

**Vehicle Research and Test Center
Left Crabbed Moving Barrier Impact
WorldSID
2010 Acura MDX
TRC Inc. Test Number: 130312**

**Prepared By:
Transportation Research Center Inc.
10820 State Route 347
P. O. Box B-67
East Liberty, OH 43319**

Final Report

March – July, 2013

**Prepared For
Vehicle Research and Test Center
P. O. Box 37
East Liberty, OH 43319**

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TRC TEST NUMBER: 130312

Project Manager, Jeffery W. Sankey

Report Approved July 25, 2013

Transportation Research Center Inc.

Final Report Accepted by:

Allison Loudon
Project Engineer
Vehicle Research & Test Center

Date: _____

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Section 1

Purpose and Test Procedure

Purpose

This moving deformable barrier side impact test is part of Federal Motor Vehicle Safety Standard 214 Side Impact Protection. It 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 refine the seating procedure for the 50th male and 5th female WorldSID dummies and to begin to evaluate the performance of the post-FMVSS 214 fleet. The test was conducted in accordance with the National Highway Traffic Safety Administration's modified test procedures FMVSS 214/NCAP side impact moving deformable barrier (January, 2010) along with VRTC seating procedure for the WorldSID dummies.

Section 2

Side Impact Test Results

Summary of Side Impact Test

A 2010 Acura MDX was impacted on the left side by a crabbed moving deformable barrier, at a velocity of 61.9 km/h (38.4 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 March 12, 2013. Pre-test and post-test photographs of the test vehicle, the moving barrier, and the side impact dummies (WorldSID) are included in Appendix A.

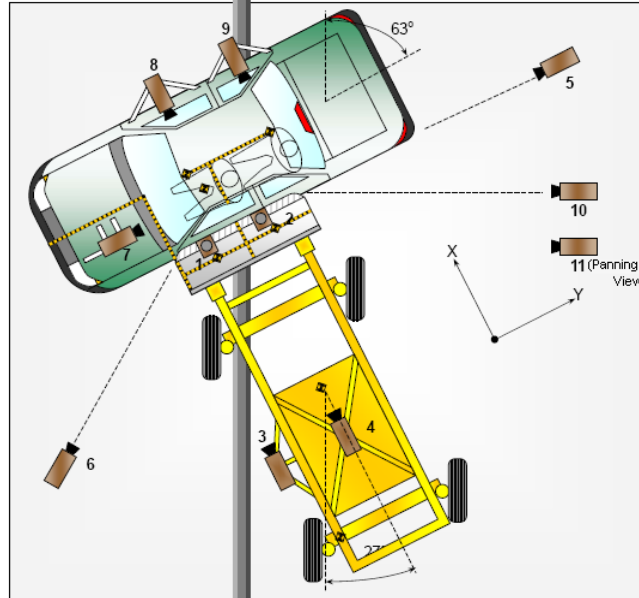
One restrained Side Impact Dummy, (WorldSID) S/N 016, was placed in the driver (Position #1) designated seating position and one restrained Side Impact Dummy, (WorldSID) S/N DG 236, was placed in the left rear passenger (Position #4) designated seating position according to the instructions specified in the VRTC WorldSID Seating Procedures. The WorldSID's were calibrated prior to this test. The side impact test was documented by one (1) real-time camera and eight (8) high-speed digital cameras. Camera locations and other pertinent camera information are included in this report.

The driver front airbag, passenger front airbag, and passenger side curtain and torso airbags were disabled prior to the test performance.

The WorldSID instrumentation is detailed in Table 4. The 50th male and 5th female WorldSID dummies each had 2D IRTRAC data channels. One hundred and seventy (170) dummy channels of acceleration, force, moment, and displacement data were collected for this test.

A summary of the side impact dummies (WorldSID) configuration and verification test data can be found in Appendix C. A total of two hundred and twenty nine (229) channels of data were recorded. Appendix B contains the vehicle, barrier, and dummy response data traces.

Test Results Summary



	Left Front WorldSID (#16)	Left Rear WorldSID (#236)
HIC36 (g) CFC 1000	52	111
Upper Rib Deflection (mm) CFC 600	See Table 4	See Table 4
Lower Rib Deflection (mm) CFC 600	See Table 4	See Table 4
Lower Spine Resultant (g) CFC 180	29.7 g	40.6 g
Pubic Symphysis Force (N) CFC 600	-374.8 N	-757.3 N

	2010 Acura MDX
Vehicle Test Weight	2261.0 kg (4984.6 lbs)
Impact Point (Horizontal) rearward of front axle	436 mm
Impact Angle	63°
Maximum Crush	207 mm Level 3
Impact Speed	61.9 km/h

Data Acquisition Explanations

The Rear Passenger Dummy Head Y-axis angular velocity data channel recorded a data spike at approximately 65 milliseconds.

The Rear Passenger Dummy Pubic Force Y-axis data channel recorded several data spikes in the negative direction.

The Vehicle Center of Gravity Pitch Rate angular rate Data Channel Exceeded the full scale throughout the event

The Vehicle at EDR Pitch Rate angular rate data channel exceeded the full scale at approximately 30 milliseconds.

The Vehicle at EDR Yaw Rate angular rate data channel exceeded the full scale at approximately 30 milliseconds.

The Vehicle Rear Deck Pitch Rate angular rate data channel exceeded the full scale at approximately 23 milliseconds.

The Vehicle Rear Deck Yaw Rate angular rate data channel exceeded the full scale at approximately 22 milliseconds.

Section 3

Summary of Test Results

Table 1 General Test Vehicle Parameter Data

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

TEST VEHICLE INFORMATION

Make	Acura
Model	MDX
Body Style	MPV
VIN	2HNYD2H57AH532677
Color	Brown
Odometer Reading	1040
Transmission	Automatic
Final Drive	Four Wheel Drive
Number of Cylinders	6
Engine Displacement	3.7
Engine Placement	V
Air Conditioning	Yes
Power Windows	Yes
Power Seats	Yes
Cruise Control	Yes
Tinted Glass	Yes
Keyless Entry	Yes

TEST VEHICLE OPTIONS

Driver Front Airbag	Yes ¹
Driver Side Curtain Airbag	Yes
Driver Side Torso Airbag	Yes
Rear Passenger Side/Curtain Airbag	Yes
Rear Passenger Side Torso Airbag	No
Power Steering	Yes
Power Door Locks	Yes
Tilt Wheel	Yes
Anti-lock Brakes	Yes
Traction Control	No
Bucket Seats	Yes
Rear Defroster	Yes
4-Door	Yes
AM/FM Radio	Yes
CD Player	Yes
Sun Roof	Yes
Telescoping Steering Wheel/Column	Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Honda of Canada MFG.
Date of Manufacture	8/10

GVWR (kg)	2700
GAWR Front (kg)	1310
GAWR Rear (kg)	1440

Measured Parameter	Front	Mid	Rear	Total
Type of Seats	Bucket	Split Bench	Split Bench	
Number Of Occupants	2	3	2	7
Capacity Wt. (VCW) (kg)				525

¹ Airbags were disabled prior to the test performance

Table 1 General Test Vehicle Parameter Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

TEST VEHICLE WEIGHTS

	Units	As Delivered (Axle)			As Tested (ATW) (Axle)		
		Front	Rear	Total	Front	Rear	Total
Left	kg	590.0	474.8		644.4	514.0	
Right	kg	579.0	452.0		597.8	504.8	
Ratio	%	55.8	44.2		54.9	45.1	
Totals	kg	1169.0	926.8	2095.8	1242.2	1018.8	2261.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight	kg	2095.8
Weight of WorldSID ATD	kg	125.0
Rated Cargo/Luggage Weight (RCLW)	kg	48.7
Calculated Vehicle Target Weight (TVTW)	kg	2269.5

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG(aft of front axle)
As Delivered	mm	810	805	822	825	1221
As Tested	mm	796	802	807	816	1244
Fully Loaded	mm	804	810	803	814	1284

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheelbase	mm	2760
Total Vehicle Length at Left Side	mm	4525
Total Vehicle Length at Centerline	mm	4850
Total Vehicle Length at Right Side	mm	4525
Weight of Ballast	kg	5.7
Amount of Stoddard Solvent in Fuel Tank	liters	68.1

TEST VEHICLE IMPACT ACCURACY DATA

Measurement Description	Units	Intended	Actual	Difference
Impact Reference Line From Front Axle	mm	440	436	4 left
Impact Point Angle	Degrees	63	63	0

Table 1 General Test Vehicle Parameter Data, Continued

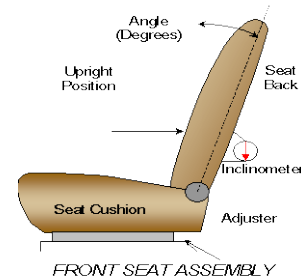
Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

WORLD SID RIDING POSITION

The driver seat back is positioned according to the procedure defined in SAE J826, "Devices for use in Defining and Measuring Vehicle Seating Accommodation", November, 2008.

Driver seat back angle: The back was adjusted to 13.2° as measured at headrest.

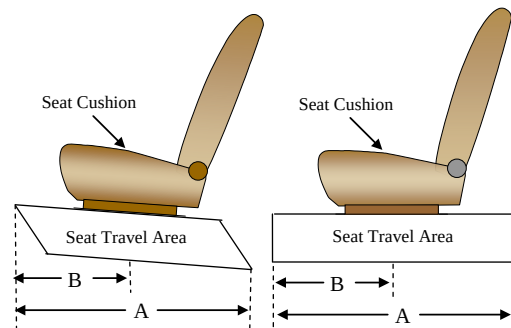


SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position to rearmost position, irrespective of vertical seat height in those positions. The seat was set at the longitudinal mid position with vertical adjustment at the lowest position obtainable for the driver. The rear seating position was not tested.

SEAT FORE/AFT POSITIONING

	Total Fore/Aft Travel	Placed in Position No.
Driver Seat	240	140
Rear Seat	N/A	N/A



SEAT BELT UPPER ANCHORAGE

	Total No. of Positions	Placed in Position No.
Driver Seat	4	1
Rear Seat	N/A	N/A

Position number one is the uppermost adjustment position.

Table 1 General Test Vehicle Parameter Data, Continued

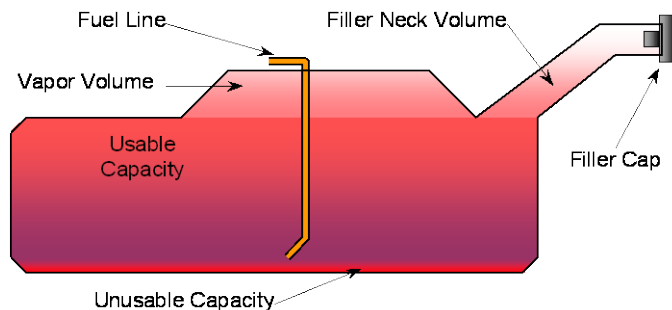
Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	79.5
Usable Capacity used for FMVSS 301	73.1-74.7
Actual Amount of Solvent used	68.1

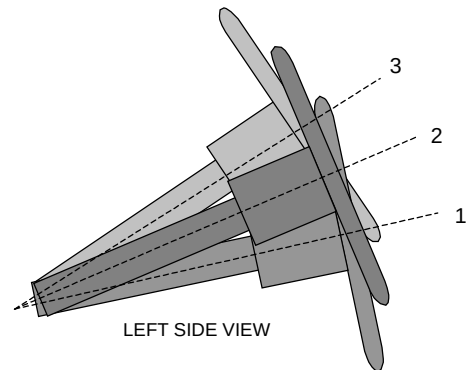
The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender. The standard fuel tank occupies the area under the rear seat.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

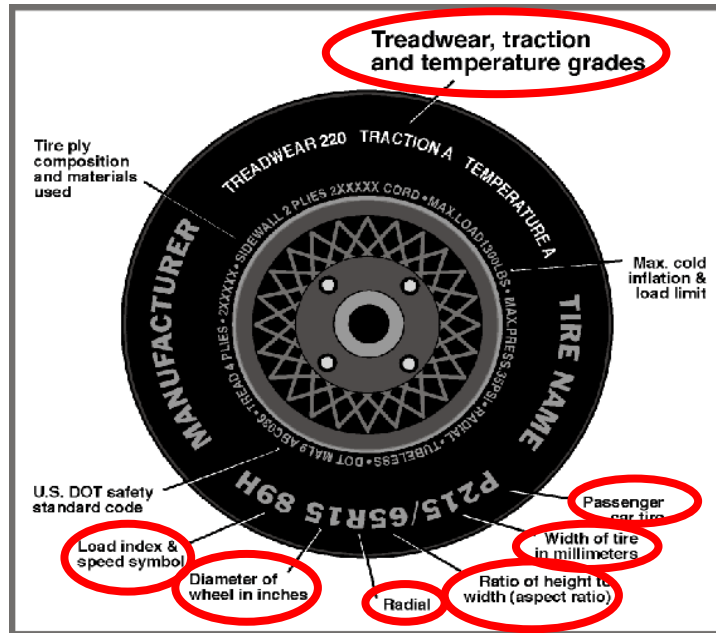
Steering Column Tilt Position	Degrees
Lowermost Position	20.0
Geometric Center Position	22.5
Uppermost Position	25.0

Steering Column Telescoping Position	(mm)
Full In Position	0
Full Out Position	36
Test Position	18

Table 2 Test Vehicle Tire Information

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	350	350
Cold / Test Pressure (kPa)	220	220
Recommended Tire Size	P255/50R19	P255/50R19
Tire Size on Vehicle	P255/50R19	P255/50R19
Tire Manufacturer	Michelin	Michelin
Tire Name	Latitude	Latitude
Radial	Yes	Yes
Wheel Diameter	19	19
Load Index & Speed Symbol	103H	103H
Tread wear	440	440
Traction Grade	A	A
Temperature Grade	A	A

Table 3 Post-Test Observations

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat WorldSID	Left Rear Seat WorldSID
Dummy Type / Serial No.	WorldSID / WSID016	WorldSID / 236
Head Contact	Side Curtain Airbag, Headrest	Headrest, SCAB
Upper Torso Contact	Seat Back, Side Airbag	Seat Back, Door Panel
Lower Torso Contact	Seat Back, Side Airbag	Seat Back, Door Panel
Left Knee Contact	Door Panel	Door Panel
Right Knee Contact	None	N/A

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Locked/Unlocked Doors	Unlocked	Unlocked
Left Side Door Opening	Jammed Shut	Jammed Shut
Right Side Door Opening	Closed & operational	Closed & operational
Seat Movement	None	None
Seat Back Failure	None	None

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	B-Pillar Deformation
Sill Separation	No
Windshield Damage	None
Window Damage	Driver window broken out
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 01		Left Rear (Passenger) Occupant Location 04	
	Installed	Operation	Installed	Operation
Front Airbag	Yes	No ¹	N/A	N/A
Torso Airbag	Yes	Yes	N/A	N/A
Head Airbag	N/A	N/A	N/A	N/A
Curtain Airbag	Yes	Yes	Yes	Yes
Seat Belt Pre-tensioner	N/A	N/A	N/A	N/A
Seat Belt Load Limiter	N/A	N/A	N/A	N/A

¹ The driver front airbag was disabled for this test.

Section 4

Occupant, Vehicle and MDB Information

Table 4 WorldSID Instrumentation Data

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Driver Dummy Serial Number: 016

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
Head Acceleration (g)	X	3.5	258.1	-11.0	65.6
	Y	23.0	66.7	-4.4	309.2
	Z	10.4	38.6	-5.4	73.7
	R	25.1	66.7	---	---
Head Rotational Acceleration (rad/sec ²)	X	1511.4	44.9	-1426.5	33.9
	Y	866.3	79.8	-650.1	17.5
	Z	1283.8	77.6	-1171.1	17.2
Head Angular Velocity (°/sec)	X	1106.7	44.5	-681.7	280.8
	Y	502.0	21.9	-870.7	21.6
	Z	740.8	104.8	-912.8	65.6
Upper Neck Force (N)	X	87.1	251.2	-167.1	68.0
	Y	136.3	67.7	-156.2	105.9
	Z	364.0	45.9	-260.3	74.3
Upper Neck Moment (N-m)	X	7.2	216.4	-21.8	67.4
	Y	7.7	82.8	-12.0	49.0
	Z	18.7	73.7	-7.6	133.0
Lower Neck Force (N)	X	112.0	251.3	-134.7	64.3
	Y	247.2	30.3	-223.7	46.5
	Z	714.1	47.9	-123.8	119.9
Lower Neck Moment (N-m)	X	16.6	66.9	-34.1	310.0
	Y	20.7	69.8	-22.2	266.3
	Z	18.8	75.7	-6.9	310.0
Shoulder Acceleration (g)	X	51.6	16.1	-71.4	23.9
	Y	108.5	16.1	-101.4	23.8
	Z	130.3	16.1	-116.4	16.7
	R	175.1	16.1	---	---
Shoulder Force (N)	X	16.9	161.0	-222.6	59.4
	Y	176.6	85.3	-1043.9	26.7
	Z	258.2	23.8	-48.3	119.9
Shoulder Displacement (mm)	Y	12.7	31.7	-4.0	105.9

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Driver Dummy Serial Number: 016

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
T1 Acceleration (g)	X	1.7	199.3	-5.5	15.8
	Y	16.9	25.5	-2.6	256.3
	Z	3.9	91.9	-7.3	40.3
	R	18.1	45.0	---	---
Thorax Rib 1 Acceleration (g)	X	36.5	13.9	-43.0	14.5
	Y	90.5	21.6	-50.2	26.8
	Z	15.9	32.8	-19.3	13.5
	R	91.1	21.6	---	---
Thorax Rib 1 Displacement (mm)	Y	9.0	29.2	-3.0	20.5
Thorax Rib 2 Acceleration (g)	X	49.5	18.2	-48.1	14.8
	Y	109.2	13.5	-112.1	16.7
	Z	20.8	17.6	-24.4	15.0
	R	115.6	13.6	---	---
Thorax Rib 2 IRTRAC Compression. (mm)	Y	6.4	32.3	-2.0	263.2
Thorax Rib 2 Rotational Pot (deg)	Z	9.1	38.5	--- ¹	--- ¹
Thorax Rib 2 IRTRAC Deflection (mm)	X	17.1	40.2	--- ¹	--- ¹
Thorax Rib 2 IRTRAC Deflection (mm)	Y	7.3	34.6	-1.9	263.2
Thorax Rib 3 Acceleration (g)	X	93.9	16.1	-133.1	13.9
	Y	130.9	14.0	-140.6	17.0
	Z	33.0	15.7	-36.7	14.2
	R	180.7	13.9	---	---
Thorax Rib 3 IRTRAC Compression. (mm)	Y	9.6	33.3	-0.4	12.7
Thorax Rib 3 Rotational Pot (deg)	Z	9.9	38.6	--- ¹	--- ¹
Thorax Rib 3 IRTRAC Deflection (mm)	X	18.7	41.0	--- ¹	--- ¹
Thorax Rib 3 IRTRAC Deflection (mm)	Y	10.9	33.3	-0.3	12.7
Abdominal Rib 1 Acceleration (g)	X	153.0	16.2	-194.0	14.0
	Y	195.6	14.0	-138.6	16.6
	Z	31.8	19.3	-31.5	15.1
	R	273.9	14.0	---	---

¹ No Negative Value

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Driver Dummy Serial Number: 016

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
Abdominal Rib 1 IRTRAC Compression. (mm)	Y	11.3	33.3	-0.5	12.3
Abdominal Rib 1 Rotational Pot (deg)	Z	9.5	42.7	--- ¹	--- ¹
Abdominal Rib 1 IRTRAC Deflection (mm)	X	17.6	43.8	--- ¹	--- ¹
Abdominal Rib 1 IRTRAC Deflection (mm)	Y	12.2	33.3	-0.4	12.3
Abdominal Rib 2 Acceleration (g)	X	116.4	15.8	-160.2	13.6
	Y	279.4	13.6	-164.7	16.4
	Z	47.3	16.9	-28.7	15.0
	R	323.3	13.6		
Abdominal Rib 2 Displacement (mm)	Y	13.2	33.2	-1.7	148.4
T4 Acceleration (g)	X	1.7	201.5	-4.4	27.9
	Y	19.6	25.8	-2.6	17.4
	Z	7.4	41.2	-4.1	90.2
	R	19.9	25.9		
T12 Acceleration (g)	X	4.0	40.8	-11.2	28.7
	Y	29.3	36.2	-4.2	19.0
	Z	5.0	37.4	-3.6	91.8
	R	29.7	36.2		
Pelvis Acceleration (g)	X	4.6	39.5	-7.3	16.4
	Y	37.3	29.3	-9.4	68.1
	Z	14.5	26.2	-16.4	44.1
	R	39.5	29.3		
Pubic Force (N)	Y	58.1	158.1	-374.8	30.0
Lumbar Force (N)	X	205.5	41.4	-194.5	23.1
	Y	545.5	29.9	-58.2	19.7
	Z	1555.9	53.4	-433.2	96.6
Lumbar Moment (N-m)	X	37.7	51.3	-3.5	19.6
	Y	13.4	94.1	-9.8	48.9
	Z	7.8	33.3	-13.4	158.0

¹ No Negative Value

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Driver Dummy Serial Number: 016

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
Sacro-Iliac Right Moment (N-m)	X	46.6	53.4	-11.7	99.7
	Y	20.3	44.9	-3.4	71.1
	Z	41.3	30.5	-15.5	64.8
Sacro-Iliac Right Force (N)	X	73.5	188.3	-422.7	33.0
	Y	115.1	68.8	-1286.1	32.9
	Z	718.1	53.7	-51.2	99.8
Sacro-Iliac Left Moment (N-m)	X	14.0	54.9	-43.6	36.0
	Y	37.2	43.7	-10.1	23.3
	Z	49.8	30.5	-8.7	66.1
Sacro-Iliac Left Force (N)	X	97.7	19.9	-587.8	40.0
	Y	2.3	-13.6	-2223.9	30.5
	Z	314.7	96.9	-571.0	31.1
Left Femoral Neck Force (N)	X	176.6	60.5	-486.6	91.1
	Y	380.1	38.7	-173.1	21.0
	Z	86.8	237.6	-763.7	41.4
Right Femoral Neck Force (N)	X	1.8	-6.6	-508.4	62.2
	Y	59.9	246.4	-337.2	44.1
	Z	413.0	60.0	-9.4	86.9

Positive Direction

Longitudinal: Forward
 Lateral: Rightward
 Vertical: Downward

Negative Direction

Longitudinal: Rearward
 Lateral: Leftward
 Vertical: Upward

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Left Rear Passenger Dummy Serial Number: DG-236

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
Head Acceleration (g)	X	10.2	200.4	-13.5	78.6
	Y	36.1	63.1	-9.8	201.8
	Z	2.8	93.7	-9.8	75.7
	R	36.7	63.1	---	---
Head Rotational Acceleration (rad/sec ²)	X	1586.8	48.6	-1846.7	63.0
	Y	531.7	112.4	-807.0	76.9
	Z	1864.2	76.2	-1501.2	62.1
Head Angular Velocity (°/sec)	X	990.9	59.9	-428.5	133.0
	Y	--- ²	--- ²	-480.5	98.5
	Z	1322.6	261.8	-718.4	206.1
Upper Neck Force (N)	X	299.2	87.2	-67.0	139.0
	Y	40.5	223.3	-488.8	76.8
	Z	80.4	294.0	-565.0	75.5
Upper Neck Moment (N-m)	X	8.4	185.8	-17.5	63.6
	Y	5.6	127.9	-19.2	74.3
	Z	11.5	76.7	-17.4	222.2
Lower Neck Force (N)	X	173.8	198.7	-269.2	74.4
	Y	296.5	64.3	-187.1	92.3
	Z	92.9	290.6	-657.9	76.9
Lower Neck Moment (N-m)	X	5.0	170.5	-45.6	91.2
	Y	10.7	140.9	-13.2	199.8
	Z	8.4	300.1	-16.8	223.0
Shoulder Acceleration (g)	X	36.9	40.2	-25.9	58.6
	Y	69.2	55.0	-9.8	62.1
	Z	16.1	65.8	-19.9	60.9
	R	69.7	55.0	---	---
Shoulder Force (N)	X	214.0	53.4	-44.3	110.8
	Y	72.2	105.6	-996.0	61.4
	Z	155.7	49.8	-53.0	67.0
Shoulder Displacement (mm)	Y	13.3	62.9	-4.5	100.4

² See Data Acquisition Explanations

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Left Rear Passenger Dummy Serial Number: DG-236

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
T1 Acceleration (g)	X	5.4	201.5	-12.5	67.7
	Y	34.5	61.1	-5.5	192.1
	Z	10.5	67.2	-3.9	49.4
	R	35.2	61.1	---	---
Thorax Rib 1 Acceleration (g)	X	24.9	40.3	-32.1	56.1
	Y	68.3	56.5	-15.3	37.5
	Z	14.7	46.1	-12.0	68.6
	R	74.4	56.5	---	---
Thorax Rib 1 IRTAC Compression (mm)	Y	1.9	62.2	-2.1	88.3
Thorax Rib 1 Rotational Pot (deg)	Z	4.4	48.7	-4.9	66.1
Thorax Rib 1 IRTAC Deflection (mm)	X	6.8	48.6	-7.3	66.1
Thorax Rib 1 IRTAC Deflection (mm)	Y	2.0	62.2	-2.1	88.3
Thorax Rib 2 Acceleration (g)	X	15.2	37.9	-30.8	55.3
	Y	50.3	59.4	-4.6	94.5
	Z	16.3	58.7	-16.6	93.9
	R	51.6	59.5	---	---
Thorax Rib 2 IRTAC Compression. (mm)	Y	3.5	66.1	-0.6	220.3
Thorax Rib 2 Rotational Pot (deg)	Z	5.0	47.3	--- ¹	62.0
Thorax Rib 2 IRTAC Deflection (mm)	X	7.7	47.3	--- ¹	62.0
Thorax Rib 2 IRTAC Deflection (mm)	Y	3.5	66.1	-0.5	220.3
Thorax Rib 3 Acceleration (g)	X	33.9	54.4	-54.7	52.3
	Y	62.2	53.1	-20.7	54.7
	Z	52.5	56.2	-19.1	59.5
	R	65.4	58.4	---	---
Thorax Rib 3 IRTAC Compression. (mm)	Y	13.8	63.5	-0.3	269.8
Thorax Rib 3 Rotational Pot (deg)	Z	1.7	43.3	-5.2	64.9
Thorax Rib 3 IRTAC Deflection (mm)	X	2.6	43.3	-7.1	77.4

¹ No Negative Value

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Left Rear Passenger Dummy Serial Number: DG-236

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
Thorax Rib 3 IRTAC Deflection (mm)	Y	14.1	63.5	-0.3	269.8
Abdominal Rib 1 Acceleration (g)	X	141.0	54.2	-68.7	56.8
	Y	117.2	54.1	-64.0	50.3
	Z	41.4	57.5	-27.9	45.3
	R	176.7	54.2	---	---
Abdominal Rib 1 IRTAC Compression. (mm)	Y	10.6	55.9	-1.0	220.3
Abdominal Rib 1 Rotational Pot (deg)	Z	4.9	117.5	-0.4	59.4
Abdominal Rib 1 IRTAC Deflection (mm)	X	7.7	117.4	-0.6	62.0
Abdominal Rib 1 IRTAC Deflection (mm)	Y	10.6	55.9	-1.0	220.3
Abdominal Rib 2 Acceleration (g)	X	42.7	57.1	-43.4	55.7
	Y	79.0	54.1	-24.4	57.8
	Z	35.1	57.8	-17.8	62.3
	R	79.9	54.1	---	---
Abdominal Rib 2 IRTAC Compression (mm)	Y	5.2	50.6	-0.3	-15.1
Abdominal Rib 2 Rotational Pot (deg)	Z	3.3	80.9	-2.0	59.0
Abdominal Rib 2 IRTAC Deflection (mm)	X	4.9	80.9	-3.0	59.0
Abdominal Rib 2 IRTAC Deflection (mm)	Y	5.3	57.3	-0.3	-15.1

Table 4 WorldSID Instrumentation Data, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Left Rear Passenger Dummy Serial Number: DG-236

Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
T4 Acceleration (g)	X	4.7	202.2	-11.9	67.5
	Y	35.9	60.2	-4.8	213.9
	Z	7.9	67.3	-4.9	50.0
	R	36.8	62.7	---	---
T12 Acceleration (g)	X	4.7	88.5	-12.4	59.1
	Y	39.4	50.1	-5.2	102.0
	Z	5.6	66.9	-4.1	50.1
	R	40.6	50.1	---	---
Pelvis Acceleration (g)	X	2.2	139.0	-14.0	54.7
	Y	49.6	55.0	-2.8	81.3
	Z	5.2	75.0	-13.3	44.5
	R	52.2	54.8	---	---
Pubic Force (N)	Y	627.1	120.9	--- ²	--- ¹

² See Data Acquisition Explanations

Positive Direction

Longitudinal: Forward
Lateral: Rightward
Vertical: Downward

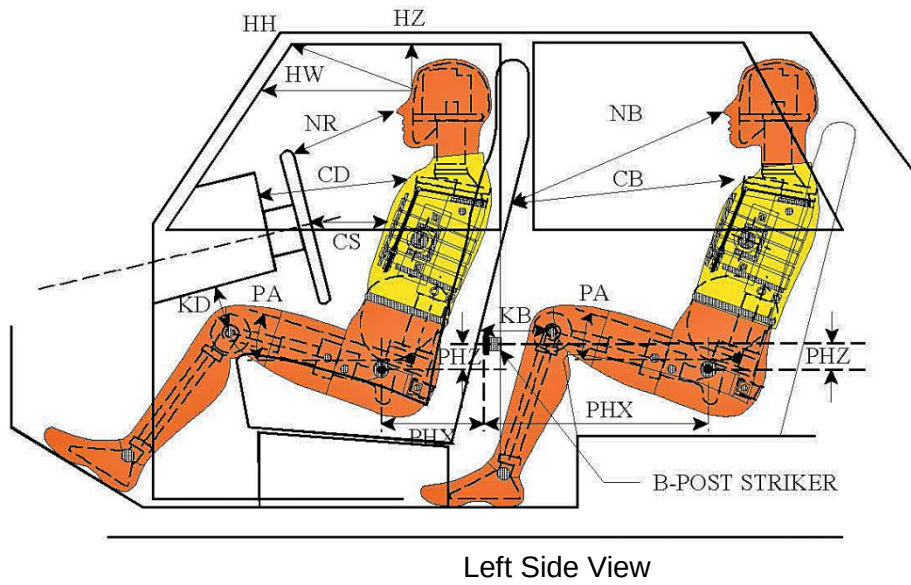
Negative Direction

Longitudinal: Rearward
Lateral: Leftward
Vertical: Up

Figure 1 WorldSID Longitudinal Clearance Dimensions

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



Left Side View

Measurement	Measurement Description	Driver WorldSID #016		Passenger WorldSID #236	
		Length (mm)	Angle	Length (mm)	Angle
HH	Header to Header	469			
HW	Header to Windshield	790			
HZ	Head to Roof Liner	248			
NR	Nose to Rim/Seat Back	524			
CD	Chest to Dash/Seat Back	664			
CS	Chest to Steering Wheel	421			
KD(L)/KDA(L)°	Left Knee to Dash/Seat Back	137	17.8		
KD(R)/KDA(R)°	Right Knee to Dash/Seat Back	133	0.7		
PAX°	Pelvic Tilt Angle X		-1.1		-0.4
PAY°	Pelvic Tilt Angle Y		-0.1		-16.2
PHX	Hip Point to Striker (X-Axis)	209		246	
PHZ	Hip Point to Striker (Z-Axis)	147		204	
HAX°	Head Tilt Angle X		-1.7		0.2
HAY ¹ °	Head Tilt Angle Y		0.3		2.1
TAX°	Thorax Tilt Angle X		0.0		-1.2
TAY°	Thorax Tilt Angle Y		0.5		-0.1

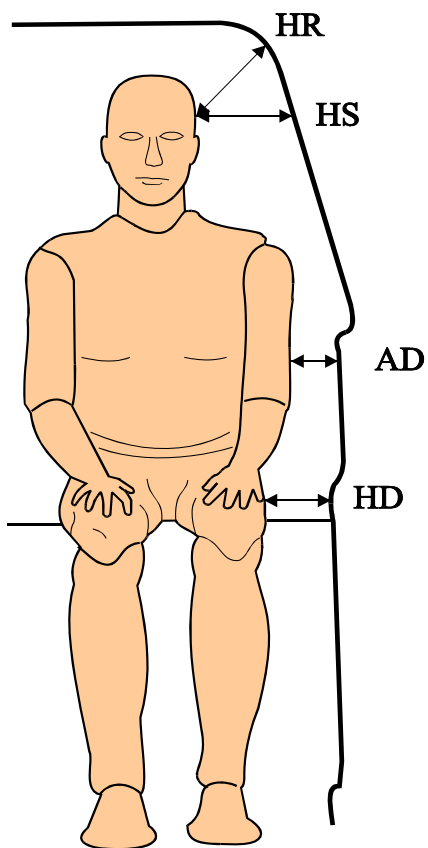
Note: All measurements are in millimeters.

¹NR was measured from bridge of nose

Figure 2 WorldSID Lateral Clearance Dimensions

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



Measurement	Driver WorldSID # WSID016	Passenger WorldSID # 236
HR	253	268
HS	371	376
AD	Lower: 145 Upper: 148	Lower: 148 Upper: 172
HD	123	147

Note: All measurements are in millimeters with tolerance of ± 0.1 mm

Table 5 WorldSID Position Relative to Striker

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

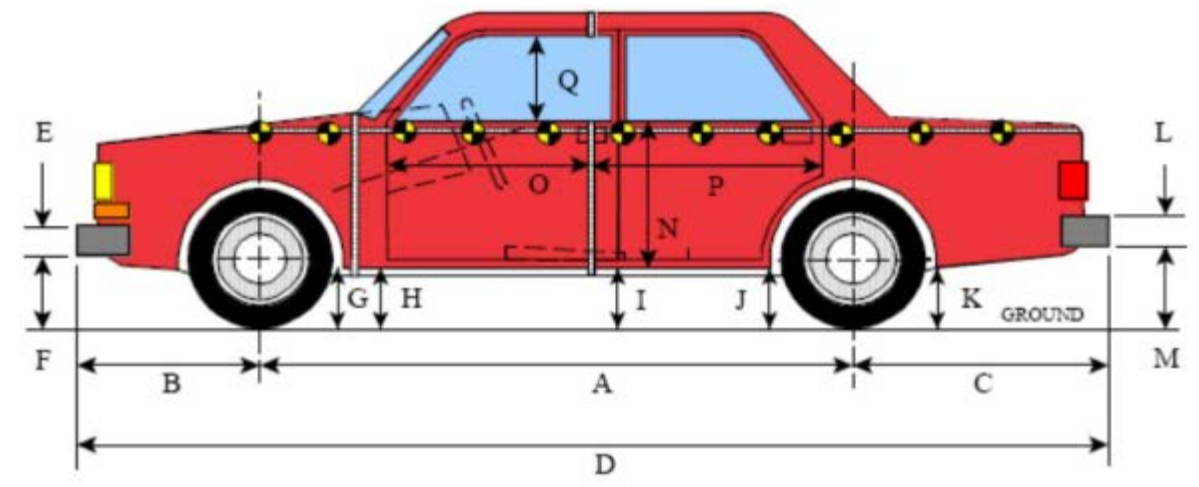
Location	Driver Dummy Serial Number: 016		Passenger Dummy Serial Number: 236	
	Longitudinal X (mm)	Vertical Z (mm)	Longitudinal X (mm)	Vertical Z (mm)
M_HEAD CG	2440	-724	1510	-685
M_H POINT	2627	-59	1716	-134
M_KNEE	3042	-179	2077	-235
M_ANKLE	3332	110	2206	109
M_RIB 1	2494	-503	1587	-469
M_RIB 2	2530	-426	1616	-411
M_RIB 3	2567	-363	1633	-357
M_RIB 4	2589	-314	1654	-315
M_RIB 5	2611	-261	1673	-273
M_RIB 6	2634	-218	1692	-233

Note: All measurements are in millimeters
Positive values are forward and down relative to the striker.

Figure 3 Vehicle Pre-Test And Post-Test Measurements

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



Left Side View

Note: Measurements were achieved by using a tape measure.

All dimensions are in millimeters with tolerance of ± 0.1 mm

	Pre-Test (as delivered)	Pre-Test (as tested)	Post-Test (as tested)	Change
A	2760	2760	2730	30
B	990	990	990	0
C	1100	1100	1100	0
D	4850	4850	4850	0
E	205	205	205	0
F	473	478	518	-40
G	350	350	348	2
G1	337	332	364	-32
H	348	344	389	-45
I	345	335	393	-58
J1	323	310	345	-35
J2	354	342	398	-56
K	420	402	440	-38
L	145	145	145	0
M	510	495	523	-28
N	870	870	832	38
O	815	815	777	38
P	1310	1310	1287	23
Q	466	466	454	12
R	4525	4525	4530	-5
S	4525	4525	4510	15
T	1455	1455	1404	51

D = Length at centerline

E and L = Bumper Thickness

R = Right Side Length

S = Left Side Length

T = Width at B-pillar

J1 = To Pinch Weld

J2 = To Sill

Table 6 Vehicle Structural Measurements^{1,2}

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

	Elements	Pre-Test
1	Total Length	4850
2	Total Width	1975
3	Bumper Top Height	566
4	Bumper Bottom Height	481
5	Longitudinal Member Top Height	566
6	Longitudinal Member Bottom Height	481
7	Distance Between Longitudinal Members	1230
7'	Longitudinal Member Width	110
8	Engine Top Height	1071
9	Engine Bottom Height	244
10	Engine and Gearbox Width	840
11	Front Bumper - Engine Distance	490
12	Front Shock Absorber Fixing Height	1051
13	Bonnet Leading Edge Height	926
14	Front Shock Absorber Fixing Width	1235
15	Front Bumper - Front Axle Distance	990
16	Front Axle - A Pillar Distance	530
17	A Pillar - B Pillar Distance	1000
18	B Pillar - Rear Axle Distance	1230
19	B Pillar - C Pillar Distance	1010
20	Roof Sill Bottom Height	1536
21	Roof Sill Top Height	1596
22	Floor Sill Bottom Height	456
23	Floor Sill Top Height	496

All distance measurements are in millimeters and achieved by using a tape measure.

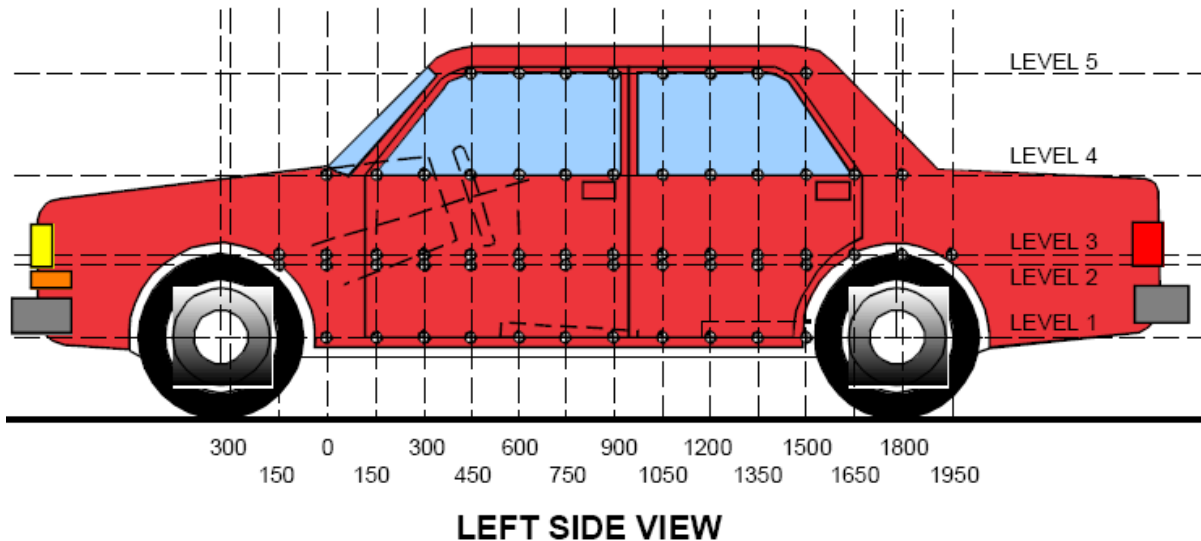
¹ Taken from INSIA report, "Structural Survey of Cars, Methodology of the Main Resistant Elements in the Car Body", March 1999.

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

Figure 4 Vehicle Side Measurements

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Height Above Ground	Maximum Exterior Crush	Distance from Impact
5	Window Top	1412	0	N/A
4	Window Sill	907	112	1500
3	Mid Door	646	207	750
2	Occupant H-Point	540	198	600
1	Side Sill	358	164	1200

Note: Measurements were taken using a FARO arm at crush grid zero vertical line.
Measurements are taken when the vehicle is in the "As Tested" configuration.
Measurements forward of the vehicle impact reference line are negative.
All measurements are in mm.

Vehicle: 2010 Acura MDX

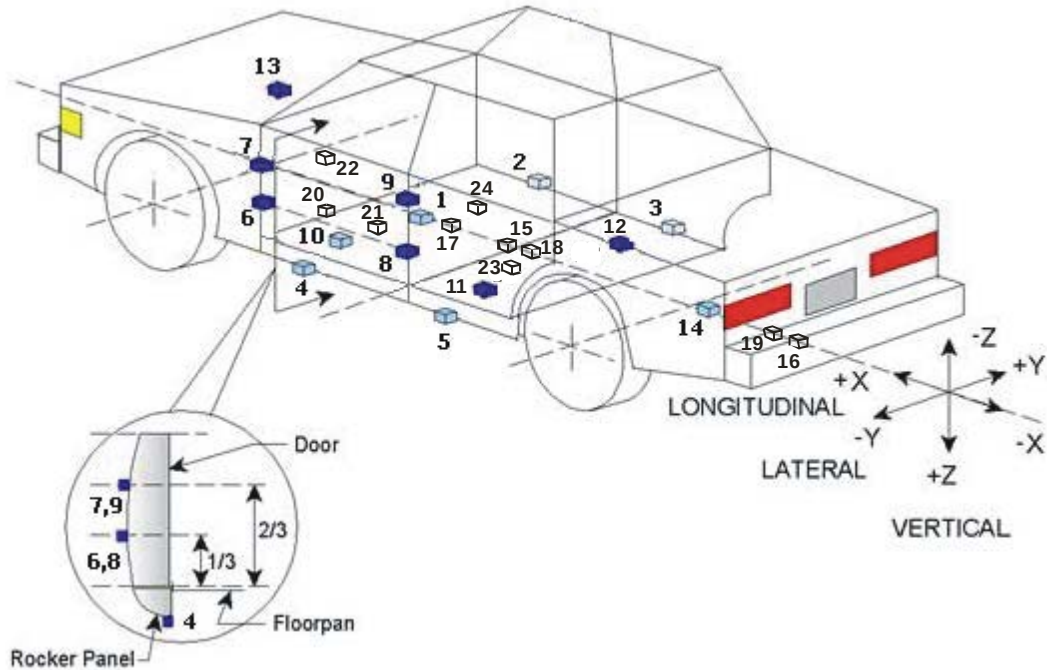
Location	Height		(mm) From Impact Point													
			-1200	-1050	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750
Level 1 Side Sill	358	Pre									978	950	940	942	944	944
		Post									984	829	808	800	795	793
		Crush									-6	121	132	142	149	151
Level 2 H-Point	540	Pre									994	981	975	978	981	982
		Post									943	961	840	799	790	784
		Crush									51	20	135	179	191	198
Level 3 Mid-Door	646	Pre									991	976	975	979	982	984
		Post									942	961	850	801	787	779
		Crush									49	15	125	178	195	205
Level 4 Window Sill	907	Pre							847	864	879	893	904	913	920	925
		Post							864	876	886	906	895	870	866	881
		Crush							-17	-12	-7	-13	9	43	54	44
Level 5 Window Top	1412	Pre														644
		Post														654
		Crush														-10

Location	Height		(mm) From Impact Point													
			900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850
Level 1 Side Sill	358	Pre	944	944	941	939	936	939	956							
		Post	792	795	777	777	781	788	846							
		Crush	152	149	164	162	155	151	110							
Level 2 H-Point	540	Pre	984	983	981	979	977	974	976	992						
		Post	792	803	789	788	796	807	822	913						
		Crush	192	180	192	191	181	167	154	79						
Level 3 Mid-Door	646	Pre	986	985	983	981	979	977	976	992						
		Post	788	813	786	775	776	785	811	922						
		Crush	198	172	197	206	203	192	165	70						
Level 4 Window Sill	907	Pre	930	934	935	936	937	937	935	959	930	929	925	912	899	884
		Post	894	897	864	845	825	830	878	946	925	902	916	901	892	879
		Crush	36	37	71	91	112	107	57	13	5	27	9	11	7	5
Level 5 Window Top	1412	Pre	663	667	669	670	671	668	663	655	645	634	620	603		
		Post	671	673	674	673	672	671	666	658	648	637	622	604		
		Crush	-8	-6	-5	-3	-1	-3	-3	-3	-3	-3	-2	-1		

Figure 5 Test Vehicle Accelerometer Locations and Data Summary

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



- 1-Vehicle CG
- 2-Right Side Sill Front
- 3-Right Side Sill Rear
- 4-Left Side Sill Front
- 5-Left Side Sill Rear
- 6-Left Side Lower A-Pillar
- 7-Left Side Middle A-Pillar
- 8-Left Side Lower B-Pillar
- 9-Left Side Middle B-Pillar
- 10-Left Front Seat Track
- 11-Left Rear Seat Track
- 12- Right Rear Occupant Compartment

- 13-Engine Block
- 14-Rear Floorpan
- 15-Vehicle at EDR¹
- 16-Rear Deck
- 17-Vehicle CG Gyros
- 18-Vehicle at EDR Gyros¹
- 19-Rear Deck Gyros
- 20-Left Front Door Mid Centerline
- 21-Left Front Door Mid Rear
- 22-Left Front Door Upper Centerline
- 23-Left Rear Door Mid Rear
- 24-Left Rear Door Upper Centerline

¹Location of accelerometer may change depending on vehicle EDR location.

Table 8 Test Vehicle Transducer Locations and Data Summary

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Location		Coordinates (mm)			Positive Direction		Negative Direction	
		X	Y	Z	Max	Time (ms)	Max	Time (ms)
1	Vehicle CG	3452	115	400				
	Longitudinal (g)				1.9	58.7	-7.9	10.1
	Lateral (g)				28.0	6.8	-2.5	133.3
	Vertical (g)				14.2	17.6	-12.1	42.0
	Resultant				31.0	6.7	---	---
2	Right Side Sill Front	3360	740	495				
	Longitudinal (g)				3.1	60.4	-5.0	11.4
	Lateral (g)				28.6	7.0	-2.5	132.2
	Vertical (g)				4.3	72.3	-12.8	10.2
	Resultant				29.2	7.1	---	---
3	Right Side Sill Rear	2520	750	505				
	Longitudinal (g)				3.4	59.8	-4.5	11.5
	Lateral (g)				32.0	7.3	-2.1	133.1
	Vertical (g)				5.0	71.2	-7.4	9.7
	Resultant				32.2	7.4	---	---
4	Left Side Sill Front	3358	-740	463				
	Lateral (g)				115.7	6.9	-46.0	12.5
5	Left Side Sill Rear	2518	-750	478				
	Lateral (g)				42.7	9.2	-6.4	20.2
6	Left Side Lower A-Pillar	3805	-885	625				
	Lateral (g)				56.7	3.8	-29.2	28.0
7	Left Side Middle A-Pillar	3800	-875	970				
	Lateral (g)				43.8	10.3	-7.1	15.2
8	Left Side Lower B-Pillar	2770	-920	642				
	Lateral (g)				74.9	3.3	-57.8	19.8
9	Left Side Middle B-Pillar	2755	-890	1040				
	Lateral (g)				83.8	10.9	-37.9	20.9
10	Left Front Seat Track	2970	-585	521				
	Lateral (g)				37.1	6.9	-15.1	27.5

Table 8 Test Vehicle Transducer Locations and Data Summary, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Location		Coordinates (mm)			Positive Direction		Negative Direction	
		X	Y	Z	Max	Time (ms)	Max	Time (ms)
11	Left Rear Seat Track	2225	-660	552				
	Lateral (g)				30.3	7.4	-60.2	21.0
12	Right Rear Occupant Compartment	2195	745	535				
	Lateral (g)				29.3	8.0	-1.7	133.5
13	Engine Block	4510	0	895				
	Longitudinal (g)				5.0	98.1	-9.3	41.2
	Lateral (g)				23.0	42.9	-7.6	110.0
14	Rear Floorpan	1460	0	565				
	Longitudinal (g)				2.5	7.7	-9.7	25.7
	Lateral (g)				22.1	8.6	-3.0	95.0
	Vertical (g)				4.3	19.0	-7.8	24.2
	Resultant				22.5	26.9	---	---
15	Vehicle at EDR	3912	40	583				
	Longitudinal (g)				2.7	4.5	-10.5	10.1
	Lateral (g)				19.9	7.3	-2.0	133.0
	Vertical (g)				5.5	6.8	-6.0	29.5
	Resultant				21.0	7.5	---	---
16	Rear Deck	705	-30	710				
	Longitudinal (g)				3.3	7.5	-7.2	29.3
	Lateral (g)				24.3	29.5	-4.3	93.9
	Vertical (g)				5.4	36.1	-3.6	64.3
	Resultant				25.5	29.4	---	---
17	Vehicle CG	3452	75	400				
	Roll (°/sec)				3.0	74.6	-11.3	16.8
	Pitch (°/sec)				-- ¹	-- ¹	-- ¹	-- ¹
	Yaw (°/sec)				57.6	10.9	-86.9	83.7
18	Vehicle at EDR	3852	25	591				
	Roll (°/sec)				130.0	28.2	-72.3	175.5
	Pitch (°/sec)				-- ¹	-- ¹	-- ¹	-- ¹
	Yaw (°/sec)				-- ¹	-- ¹	-- ¹	-- ¹
19	Rear Deck	705	25	710				
	Roll (°/sec)				127.3	21.6	-75.0	182.4
	Pitch (°/sec)				-- ¹	-- ¹	-- ¹	-- ¹
	Yaw (°/sec)				-- ¹	-- ¹	-- ¹	-- ¹

¹ See Data Acquisition Explanations

Table 8 Test Vehicle Transducer Locations and Data Summary, Continued

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13

Location		Coordinates (mm)			Positive Direction		Negative Direction	
		X	Y	Z	Max	Time (ms)	Max	Time (ms)
20	Left Front Door Mid Centerline	3215	-820	809				
	Lateral (g)				74.0	8.6	-40.6	21.5
21	Left Front Door Mid Rear	2980	-830	809				
	Lateral (g) ¹				137.3	10.8	-102.6	19.7
22	Left Front Door Upper Centerline	3292	-810	1084				
	Lateral (g)				101.8	14.0	-47.5	6.4
23	Left Rear Door Mid Rear	1972	-845	810				
	Lateral (g)				63.0	10.2	-10.3	58.1
24	Left Rear Door Upper Centerline	2295	-805	1128				
	Lateral (g)				111.2	14.7	-57.6	35.9

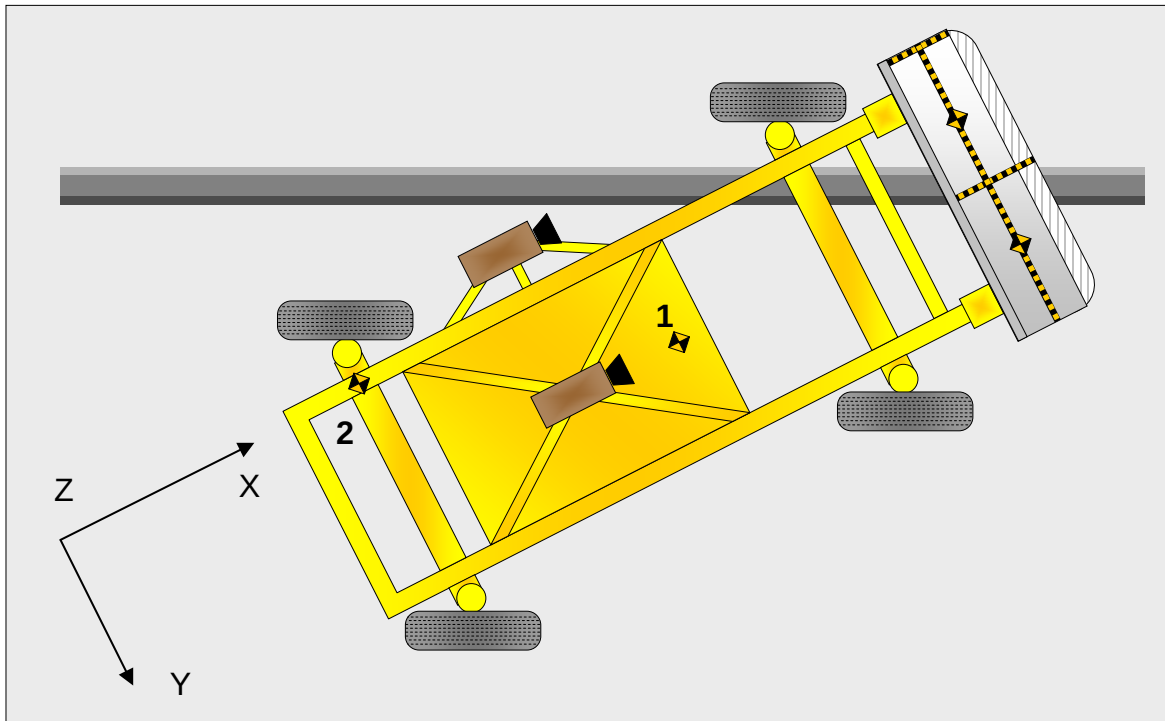
Reference: X: + Forward from rear bumper
Y: + Rightward from vehicle centerline
Z: + Upward from ground level

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

Table 9 MDB Test Data Summary

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



Location		Positive Direction		Negative Direction	
		Max.	Time (ms)	Max.	Time (ms)
1	MDB CG				
	Longitudinal (g)	4.0	121.3	-22.3	16.3
	Lateral (g)	1.2	67.3	-8.4	35.8
	Vertical (g)	6.1	36.9	-8.8	20.1
	Resultant	23.8	36.6	---	---
2	MDB Rear Frame				
	Longitudinal (g)	2.5	144.8	-24.4	38.0
	Lateral (g)	3.1	18.4	-2.5	144.5

Reference : X - Face of MDB (+ forward)
Y - MDB Centerline (+ to right)
Z - Ground Plane (+ down)

Table 9 MDB Test Data Summary, Continued

MDB WEIGHTS

	Units	Front Axle	Rear Axle	Total
Left	kg	415.6	266.4	
Right	kg	358.6	326.8	
Ratio	%	56.6	43.4	
Totals	kg	774.2	593.2	1367.4

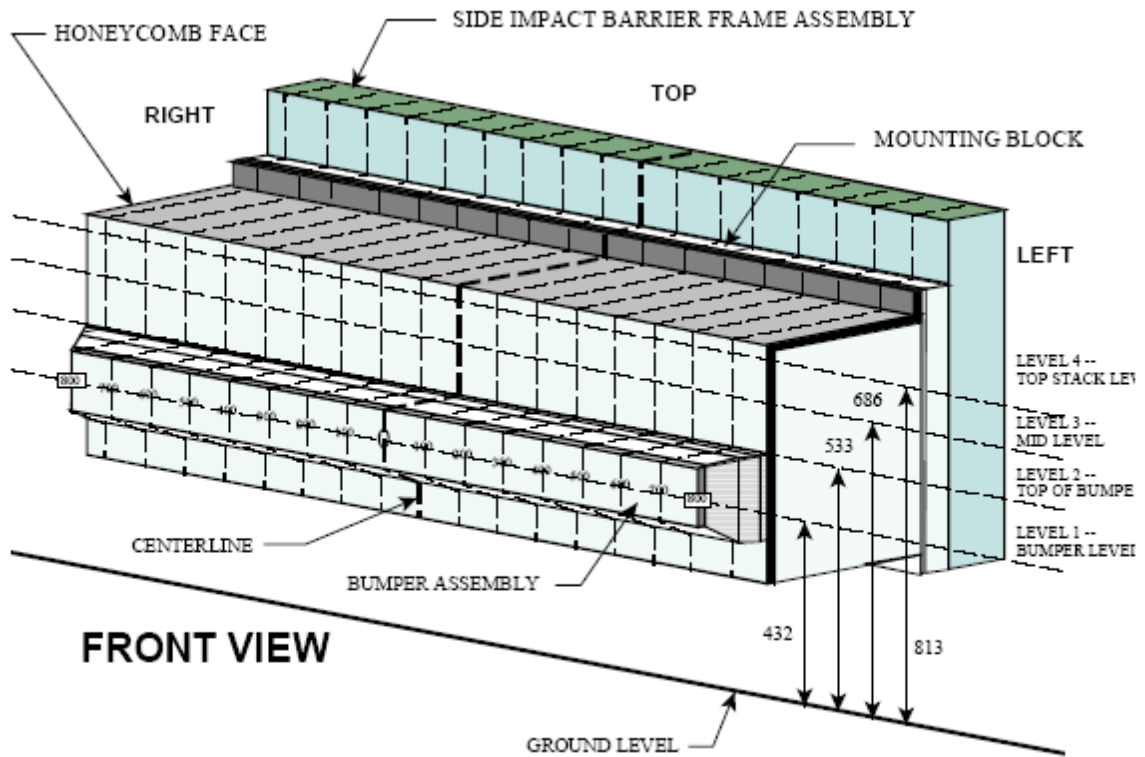
SPEED AND IMPACT ANGLE DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	61.9
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	61.8
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	91.0
MDB Forward Line of Motion to Target Vehicle CL	degrees	62.5 to 63.5	63.0
MDB Crabbed Angle to MDB Forward Line of Motion	degrees	26 to 28	26.0

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE

Vertical Location			From Centerline		Maximum Crush
Row	Description	Height	Distance	Direction	
A	Center of Bumper	432	700	Right	258
B	Top of Bumper	533	100	Left	372
C	Mid-Level	686	800	Right	156
D	Top of Stack	813	800	Left	157

Table 9 MDB Test Data Summary, Continued



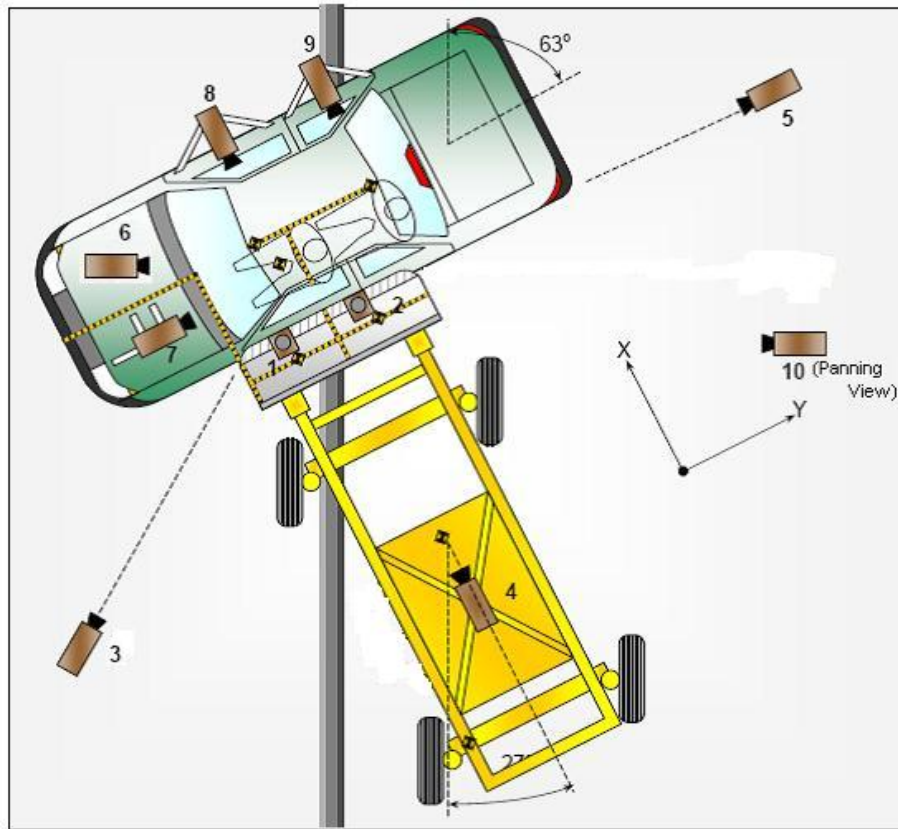
DEFORMABLE BARRIER STATIC CRUSH

Stack Level	Distance Right of Center								C/L	Distance Left of Center							
	800	700	600	500	400	300	200	100		100	200	300	400	500	600	700	800
1	-126	-99	-82	-80	-89	-102	-143	-133	-104	-98	-87	-96	-76	-94	-110	-126	-157
2	-156	-133	-124	-111	-102	-102	-129	-114	-108	-95	-83	-74	-71	-73	-80	-94	-131
3	-192	---	---	---	---	---	---	---	-372	-372	-128	-126	-123	-122	-124	-125	-130
4	-256	-258	-243	-230	-222	-216	-213	-210	-208	-206	-204	-203	-202	-203	-204	-209	-211

Figure 6 High-Speed Camera Locations and Data Summary

Test Vehicle: 2010 Acura MDX

Test Date: 03/12/13



No.	Camera View	Lens (mm)	Speed (fps)
1	Overhead wide view	6	1000
2	Overhead close up view	16	1000
3	Left side front oblique view	12.5	1000
4	Struck side view at impact ¹	12.5	1000
5	Rear impact view of struck side	25	1000
6	Onboard driver front oblique	8.5	1000
7	Onboard driver front	12.5	1000
8	Onboard driver side	8.5	1000
9	Onboard passenger side	6	1000
10	Real-time	zoom	30

¹ Camera Omitted on Test Day per A. Louden

Appendix A

Photographs



Figure A-1 Pre-Test Front View

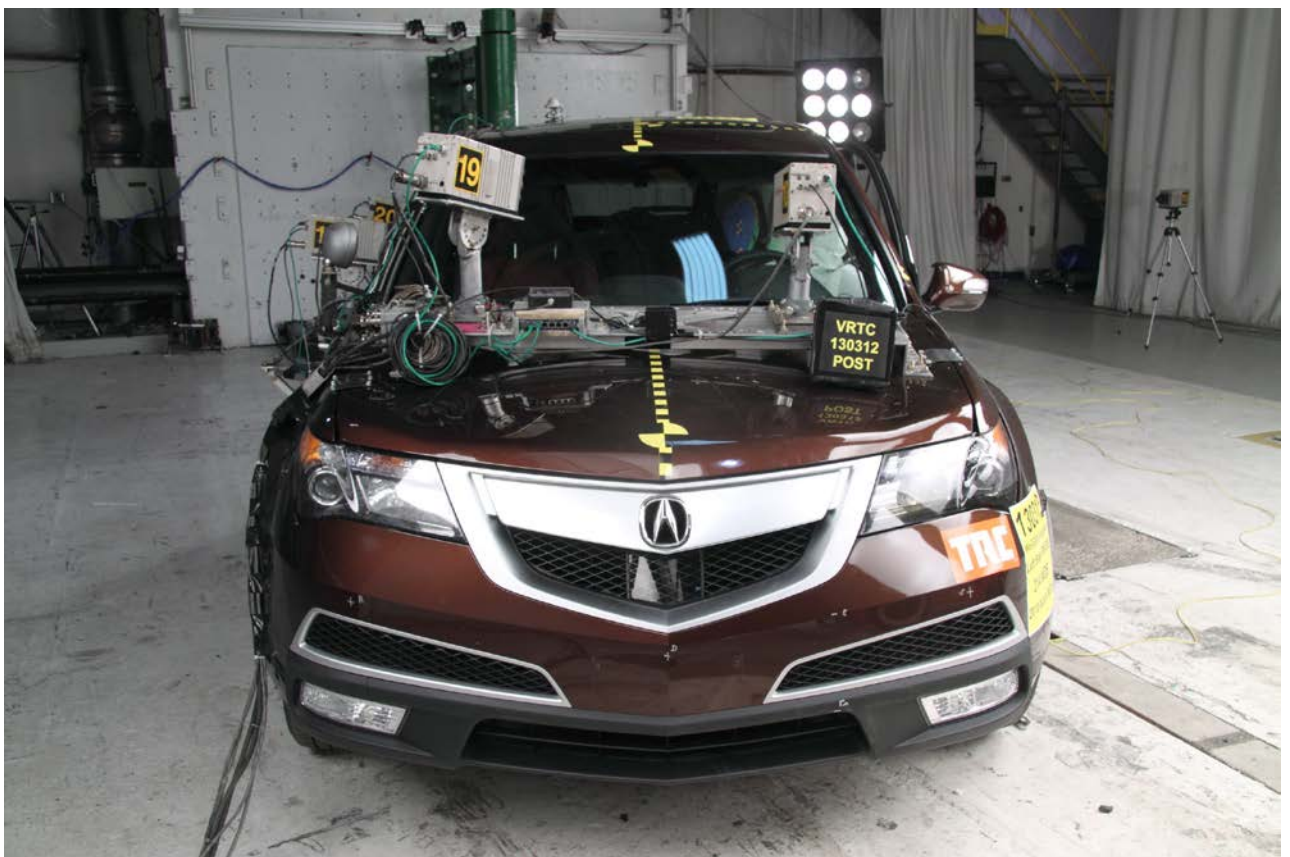


Figure A-2 Post-Test Front View



Figure A-3 Pre-Test Left Front View



Figure A-4 Post-Test Left Front View



Figure A-5 Pre-Test Left Side View

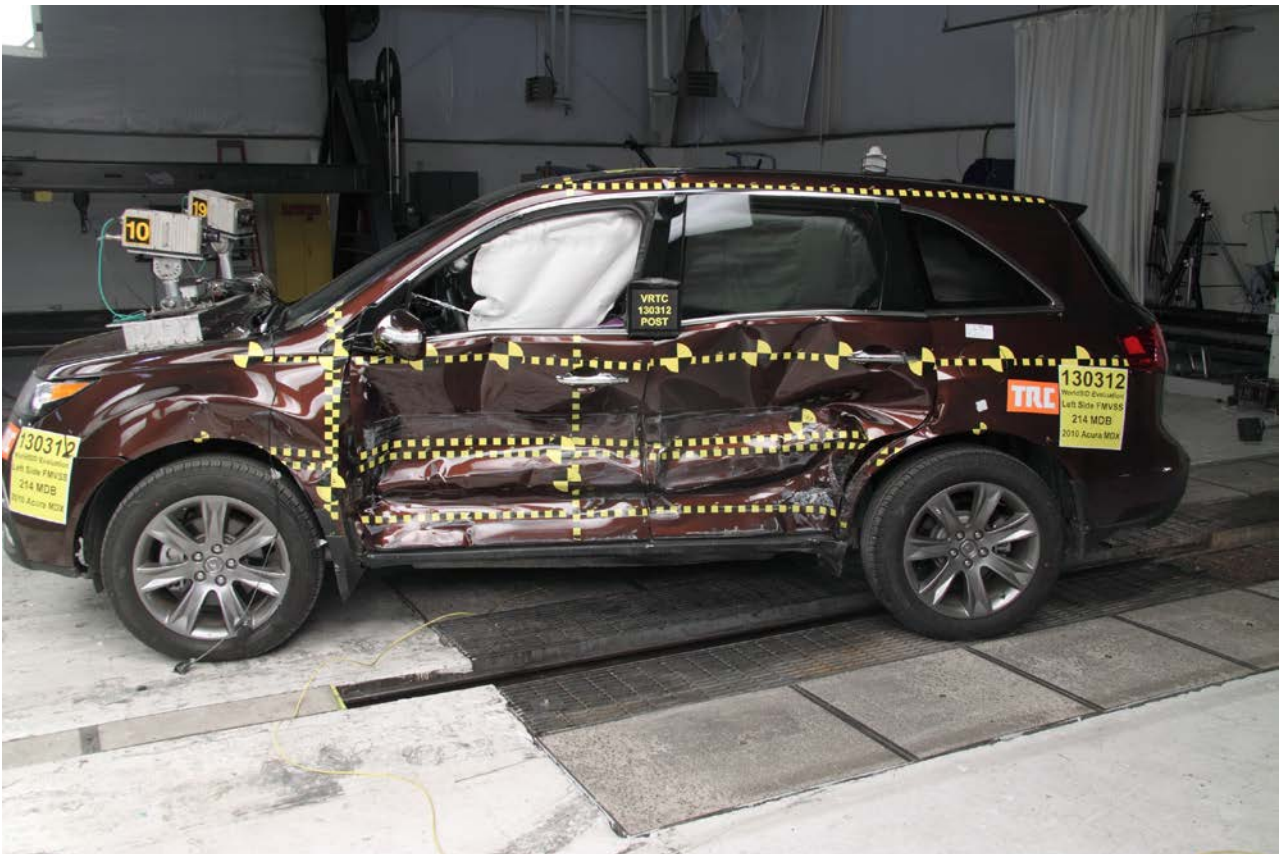


Figure A-6 Post-Test Left Side View



Figure A-7 Pre-Test Left Rear View



Figure A-8 Post-Test Left Rear View



Figure A-9 Pre-Test Rear View

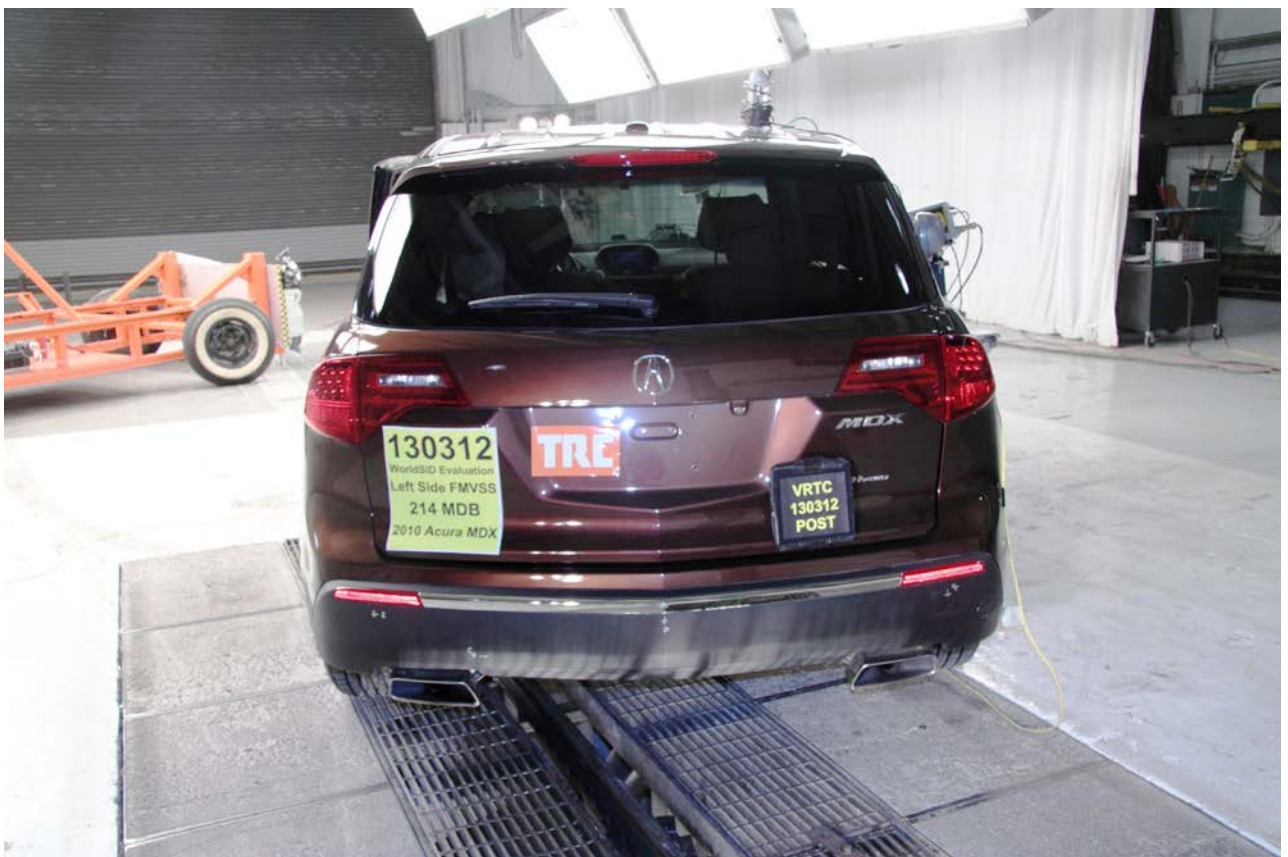


Figure A-10 Post-Test Rear



Figure A-11 Pre-Test Right Side View



Figure A-12 Post-Test Right Side View

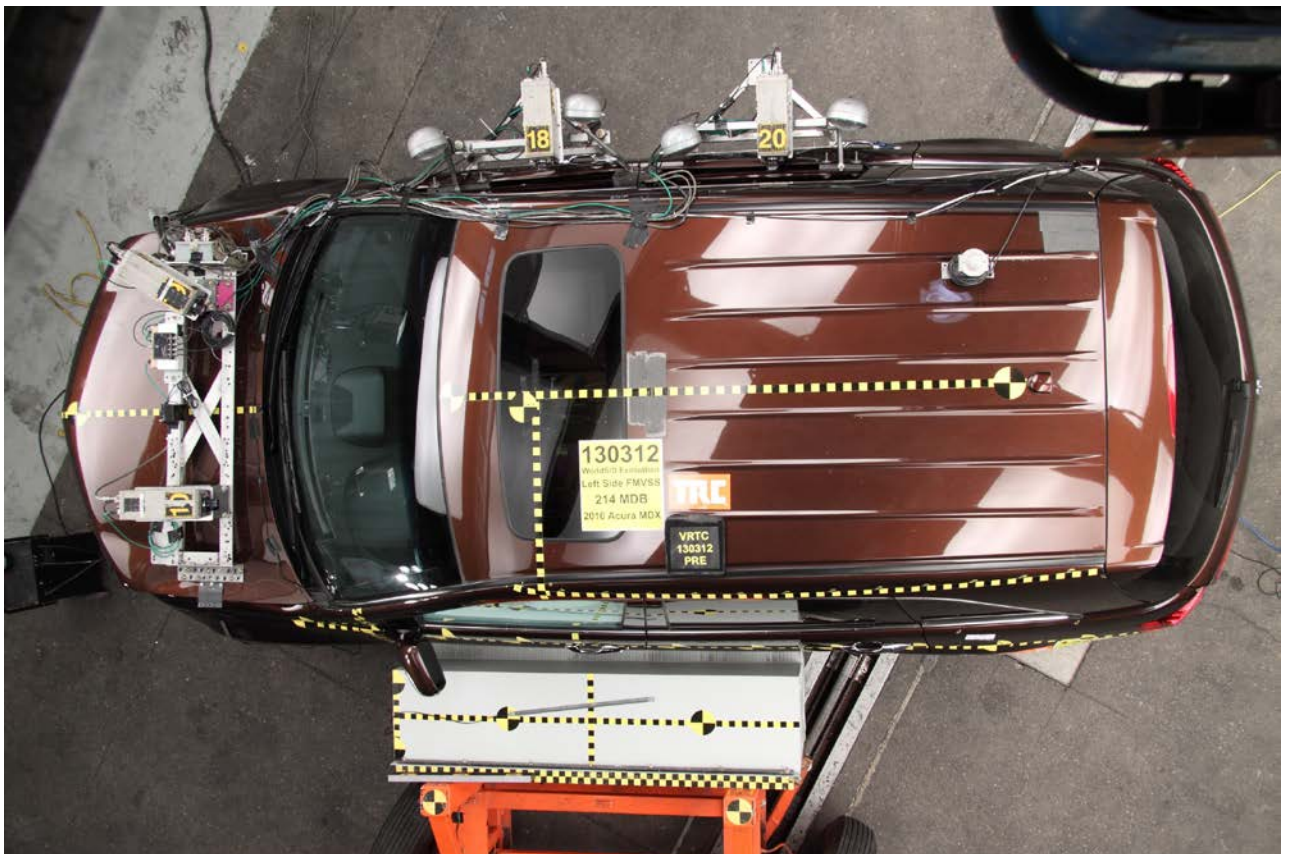


Figure A-13 Pre-Test Overhead View

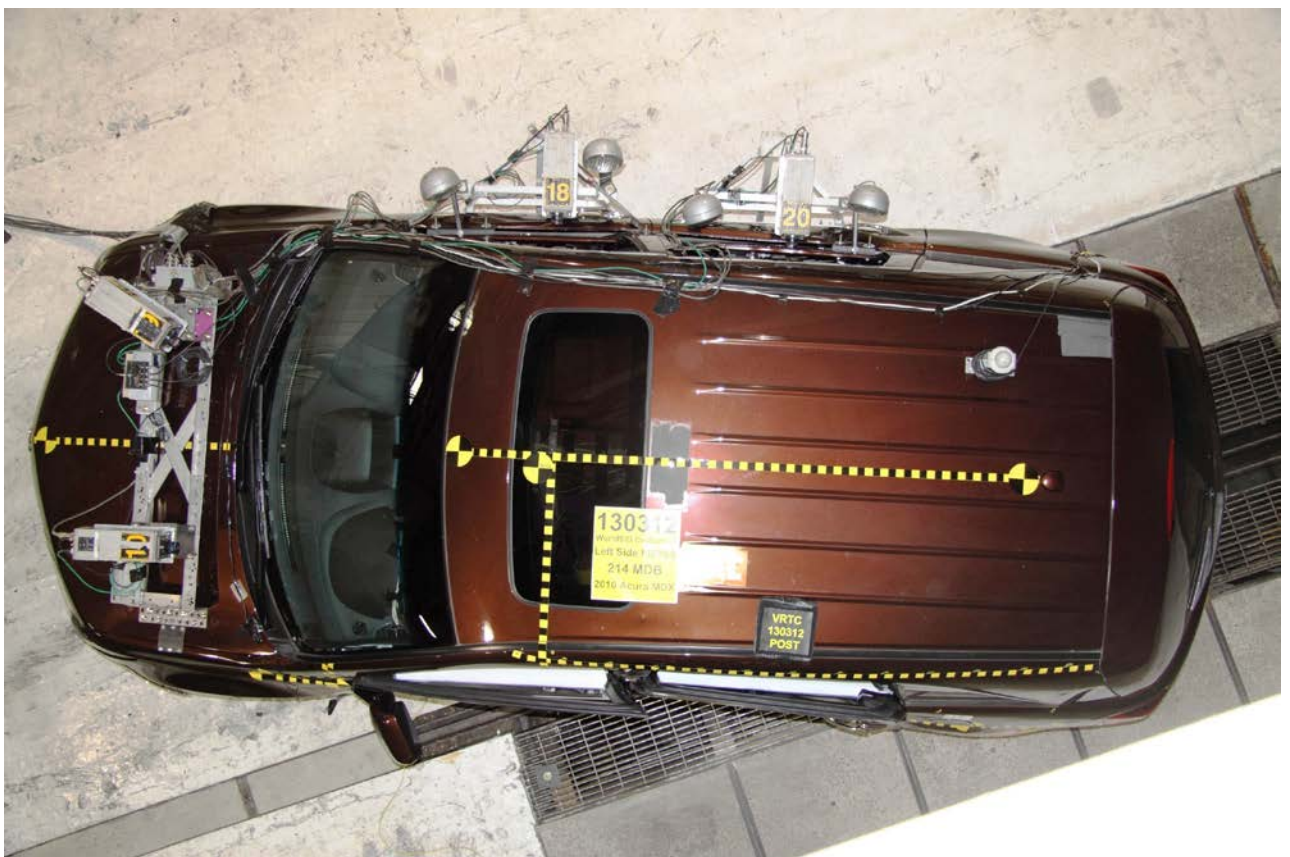


Figure A-14 Post-Test Overhead View



Figure A-15 Pre-Test Primary Impact Point View



Figure A-16 Post-Test Primary Impact Point View

Photograph Not Taken

Figure A-17 Pre-Test Secondary Impact Point View



Figure A-18 Post-Test Secondary Impact Point View



Figure A-19 Pre-Test Driver Dummy - View 1



Figure A-20 Post-Test Driver Dummy - View 1



Figure A-21 Pre-Test Driver Dummy - View 2



Figure A-22 Post-Test Driver Dummy - View 2



Figure A-23 Pre-Test Driver Dummy - View 3



Figure A-24 Post-Test Driver Dummy - View 3

Photograph Not Taken

Figure A-25 Pre-Test Driver Door Panel View

Photograph Not Taken

Figure A-26 Post-Test Driver Door Panel View



Figure A-27 Post-Test Driver Dummy Contact – View 1



Figure A-28 Post-Test Driver Dummy Contact – View 2

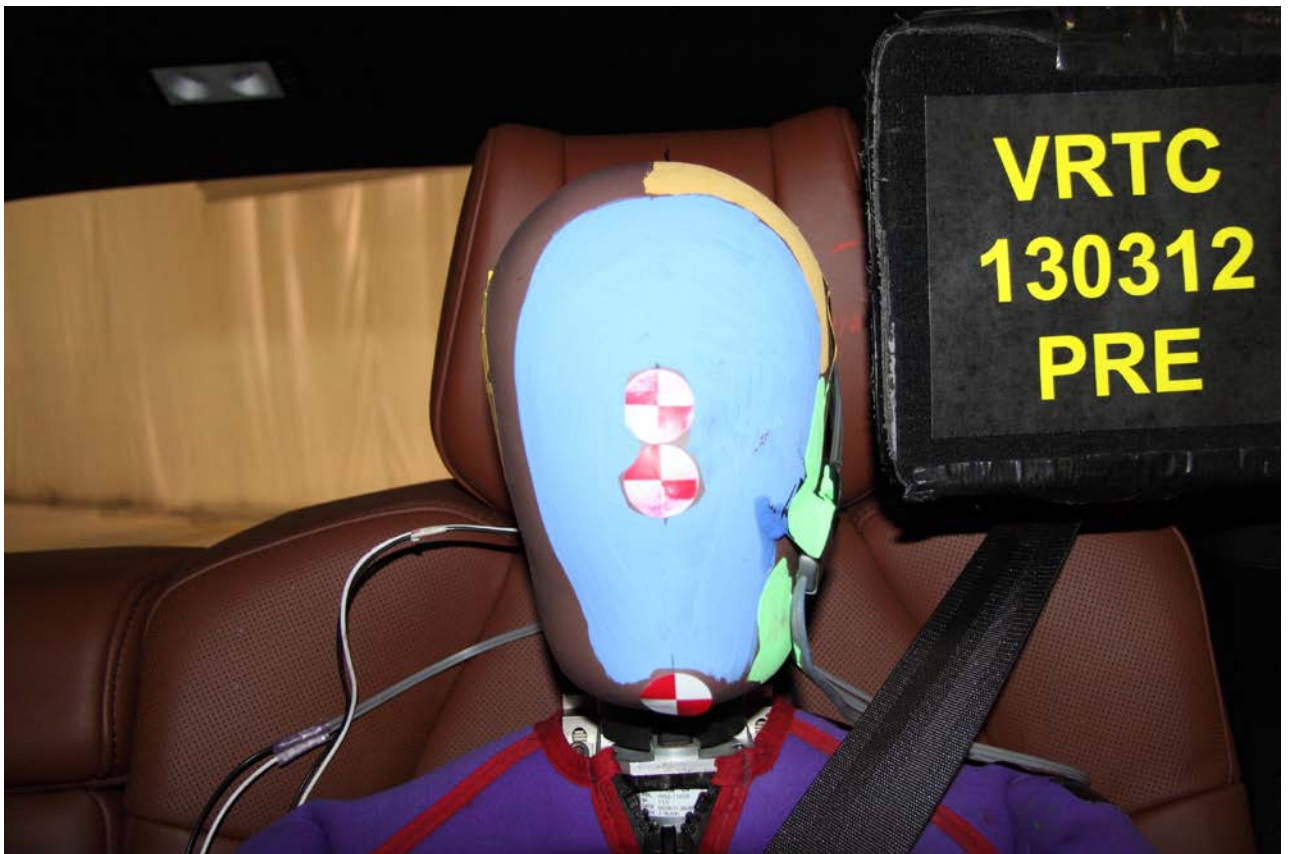


Figure A-29 Pre-Test Rear Passenger Dummy - View 1

Photograph Not Taken

Figure A-30 Post-Test Rear Passenger Dummy - View 1



Figure A-31 Pre-Test Rear Passenger Dummy - View 2

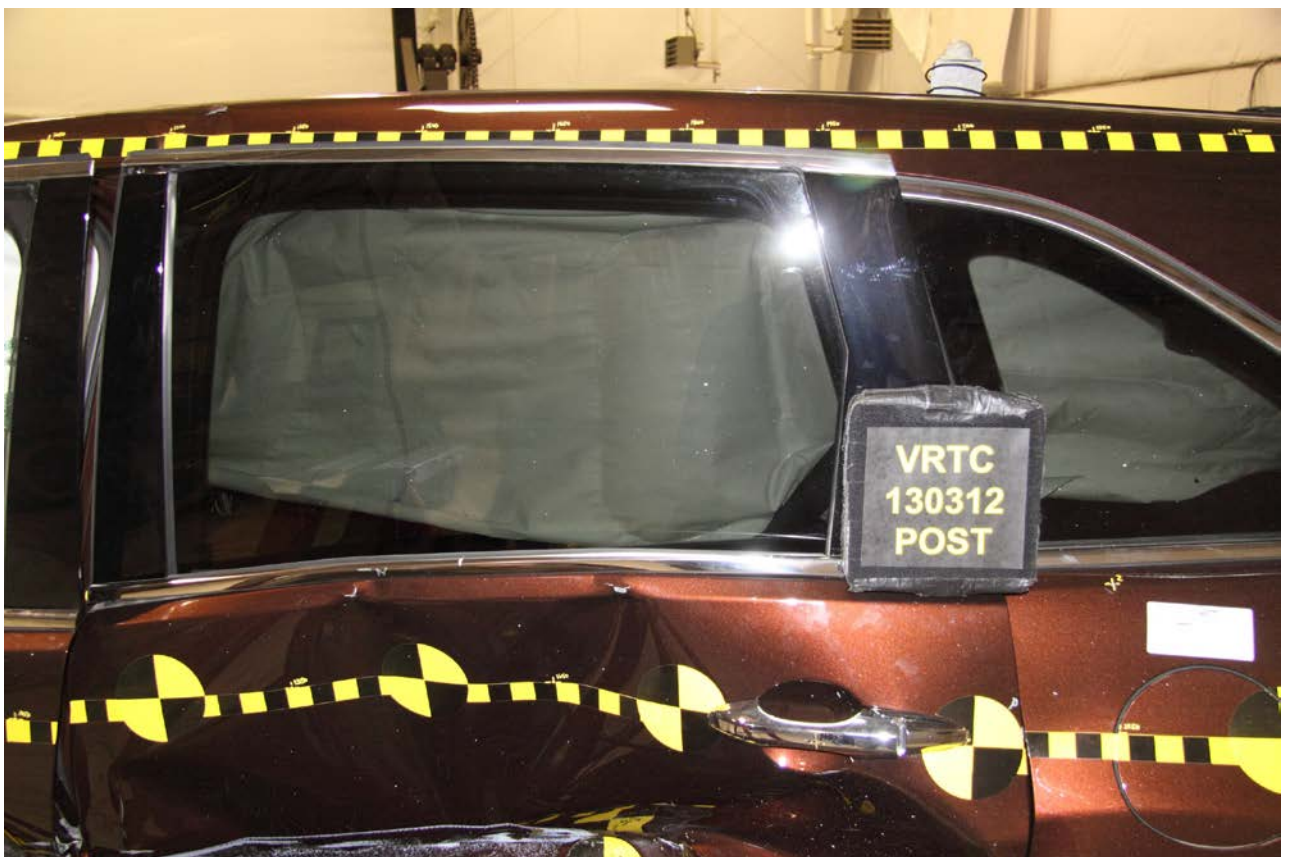


Figure A-32 Post-Test Rear Passenger Dummy - View 2



Figure A-33 Pre-Test Rear Passenger Dummy - View 3



Figure A-34 Post-Test Rear Passenger Dummy - View 3

Photograph Not Taken

Figure A-35 Pre-Test Rear Passenger Door Panel View

Photograph Not Taken

Figure A-36 Post-Test Rear Passenger Door Panel View



Figure A-37 Post-Test Rear Passenger Dummy Contact – View 1



Figure A-38 Post-Test Rear Passenger Dummy Contact – View 2



Figure A-39 Pre-Test MDB Face Front View

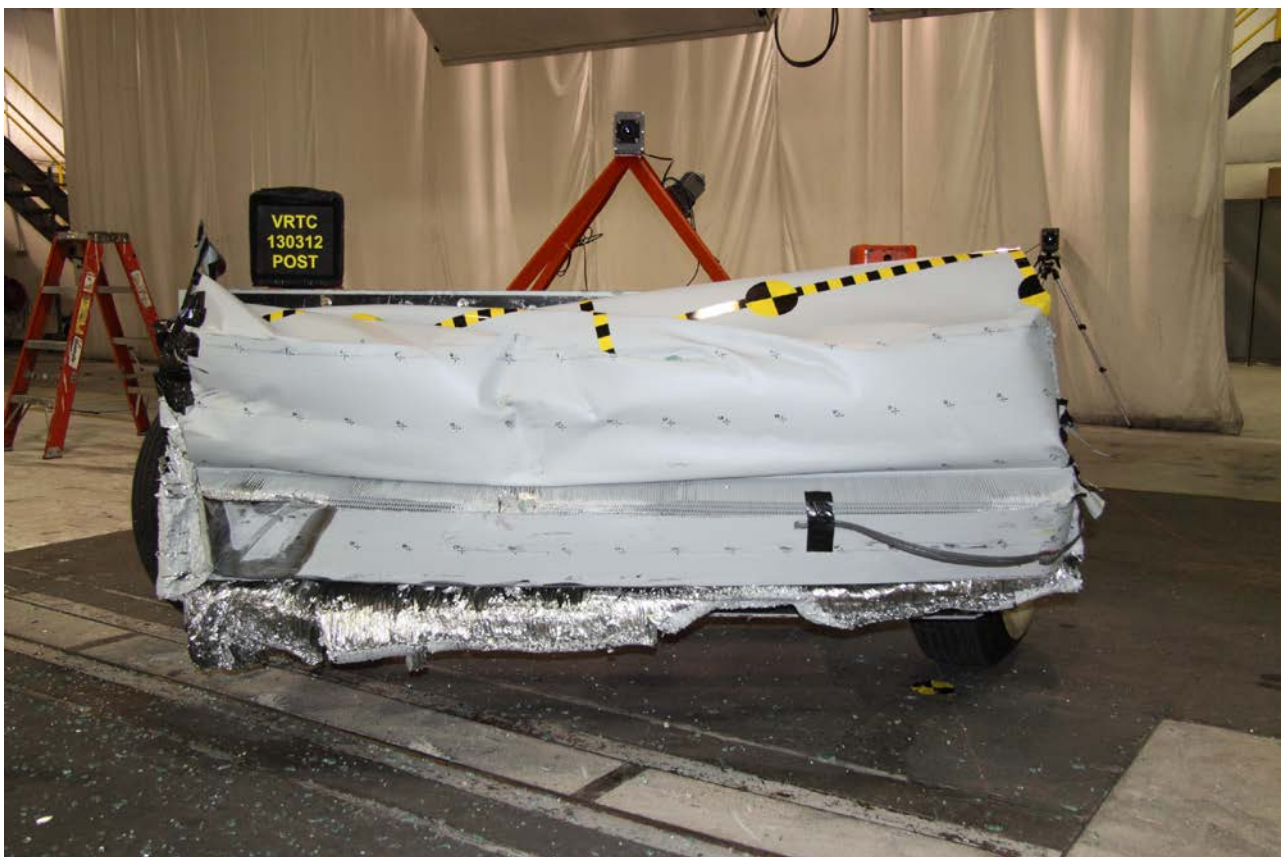


Figure A-40 Post-Test MDB Face Front View

Photograph Not Taken

Figure A-41 Pre-Test MDB Face Top View



Figure A-42 Post-Test MDB Face Top View



Figure A-43 Pre-Test MDB Face Left Front View



Figure A-44 Post-Test MDB Face Left Front View



Figure A-45 Pre-Test MDB Face Right Front View



Figure A-46 Post-Test MDB Face Right Front View



Figure A-47 Pre-Test MDB Face Left Side View



Figure A-48 Pre-Test MDB Face Right Side View

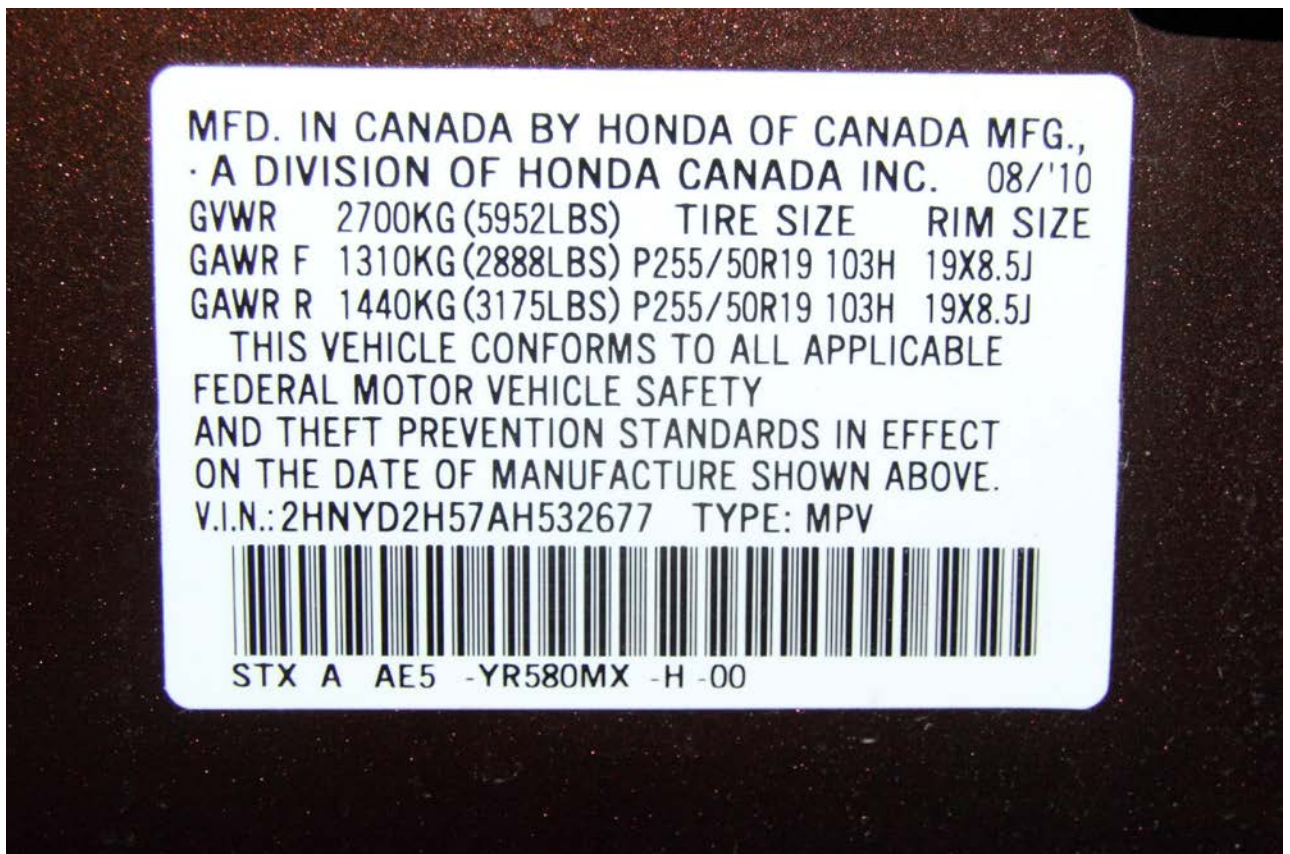


Figure A-49 Vehicle Certification Label

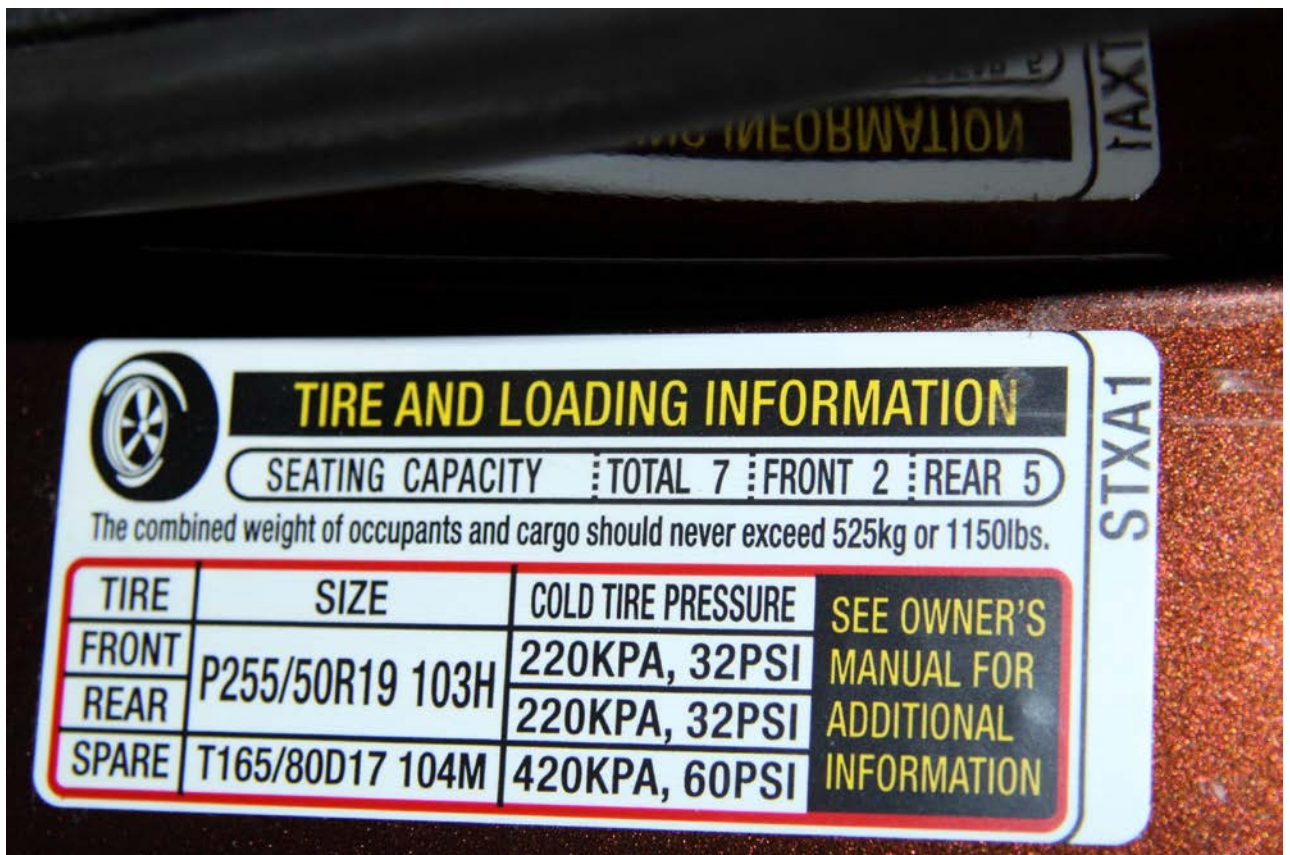


Figure A-50 Tire Pressure Label



Figure A-51 Pre-Test Instrumentation Location View

Appendix B

Data Plots



FMVSS 214 Side Impact 2010 Acura MDX

Head Longitudinal Ax

Date: 03/13/2013

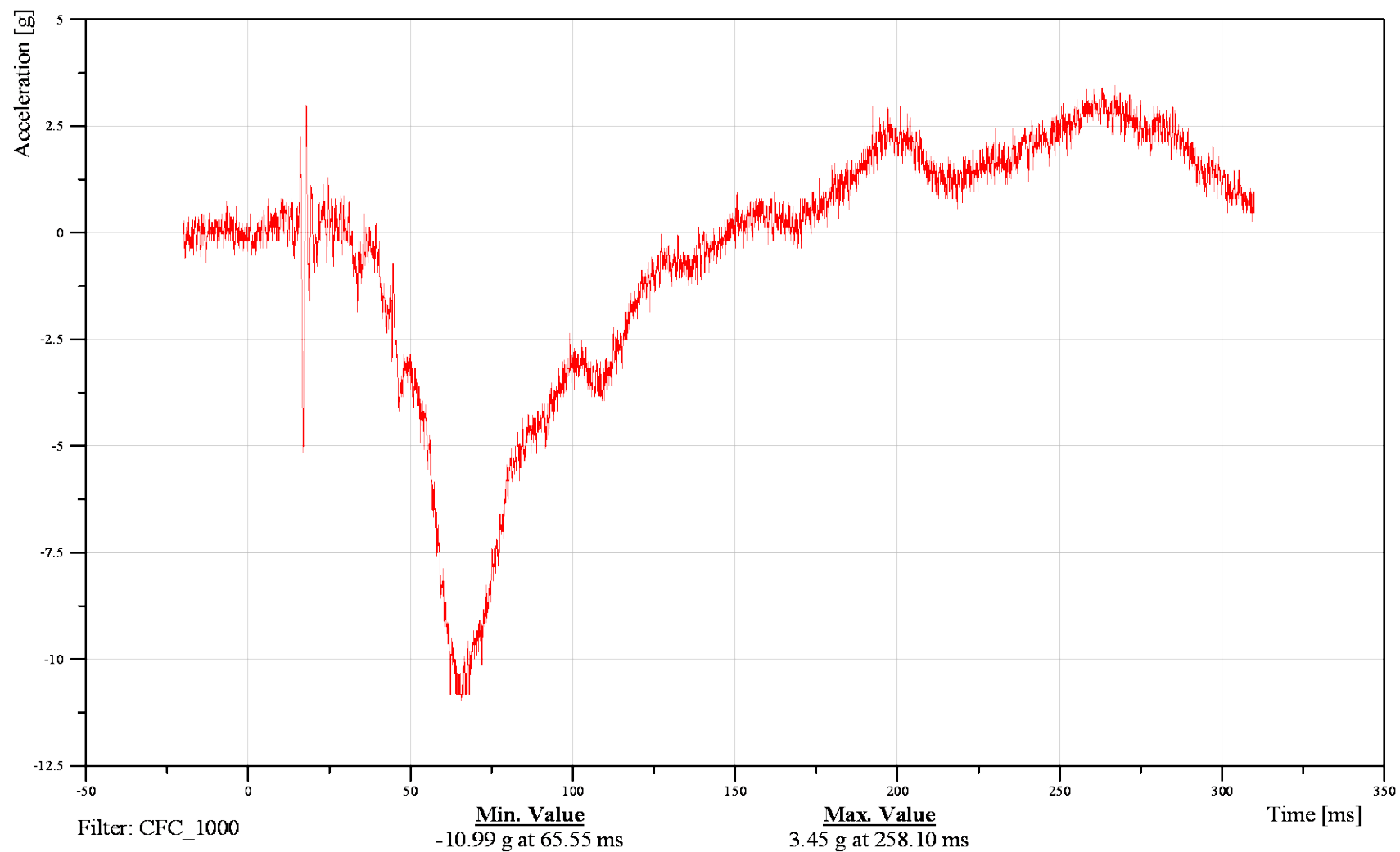
Time: 10:15

Customer: VRTC

11HEADCG00WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Lateral Ay

Date: 03/13/2013

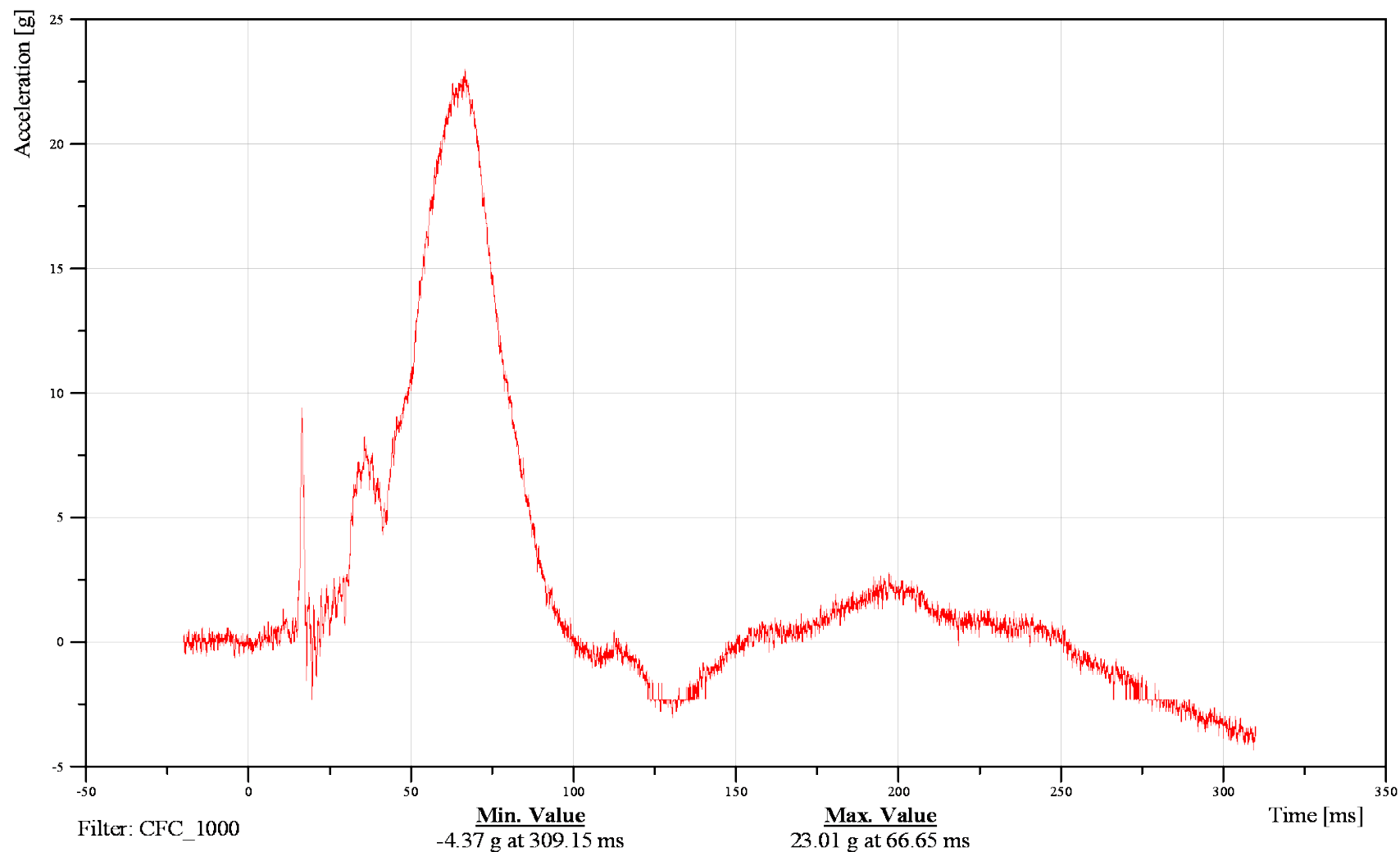
Time: 10:15

Customer: VRTC

11HEADCG00WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Head Vertical Az

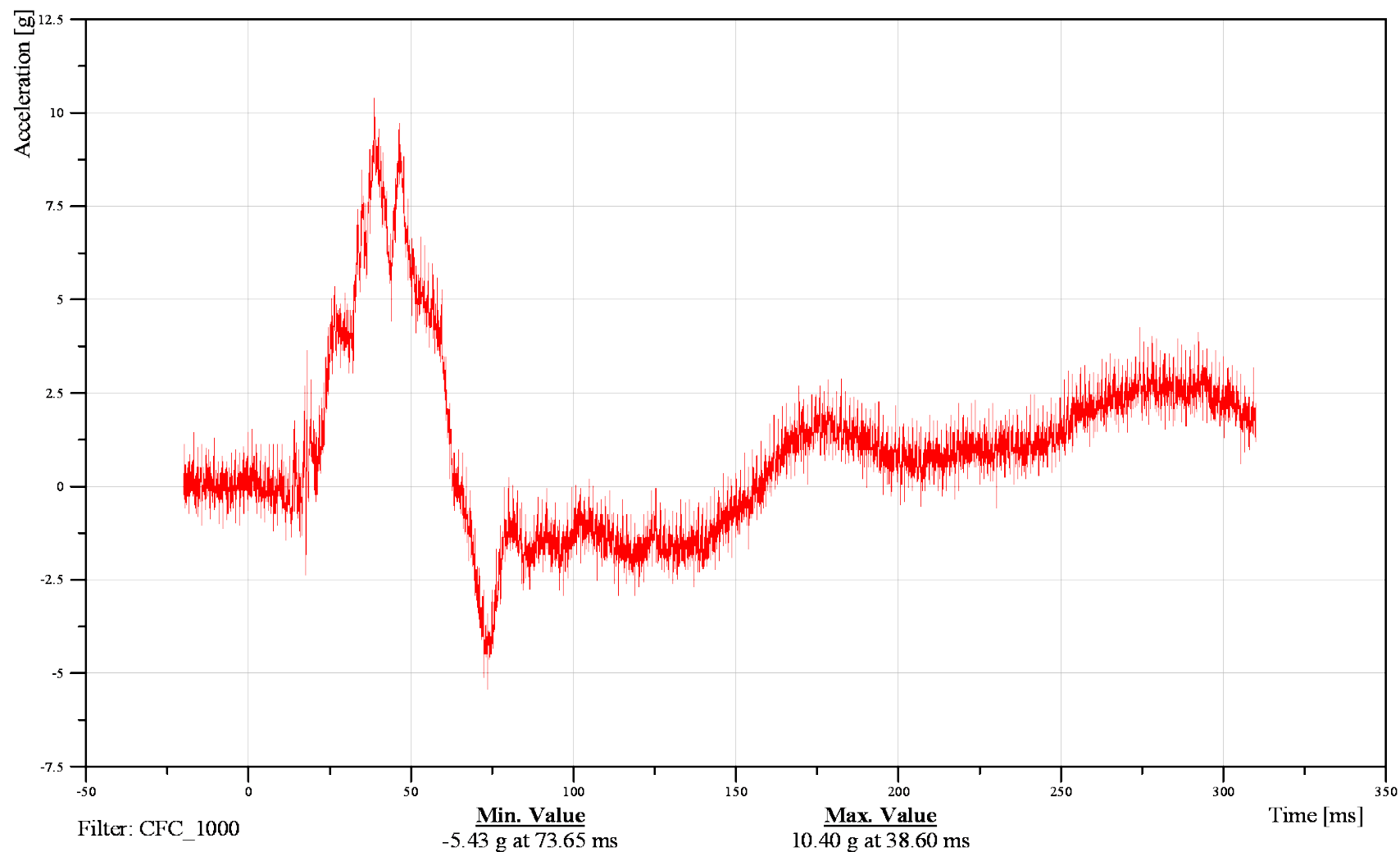
Time: 10:15

Customer: VRTC

11HEADCG00WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head A Resultant

Date: 03/13/2013

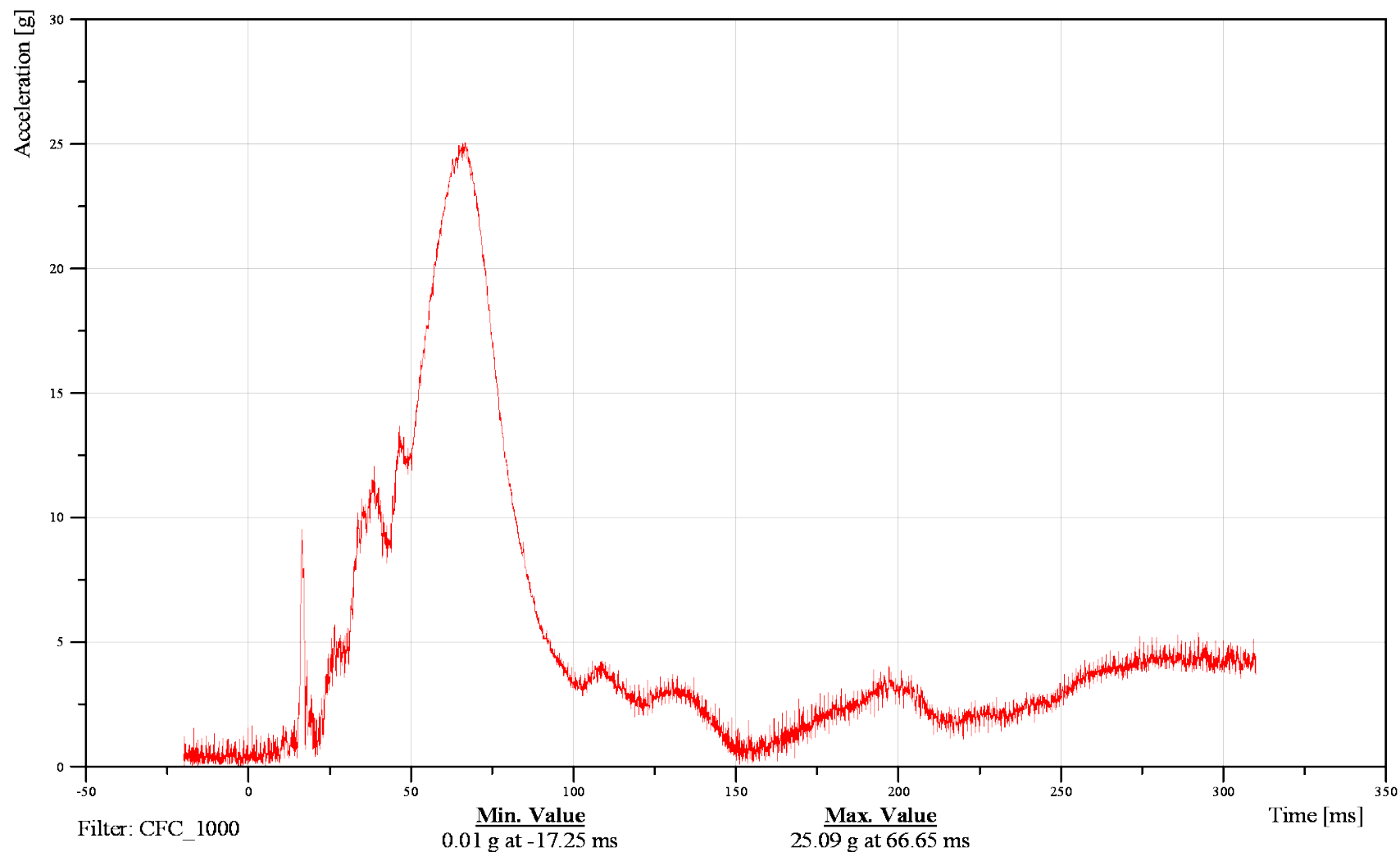
Time: 10:15

Customer: VRTC

11HEADCG00WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Rotational Acceleration Rx

Date: 03/13/2013

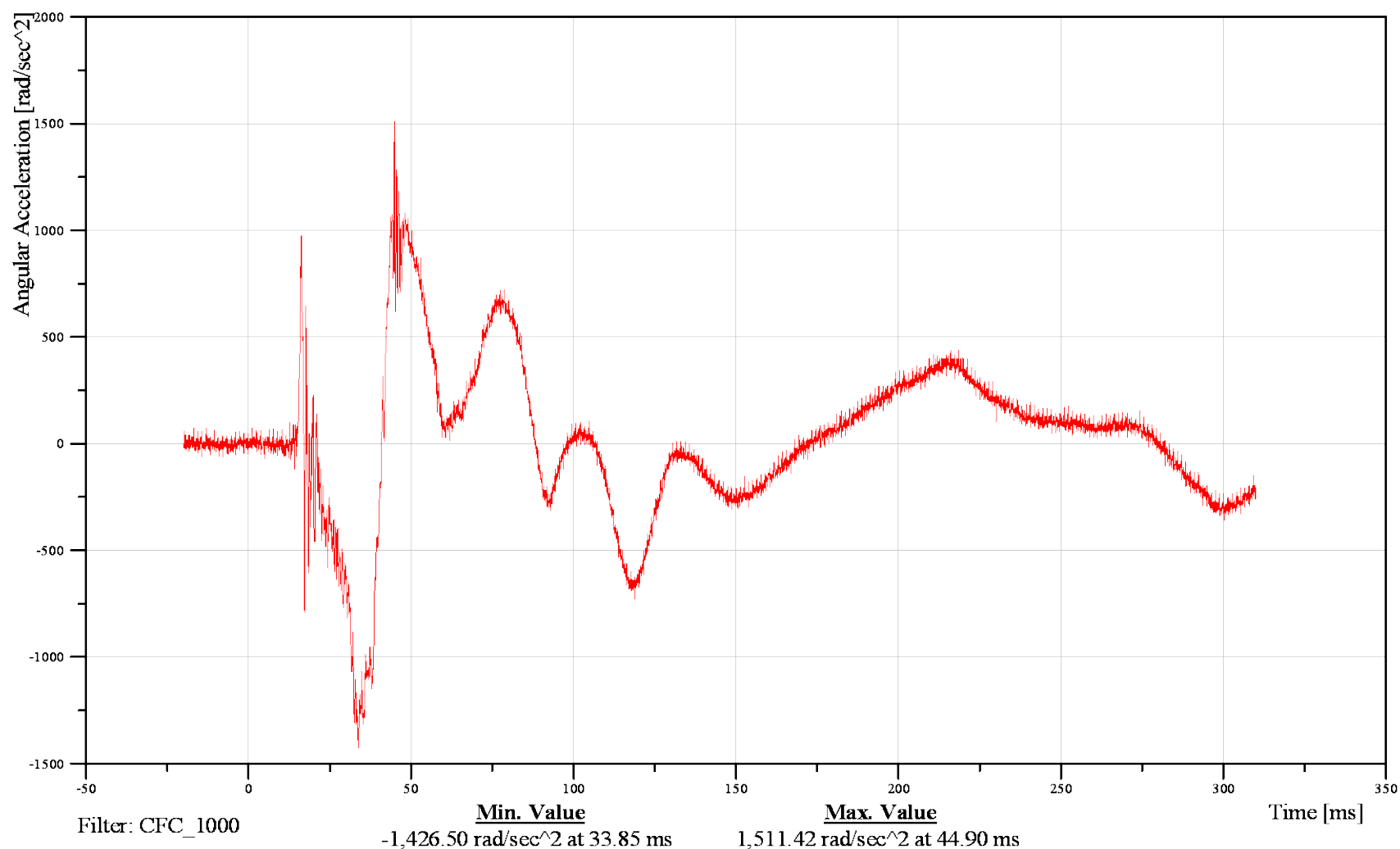
Time: 10:15

Customer: VRTC

11HEAD0000WSAAXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Rotational Acceleration Ry

Date: 03/13/2013

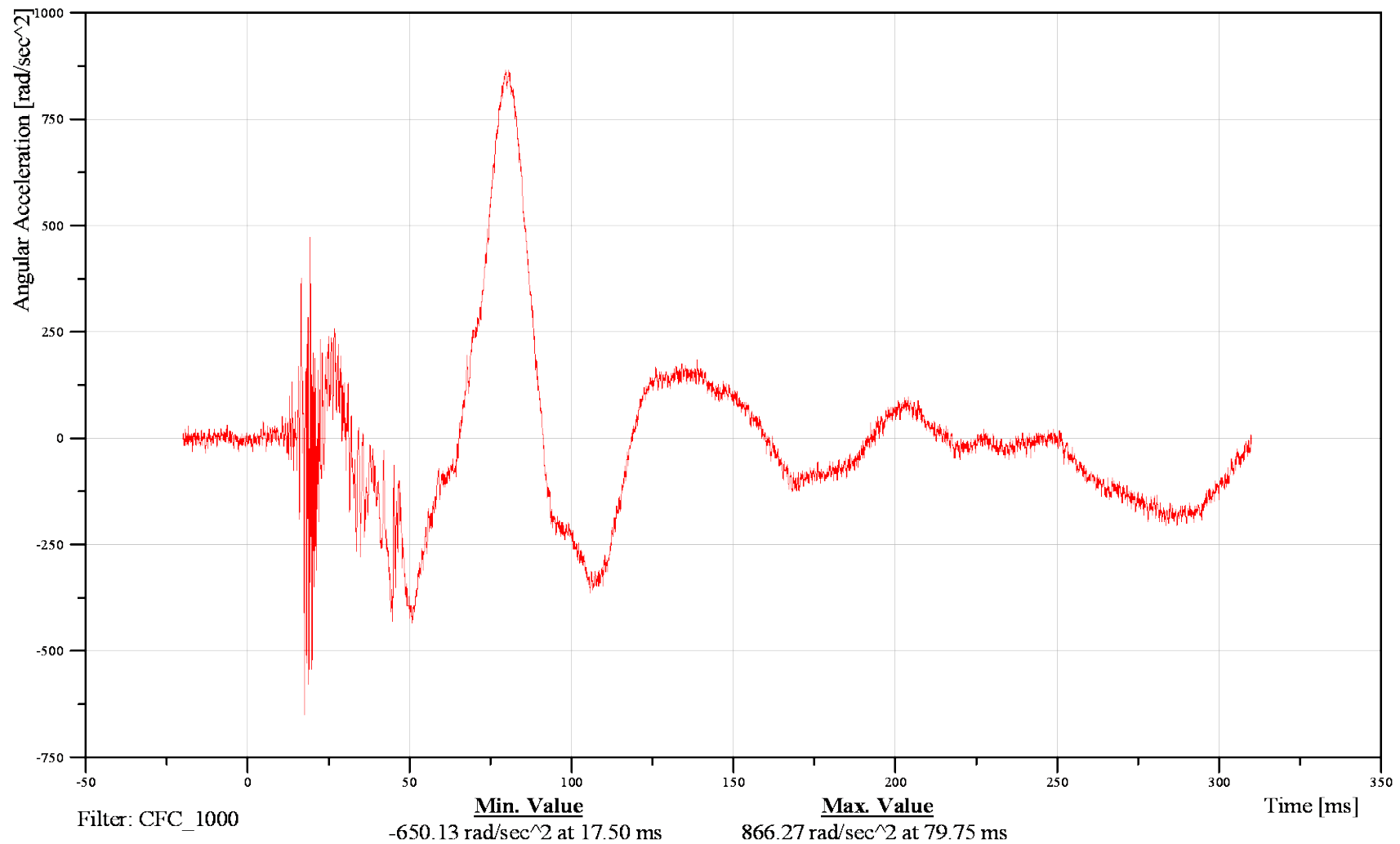
Time: 10:15

Customer: VRTC

11HEAD0000WSAAYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Rotational Acceleration Rz

Date: 03/13/2013

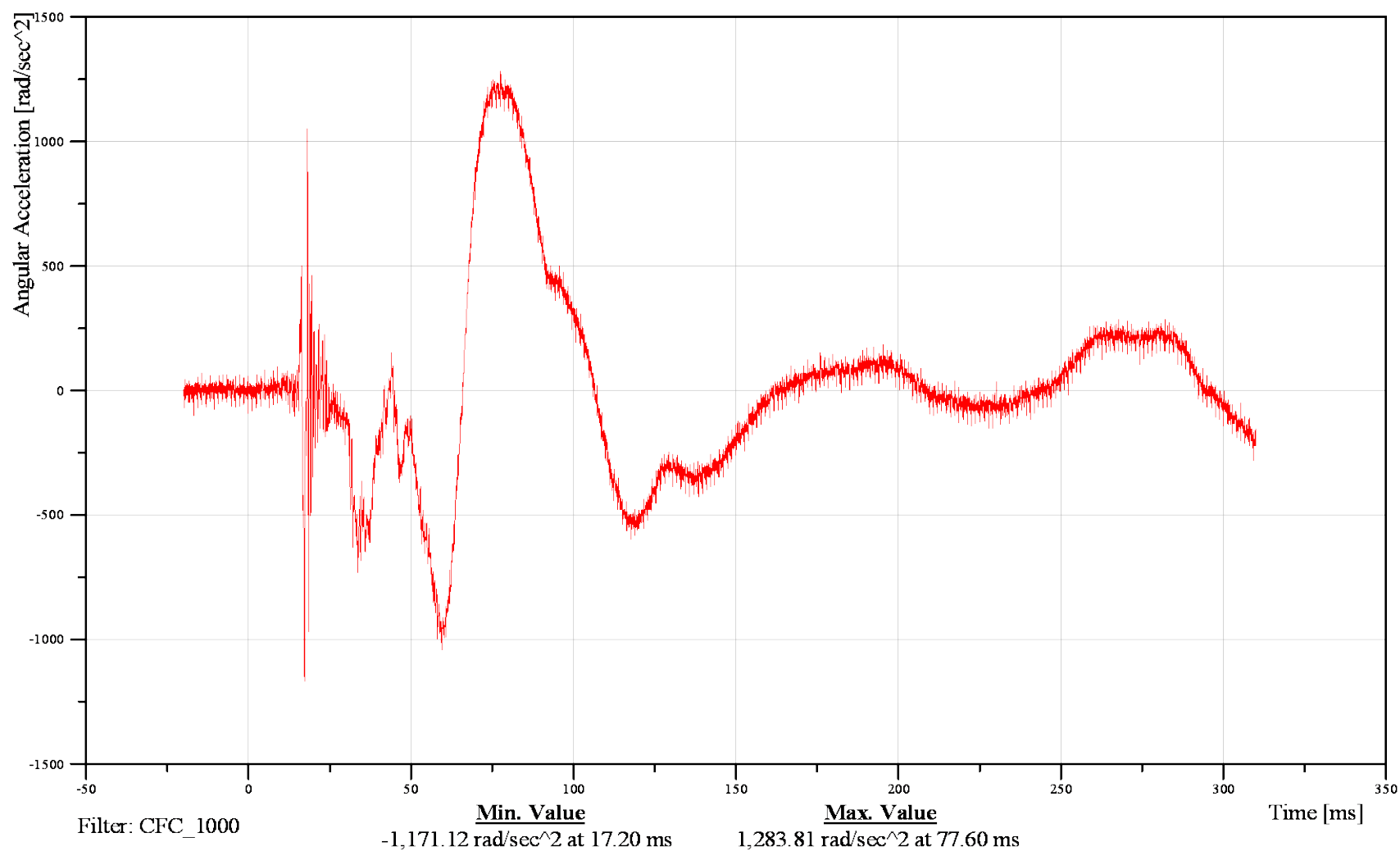
Time: 10:15

Customer: VRTC

11HEAD0000WSAAZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head X-Axis Angular Velocity

Date: 03/13/2013

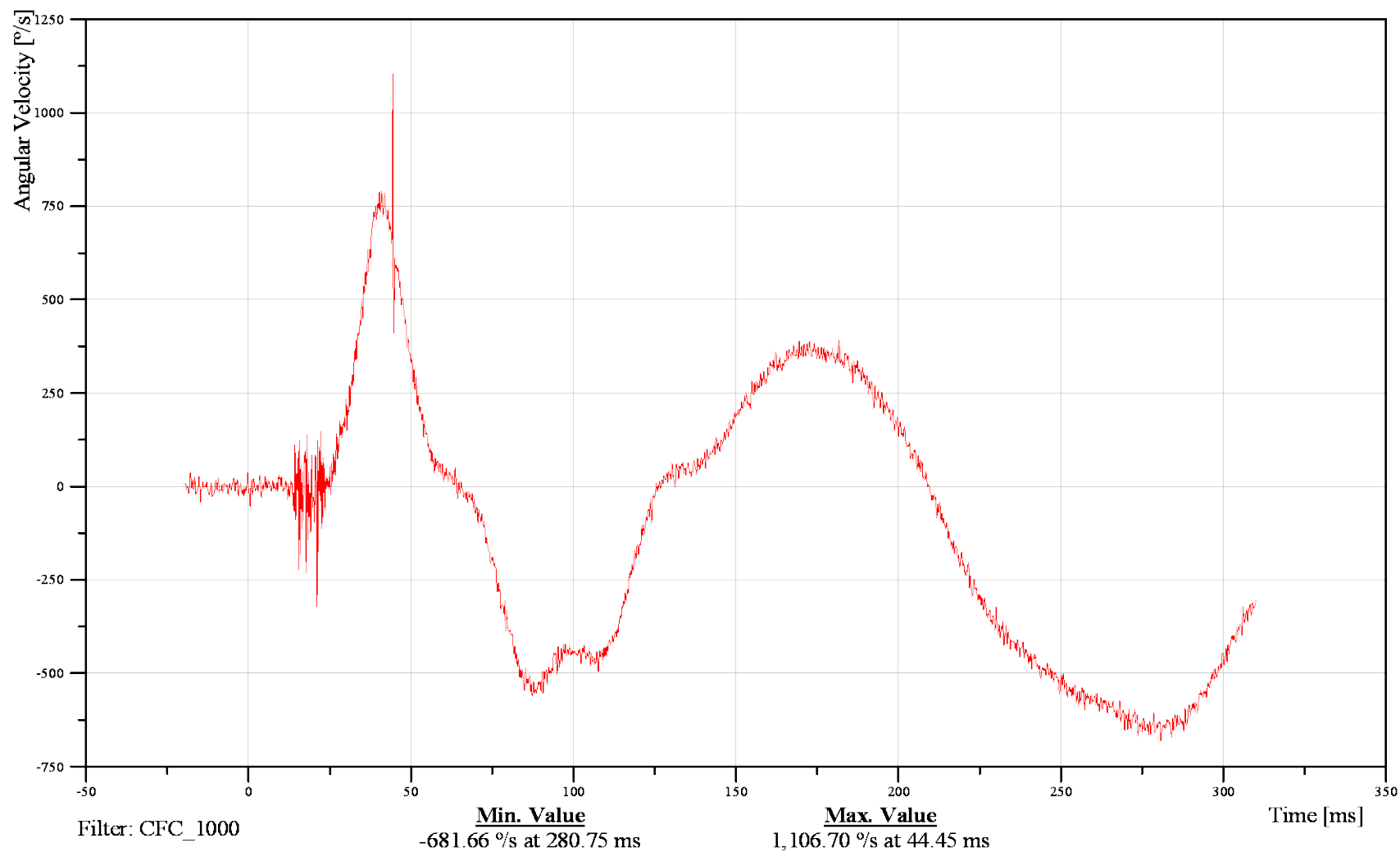
Time: 10:15

Customer: VRTC

11HEADCG00WSAVXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Y-Axis Angular Velocity

Date: 03/13/2013

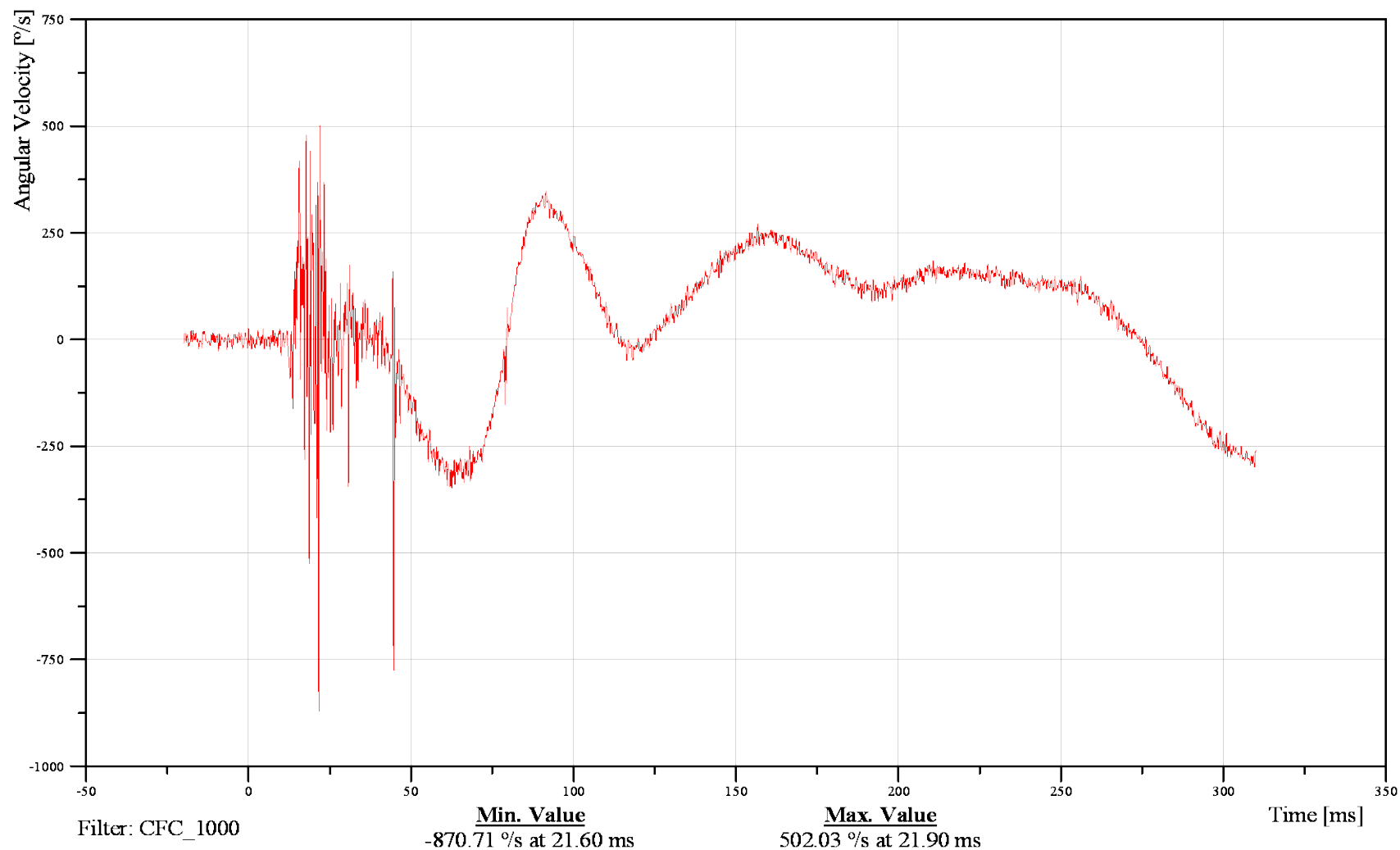
Time: 10:15

Customer: VRTC

11HEADCG00WSAVYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Z-Axis Angular Velocity

Date: 03/13/2013

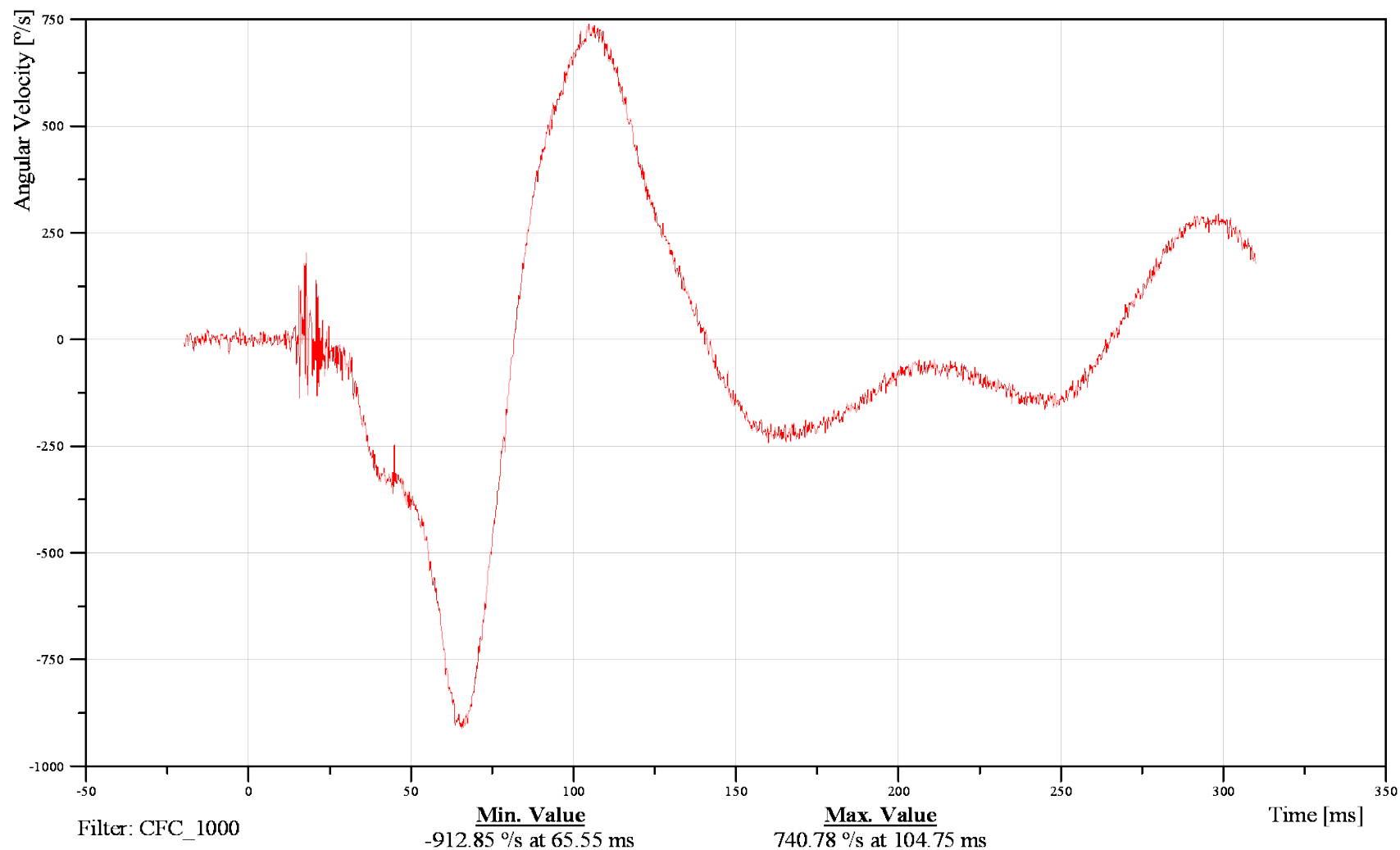
Time: 10:15

Customer: VRTC

11HEADCG00WSAVZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Force Fx

Date: 03/13/2013

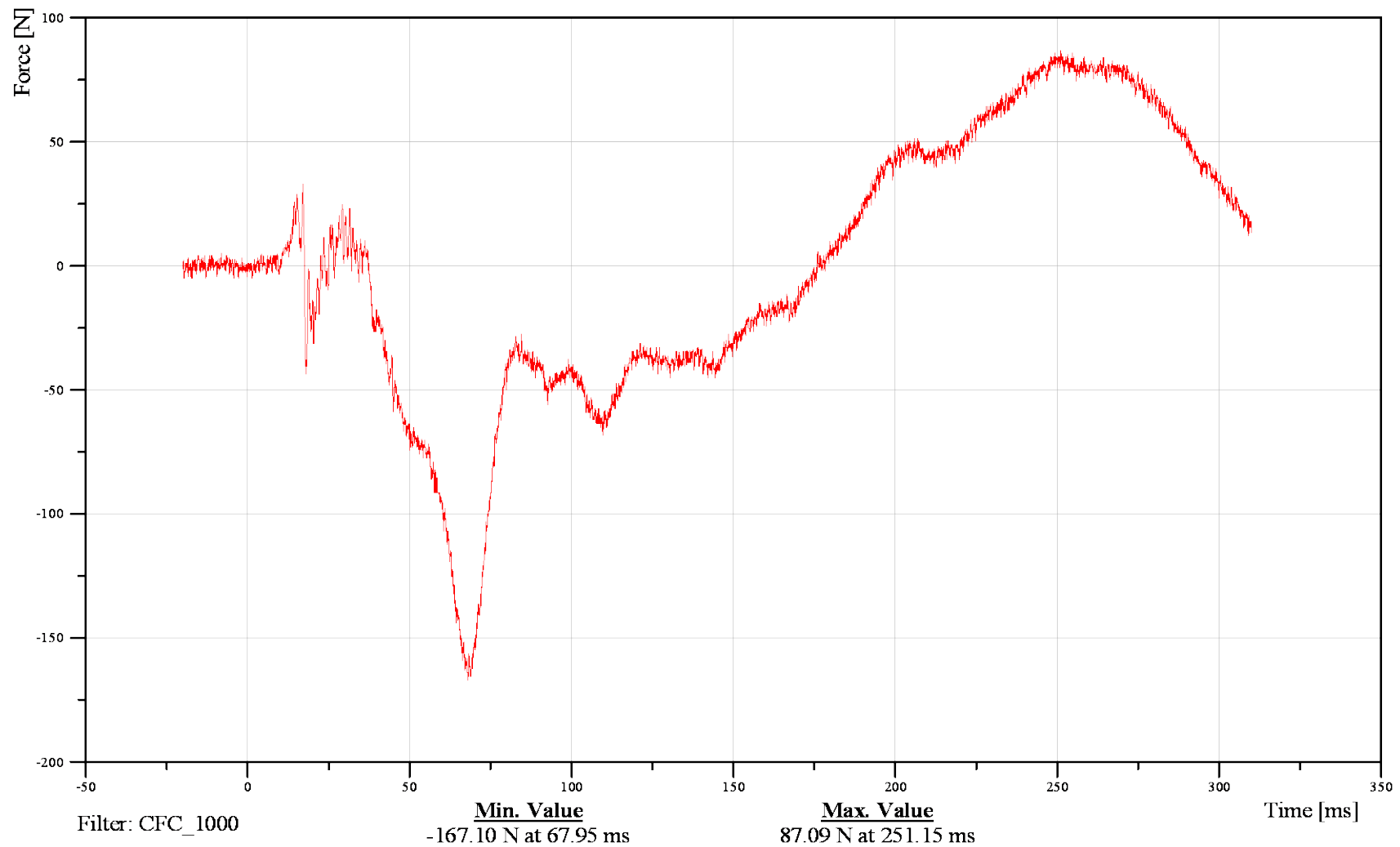
Time: 10:15

Customer: VRTC

11NECKUP00WSFOXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Force Fy

Date: 03/13/2013

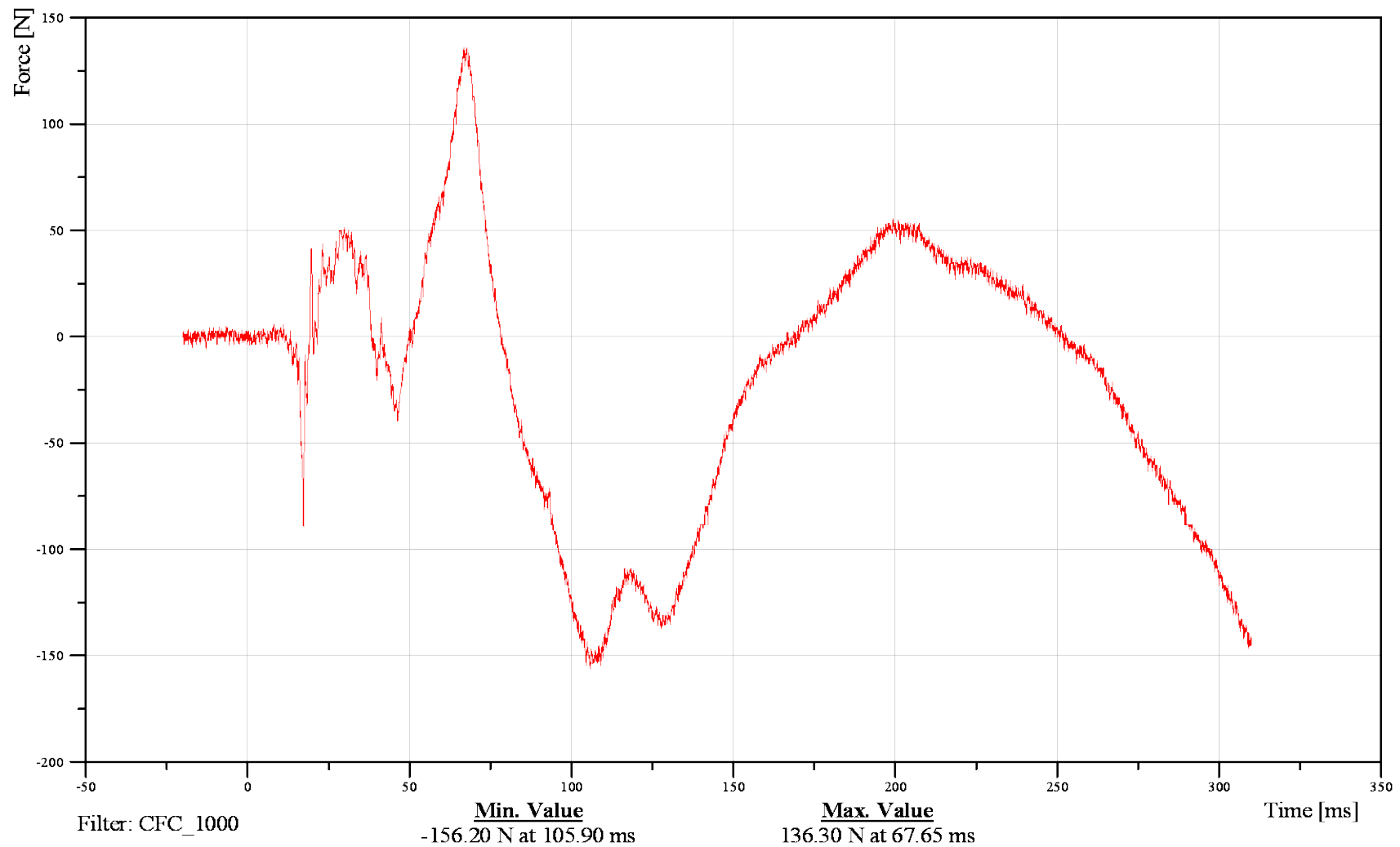
Time: 10:15

Customer: VRTC

11NECKUP00WSFOYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Force Fz

Date: 03/13/2013

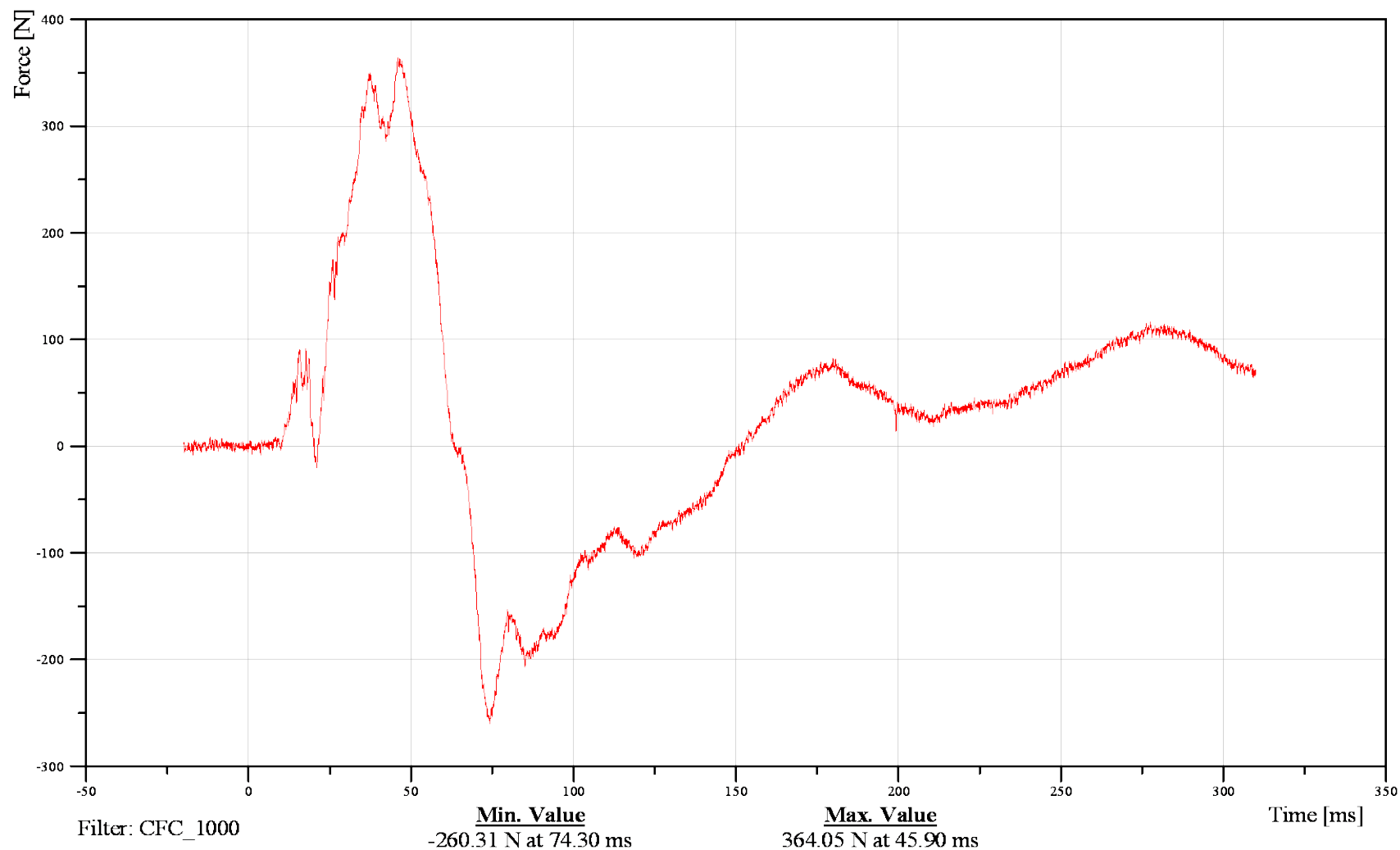
Time: 10:15

Customer: VRTC

11NECKUP00WSFOZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Moment Mx

Date: 03/13/2013

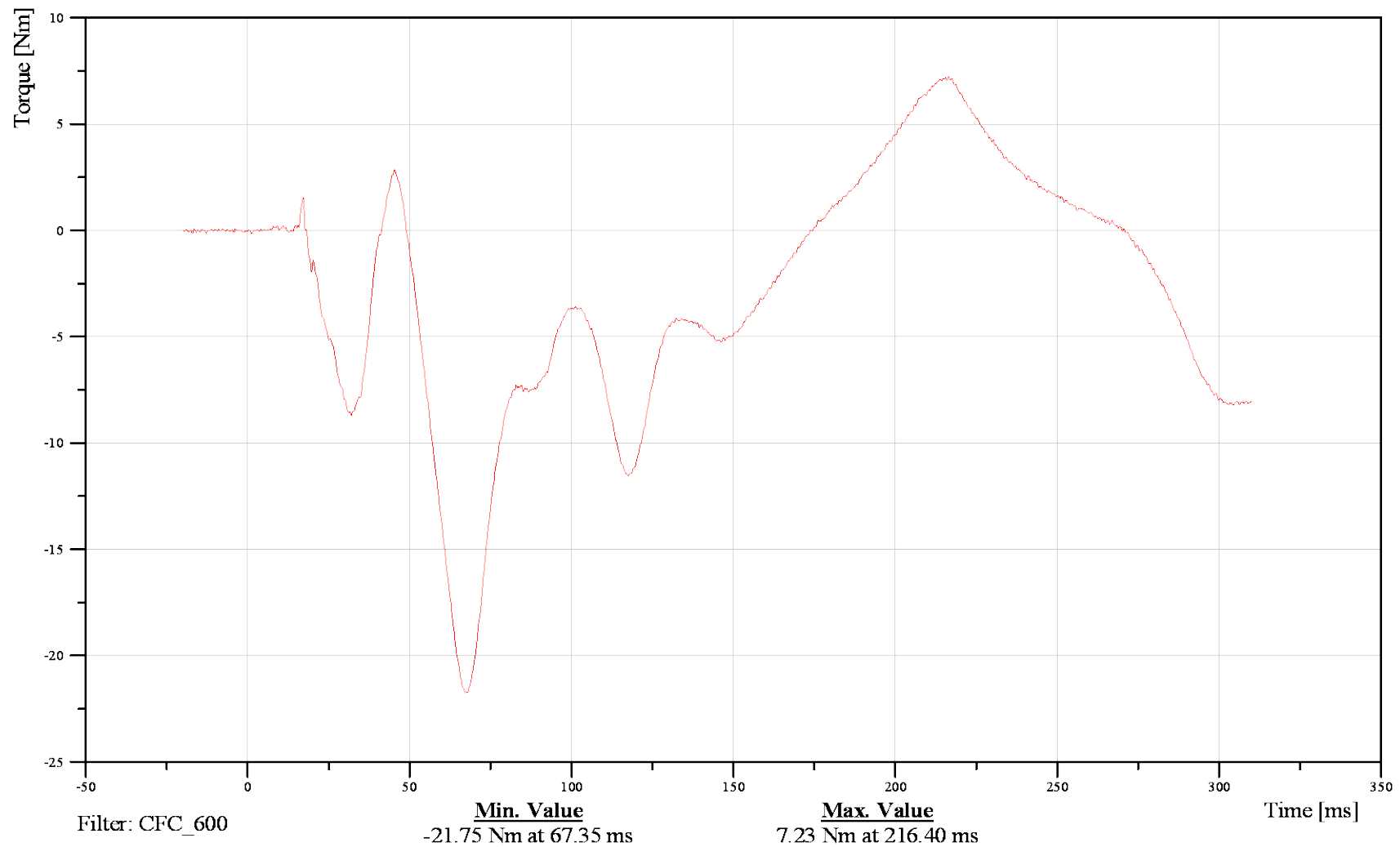
Time: 10:15

Customer: VRTC

11NECKUP00WSMOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Moment My

Date: 03/13/2013

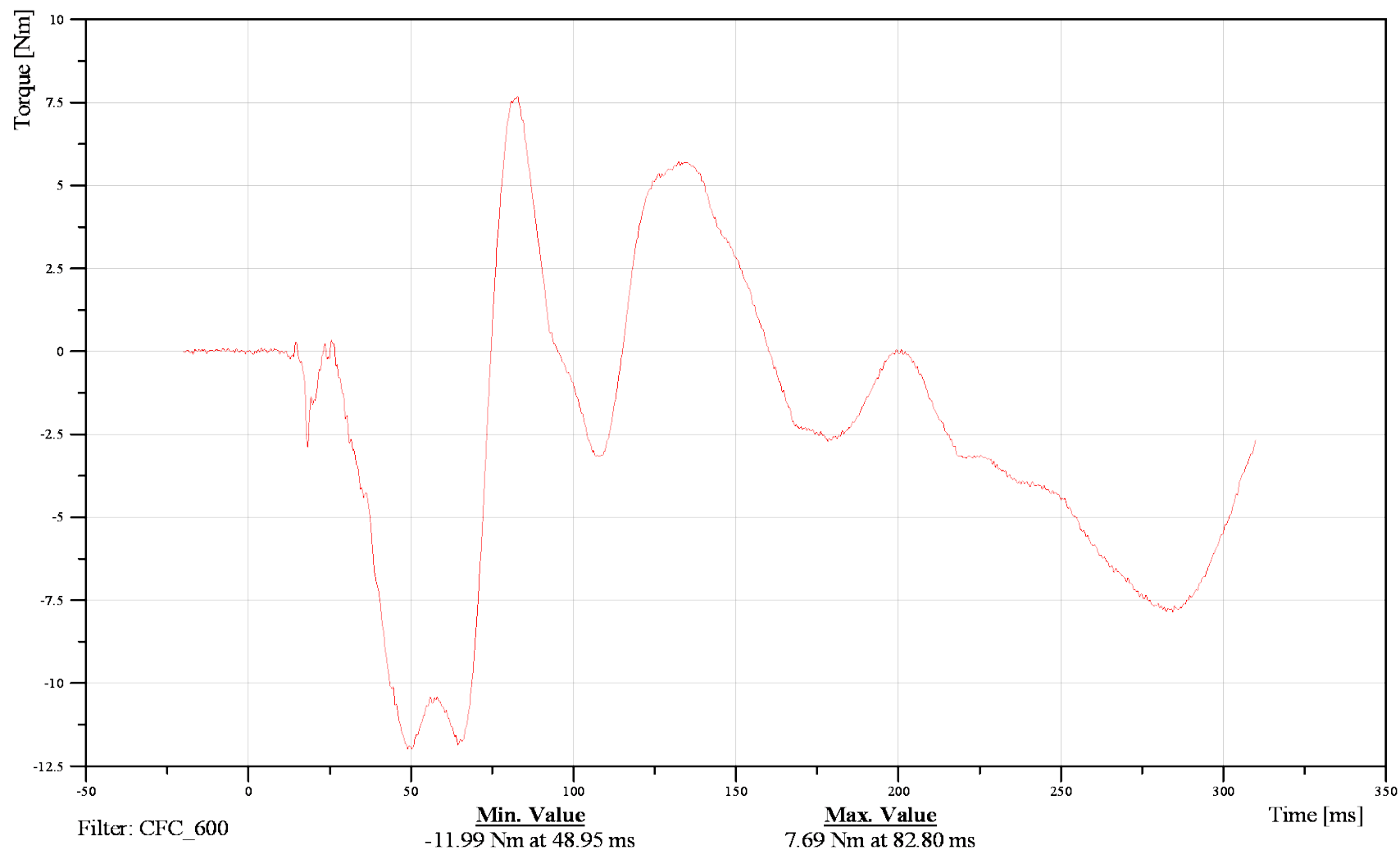
Time: 10:15

Customer: VRTC

11NECKUP00WSMOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Moment Mz

Date: 03/13/2013

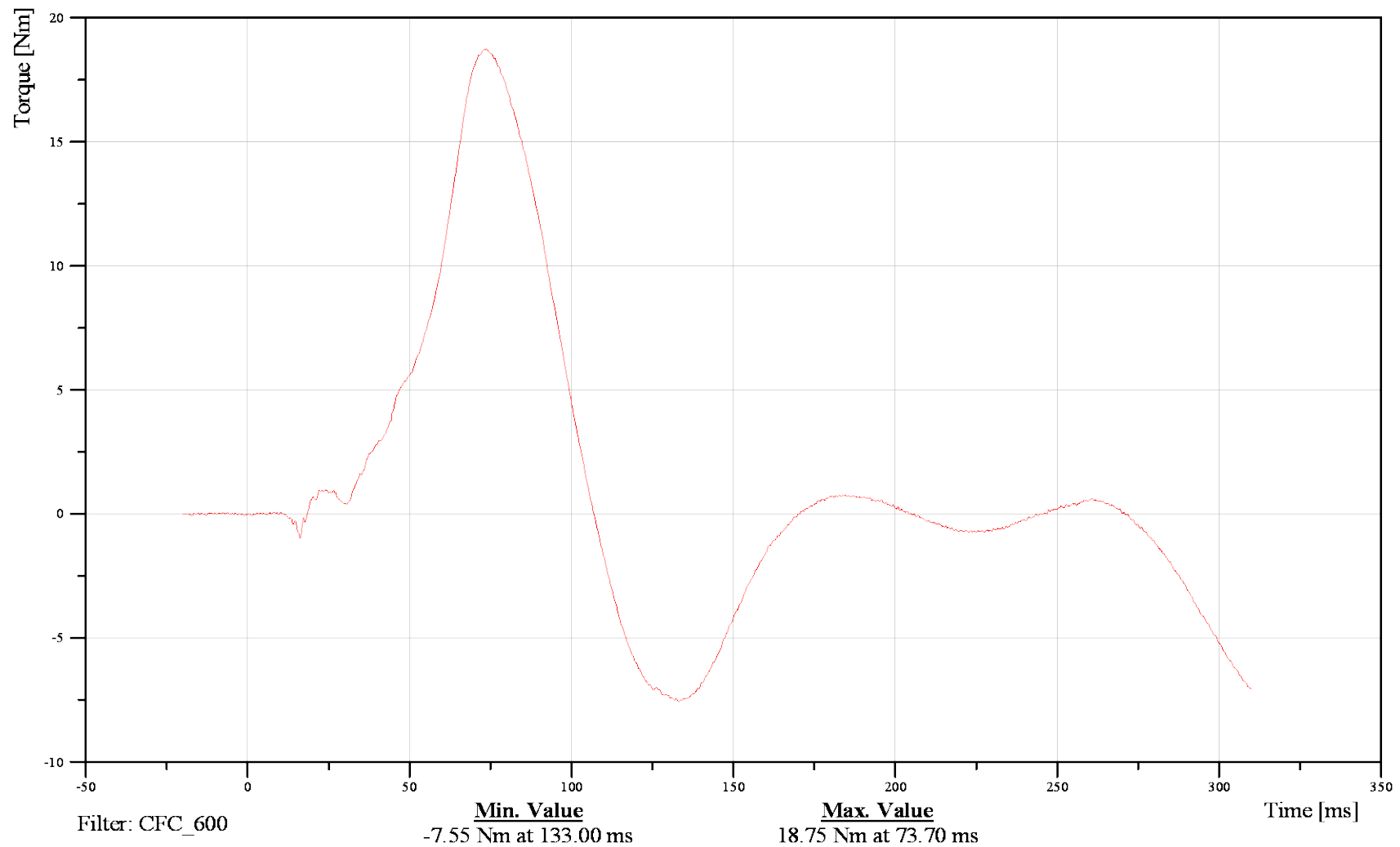
Time: 10:15

Customer: VRTC

11NECKUP00WSMOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Force Fx

Date: 03/13/2013

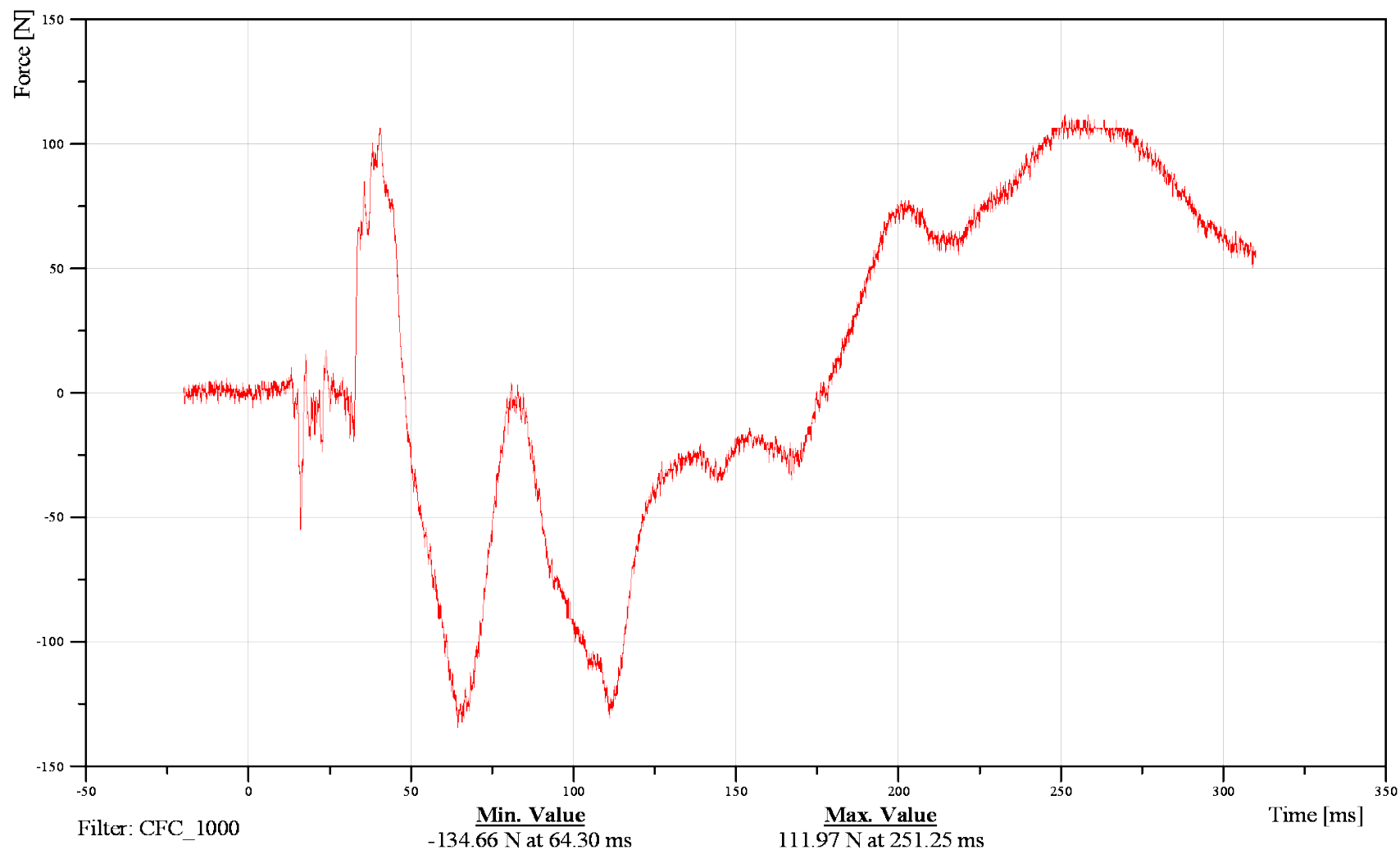
Time: 10:15

Customer: VRTC

11NECKLO00WSFOXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Force Fy

Date: 03/13/2013

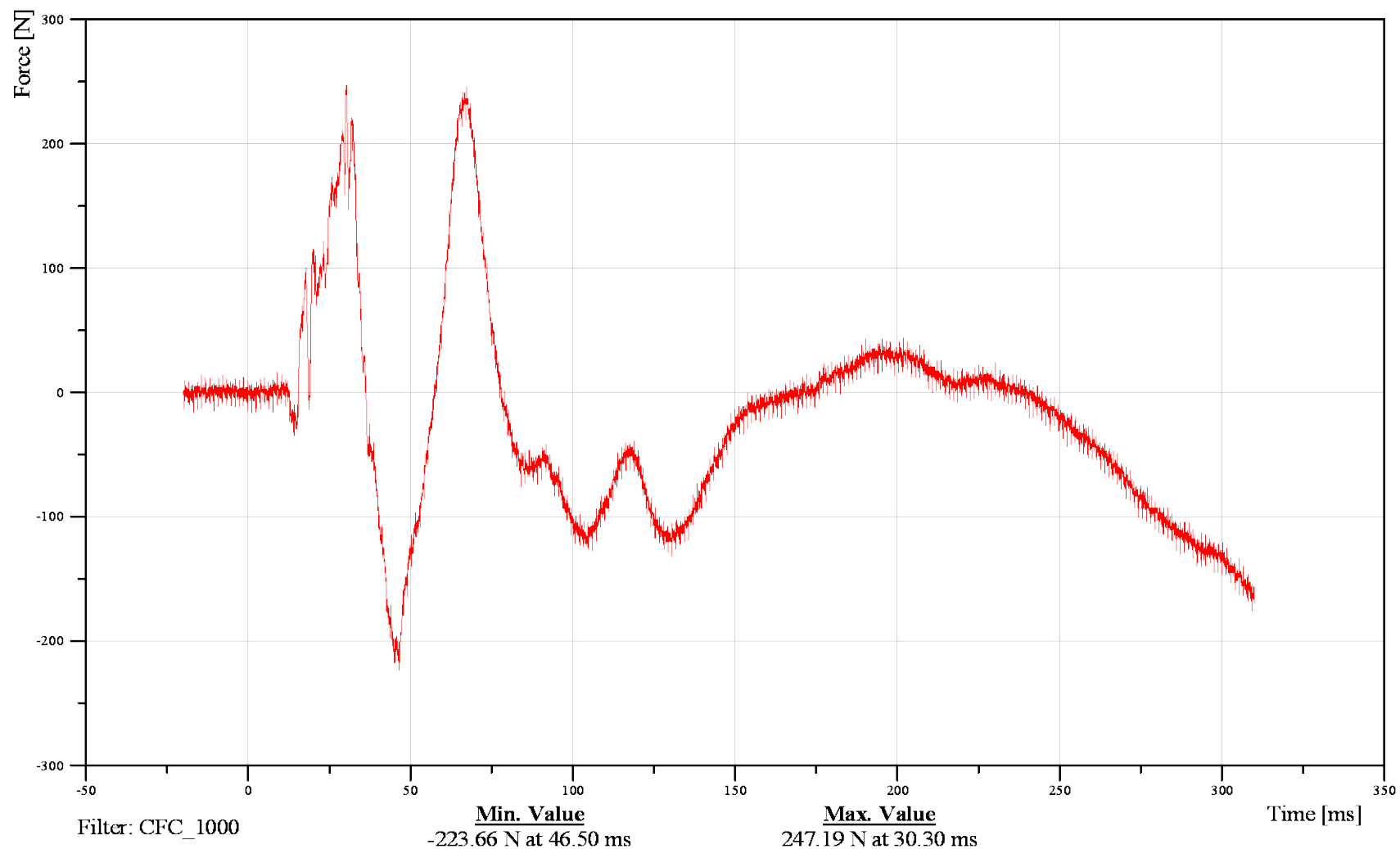
Time: 10:15

Customer: VRTC

11NECKLO00WSFOYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Force Fz

Date: 03/13/2013

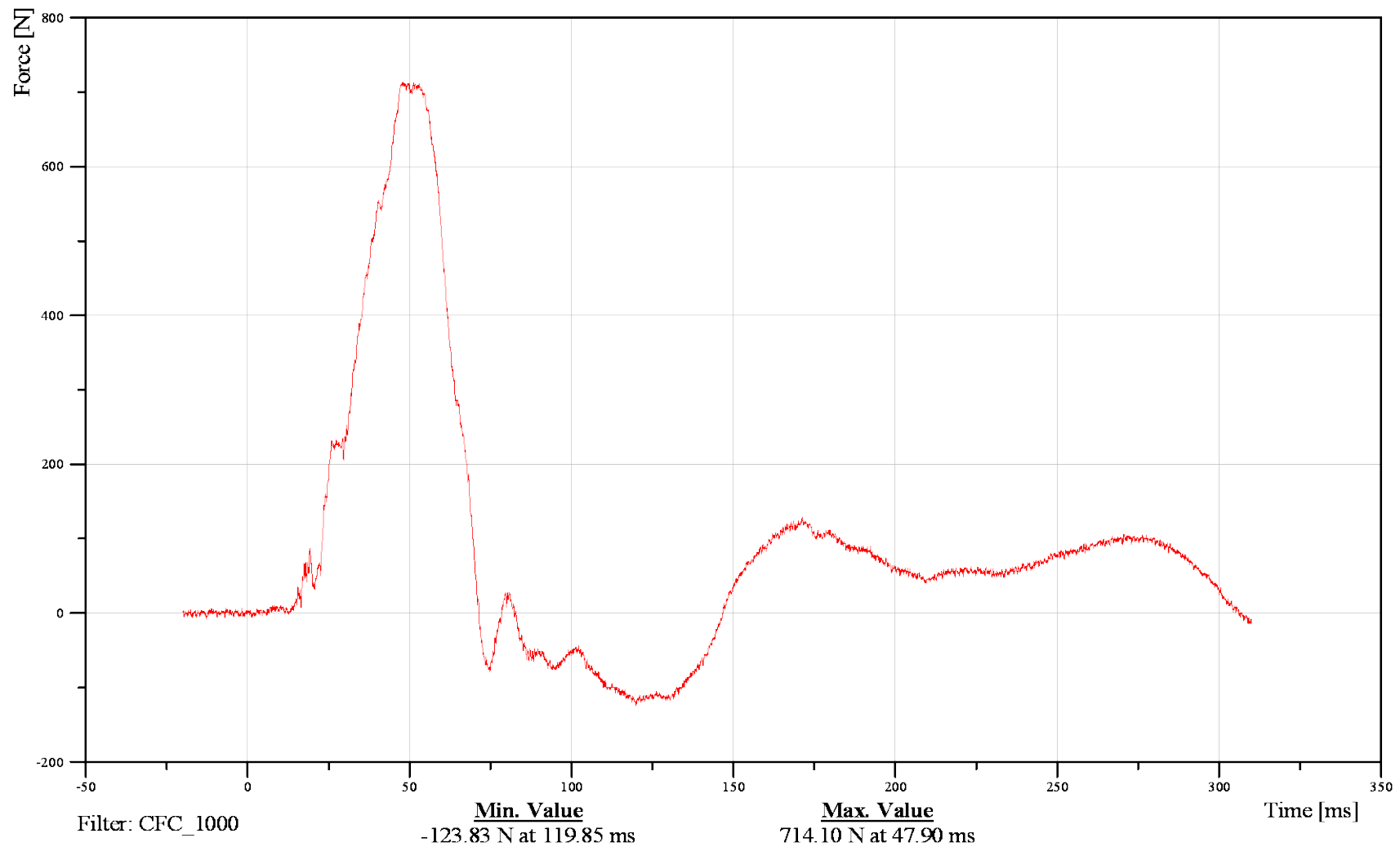
Time: 10:15

Customer: VRTC

11NECKLO00WSFOZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Moment Mx

Date: 03/13/2013

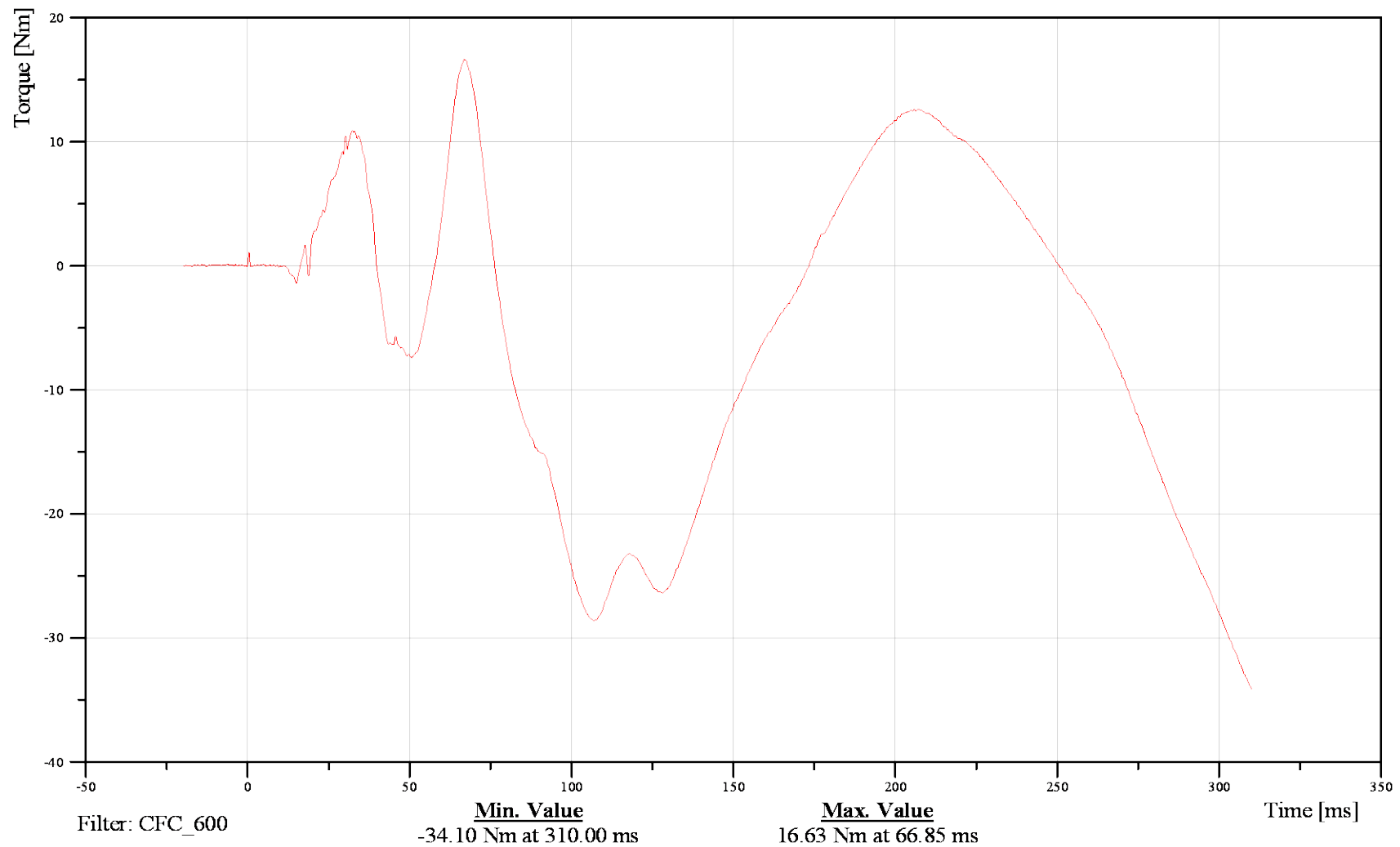
Time: 10:15

Customer: VRTC

11NECKLO00WSMOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Moment My

Date: 03/13/2013

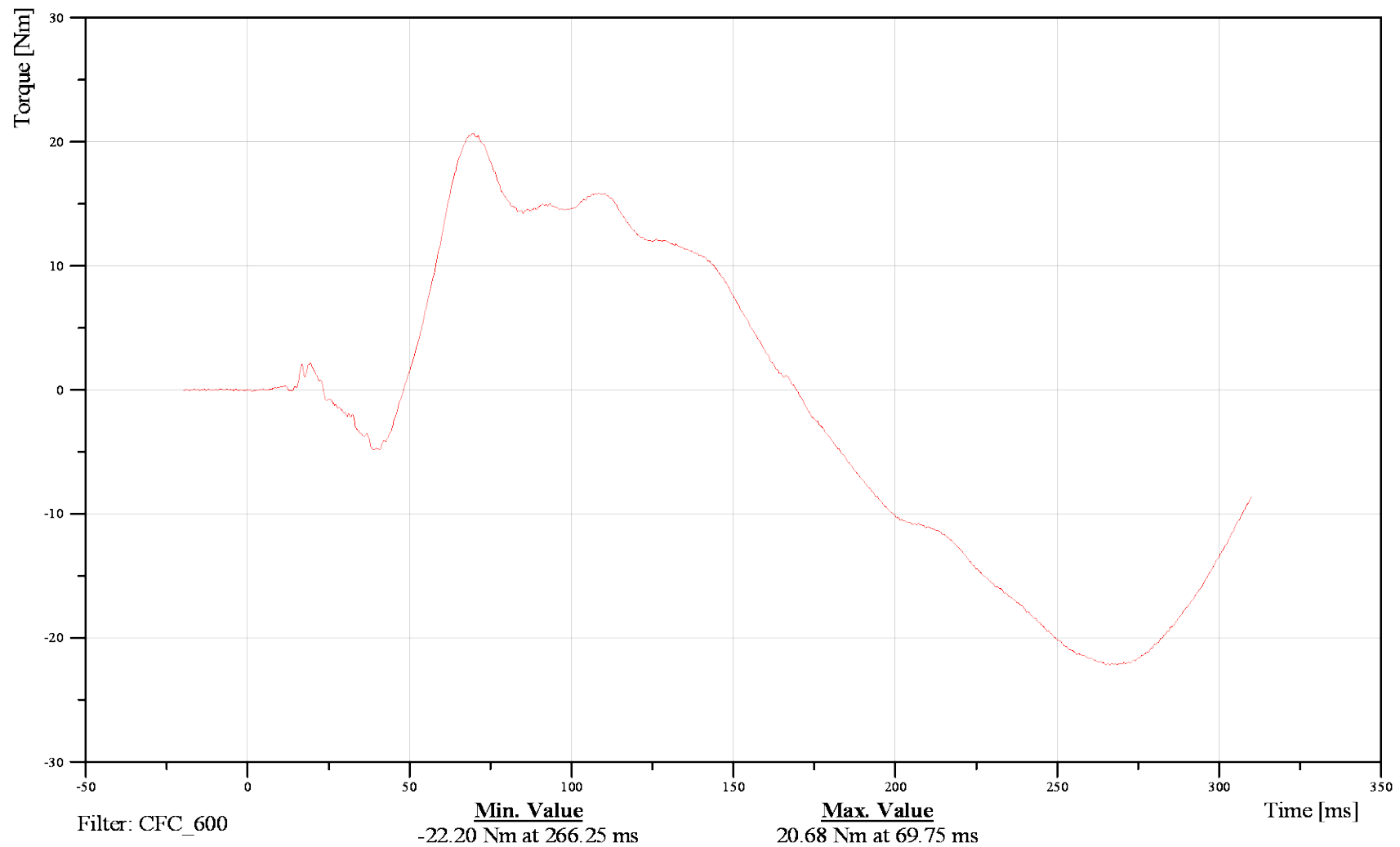
Time: 10:15

Customer: VRTC

11NECKLO00WSMOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Moment Mz

Date: 03/13/2013

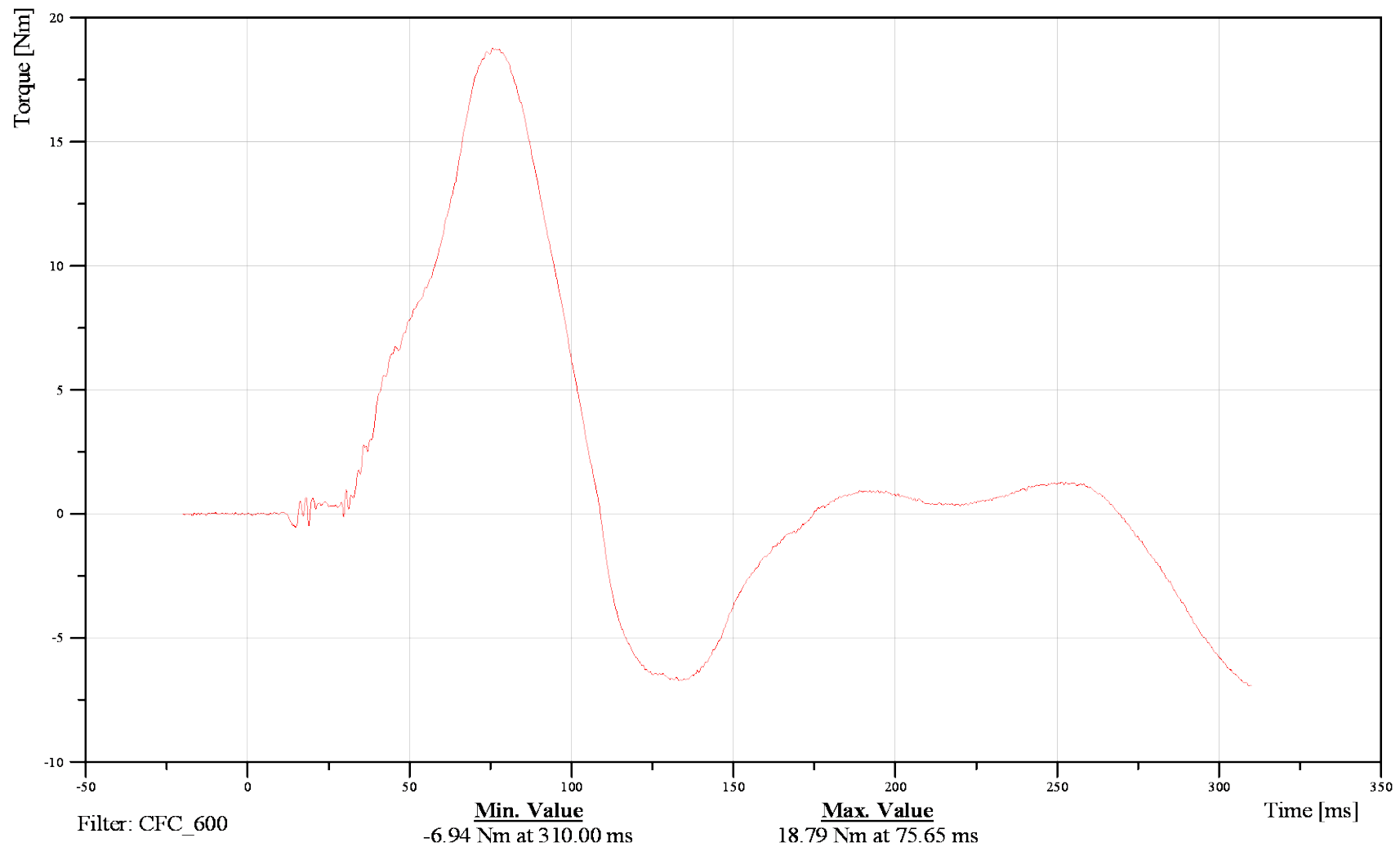
Time: 10:15

Customer: VRTC

11NECKLO00WSMOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Longitudinal Ax

Date: 03/13/2013

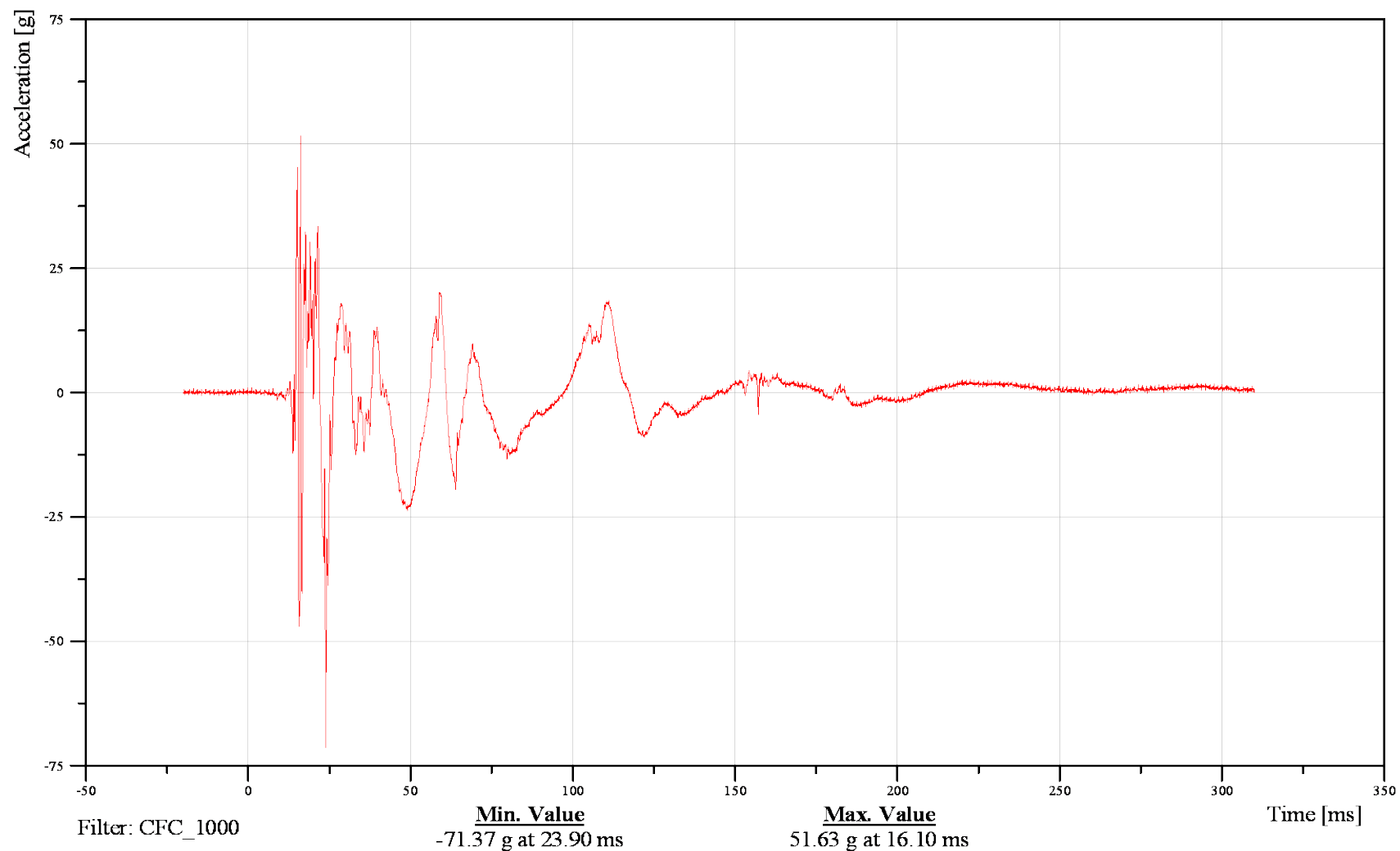
Time: 10:15

Customer: VRTC

11SHLDLE00WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Lateral Ay

Date: 03/13/2013

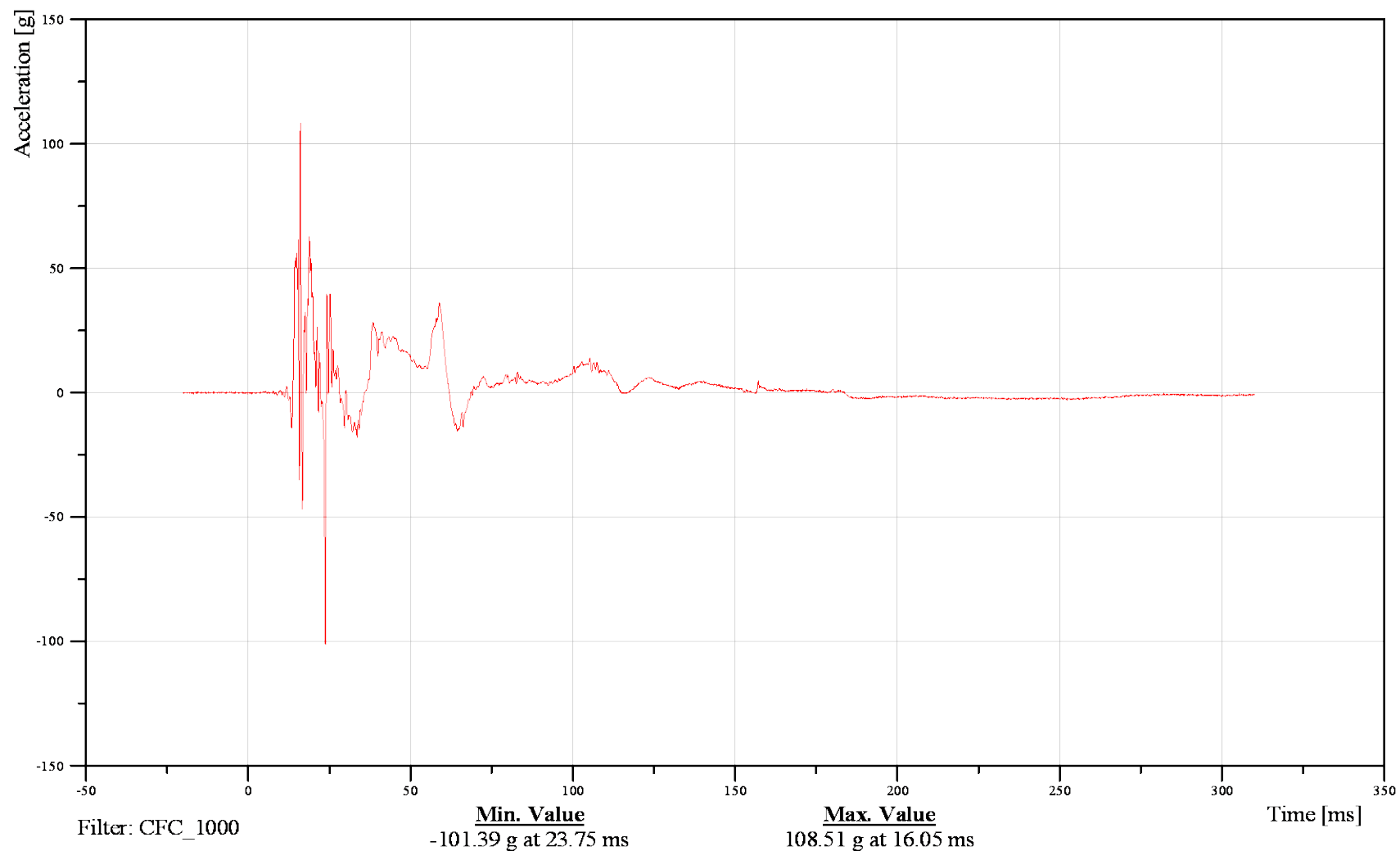
Time: 10:15

Customer: VRTC

11SHLDLE00WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Vertical Az

Date: 03/13/2013

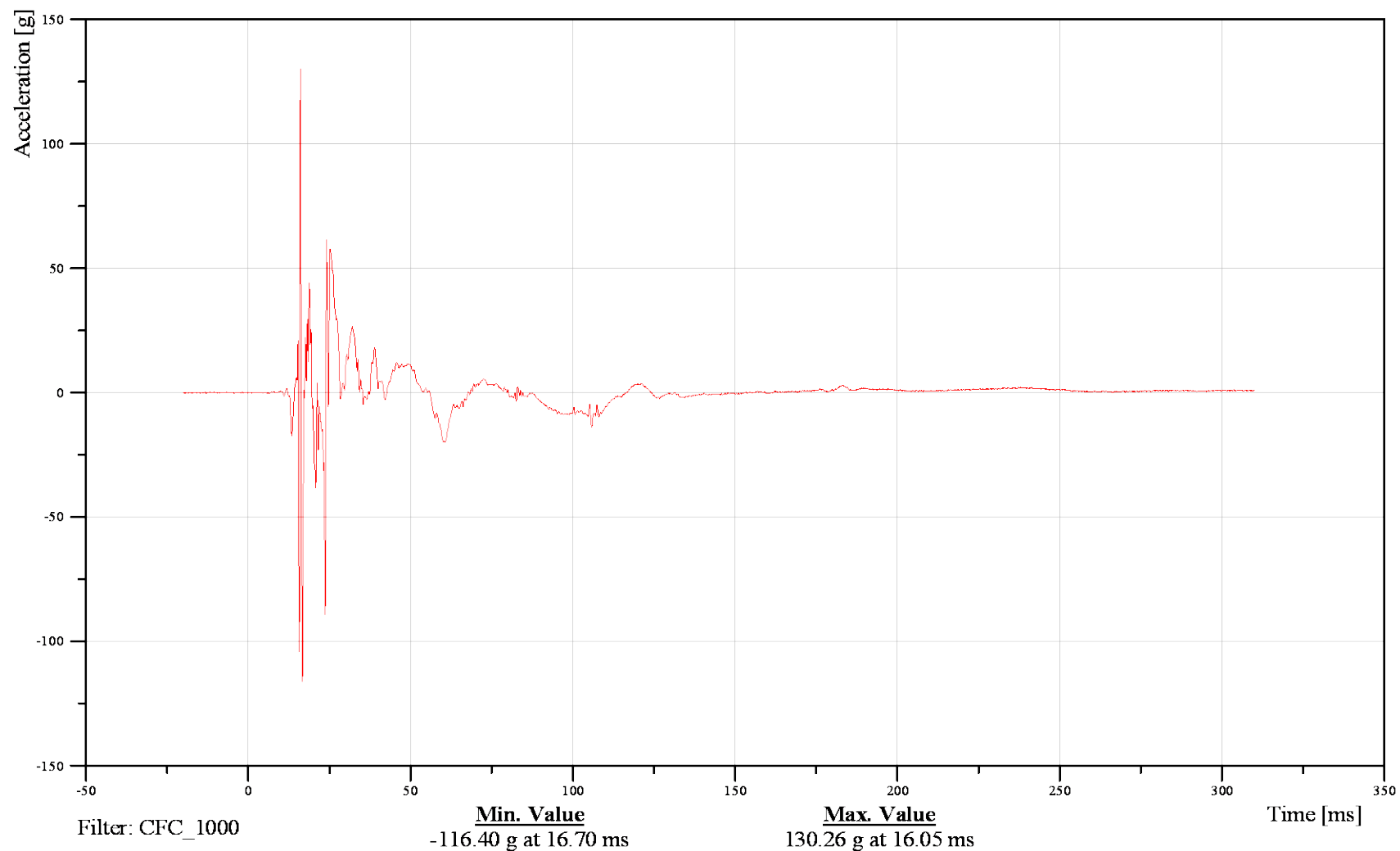
Time: 10:15

Customer: VRTC

11SHLDLE00WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder A Resultant

Date: 03/13/2013

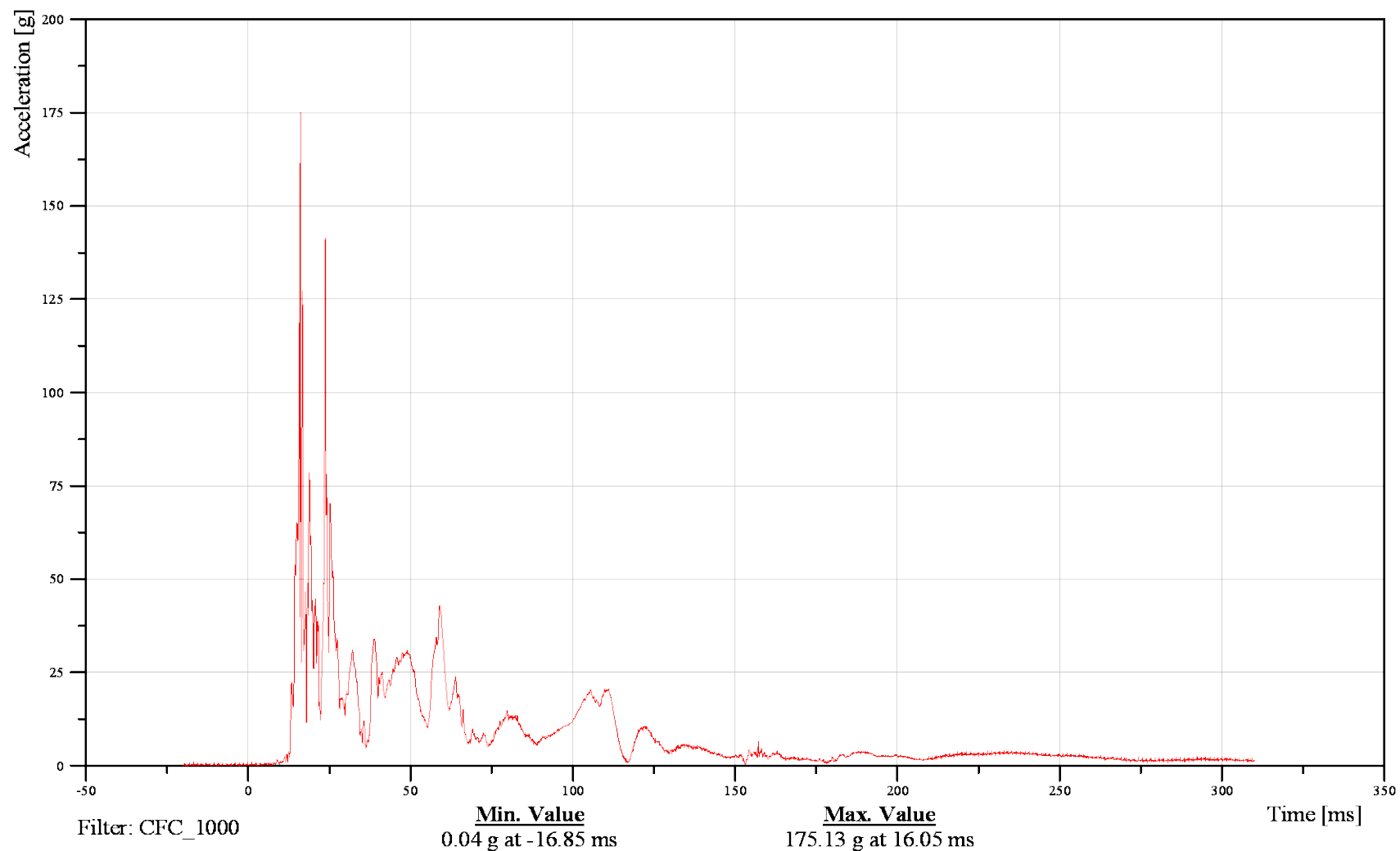
Time: 10:15

Customer: VRTC

11SHLDLE00WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Force Fx

Date: 03/13/2013

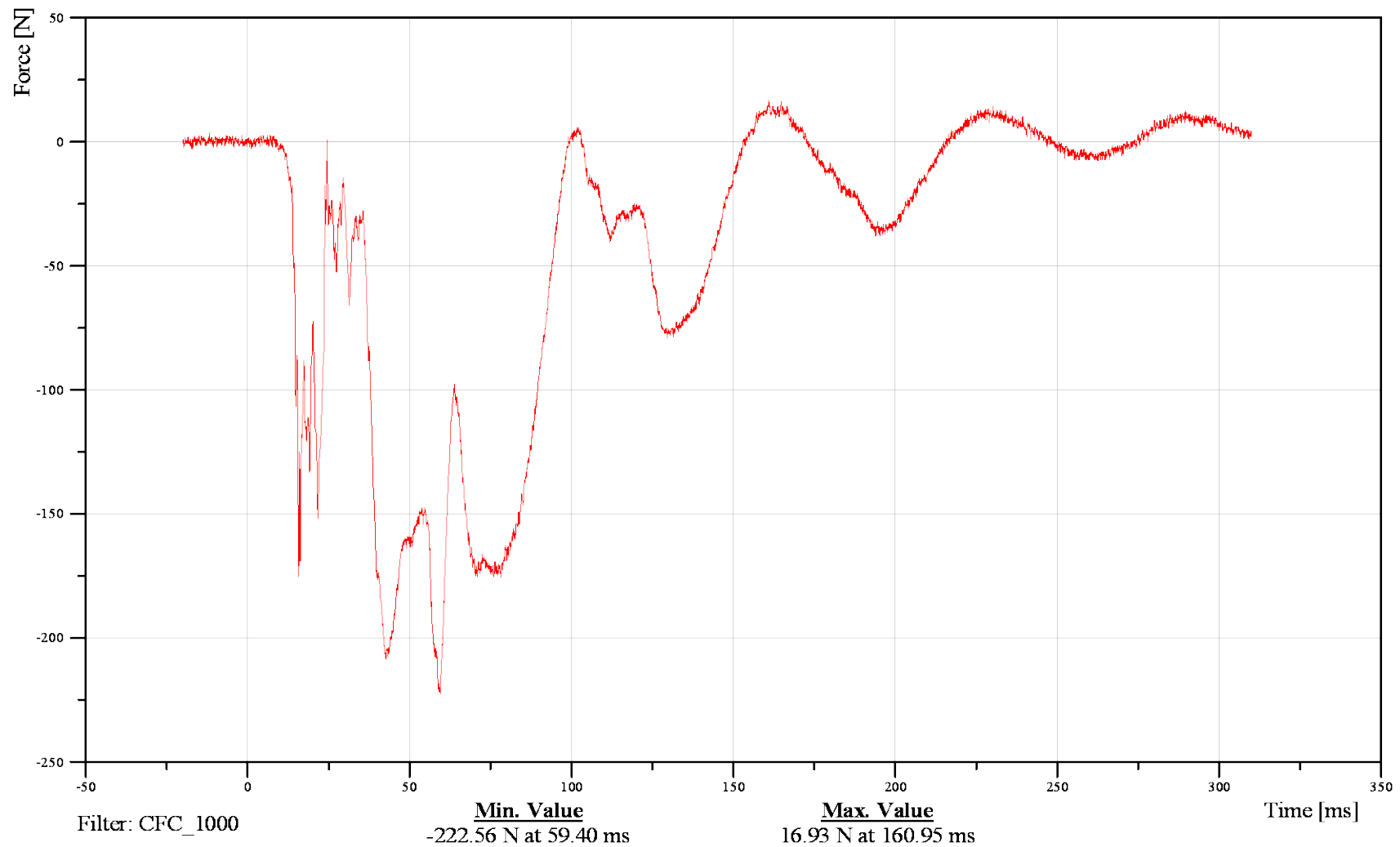
Time: 10:15

Customer: VRTC

11SHLDLE00WSFOXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Force Fy

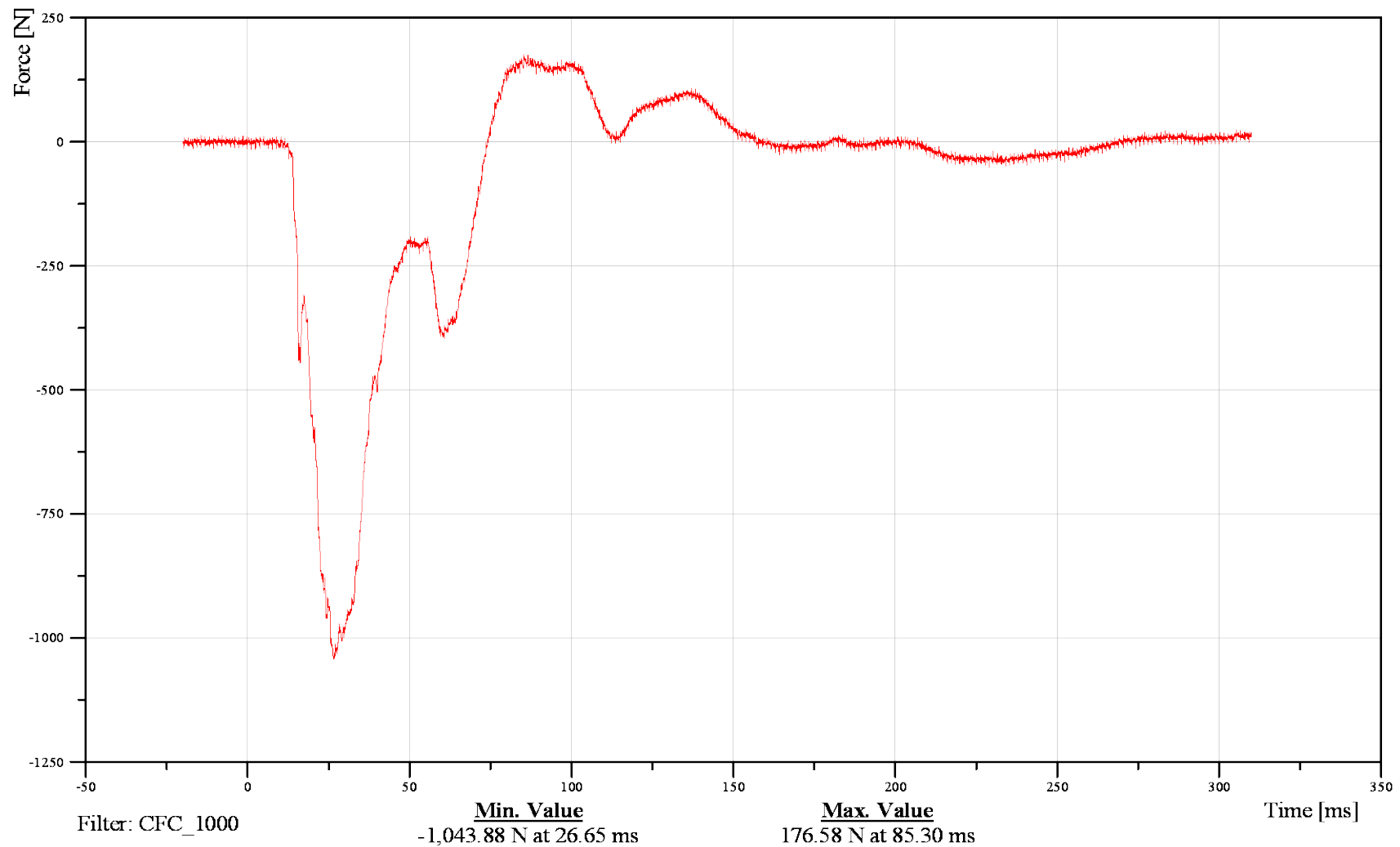
Date: 03/13/2013
Time: 10:15

Customer: VRTC

11SHLDLE00WSFOYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Force Fz

Date: 03/13/2013

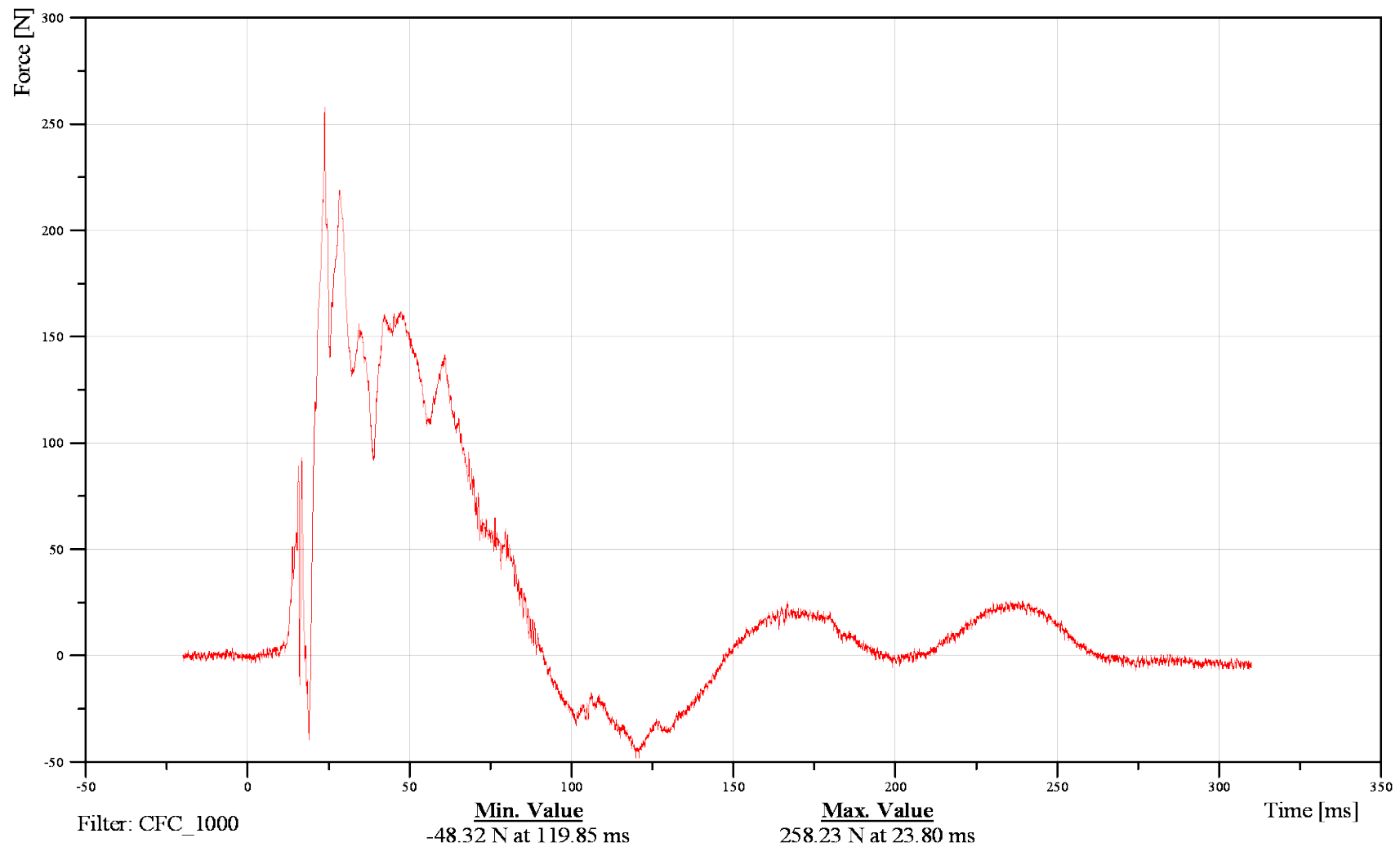
Time: 10:15

Customer: VRTC

11SHLDLE00WSFOZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Y Disp

Date: 03/13/2013

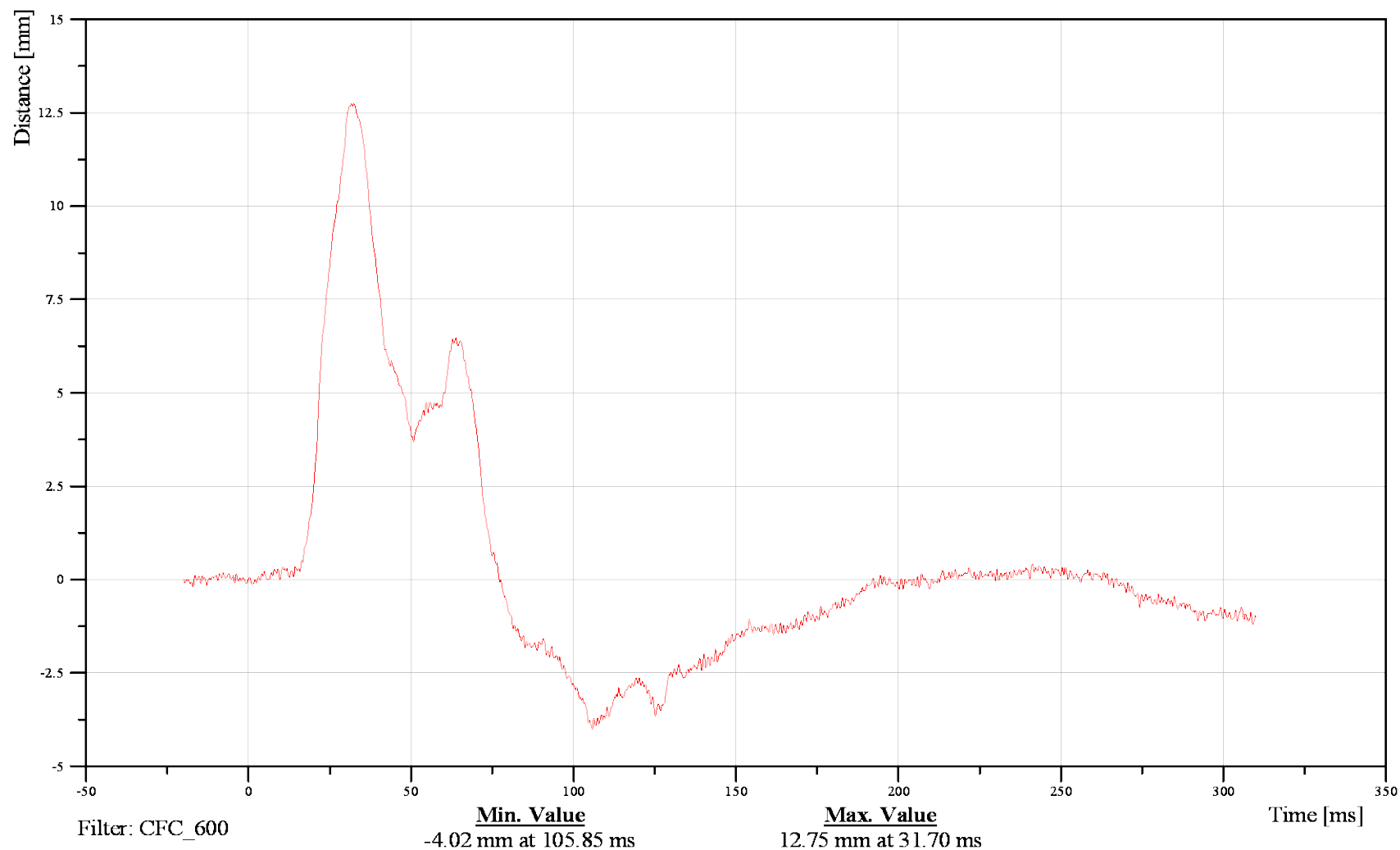
Time: 10:15

Customer: VRTC

11SHRILE00WSDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 Longitudinal Ax

Date: 03/13/2013

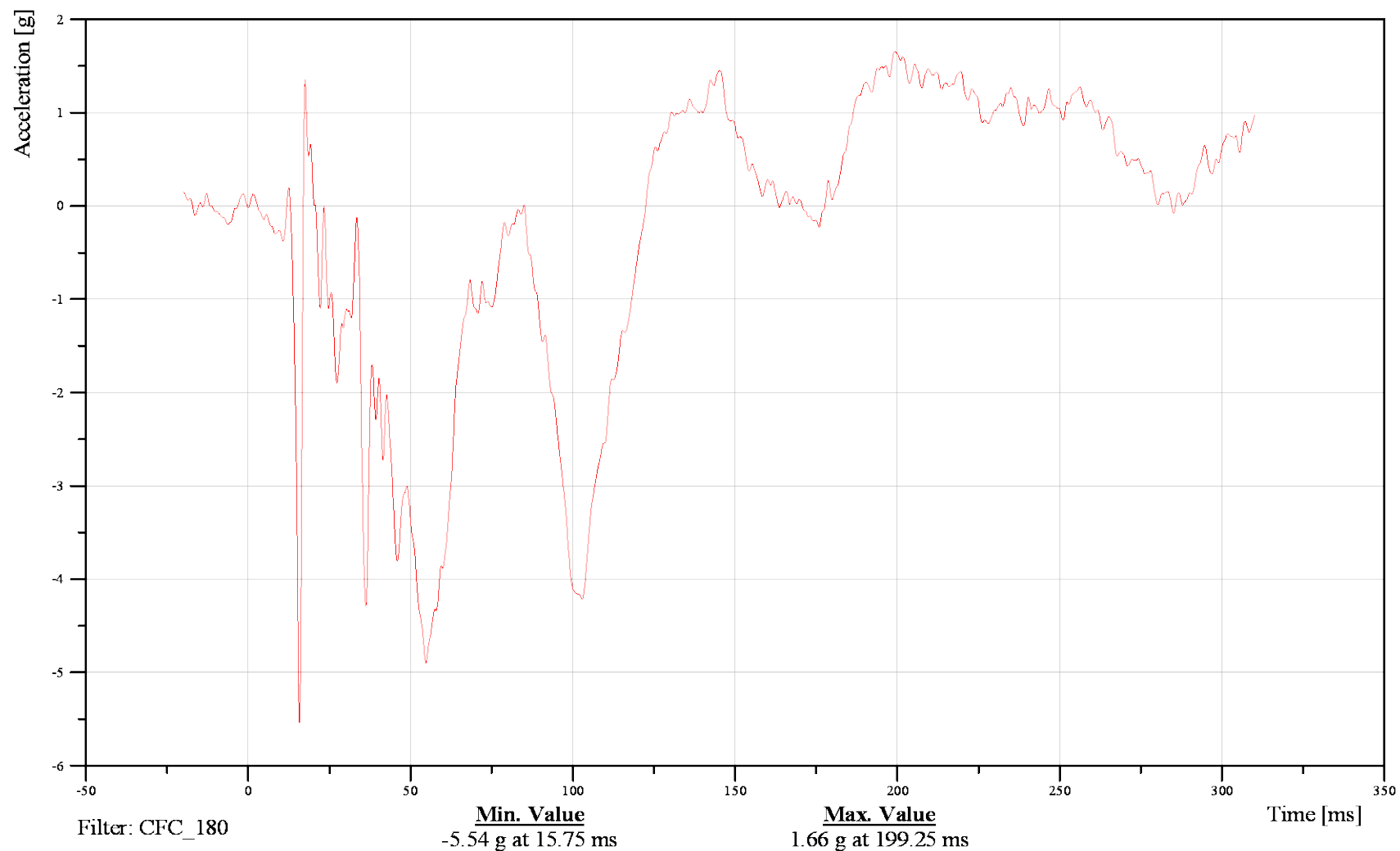
Time: 10:15

Customer: VRTC

11THSP0100WSACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 Lateral Ay

Date: 03/13/2013

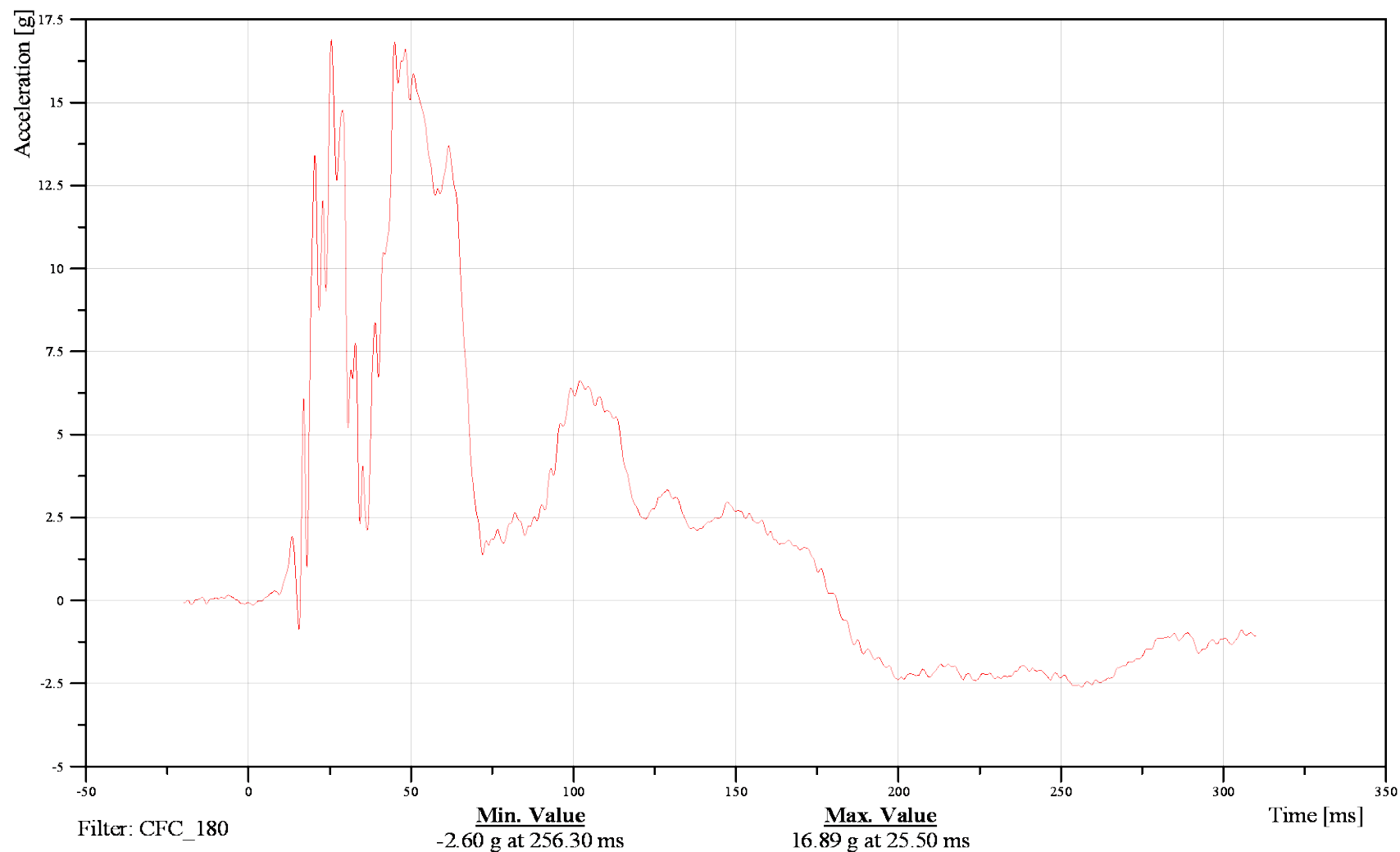
Time: 10:15

Customer: VRTC

11THSP0100WSACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 Vertical Az

Date: 03/13/2013

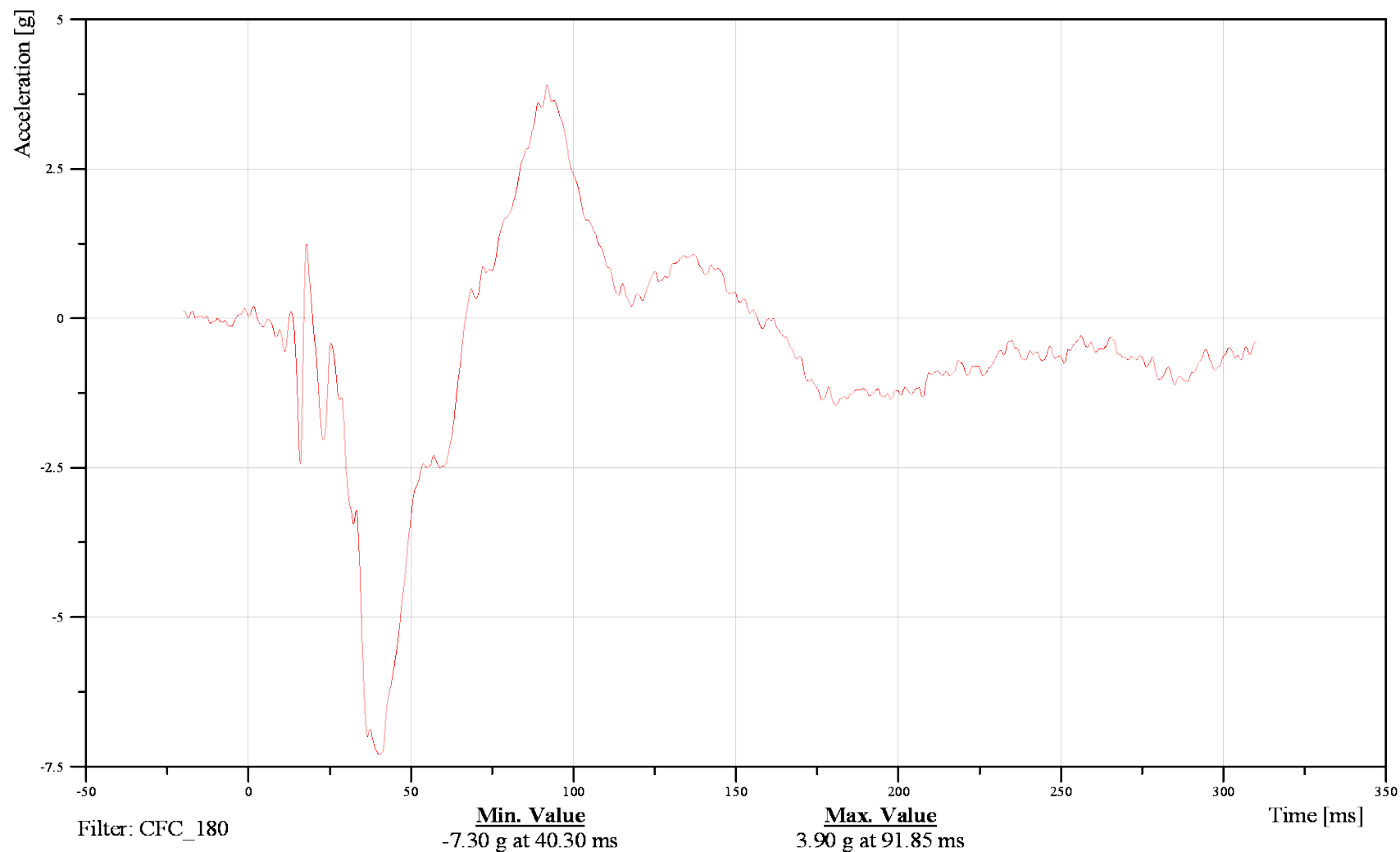
Time: 10:15

Customer: VRTC

11THSP0100WSACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 A Resultant

Date: 03/13/2013

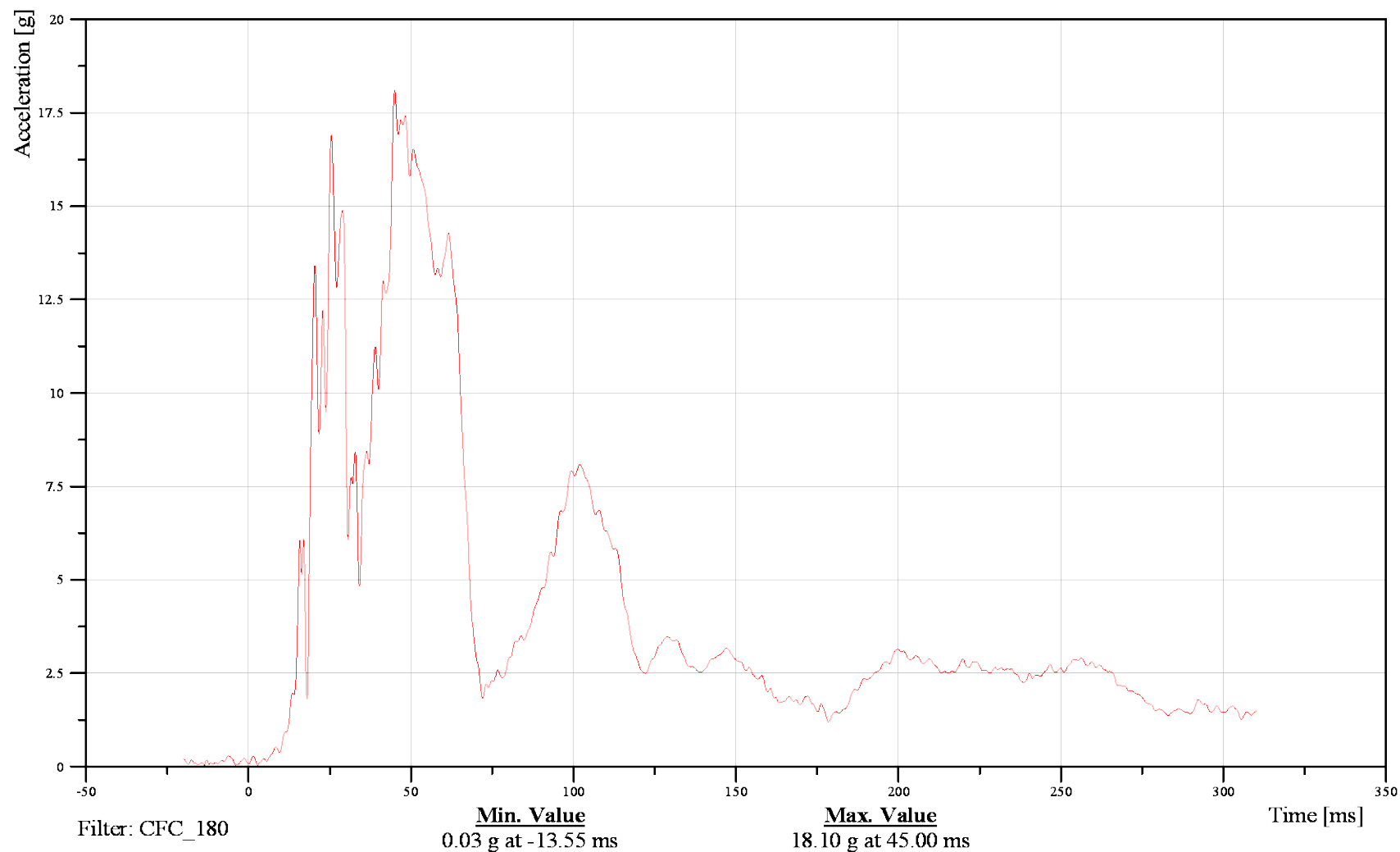
Time: 10:15

Customer: VRTC

11THSP0100WSACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Longitudinal Ax

Date: 03/13/2013

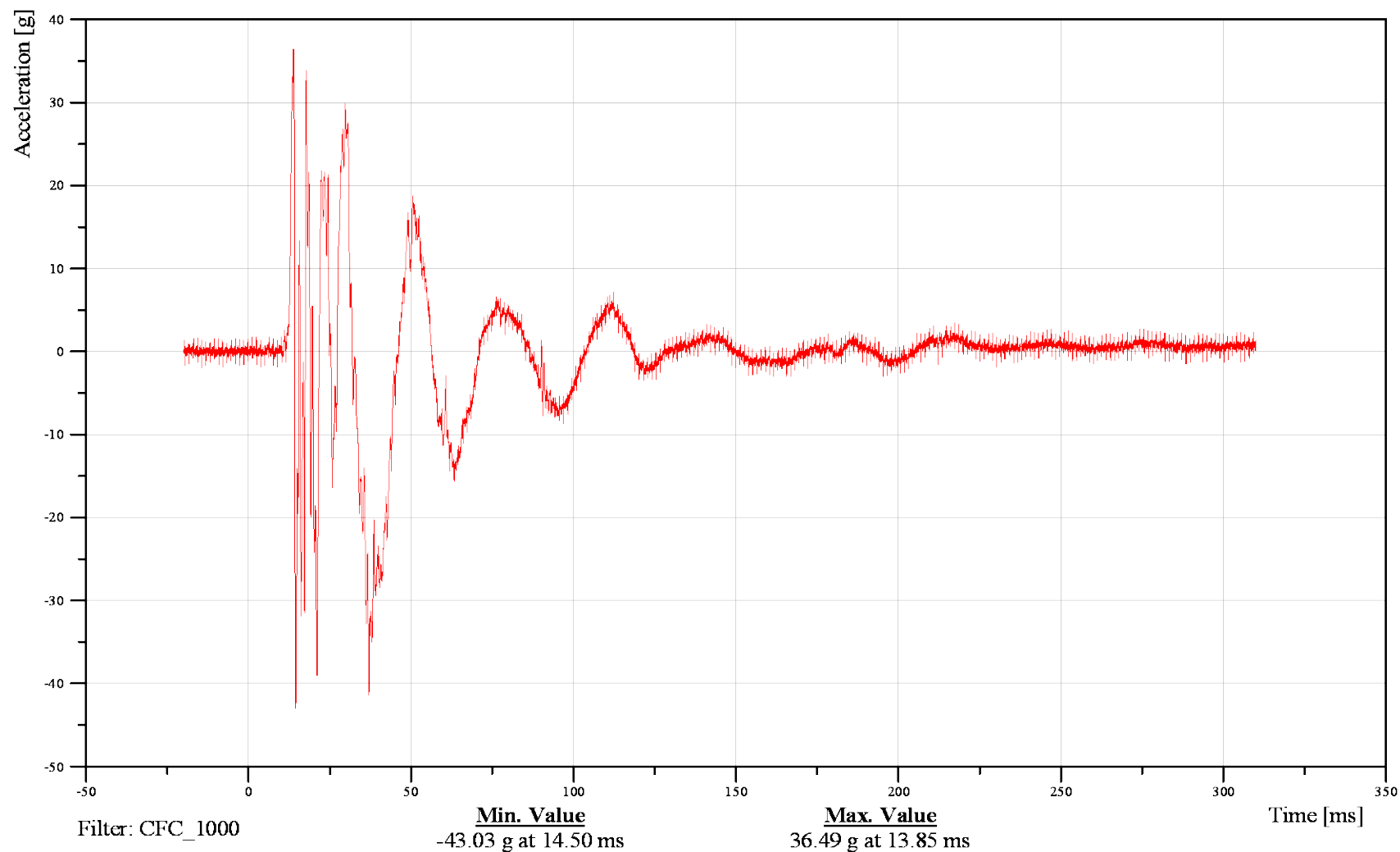
Time: 10:15

Customer: VRTC

11TRRILE01WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Lateral Ay

Date: 03/13/2013

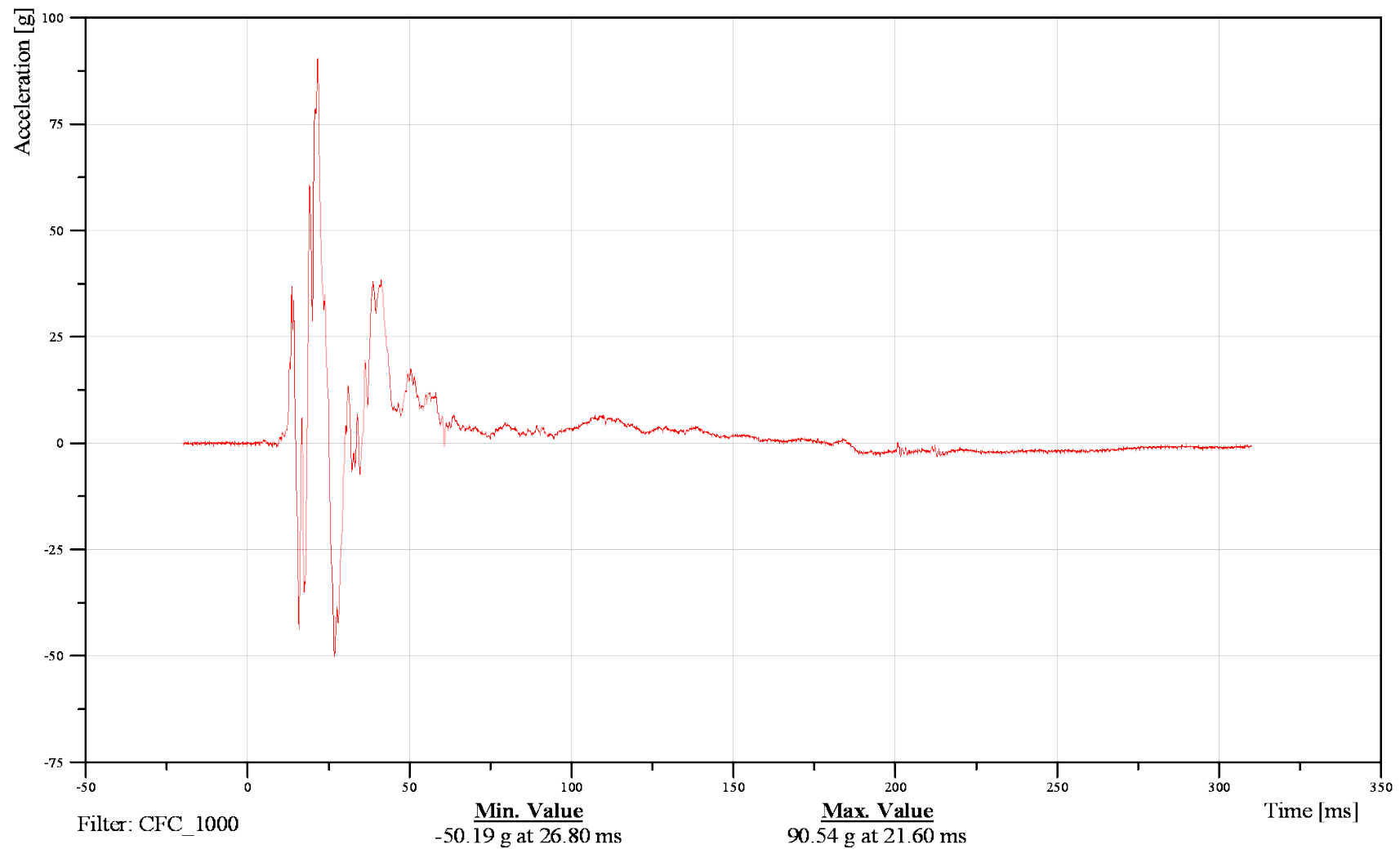
Time: 10:15

Customer: VRTC

11TRRILE01WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Vertical Az

Date: 03/13/2013

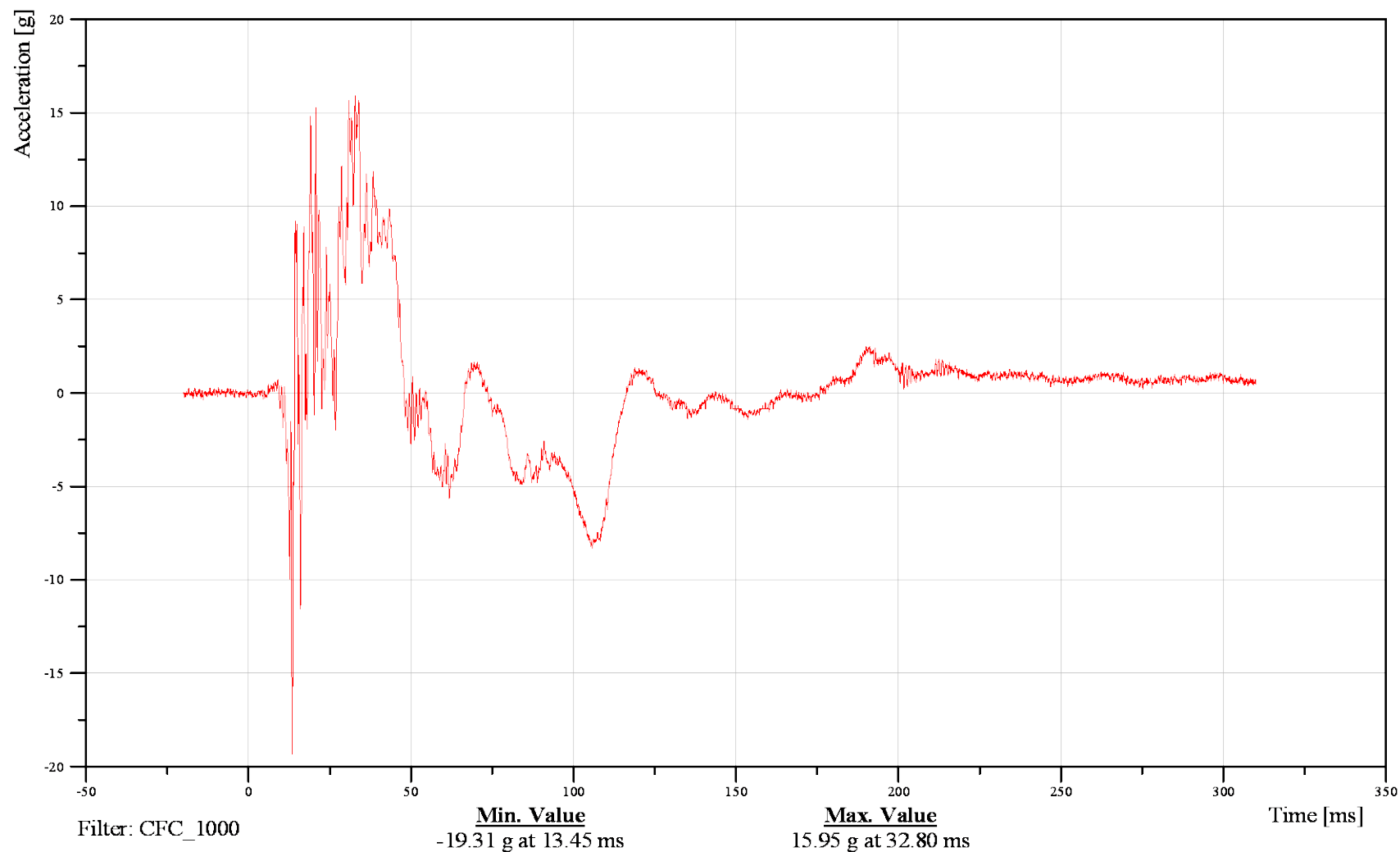
Time: 10:15

Customer: VRTC

11TRRILE01WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 A Resultant

Date: 03/13/2013

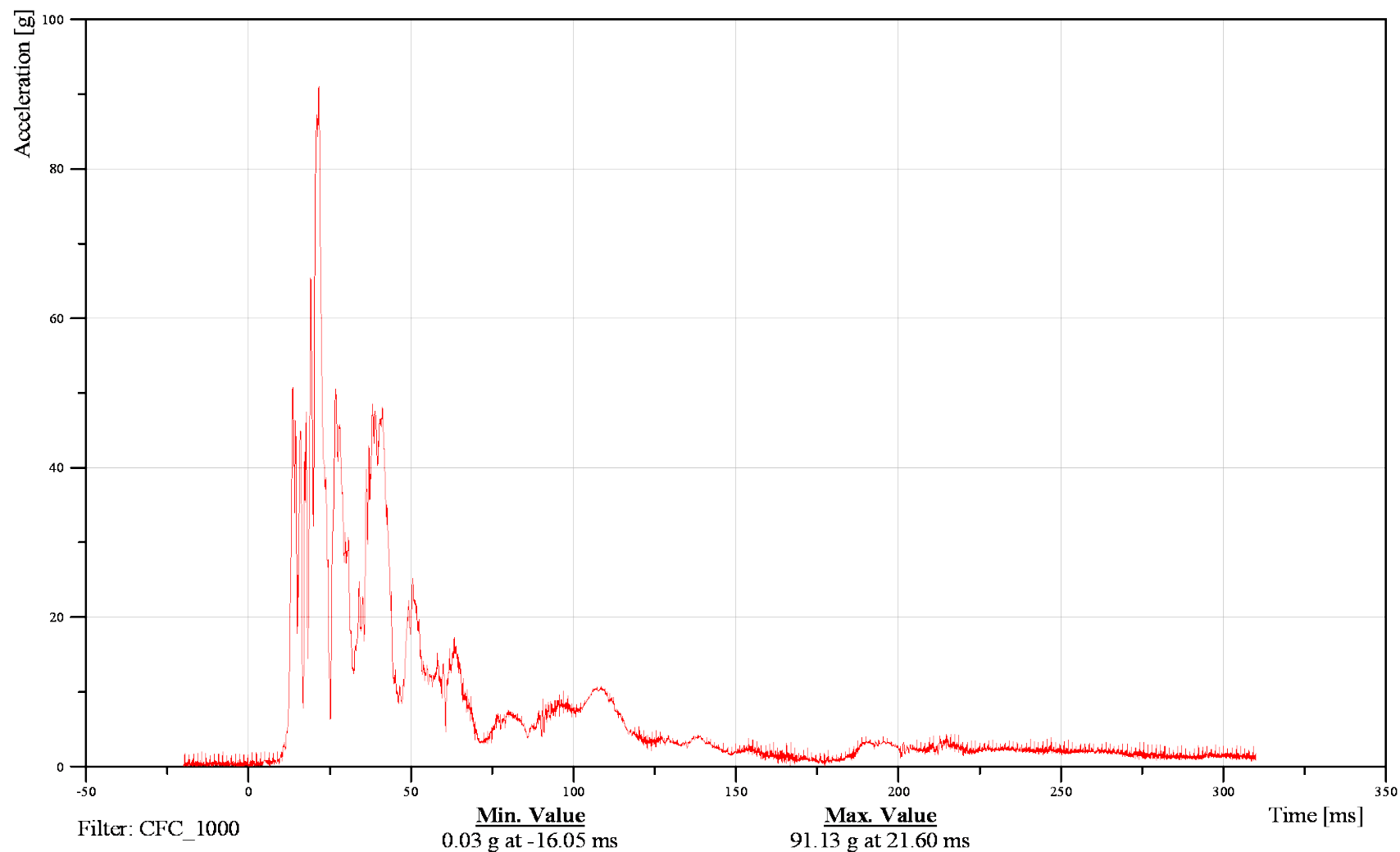
Time: 10:15

Customer: VRTC

11TRRILE01WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Lateral Disp

Date: 03/13/2013

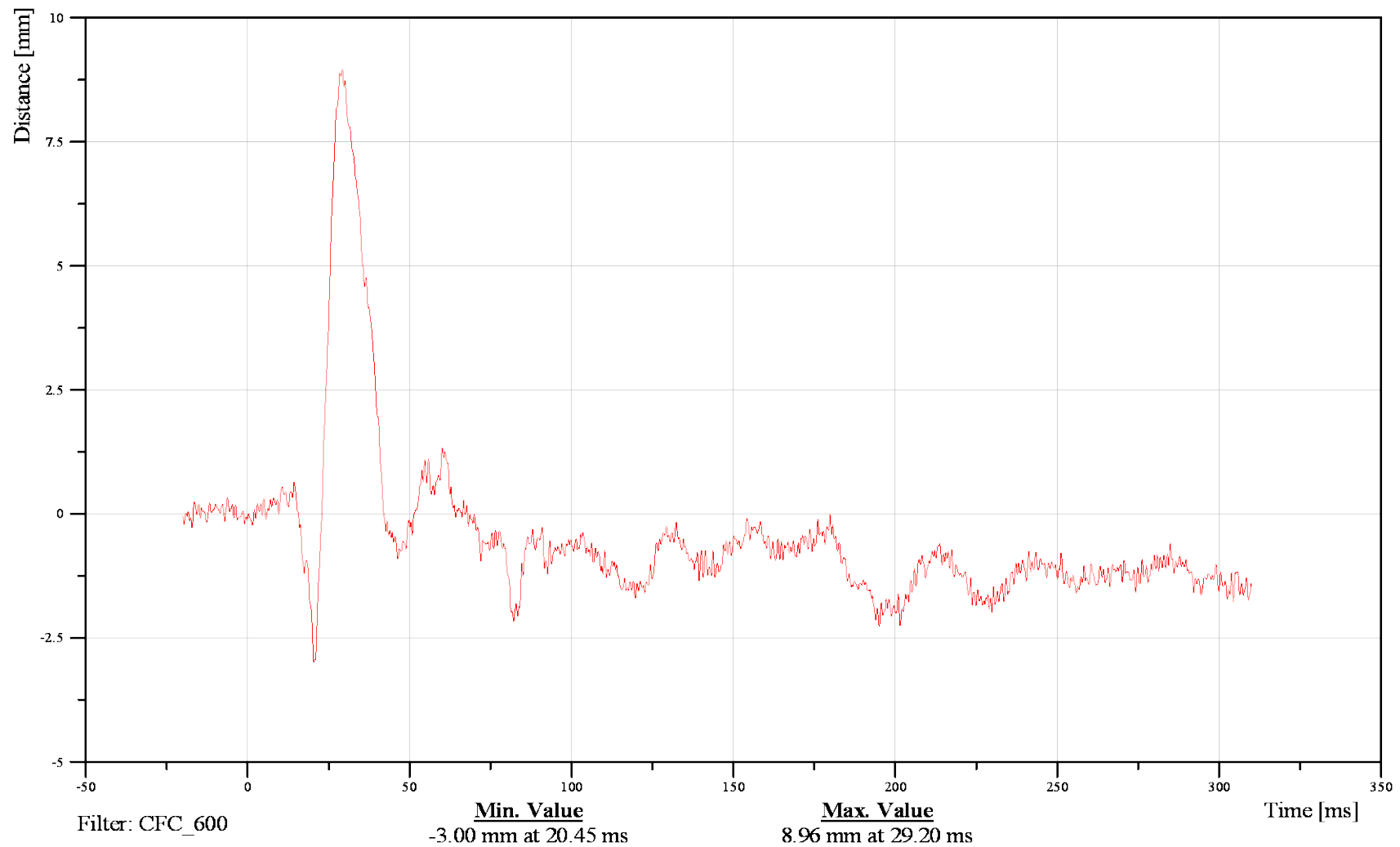
Time: 10:15

Customer: VRTC

11TRRILE01WSDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Longitudinal Ax

Date: 03/13/2013

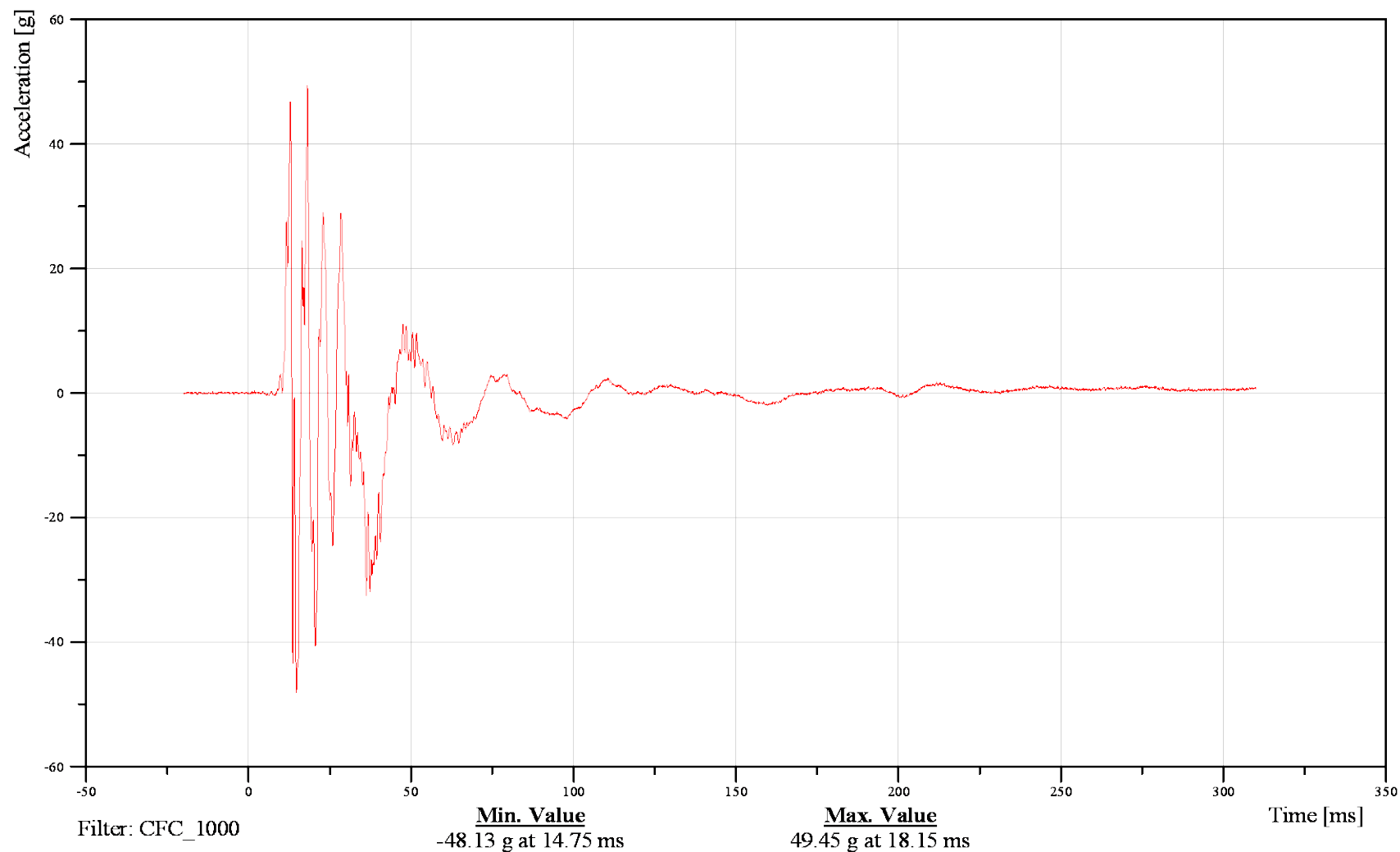
Time: 10:15

Customer: VRTC

11TRRILE02WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Lateral Ay

Date: 03/13/2013

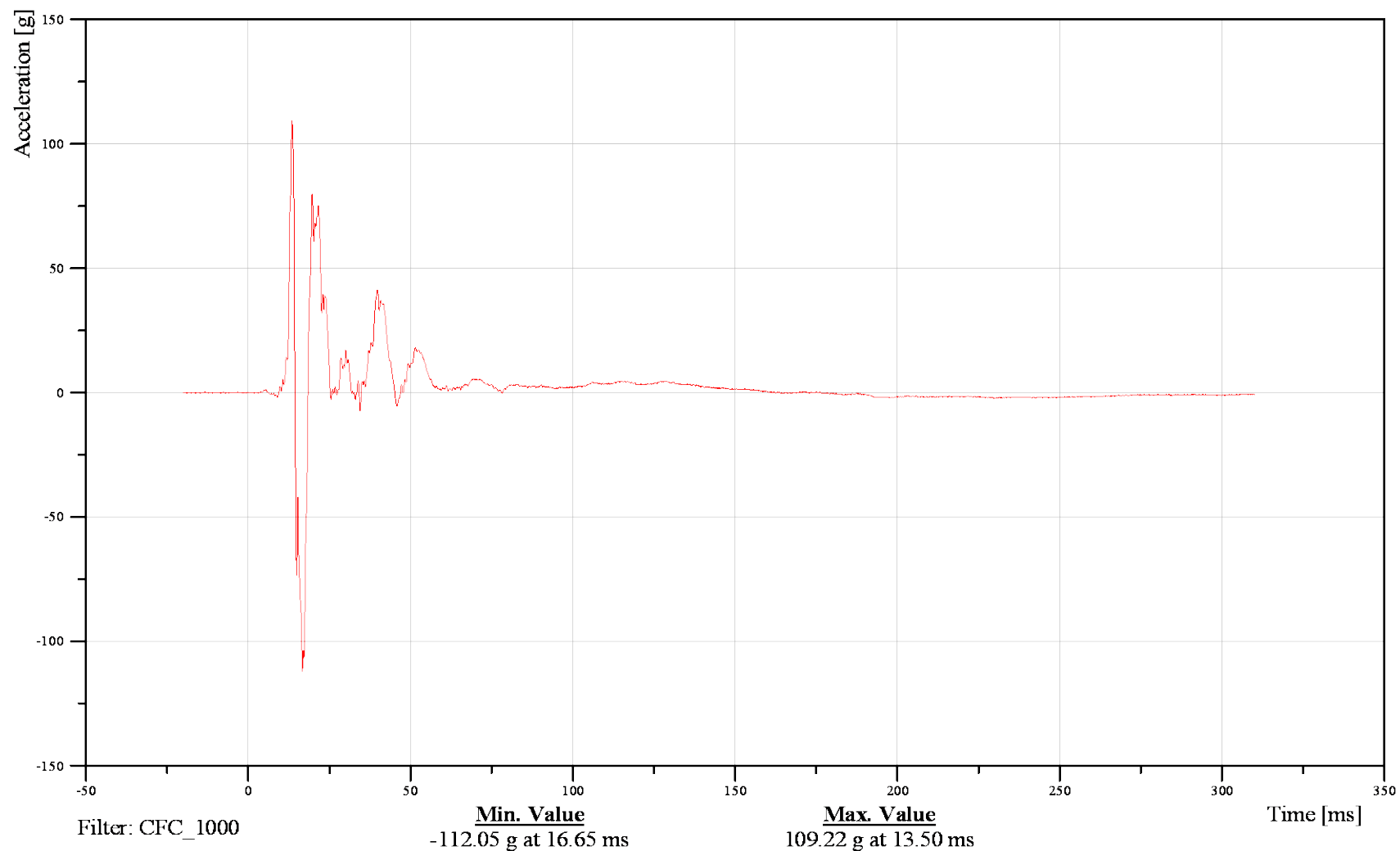
Time: 10:15

Customer: VRTC

11TRRILE02WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Vertical Az

Date: 03/13/2013

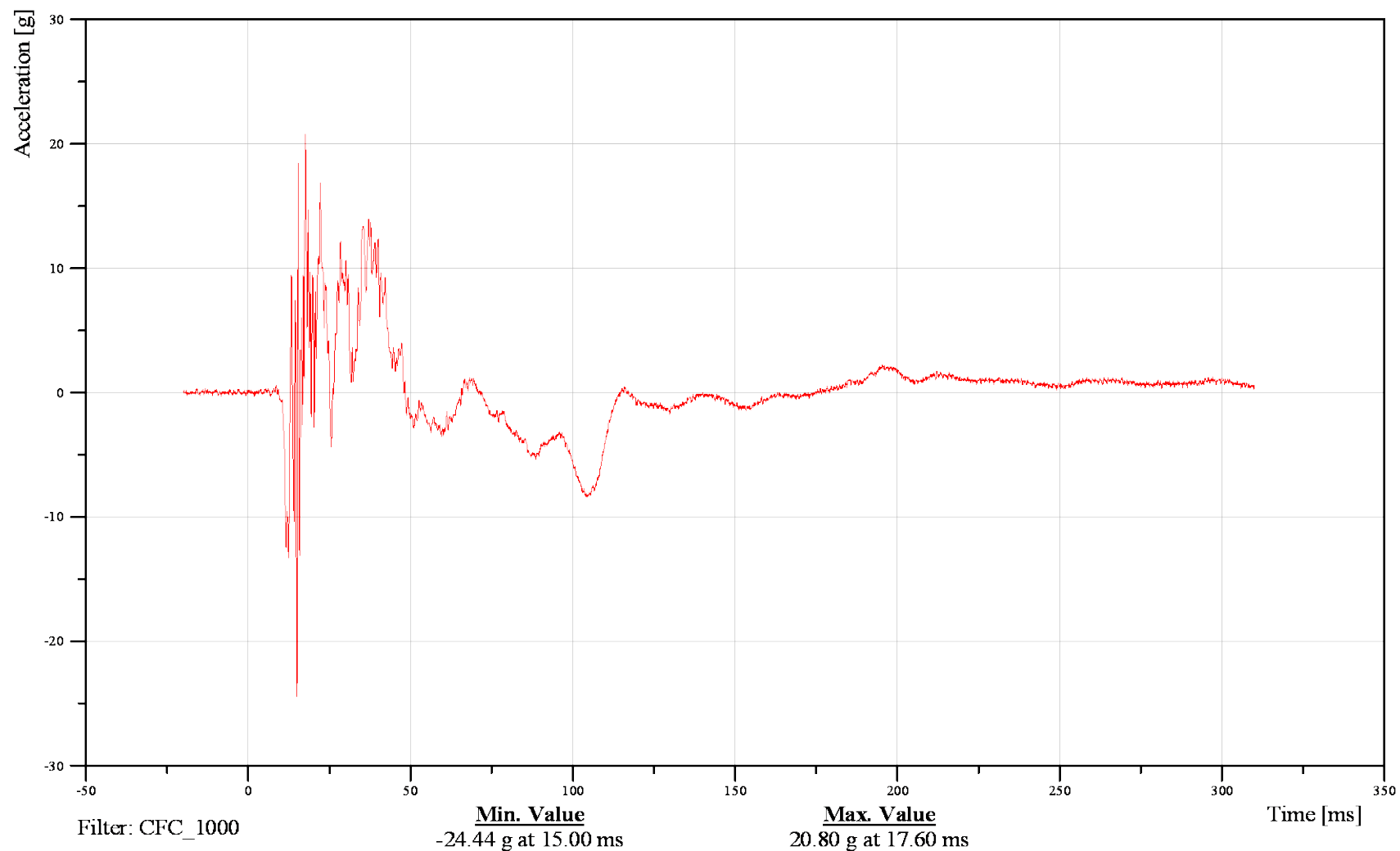
Time: 10:15

Customer: VRTC

11TRRILE02WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 A Resultant

Date: 03/13/2013

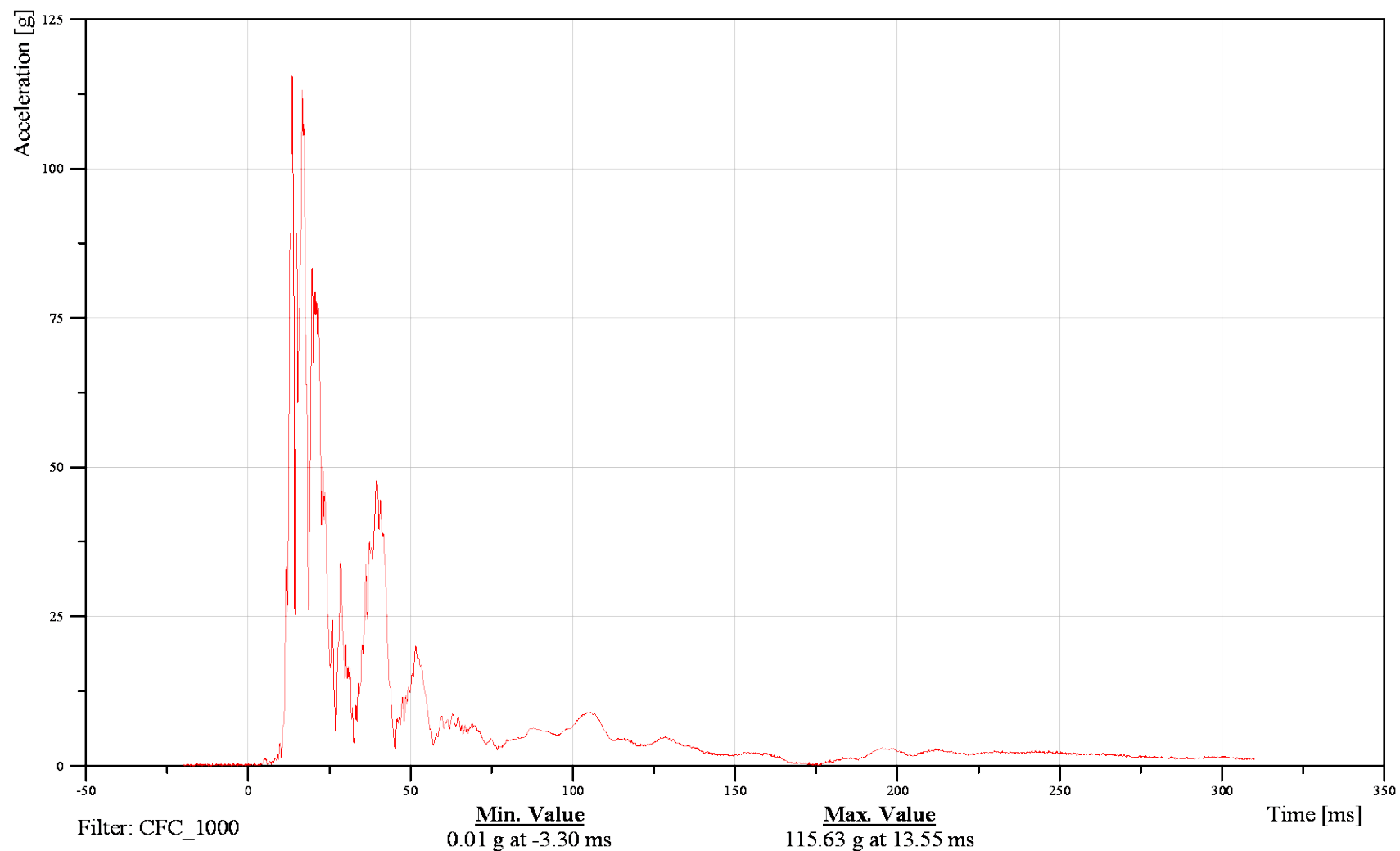
Time: 10:15

Customer: VRTC

11TRRILE02WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 IRTRAC compression

Date: 03/13/2013

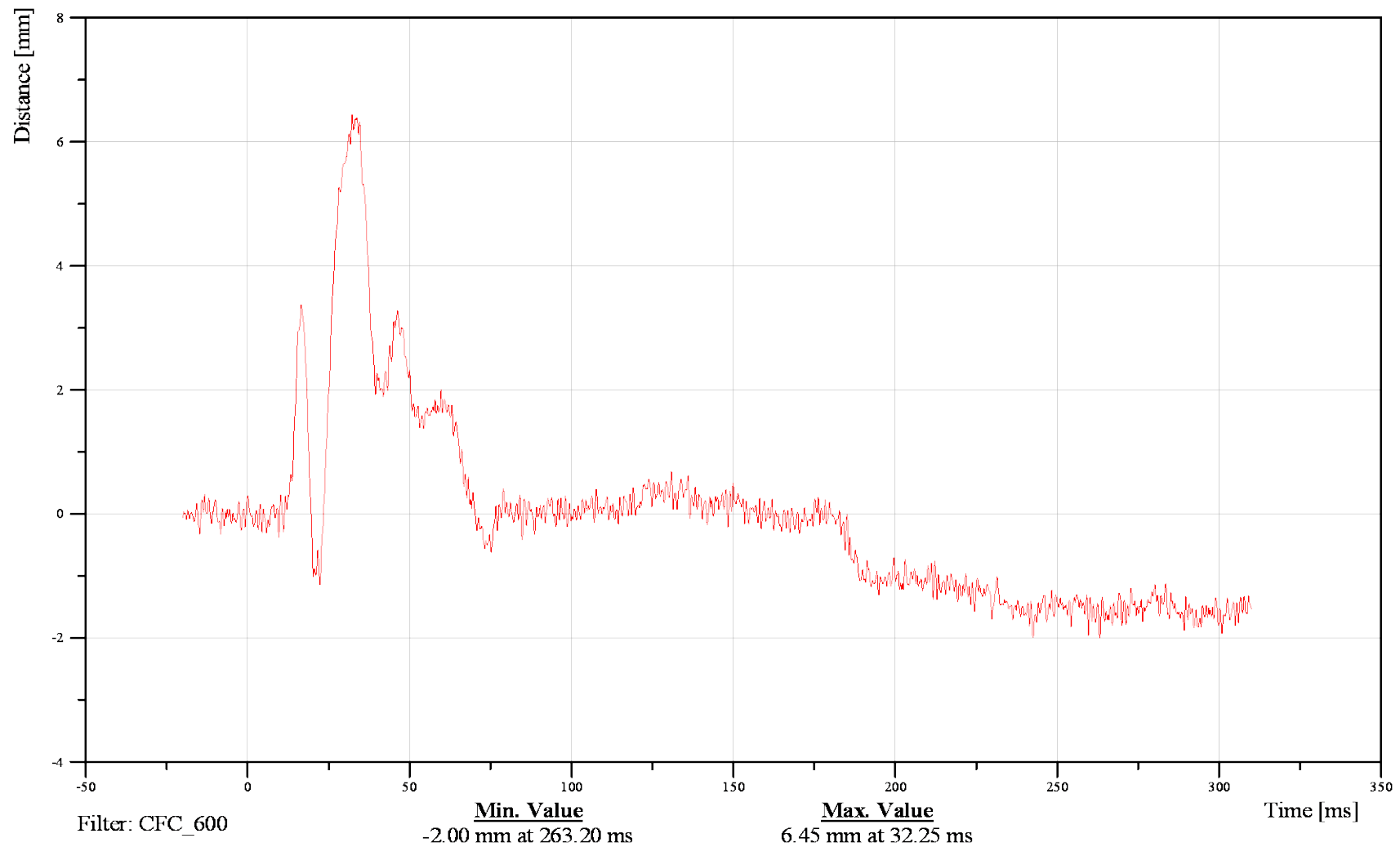
Time: 10:15

Customer: VRTC

11TRRILE02WSDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Rotational angle

Date: 03/13/2013

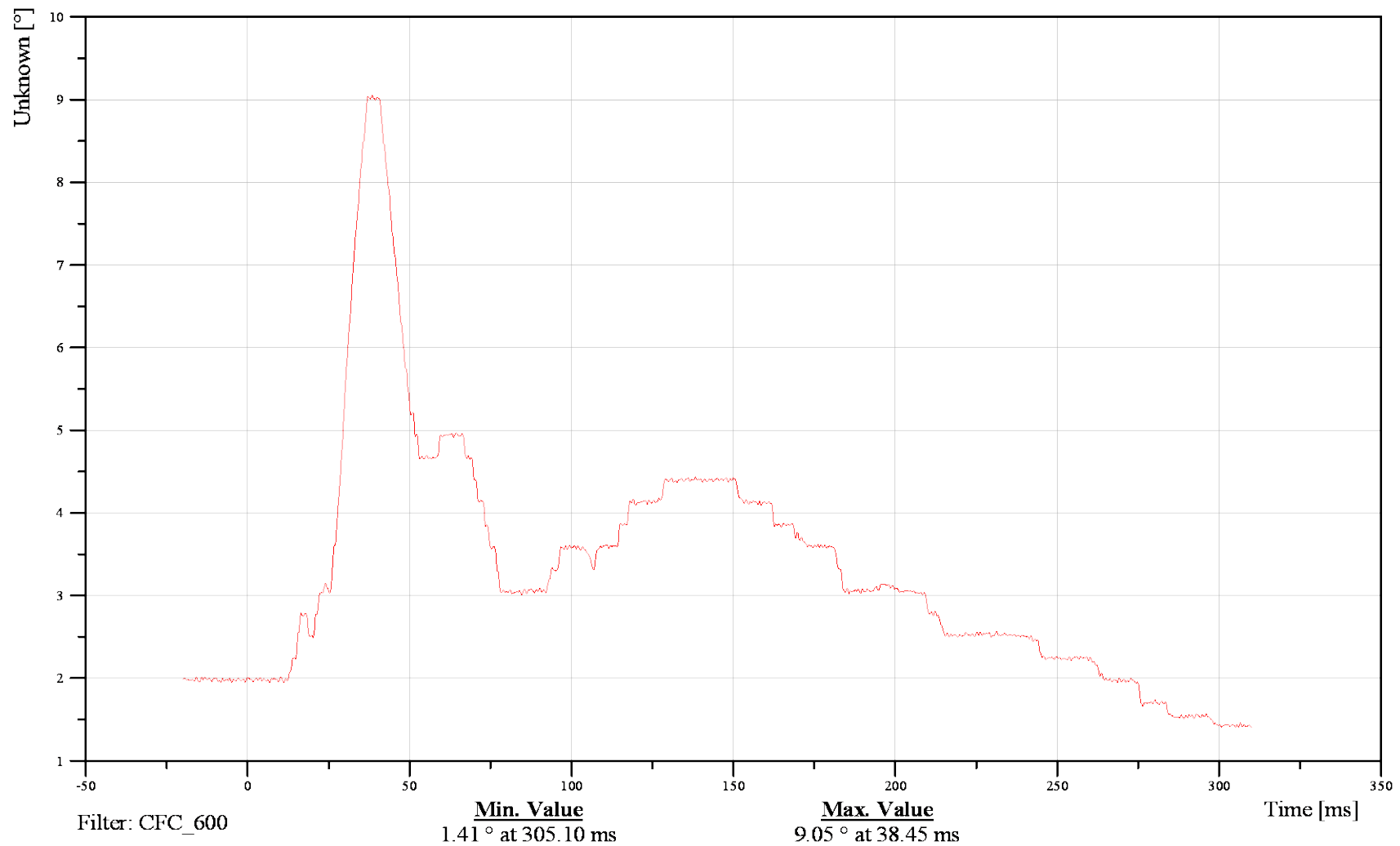
Time: 10:15

Customer: VRTC

11TRRILE02WSANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 IRTRAC X Deflection

Date: 03/13/2013

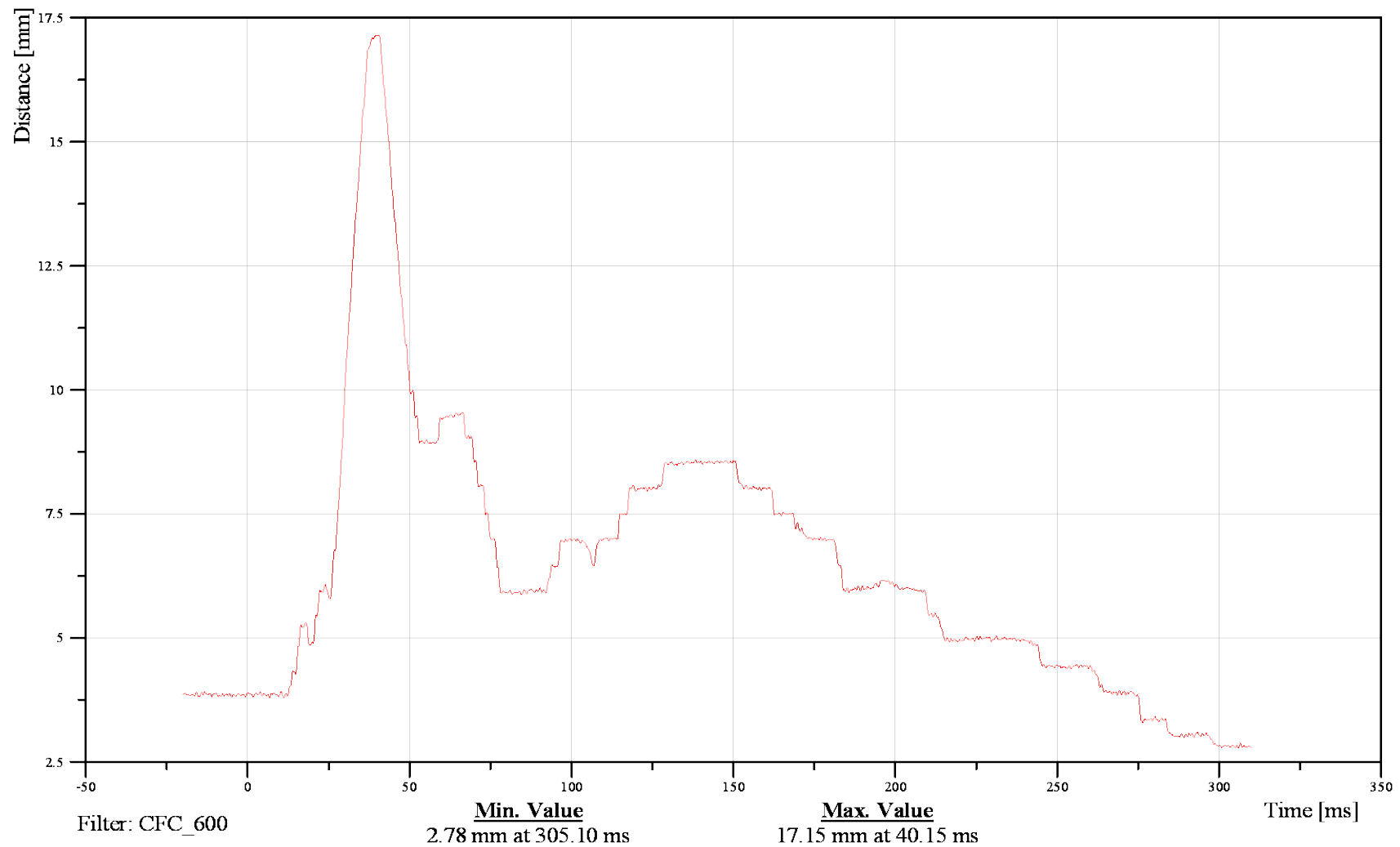
Time: 10:15

Customer: VRTC

11TRRILE02WSDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 IRTRAC Y Deflection

Date: 03/13/2013

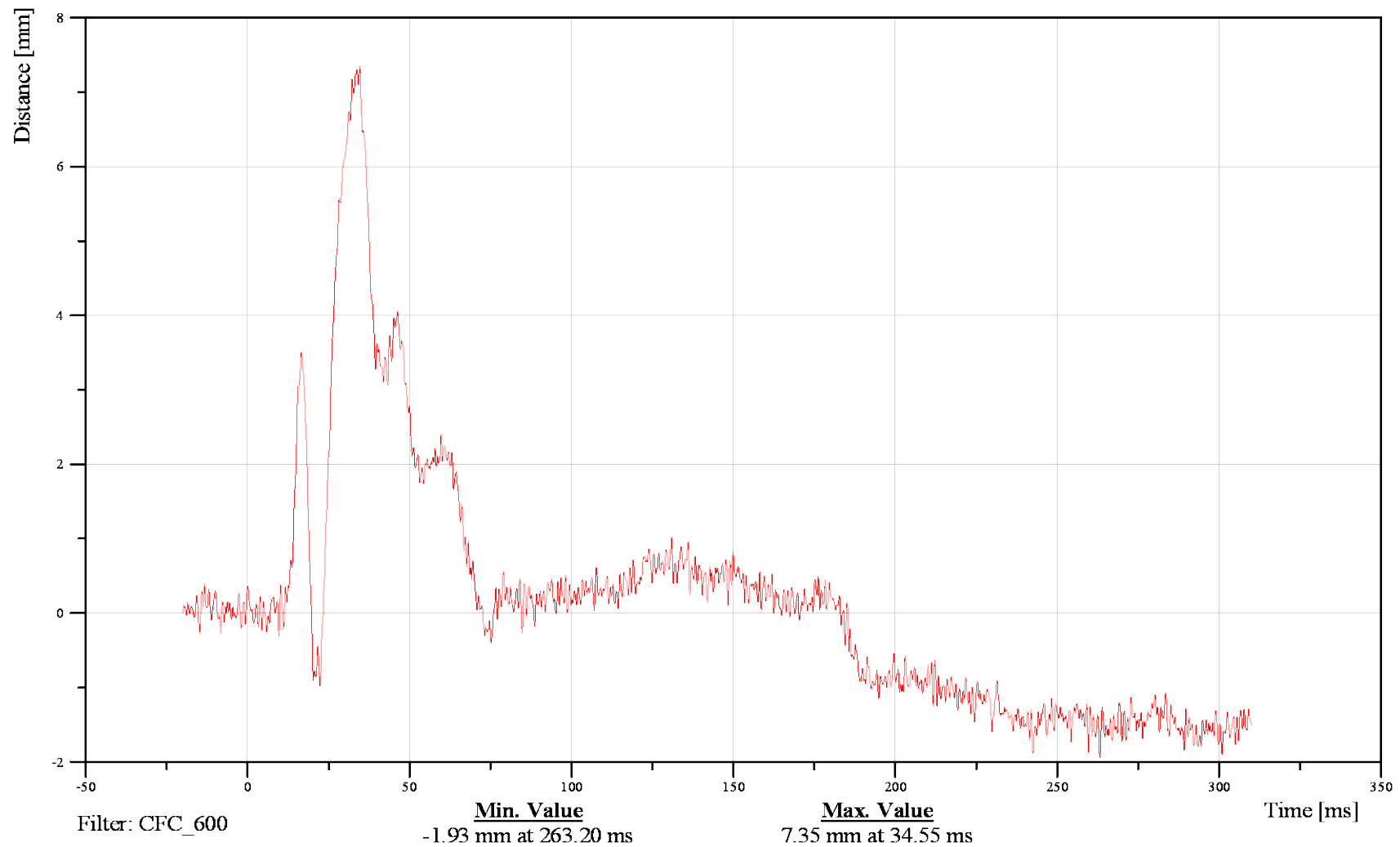
Time: 10:15

Customer: VRTC

11TRRILE02WSDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Longitudinal Ax

Date: 03/13/2013

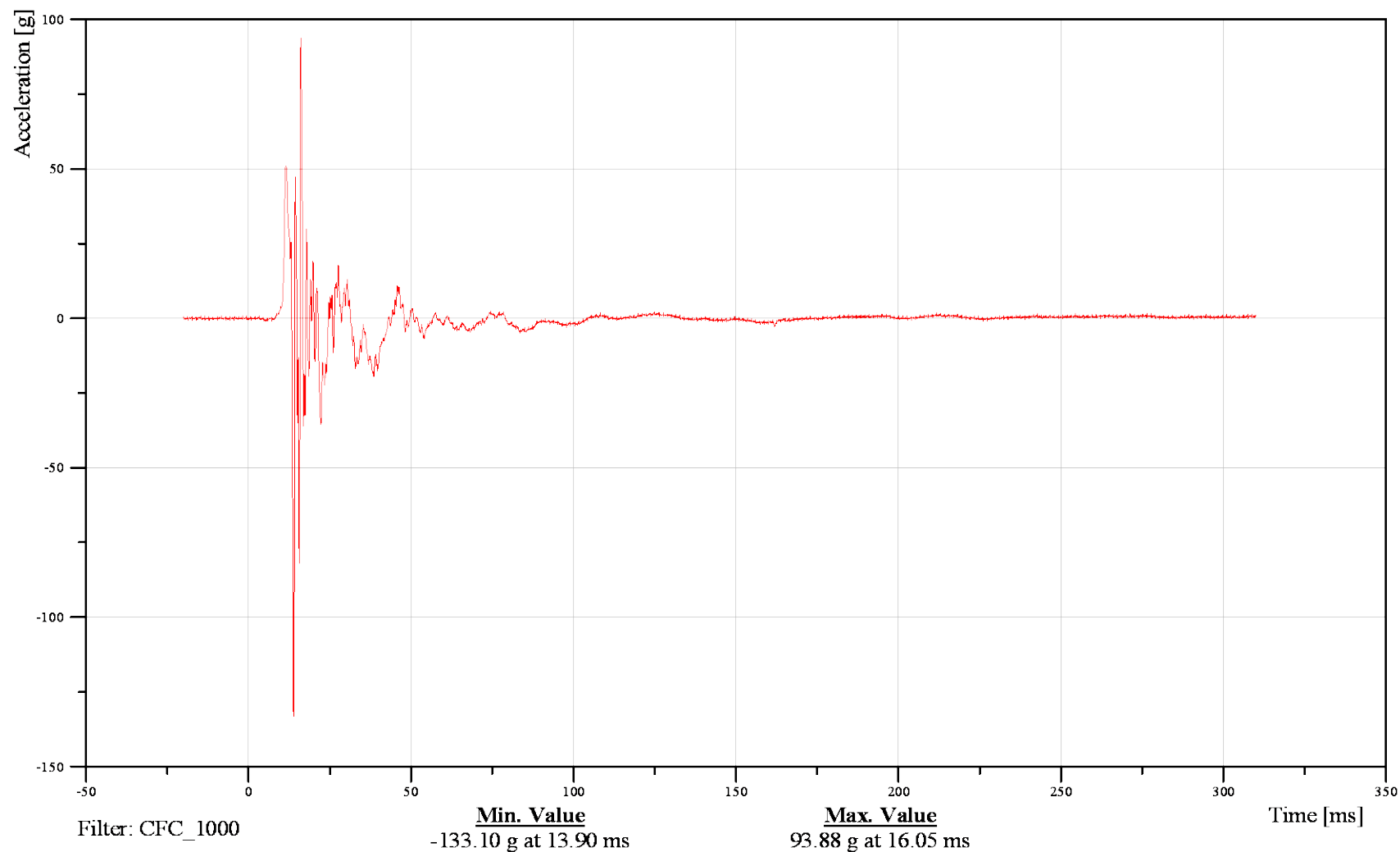
Time: 10:15

Customer: VRTC

11TRRILE03WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Lateral Ay

Date: 03/13/2013

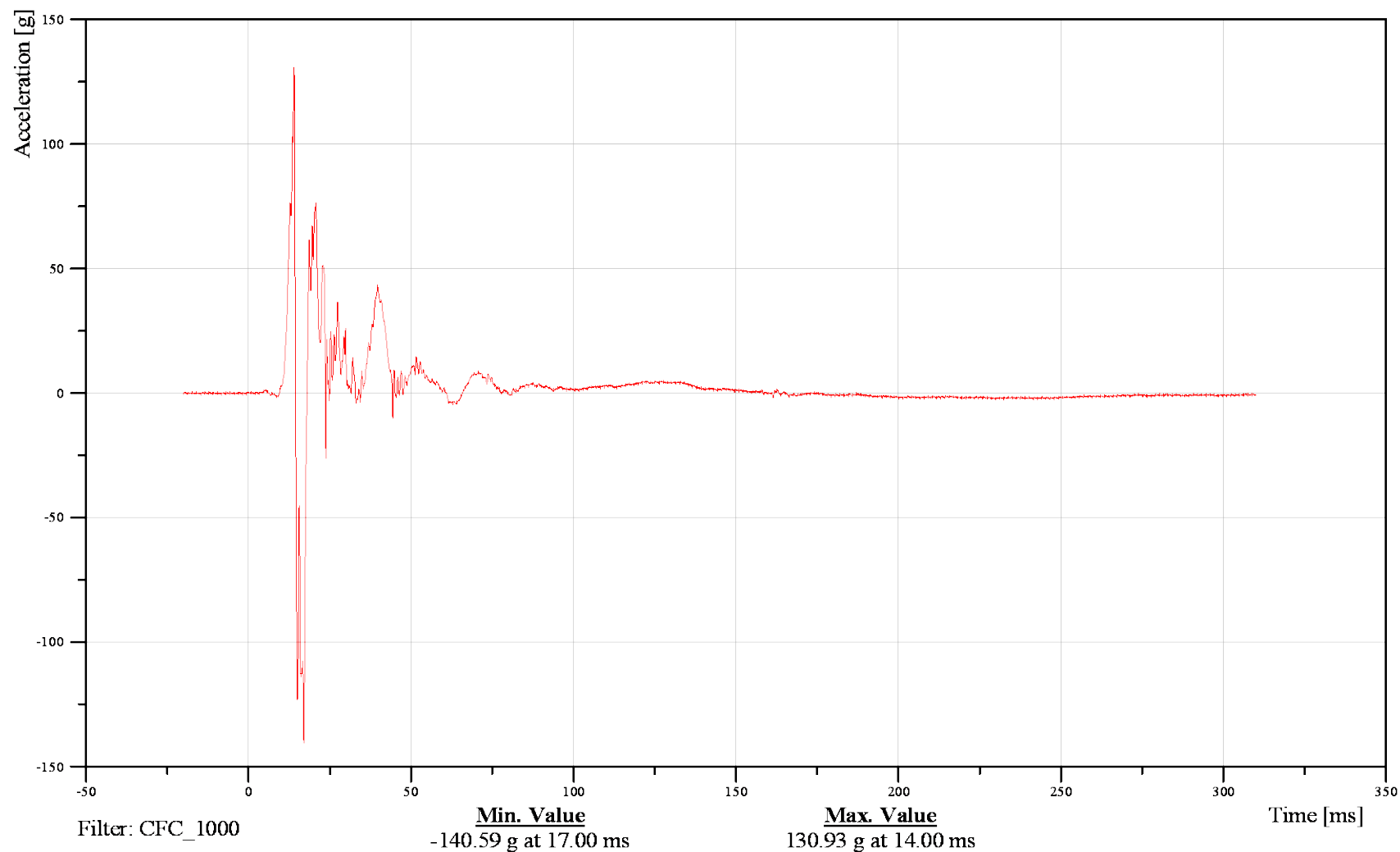
Time: 10:15

Customer: VRTC

11TRRILE03WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Vertical Az

Date: 03/13/2013

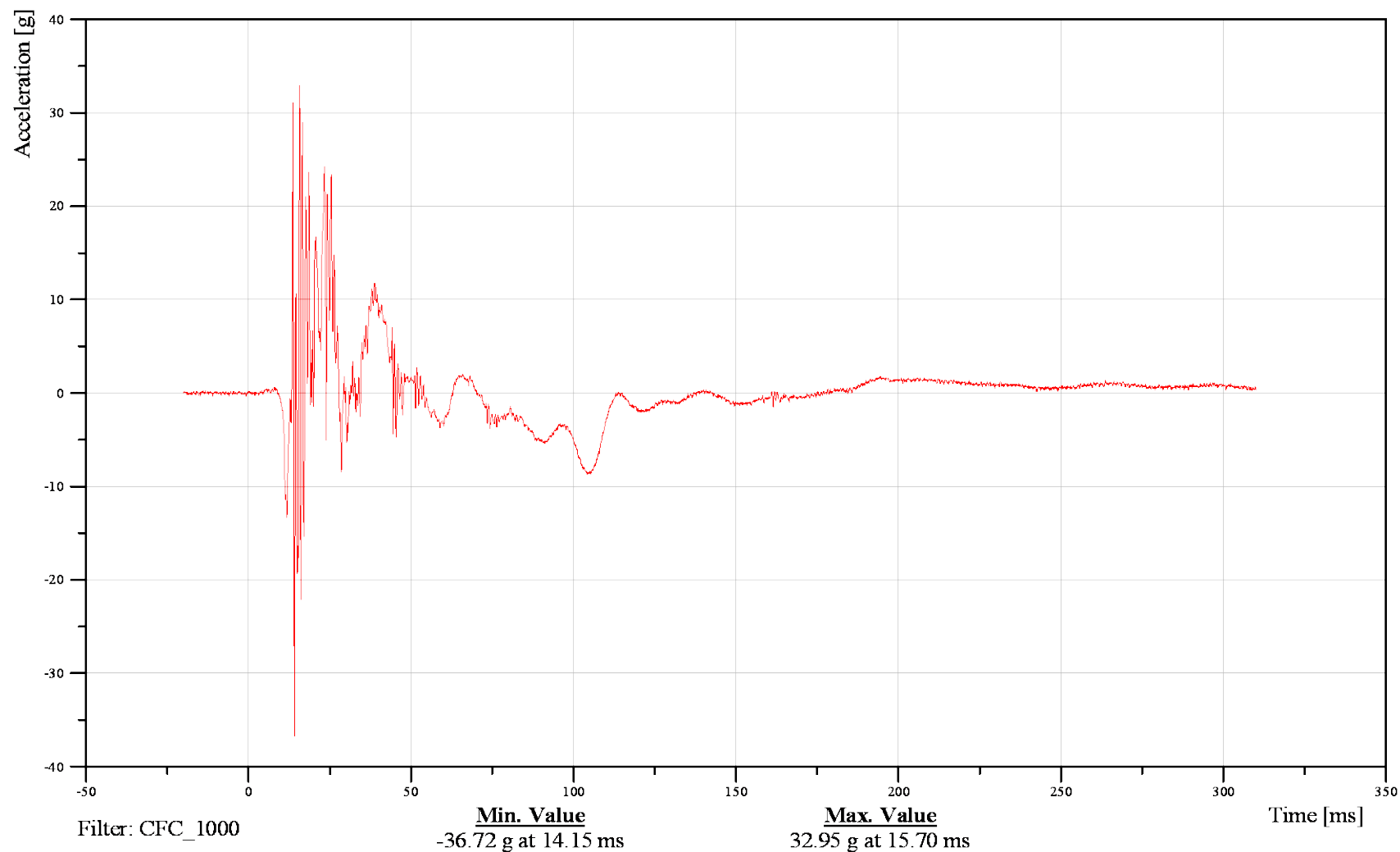
Time: 10:15

Customer: VRTC

11TRRILE03WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 A Resultant

Date: 03/13/2013

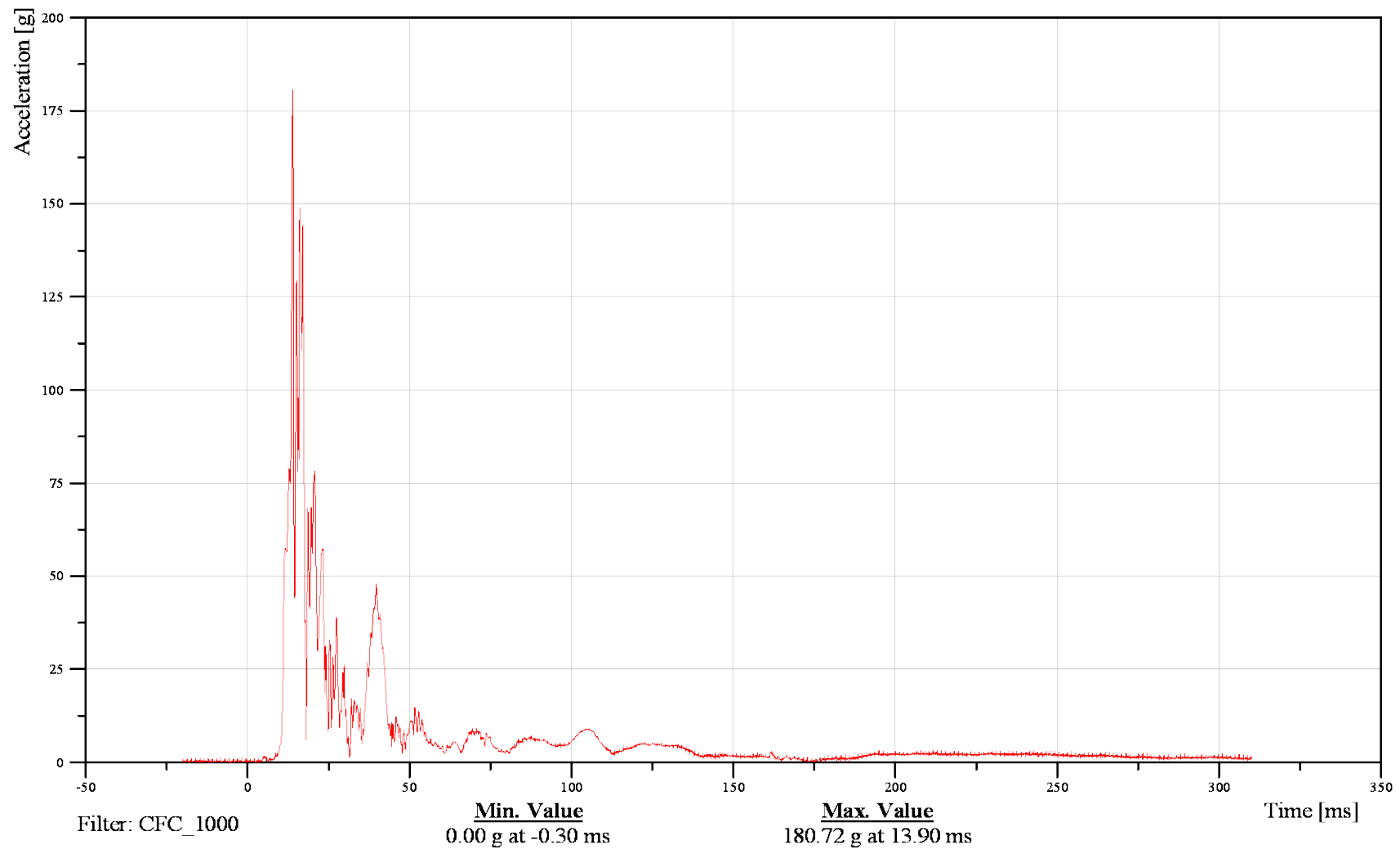
Time: 10:15

Customer: VRTC

11TRRILE03WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 IRTRAC compression

Date: 03/13/2013

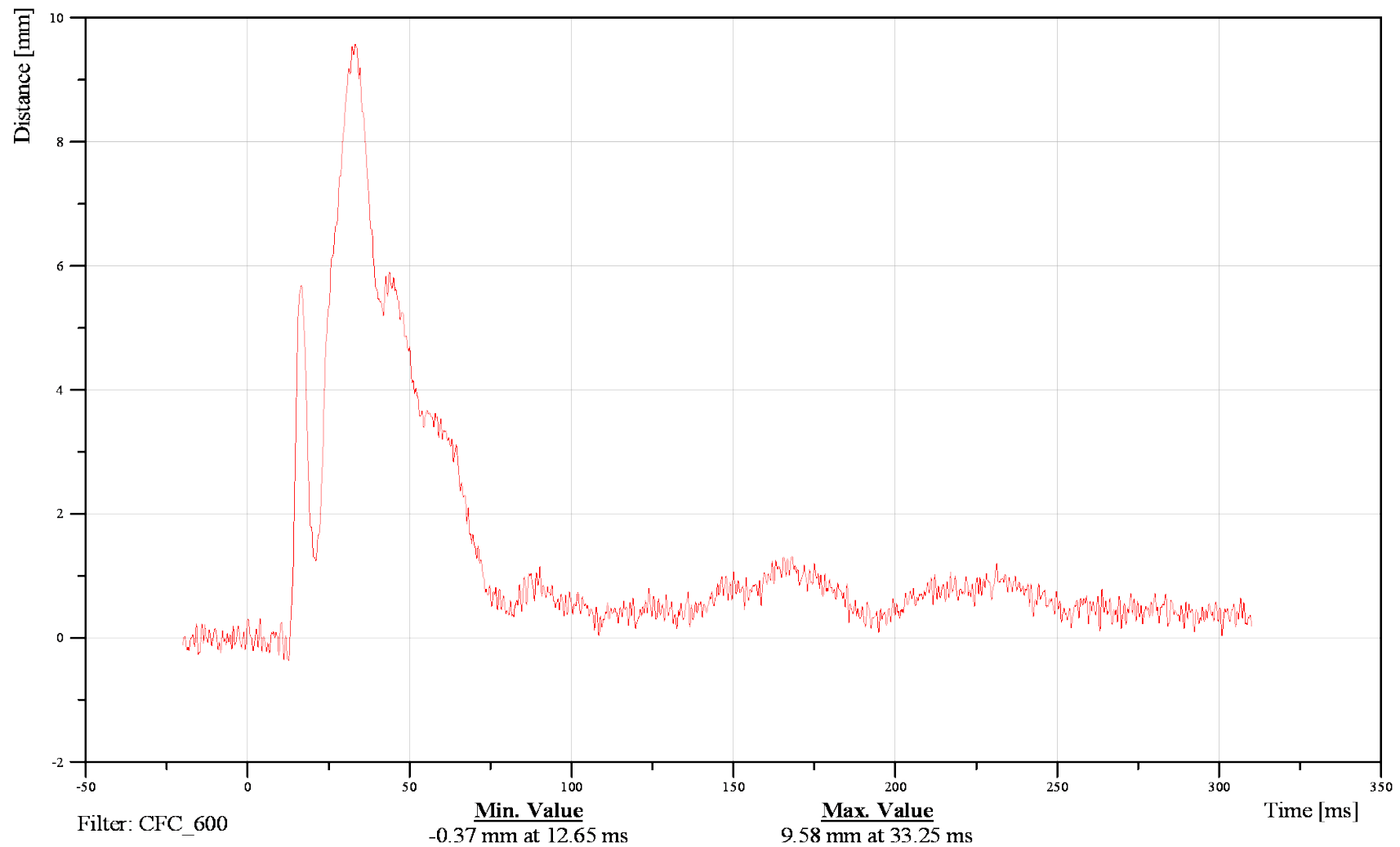
Time: 10:15

Customer: VRTC

11TRRILE03WSDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Rotational angle

Date: 03/13/2013

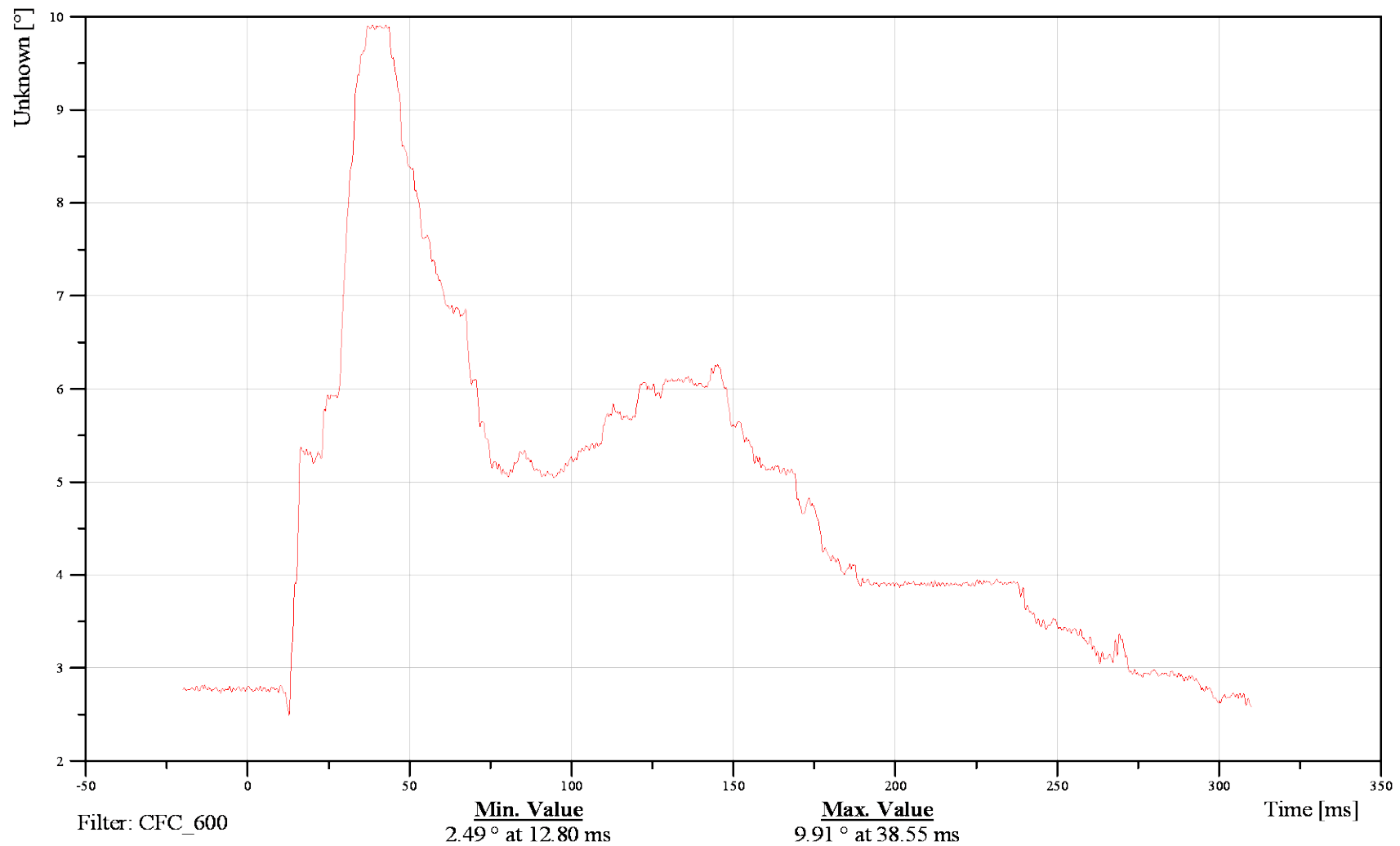
Time: 10:15

Customer: VRTC

11TRRILE03WSANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 IRTRAC X Deflection

Date: 03/13/2013

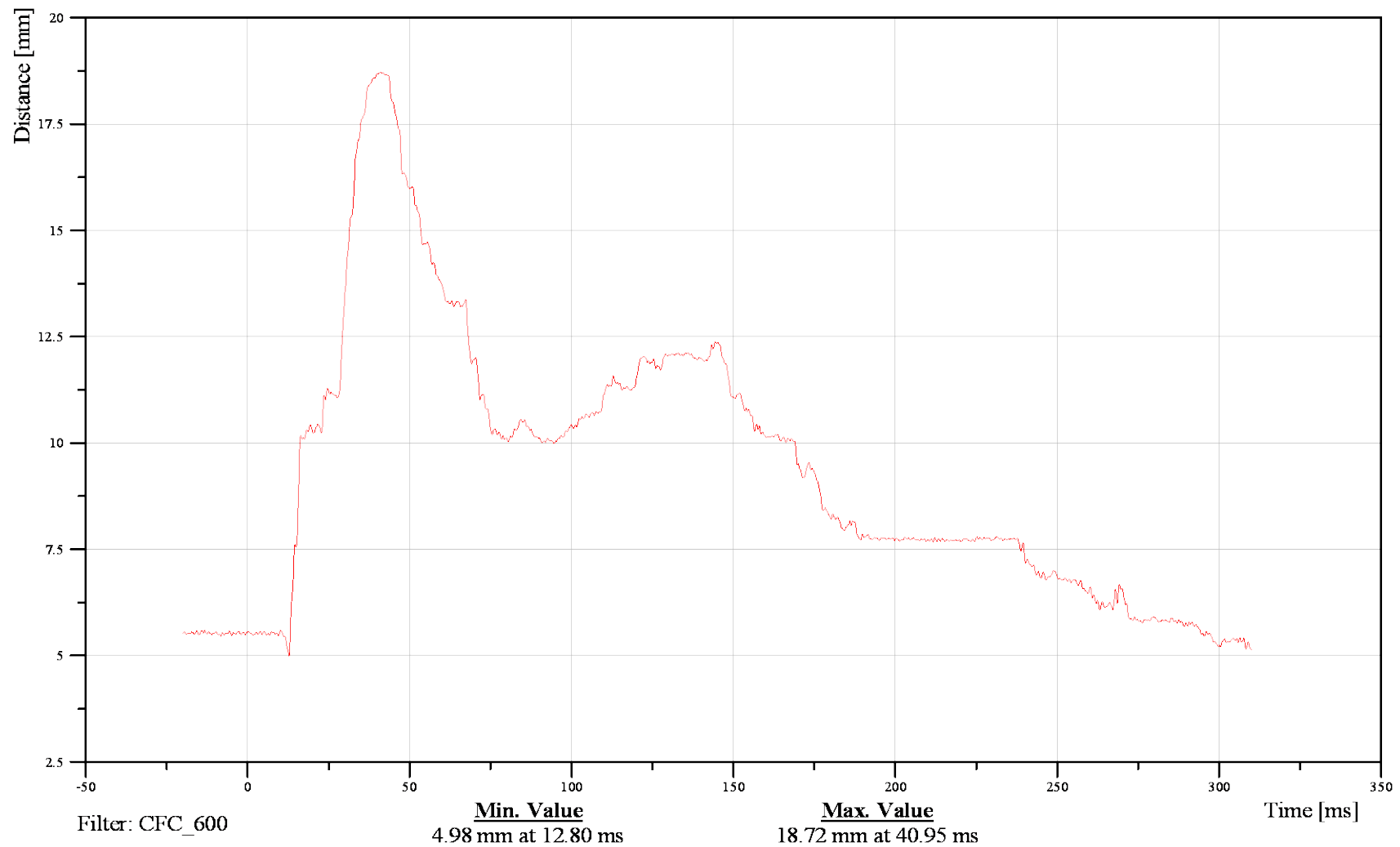
Time: 10:15

Customer: VRTC

11TRRILE03WSDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 IRTRAC Y Deflection

Date: 03/13/2013

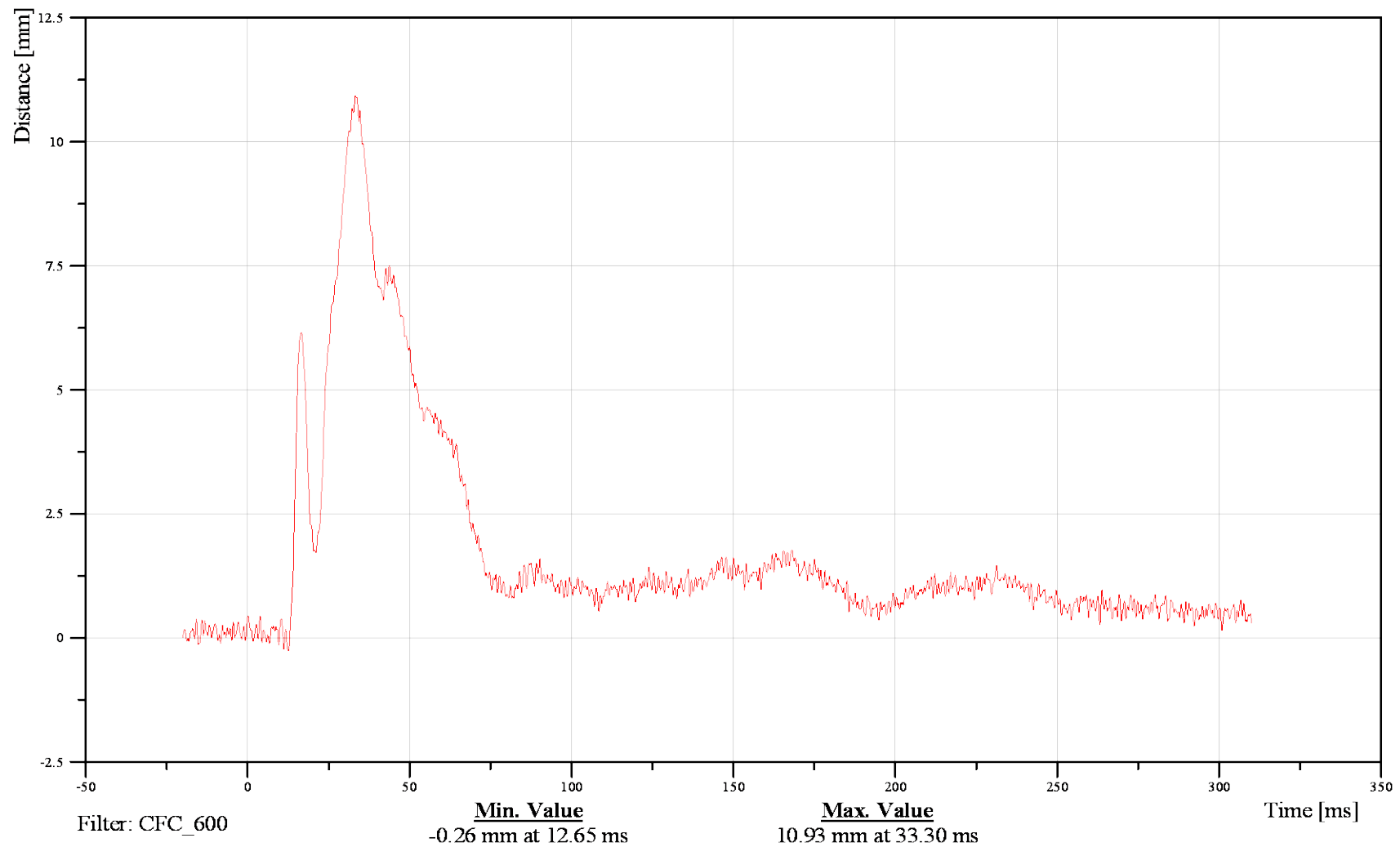
Time: 10:15

Customer: VRTC

11TRRILE03WSDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Longitudinal Ax

Date: 03/13/2013

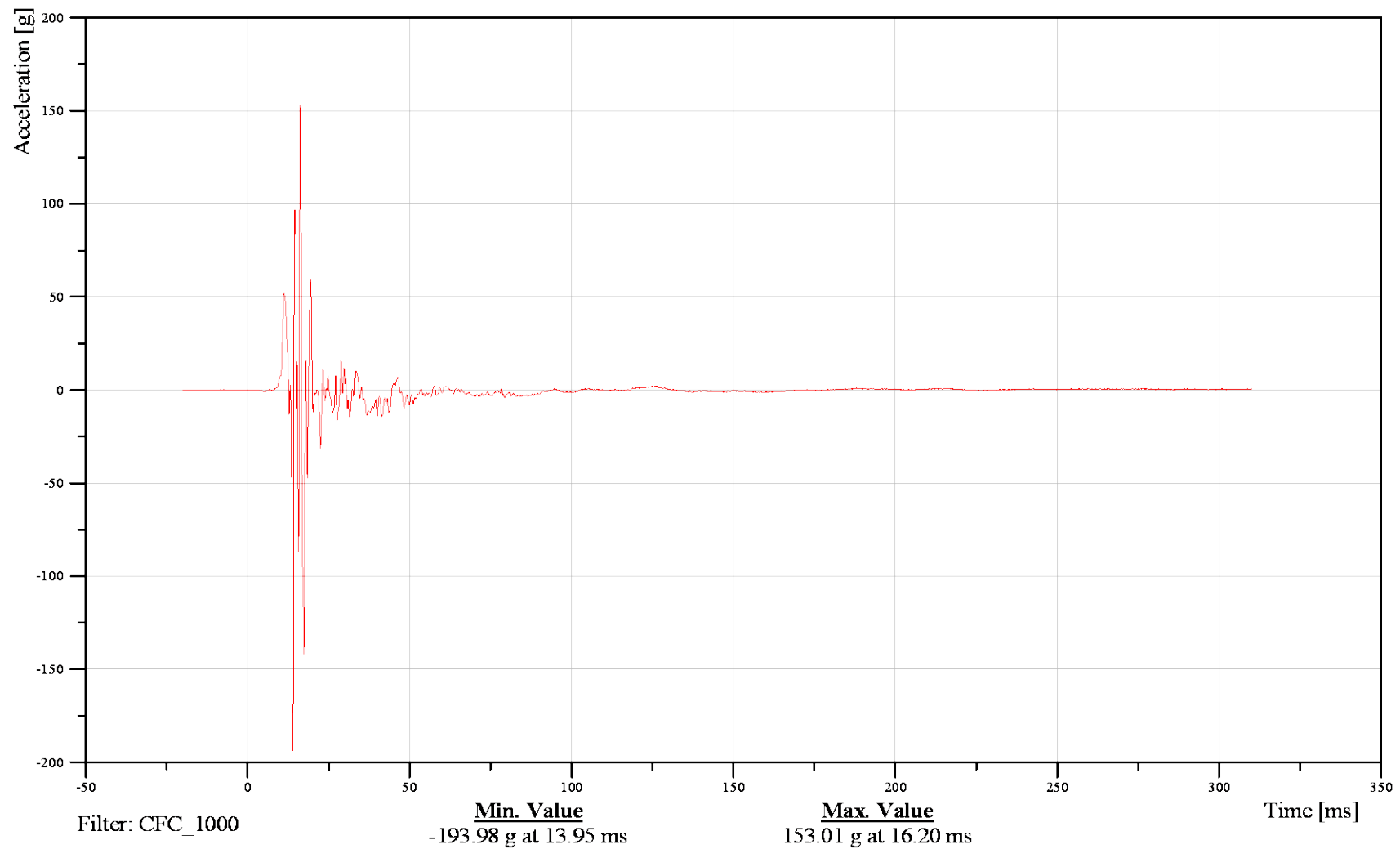
Time: 10:15

Customer: VRTC

11ABRILE01WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Lateral Ay

Date: 03/13/2013

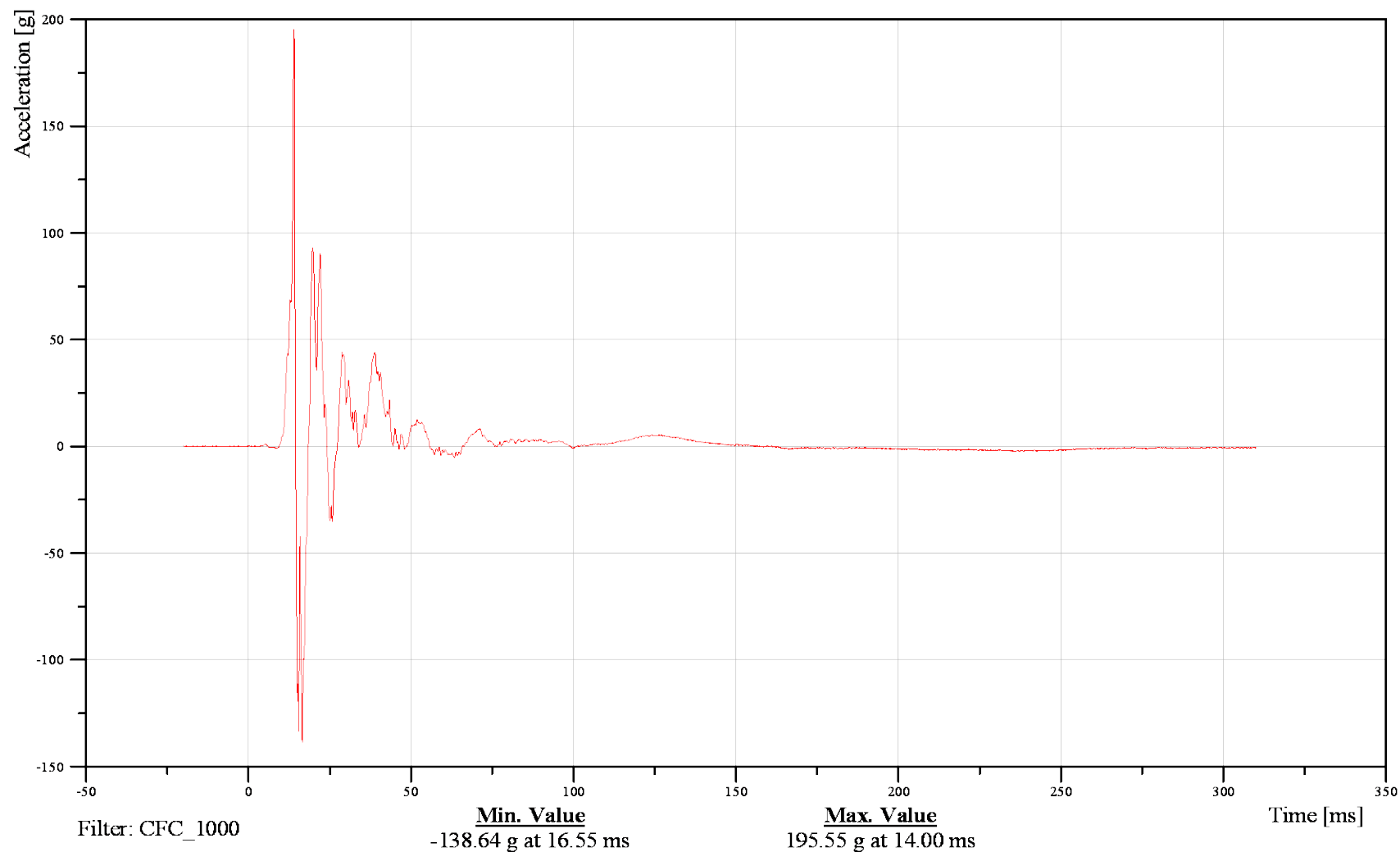
Time: 10:15

Customer: VRTC

11ABRILE01WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Vertical Az

Date: 03/13/2013

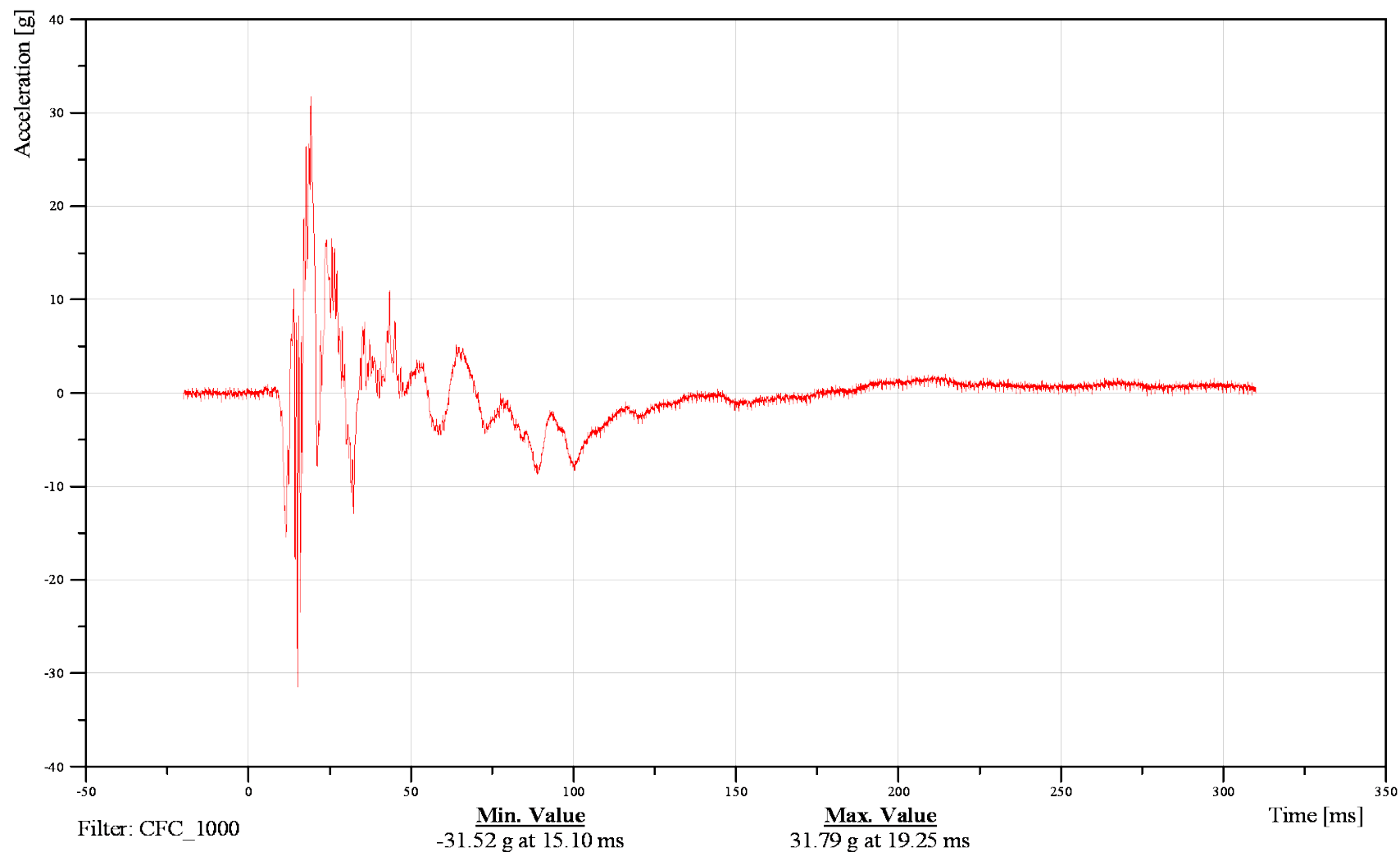
Time: 10:15

Customer: VRTC

11ABRILE01WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 A Resultant

Date: 03/13/2013

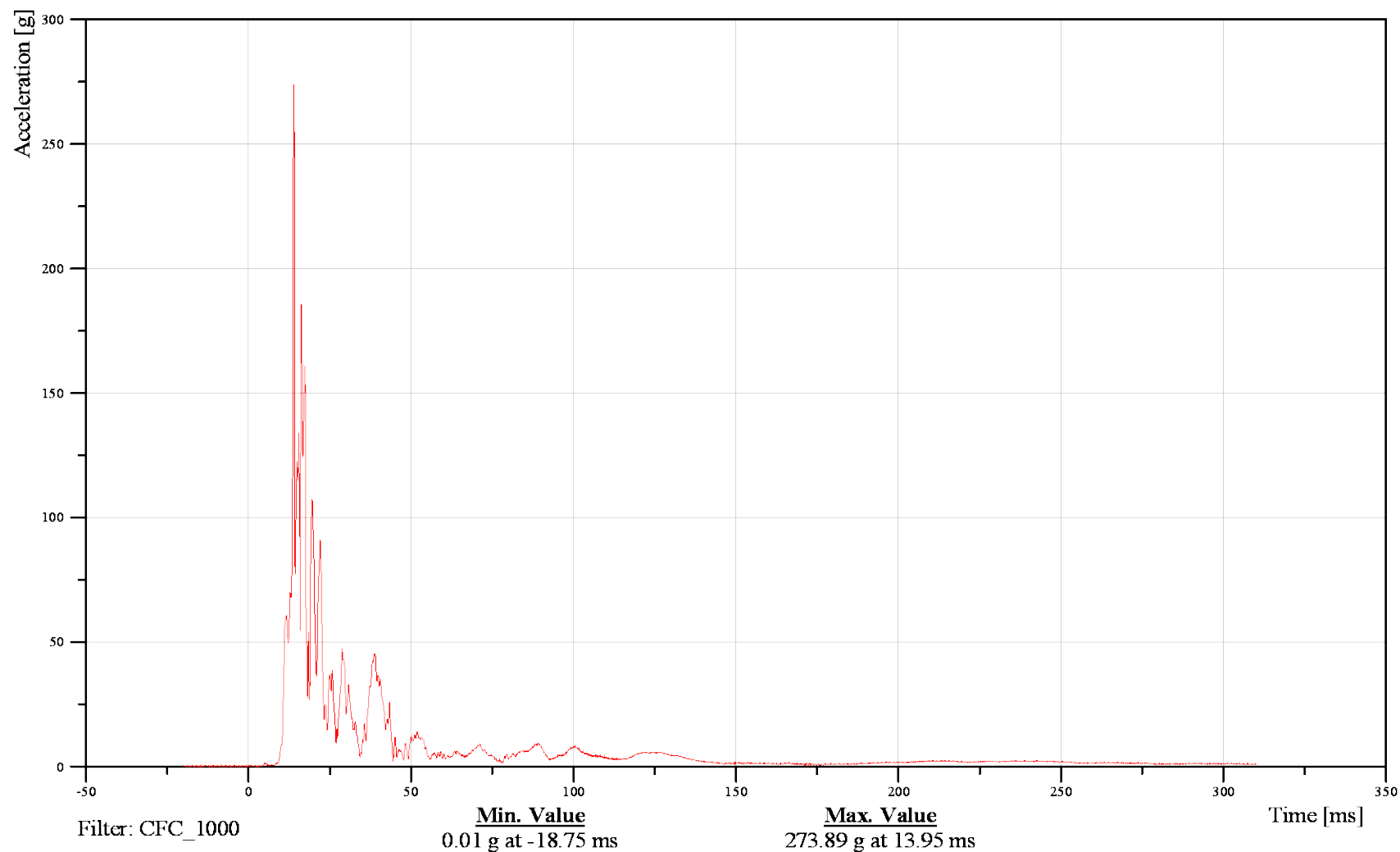
Time: 10:15

Customer: VRTC

11ABRILE01WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 IRTRAC compression

Date: 03/13/2013

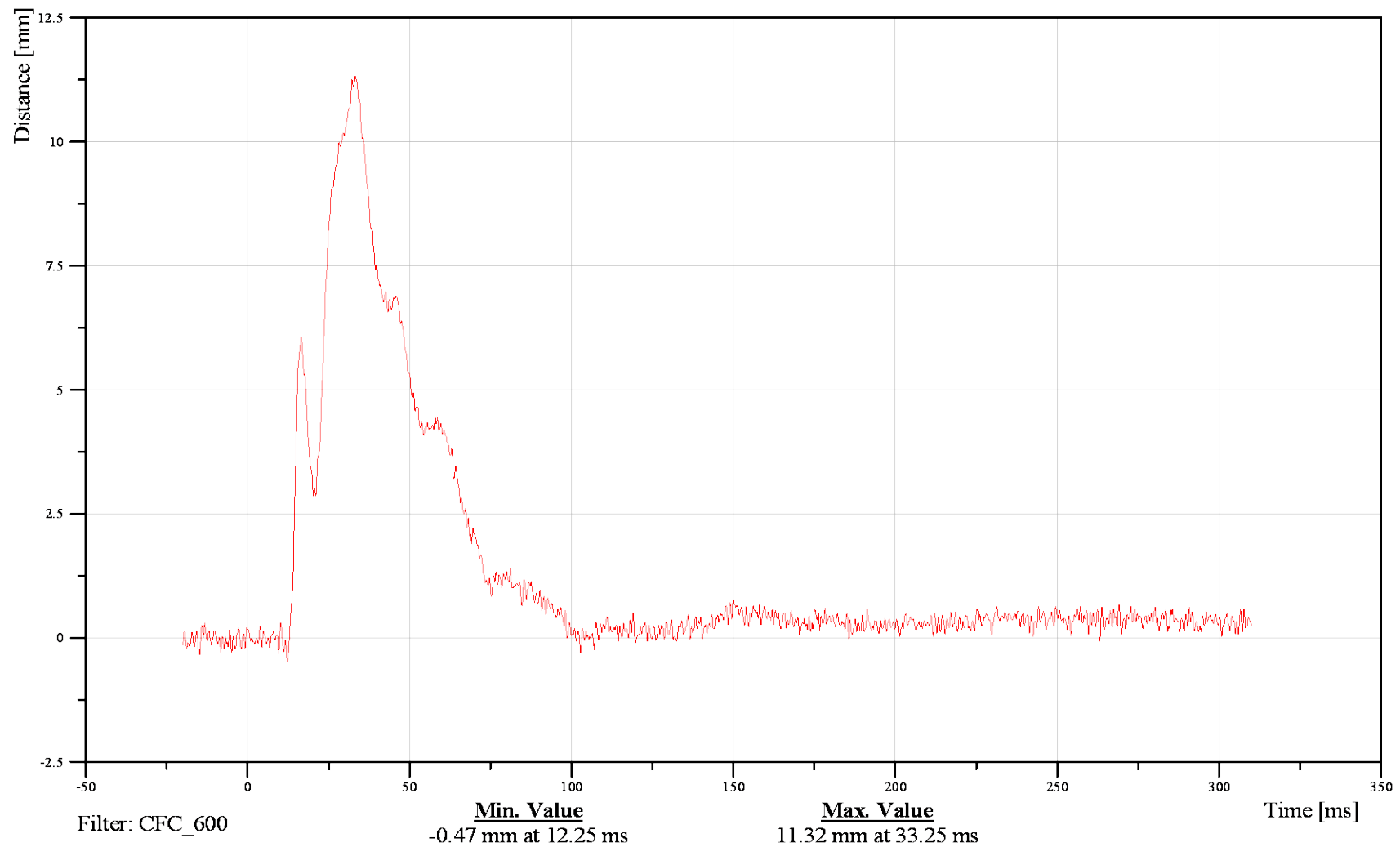
Time: 10:15

Customer: VRTC

11ABRILE01WSDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Rotational angle

Date: 03/13/2013

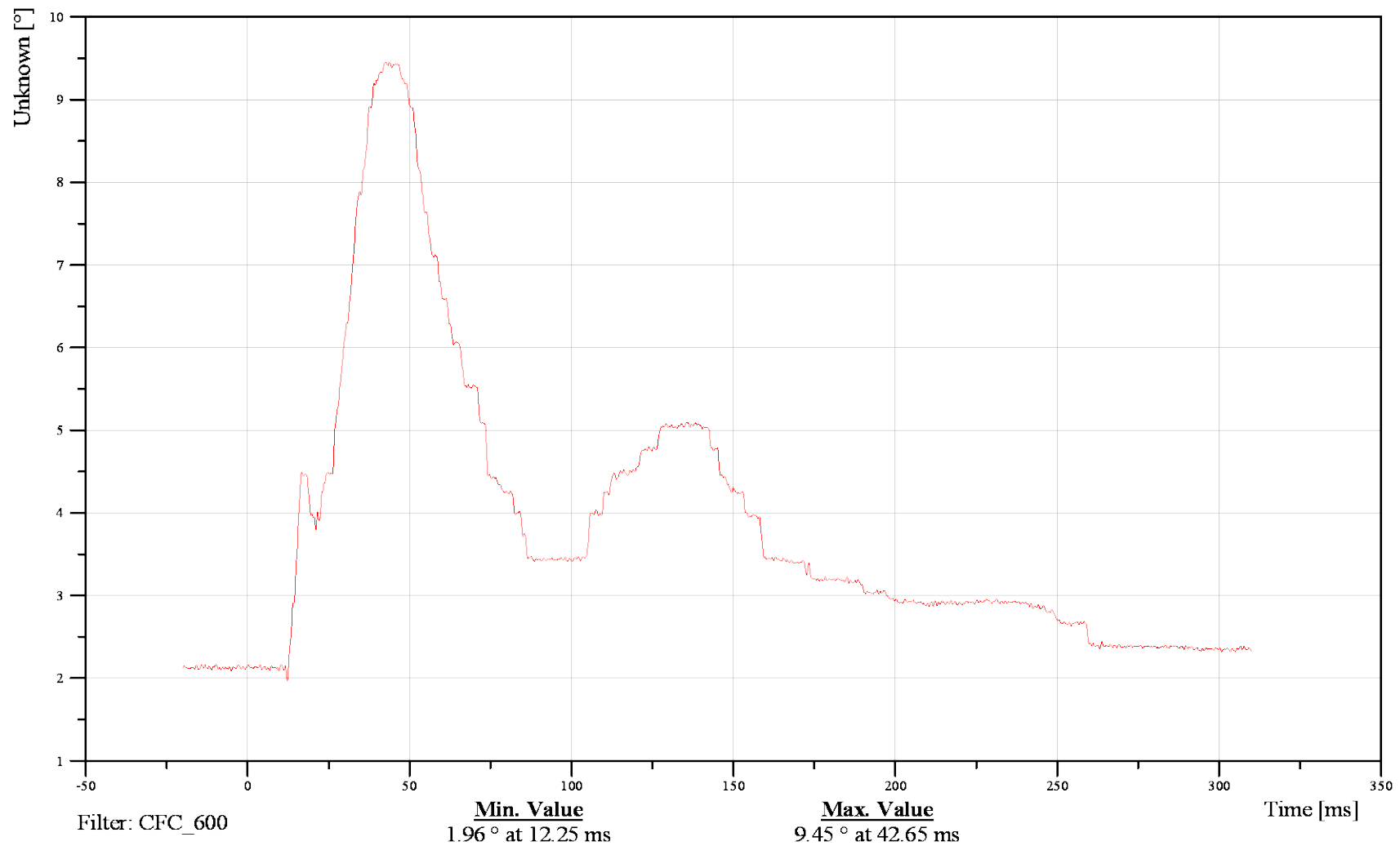
Time: 10:15

Customer: VRTC

11ABRILE01WSANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 IRTRAC X Deflection

Date: 03/13/2013

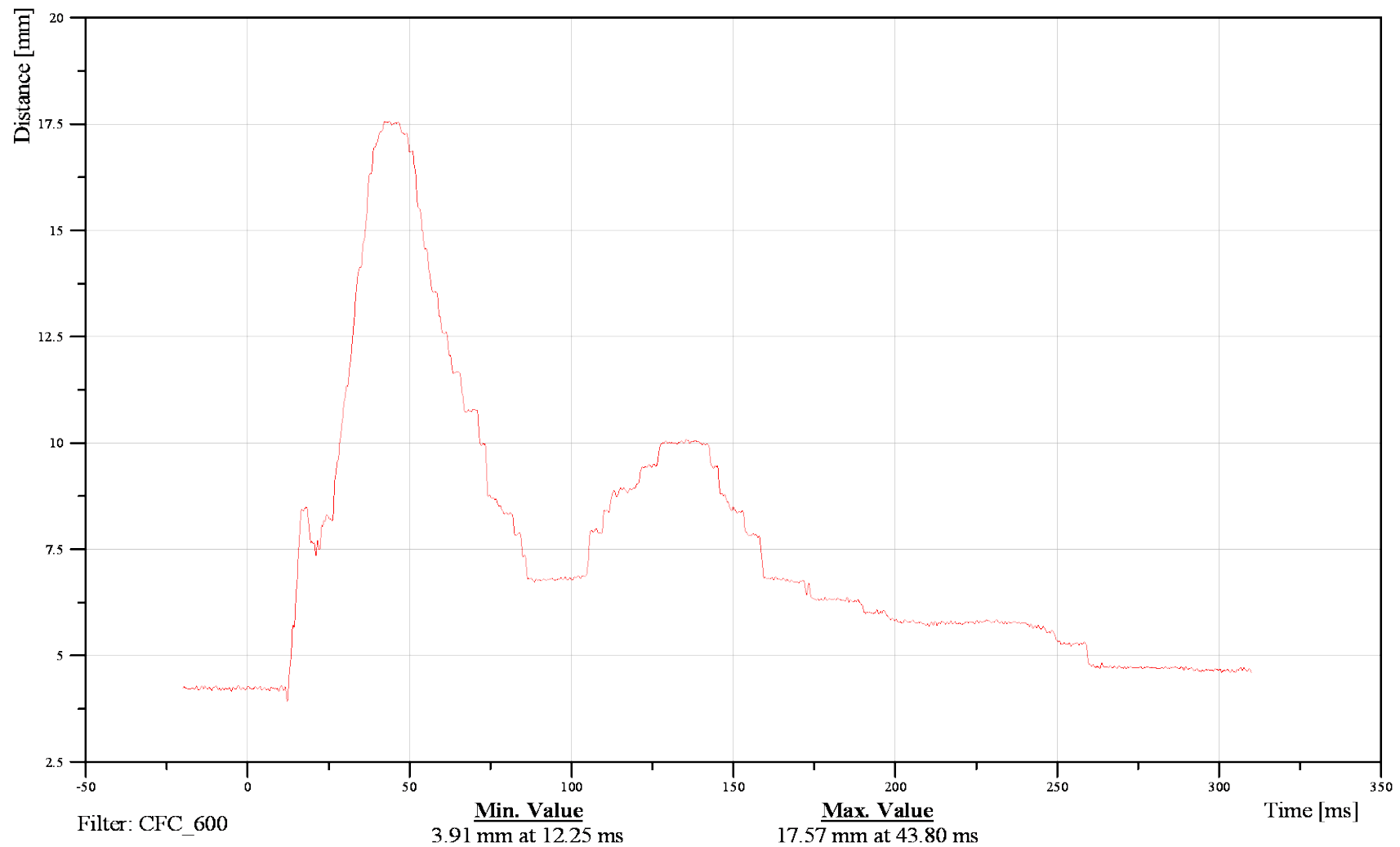
Time: 10:15

Customer: VRTC

11ABRILE01WSDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 IRTRAC Y Deflection

Date: 03/13/2013

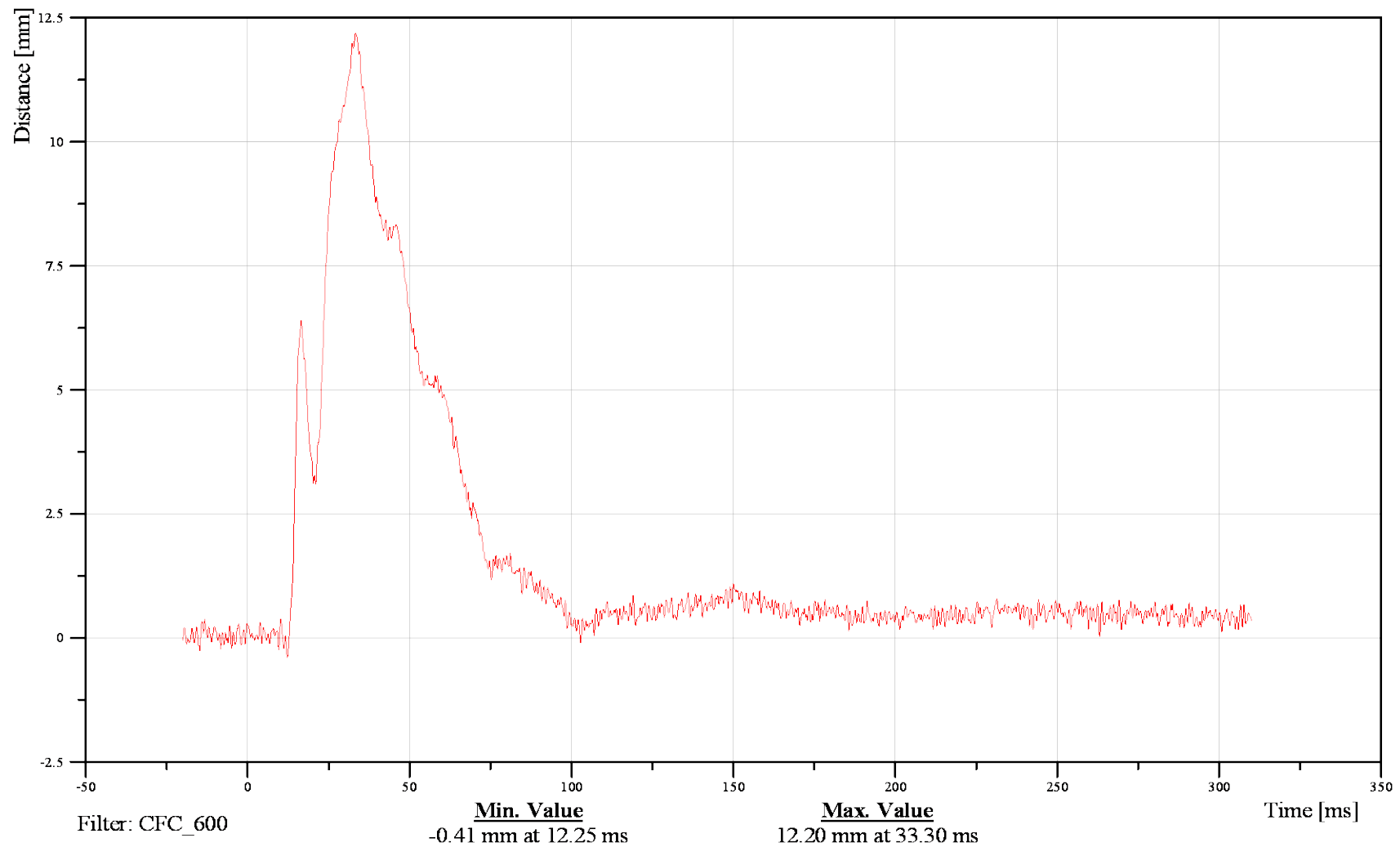
Time: 10:15

Customer: VRTC

11ABRILE01WSDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Longitudinal Ax

Date: 03/13/2013

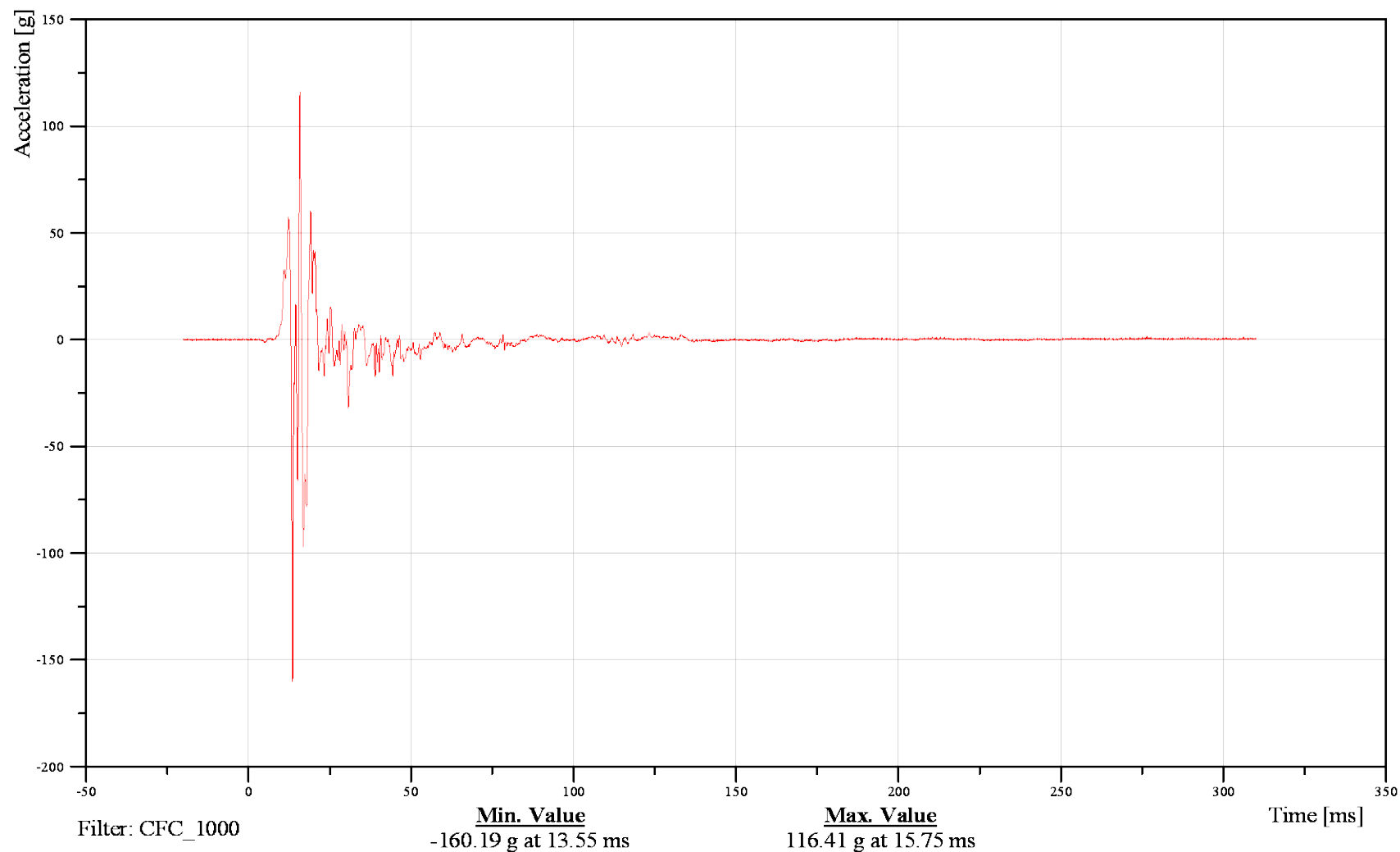
Time: 10:15

Customer: VRTC

11ABRILE02WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Lateral Ay

Date: 03/13/2013

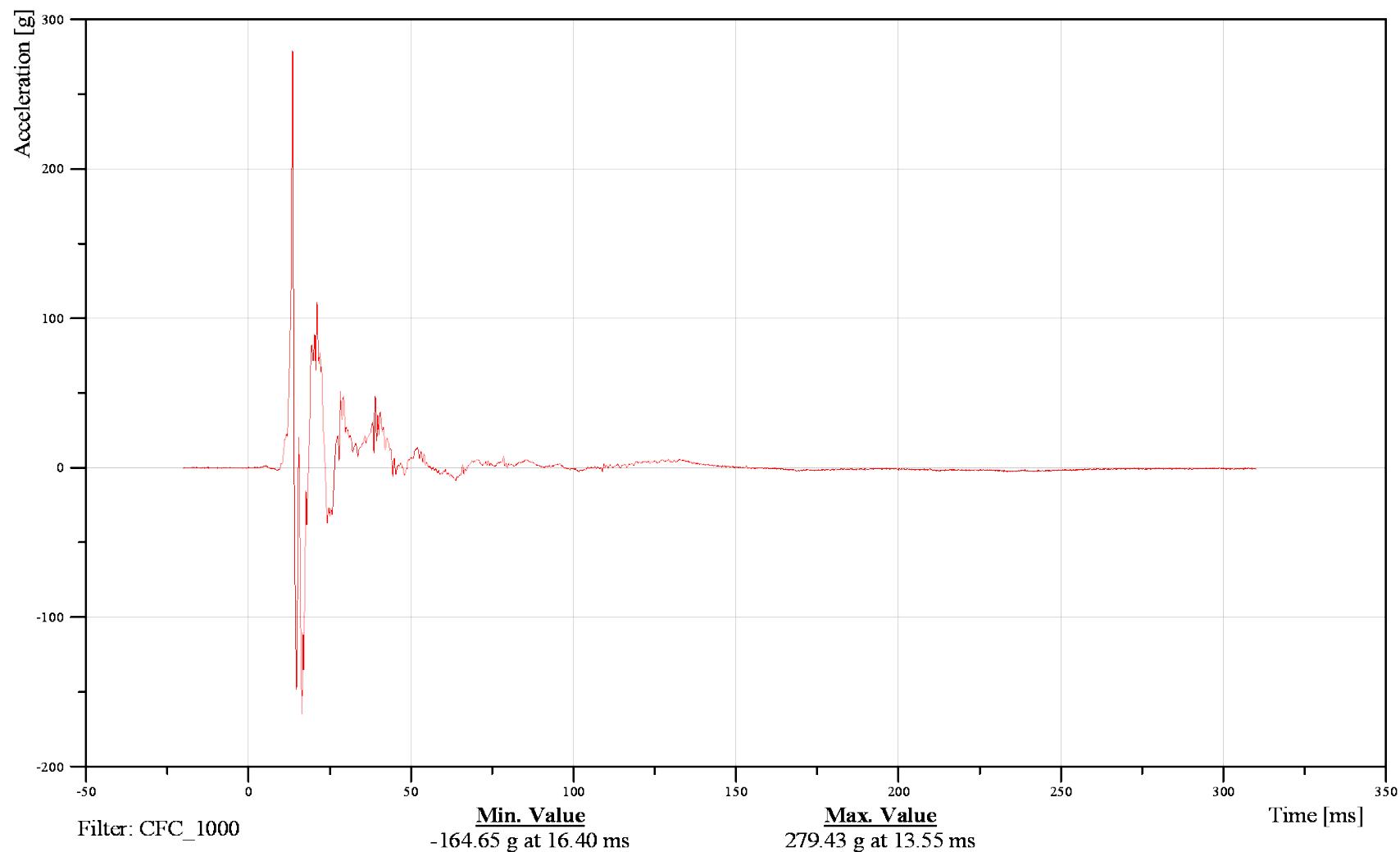
Time: 10:15

Customer: VRTC

11ABRILE02WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Vertical Az

Date: 03/13/2013

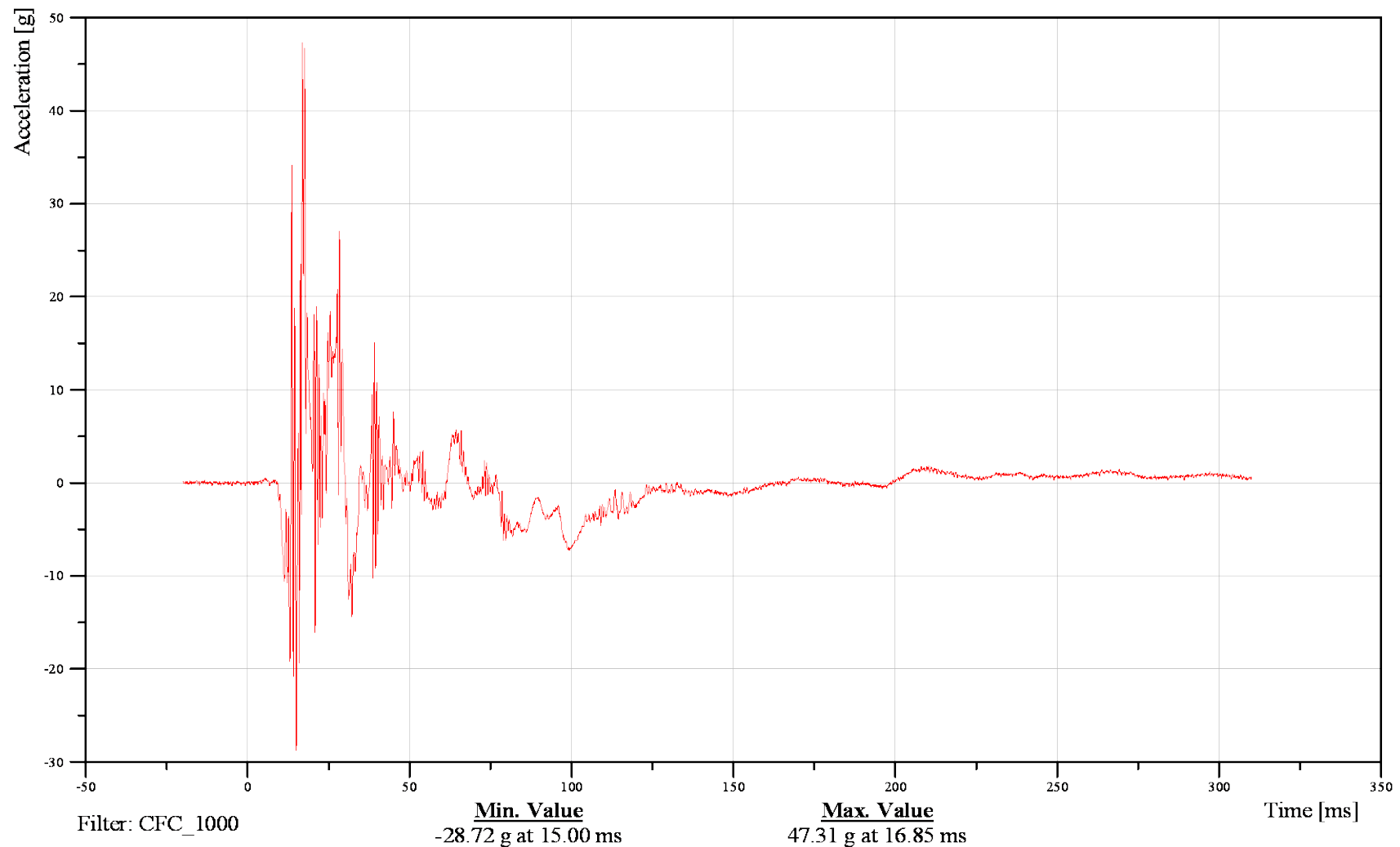
Time: 10:15

Customer: VRTC

11ABRILE02WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 A Resultant

Date: 03/13/2013

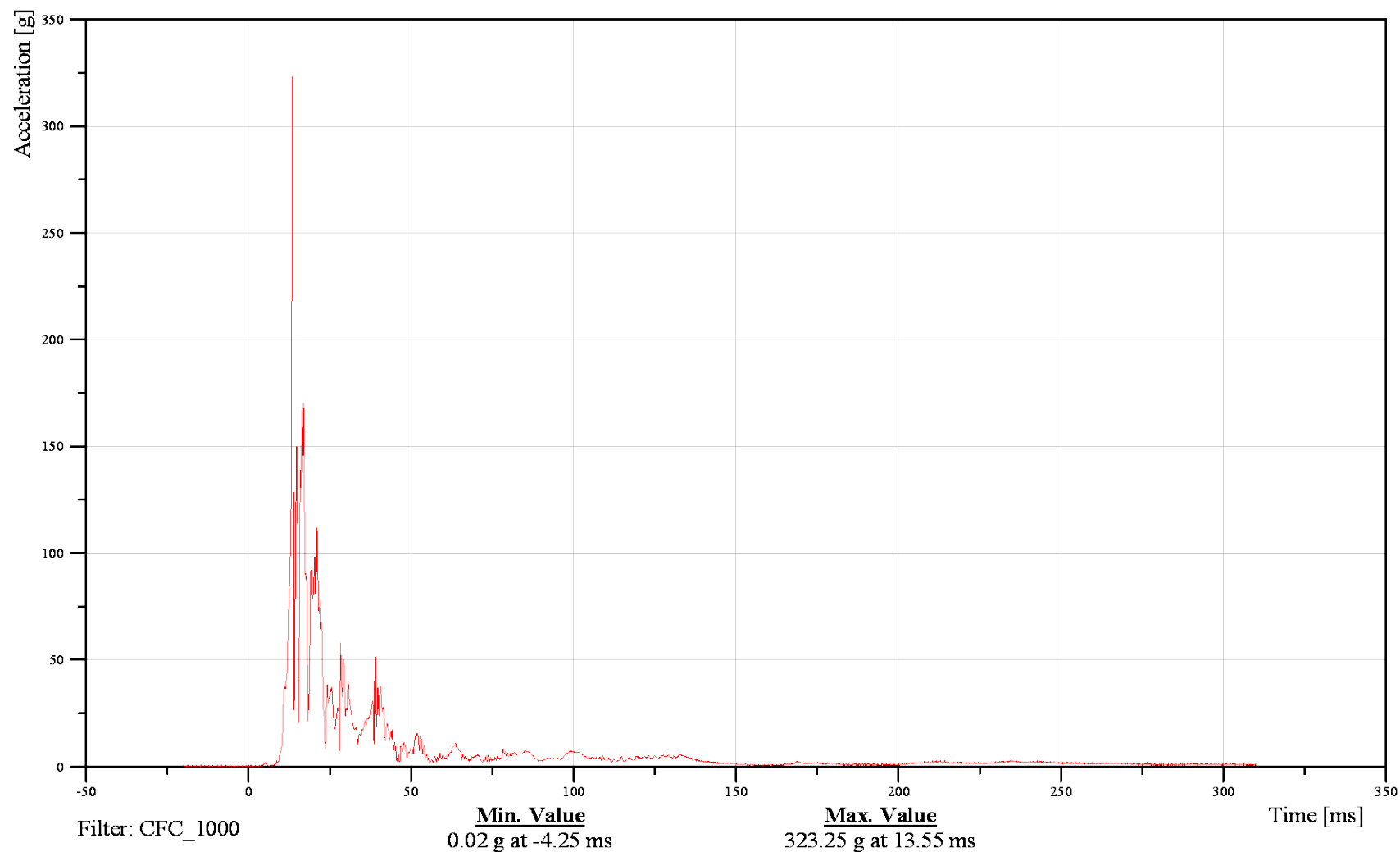
Time: 10:15

Customer: VRTC

11ABRILE02WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Lateral Disp

Date: 03/13/2013

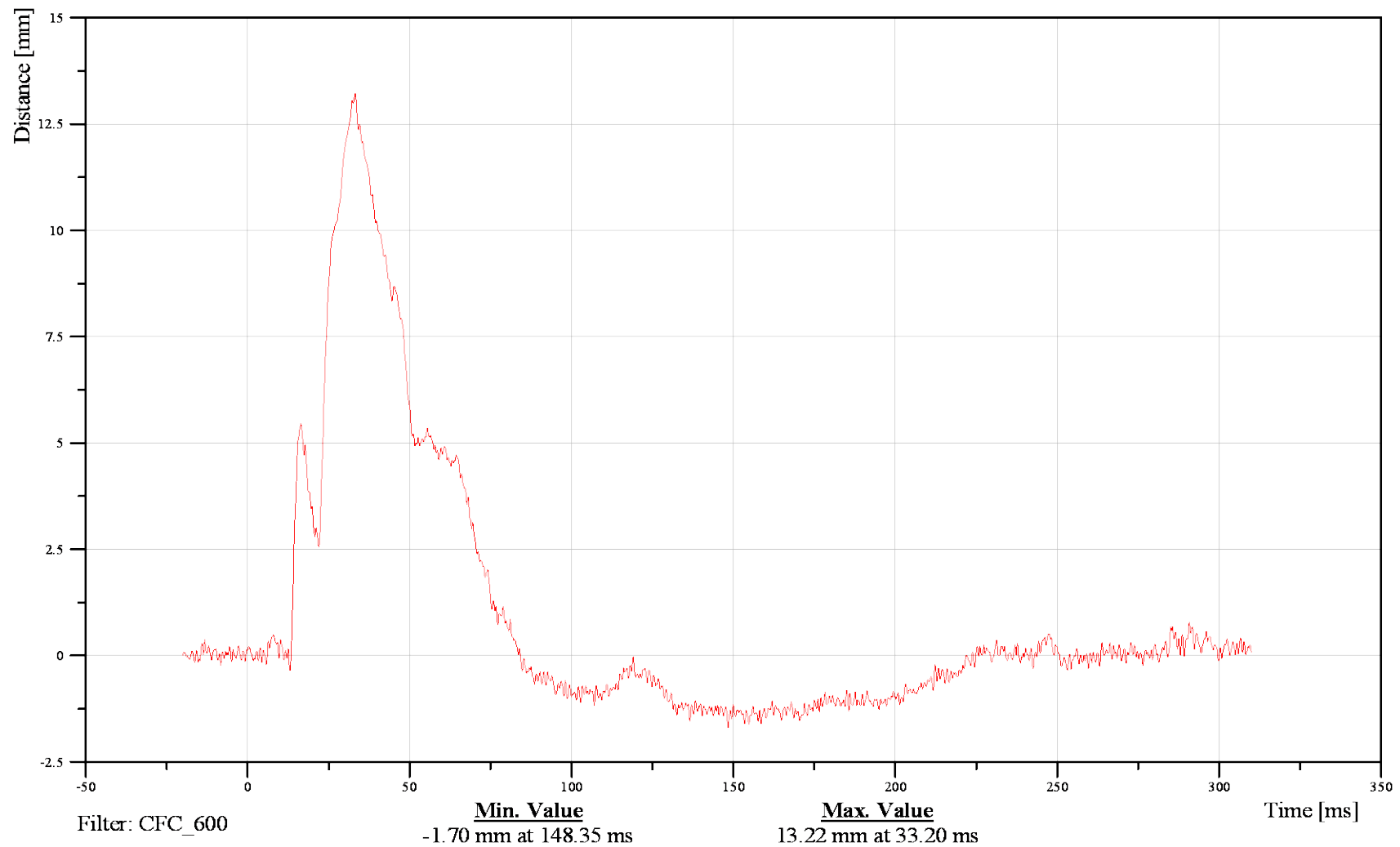
Time: 10:15

Customer: VRTC

11ABRILE02WSDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 Longitudinal Ax

Date: 03/13/2013

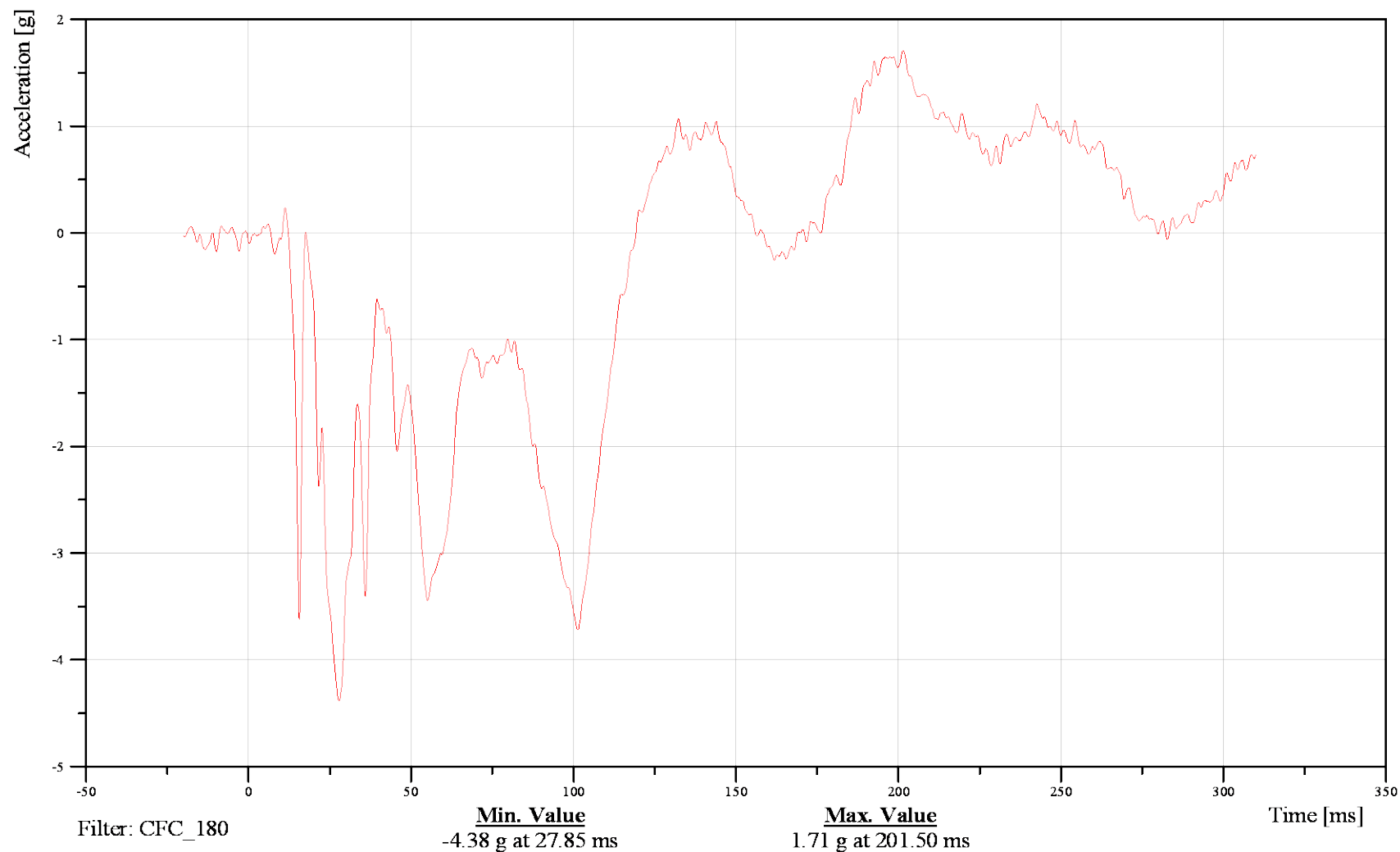
Time: 10:15

Customer: VRTC

11THSP0400WSACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 Lateral Ay

Date: 03/13/2013

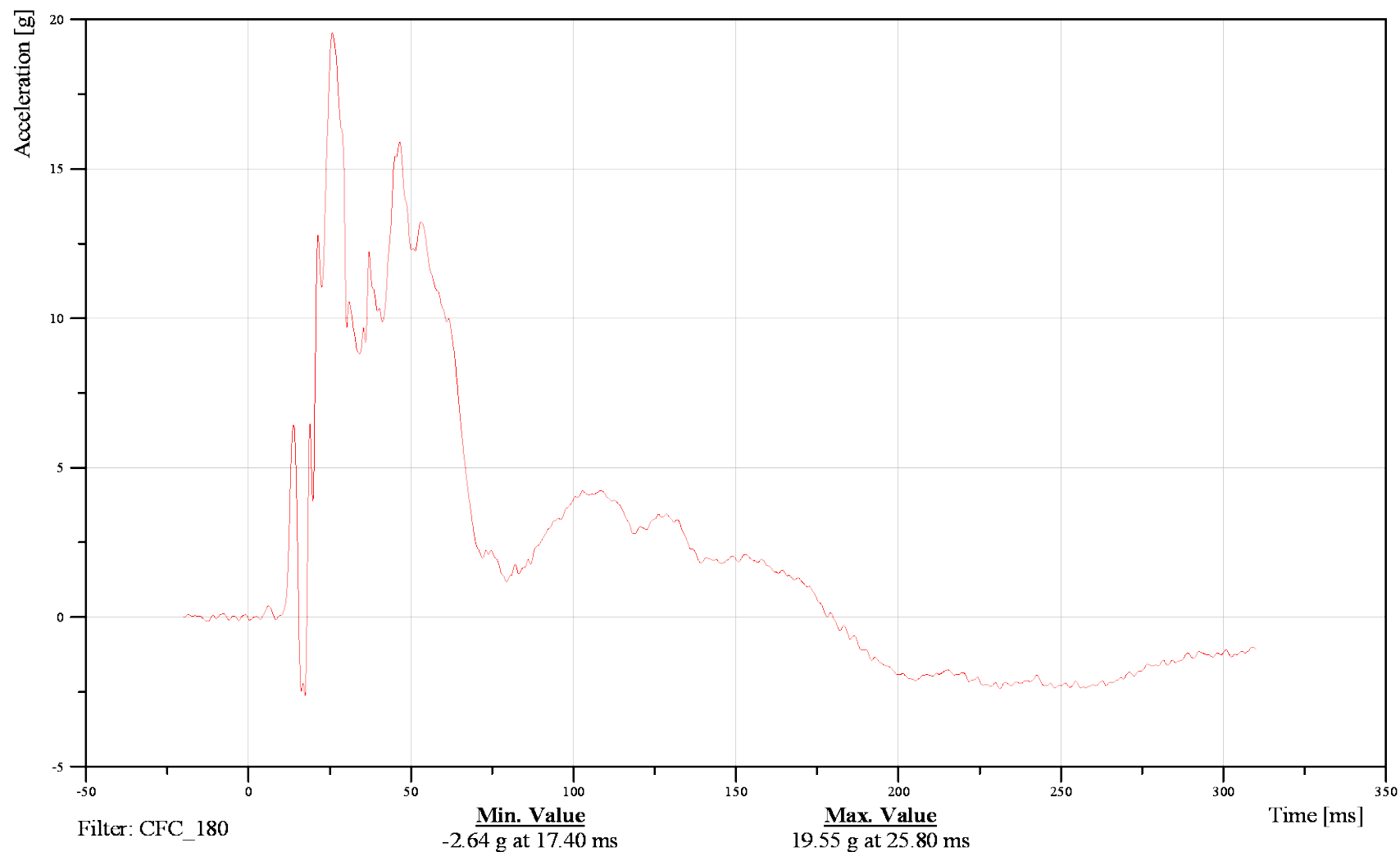
Time: 10:15

Customer: VRTC

11THSP0400WSACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 Vertical Az

Date: 03/13/2013

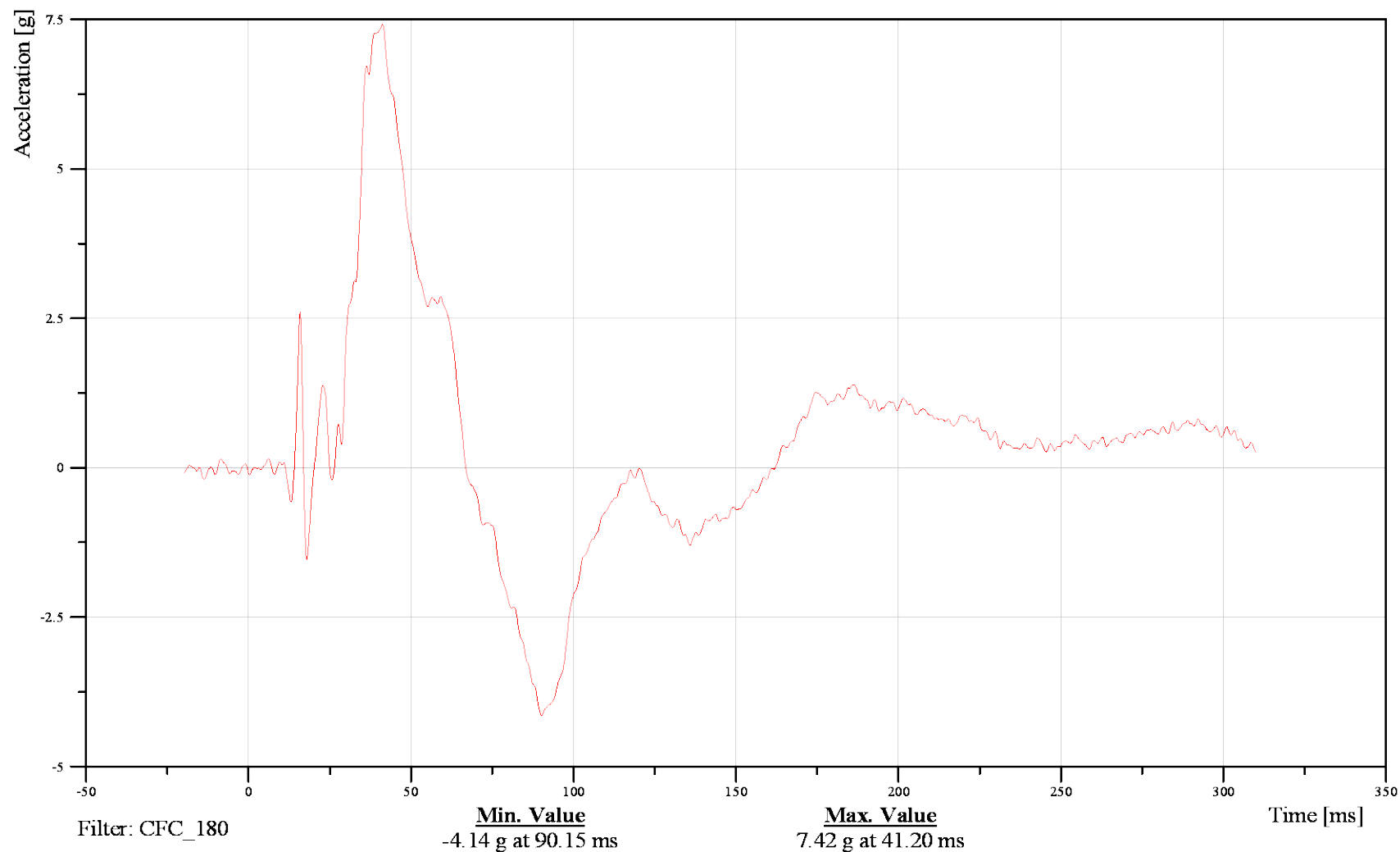
Time: 10:15

Customer: VRTC

11THSP0400WSACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 A Resultant

Date: 03/13/2013

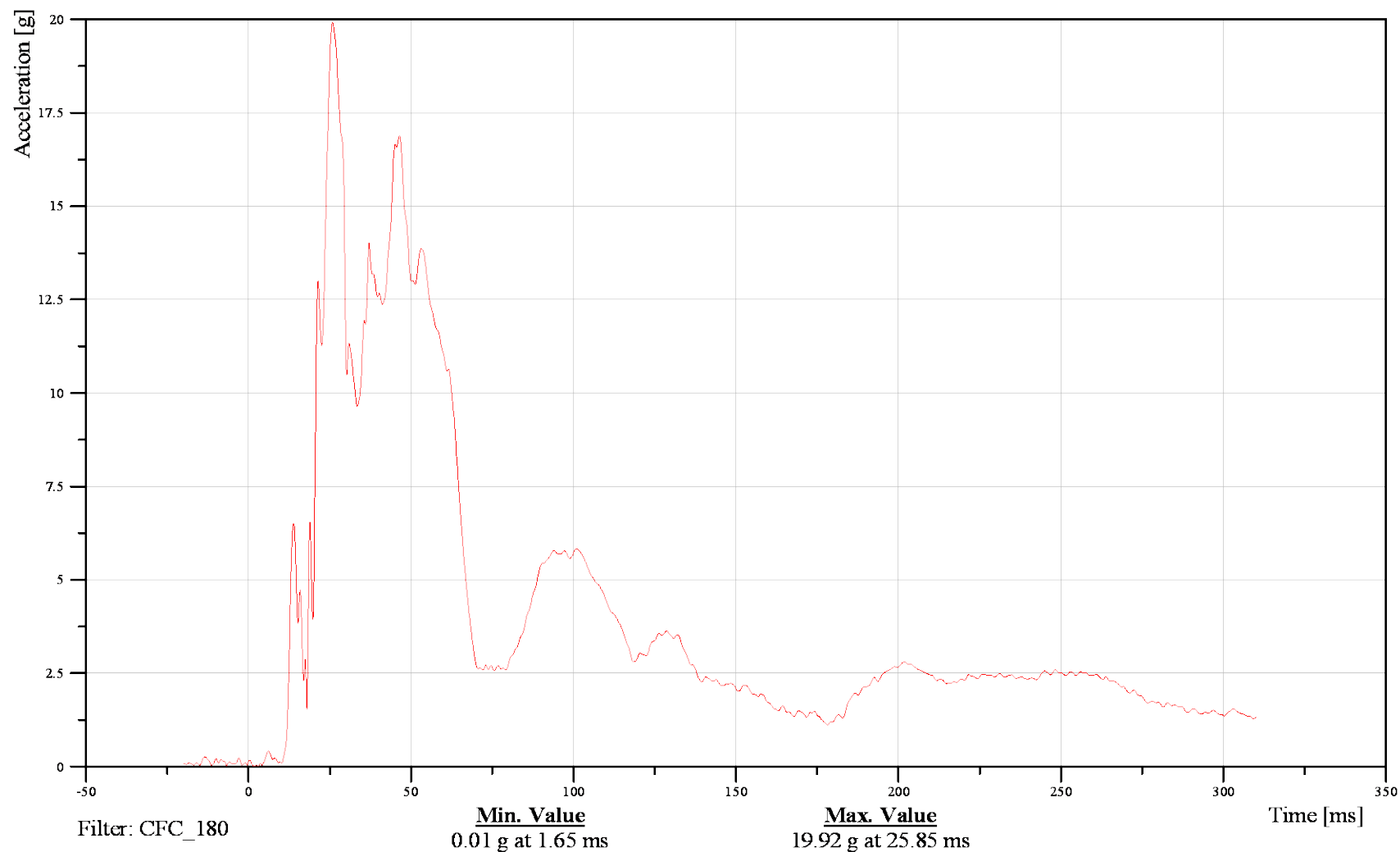
Time: 10:15

Customer: VRTC

11THSP0400WSACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 Longitudinal Ax

Date: 03/13/2013

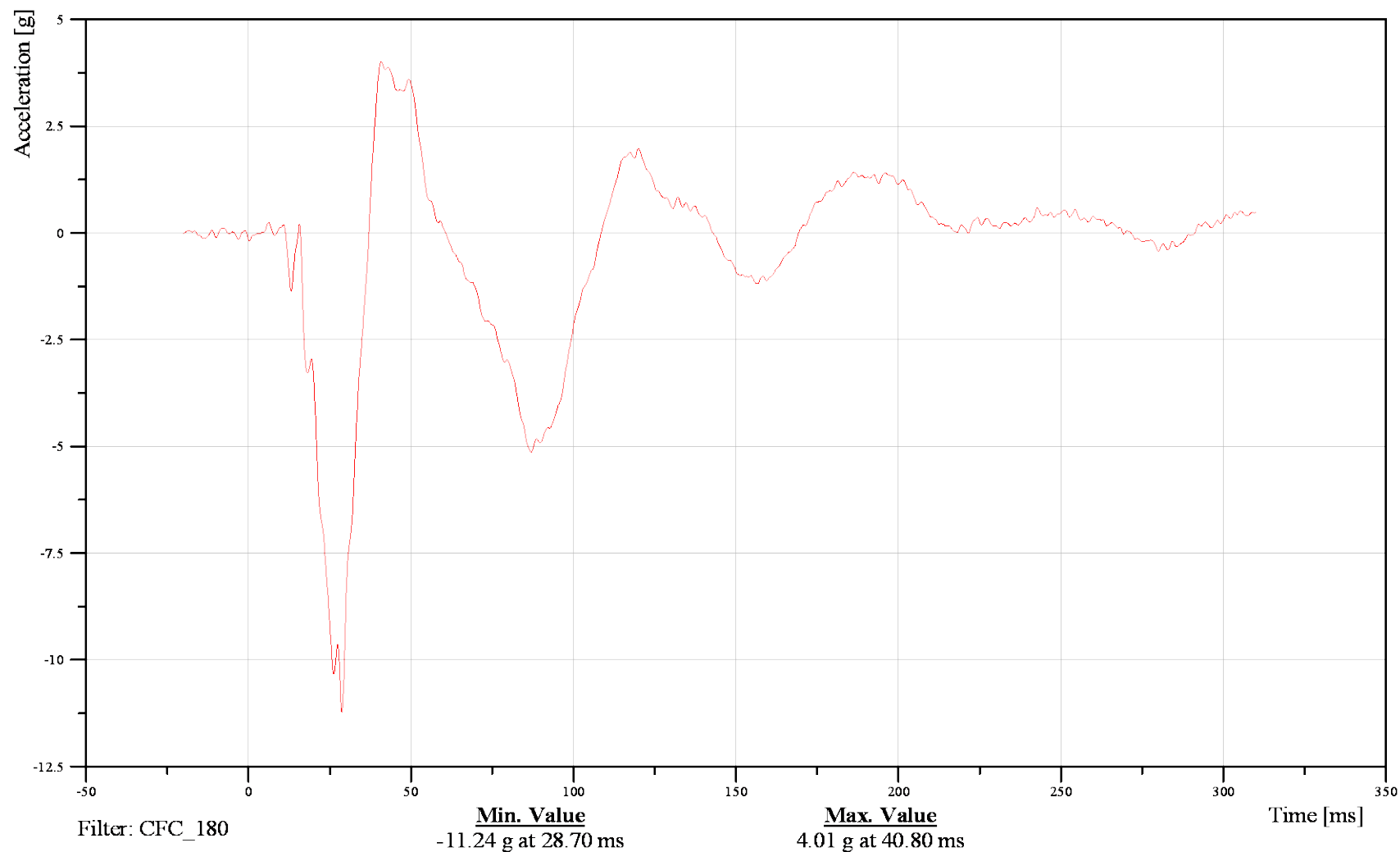
Time: 10:15

Customer: VRTC

11THSP1200WSACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 Lateral Ay

Date: 03/13/2013

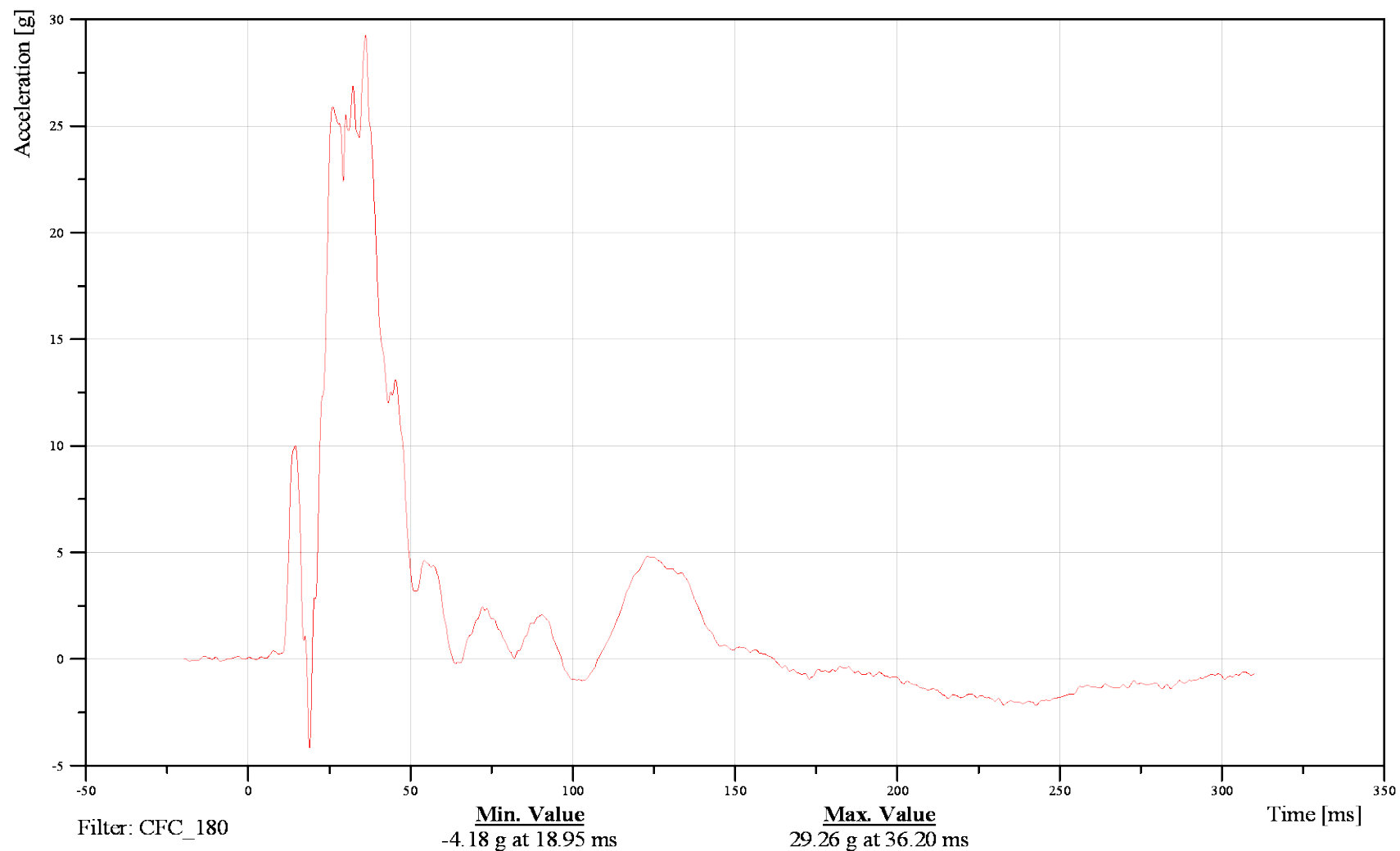
Time: 10:15

Customer: VRTC

11THSP1200WSACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 Vertical Az

Date: 03/13/2013

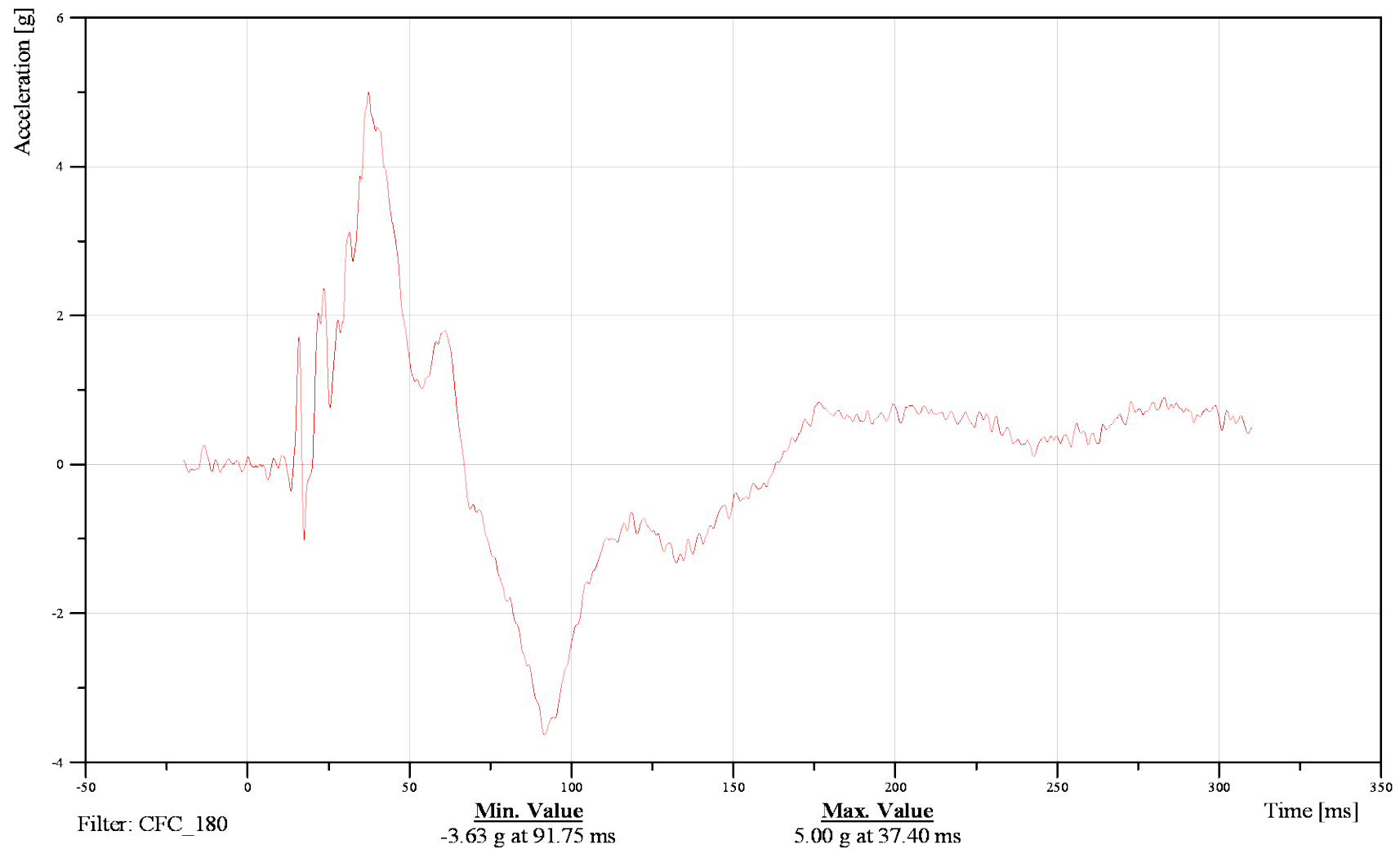
Time: 10:15

Customer: VRTC

11THSP1200WSACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 A Resultant

Date: 03/13/2013

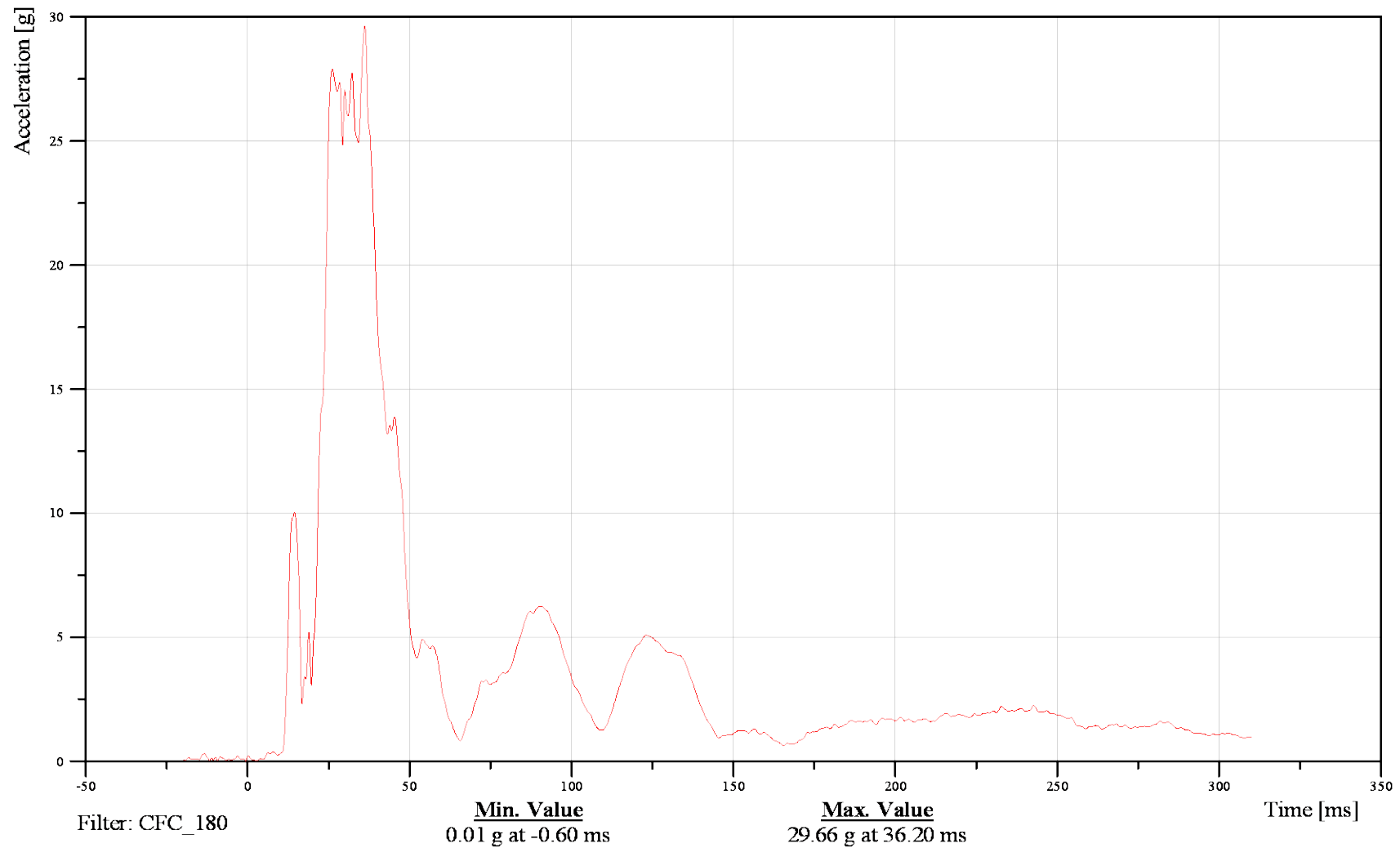
Time: 10:15

Customer: VRTC

11THSP1200WSACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis Longitudinal Ax

Date: 03/13/2013

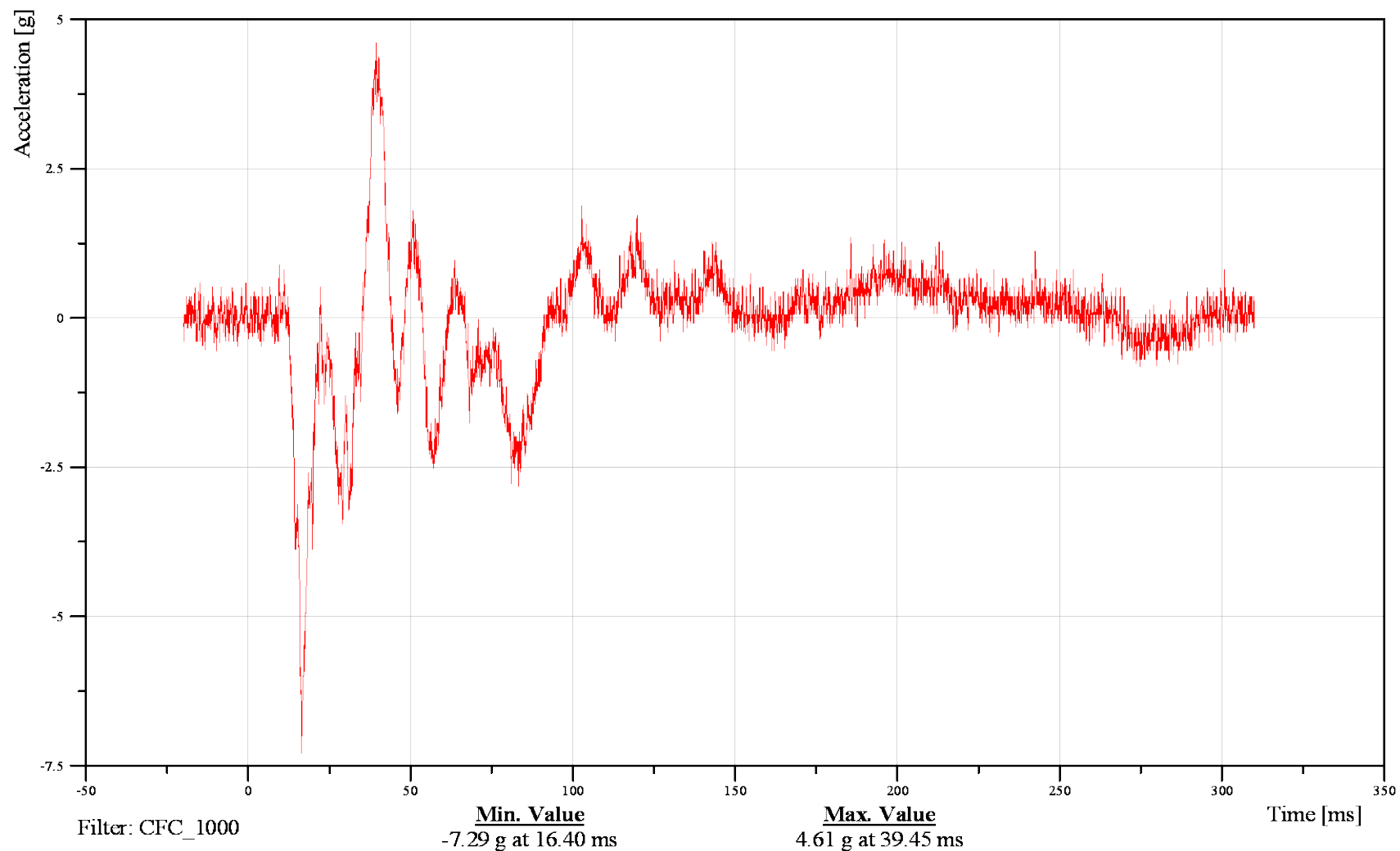
Time: 10:15

Customer: VRTC

11PELV0000WSACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis Lateral Ay

Date: 03/13/2013

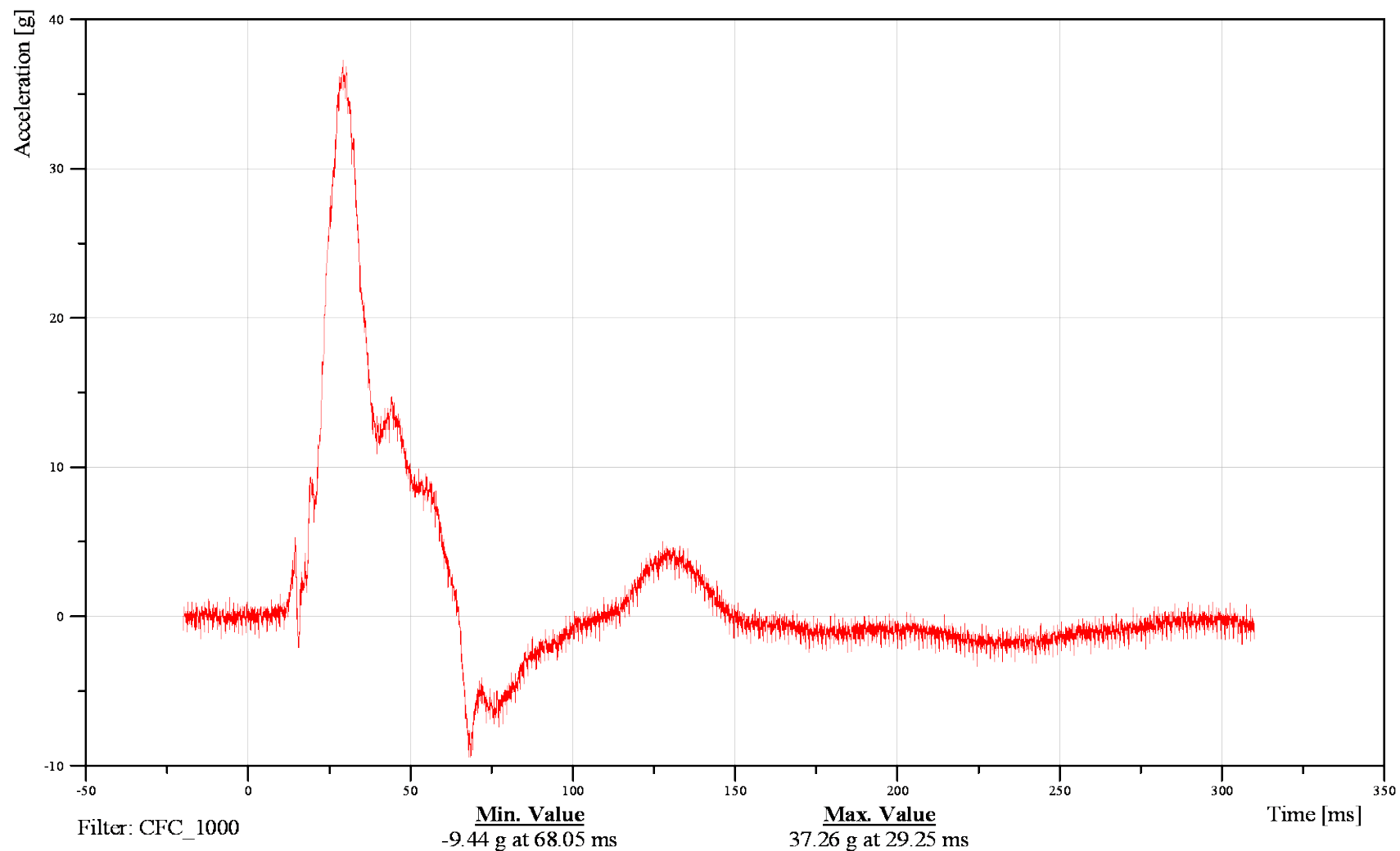
Time: 10:15

Customer: VRTC

11PELV0000WSACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis Vertical Az

Date: 03/13/2013

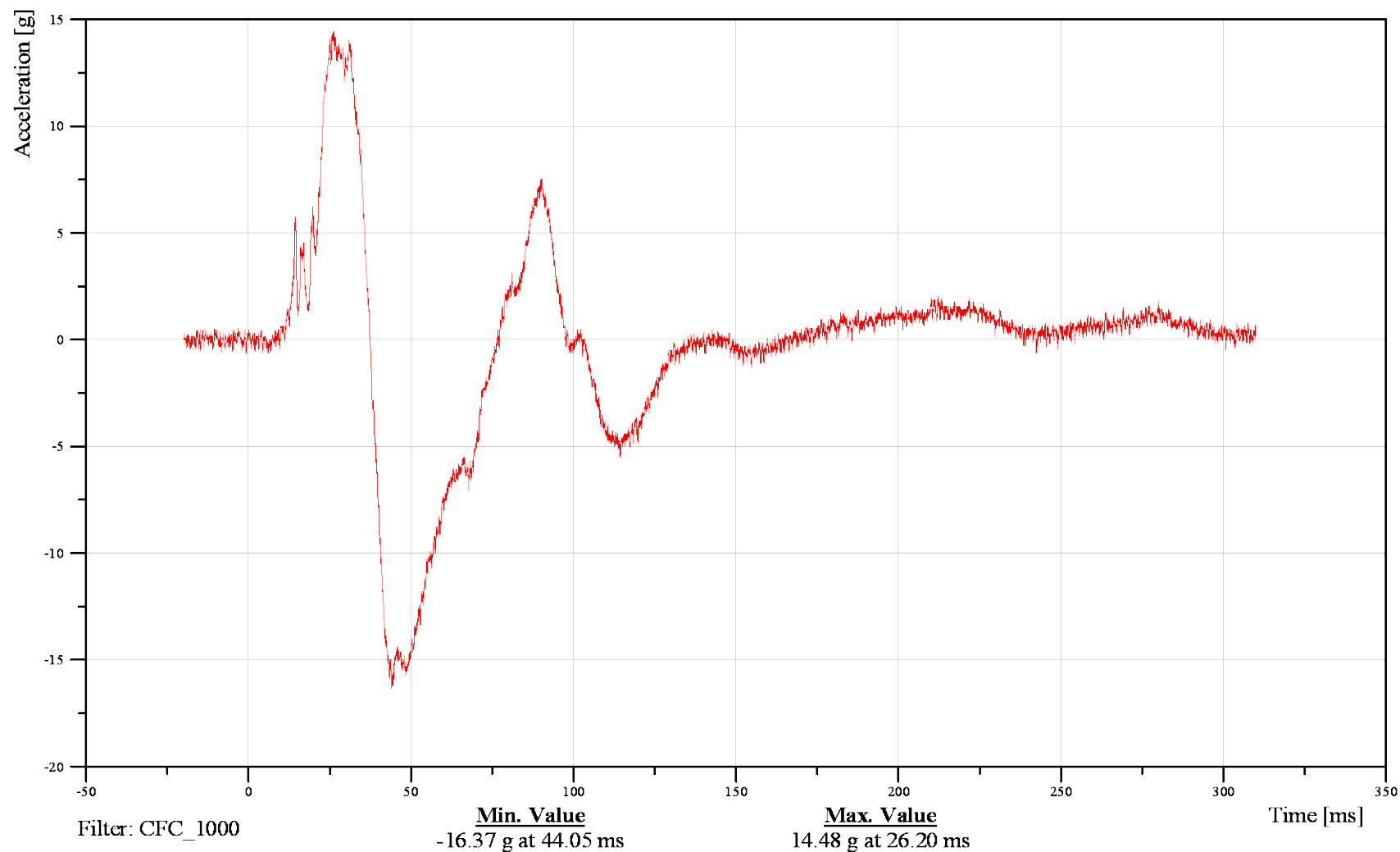
Time: 10:15

Customer: VRTC

11PELV0000WSACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis A Resultant

Date: 03/13/2013

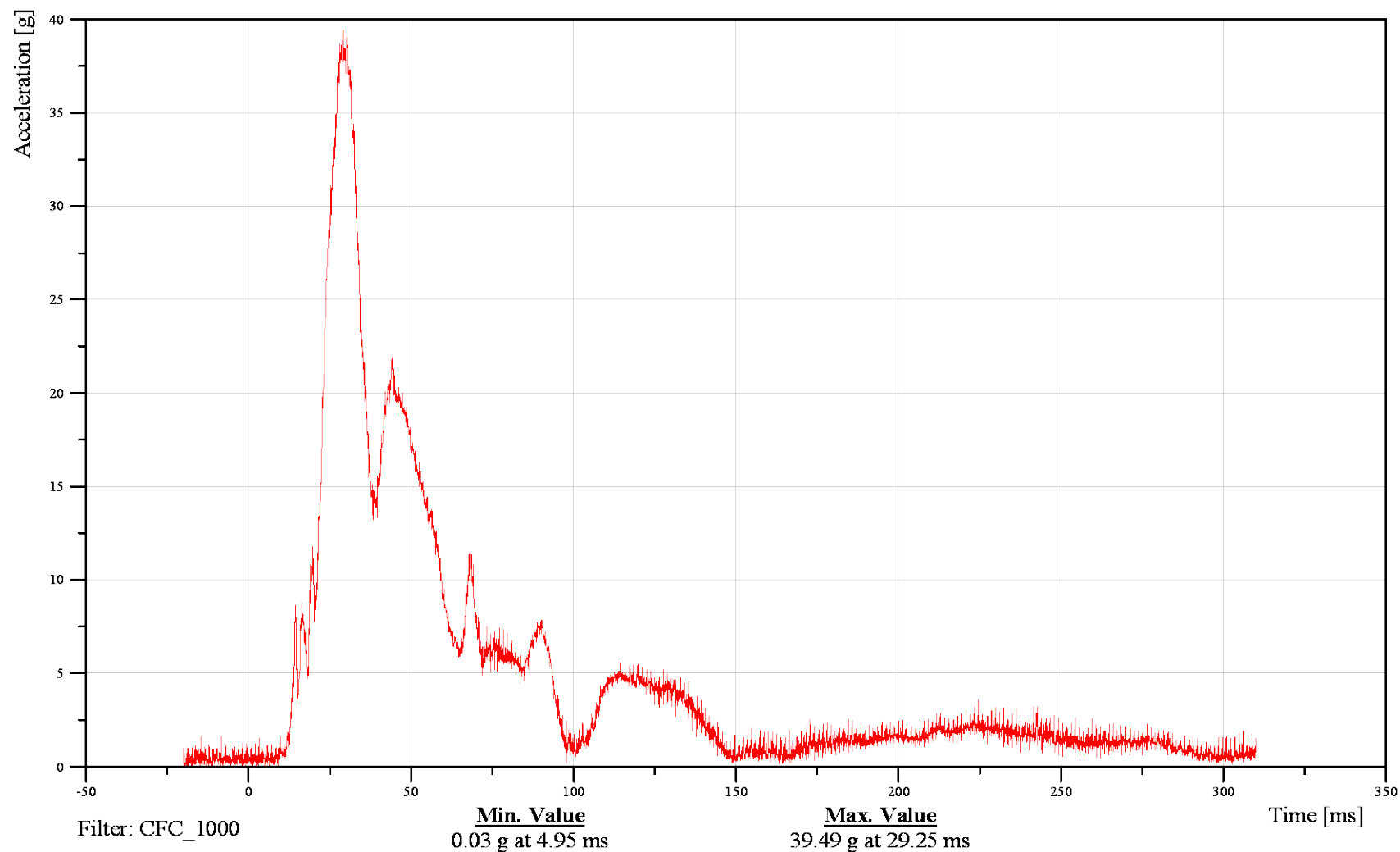
Time: 10:15

Customer: VRTC

11PELV0000WSACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

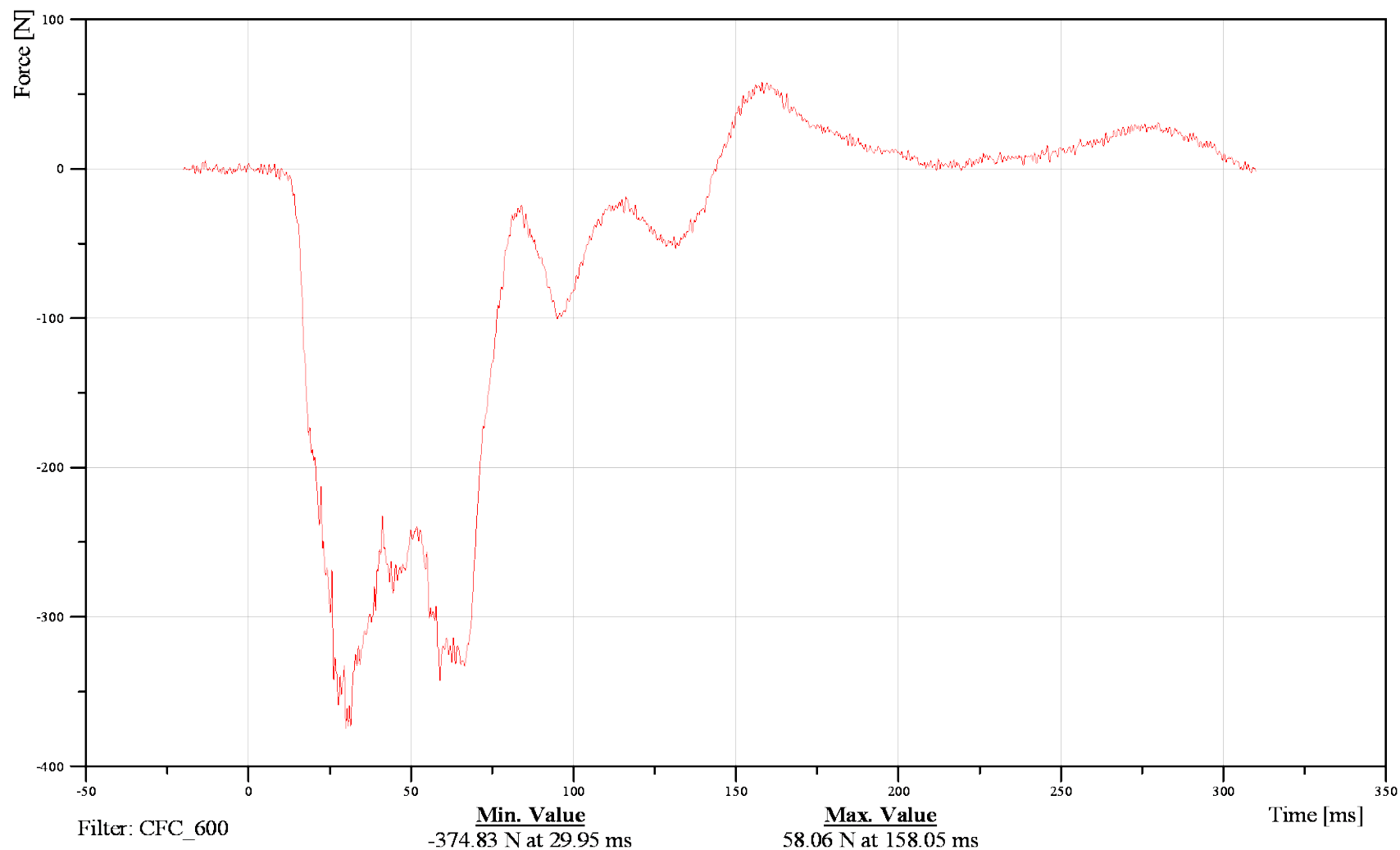
Pubic Force Fy

Customer: VRTC

11PUBC0000WSFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Lumbar Force Fx

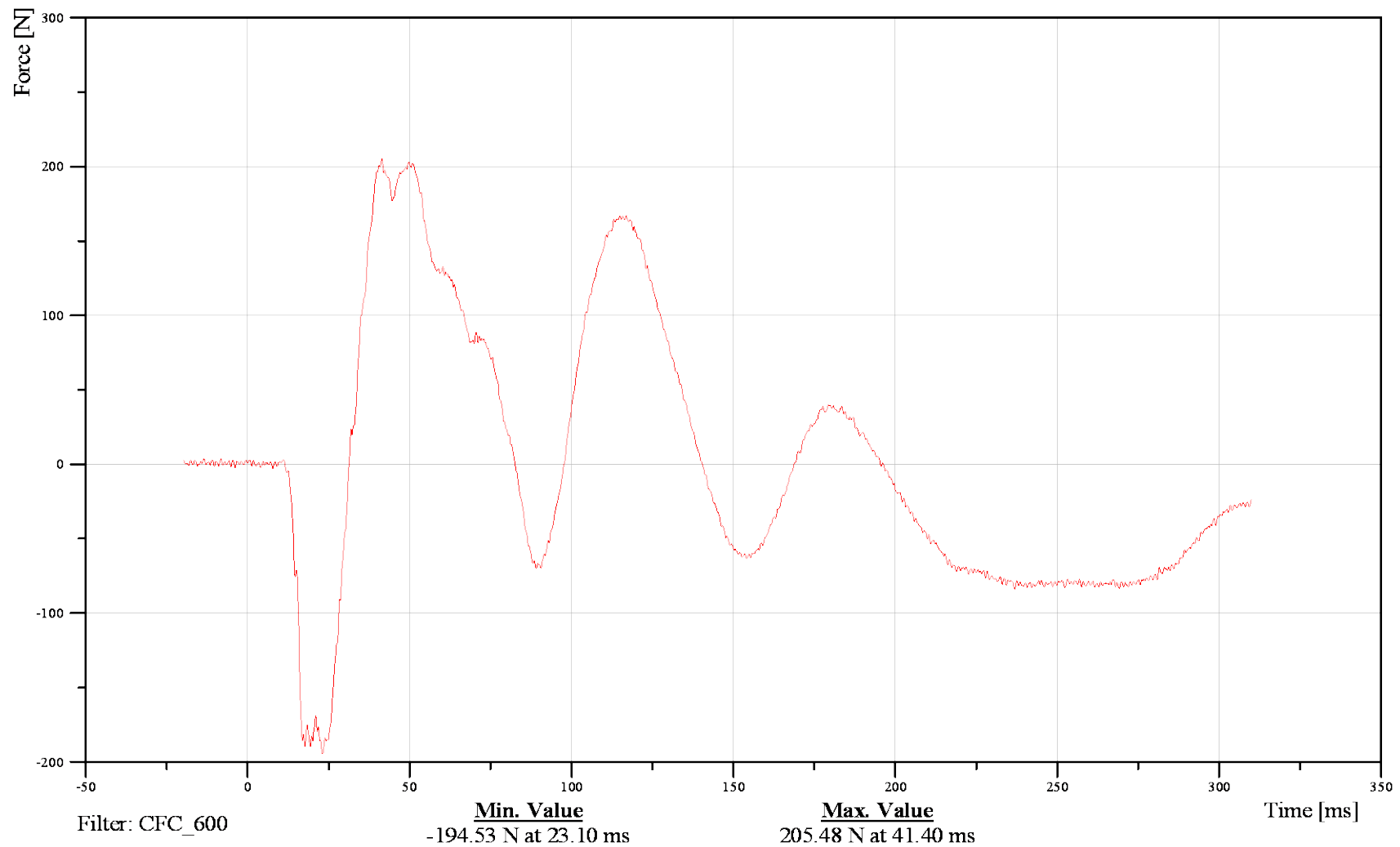
Date: 03/13/2013
Time: 10:15

Customer: VRTC

11LUSP0000WSFOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Lumbar Force Fy

Date: 03/13/2013

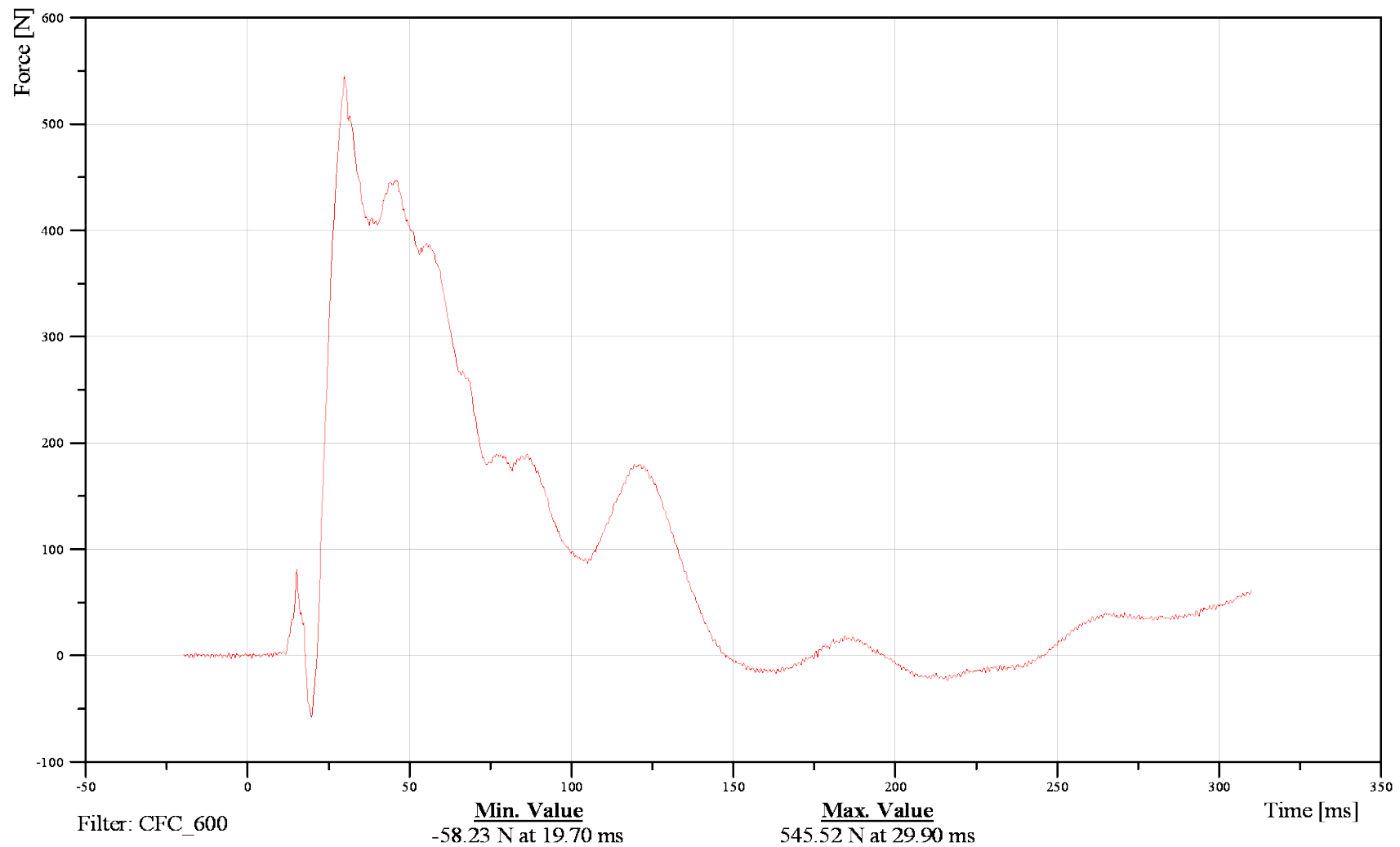
Time: 10:15

Customer: VRTC

11LUSP0000WSFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Lumbar Force Fz

Date: 03/13/2013

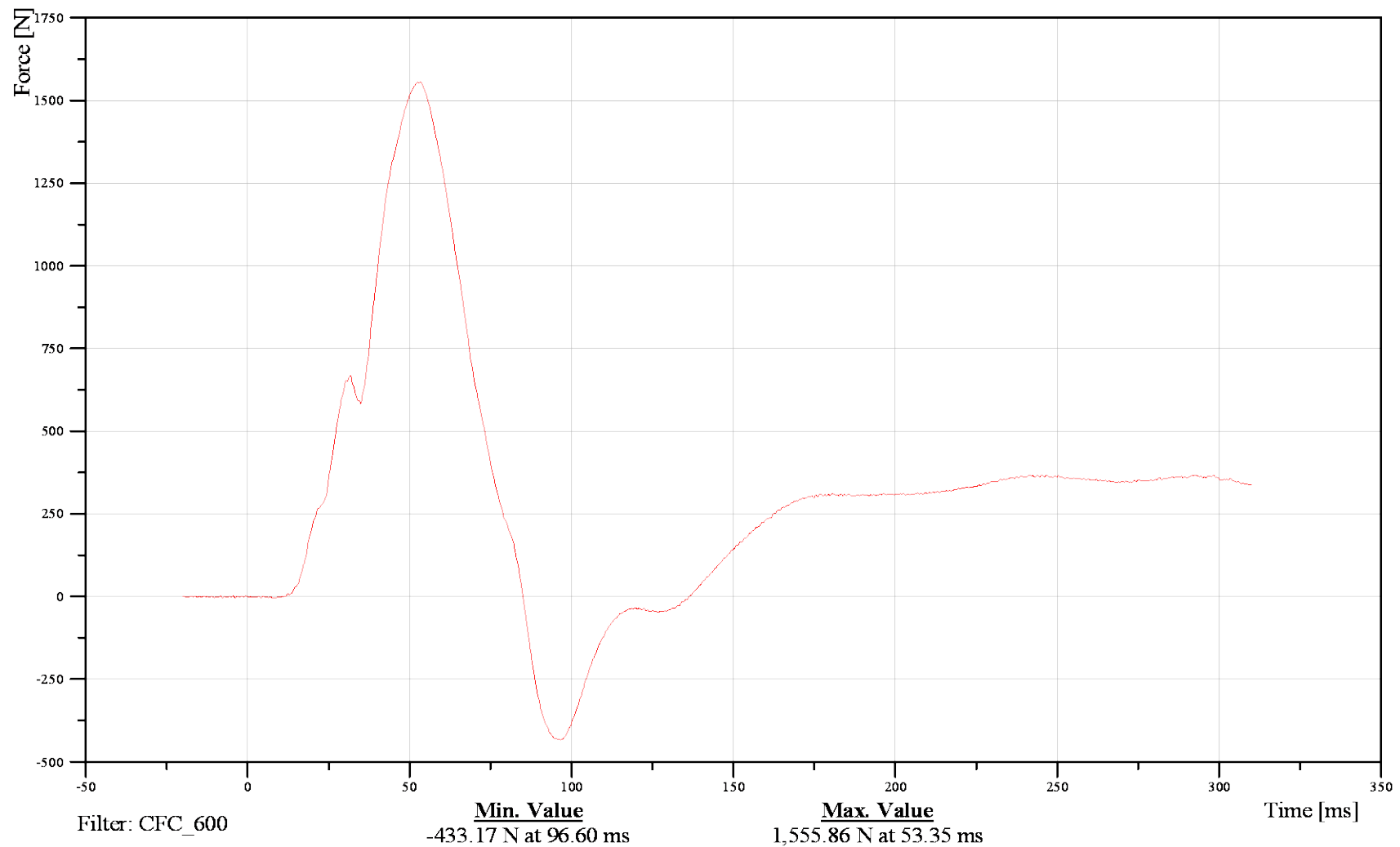
Time: 10:15

Customer: VRTC

11LUSP0000WSFOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Lumbar Moment Mx

Date: 03/13/2013

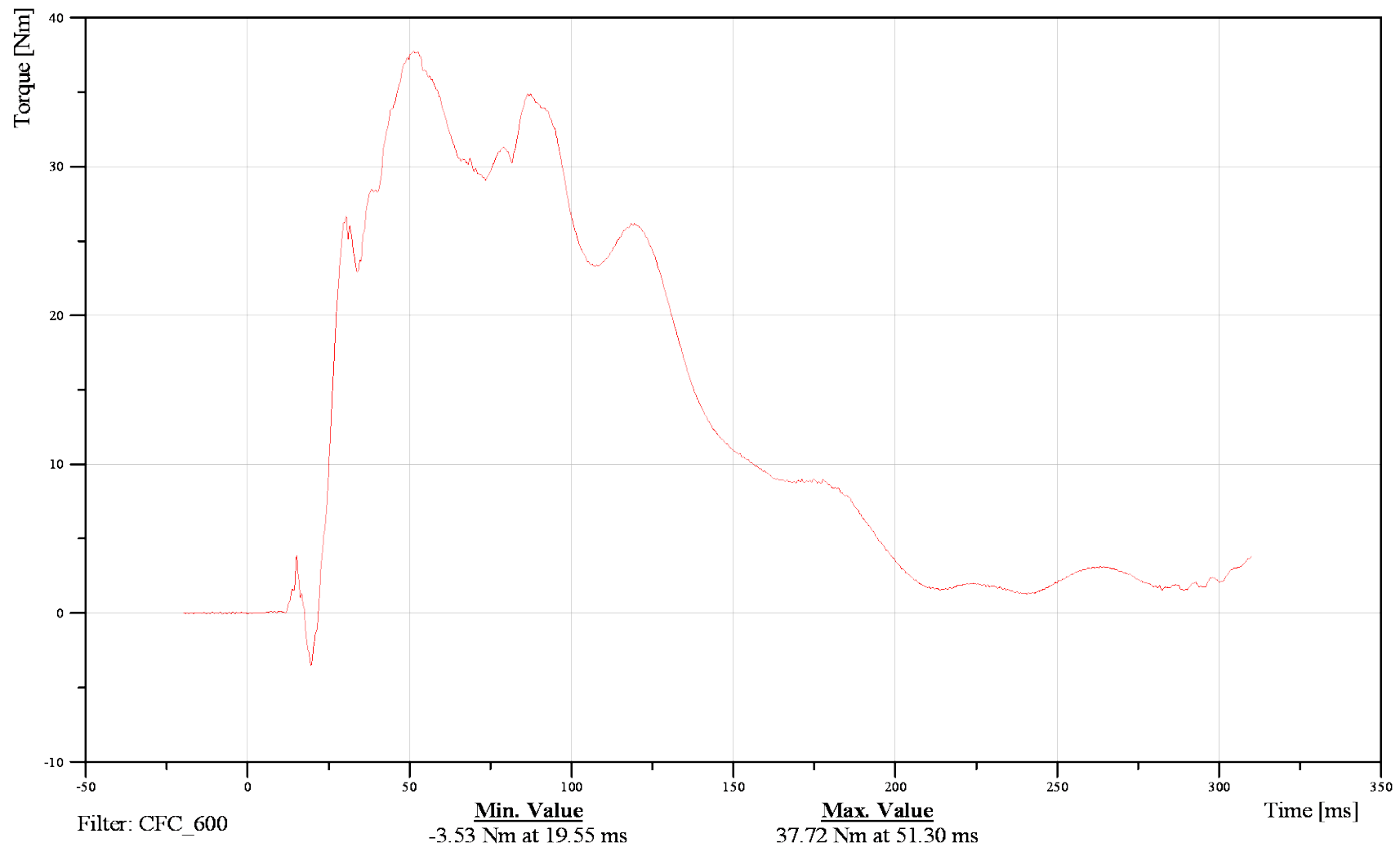
Time: 10:15

Customer: VRTC

11LUSP0000WSMOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Lumbar Moment My

Date: 03/13/2013

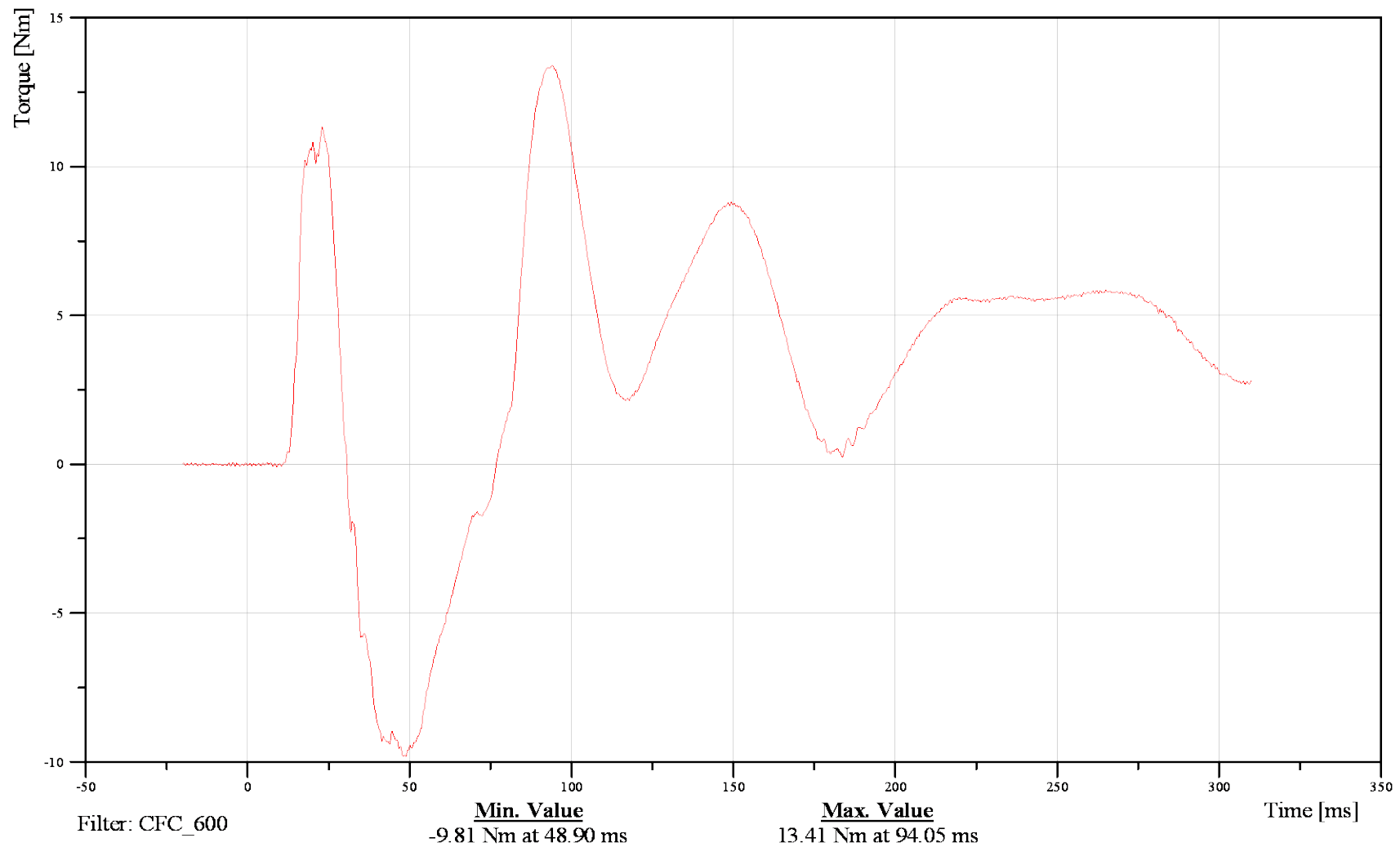
Time: 10:15

Customer: VRTC

11LUSP0000WSMOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Lumbar Moment Mz

Date: 03/13/2013

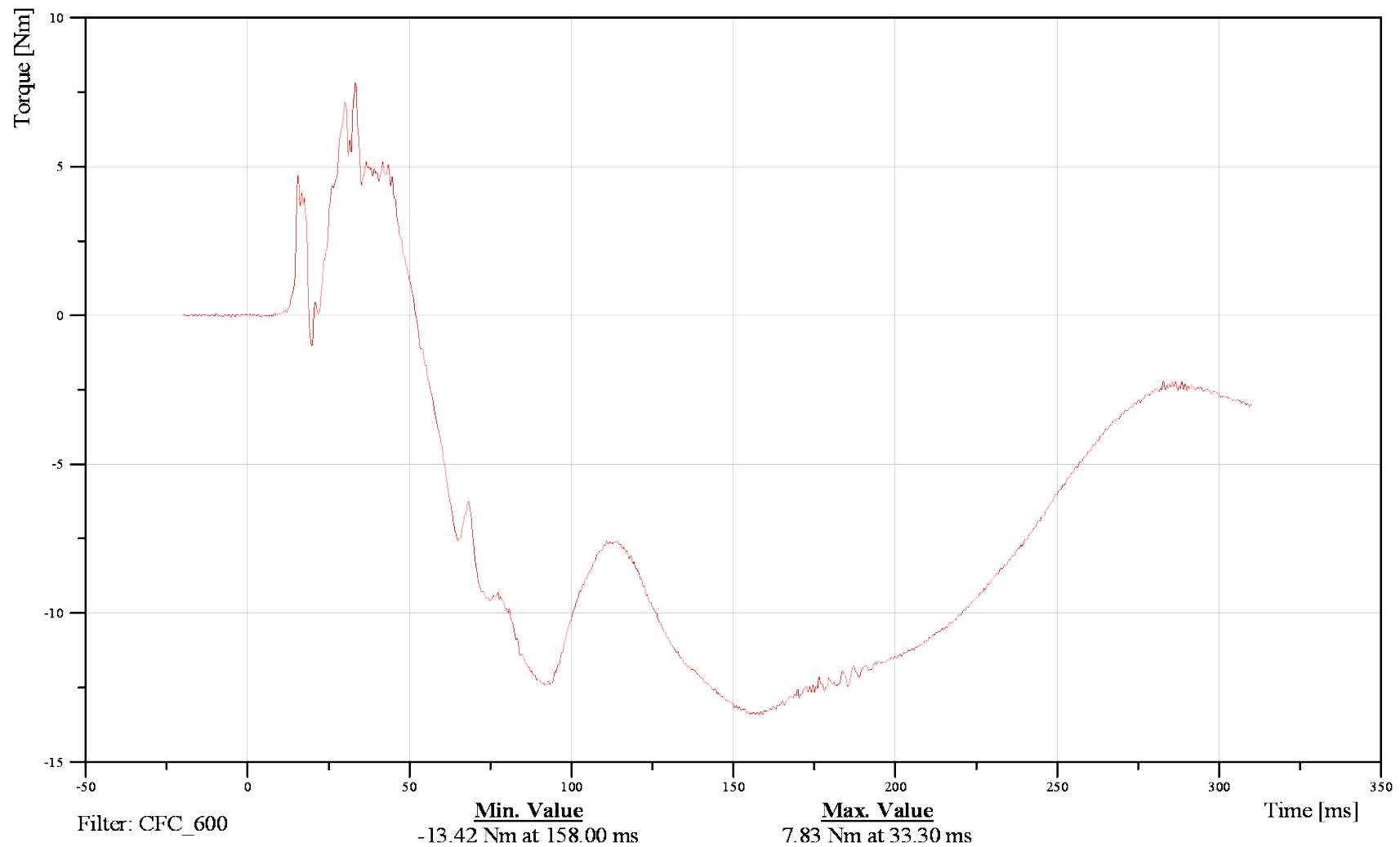
Time: 10:15

Customer: VRTC

11LUSP0000WSMOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Right Moment Mx

Date: 03/13/2013

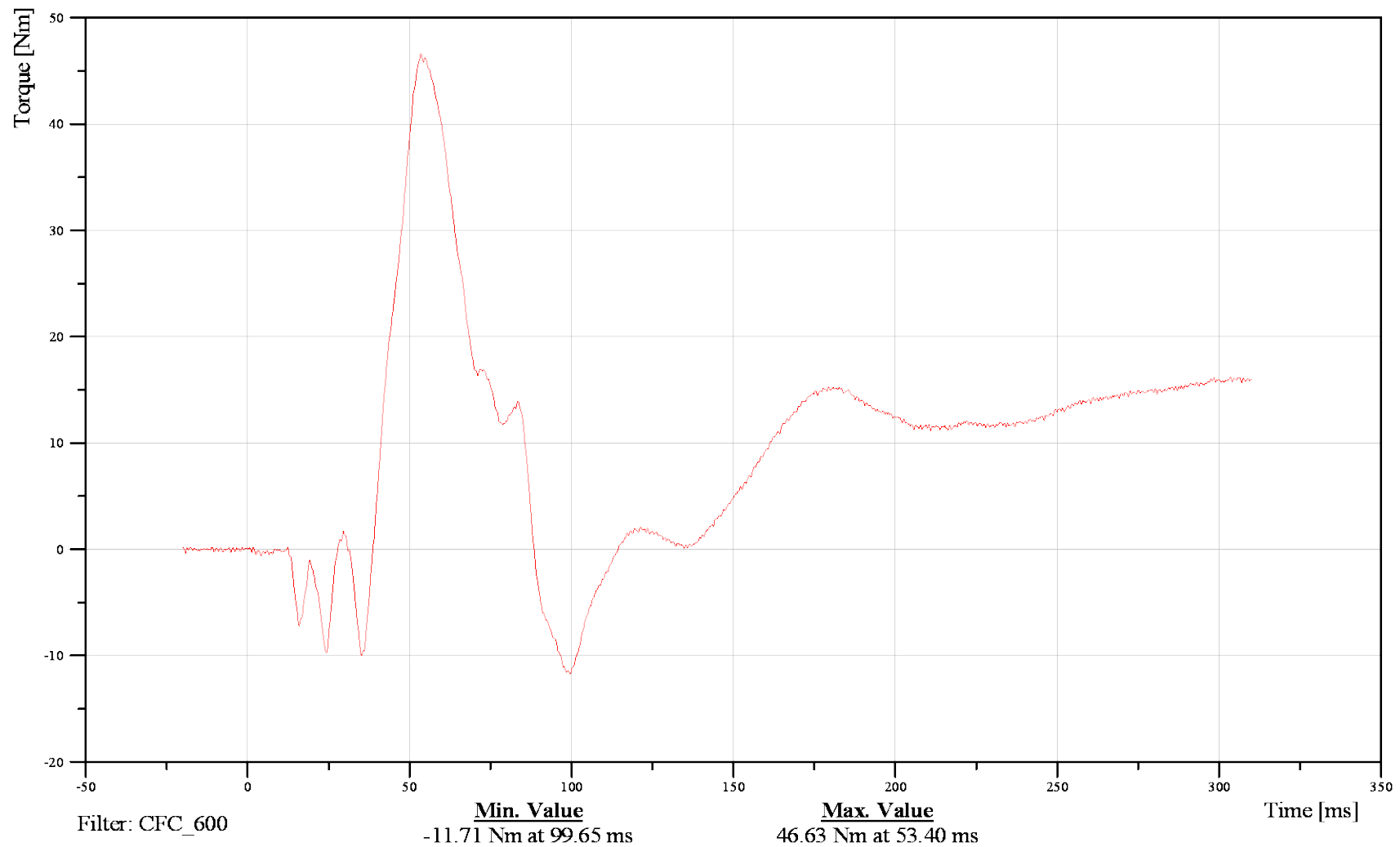
Time: 10:15

Customer: VRTC

11SACRRI00WSMOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Right Moment My

Date: 03/13/2013

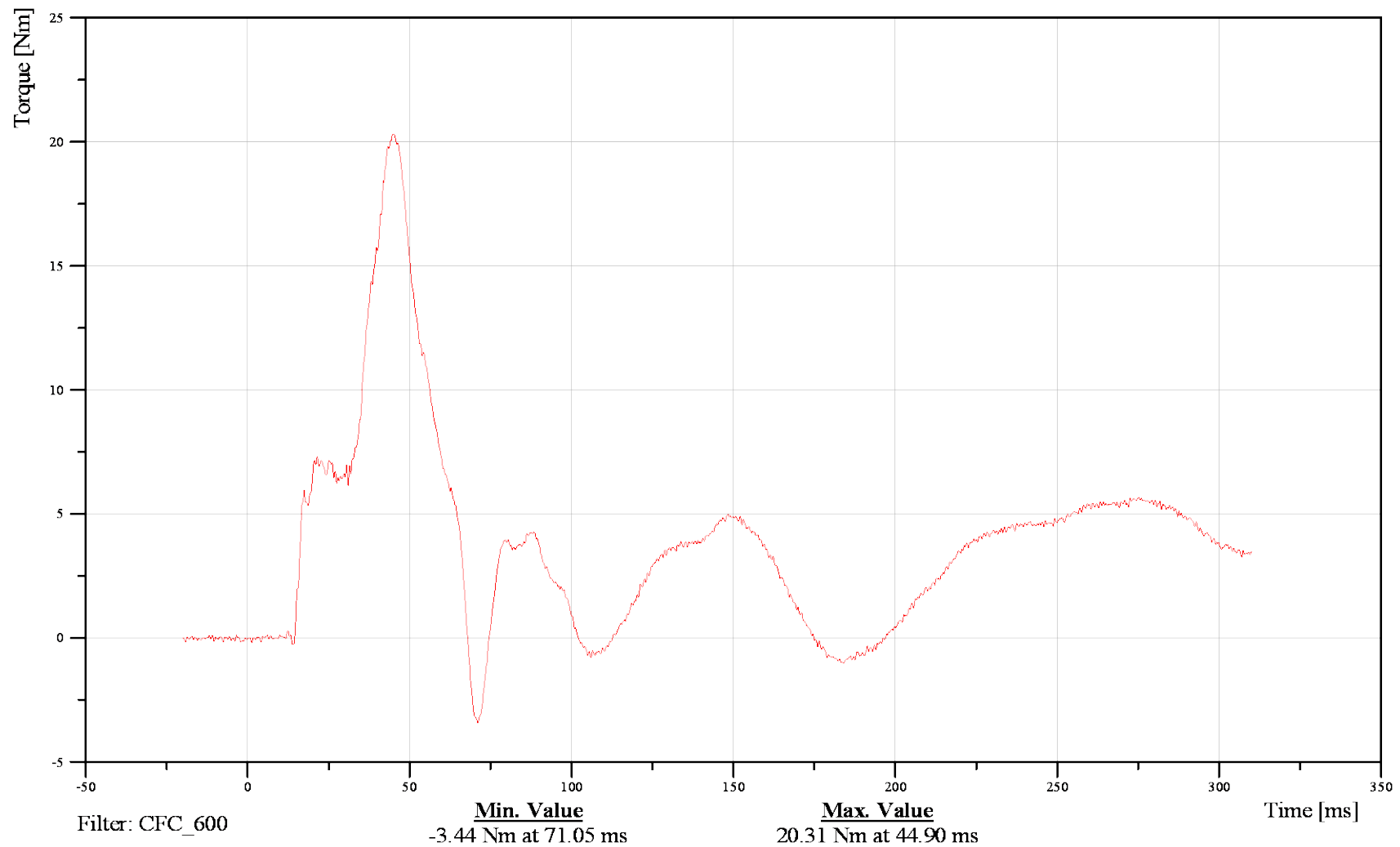
Time: 10:15

Customer: VRTC

11SACRRI00WSMOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Right Moment Mz

Date: 03/13/2013

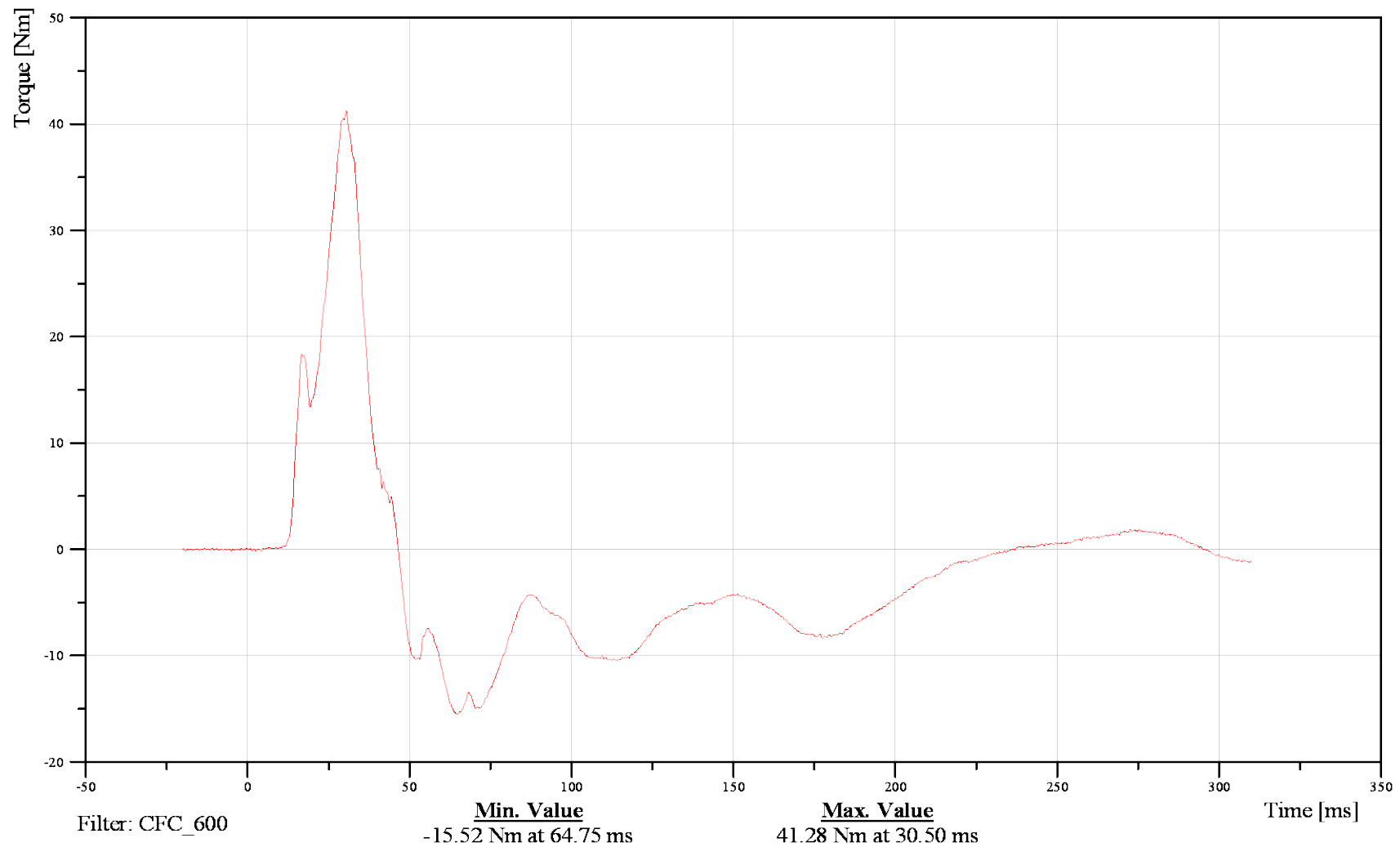
Time: 10:15

Customer: VRTC

11SACRRI00WSMOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Right Force Fx

Date: 03/13/2013

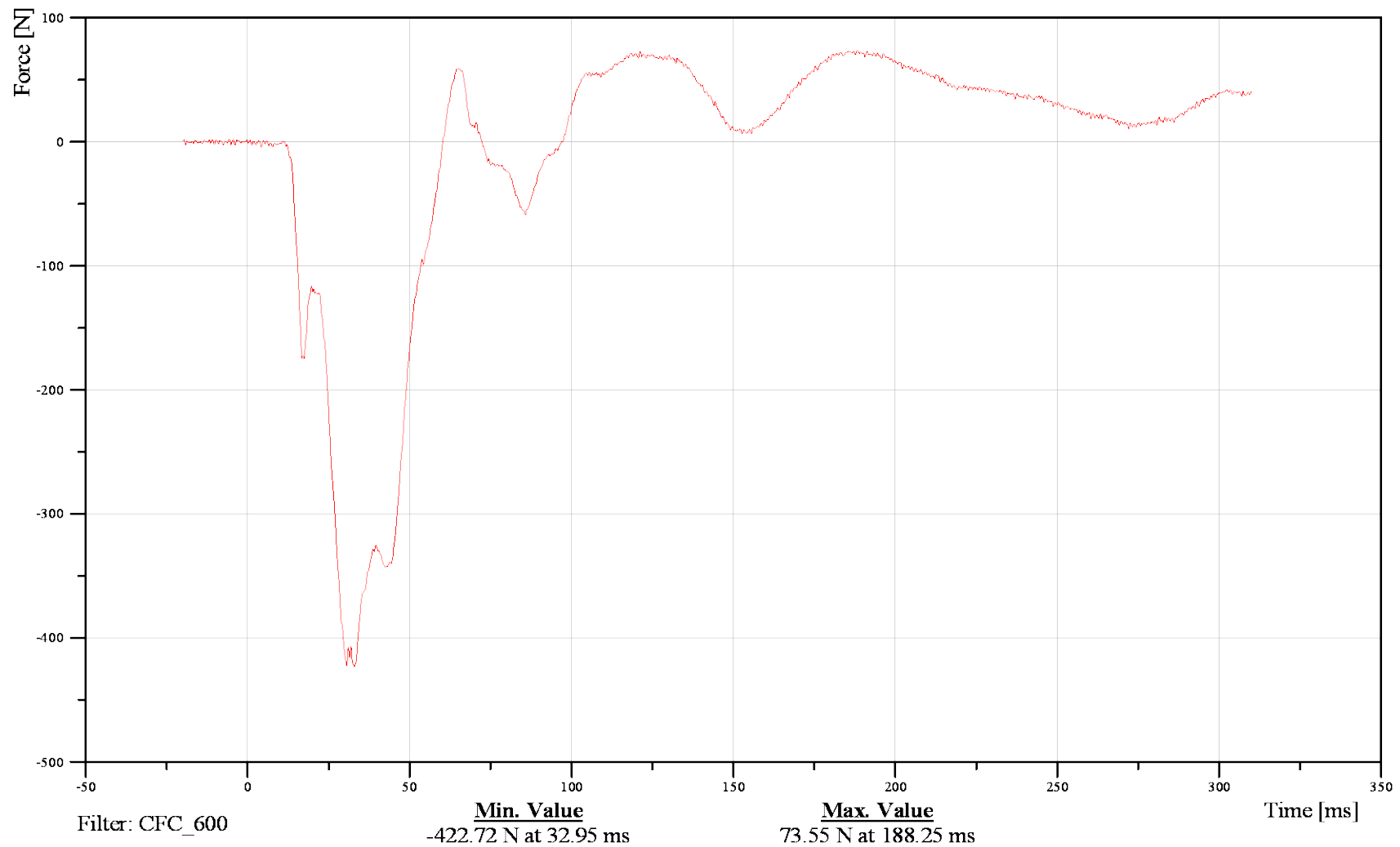
Time: 10:15

Customer: VRTC

11SACRRI00WSFOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Right Force Fy

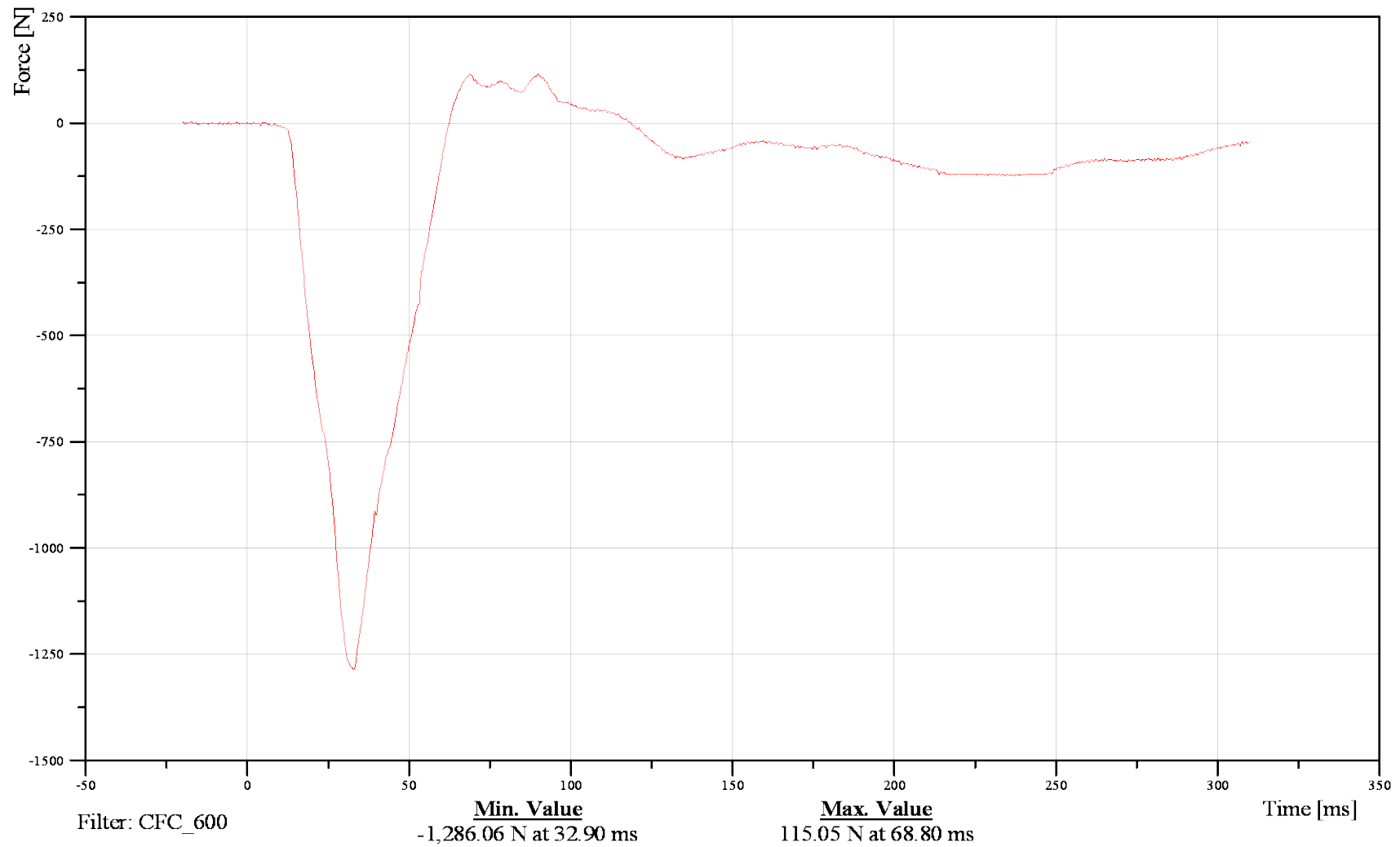
Date: 03/13/2013
Time: 10:15

Customer: VRTC

11SACRRI00WSFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Right Force Fz

Date: 03/13/2013

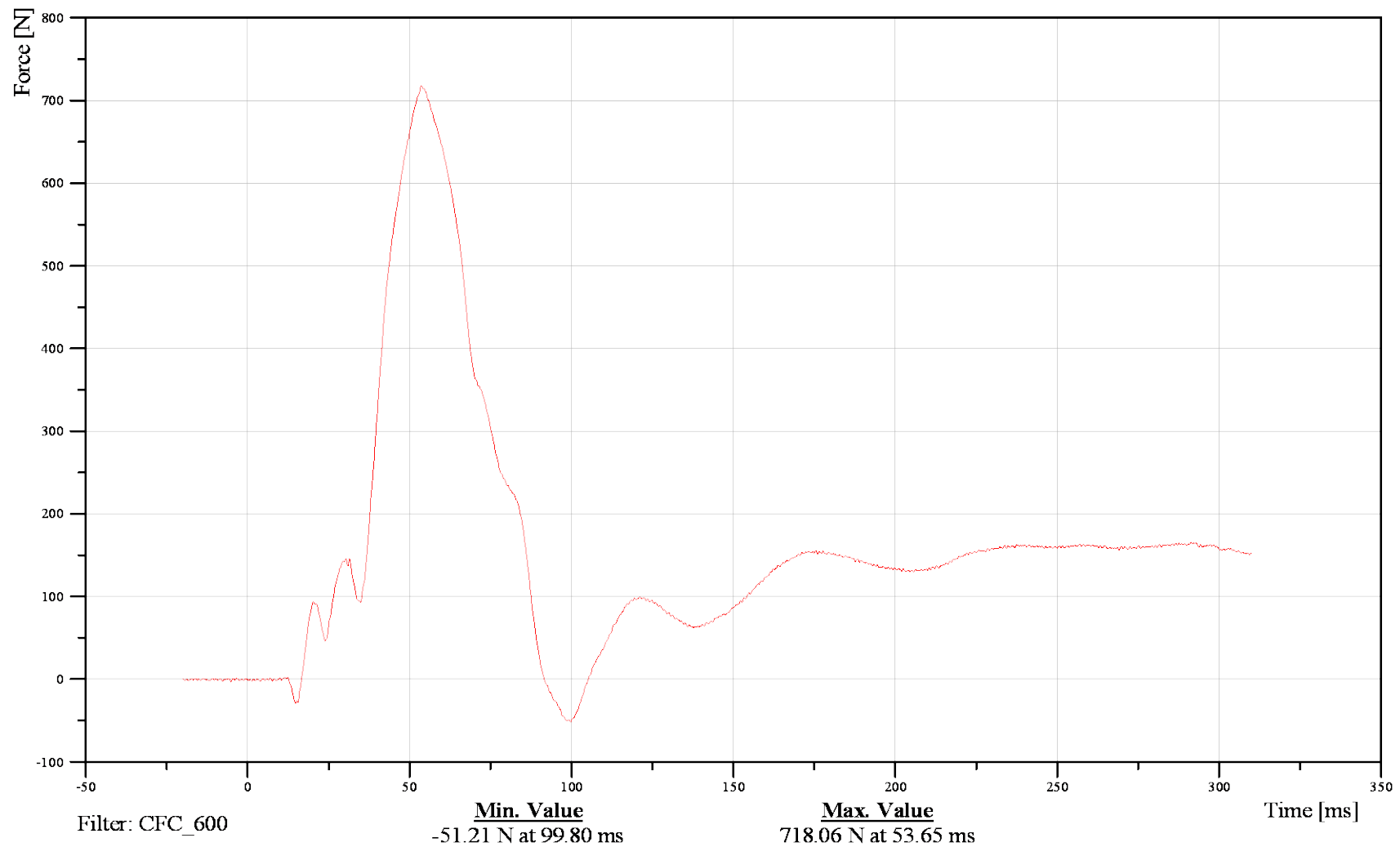
Time: 10:15

Customer: VRTC

11SACRRI00WSFOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Left Moment Mx

Date: 03/13/2013

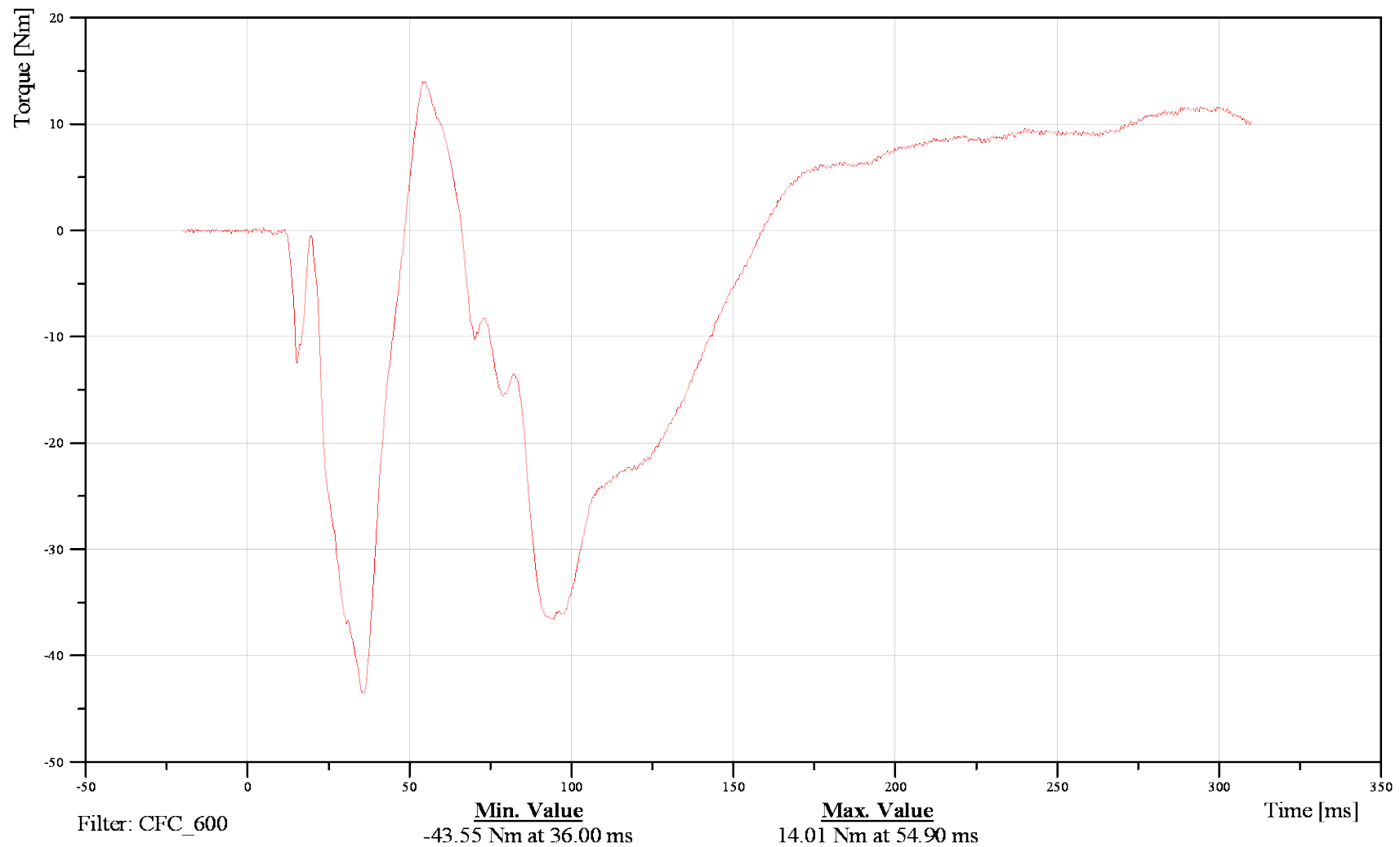
Time: 10:15

Customer: VRTC

11SACRLE00WSMOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Left Moment My

Date: 03/13/2013

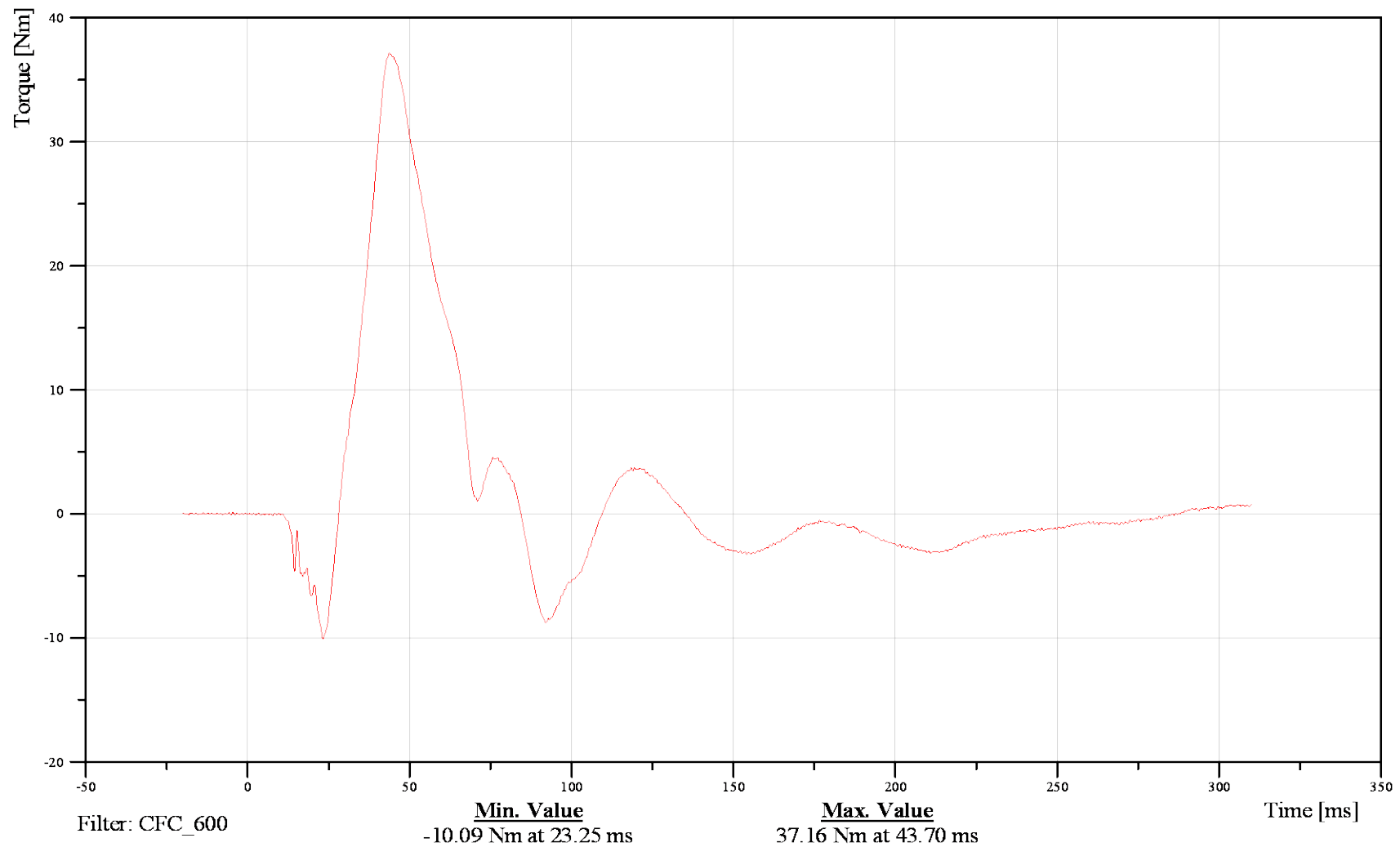
Time: 10:15

Customer: VRTC

11SACRLE00WSMOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Left Moment Mz

Date: 03/13/2013

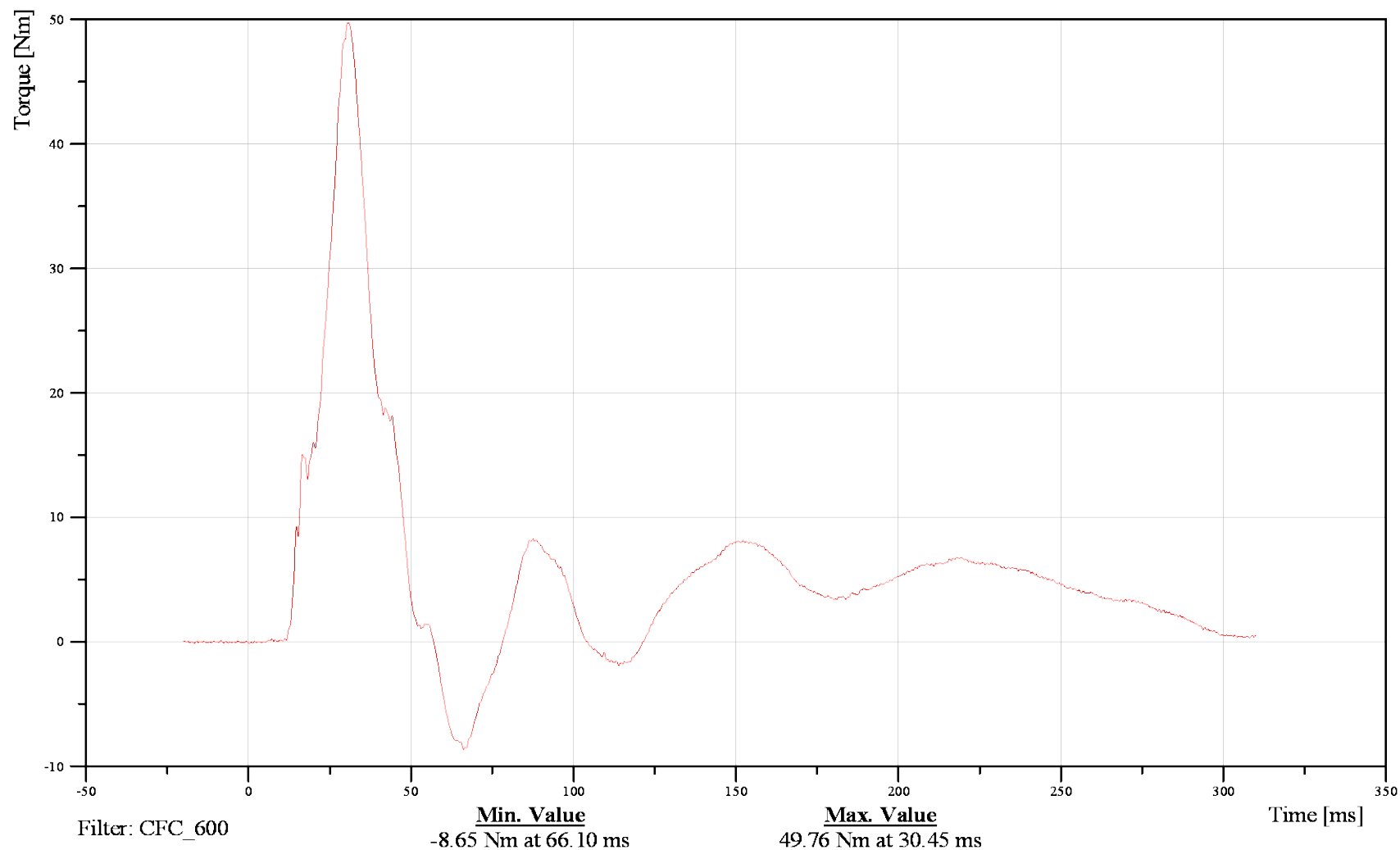
Time: 10:15

Customer: VRTC

11SACRLE00WSMOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Left Force Fx

Date: 03/13/2013

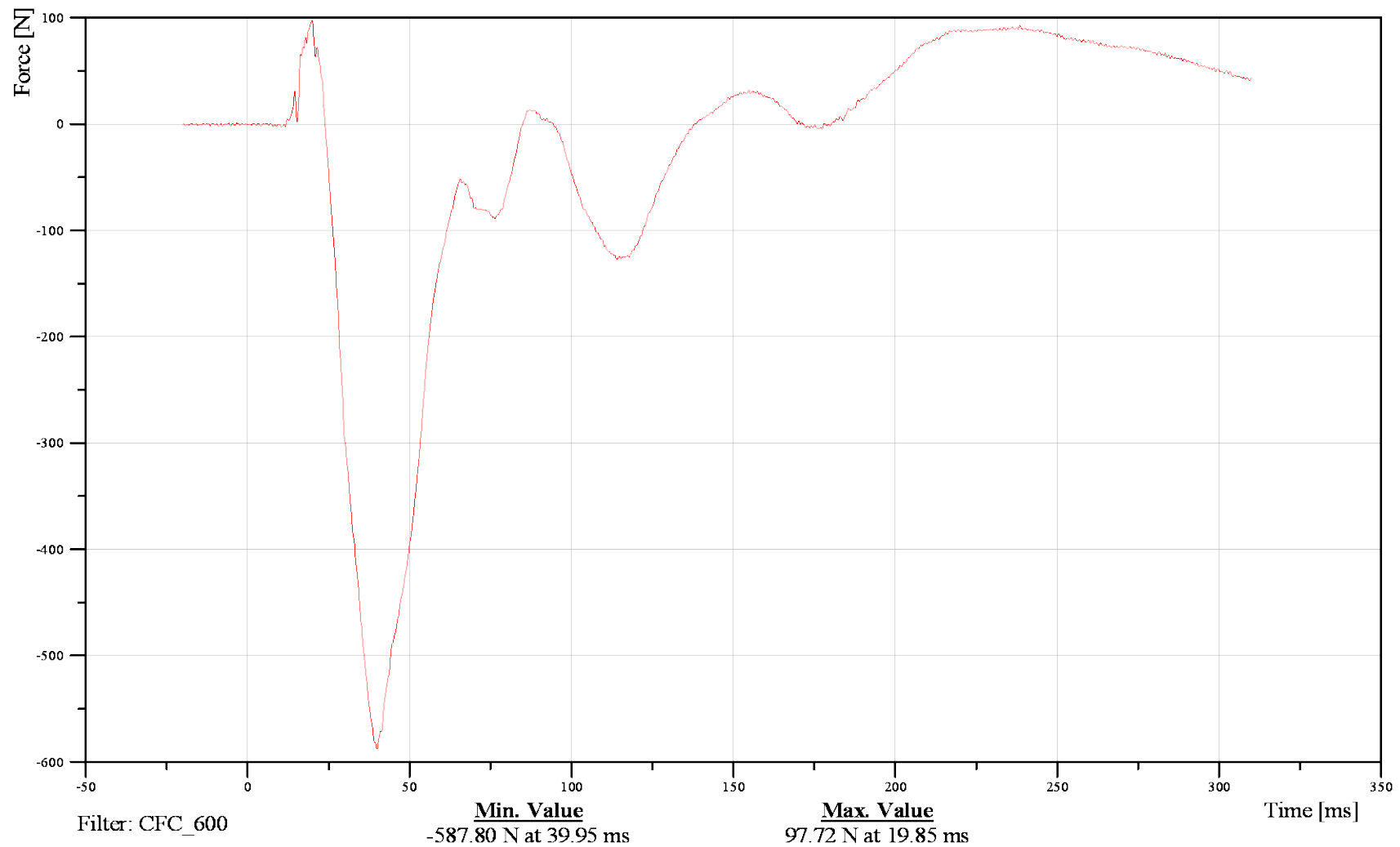
Time: 10:15

Customer: VRTC

11SACRLE00WSFOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Left Force Fy

Date: 03/13/2013

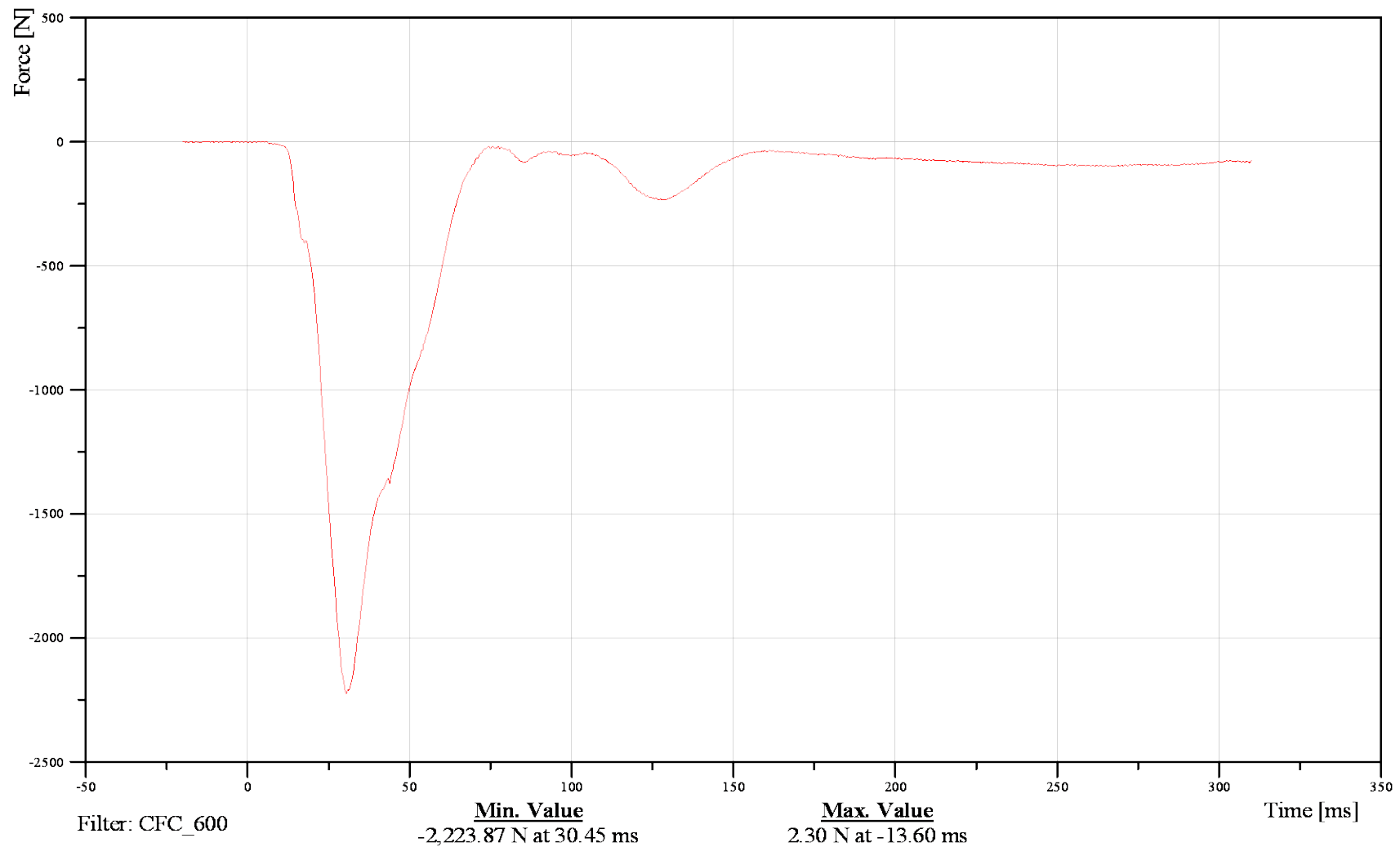
Time: 10:15

Customer: VRTC

11SACRLE00WSFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Sacro-Iliac Left Force Fz

Date: 03/13/2013

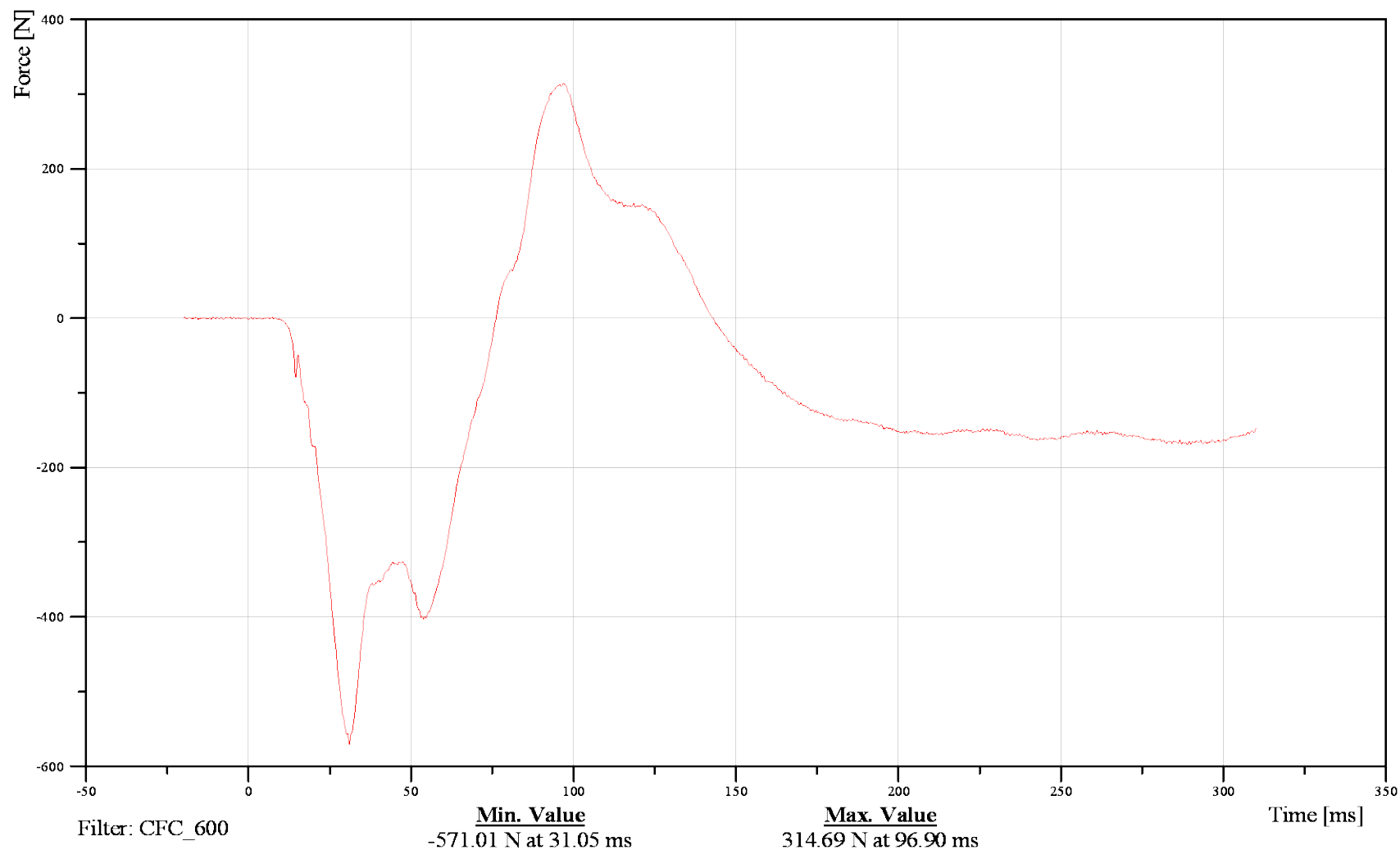
Time: 10:15

Customer: VRTC

11SACRLE00WSFOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Femoral Neck Force Fx

Date: 03/13/2013

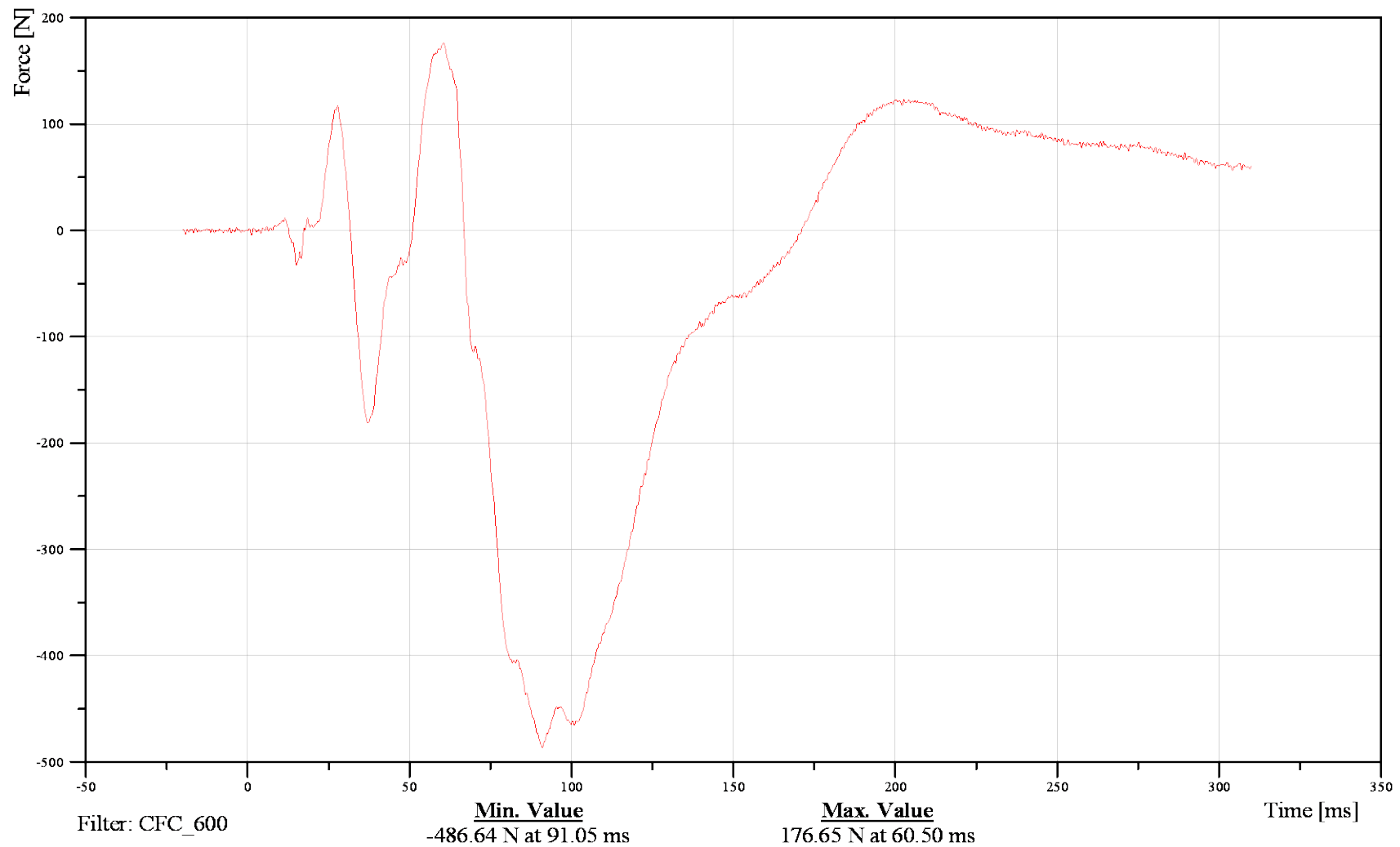
Time: 10:15

Customer: VRTC

11FEACLE00WSFOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Femoral Neck Force Fy

Date: 03/13/2013

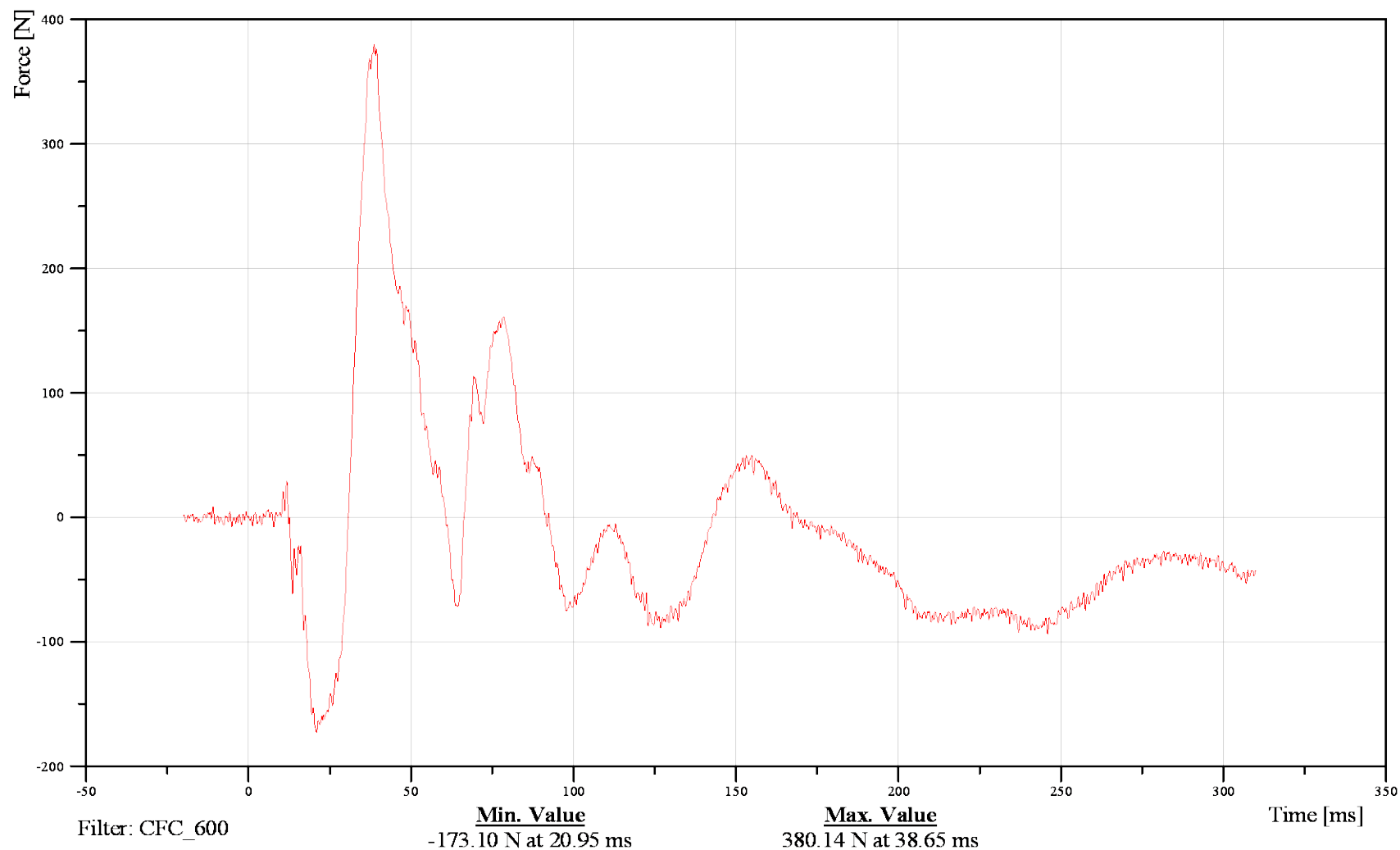
Time: 10:15

Customer: VRTC

11FEACLE00WSFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Femoral Neck Force Fz

Date: 03/13/2013

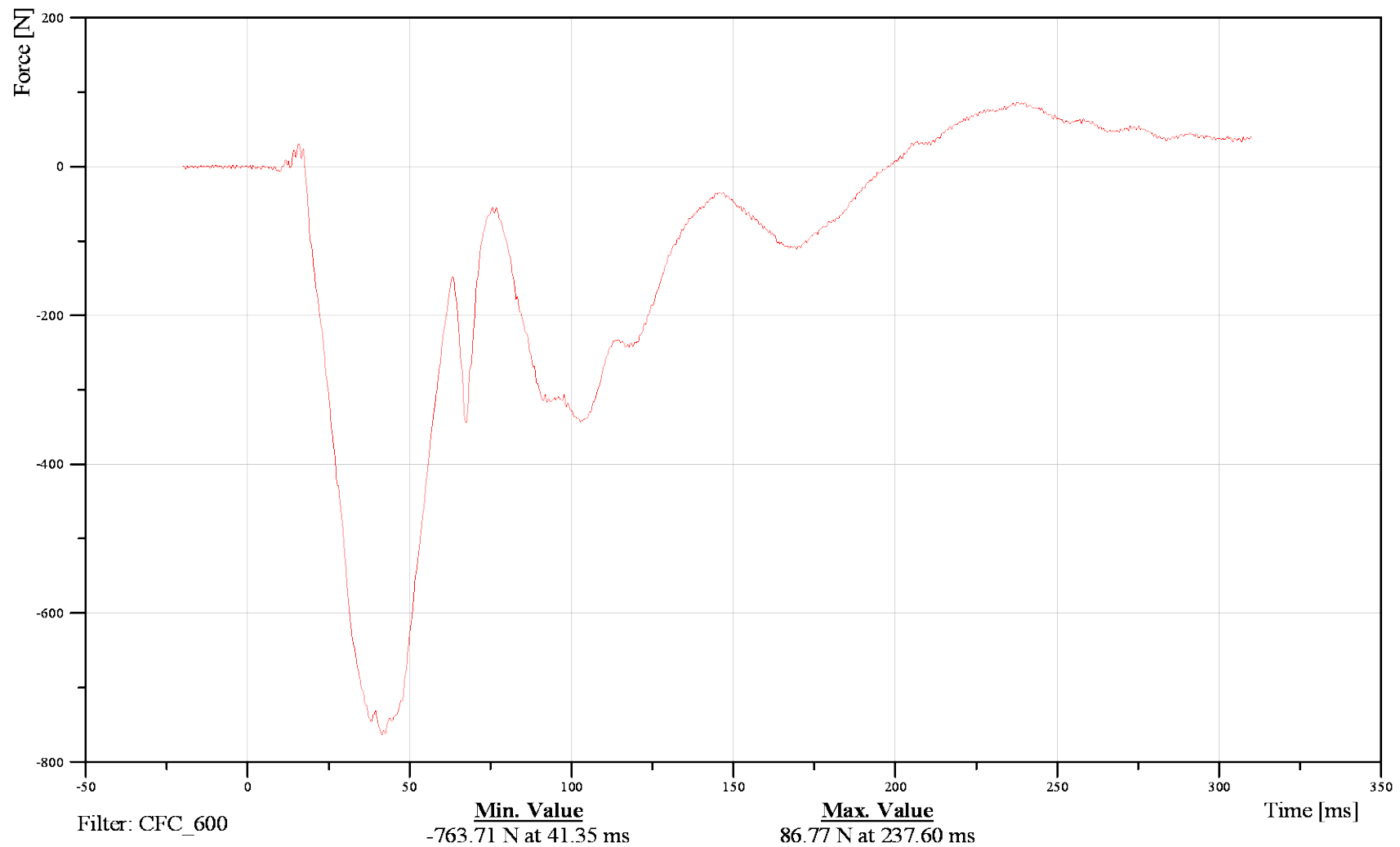
Time: 10:15

Customer: VRTC

11FEACLE00WSFOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Femoral Neck Force Fx

Date: 03/13/2013

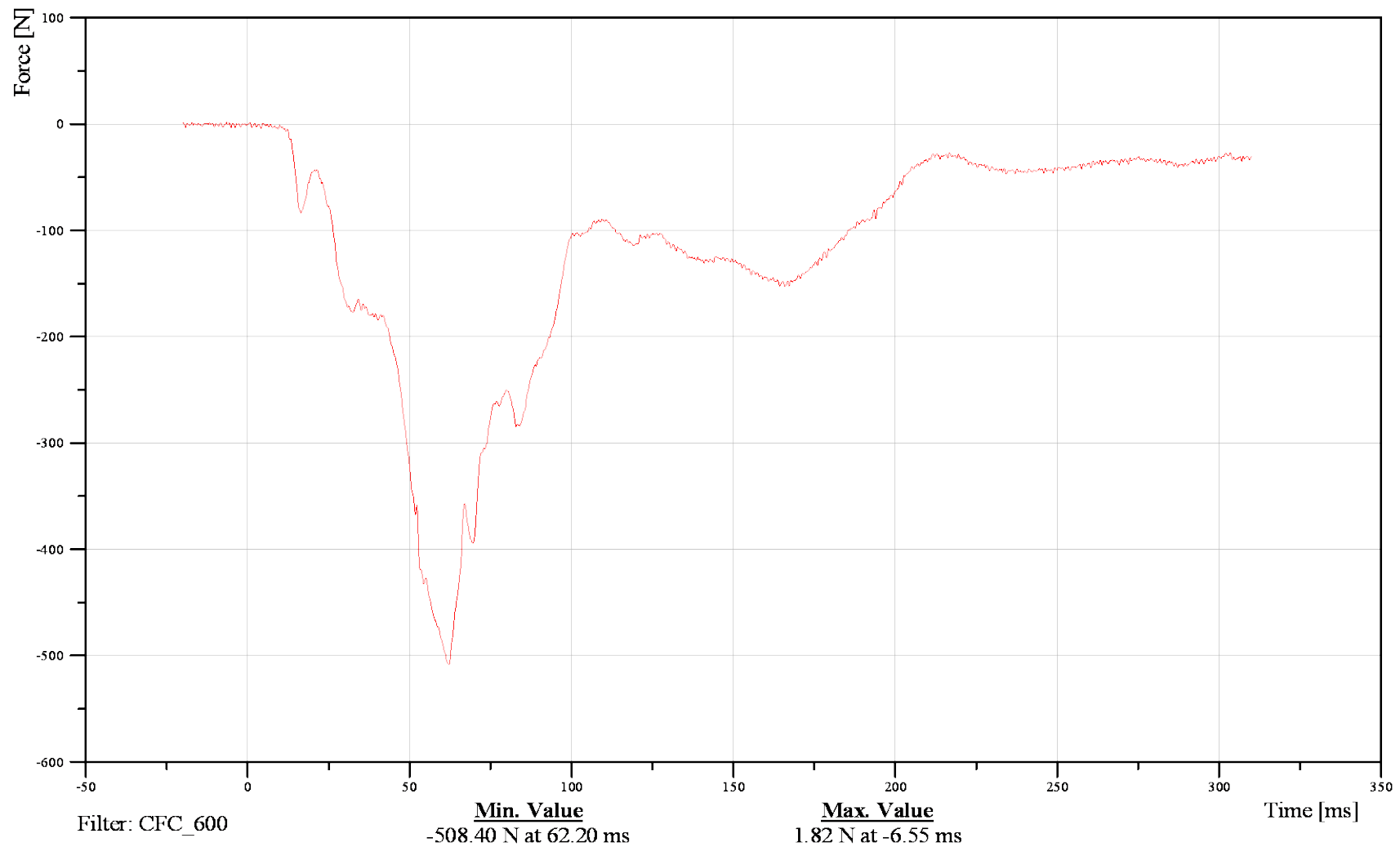
Time: 10:15

Customer: VRTC

11FEACRI00WSFOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Femoral Neck Force Fy

Date: 03/13/2013

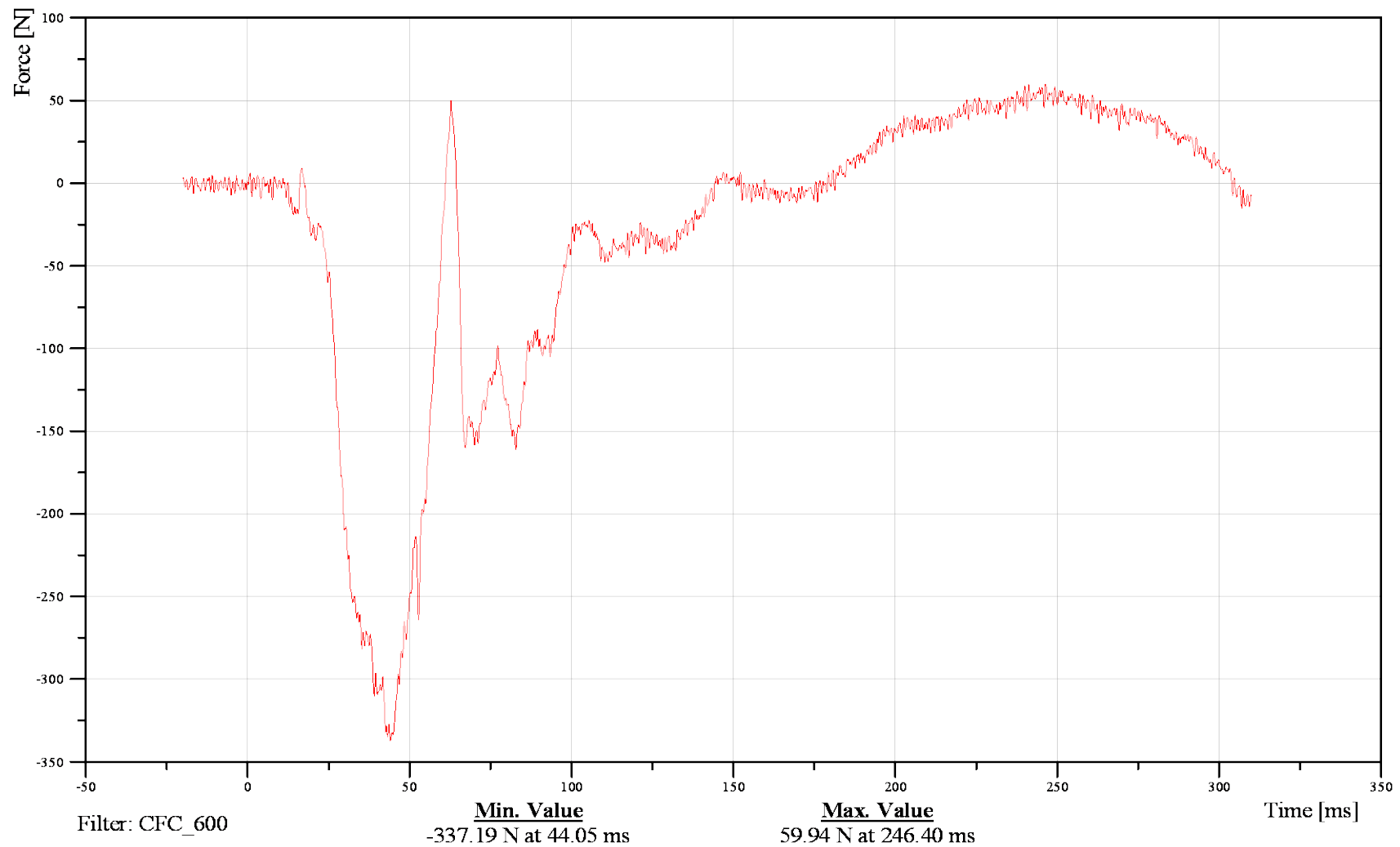
Time: 10:15

Customer: VRTC

11FEACRI00WSFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Femoral Neck Force Fz

Date: 03/13/2013

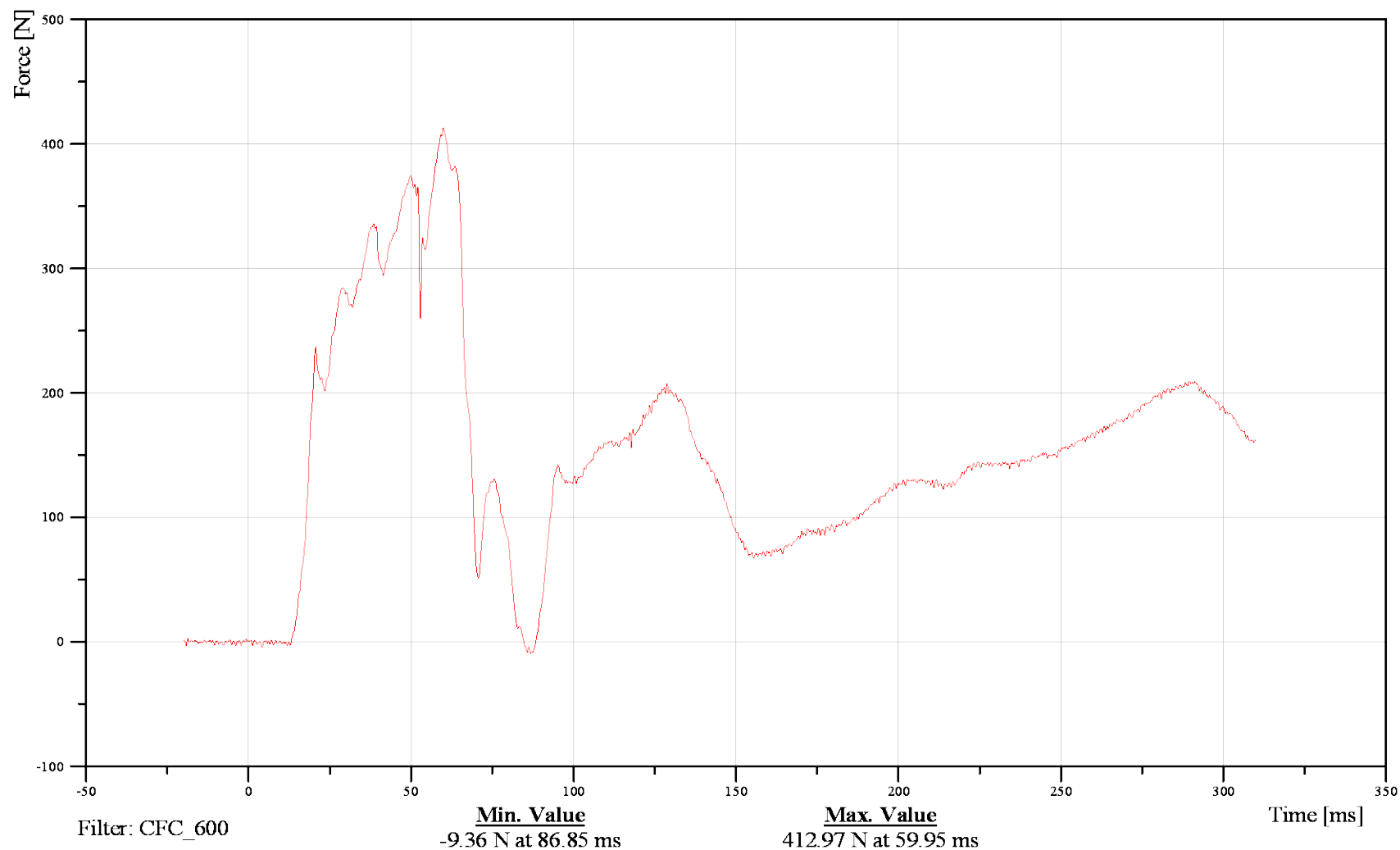
Time: 10:15

Customer: VRTC

11FEACRI00WSFOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Longitudinal Ax

Date: 03/13/2013

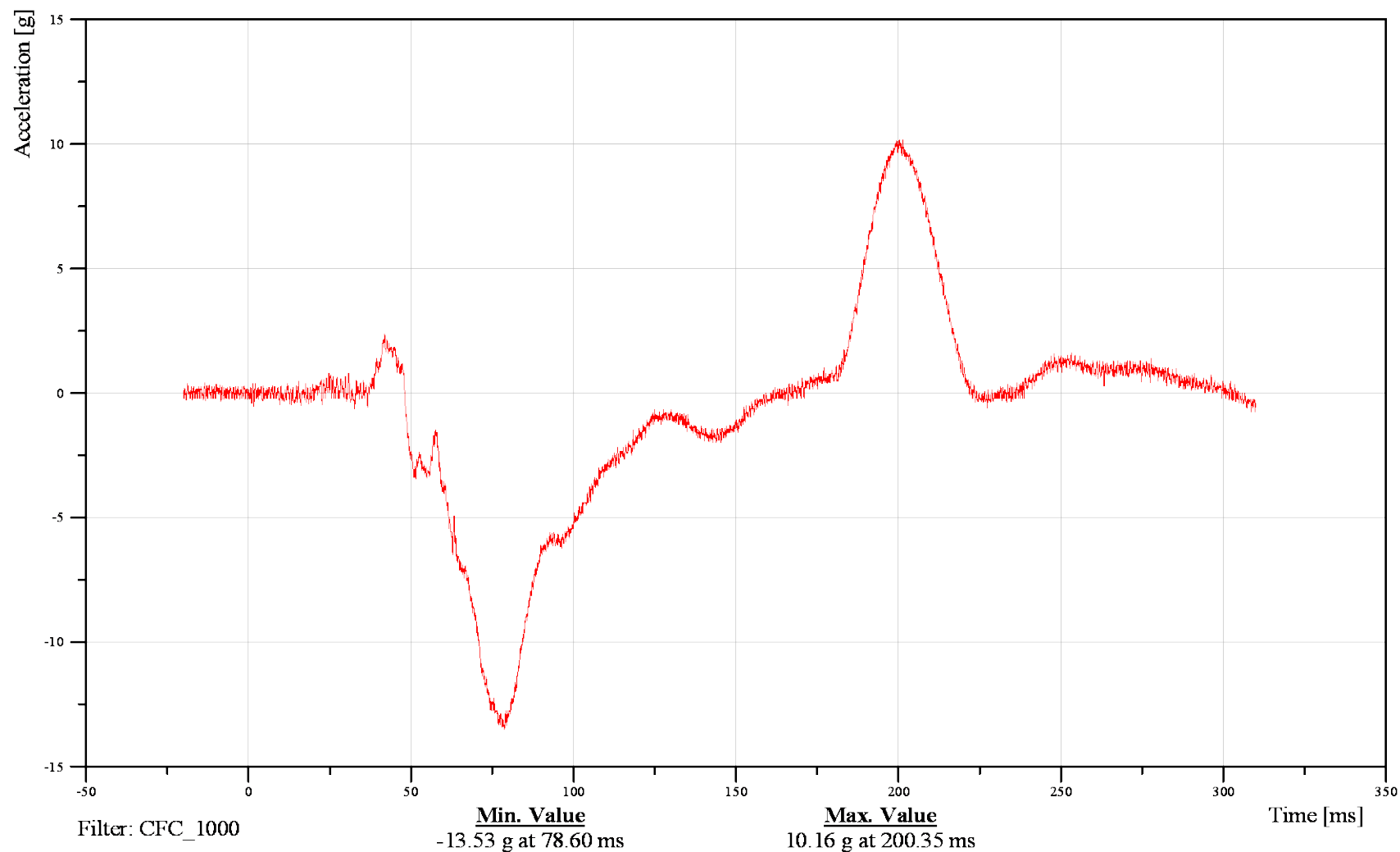
Time: 10:15

Customer: VRTC

14HEADCG00WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Lateral Ay

Date: 03/13/2013

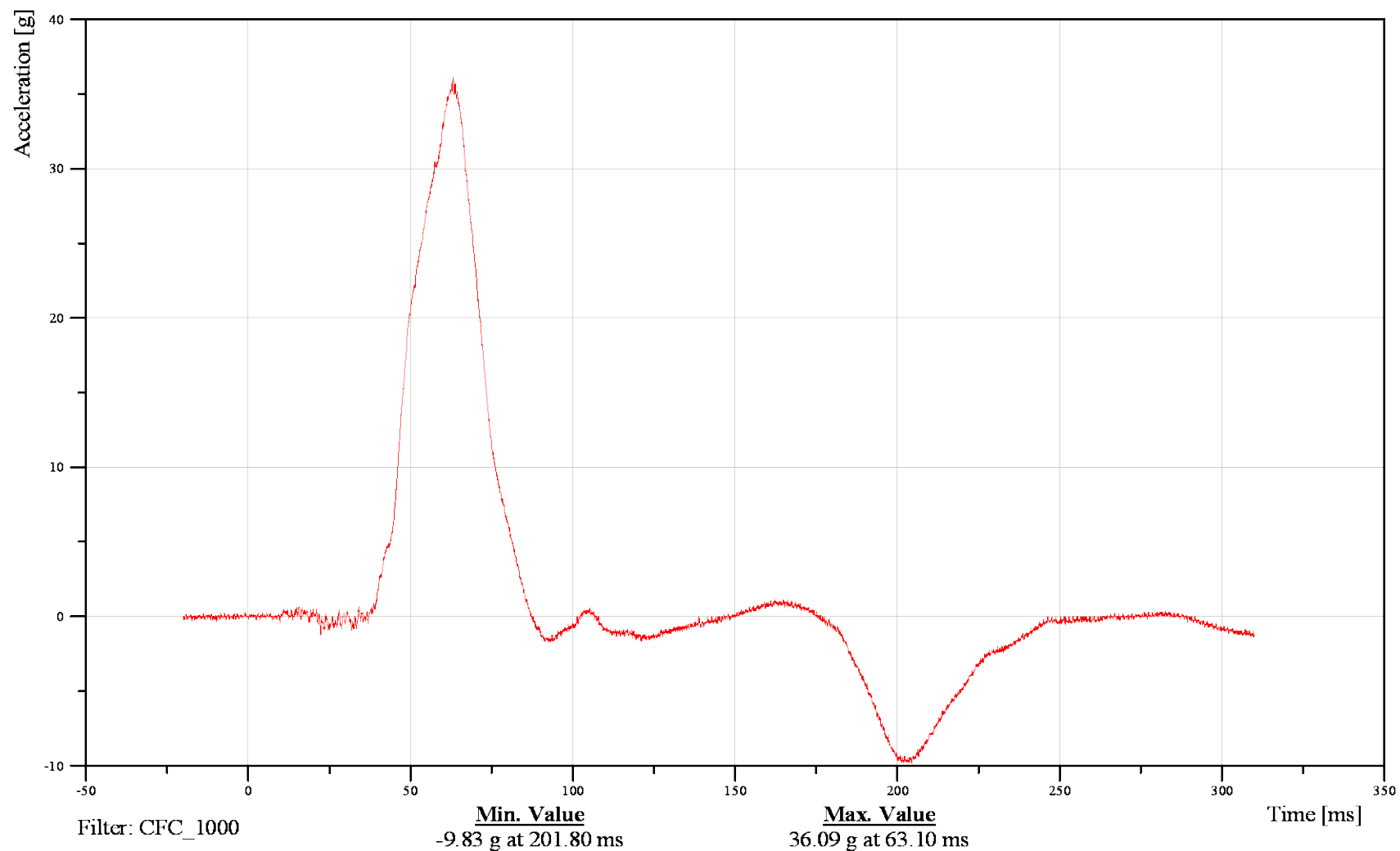
Time: 10:15

Customer: VRTC

14HEADCG00WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Head Vertical Az

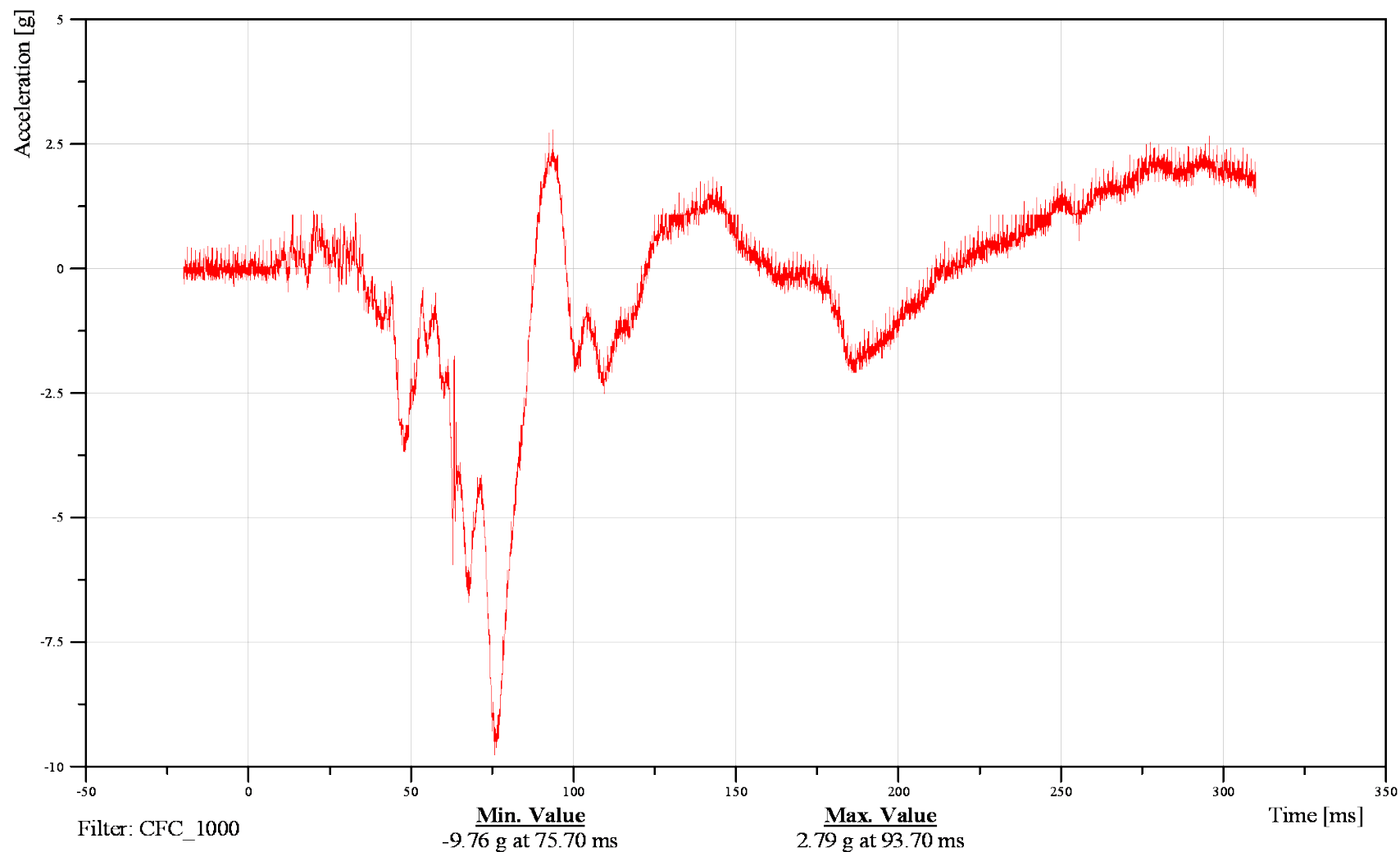
Time: 10:15

Customer: VRTC

14HEADCG00WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head A Resultant

Date: 03/13/2013

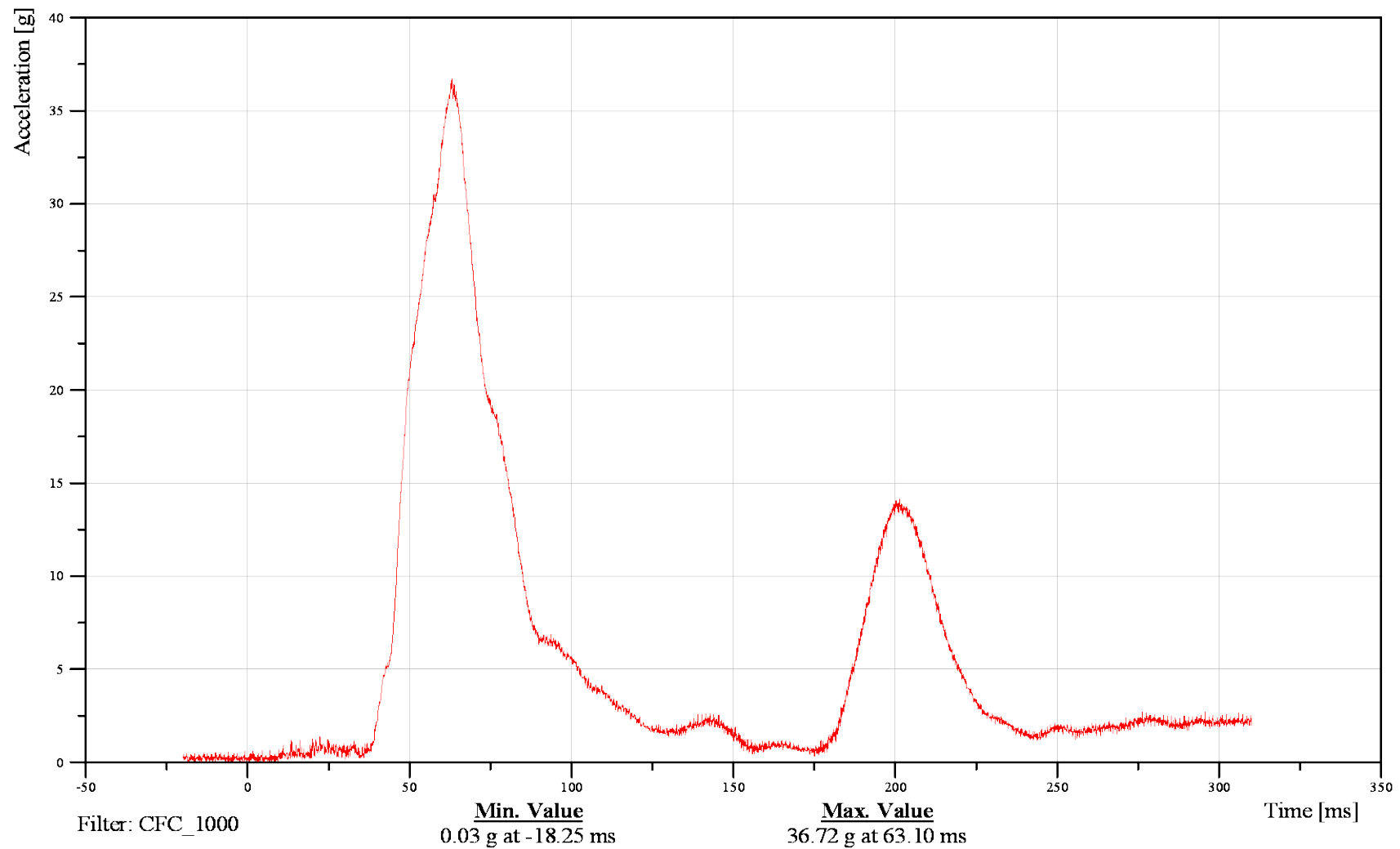
Time: 10:15

Customer: VRTC

14HEADCG00WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Rotational Acceleration Rx

Date: 03/13/2013

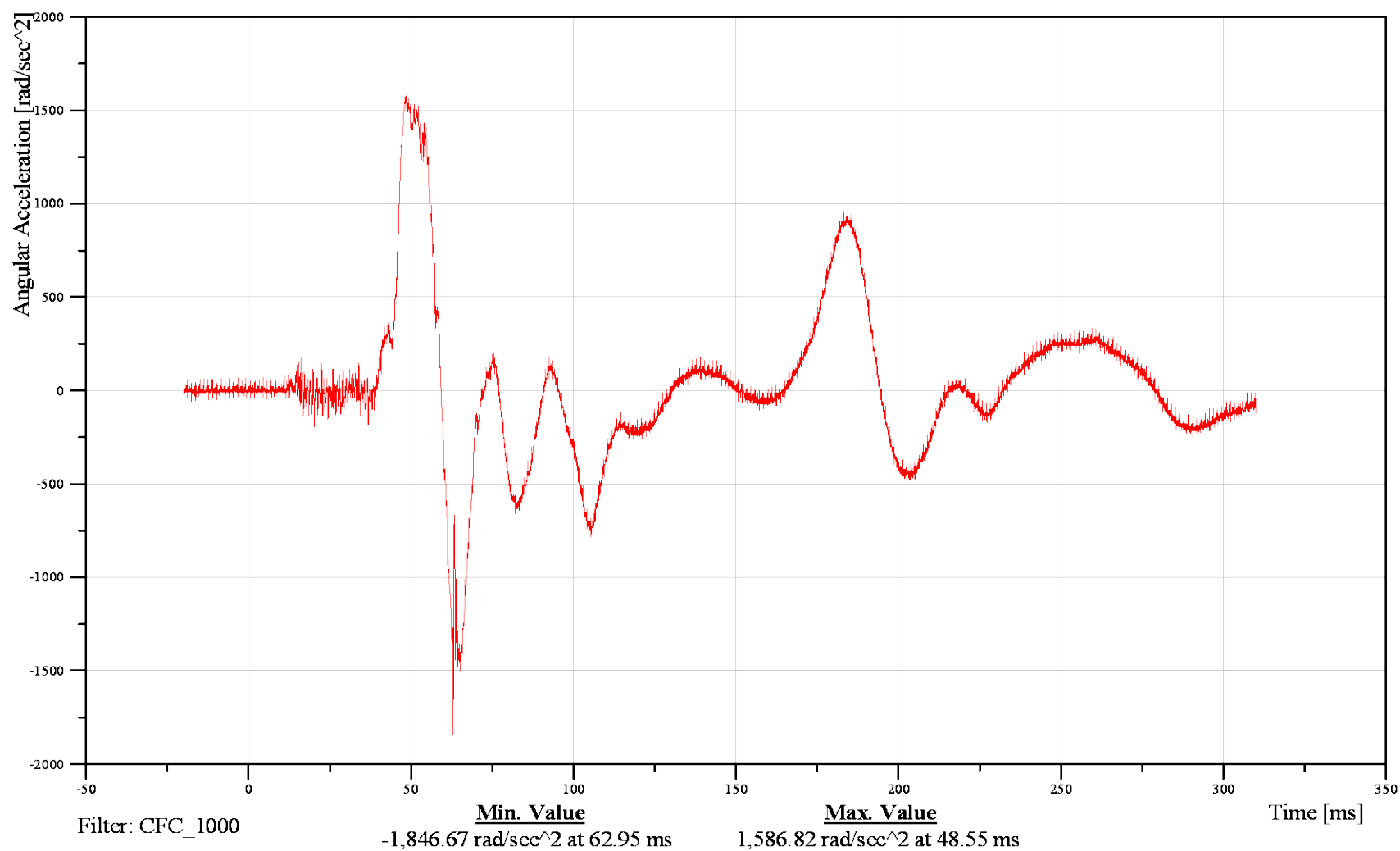
Time: 10:15

Customer: VRTC

14HEAD0000WFAAXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Rotational Acceleration Ry

Date: 03/13/2013

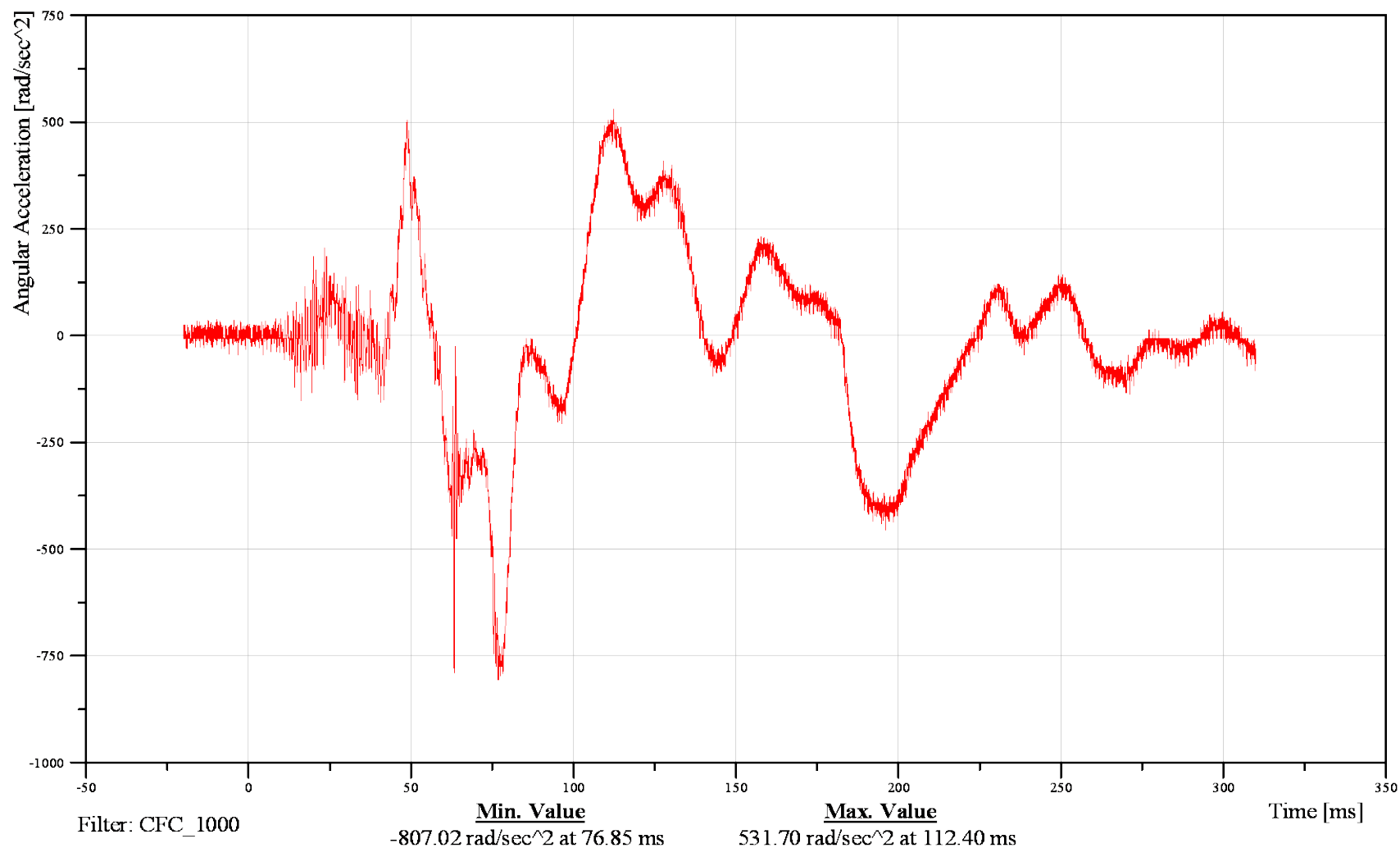
Time: 10:15

Customer: VRTC

14HEAD0000WFAAYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Rotational Acceleration Rz

Date: 03/13/2013

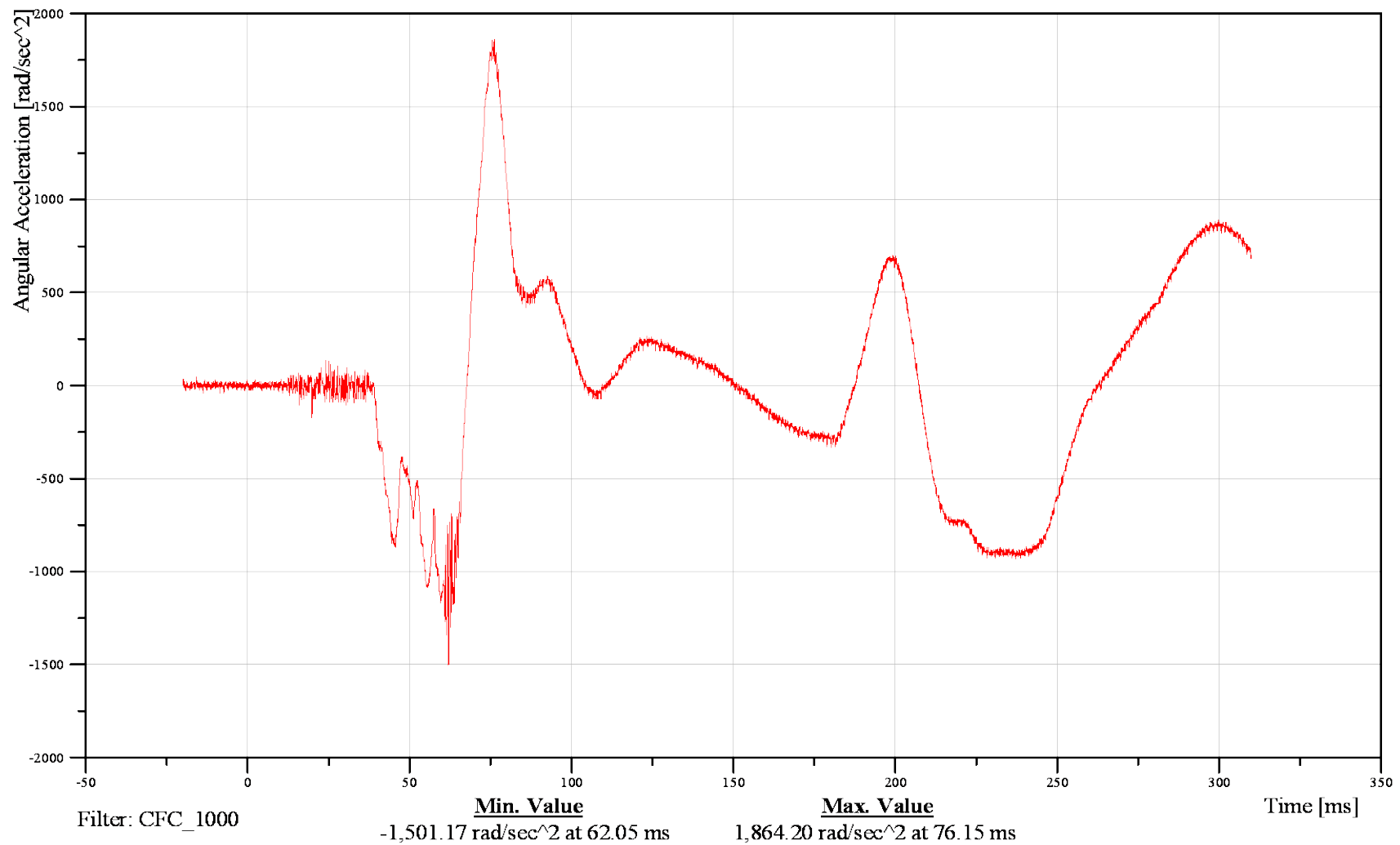
Time: 10:15

Customer: VRTC

14HEAD0000WFAAZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head X-Axis Angular Velocity

Date: 03/13/2013

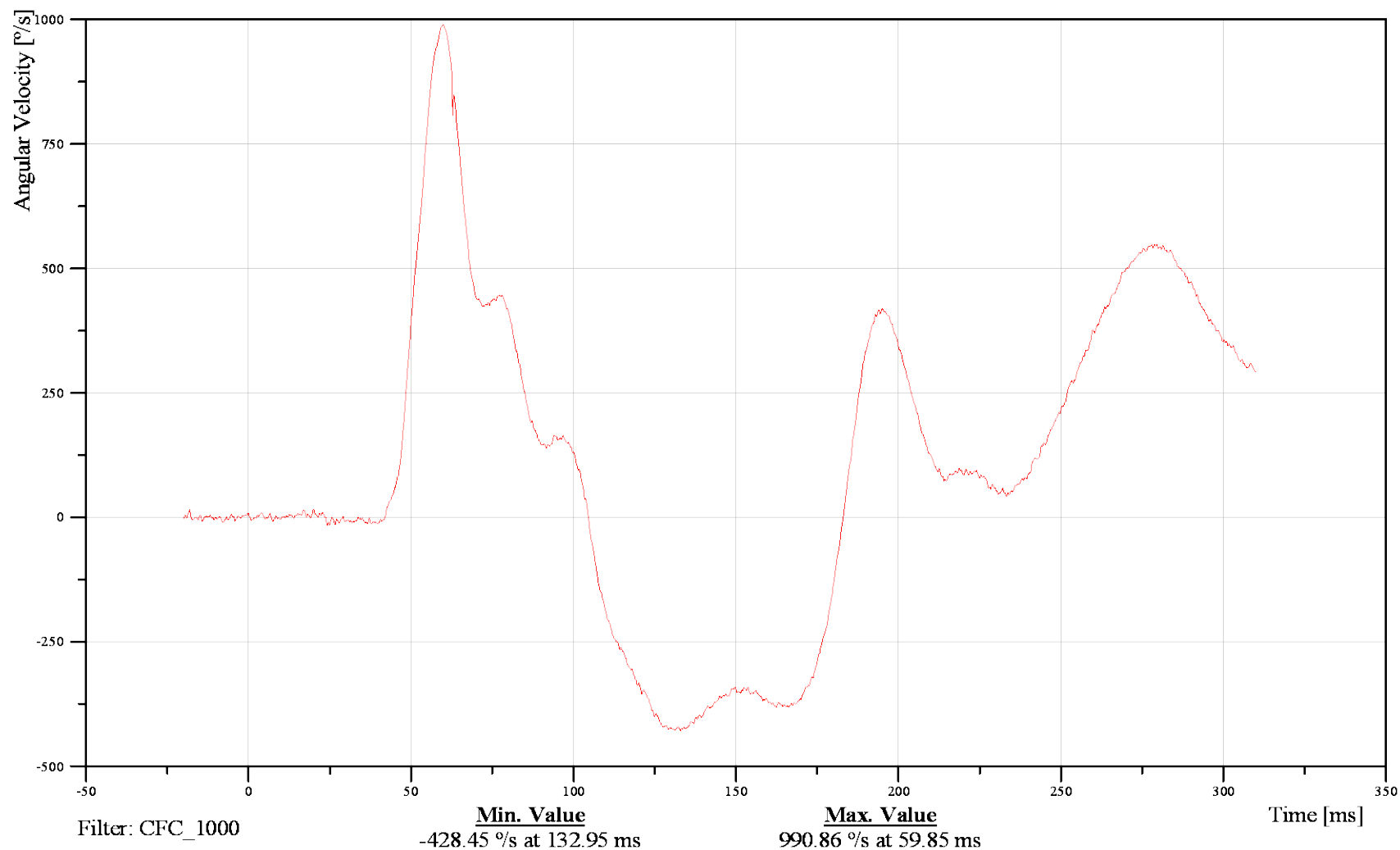
Time: 10:15

Customer: VRTC

14HEADCG00WFAVXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Y-Axis Angular Velocity

Date: 03/13/2013

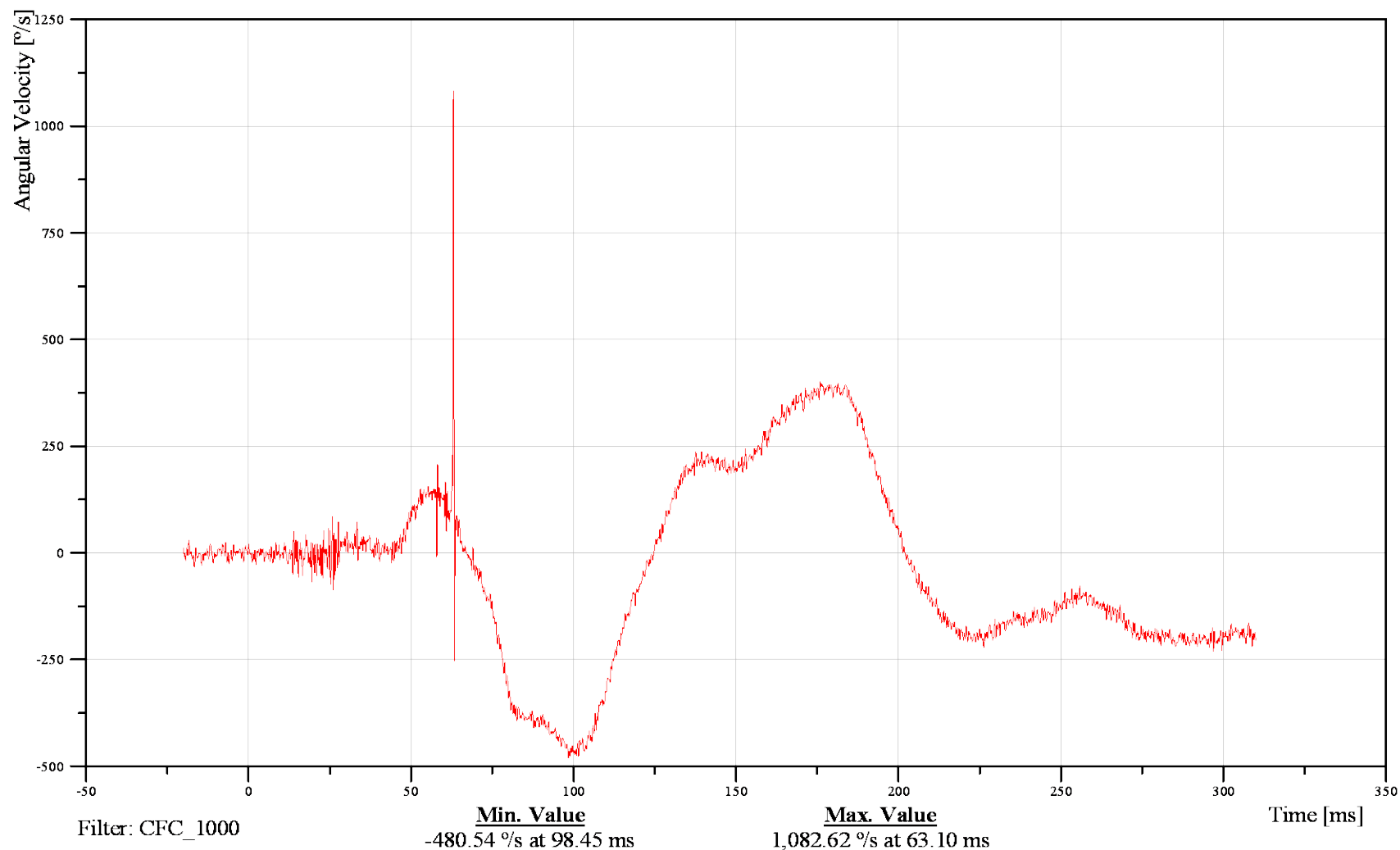
Time: 10:15

Customer: VRTC

14HEADCG00WFAVYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Z-Axis Angular Velocity

Date: 03/13/2013

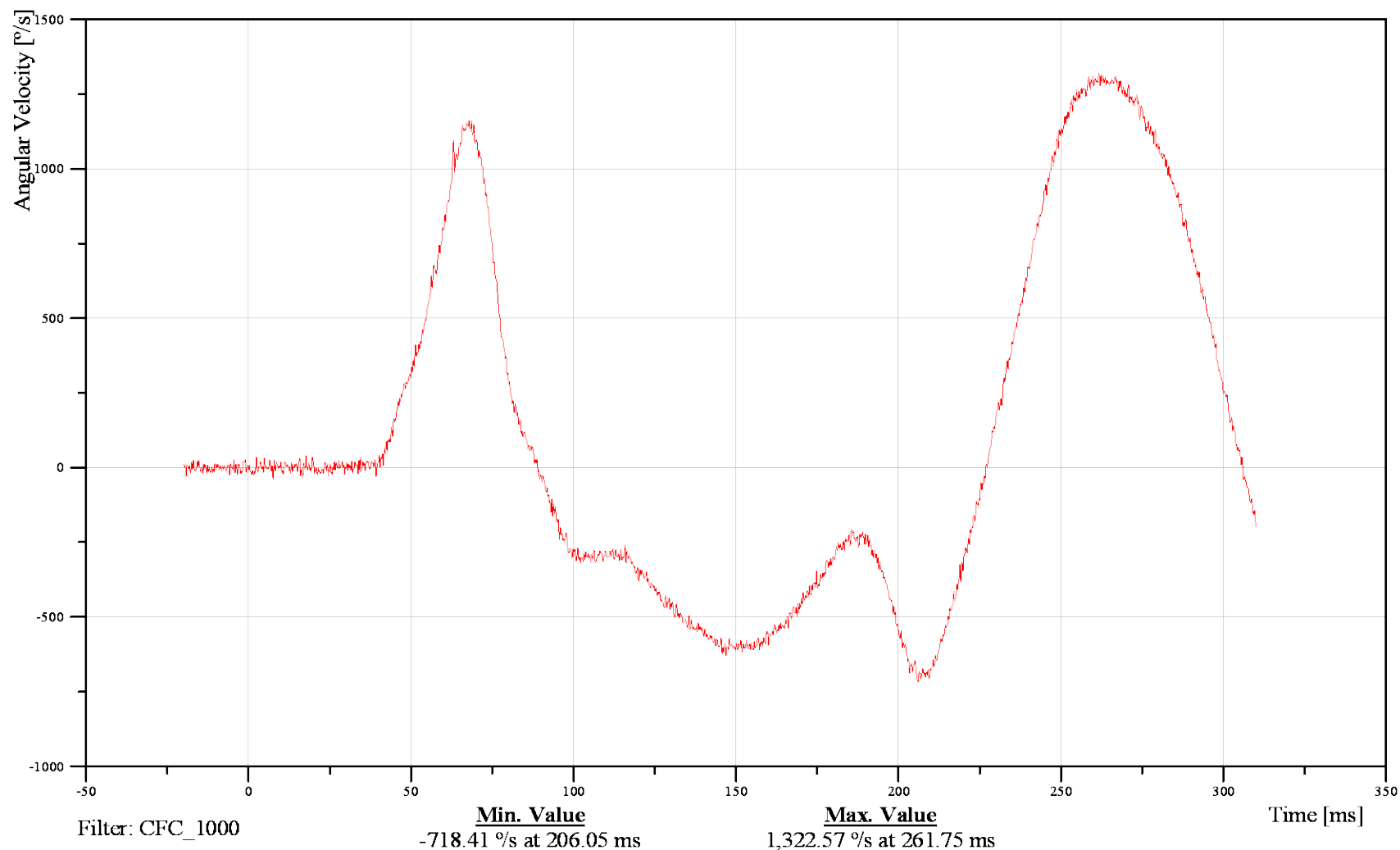
Time: 10:15

Customer: VRTC

14HEADCG00WFAVZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Force Fx

Date: 03/13/2013

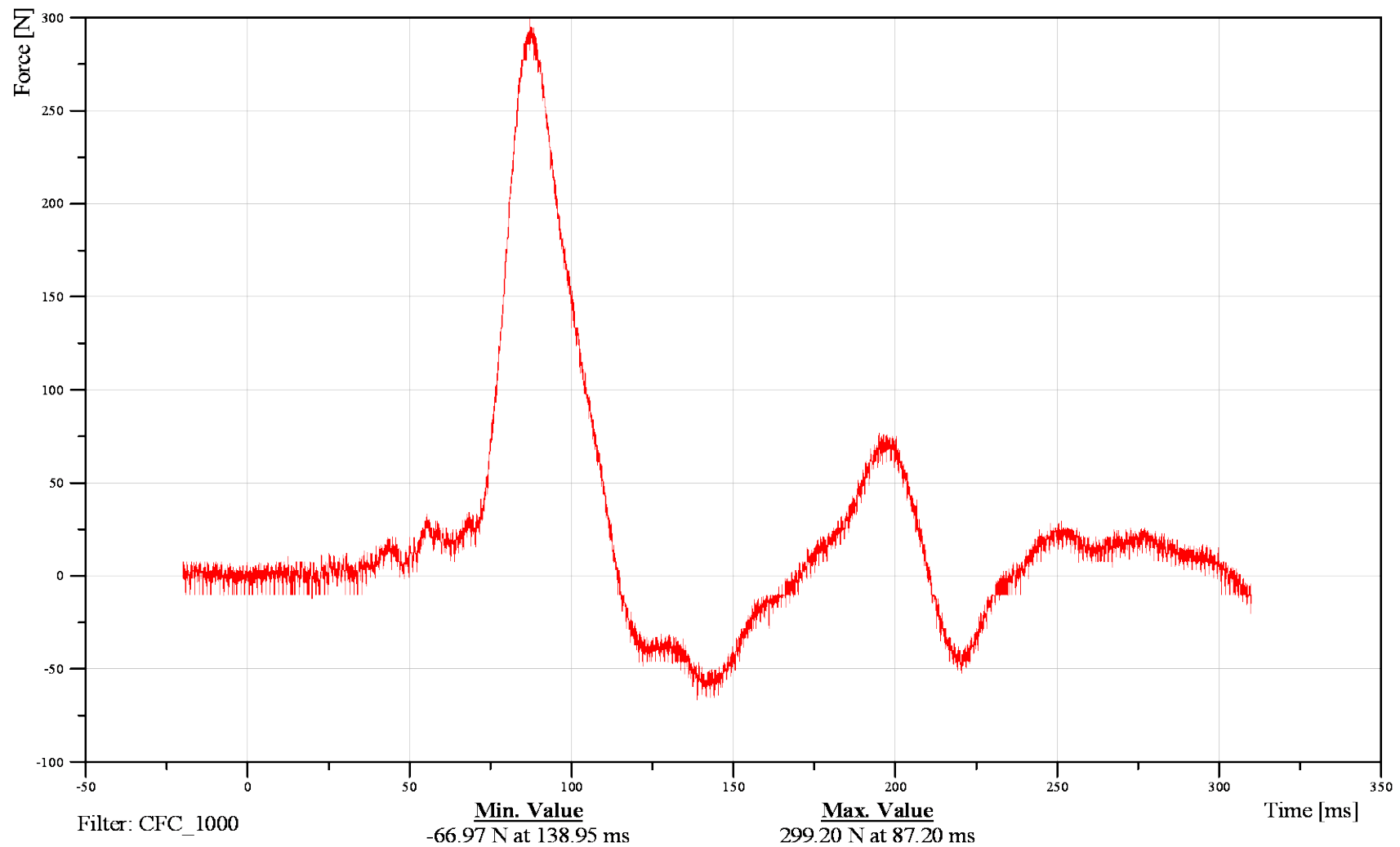
Time: 10:15

Customer: VRTC

14NECKUP00WFFOXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Force Fy

Date: 03/13/2013

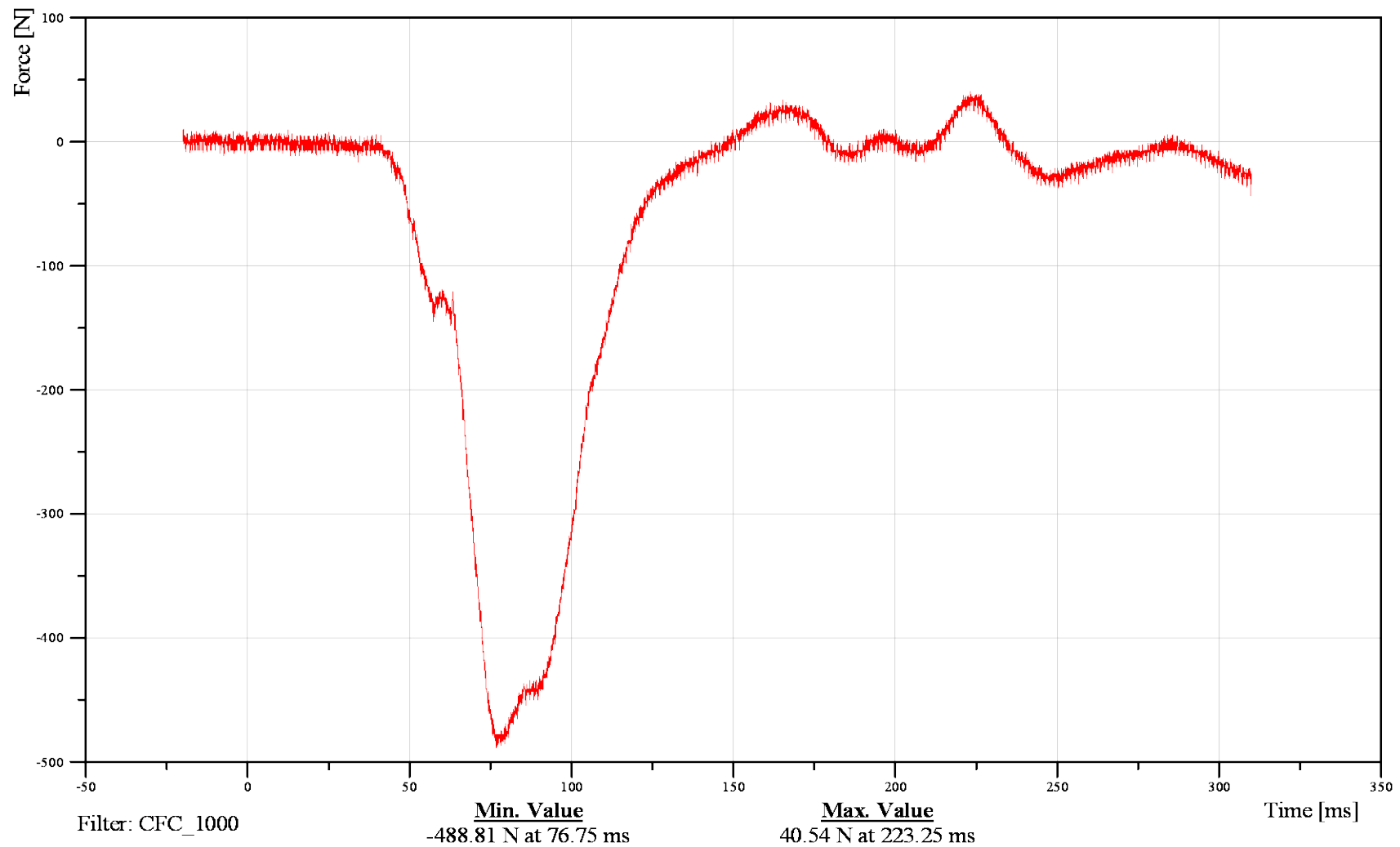
Time: 10:15

Customer: VRTC

14NECKUP00WFFOYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Force Fz

Date: 03/13/2013

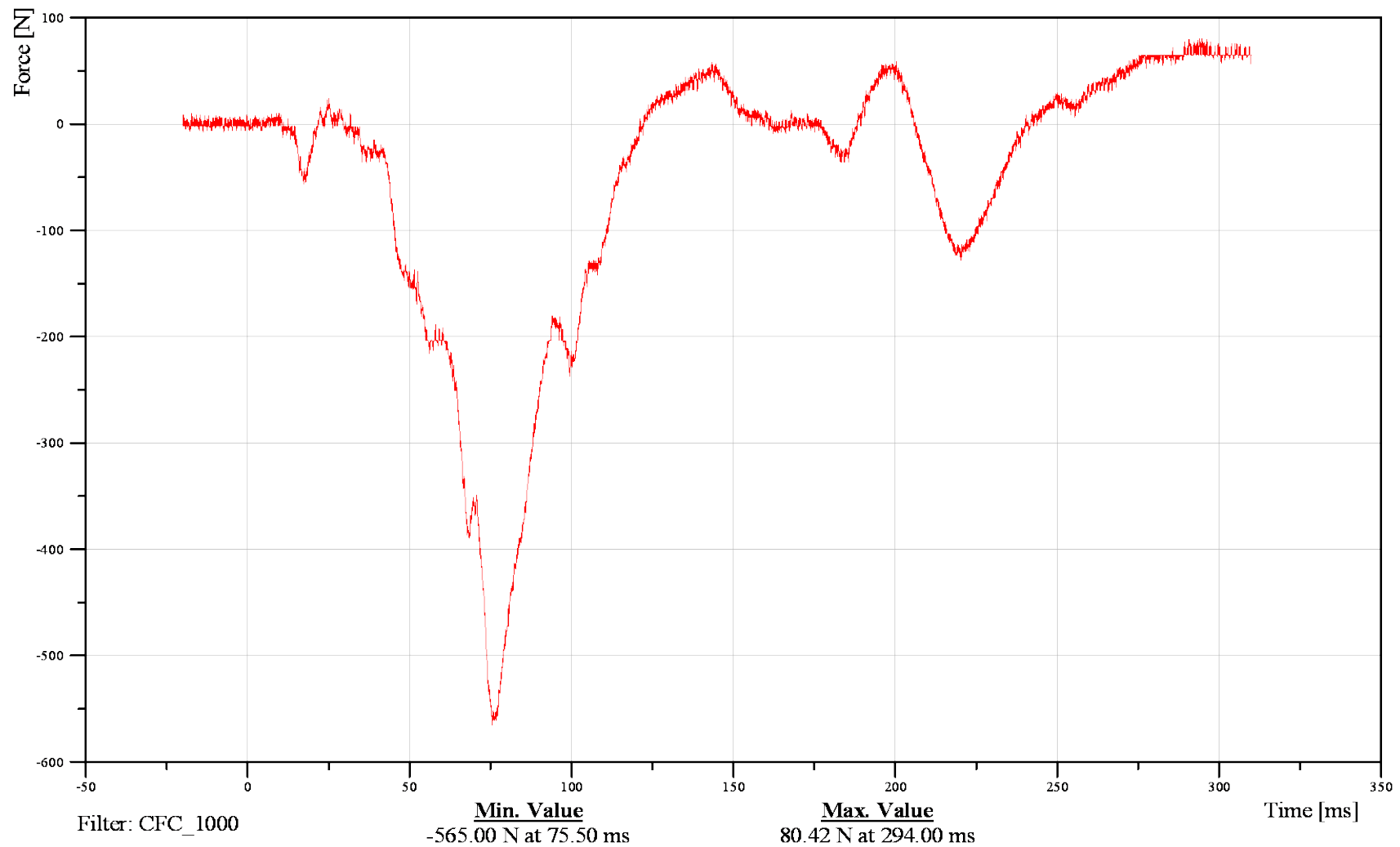
Time: 10:15

Customer: VRTC

14NECKUP00WFFOZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Moment Mx

Date: 03/13/2013

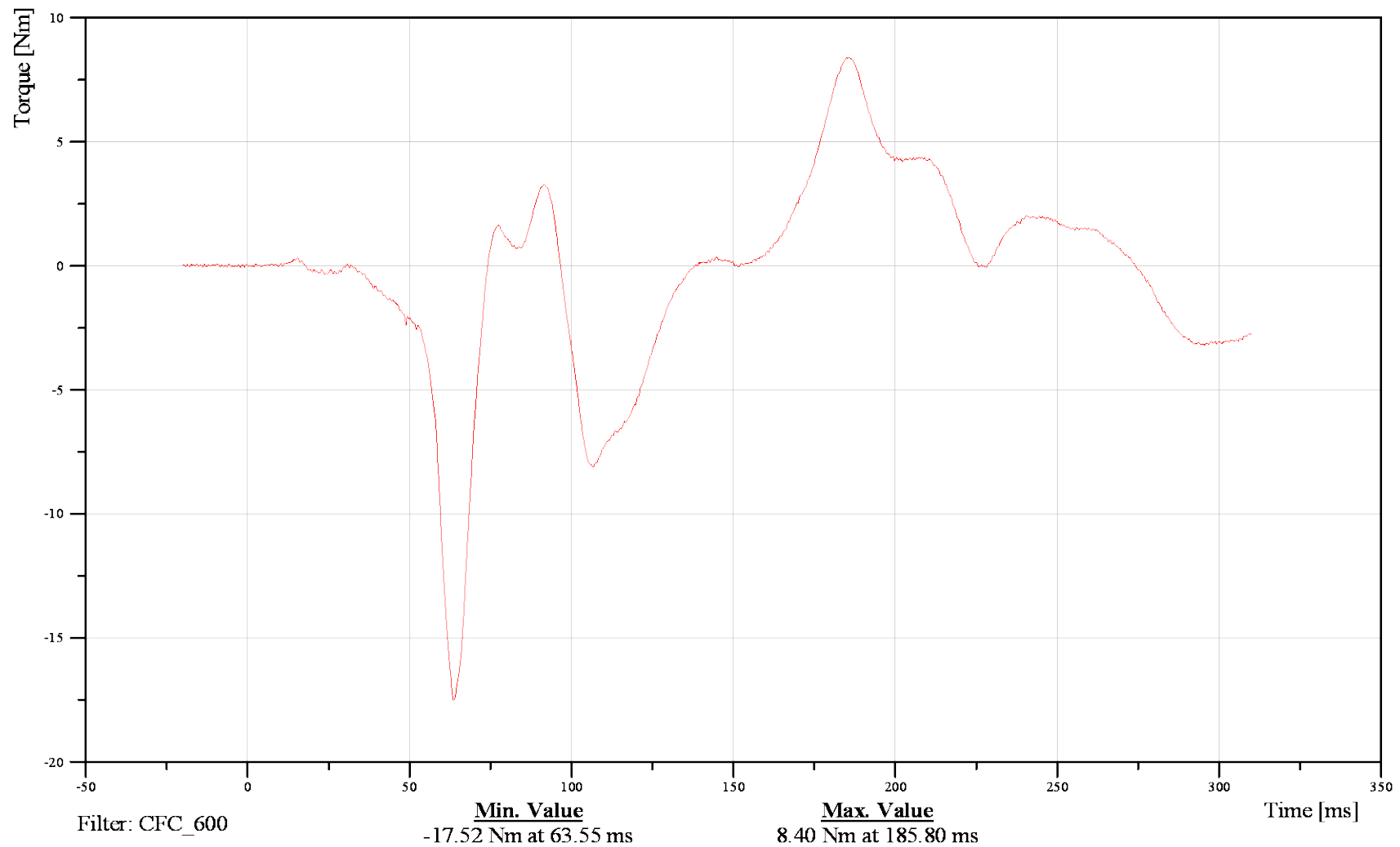
Time: 10:15

Customer: VRTC

14NECKUP00WFM0XB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Moment My

Date: 03/13/2013

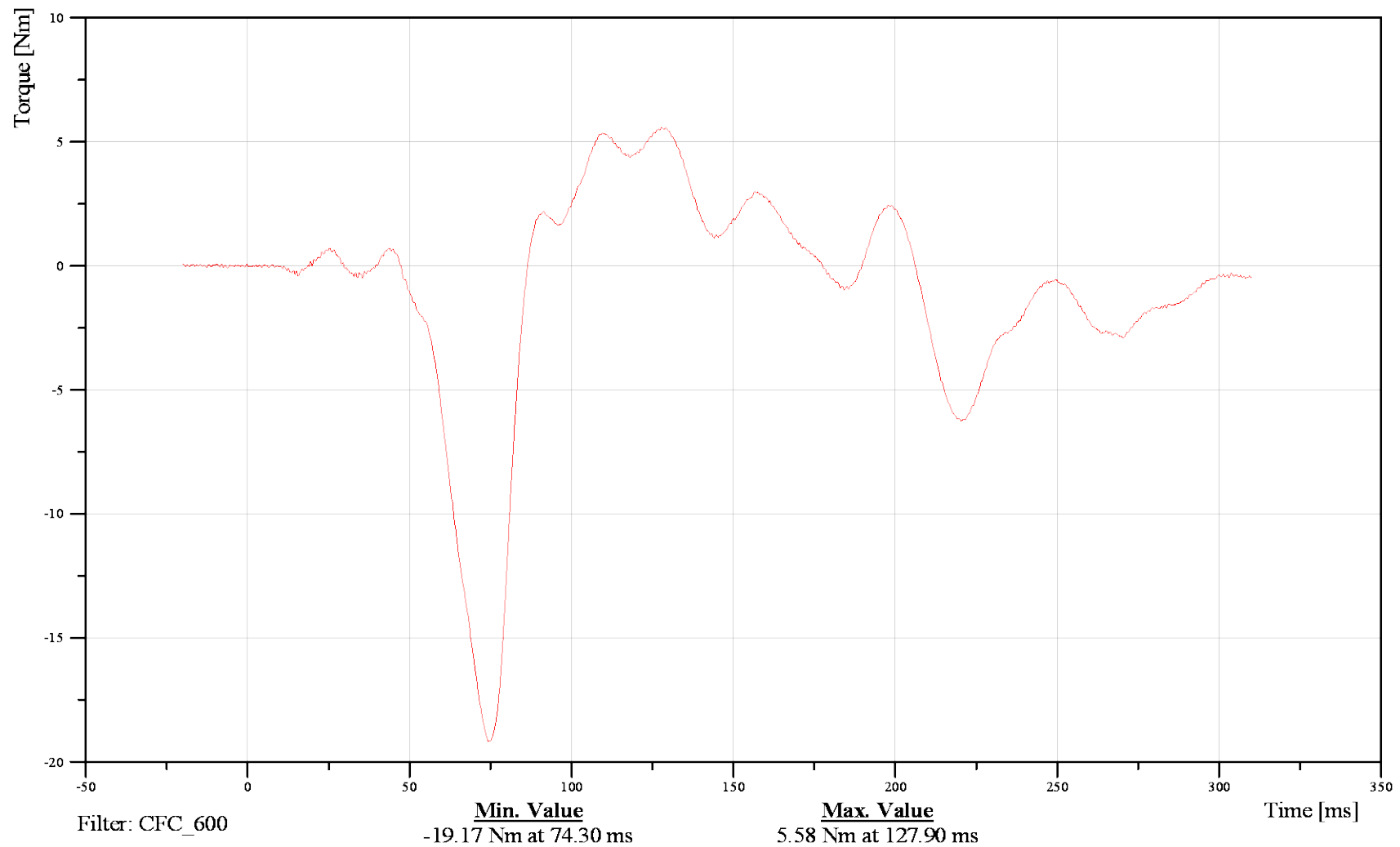
Time: 10:15

Customer: VRTC

14NECKUP00WFM0YB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Upper Moment Mz

Date: 03/13/2013

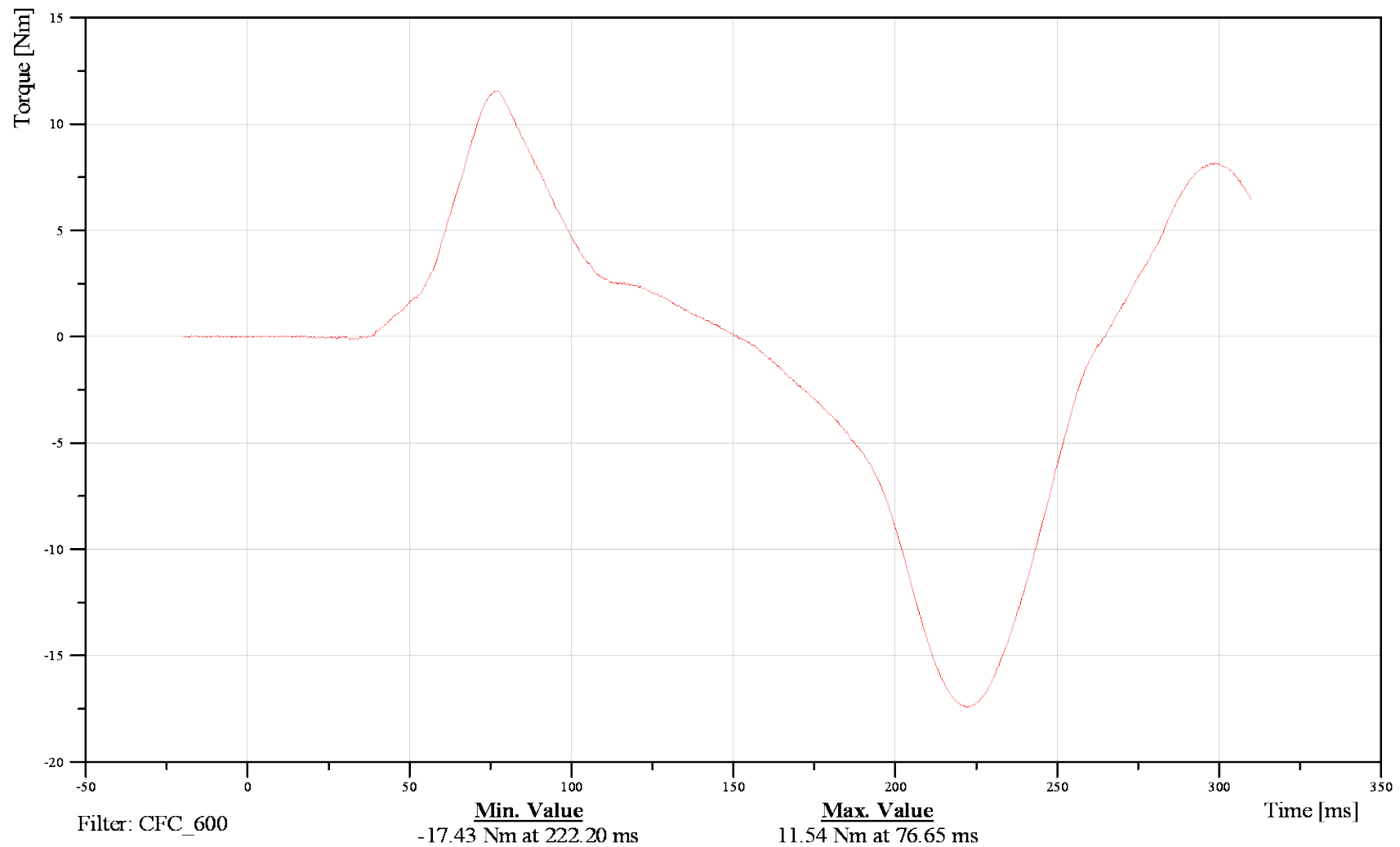
Time: 10:15

Customer: VRTC

14NECKUP00WFM0ZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Force Fx

Date: 03/13/2013

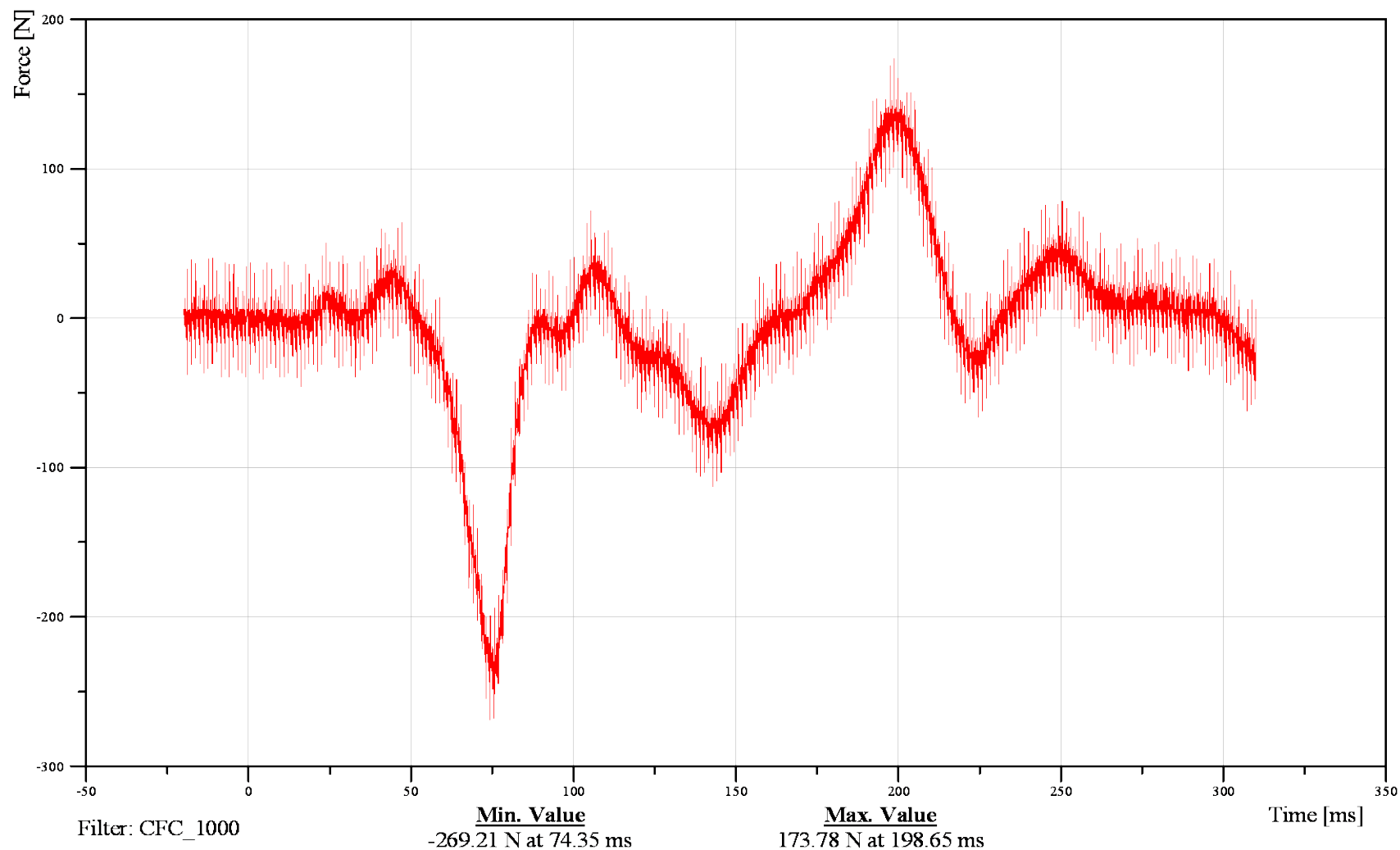
Time: 10:15

Customer: VRTC

14NECKLO00WFFOXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Force Fy

Date: 03/13/2013

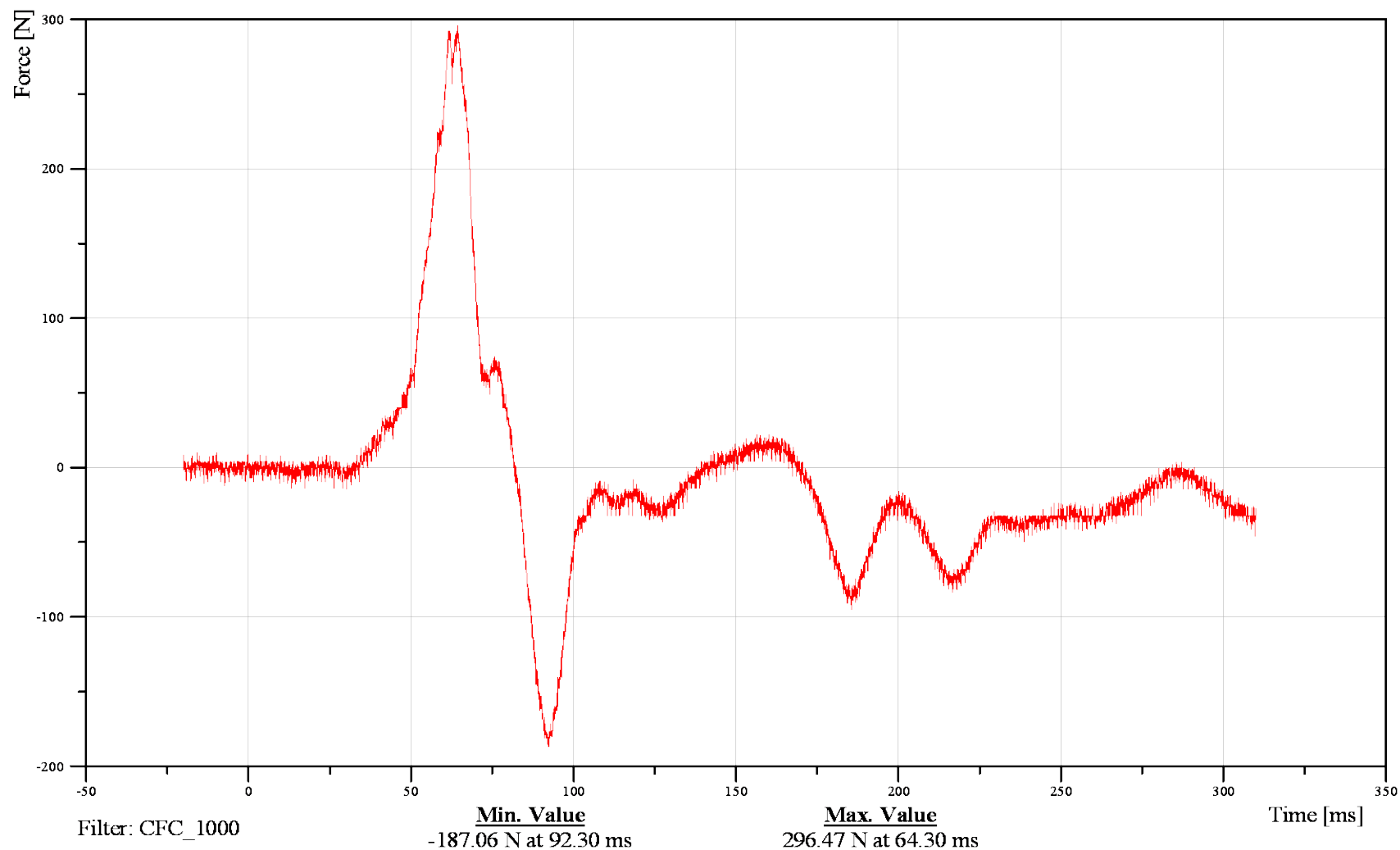
Time: 10:15

Customer: VRTC

14NECKLO00WFFOYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Force Fz

Date: 03/13/2013

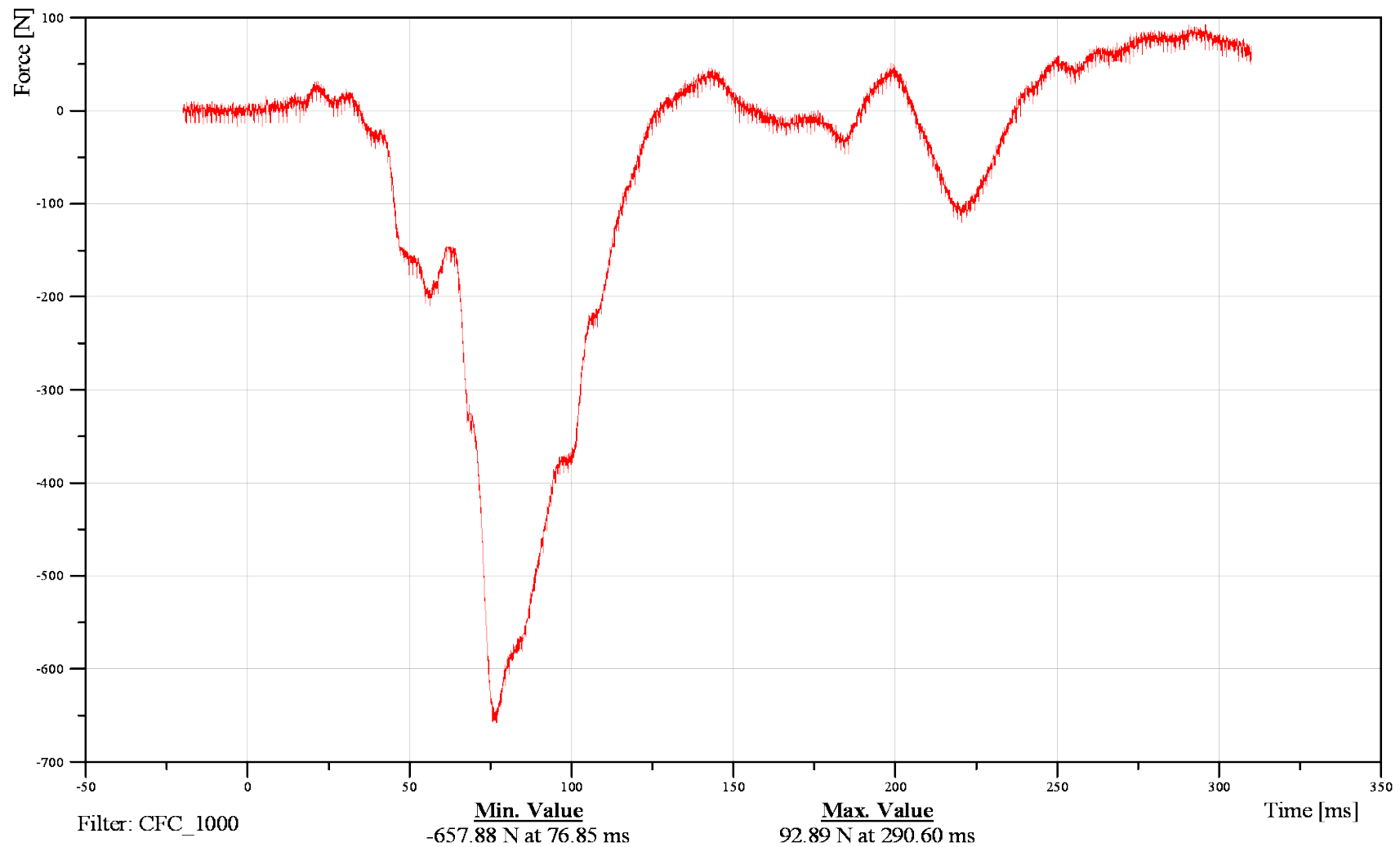
Time: 10:15

Customer: VRTC

14NECKLO00WFFOZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Moment Mx

Date: 03/13/2013

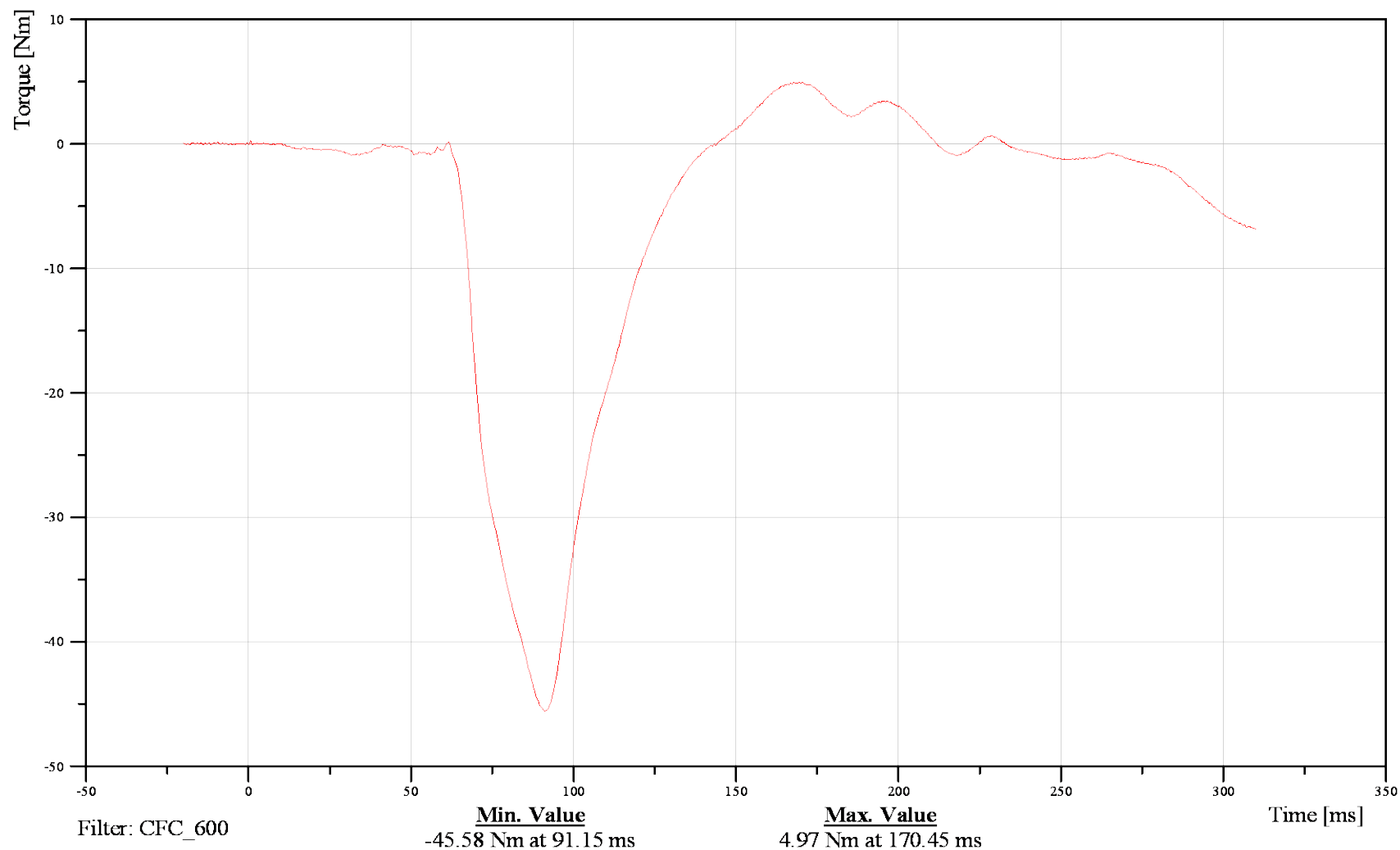
Time: 10:15

Customer: VRTC

14NECKLO00WFM0XB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Moment My

Date: 03/13/2013

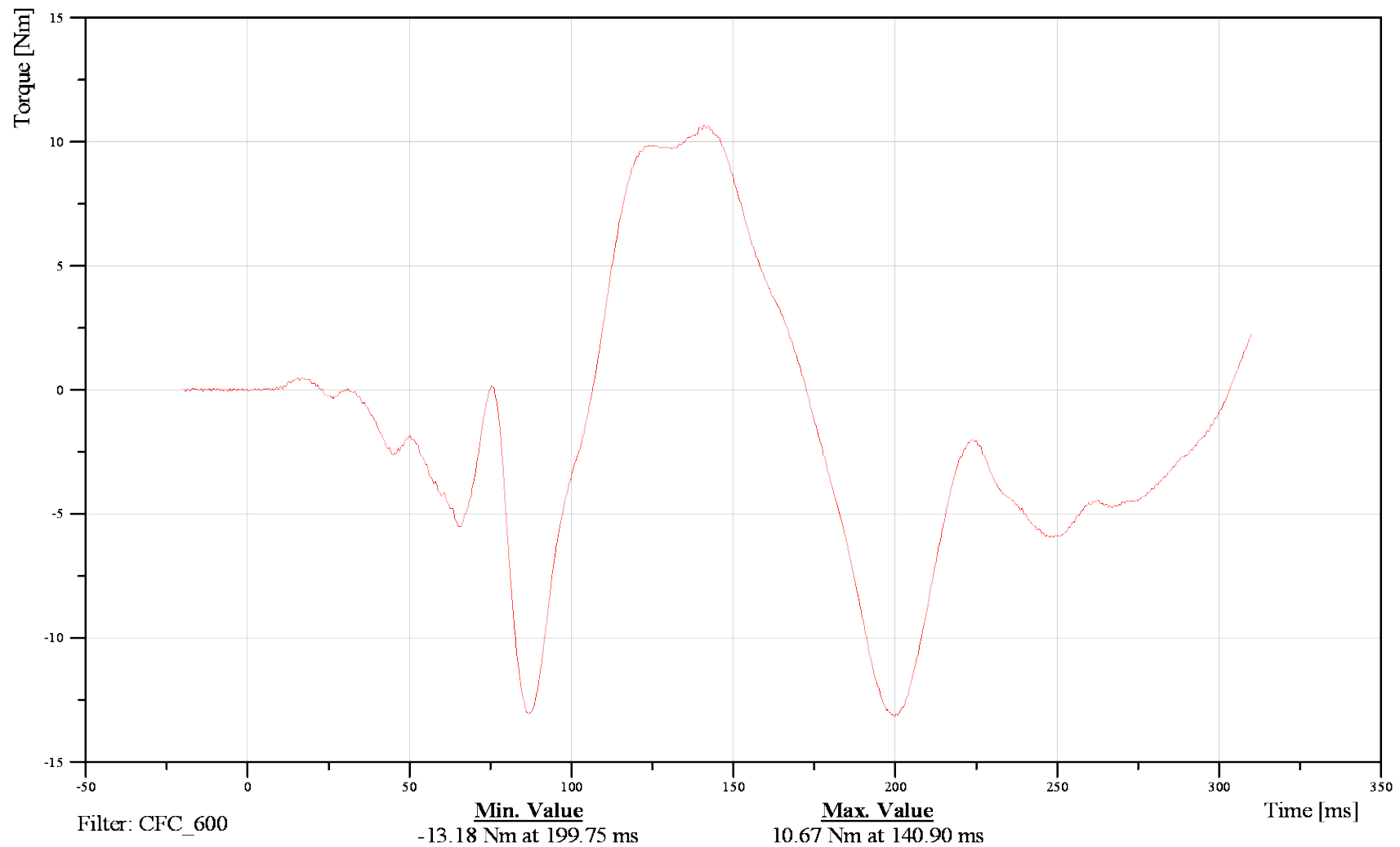
Time: 10:15

Customer: VRTC

14NECKLO00WFM0YB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Neck Lower Moment Mz

Date: 03/13/2013

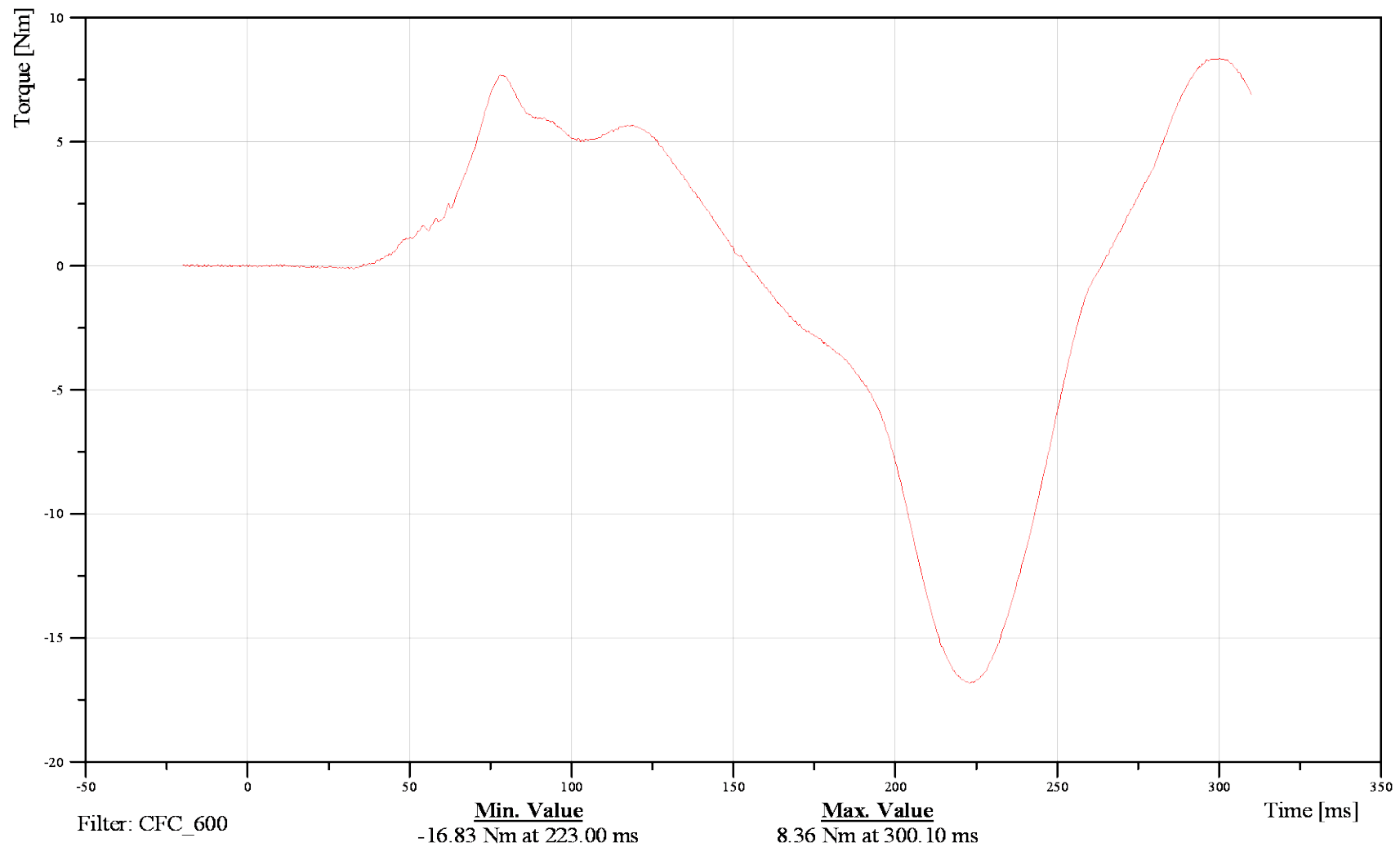
Time: 10:15

Customer: VRTC

14NECKLO00WFMOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Longitudinal Ax

Date: 03/13/2013

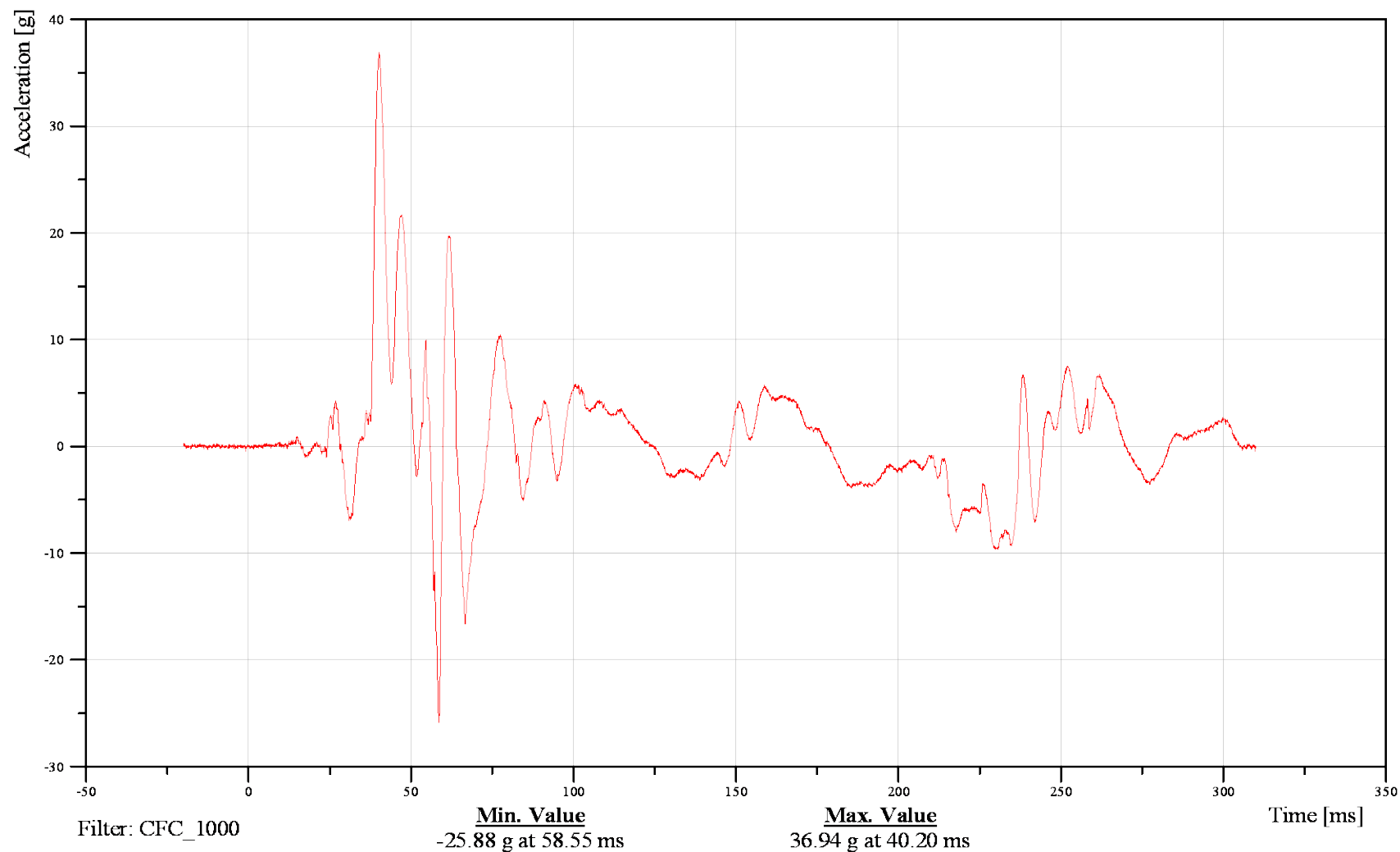
Time: 10:15

Customer: VRTC

14SHLDLE00WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Lateral Ay

Date: 03/13/2013

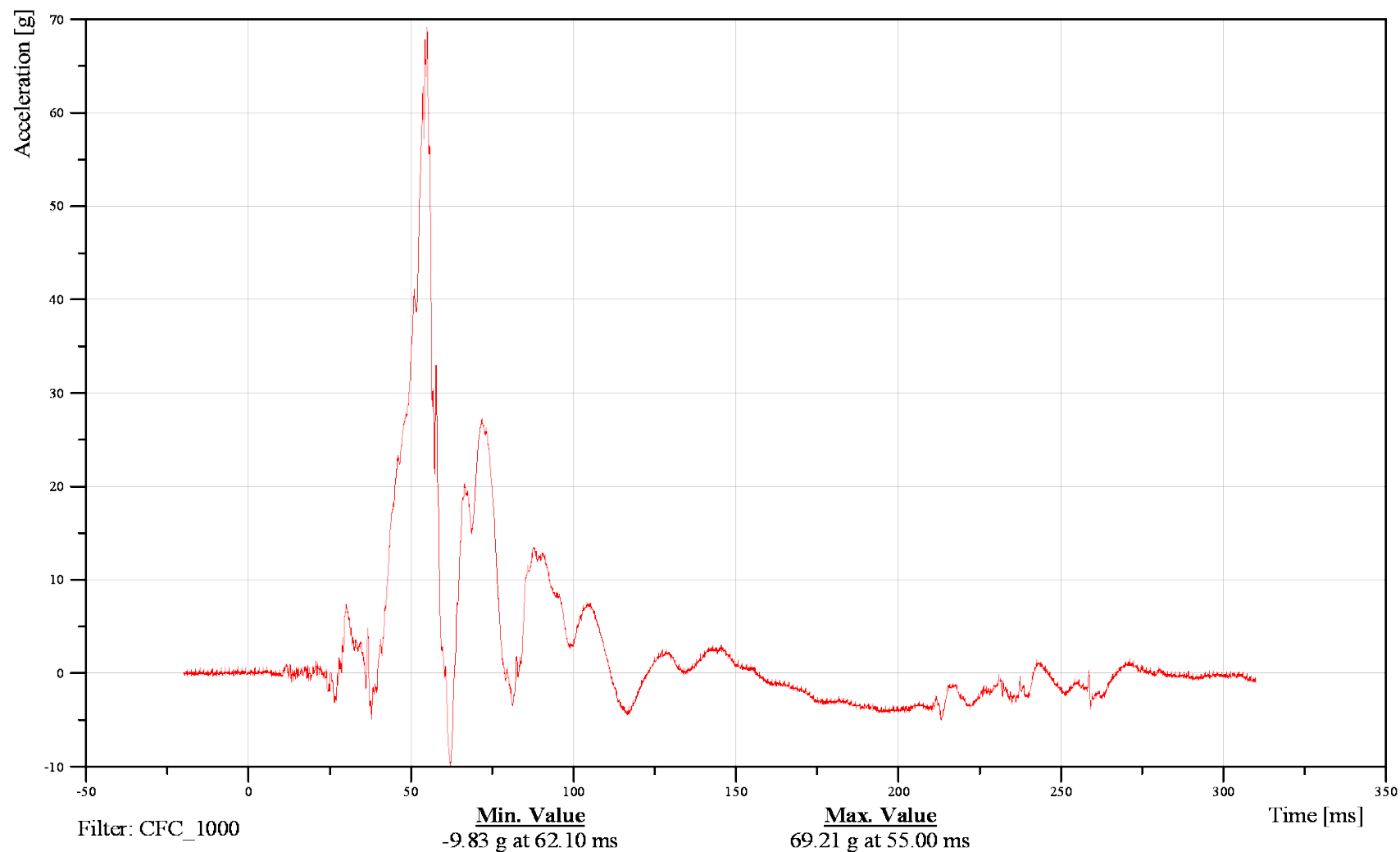
Time: 10:15

Customer: VRTC

14SHLDLE00WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Vertical Az

Date: 03/13/2013

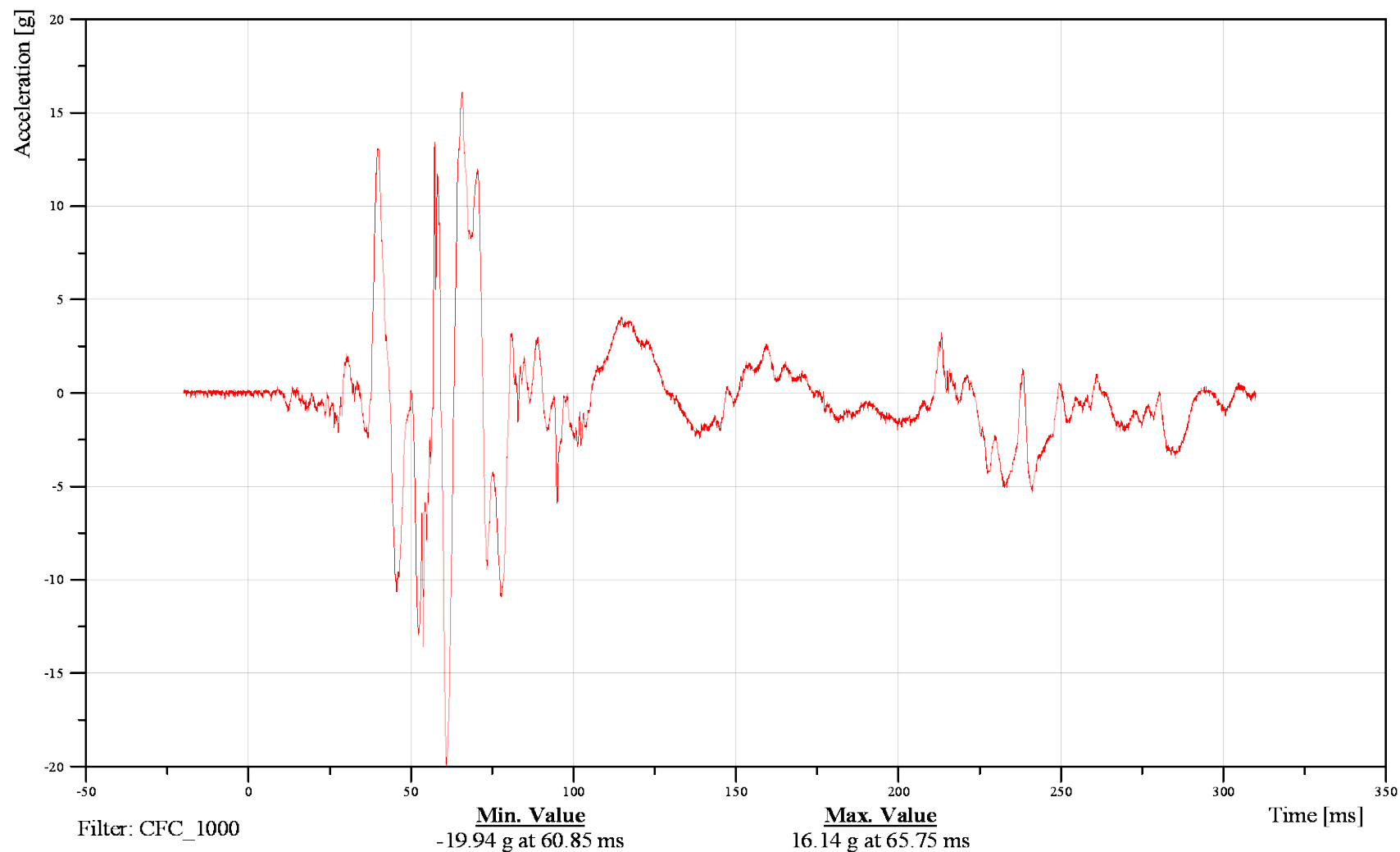
Time: 10:15

Customer: VRTC

14SHLDLE00WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder A Resultant

Date: 03/13/2013

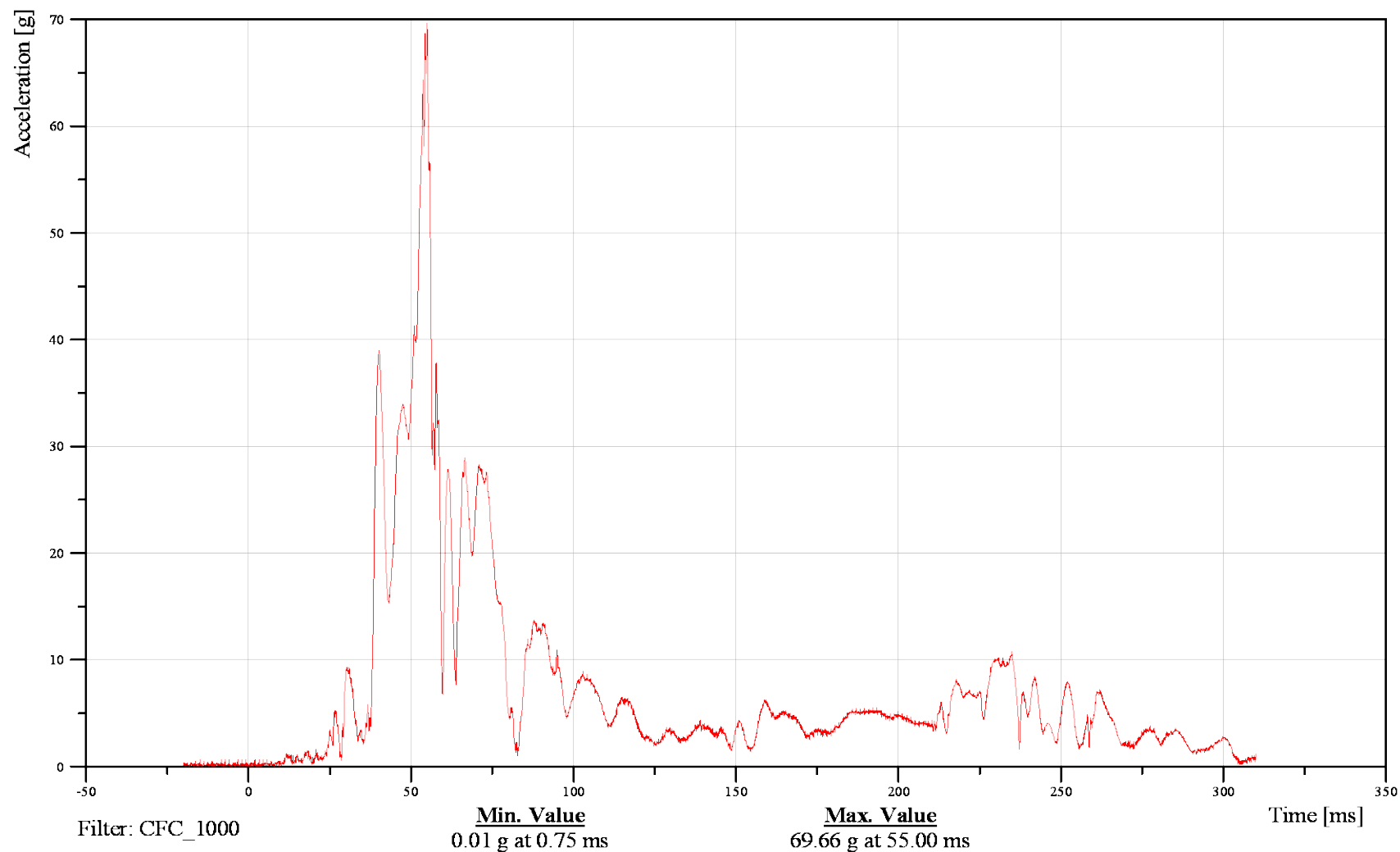
Time: 10:15

Customer: VRTC

14SHLDLE00WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Force Fx

Date: 03/13/2013

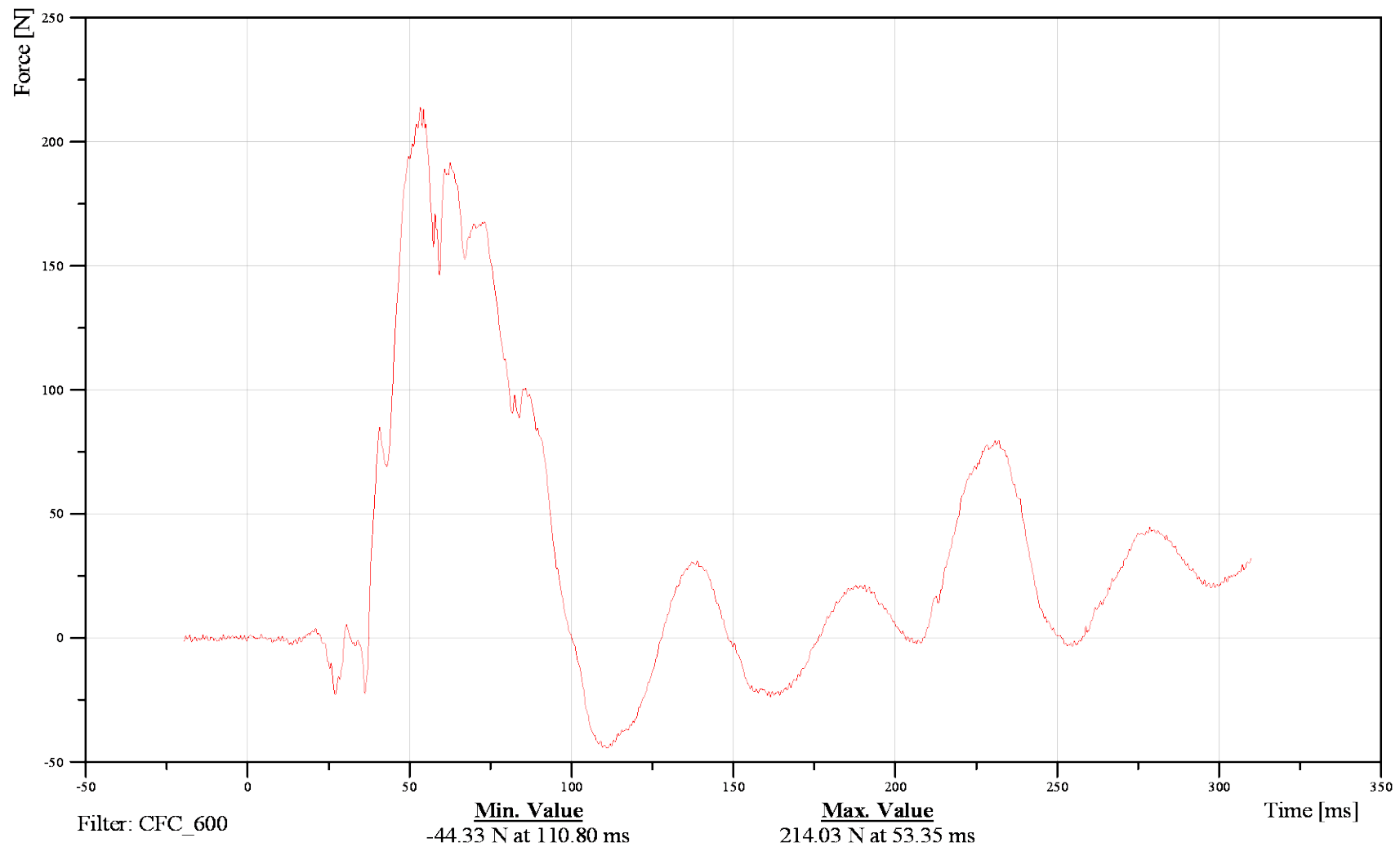
Time: 10:15

Customer: VRTC

14SHLDLE00WFFOXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Force Fy

Date: 03/13/2013

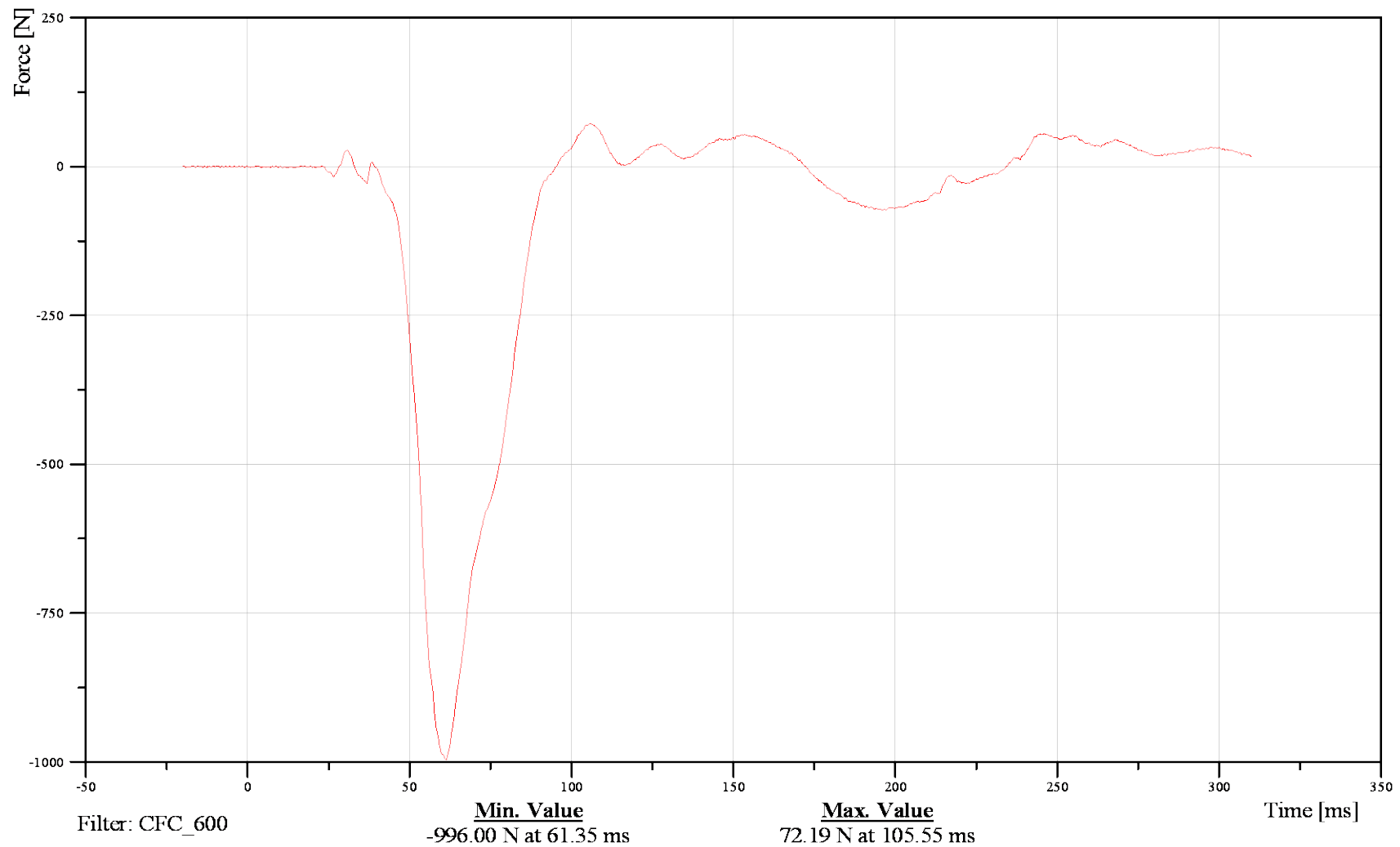
Time: 10:15

Customer: VRTC

14SHLDLE00WFFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Force Fz

Date: 03/13/2013

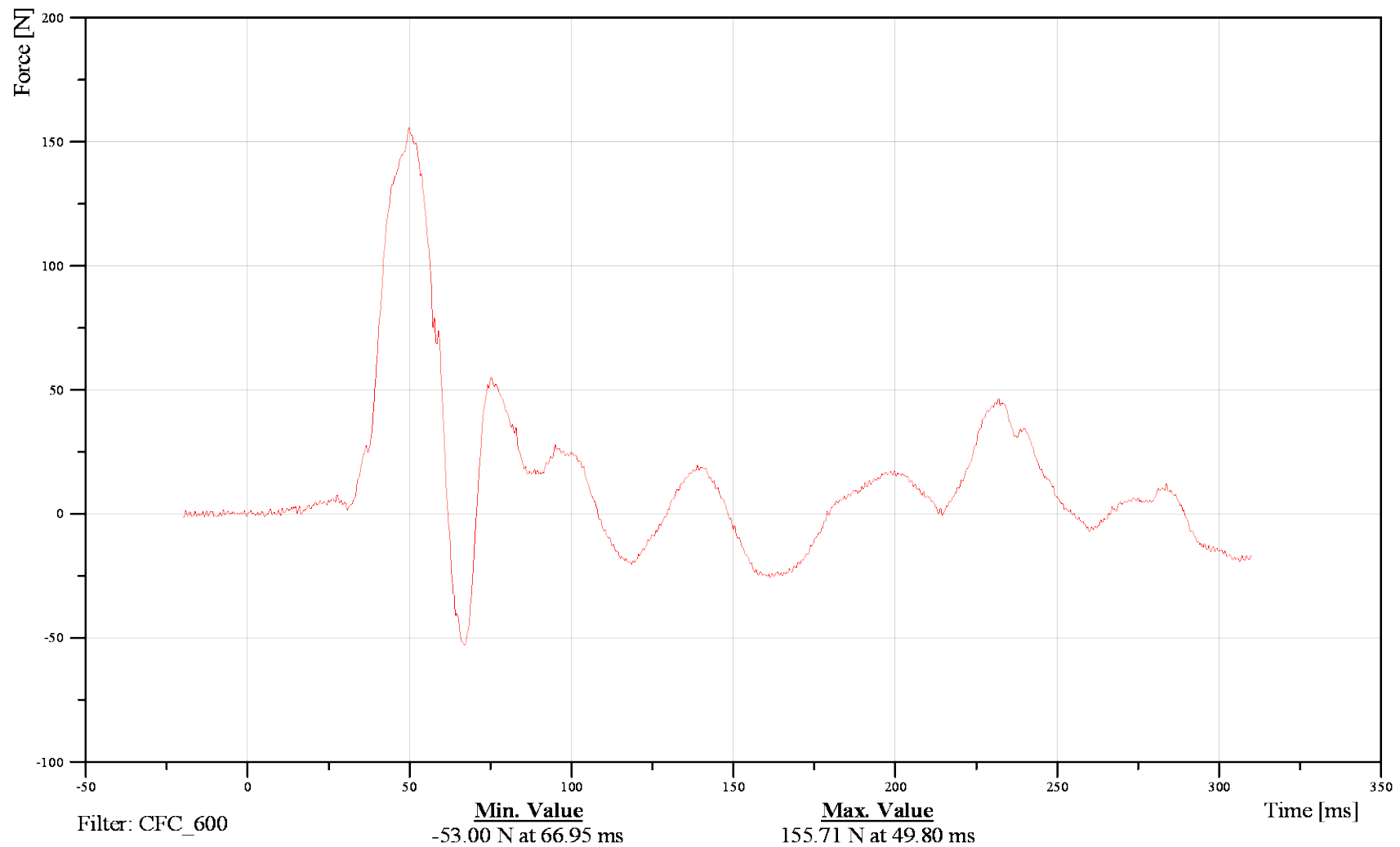
Time: 10:15

Customer: VRTC

14SHLDLE00WFFOZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Displacement Dy

Date: 03/13/2013

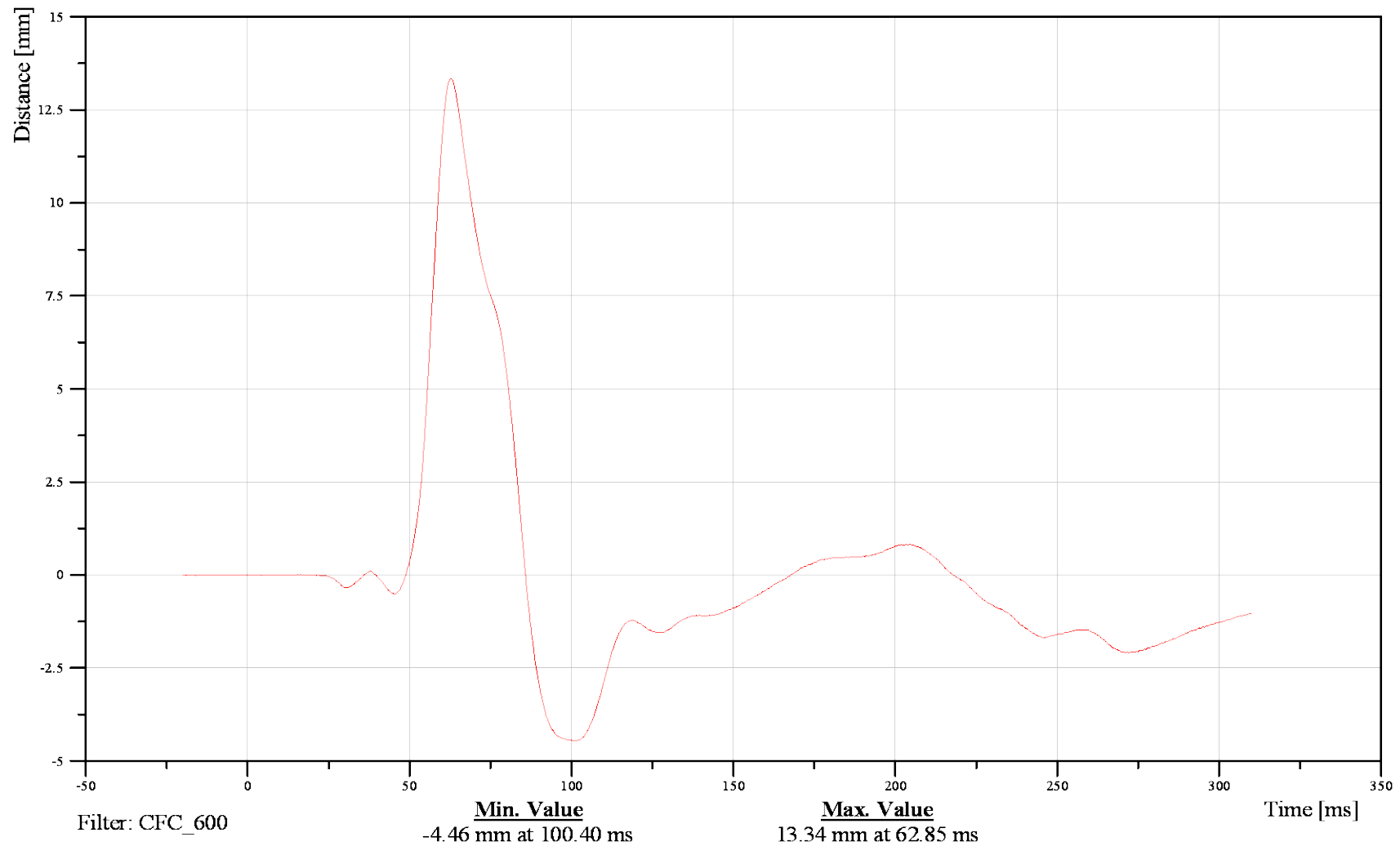
Time: 10:15

Customer: VRTC

14SHLDLE00WFDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 Longitudinal Ax

Date: 03/13/2013

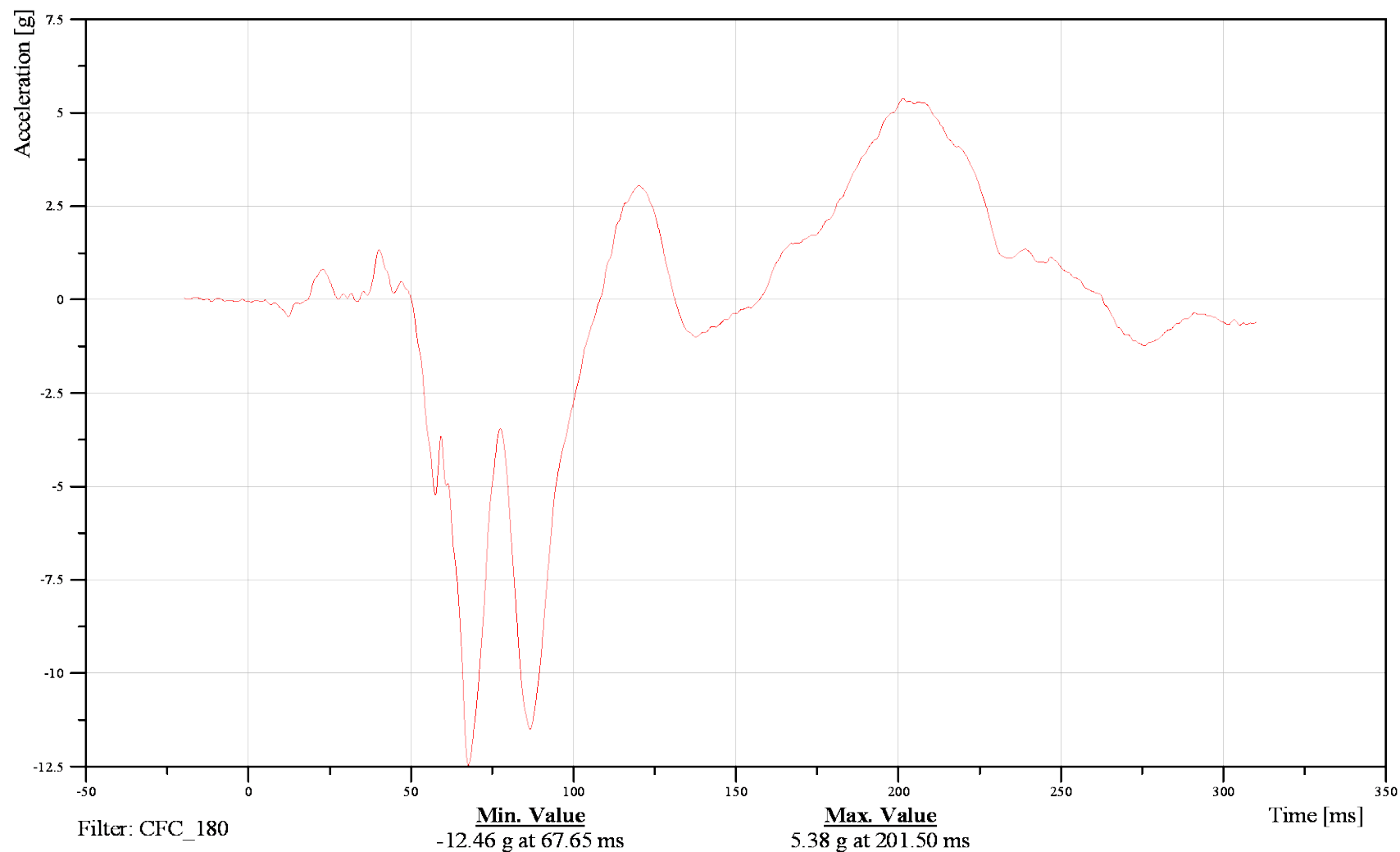
Time: 10:15

Customer: VRTC

14THSP0100WFACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 Lateral Ay

Date: 03/13/2013

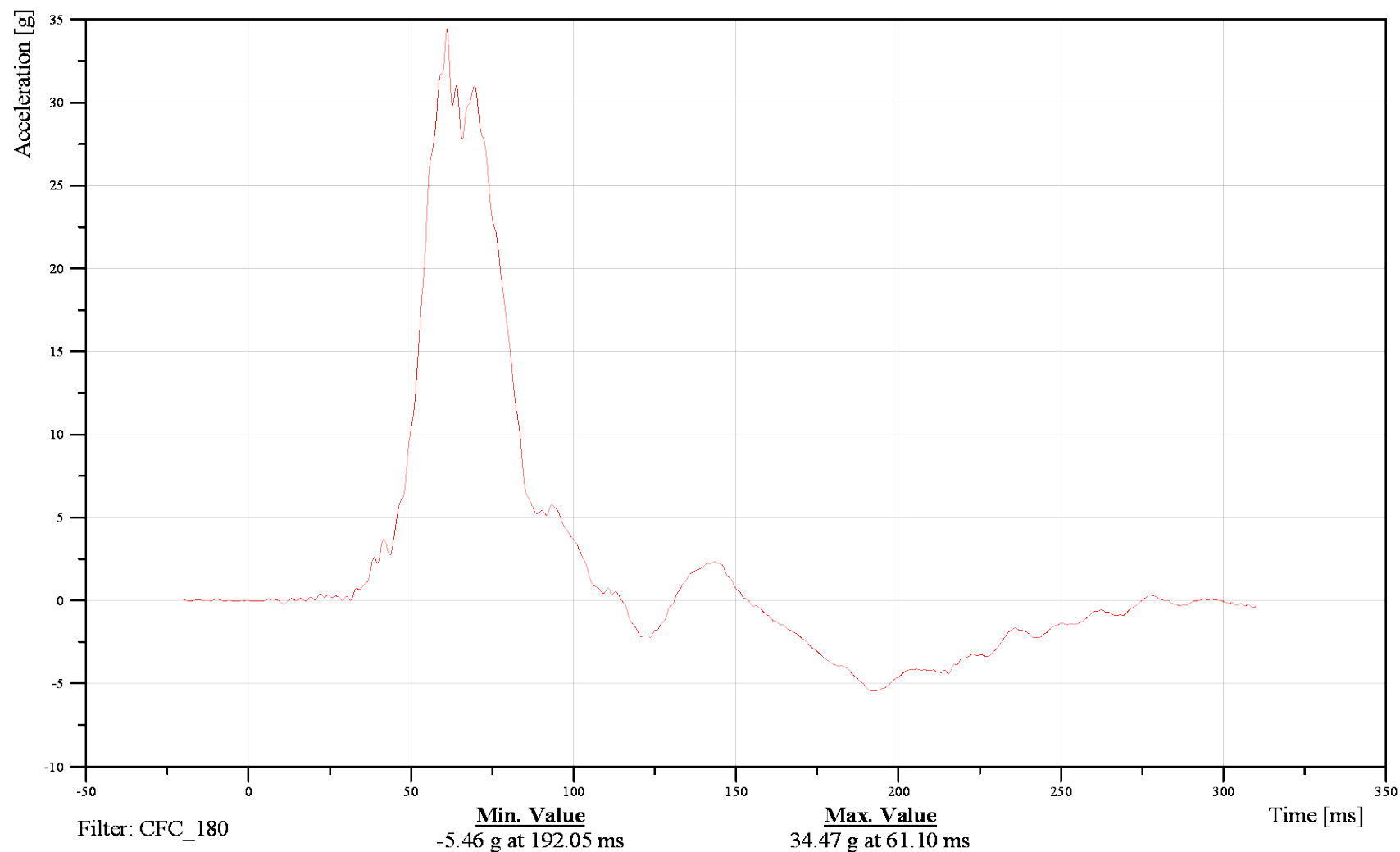
Time: 10:15

Customer: VRTC

14THSP0100WFACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 Vertical Az

Date: 03/13/2013

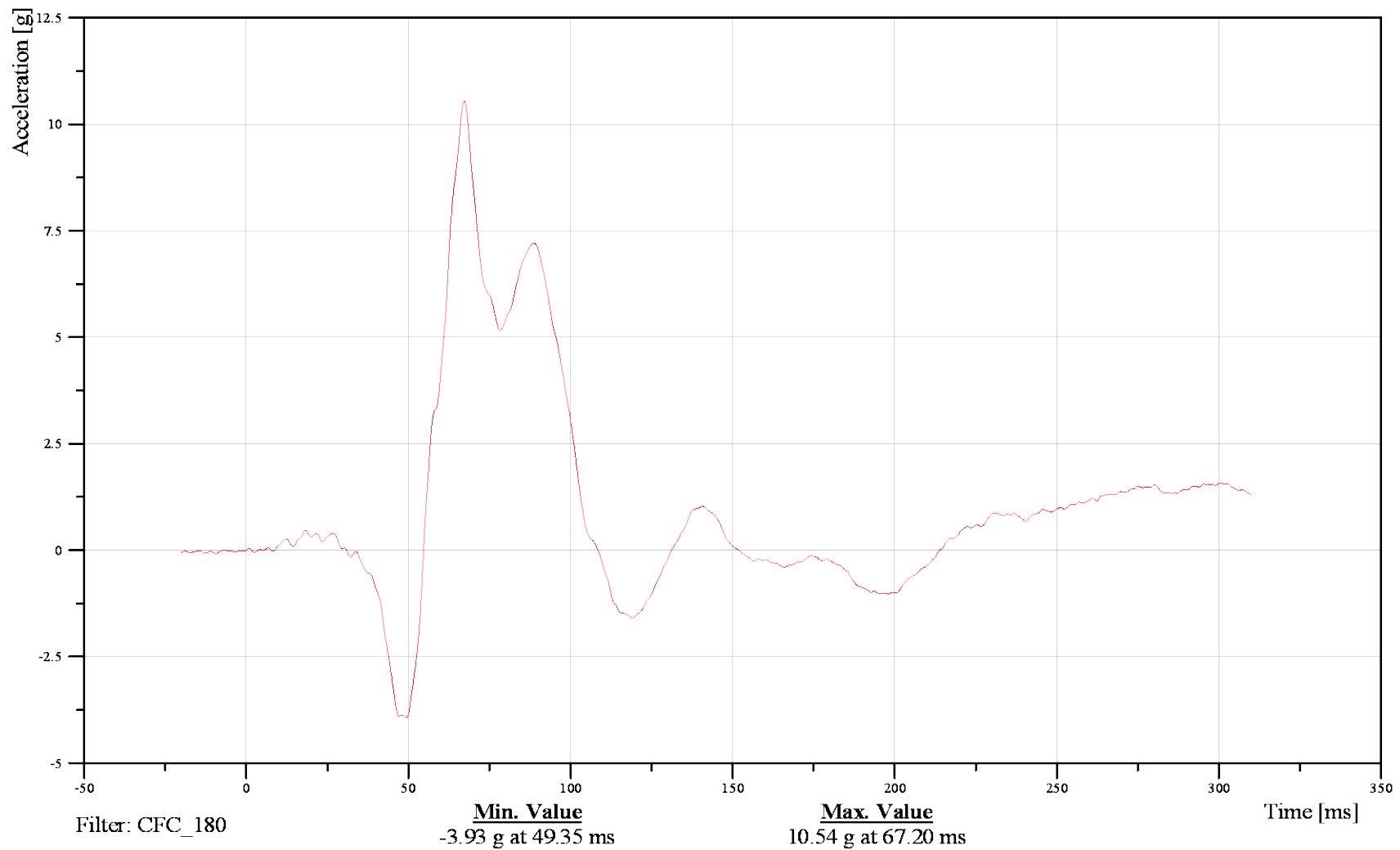
Time: 10:15

Customer: VRTC

14THSP0100WFACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T1 A Resultant

Date: 03/13/2013

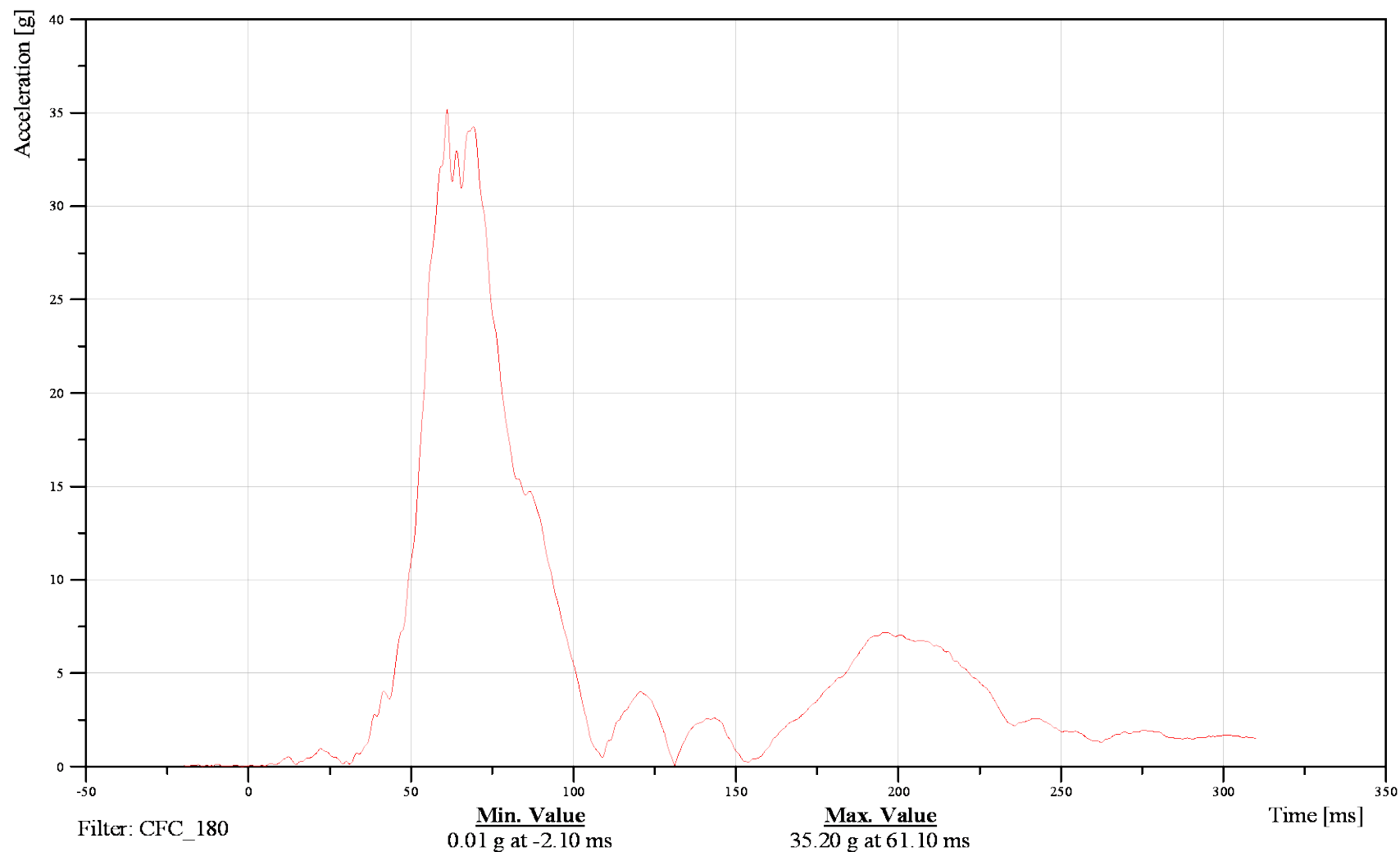
Time: 10:15

Customer: VRTC

14THSP0100WFACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Longitudinal Ax

Date: 03/13/2013

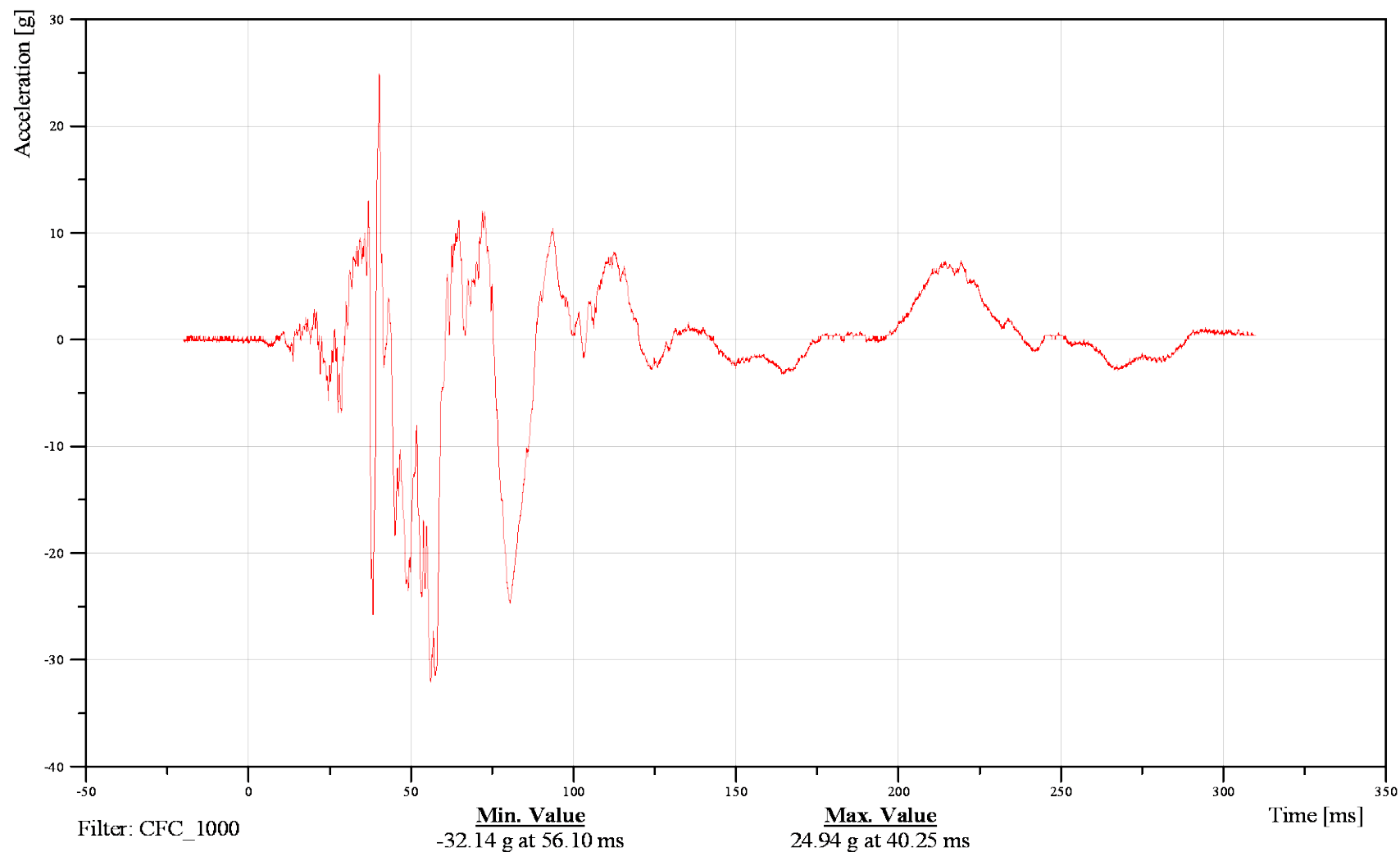
Time: 10:15

Customer: VRTC

14TRRILE01WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Lateral Ay

Date: 03/13/2013

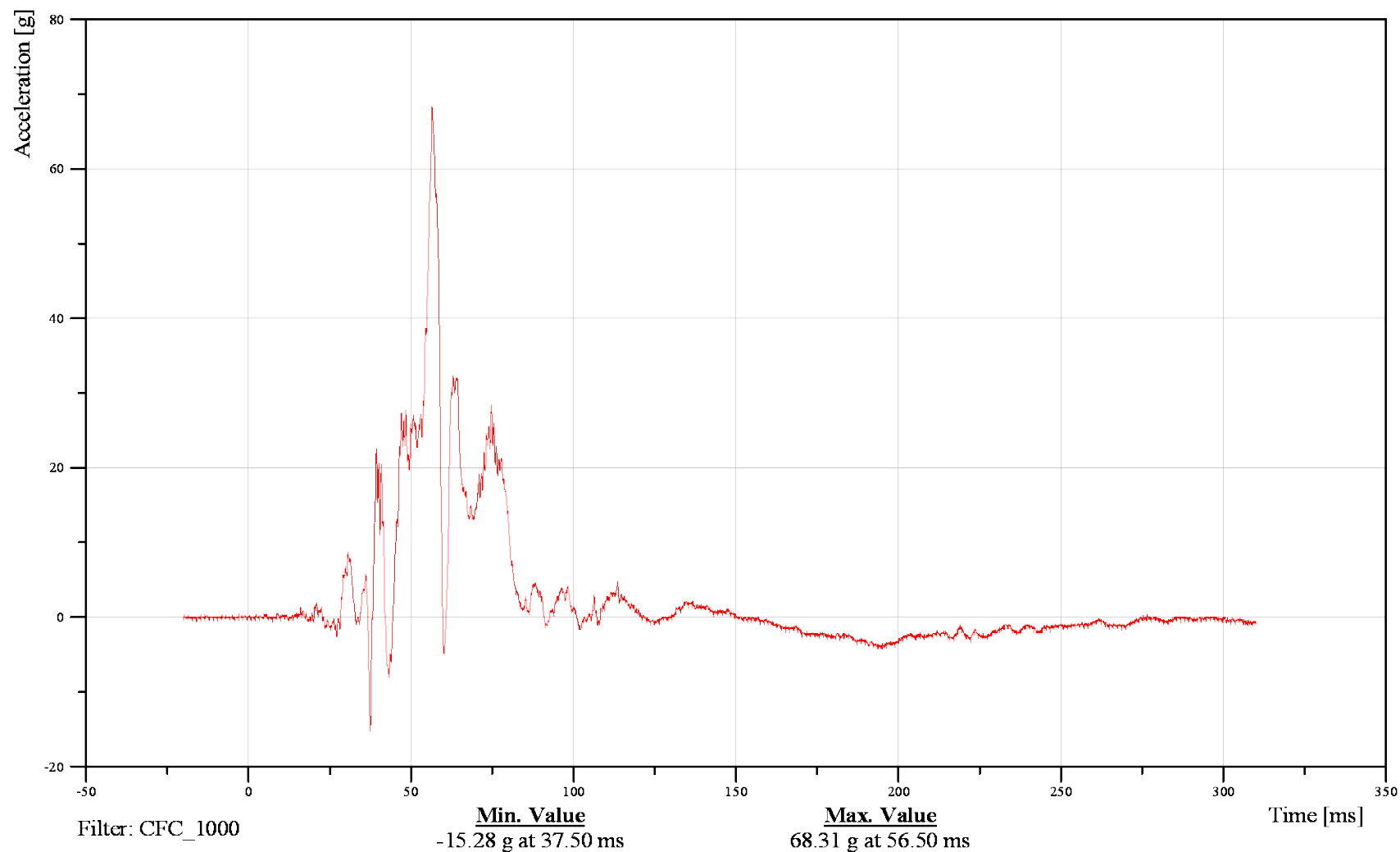
Time: 10:15

Customer: VRTC

14TRRILE01WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Vertical Az

Date: 03/13/2013

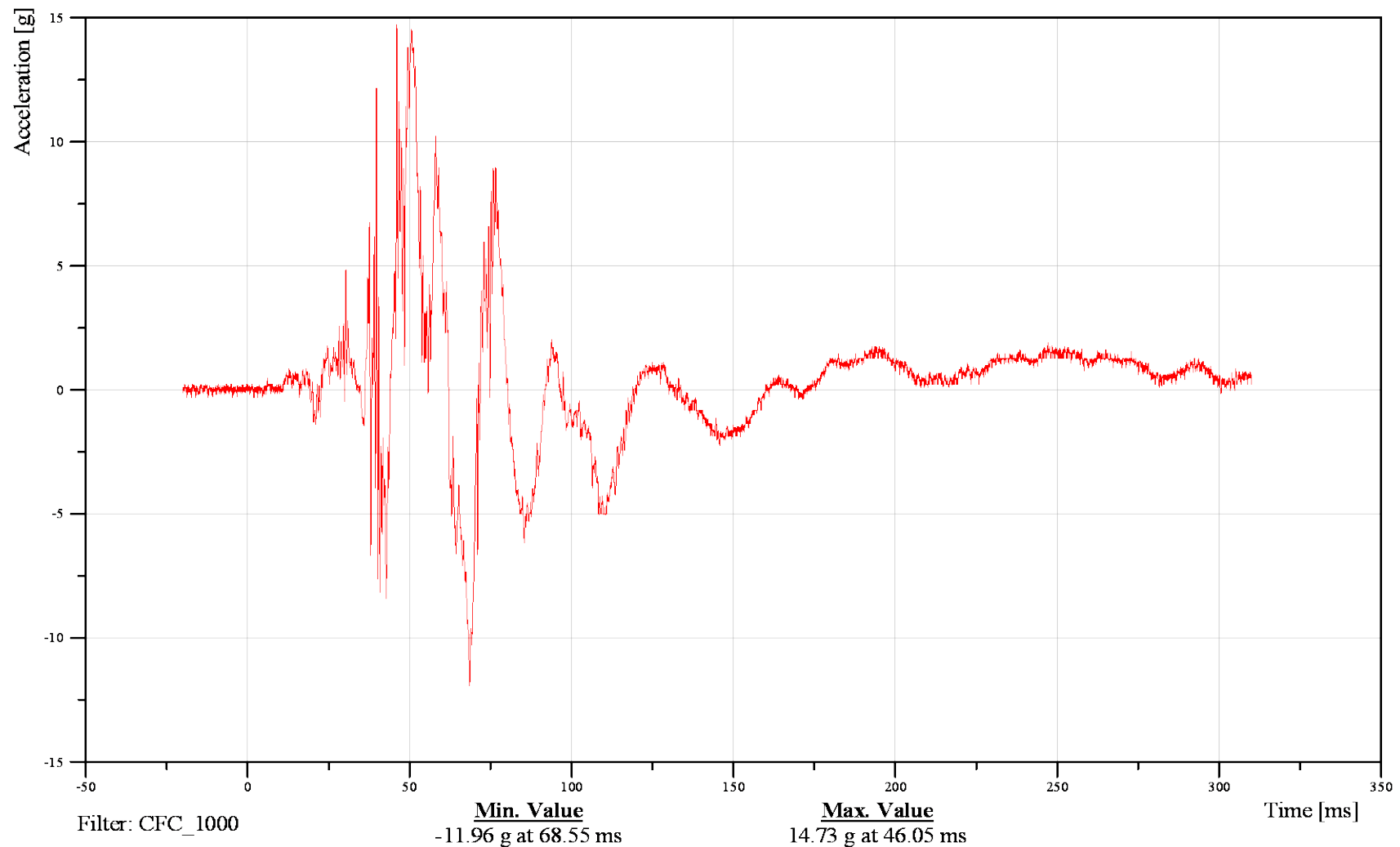
Time: 10:15

Customer: VRTC

14TRRILE01WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 A Resultant

Date: 03/13/2013

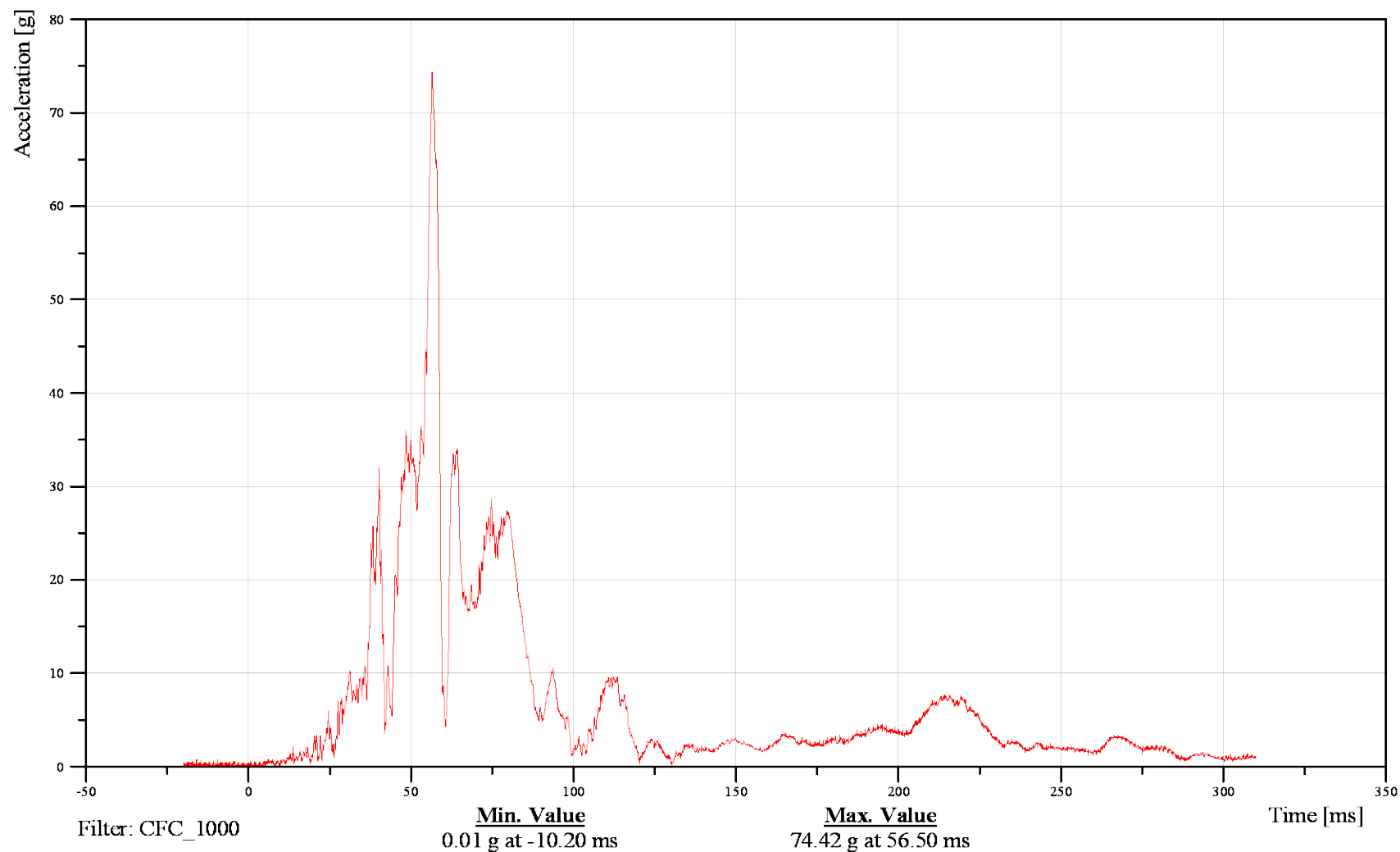
Time: 10:15

Customer: VRTC

14TRRILE01WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 IRTRAC compression

Date: 03/13/2013

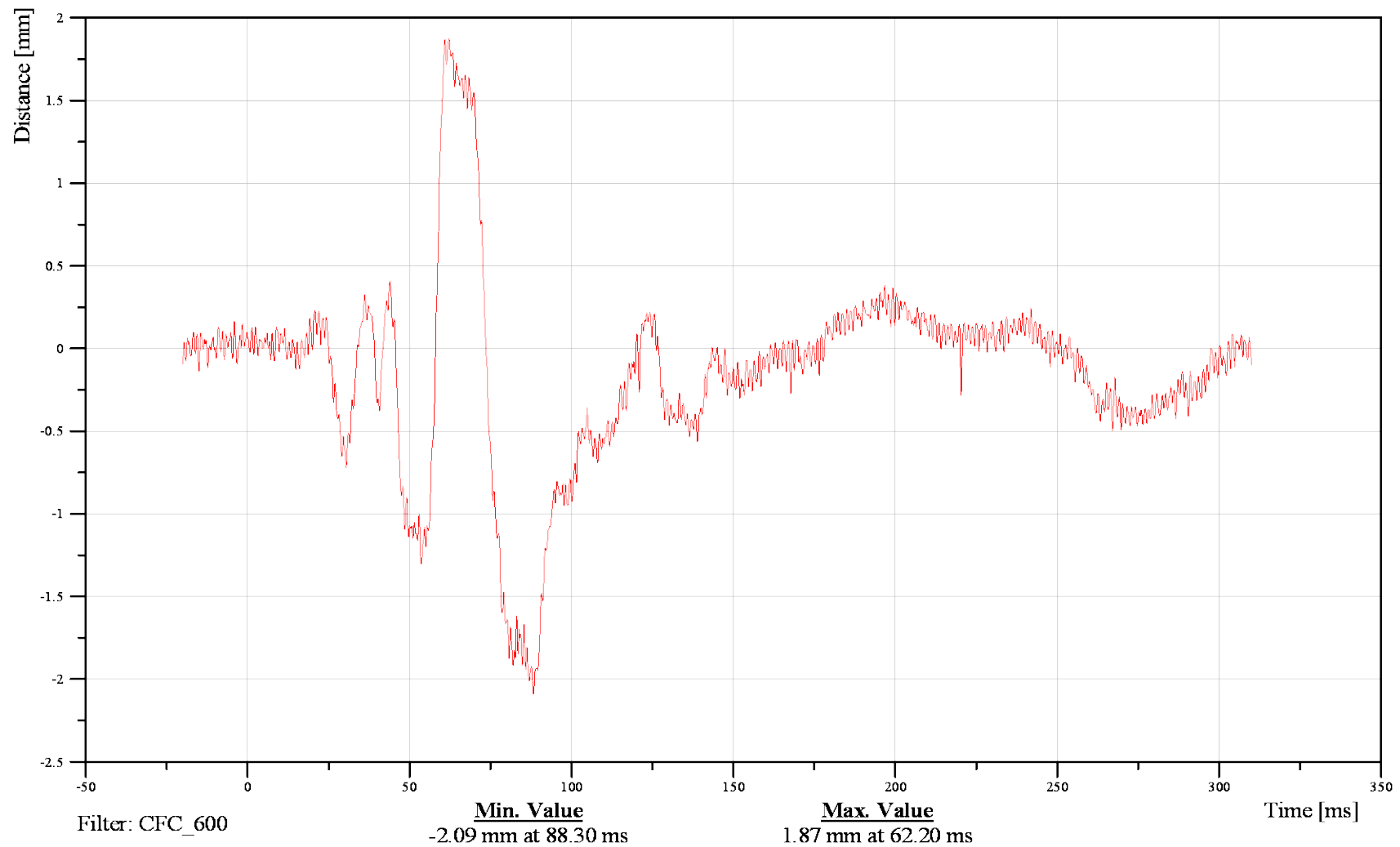
Time: 10:15

Customer: VRTC

14TRRILE01WFD00B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 Rotational angle

Date: 03/13/2013

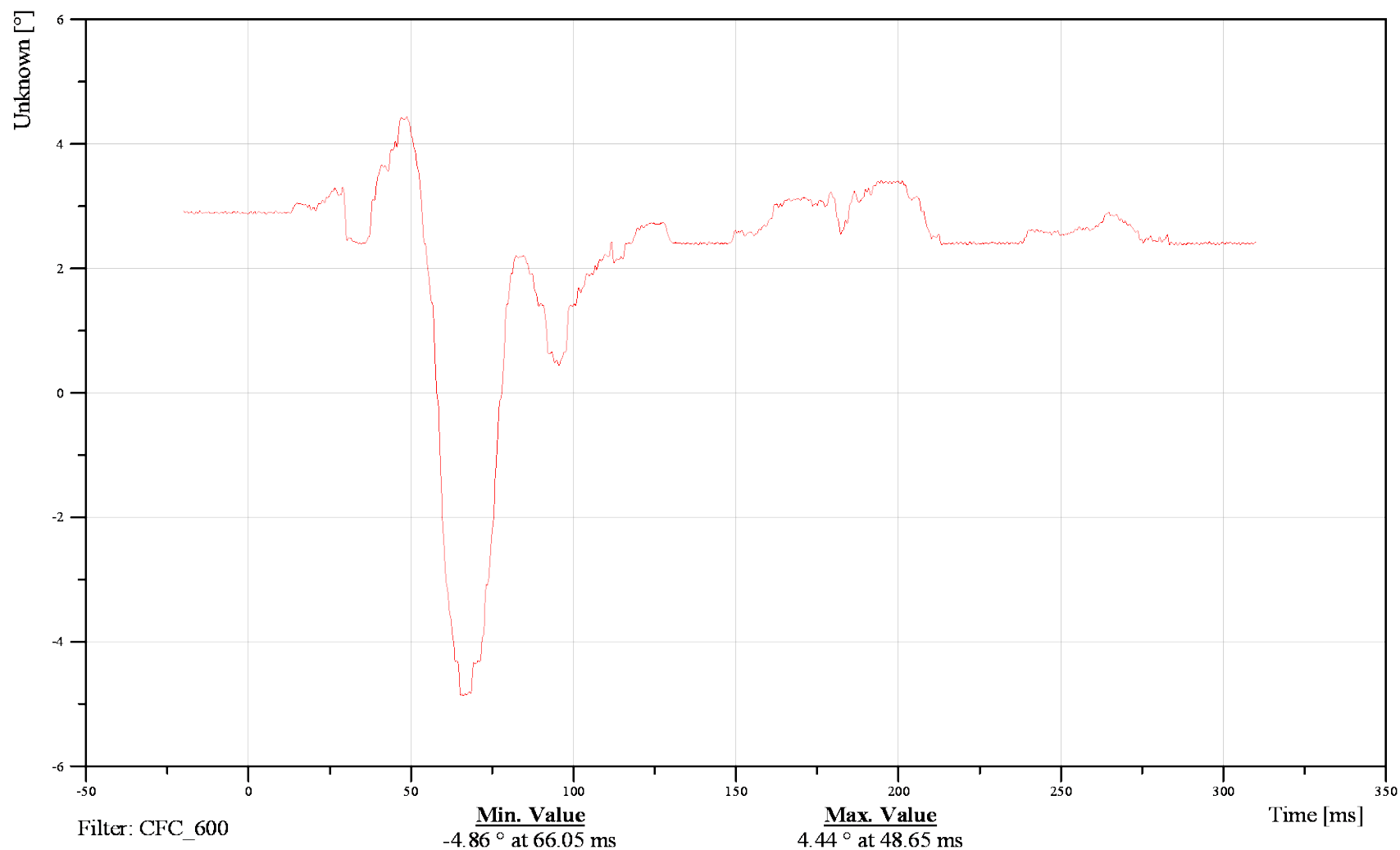
Time: 10:15

Customer: VRTC

14TRRILE01WFANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 IRTRAC X Deflection

Date: 03/13/2013

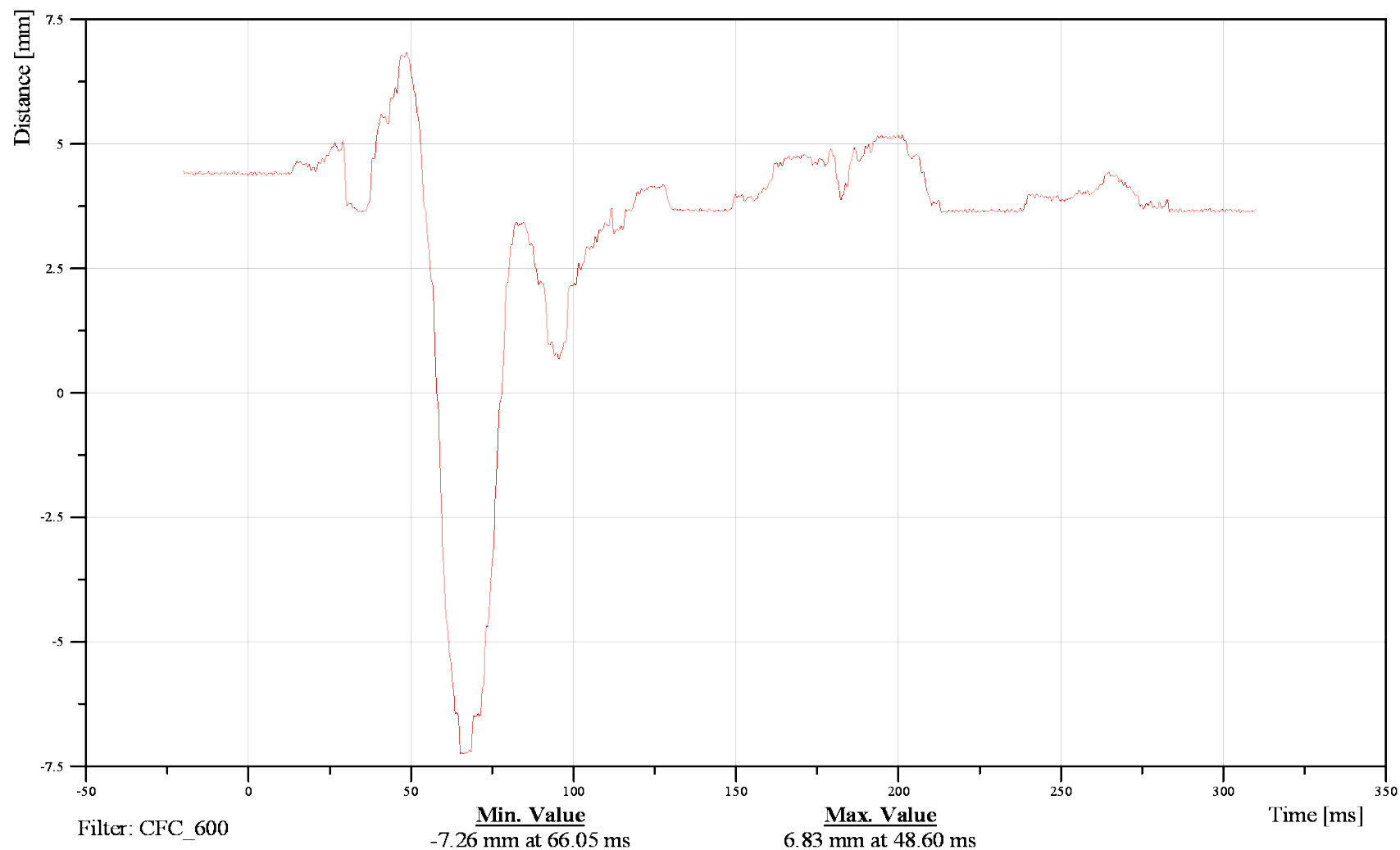
Time: 10:15

Customer: VRTC

14TRRILE01WFDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 1 IRTRAC Y Deflection

Date: 03/13/2013

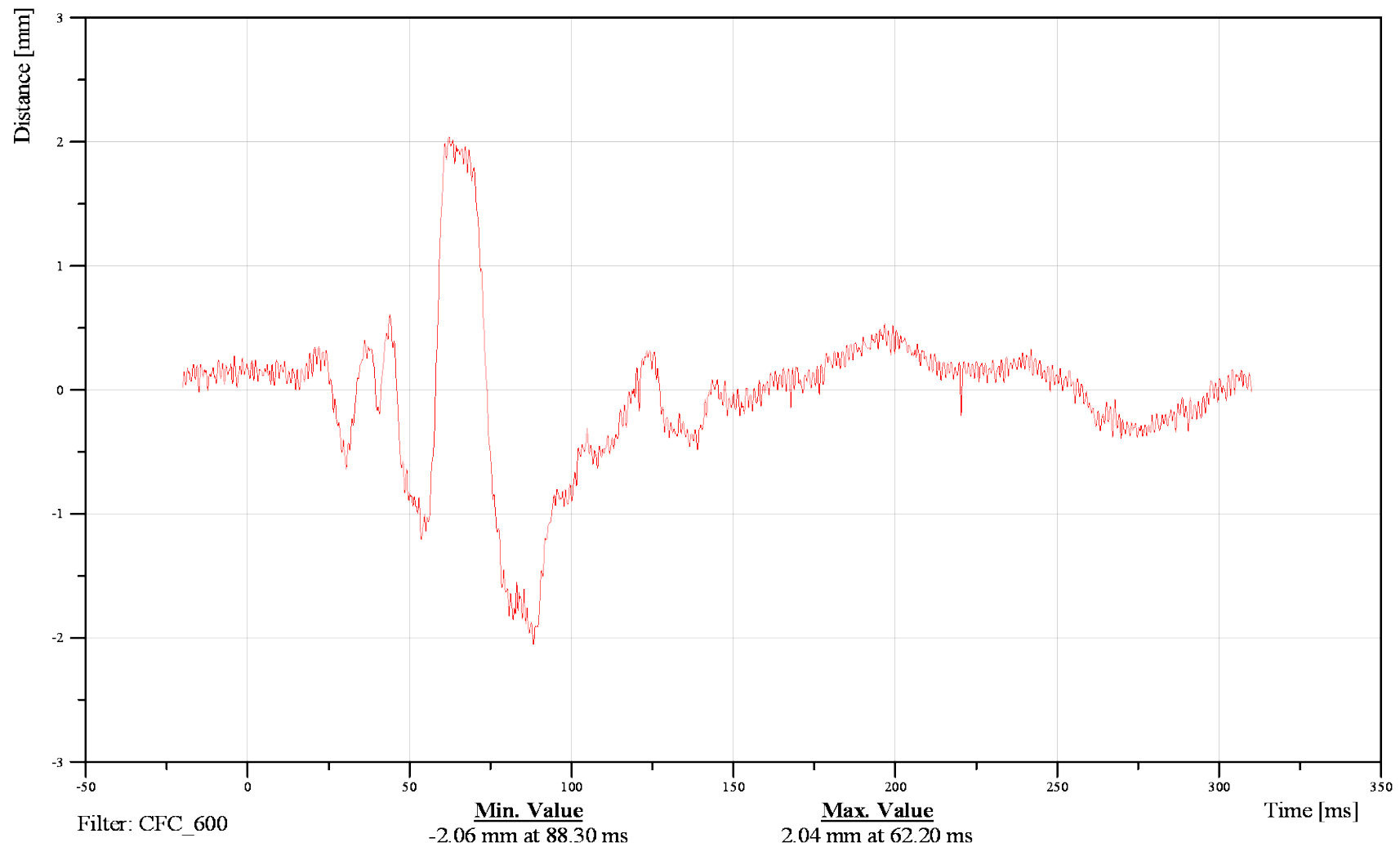
Time: 10:15

Customer: VRTC

14TRRILE01WFDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Longitudinal Ax

Date: 03/13/2013

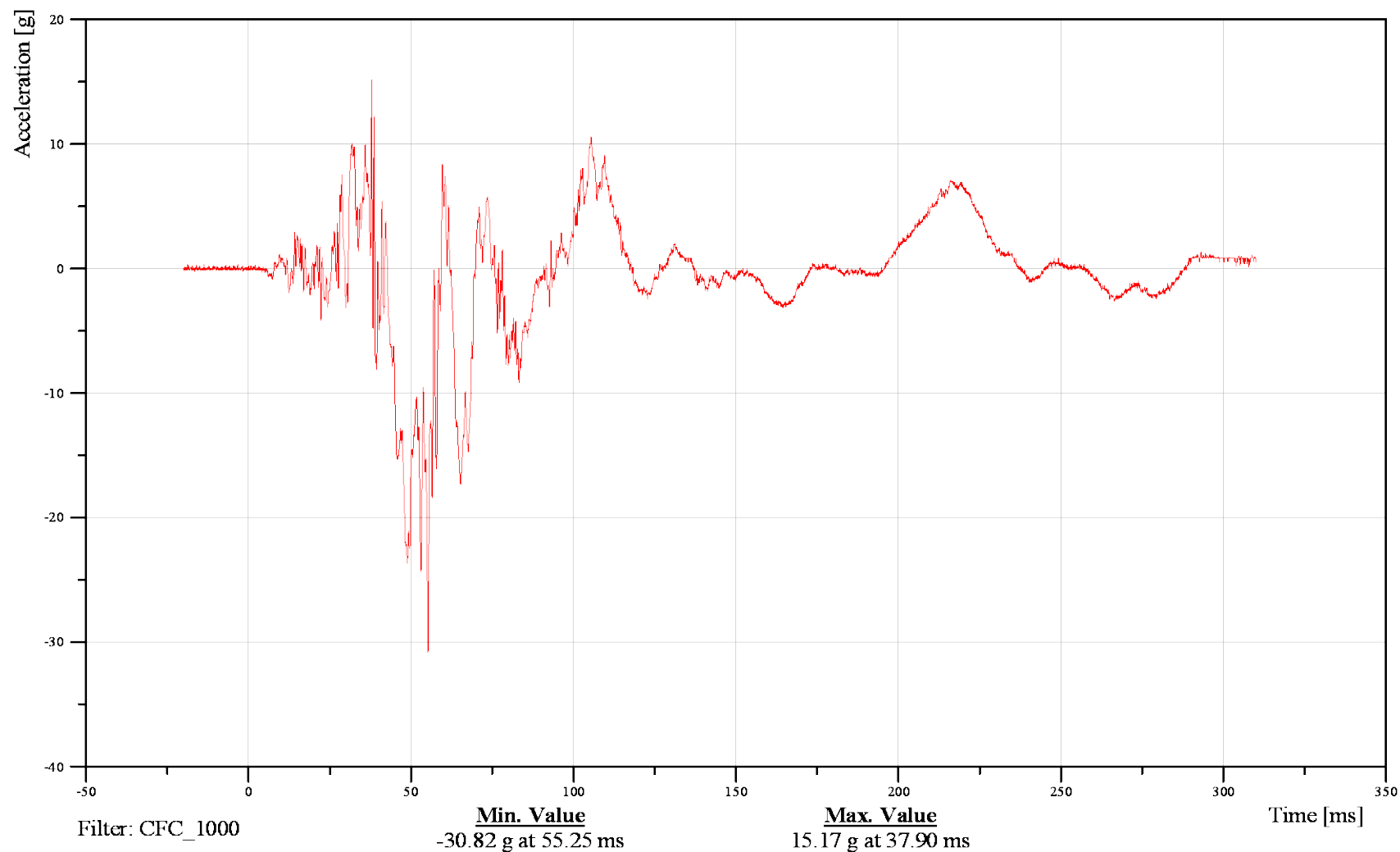
Time: 10:15

Customer: VRTC

14TRRILE02WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Lateral Ay

Date: 03/13/2013

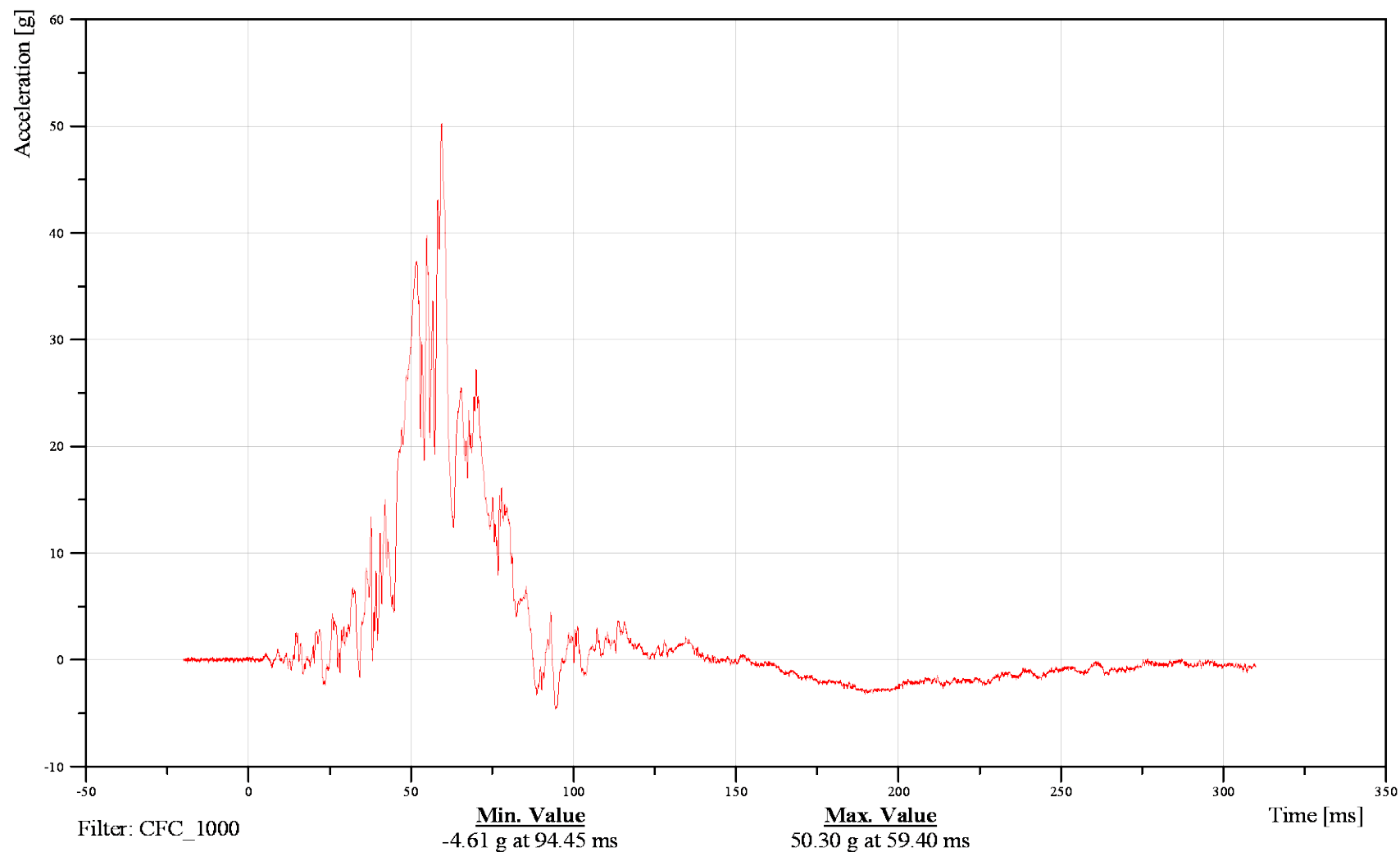
Time: 10:15

Customer: VRTC

14TRRILE02WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Vertical Az

Date: 03/13/2013

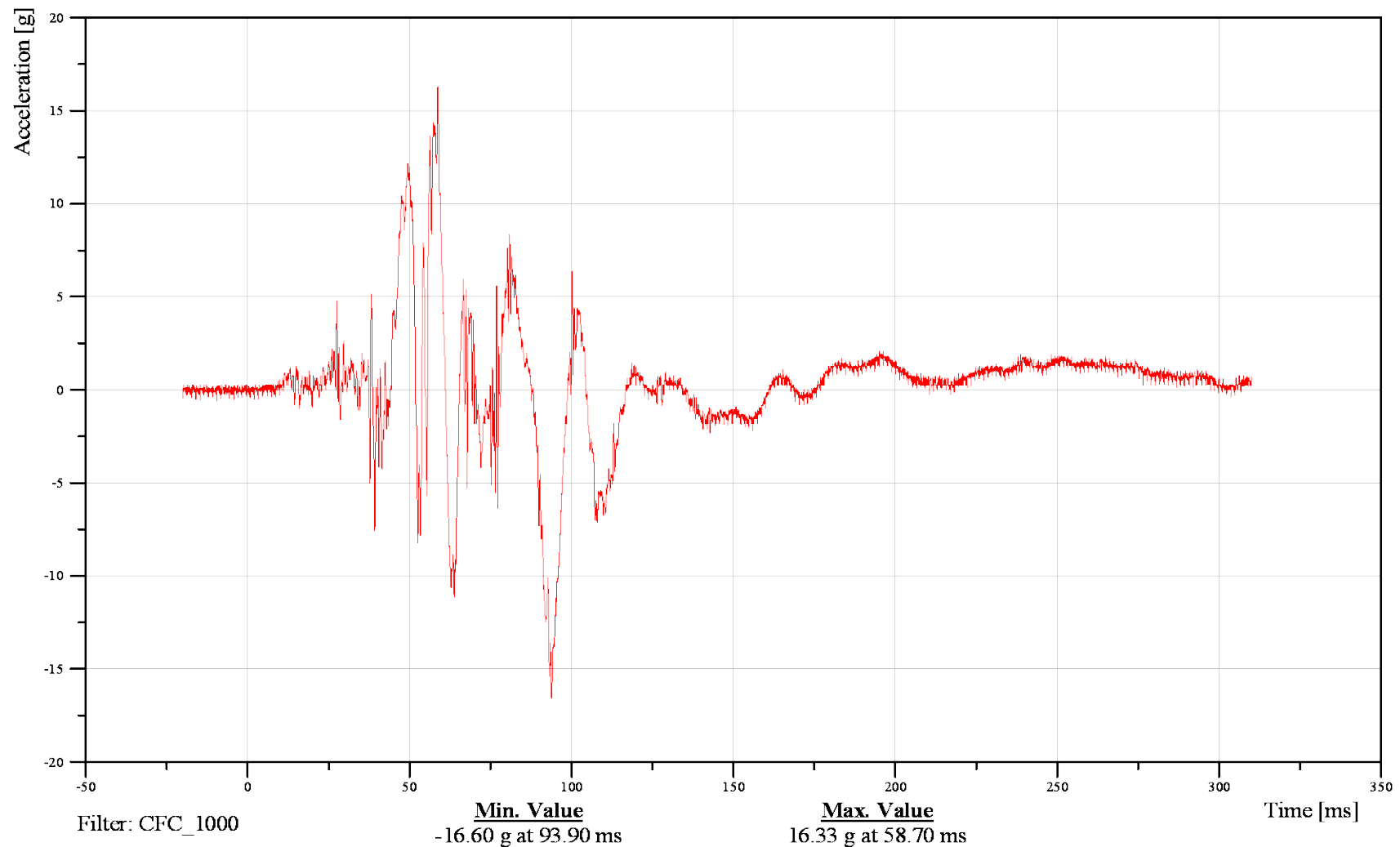
Time: 10:15

Customer: VRTC

14TRRILE02WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 A Resultant

Date: 03/13/2013

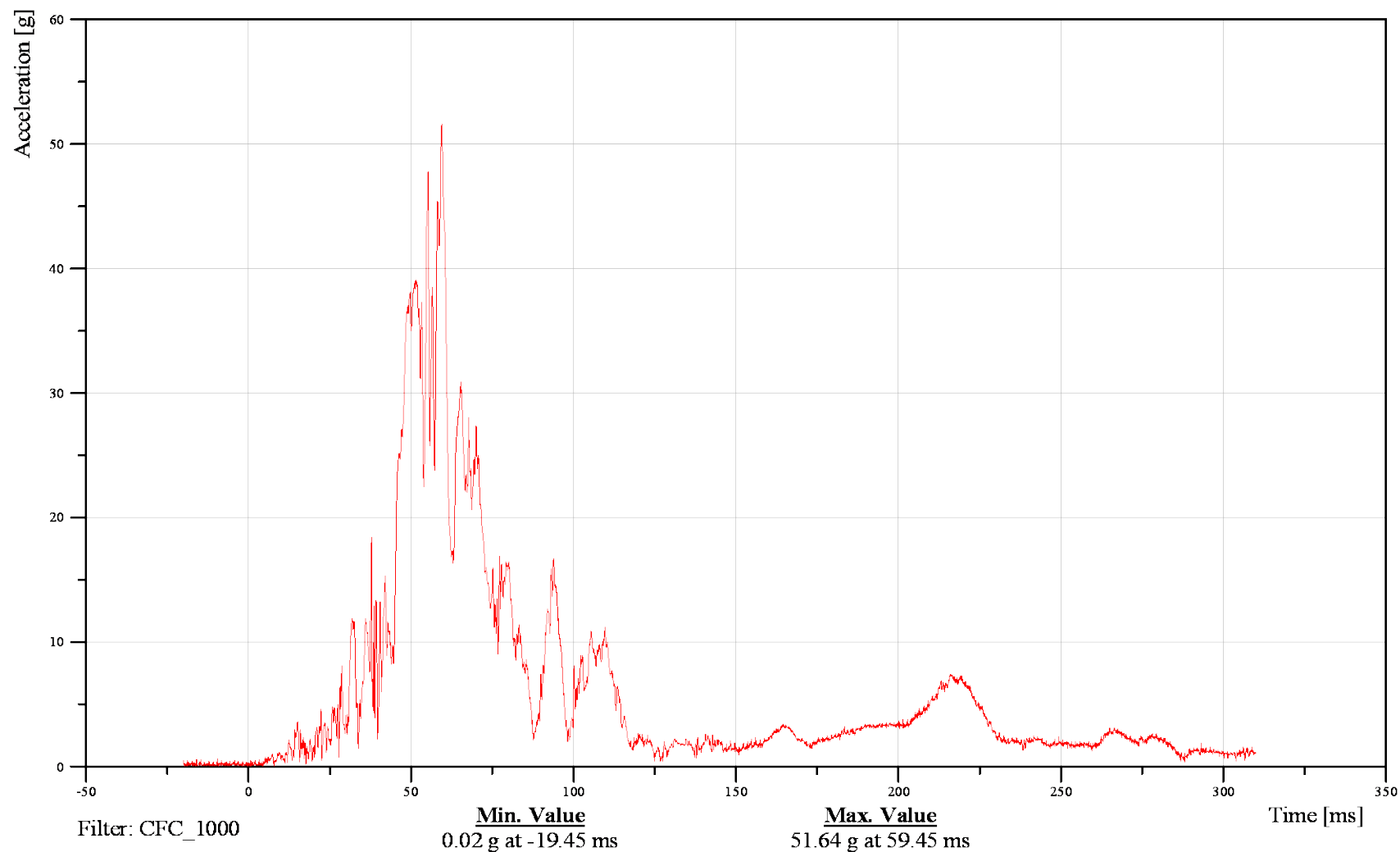
Time: 10:15

Customer: VRTC

14TRRILE02WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 IRTRAC compression

Date: 03/13/2013

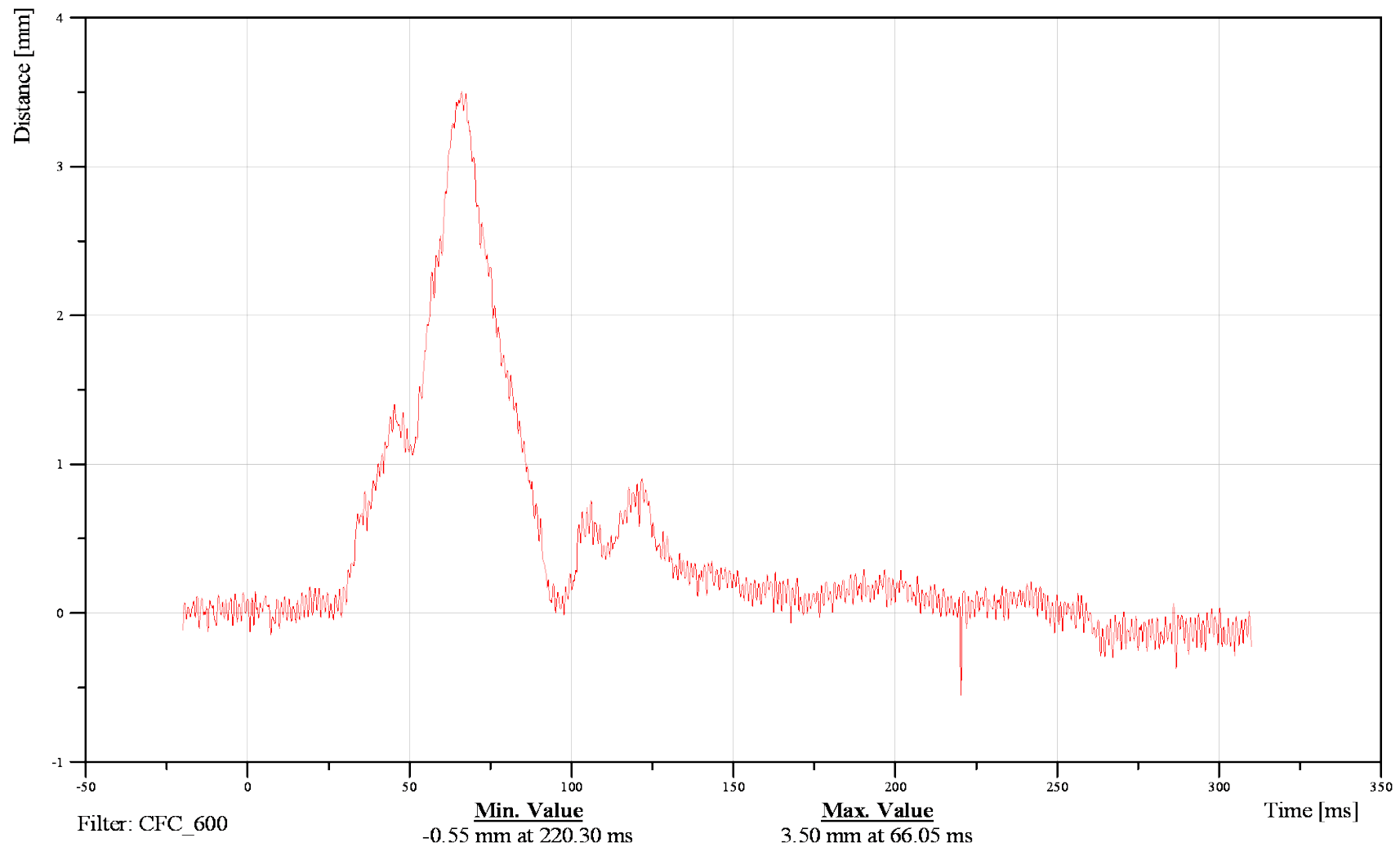
Time: 10:15

Customer: VRTC

14TRRILE02WFDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 Rotational angle

Date: 03/13/2013

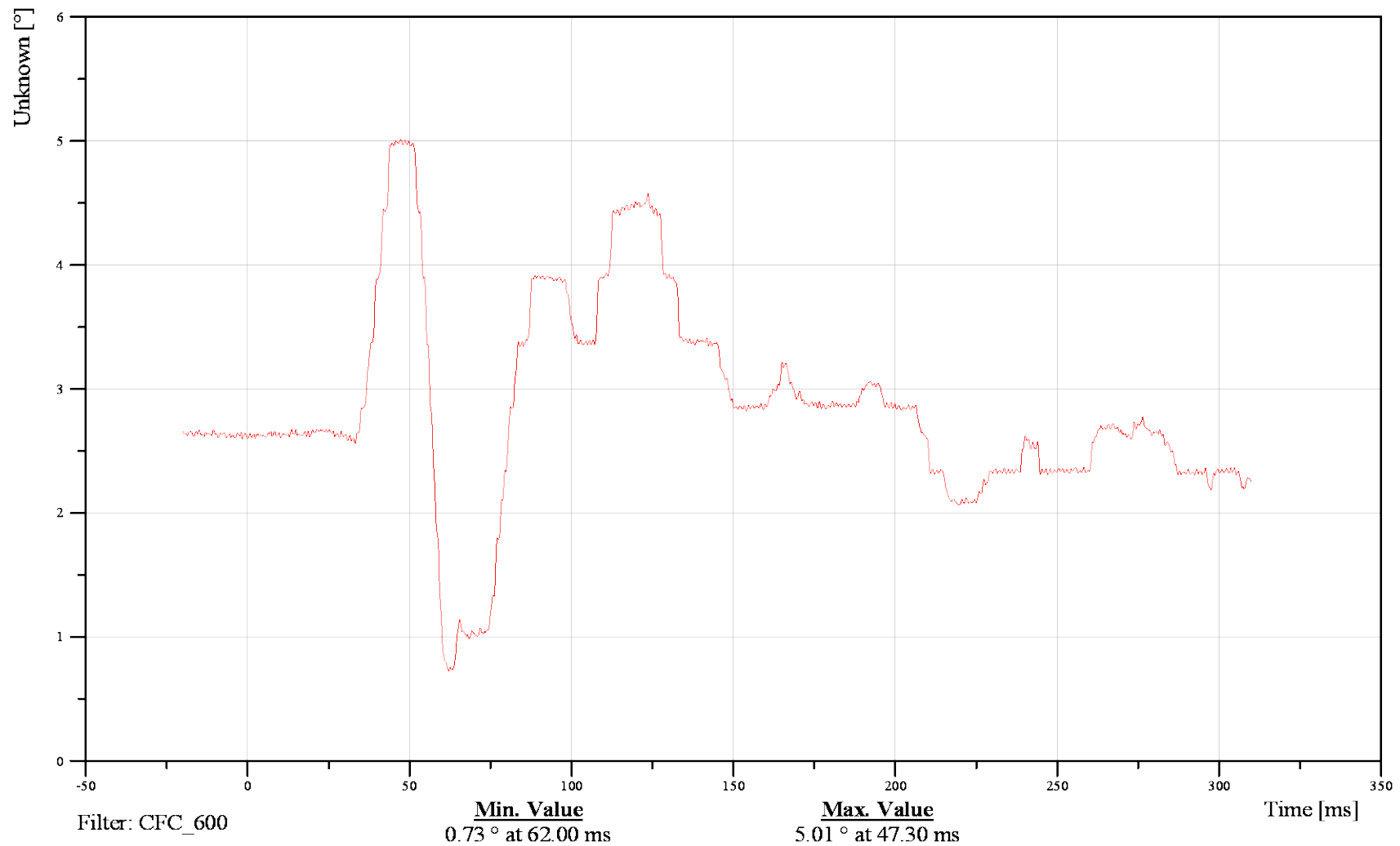
Time: 10:15

Customer: VRTC

14TRRILE02WFANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 IRTRAC X Deflection

Date: 03/13/2013

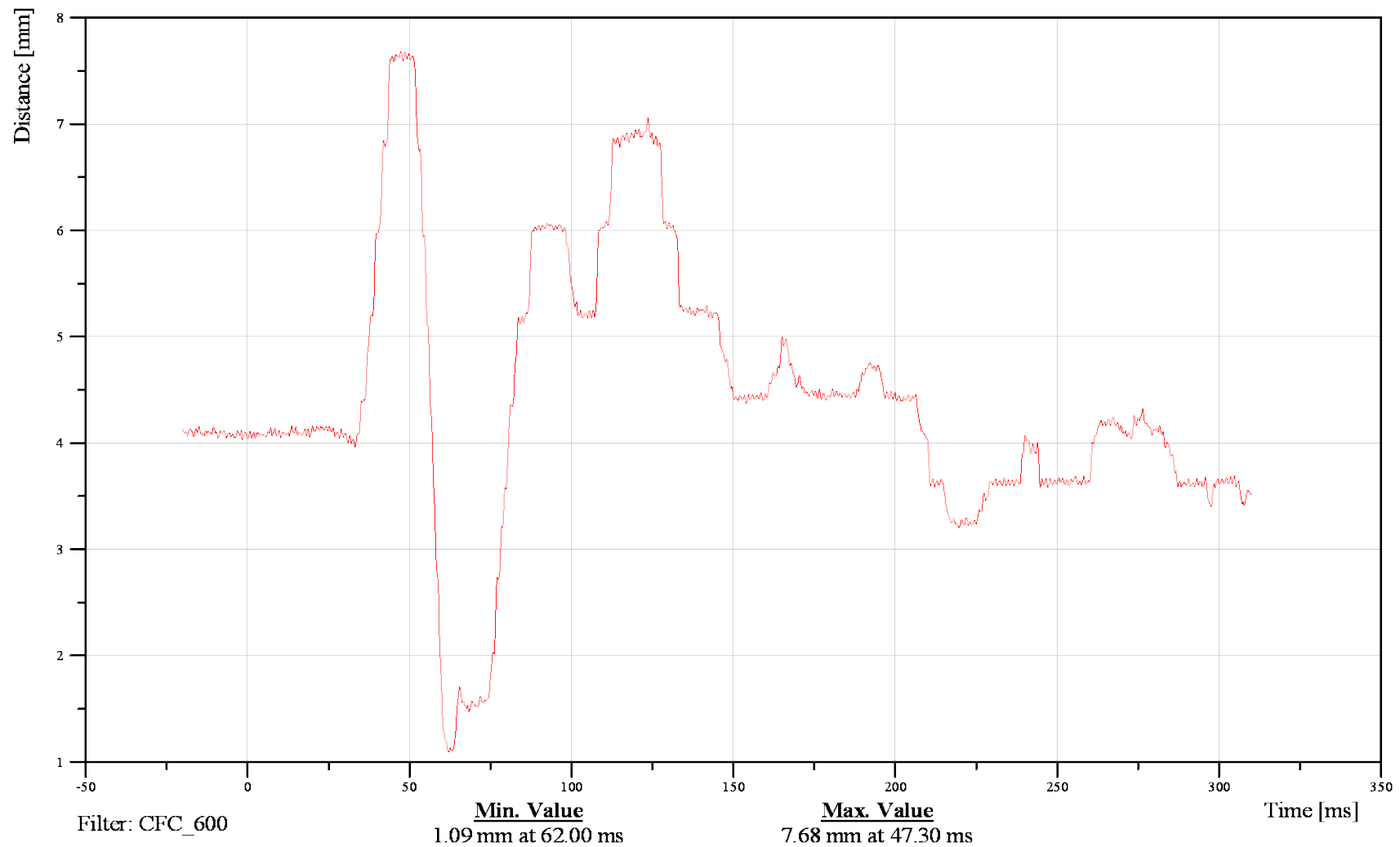
Time: 10:15

Customer: VRTC

14TRRILE02WFDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 2 IRTRAC Y Deflection

Date: 03/13/2013

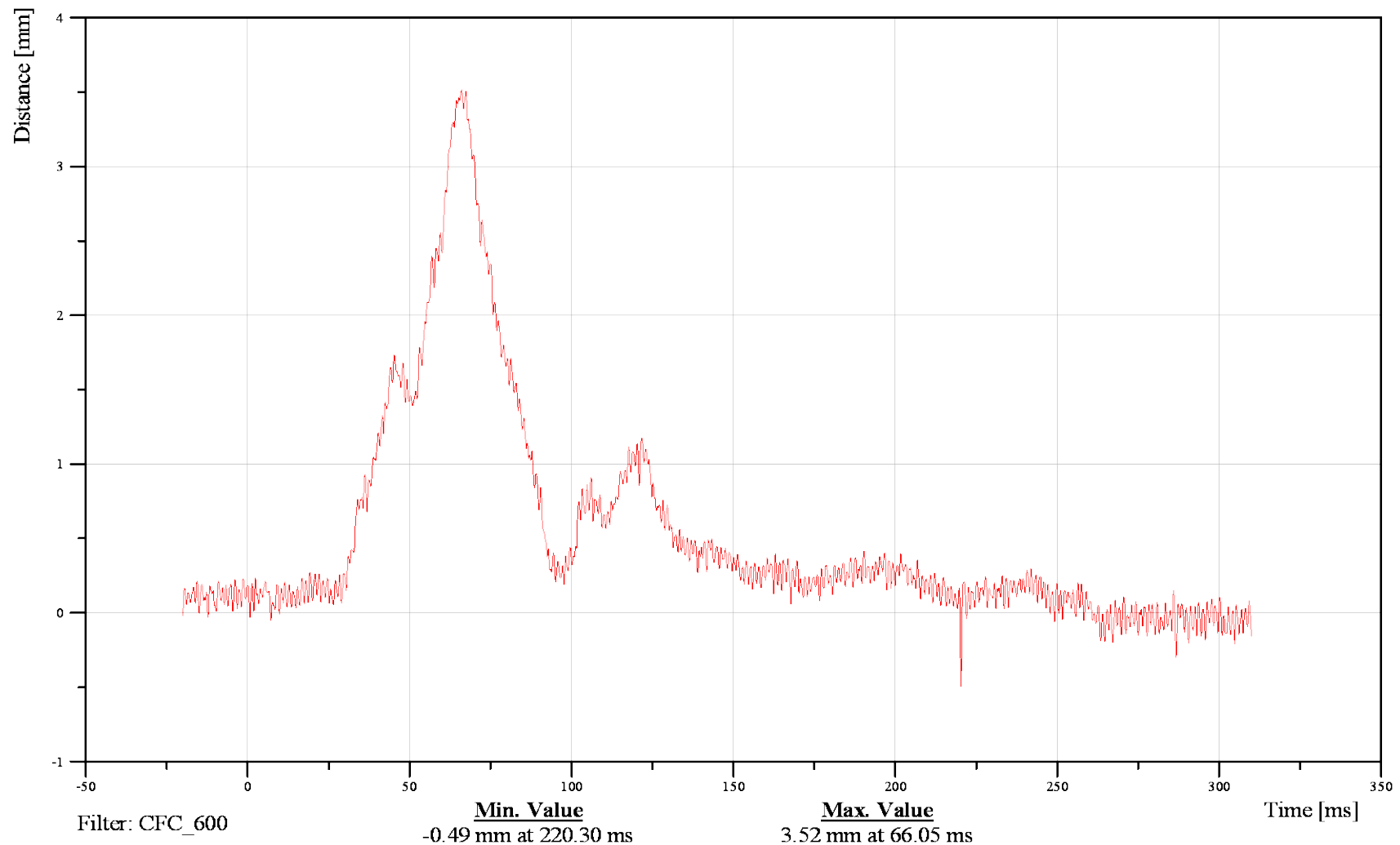
Time: 10:15

Customer: VRTC

14TRRILE02WFDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Longitudinal Ax

Date: 03/13/2013

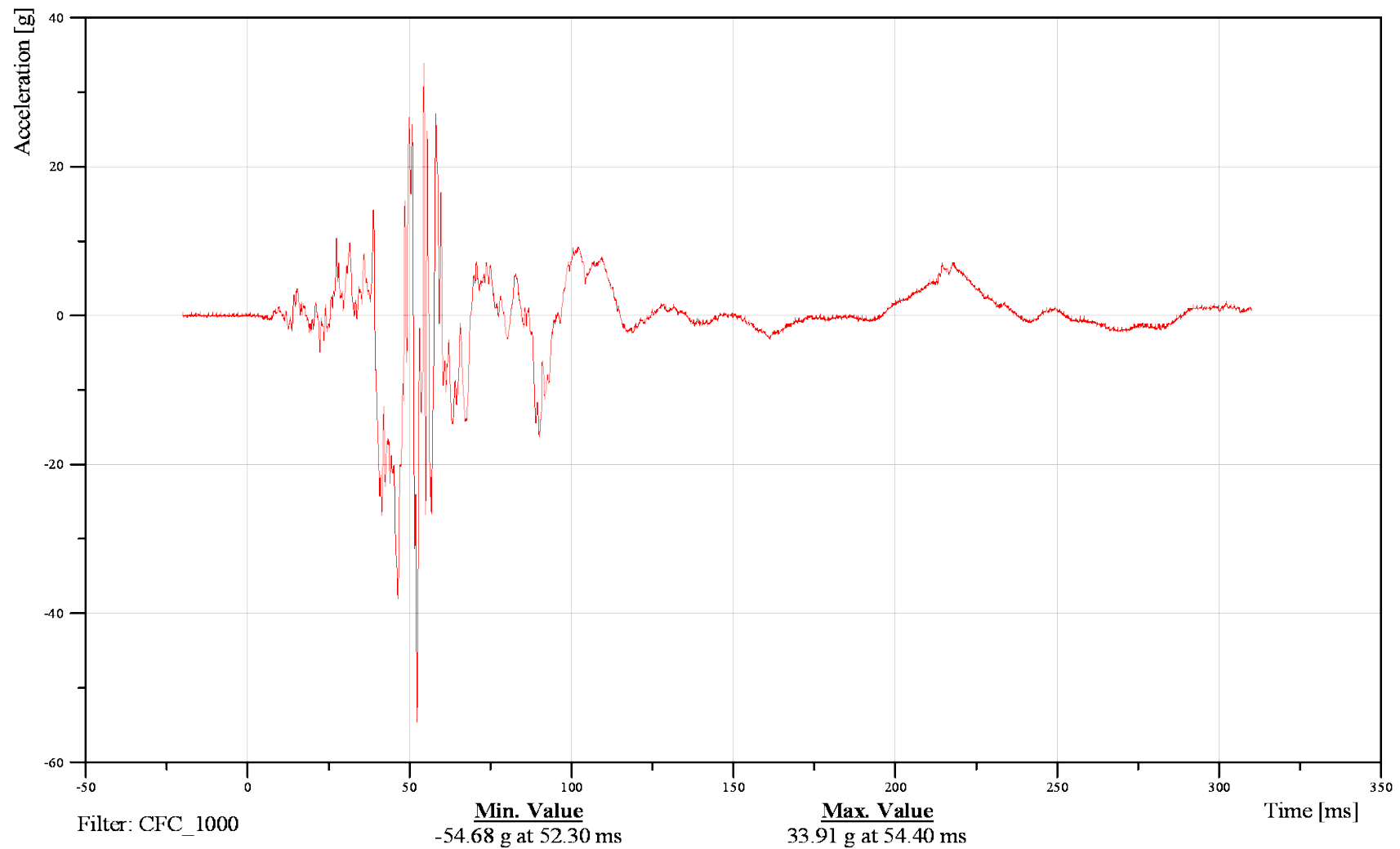
Time: 10:15

Customer: VRTC

14TRRILE03WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Lateral Ay

Date: 03/13/2013

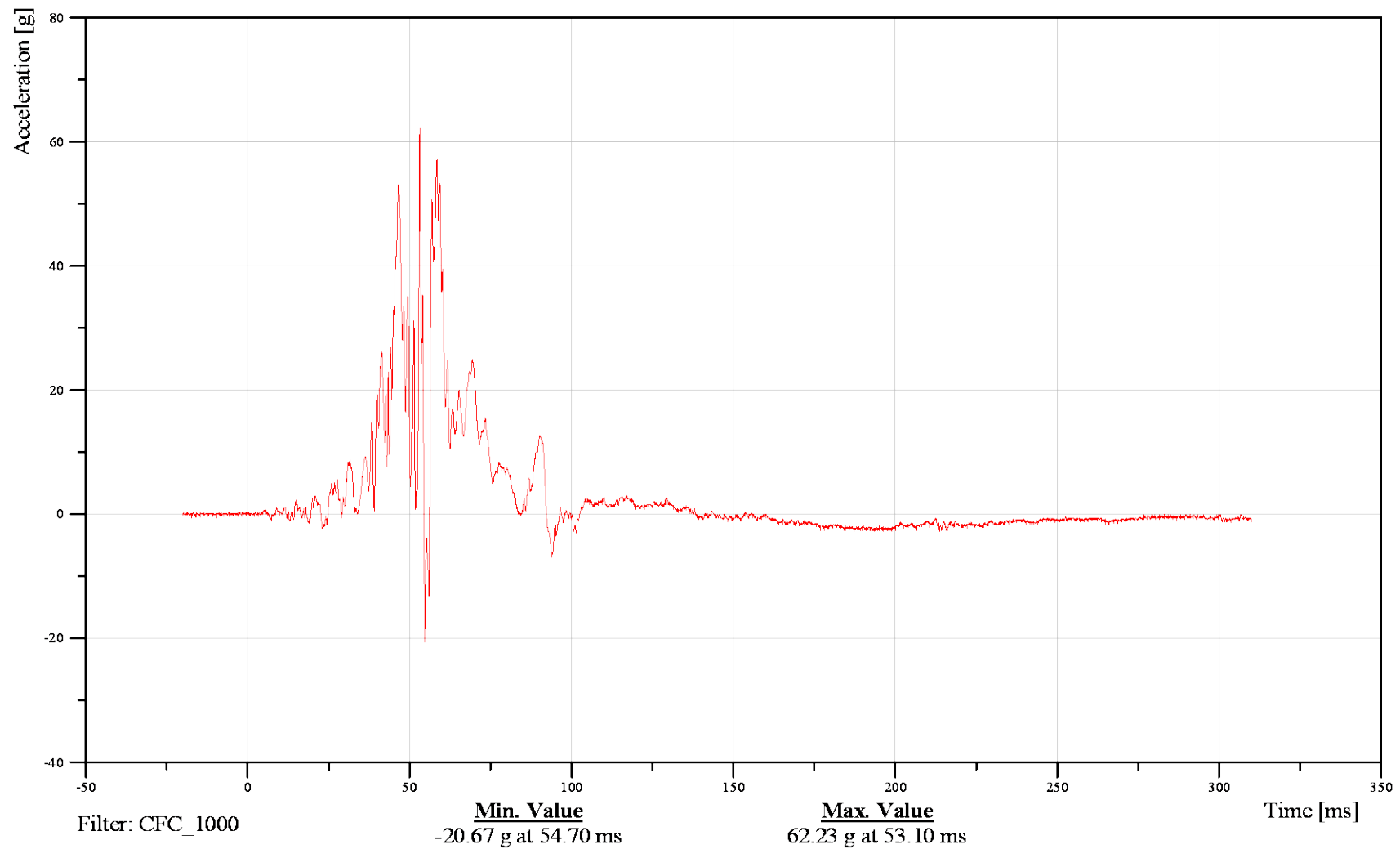
Time: 10:15

Customer: VRTC

14TRRILE03WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Vertical Az

Date: 03/13/2013

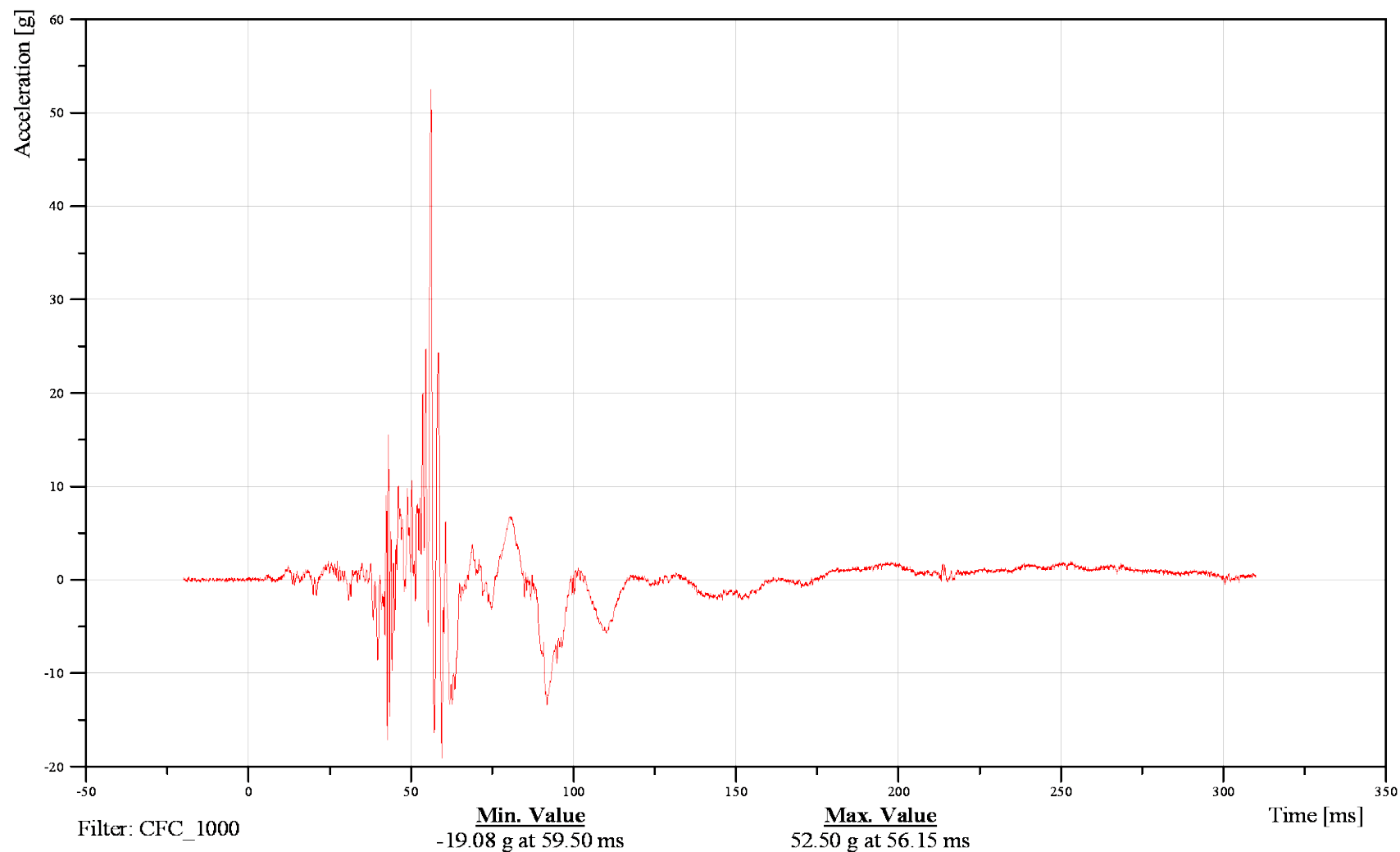
Time: 10:15

Customer: VRTC

14TRRILE03WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 A Resultant

Date: 03/13/2013

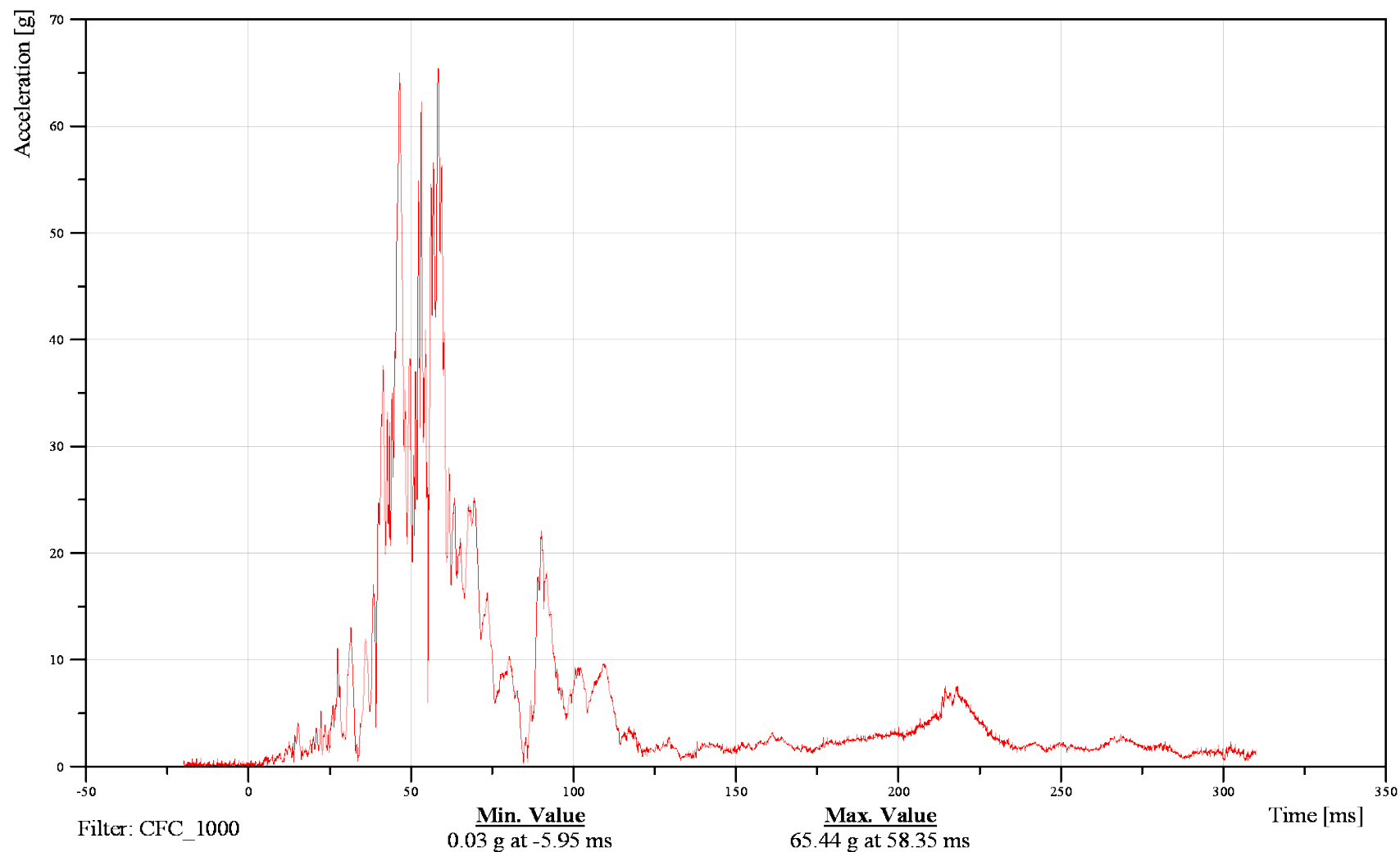
Time: 10:15

Customer: VRTC

14TRRILE03WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 IRTRAC compression

Date: 03/13/2013

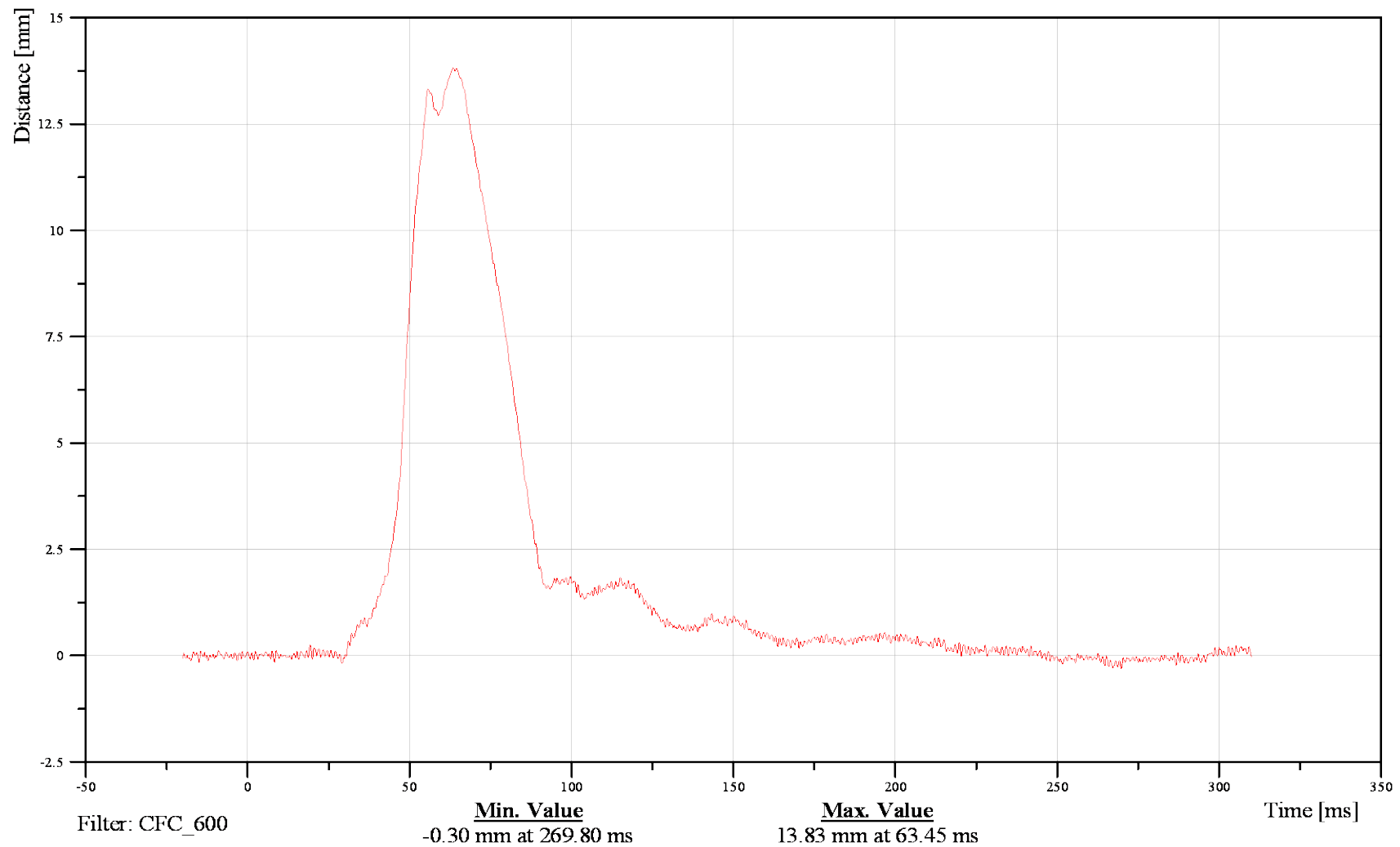
Time: 10:15

Customer: VRTC

14TRRILE03WFDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 Rotational angle

Date: 03/13/2013

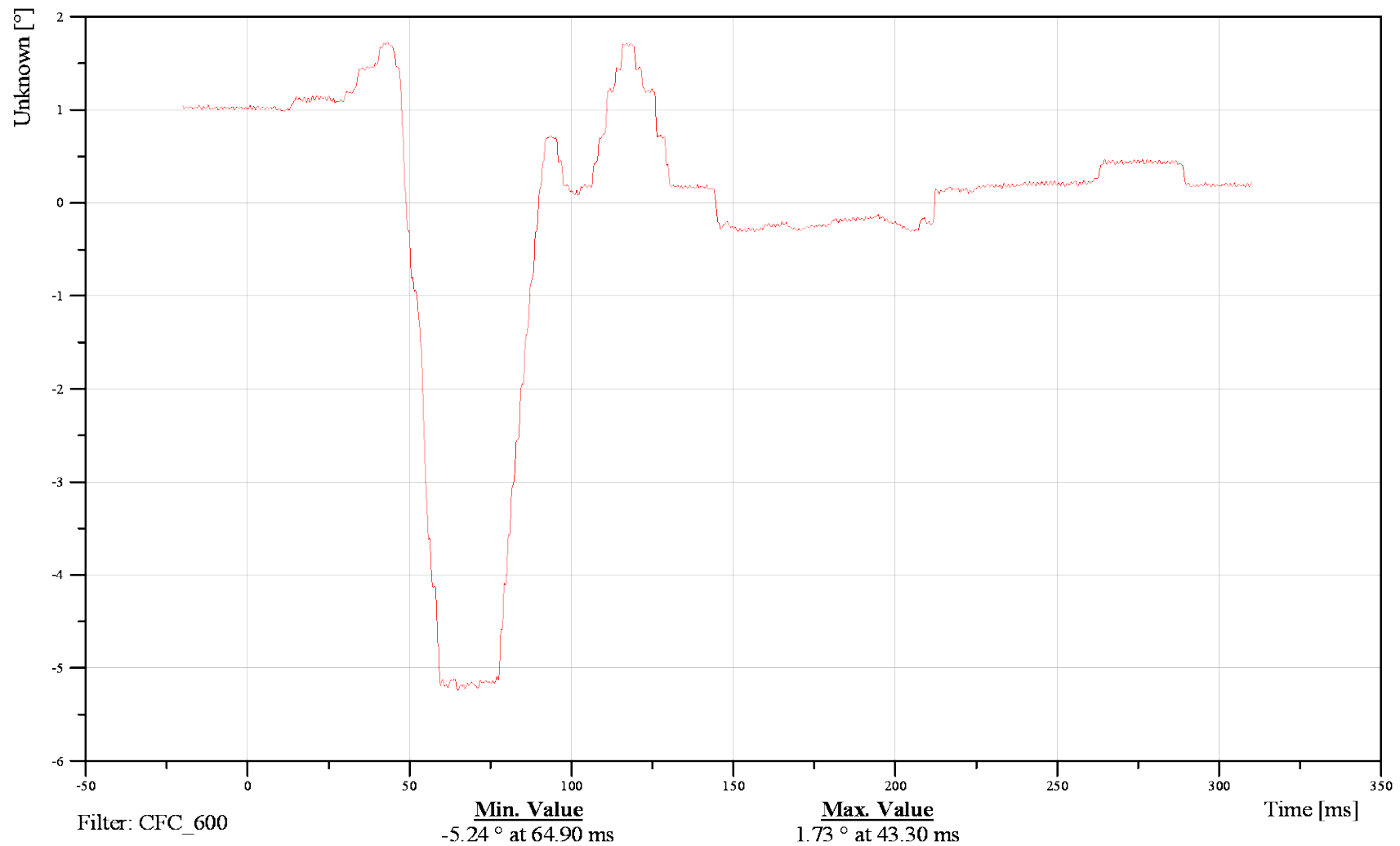
Time: 10:15

Customer: VRTC

14TRRILE03WFANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 IRTRAC X Deflection

Date: 03/13/2013

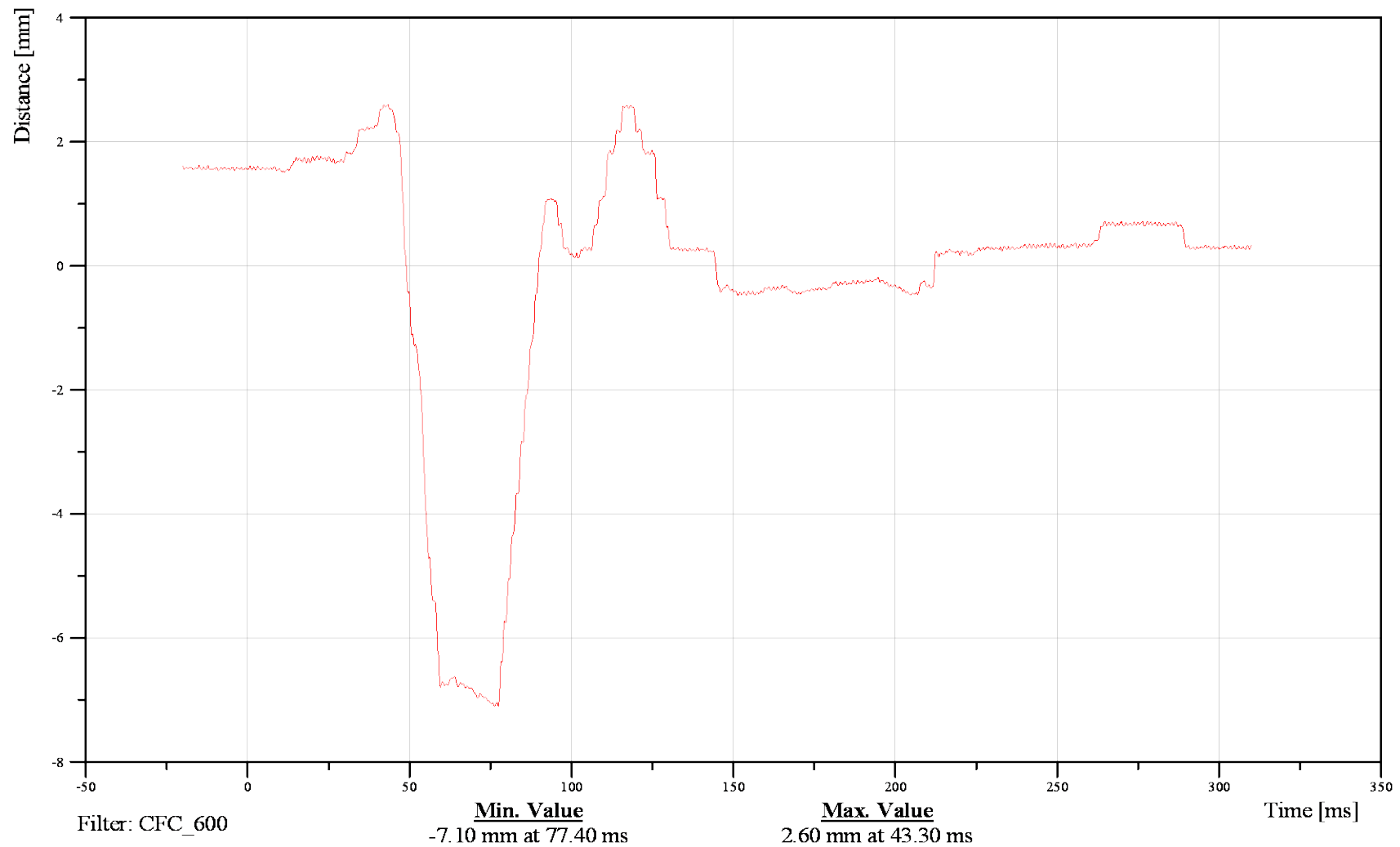
Time: 10:15

Customer: VRTC

14TRRILE03WFDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Rib 3 IRTRAC Y Deflection

Date: 03/13/2013

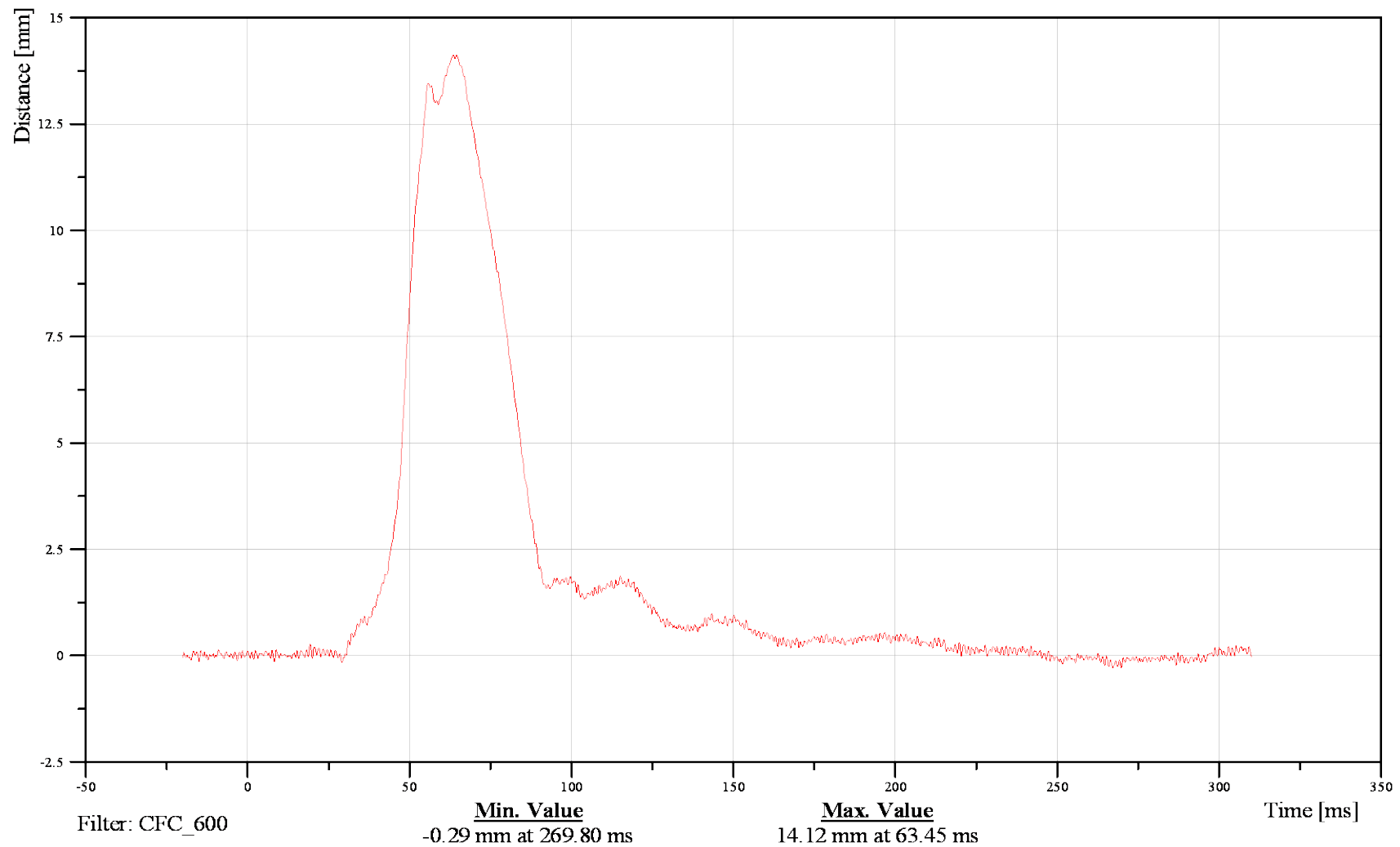
Time: 10:15

Customer: VRTC

14TRRILE03WFDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Longitudinal Ax

Date: 03/13/2013

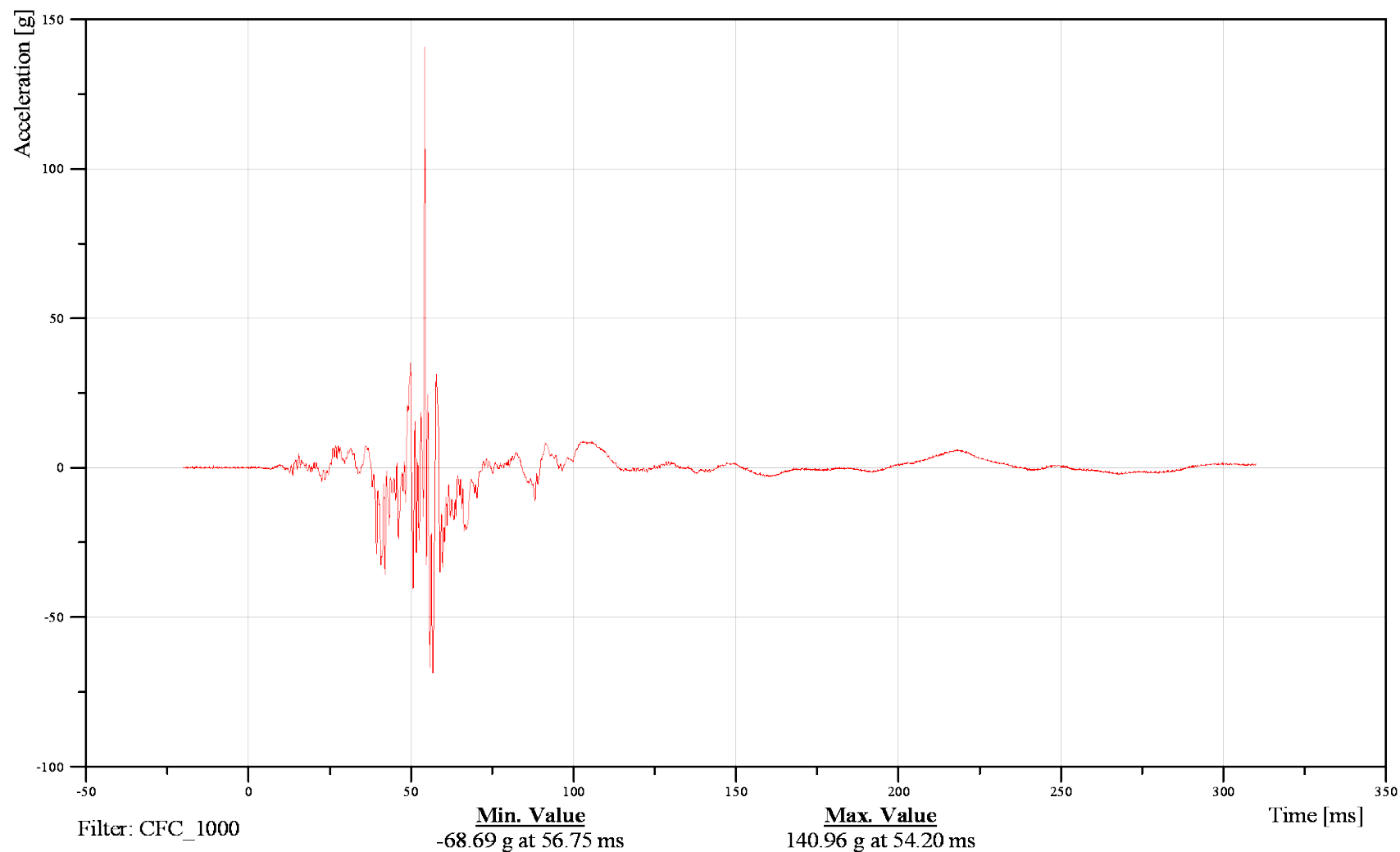
Time: 10:15

Customer: VRTC

14ABRILE01WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Lateral Ay

Date: 03/13/2013

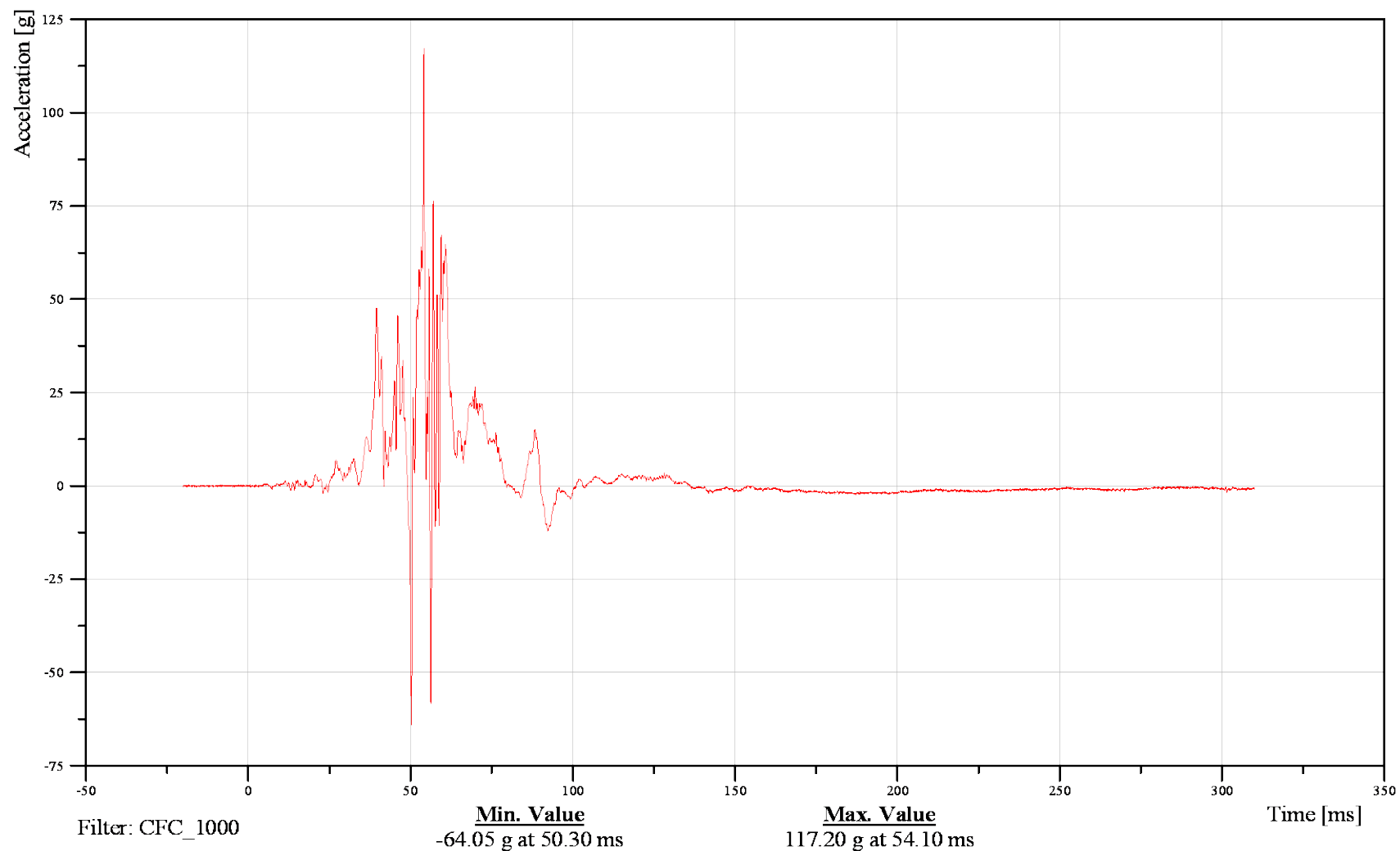
Time: 10:15

Customer: VRTC

14ABRILE01WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Vertical Az

Date: 03/13/2013

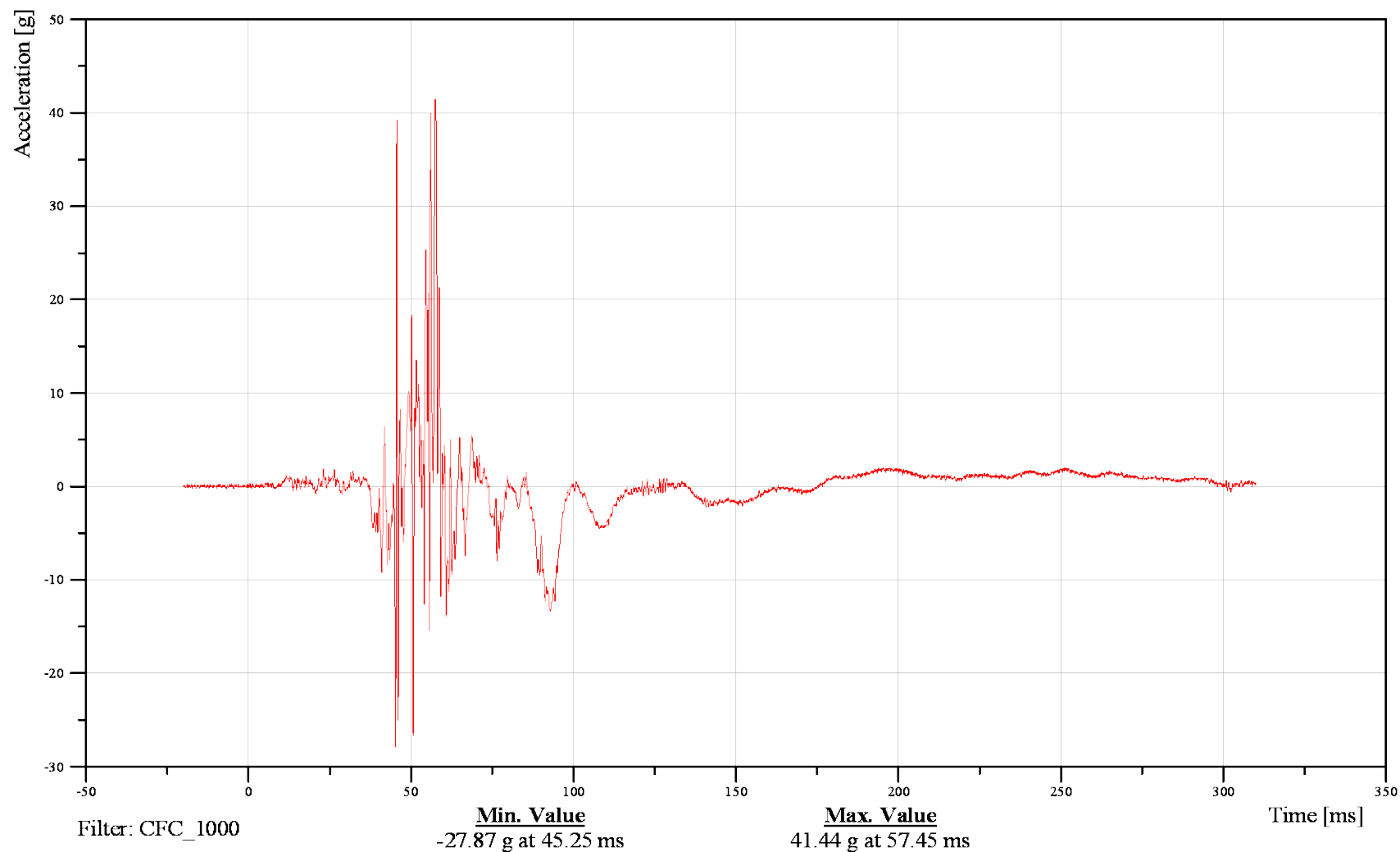
Time: 10:15

Customer: VRTC

14ABRILE01WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 A Resultant

Date: 03/13/2013

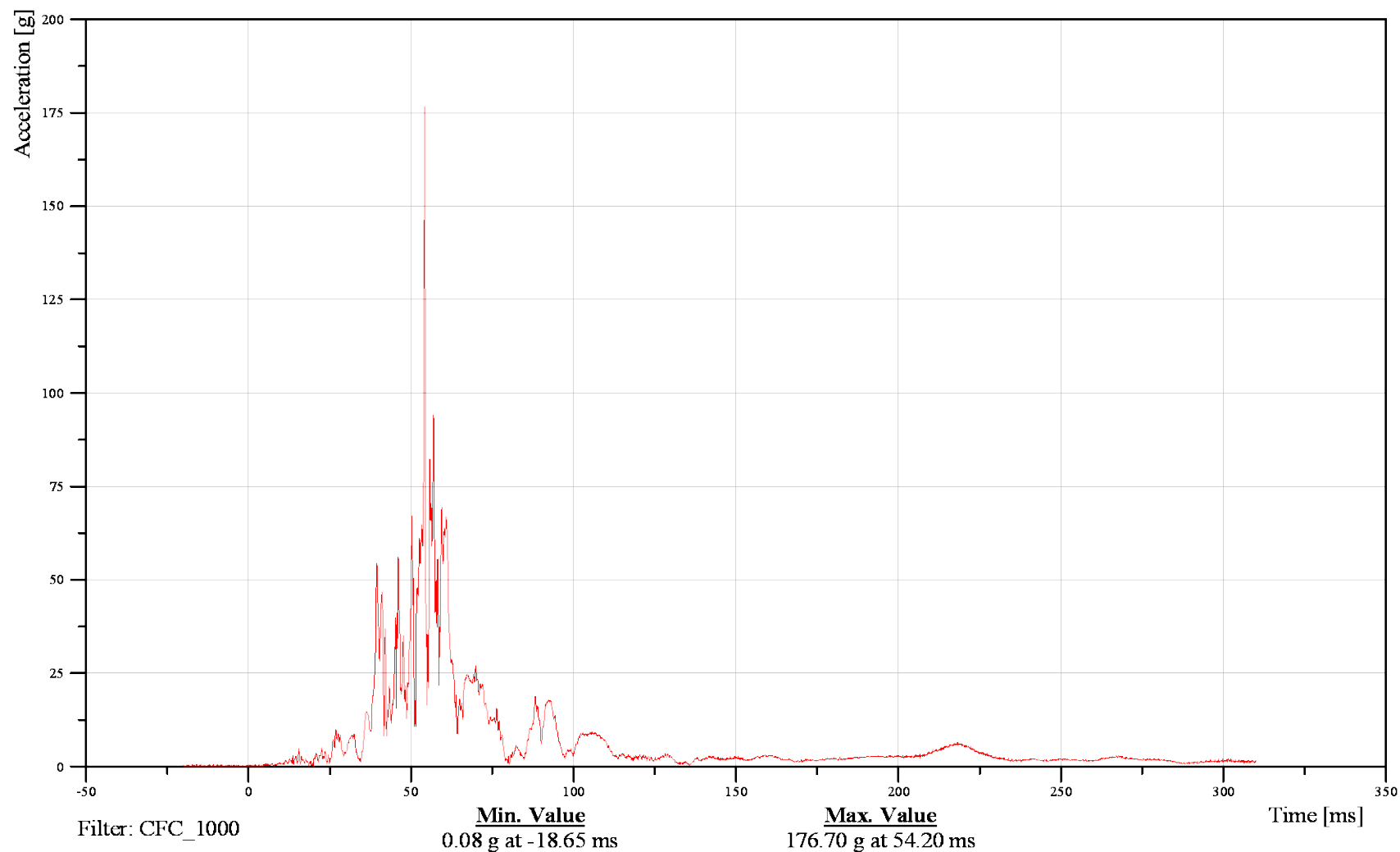
Time: 10:15

Customer: VRTC

14ABRILE01WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 IRTRAC compression

Date: 03/13/2013

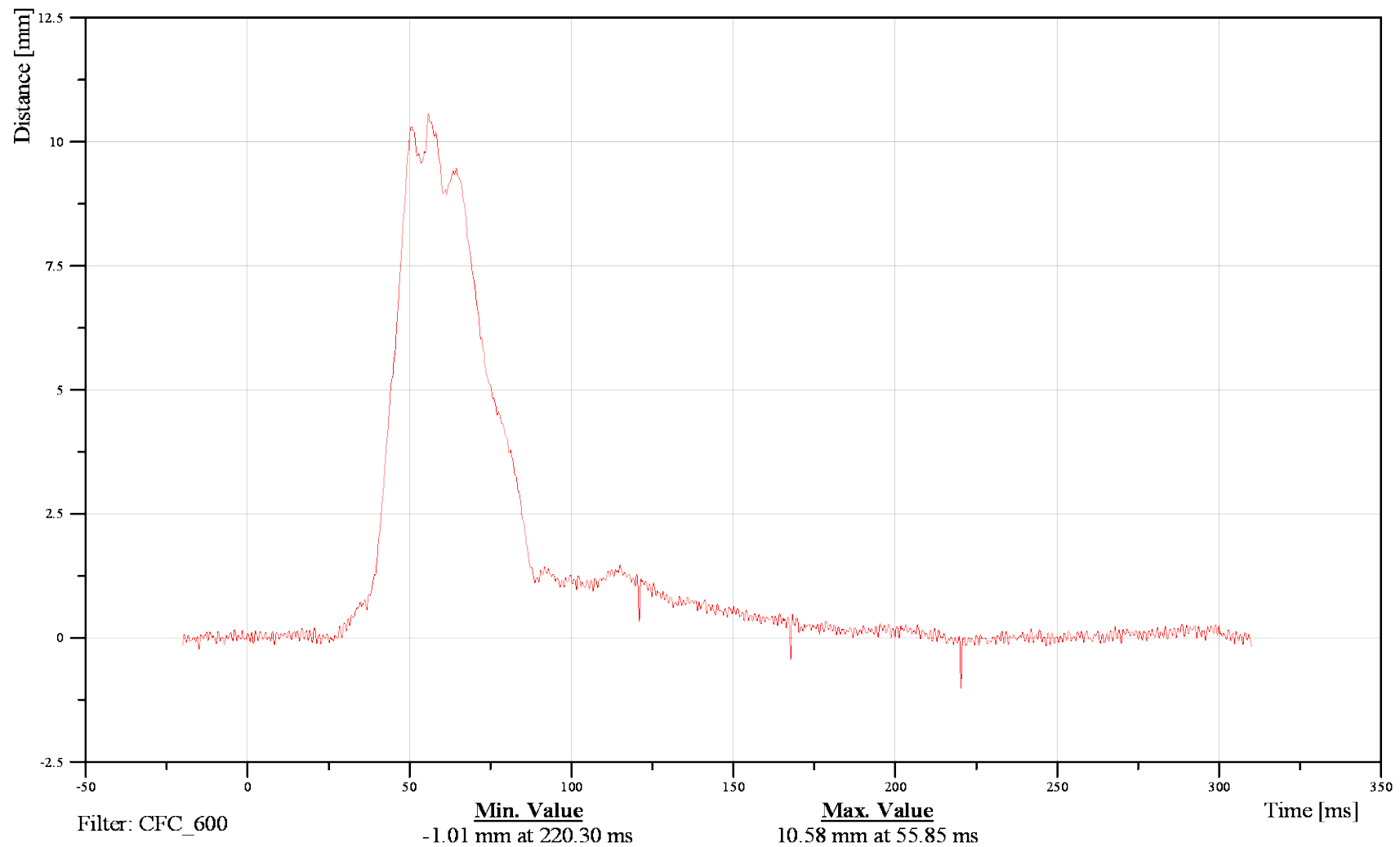
Time: 10:15

Customer: VRTC

14ABRILE01WFDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 Rotational angle

Date: 03/13/2013

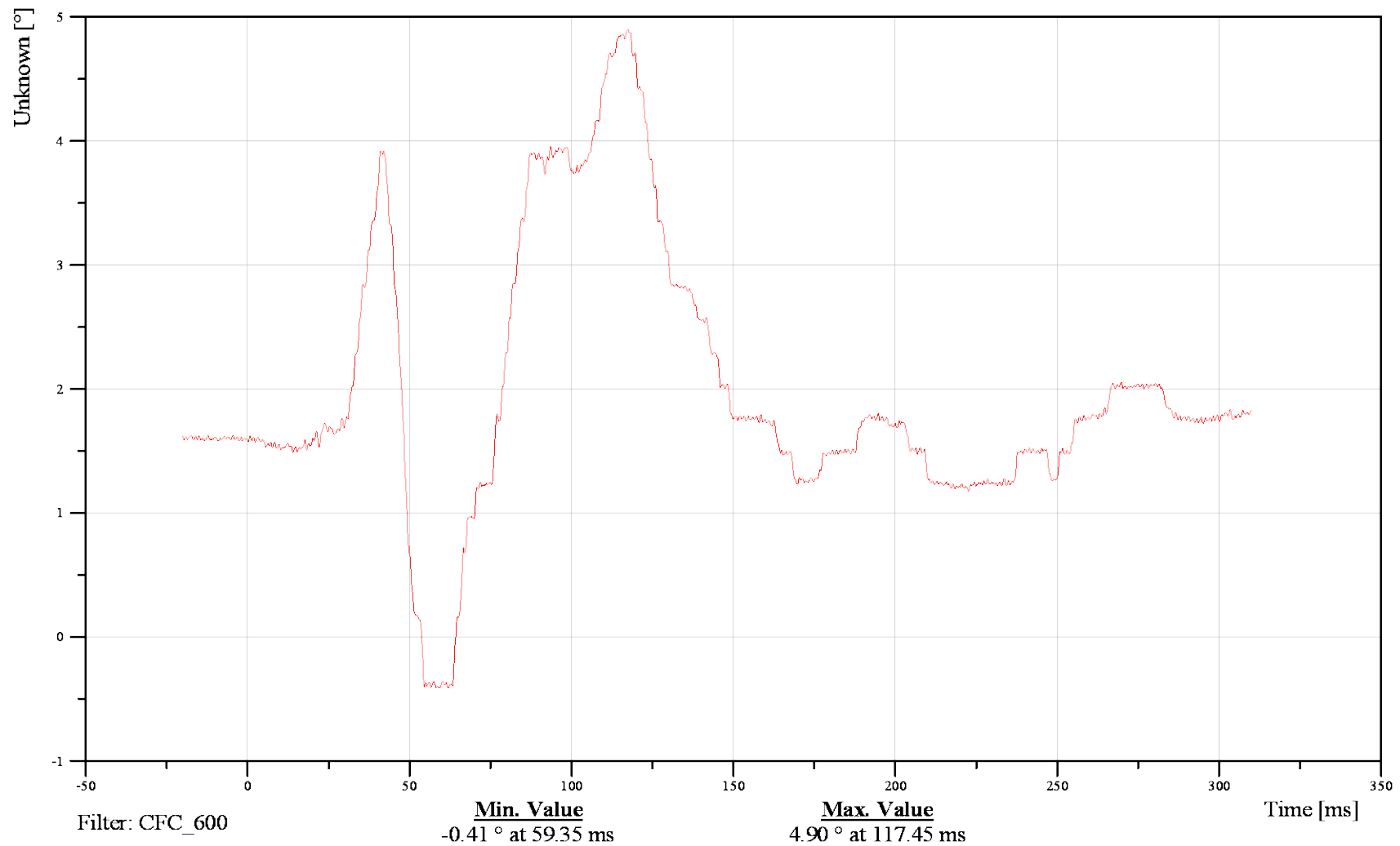
Time: 10:15

Customer: VRTC

14ABRILE01WFANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 IRTRAC X Deflection

Date: 03/13/2013

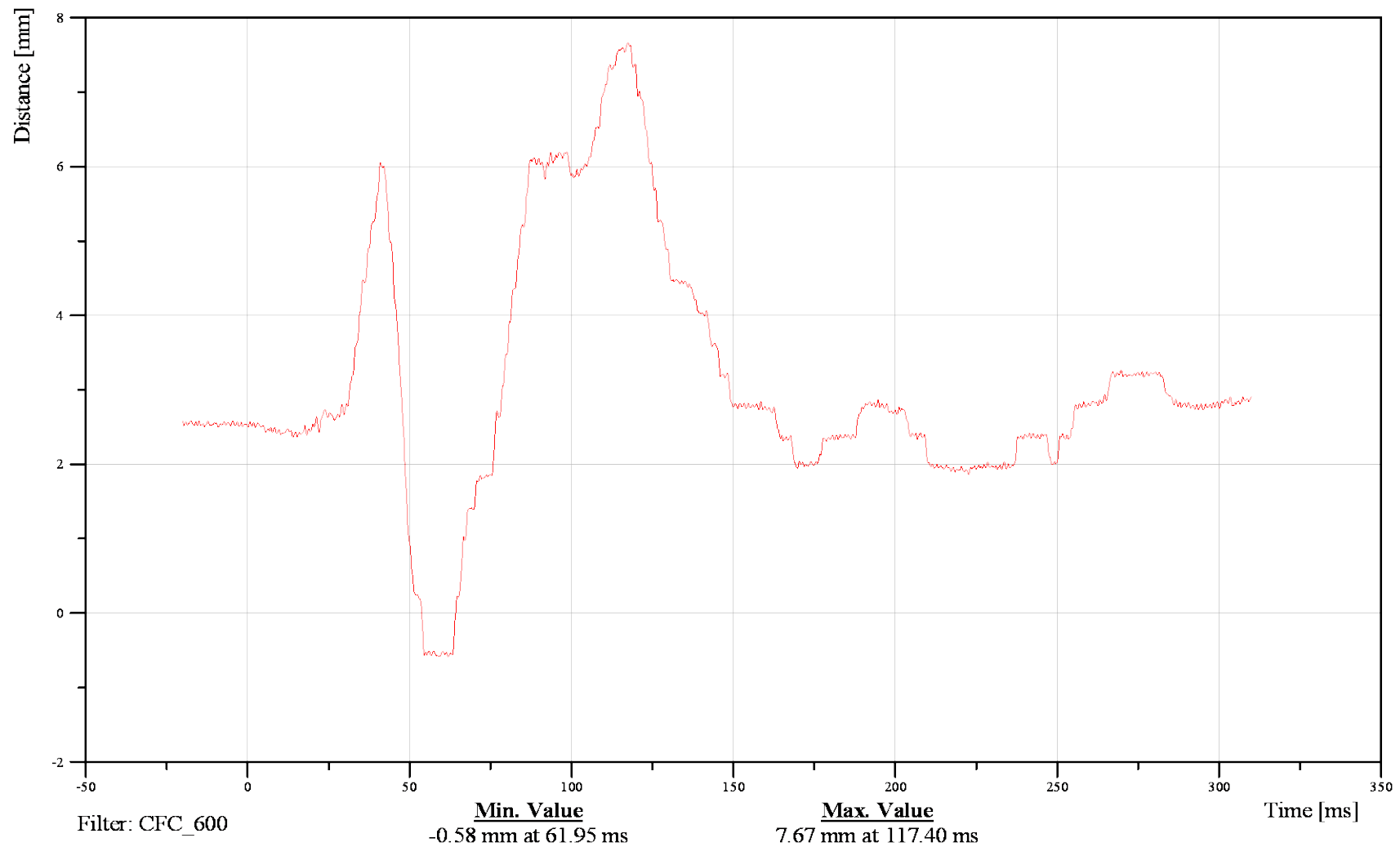
Time: 10:15

Customer: VRTC

14ABRILE01WFDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 1 IRTRAC Y Deflection

Date: 03/13/2013

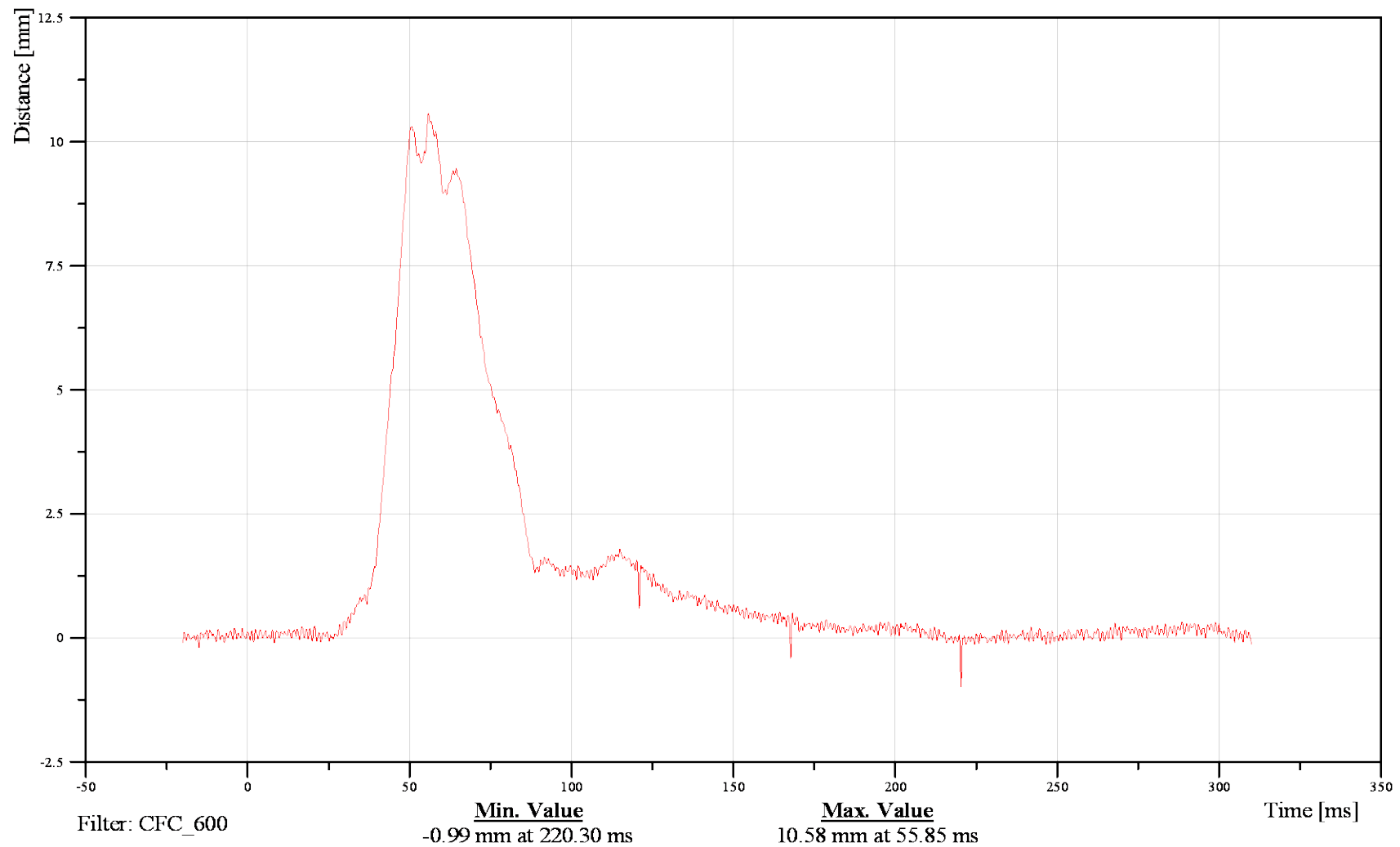
Time: 10:15

Customer: VRTC

14ABRILE01WFDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Longitudinal Ax

Date: 03/13/2013

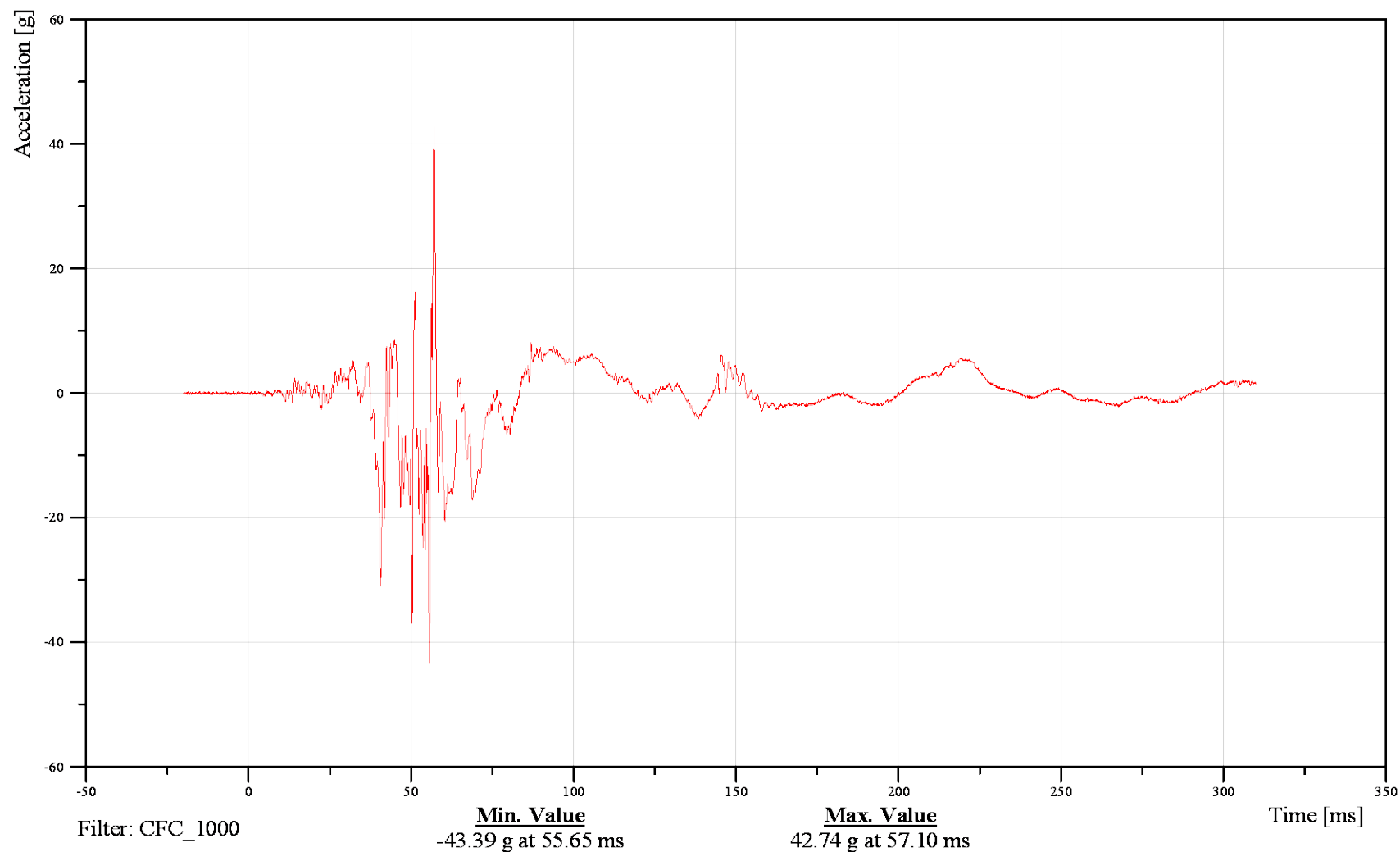
Time: 10:15

Customer: VRTC

14ABRILE02WFACXA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Lateral Ay

Date: 03/13/2013

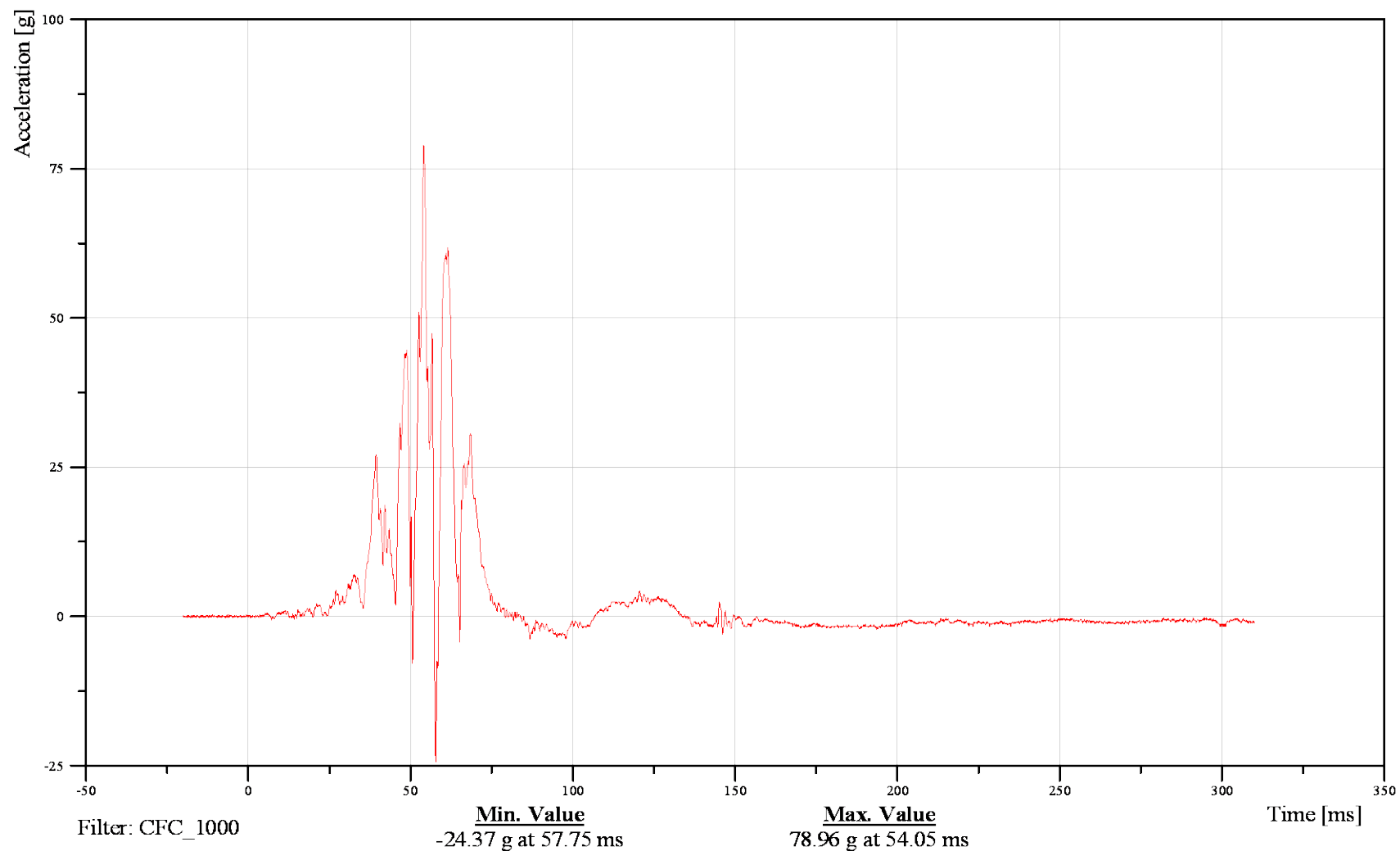
Time: 10:15

Customer: VRTC

14ABRILE02WFACYA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Vertical Az

Date: 03/13/2013

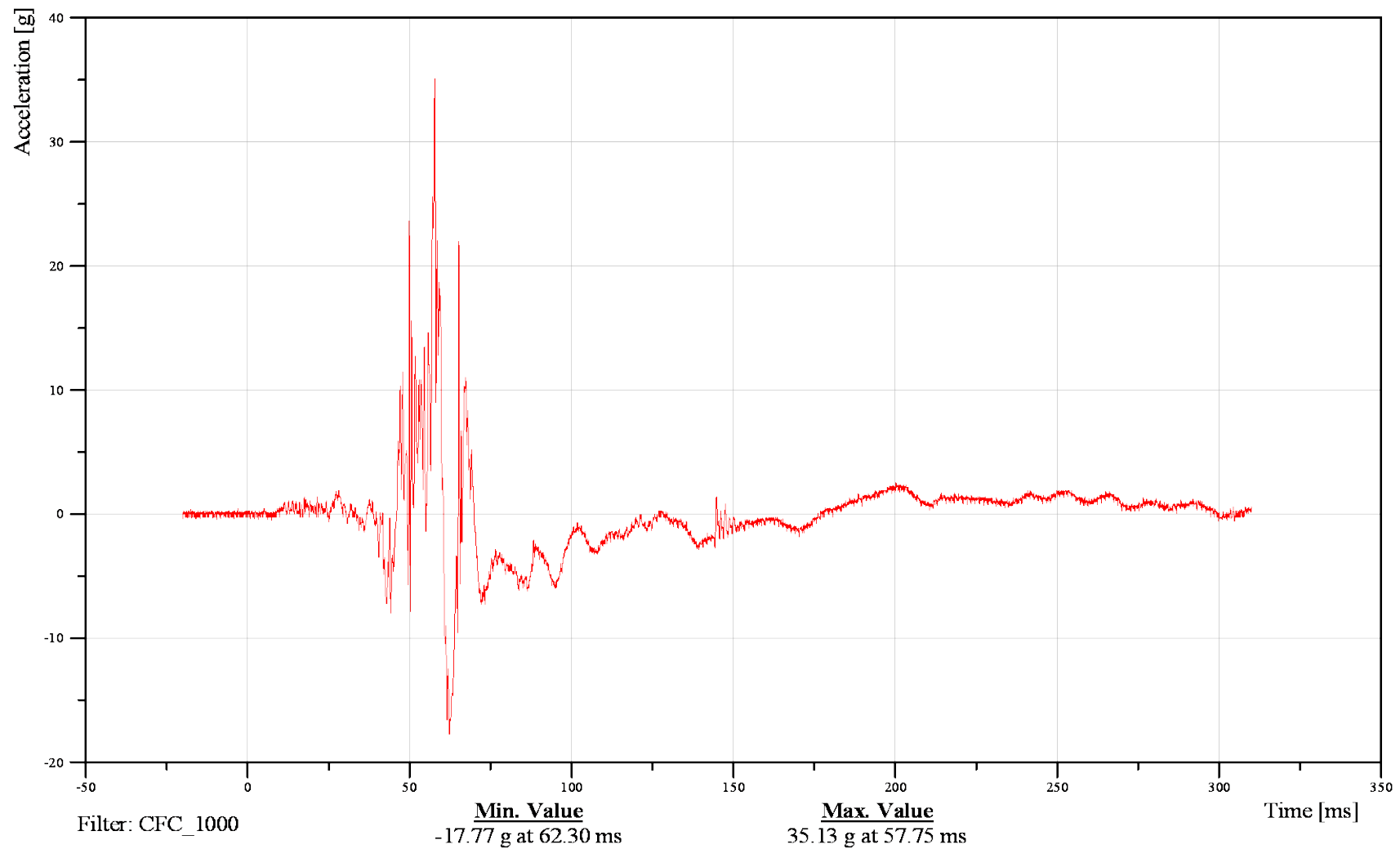
Time: 10:15

Customer: VRTC

14ABRILE02WFACZA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 A Resultant

Date: 03/13/2013

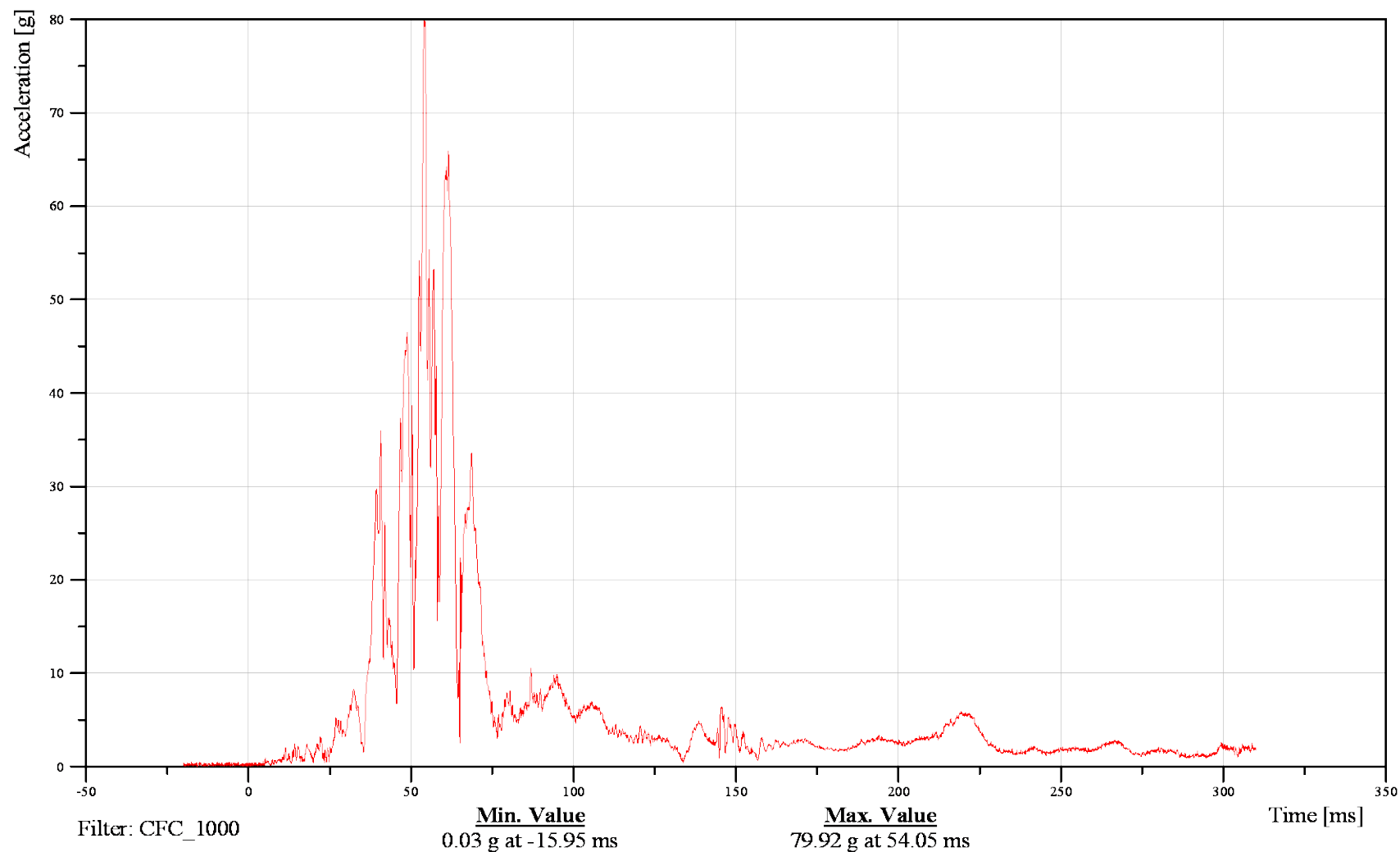
Time: 10:15

Customer: VRTC

14ABRILE02WFACRA

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 IRTRAC compression

Date: 03/13/2013

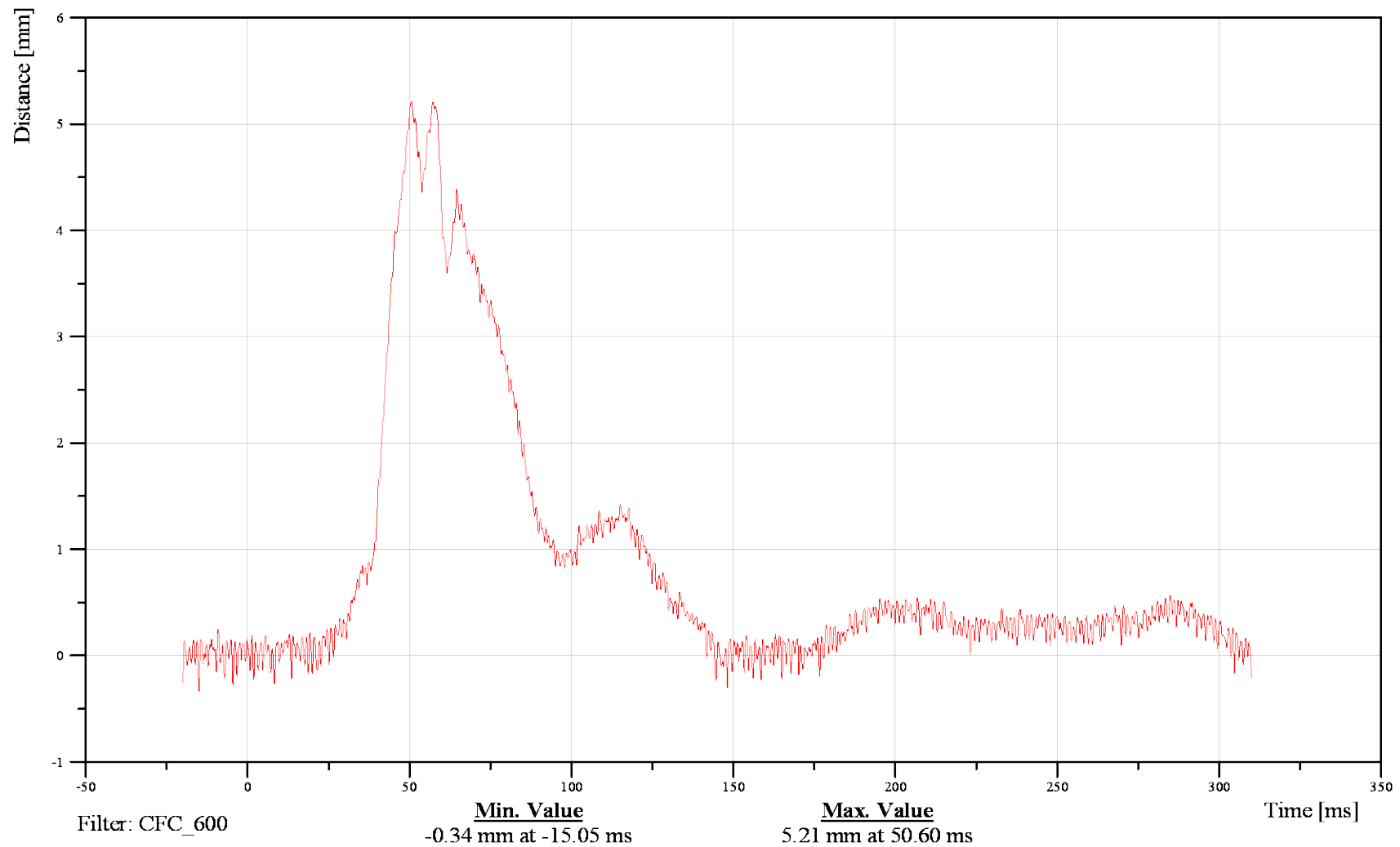
Time: 10:15

Customer: VRTC

14ABRILE02WFDC0B

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 Rotational angle

Date: 03/13/2013

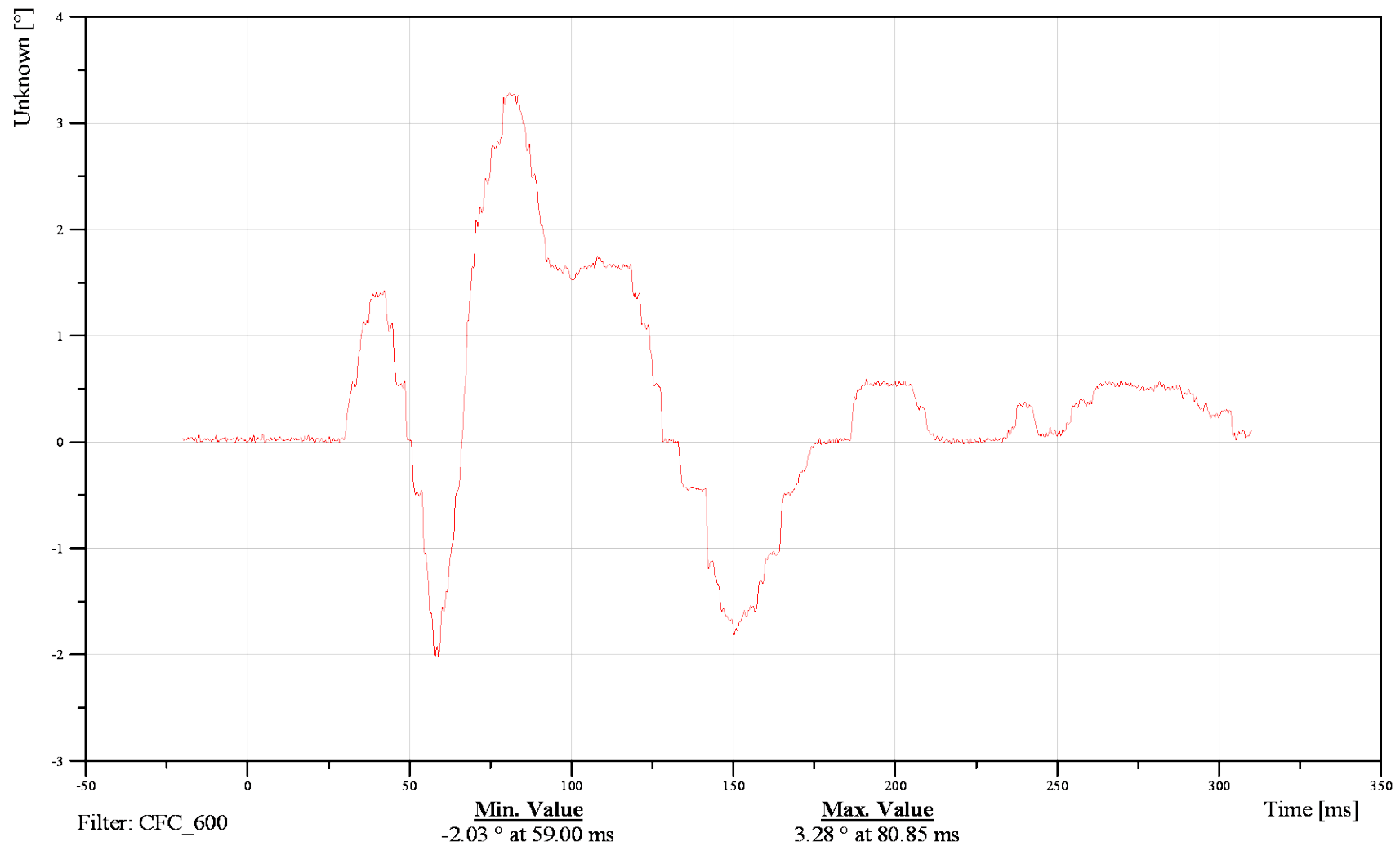
Time: 10:15

Customer: VRTC

14ABRILE02WFANZB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 IRTRAC X Deflection

Date: 03/13/2013

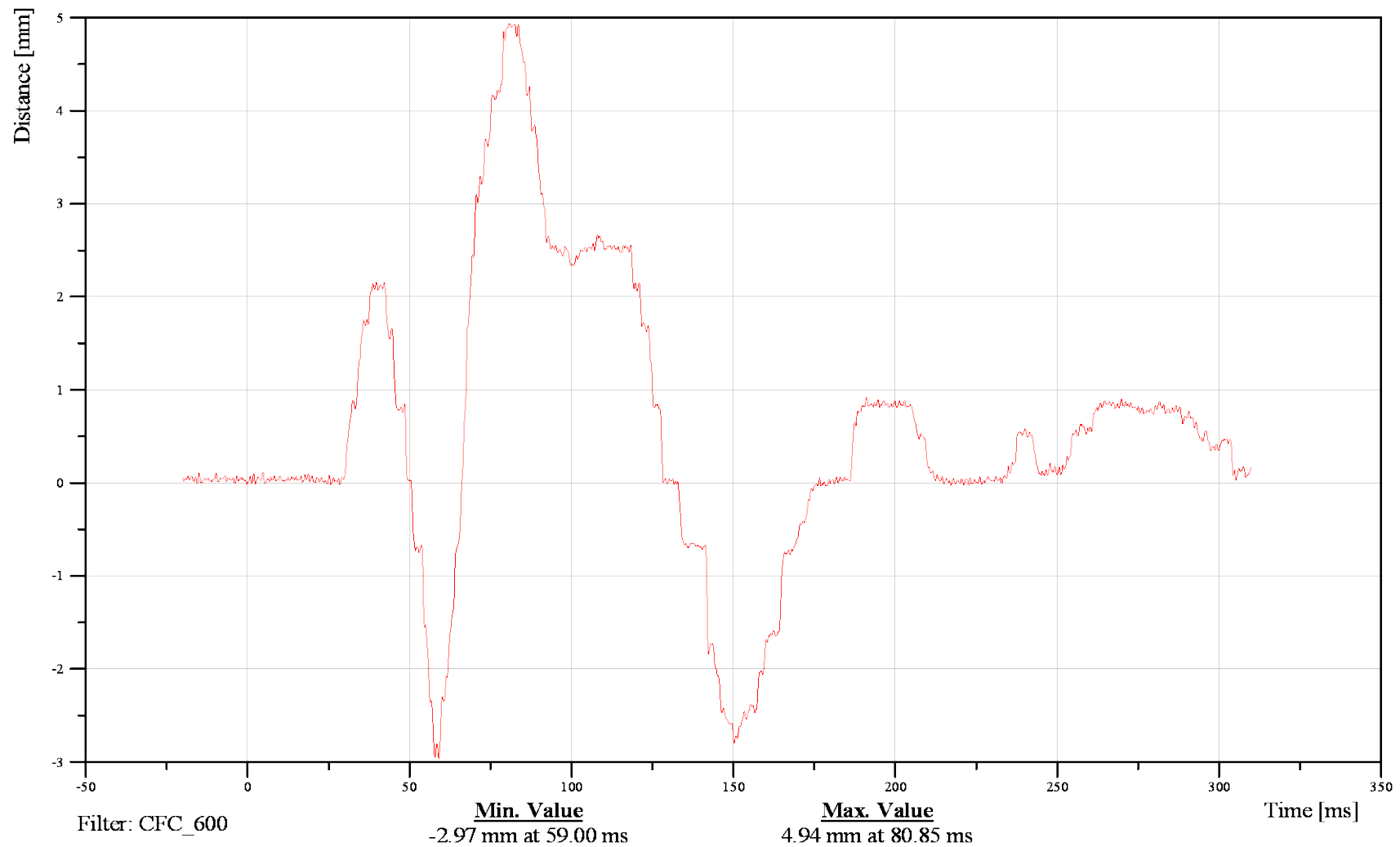
Time: 10:15

Customer: VRTC

14ABRILE02WFDSXB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Abdominal Rib 2 IRTRAC Y Deflection

Date: 03/13/2013

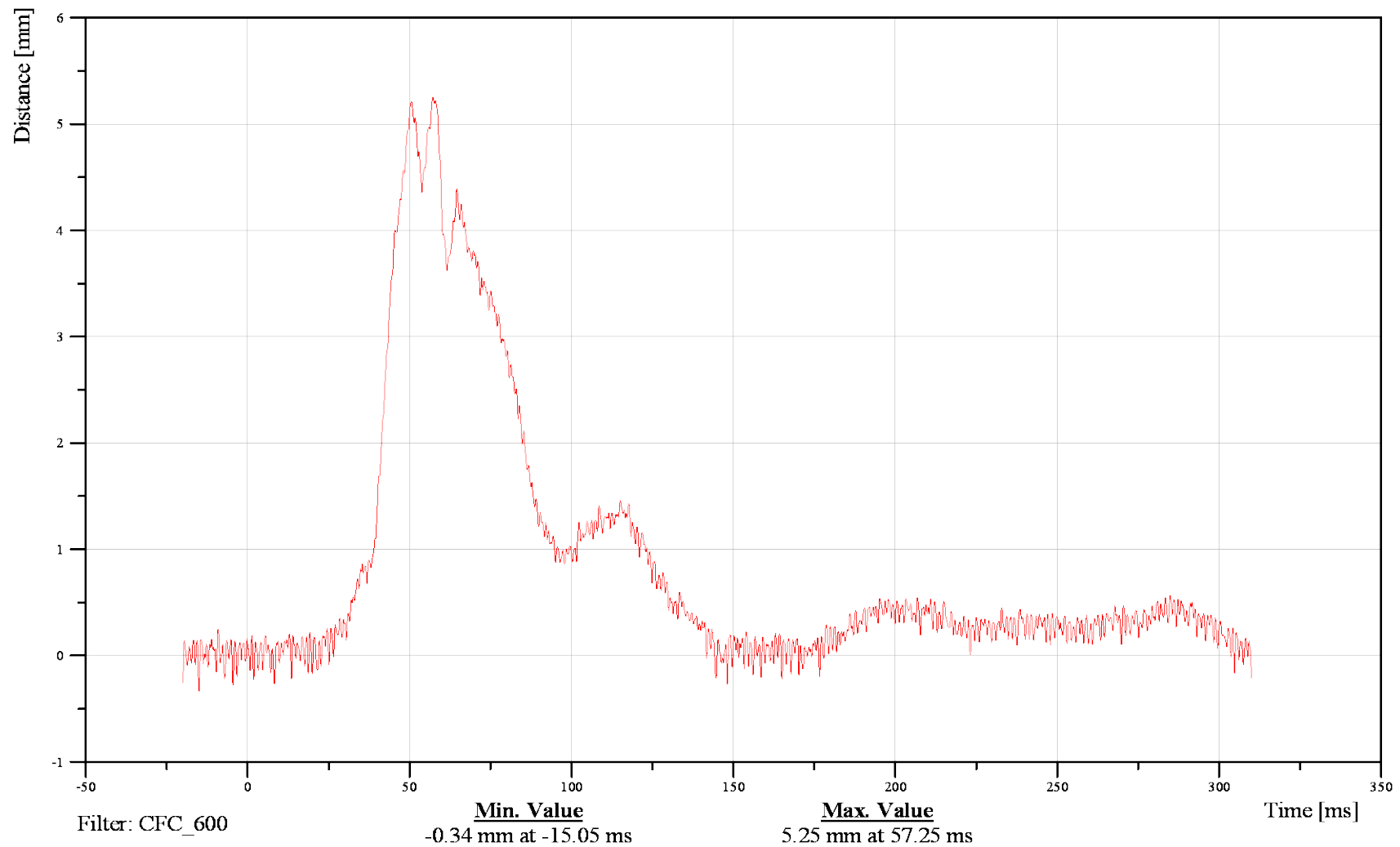
Time: 10:15

Customer: VRTC

14ABRILE02WFDSYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 Longitudinal Ax

Date: 03/13/2013

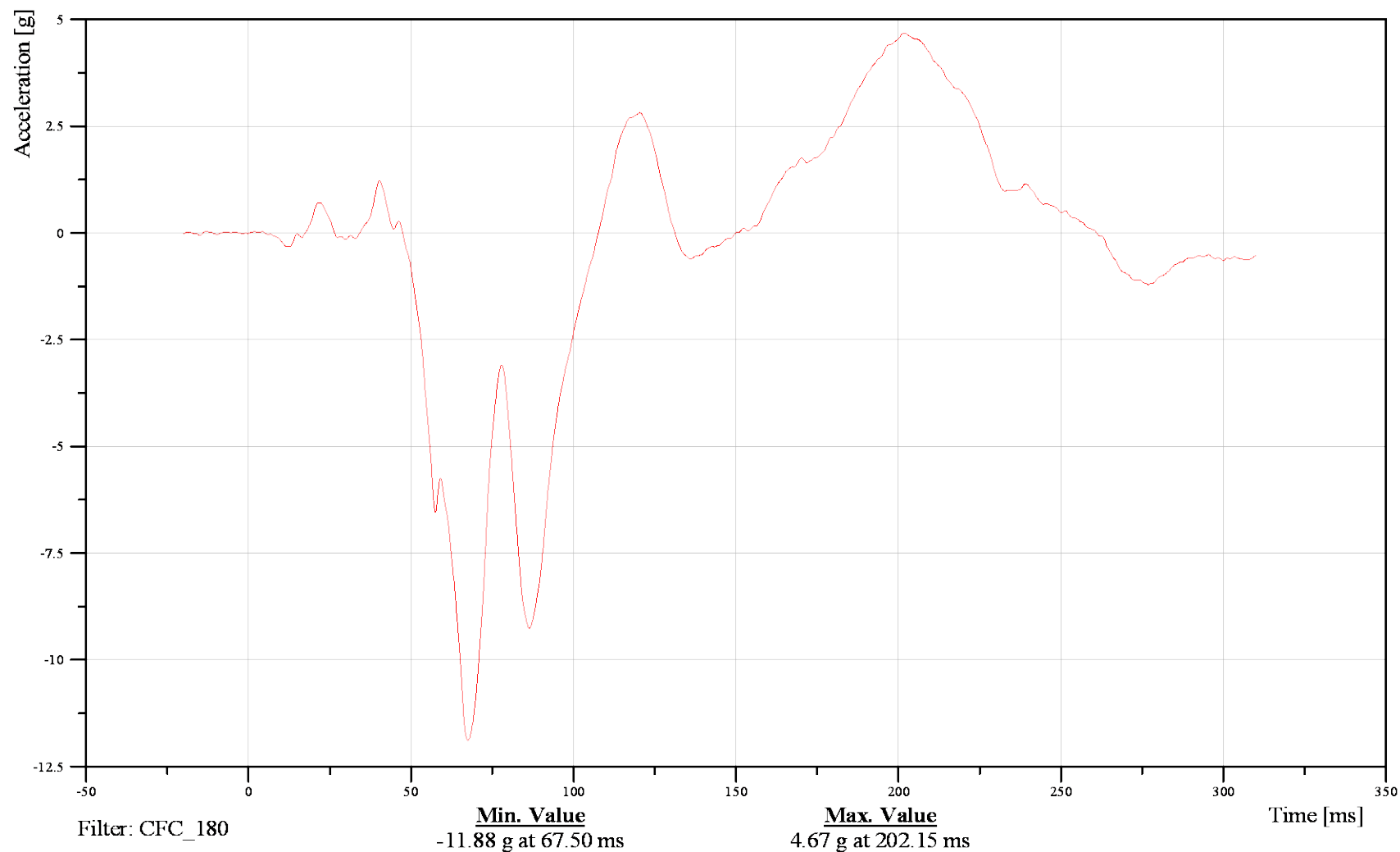
Time: 10:15

Customer: VRTC

14THSP0400WFACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 Lateral Ay

Date: 03/13/2013

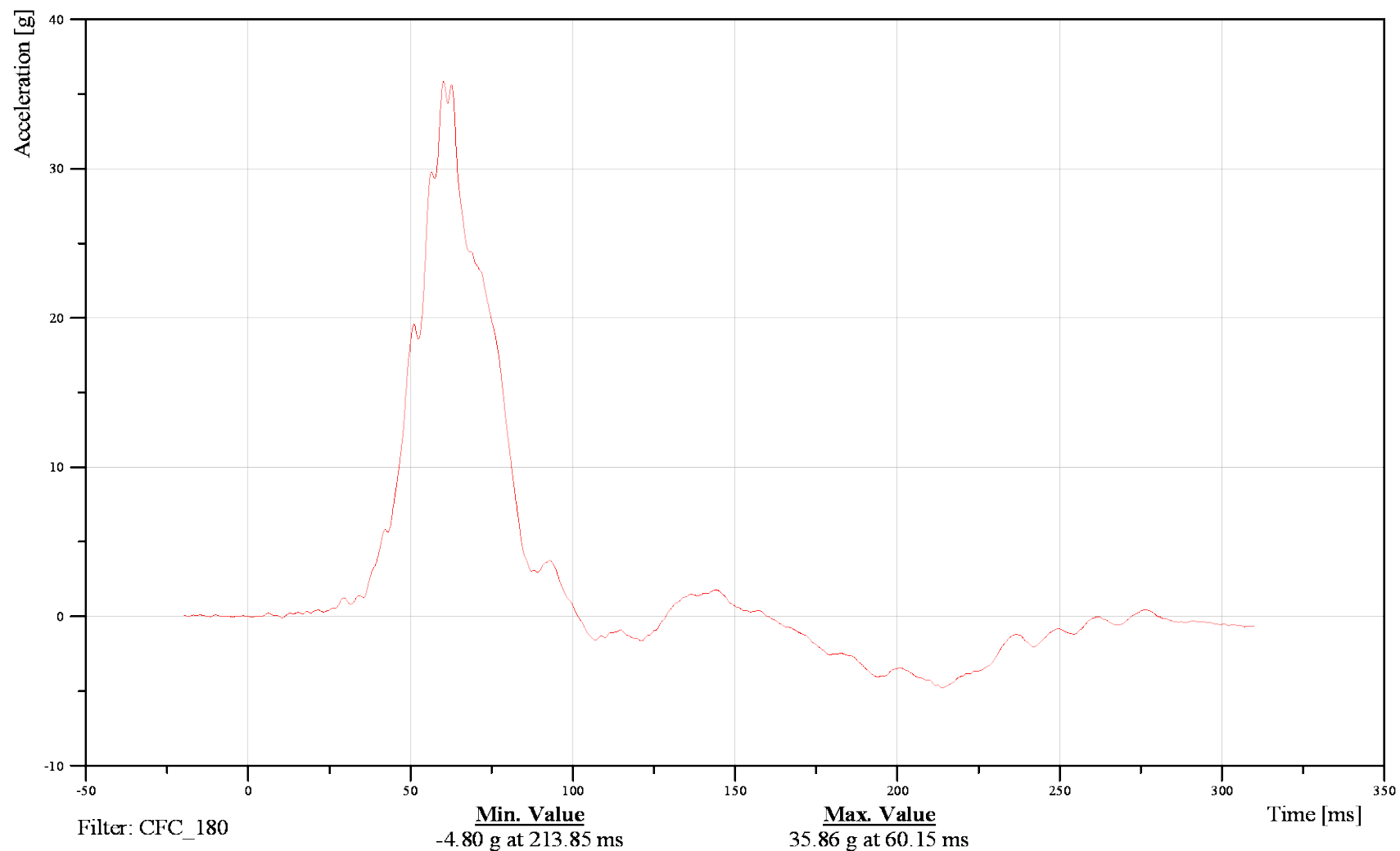
Time: 10:15

Customer: VRTC

14THSP0400WFACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 Vertical Az

Date: 03/13/2013

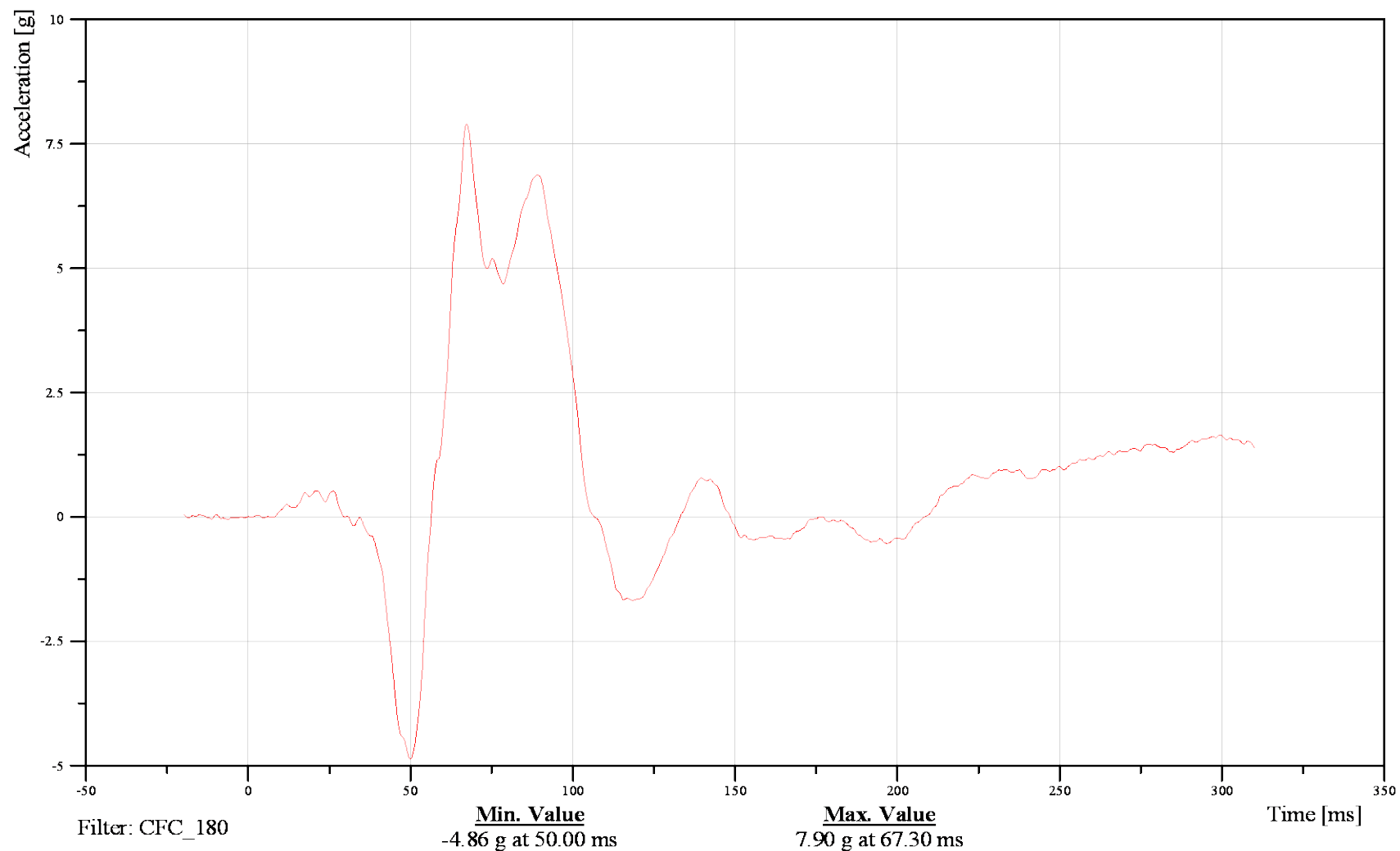
Time: 10:15

Customer: VRTC

14THSP0400WFACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T4 A Resultant

Date: 03/13/2013

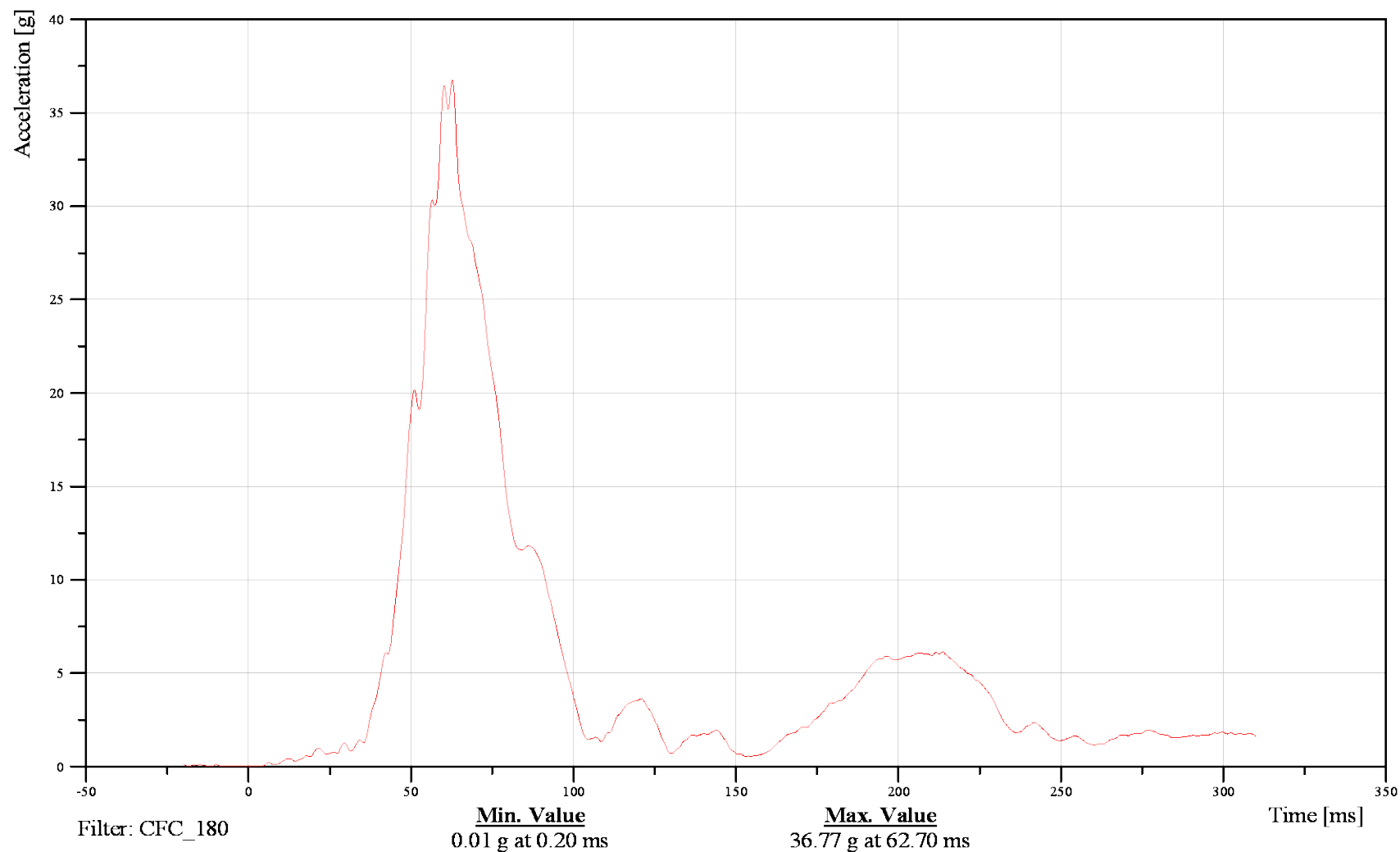
Time: 10:15

Customer: VRTC

14THSP0400WFACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 Longitudinal Ax

Date: 03/13/2013

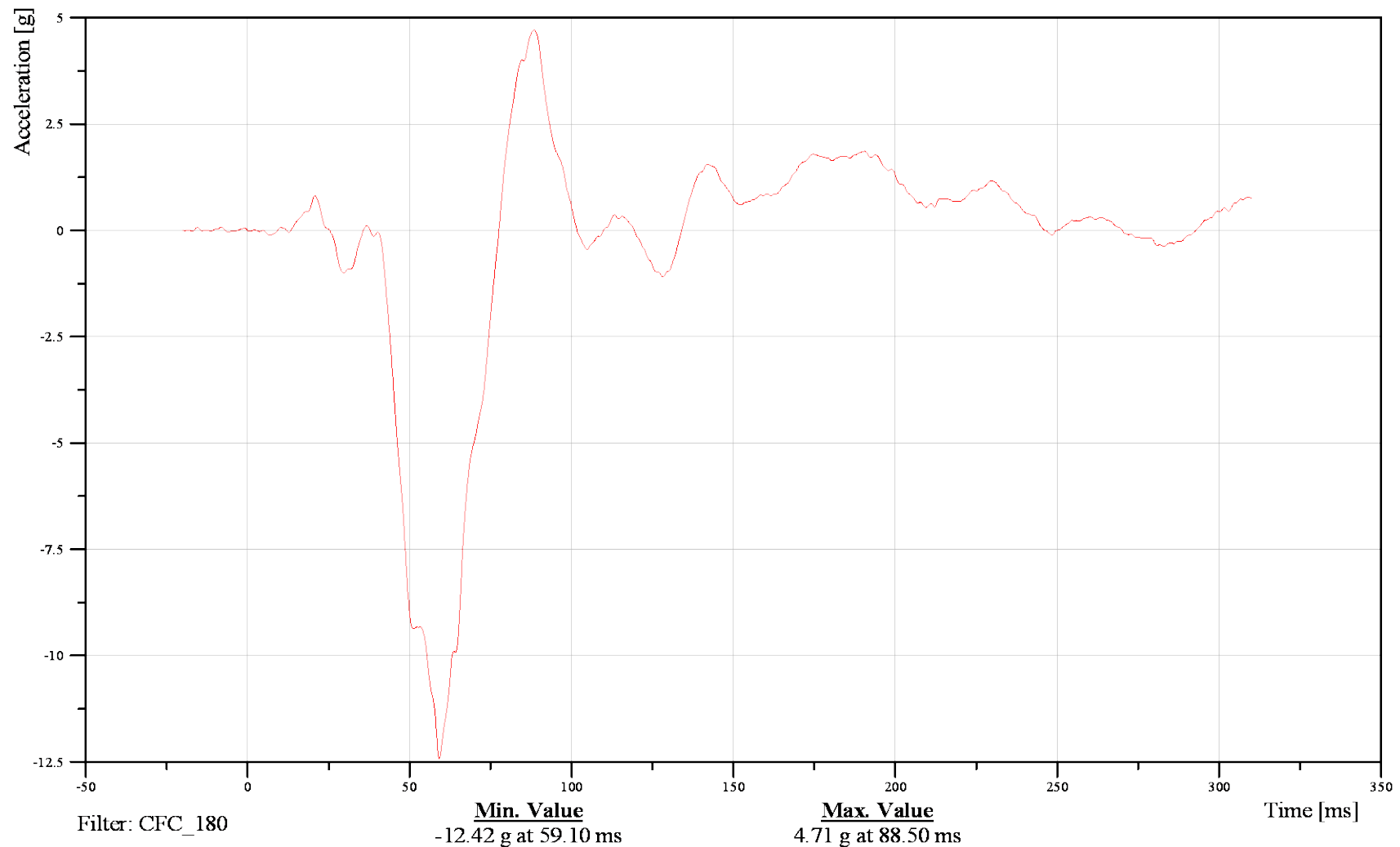
Time: 10:15

Customer: VRTC

14THSP1200WFACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 Lateral Ay

Date: 03/13/2013

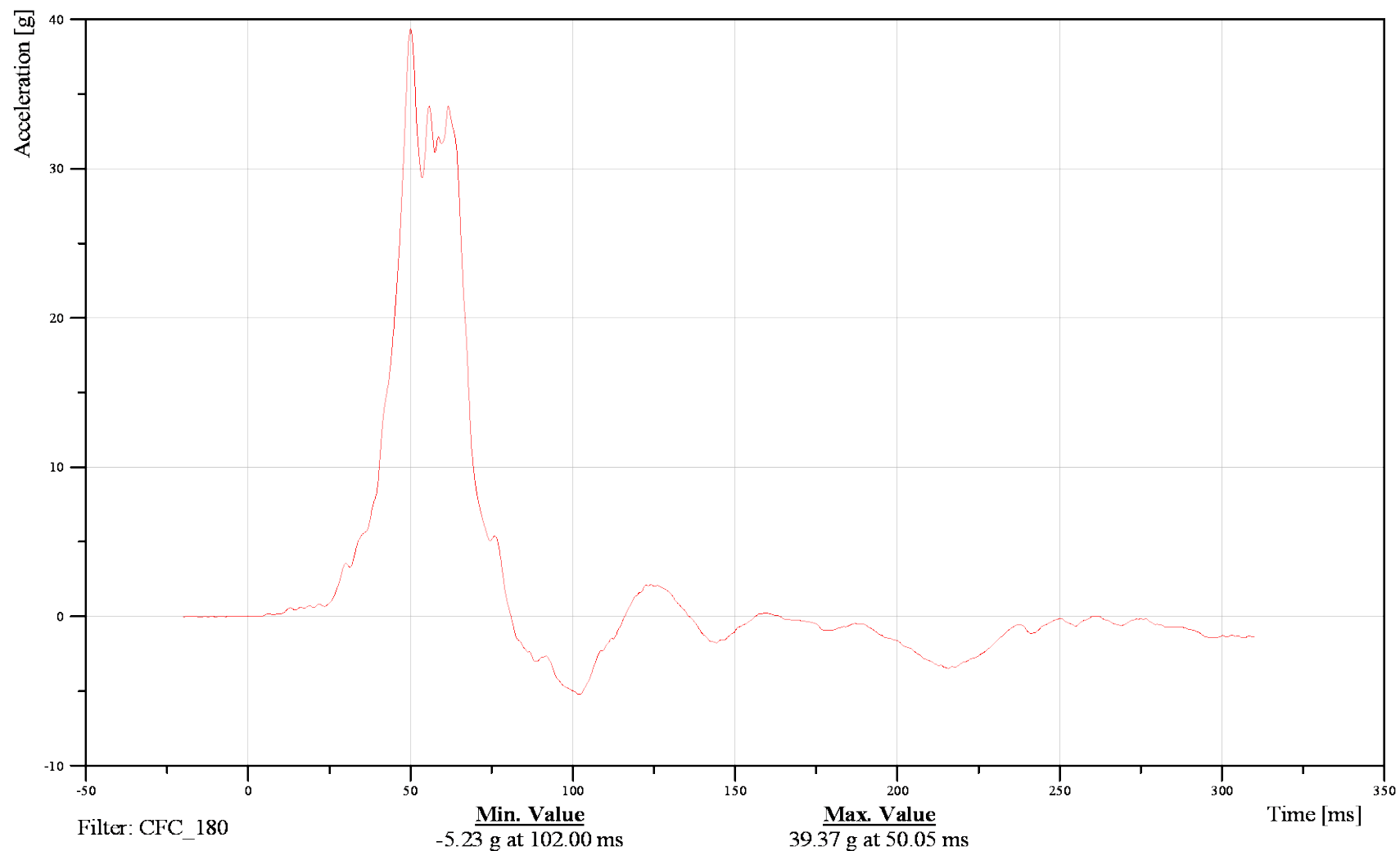
Time: 10:15

Customer: VRTC

14THSP1200WFACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 Vertical Az

Date: 03/13/2013

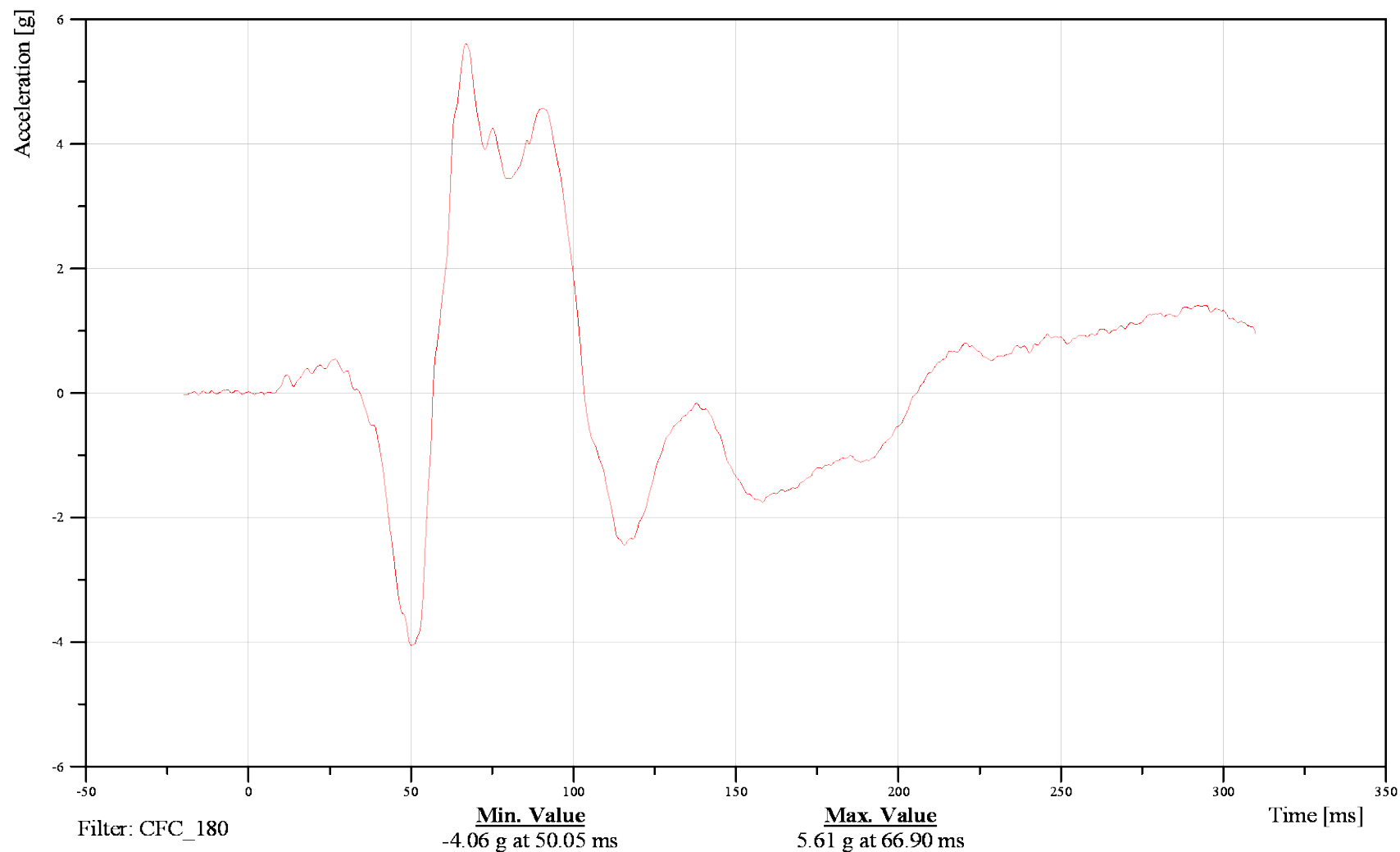
Time: 10:15

Customer: VRTC

14THSP1200WFACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

T12 A Resultant

Date: 03/13/2013

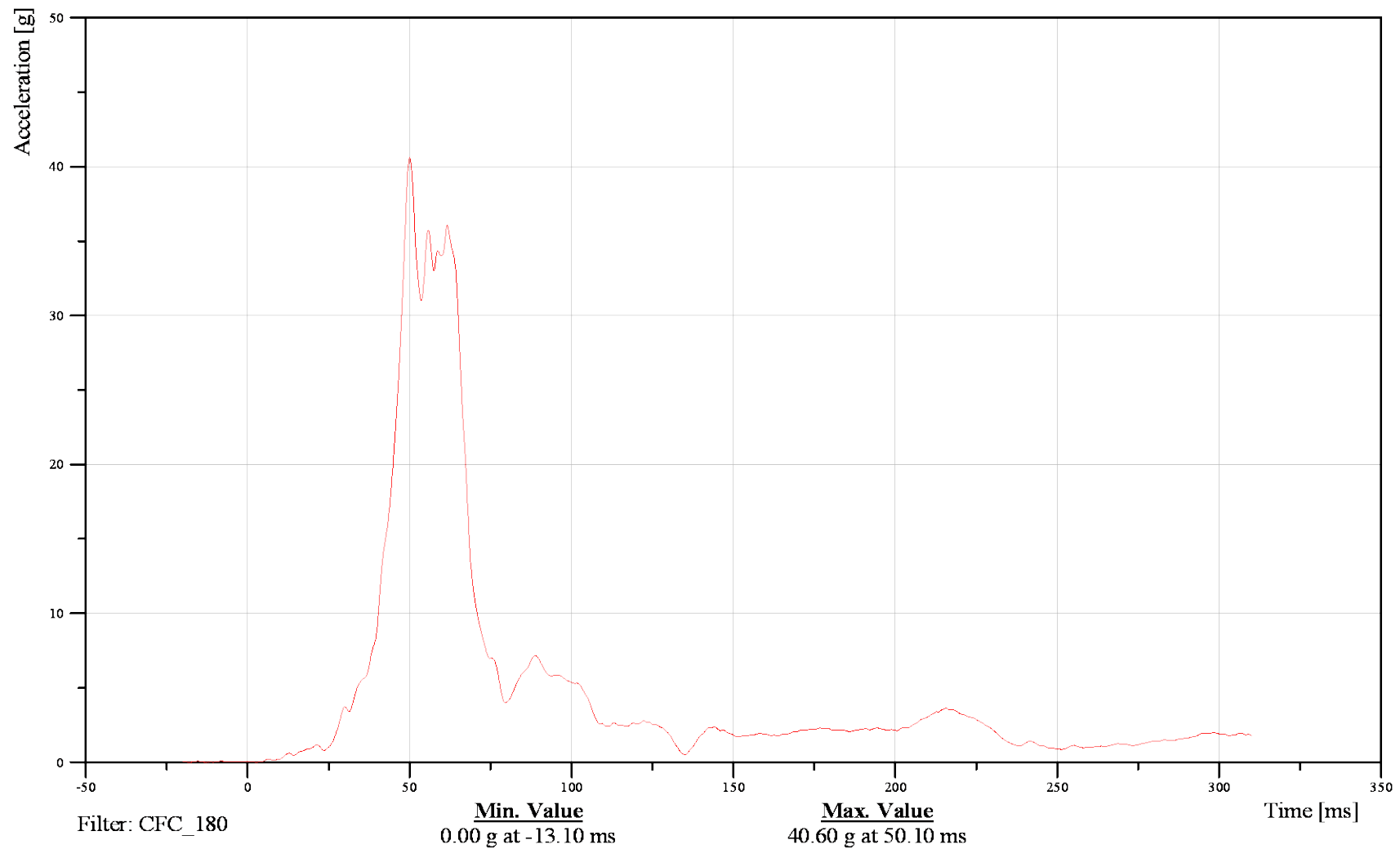
Time: 10:15

Customer: VRTC

14THSP1200WFACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis Longitudinal Ax

Date: 03/13/2013

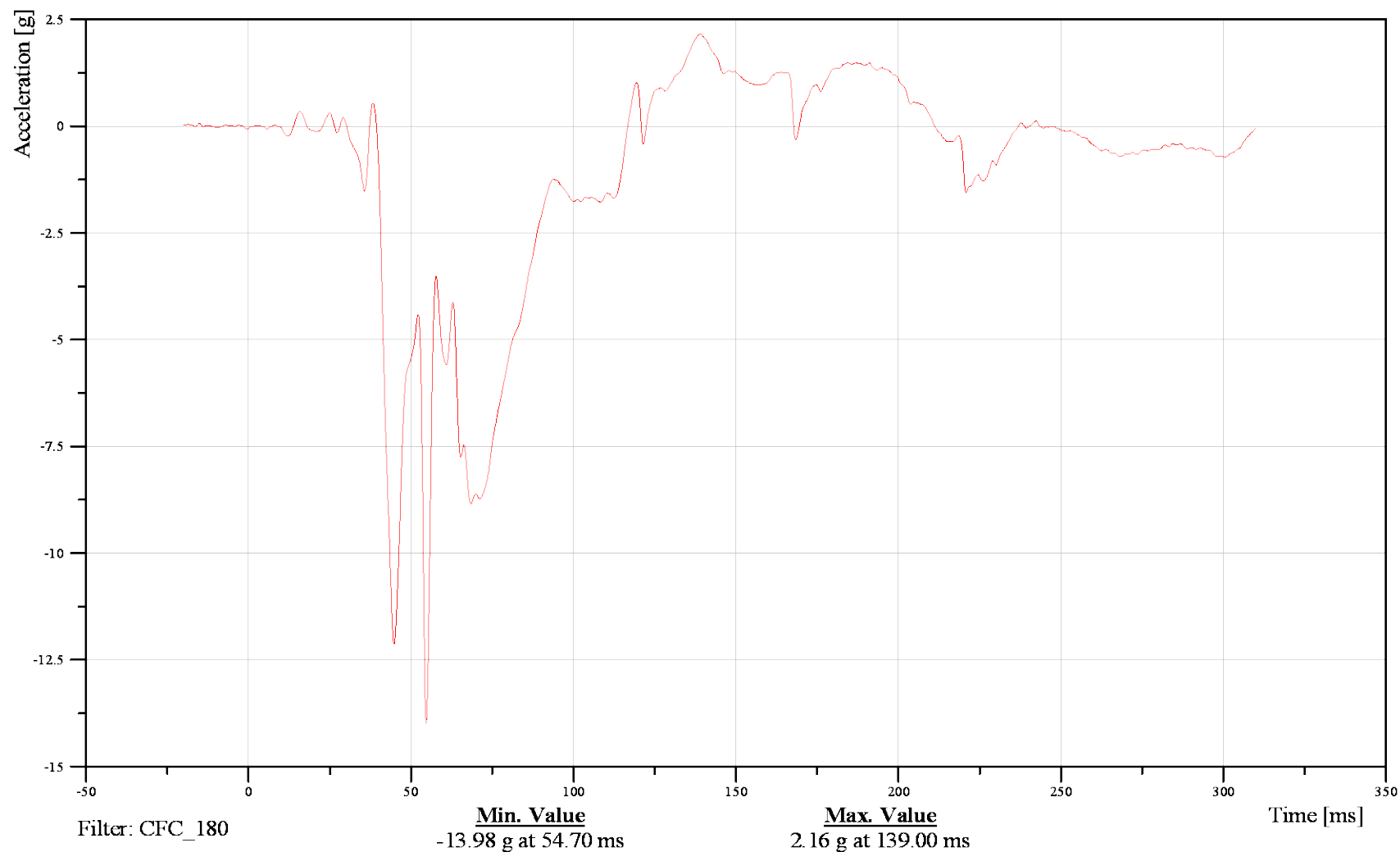
Time: 10:15

Customer: VRTC

14PELV0000WFACXC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis Lateral Ay

Date: 03/13/2013

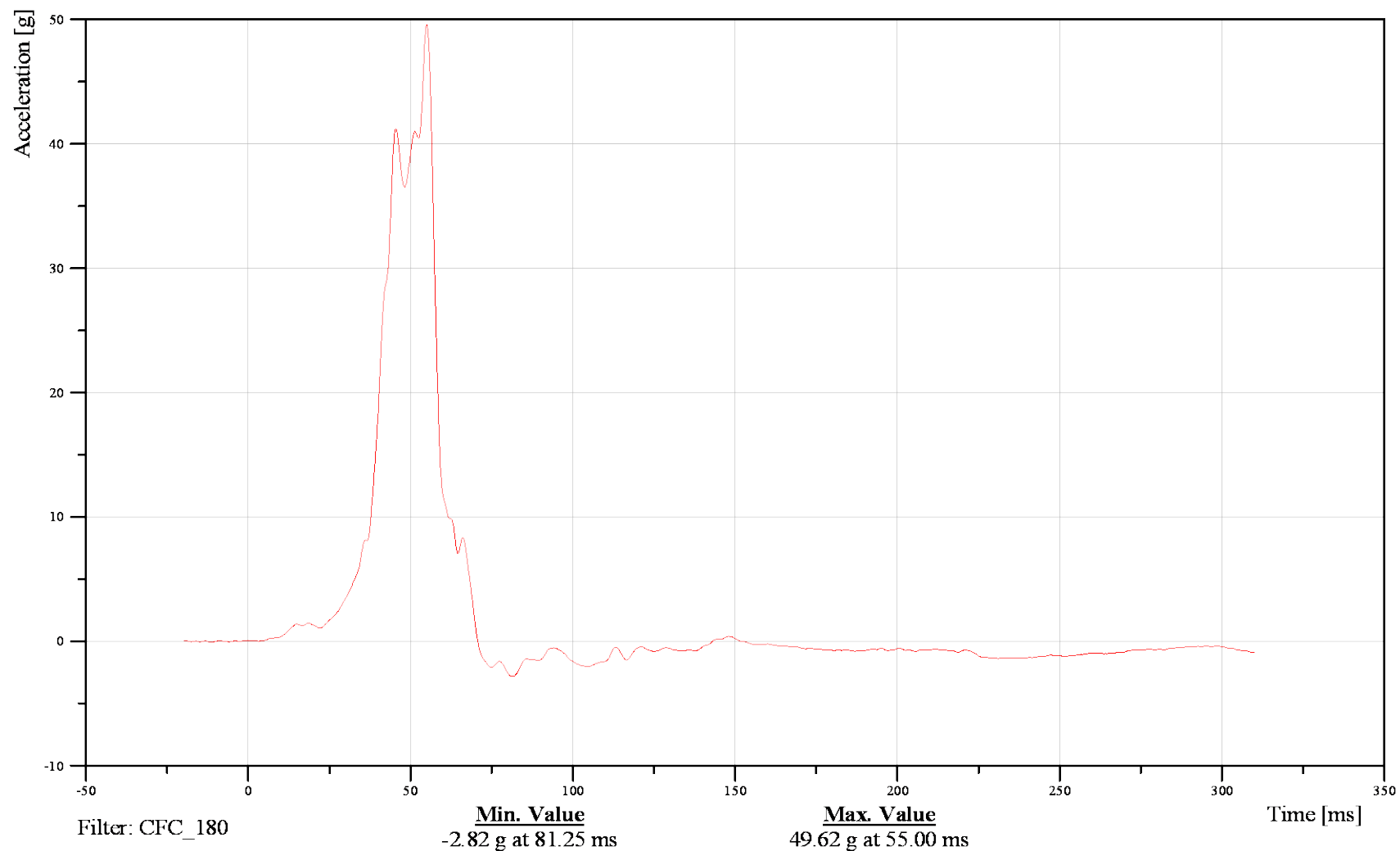
Time: 10:15

Customer: VRTC

14PELV0000WFACYC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis Vertical Az

Date: 03/13/2013

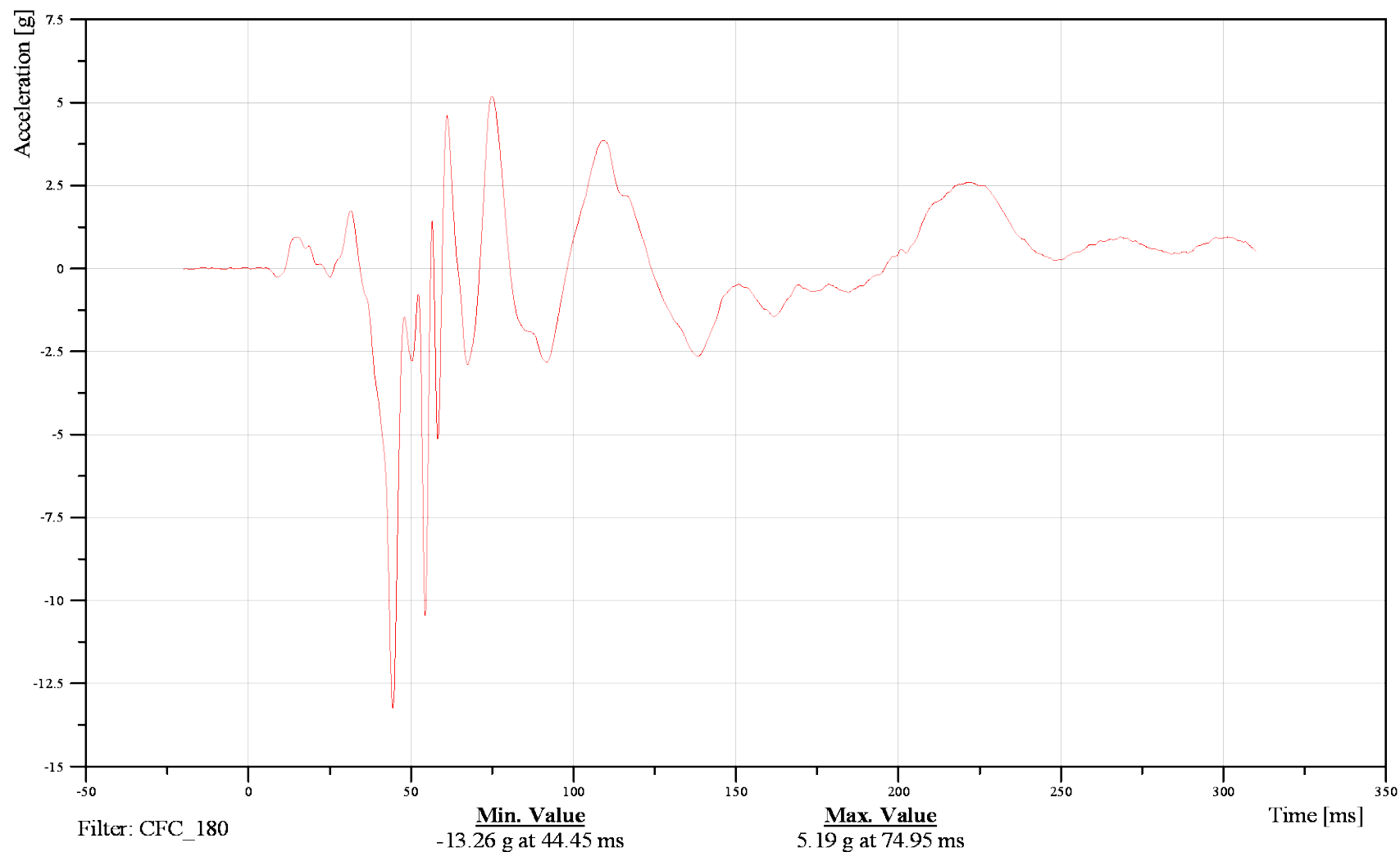
Time: 10:15

Customer: VRTC

14PELV0000WFACZC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Pelvis A Resultant

Date: 03/13/2013

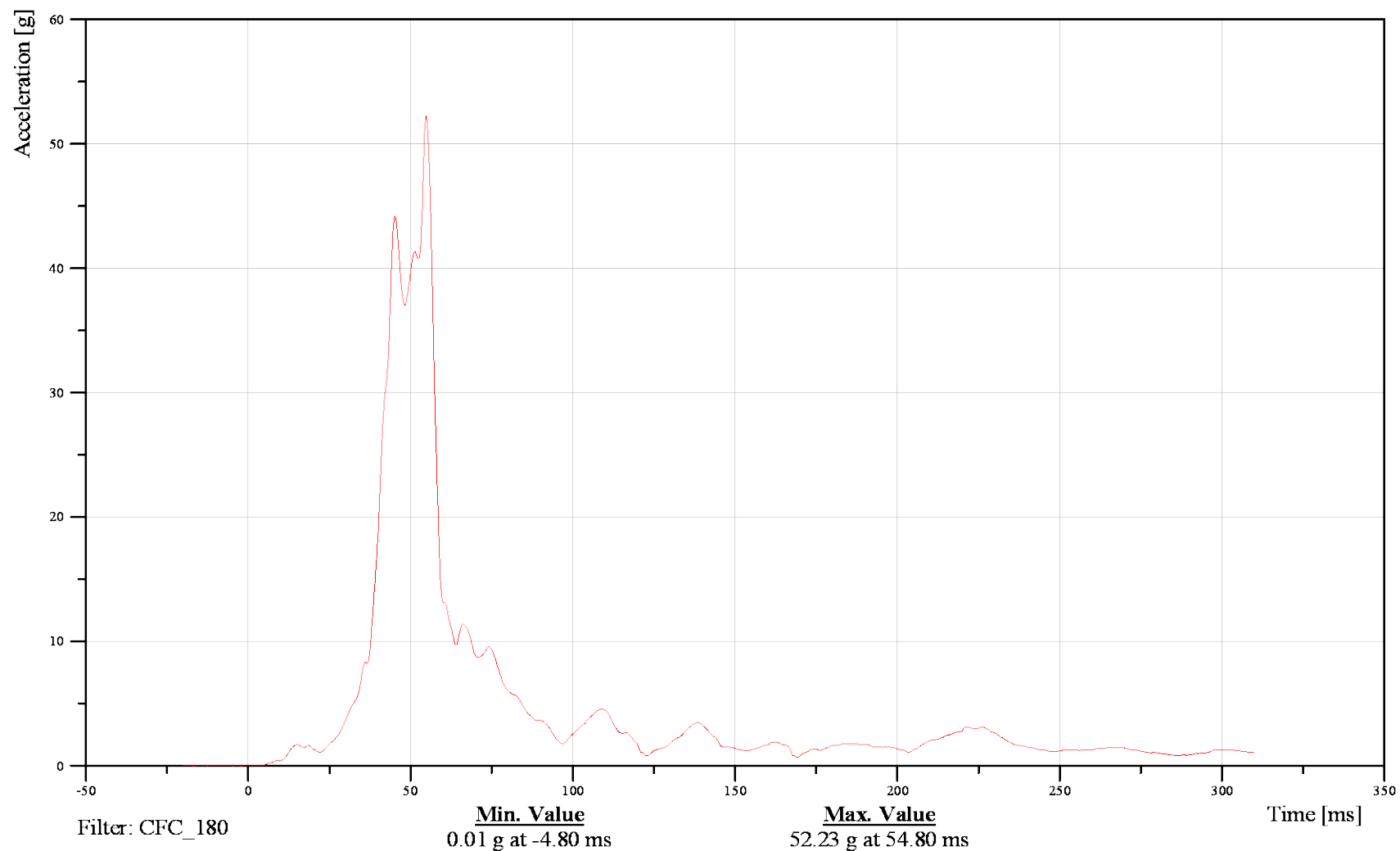
Time: 10:15

Customer: VRTC

14PELV0000WFACRC

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

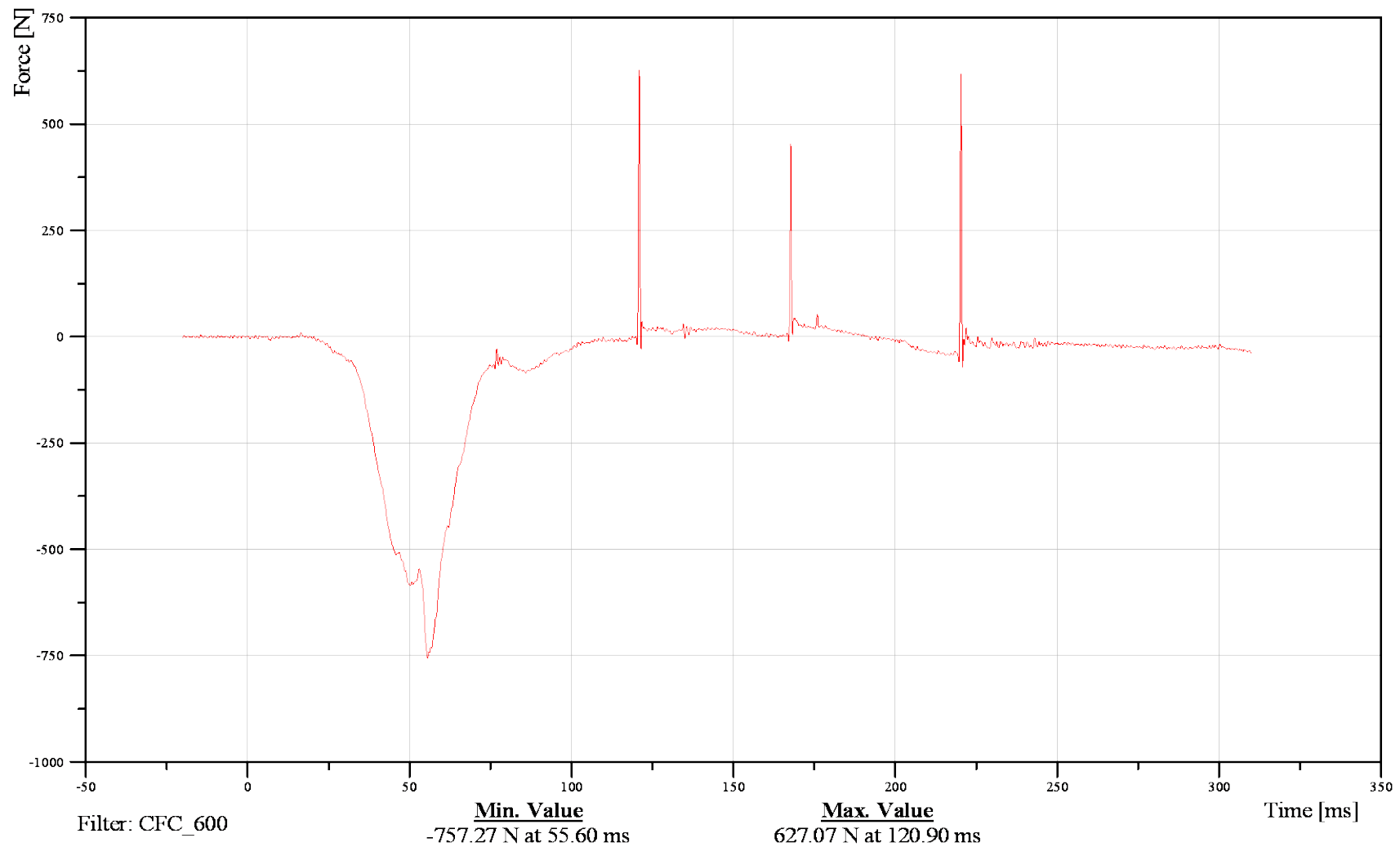
Pubic Force Fy

Customer: VRTC

14PUBC0000WFFOYB

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle CG (X)

Date: 03/13/2013

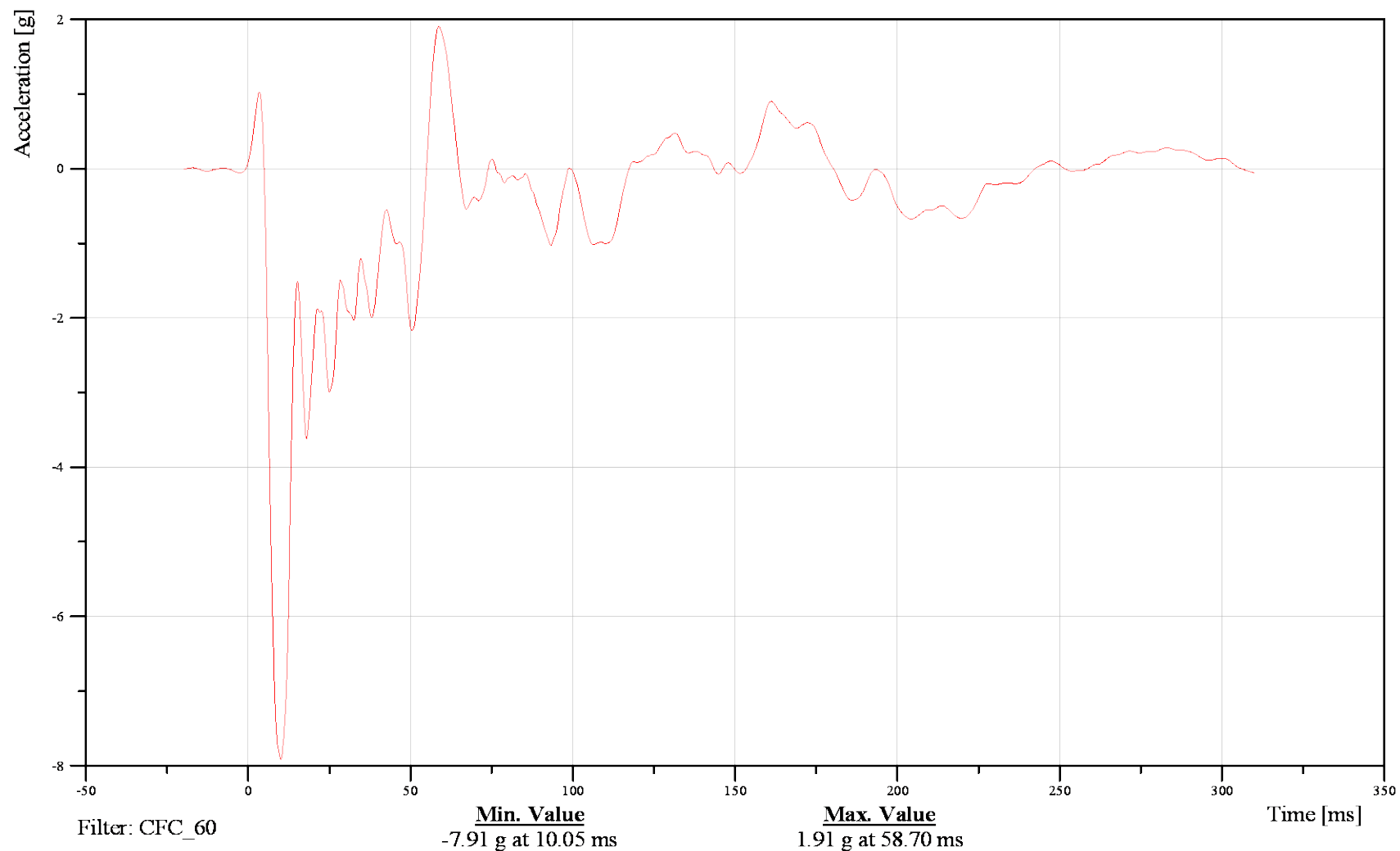
Time: 10:15

Customer: VRTC

11VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle CG (Y)

Date: 03/13/2013

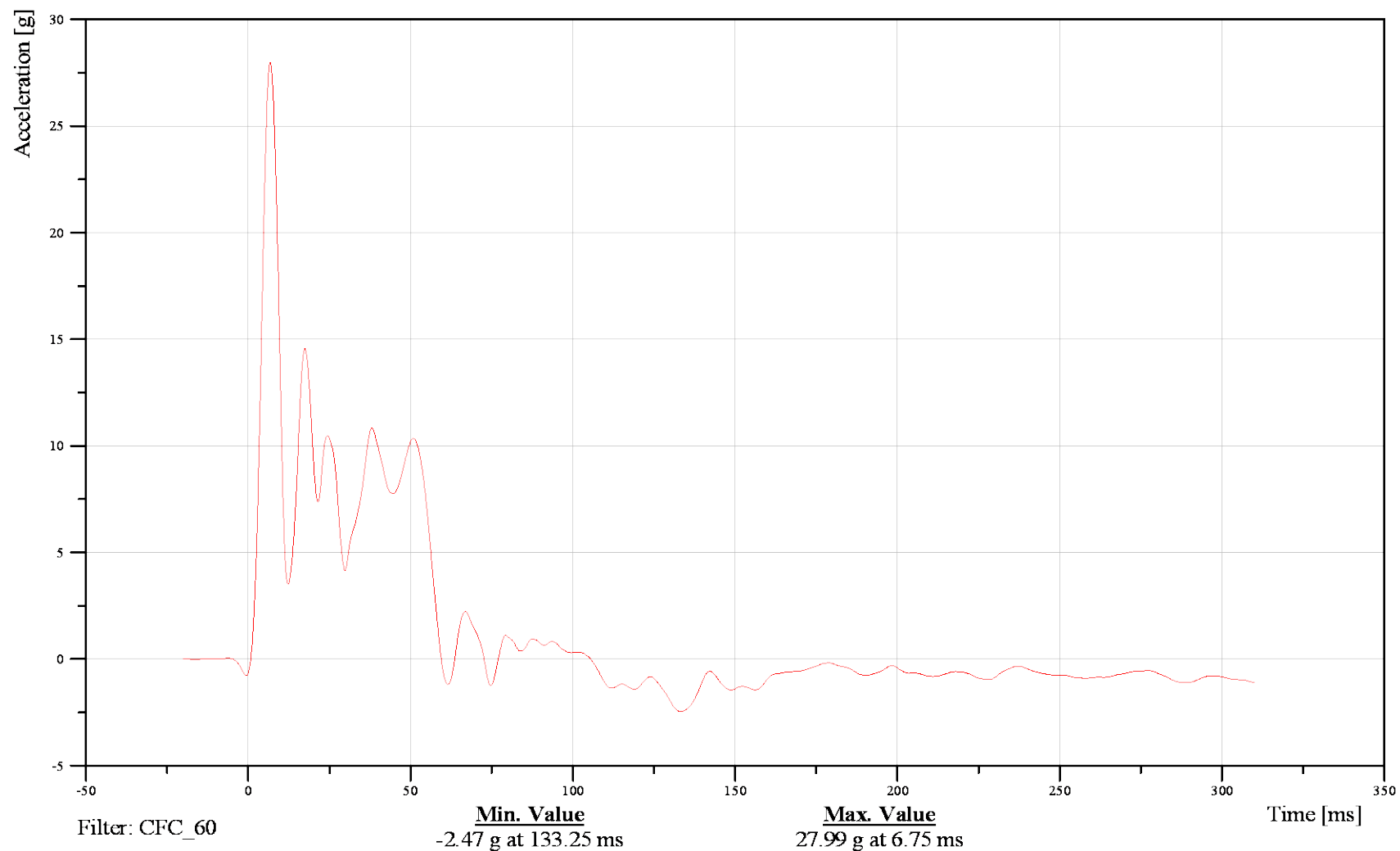
Time: 10:15

Customer: VRTC

11VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle CG (Z)

Date: 03/13/2013

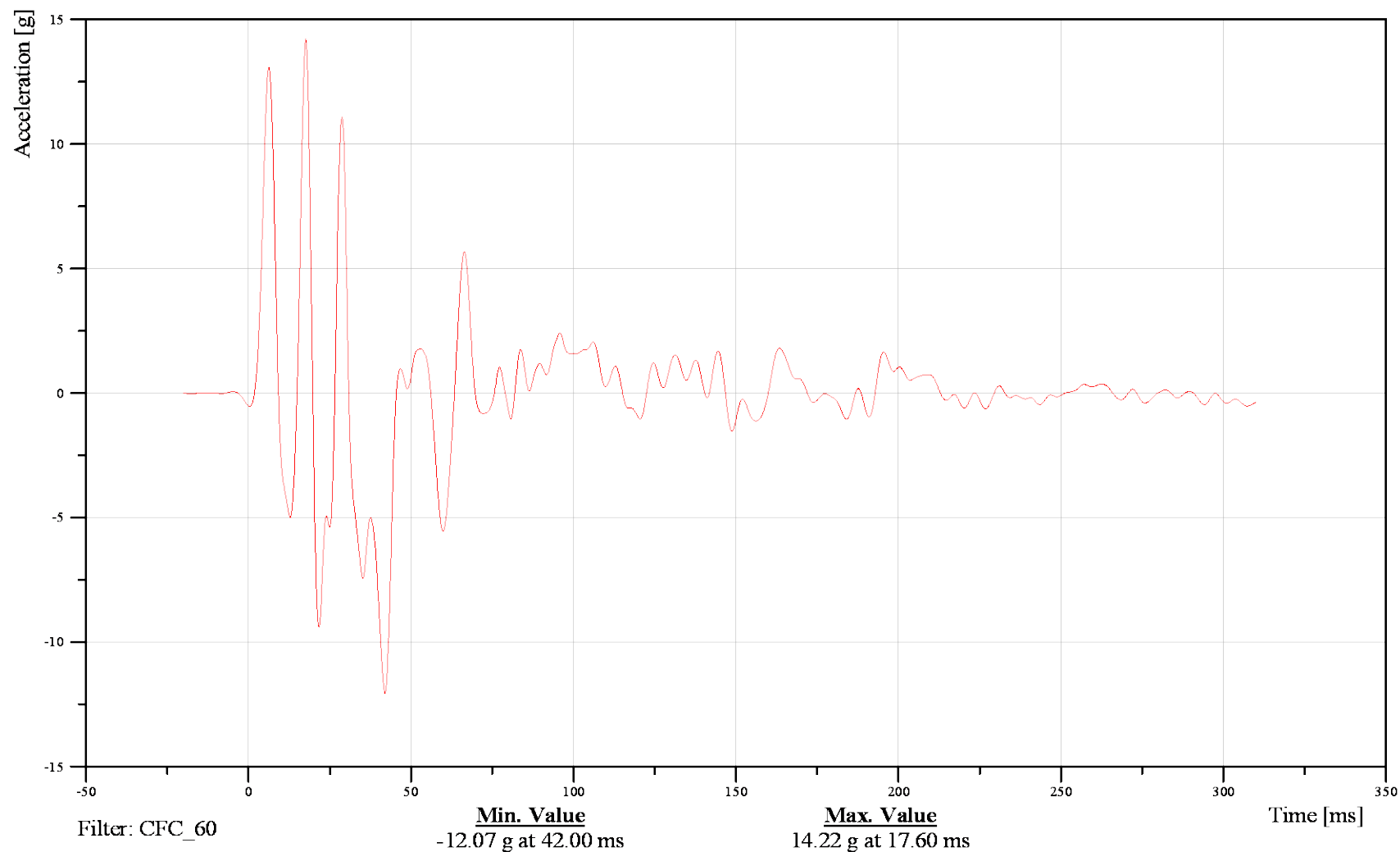
Time: 10:15

Customer: VRTC

11VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle CG Resultant

Date: 03/13/2013

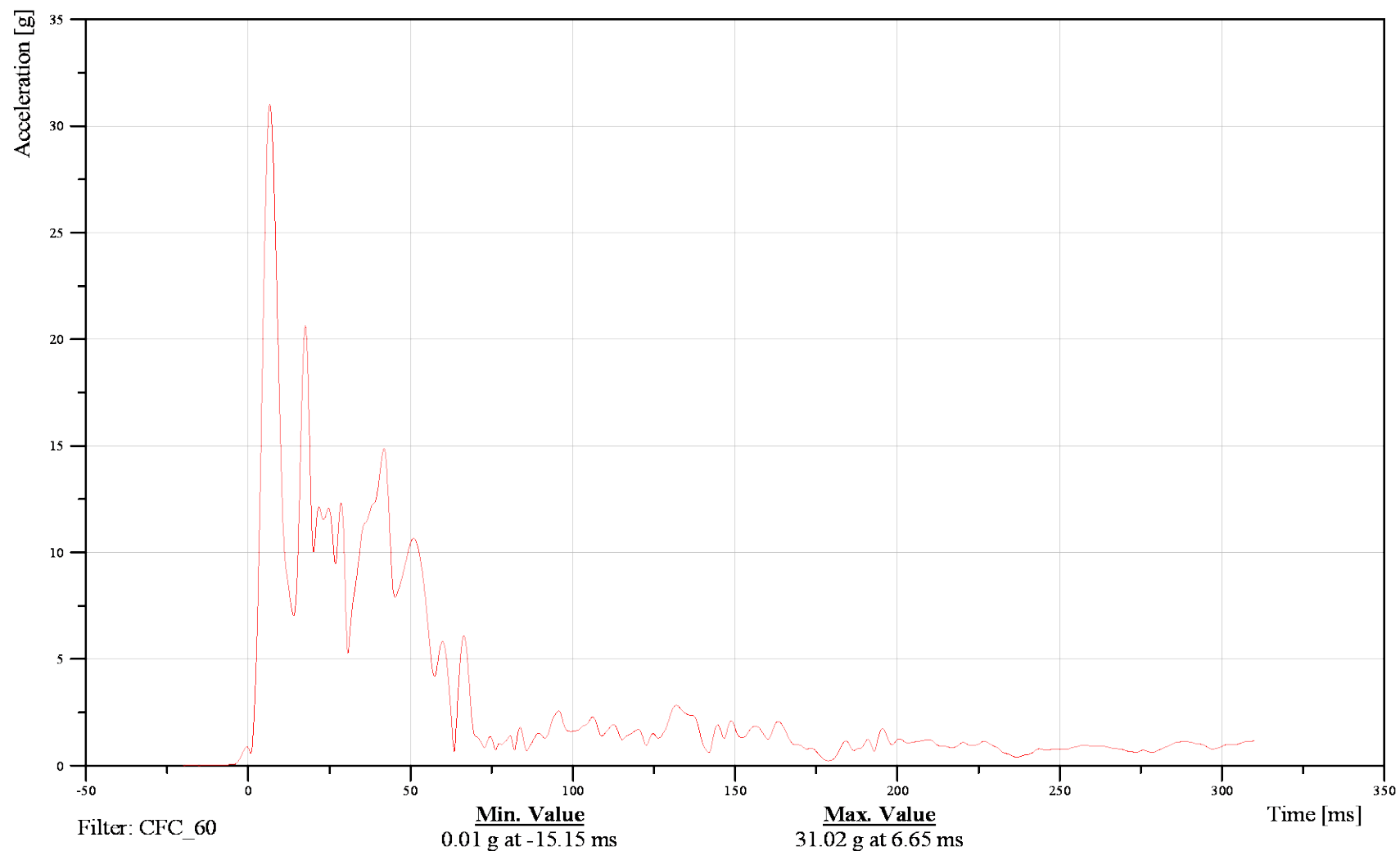
Time: 10:15

Customer: VRTC

11VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Front Sill at Front Seat (X)

Date: 03/13/2013

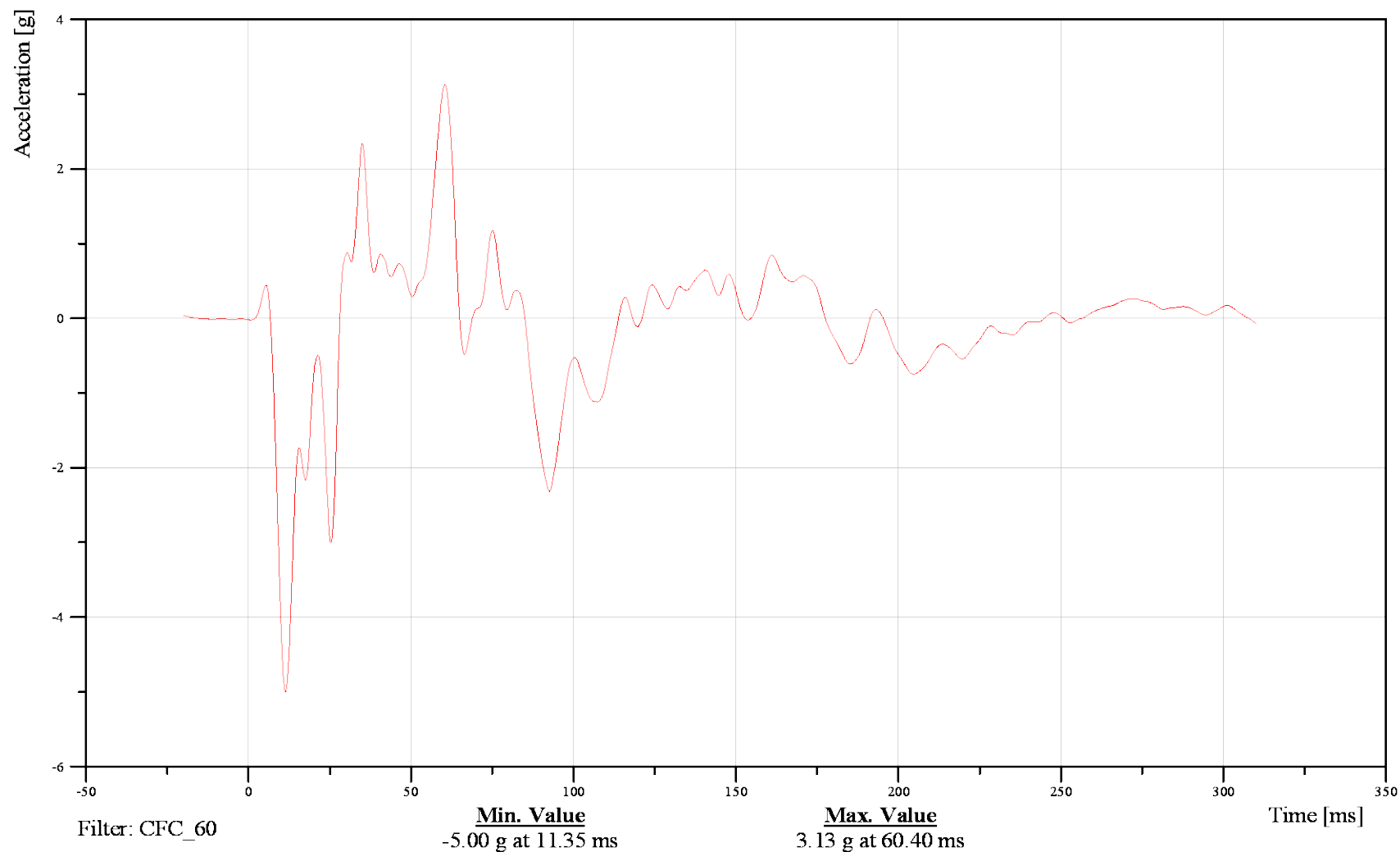
Time: 10:15

Customer: VRTC

11SILBRIFR00ACXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Front Sill at Front Seat (Y)

Date: 03/13/2013

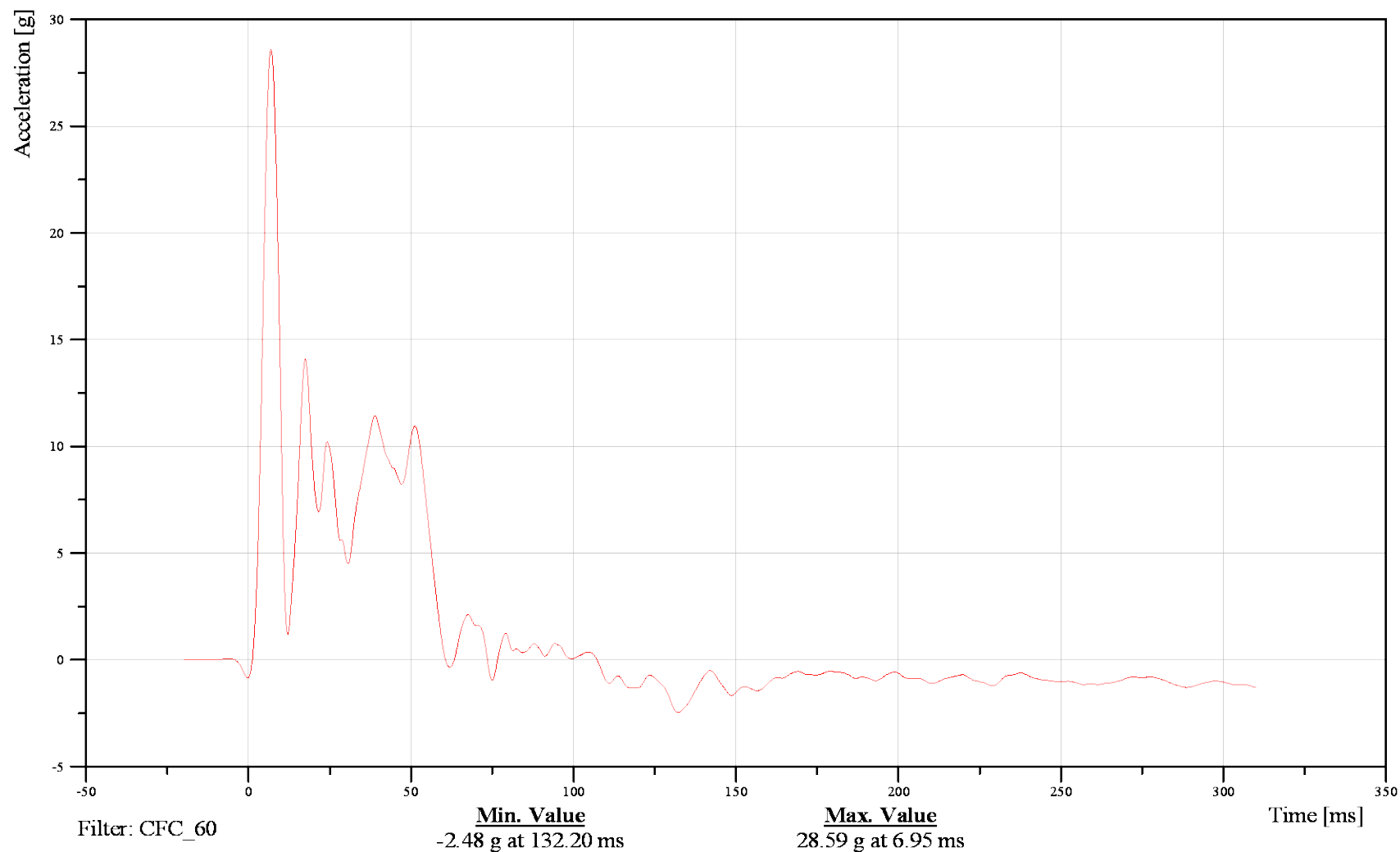
Time: 10:15

Customer: VRTC

11SILBRIFR00ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Front Sill at Front Seat (Z)

Date: 03/13/2013

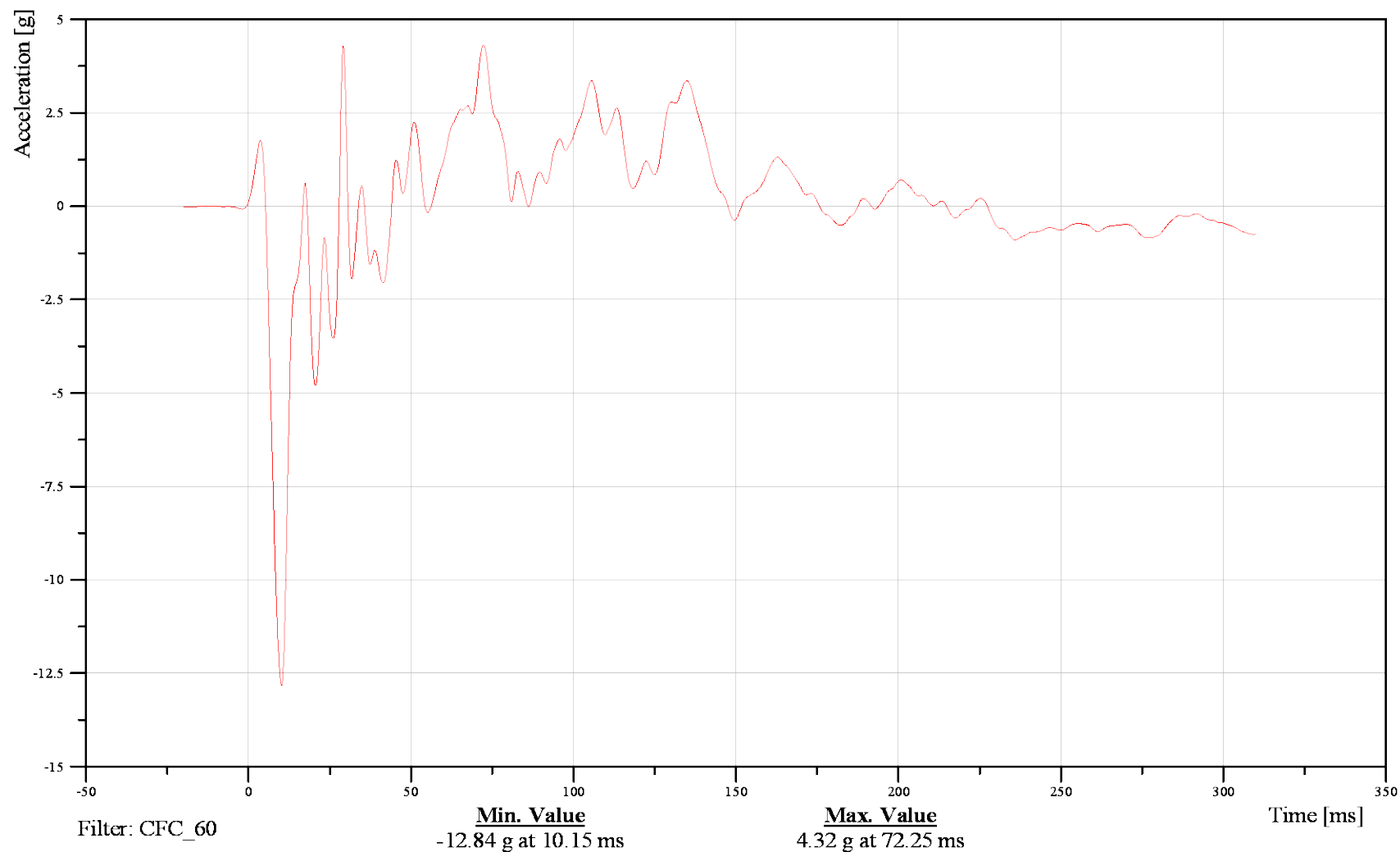
Time: 10:15

Customer: VRTC

11SILBRIFR00ACZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Front Sill at Front Seat Resultant

Date: 03/13/2013

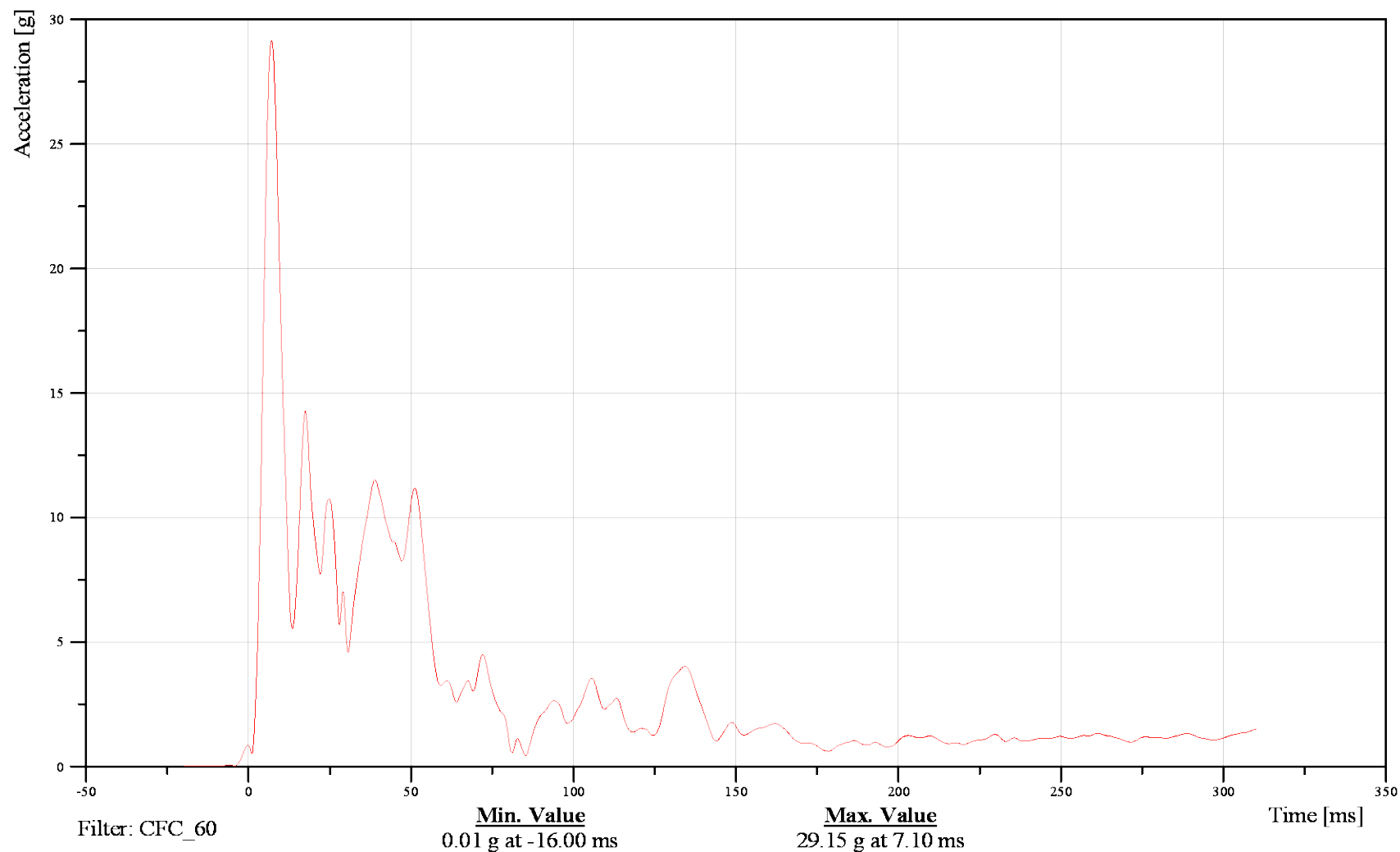
Time: 10:15

Customer: VRTC

11SILBRIFR00ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Rear Sill at Rear Seat (X)

Date: 03/13/2013

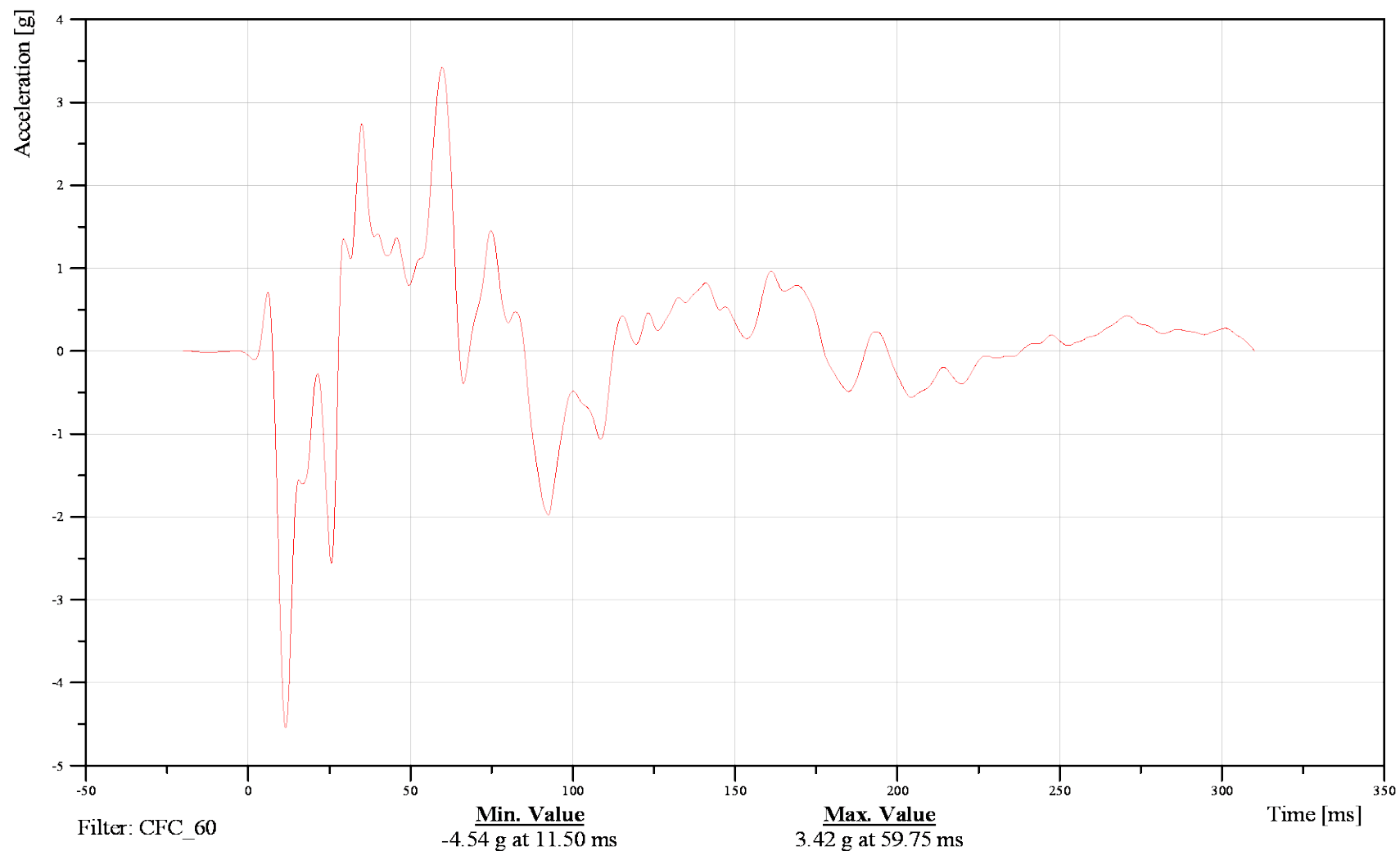
Time: 10:15

Customer: VRTC

11SILBRIRE00ACXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Rear Sill at Rear Seat (Y)

Date: 03/13/2013

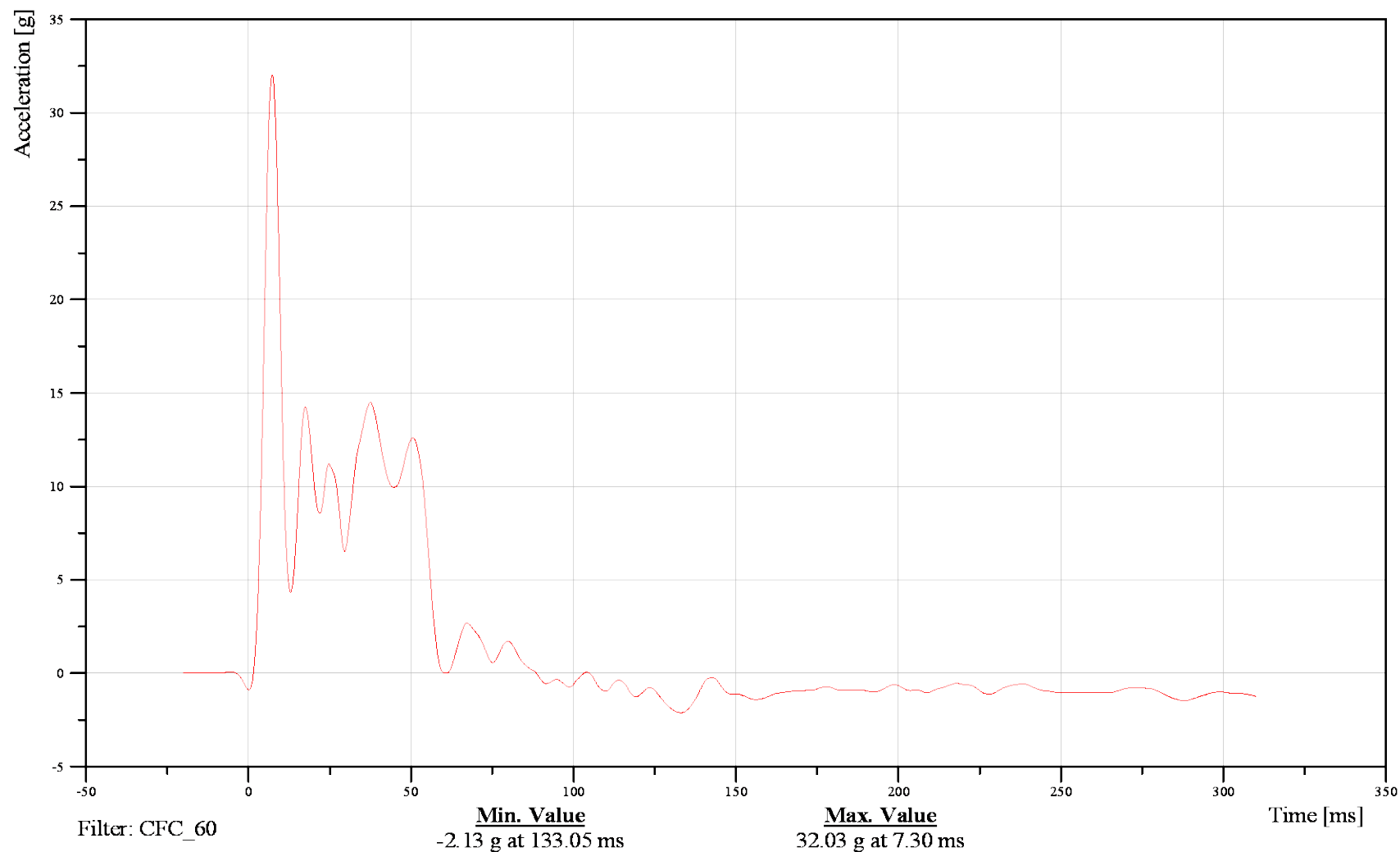
Time: 10:15

Customer: VRTC

11SILBRIRE00ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Rear Sill at Rear Seat (Z)

Date: 03/13/2013

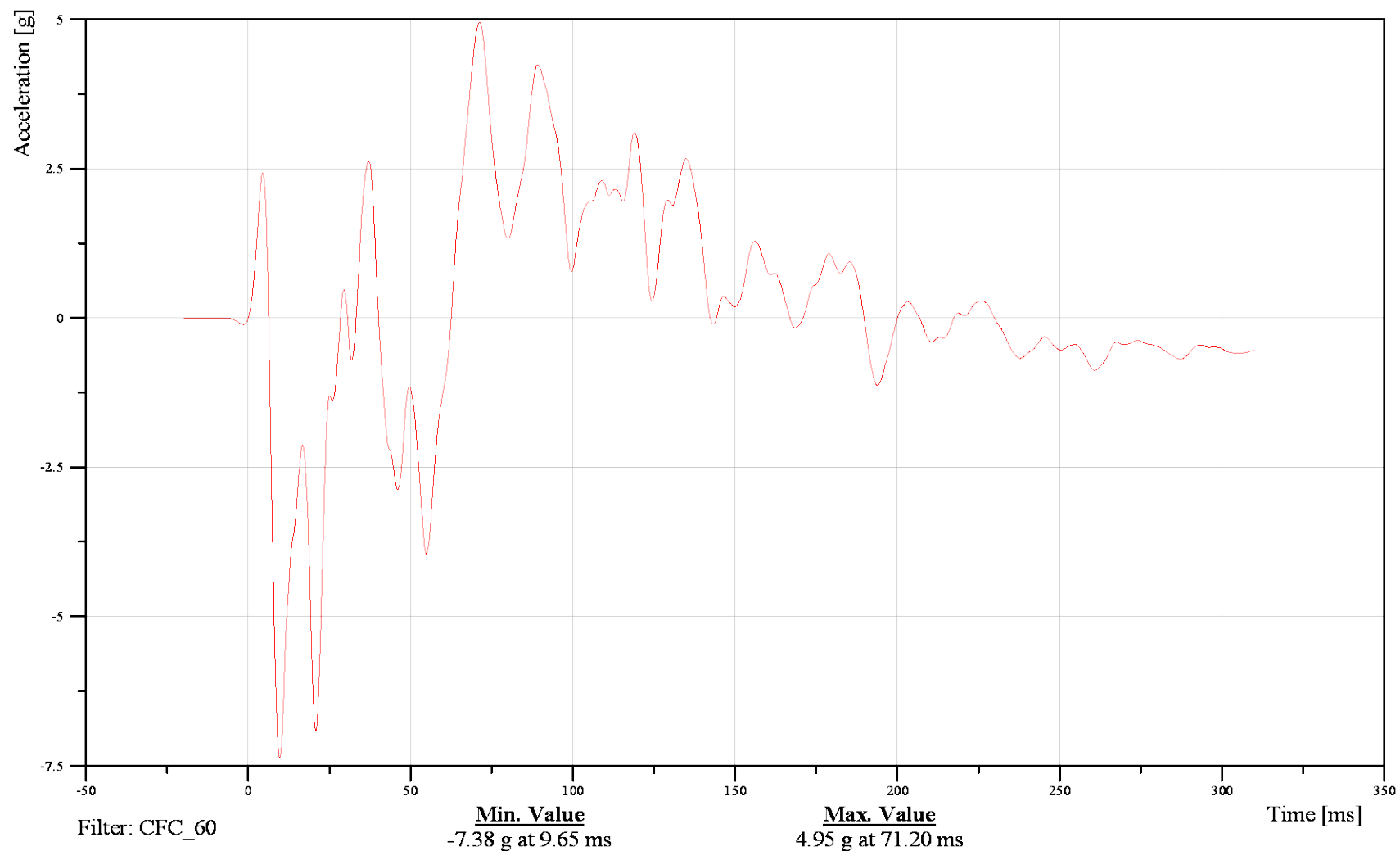
Time: 10:15

Customer: VRTC

11SILBRIRE00ACZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Right Rear Sill at Rear Seat Resultant

Date: 03/13/2013

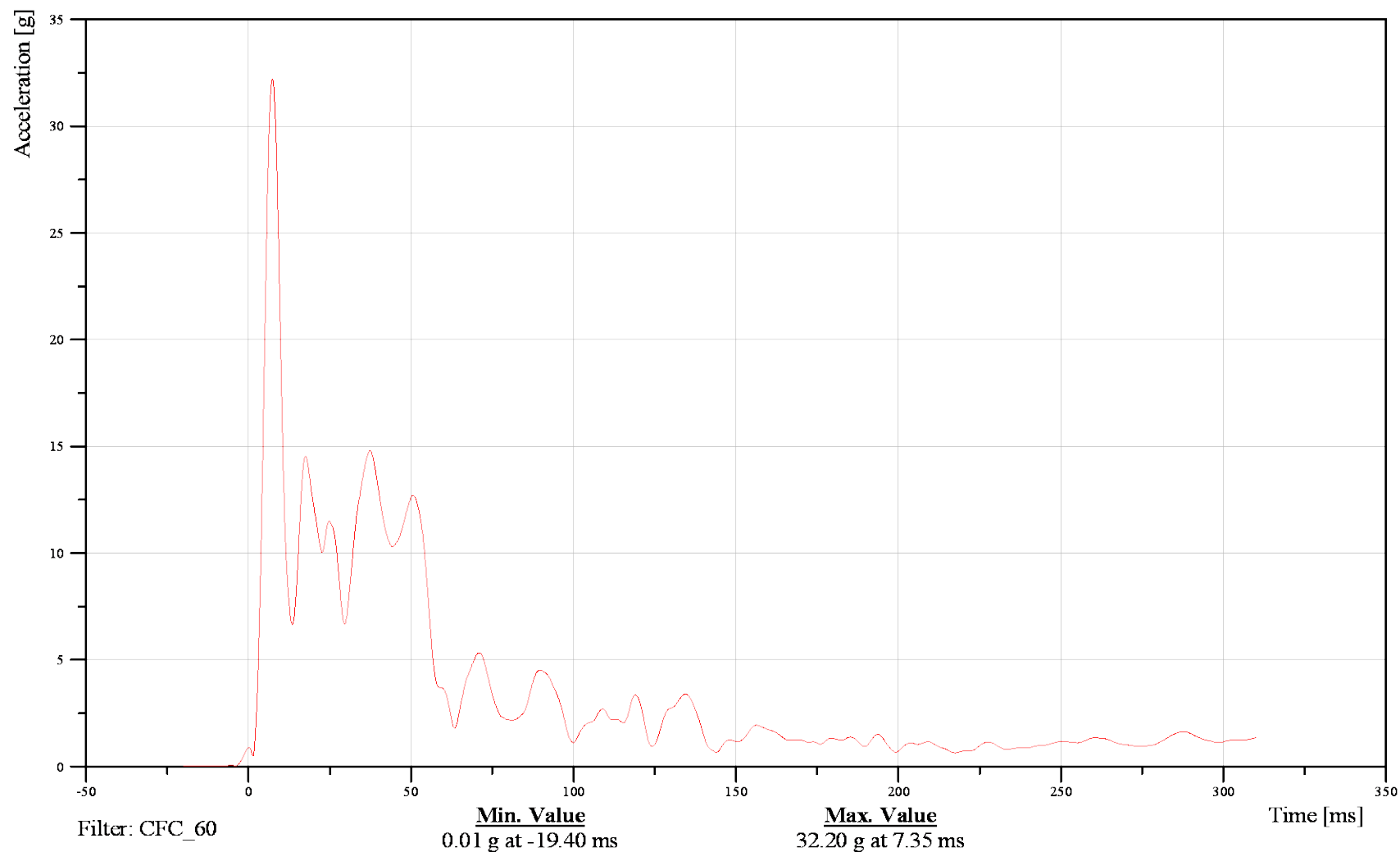
Time: 10:15

Customer: VRTC

11SILBRIRE00ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Side Sill at Front Seat (Y)

Date: 03/13/2013

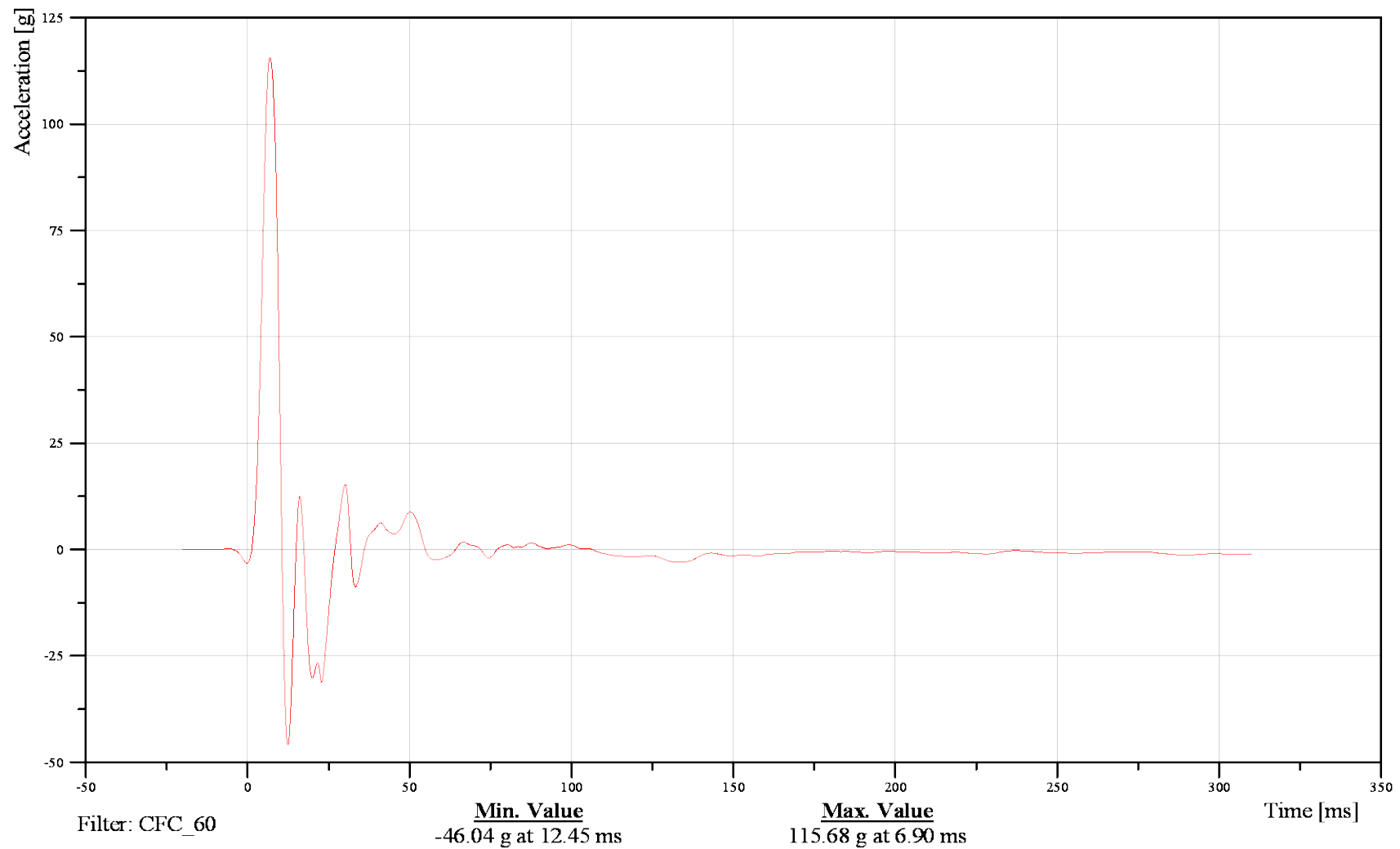
Time: 10:15

Customer: VRTC

11SILBLEFR00ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Side Sill at Rear Seat (Y)

Date: 03/13/2013

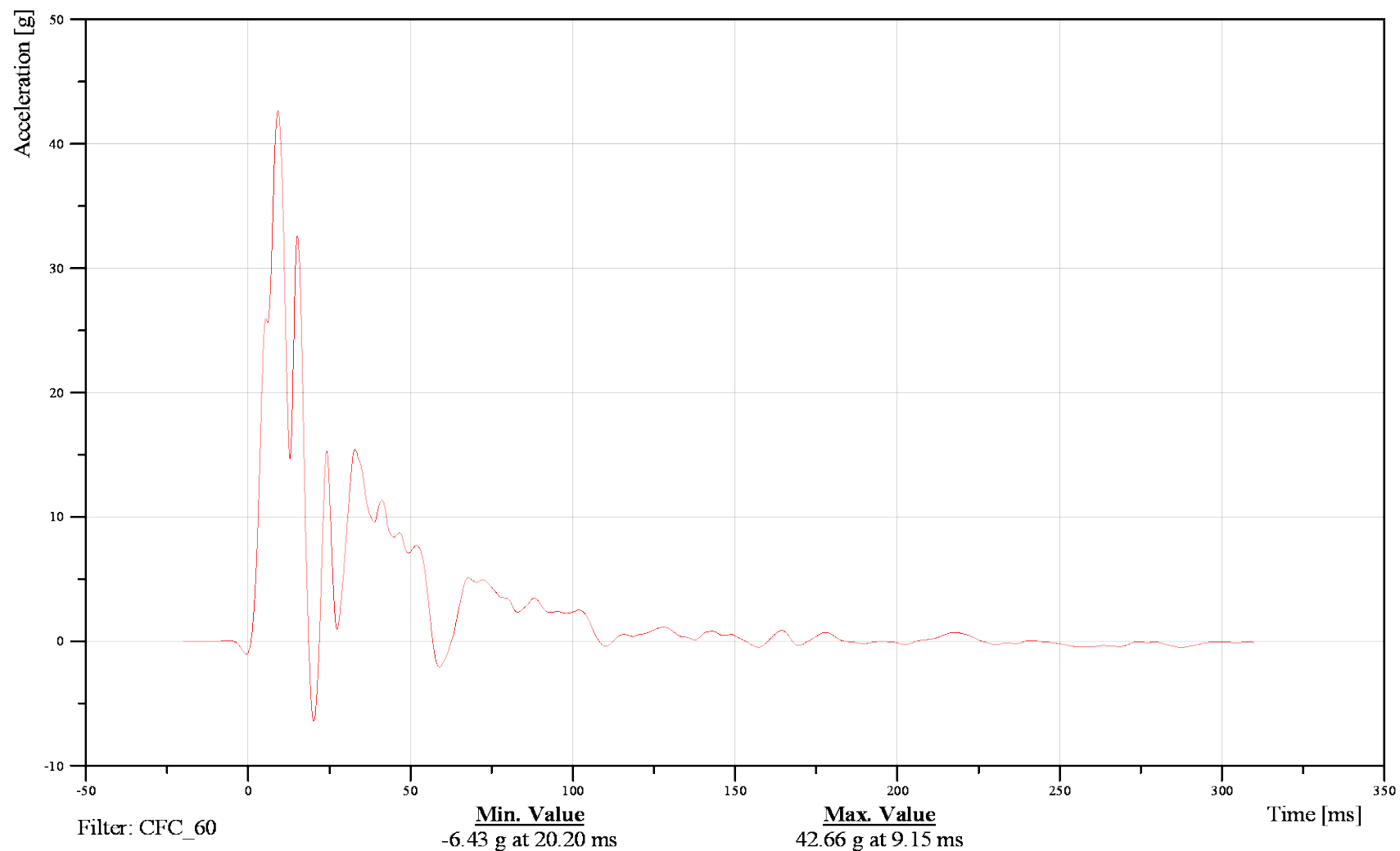
Time: 10:15

Customer: VRTC

11SILBLERE00ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Lower A Post (Y)

Date: 03/13/2013

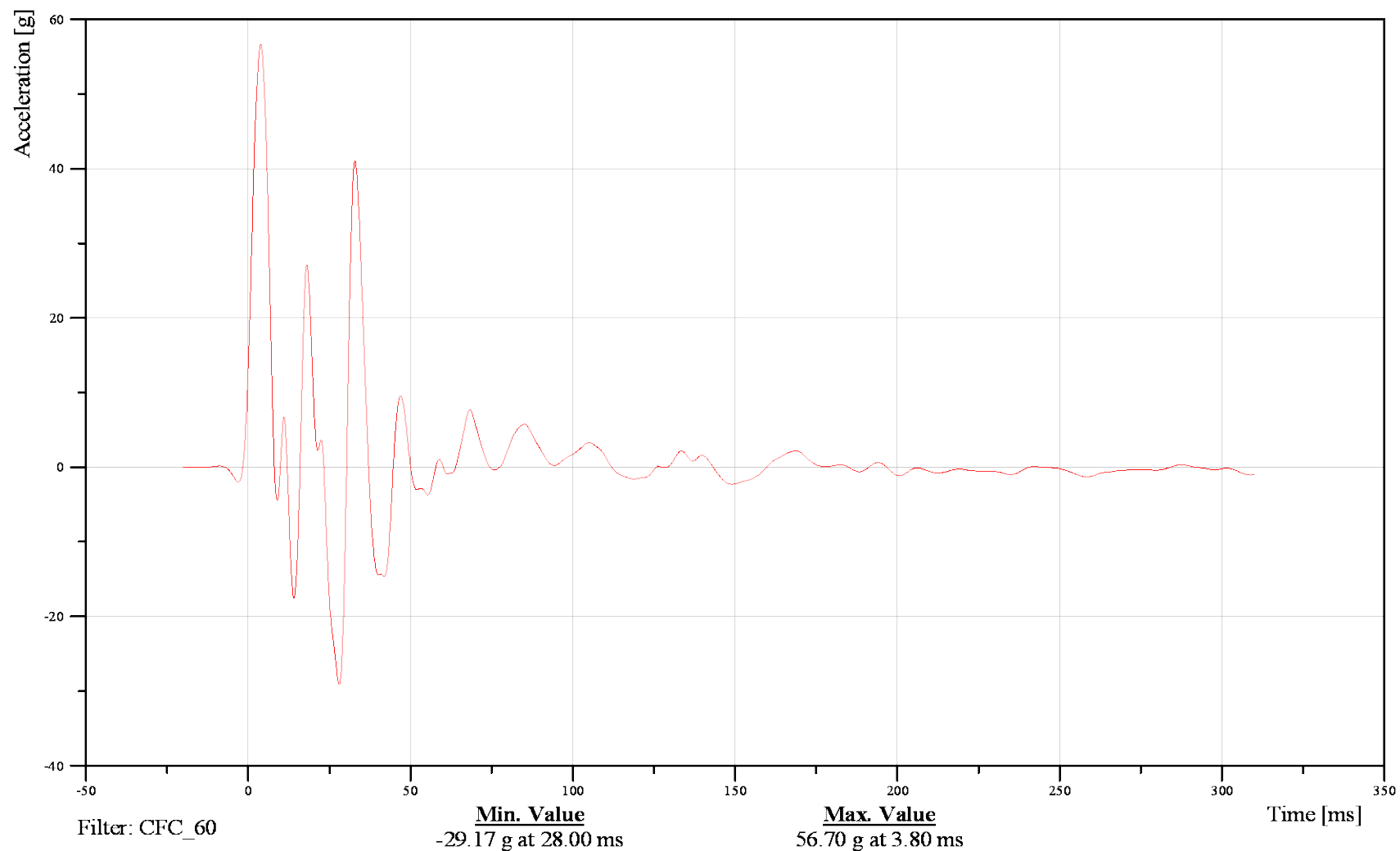
Time: 10:15

Customer: VRTC

11APILLO0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

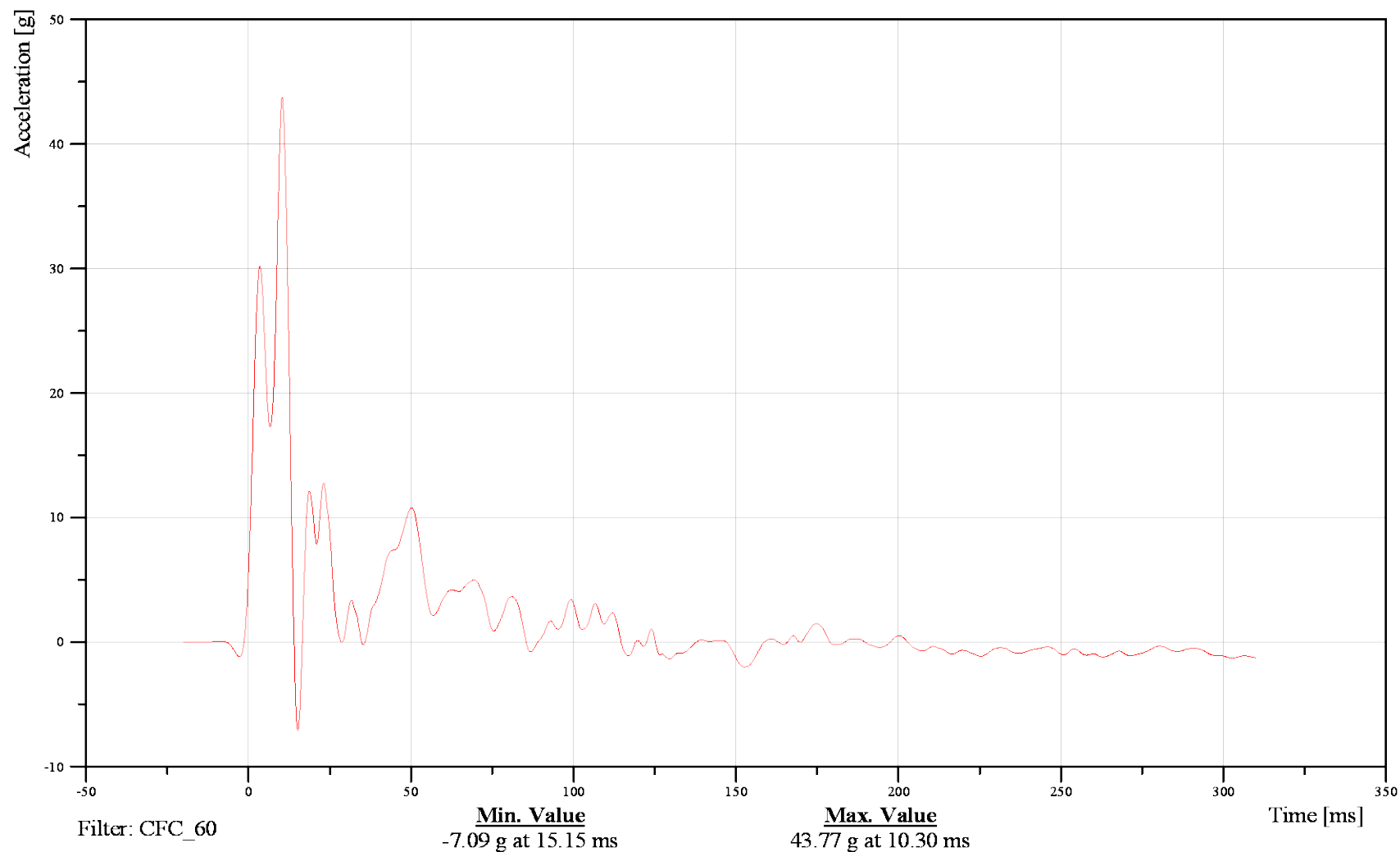
Left Middle A-Post (Y)

Customer: VRTC

11APILMI0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Lower B Post (Y)

Date: 03/13/2013

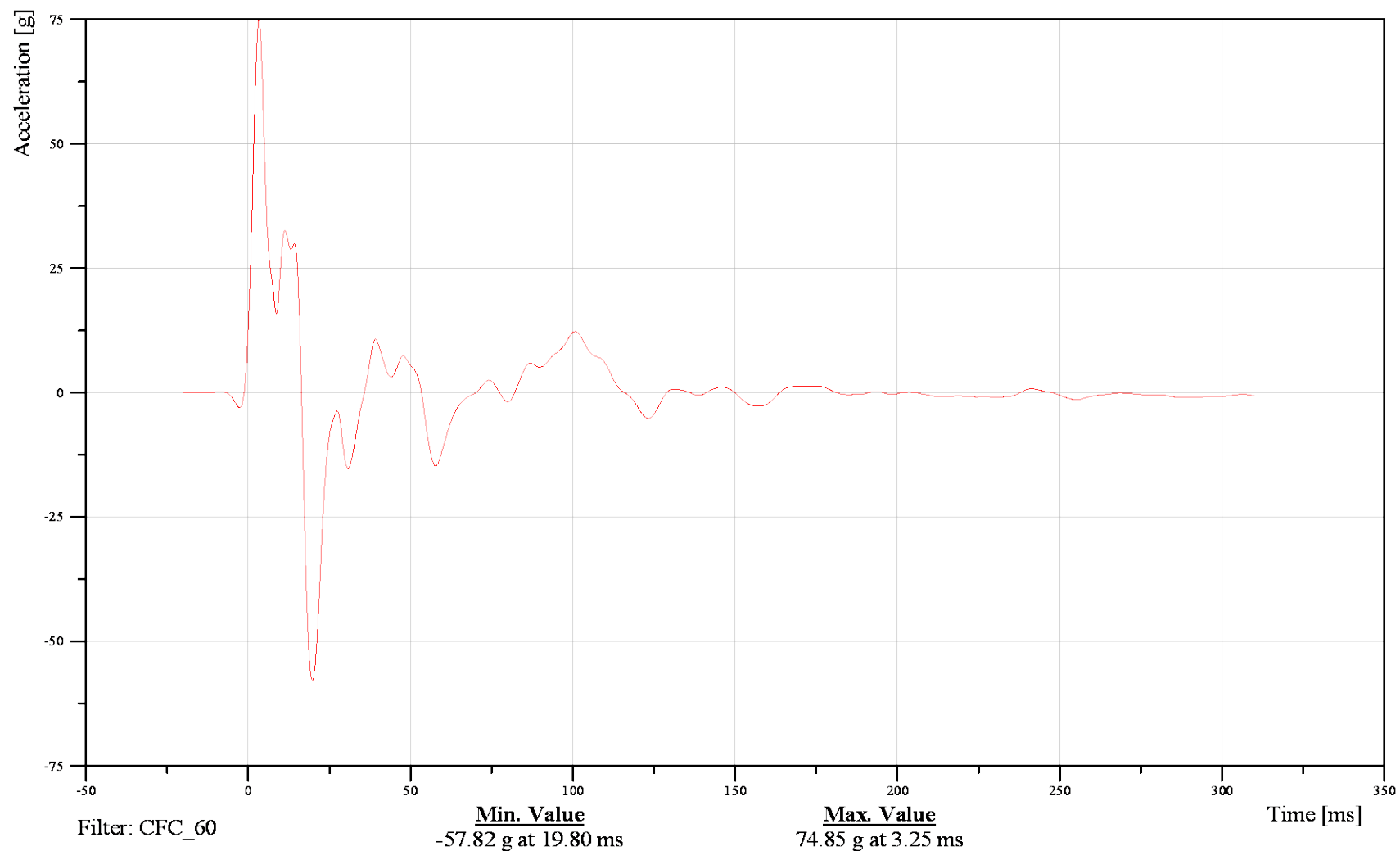
Time: 10:15

Customer: VRTC

11BPILLO00000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Middle B Post (Y)

Date: 03/13/2013

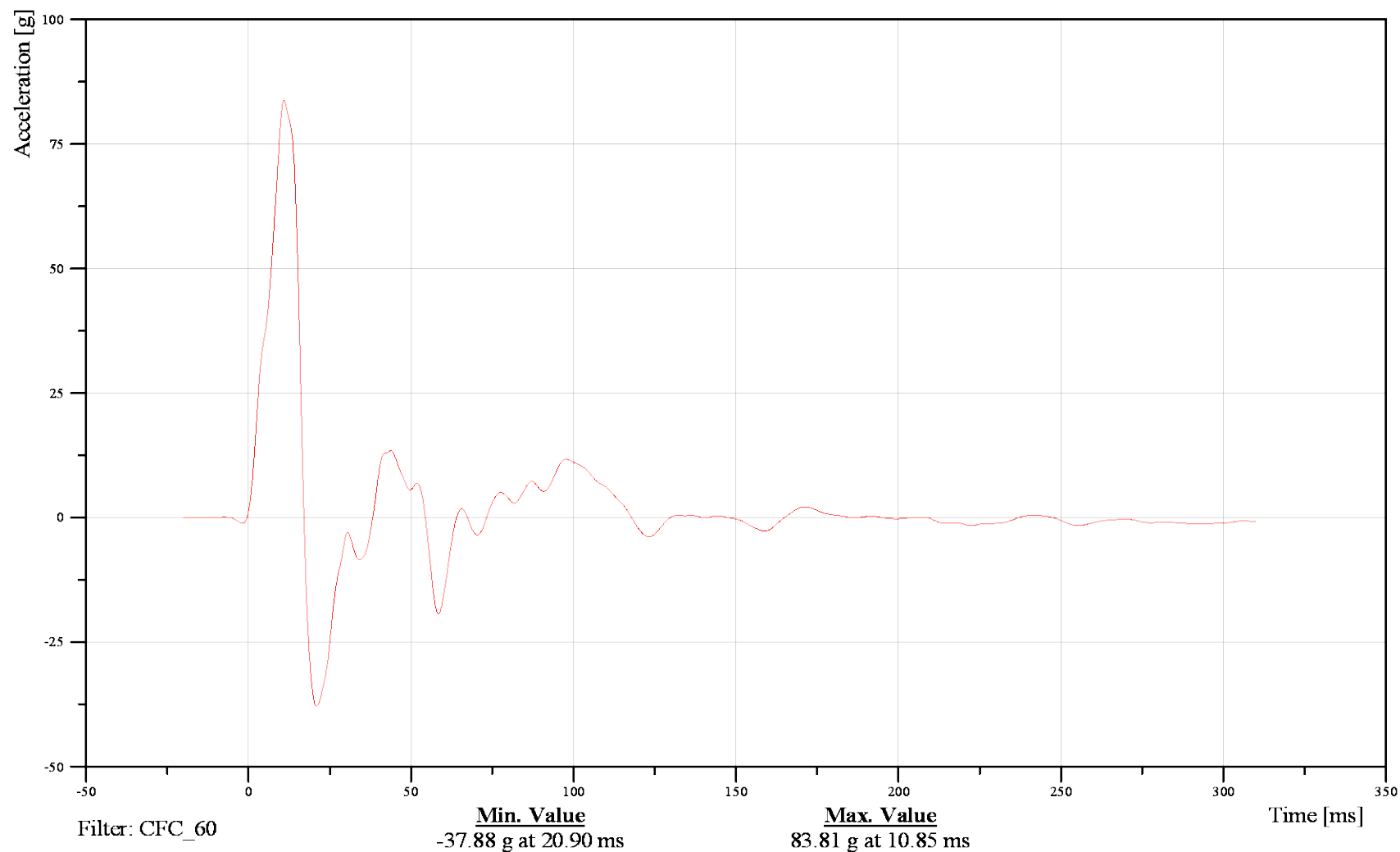
Time: 10:15

Customer: VRTC

11BPILMI0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Front Seat Track (Y)

Date: 03/13/2013

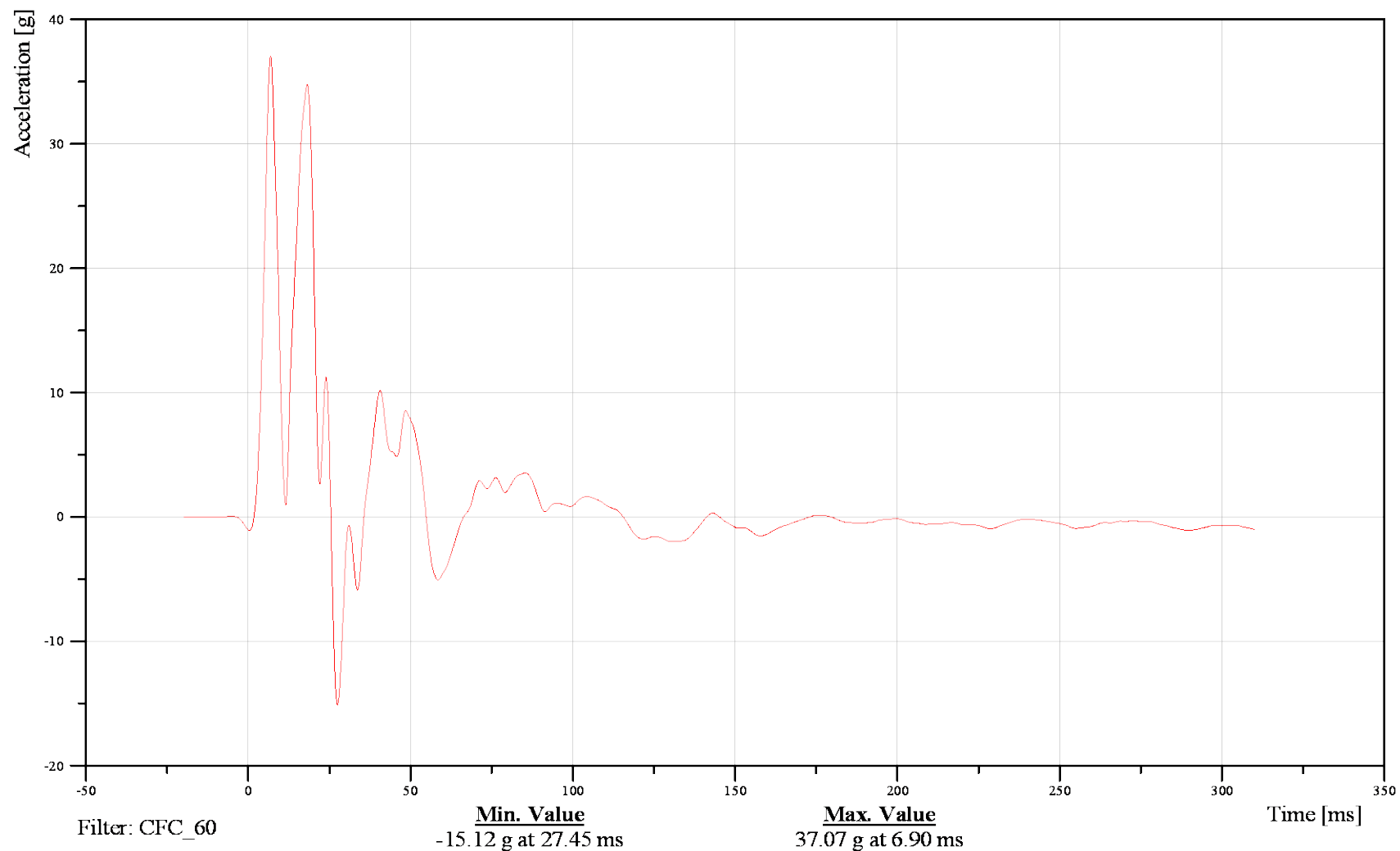
Time: 10:15

Customer: VRTC

11SETR000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





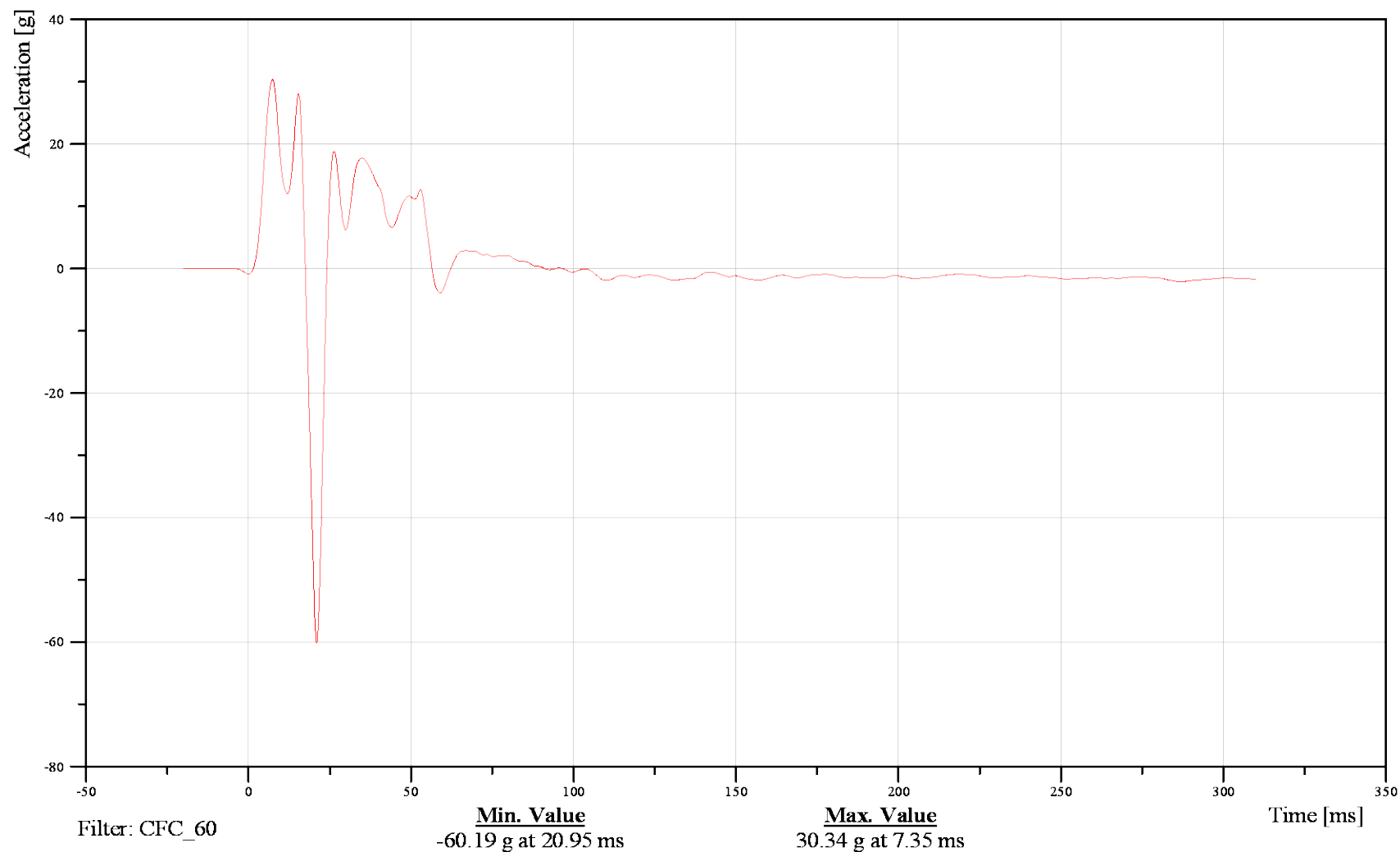
FMVSS 214 Side Impact 2010 Acura MDX
LEFT REAR SEAT STRUCTURE AY

Date: 03/13/2013
Time: 10:15

Customer: VRTC

11SETRLERE00ACYD

TRC Inc. Test Lab: CTF
Test Number: 130312





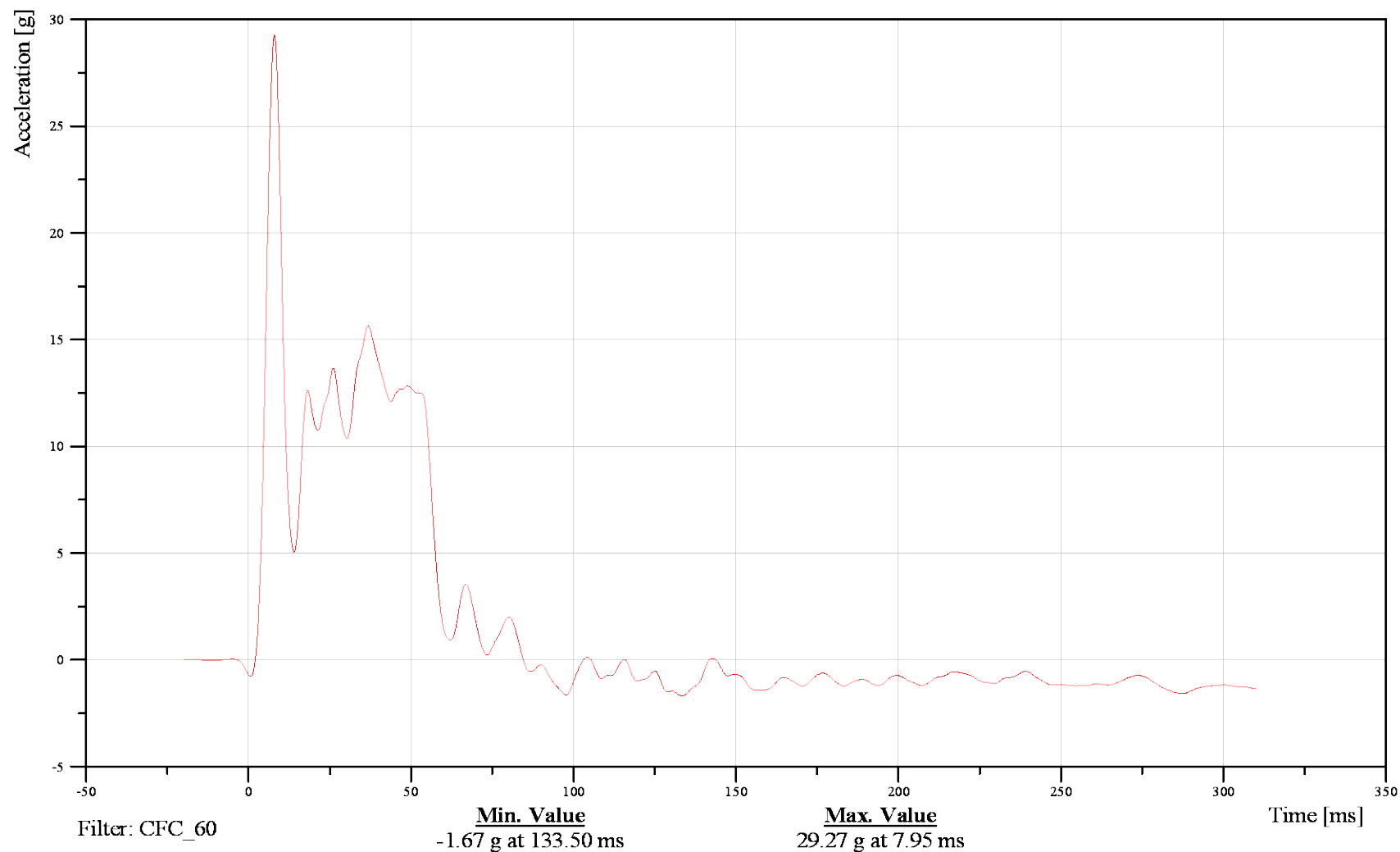
FMVSS 214 Side Impact 2010 Acura MDX
RIGHT REAR OCCUPANT COMPARTMENT AY

Date: 03/13/2013
Time: 10:15

Customer: VRTC

11VEHCRIRE00ACYD

TRC Inc. Test Lab: CTF
Test Number: 130312





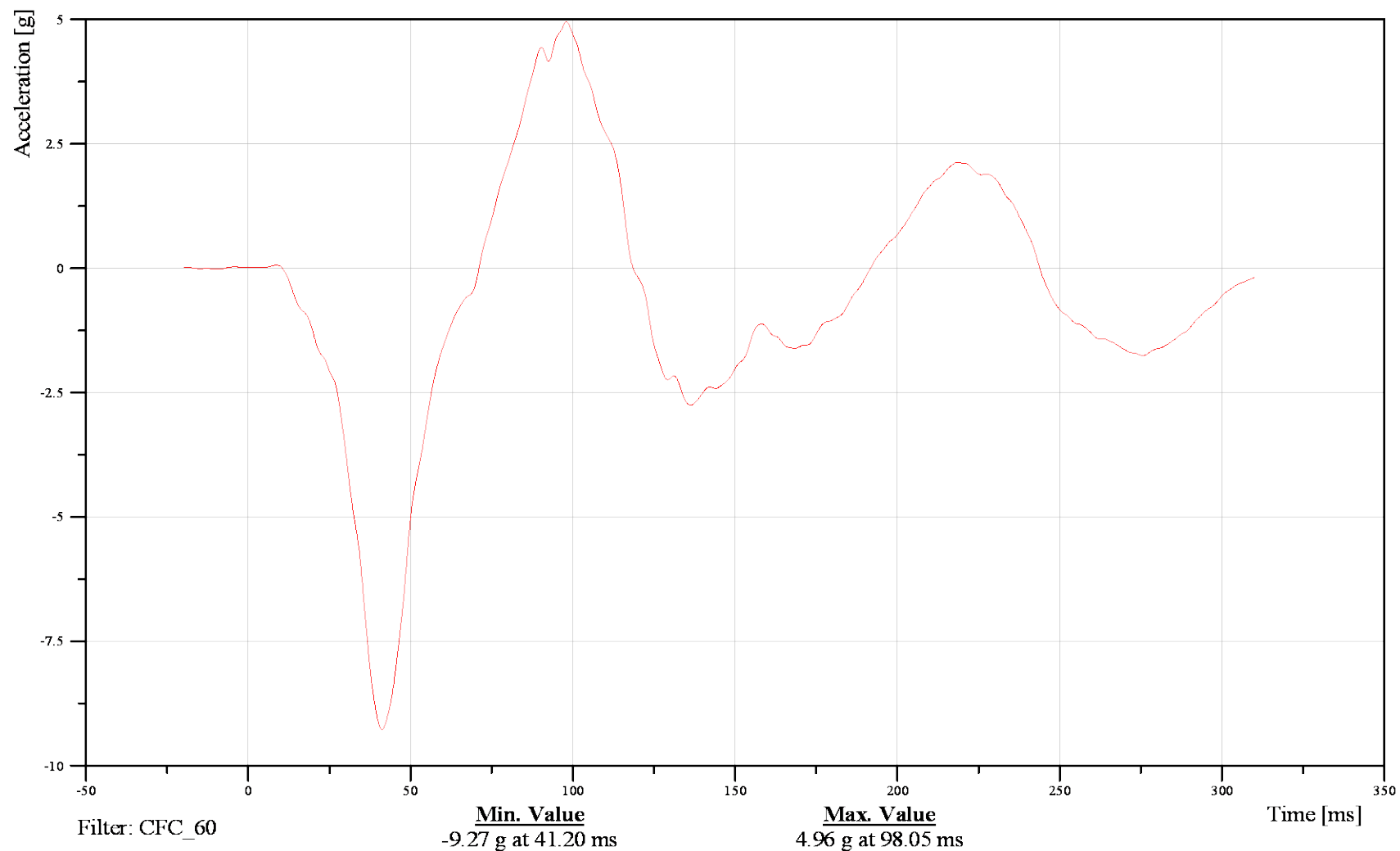
FMVSS 214 Side Impact 2010 Acura MDX ENGINE BLOCK AX

Date: 03/13/2013
Time: 10:15

Customer: VRTC

11ENGNTTP0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

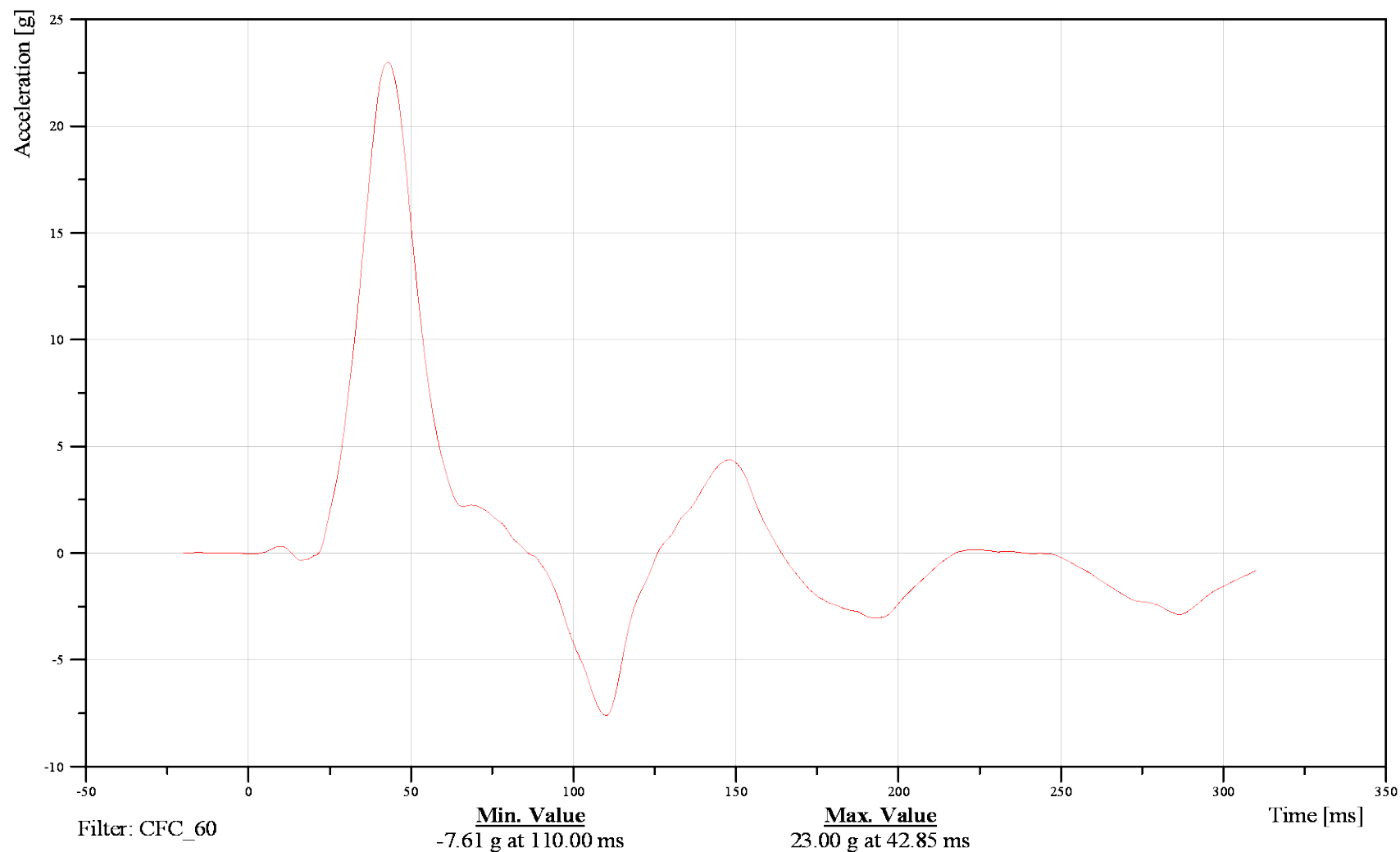
ENGINE BLOCK AY

Date: 03/13/2013
Time: 10:15

Customer: VRTC

11ENGNTTP0000ACYD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Rear Floor Pan Above Axle (X)

Date: 03/13/2013

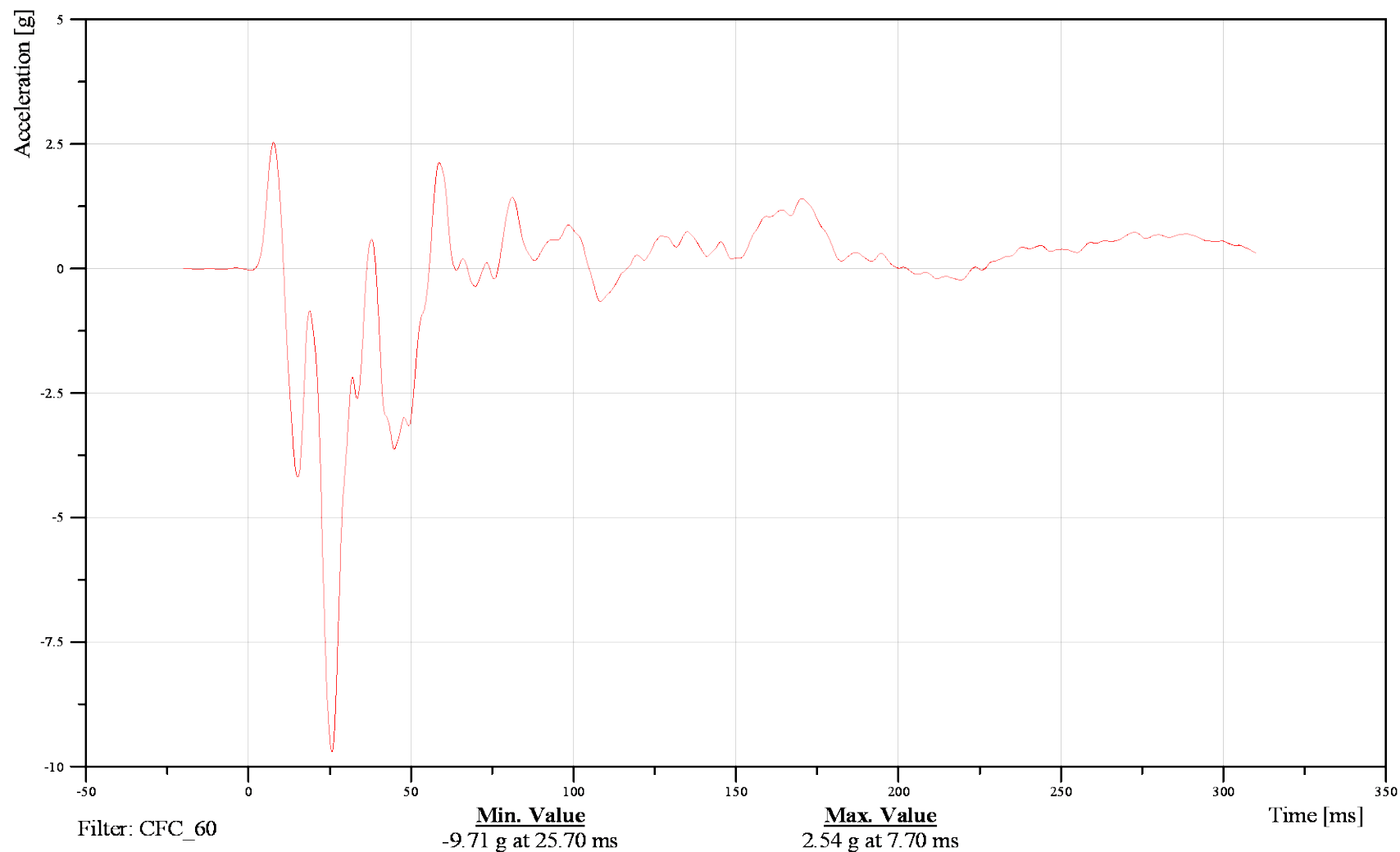
Time: 10:15

Customer: VRTC

11FORA000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Rear Floor Pan Above Axle (Y)

Date: 03/13/2013

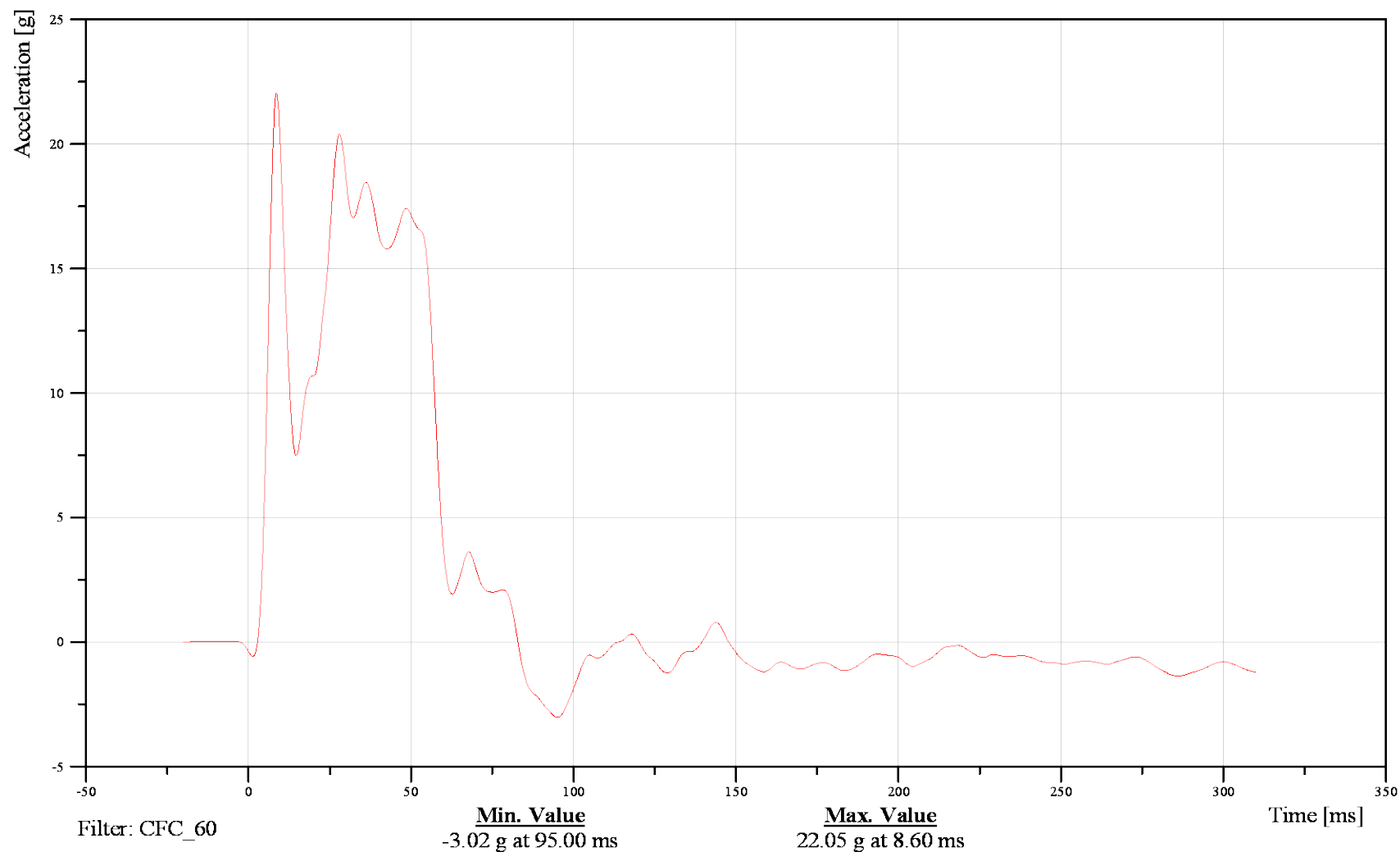
Time: 10:15

Customer: VRTC

11FORA000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Rear Floor Pan Above Axle (Z)

Date: 03/13/2013

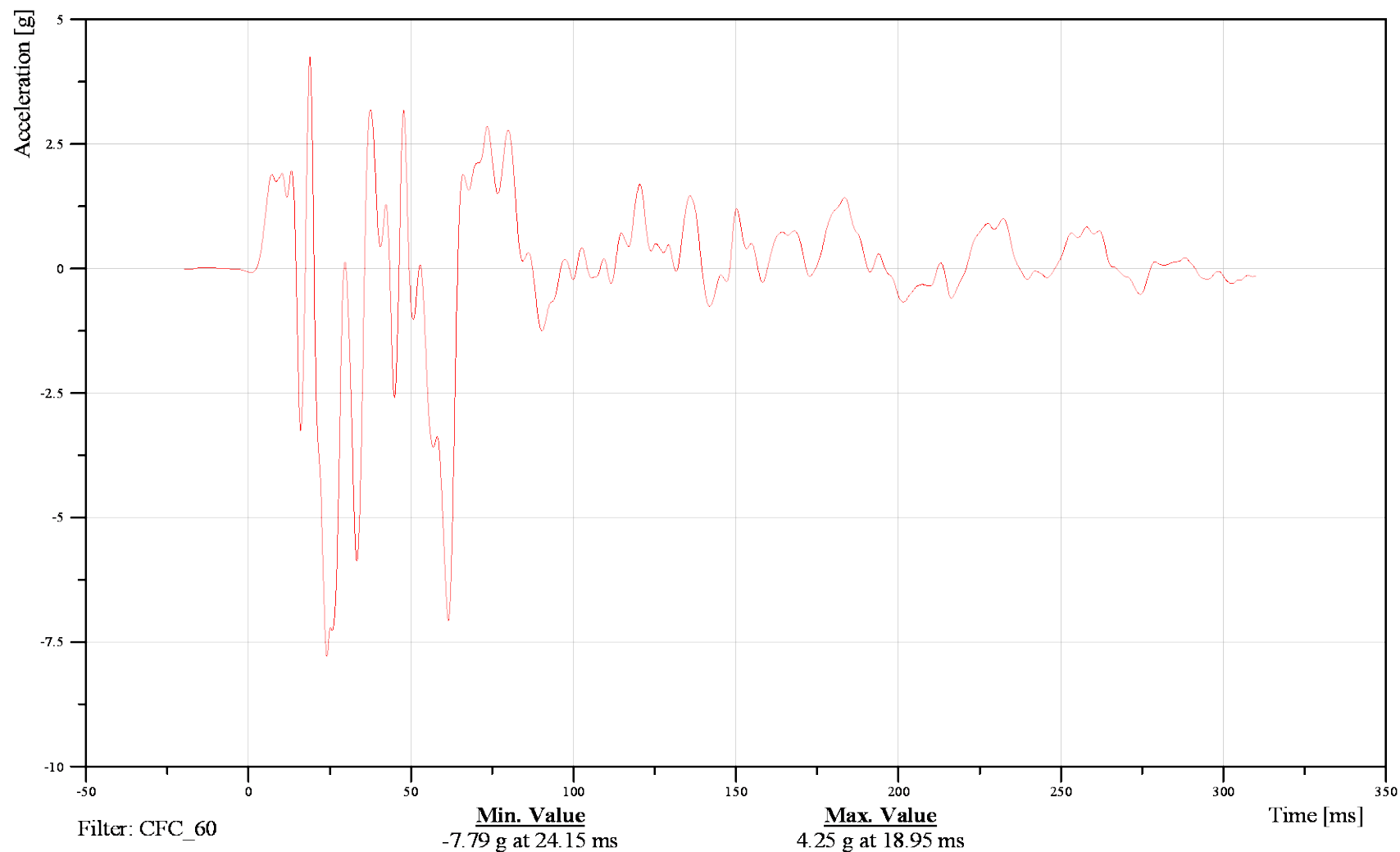
Time: 10:15

Customer: VRTC

11FORA000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Rear Floor Pan Above Axle Resultant

Date: 03/13/2013

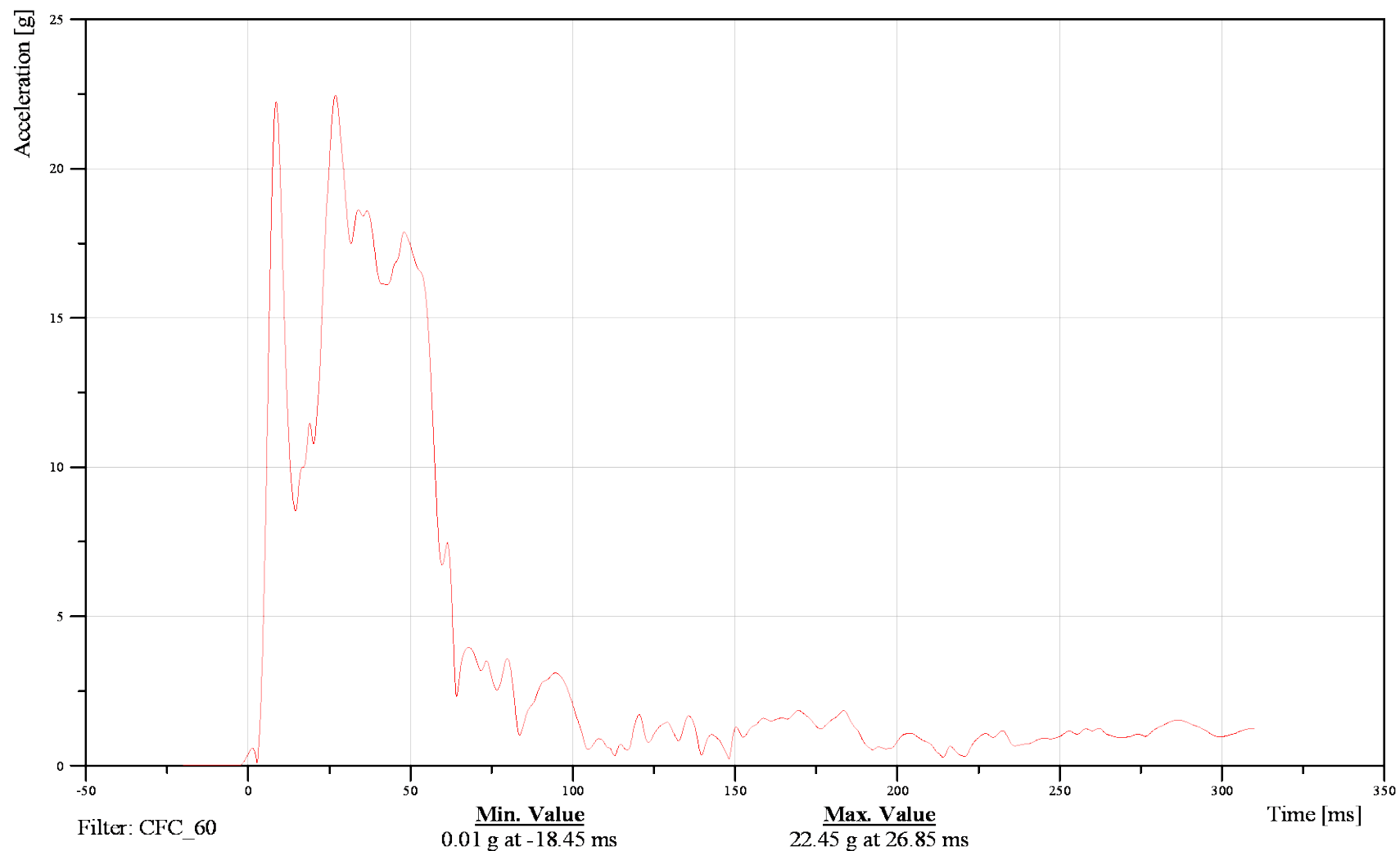
Time: 10:15

Customer: VRTC

11FORA000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle at EDR (X)

Date: 03/13/2013

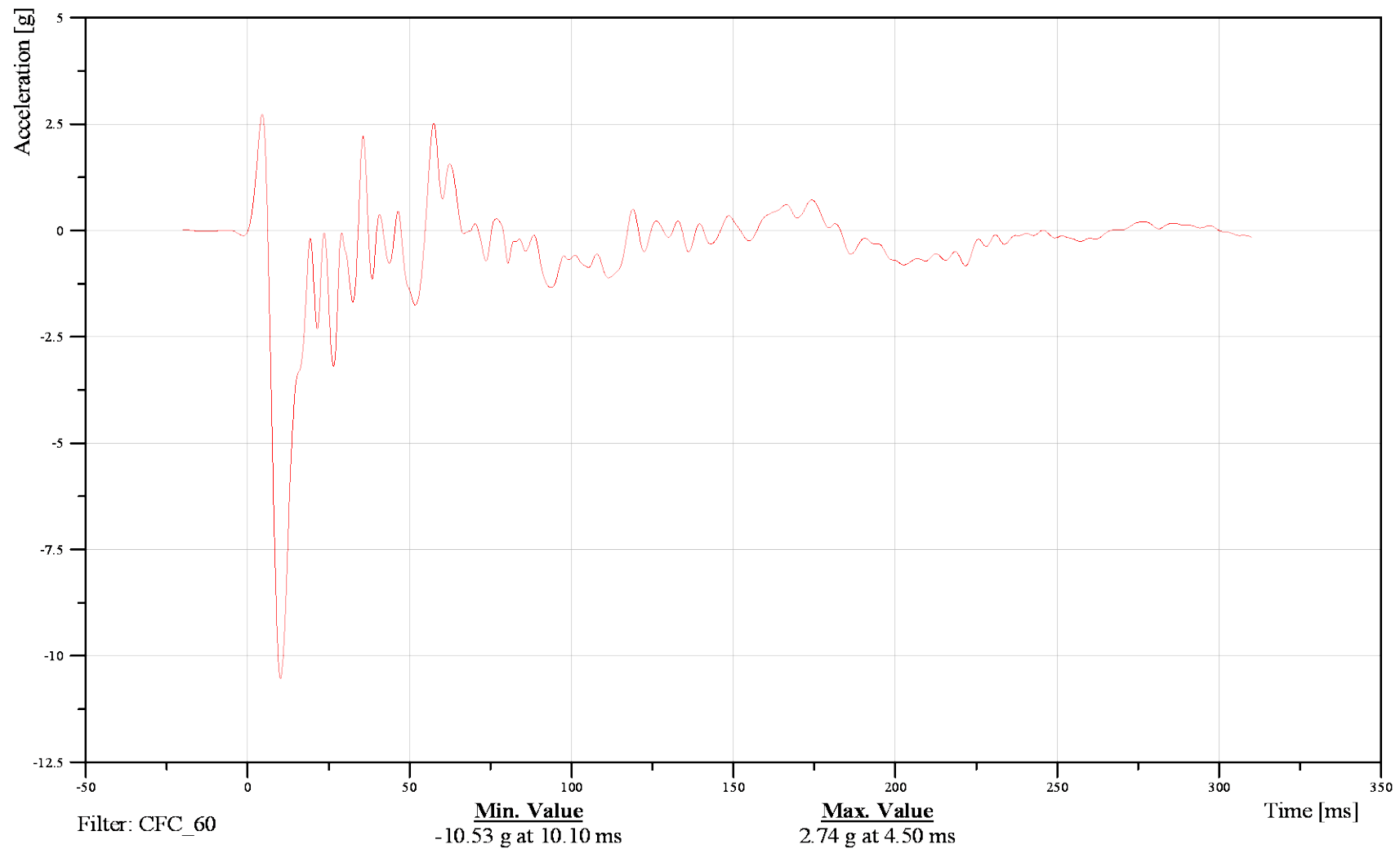
Time: 10:15

Customer: VRTC

11VEHCEDR000ACXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle at EDR (Y)

Date: 03/13/2013

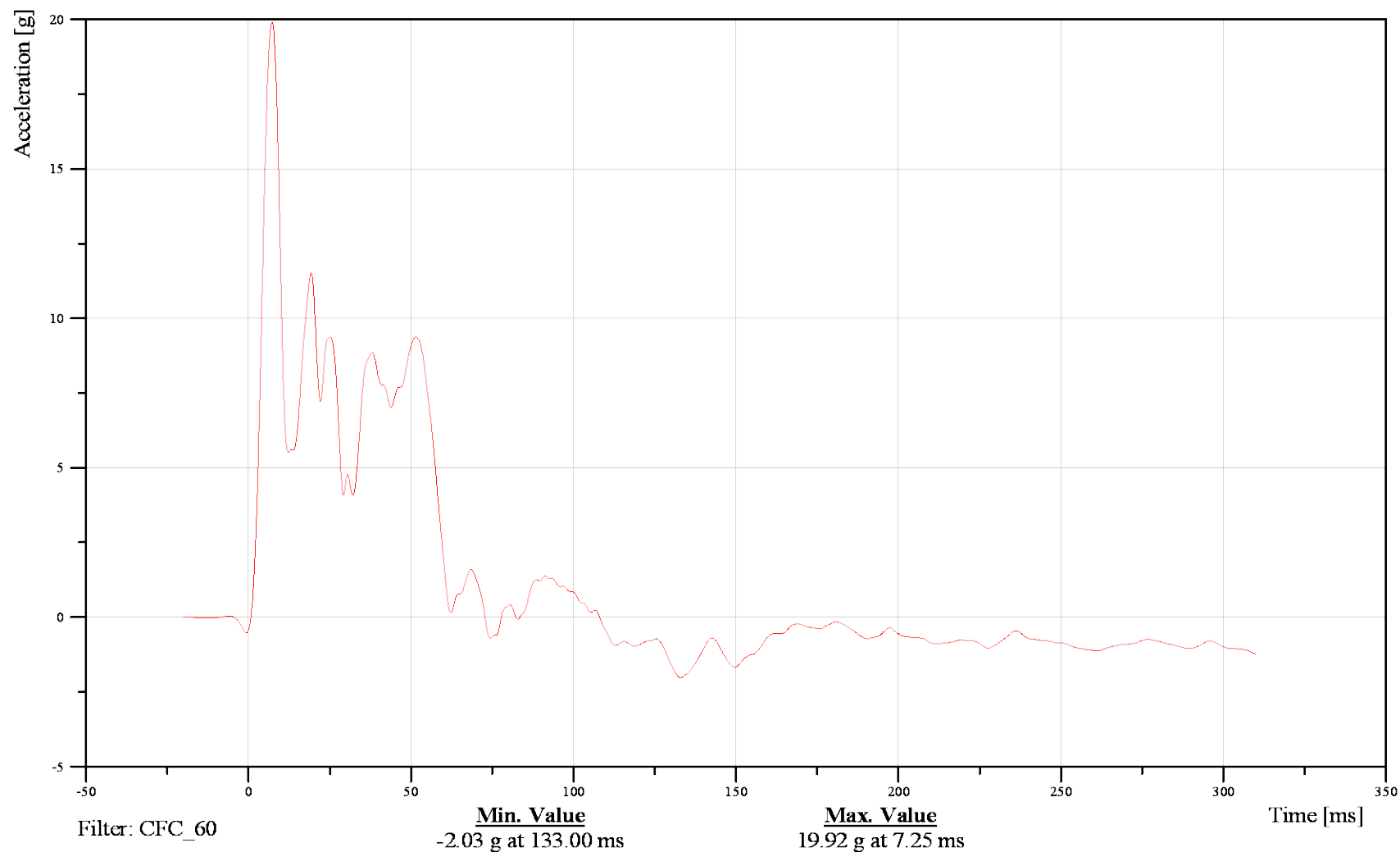
Time: 10:15

Customer: VRTC

11VEHCEDR000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle at EDR (Z)

Date: 03/13/2013

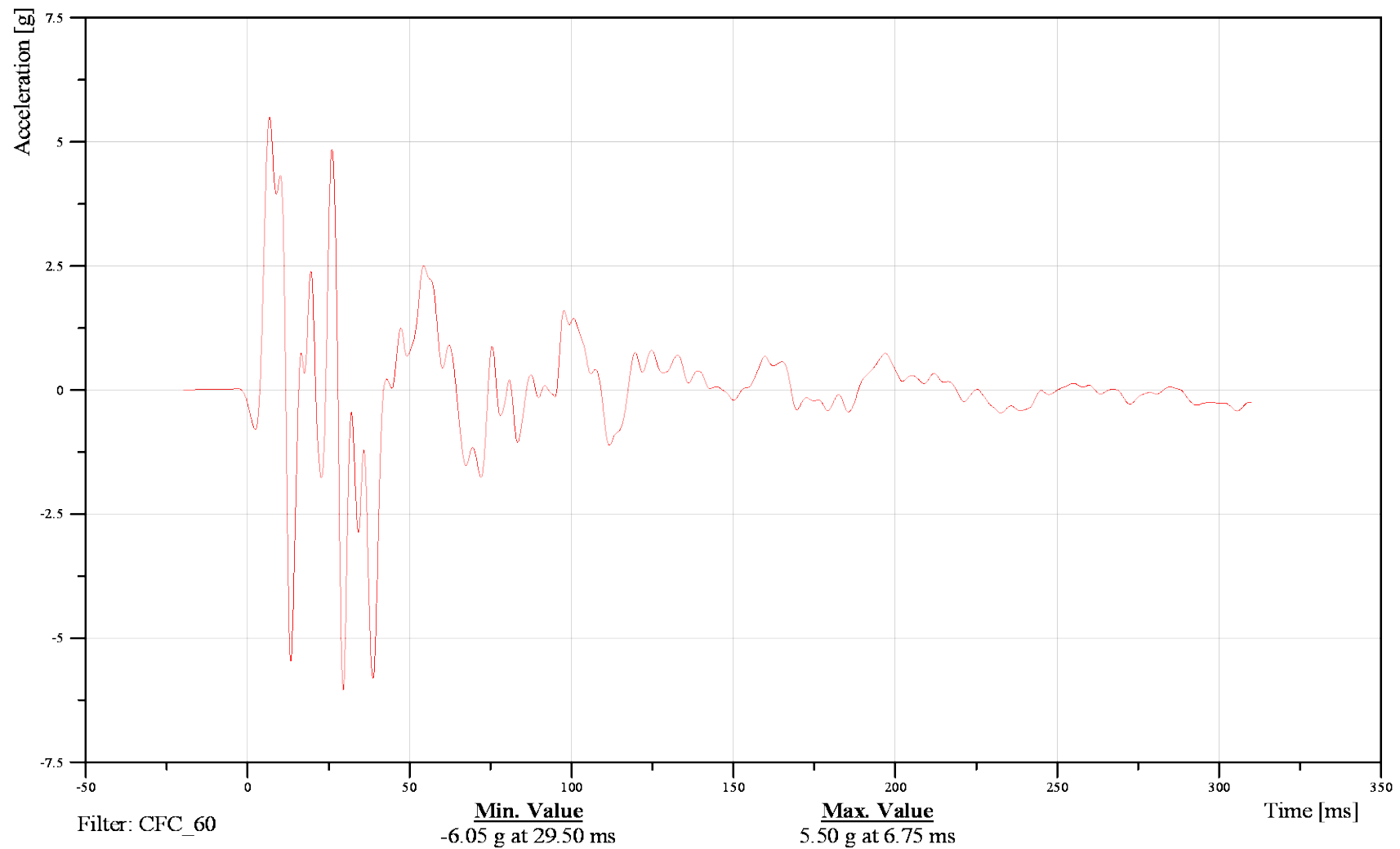
Time: 10:15

Customer: VRTC

11VEHCEDR000ACZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Vehicle at EDR Resultant

Date: 03/13/2013

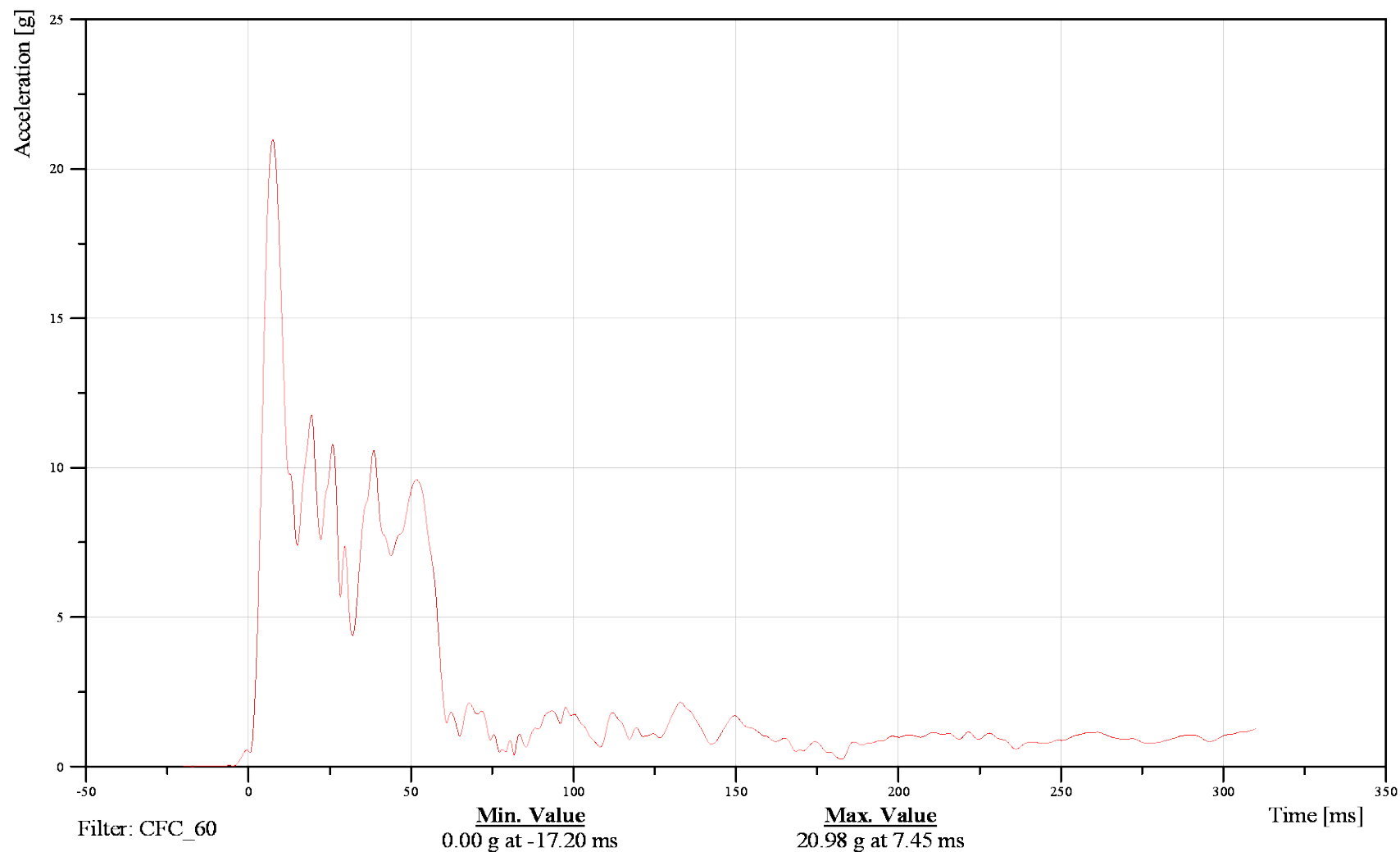
Time: 10:15

Customer: VRTC

11VEHCEDR000ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





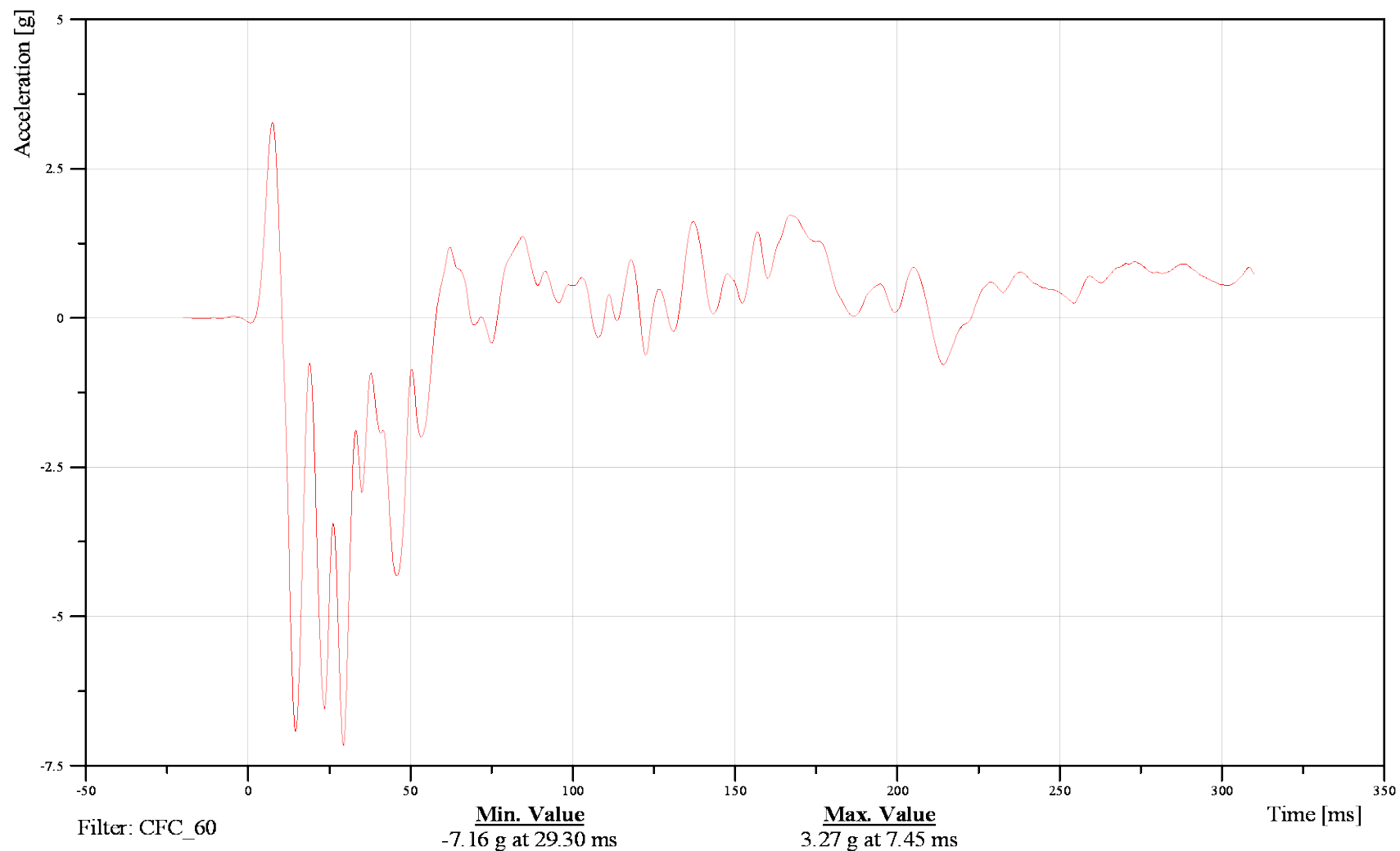
FMVSS 214 Side Impact 2010 Acura MDX
REAR DECK AX

Date: 03/13/2013
Time: 10:15

Customer: VRTC

10FORARD0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

REAR DECK AY

Date: 03/13/2013

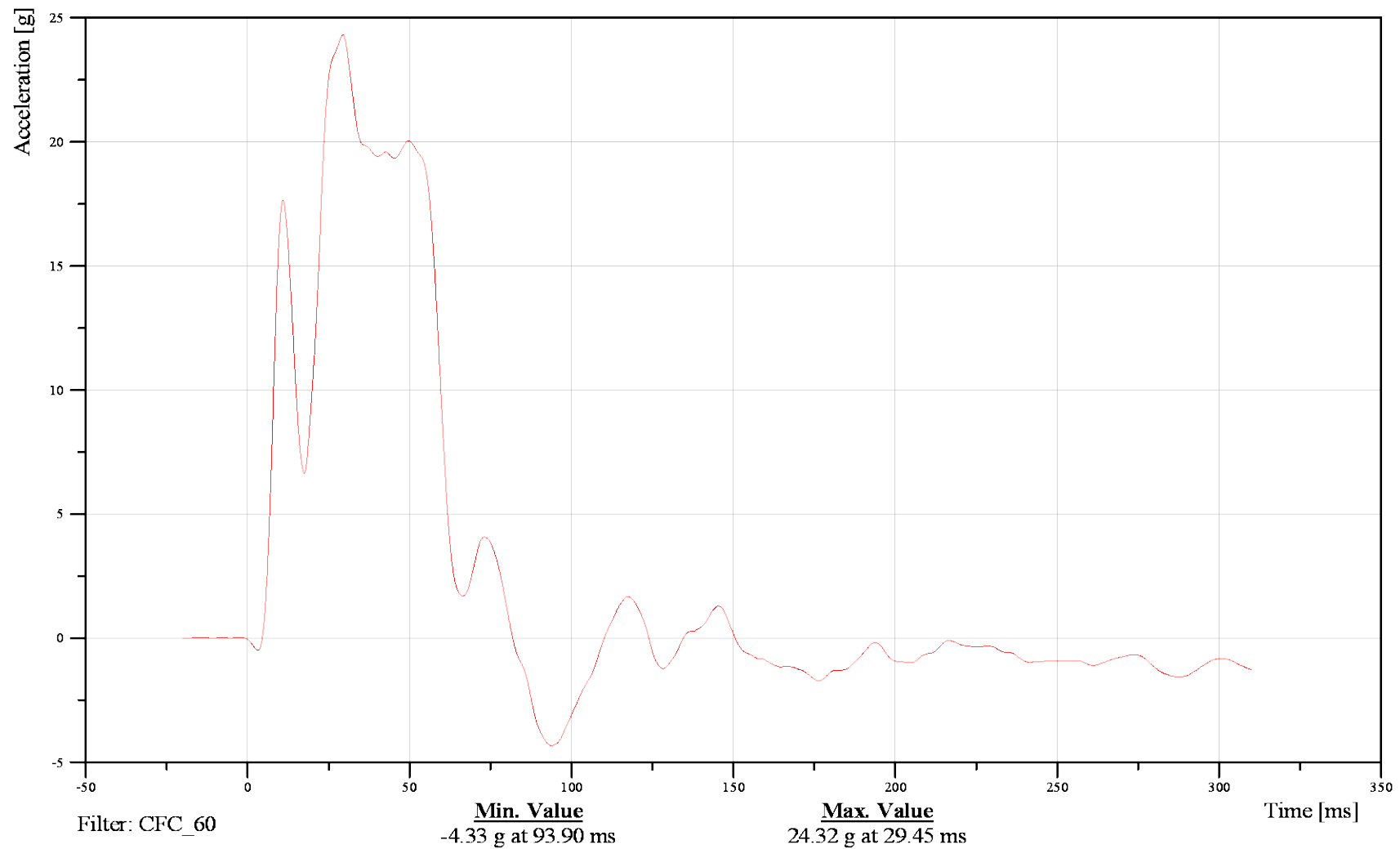
Time: 10:15

Customer: VRTC

10FORARD0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

REAR DECK AZ

Date: 03/13/2013

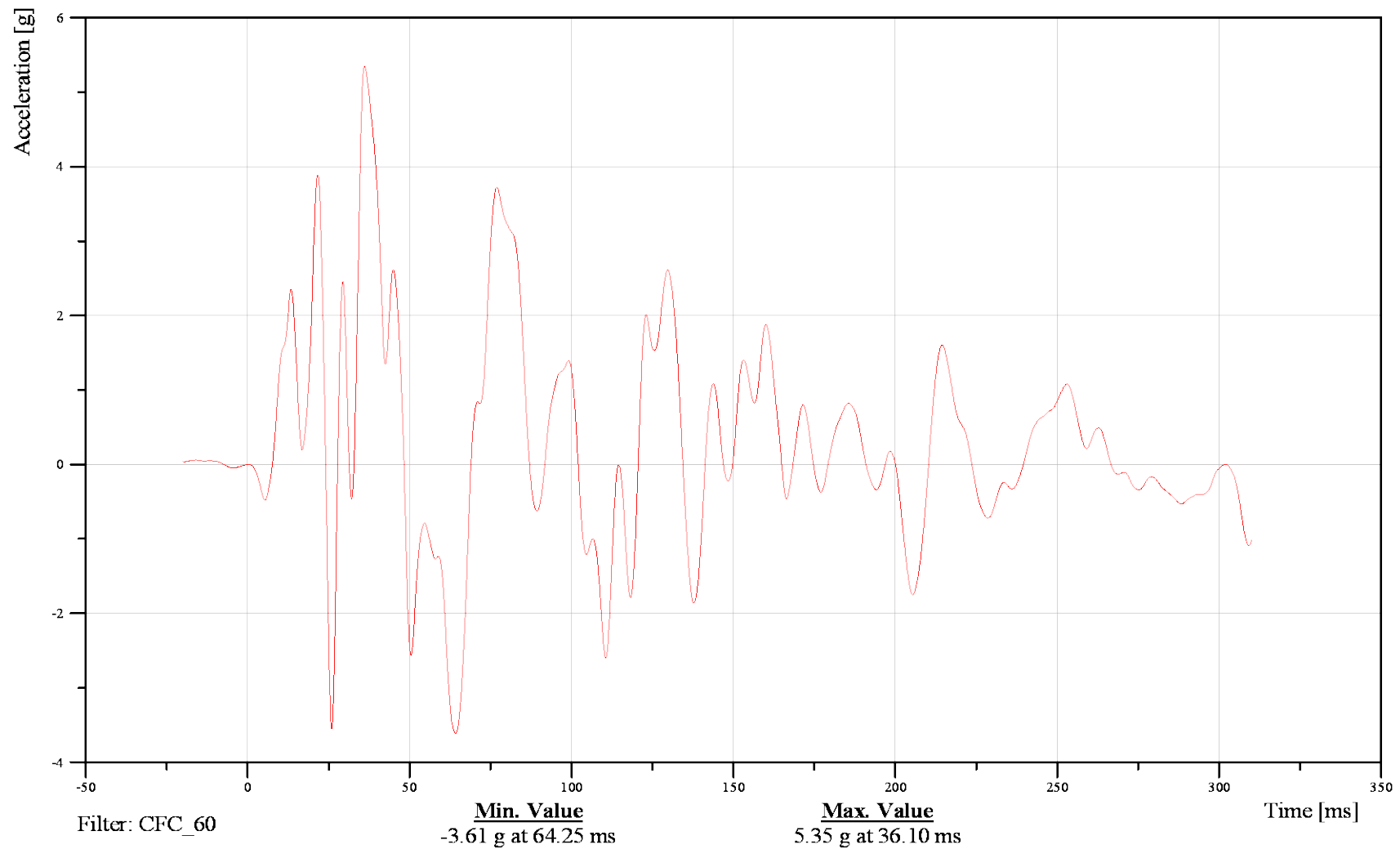
Time: 10:15

Customer: VRTC

10FORARD0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

REAR DECK A Resultant

Date: 03/13/2013

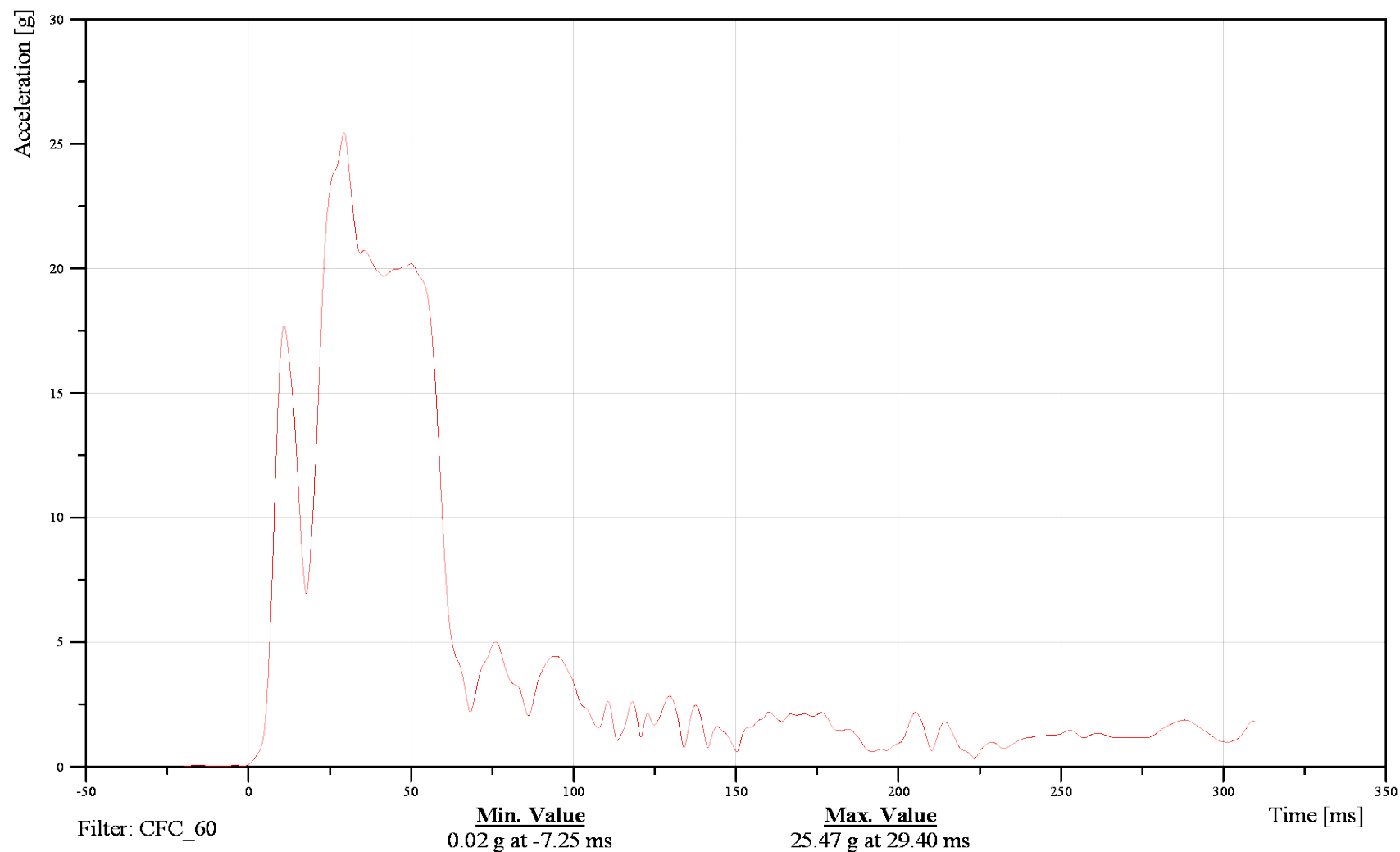
Time: 10:15

Customer: VRTC

10FORARD0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





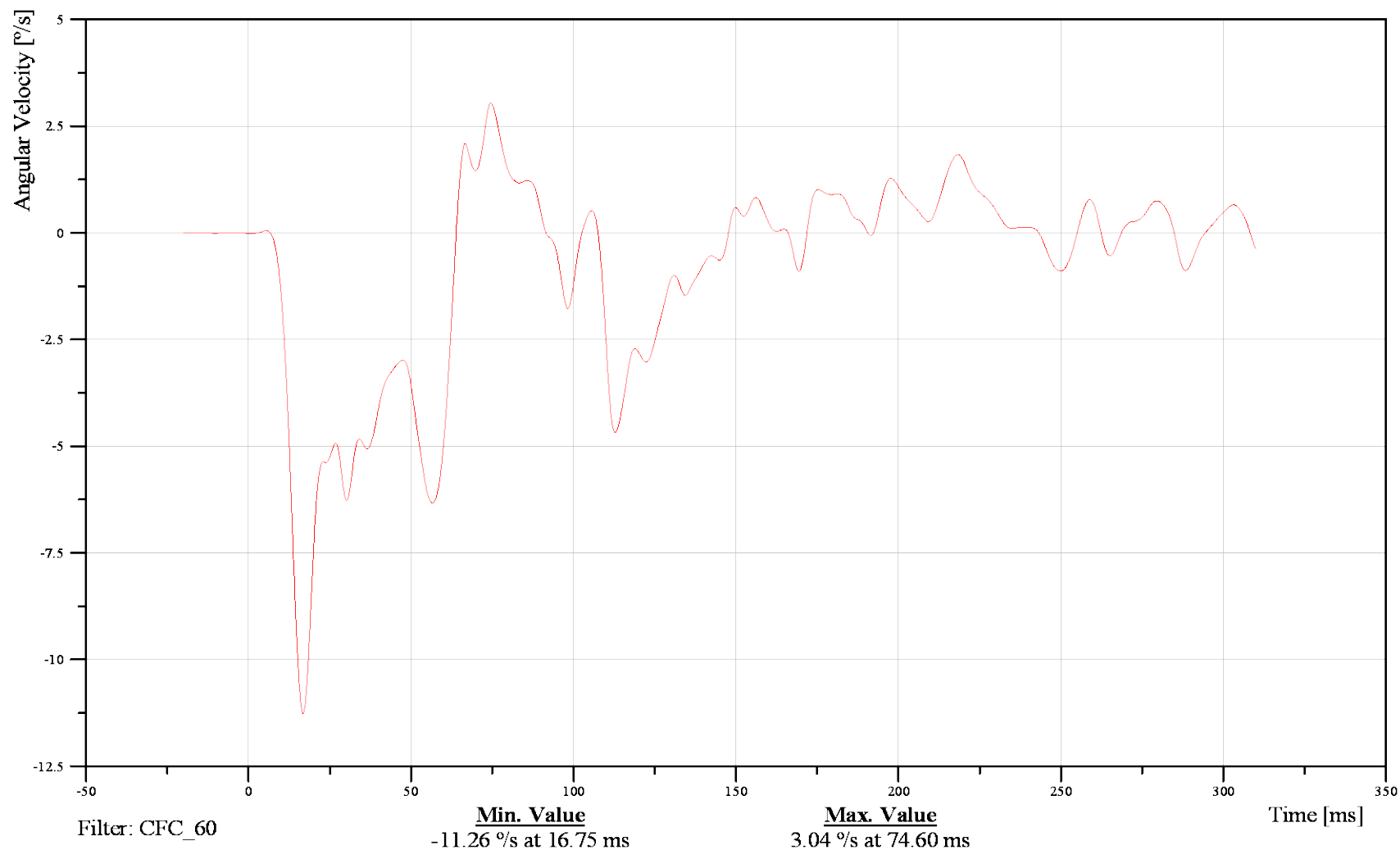
FMVSS 214 Side Impact 2010 Acura MDX
VEHICLE CENTER OF GRAVITY (X) ROLL RATE GYRO

Date: 03/13/2013
Time: 10:15

Customer: VRTC

10VEHCCG0000AVXD

TRC Inc. Test Lab: CTF
Test Number: 130312





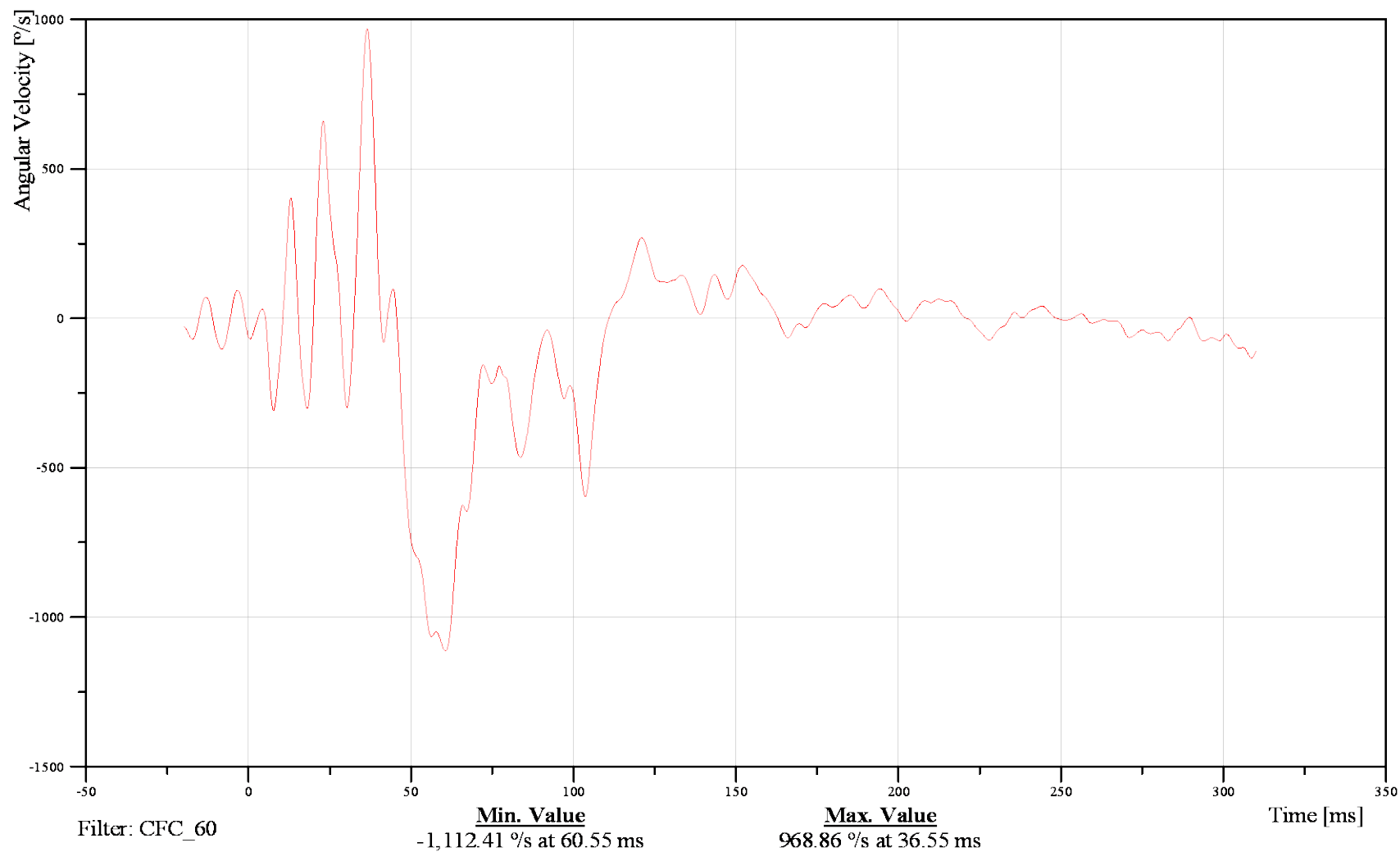
FMVSS 214 Side Impact 2010 Acura MDX
VEHICLE CENTER OF GRAVITY (Y) PITCH RATE GYRO

Date: 03/13/2013
Time: 10:15

Customer: VRTC

10VEHCCG0000AVYD

TRC Inc. Test Lab: CTF
Test Number: 130312





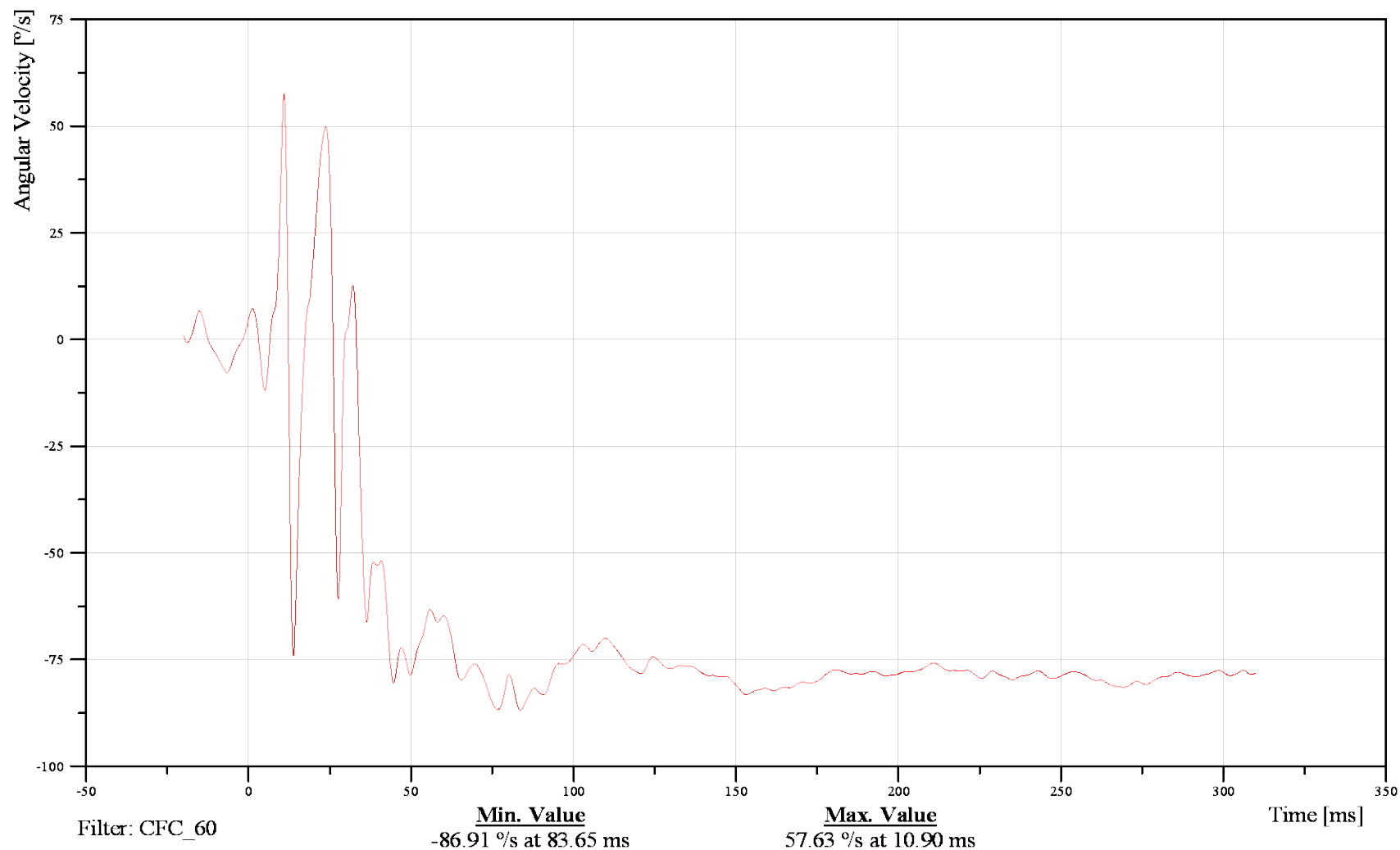
FMVSS 214 Side Impact 2010 Acura MDX
VEHICLE CENTER OF GRAVITY (Z) YAW RATE GYRO

Date: 03/13/2013
Time: 10:15

Customer: VRTC

10VEHCCG0000AVZD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

VEHICLE AT EDR (X) ROLL RATE GYRO

Date: 03/13/2013

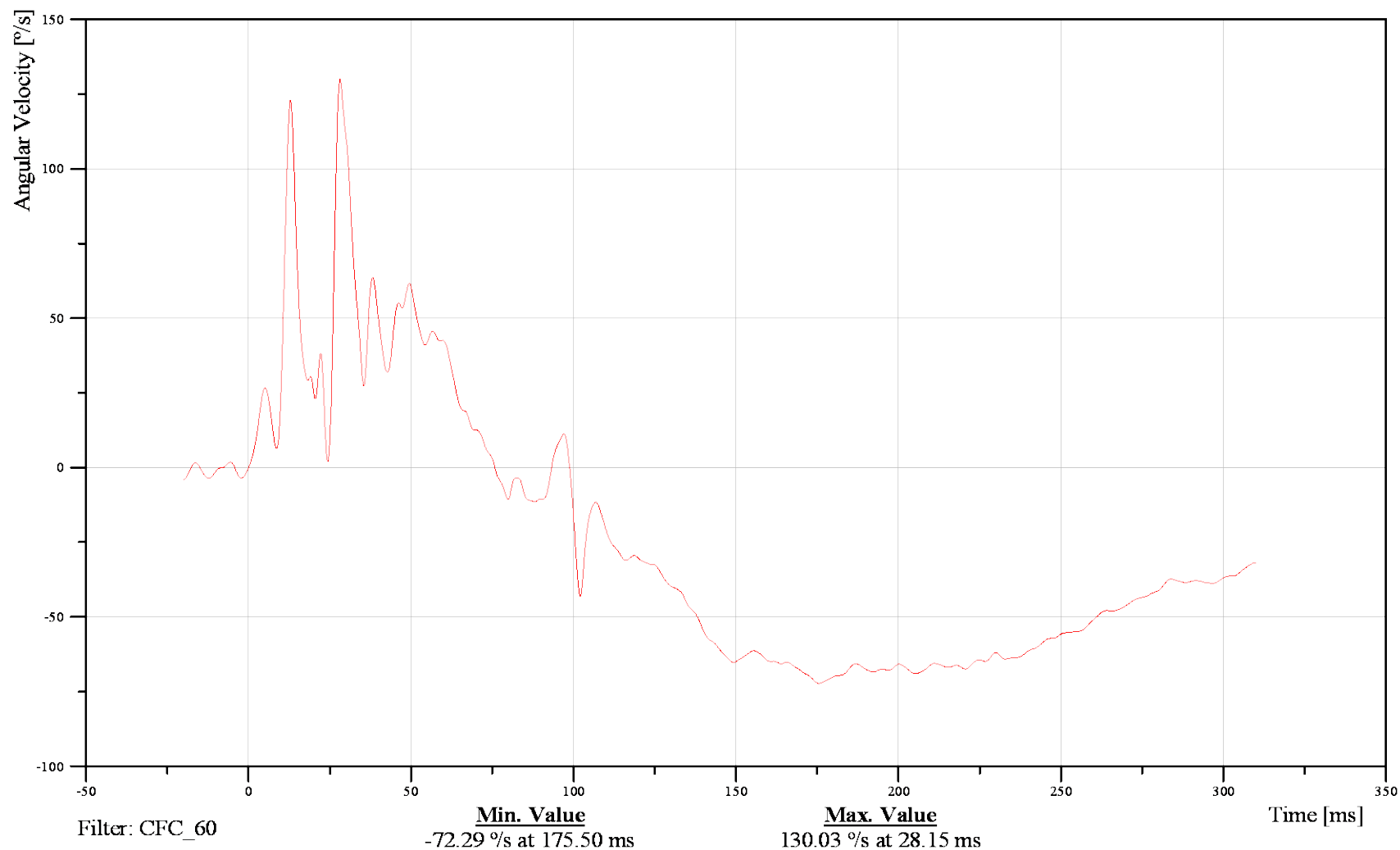
Time: 10:15

Customer: VRTC

10VEHCEDR000AVXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

VEHICLE AT EDR (Y) PITCH RATE GYRO

Date: 03/13/2013

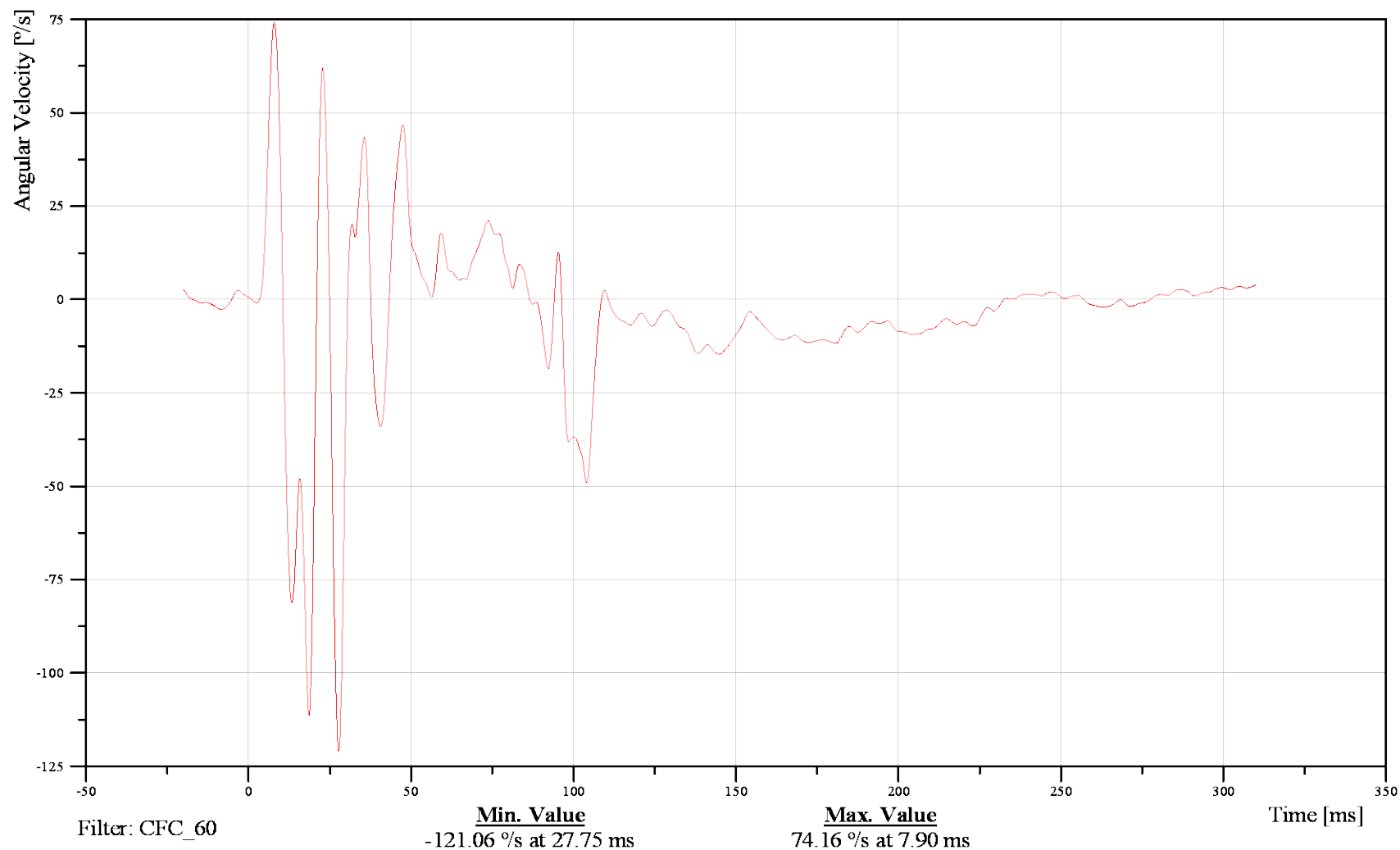
Time: 10:15

Customer: VRTC

10VEHCEDR000AVYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

VEHICLE AT EDR (Z) YAW RATE GYRO

Date: 03/13/2013

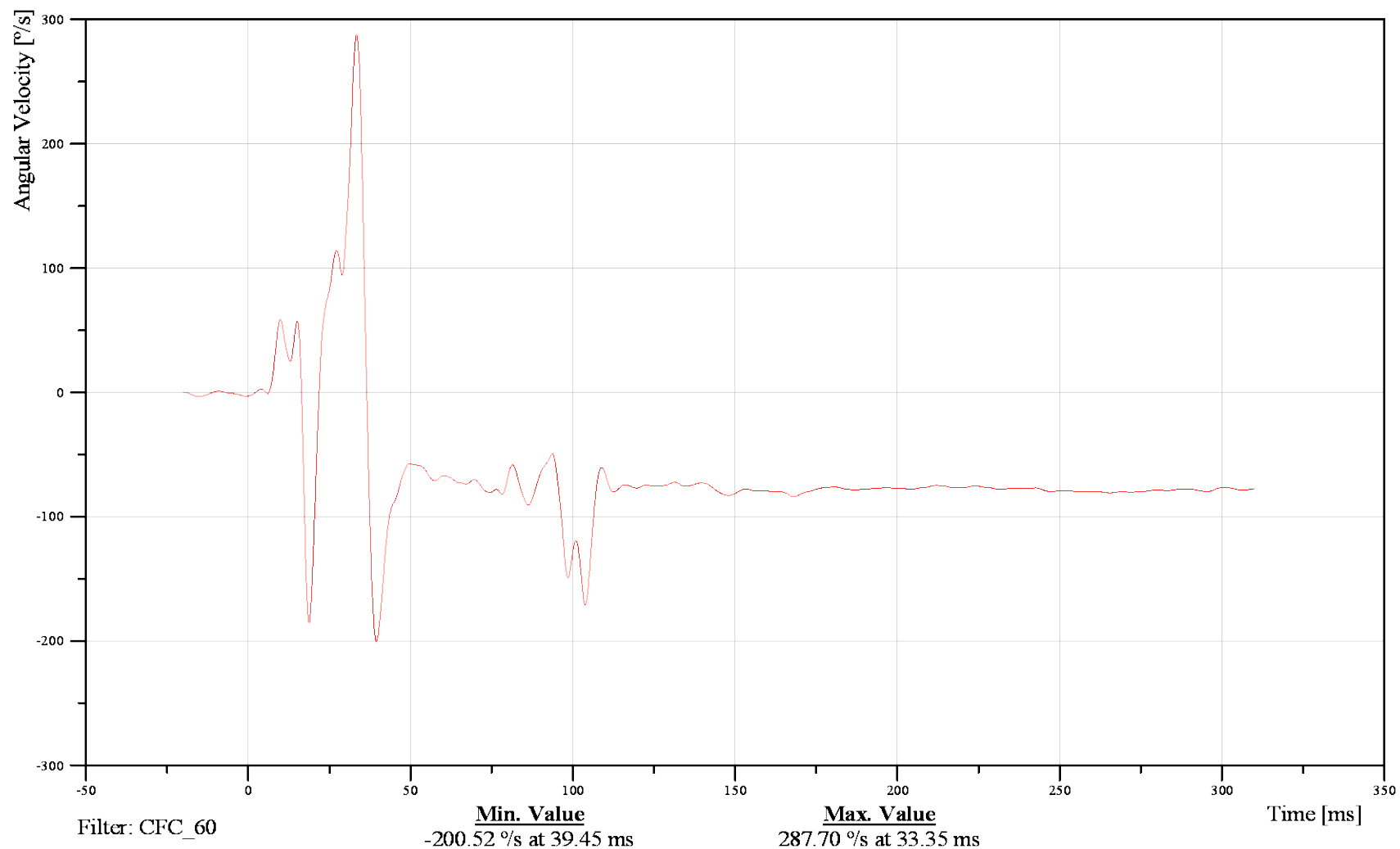
Time: 10:15

Customer: VRTC

10VEHCEDR000AVZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

REAR DECK (X) ROLL RATE GYRO

Date: 03/13/2013

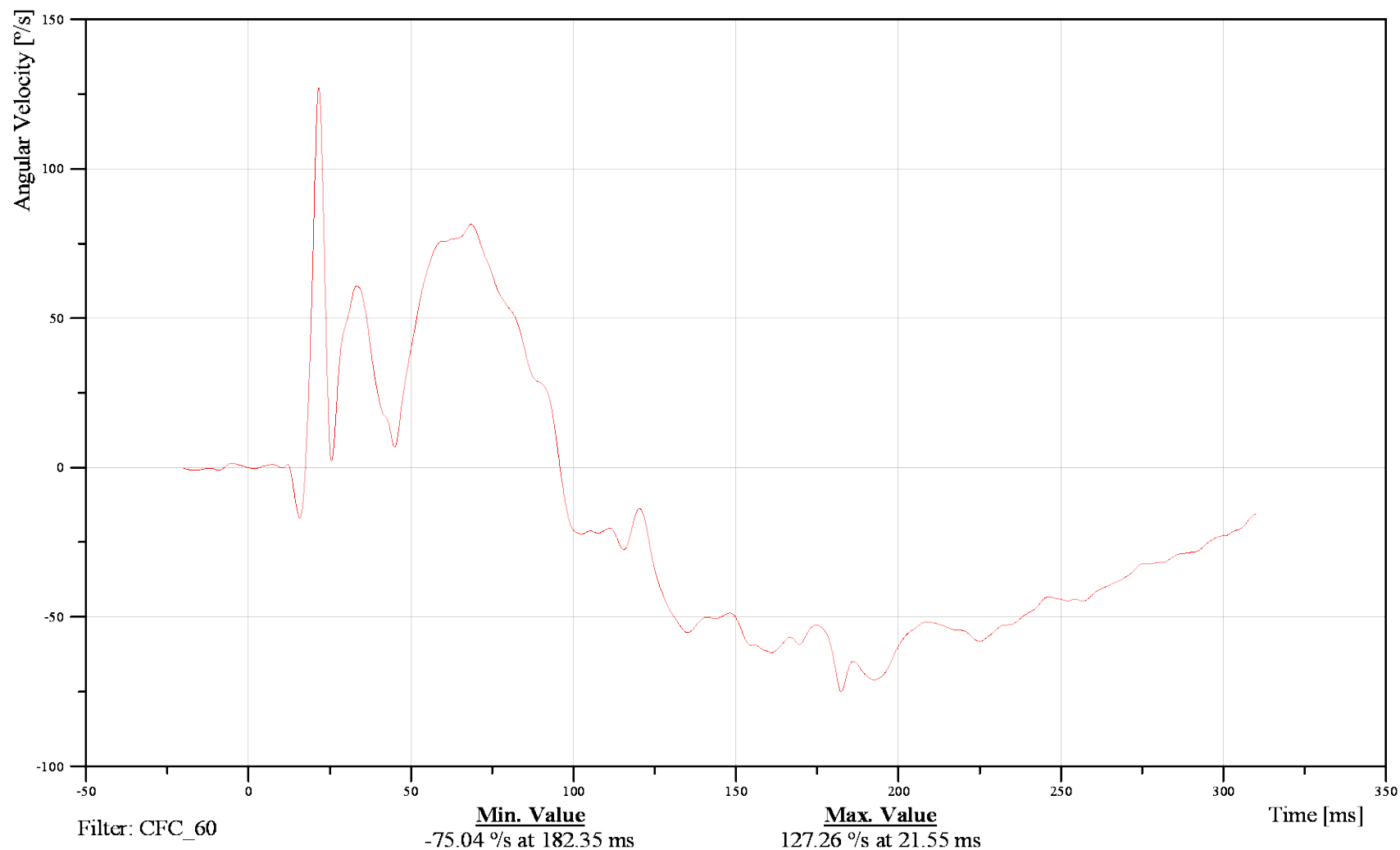
Time: 10:15

Customer: VRTC

10FORARD0000AVXD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

REAR DECK (Y) PITCH RATE GYRO

Date: 03/13/2013

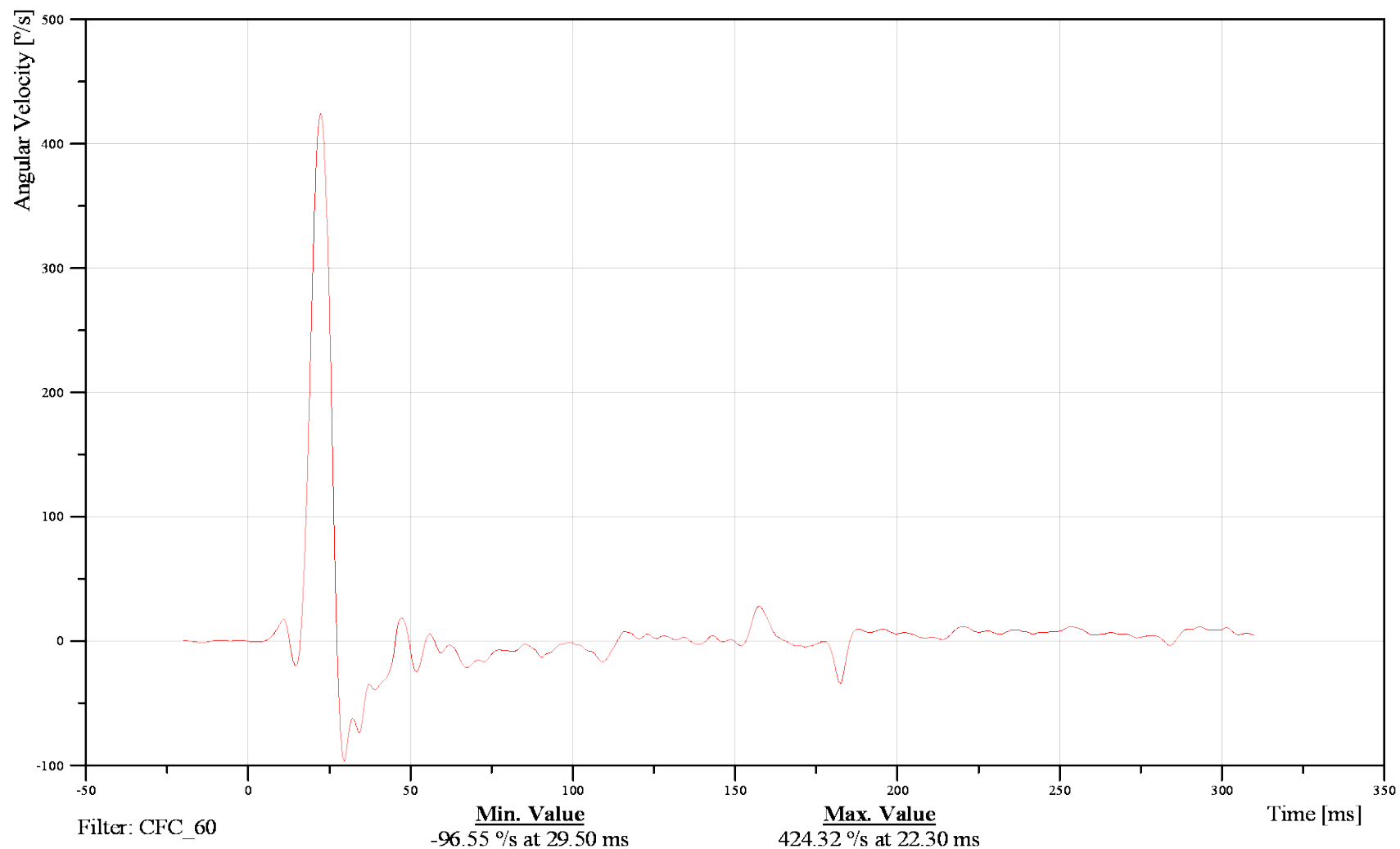
Time: 10:15

Customer: VRTC

10FORARD0000AVYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

REAR DECK (Z) YAW RATE GYRO

Date: 03/13/2013

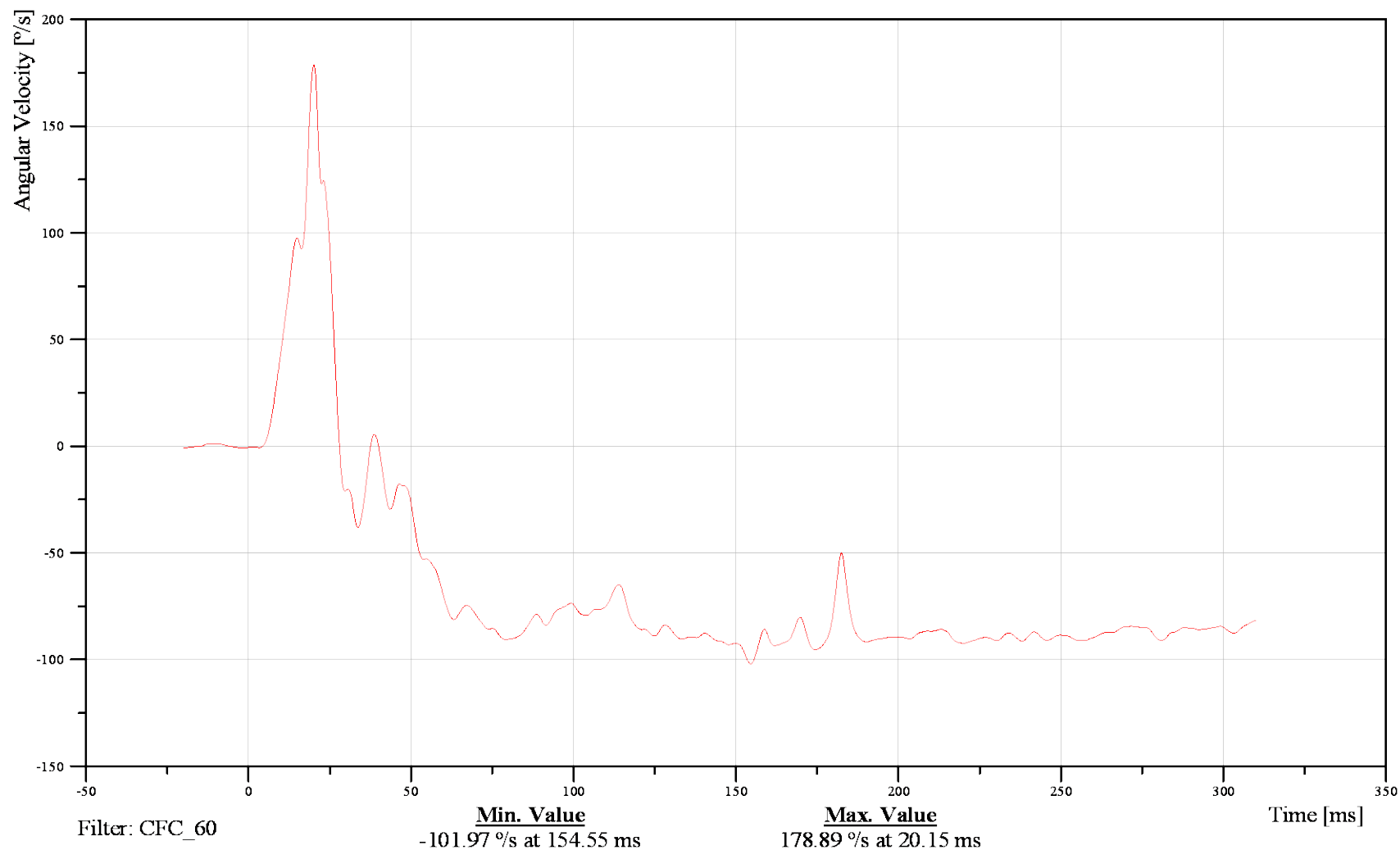
Time: 10:15

Customer: VRTC

10FORARD0000AVZD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Front Door Mid Centerline (Y)

Date: 03/13/2013

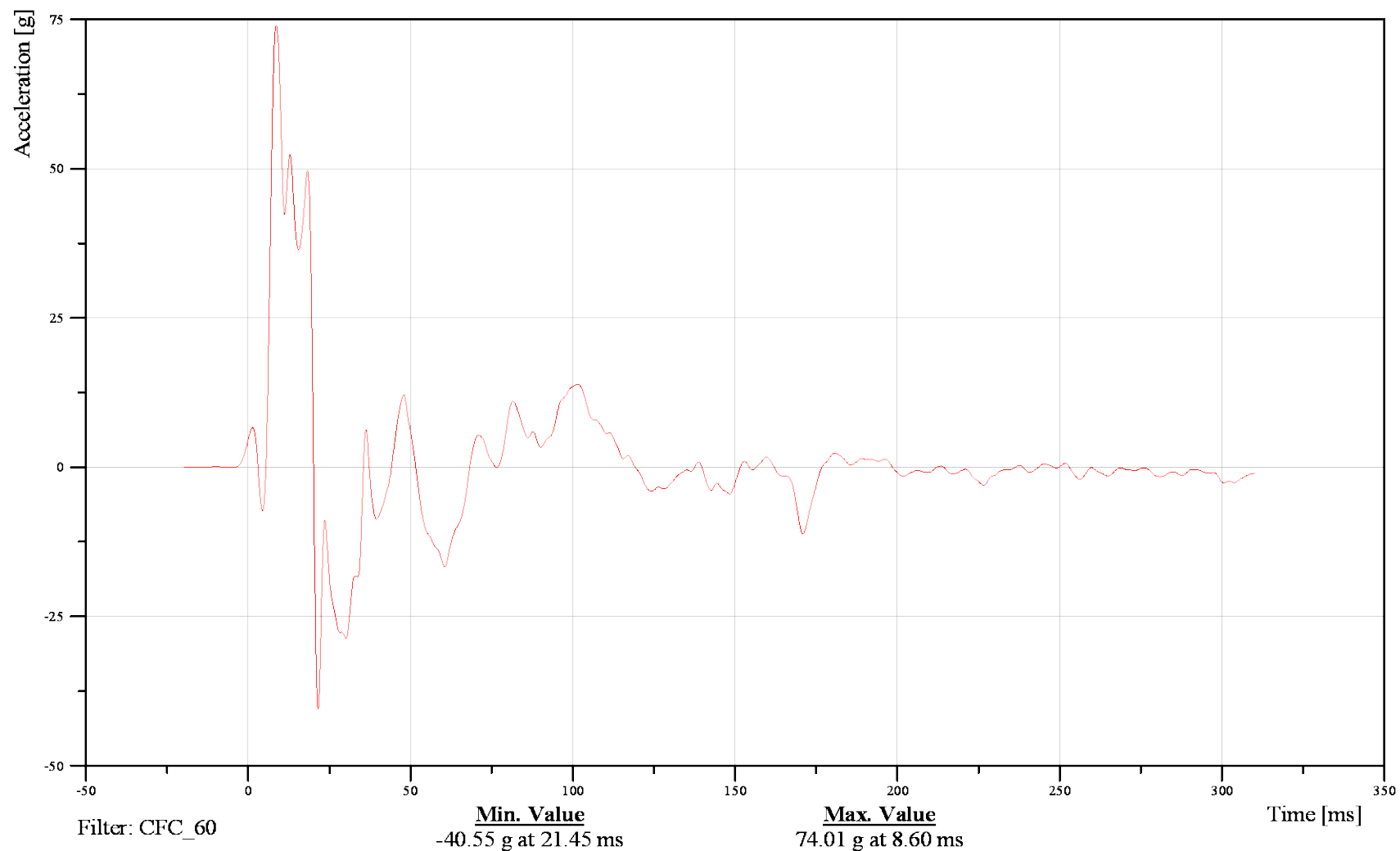
Time: 10:15

Customer: VRTC

11DOORMIMI71ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Front Door Mid Rear (Y)

Date: 03/13/2013

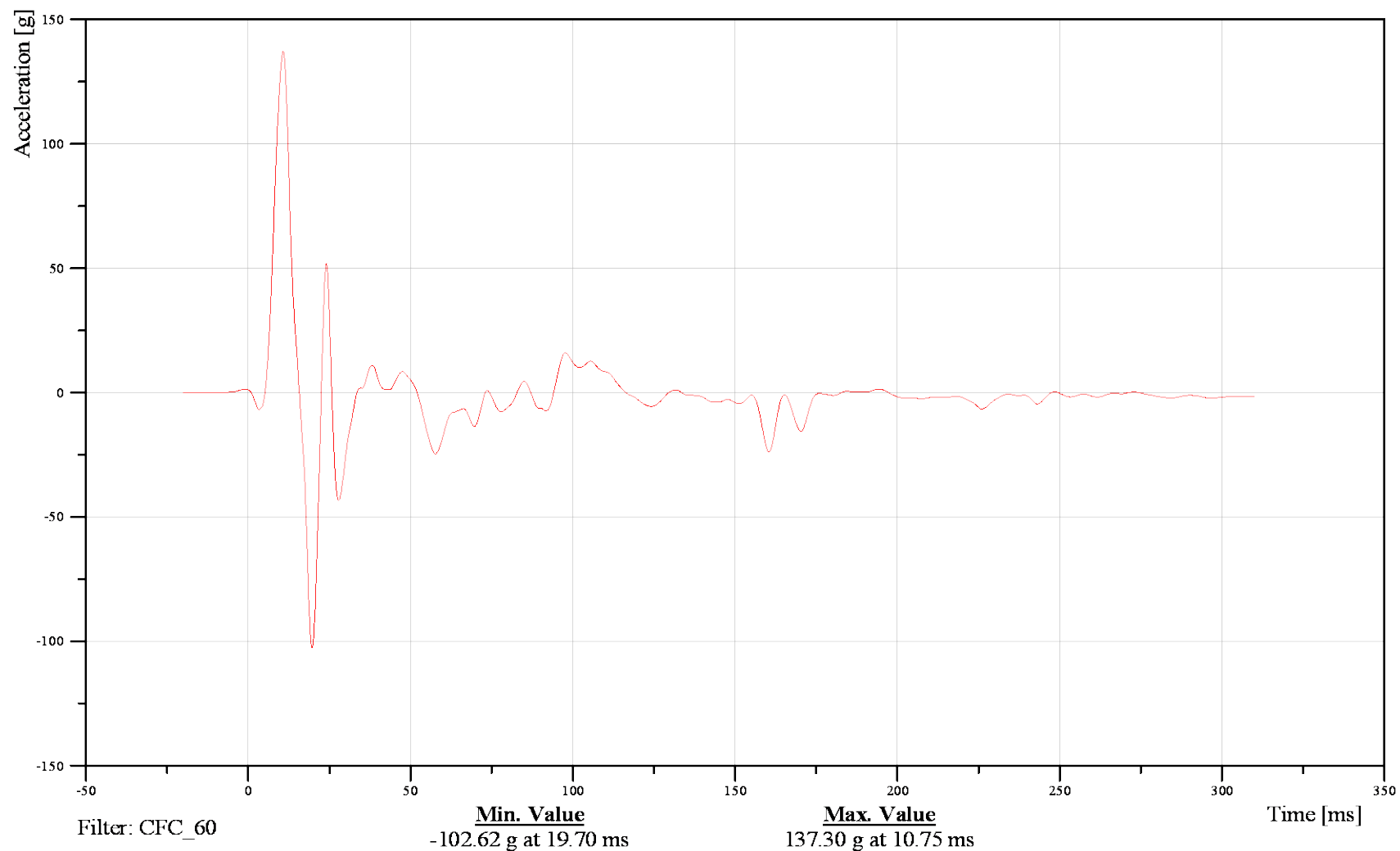
Time: 10:15

Customer: VRTC

11DOORMIRE71ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Front Door Upper Centerline (Y)

Date: 03/13/2013

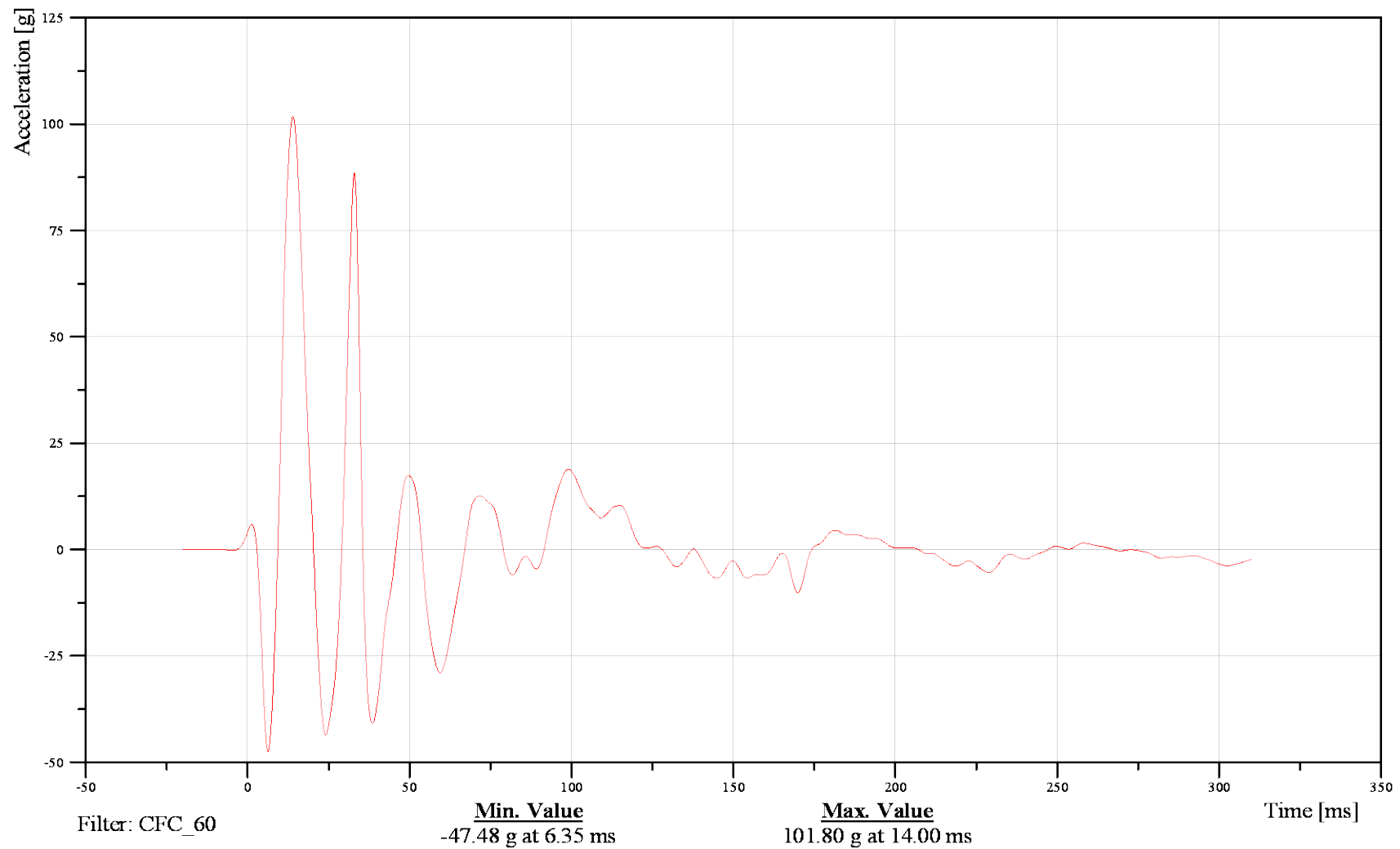
Time: 10:15

Customer: VRTC

11DOORMIUP71ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Rear Door Mid Rear (Y)

Date: 03/13/2013

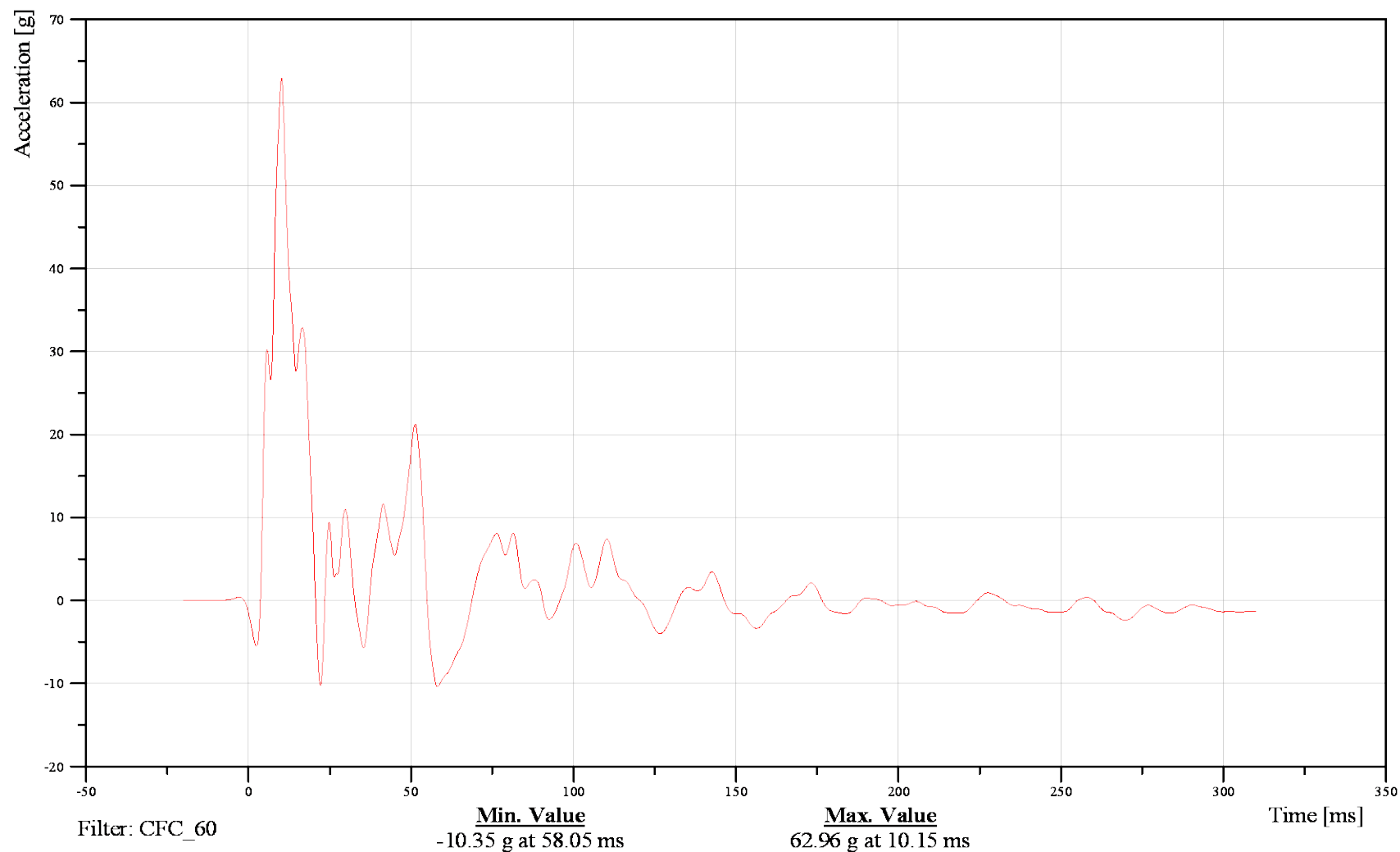
Time: 10:15

Customer: VRTC

14DOORMIRE71ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Left Rear Door Upper Centerline (Y)

Date: 03/13/2013

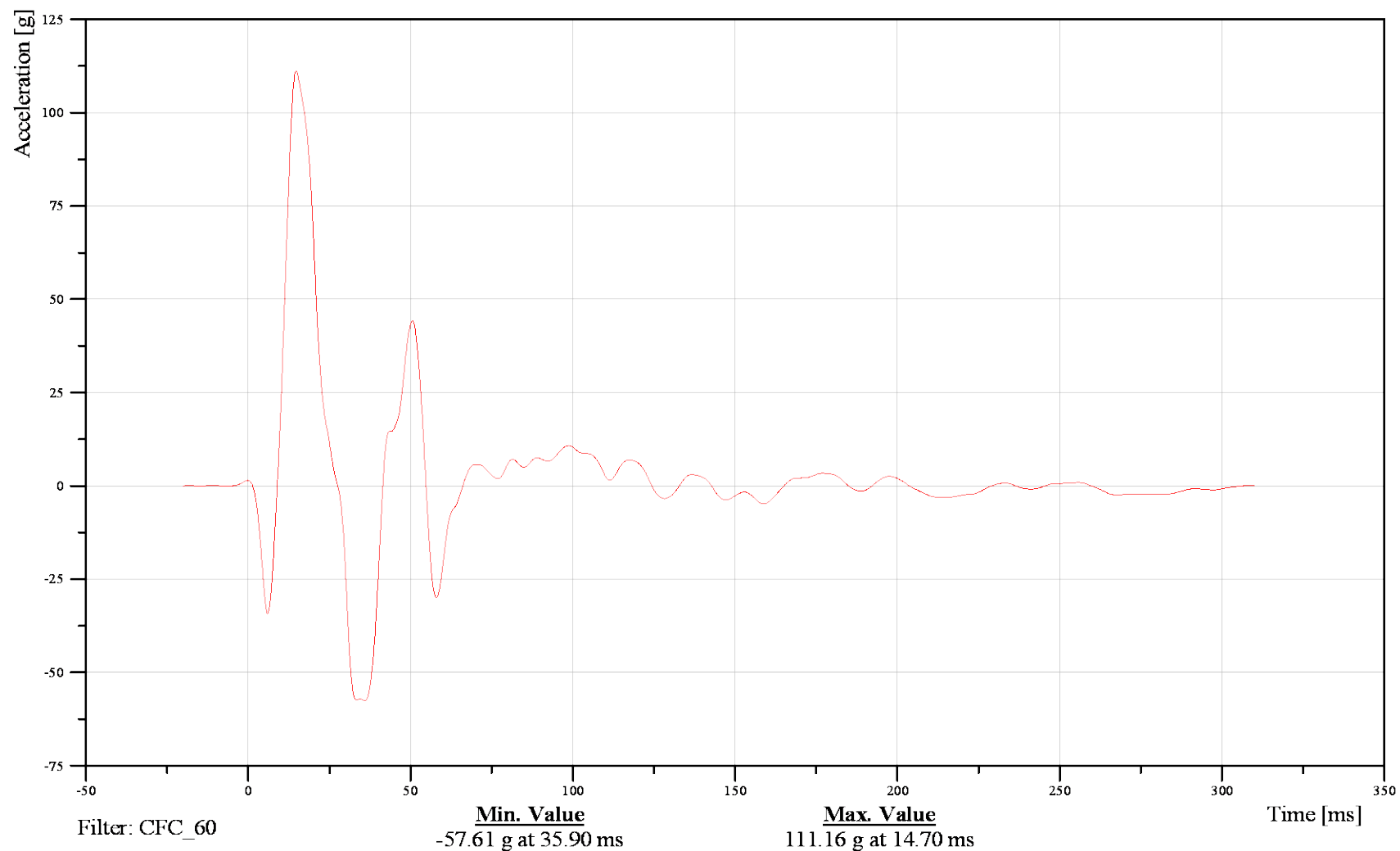
Time: 10:15

Customer: VRTC

14DOORMIUP71ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





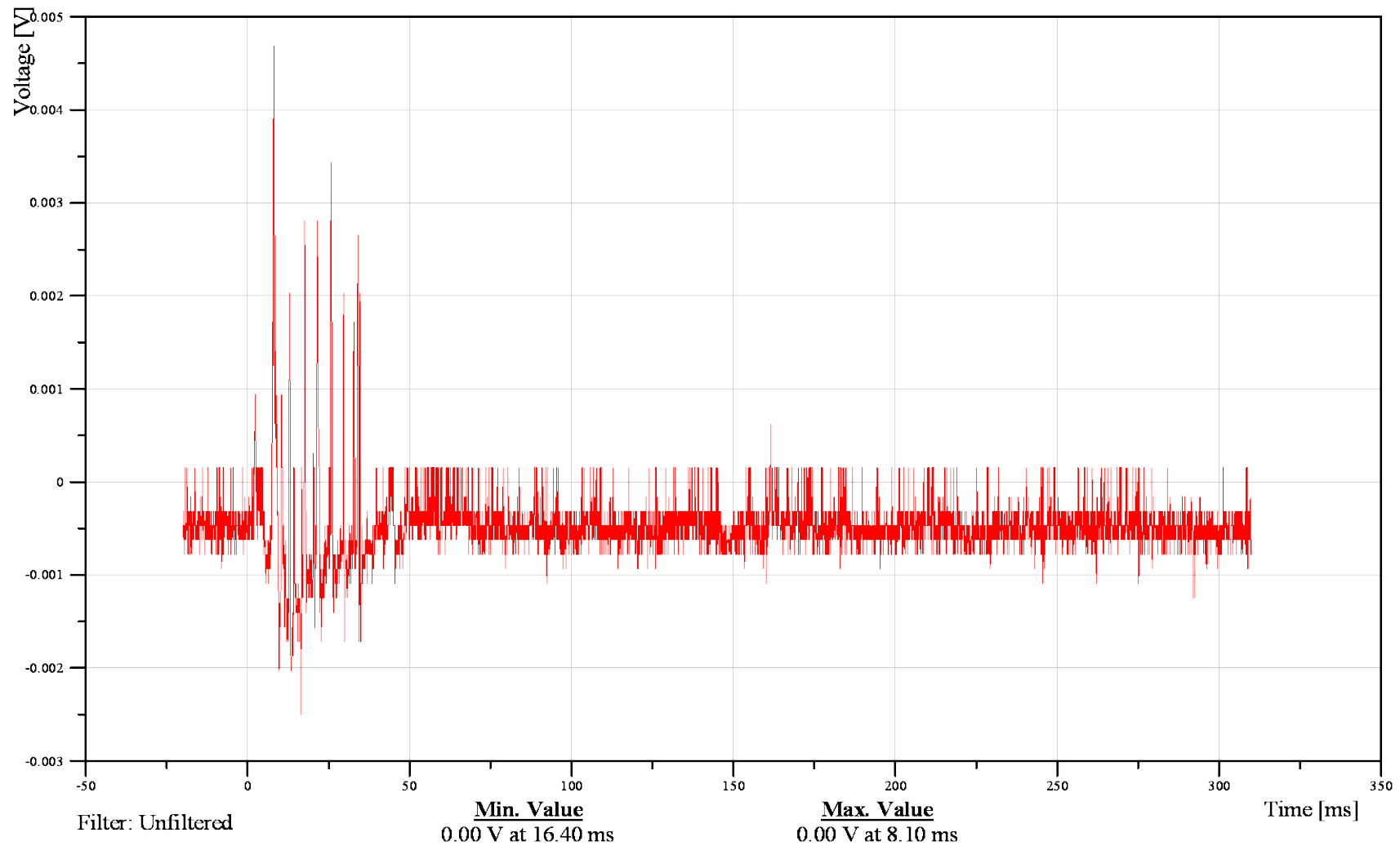
FMVSS 214 Side Impact 2010 Acura MDX
DRIVER PRIMARY

Date: 03/13/2013
Time: 10:15

Customer: VRTC

11SENS000000VO00

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

SAB TIMING IND

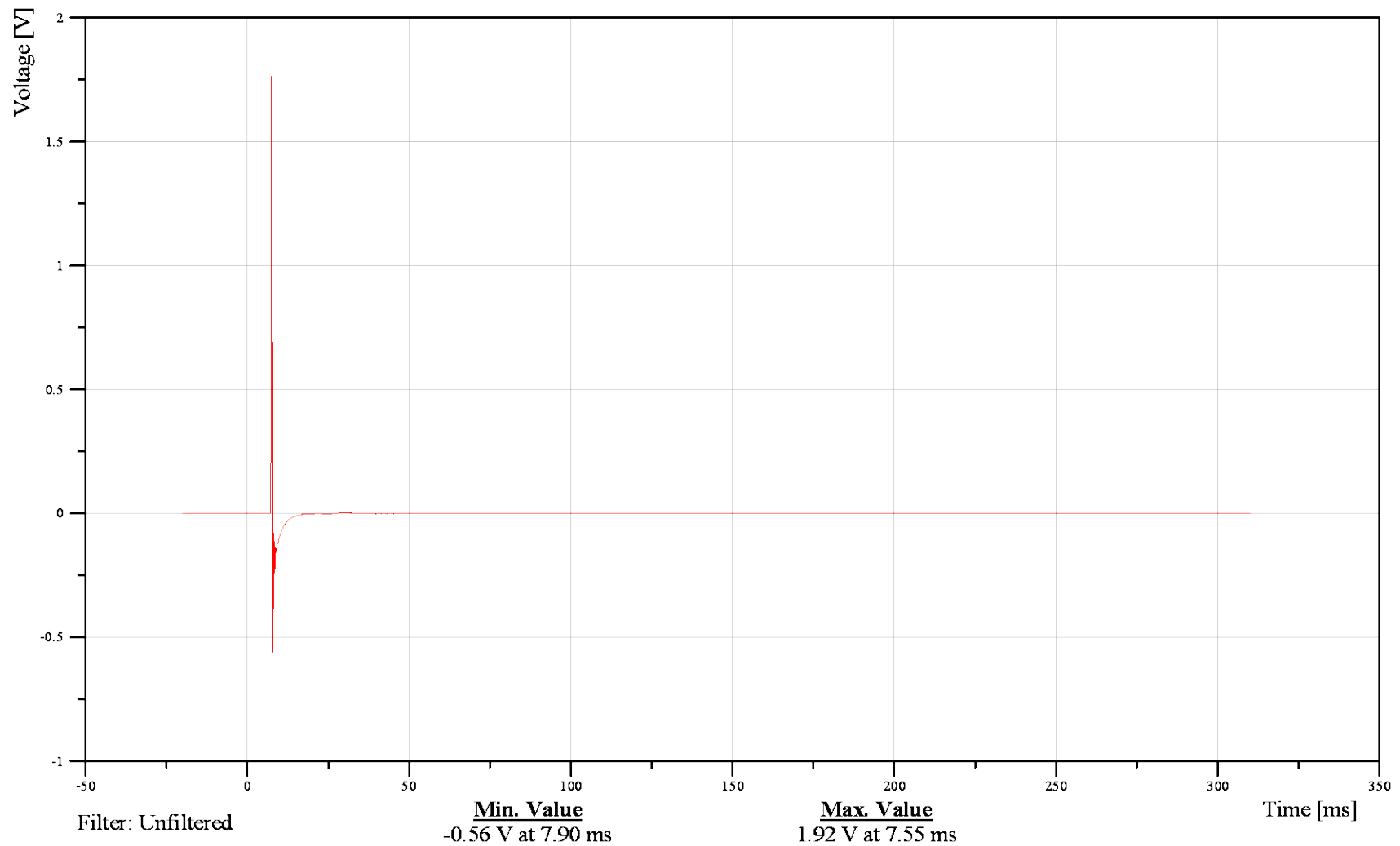
Date: 03/13/2013
Time: 10:15

Customer: VRTC

11SENS010000VO00

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

SCAB TIMING IND

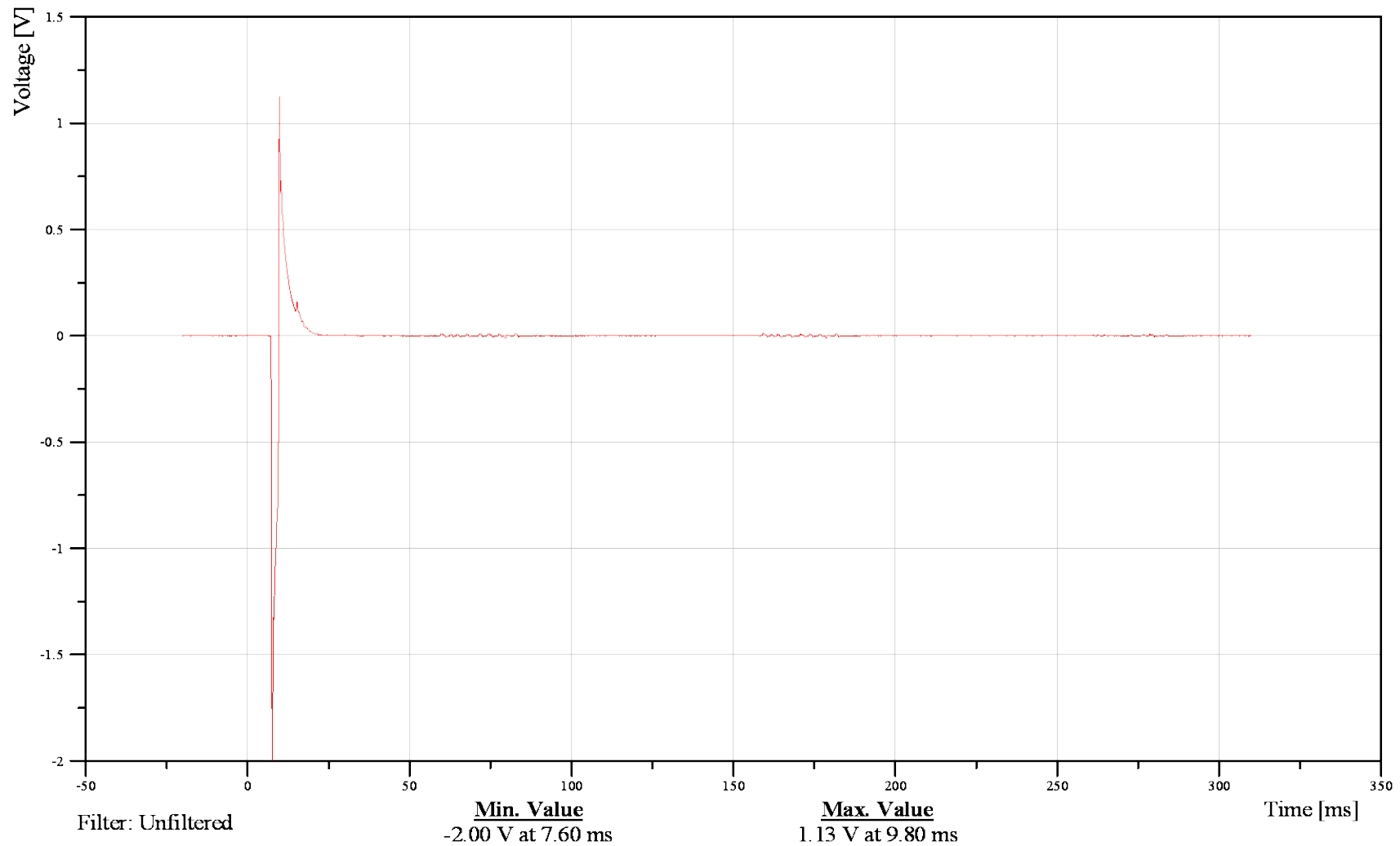
Date: 03/13/2013
Time: 10:15

Customer: VRTC

11SENS020000VO00

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

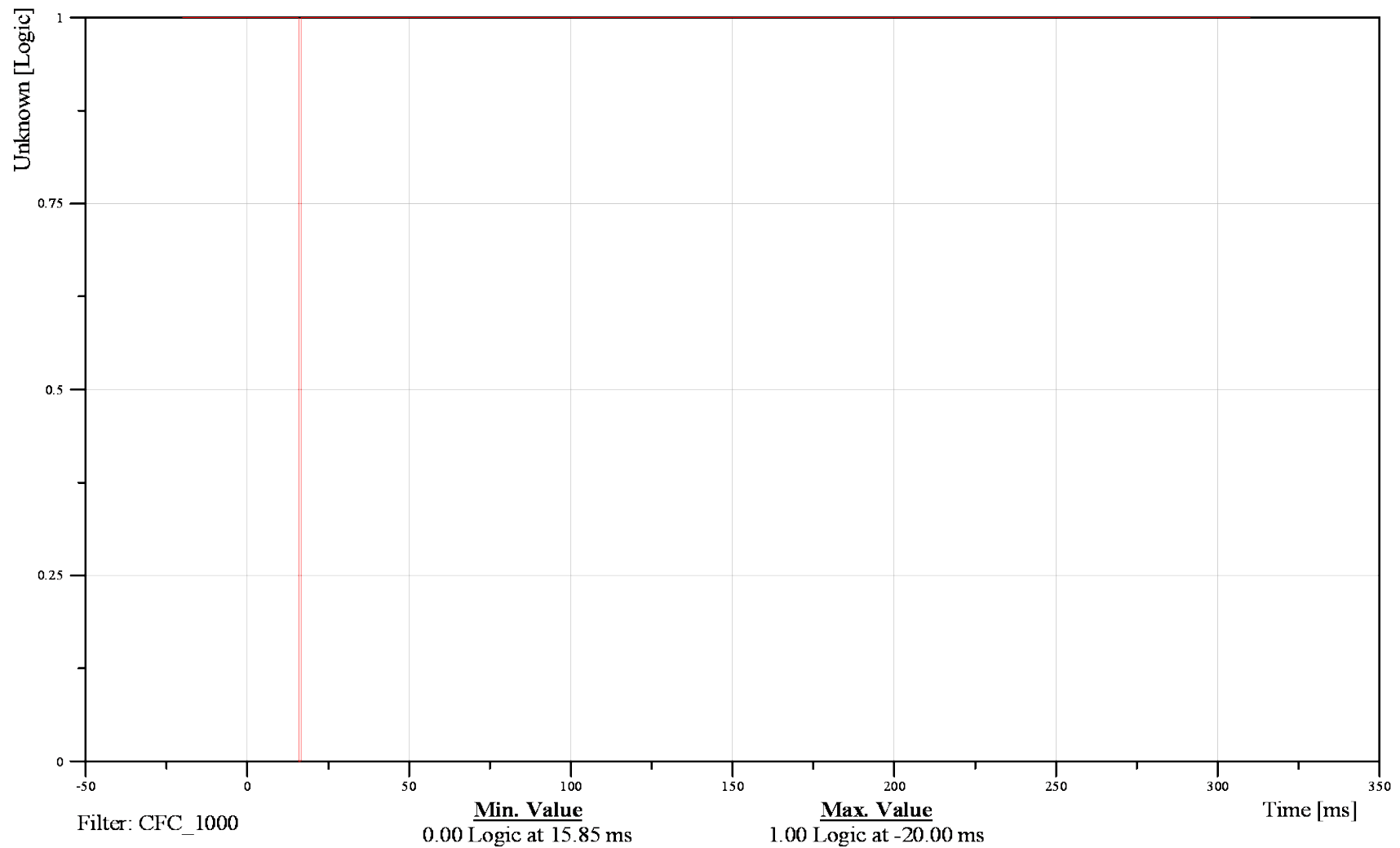
Head Contact

Customer: VRTC

11HEADCONT00VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Shoulder Contact

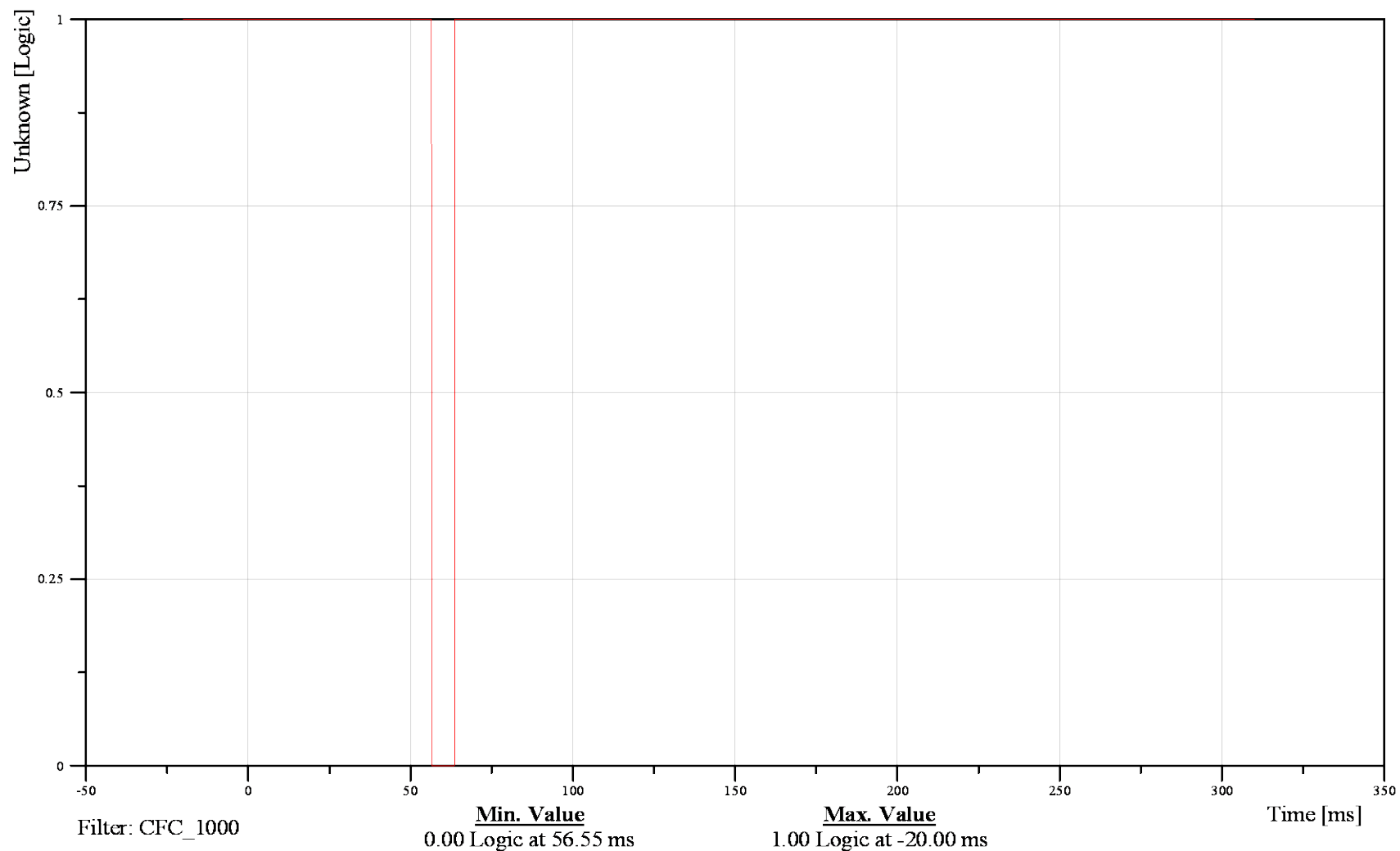
Time: 10:15

Customer: VRTC

11SHLDCONT00VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Thorax Contact

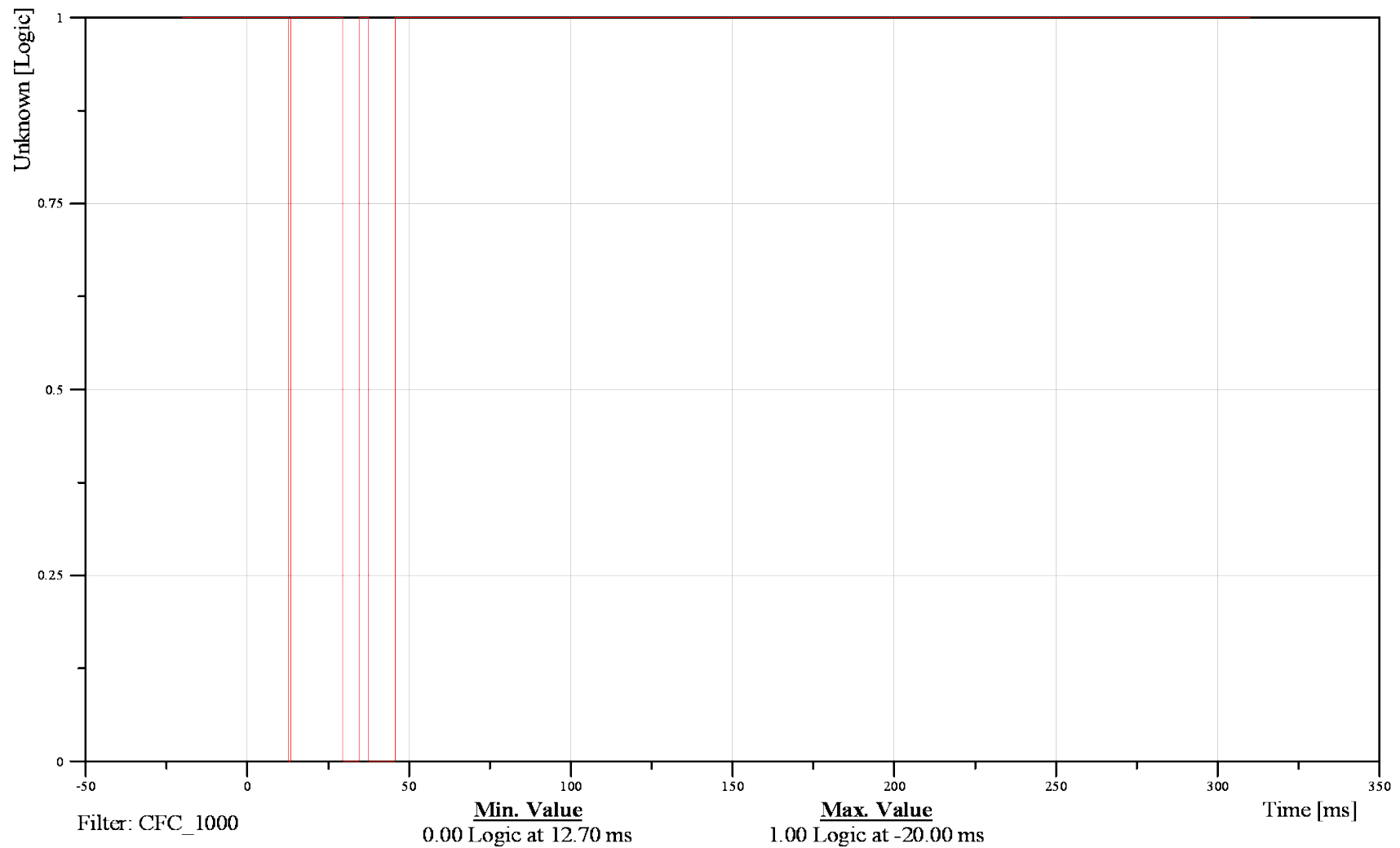
Date: 03/13/2013
Time: 10:15

Customer: VRTC

11THORCONT00VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

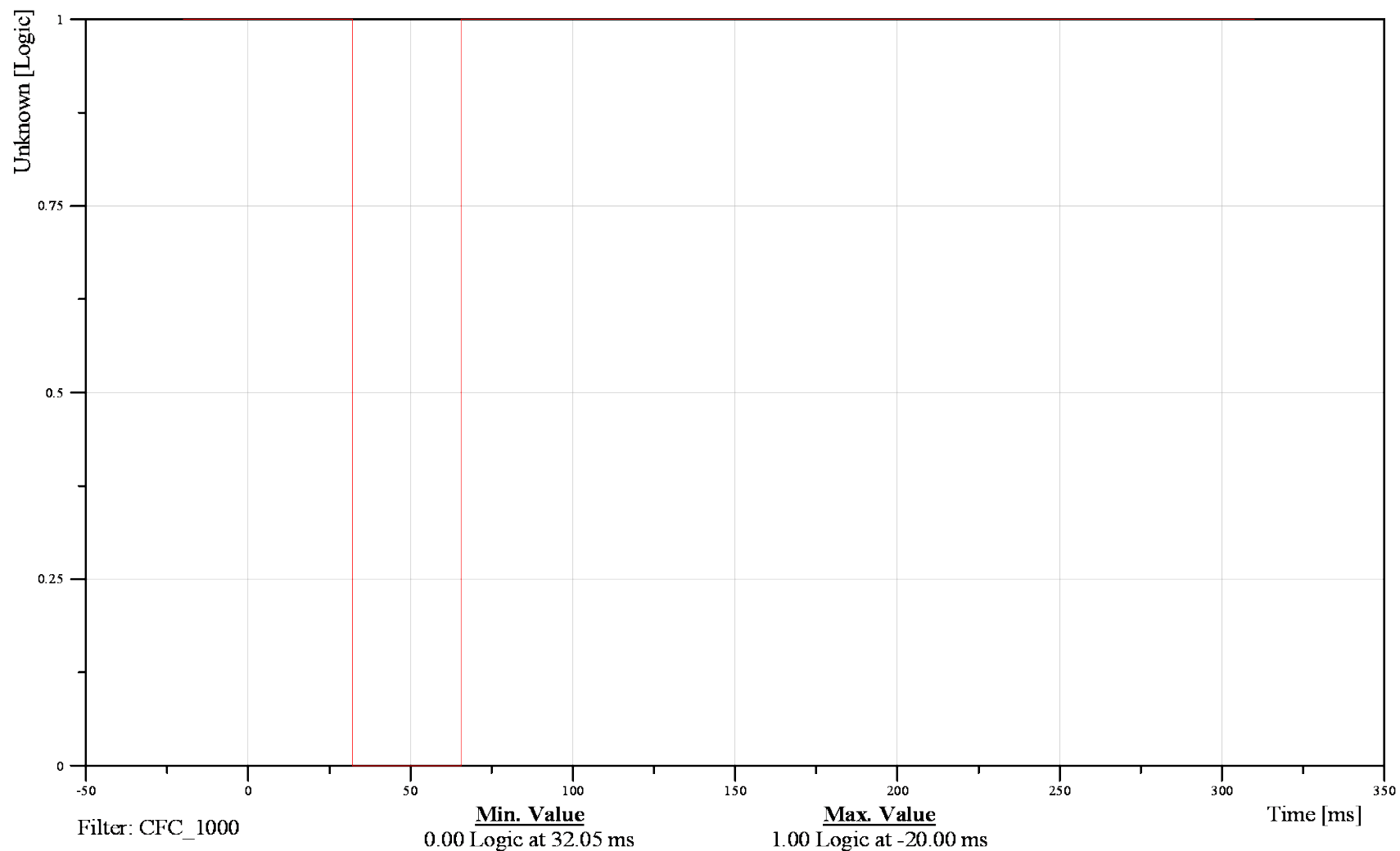
Leg Contact

Customer: VRTC

11LEGCONT000VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Head Contact

Date: 03/13/2013

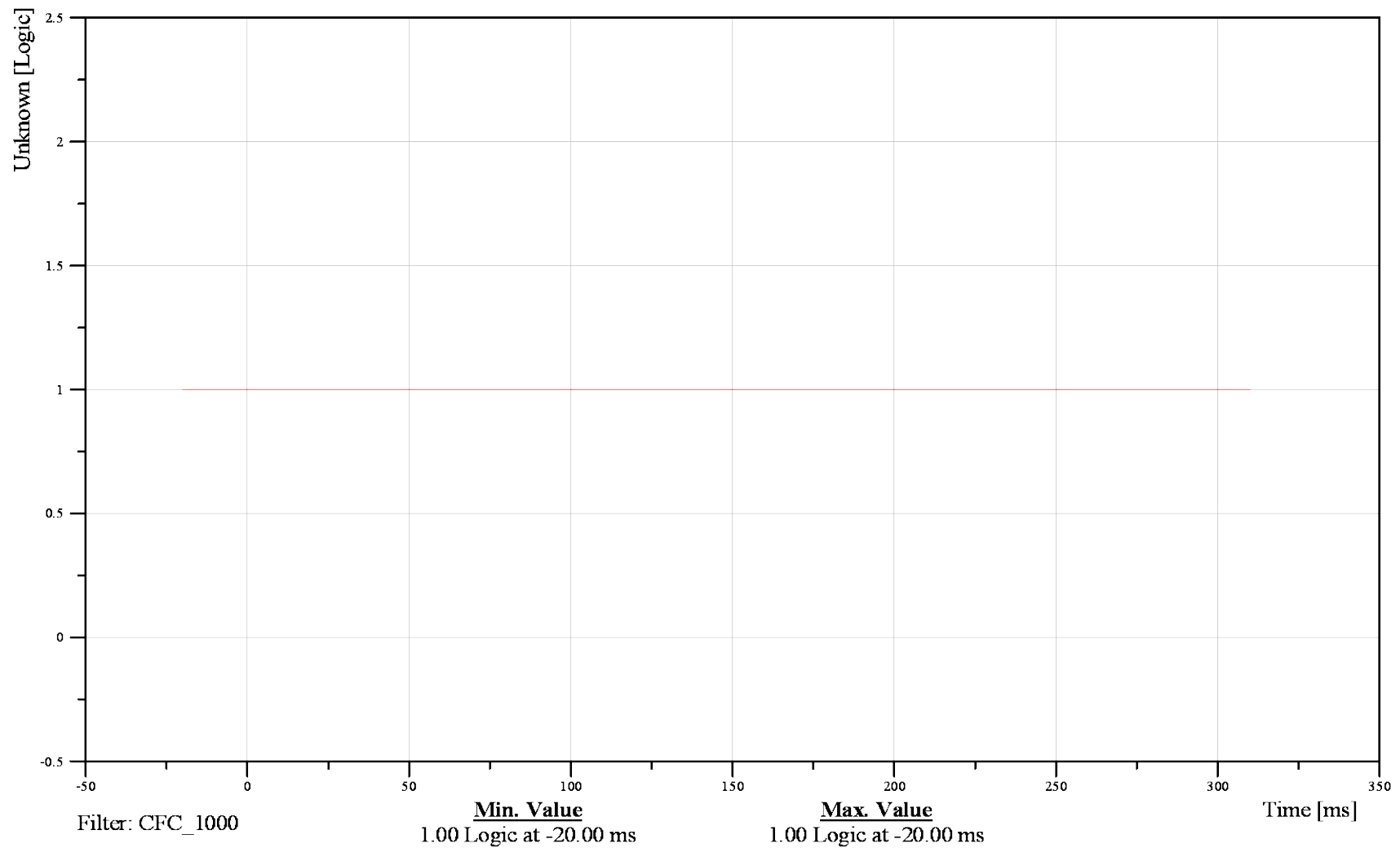
Time: 10:15

Customer: VRTC

14HEADCONT00VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Shoulder Contact

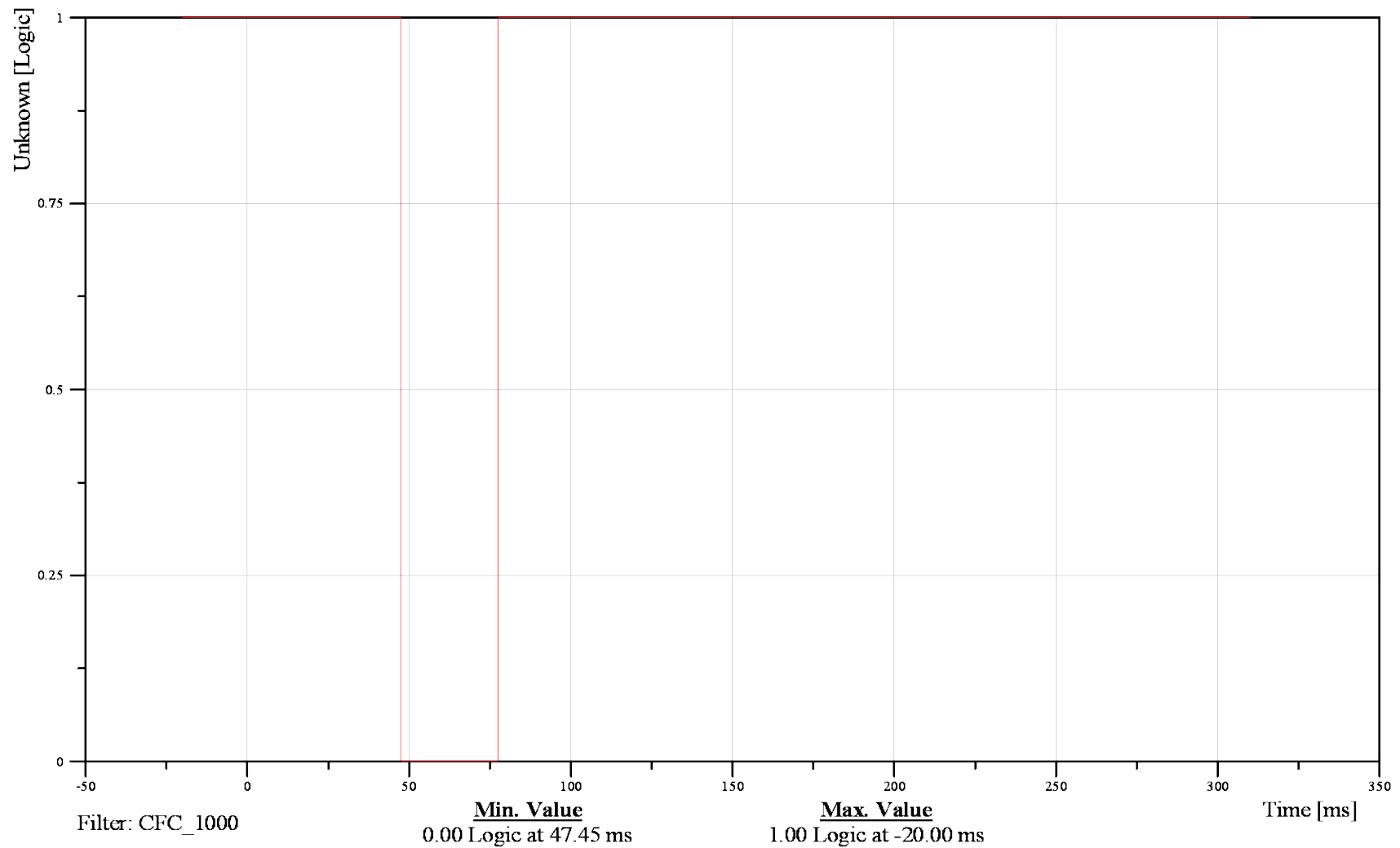
Date: 03/13/2013
Time: 10:15

Customer: VRTC

14SHLDCONT00VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

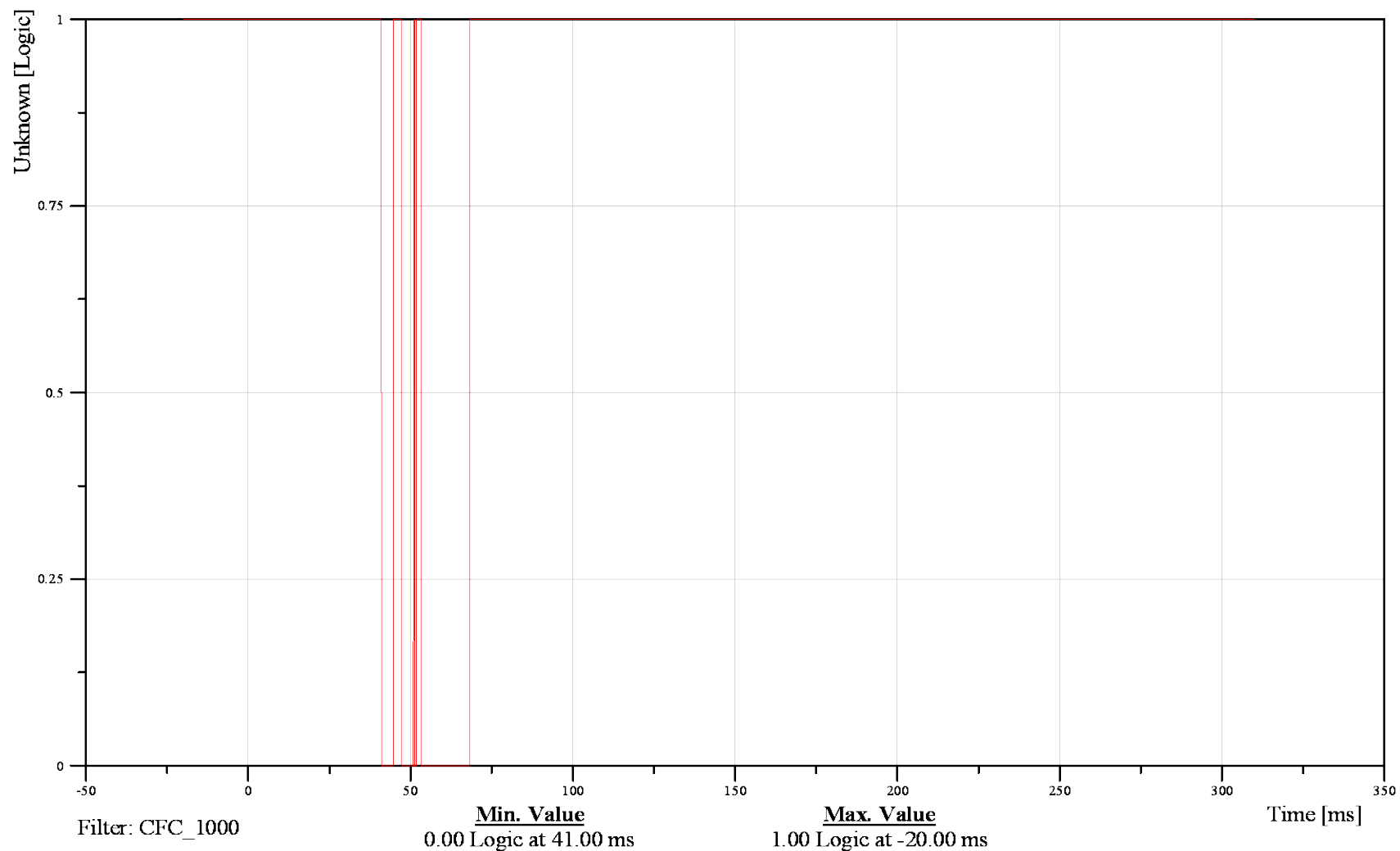
Thorax Contact

Customer: VRTC

14THORCONT00VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

Date: 03/13/2013

Time: 10:15

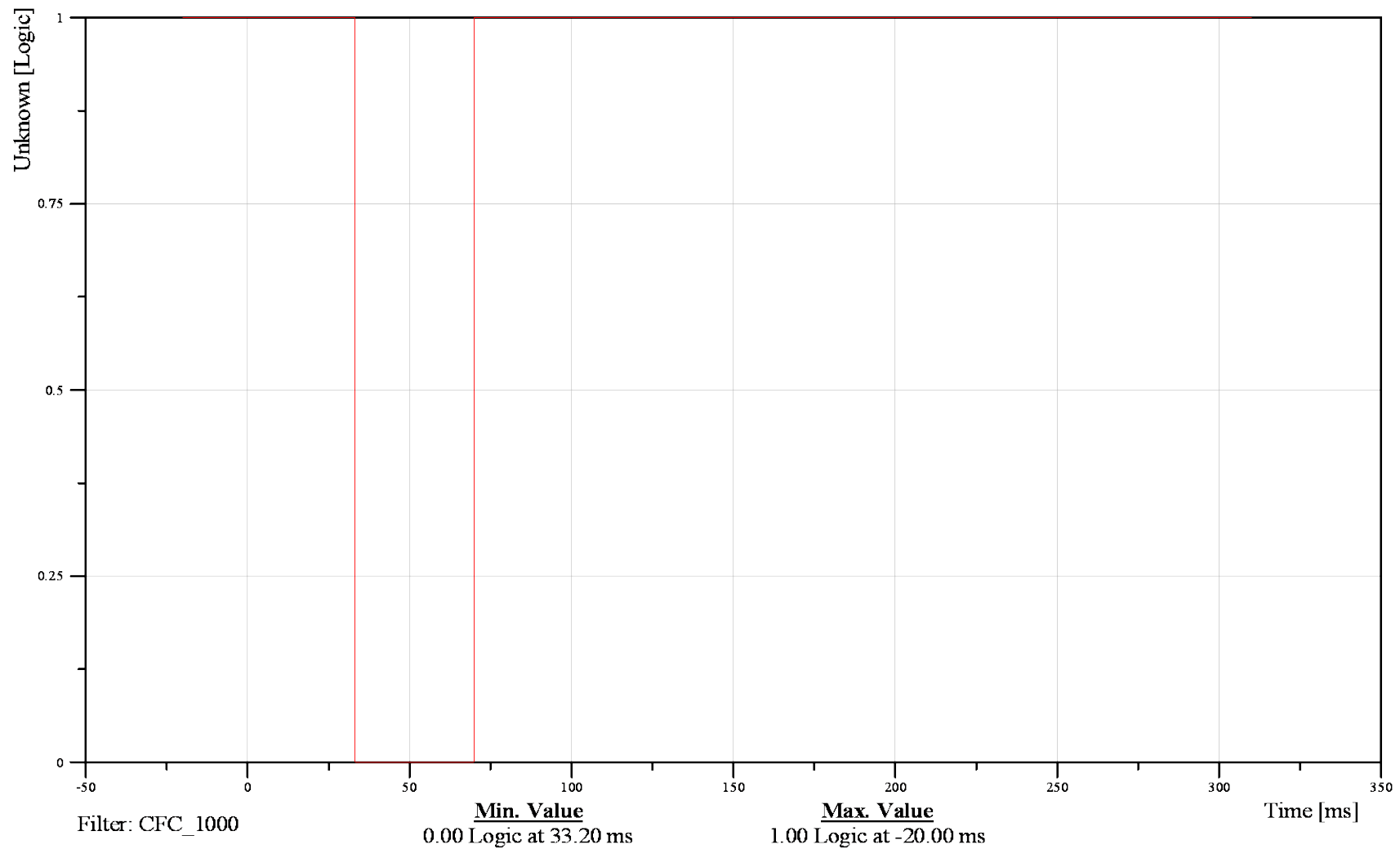
Leg Contact

Customer: VRTC

14LEGCONT000VO0A

TRC Inc. Test Lab: CTF

Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

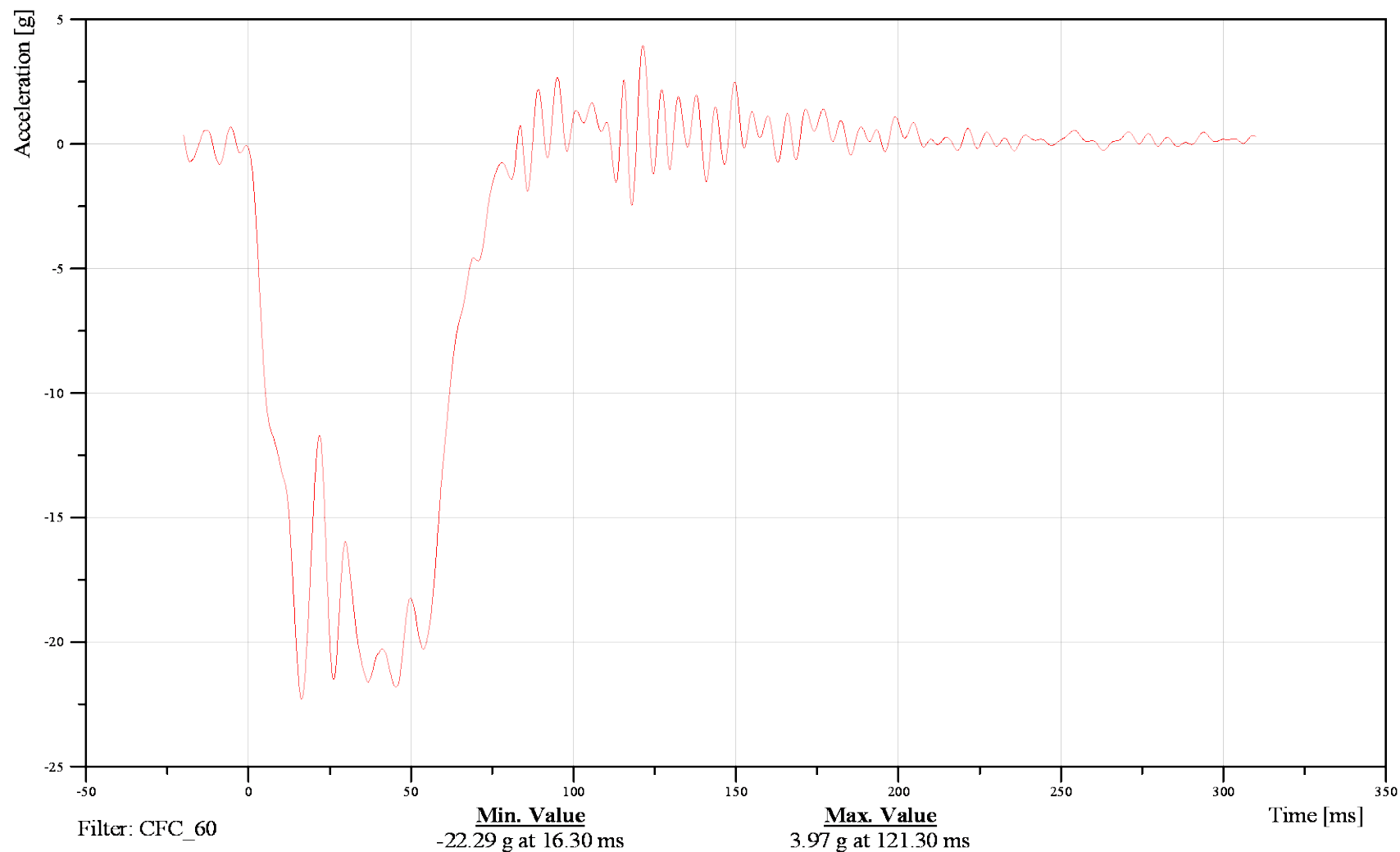
MDB CG AX

Date: 03/13/2013
Time: 10:15

Customer: VRTC

M0MBARCG0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

MDB CG AY

Date: 03/13/2013

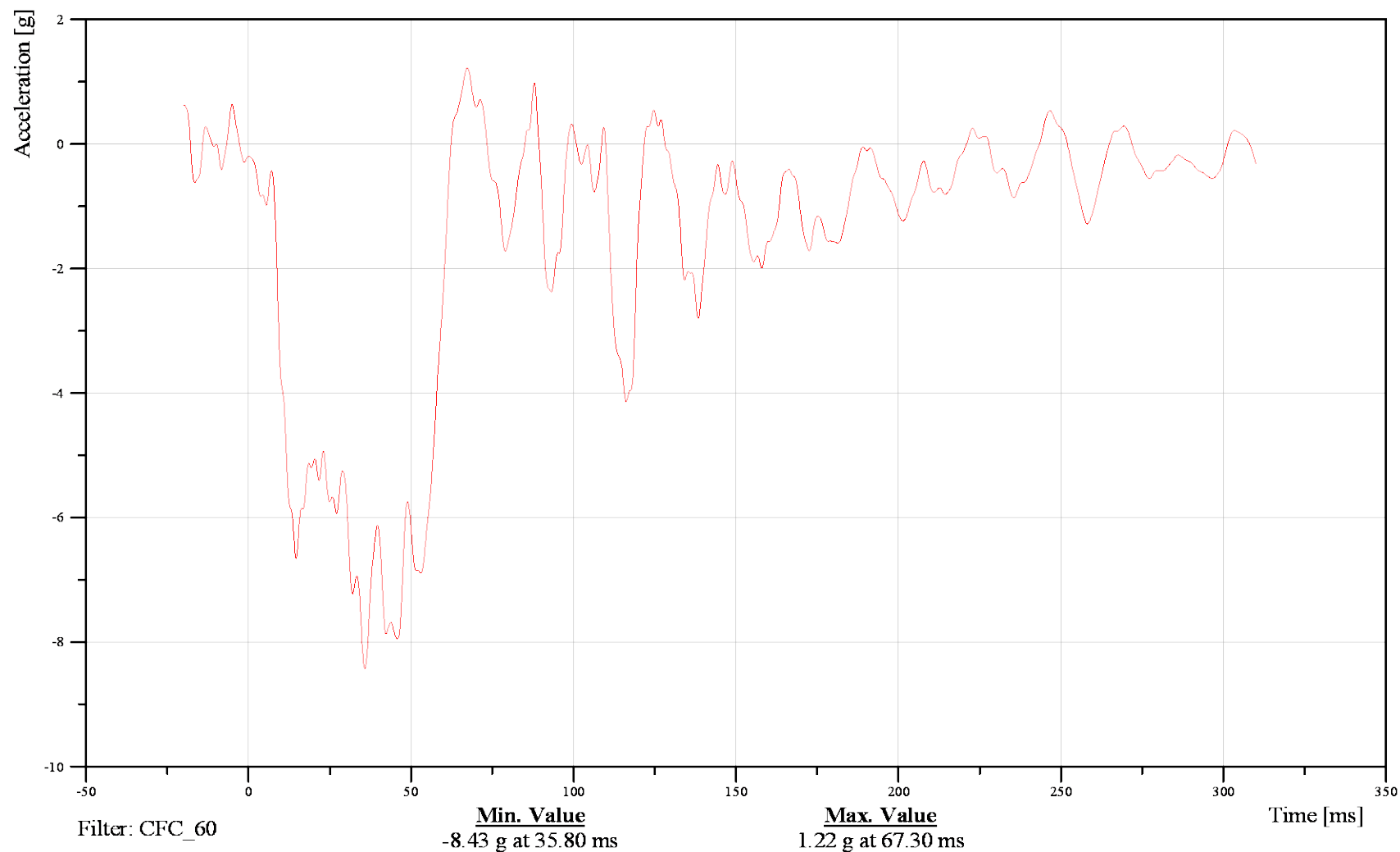
Time: 10:15

Customer: VRTC

M0MBARCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312





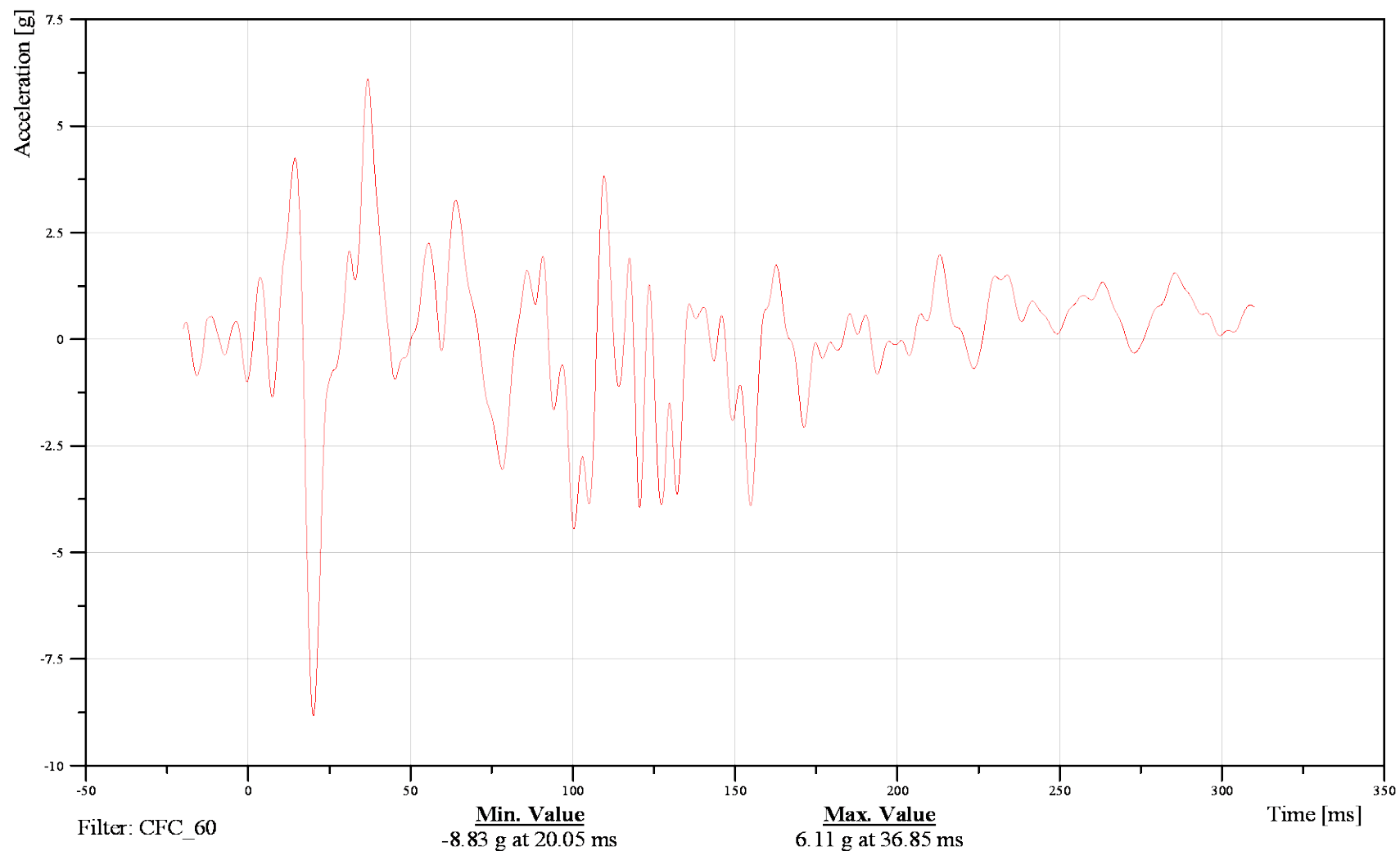
FMVSS 214 Side Impact 2010 Acura MDX
MDB CG AZ

Date: 03/13/2013
Time: 10:15

Customer: VRTC

M0MBCRG0000ACZD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

MDB CG A Resultant

Date: 03/13/2013

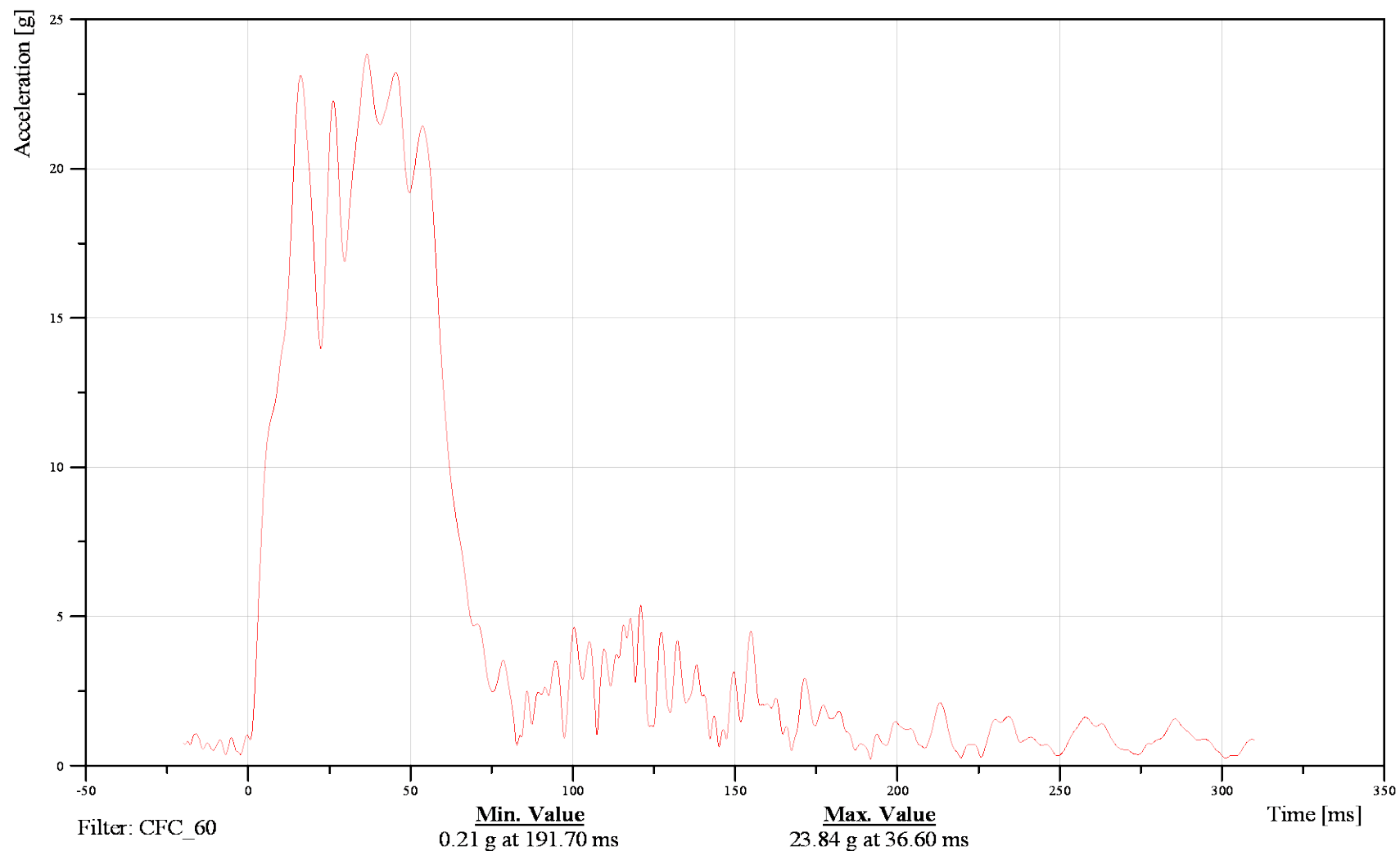
Time: 10:15

Customer: VRTC

M0MBARCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 130312





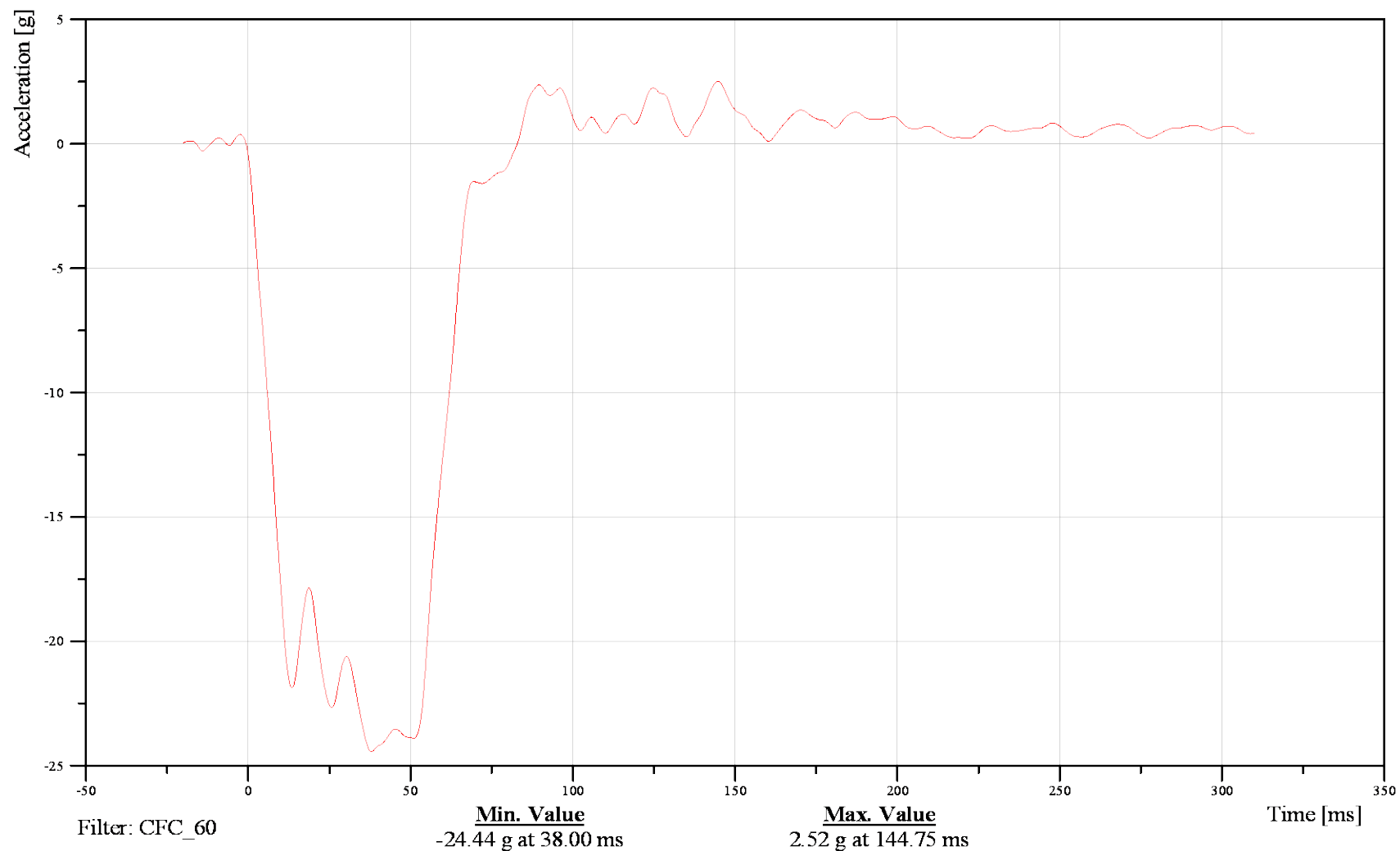
FMVSS 214 Side Impact 2010 Acura MDX
MDB REAR AX

Date: 03/13/2013
Time: 10:15

Customer: VRTC

M0FRAMRE0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 130312





FMVSS 214 Side Impact 2010 Acura MDX

MDB REAR AY

Date: 03/13/2013

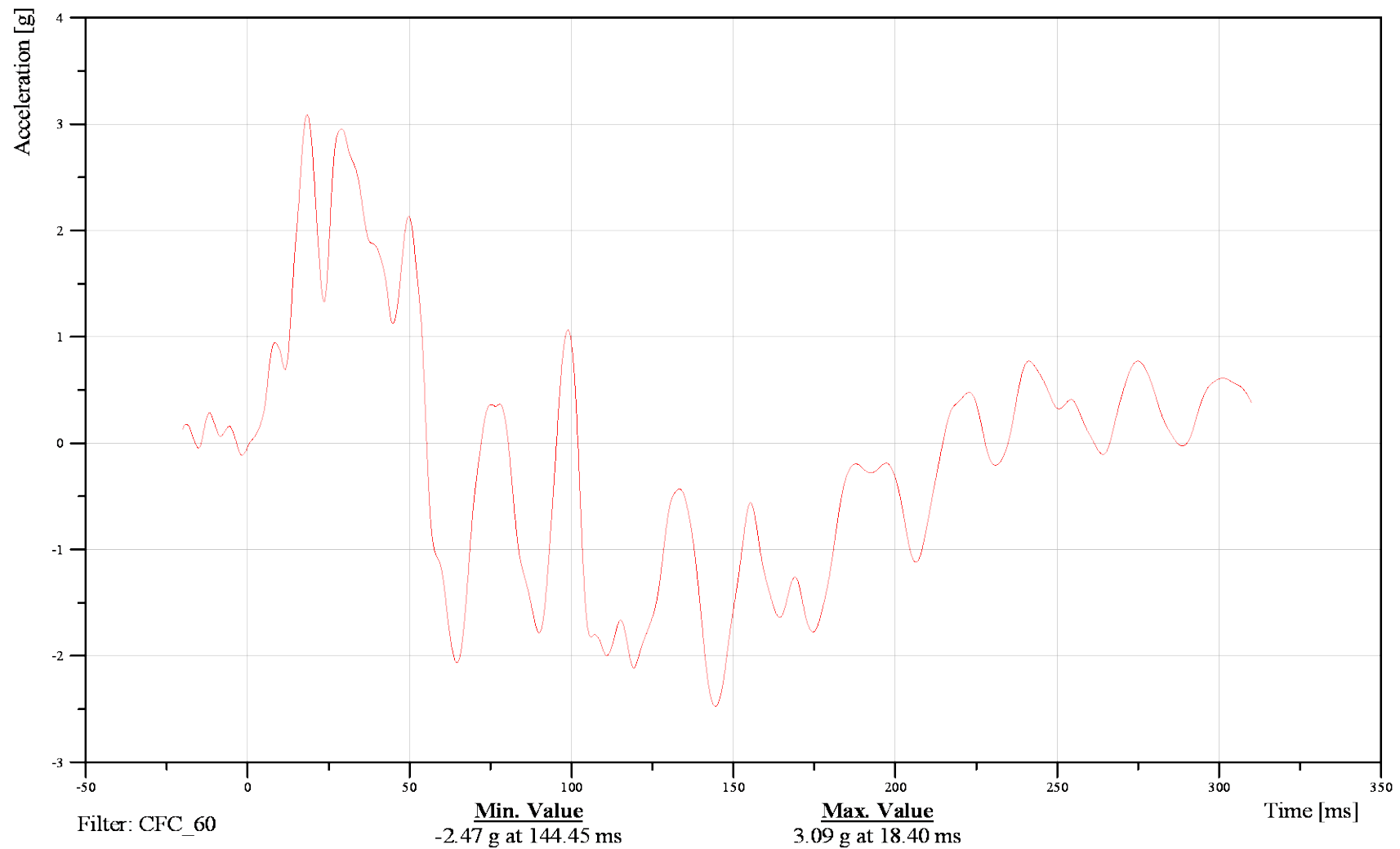
Time: 10:15

Customer: VRTC

M0FRAMRE0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 130312



Appendix C

WorldSID Configuration and Performance Verification Data

Calibration Test Results

Pre-Test

WorldSID: 016

Configured for Left Side Impact

Transportation Research Center Inc.

Front Head Drop

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

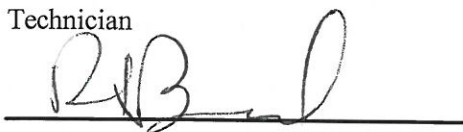
Test Date: 2/12/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Peak Head Resultant Acceleration	205 - 255 g	241.7 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-6.9 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

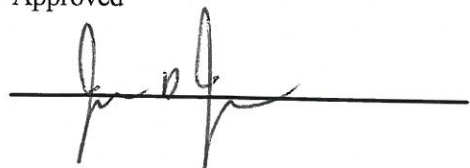
Test meets specifications.

Comments:

Technician



Approved



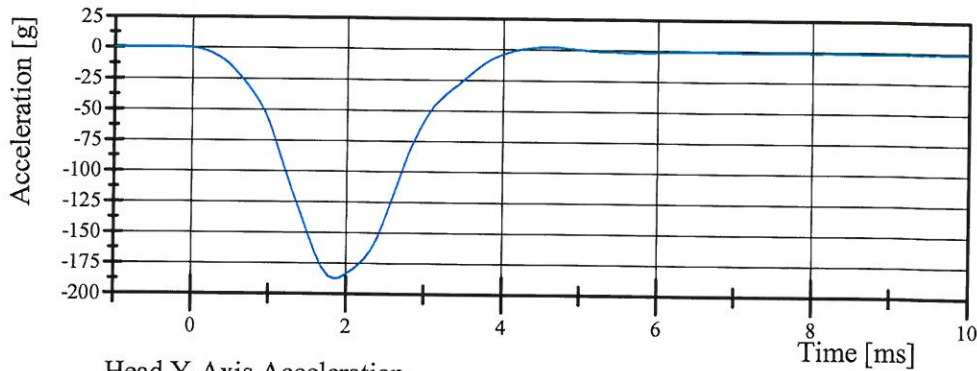
Transportation Research Center Inc.

Front Head Drop

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

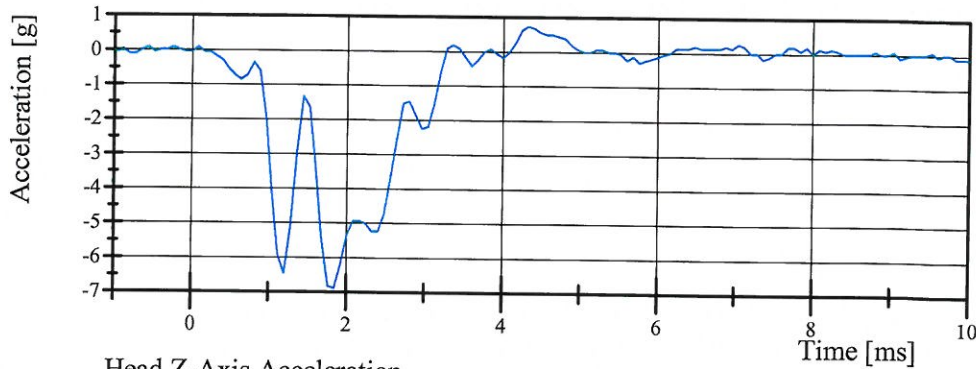
Test Date: 2/12/2013

Head X-Axis Acceleration



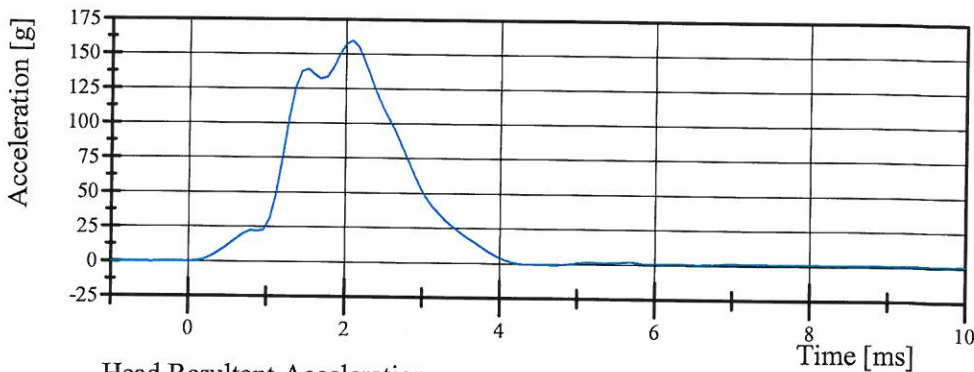
Filter Class: CFC_1000
Max: 2.4 gn at 4.6 ms
Min: -187.6 gn at 1.8 ms

Head Y-Axis Acceleration



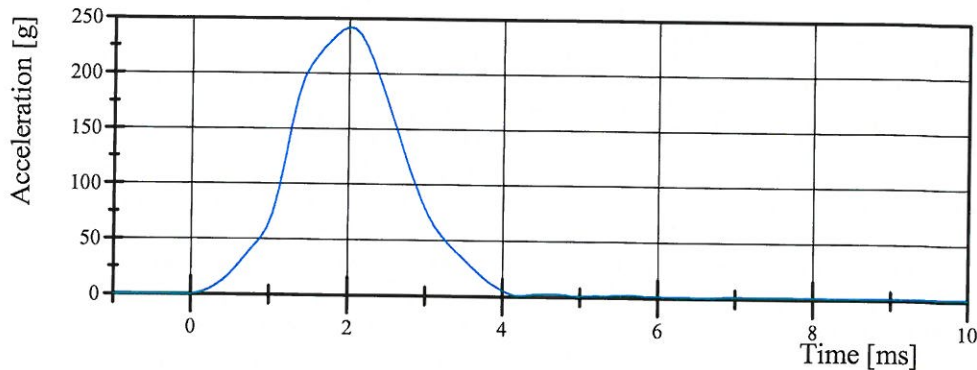
Filter Class: CFC_1000
Max: 0.7 gn at 4.3 ms
Min: -6.9 gn at 1.8 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 159.8 gn at 2.1 ms
Min: -0.9 gn at 4.6 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 241.7 gn at 2.0 ms
Min: 0.1 gn at 0.0 ms

Transportation Research Center Inc.

Left Lateral Head Drop

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-4

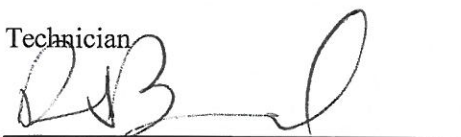
Test Date: 2/22/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Peak Head Resultant Acceleration	104 - 123 g	110.7 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	-2.8 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

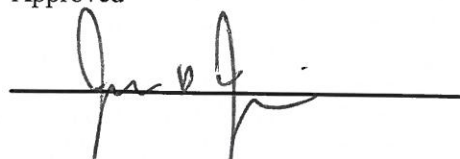
Test meets specifications.

Comments:

Technician



Approved

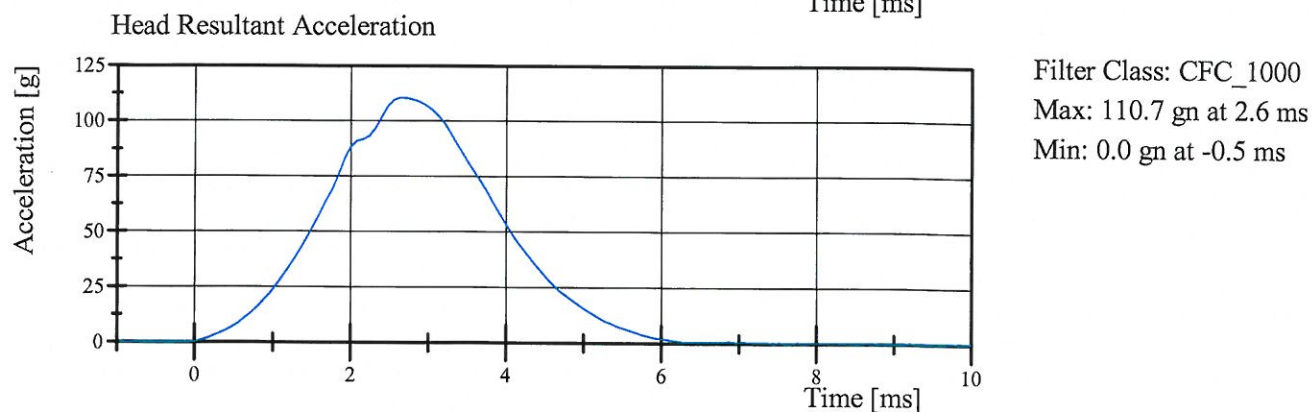
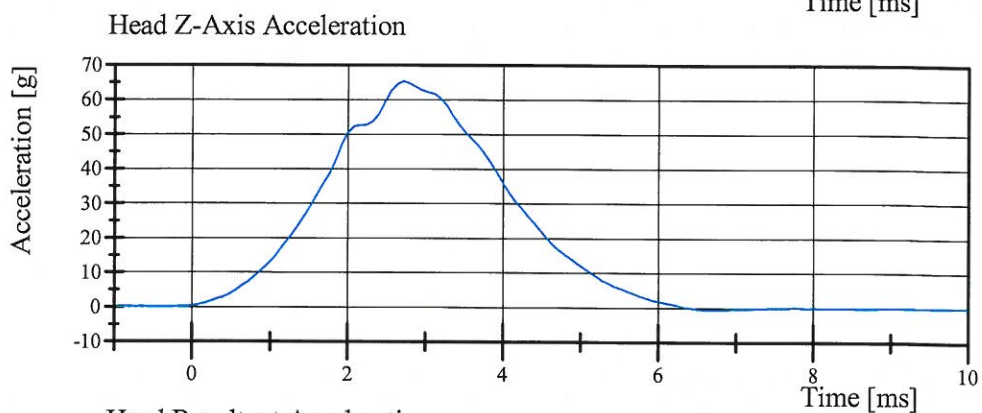
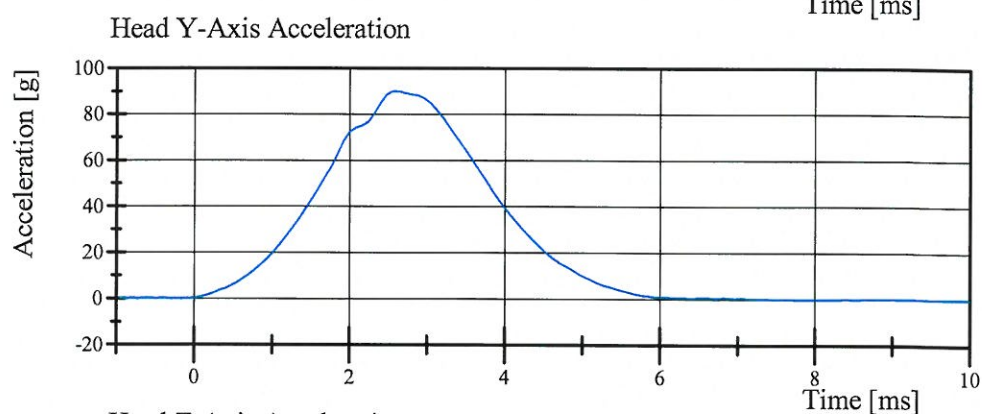
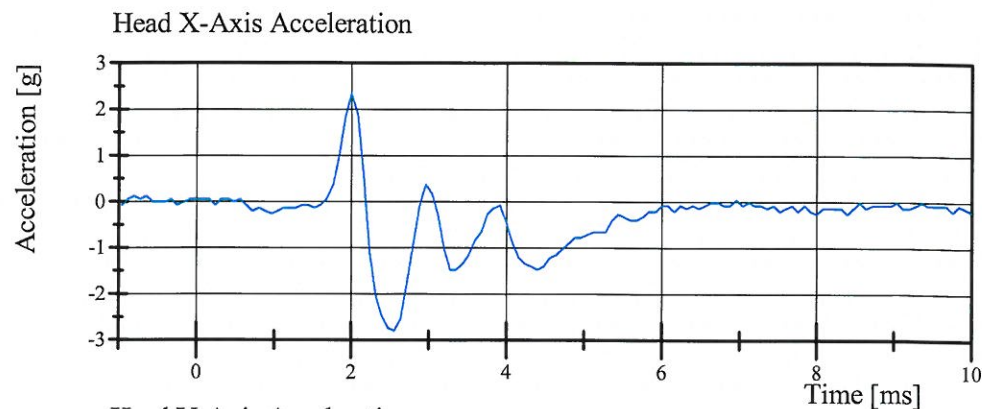


Transportation Research Center Inc.

Left Lateral Head Drop

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-4

Test Date: 2/22/2013



Transportation Research Center Inc.

Right Lateral Head Drop

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-2

Test Date: 2/21/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Peak Head Resultant Acceleration	104 - 123 g	120.6 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	4.7 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

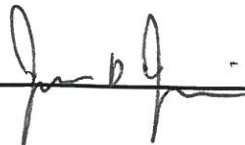
Test meets specifications.

Comments:

Technician



Approved



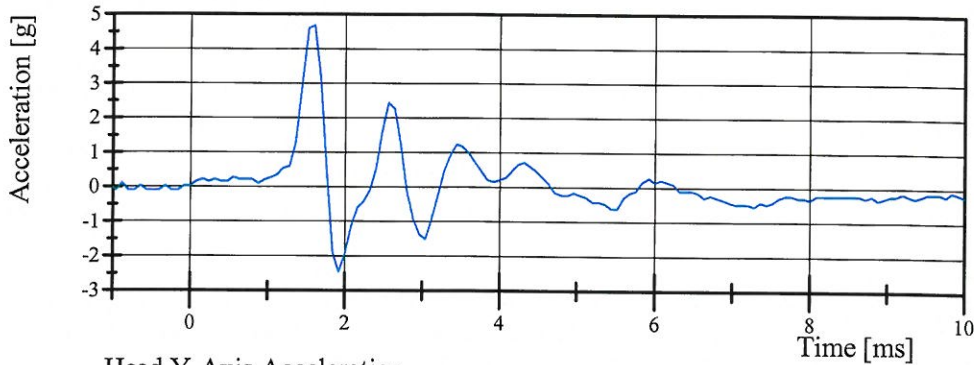
Transportation Research Center Inc.

Right Lateral Head Drop

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-2

Test Date: 2/21/2013

Head X-Axis Acceleration

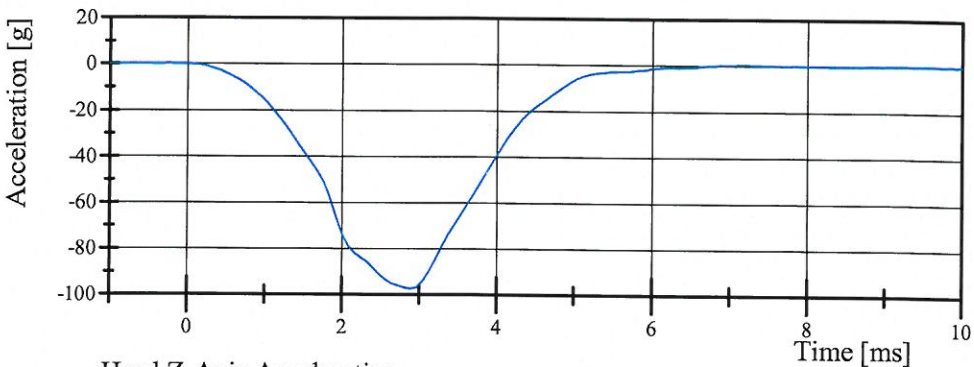


Filter Class: CFC_1000

Max: 4.7 gn at 1.6 ms

Min: -2.5 gn at 1.9 ms

Head Y-Axis Acceleration

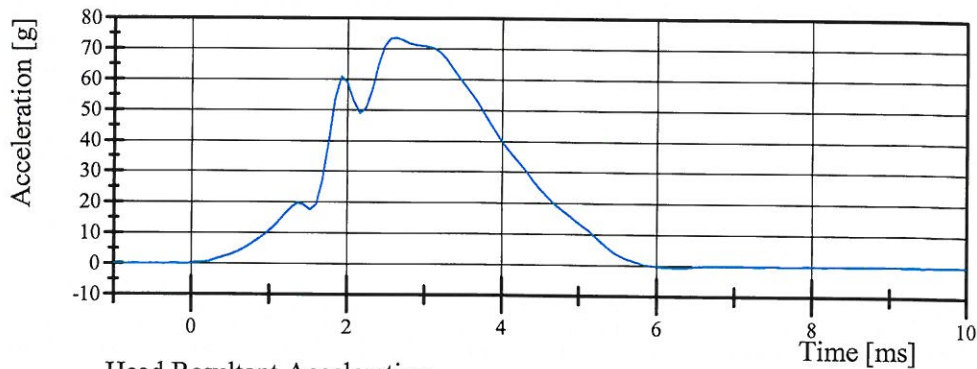


Filter Class: CFC_1000

Max: 0.5 gn at 7.1 ms

Min: -97.4 gn at 2.9 ms

Head Z-Axis Acceleration

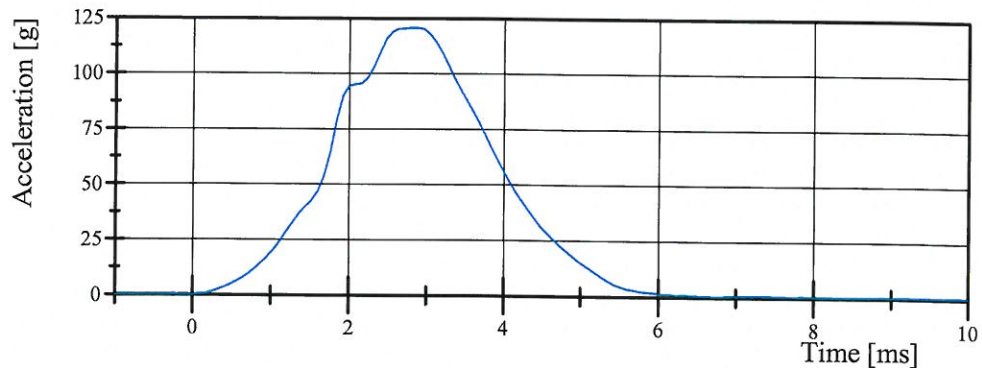


Filter Class: CFC_1000

Max: 73.5 gn at 2.6 ms

Min: -0.6 gn at 6.2 ms

Head Resultant Acceleration



Filter Class: CFC_1000

Max: 120.6 gn at 2.9 ms

Min: 0.0 gn at -0.6 ms

Transportation Research Center Inc.

Left Lateral Neck

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/12/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Pendulum Velocity	(-3.3) - (-3.5) m/s	-3.35 m/s	Yes
Pendulum Integrated Velocity Change at 4 ms	0.77 - 1.04 m/s	0.936 m/s	Yes
Change at 8 ms	1.6 - 2.16 m/s	2.043 m/s	Yes
Change at 12 ms	2.43 - 3.29 m/s	3.213 m/s	Yes
Maximum Headform Flexion	(-50) - (-61) deg	-52.8 deg	Yes
Headform Flexion Decay - from Peak to Zero Degrees	58 - 72 ms	60.6 ms	Yes
Total Neck Occipital Condyles Moment	55 - 68 N·m	64.7 N·m	Yes
Total Neck Occipital Condyles Moment Decay Time to 0 N·m	71 - 87 ms	79.0 ms	Yes
Maximum Forward Pot Rotation			
Peak	(-32) - (-39) °	-34.5 °	Yes
Time of Peak	56 - 68 ms	57.0 ms	Yes
Maximum Rear Pot Rotation			
Peak	(-30) - (-37) °	-31.2 °	Yes
Time of Peak	56 - 68 ms	60.5 ms	Yes

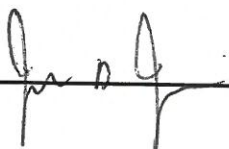
Test meets specifications.

Comments:

Technician



Approved



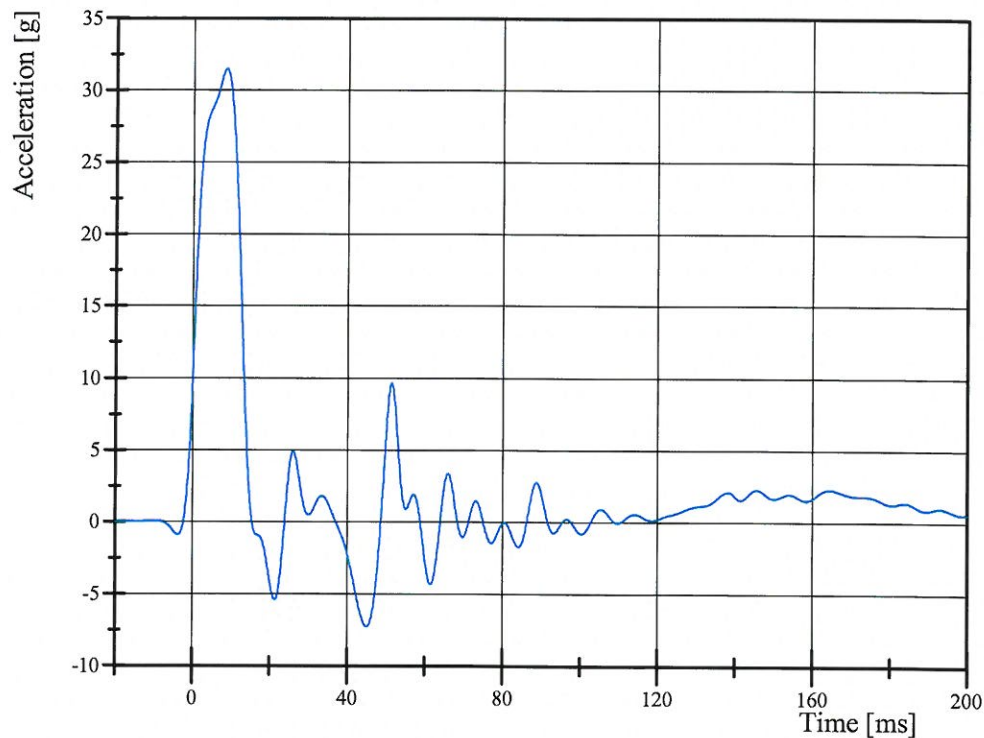
Transportation Research Center Inc.

Left Lateral Neck

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

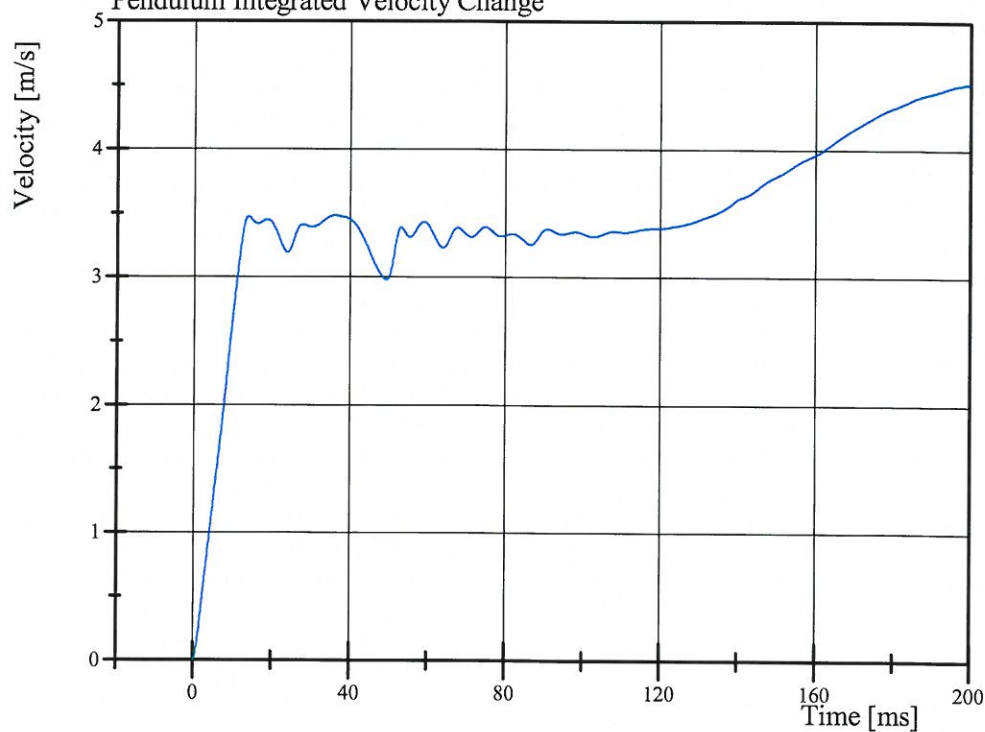
Test Date: 2/12/2013

Pendulum Acceleration



Filter Class: CFC_60
Max: 31.5 gn at 8.6 ms
Min: -7.3 gn at 45.0 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 4.5 m/s at 200.0 ms
Min: 0.0 m/s at 0.0 ms

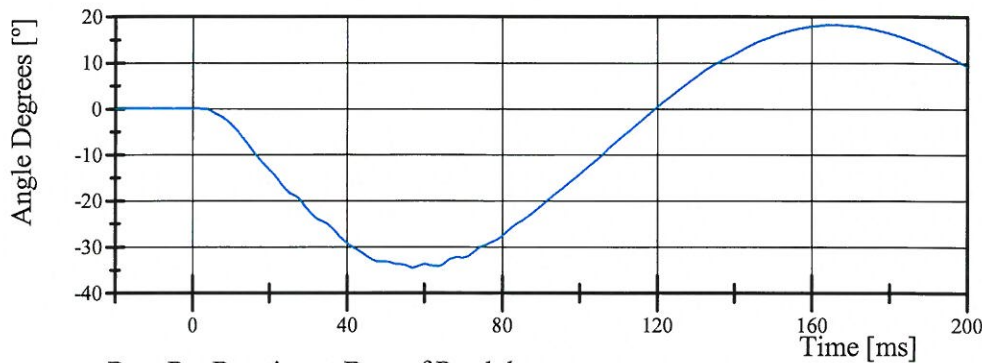
Transportation Research Center Inc.

Left Lateral Neck

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

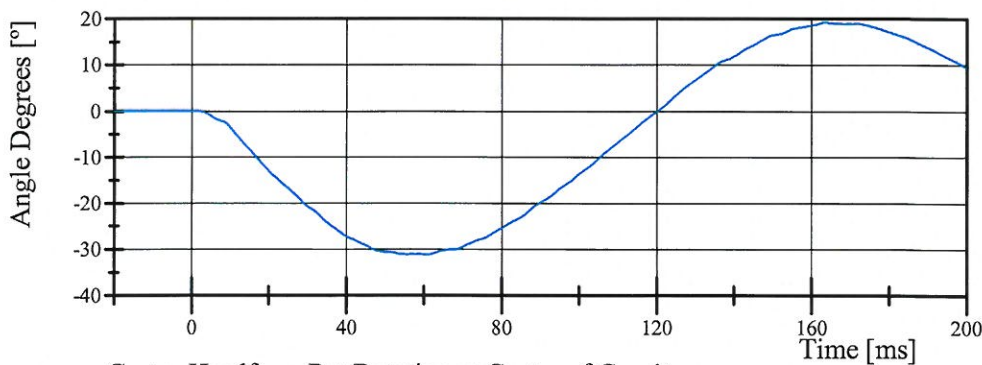
Test Date: 2/12/2013

Forward Pot Rotation at Base of Pendulum



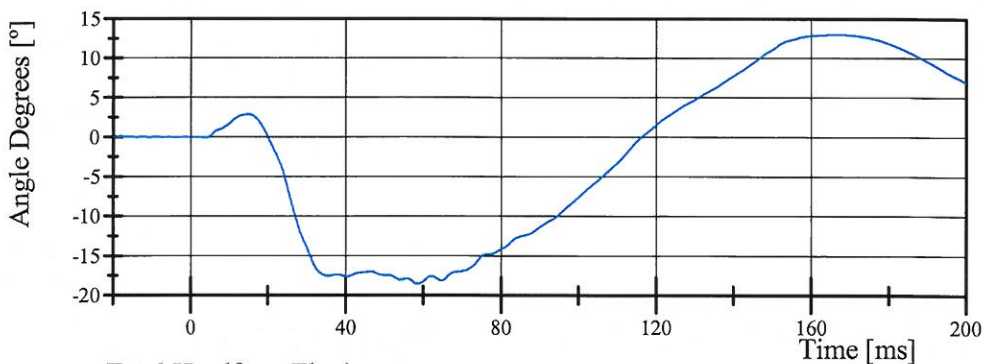
Filter Class: CFC_180
Max: 18.2 ° at 165.6 ms
Min: -34.5 ° at 57.0 ms

Rear Pot Rotation at Base of Pendulum



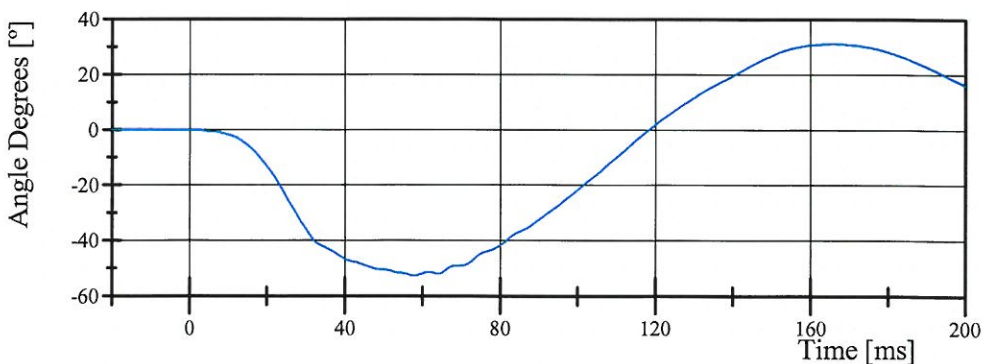
Filter Class: CFC_180
Max: 19.2 ° at 163.4 ms
Min: -31.2 ° at 60.5 ms

Center Headform Pot Rotation at Center of Gravity



Filter Class: CFC_180
Max: 13.0 ° at 167.0 ms
Min: -18.5 ° at 58.6 ms

Total Headform Flexion



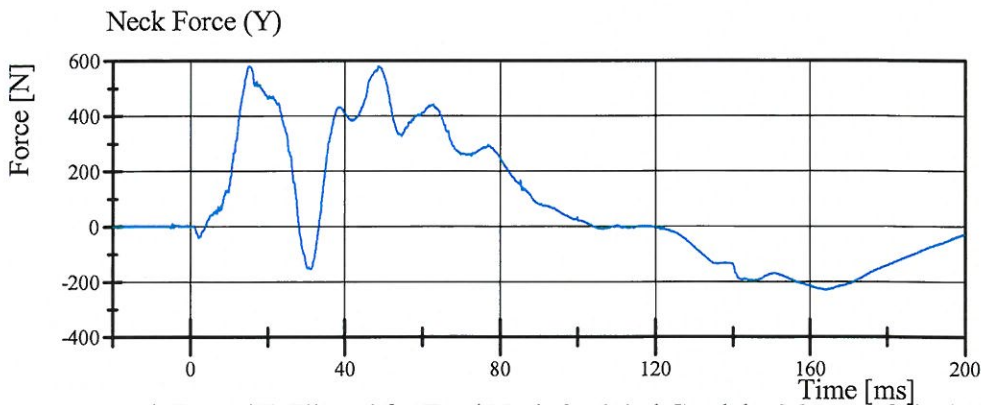
Filter Class: CFC_180
Max: 31.2 ° at 165.8 ms
Min: -52.8 ° at 57.8 ms

Transportation Research Center Inc.

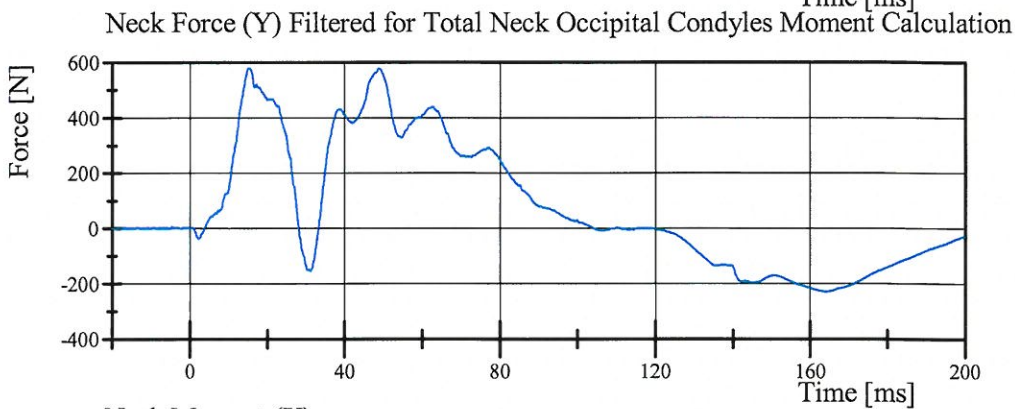
Left Lateral Neck

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

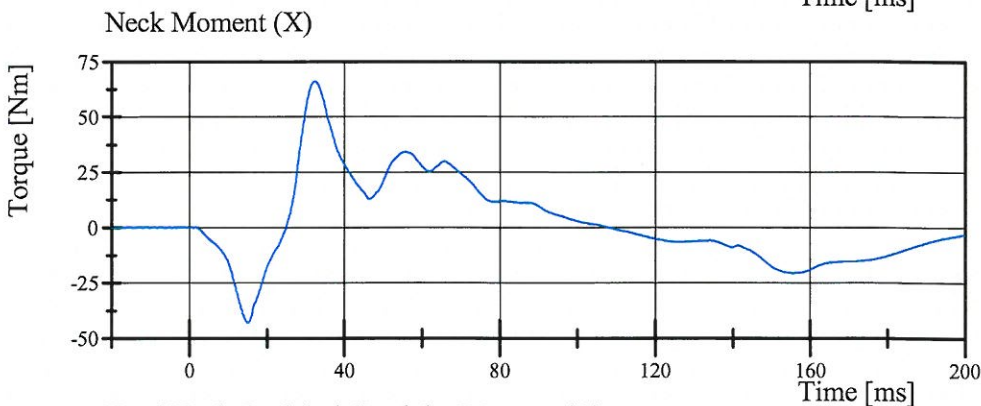
Test Date: 2/12/2013



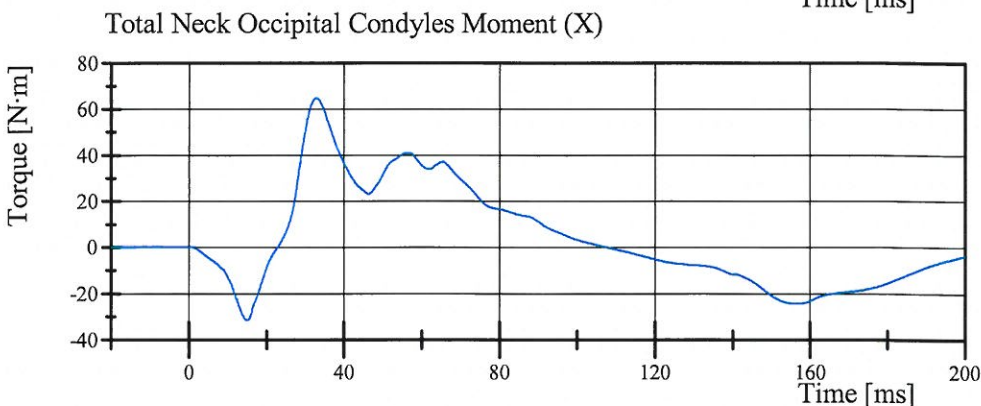
Filter Class: CFC_1000
Max: 579.9 N at 15.1 ms
Min: -229.1 N at 163.9 ms



Filter Class: CFC_600
Max: 579.6 N at 15.1 ms
Min: -228.8 N at 164.0 ms



Filter Class: CFC_600
Max: 66.1 Nm at 32.4 ms
Min: -42.9 Nm at 15.0 ms



Filter Class: Without_(Constai
Max: 64.7 N·m at 33.0 ms
Min: -31.6 N·m at 15.0 ms

Transportation Research Center Inc.

Left Lateral Shoulder

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

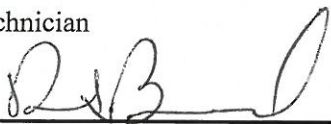
Test Date: 2/21/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.39 m/s	Yes
Impactor Force	(-2,600) - (-3,300) N	-2,826.6 N	Yes
Shoulder Displacement	35 - 44 mm	38.1 mm	Yes

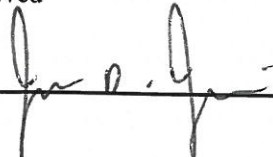
Test meets specifications.

Comments:

Technician



Approved



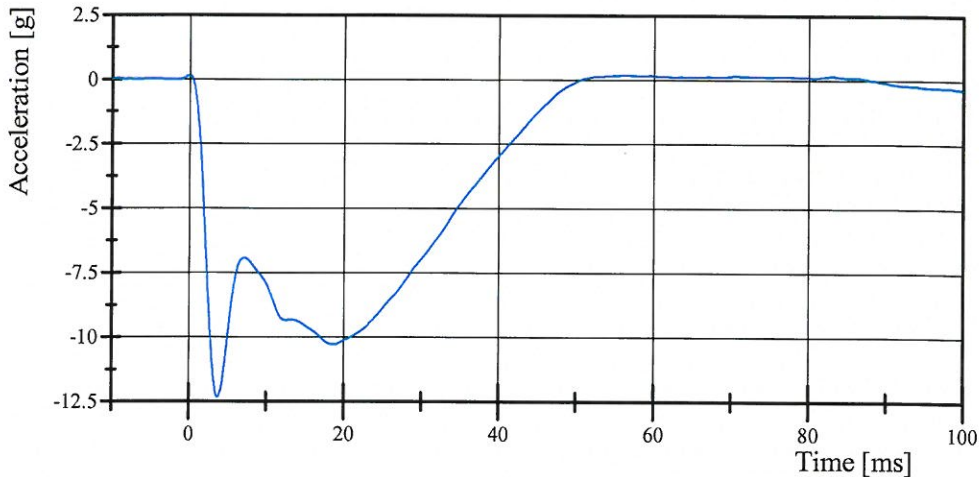
Transportation Research Center Inc.

Left Lateral Shoulder

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

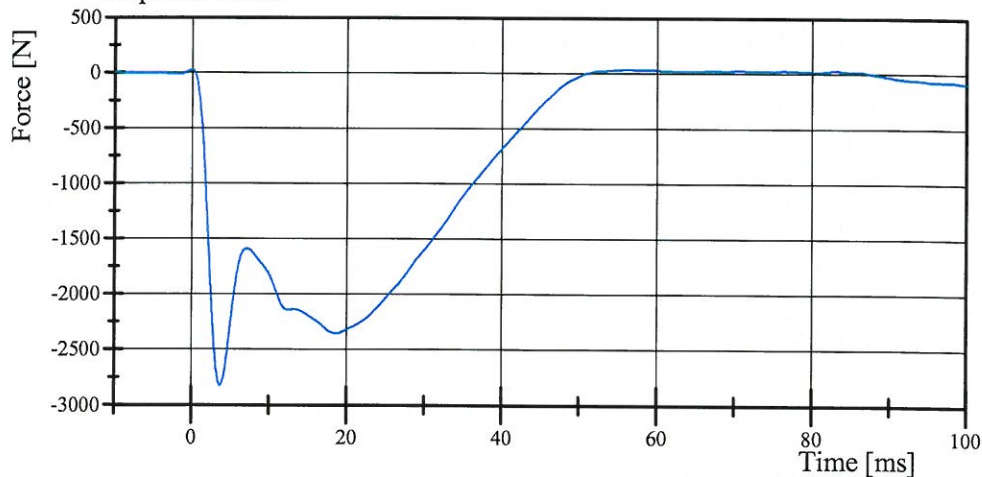
Test Date: 2/21/2013

Impactor Acceleration



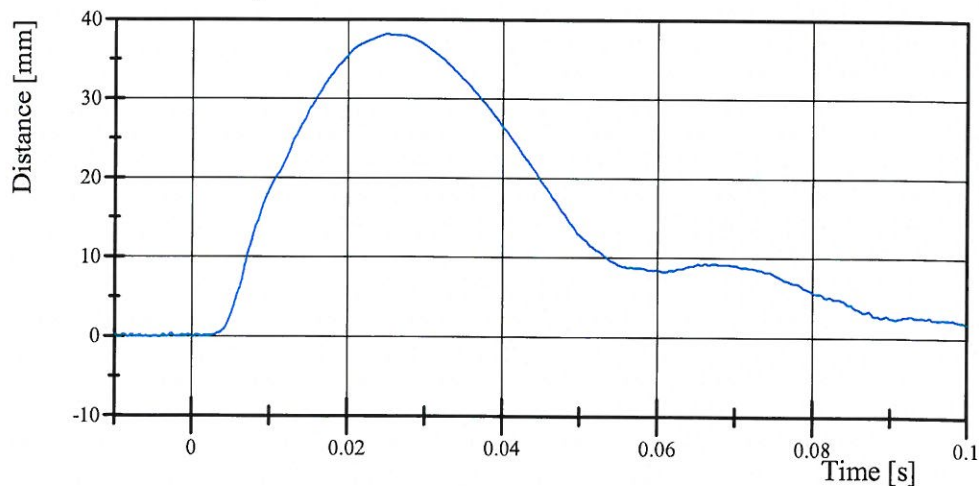
Filter Class: CFC_180
Max: 0.2 gn at 56.2 ms
Min: -12.3 gn at 3.8 ms

Impactor Force



Filter Class: CFC_180
Max: 38.7 N at 56.2 ms
Min: -2,826.6 N at 3.8 ms

Shoulder Displacement



Filter Class: CFC_600
Max: 38.1 mm at 0.0 s
Min: -3.3 mm at 0.1 s

Transportation Research Center Inc.

Left Lateral Thorax with Arm

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

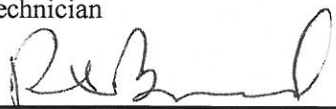
Test Date: 2/21/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Impactor Velocity	6.6 - 6.8 m/s	6.79 m/s	Yes
Impactor Force	(-4,900) - (-5,800) N	-5,779.1 N	Yes
Upper Thorax Rib Displacement	35 - 47 mm	39.2 mm	Yes
Center Thorax Rib Displacement	46 - 56 mm	46.6 mm	Yes
Lower Thorax Rib Displacement	39 - 46 mm	39.6 mm	Yes
Upper Spine Lateral Acceleration	28 - 37 g	30.2 g	Yes
Lower Spine Lateral Acceleration	22 - 28 g	23.8 g	Yes

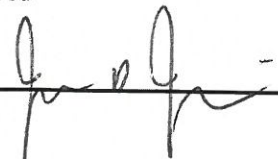
Test meets specifications.

Comments:

Technician



Approved

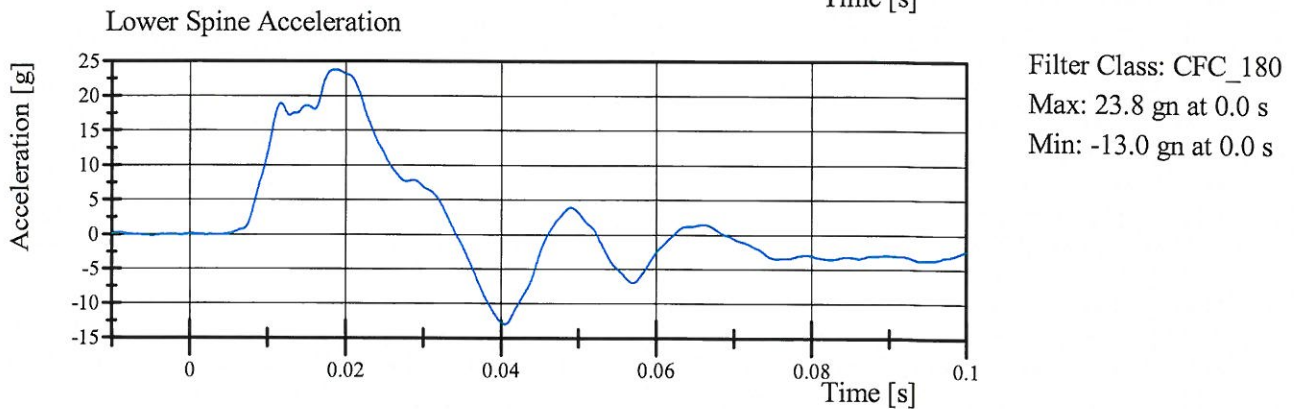
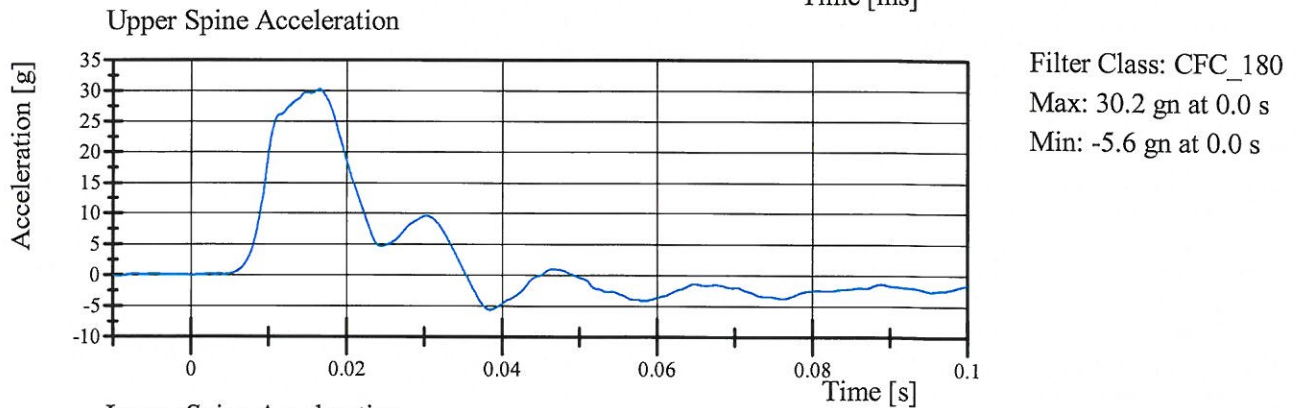
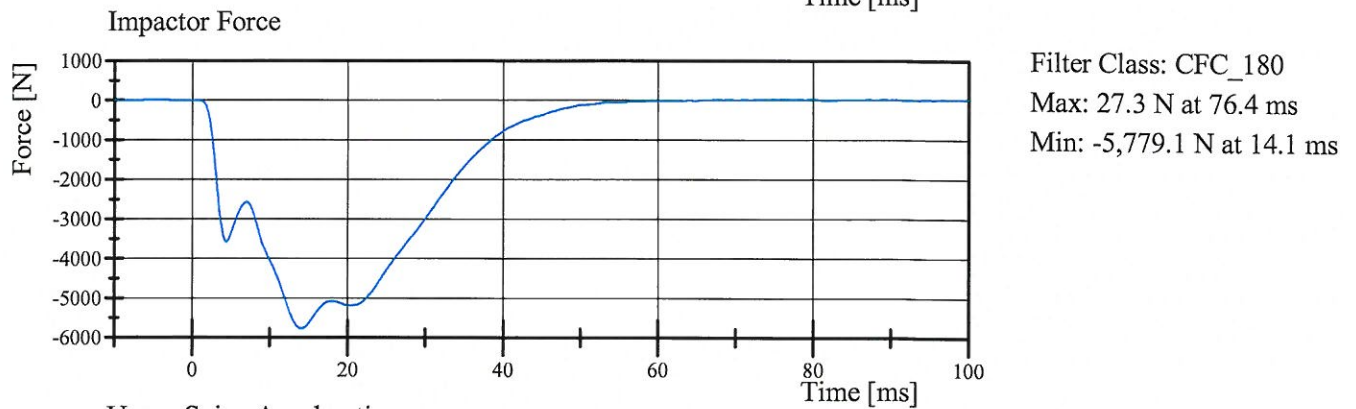
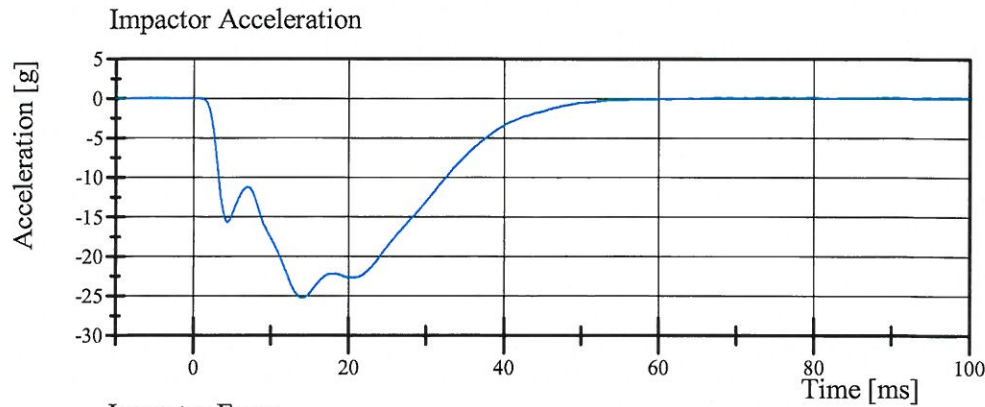


Transportation Research Center Inc.

Left Lateral Thorax with Arm

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/21/2013



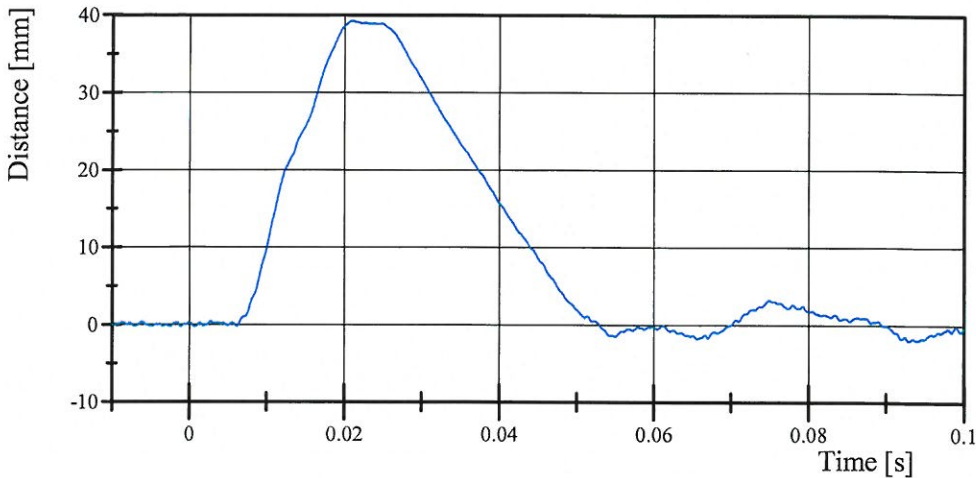
Transportation Research Center Inc.

Left Lateral Thorax with Arm

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/21/2013

Upper Thorax Rib Displacement

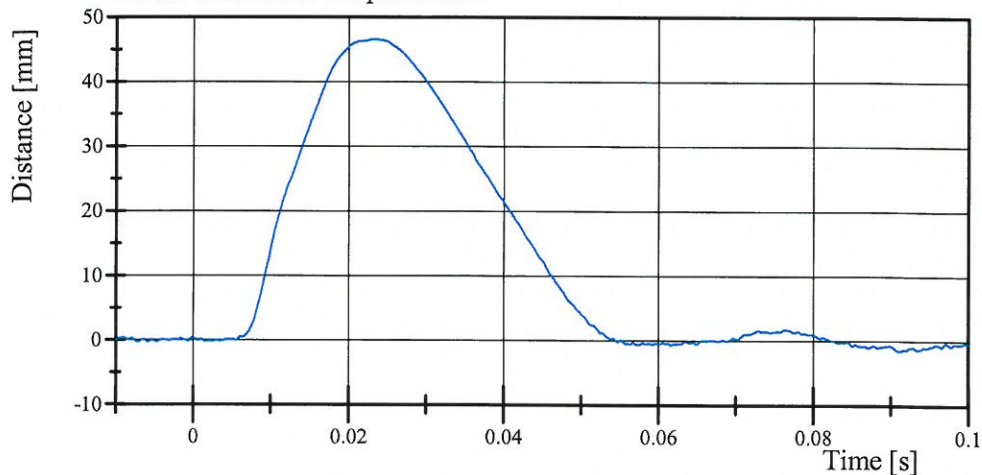


Filter Class: CFC_600

Max: 39.2 mm at 0.0 s

Min: -3.5 mm at 0.2 s

Center Thorax Rib Displacement

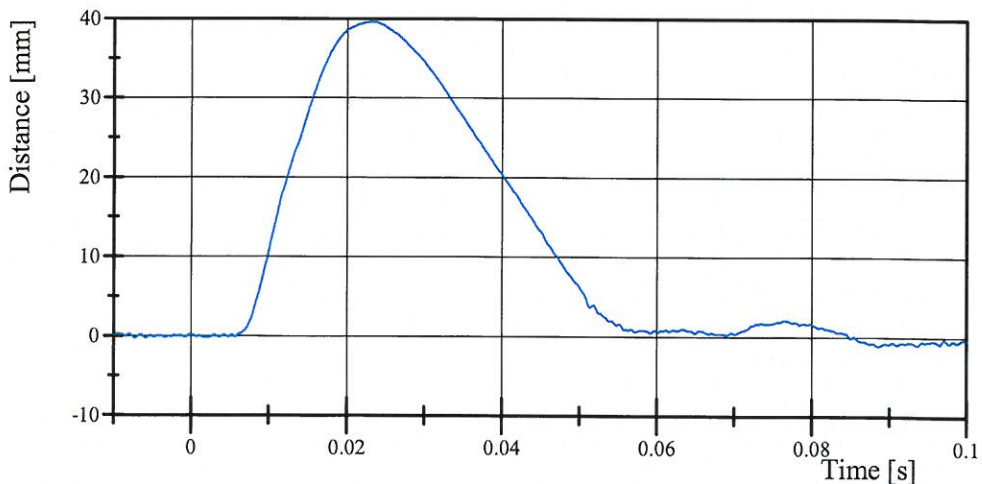


Filter Class: CFC_600

Max: 46.6 mm at 0.0 s

Min: -3.2 mm at 0.3 s

Lower Thorax Rib Displacement



Filter Class: CFC_600

Max: 39.6 mm at 0.0 s

Min: -1.1 mm at 0.2 s

Transportation Research Center Inc.

Left Lateral Thorax without Arm

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/21/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	26 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.338 m/s	Yes
Impactor Force	(-3,200) - (-3,800) N	-3,731.9 N	Yes
Upper Thorax Rib Displacement	33 - 43 mm	33.9 mm	Yes
Center Thorax Rib Displacement	35 - 43 mm	35.5 mm	Yes
Lower Thorax Rib Displacement	32 - 40 mm	34.2 mm	Yes
Upper Spine Lateral Acceleration	14 - 20 g	14.1 g	Yes
Lower Spine Lateral Acceleration	14 - 22 g	15.5 g	Yes

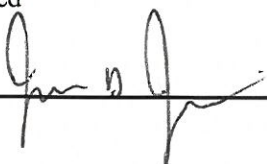
Test meets specifications.

Comments:

Technician



Approved



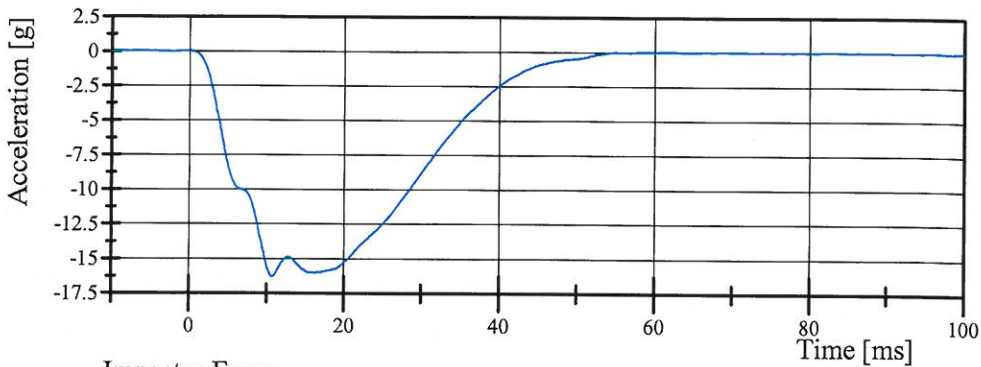
Transportation Research Center Inc.

Left Lateral Thorax without Arm

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

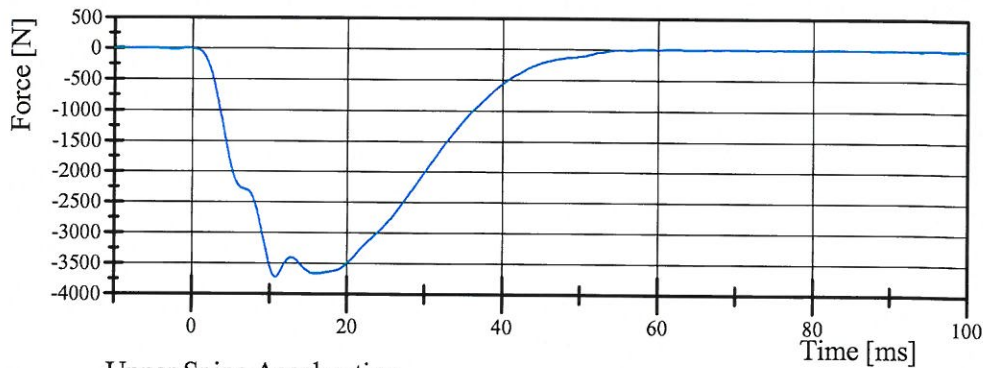
Test Date: 2/21/2013

Impactor Acceleration



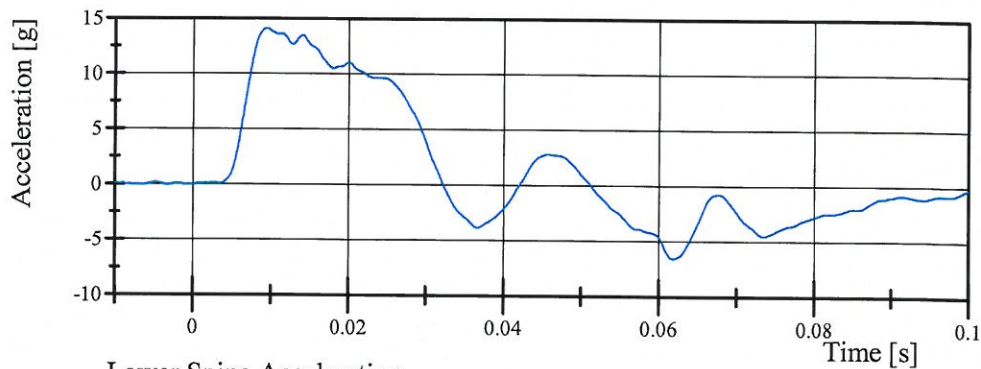
Filter Class: CFC_180
Max: 0.0 gn at 70.4 ms
Min: -16.3 gn at 10.7 ms

Impactor Force



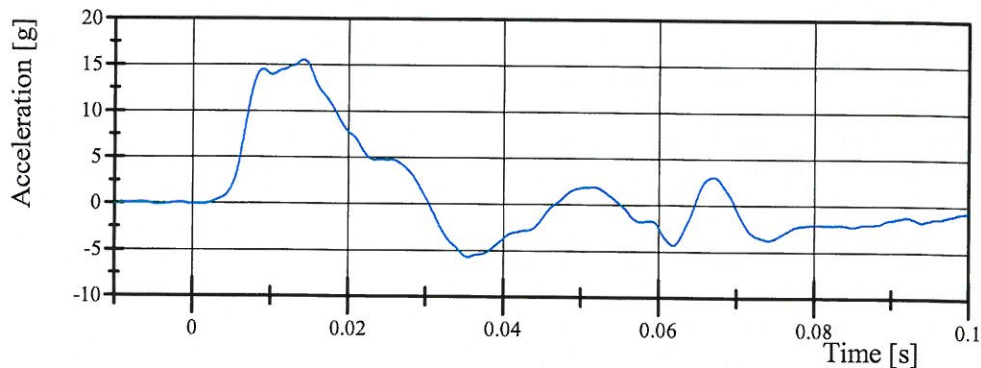
Filter Class: CFC_180
Max: 8.9 N at 70.4 ms
Min: -3,731.9 N at 10.7 ms

Upper Spine Acceleration



Filter Class: CFC_180
Max: 14.1 gn at 0.0 s
Min: -6.5 gn at 0.1 s

Lower Spine Acceleration



Filter Class: CFC_180
Max: 15.5 gn at 0.0 s
Min: -5.7 gn at 0.0 s

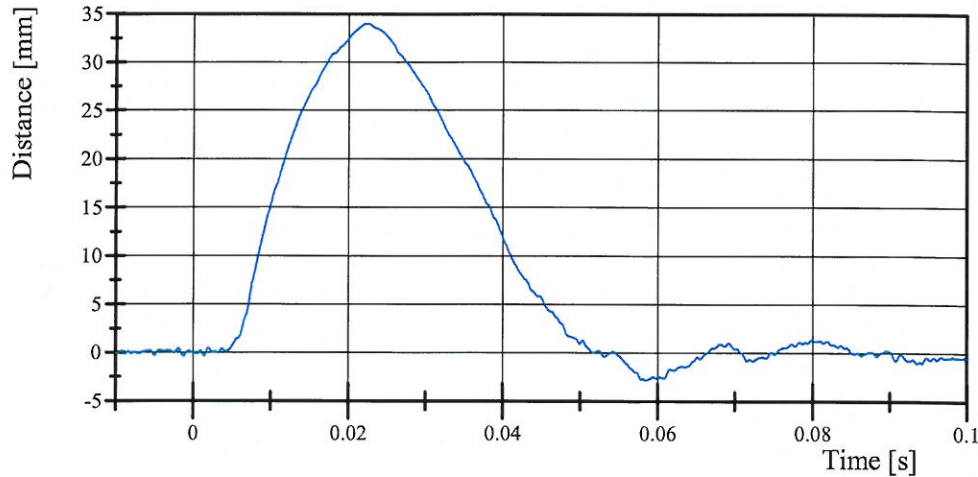
Transportation Research Center Inc.

Left Lateral Thorax without Arm

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/21/2013

Upper Thorax Rib Displacement

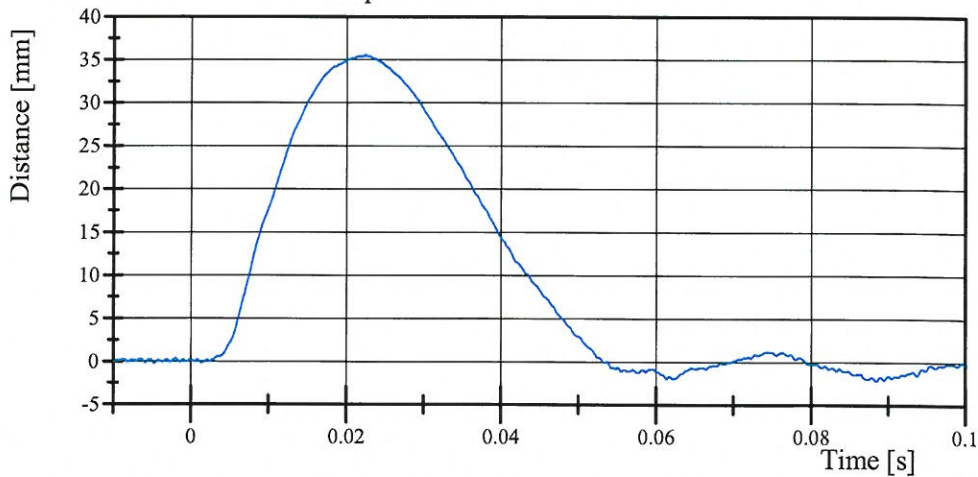


Filter Class: CFC_600

Max: 33.9 mm at 0.0 s

Min: -2.8 mm at 0.1 s

Center Thorax Rib Displacement

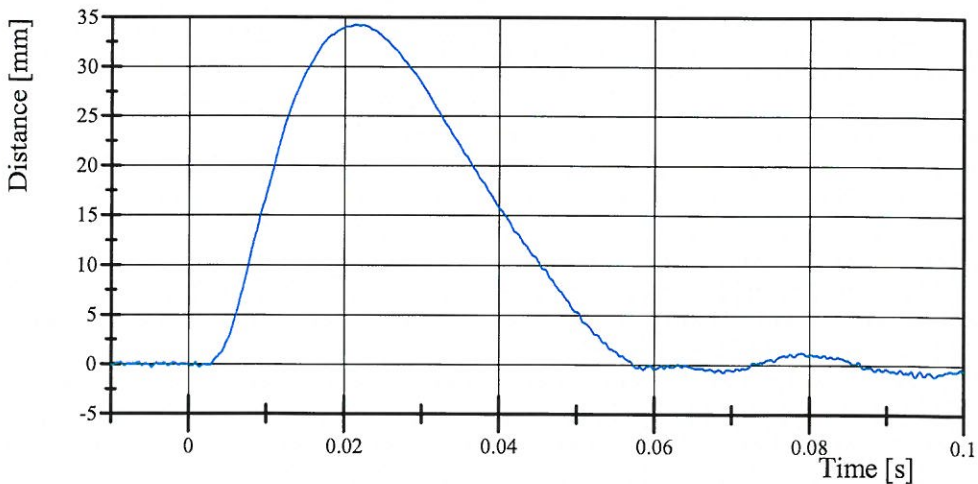


Filter Class: CFC_600

Max: 35.5 mm at 0.0 s

Min: -2.3 mm at 0.1 s

Lower Thorax Rib Displacement



Filter Class: CFC_600

Max: 34.2 mm at 0.0 s

Min: -1.2 mm at 0.1 s

Transportation Research Center Inc.

Left Lateral Abdomen

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-2

Test Date: 2/21/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.35 m/s	Yes
Impactor Force	(-2,700) - (-3,100) N	-3,074.4 N	Yes
Upper Abdominal Rib Displacement	33 - 40 mm	33.6 mm	Yes
Lower Abdominal Rib Displacement	30 - 36 mm	29.3 mm	No
Lower Spine Lateral Acceleration	15 - 20 g	16.8 g	Yes

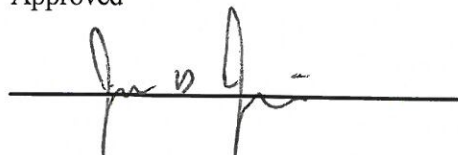
Test does not meet specifications.

Comments: Ok per A.Louden

Technician



Approved

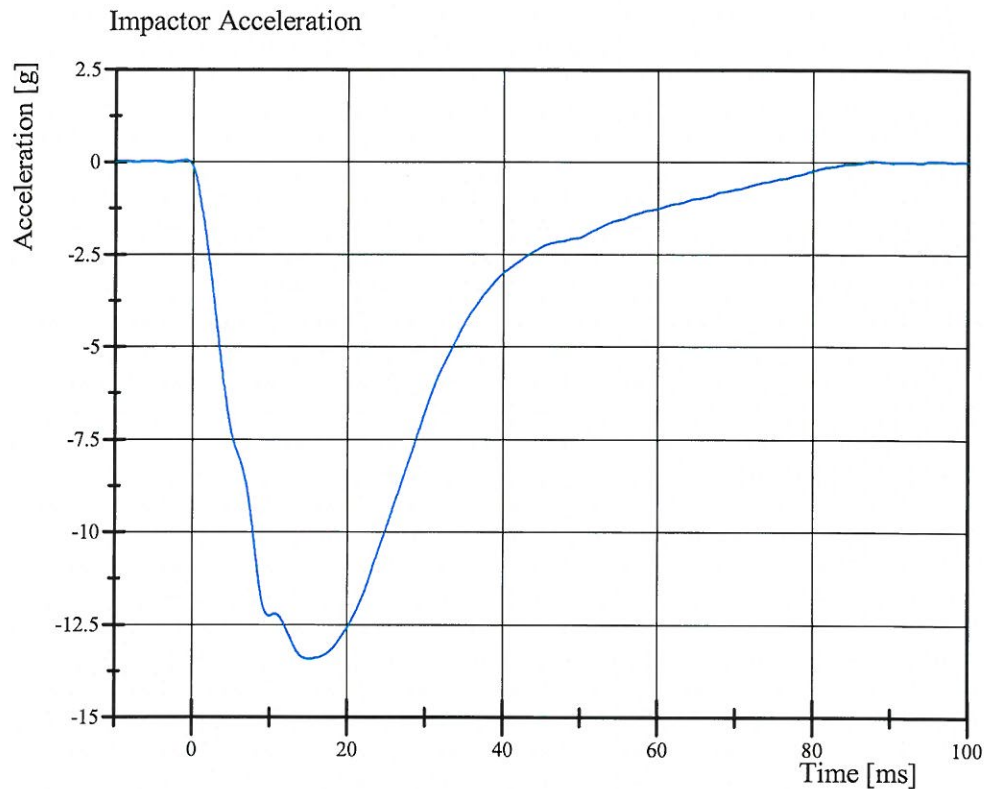


Transportation Research Center Inc.

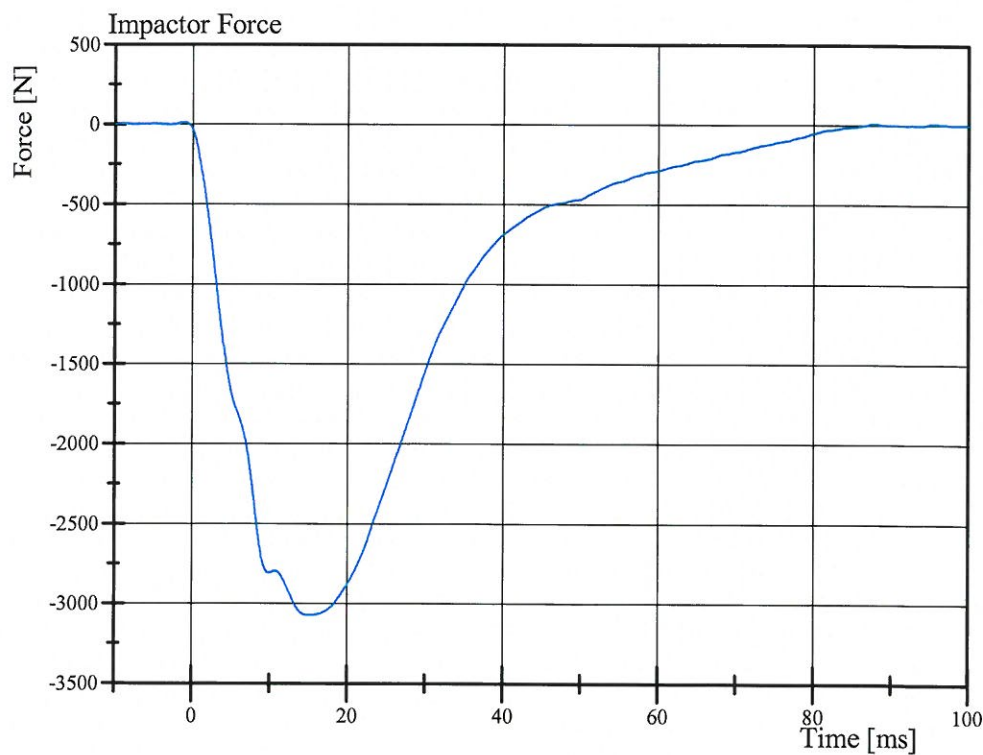
Left Lateral Abdomen

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-2

Test Date: 2/21/2013



Filter Class: CFC_180
Max: 0.0 gn at -1.0 ms
Min: -13.4 gn at 15.0 ms



Filter Class: CFC_180
Max: 6.2 N at -1.0 ms
Min: -3,074.4 N at 15.0 ms

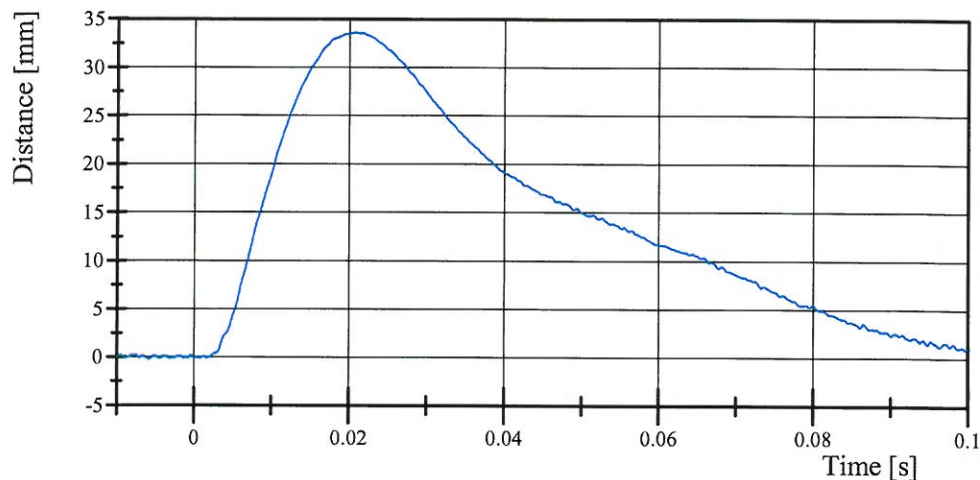
Transportation Research Center Inc.

Left Lateral Abdomen

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-2

Test Date: 2/21/2013

Upper Abdominal Rib Displacement

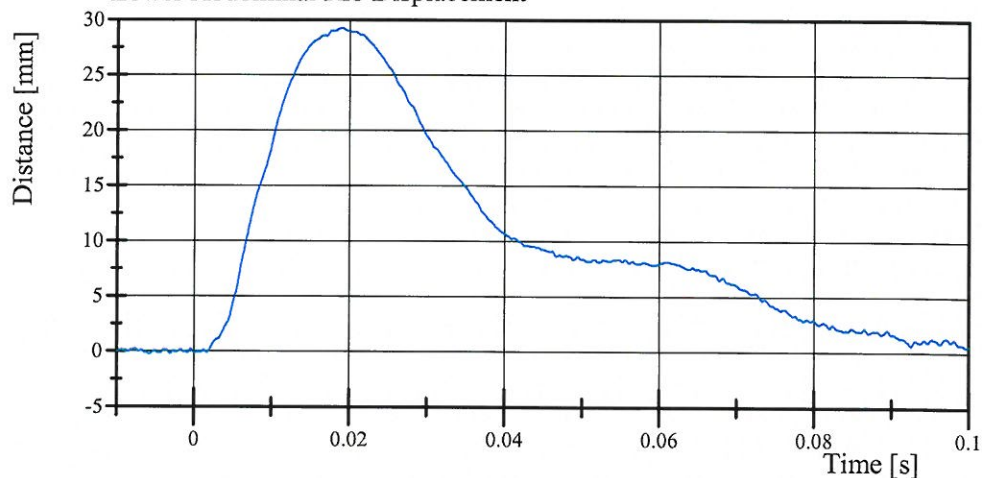


Filter Class: CFC_600

Max: 33.6 mm at 0.0 s

Min: -0.5 mm at -0.0 s

Lower Abdominal Rib Displacement

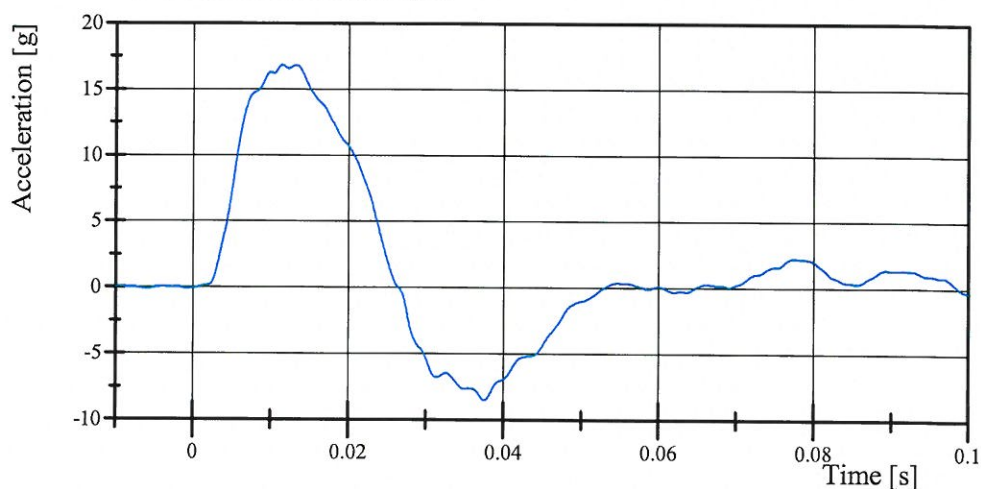


Filter Class: CFC_600

Max: 29.3 mm at 0.0 s

Min: -0.5 mm at 0.3 s

Lower Spine Acceleration (Y)



Filter Class: CFC_180

Max: 16.8 gn at 0.0 s

Min: -8.5 gn at 0.0 s

Transportation Research Center Inc.

Left Lateral Pelvis

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/21/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Impactor Velocity	6.6 - 6.8 m/s	6.75 m/s	Yes
Impactor Force	(-6,800) - (-8,200) N	-7,172.5 N	Yes
Pelvis Lateral Acceleration	37 - 47 g	41.7 g	Yes
Lower Spine Lateral Acceleration	10 - 14 g	11.7 g	Yes

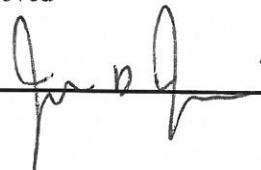
Test meets specifications.

Comments:

Technician



Approved

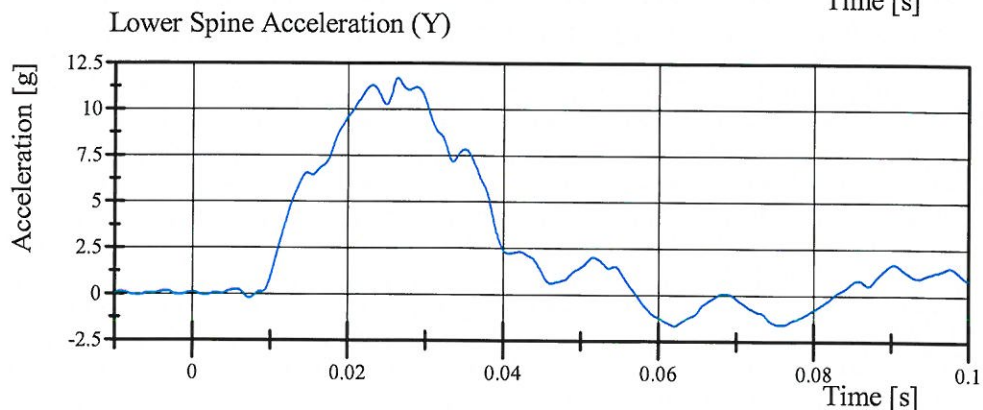
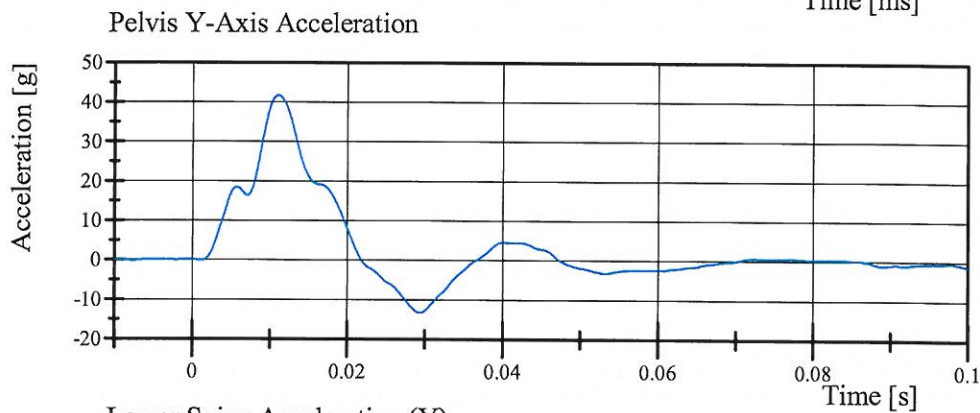
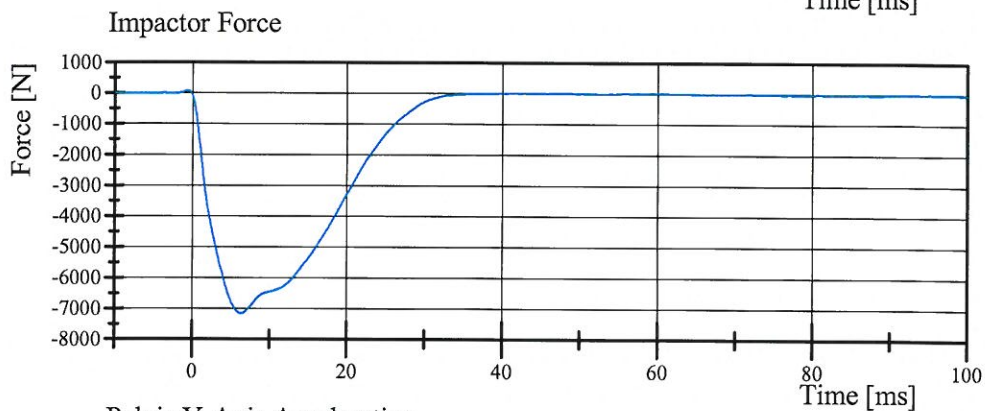
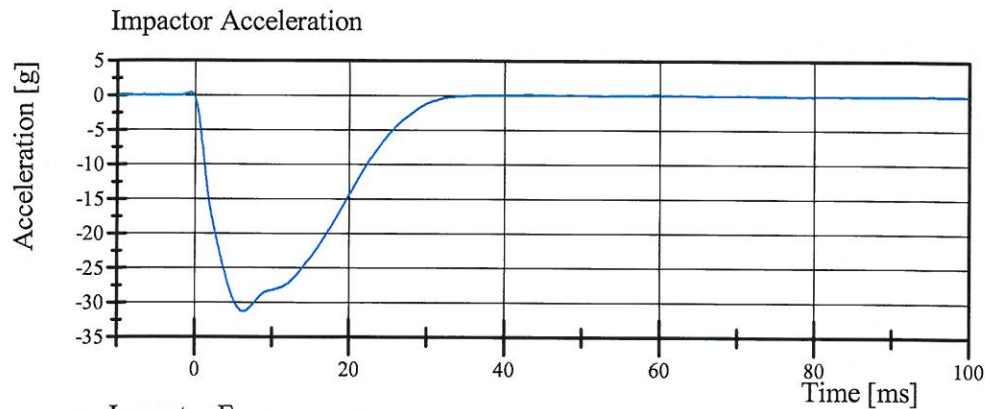


Transportation Research Center Inc.

Left Lateral Pelvis

WorldSID ISO 15830-2 Serial No. 016 Certification No. 12-1

Test Date: 2/21/2013



Calibration Test Results

Pre-Test

WorldSID: 236

Configured for Left Side Impact

Transportation Research Center Inc.

Front Head Drop

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

Test Date: 3/1/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	245.9 g	No
Peak Head Lateral Acceleration	(-15) - 15 g	-3.7 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

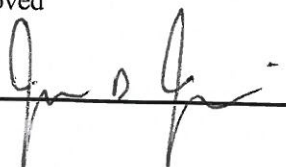
Test does not meet specifications.

Comments:OK per A. Louden

Technician



Approved

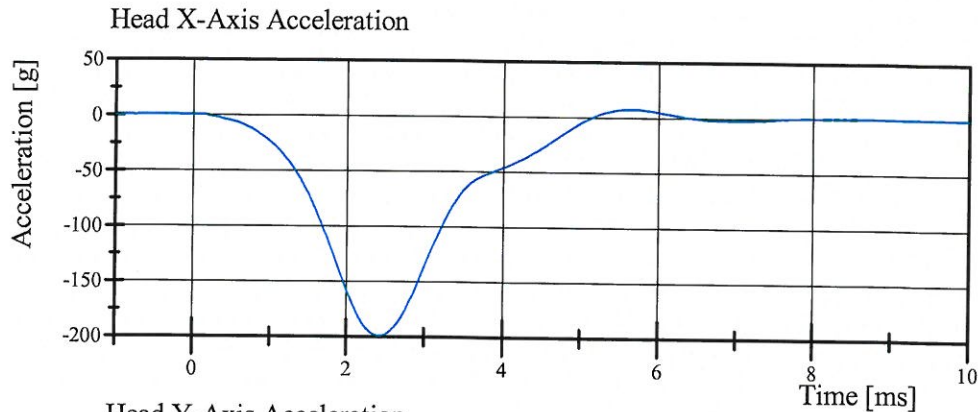


Transportation Research Center Inc.

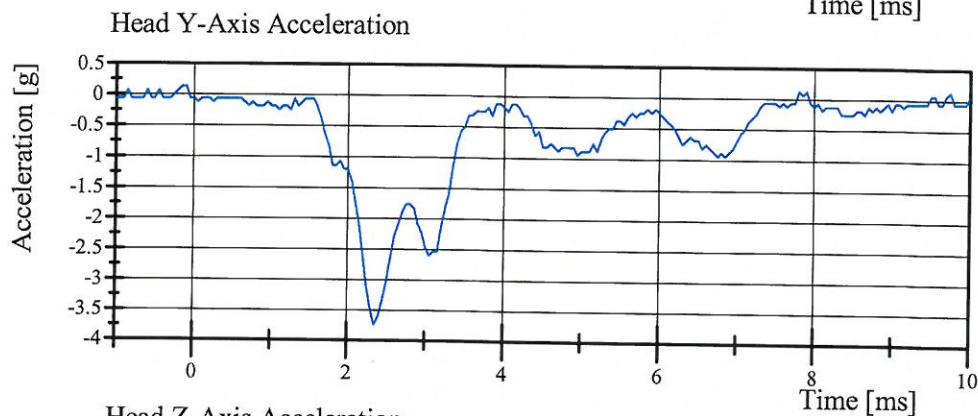
Front Head Drop

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

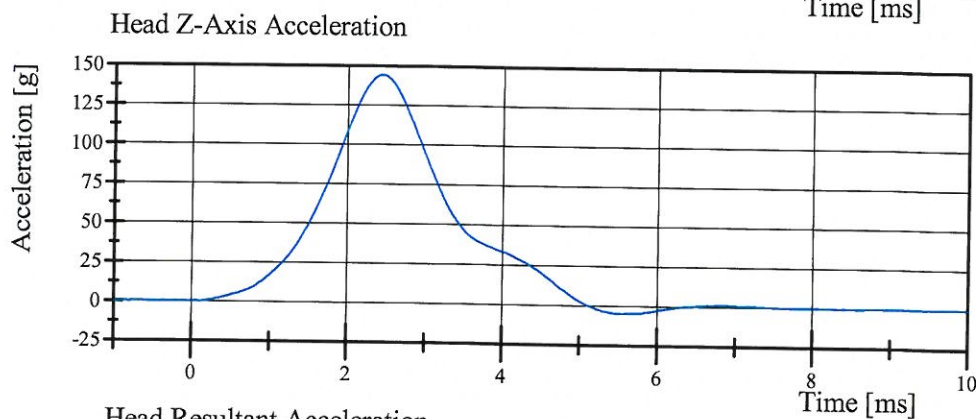
Test Date: 3/1/2013



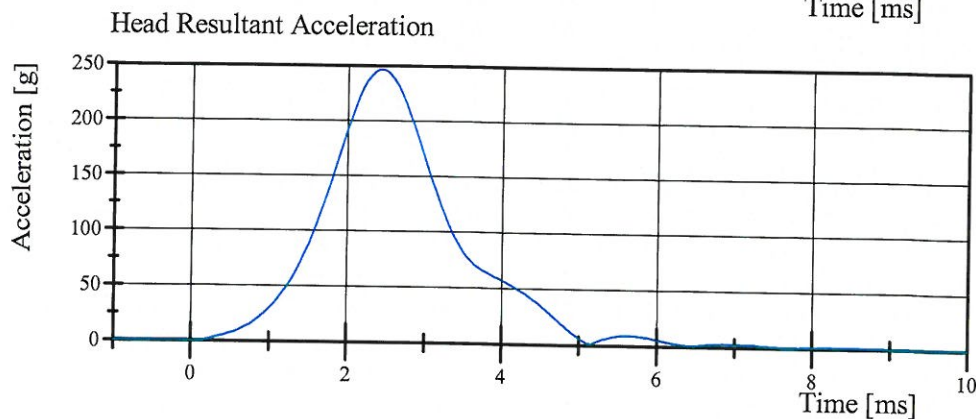
Filter Class: CFC_1000
Max: 7.5 gn at 5.6 ms
Min: -199.2 gn at 2.4 ms



Filter Class: CFC_1000
Max: 0.1 gn at -0.1 ms
Min: -3.7 gn at 2.4 ms



Filter Class: CFC_1000
Max: 144.2 gn at 2.5 ms
Min: -4.9 gn at 5.5 ms



Filter Class: CFC_1000
Max: 245.9 gn at 2.5 ms
Min: 0.1 gn at -0.4 ms

Transportation Research Center Inc.

Left Lateral Head Drop

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/4/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	25 %	Yes
Peak Head Resultant Acceleration	124 - 149 g	112.4 g	No
Peak Head Longitudinal Acceleration	(-15) - 15 g	-7.6 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

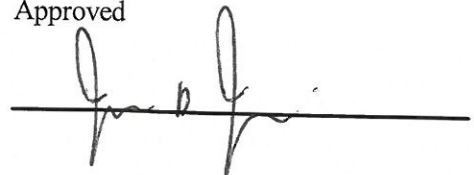
Test does not meet specifications.

Comments: OK per A.Louden

Technician



Approved

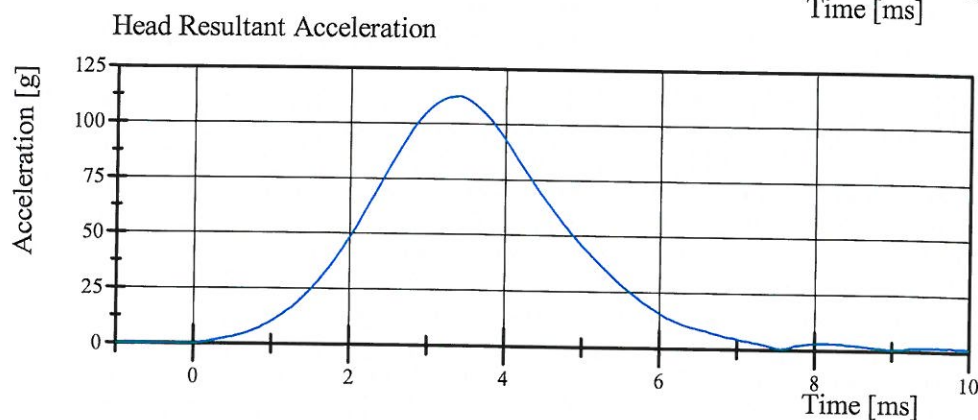
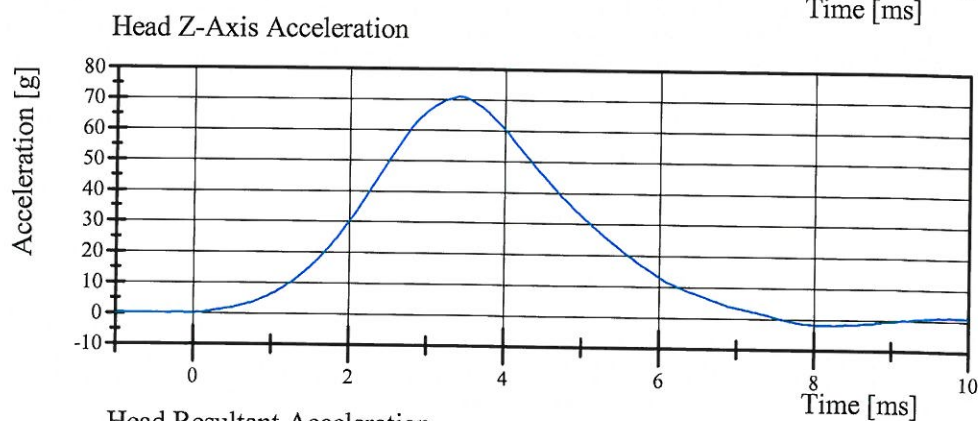
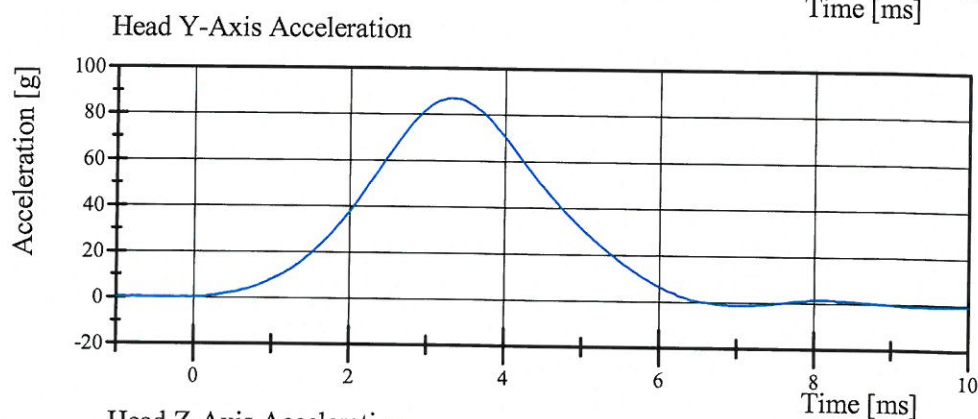
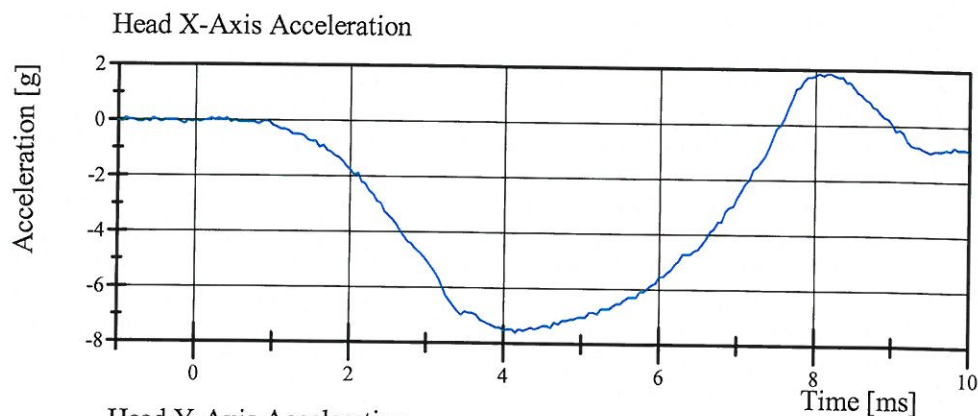


Transportation Research Center Inc.

Left Lateral Head Drop

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/4/2013



Transportation Research Center Inc.

Right Lateral Head Drop

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

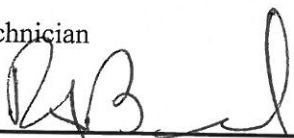
Test Date: 3/1/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Peak Head Resultant Acceleration	124 - 149 g	112.6 g	No
Peak Head Longitudinal Acceleration	(-15) - 15 g	-5.3 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

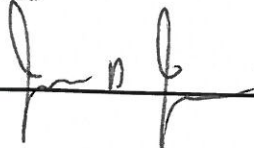
Test does not meet specifications.

Comments:OK per A.Louden

Technician



Approved

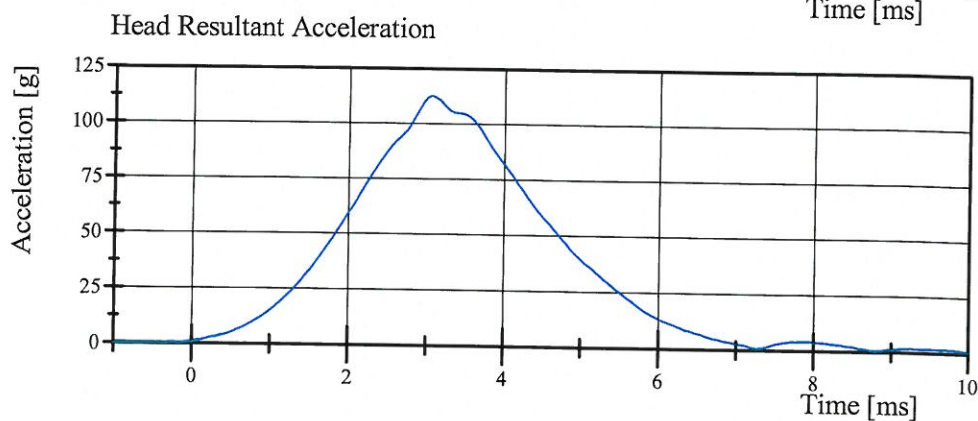
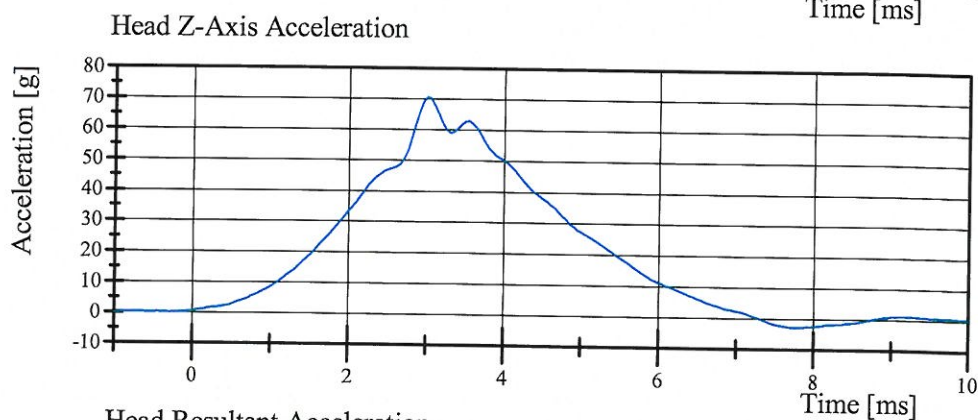
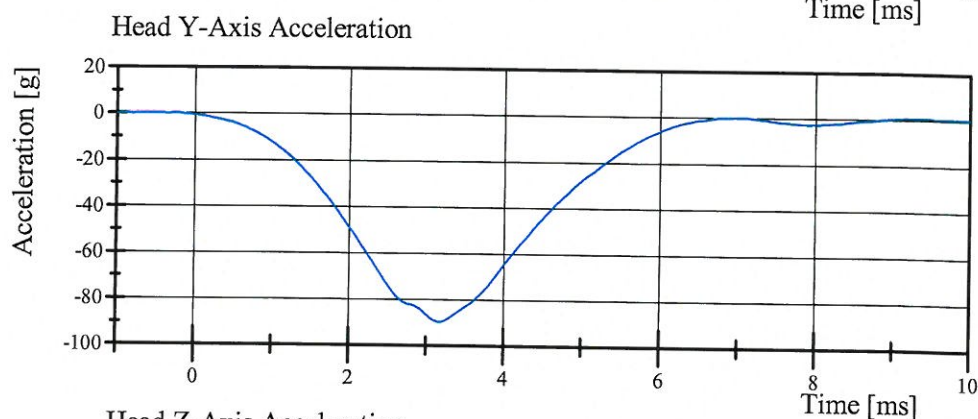
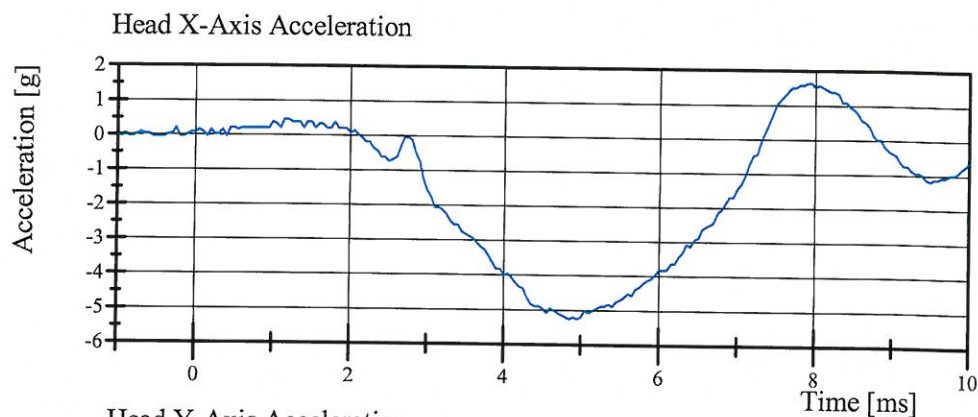


Transportation Research Center Inc.

Right Lateral Head Drop

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

Test Date: 3/1/2013



Transportation Research Center Inc.

Left Lateral Shoulder

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-2

Test Date: 3/5/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.21 m/s	Yes
Impactor Force	(-1,580) - (-2,280) N	-2,164.7 N	Yes
Shoulder Displacement	23.4 - 36.6 mm	28.83 mm	Yes

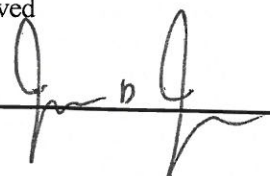
Test meets specifications.

Comments:

Technician



Approved



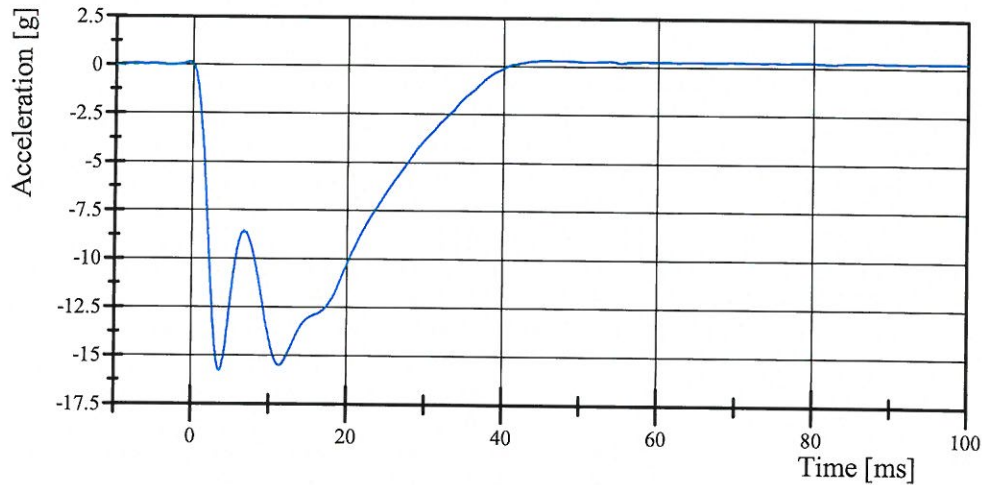
Transportation Research Center Inc.

Left Lateral Shoulder

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-2

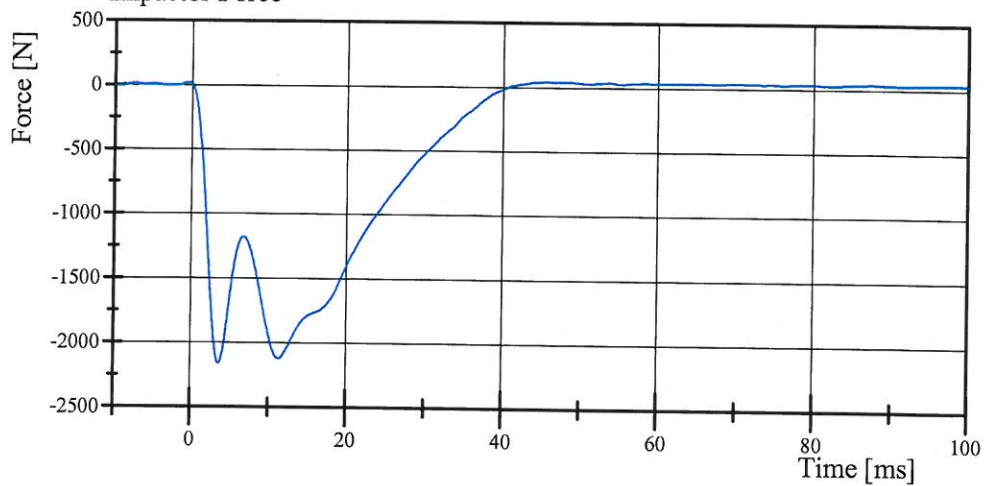
Test Date: 3/5/2013

Impactor Acceleration



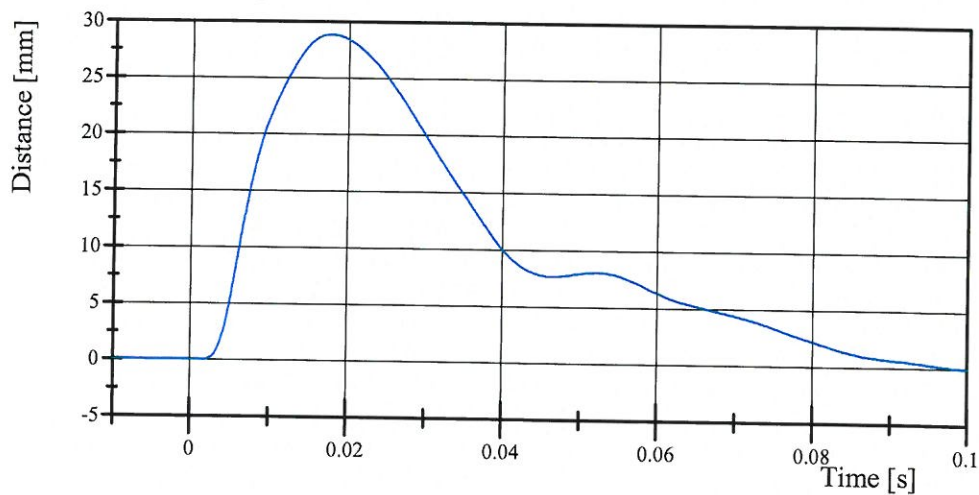
Filter Class: CFC_180
Max: 0.3 gn at 45.6 ms
Min: -15.8 gn at 3.6 ms

Impactor Force



Filter Class: CFC_180
Max: 41.9 N at 45.6 ms
Min: -2,164.7 N at 3.6 ms

Shoulder Displacement



Filter Class: CFC_600
Max: 28.8 mm at 0.0 s
Min: -0.2 mm at 0.2 s

Transportation Research Center Inc.

Left Lateral Thorax with Arm

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/5/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Impactor Velocity	6.6 - 6.8 m/s	6.70 m/s	Yes
Impactor Force	(-5,020) - (-6,130) N	-5,980.2 N	Yes
Upper Thorax Rib Displacement	18.3 - 26.4 mm	19.55 mm	Yes
Center Thorax Rib Displacement	21.6 - 26.4 mm	22.25 mm	Yes
Lower Thorax Rib Displacement	19.7 - 26.6 mm	22.37 mm	Yes
Upper Spine Lateral Acceleration	34.7 - 52 g	46.65 g	Yes
Lower Spine Lateral Acceleration	44.5 - 54.9 g	53.98 g	Yes

Test meets specifications.

Comments:

Technician



Approved

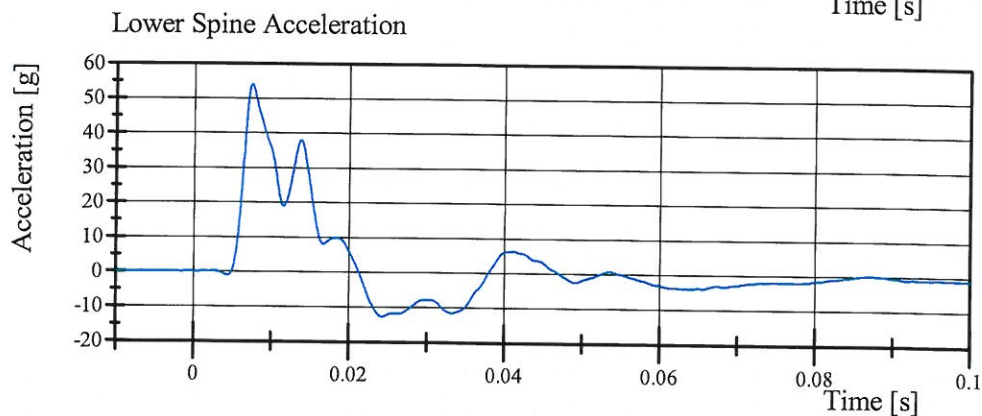
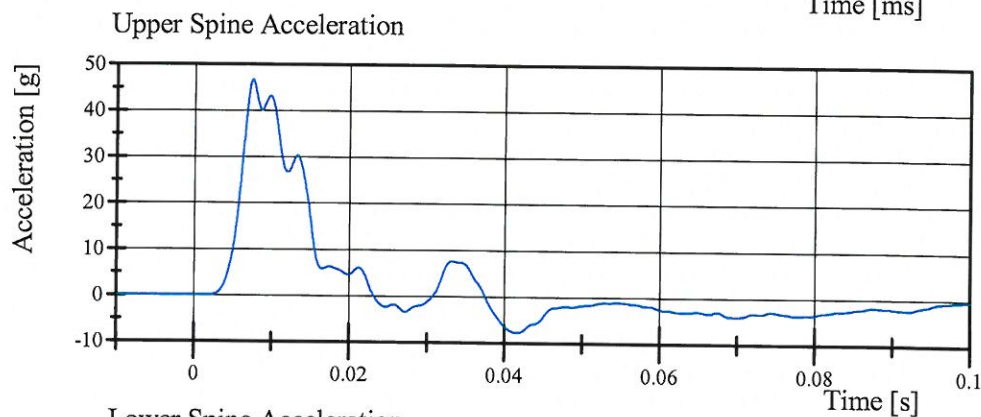
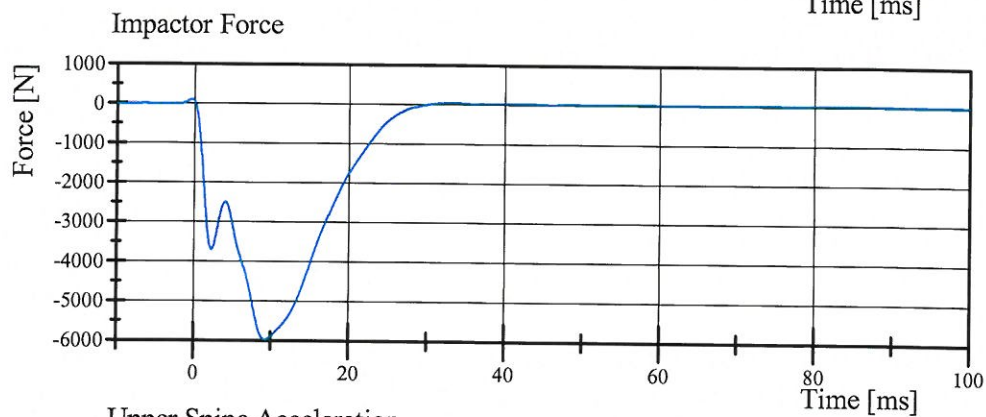
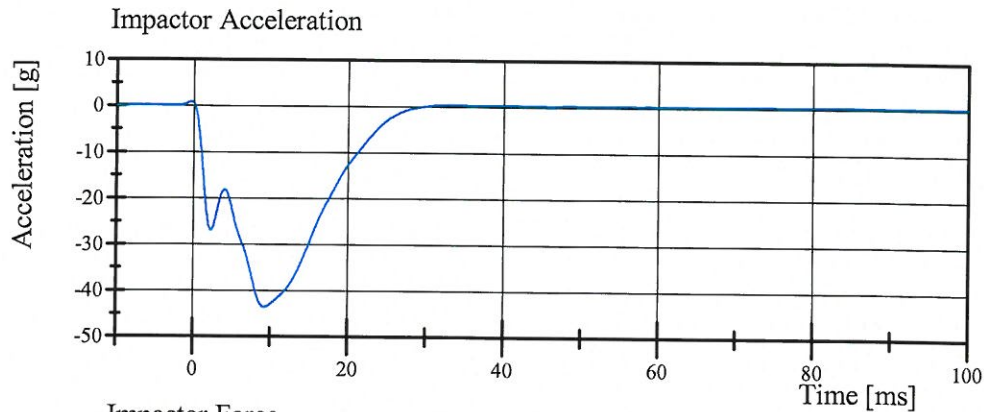


Transportation Research Center Inc.

Left Lateral Thorax with Arm

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/5/2013



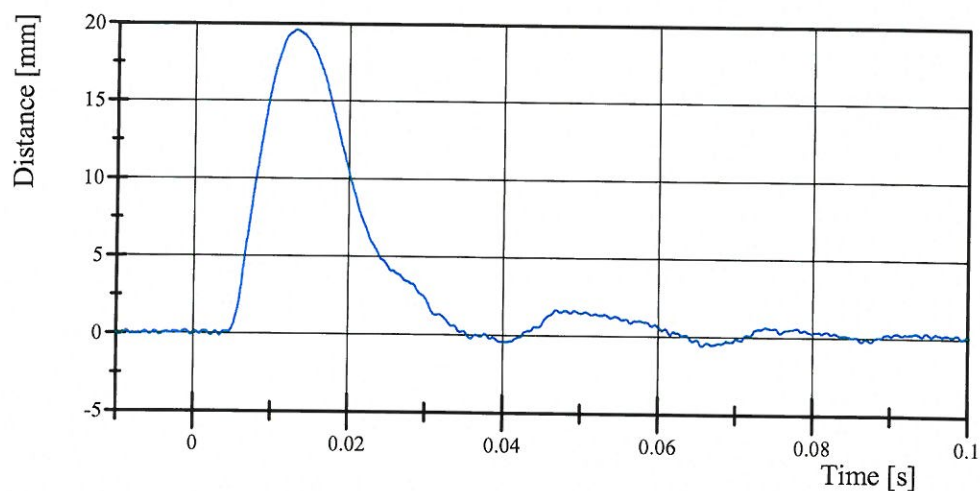
Transportation Research Center Inc.

Left Lateral Thorax with Arm

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/5/2013

Upper Thorax Rib Displacement

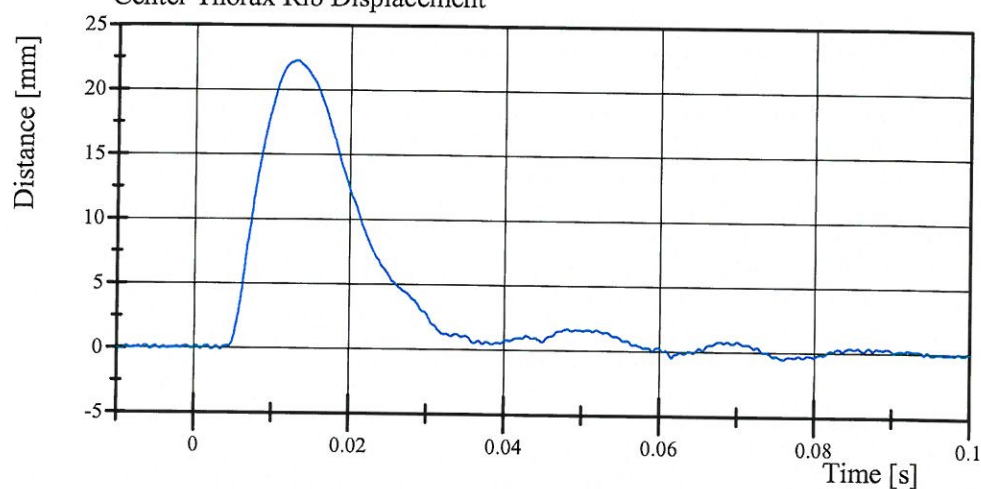


Filter Class: CFC_600

Max: 19.6 mm at 0.0 s

Min: -0.6 mm at 0.1 s

Center Thorax Rib Displacement

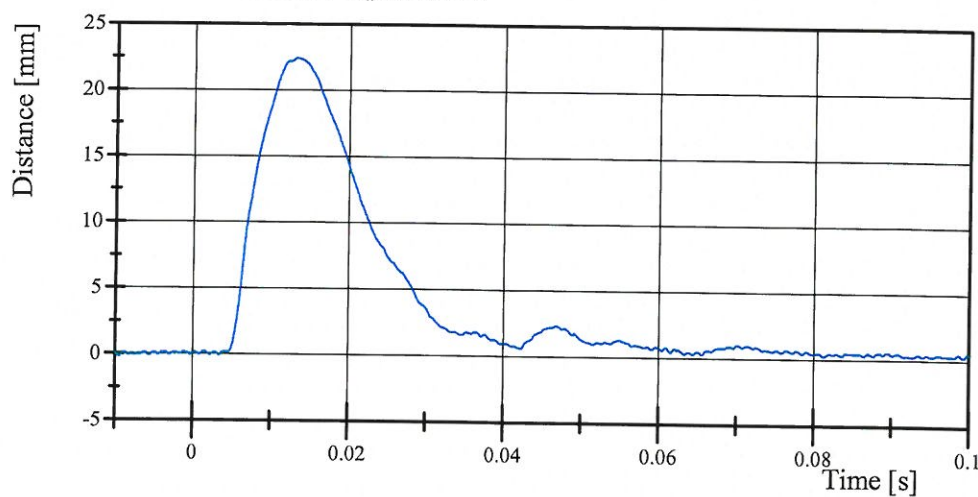


Filter Class: CFC_600

Max: 22.2 mm at 0.0 s

Min: -0.5 mm at 0.1 s

Lower Thorax Rib Displacement



Filter Class: CFC_600

Max: 22.4 mm at 0.0 s

Min: -0.5 mm at 0.2 s

Transportation Research Center Inc.

Left Lateral Thorax without Arm

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

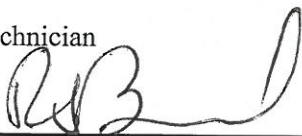
Test Date: 3/5/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.31 m/s	Yes
Impactor Force	(-2,640) - (-3,220) N	-3,338.5 N	No
Upper Thorax Rib Displacement	20.5 - 27.7 mm	20.83 mm	Yes
Center Thorax Rib Displacement	21.7 - 26.7 mm	22.09 mm	Yes
Lower Thorax Rib Displacement	20.9 - 27.3 mm	24.57 mm	Yes
Upper Spine Lateral Acceleration	21.2 - 27.5 g	24.42 g	Yes
Lower Spine Lateral Acceleration	20.6 - 28.9 g	24.40 g	Yes

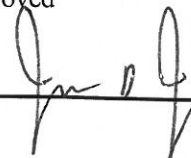
Test does not meet specifications.

Comments: OK per A.Louden

Technician



Approved

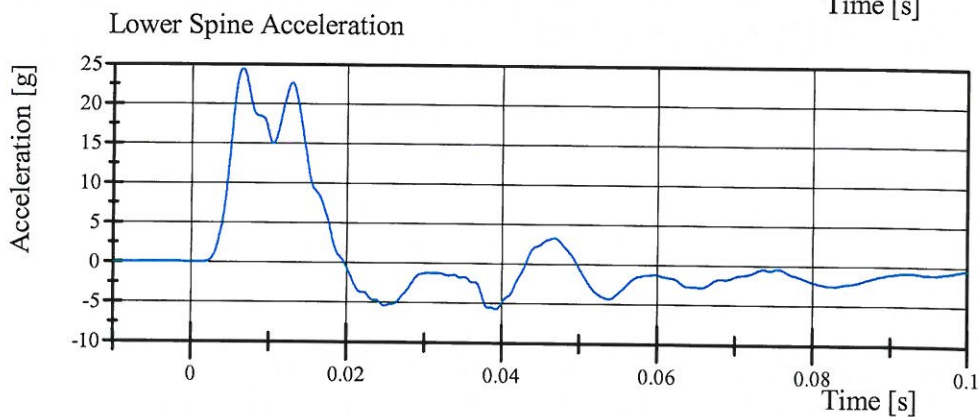
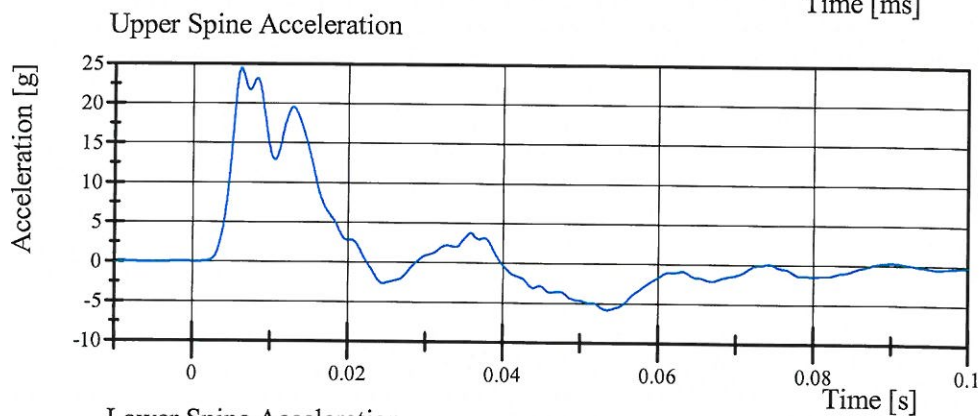
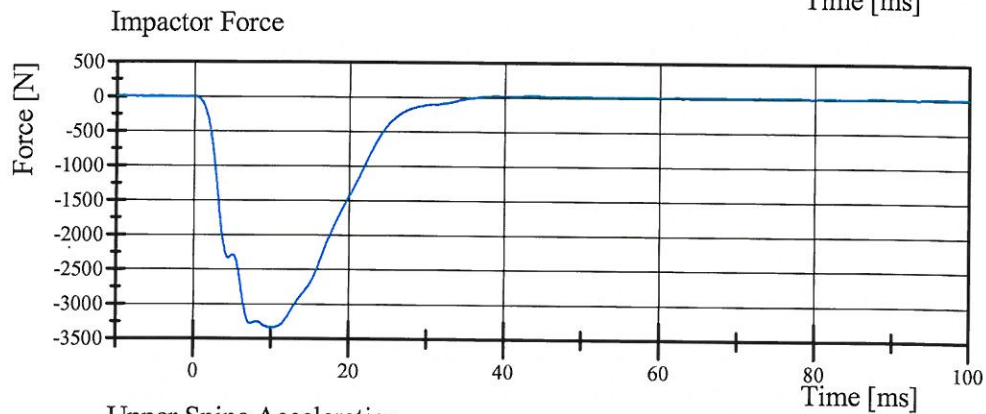
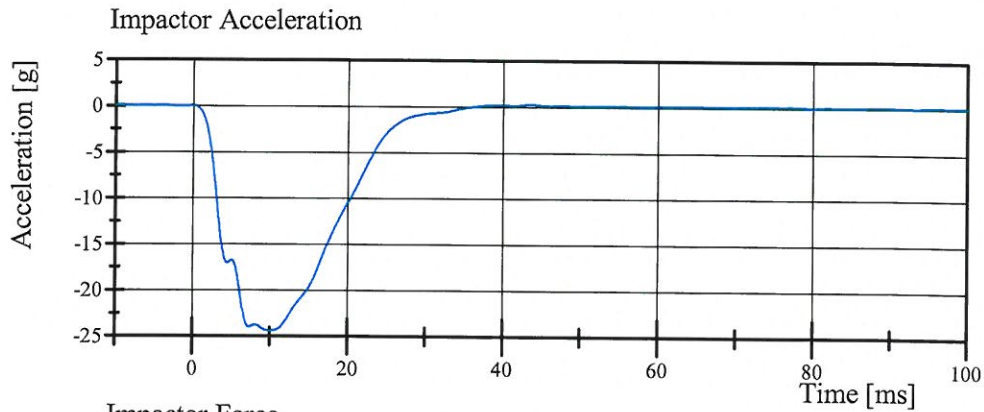


Transportation Research Center Inc.

Left Lateral Thorax without Arm

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/5/2013



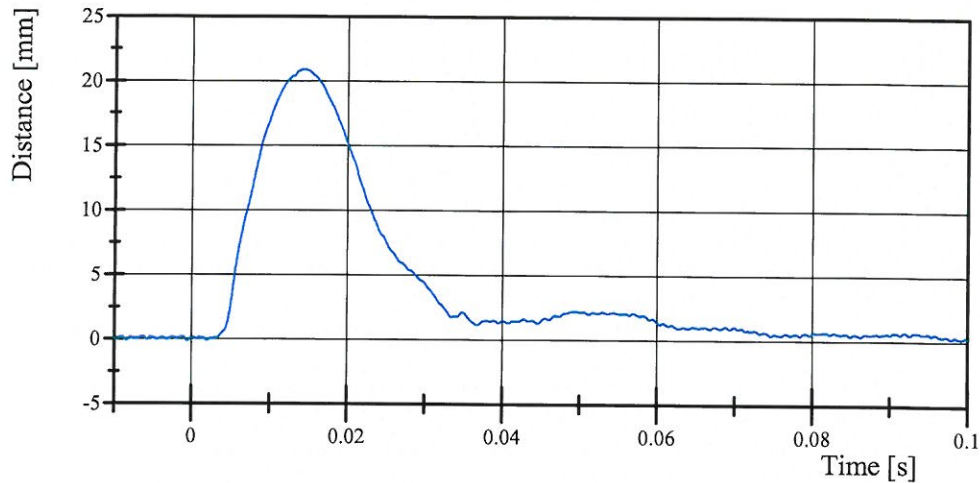
Transportation Research Center Inc.

Left Lateral Thorax without Arm

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-3

Test Date: 3/5/2013

Upper Thorax Rib Displacement

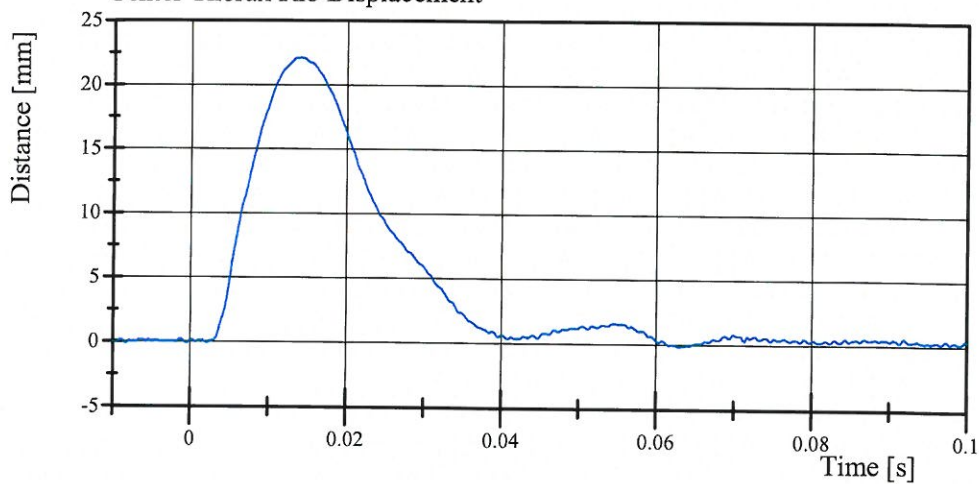


Filter Class: CFC_600

Max: 20.8 mm at 0.0 s

Min: -0.3 mm at 0.2 s

Center Thorax Rib Displacement

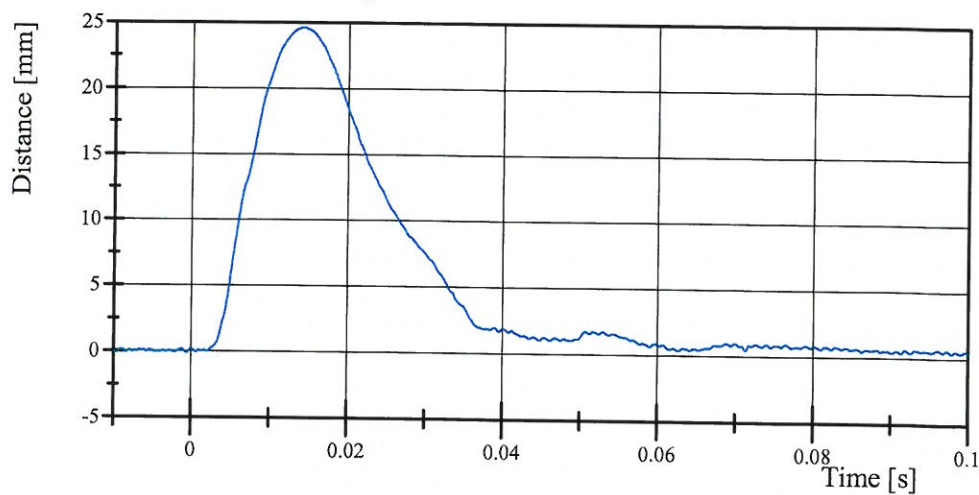


Filter Class: CFC_600

Max: 22.1 mm at 0.0 s

Min: -0.2 mm at -0.1 s

Lower Thorax Rib Displacement



Filter Class: CFC_600

Max: 24.6 mm at 0.0 s

Min: -0.3 mm at 0.1 s

Transportation Research Center Inc.

Left Lateral Abdomen

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-4

Test Date: 3/6/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.39 m/s	Yes
Impactor Force	(-2,210) - (-2,700) N	-2,601.7 N	Yes
Upper Abdominal Rib Displacement	23.1 - 31.2 mm	25.92 mm	Yes
Lower Abdominal Rib Displacement	22.7 - 27.8 mm	23.44 mm	Yes
Lower Spine Lateral Acceleration	24.4 - 30.6 g	27.06 g	Yes

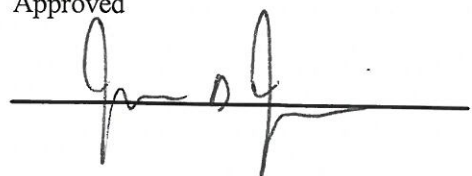
Test meets specifications.

Comments:

Technician



Approved

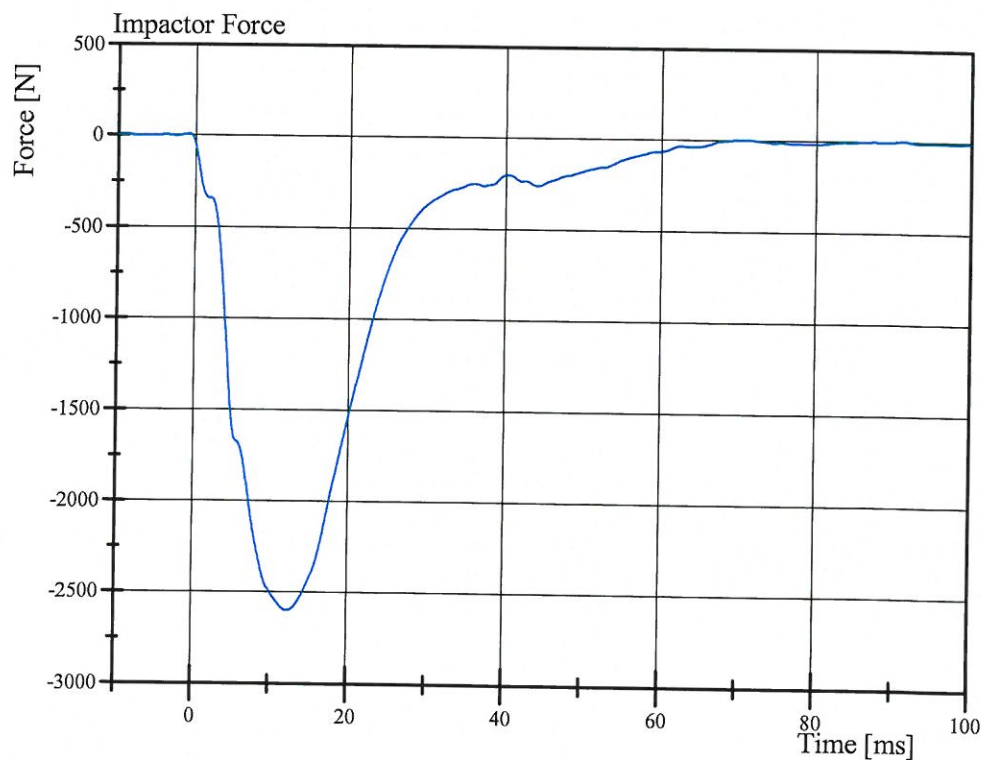
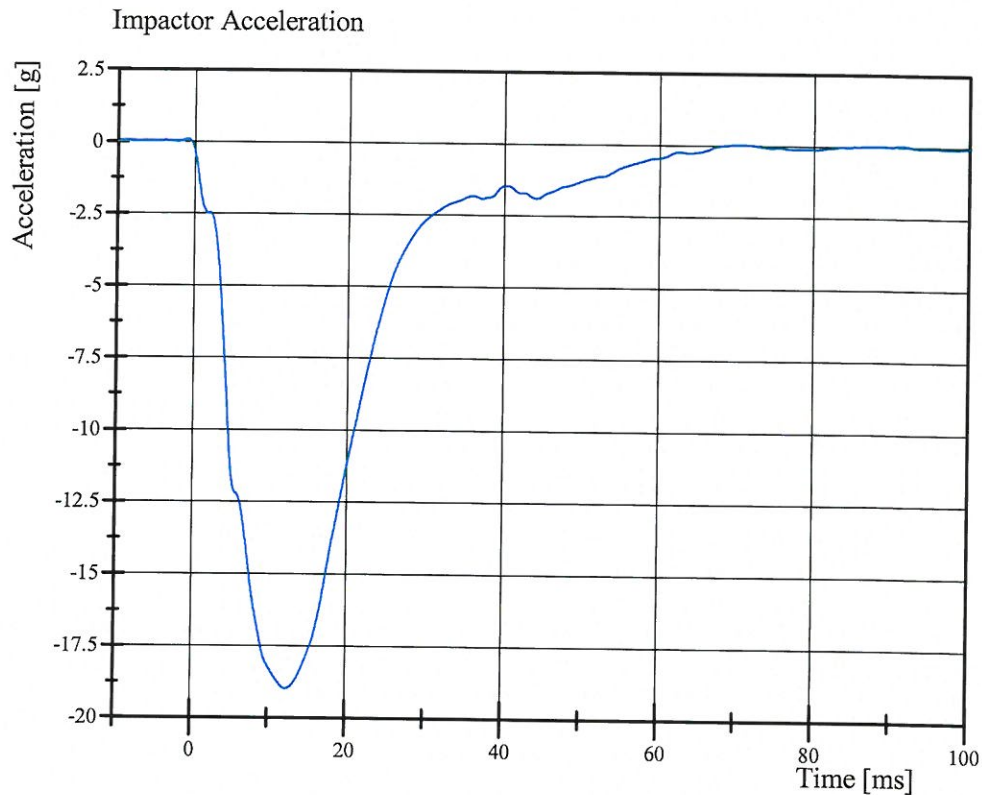


Transportation Research Center Inc.

Left Lateral Abdomen

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-4

Test Date: 3/6/2013



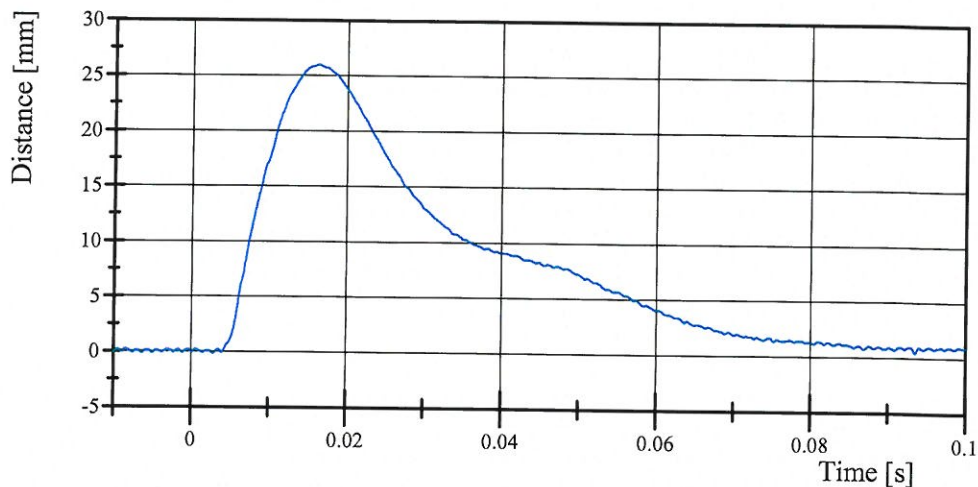
Transportation Research Center Inc.

Left Lateral Abdomen

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-4

Test Date: 3/6/2013

Upper Abdominal Rib Displacement

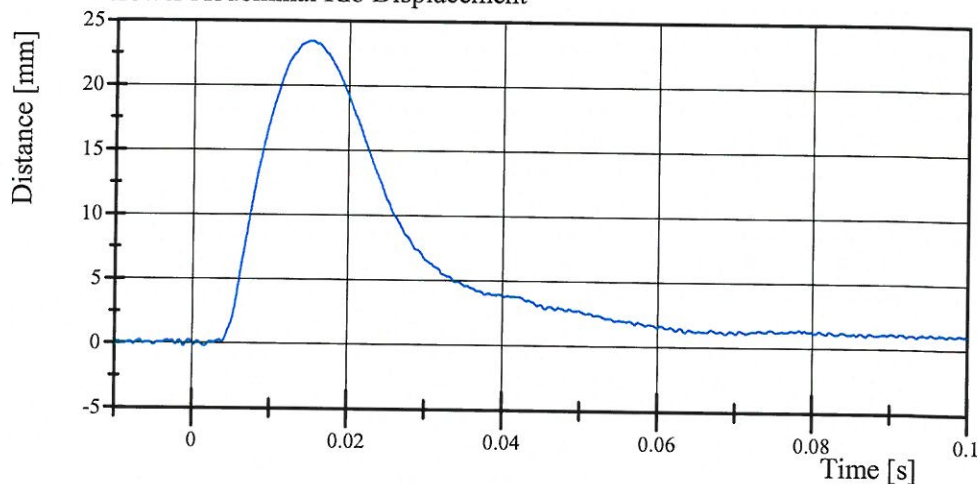


Filter Class: CFC_600

Max: 25.9 mm at 0.0 s

Min: -0.3 mm at -0.1 s

Lower Abdominal Rib Displacement

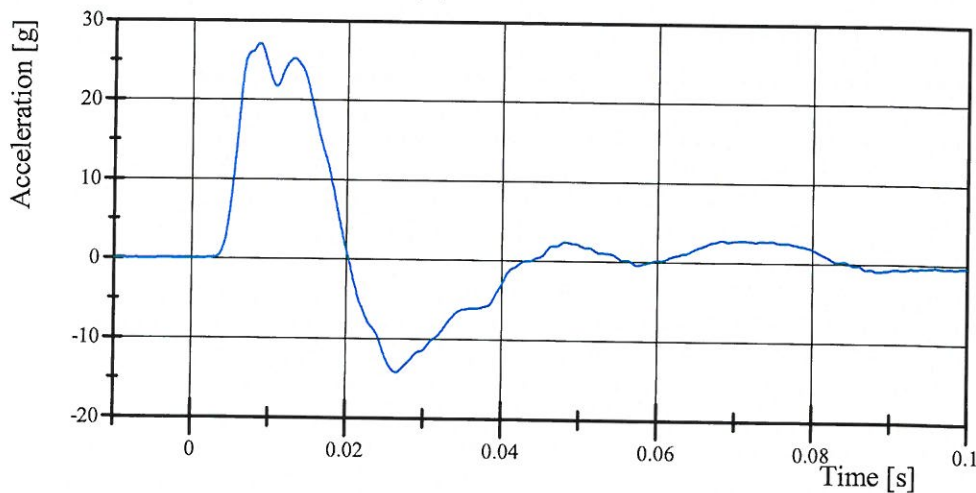


Filter Class: CFC_600

Max: 23.4 mm at 0.0 s

Min: -0.3 mm at -0.1 s

Lower Spine Acceleration (Y)



Filter Class: CFC_180

Max: 27.1 gn at 0.0 s

Min: -14.3 gn at 0.0 s

Transportation Research Center Inc.

Left Lateral Pelvis

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

Test Date: 3/6/2013

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Impactor Velocity	6.6 - 6.8 m/s	6.68 m/s	Yes
Impactor Force	(-4,620) - (-5,650) N	-4,787.2 N	Yes
Pelvis Lateral Acceleration	48.6 - 74.4 g	61.33 g	Yes
Lower Spine Lateral Acceleration	11.8 - 15.8 g	13.84 g	Yes
Pubic Lateral Force	(-770) - (-1,200) N	-1,084.6 N	Yes

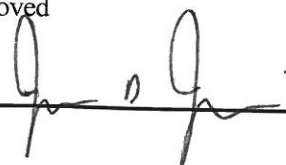
Test meets specifications.

Comments:

Technician



Approved

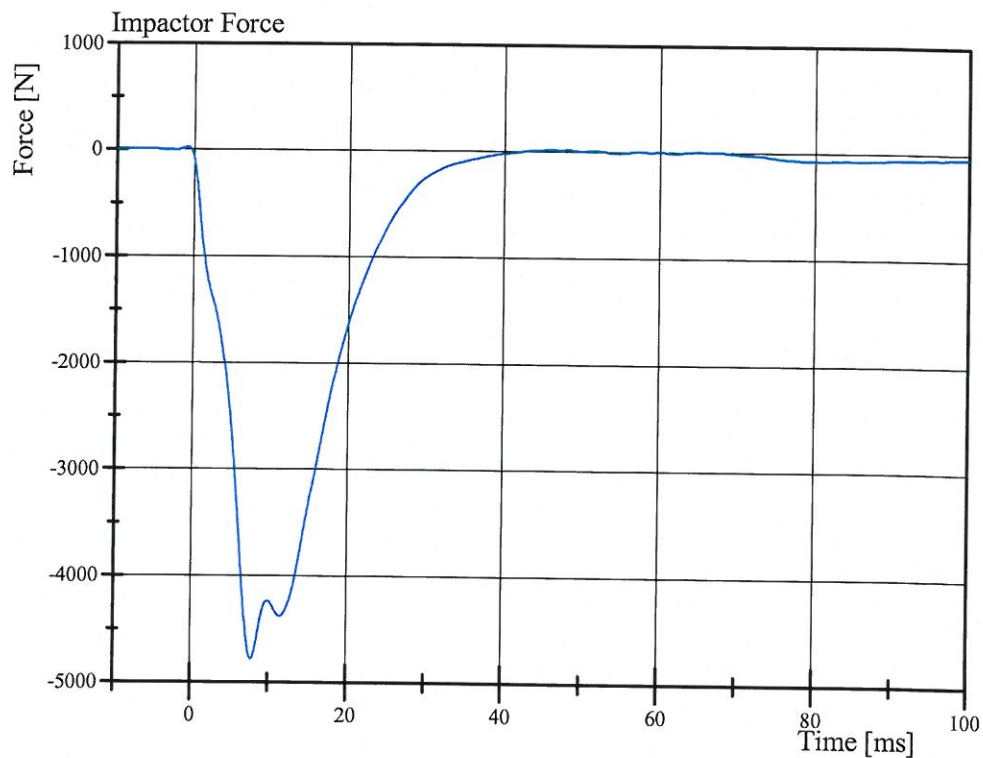
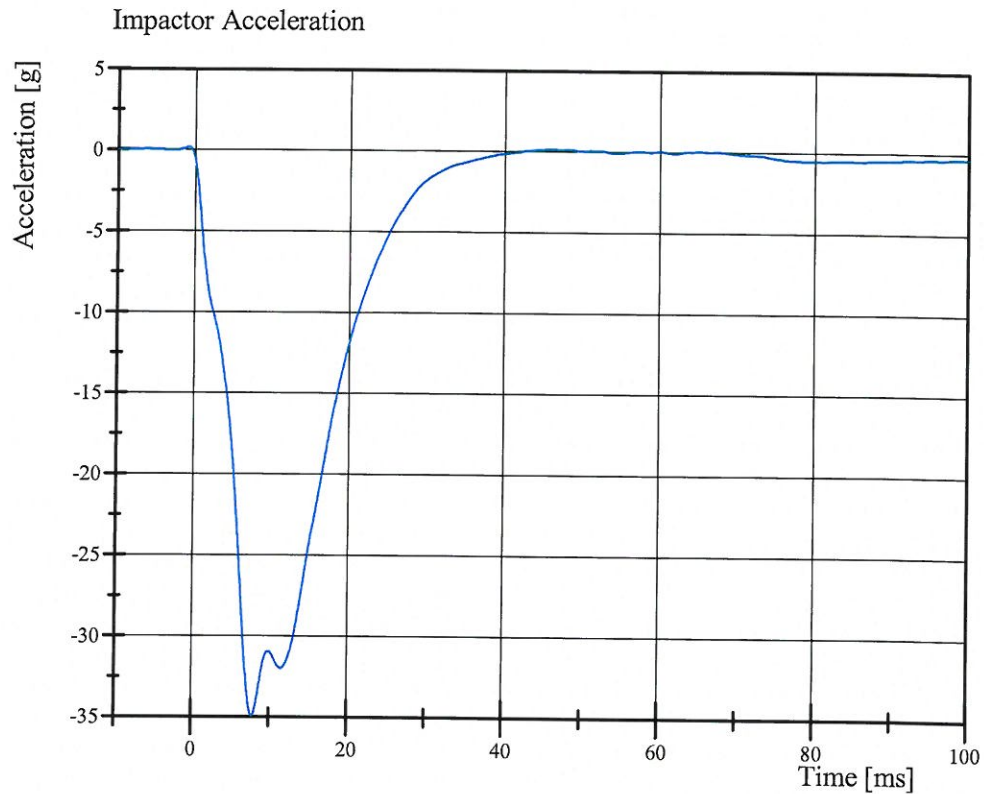


Transportation Research Center Inc.

Left Lateral Pelvis

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

Test Date: 3/6/2013



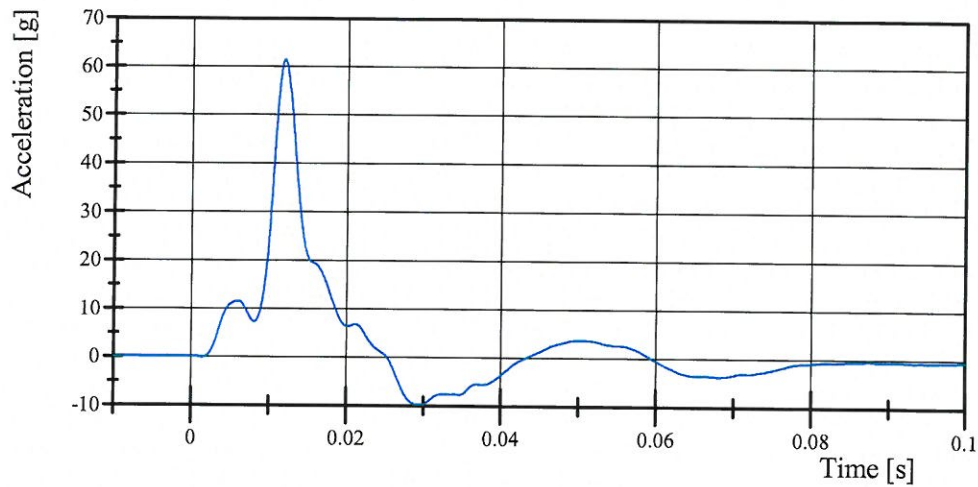
Transportation Research Center Inc.

Left Lateral Pelvis

WorldSID W5-9900 Rev C Serial No. DG0236 Certification No. 4-1

Test Date: 3/6/2013

Pelvis Y-Axis Acceleration

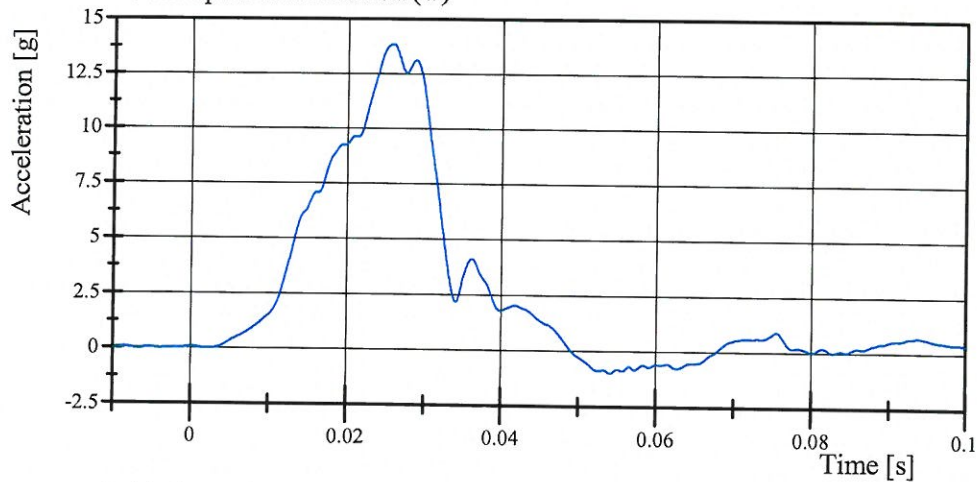


Filter Class: CFC_180

Max: 61.3 gn at 0.0 s

Min: -9.8 gn at 0.0 s

Lower Spine Acceleration (Y)

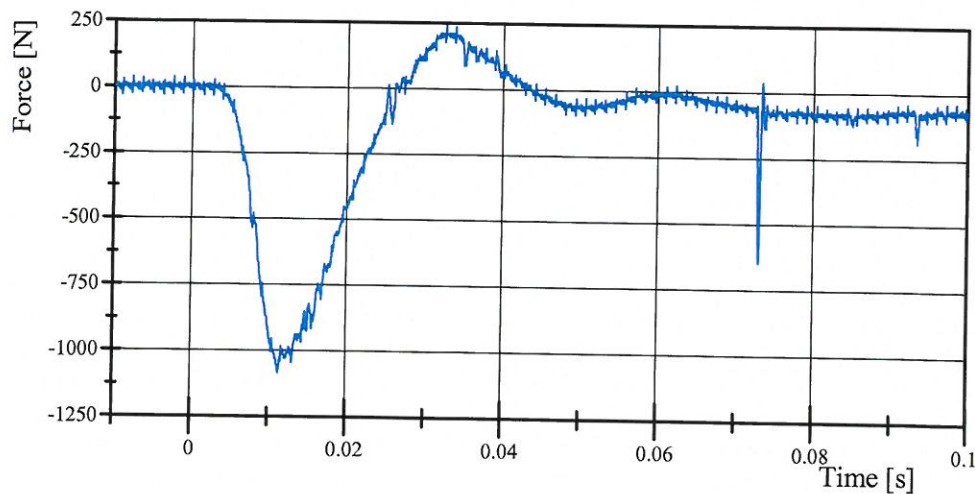


Filter Class: CFC_180

Max: 13.8 gn at 0.0 s

Min: -1.2 gn at 0.1 s

Pubic Lateral Force



Filter Class: CFC_1000

Max: 238.2 N at 0.0 s

Min: -1,084.6 N at 0.0 s

Appendix D

Miscellaneous Test Information

Sign Convention
SAE J211 MAR95

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

<u>Potentiometers:</u>	+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

<u>Tibia load cells:</u>	+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

<u>Lumbar load cells:</u>	+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
SAE J211 MAR95

<u>Typical Test Measurements</u>	<u>Channel Class</u>
Vehicle Structural Accelerations for use in:	
Total vehicle comparison	60
Collision simulation input	60
Component analysis	600
Integration for velocity or displacement	180
Barrier Face Forces	60
Belt Restraint System Loads	60
Anthropomorphic Test Device	
Head accelerations (linear and angular)	1000
Neck	
Forces	1000
Moments	600
Thorax	
Spine accelerations	180
Rib accelerations	1000
Sternum accelerations	1000
Deflections	600
Lumbar	
Forces	1000
Moments	1000
Pelvis	
Accelerations	1000
Forces	1000
Moments	1000
Femur/Knee/Tibia/Ankle	
Forces	600
Moments	600
Displacements	180
Sled Accelerations	60
Steering Column Loads	600
Head Form Accelerations	1000

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 130312

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	Polarity
1	Trig D1	10ZERO000000VO0A	EVENT	1	Logic	Bipolar
2	ARS-12K-ARS0238	11HEADCG00WSANXA	Head X-Axis Angular Displacement	5000	°/s	Bipolar
3	ARS-12K-ARS0253	11HEADCG00WSANYA	Head Y-Axis Angular Displacement	5000	°/s	Bipolar
4	ARS-12K-ARS2799	11HEADCG00WSANZA	Head Z-Axis Angular Displacement	5000	°/s	Bipolar
5	ARS-8K-ARS2338	14HEADCG00WSANXA	Head X-Axis Angular Displacement	5000	°/s	Bipolar
6	ARS-12K-ARS2350	14HEADCG00WSANYA	Head Y-Axis Angular Displacement	5000	°/s	Bipolar
7	ARS-12K-ARS2629	14HEADCG00WSANZA	Head Z-Axis Angular Displacement	5000	°/s	Bipolar
8	P76411	11VEHCCG0000ACXA	Vehicle CG (X)	2000	g	Bipolar
9	P78122	11VEHCCG0000ACYA	Vehicle CG (Y)	2000	g	-Bipolar
10	P78103	11VEHCCG0000ACZA	Vehicle CG (Z)	2000	g	-Bipolar
11	P78101	11SILBRIFR00ACXA	Right Front Sill at Front Seat (X)	2000	g	Bipolar
12	P78109	11SILBRIFR00ACYA	Right Front Sill at Front Seat (Y)	2000	g	-Bipolar
13	P74239	11SILBRIFR00ACZA	Right Front Sill at Front Seat (Z)	2000	g	-Bipolar
14	P77675	11SILBRIRE00ACXA	Right Rear Sill at Rear Seat (X)	2000	g	Bipolar
15	P78093	11SILBRIRE00ACYA	Right Rear Sill at Rear Seat (Y)	2000	g	-Bipolar
16	P77746	11SILBRIRE00ACZA	Right Rear Sill at Rear Seat (Z)	2000	g	Bipolar
17	P75993	11SILBLEFR00ACYA	Left Side Sill at Front Seat (Y)	2000	g	Bipolar
18	P73581	11SILBLERE00ACYA	Left Side Sill at Rear Seat (Y)	2000	g	Bipolar
19	P75771	11APILLO0000ACYA	Left Lower A Post (Y)	2000	g	-Bipolar
20	P76069	11APILMI0000ACYA	Left Middle A-Post (Y)	2000	g	-Bipolar
21	P74248	11BPILLO0000ACYA	Left Lower B Post (Y)	2000	g	-Bipolar
22	P75770	11BPILMI0000ACYA	Left Middle B Post (Y)	2000	g	-Bipolar
23	P74480	11SETR000000ACYA	Front Seat Track (Y)	2000	g	Bipolar
24	P78106	11SETRLERE00ACYA	LEFT REAR SEAT STRUCTURE AY	2000	g	Bipolar
25	P74811	112OCCRIRE00ACYA	RIGHT REAR OCCUPANT COMPARTMENT AY	2000	g	-Bipolar

Channel Report Test Number 130312 Continued

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	Polarity
26	P80136	11ENGNTPO000ACXA	ENGINE BLOCK AX	2000	g	Bipolar
27	P80142	11ENGNTPO000ACYA	ENGINE BLOCK AY	2000	g	-Bipolar
28	P76400	11FORA000000ACXA	Rear Floor Pan Above Axle (X)	2000	g	Bipolar
29	P75030	11FORA000000ACYA	Rear Floor Pan Above Axle (Y)	2000	g	-Bipolar
30	P78113	11FORA000000ACZA	Rear Floor Pan Above Axle (Z)	2000	g	-Bipolar
31	P77748	11VEHEDR0000ACXA	Vehicle at EDR (X)	2000	g	Bipolar
32	P77741	11VEHEDR0000ACYA	Vehicle at EDR (Y)	2000	g	-Bipolar
33	P77721	11VEHEDR0000ACZA	Vehicle at EDR (Z)	2000	g	-Bipolar
34	P75236	10DECKRR0000ACXA	REAR DECK AX	2000	g	Bipolar
35	P75765	10DECKRR0000ACYA	REAR DECK AY	2000	g	-Bipolar
36	P76105	10DECKRR0000ACZA	REAR DECK AZ	2000	g	-Bipolar
37	P77739	11DOORMIMI71ACYA	Left Front Door Mid Centerline (Y)	2000	g	Bipolar
38	P76407	11DOORMIRE71ACYA	Left Front Door Mid Rear (Y)	2000	g	Bipolar
39	P80157	11DOORMIUP71ACYA	Left Front Door Upper Centerline (Y)	2000	g	Bipolar
40	P78099	14DOORMIRE71ACYA	Left Rear Door Mid Rear (Y)	2000	g	Bipolar
41	P78151	14DOORMIUP71ACYA	Left Rear Door Upper Centerline (Y)	2000	g	Bipolar
42	ARS-1500-ARS0330	10VEHCCG0000AVXA	VEHICLE CENTER OF GRAVITY (X) ROLL RATE GYRO	1500	°/s	Bipolar
43	ARS-1500-ARS0010	10VEHCCG0000AVYA	VEHICLE CENTER OF GRAVITY (Y) PITCH RATE GYRO	1500	°/s	Bipolar
44	ARS-1500-ARS4512	10VEHCCG0000AVZA	VEHICLE CENTER OF GRAVITY (Z) YAW RATE GYRO	1500	°/s	Bipolar
45	ARS-1500-ARS0300	10VEHEDR0000AVXA	VEHICLE AT EDR (X) ROLL RATE GYRO	1500	°/s	Bipolar
46	ARS-1500-ARS0323	10VEHEDR0000AVYA	VEHICLE AT EDR (Y) PITCH RATE GYRO	1500	°/s	Bipolar
47	ARS-1500-ARS2331	10VEHEDR0000AVZA	VEHICLE AT EDR (Z) YAW RATE GYRO	1500	°/s	Bipolar
48	ARS-1500-ARS4511	10DECKRR0000AVXA	REAR DECK (X) ROLL RATE GYRO	1500	°/s	Bipolar
49	ARS-1500-ARS0738	10DECKRR0000AVYA	REAR DECK (Y) PITCH RATE GYRO	1500	°/s	Bipolar
50	ARS-1500-ARS3810	10DECKRR0000AVZA	REAR DECK (Z) YAW RATE GYRO	1500	°/s	Bipolar
51	ABFire1	11SENS000000VO00	SAB TIMING IND	5	V	Bipolar
52	ABFire2	11SENS010000VO00	SAB TIMING IND	5	V	Bipolar
53	ABFire3	11SENS020000VO00	SCAB TIMING IND	5	V	Bipolar

Channel Report Test Number 130312 Continued

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	Polarity
54	Bit.00	11HEADCONT00VO0A	Head Contact	1	Logic	Bipolar
55	Bit.01	11SHLDCONT00VO0A	Shoulder Contact	1	Logic	Bipolar
56	Bit.02	11THORCONT00VO0A	Thorax Contact	1	Logic	Bipolar
57	Bit.03	11LEGCONT000VO0A	Leg Contact	1	Logic	Bipolar
58	Bit.04	14HEADCONT00VO0A	Head Contact	1	Logic	Bipolar
59	Bit.05	14SHLDCONT00VO0A	Shoulder Contact	1	Logic	Bipolar
60	Bit.06	14THORCONT00VO0A	Thorax Contact	1	Logic	Bipolar
61	Bit.07	14LEGCONT000VO0A	Leg Contact	1	Logic	Bipolar
62	P79385	M0MBARCG0000ACXA	MDB CG AX	2000	g	Bipolar
63	P80356	M0MBARCG0000ACYA	MDB CG AY	2000	g	Bipolar
64	P80355	M0MBARCG0000ACZA	MDB CG AZ	2000	g	-Bipolar
65	P75254	M0FRAMRE0000ACXA	MDB REAR AX	2000	g	Bipolar
66	P75567	M0FRAMRE0000ACYA	MDB REAR AY	2000	g	Bipolar

Command File Test Number 130312

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
3A	1 11HEADCG00WSACXA	Head Longitudinal Ax	1000	+	yes	1000
	2 11HEADCG00WSACYA	Head Lateral Ay	1000	+	yes	1000
	3 11HEADCG00WSACZA	Head Vertical Az	1000	+	yes	1000
	11HEADCG00WSACRA	Head A Resultant	1000			
	4 11HEAD0000WSAAXA	Head Rotational Acceleration Rx	1000	-	yes	50000
	5 11HEAD0000WSAAYA	Head Rotational Acceleration Ry	1000	+	yes	50000
	6 11HEAD0000WSAAZA	Head Rotational Acceleration Rz	1000	+	yes	50000
	7 11HEADCG00WSAVXA	Head X-Axis Angular Velocity	1000	+	yes	5000
	8 11HEADCG00WSAVYA	Head Y-Axis Angular Velocity	1000	+	yes	5000
	9 11HEADCG00WSAVZA	Head Z-Axis Angular Velocity	1000	+	yes	5000
	10 11NECKUP00WSFOXA	Neck Upper Force Fx	1000	-	yes	10000
	11 11NECKUP00WSFOYA	Neck Upper Force Fy	1000	+	yes	10000
	12 11NECKUP00WSFOZA	Neck Upper Force Fz	1000	-	yes	12000
	13 11NECKUP00WSMOXA	Neck Upper Moment Mx	600	+	yes	300
	14 11NECKUP00WSMOYA	Neck Upper Moment My	600	+	yes	300
	15 11NECKUP00WSMOZA	Neck Upper Moment Mz	600	+	yes	200
	16 11NECKLO00WSFOXA	Neck Lower Force Fx	1000	+	yes	10000
	17 11NECKLO00WSFOYA	Neck Lower Force Fy	1000	+	yes	10000
	18 11NECKLO00WSFOZA	Neck Lower Force Fz	1000	-	yes	12000
	19 11NECKLO00WSMOXA	Neck Lower Moment Mx	600	+	yes	300
	20 11NECKLO00WSMOYA	Neck Lower Moment My	600	+	yes	300
	21 11NECKLO00WSMOZA	Neck Lower Moment Mz	600	+	yes	200
	22 11SHLDLE00WSACXA	Shoulder Longitudinal Ax	1000	+	yes	500
	23 11SHLDLE00WSACYA	Shoulder Lateral Ay	1000	+	yes	500
	24 11SHLDLE00WSACZA	Shoulder Vertical Az	1000	+	yes	500
24A	11SHLDLE00WSACRA	Shoulder A Resultant	1000			
	25 11SHLDLE00WSFOXA	Shoulder Force Fx	1000	+	yes	5000

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale	
	26	11SHLDLE00WSFOYA	Shoulder Force Fy	1000	-	yes	10000
	27	11SHLDLE00WSFOZA	Shoulder Force Fz	1000	+	yes	5000
	28	11SHRILE00WSDSYA	Shoulder Y Disp	600	+	yes	90
	29	11THSP0100WSACXA	T1 Longitudinal Ax	180	+	yes	1000
	30	11THSP0100WSACYA	T1 Lateral Ay	180	+	yes	1000
	31	11THSP0100WSACZA	T1 Vertical Az	180	-	yes	1000
31A		11THSP0100WSACRA	T1 A Resultant	180			
	32	11TRRILE01WSACXA	Thorax Rib 1 Longitudinal Ax	1000	+	yes	500
	33	11TRRILE01WSACYA	Thorax Rib 1 Lateral Ay	1000	+	yes	500
	34	11TRRILE01WSACZA	Thorax Rib 1 Vertical Az	1000	+	yes	500
34A		11TRRILE01WSACRA	Thorax Rib 1 A Resultant	1000			
	35	11TRRILE01WSDSYA	Thorax Rib 1 Lateral Disp	600	+	yes	90
	36	11TRRILE02WSACXA	Thorax Rib 2 Longitudinal Ax	1000	+	yes	500
	37	11TRRILE02WSACYA	Thorax Rib 2 Lateral Ay	1000	+	yes	500
	38	11TRRILE02WSACZA	Thorax Rib 2 Vertical Az	1000	+	yes	500
38A		11TRRILE02WSACRA	Thorax Rib 2 A Resultant	1000			
	39	11TRRILE02WSDCOA	Thorax Rib 2 IRTRAC compression	600	+	no	110
	40	11TRRILE02WSANZA	Thorax Rib 2 Rotational angle	600	+	no	110
	41	11TRRILE02WSDSXA	Thorax Rib 2 IRTRAC X Deflection	600	+	no	110
	42	11TRRILE02WSDSYA	Thorax Rib 2 IRTRAC Y Deflection	600	+	no	110
	43	11TRRILE03WSACXA	Thorax Rib 3 Longitudinal Ax	1000	+	yes	500
	44	11TRRILE03WSACYA	Thorax Rib 3 Lateral Ay	1000	+	yes	500
	45	11TRRILE03WSACZA	Thorax Rib 3 Vertical Az	1000	+	yes	500
45A		11TRRILE03WSACRA	Thorax Rib 3 A Resultant	1000			
	46	11TRRILE03WSDCOA	Thorax Rib 3 IRTRAC compression	600	+	no	110
	47	11TRRILE03WSANZA	Thorax Rib 3 Rotational angle	600	+	no	110
	48	11TRRILE03WSDSXA	Thorax Rib 3 IRTRAC X Deflection	600	+	no	110
	49	11TRRILE03WSDSYA	Thorax Rib 3 IRTRAC Y Deflection	600	+	no	110

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale	
52A	50	11ABRILE01WSACXA	Abdominal Rib 1 Longitudinal Ax	1000	+	yes	500
	51	11ABRILE01WSACYA	Abdominal Rib 1 Lateral Ay	1000	+	yes	500
	52	11ABRILE01WSACZA	Abdominal Rib 1 Vertical Az	1000	+	yes	500
		11ABRILE01WSACRA	Abdominal Rib 1 A Resultant	1000	+	yes	
	53	11ABRILE01WSDCOA	Abdominal Rib 1 IRTAC compression	600	+	no	110
	54	11ABRILE01WSANZA	Abdominal Rib 1 Rotational angle	600	+	no	110
	55	11ABRILE01WSDSXA	Abdominal Rib 1 IRTAC X Deflection	600	+	no	110
	56	11ABRILE01WSDSYA	Abdominal Rib 1 IRTAC Y Deflection	600	+	no	110
59A	57	11ABRILE02WSACXA	Abdominal Rib 2 Longitudinal Ax	1000	+	yes	500
	58	11ABRILE02WSACYA	Abdominal Rib 2 Lateral Ay	1000	+	yes	500
	59	11ABRILE02WSACZA	Abdominal Rib 2 Vertical Az	1000	+	yes	500
		11ABRILE02WSACRA	Abdominal Rib 2 A Resultant	1000			
	60	11ABRILE02WSDSYA	Abdominal Rib 2 Lateral Disp	600	+	yes	90
	61	11THSP0400WSACXA	T4 Longitudinal Ax	180	+	yes	1000
	62	11THSP0400WSACYA	T4 Lateral Ay	180	+	yes	1000
	63	11THSP0400WSACZA	T4 Vertical Az	180	+	yes	1000
63A		11THSP0400WSACRA	T4 A Resultant	180			
	64	11THSP1200WSACXA	T12 Longitudinal Ax	180	+	yes	1000
	65	11THSP1200WSACYA	T12 Lateral Ay	180	+	yes	1000
	66	11THSP1200WSACZA	T12 Vertical Az	180	+	yes	1000
66A		11THSP1200WSACRA	T12 A Resultant	180			
	67	11PELV0000WSACXA	Pelvis Longitudinal Ax	1000	+	yes	1000
	68	11PELV0000WSACYA	Pelvis Lateral Ay	1000	+	yes	1000
	69	11PELV0000WSACZA	Pelvis Vertical Az	1000	+	yes	1000
69A		11PELV0000WSACRA	Pelvis A Resultant	1000			
	70	11PUBC0000WSFOYA	Pubic Force Fy	600	+	yes	12000
	71	11LUSP0000WSFOXA	Lumbar Force Fx	600	+	yes	10000
	72	11LUSP0000WSFOYA	Lumbar Force Fy	600	+	yes	10000

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
73	11LUSP0000WSFOZA	Lumbar Force Fz	600	-	yes	12000
74	11LUSP0000WSMOXA	Lumbar Moment Mx	600	+	yes	300
75	11LUSP0000WSMOYA	Lumbar Moment My	600	+	yes	300
76	11LUSP0000WSMOZA	Lumbar Moment Mz	600	+	yes	200
77	11SACRRI00WSMOXA	Sacro-Iliac Right Moment Mx	600	+	yes	800
78	11SACRRI00WSMOYA	Sacro-Iliac Right Moment My	600	+	yes	400
79	11SACRRI00WSMOZA	Sacro-Iliac Right Moment Mz	600	+	yes	400
80	11SACRRI00WSFOXA	Sacro-Iliac Right Force Fx	600	+	yes	6000
81	11SACRRI00WSFOYA	Sacro-Iliac Right Force Fy	600	-	yes	12000
82	11SACRRI00WSFOZA	Sacro-Iliac Right Force Fz	600	-	yes	6000
83	11SACRLE00WSMOXA	Sacro-Iliac Left Moment Mx	600	+	yes	800
84	11SACRLE00WSMOYA	Sacro-Iliac Left Moment My	600	+	yes	400
85	11SACRLE00WSMOZA	Sacro-Iliac Left Moment Mz	600	+	yes	400
86	11SACRLE00WSFOXA	Sacro-Iliac Left Force Fx	600	+	yes	6000
87	11SACRLE00WSFOYA	Sacro-Iliac Left Force Fy	600	-	yes	12000
88	11SACRLE00WSFOZA	Sacro-Iliac Left Force Fz	600	+	yes	6000
89	11FEACLE00WSFOXA	Left Femoral Neck Force Fx	600	-	yes	10000
90	11FEACLE00WSFOYA	Left Femoral Neck Force Fy	600	-	yes	25000
91	11FEACLE00WSFOZA	Left Femoral Neck Force Fz	600	-	yes	10000
92	11FEACRI00WSFOXA	Right Femoral Neck Force Fx	600	-	yes	10000
93	11FEACRI00WSFOYA	Right Femoral Neck Force Fy	600	-	yes	25000
94	11FEACRI00WSFOZA	Right Femoral Neck Force Fz	600	-	yes	10000
95	14HEADCG00WFACXA	Head Longitudinal Ax	1000	+	yes	400
96	14HEADCG00WFACYA	Head Lateral Ay	1000	+	yes	400
97	14HEADCG00WFACZA	Head Vertical Az	1000	-	yes	400
97A	14HEADCG00WFACRA	Head A Resultant	1000			
98	14HEAD0000WFAAXA	Head Rotational Acceleration Rx	1000	+	yes	50000
99	14HEAD0000WFAAYA	Head Rotational Acceleration Ry	1000	+	yes	50000

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
100	14HEAD0000WFAAZA	Head Rotational Acceleration Rz	1000	+	yes	50000
101	14HEADCG00WFAVXA	Head X-Axis Angular Velocity	1000	+	yes	5000
102	14HEADCG00WFAVYA	Head Y-Axis Angular Velocity	1000	+	yes	5000
103	14HEADCG00WFAVZA	Head Z-Axis Angular Velocity	1000	+	yes	5000
104	14NECKUP00WFFOXA	Neck Upper Force Fx	1000	+	yes	10000
105	14NECKUP00WFFOYA	Neck Upper Force Fy	1000	+	yes	10000
106	14NECKUP00WFFOZA	Neck Upper Force Fz	1000	+	yes	12000
107	14NECKUP00WFMOXA	Neck Upper Moment Mx	600	-	yes	200
108	14NECKUP00WFMOYA	Neck Upper Moment My	600	+	yes	300
109	14NECKUP00WFMOZA	Neck Upper Moment Mz	600	+	yes	200
110	14NECKLO00WFFOXA	Neck Lower Force Fx	1000	+	yes	10000
111	14NECKLO00WFFOYA	Neck Lower Force Fy	1000	+	yes	10000
112	14NECKLO00WFFOZA	Neck Lower Force Fz	1000	+	yes	12000
113	14NECKLO00WFMOXA	Neck Lower Moment Mx	600	+	yes	300
114	14NECKLO00WFMOYA	Neck Lower Moment My	600	+	yes	300
115	14NECKLO00WFMOZA	Neck Lower Moment Mz	600	+	yes	200
116	14SHLDLE00WFACXA	Shoulder Longitudinal Ax	1000	+	yes	400
117	14SHLDLE00WFACYA	Shoulder Lateral Ay	1000	+	yes	400
118	14SHLDLE00WFACZA	Shoulder Vertical Az	1000	+	yes	400
118A	14SHLDLE00WFACRA	Shoulder A Resultant	1000			
119	14SHLDLE00WFFOXA	Shoulder Force Fx	600	-	yes	4000
120	14SHLDLE00WFFOYA	Shoulder Force Fy	600	+	yes	5000
121	14SHLDLE00WFFOZA	Shoulder Force Fz	600	-	yes	4000
122	14SHLDLE00WFDSYA	Shoulder Displacement Dy	600	+	yes	102
123	14THSP0100WFACXA	T1 Longitudinal Ax	180	+	yes	400
124	14THSP0100WFACYA	T1 Lateral Ay	180	+	yes	400
125	14THSP0100WFACZA	T1 Vertical Az	180	+	yes	400
125A	14THSP0100WFACRA	T1 A Resultant	180			

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Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
126	14TRRILE01WFACXA	Thorax Rib 1 Longitudinal Ax	1000	+	yes	400
127	14TRRILE01WFACYA	Thorax Rib 1 Lateral Ay	1000	+	yes	400
128	14TRRILE01WFACZA	Thorax Rib 1 Vertical Az	1000	+	yes	400
128A	14TRRILE01WFACRA	Thorax Rib 1 A Resultant	1000			
129	14TRRILE01WFDCOA	Thorax Rib 1 IRTRAC compression	600	+	no	110
130	14TRRILE01WFANZA	Thorax Rib 1 Rotational angle	600	+	no	110
131	14TRRILE01WFDSXA	Thorax Rib 1 IRTRAC X Deflection	600	+	no	110
132	14TRRILE01WFDSYA	Thorax Rib 1 IRTRAC Y Deflection	600	+	no	110
133	14TRRILE02WFACXA	Thorax Rib 2 Longitudinal Ax	1000	+	yes	400
134	14TRRILE02WFACYA	Thorax Rib 2 Lateral Ay	1000	+	yes	400
135	14TRRILE02WFACZA	Thorax Rib 2 Vertical Az	1000	+	yes	400
135A	14TRRILE02WFACRA	Thorax Rib 2 A Resultant	1000			
136	14TRRILE02WFDCOA	Thorax Rib 2 IRTRAC compression	600	+	no	110
137	14TRRILE02WFANZA	Thorax Rib 2 Rotational angle	600	+	no	110
138	14TRRILE02WFDSXA	Thorax Rib 2 IRTRAC X Deflection	600	+	no	110
139	14TRRILE02WFDSYA	Thorax Rib 2 IRTRAC Y Deflection	600	+	no	110
140	14TRRILE03WFACXA	Thorax Rib 3 Longitudinal Ax	1000	+	yes	400
141	14TRRILE03WFACYA	Thorax Rib 3 Lateral Ay	1000	+	yes	400
142	14TRRILE03WFACZA	Thorax Rib 3 Vertical Az	1000	+	yes	400
142A	14TRRILE03WFACRA	Thorax Rib 3 A Resultant	1000			
143	14TRRILE03WFDCOA	Thorax Rib 3 IRTRAC compression	600	+	no	110
144	14TRRILE03WFANZA	Thorax Rib 3 Rotational angle	600	+	no	110
145	14TRRILE03WFDSXA	Thorax Rib 3 IRTRAC X Deflection	600	+	no	110
146	14TRRILE03WFDSYA	Thorax Rib 3 IRTRAC Y Deflection	600	+	no	110
147	14ABRILE01WFACXA	Abdominal Rib 1 Longitudinal Ax	1000	+	yes	400
148	14ABRILE01WFACYA	Abdominal Rib 1 Lateral Ay	1000	+	yes	400
149	14ABRILE01WFACZA	Abdominal Rib 1 Vertical Az	1000	+	yes	400
149A	14ABRILE01WFACRA	Abdominal Rib 1 A Resultant	1000			

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
150	14ABRILE01WFDC0A	Abdominal Rib 1 IRTRAC compression	600	+	no	110
151	14ABRILE01WFANZA	Abdominal Rib 1 Rotational angle	600	+	no	110
152	14ABRILE01WFDSXA	Abdominal Rib 1 IRTRAC X Deflection	600	+	no	110
153	14ABRILE01WFDSYA	Abdominal Rib 1 IRTRAC Y Deflection	600	+	no	110
154	14ABRILE02WFACXA	Abdominal Rib 2 Longitudinal Ax	1000	+	yes	400
155	14ABRILE02WFACYA	Abdominal Rib 2 Lateral Ay	1000	+	yes	400
156	14ABRILE02WFACZA	Abdominal Rib 2 Vertical Az	1000	+	yes	400
156A	14ABRILE02WFACRA	Abdominal Rib 2 A Resultant	1000			
157	14ABRILE02WFDC0A	Abdominal Rib 2 IRTRAC compression	600	+	no	110
158	14ABRILE02WFANZA	Abdominal Rib 2 Rotational angle	600	+	no	110
159	14ABRILE02WFDSXA	Abdominal Rib 2 IRTRAC X Deflection	600	+	no	110
160	14ABRILE02WFDSYA	Abdominal Rib 2 IRTRAC Y Deflection	600	+	no	110
161	14THSP0400WFACXA	T4 Longitudinal Ax	180	+	yes	400
162	14THSP0400WFACYA	T4 Lateral Ay	180	+	yes	400
163	14THSP0400WFACZA	T4 Vertical Az	180	+	yes	400
163A	14THSP0400WFACRA	T4 A Resultant	180			
164	14THSP1200WFACXA	T12 Longitudinal Ax	180	+	yes	400
165	14THSP1200WFACYA	T12 Lateral Ay	180	+	yes	400
166	14THSP1200WFACZA	T12 Vertical Az	180	+	yes	400
166A	14THSP1200WFACRA	T12 A Resultant	180			
167	14PELV0000WFACXA	Pelvis Longitudinal Ax	180	+	yes	400
168	14PELV0000WFACYA	Pelvis Lateral Ay	180	-	yes	400
169	14PELV0000WFACZA	Pelvis Vertical Az	180	+	yes	400
169A	14PELV0000WFACRA	Pelvis A Resultant	180			
170	14PUBC0000WFFOYA	Pubic Force Fy	600	-	yes	12000
171	11VEHCCG0000ACXA	Vehicle CG (X)	60	+	yes	2000
172	11VEHCCG0000ACYA	Vehicle CG (Y)	60	+	yes	2000
173	11VEHCCG0000ACZA	Vehicle CG (Z)	60	+	yes	2000

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
173A	11VEHCCG0000ACRA	Vehicle CG Resultant	60			
174	11SILBRIFR00ACXA	Right Front Sill at Front Seat (X)	60	+	yes	2000
175	11SILBRIFR00ACYA	Right Front Sill at Front Seat (Y)	60	+	yes	2000
176	11SILBRIFR00ACZA	Right Front Sill at Front Seat (Z)	60	+	yes	2000
176A	11SILBRIFR00ACRA	Right Front Sill at Front Seat Resultant	60			
177	11SILBRIRE00ACXA	Right Rear Sill at Rear Seat (X)	60	+	yes	2000
178	11SILBRIRE00ACYA	Right Rear Sill at Rear Seat (Y)	60	+	yes	2000
179	11SILBRIRE00ACZA	Right Rear Sill at Rear Seat (Z)	60	+	yes	2000
179A	11SILBRIRE00ACRA	Right Rear Sill at Rear Seat Resultant	60			
180	11SILBLEFR00ACYA	Left Side Sill at Front Seat (Y)	60	+	yes	2000
181	11SILBLERE00ACYA	Left Side Sill at Rear Seat (Y)	60	+	yes	2000
182	11APILLO0000ACYA	Left Lower A Post (Y)	60	+	yes	2000
183	11APILMI0000ACYA	Left Middle A-Post (Y)	60	+	yes	2000
184	11BPILLO0000ACYA	Left Lower B Post (Y)	60	+	yes	2000
185	11BPILMI0000ACYA	Left Middle B Post (Y)	60	+	yes	2000
186	11SETR000000ACYA	Front Seat Track (Y)	60	+	yes	2000
187	11SETRLERE00ACYA	LEFT REAR SEAT STRUCTURE AY	60	+	yes	2000
188	11VEHCRIRE00ACYA	RIGHT REAR OCCUPANT COMPARTMENT AY	60	+	yes	2000
189	11ENGNTPO000ACXA	ENGINE BLOCK AX	60	+	yes	2000
190	11ENGNTPO000ACYA	ENGINE BLOCK AY	60	+	yes	2000
191	11FORA000000ACXA	Rear Floor Pan Above Axle (X)	60	+	yes	2000
192	11FORA000000ACYA	Rear Floor Pan Above Axle (Y)	60	+	yes	2000
193	11FORA000000ACZA	Rear Floor Pan Above Axle (Z)	60	+	yes	2000
193A	11FORA000000ACRA	Rear Floor Pan Above Axle Resultant	60			
194	11VEHCEDR000ACXA	Vehicle at EDR (X)	60	+	yes	2000
195	11VEHCEDR000ACYA	Vehicle at EDR (Y)	60	+	yes	2000
196	11VEHCEDR000ACZA	Vehicle at EDR (Z)	60	+	yes	2000
196A	11VEHCEDR000ACRA	Vehicle at EDR Resultant	60			

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
197	10FORARD0000ACXA	REAR DECK AX	60	+	yes	2000
198	10FORARD0000ACYA	REAR DECK AY	60	+	yes	2000
199	10FORARD0000ACZA	REAR DECK AZ	60	+	yes	2000
199A	10FORARD0000ACRA	REAR DECK A Resultant	60			
200	10VEHCCG0000AVXA	VEHICLE CENTER OF GRAVITY (X) ROLL RATE GYRO	60	+	yes	1500
201	10VEHCCG0000AVYA	VEHICLE CENTER OF GRAVITY (Y) PITCH RATE GYRO	60	+	yes	1500
202	10VEHCCG0000AVZA	VEHICLE CENTER OF GRAVITY (Z) YAW RATE GYRO	60	+	yes	1500
203	10VEHCEDR000AVXA	VEHICLE AT EDR (X) ROLL RATE GYRO	60	+	yes	1500
204	10VEHCEDR000AVYA	VEHICLE AT EDR (Y) PITCH RATE GYRO	60	+	yes	1500
205	10VEHCEDR000AVZA	VEHICLE AT EDR (Z) YAW RATE GYRO	60	+	yes	1500
206	10FORARD0000AVXA	REAR DECK (X) ROLL RATE GYRO	60	+	yes	1500
207	10FORARD0000AVYA	REAR DECK (Y) PITCH RATE GYRO	60	+	yes	1500
208	10FORARD0000AVZA	REAR DECK (Z) YAW RATE GYRO	60	+	yes	1500
209	11DOORMIMI71ACYA	Left Front Door Mid Centerline (Y)	60	+	yes	2000
210	11DOORMIRE71ACYA	Left Front Door Mid Rear (Y)	60	+	yes	2000
211	11DOORMIUP71ACYA	Left Front Door Upper Centerline (Y)	60	+	yes	2000
212	14DOORMIRE71ACYA	Left Rear Door Mid Rear (Y)	60	+	yes	2000
213	14DOORMIUP71ACYA	Left Rear Door Upper Centerline (Y)	60	+	yes	2000
214	11SENS000000VO00	DRIVER PRIMARY	0	+	no	5
215	11SENS010000VO00	SAB TIMING IND	0	+	no	5
216	11SENS020000VO00	SCAB TIMING IND	0	+	no	5
217	11HEADCONT00VO0A	Head Contact	1000	+	no	1
218	11SHLDCONT00VO0A	Shoulder Contact	1000	+	no	1
219	11THORCONT00VO0A	Thorax Contact	1000	+	no	1
220	11LEGCONT000VO0A	Leg Contact	1000	+	no	1
221	14HEADCONT00VO0A	Head Contact	1000	+	no	1
222	14SHLDCONT00VO0A	Shoulder Contact	1000	+	no	1
223	14THORCONT00VO0A	Thorax Contact	1000	+	no	1

Command File Test Number 130312 Continued

Channel	ISO mnemonic	Channel Title	Filter	Flip	Zero	Full Scale
224	14LEGCONT000VO0A	Leg Contact	1000	+	no	1
225	M0MBARCG0000ACXA	MDB CG AX	60	+	yes	2000
226	M0MBARCG0000ACYA	MDB CG AY	60	+	yes	2000
227	M0MBARCG0000ACZA	MDB CG AZ	60	+	yes	2000
227A	M0MBARCG0000ACRA	MDB CG A Resultant	60			
228	M0FRAMRE0000ACXA	MDB REAR AX	60	+	yes	2000
229	M0FRAMRE0000ACYA	MDB REAR AY	60	+	yes	2000

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