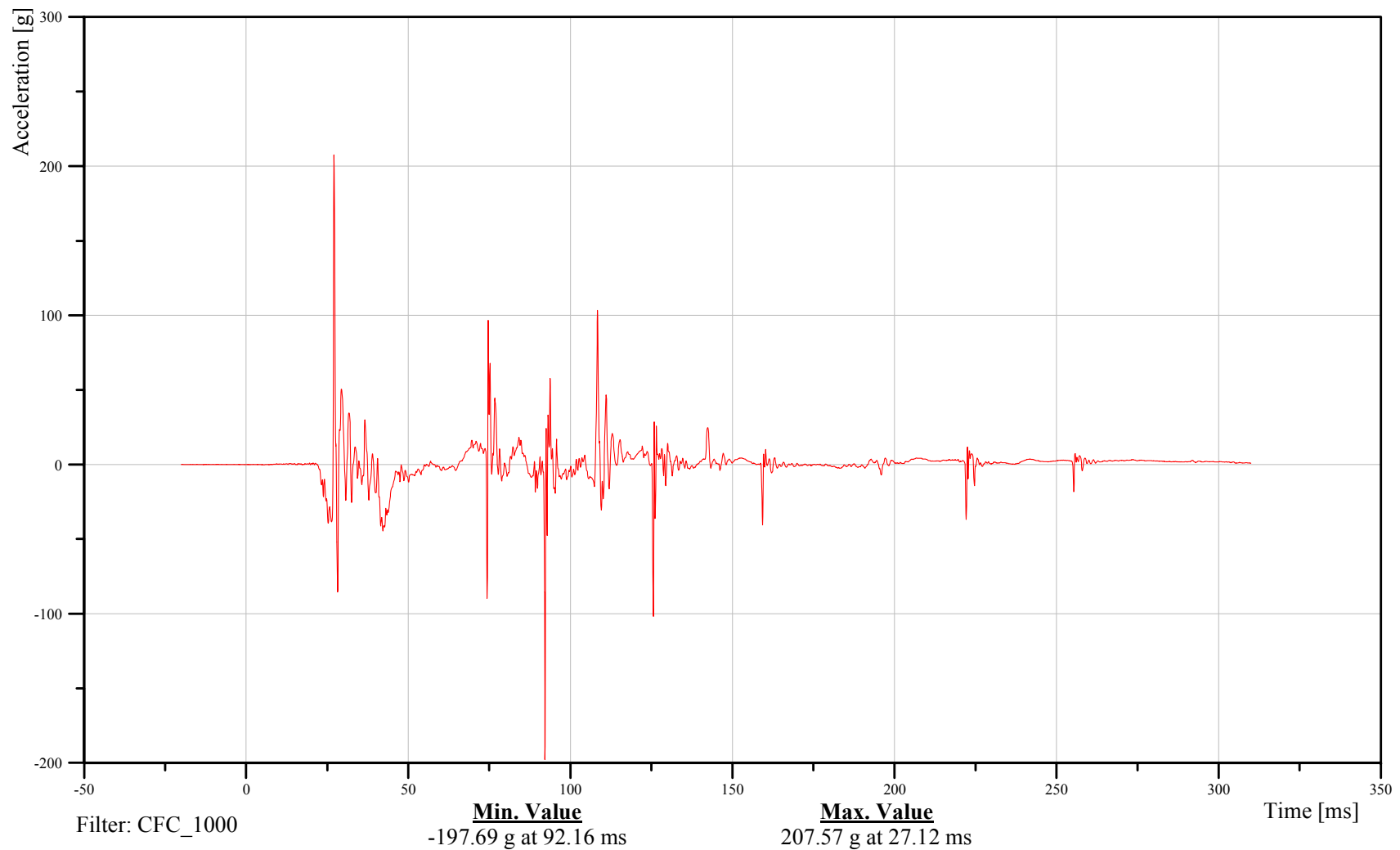
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2ACZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Accel Resultant

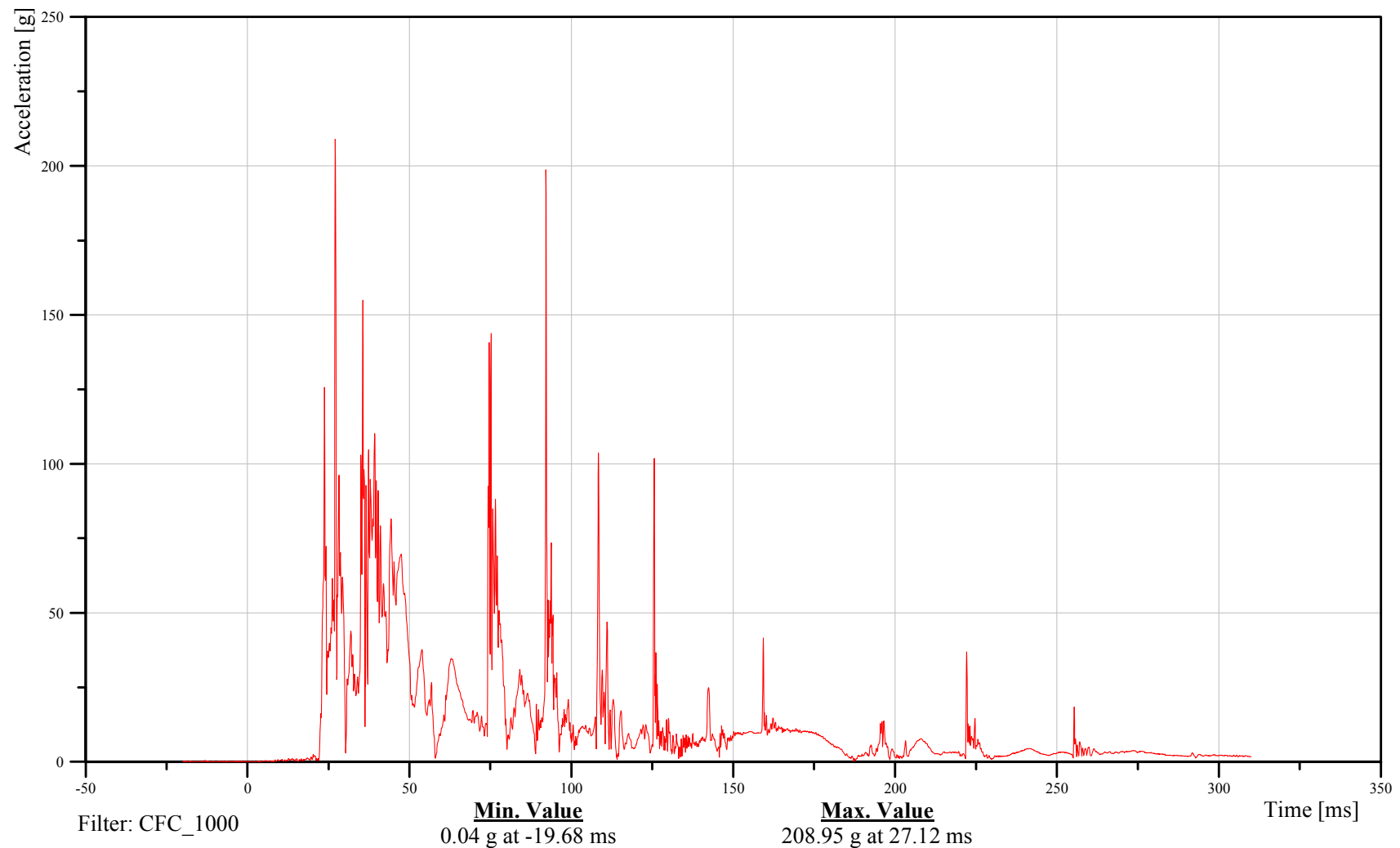
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2ACRA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Force X

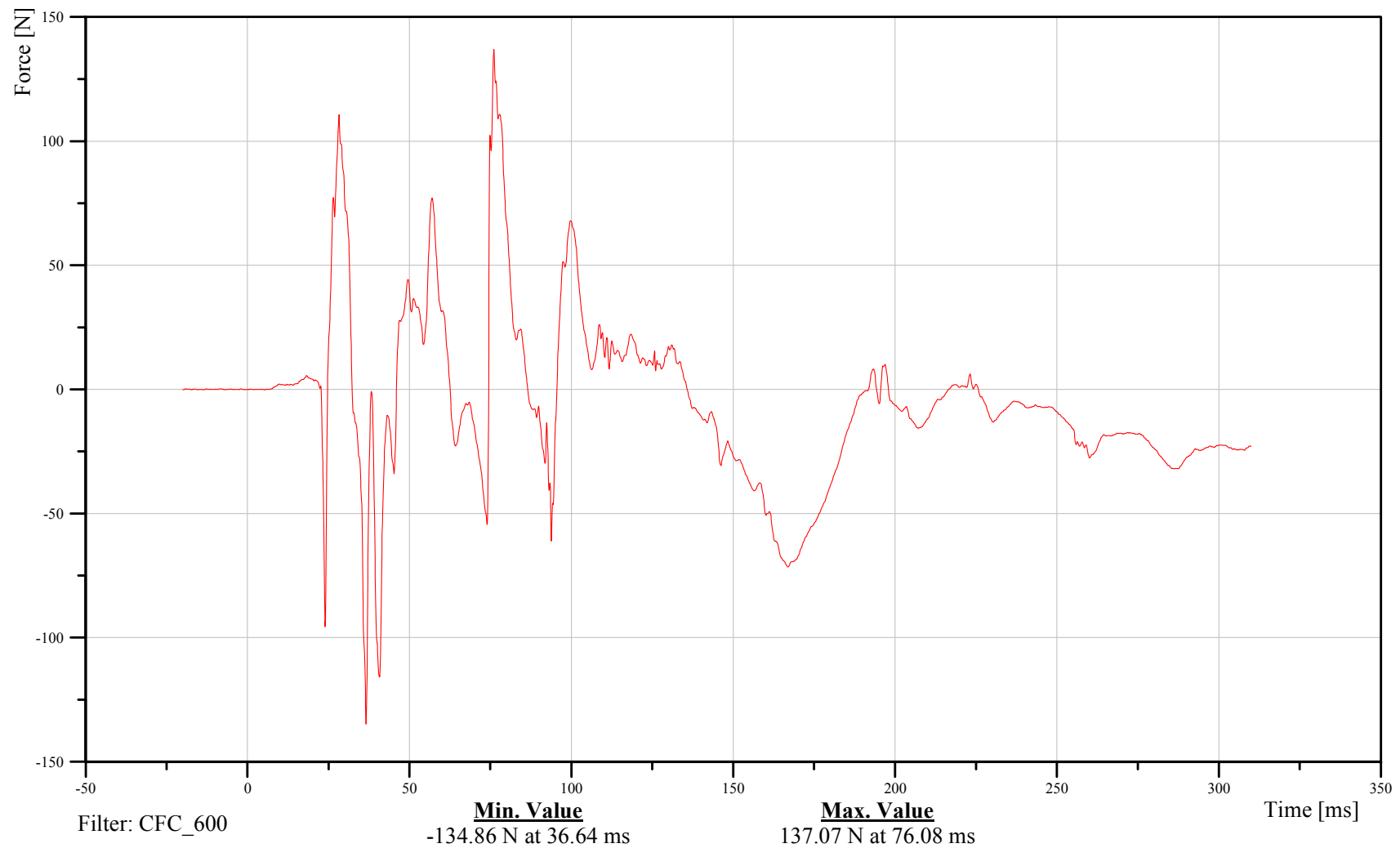
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2FOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Force Y

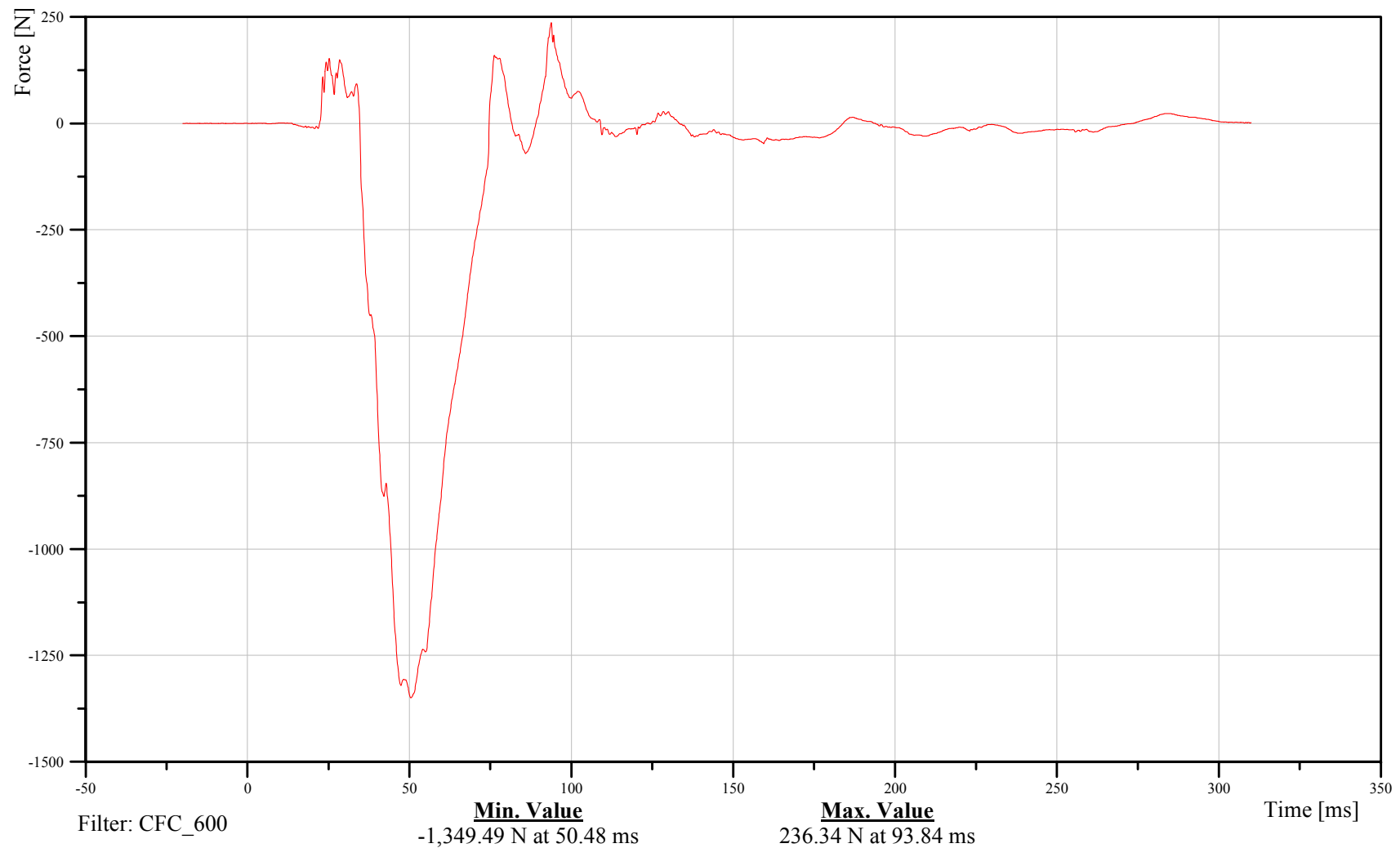
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Force Z

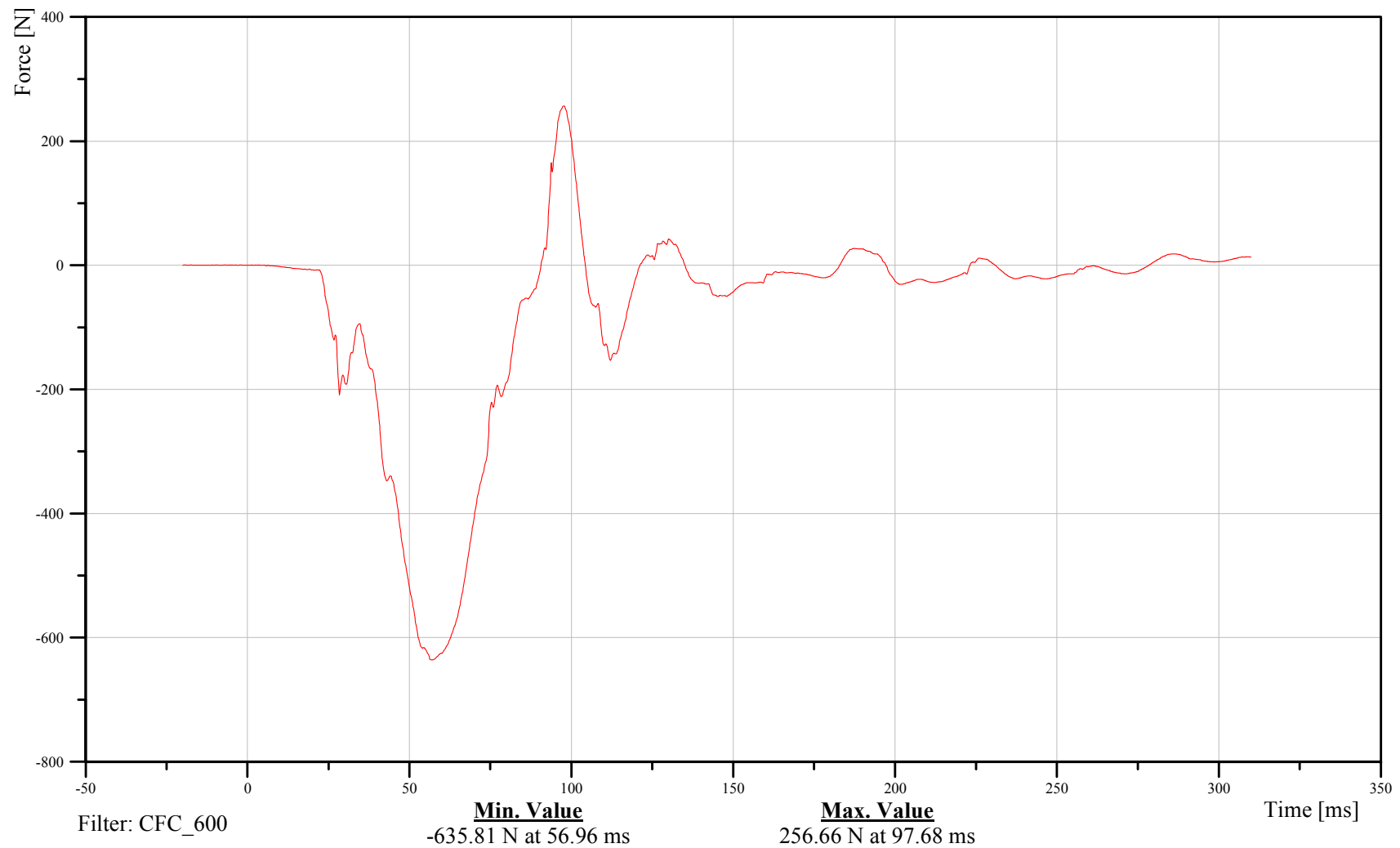
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHLDLE00S2FOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Upper Spine Accel X

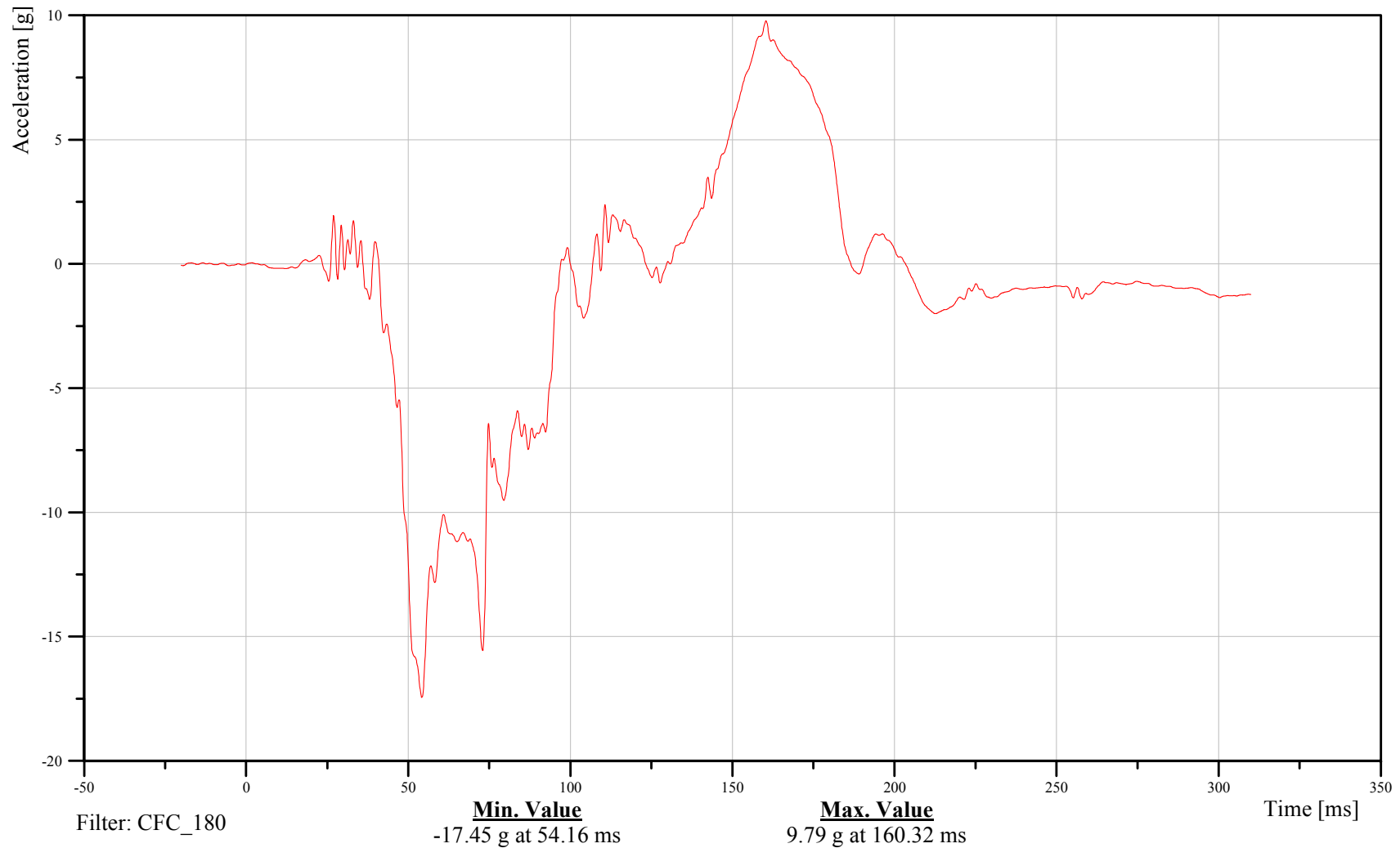
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN0100S2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Upper Spine Accel Y

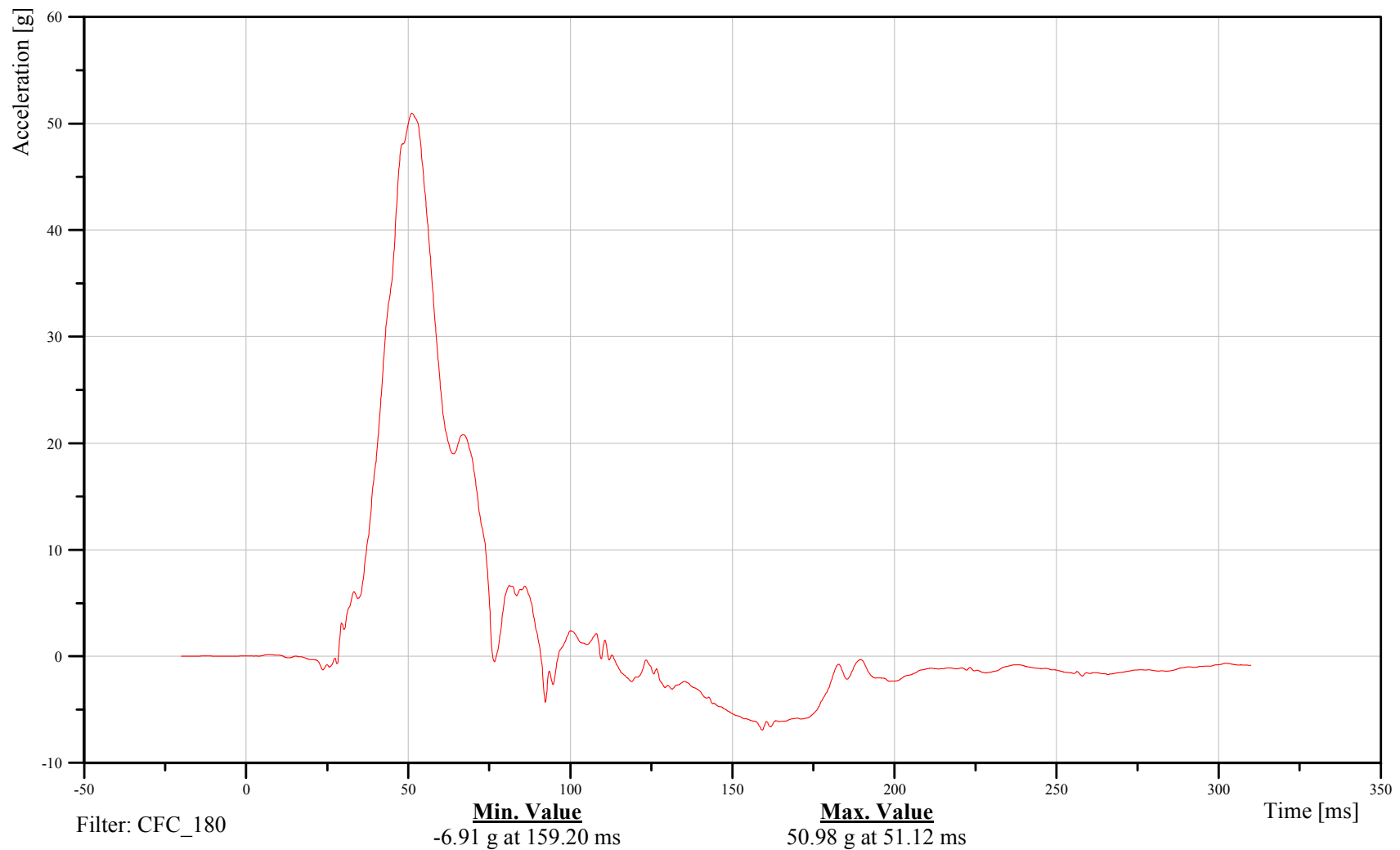
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN0100S2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Upper Spine Accel Z

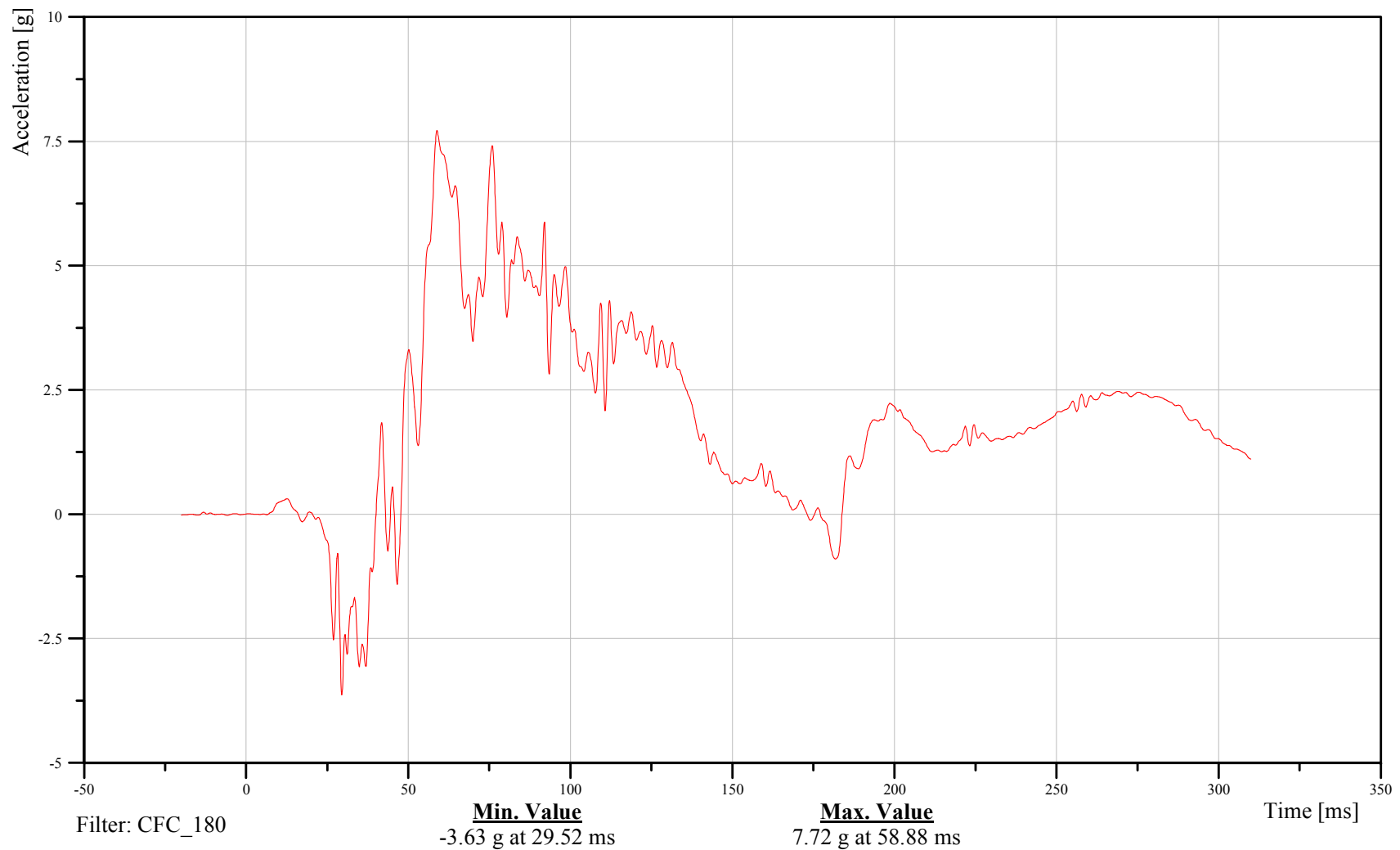
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN0100S2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Upper Spine Resultant

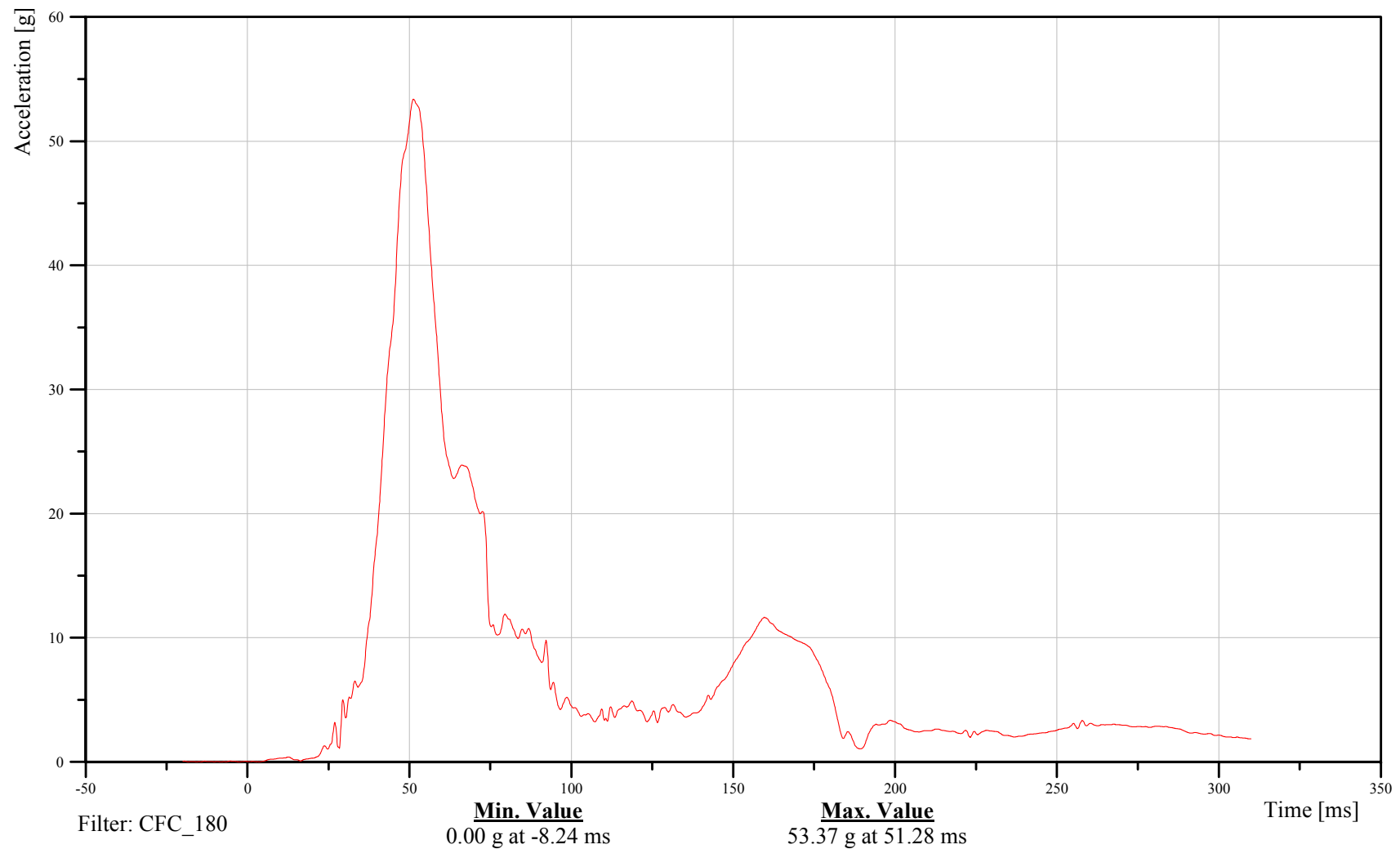
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN0100S2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 1 Accel X

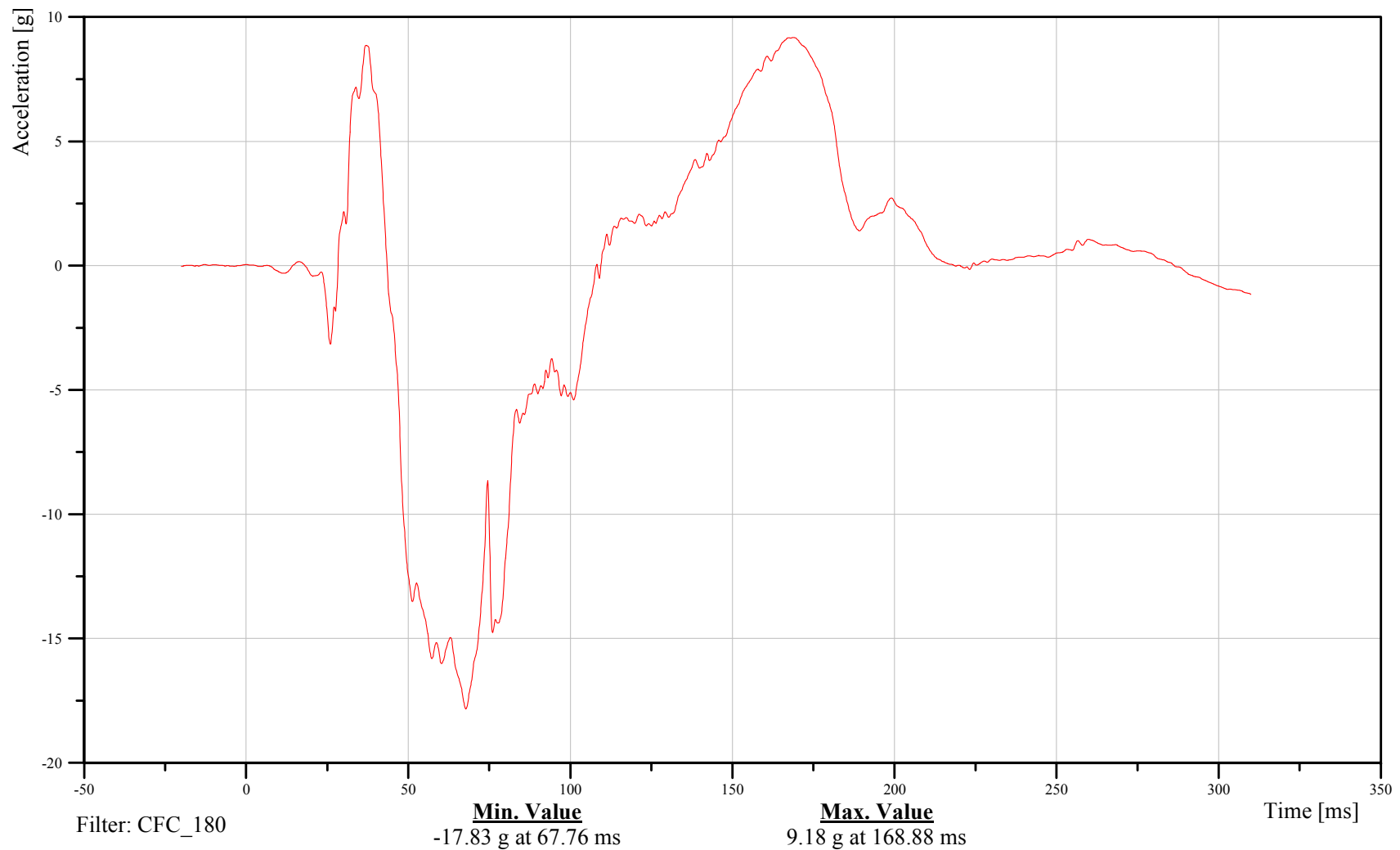
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP01RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 1 Accel Y

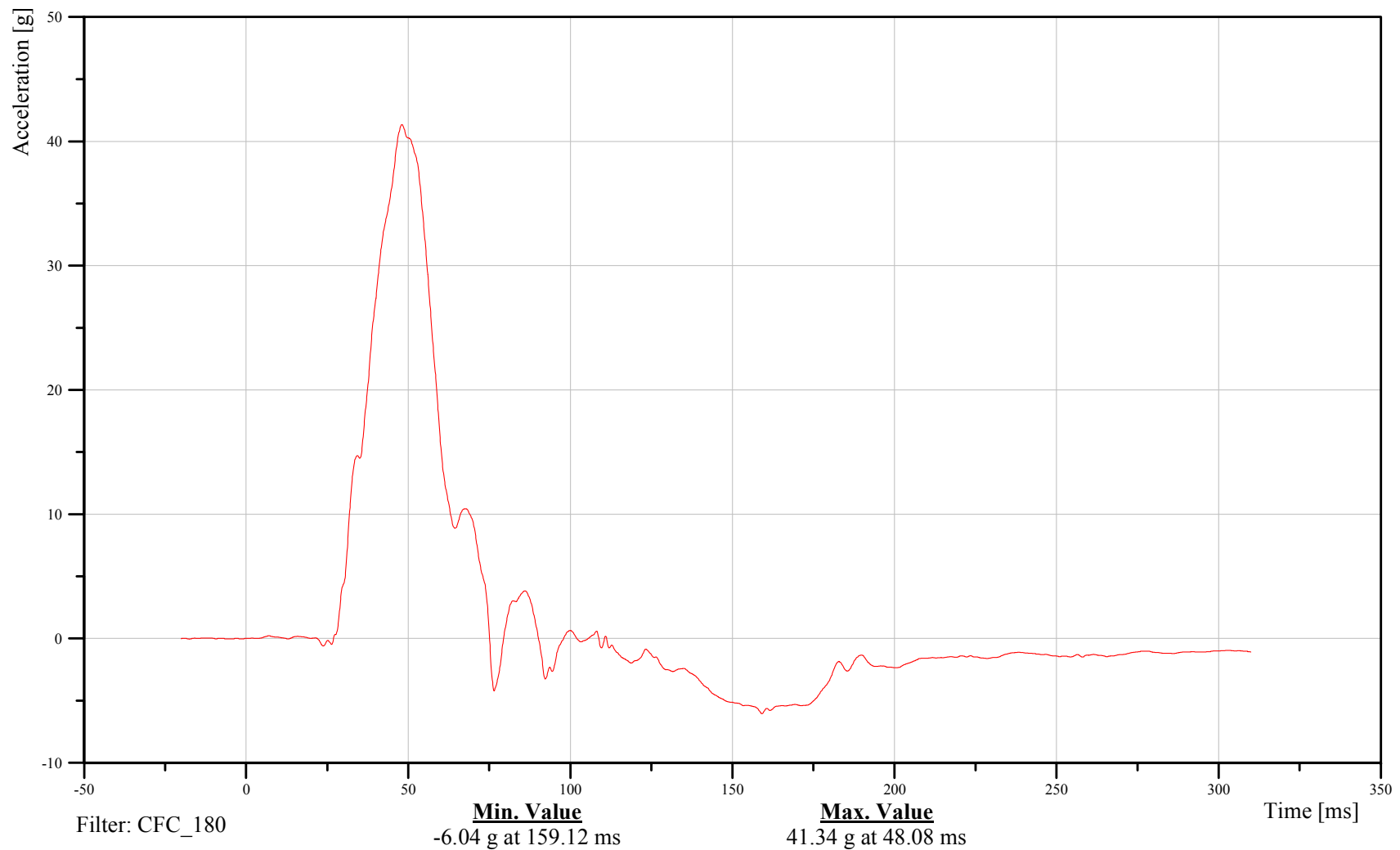
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP01RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 1 Accel Z

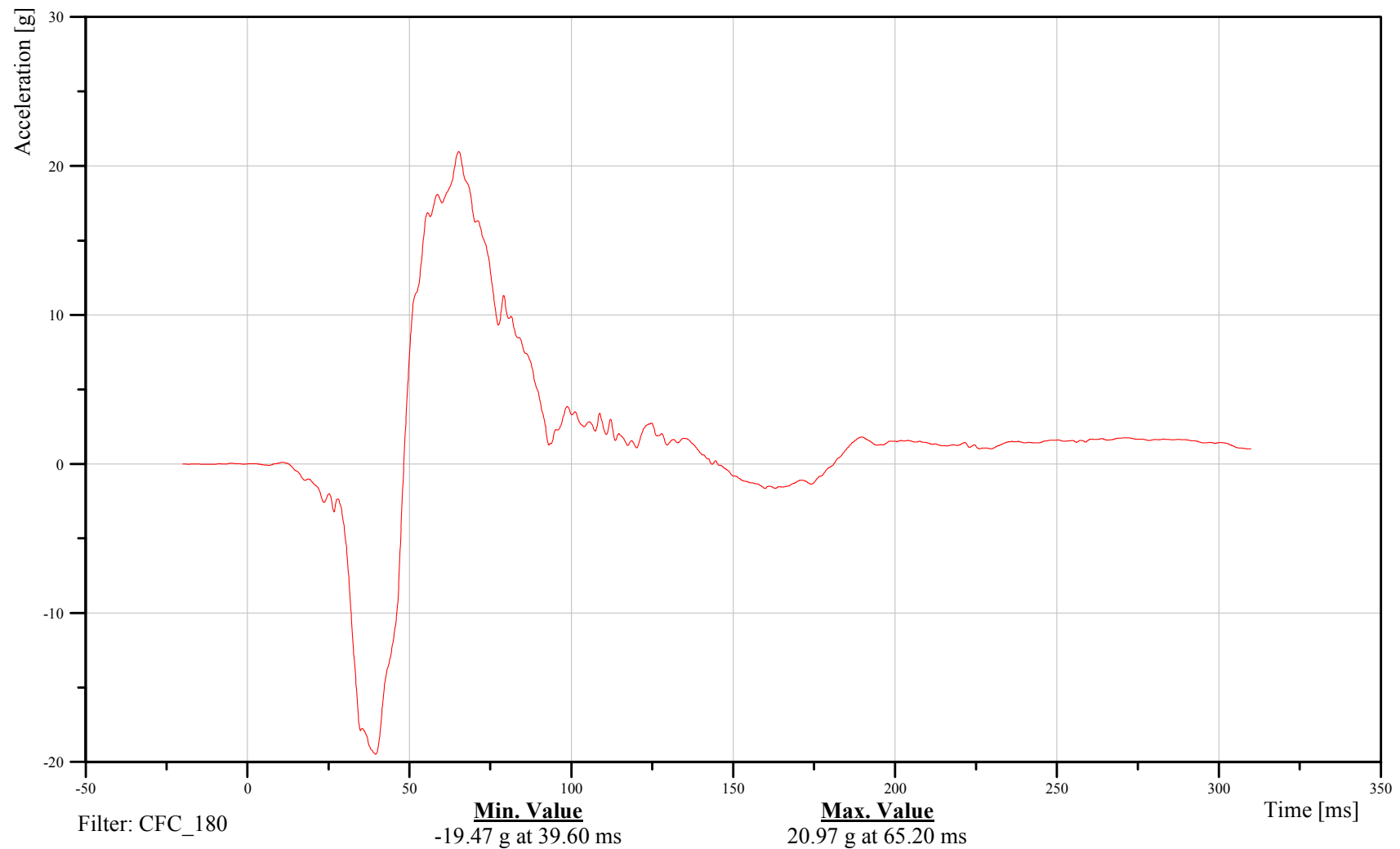
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP01RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 1 Accel Resultant

Date: 08/17/2005

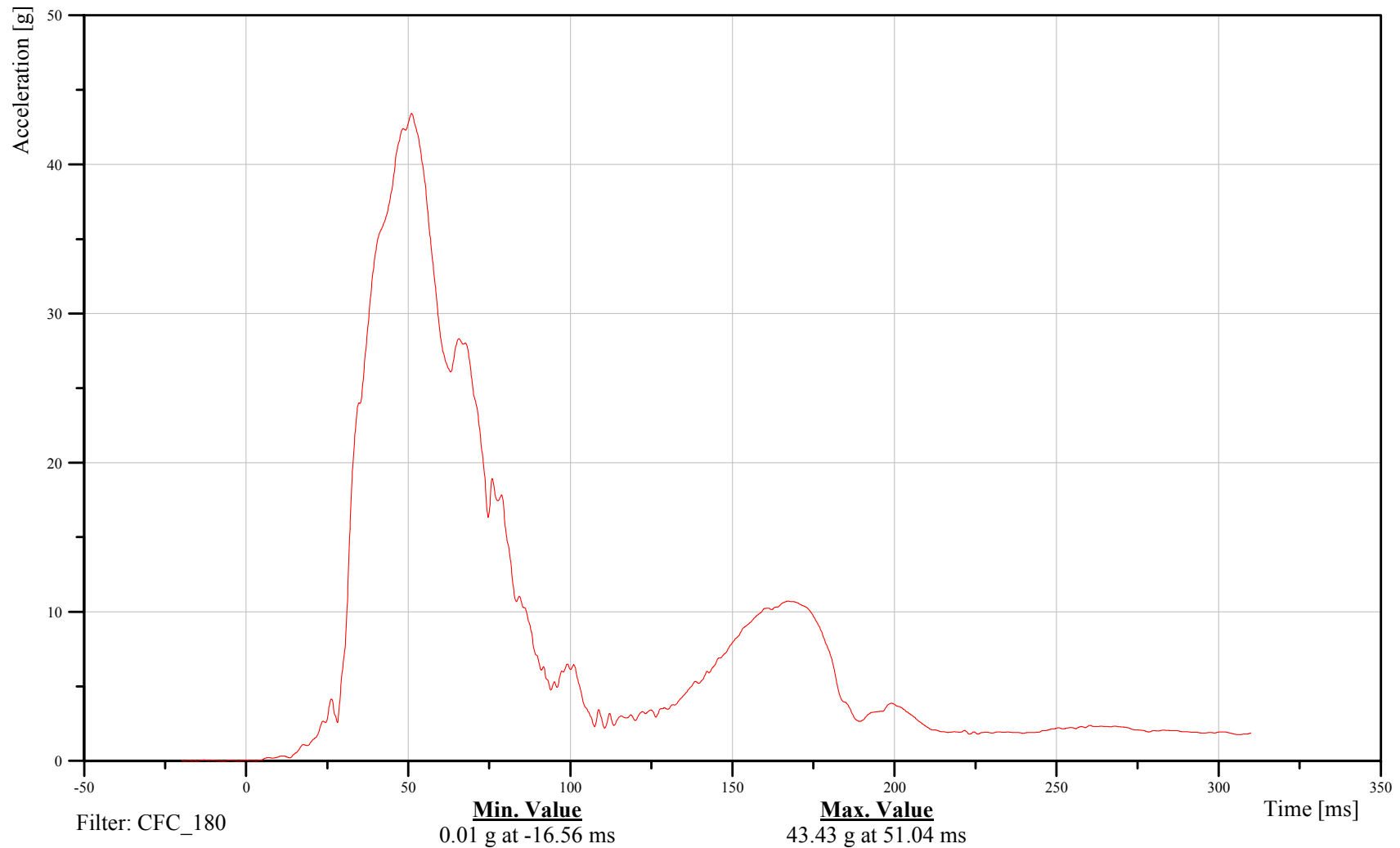
Time: 13:44

Customer: VRTC

14THSP01RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 2 Accel X

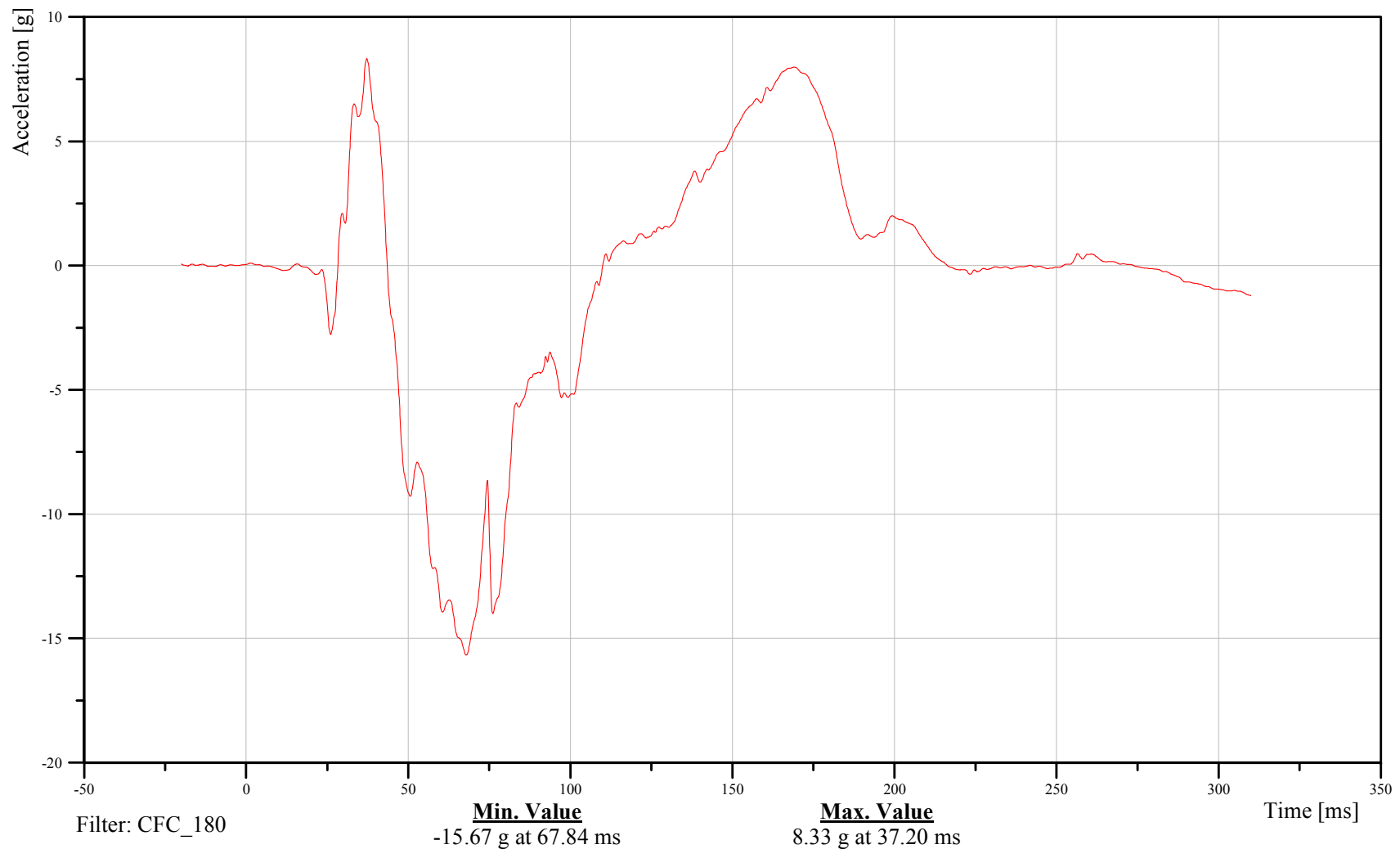
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP02RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 2 Accel Y

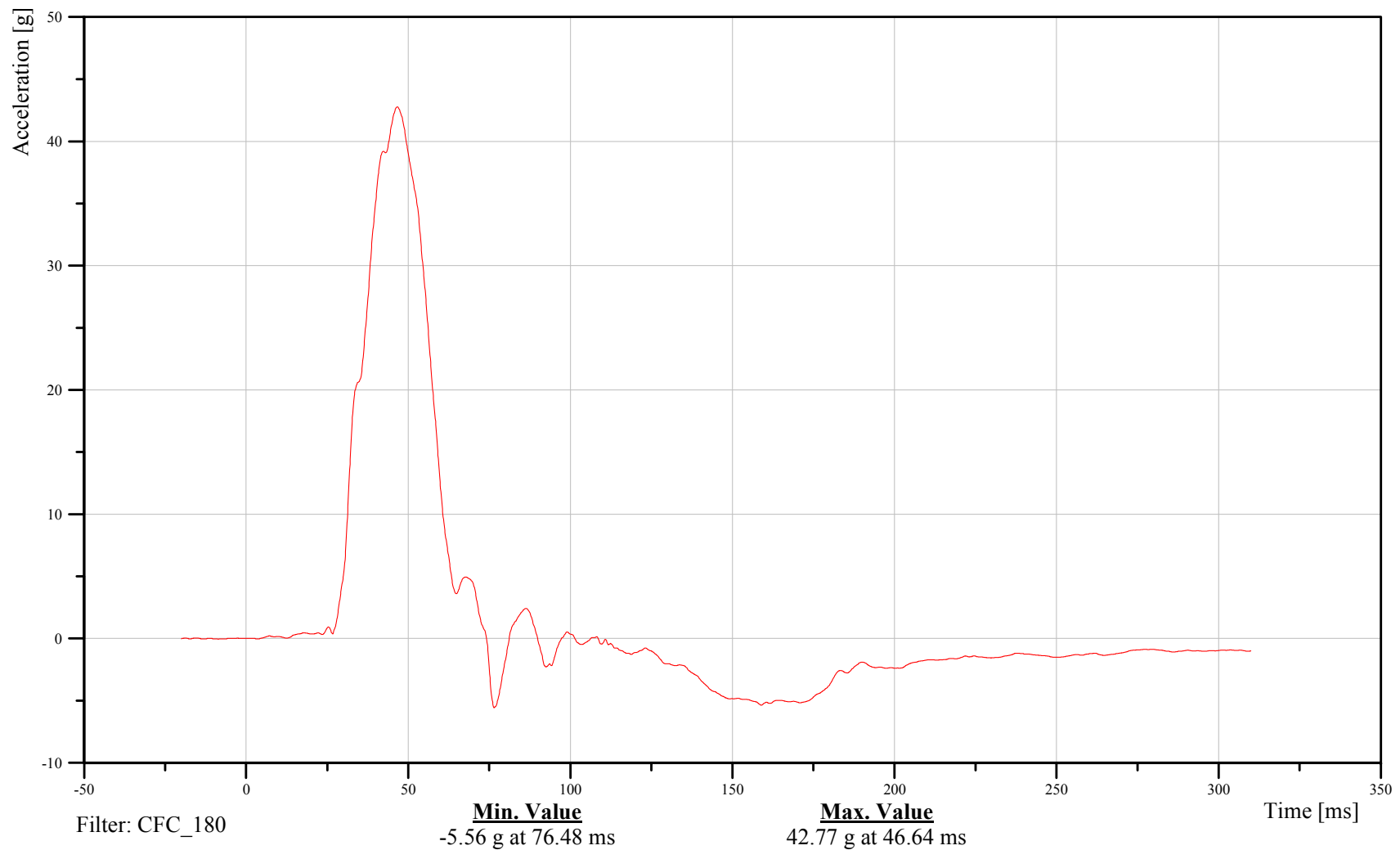
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP02RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 2 Accel Z

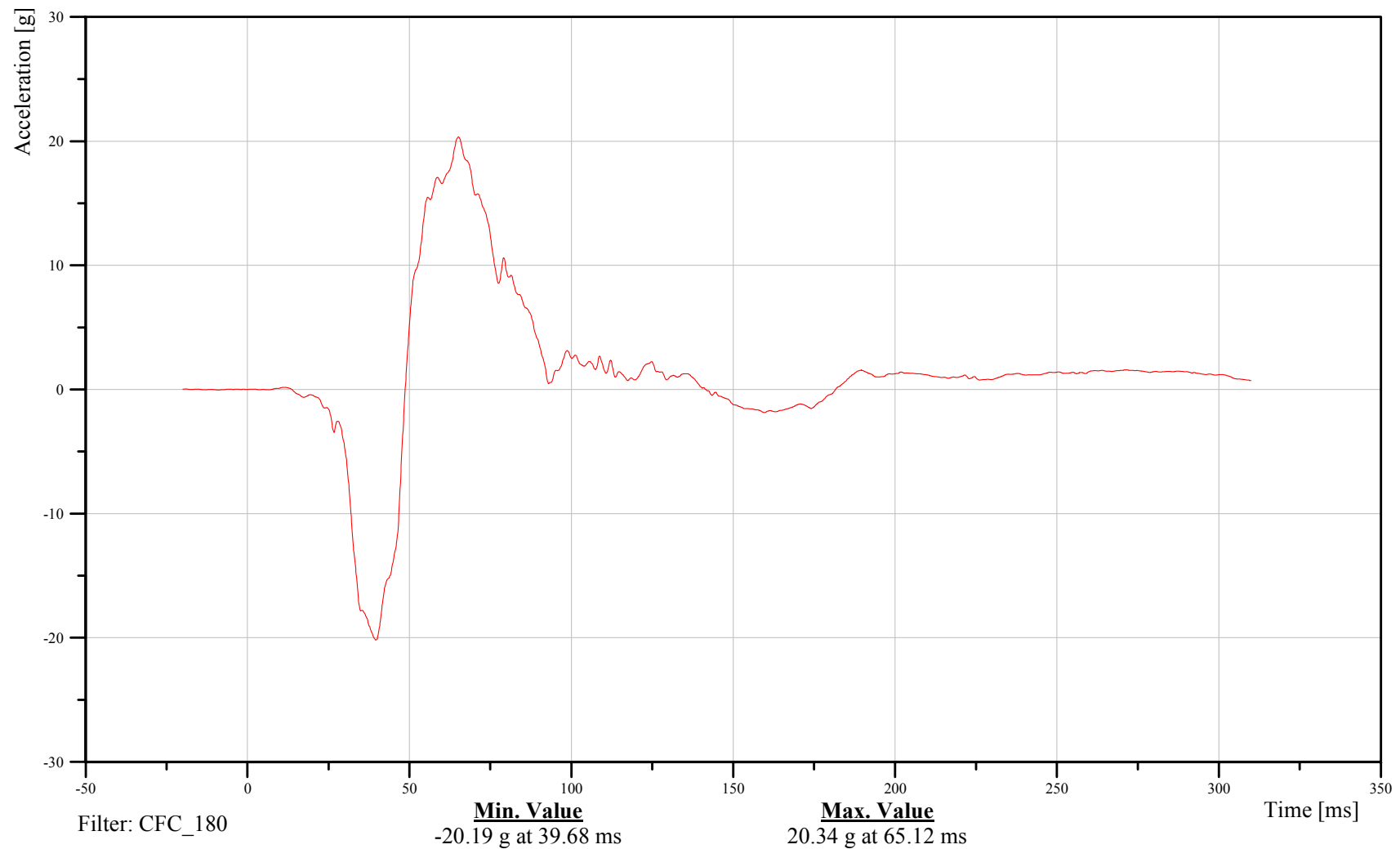
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP02RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 2 Accel Resultant

Date: 08/17/2005

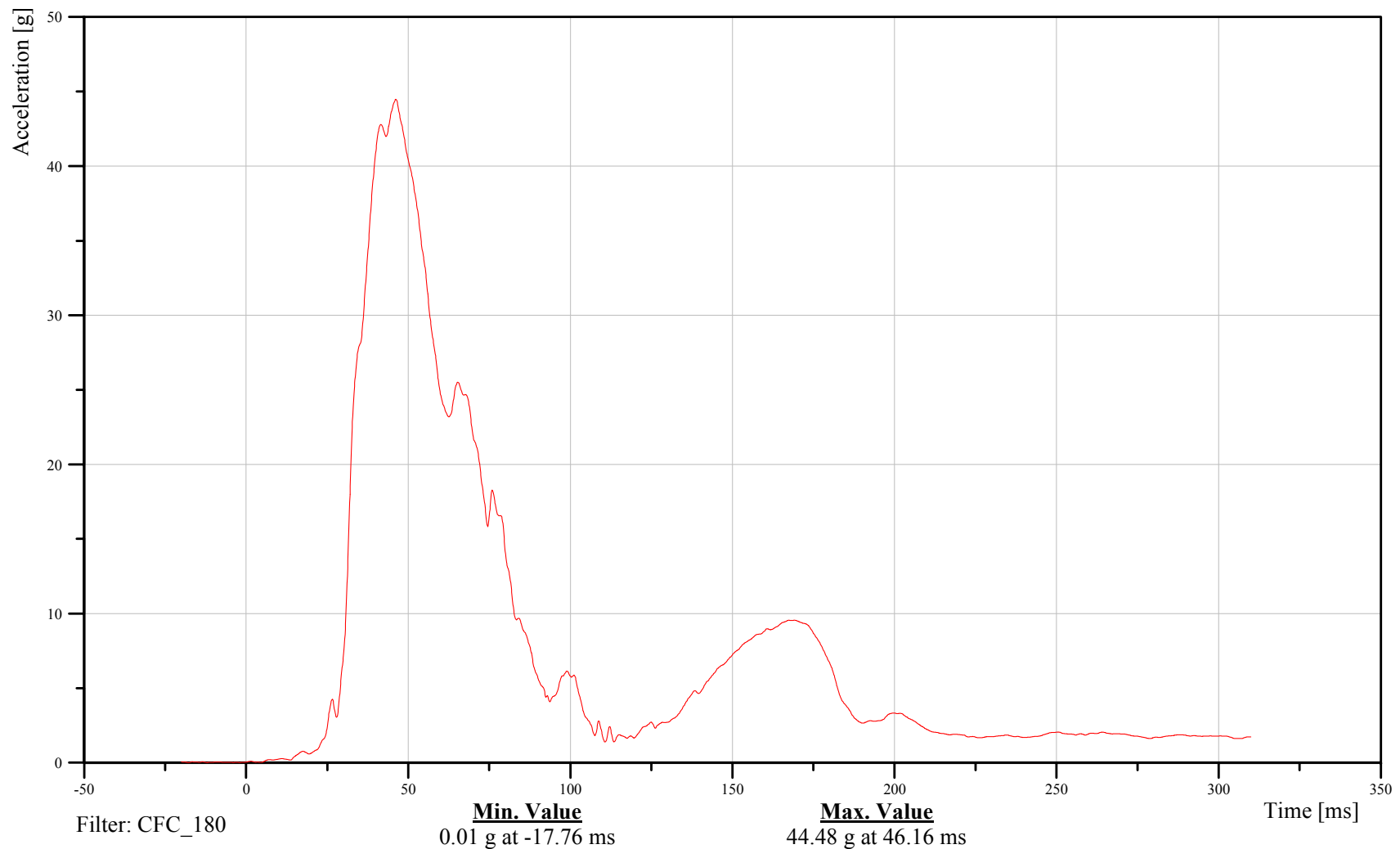
Time: 13:44

Customer: VRTC

14THSP02RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 3 Accel X

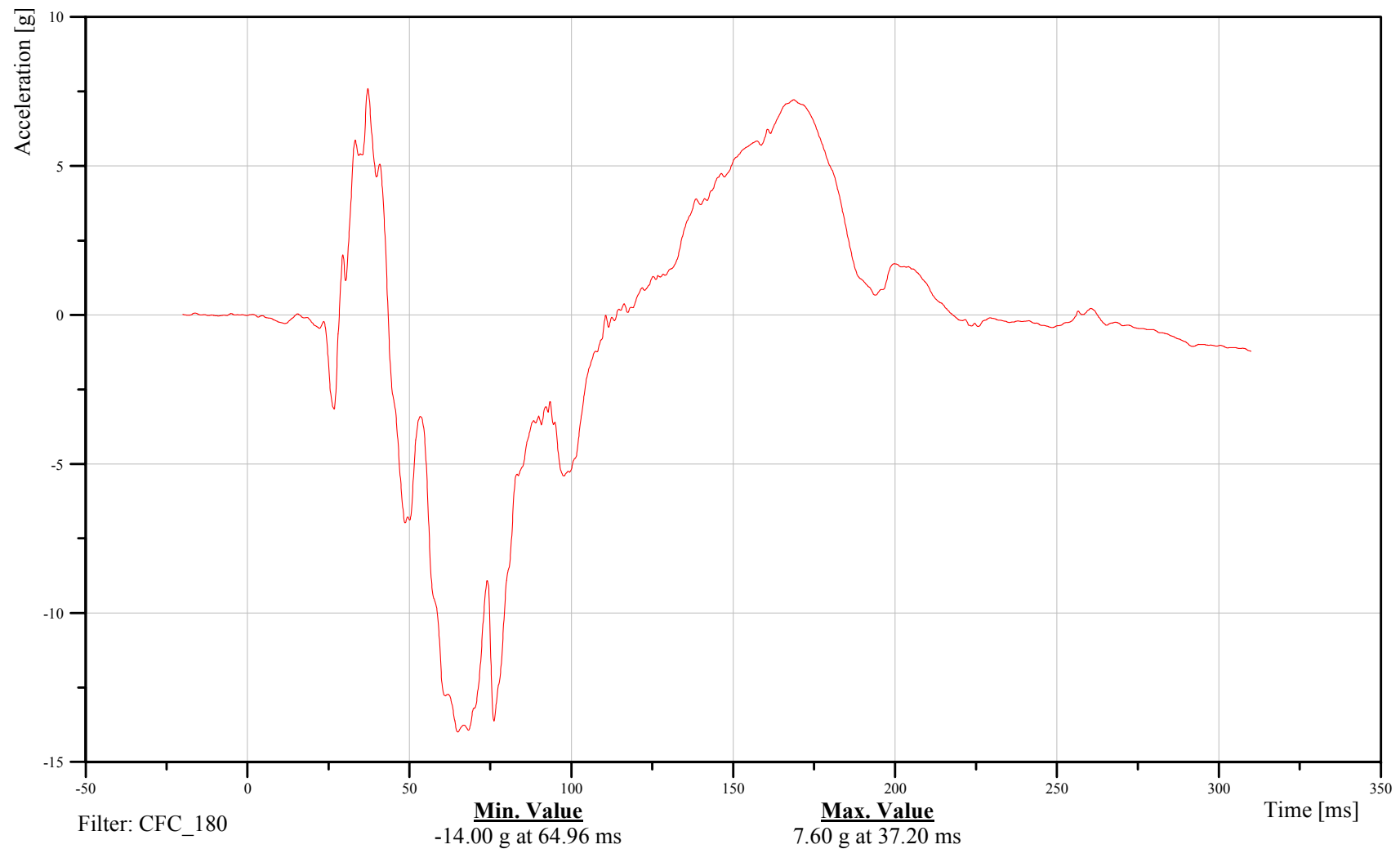
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP03RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 3 Accel Y

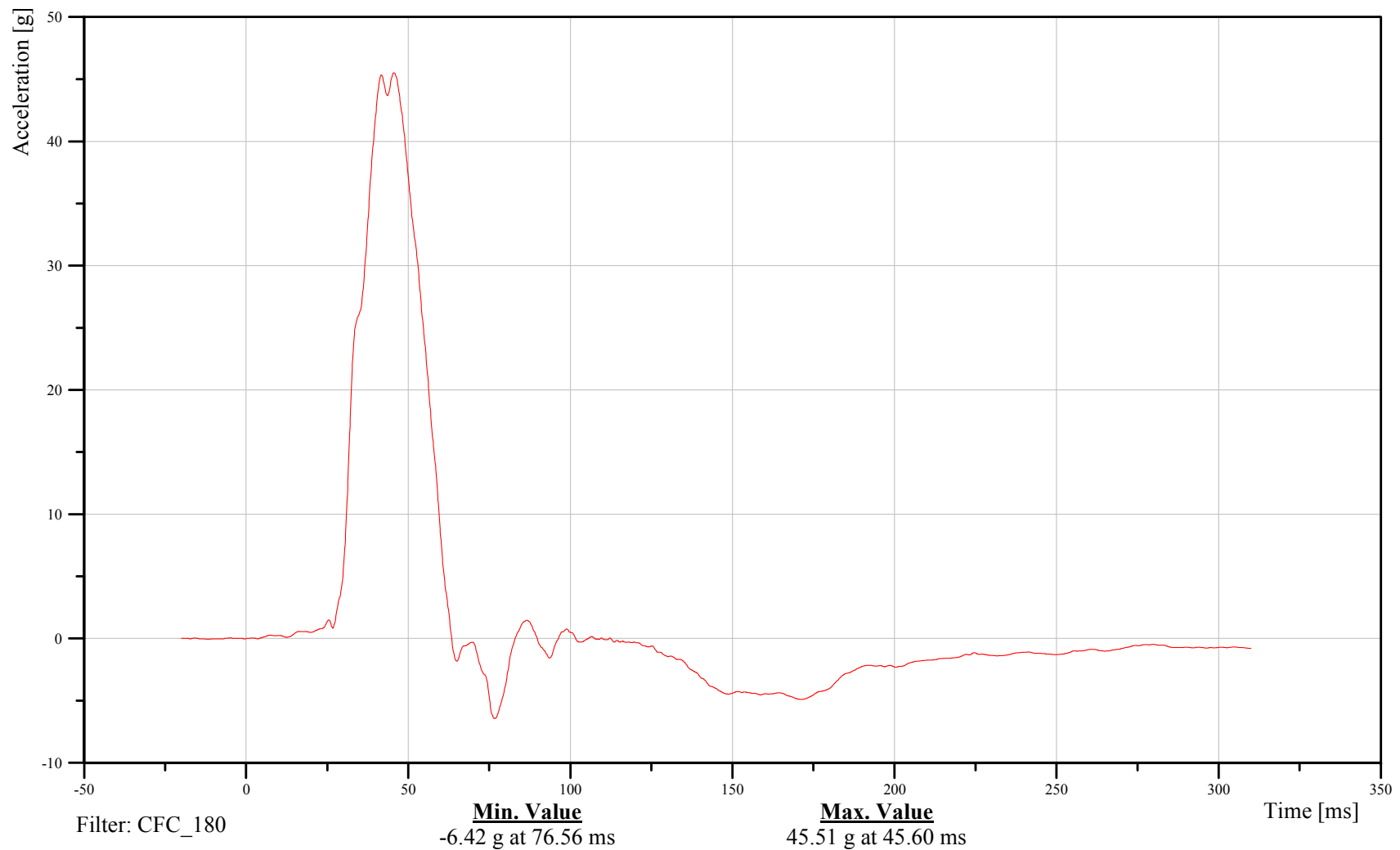
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP03RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 3 Accel Z

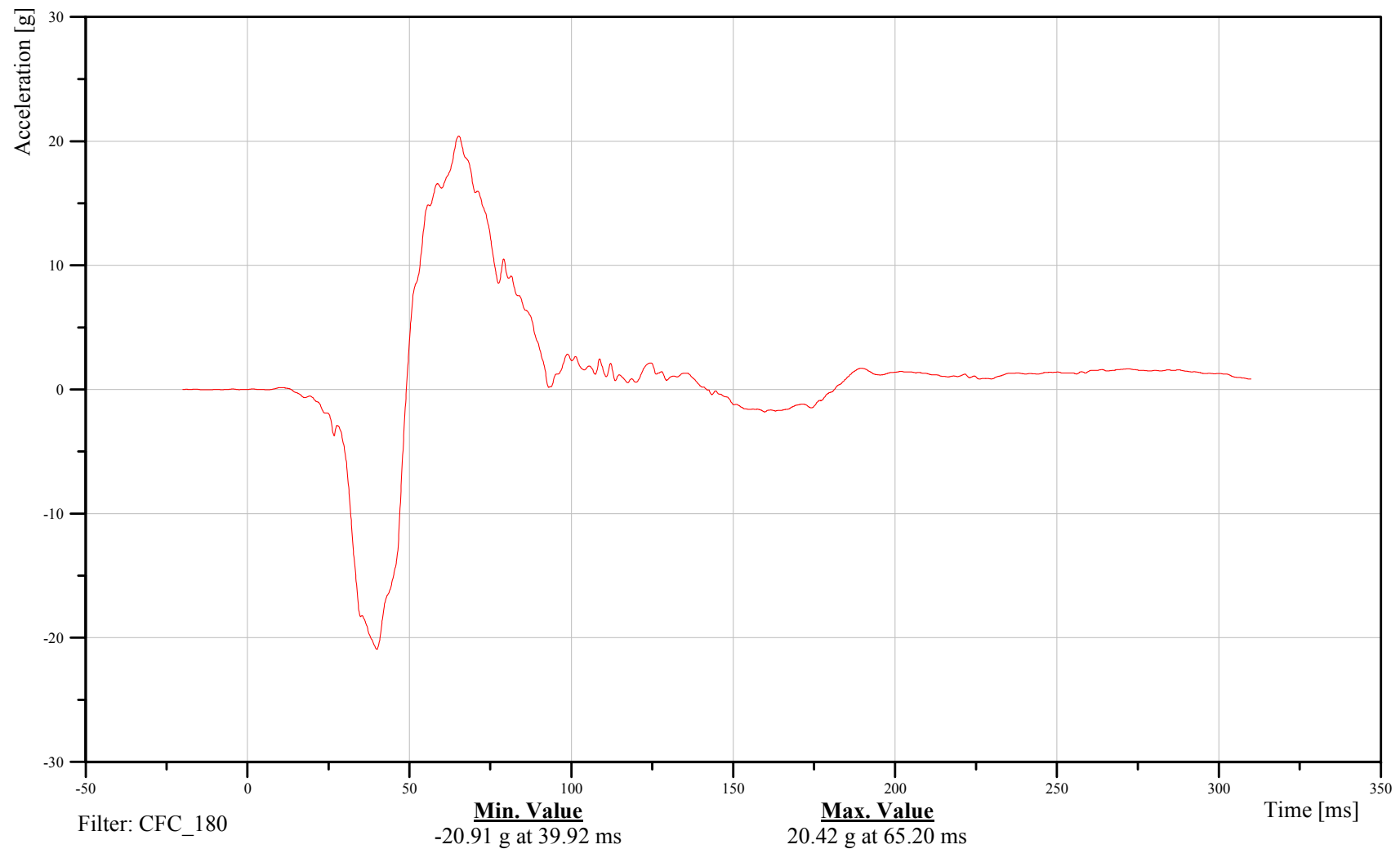
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP03RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 3 Accel Resultant

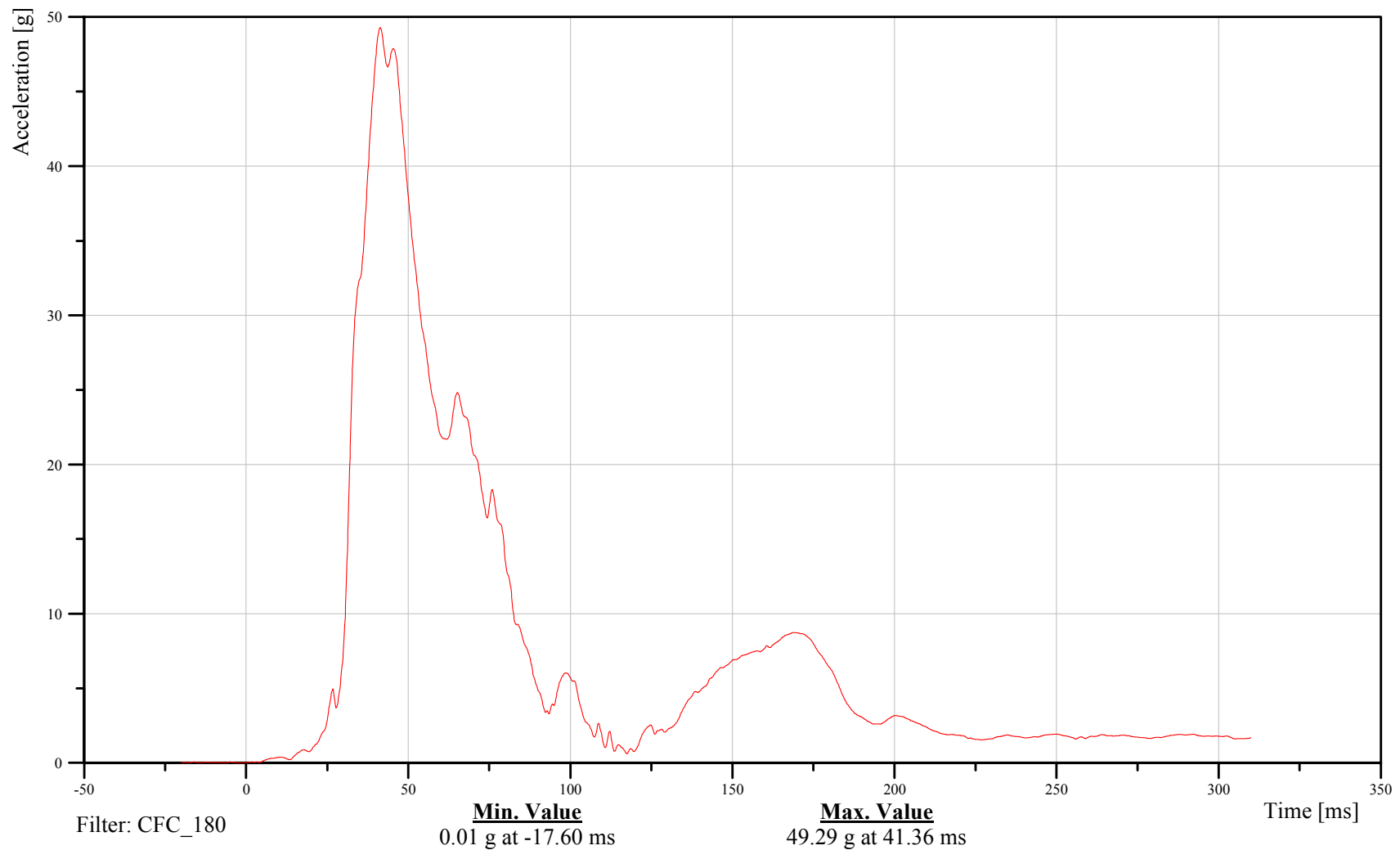
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14THSP03RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lower Spine Accel X

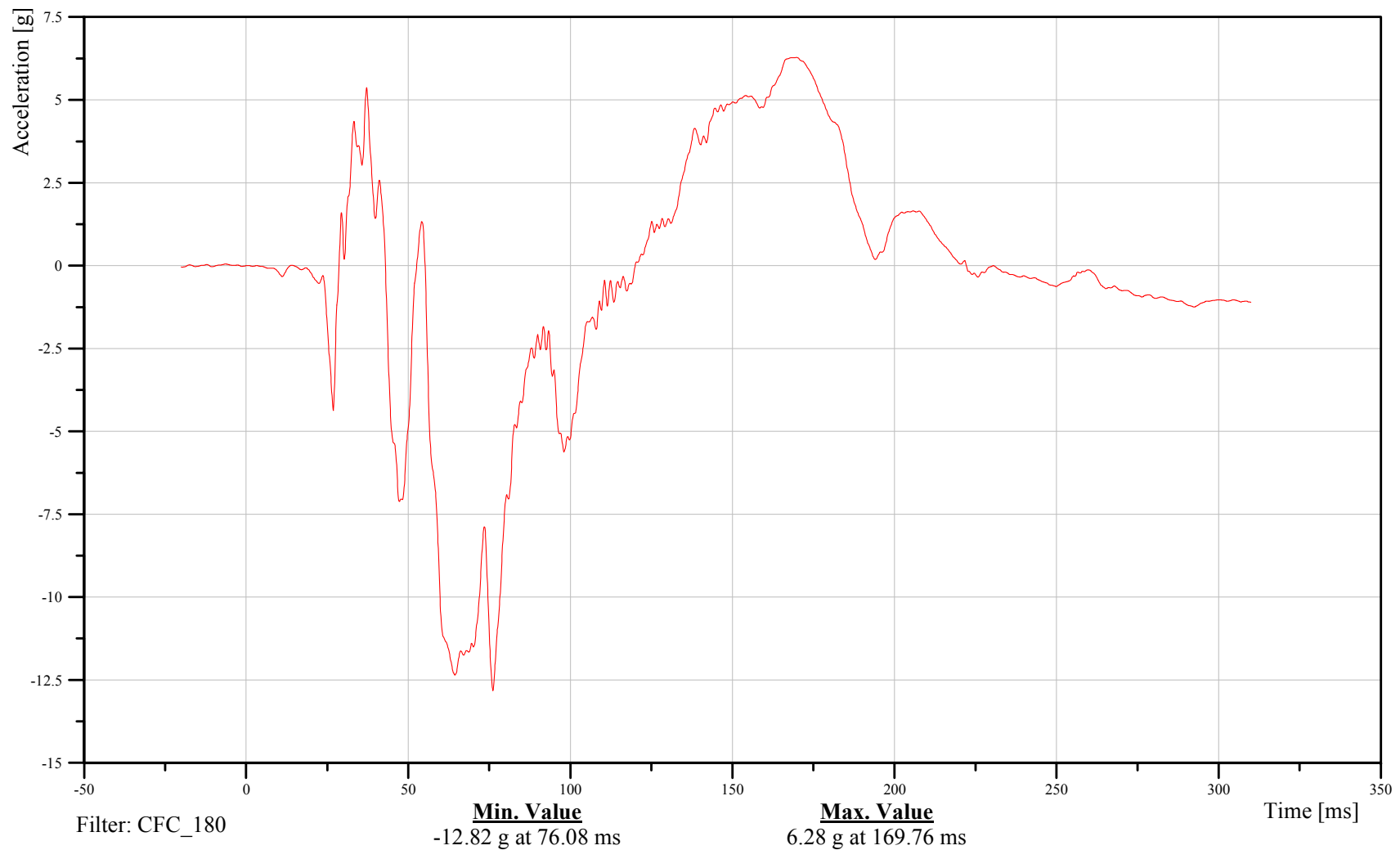
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN1200S2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lower Spine Accel Y

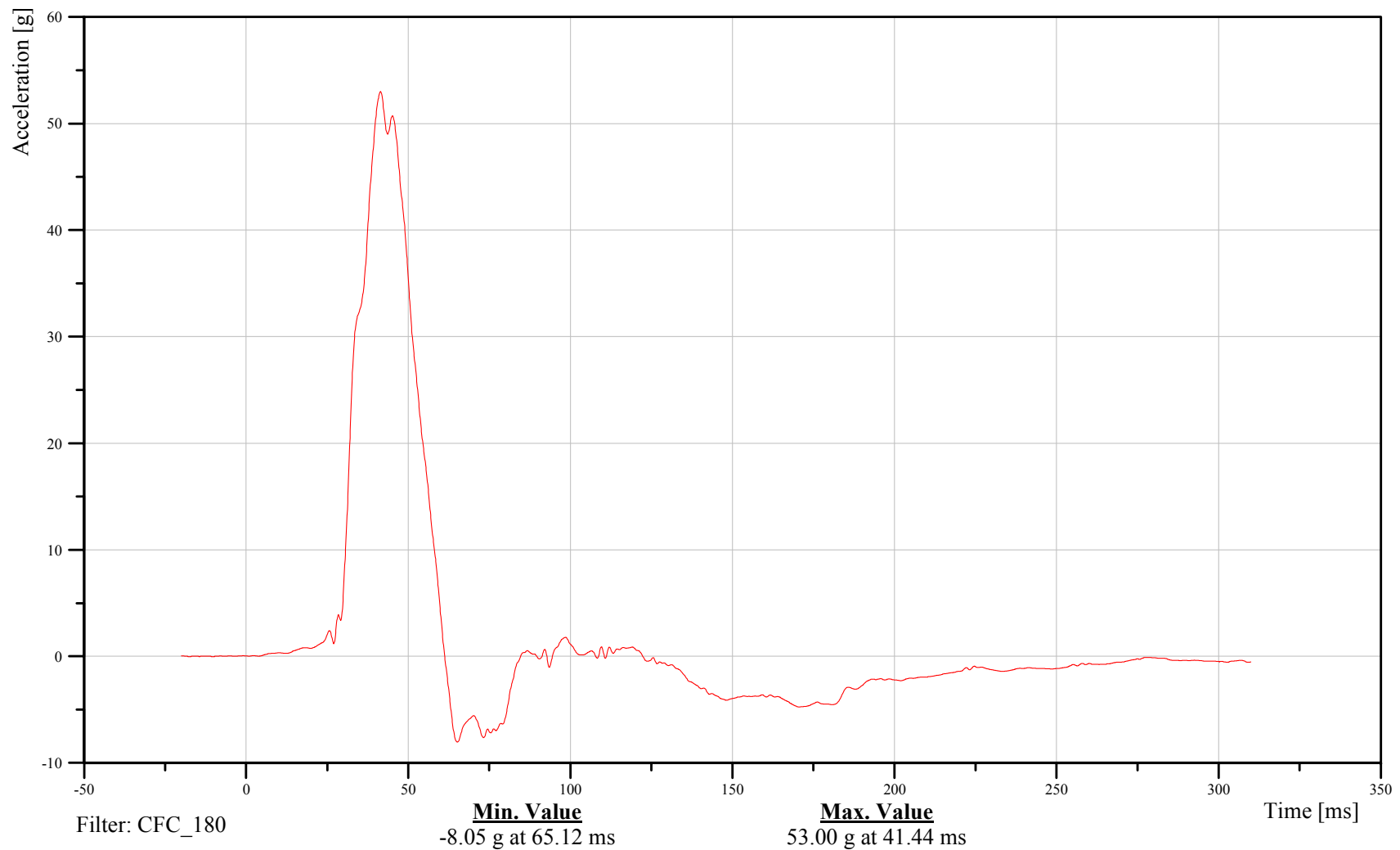
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN1200S2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lower Spine Accel Z

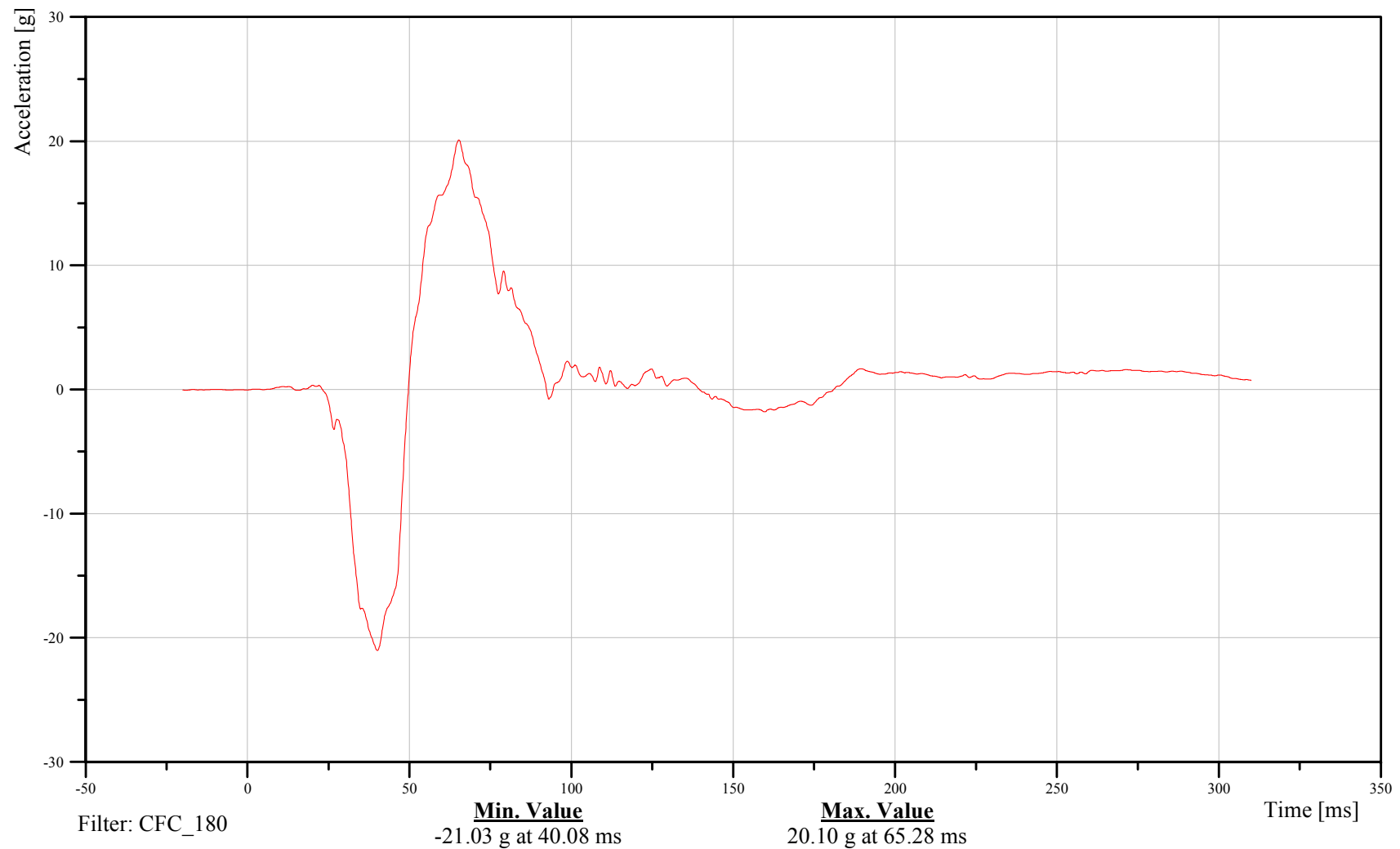
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN1200S2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lower Spine Accel Resultant

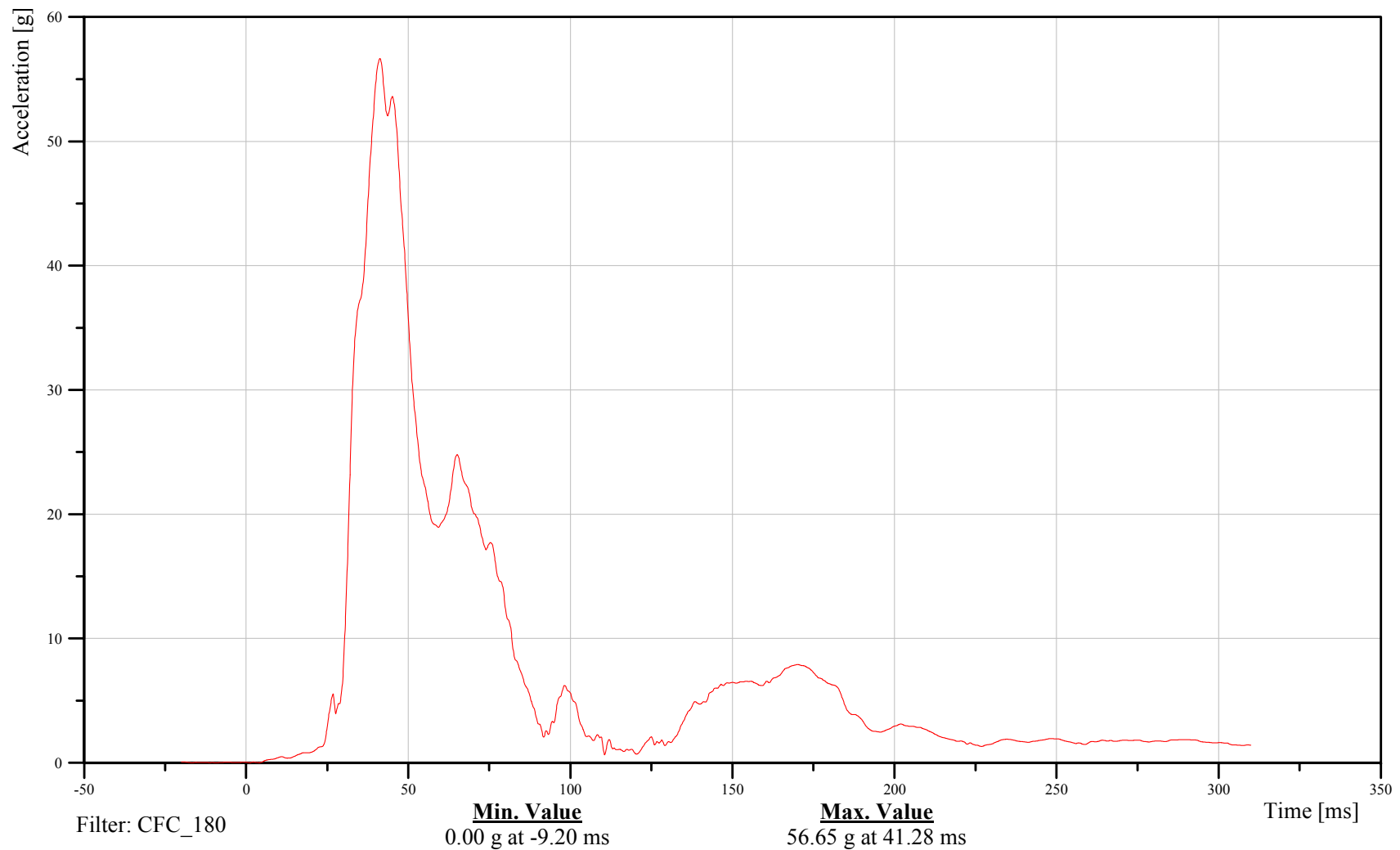
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SPIN1200S2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 5 Accel X

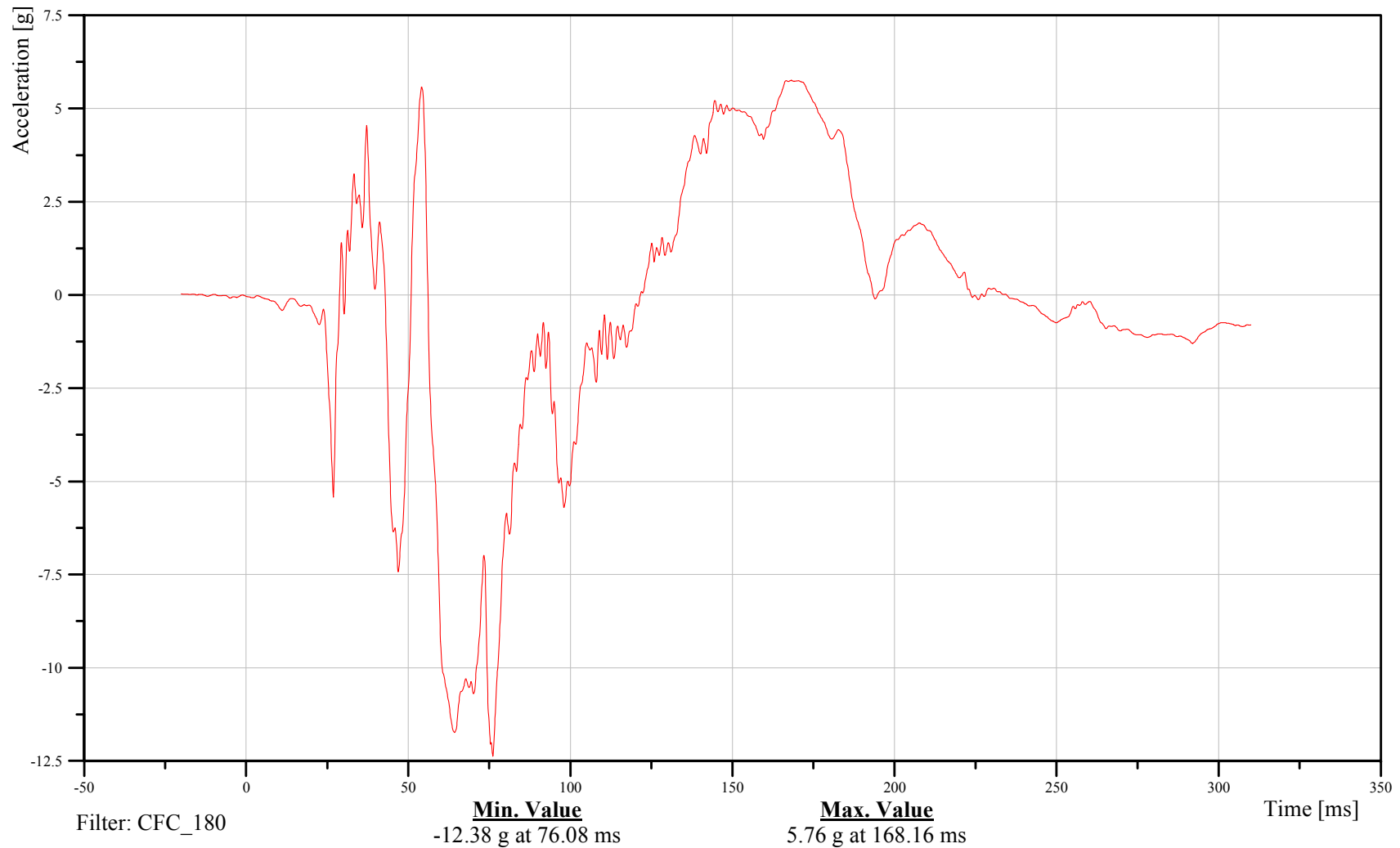
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABSP02RIS2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 5 Accel Y

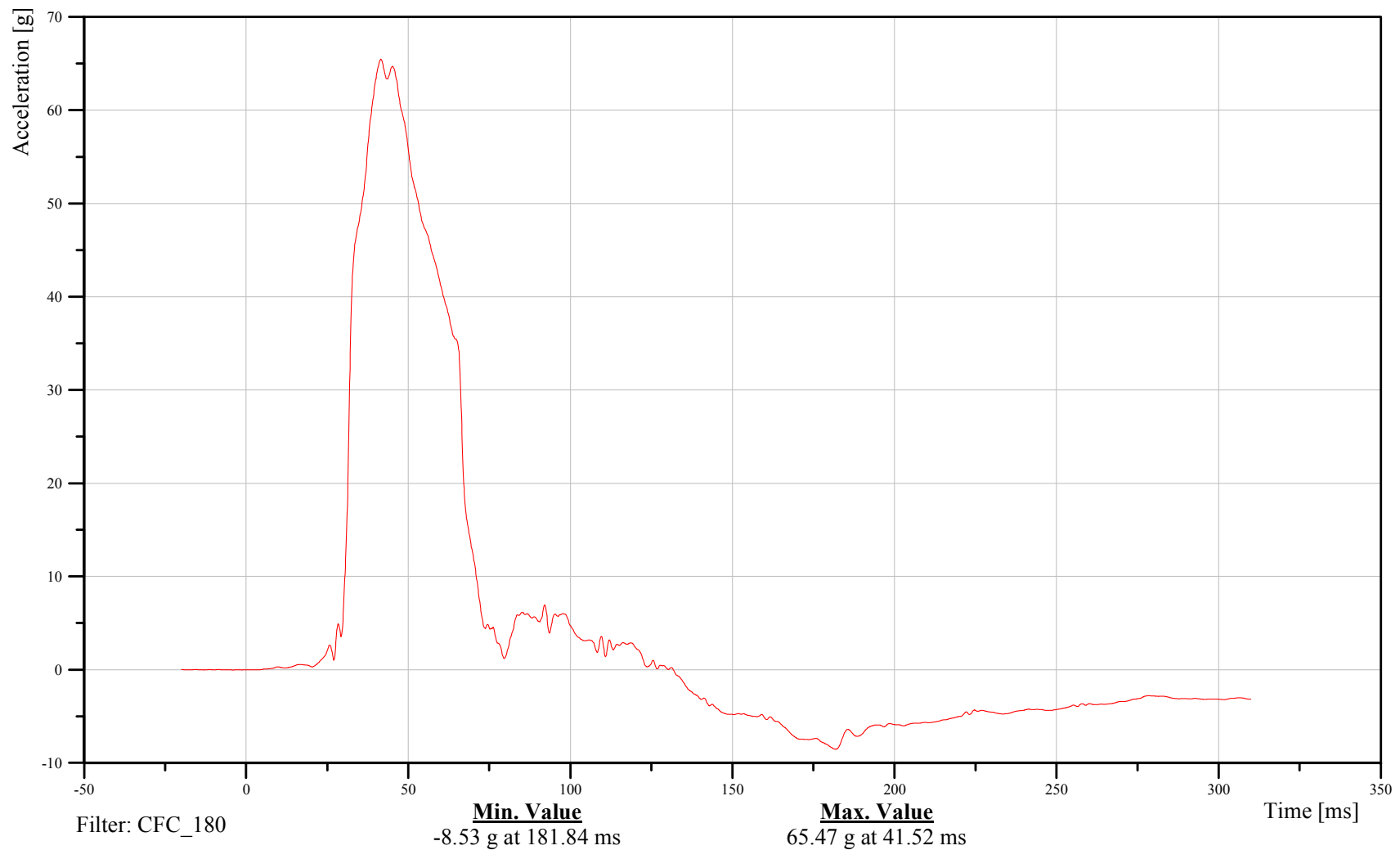
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABSP02RIS2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 5 Accel Z

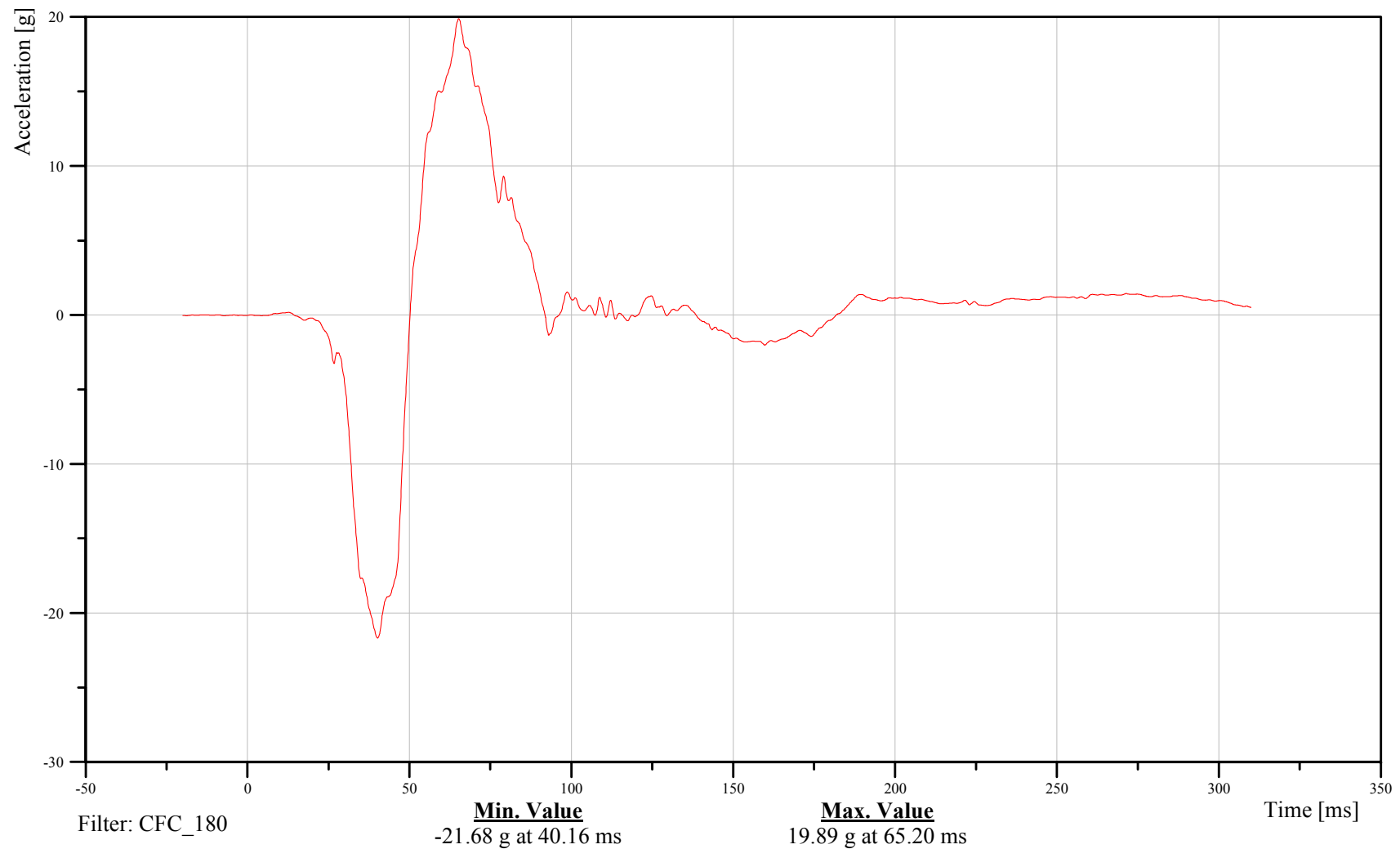
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABSP02RIS2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Spine Rib 5 Accel Resultant

Date: 08/17/2005

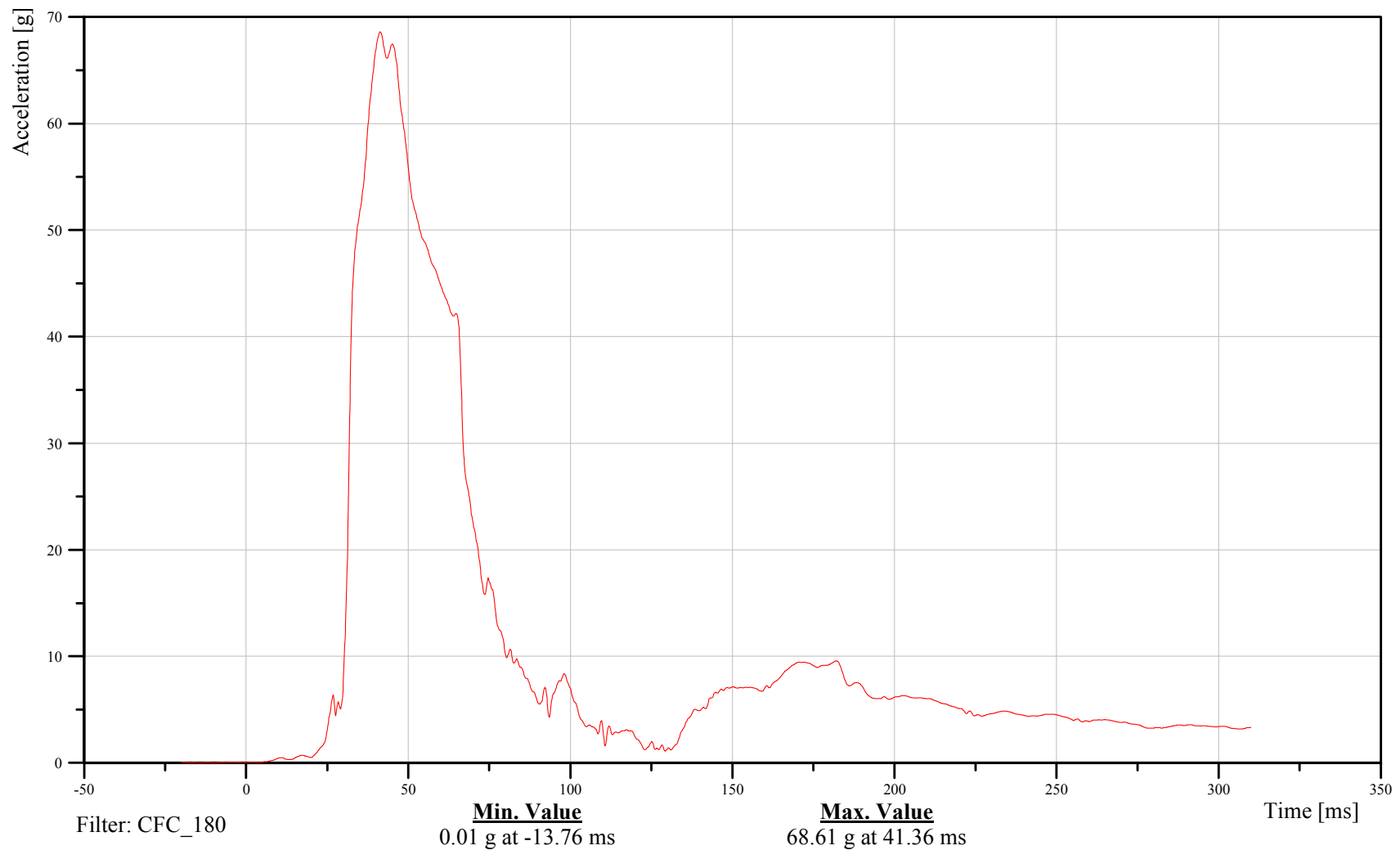
Time: 13:44

Customer: VRTC

14ABSP02RIS2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lumbar Moment X

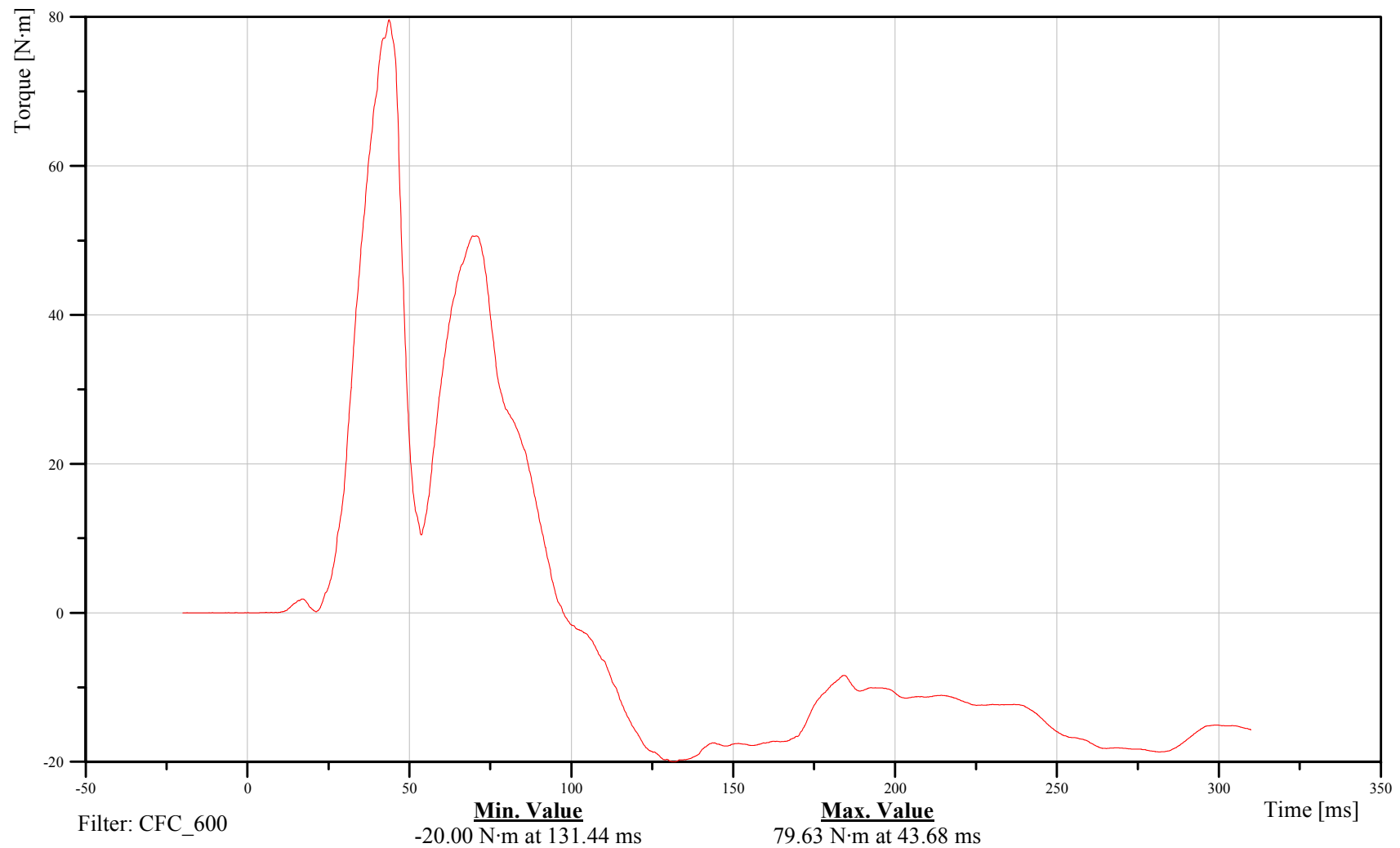
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14LUSP0000S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lumbar Moment Y

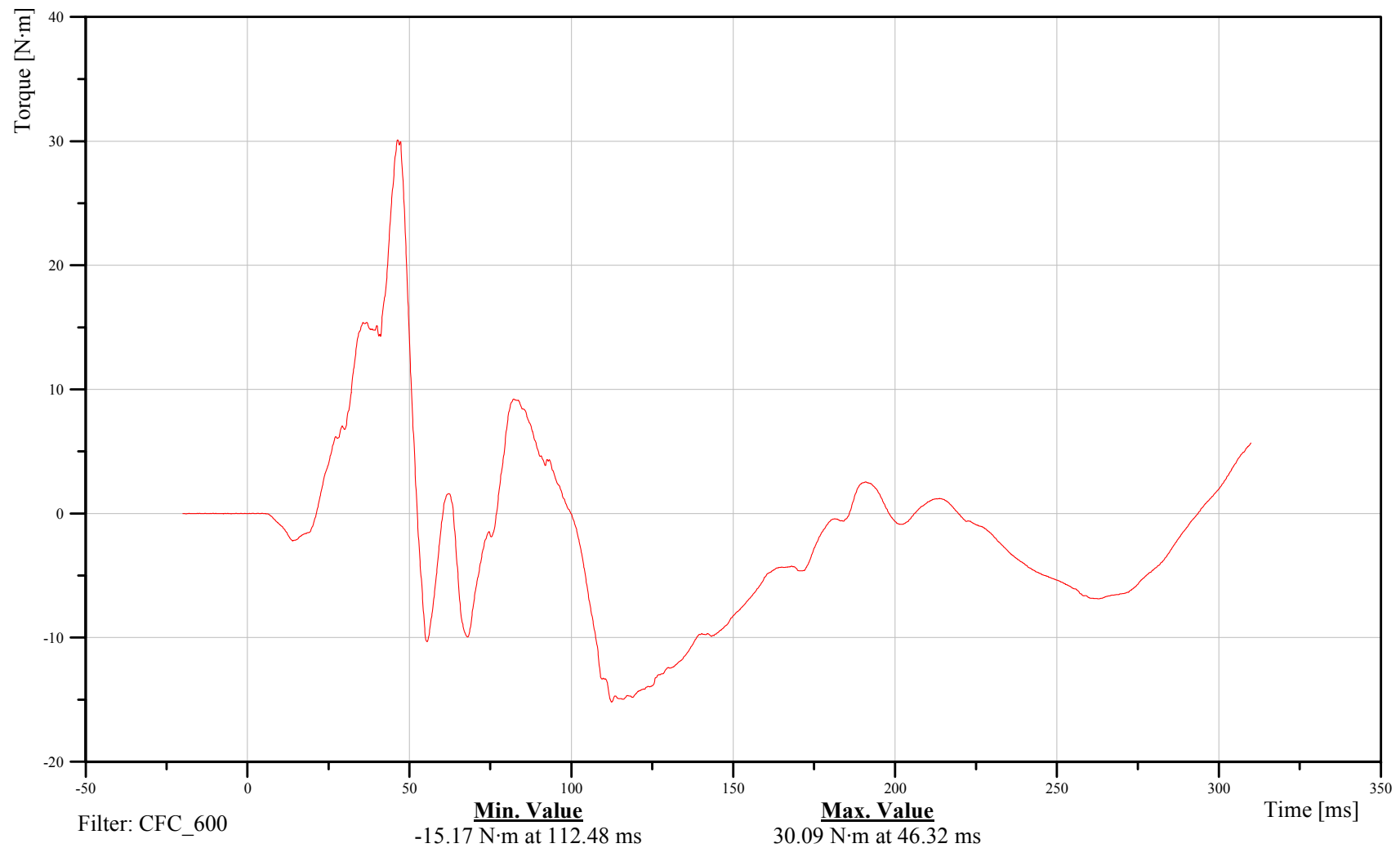
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14LUSP0000S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Lumbar Moment Z

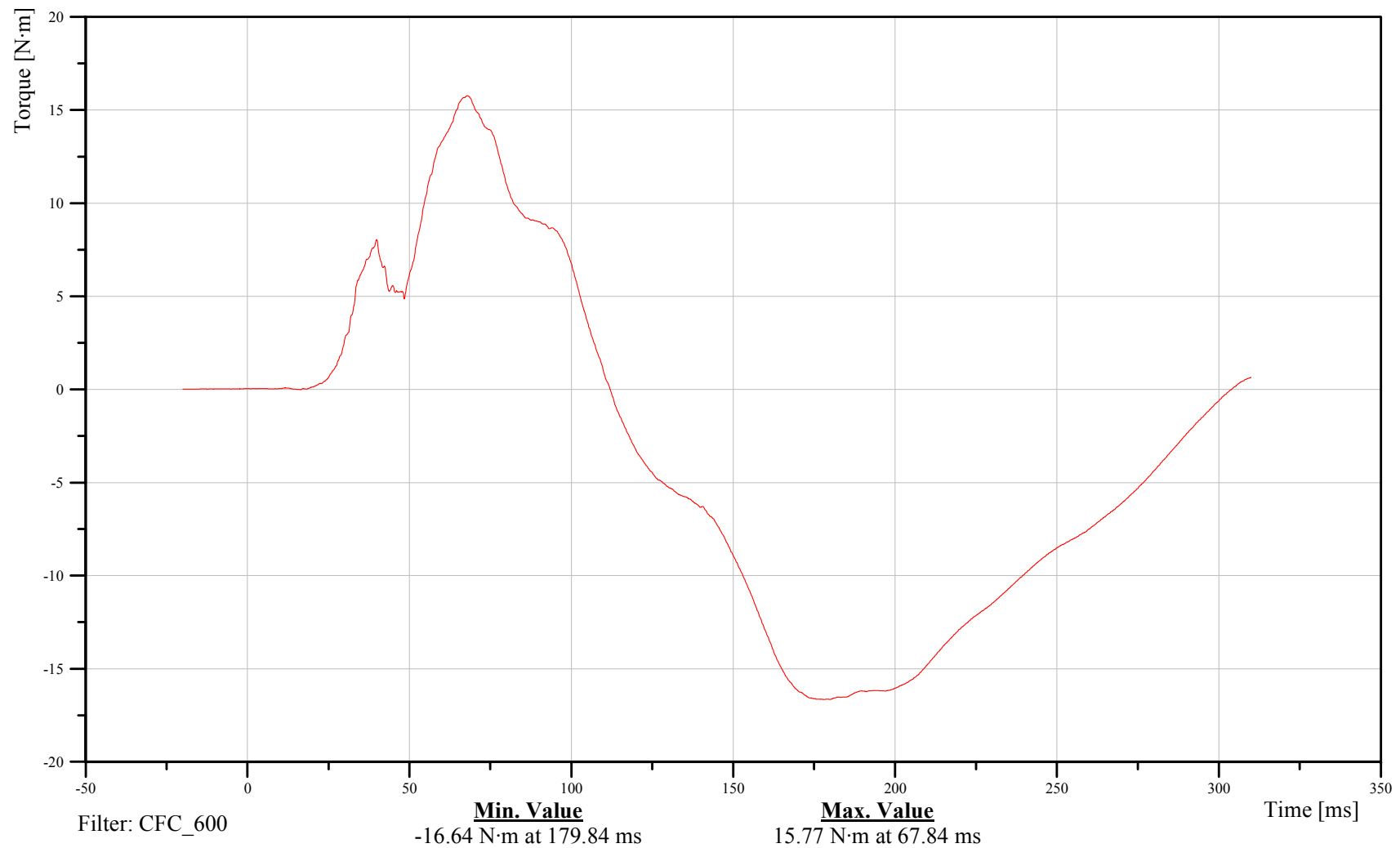
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14LUSP0000S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 1 Accel X

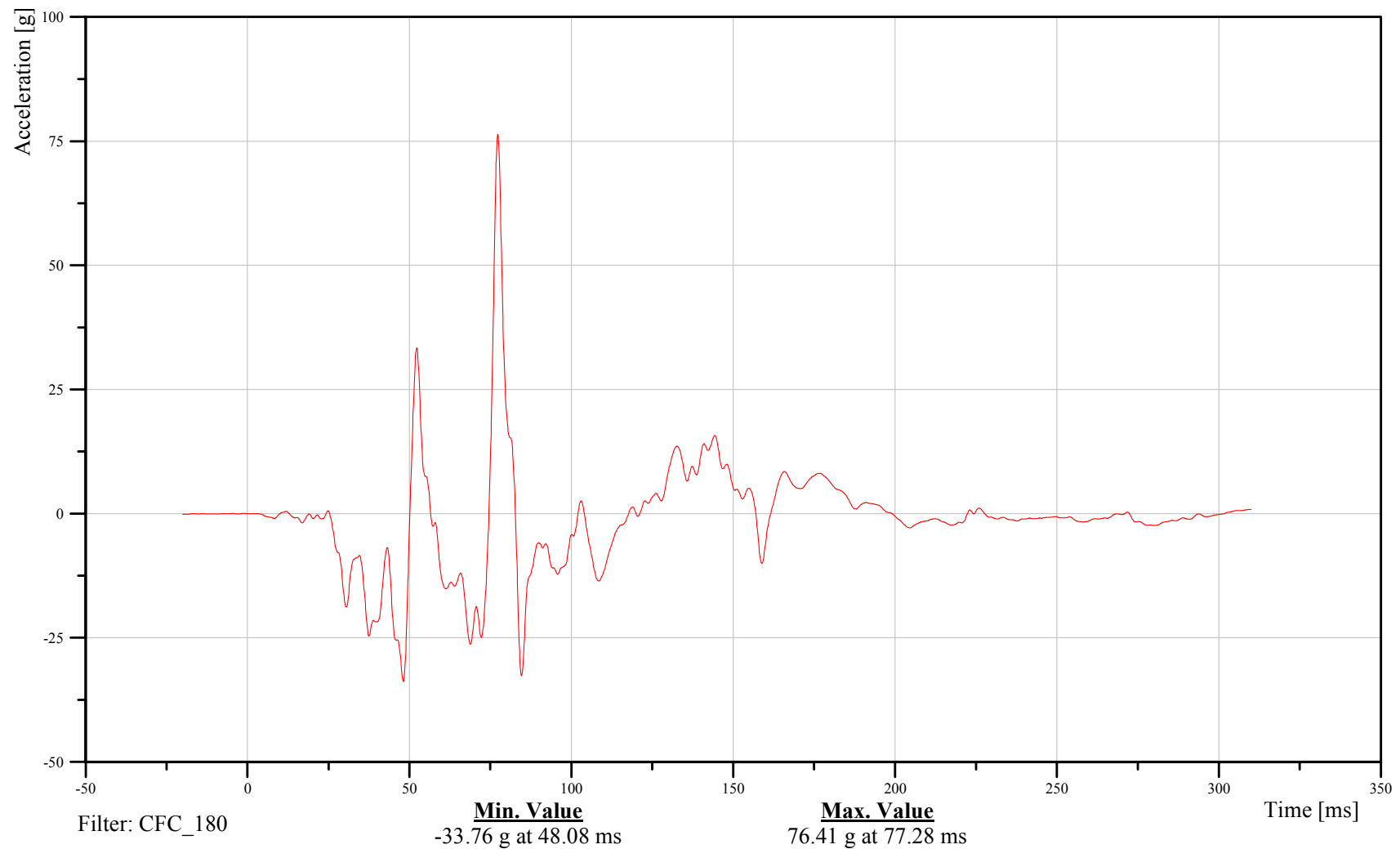
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI01LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 1 Accel Y

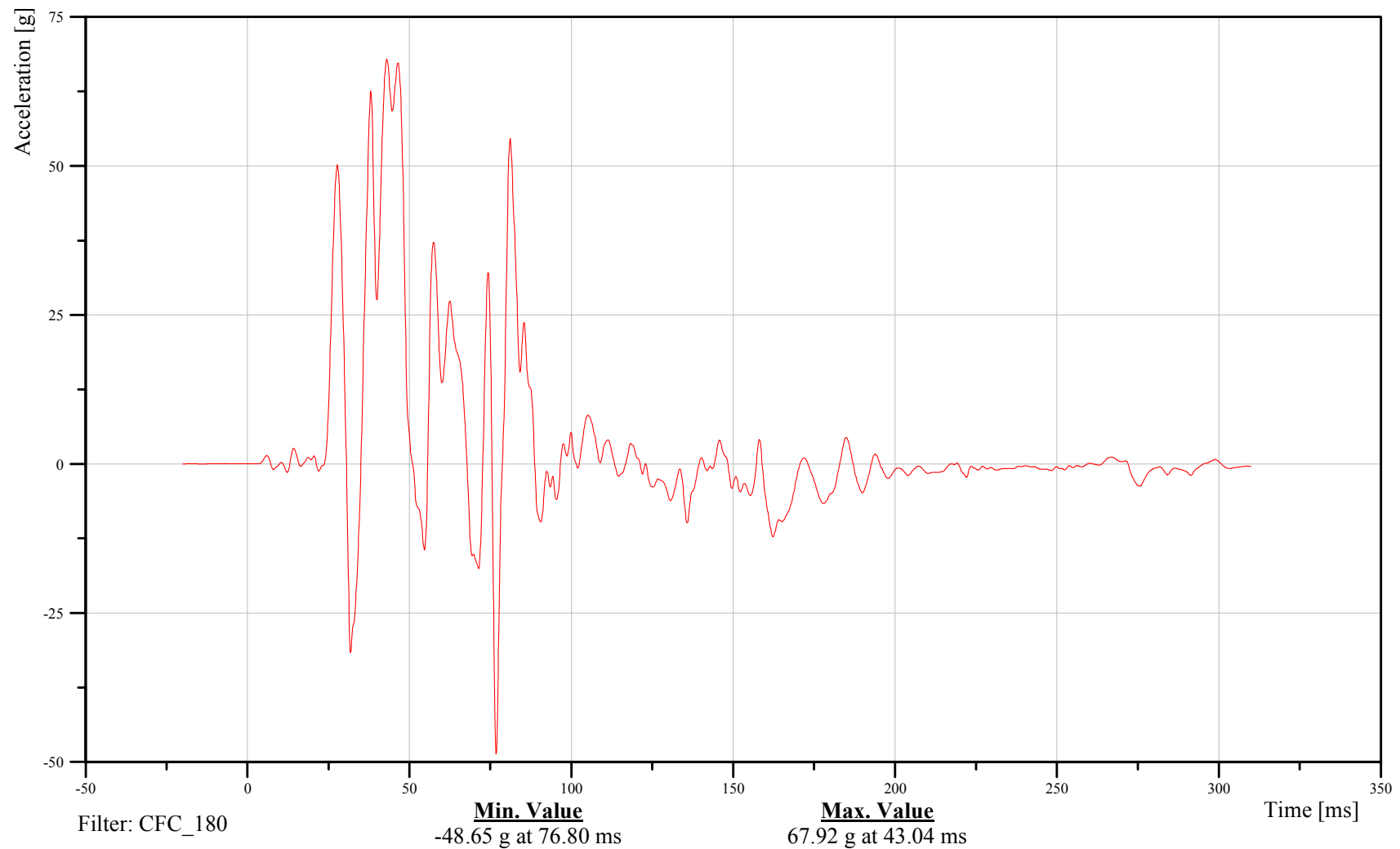
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI01LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 1 Accel Z

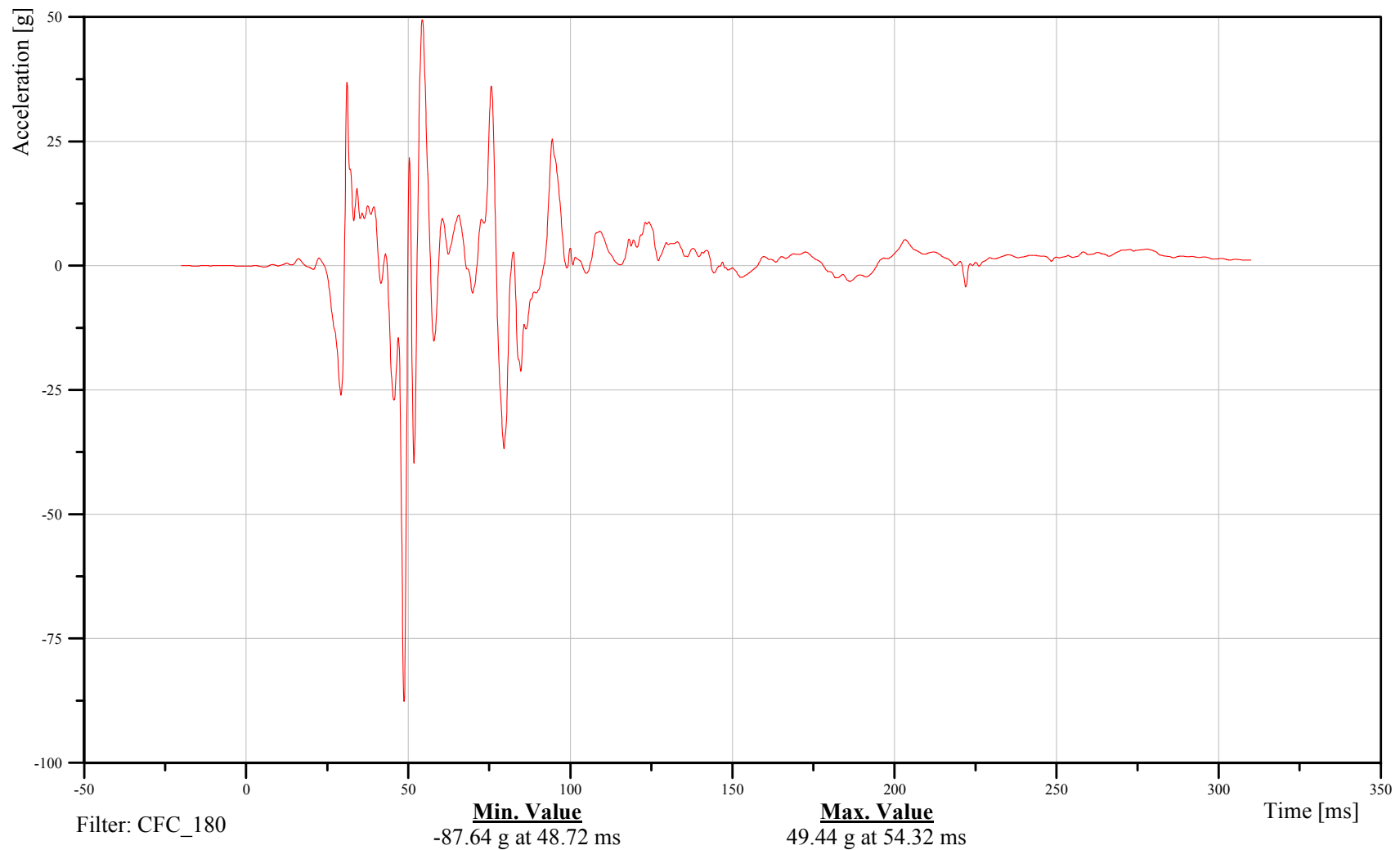
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI01LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 1 Accel Resultant

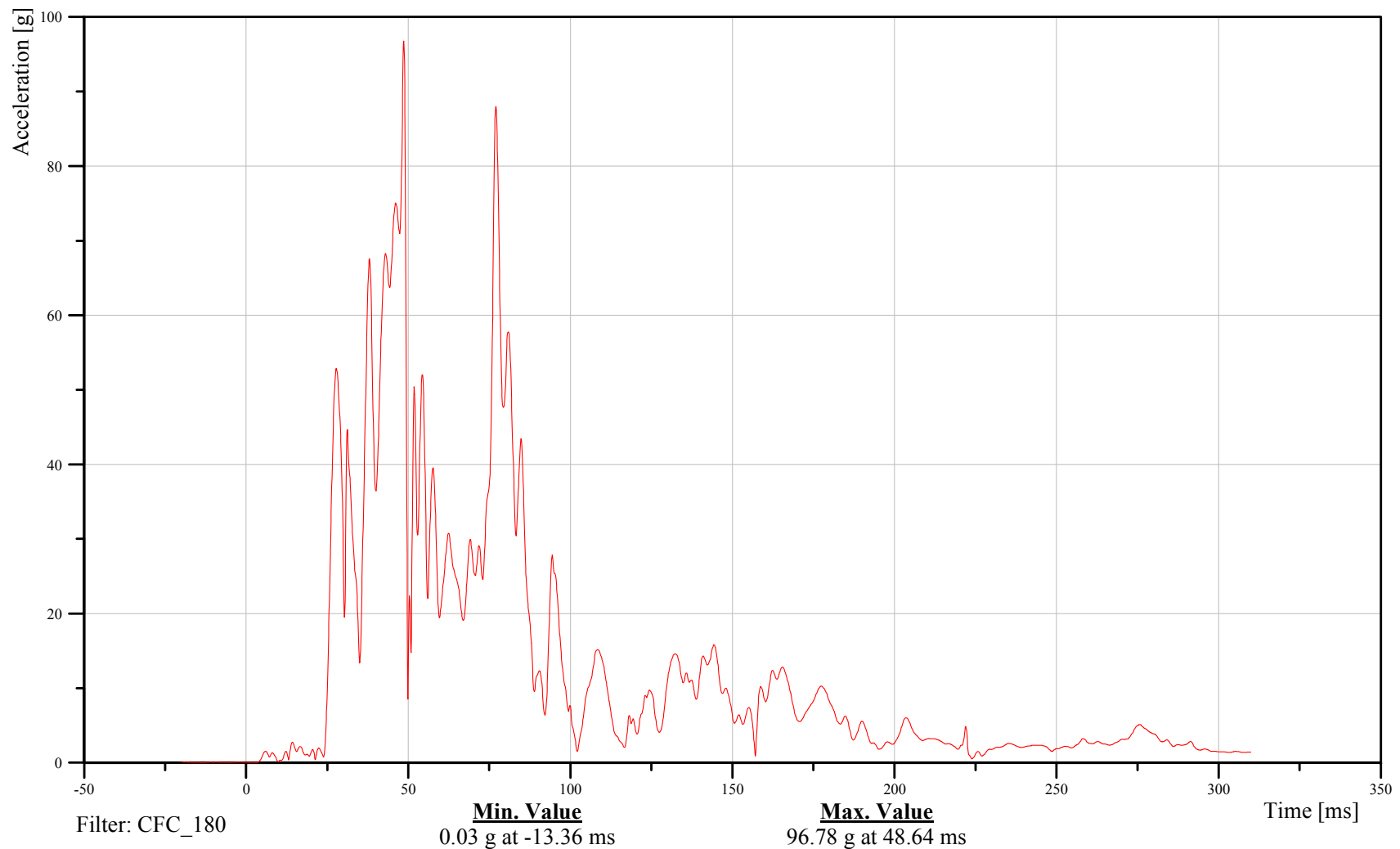
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI01LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 2 Accel X

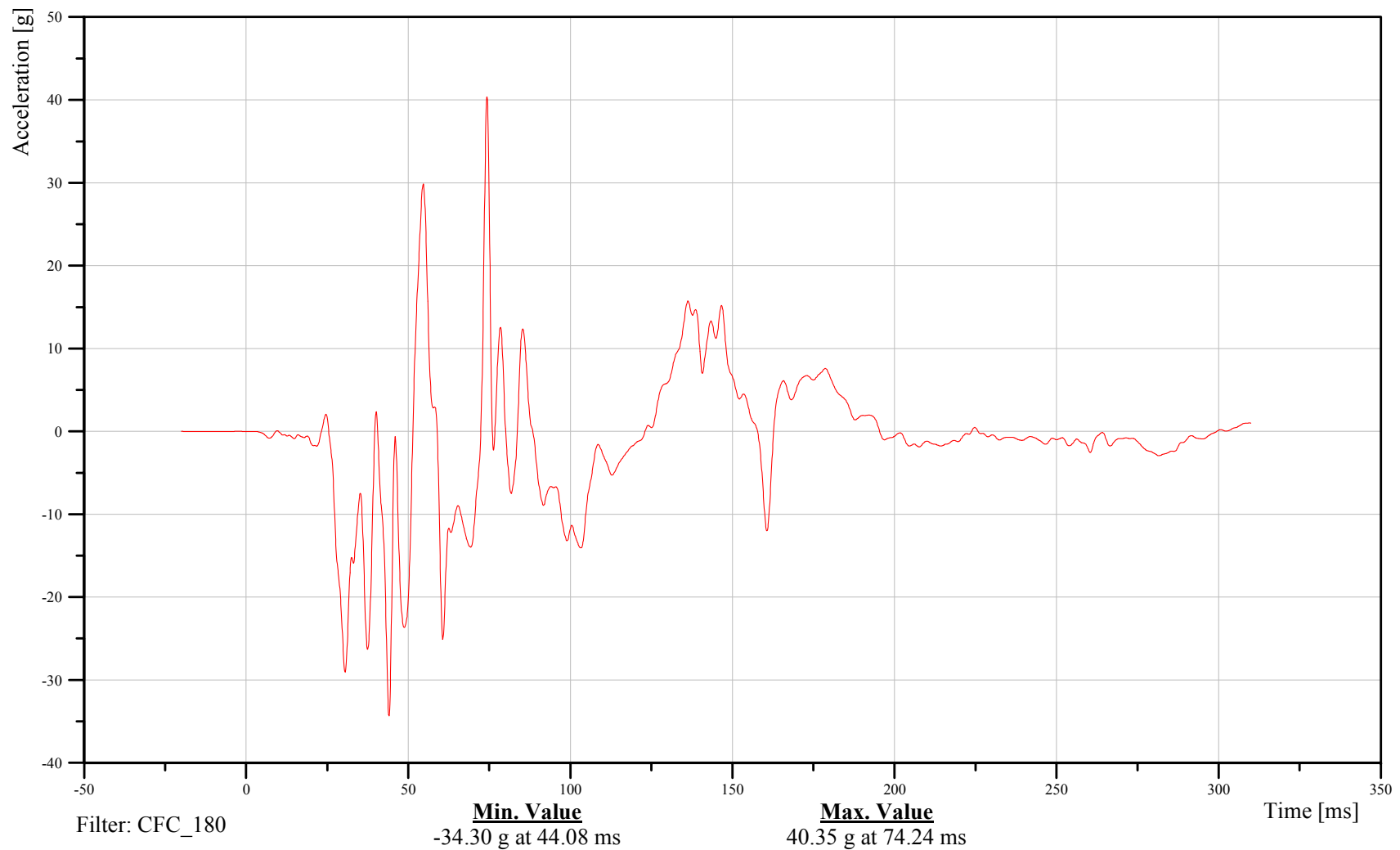
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI02LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 2 Accel Y

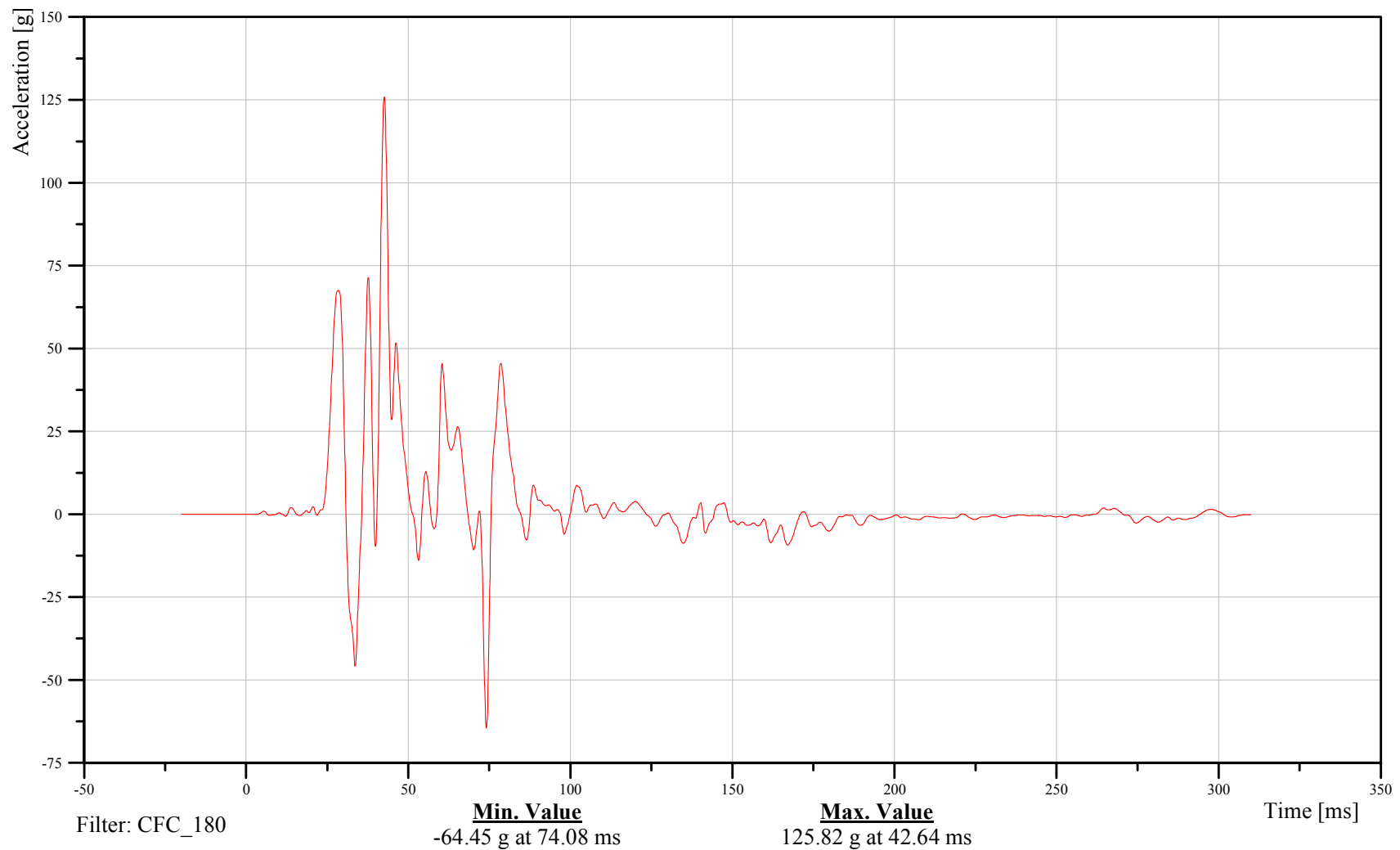
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI02LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 2 Accel Z

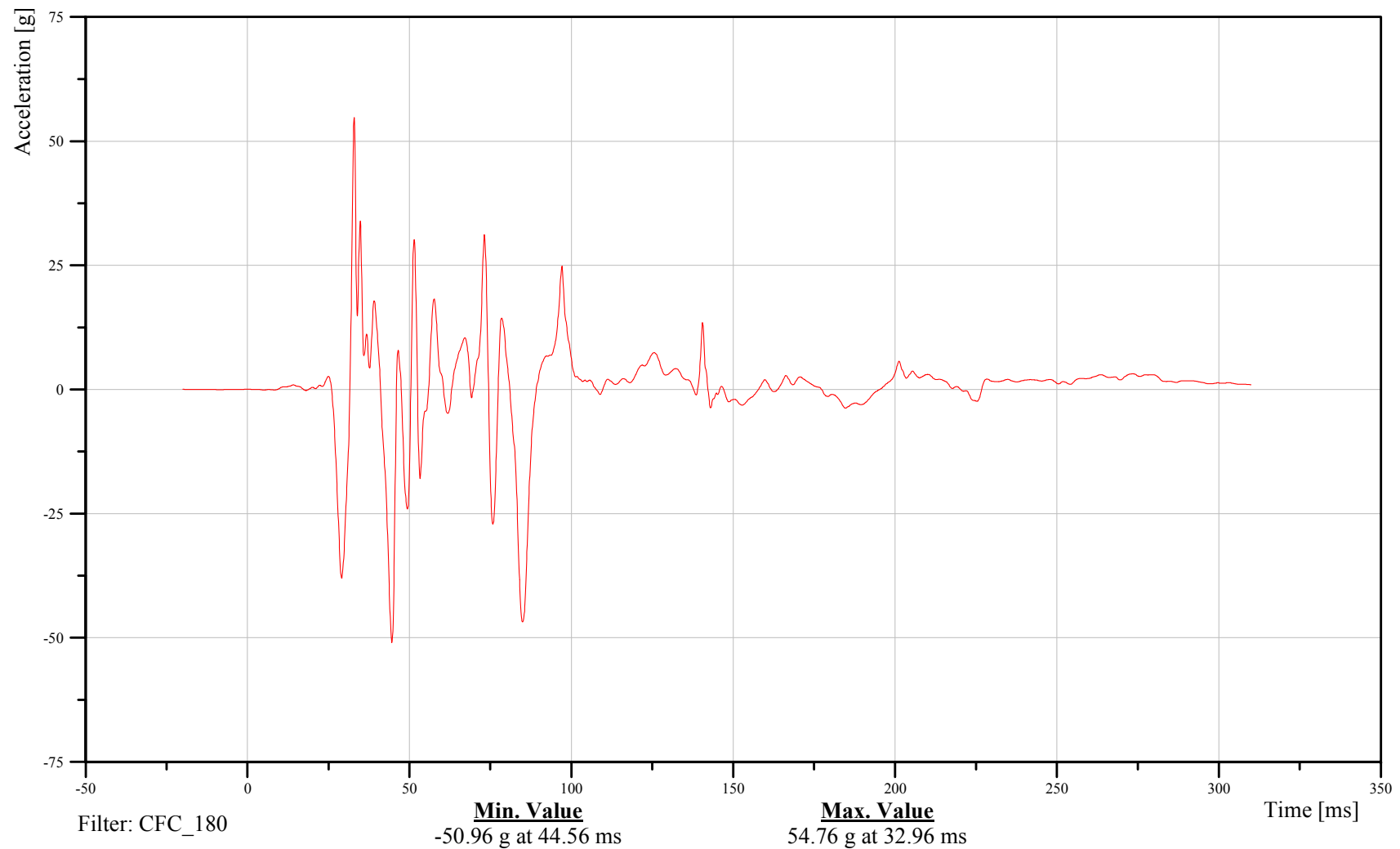
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI02LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 2 Accel Resultant

Date: 08/17/2005

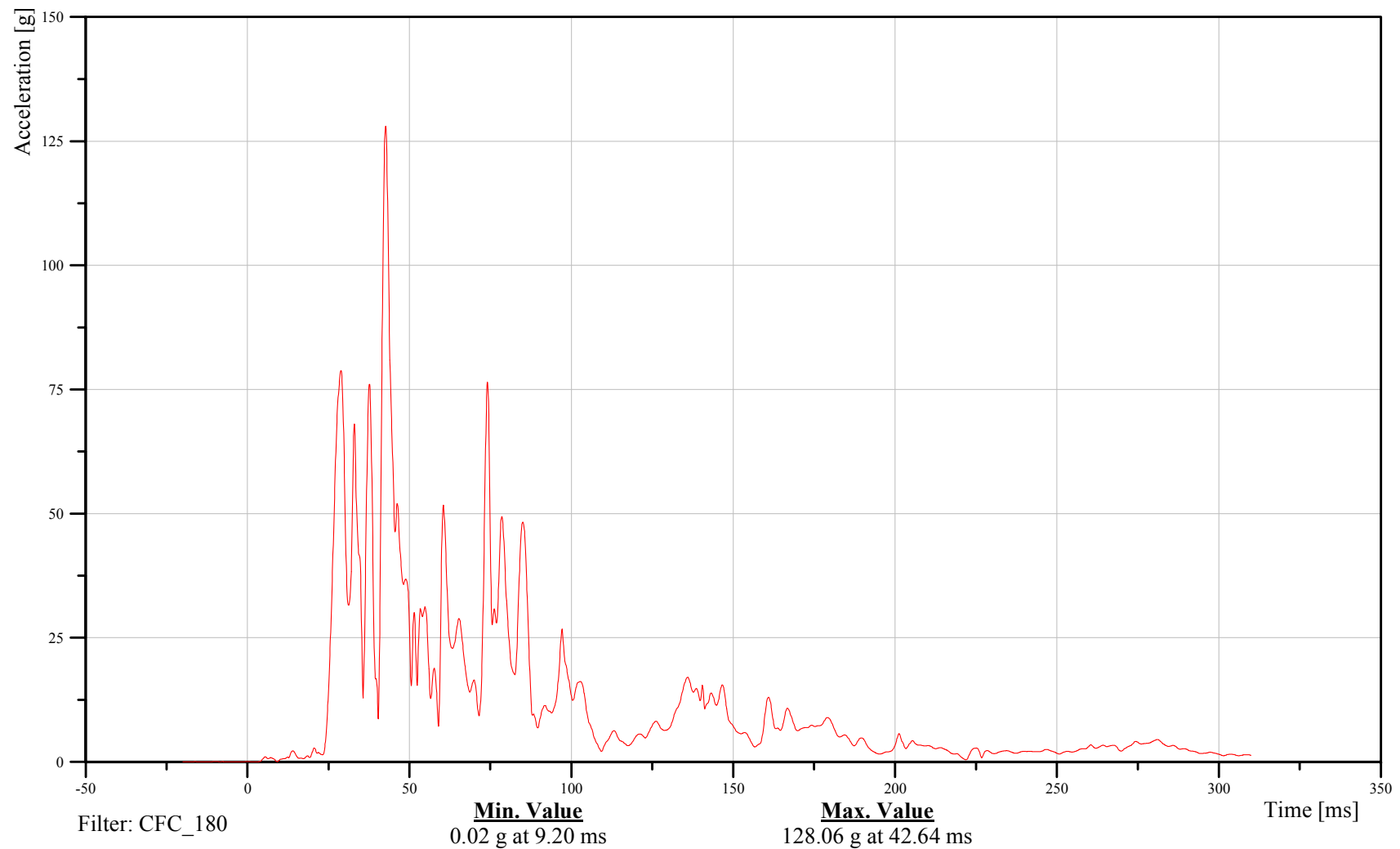
Time: 13:44

Customer: VRTC

14TRRI02LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 3 Accel X

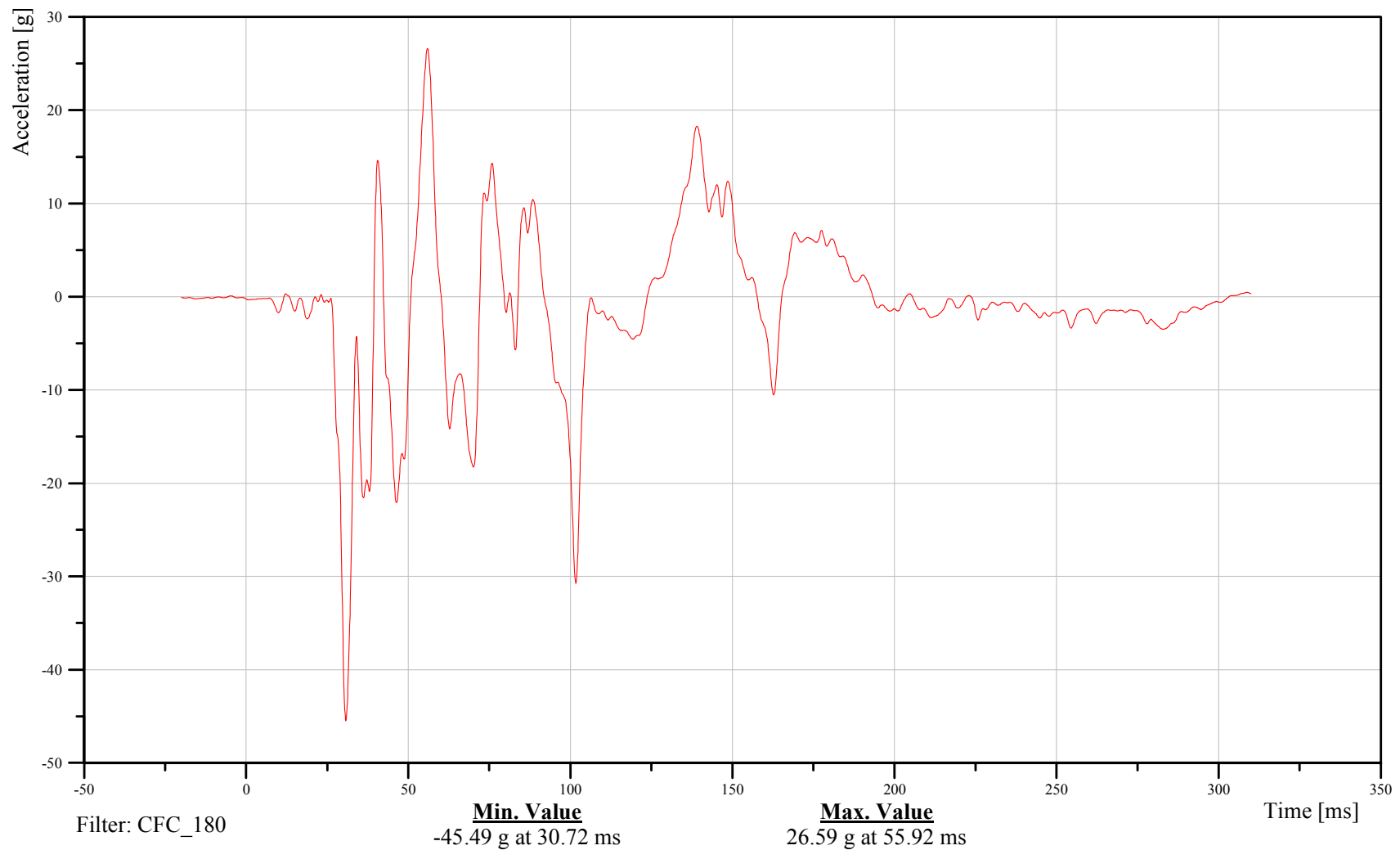
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI03LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 3 Accel Y

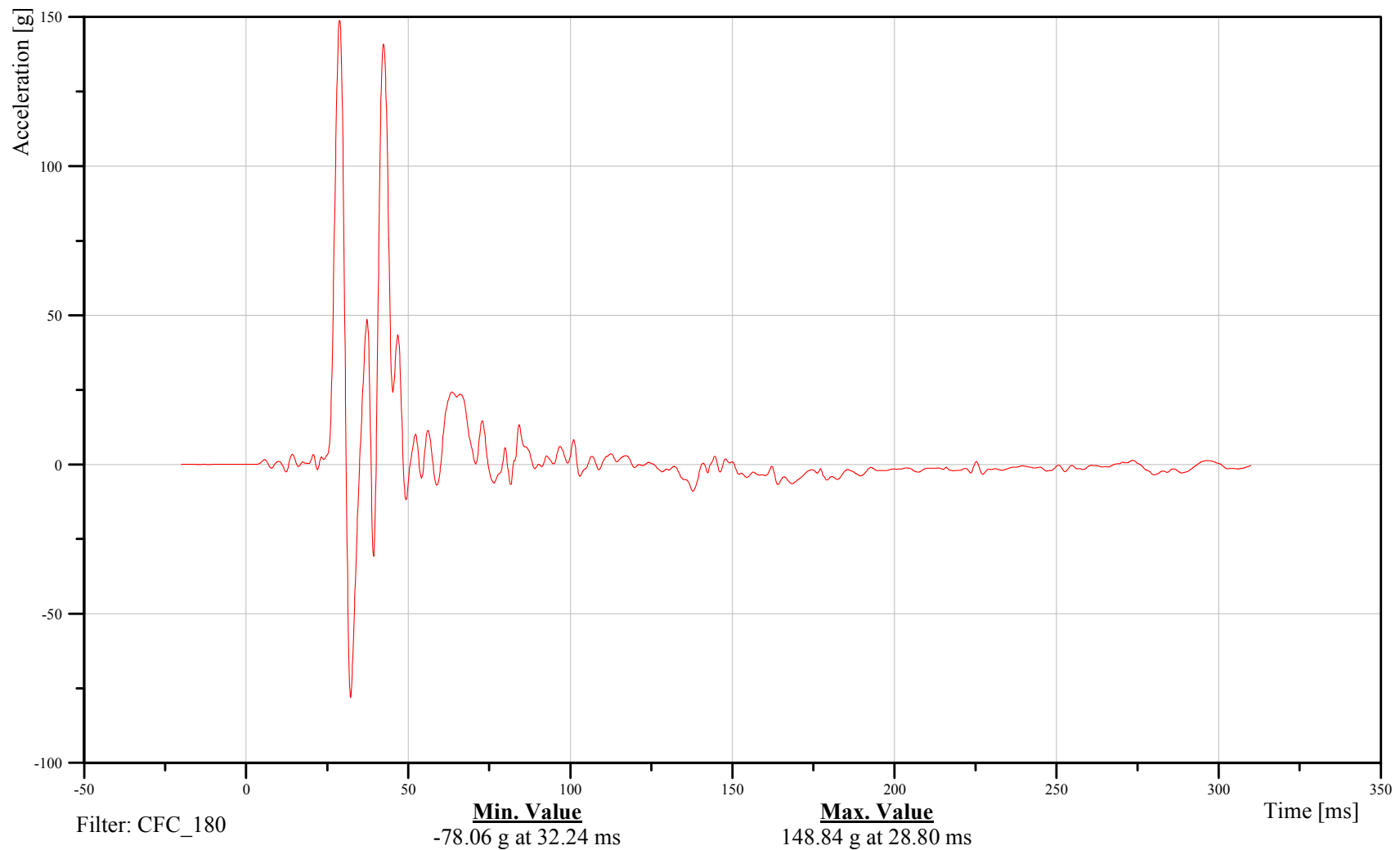
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI03LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 3 Accel Z

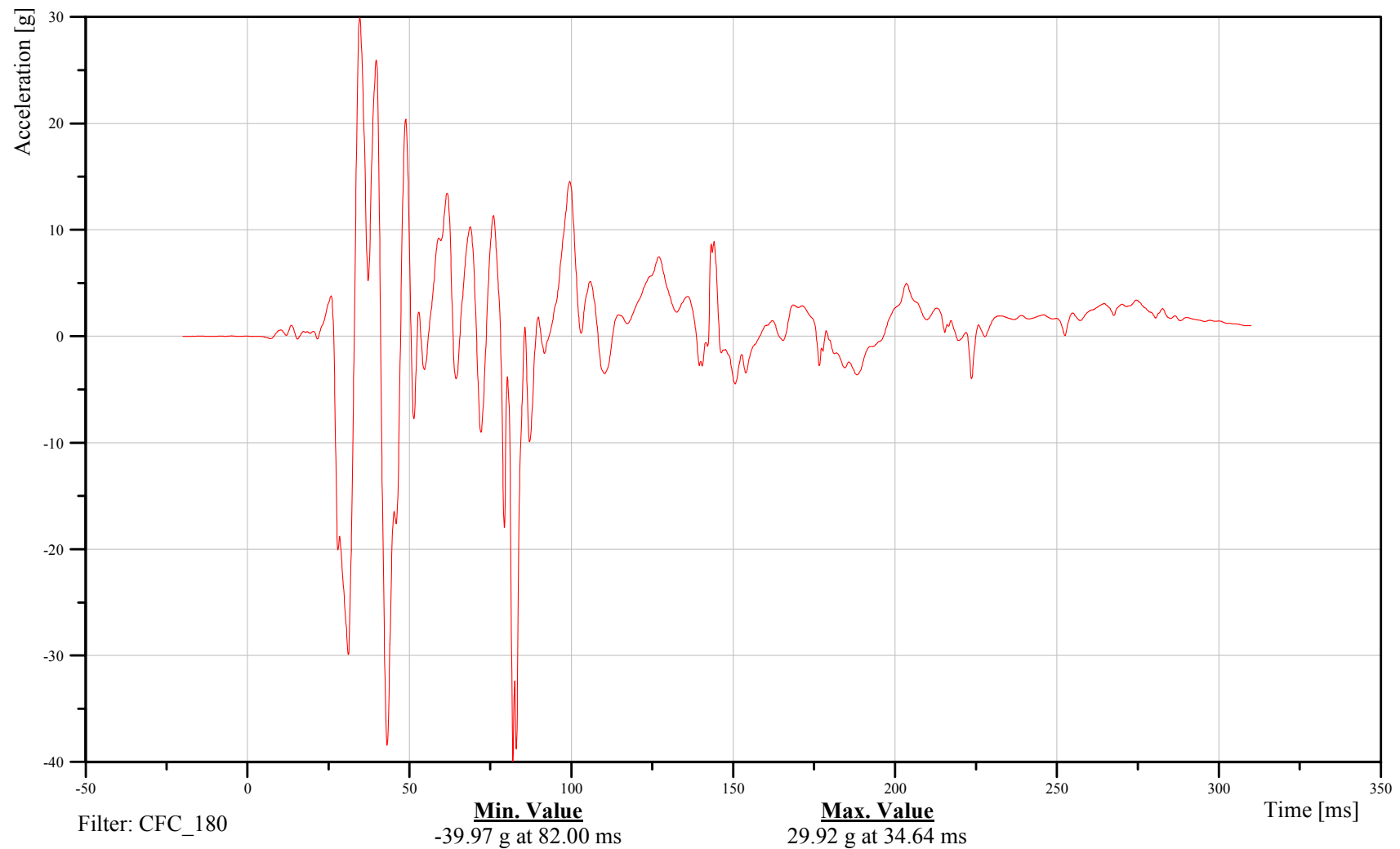
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI03LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 3 Accel Resultant

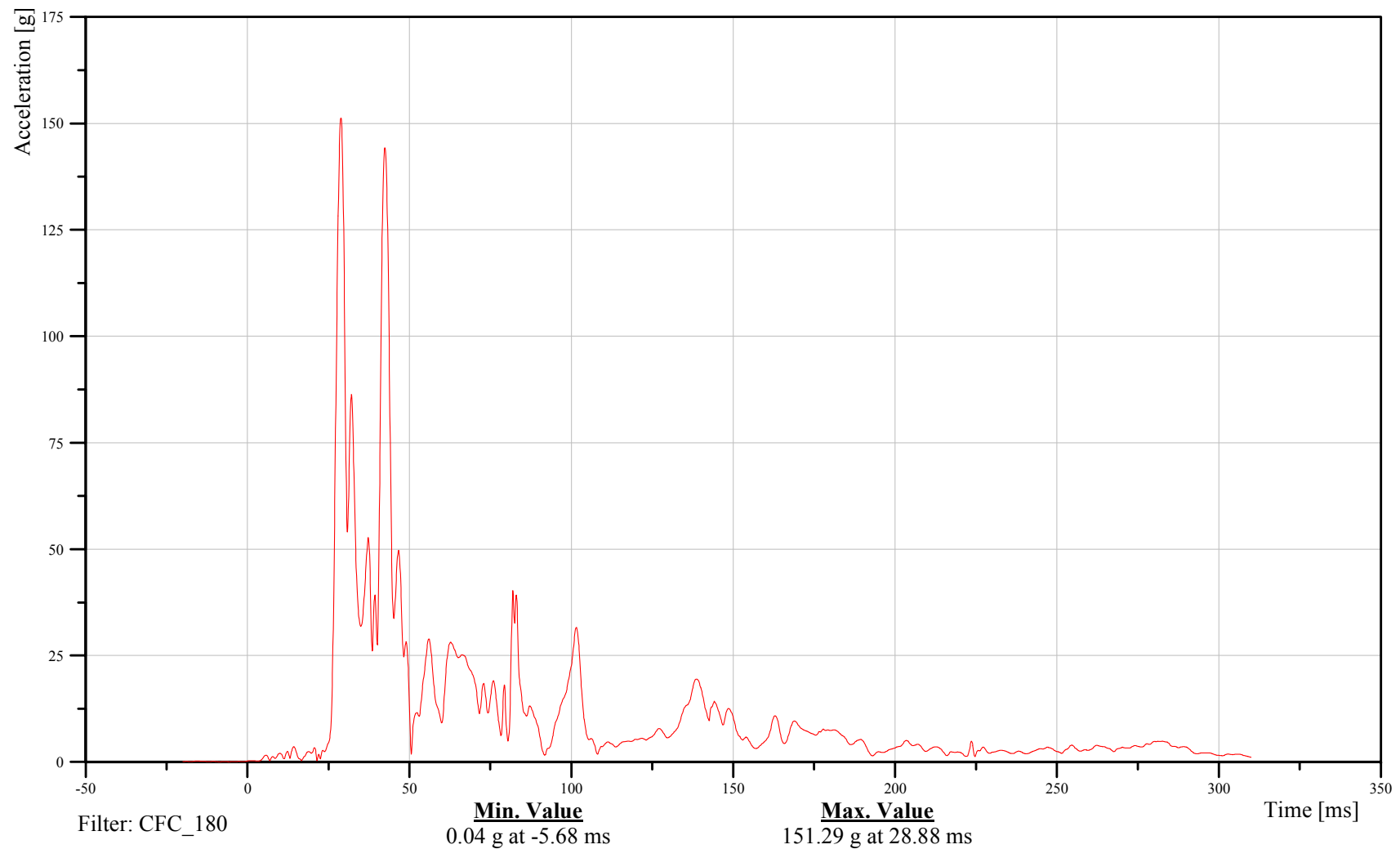
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI03LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 1 Accel X

Date: 08/17/2005

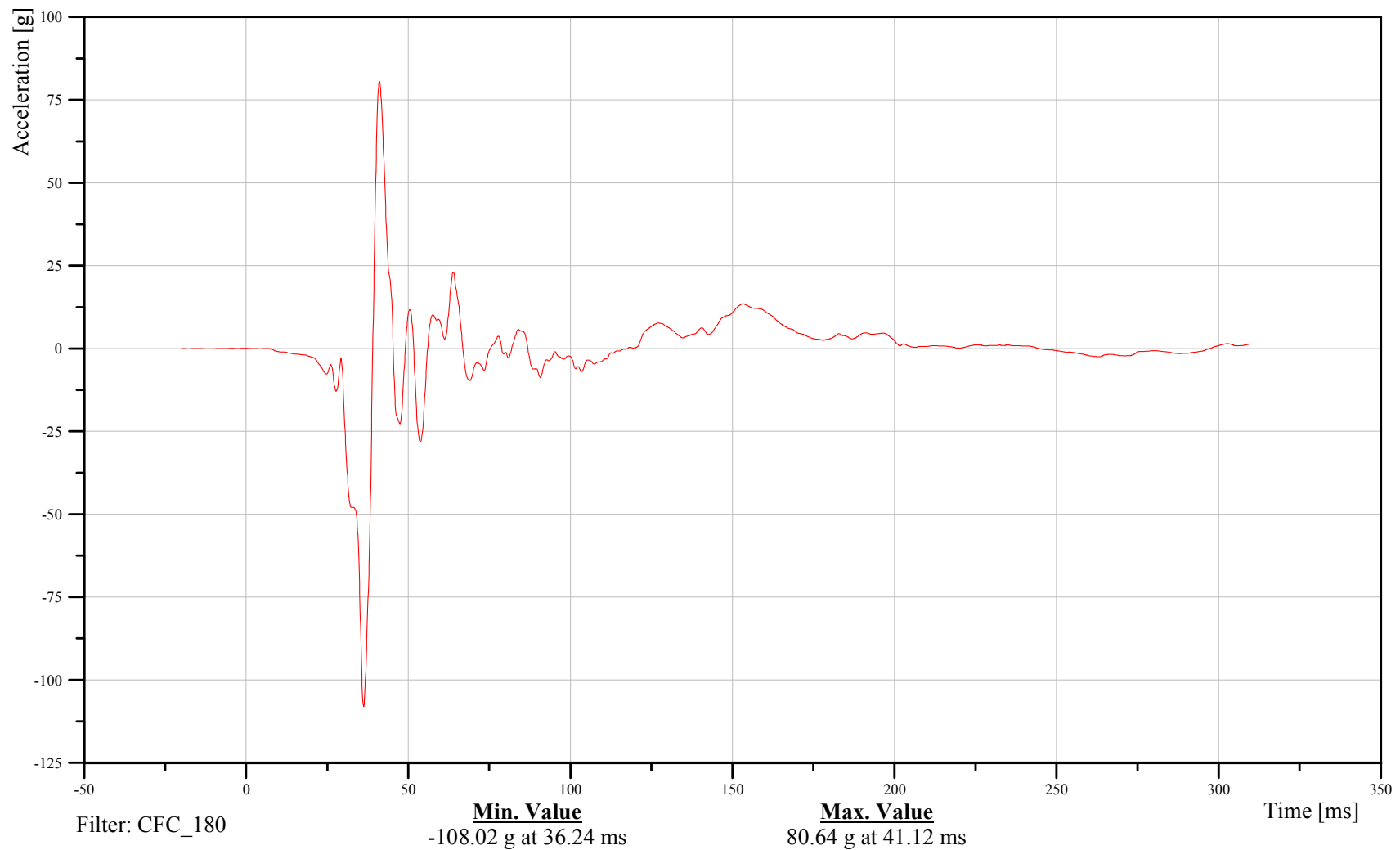
Time: 13:44

Customer: VRTC

14ABRI01LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 1 Accel Y

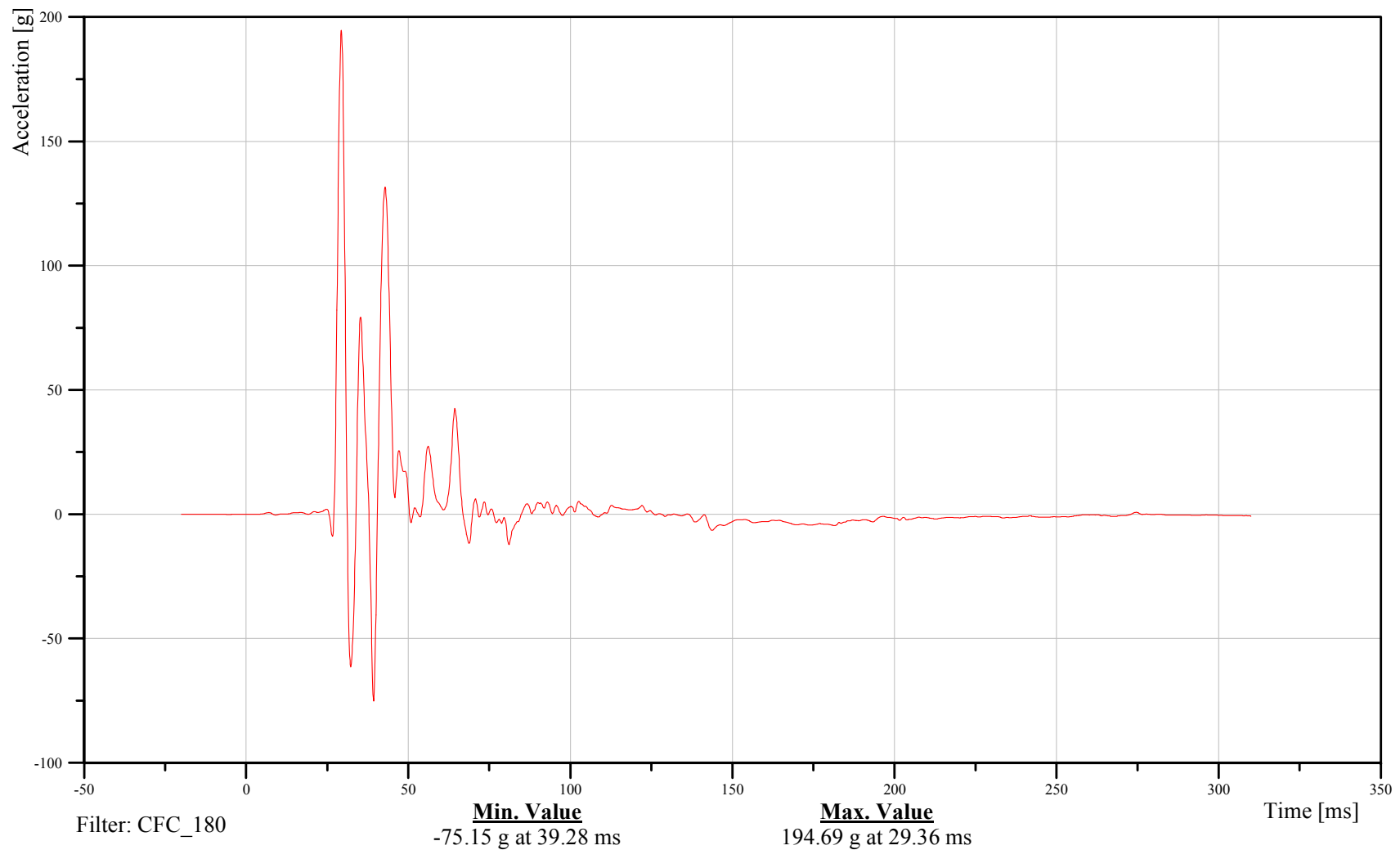
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI01LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 1 Accel Z

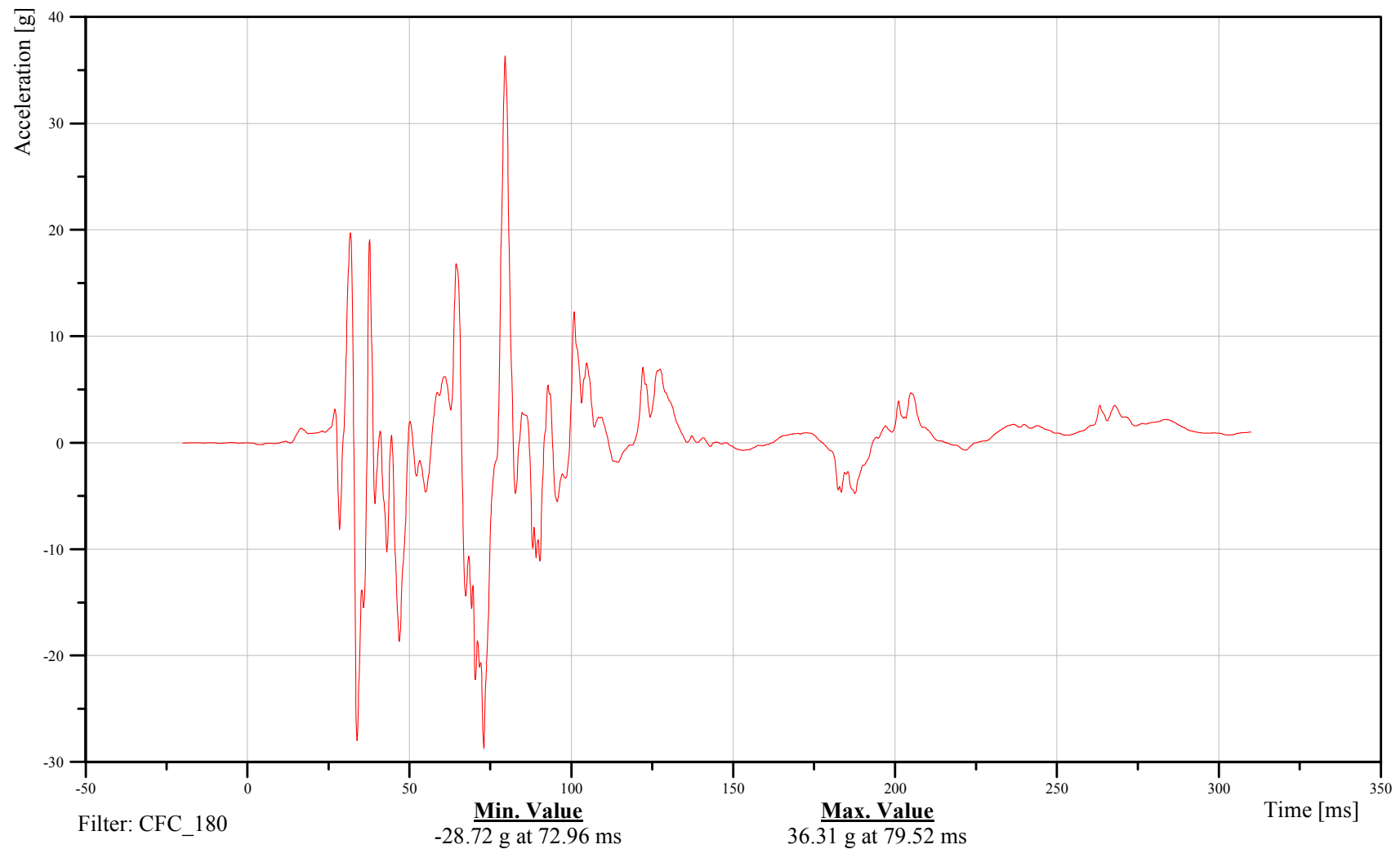
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI01LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 1 Accel Resultant

Date: 08/17/2005

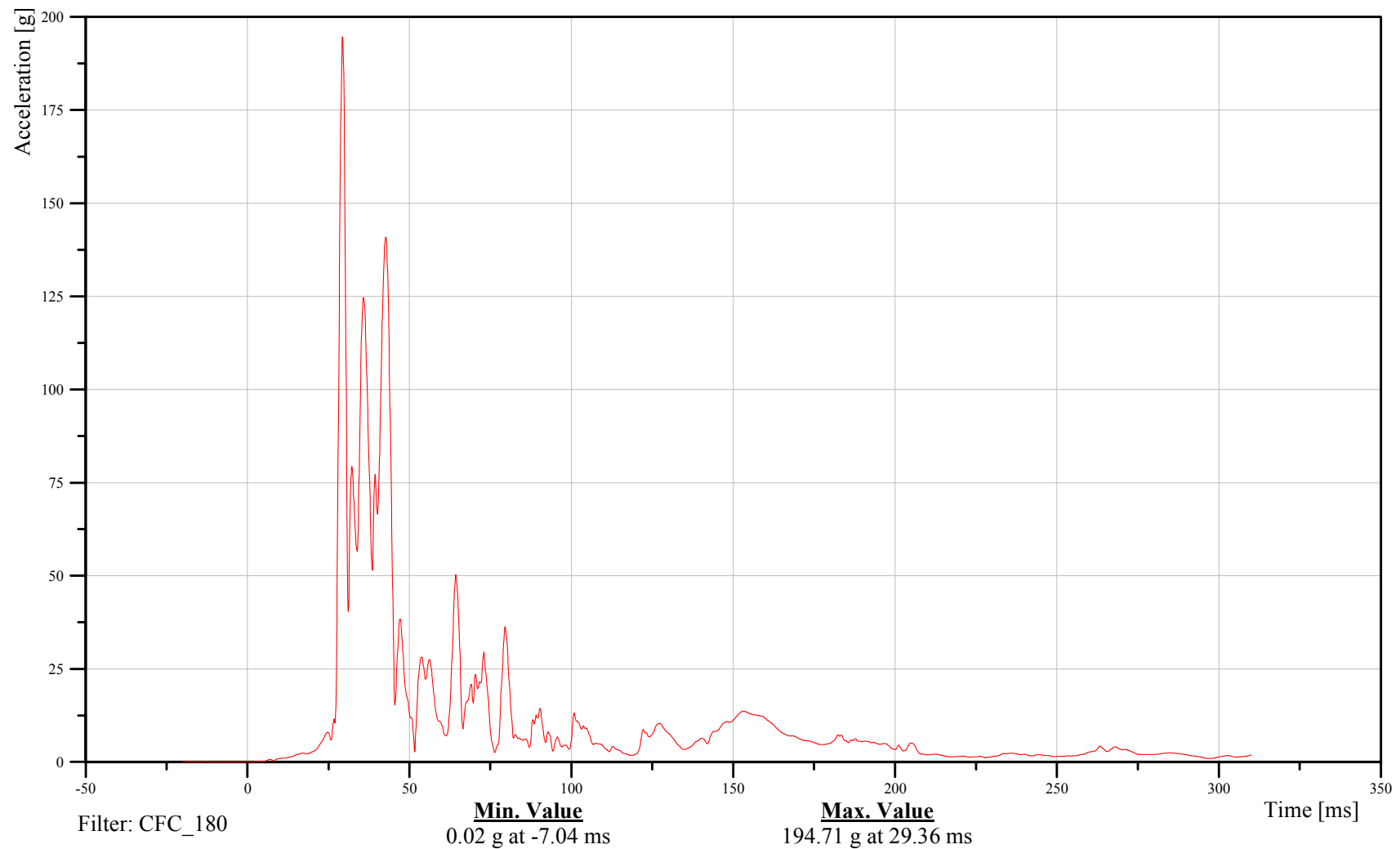
Time: 13:44

Customer: VRTC

14ABRI01LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 2 Accel X

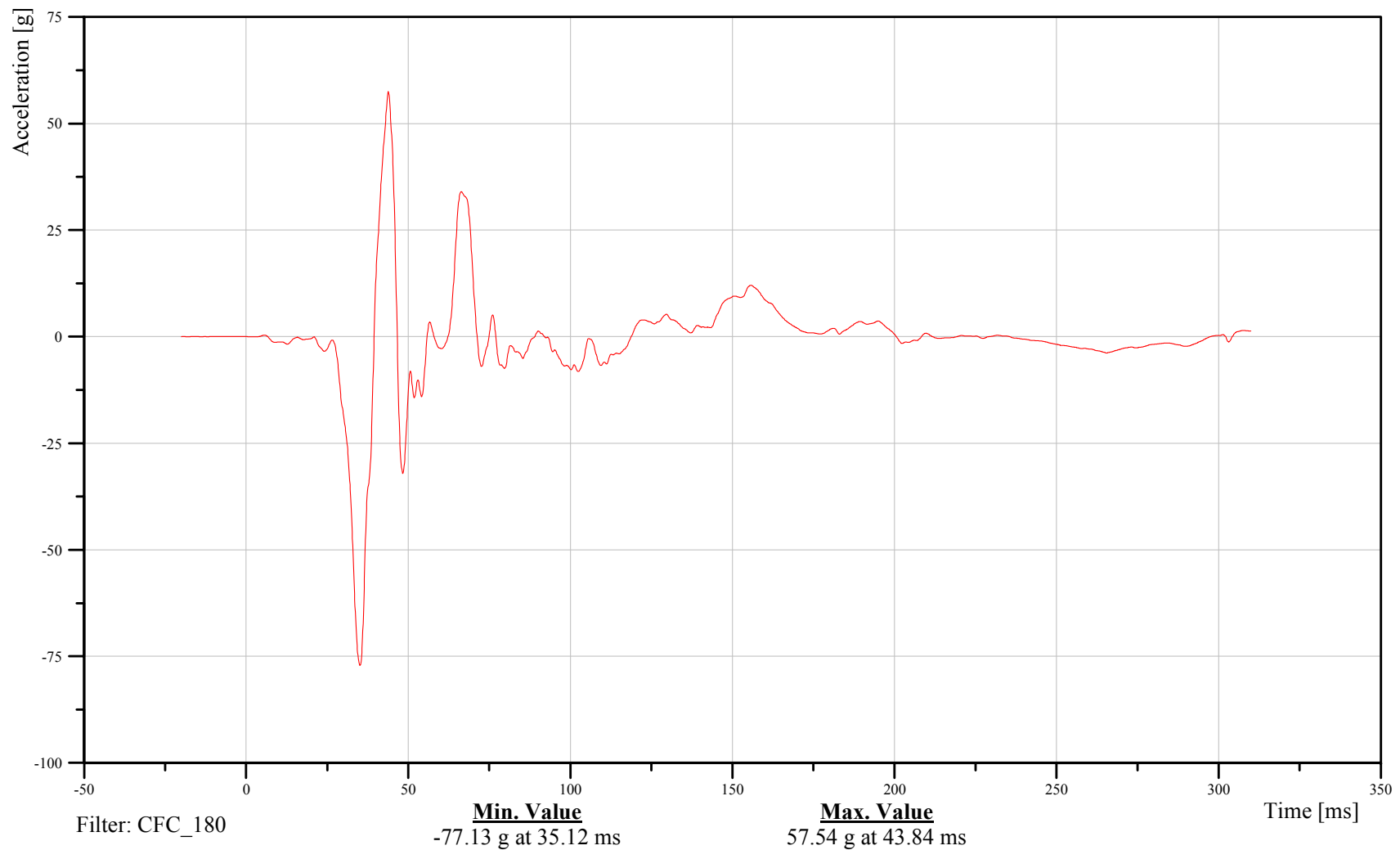
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI02LES2ACXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 2 Accel Y

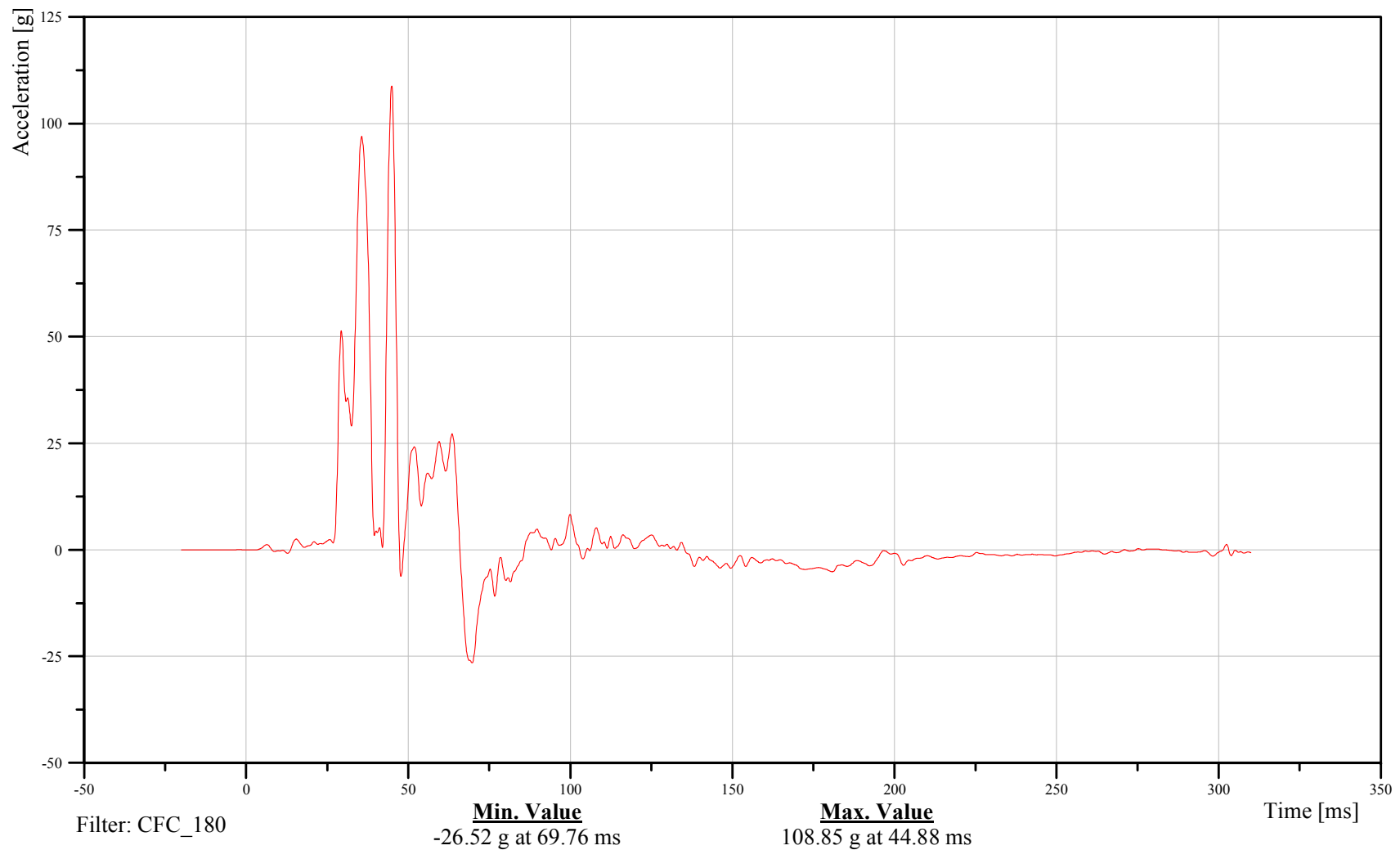
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI02LES2ACYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 2 Accel Z

Date: 08/17/2005

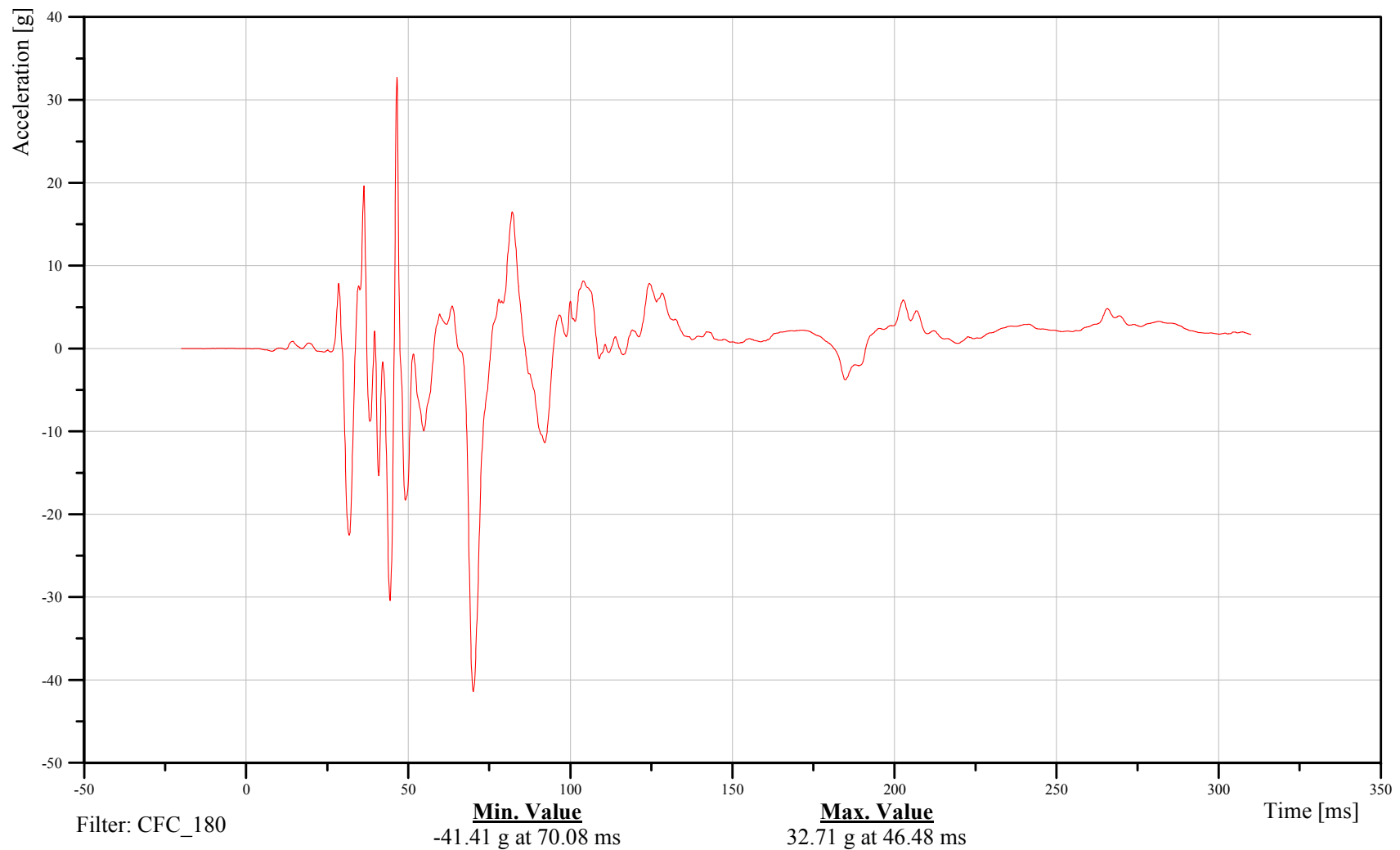
Time: 13:44

Customer: VRTC

14ABRI02LES2ACZC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 2 Accel Resultant

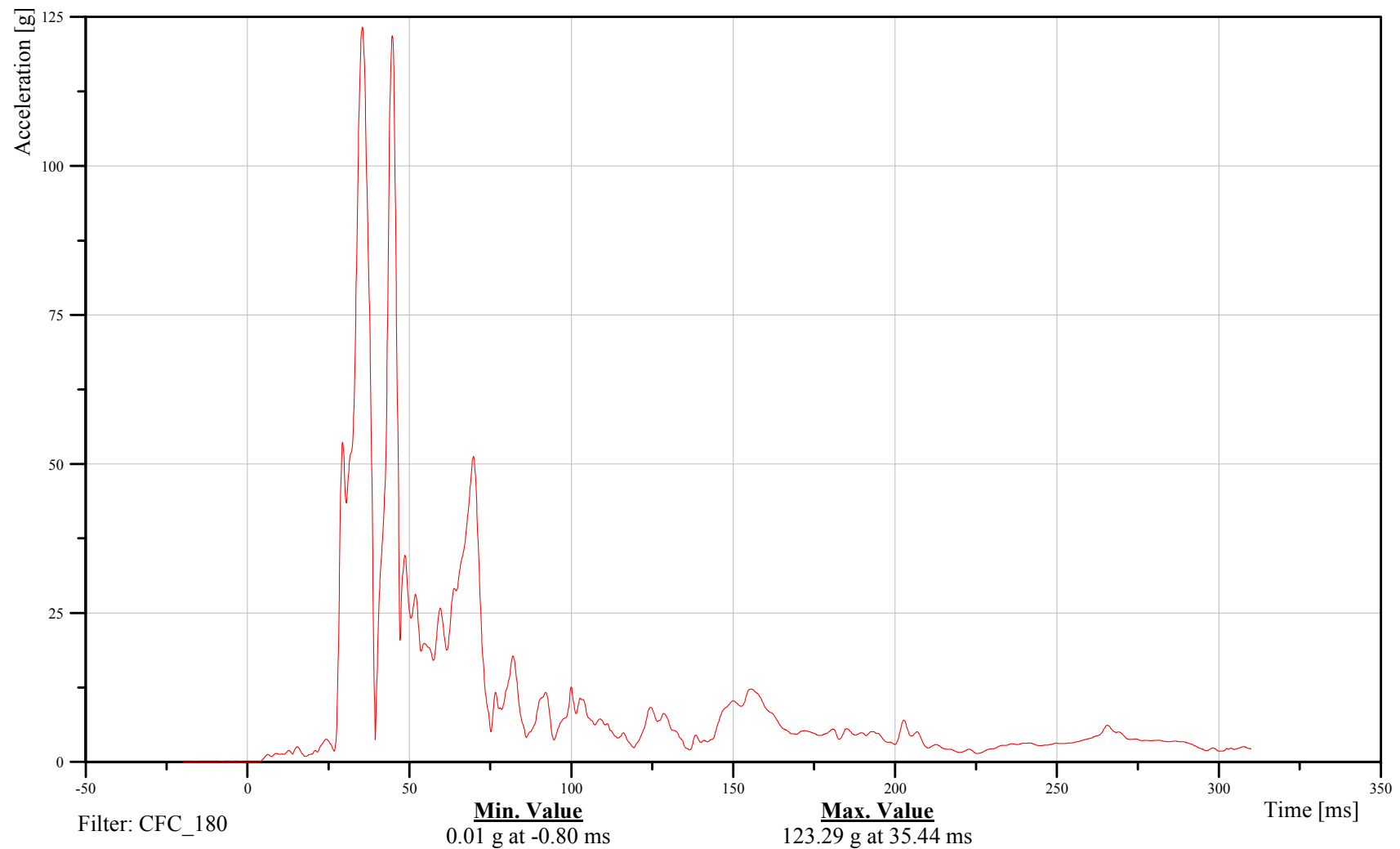
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI02LES2ACRC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Shoulder Disp. Y

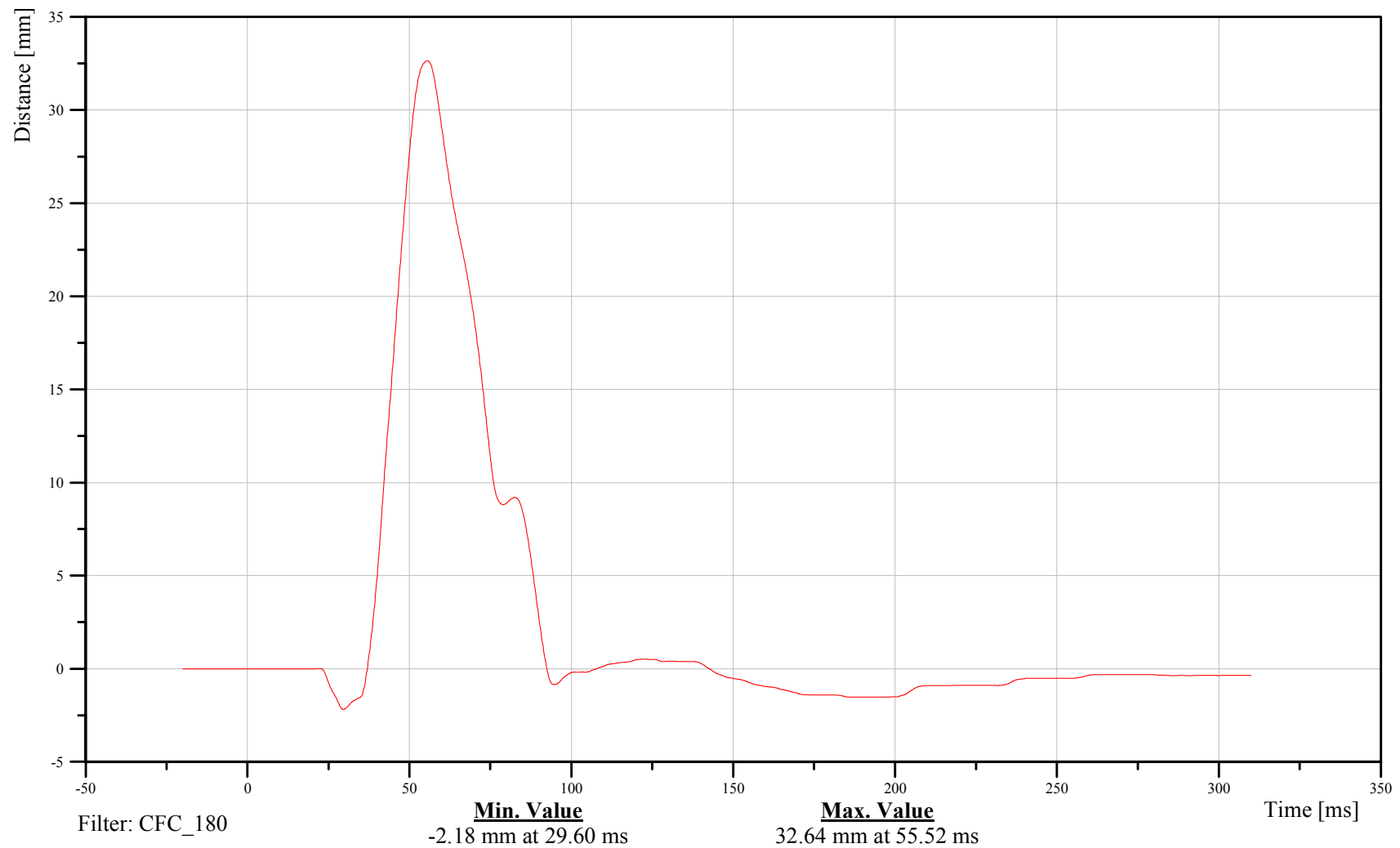
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SHRILE00S2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 1 Disp. Y

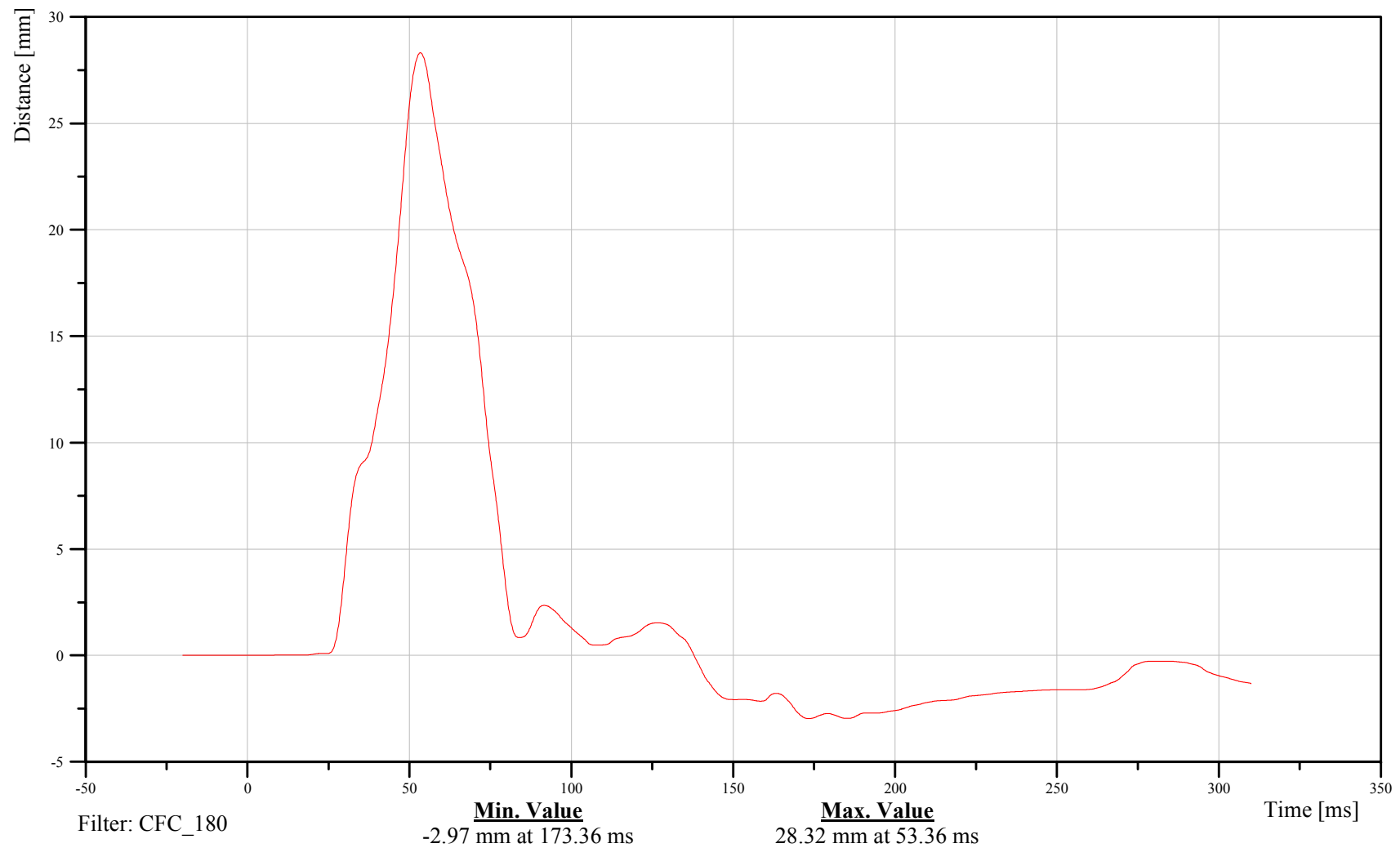
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI01LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 2 Disp. Y

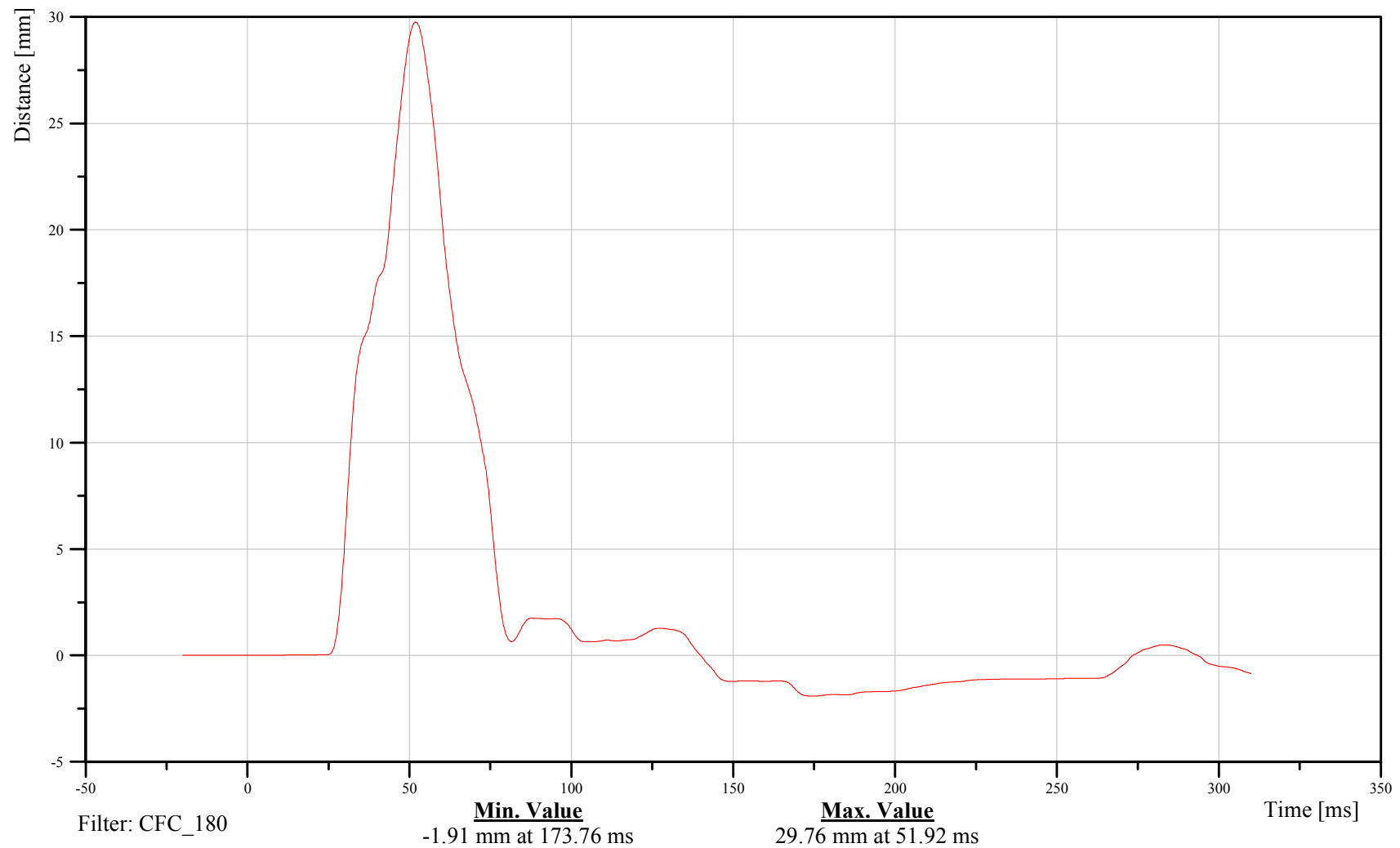
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI02LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Thorax Rib 3 Disp. Y

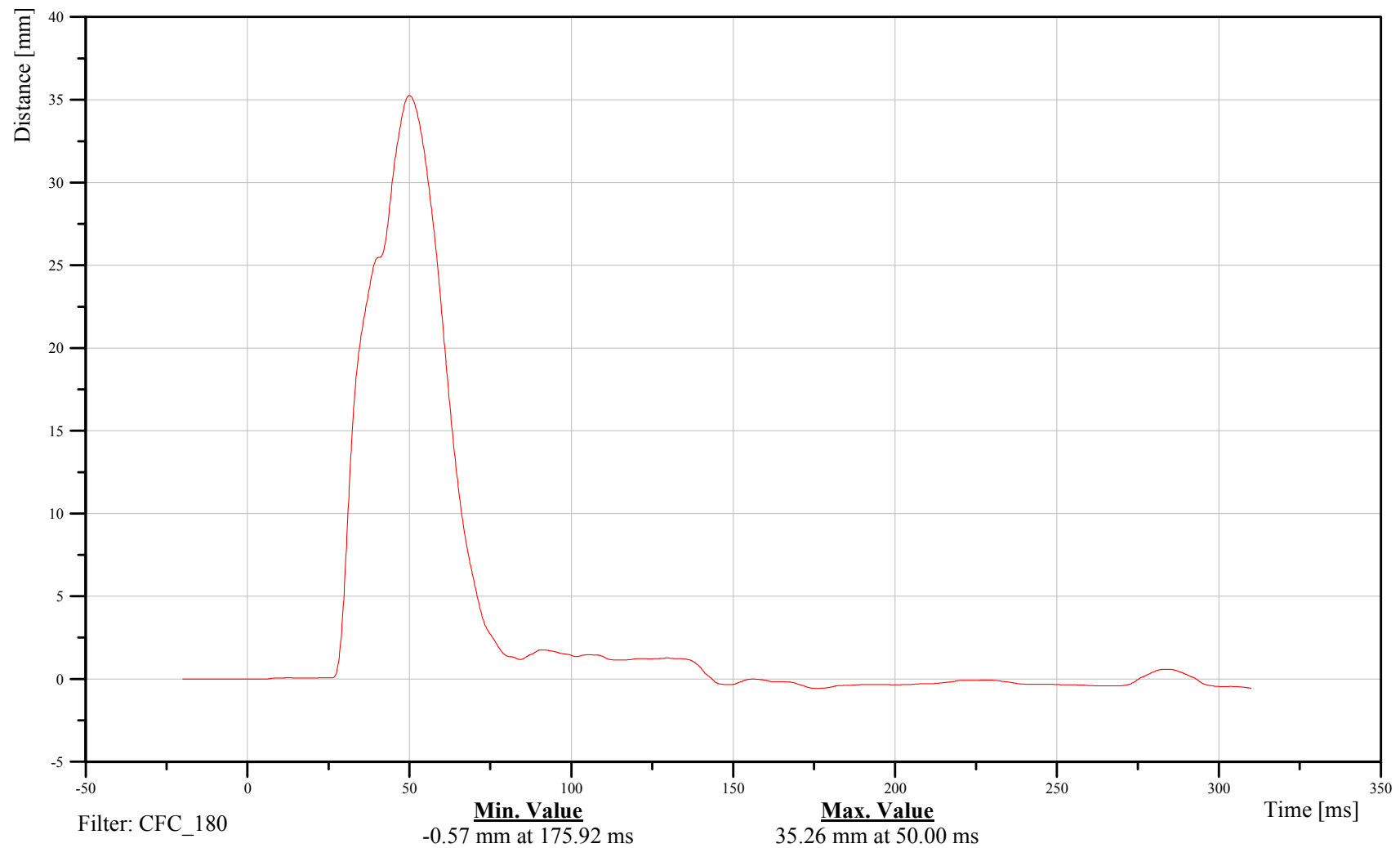
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14TRRI03LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 1 Disp. Y

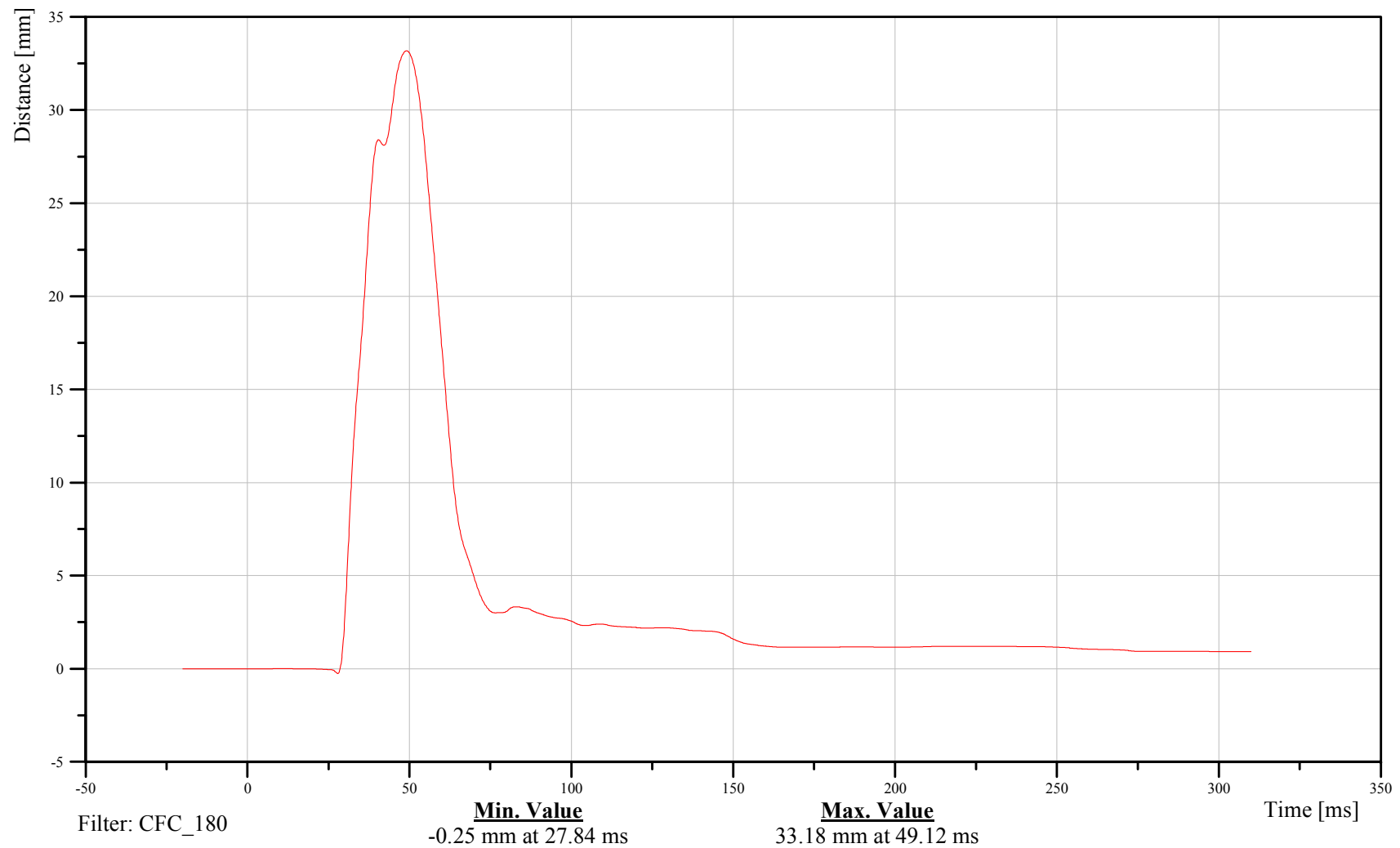
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI01LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Abdomin Rib 2 Disp. Y

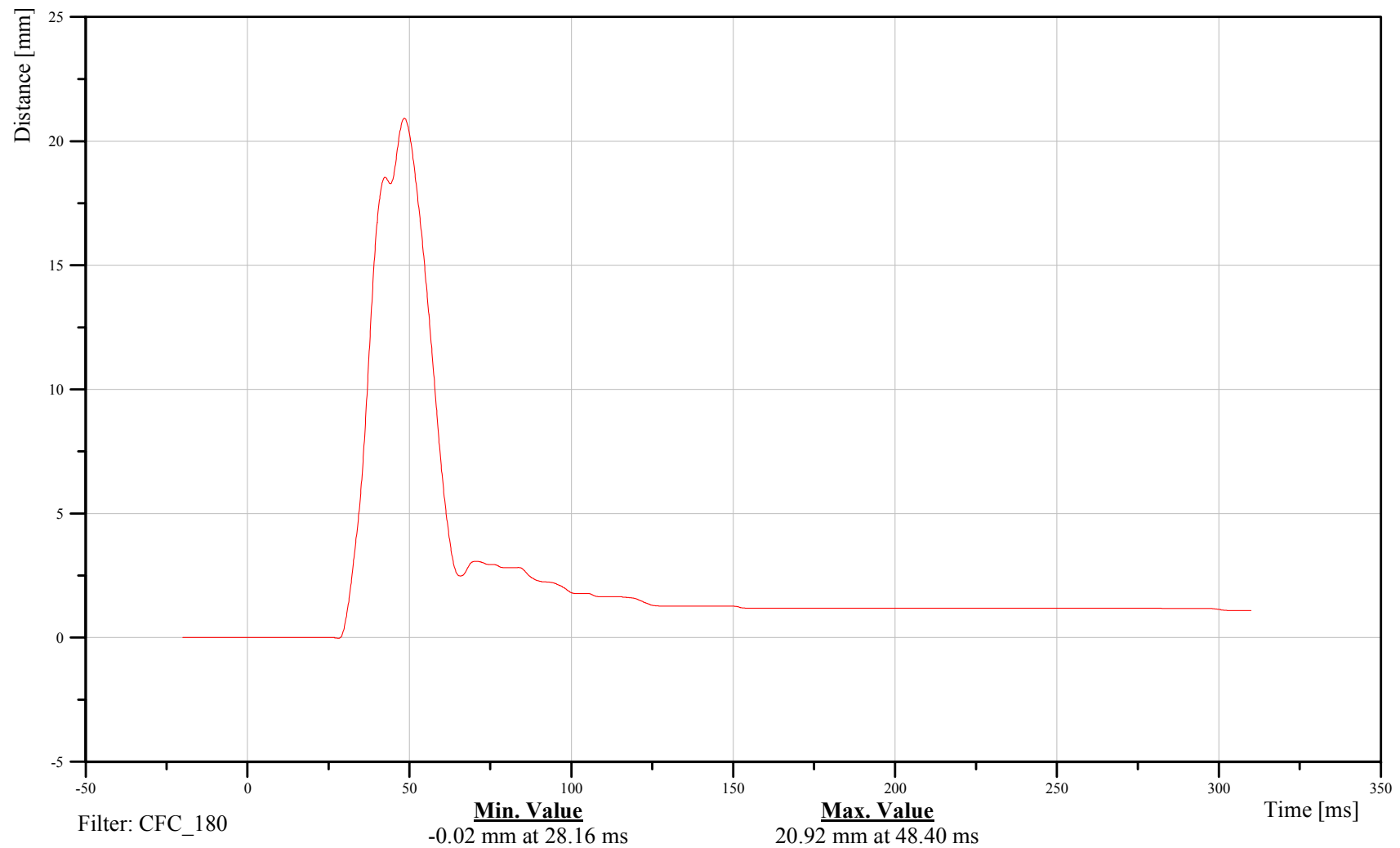
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ABRI02LES2DSYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Pelvis Accel X

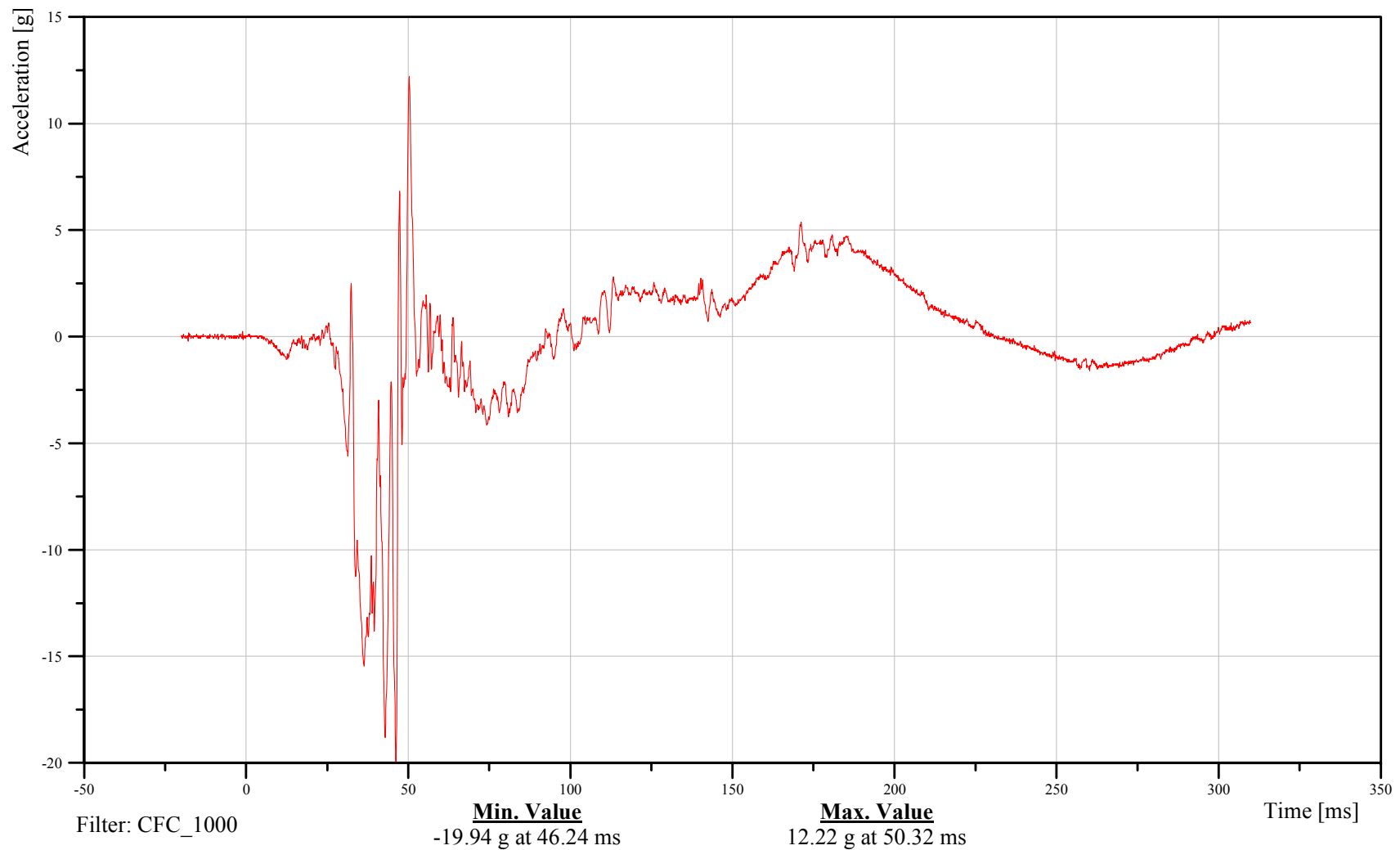
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14PELVCG00S2ACXA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Pelvis Accel Y

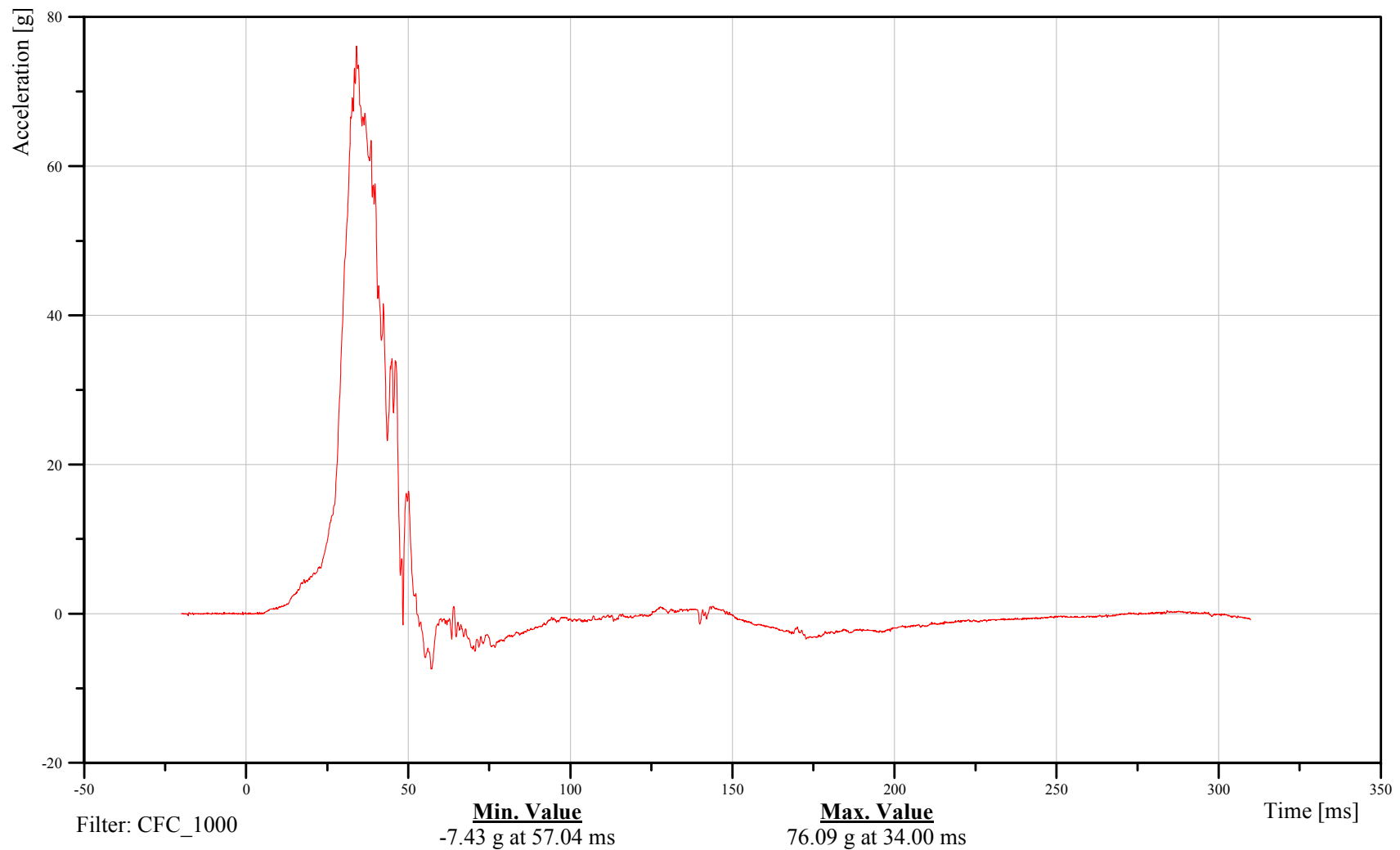
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14PELVCG00S2ACYA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Pelvis Accel Z

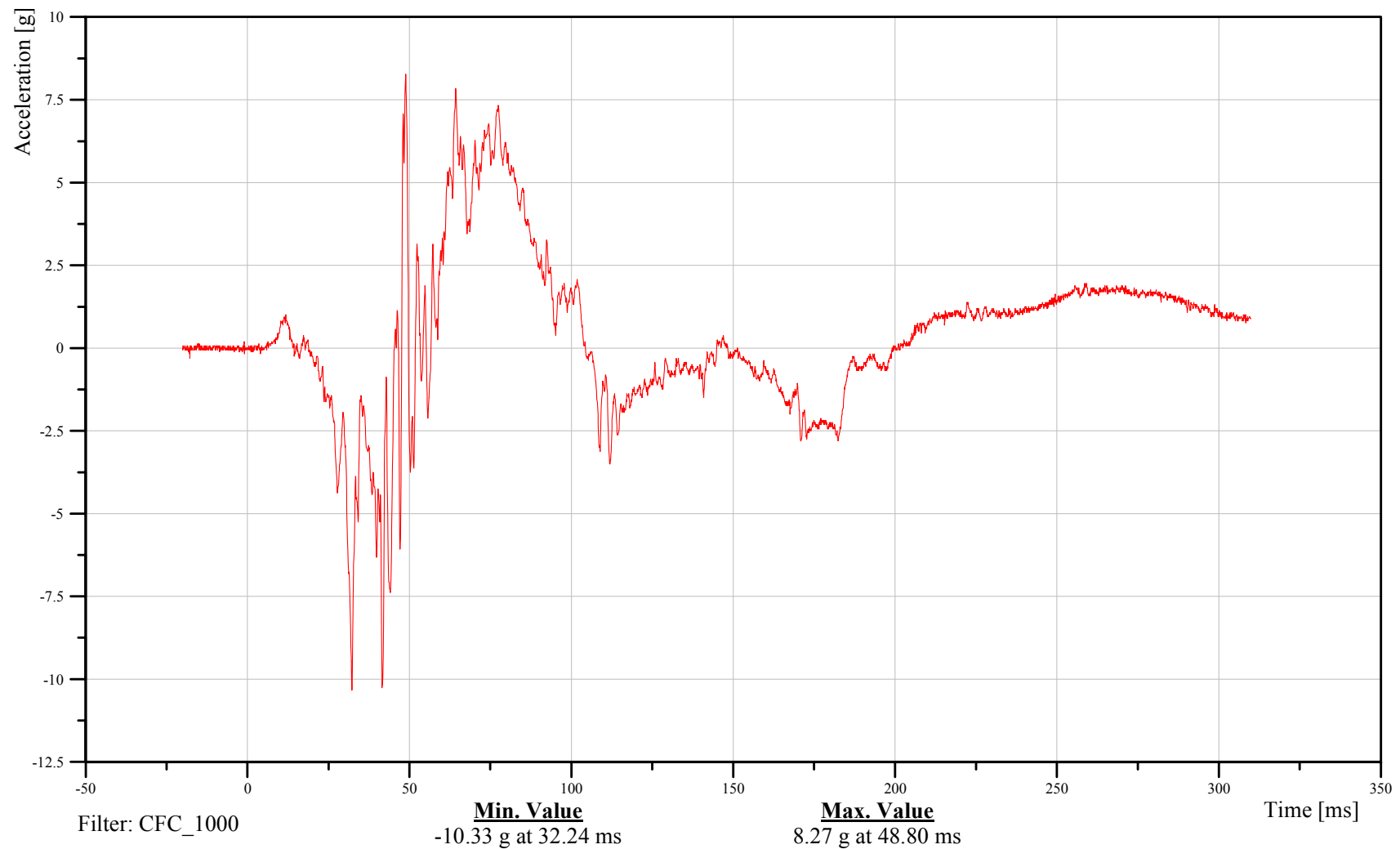
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14PELVCG00S2ACZA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Pelvis Accel Resultant

Date: 08/17/2005

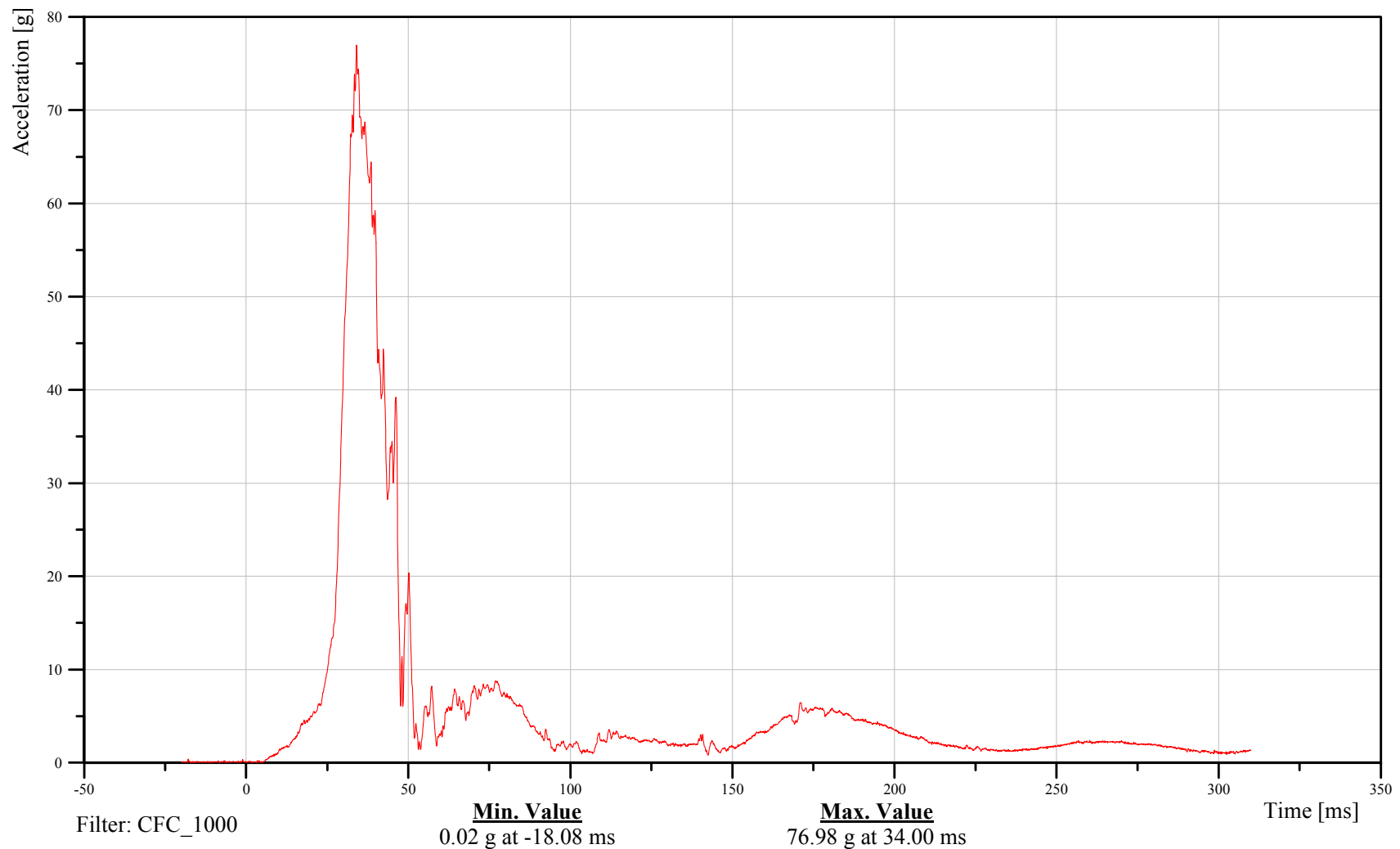
Time: 13:44

Customer: VRTC

14PELVCG00S2ACRA

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Acetabulum Force Y

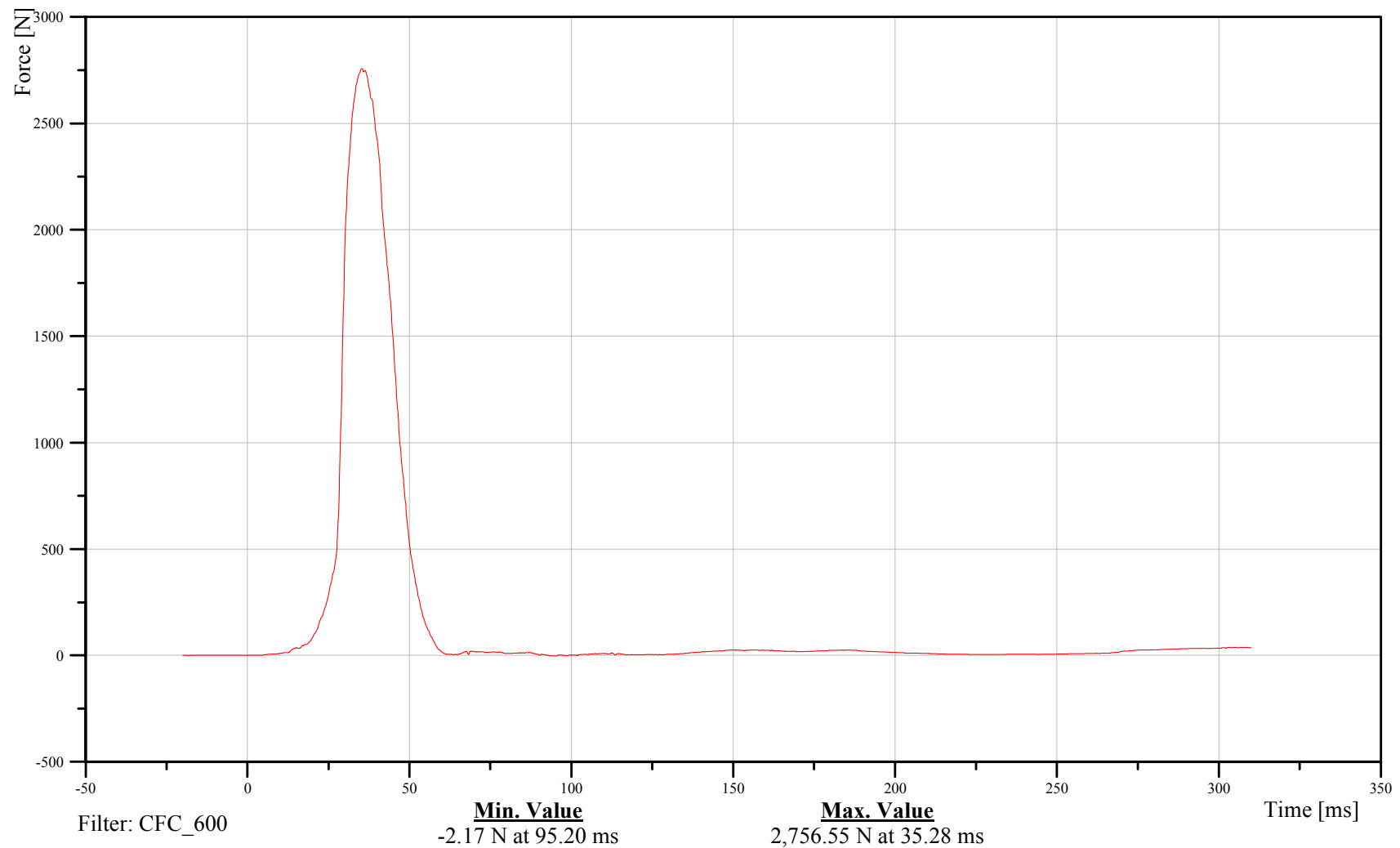
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14ACTBLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Illiac Wing Force Y

Date: 08/17/2005

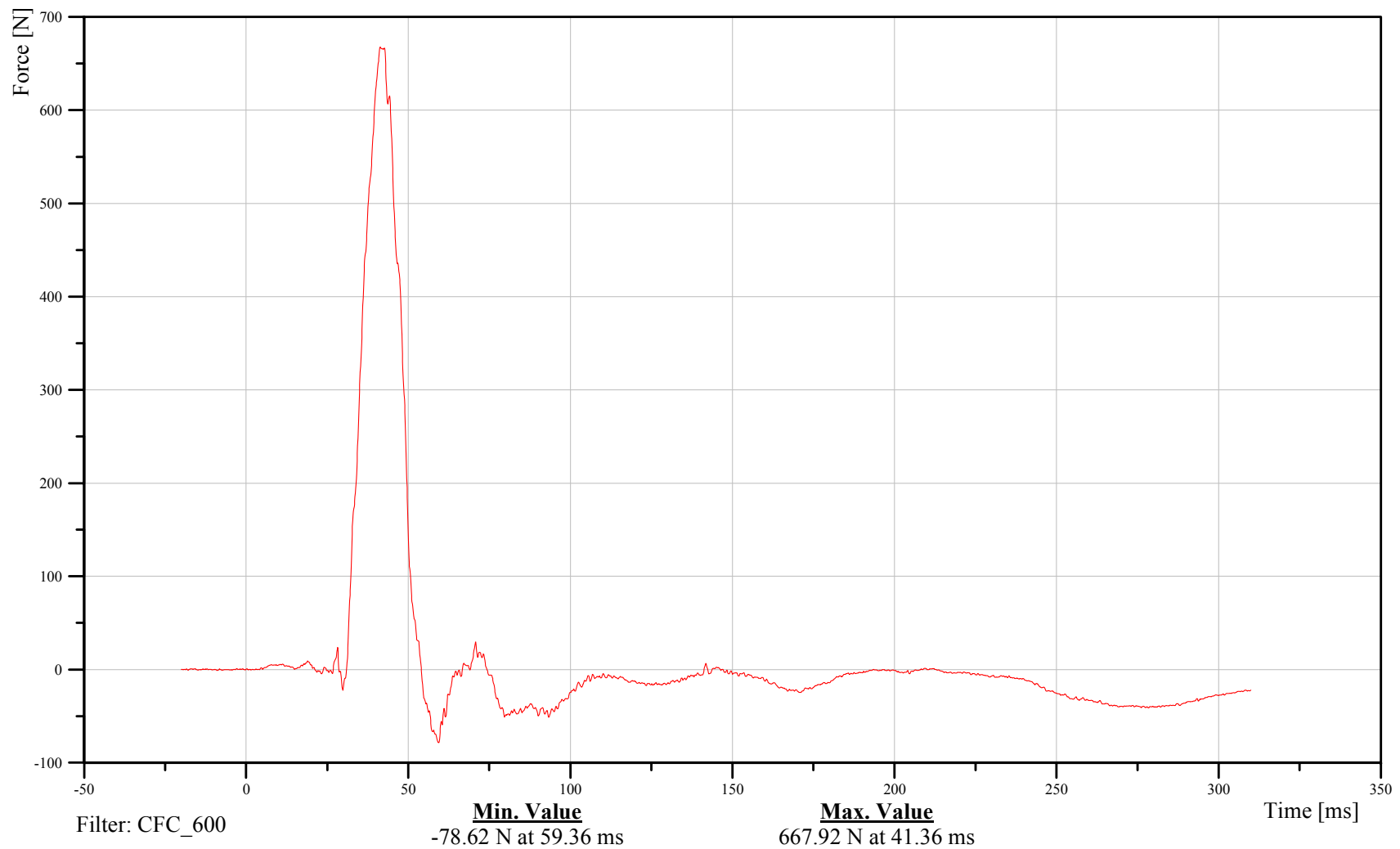
Time: 13:44

Customer: VRTC

14ILACLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Femur Force X

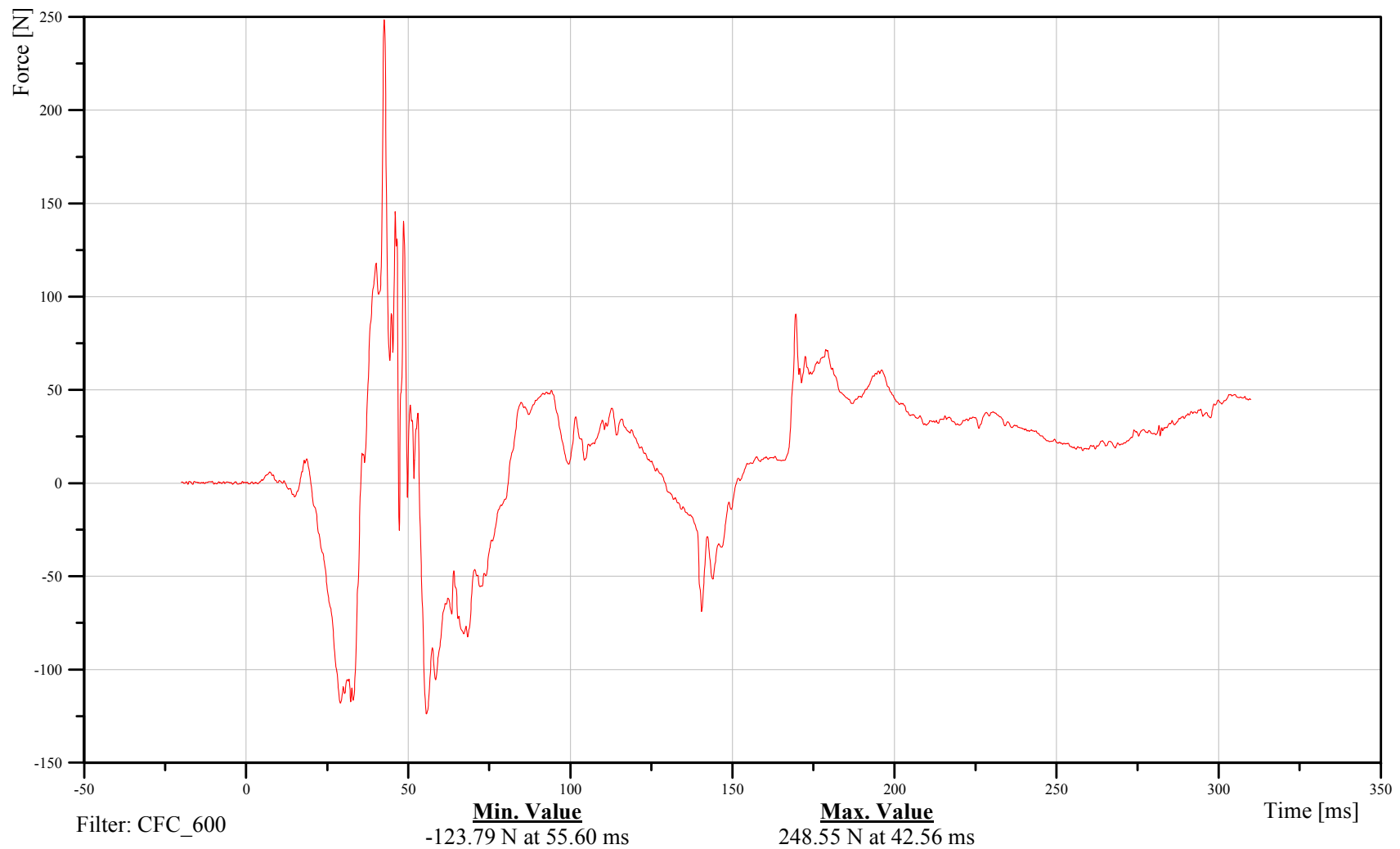
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRLE00S2FOX B

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Femur Force Y

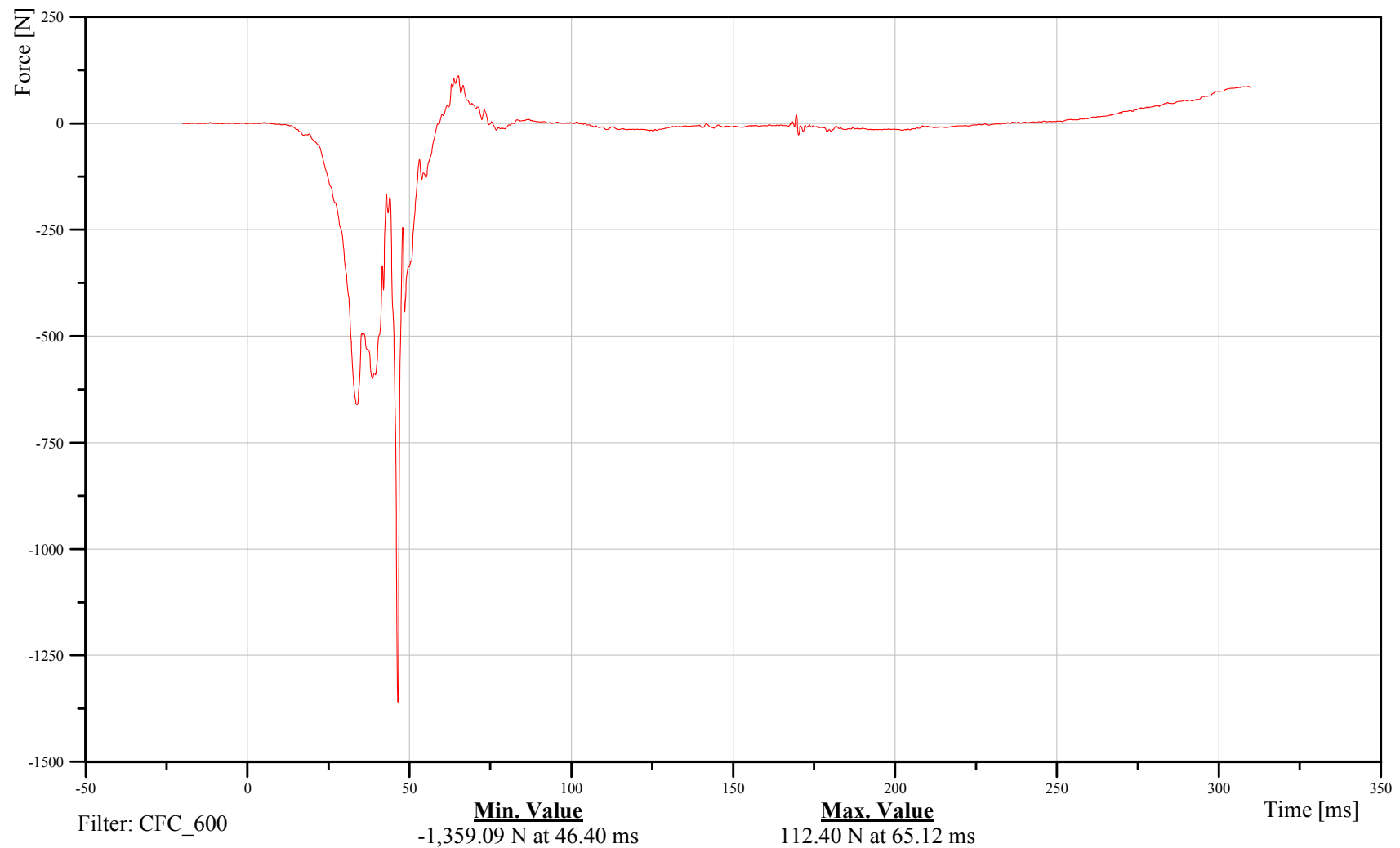
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRLE00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Femur Force Z

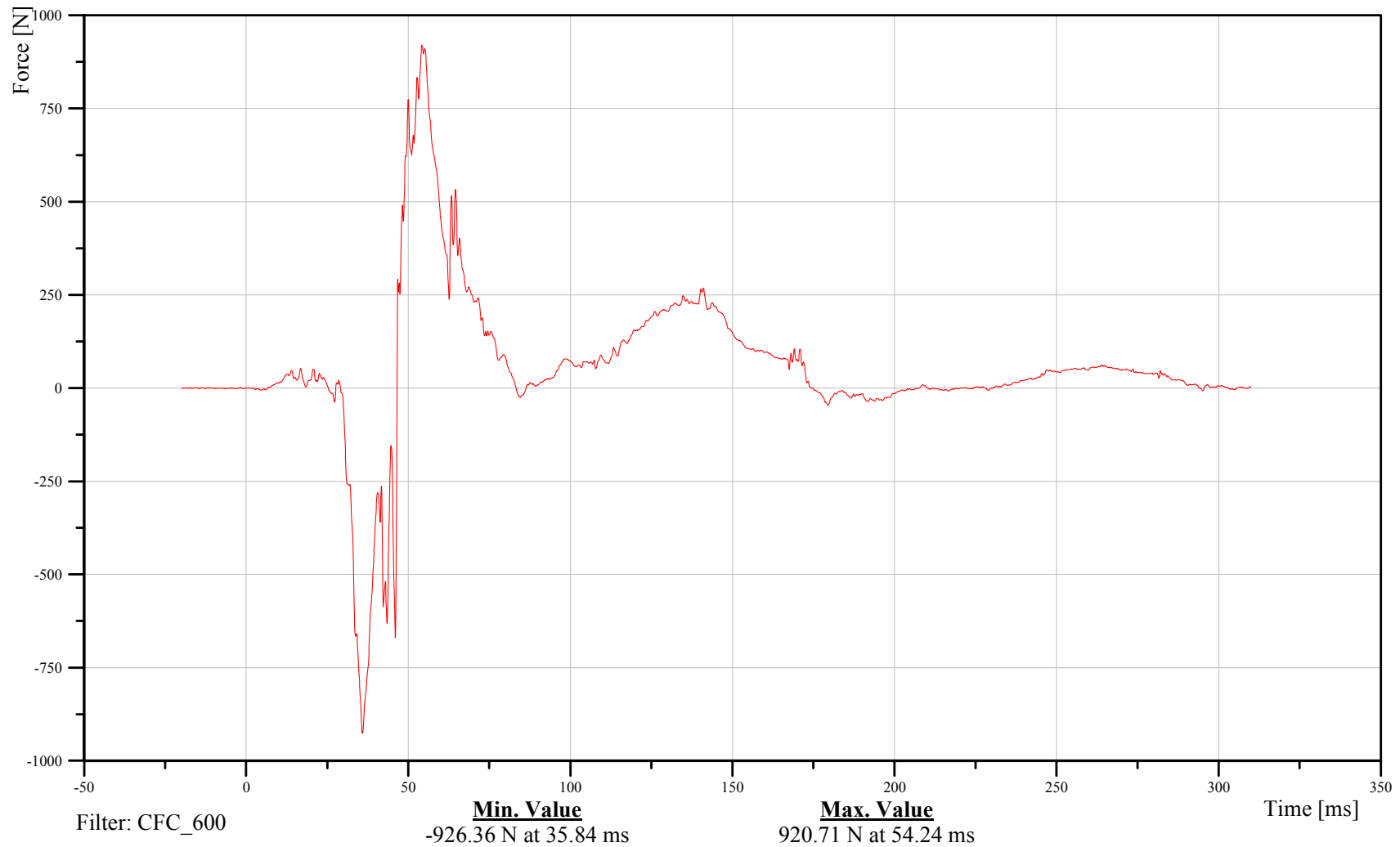
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRLE00S2FOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Femur Moment X

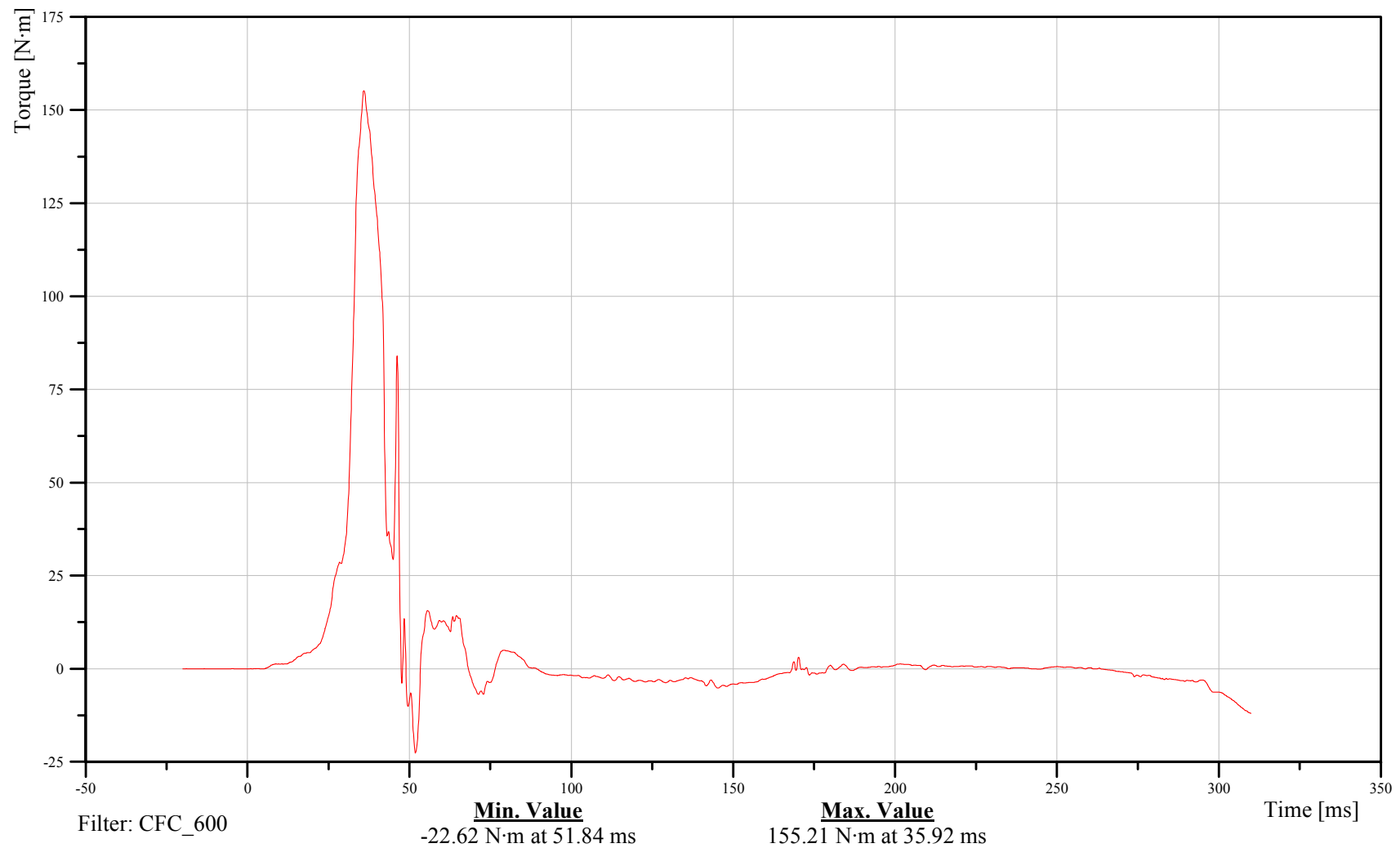
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRLE00S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Femur Moment Y

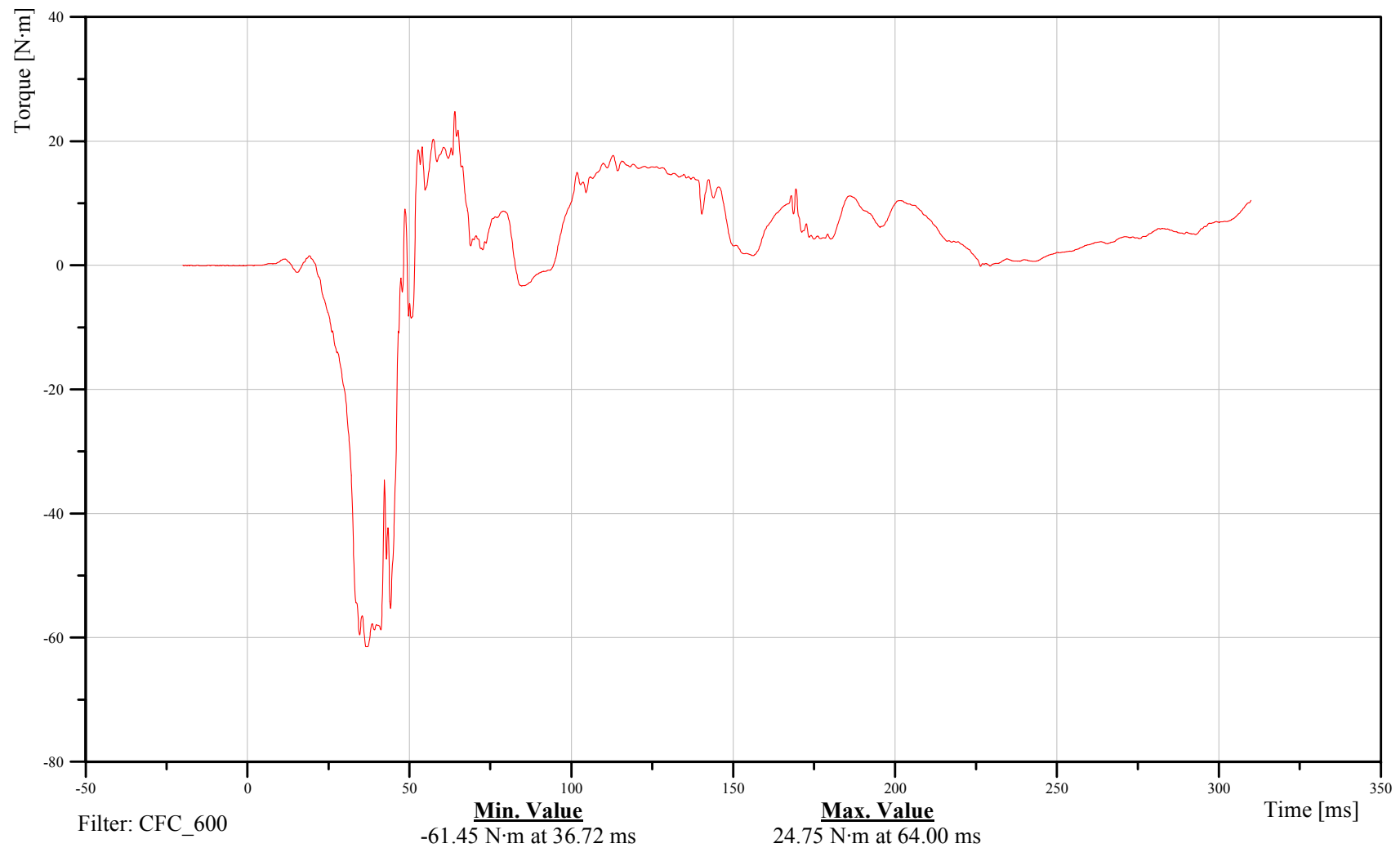
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRLE00S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Left Femur Moment Z

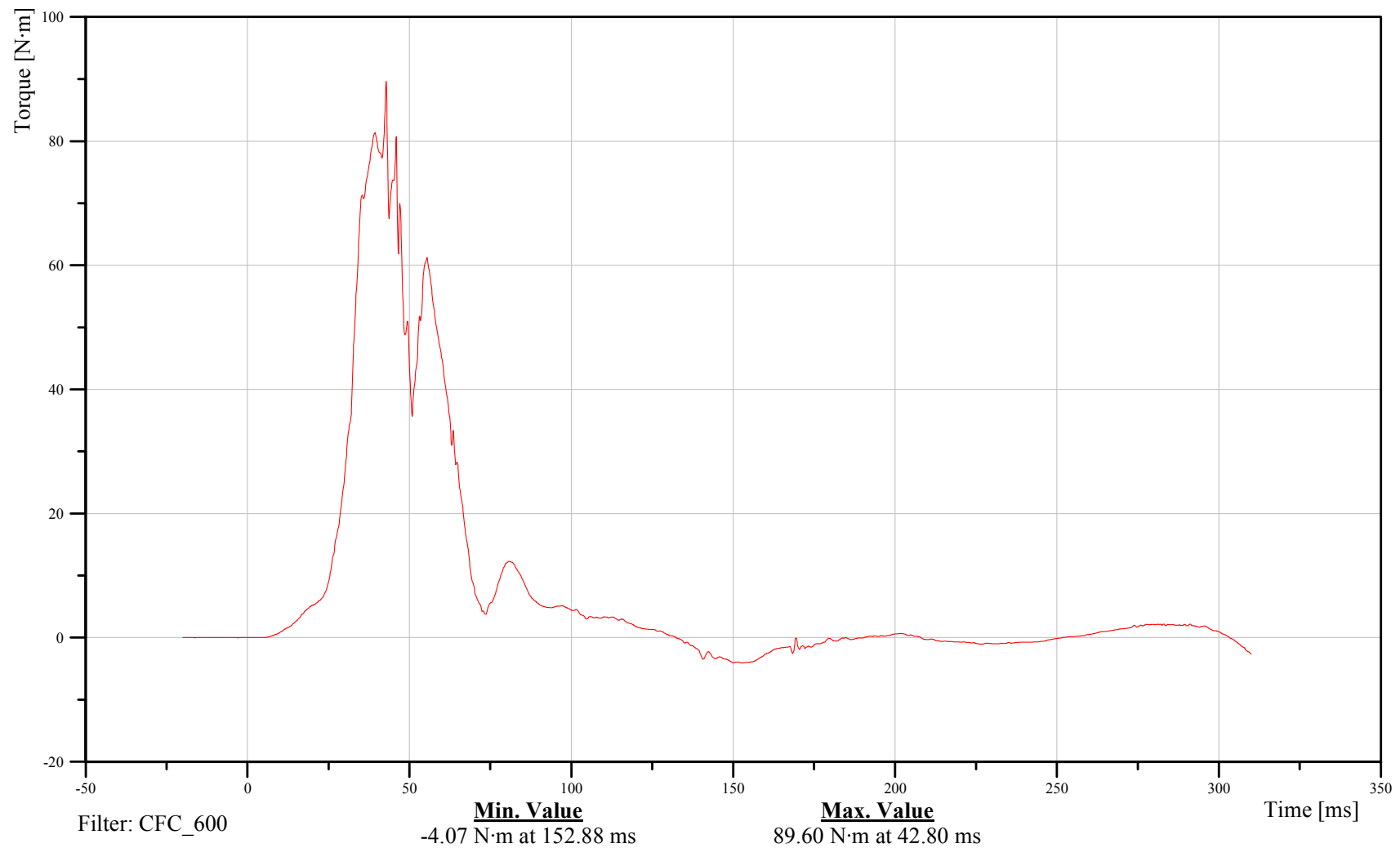
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRLE00S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Right Femur Force X

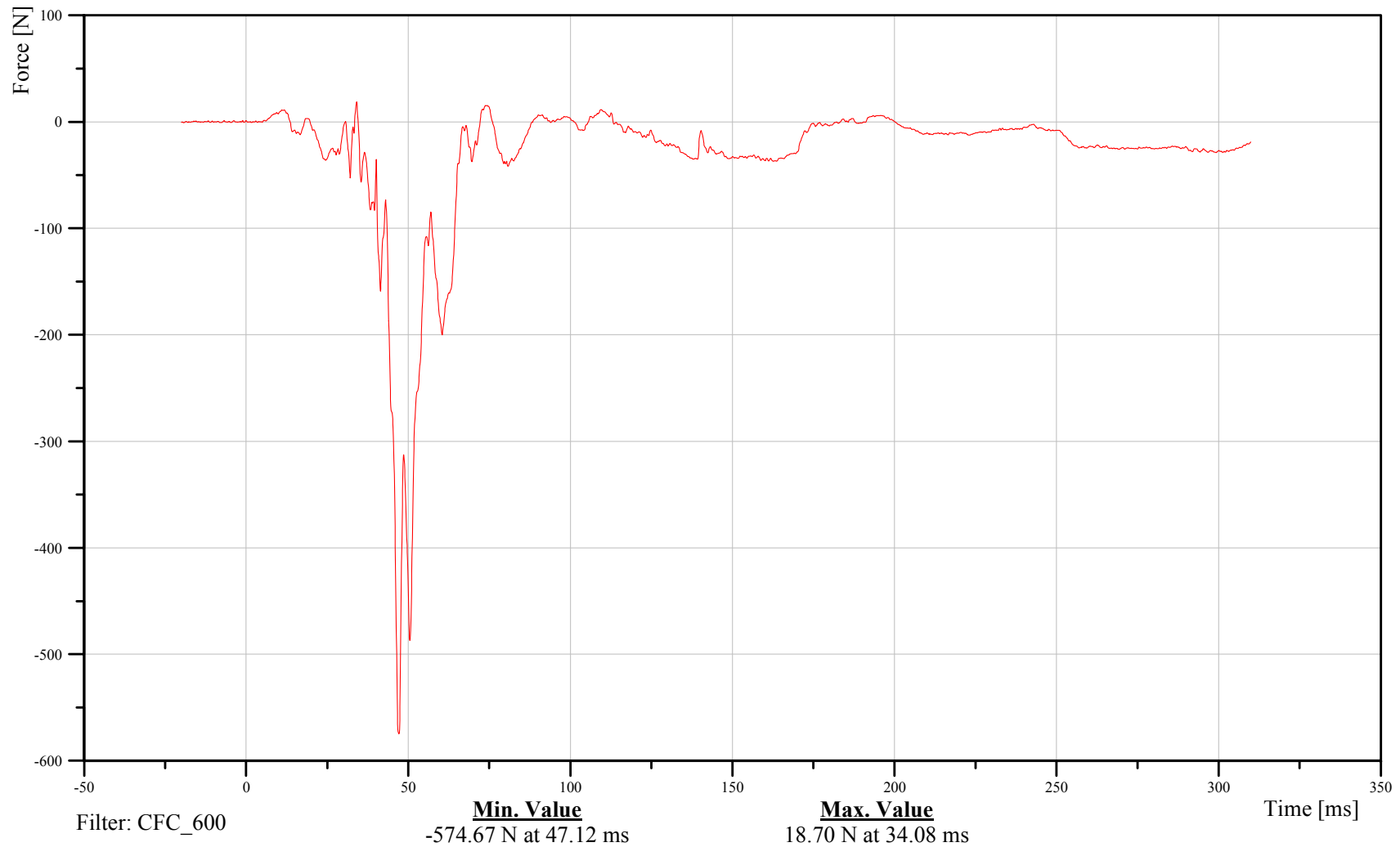
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRRI00S2FOX B

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Right Femur Force Y

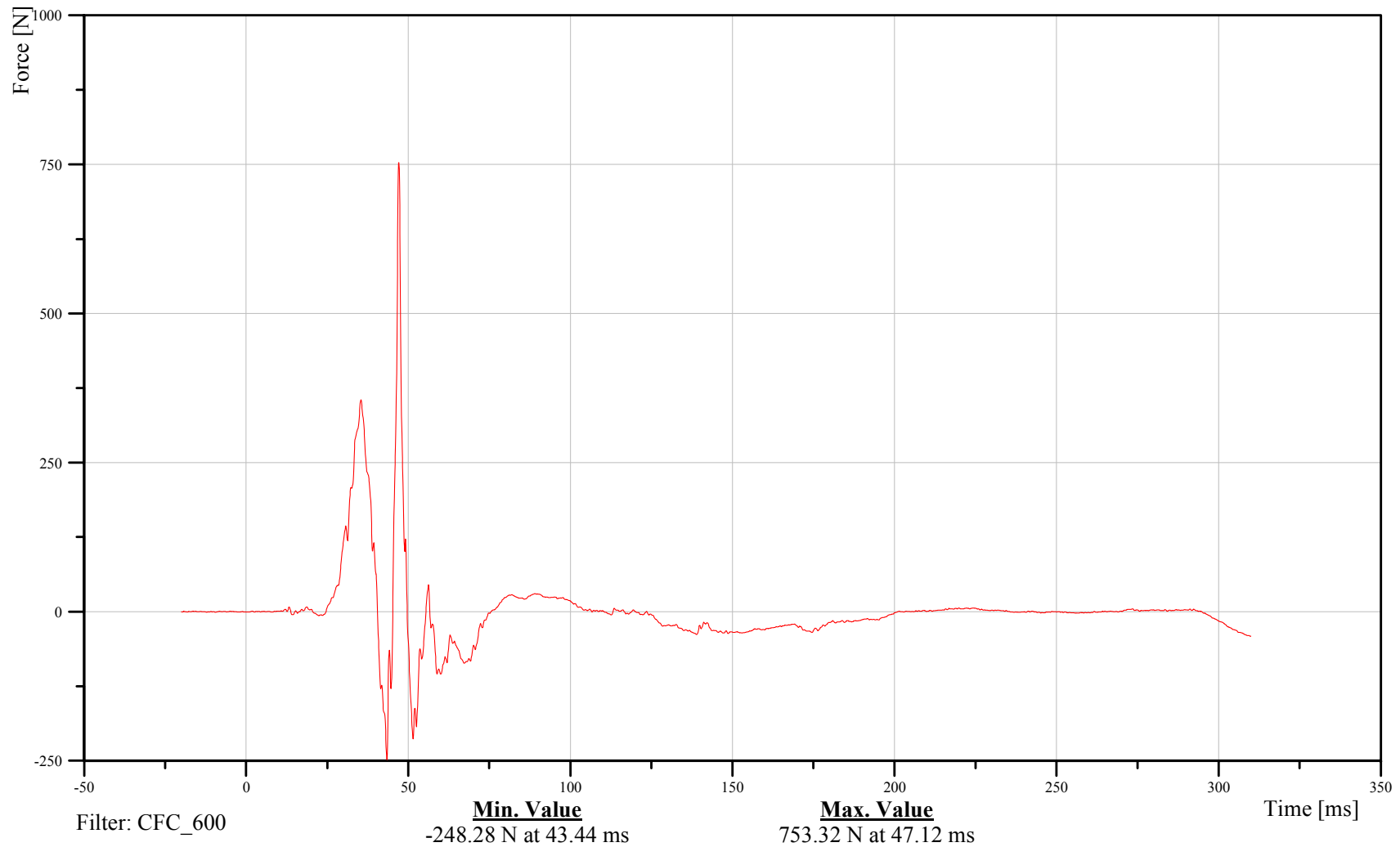
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRRI00S2FOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Right Femur Force Z

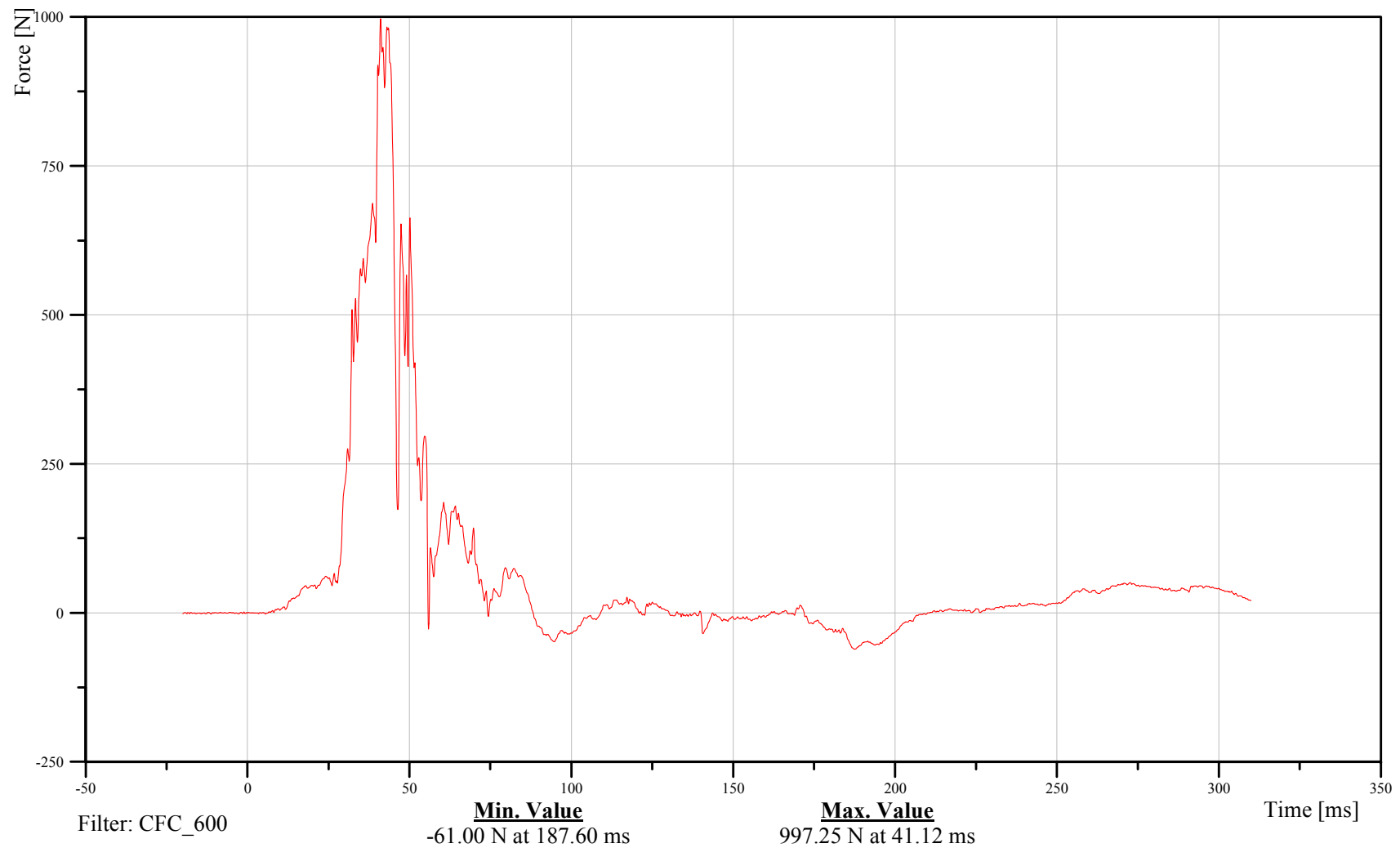
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRRI00S2FOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Right Femur Moment X

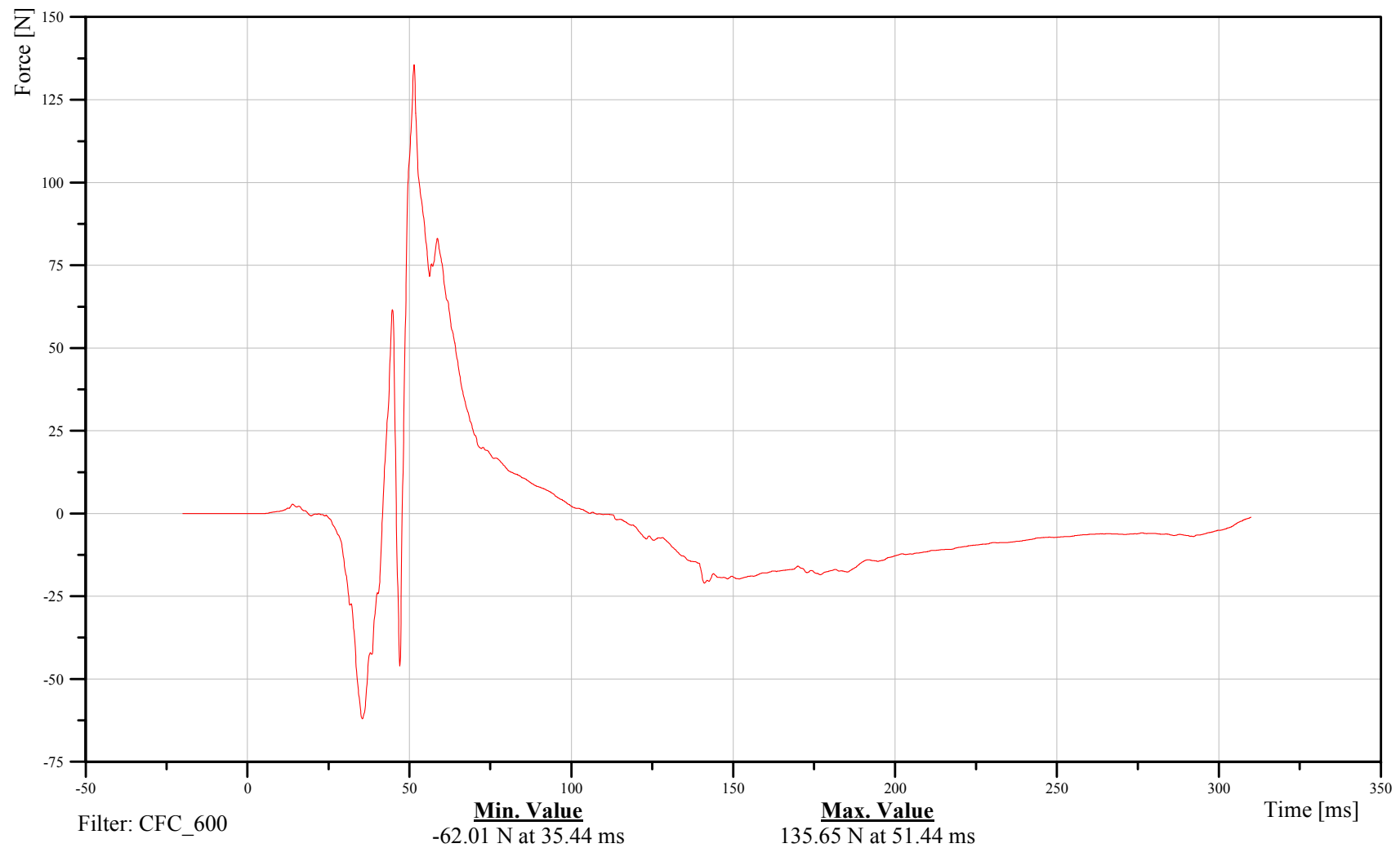
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRRI00S2MOXB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Right Femur Moment Y

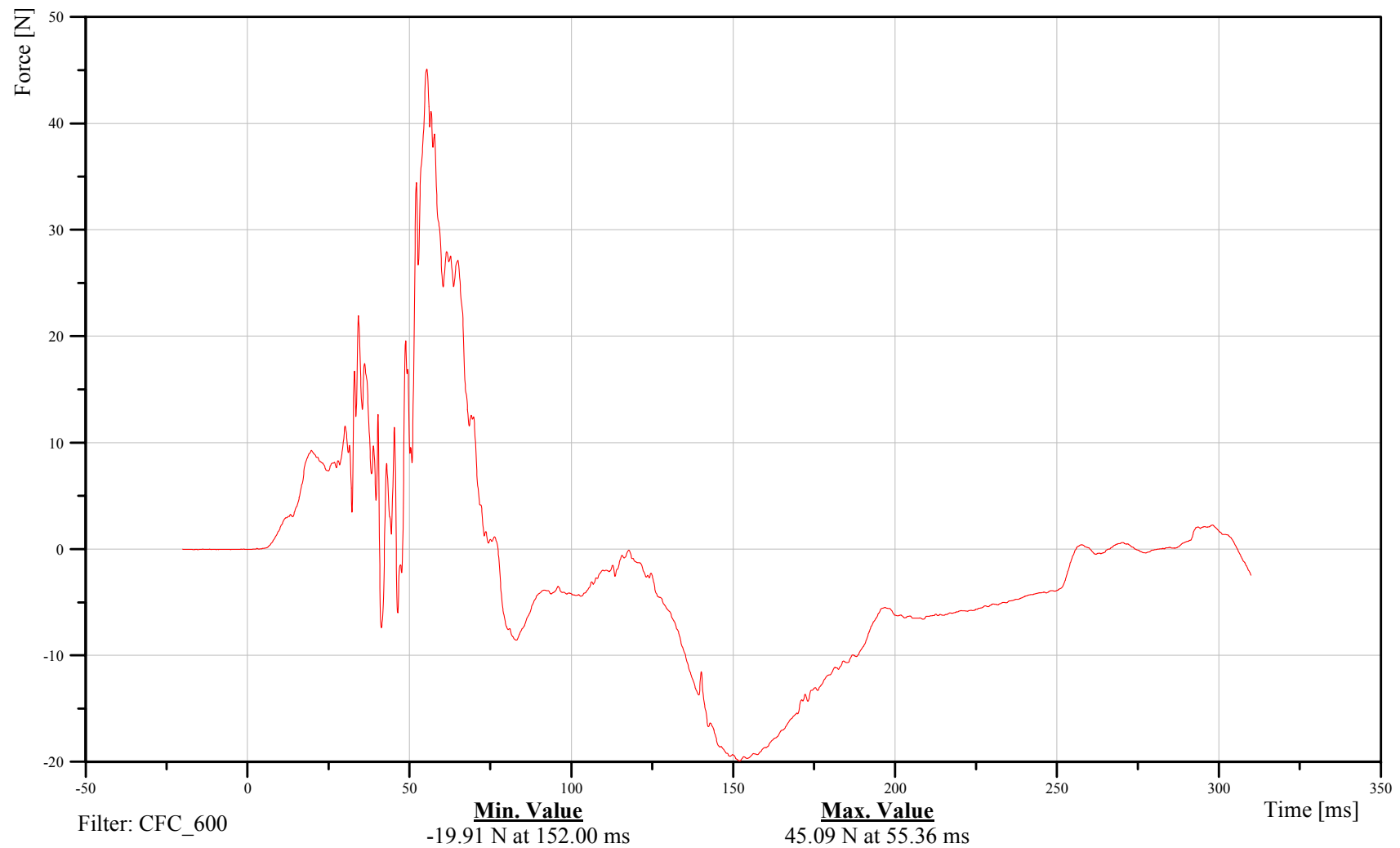
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14FEMRRI00S2MOYB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

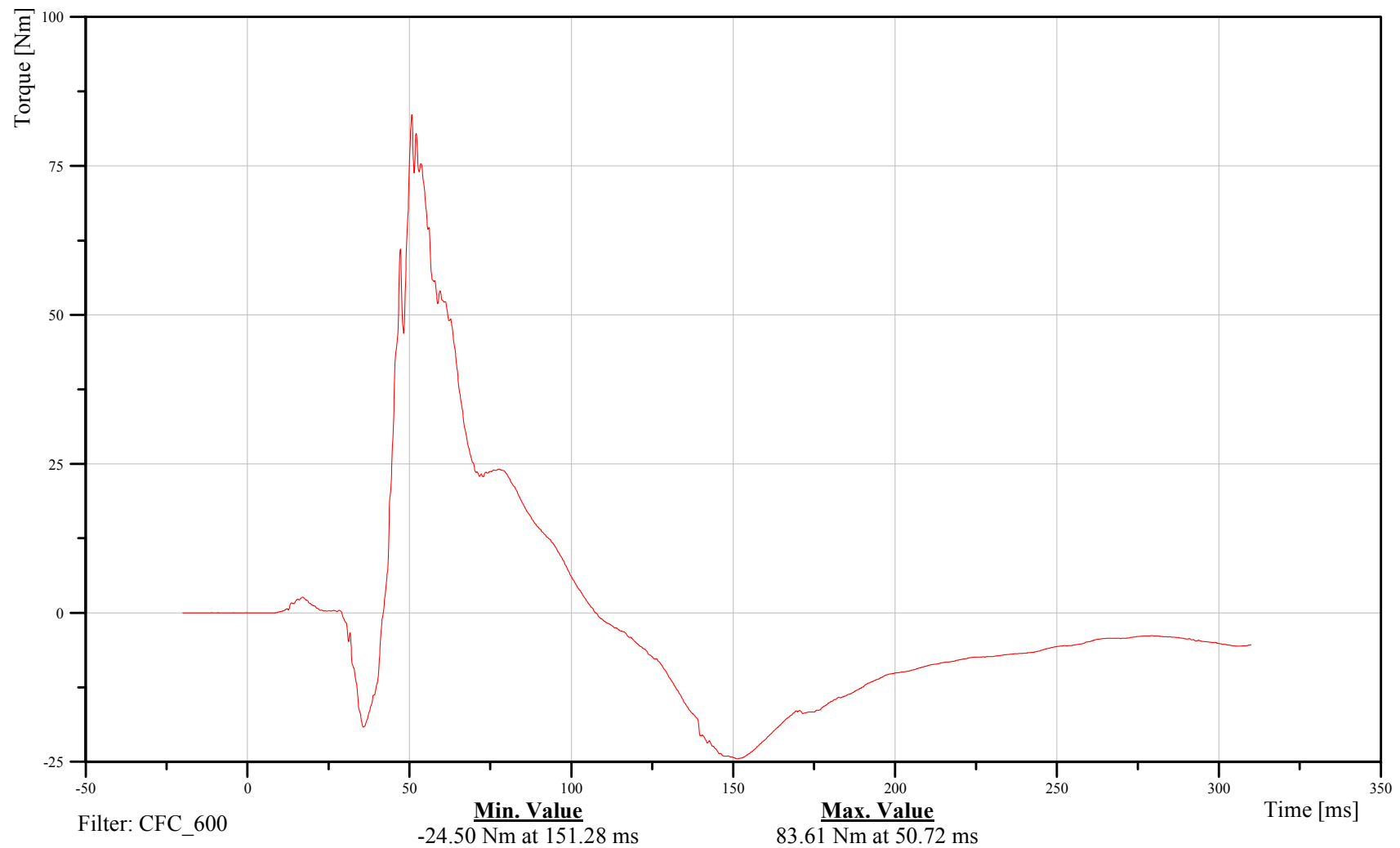
LR Pass. Right Femur Moment Z

Customer: VRTC

14FEMRRI00S2MOZB

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

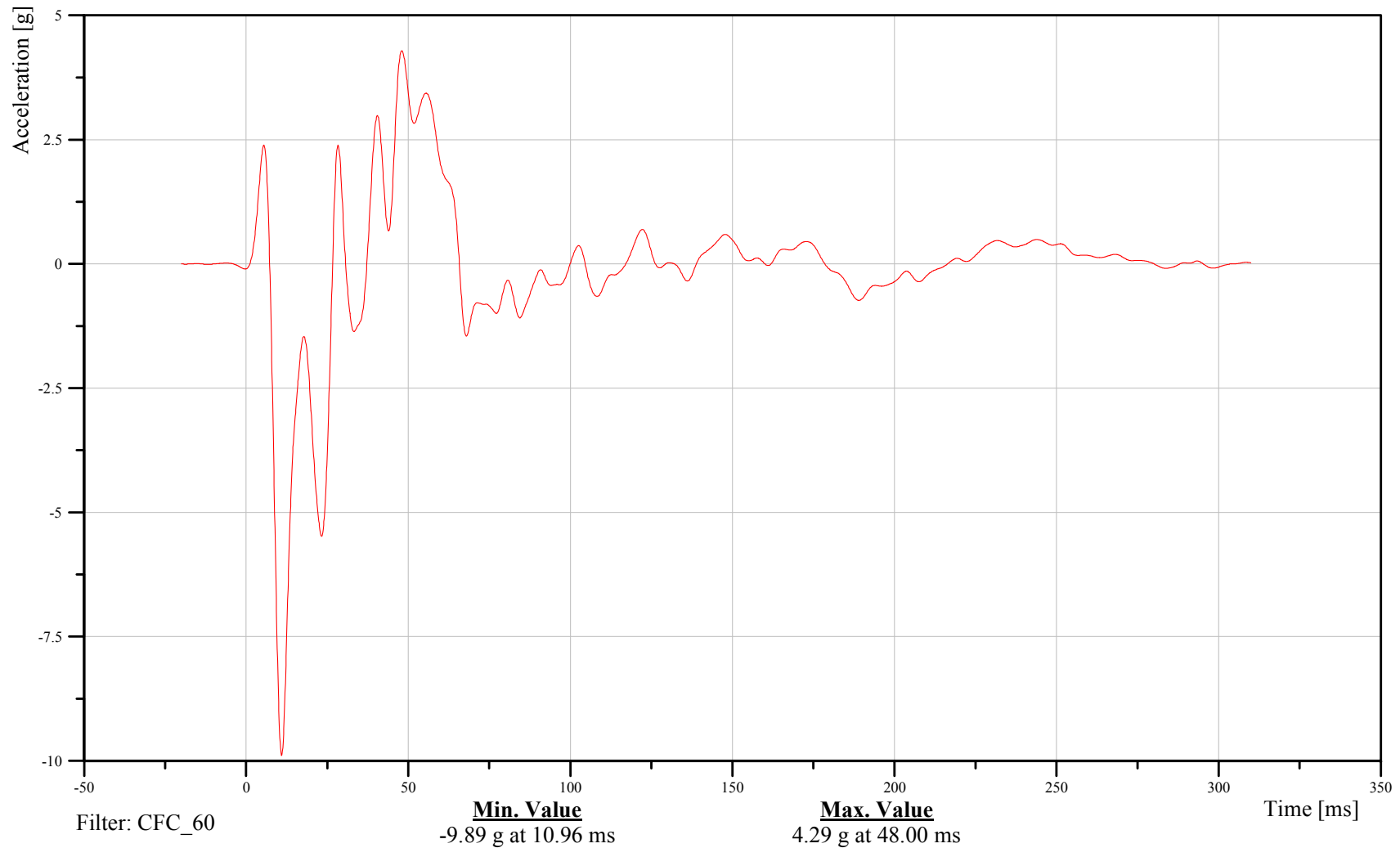
Right Side Sill at Front Seat X-Axis Acceleration

Customer: VRTC

16SILBFR0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Right Side Sill at Front Seat Y-Axis Acceleration

Date: 08/17/2005

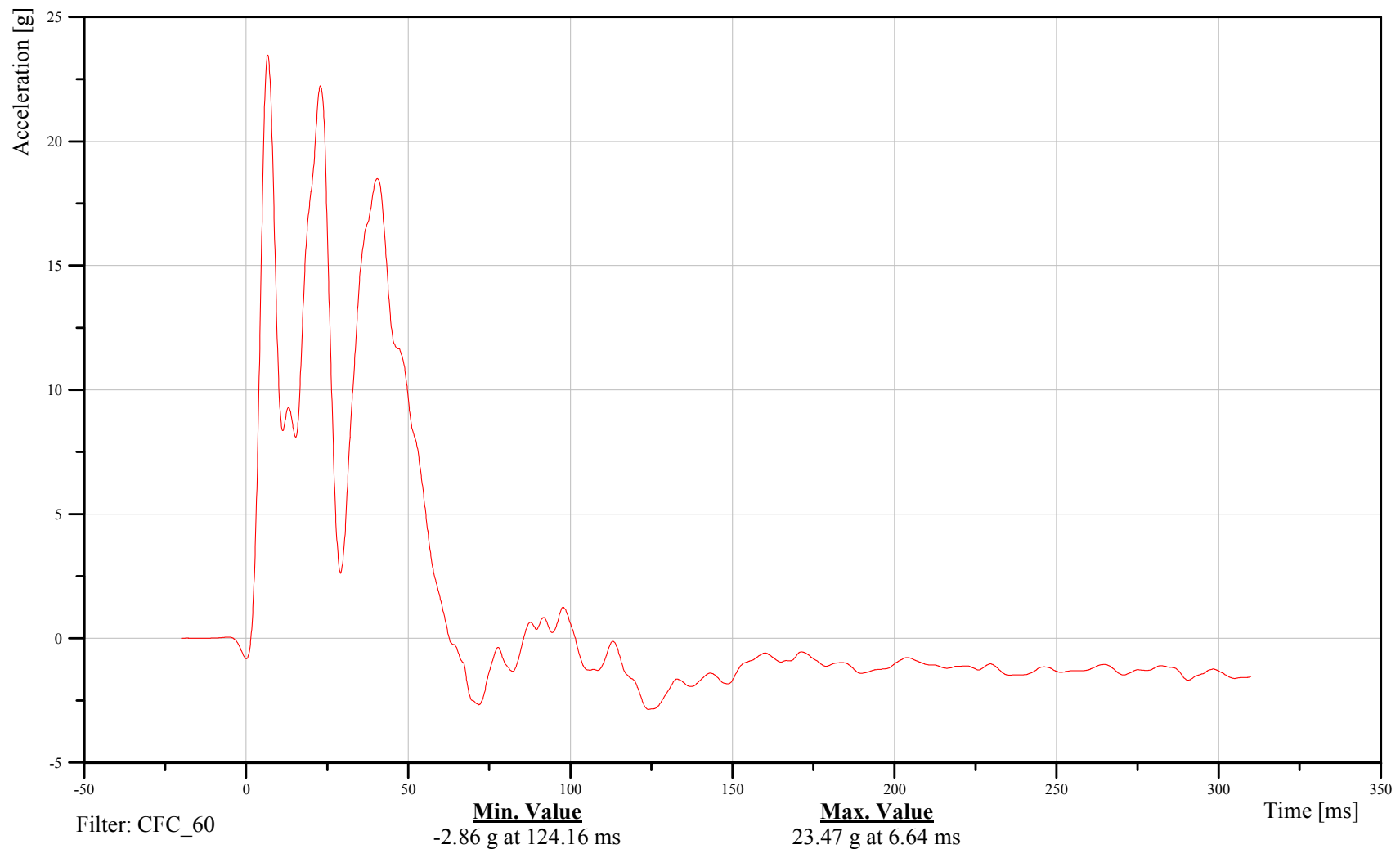
Time: 13:44

Customer: VRTC

16SILBFR0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Right Side Sill at Front Seat Y-Axis Velocity

Date: 08/17/2005

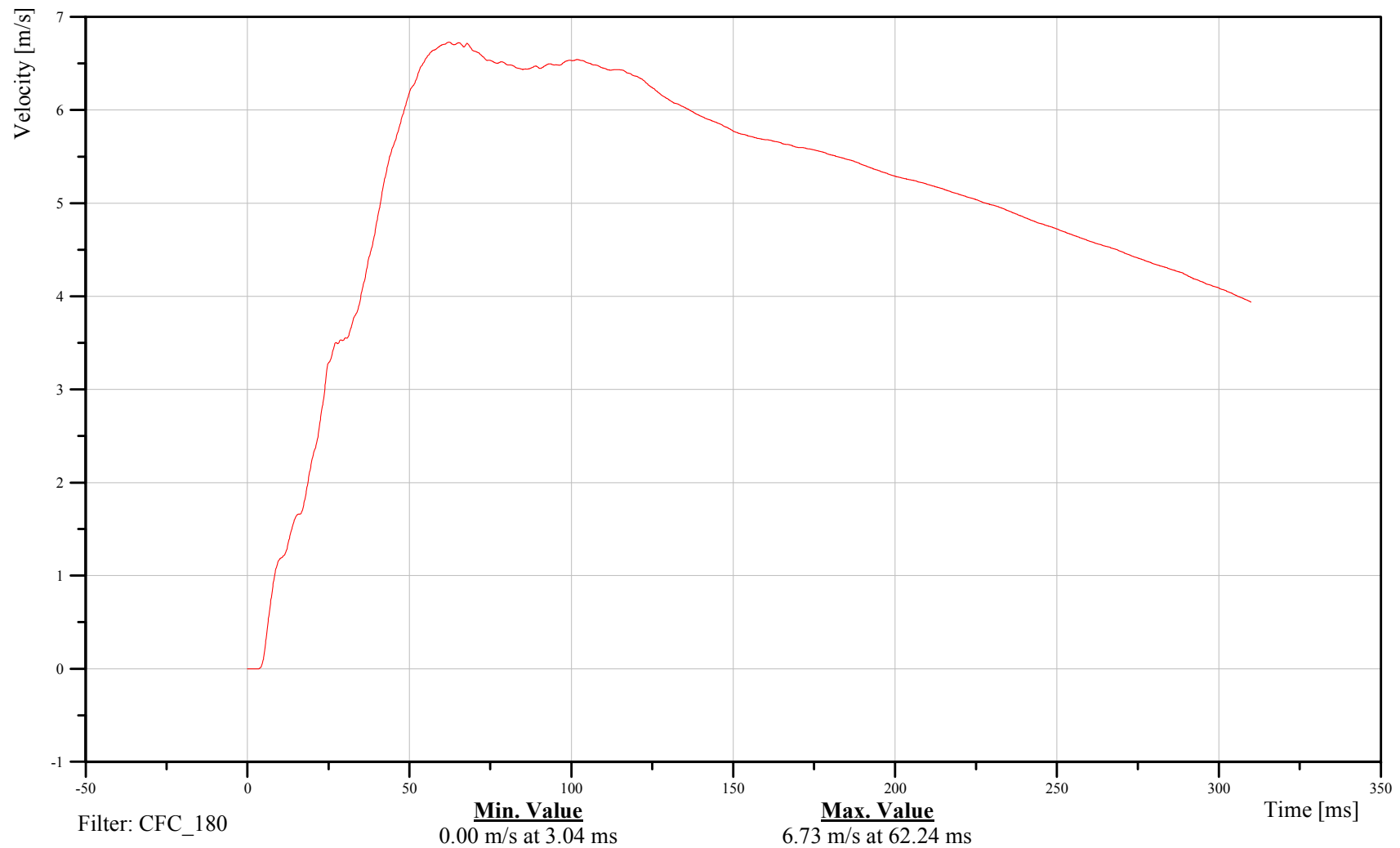
Time: 13:44

Customer: VRTC

16SILBFR0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

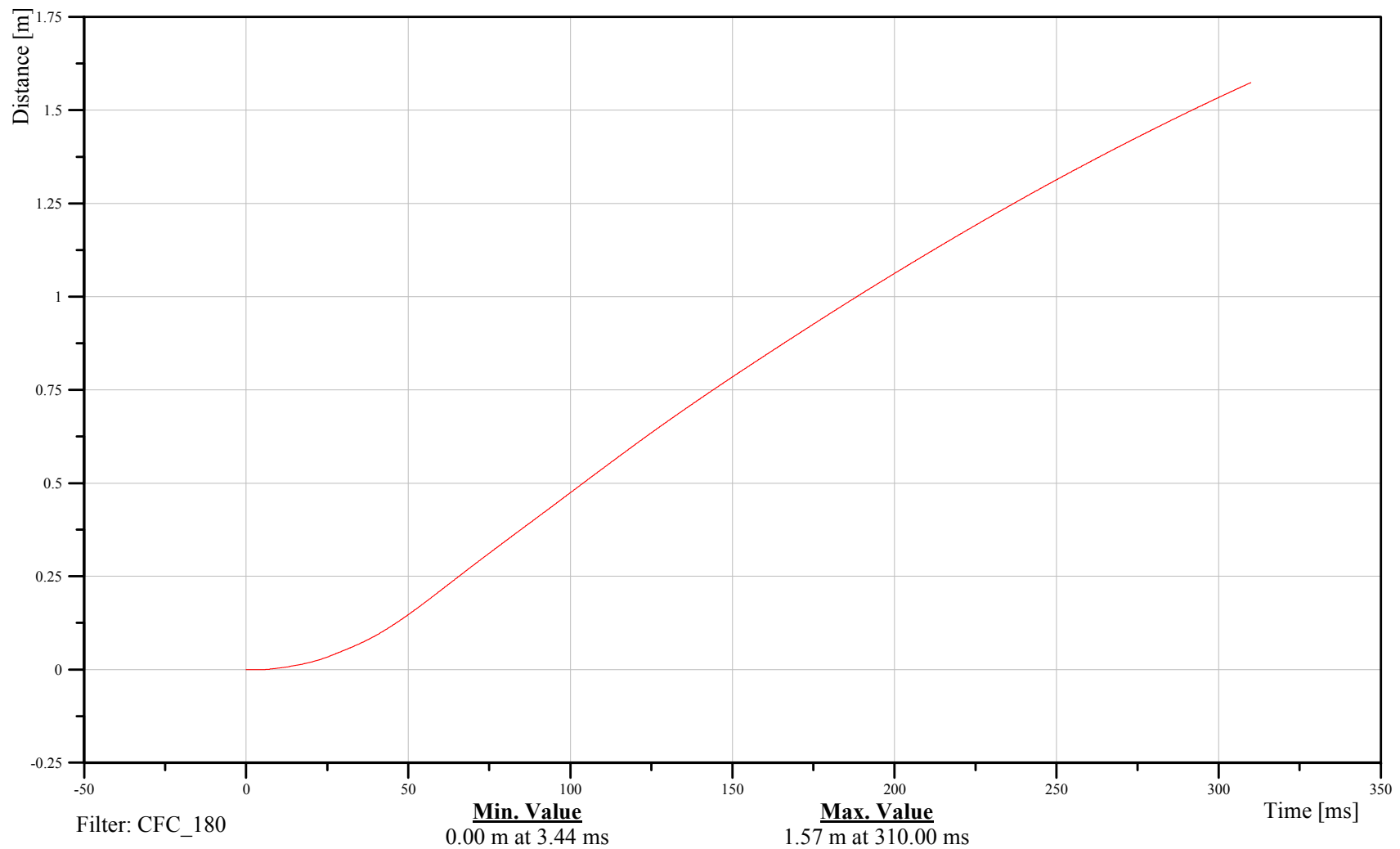
Right Side Sill at Front Seat Y-Axis Displacement

Customer: VRTC

16SILBFR0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Right Side Sill at Front Seat Z-Axis Acceleration

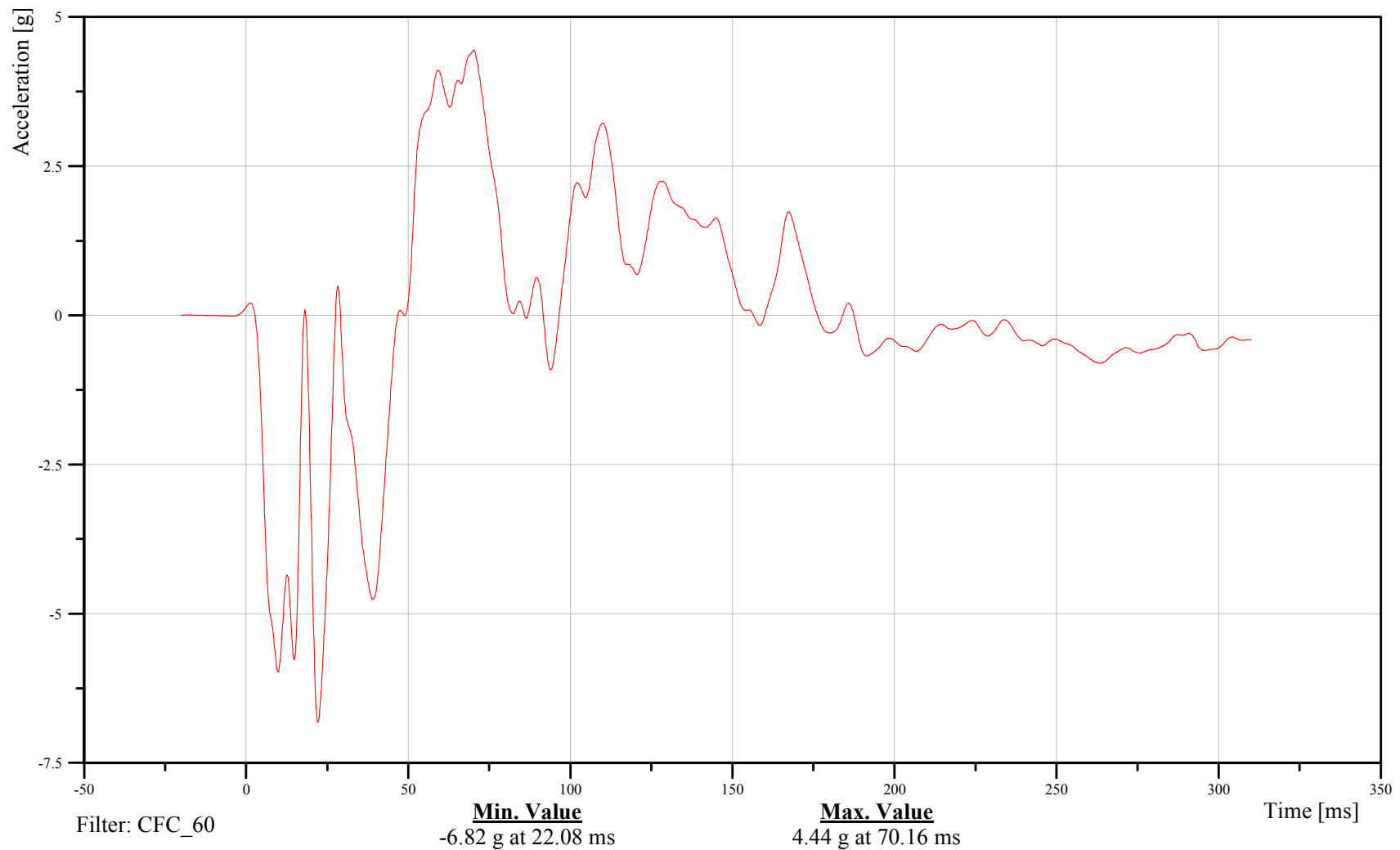
Time: 13:44

Customer: VRTC

16SILBFR0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

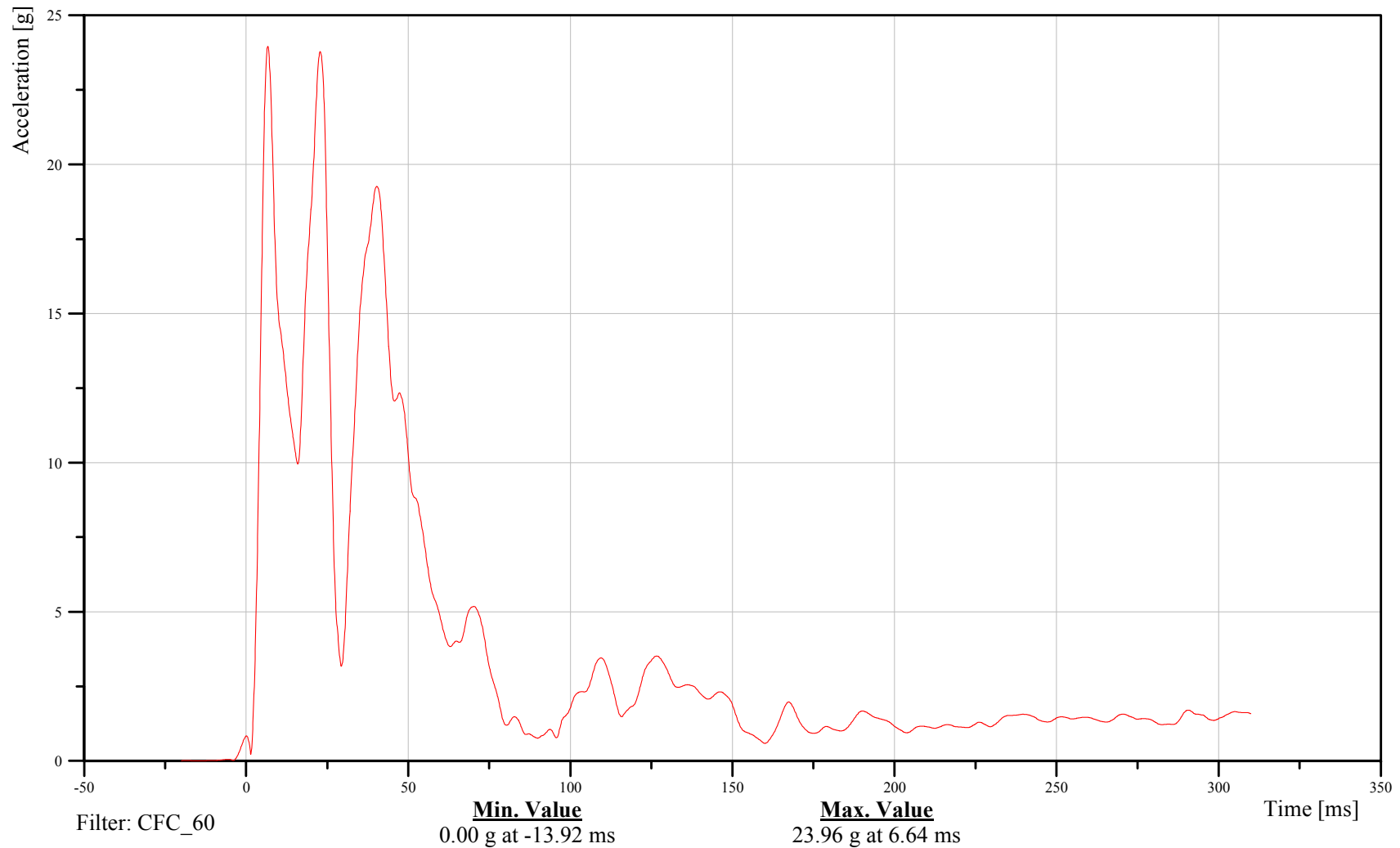
Right Side Sill at Front Seat Resultant Acceleration

Customer: VRTC

16SILBFR0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Right Side Sill at Rear Seat X-Axis Acceleration

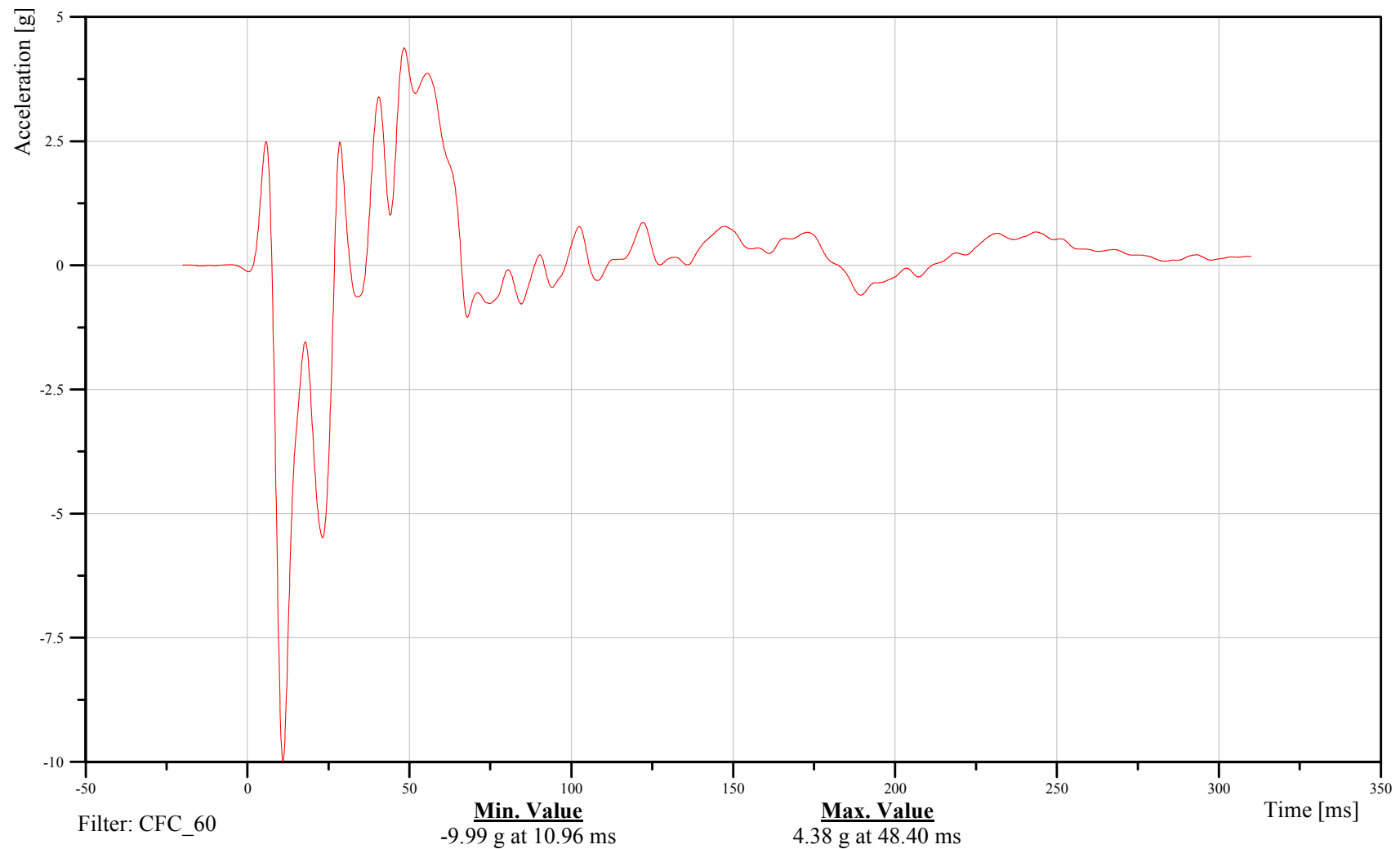
Date: 08/17/2005
Time: 13:44

Customer: VRTC

16SILBRE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Right Side Sill at Rear Seat Y-Axis Acceleration

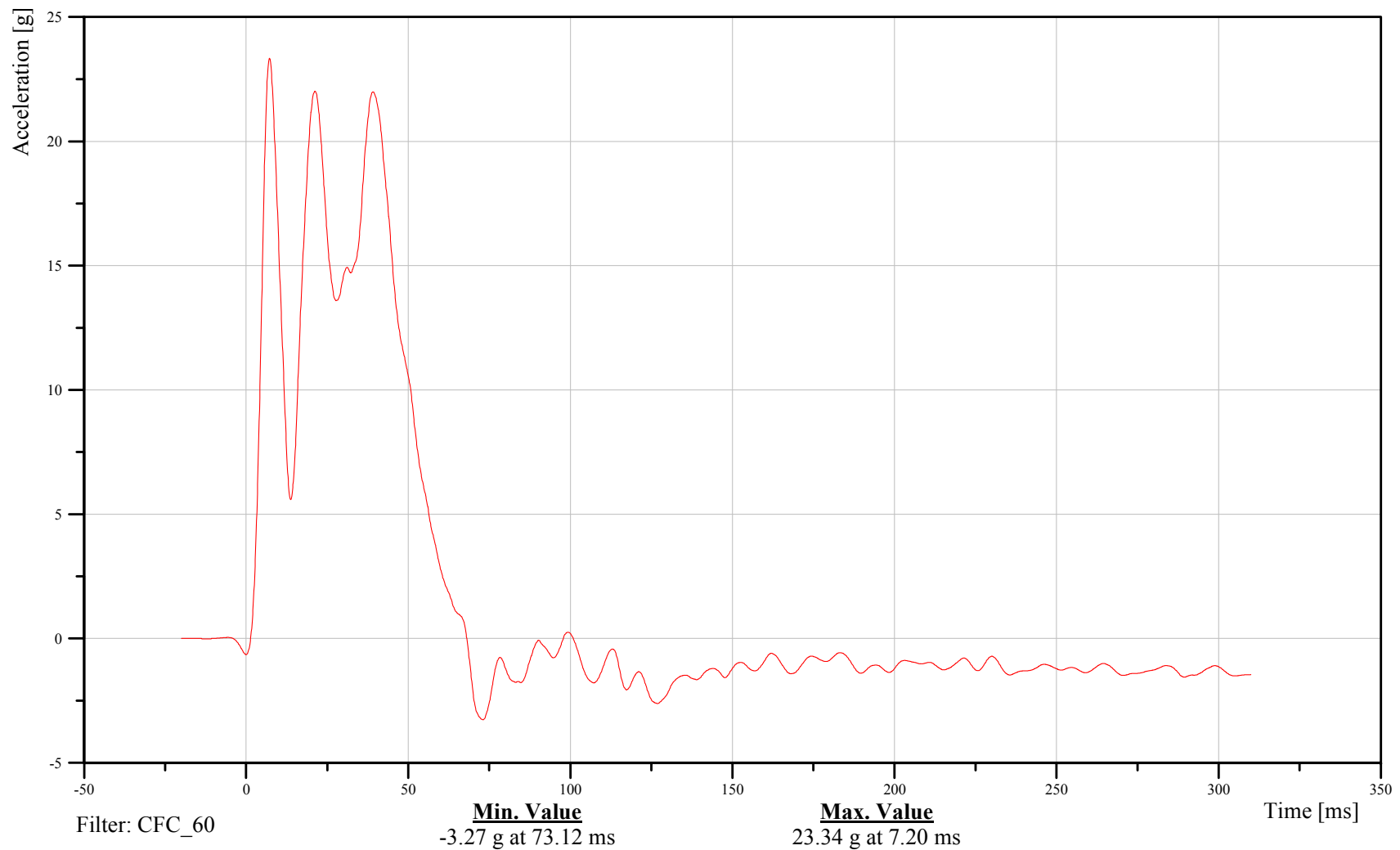
Date: 08/17/2005
Time: 13:44

Customer: VRTC

16SILBRE0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Right Side Sill at Rear Seat Y-Axis Velocity

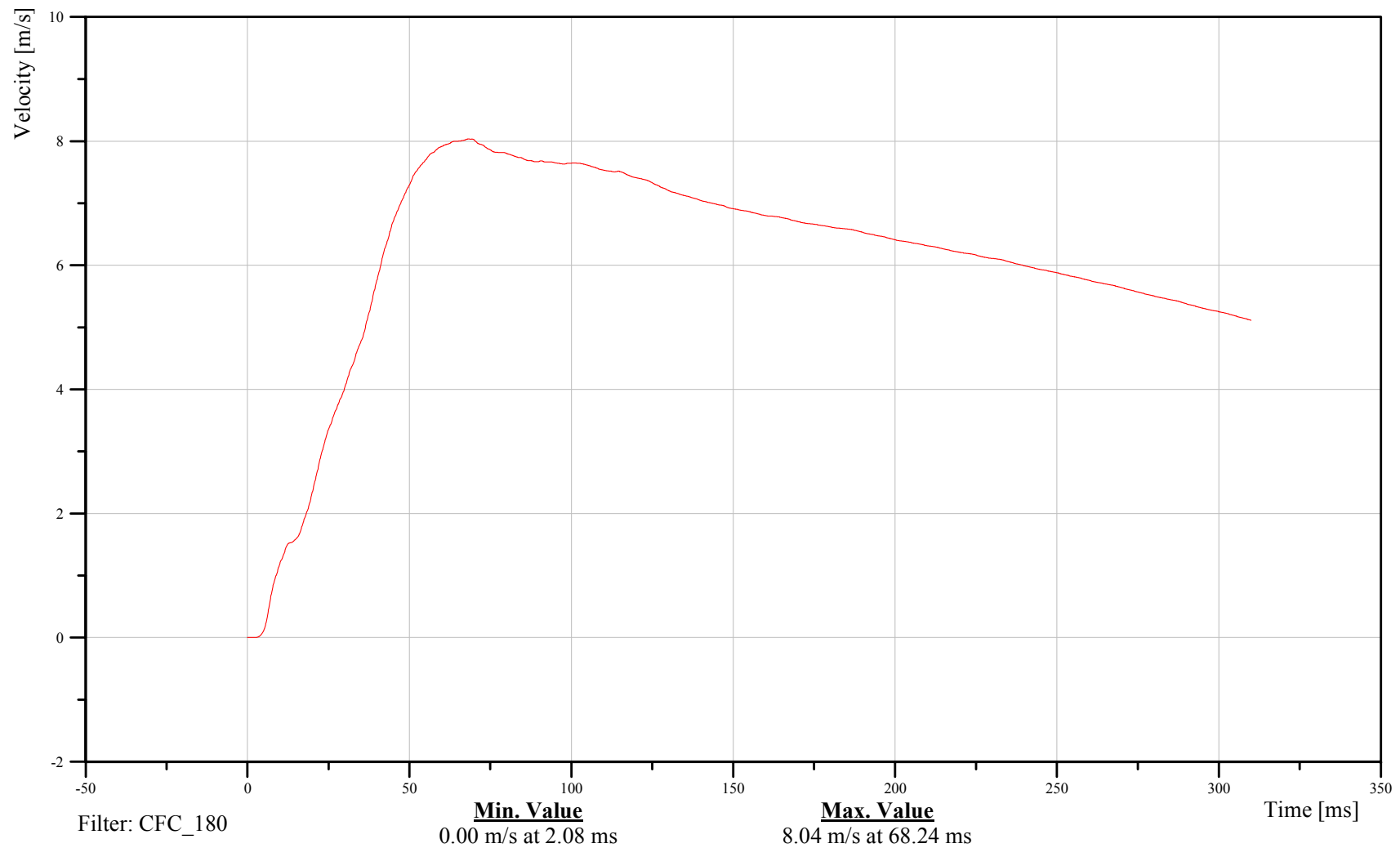
Date: 08/17/2005
Time: 13:44

Customer: VRTC

16SILBRE0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

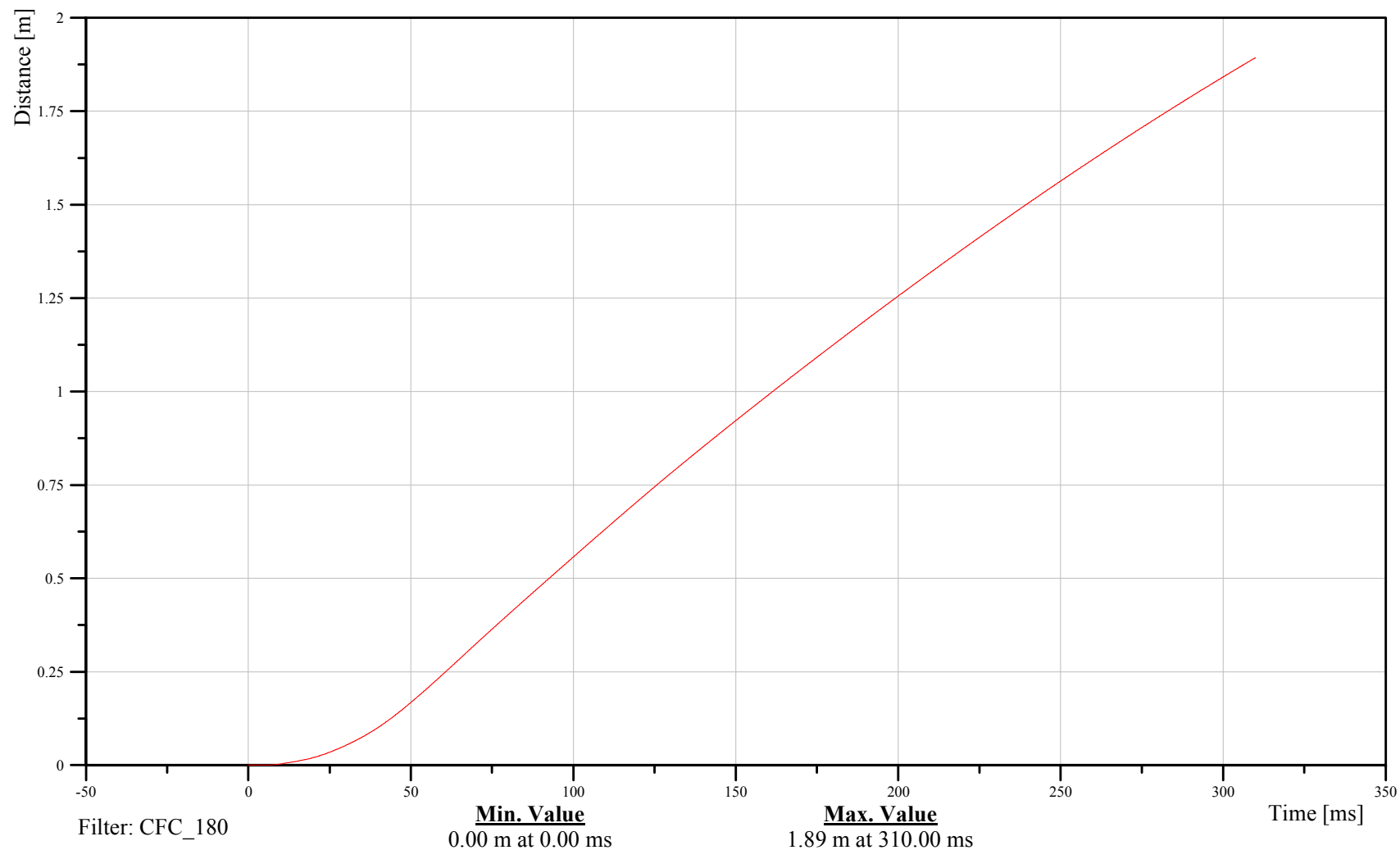
Right Side Sill at Rear Seat Y-Axis Displacement

Customer: VRTC

16SILBRE0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Right Side Sill at Rear Seat Z-Axis Acceleration

Date: 08/17/2005

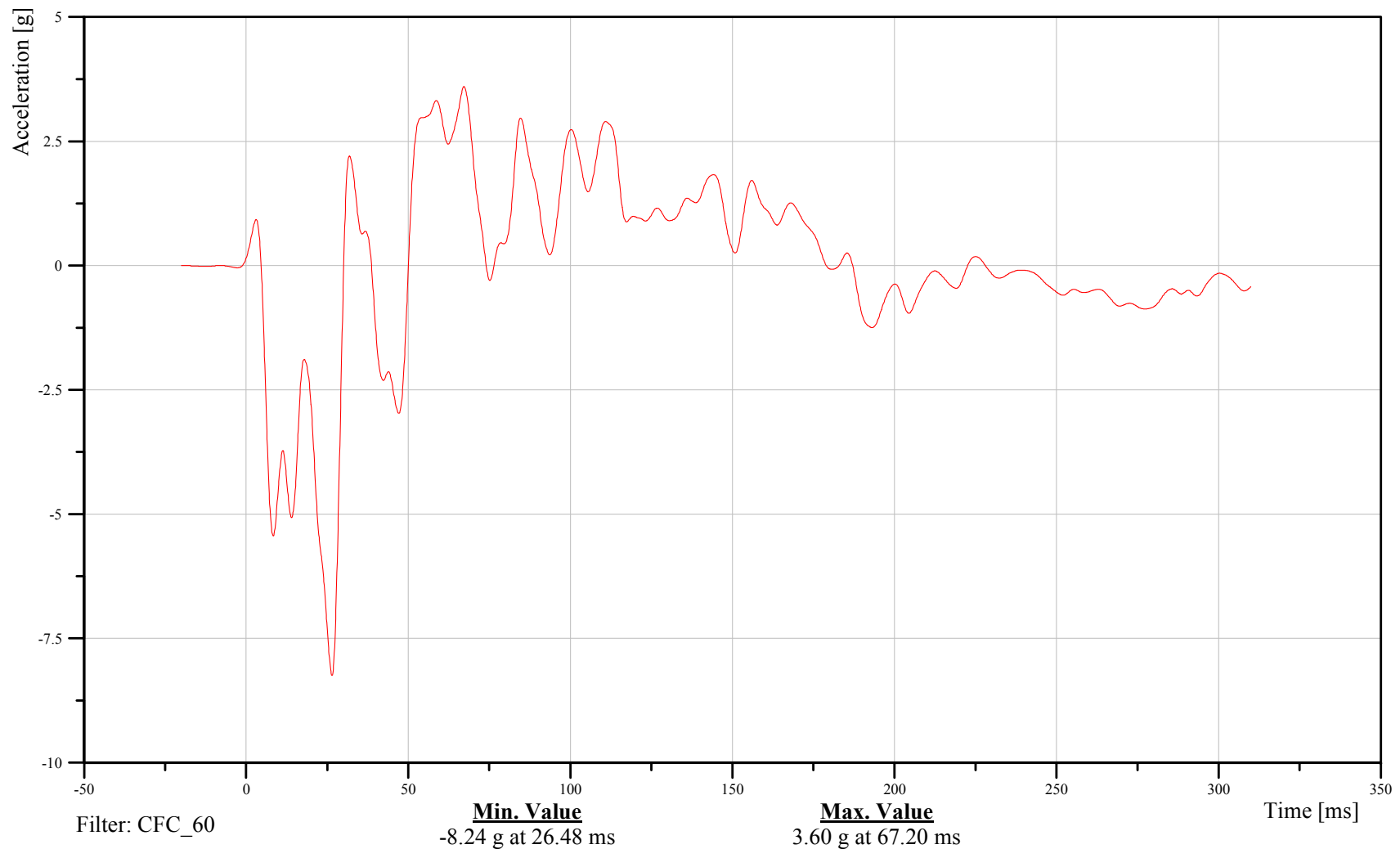
Time: 13:44

Customer: VRTC

16SILBRE0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

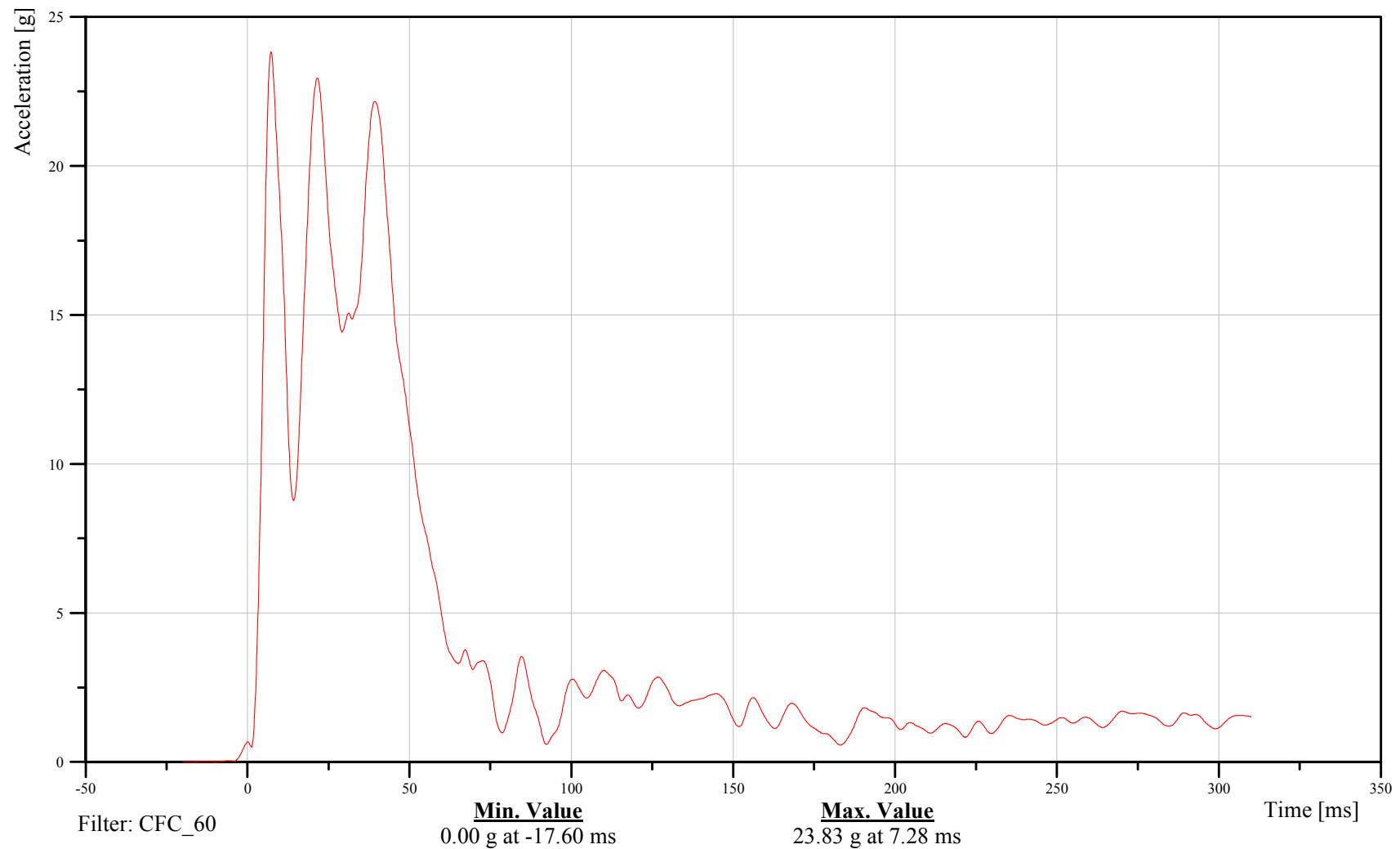
Right Side Sill at Rear Seat Resultant Acceleration

Customer: VRTC

16SILBRE0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Rear Floorpan Above Axle X-Axis Acceleration

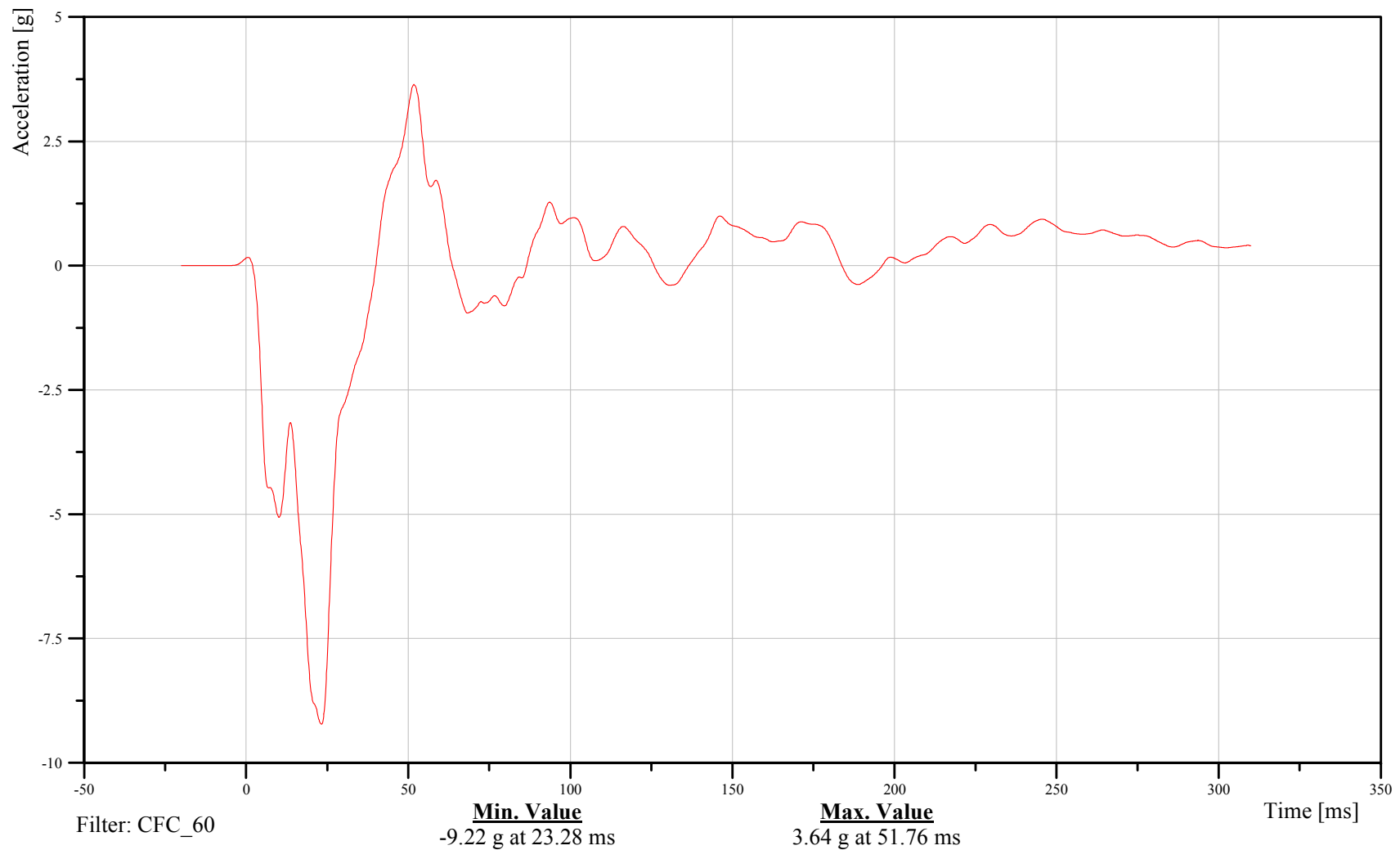
Date: 08/17/2005
Time: 13:44

Customer: VRTC

18FORA000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Rear Floorpan Above Axle Y-Axis Acceleration

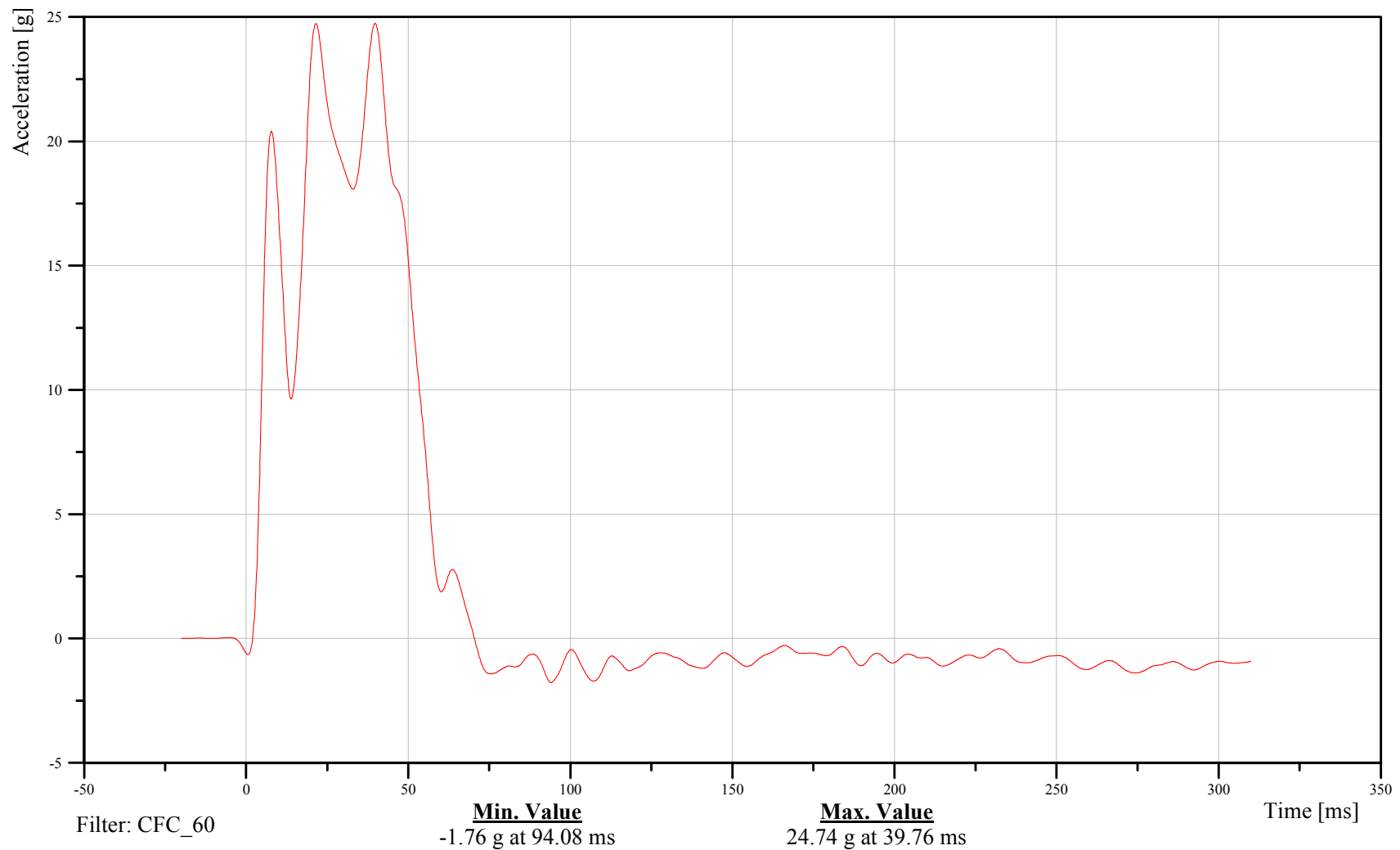
Date: 08/17/2005
Time: 13:44

Customer: VRTC

18FORA000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Rear Floorpan Above Axle Z-Axis Acceleration

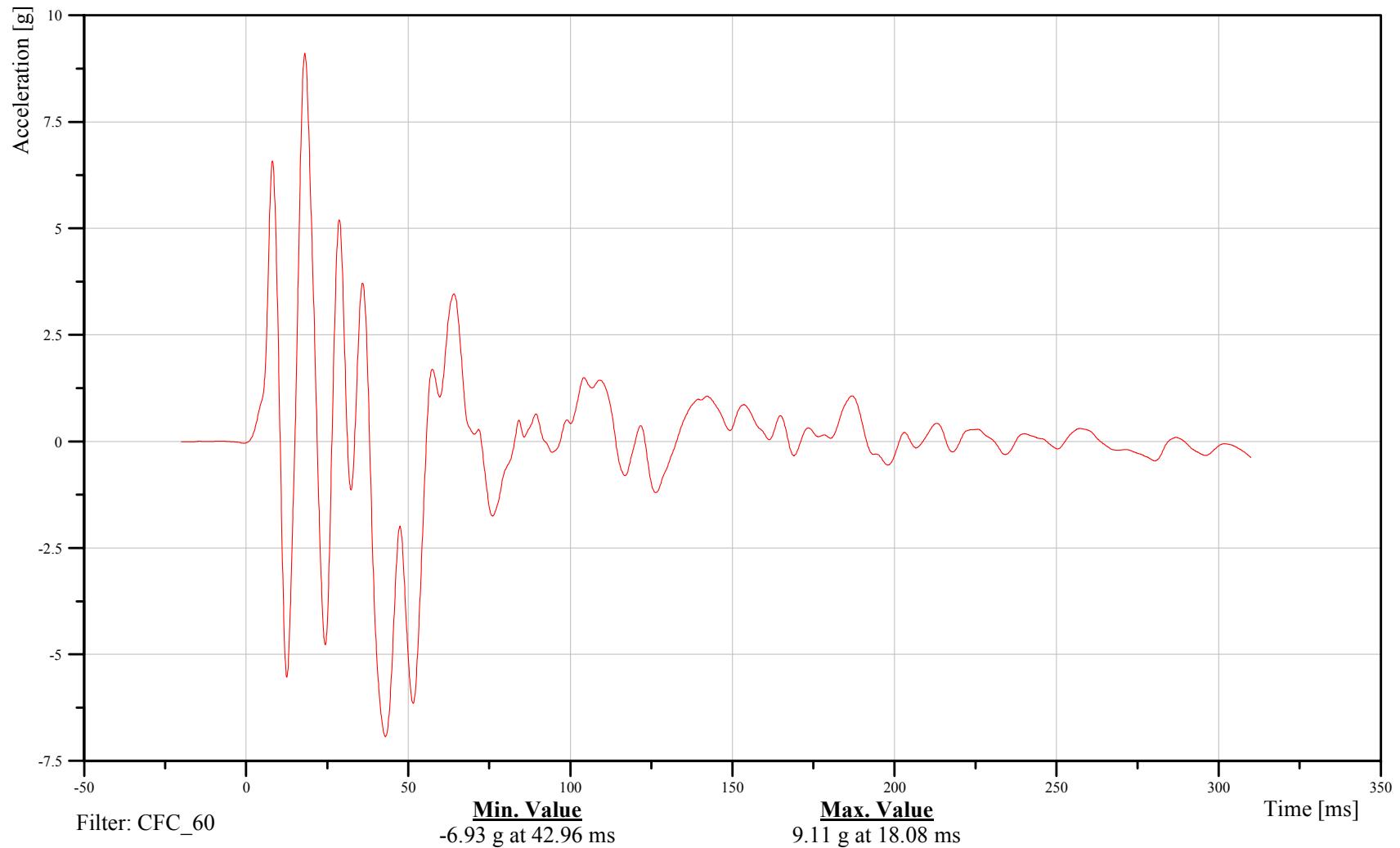
Date: 08/17/2005
Time: 13:44

Customer: VRTC

18FORA000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

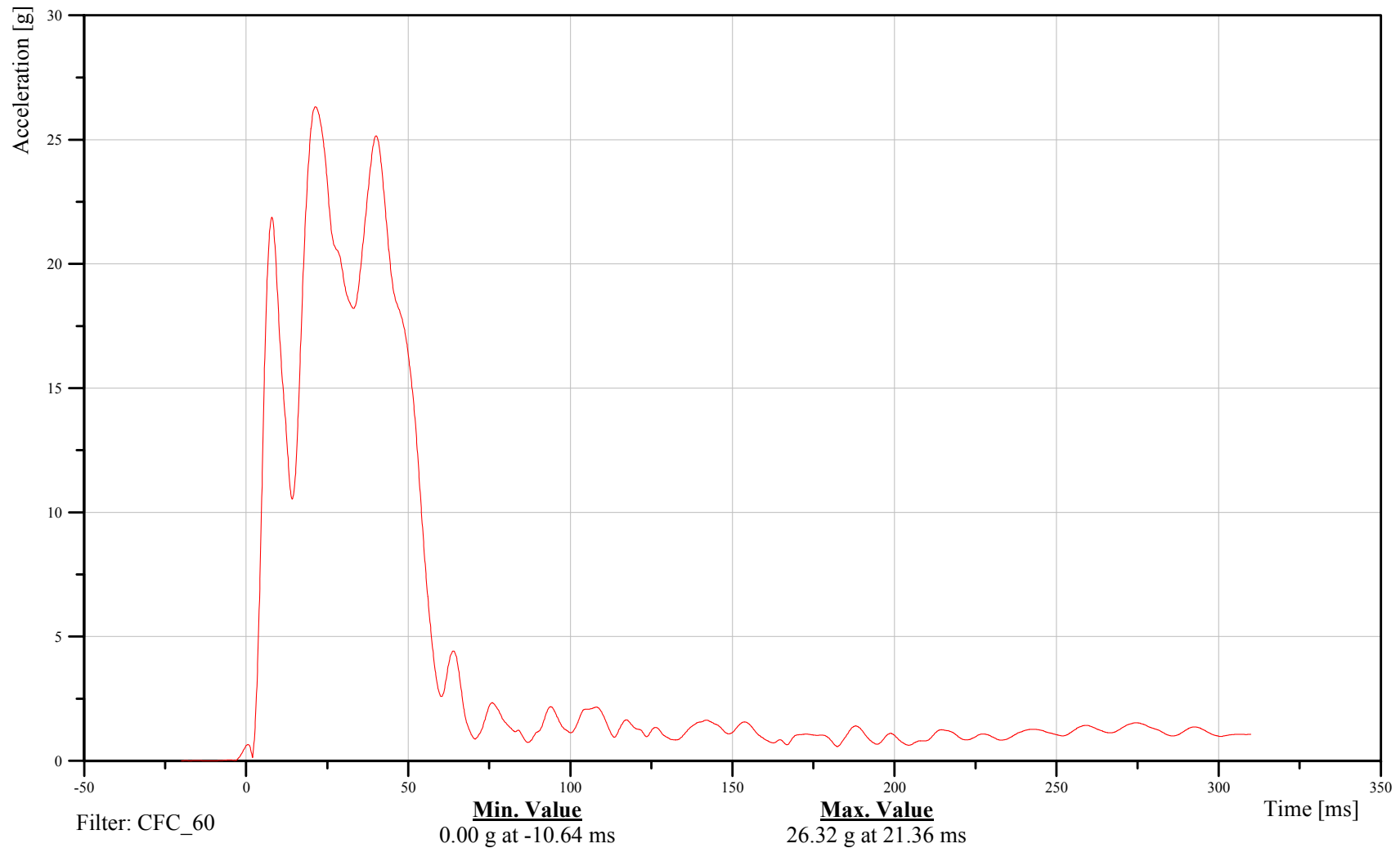
Rear Floorpan Above Axle Resultant Acceleration

Customer: VRTC

18FORA000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Side Sill at Rear Seat Y-Axis Acceleration

Date: 08/17/2005

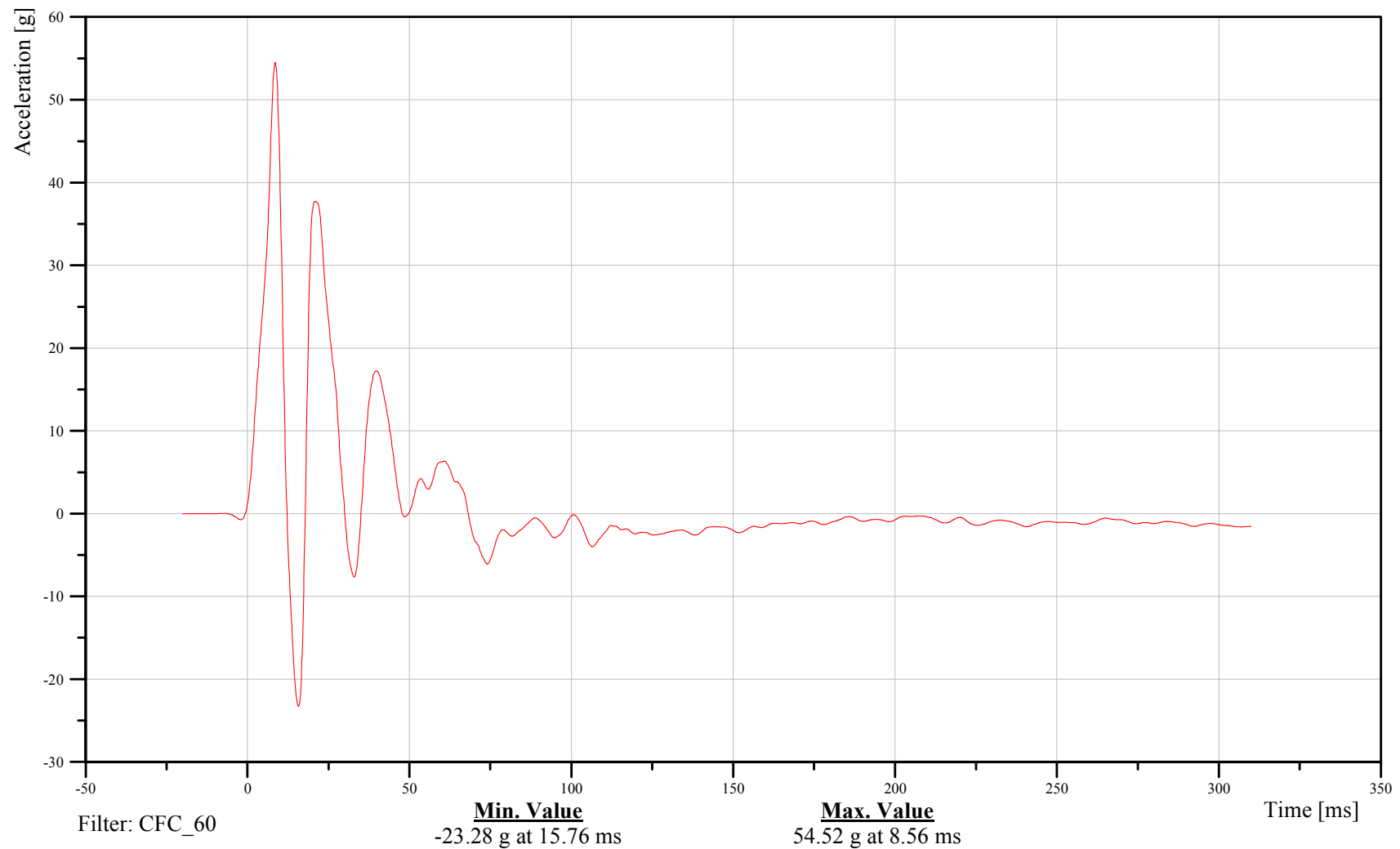
Time: 13:44

Customer: VRTC

14SILBRE0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Side Sill at Front Seat Y-Axis Acceleration

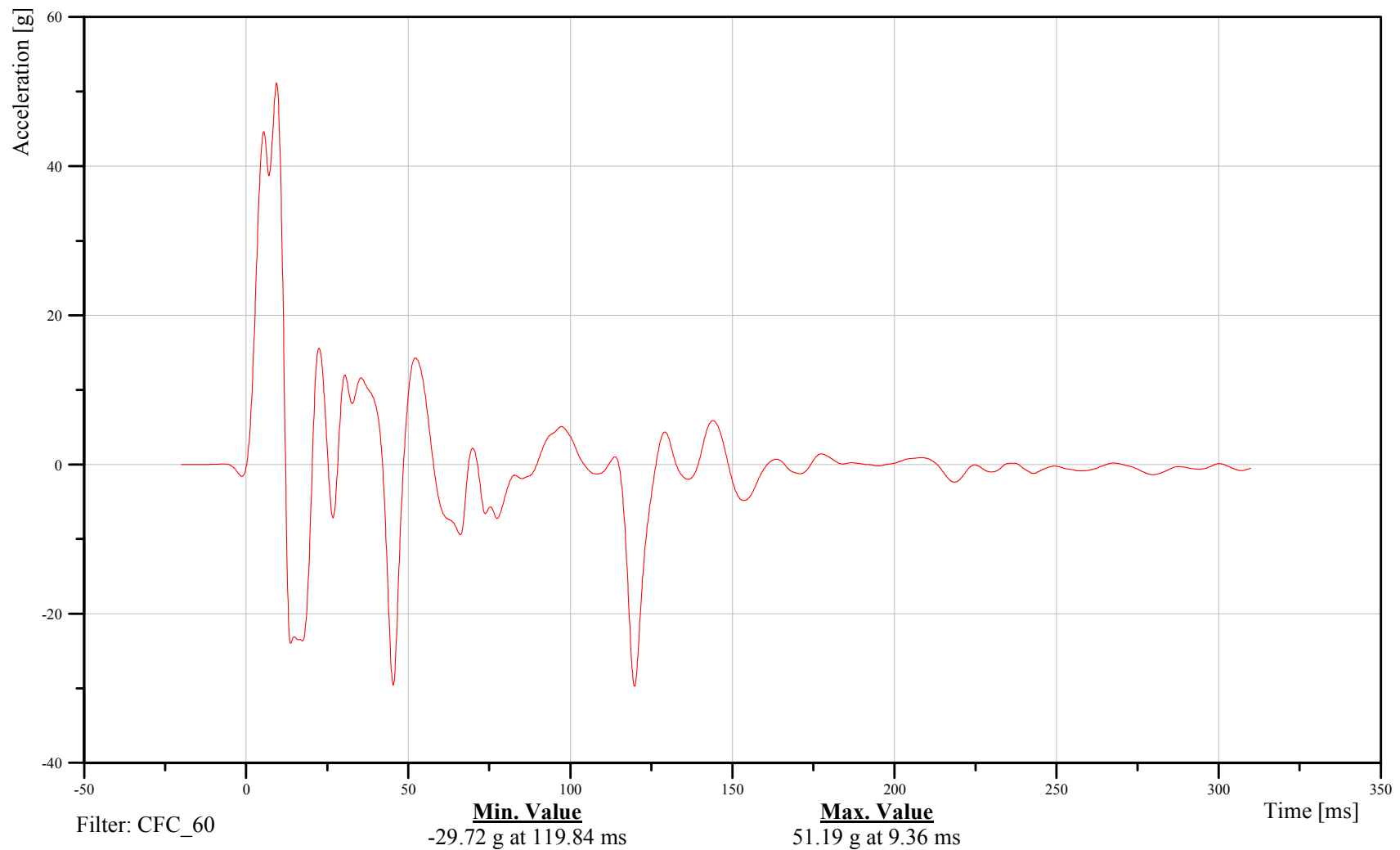
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SILBFR0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

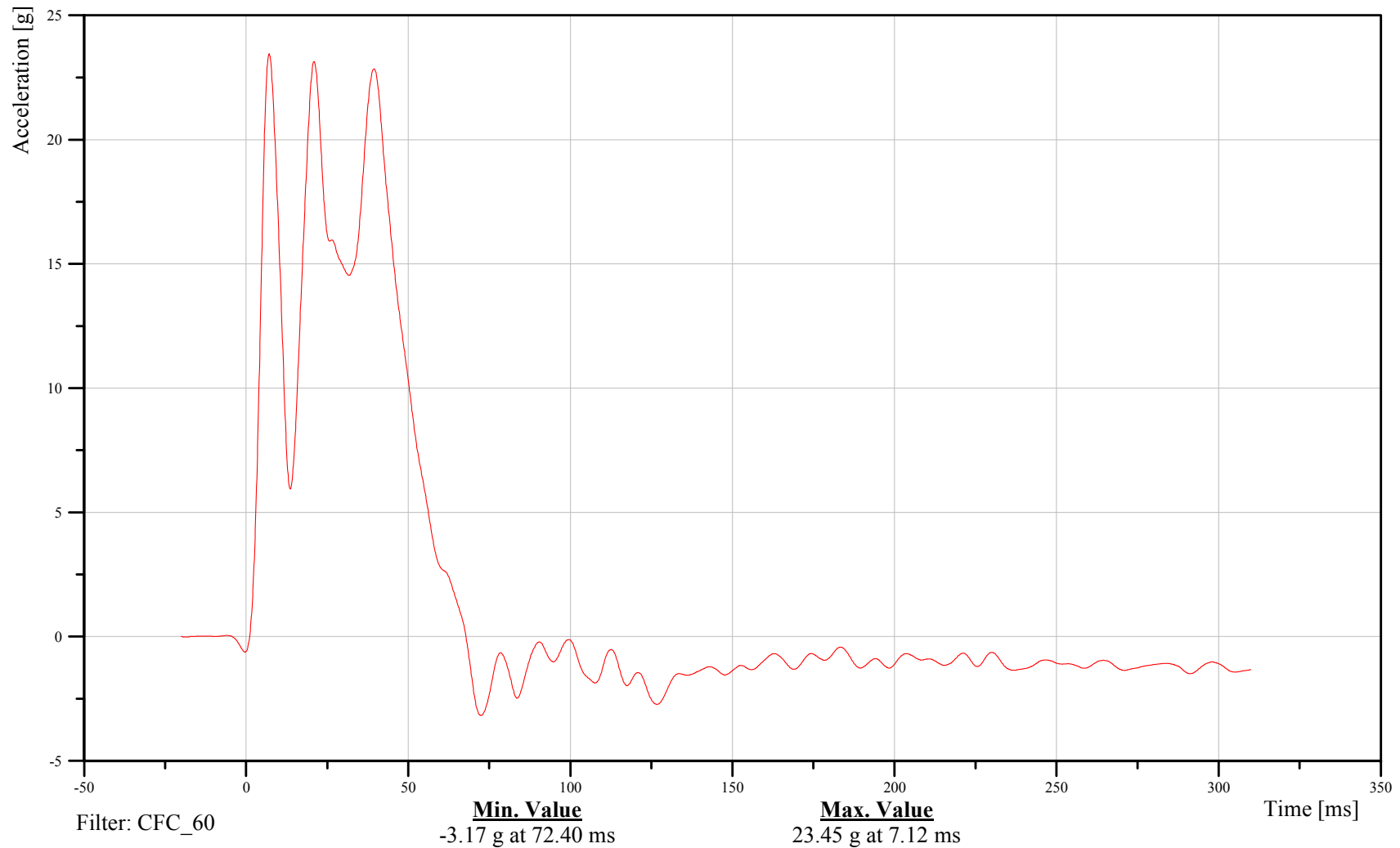
Right Rear Occupant Compartment Y-Axis Acceleration

Customer: VRTC

16VEHCRE0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Lower B-Post Y-Axis Acceleration

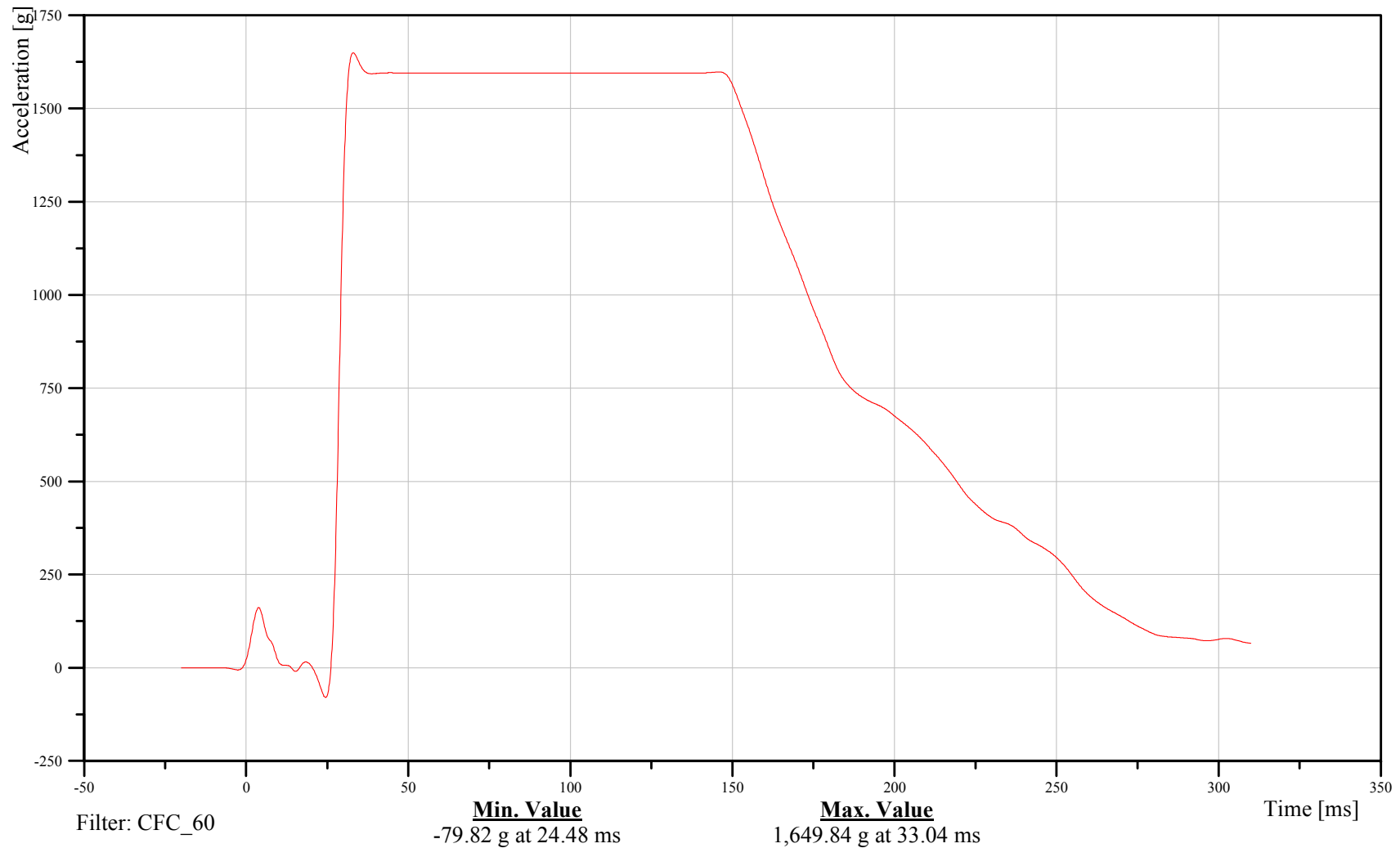
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14BPILLO0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

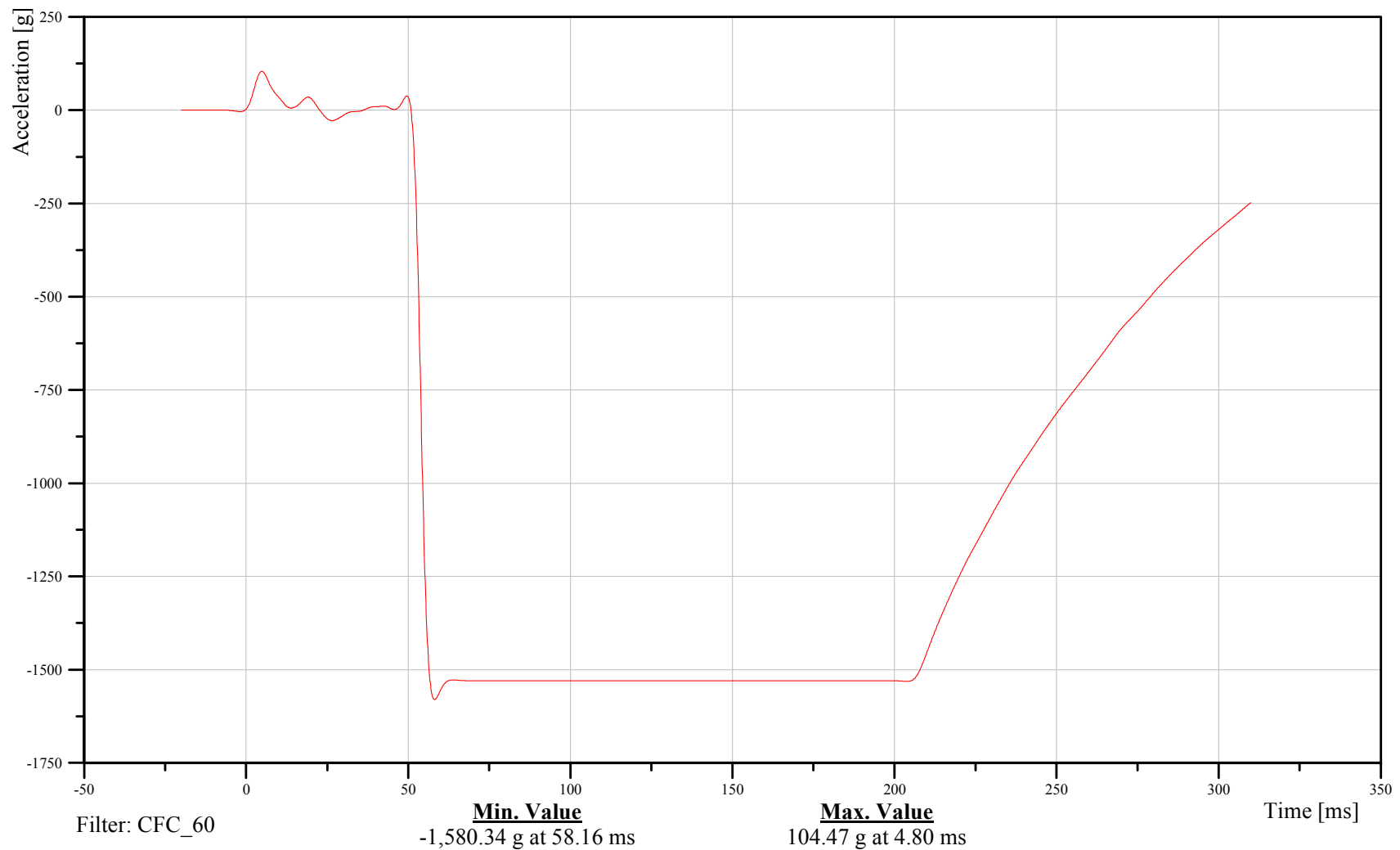
Left Middle B-Post Y-Axis Acceleration

Customer: VRTC

14BPILMI0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

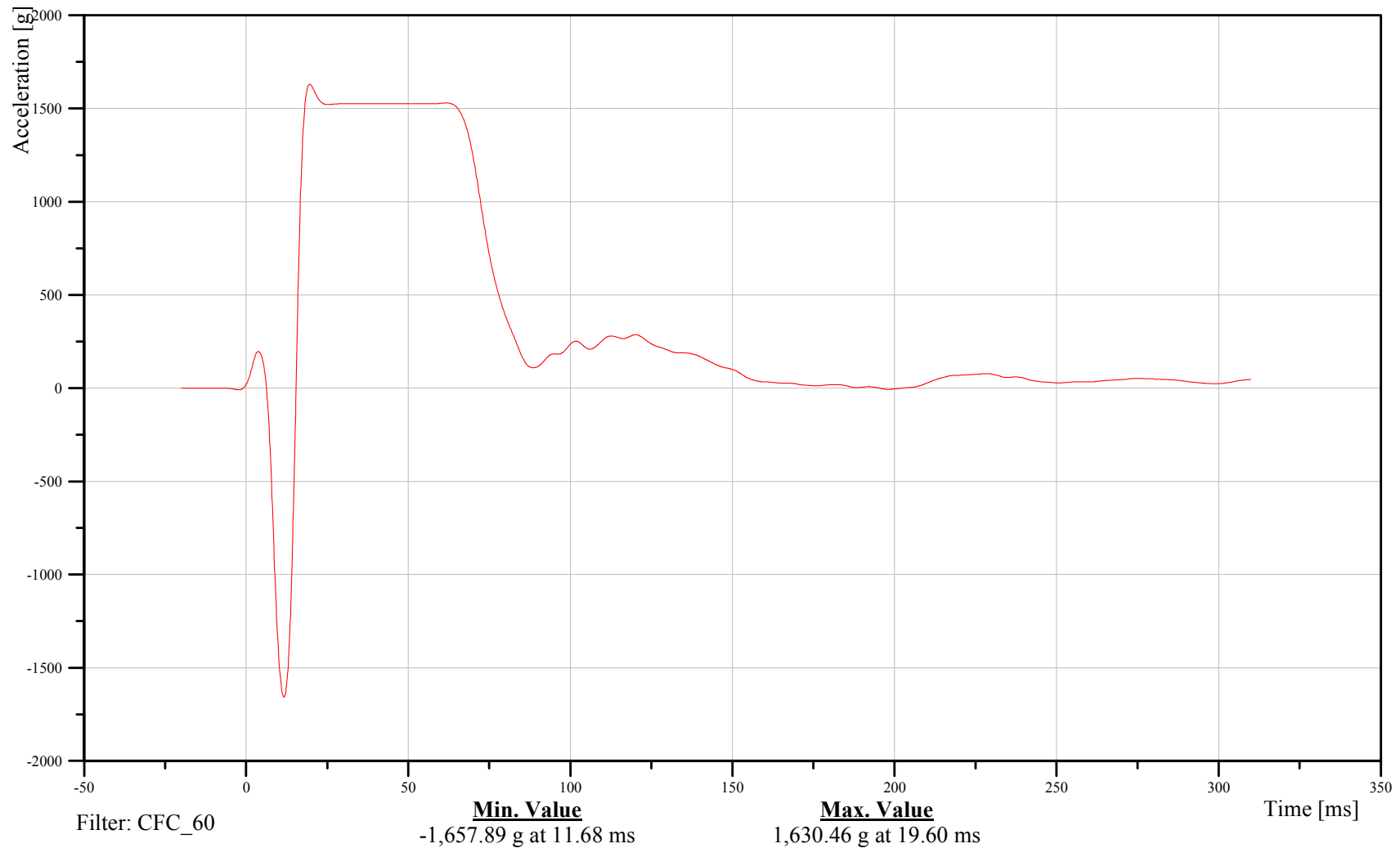
Left Lower A-Post Y-Axis Acceleration

Customer: VRTC

11APILO0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

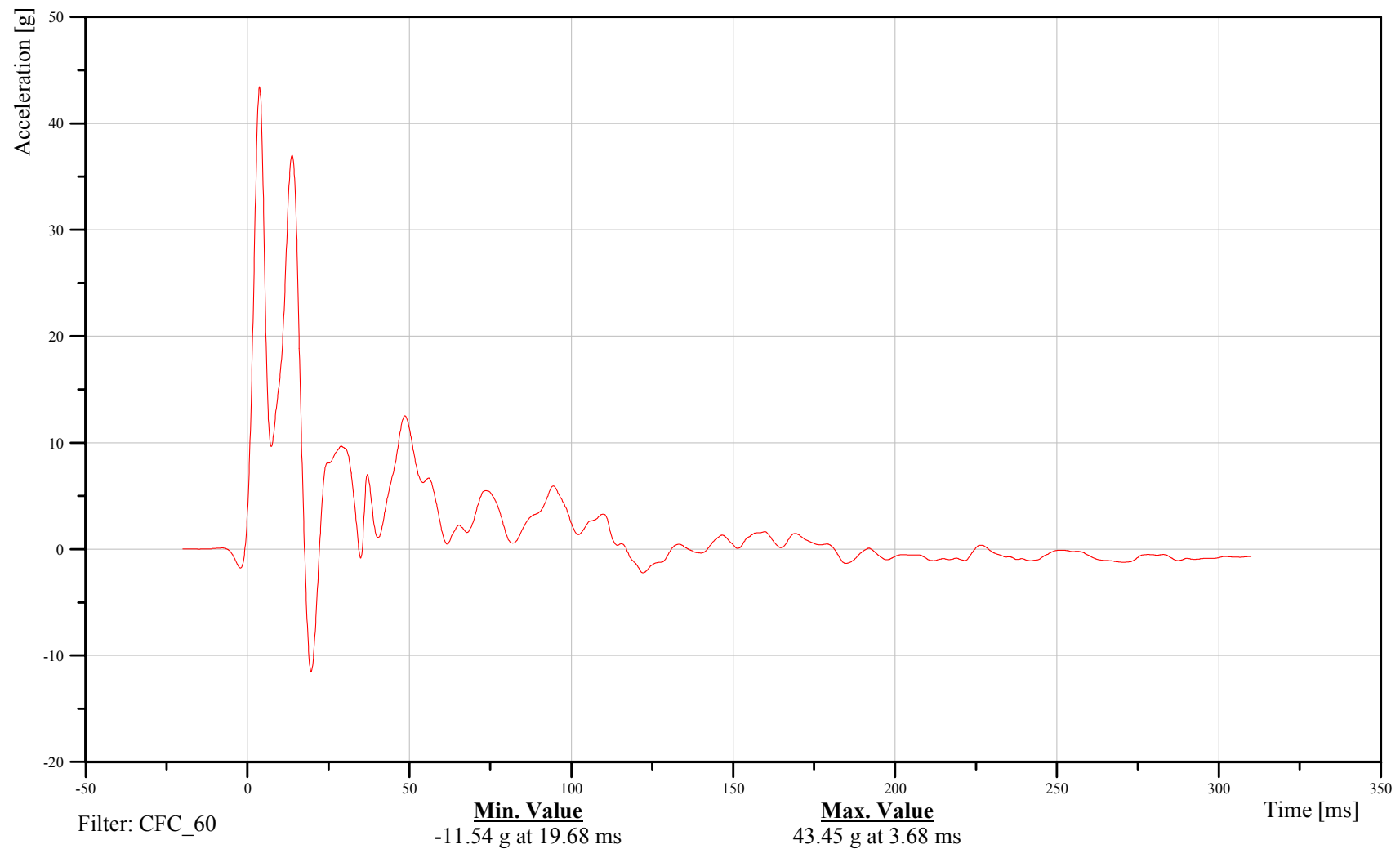
Left Middle A-Post Y-Axis Acceleration

Customer: VRTC

11APILMI0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

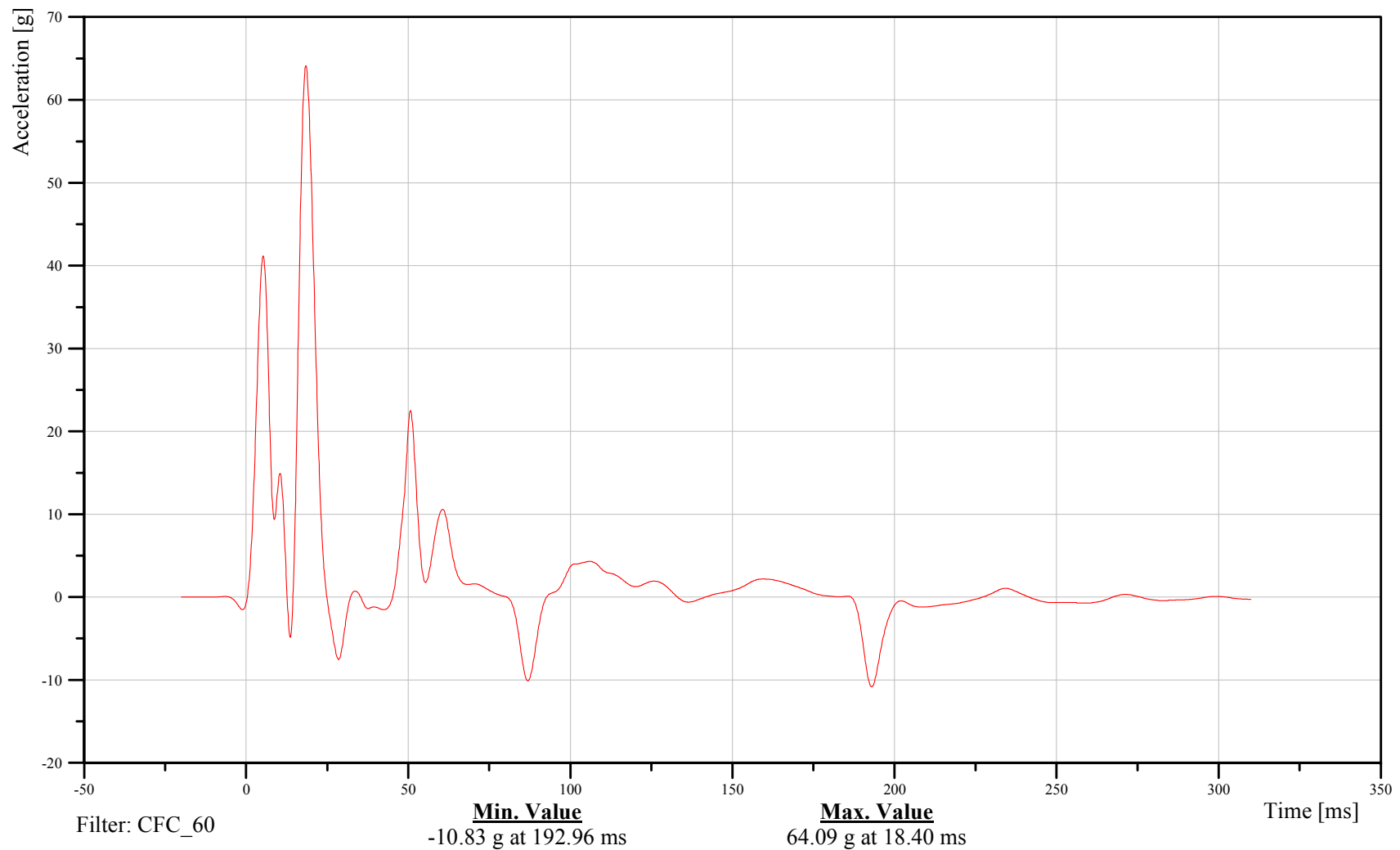
Left Front Seat Track Y-Axis Acceleration

Customer: VRTC

11SETRFR0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Rear Seat Track Y-Axis Acceleration

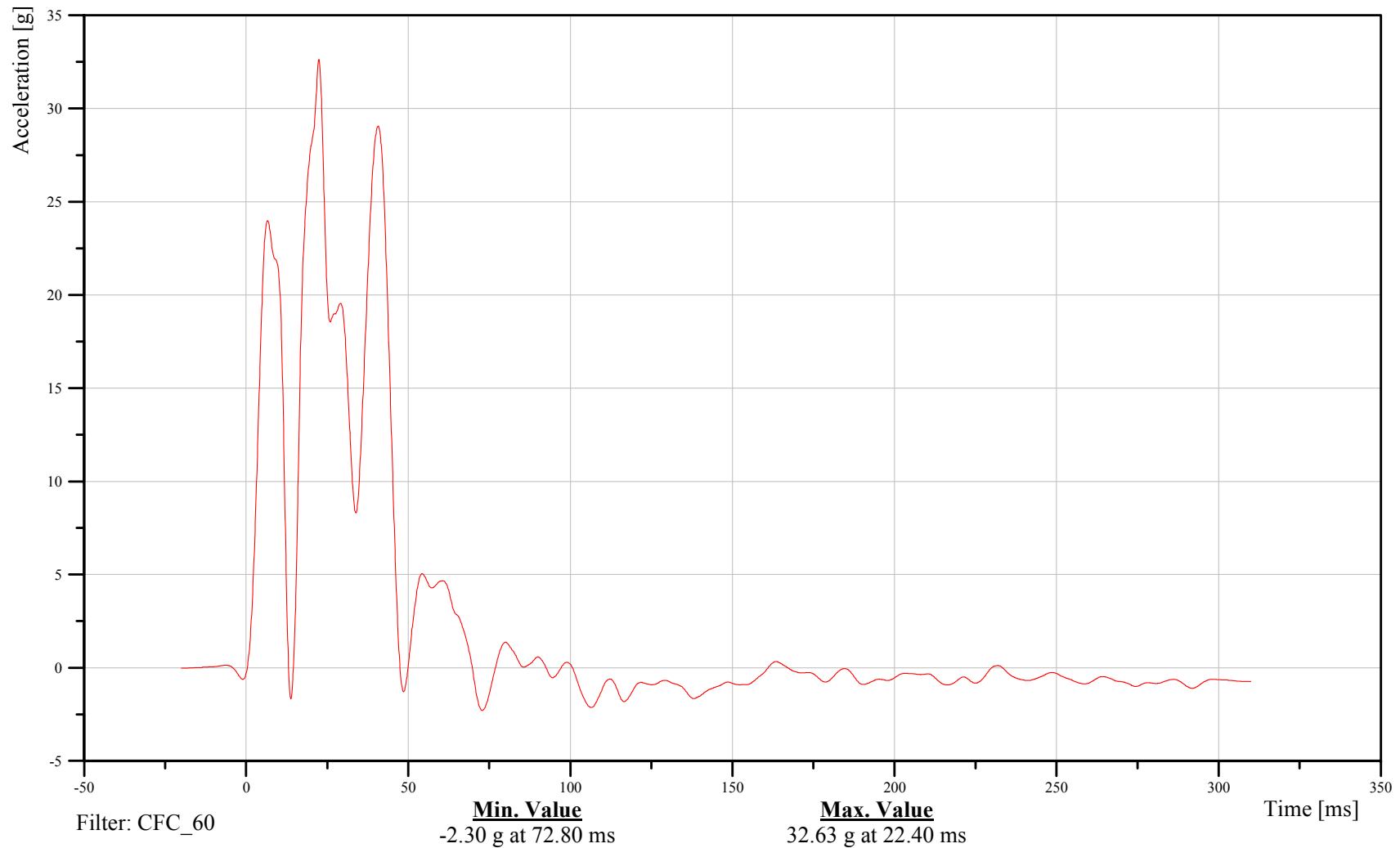
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14SETRLERE00ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Vehicle Center of Gravity X-Axis Acceleration

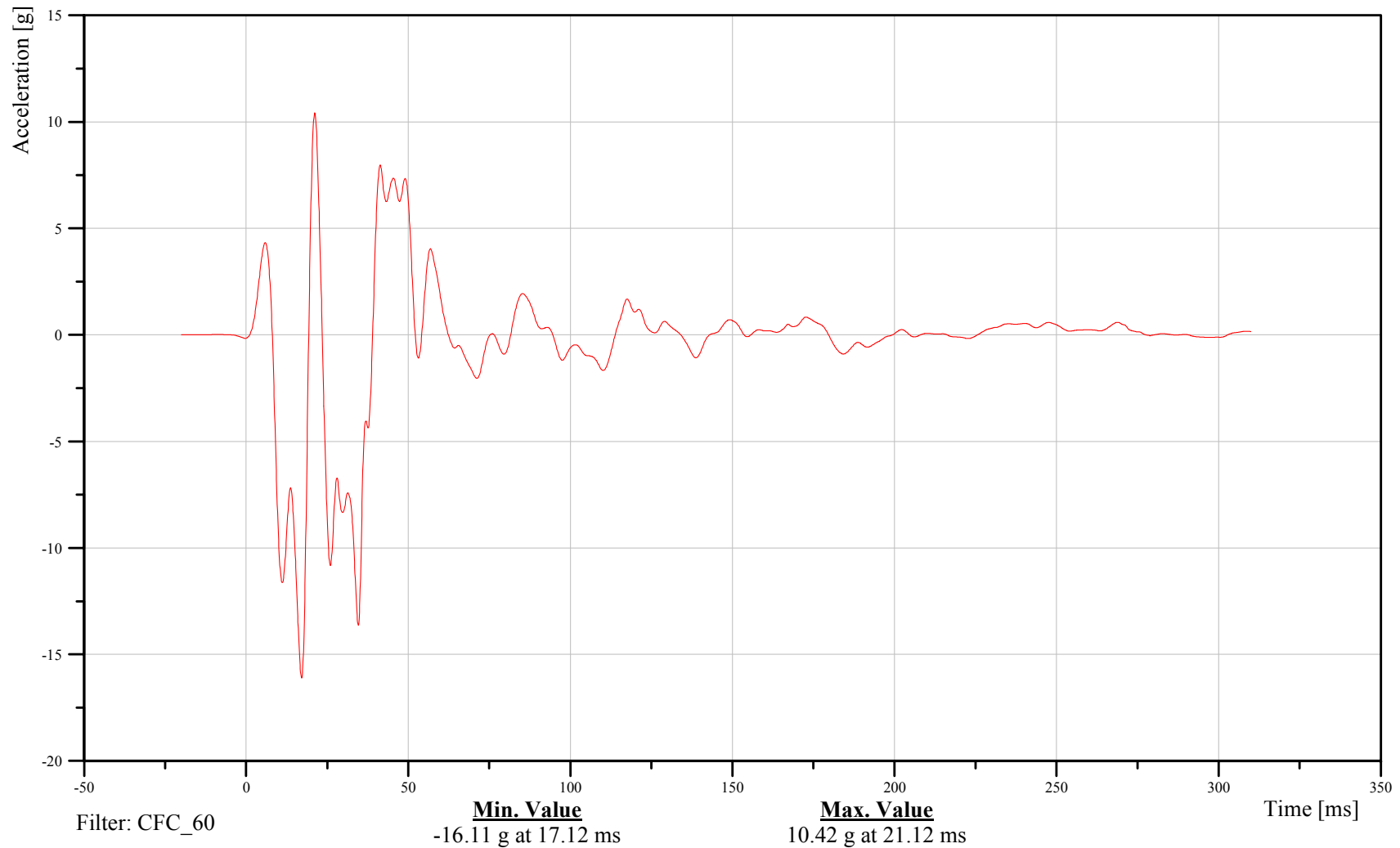
Date: 08/17/2005
Time: 13:44

Customer: VRTC

10VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Vehicle Center of Gravity Y-Axis Acceleration

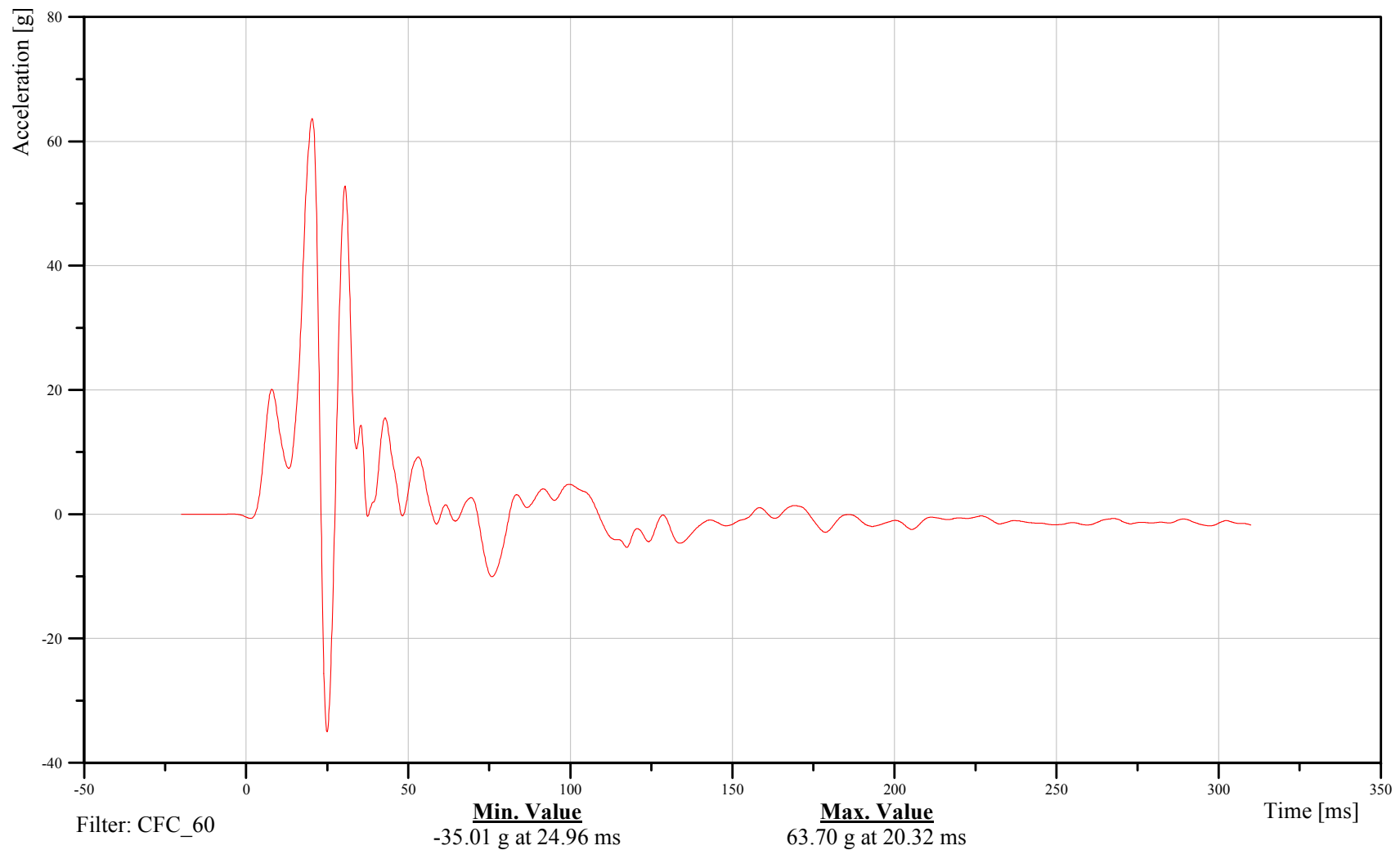
Date: 08/17/2005
Time: 13:44

Customer: VRTC

10VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Vehicle Center of Gravity Z-Axis Acceleration

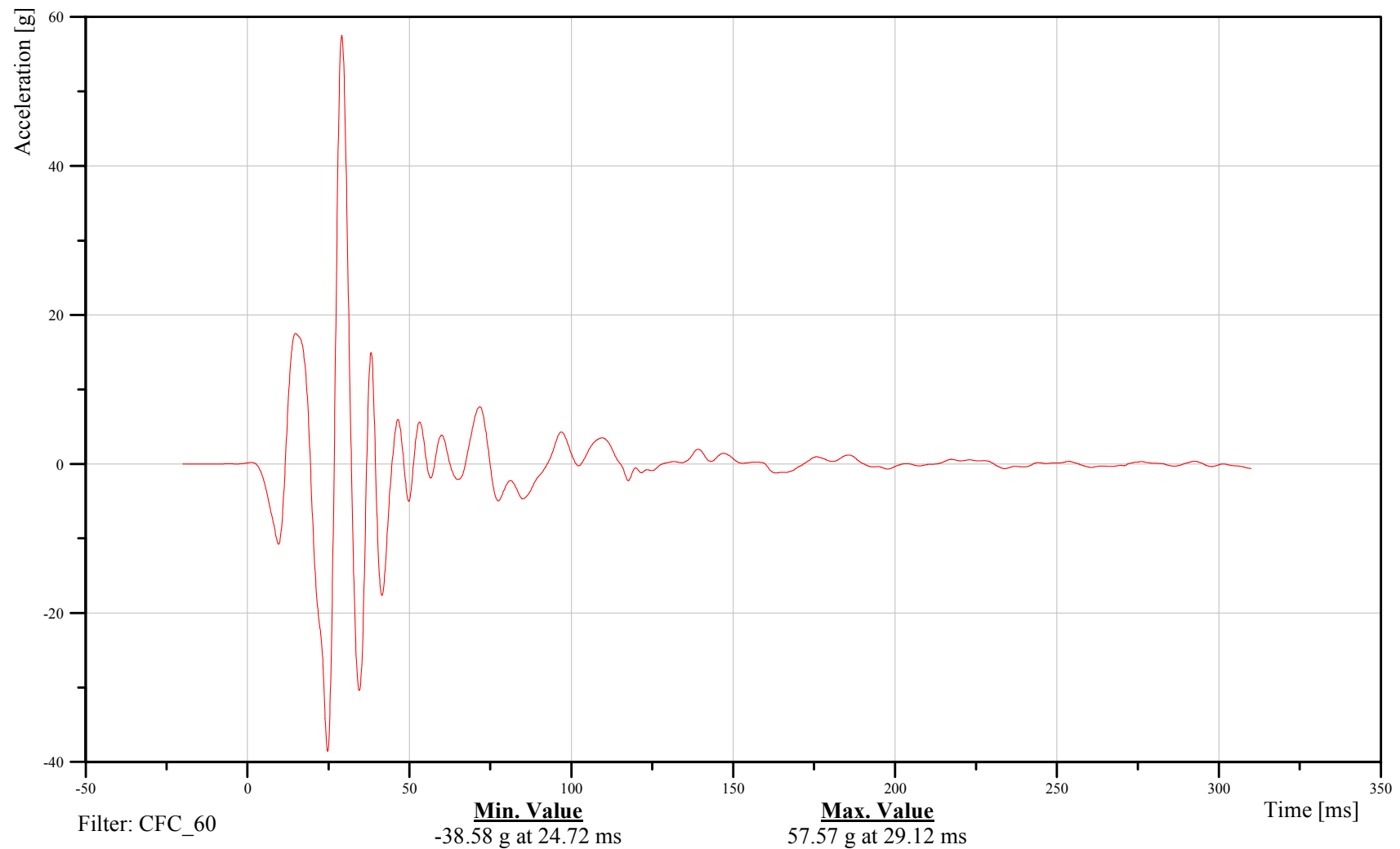
Date: 08/17/2005
Time: 13:44

Customer: VRTC

10VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Vehicle Center of Gravity Resultant Acceleration

Date: 08/17/2005

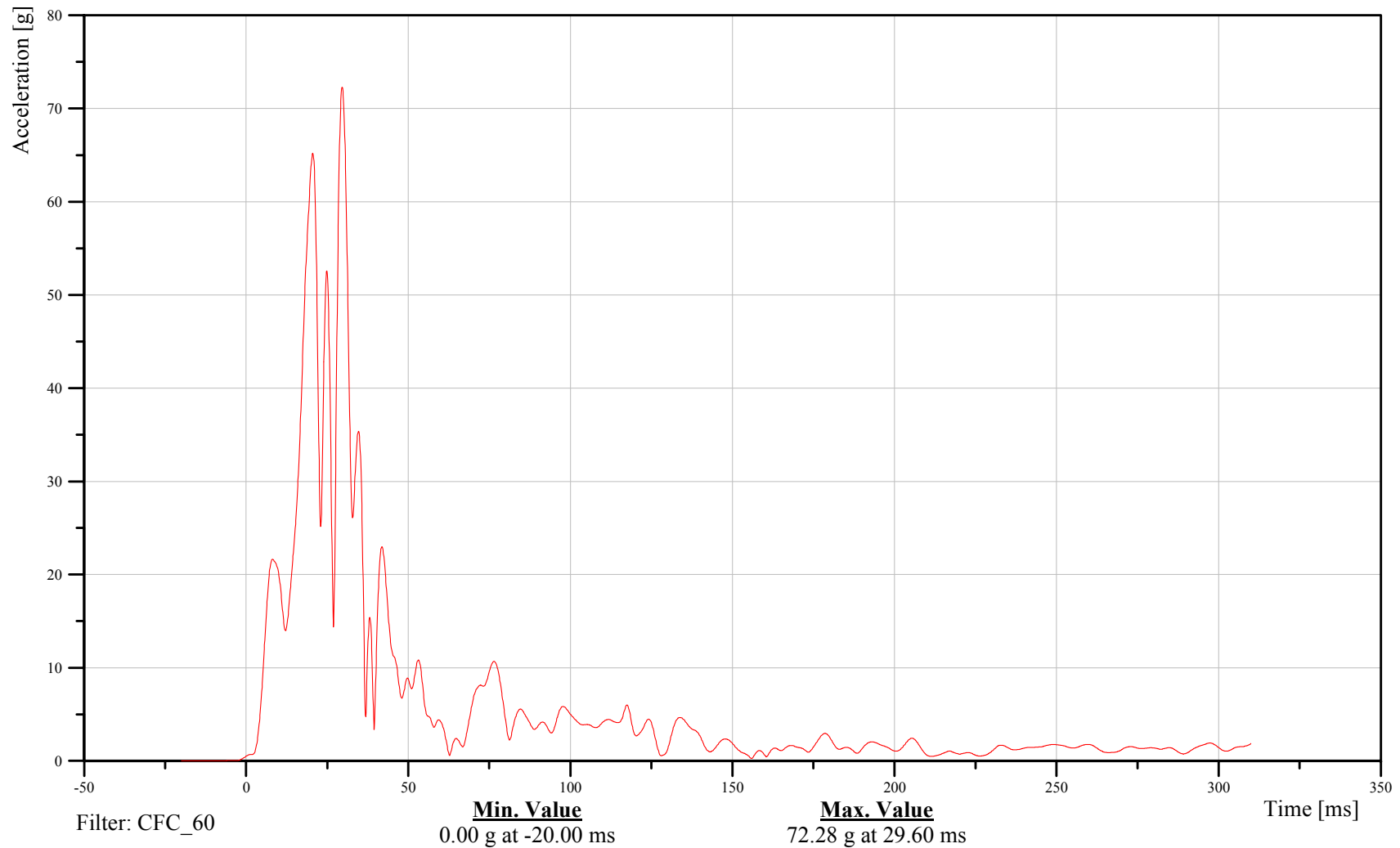
Time: 13:44

Customer: VRTC

10VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

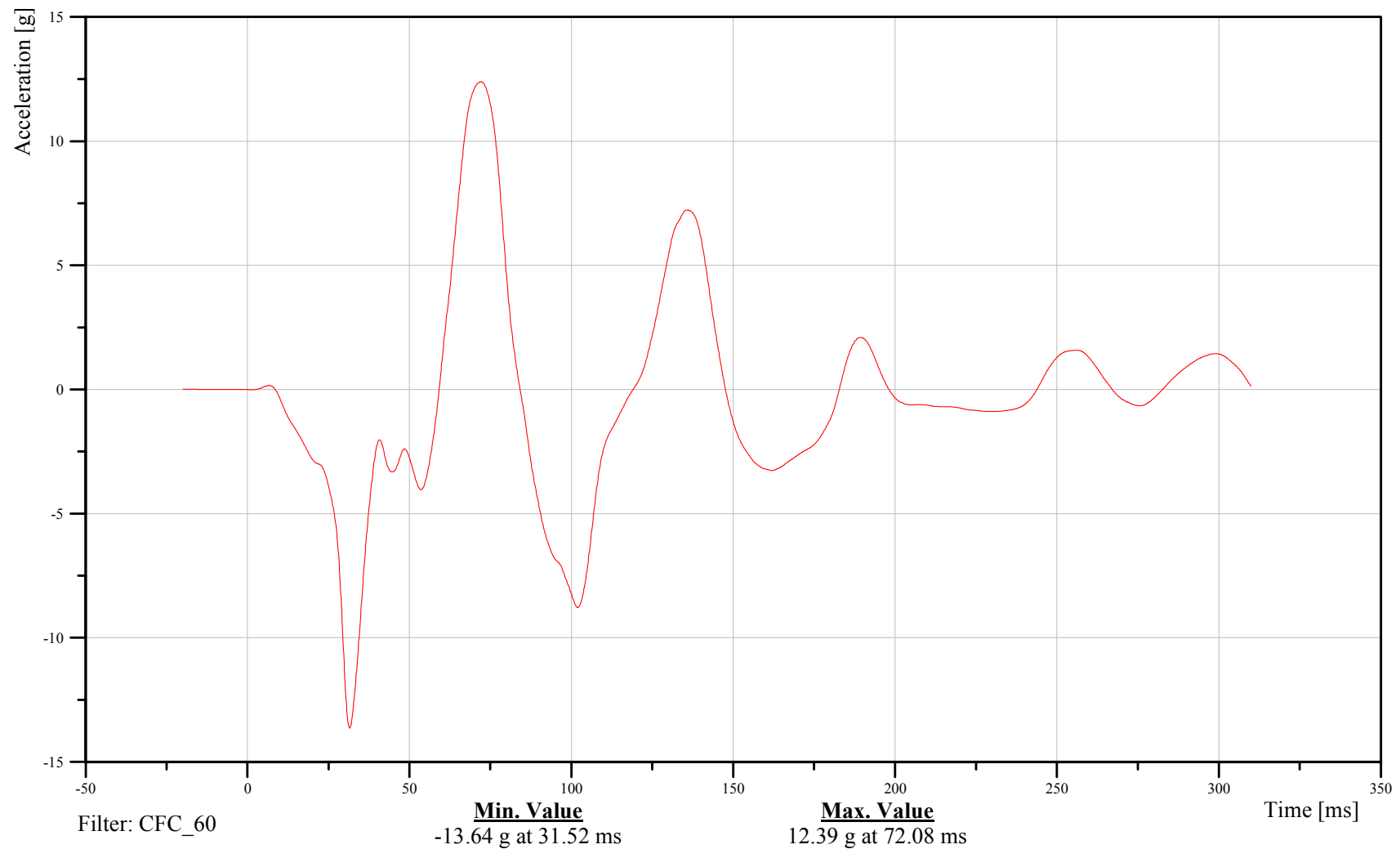
Top of Engine X-Axis Acceleration

Customer: VRTC

12ENG000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

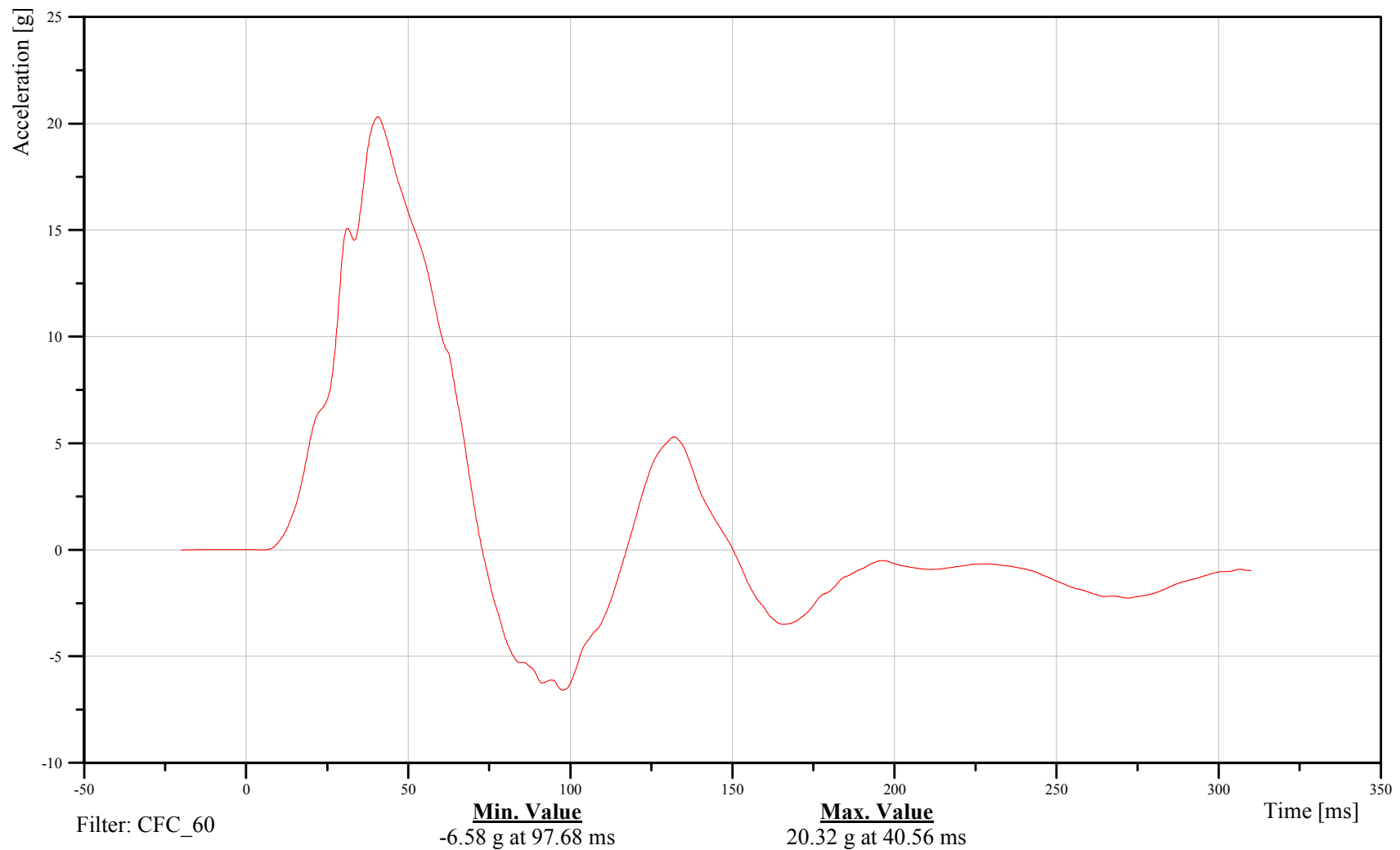
Top of Engine Y-Axis Acceleration

Customer: VRTC

12ENGN000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

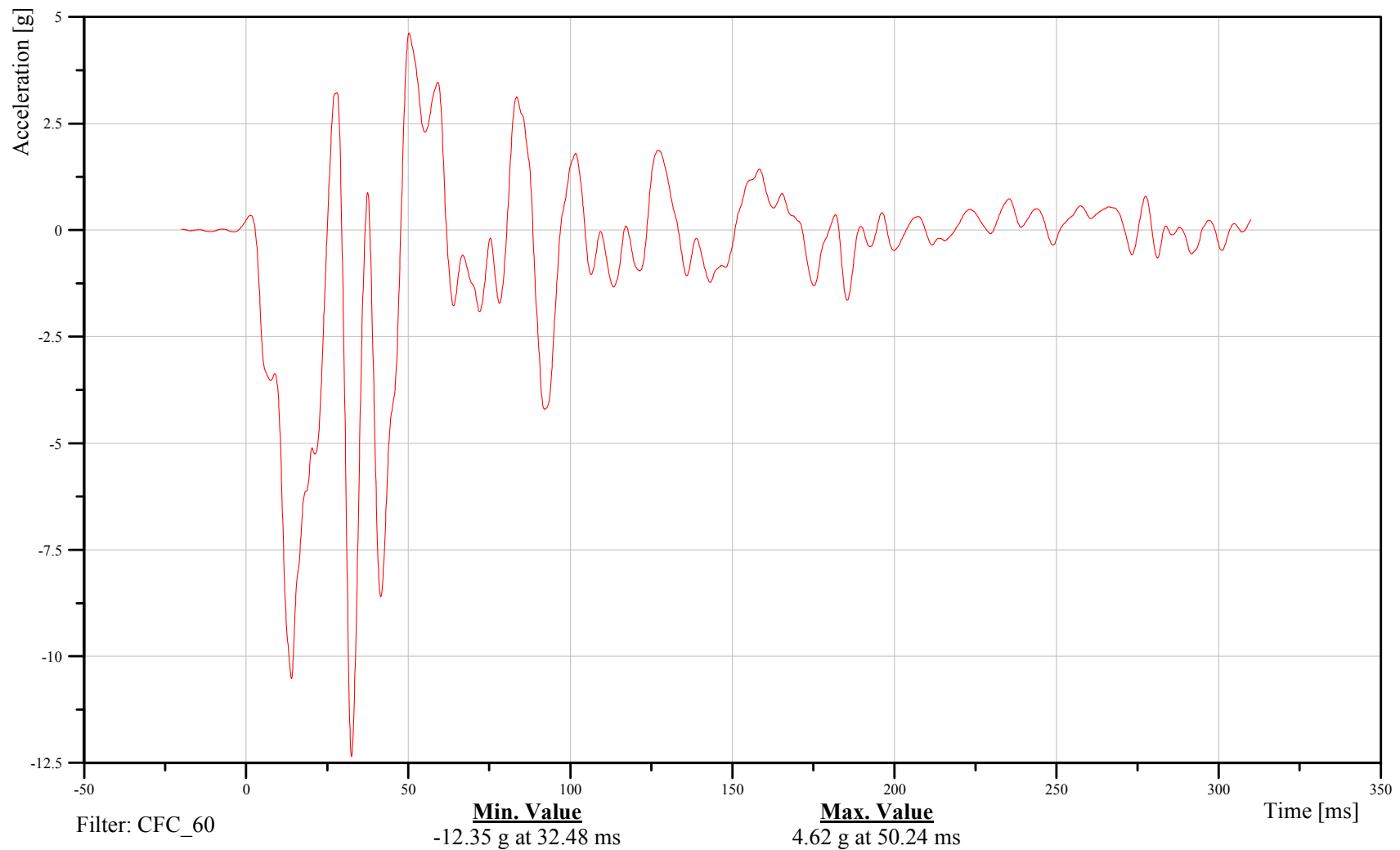
Firewall X-Axis Acceleration

Customer: VRTC

12VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Firewall Y-Axis Acceleration

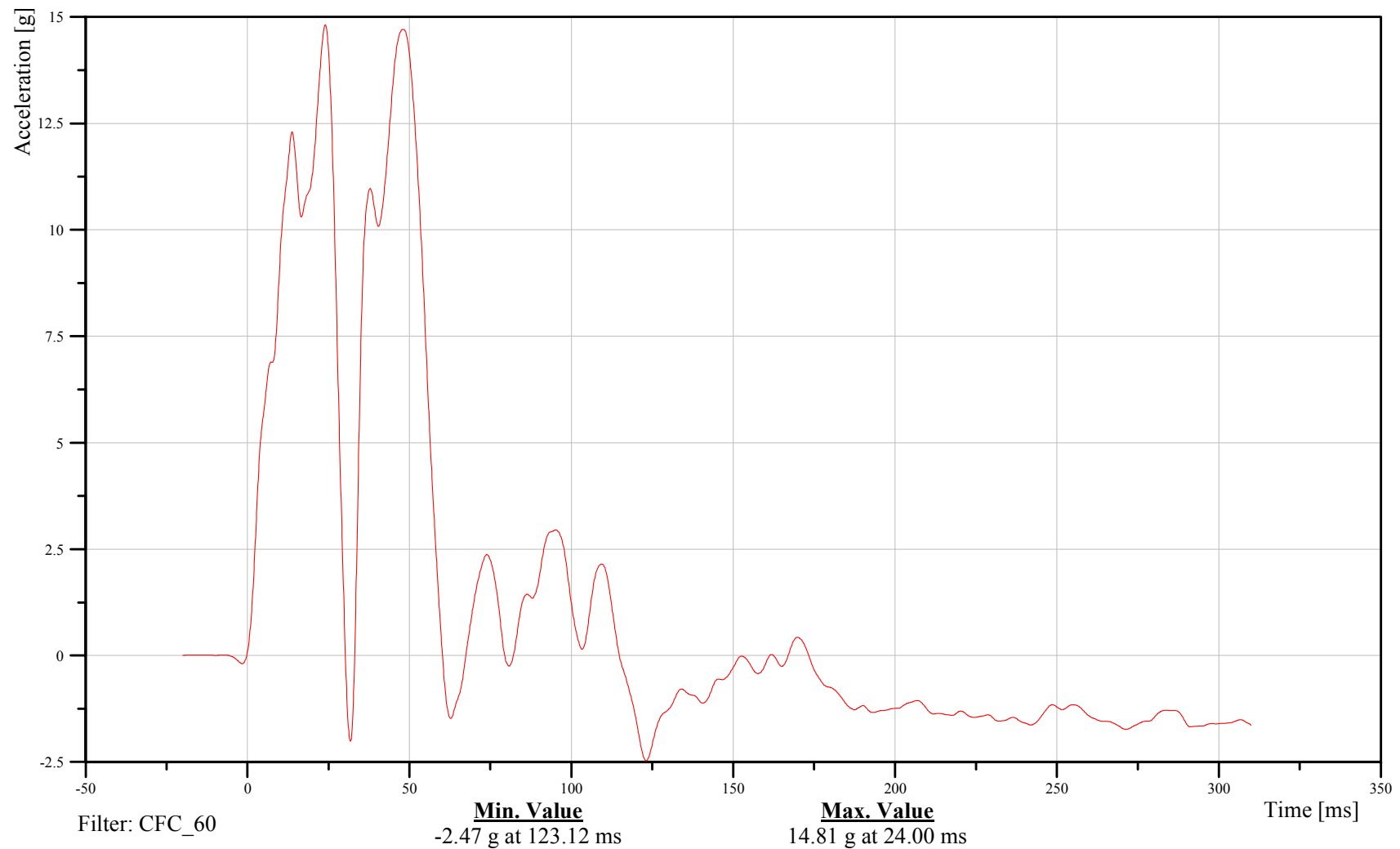
Date: 08/17/2005
Time: 13:44

Customer: VRTC

12VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

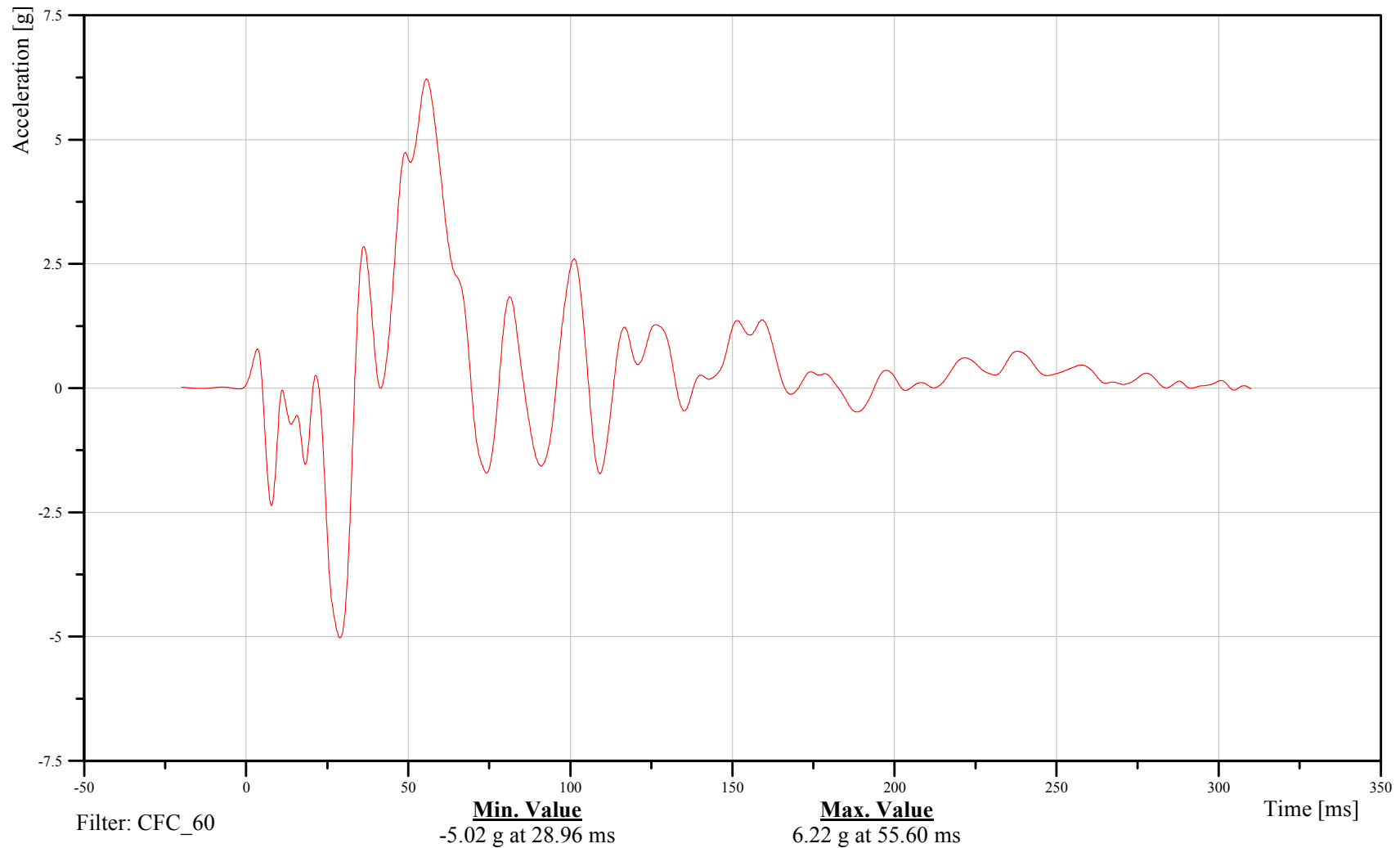
Right Roof Rail X-Axis Acceleration

Customer: VRTC

13ROFR000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

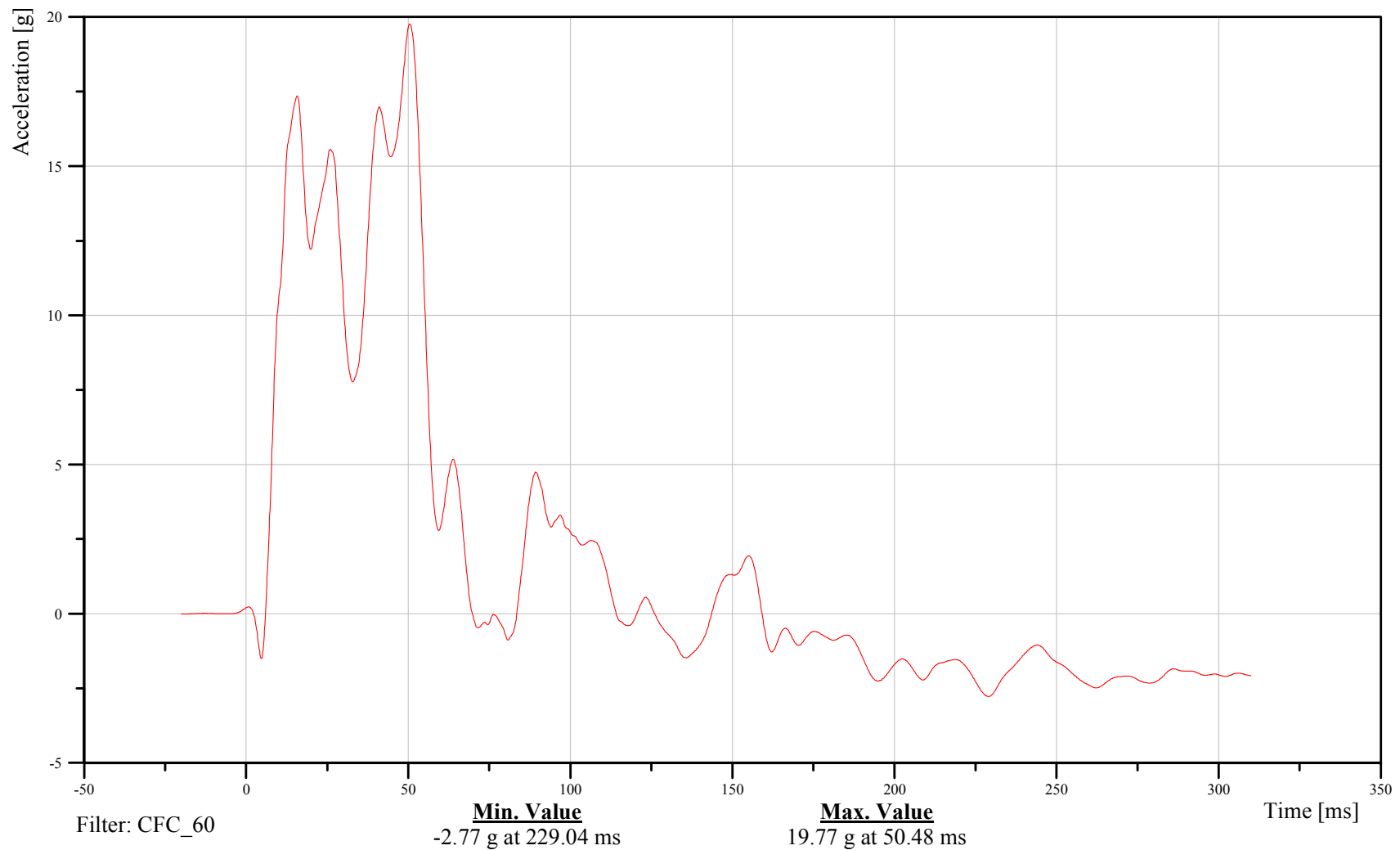
Right Roof Rail Y-Axis Acceleration

Customer: VRTC

13ROFR000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Front Door Centerline Y-Axis Acceleration

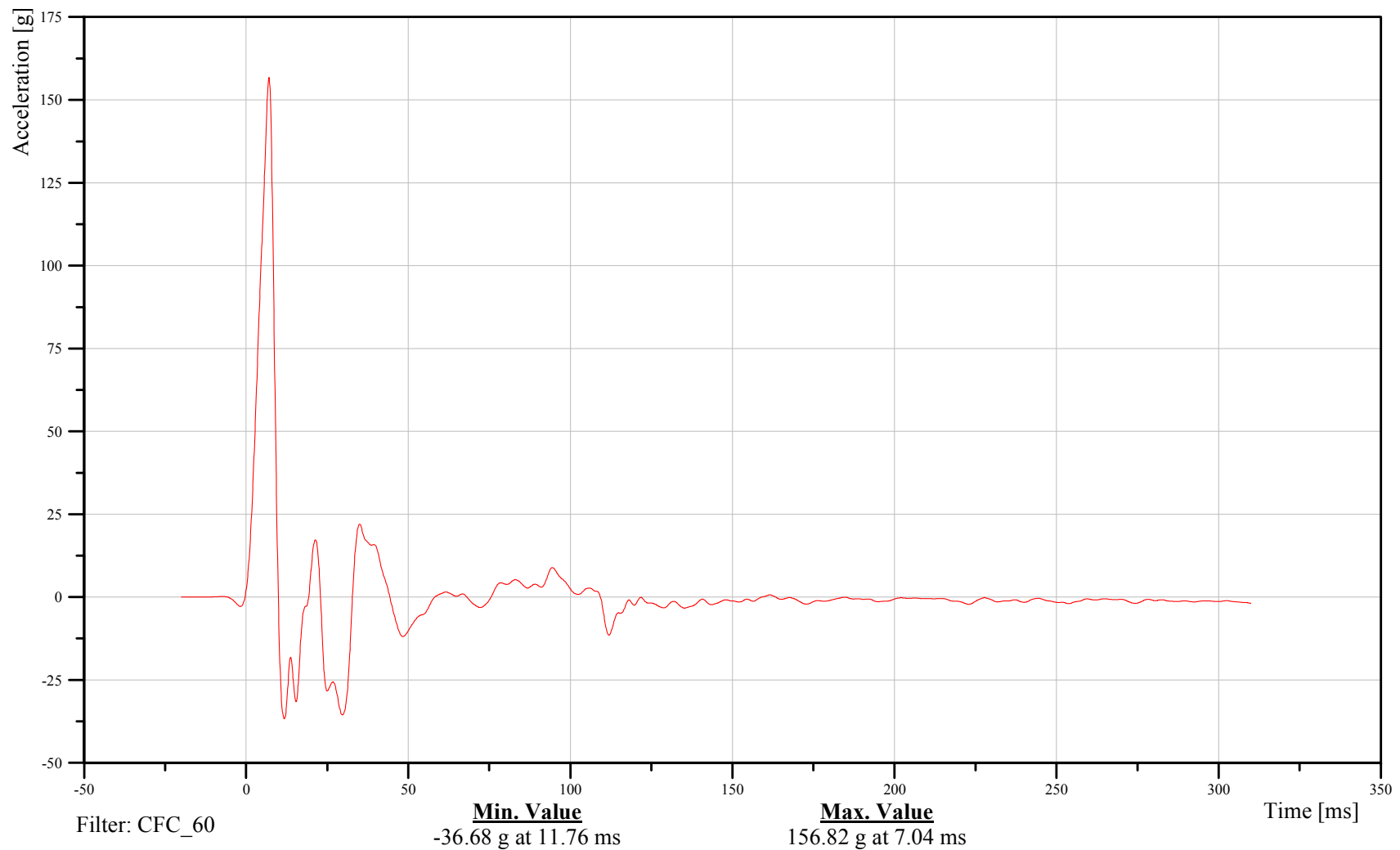
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11DOOR000001ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

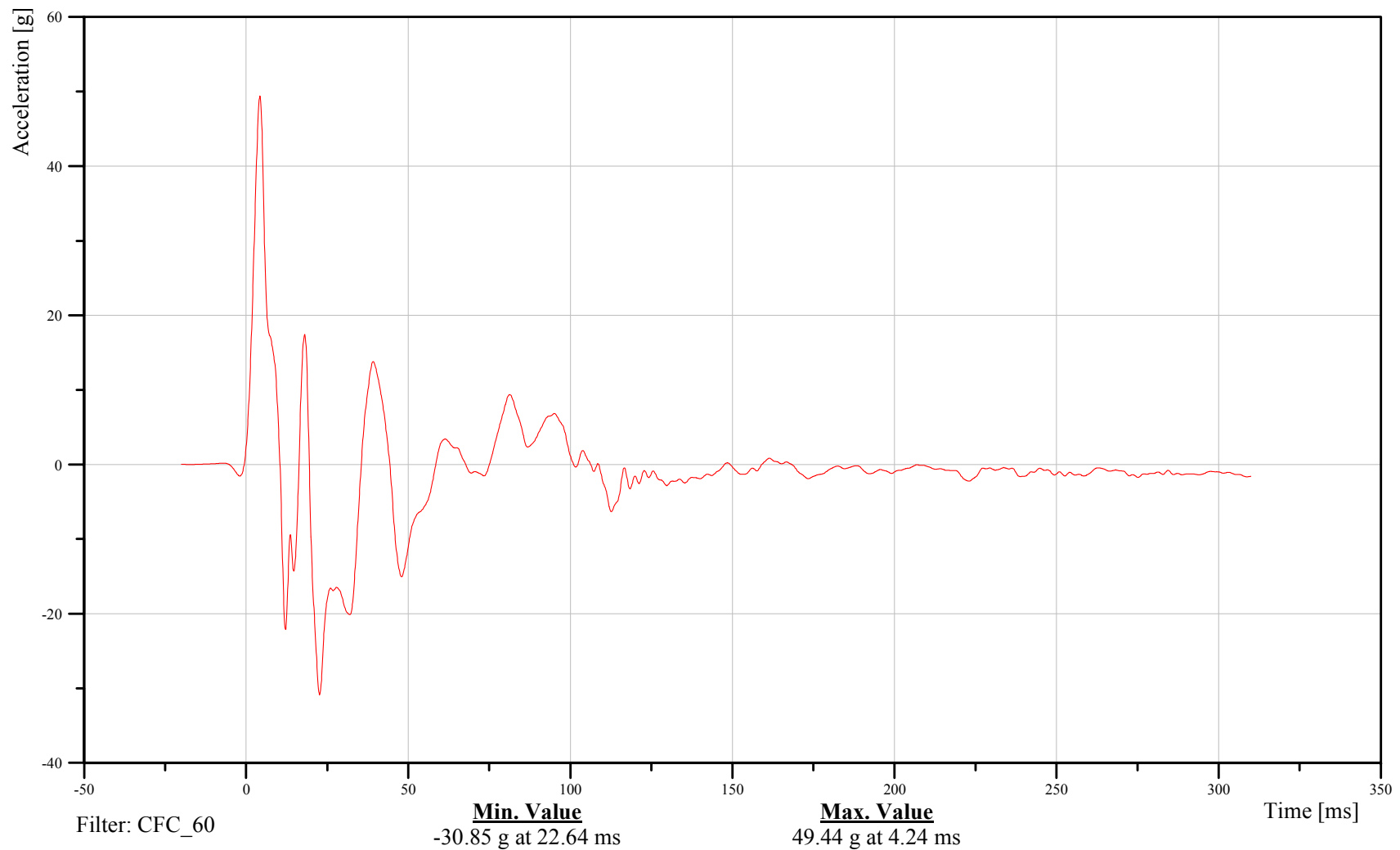
Left Front Door Mid-Rear Y-Axis Acceleration

Customer: VRTC

11DOOR000002ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Front Door Upper Centerline Y-Axis Acceleration

Date: 08/17/2005

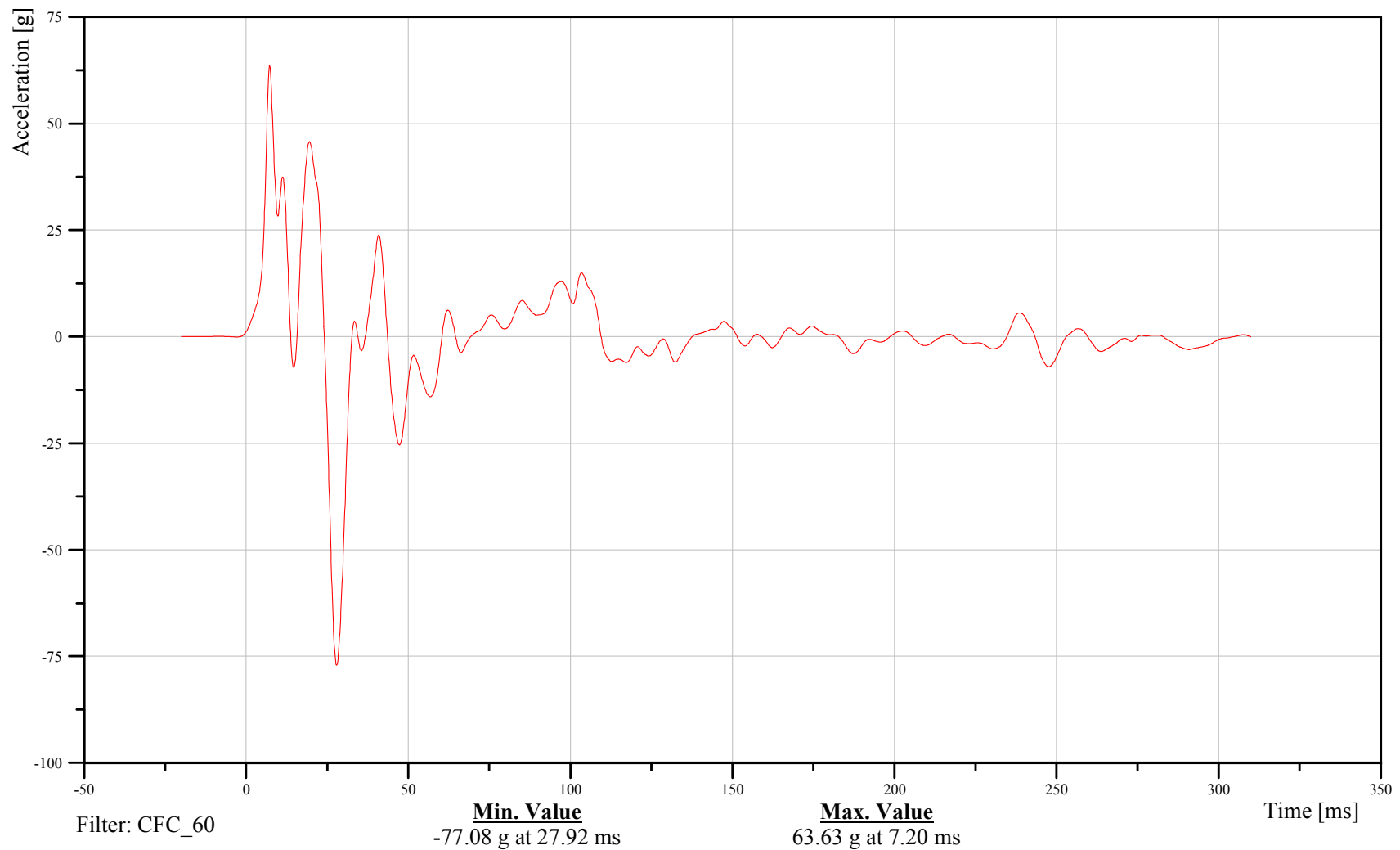
Time: 13:44

Customer: VRTC

11DOOR000003ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Left Rear Door Mid-Rear Y-Axis Acceleration

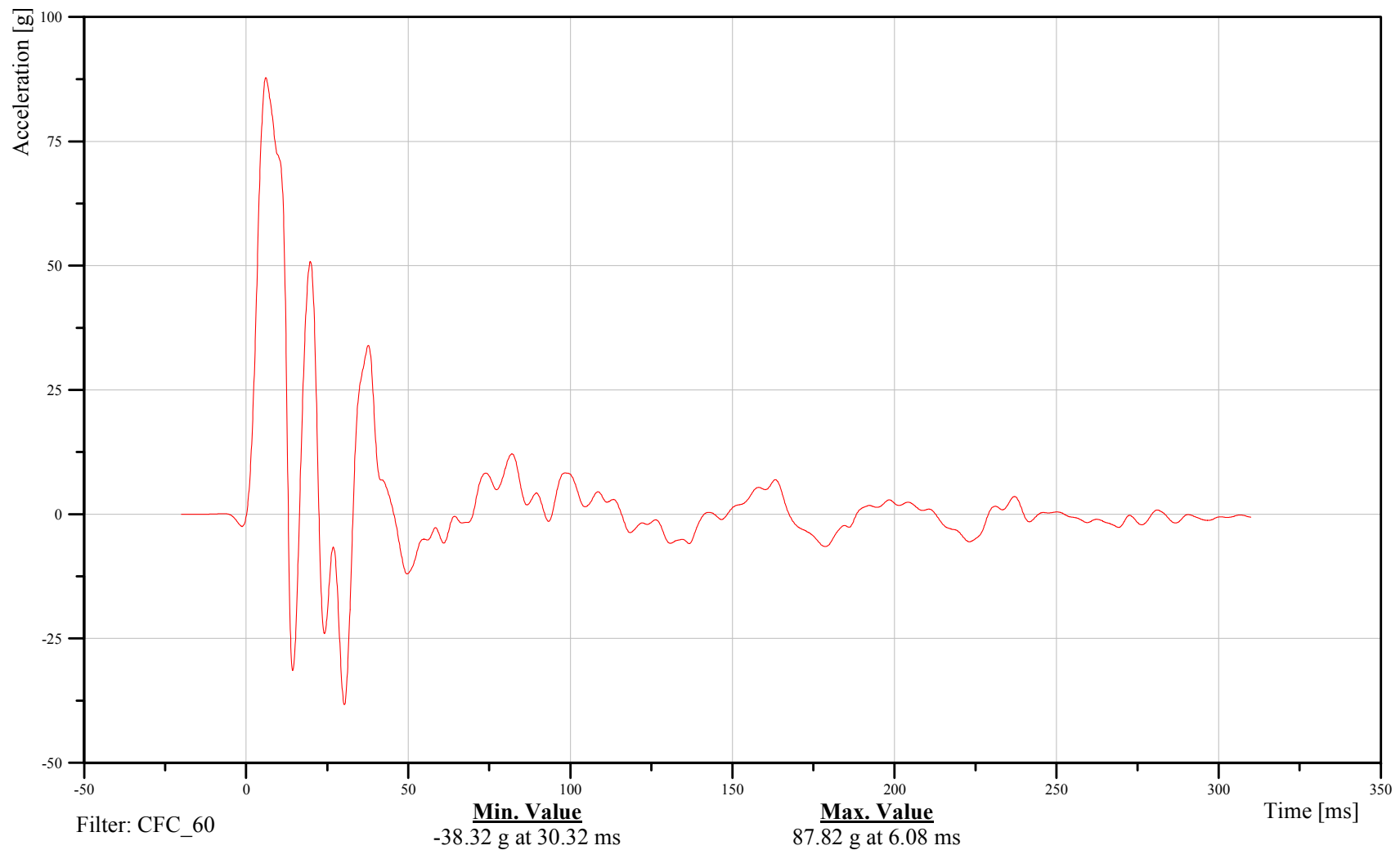
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14DOOR000001ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

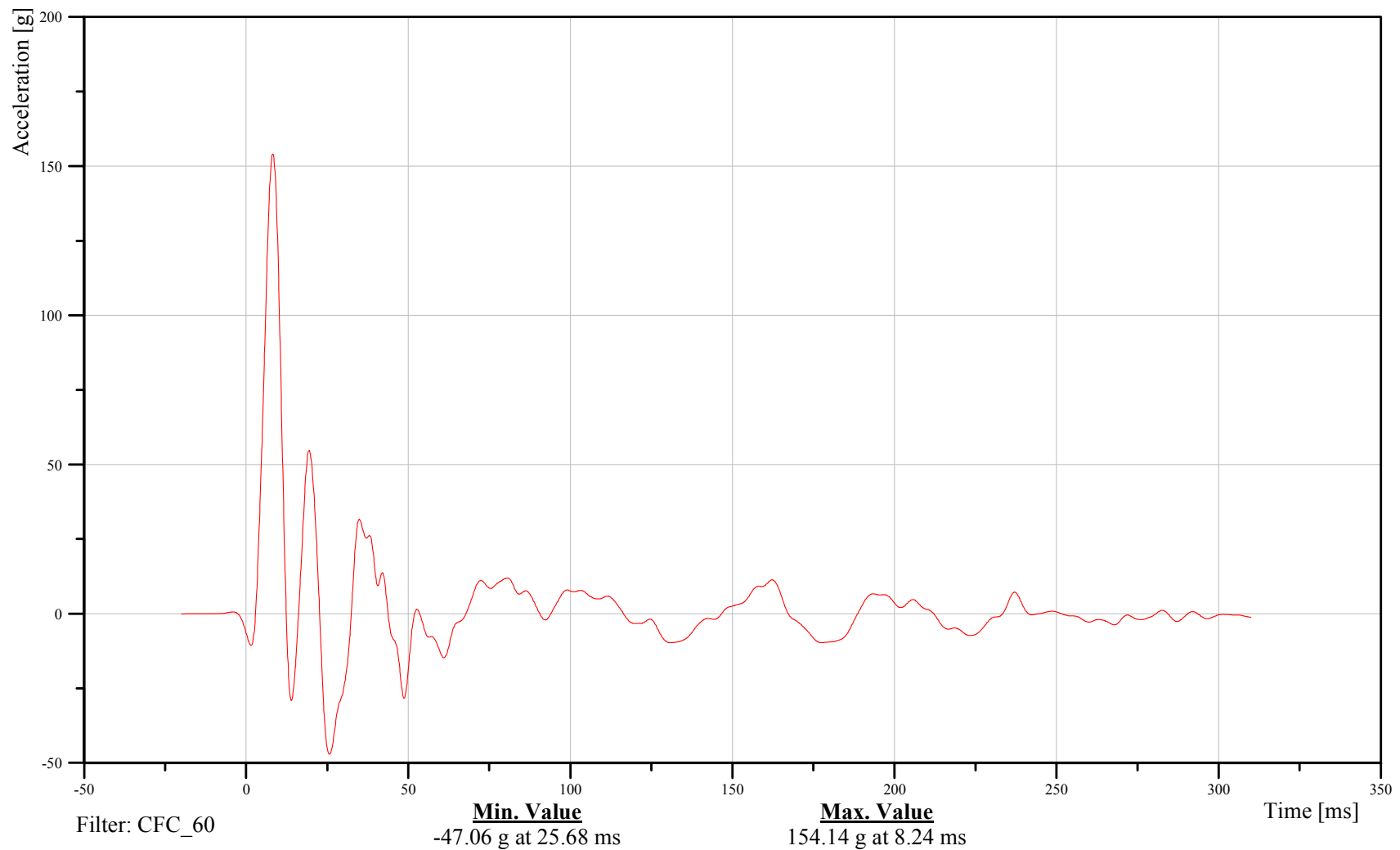
Left Rear Door Upper Centerline Y-Axis Acceleration

Customer: VRTC

14DOOR000002ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Side Torso Airbag Fire

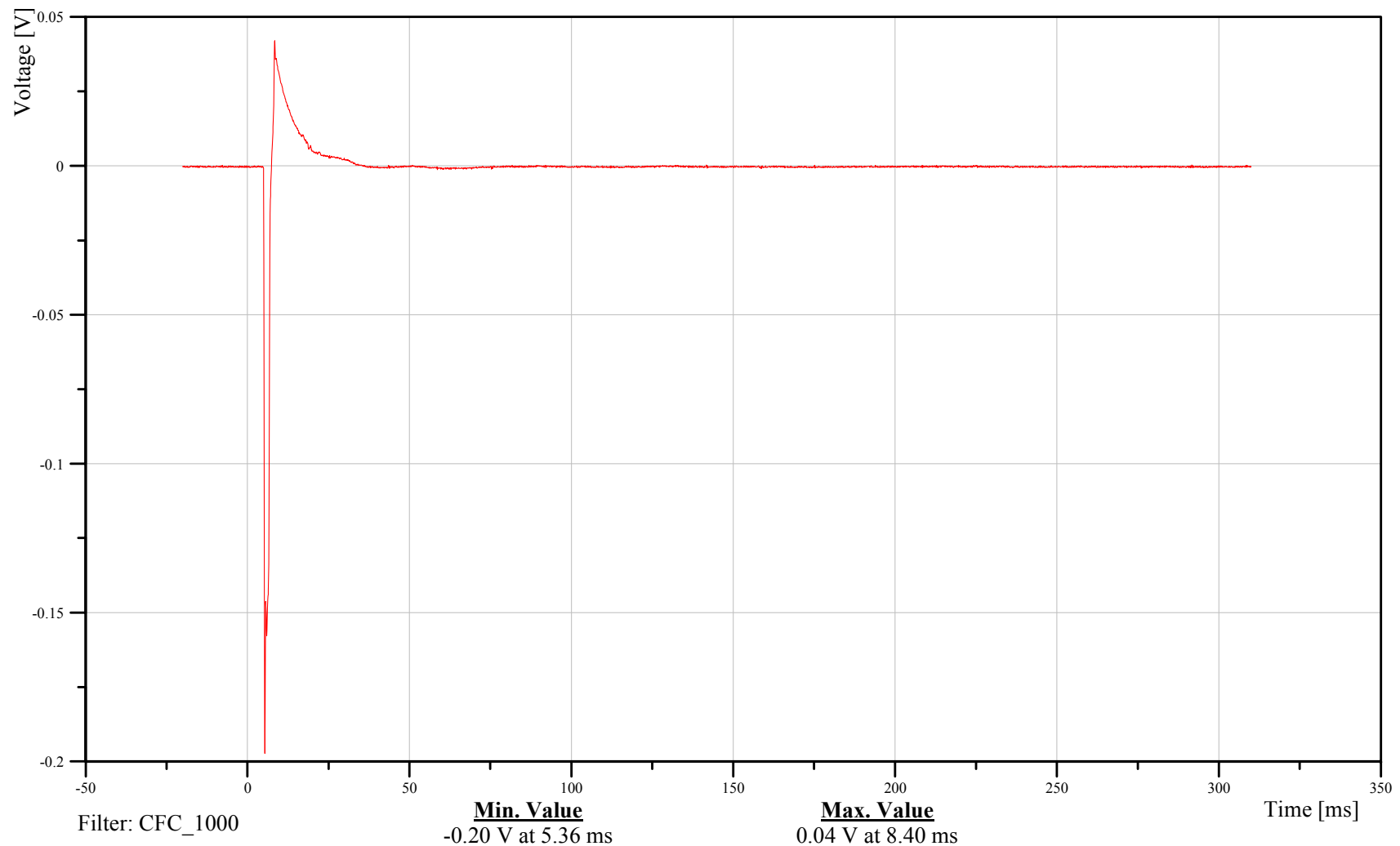
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SENS000001VO0A

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Side Curtain Airbag Fire

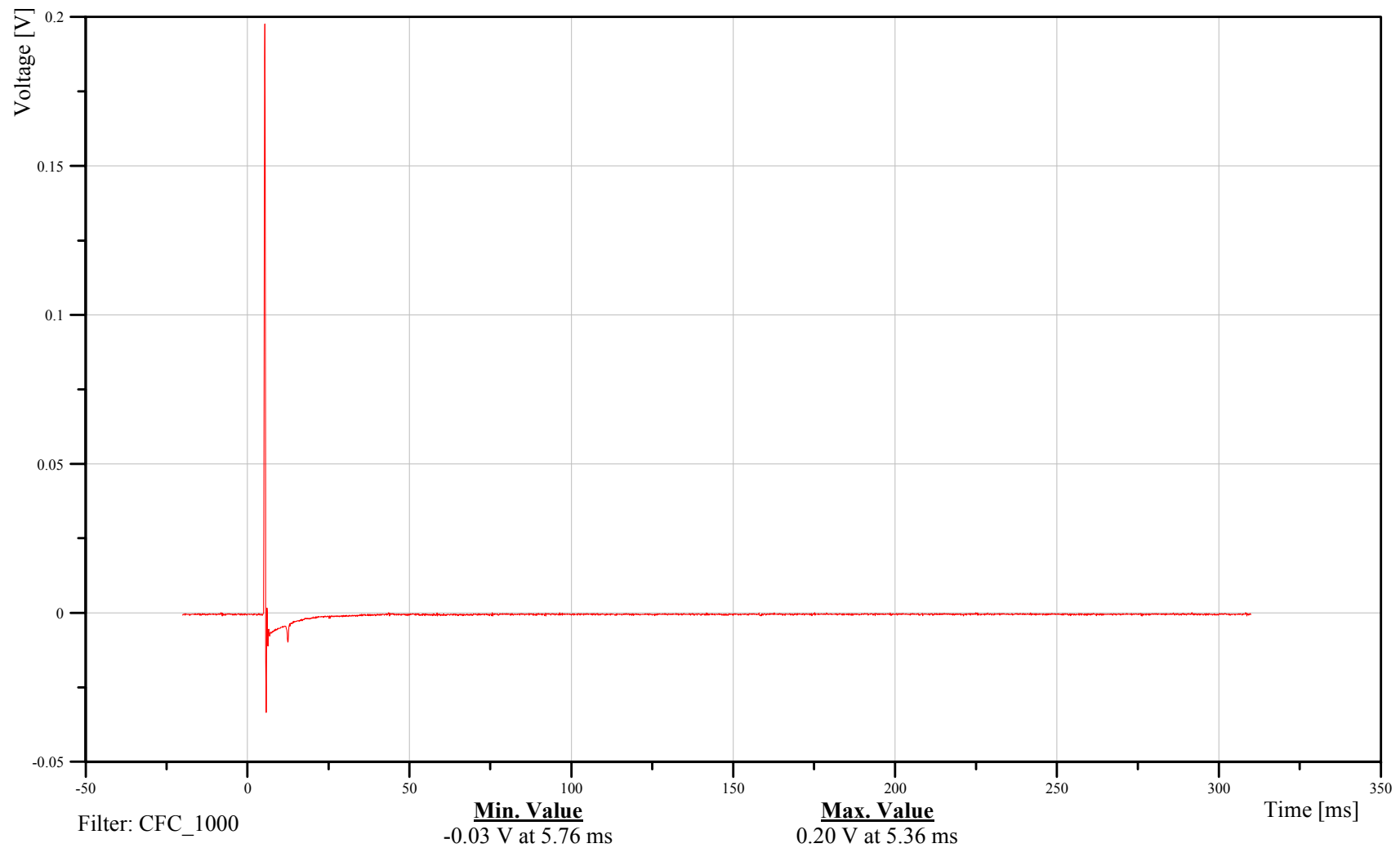
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11SENS000002VO0A

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Non-Struck Side Torso Airbag Fire (disable bag)

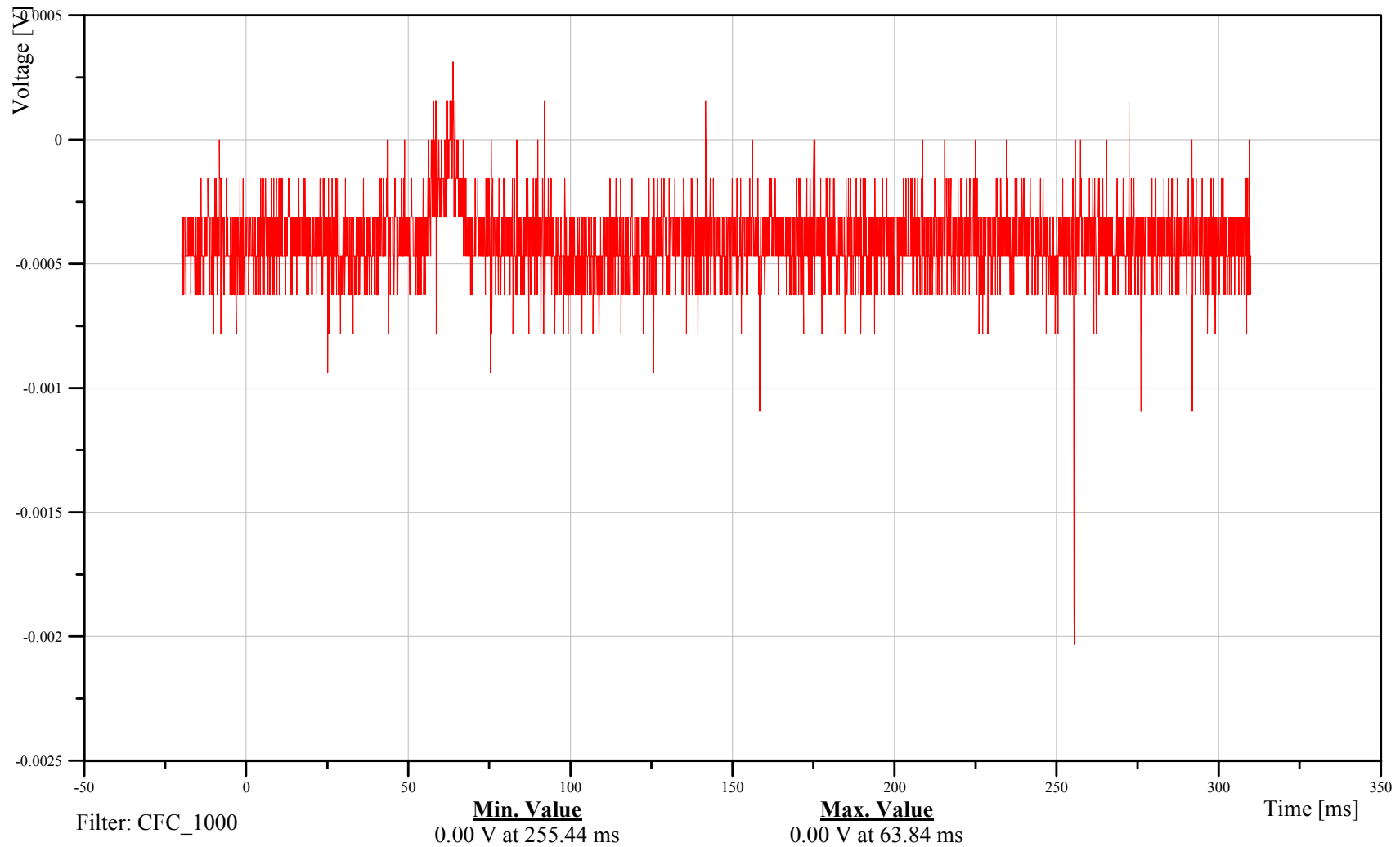
Date: 08/17/2005
Time: 13:44

Customer: VRTC

13SENS000001VO0A

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Non-Struck Side Curtain Airbag Fire (disable bag)

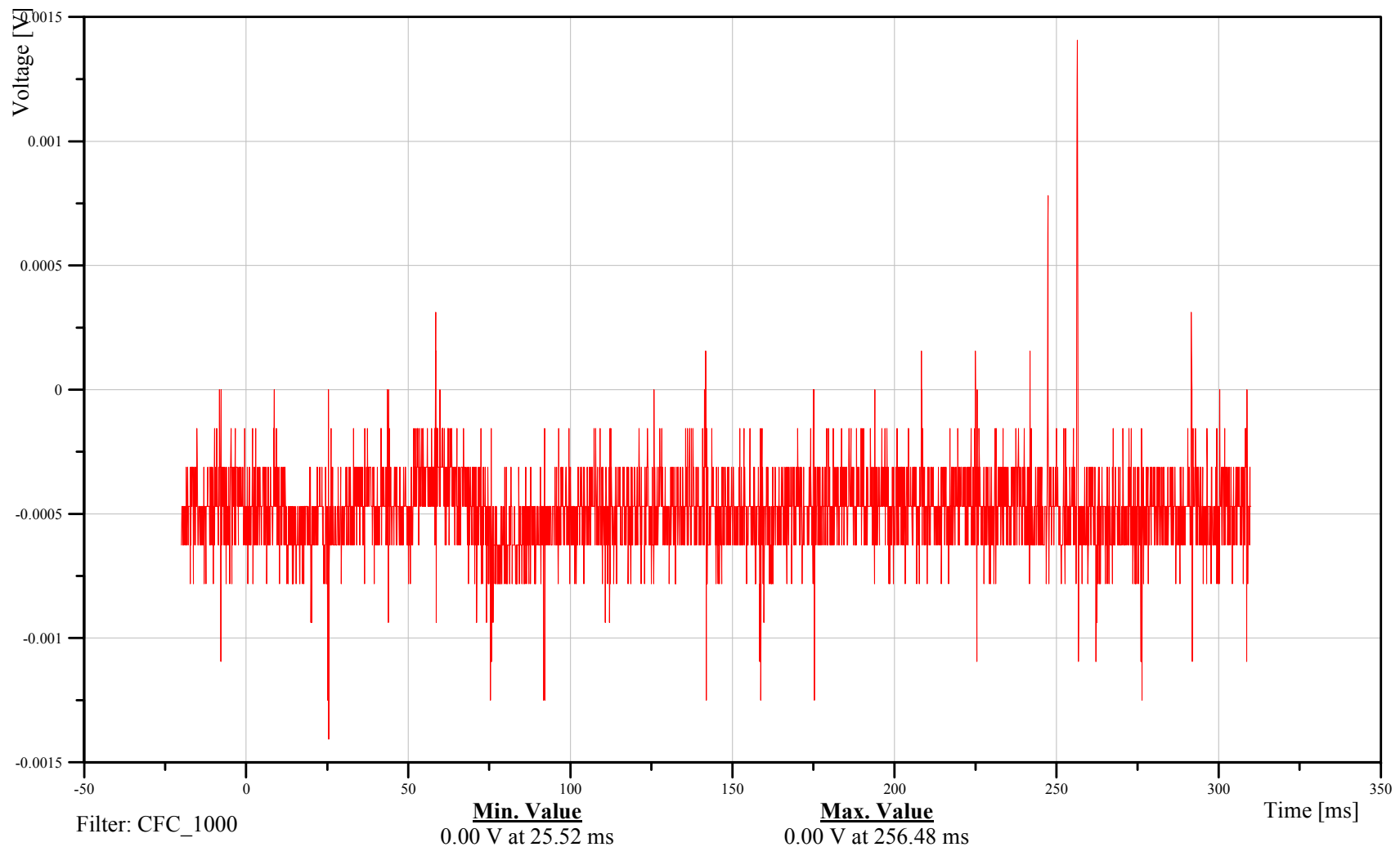
Date: 08/17/2005
Time: 13:44

Customer: VRTC

13SENS000002VO0A

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Dummy Head contact

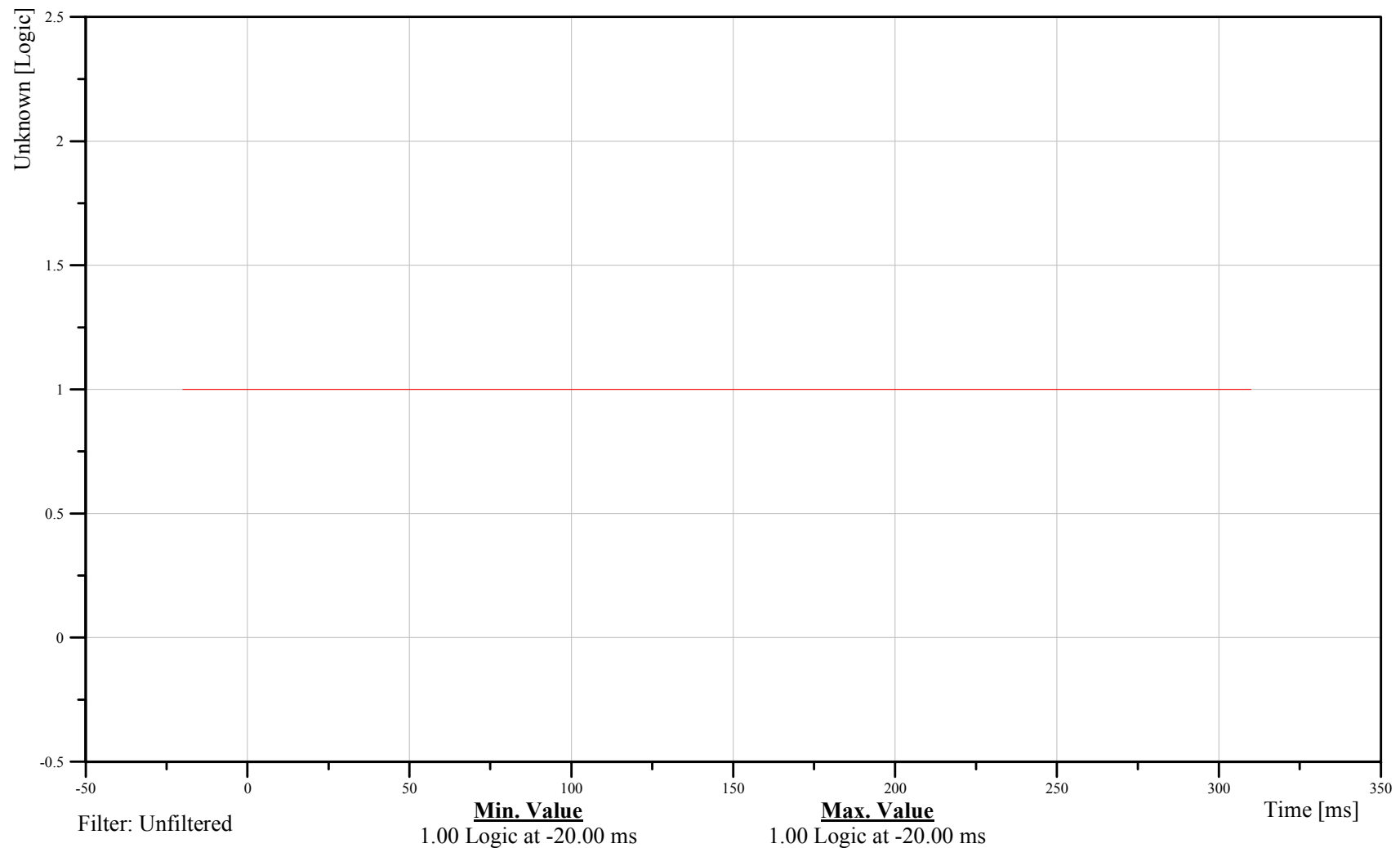
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11CONT000001EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Dummy Shoulder contact

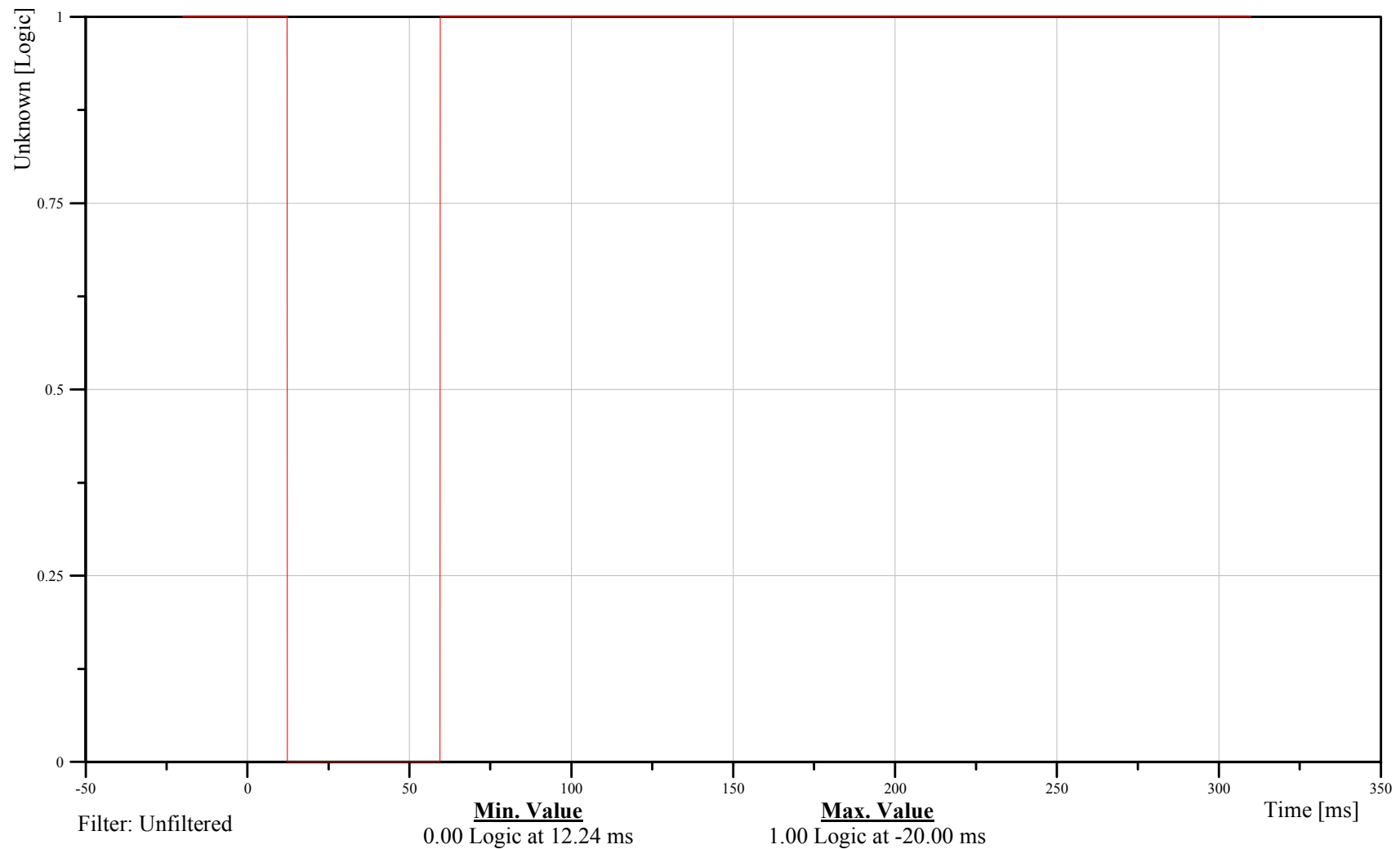
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11CONT000002EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Dummy Torso contact

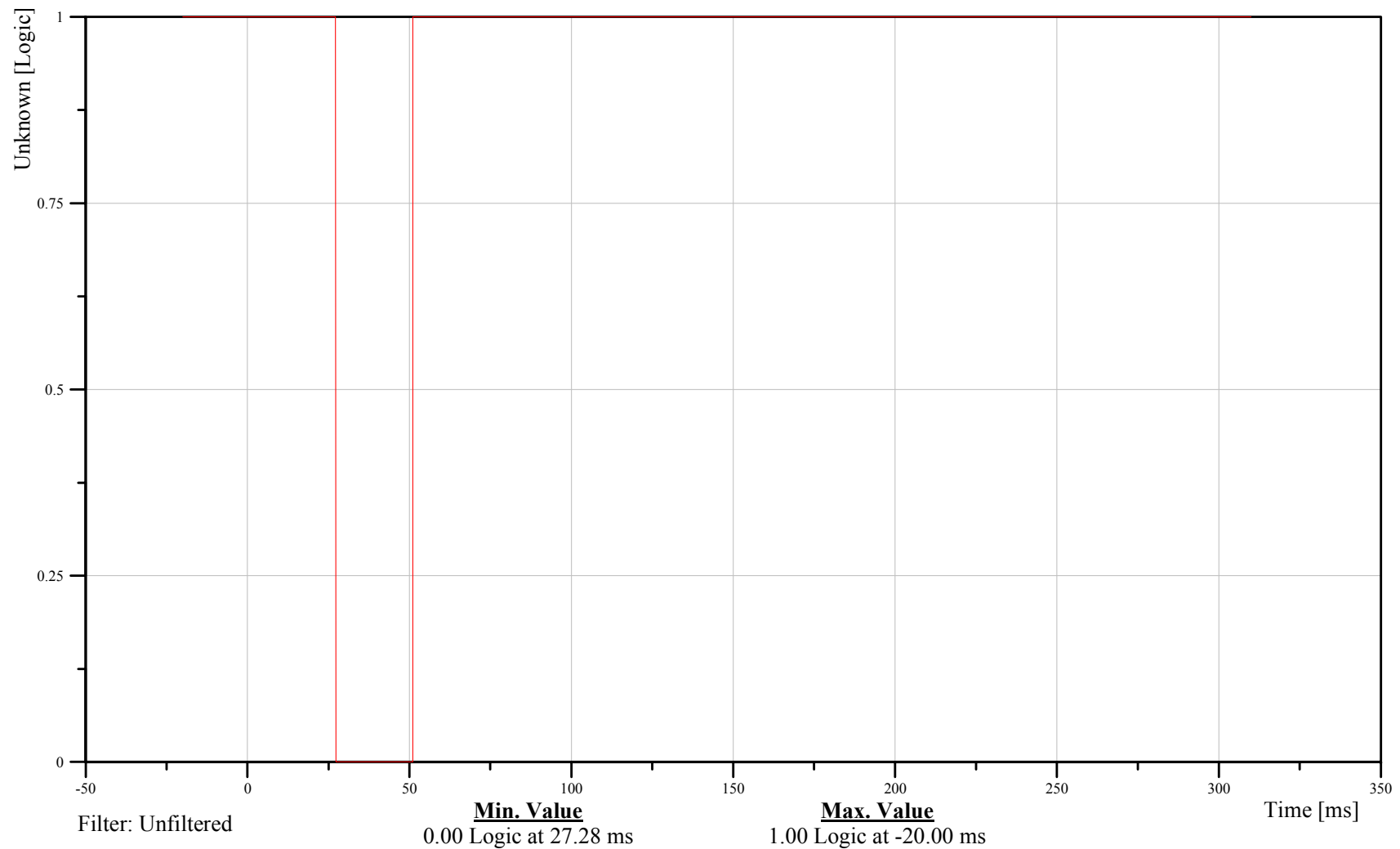
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11CONT000003EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Driver Dummy Leg contact

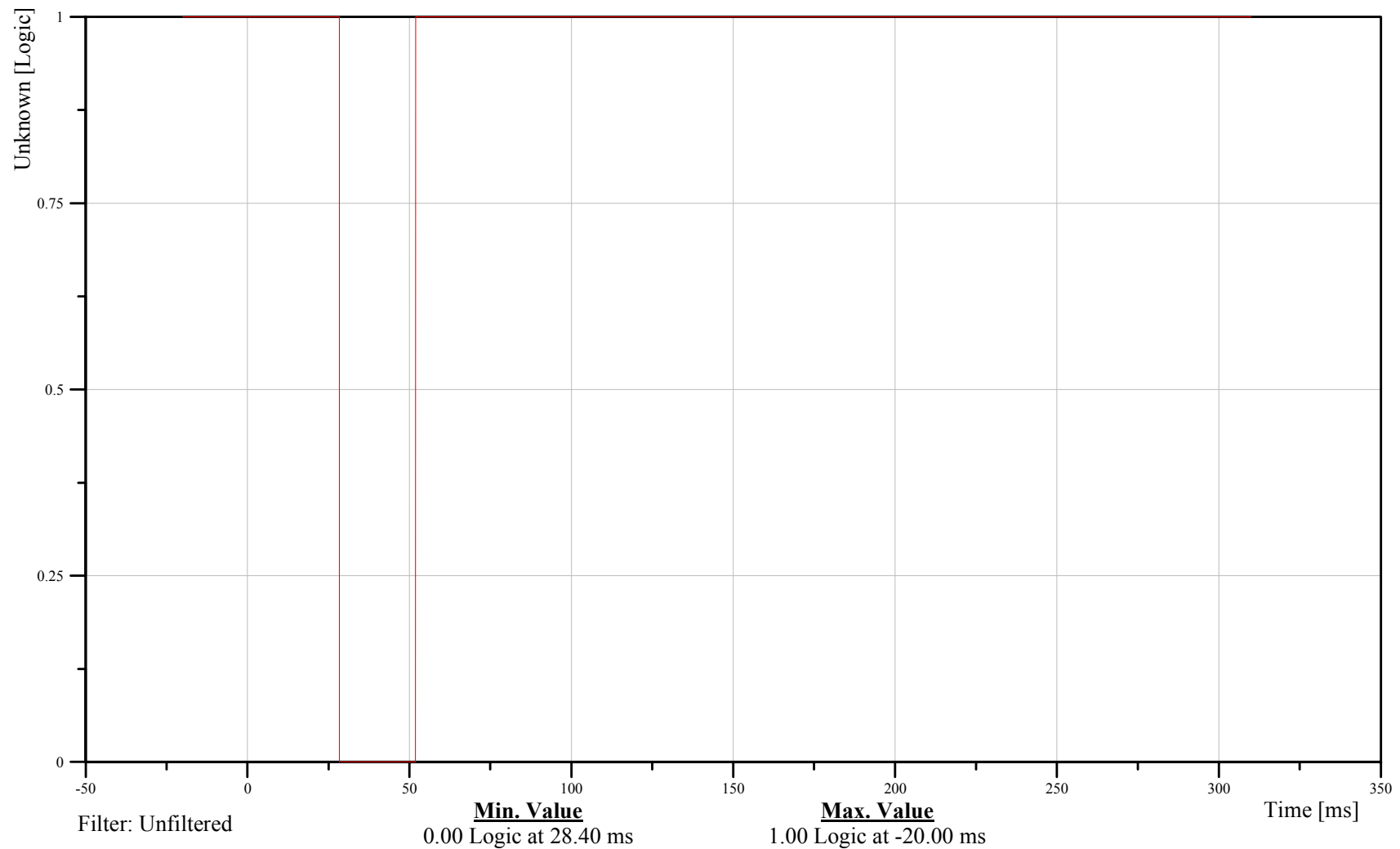
Date: 08/17/2005
Time: 13:44

Customer: VRTC

11CONT000004EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Dummy Head contact

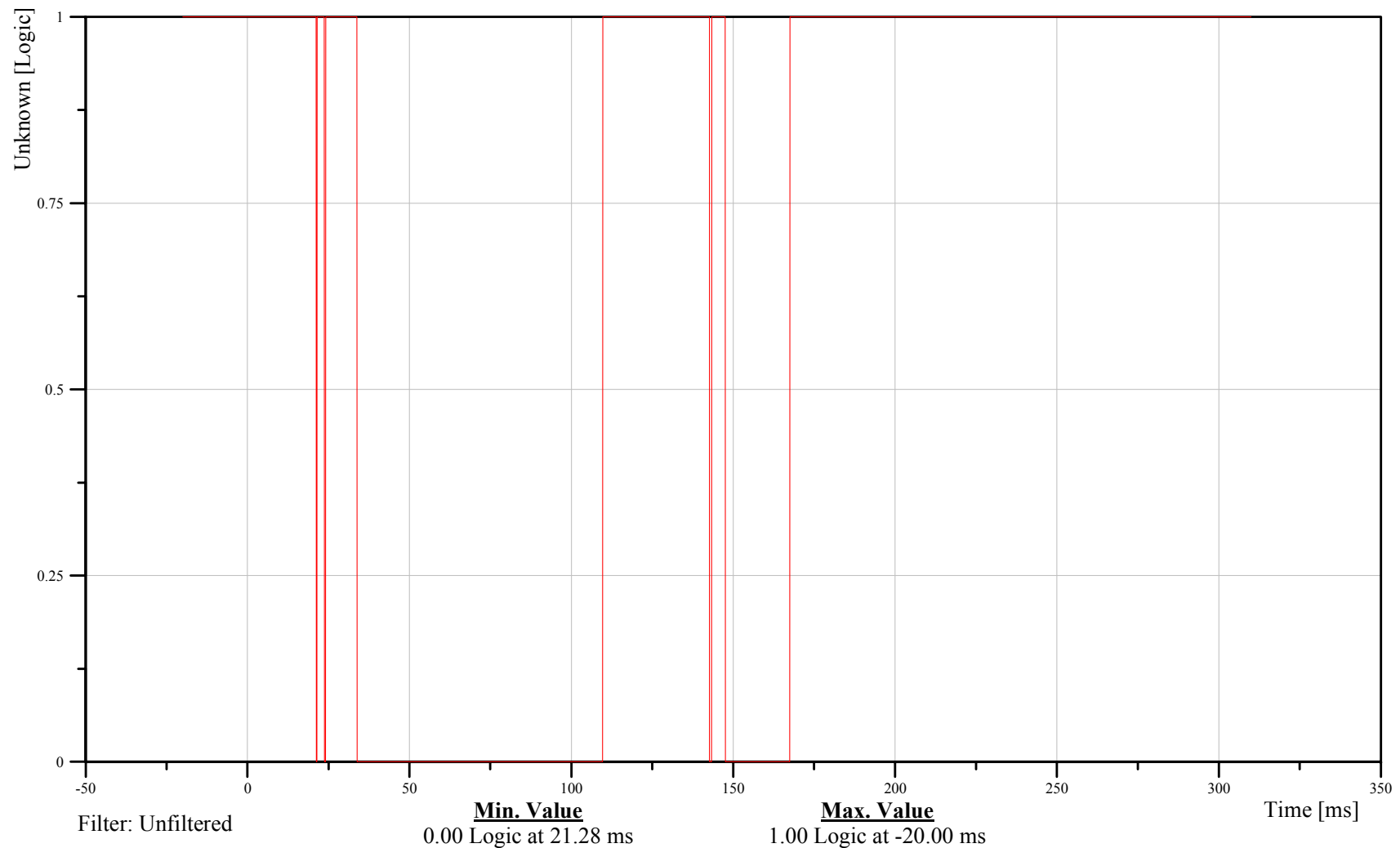
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14CONT000001EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

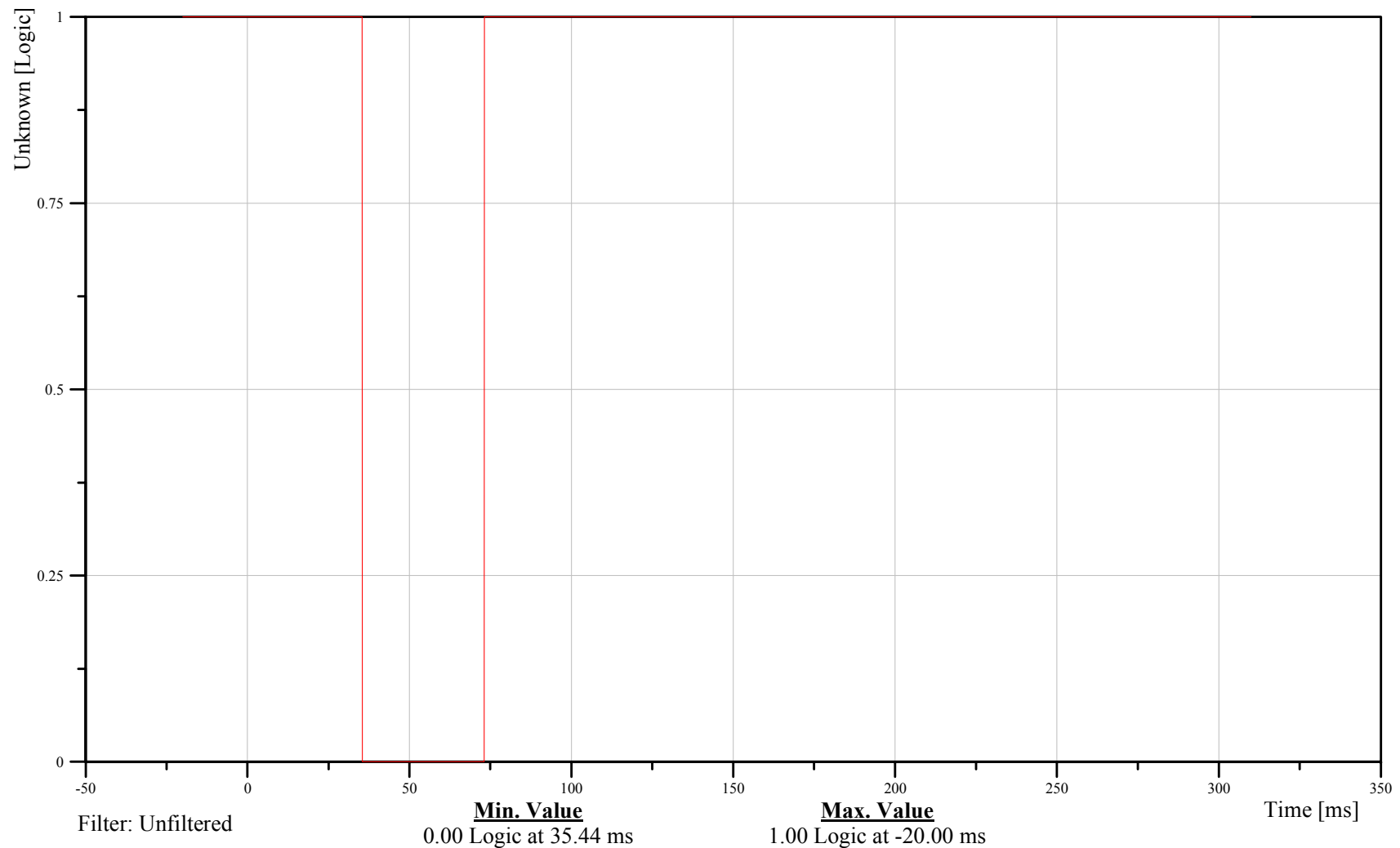
LR Pass. Dummy Shoulder contact

Customer: VRTC

14CONT000002EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

LR Pass. Dummy Torso contact

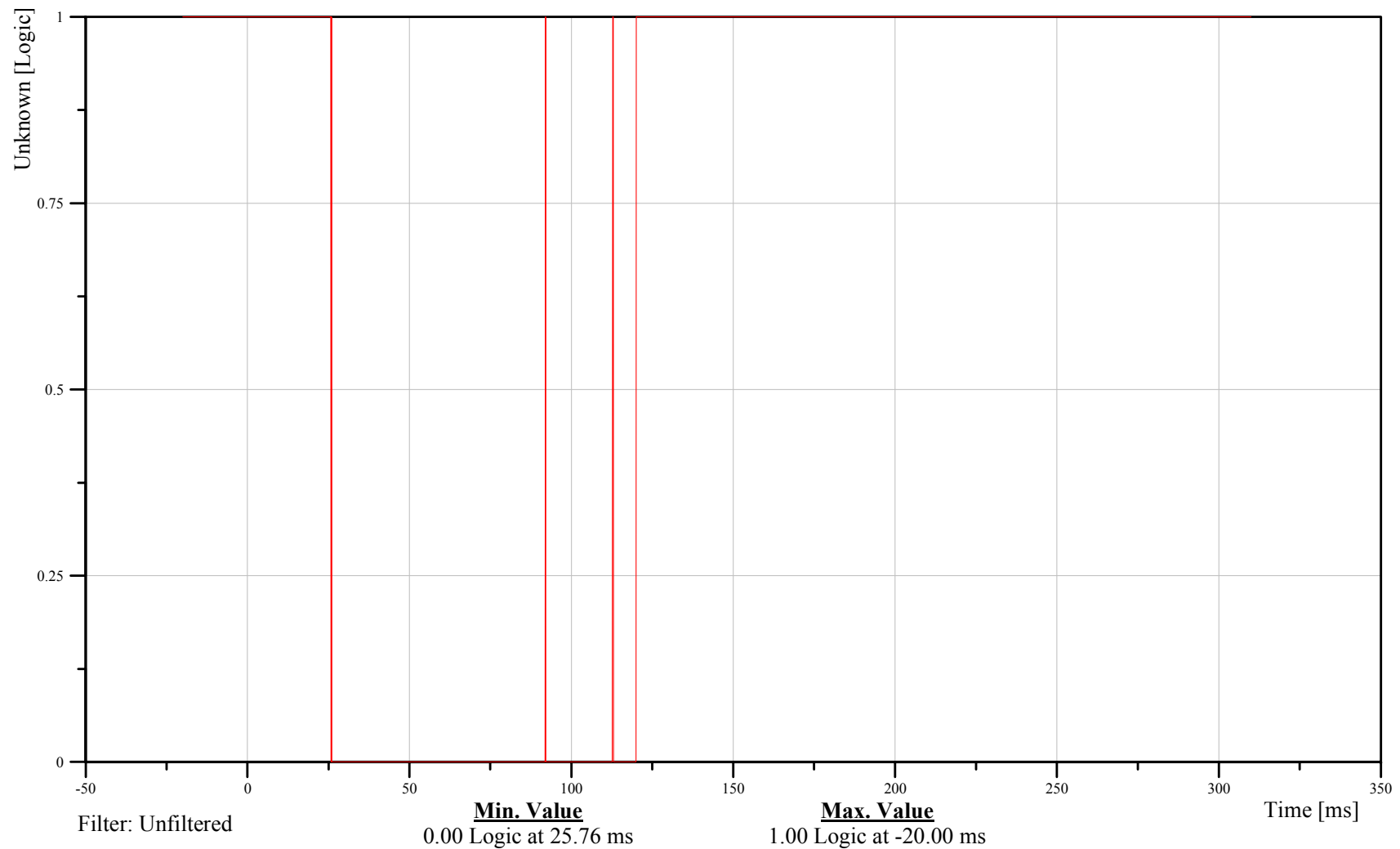
Date: 08/17/2005
Time: 13:44

Customer: VRTC

14CONT000003EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

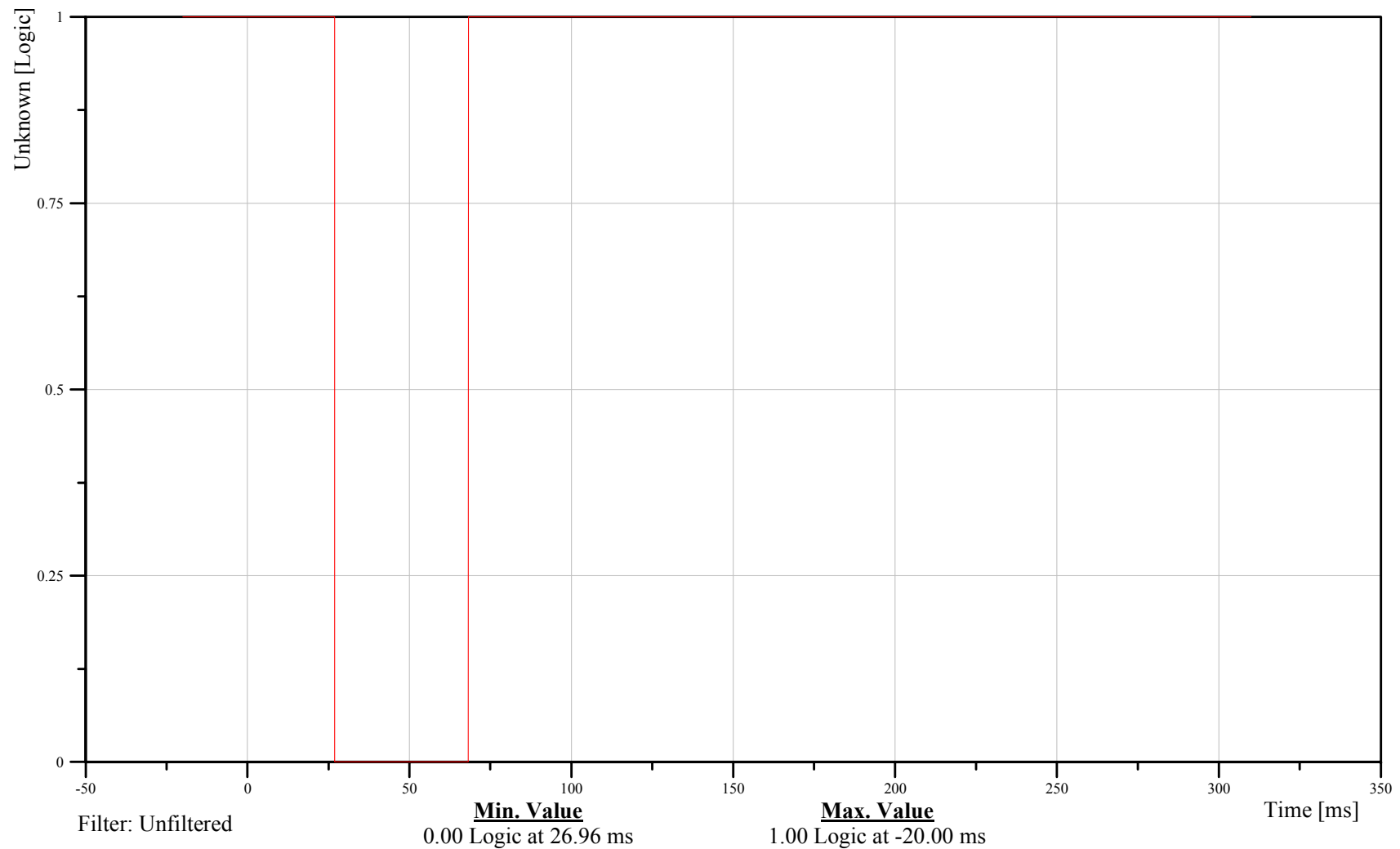
LR Pass. Dummy Leg contact

Customer: VRTC

14CONT000004EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

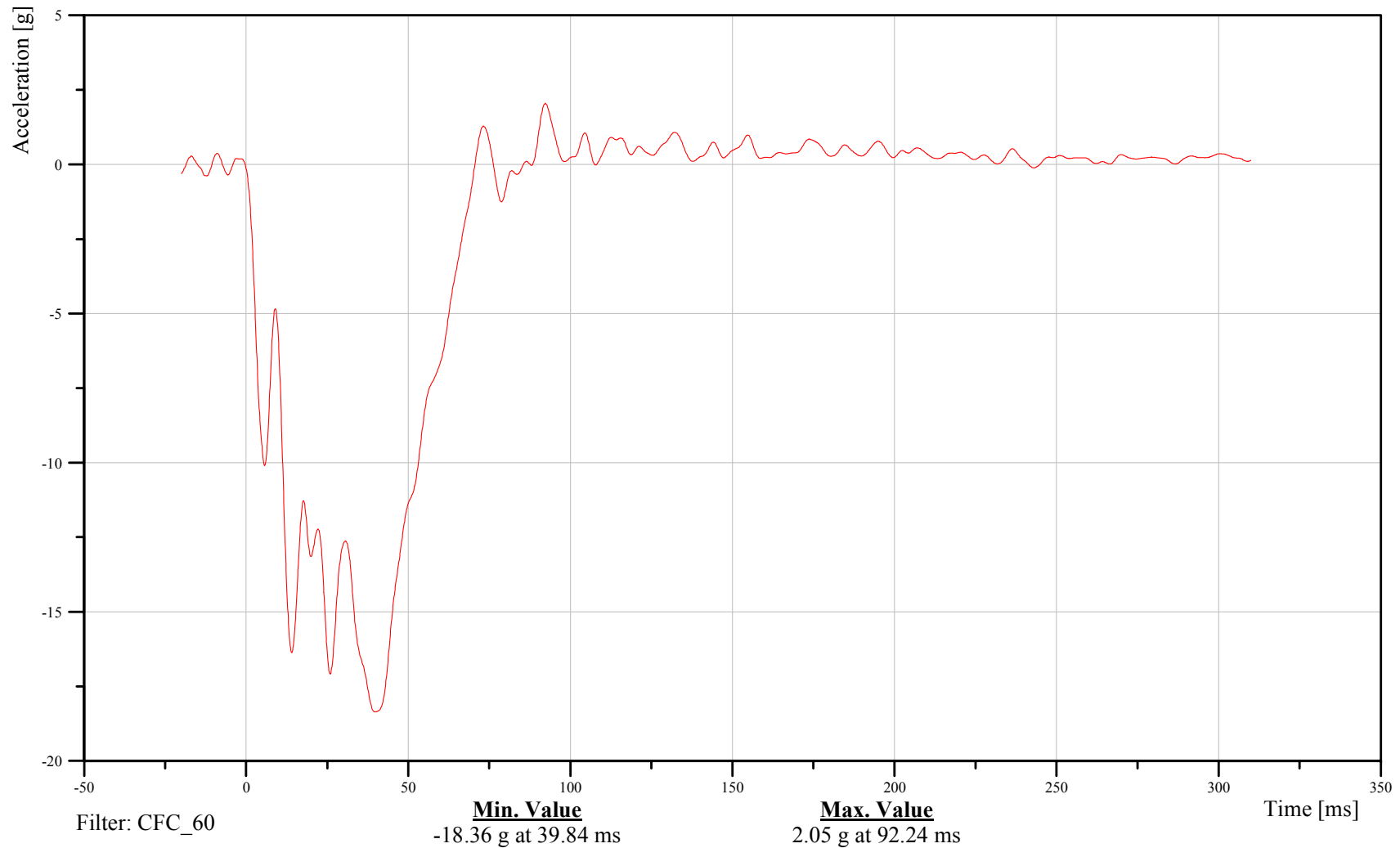
MDB Center of Gravity X-Axis Acceleration

Customer: VRTC

M0VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

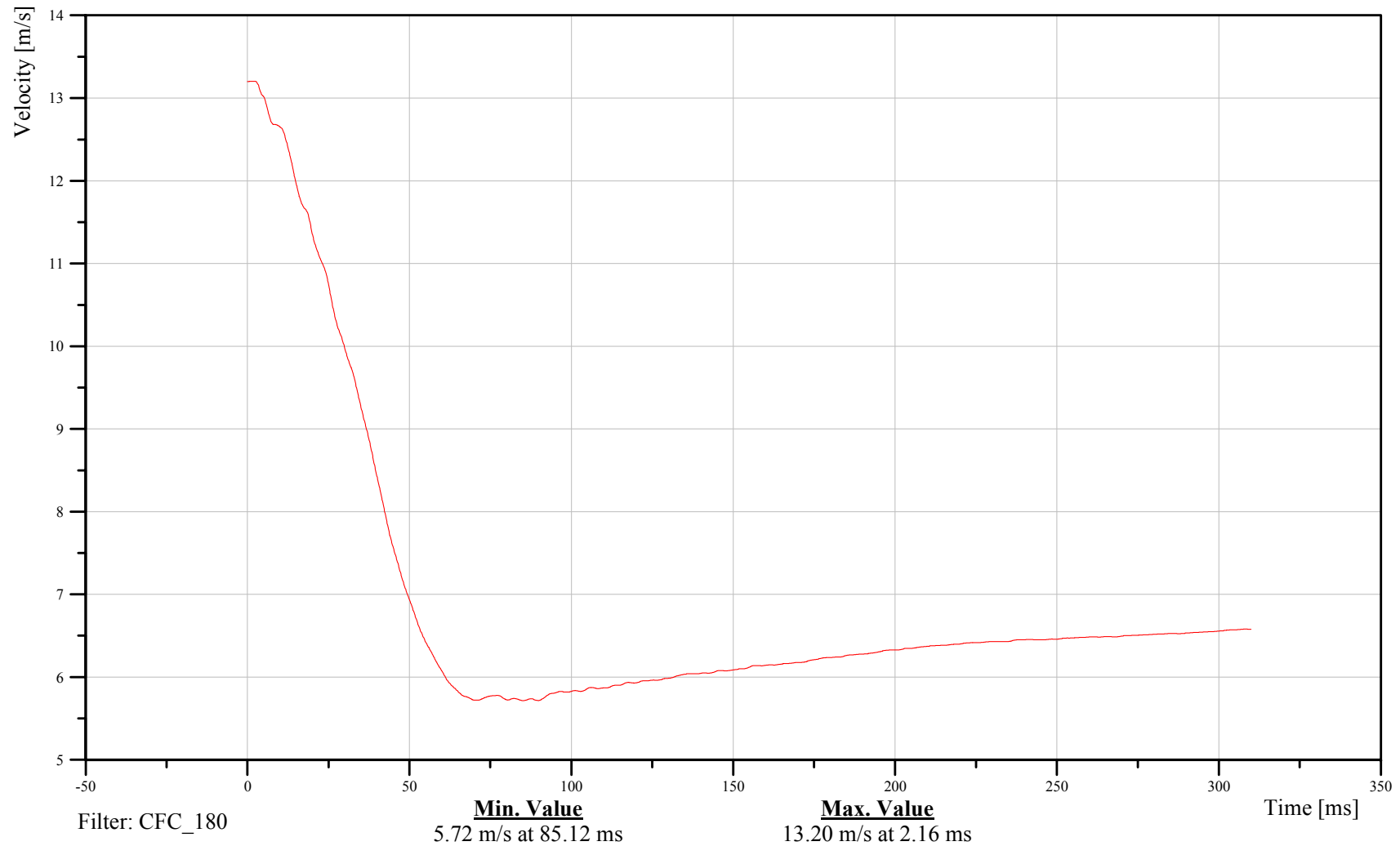
MDB Center of Gravity X-Axis Velocity

Customer: VRTC

M0VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

MDB Center of Gravity Y-Axis Acceleration

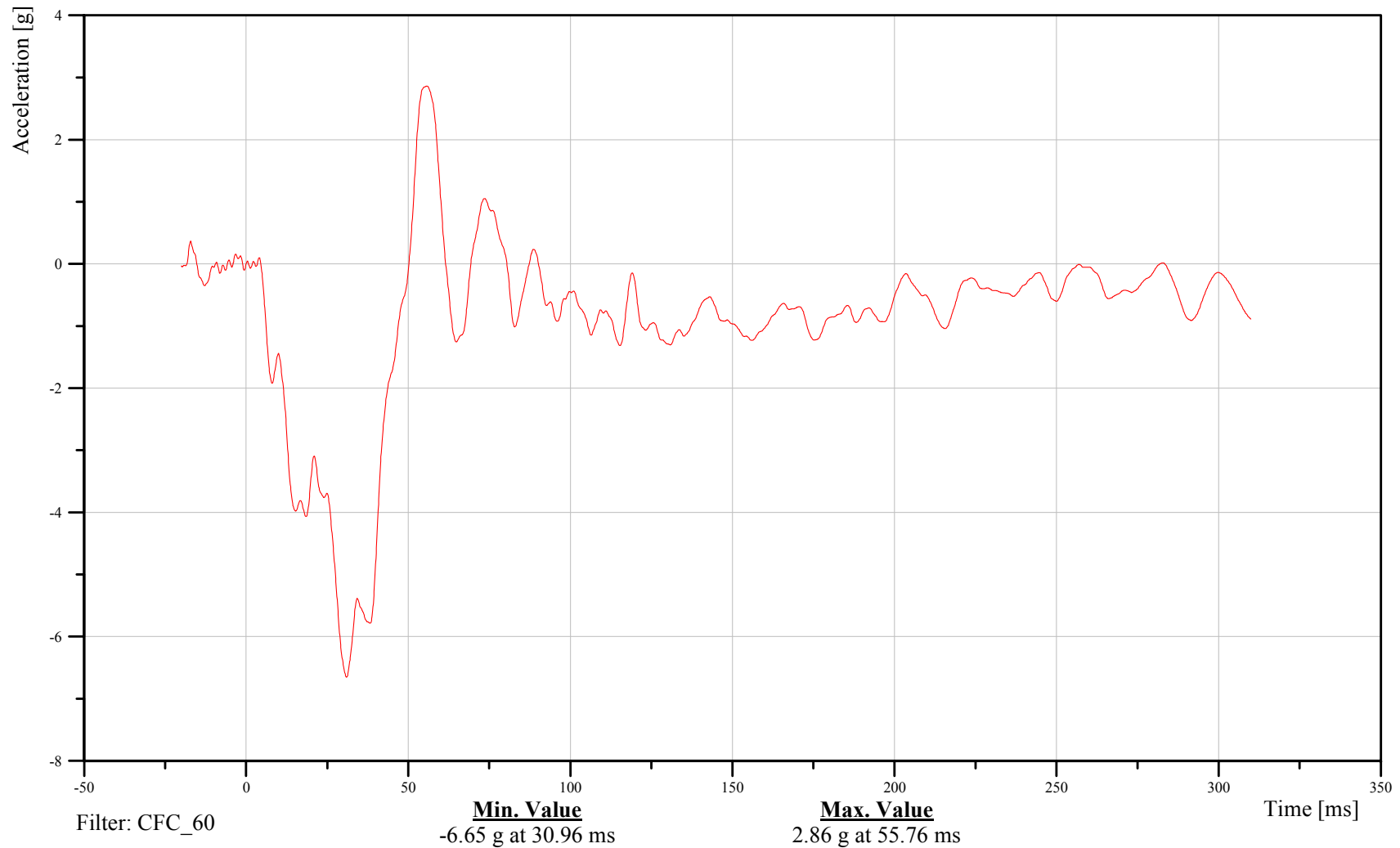
Date: 08/17/2005
Time: 13:44

Customer: VRTC

M0VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

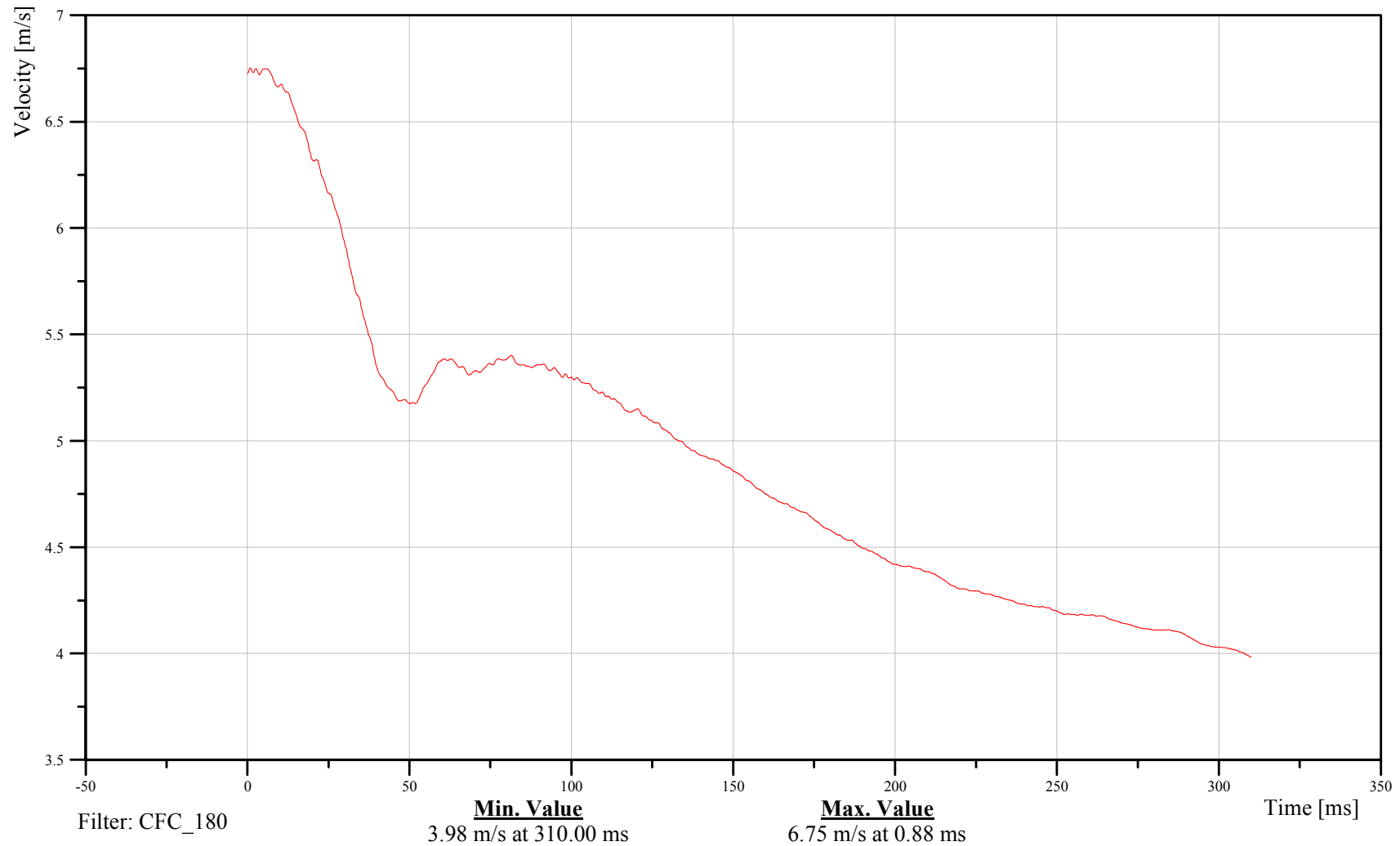
MDB Center of Gravity Y-Axis Velocity

Customer: VRTC

M0VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

MDB Center of Gravity Z-Axis Acceleration

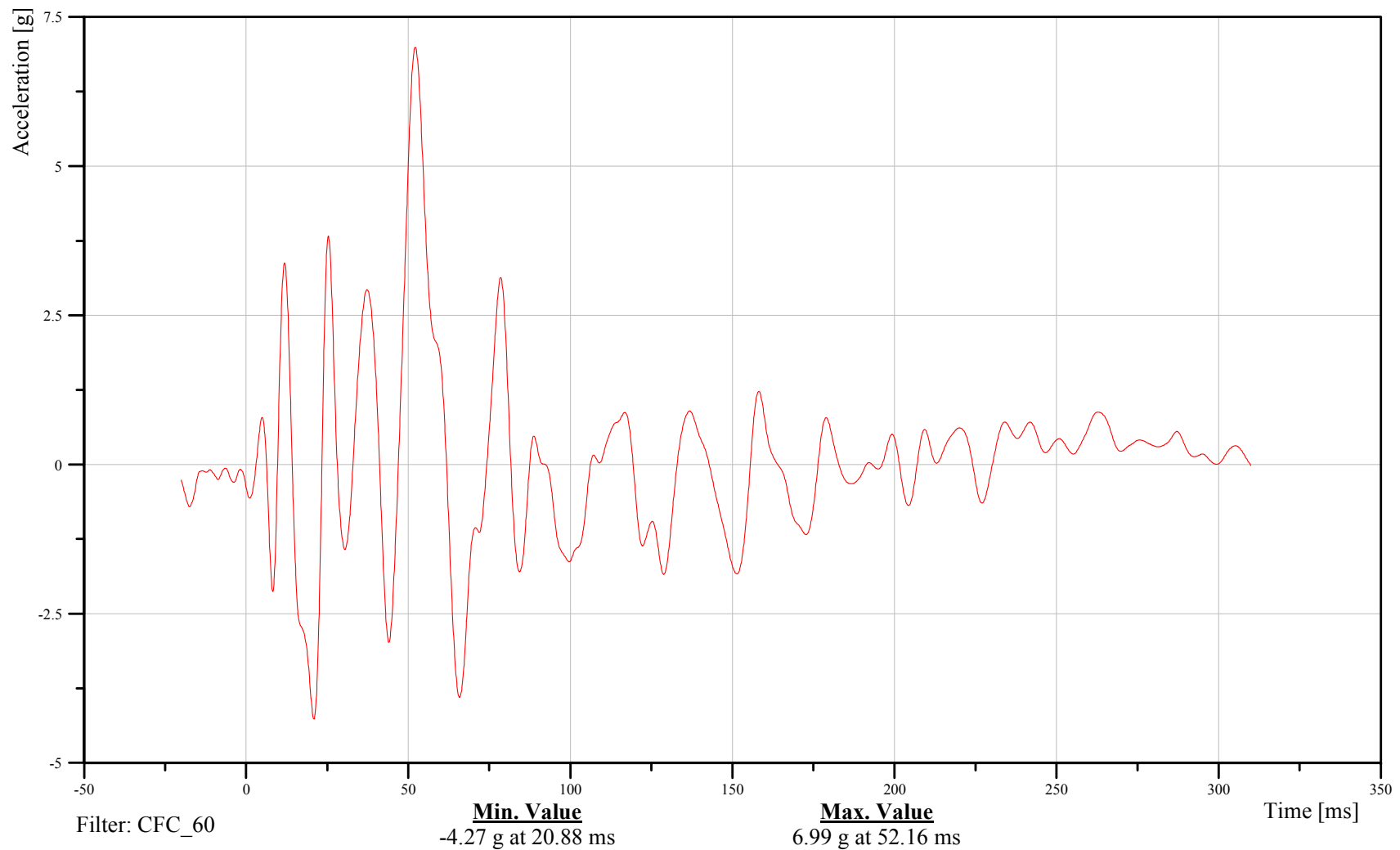
Date: 08/17/2005
Time: 13:44

Customer: VRTC

M0VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

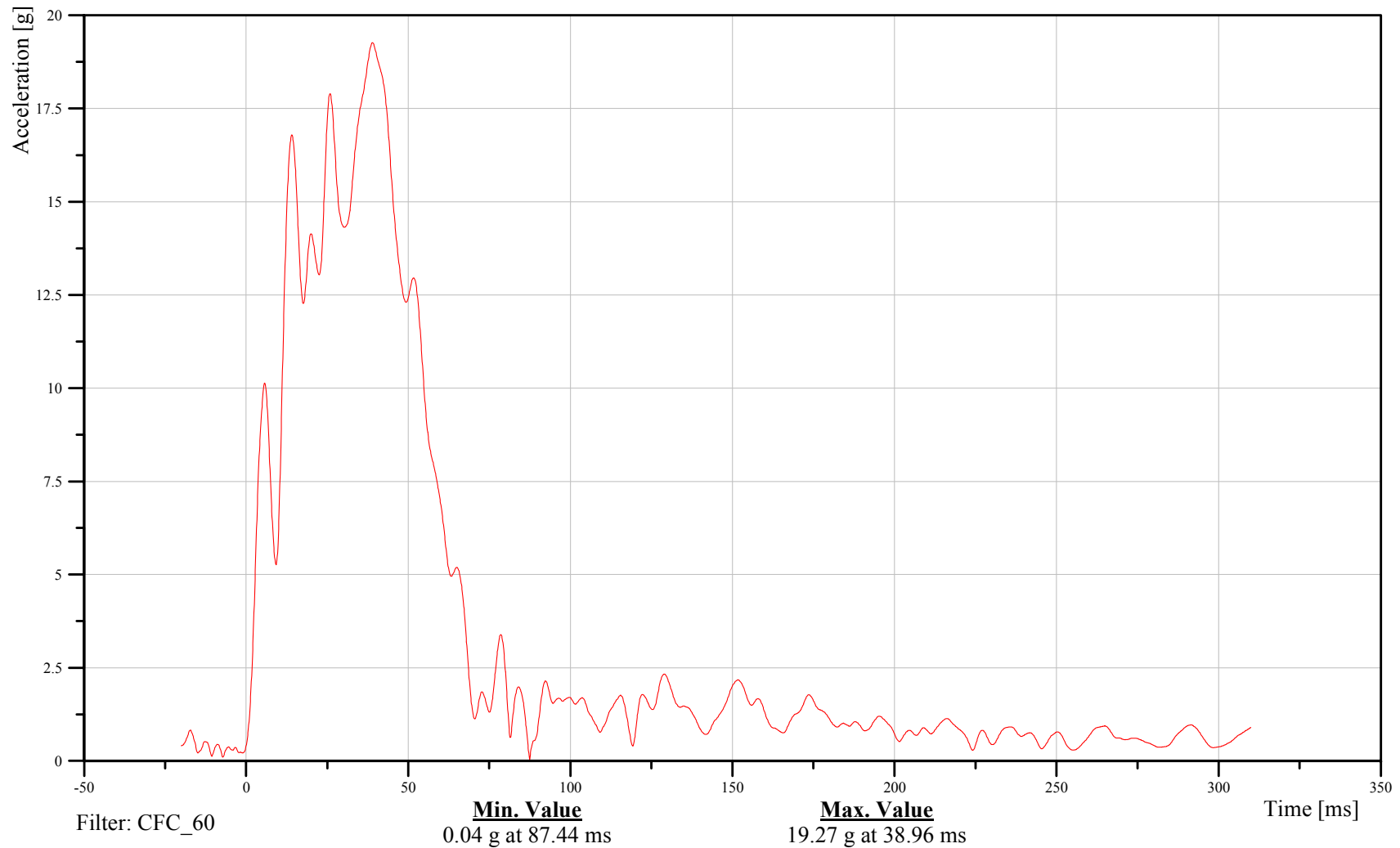
MDB Center of Gravity Resultant Acceleration

Customer: VRTC

M0VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

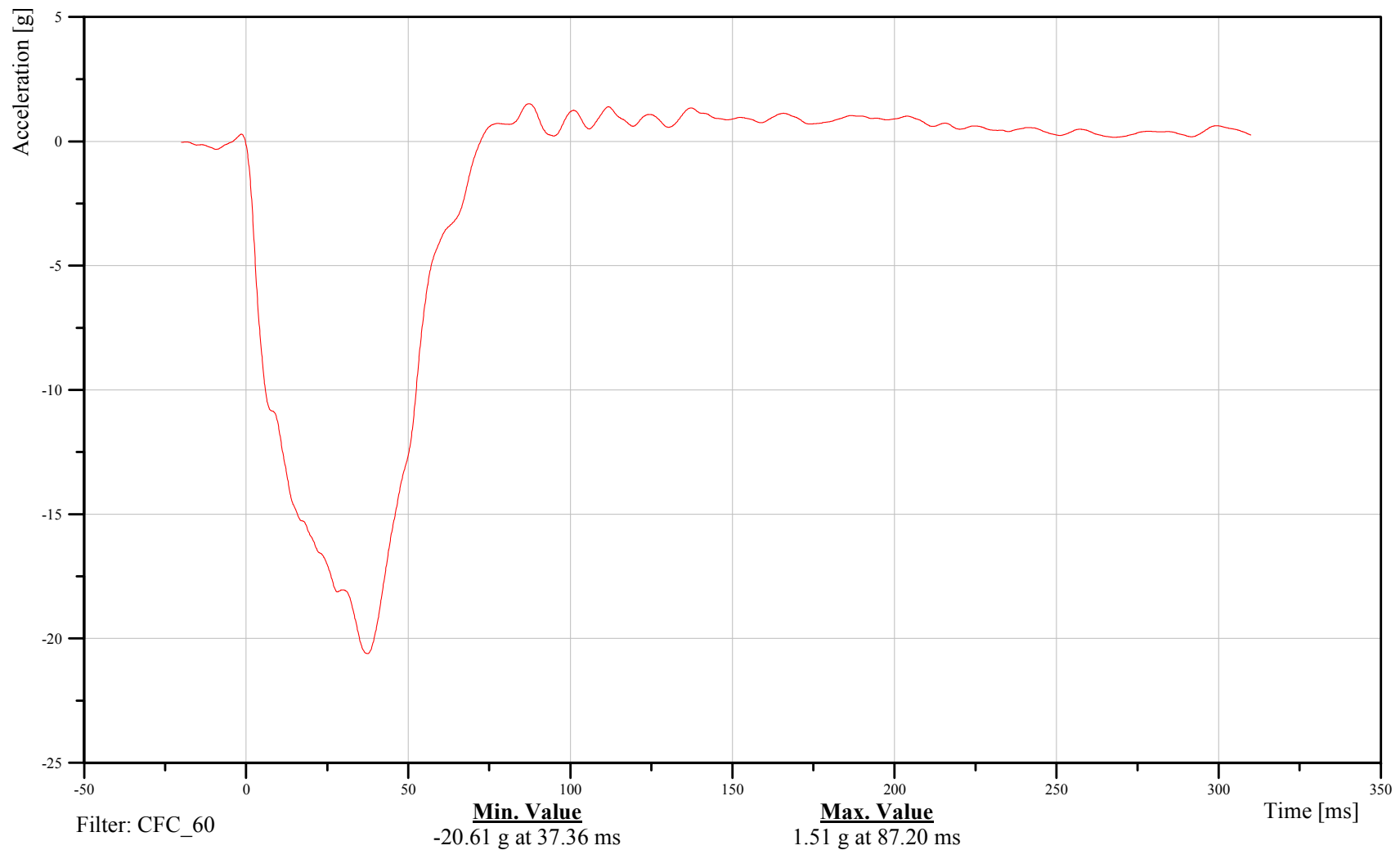
MDB Left Rear X-Axis Acceleration

Customer: VRTC

M7FRAM000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

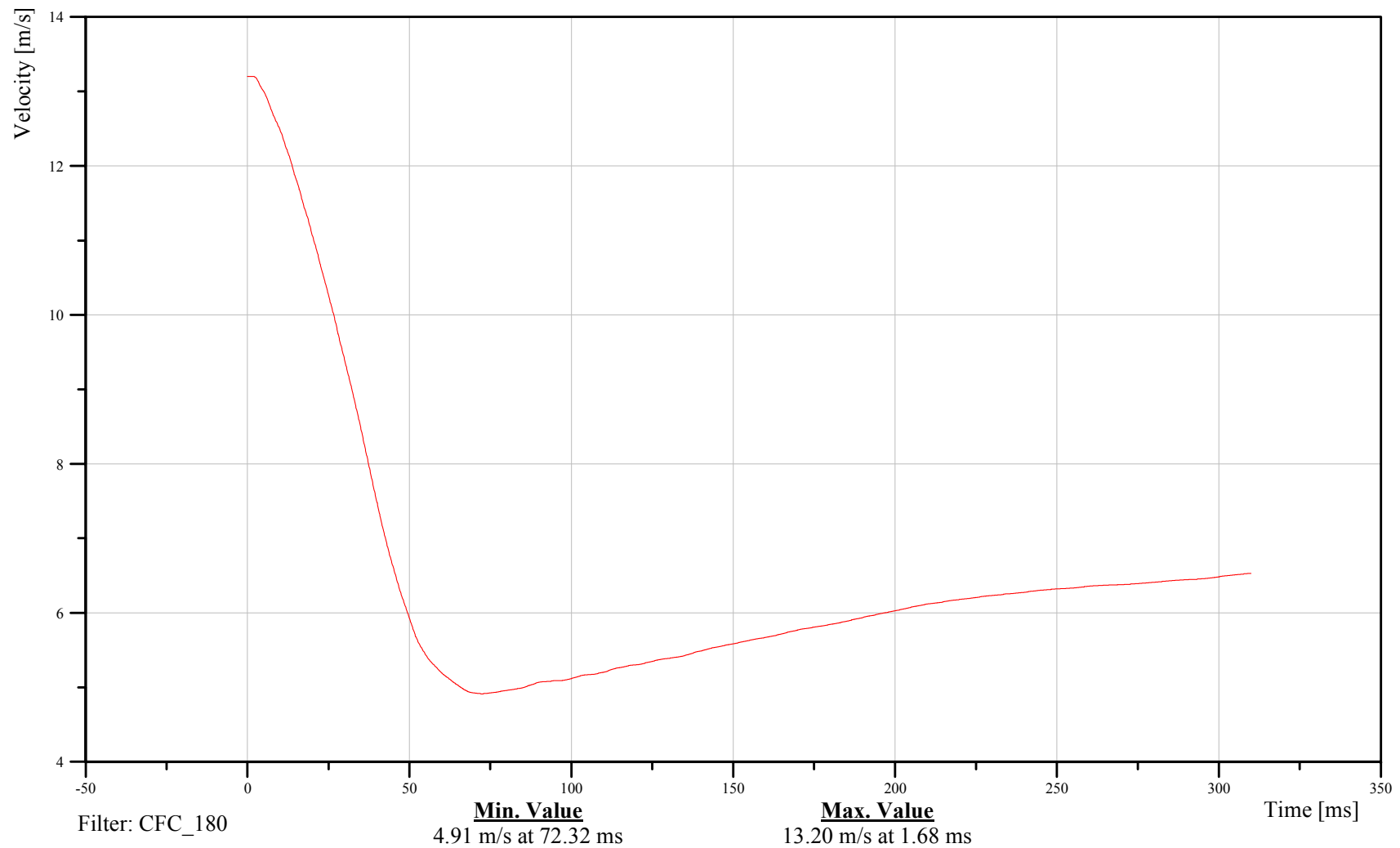
MDB Left Rear X-Axis Velocity

Customer: VRTC

M7FRAM000000VEXC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

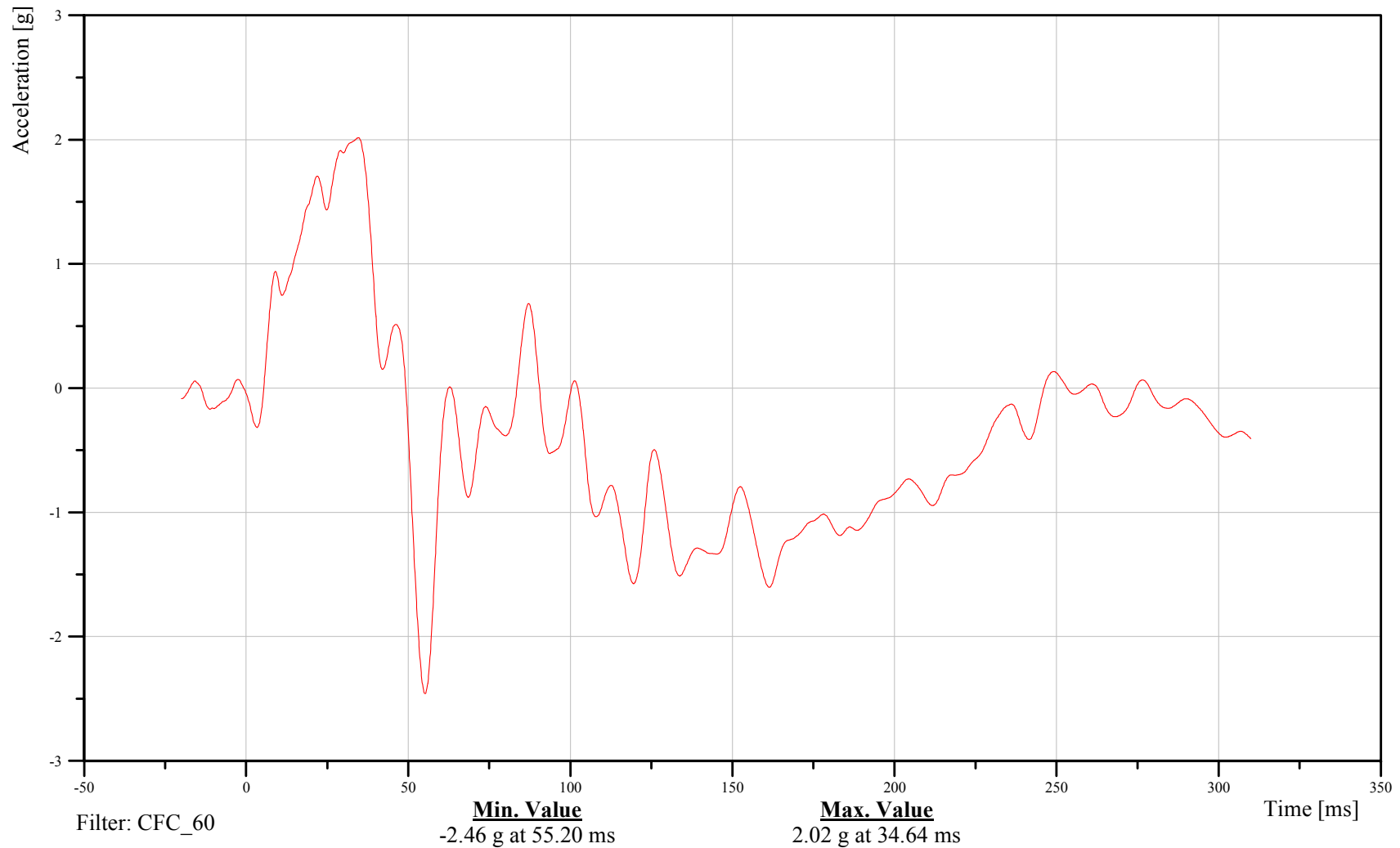
MDB Left Rear Y-Axis Acceleration

Customer: VRTC

M7FRAM000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

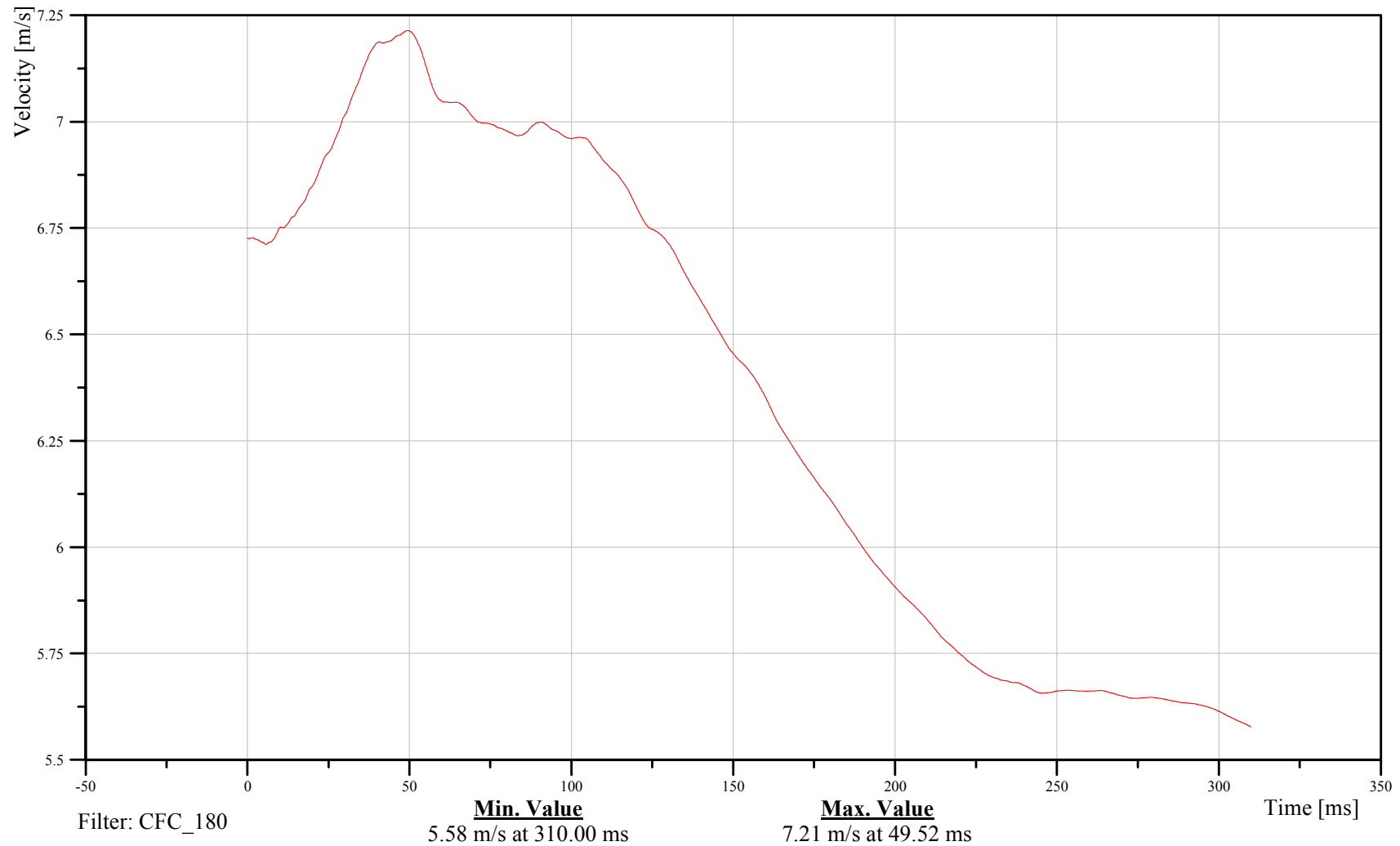
MDB Left Rear Y-Axis Velocity

Customer: VRTC

M7FRAM000000VEYC

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005
Time: 13:44

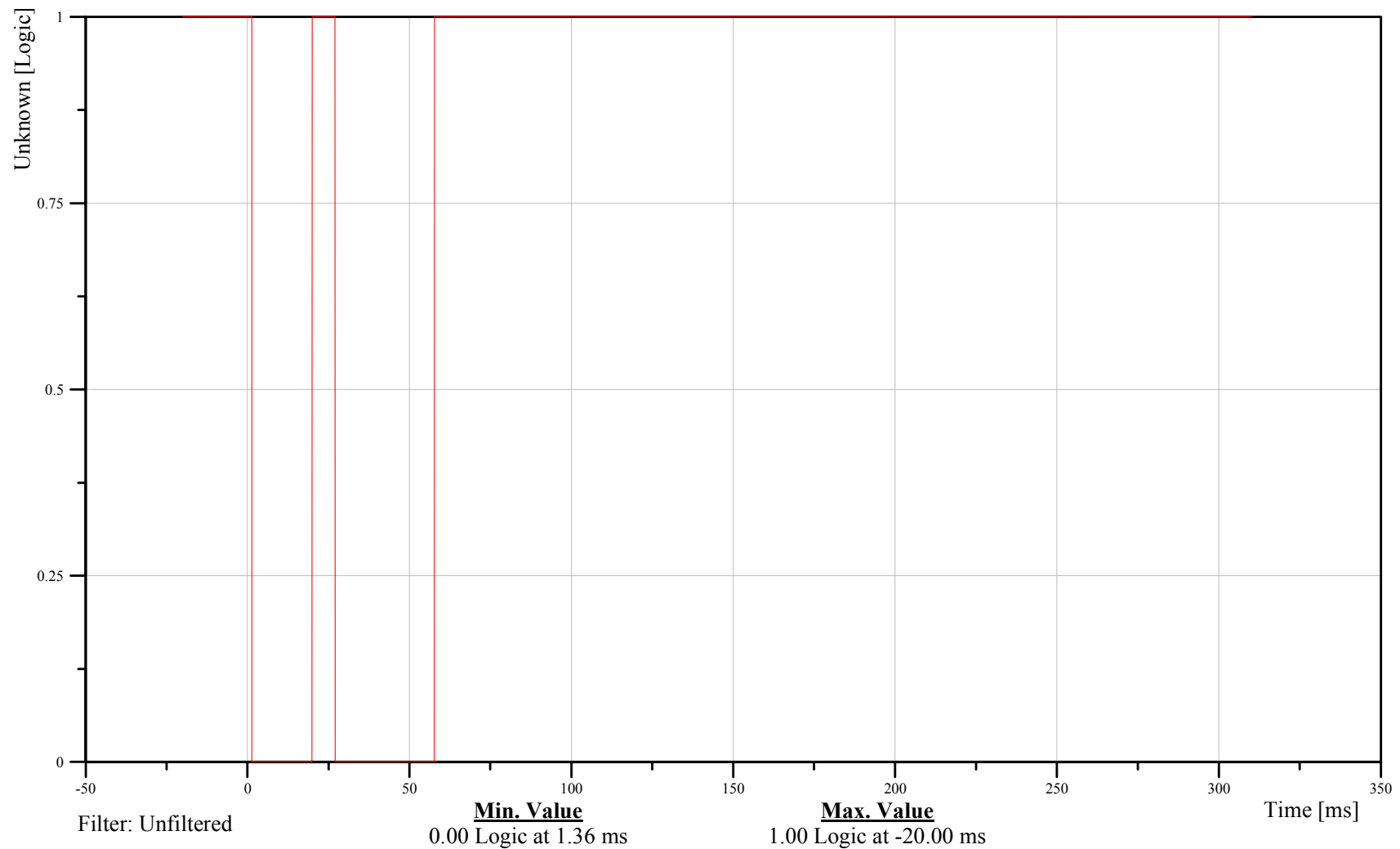
MDB Right Side Contact Switch

Customer: VRTC

M3CONT000000EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

MDB Left Side Contact Switch

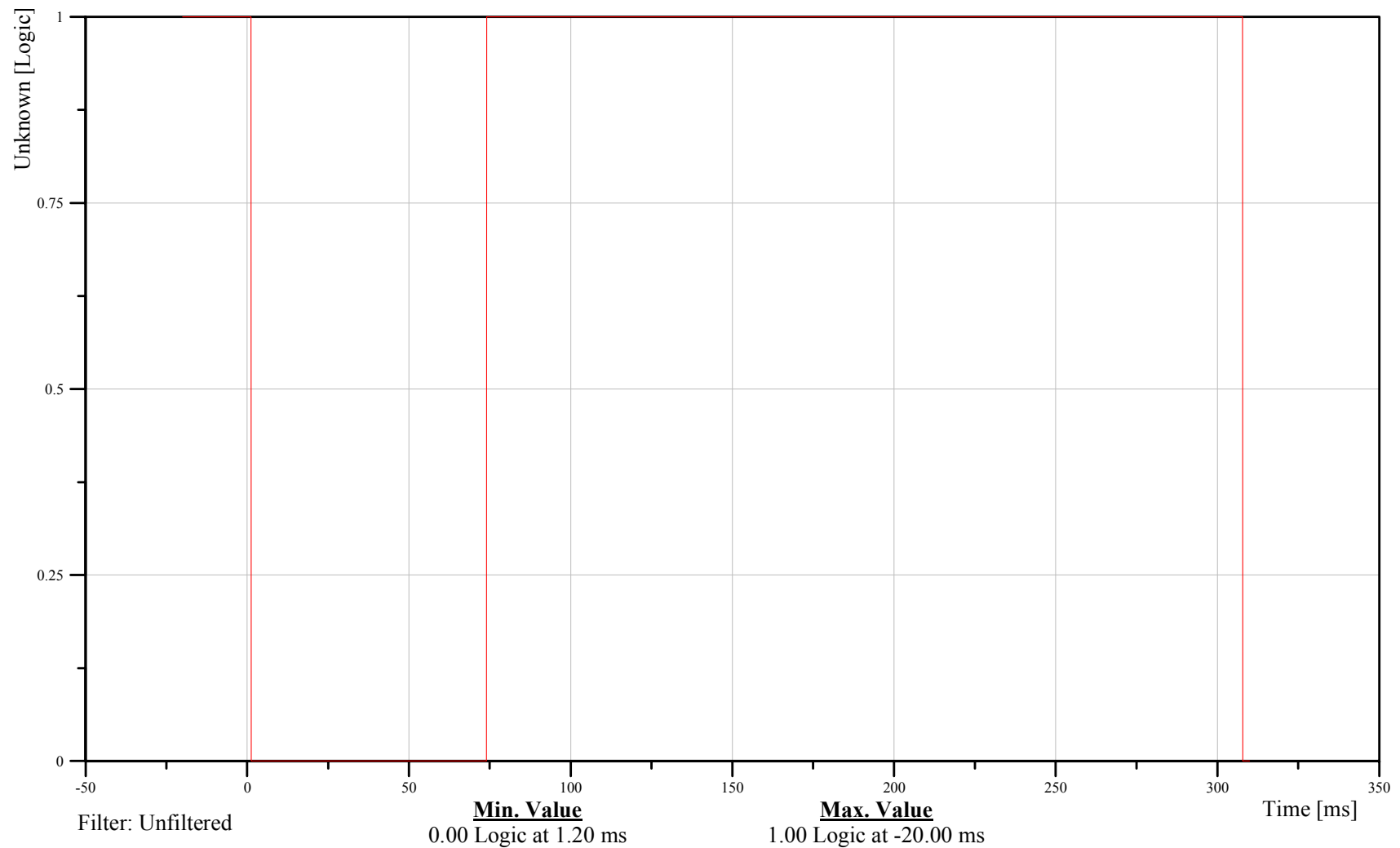
Date: 08/17/2005
Time: 13:44

Customer: VRTC

M1CONT000000EV00

TRC Inc. Test Lab: CTF

Test Number: 050817





MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Head Injury Criterion (HIC)

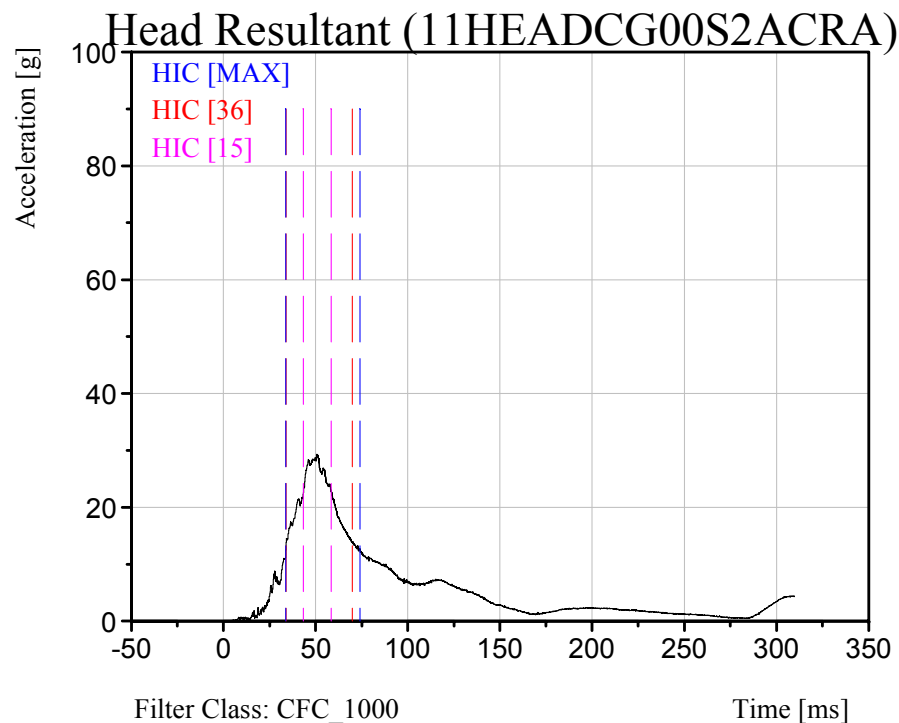
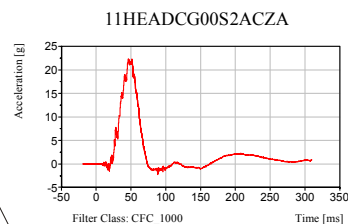
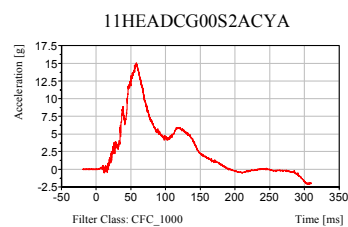
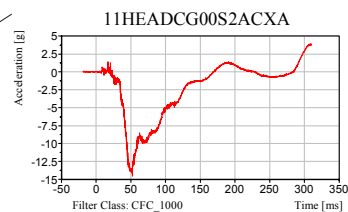
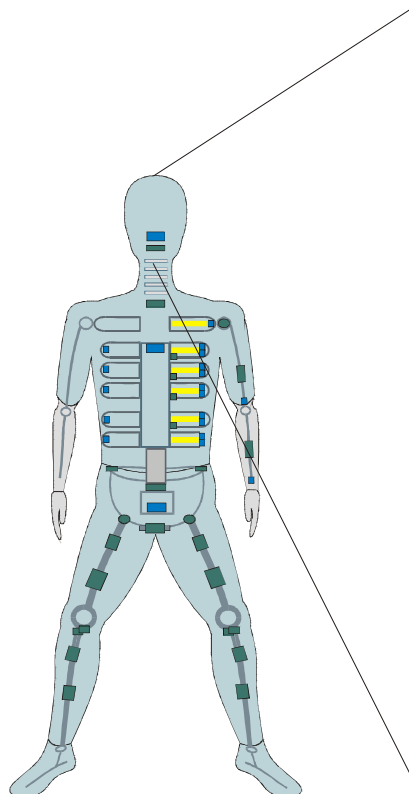
Date: 08/17/2005

Time: 13:44

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 050817



Dummy:SID IIs
Seating Position:
Driver

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 78.07	33.76 ms	74.16 ms	20.61 g
HIC [36] = 77.59	33.92 ms	69.92 ms	21.53 g
HIC [15] = 54.71	43.44 ms	58.48 ms	26.55 g

HIC Source Code: SAE J2052 ISO/TC22/SC12/WG3 N 282 (Issued 1990-03-16) 0



MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

Pelvis(LE) Summation

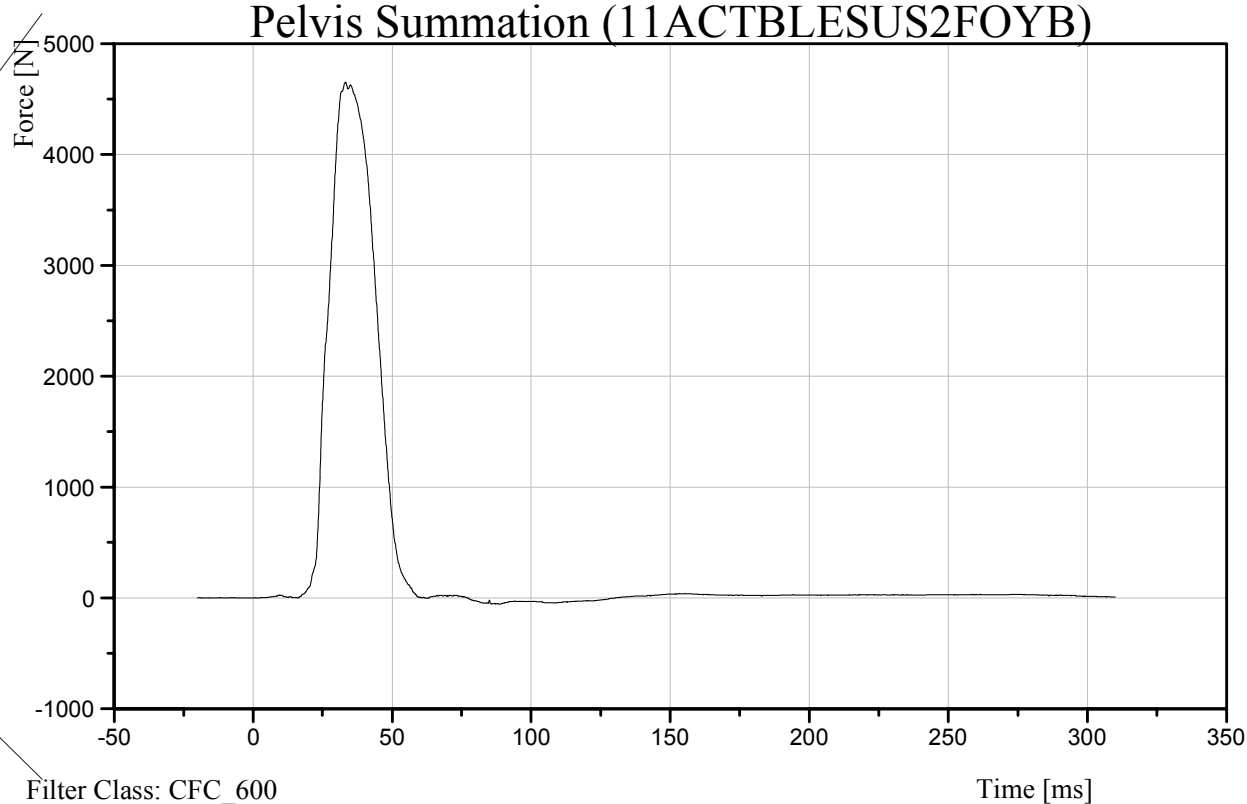
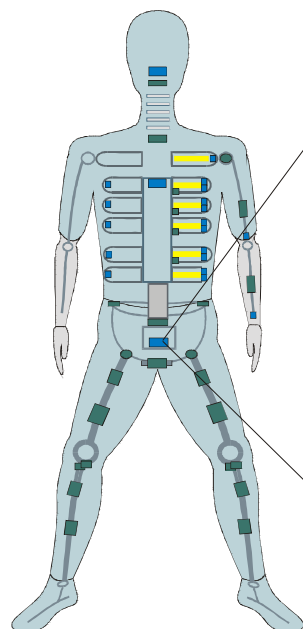
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 050817

Test Orientation = Side

Pelvis Summation (11ACTBLESUS2FOYB)



Dummy:SID IIs
Seating Position:
Driver

[Max.] 4,654.58 N at 33.20 ms

[Min.] -56.13 N at 85.76 ms

Pelvis Summation Source Code : Summation of Channels 11ILACLE00S2FOYB,11ACTBLE00S2FOYB



MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Head Injury Criterion (HIC)

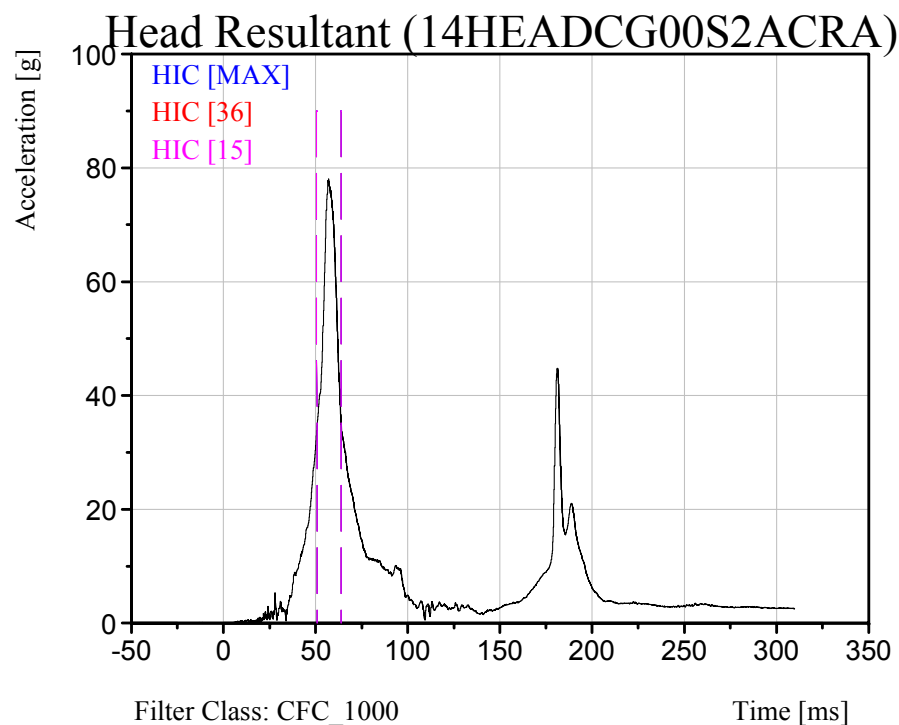
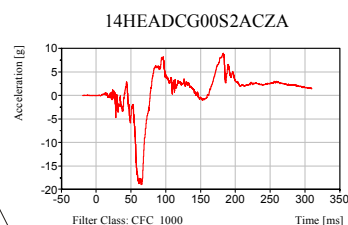
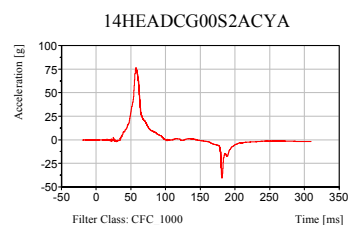
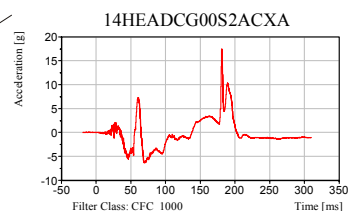
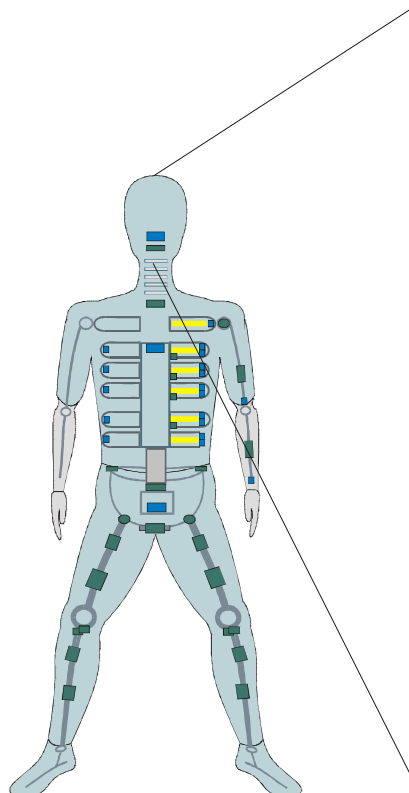
Date: 08/17/2005

Time: 13:44

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 050817



Dummy:SID IIs
Seating Position:
Left Rear Passenger

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 329.73	50.64 ms	63.92 ms	57.14 g
HIC [36] = 329.73	50.64 ms	63.92 ms	57.14 g
HIC [15] = 329.73	50.64 ms	63.92 ms	57.14 g

HIC Source Code: SAE J2052 ISO/TC22/SC12/WG3 N 282 (Issued 1990-03-16) 102



MDB into Left Side of 2005 Toyota Corolla at 52.9 kph

Date: 08/17/2005

Time: 13:44

Pelvis(LE) Summation

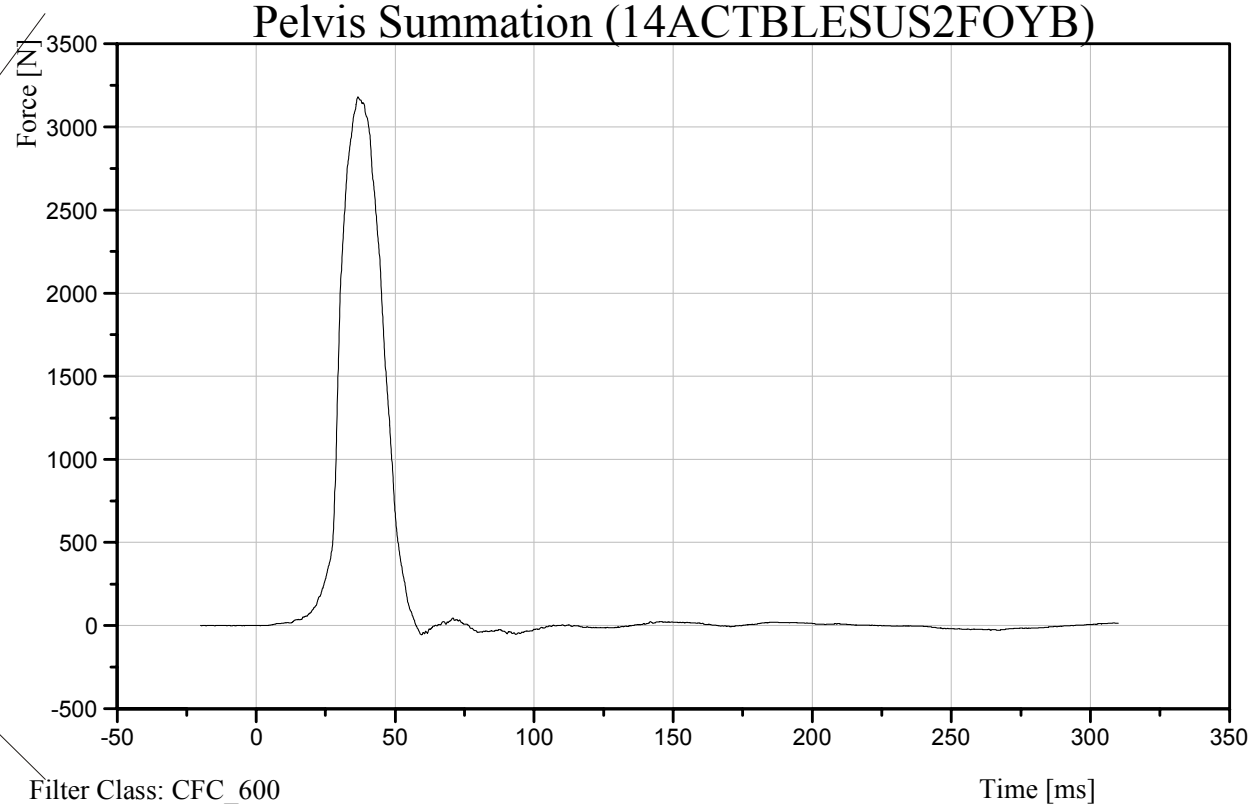
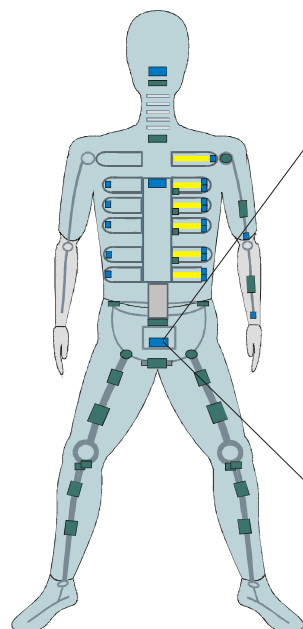
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 050817

Test Orientation = Side

Pelvis Summation (14ACTBLE00S2FOYB)



Dummy:SID IIs
Seating Position:
Left Rear Passenger

[Max.] 3,182.46 N at 36.56 ms

[Min.] -55.01 N at 59.52 ms

Pelvis Summation Source Code : Summation of Channels 14ILACLE00S2FOYB,14ACTBLE00S2FOYB

Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

Driver Dummy S/N: 056

Tested per draft procedures and specifications provided by VRTC

Transportation Research Center Inc.

Left Head Drop Test

SID-IIs Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Peak Resultant Acceleration	125 - 145 g	122.8 g	No
Peak Longitudinal Acceleration	15 g Max	-3.5 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

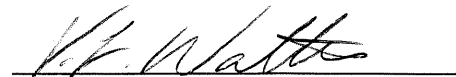
Test does not meet specifications.

Comments:

Technician



Approved



08.08.2005 13:16:12 230

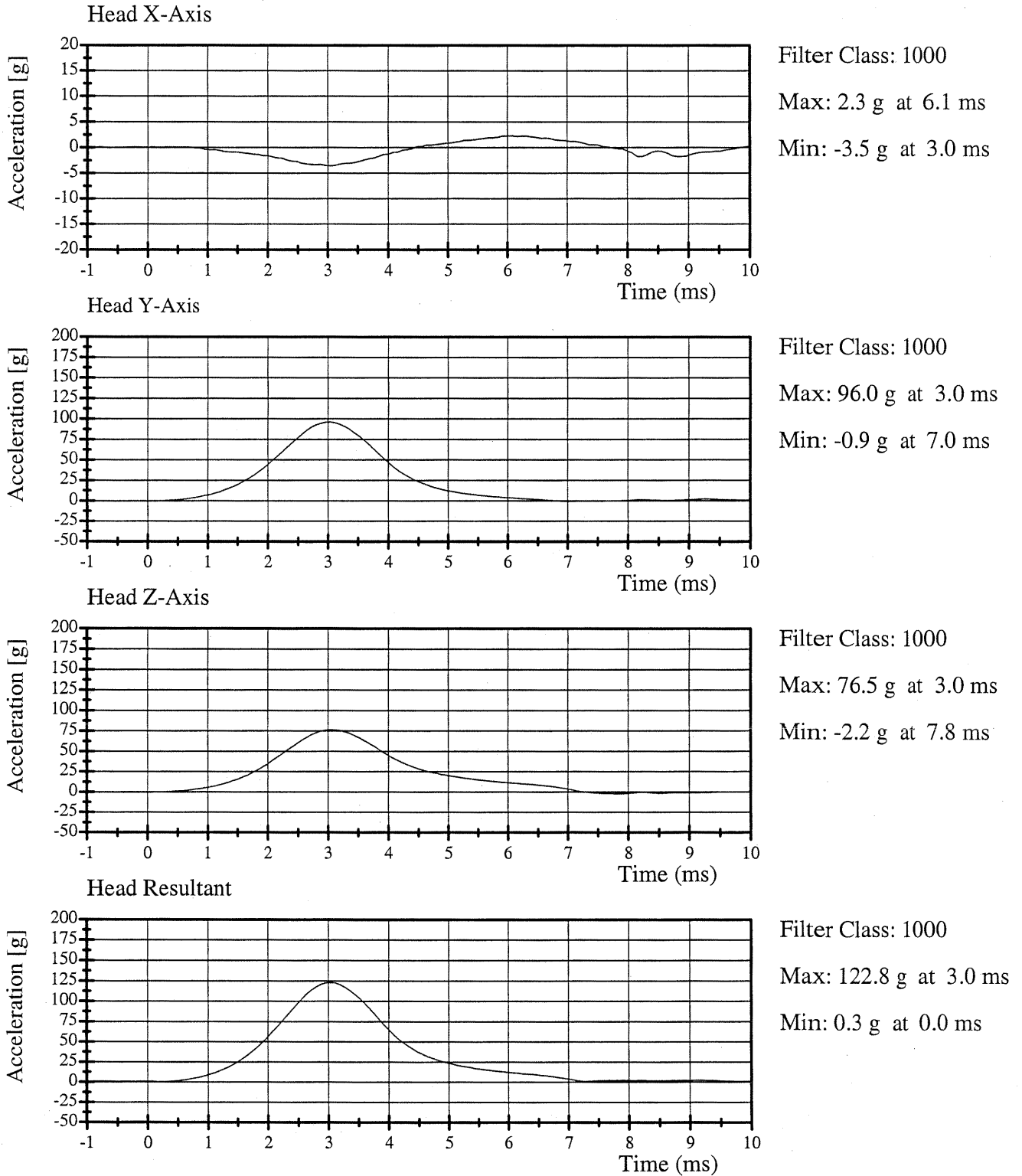


Transportation Research Center Inc.

Head Drop Test

SID-IIs Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005



08.08.2005 13:16:13 230



Transportation Research Center Inc.

Left Lateral Neck Test

SID-IIs Serial No. 056 Calibration No. 02 - 01

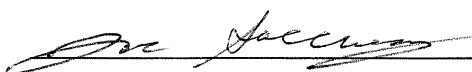
Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Impact Velocity	5.51 - 5.63 m/s	5.58 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.20 - 2.80 m/s	2.67 m/s	Yes
15 ms	3.40 - 4.10 m/s	3.76 m/s	Yes
20 ms	4.50 - 5.40 m/s	4.98 m/s	Yes
25 ms	5.50 - 6.10 m/s	5.95 m/s	Yes
25 - 100 ms	5.20 - 6.20 m/s	5.69 - 6.02 m/s	Yes
Peak D Plane Rotation	74 - 79 °	74.8 °	Yes
Time of Peak D-Plane Rotation	50 - 70 °	60.4 °	Yes
Peak Moment About Occipital Condyles during Rotation Interval	40.0 - 45.0 N·m	42.1 N·m	Yes
Time of Moment Decay To 0 N·m	113 - 123 ms	114.9 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



08.08.2005 13:22:08 674



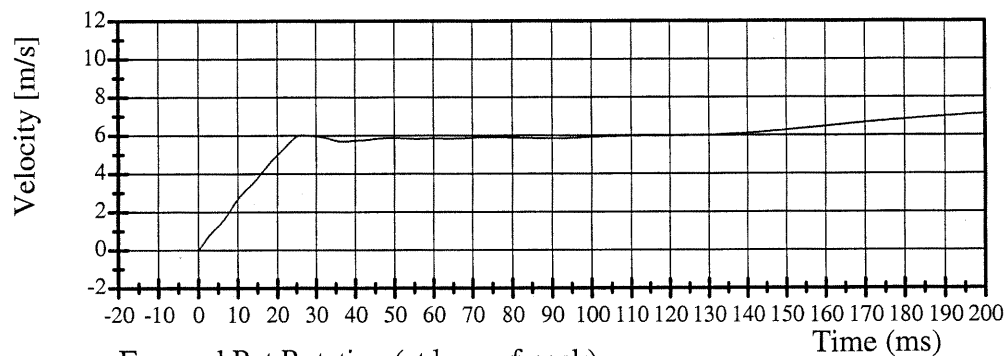
Transportation Research Center Inc.

Left Lateral Neck Test

SID-IIs Serial No. 056 Calibration No. 02 - 01

Test Date 08/02/2005

Integrated Pendulum Velocity

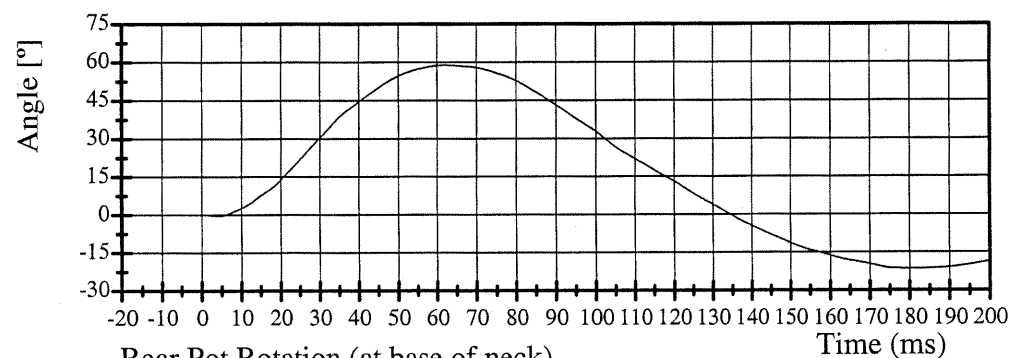


Filter Class: 180

Max: 7.3 m/s at 227.9 ms

Min: -0.0 m/s at -0.7 ms

Forward Pot Rotation (at base of neck)

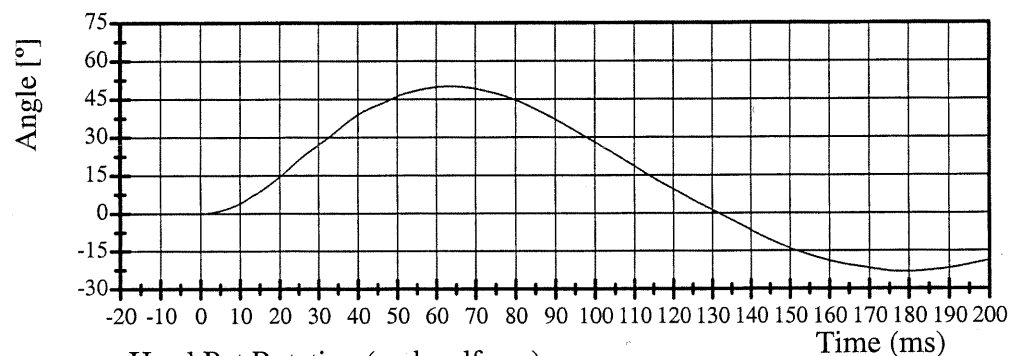


Filter Class: 60

Max: 58.8 ° at 61.9 ms

Min: -21.4 ° at 181.8 ms

Rear Pot Rotation (at base of neck)

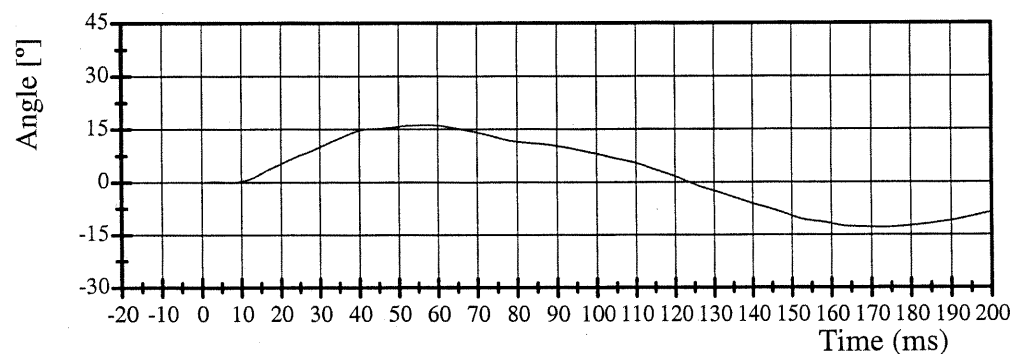


Filter Class: 60

Max: 50.1 ° at 63.9 ms

Min: -23.2 ° at 178.4 ms

Head Pot Rotation (on headform)



Filter Class: 60

Max: 16.3 ° at 57.4 ms

Min: -12.9 ° at 172.9 ms

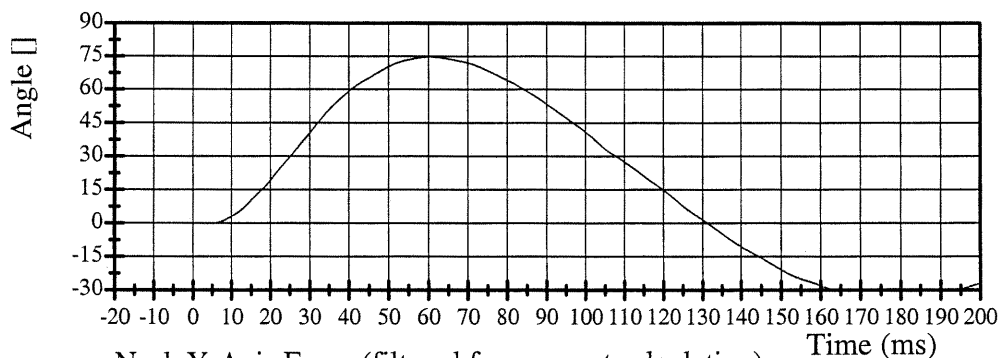
Transportation Research Center Inc.

Left Lateral Neck Test

SID-IIs Serial No. 056 Calibration No. 02 - 01

Test Date 08/02/2005

D-Plane Rotation (forward pot + head pot)

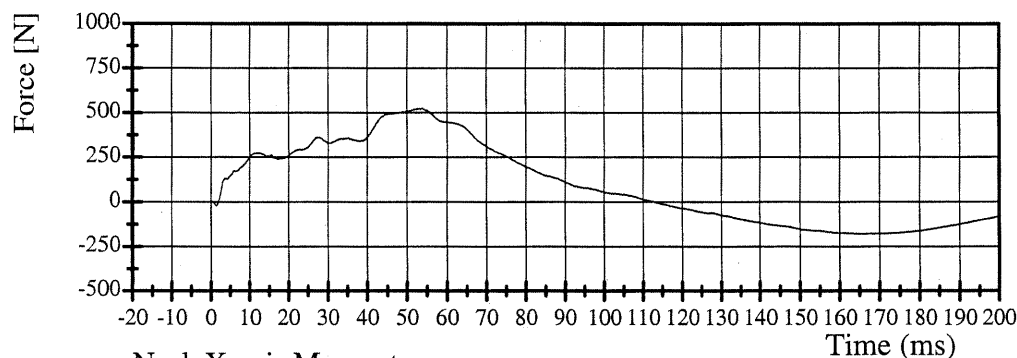


Filter Class: CFC 60

Max: 74.8 ° at 60.4 ms

Min: -34.1 ° at 176.1 ms

Neck Y-Axis Force (filtered for moment calculation)

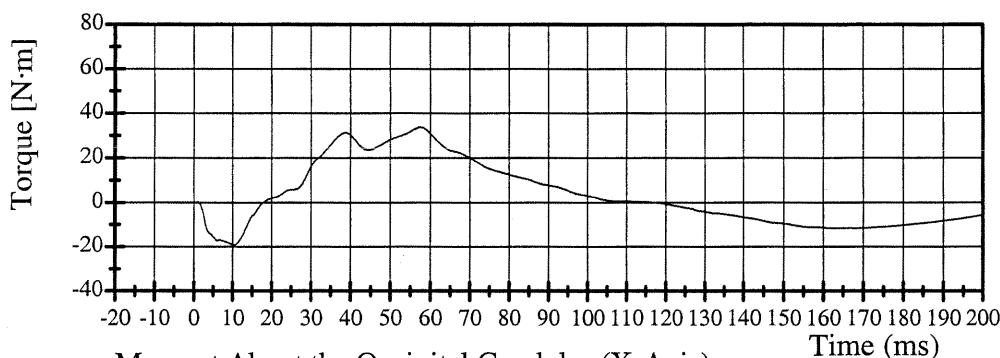


Filter Class: CFC 600

Max: 522 N at 53.8 ms

Min: -179 N at 166.2 ms

Neck X-axis Moment

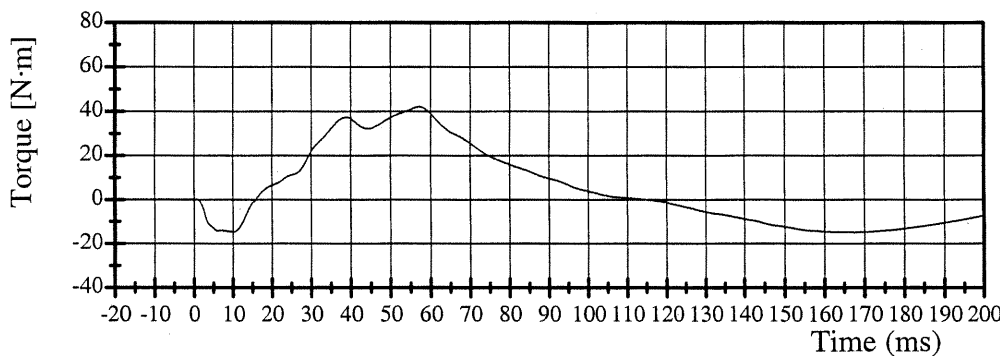


Filter Class: CFC 600

Max: 33.8 N·m at 57.4 ms

Min: -19.1 N·m at 10.3 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 42.1 N·m at 57.2 ms

Min: -14.8 N·m at 167.9 ms

Transportation Research Center Inc.

Left Shoulder Test

SID-IIs Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.2 C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Pendulum Velocity	4.41 - 4.59 m/sec	4.47 m/sec	Yes
Probe Force	1600 - 2400 N	2232 N	Yes
Deflection	27 - 39 mm	35.8 mm	Yes

Test meets specifications.

Comments:

Technician



Approved



08.08.2005 13:25:06 568



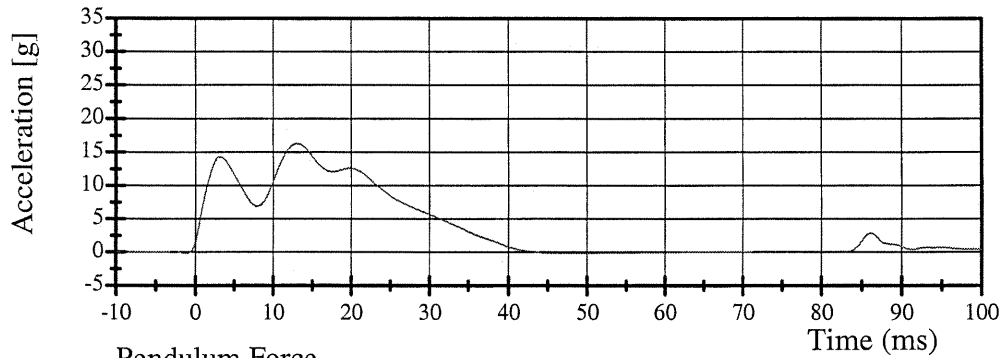
Transportation Research Center Inc.

Left Shoulder Test

SID-IIs Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005

Pendulum Deceleration

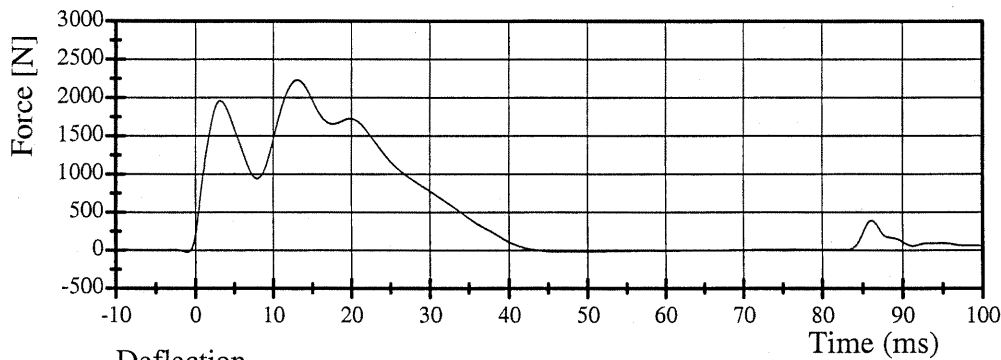


Filter Class: CFC 180

Max: 16.6 g at 13.1 ms

Min: -0.2 g at 46.9 ms

Pendulum Force

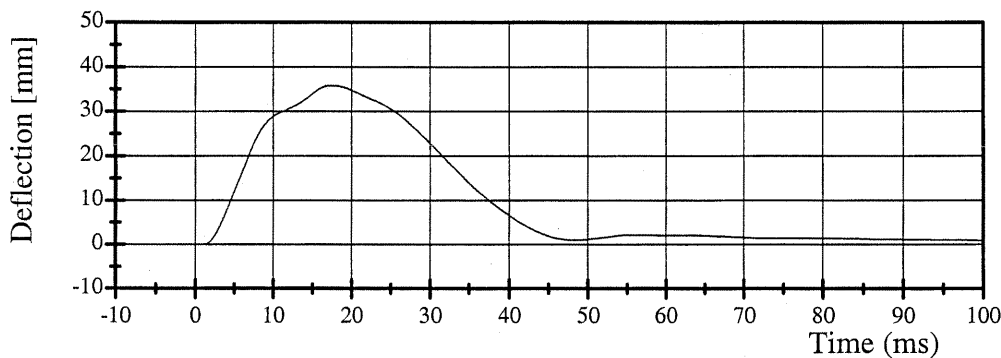


Filter Class: CFC 180

Max: 2232 N at 13.0 ms

Min: -21 N at -1.0 ms

Deflection



Filter Class: CFC 600

Max: 35.8 mm at 17.5 ms

Min: -0.0 mm at 1.1 ms

Transportation Research Center Inc.

Left Thorax With Arm Test

SID-IIIs Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.4 C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	6.60 - 6.80 m/sec	6.72 m/sec	Yes
Pendulum Force	4100 - 4700 N	4708 N	No
Upper Spine Peak Acceleration	34 - 48 g	36.0 g	Yes
Lower Spine Peak Acceleration	30 - 38 g	32.8 g	Yes
Upper Rib Peak Deflection	23 - 35 mm	28.1 mm	Yes
Mid Rib Peak Deflection	29 - 44 mm	32.7 mm	Yes
Lower Rib Peak Deflection	33 - 40 mm	35.6 mm	Yes
Shoulder Peak Deflectioin	30 - 42 mm	35.4 mm	Yes

Test does not meet specifications.

Comments:

Technician



Approved



08.08.2005 13:31:29 405

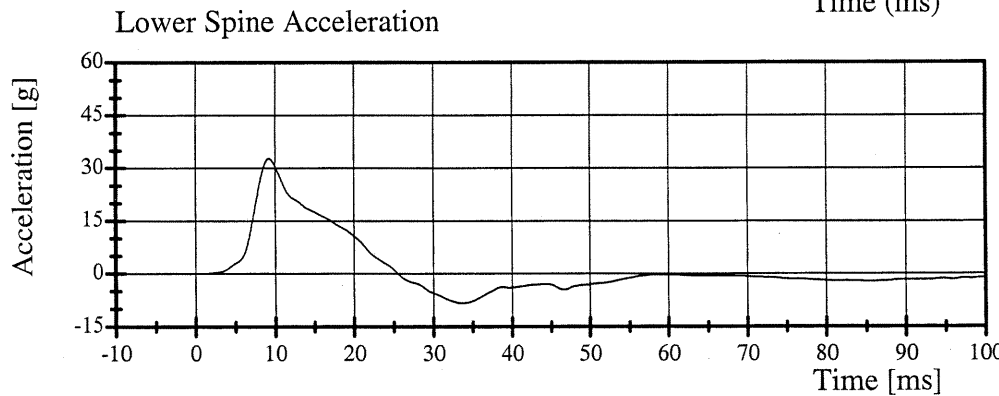
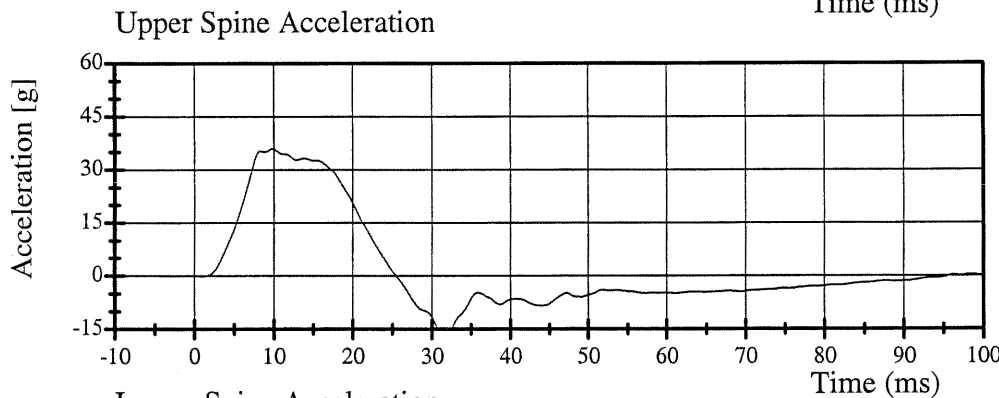
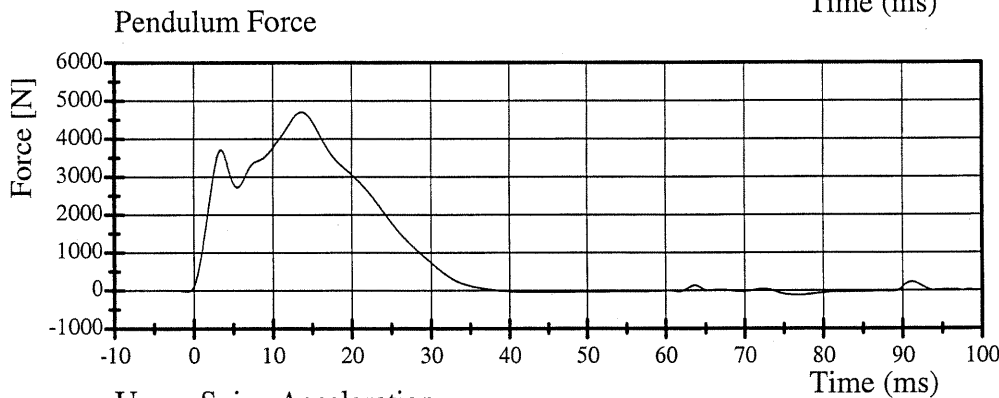
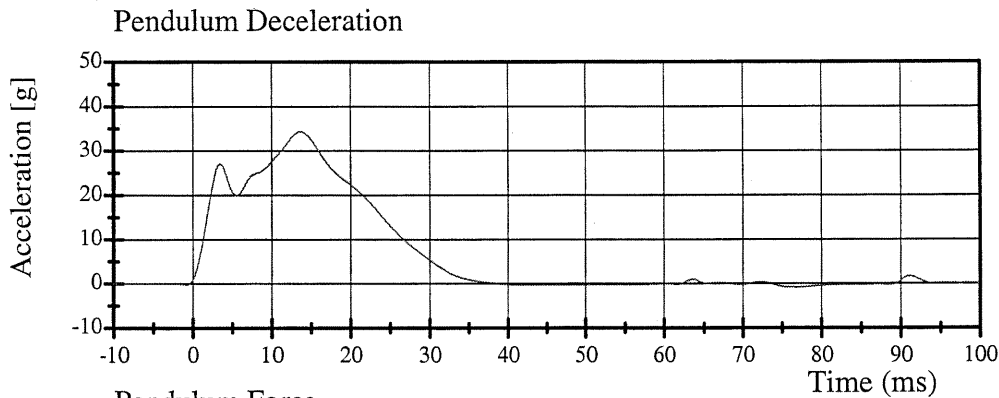


Transportation Research Center Inc.

Left Thorax With Arm Test

SID-IIs Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005



08.08.2005 13:31:30 405

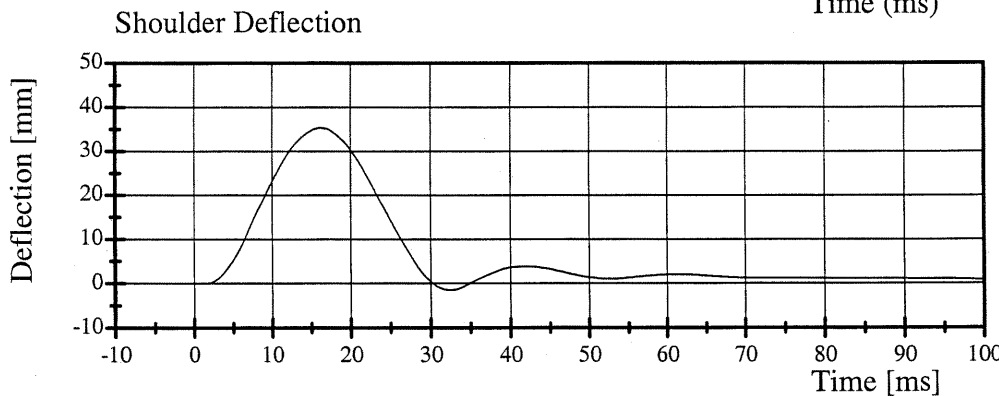
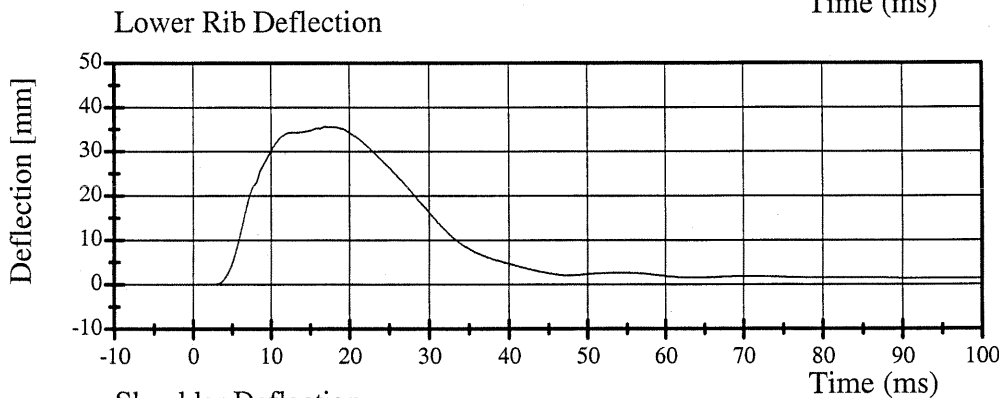
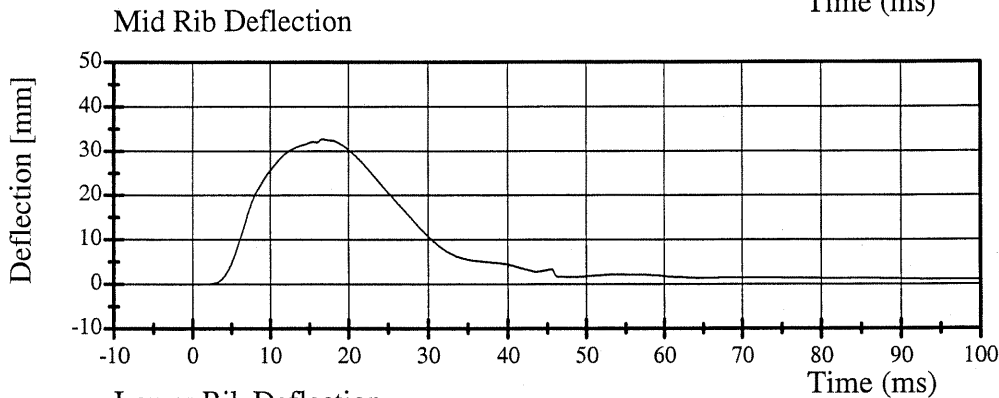
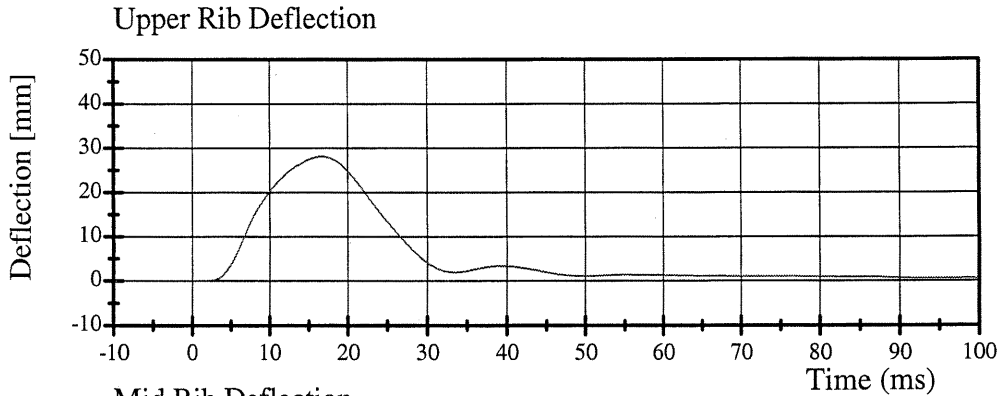


Transportation Research Center Inc.

Left Thorax With Arm Test

SID-II's Serial No. 056 Calibration No. 02 - 1

Test Date 08/02/2005



08.08.2005 13:31:30 405



Transportation Research Center Inc.

Left Thorax Without Arm Test

SID-IIs Serial No. 056 Calibration No. 02 - 2

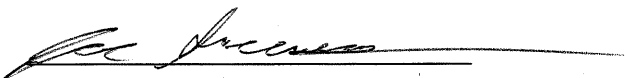
Test Date 08/01/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.3 C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Pendulum Velocity	4.20 - 4.40 m/sec	4.31 m/sec	Yes
Pendulum Force	1800 - 2300 N	2304 N	No
Upper Spine Peak Acceleration	13 - 18 g	15.4 g	Yes
Lower Spine Peak Acceleration	8 - 13 g	10.1 g	Yes
Upper Rib Peak Deflection	32 - 41 mm	34.2 mm	Yes
Mid Rib Peak Deflection	40 - 51 mm	41.2 mm	Yes
Lower Rib Peak Deflection	34 - 47 mm	40.2 mm	Yes

Test does not meet specifications.

Comments:

Technician



Approved



08.08.2005 13:42:29 567

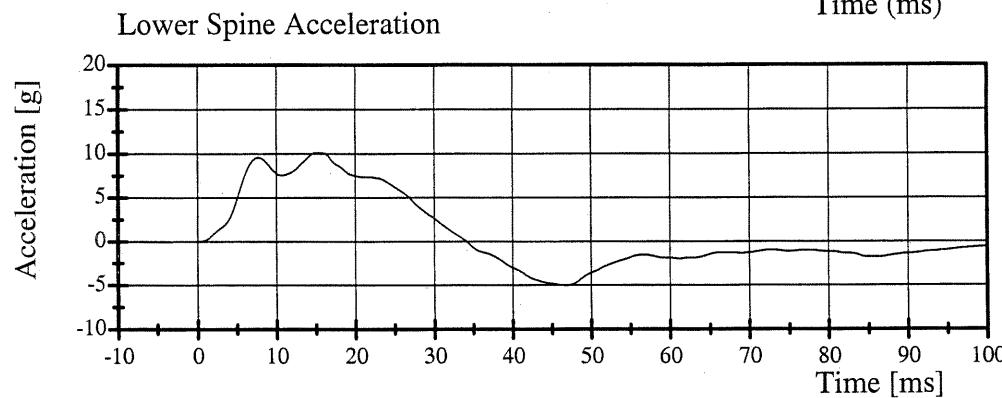
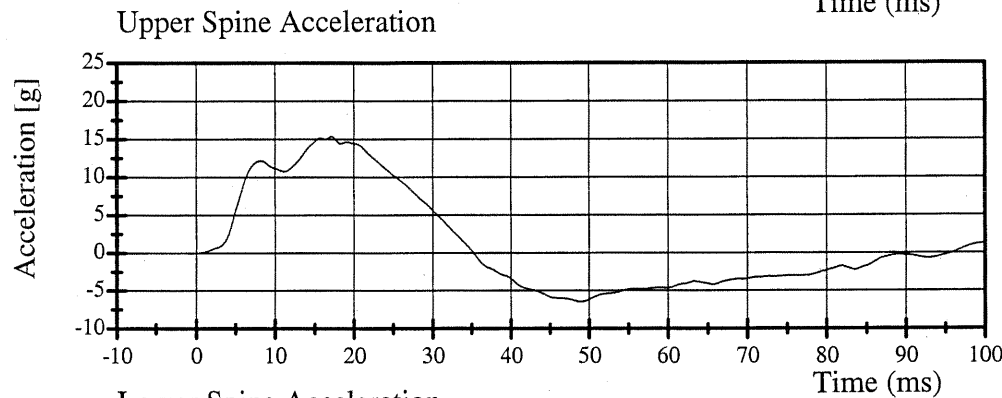
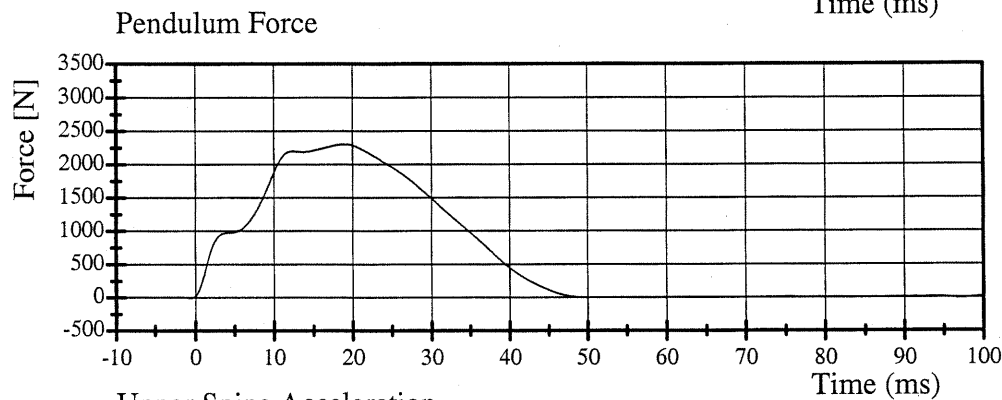
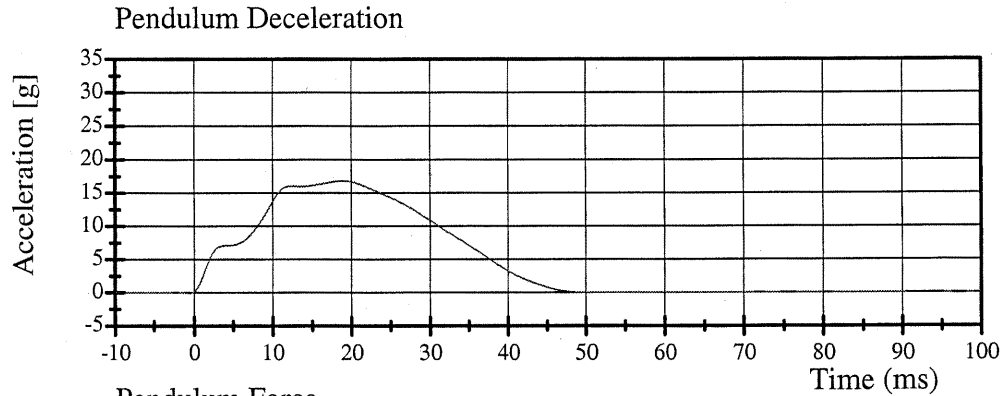


Transportation Research Center Inc.

Left Thorax Without Arm Test

SID-IIs Serial No. 056 Calibration No. 02 - 2

Test Date 08/01/2005



08.08.2005 13:42:30 567

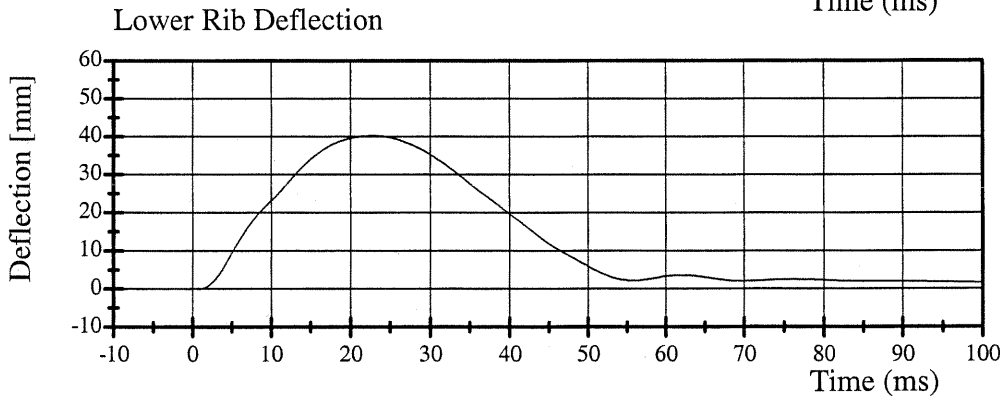
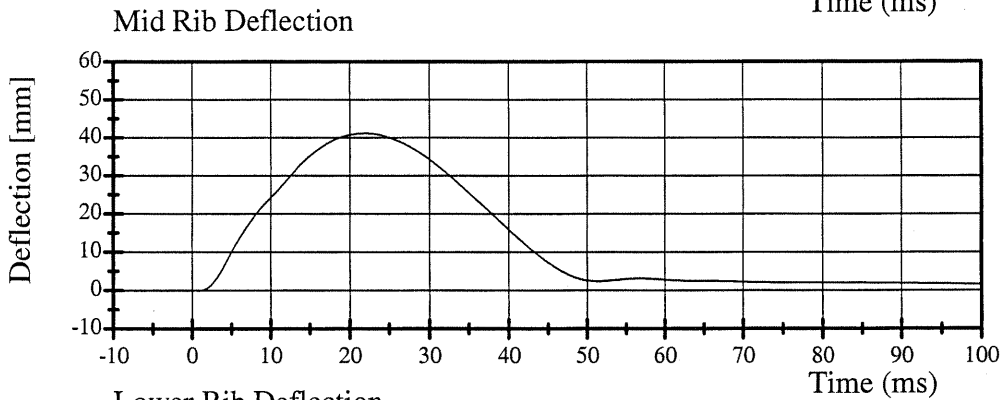
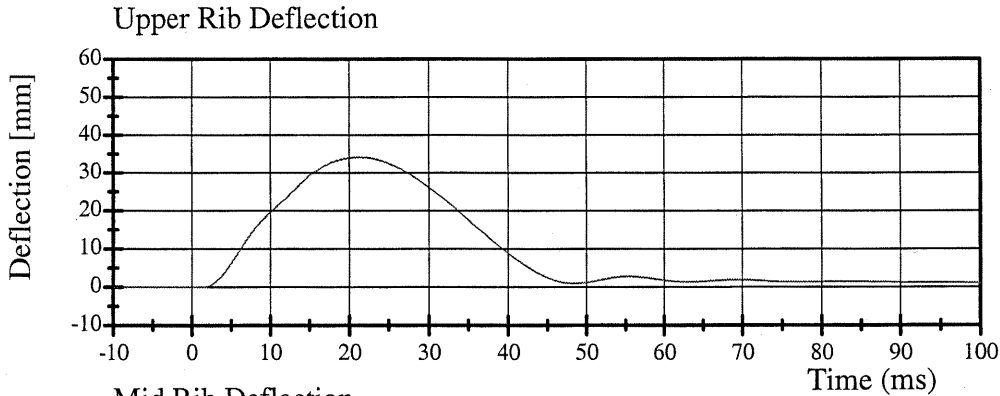


Transportation Research Center Inc.

Left Thorax Without Arm Test

SID-IIs Serial No. 056 Calibration No. 02 - 2

Test Date 08/01/2005



08.08.2005 13:42:31 567



Transportation Research Center Inc.

Left Abdomen Test

SID-IIs Serial No. 056 Calibration No. 02 - 02

Test Date 08/01/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.2 C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Pendulum Velocity	4.20 - 4.40 m/sec	4.38 m/sec	Yes
Pendulum Force	1300 - 1900 N	2104 N	No
Upper Spine Peak Acceleration	5 - 9 g	7.4 g	Yes
Lower Spine Peak Acceleration	9 - 13 g	11.8 g	Yes
Upper Abdomen Rib Peak Deflection	44 - 55 mm	43.5 mm	No
Lower Abdomen Rib Peak Deflection	44 - 56 mm	41.1 mm	No

Test does not meet specifications.

Comments:

Technician



Approved



08.08.2005 13:48:58 592



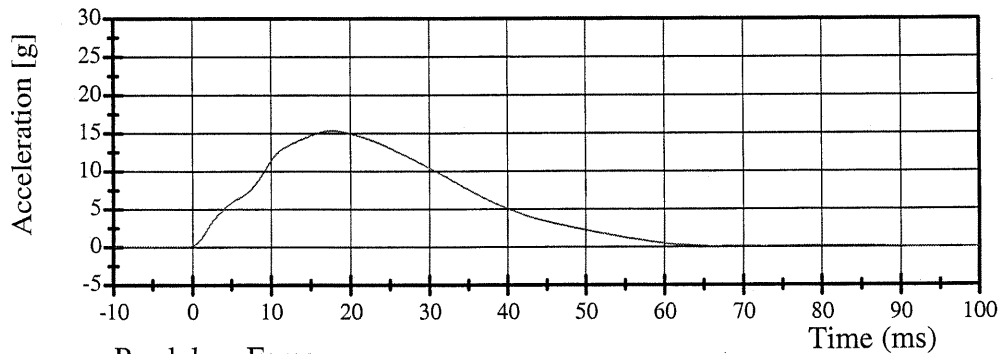
Transportation Research Center Inc.

Left Abdomen Test

SID-IIs Serial No. 056 Calibration No. 02 - 02

Test Date 08/01/2005

Pendulum Deceleration

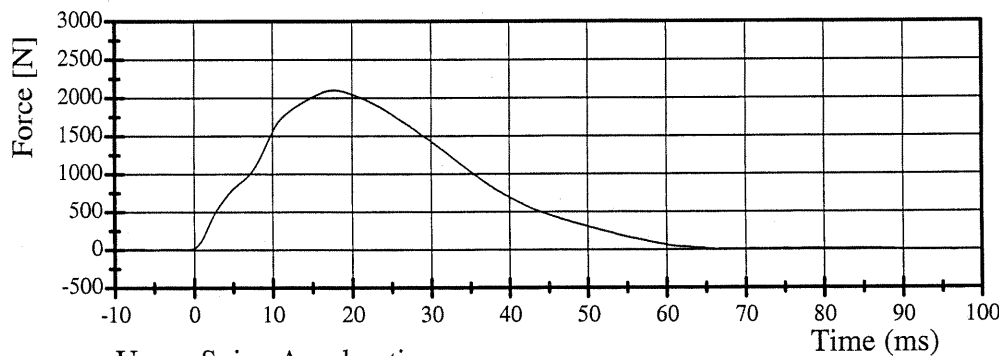


Filter Class: CFC 180

Max: 15.4 g at 17.7 ms

Min: -0.3 g at 138.8 ms

Pendulum Force

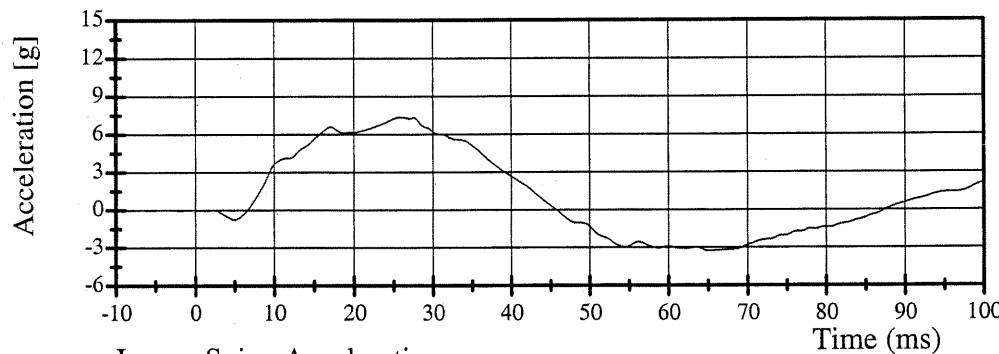


Filter Class: CFC 180

Max: 2104 N at 17.7 ms

Min: -35 N at 138.8 ms

Upper Spine Acceleration

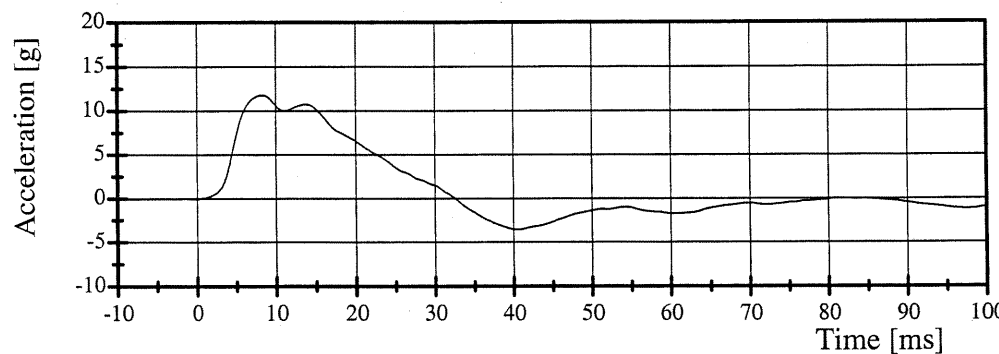


Filter Class: CFC 180

Max: 7.4 g at 26.0 ms

Min: -3.3 g at 65.0 ms

Lower Spine Acceleration



Filter Class: CFC 180

Max: 11.8 g at 8.2 ms

Min: -3.6 g at 40.4 ms

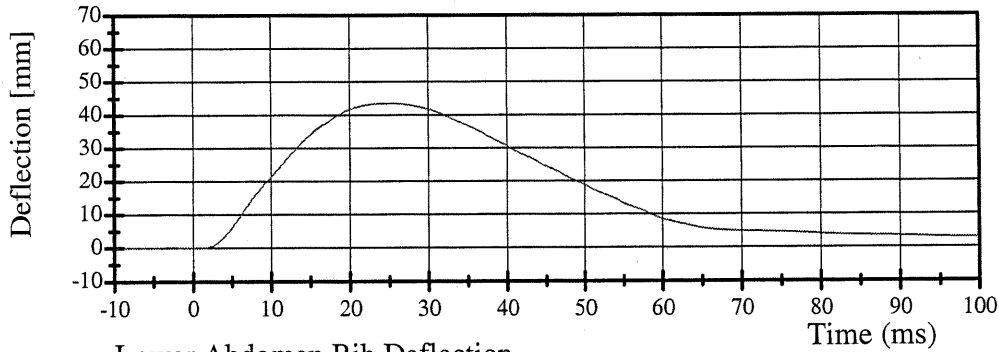
Transportation Research Center Inc.

Left Abdomen Test

SID-IIs Serial No. 056 Calibration No. 02 - 02

Test Date 08/01/2005

Upper Abdomen Rib Deflection

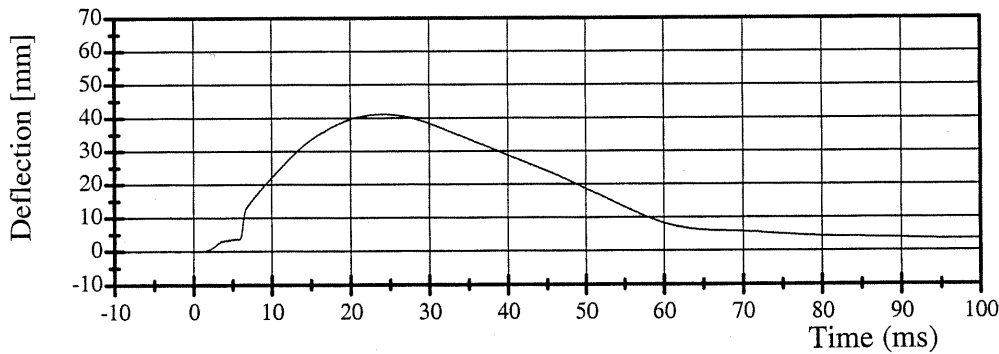


Filter Class: CFC 600

Max: 43.5 mm at 24.9 ms

Min: -0.0 mm at -45.4 ms

Lower Abdomen Rib Deflection



Filter Class: CFC 600

Max: 41.1 mm at 24.1 ms

Min: -0.0 mm at -37.0 ms

Transportation Research Center Inc.

Left Pelvis Test

SID-IIs Serial No. 056 Calibration No. 02 - 2

Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.2 C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Pendulum Velocity	6.60 - 6.80 m/sec	6.65 m/sec	Yes
Pendulum Acceleration	40 - 48 g	40.3 g	Yes
Pelvis Peak Acceleration	40 - 48 g	43.3 g	Yes
Peak Acetabulum Force	3803 - 4505 g	3987 N	Yes

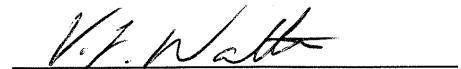
Test meets specifications.

Comments:

Technician



Approved



08.08.2005 14:56:49 418



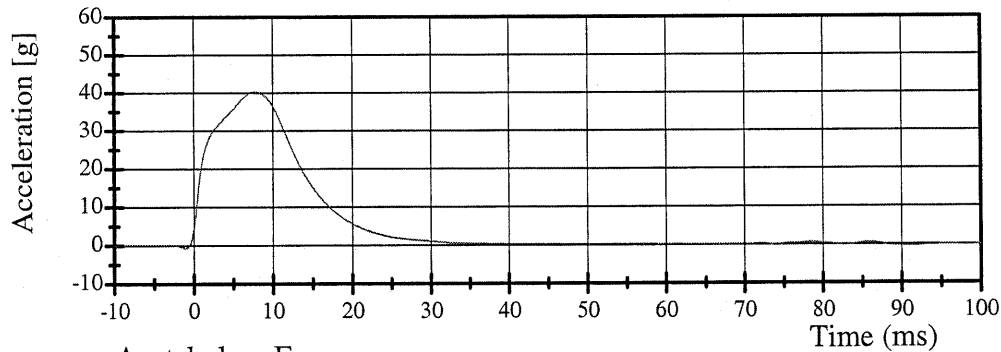
Transportation Research Center Inc.

Left Pelvis Test

SID-II's Serial No. 056 Calibration No. 02 - 2

Test Date 08/02/2005

Pendulum Deceleration

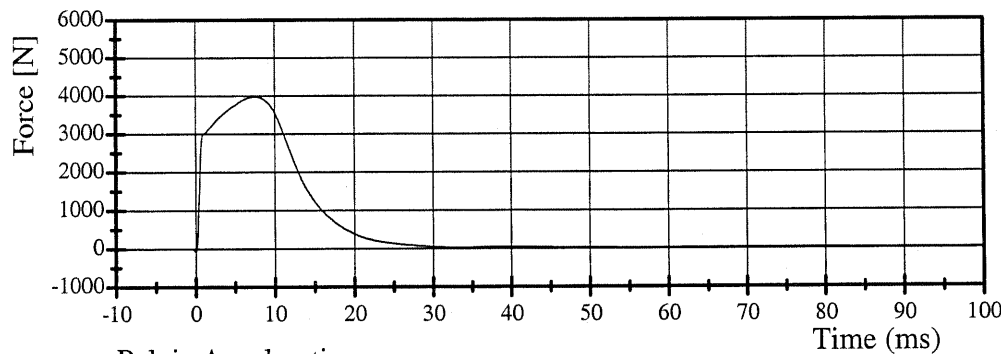


Filter Class: CFC 180

Max: 40.3 g at 7.8 ms

Min: -0.7 g at -1.0 ms

Acetabulum Force

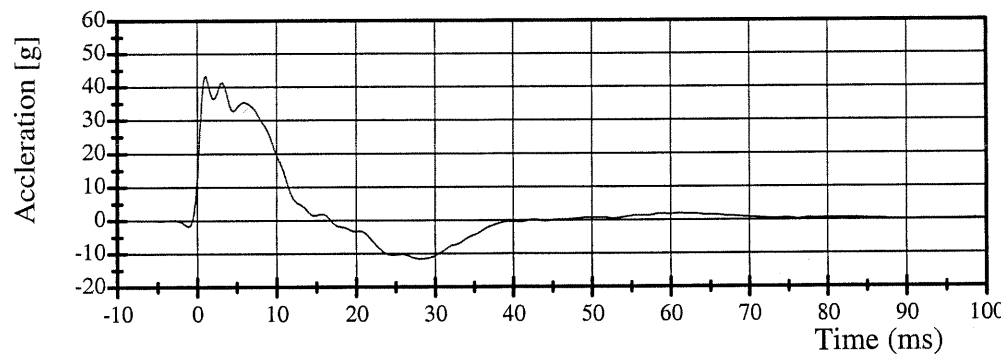


Filter Class: CFC 600

Max: 3987 N at 7.6 ms

Min: -64 N at 0.0 ms

Pelvis Acceleration



Filter Class: CFC 180

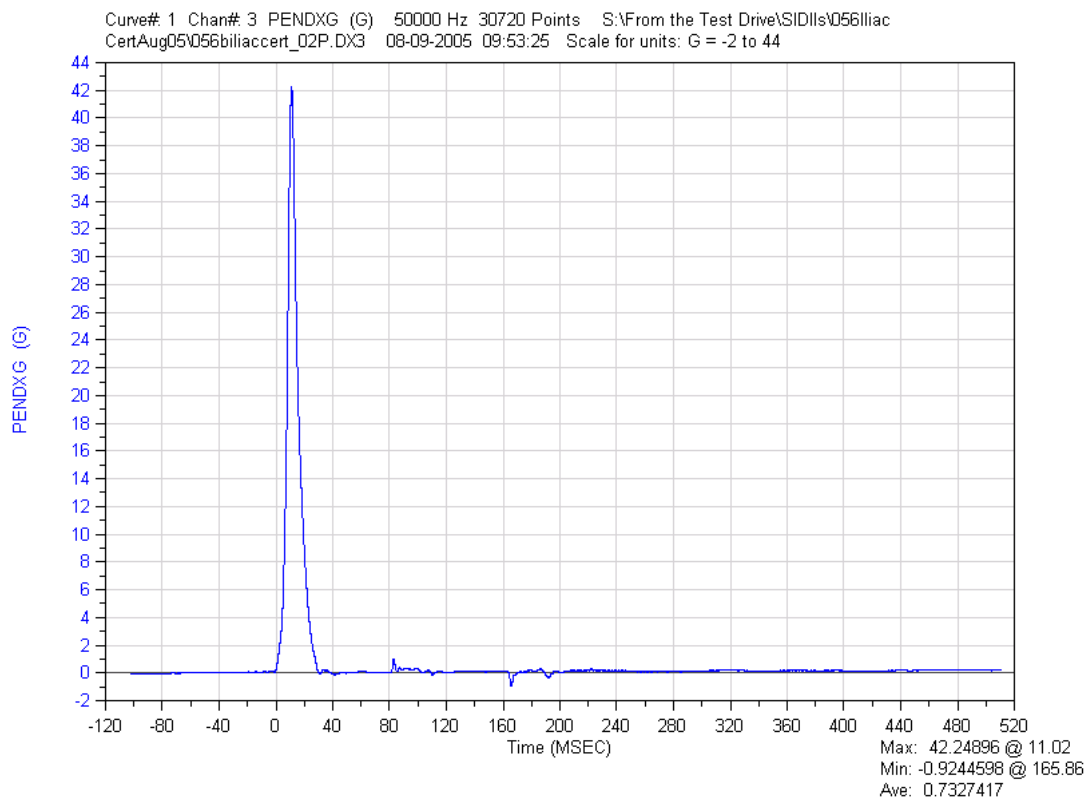
Max: 43.3 g at 1.0 ms

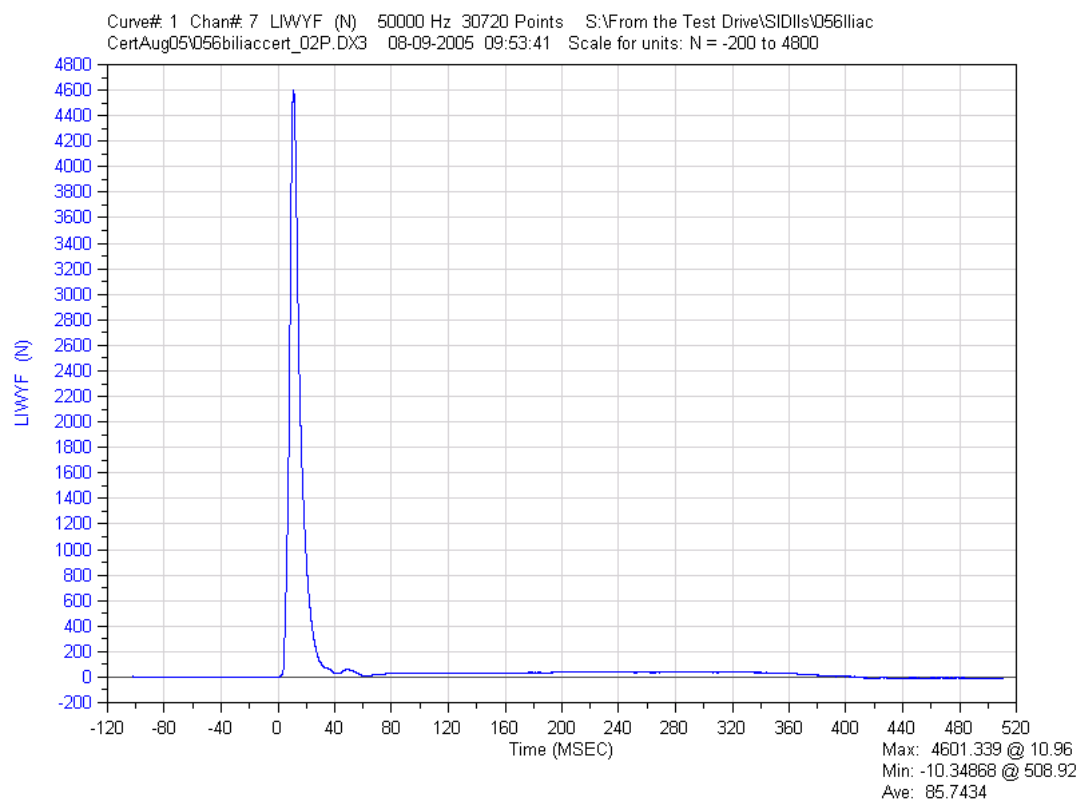
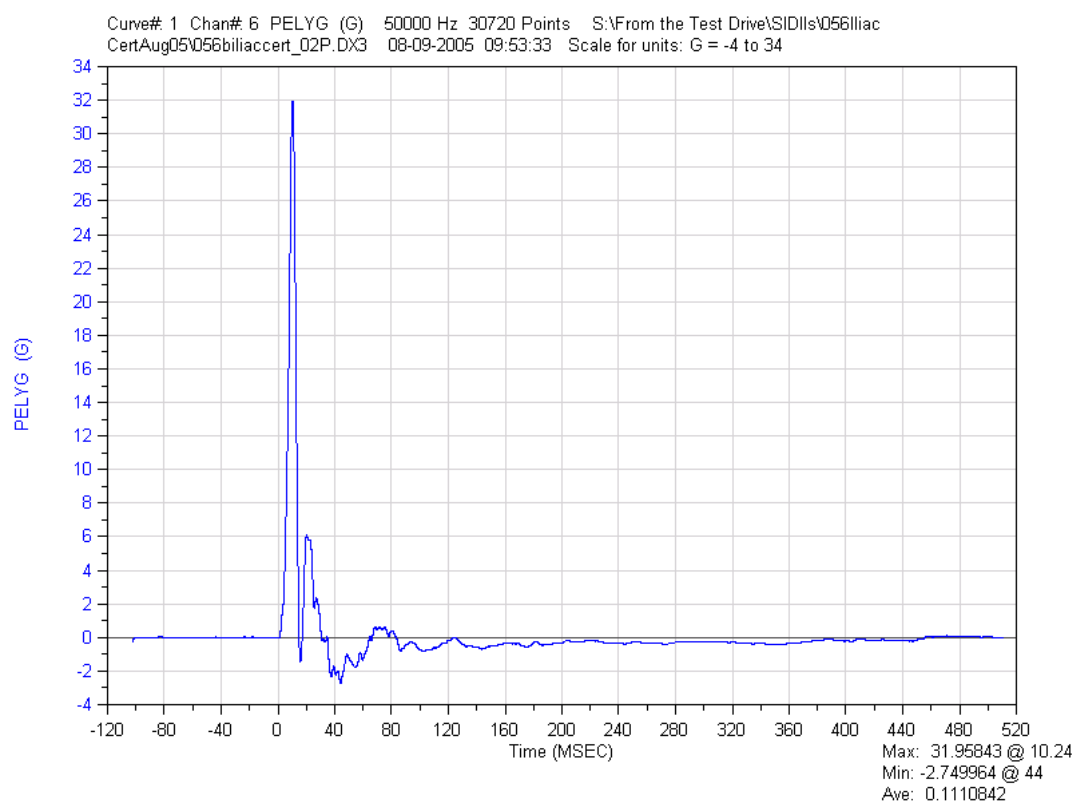
Min: -11.5 g at 28.2 ms

Test Parameter/Specification

Test Number	056biliaccert_02
Dummy S/N	056
Test Performer	VRTC
Date of Calibration	8/2/2005
Temperature (20.6 - 22.2 °C)	21.1
Relative Humidity (10 - 70 %)	47
Probe Velocity (4.2 - 4.4 m/s)	4.379
Maximum Probe Acceleration (41 - 47 g)	42.249
Maximum Pelvis Y Acceleration (32 - 40 g)	31.958
Maximum Iliac Force (4841 - 5491 N)	4601.339

Test Results





Pre-Test Dummy Configuration and Performance Verification Data

Passenger Dummy S/N: 020

Tested per draft procedures and specifications provided by VRTC

Transportation Research Center Inc.

Left Head Drop Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Peak Resultant Acceleration	125 - 145 g	130.2 g	Yes
Peak Longitudinal Acceleration	15 g Max	-2.5 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved



08.11.2005 10:34:29 231

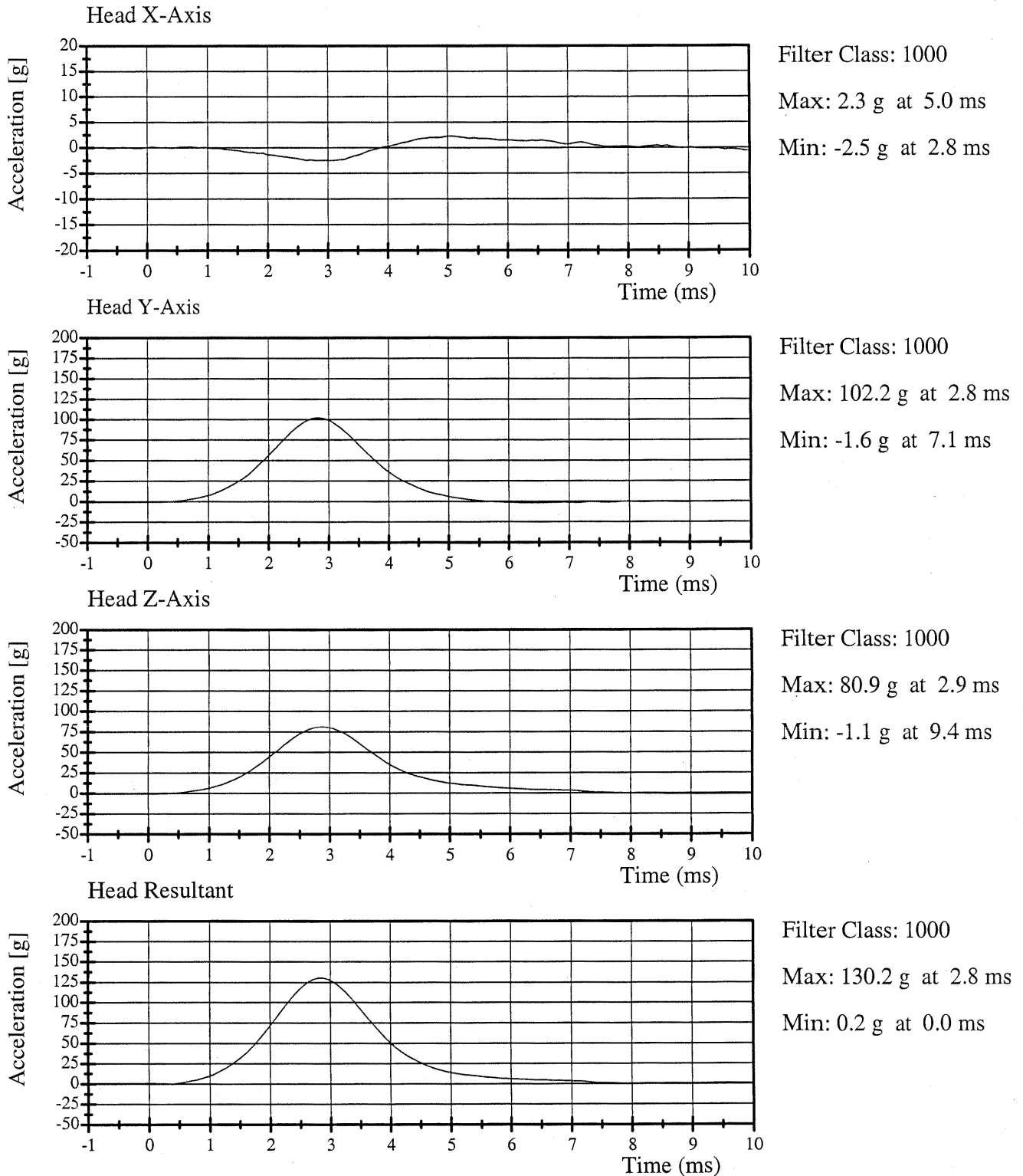


Transportation Research Center Inc.

Head Drop Test

SID-II's Serial No. 020 Calibration No. 08 - 1

Test Date 08/02/2005



08.11.2005 10:34:30 231



Transportation Research Center Inc.

Left Lateral Neck Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/01/2005

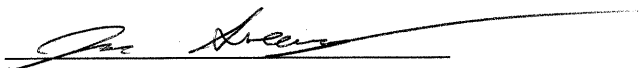
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Impact Velocity	5.51 - 5.63 m/s	5.58 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.20 - 2.80 m/s	2.52 m/s	Yes
15 ms	3.40 - 4.10 m/s	3.64 m/s	Yes
20 ms	4.50 - 5.40 m/s	4.92 m/s	Yes
25 ms	5.50 - 6.10 m/s	5.94 m/s	Yes
25 - 100 ms	5.20 - 6.20 m/s	5.70 - 6.01 m/s	Yes
Peak D Plane Rotation	74 - 79 °	71.8 °	No
Time of Peak D-Plane Rotation	50 - 70 °	59.2 °	Yes
Peak Moment About Occipital Condyles during Rotation Interval	40.0 - 45.0 N·m	0 N·m	No
Time of Moment Decay To 0 N·m	113 - 123 ms	111.6 ms	No

Test does not meet specifications.

Comments:

Technician

Approved



08.11.2005 10:37:46 669

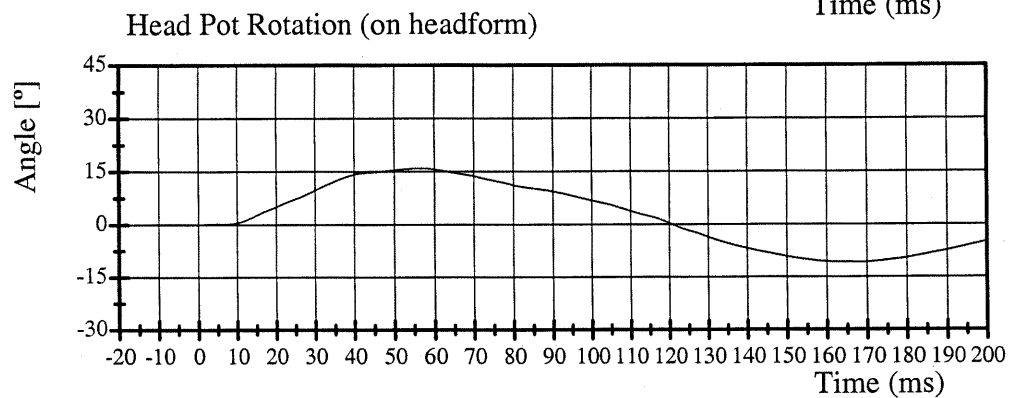
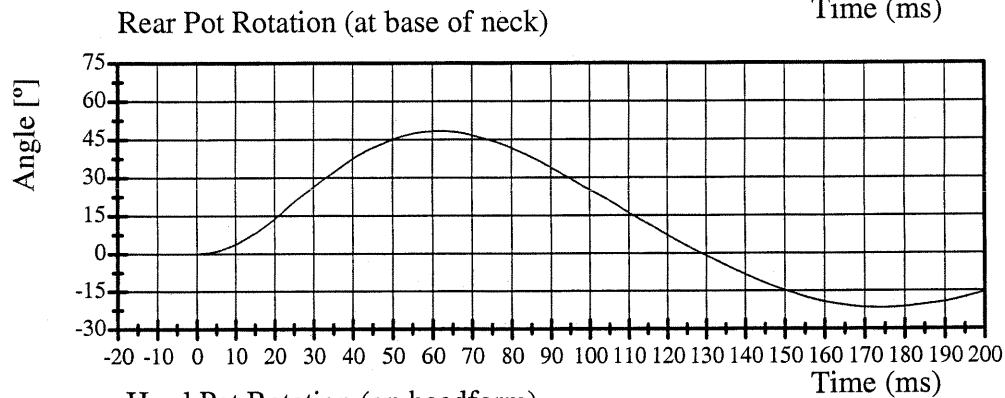
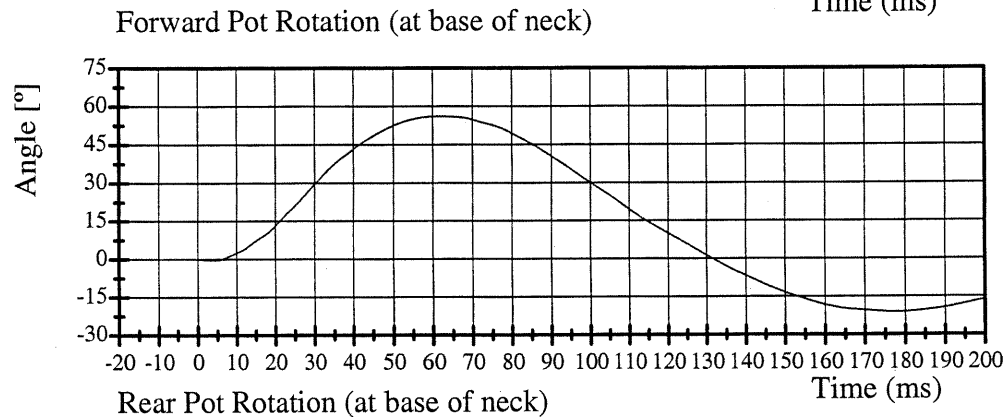
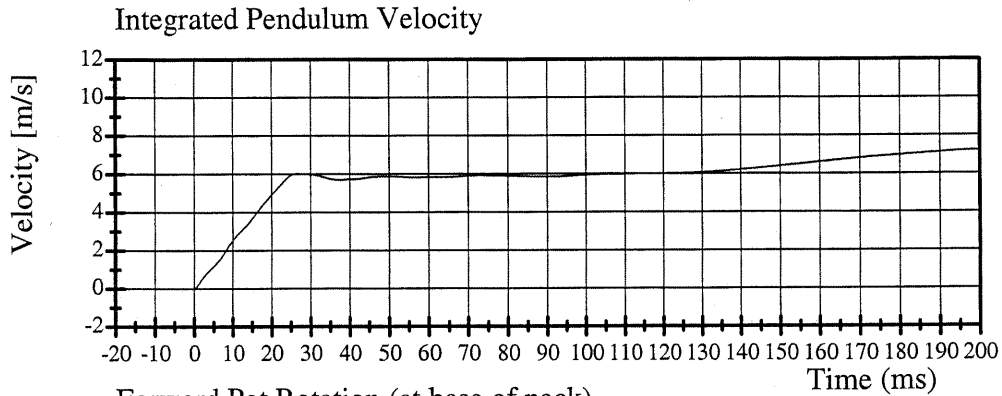


Transportation Research Center Inc.

Left Lateral Neck Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/01/2005



08.11.2005 10:37:47 669



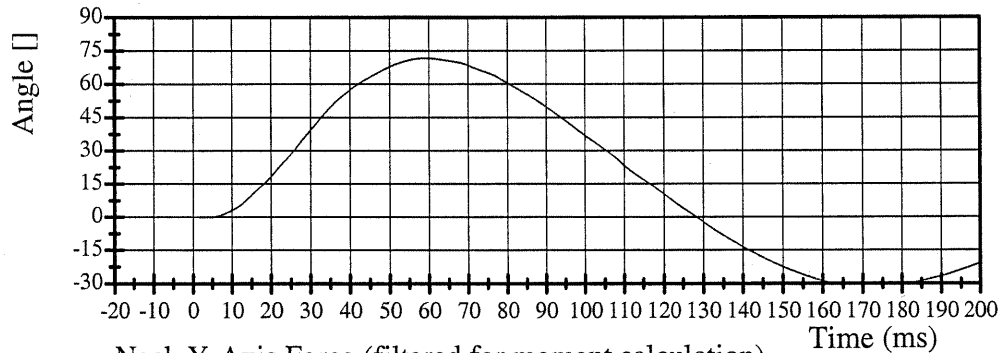
Transportation Research Center Inc.

Left Lateral Neck Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/01/2005

D-Plane Rotation (forward pot + head pot)

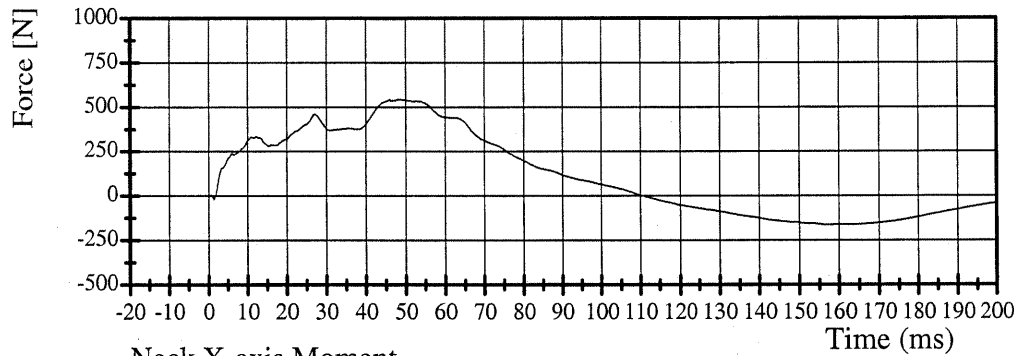


Filter Class: CFC 60

Max: 71.8 ° at 59.2 ms

Min: -31.2 ° at 173.3 ms

Neck Y-Axis Force (filtered for moment calculation)

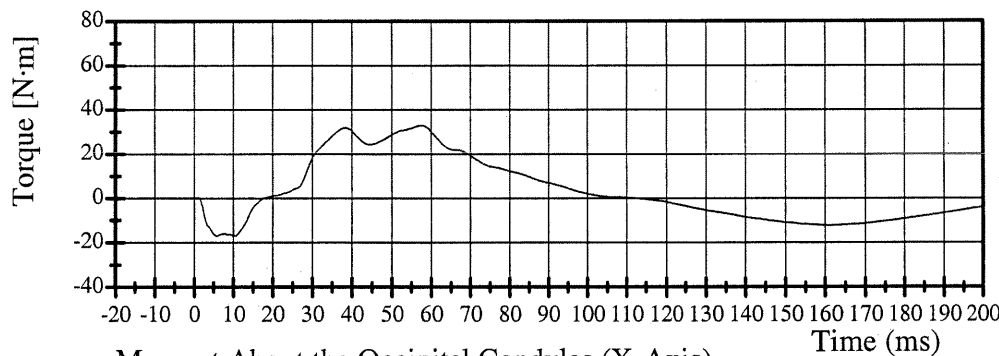


Filter Class: CFC 600

Max: 543 N at 48.1 ms

Min: -164 N at 157.4 ms

Neck X-axis Moment

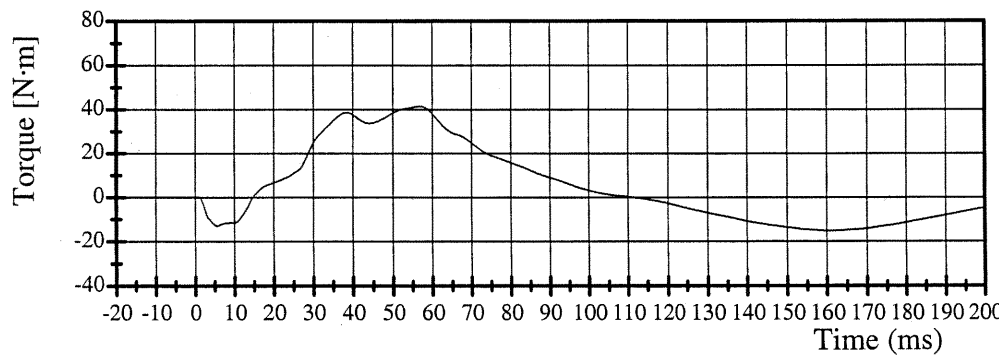


Filter Class: CFC 600

Max: 32.9 N·m at 57.3 ms

Min: -17.1 N·m at 5.8 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 41.5 N·m at 57.0 ms

Min: -15.1 N·m at 161.4 ms

08.11.2005 10:37:48 669



Transportation Research Center Inc.

Left Shoulder Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.4 C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Pendulum Velocity	4.41 - 4.59 m/sec	4.43 m/sec	Yes
Probe Force	1600 - 2400 N	2242 N	Yes
Deflection	27 - 39 mm	34.0 mm	Yes

Test meets specifications.

Comments:

Technician



Approved



08.02.2005 14:39:47 645



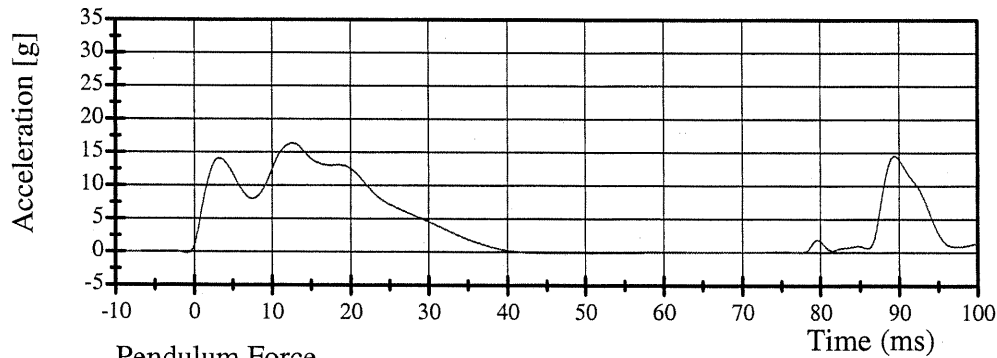
Transportation Research Center Inc.

Left Shoulder Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/02/2005

Pendulum Deceleration

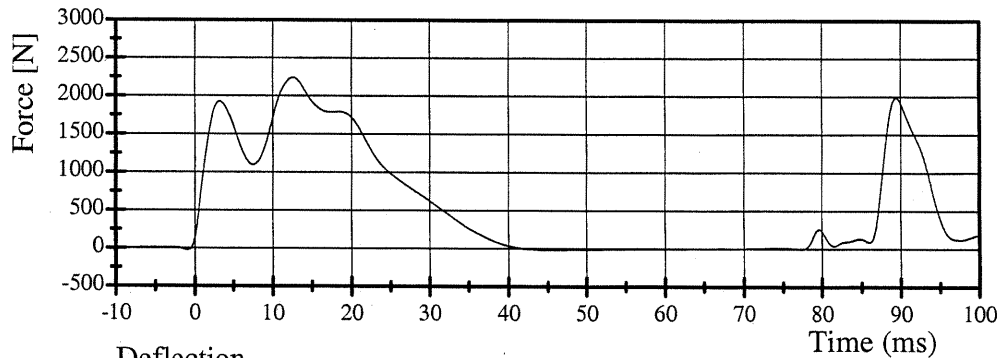


Filter Class: CFC 180

Max: 16.5 g at 12.5 ms

Min: -0.5 g at 121.8 ms

Pendulum Force

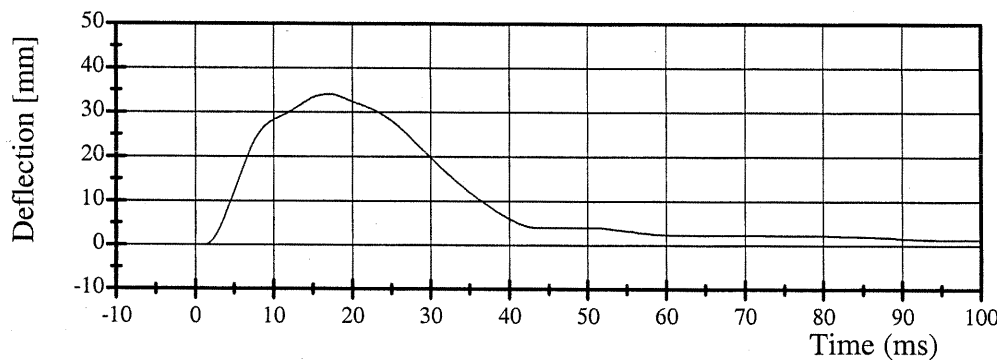


Filter Class: CFC 180

Max: 2242 N at 12.6 ms

Min: -41 N at 121.8 ms

Deflection



Filter Class: CFC 600

Max: 34.0 mm at 17.0 ms

Min: -0.0 mm at 1.1 ms

Transportation Research Center Inc.

Left Thorax With Arm Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

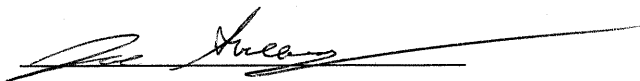
Test Date 08/02/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.3 C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Pendulum Velocity	6.60 - 6.80 m/sec	6.72 m/sec	Yes
Pendulum Force	4100 - 4700 N	4859 N	No
Upper Spine Peak Acceleration	34 - 48 g	40.2 g	Yes
Lower Spine Peak Acceleration	30 - 38 g	32.8 g	Yes
Upper Rib Peak Deflection	23 - 35 mm	28.7 mm	Yes
Mid Rib Peak Deflection	29 - 44 mm	31.9 mm	Yes
Lower Rib Peak Deflection	33 - 40 mm	35.0 mm	Yes
Shoulder Peak Deflectioin	30 - 42 mm	34.7 mm	Yes

Test does not meet specifications.

Comments:

Technician



Approved



08.11.2005 14:13:21 392

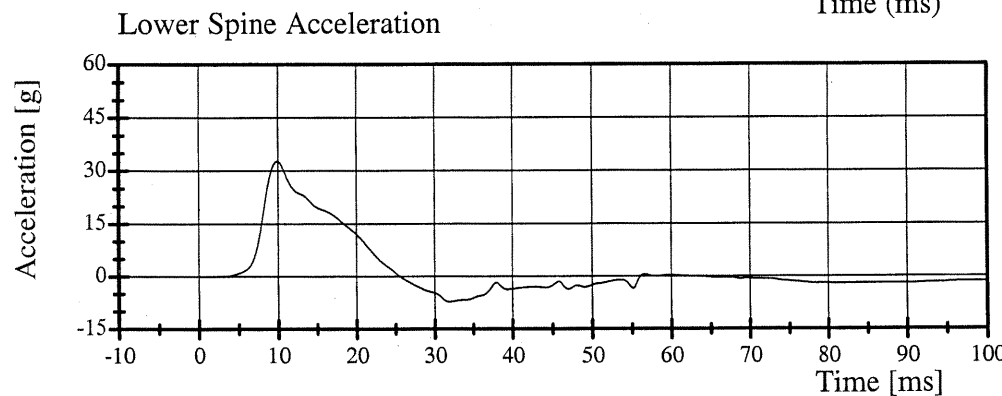
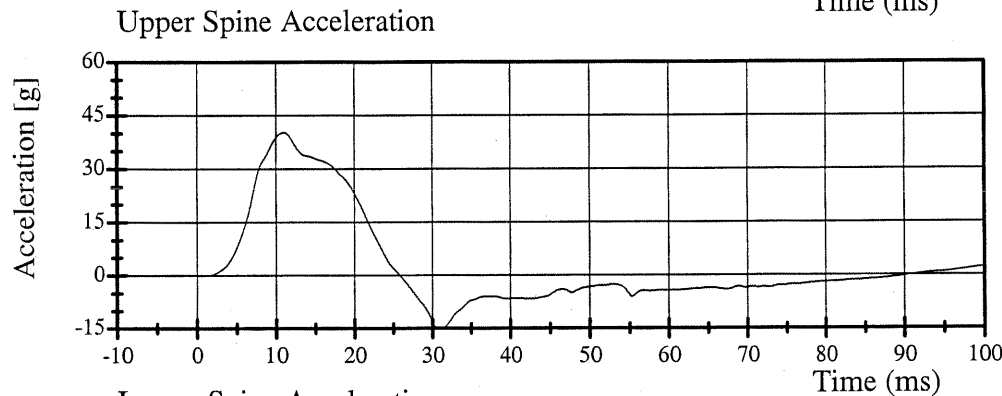
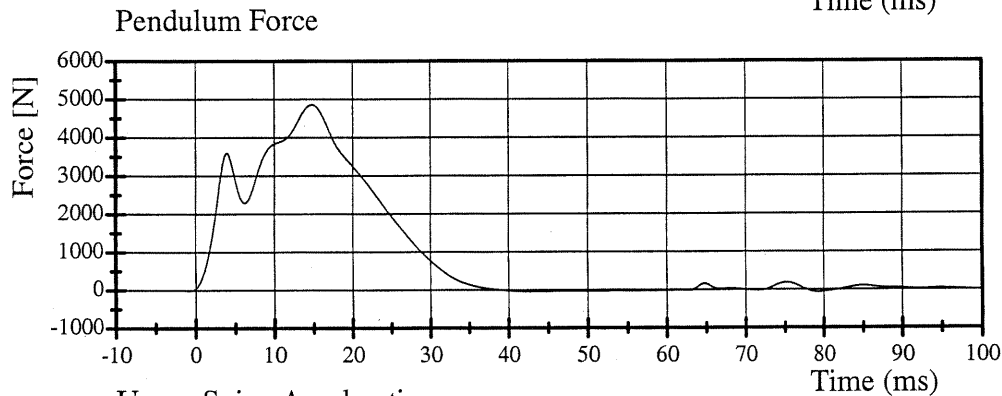
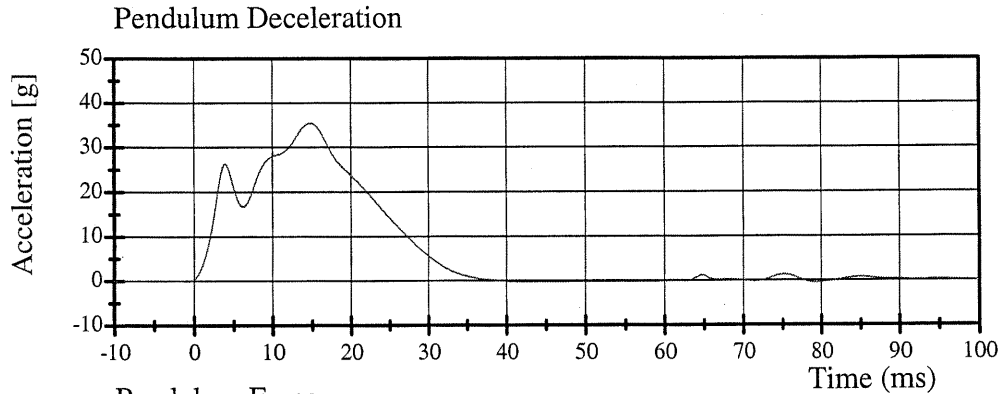


Transportation Research Center Inc.

Left Thorax With Arm Test

SID-II's Serial No. 020 Calibration No. 08 - 1

Test Date 08/02/2005



08.11.2005 14:13:22 392

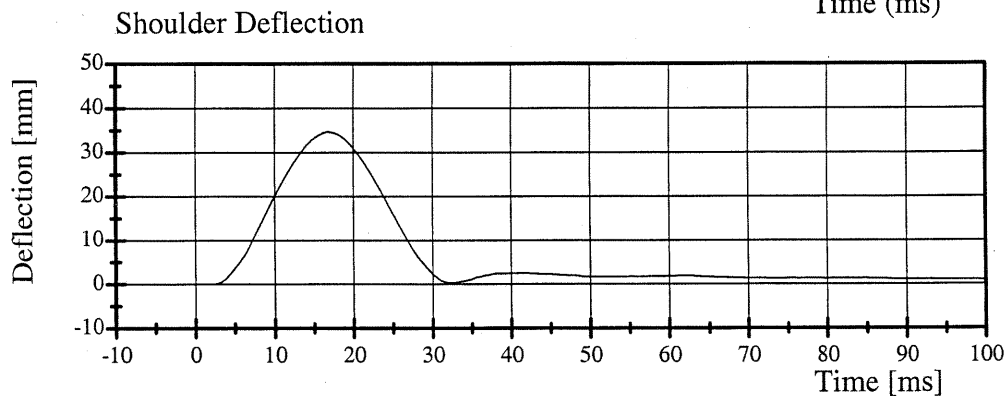
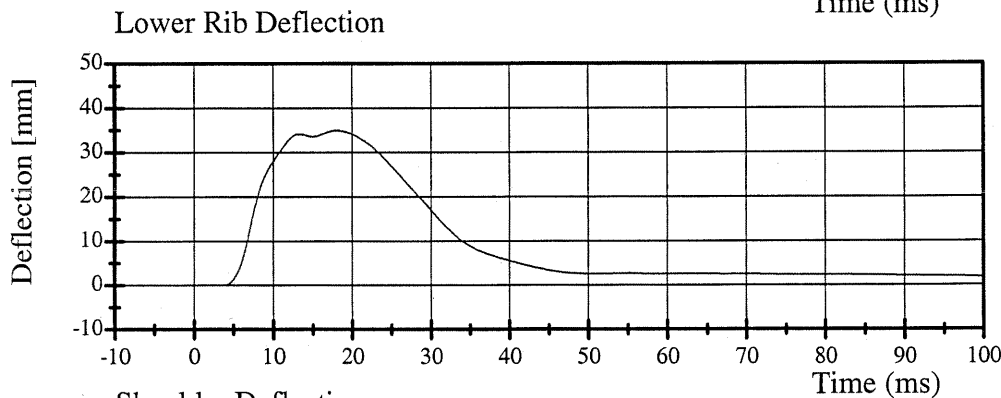
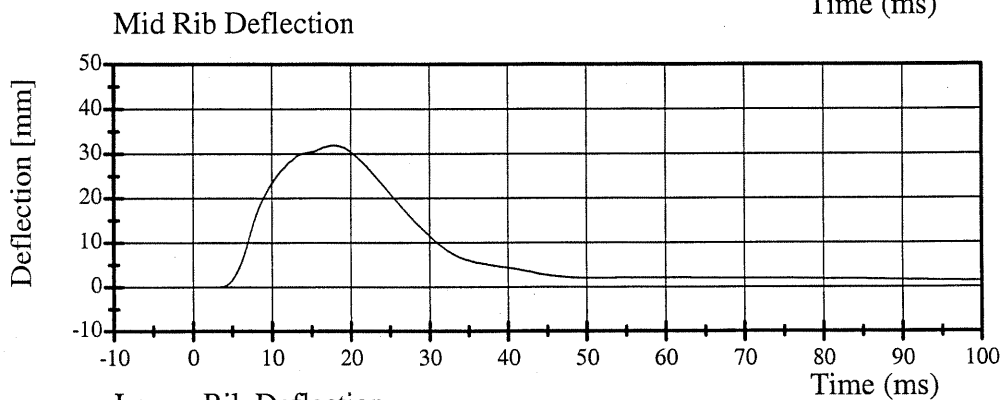
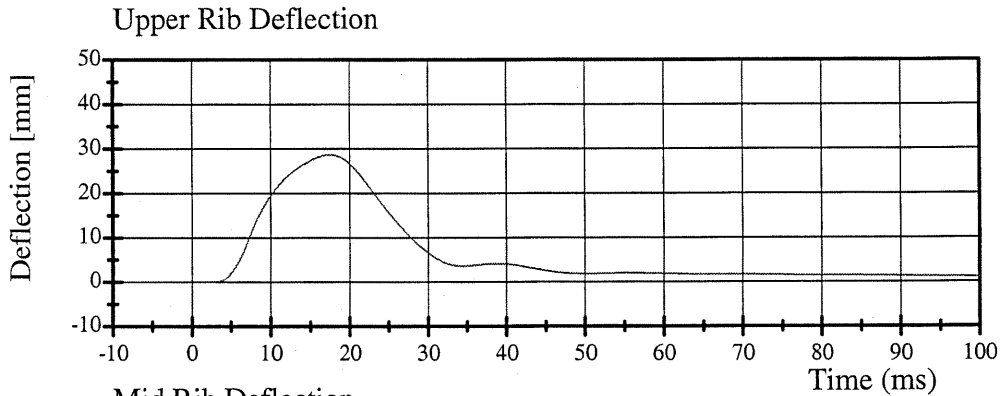


Transportation Research Center Inc.

Left Thorax With Arm Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/02/2005



08.11.2005 14:13:23 392



Transportation Research Center Inc.

Left Thorax Without Arm Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/03/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.3 C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	4.20 - 4.40 m/sec	4.29 m/sec	Yes
Pendulum Force	1800 - 2300 N	2276 N	Yes
Upper Spine Peak Acceleration	13 - 18 g	15.7 g	Yes
Lower Spine Peak Acceleration	8 - 13 g	9.2 g	Yes
Upper Rib Peak Deflection	32 - 41 mm	36.8 mm	Yes
Mid Rib Peak Deflection	40 - 51 mm	41.5 mm	Yes
Lower Rib Peak Deflection	34 - 47 mm	40.1 mm	Yes

Test meets specifications.

Comments:

Technician



Approved



08.11.2005 14:14:39 594

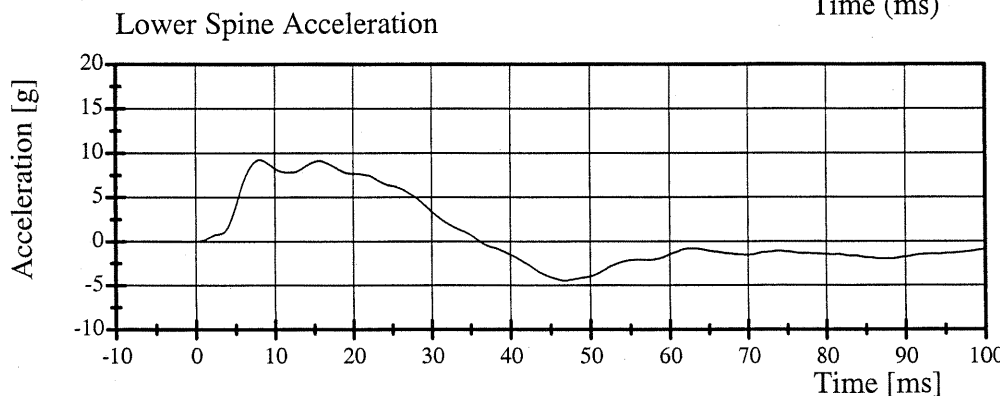
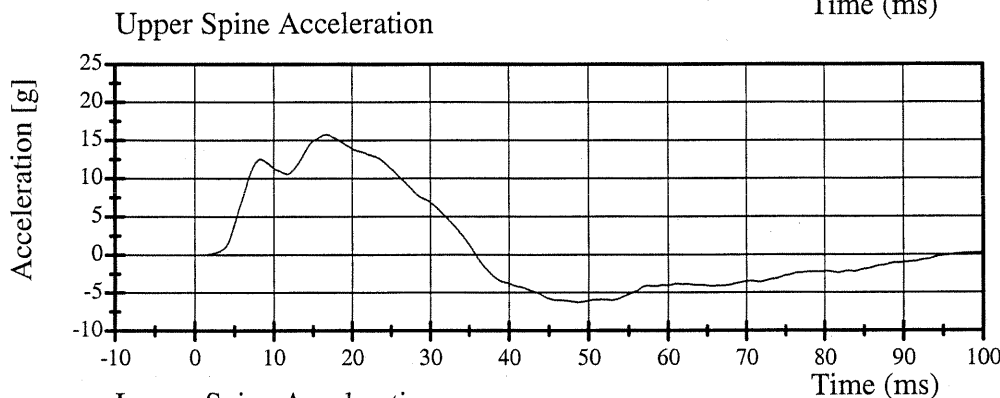
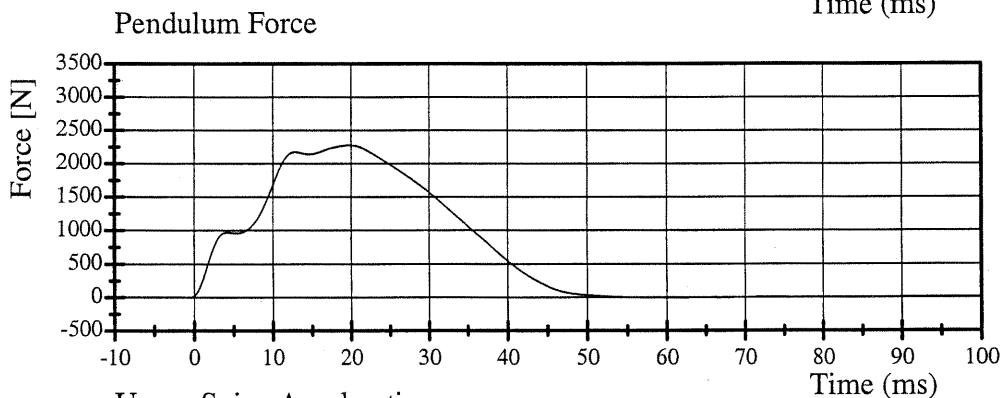
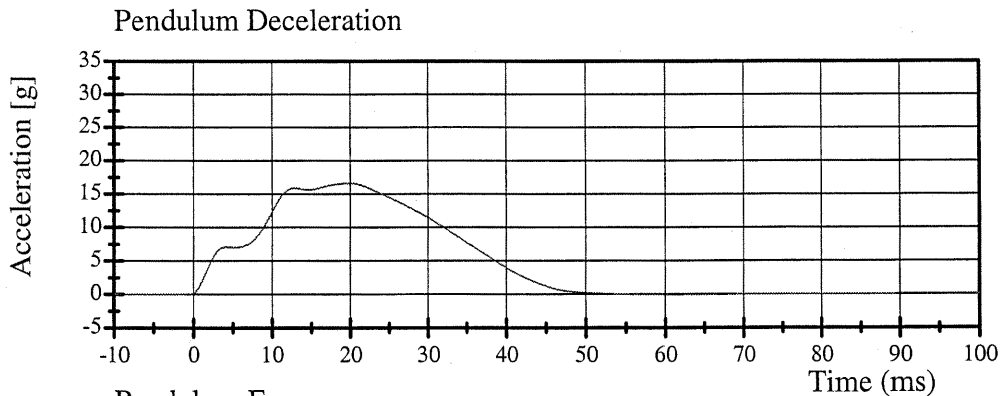


Transportation Research Center Inc.

Left Thorax Without Arm Test

SID-II's Serial No. 020 Calibration No. 08 - 1

Test Date 08/03/2005



08.11.2005 14:14:40 594

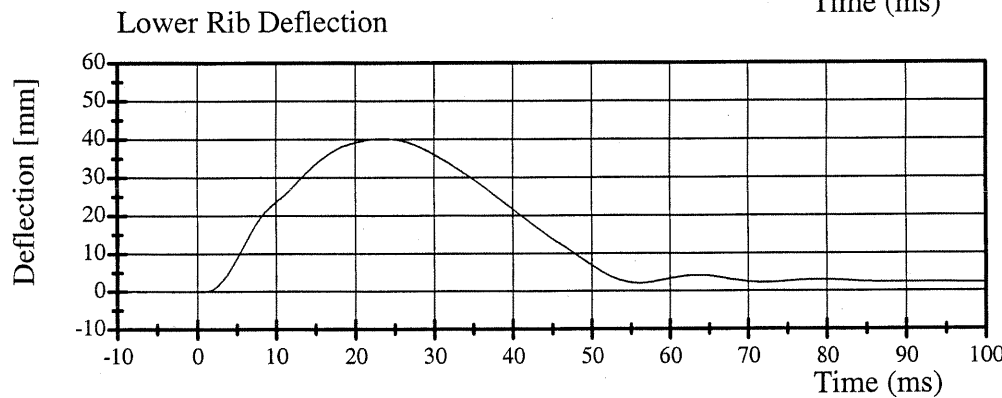
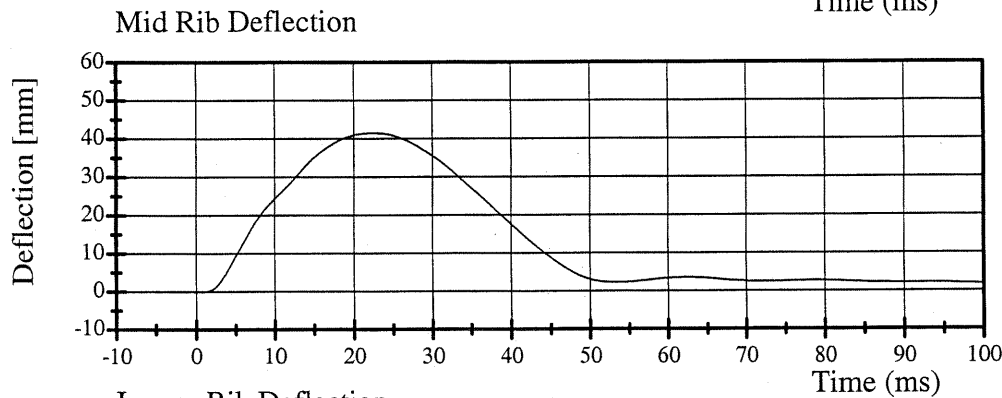
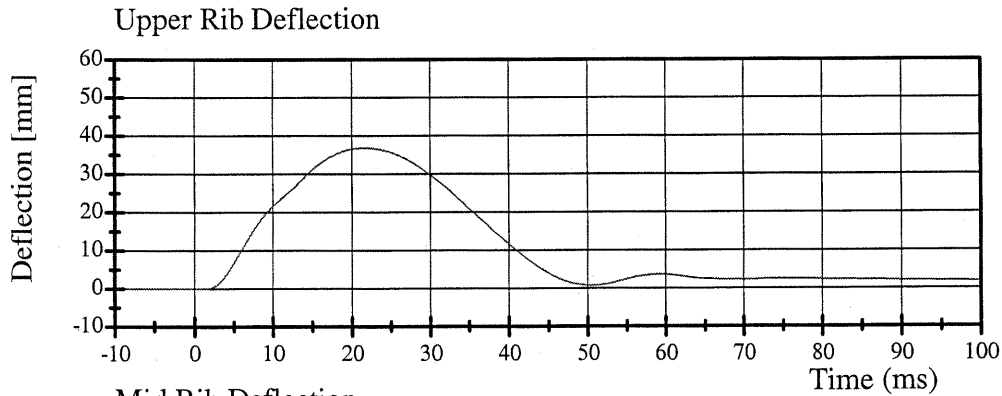


Transportation Research Center Inc.

Left Thorax Without Arm Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/03/2005



08.11.2005 14:14:41 594



Transportation Research Center Inc.

Left Abdomen Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/03/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.5 C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	4.20 - 4.40 m/sec	4.38 m/sec	Yes
Pendulum Force	1300 - 1900 N	2110 N	No
Upper Spine Peak Acceleration	5 - 9 g	7.2 g	Yes
Lower Spine Peak Acceleration	9 - 13 g	11.7 g	Yes
Upper Abdomen Rib Peak Deflection	44 - 55 mm	39.9 mm	No
Lower Abdomen Rib Peak Deflection	44 - 56 mm	40.9 mm	No

Test does not meet specifications.

Comments:

Technician



Approved



08.11.2005 14:16:51 633

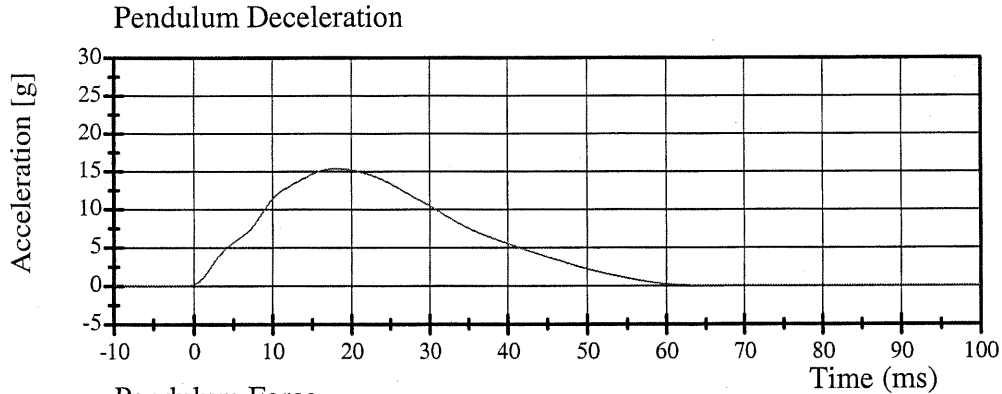


Transportation Research Center Inc.

Left Abdomen Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

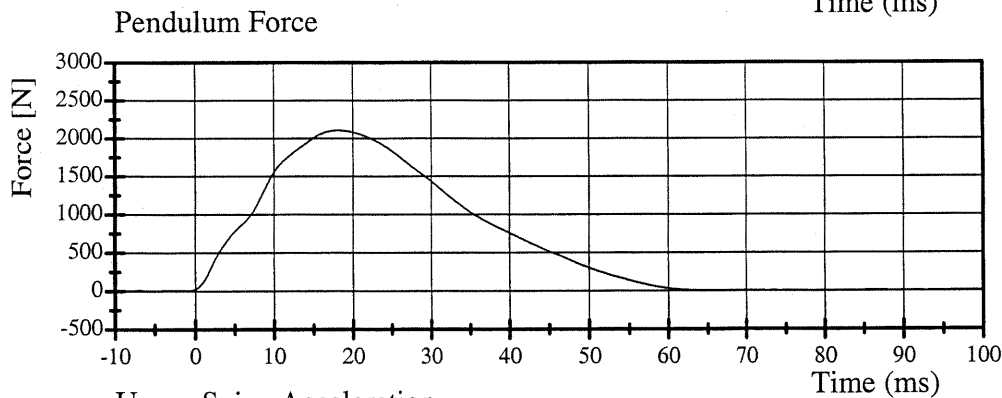
Test Date 08/03/2005



Filter Class: CFC 180

Max: 15.4 g at 18.0 ms

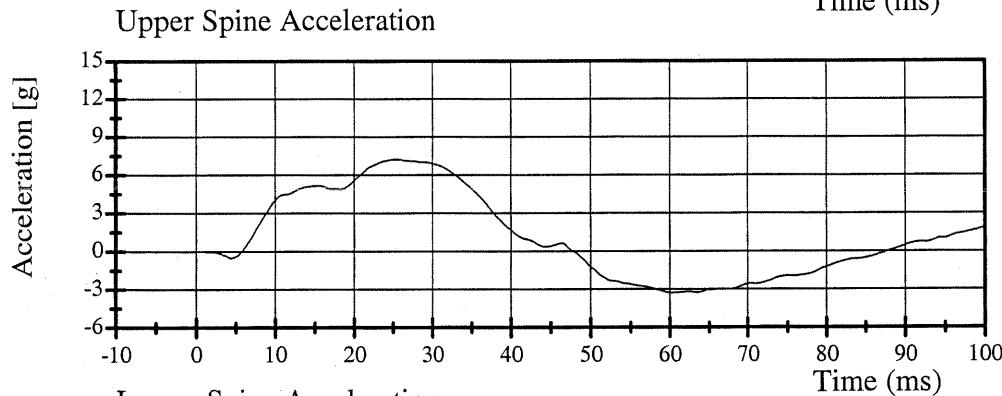
Min: -0.7 g at 120.9 ms



Filter Class: CFC 180

Max: 2110 N at 18.0 ms

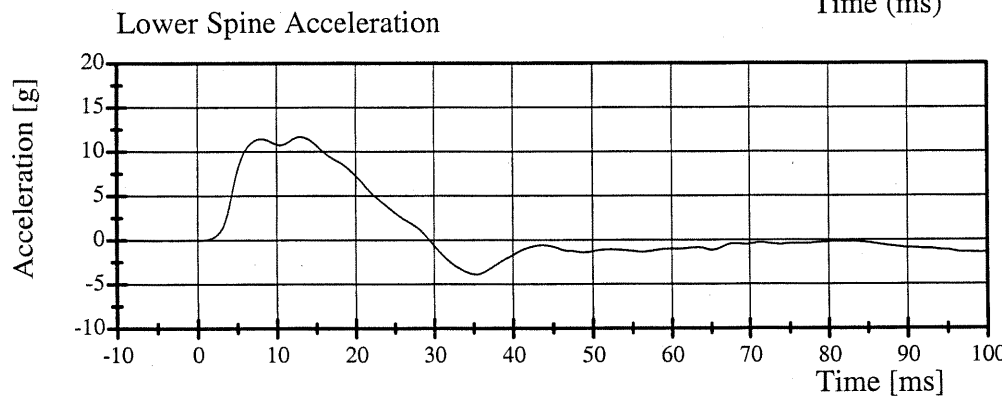
Min: -99 N at 120.9 ms



Filter Class: CFC 180

Max: 7.2 g at 25.4 ms

Min: -3.3 g at 60.2 ms



Filter Class: CFC 180

Max: 11.7 g at 13.0 ms

Min: -3.9 g at 35.4 ms

08.11.2005 14:16:52 633

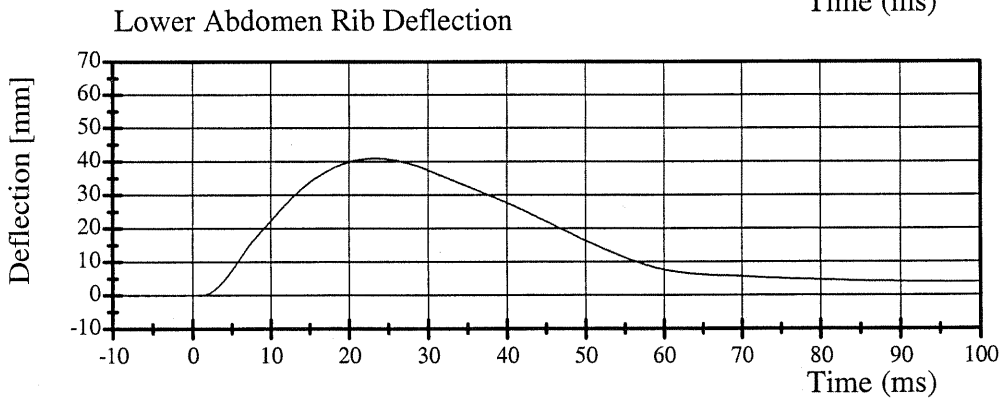
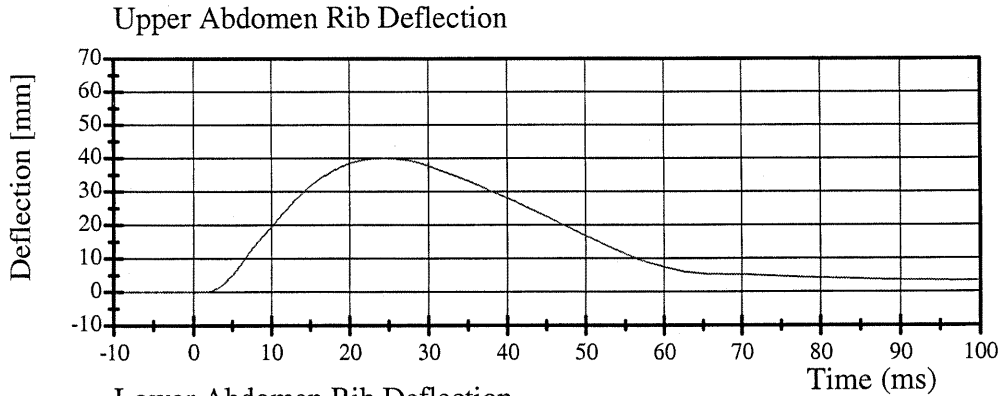


Transportation Research Center Inc.

Left Abdomen Test

SID-IIs Serial No. 020 Calibration No. 08 - 1

Test Date 08/03/2005



Transportation Research Center Inc.

Left Pelvis Test

SID-IIs Serial No. 020 Calibration No. 08 - 2

Test Date 08/03/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 C	21.6 C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	6.60 - 6.80 m/sec	6.65 m/sec	Yes
Pendulum Acceleration	40 - 48 g	41.7 g	Yes
Pelvis Peak Acceleration	40 - 48 g	43.9 g	Yes
Peak Acetabulum Force	3803 - 4505 g	3951 N	Yes

Test meets specifications.

Comments:

Technician



Approved



08.11.2005 14:23:38 425

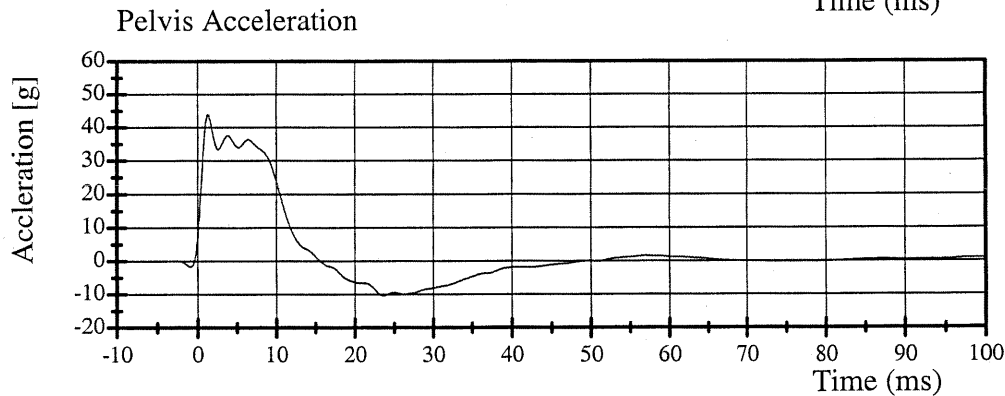
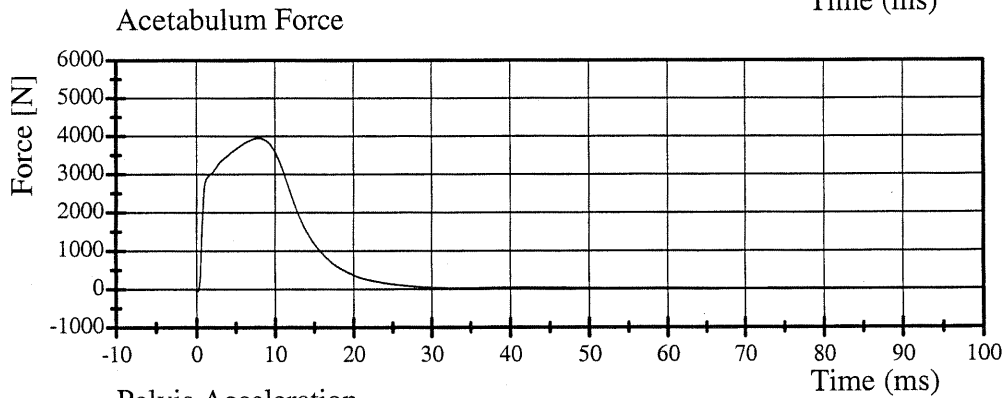
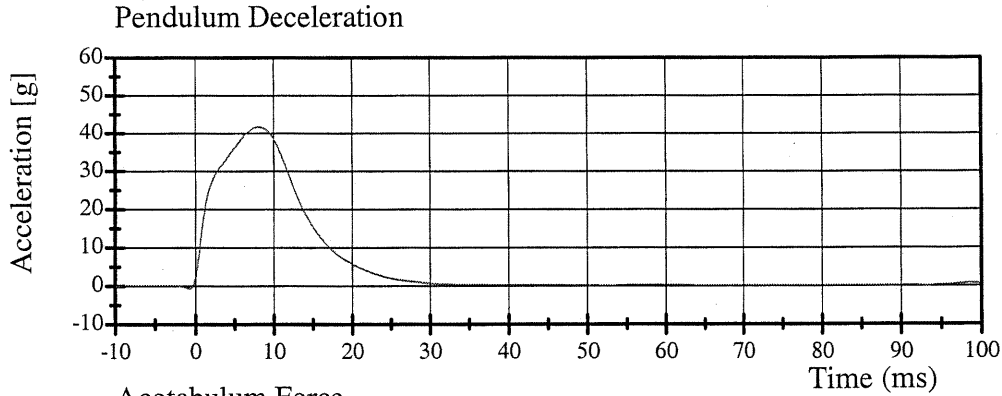


Transportation Research Center Inc.

Left Pelvis Test

SID-IIs Serial No. 020 Calibration No. 08 - 2

Test Date 08/03/2005



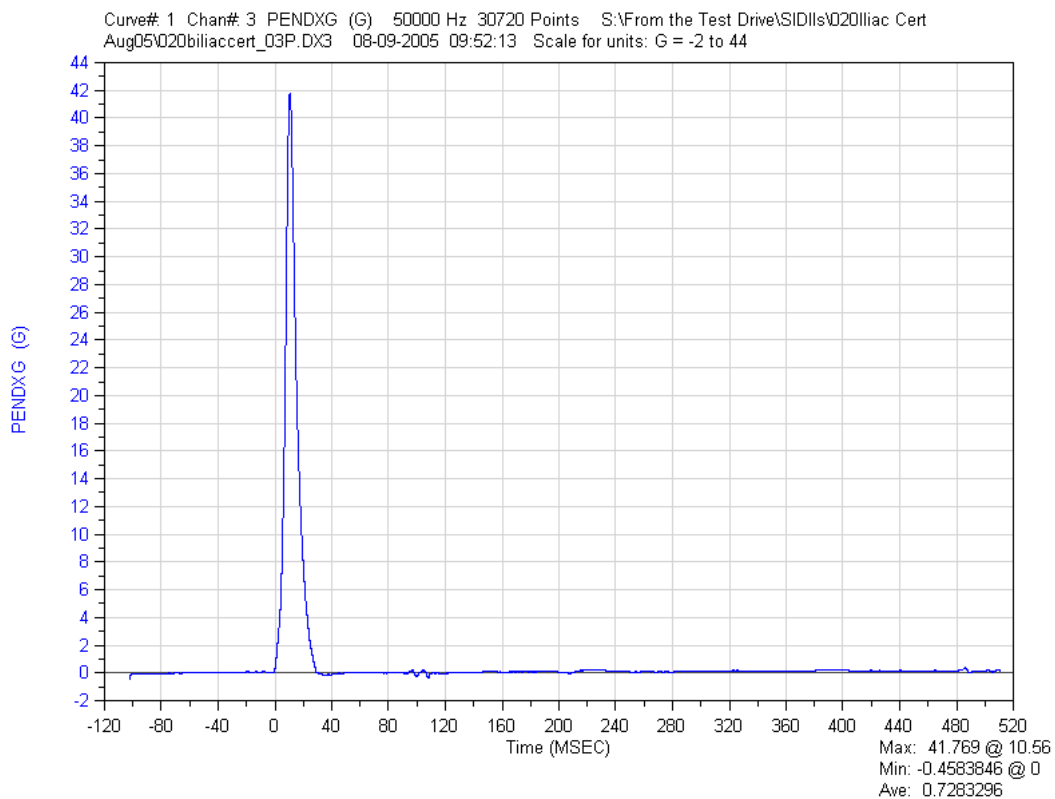
08.11.2005 14:23:39 425

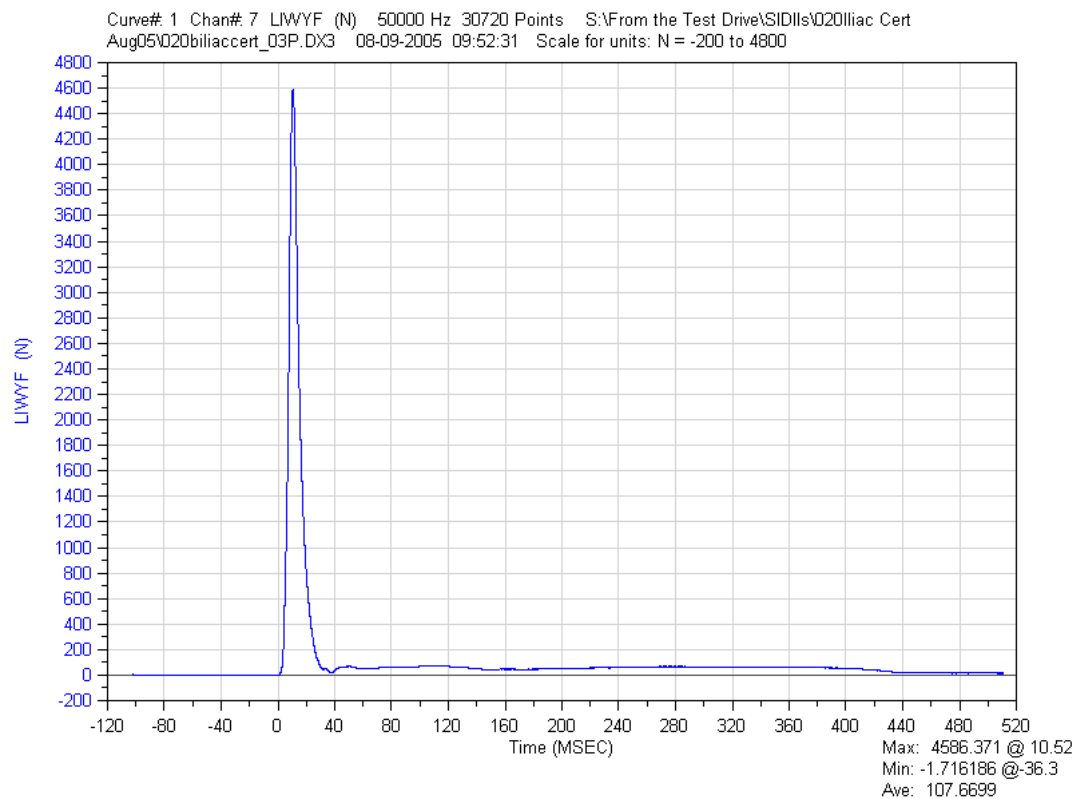
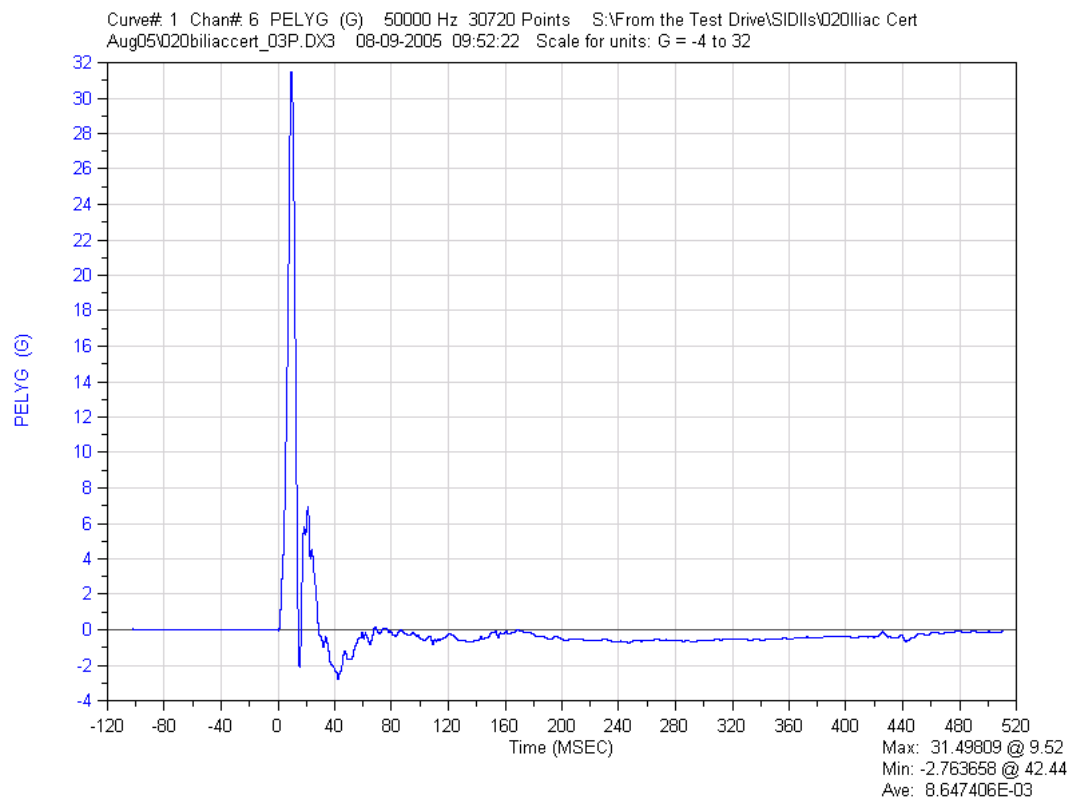


Test Parameter/Specification

Test Number	020biliaccert_03
Dummy S/N	020
Test Performer	VRTC
Date of Calibration	8/4/2005
Temperature (20.6 - 22.2 °C)	20.6
Relative Humidity (10 - 70 %)	50
Probe Velocity (4.2 - 4.4 m/s)	4.364
Maximum Probe Acceleration (41 - 47 g)	41.769
Maximum Pelvis Y Acceleration (32 - 40 g)	31.498
Maximum Iliac Force (4841 - 5491 N)	4586.371

Test Results





Appendix D

Miscellaneous Test Information

Sign Convention
SAE J211 MAR95

Accelerometers:

+X: Forward
+Y: Rightward
+Z: Downward

Potentiometers:

+Chest longitudinal deflection: Outward
+Chest lateral deflection: Rightward
+Seat belt displacement: Outward
+Seat belt extension: Elongation
+Knee slider displacement: Distance between femur and tibia
increased (in relation to a seated
dummy)

Rotation potentiometers:

+About the X-axis: Left foot-eversion
Right foot-inversion
+About the Y-axis: Left/right foot-dorsiflexion
+About the Z-axis: Left foot-internal
Right foot-external

Load cells:

+Femur force: Tension
+Seat belt force: Tension
+Barrier force: Tension

Neck load cells:

+X force: Head pushed rearward
+Y force: Head pushed leftward
+Z force: Head pulled upward (tension on neck)
+X moment: Left ear rotating toward left shoulder
+Y moment: Chin rotating toward chest
+Z moment: Chin rotating toward left shoulder

Tibia load cells:

+X force: Ankle forward, knee rearward
+Y force: Ankle rightward, knee leftward
+Z force: Tension
+X moment: Bottom of tibia moving leftward
+Y moment: Bottom of tibia moving rearward

Sign Convention, Continued
SAE J211 MAR95

Lumbar load cells:

+X force:	Chest rearward, pelvis forward
+Y force:	Chest leftward, pelvis rightward
+Z force:	Chest upward, pelvis downward
+X moment:	Left shoulder toward left hip
+Y moment:	Sternum toward front of legs
+Z moment:	Right shoulder forward, left shoulder rearward

Frequency Response Classes
Used for 050817 Test

<u>Typical Test Measurements</u>	<u>Channel Class</u>
Vehicle Structural Accelerations for use in:	
Total vehicle comparison	60
Integration for velocity or displacement	180
Anthropomorphic Test Device	
Head accelerations	1000
Upper neck force	1000
Upper neck moment	600
Shoulder accelerations	1000
Shoulder force	600
Shoulder displacement	180
Spine acceleration	180
Rib Y-axis acceleration	180
Rib displacement	180
Lumbar moment	600
Pelvis acceleration	1000
Iliac wing force	600
Acetabulum force	600
Femur force	600
Femur moment	600

The direction column on the following sheets describes the transducer output as mounted and wired in the test location. The polarity column indicates whether a polarity change occurred during data acquisition to conform to J211 MAR95. See Report Sign Convention sheet for description of data output as presented in the report: occasionally channels have been adjusted in post-acquisition processing to conform to J211 MAR95.

Channel Report Test Number 050817

Ref	Transducer ID	ISO Signal Identifier	Description
1	Trig D1	10ZERO000000EV00	EVENT
2	03F03E29-N04	11HEADCG00S2ACXA	Head Accel X
3	01G18-F08	11HEADCG00S2ACYA	Head Accel Y
4	03E03E18-F21	11HEADCG00S2ACZA	Head Accel Z
5	IF-205-283-FX	11NECKUP00S2FOXA	Neck Force X
6	IF-205-283-FY	11NECKUP00S2FOYA	Neck Force Y
7	IF-205-283-FZ	11NECKUP00S2FOZA	Neck Force Z
8	IF-205-283-MX	11NECKUP00S2MOXA	Neck Moment X
9	IF-205-283-MY	11NECKUP00S2MOYA	Neck Moment Y
10	IF-205-283-MZ	11NECKUP00S2MOZA	Neck Moment Z
11	03E03E20-N05	11SHLDLE00S2ACXA	Shoulder Accel X
12	03D03D16-F13	11SHLDLE00S2ACYA	Shoulder Accel Y
13	02I02I05-F07	11SHLDLE00S2ACZA	Shoulder Accel Z
14	3167-142-FX	11SHLDLE00S2FOXA	Shoulder Force X
15	3167-142-FY	11SHLDLE00S2FOYA	Shoulder Force Y
16	3167-142-FZ	11SHLDLE00S2FOZA	Shoulder Force Z
17	180-3860-056SHLD	11SHRILE00S2DSYA	Shoulder Disp. Y
18	P17846	11SPIN0100S2ACXA	Upper Spine Accel X
19	00L13-F71	11SPIN0100S2ACYA	Upper Spine Accel Y
20	02I02I05-F14	11SPIN0100S2ACZA	Upper Spine Accel Z
21	03F03E29-N21	11THSP01RIS2ACXA	Spine Rib 1 Accel X
22	04J04I01-R04	11THSP01RIS2ACYA	Spine Rib 1 Accel Y
23	04J04I20-Z05	11THSP01RIS2ACZA	Spine Rib 1 Accel Z
24	03D03D16-F18	11THSP02RIS2ACXA	Spine Rib 2 Accel X
25	01G18-F15	11THSP02RIS2ACYA	Spine Rib 2 Accel Y
26	01G18-F12	11THSP02RIS2ACZA	Spine Rib 2 Accel Z
27	04J04I20-Z14	11THSP03RIS2ACXA	Spine Rib 3 Accel X
28	03D03D09-N10	11THSP03RIS2ACYA	Spine Rib 3 Accel Y
29	03F03F09-N17	11THSP03RIS2ACZA	Spine Rib 3 Accel Z
30	04J04I01-R18	11SPIN1200S2ACXA	Lower Spine Accel X
31	03E03D30-N04	11SPIN1200S2ACYA	Lower Spine Accel Y
32	04J04I01-R10	11SPIN1200S2ACZA	Lower Spine Accel Z
33	04J04I08-F25	11ABSP02RIS2ACXA	Spine Rib 5 Accel X
34	00L13-F04	11ABSP02RIS2ACYA	Spine Rib 5 Accel Y
35	04J04I20-Z08	11ABSP02RIS2ACZA	Spine Rib 5 Accel Z
36	IF-414-101-MX	11LUSP0000S2MOXA	Lumbar Moment X
37	IF-414-101-MY	11LUSP0000S2MOYA	Lumbar Moment Y
38	IF-414-101-MZ	11LUSP0000S2MOZA	Lumbar Moment Z
39	02I02I10-N22	11TRRI01LES2ACXA	Thorax Rib 1 Accel X
40	99H12-F11	11TRRI01LES2ACYA	Thorax Rib 1 Accel Y
41	03E03E20-N04	11TRRI01LES2ACZA	Thorax Rib 1 Accel Z
42	02A16-A07	11TRRI02LES2ACXA	Thorax Rib 2 Accel X

Polarity	FScale	Units	Filter	Assembly
Bipolar		1 Logic	0	
Bipolar	1000 g		2000	1-056 SIDIIs FTSS.001
-Bipolar	1000 g		2000	1-056 SIDIIs FTSS.002
-Bipolar	1000 g		2000	1-056 SIDIIs FTSS.003
Bipolar	8896 N		2000	1-056 SIDIIs FTSS.004
Bipolar	8896 N		2000	1-056 SIDIIs FTSS.005
Bipolar	13344 N		2000	1-056 SIDIIs FTSS.006
Bipolar	282.5 N		2000	1-056 SIDIIs FTSS.007
Bipolar	282.5 N		2000	1-056 SIDIIs FTSS.008
Bipolar	282.5 N		2000	1-056 SIDIIs FTSS.009
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.016
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.017
Bipolar	2000 g		2000	1-056 SIDIIs FTSS.018
-Bipolar	4448 N		2000	1-056 SIDIIs FTSS.013
Bipolar	4448 N		2000	1-056 SIDIIs FTSS.014
Bipolar	4448 N		2000	1-056 SIDIIs FTSS.015
-Bipolar	75 mm		2000	1-056 SIDIIs FTSS.019
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.010
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.011
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.012
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.020
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.021
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.022
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.023
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.024
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.025
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.026
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.027
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.028
Bipolar	2000 g		2000	1-056 SIDIIs FTSS.029
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.030
Bipolar	2000 g		2000	1-056 SIDIIs FTSS.031
Bipolar	2000 g		2000	1-056 SIDIIs FTSS.032
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.033
Bipolar	2000 g		2000	1-056 SIDIIs FTSS.034
Bipolar	452 N		2000	1-056 SIDIIs FTSS.058
Bipolar	452 N		2000	1-056 SIDIIs FTSS.059
Bipolar	226 N		2000	1-056 SIDIIs FTSS.060
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.035
Bipolar	2000 g		2000	1-056 SIDIIs FTSS.036
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.037
-Bipolar	2000 g		2000	1-056 SIDIIs FTSS.038

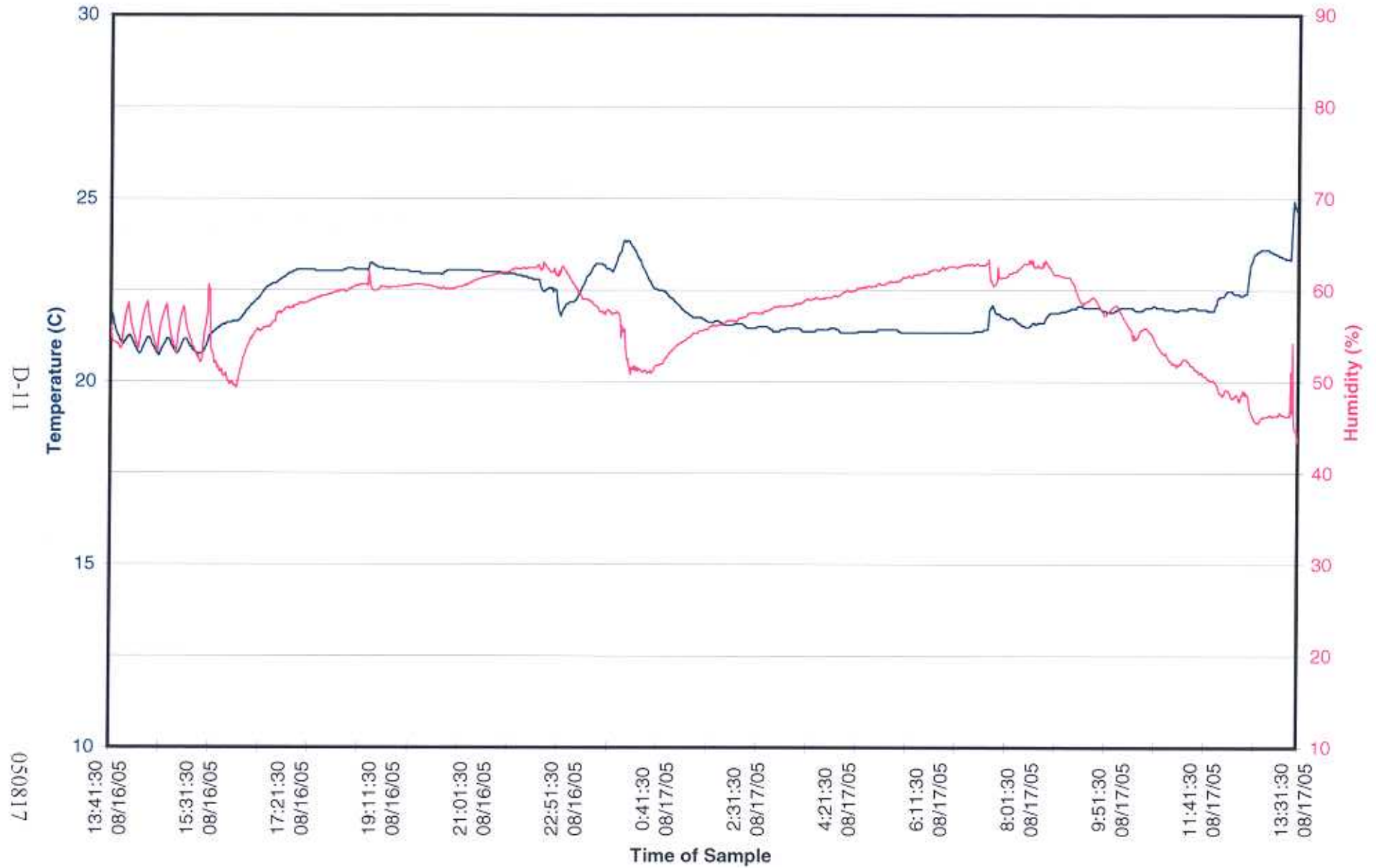
43 02I02I05-F23	11TRRI02LES2ACYA	Thorax Rib 2 Accel Y	Bipolar	2000 g	2000 1-056 SIDIs FTSS.039
44 02A16-A10	11TRRI02LES2ACZA	Thorax Rib 2 Accel Z	-Bipolar	2000 g	2000 1-056 SIDIs FTSS.040
45 04J04I07-Z16	11TRRI03LES2ACXA	Thorax Rib 3 Accel X	-Bipolar	2000 g	2000 1-056 SIDIs FTSS.041
46 04J04I01-R06	11TRRI03LES2ACYA	Thorax Rib 3 Accel Y	Bipolar	2000 g	2000 1-056 SIDIs FTSS.042
47 04J04I01-R13	11TRRI03LES2ACZA	Thorax Rib 3 Accel Z	-Bipolar	2000 g	2000 1-056 SIDIs FTSS.043
48 03D03D16-F04	11ABRI01LES2ACXA	Abdomen Rib 1 Accel X	-Bipolar	2000 g	2000 1-056 SIDIs FTSS.044
49 03D03D09-N07	11ABRI01LES2ACYA	Abdomen Rib 1 Accel Y	Bipolar	2000 g	2000 1-056 SIDIs FTSS.045
50 04J04I20-Z23	11ABRI01LES2ACZA	Abdomen Rib 1 Accel Z	-Bipolar	2000 g	2000 1-056 SIDIs FTSS.046
51 99H12-F20	11ABRI02LES2ACXA	Abdomen Rib 2 Accel X	-Bipolar	2000 g	2000 1-056 SIDIs FTSS.047
52 99H12-F24	11ABRI02LES2ACYA	Abdomen Rib 2 Accel Y	Bipolar	2000 g	2000 1-056 SIDIs FTSS.048
53 03E03E21-M19	11ABRI02LES2ACZA	Abdomen Rib 2 Accel Z	Bipolar	2000 g	2000 1-056 SIDIs FTSS.049
54 180-3860-056RIB1	11TRRI01LES2DSYA	Thorax Rib 1 Disp. Y	-Bipolar	75 mm	2000 1-056 SIDIs FTSS.050
55 180-3860-056RIB2	11TRRI02LES2DSYA	Thorax Rib 2 Disp. Y	-Bipolar	75 mm	2000 1-056 SIDIs FTSS.051
56 180-3860-056RIB3	11TRRI03LES2DSYA	Thorax Rib 3 Disp. Y	-Bipolar	75 mm	2000 1-056 SIDIs FTSS.052
57 180-3860-056RIB4	11ABRI01LES2DSYA	Abdomen Rib 1 Disp. Y	-Bipolar	75 mm	2000 1-056 SIDIs FTSS.053
58 180-3860-056RIB5	11ABRI02LES2DSYA	Abdomen Rib 2 Disp. Y	-Bipolar	75 mm	2000 1-056 SIDIs FTSS.054
59 01G25-N14	11PELVCG00S2ACXA	Pelvis Accel X	Bipolar	2000 g	2000 1-056 SIDIs FTSS.061
60 01G25-N05	11PELVCG00S2ACYA	Pelvis Accel Y	Bipolar	2000 g	2000 1-056 SIDIs FTSS.062
61 03E03E18-F05	11PELVCG00S2ACZA	Pelvis Accel Z	Bipolar	2000 g	2000 1-056 SIDIs FTSS.063
62 IF-520-102-FY	11ACTBLE00S2FOYA	Left Acetabulum Force Y	Bipolar	8896 N	2000 1-056 SIDIs FTSS.064
63 IF-507-101-FY	11ILACLE00S2FOYA	Left Iliac Wing Force Y	Bipolar	13344 N	2000 1-056 SIDIs FTSS.065
64 IF-625-110-FX	11FEMRLE00S2FOXA	Left Femur Force X	Bipolar	13344 N	2000 1-056 SIDIs FTSS.066
65 IF-625-110-FY	11FEMRLE00S2FOYA	Left Femur Force Y	Bipolar	13344 N	2000 1-056 SIDIs FTSS.067
66 IF-625-110-FZ	11FEMRLE00S2FOZA	Left Femur Force Z	Bipolar	22240 N	2000 1-056 SIDIs FTSS.068
67 IF-625-110-MX	11FEMRLE00S2MOXA	Left Femur Moment X	Bipolar	339 N-m	2000 1-056 SIDIs FTSS.069
68 IF-625-110-MY	11FEMRLE00S2MOYA	Left Femur Moment Y	Bipolar	339 N-m	2000 1-056 SIDIs FTSS.070
69 IF-625-110-MZ	11FEMRLE00S2MOZA	Left Femur Moment Z	Bipolar	339 N-m	2000 1-056 SIDIs FTSS.071
70 IF-625-111-FX	11FEMRRI00S2FOXA	Right Femur Force X	Bipolar	13344.6 N	2000 1-056 SIDIs FTSS.072
71 IF-625-111-FY	11FEMRRI00S2FOYA	Right Femur Force Y	Bipolar	13344 N	2000 1-056 SIDIs FTSS.073
72 IF-625-111-FZ	11FEMRRI00S2FOZA	Right Femur Force Z	Bipolar	22240 N	2000 1-056 SIDIs FTSS.074
73 IF-625-111-MX	11FEMRRI00S2MOXA	Right Femur Moment X	Bipolar	339 N-m	2000 1-056 SIDIs FTSS.075
74 IF-625-111-MY	11FEMRRI00S2MOYA	Right Femur Moment Y	Bipolar	339 N-m	2000 1-056 SIDIs FTSS.076
75 IF-625-111-MZ	11FEMRRI00S2MOZA	Right Femur Moment Z	Bipolar	339 N-m	2000 1-056 SIDIs FTSS.077
76 02I02I24-N07	14HEADCG00S2ACXA	Head Accel X	Bipolar	1000 g	2000 4-020 SIDIs FTSS.001
77 04J04I20-Z24	14HEADCG00S2ACYA	Head Accel Y	-Bipolar	1000 g	2000 4-020 SIDIs FTSS.002
78 04J04I08-F24	14HEADCG00S2ACZA	Head Accel Z	-Bipolar	1000 g	2000 4-020 SIDIs FTSS.003
79 IF-205-286-FX	14NECKUP00S2FOXA	Neck Force X	Bipolar	8896 N	2000 4-020 SIDIs FTSS.004
80 IF-205-286-FY	14NECKUP00S2FOYA	Neck Force Y	Bipolar	8896 N	2000 4-020 SIDIs FTSS.005
81 IF-205-286-FZ	14NECKUP00S2FOZA	Neck Force Z	Bipolar	13344 N	2000 4-020 SIDIs FTSS.006
82 IF-205-286-MX	14NECKUP00S2MOXA	Neck Moment X	Bipolar	282.5 N-m	2000 4-020 SIDIs FTSS.007
83 IF-205-286-MY	14NECKUP00S2MOYA	Neck Moment Y	Bipolar	282.5 N-m	2000 4-020 SIDIs FTSS.008
84 IF-205-286-MZ	14NECKUP00S2MOZA	Neck Moment Z	Bipolar	282.5 N-m	2000 4-020 SIDIs FTSS.009
85 01G18-F05	14SHLDLE00S2ACXA	Shoulder Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.016
86 04J04I20-Z06	14SHLDLE00S2ACYA	Shoulder Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.017

87 03E03E18-F18	14SHLDLE00S2ACZA	Shoulder Accel Z	Bipolar	2000 g	2000 4-020 SIDIs FTSS.018
88 IF-344-110-FX	14SHLDLE00S2FOXA	Shoulder Force X	Bipolar	4448 N	2000 4-020 SIDIs FTSS.013
89 IF-344-110-FY	14SHLDLE00S2FOYA	Shoulder Force Y	-Bipolar	4448 N	2000 4-020 SIDIs FTSS.014
90 IF-344-110-FZ	14SHLDLE00S2FOZA	Shoulder Force Z	Bipolar	4448 N	2000 4-020 SIDIs FTSS.015
91 3860-020SHD	14SHRILE00S2DSYA	Shoulder Disp. Y	-Bipolar	75 mm	2000 4-020 SIDIs FTSS.019
92 03E03E18-F09	14SPIN0100S2ACXA	Upper Spine Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.010
93 04J04I01-R24	14SPIN0100S2ACYA	Upper Spine Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.011
94 02I02I05-F04	14SPIN0100S2ACZA	Upper Spine Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.012
95 04J04I07-Z15	14THSP01RIS2ACXA	Spine Rib 1 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.020
96 04J04I20-A17	14THSP01RIS2ACYA	Spine Rib 1 Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.021
97 03F03E29-N17	14THSP01RIS2ACZA	Spine Rib 1 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.022
98 03F03F09-N03	14THSP02RIS2ACXA	Spine Rib 2 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.023
99 03E03E20-N14	14THSP02RIS2ACYA	Spine Rib 2 Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.024
100 03E03E20-N12	14THSP02RIS2ACZA	Spine Rib 2 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.025
101 01H02-N07	14THSP03RIS2ACXA	Spine Rib 3 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.026
102 00L20-A14	14THSP03RIS2ACYA	Spine Rib 3 Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.027
103 03F03E29-N10	14THSP03RIS2ACZA	Spine Rib 3 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.028
104 01J02-F22	14SPIN1200S2ACXA	Lower Spine Accel X	Bipolar	2000 g	2000 4-020 SIDIs FTSS.029
105 B02A09-F04	14SPIN1200S2ACYA	Lower Spine Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.030
106 01G25-N16	14SPIN1200S2ACZA	Lower Spine Accel Z	Bipolar	2000 g	2000 4-020 SIDIs FTSS.031
107 01G18-F13	14ABSP02RIS2ACXA	Spine Rib 5 Accel X	Bipolar	2000 g	2000 4-020 SIDIs FTSS.032
108 00L13-F37	14ABSP02RIS2ACYA	Spine Rib 5 Accel Y	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.033
109 01J02-F07	14ABSP02RIS2ACZA	Spine Rib 5 Accel Z	Bipolar	2000 g	2000 4-020 SIDIs FTSS.034
110 IF-414-107-MX	14LUSP0000S2MOXA	Lumbar Moment X	Bipolar	452 N·m	2000 4-020 SIDIs FTSS.058
111 IF-414-107-MY	14LUSP0000S2MOYA	Lumbar Moment Y	Bipolar	452 N·m	2000 4-020 SIDIs FTSS.059
112 IF-414-107-MZ	14LUSP0000S2MOZA	Lumbar Moment Z	Bipolar	226 N·m	2000 4-020 SIDIs FTSS.060
113 02I02I05-F24	14TRRI01LES2ACXA	Thorax Rib 1 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.035
114 04J04I01-R11	14TRRI01LES2ACYA	Thorax Rib 1 Accel Y	Bipolar	2000 g	2000 4-020 SIDIs FTSS.036
115 98H10-F03	14TRRI01LES2ACZA	Thorax Rib 1 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.037
116 03E03E21-M09	14TRRI02LES2ACXA	Thorax Rib 2 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.038
117 01G18-F03	14TRRI02LES2ACYA	Thorax Rib 2 Accel Y	Bipolar	2000 g	2000 4-020 SIDIs FTSS.039
118 03E03E20-N13	14TRRI02LES2ACZA	Thorax Rib 2 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.040
119 04J04I01-R09	14TRRI03LES2ACXA	Thorax Rib 3 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.041
120 98H13-F11	14TRRI03LES2ACYA	Thorax Rib 3 Accel Y	Bipolar	2000 g	2000 4-020 SIDIs FTSS.042
121 03D03D09-N02	14TRRI03LES2ACZA	Thorax Rib 3 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.043
122 02A16-A15	14ABRI01LES2ACXA	Abdomen Rib 1 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.044
123 99H12-F26	14ABRI01LES2ACYA	Abdomen Rib 1 Accel Y	Bipolar	2000 g	2000 4-020 SIDIs FTSS.045
124 02I02I05-F22	14ABRI01LES2ACZA	Abdomen Rib 1 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.046
125 04J04I10-H10	14ABRI02LES2ACXA	Abdomen Rib 2 Accel X	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.047
126 04J04I20-Z18	14ABRI02LES2ACYA	Abdomen Rib 2 Accel Y	Bipolar	2000 g	2000 4-020 SIDIs FTSS.048
127 02I02I05-F09	14ABRI02LES2ACZA	Abdomen Rib 2 Accel Z	-Bipolar	2000 g	2000 4-020 SIDIs FTSS.049
128 3861-020RB1	14TRRI01LES2DSYA	Thorax Rib 1 Disp. Y	-Bipolar	75 mm	2000 4-020 SIDIs FTSS.050
129 3861-020RB2	14TRRI02LES2DSYA	Thorax Rib 2 Disp. Y	-Bipolar	75 mm	2000 4-020 SIDIs FTSS.051
130 3861-020RB3	14TRRI03LES2DSYA	Thorax Rib 3 Disp. Y	-Bipolar	75 mm	2000 4-020 SIDIs FTSS.052

131 3861-020RB4	14ABRI01LES2DSYA	Abdomen Rib 1 Disp. Y	-Bipolar	75 mm	2000 4-020 SIDIs FTSS.053
132 3861-020RB5	14ABRI02LES2DSYA	Abdomen Rib 2 Disp. Y	-Bipolar	75 mm	2000 4-020 SIDIs FTSS.054
133 01J02-F16	14PELVCG00S2ACXA	Pelvis Accel X	Bipolar	2000 g	2000 4-020 SIDIs FTSS.061
134 03E03E18-F03	14PELVCG00S2ACYA	Pelvis Accel Y	Bipolar	2000 g	2000 4-020 SIDIs FTSS.062
135 03F03E29-N13	14PELVCG00S2ACZA	Pelvis Accel Z	Bipolar	2000 g	2000 4-020 SIDIs FTSS.063
136 IF-520-115-FY	14ACTBLE00S2FOYA	Left Acetabulum Force Y	Bipolar	8896 N	2000 4-020 SIDIs FTSS.064
137 IF-507-112-FY	14ILACLE00S2FOYA	Left Iliac Wing Force Y	Bipolar	13344 N	2000 4-020 SIDIs FTSS.065
138 IF-625-107-FX	14FEMRLE00S2FOXA	Left Femur Force X	Bipolar	13344 N	2000 4-020 SIDIs FTSS.066
139 IF-625-107-FY	14FEMRLE00S2FOYA	Left Femur Force Y	Bipolar	13344 N	2000 4-020 SIDIs FTSS.067
140 IF-625-107-FZ	14FEMRLE00S2FOZA	Left Femur Force Z	Bipolar	22240 N	2000 4-020 SIDIs FTSS.068
141 IF-625-107-MX	14FEMRLE00S2MOXA	Left Femur Moment X	Bipolar	339 N·m	2000 4-020 SIDIs FTSS.069
142 IF-625-107-MY	14FEMRLE00S2MOYA	Left Femur Moment Y	Bipolar	339 N·m	2000 4-020 SIDIs FTSS.070
143 IF-625-107-MZ	14FEMRLE00S2MOZA	Left Femur Moment Z	Bipolar	339 N·m	2000 4-020 SIDIs FTSS.071
144 IF-625-142-FX	14FEMRRI00S2FOXA	Right Femur Force X	Bipolar	13344 N	2000 4-020 SIDIs FTSS.072
145 IF-625-142-FY	14FEMRRI00S2FOYA	Right Femur Force Y	Bipolar	13344 N	2000 4-020 SIDIs FTSS.073
146 IF-625-142-FZ	14FEMRRI00S2FOZA	Right Femur Force Z	Bipolar	22240 N	2000 4-020 SIDIs FTSS.074
147 IF-625-142-MX	14FEMRRI00S2MOXA	Right Femur Moment X	Bipolar	339 N	2000 4-020 SIDIs FTSS.075
148 IF-625-142-MY	14FEMRRI00S2MOYA	Right Femur Moment Y	Bipolar	339 N	2000 4-020 SIDIs FTSS.076
149 IF-625-142-MZ	14FEMRRI00S2MOZA	Right Femur Moment Z	Bipolar	339 Nm	2000 4-020 SIDIs FTSS.077
150 P45702	16SILBFR0000ACXA	Right Side Sill at Front Seat X-axis Acceleration	Bipolar	400 g	2000
151 P46001	16SILBFR0000ACYA	Right Side Sill at Front Seat Y-axis Acceleration	-Bipolar	1000 g	2000
152 P45689	16SILBFR0000ACZA	Right Side Sill at Front Seat Z-axis Acceleration	-Bipolar	400 g	2000
153 P47496	16SILBRE0000ACXA	Right Side Sill at Rear Seat X-axis Acceleration	Bipolar	400 g	2000
154 P47324	16SILBRE0000ACYA	Right Side Sill at Rear Seat Y-axis Acceleration	-Bipolar	1000 g	2000
155 P47505	16SILBRE0000ACZA	Right Side Sill at Rear Seat Z-axis Acceleration	-Bipolar	400 g	2000
156 P47509	18FORA000000ACXA	Rear Floorpan Above Axle X-axis Acceleration	Bipolar	1000 g	2000
157 P46503	18FORA000000ACYA	Rear Floorpan Above Axle Y-axis Acceleration	-Bipolar	1000 g	2000
158 P46485	18FORA000000ACZA	Rear Floorpan Above Axle Z-axis Acceleration	-Bipolar	1000 g	2000
159 P46019	14SILBRE0000ACYA	Left Side Sill at Rear Seat Y-axis Acceleration	Bipolar	1000 g	2000
160 P46064	14SILBFR0000ACYA	Left Side Sill at Front Seat Y-axis Acceleration	Bipolar	1000 g	2000
161 P46478	16VEHCRE0000ACYA	Right Rear Occupant Compartment Y-axis Accel	-Bipolar	1500 g	2000
162 P34257	14BPILLO0000ACYA	Left Lower B-Post Y-axis Accel	-Bipolar	1500 g	2000
163 P35091	14BPILMI0000ACYA	Left Middle B-Post Y-axis Accel	-Bipolar	1500 g	2000
164 P46020	11APILLO0000ACYA	Left Lower A-Post Y-axis Accel	-Bipolar	1500 g	2000
165 P34297	11APILMI0000ACYA	Left Middle A-Post Y-axis Accel	-Bipolar	1500 g	2000
166 P46048	11SETRFR0000ACYA	Left Front Seat Track Y-axis Acceleration	-Bipolar	1500 g	2000
167 P45723	14SETRLERE00ACYA	Left Rear Seat Track Y-axis Acceleration	-Bipolar	1500 g	2000
168 P46491	10VEHCCG0000ACXA	Vehicle Center of Gravity X-axis Acceleration	Bipolar	1000 g	2000
169 P47317	10VEHCCG0000ACYA	Vehicle Center of Gravity Y-axis Acceleration	-Bipolar	1000 g	2000
170 P46484	10VEHCCG0000ACZA	Vehicle Center of Gravity Z-axis Acceleration	-Bipolar	1000 g	2000
171 P38620	12ENGN000000ACXA	Top of Engine X-axis Acceleration	Bipolar	1000 g	2000
172 P39867	12ENGN000000ACYA	Top of Engine Y-axis Acceleration	-Bipolar	1000 g	2000
173 P47477	12VEHC000000ACXA	Firewall X-axis Acceleration	Bipolar	1000 g	2000
174 P46024	12VEHC000000ACYA	Firewall Y-axis Acceleration	-Bipolar	1000 g	2000

175 P44311	13ROFR000000ACXA	Right Roof Rail X-axis Acceleration	Bipolar	1000 g	2000
176 P39877	13ROFR000000ACYA	Right Roof Rail Y-axis Acceleration	-Bipolar	1000 g	2000
177 P47524	11DOOR000001ACYA	Left Front Door centerline 430 mm above ground Y-axis accel (NHTSA #6)	Bipolar	1000 g	2000
178 P47326	11DOOR000002ACYA	Left Front Door mid-rear 430 mm above ground Y-axis accel (NHTSA #8)	Bipolar	1000 g	2000
179 P37750	11DOOR000003ACYA	Left Front Door upper centerline 685 mm above ground Y-axis accel (NHTSA #9)	Bipolar	1000 g	2000
180 P45730	14DOOR000001ACYA	Left Rear Door mid-rear 685 mm above ground Y-axis accel (NHTSA #10)	Bipolar	1000 g	2000
181 P44323	14DOOR000002ACYA	Left Rear Door upper centerline 685 mm above ground Y-axis accel (NHTSA #11)	Bipolar	1000 g	2000
182 ABFire1	11SENS000001VO0A	Side torso Airbag fire	Bipolar	5 V	2000
183 ABFire2	11SENS000002VO0A	Side curtain airbag fire	Bipolar	5 V	2000
184 ABFire3	13SENS000001VO0A	Non-struck Side torso Airbag fire (disable bag)	Bipolar	5 V	2000
185 ABFire4	13SENS000002VO0A	Non-struck Side curtain airbag fire (disable bag)	Bipolar	5 V	2000
186 Bit.00	11CONT000001EV00	Driver Dummy head contact	Bipolar	1 Logic	0
187 Bit.01	11CONT000002EV00	Driver Dummy shoulder contact	Bipolar	1 Logic	0
188 Bit.02	11CONT000003EV00	Driver Dummy torso contact	Bipolar	1 Logic	0
189 Bit.03	11CONT000004EV00	Driver Dummy leg contact	Bipolar	1 Logic	0
190 Bit.04	14CONT000001EV00	LR Pass Dummy head contact	Bipolar	1 Logic	0
191 Bit.05	14CONT000002EV00	LR Pass Dummy shoulder contact	Bipolar	1 Logic	0
192 Bit.06	14CONT000003EV00	LR Pass Dummy torso contact	Bipolar	1 Logic	0
193 Bit.07	14CONT000004EV00	LR Pass Dummy leg contact	Bipolar	1 Logic	0
194 P28974	M0VEHCCG0000ACXA	MDB Center of Gravity X-axis Acceleration	Bipolar	600 g	2000
195 P41059	M0VEHCCG0000ACYA	MDB Center of Gravity Y-axis Acceleration	-Bipolar	600 g	2000
196 P34836	M0VEHCCG0000ACZA	MDB Center of Gravity Z-axis Acceleration	-Bipolar	600 g	2000
197 P46067	M7FRAM000000ACXA	MDB Left Rear X-axis Acceleration (on left frame over axle)	Bipolar	600 g	2000
198 P45767	M7FRAM000000ACYA	MDB Left Rear Y-axis Acceleration (on left frame over axle)	Bipolar	600 g	2000
199 Bit.00	M3CONT000000EV00	MDB Right Side Contact Switch	Bipolar	1 Logic	0
200 Bit.01	M1CONT000000EV00	MDB Left Side Contact Switch	Bipolar	1 Logic	0

LEFT SIDE IMPACT OF 2005 TOYOTA COROLLA / 050817



CERTIFICATE OF CONFORMITY

Certificate No. **19884**
Serial No. **EH 311**

Cellbond Composites Ltd
5 Stukeley Business Centre
Blackstone Road
Huntingdon
Cambridgeshire
PE29 6EF
United Kingdom

Product Description	FMVSS 214 - 1750x740x550mm Spec with 1.6 3/8 5052 Painted Grey
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Cellbond Part No.	70NHTSASIUS G
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	Test Results	GR No.	Blk No.
1	26849-56	P144788-A00	N/A
2	26938-45	P131911-01	N/A

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Declaration.

The above moving deformable barrier has been manufactured in accordance with the provisions of FMVSS 214.

Additional Information...

company registration
England 1944904

registered office
5 Stukeley Business Centre
Blackstone Road
Huntingdon
Cambridgeshire
PE29 6EF

Cellbond Offices
United Kingdom
Germany
United States of America



GS9000
ISO9001:2000

050817



Aluminium ist wiederverwertbar
Aluminium is recyclable



NHTSA DEFORMABLE SIDE IMPACT BARRIER
ALUMINIUM HONEYCOMB CERTIFICATION
STATIC TEST RESULTS

MAIN BLOCK
Core: 1.6 3/8 5052

Required Crush Strength
42.5 PSI to 47.5 PSI

Test No: 26849-56

GR No: P144788 A00

Block No: N/A

	Crush Strength (PSI)			RESULT
	0.25 to 0.38 inch	0.38 to 0.52 inch	0.52 to 0.65 inch	
Sample* 1	43.319	43.763	43.817	PASS
Sample 2	44.400	44.548	45.888	PASS
Sample 3	44.012	44.392	45.224	PASS
Sample 4	43.225	44.437	44.046	PASS
Sample 5	44.182	44.639	44.890	PASS
Sample 6	46.090	46.833	47.077	PASS
Sample 7	44.439	45.337	45.387	PASS
Sample 8	45.264	45.812	45.767	PASS

Seven out of the eight samples must fulfil the crush strength
requirement in order to pass the block certification

*Sample size and location as per R94.

RESULT: PASSED

NHTSA DEFORMABLE SIDE IMPACT BARRIER
MAIN BLOCK

Honeycomb Type: 1.6 3/8 5052

Higher Acceptable Crush Strength Limit: 47.5 PSI

Lower Acceptable Crush Strength Limit: 42.5 PSI

Section 1: 0.25 - 0.38 inch

Section 2: 0.38 - 0.52 inch

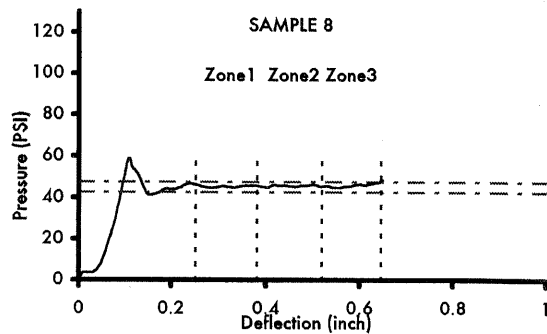
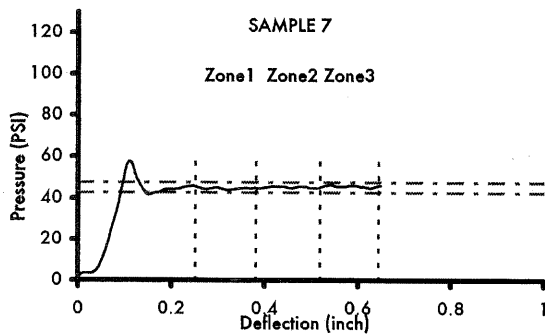
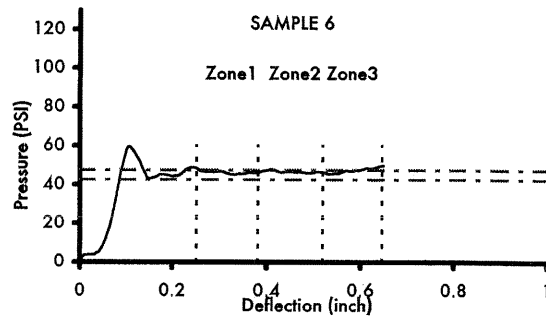
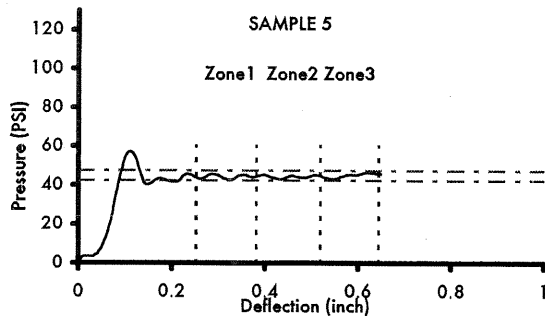
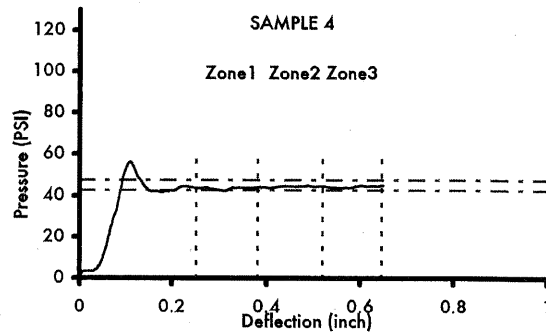
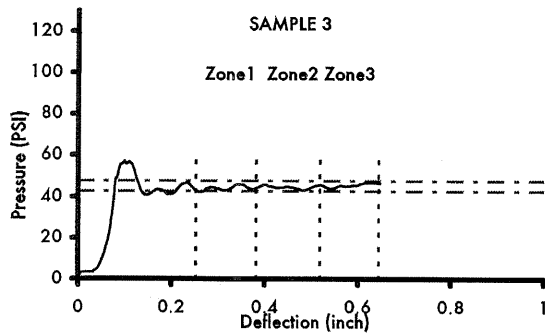
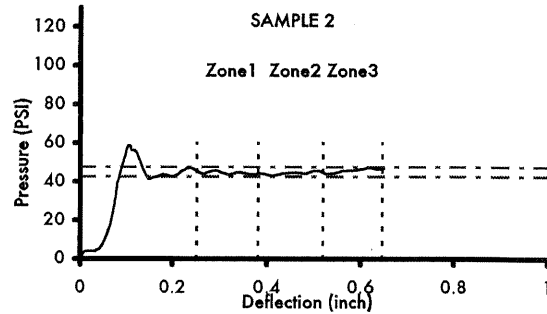
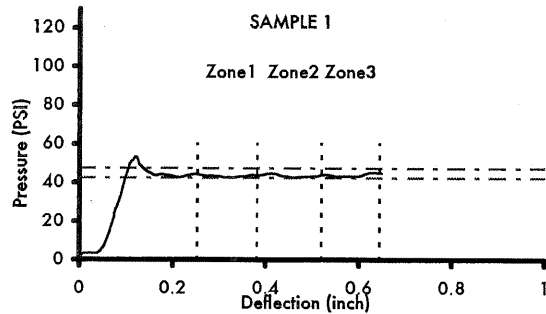
Section 3: 0.52 - 0.65 inch

Speed: 0.25 inch/min

Test No: 26849-56

GR No: P144788 A00

Block No: N/A





NHTSA DEFORMABLE SIDE IMPACT BARRIER
ALUMINIUM HONEYCOMB CERTIFICATION
STATIC TEST RESULTS

BUMPER

Core: 5.2 1/4 3003

Required Crush Strength
230 PSI to 260 PSI

Test No: 26938-45

GR No: P131911-01

Block No: N/A

	Crush Strength (PSI)			RESULT
	0.25 to 0.38	0.38 to 0.52	0.52 to 0.65	
Sample* 1	253.65	250.73	249.94	PASS
Sample 2	254.15	257.02	254.84	PASS
Sample 3	258.36	258.90	257.66	PASS
Sample 4	256.46	253.19	255.54	PASS
Sample 5	258.77	255.99	253.10	PASS
Sample 6	253.66	256.18	252.31	PASS
Sample 7	254.32	255.06	251.31	PASS
Sample 8	255.55	253.47	253.21	PASS

Seven out of the eight samples must fulfil the crush strength
requirement in order to pass the block certification

*Sample size and location as per R94.

RESULT: PASSED

NHTSA DEFORMABLE SIDE IMPACT BARRIER BUMPER

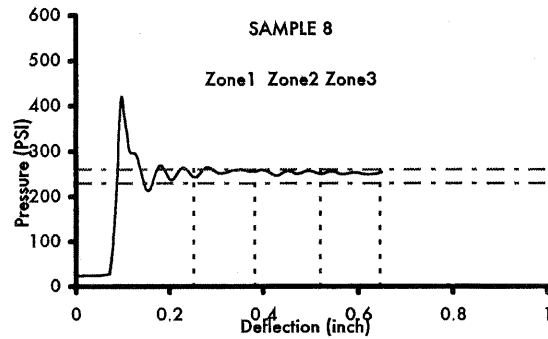
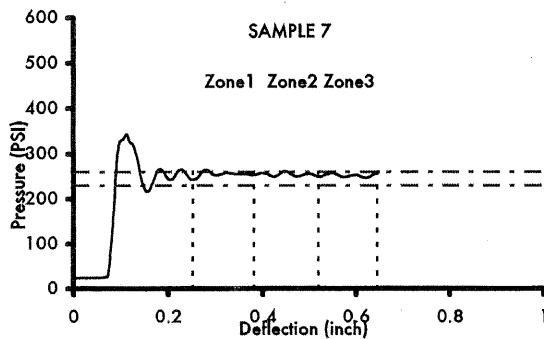
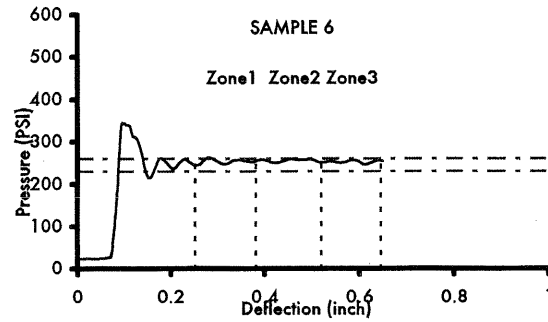
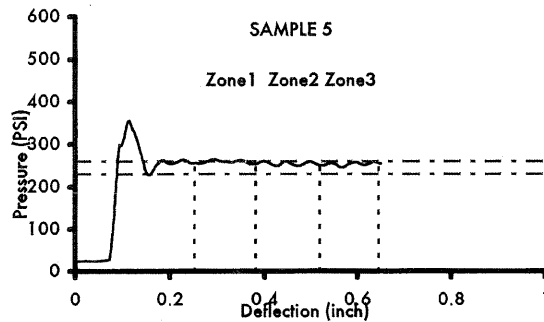
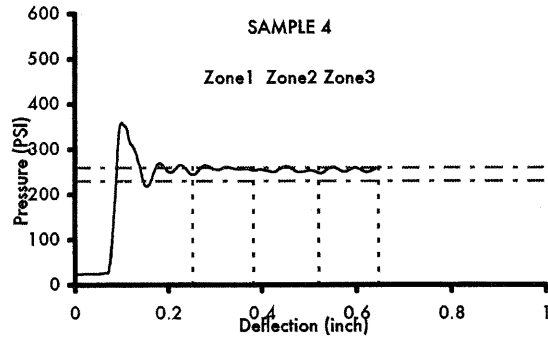
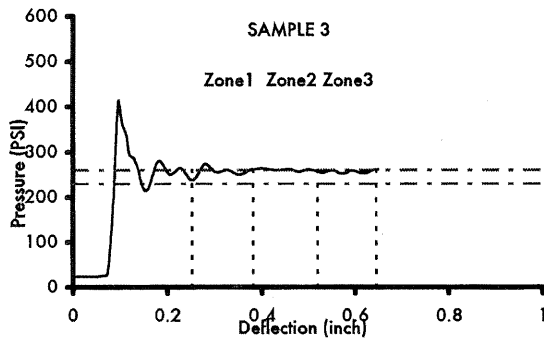
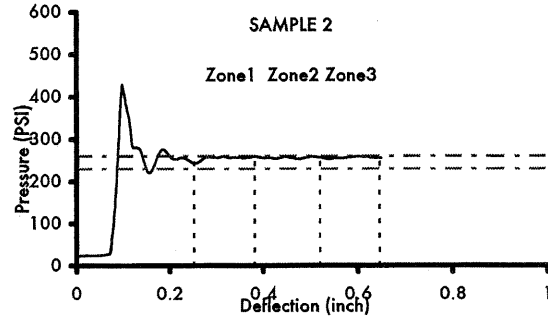
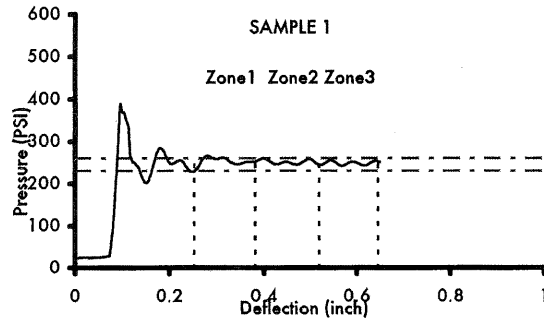
Honeycomb Type: 5.2 1/4 3003
Higher Acceptable Crush Strength Limit: 260 PSI
Lower Acceptable Crush Strength Limit: 230 PSI

Section 1: 0.25 - 0.38 inch
Section 2: 0.38 - 0.52 inch
Section 3: 0.52 - 0.65 inch
Speed: 0.25 inch/min

Test No: 26938-45

GR No: P131911-01

Block No: N/A



TEST VEHICLE INFORMATION
(FORM 1)

Page 1 of 4

LINCAP

Vehicle Model Year and Make: 05 Model Year

Vehicle Model and Body Style: TOYOTA COROLLA

1. NOMINAL DESIGN RIDING POSITION –
For adjustable driver, front passenger, and 2nd
row seat backs, describe how to position the
inclinometer to measure the seat back angle.

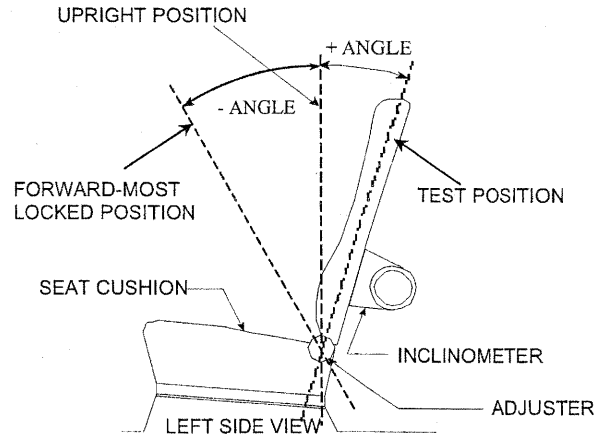
1.1 Seat back angle for driver's seat:

- A. Seat back angle at forward-most locking
position or forward stop (measured from
upright position) = -4.3 degrees
Seat back angle at test position (measured
from upright position) = +1.7 degrees

- B. If detents are also available, please
provide the following:

Total number of detents: 22

Test detent (with the forward-most detent defined as 0): third



1.2 Seat back angle for front passenger's seat:

- A. Seat back angle at forward-most locking position or forward stop (measured from
upright position) = -7 degrees
Seat back angle at test position (measured from upright position) = +1
degrees

- B. If detents are also available, please provide the following:

Total number of detents: 22

Test detent (with the forward-most detent defined as 0): fourth

1.3 Seat back angle for 2nd row seat (if applicable):

Rear seat has no adjustable mechanism.

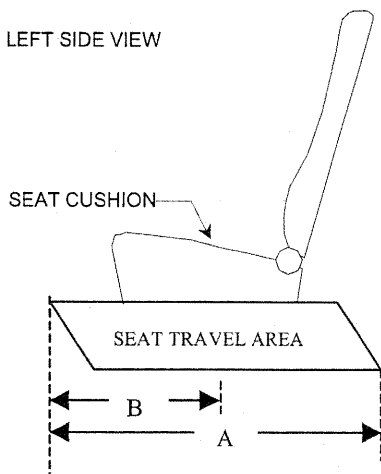
2. SEAT FORE AND AFT POSITIONS –

Provide instructions for positioning the driver and front outboard passenger seat(s) in the center of fore and aft travel. Forward-most measurements and rearward-most measurements should be taken from the bottom of the seat cushion (including the plastic base if applicable). (For vehicle seats equipped with a height adjuster, see diagrams on page 2 to assist in attaining proper measurements specific to seat travel area type.

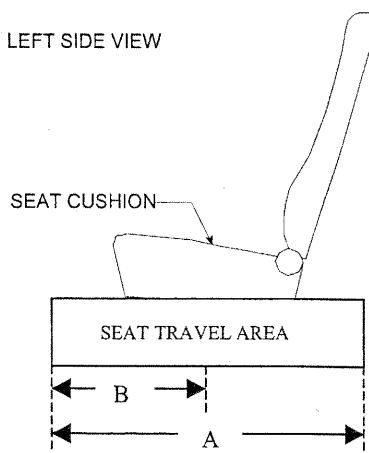
NOTE: A = Complete range of travel and B = A/2)

SEAT TRAVEL AREA TYPE 1

LEFT SIDE VIEW

SEAT TRAVEL AREA TYPE 2

LEFT SIDE VIEW

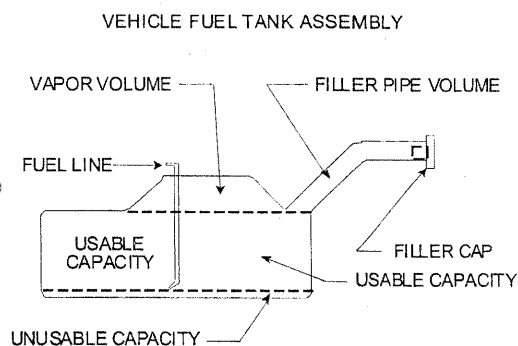


- 2.1. Position of the driver's seat:
- A. Complete range of travel (A): 240 millimeters
Distance from the forward-most position to the test position (B): 120 millimeters
- B. If detents are also available, please provide the following:
Total number of detents: 17.
Test detent (with the forward-most detent defined as 0): 8th.
- 2.2 Position of the front passenger's seat:
- A. Complete range of travel (A): 240 millimeters
Distance from the forward-most position to the test position (B): 120 millimeters
- B. If detents are also available, please provide the following:
Total number of detents: 17.
Test detent (with the forward-most detent defined as 0): 8th.
- 2.3 Position of the rear passengers' seats (if applicable):

Rear seat has no adjustable mechanism.

3. FUEL TANK CAPACITY DATA –

- 3.1 A. "Usable Capacity" of standard equipment fuel tank = 13.2 gallons.
B. "Usable Capacity" of optional equipment fuel tank = 0 gallons.
~~C. Capacity used when certification testing to requirements of FMVSS 301 = 12.5 gallons.~~



Operational instructions:

None

Suggested methods for draining:

Please see Attachment 1.3.2 Amount of Stoddard solvent added to vehicle for certification test = 12.5(95%) gallons.3.3 Is vehicle equipped with electric fuel pump? ☒ YES ☐ NO

If YES, does pump normally operate when vehicle's electrical system is activated?

☒ YES ☐ NO

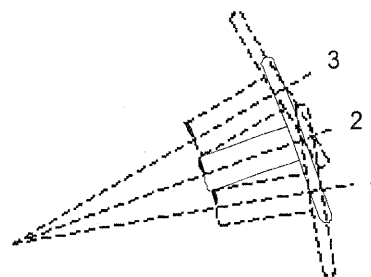
If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel:

The fuel pump will pump fuel when the ignition is on.

4. STEERING COLUMN ADJUSTMENTS –

STEERING COLUMN ASSEMBLY

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions.

Does this vehicle have a telescoping steering column? ☒ YES ☐ NO

LEFT SIDE VIEW

Please provide the following:

A. Angle at upper-most locking position = 28.3 degreesAngle at test position = 26.5 degrees

B. If detents are also available, please provide the following:

Total number of detents: _____

Test detent (with the upper-most detent defined as 0): _____

5. SEATING REFERENCE POINT (SRP) – (Polar Coordinate Measures from Actual Tests (Inches))

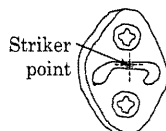
Driver (Manual Seat)

Driver (Power Seat)

Passenger (Manual Seat)

Passenger (Power Seat)

Second Row Occupant (Side impacts only) 27.8(Longitudinal)



Door Striker To H-point	Door Striker to OB Knee	Nose to RIM	Knee Spread
7.6(Longitudinal)			11.5

11.5

6. FUEL TANK LOCATION –

Provide drawing (or description) that shows the undercarriage view and/or location.

Please see attachment 2.

7. ADJUSTABLE D RING POSITION –

Does the tested vehicle have such adjustments? ☒ YES ☐ NO

If YES, please provide the following:

Range of travel: 90 millimeters

Distance from the upper-most position to the test position: 22.5 millimeters

If detents are also available, please provide the following:

Total number of detents: 5.

Test detent (with the upper-most detent defined as 0): first.

8. SPECIAL INSTRUCTIONS –

Please make note of any special instructions that you would like NHTSA to consider or be made aware of for the tested vehicle:

Frontal NCAP test:

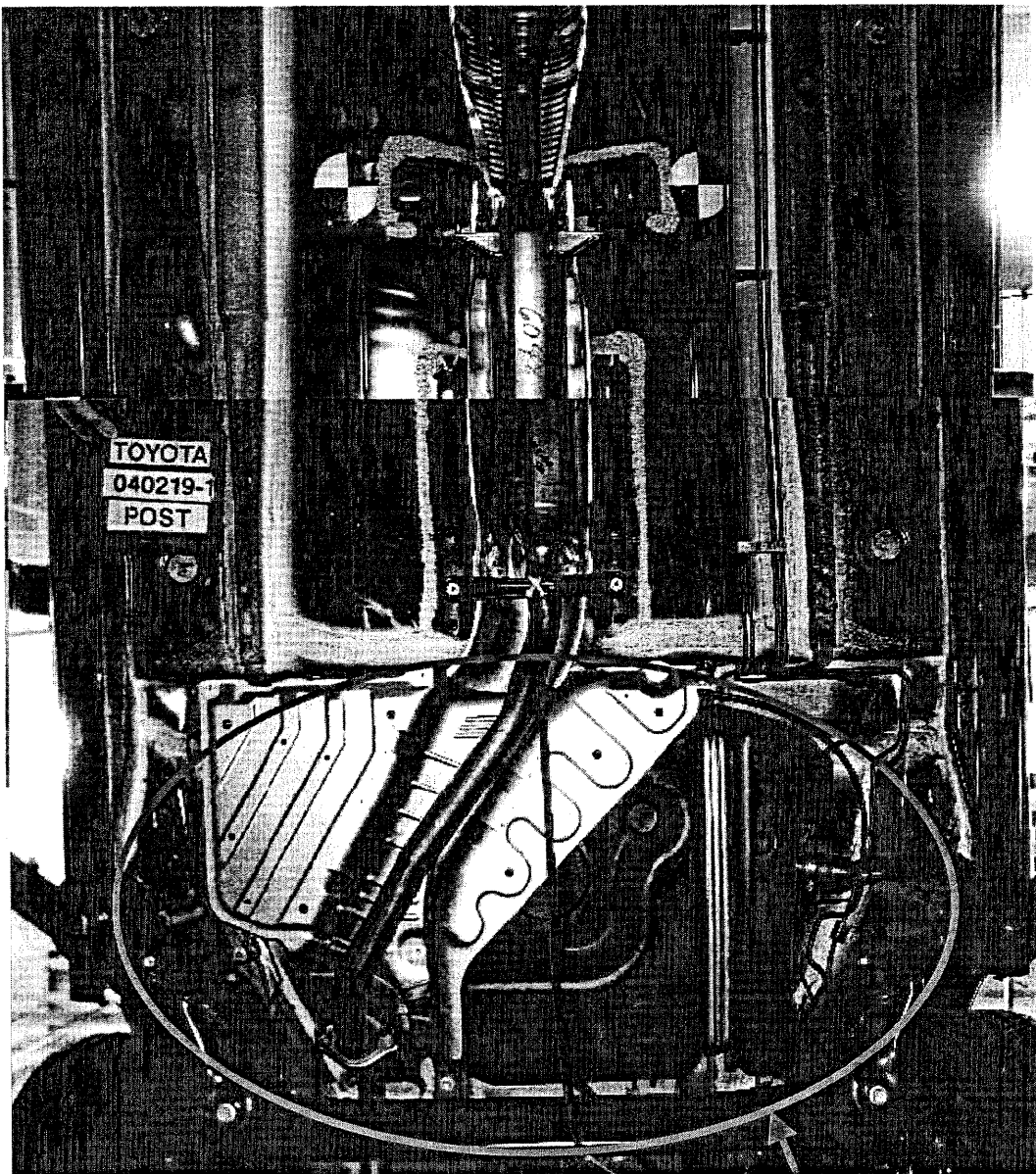
Side NCAP test:

Fuel tank draining instructions differ between NCAP and LINCAP such that the disconnection of the fuel line is made in an area less likely to receive damage during the test.

rev. 08/09/04

TOYOTA COROLLA FUEL TANK

Front



Rear

Fuel Tank

Suggested methods for draining Fuel

Step1:Detach Fuel line connector (Photo1 to 5)

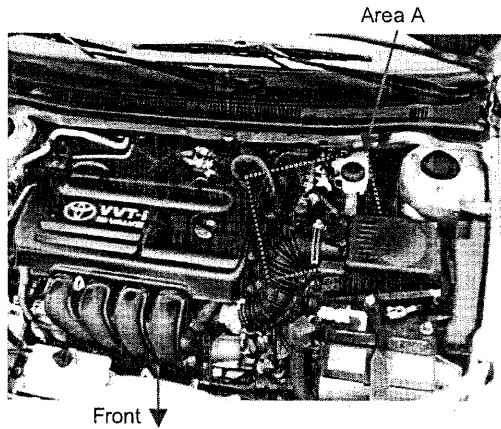


Photo 1

Fuel line connector cover

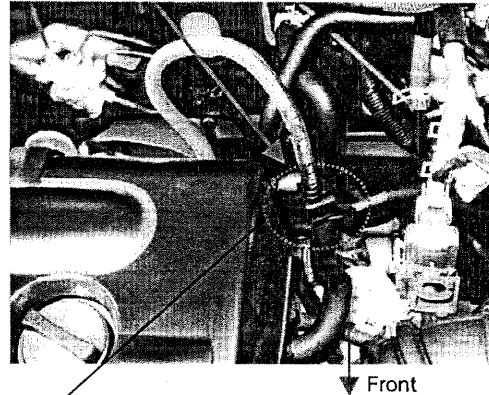


Photo 2

Expand Area A of Photo1

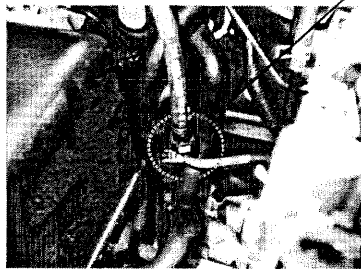


Photo 3

Remove the cover.

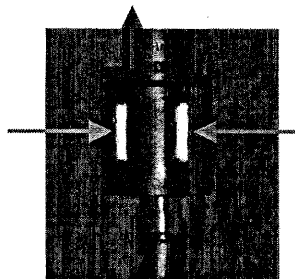


Photo 4

Look from the fuel line connector top.
Push clip (Red arrow) and Pull Fuel line
(Blue arrow).

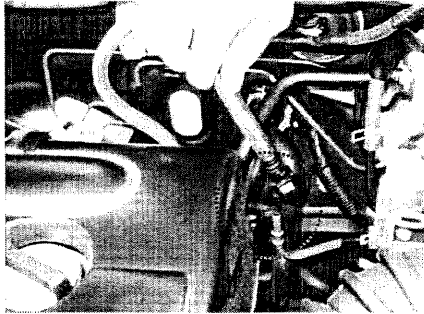


Photo 5

Step2: Remove Rear Seat Cushion

Step3: Remove Fuel Pump Service Hole Cover (Photo 7)



Photo 6

Inside of vehicle:
Remove 4 bolts.

Fuel Pump Service Hole Cover

Step4: Detach Fuel Pump Connector (Photo 8)

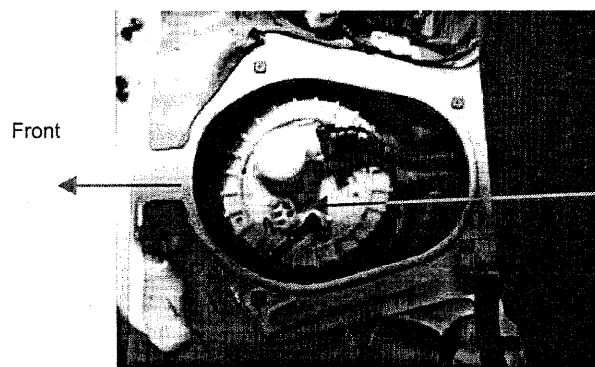


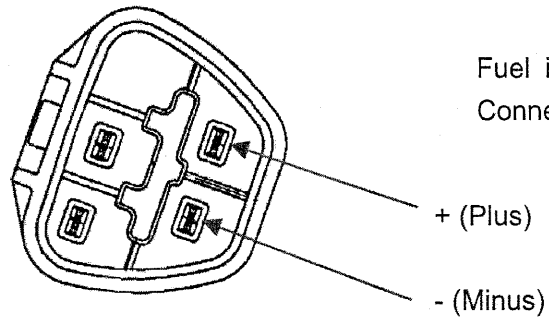
Photo 7

Connector

Step5:Supply DC-12Volt Power (Figure 1)

Figure 1

Fuel is drained from a Fuel
Connector (Photo 6)



Step6: Return it to the original condition

Reverse procedure, step 6 to 1.

Appendix E

INSIA Report on Structural Measurements



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

**APARICIO IZQUIERDO, FRANCISCO
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March, 1999

REPORT DOCUMENTATION PAGE	
Title:	<i>STRUCTURAL SURVEY OF CARS. MEASUREMENT METHODOLOGY OF THE MAIN RESISTANT ELEMENTS IN THE CAR BODY</i>
Author(s):	Aparicio Izquierdo, Francisco Páez Ayuso, Francisco Javier
Performing Organisation name and address:	INSIA – University Institute for Automobile Research Carretera de Valencia, Km. 7 – Campus Sur de la Universidad Politécnica de Madrid 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 -<i>Structural Survey of Cars</i>- 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.

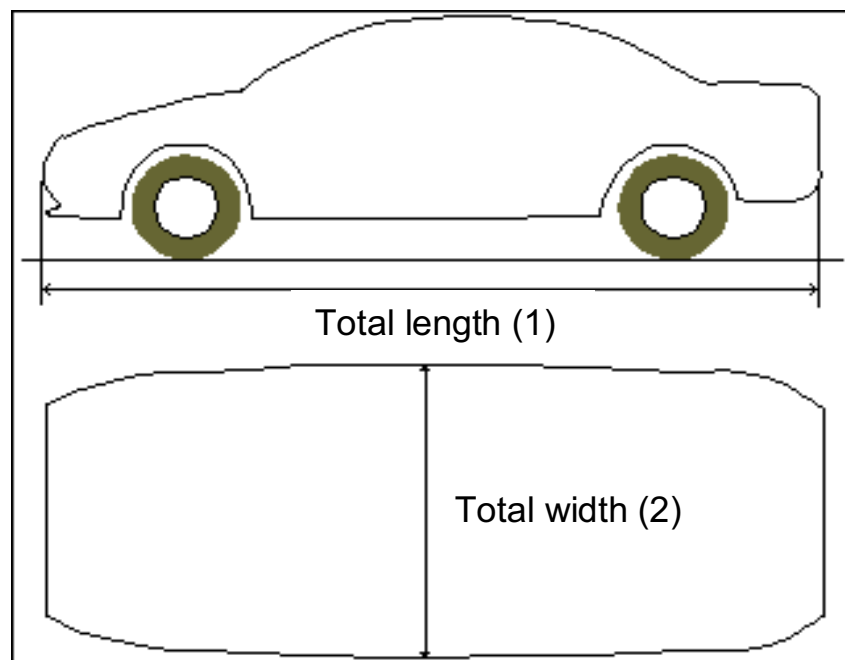


Figure 1.- Definition of the main resistant elements. General dimensions.

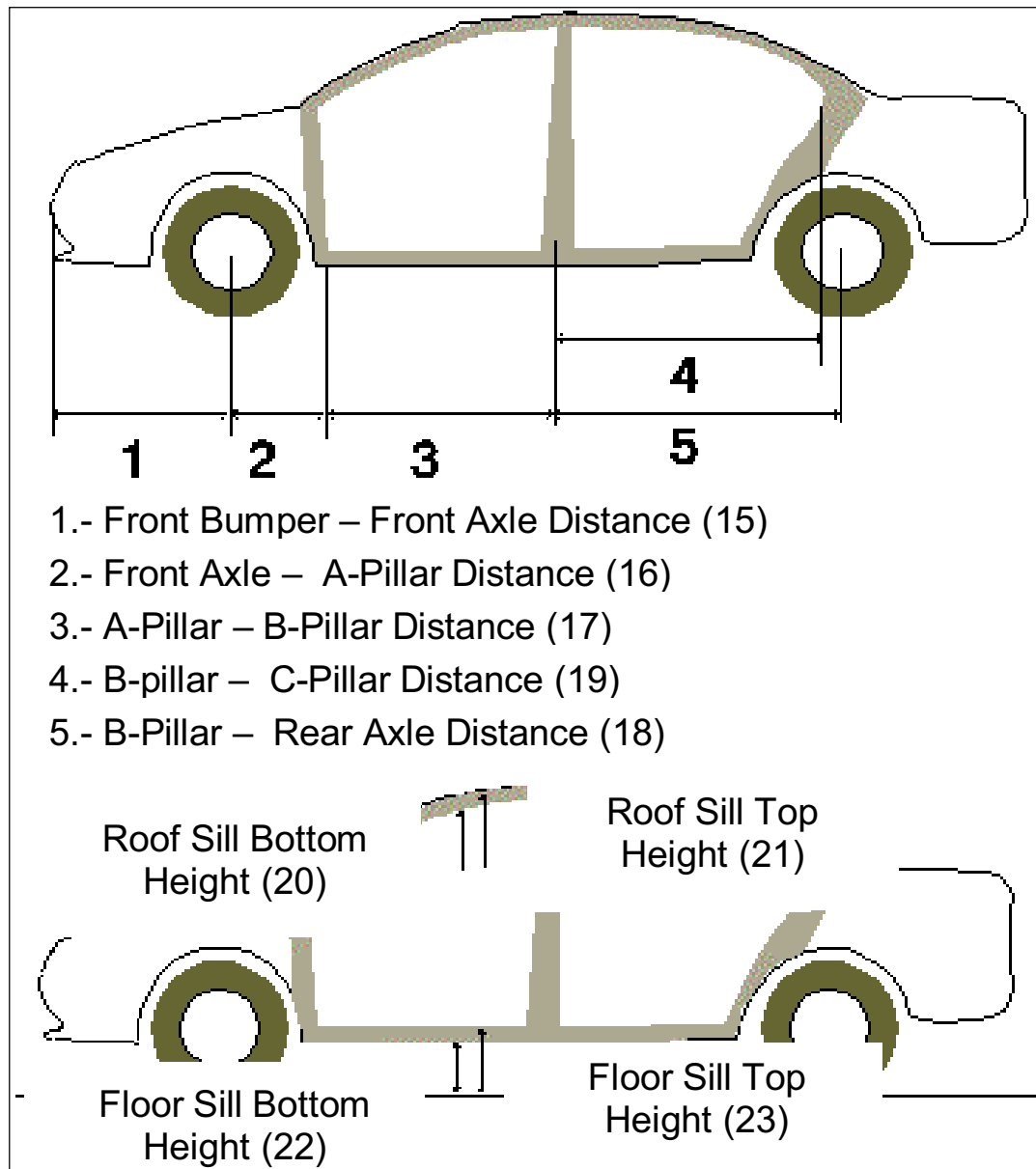


Figure 2.- Definition of the main resistant elements. Side elements.

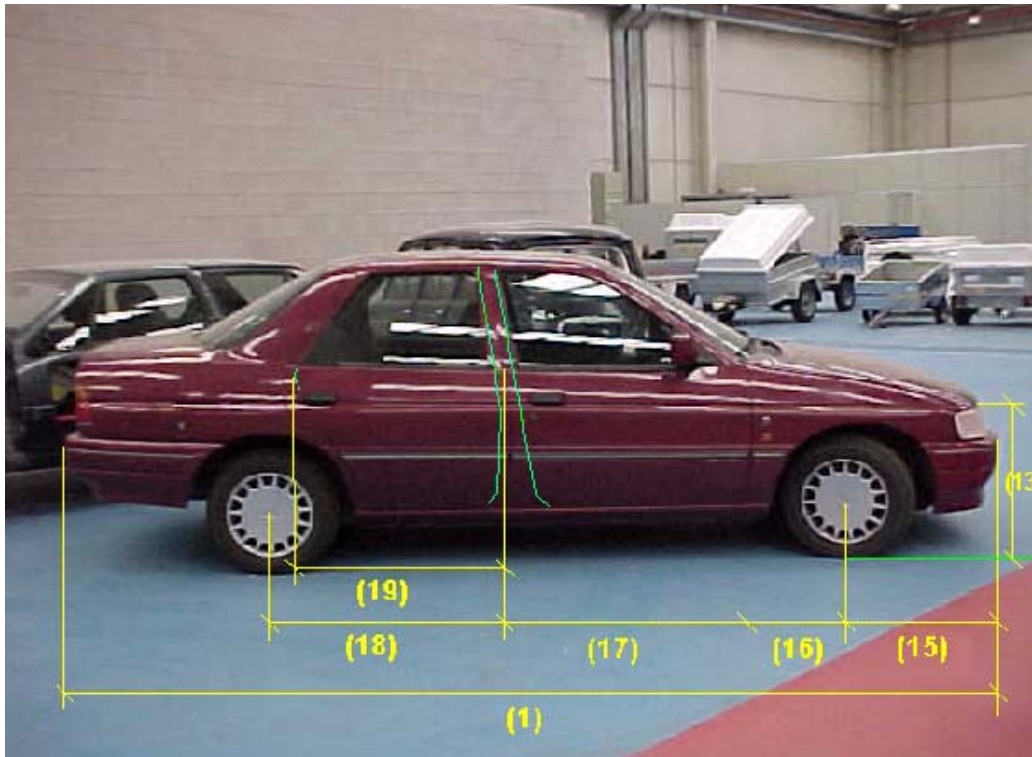


Figure 3.-
Measurements of
the side resistant
elements (outer).

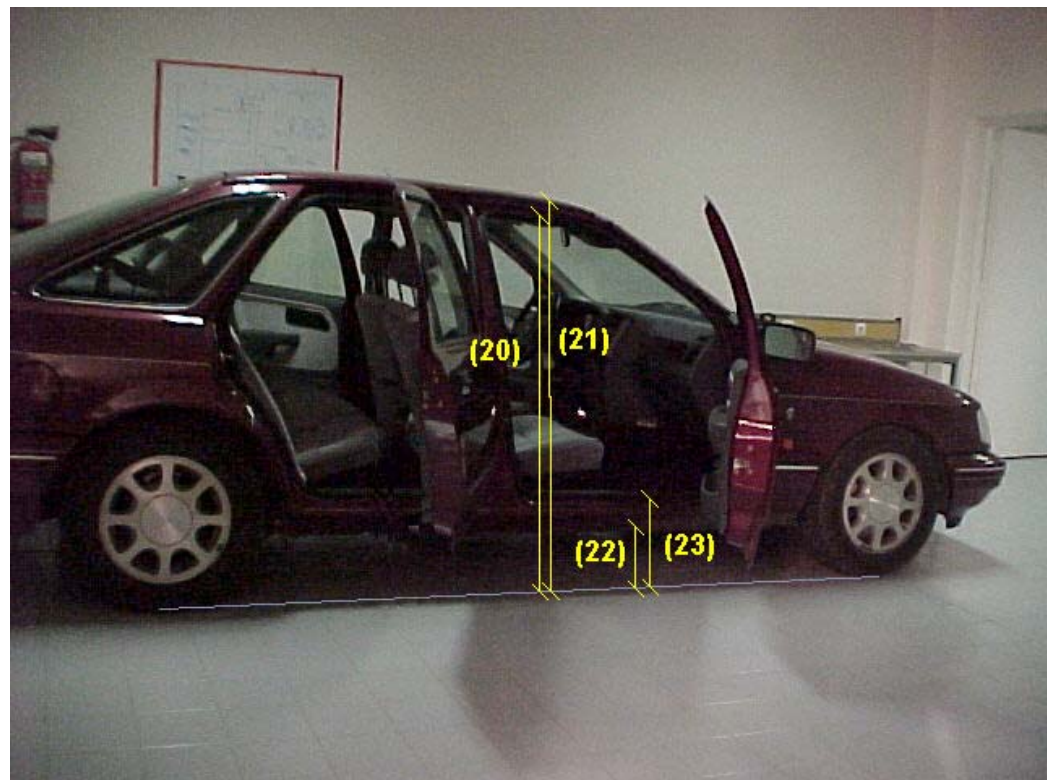


Figure 4.- Measurements
of the side resistant
elements (inner).

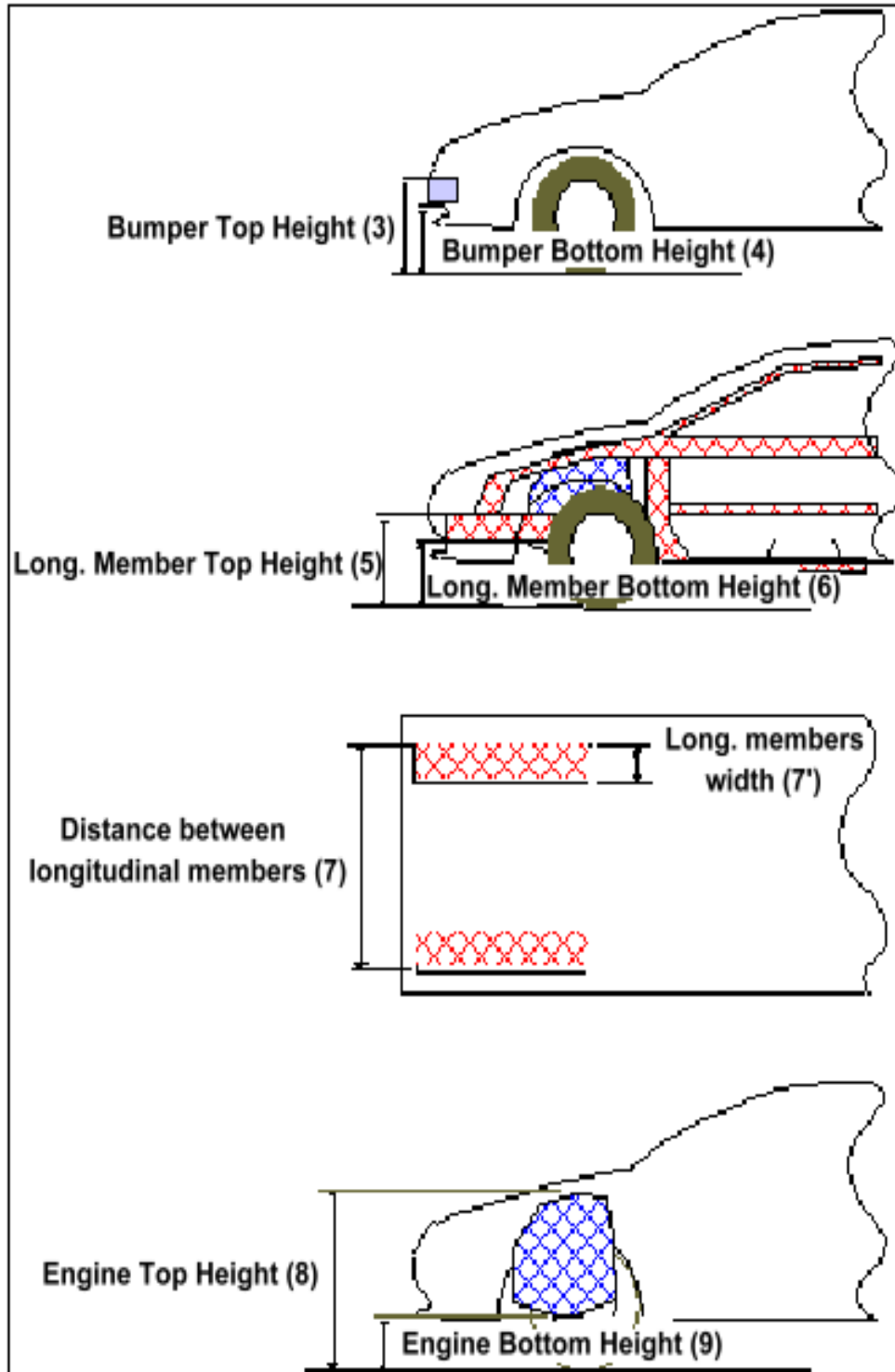


Figure 5.- Definition of the main resistant elements. Front elements.

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

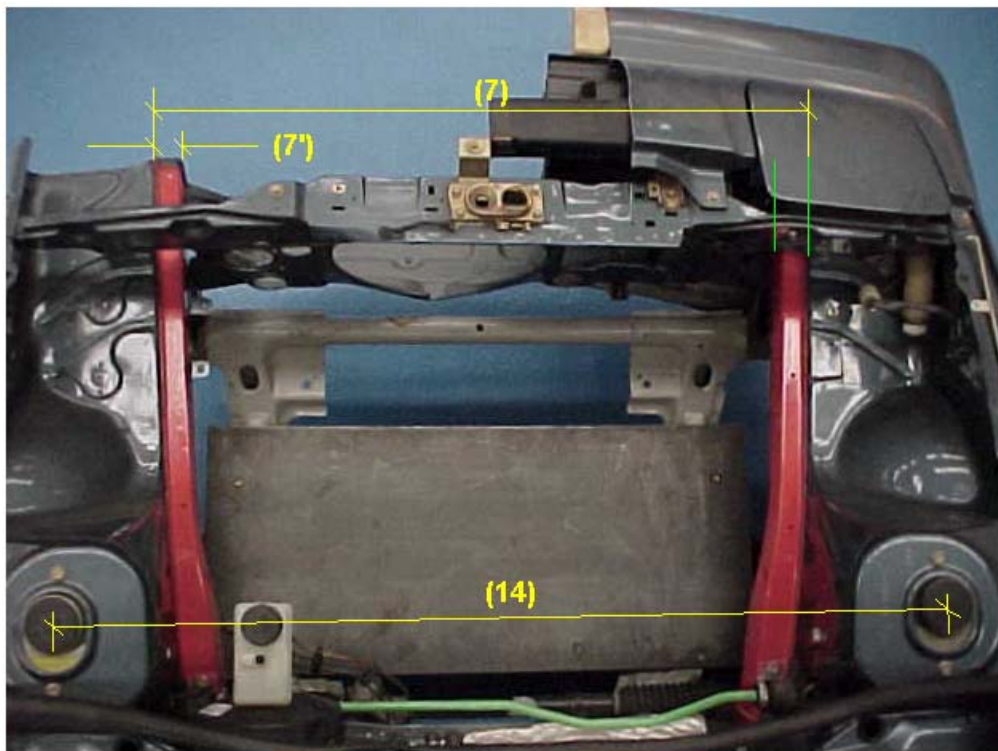
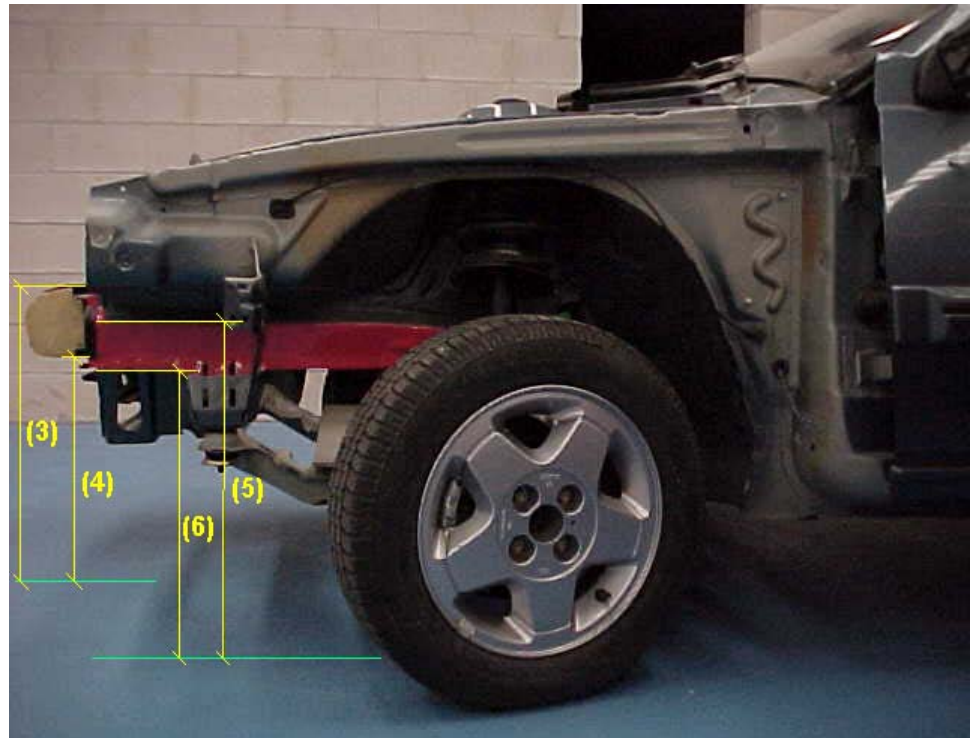


Figure 7.-
Measurements
of the main
resistant
elements. Front
elements 2.

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

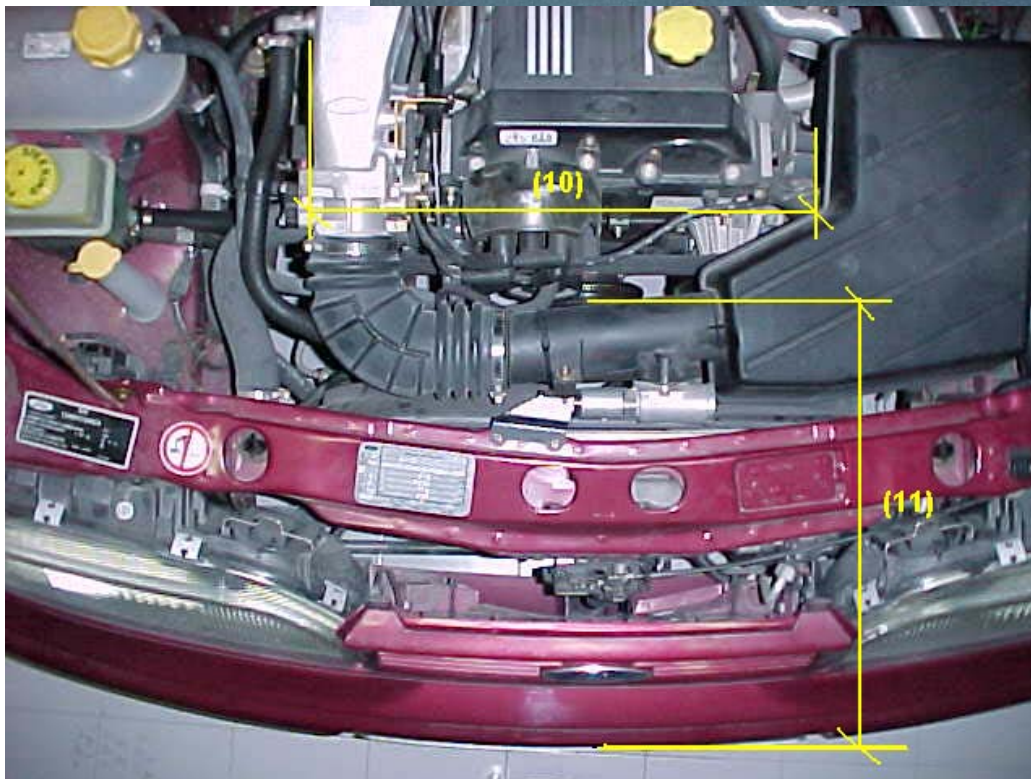
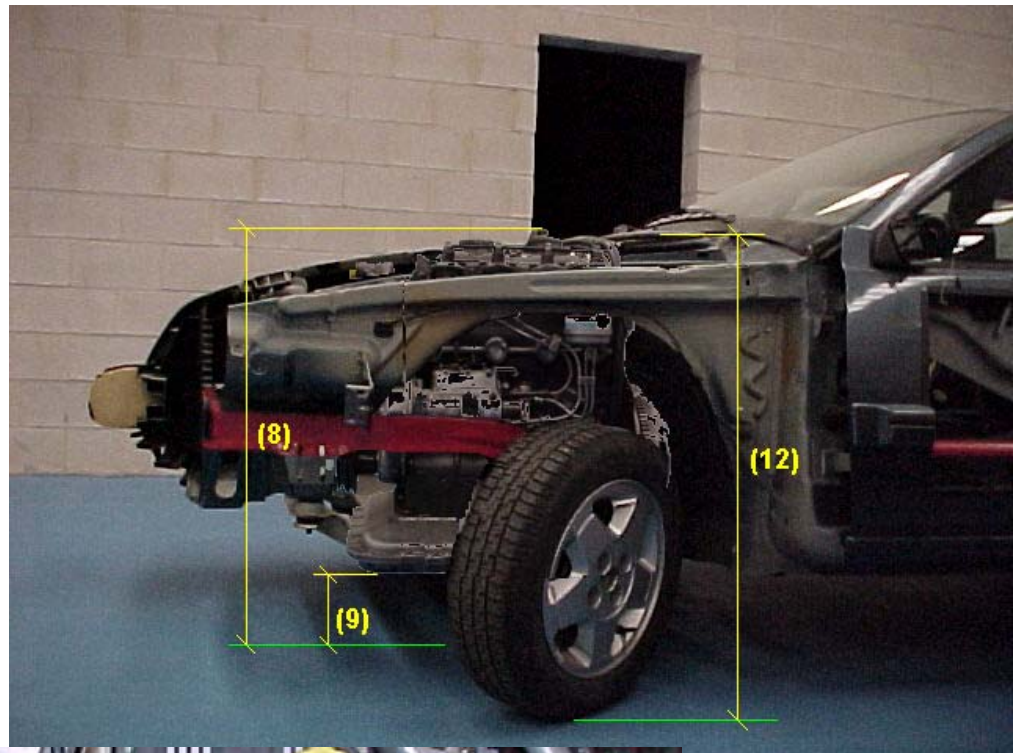


Figure 9.-
Definition of
the main
resistant
elements. Front
elements
(Longitudinal
engine).



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.