

**Vehicle Research and Test Center
2005 Chrysler Town and Country LX into
Front of a 2002 Ford Focus SE
TRC Inc. Test Number: 070607**

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Section 1.0

Purpose and Test Procedure

Purpose

This 40% offset frontal collinear vehicle-to-vehicle impact test was conducted for the National Highway Traffic Safety Administration (NHTSA) and Vehicle Research and Test Center (VRTC) by Transportation Research Center Inc. (TRC Inc.).

The test mode was defined as the bullet vehicle moving at 44.6 km/h to impact the target vehicle moving at 64.0 km/h at an impact angle of 0 degrees. The purpose of this test was to evaluate the aggressiveness of the bullet vehicle, a 2005 Chrysler Town and Country LX MPV, and the vehicle and occupant response of the target vehicle, a 2002 Ford Focus SE 4-door, in this vehicle-to-vehicle impact mode.

Test Procedure

This test was conducted in accordance with VRTC instructions for a 40% offset frontal collinear vehicle-to-vehicle test. Data was obtained relative to FMVSS 208, "Occupant Crash Protection" (December 18, 2001), FMVSS 212, "Windshield Mounting, and FMVSS 219 (partial), Windshield Zone Intrusion.

The target vehicle, a 2002 Ford Focus SE 4-door, was instrumented with eighteen (18) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver's and passenger's airbag signals were monitored with inductive pickups, and the lap and shoulder belts were monitored for pay-in and pay-out. The vehicle's specified impact velocity range was 63.6 to 65.2 km/h.

The bullet vehicle, a 2005 Chrysler Town and Country LX MPV, was instrumented with eighteen (18) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver's and passenger's airbag signals were monitored with inductive pickups, and the lap and shoulder belts were monitored for pay-in and pay-out. The vehicle's specified impact velocity range was 43.8 to 45.4 km/h.

The bullet vehicle impacted the front of the target vehicle at an impact angle of 0 degrees. The intended impact point was the bullet vehicle's left front side aligned with the target vehicle's 40% offset centerline.

One (1) 50th percentile adult male Hybrid III dummy and one (1) 5th percentile adult female dummy were placed in the target vehicle's left front and right front designated seating positions, respectively. The Hybrid III 50th dummy was positioned according to the draft mid track based seating procedure while the Hybrid III 5th dummy was positioned according to the draft dummy based seating procedure. The driver dummy and passenger dummy were both belted and were restrained with front dual stage airbags.

The target vehicle's driver dummy was instrumented with three (3) accelerometers in the head, plus three (3) chest and three (3) pelvis accelerometers to measure longitudinal, lateral and

vertical accelerations. The target vehicle's driver dummy was also instrumented with upper and lower neck moment and force load cells, a chest deflection potentiometer, left and right femur load cells to measure moments and forces, and tibia to femur displacement potentiometers at each knee. The target vehicle's driver dummy was also equipped with THOR-LX lower legs and with upper and lower tibia load cells to measure forces and moments.

The target vehicle's passenger dummy was instrumented with an array of three (3) accelerometers in the head, plus three (3) chest and three (3) pelvis accelerometers to measure longitudinal, lateral, and vertical accelerations. The target vehicle's passenger dummy was also instrumented with upper and lower neck moment and force load cells, left and right femur load cells to measure axial forces, and a chest deflection potentiometer. The target vehicle's passenger dummy was also equipped with THOR-FLX lower legs, which included upper and lower tibia load cells to measure forces and moments, and a tibia to femur displacement potentiometer at each knee.

One (1) 50th percentile adult male Hybrid III dummy and one (1) 5th percentile adult female dummy were placed in the bullet vehicle's left front and right front designated seating positions, respectively. The Hybrid III 50th dummy was positioned according to the draft mid track based seating procedure while the Hybrid III 5th dummy was positioned according to the draft dummy based seating procedure. The driver dummy and passenger dummy were both belted and were restrained with front dual stage airbags.

The bullet vehicle's driver dummy was instrumented with three (3) accelerometers in the head, plus three (3) chest and three (3) pelvis accelerometers to measure longitudinal, lateral and vertical accelerations. The bullet vehicle's driver dummy was also instrumented with upper and lower neck moment and force load cells, a chest deflection potentiometer, left and right femur load cells to measure moments and forces, and tibia to femur displacement potentiometers at each knee. The bullet vehicle's driver dummy was also equipped with THOR-LX lower legs and with upper and lower tibia load cells to measure forces and moments.

The bullet vehicle's passenger dummy was instrumented with three (3) accelerometers in the head, plus three (3) chest and three (3) pelvis accelerometers to measure longitudinal, lateral, and

vertical accelerations. The bullet vehicle's passenger dummy was also instrumented with upper and lower neck moment and force load cells, left and right femur load cells to measure axial forces, and a chest deflection potentiometer. The bullet vehicle's passenger dummy was also equipped with THOR-FLX lower legs and with upper and lower tibia load cells to measure forces and moments.

The 268 data channels were digitally sampled and recorded at 12,500 samples per second and processed per SAE J211 March 1995.

The crash event was recorded by one (1) real-time panning motion picture camera and nineteen (19) high-speed digital motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

The test summary data is presented in Section 2.0. The summaries of data are presented in Section 3.0. The occupant, camera, and vehicle measurements are presented in Section 4.0. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the dummy verification data. Appendix D contains miscellaneous test information. Appendix E contains an INSIA report that was the basis for the Structural Measurements presented in Tables 14 and 19 of this report.

Section 2.0

40% Offset Frontal Collinear Test Summary

Test Results Summary

This 108.6 km/h 0° 40% offset frontal collinear vehicle-to-vehicle impact test was conducted by TRC Inc. on June 7, 2007.

The target test vehicle, a 2002 Ford Focus SE 4-door, was equipped 2.0-liter transverse engine, automatic transmission, power steering, and power brakes, and dual stage front airbags. The target vehicle's test weight was 1503.2 kg. The target vehicle's impact speed was 64.0 km/h.

The bullet test vehicle, a 2005 Chrysler Town and Country LX MPV, was equipped with a 3.3-liter transverse engine, automatic transmission, power steering, power brakes, and dual stage front airbags. The bullet vehicle's test weight was 2168.0 kg. The bullet vehicle's impact speed was 44.9 km/h.

Injury Criteria Data Summary						
	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
HIC (15 ms)	700	700	2073	175	195	218
HIC (36 ms)	1000	---	2073	329	276	258
Chest 3 ms (g)	60	60	90.0	36.5	27.5	30.7
Chest Deflection (mm)	63	52	31	22	22	28
Upper Neck						
NTF	1.0	1.0	0.31	0.24	0.13	0.31
NTE	1.0	1.0	0.67	0.42	0.25	0.18
NCF	1.0	1.0	0.37	0.36	0.00	0.15
NCE	1.0	1.0	0.49	0.38	0.06	0.06

Test Results Summary, Continued

Injury Criteria Data Summary, Continued						
	Limits		Target Vehicle		Bullet Vehicle	
			Driver	Passenger	Driver	Passenger
Neck Tension (N)	4170	2620	2338	459	957	426
Neck Compression (N)	4000	2520	2292	1128	91	248
Left Femur (N)	10000	6805	13342 ¹	3193	2458	330
Right Femur (N)	10000	6805	5688	143	1355	34
Maximum Left Upper Tibia Index (SAE)	0.91	0.91	0.75	0.29	0.45	0.31
Maximum Right Upper Tibia Index (SAE)	0.91	0.91	1.03	0.18	0.67	0.22
Maximum Left Lower Tibia Index (SAE)	0.91	0.91	0.59	0.24	0.38	0.23
Maximum Right Lower Tibia Index (SAE)	0.91	0.91	1.21	0.18	0.26	0.11

¹ See Data Acquisition Explanations.

Data Acquisition Explanations

The target vehicle driver dummy's left femur force Z-axis data channel, 21FEMRLL00H3FOZA, exceeded full scale at approximately 77 milliseconds and recorded questionable data thereafter.

The target vehicle passenger dummy's pelvis Y-axis acceleration data channel, 23PELVCG00HFACYA, recorded no valid data throughout the event. This affected the resultant calculation.

The target vehicle's left rear seat crossmember X-axis acceleration data channel, 24CRME000000ACXA, recorded questionable data throughout.

The target vehicle's bottom of engine X-axis acceleration data channel, 22ENGNBO0000ACXA, exceeded full scale at approximately 61 milliseconds and recorded no valid data thereafter.

The target vehicle's left front brake caliper X-axis acceleration data channel, 21VEHCLE0000ACXA, recorded questionable data after approximately 50 milliseconds.

The target vehicle's center of gravity Y-axis acceleration data channel, 20VEHCCG0000ACYA, exceeded full scale at approximately 120 milliseconds and recorded no valid data thereafter. This affected the velocity, displacement, and resultant calculations.

The target vehicle's center of gravity Z-axis acceleration data channel, 20VEHCCG0000ACZA, exceeded full scale at approximately 103 milliseconds and recorded no valid data thereafter. This affected the velocity, displacement, and resultant calculations.

Table 1 Crash Test Summary

Test mode:	40% Offset Frontal Collinear	
Test date:	06/07/07	
Test time:	15:44	
Ambient temperature:	32° C	
Target vehicle year/make/ model/body style:	2002/Ford/Focus SE/4-door	
Target vehicle test weight:	1503.2 kg	
Bullet vehicle year/make/ model/body style:	2005/Chrysler/Town and Country LX/MPV	
Bullet vehicle test weight:	2168.0 kg	
Impact angle ¹ :	0°	
Impact velocity ² :	Target vehicle = 64.0 km/h Bullet vehicle = 44.9 km/h	
Total number of data channels:	268	
Number of cameras:		
High-speed digital:	19	
Real-time:	1	
<u>Target vehicle dummies:</u>	<u>Driver #855</u>	<u>Passenger #324</u>
Type:	HIII 50 th	HIII 5 th
Location:	Left front	Right front
Restraint:	3-pt. seat belt, dual-stage airbag	3-pt. seat belt, dual-stage airbag
<u>Bullet vehicle dummies:</u>	<u>Driver #001</u>	<u>Passenger #416</u>
Type:	HIII 50 th	HIII 5 th
Location:	Left front	Right front
Restraint:	3-pt. seat belt, dual-stage airbag	3-pt. seat belt, dual-stage airbag

¹ With respect to tow track centerline.

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

Table 1 Crash Test Summary, Continued

Target vehicle seat track positions for test:

Driver:	Full rear
Passenger:	Full forward

Target vehicle seat back positions for test:

Driver:	13.6°; measured at head restraint support post
Passenger:	26.9°; measured at head restraint support post

Target vehicle head restraint positions for test:

Driver:	Full up
Passenger:	Full down

Target vehicle steering column

<u>position for test:</u>	Middle of geometric range of travel
---------------------------	-------------------------------------

Target vehicle D-ring positions for test:

Driver:	Full up
Passenger:	Full down

Bullet vehicle seat track positions for test:

Driver:	Detent #18 of 23
Passenger:	Full forward

Bullet vehicle seat back positions for test:

Driver:	18.2°; measured at head restraint support post
Passenger:	8.7°; measured at head restraint support post

Bullet vehicle head restraint positions for test:

Driver:	Full up
Passenger:	Full down

Bullet vehicle steering column

<u>position for test:</u>	Middle; detent #3 of 6
---------------------------	------------------------

Bullet vehicle D-ring positions for test:

Driver:	Full up
Passenger:	Full down

Table 2 Target Vehicle General Test and Vehicle Parameter Data

Vehicle year/make/
model/body style: 2002/Ford/Focus SE/4-door

VIN: 1FAFP34PX2W347940

Model year: 2002

Body style: 4-door

Color: Dark Gray

Engine data:
Cylinders: 4
Displacement: 2.0 liters
Type: Straight
Placement: Transverse

Transmission data: 4 speed, manual, X automatic, overdrive
Final drive: X FWD, RWD, 4WD

Date vehicle received: 05/29/2007

Odometer reading: 69,723 miles

Dealer's name
and address: Vehicle supplied by VRTC

Accessories:

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

Certification data from vehicle's label:

Vehicle manufactured by: Ford Motor Company

Date of manufacture: 07/02

VIN: 1FAFP34PX2W347940

GVWR: 3620 lbs. (1641 kg)

GAWR: Front: 1965 lbs. (891 kg)
Rear: 1745 lbs. (791 kg)

Table 2 Target Vehicle General Test and Vehicle Parameter Data, Continued

Tires on vehicle (mfr., line, size): Michelin, Harmony, P195/60R15

Tire pressure with maximum capacity vehicle load:

Front: 30 psi (207 kPa)

Rear: 30 psi (207 kPa)

Spare tire (mfr., line, size): Hankook, Temp, T125/80R15

Type of seats:

Front Bucket

Rear Split bench

Maximum width: 1705 mm

Wheelbase: 2590 mm

Location of "Recommended Tire Pressure" label:

Driver B-pillar

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

Recommended tire size: P195/60R15

Recommended cold tire pressure: Front: 32 psi (221 kPa)

Rear: 32 psi (221 kPa)

Seating capacity: Front: 2

Rear: 3

Total: 5

Vehicle capacity weight: 827 lbs. (375 kg)

Rated cargo/luggage weight: 77 lbs. (35 kg)

Test vehicle attitude:

Pre-test attitude: LF 630 mm; RF 636 mm; LR 615 mm; RR 620 mm

Post-test attitude: LF 635 mm¹; RF 620 mm; LR 590 mm; RR 660 mm

¹ The left front and left rear tires were flat upon post-test inspection.

Table 2 Target Vehicle General Test and Vehicle Parameter Data Continued

Weight of test vehicle with required dummies and cargo weight:

Right front	404.4 kg	Right rear	349.4 kg
Left front	412.2 kg	Left rear	337.2 kg
Total front weight	816.6 kg	(54.3% of total vehicle weight)	
Total rear weight	686.6 kg	(45.7% of total vehicle weight)	
Total test weight	1503.2 kg		

Weight of ballast secured in vehicle: None

Components removed to meet target test weight: None

Location of Vehicle's CG: 1183 mm rearward of front wheel centerline

Fuel System Data:

Usable fuel system capacity 56.8 liters (from owner's manual)

Actual test volume: 53.0 liters (93% of usable)

Table 3 Bullet Vehicle General Test and Vehicle Parameter Data

Vehicle year/make/
model/body style: 2005/Chrysler/Town and Country LX/MPV

VIN: 2C4GP44R25R420849

Model year: 2005

Body style: MPV

Color: Blue

Engine data:
Cylinders: 6
Displacement 3.3 liters
Type: V
Placement: Transverse

Transmission data: 4 speed, manual, X automatic, overdrive

Final drive: X FWD, RWD, 4WD

Date vehicle received: 5/31/2007

Odometer reading: 47,401 miles

Dealer's name
and address: Vehicle supplied by VRTC

Accessories:

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

Certification data from vehicle's label:

Vehicle manufactured by: DaimlerChrysler Corporation

Date of manufacture: 02/05

VIN: 2C4GP44R25R420849

GVWR: 2586 lbs. (5700 kg)

GAWR: Front: 2850 lbs. (1293 kg)

Rear: 2950 lbs. (1339 kg)

Table 3 Bullet Vehicle General Test and Vehicle Parameter Data, Continued

Tires on vehicle (mfr., line, size): Goodyear, Integrity, P215/70R15

Tire pressure with maximum capacity vehicle load:

Front: 30 psi (207 kPa)

Rear: 25 psi (172 kPa)

Spare tire (mfr., line, size): Not available

Type of seats:

Front Bucket

Rear Split bench

Maximum width: 1930 mm

Wheelbase: 3030 mm

Location of "Recommended Tire Pressure" label:

Driver B-pillar

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

Recommended tire size: P215/70R15

Recommended cold tire pressure: Front: 36 psi (250 kPa)

Rear: 36 psi (250 kPa)

Seating capacity: Front: 2

Rear: 5

Total: 7

Vehicle capacity weight: 1150 lbs. (521 kg)

Rated cargo/luggage weight: N/A lbs. (N/A kg)

Test vehicle attitude:

Pre-test attitude: LF 743 mm; RF 748 mm; LR 730 mm; RR 730 mm

Post-test attitude: LF 610 mm¹; RF 720 mm; LR 645 mm; RR 825 mm

¹ The left front tire was flat upon post-test inspection.

Table 3 Bullet Vehicle General Test and Vehicle Parameter Data, Continued

Weight of test vehicle with required dummies and cargo weight:

Right front	615.6 kg	Right rear	495.0 kg
Left front	562.0 kg	Left rear	495.4 kg
Total front weight	1177.6 kg	(54.3% of total vehicle weight)	
Total rear weight	990.4 kg	(45.7% of total vehicle weight)	
Total test weight	2168.0 kg		

Weight of ballast secured in vehicle: 90.8 kg

Components removed to meet target test weight: None

Location of Vehicle's CG: 1384 mm rearward of front wheel centerline

Fuel System Data:

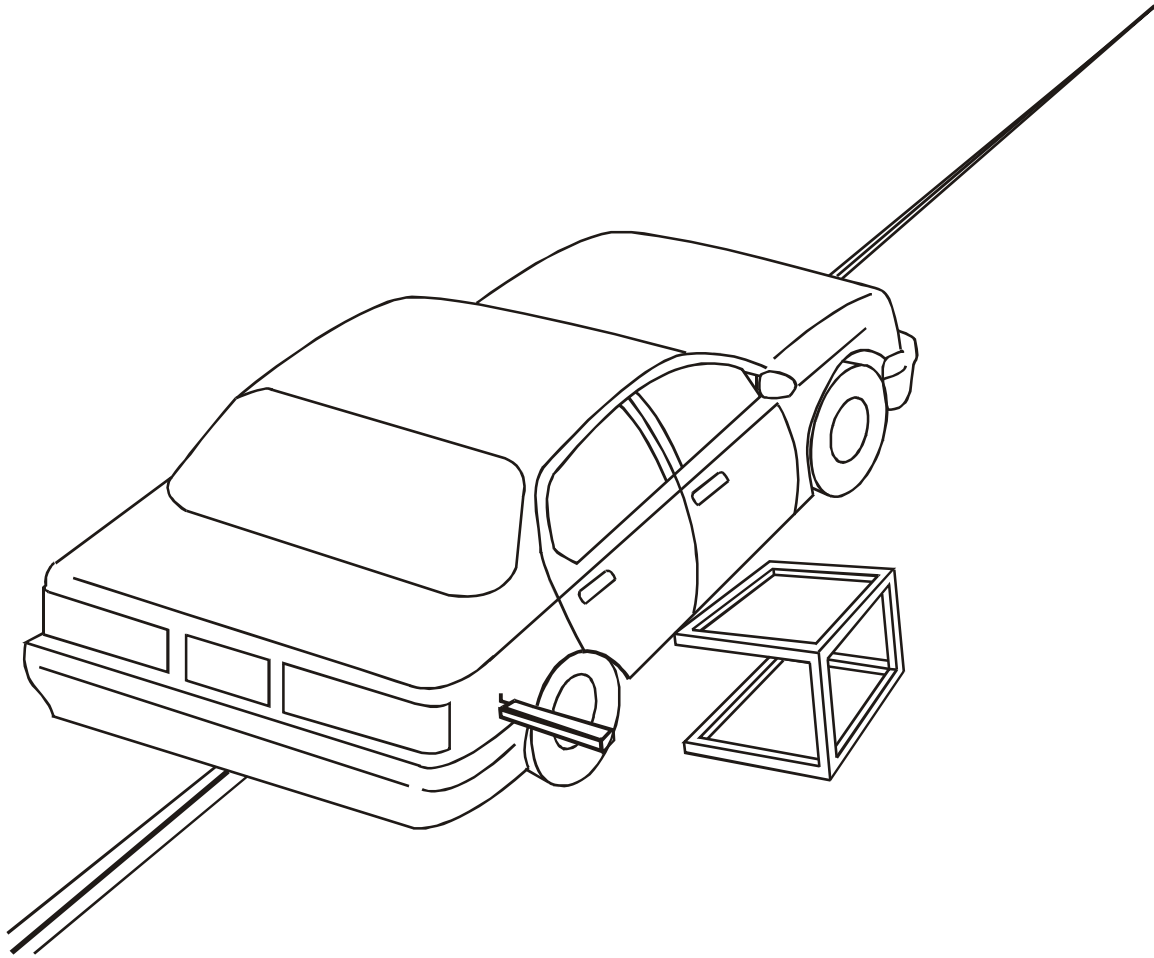
Usable fuel system capacity 98.4 liters (from owner's manual)

Actual test volume: 91.6 liters (93.0% of usable)

Table 4 Post-Impact Data

Test number:	070607
Test date:	06/07/07
Test time:	15:44
Test type:	Car to car 40% offset collinear
Impact angle:	0°
Ambient temperature at impact area:	32° C
Impact velocity:	
Target vehicle:	64.0 km/h
Bullet vehicle:	44.9 km/h
Required impact velocity range:	
Target vehicle:	63.6 to 65.2 km/h
Bullet vehicle:	43.8 to 45.4 km/h
Distance from each vehicle to intended impact point:	
Entering velocity trap:	660 mm
Exiting velocity trap:	50 mm, approximately
Impact point:	50 mm left of intended impact point (referenced to target vehicle coordinate system)

Figure 1 Impact Velocity Measurement System



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

The emitter/receiver pairs have 610-millimeter spacing.

Table 5 Target Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction		Negative Direction	
			Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	Left Rear Seat Cross-member ¹	X	24.1	78.0	70.3	122.4
2	Right Rear Seat Cross-member	X	1.3	281.5	20.5	62.4
3	Top of Engine	X	20.9	85.6	52.8	45.4
4	Bottom of Engine ¹	X	----	----	----	----
5	Right Front Brake Caliper	X	59.9	58.0	78.0	52.4
6	Left Front Brake Caliper ¹	X	456.4	177.1	660.0	89.6
7	Dash Center	X	14.8	86.0	76.5	75.7
8	Toe Pan Accelerator	X	9.8	110.8	73.1	56.8
		Z	35.8	46.0	45.4	71.0
9	Toe Pan Footrest	X	61.4	64.5	79.9	42.3
		Z	52.8	45.5	50.2	67.2
10	Rear Tunnel Center	X	22.4	134.8	35.6	113.2
11	Vehicle Center of Gravity ¹	X	13.7	104.4	61.7	70.9
		Y	----	----	----	----
		Z	----	----	----	----
		Resultant	R	----	----	
12	Vehicle Rear Deck	X	10.1	110.6	36.1	60.9
		Y	17.3	35.7	11.6	77.2
		Z	9.6	154.8	17.2	59.7
		Resultant	R	39.5	60.8	

Reference: X: + Forward From Rear Bumper
 Y: + Rightward From Vehicle Centerline
 Z: + Downward From Ground Level

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

¹ See Data Acquisition Explanations.

Table 6 Bullet Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction		Negative Direction	
			Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	Left Rear Seat Cross-member	X	5.6	10.0	31.3	62.4
2	Right Rear Seat Cross-member	X	1.3	14.5	21.5	68.4
3	Top of Engine	X	4.1	52.3	28.7	46.4
4	Bottom of Engine	X	19.0	70.6	47.1	52.8
5	Right Front Brake Caliper	X	45.7	76.3	53.4	68.8
6	Left Front Brake Caliper	X	116.2	55.3	155.5	26.8
7	Dash Center	X	7.3	108.1	57.5	62.5
8	Toe Pan Accelerator	X	6.8	8.2	31.4	62.7
		Z	21.0	44.7	21.0	32.8
9	Toe Pan Footrest ¹	X	6.7	8.5	37.7	61.4
		Z	16.4	56.4	17.8	51.4
10	Rear Tunnel Center	X	2.6	9.6	22.4	64.4
11	Vehicle Center of Gravity	X	2.8	9.6	21.4	62.7
		Y	11.1	61.6	7.5	70.0
		Z	14.0	44.6	16.7	63.9
		Resultant	R	27.7	63.5	
12	Vehicle Rear Deck	X	4.8	12.8	24.8	65.5
		Y	11.3	43.6	4.8	14.7
		Z	4.6	37.0	9.6	52.3
		Resultant	R	26.8	65.3	

Reference: X: + Forward From Rear Bumper
 Y: + Rightward From Vehicle Centerline
 Z: + Downward From Ground Level

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

¹ See Data Acquisition Explanations.

Section 3.0

Summary of Data

Table 7 Dummy Injury Criteria Data

	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
HIC (15 ms)	700	700	2073	175	195	218
Start time (ms)			97.1	73.3	101.7	82.0
End time (ms)			102.0	88.4	116.8	97.1
HIC (36 ms) ¹	1000	---	2073	329	276	258
Start time (ms)			97.1	61.7	87.8	71.2
End time (ms)			102.0	97.7	123.8	104.0
Chest 3 ms (g) ²	60	60	90.0	36.5	27.5	30.7
Start time (ms)			91.1	75.4	83.5	78.4
End time (ms)			94.1	78.6	86.5	81.4
Chest Deflection (mm)	63	52	31	22	22	28
Upper Neck						
Neck Tension-Flexion	1.0	1.0	0.67	0.24	0.13	0.31
Neck Tension-Extension	1.0	1.0	0.31	0.42	0.25	0.18
Neck Compression-Flexion	1.0	1.0	0.37	0.36	0.00	0.15
Neck Compression-Extension	1.0	1.0	0.49	0.38	0.06	0.06
Neck Tension (N)	4170	2620	2338	459	957	426
Neck Compression (N)	4000	2520	2292	1128	91	248
Left Femur (N) ³	10000	6805	----	3193	2458	330
Right Femur (N)	10000	6805	5688	143	1355	34
Maximum Left Upper Tibia Index (SAE)	0.91	0.91	0.75	0.29	0.45	0.31
Maximum Right Upper Tibia Index (SAE)	0.91	0.91	1.03	0.18	0.67	0.22
Maximum Left Lower Tibia Index (SAE)	0.91	0.91	0.59	0.24	0.38	0.23
Maximum Right Lower Tibia Index (SAE)	0.91	0.91	1.21	0.18	0.26	0.11

¹ As defined in FMVSS No. 208.

² Defined as equal to or exceeding 0.003 sec. duration.

³ See Data Acquisition Explanations.

Table 8 Target Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Airbag, head restraint, seat back	Airbag, head restraint
Chest	Airbag	Airbag
Abdomen	Steering wheel	Airbag
Left knee	Dash	Glove box
Right knee	Dash	Glove box

Door opening:

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

Seat movement:

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

Glazing damage: Windshield broken

Other notable impact effects: None

Table 9 Bullet Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Airbag	Airbag, head restraint
Chest	Airbag	Airbag
Abdomen	Airbag	Airbag
Left knee	Knee bolster, airbag	Glove box
Right knee	Knee bolster, airbag	Glove box

Door opening:

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

Seat movement:

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

Glazing damage: Windshield broken

Other notable impact effects: None

Section 4.0

Occupant, Camera, and Vehicle Information

Figure 2 Vehicle Dummy Measurement Locations for Front Seat Occupants

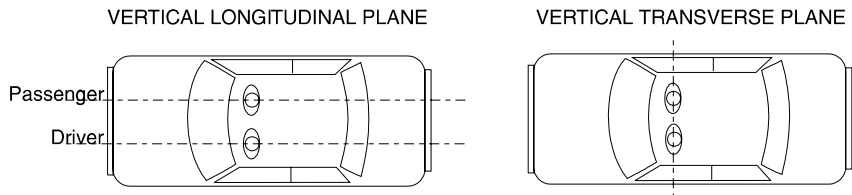
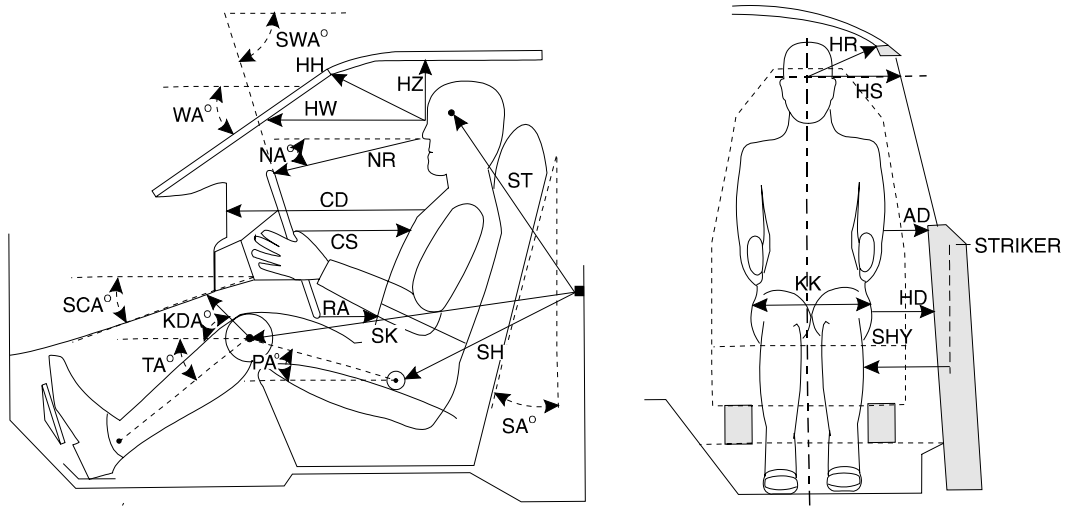


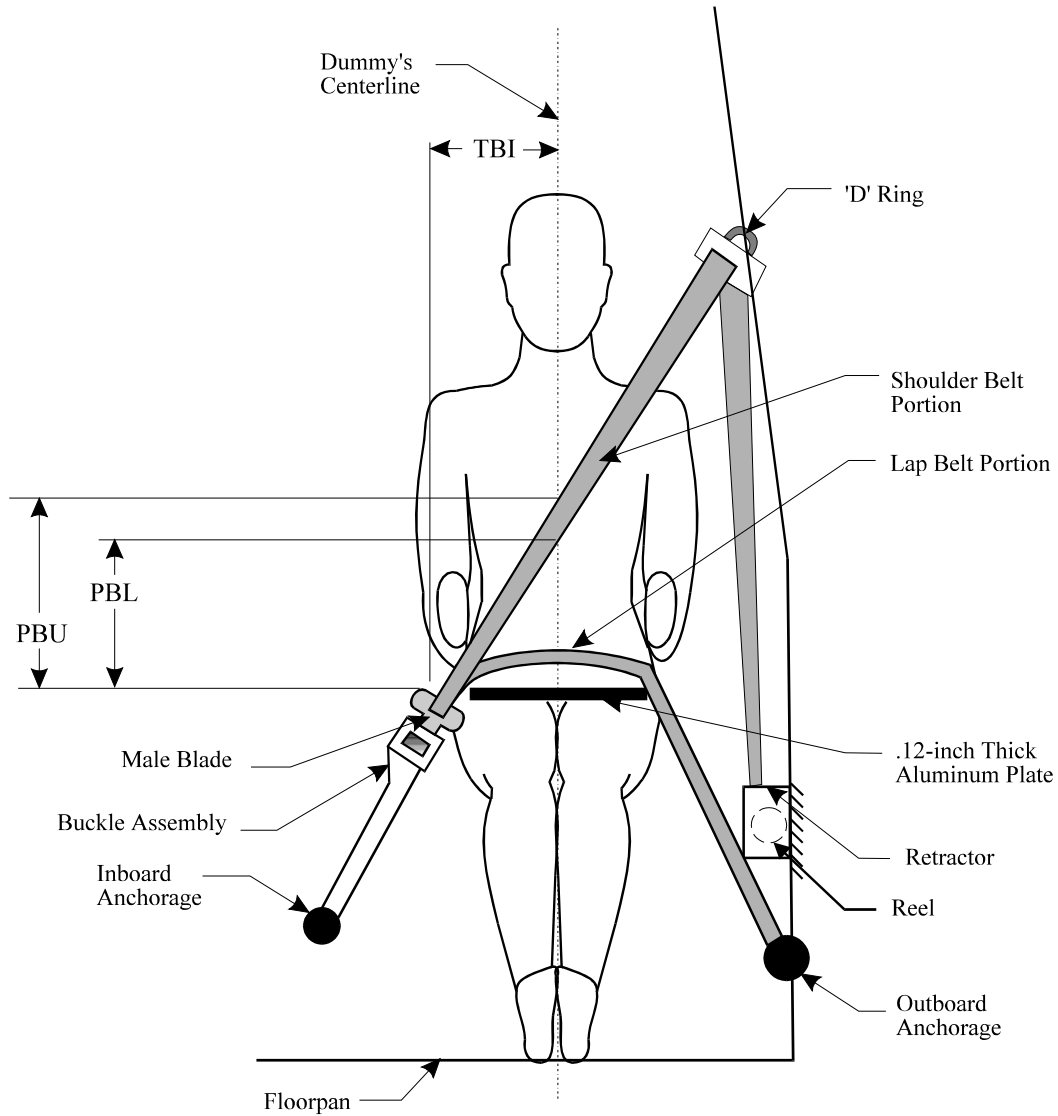
Table 10 Target Vehicle Dummy Measurement Data For Front Seat Occupants

<u>Designation</u>	<u>Type of Measurement</u>	<u>Driver (Serial # 855)</u>	<u>Passenger (Serial # 324)</u>
WA	Windshield angle	25.0°	25.0°
SWA	Steering wheel angle	65.4°	N/A
SCA	Steering column angle	24.6°	N/A
SA	Seat back angle	14.2°	9.3°
HZ	Head to roof	267 mm	219 mm
HH	Head to header	450 mm	266 mm
HW	Head to windshield	827 mm	626 mm
HR	Head to side header	258 mm	254 mm
NR	Nose to rim	524 mm	N/A
NA	Nose to rim angle	1.9°	N/A
CD	Chest to dash	672 mm	360 mm
CS	Steering wheel to chest	426 mm	N/A
RA	Rim to abdomen	330 mm	N/A
KDL	Left knee to dash	264 mm	53 mm
KDR	Right knee to dash	264 mm	62 mm
KDA	Outboard knee to dash angle	17.8°	10.6°
PA	Pelvic angle	28.3°	17.0°
TA	Tibia angle	35.7°	52.6°
KK	Knee to knee	333 mm	165 mm
ST ¹	Striker to head	490 mm	498 mm
	Striker to head angle	83.6°	-66.6°
SK ¹	Striker to knee	472 mm	694 mm
	Striker to knee angle	4.0°	1.3°
SH ¹	Striker to H-point	174 mm	321 mm
	Striker to H-point angle	60.6°	19.5°
SHY	Striker to H-point (Y dir.)	159 mm	173 mm
HS	Head to side window	343 mm	350 mm
HD	H-point to door	43 mm	48 mm
AD	Arm to door	93 mm	168 mm

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

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

Figure 3 Target Vehicle Seat Belt Positioning Data



	Driver Dummy	Passenger Dummy
PBU - Top surface of aluminum plate to belt upper edge	300 mm	250 mm
PBL - Top surface of aluminum plate to belt lower edge	230 mm	170 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	280 mm	210 mm
Total belt length	1725 mm	1720 mm
Lap belt length	200 mm	830 mm
Shoulder belt length	760 mm	860 mm

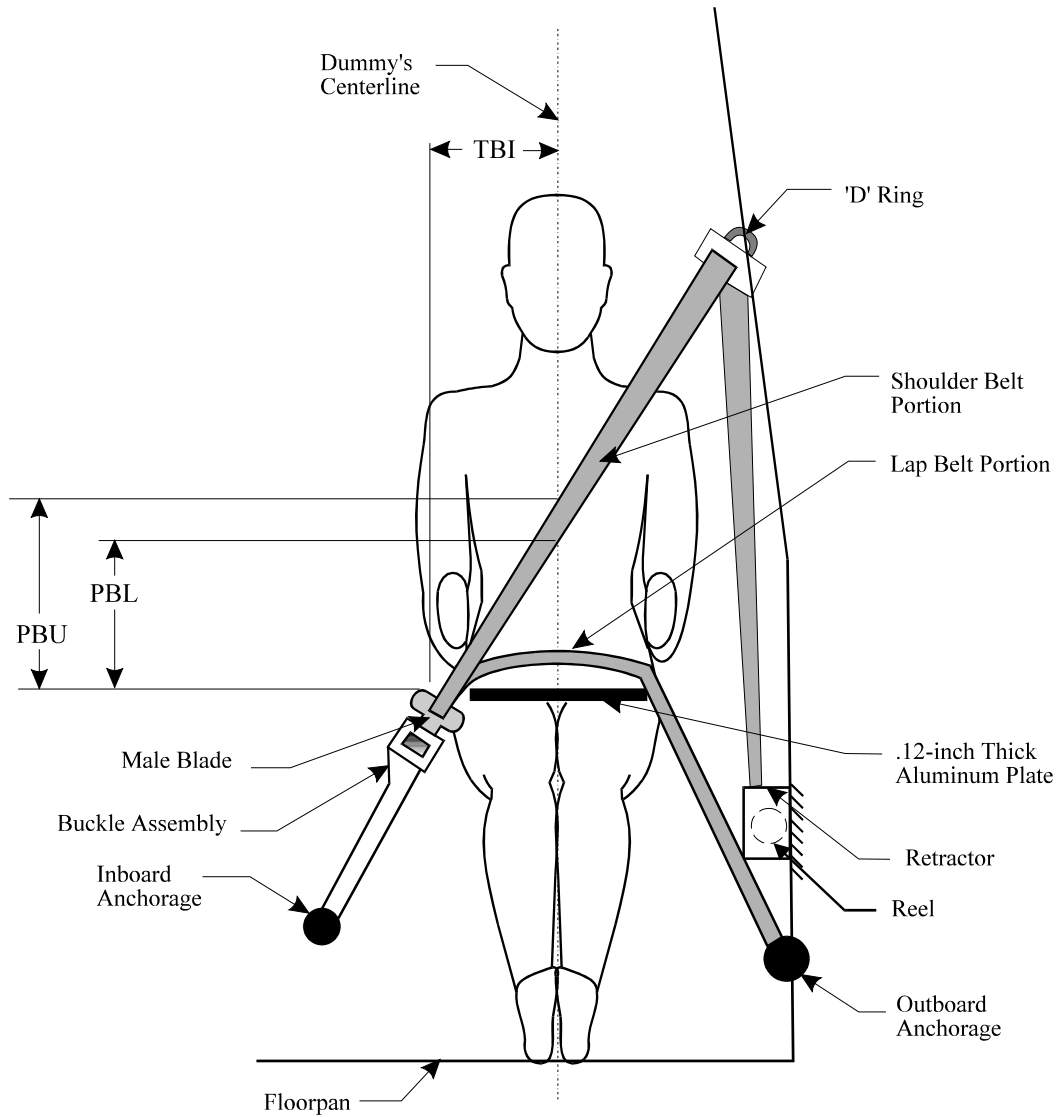
Table 11 Bullet Vehicle Dummy Measurement Data For Front Seat Occupants

<u>Designation</u>	<u>Type of Measurement</u>	<u>Driver (Serial # 001)</u>	<u>Passenger (Serial # 416)</u>
WA	Windshield angle	27.0°	27.0°
SWA	Steering wheel angle	55.9°	N/A
SCA	Steering column angle	34.1°	N/A
SA	Seat back angle	17.8°	9.9°
HZ	Head to roof	253 mm	233 mm
HH	Head to header	465 mm	306 mm
HW	Head to windshield	784 mm	653 mm
HR	Head to side header	228 mm	228 mm
NR	Nose to rim	531 mm	N/A
NA	Nose to rim angle	6.7°	N/A
CD	Chest to dash	687 mm	467 mm
CS	Steering wheel to chest	394 mm	N/A
RA	Rim to abdomen	253 mm	N/A
KDL	Left knee to dash	228 mm	77 mm
KDR	Right knee to dash	218 mm	77 mm
KDA	Outboard knee to dash angle	16.7°	5.4°
PA	Pelvic angle	28.7°	23.0°
TA	Tibia angle	52.8°	56.9°
KK	Knee to knee	328 mm	166 mm
ST ¹	Striker to head	630 mm	621 mm
	Striker to head angle	-89.9°	-71.2°
SK ¹	Striker to knee	546 mm	737 mm
	Striker to knee angle	-12.5°	-9.2°
SH ¹	Striker to H-point	150 mm	328 mm
	Striker to H-point angle	5.1°	-2.2°
SHY	Striker to H-point (Y dir.)	160 mm	115 mm
HS	Head to side window	390 mm	360 mm
HD	H-point to door	68 mm	40 mm
AD	Arm to door	126 mm	199 mm

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

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

Figure 4 Bullet Vehicle Seat Belt Positioning Data



	Driver Dummy	Passenger Dummy
PBU - Top surface of aluminum plate to belt upper edge	210 mm	280 mm
PBL - Top surface of aluminum plate to belt lower edge	187 mm	200 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	255 mm	280 mm
Total belt length	1765 mm	1760 mm
Lap belt length	876 mm	930 mm
Shoulder belt length	725 mm	830 mm

Figure 5 Target Vehicle FMVSS 212 Test Data

Details of windshield mounting such as retention method, trim type, etc.:

Adhesive, Plastic, N/A

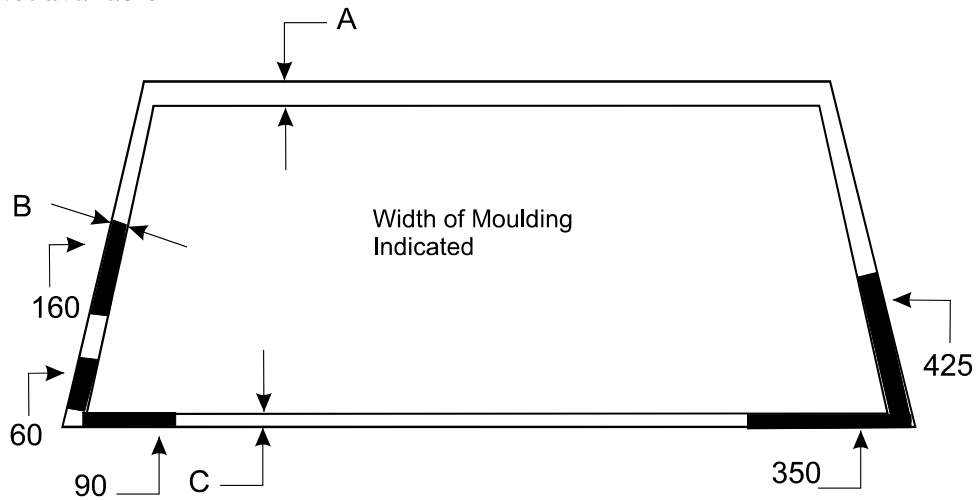
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	<u>Pre-test</u>	<u>Post-test</u>	<u>Percent retention</u>
Right side	2130 mm	1820 mm	85.4 %
Left side	2130 mm	1355 mm	63.6 %
Total	4260 mm	3175 mm	74.5 %

Pre-test windshield mounting material temperature: N/A

- A = 5 mm
- B = 5 mm
- C = Not available



Front view of windshield

Loss of windshield retention lengths: 160 mm mid right side, 60 mm bottom right side, 90 mm lower right, 350 mm lower left, 425 mm bottom left side

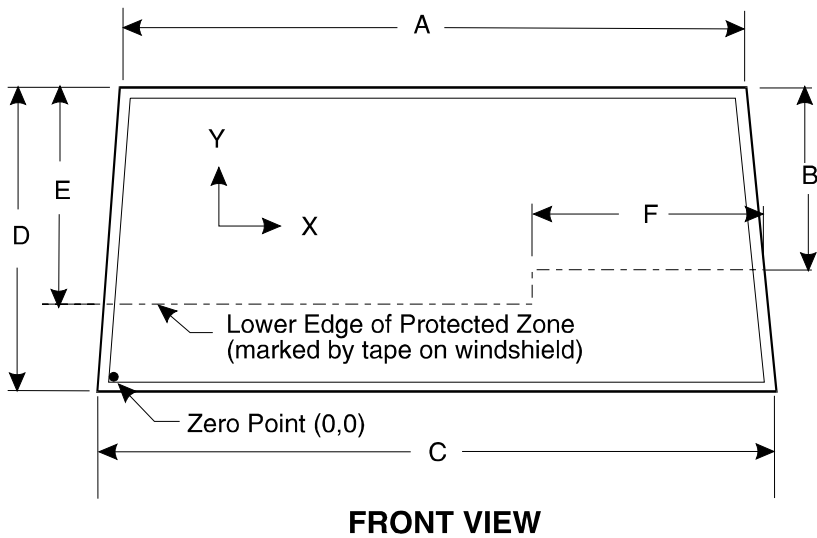
Figure 6 Target Vehicle FMVSS 219 Test Data

Protected zone lower edge requirement:

The lower edge of the protected zone is determined by placing a 165-millimeter diameter rigid sphere weighing 6.8 kg in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. Draw the locus of points on the inner surface of the windshield contactable by the sphere across the width of the instrument panel. From the outermost contactable points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 13 millimeters from the locus line. The **lower edge of the protected zone** is the longitudinal projection onto the outer surface of the windshield of this line.

Windshield measurements:

- A = 1130 mm
- B = 448 mm
- C = 1520 mm
- D = 805 mm
- E = 532 mm
- F = 693 mm



Method of adhering protected zone template to windshield: N/A

Areas of windshield template penetration greater than 6 mm: None

	Coordinates, mm	
	X	Y
1.	N/A	N/A
2.		
3.		

Areas of windshield penetration, below the protected zone, through the inner surface of the windshield:

1.	None	None
2.		
3.		

Figure 7 Bullet Vehicle FMVSS 212 Test Data

Details of windshield mounting such as retention method, trim type, etc.:

Adhesive, Plastic, N/A

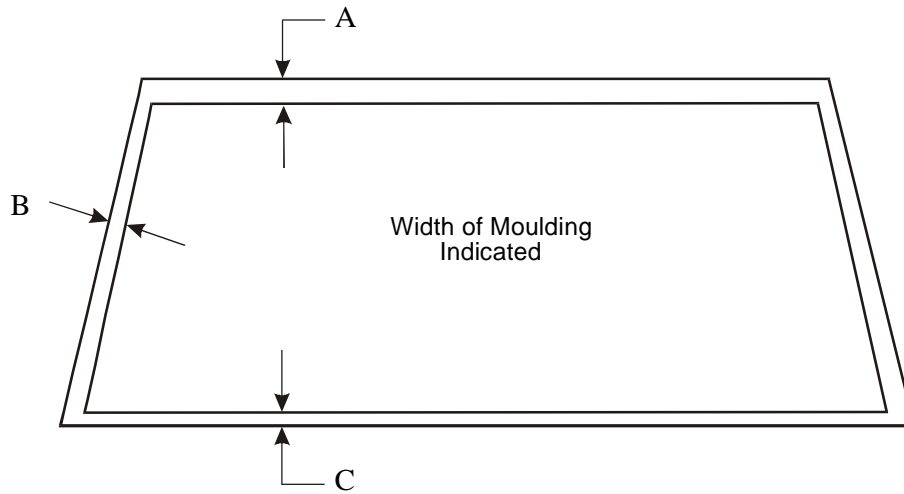
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	<u>Pre-test</u>	<u>Post-test</u>	<u>Percent retention</u>
Right side	2365 mm	2365 mm	100.0 %
Left side	2365 mm	2365 mm	100.0 %
Total	4730 mm	4730 mm	100.0 %

Pre-test windshield mounting material temperature: N/A

- A = 13 mm
- B = 13 mm
- C = Not available



Front view of windshield

Loss of windshield retention lengths: None

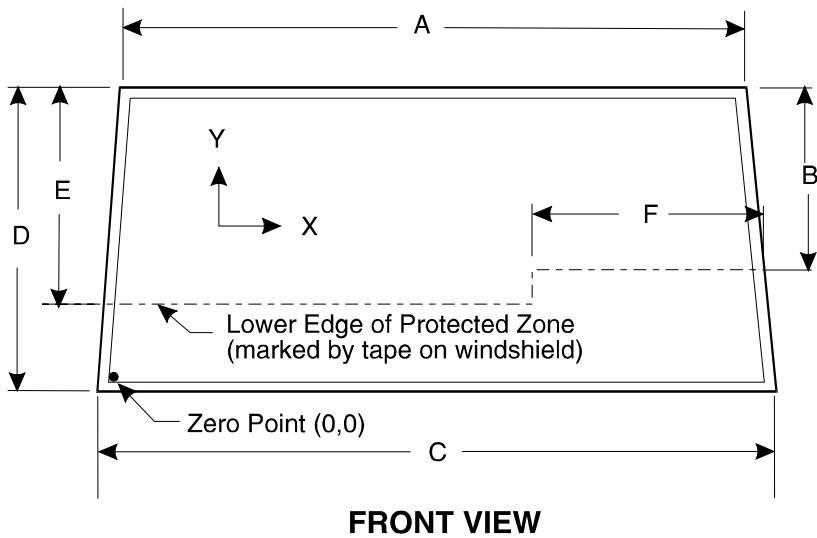
Figure 8 Bullet Vehicle FMVSS 219 Test Data

Protected zone lower edge requirement:

The lower edge of the protected zone is determined by placing a 165-millimeter diameter rigid sphere weighing 6.8 kg in a position such that it simultaneously contacts the inner surface of the windshield and the top surface of the instrument panel including padding. Draw the locus of points on the inner surface of the windshield contactable by the sphere across the width of the instrument panel. From the outermost contactable points, extend the locus line horizontally to the edges of the windshield, and then draw a line on the inner surface of the windshield below and 13 millimeters from the locus line. The **lower edge of the protected zone** is the longitudinal projection onto the outer surface of the windshield of this line.

Windshield measurements:

- A = 1255 mm
- B = 510 mm
- C = 1665 mm
- D = 905 mm
- E = 585 mm
- F = 775 mm



Method of adhering protected zone template to windshield: N/A

Areas of windshield template penetration greater than 6 mm: None

	Coordinates, mm	
	X	Y
1.	N/A	N/A
2.		
3.		

Areas of windshield penetration, below the protected zone, through the inner surface of the windshield:

1.	0	0
2.		
3.		

Table 12 Target Vehicle Structural Measurements¹

	Elements	Pre-Test
1	Total Length	4339
2	Total Width	1705
3	Bumper Top Height	518
4	Bumper Bottom Height	395
5	Longitudinal Member Top Height	490
6	Longitudinal Member Bottom Height	418
7	Distance Between Longitudinal Members	1075
7'	Longitudinal Member Width	80
8	Engine Top Height	780
9	Engine Bottom Height	189
10	Engine and Gearbox Width	930
11	Front Bumper - Engine Distance	420
12	Front Shock Absorber Fixing Height	819
13	Bonnet Leading Edge Height	669
14	Front Shock Absorber Fixing Width	1100
15	Front Bumper - Front Axle Distance	780
16	Front Axle - A Pillar Distance	580
17	A Pillar - B Pillar Distance	945
18	B Pillar - Rear Axle Distance	1092
19	B Pillar - C Pillar Distance	895
20	Roof Sill Bottom Height	1292
21	Roof Sill Top Height	1352
22	Floor Sill Bottom Height	294
23	Floor Sill Top Height	325

All distance measurements are in millimeters.

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

Figure 9 Target Vehicle Pre-Test And Post-Test Measurement Points

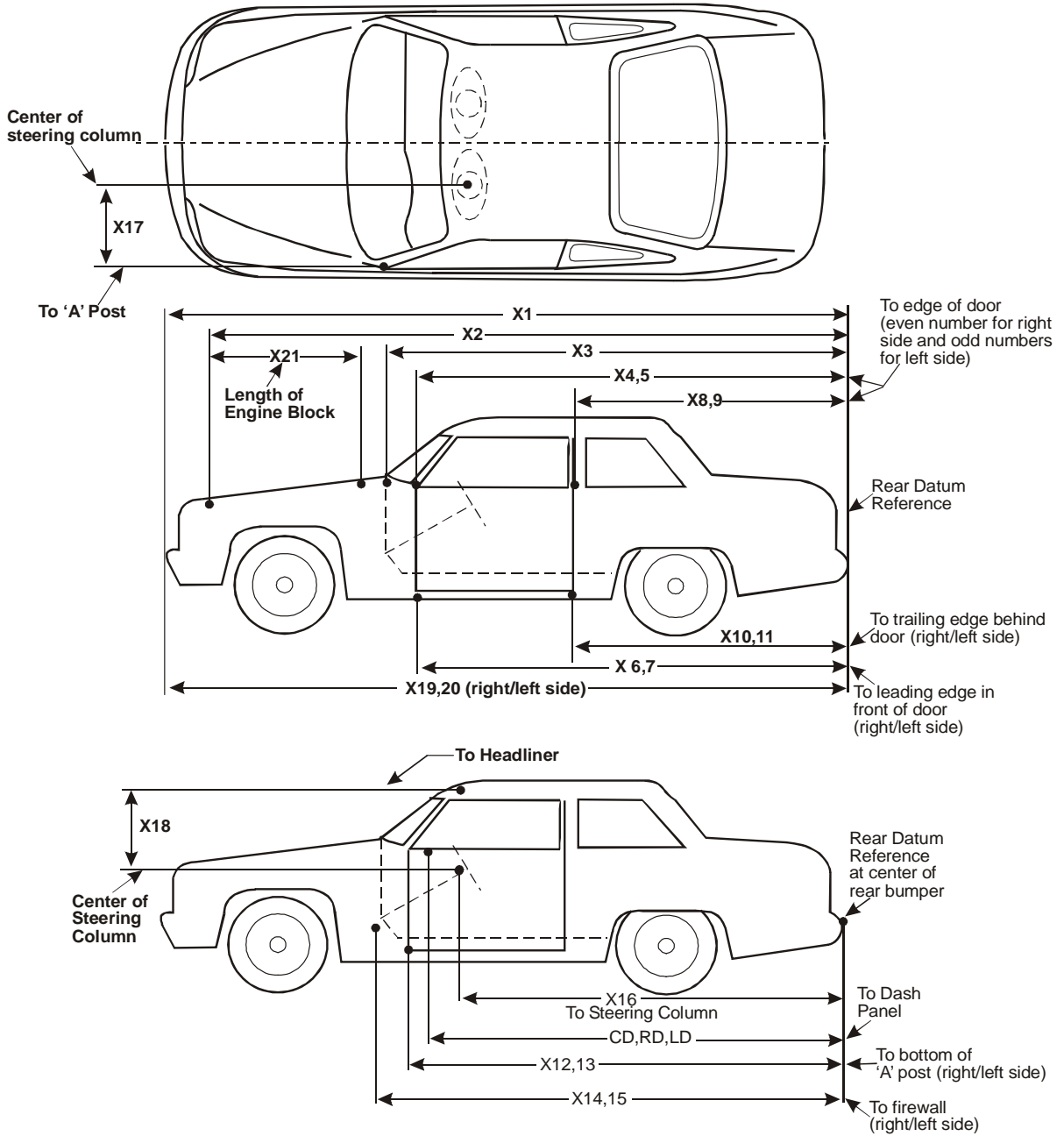


Table 13 Target Vehicle Impacted Measurements

Test number: 070607

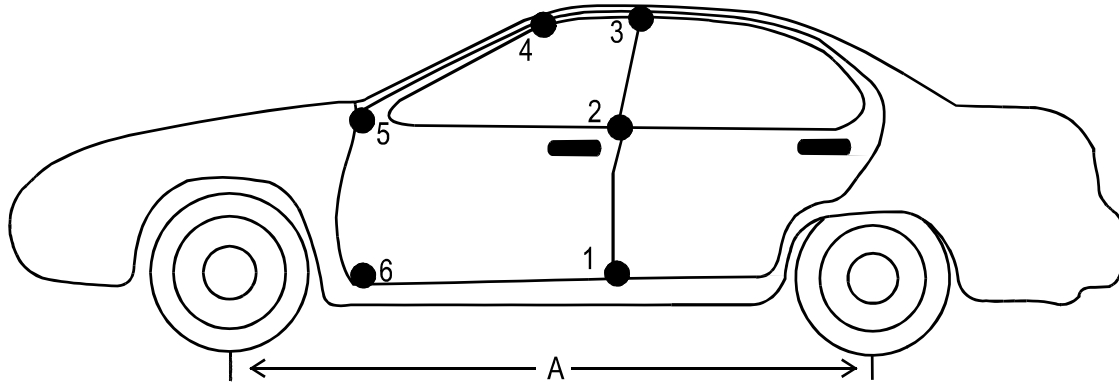
Vehicle year/make/model/body style: 2002/Ford/Focus SE/4-door

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4339	3735	604
X2	Rear Surface of Vehicle to Front of Engine Block	3888	3421	467
X3	Rear Surface of Vehicle to Firewall	3487	3098	389
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3073	3088	-15
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3077	2518	559
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3029	3030	-1
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3039	2548	491
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2063	2076	-13
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2061	1713	348
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2057	2056	1
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2066	1807	259
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3000	3002	-2
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3007	1975	1032
X14	Rear Surface of Vehicle to Firewall - Right Side	3459	3468	-9
X15	Rear Surface of Vehicle to Firewall - Left Side	3468	2335	1133
X16	Rear Surface of Vehicle to Steering Wheel Center	2614	2212	402
X17	Center of Steering Column to " A " Post	289	435	-146
X18	Center of Steering Column to Headliner	445	591	-146
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4304	4186	118
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4304	3583	721
X21	Length of Engine Block	480	480	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2939	2906	33
CD	Rear Surface of Vehicle to Center of Dash Panel	2979	2673	306
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2936	2330	606

All distance measurements are in millimeters.

Figure 10 Target Vehicle Intrusion Measurements

Door Opening Width



Left Front

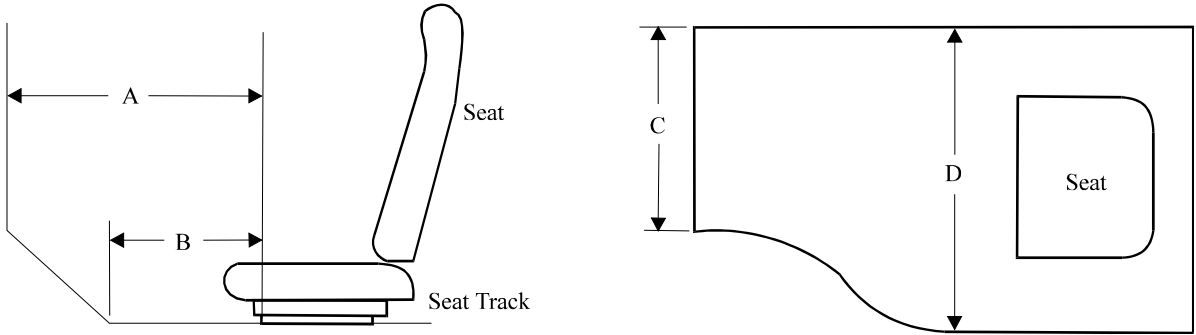
Point Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2218	-761	231	2191	-748	278	-27	13	47
2	2089	-731	-108	2070	-719	-77	-19	12	31
3	1999	-555	-776	2003	-532	-733	4	23	43
4	2503	-598	-737	2394	-595	-882	-109	3	-145
5	2987	-713	-108	2379	-658	-40	-608	55	68
6	2938	-764	262	2429	-736	323	-509	28	61

Right Front

Point Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2224	769	233	2226	757	237	2	-12	4
2	2090	740	-105	2093	731	-101	3	-9	4
3	1997	563	-778	1998	554	-775	1	-9	3
4	2503	604	-739	2503	589	-783	0	-15	-44
5	2993	728	-114	2982	650	-122	-11	-78	-8
6	2951	763	249	2949	664	243	-2	-99	-6

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	2590 mm	2590 mm
Post-Test	1870 mm	2654 mm
Difference	720 mm	-64 mm

Figure 11 Target Vehicle Intrusion Measurements
Static Footwell Deformation



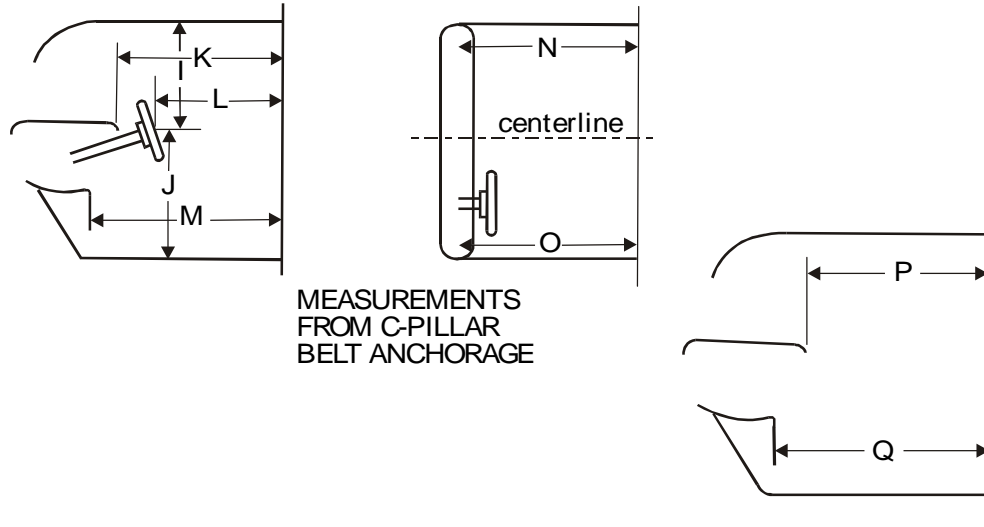
Driver's Side

Measurement	Pre-Test	Post-Test	Difference
A	515 mm	352 mm	-163 mm
B	398 mm	356 mm	-42 mm
C	430 mm	270 mm	-160 mm
D	429 mm	374 mm	-55 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	612 mm	601 mm	-11 mm
B	397 mm	392 mm	-5 mm
C	365 mm	376 mm	11 mm
D	474 mm	458 mm	-16 mm

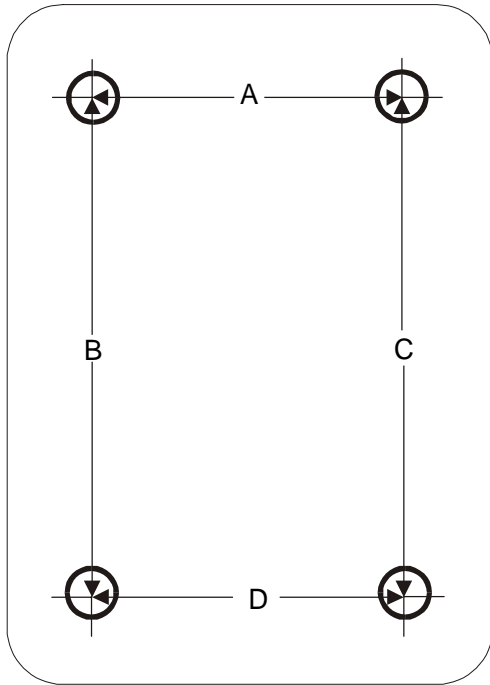
Figure 12 Target Vehicle Intrusion Measurements
Static Passenger Compartment Intrusion



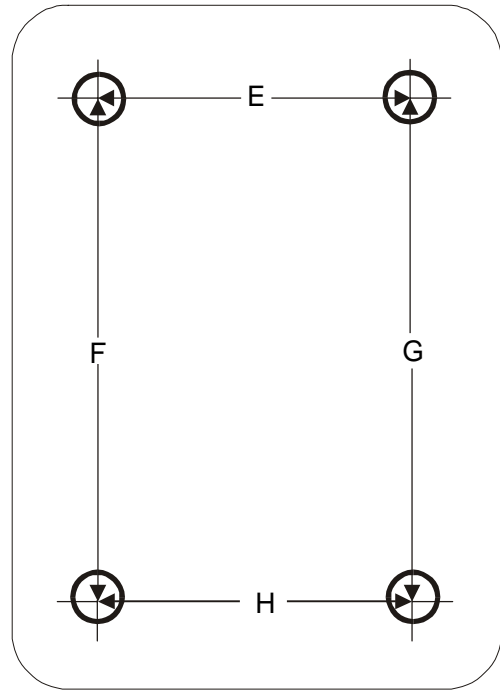
Measurement	Pre-Test	Post-Test	Difference
I	435 mm	679 mm	-244 mm
J	680 mm	740 mm	-60 mm
K (driver's side)	1753 mm	1163 mm	590 mm
L	1475 mm	1160 mm	315 mm
M (driver's side)	1733 mm	1226 mm	507 mm
N (passenger's side)	1711 mm	1609 mm	102 mm
O (driver's side)	1691 mm	1138 mm	553 mm
P (passenger's side)	1736 mm	1690 mm	46 mm
Q (passenger's side)	1722 mm	1743 mm	-21 mm

Figure 13 Target Vehicle Floorboard Deformation

DRIVERS SIDE



PASSENGERS SIDE



Measurement	Pre-Test	Post-Test	Difference
A	433 mm	384 mm	-49 mm
B	398 mm	356 mm	-42 mm
C	417 mm	368 mm	-49 mm
D	429 mm	374 mm	-55 mm
E	452 mm	436 mm	-16 mm
F	397 mm	392 mm	-5 mm
G	396 mm	385 mm	-11 mm
H	474 mm	458 mm	-16 mm

Table 14 Target Vehicle Frontal Profile Measurements

Bottom of Front Bumper¹

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Top of Front Bumper¹

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Center of Grill¹

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

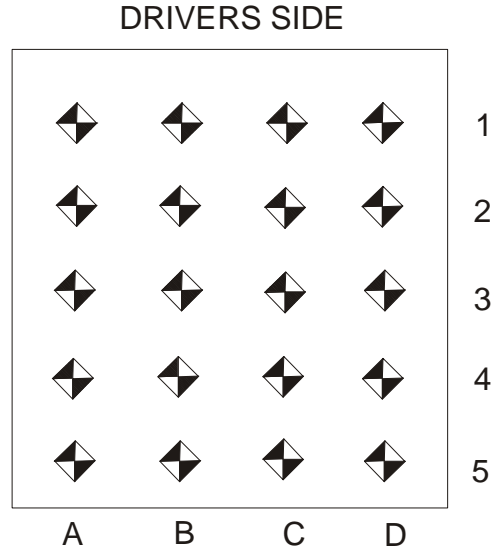
Front of Hood

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	3918	-710	-189	2708	-719	-407	-1210	-9	-218
2	4255	-425	-94	3064	-643	-290	-1191	-218	-196
3	4319	-144	-72	3280	-580	-448	-1039	-436	-376
4	4320	149	-74	3497	-419	-520	-823	-568	-446
5	4258	427	-97	3644	-259	-702	-614	-686	-605
6	3919	712	-190	3604	156	-712	-315	-556	-522

Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.
0, 0, 0 origin is center of rear bumper.

¹ Measurement point could not be taken, fascia was removed pre-test.

Figure 14 Target Vehicle Toeboard Measurements



TARGET DRIVER TOEPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	3157	3223	3221	3234	2646	2782	2850	2953	-511	-441	-371	-281
2	3127	3150	3144	3139	2650	2747	2818	2894	-478	-403	-325	-245
3	3040	3038	3043	3054	2650	2705	2753	2818	-391	-333	-290	-236
4	2842	2832	2824	2827	2475	2517	2553	2610	-367	-315	-271	-217
5	2642	2641	2641	2637	2294	2337	2390	2450	-348	-304	-251	-187

TARGET DRIVER TOEPAN Y-AXIS

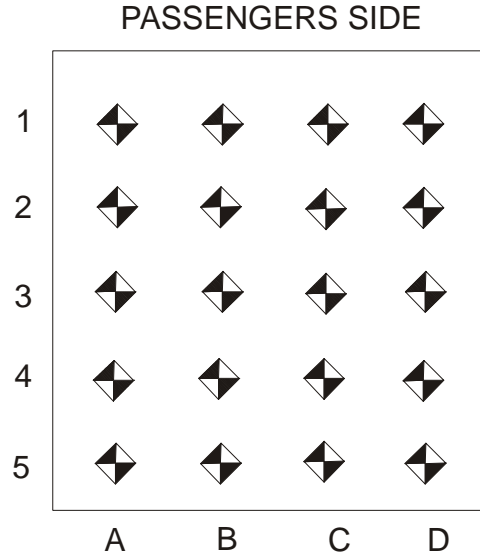
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-592	-446	-321	-162	-553	-502	-402	-283	39	-56	-81	-121
2	-614	-452	-319	-152	-605	-497	-385	-246	8	-45	-66	-94
3	-589	-457	-314	-156	-614	-493	-370	-230	-25	-36	-55	-74
4	-593	-440	-306	-148	-552	-408	-292	-163	42	32	14	-15
5	-585	-447	-305	-156	-481	-354	-231	-107	104	94	74	48

TARGET DRIVER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	231	258	261	258	256	239	254	238	25	-19	-7	-20
2	308	306	314	321	322	318	336	322	14	12	23	1
3	373	373	373	372	423	430	403	371	50	57	30	-1
4	375	378	378	369	418	439	426	369	43	61	48	0
5	395	392	392	372	470	464	445	423	75	72	53	51

Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.
 0, 0, 0 origin is center of rear bumper.

Figure 14 Target Vehicle Toeboard Measurements, Continued



TARGET PASSENGER TOEPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	3250	3250	3262	3179	3111	3132	3173	3130	-139	-118	-88	-49
2	3159	3157	3150	3141	3013	3046	3072	3102	-146	-111	-78	-39
3	3035	3035	3031	3038	2902	2932	2963	3008	-134	-103	-68	-30
4	2824	2821	2817	2812	2691	2718	2760	2787	-133	-103	-58	-26
5	2638	2642	2642	2642	2510	2542	2593	2623	-128	-100	-49	-19

TARGET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	227	318	449	592	70	159	284	446	-157	-159	-165	-147
2	171	314	452	610	34	174	308	467	-137	-140	-144	-142
3	178	316	467	630	68	201	349	504	-111	-115	-118	-126
4	165	286	478	623	103	220	408	548	-62	-66	-71	-76
5	154	272	493	628	133	245	460	591	-21	-27	-33	-36

TARGET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	223	240	230	191	189	205	198	171	-35	-34	-32	-20
2	305	307	307	275	273	280	283	257	-32	-27	-24	-18
3	374	372	371	371	353	353	355	358	-21	-20	-16	-12
4	368	376	377	376	364	366	375	368	-4	-10	-2	-8
5	371	387	390	390	383	397	398	389	12	9	8	-1

Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.
0, 0, 0 origin is center of rear bumper.

Table 15 Target Vehicle IIHS Measurements

Index	Description	Pre-Test			Post-Test			Difference		
		X mm	Y mm	Z mm	X mm	Y mm	Z mm	X mm	Y mm	Z mm
1	Center of Steering Wheel on the Airbag Door	2612	-343	-312	2199	-192	-272	-412	151	40
2	Driver's Lower Left Instrument Panel	2860	-492	-89	2460	-445	-58	-400	47	31
3	Driver's Lower Right Instrument Panel	2846	-192	-90	2522	-152	-60	-324	40	30
4	Brake Pedal Center	3084	-323	172	2666	-278	208	-418	45	36
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3294	-473	173	2785	-525	129	-509	-52	-44
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3302	-322	167	2857	-396	128	-444	-74	-39
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	3285	-149	171	2950	-245	161	-336	-96	-10
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3190	-572	171	2653	-533	187	-536	39	16
9	Left Front Driver's Seat Mounting Bolt	2577	-591	298	2247	-479	376	-330	112	78
10	Right Front Driver's Seat Mounting Bolt	2572	-139	278	2414	-101	326	-158	38	48
11	Left Rear Driver's Seat Mounting Bolt	2190	-626	313	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
12	Right Rear Driver's Seat Mounting Bolt	2142	-103	309	1988	-61	321	-155	42	12

¹ Post-test measurement was not taken.

Table 16 Target Vehicle Bumper Measurements

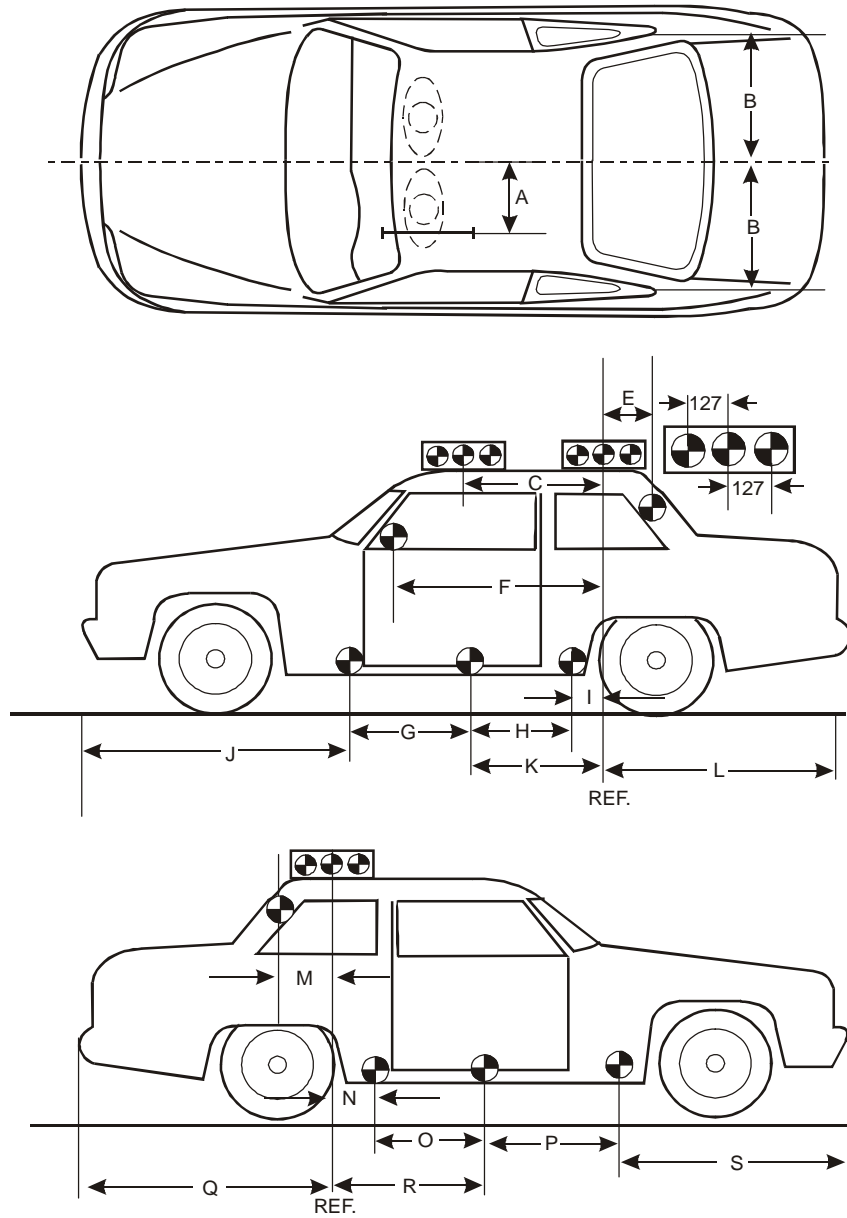
Index	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	4311	-611	195	3489	-788	-102	-822	-177	-297
2	4333	-493	200	3453	-716	-143	-880	-223	-343
3	4334	-368	198	3401	-621	-198	-933	-253	-396
4	4334	-248	200	3456	-567	-195	-878	-319	-395
5	4334	-121	200	3568	-514	-171	-766	-393	-371
6	4334	-4	200	3666	-454	-149	-668	-450	-349
7	4335	120	200	3770	-388	-128	-565	-508	-328
8	4336	244	199	3874	-322	-108	-462	-566	-307
9	4337	366	197	3970	-251	-88	-367	-617	-285
10	4337	489	199	4067	-179	-62	-270	-668	-261
11	4316	607	191	4146	-92	-41	-170	-699	-232

Pre-test and post-test measurement references: +X, forward of rear bumper; +Y, rightward from vehicle centerline; +Z, downward from ground level.

0, 0, 0 origin is center of rear bumper.

Measurements taken to bumper beam.

Figure 15 Target Vehicle Reference Photo Target Locations



Measurement	Pre-Test	Measurement	Pre-Test	Measurement	Pre-Test
A	Left 400 mm	F	1232 mm	M	570 mm
	Right 400 mm		G		878 mm
B	Left 665 mm	H		903 mm	O
	Right 665 mm		I	-201 mm	
C	Left 610 mm	J		1165 mm	Q
	Right 610 mm		K	702 mm	
E	568 mm	L		1559 mm	S

¹ The first side target is placed 600 mm from front edge of bumper, and others are at 300 mm intervals

Table 17 Bullet Vehicle Structural Measurements¹

	Elements	Pre-Test
1	Total Length	5614
2	Total Width	1930
3	Bumper Top Height	506
4	Bumper Bottom Height	397
5	Longitudinal Member Top Height	519
6	Longitudinal Member Bottom Height	394
7	Distance Between Longitudinal Members	1229
7'	Longitudinal Member Width	132
8	Engine Top Height	918
9	Engine Bottom Height	179
10	Engine and Gearbox Width	830
11	Front Bumper - Engine Distance	445
12	Front Shock Absorber Fixing Height	933
13	Bonnet Leading Edge Height	798
14	Front Shock Absorber Fixing Width	1237
15	Front Bumper - Front Axle Distance	877
16	Front Axle - A Pillar Distance	533
17	A Pillar - B Pillar Distance	965
18	B Pillar - Rear Axle Distance	1499
19	B Pillar - C Pillar Distance	997
20	Roof Sill Bottom Height	1500
21	Roof Sill Top Height	1566
22	Floor Sill Bottom Height	330
23	Floor Sill Top Height	368

All distance measurements are in millimeters.

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

Figure 16 Bullet Pre-Test And Post-Test Measurement Points

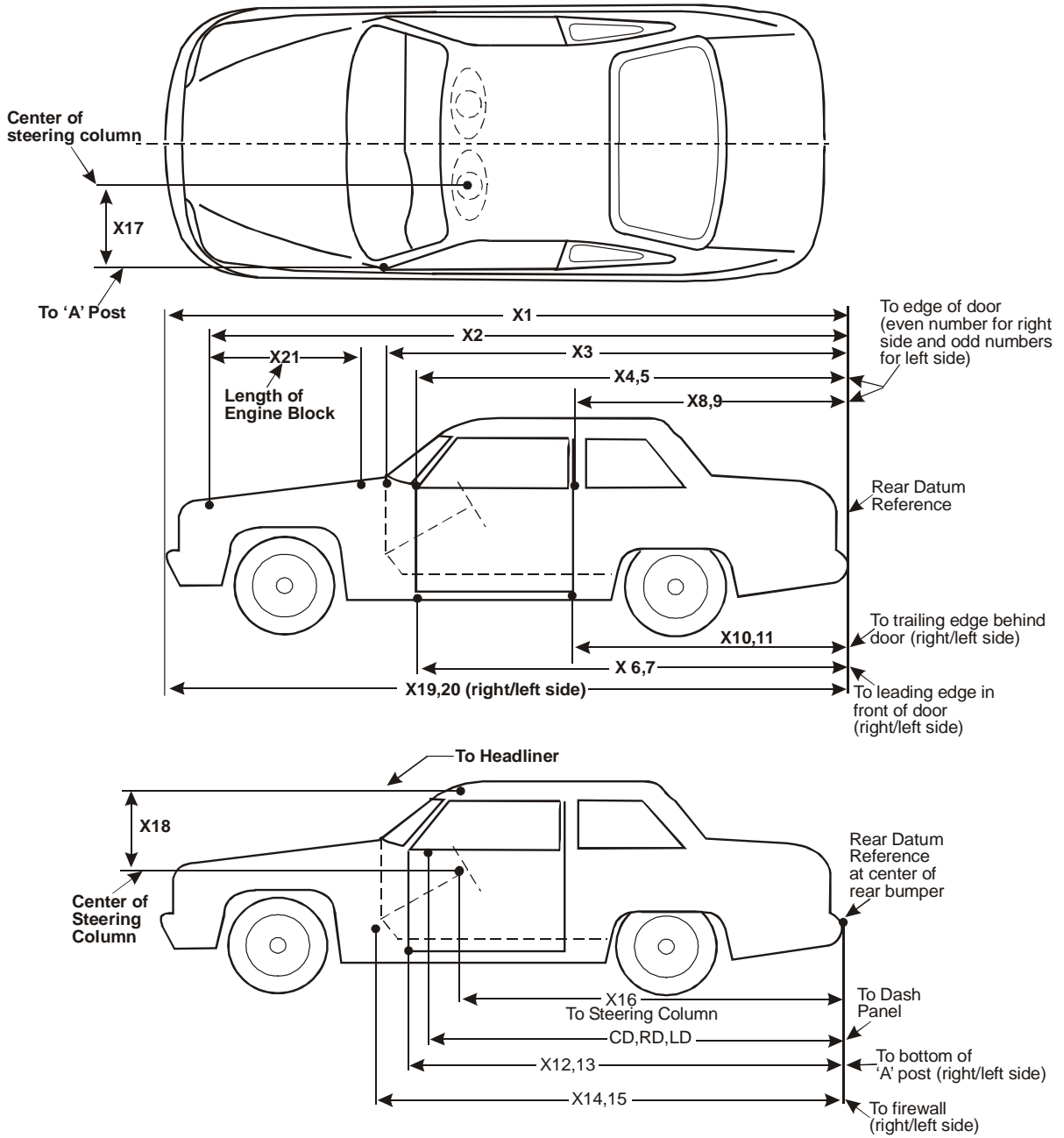


Table 18 Bullet Vehicle Impacted Measurements

Test number: 070607

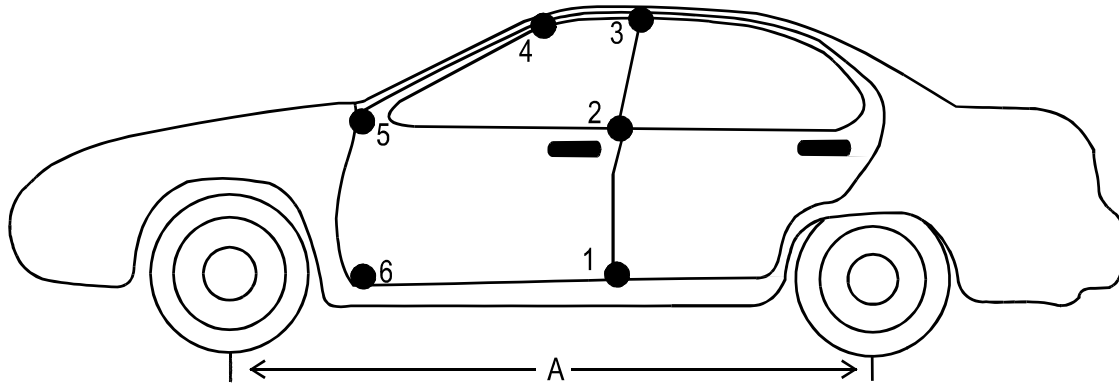
Vehicle year/make/model/body style: 2005/Chrysler/Town and Country LX/MPV

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5026	4901	125
X2	Rear Surface of Vehicle to Front of Engine Block	4526	4561	-35
X3	Rear Surface of Vehicle to Firewall	4231	4316	-85
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3679	3677	2
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3679	3656	23
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3631	3633	-2
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3629	3576	53
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2679	2673	6
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2689	2652	37
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2668	2657	11
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2674	2604	70
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3679	3673	6
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3684	3602	82
X14	Rear Surface of Vehicle to Firewall - Right Side	4189	4097	92
X15	Rear Surface of Vehicle to Firewall - Left Side	4183	4179	4
X16	Rear Surface of Vehicle to Steering Wheel Center	3231	3204	27
X17	Center of Steering Column to " A " Post	315	420	-105
X18	Center of Steering Column to Headliner	482	442	40
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4942	5022	-80
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4930	4648	282
X21	Length of Engine Block	430	430	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3526	3527	-1
CD	Rear Surface of Vehicle to Center of Dash Panel	3472	3458	14
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3516	3477	39

All distance measurements are in millimeters.

Figure 17 Bullet Vehicle Intrusion Measurements

Door Opening Width



Left Front

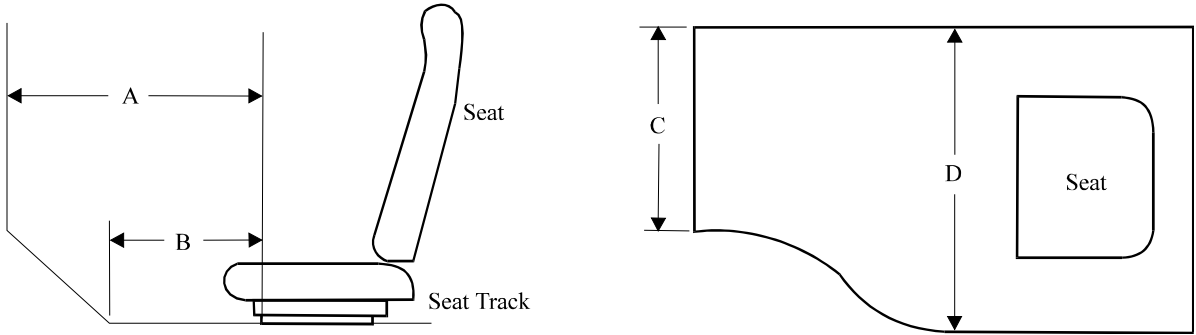
Point Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2722	-879	31	2718	-872	38	-4	7	7
2	2671	-845	-326	2659	-834	-318	-12	11	8
3	2655	-665	-1117	2653	-663	-1112	-2	2	5
4	3164	-671	-1043	3166	-670	-1057	2	1	-14
5	3642	-817	-339	3591	-800	-337	-51	17	2
6	3613	-833	71	3573	-779	68	-40	54	-3

Right Front

Point Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2746	863	58	2743	870	55	-3	7	-3
2	2673	838	-330	2672	843	-333	-1	5	-3
3	2666	655	-1123	2667	656	-1126	1	1	-3
4	3156	664	-1044	3157	666	-1049	1	2	-5
5	3645	817	-328	3647	831	-337	2	14	-9
6	3599	825	83	3597	845	73	-2	20	-10

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	3030 mm	3030 mm
Post-Test	mm	3059 mm
Difference	mm	-29 mm

Figure 18 Bullet Vehicle Intrusion Measurements
Static Footwell Deformation



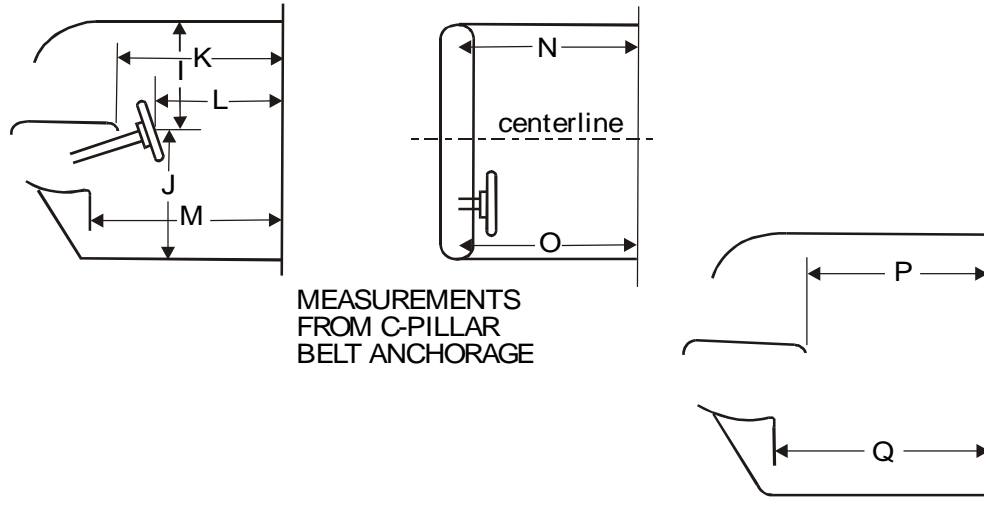
Driver's Side

Measurement	Pre-Test	Post-Test	Difference
A	523 mm	474 mm	-49 mm
B	481 mm	478 mm	-3 mm
C	373 mm	339 mm	-34 mm
D	420 mm	415 mm	-5 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	618 mm	607 mm	-11 mm
B	452 mm	443 mm	-9 mm
C	426 mm	423 mm	-3 mm
D	449 mm	452 mm	-3 mm

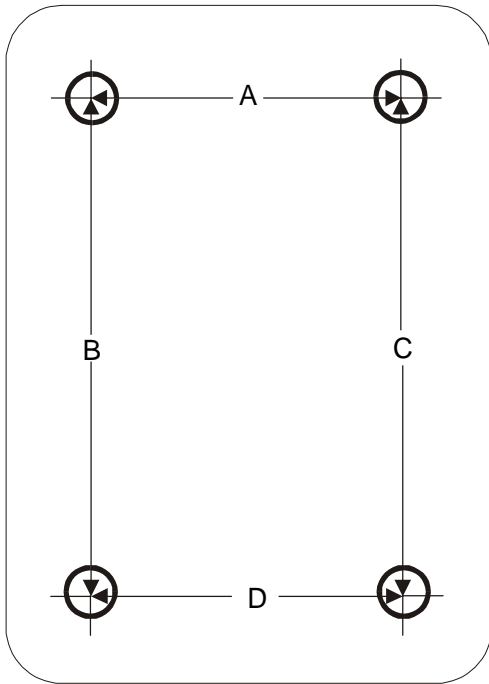
Figure 19 Bullet Vehicle Intrusion Measurements
Static Passenger Compartment Intrusion



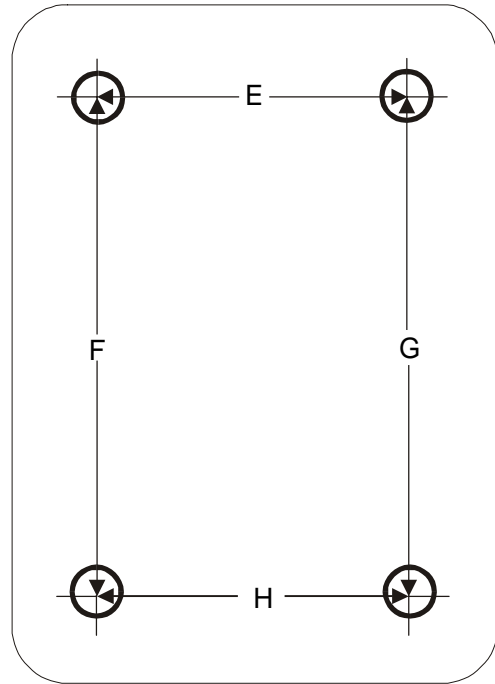
Measurement	Pre-Test	Post-Test	Difference
I	463 mm	455 mm	8 mm
J	662 mm	698 mm	-36 mm
K (driver's side)	1825 mm	1805 mm	20 mm
L	1604 mm	1585 mm	19 mm
M (driver's side)	1955 mm	1902 mm	53 mm
N (passenger's side)	1875 mm	1896 mm	-21 mm
O (driver's side)	1873 mm	1866 mm	7 mm
P (passenger's side)	1837 mm	1851 mm	-14 mm
Q (passenger's side)	1938 mm	1942 mm	-4 mm

Figure 20 Bullet Vehicle Floorboard Deformation

DRIVERS SIDE



PASSENGERS SIDE



Measurement	Pre-Test	Post-Test	Difference
A	377 mm	368 mm	-9 mm
B	481 mm	478 mm	-3 mm
C	512 mm	508 mm	-4 mm
D	420 mm	415 mm	-5 mm
E	402 mm	403 mm	1 mm
F	452 mm	443 mm	-9 mm
G	456 mm	455 mm	-1 mm
H	449 mm	452 mm	3 mm

Table 19 Bullet Vehicle Frontal Profile Measurements

Bottom of Front Bumper¹

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Top of Front Bumper¹

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Center of Grill¹

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

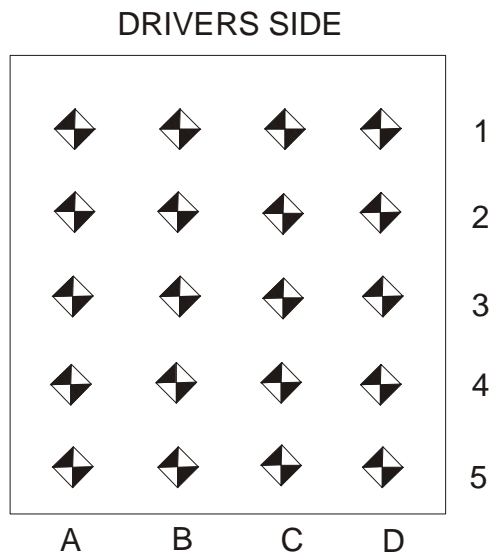
Front of Hood

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	4729	-714	-365	4581	-699	-381	-148	15	-16
2	4895	-464	-358	4741	-468	-382	-154	-4	-24
3	4954	-164	-360	4873	-200	-358	-81	-36	2
4	4956	140	-361	4899	101	-357	-57	-39	4
5	4901	444	-357	4870	408	-359	-31	-36	-2
6	4733	703	-370	4723	679	-384	-10	-24	-14

Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.
0, 0, 0 origin is center of rear bumper.

¹ Measurement point could not be taken, fascia was removed pre-test.

Figure 21 Bullet Vehicle Toeboard Measurements



BULLET DRIVER TOEPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	3786	3856	3852	3851	3727	3810	3830	3840	-59	-46	-22	-11
2	3759	3820	3815	3814	3725	3795	3798	3803	-34	-24	-17	-11
3	3744	3788	3784	3776	3731	3711	3772	3764	-14	-77	-13	-12
4	3550	3551	3555	3555	3538	3539	3544	3546	-12	-12	-11	-10
5	3263	3268	3263	3264	3253	3257	3250	3256	-10	-11	-13	-8

BULLET DRIVER TOEPAN Y-AXIS

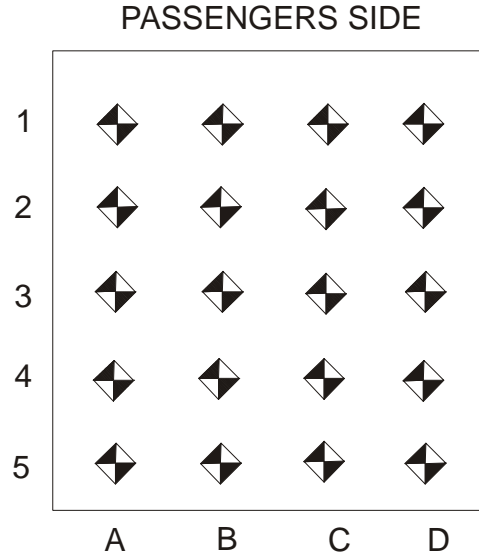
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-574	-450	-332	-201	-524	-430	-318	-185	49	20	14	15
2	-577	-446	-331	-197	-540	-428	-315	-180	37	18	15	17
3	-574	-462	-326	-197	-547	-439	-308	-179	27	23	18	18
4	-581	-424	-297	-170	-555	-403	-277	-153	26	21	19	17
5	-570	-420	-238	-150	-551	-402	-220	-136	19	18	18	14

BULLET DRIVER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-42	-15	-14	-12	-42	-25	-14	-9	1	-10	0	3
2	28	26	23	25	33	25	27	29	5	-1	4	4
3	79	67	57	47	86	100	65	50	7	33	8	3
4	77	74	72	74	86	72	74	72	9	-1	2	-2
5	69	67	88	78	75	74	98	72	6	7	10	-6

Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.
0, 0, 0 origin is center of rear bumper.

Figure 21 Bullet Vehicle Toeboard Measurements, Continued



BULLET PASSENGER TOEPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	3879	3878	3819	3762	3868	3881	3822	3762	-11	2	3	1
2	3808	3817	3784	3734	3797	3818	3784	3734	-11	2	0	0
3	3713	3722	3729	3703	3704	3722	3730	3702	-9	-1	0	-1
4	3474	3473	3472	3428	3474	3475	3474	3427	0	2	2	-1
5	3261	3259	3259	3247	3261	3260	3261	3247	-1	1	2	0

BULLET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	271	394	551	697	288	407	564	711	18	14	13	14
2	272	399	548	692	292	414	565	708	20	16	17	16
3	288	403	563	690	306	421	582	709	18	18	19	19
4	256	365	516	611	273	380	531	627	17	16	15	16
5	161	249	423	610	173	261	436	625	11	12	13	14

BULLET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-43	-48	-67	-97	-48	-46	-67	-103	-5	2	0	-6
2	14	24	9	-11	1	26	6	-15	-13	2	-2	-5
3	71	72	76	100	57	67	74	94	-14	-5	-2	-6
4	69	69	68	80	79	69	68	78	9	-1	0	-1
5	75	89	66	75	80	90	69	75	5	1	3	-1

Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.
0, 0, 0 origin is center of rear bumper.

Table 20 Bullet Vehicle IIHS Measurements

Index	Description	Pre-Test			Post-Test			Difference		
		X mm	Y mm	Z mm	X mm	Y mm	Z mm	X mm	Y mm	Z mm
1	Center of Steering Wheel on the Airbag Door	3221	-394	-630	3186	-374	-634	-34	20	-4
2	Driver's Lower Left Instrument Panel	N/A ¹	N/A ¹	N/A ¹	3482	-529	-386	N/A ¹	N/A ¹	N/A ¹
3	Driver's Lower Right Instrument Panel	N/A ¹	N/A ¹	N/A ¹	3515	-235	-390	N/A ¹	N/A ¹	N/A ¹
4	Brake Pedal Center	3690	-392	-121	3660	-377	-115	-30	15	5
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3889	-544	-119	3798	-481	-144	-92	63	-25
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3945	-390	-120	3900	-368	-126	-45	22	-6
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	3949	-221	-121	3936	-208	-115	-13	13	6
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3788	-645	-119	3702	-582	-123	-86	63	-4
9	Left Front Driver's Seat Mounting Bolt	3163	-614	-128	3158	-611	-113	-5	3	14
10	Right Front Driver's Seat Mounting Bolt	3162	-214	-128	3164	-209	-112	2	5	16
11	Left Rear Driver's Seat Mounting Bolt	2841	-603	46	2830	-595	53	-11	9	7
12	Right Rear Driver's Seat Mounting Bolt	2844	-227	49	2834	-220	46	-10	7	-3

¹ Pre-test measurement was not taken.

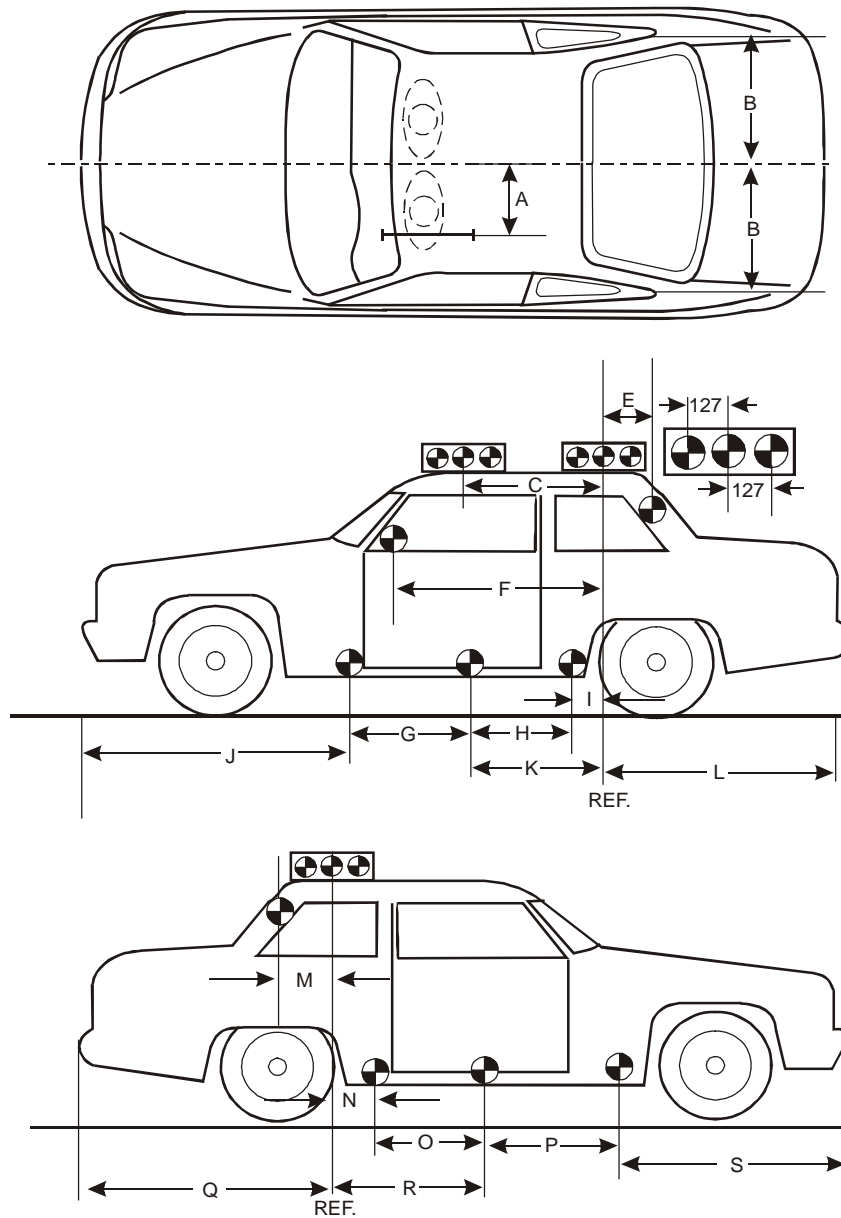
Table 21 Bullet Vehicle Bumper Measurements

Index	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	4929	-618	19	4634	-594	124	-295	24	105
2	4992	-510	26	4670	-478	97	-322	32	71
3	5008	-383	32	4667	-392	33	-341	-9	1
4	5020	-266	30	4733	-298	58	-287	-32	28
5	5028	-136	33	4787	-181	79	-241	-45	46
6	5031	-6	34	4834	-60	87	-197	-54	53
7	5029	110	35	4870	50	94	-159	-60	59
8	5023	237	34	4907	172	96	-116	-65	62
9	5012	367	33	4942	296	95	-70	-71	62
10	4996	502	27	4978	433	85	-18	-69	58
11	4934	611	26	4945	551	56	11	-60	30

Pre-test and post-test measurement references: +X, forward of rear bumper; +Y, rightward from vehicle centerline; +Z, downward from ground level.

0, 0, 0 origin is center of rear bumper.

Figure 22 Bullet Vehicle Reference Photo Target Locations



Measurement	Pre-Test	Measurement	Pre-Test	Measurement	Pre-Test
A	Left 450 mm	F	1290 mm	M	498 mm
	Right 450 mm	G	990 mm	N	497 mm
B	Left 650 mm	H	1037 mm	O	1045 mm
	Right 650 mm	I	564 mm	P	956 mm
C	Left 610 mm	J	1313 mm	Q	2082 mm
	Right 610 mm	K	1601 mm	R	555 mm
E	580 mm	L	2152 mm	S	1349 mm

¹ The first side target is placed 600 mm from front edge of bumper, and others are at 300 mm intervals.

Figure 23 Camera Positions

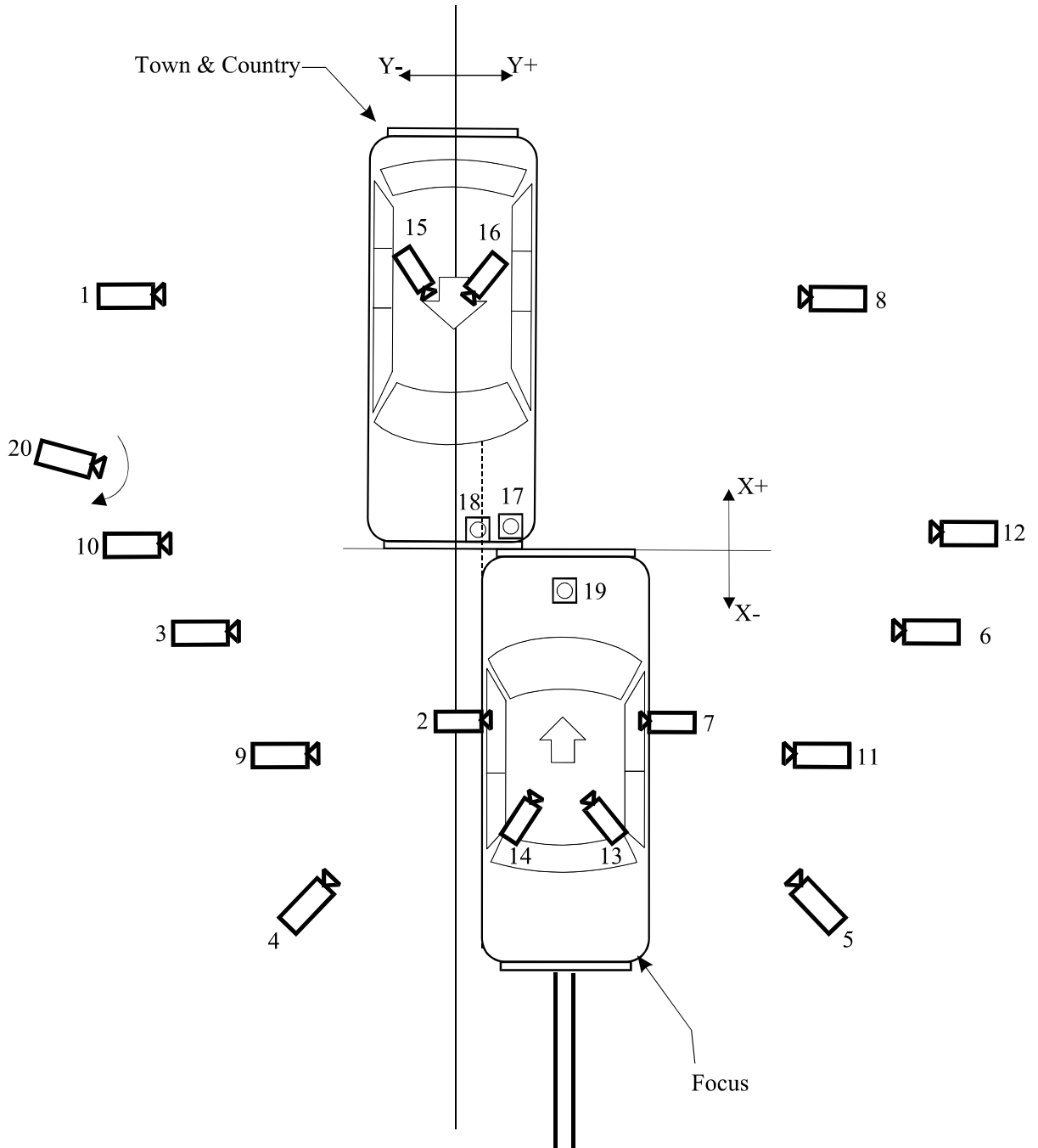


Table 22 Camera Information

Camera Number	Location	Location, mm			Angle (deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Bullet vehicle passenger side	1000	-12350	-1180	1.5°	25	1000
2	Onboard target vehicle - driver	N/A	N/A	N/A	N/A	6.5	1000
3	Target vehicle left tight	-1000	-9350	-1120	2.0°	50	1000
4	Target vehicle driver angled	-5450	-3500	-1770	12.5°	25	1000
5	Target vehicle passenger angled	-8150	7020	-1050	9.5°	25	1000
6	Target vehicle right tight	-800	11050	-1030	2.0°	50	1000
7	Onboard target vehicle - passenger	N/A	N/A	N/A	N/A	6.5	1000
8	Bullet vehicle driver side	1750	12800	-1083	0.0°	25	1000
9	Target vehicle driver side wide	-1800	-11900	-1363	0.5°	25	1000
10	Left overall wide (reference to target vehicle)	0	-10870	-1300	1.5°	12.5	1000
11	Target vehicle passenger side wide	-1750	14550	-1373	1.0°	25	1000
12	Right overall wide (reference to target vehicle)	0	8900	-1330	6.0°	12.5	1000
13	Onboard target vehicle - driver over shoulder	N/A	N/A	-1300	N/A	12.5	1000
14	Onboard target vehicle - passenger over shoulder	N/A	N/A	-1300	N/A	12.5	1000
15	Onboard bullet vehicle - driver over shoulder	3305	-900	-1550	4.1°	12.5	1000
16	Onboard bullet vehicle - passenger over shoulder	3305	900	-1550	11.0°	12.5	1000
17	Overhead wide	0	0	-5500	90.0°	12.5	1000
18	Overhead tight	800	0	-5500	90.0°	25	1000
19	Underbody crush area of target vehicle	0	0	3160	90.0°	12.5	1000
20	Panning/documentary	N/A	N/A	N/A	N/A	Zoom	30

+X: Forward (referenced to Target) from impact point
 +Y: Rightward (referenced to Target) from impact point
 +Z: Downward from ground level

Appendix A

Photographs



Figure A-1 Pre-Test Overall - View 1



Figure A-2 Post-Test Overall - View 1



Figure A-3 Pre-Test Overall - View 2



Figure A-4 Post-Test Overall - View 2



Figure A-5 Pre-Test Impact Alignment - View 1

Intentionally Left Blank



Figure A-6 Pre-Test Impact Alignment - View 2

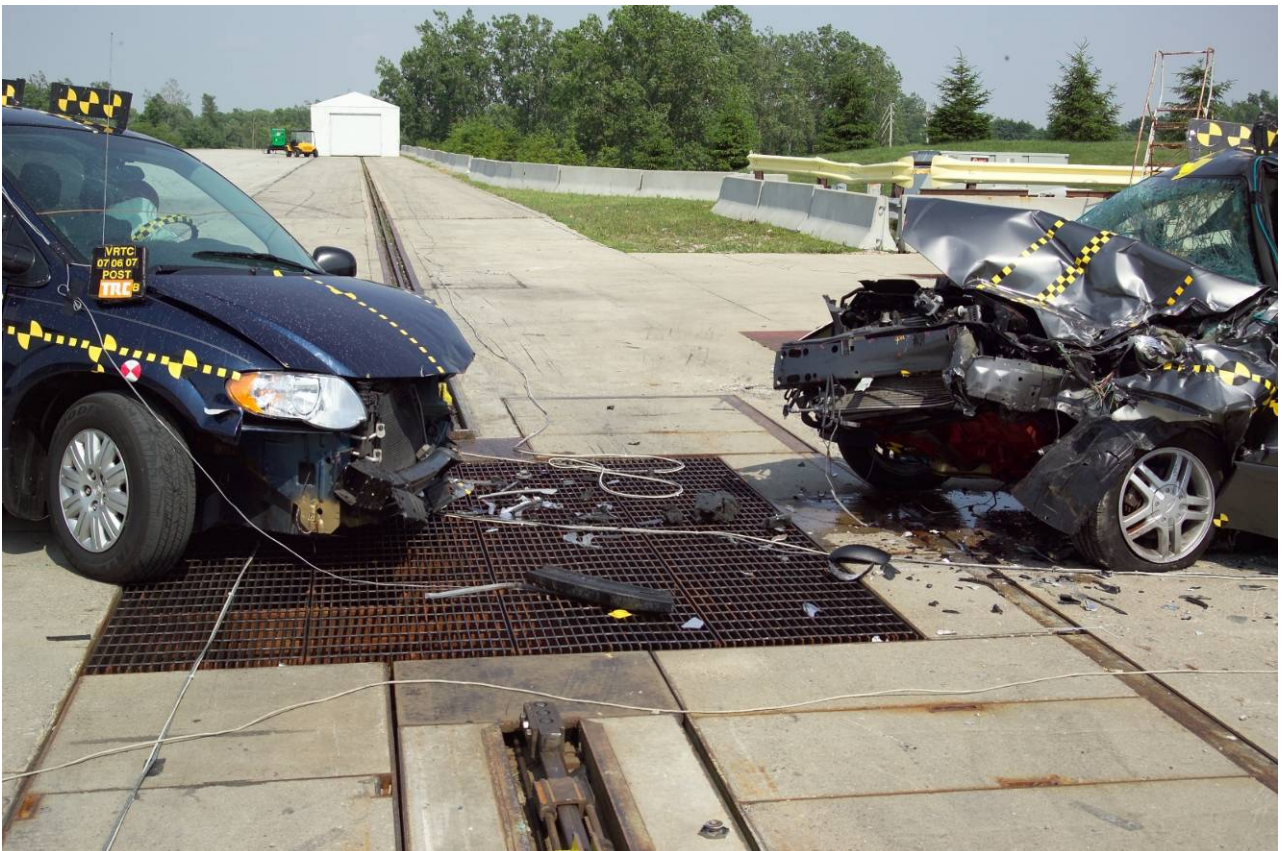


Figure A-7 Post-Test Impact Alignment - View 2



Figure A-8 Pre-Test Impact Alignment - View 3



Figure A-9 Post-Test Impact Alignment - View 3

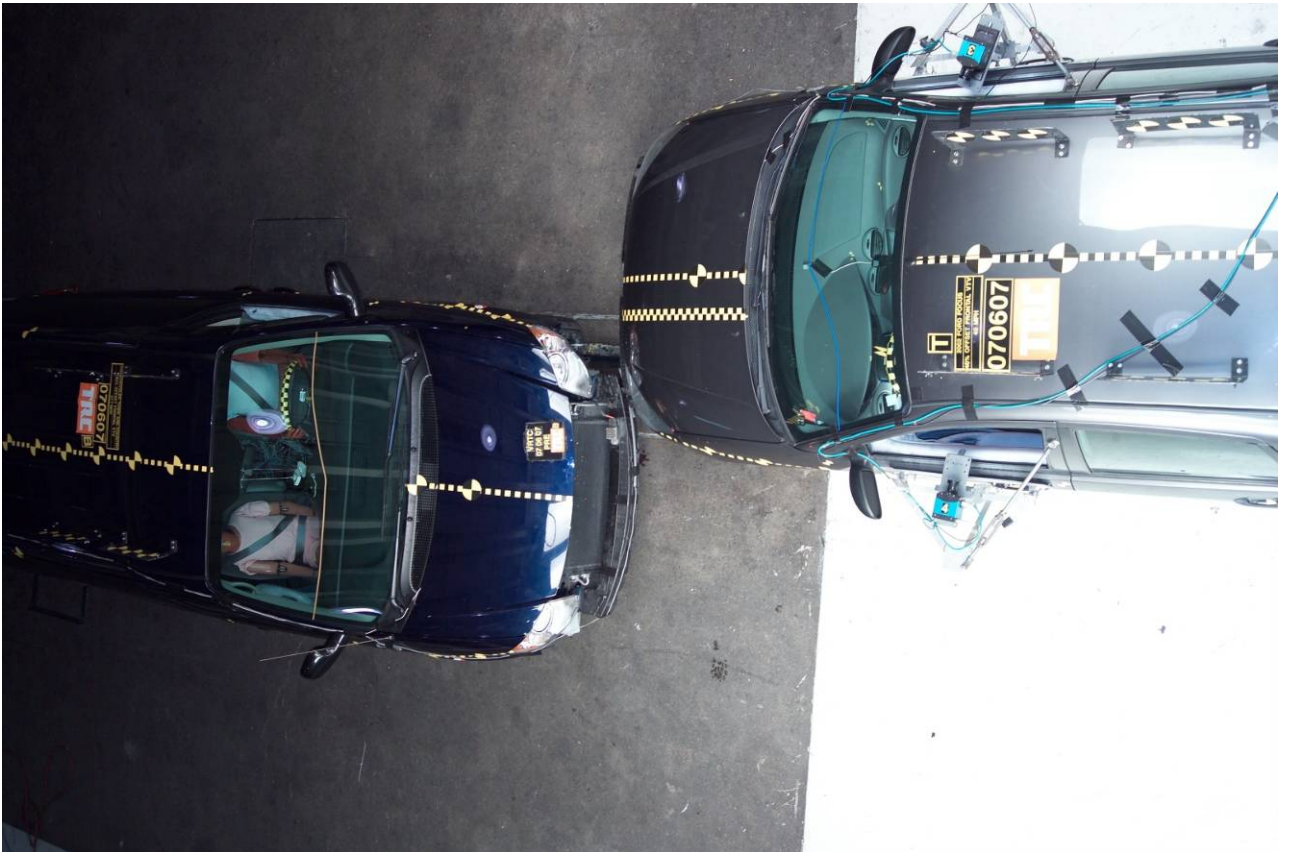


Figure A-10 Pre-Test Overhead Wide View



Figure A-11 Post-Test Overhead Wide View

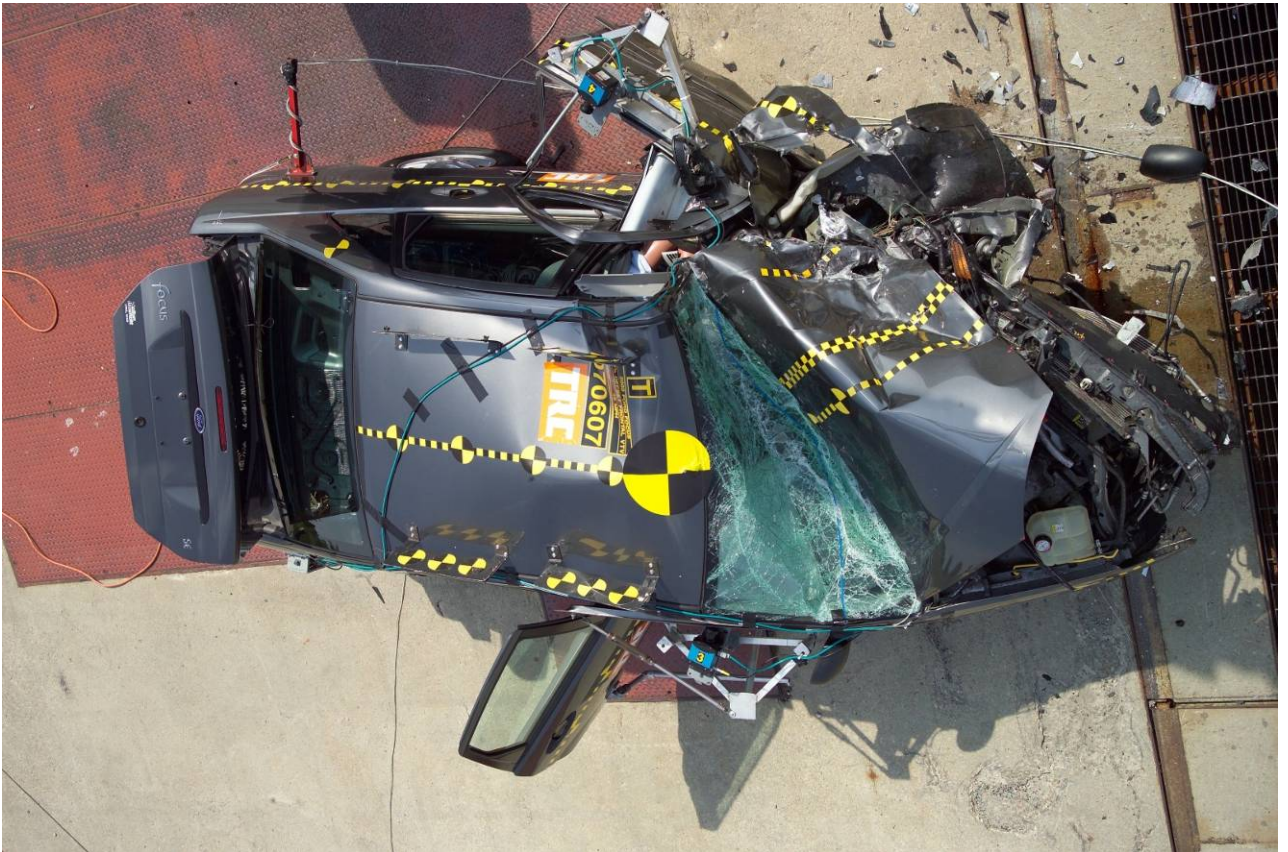


Figure A-12 Post-Test Overhead Target Vehicle View

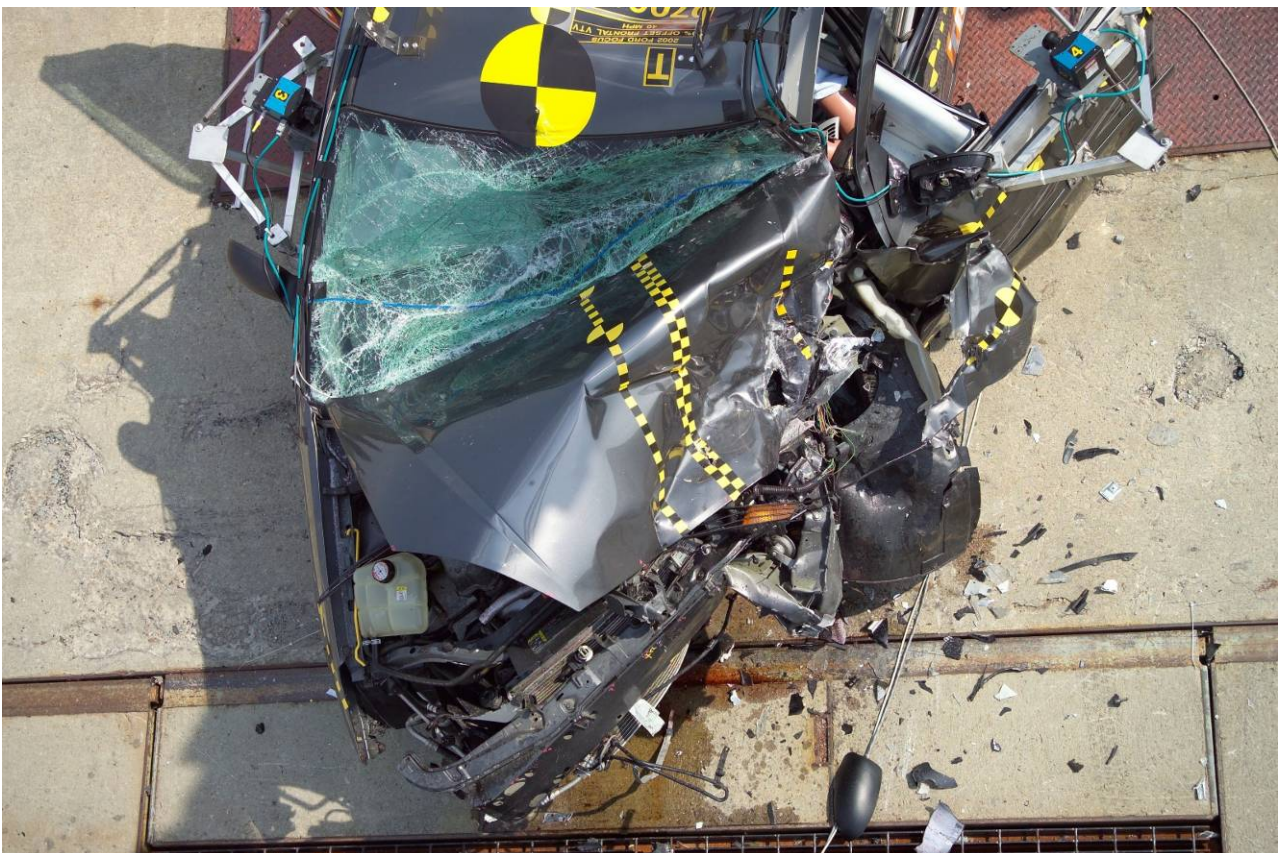


Figure A-13 Post-Test Overhead Target Vehicle Close-up View



Figure A-14 Post-Test Overhead Bullet Vehicle View



Figure A-15 Post-Test Overhead Bullet Vehicle Close-up View

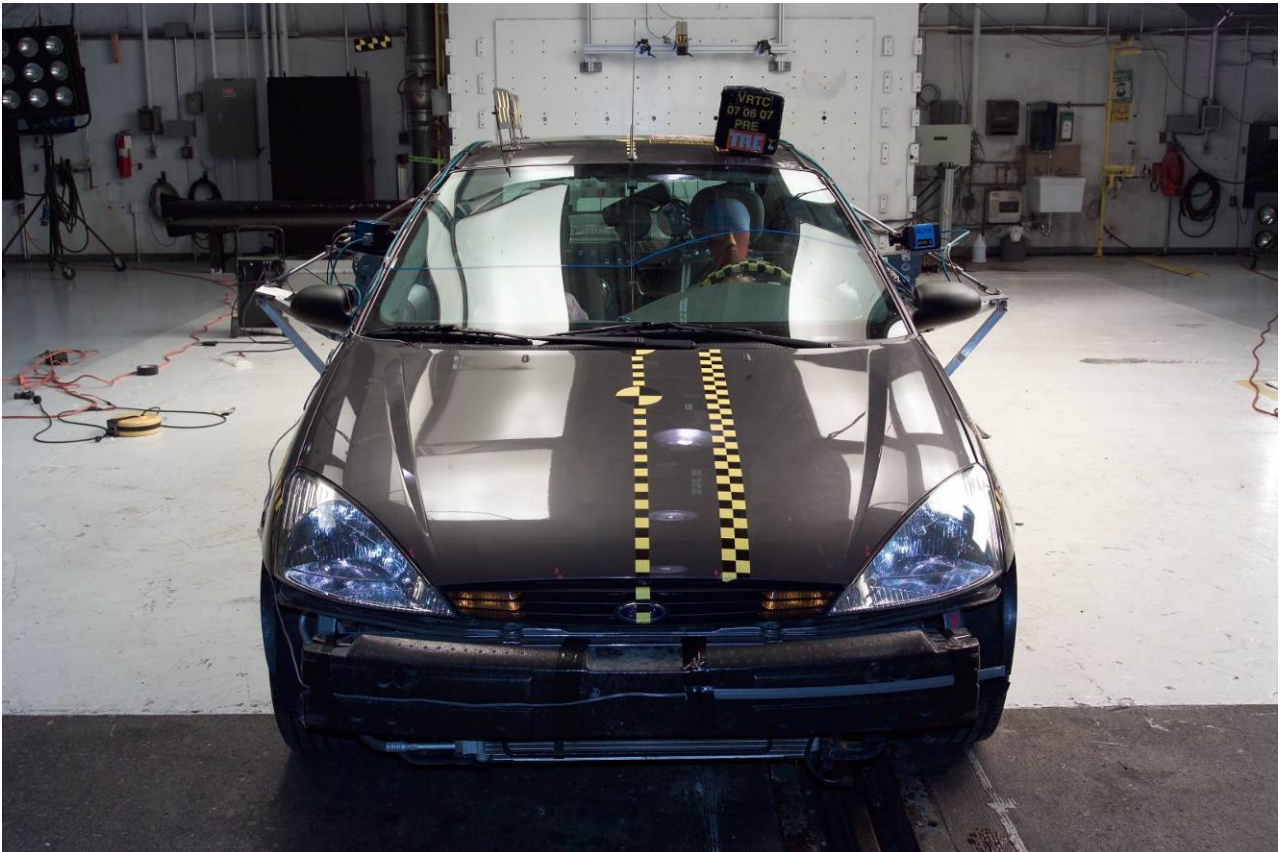


Figure A-16 Pre-Test Target Vehicle Front View



Figure A-17 Post-Test Target Vehicle Front View



Figure A-18 Pre-Test Target Vehicle Left Front View

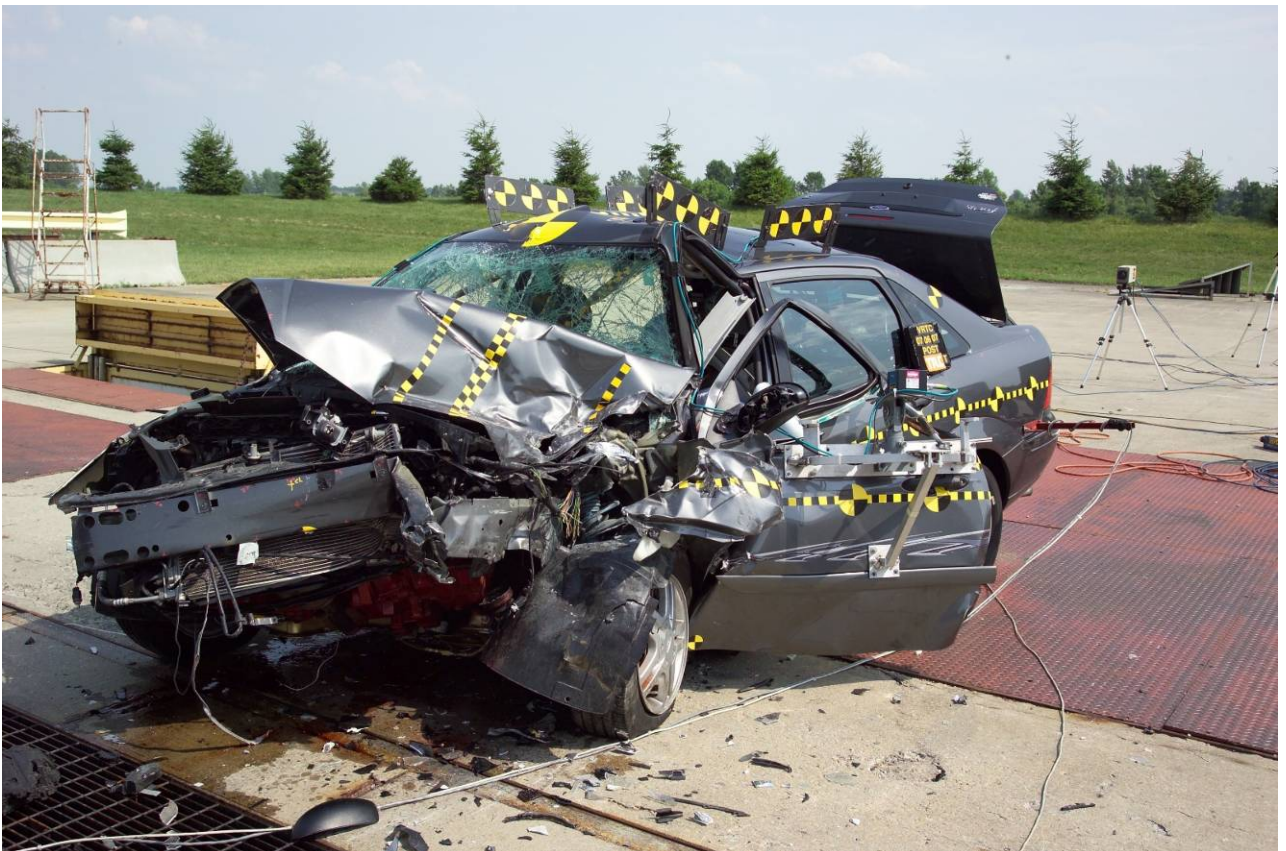


Figure A-19 Post-Test Target Vehicle Left Front View



Figure A-20 Pre-Test Target Vehicle Left Side View

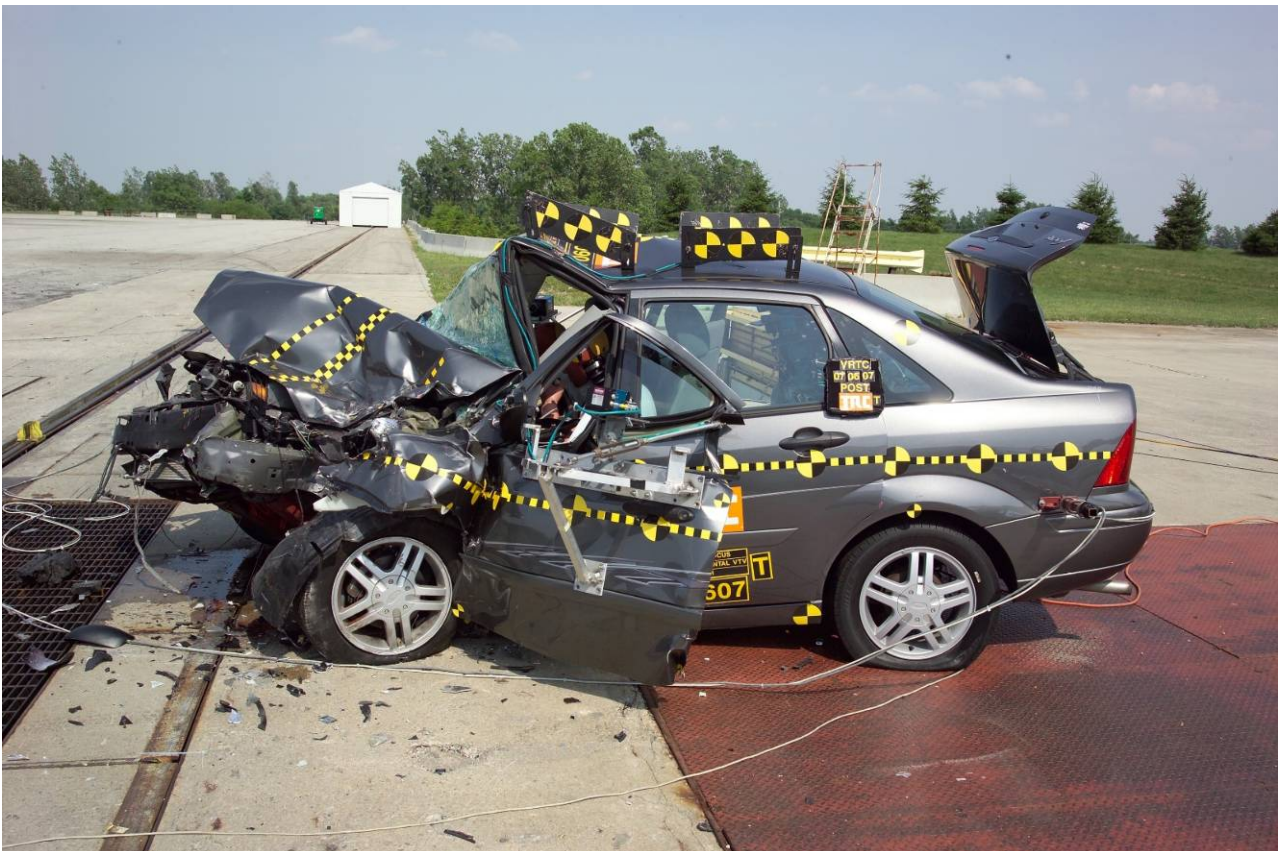


Figure A-21 Post-Test Target Vehicle Left Side View



Figure A-22 Pre-Test Target Vehicle Left Rear View



Figure A-23 Post-Test Target Vehicle Left Rear View



Figure A-24 Pre-Test Target Vehicle Rear View



Figure A-25 Post-Test Target Vehicle Rear View



Figure A-26 Pre-Test Target Vehicle Right Rear View



Figure A-27 Post-Test Target Vehicle Right Rear View



Figure A-28 Pre-Test Target Vehicle Right Side View

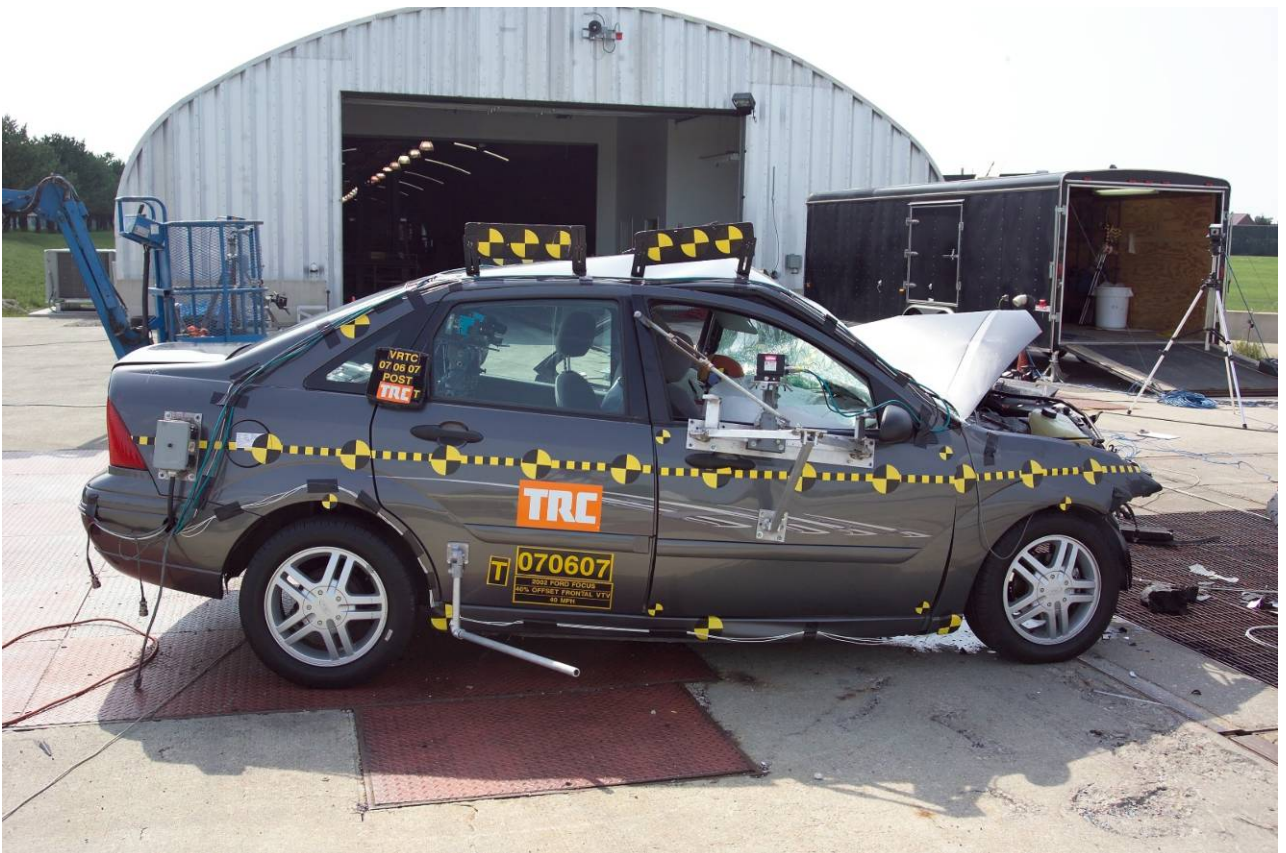


Figure A-29 Post-Test Target Vehicle Right Side View



Figure A-30 Pre-Test Target Vehicle Right Front View



Figure A-31 Post-Test Target Vehicle Right Front View



Figure A-32 Pre-Test Target Vehicle Engine Compartment View

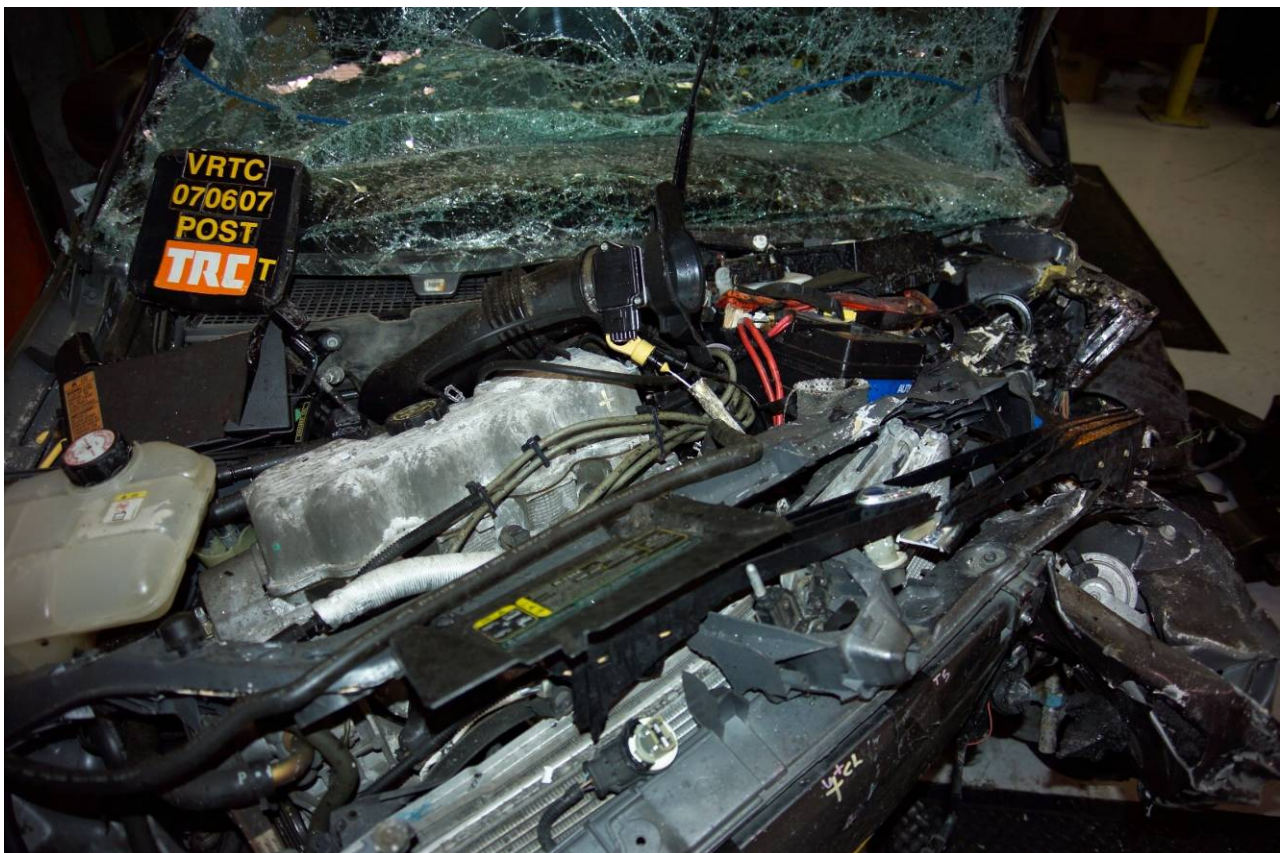


Figure A-33 Post-Test Target Vehicle Engine Compartment View



Figure A-34 Pre-Test Target Vehicle Front Underbody View



Figure A-35 Post-Test Target Vehicle Front Underbody View

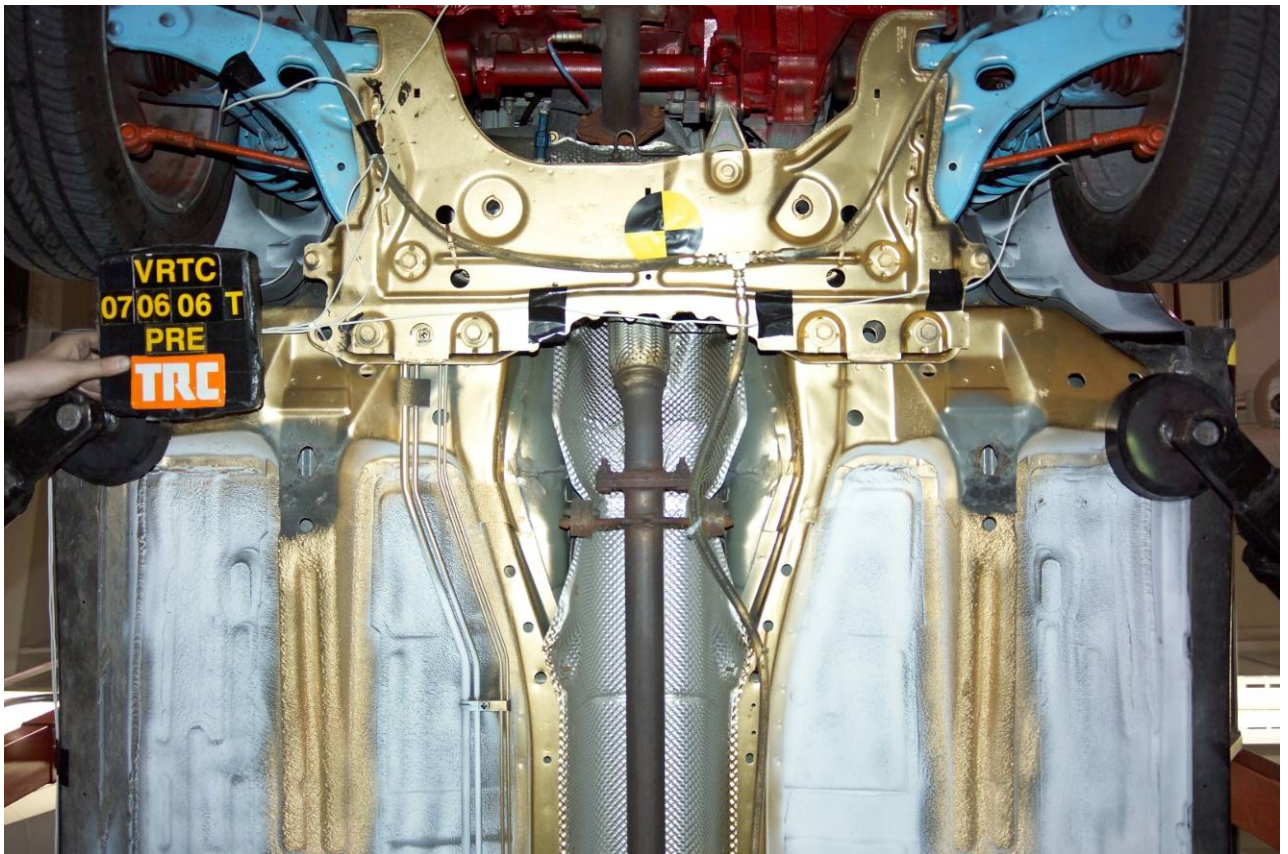


Figure A-36 Pre-Test Target Vehicle Mid Front Underbody View

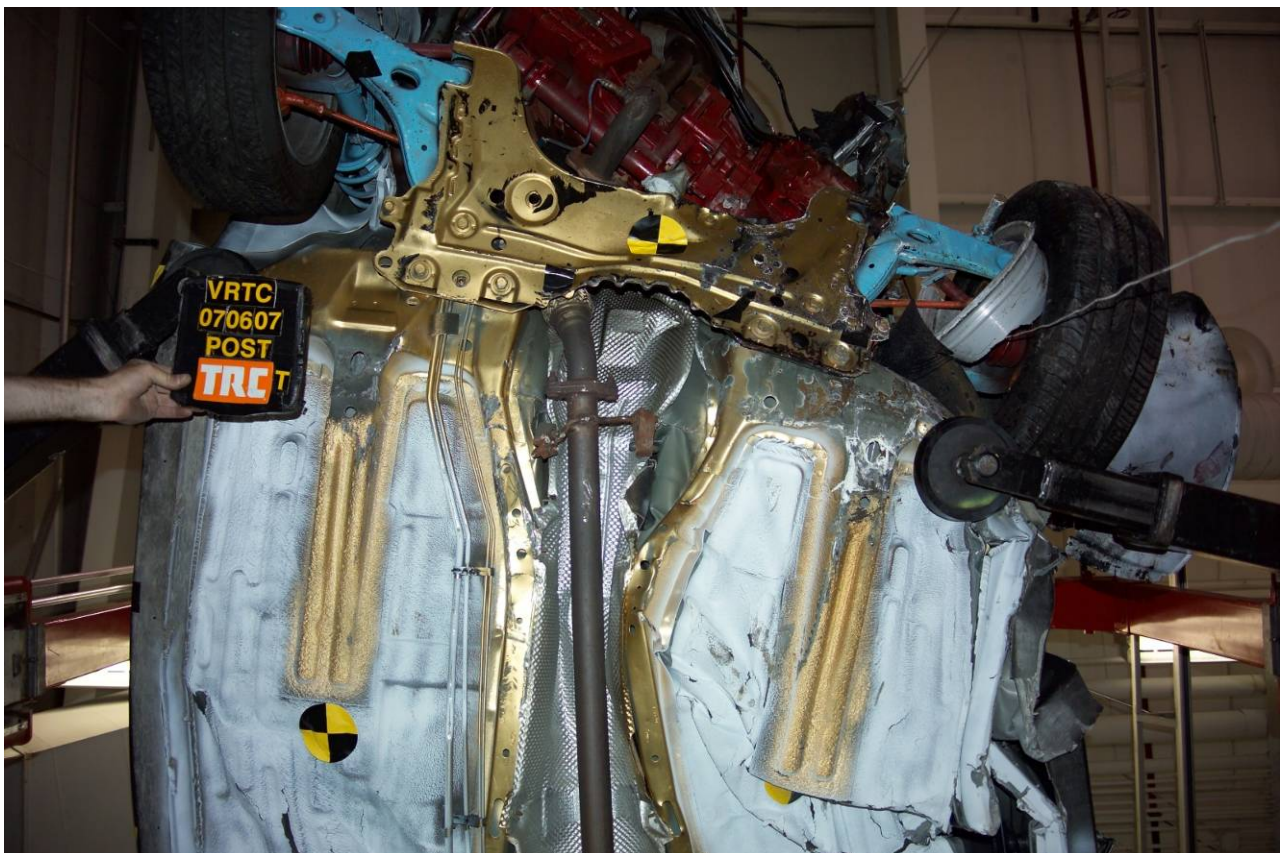


Figure A-37 Post-Test Target Vehicle Mid Front Underbody View



Figure A-38 Pre-Test Target Vehicle Mid Underbody View

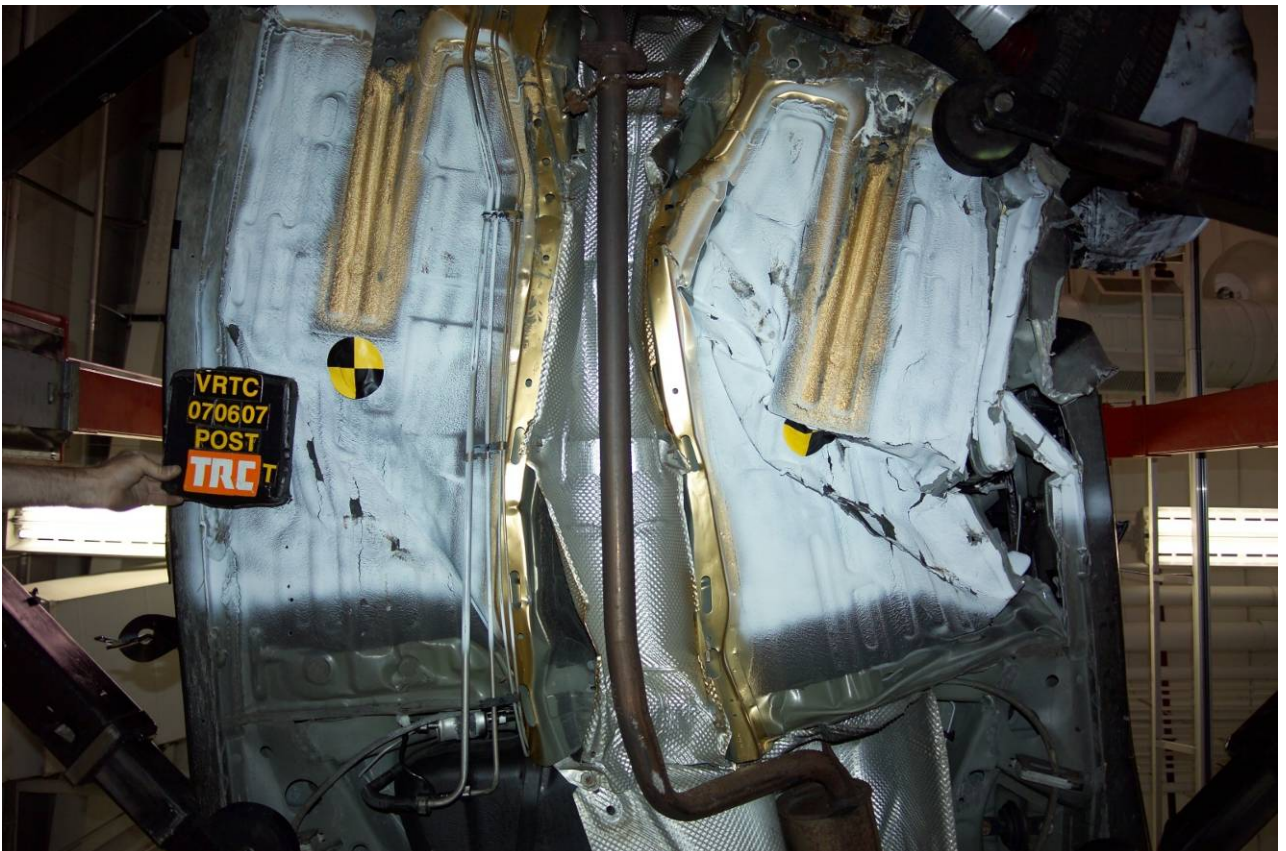


Figure A-39 Post-Test Target Vehicle Mid Underbody View

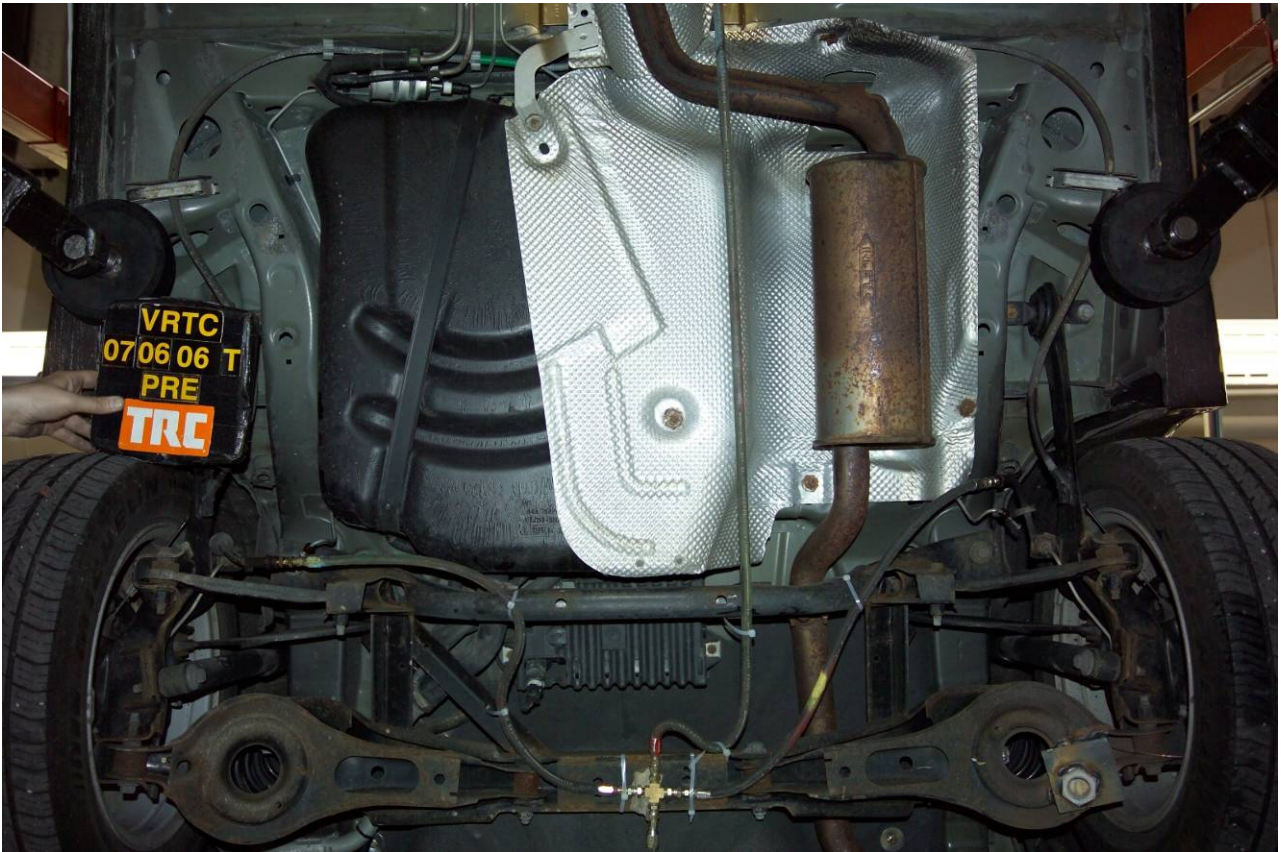


Figure A-40 Pre-Test Target Vehicle Mid Rear Underbody View



Figure A-41 Post-Test Target Vehicle Mid Rear Underbody View

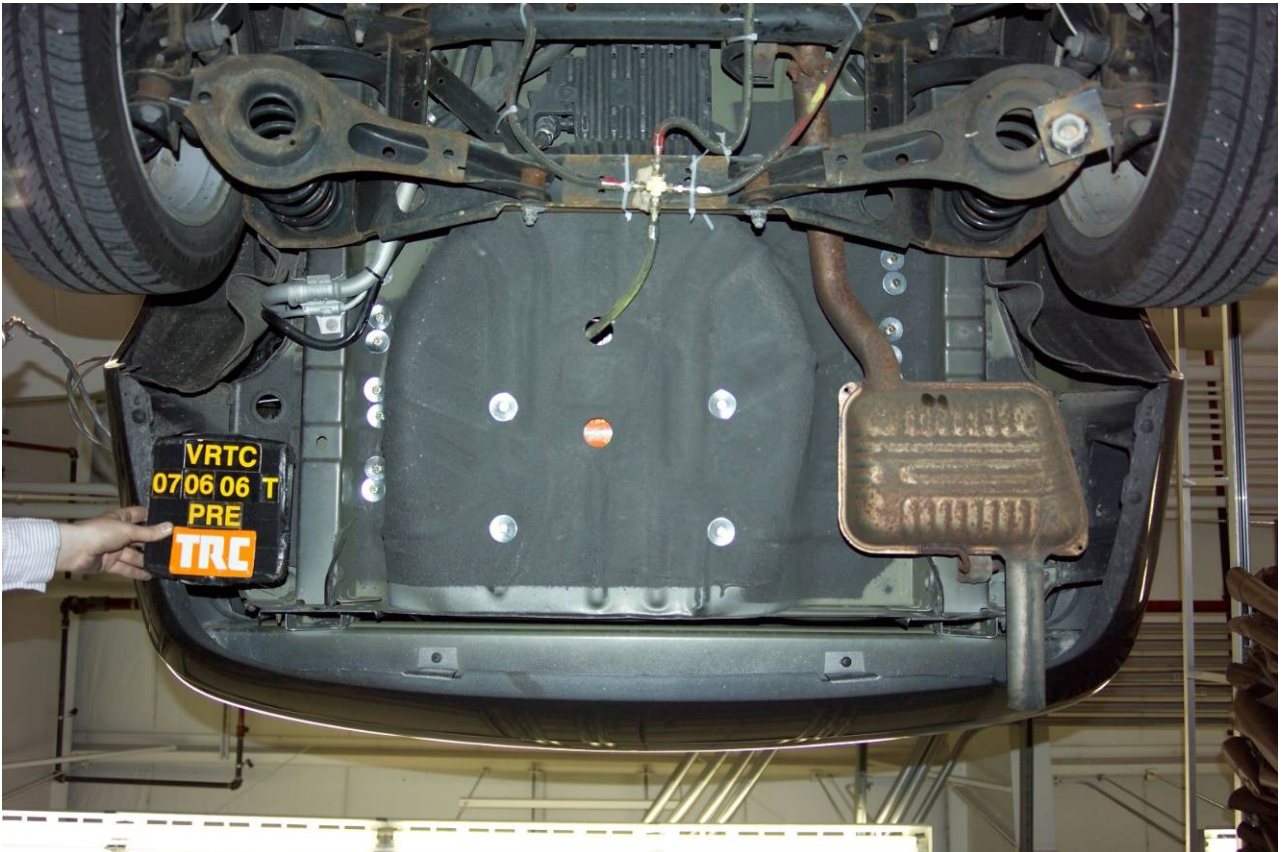


Figure A-42 Pre-Test Target Vehicle Rear Underbody View

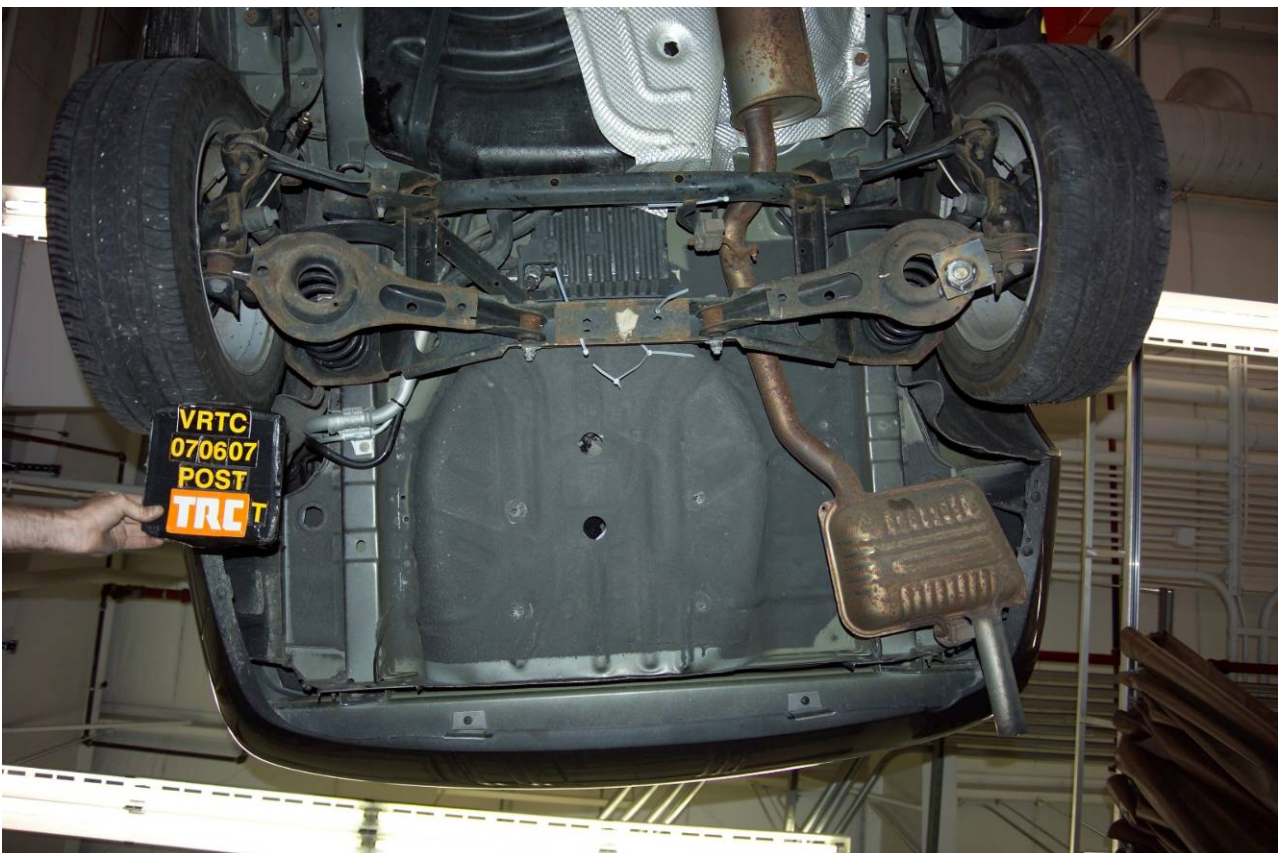


Figure A-43 Post-Test Target Vehicle Rear Underbody View



Figure A-44 Pre-Test Bullet Vehicle Front View



Figure A-45 Post-Test Bullet Vehicle Front View



Figure A-46 Pre-Test Bullet Vehicle Left Front View

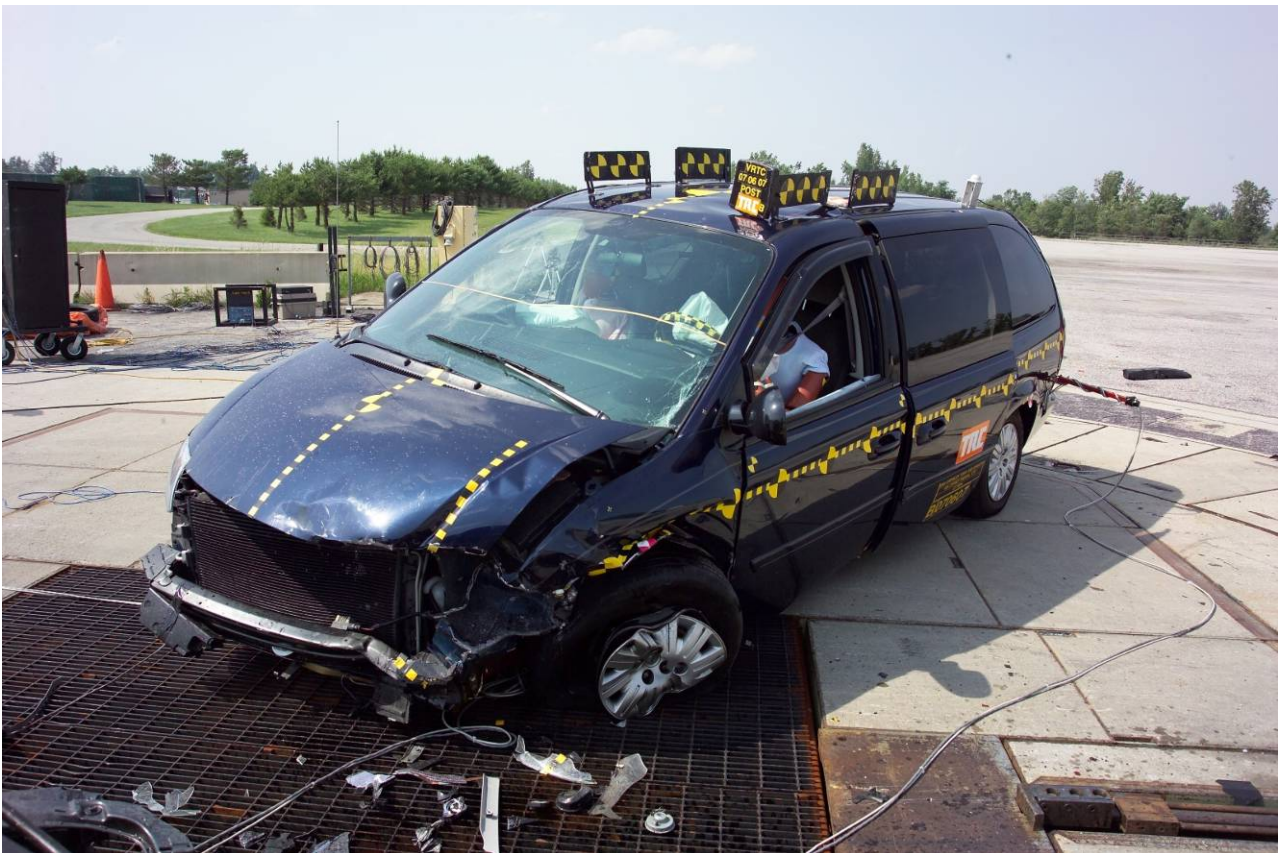


Figure A-47 Post-Test Bullet Vehicle Left Front View



Figure A-48 Pre-Test Bullet Vehicle Left Side View



Figure A-49 Post-Test Bullet Vehicle Left Side View

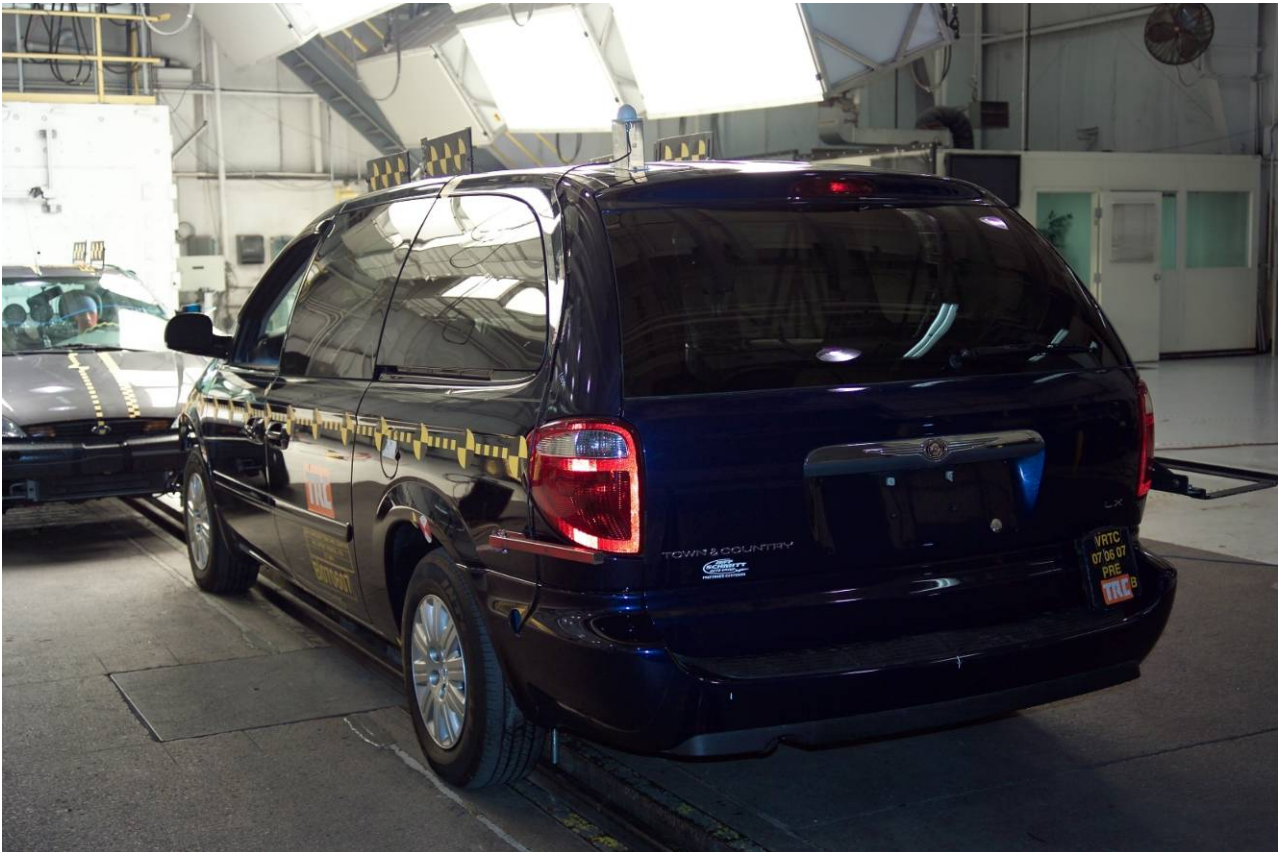


Figure A-50 Pre-Test Bullet Vehicle Left Rear View



Figure A-51 Post-Test Bullet Vehicle Left Rear View



Figure A-52 Pre-Test Bullet Vehicle Rear View



Figure A-53 Post-Test Bullet Vehicle Rear View



Figure A-54 Pre-Test Bullet Vehicle Right Rear View



Figure A-55 Post-Test Bullet Vehicle Right Rear View



Figure A-56 Pre-Test Bullet Vehicle Right Side View



Figure A-57 Post-Test Bullet Vehicle Right Side View



Figure A-58 Pre-Test Bullet Vehicle Right Front View



Figure A-59 Post-Test Bullet Vehicle Right Front View



Figure A-60 Pre-Test Bullet Vehicle Engine Compartment View



Figure A-61 Post-Test Bullet Vehicle Engine Compartment View

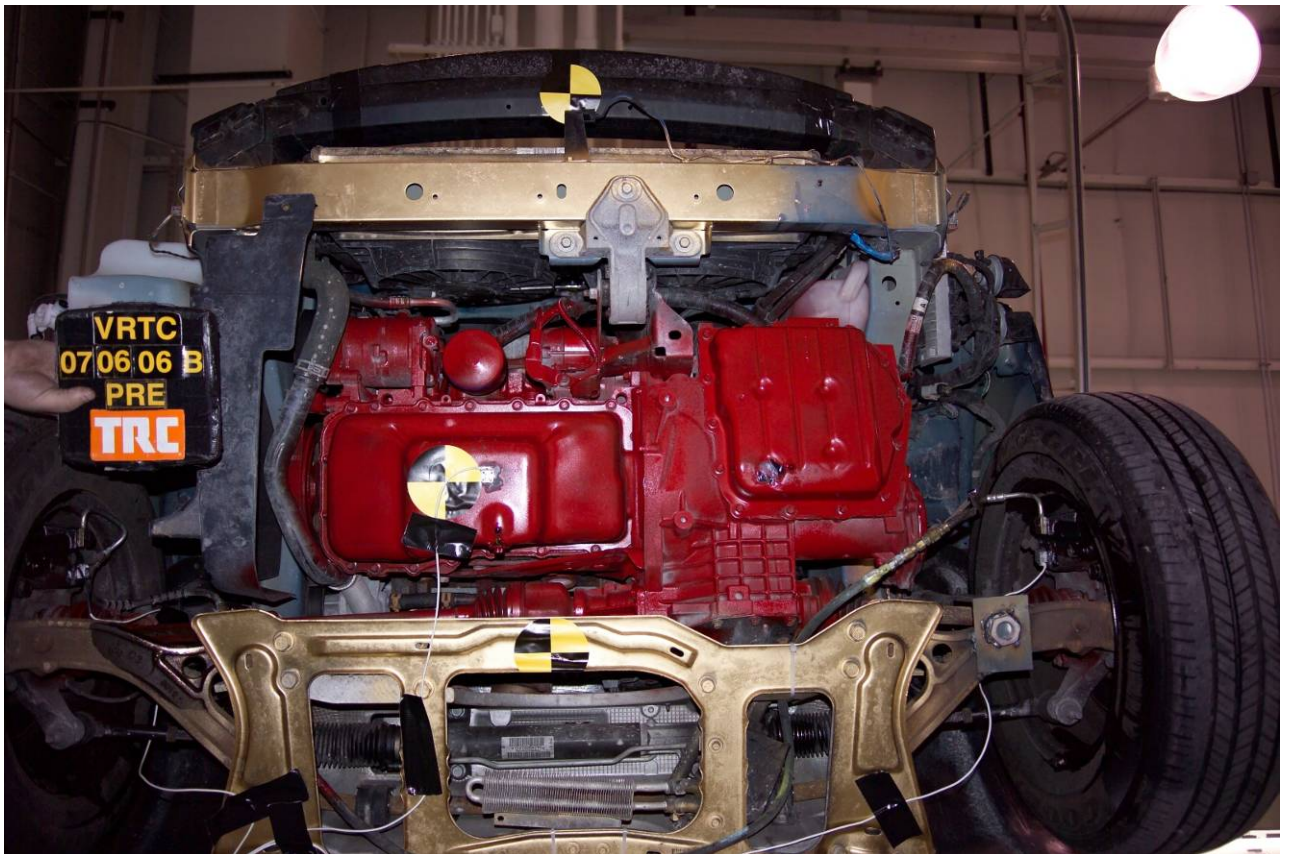


Figure A-62 Pre-Test Bullet Vehicle Front Underbody View



Figure A-63 Post-Test Bullet Vehicle Front Underbody View

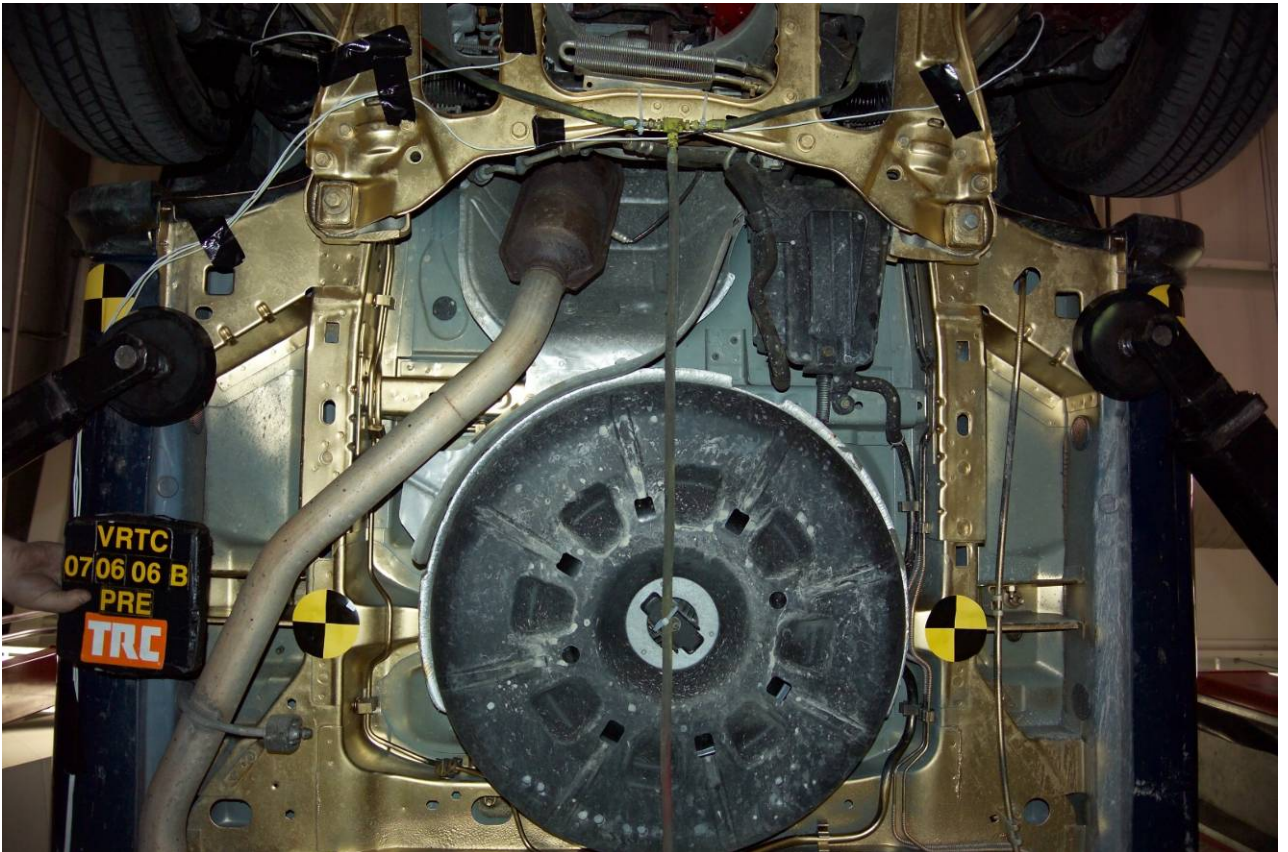


Figure A-64 Pre-Test Bullet Vehicle Mid Front Underbody View

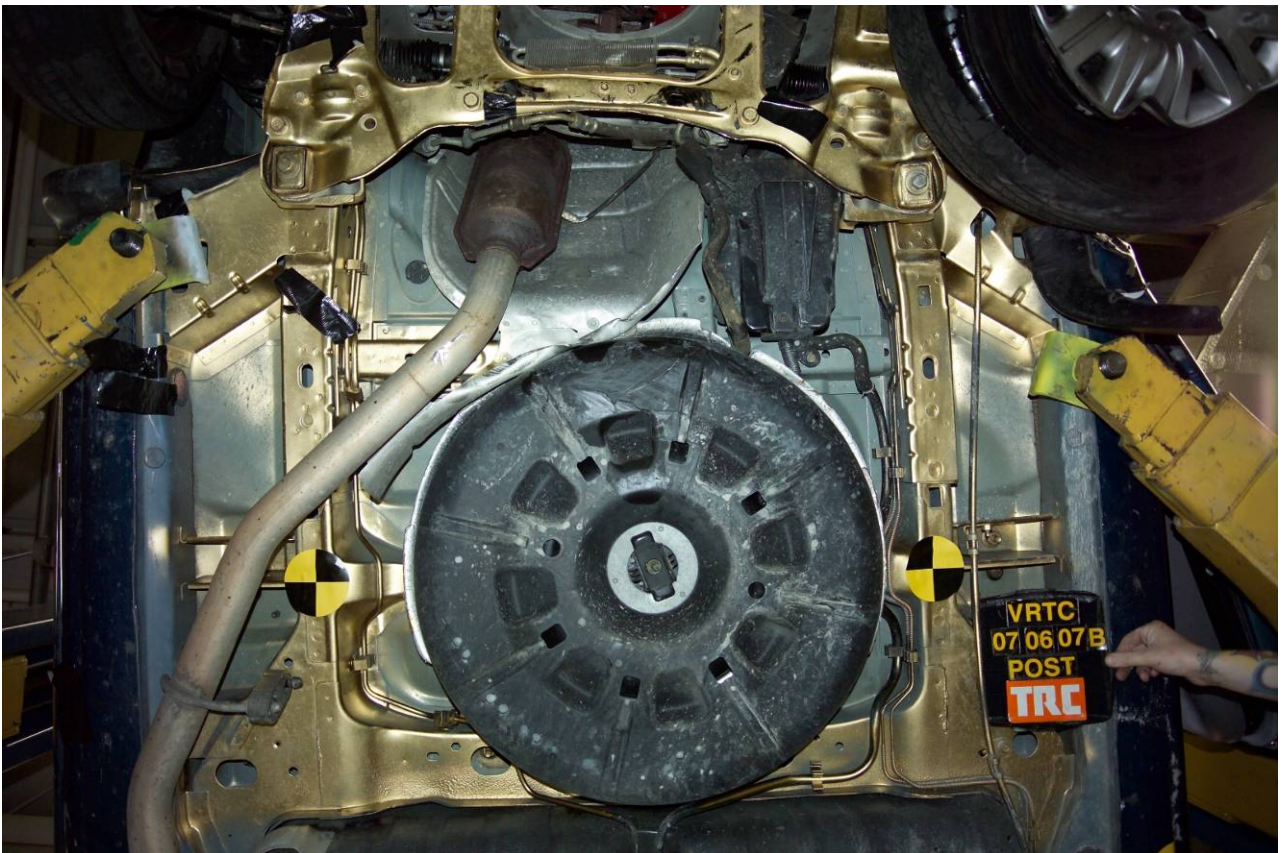


Figure A-65 Post-Test Bullet Vehicle Mid Front Underbody View



Figure A-66 Pre-Test Bullet Vehicle Mid Underbody View

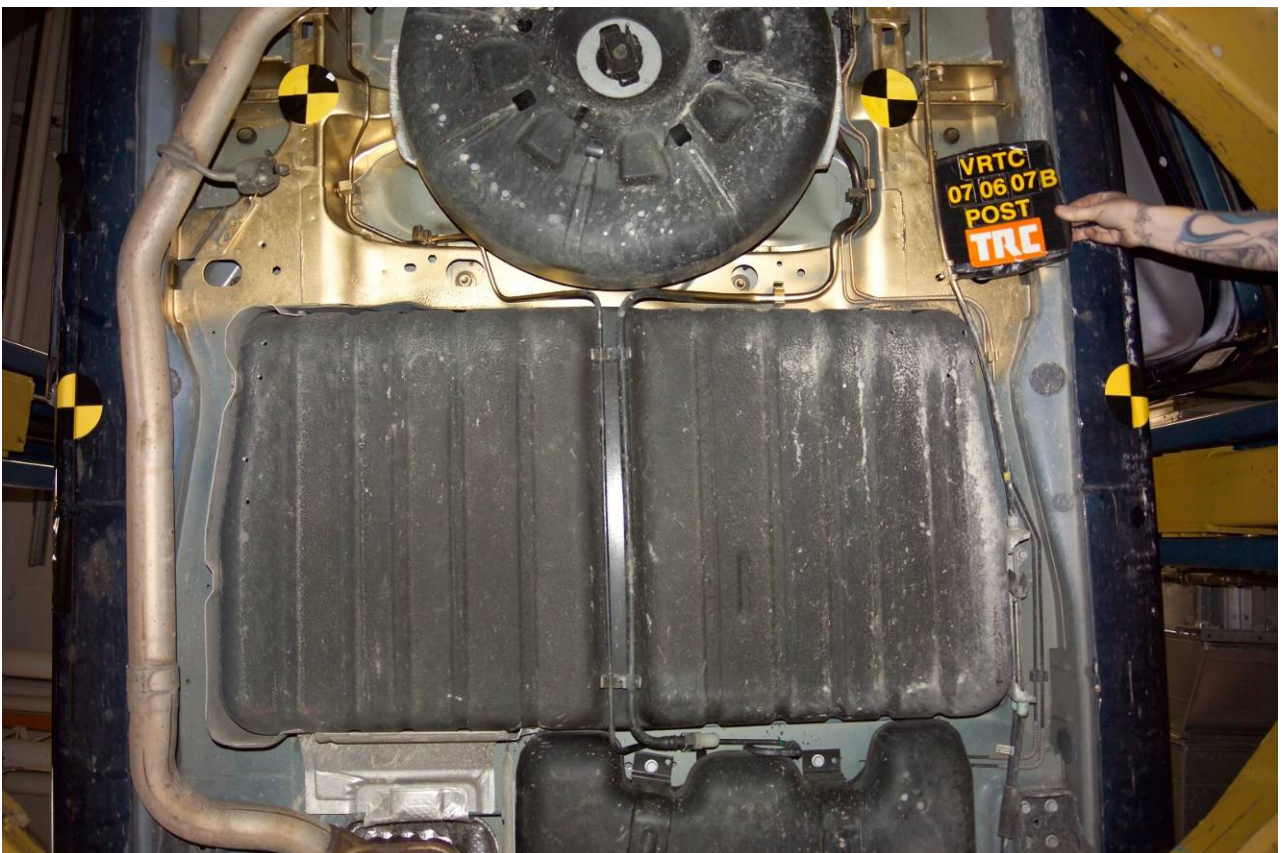


Figure A-67 Post-Test Bullet Vehicle Mid Underbody View

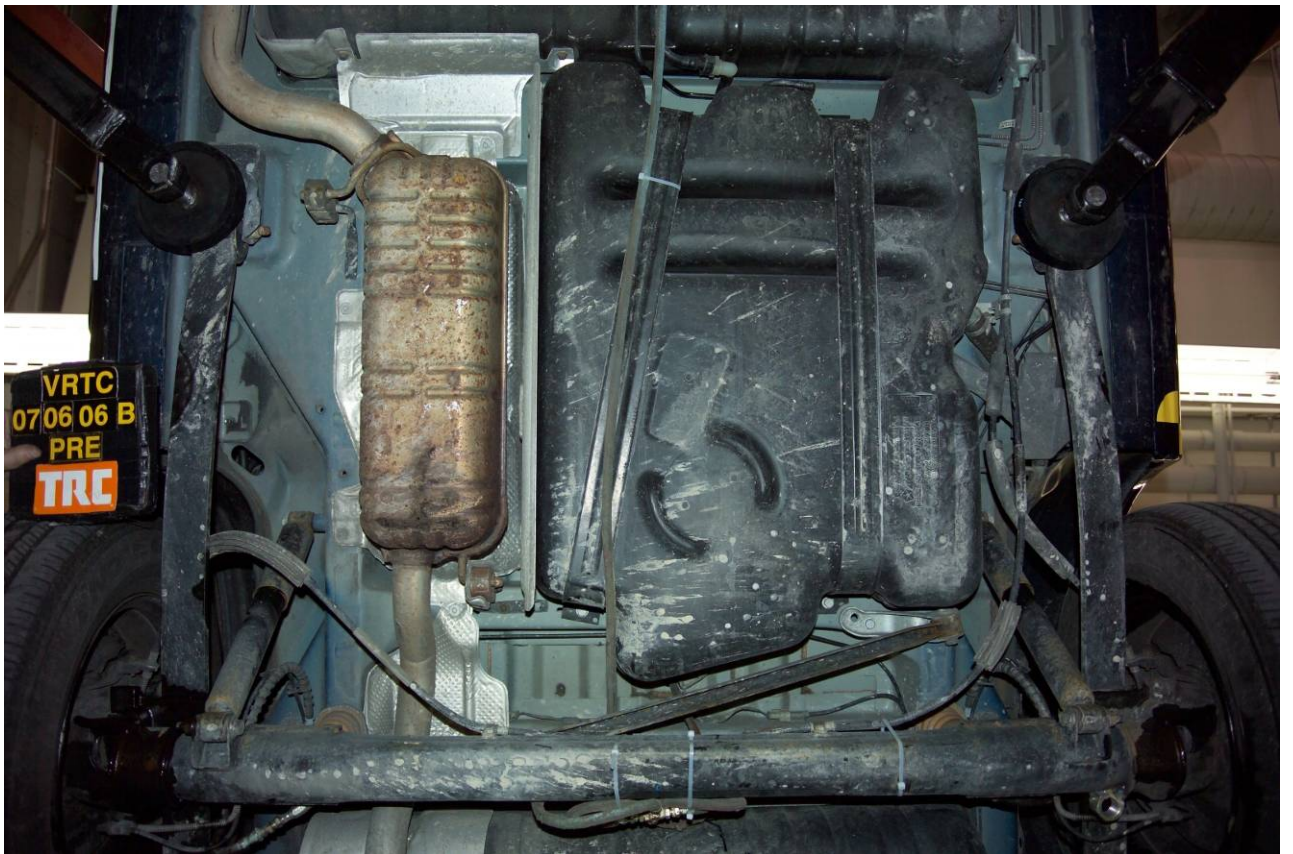


Figure A-68 Pre-Test Bullet Vehicle Mid Rear Underbody View

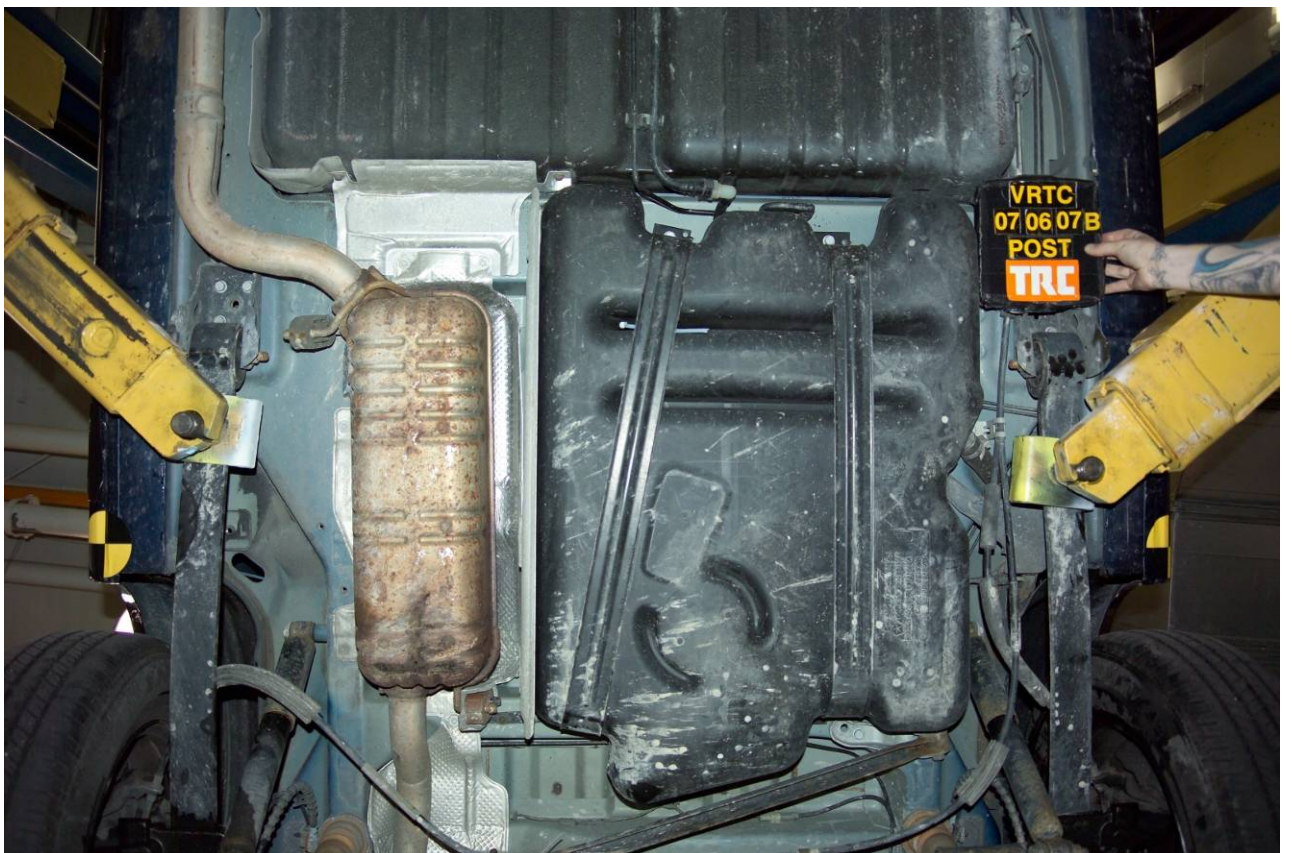


Figure A-69 Post-Test Bullet Vehicle Mid Rear Underbody View



Figure A-70 Pre-Test Bullet Vehicle Rear Underbody View



Figure A-71 Post-Test Bullet Vehicle Rear Underbody View



Figure A-72 Pre-Test Target Vehicle Windshield View



Figure A-73 Post-Test Target Vehicle Windshield View



Figure A-74 Pre-Test Target Vehicle Driver and Passenger Dummies through Windshield View



Figure A-75 Post-Test Target Vehicle Driver and Passenger Dummies through Windshield View



Figure A-76 Pre-Test Target Vehicle Driver Dummy - View 1

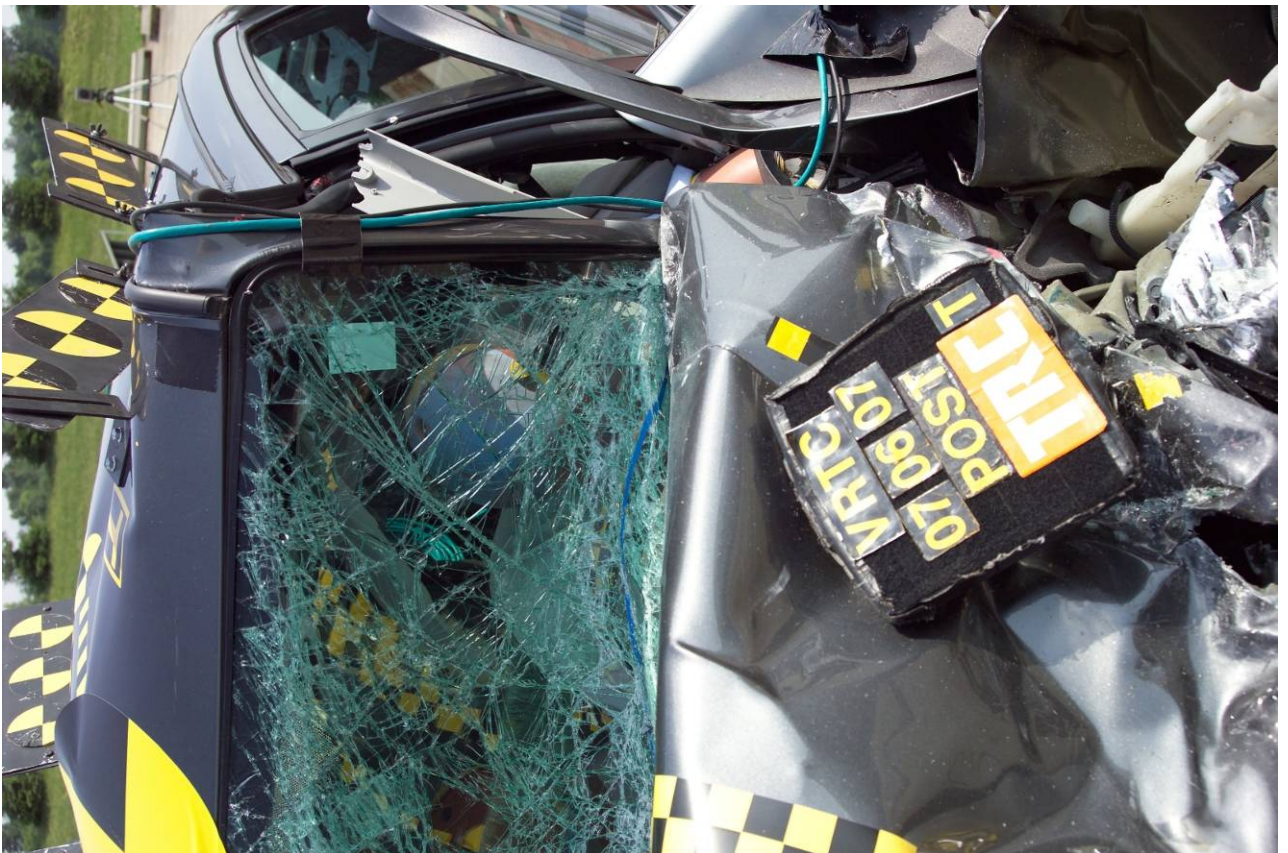


Figure A-77 Post-Test Target Vehicle Driver Dummy - View 1



Figure A-78 Pre-Test Target Vehicle Driver Dummy - View 2



Figure A-79 Post-Test Target Vehicle Driver Dummy - View 2



Figure A-80 Pre-Test Target Vehicle Driver Dummy - View 3

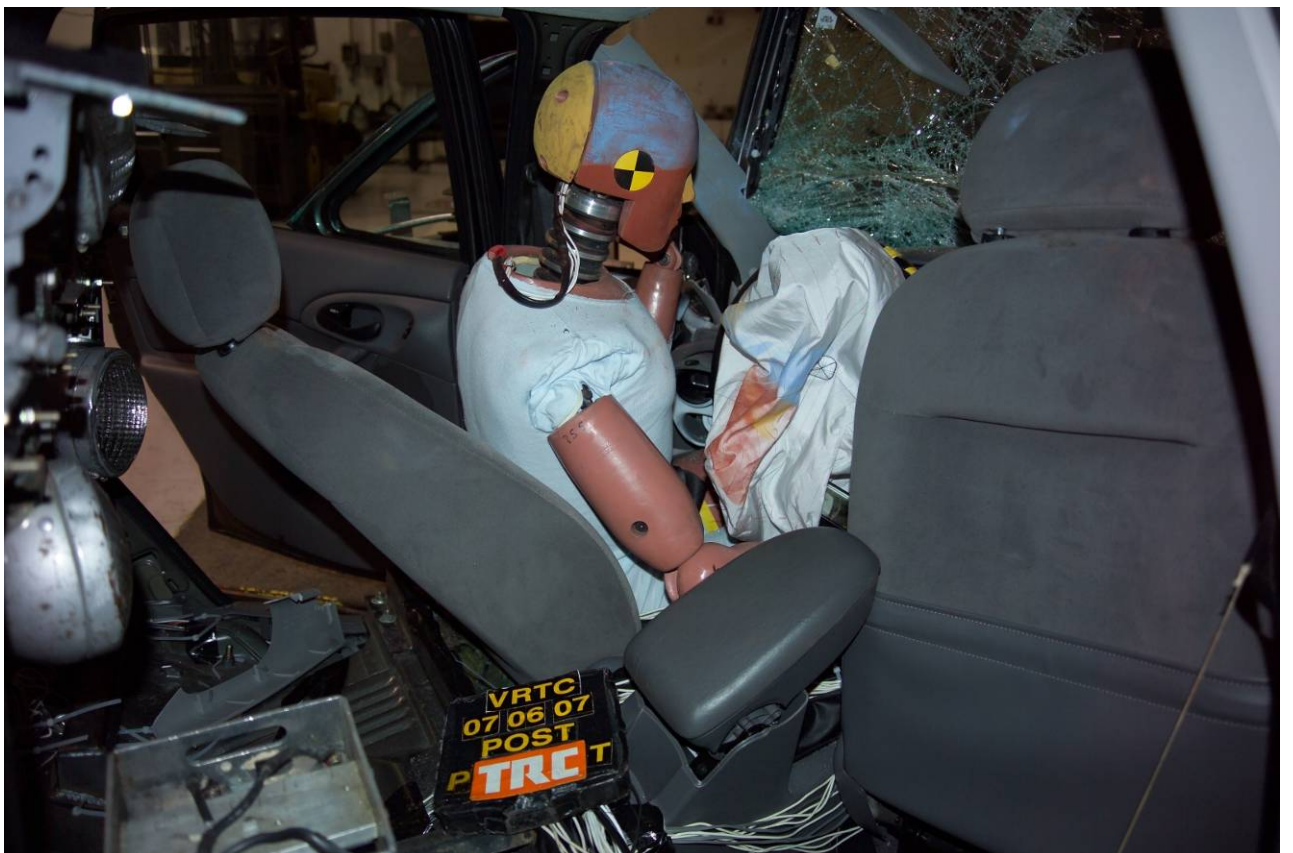


Figure A-81 Post-Test Target Vehicle Driver Dummy - View 3



Figure A-82 Pre-Test Target Vehicle Driver Dummy - View 4

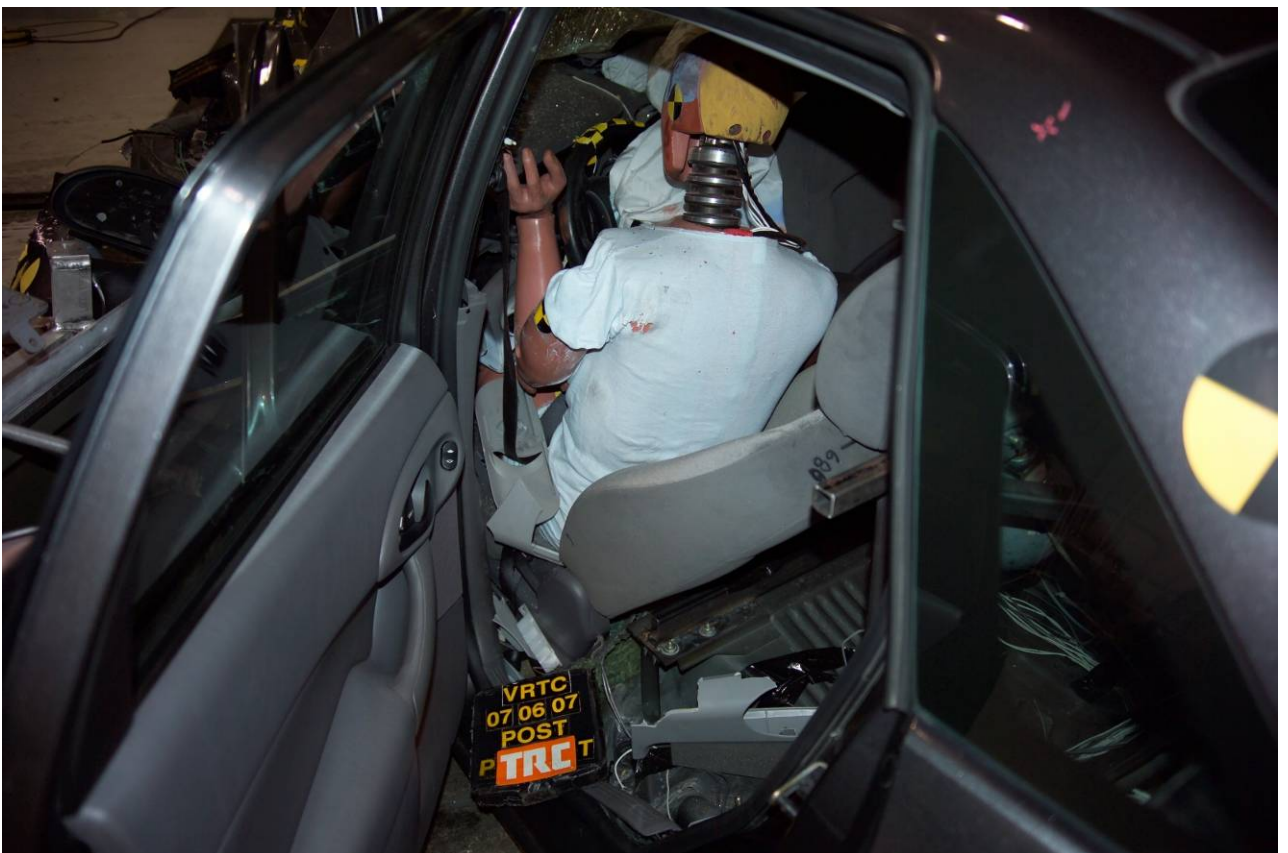


Figure A-83 Post-Test Target Vehicle Driver Dummy - View 4



Figure A-84 Pre-Test Target Vehicle Driver Dummy Foot Position View

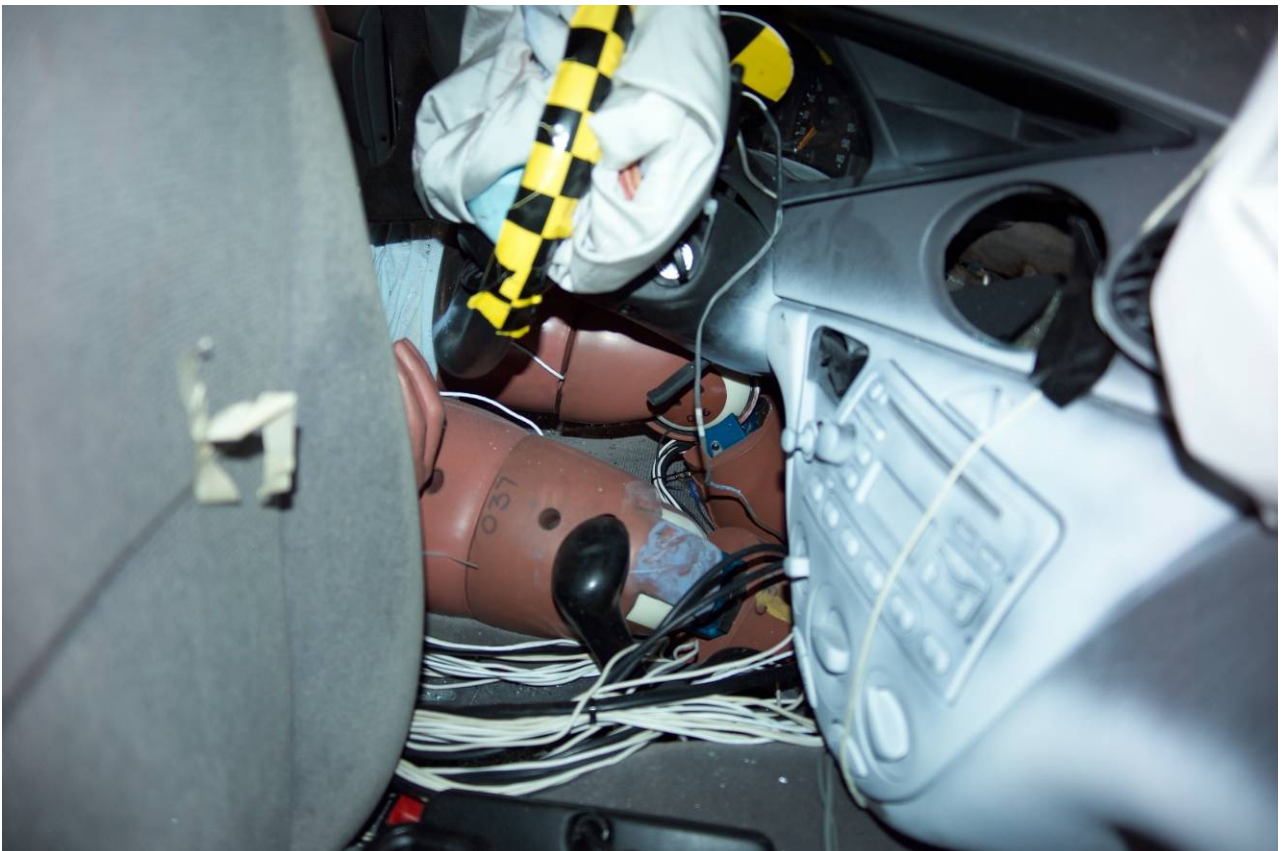


Figure A-85 Post-Test Target Vehicle Driver Dummy Foot Position - View 1



Figure A-86 Post-Test Target Vehicle Driver Dummy Foot Position - View 2



Figure A-87 Post-Test Target Vehicle Driver Dummy Foot Position - View 3

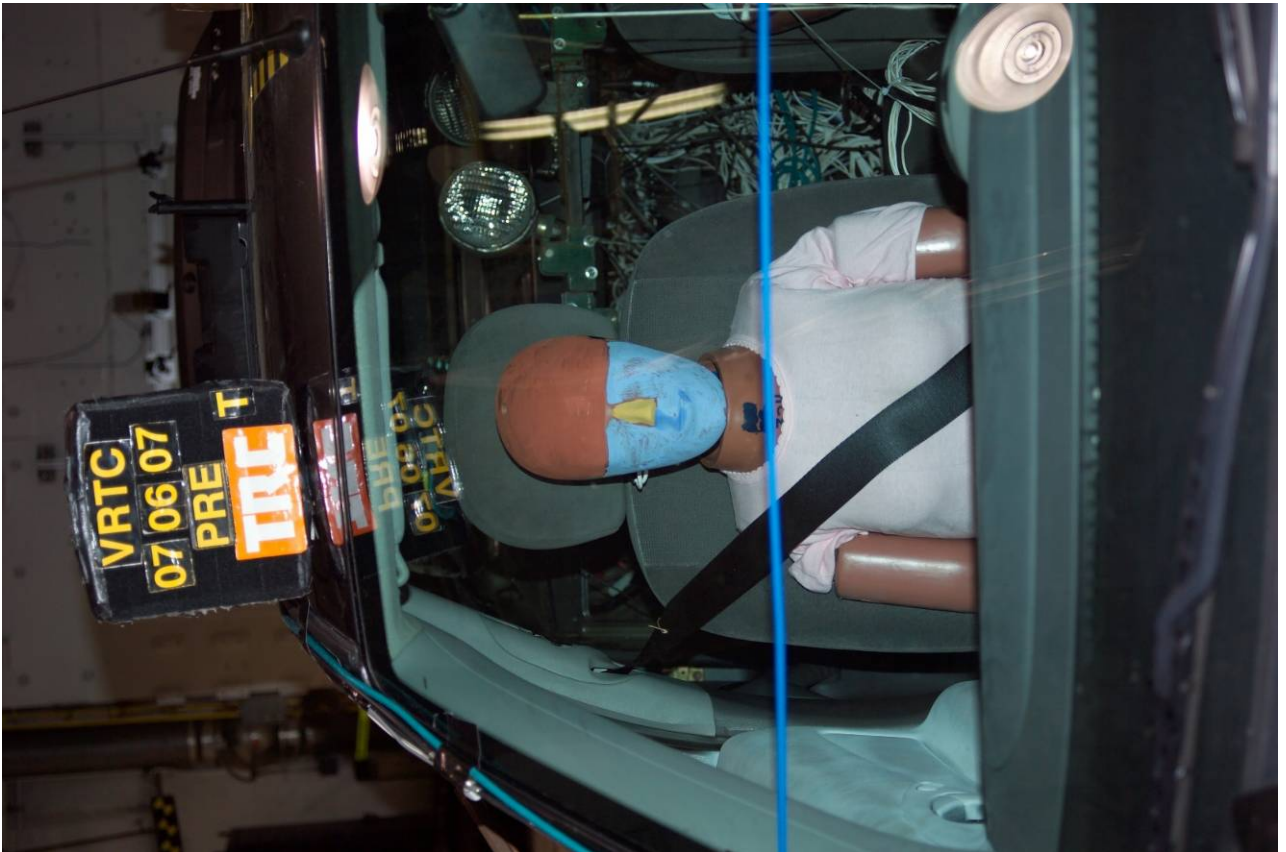


Figure A-88 Pre-Test Target Vehicle Passenger Dummy - View 1



Figure A-89 Post-Test Target Vehicle Passenger Dummy - View 1



Figure A-90 Pre-Test Target Vehicle Passenger Dummy - View 2



Figure A-91 Post-Test Target Vehicle Passenger Dummy - View 2



Figure A-92 Pre-Test Target Vehicle Passenger Dummy - View 3

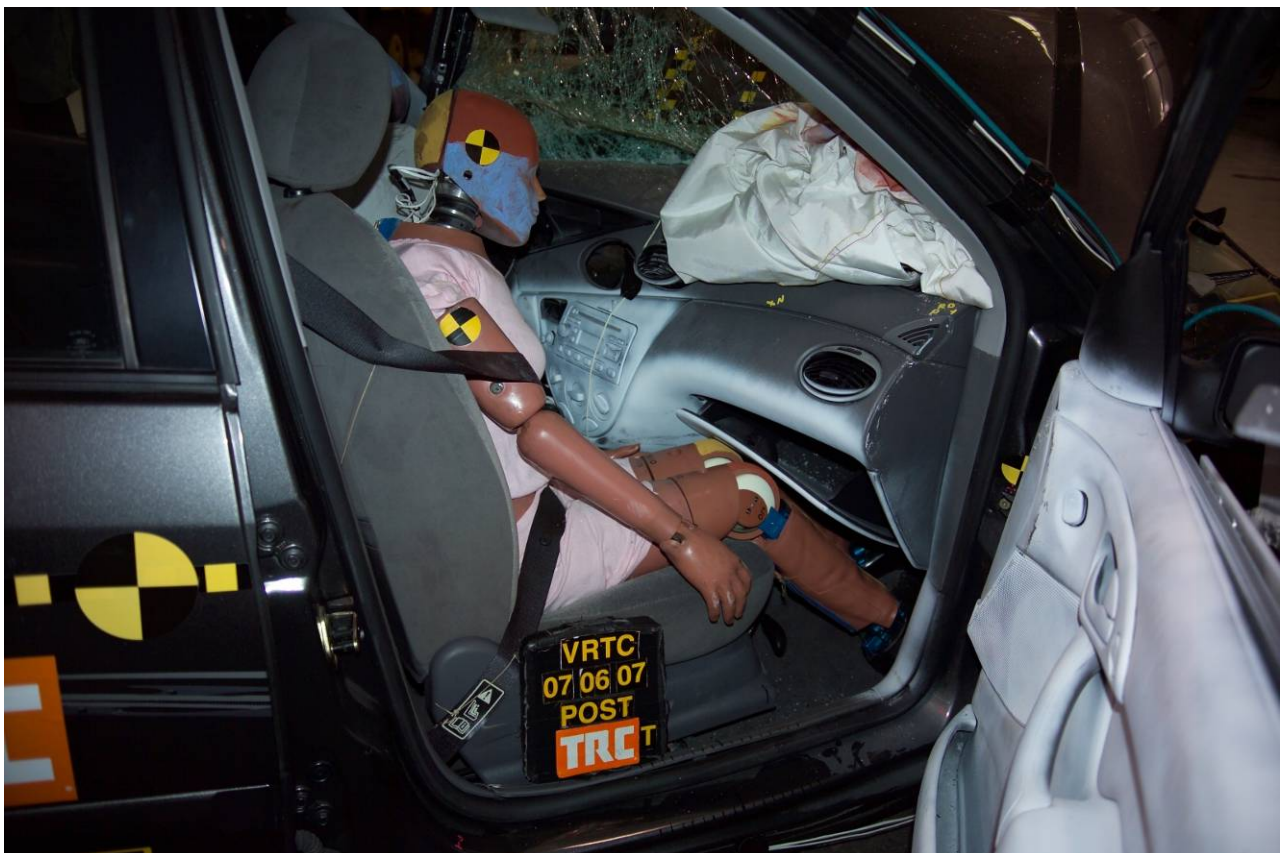


Figure A-93 Post-Test Target Vehicle Passenger Dummy - View 3



Figure A-94 Pre-Test Target Vehicle Passenger Dummy - View 4

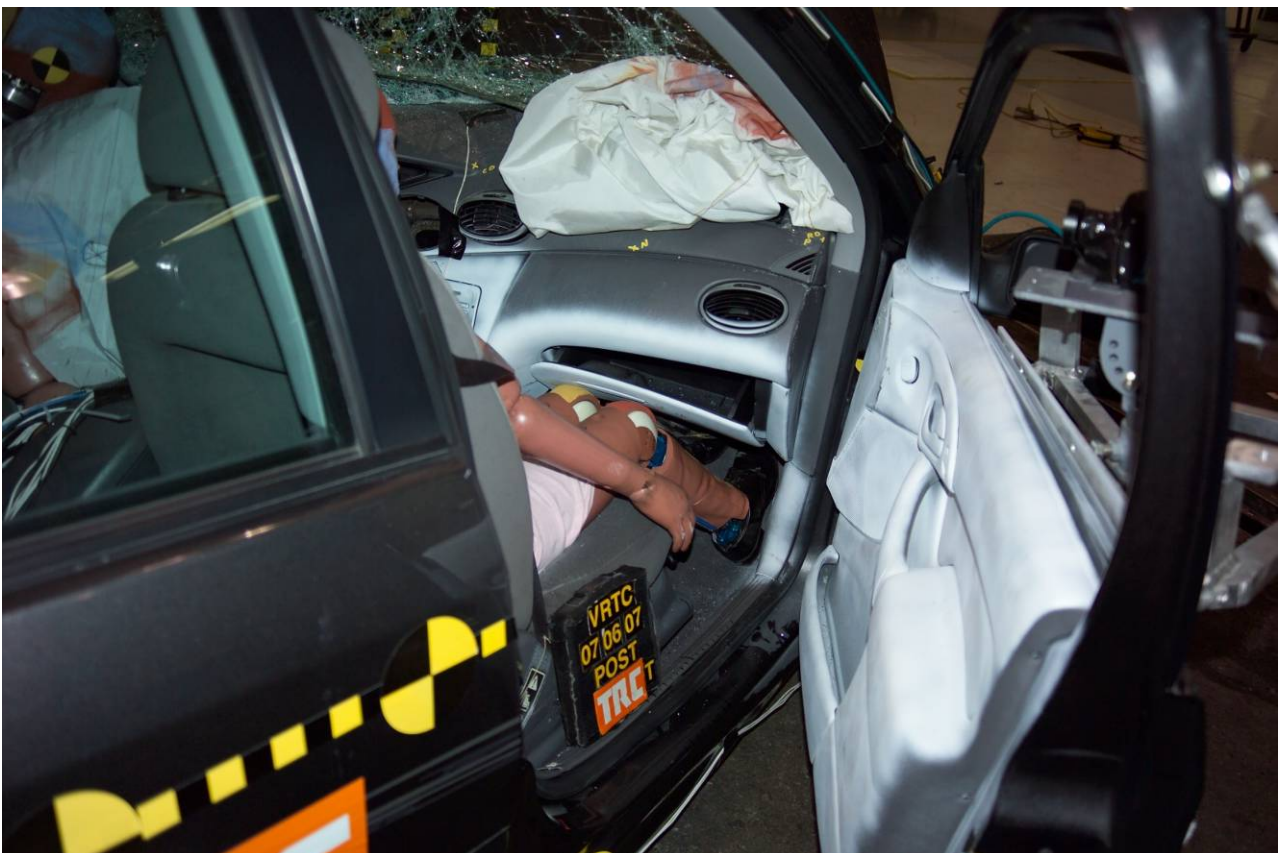


Figure A-95 Post-Test Target Vehicle Passenger Dummy - View 4



Figure A-96 Pre-Test Bullet Vehicle Windshield View



Figure A-97 Post-Test Bullet Vehicle Windshield View



Figure A-98 Pre-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View

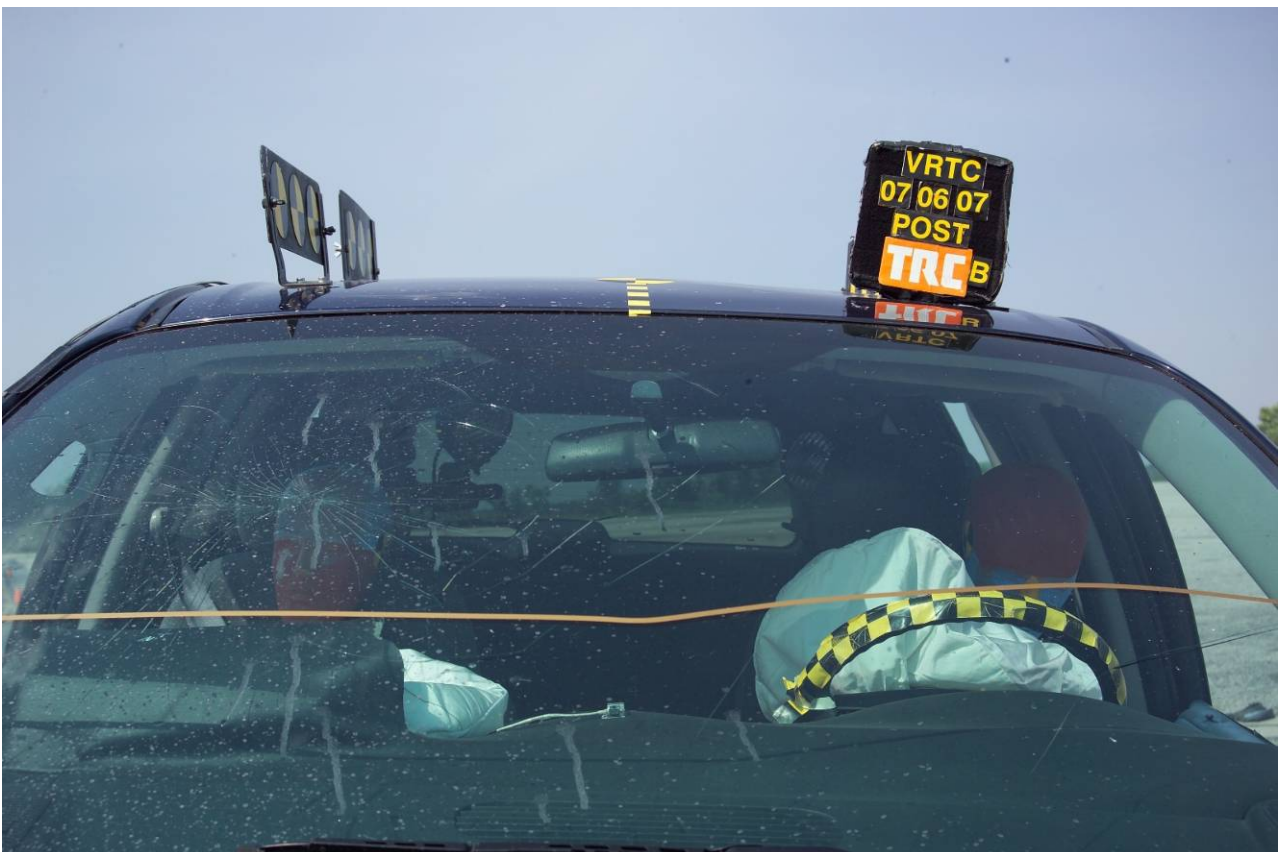


Figure A-99 Post-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View



Figure A-100 Pre-Test Bullet Vehicle Driver Dummy - View 1



Figure A-101 Post-Test Bullet Vehicle Driver Dummy - View 1



Figure A-102 Pre-Test Bullet Vehicle Driver Dummy - View 2



Figure A-103 Post-Test Bullet Vehicle Driver Dummy - View 2

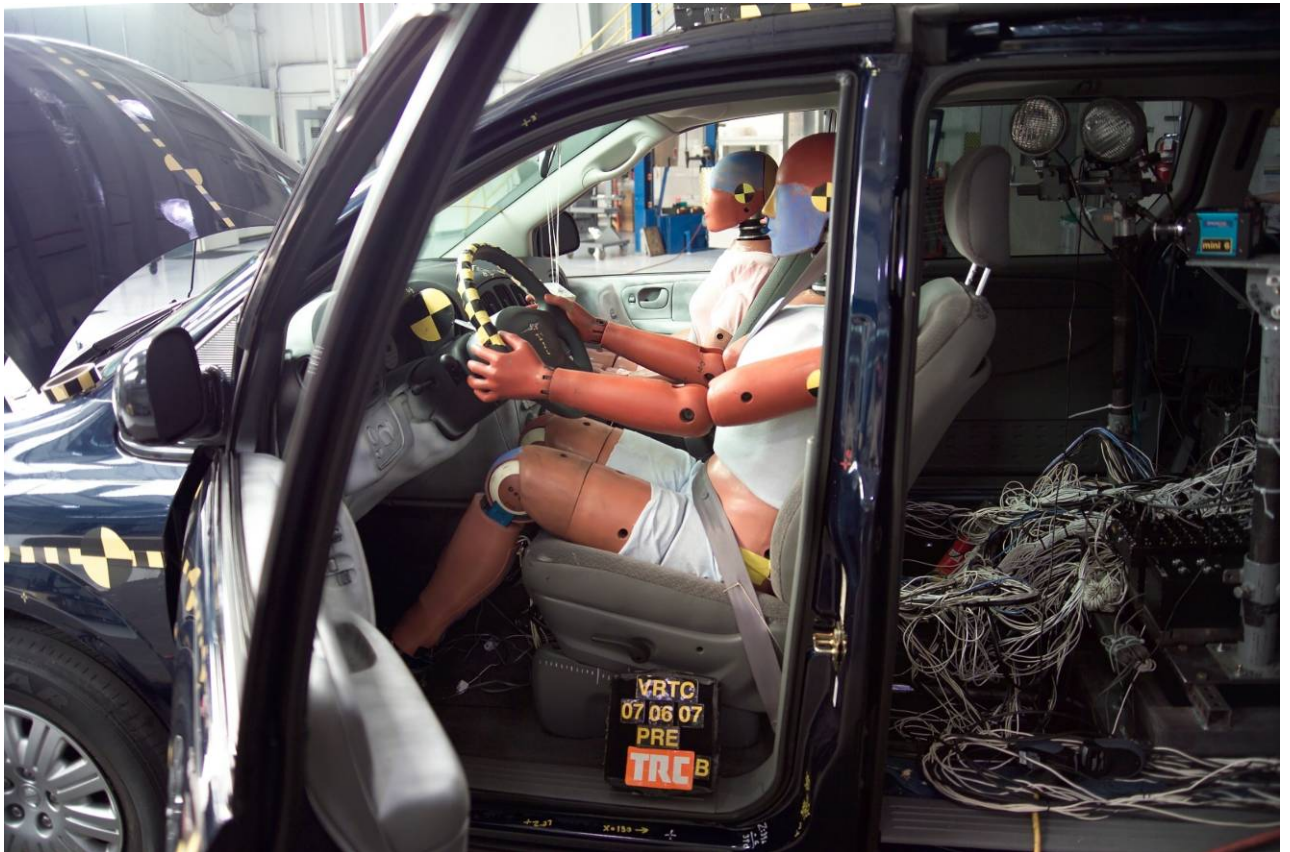


Figure A-104 Pre-Test Bullet Vehicle Driver Dummy - View 3



Figure A-105 Post-Test Bullet Vehicle Driver Dummy - View 3



Figure A-106 Pre-Test Bullet Vehicle Driver Dummy - View 4

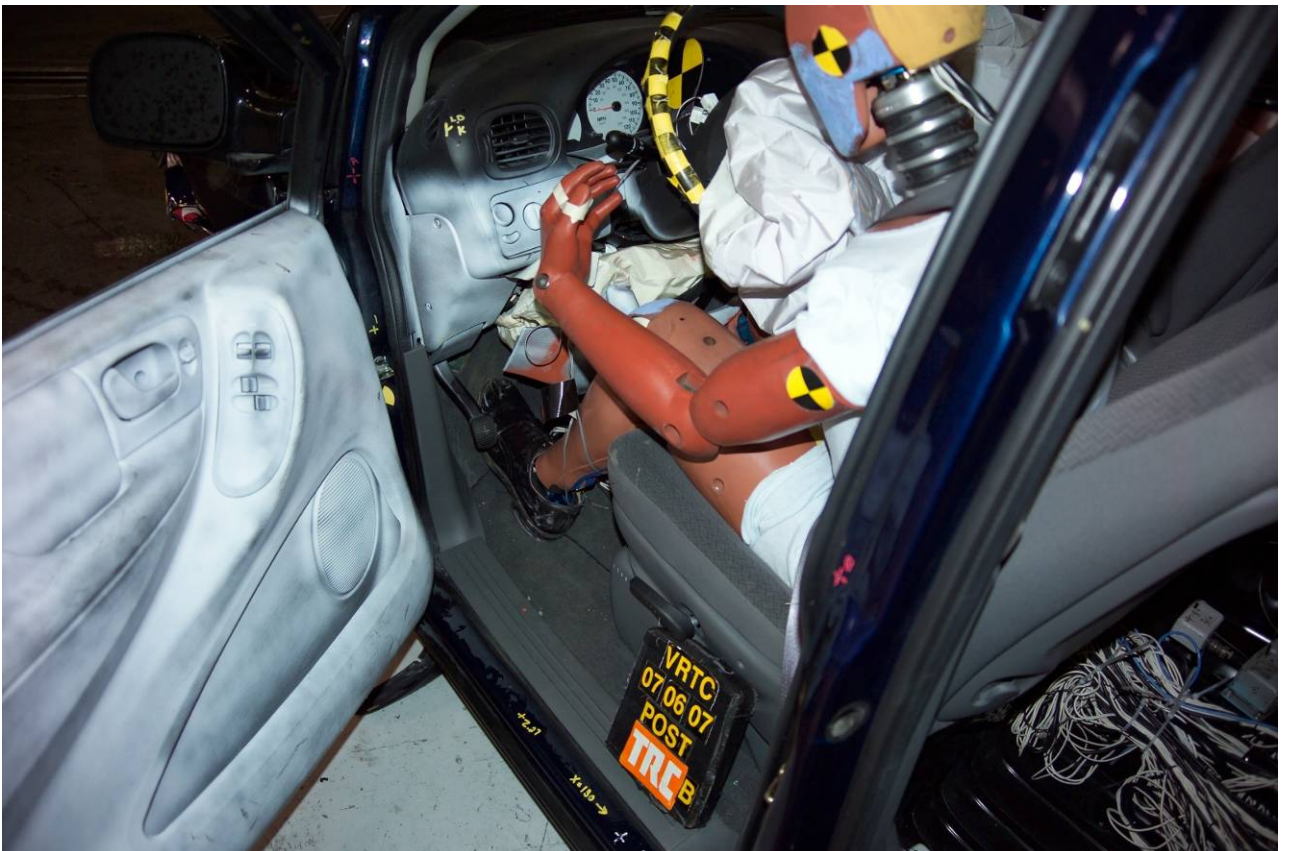


Figure A-107 Post-Test Bullet Vehicle Driver Dummy - View 4



Figure A-108 Pre-Test Bullet Vehicle Driver Dummy Foot Position View

Intentionally Left Blank



Figure A-109 Pre-Test Bullet Vehicle Passenger Dummy - View 1

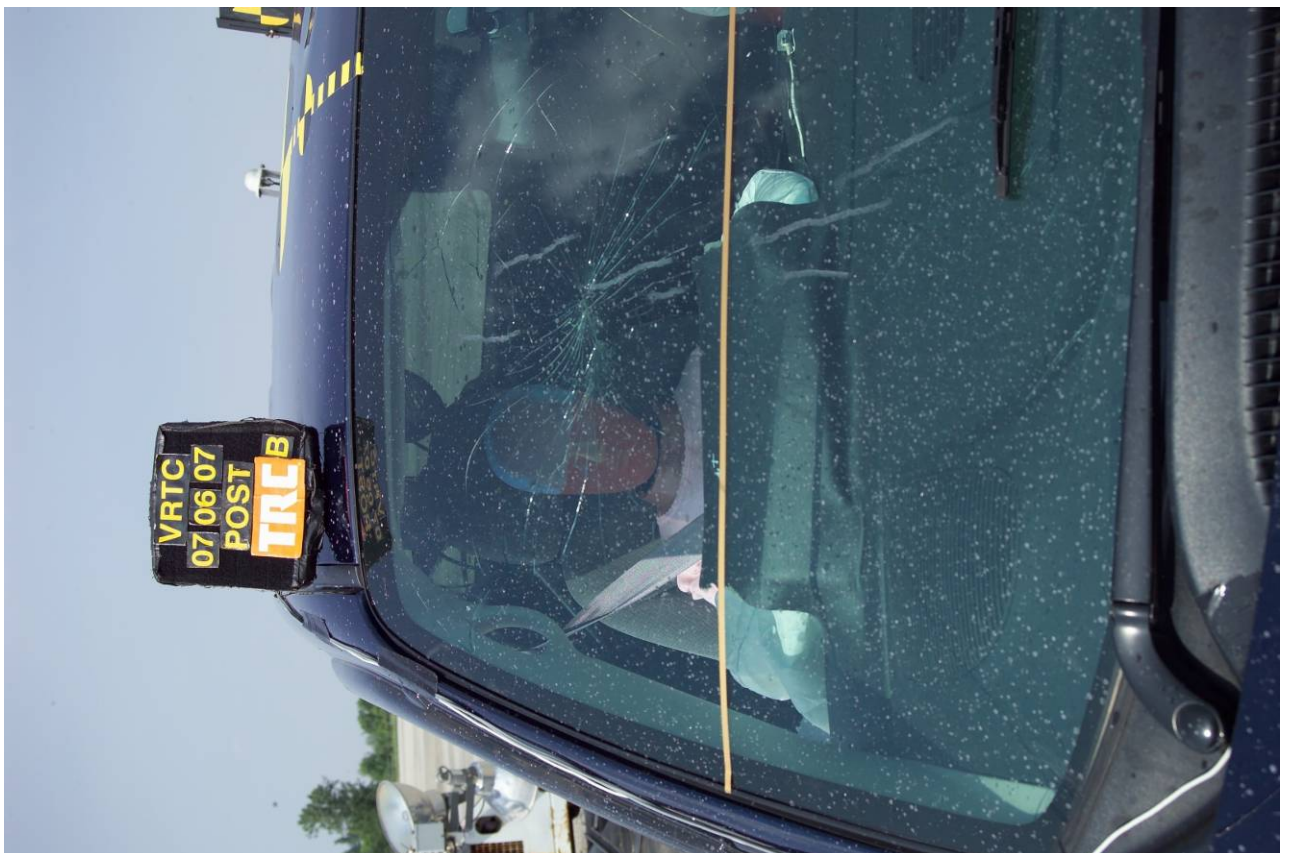


Figure A-110 Post-Test Bullet Vehicle Passenger Dummy - View 1



Figure A-111 Pre-Test Bullet Vehicle Passenger Dummy - View 2



Figure A-112 Post-Test Bullet Vehicle Passenger Dummy - View 2



Figure A-113 Pre-Test Bullet Vehicle Passenger Dummy - View 3



Figure A-114 Post-Test Bullet Vehicle Passenger Dummy - View 3

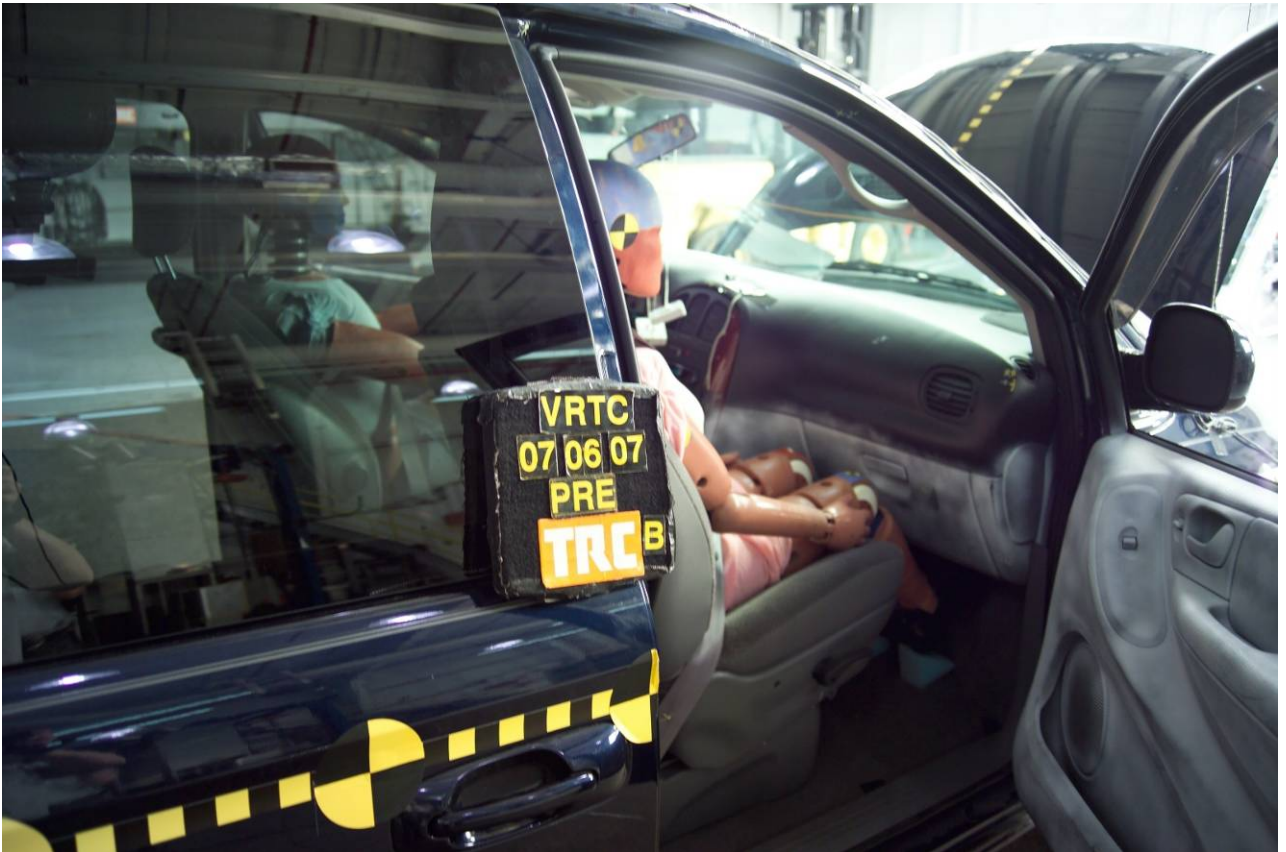


Figure A-115 Pre-Test Bullet Vehicle Passenger Dummy - View 4



Figure A-116 Post-Test Bullet Vehicle Passenger Dummy - View 4



Figure A-117 Post-Test Target Vehicle Driver Dummy Overall Contact View



Figure A-118 Post-Test Target Vehicle Driver Dummy Head Contact View



Figure A-119 Post-Test Target Vehicle Driver Dummy Knee Contact - View 1



Figure A-120 Post-Test Target Vehicle Driver Dummy Knee Contact - View 2

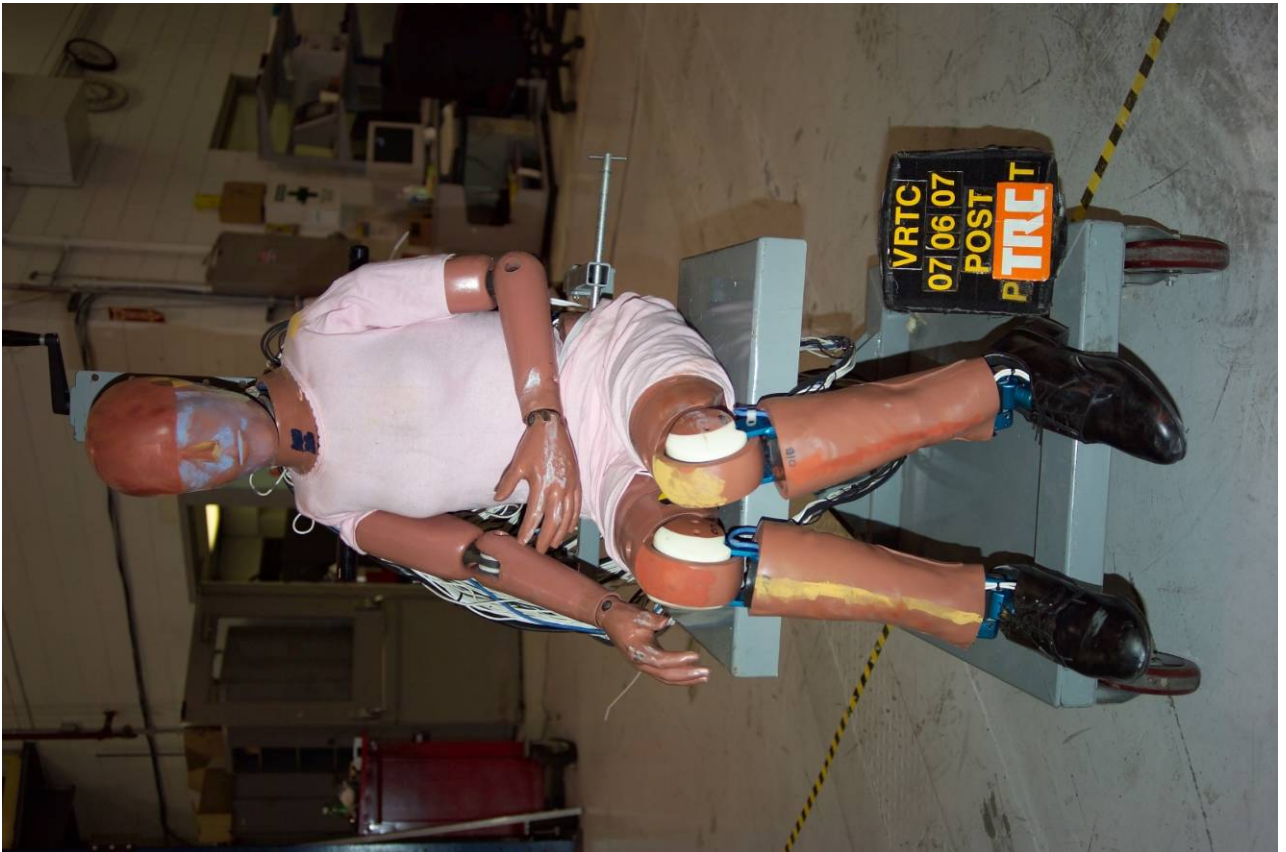


Figure A-121 Post-Test Target Vehicle Passenger Dummy Overall Contact View



Figure A-122 Post-Test Target Vehicle Passenger Dummy Head Contact - View 1



Figure A-123 Post-Test Target Vehicle Passenger Dummy Head Contact - View 2



Figure A-124 Post-Test Target Vehicle Passenger Dummy Knee Contact View



Figure A-125 Post-Test Target Vehicle Passenger Floorboard View



Figure A-126 Post-Test Target Vehicle Passenger Toeboard View



Figure A-127 Post-Test Bullet Vehicle Driver Dummy Overall Contact View



Figure A-128 Post-Test Bullet Vehicle Driver Dummy Head Contact View



Figure A-129 Post-Test Bullet Vehicle Driver Dummy Knee Contact View



Figure A-130 Post-Test Bullet Vehicle Driver Floorboard View



Figure A-131 Post-Test Bullet Vehicle Driver Toeboard View

Intentionally Left Blank

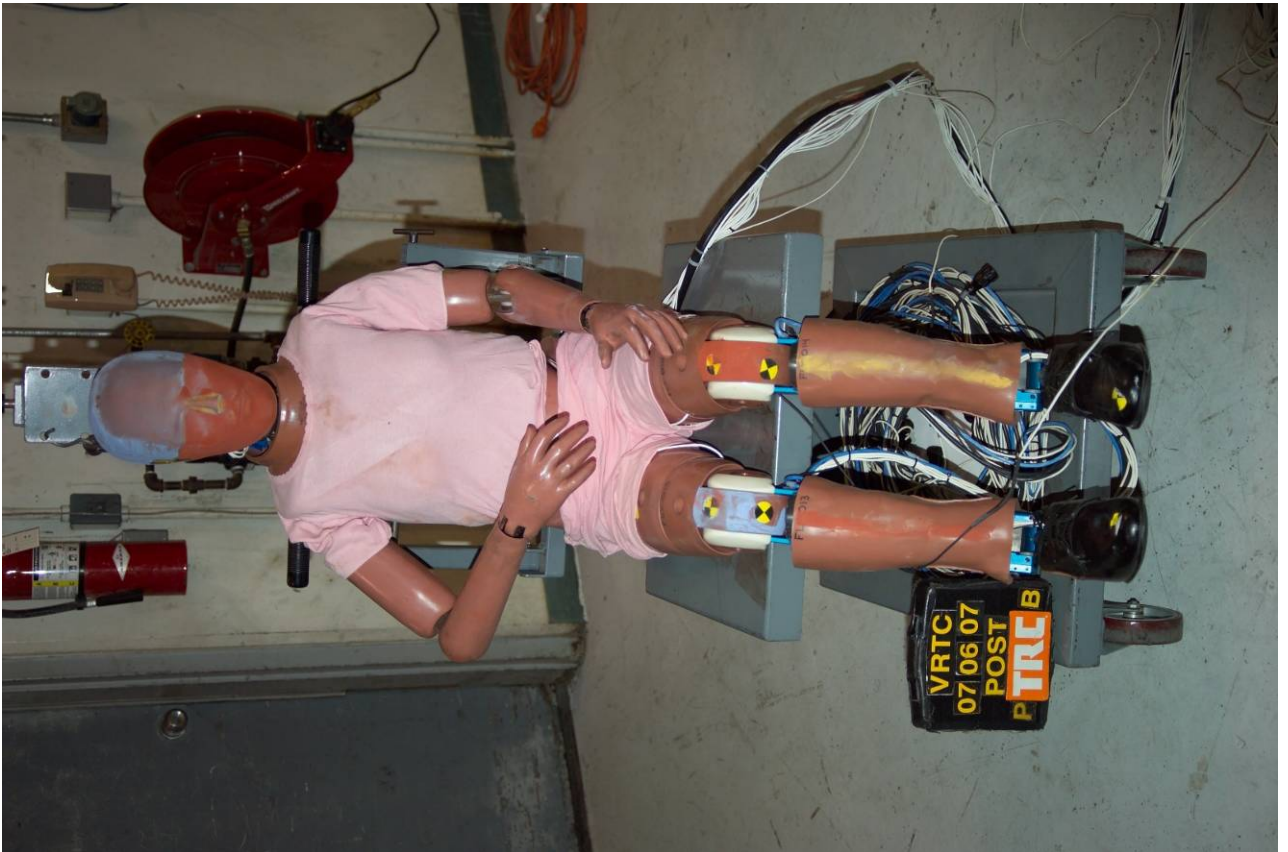


Figure A-132 Post-Test Bullet Vehicle Passenger Dummy Overall Contact View



Figure A-133 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 1



Figure A-134 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 2



Figure A-135 Post-Test Bullet Vehicle Passenger Dummy Knee Contact View



Figure A-136 Post-Test Bullet Vehicle Passenger Floorboard View



Figure A-137 Post-Test Bullet Vehicle Passenger Toeboard View



Figure A-138 Target Vehicle Certification and Recommended Tire Pressure Label View



Figure A-139 Bullet Vehicle Certification Label View



Figure A-140 Bullet Vehicle Recommended Tire Pressure Label View

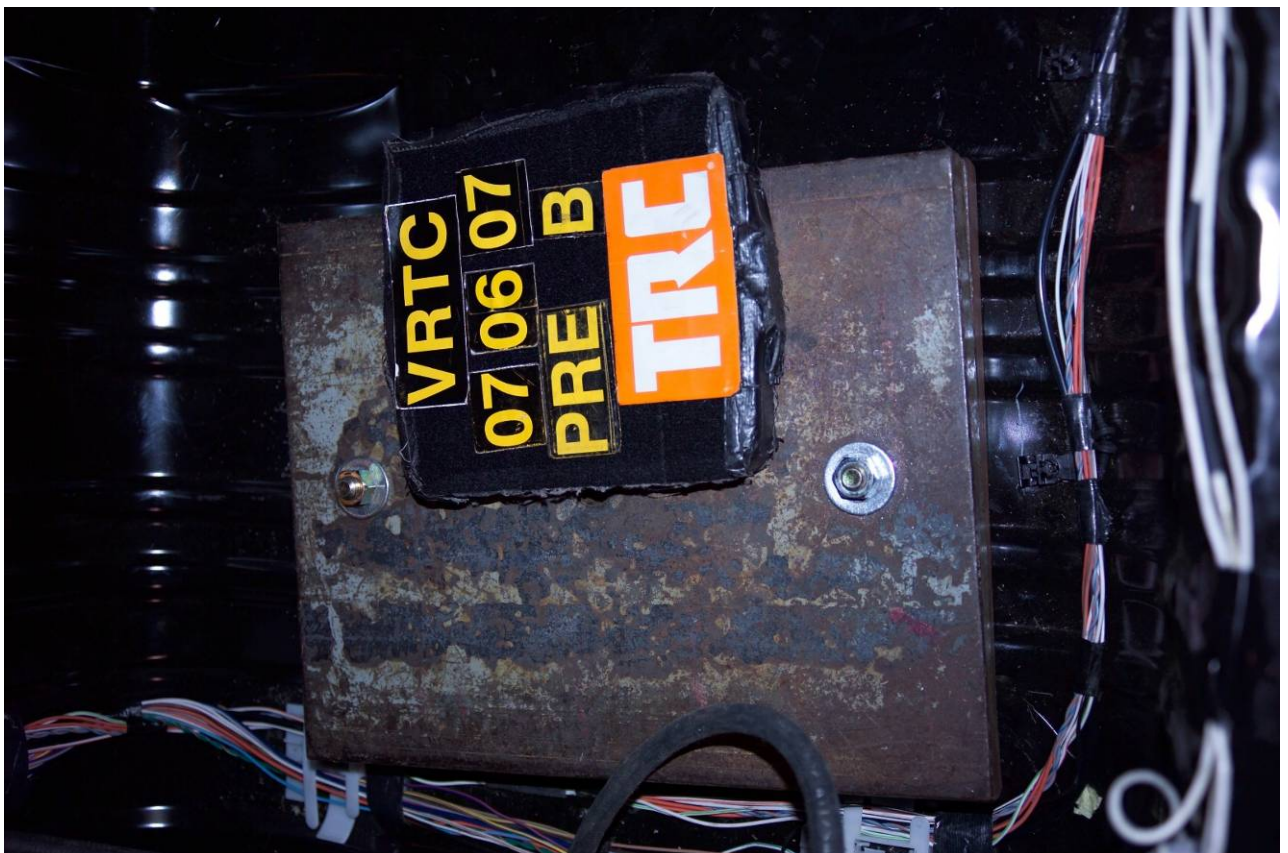


Figure A-141 Pre-Test Bullet Vehicle Ballast View

Appendix B

Data Plots



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

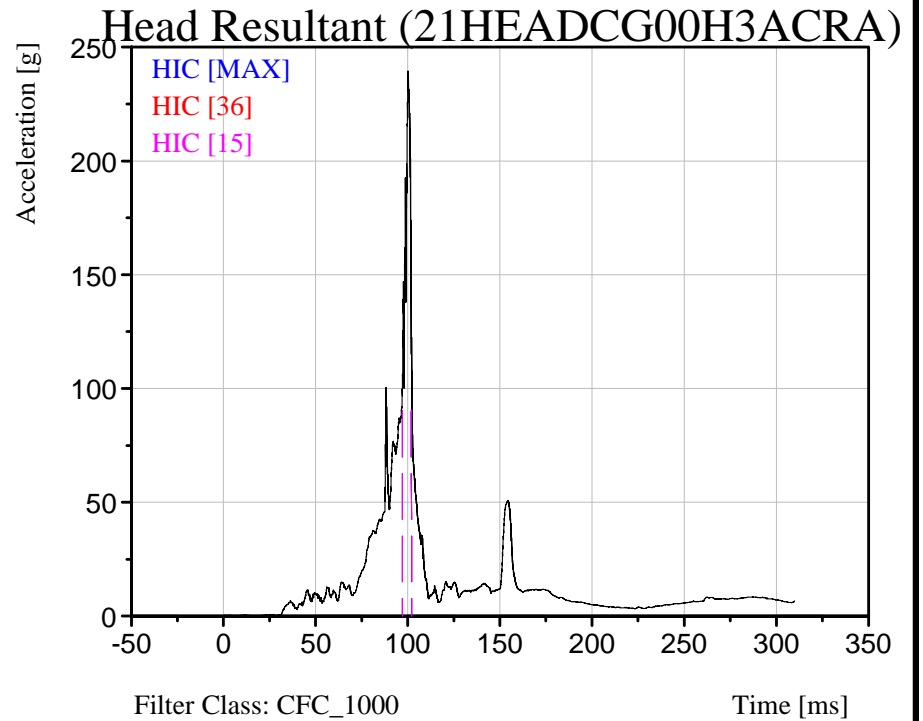
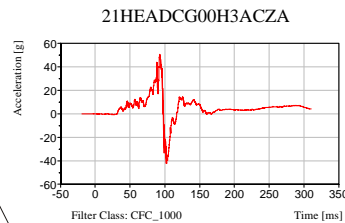
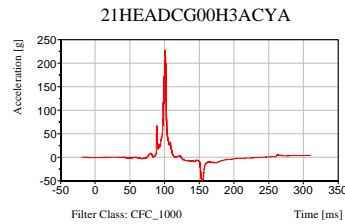
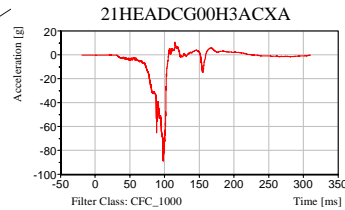
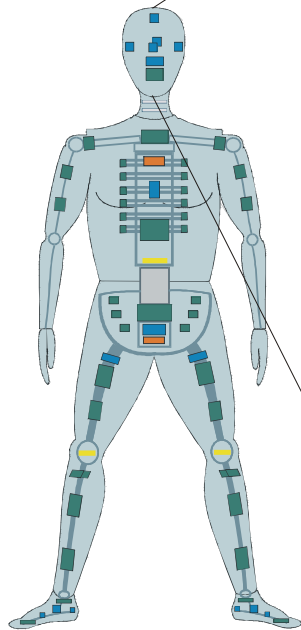
Time: 15:44

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



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070607

Dummy: HIII 50th Male
 Seating Position:
 Driver

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 2,072.84	97.08 ms	102.04 ms	176.07 g
HIC [36] = 2,072.84	97.08 ms	102.04 ms	176.07 g
HIC [15] = 2,072.84	97.08 ms	102.04 ms	176.07 g

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



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

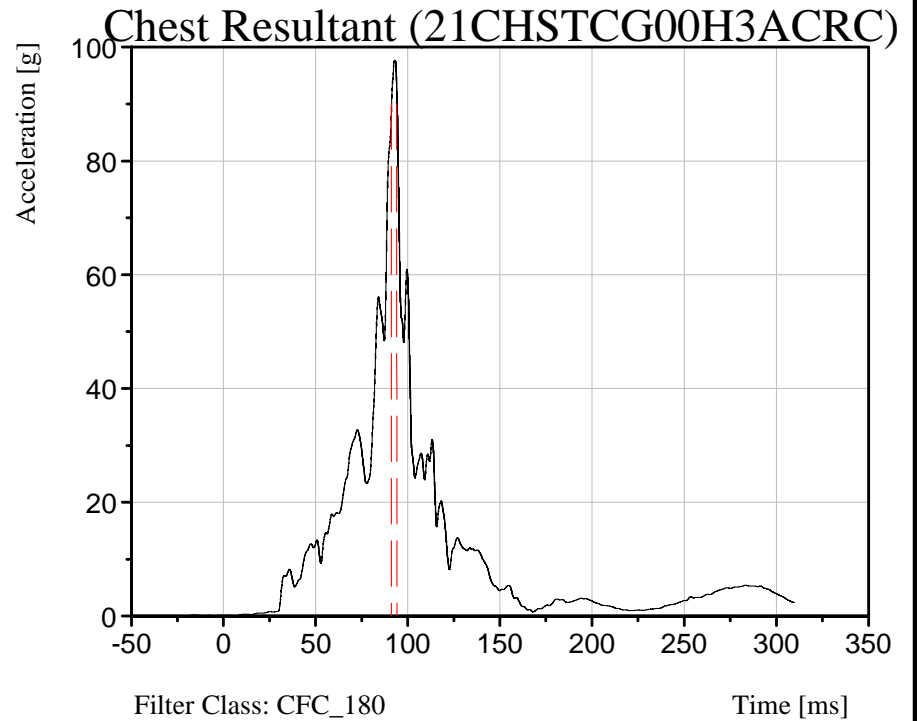
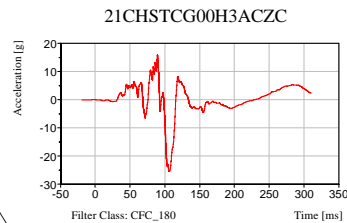
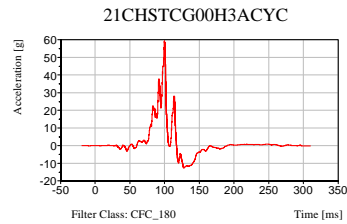
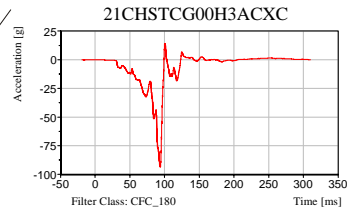
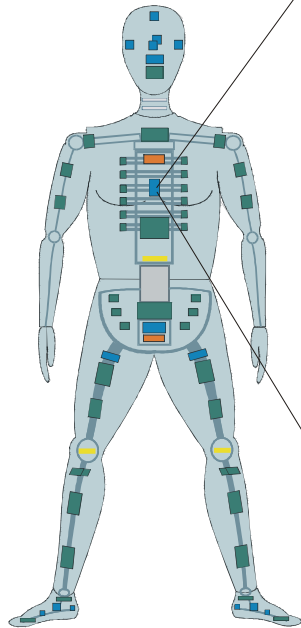
3 ms Duration Acceleration (Chest)

Time: 15:44

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



3 ms Duration Acceleration = 89.97 g

T1 (Begin)
91.13 ms

T2 (End)
94.13 ms

Chest Severity Index = 921.01

Dummy: HIII 50th Male

Seating Position:

Driver

3 ms Duration Acceleration Source Code : vbScript w/DIADEM 9.0

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

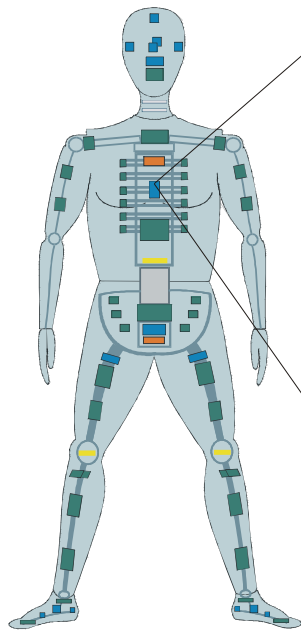
Chest Deflection

Customer: VRTC

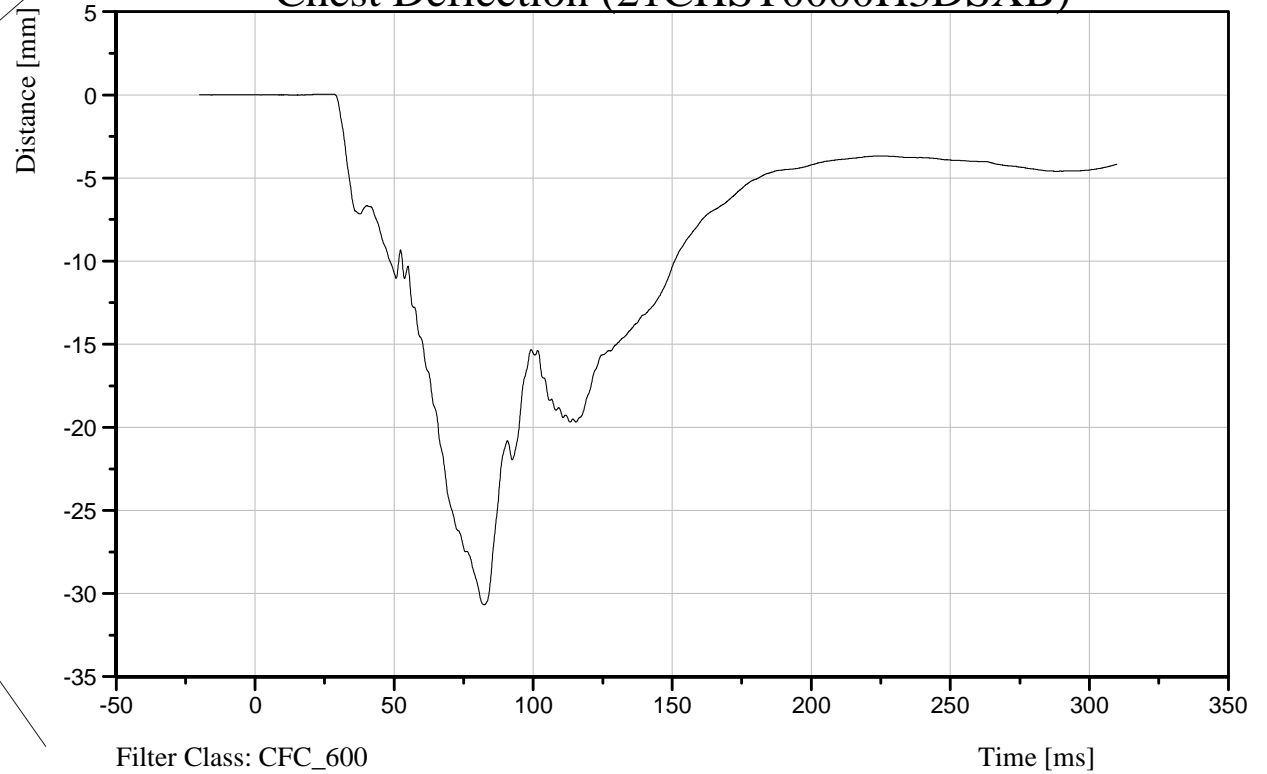
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



Chest Deflection (21CHST0000H3DSXB)



Dummy: HIII 50th Male

Seating Position:

Driver

[Max.] 0.04 mm at 25.16 ms

[Min.] -30.68 mm at 82.36 ms

ChestDeflection Source Code : Min/Max of 21CHST0000H3DSXB (CFC_600)

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal Neck Moment about the Occipital Condyle (NECK OM)

Date: 06/07/2007
Time: 15:44

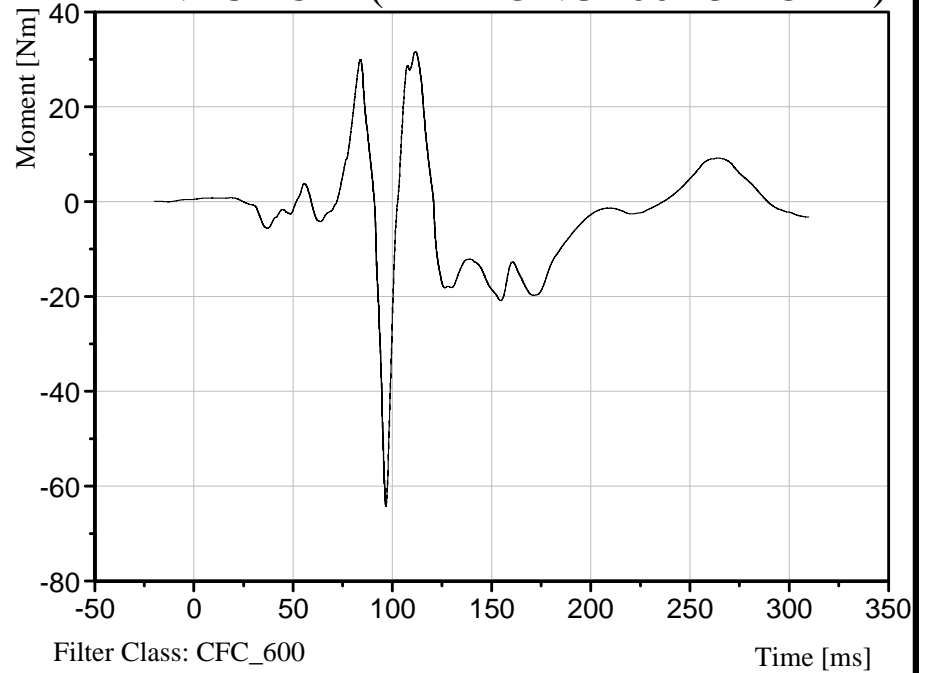
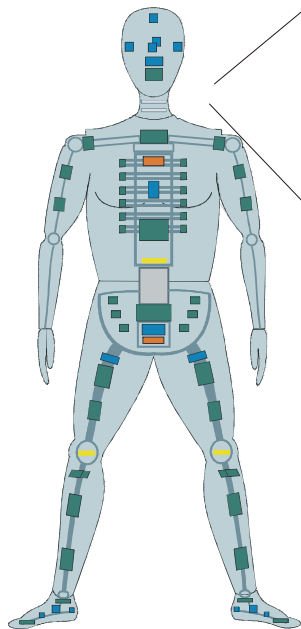
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal

NECKOM (21TMONUP00H3MOYX)



[Max.] 31.71 Nm at 111.64 ms

[Min.] -64.26 Nm at 96.76 ms

Dummy: HIII 50th Male

Seating Position:

Driver

Neck OM Source Code: My - (D*Fx)

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

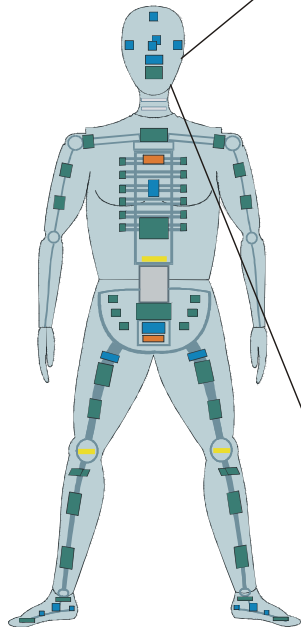
Date: 06/07/2007

Time: 15:44

Neck Injury Predictor (NIJ)

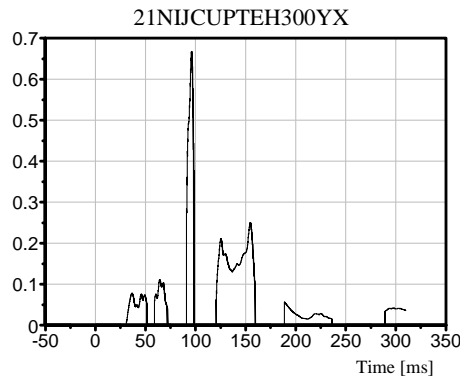
Customer: VRTC

Test Orientation = Frontal
Fzc(Tension) = 6806
Fzc(Compression) = 6160
Myc(Extension) = 135
Myc(Flexion) = 310

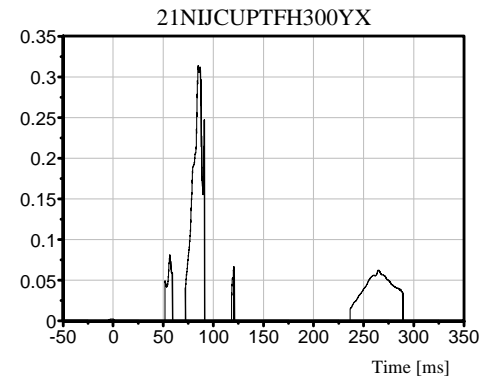


TRC Inc. Test Lab: CTF

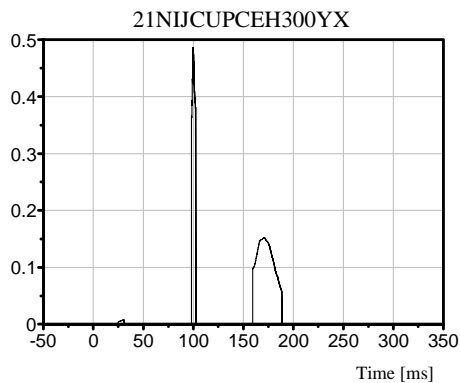
Test Number: 070607



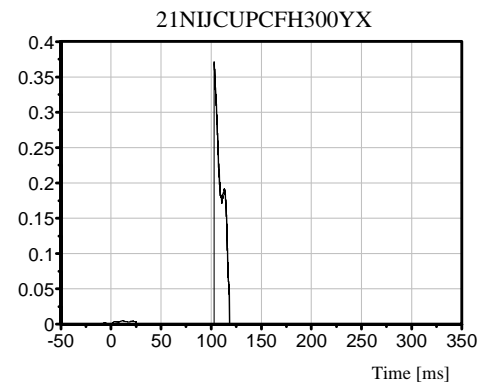
Max [NTE] 0.6686 at 96.12 ms



Max [NTF] 0.3138 at 84.76 ms



Max [NCE] 0.4864 at 99.88 ms



Max [NCF] 0.3714 at 102.68 ms

Dummy: HIII 50th Male
Seating Position:

Driver

NIJ Source Code: (Fz/Fzc)+(Myc/Myc)

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

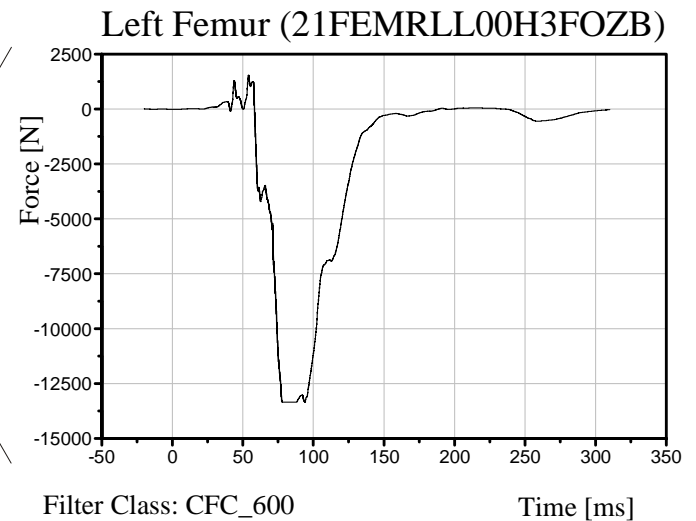
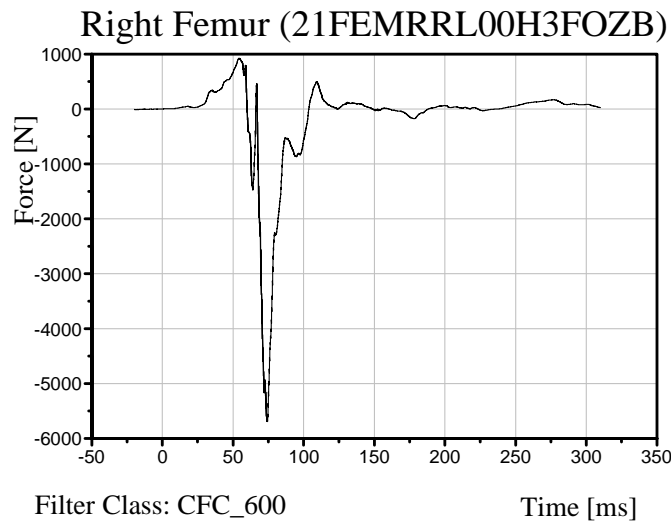
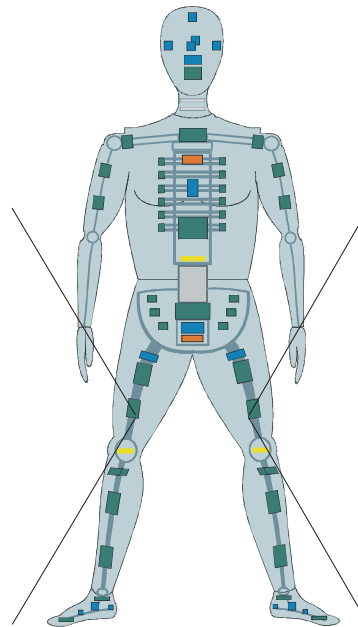
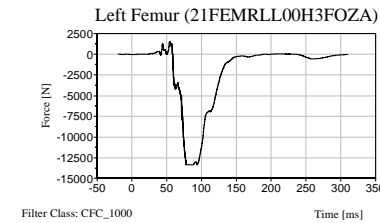
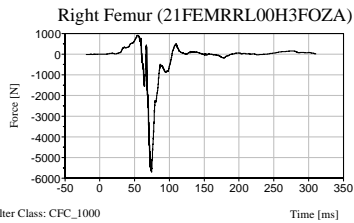
Time: 15:44

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



Max [Tension] 928.40 N at 54.28 ms
 Min [Compression] -5,688.47 N at 74.12 ms

Dummy: HIII 50th Male
 Seating Position:
 Driver

Max [Tension] 1,547.48 N at 53.96 ms
 Min [Compression] -13,342.38 N at 77.80 ms

Femur Load Source Code : Min/Max of 21FEMRRL00H3FOZB and 21FEMRLL00H3FOZB (CFC 600)

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

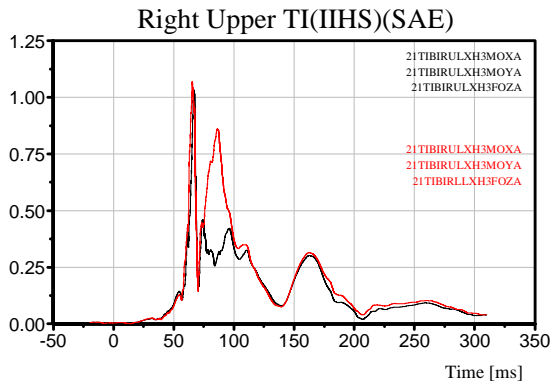
Tibia Index (TI)

Customer: VRTC

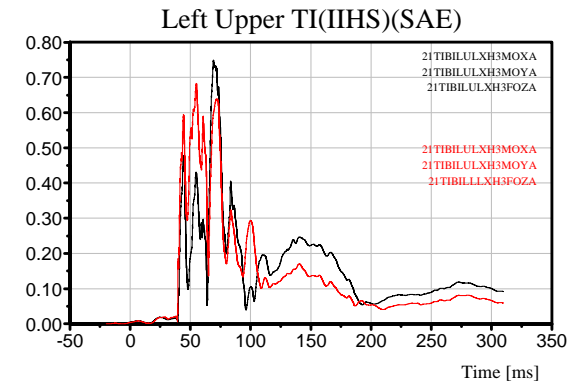
TRC Inc. Test Lab: CTF

Test Number: 070607

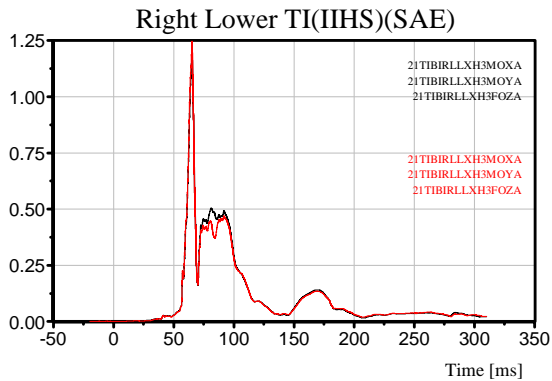
Critical Bending Moment = 240 N-m
Critical Compression Force = 12000 N



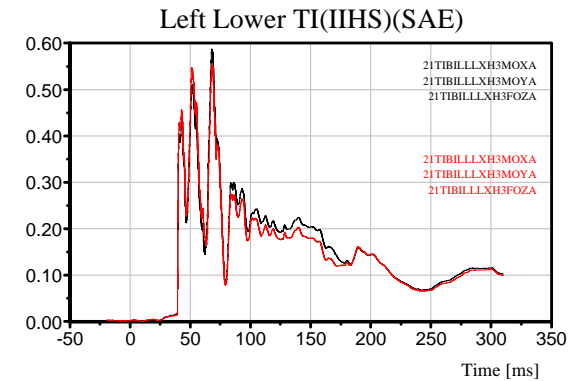
Max = 1.03 at 66.92 ms (SAE)
Max = 1.07 at 65.24 ms (IIHS)



Max = 0.75 at 69.16 ms (SAE)
Max = 0.68 at 54.92 ms (IIHS)



Max = 1.21 at 65.08 ms (SAE)
Max = 1.25 at 65.08 ms (IIHS)



Max = 0.59 at 67.88 ms (SAE)
Max = 0.55 at 67.96 ms (IIHS)

Dummy: HIII 50th Male
Seating Position:
Driver

Tibia Index Source Code : Guideline 96/79/EC; SAE J1727 AUG96; and IIHS Crashworthiness Evaluation Offset Barrier Crash Test Protocol (Version X)

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

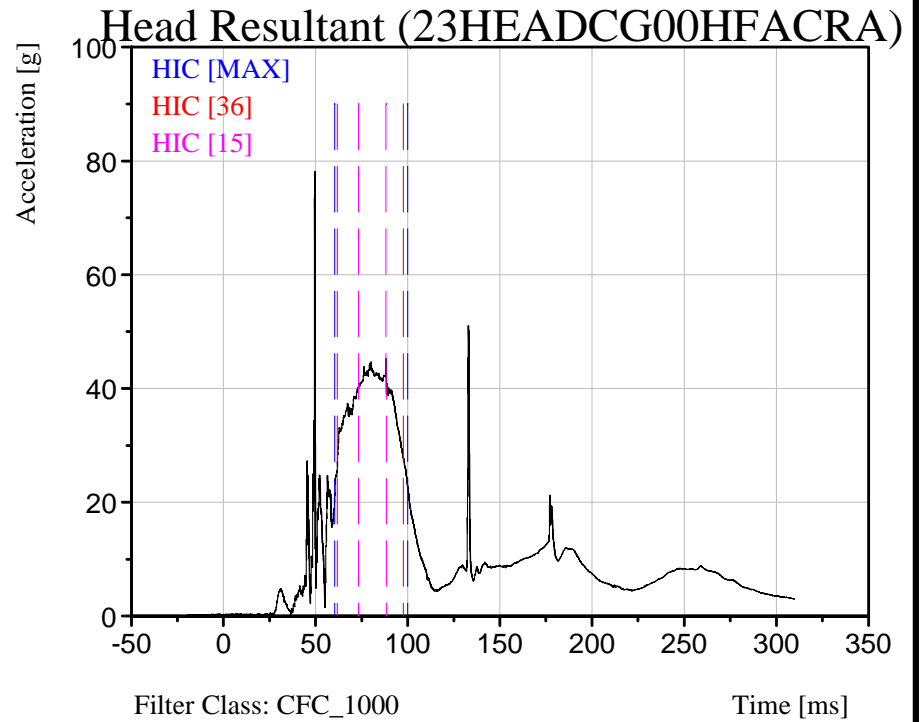
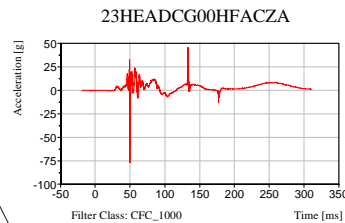
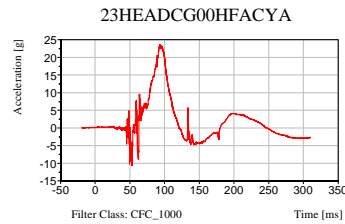
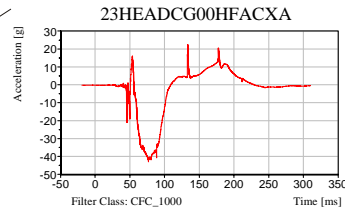
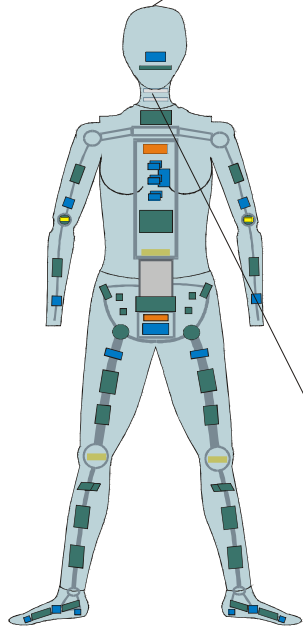
Time: 15:44

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 333.55	60.44 ms	100.04 ms	37.14 g
HIC [36] = 328.68	61.72 ms	97.72 ms	38.36 g
HIC [15] = 175.48	73.32 ms	88.36 ms	42.33 g

Dummy: HIII 5th Female
 Seating Position:
 Right Front Passenger

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

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

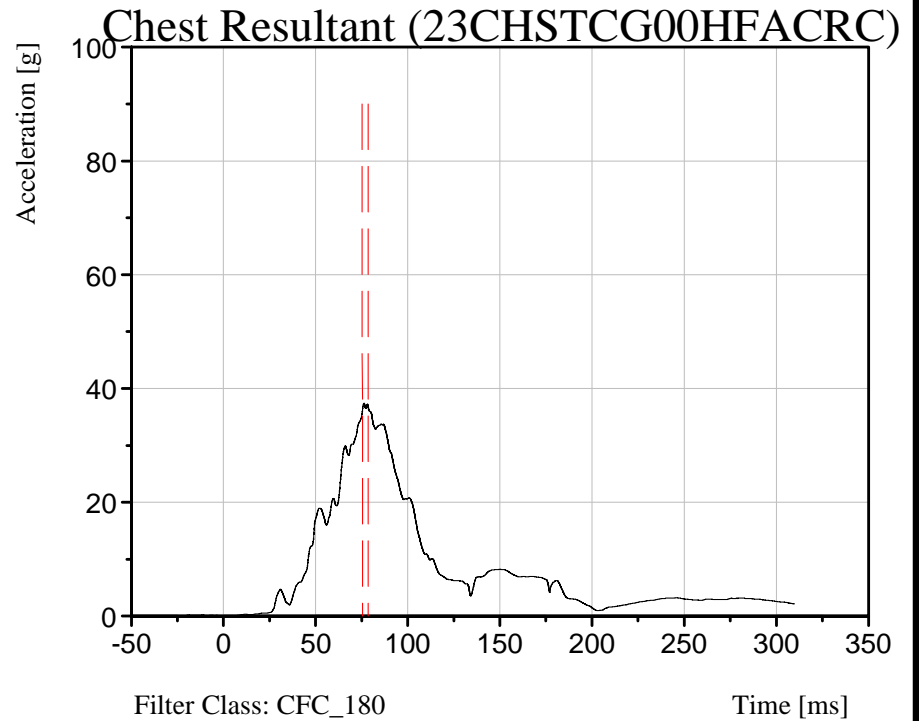
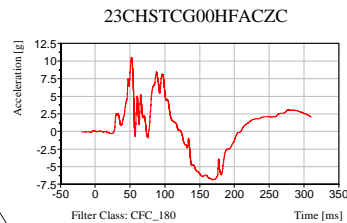
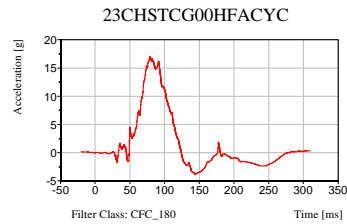
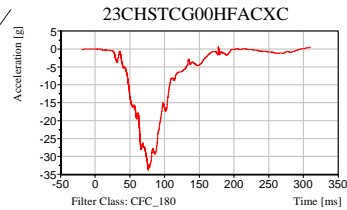
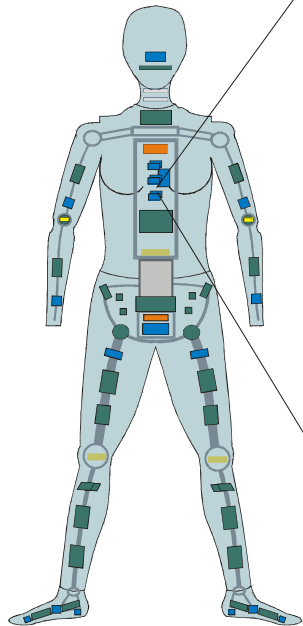
3 ms Duration Acceleration (Chest)

Time: 15:44

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



3 ms Duration Acceleration = 36.50 g
 Chest Severity Index = 238.88

T1 (Begin) T2 (End)
 75.42 ms 78.59 ms

Dummy: HIII 5th Female
 Seating Position:
 Right Front Passenger

3 ms Duration Acceleration Source Code : vbScript w/DIADEM 9.0

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

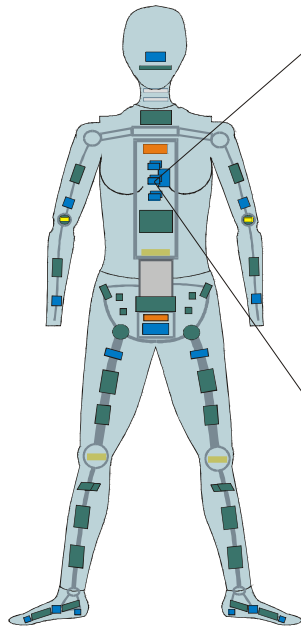
Chest Deflection

Customer: VRTC

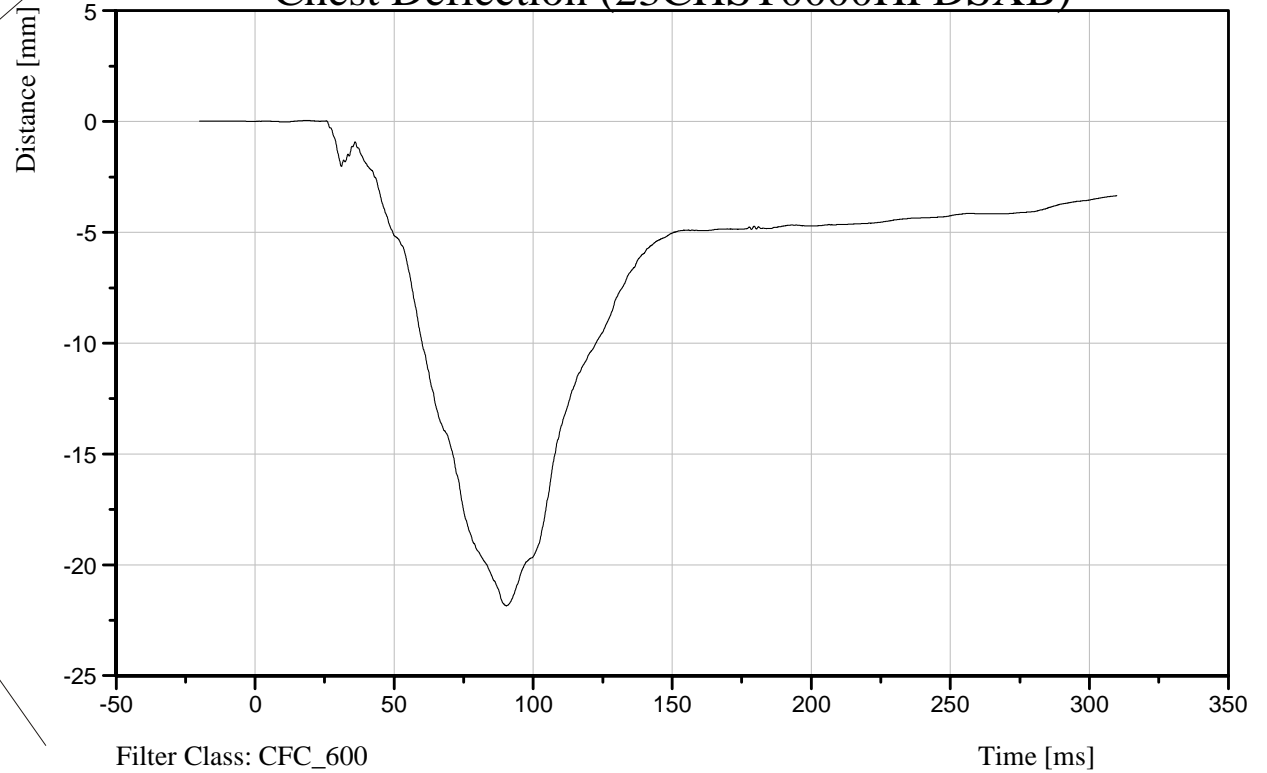
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



Chest Deflection (23CHST0000HFDSXB)



Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

[Max.] 0.06 mm at 18.68 ms

[Min.] -21.85 mm at 90.36 ms

ChestDeflection Source Code : Min/Max of 23CHST0000HFDSXB (CFC_600)

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal Neck Moment about the Occipital Condyle (NECK OM)

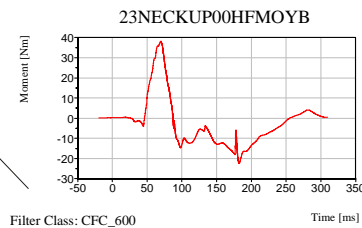
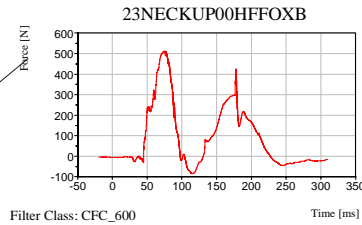
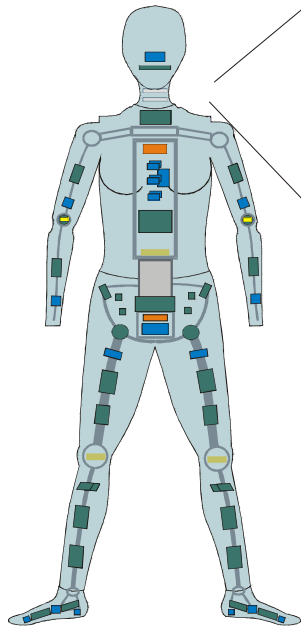
Date: 06/07/2007
Time: 15:44

Customer: VRTC

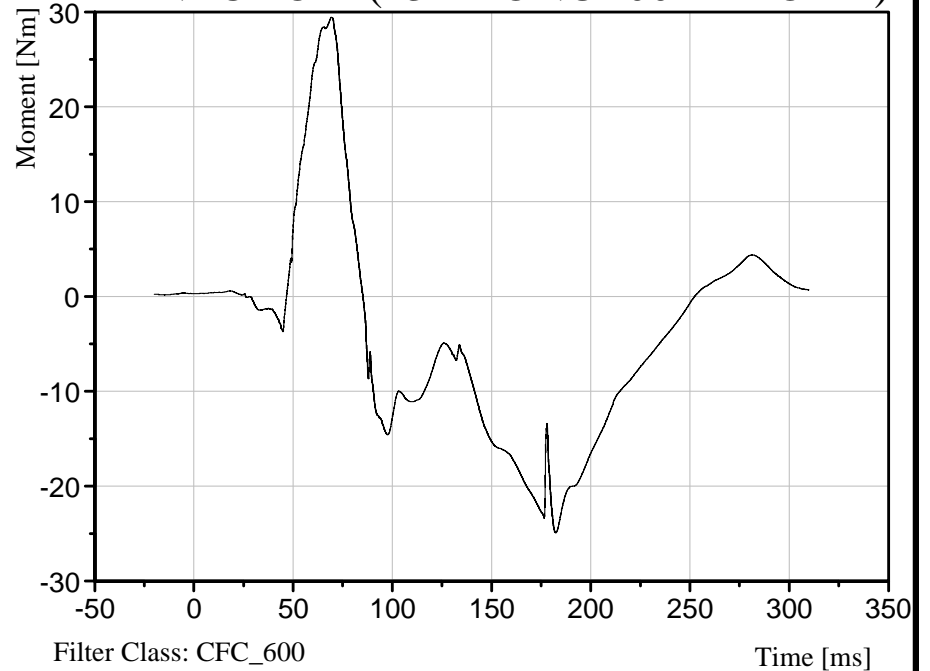
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



NECKOM (23TMONUP00HFMOYX)



[Max.] 29.46 Nm at 69.24 ms

[Min.] -24.90 Nm at 182.44 ms

Dummy: HIII 5th Female
Seating Position:
Right Front Passenger

Neck OM Source Code: My - (D*Fx)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

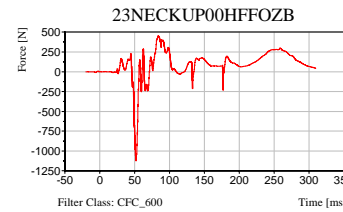
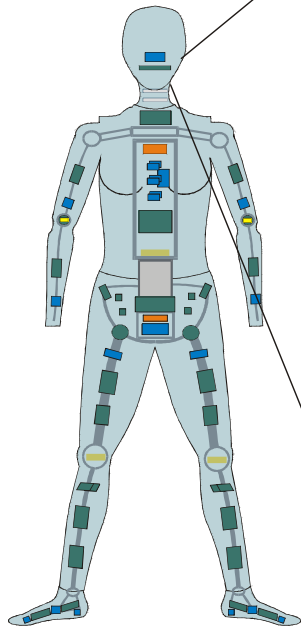
Date: 06/07/2007

Time: 15:44

Neck Injury Predictor (NIJ)

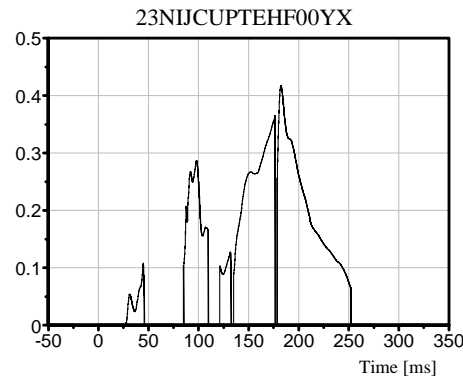
Customer: VRTC

Test Orientation = Frontal
Fzc(Tension) = 4287
Fzc(Compression) = 3880
Myc(Extension) = 67
Myc(Flexion) = 155

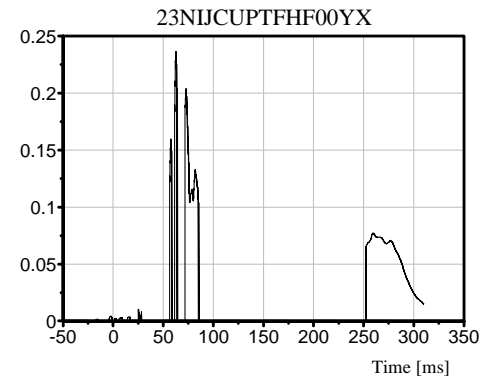


TRC Inc. Test Lab: CTF

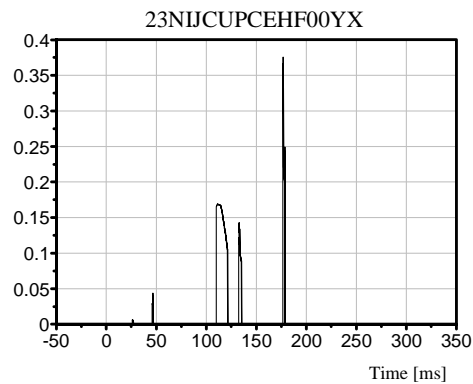
Test Number: 070607



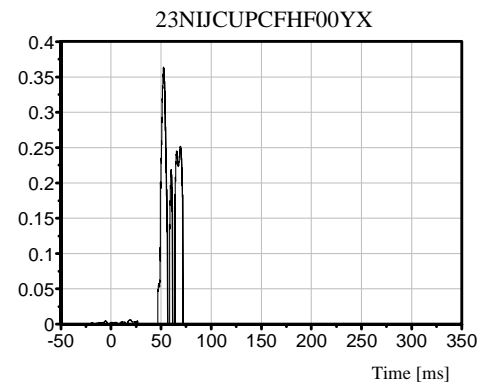
Max [NTE] 0.4176 at 182.36 ms



Max [NTF] 0.2366 at 62.52 ms



Max [NCE] 0.3755 at 176.84 ms



Max [NCF] 0.3638 at 52.28 ms

Dummy: HIII 5th Female Seating Position:

Right Front Passenger

NIJ Source Code: (Fz/Fzc)+(Myc/Myc)

B-13

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

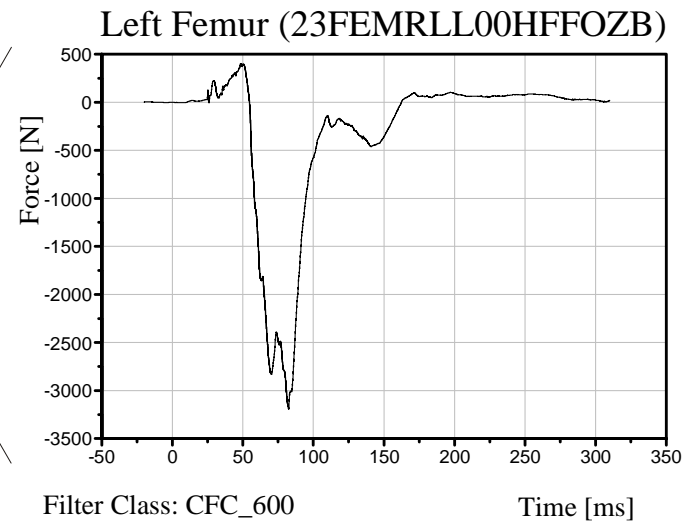
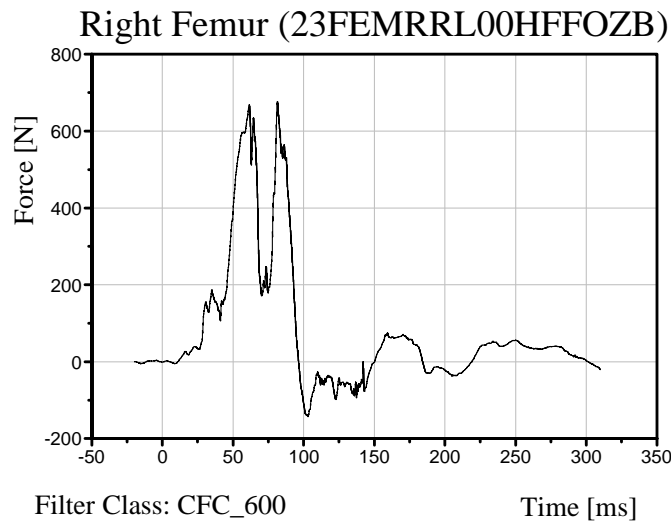
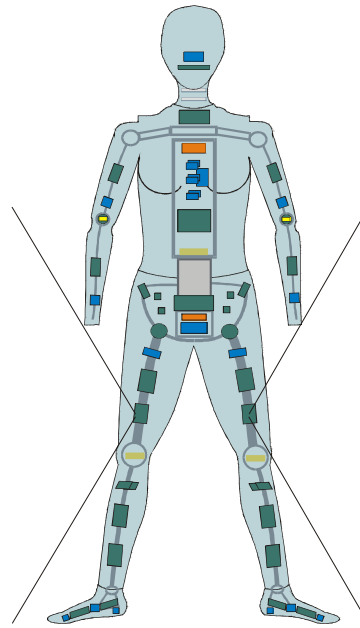
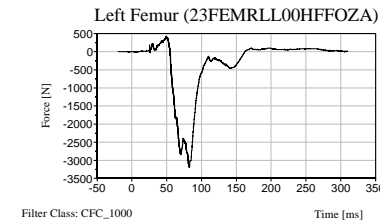
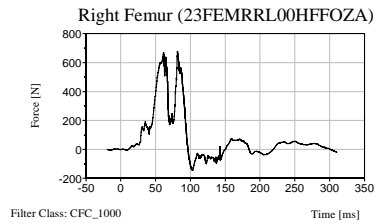
Time: 15:44

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



Max [Tension] 677.33 N at 81.24 ms
 Min [Compression] -142.78 N at 103.08 ms

Dummy: HIII 5th Female
 Seating Position:
 Right Front Passenger

Max [Tension] 404.51 N at 48.92 ms
 Min [Compression] -3,192.53 N at 82.44 ms

Femur Load Source Code : Min/Max of 23FEMRRL00HFFOZB and 23FEMRLL00HFFOZB (CFC 600)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

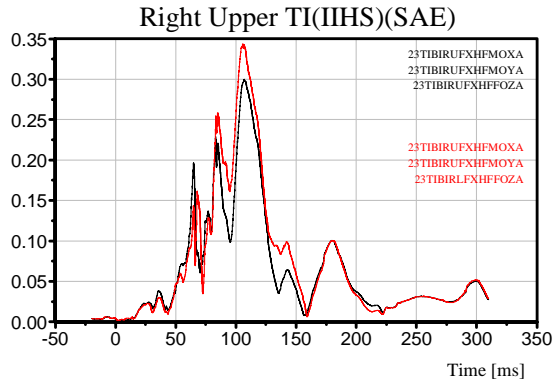
Tibia Index (TI)

Customer: VRTC

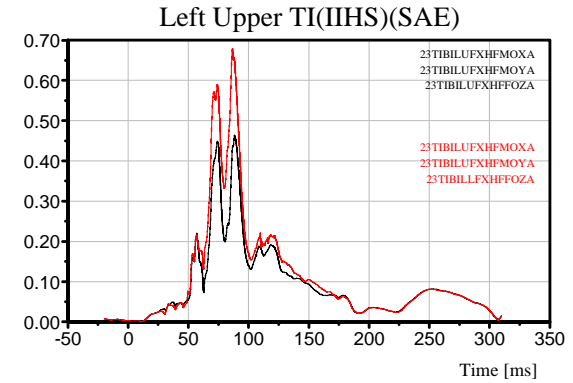
TRC Inc. Test Lab: CTF

Test Number: 070607

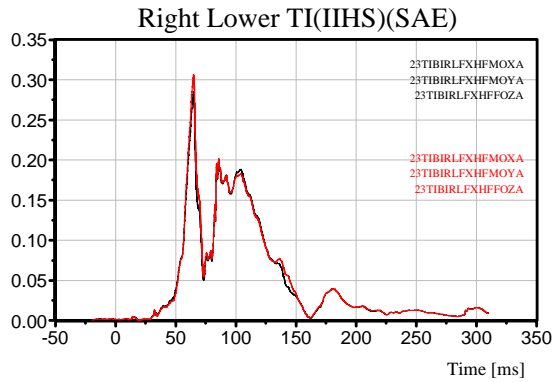
Critical Bending Moment = 146 N-m
Critical Compression Force = 8600 N



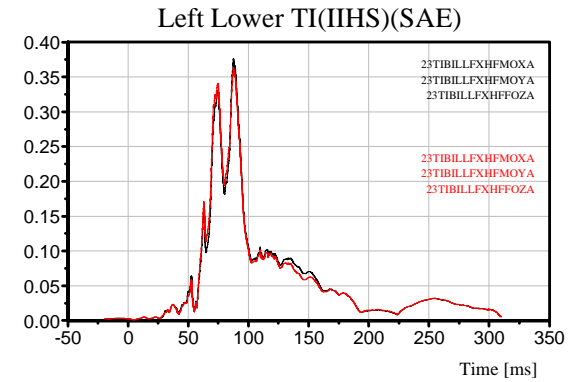
Max = 0.30 at 106.76 ms (SAE)
Max = 0.34 at 105.56 ms (IIHS)



Max = 0.46 at 88.28 ms (SAE)
Max = 0.68 at 86.60 ms (IIHS)



Max = 0.29 at 64.68 ms (SAE)
Max = 0.31 at 64.68 ms (IIHS)



Max = 0.38 at 87.48 ms (SAE)
Max = 0.36 at 87.48 ms (IIHS)

Dummy: III 5th Female
Seating Position:
Right Front Passenger

Tibia Index Source Code : Guideline 96/79/EC; SAE J1727 AUG96; and IIHS Crashworthiness Evaluation Offset Barrier Crash Test Protocol (Version X)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

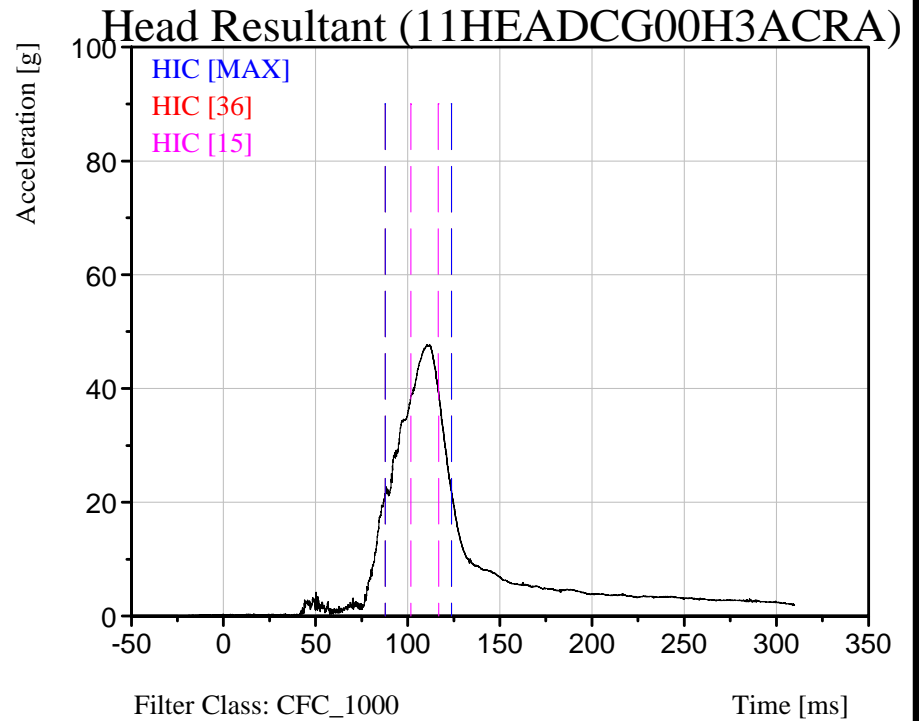
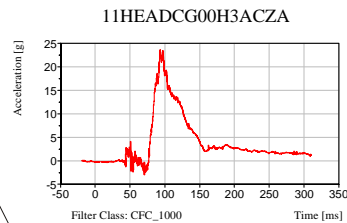
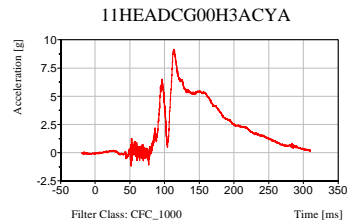
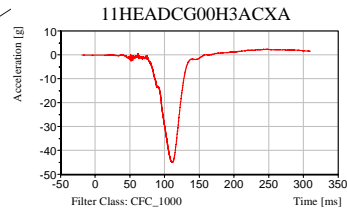
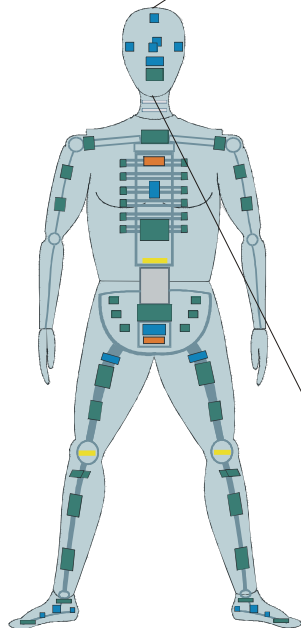
Time: 15:44

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



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070607

Dummy: HIII 50th Male
Seating Position:
Driver

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 276.25	87.80 ms	123.80 ms	35.78 g
HIC [36] = 276.25	87.80 ms	123.80 ms	35.78 g
HIC [15] = 194.69	101.72 ms	116.76 ms	44.11 g

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



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

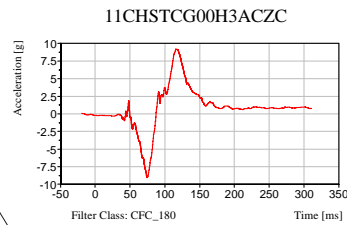
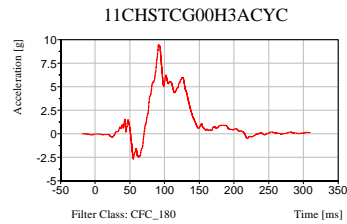
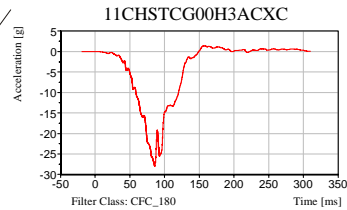
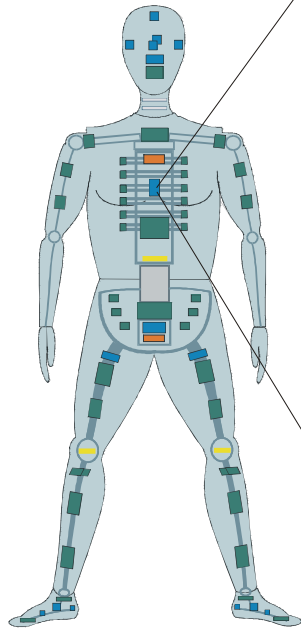
3 ms Duration Acceleration (Chest)

Time: 15:44

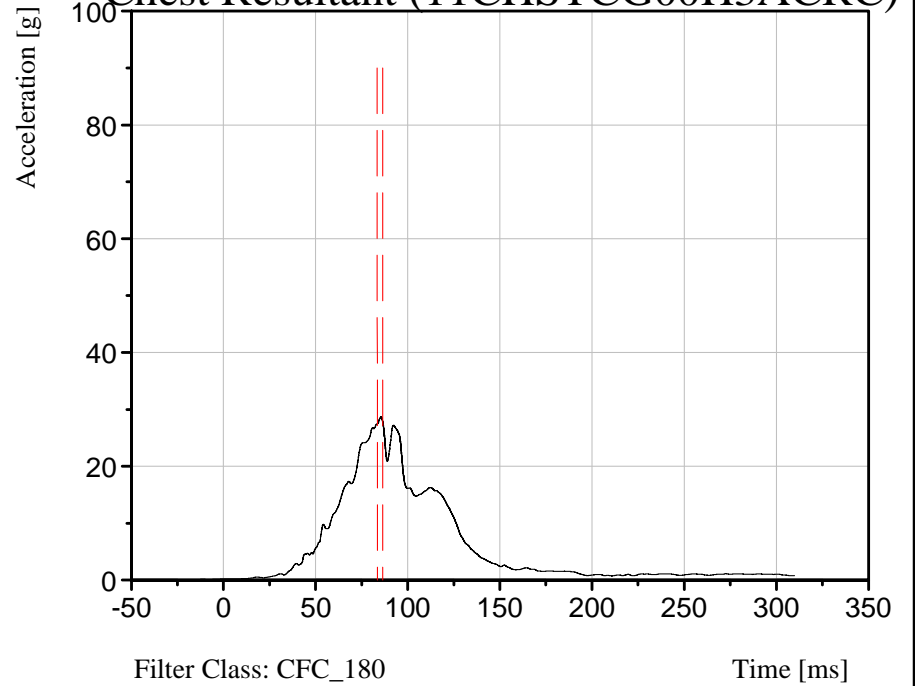
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



Chest Resultant (11CHSTCG00H3ACRC)



3 ms Duration Acceleration = 27.48 g
 Chest Severity Index = 122.69

<u>T1</u> (Begin)	<u>T2</u> (End)
83.51 ms	86.51 ms

Dummy: HIII 50th Male
 Seating Position:
 Driver

3 ms Duration Acceleration Source Code : vbScript w/DIAdem 9.0

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

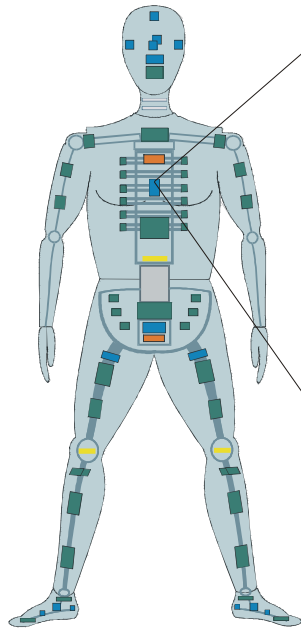
Chest Deflection

Customer: VRTC

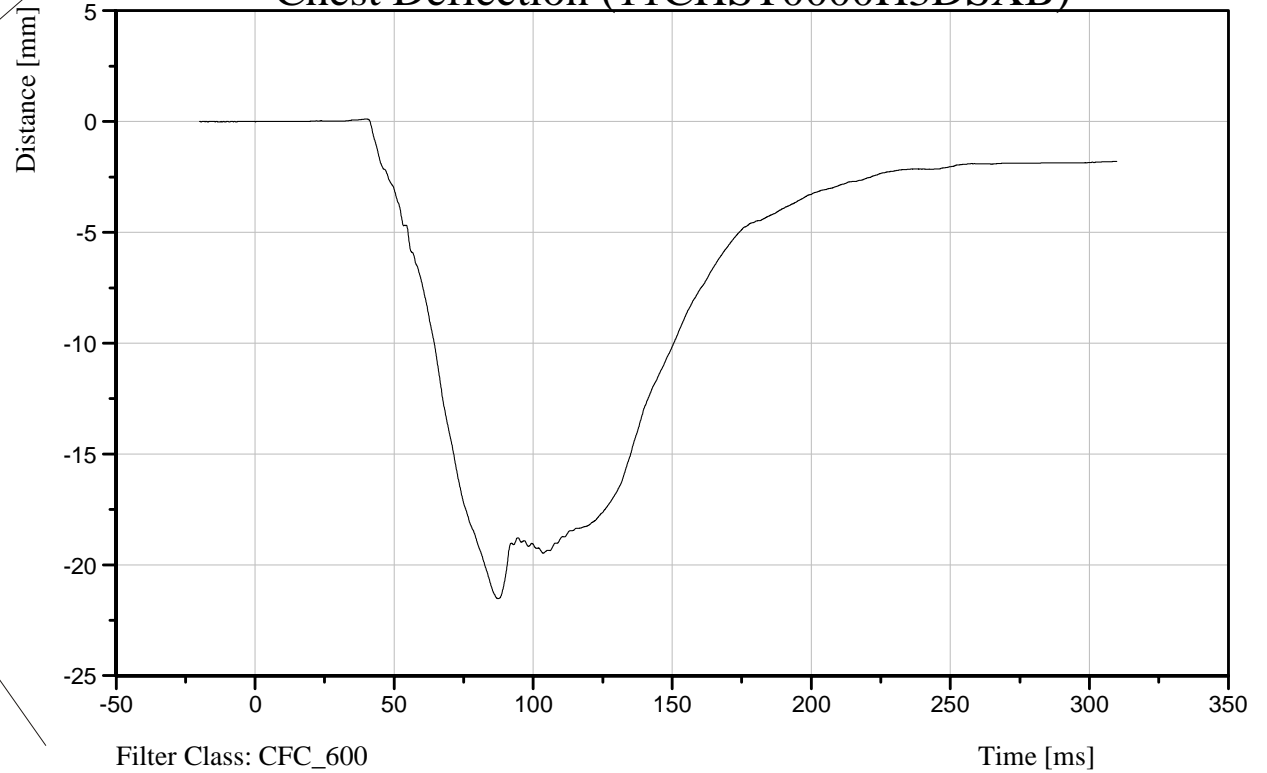
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



Chest Deflection (11CHST0000H3DSXB)



Dummy: HIII 50th Male

Seating Position:

Driver

[Max.] 0.12 mm at 40.12 ms

[Min.] -21.52 mm at 87.40 ms

ChestDeflection Source Code : Min/Max of 11CHST0000H3DSXB (CFC_600)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal Neck Moment about the Occipital Condyle (NECK OM)

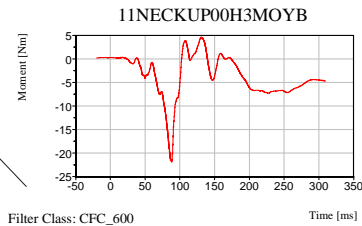
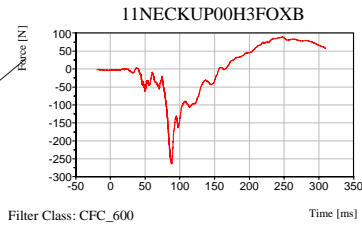
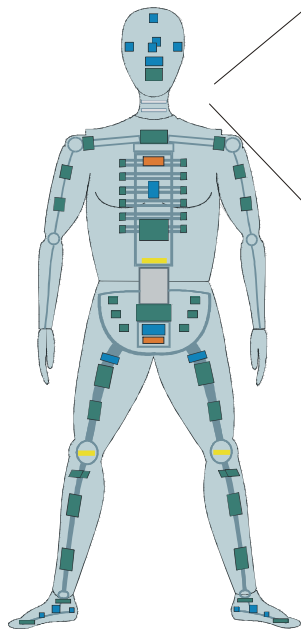
Date: 06/07/2007
Time: 15:44

Customer: VRTC

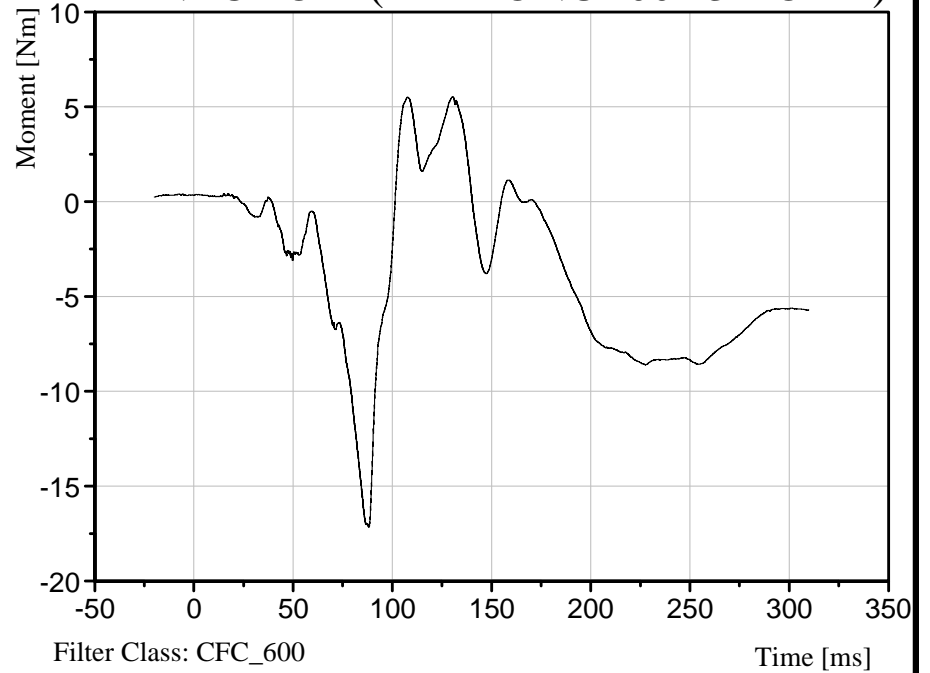
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



NECKOM (11TMONUP00H3MOYX)



[Max.] 5.53 Nm at 130.36 ms

[Min.] -17.16 Nm at 88.20 ms

Dummy: HIII 50th Male

Seating Position:

Driver

Neck OM Source Code: My - (D*Fx)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

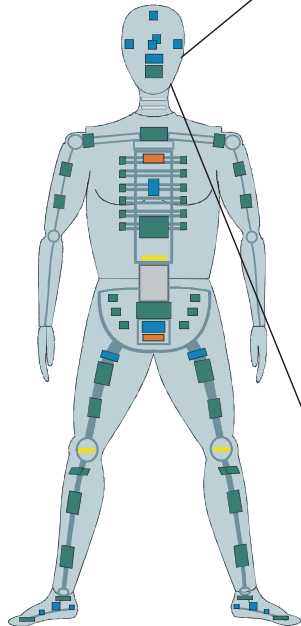
Date: 06/07/2007

Time: 15:44

Neck Injury Predictor (NIJ)

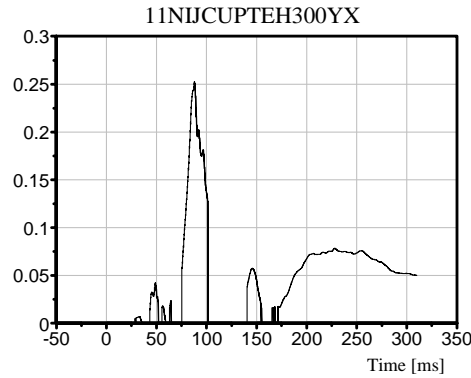
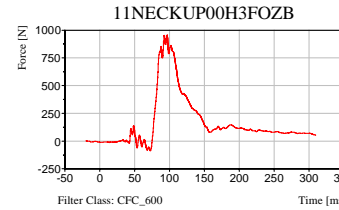
Customer: VRTC

Test Orientation = Frontal
Fzc(Tension) = 6806
Fzc(Compression) = 6160
Myc(Extension) = 135
Myc(Flexion) = 310

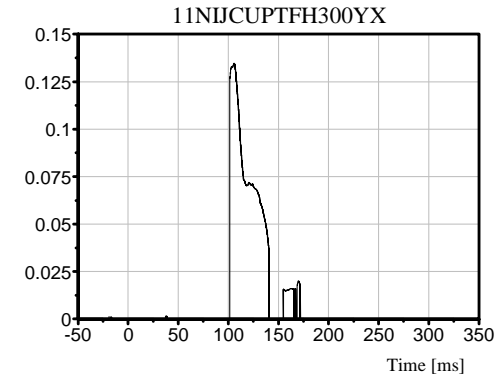


TRC Inc. Test Lab: CTF

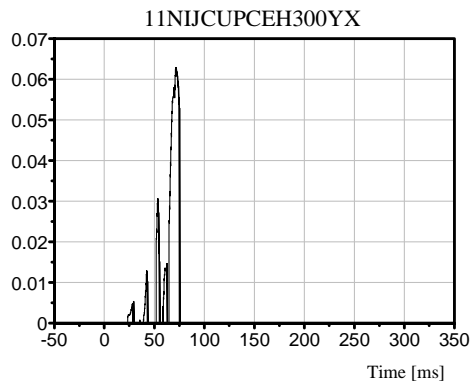
Test Number: 070607



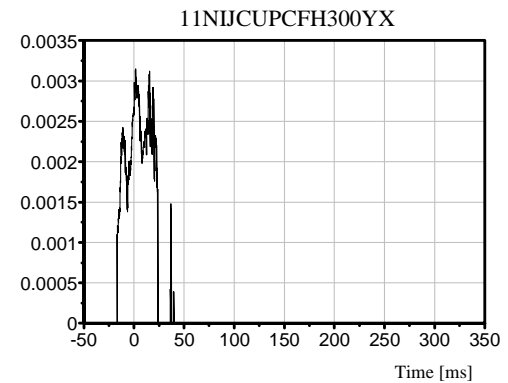
Max [NTE] 0.2525 at 88.04 ms



Max [NTF] 0.1348 at 105.64 ms



Max [NCE] 0.0630 at 71.80 ms



Max [NCF] 0.0032 at 1.40 ms

Dummy: HIII 50th Male
Seating Position:

Driver

NIJ Source Code: (Fz/Fzc)+(Myc/Myc)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

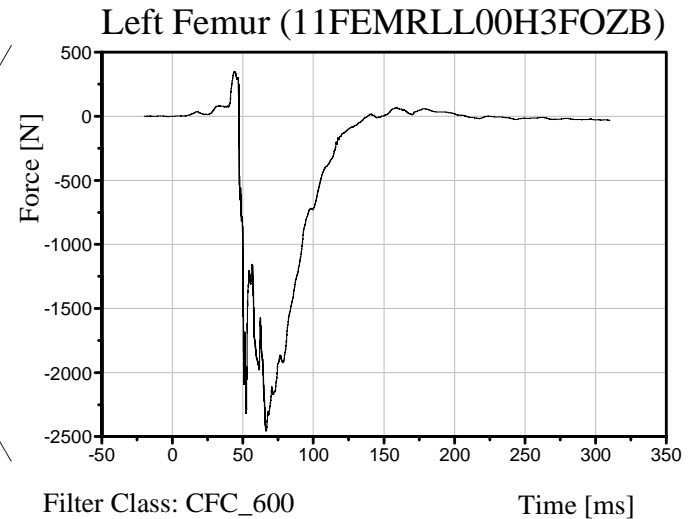
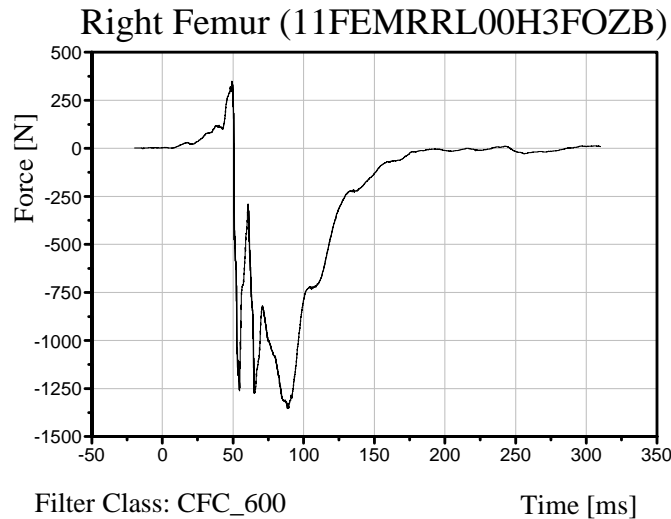
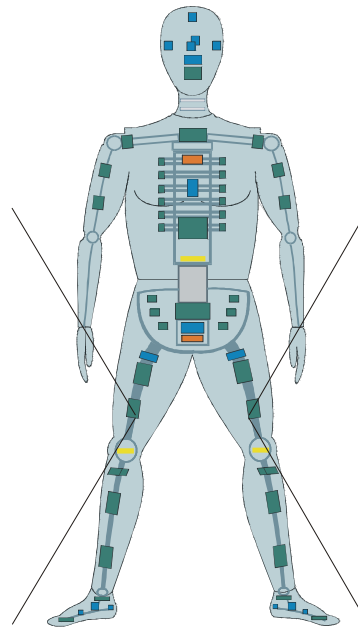
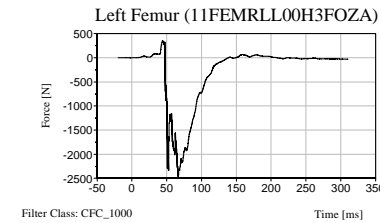
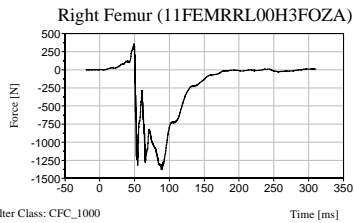
Time: 15:44

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



Max [Tension] 347.94 N at 49.08 ms
 Min [Compression] -1,354.55 N at 88.44 ms

Dummy: HIII 50th Male
 Seating Position:
 Driver

Max [Tension] 348.34 N at 43.80 ms
 Min [Compression] -2,457.96 N at 66.44 ms

Femur Load Source Code : Min/Max of 11FEMRRL00H3FOZB and 11FEMRLL00H3FOZB (CFC 600)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

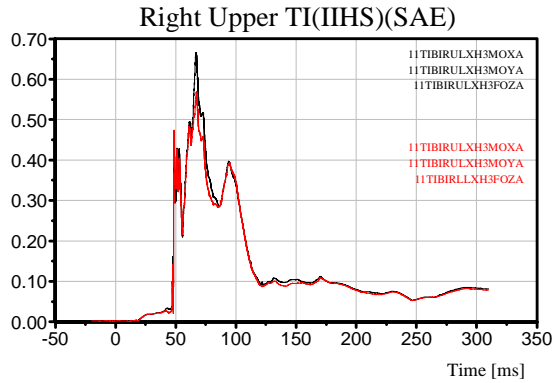
Tibia Index (TI)

Customer: VRTC

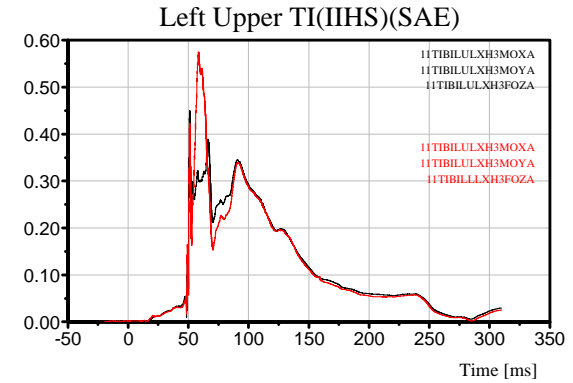
TRC Inc. Test Lab: CTF

Test Number: 070607

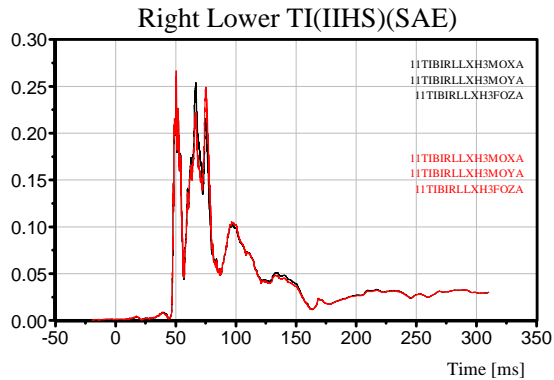
Critical Bending Moment = 240 N-m
Critical Compression Force = 12000 N



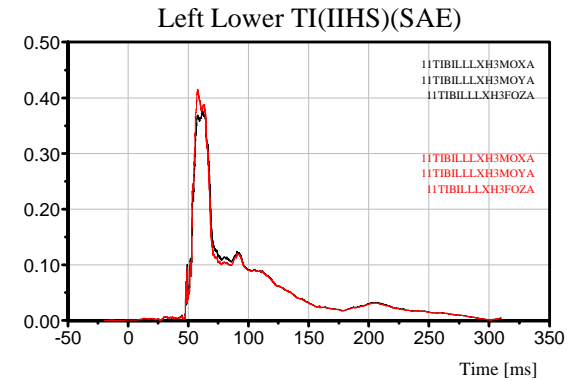
Max = 0.67 at 66.84 ms (SAE)
Max = 0.57 at 67.16 ms (IIHS)



Max = 0.45 at 51.08 ms (SAE)
Max = 0.57 at 58.44 ms (IIHS)



Max = 0.26 at 50.28 ms (SAE)
Max = 0.27 at 50.28 ms (IIHS)



Max = 0.38 at 61.48 ms (SAE)
Max = 0.41 at 57.72 ms (IIHS)

Dummy: HIII 50th Male
Seating Position:
Driver

Tibia Index Source Code : Guideline 96/79/EC; SAE J1727 AUG96; and IIHS Crashworthiness Evaluation Offset Barrier Crash Test Protocol (Version X)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

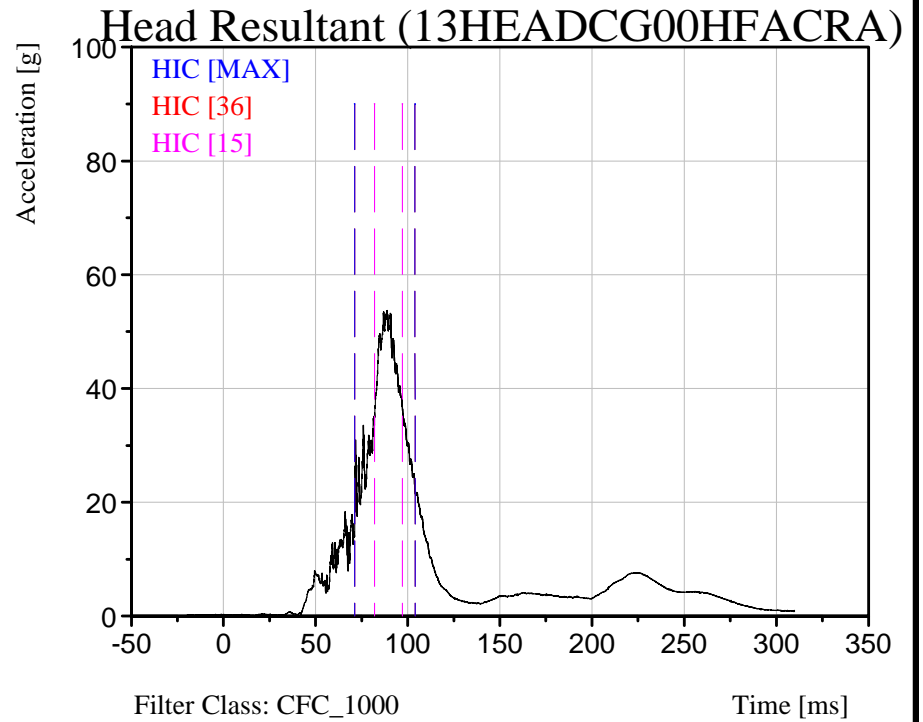
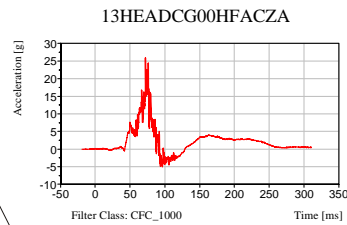
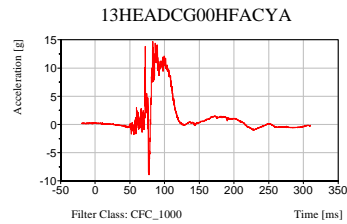
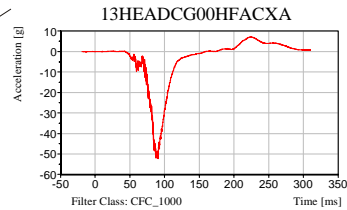
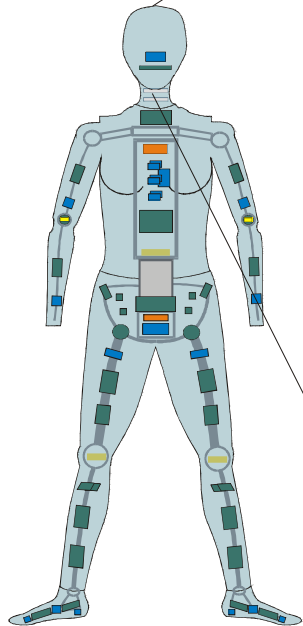
Time: 15:44

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 257.67	71.24 ms	103.96 ms	36.15 g
HIC [36] = 257.67	71.24 ms	103.96 ms	36.15 g
HIC [15] = 217.72	82.04 ms	97.08 ms	46.11 g

Dummy: HIII 5th Female
 Seating Position:
 Right Front Passenger

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

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

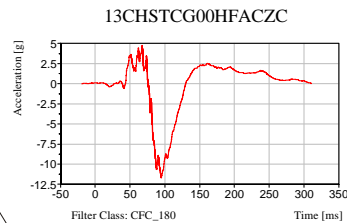
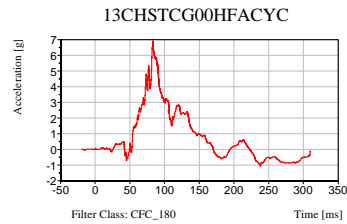
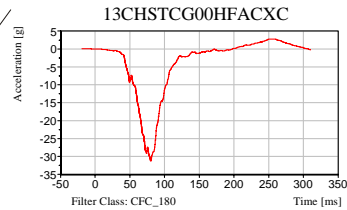
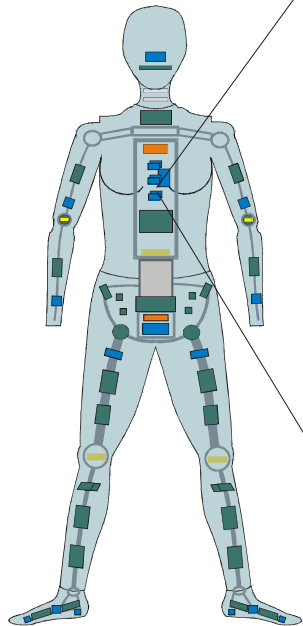
3 ms Duration Acceleration (Chest)

Time: 15:44

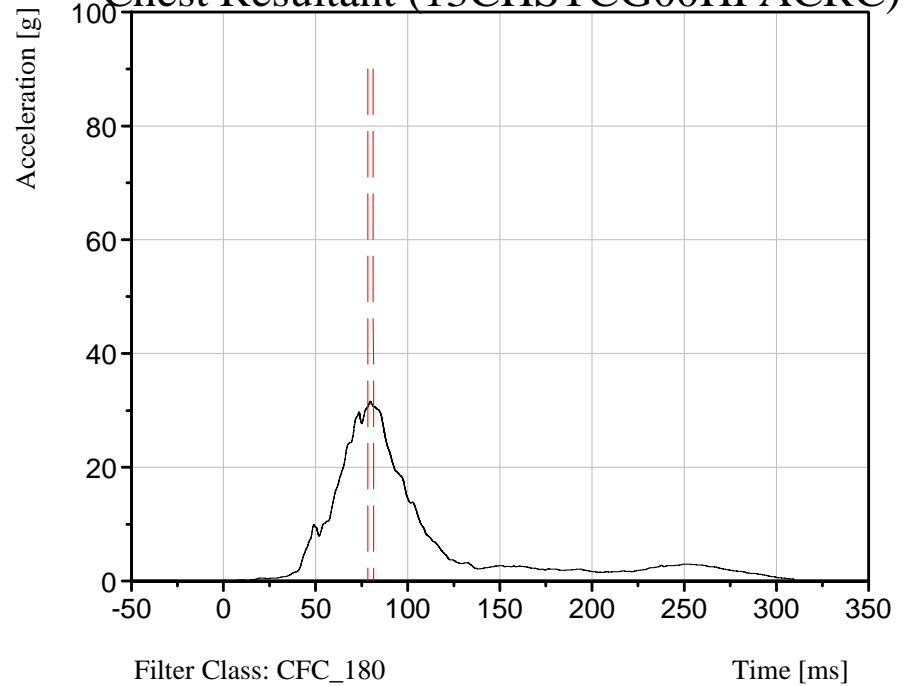
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



Chest Resultant (13CHSTCG00HFACRC)



3 ms Duration Acceleration = 30.73 g

T1 (Begin)
78.40 ms

T2 (End)
81.40 ms

Chest Severity Index = 137.06

Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

3 ms Duration Acceleration Source Code : vbScript w/DIAdem 9.0

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2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

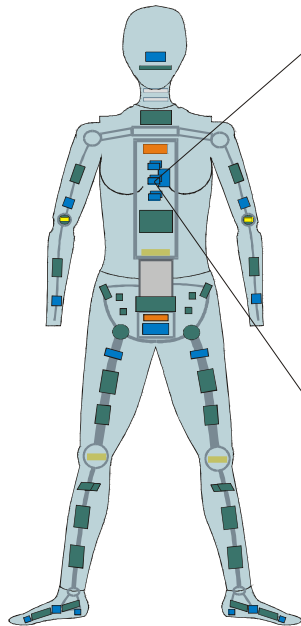
Chest Deflection

Customer: VRTC

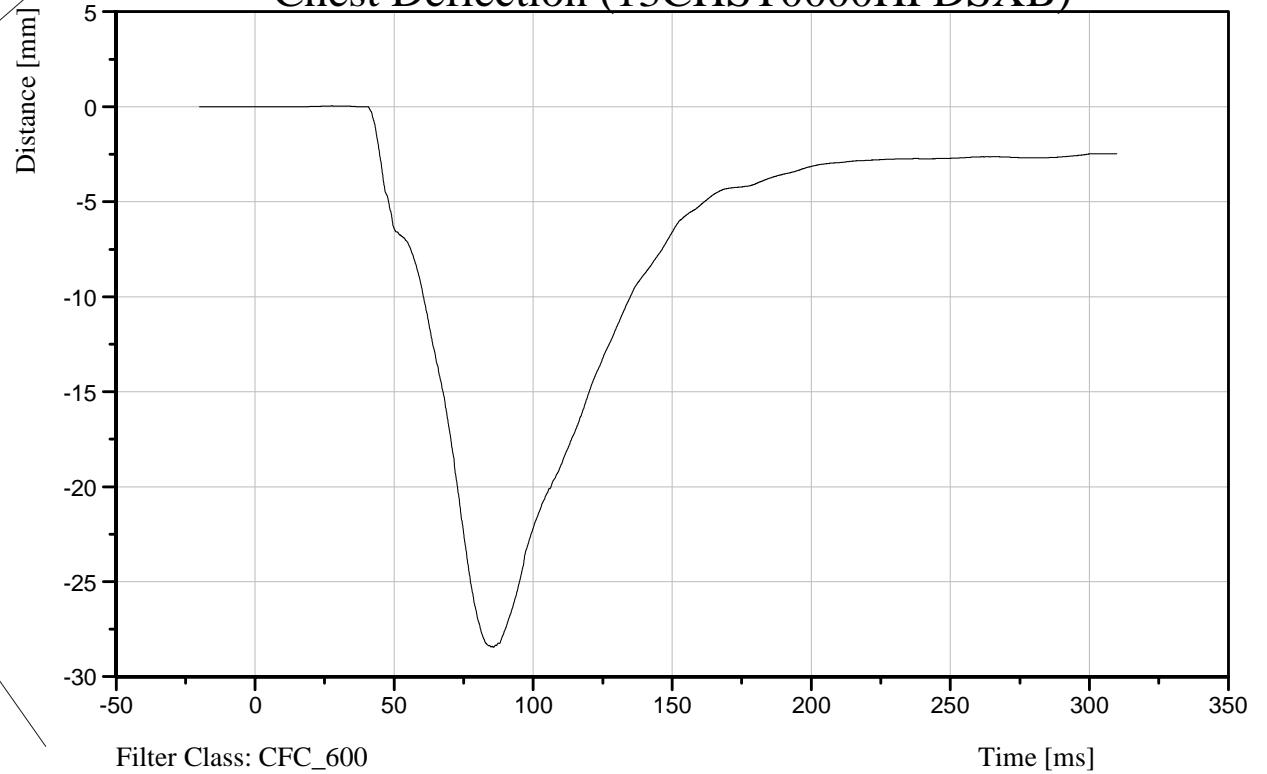
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



Chest Deflection (13CHST0000HFDSXB)



Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

[Max.] 0.05 mm at 27.48 ms

[Min.] -28.45 mm at 85.72 ms

ChestDeflection Source Code : Min/Max of 13CHST0000HFDSXB (CFC_600)

B-25

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal Neck Moment about the Occipital Condyle (NECK OM)

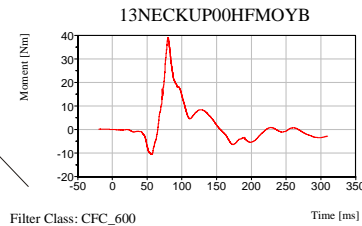
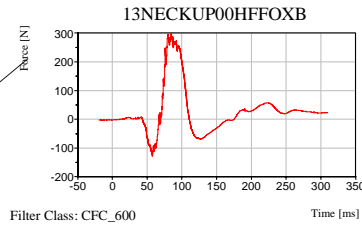
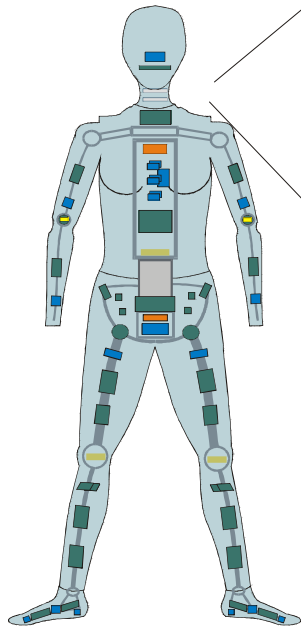
Date: 06/07/2007
Time: 15:44

Customer: VRTC

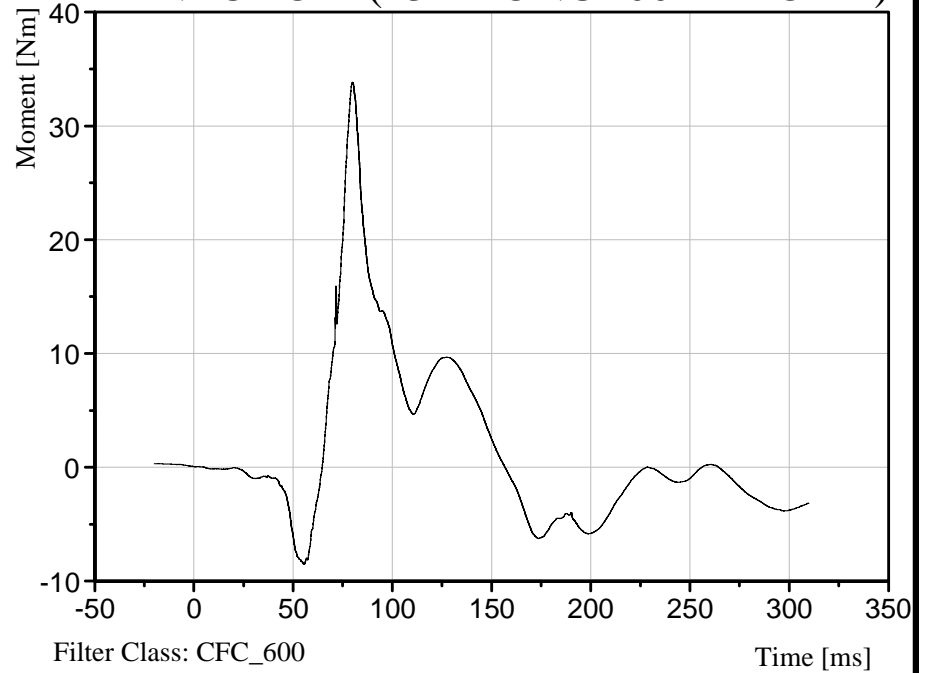
TRC Inc. Test Lab: CTF

Test Number: 070607

Test Orientation = Frontal



NECKOM (13TMONUP00HFMOYX)



[Max.] 33.85 Nm at 80.04 ms

[Min.] -8.53 Nm at 55.72 ms

Dummy: HIII 5th Female
Seating Position:
Right Front Passenger

Neck OM Source Code: My - (D*Fx)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

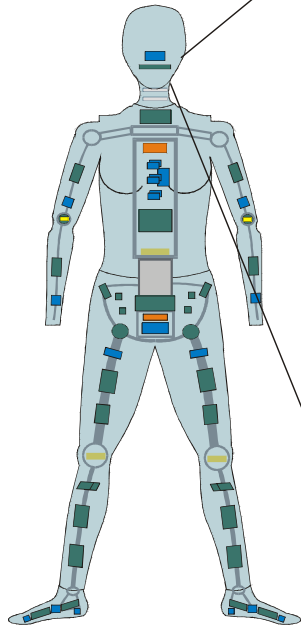
Date: 06/07/2007

Time: 15:44

Neck Injury Predictor (NIJ)

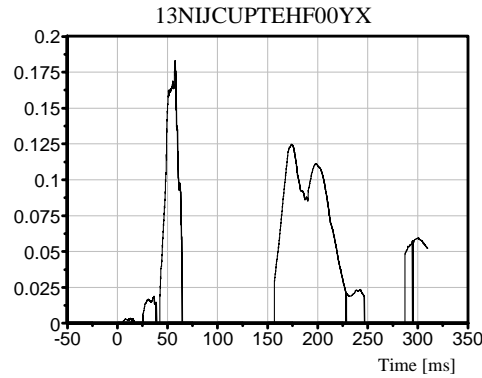
Customer: VRTC

Test Orientation = Frontal
Fzc(Tension) = 4287
Fzc(Compression) = 3880
Myc(Extension) = 67
Myc(Flexion) = 155

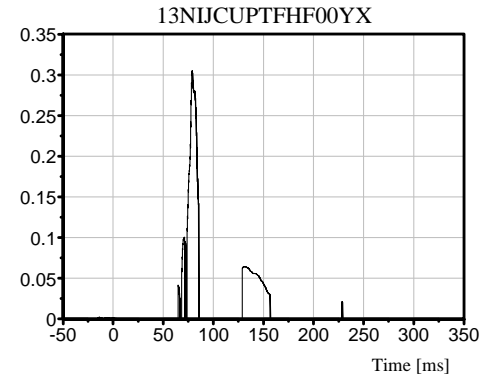


TRC Inc. Test Lab: CTF

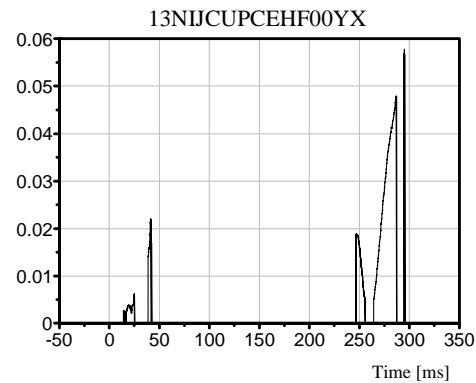
Test Number: 070607



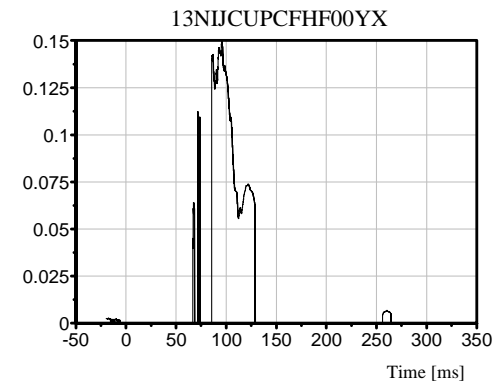
Max [NTE] 0.1832 at 57.64 ms



Max [NTF] 0.3051 at 78.76 ms



Max [NCE] 0.0578 at 295.00 ms



Max [NCF] 0.1499 at 95.56 ms

Dummy: HIII 5th Female Seating Position:

Right Front Passenger

NIJ Source Code: (Fz/Fzc)+(My/Myc)

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070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

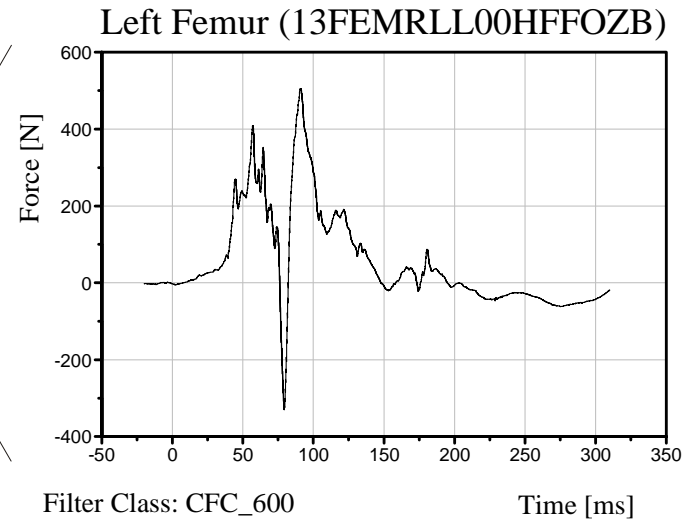
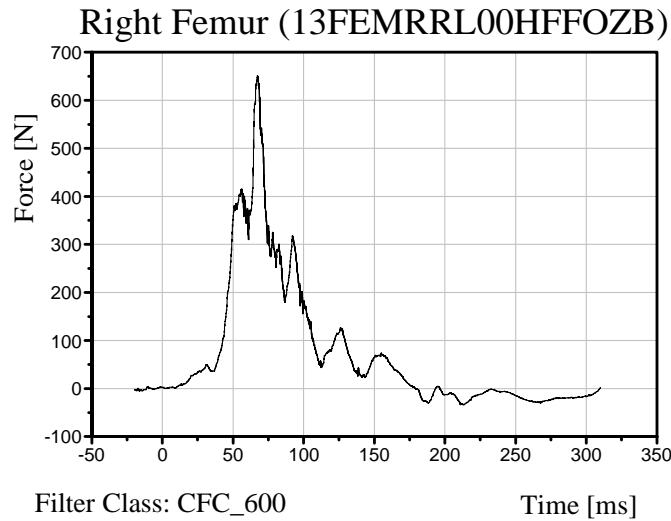
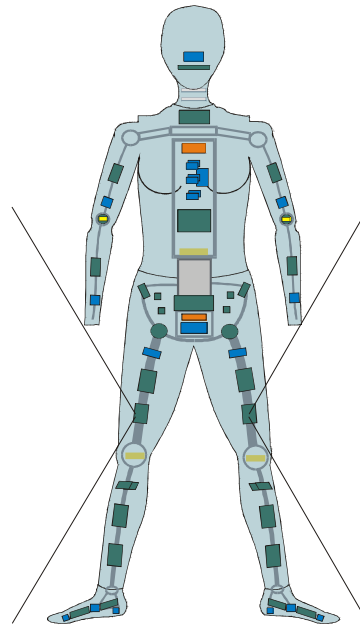
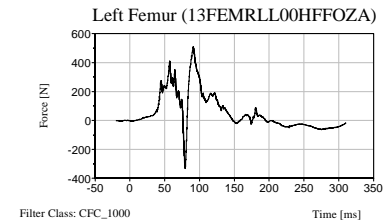
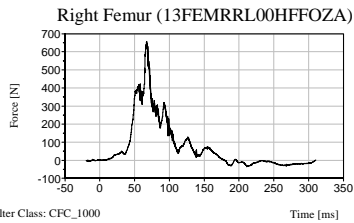
Time: 15:44

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070607



Max [Tension] 651.24 N at 67.16 ms
 Min [Compression] -33.70 N at 212.76 ms

Dummy:HIII 5th Female
 Seating Position:
 Right Front Passenger

Max [Tension] 506.29 N at 91.00 ms
 Min [Compression] -329.60 N at 79.32 ms

Femur Load Source Code : Min/Max of 13FEMRRL00HFFOZB and 13FEMRLL00HFFOZB (CFC 600)

B-28

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

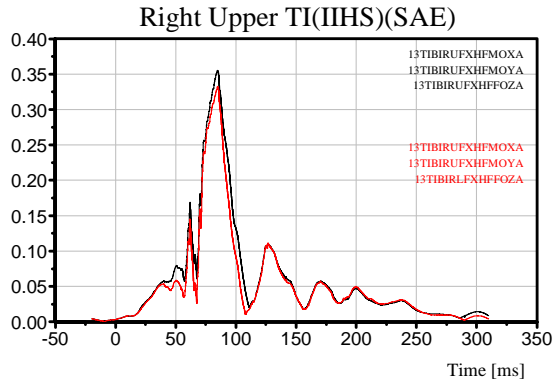
Tibia Index (TI)

Customer: VRTC

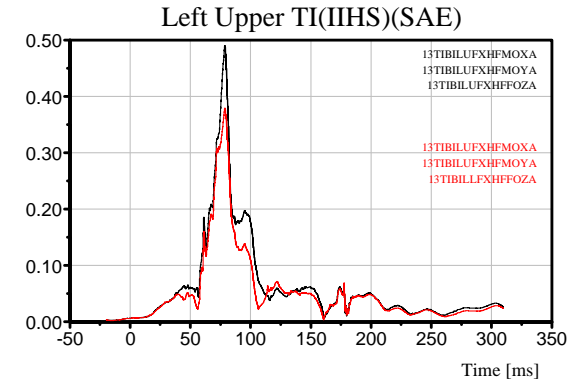
TRC Inc. Test Lab: CTF

Test Number: 070607

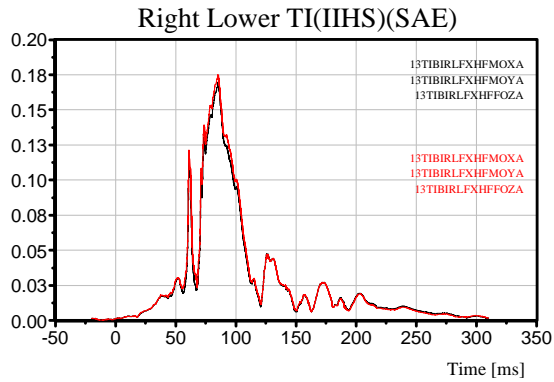
Critical Bending Moment = 146 N-m
Critical Compression Force = 8600 N



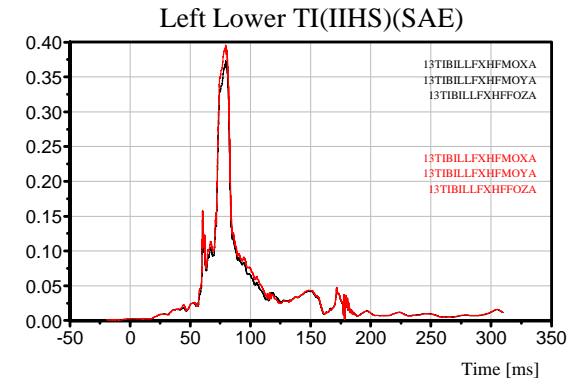
Max = 0.36 at 84.68 ms (SAE)
Max = 0.33 at 84.68 ms (IIHS)



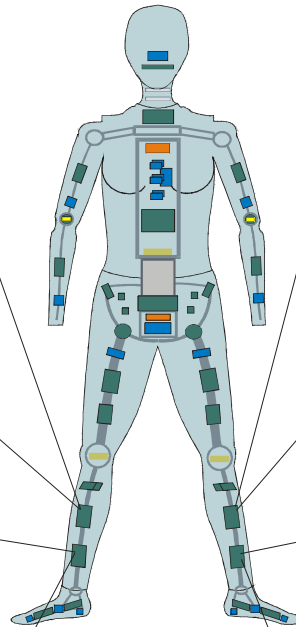
Max = 0.49 at 78.68 ms (SAE)
Max = 0.38 at 78.68 ms (IIHS)



Max = 0.17 at 85.08 ms (SAE)
Max = 0.18 at 85.08 ms (IIHS)



Max = 0.37 at 79.48 ms (SAE)
Max = 0.40 at 79.40 ms (IIHS)



Dummy:HIII 5th Female
Seating Position:
Right Front Passenger

Tibia Index Source Code : Guideline 96/79/EC; SAE J1727 AUG96; and IIHS Crashworthiness Evaluation Offset Barrier Crash Test Protocol (Version X)

B-29

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

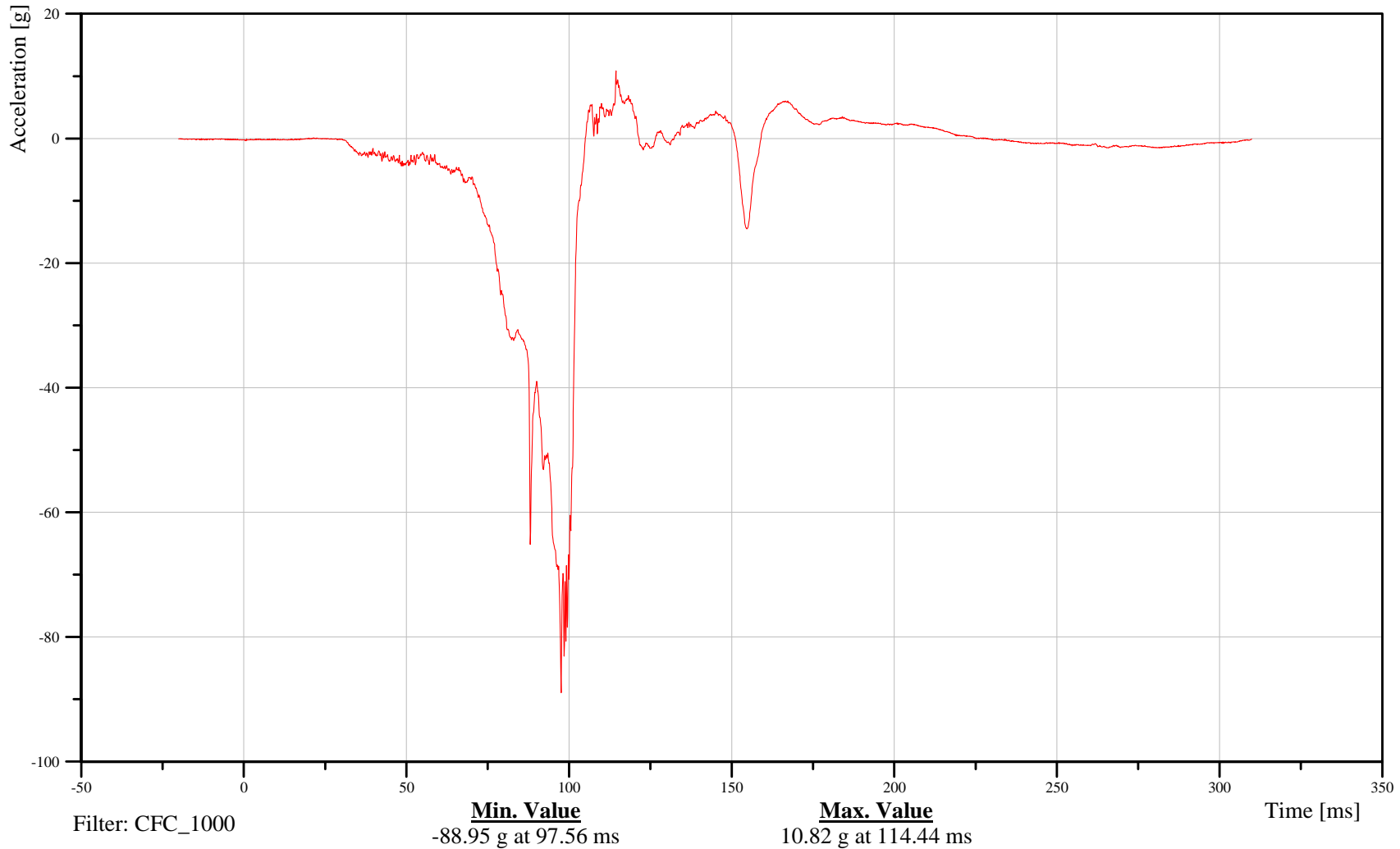
Target Vehicle Driver Head X-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-30

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

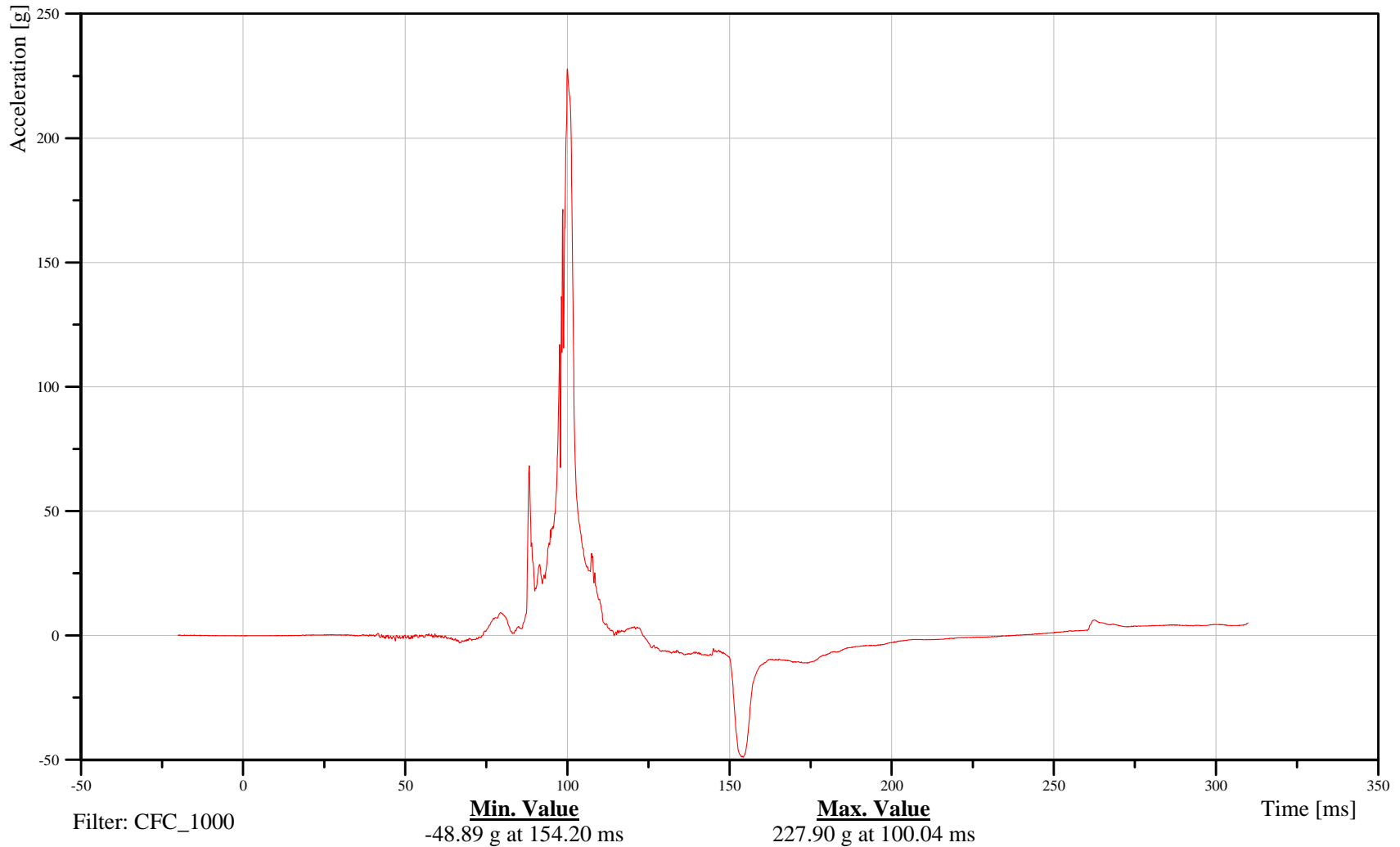
Target Vehicle Driver Head Y-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-31

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

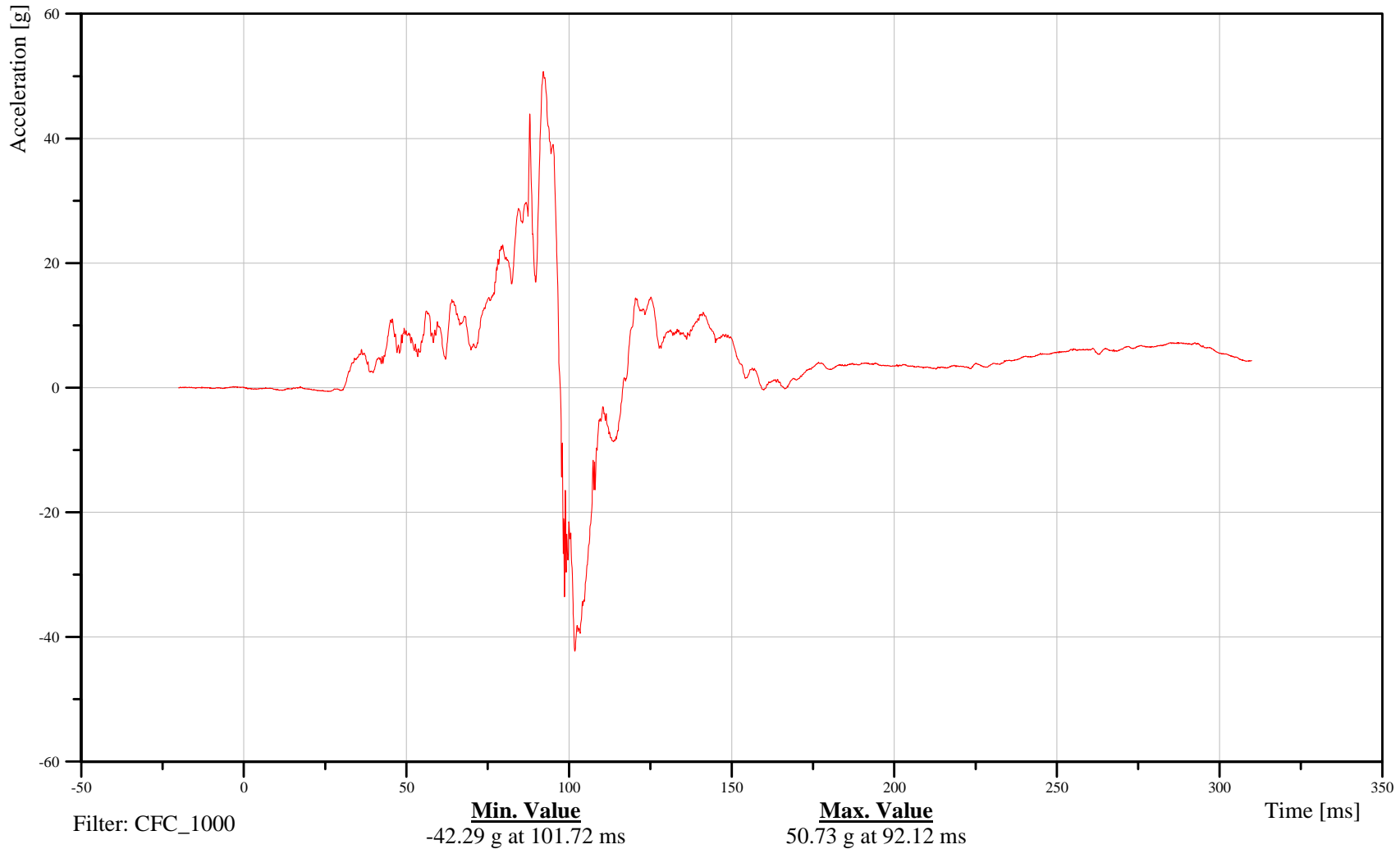
Target Vehicle Driver Head Z-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-32

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

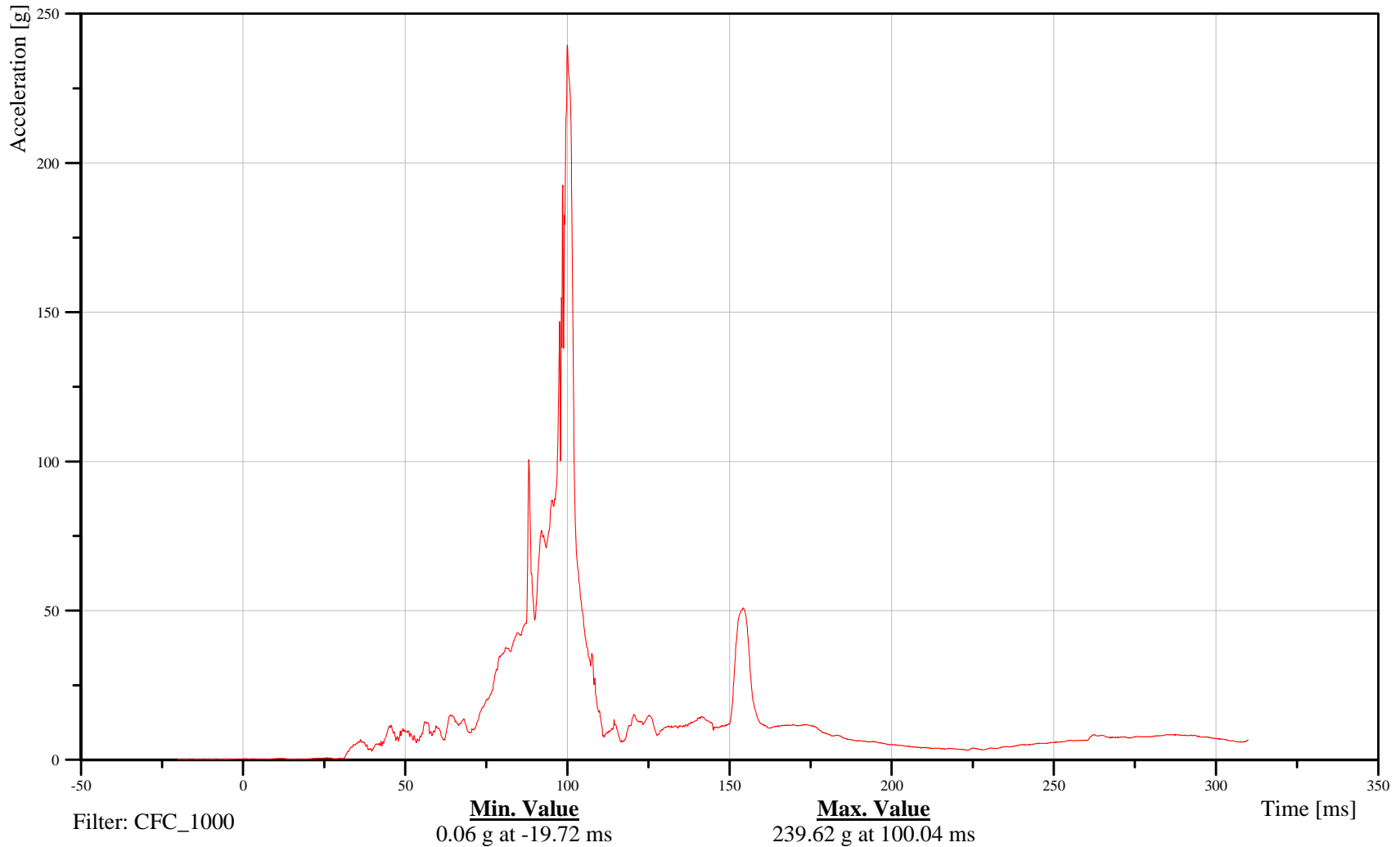
Target Vehicle Driver Head Resultant Acceleration

Customer: VRTC

21HEADCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-33

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

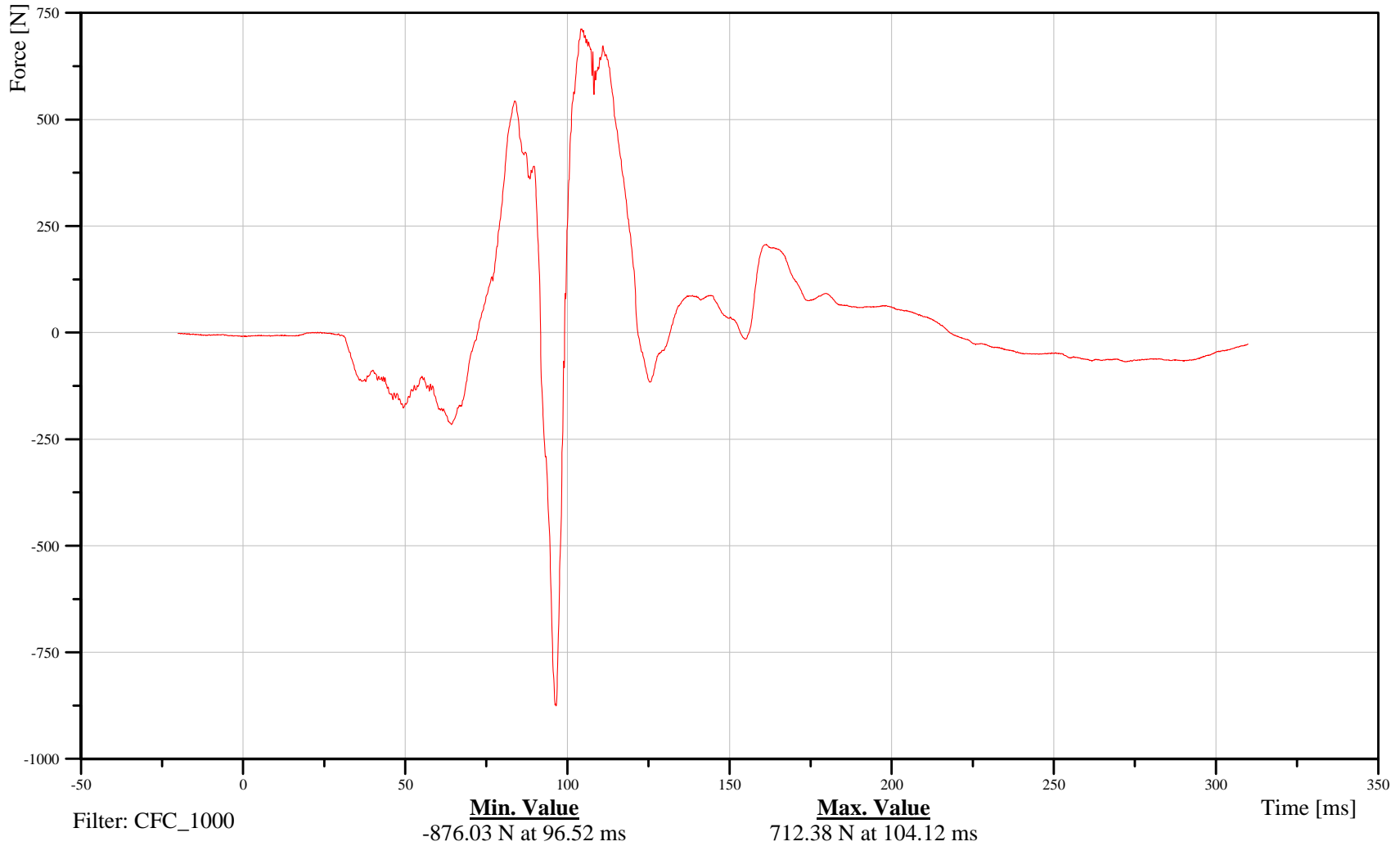
Target Vehicle Driver Neck X-Axis Force

Customer: VRTC

21NECKUP00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-34

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

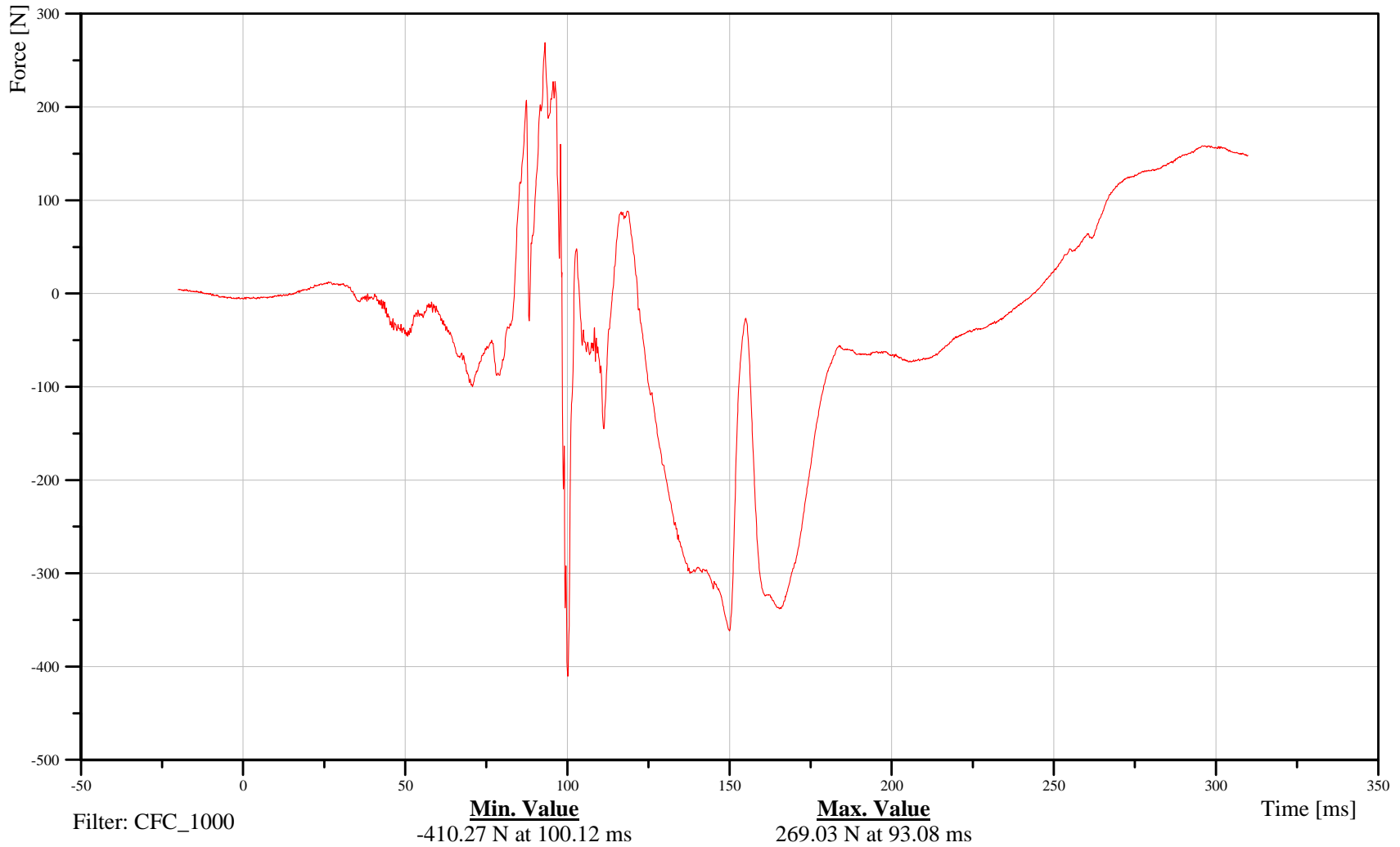
Target Vehicle Driver Neck Y-Axis Force

Customer: VRTC

21NECKUP00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-35

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

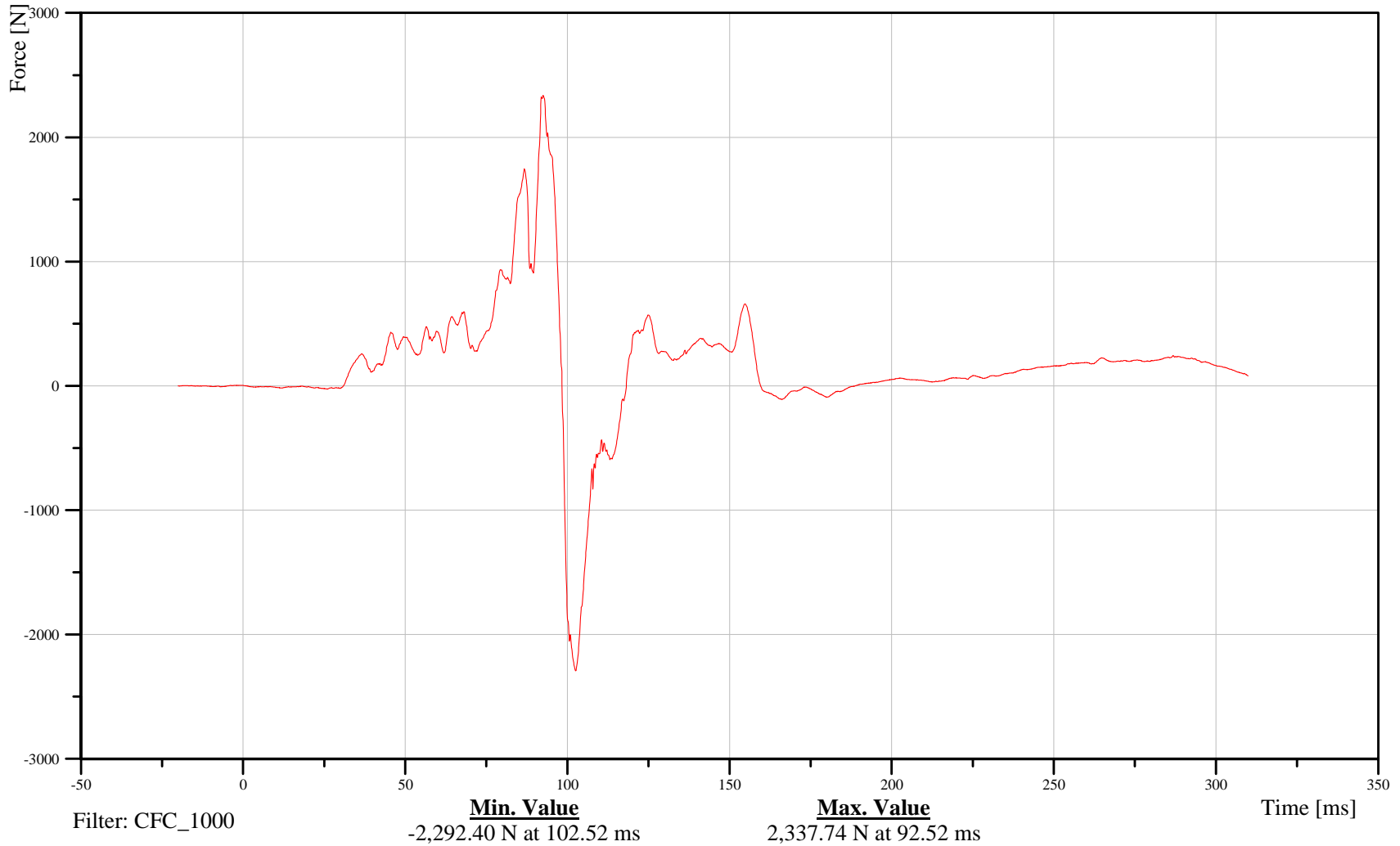
Target Vehicle Driver Neck Z-Axis Force

Customer: VRTC

21NECKUP00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-36

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

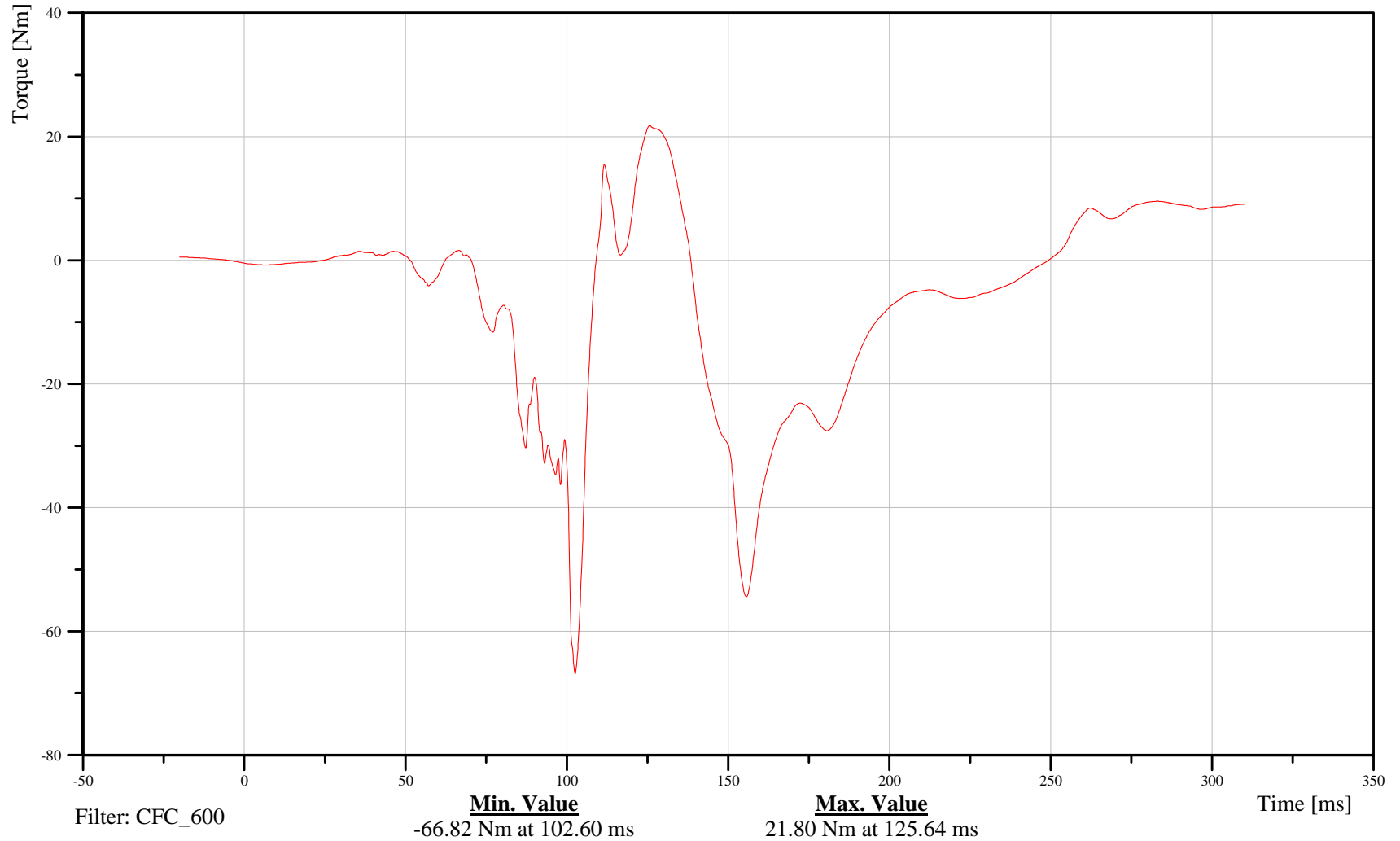
Target Vehicle Driver Neck Moment About X Axis

Customer: VRTC

21NECKUP00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-37

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

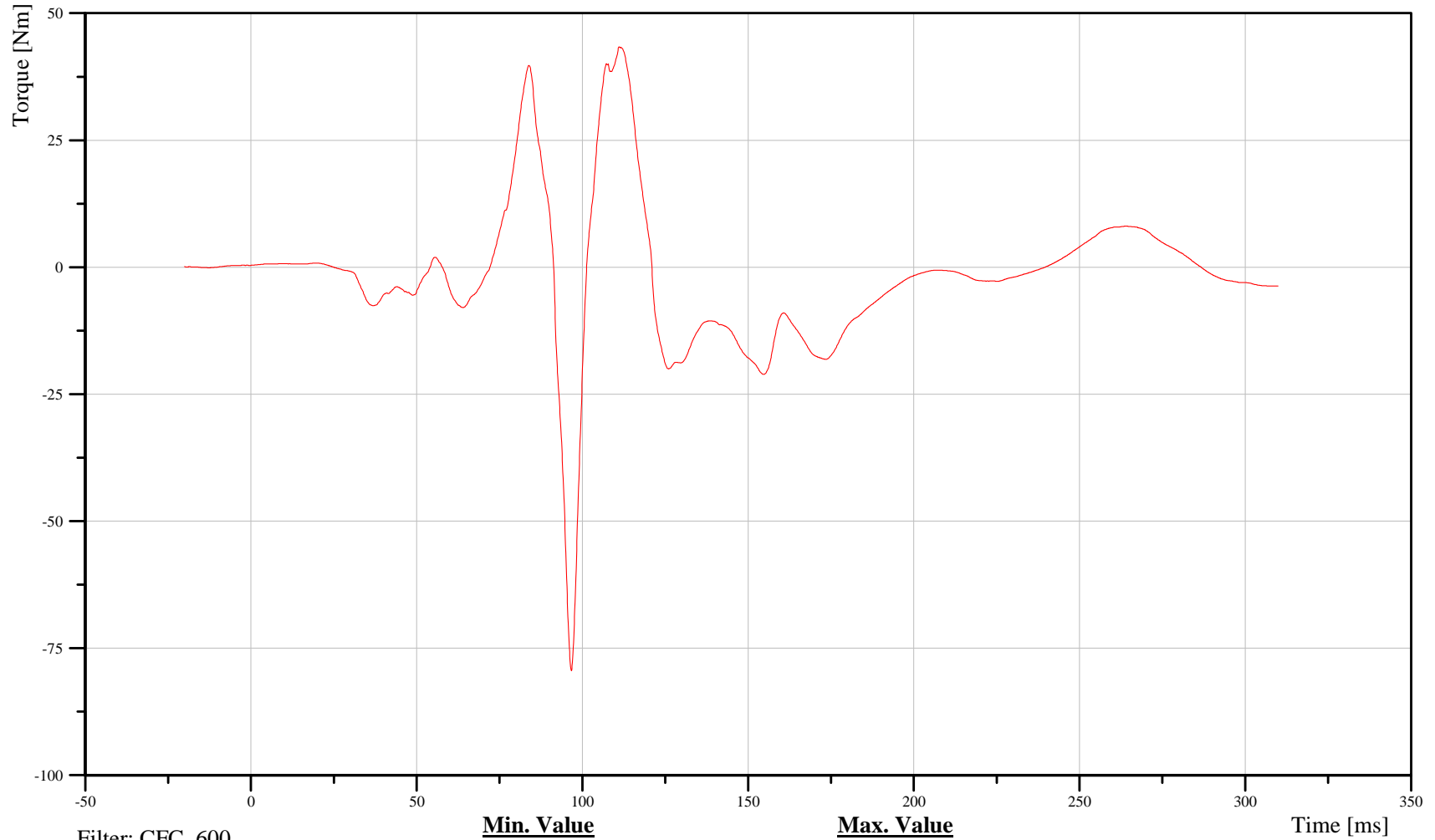
Target Vehicle Driver Neck Moment About Y Axis

Customer: VRTC

21NECKUP00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-38

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

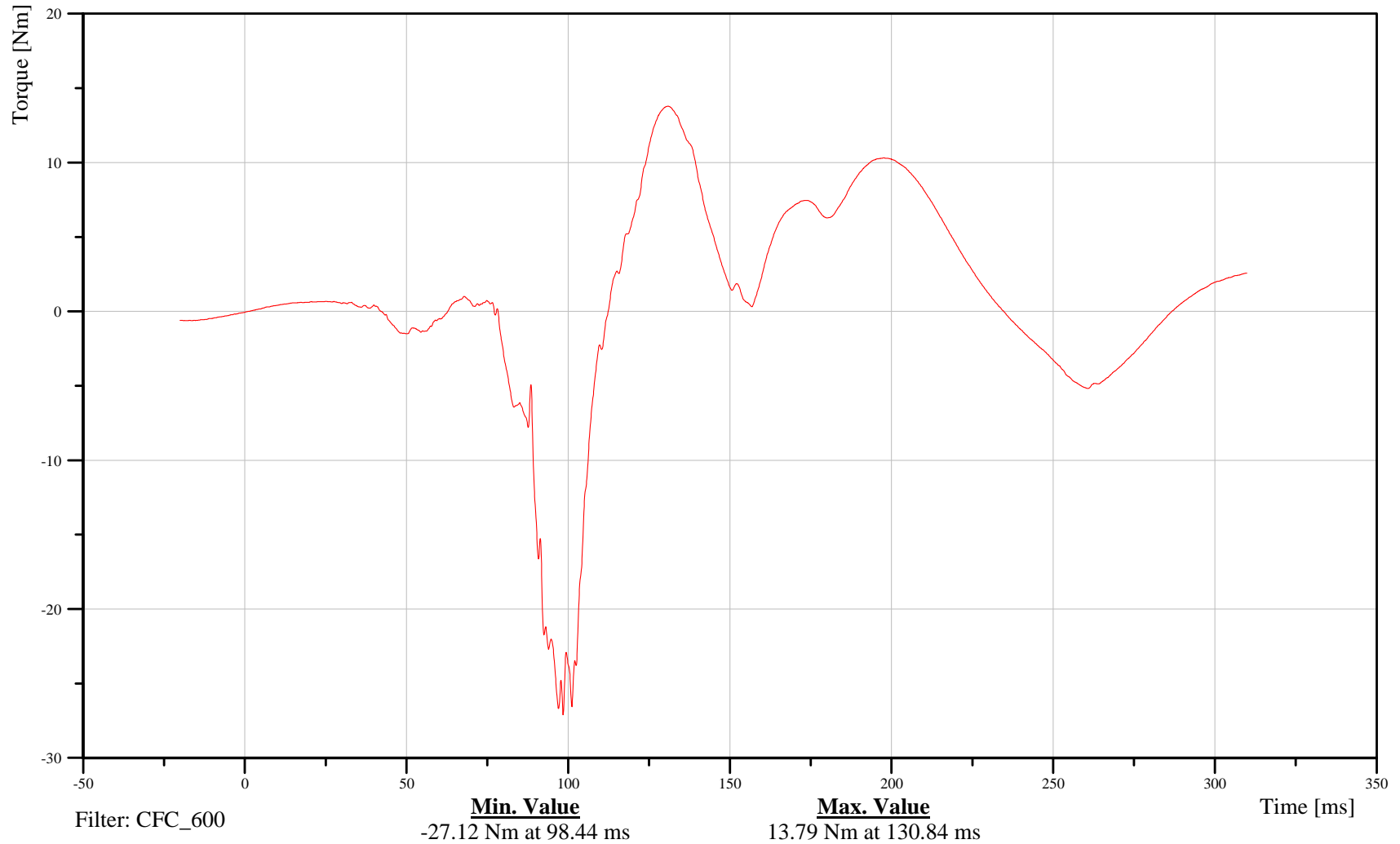
Target Vehicle Driver Neck Moment About Z Axis

Customer: VRTC

21NECKUP00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-39

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

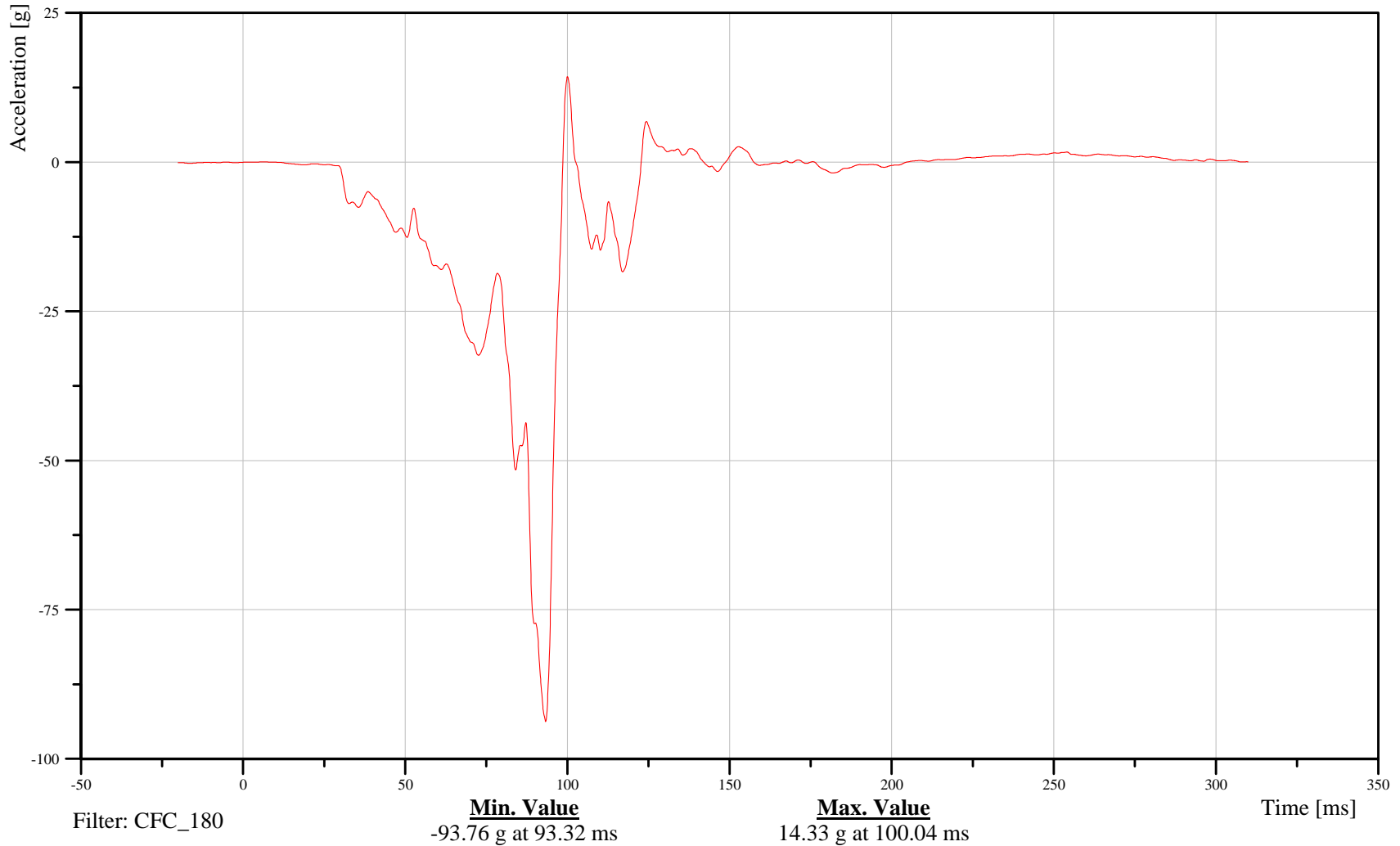
Target Vehicle Driver Chest X-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-40

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

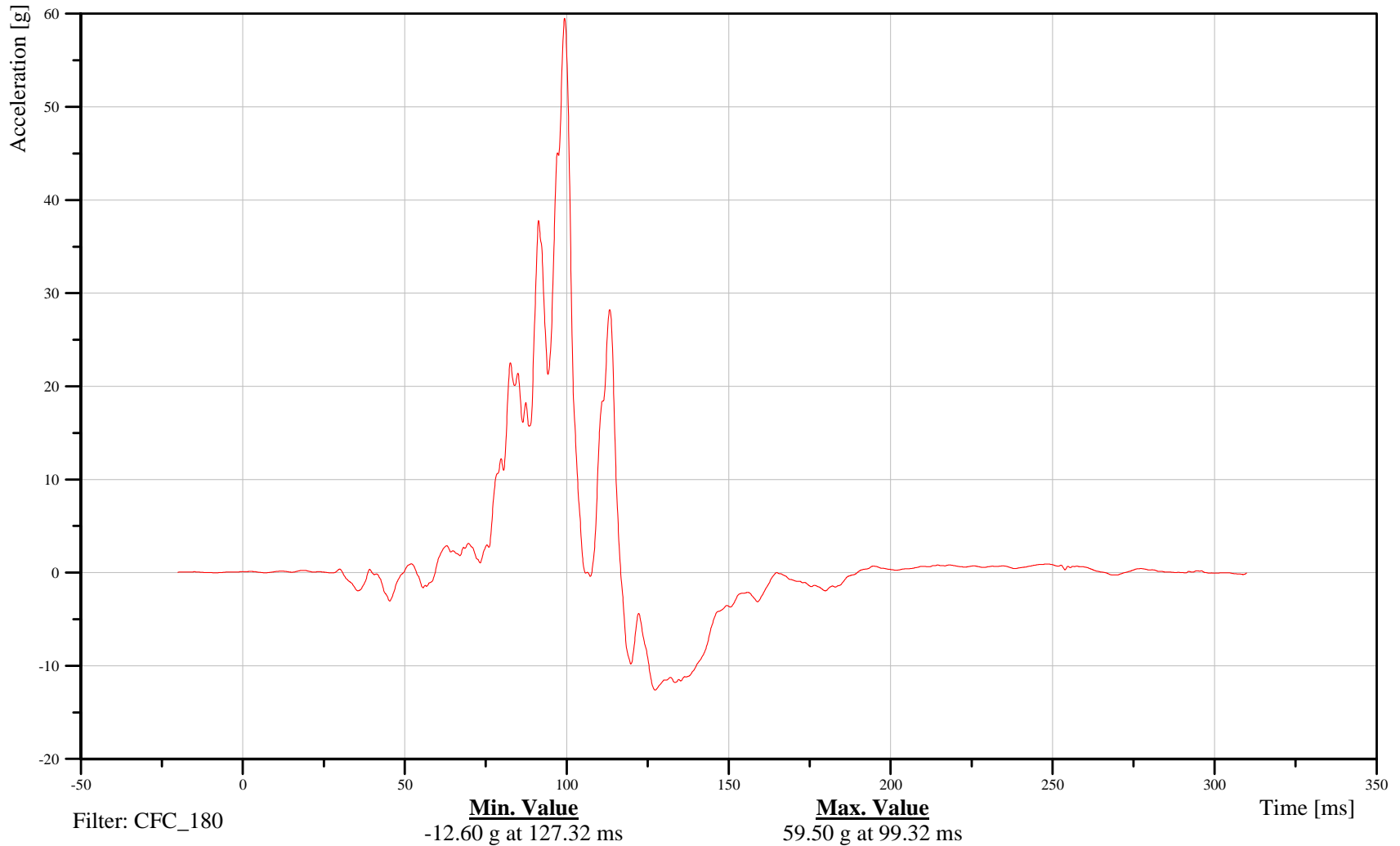
Target Vehicle Driver Chest Y-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-41

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

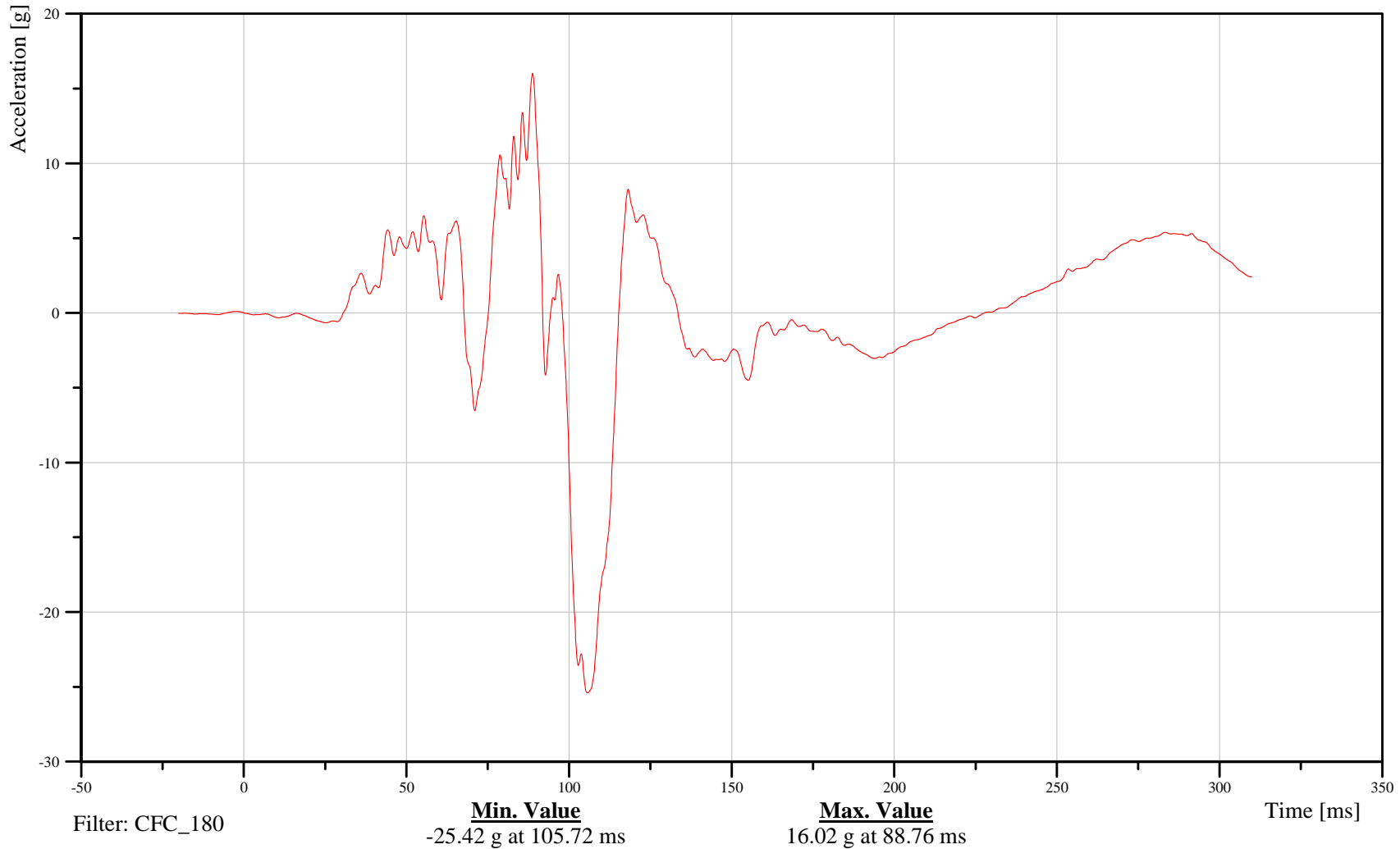
Target Vehicle Driver Chest Z-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-42

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

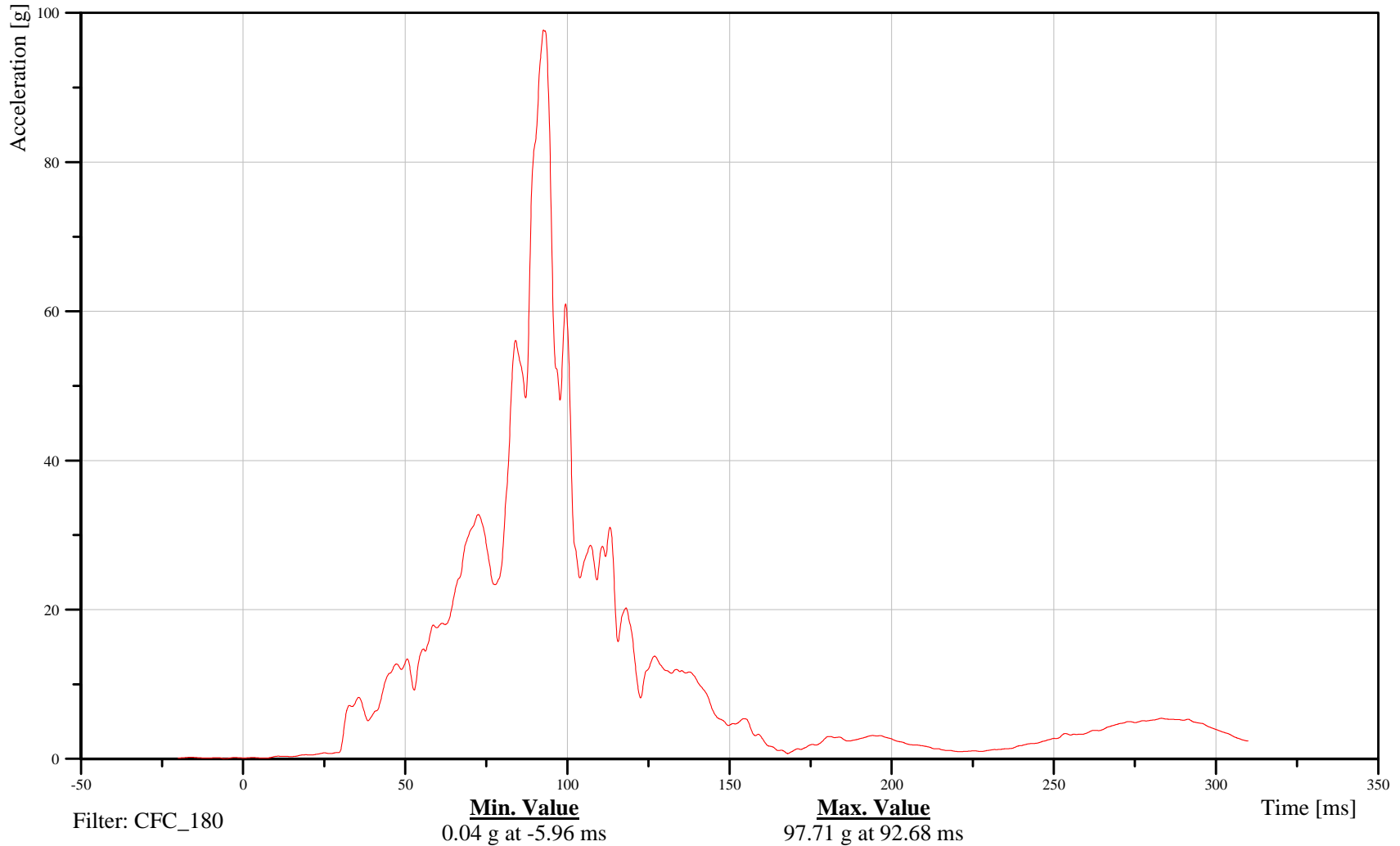
Target Vehicle Driver Chest Resultant Acceleration

Customer: VRTC

21CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-43

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

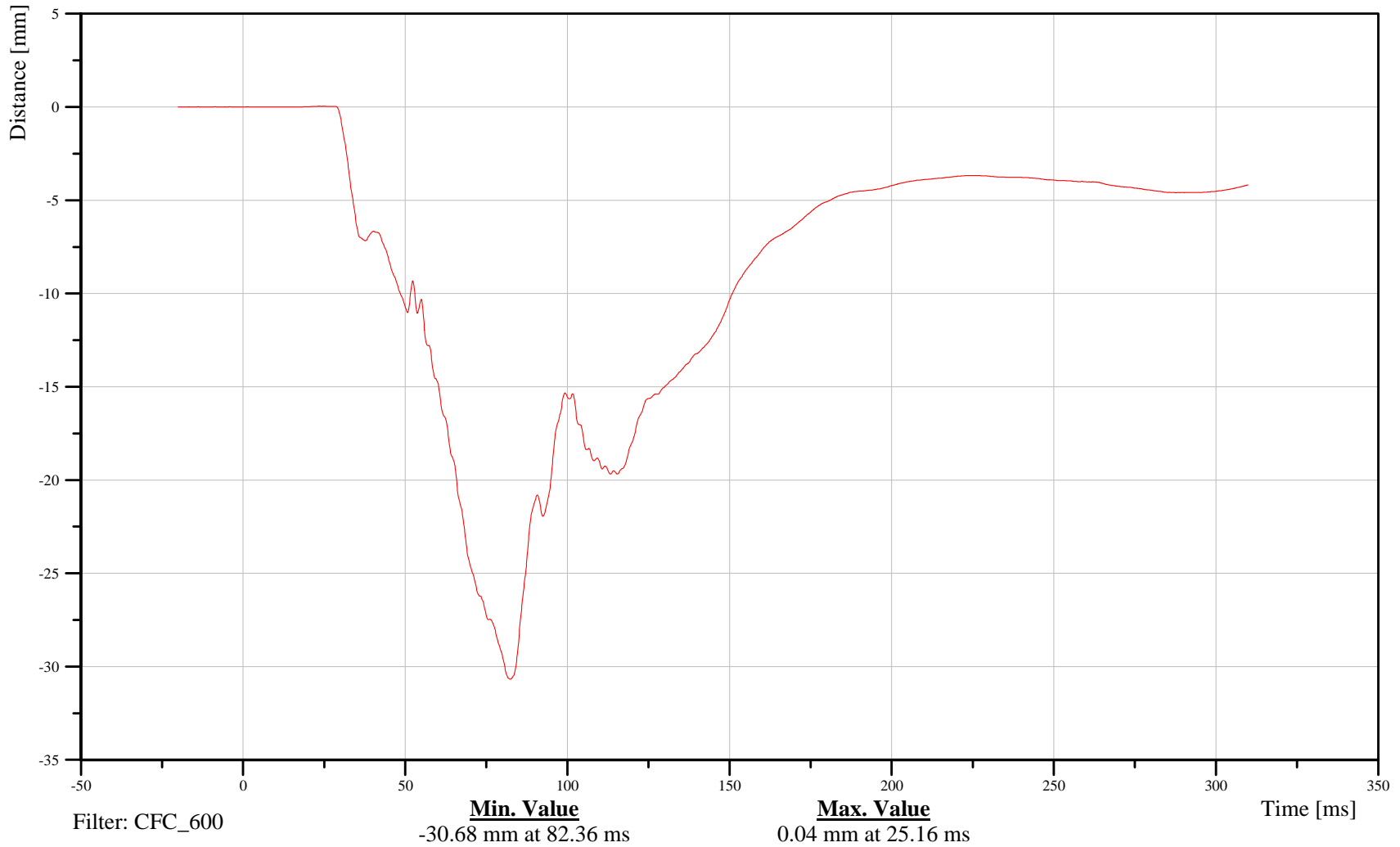
Target Vehicle Driver Chest X-Axis Displacement

Customer: VRTC

21CHST0000H3DSXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-44

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

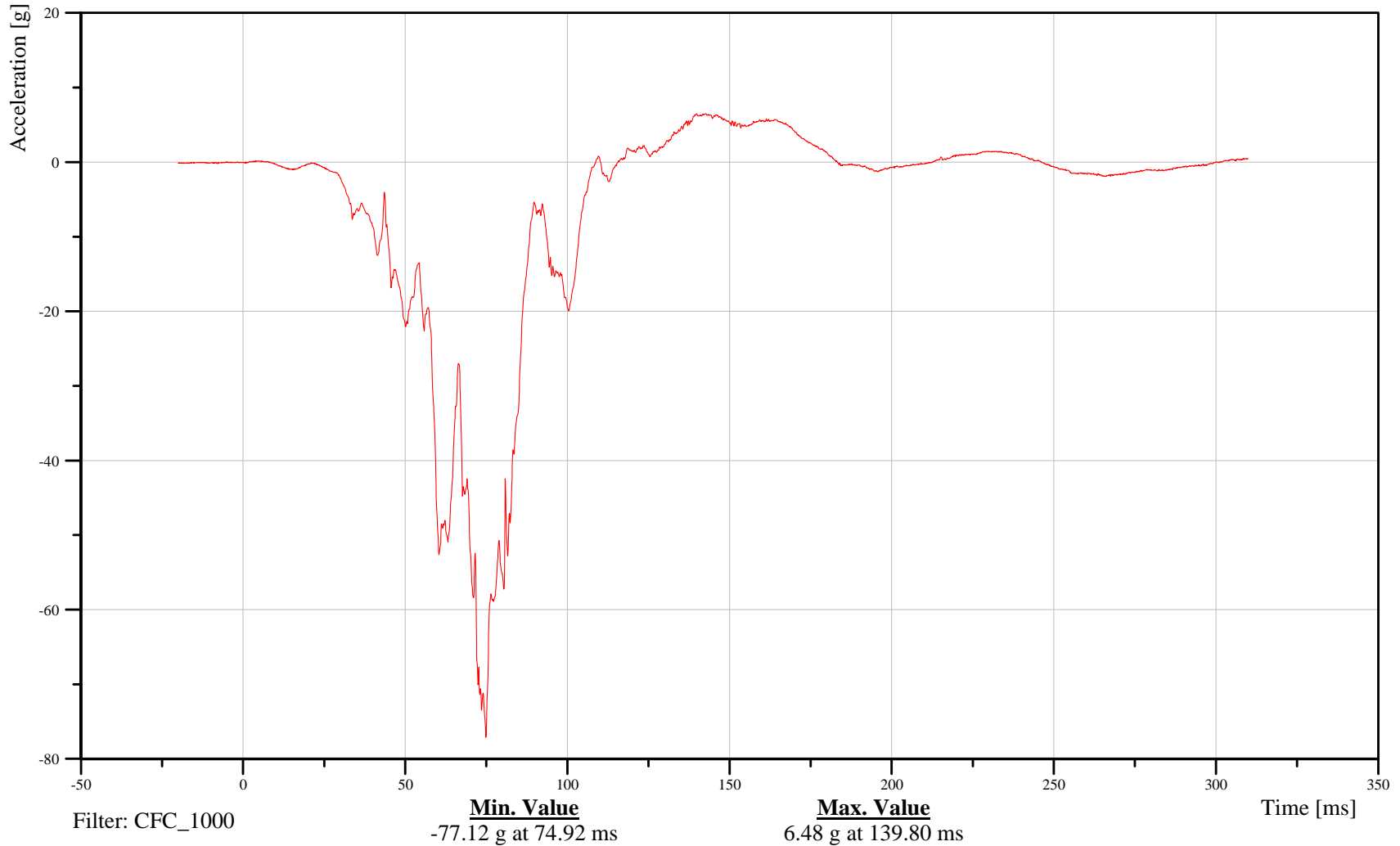
Target Vehicle Driver Pelvis X-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-45

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

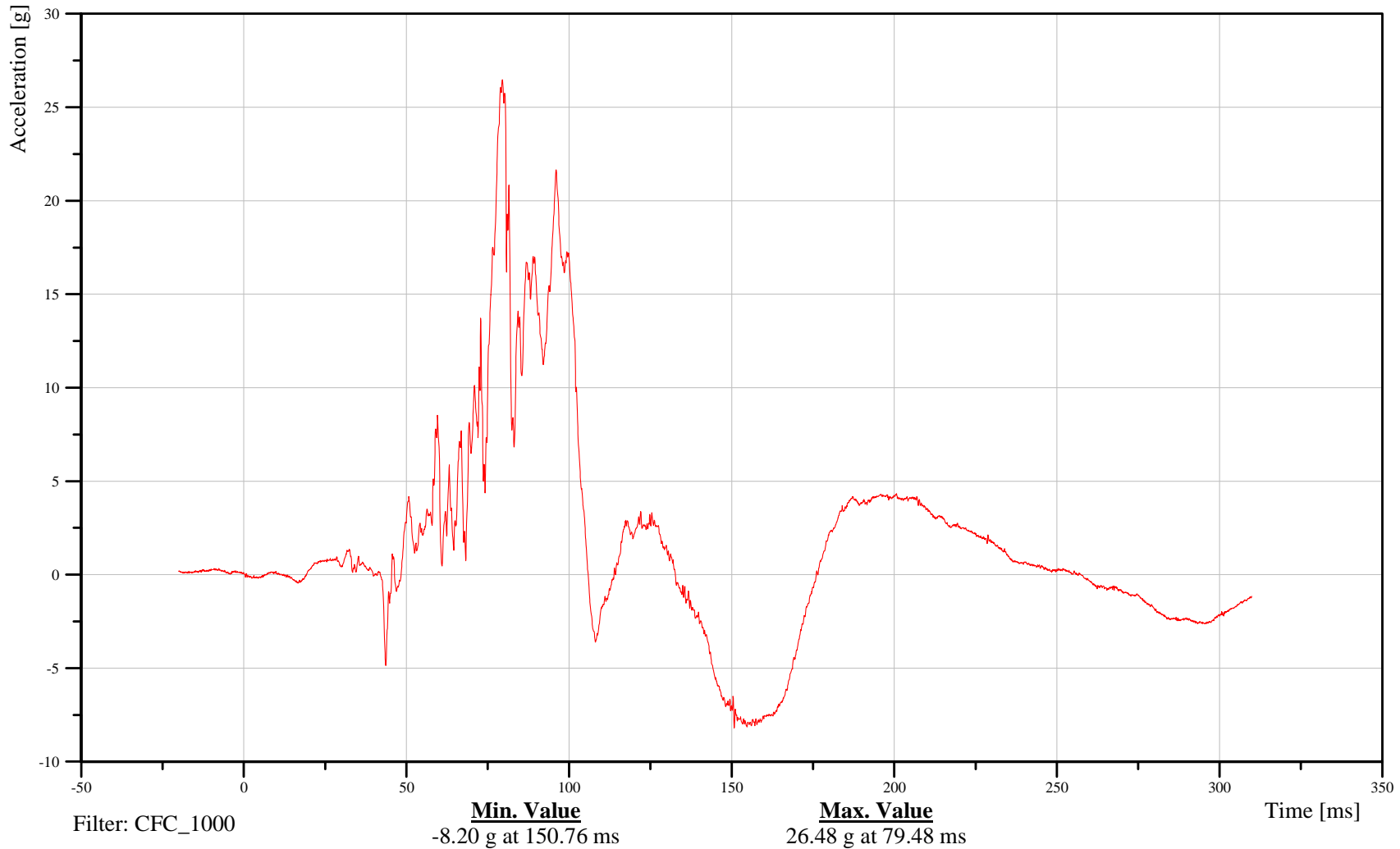
Target Vehicle Driver Pelvis Y-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-46

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

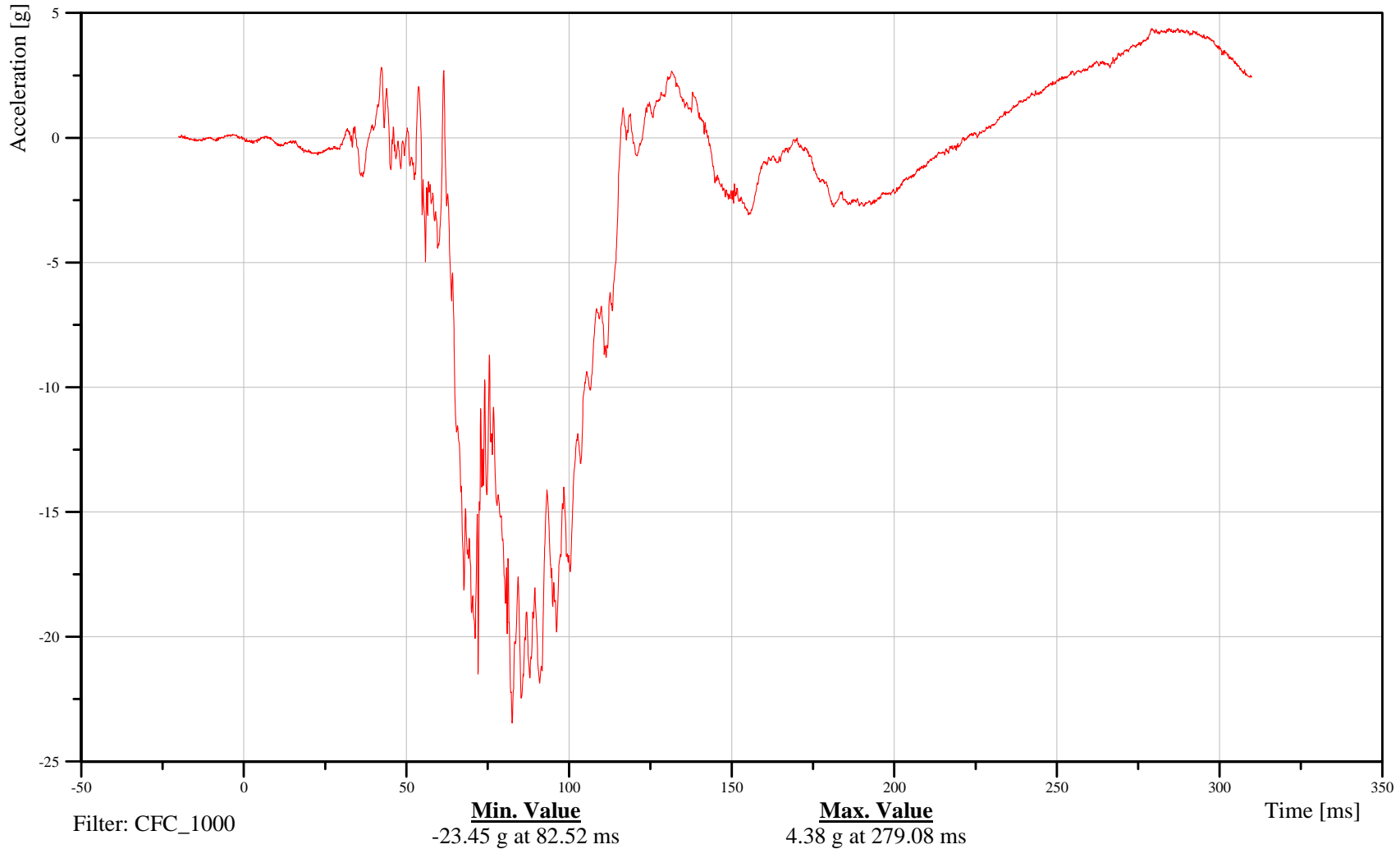
Target Vehicle Driver Pelvis Z-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-47

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

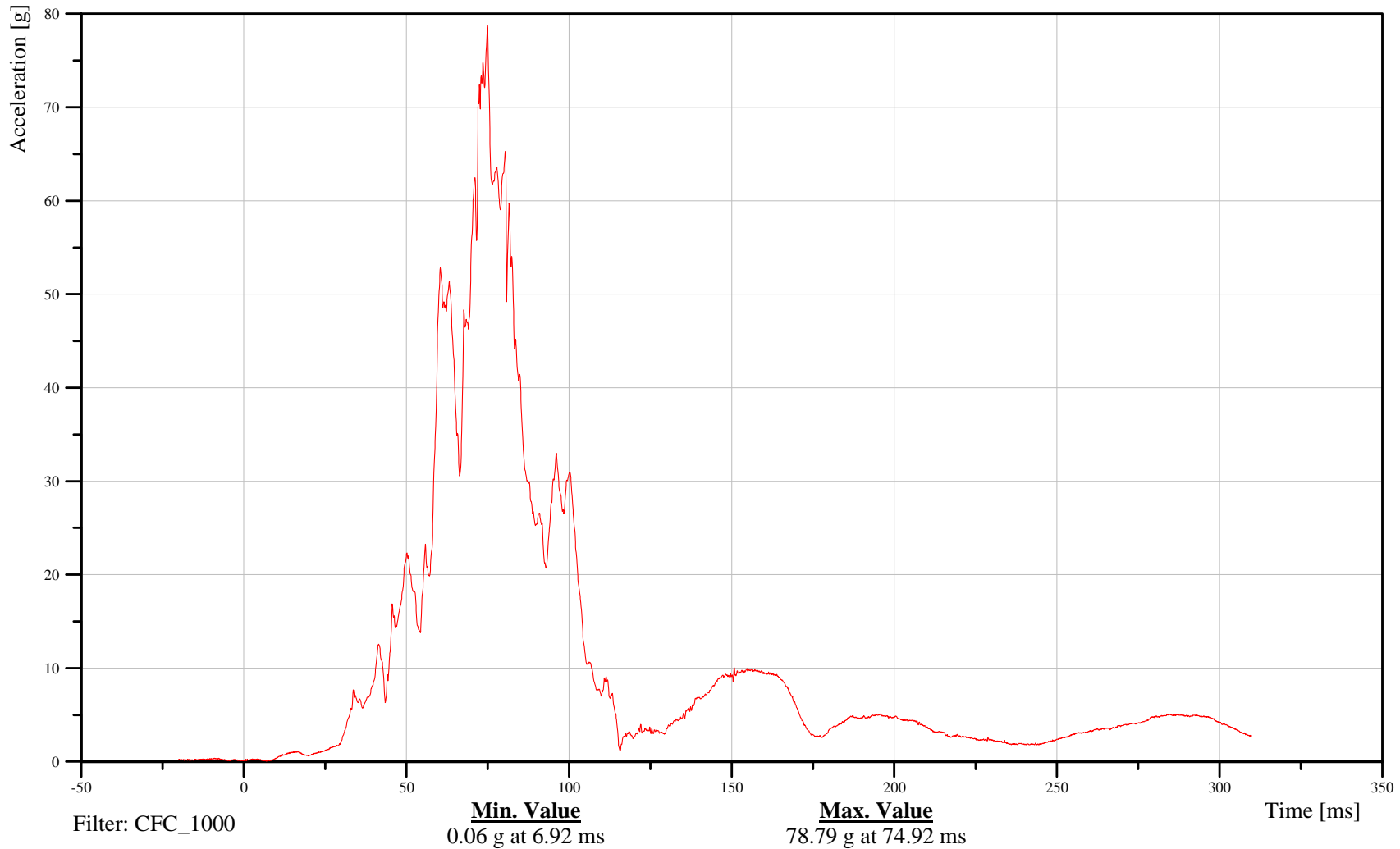
Target Vehicle Driver Pelvis Resultant Acceleration

Customer: VRTC

21PELVCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-48

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

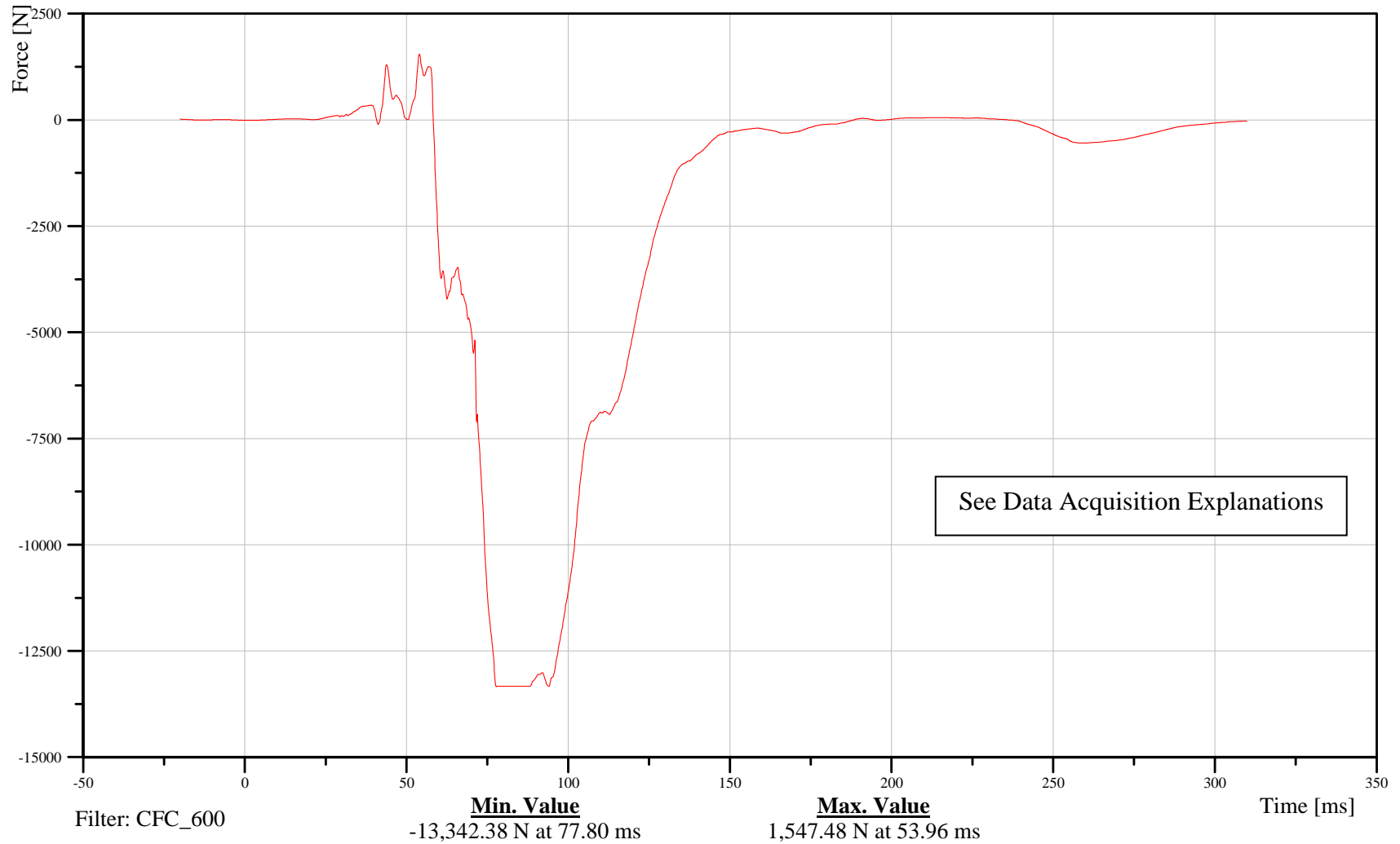
Target Vehicle Driver Left Femur Z-Axis Force

Customer: VRTC

21FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-49

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

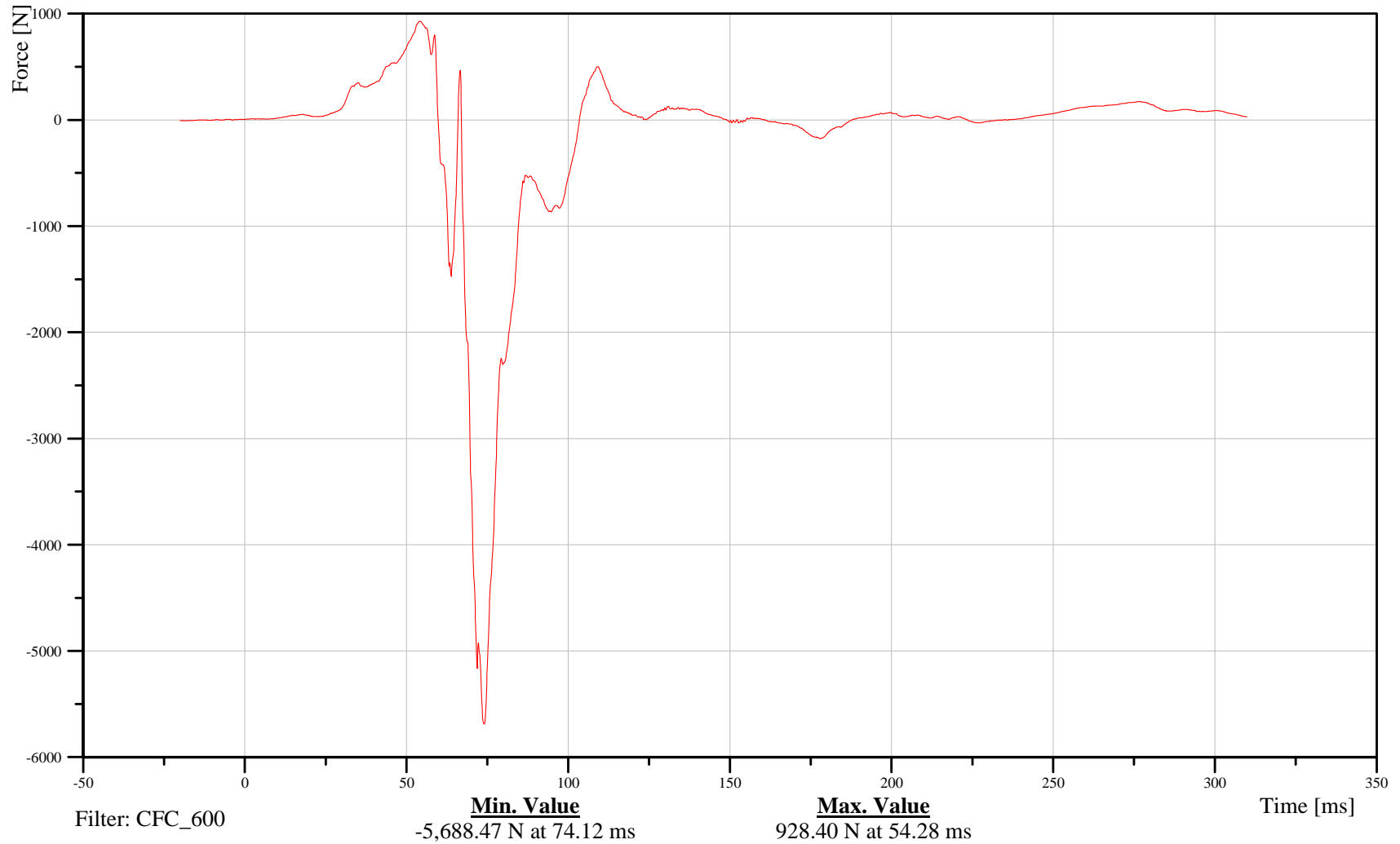
Target Vehicle Driver Right Femur Z-Axis Force

Customer: VRTC

21FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-50

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

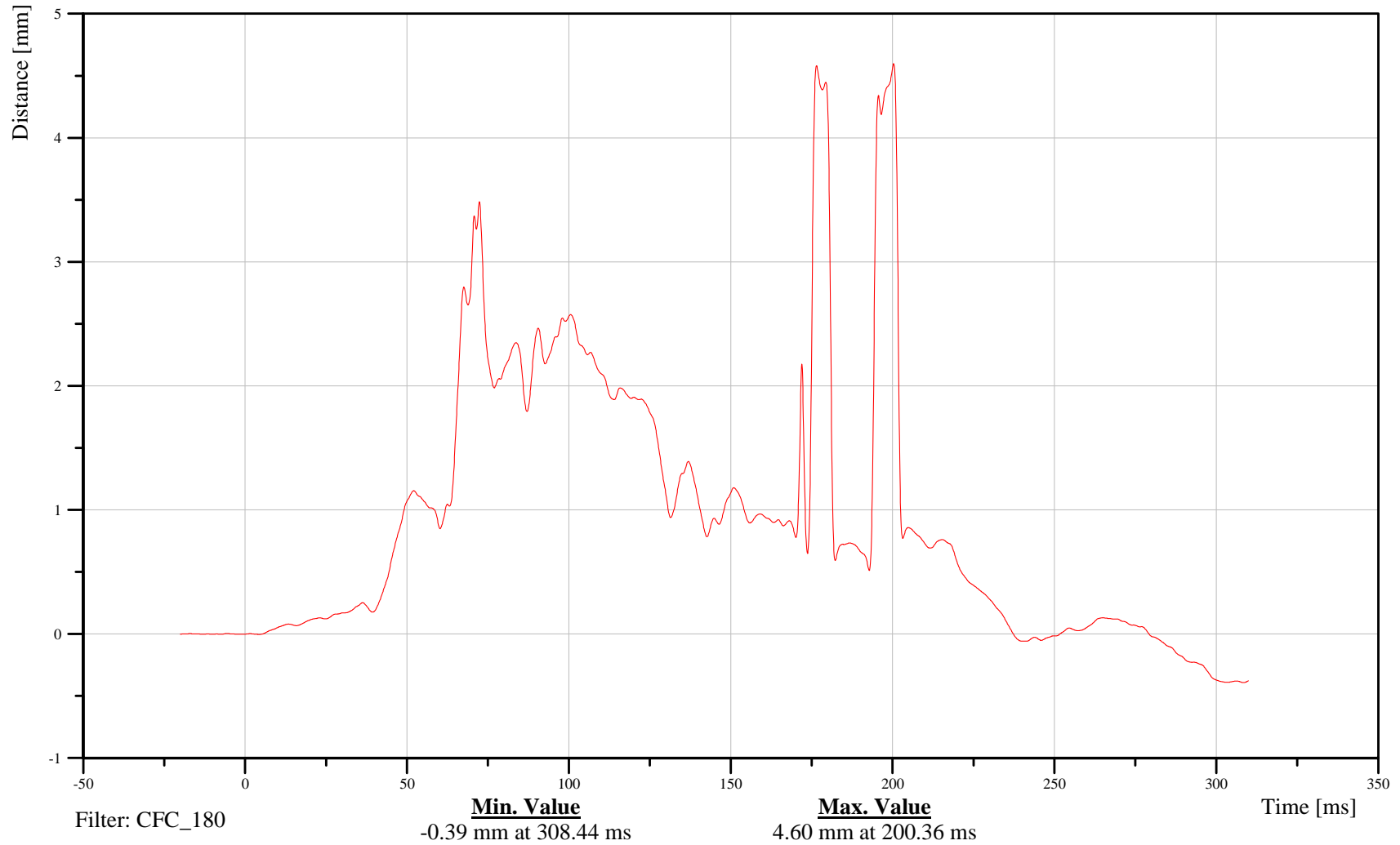
Target Vehicle Driver Left Knee X-Axis Displacement

Customer: VRTC

21KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-51

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

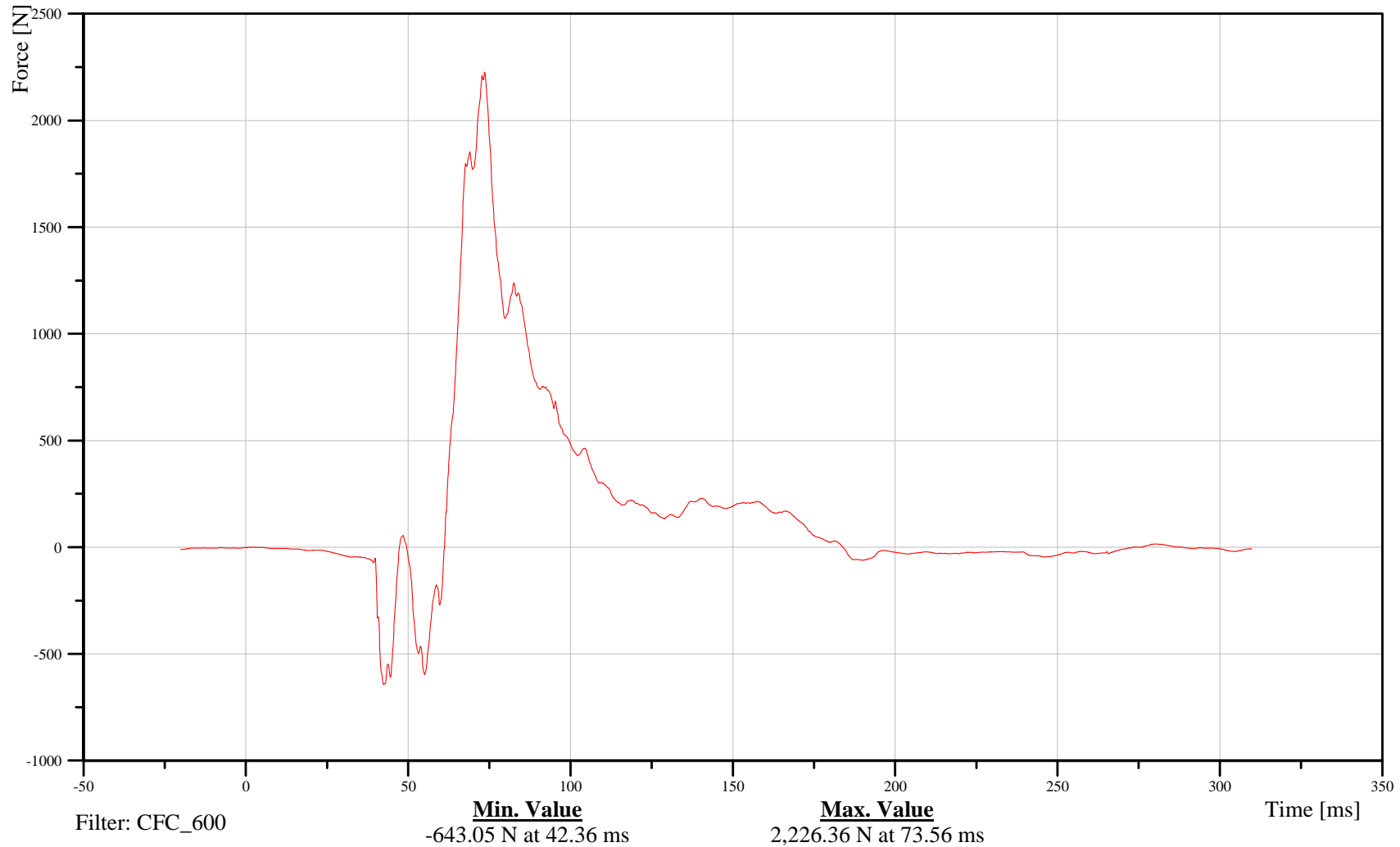
Target Vehicle Driver Left Upper Tibia X-Axis Force

Customer: VRTC

21TIBILULXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-52

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

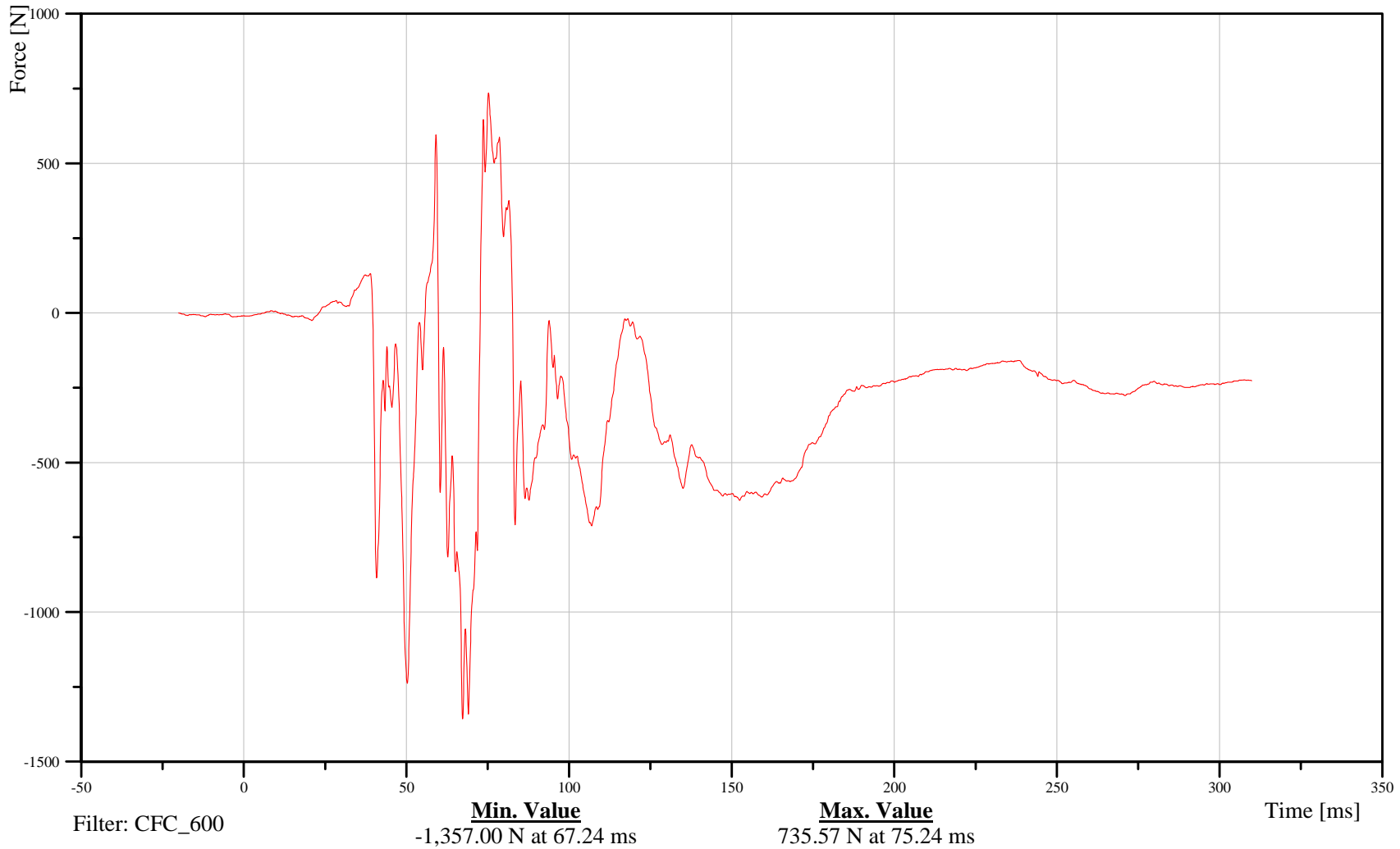
Target Vehicle Driver Left Upper Tibia Z-Axis Force

Customer: VRTC

21TIBILULXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-53

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

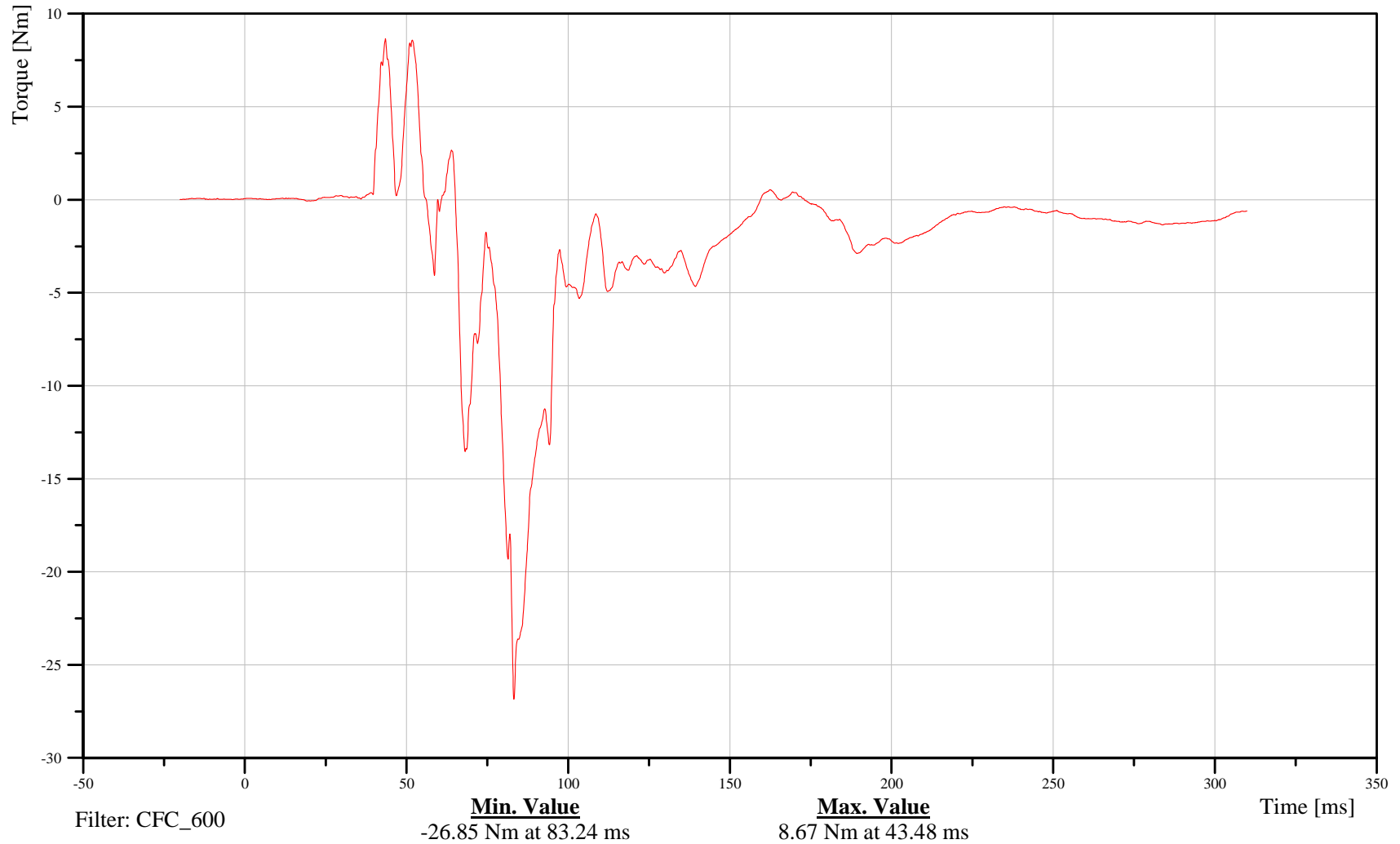
Target Vehicle Driver Left Upper Tibia Moment About X Axis

Customer: VRTC

21TIBILULXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-54

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

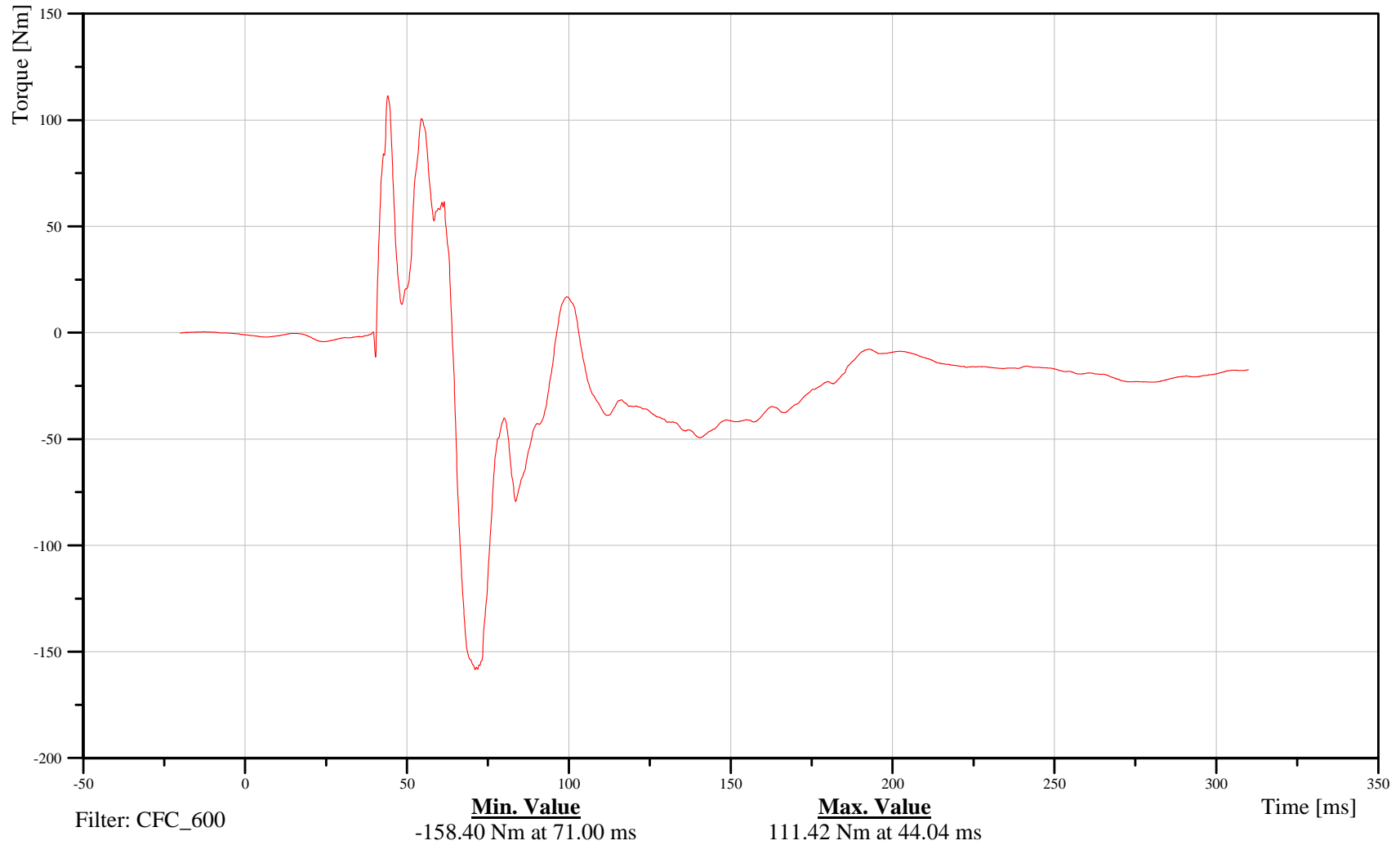
Target Vehicle Driver Left Upper Tibia Moment About Y Axis

Customer: VRTC

21TIBILULXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-55

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

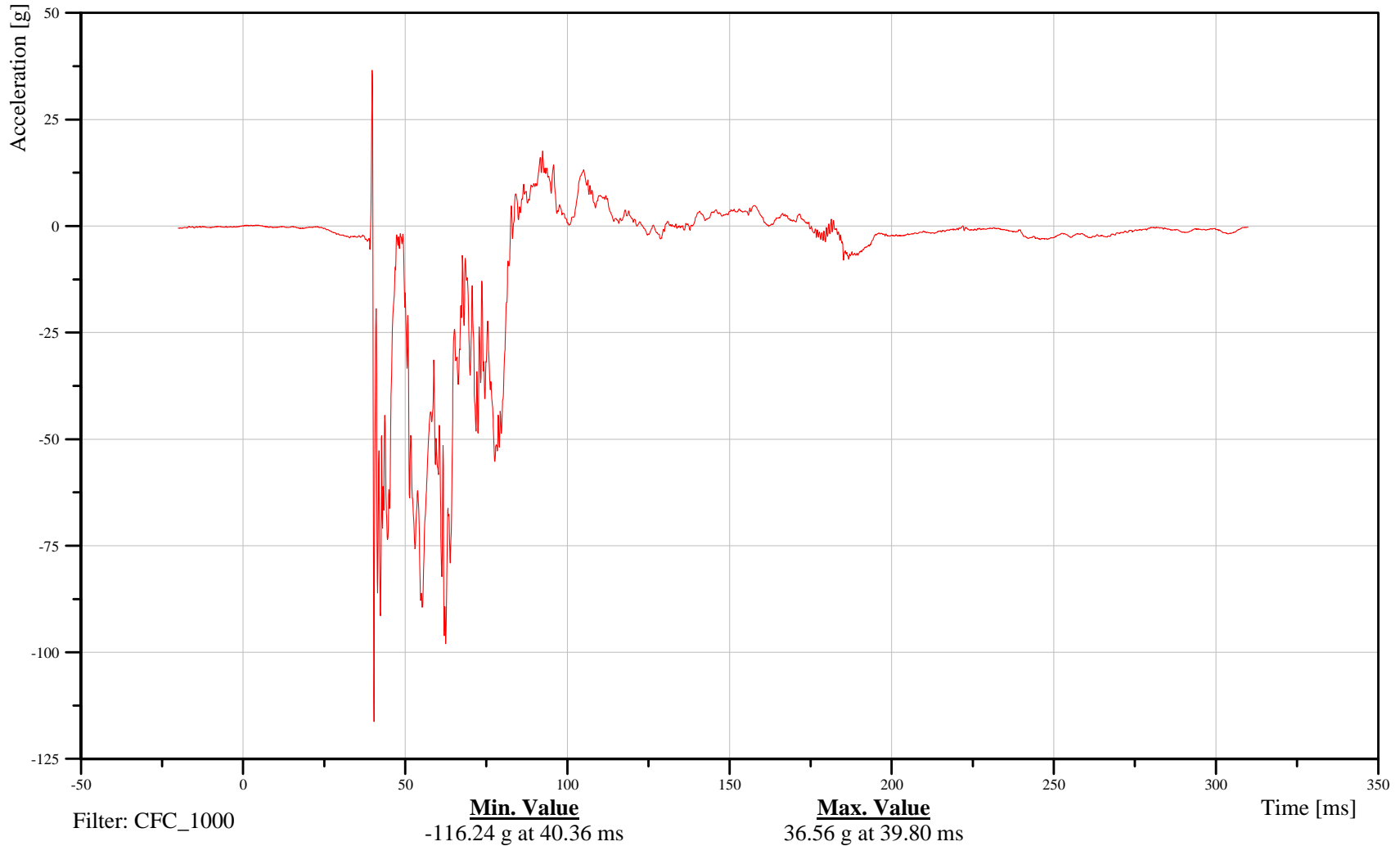
Target Vehicle Driver Left Tibia X-Axis Acceleration

Customer: VRTC

21TIBILELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-56

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

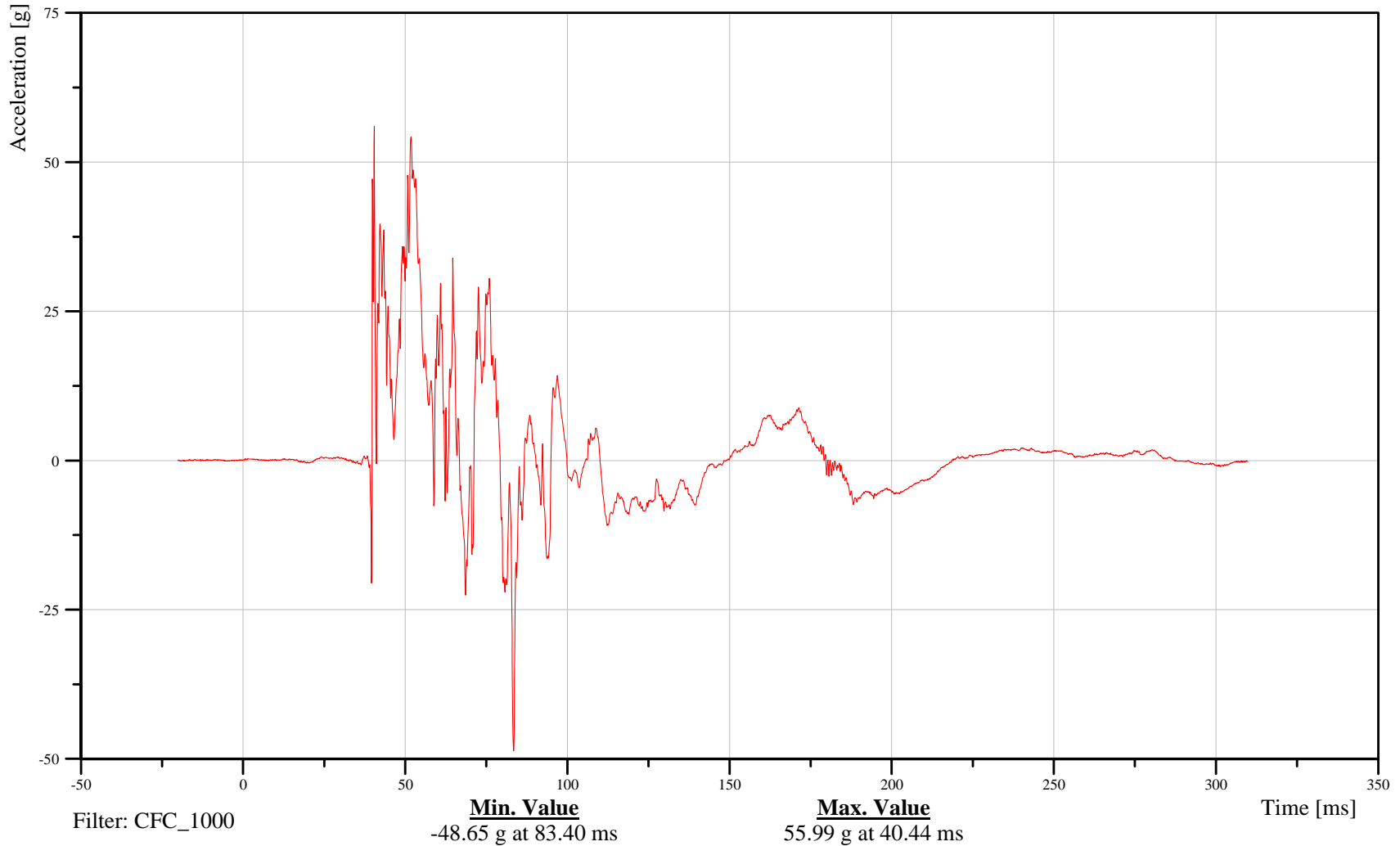
Target Vehicle Driver Left Tibia Y-Axis Acceleration

Customer: VRTC

21TIBILELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-57

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

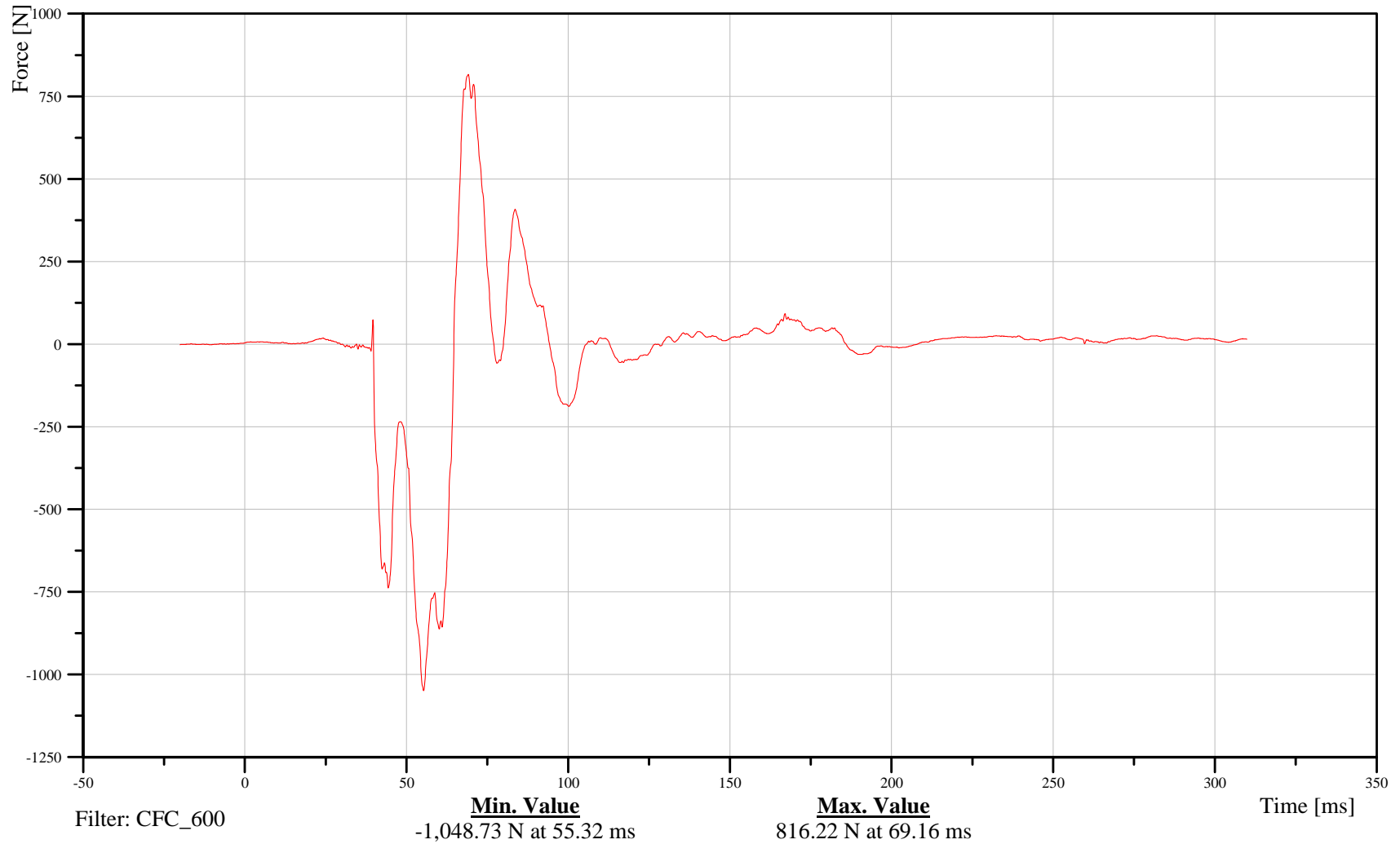
Target Vehicle Driver Left Lower Tibia X-Axis Force

Customer: VRTC

21TIBILLXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-58

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

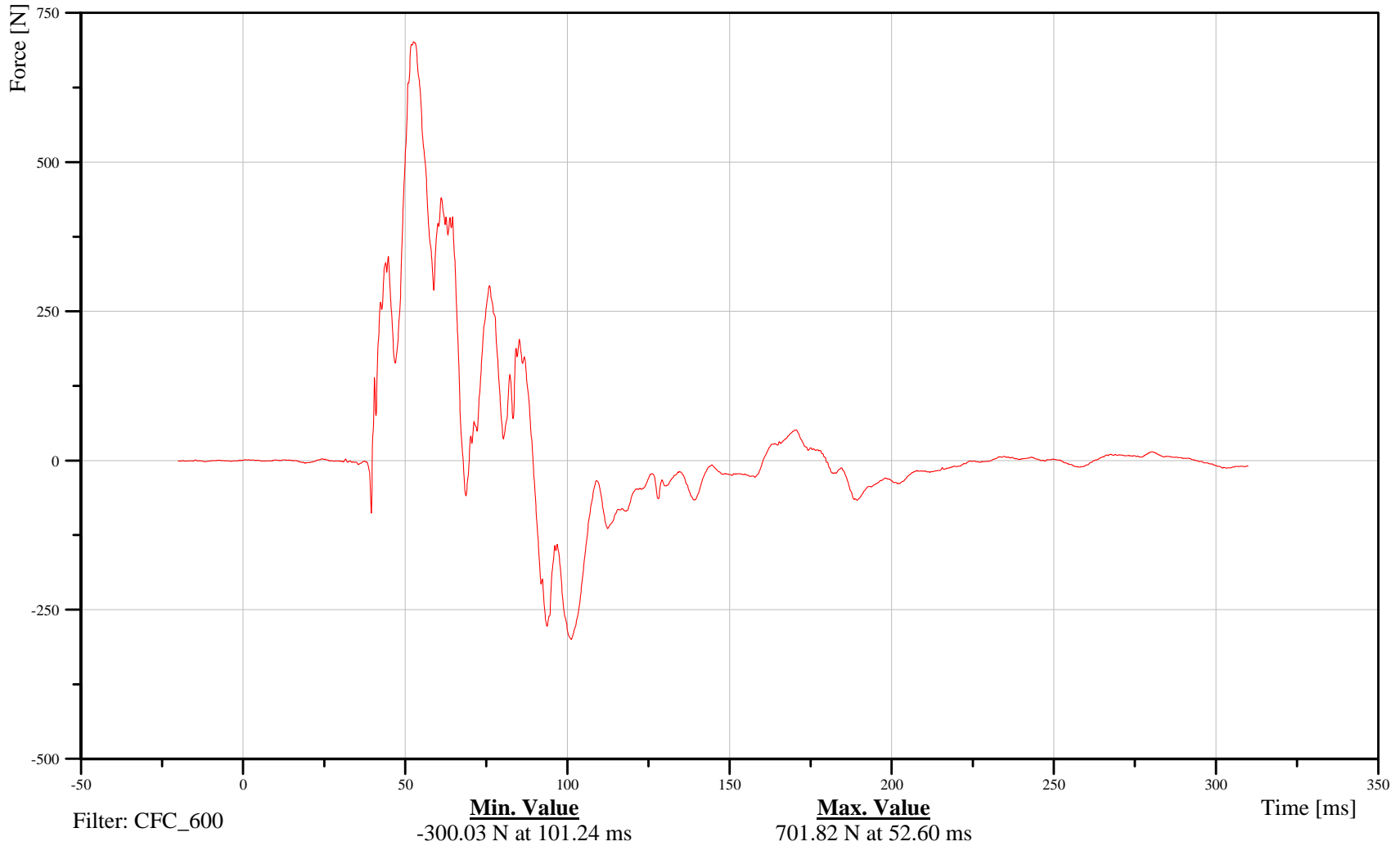
Target Vehicle Driver Left Lower Tibia Y-Axis Force

Customer: VRTC

21TIBILLXH3FOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-59

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

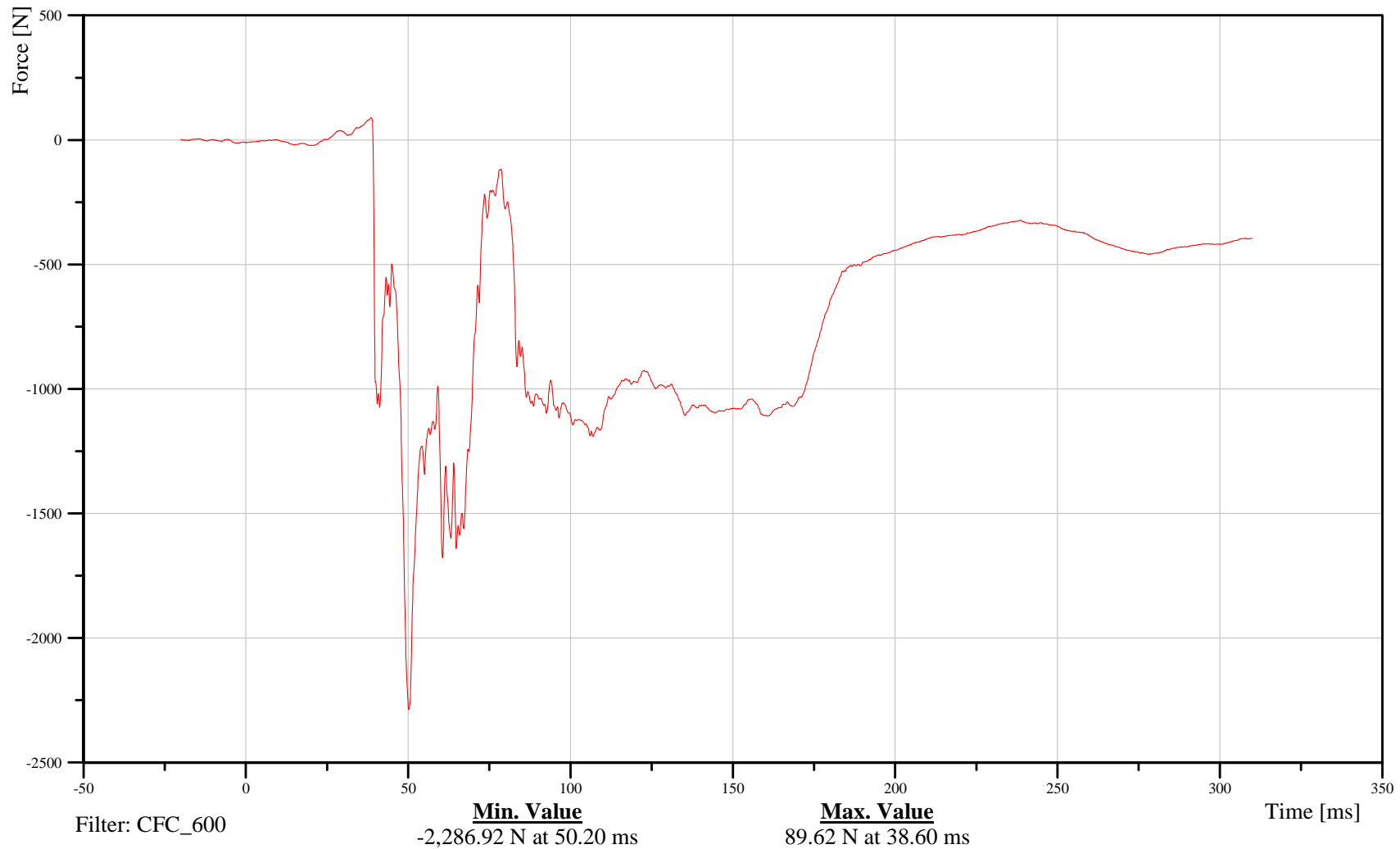
Target Vehicle Driver Left Lower Tibia Z-Axis Force

Customer: VRTC

21TIBILLXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-60

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

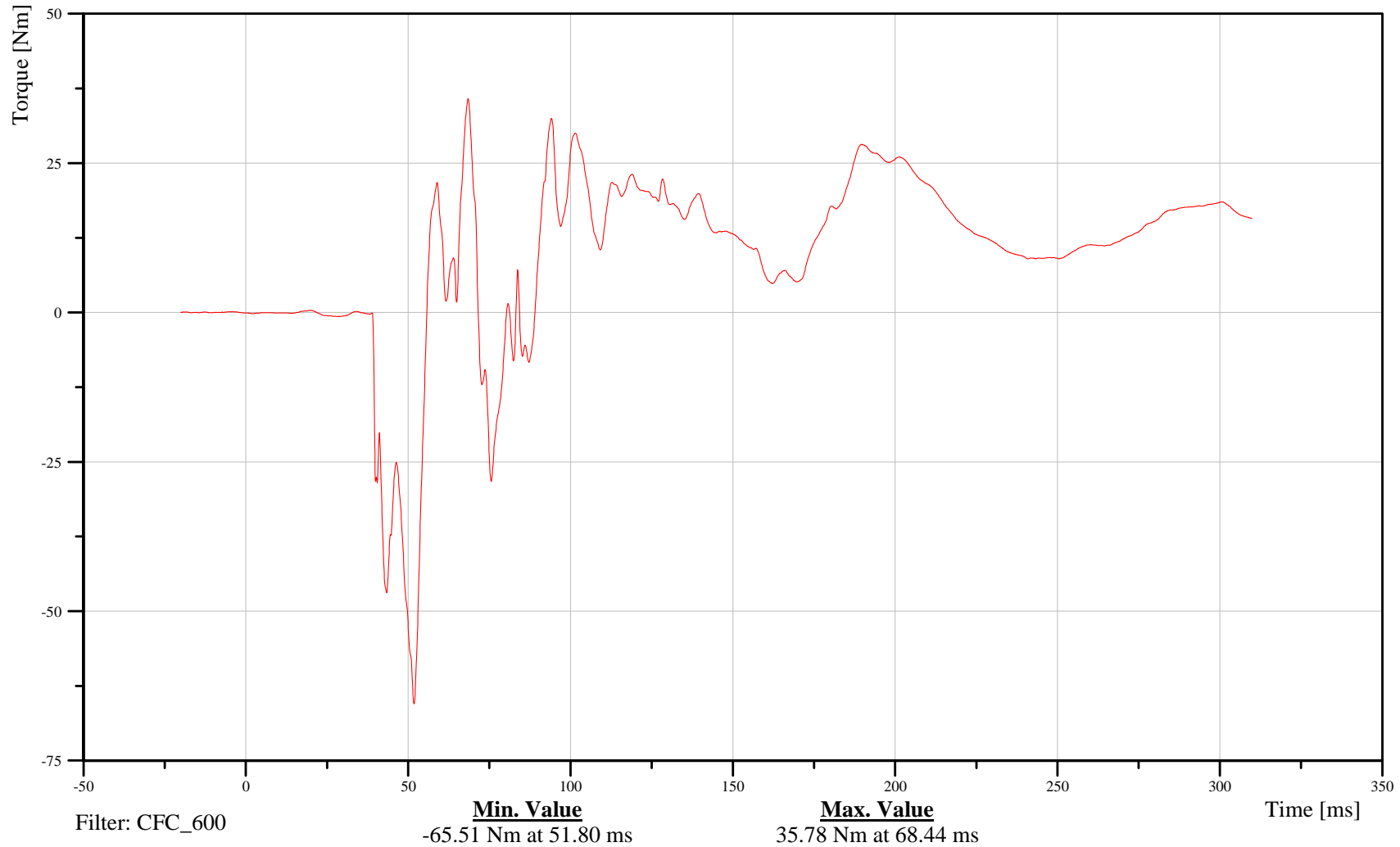
Target Vehicle Driver Left Lower Tibia Moment About X Axis

Customer: VRTC

21TIBILLXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-61

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

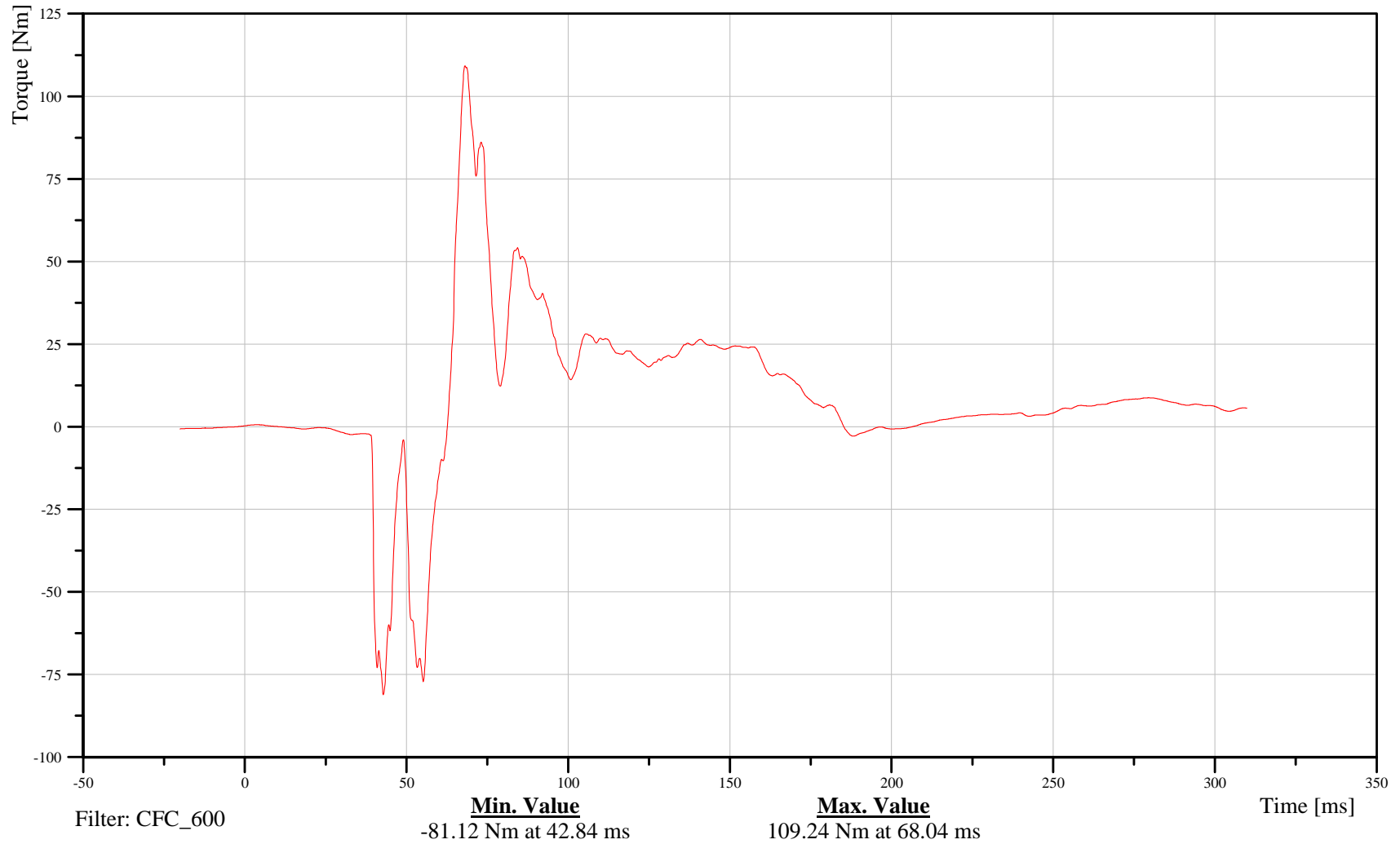
Target Vehicle Driver Left Lower Tibia Moment About Y Axis

Customer: VRTC

21TIBILLXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-62

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

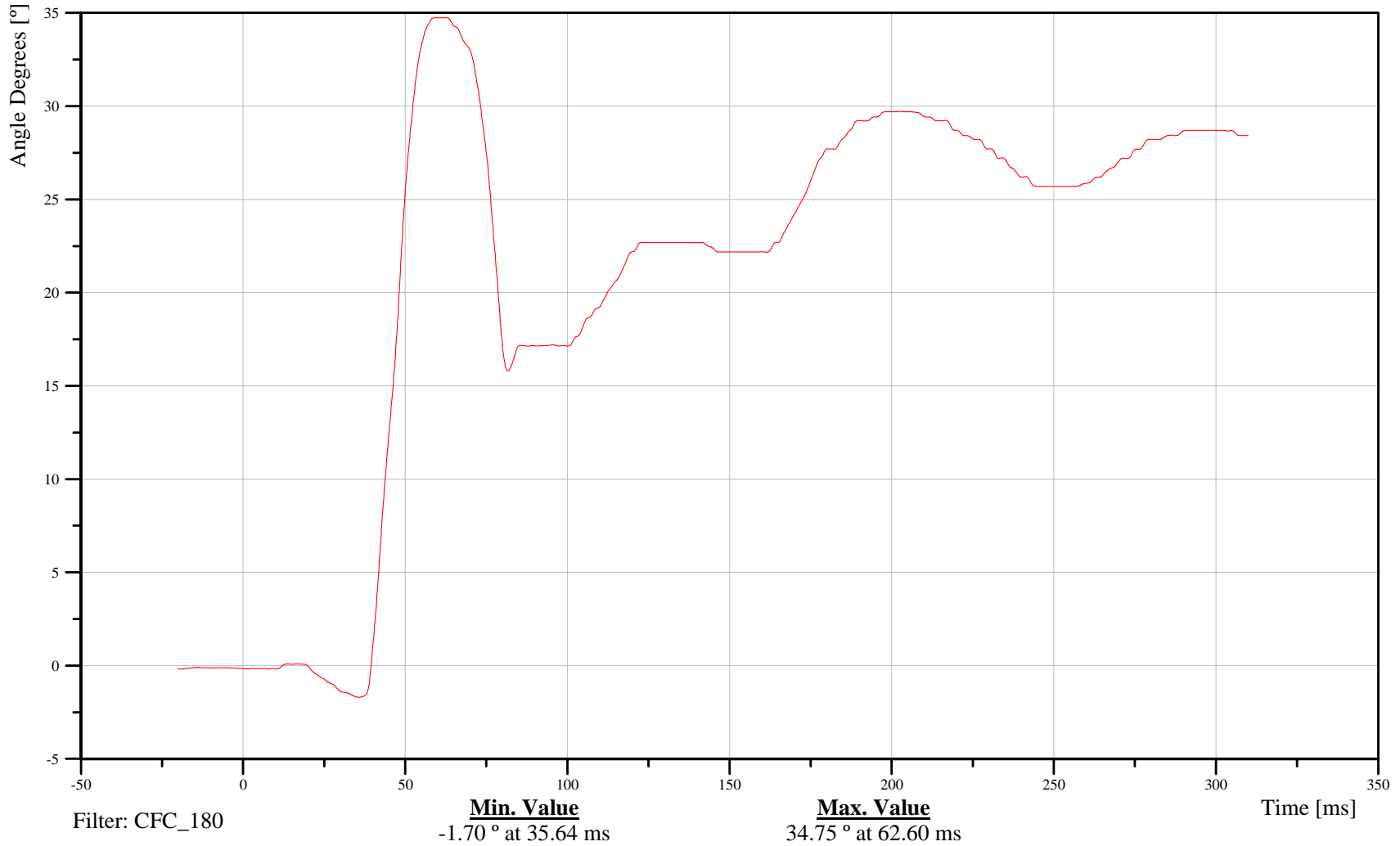
Target Vehicle Driver Left Foot X-Axis Angular Displacement

Customer: VRTC

21FOOTLELXH3ANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-63

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

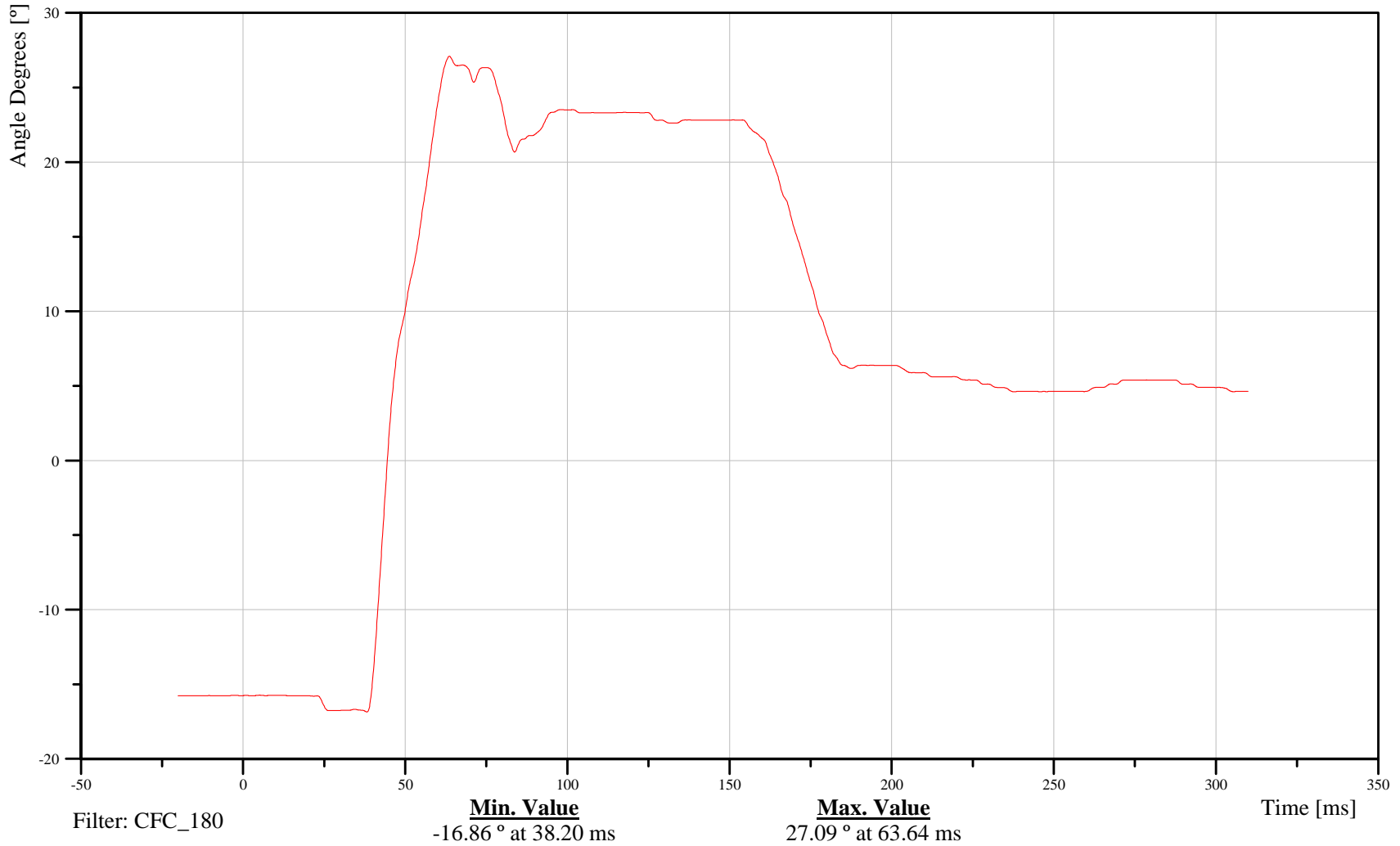
Target Vehicle Driver Left Foot Y-Axis Angular Displacement

Customer: VRTC

21FOOTLELXH3ANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-64

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

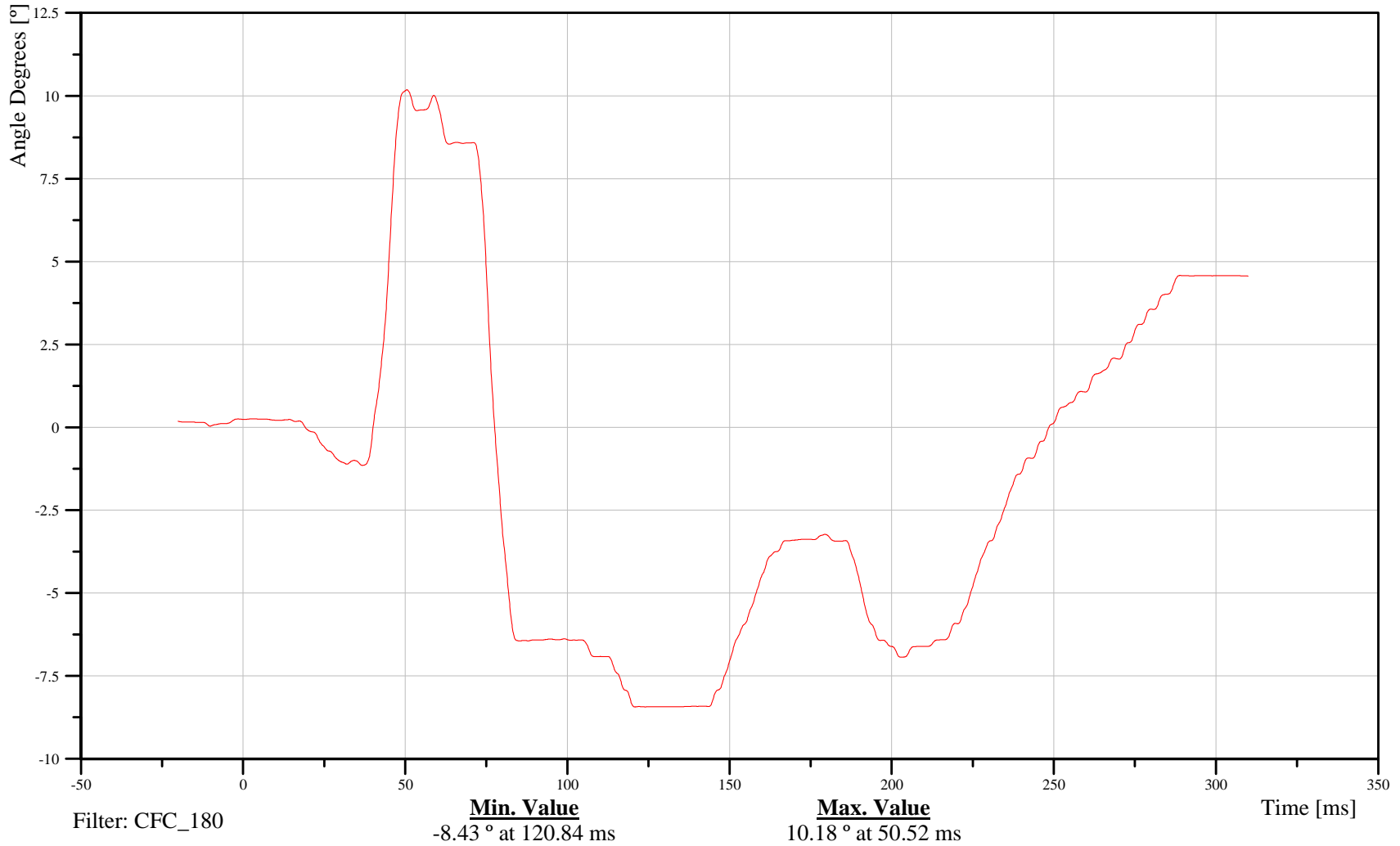
Target Vehicle Driver Left Foot Z-Axis Angular Displacement

Customer: VRTC

21FOOTLELXH3ANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-65

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

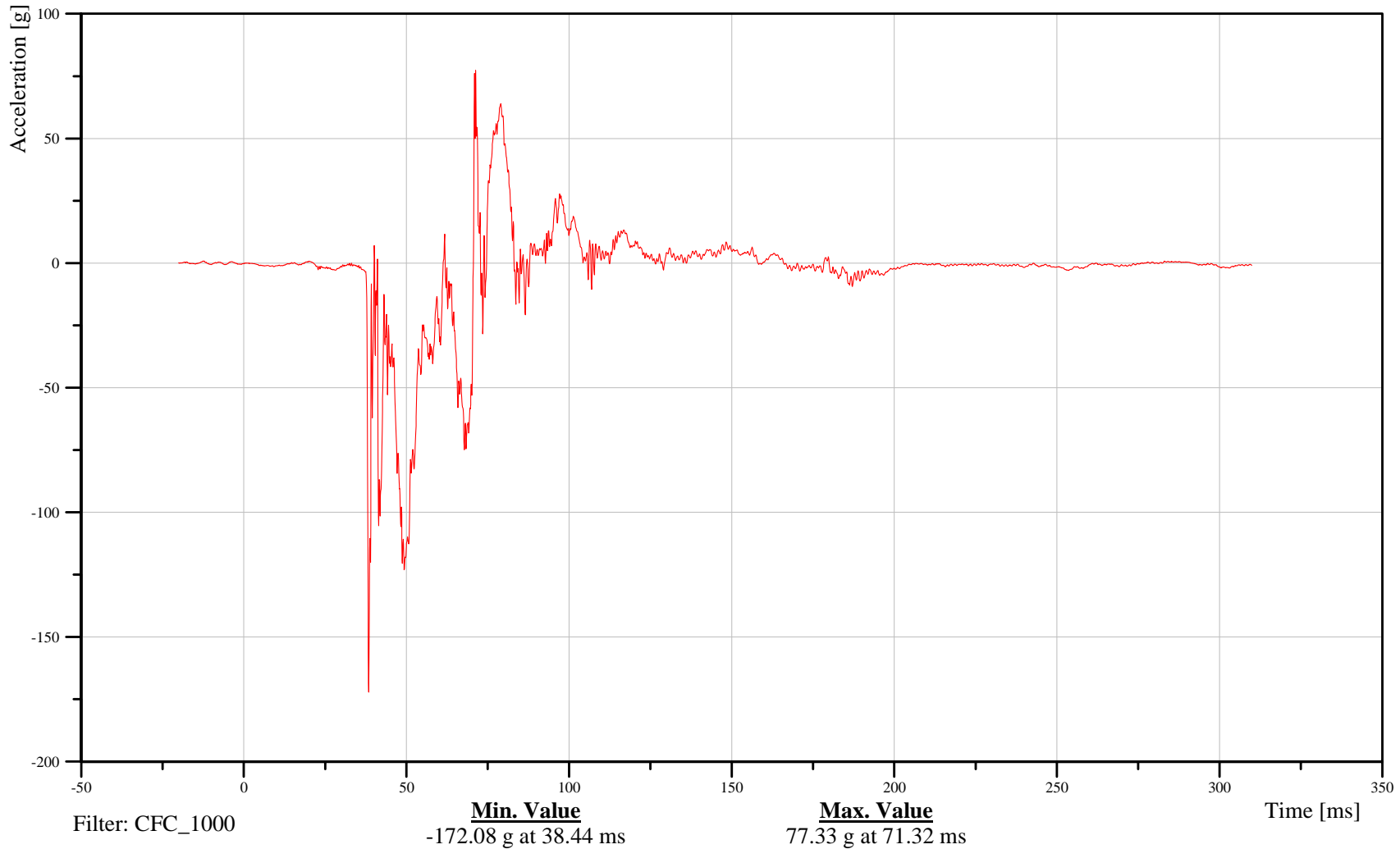
Target Vehicle Driver Left Foot X-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-66

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

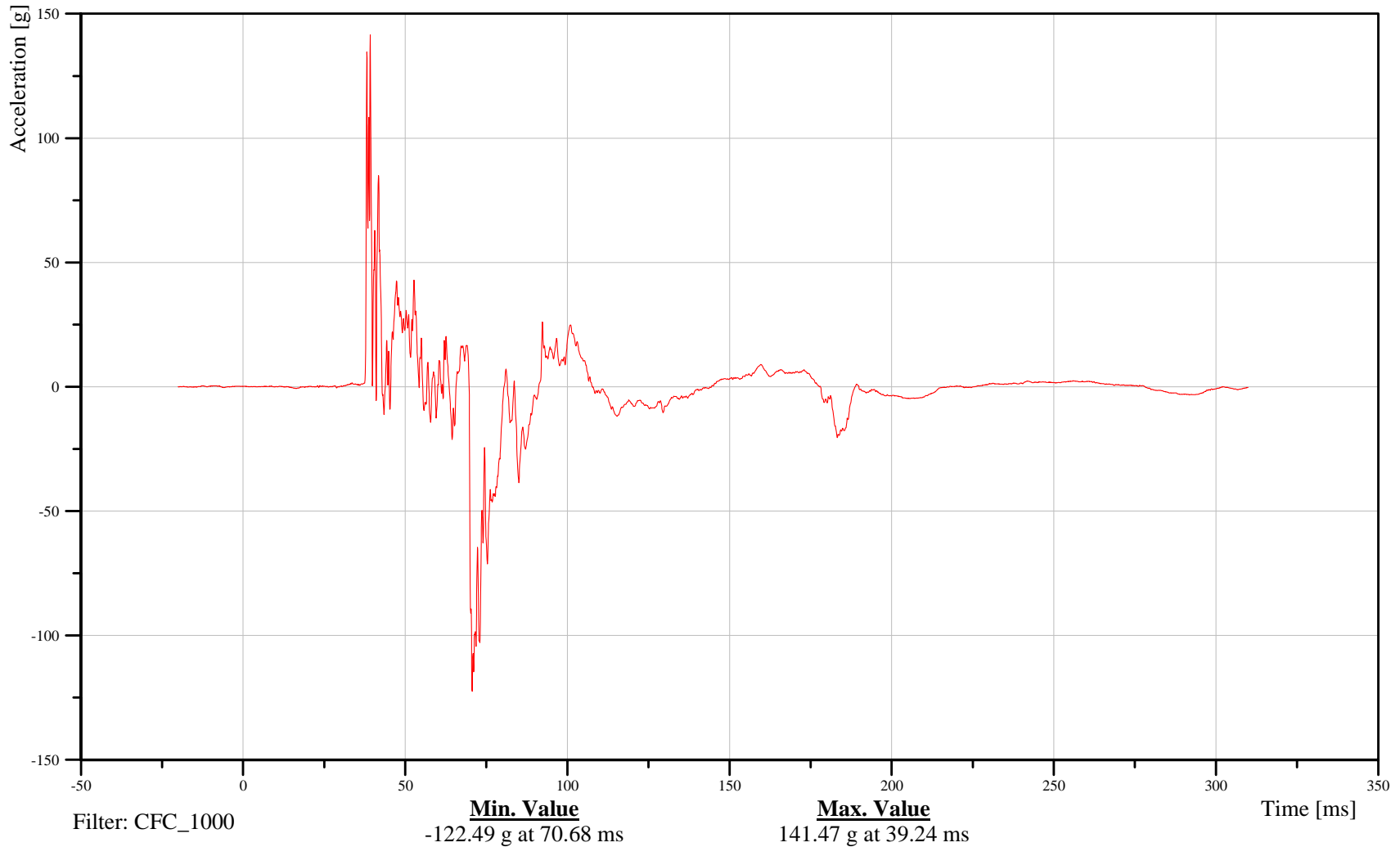
Target Vehicle Driver Left Foot Y-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-67

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

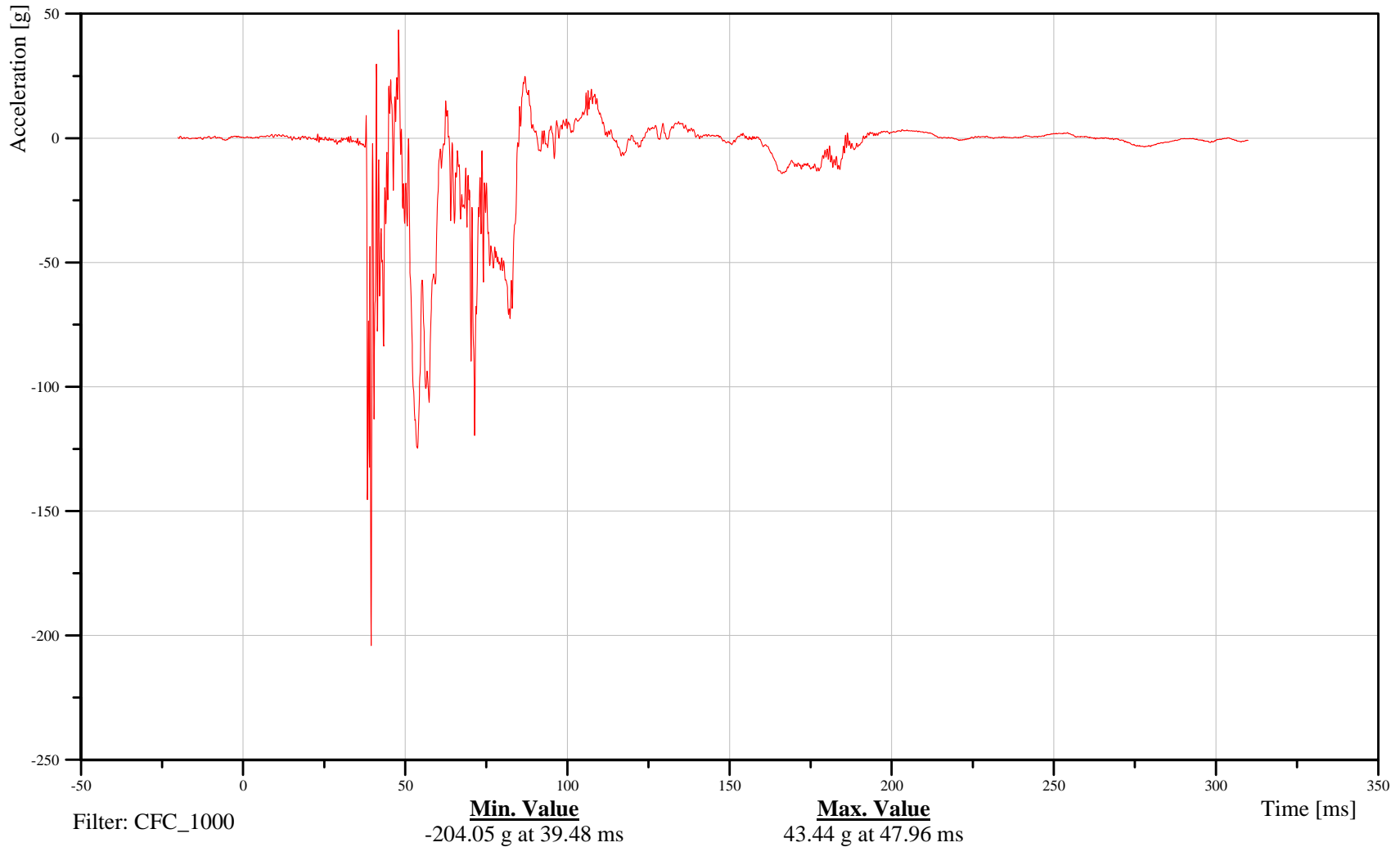
Target Vehicle Driver Left Foot Z-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-68

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

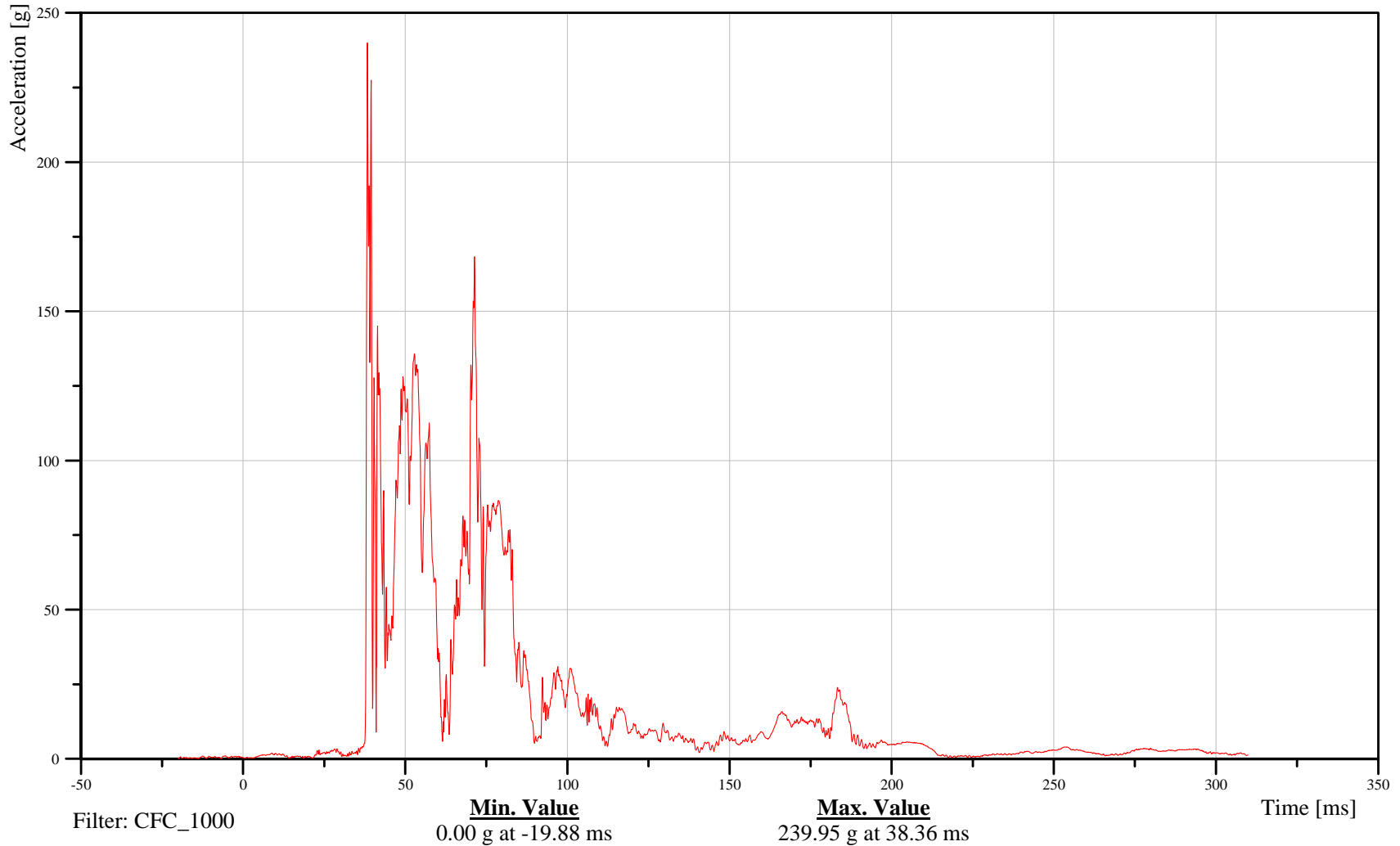
Target Vehicle Driver Left Foot Resultant Acceleration

Customer: VRTC

21FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-69

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

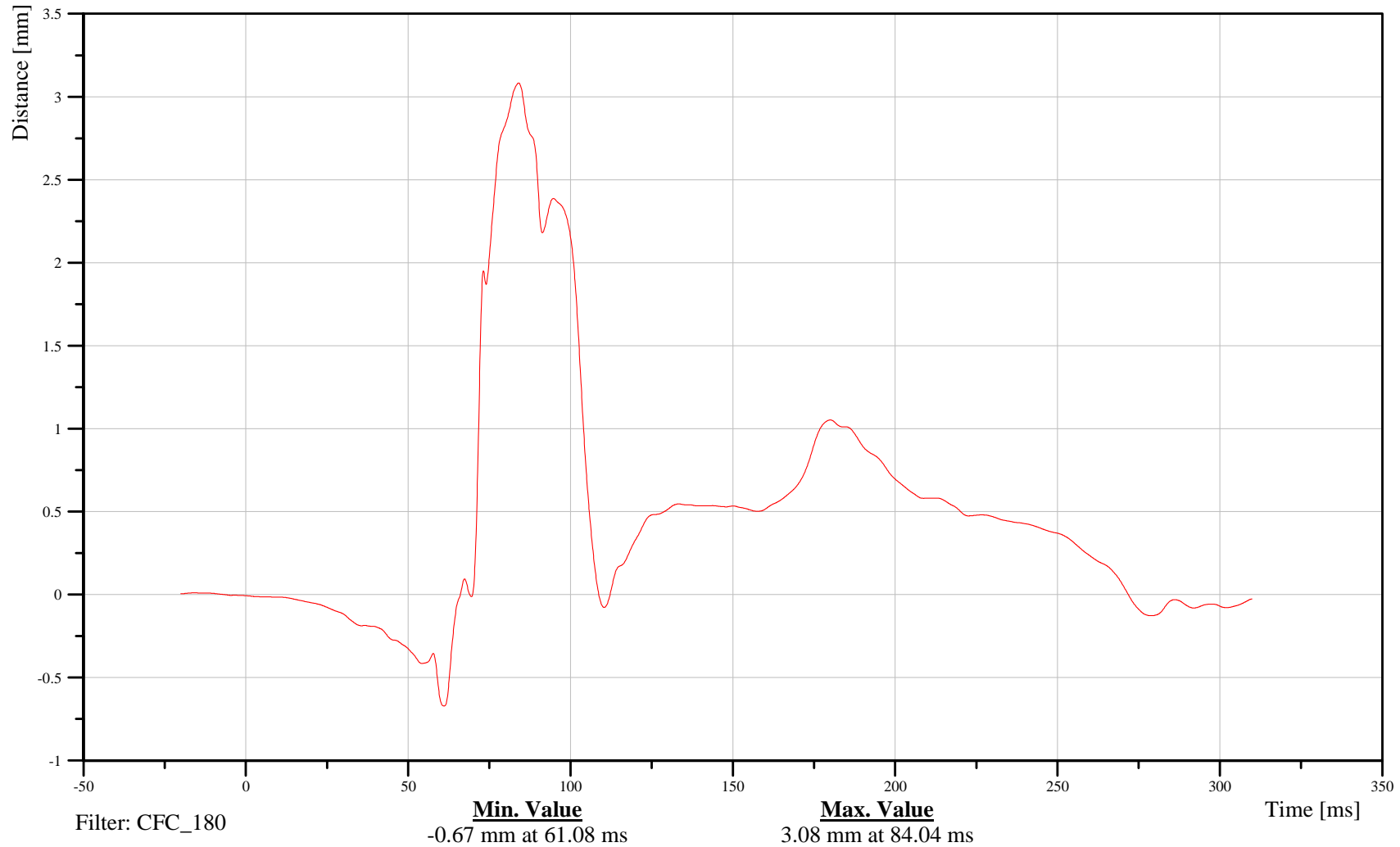
Target Vehicle Driver Right Knee X-Axis Displacement

Customer: VRTC

21KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-70

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

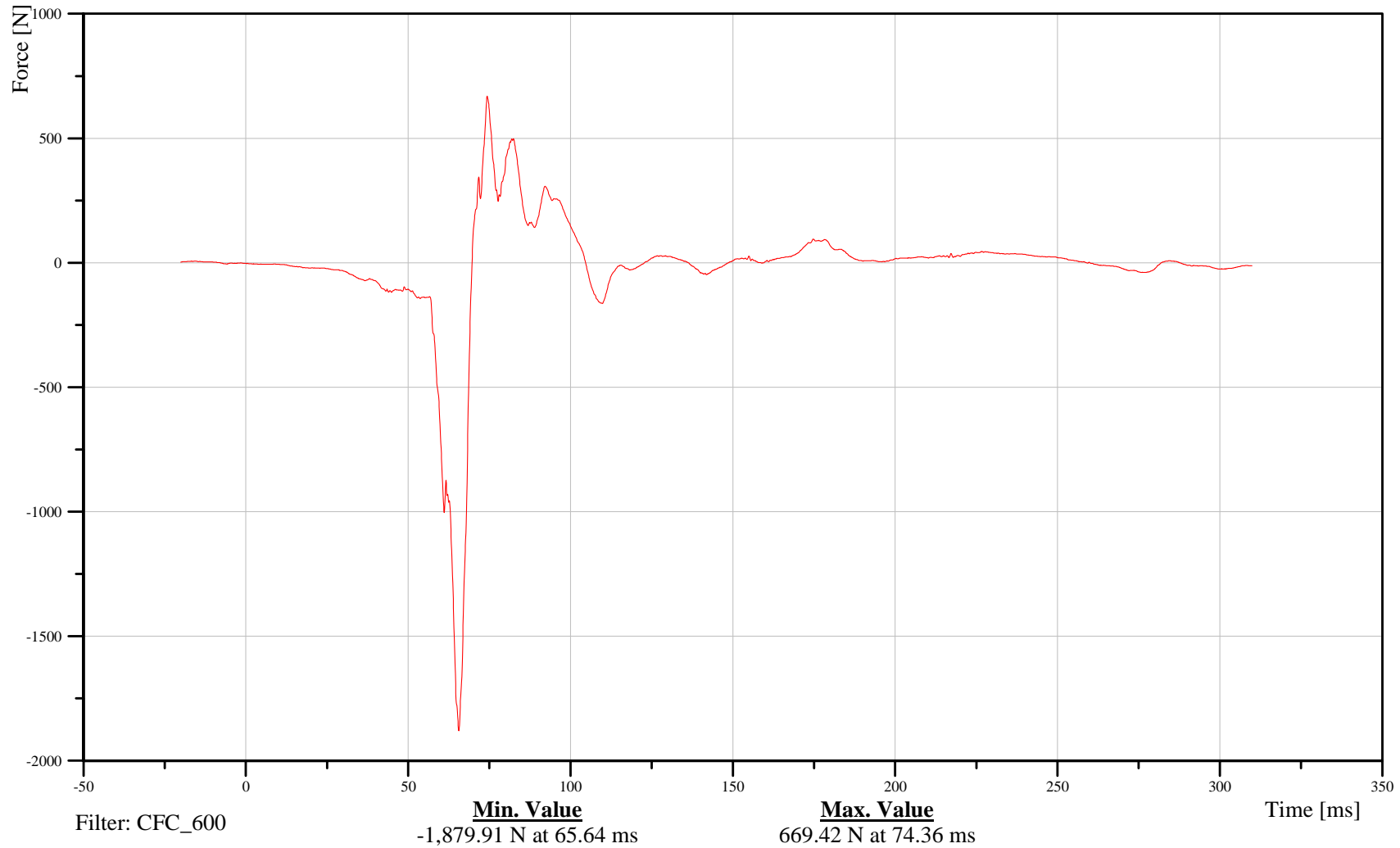
Target Vehicle Driver Right Upper Tibia X-Axis Force

Customer: VRTC

21TIBIRULXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-71

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

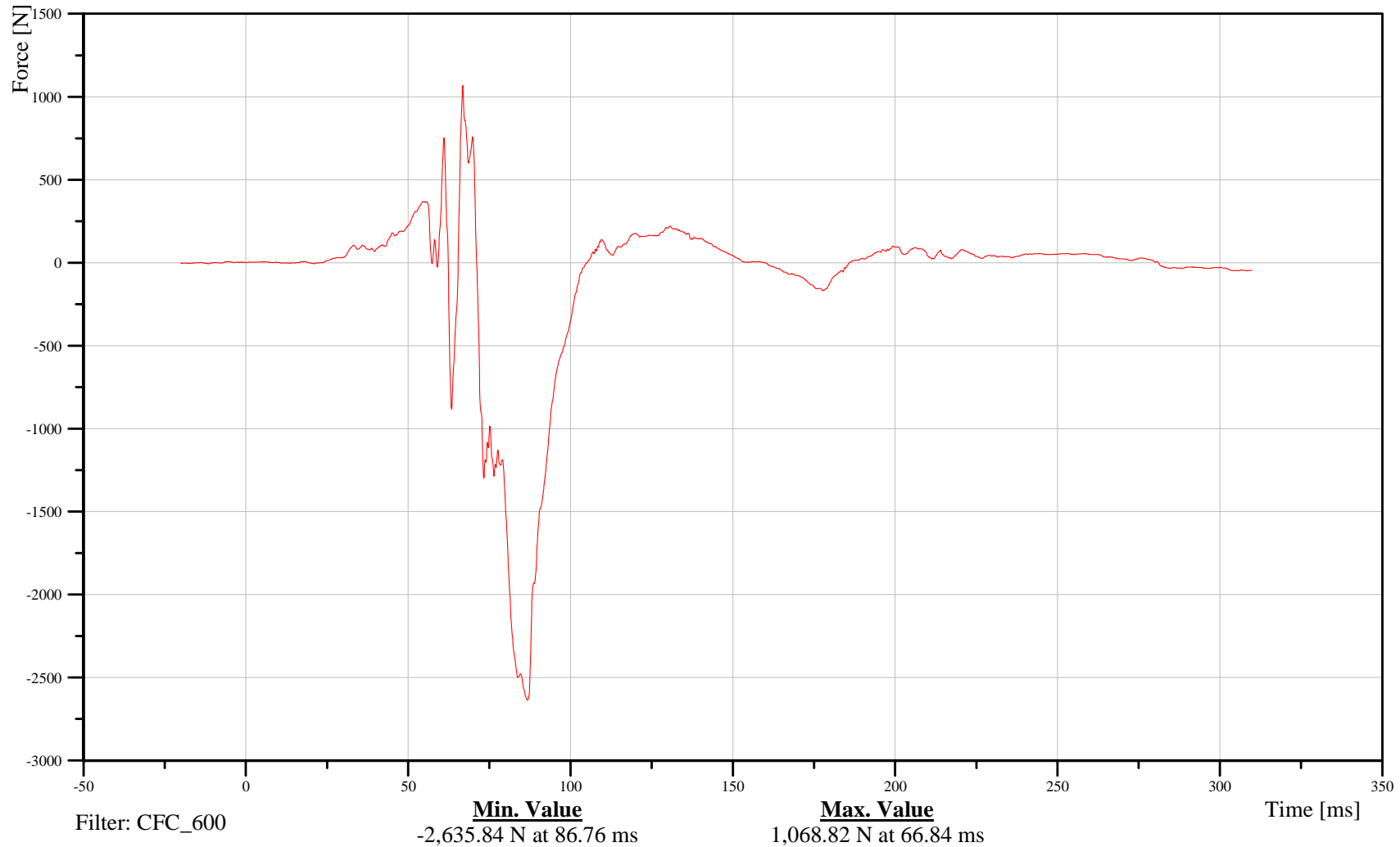
Target Vehicle Driver Right Upper Tibia Z-Axis Force

Customer: VRTC

21TIBIRULXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-72

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

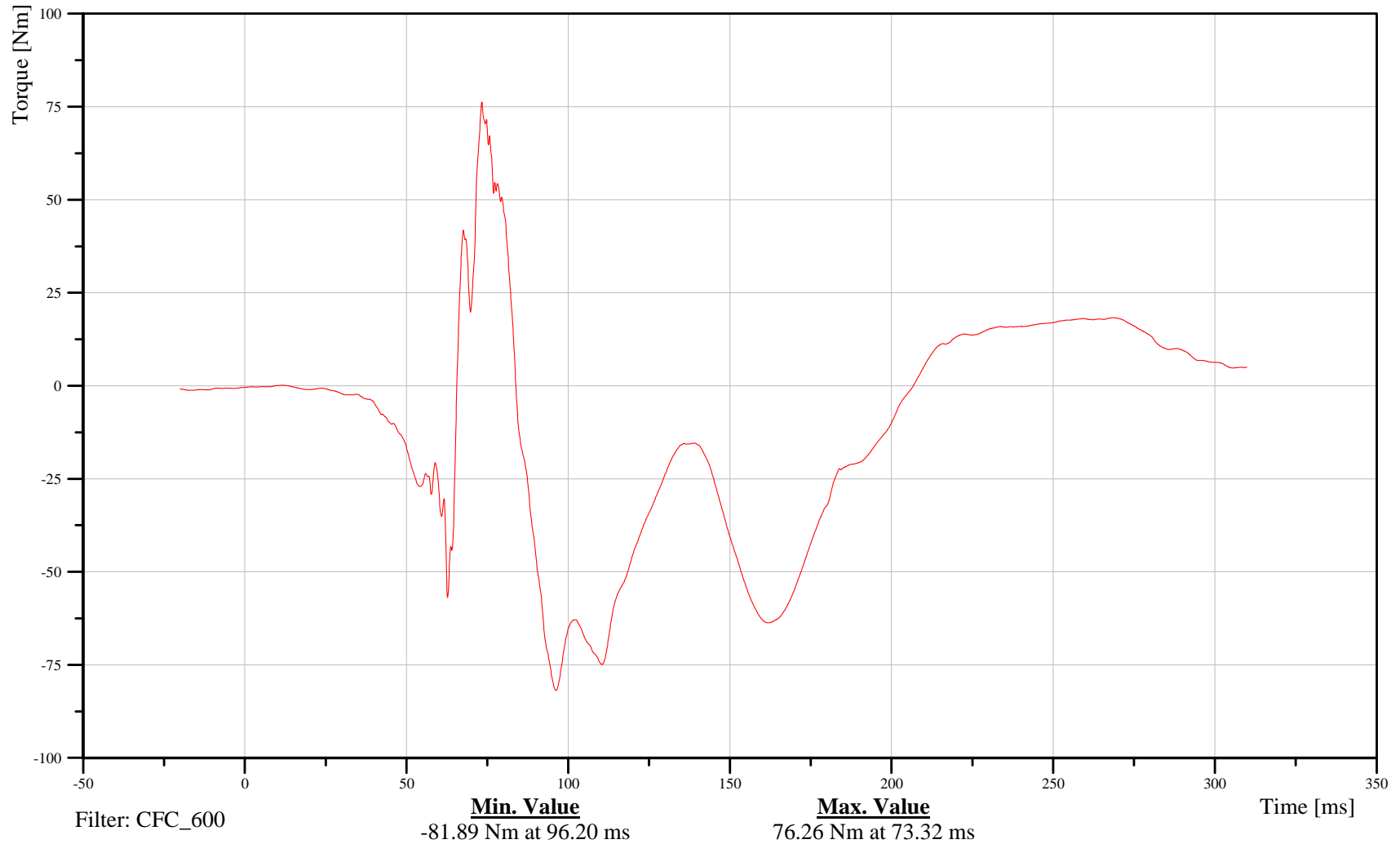
Target Vehicle Driver Right Upper Tibia Moment About X Axis

Customer: VRTC

21TIBIRULXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-73

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

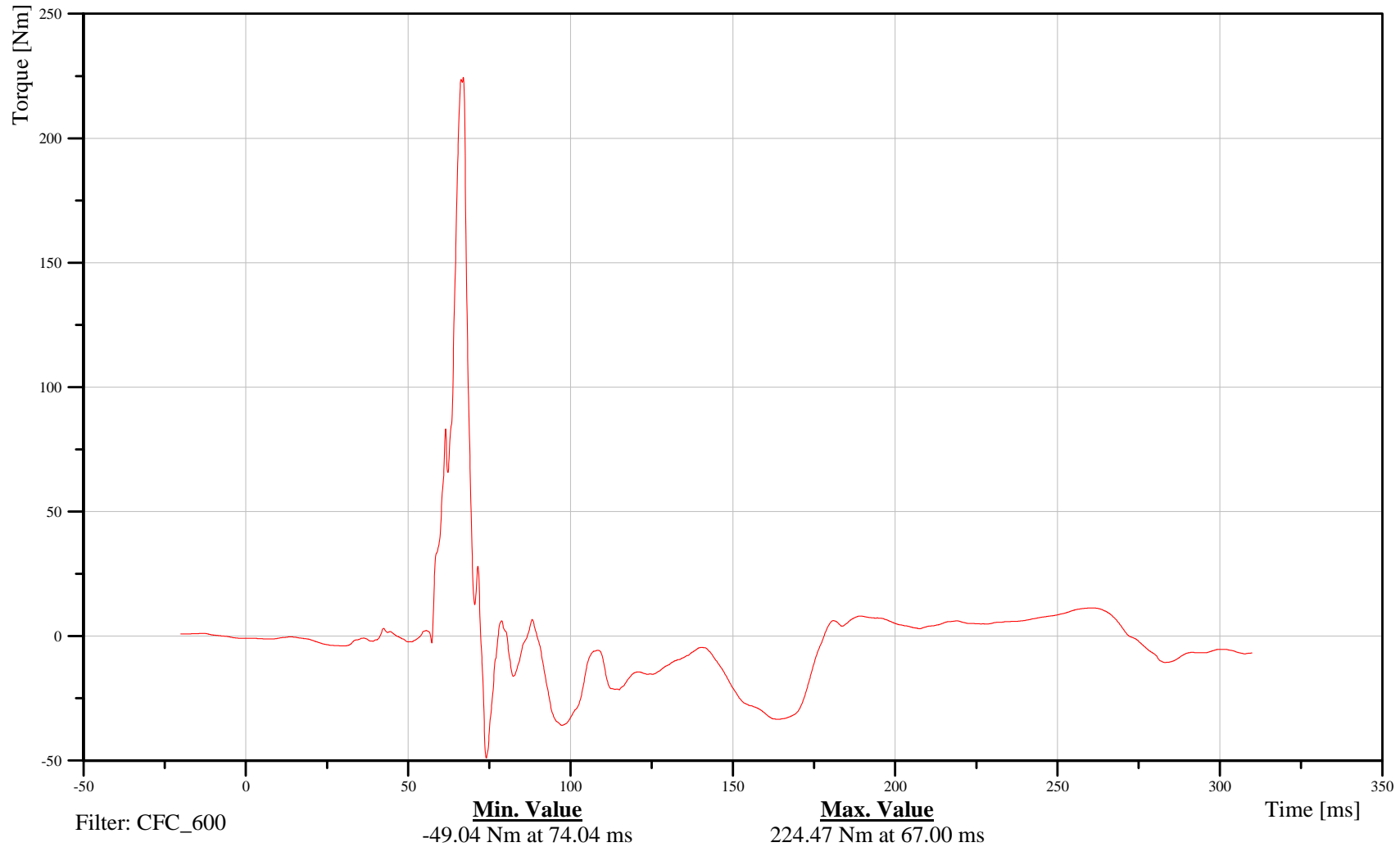
Target Vehicle Driver Right Upper Tibia Moment About Y Axis

Customer: VRTC

21TIBIRULXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-74

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

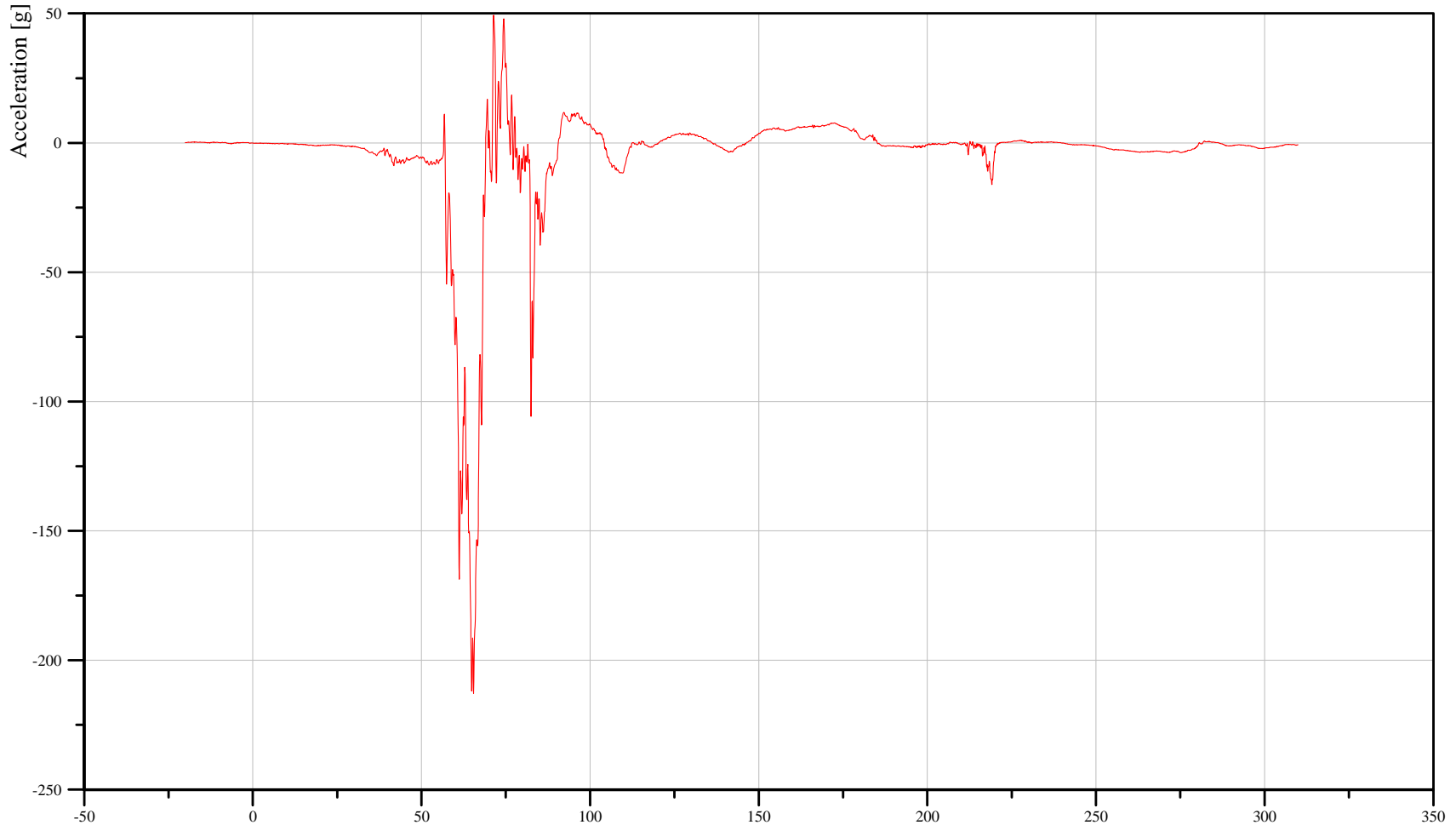
Target Vehicle Driver Right Tibia X-Axis Acceleration

Customer: VRTC

21TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



Filter: CFC_1000

Min. Value
-212.74 g at 65.48 ms

Max. Value
49.35 g at 71.40 ms

Time [ms]

B-75

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

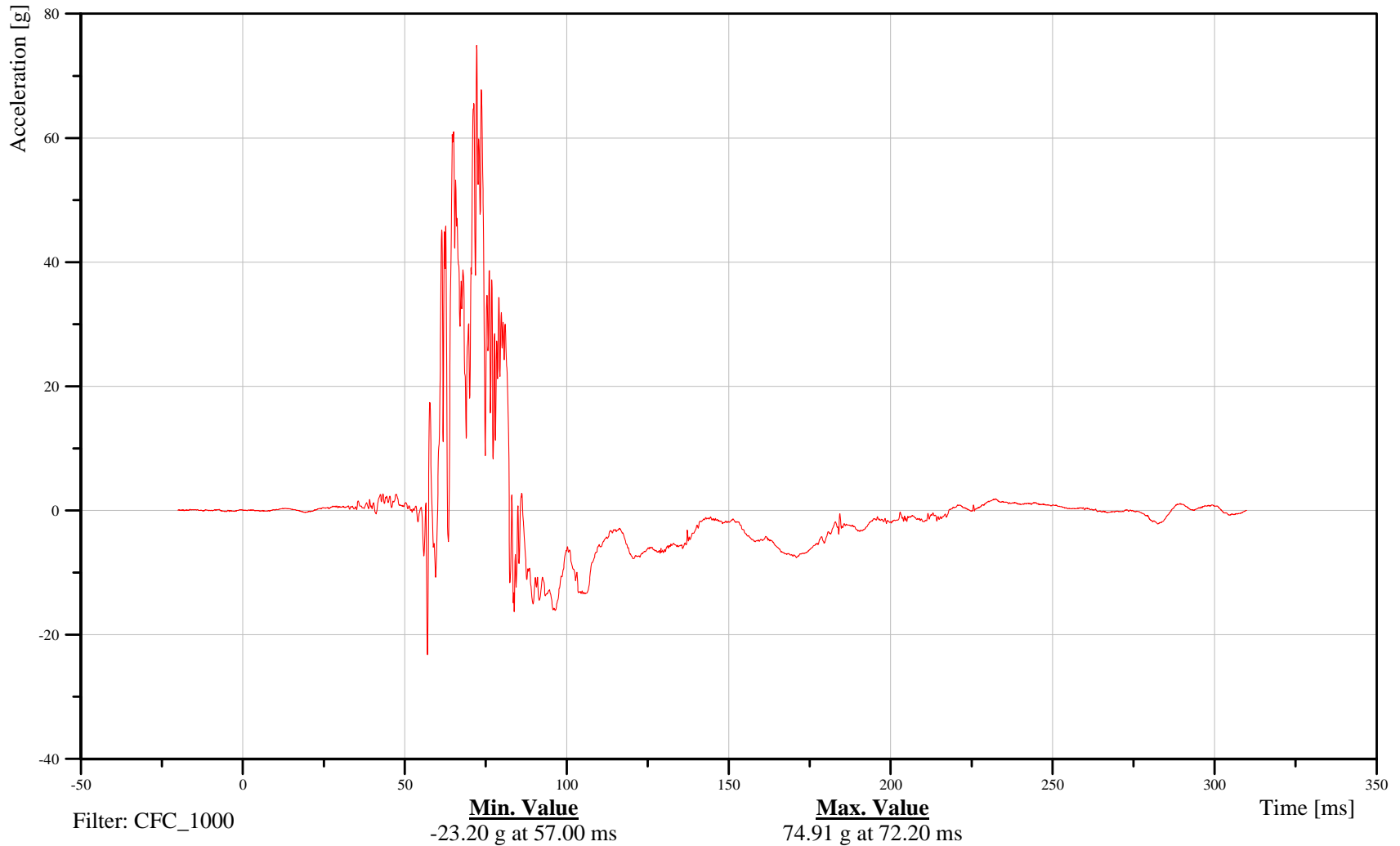
Target Vehicle Driver Right Tibia Y-Axis Acceleration

Customer: VRTC

21TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-76

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

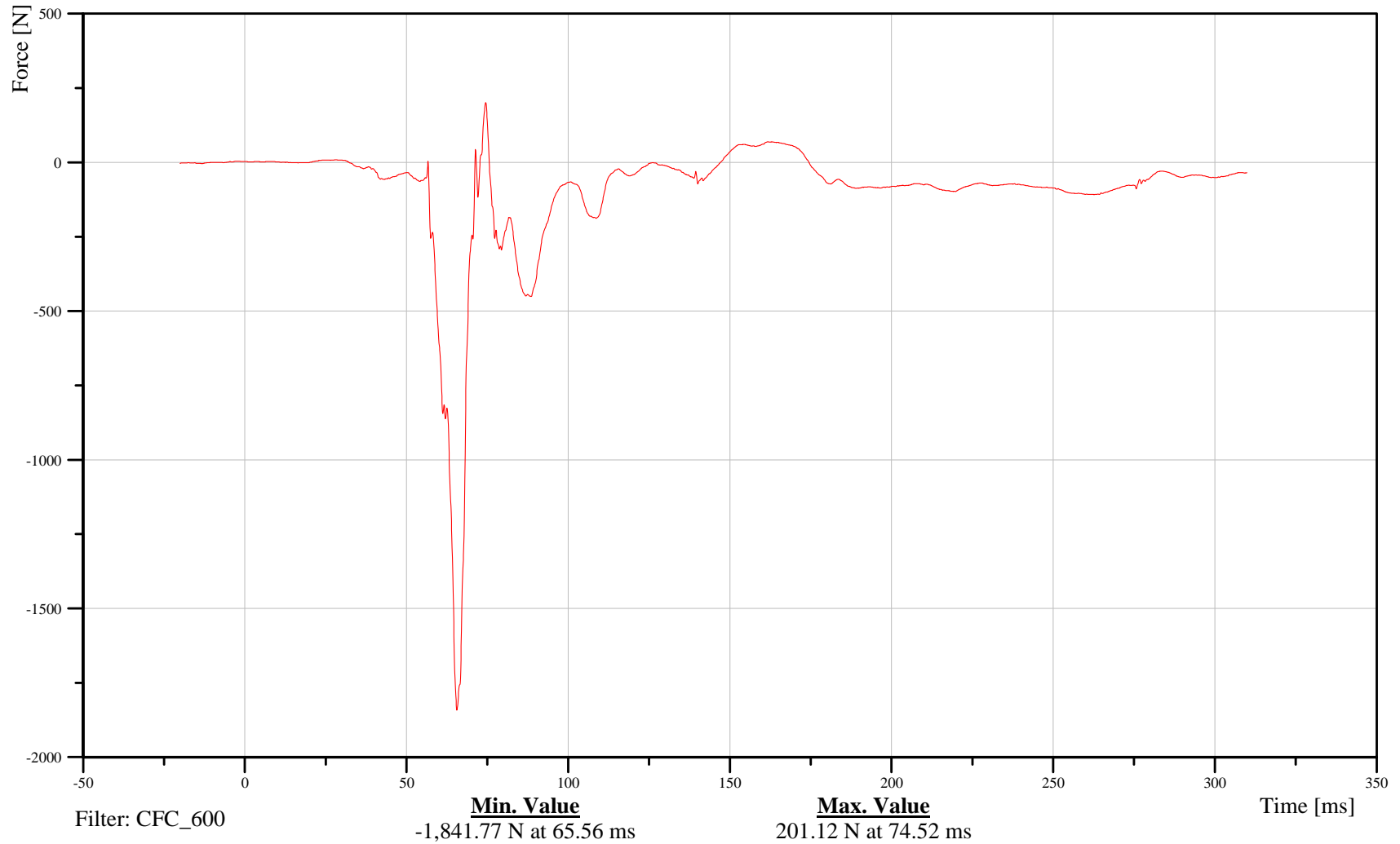
Target Vehicle Driver Right Lower Tibia X-Axis Force

Customer: VRTC

21TIBIRLLXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-77

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

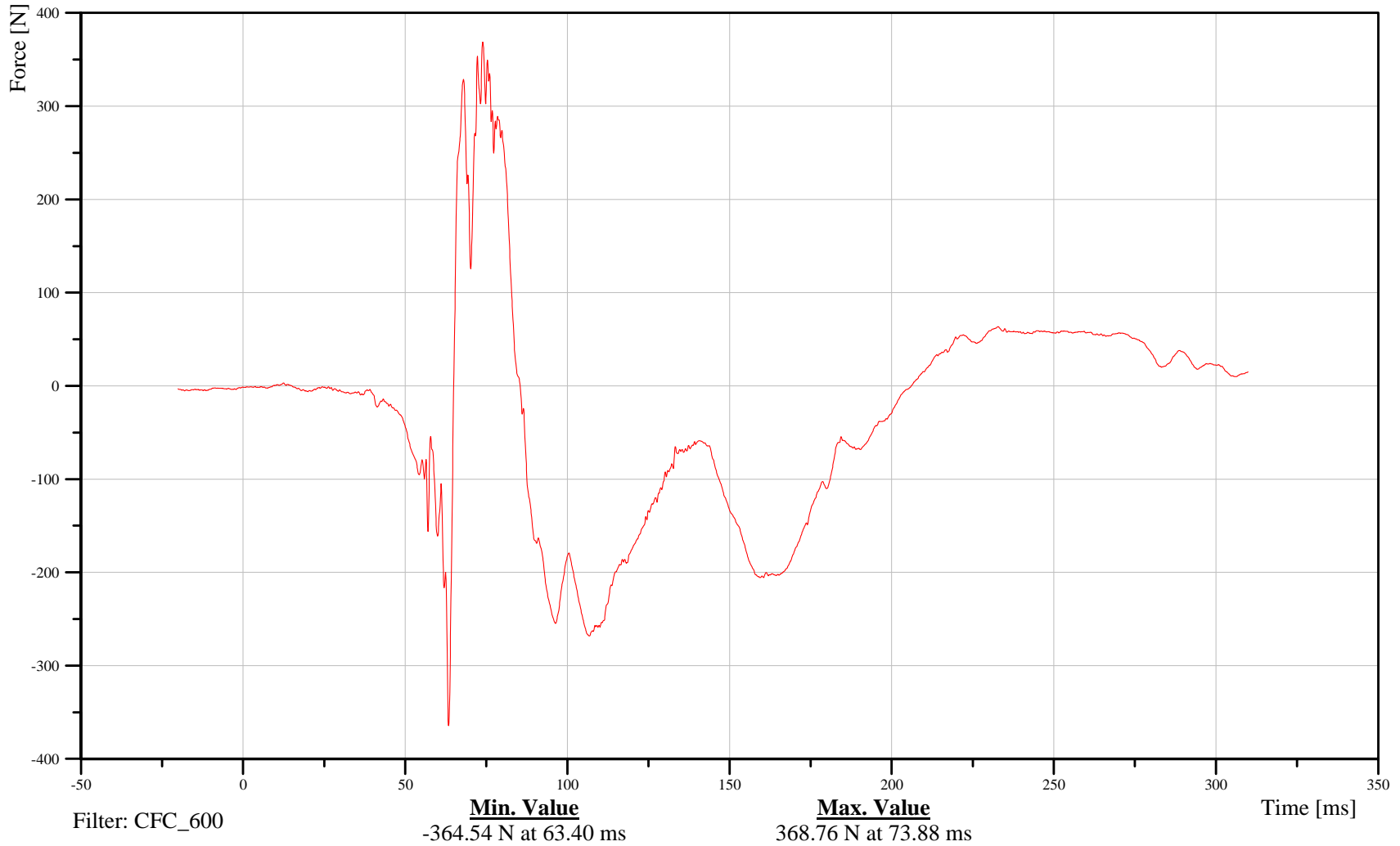
Target Vehicle Driver Right Lower Tibia Y-Axis Force

Customer: VRTC

21TIBIRLLXH3FOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-78

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

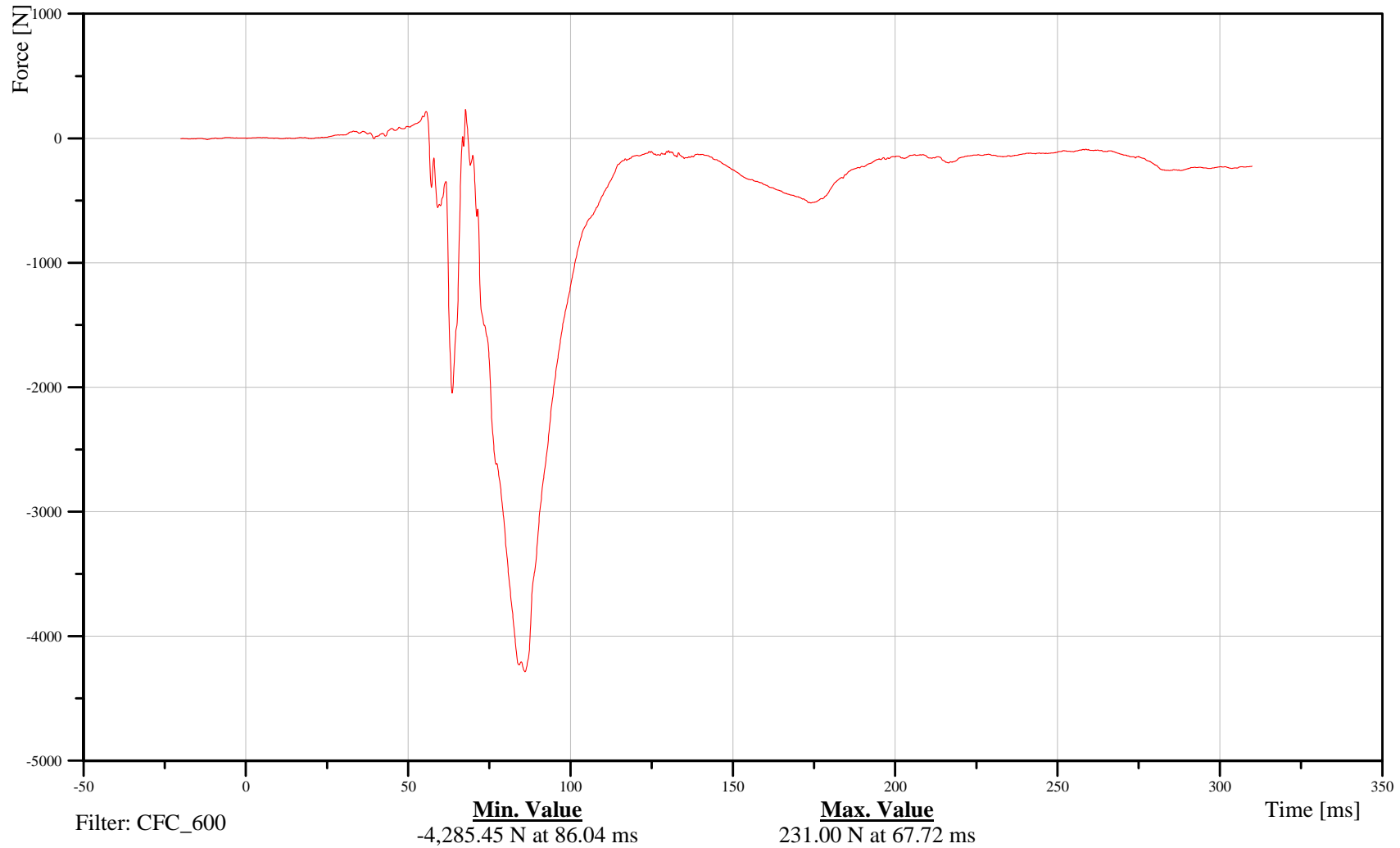
Target Vehicle Driver Right Lower Tibia Z-Axis Force

Customer: VRTC

21TIBIRLLXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-79

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

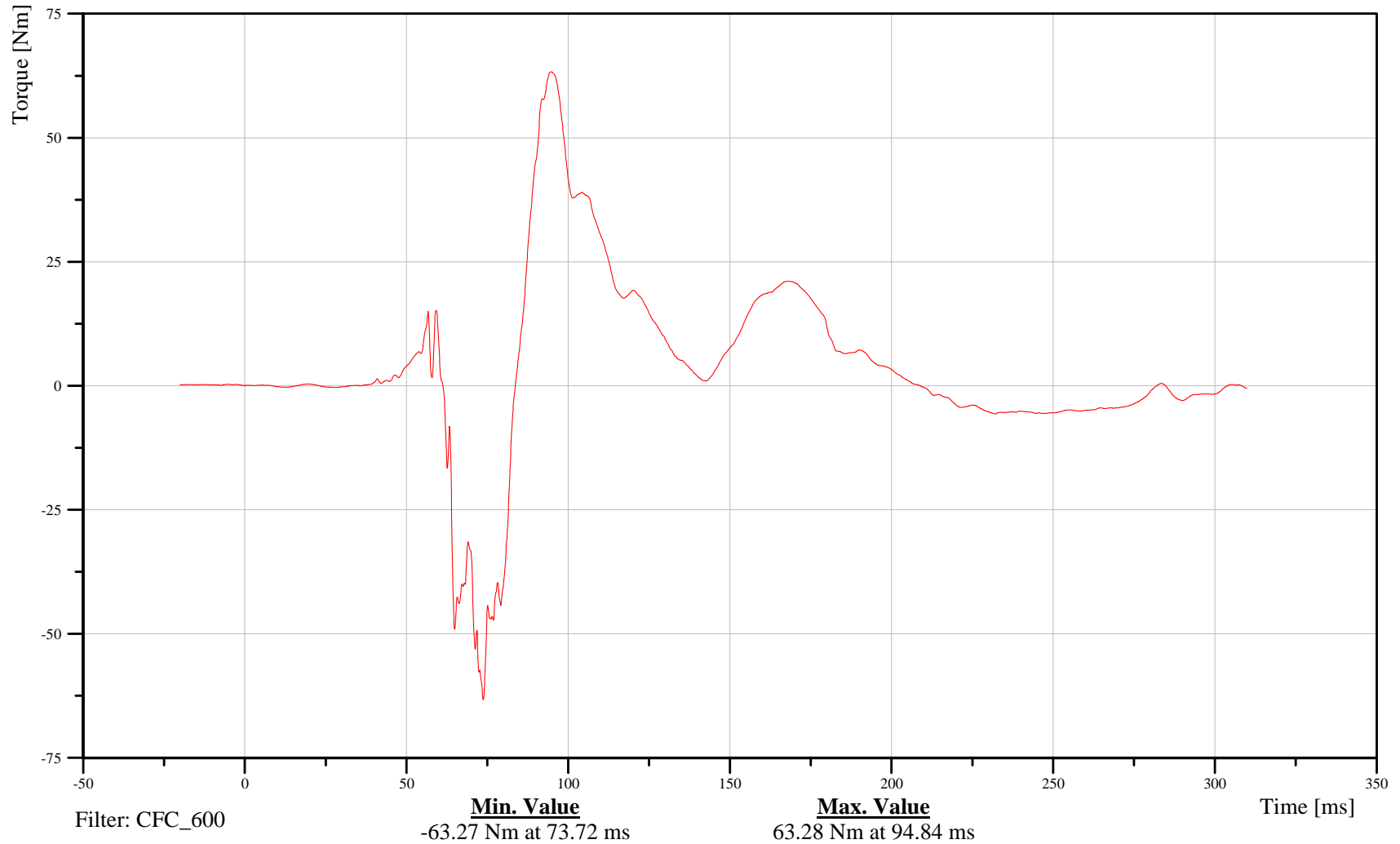
Target Vehicle Driver Right Lower Tibia Moment About X Axis

Customer: VRTC

21TIBIRLLXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-80

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

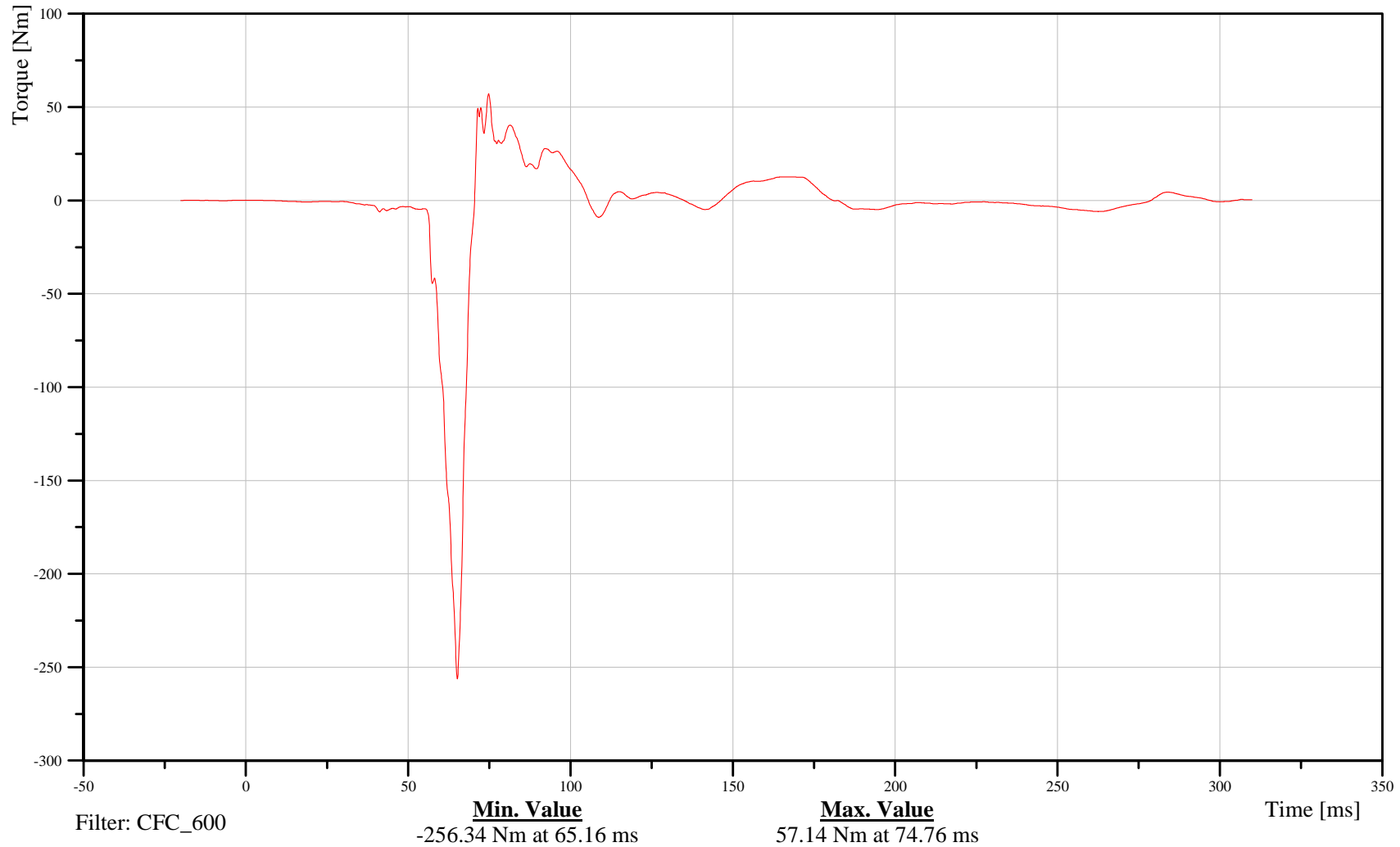
Target Vehicle Driver Right Lower Tibia Moment About Y Axis

Customer: VRTC

21TIBIRLLXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-81

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

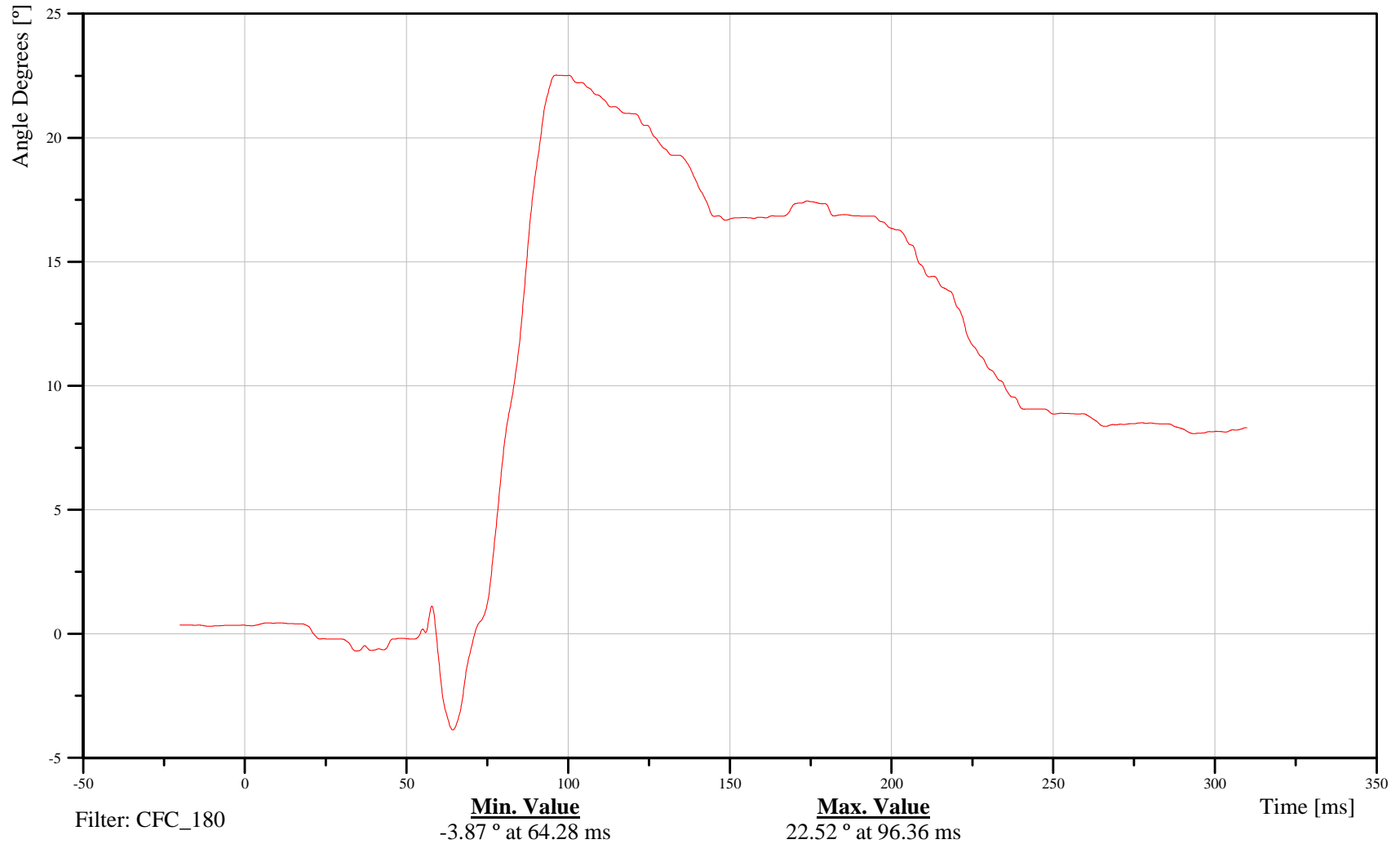
Target Vehicle Driver Right Foot X-Axis Angular Displacement

Customer: VRTC

21FOOTRILXH3ANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-82

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

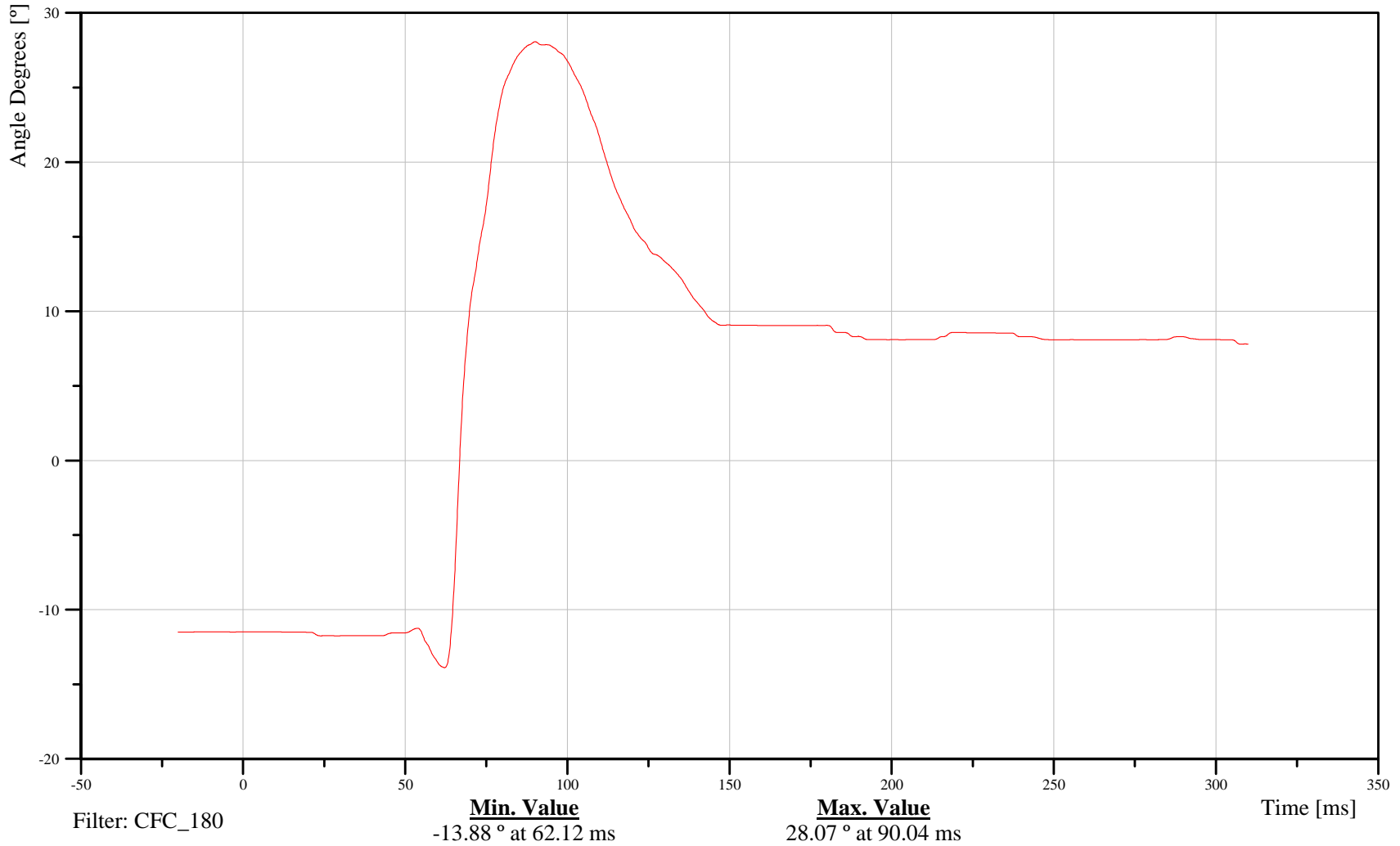
Target Vehicle Driver Right Foot Y-Axis Angular Displacement

Customer: VRTC

21FOOTRILXH3ANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-83

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

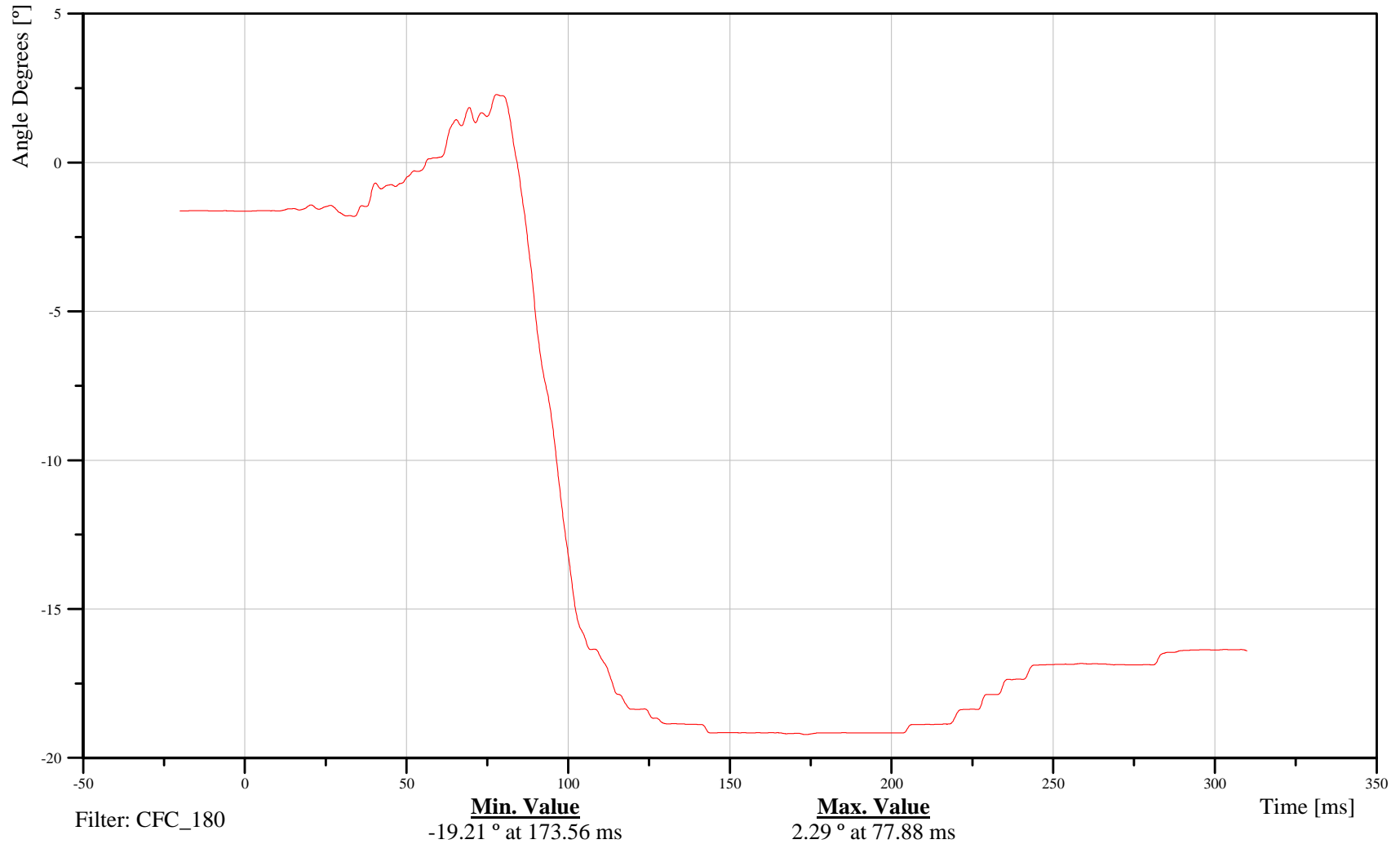
Target Vehicle Driver Right Foot Z-Axis Angular Displacement

Customer: VRTC

21FOOTRILXH3ANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-84

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

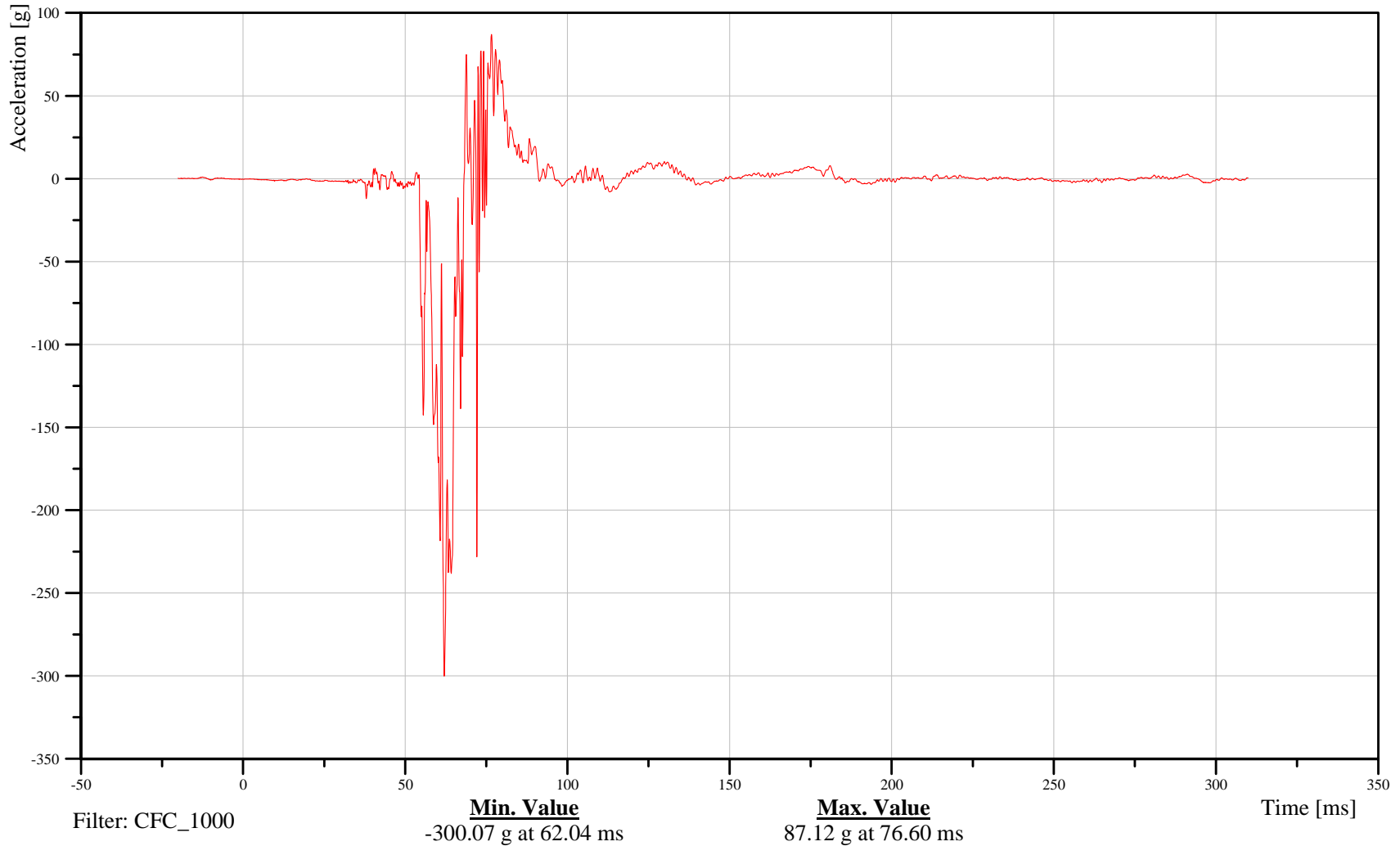
Target Vehicle Driver Right Foot X-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-85

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

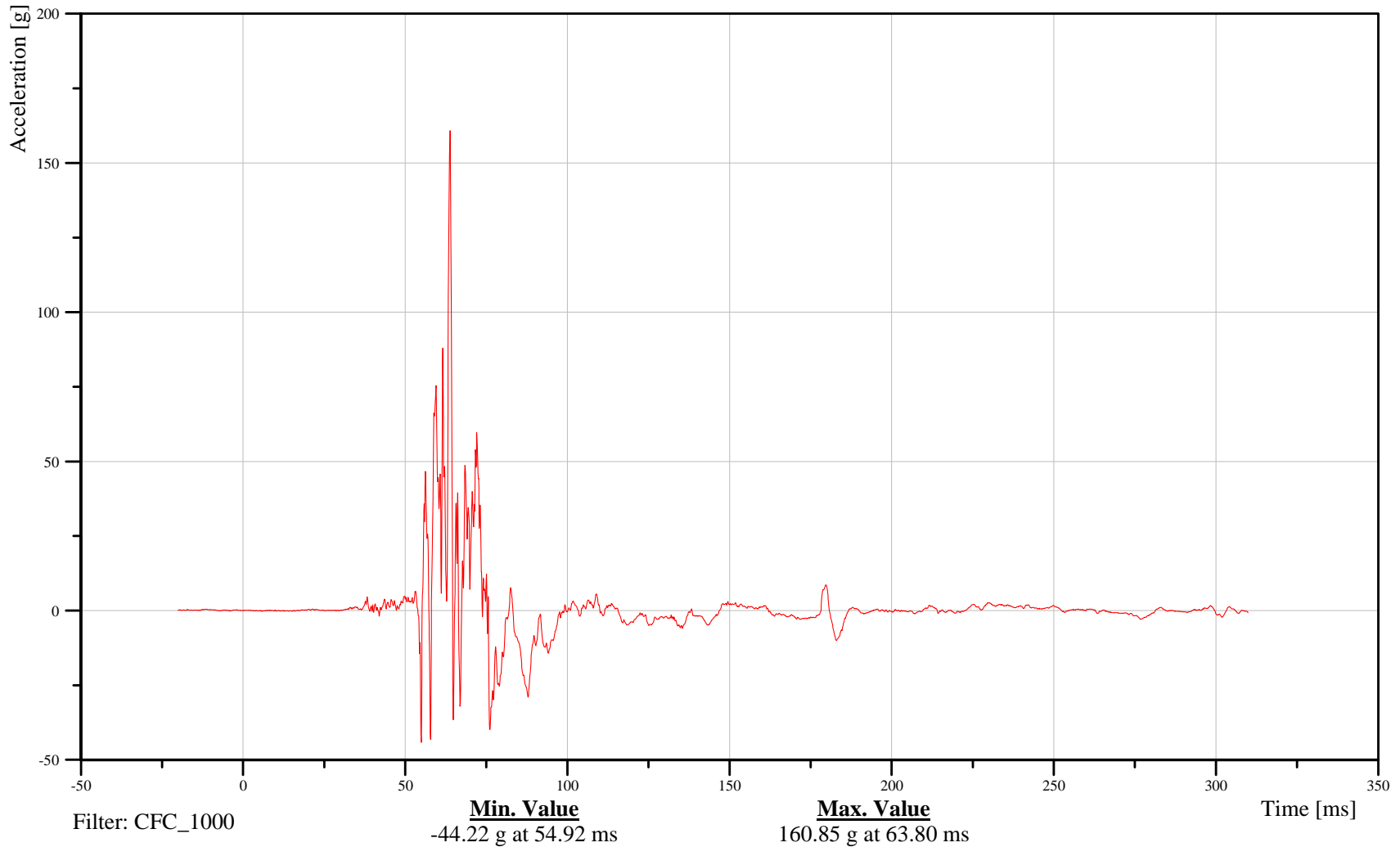
Target Vehicle Driver Right Foot Y-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-86

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

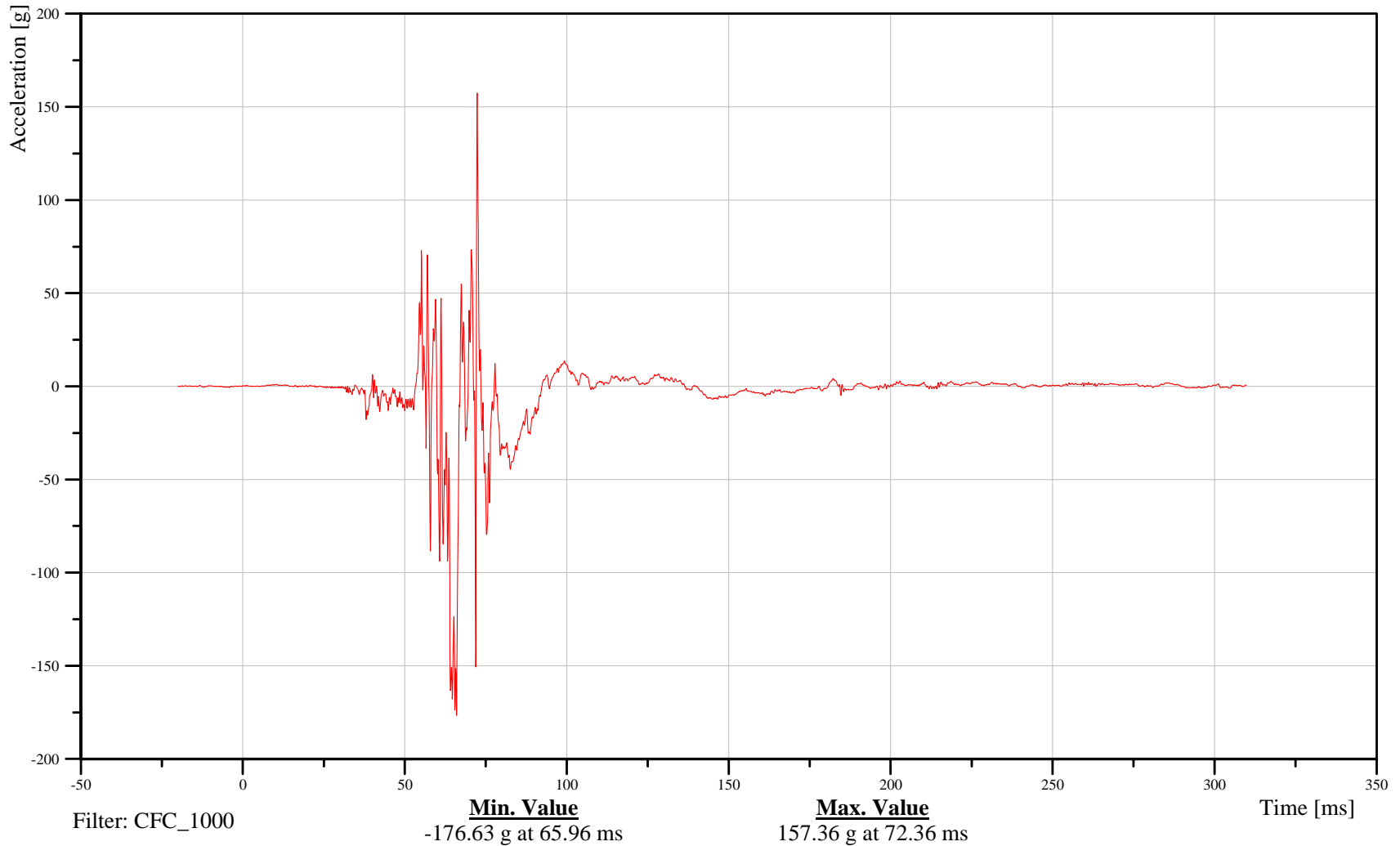
Target Vehicle Driver Right Foot Z-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-87

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

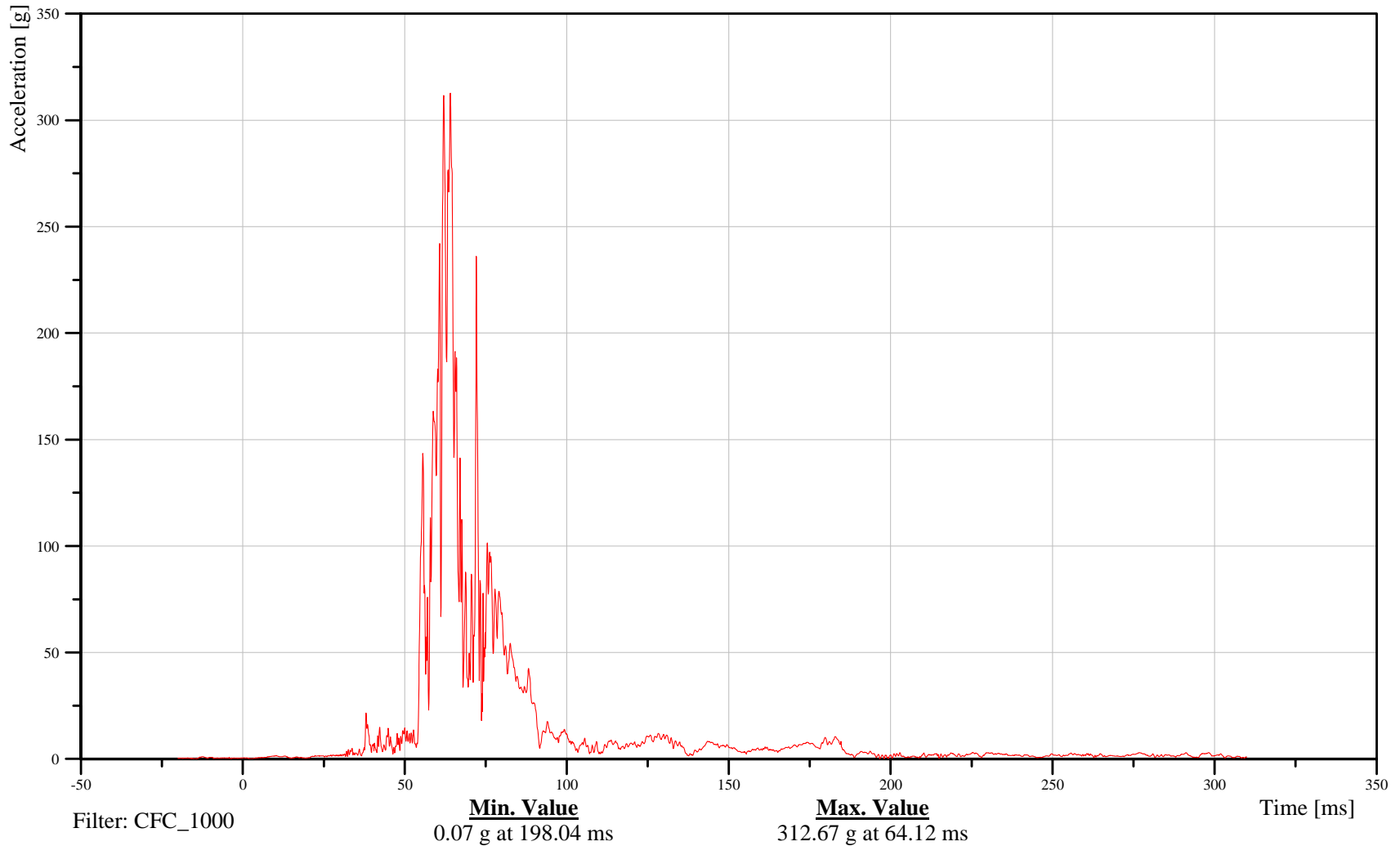
Target Vehicle Driver Right Foot Resultant Acceleration

Customer: VRTC

21FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-88

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

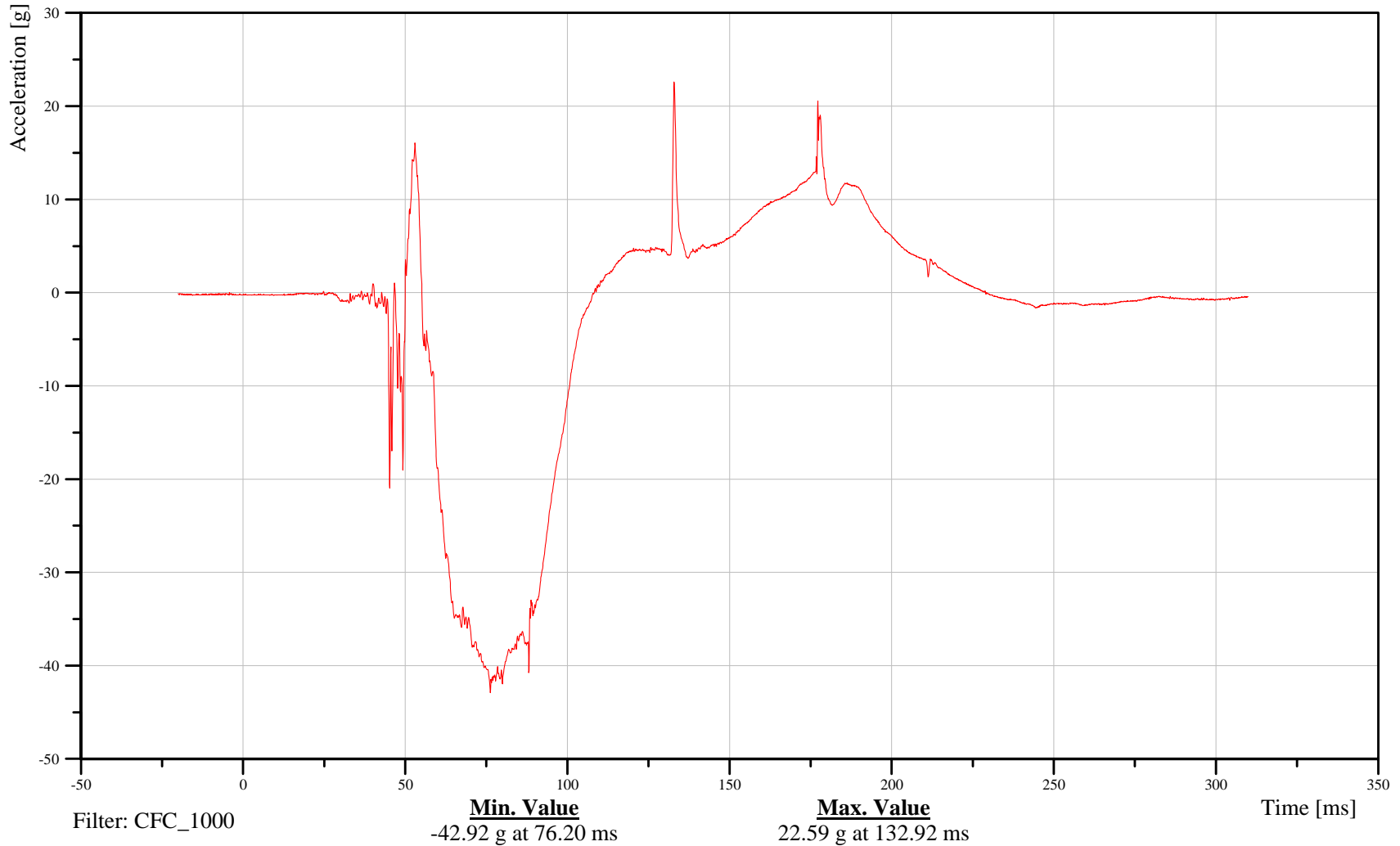
Target Vehicle Passenger Head X-Axis Acceleration

Customer: VRTC

23HEADCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-89

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

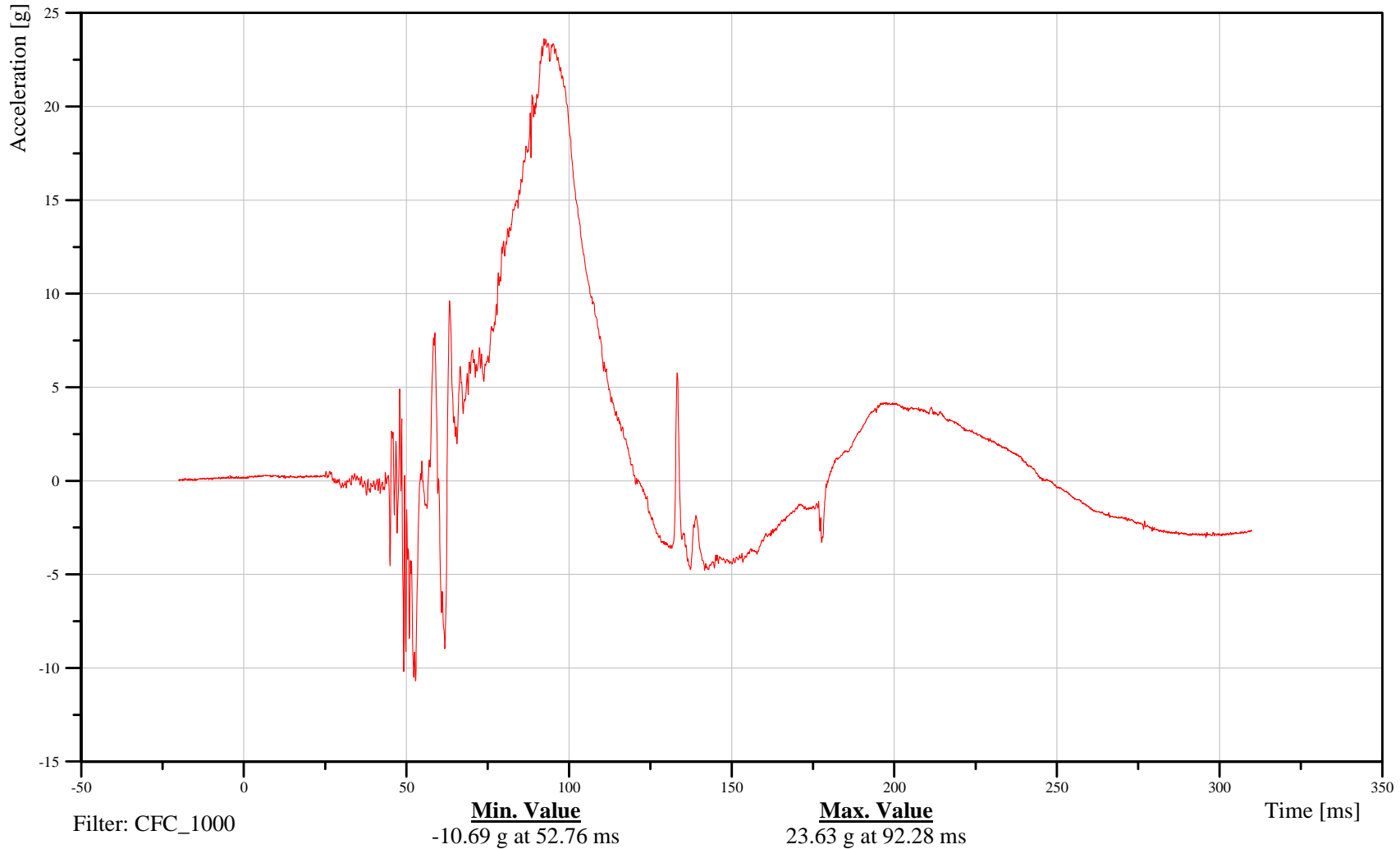
Target Vehicle Passenger Head Y-Axis Acceleration

Customer: VRTC

23HEADCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-90

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

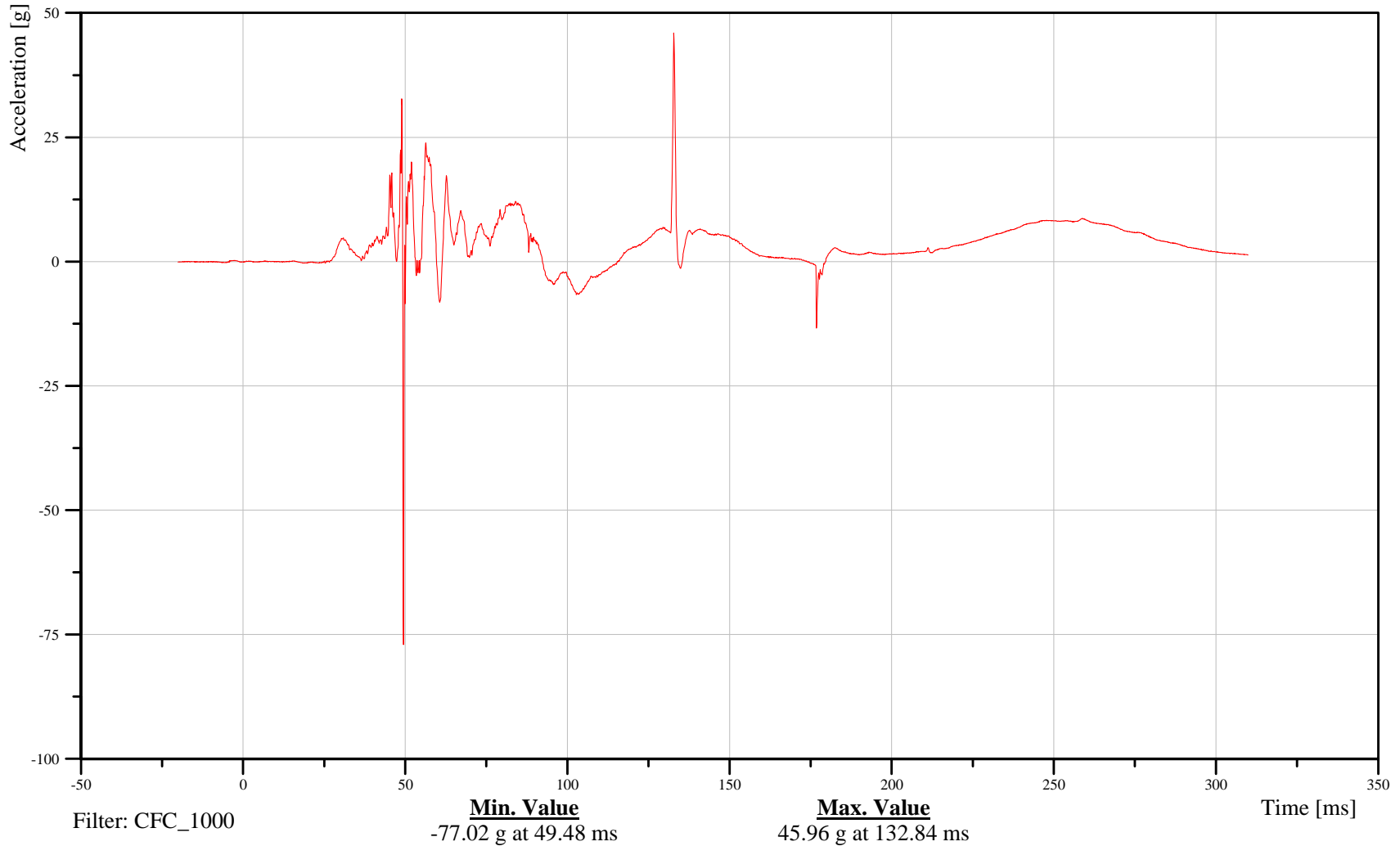
Target Vehicle Passenger Head Z-Axis Acceleration

Customer: VRTC

23HEADCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-91

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

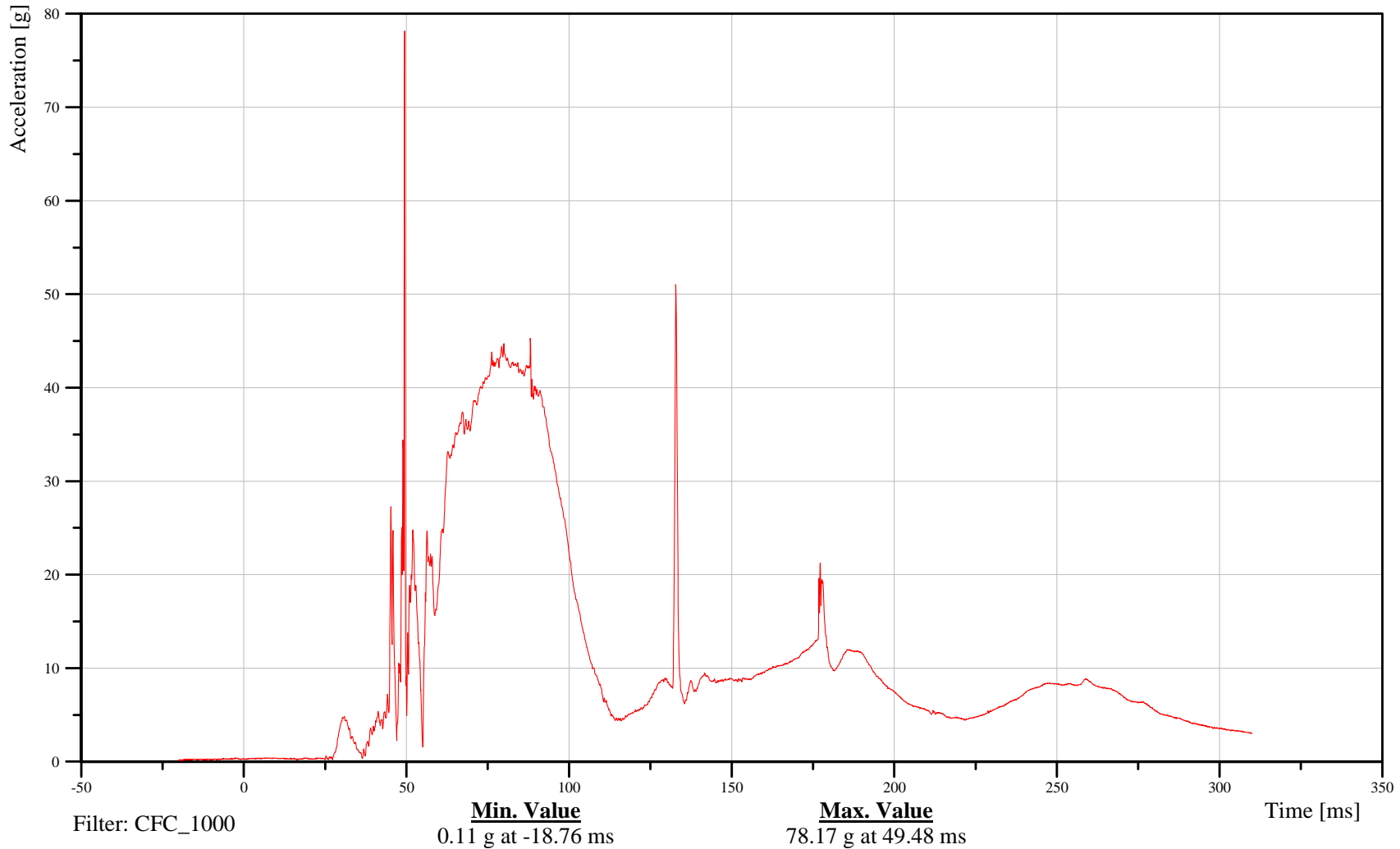
Target Vehicle Passenger Head Resultant Acceleration

Customer: VRTC

23HEADCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-92

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

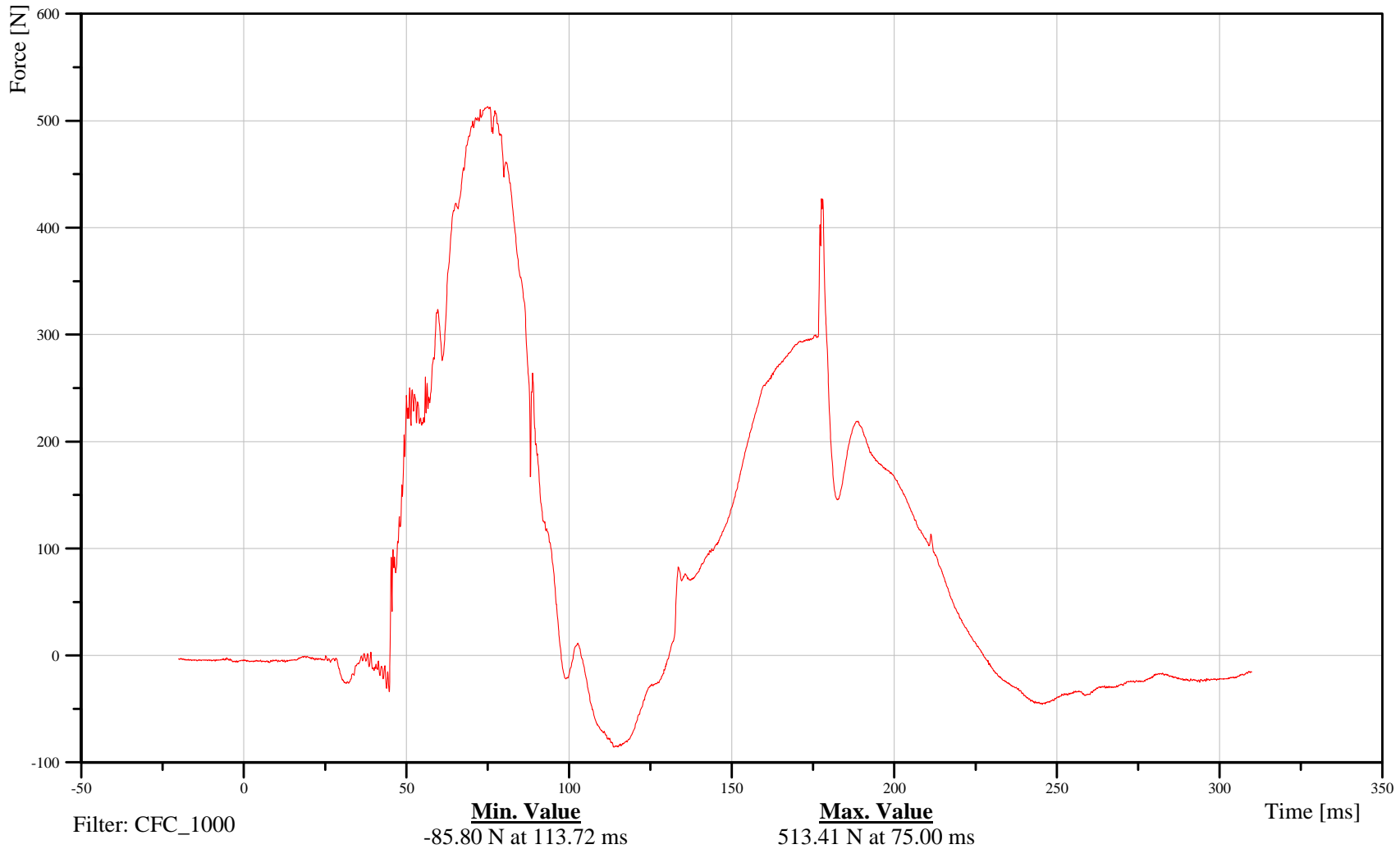
Target Vehicle Passenger Neck X-Axis Force

Customer: VRTC

23NECKUP00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-93

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

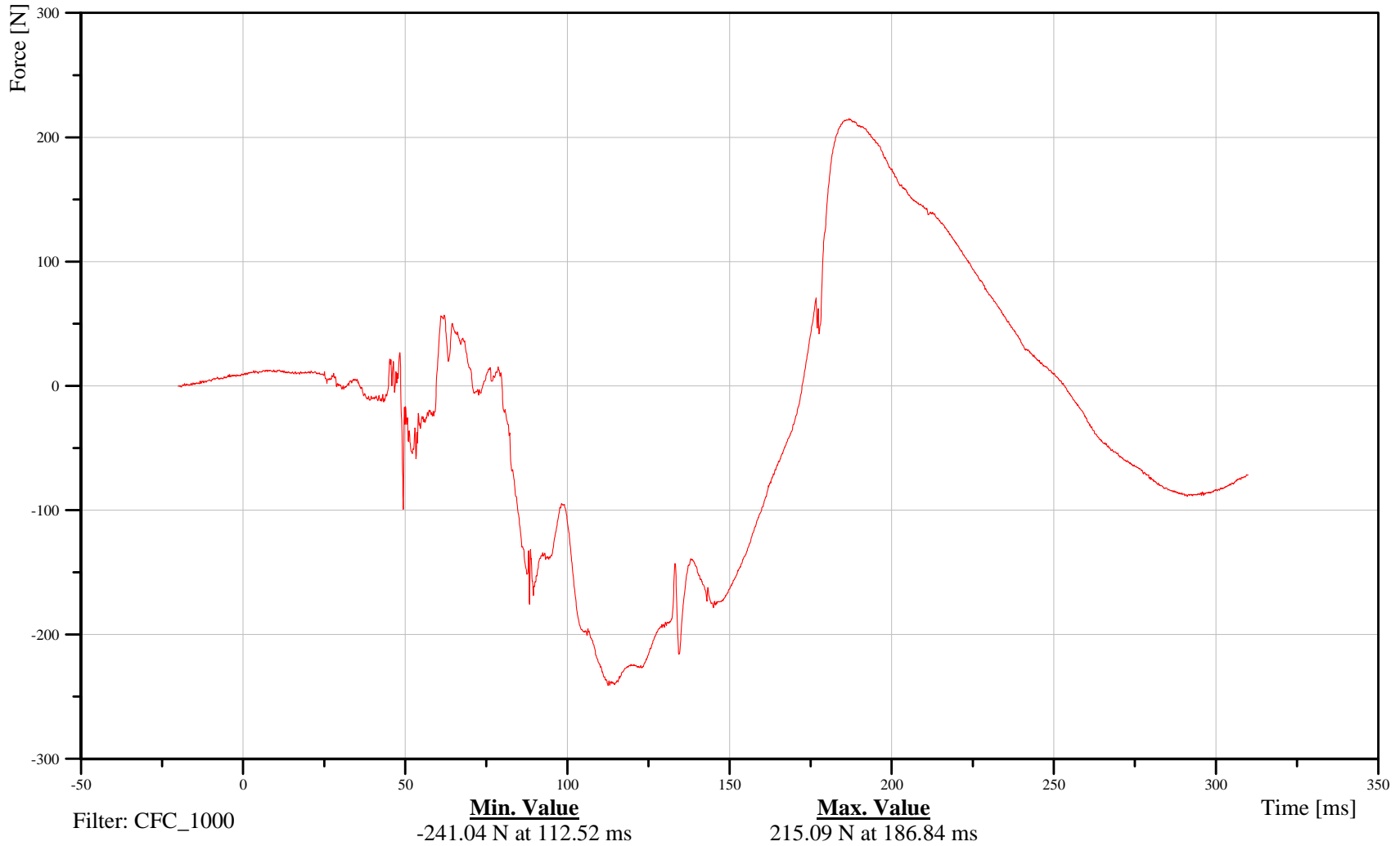
Target Vehicle Passenger Neck Y-Axis Force

Customer: VRTC

23NECKUP00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-94

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

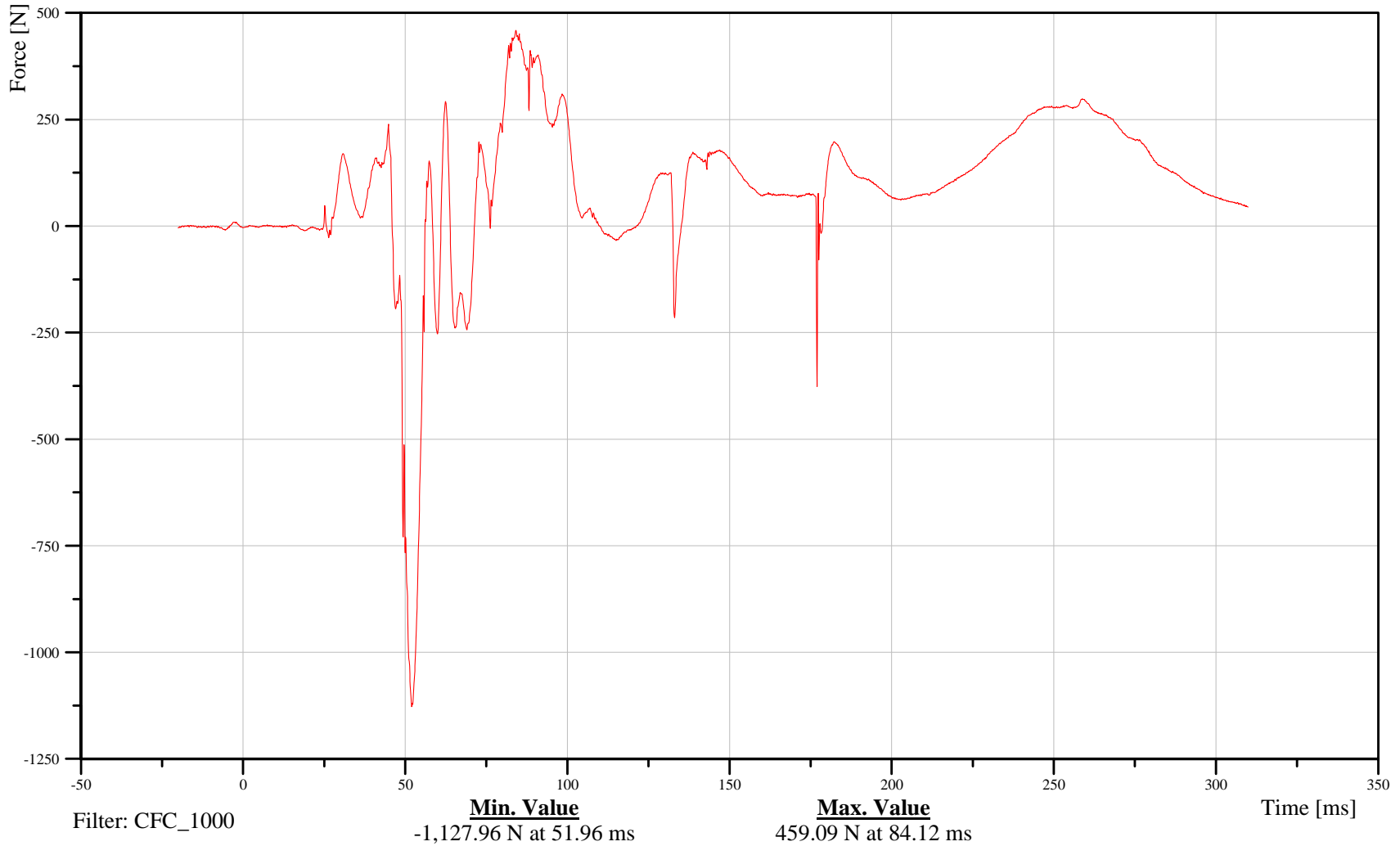
Target Vehicle Passenger Neck Z-Axis Force

Customer: VRTC

23NECKUP00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-95

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

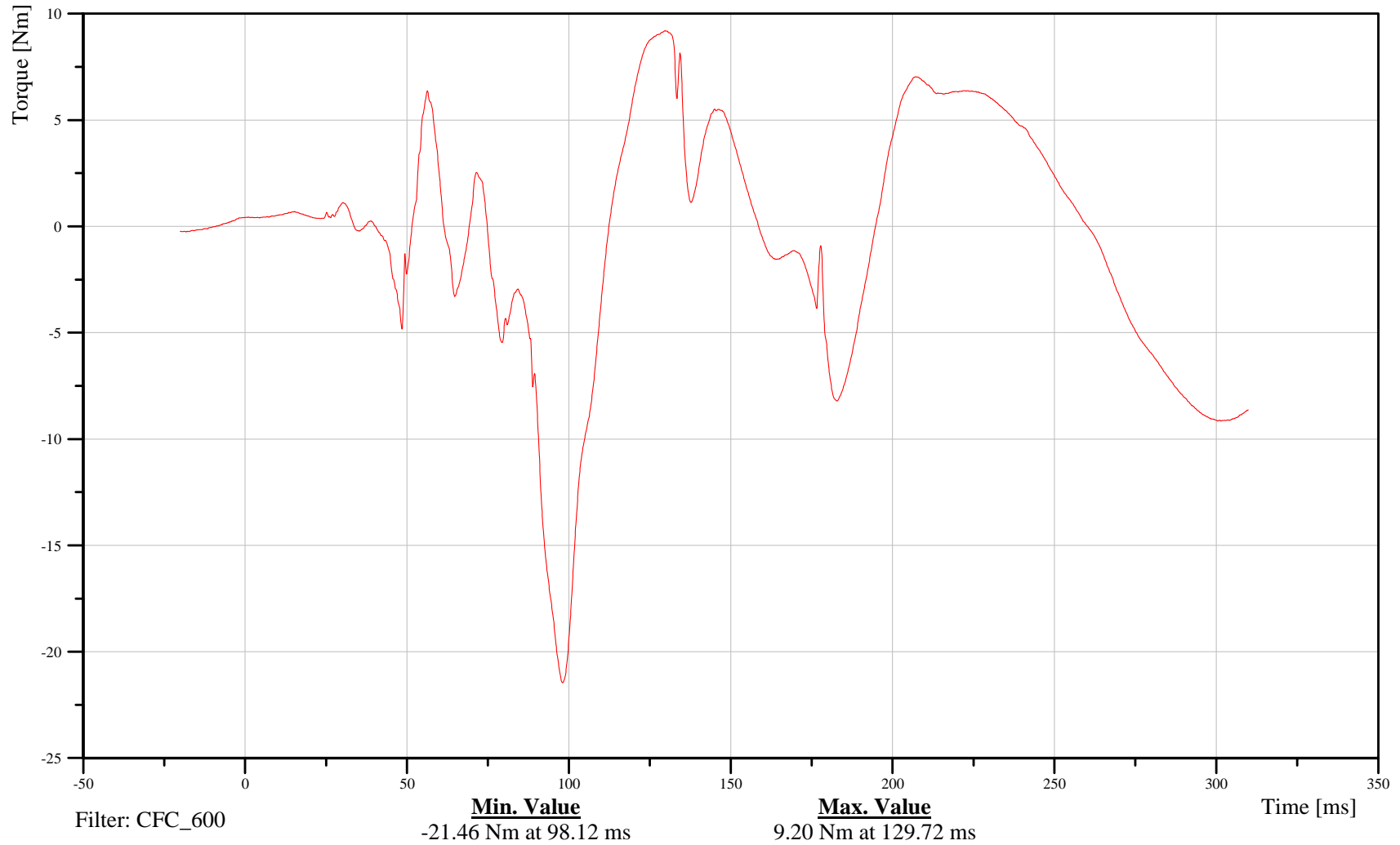
Target Vehicle Passenger Neck Moment About X Axis

Customer: VRTC

23NECKUP00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-96

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

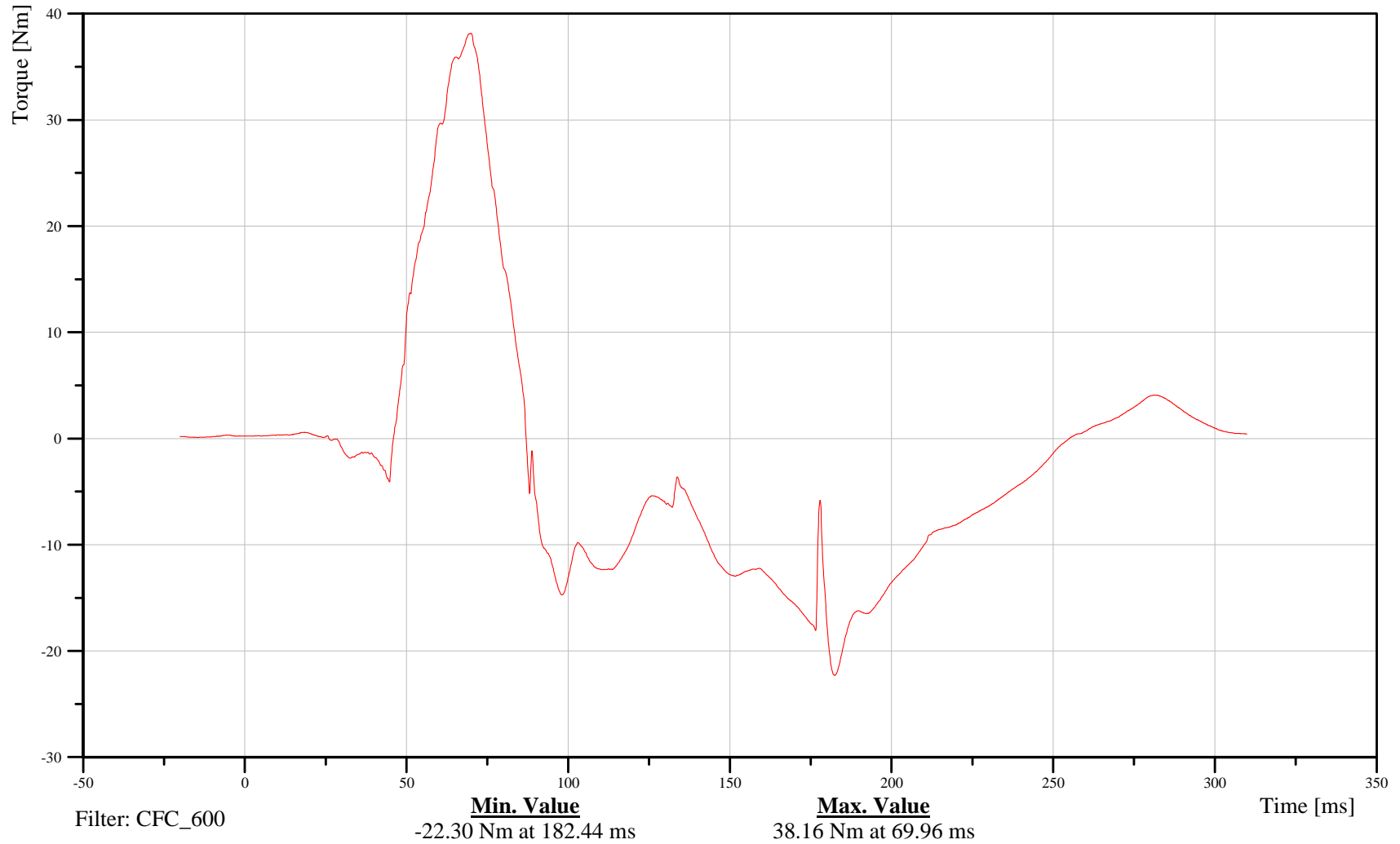
Target Vehicle Passenger Neck Moment About Y Axis

Customer: VRTC

23NECKUP00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-97

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

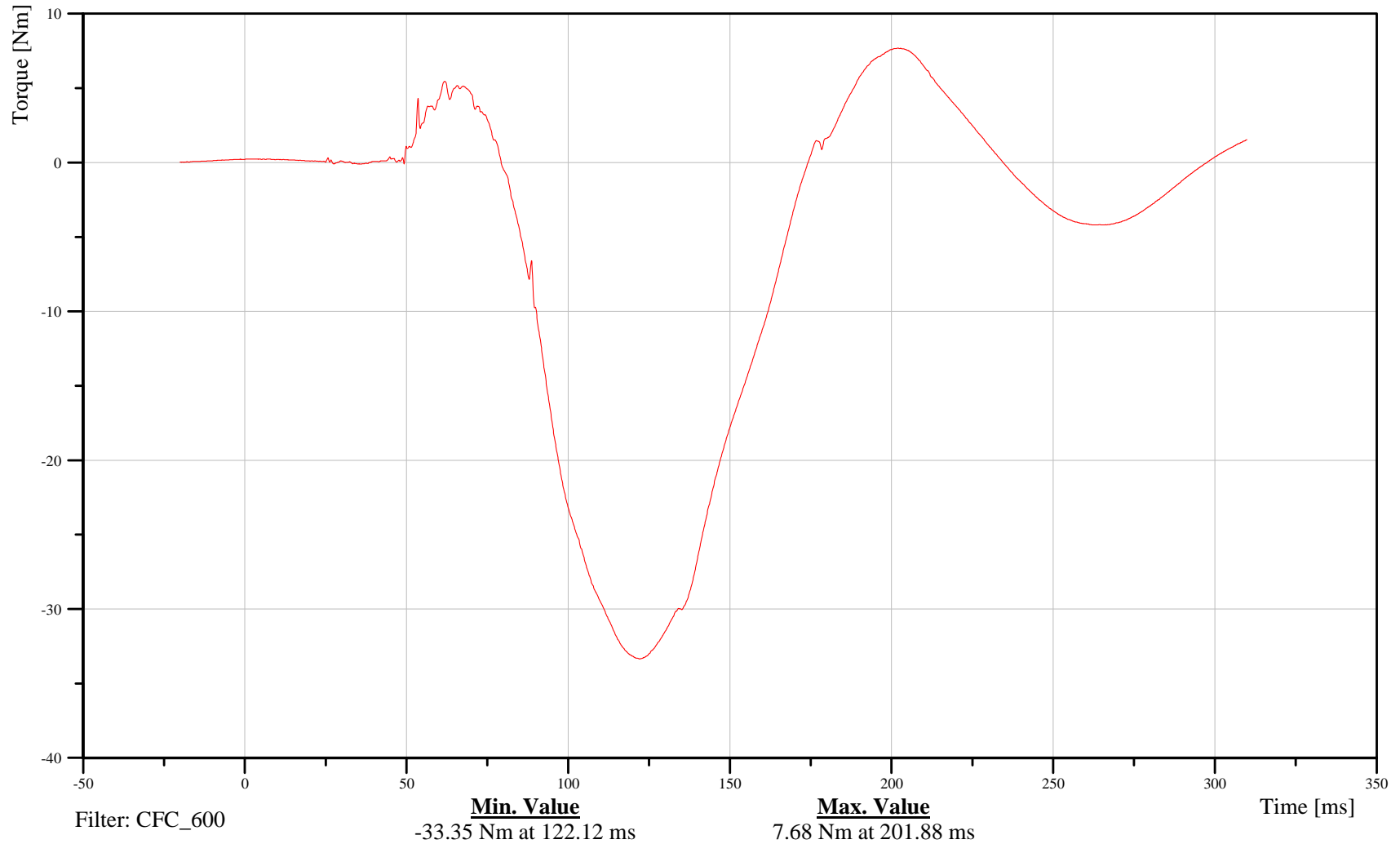
Target Vehicle Passenger Neck Moment About Z Axis

Customer: VRTC

23NECKUP00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-98

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

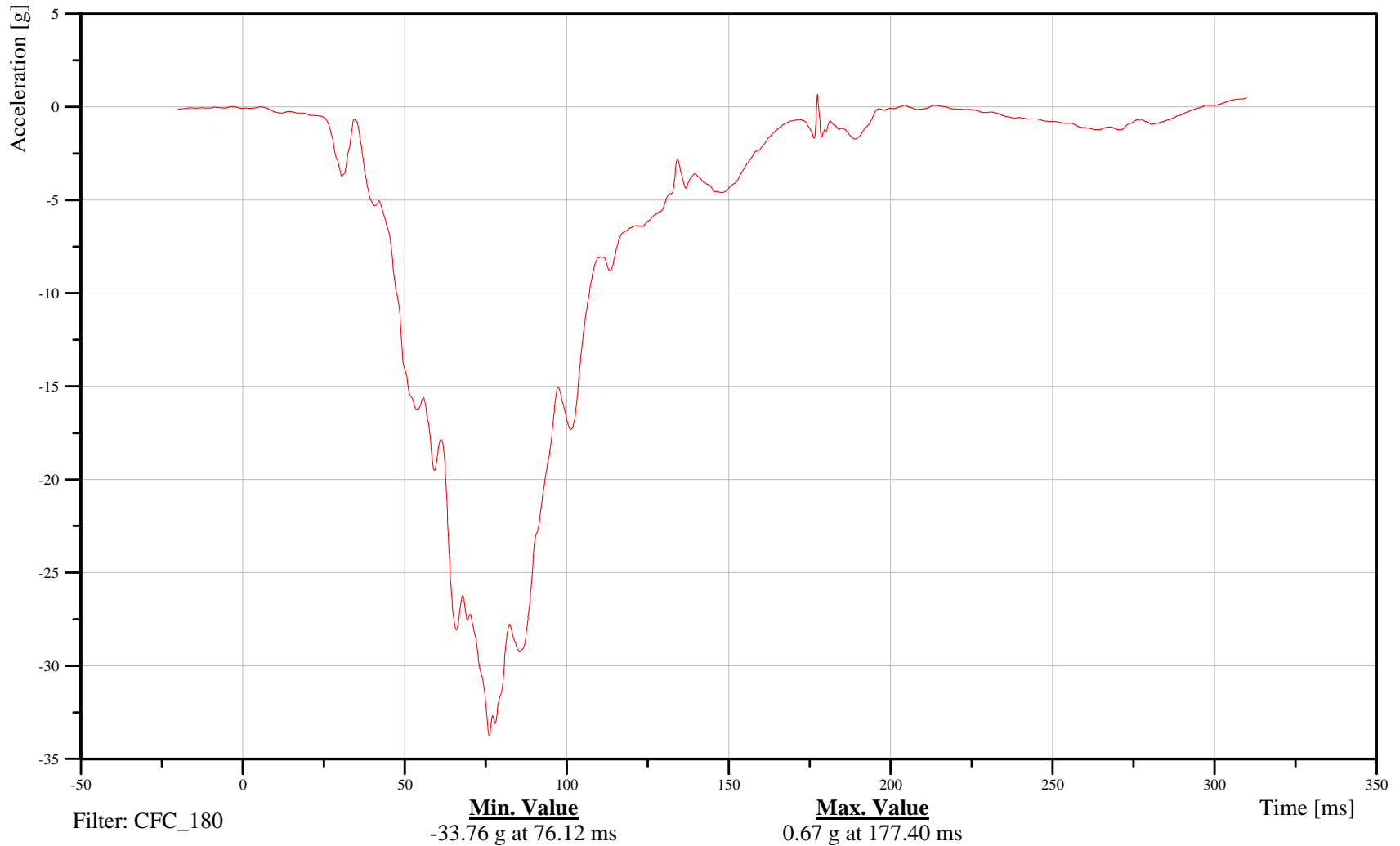
Target Vehicle Passenger Chest X-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-99

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

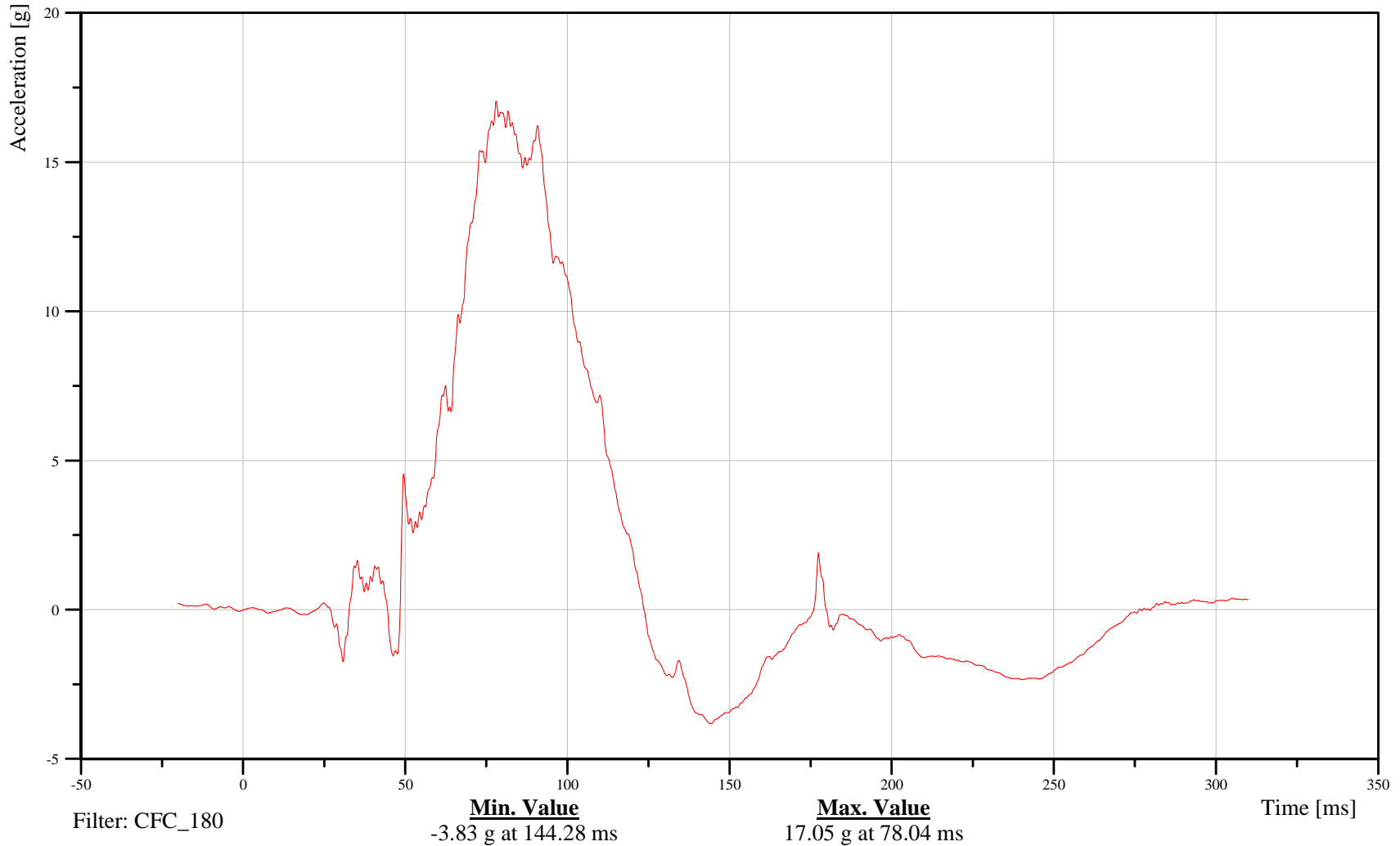
Target Vehicle Passenger Chest Y-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-100

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

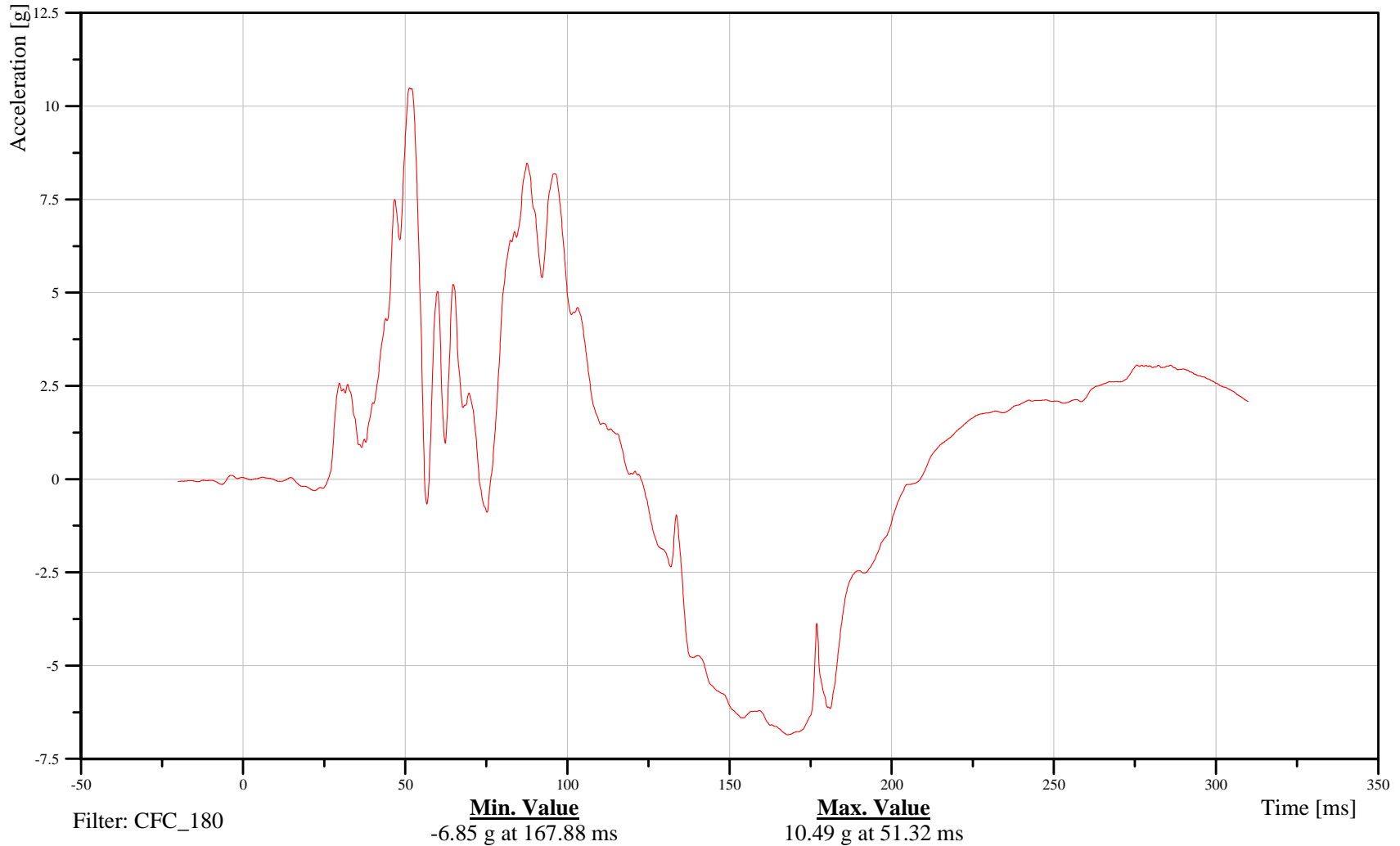
Target Vehicle Passenger Chest Z-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-101

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

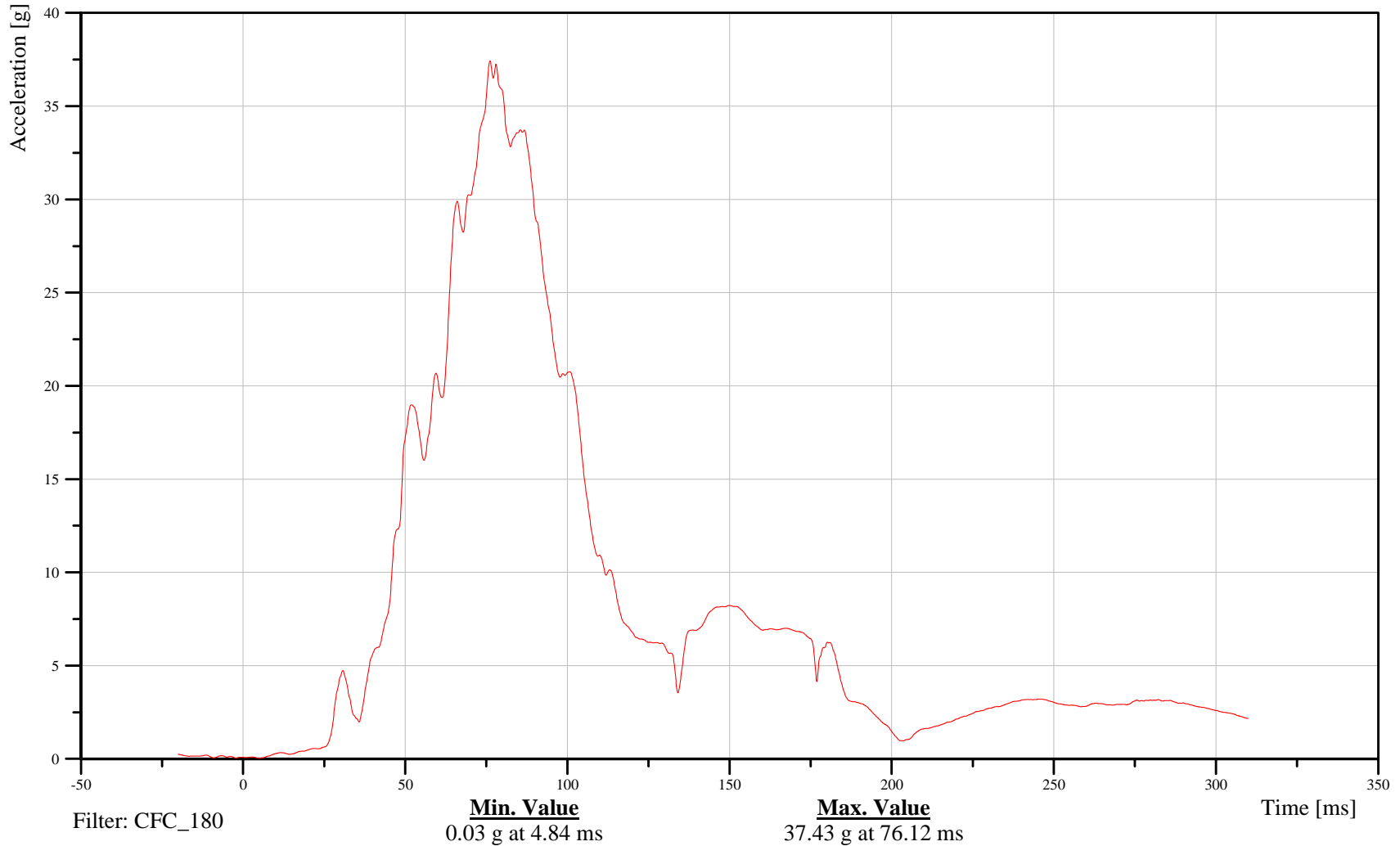
Target Vehicle Passenger Chest Resultant Acceleration

Customer: VRTC

23CHSTCG00HFACRC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-102

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

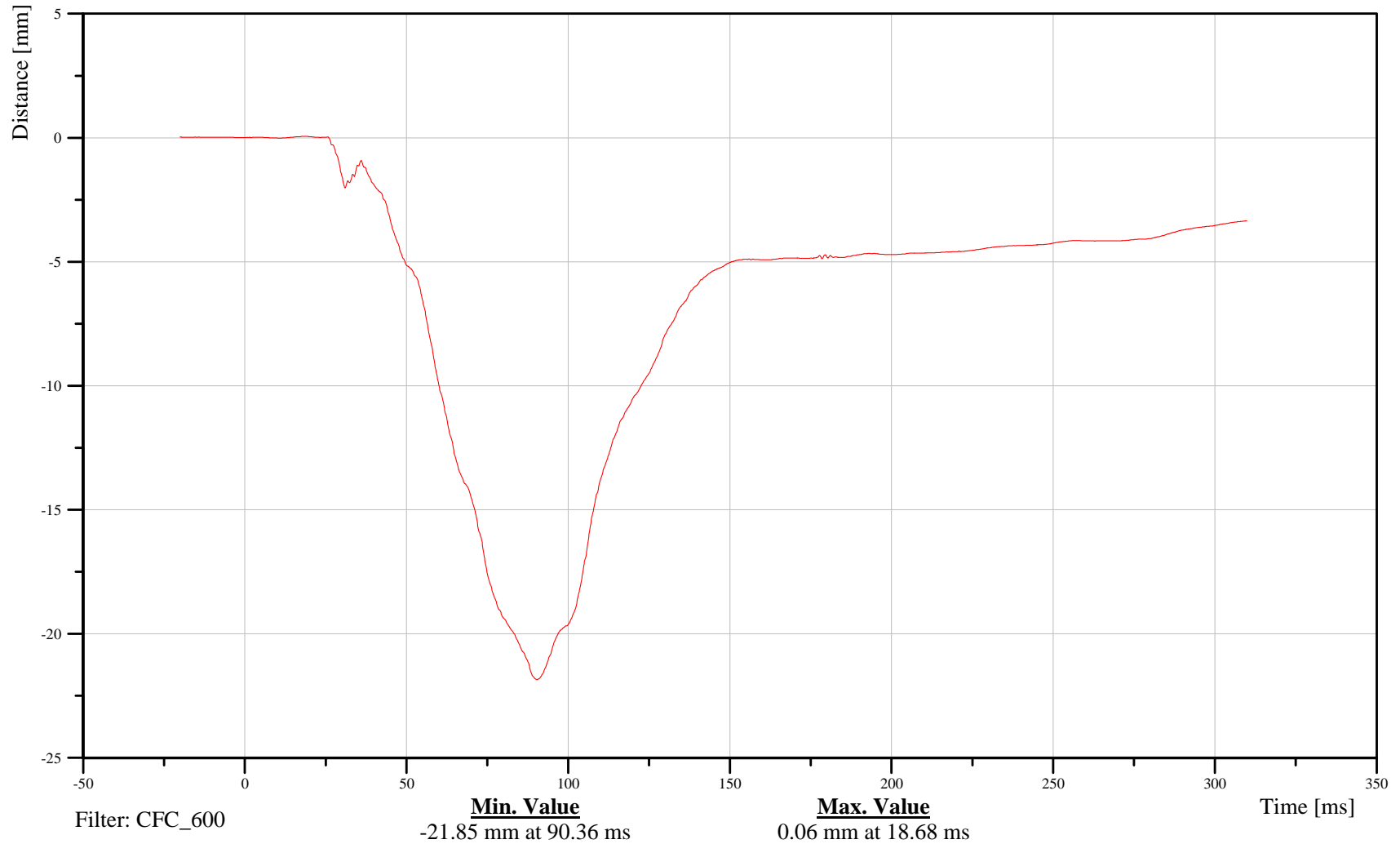
Target Vehicle Passenger Chest X-Axis Displacement

Customer: VRTC

23CHST0000HFDSXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-103

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

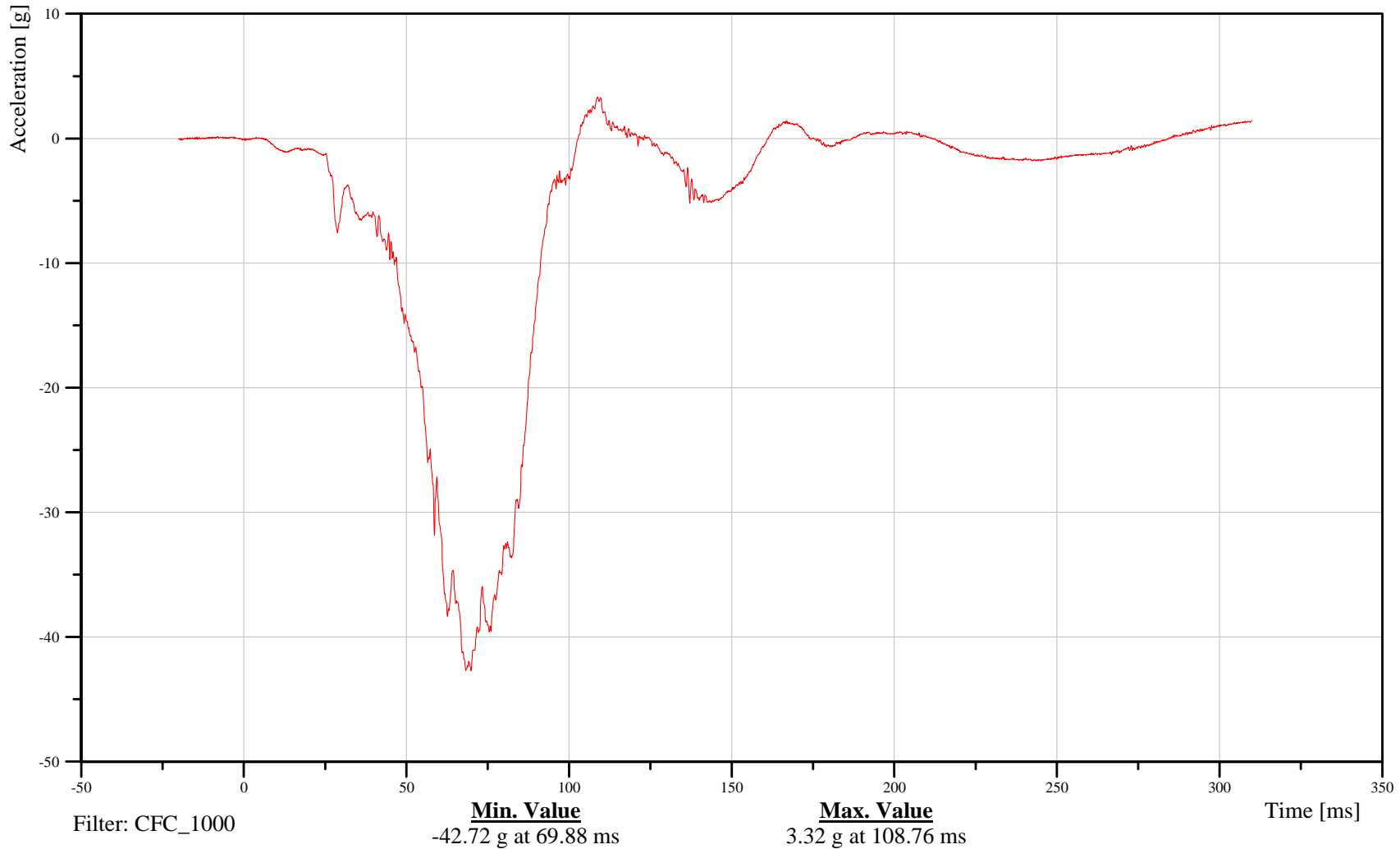
Target Vehicle Passenger Pelvis X-Axis Acceleration

Customer: VRTC

23PELVCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-104

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

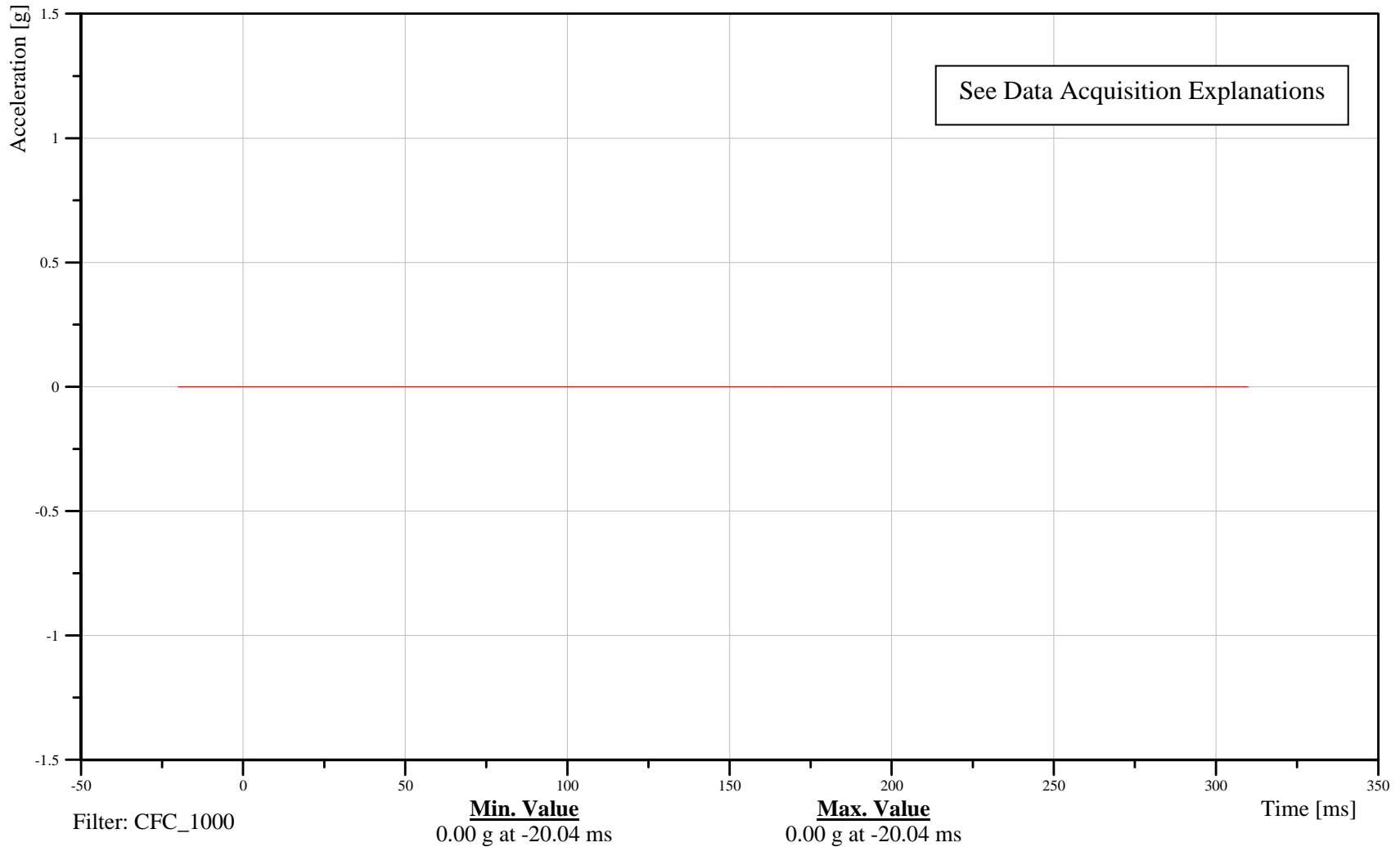
Target Vehicle Passenger Pelvis Y-Axis Acceleration

Customer: VRTC

23PELVCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-105

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

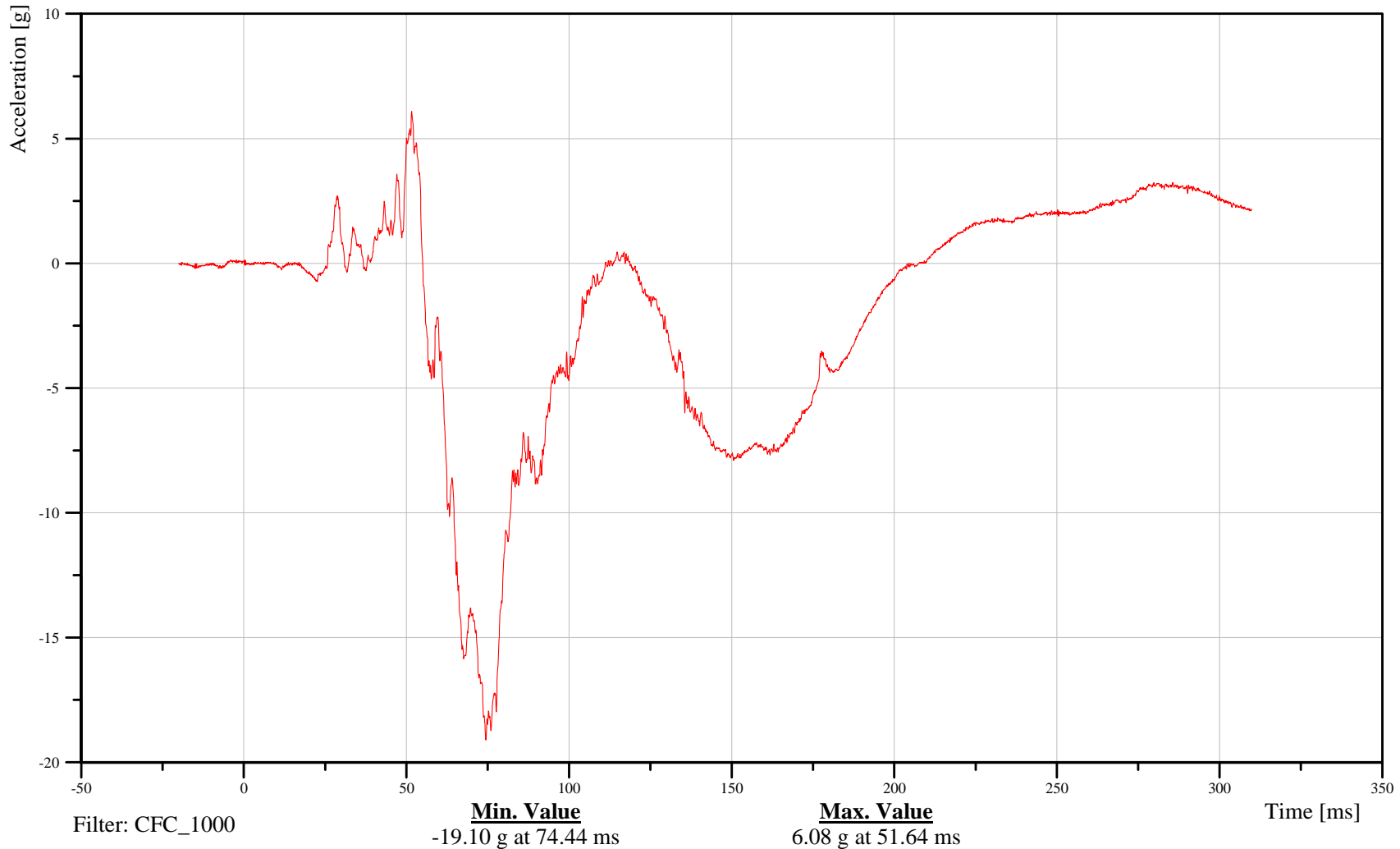
Target Vehicle Passenger Pelvis Z-Axis Acceleration

Customer: VRTC

23PELVCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-106

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

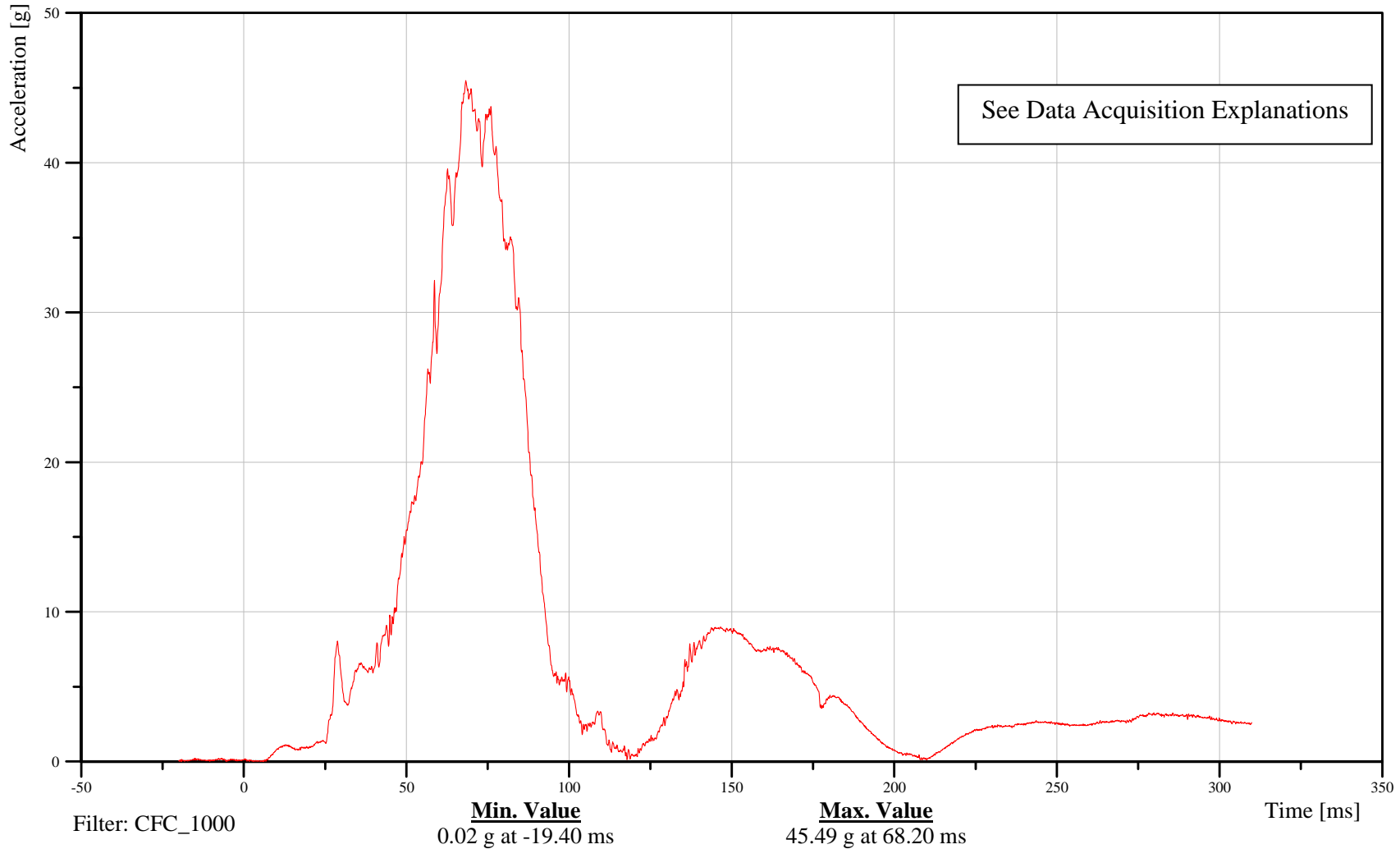
Target Vehicle Passenger Pelvis Resultant Acceleration

Customer: VRTC

23PELVCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-107

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

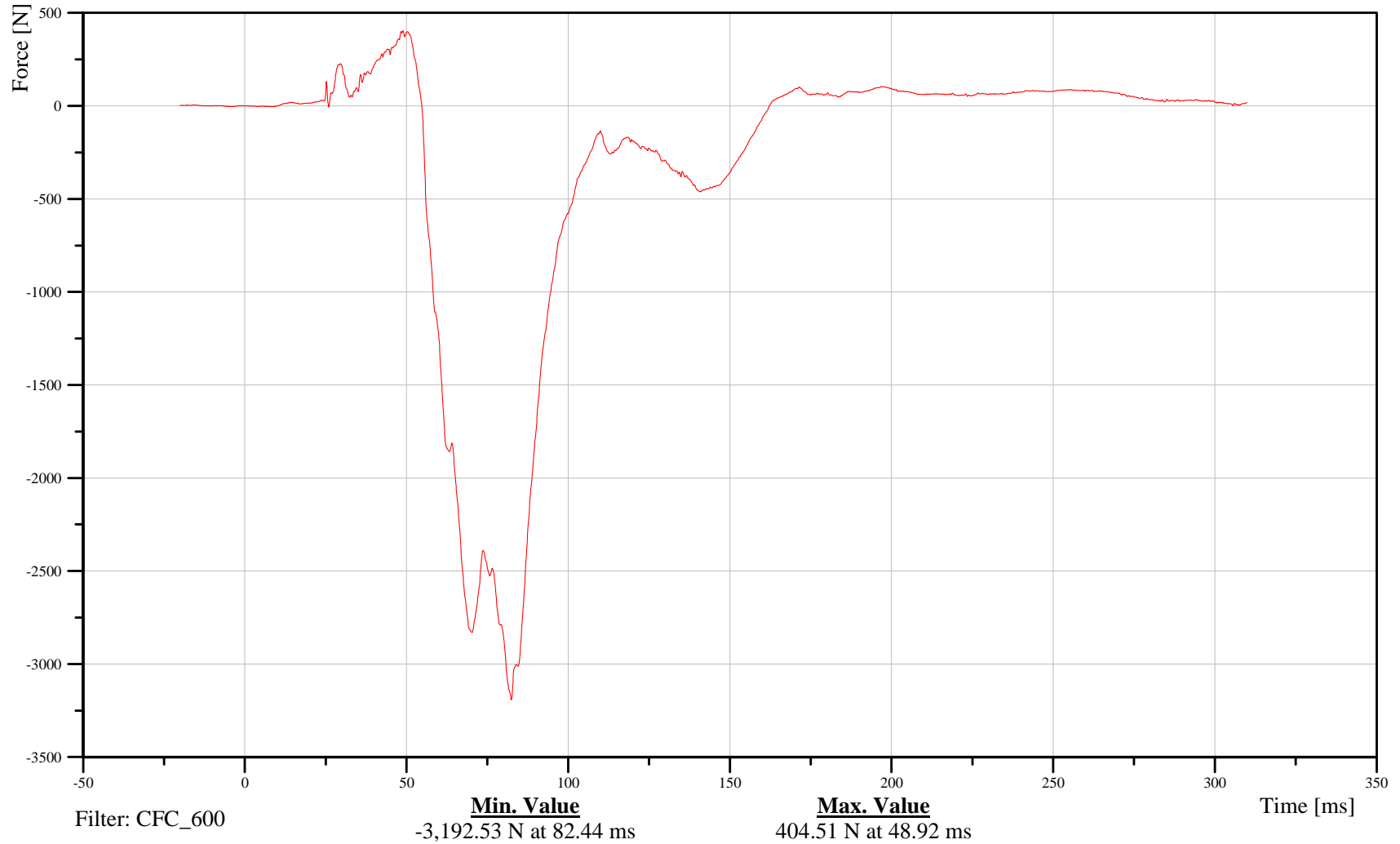
Target Vehicle Passenger Left Femur Z-Axis Force

Customer: VRTC

23FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-108

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

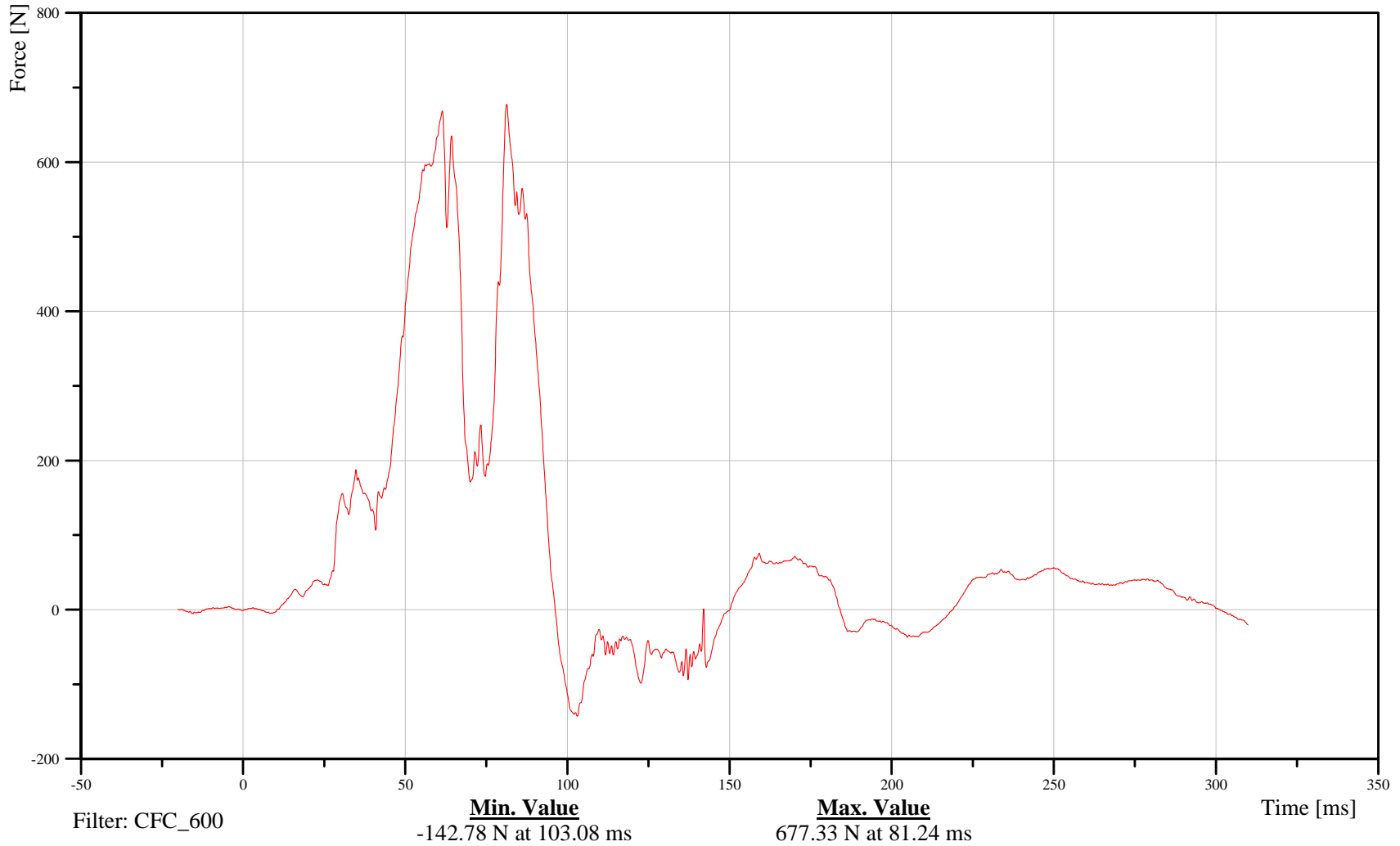
Target Vehicle Passenger Right Femur Z-Axis Force

Customer: VRTC

23FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-109

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

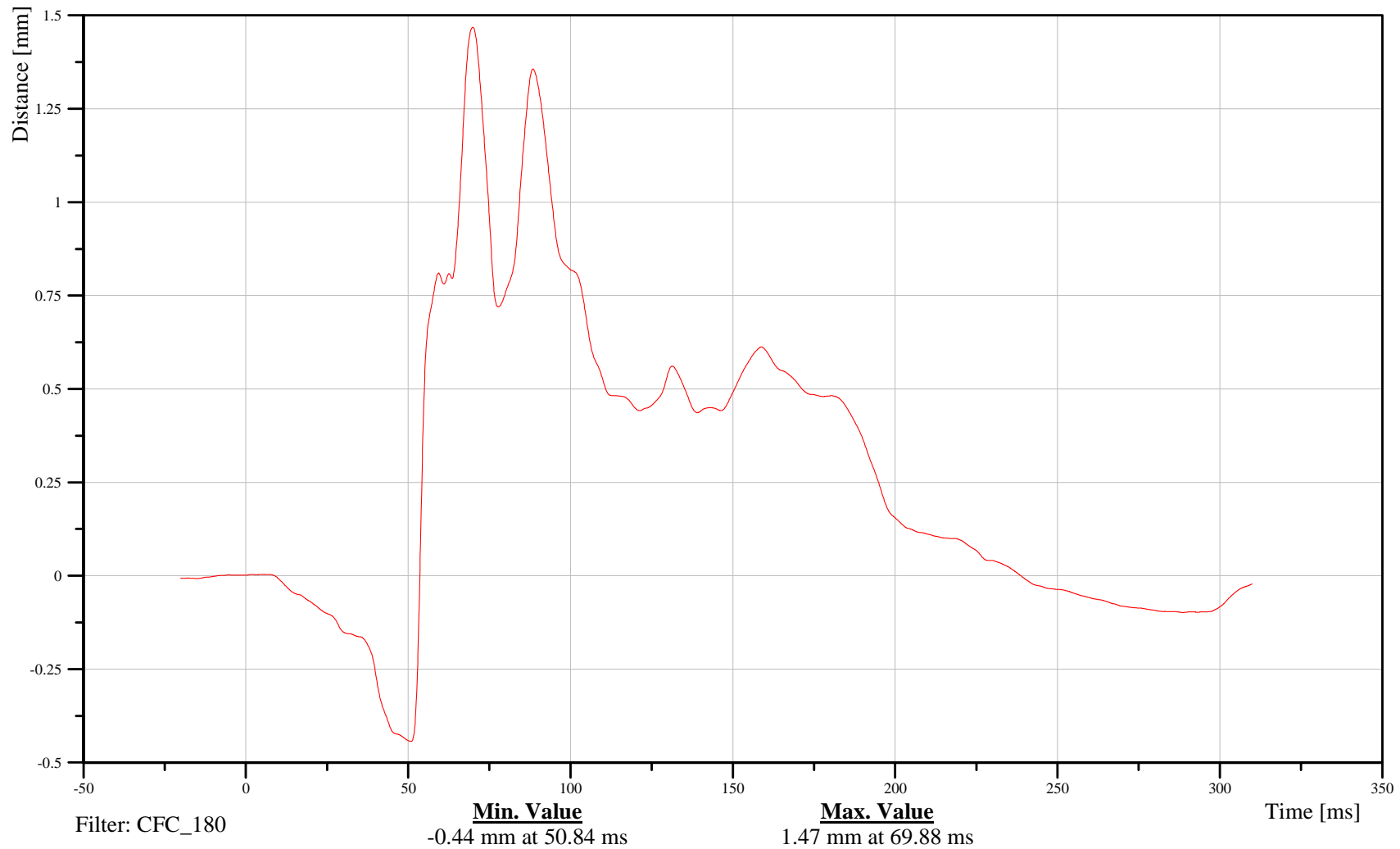
Target Vehicle Passenger Left Knee X-Axis Displacement

Customer: VRTC

23KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-110

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

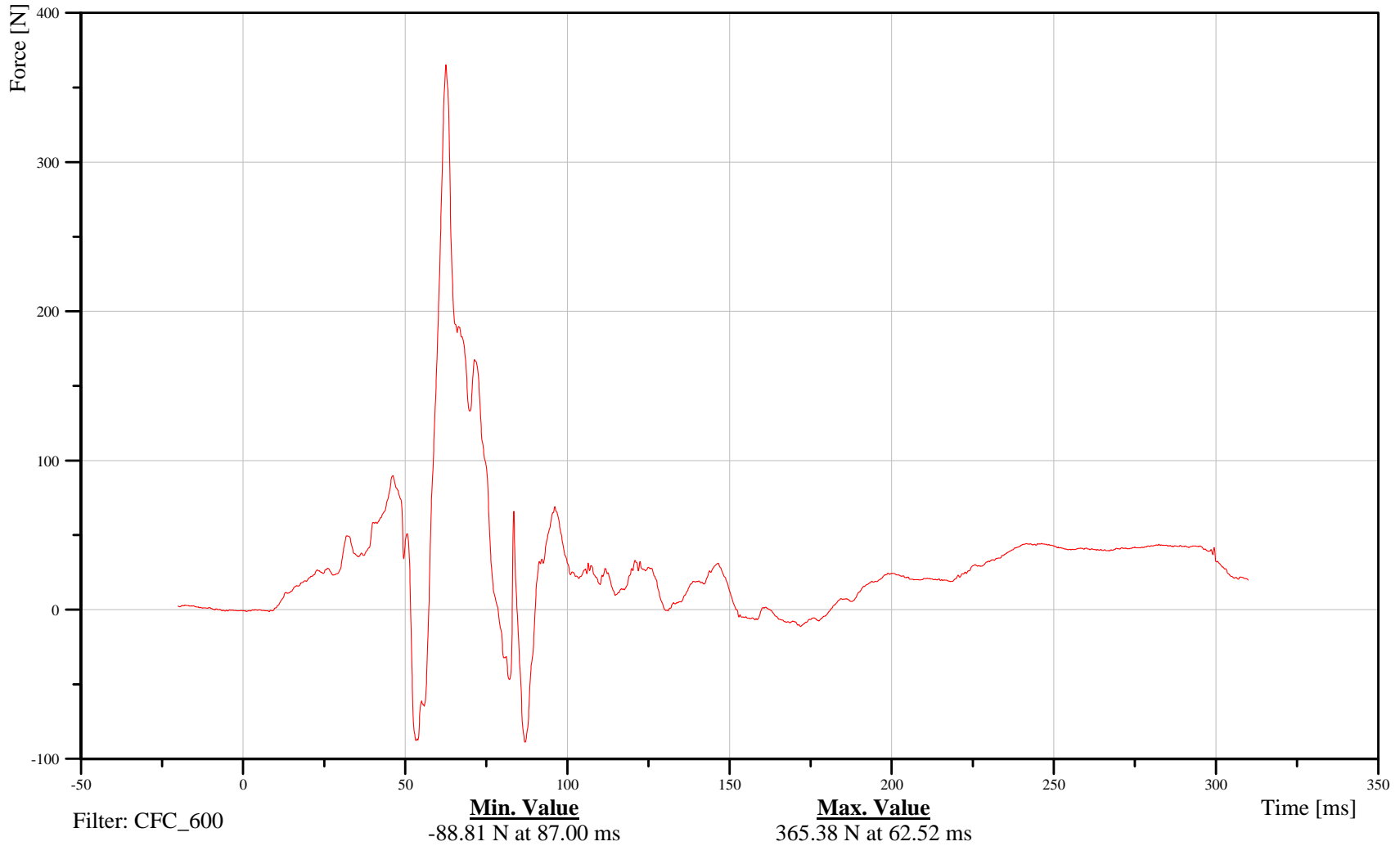
Target Vehicle Passenger Left Upper Tibia X-Axis Force

Customer: VRTC

23TIBILUFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-111

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

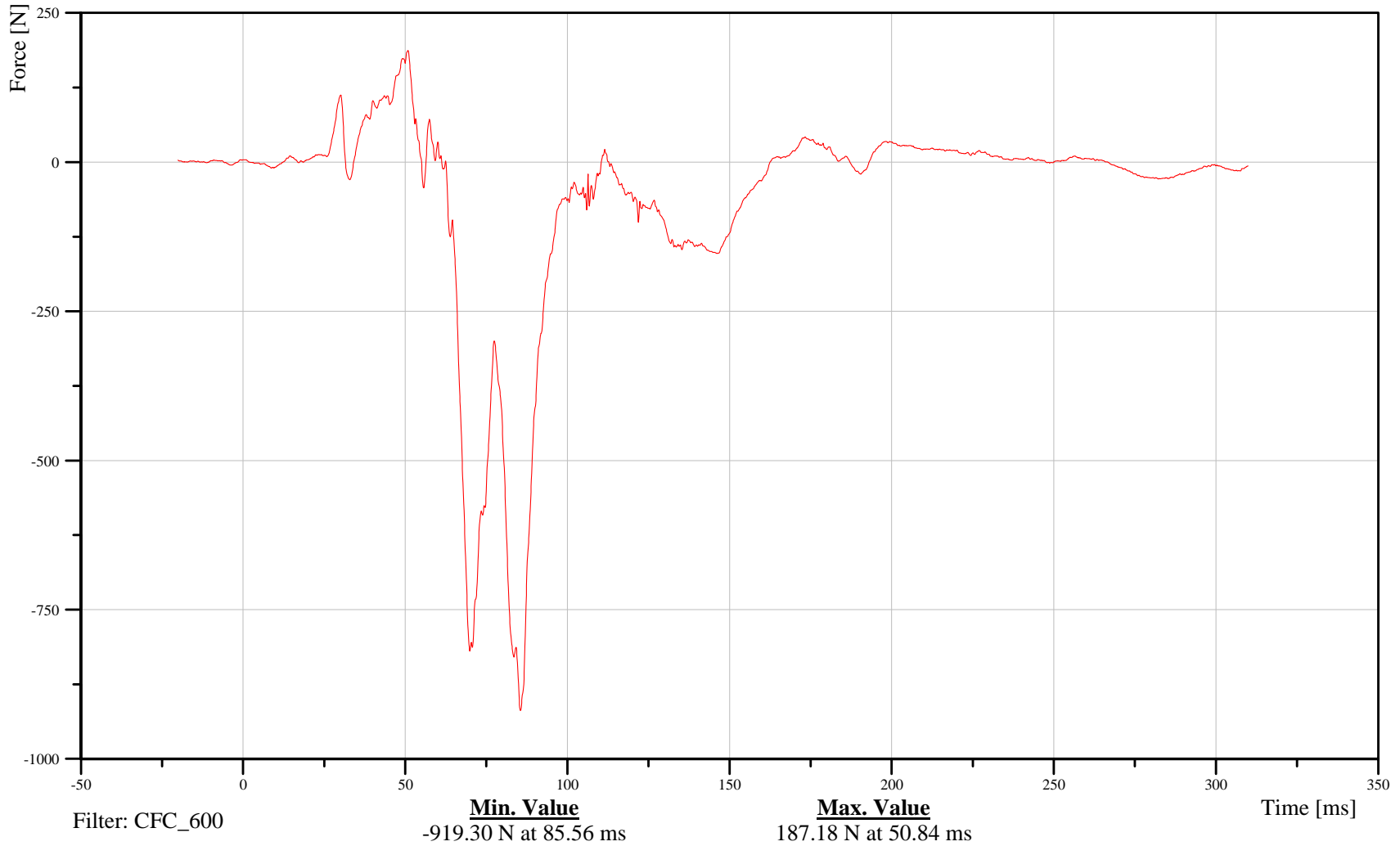
Target Vehicle Passenger Left Upper Tibia Z-Axis Force

Customer: VRTC

23TIBILUFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-112

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

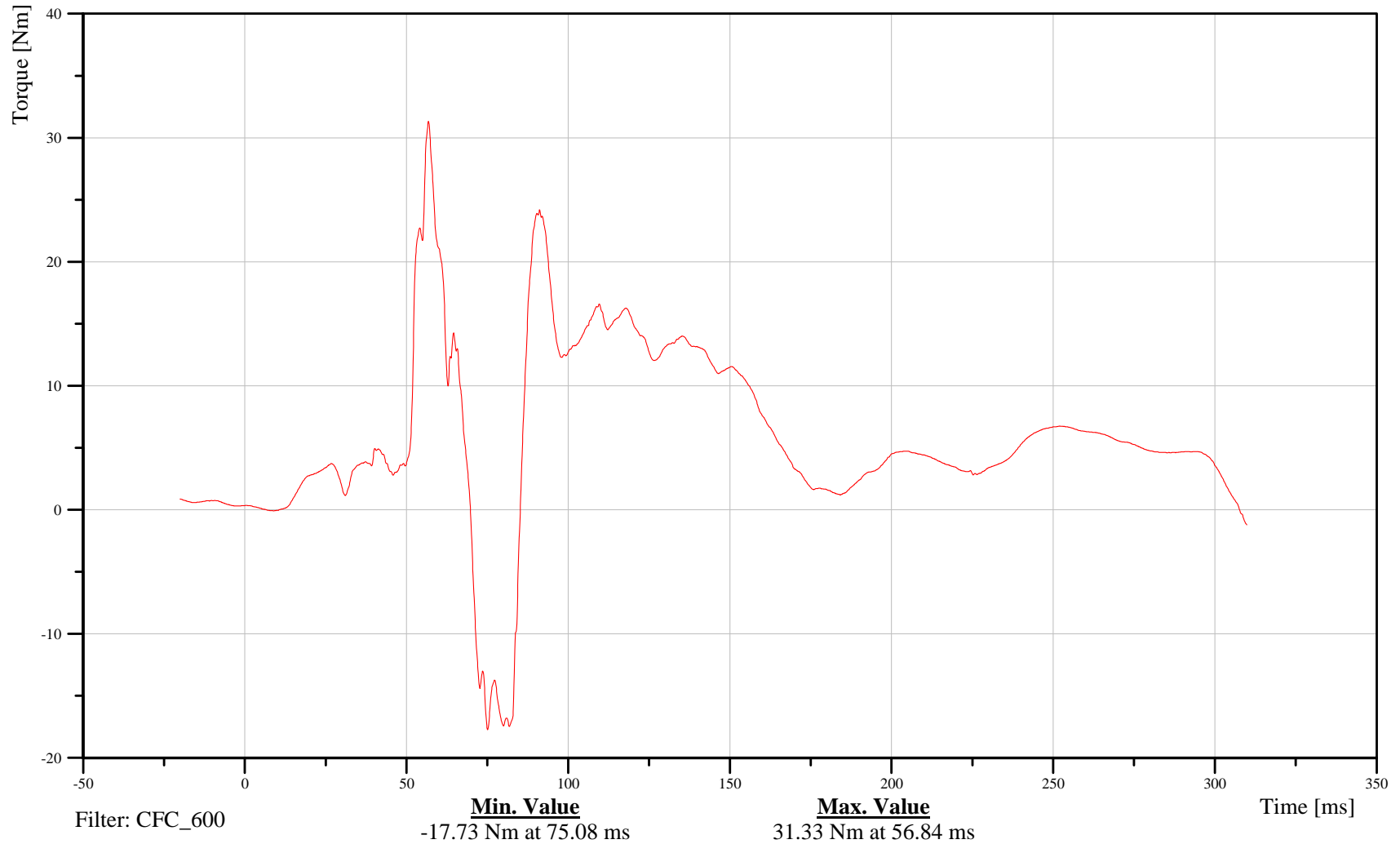
Target Vehicle Passenger Left Upper Tibia Moment About X Axis

Customer: VRTC

23TIBILUFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-113

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

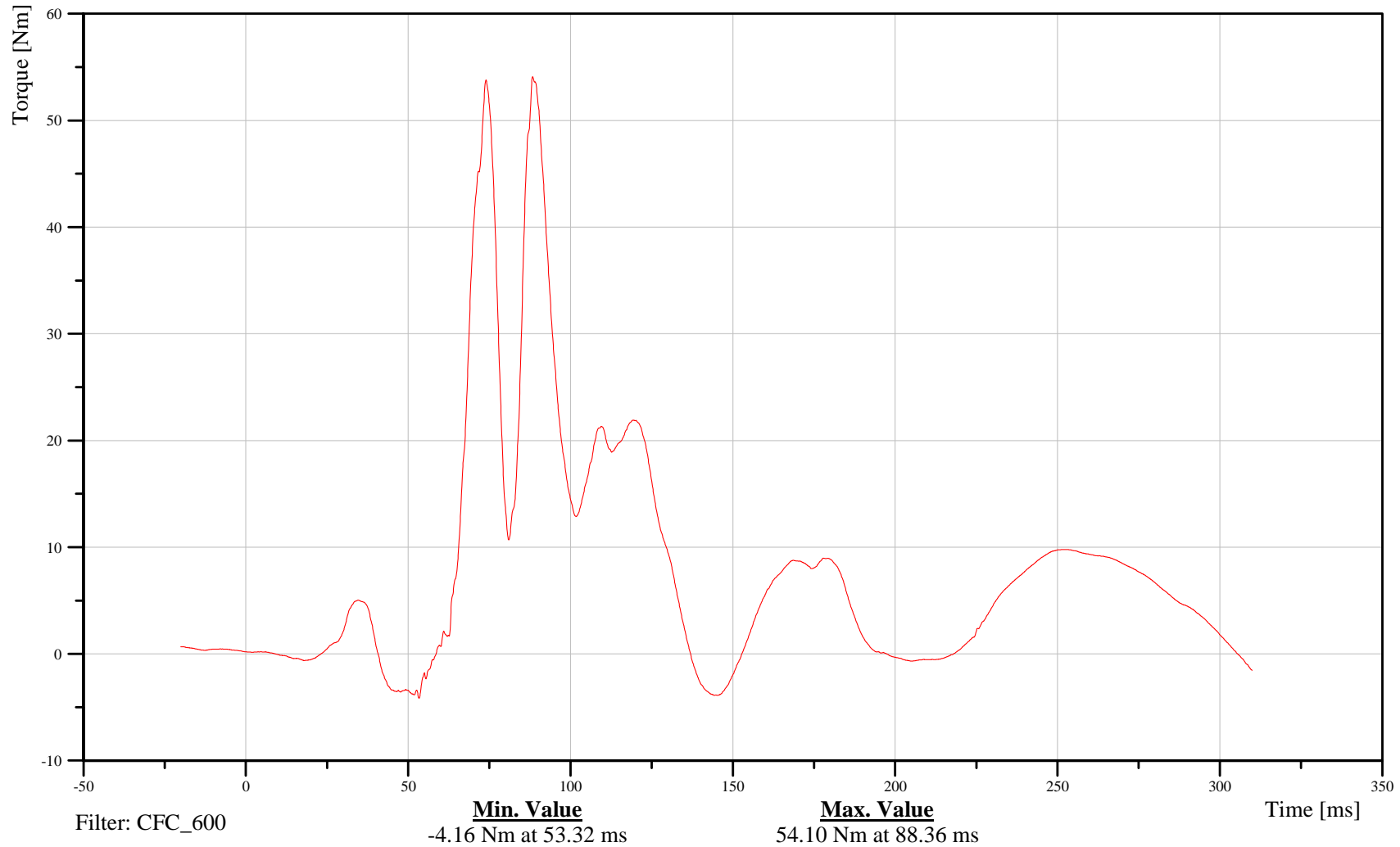
Target Vehicle Passenger Left Upper Tibia Moment About Y Axis

Customer: VRTC

23TIBILUFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-114

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

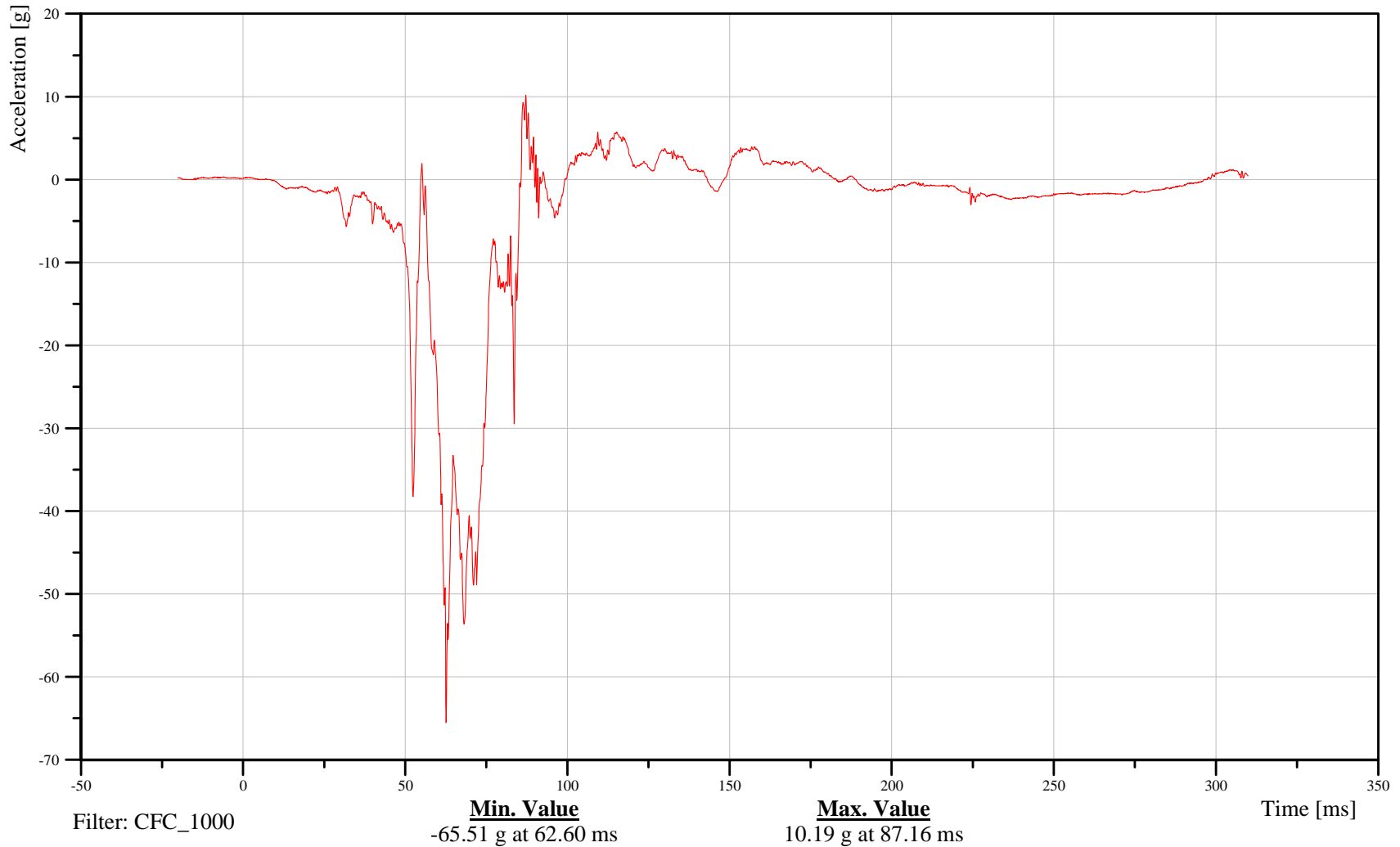
Target Vehicle Passenger Left Tibia X-Axis Acceleration

Customer: VRTC

23TIBILEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-115

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

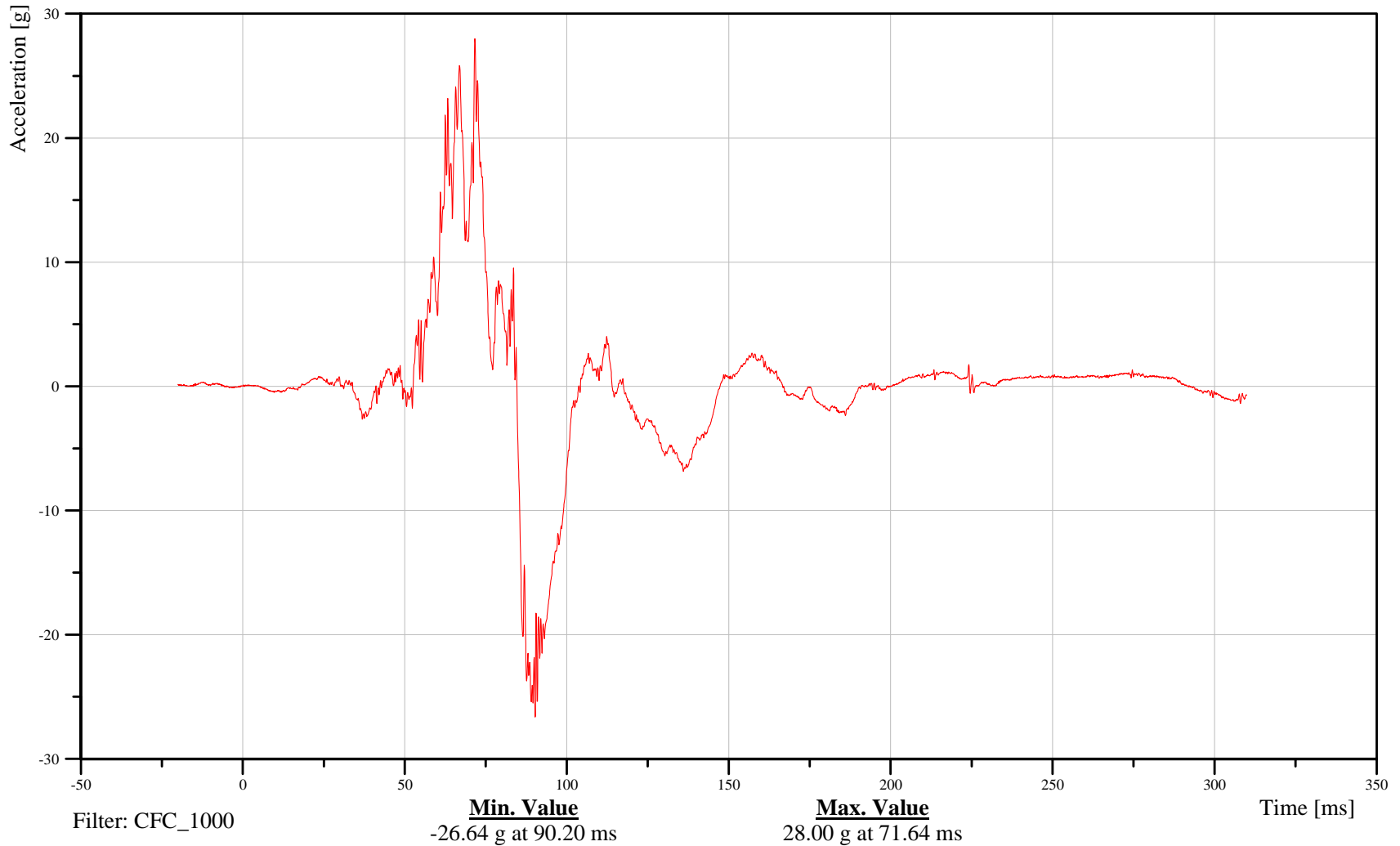
Target Vehicle Passenger Left Tibia Y-Axis Acceleration

Customer: VRTC

23TIBILEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-116

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

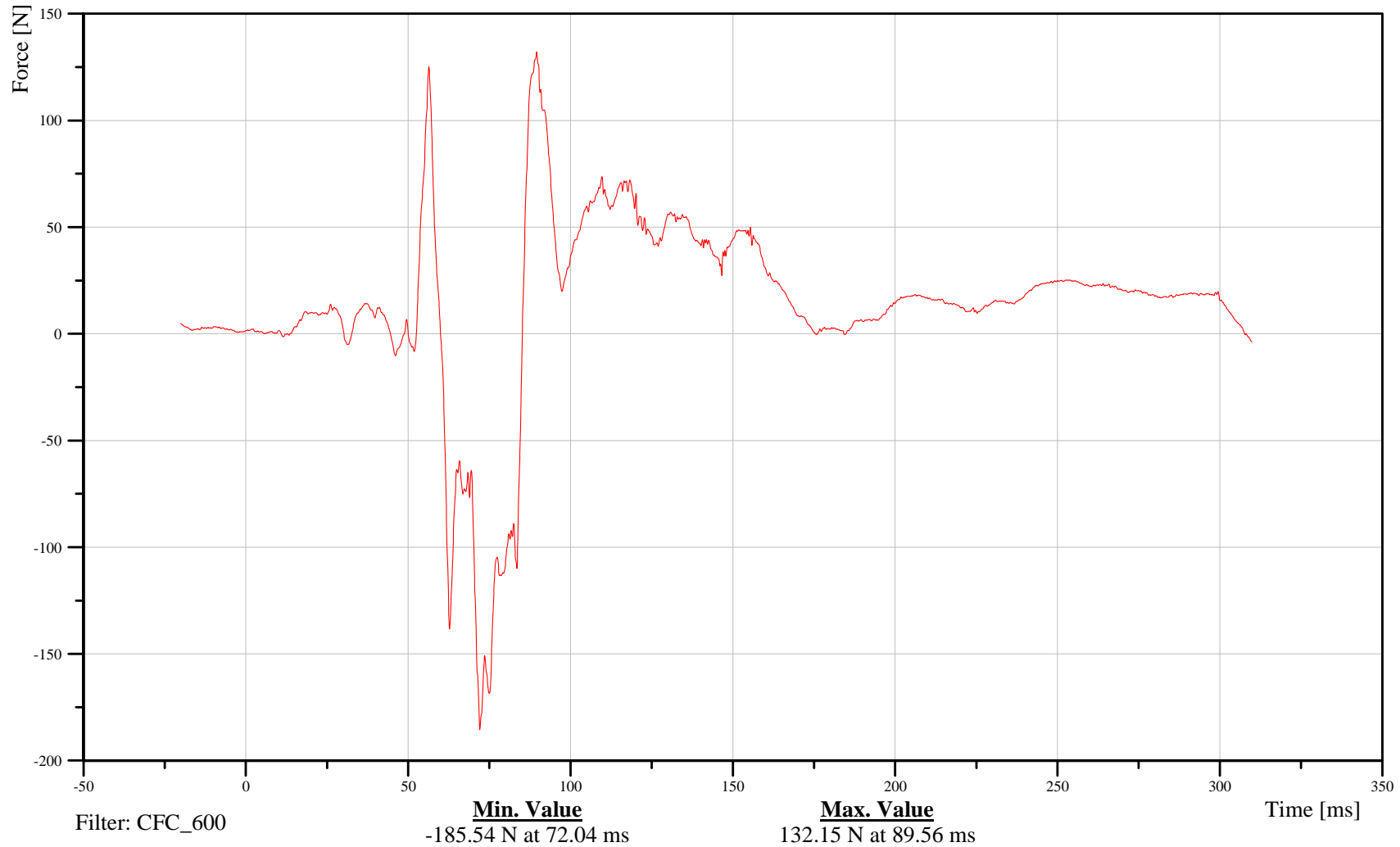
Target Vehicle Passenger Left Lower Tibia X-Axis Force

Customer: VRTC

23TIBILLFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-117

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

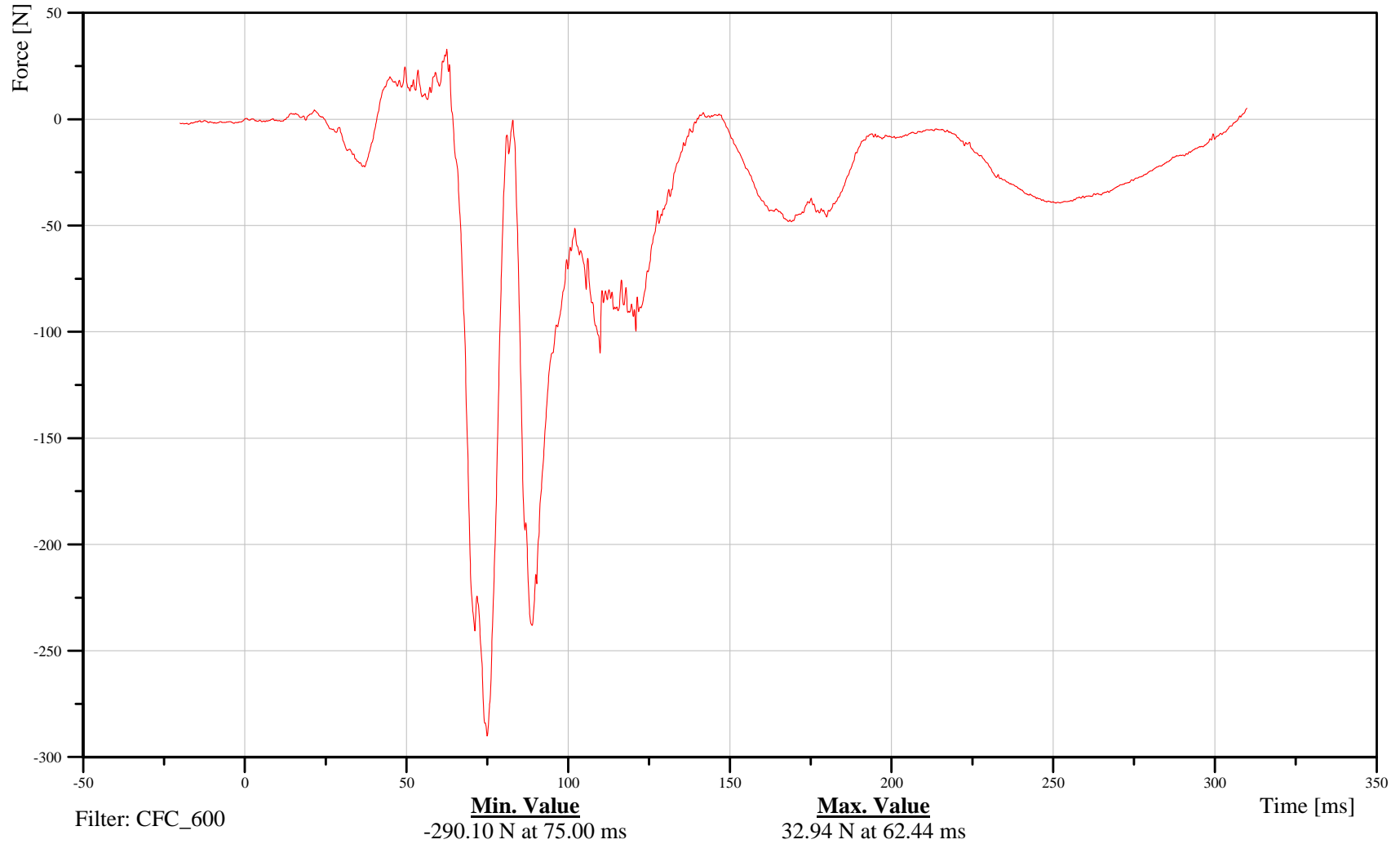
Target Vehicle Passenger Left Lower Tibia Y-Axis Force

Customer: VRTC

23TIBILLFXHFFOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-118

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

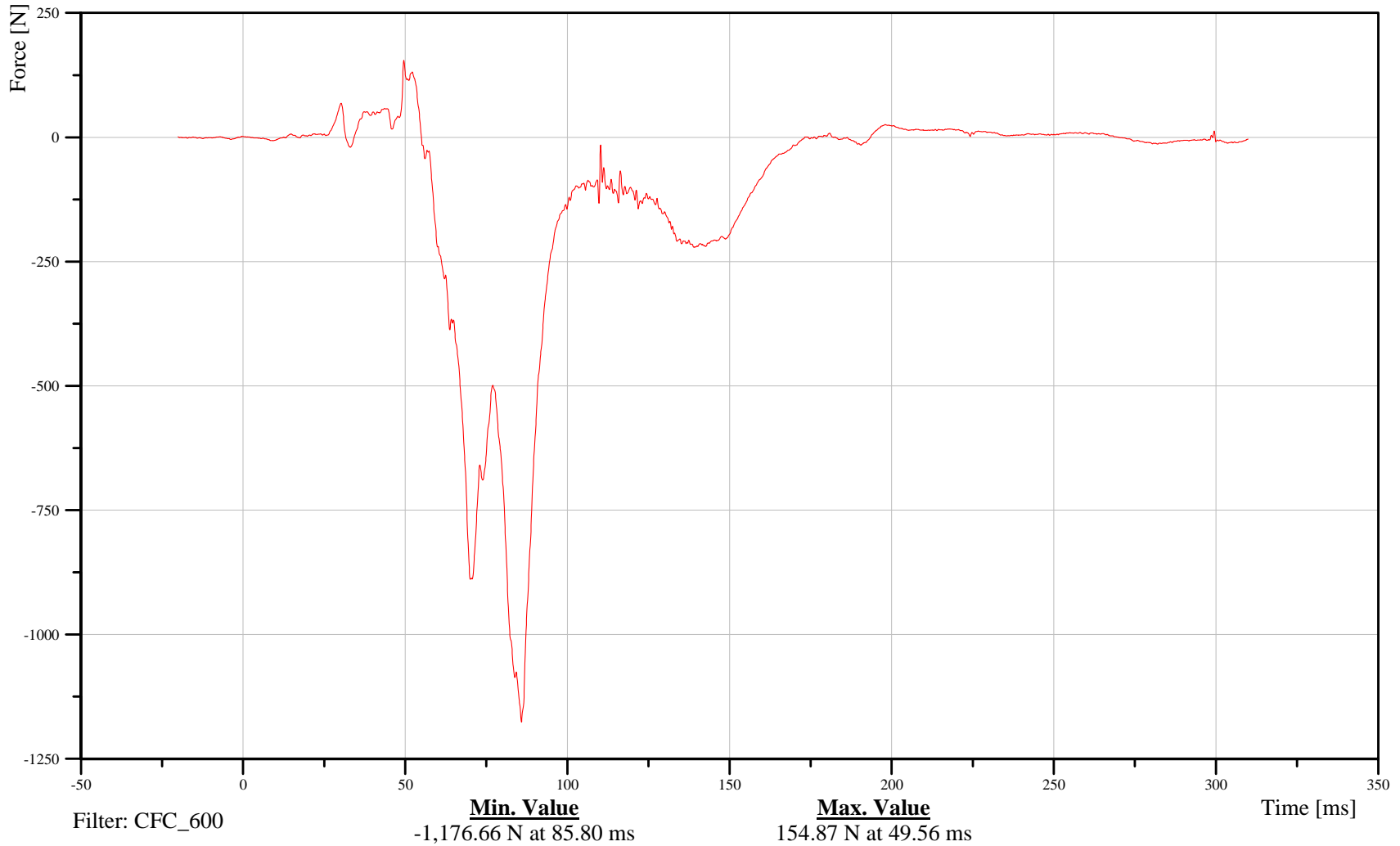
Target Vehicle Passenger Left Lower Tibia Z-Axis Force

Customer: VRTC

23TIBILLFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-119

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

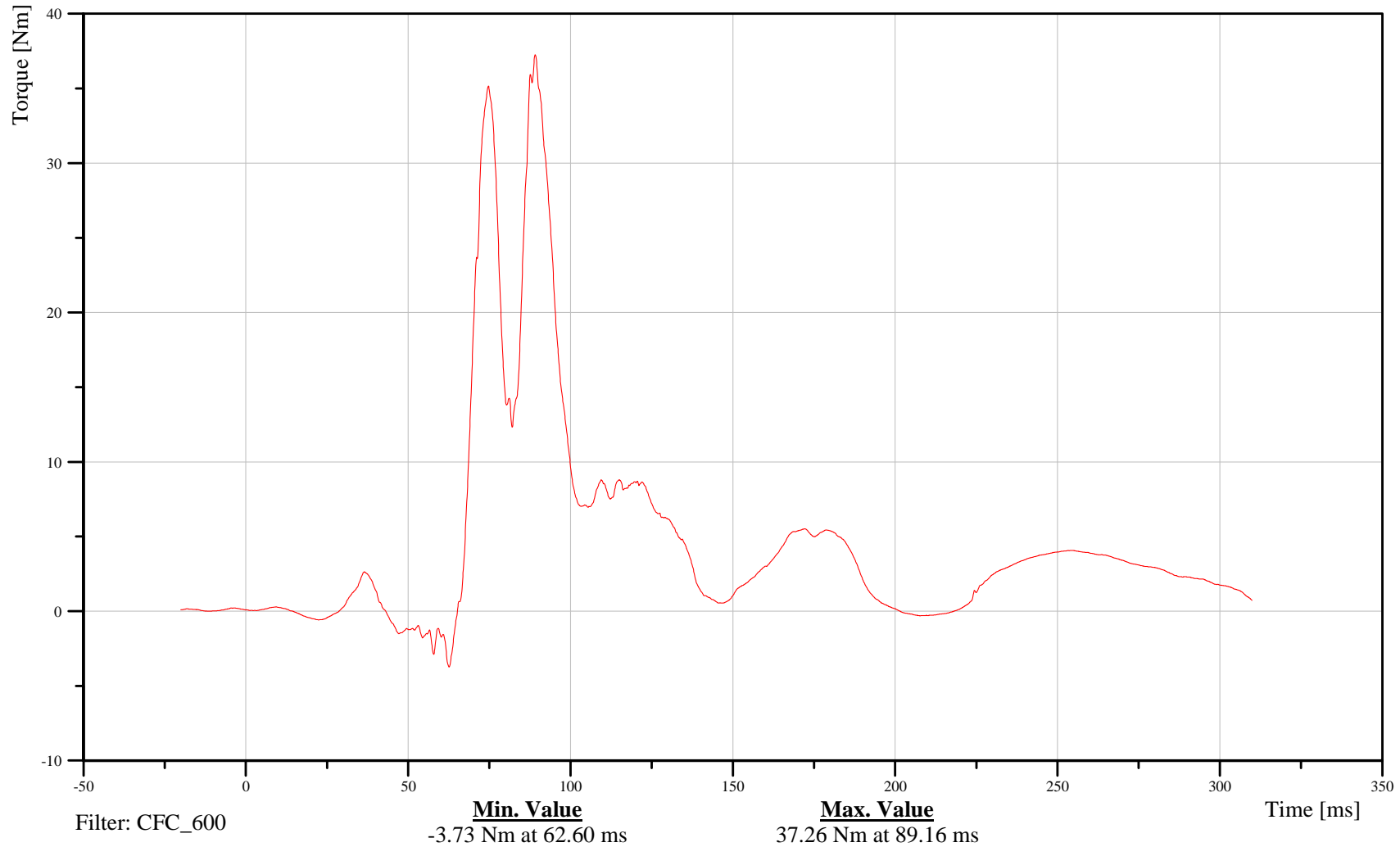
Target Vehicle Passenger Left Lower Tibia Moment About X Axis

Customer: VRTC

23TIBILLFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-120

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

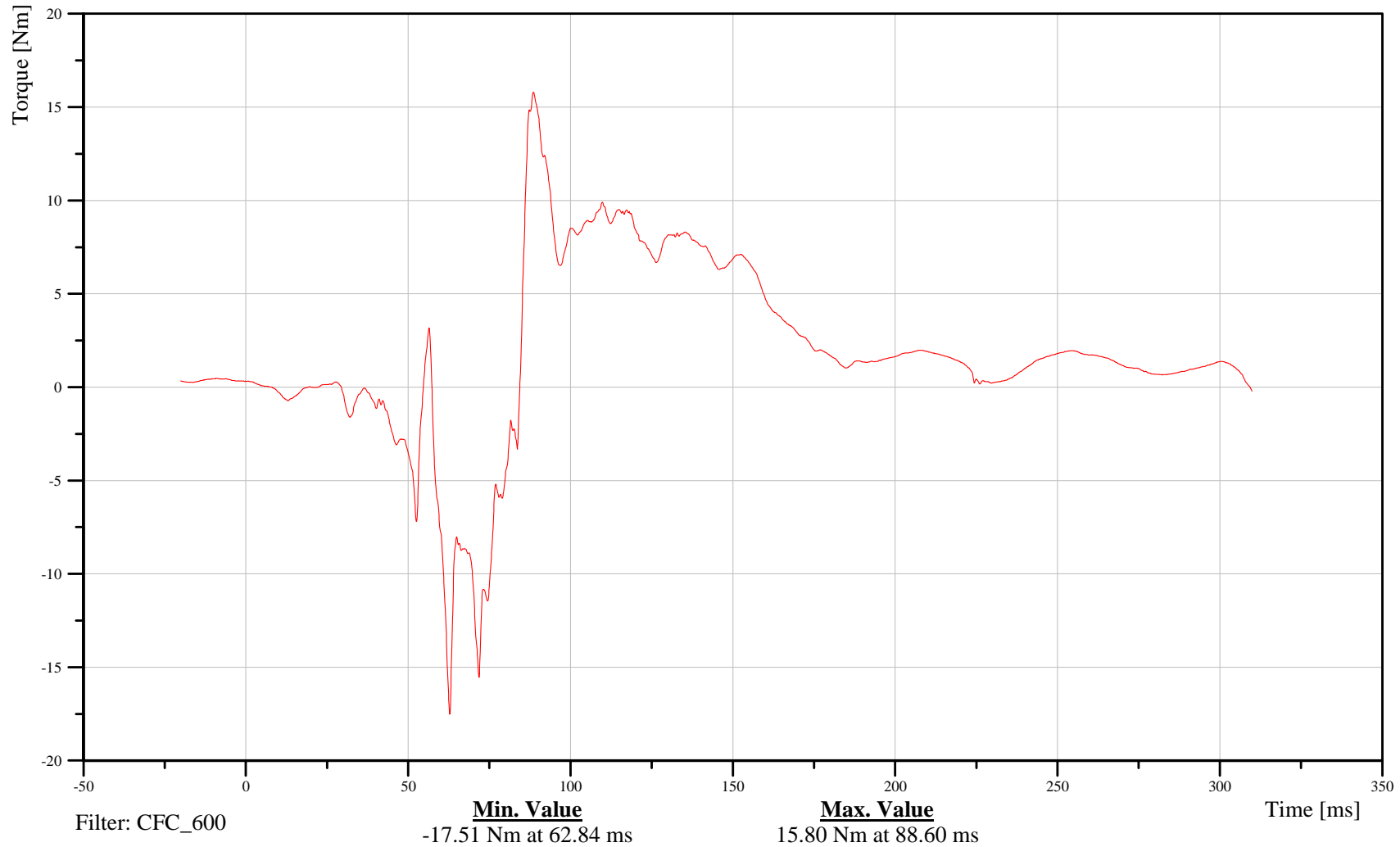
Target Vehicle Passenger Left Lower Tibia Moment About Y Axis

Customer: VRTC

23TIBILLFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-121

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

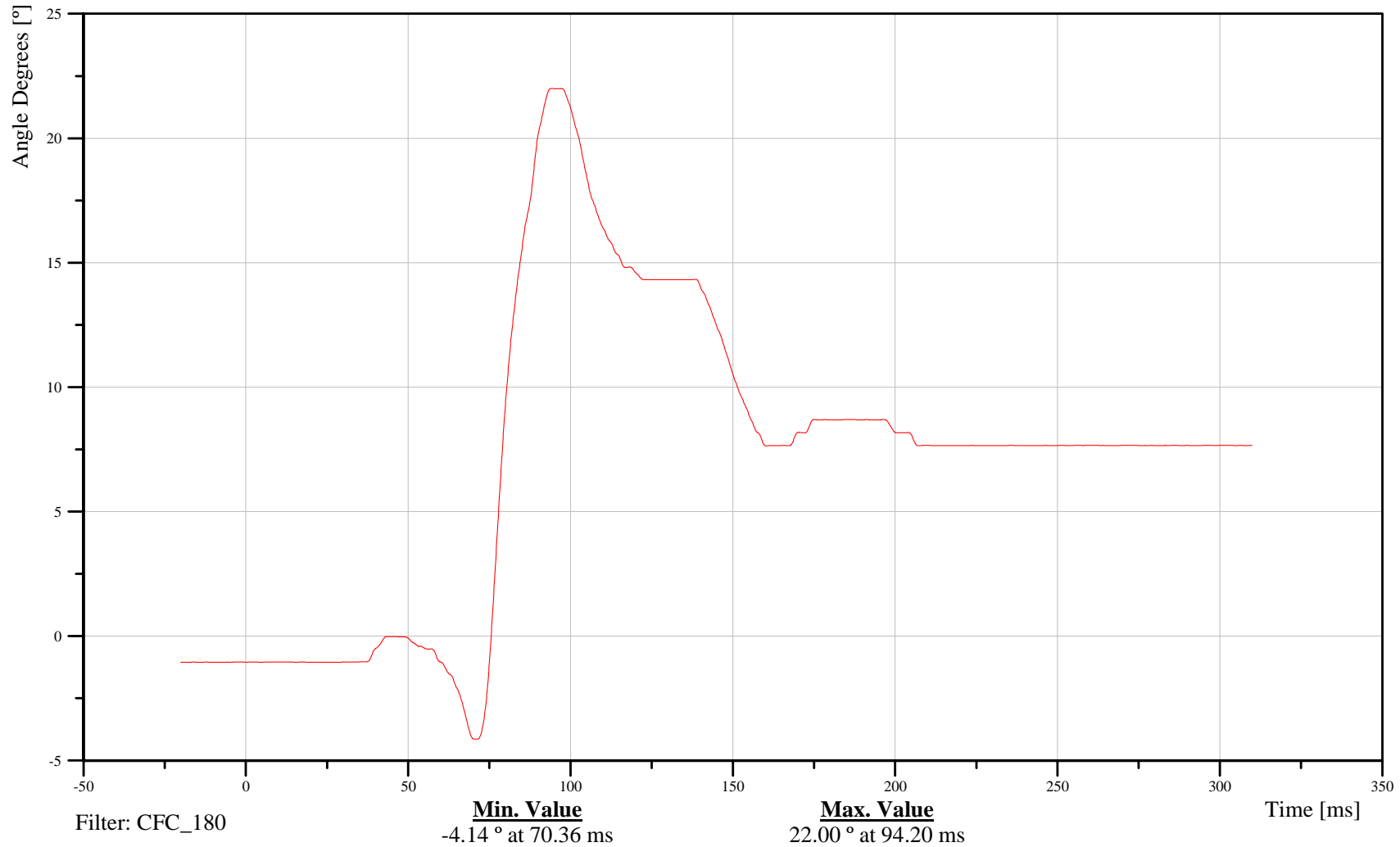
Target Vehicle Passenger Left Foot X-Axis Angular Displacement

Customer: VRTC

23FOOTLEFXHFANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-122

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

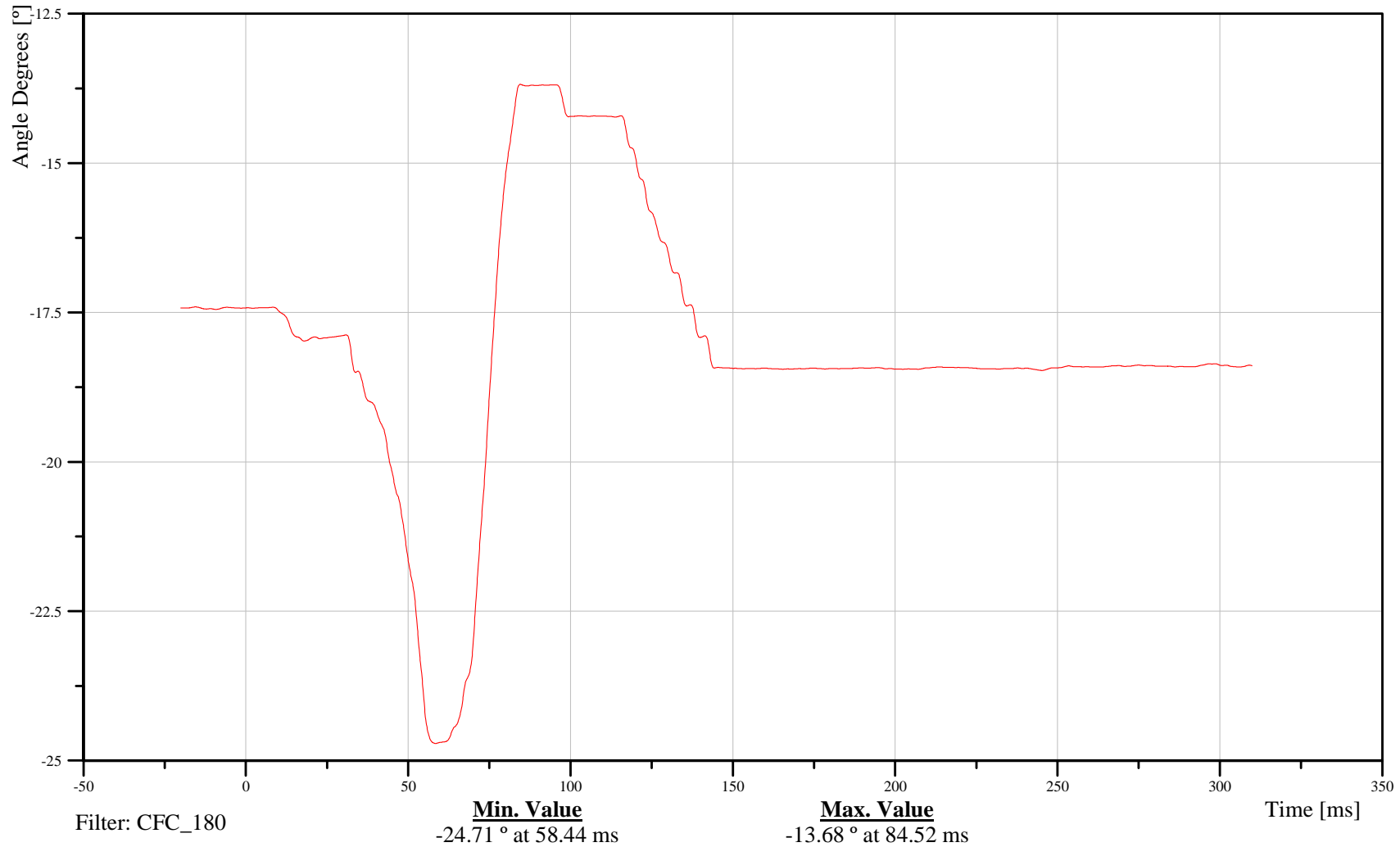
Target Vehicle Passenger Left Foot Y-Axis Angular Displacement

Customer: VRTC

23FOOTLEFXHFANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-123

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

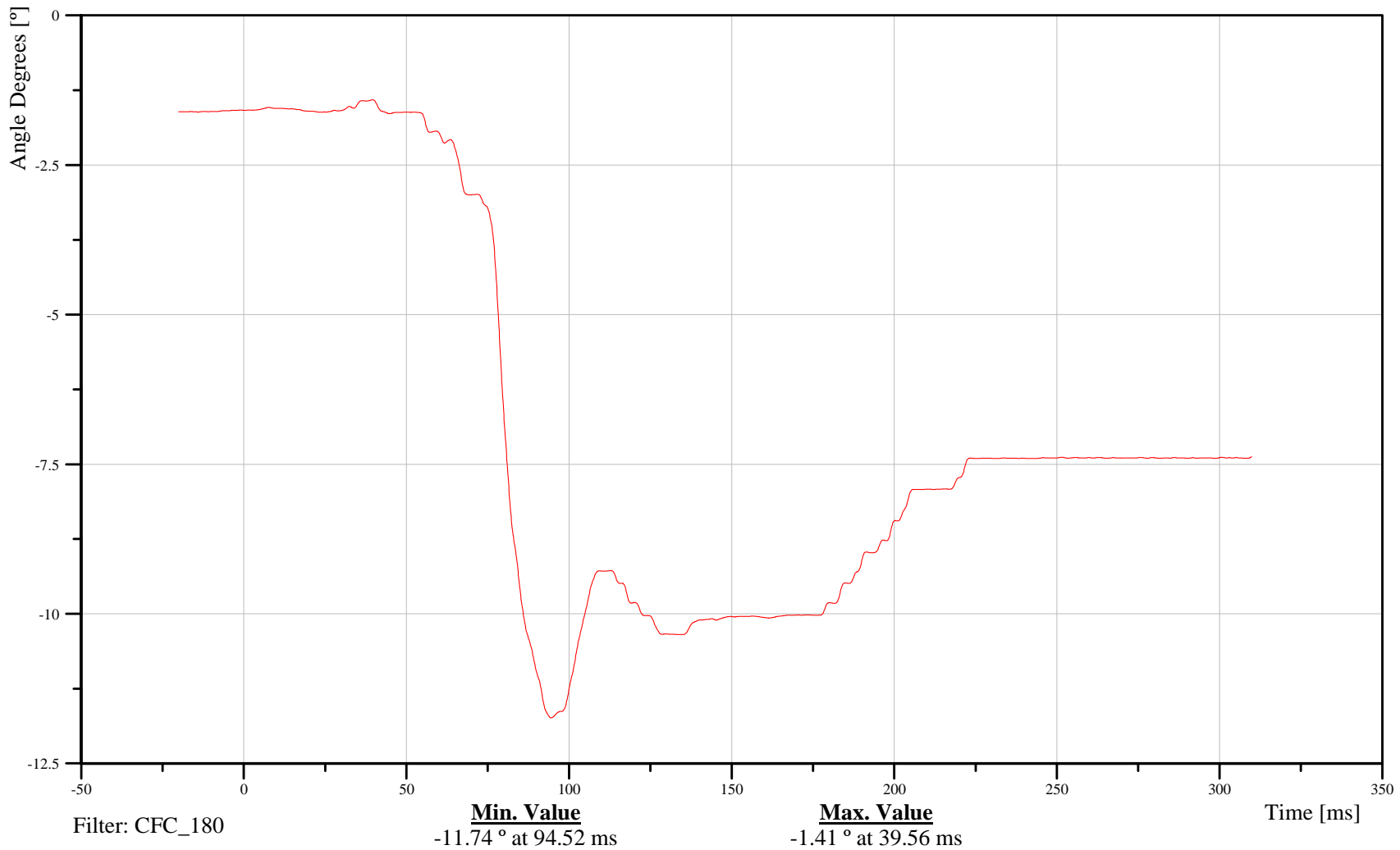
Target Vehicle Passenger Left Foot Z-Axis Angular Displacement

Customer: VRTC

23FOOTLEFXHFANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-124

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

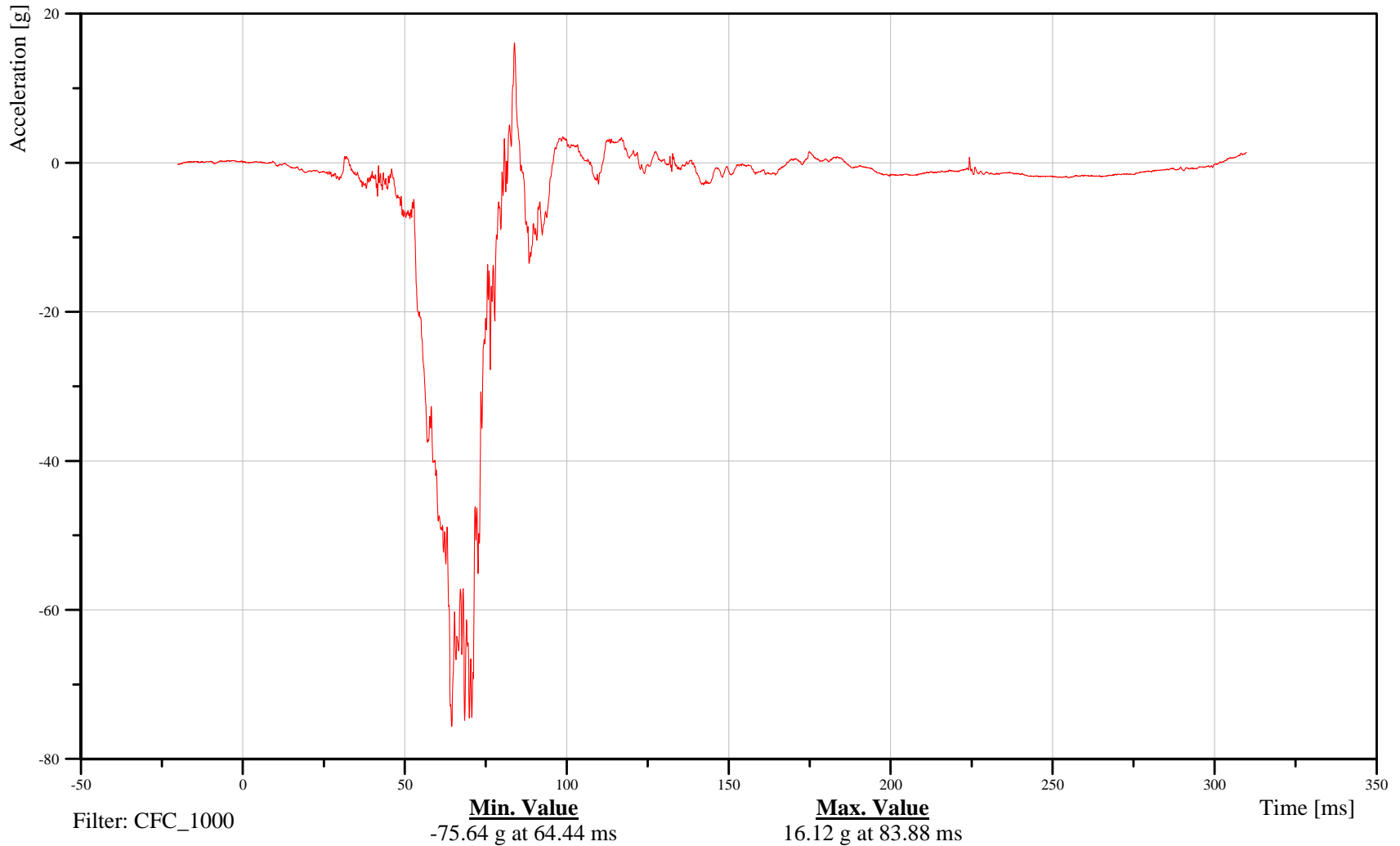
Target Vehicle Passenger Left Foot X-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-125

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

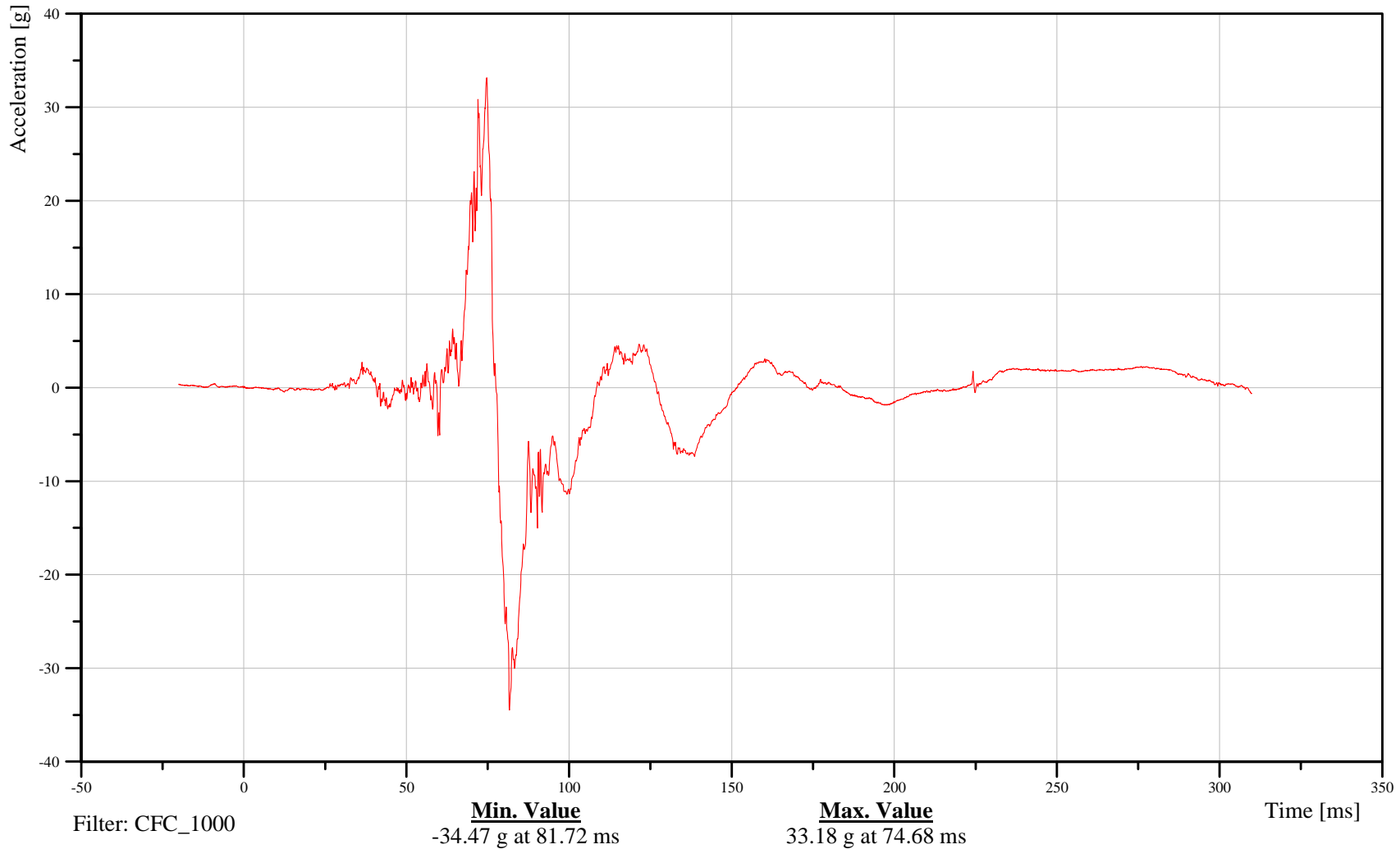
Target Vehicle Passenger Left Foot Y-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-126

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

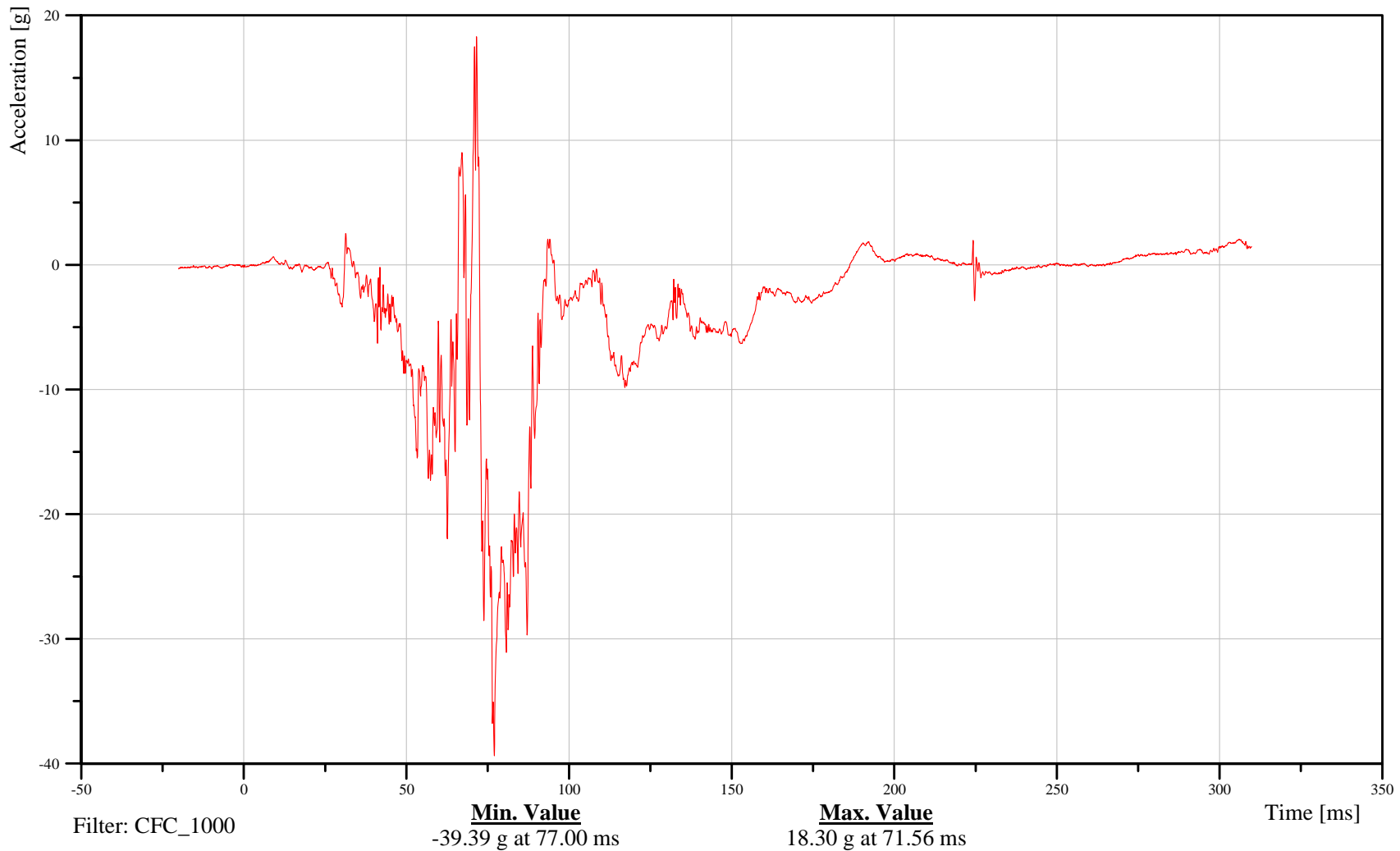
Target Vehicle Passenger Left Foot Z-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-127

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

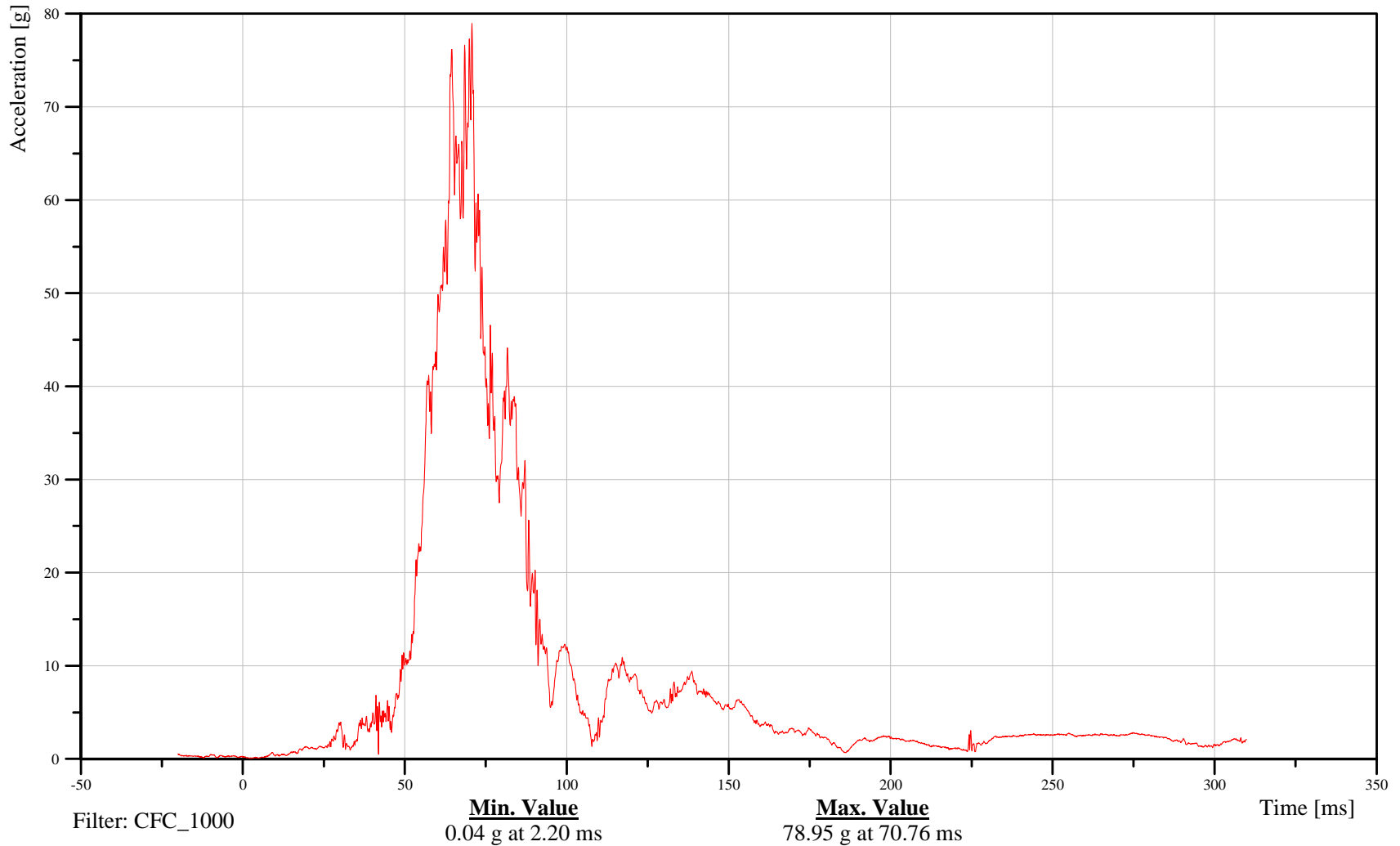
Target Vehicle Passenger Left Foot Resultant Acceleration

Customer: VRTC

23FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-128

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

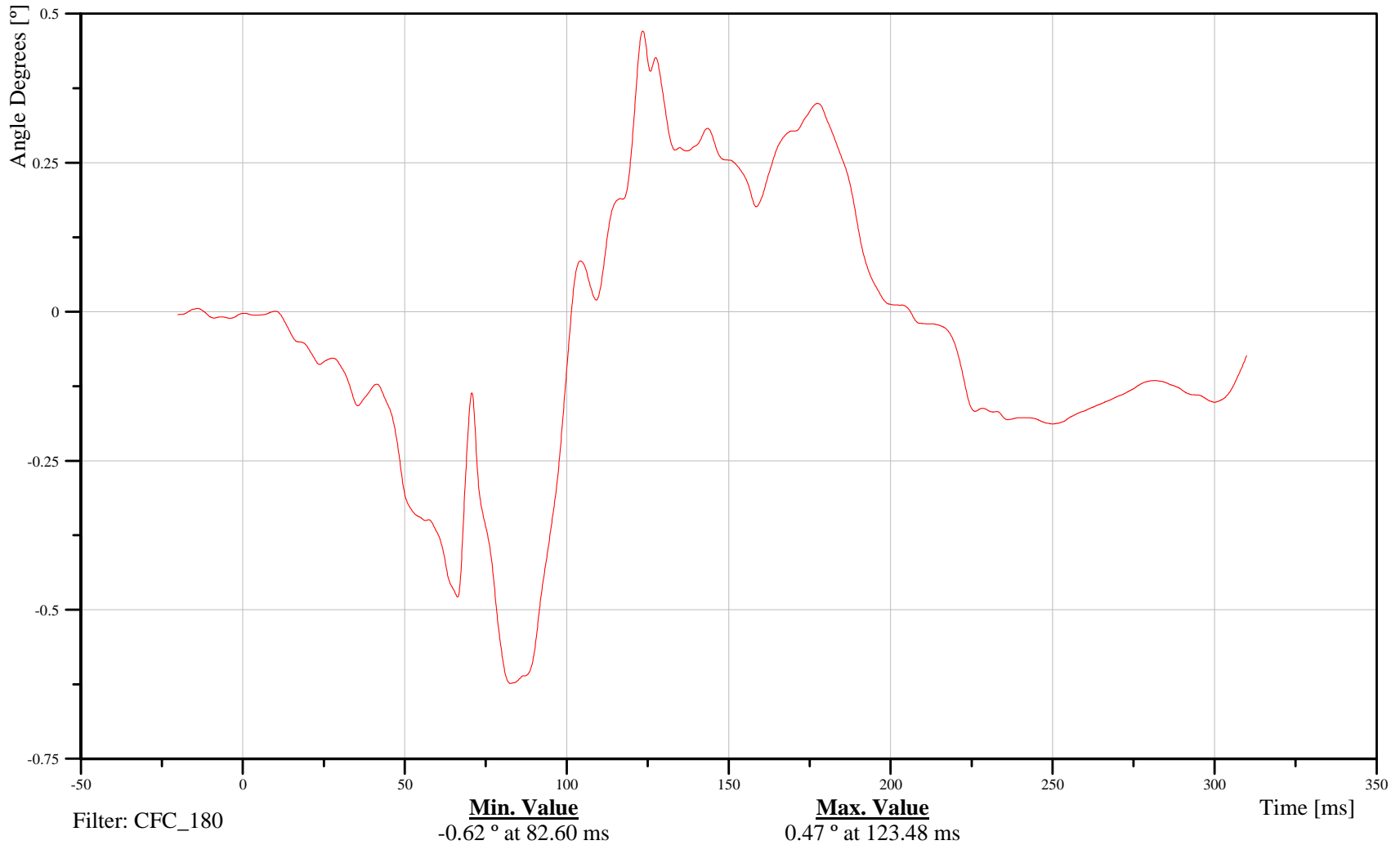
Target Vehicle Passenger Right Knee X-Axis Displacement

Customer: VRTC

23KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-129

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

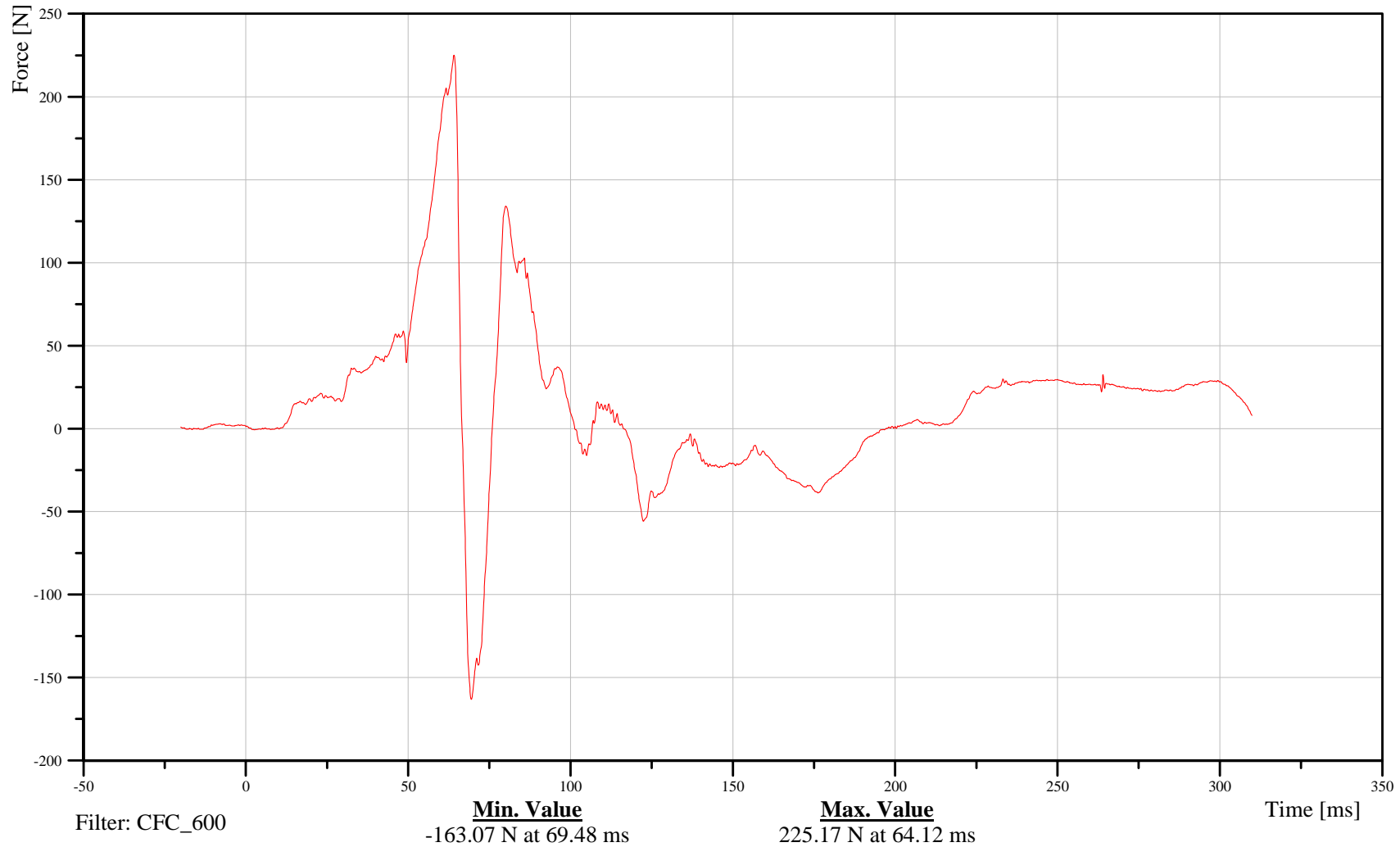
Target Vehicle Passenger Right Upper Tibia X-Axis Force

Customer: VRTC

23TIBIRUFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-130

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

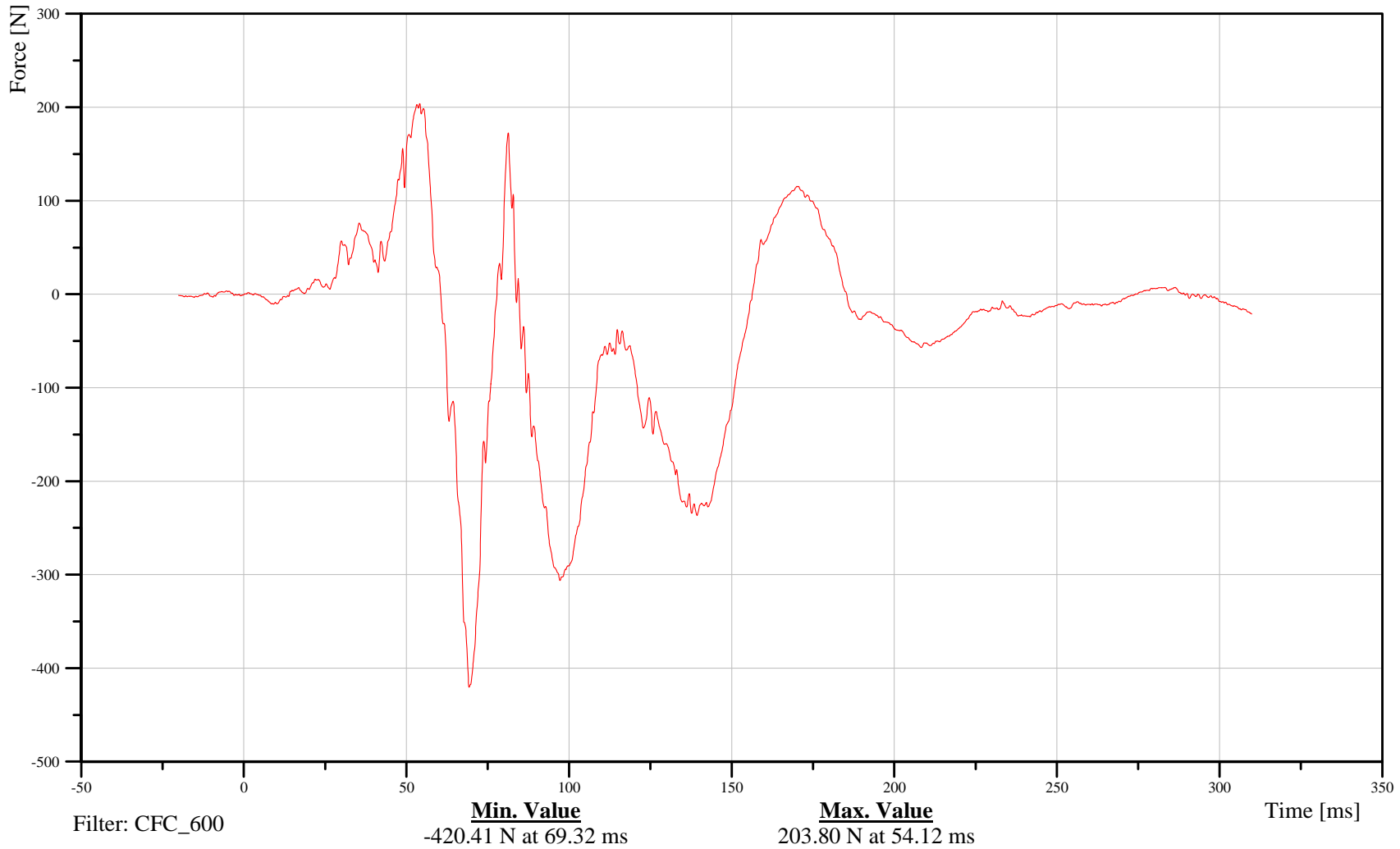
Target Vehicle Passenger Right Upper Tibia Z-Axis Force

Customer: VRTC

23TIBIRUFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-131

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

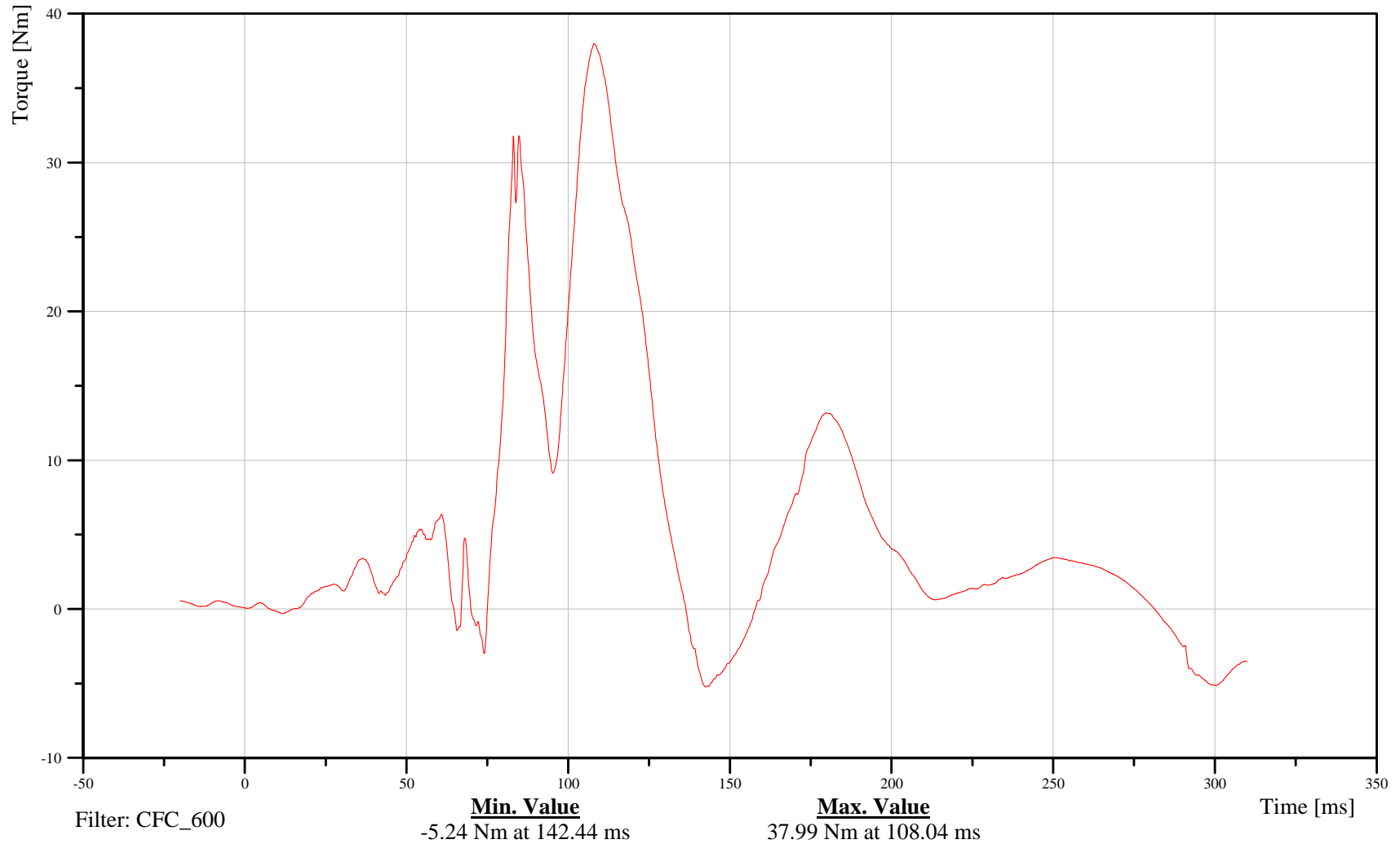
Target Vehicle Passenger Right Upper Tibia Moment About X Axis

Customer: VRTC

23TIBIRUFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-132

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

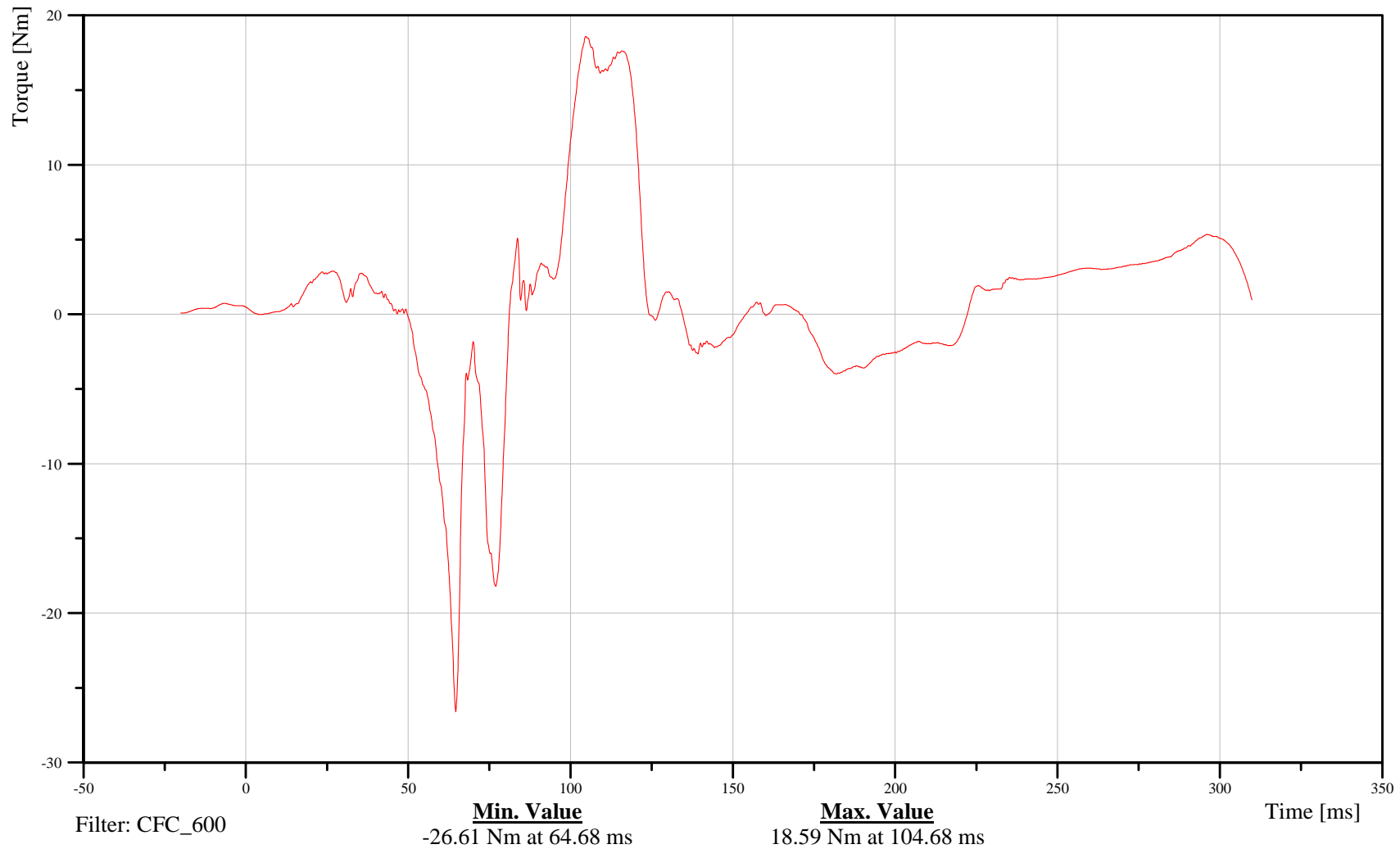
Target Vehicle Passenger Right Upper Tibia Moment About Y Axis

Customer: VRTC

23TIBIRUFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-133

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

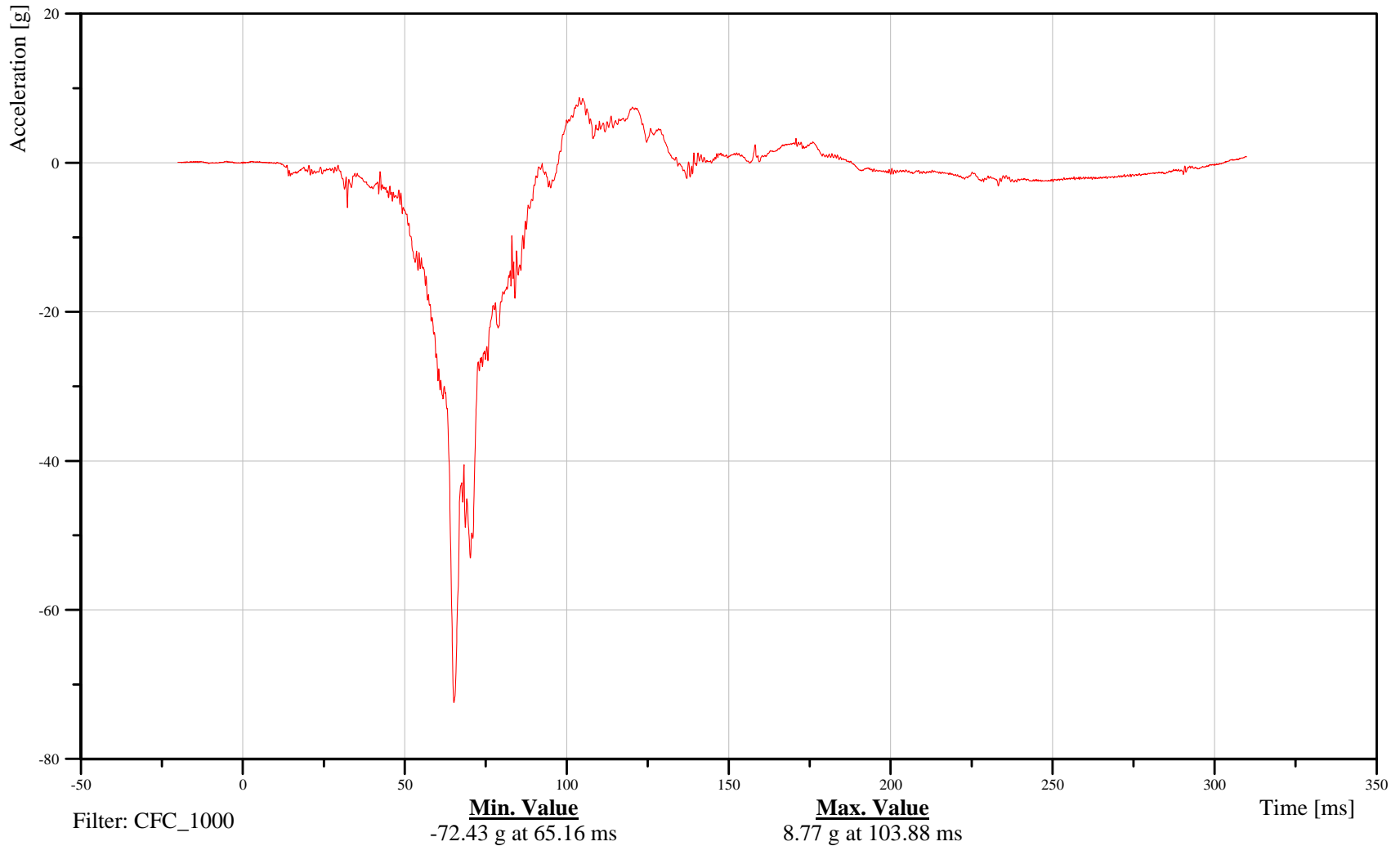
Target Vehicle Passenger Right Tibia X-Axis Acceleration

Customer: VRTC

23TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-134

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

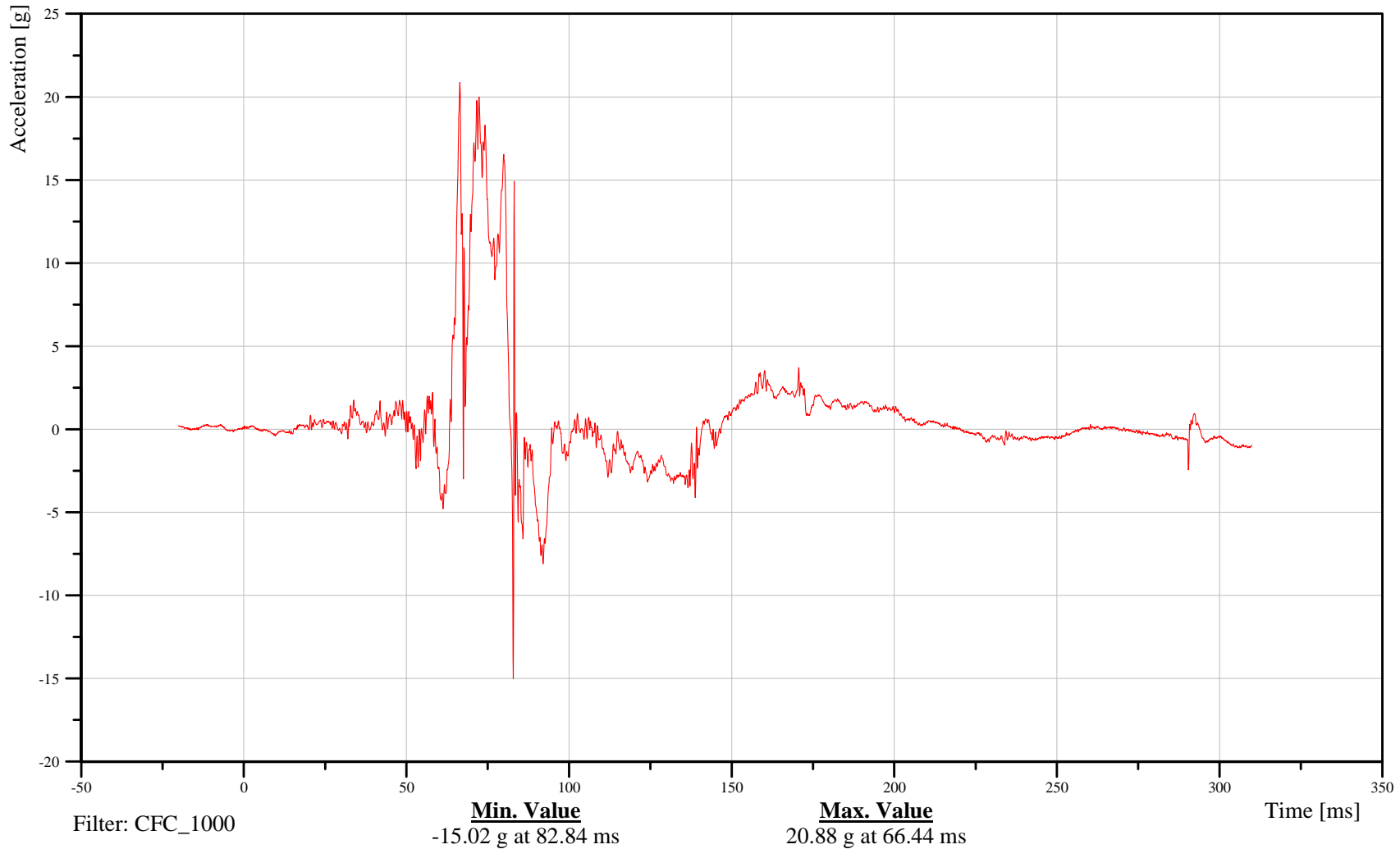
Target Vehicle Passenger Right Tibia Y-Axis Acceleration

Customer: VRTC

23TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-135

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

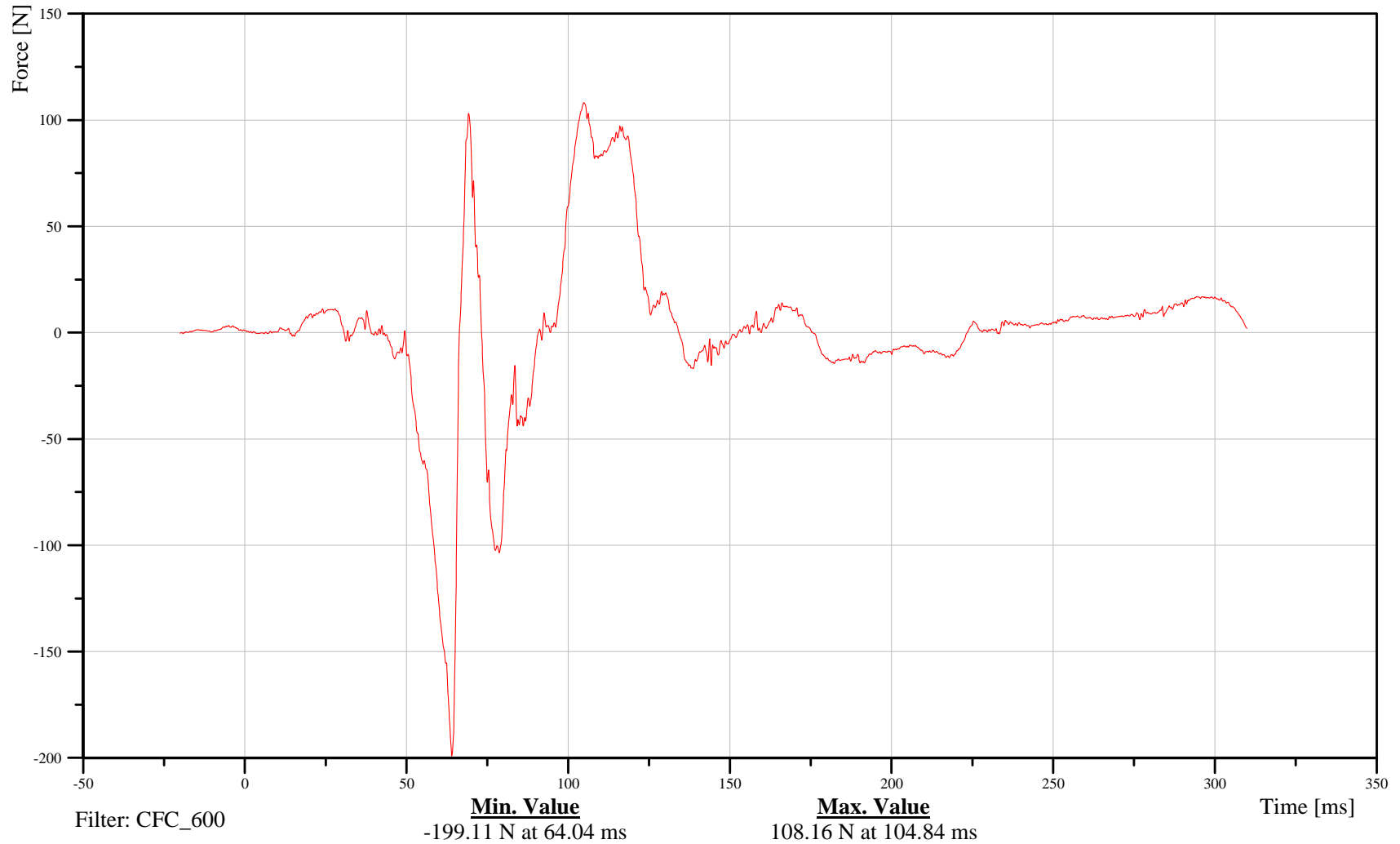
Target Vehicle Passenger Right Lower Tibia X-Axis Force

Customer: VRTC

23TIBIRLFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-136

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

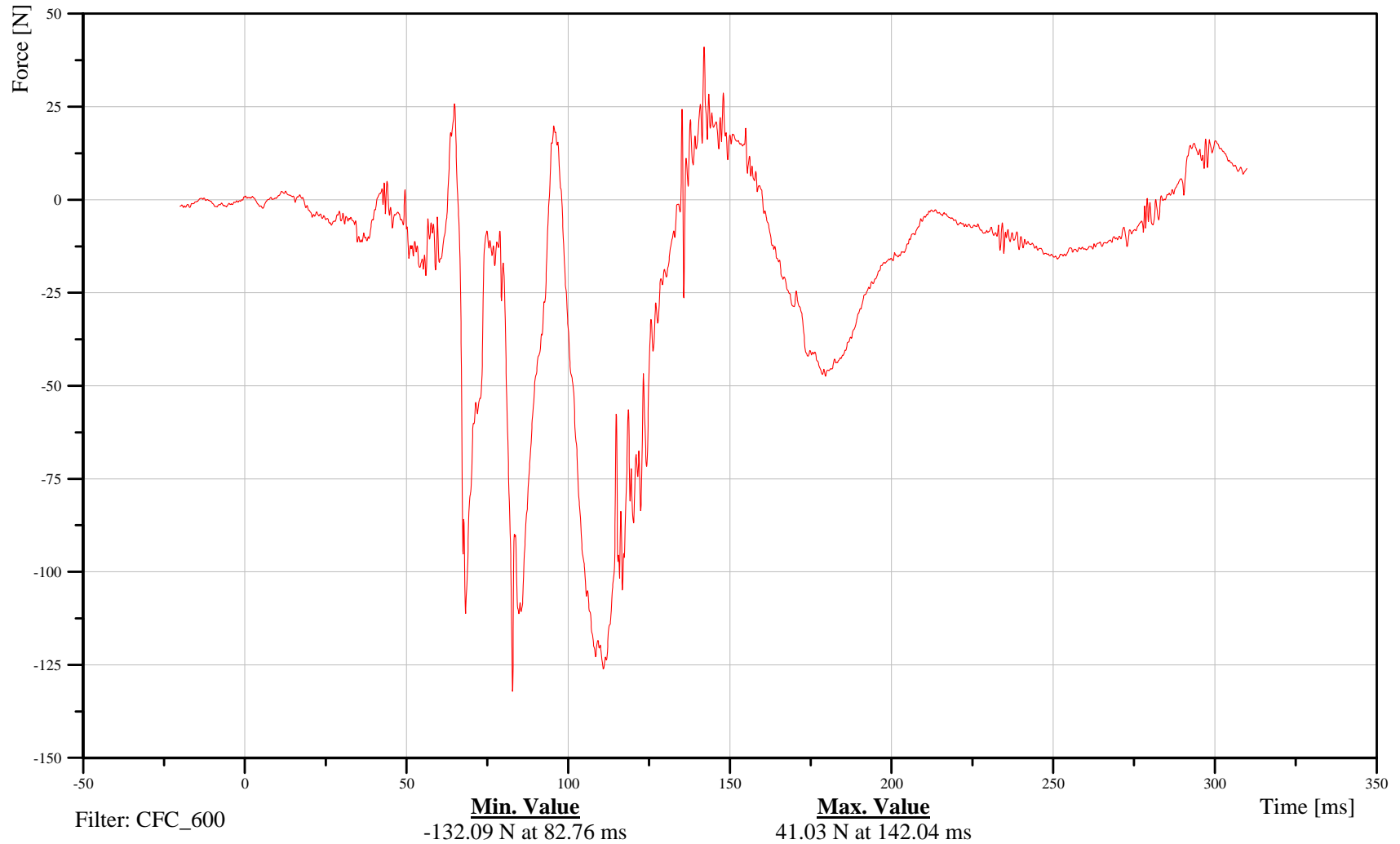
Target Vehicle Passenger Right Lower Tibia Y-Axis Force

Customer: VRTC

23TIBIRLFXHFFOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-137

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

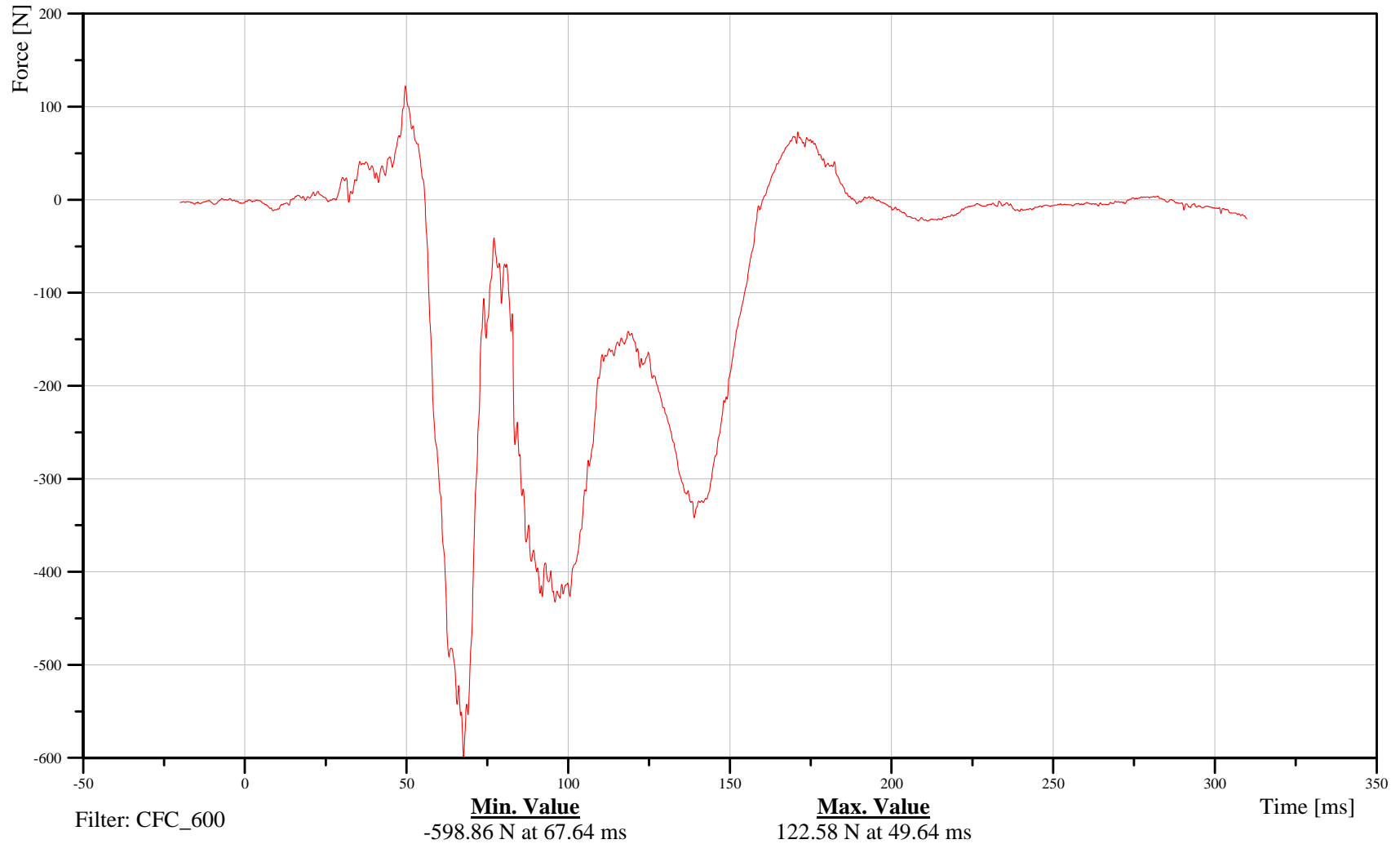
Target Vehicle Passenger Right Lower Tibia Z-Axis Force

Customer: VRTC

23TIBIRLFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-138

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

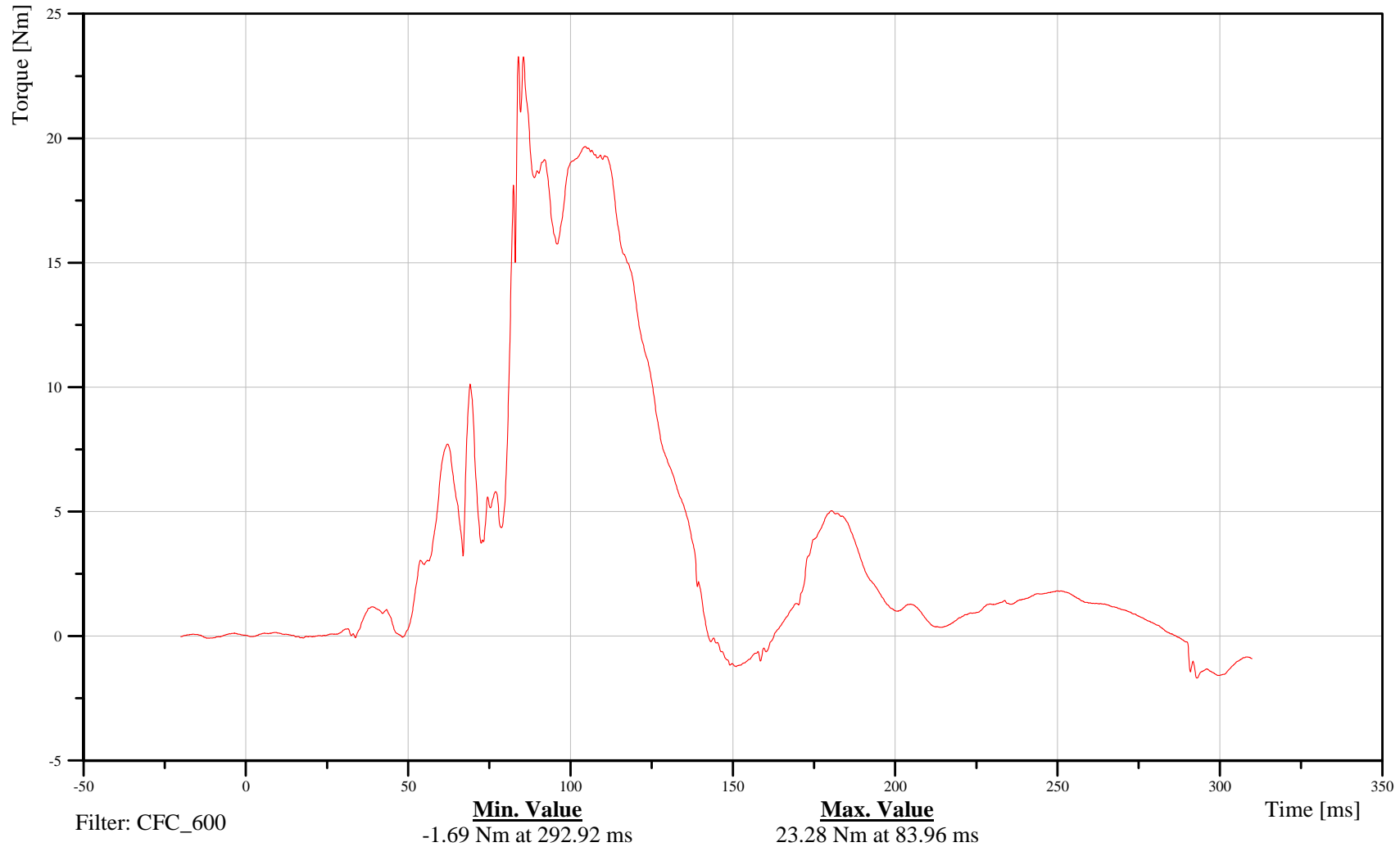
Target Vehicle Passenger Right Lower Tibia Moment About X Axis

Customer: VRTC

23TIBIRLFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-139

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

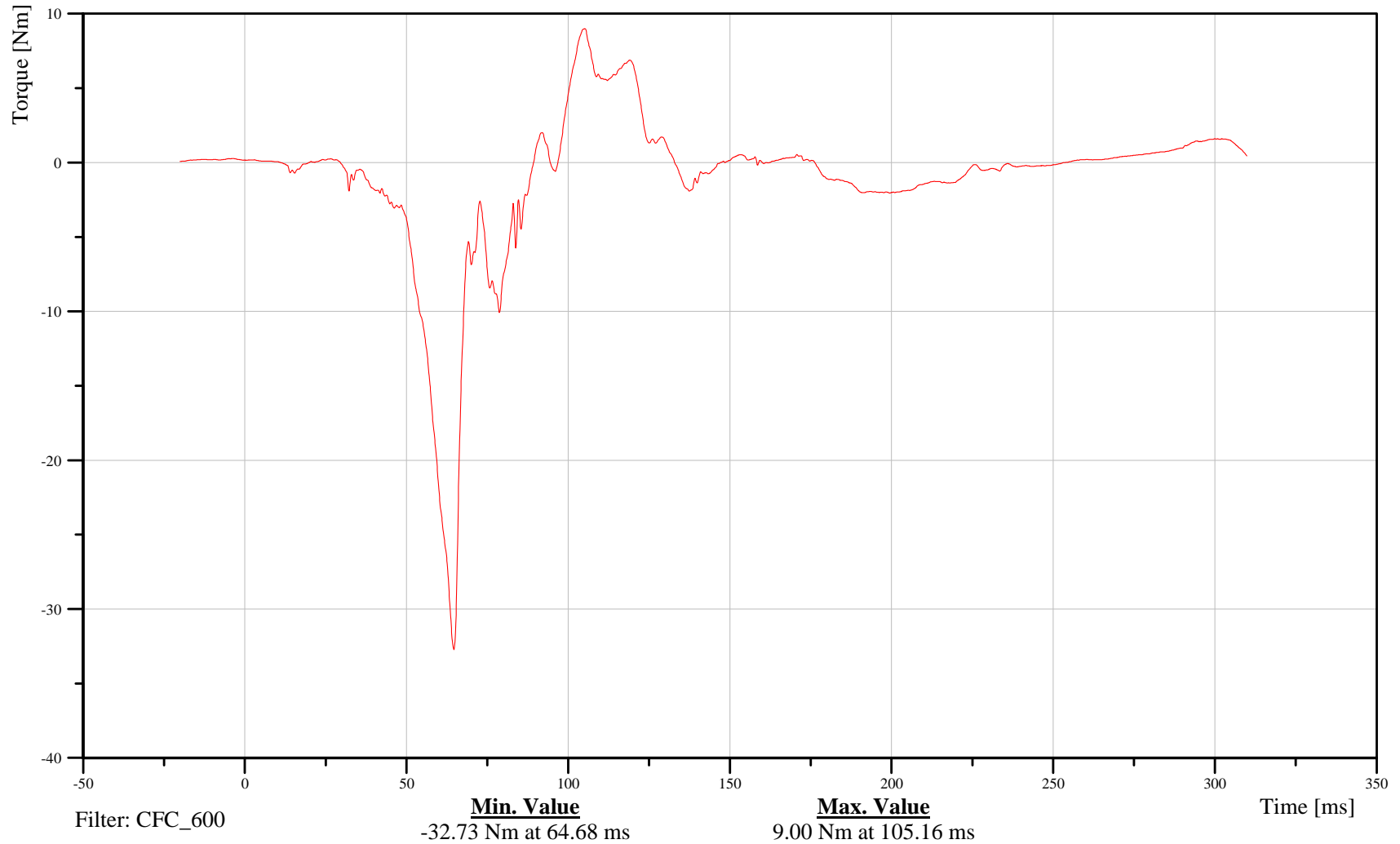
Target Vehicle Passenger Right Lower Tibia Moment About Y Axis

Customer: VRTC

23TIBIRLFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-140

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

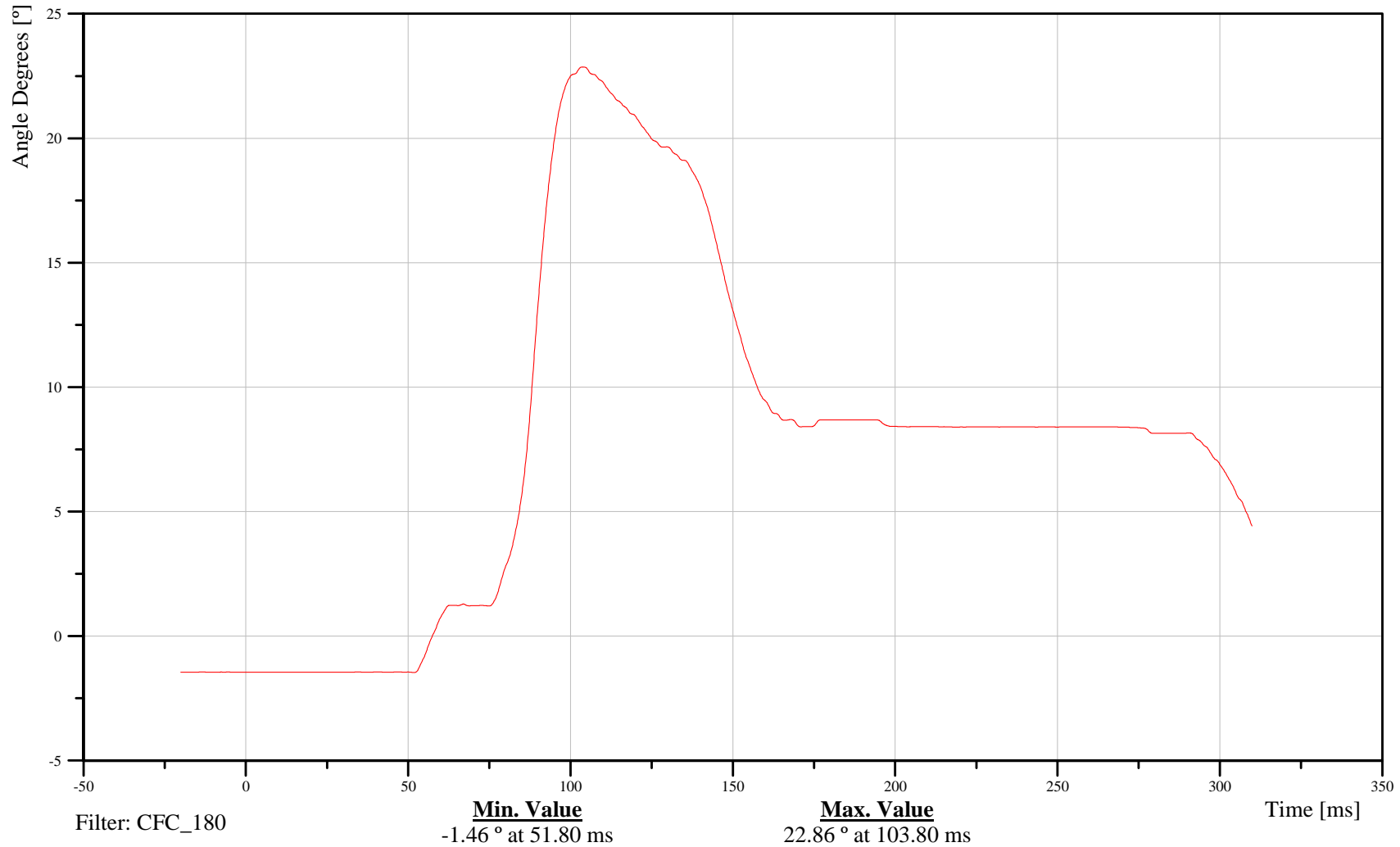
Target Vehicle Passenger Right Foot X-Axis Angular Displacement

Customer: VRTC

23FOOTRIFXHFANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-141

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

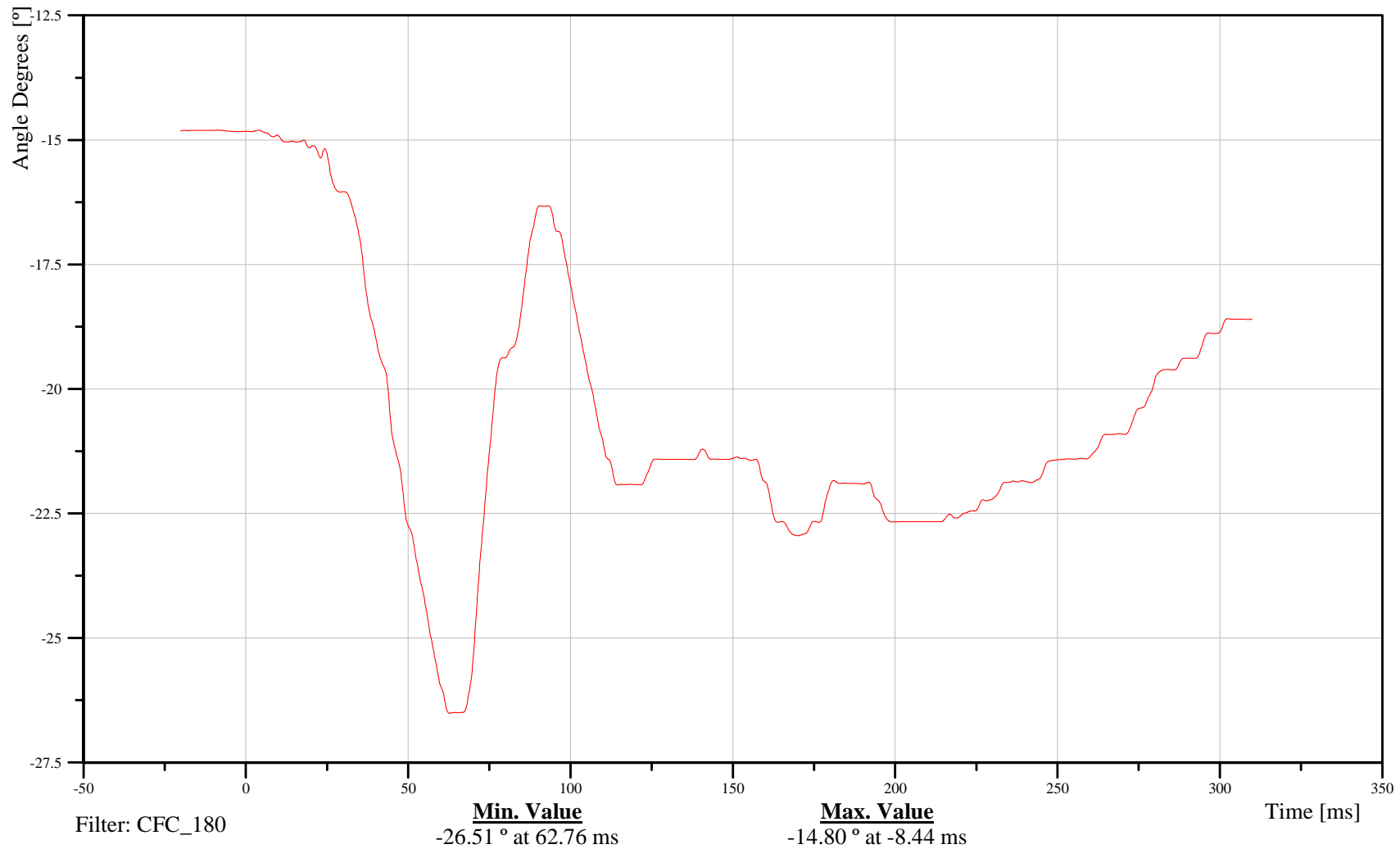
Target Vehicle Passenger Right Foot Y-Axis Angular Displacement

Customer: VRTC

23FOOTRIFXHFANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-142

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

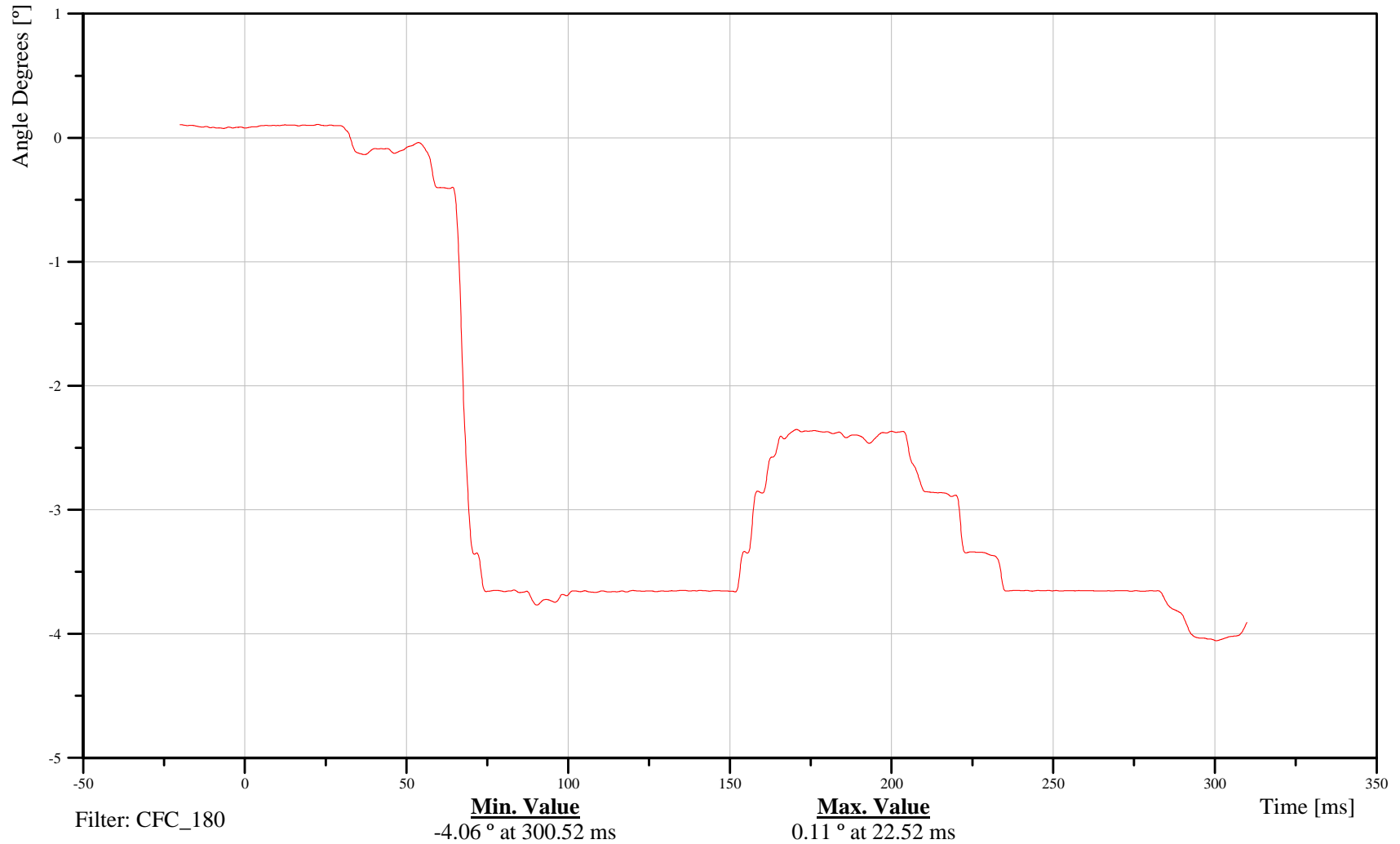
Target Vehicle Passenger Right Foot Z-Axis Angular Displacement

Customer: VRTC

23FOOTRIFXHFANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-143

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

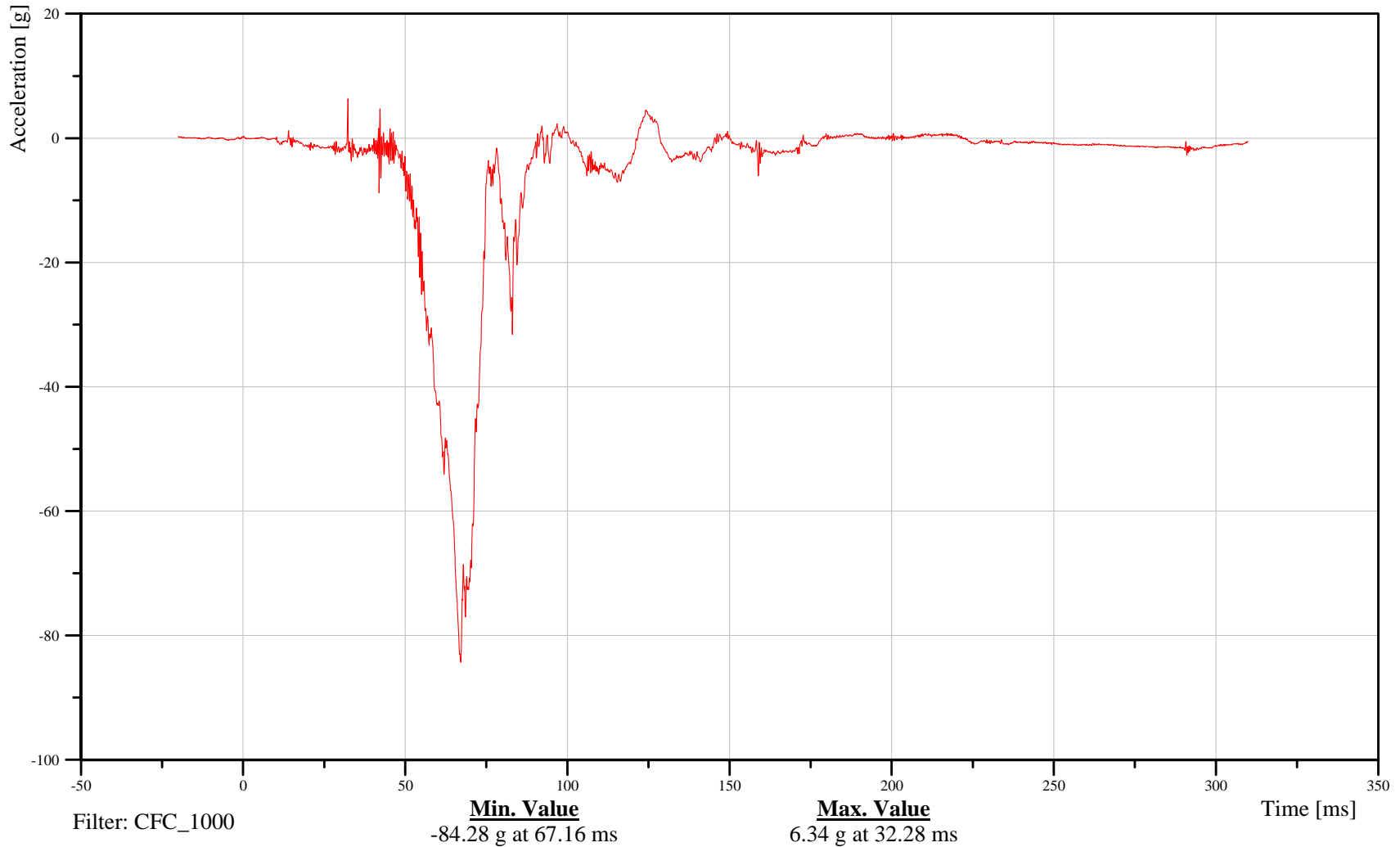
Target Vehicle Passenger Right Foot X-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-144

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

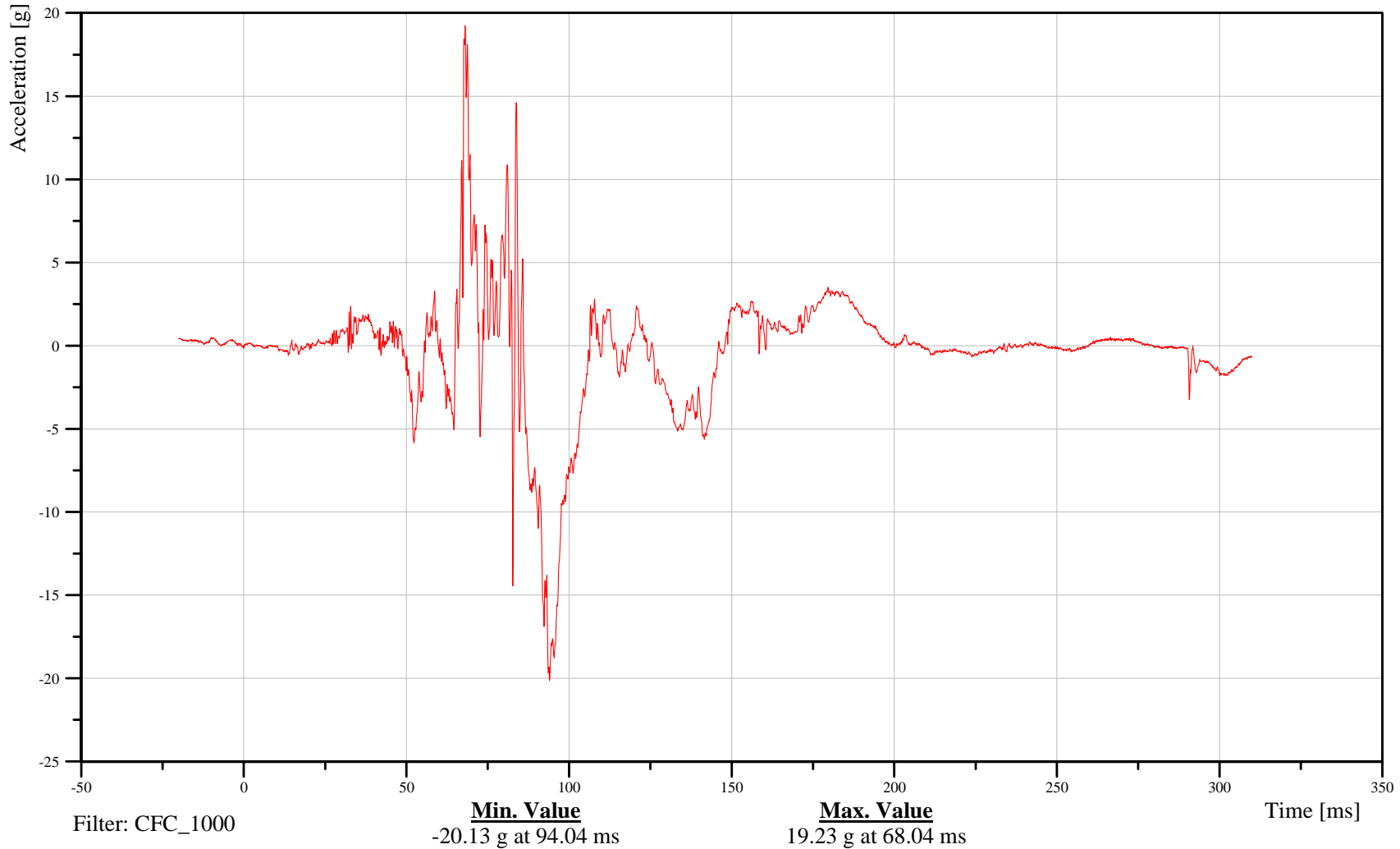
Target Vehicle Passenger Right Foot Y-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-145

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

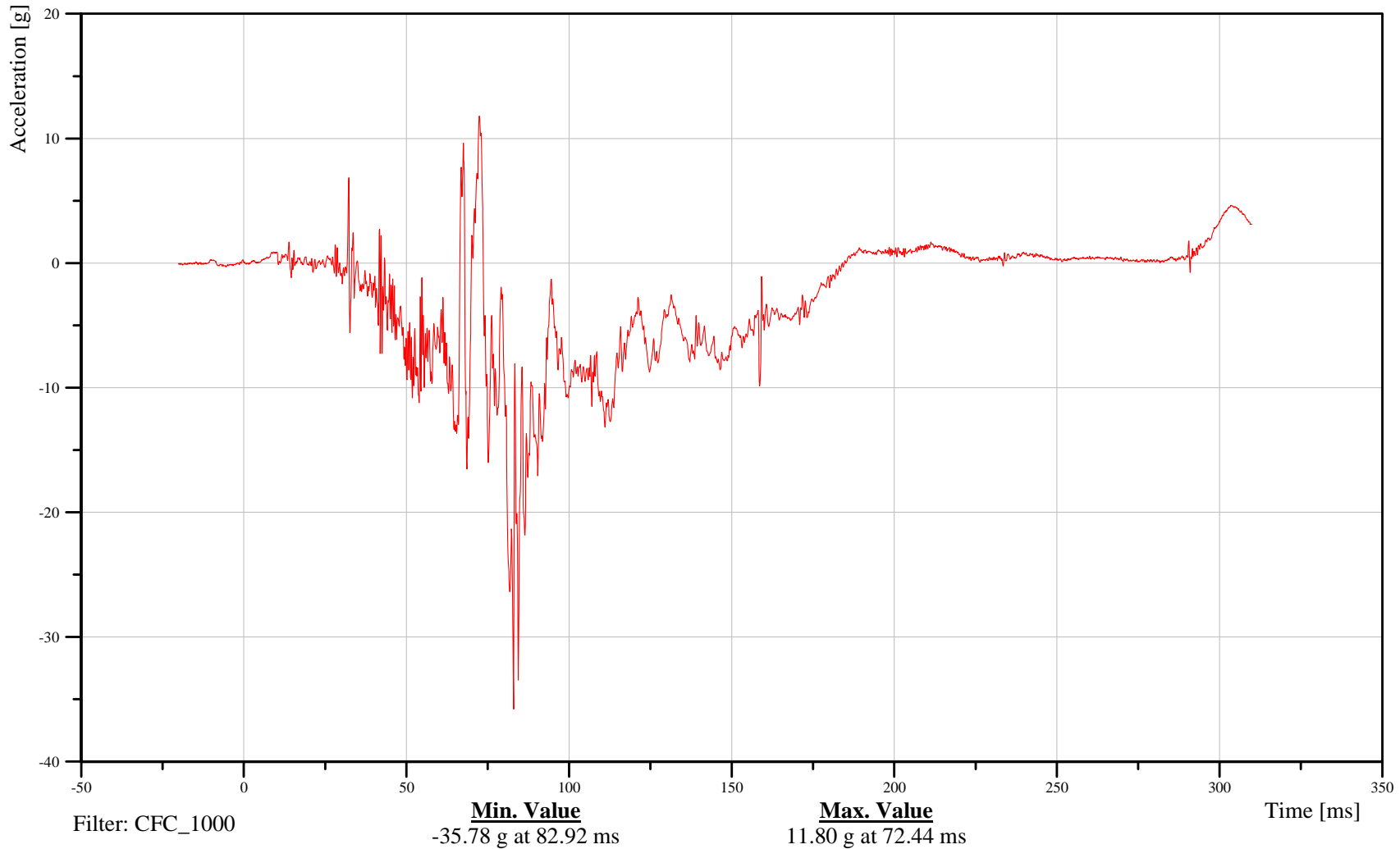
Target Vehicle Passenger Right Foot Z-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-146

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

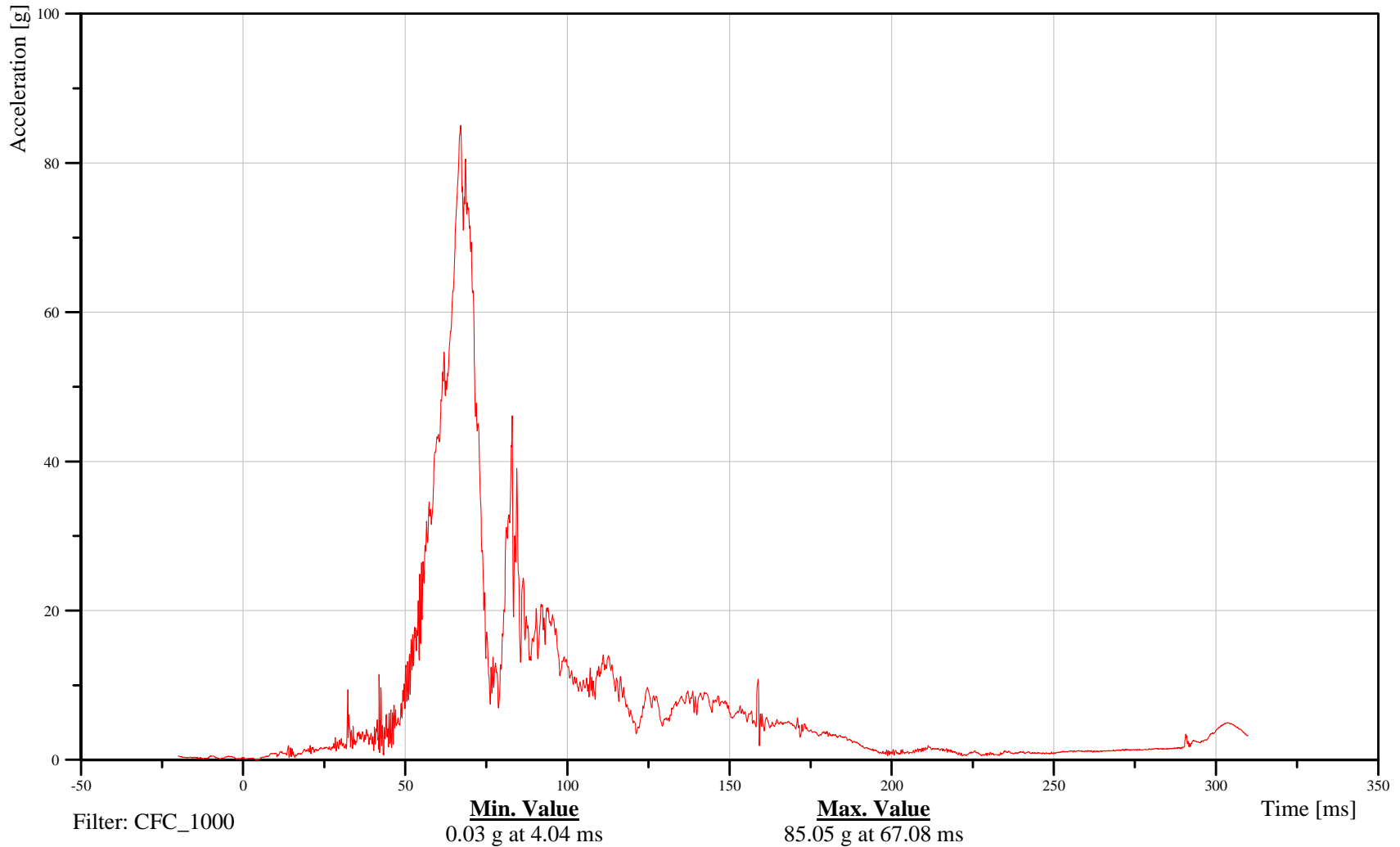
Target Vehicle Passenger Right Foot Resultant Acceleration

Customer: VRTC

23FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-147

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

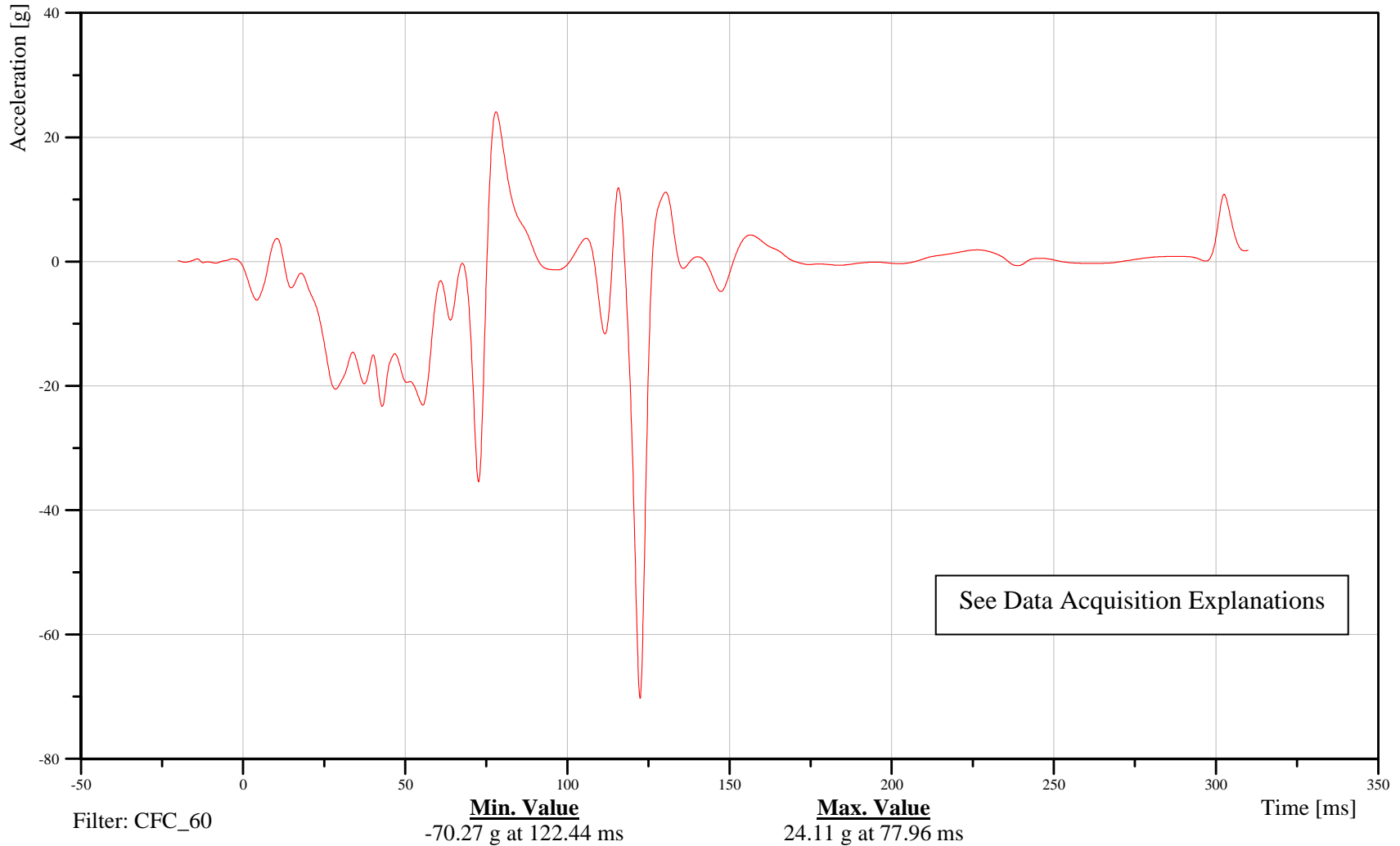
Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

24CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-148

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

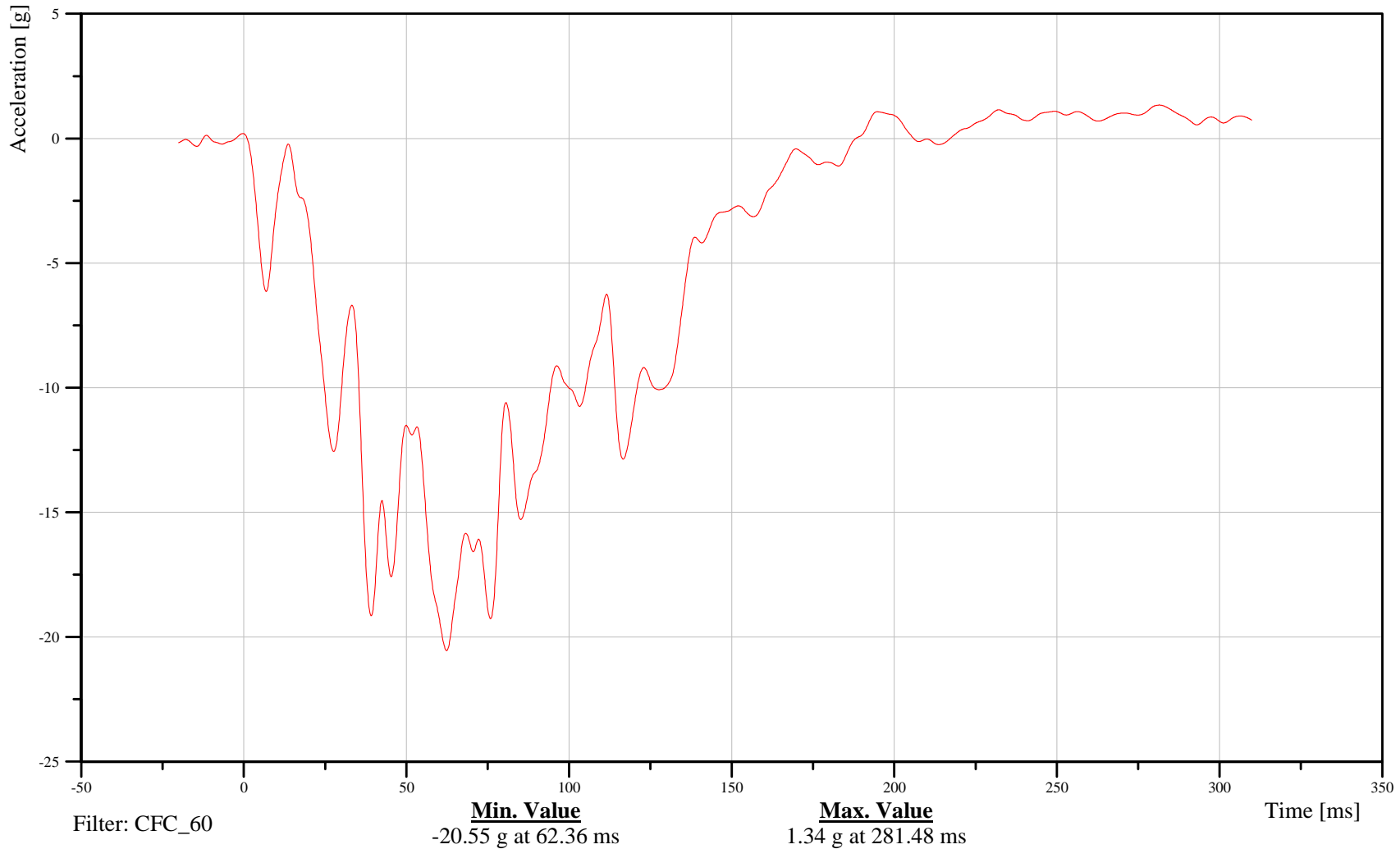
Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

26CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-149

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

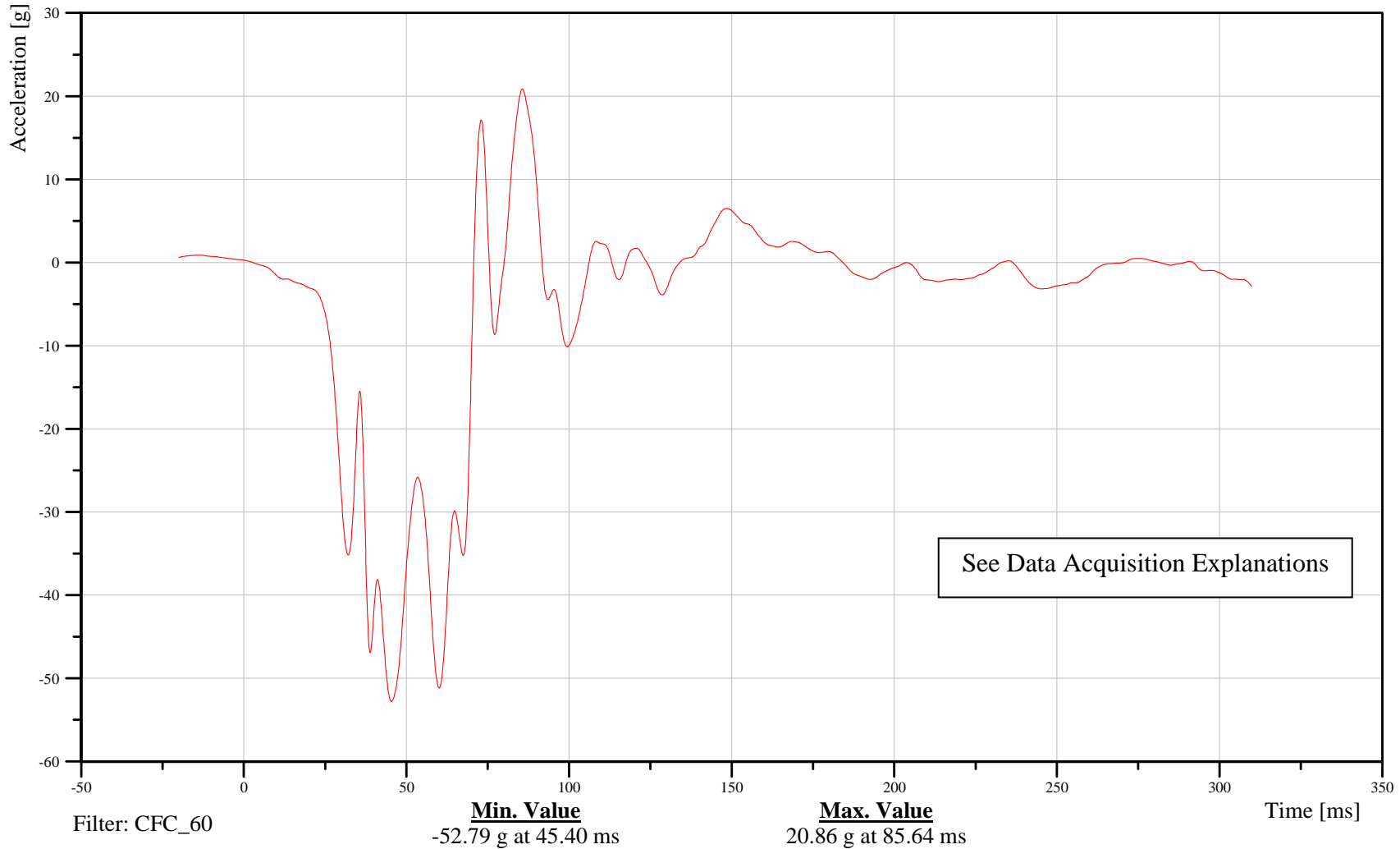
Target Vehicle Top of Engine X-Axis Acceleration

Customer: VRTC

22ENGNTTP0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-150

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

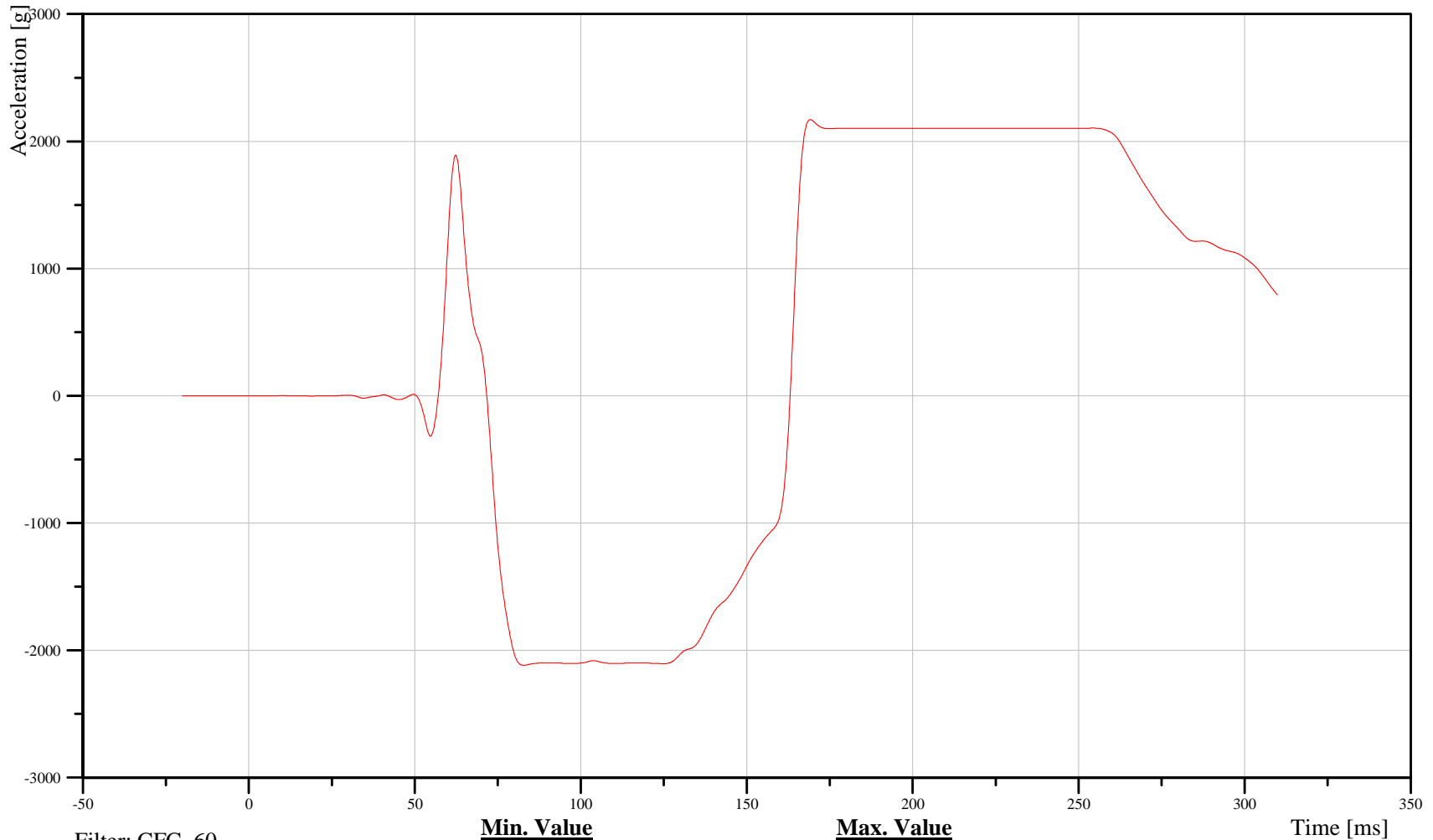
Target Vehicle Bottom of Engine X-Axis Acceleration

Customer: VRTC

22ENGNB00000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-151

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

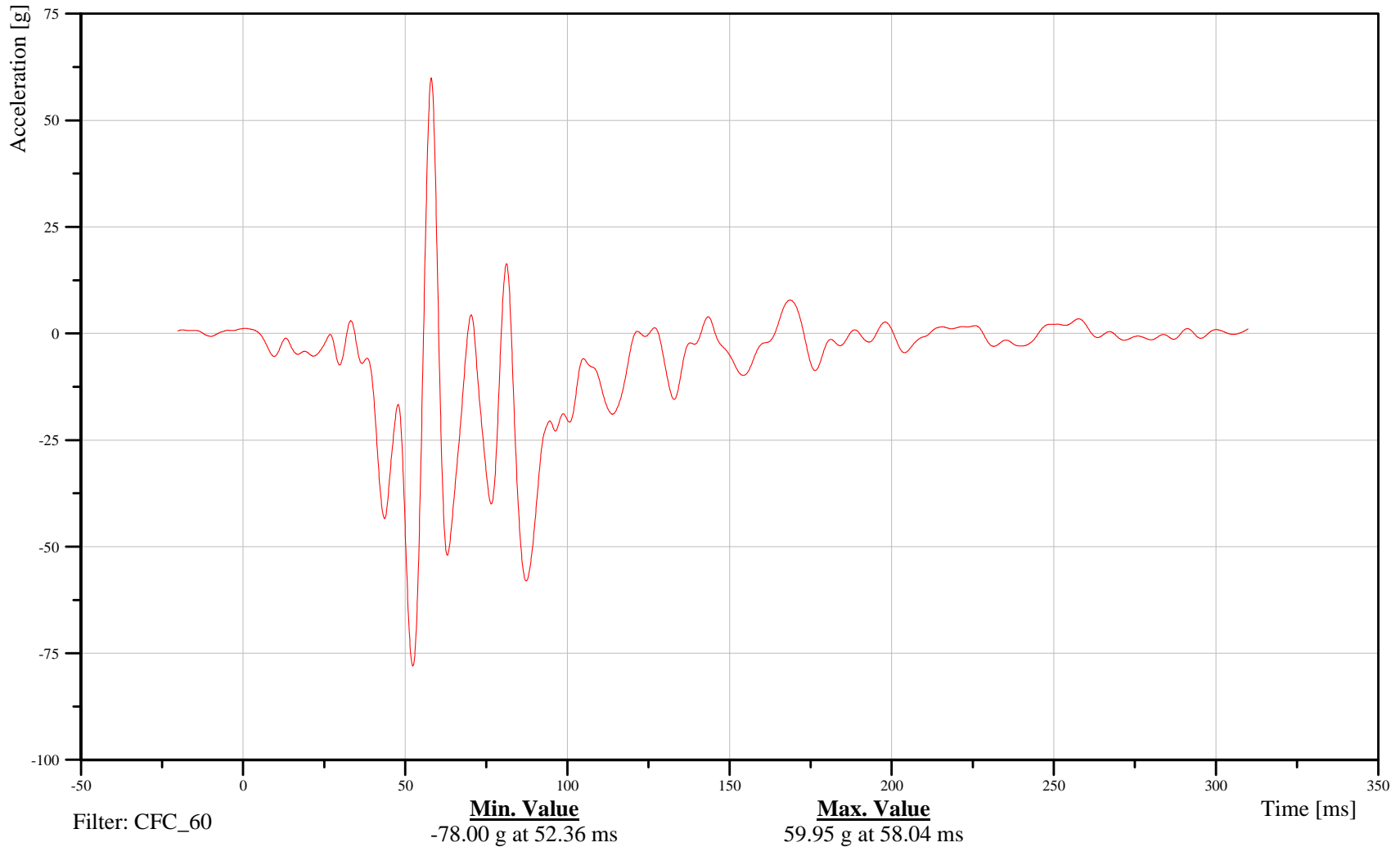
Target Vehicle Right Front Brake Caliper X-Axis Acceleration

Customer: VRTC

23VEHCRI0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-152

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

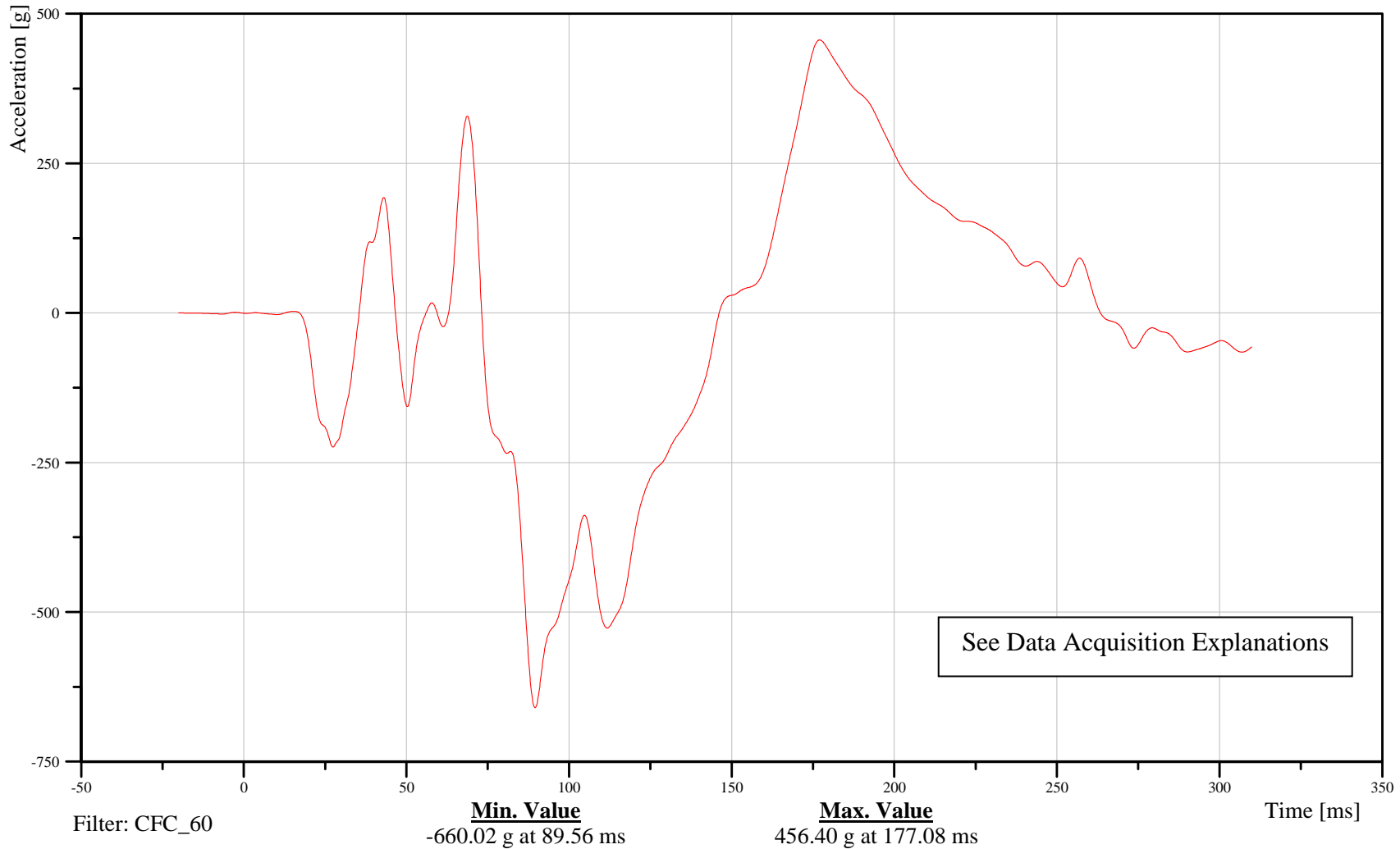
Target Vehicle Left Front Brake Caliper X-Axis Acceleration

Customer: VRTC

21VEHICLE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-153

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

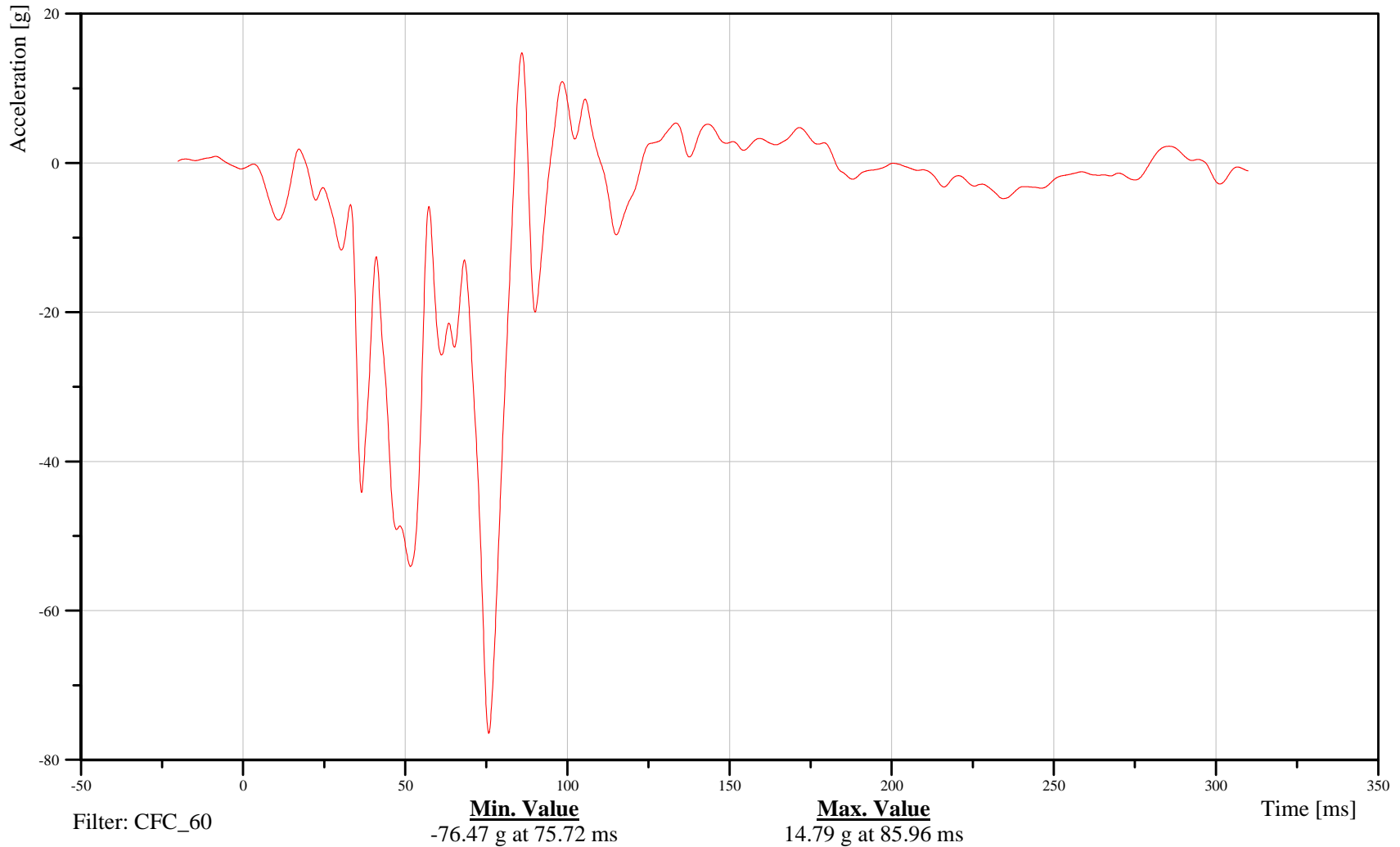
Target Vehicle Dash Center X-Axis Acceleration

Customer: VRTC

22DASH000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-154

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

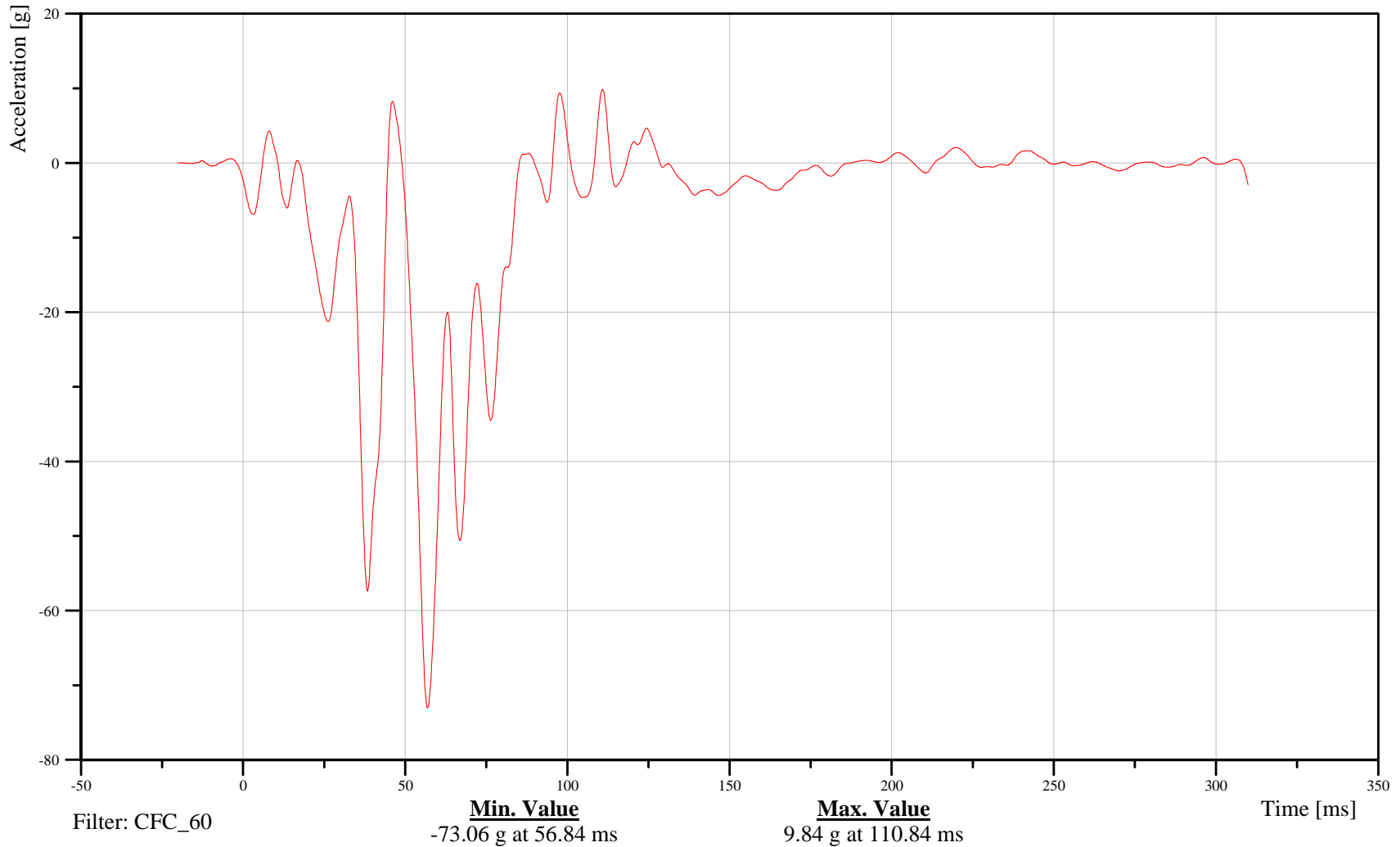
Target Vehicle Toe Pan Accelerator X-Axis Acceleration

Customer: VRTC

21PEAC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-155

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

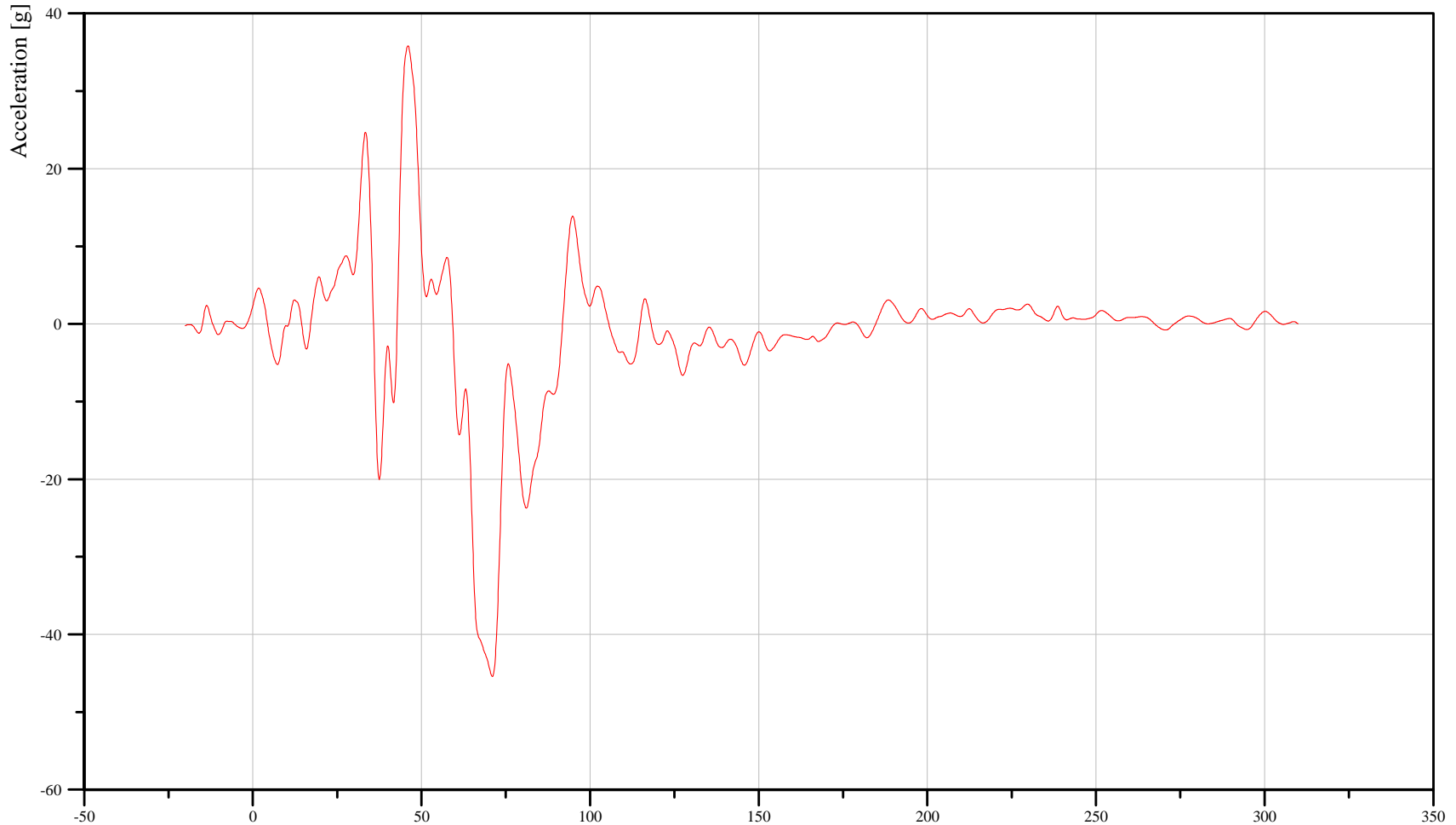
Target Vehicle Toe Pan Accelerator Z-Axis Acceleration

Customer: VRTC

21PEAC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



Filter: CFC_60

Min. Value
-45.41 g at 71.00 ms

Max. Value
35.83 g at 46.04 ms

Time [ms]

B-156

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

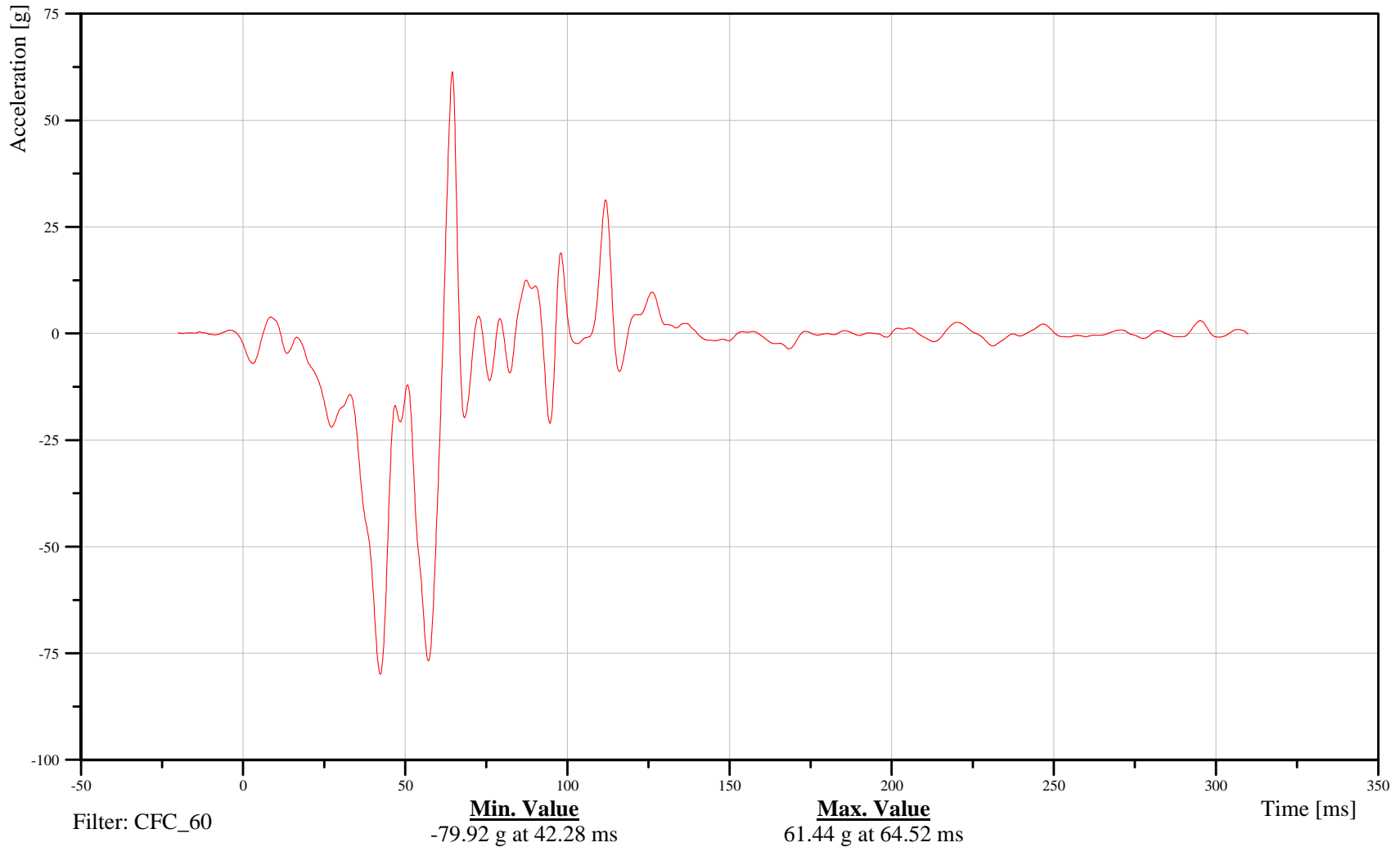
Target Vehicle Toe Pan Footrest X-Axis Acceleration

Customer: VRTC

21VEHC000001ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-157

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

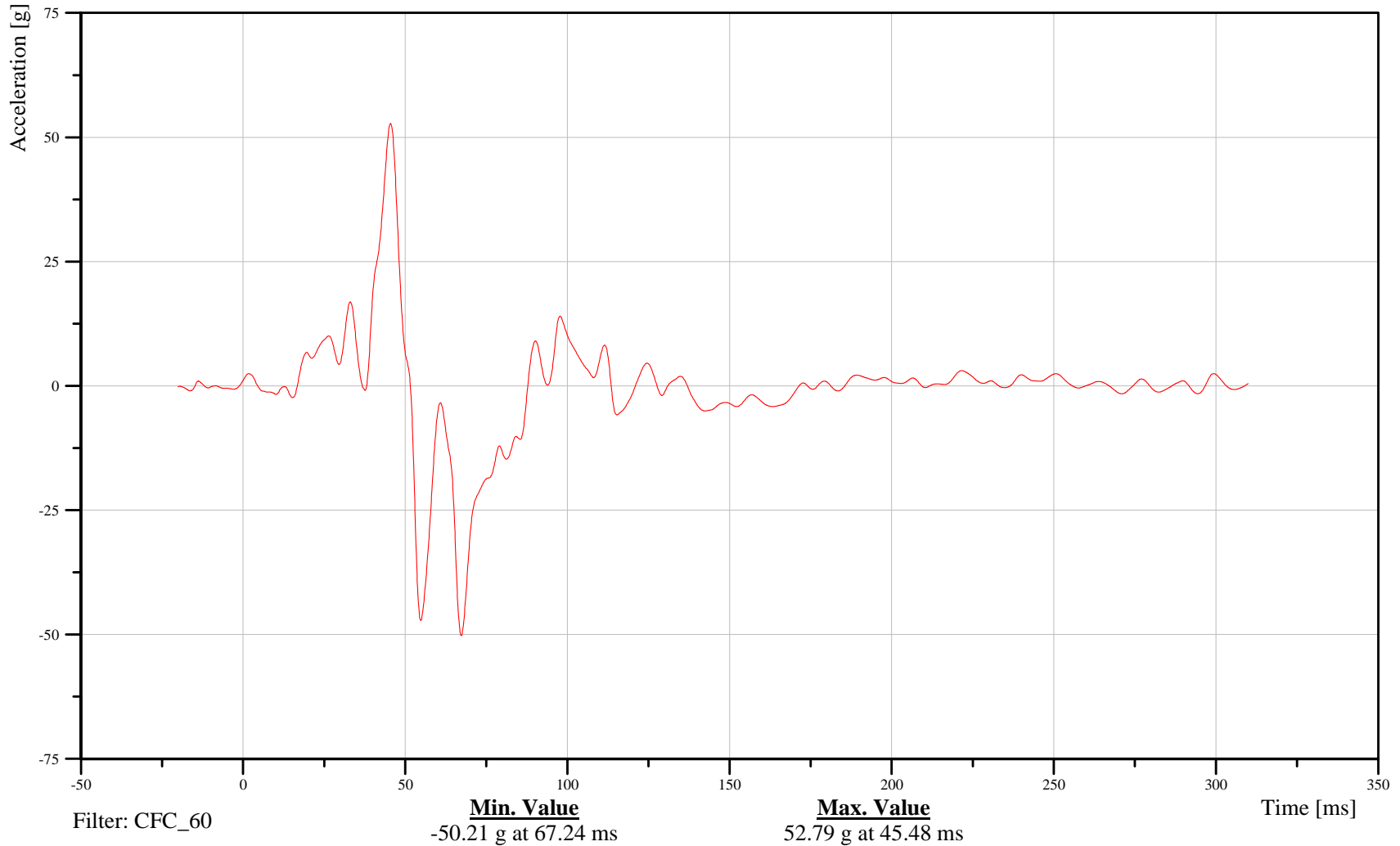
Target Vehicle Toe Pan Footrest Z-Axis Acceleration

Customer: VRTC

21VEHC000001ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-158

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

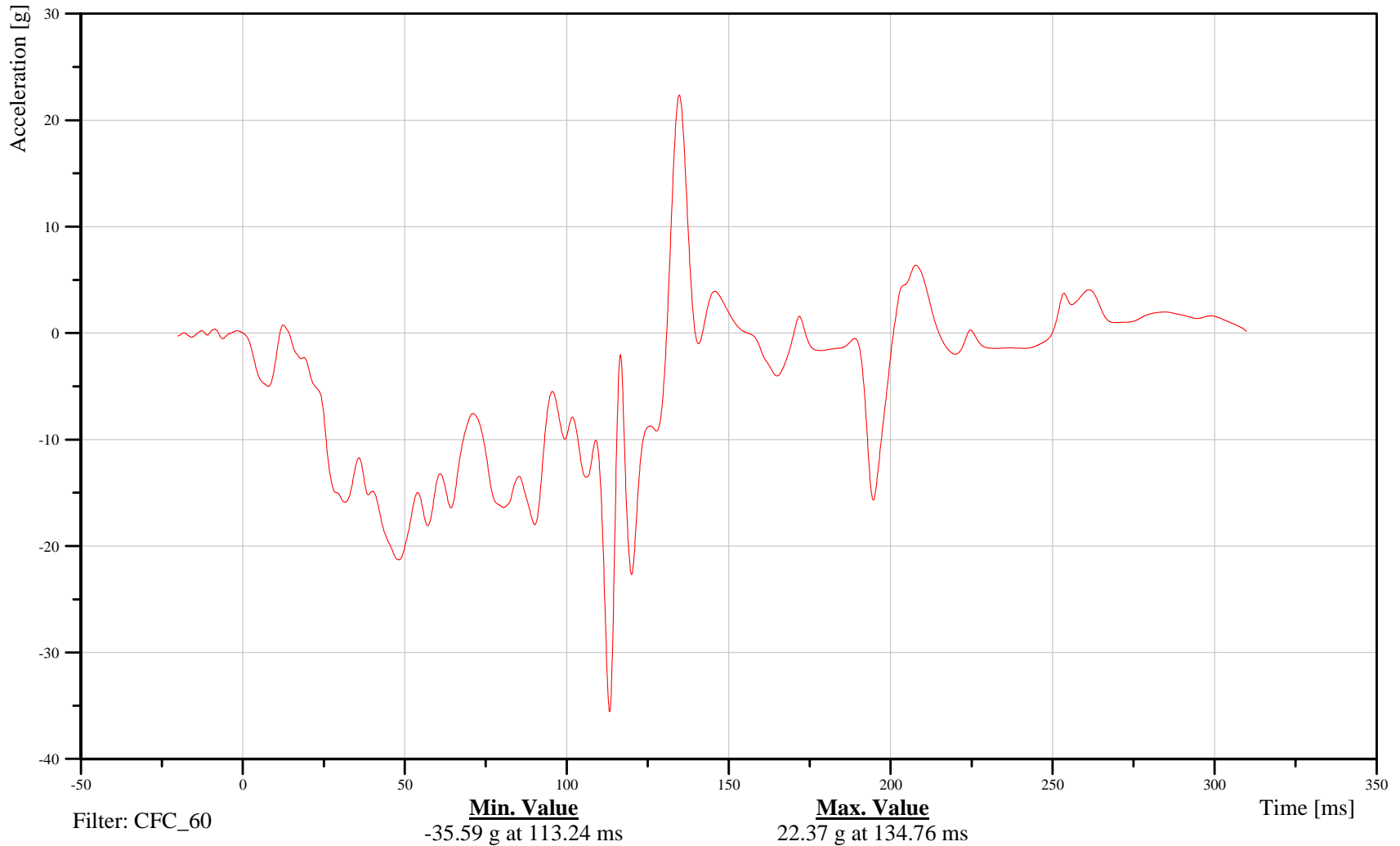
Target Vehicle Rear Tunnel Center X-Axis Acceleration

Customer: VRTC

25TUNNCY0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-159

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

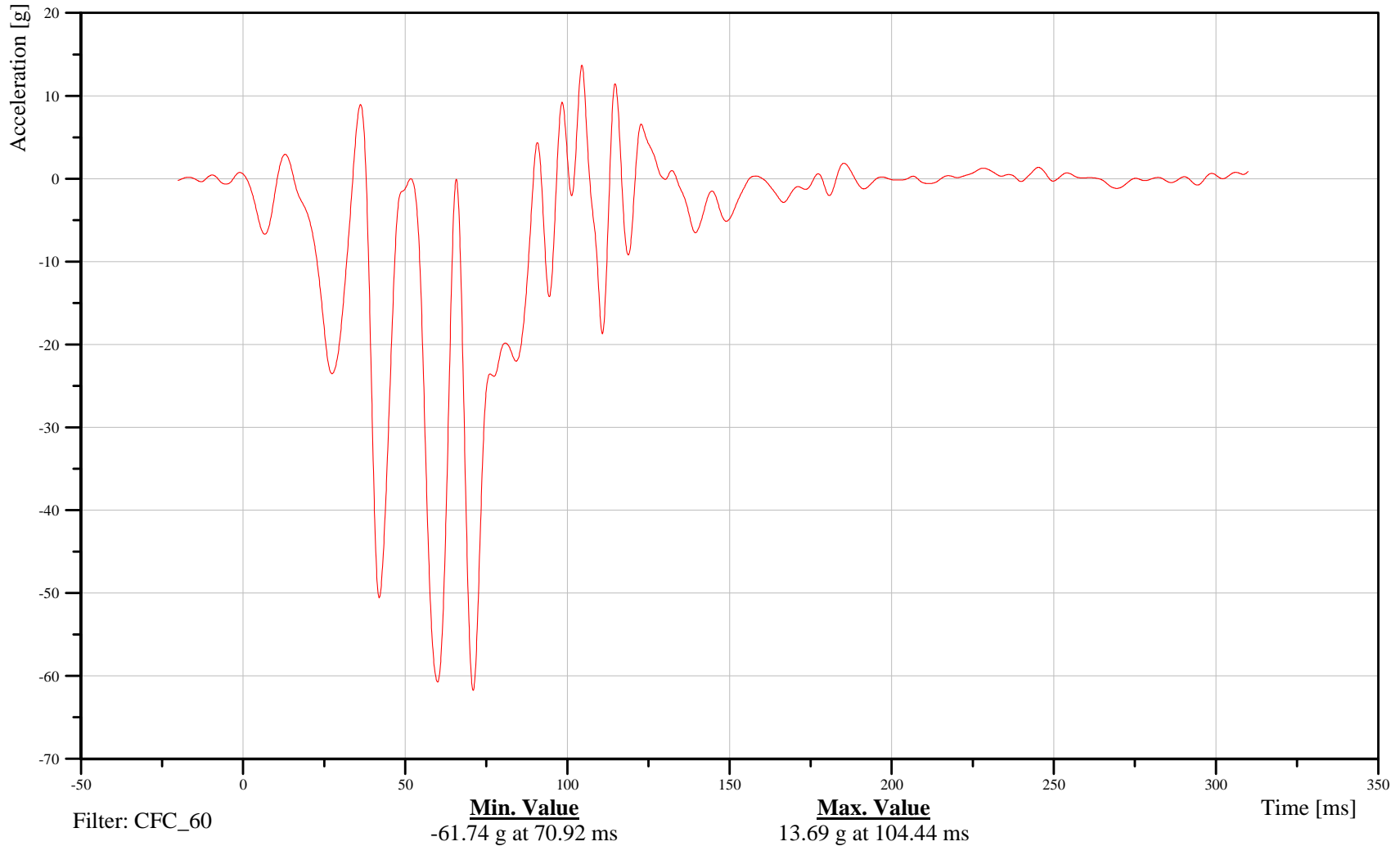
Target Vehicle CG X-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-160

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

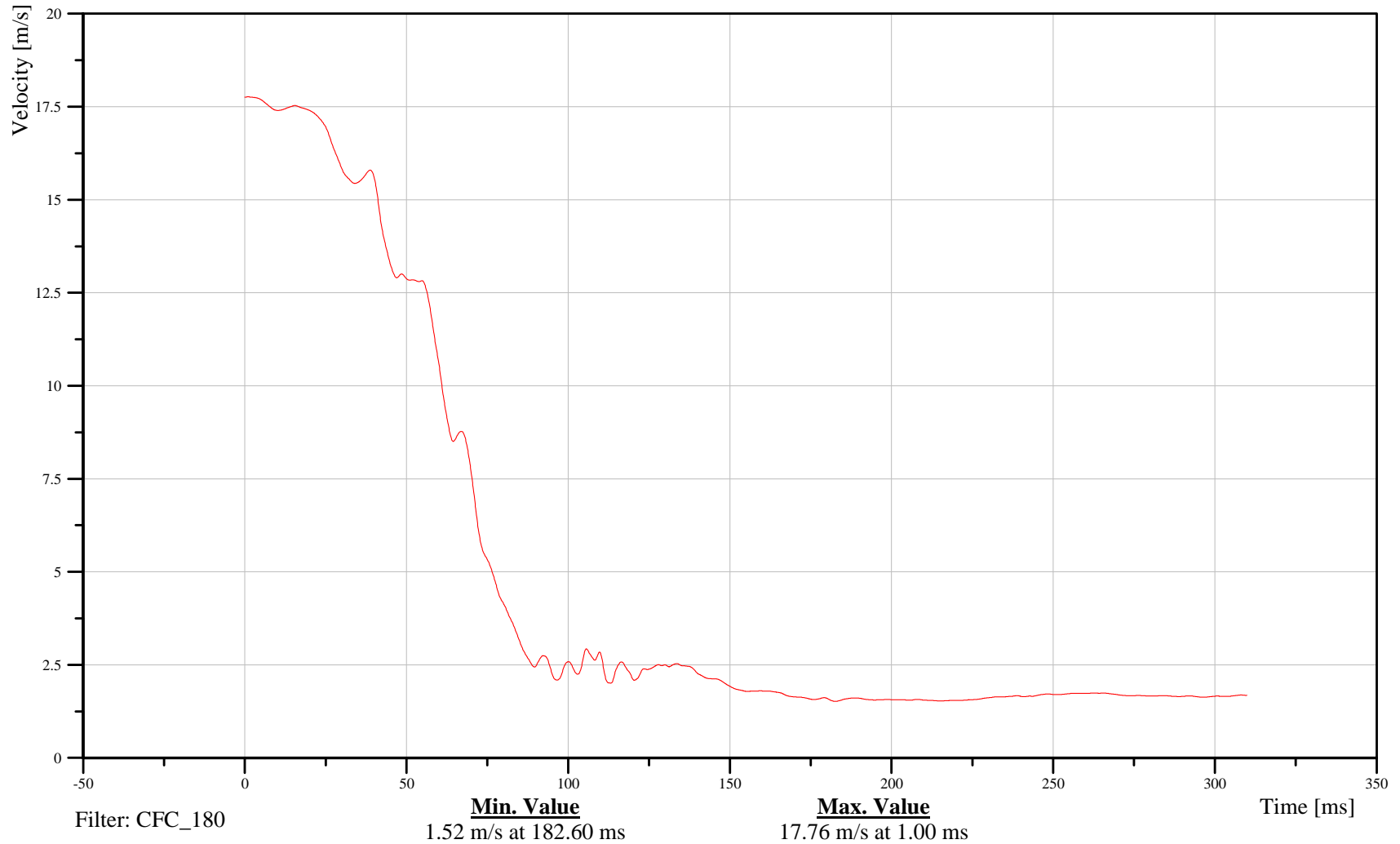
Target Vehicle CG X-Axis Velocity

Customer: VRTC

20VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-161

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

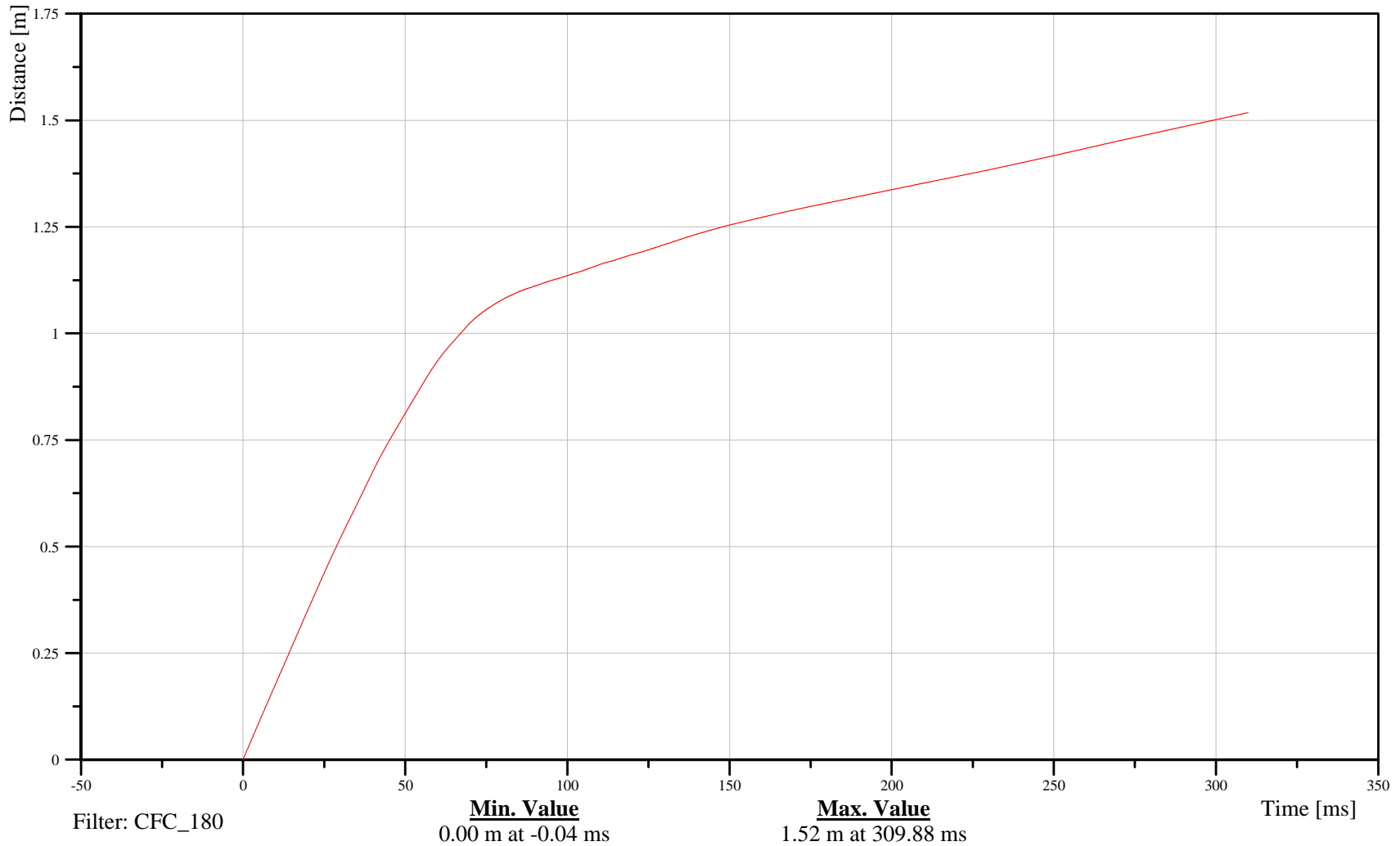
Target Vehicle CG X-Axis Displacement

Customer: VRTC

20VEHCCG0000DCXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-162

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

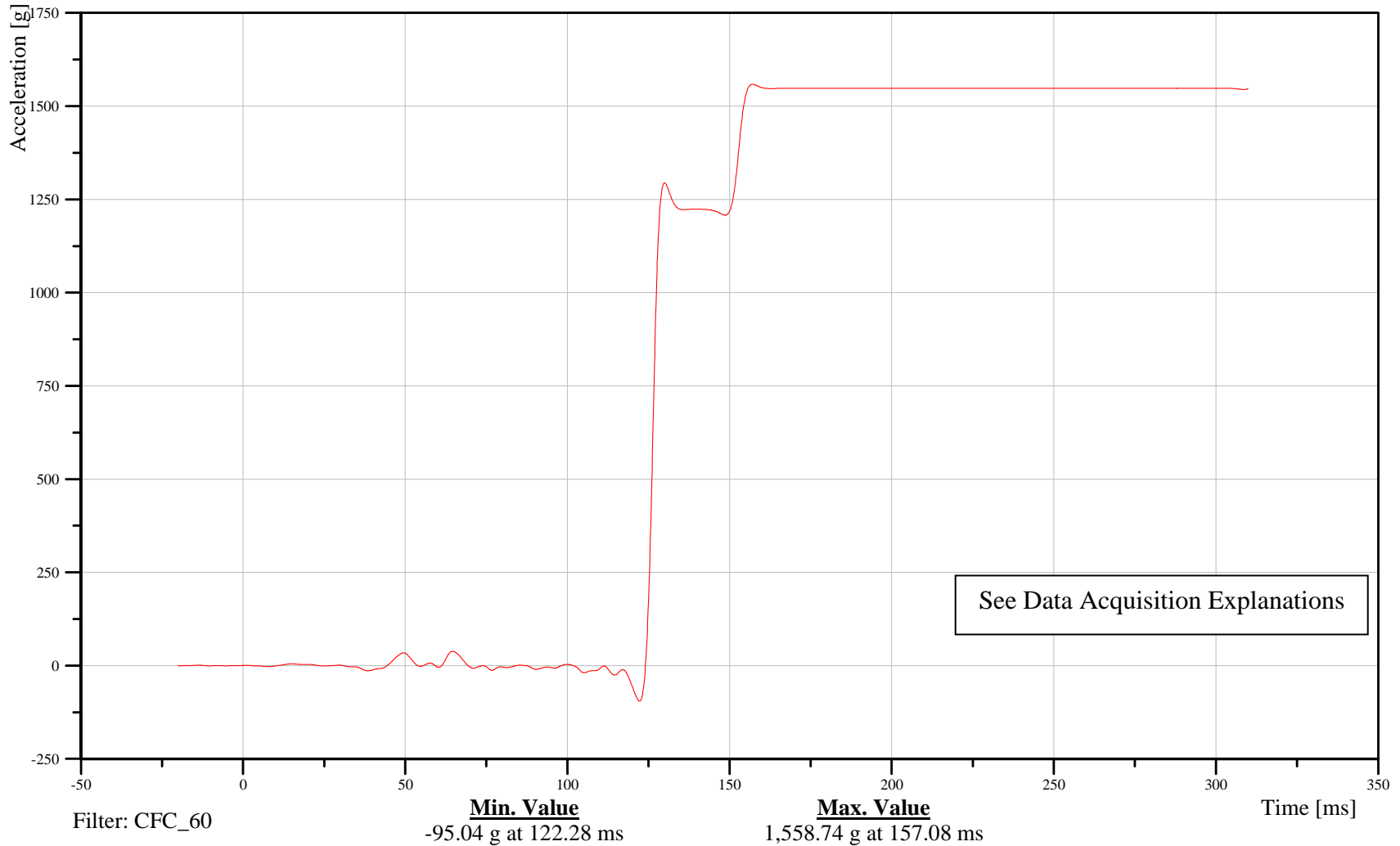
Target Vehicle CG Y-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-163

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

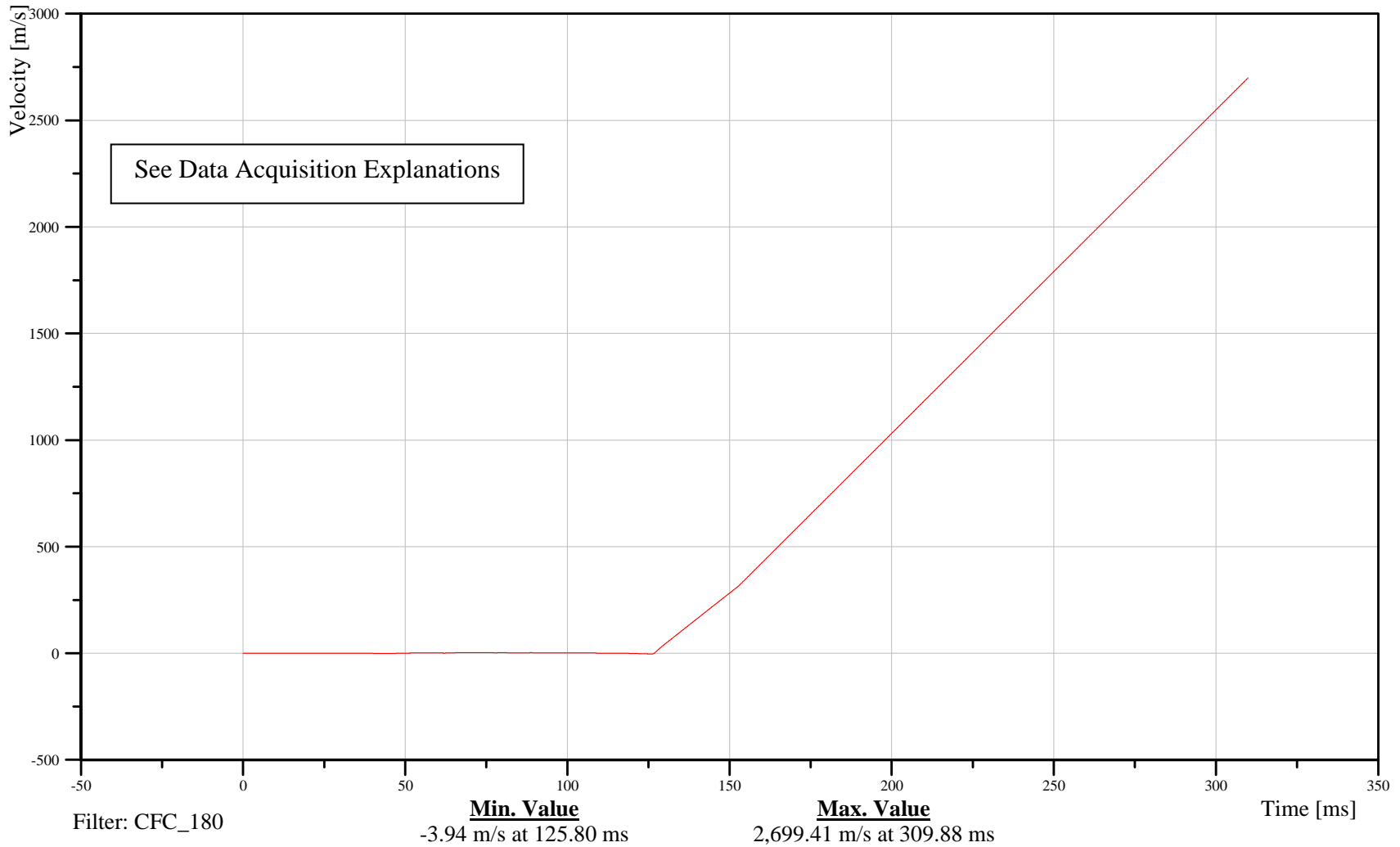
Target Vehicle CG Y-Axis Velocity

Customer: VRTC

20VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-164

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

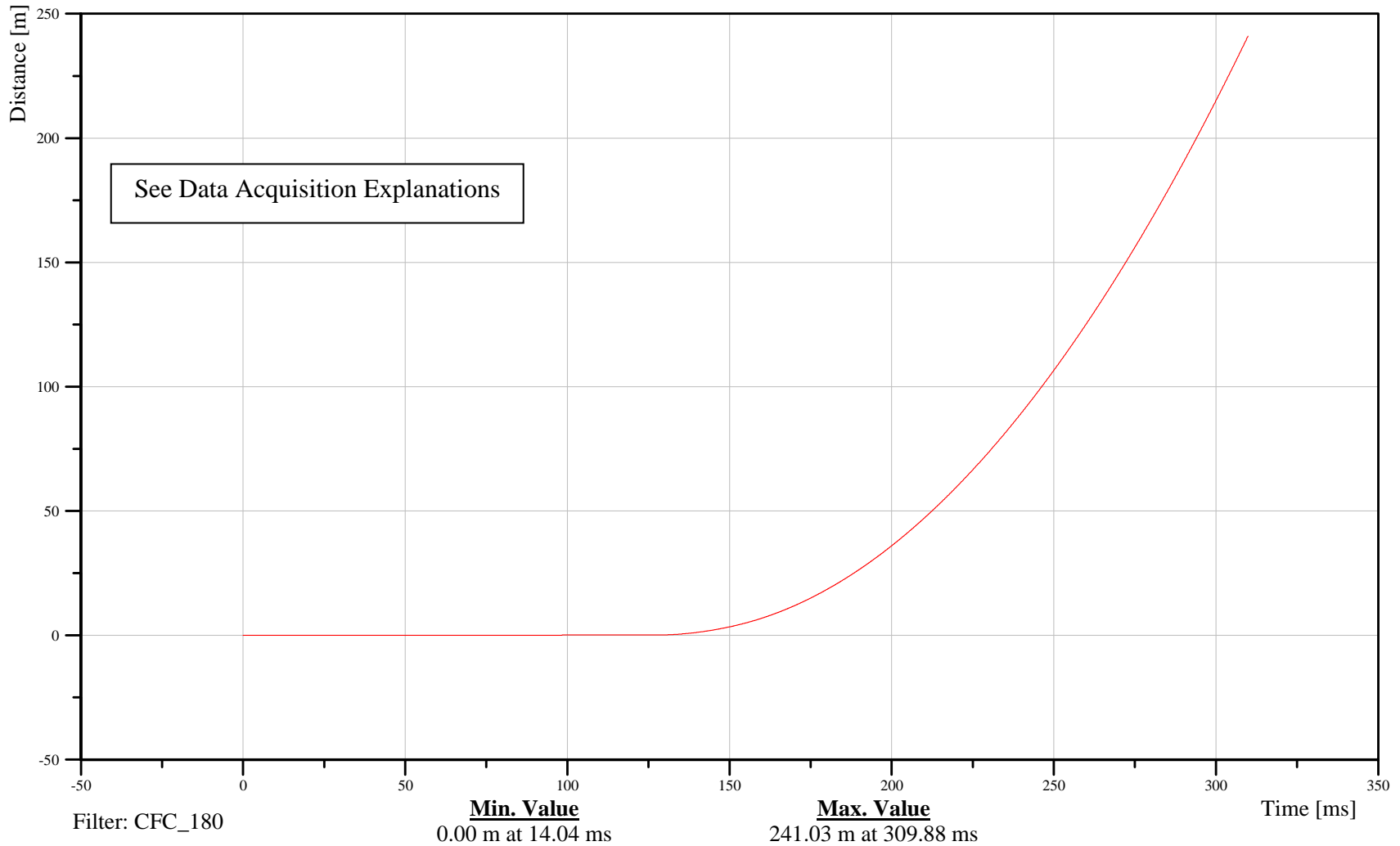
Target Vehicle CG Y-Axis Displacement

Customer: VRTC

20VEHCCG0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-165

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

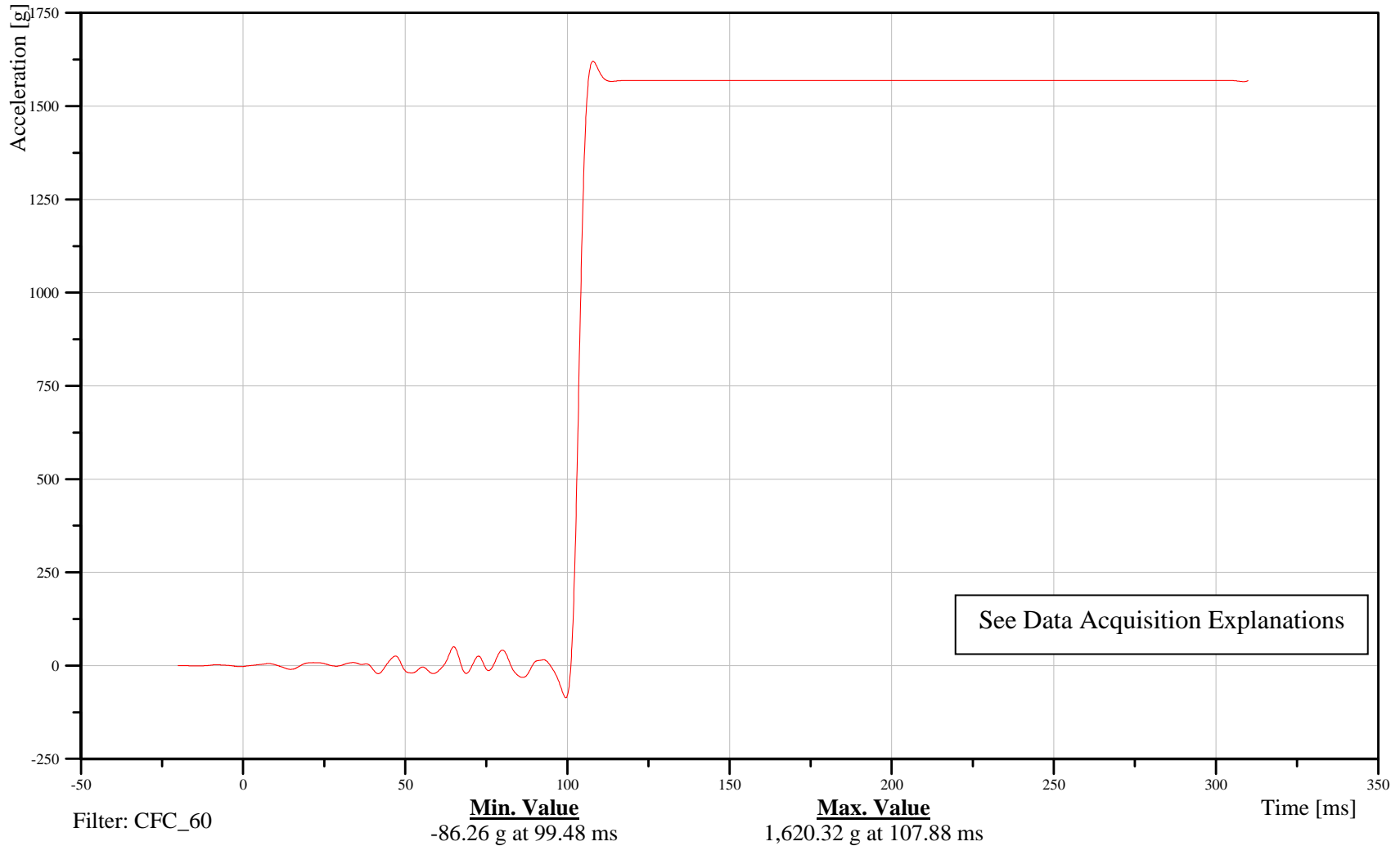
Target Vehicle CG Z-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-166

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

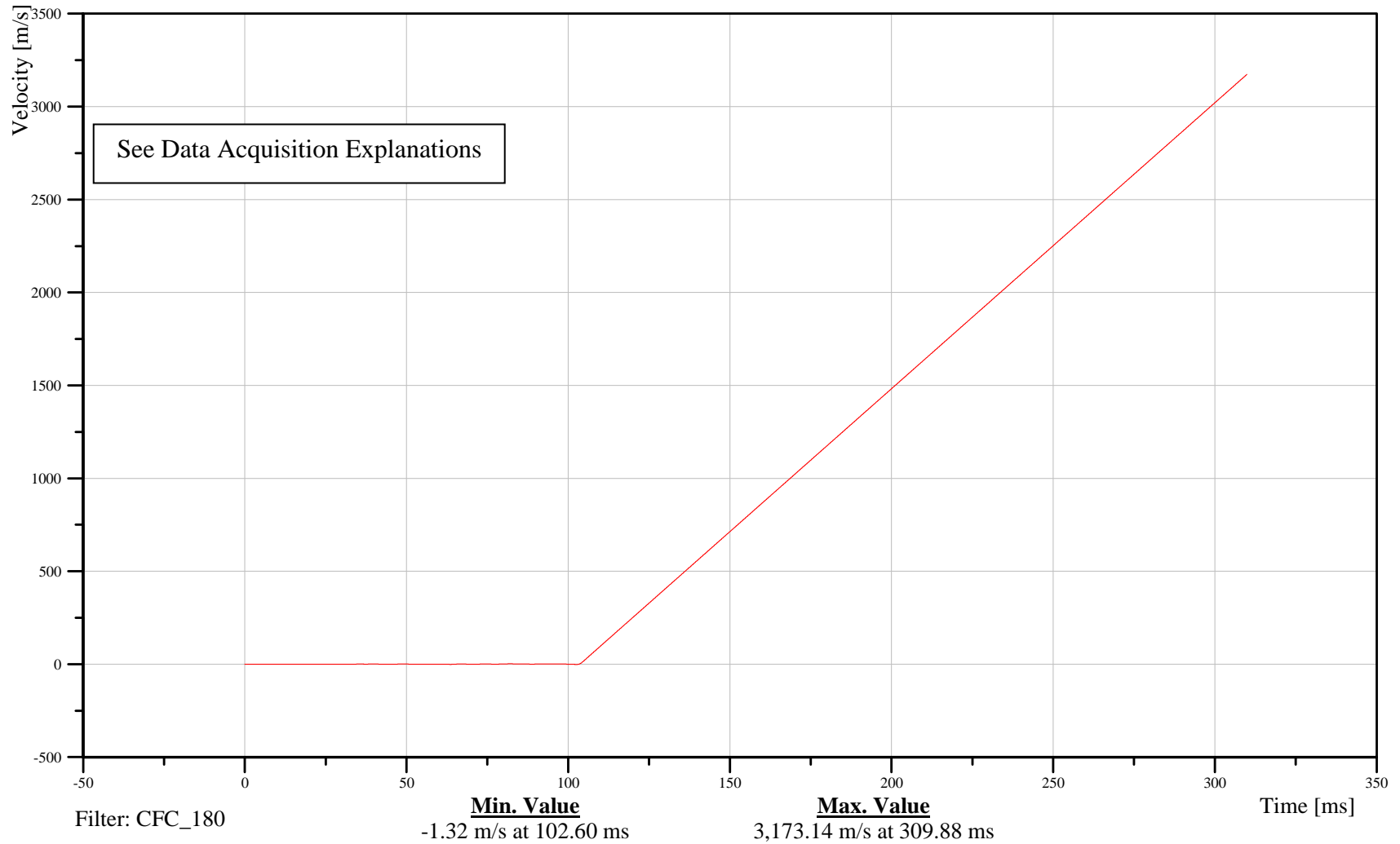
Target Vehicle CG Z-Axis Velocity

Customer: VRTC

20VEHCCG0000VEZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-167

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

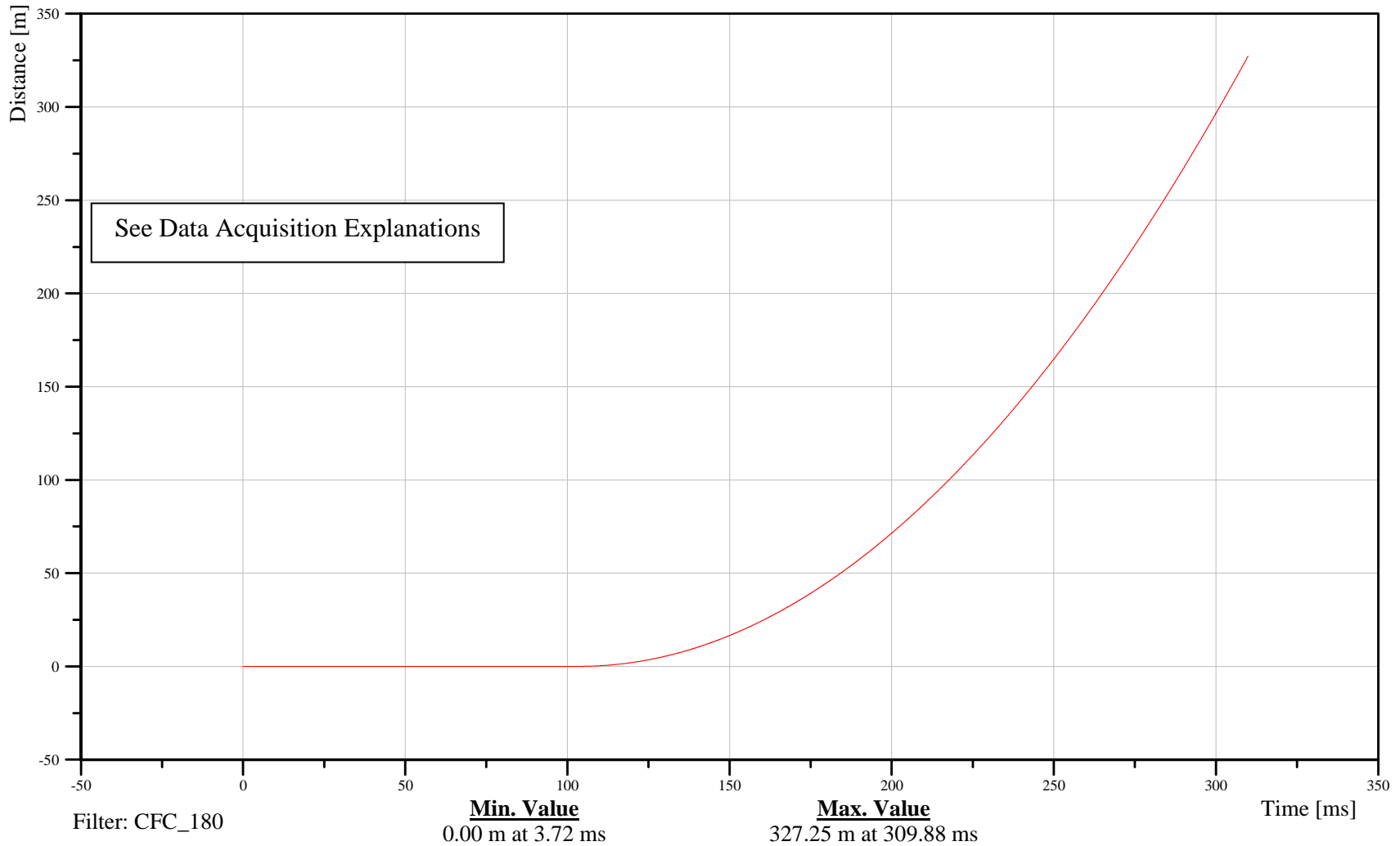
Target Vehicle CG Z-Axis Displacement

Customer: VRTC

20VEHCCG0000DCZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-168

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

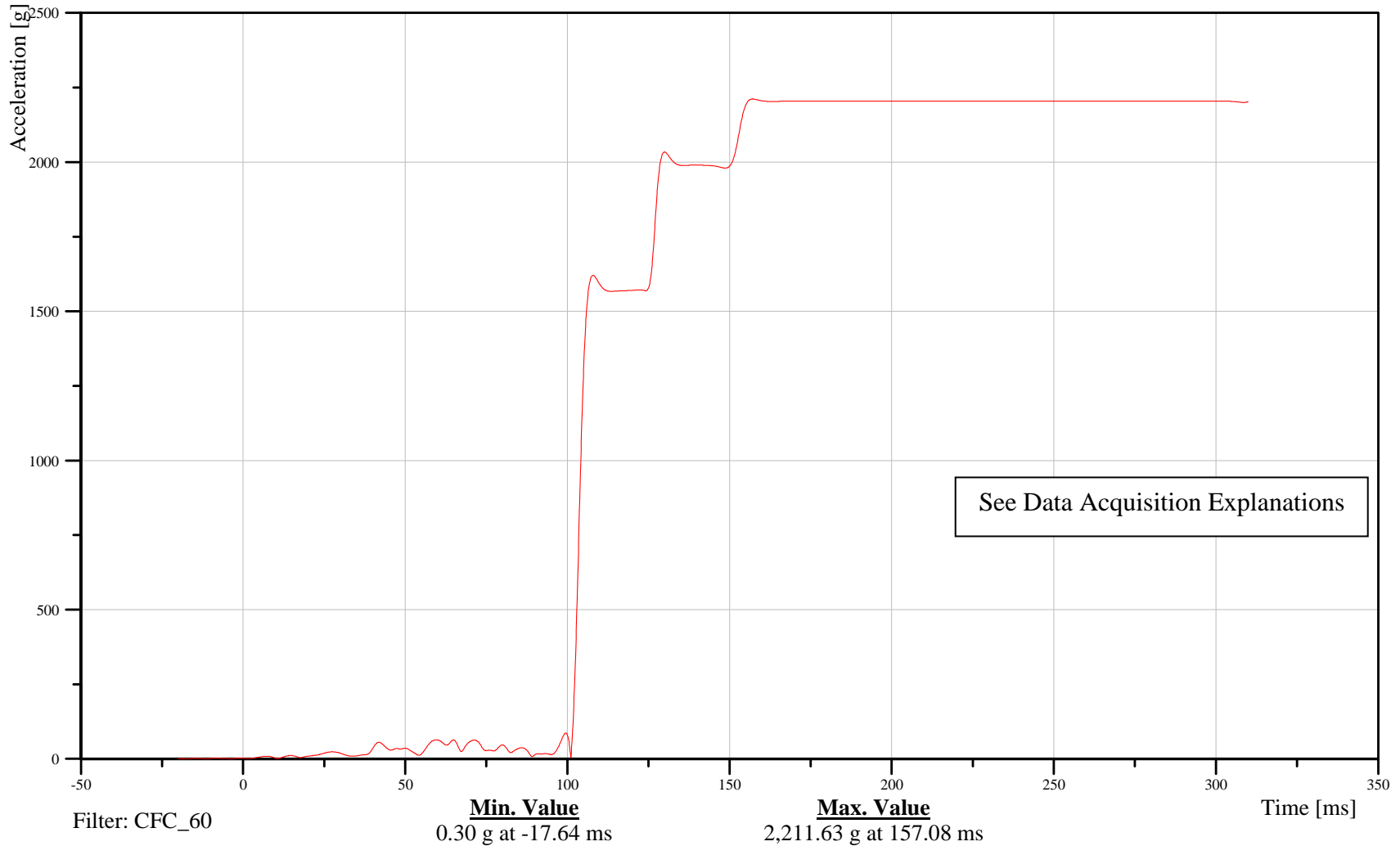
Target Vehicle CG Resultant Acceleration

Customer: VRTC

20VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-169

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

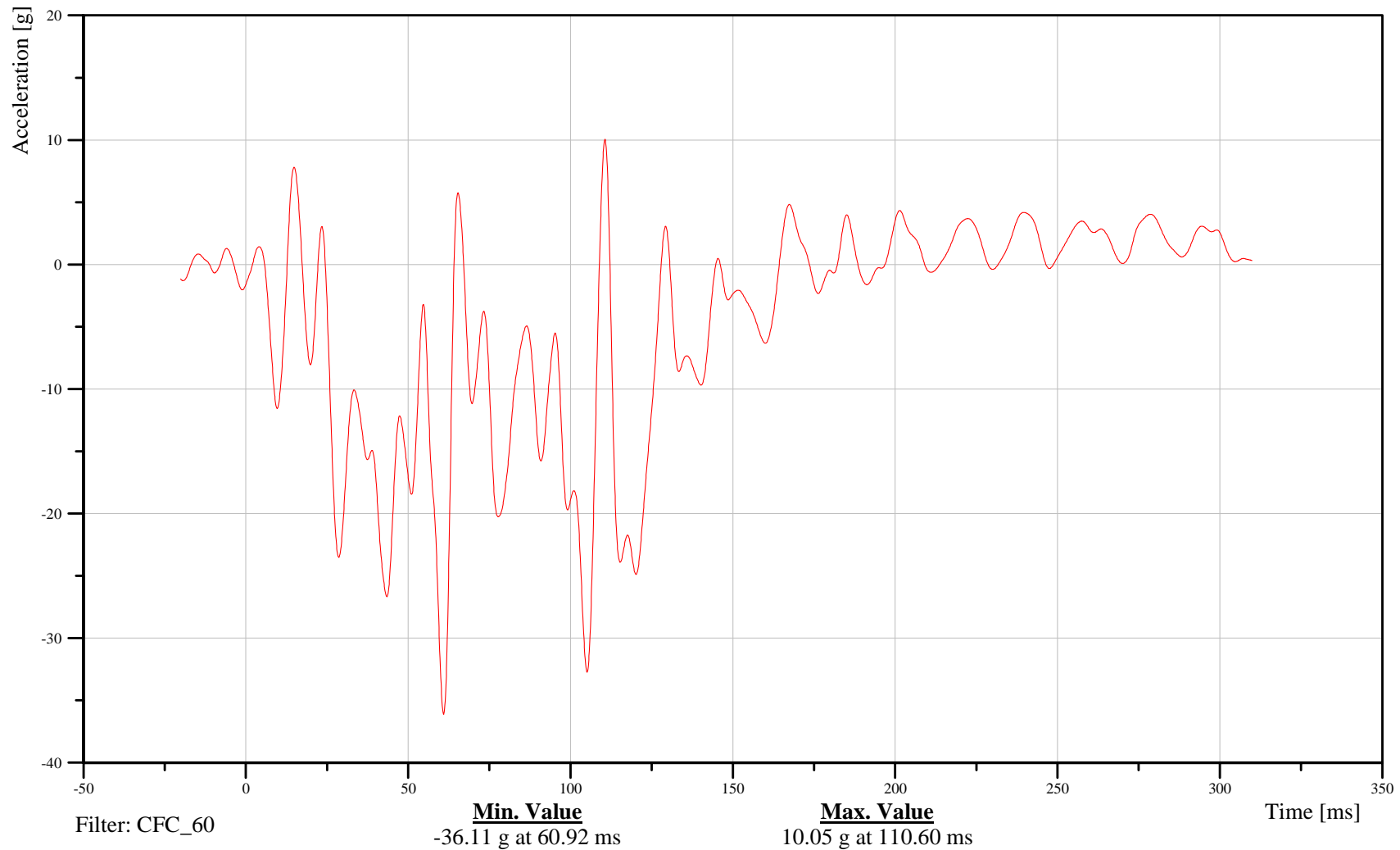
Target Vehicle Rear Deck X-Axis Acceleration

Customer: VRTC

28VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-170

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

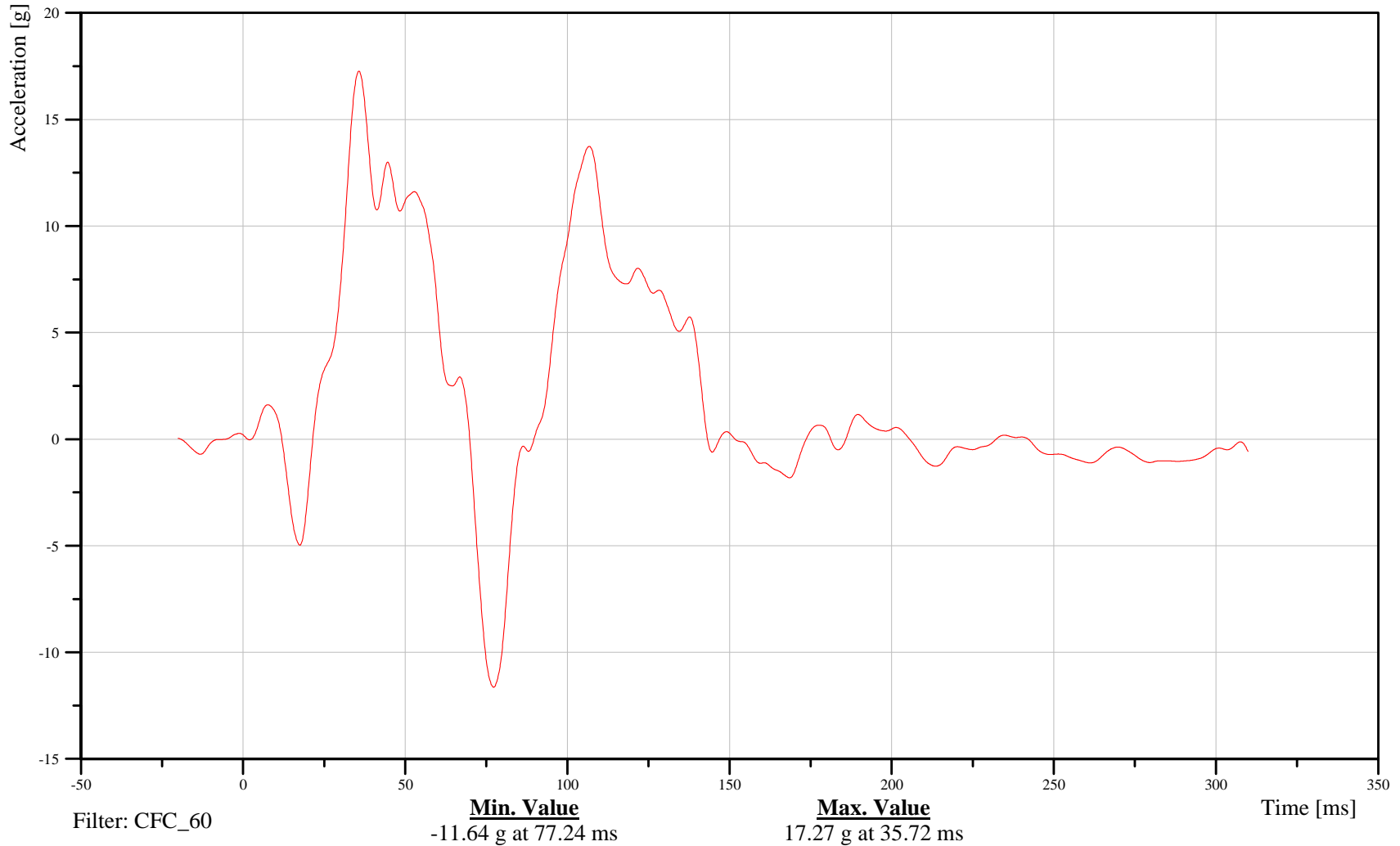
Target Vehicle Rear Deck Y-Axis Acceleration

Customer: VRTC

28VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-171

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

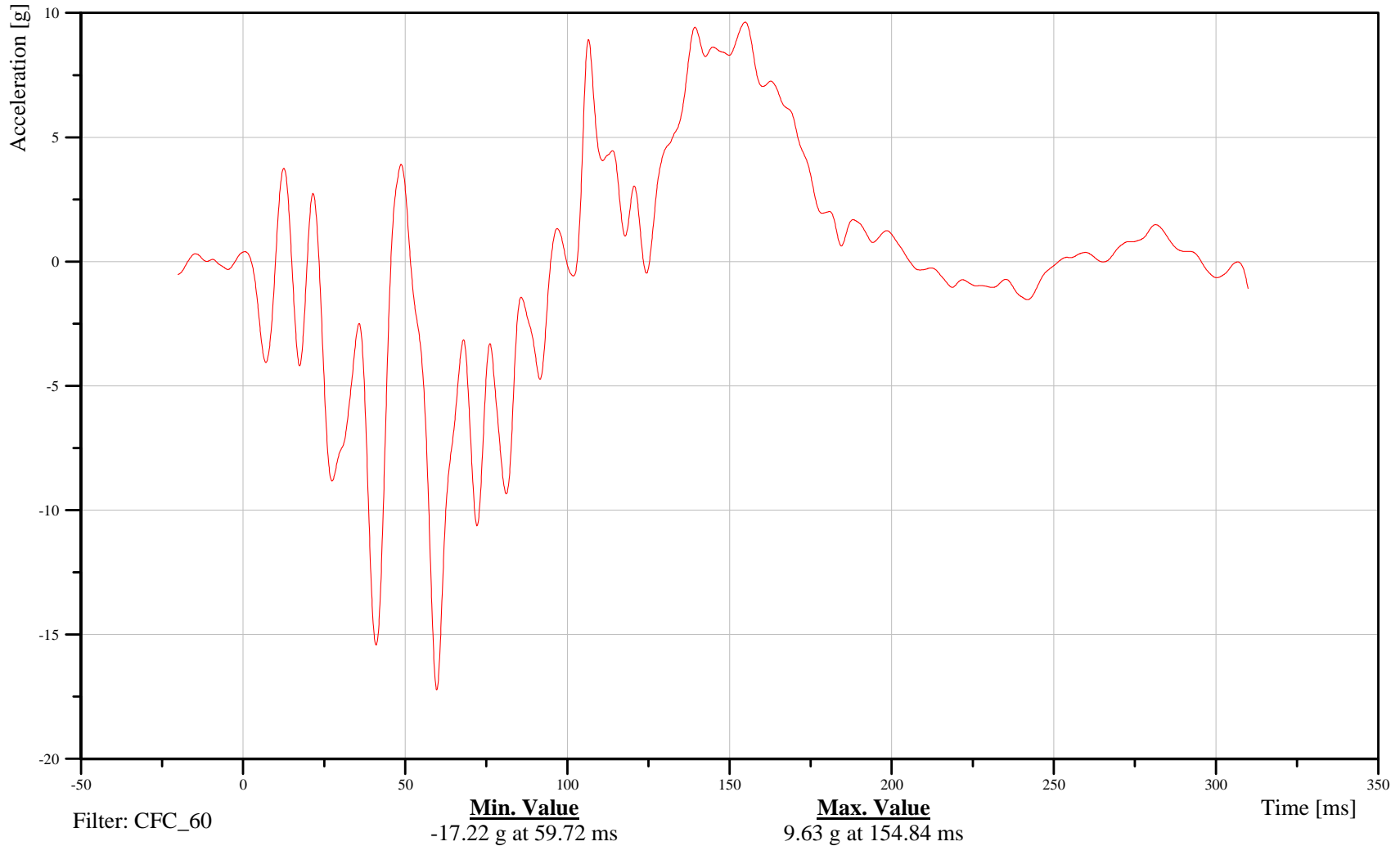
Target Vehicle Rear Deck Z-Axis Acceleration

Customer: VRTC

28VEHC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-172

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

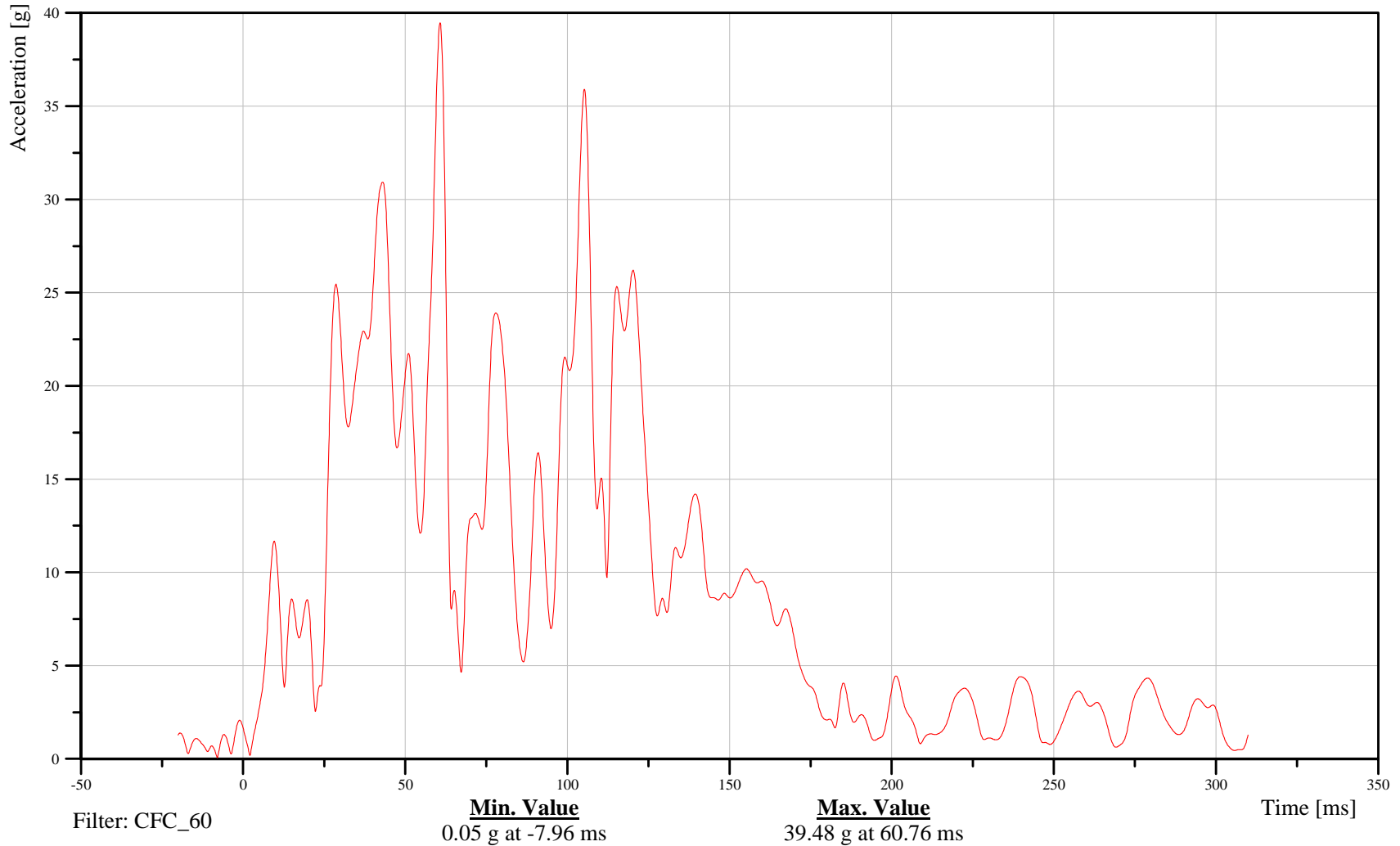
Target Vehicle Rear Deck Resultant Acceleration

Customer: VRTC

28VEHC000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-173

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

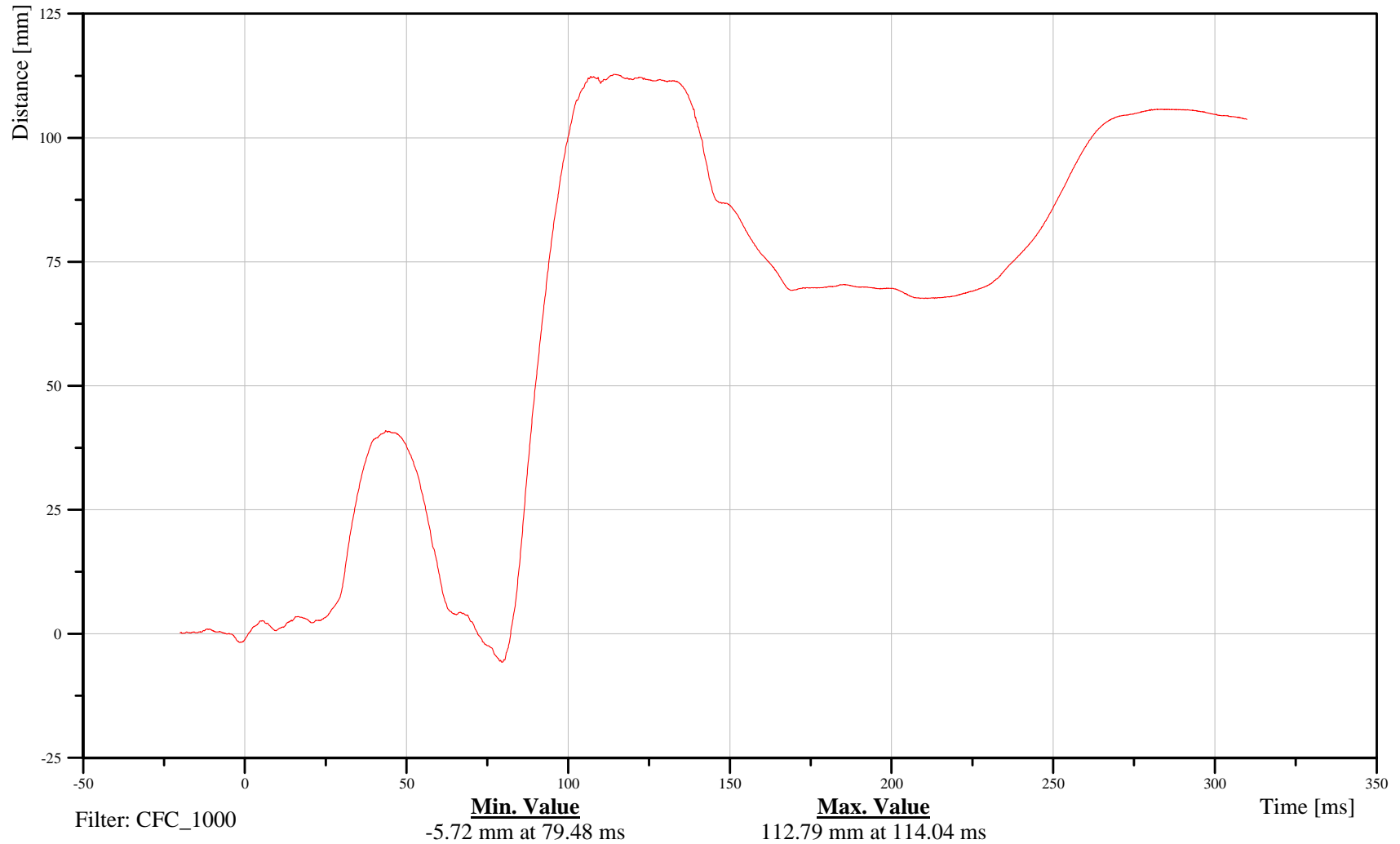
Target Vehicle Driver Lap Belt Spool

Customer: VRTC

21SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-174

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

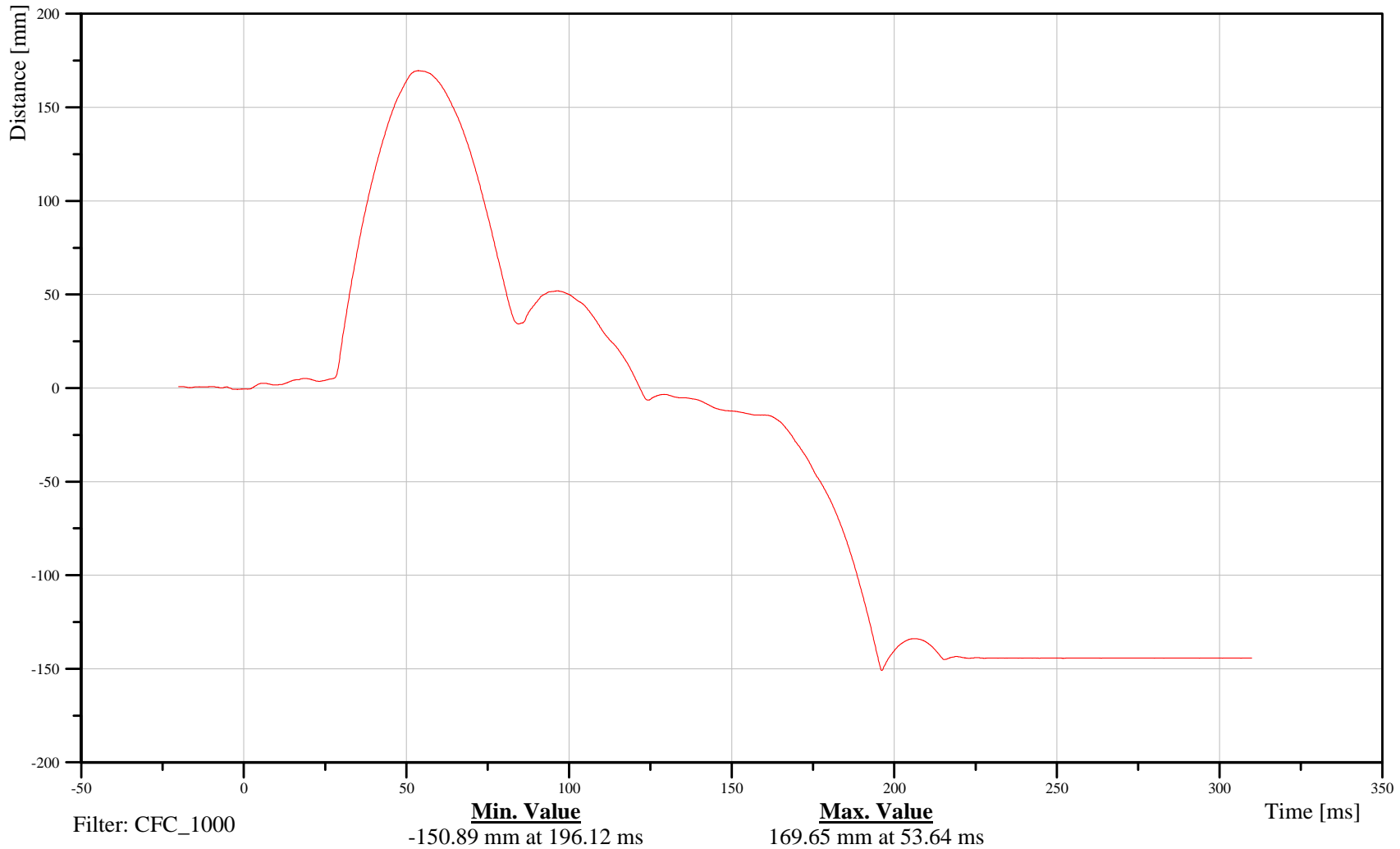
Target Vehicle Driver Shoulder Belt Spool and Retraction

Customer: VRTC

21SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-175

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

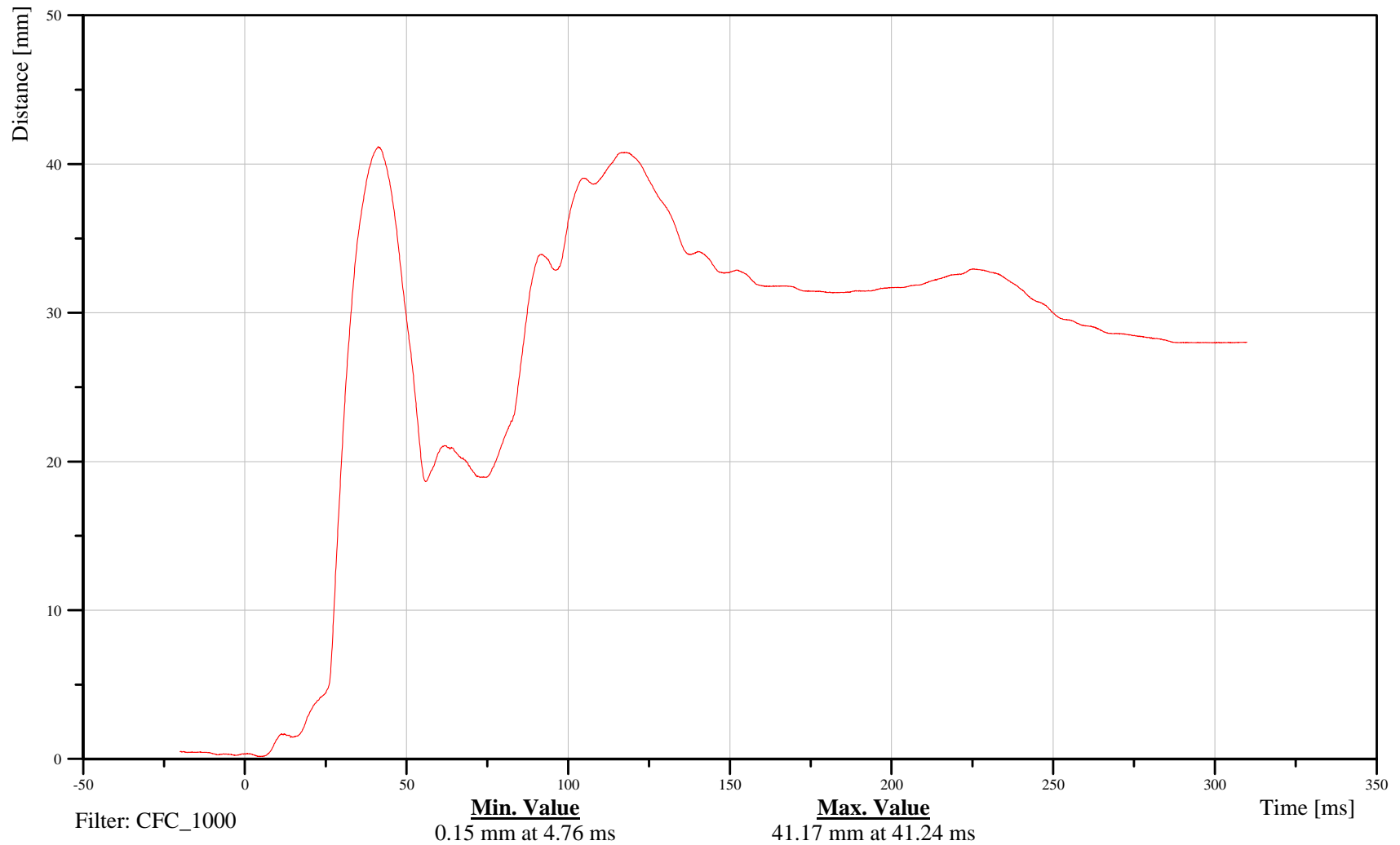
Target Vehicle Passenger Lap Belt Spool

Customer: VRTC

23SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-176

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

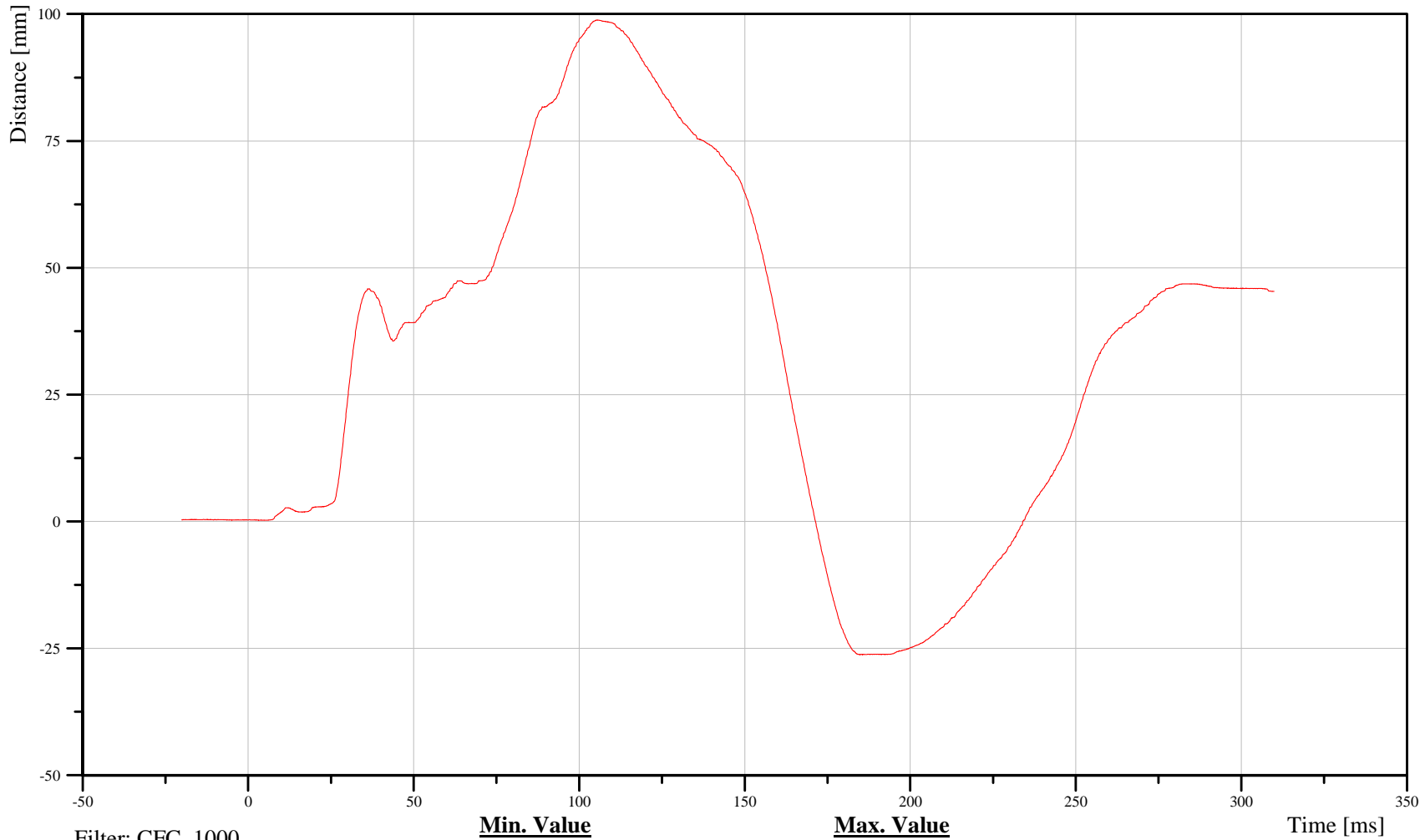
Target Vehicle Passenger Shoulder Belt Spool and Retraction

Customer: VRTC

23SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-177

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

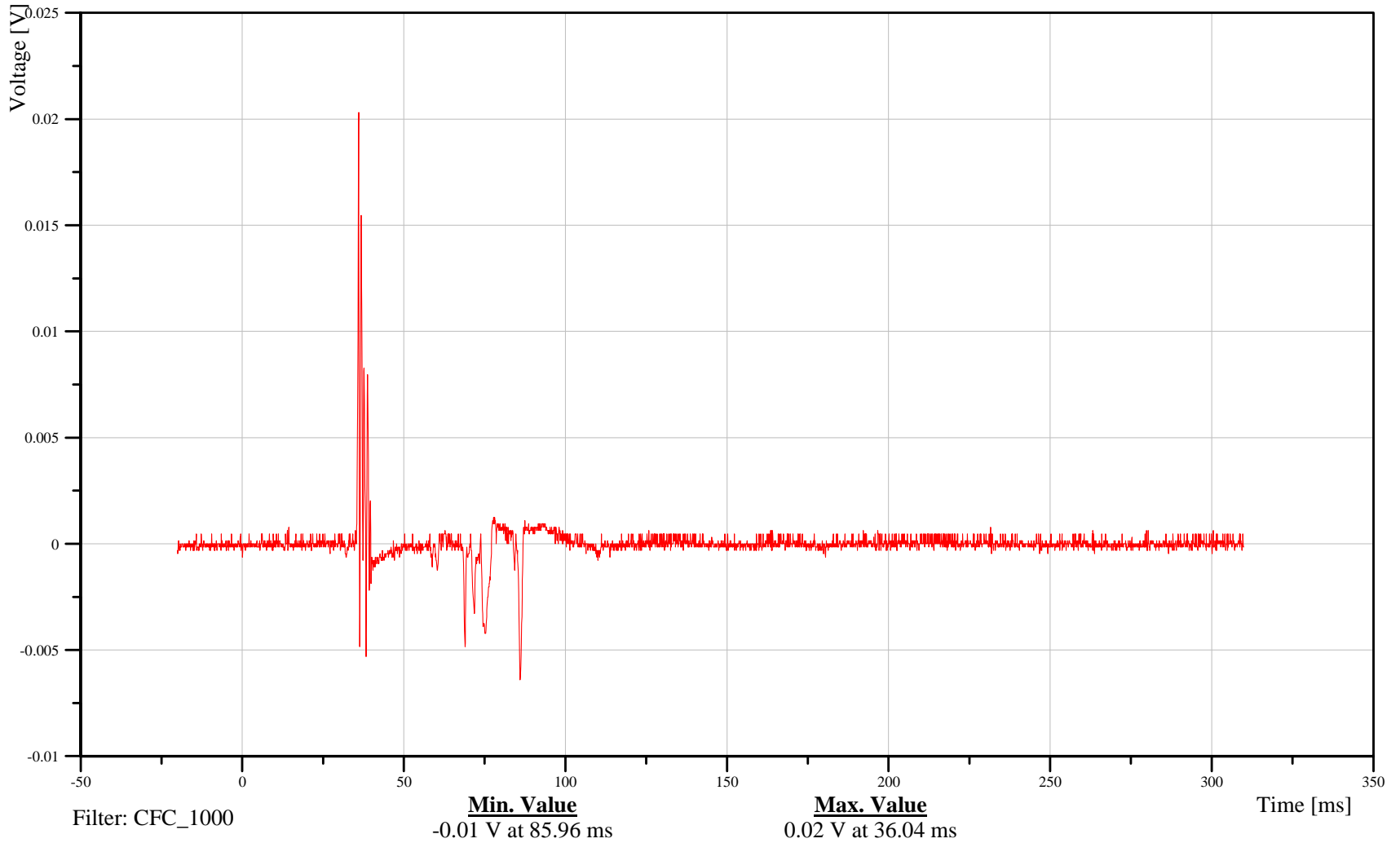
Target Vehicle Driver Front Airbag 1 Inductor

Customer: VRTC

21AIRBFR0100EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-178

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

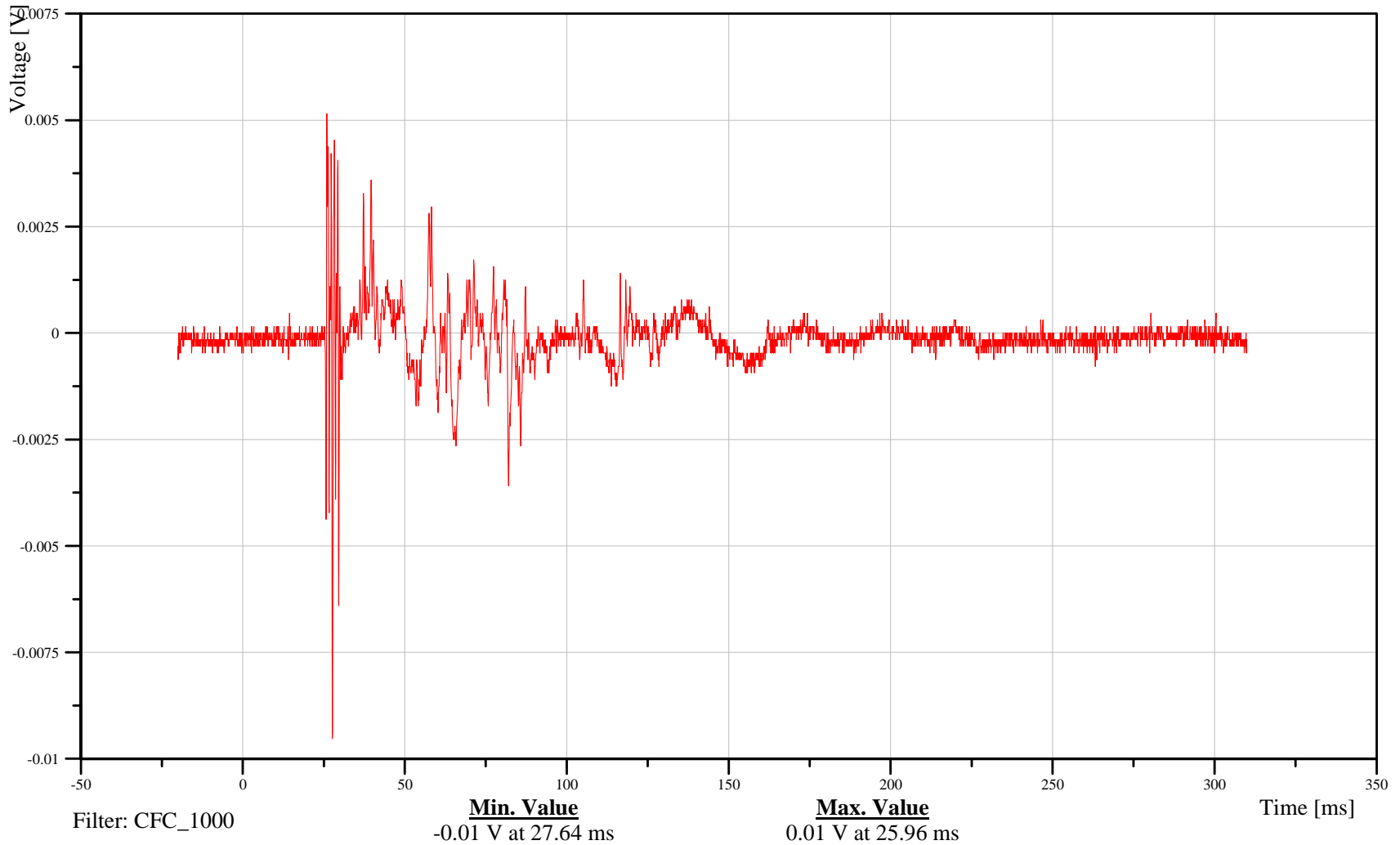
Target Vehicle Driver Front Airbag 2 Inductor

Customer: VRTC

21AIRBFR0200EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-179

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

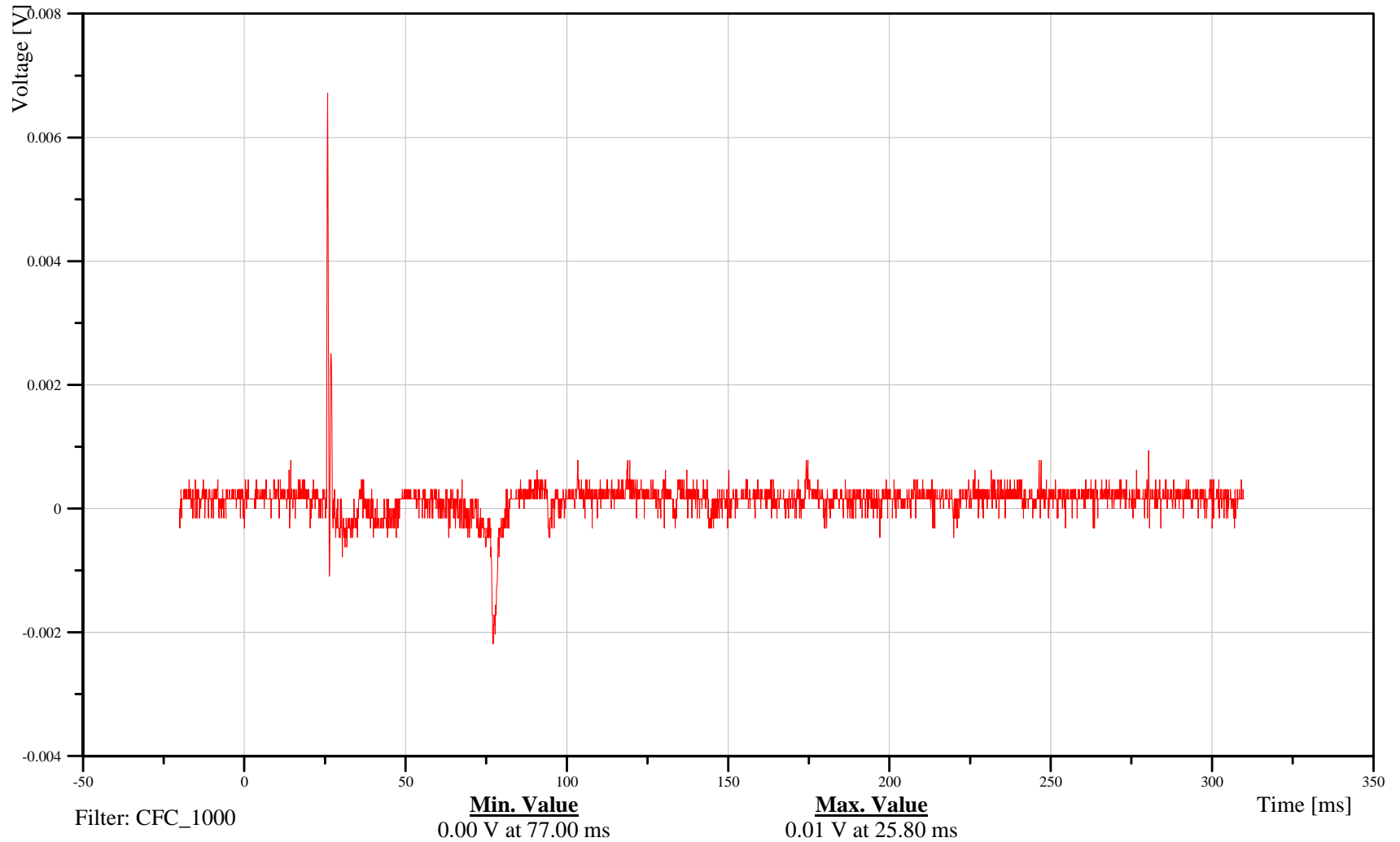
Target Vehicle Passenger Front Airbag 1 Inductor

Customer: VRTC

23AIRBFR0100EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-180

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

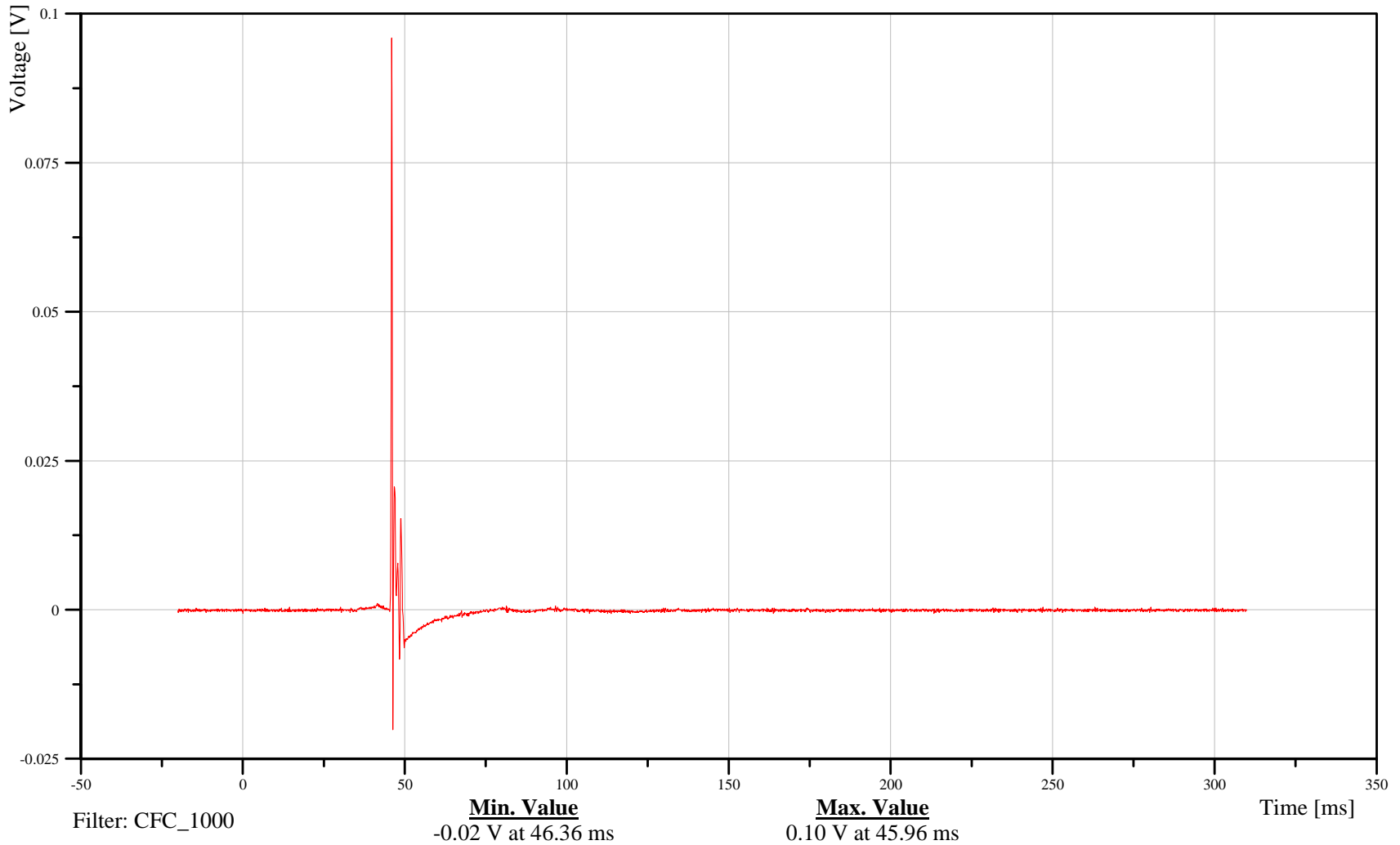
Target Vehicle Passenger Front Airbag 2 Inductor

Customer: VRTC

23AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-181

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

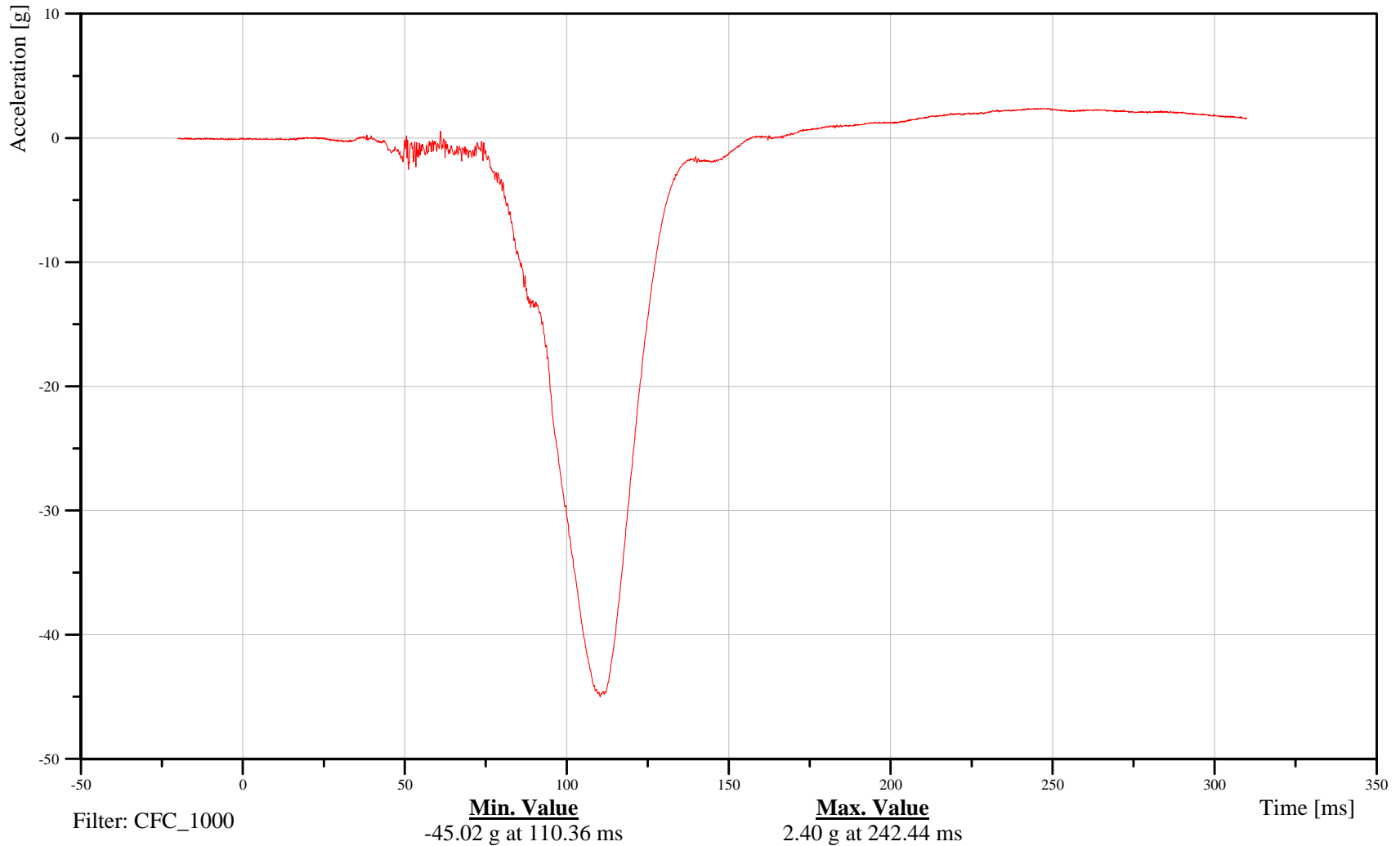
Bullet Vehicle Driver Head X-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-182

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

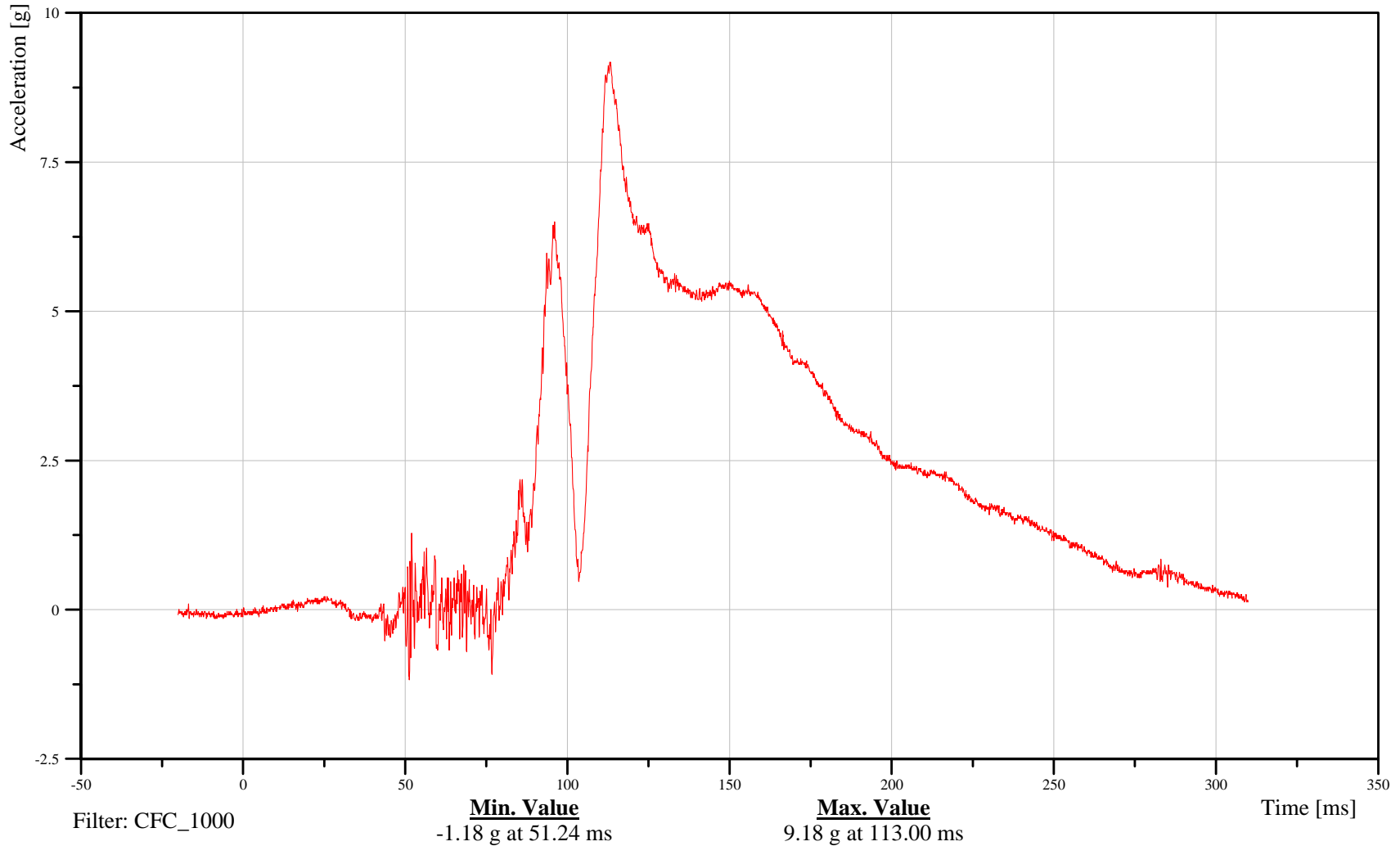
Bullet Vehicle Driver Head Y-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-183

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

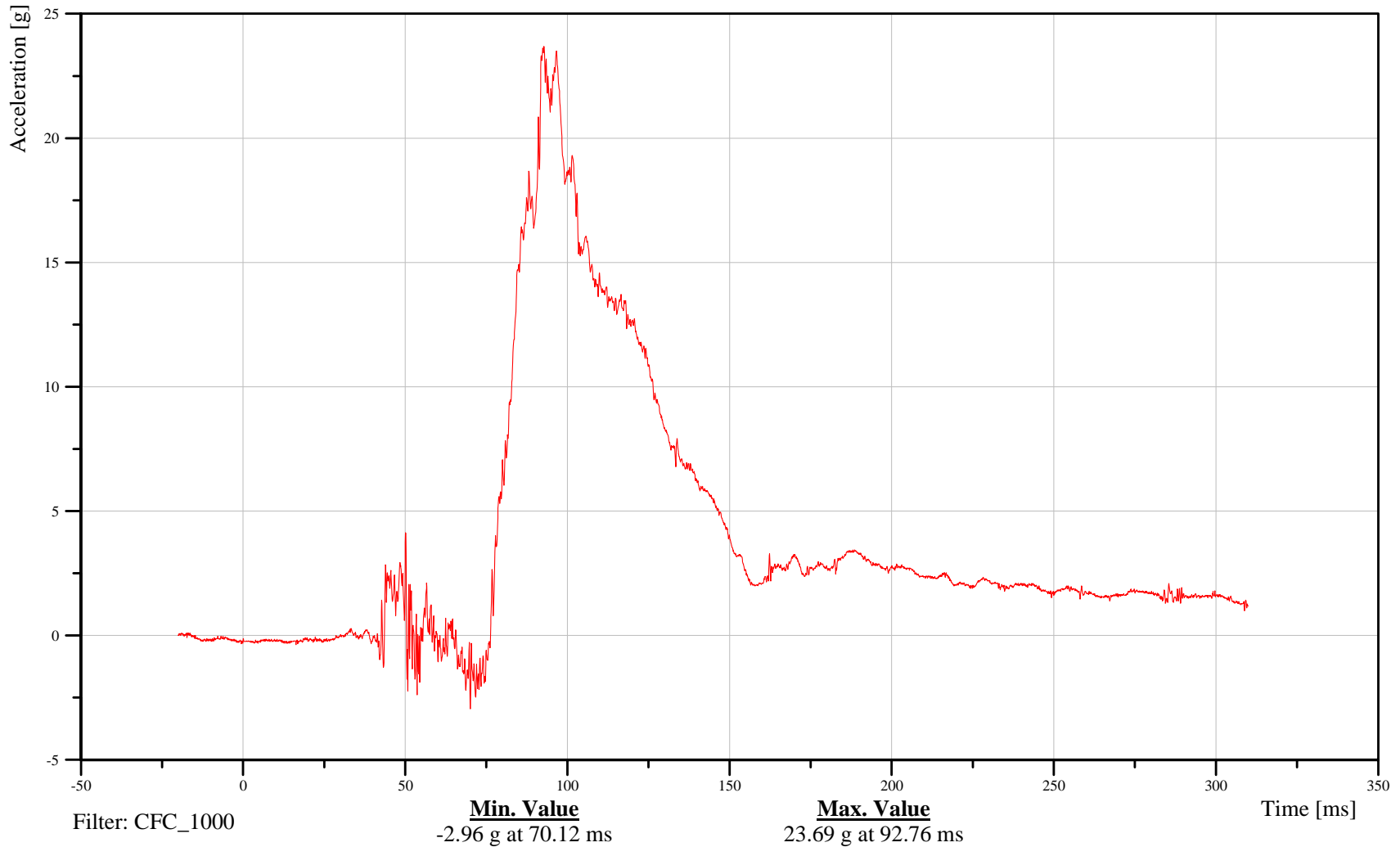
Bullet Vehicle Driver Head Z-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-184

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

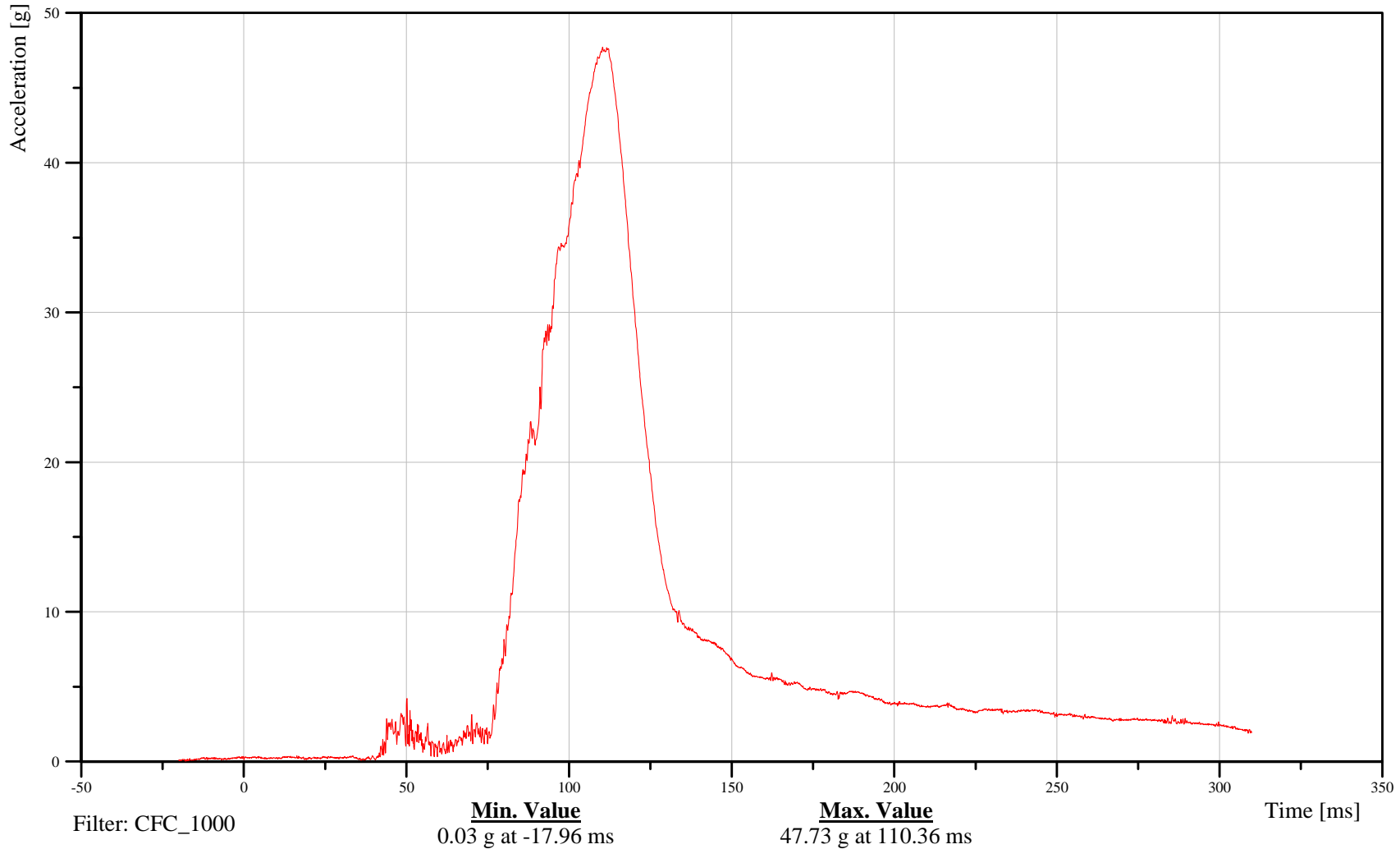
Bullet Vehicle Driver Head Resultant Acceleration

Customer: VRTC

11HEADCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-185

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

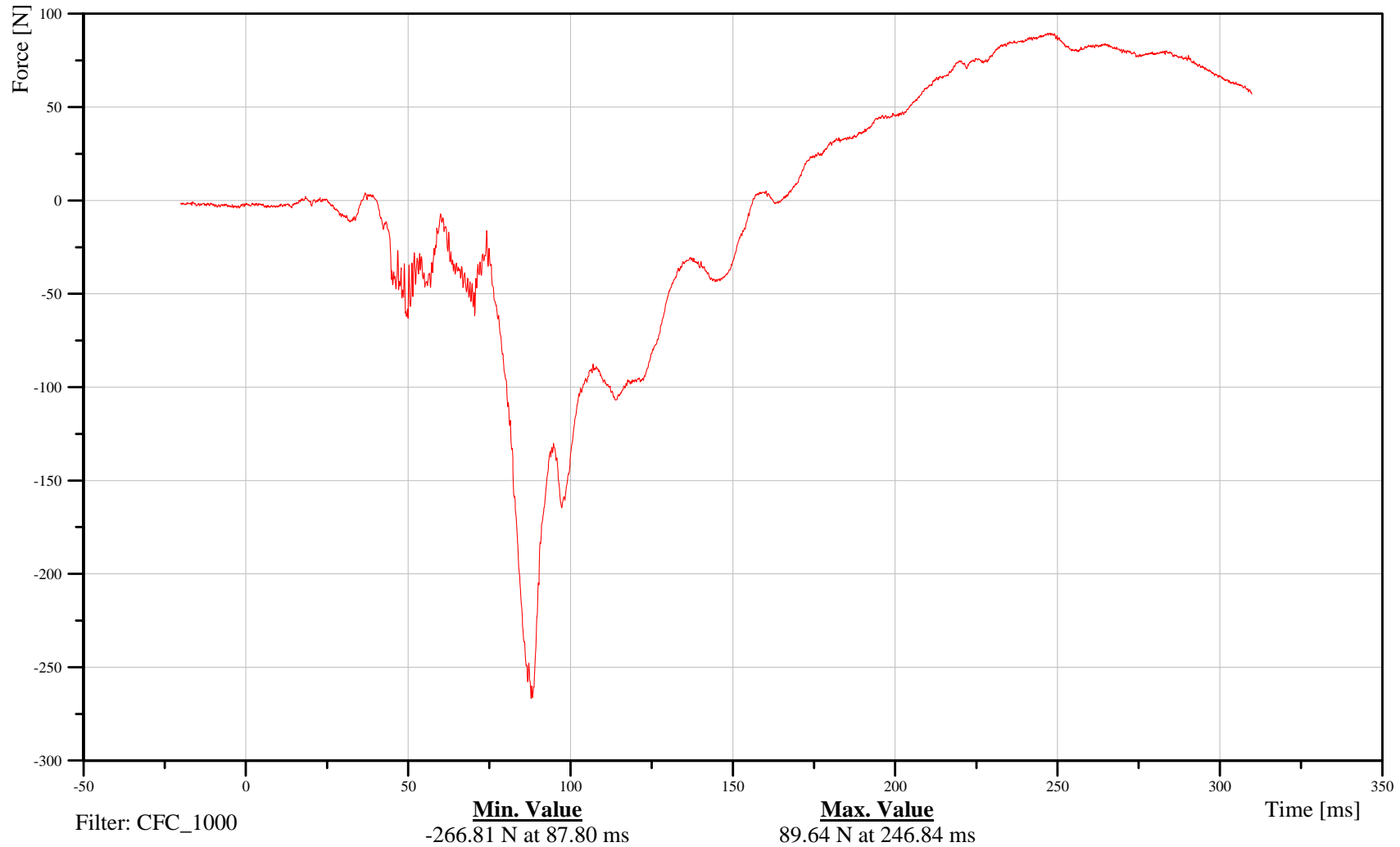
Bullet Vehicle Driver Neck X-Axis Force

Customer: VRTC

11NECKUP00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-186

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

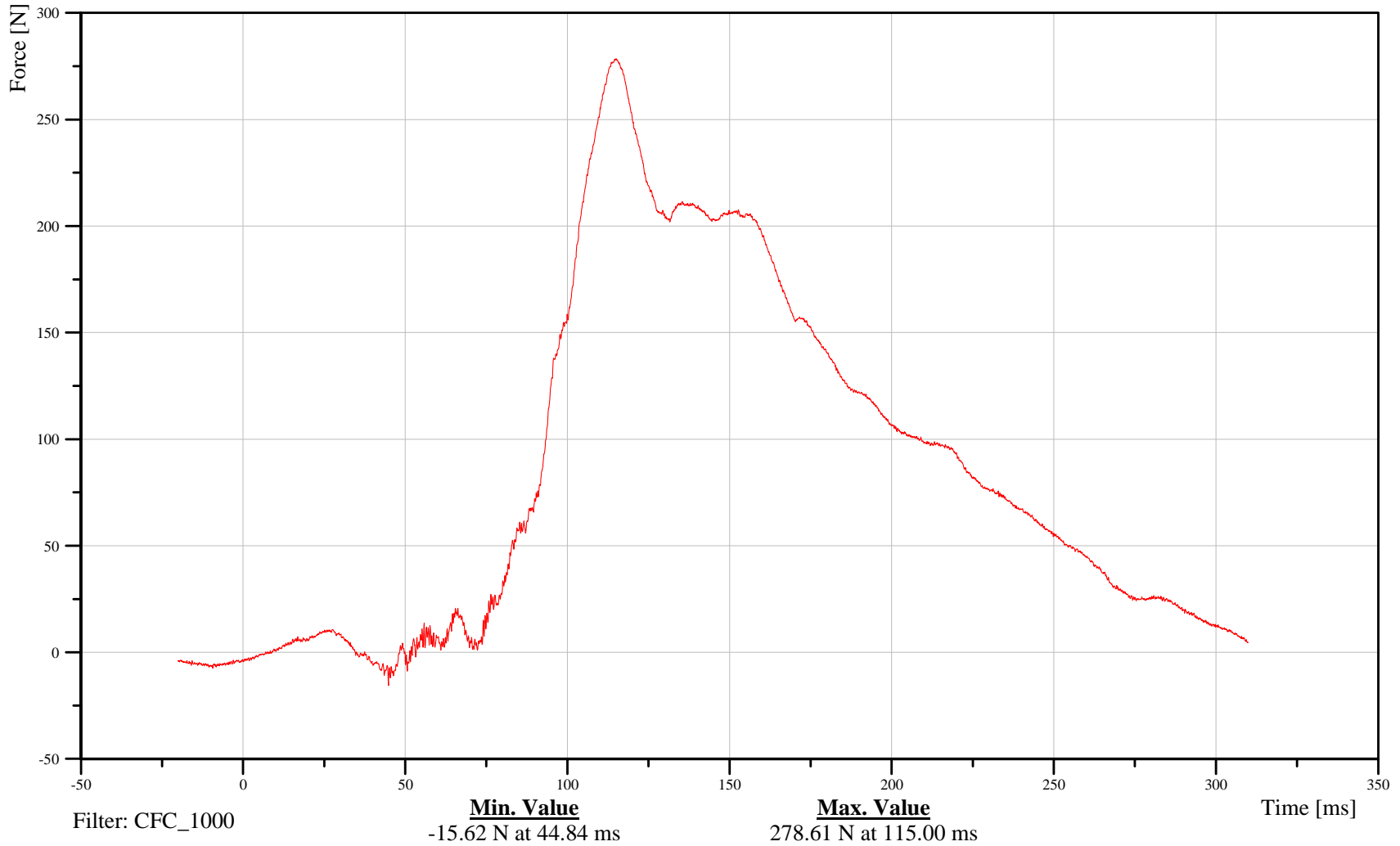
Bullet Vehicle Driver Neck Y-Axis Force

Customer: VRTC

11NECKUP00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-187

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

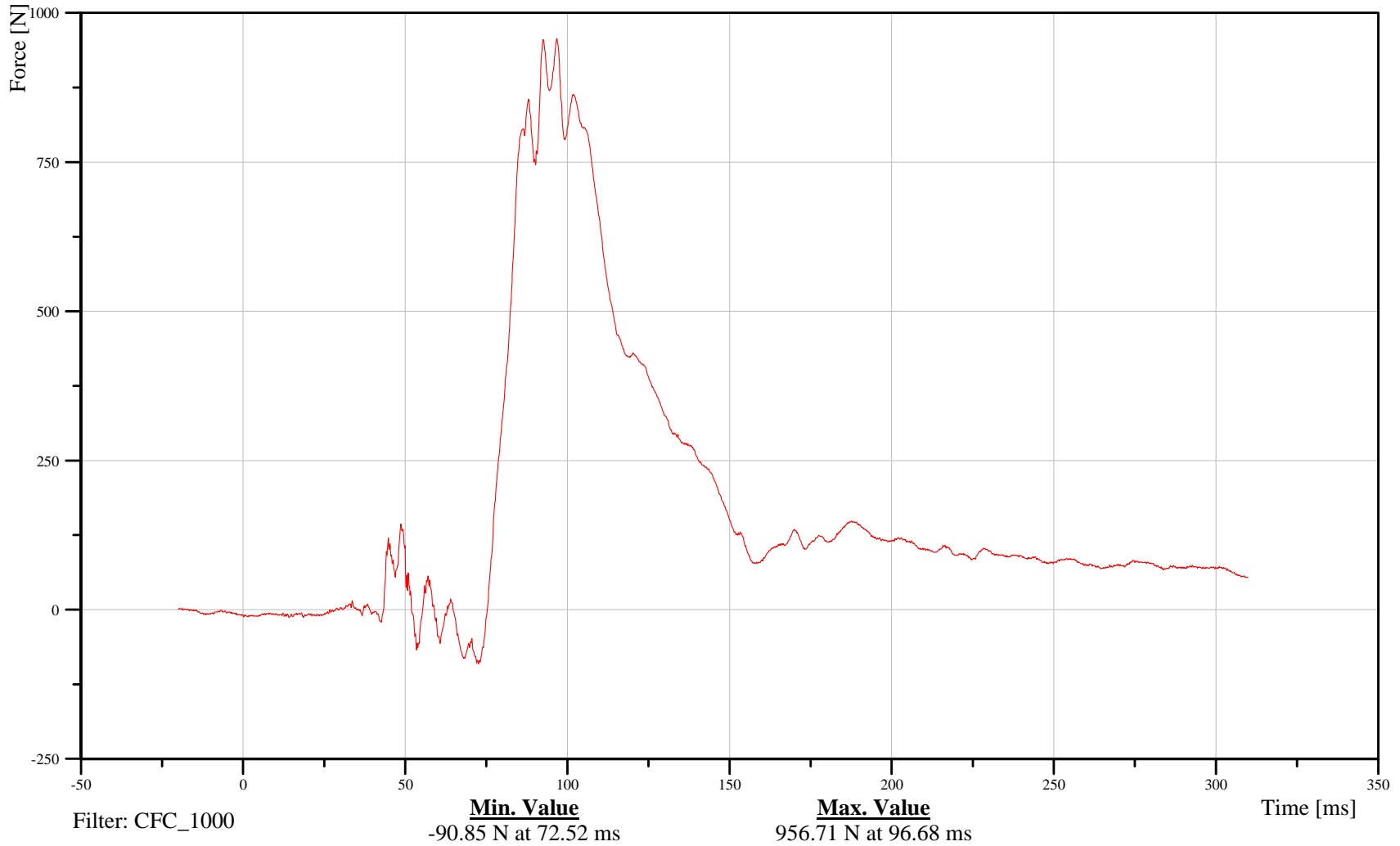
Bullet Vehicle Driver Neck Z-Axis Force

Customer: VRTC

11NECKUP00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-188

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

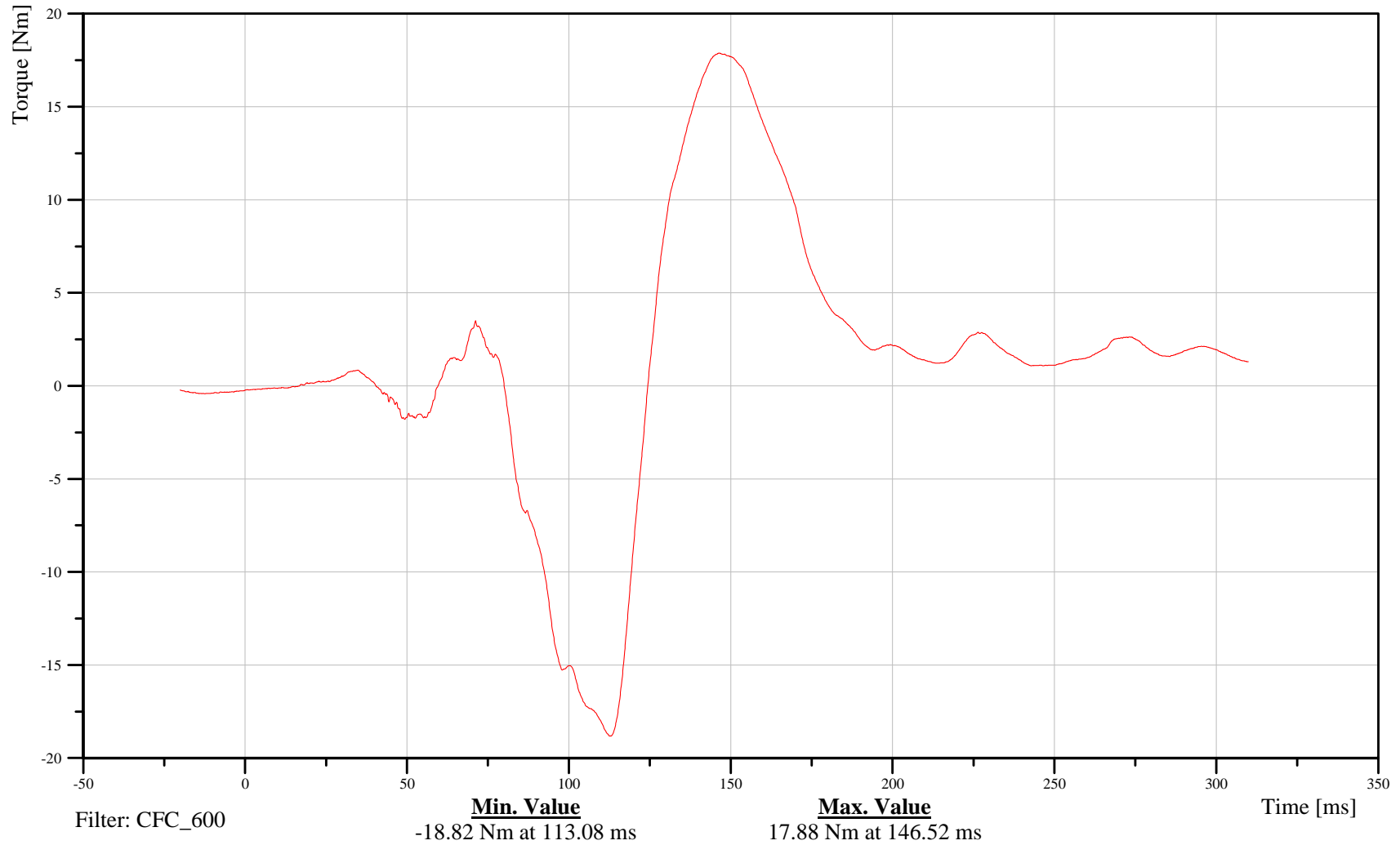
Bullet Vehicle Driver Neck Moment About X Axis

Customer: VRTC

11NECKUP00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-189

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

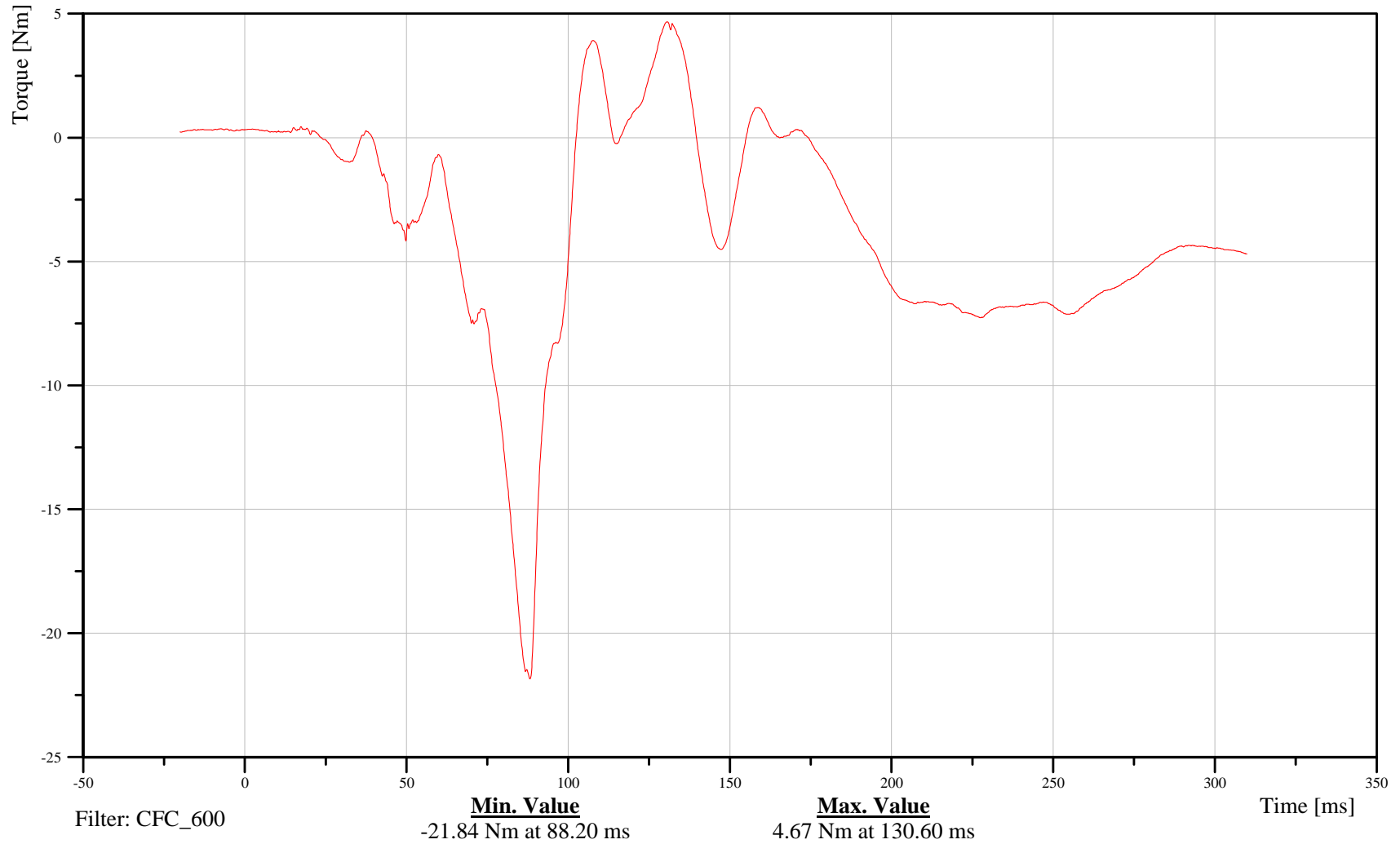
Bullet Vehicle Driver Neck Moment About Y Axis

Customer: VRTC

11NECKUP00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-190

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

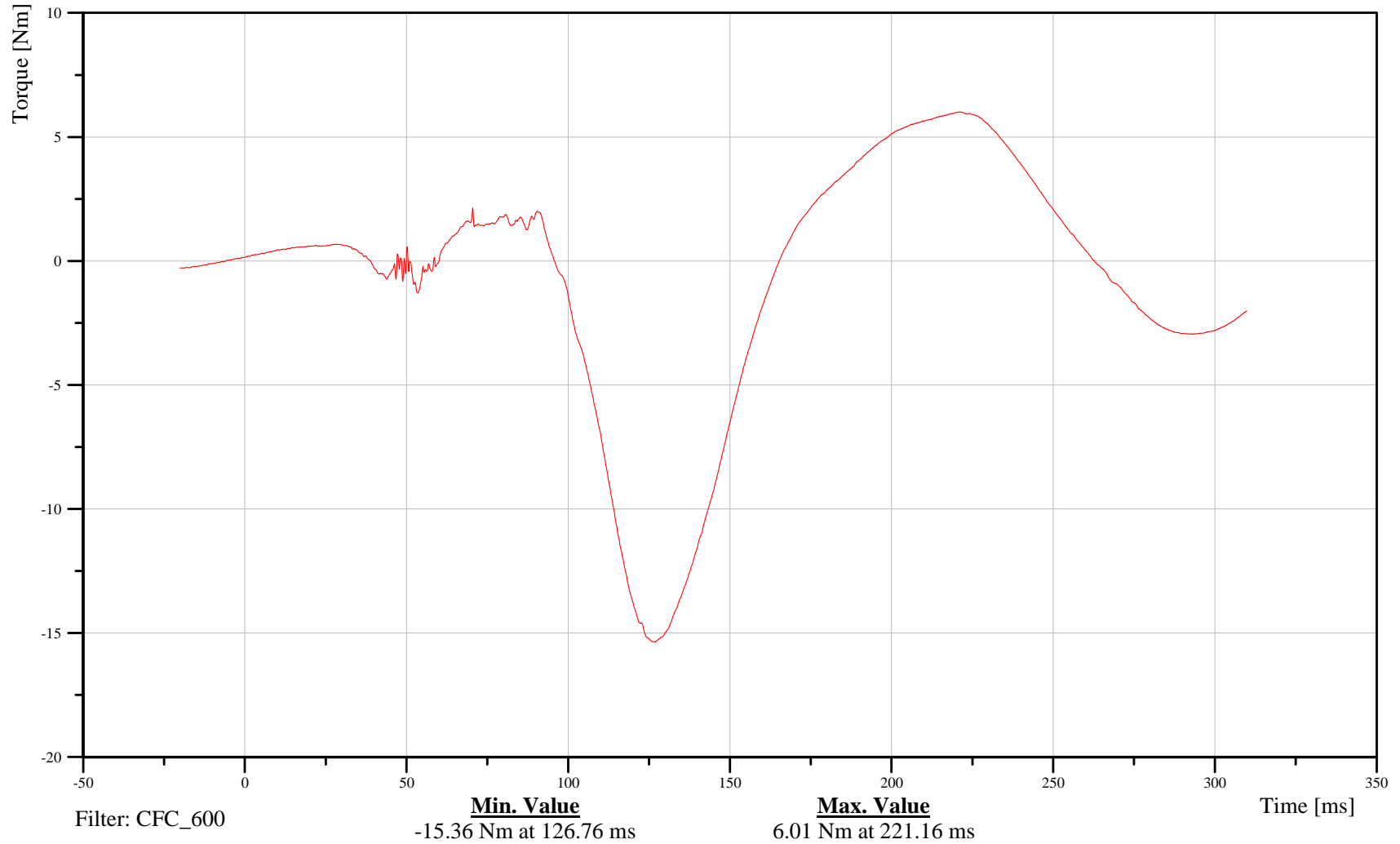
Bullet Vehicle Driver Neck Moment About Z Axis

Customer: VRTC

11NECKUP00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-191

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

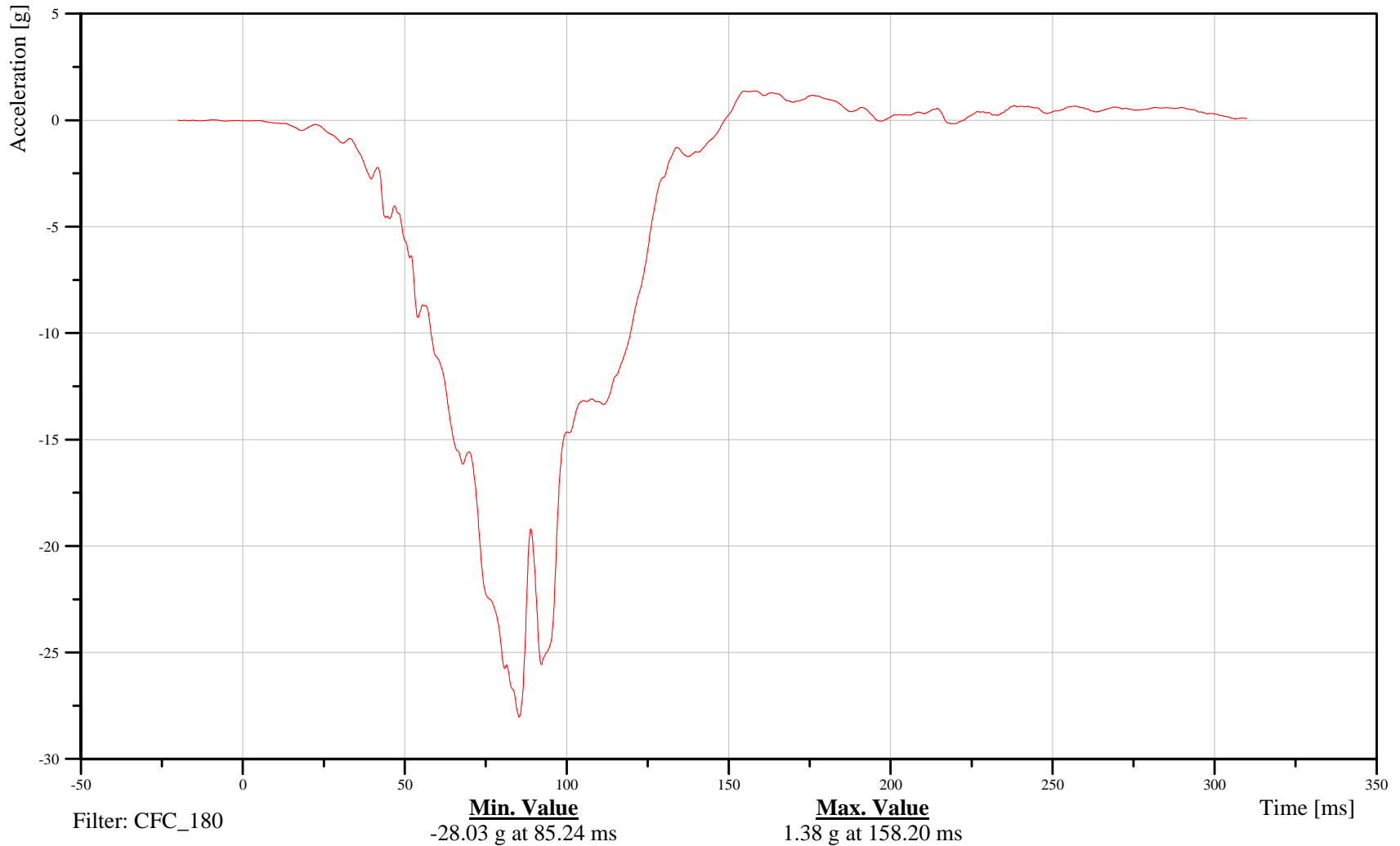
Bullet Vehicle Driver Chest X-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-192

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

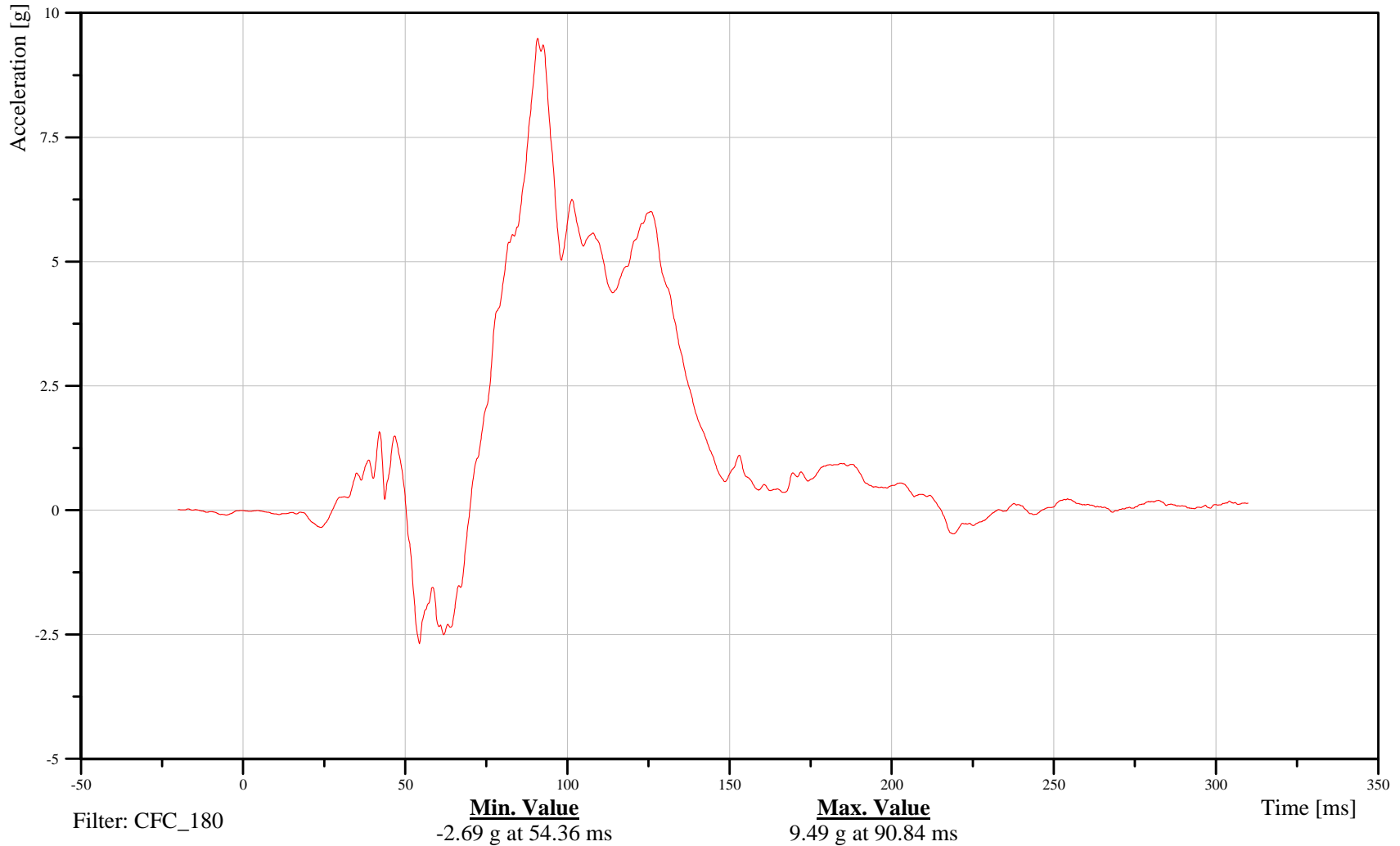
Bullet Vehicle Driver Chest Y-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-193

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

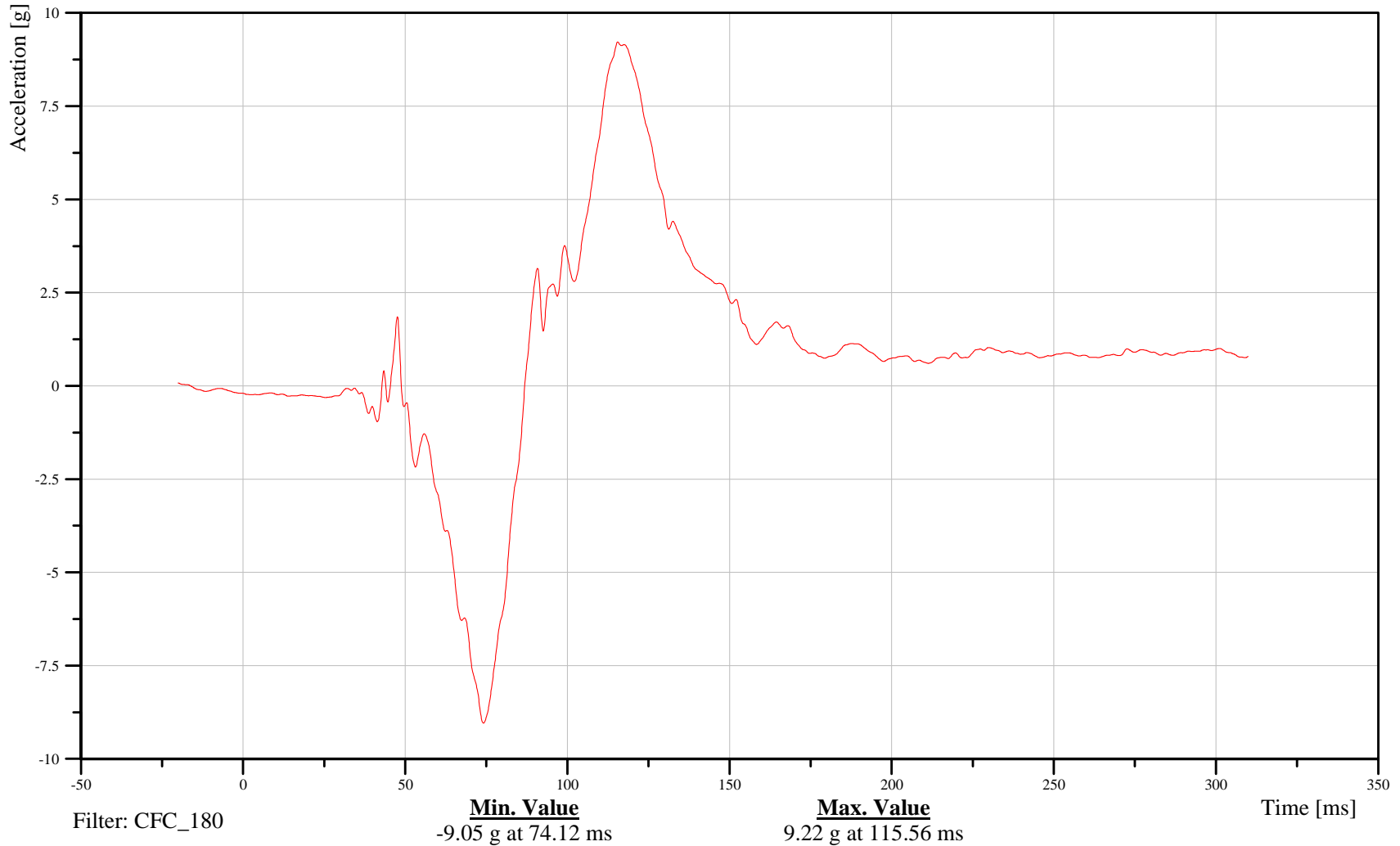
Bullet Vehicle Driver Chest Z-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-194

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

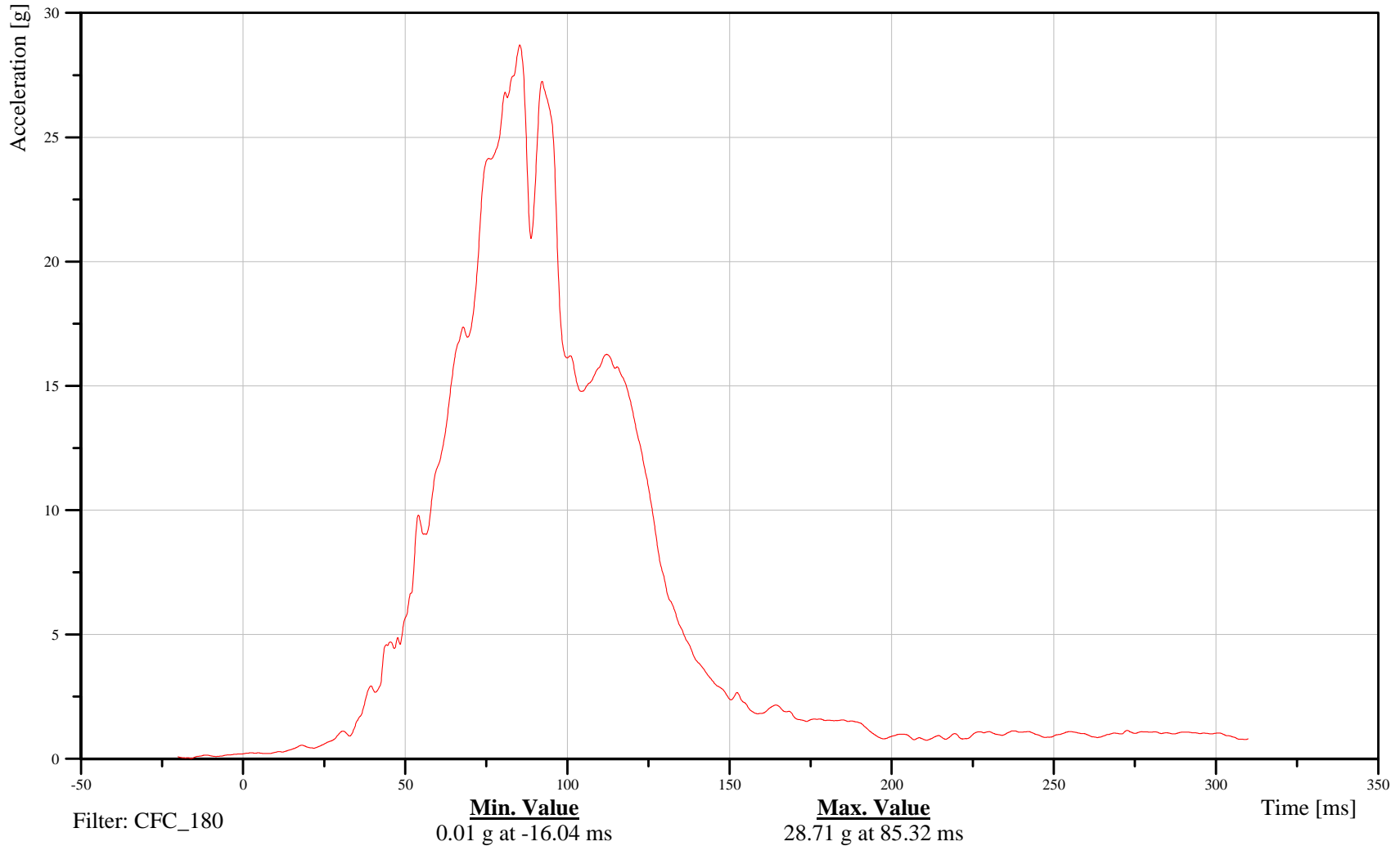
Bullet Vehicle Driver Chest Resultant Acceleration

Customer: VRTC

11CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-195

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

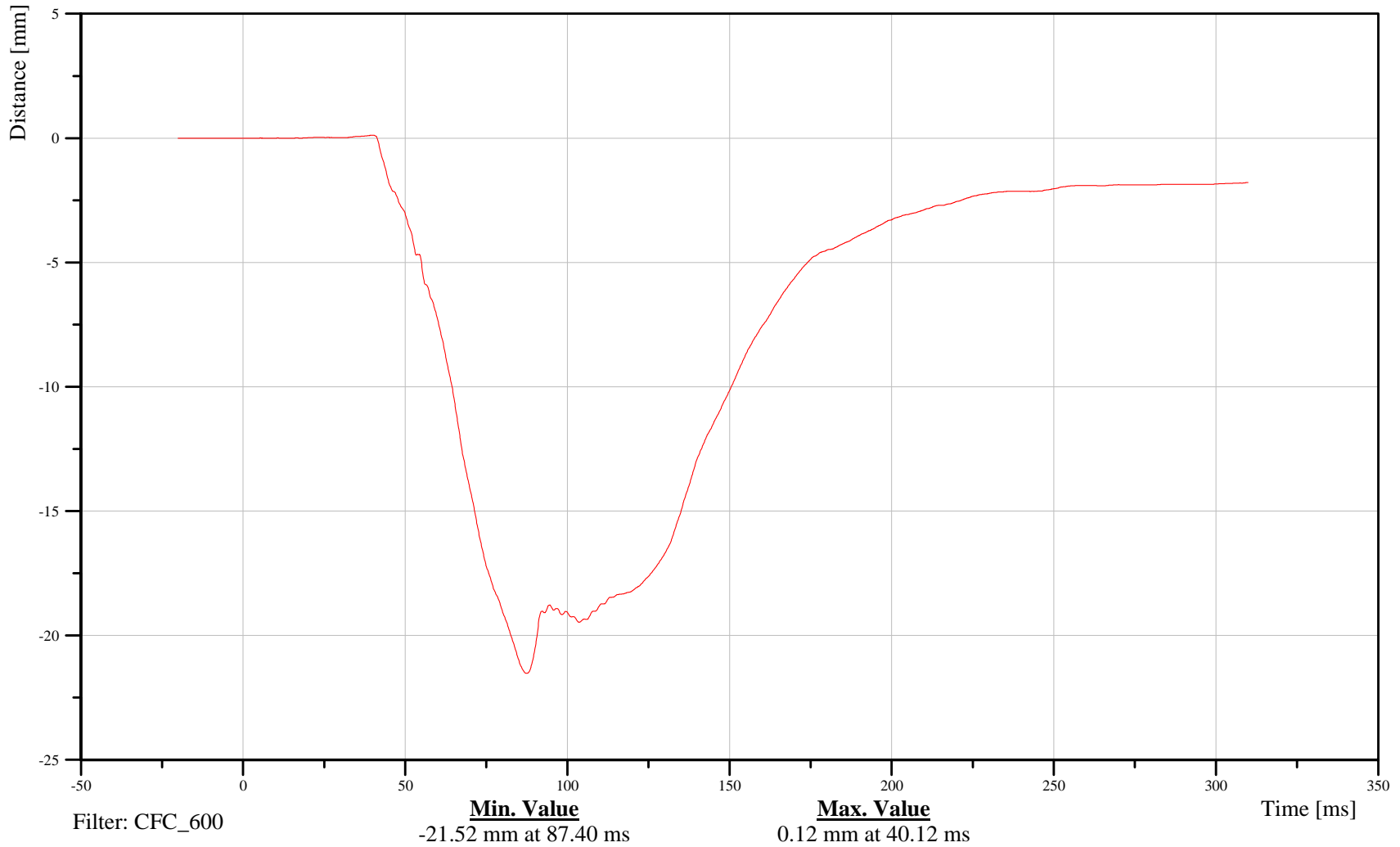
Bullet Vehicle Driver Chest X-Axis Displacement

Customer: VRTC

11CHST0000H3DSXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-196

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

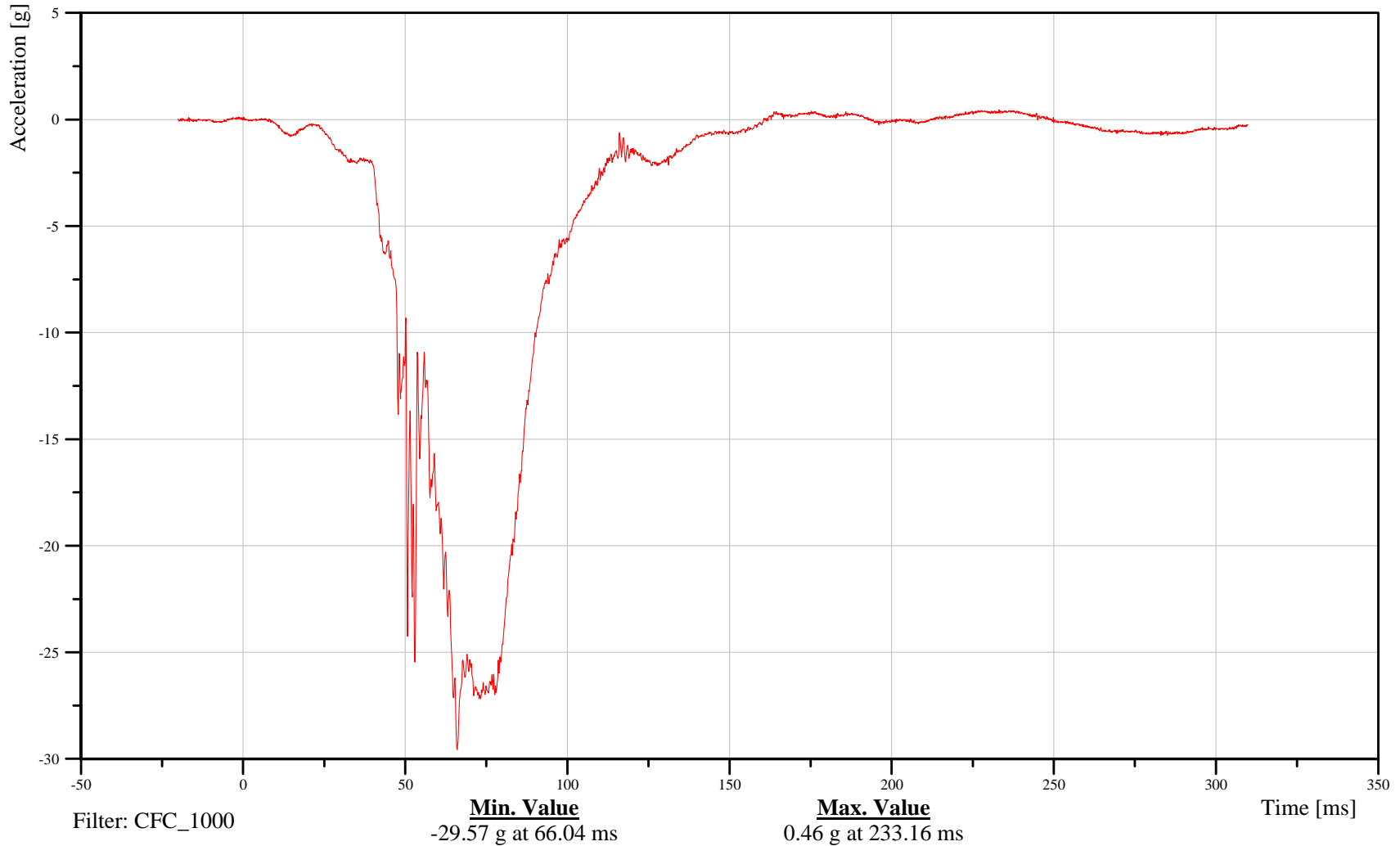
Bullet Vehicle Driver Pelvis X-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-197

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

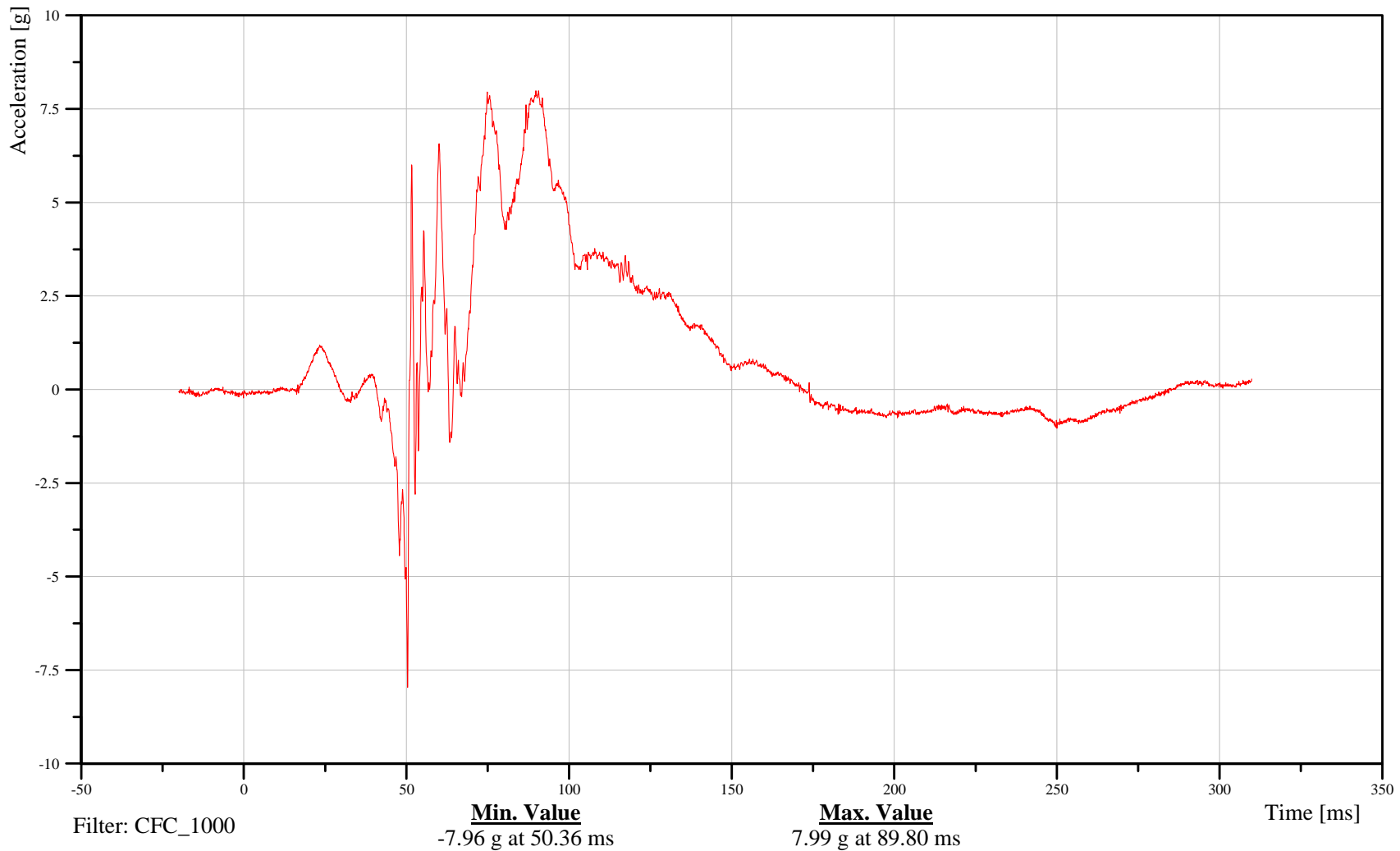
Bullet Vehicle Driver Pelvis Y-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-198

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

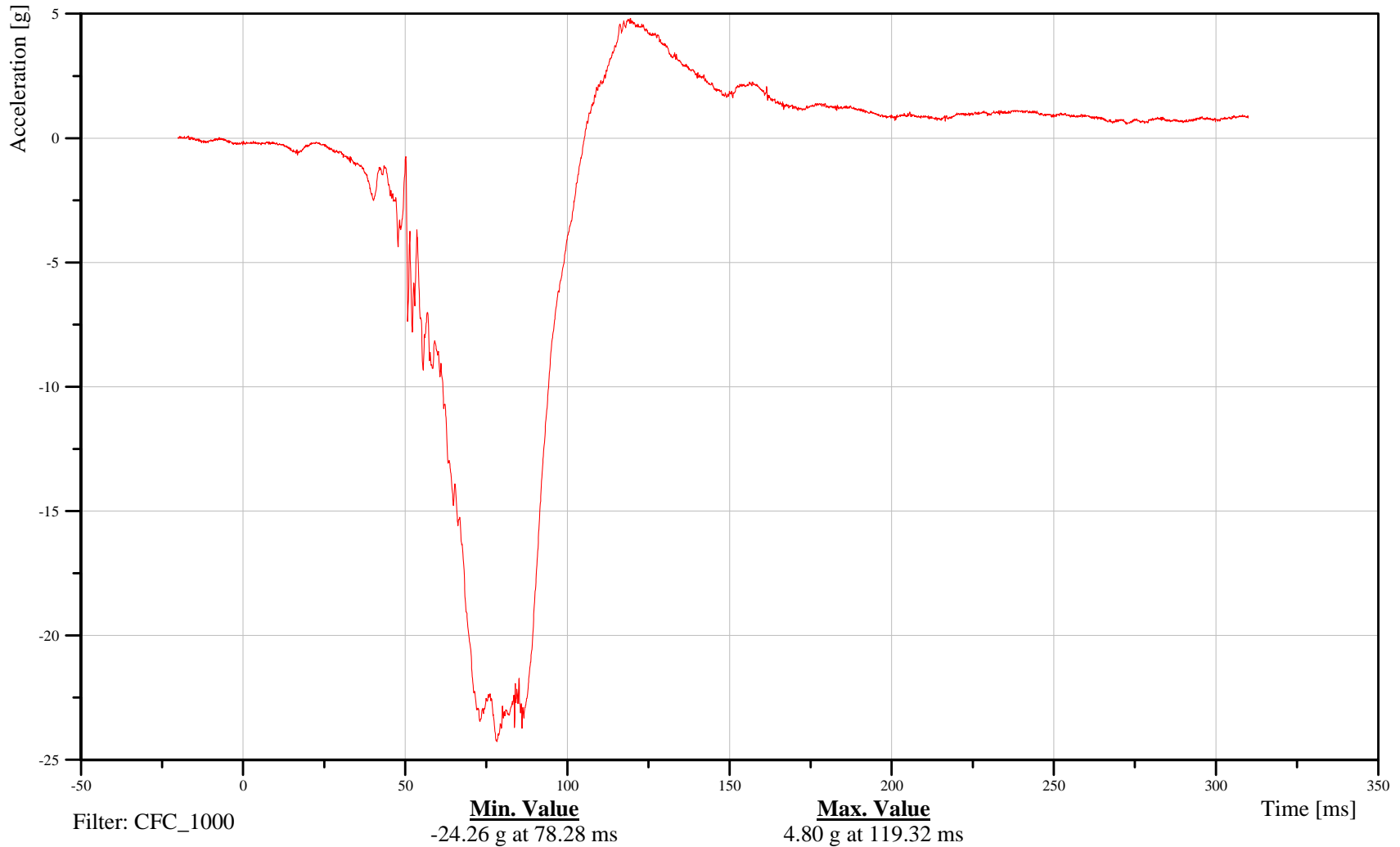
Bullet Vehicle Driver Pelvis Z-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-199

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

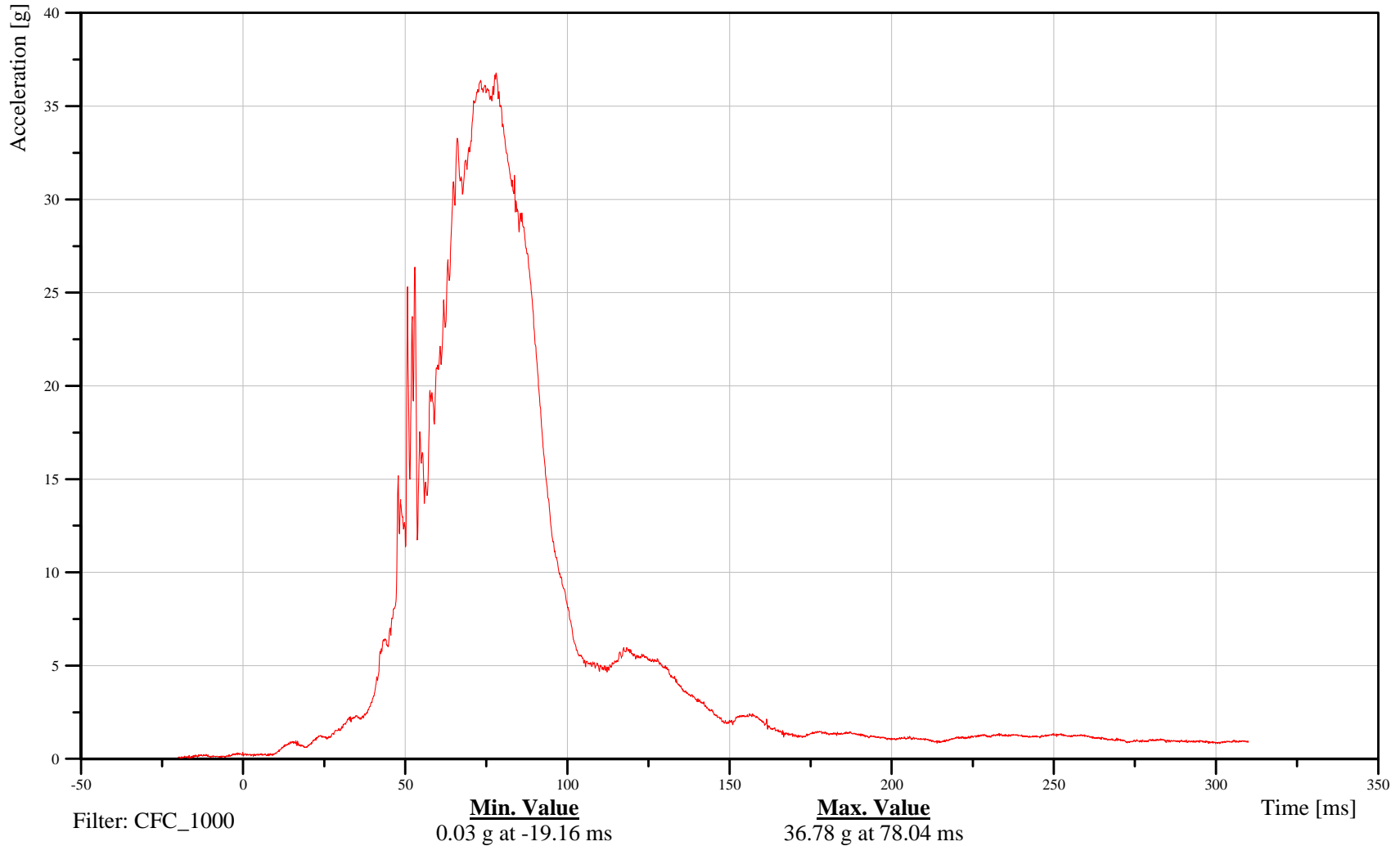
Bullet Vehicle Driver Pelvis Resultant Acceleration

Customer: VRTC

11PELVCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-200

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

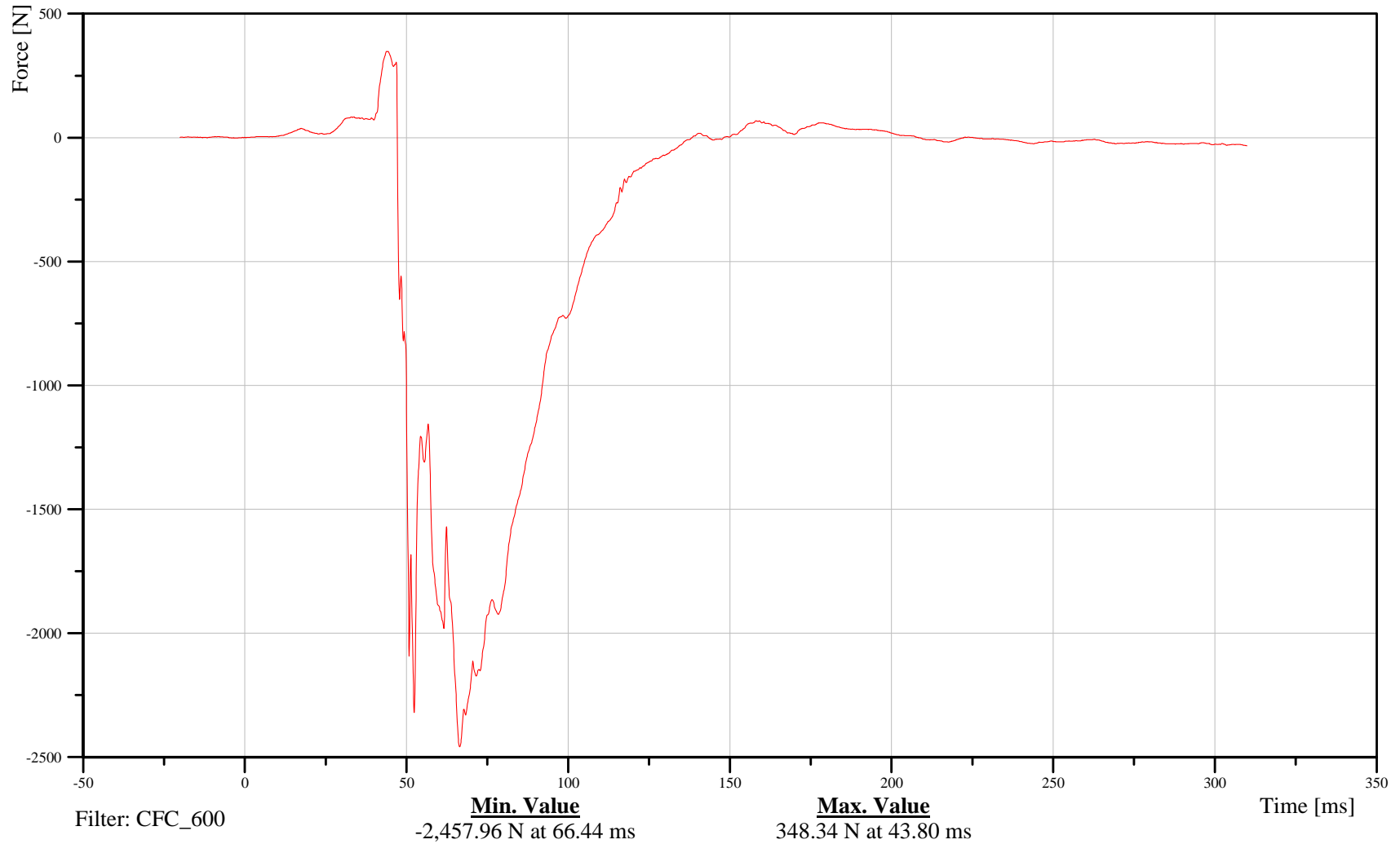
Bullet Vehicle Driver Left Femur Z-Axis Force

Customer: VRTC

11FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-201

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

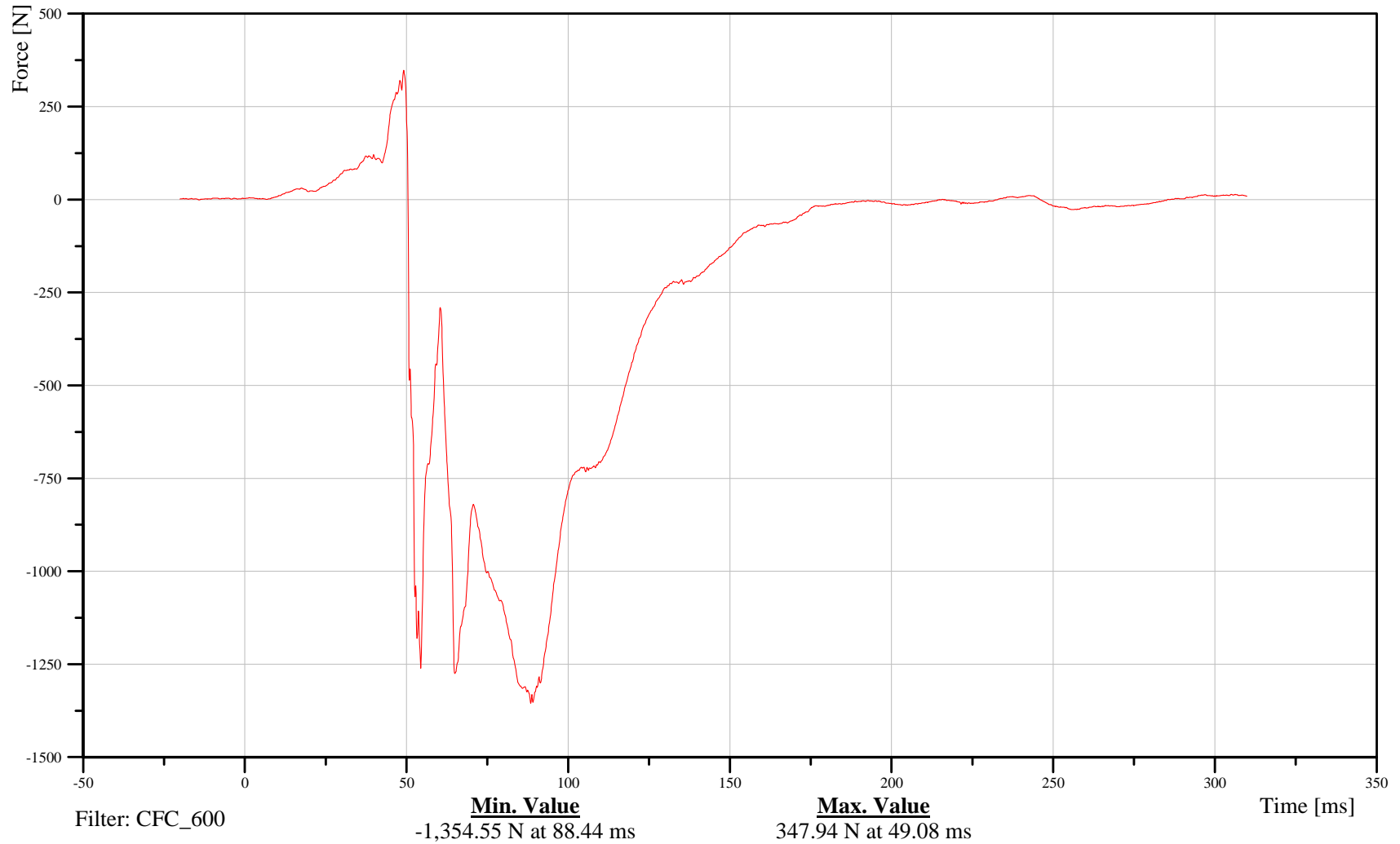
Bullet Vehicle Driver Right Femur Z-Axis Force

Customer: VRTC

11FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-202

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

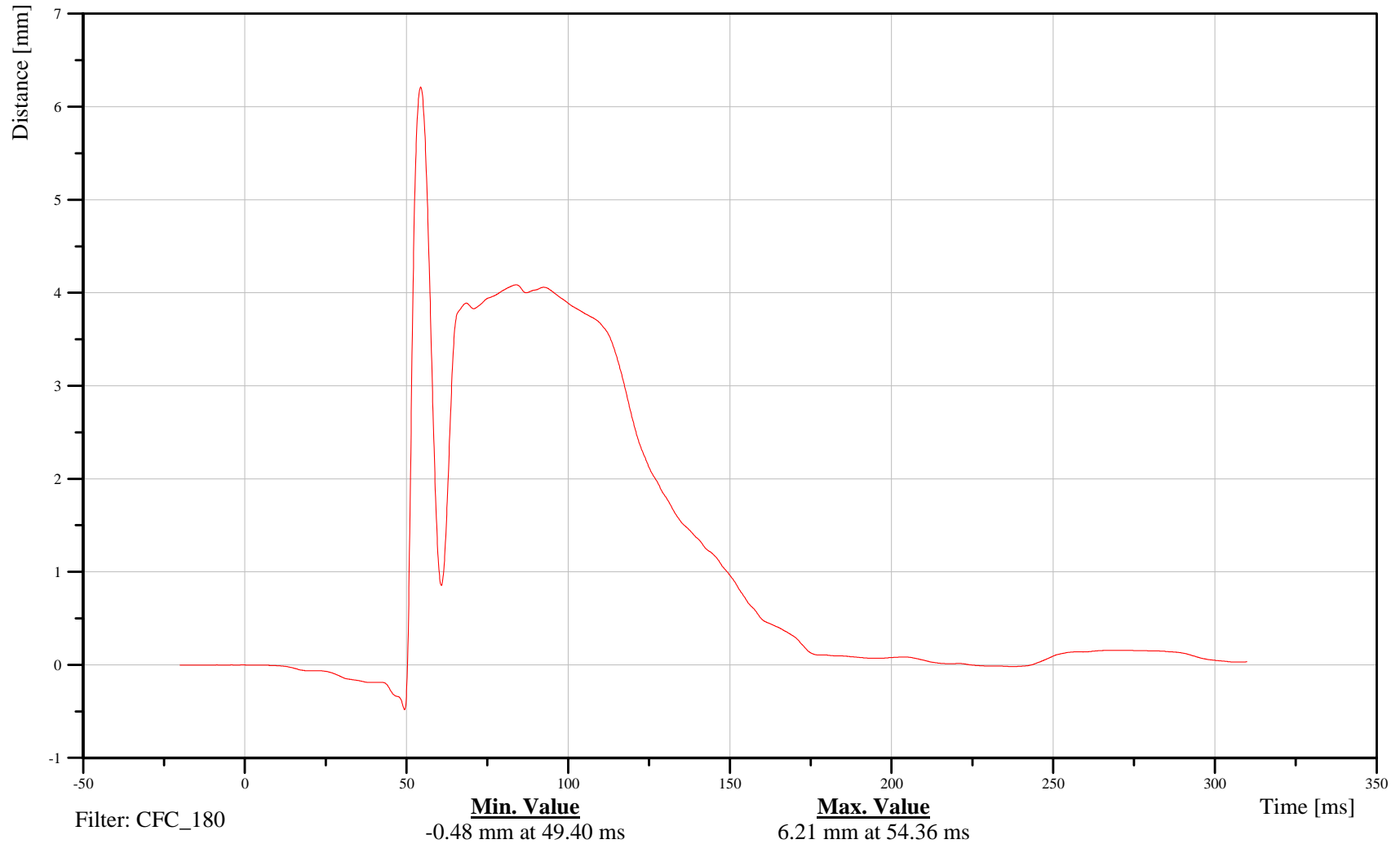
Bullet Vehicle Driver Left Knee X-Axis Displacement

Customer: VRTC

11KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-203

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

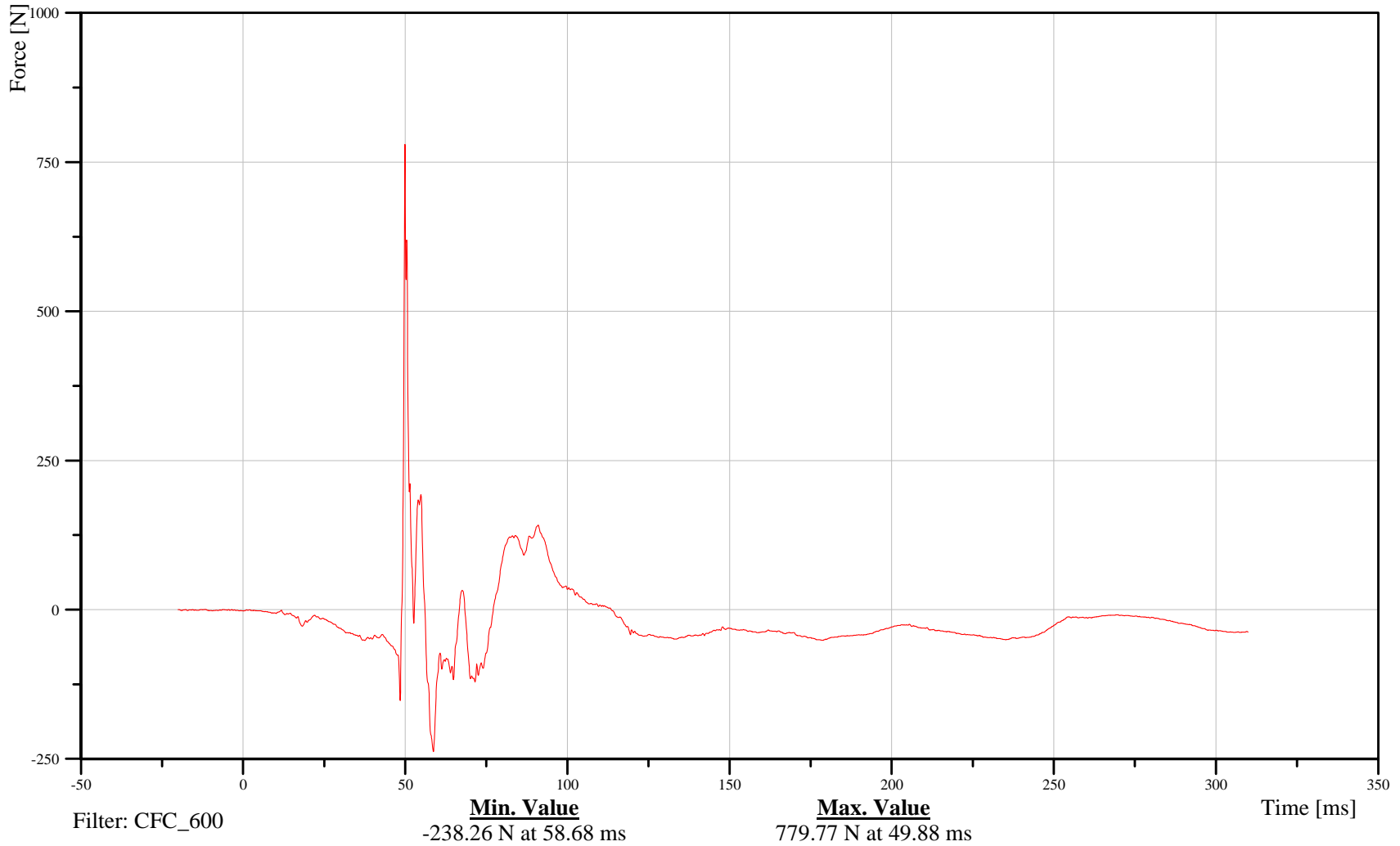
Bullet Vehicle Driver Left Upper Tibia X-Axis Force

Customer: VRTC

11TIBILULXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-204

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

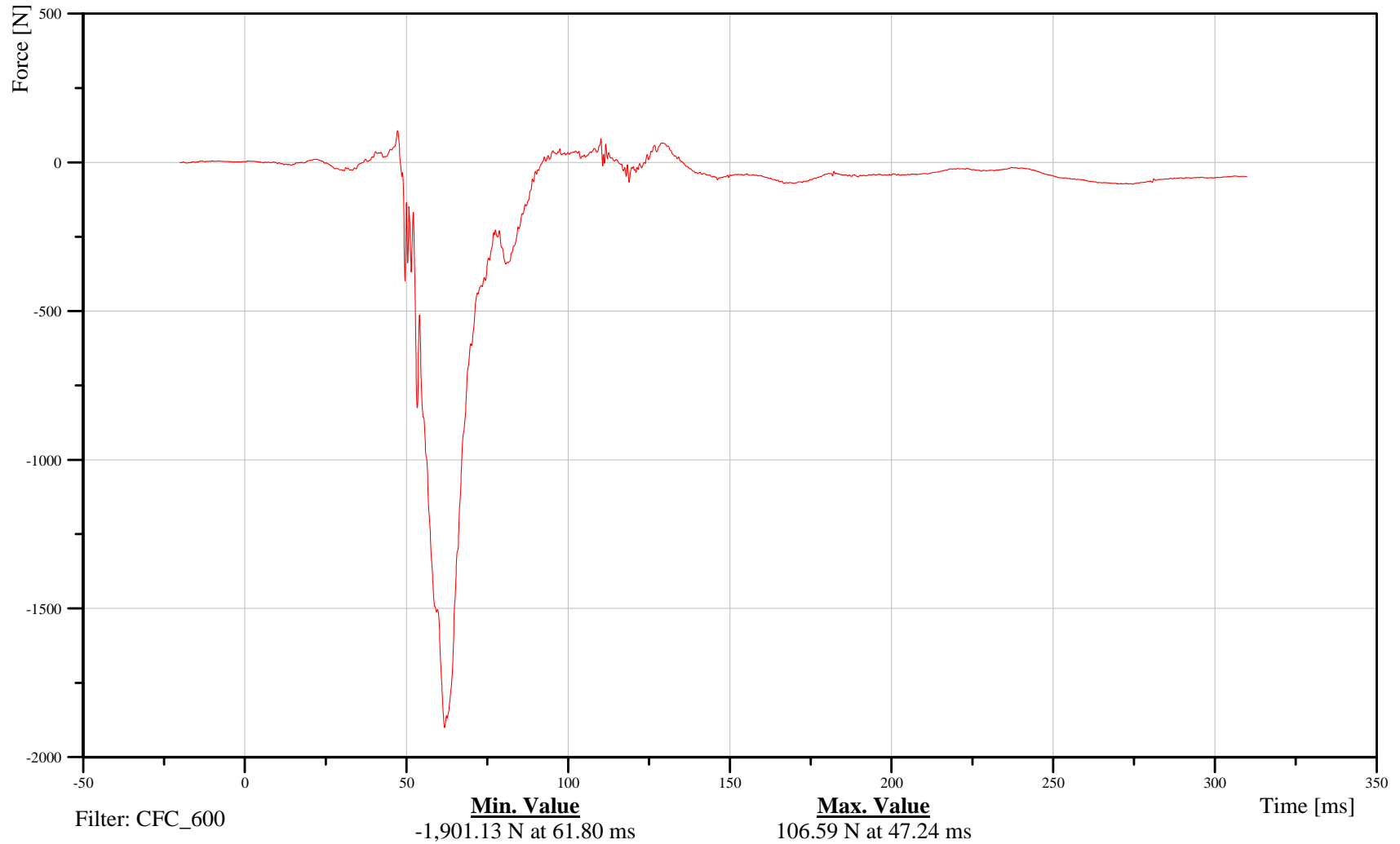
Bullet Vehicle Driver Left Upper Tibia Z-Axis Force

Customer: VRTC

11TIBILULXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-205

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Left Upper Tibia Moment About X Axis

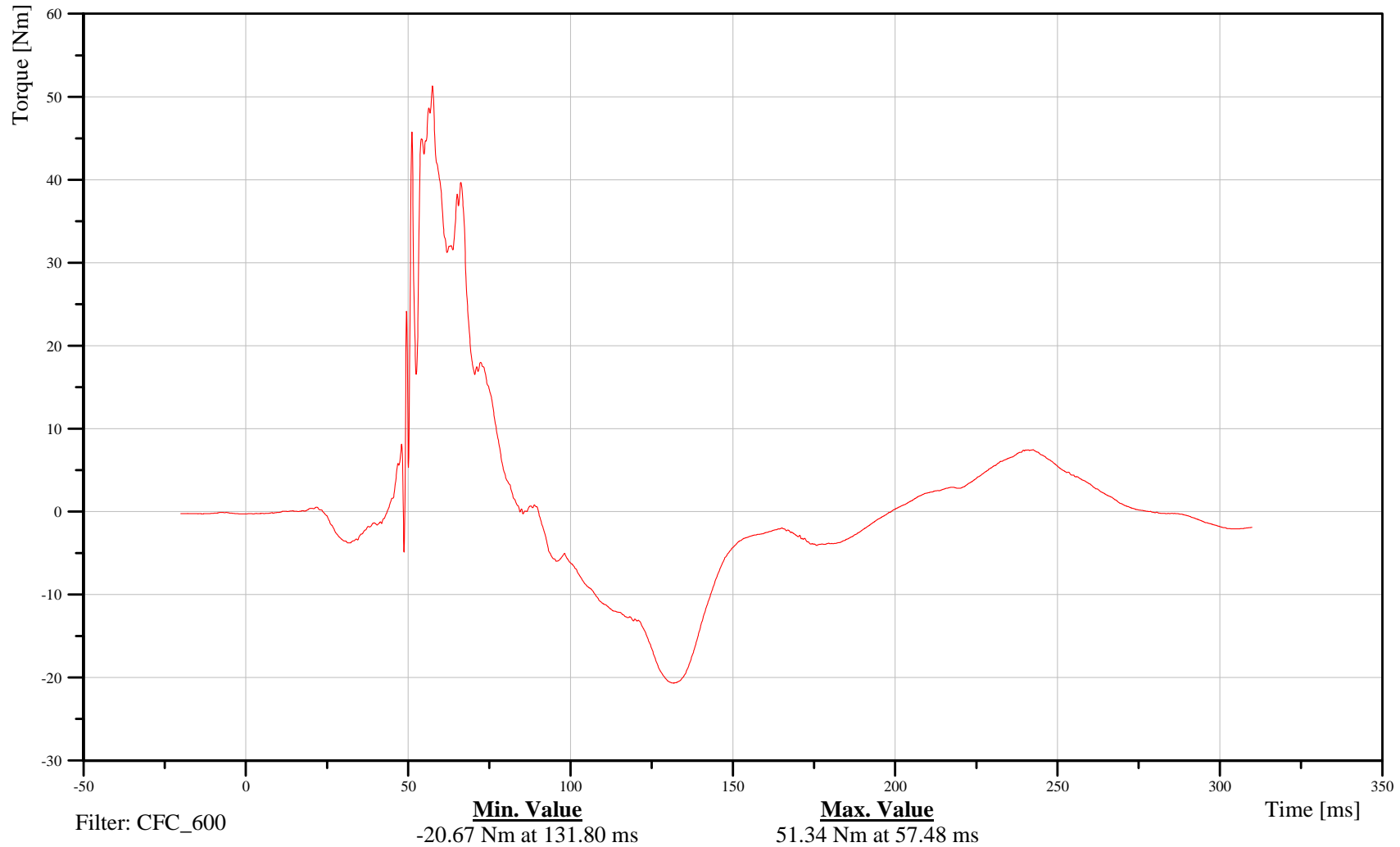
Time: 15:44

Customer: VRTC

11TIBILULXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-206

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Left Upper Tibia Moment About Y Axis

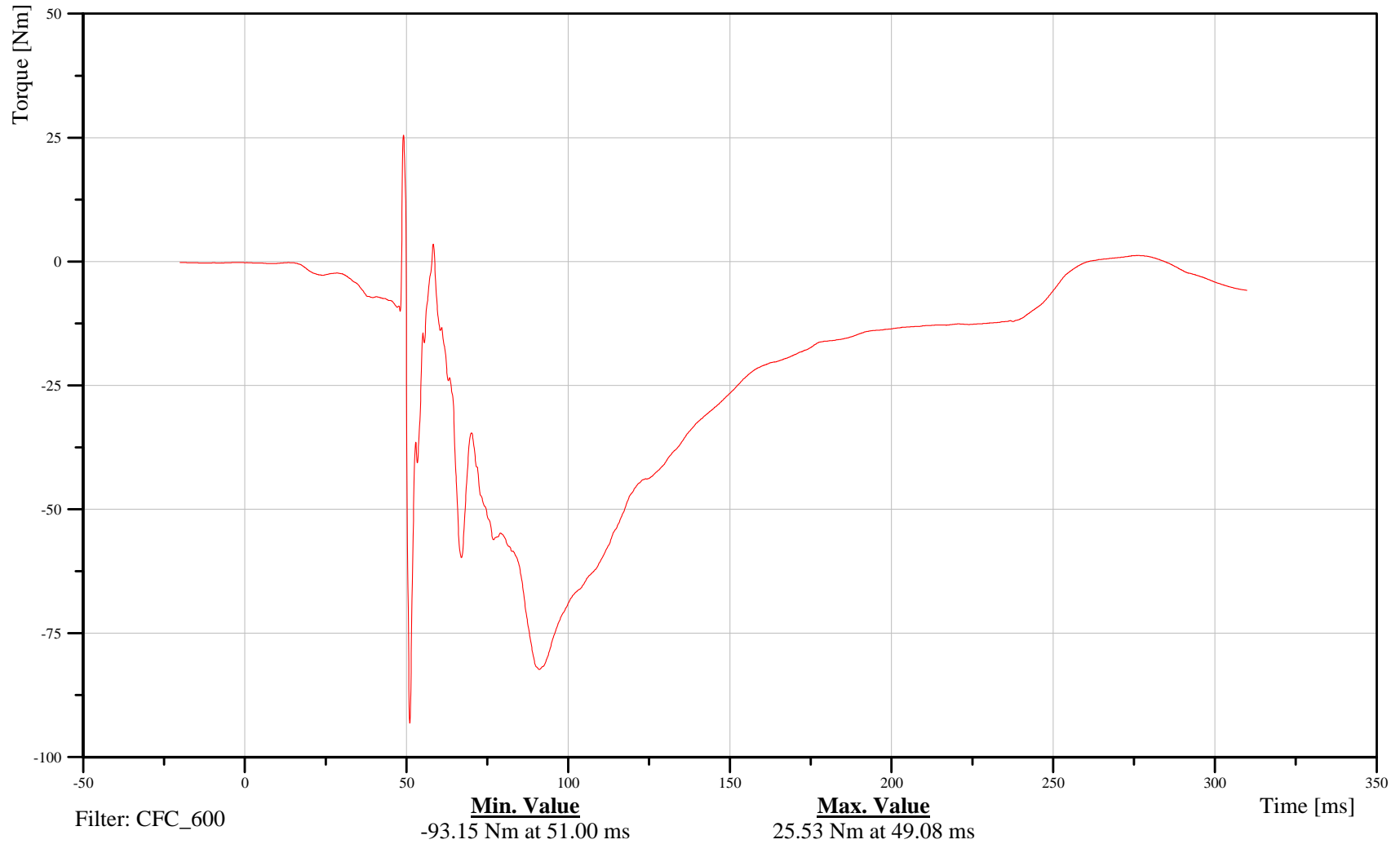
Time: 15:44

Customer: VRTC

11TIBILULXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-207

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

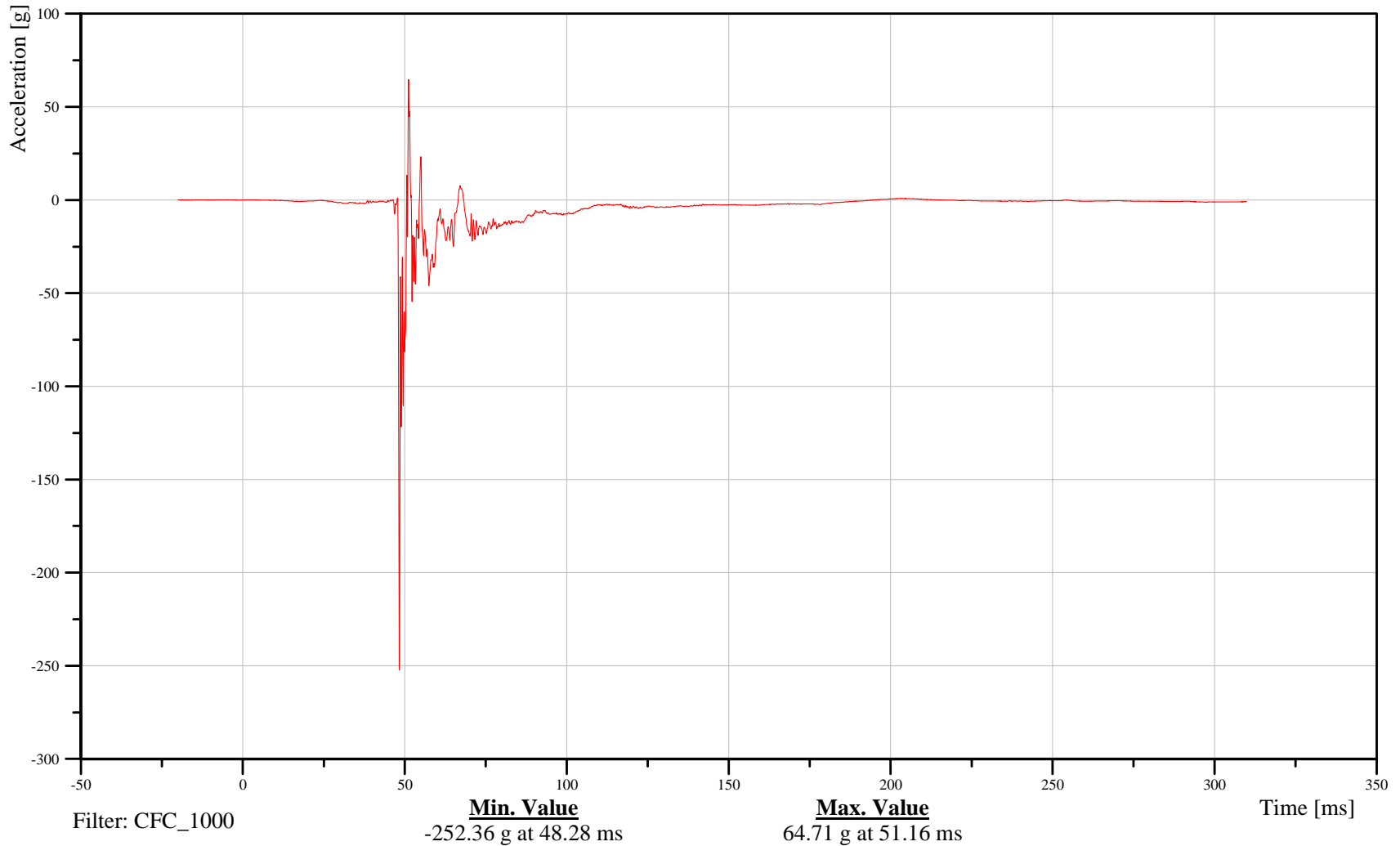
Bullet Vehicle Driver Left Tibia X-Axis Acceleration

Customer: VRTC

11TIBILELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-208

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

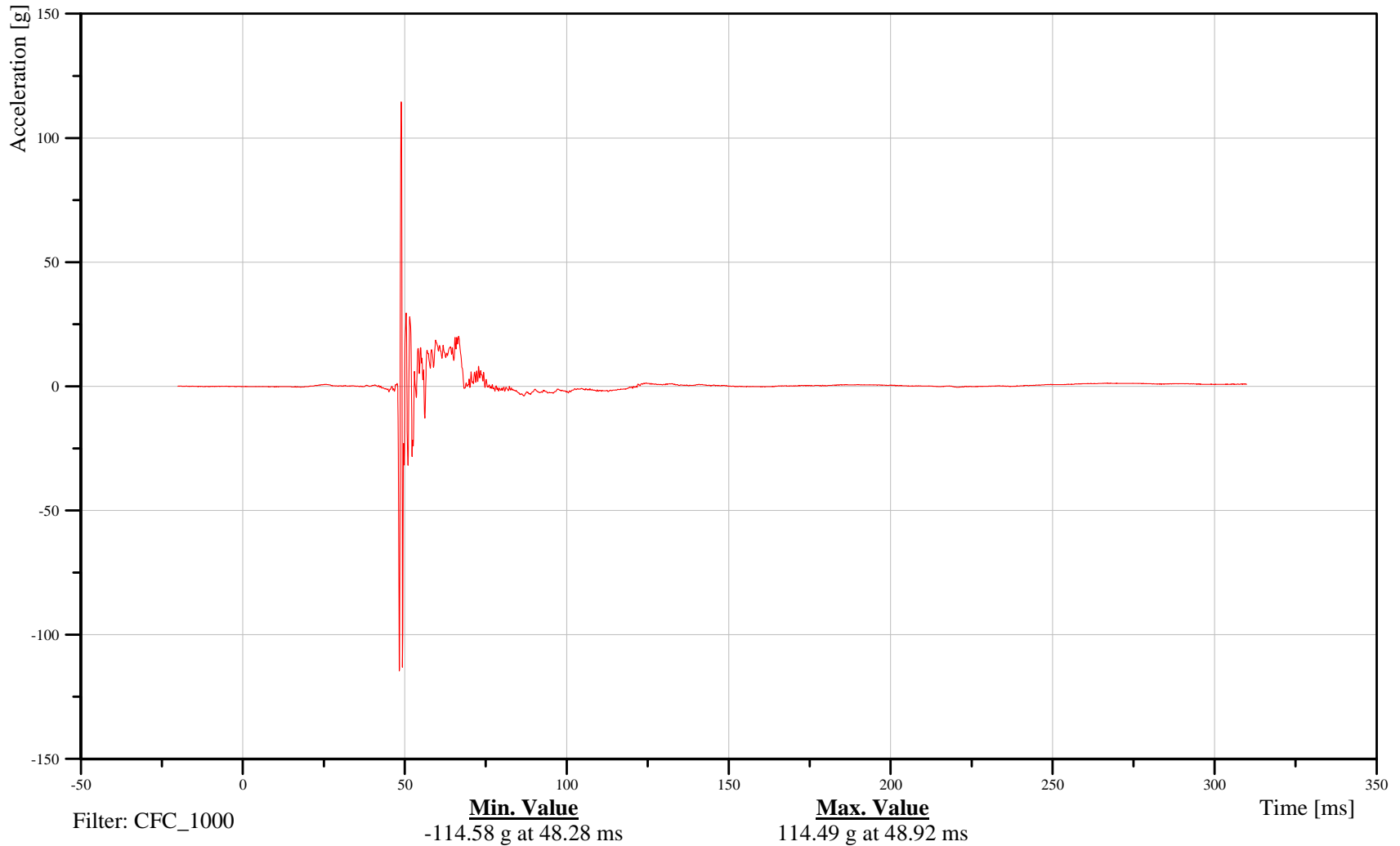
Bullet Vehicle Driver Left Tibia Y-Axis Acceleration

Customer: VRTC

11TIBILELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-209

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

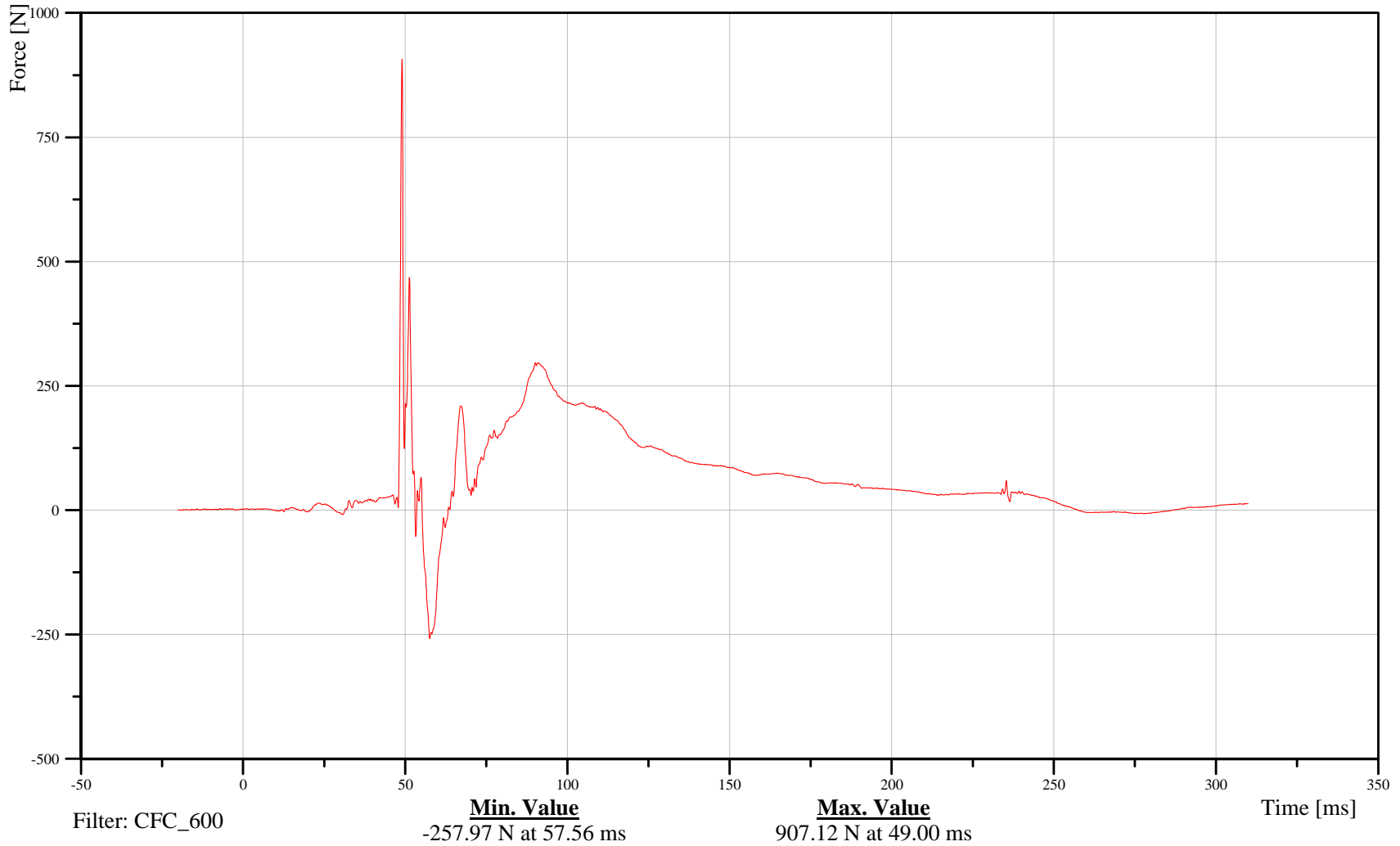
Bullet Vehicle Driver Left Lower Tibia X-Axis Force

Customer: VRTC

11TIBILLXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-210

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

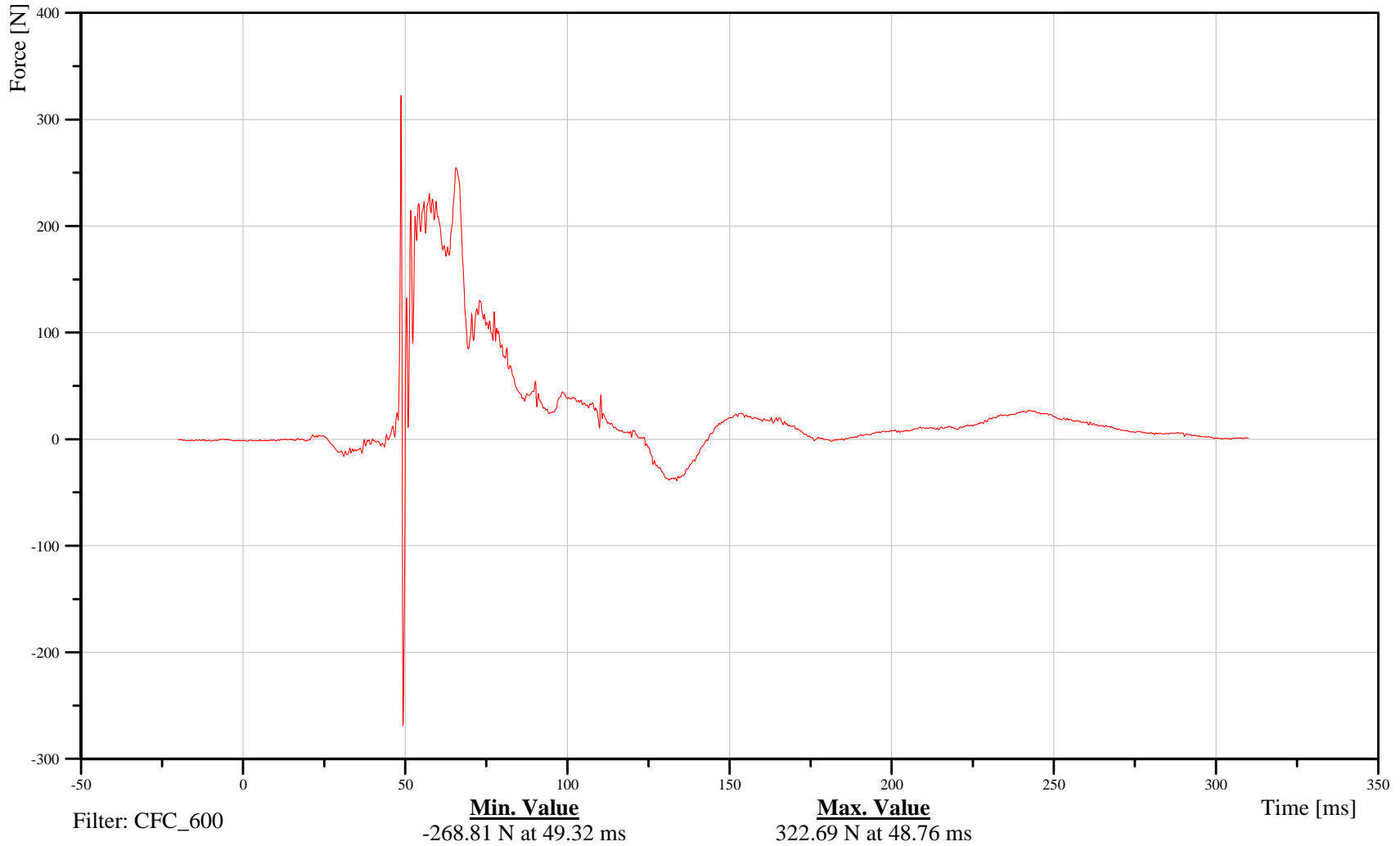
Bullet Vehicle Driver Left Lower Tibia Y-Axis Force

Customer: VRTC

11TIBILLXH3FOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-211

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

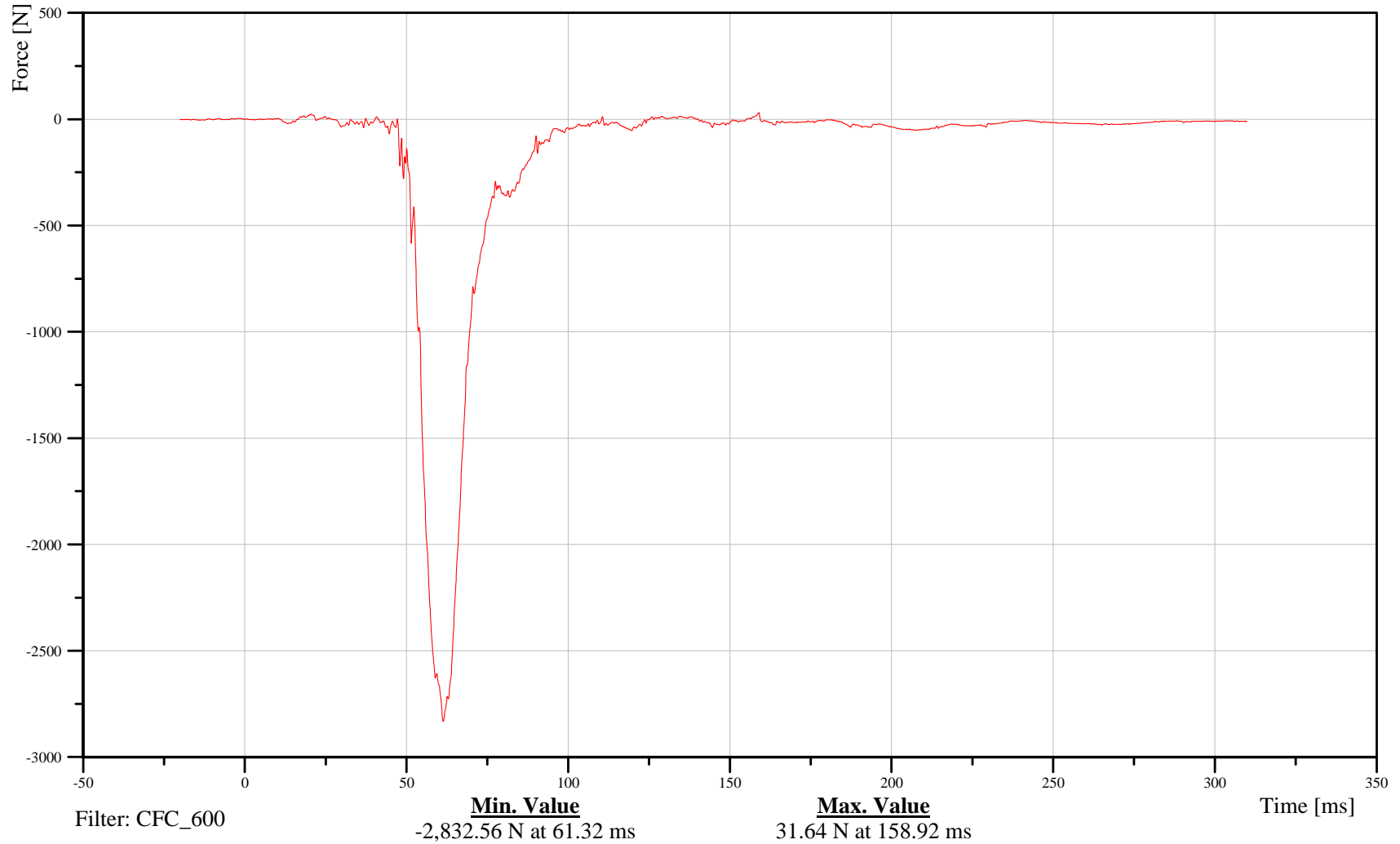
Bullet Vehicle Driver Left Lower Tibia Z-Axis Force

Customer: VRTC

11TIBILLXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-212

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

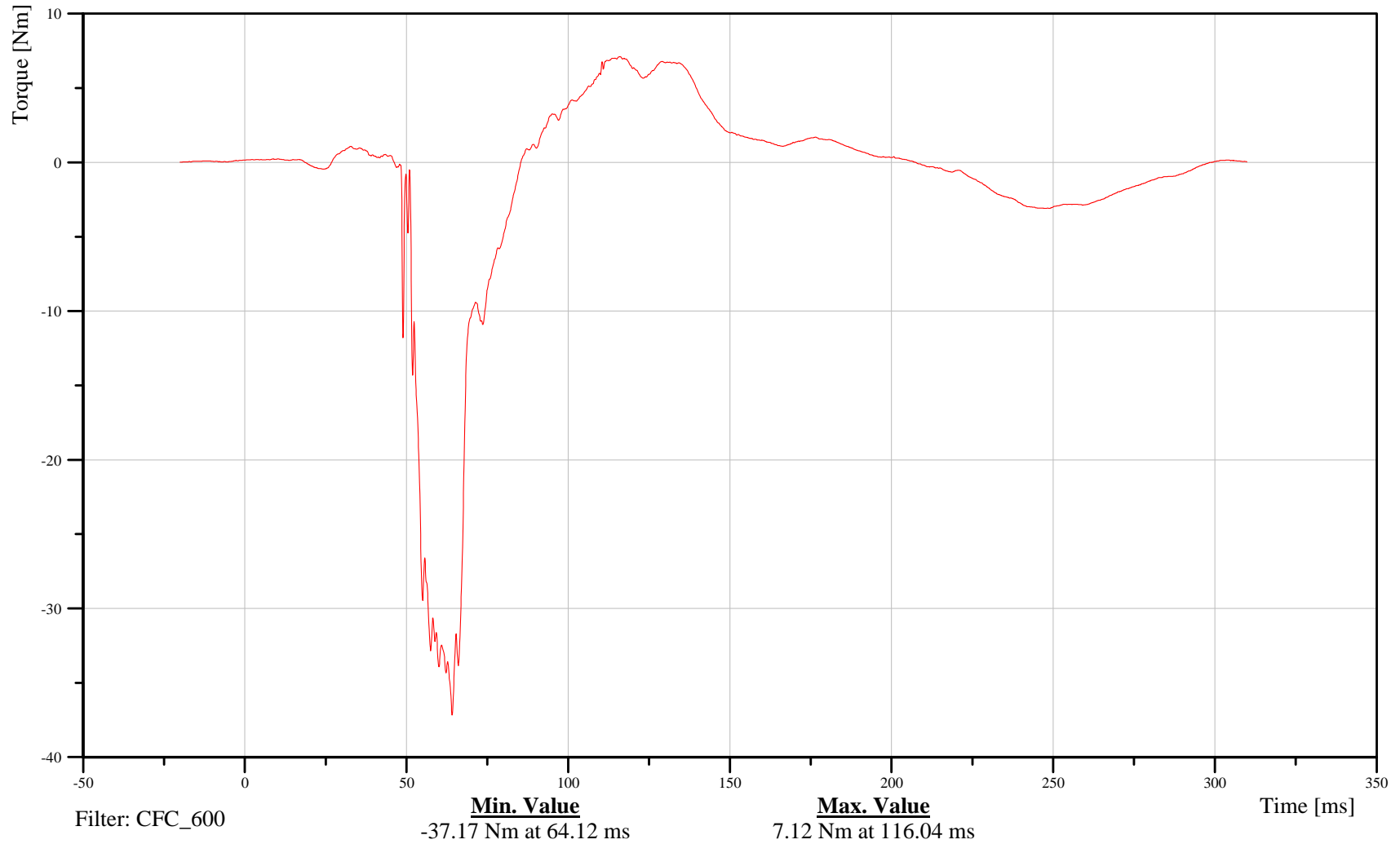
Bullet Vehicle Driver Left Lower Tibia Moment About X Axis

Customer: VRTC

11TIBILLXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-213

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

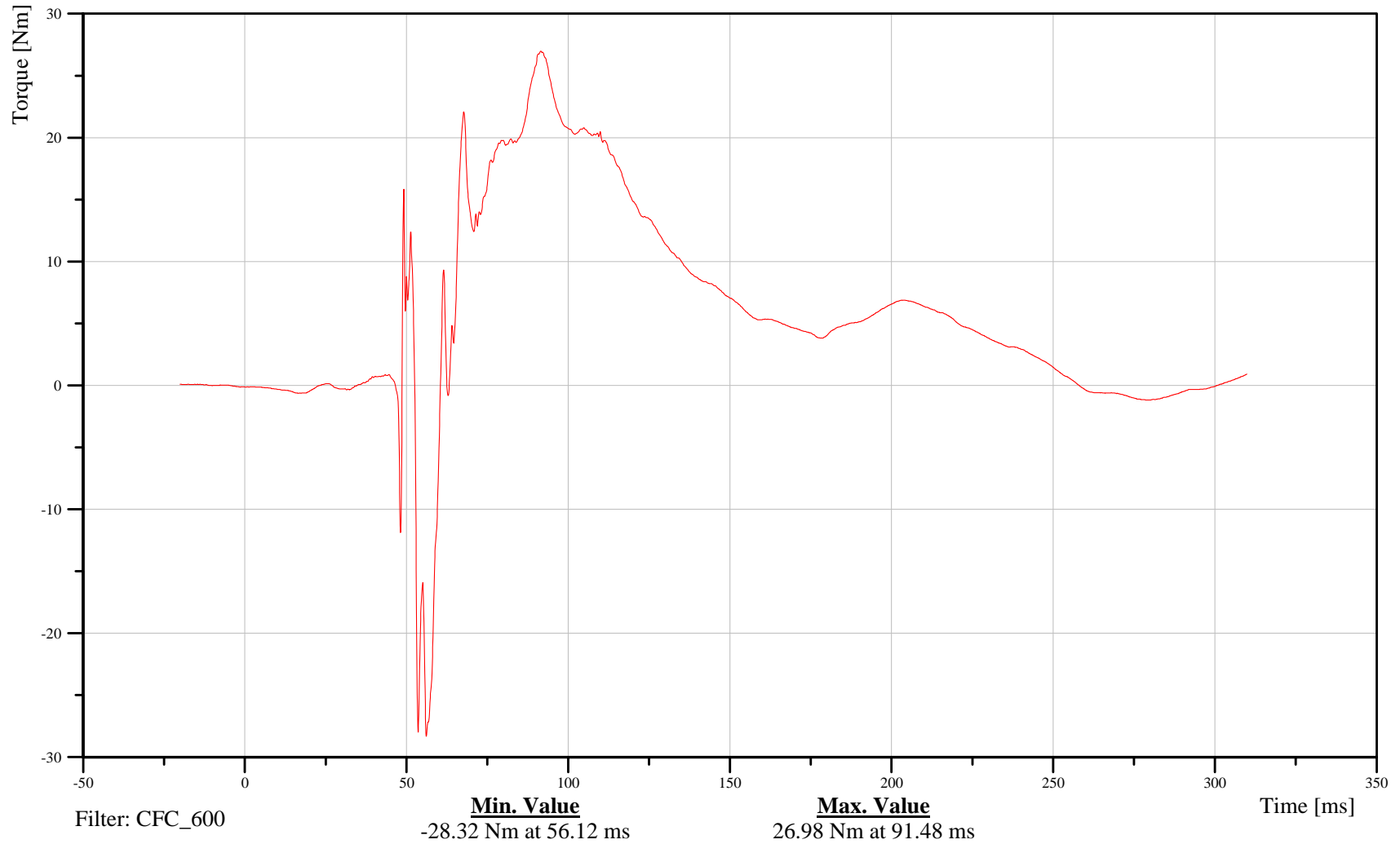
Bullet Vehicle Driver Left Lower Tibia Moment About Y Axis

Customer: VRTC

11TIBILLXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-214

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

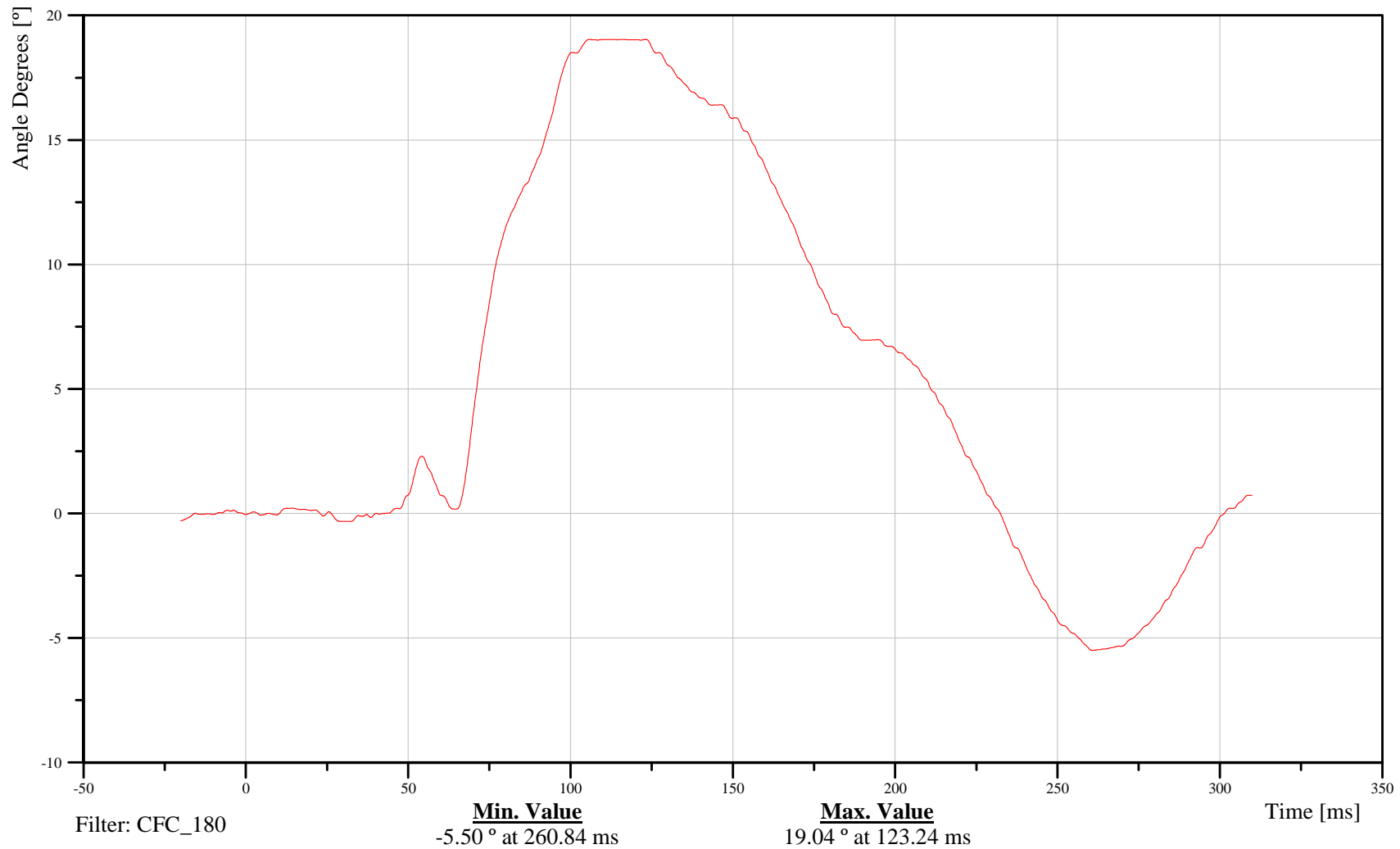
Bullet Vehicle Driver Left Foot X-Axis Angular Displacement

Customer: VRTC

11FOOTLELXH3ANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-215

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

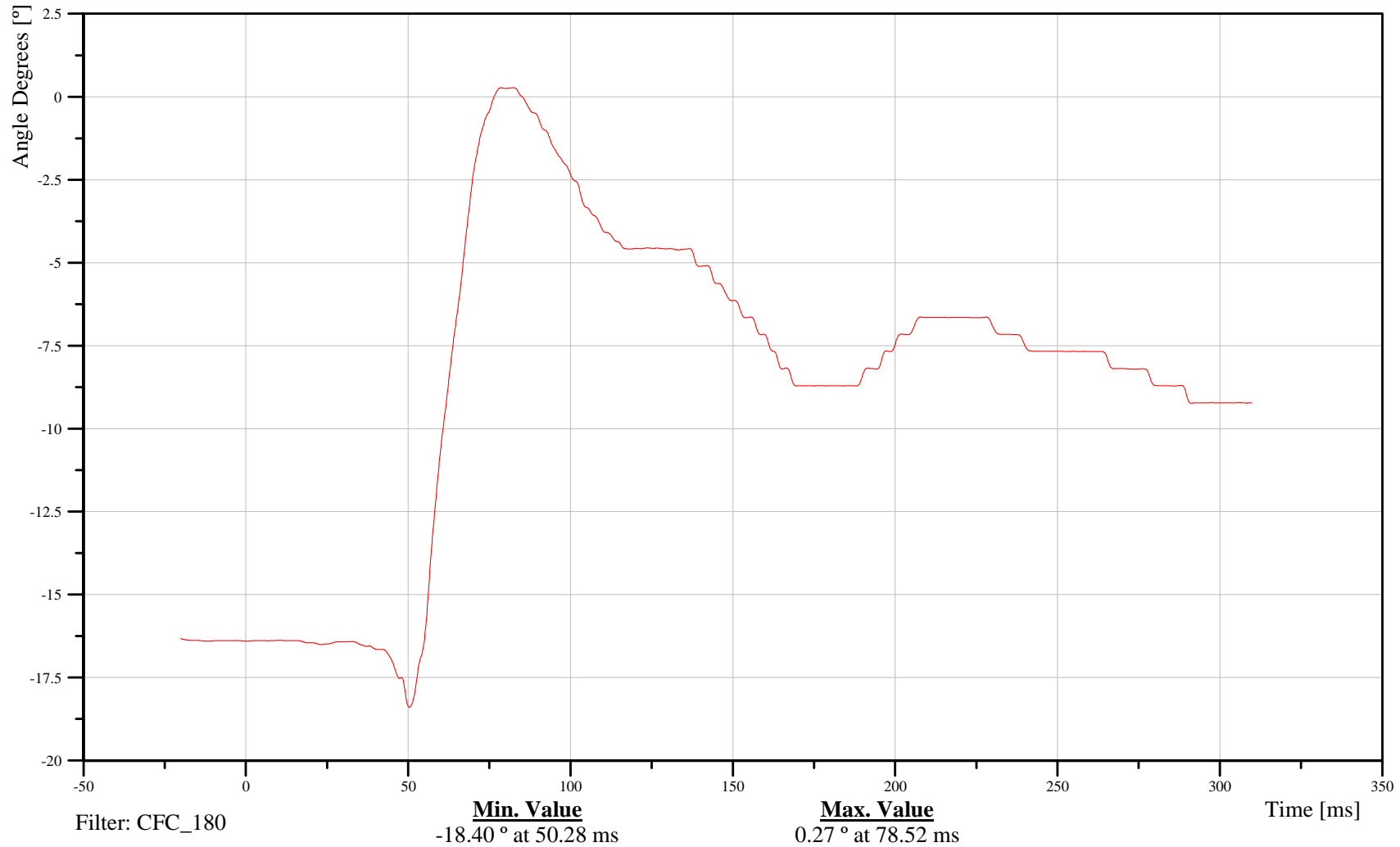
Bullet Vehicle Driver Left Foot Y-Axis Angular Displacement

Customer: VRTC

11FOOTLELXH3ANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-216

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

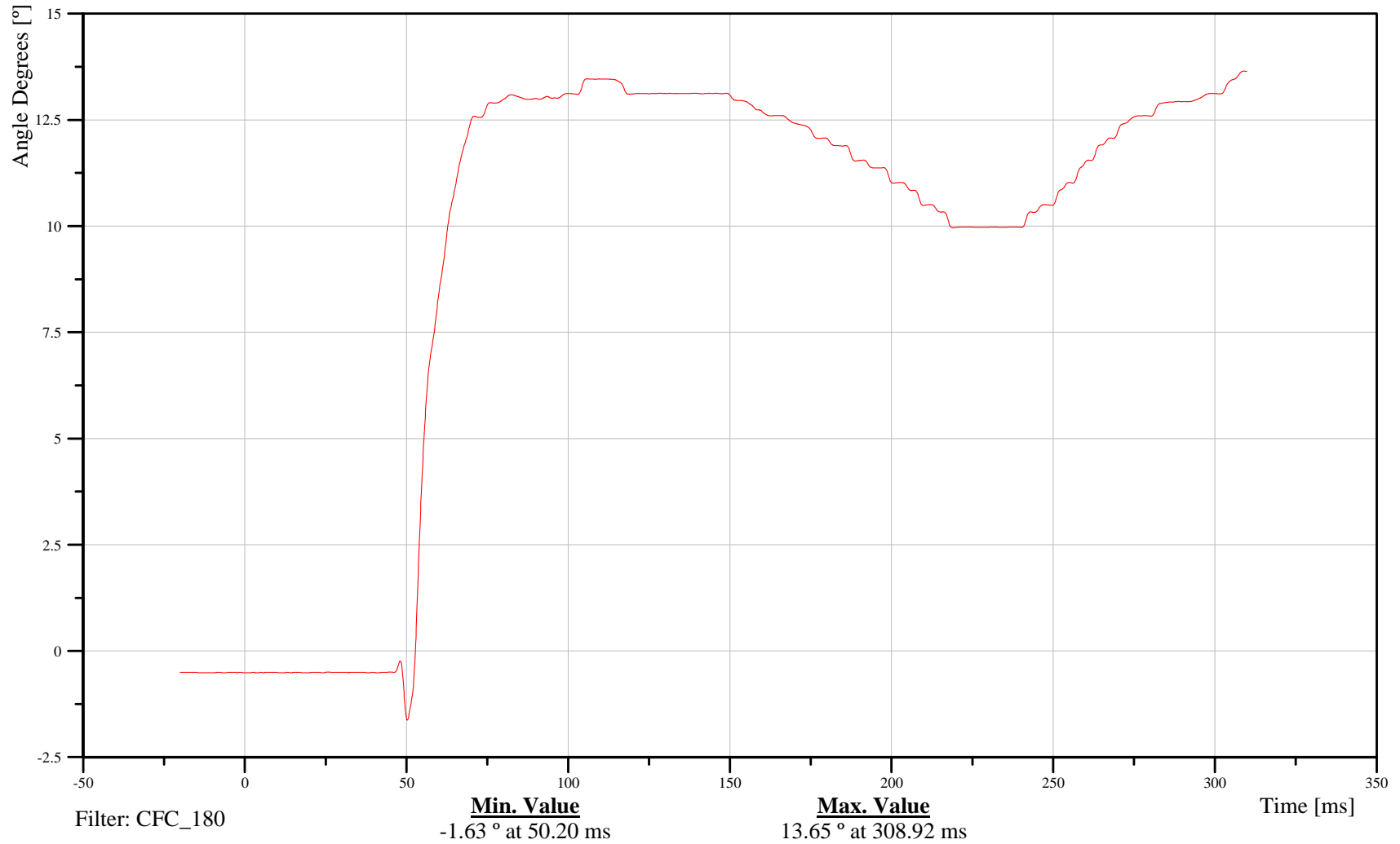
Bullet Vehicle Driver Left Foot Z-Axis Angular Displacement

Customer: VRTC

11FOOTLELXH3ANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-217

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Left Foot X-Axis Acceleration

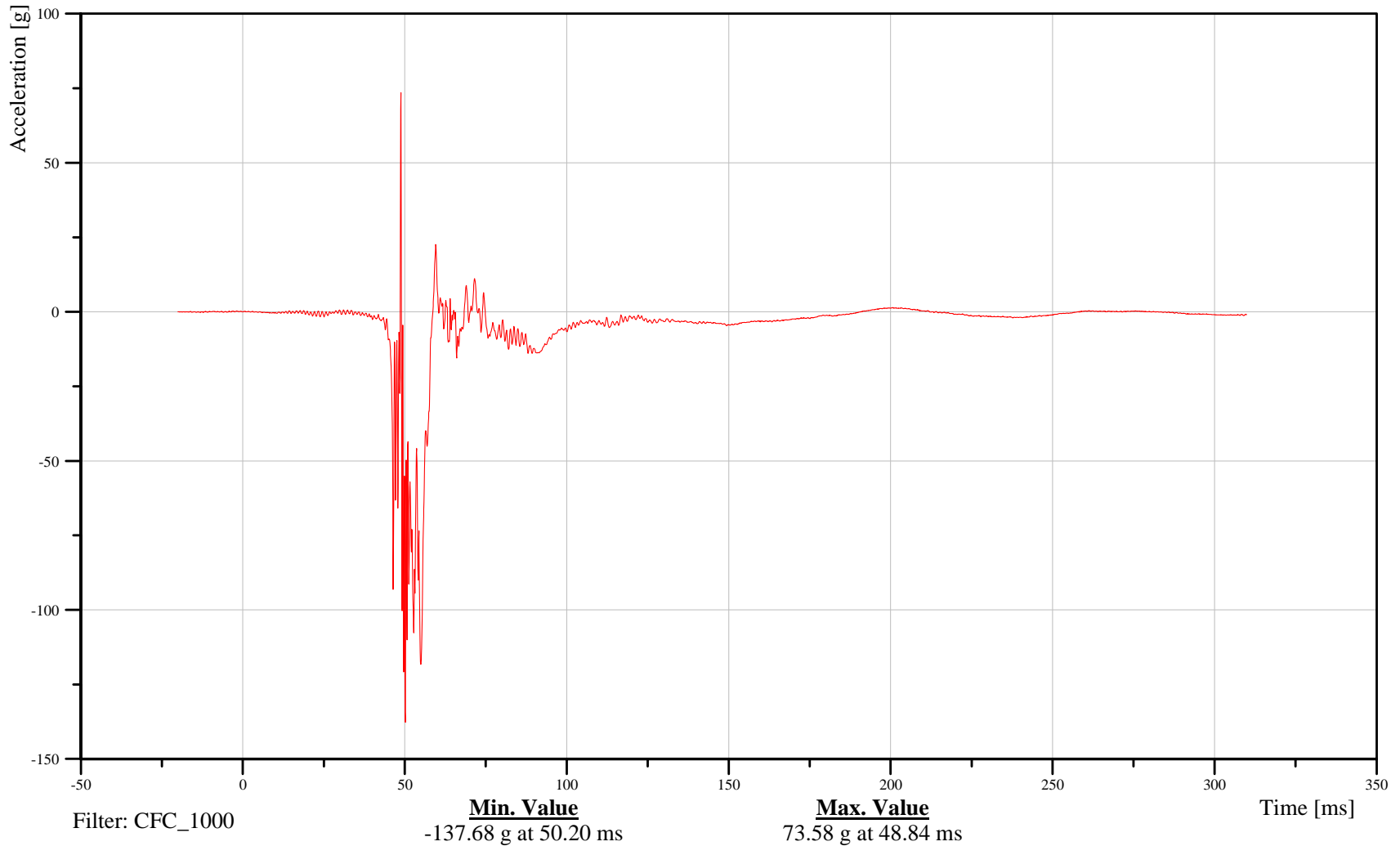
Time: 15:44

Customer: VRTC

11FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-218

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

Bullet Vehicle Driver Left Foot Y-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-219

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

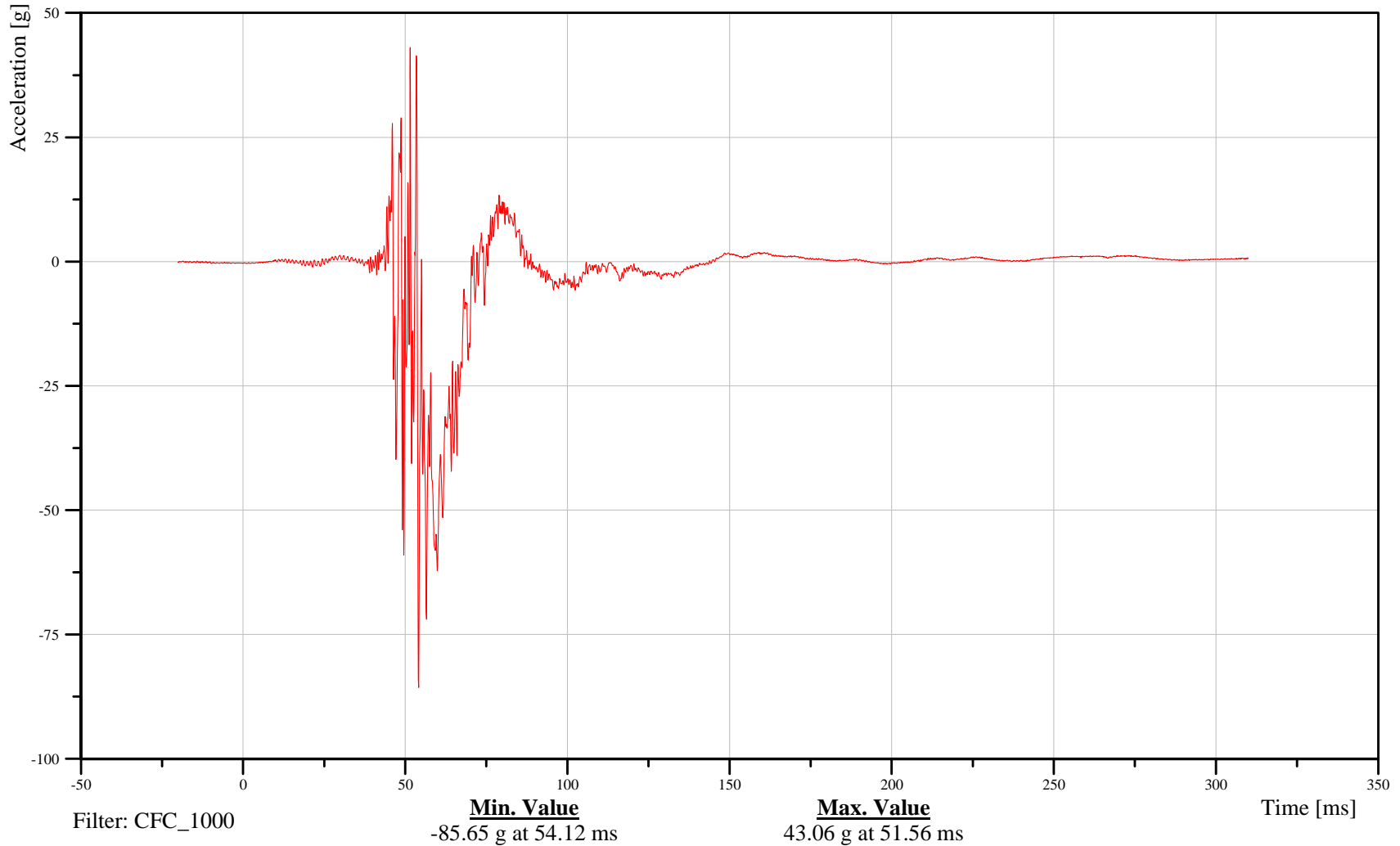
Bullet Vehicle Driver Left Foot Z-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-220

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

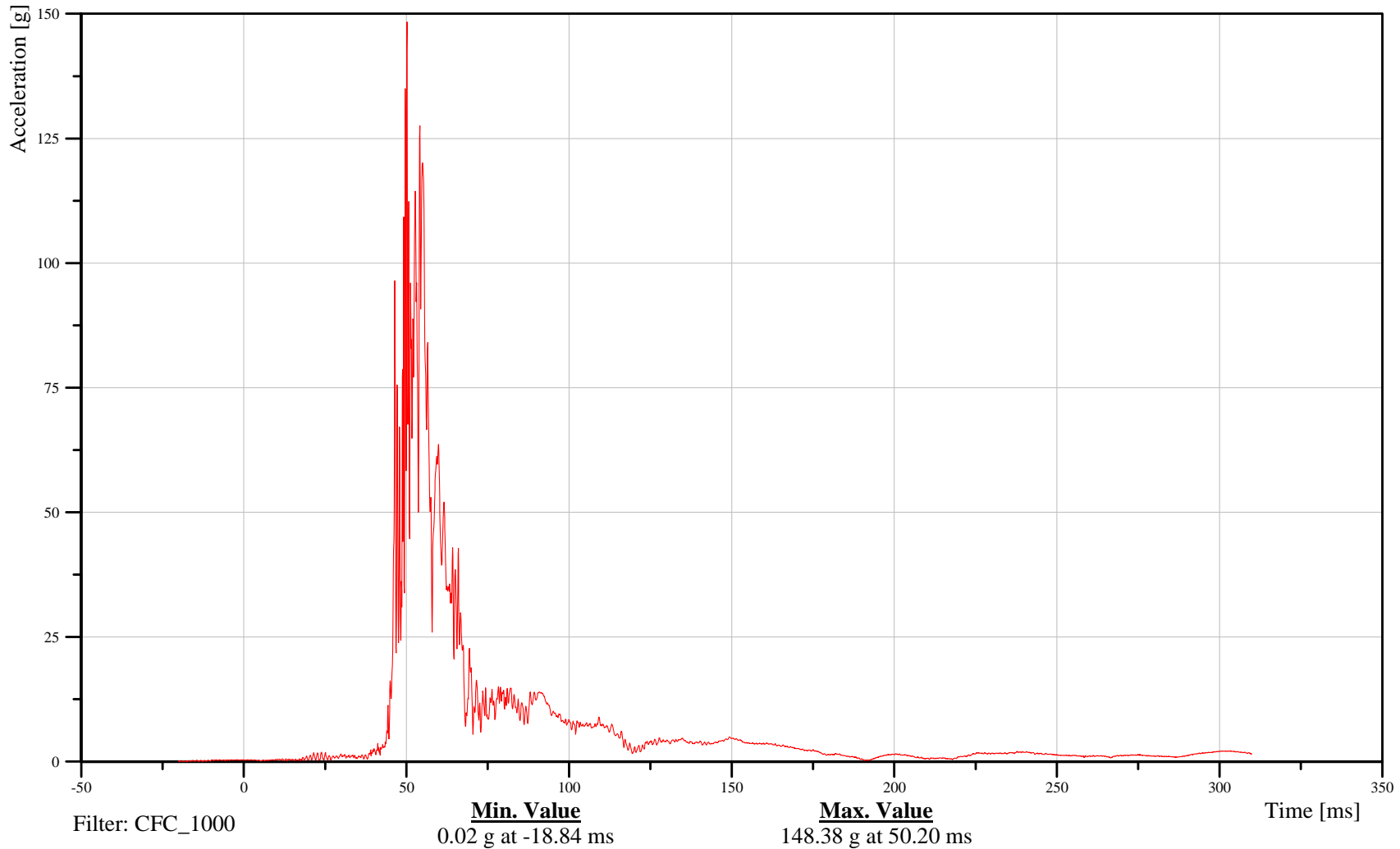
Bullet Vehicle Driver Left Foot Resultant Acceleration

Customer: VRTC

11FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-221

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Right Knee X-Axis Displacement

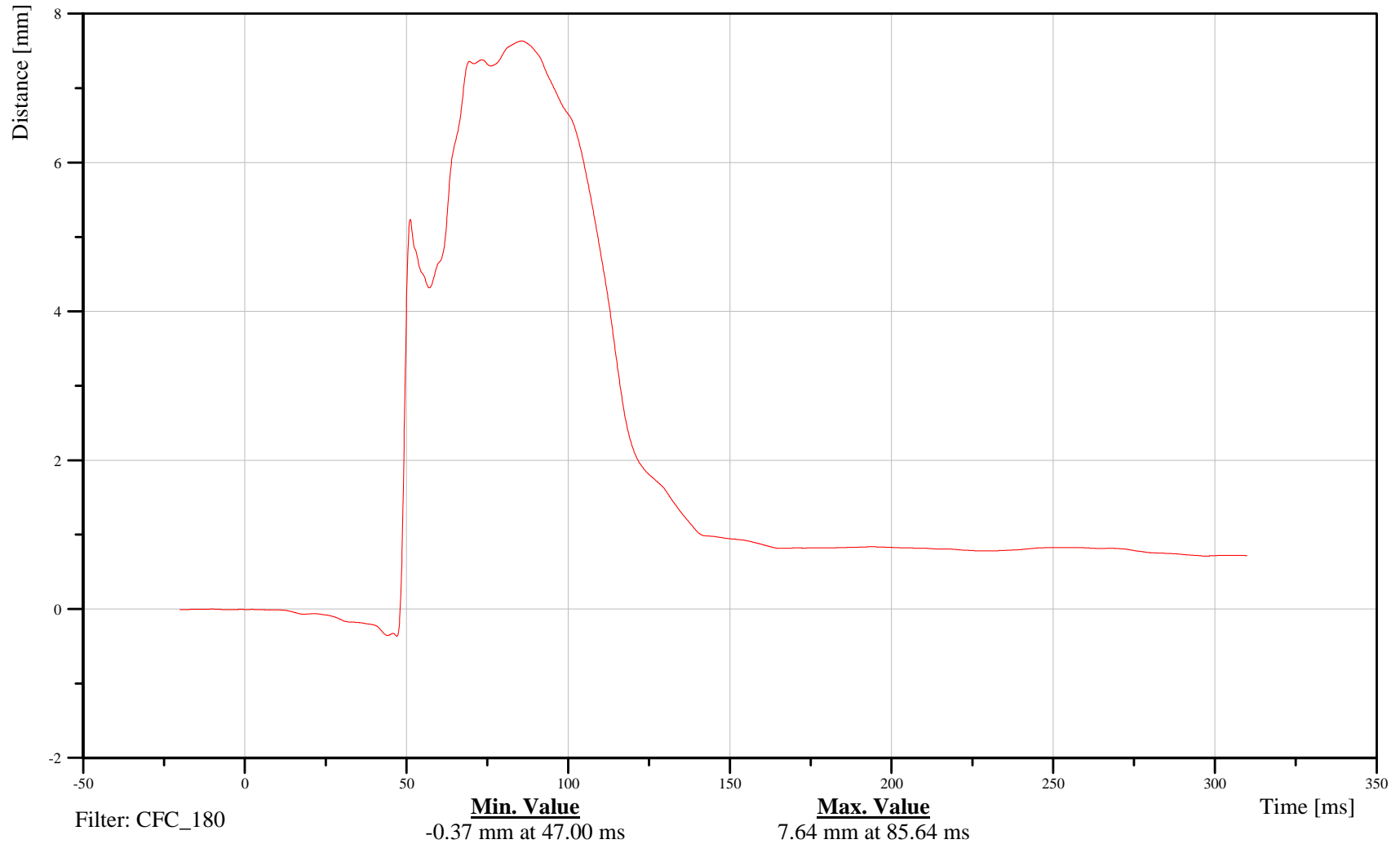
Time: 15:44

Customer: VRTC

11KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-222

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Right Upper Tibia X-Axis Force

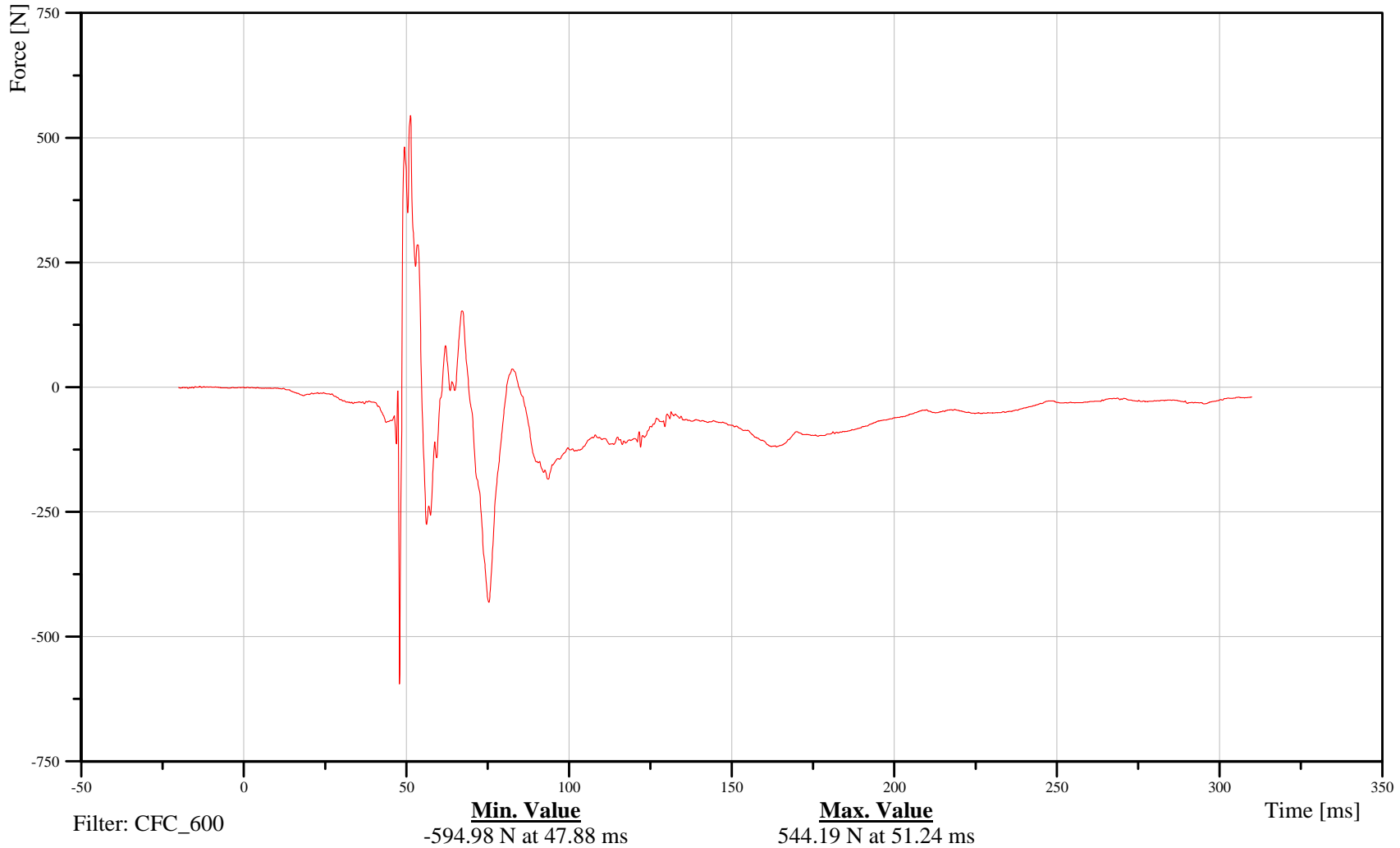
Time: 15:44

Customer: VRTC

11TIBIRULXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-223

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

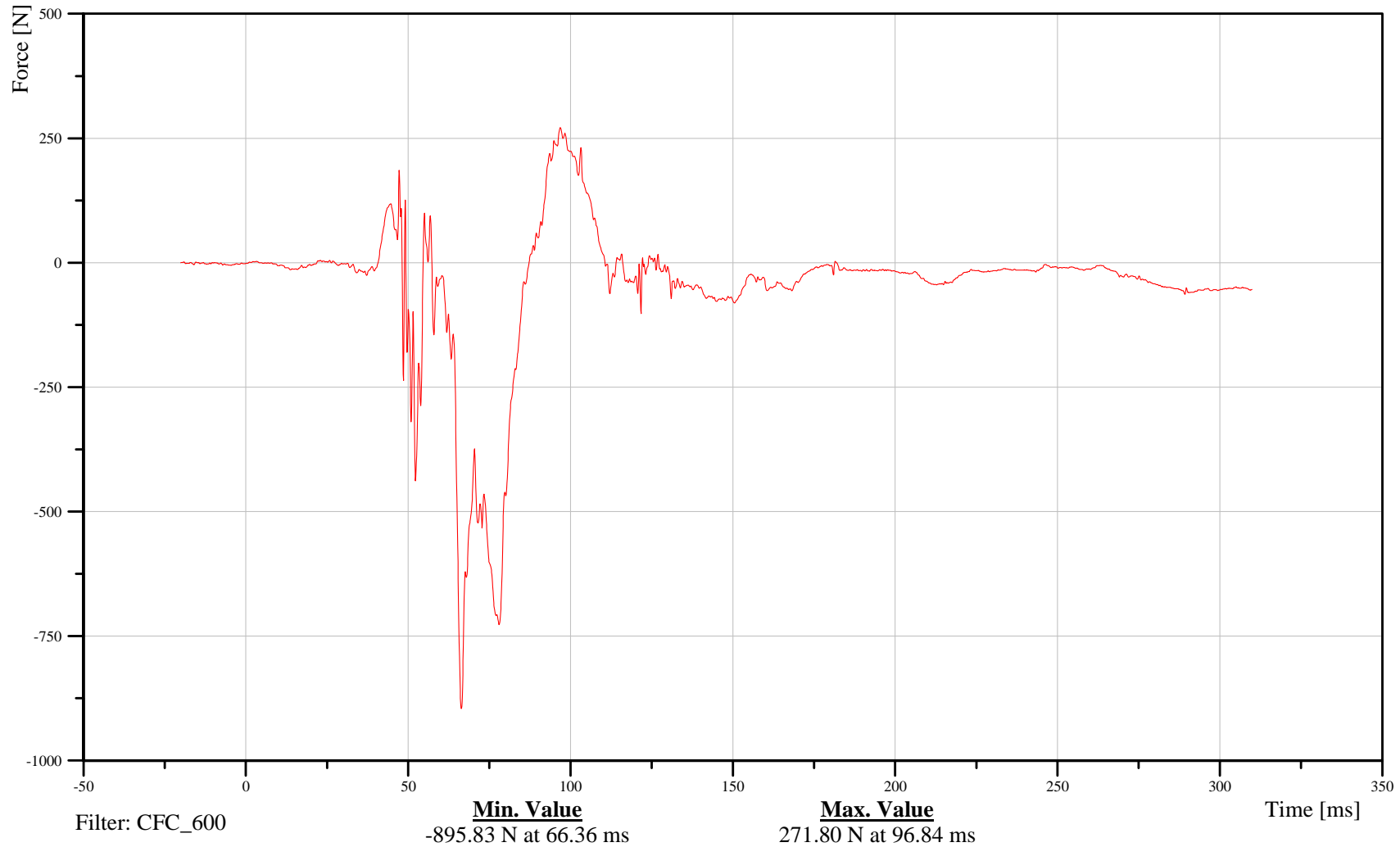
Bullet Vehicle Driver Right Upper Tibia Z-Axis Force

Customer: VRTC

11TIBIRULXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-224

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Right Upper Tibia Moment About X Axis

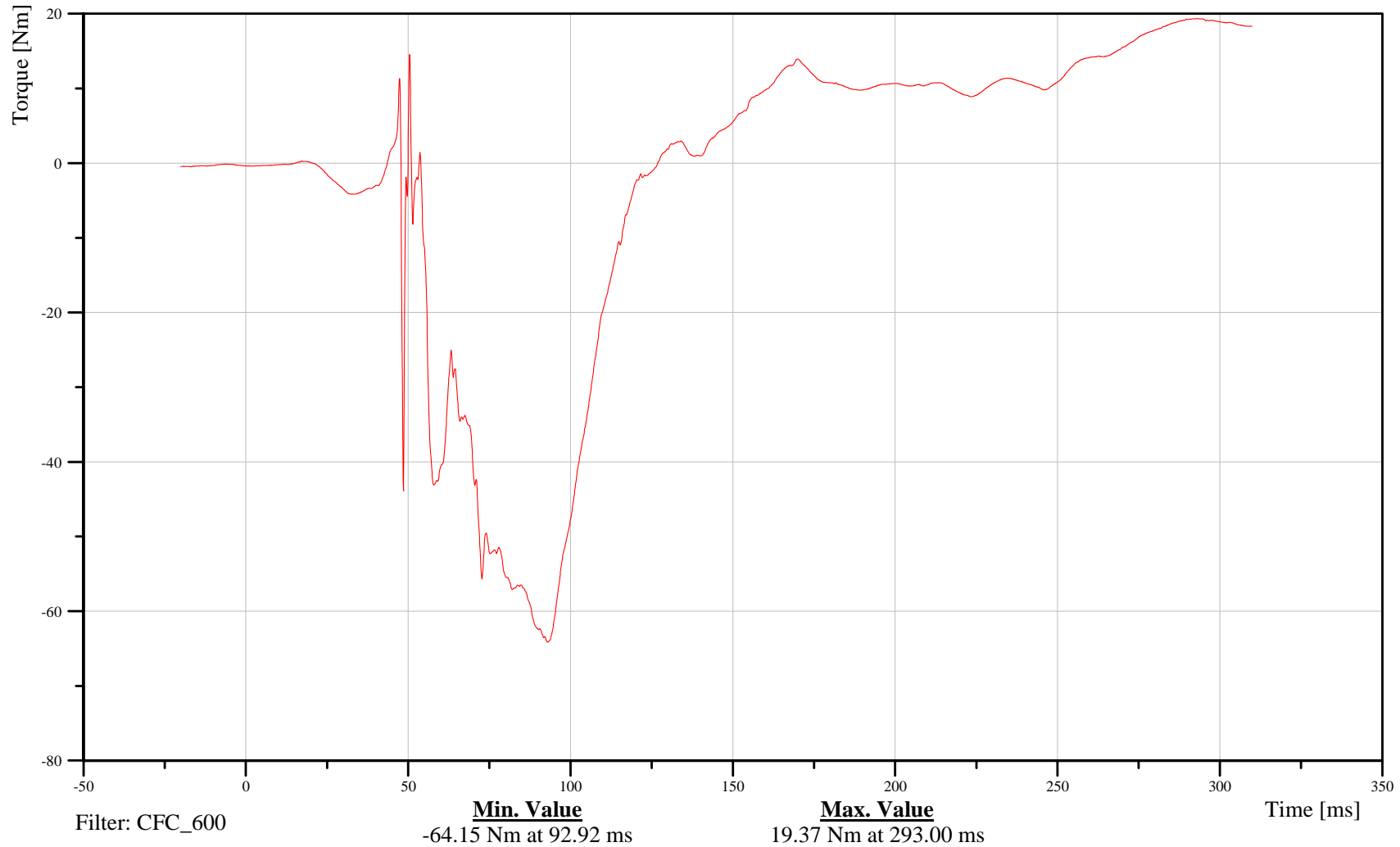
Time: 15:44

Customer: VRTC

11TIBIRULXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-225

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Right Upper Tibia Moment About Y Axis

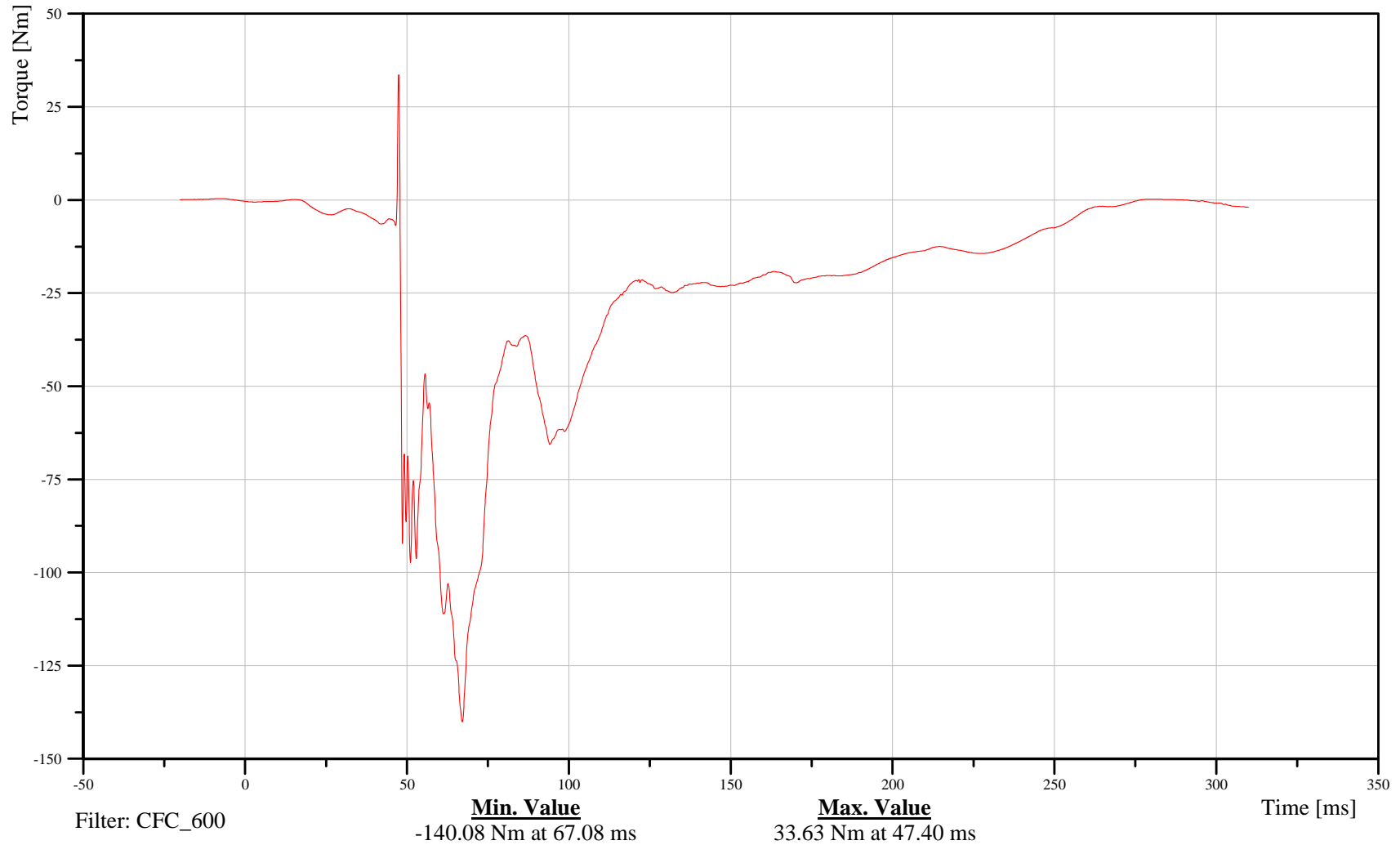
Time: 15:44

Customer: VRTC

11TIBIRULXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-226

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

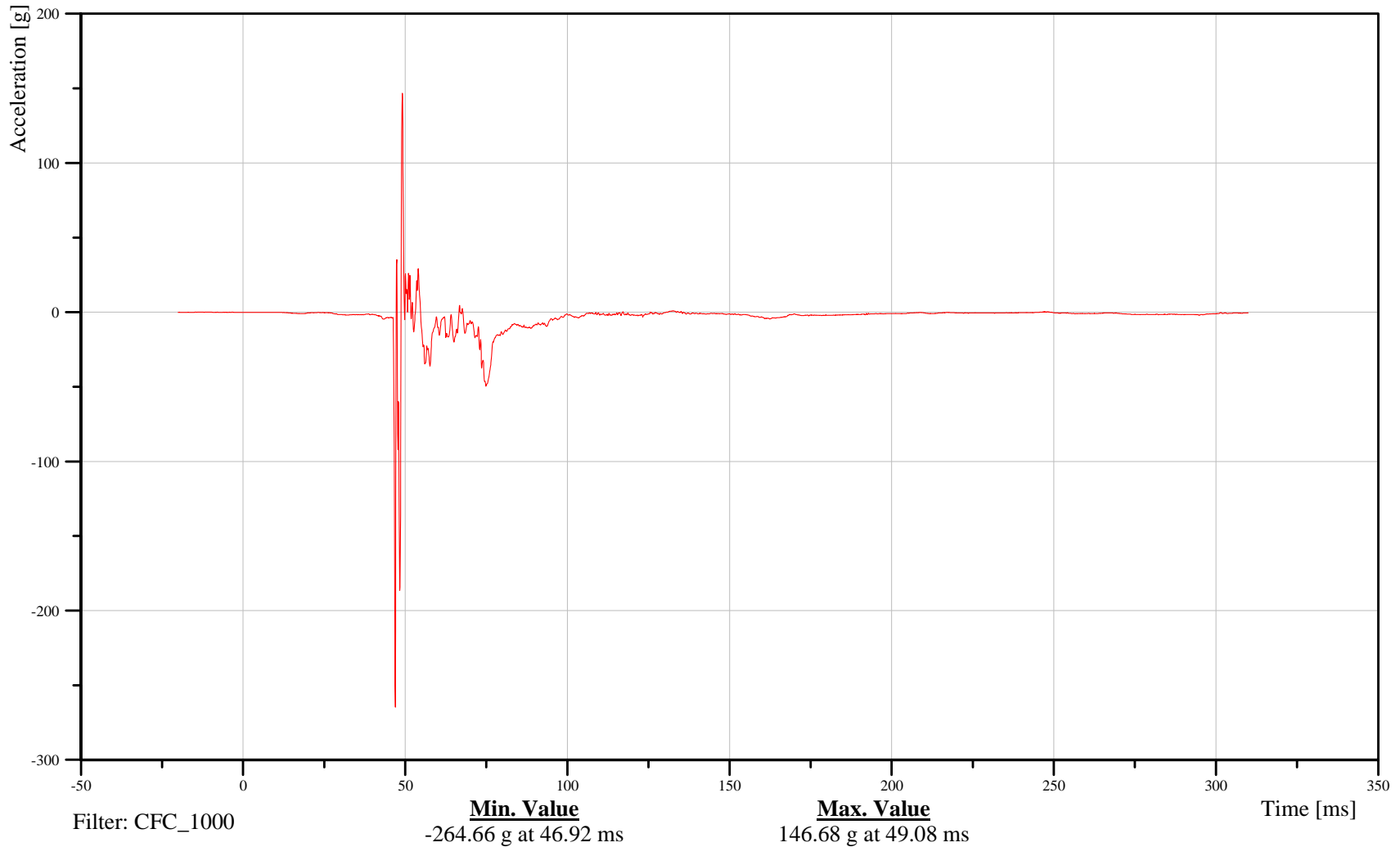
Bullet Vehicle Driver Right Tibia X-Axis Acceleration

Customer: VRTC

11TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-227

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

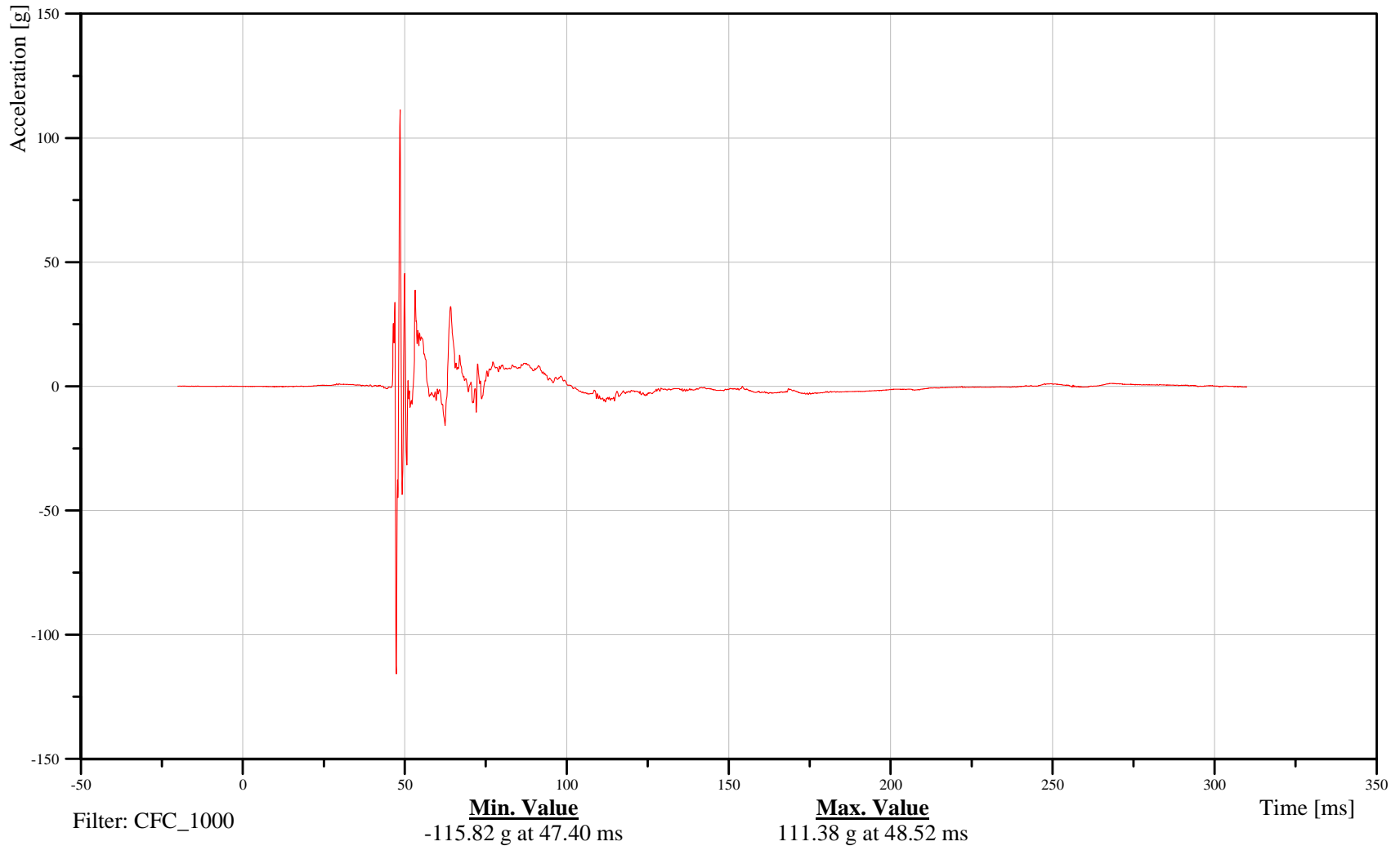
Bullet Vehicle Driver Right Tibia Y-Axis Acceleration

Customer: VRTC

11TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-228

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

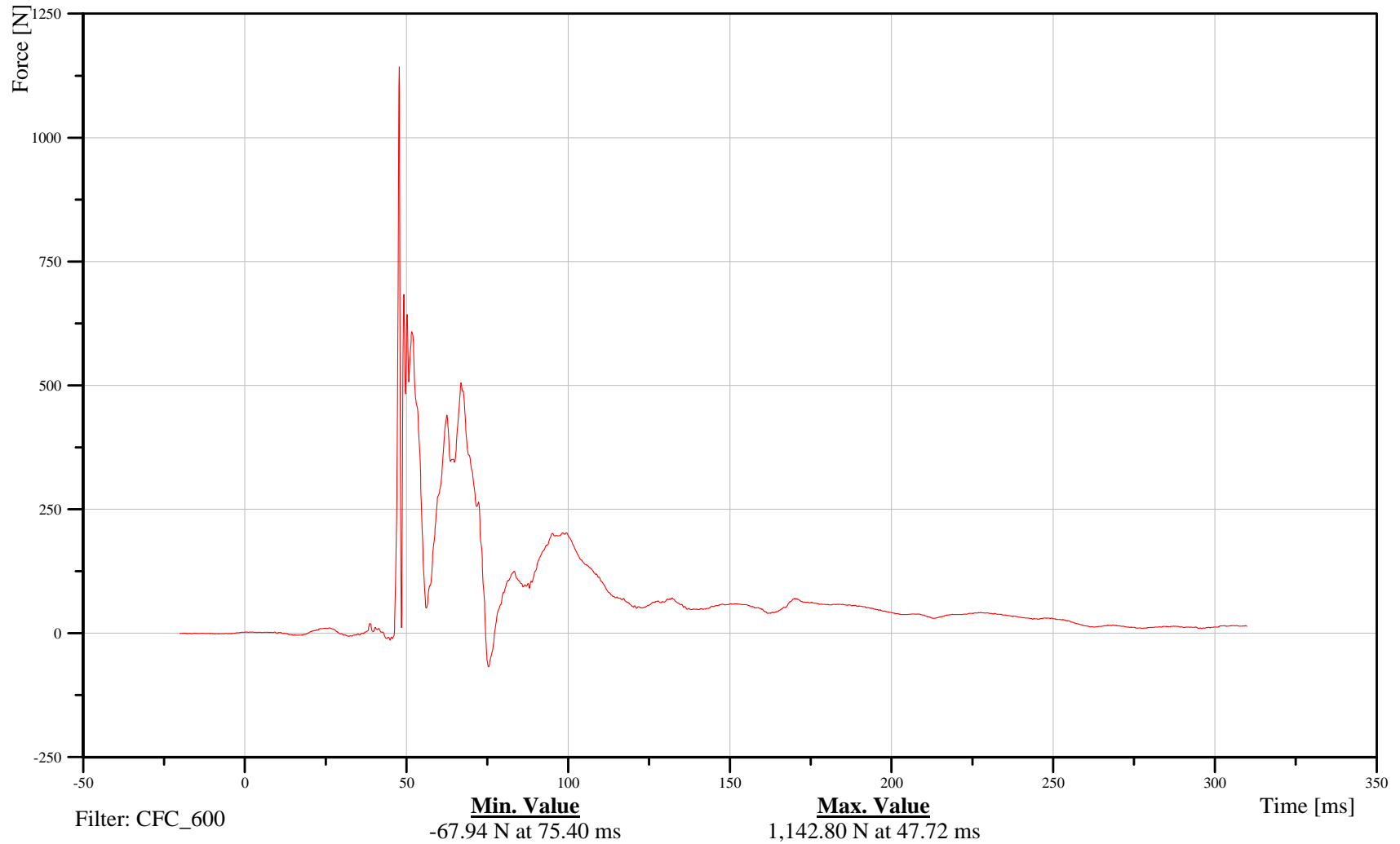
Bullet Vehicle Driver Right Lower Tibia X-Axis Force

Customer: VRTC

11TIBIRLLXH3FOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-229

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

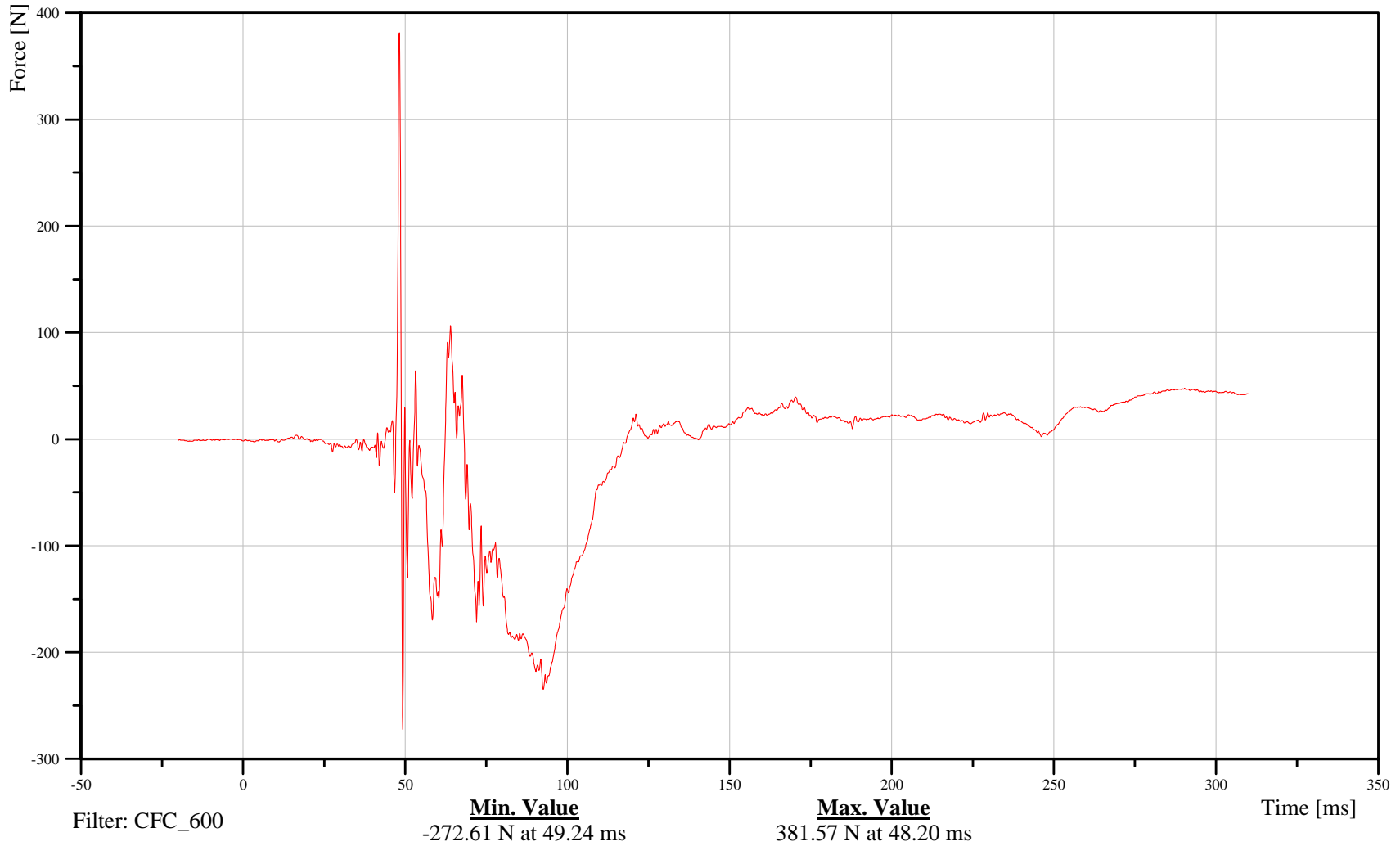
Bullet Vehicle Driver Right Lower Tibia Y-Axis Force

Customer: VRTC

11TIBIRLLXH3FOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-230

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

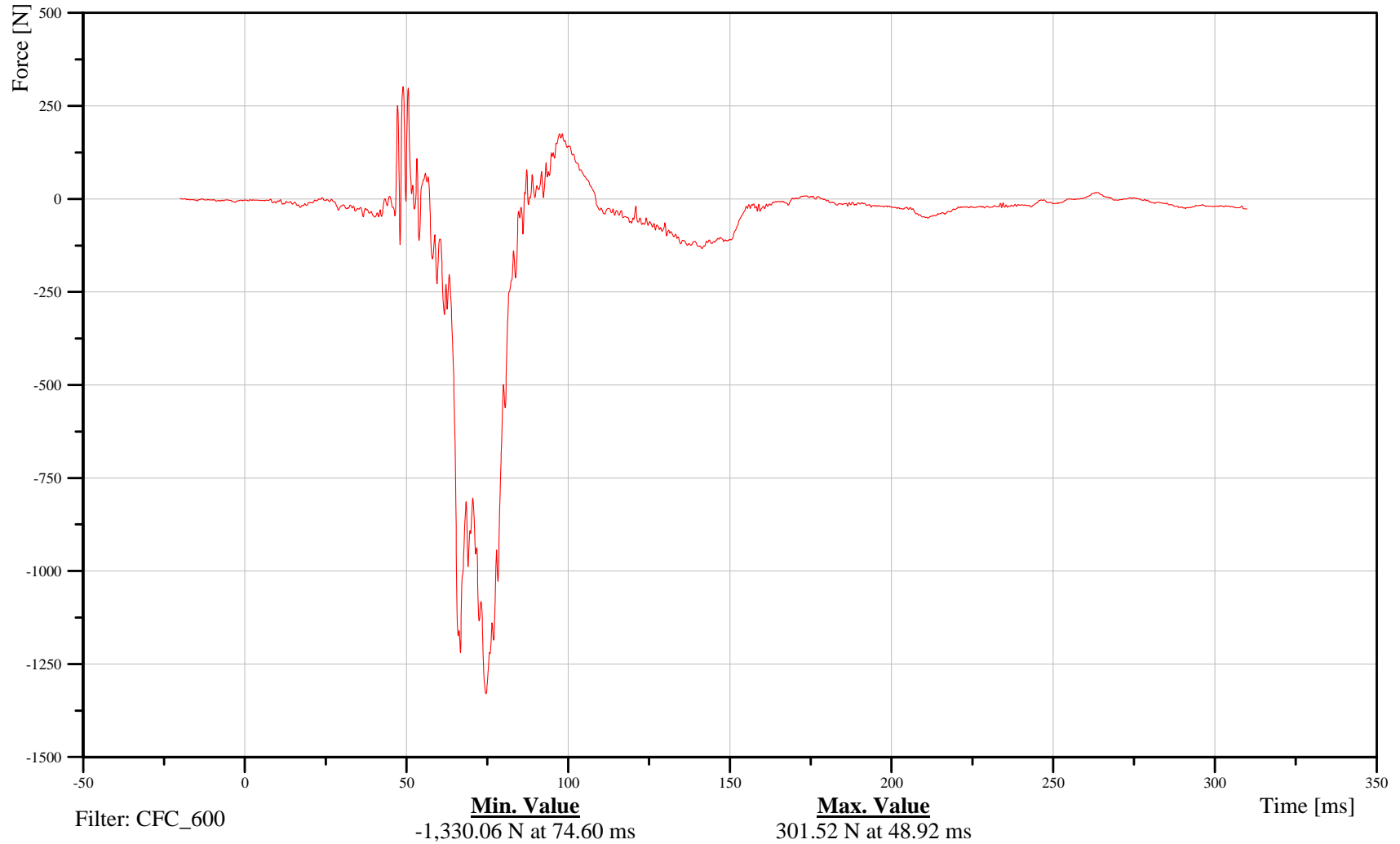
Bullet Vehicle Driver Right Lower Tibia Z-Axis Force

Customer: VRTC

11TIBIRLLXH3FOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-231

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

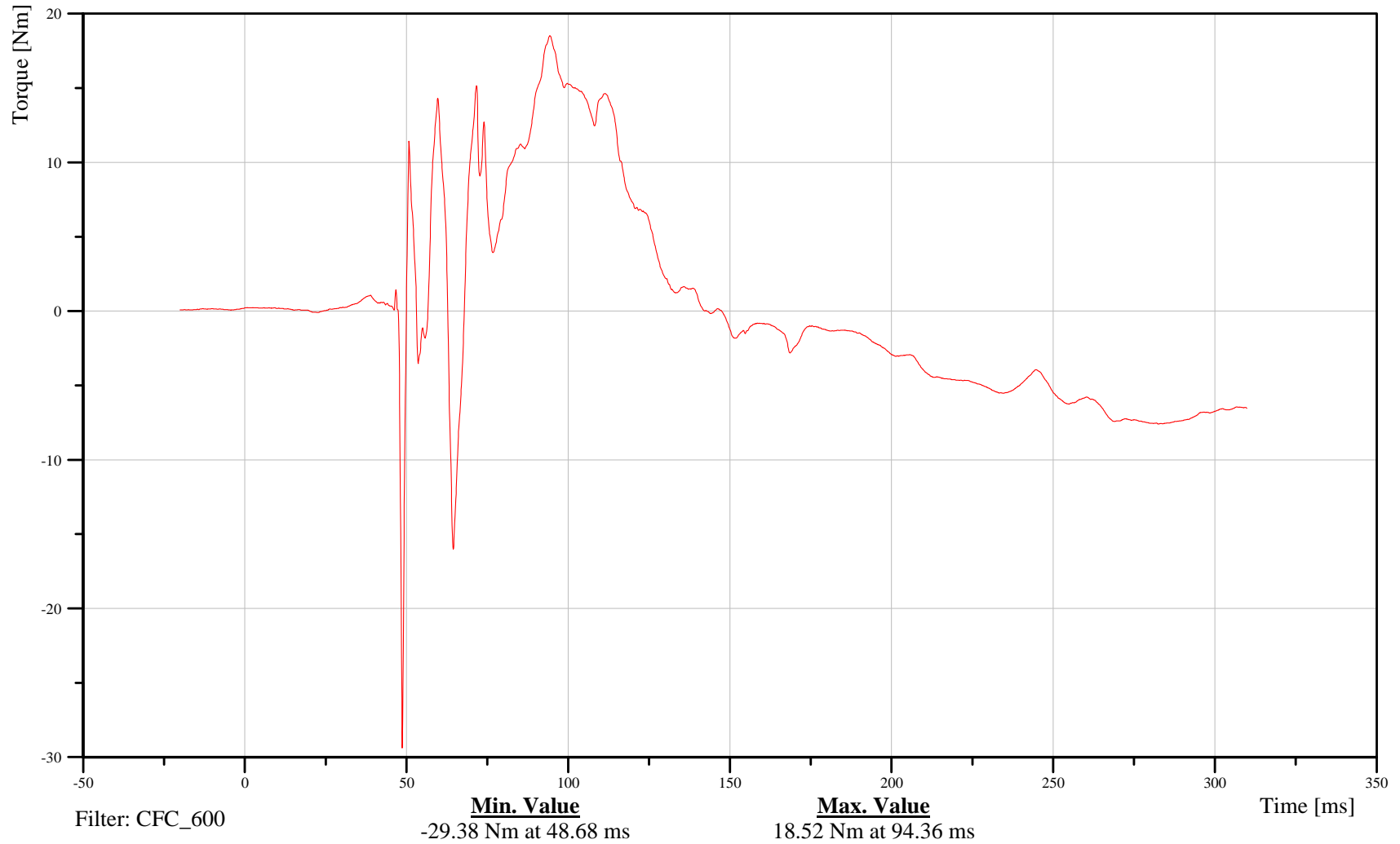
Bullet Vehicle Driver Right Lower Tibia Moment About X Axis

Customer: VRTC

11TIBIRLLXH3MOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-232

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

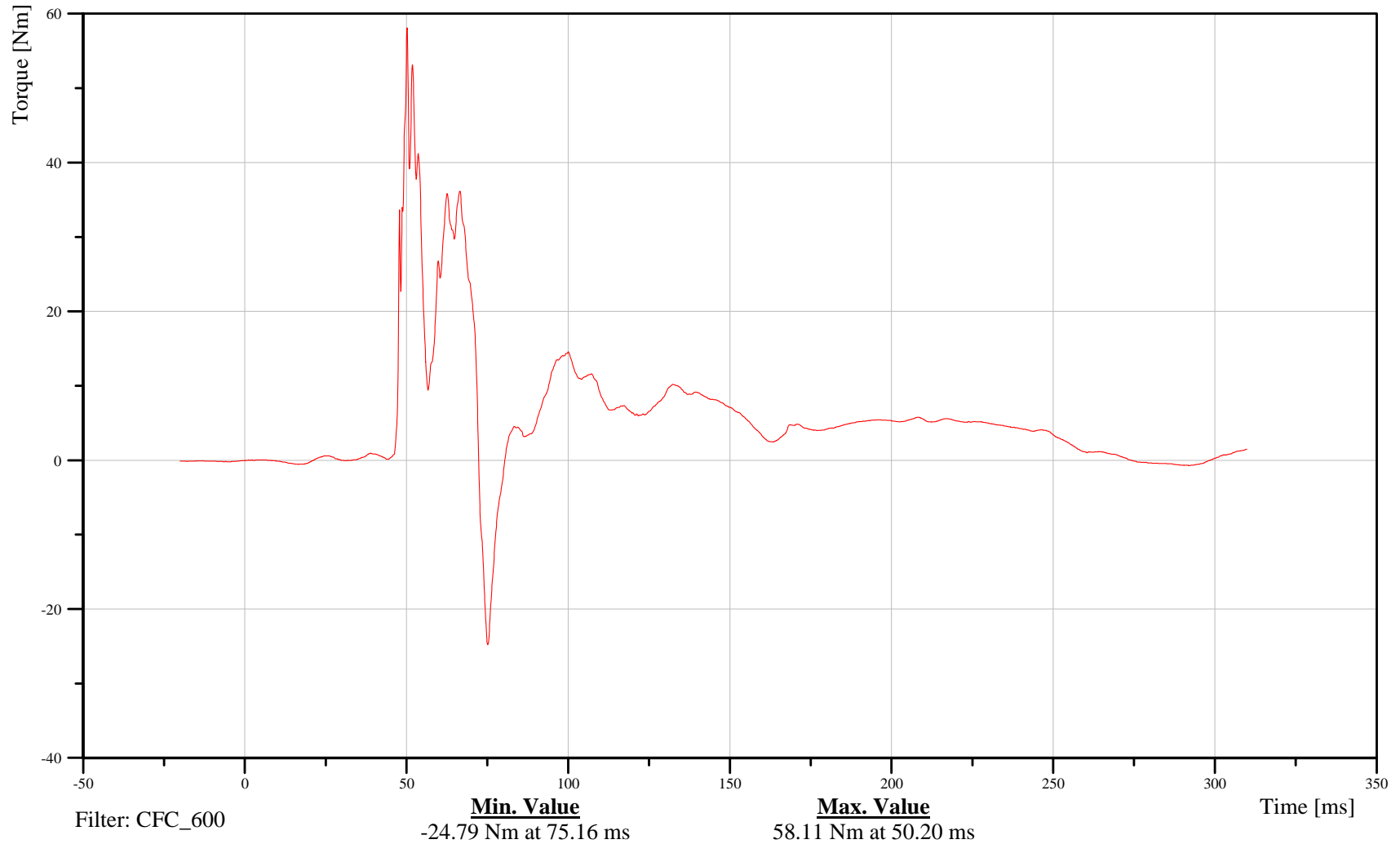
Bullet Vehicle Driver Right Lower Tibia Moment About Y Axis

Customer: VRTC

11TIBIRLLXH3MOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-233

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

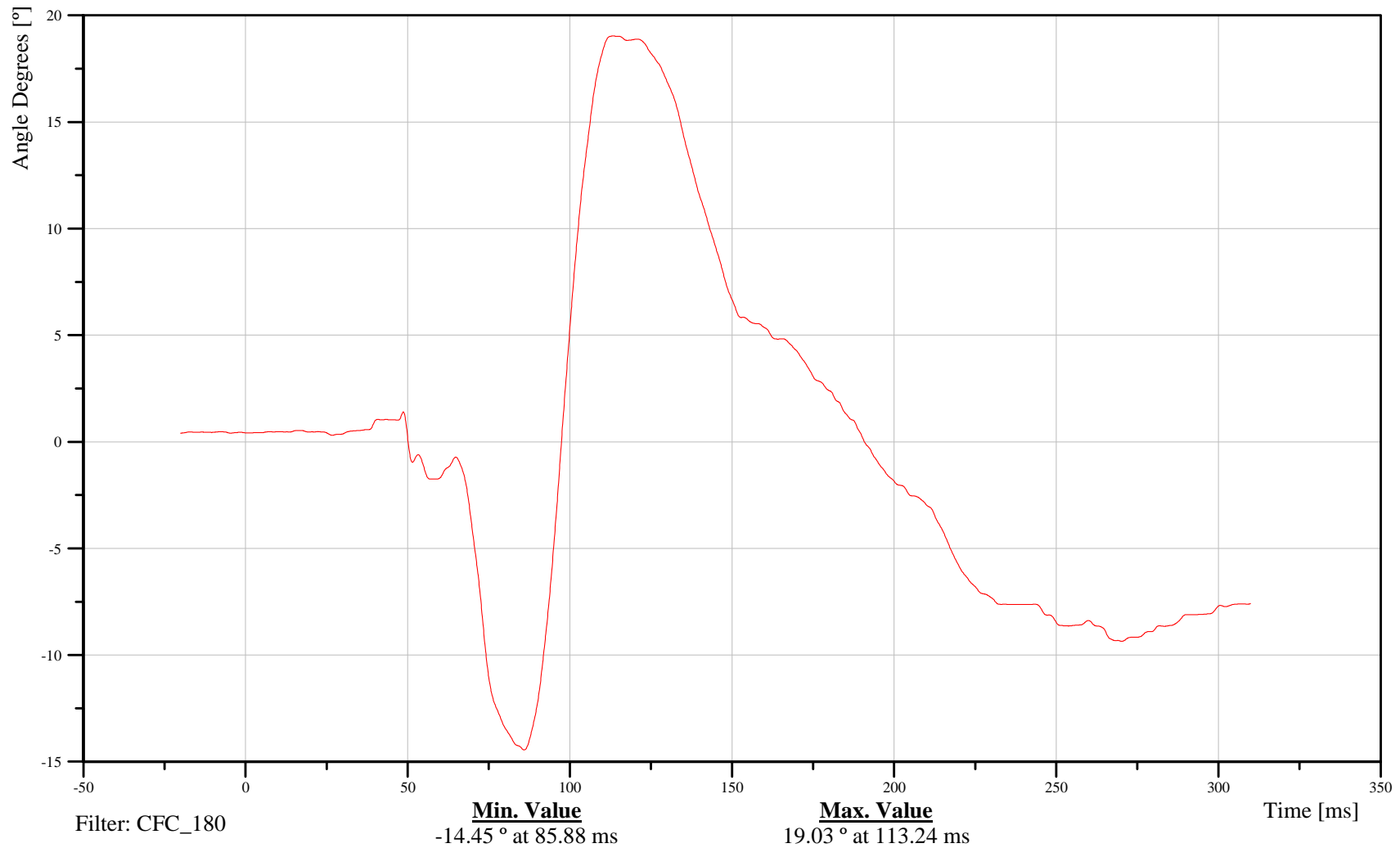
Bullet Vehicle Driver Right Foot X-Axis Angular Displacement

Customer: VRTC

11FOOTRILXH3ANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-234

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Driver Right Foot Y-Axis Angular Displacement

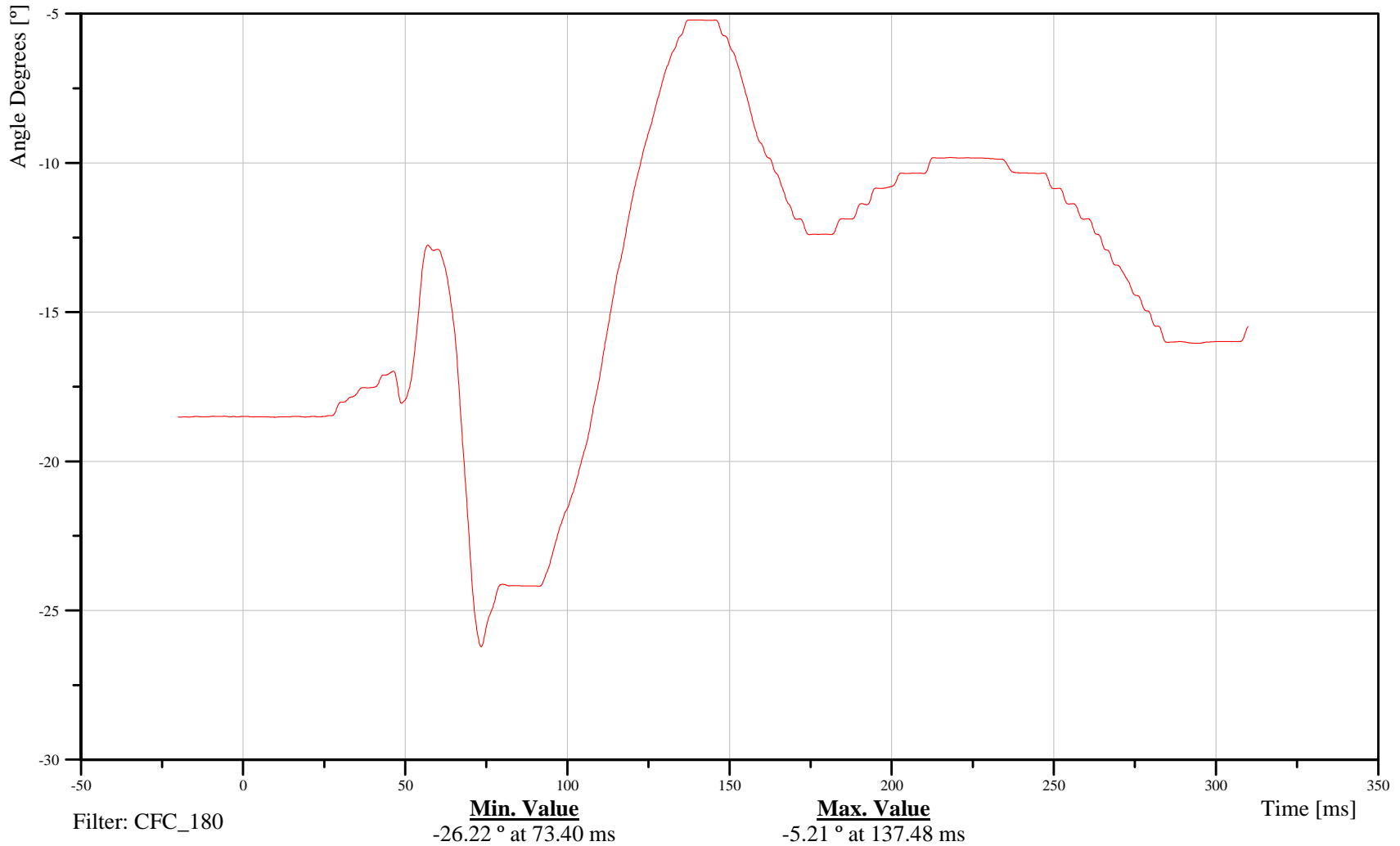
Time: 15:44

Customer: VRTC

11FOOTRILXH3ANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-235

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

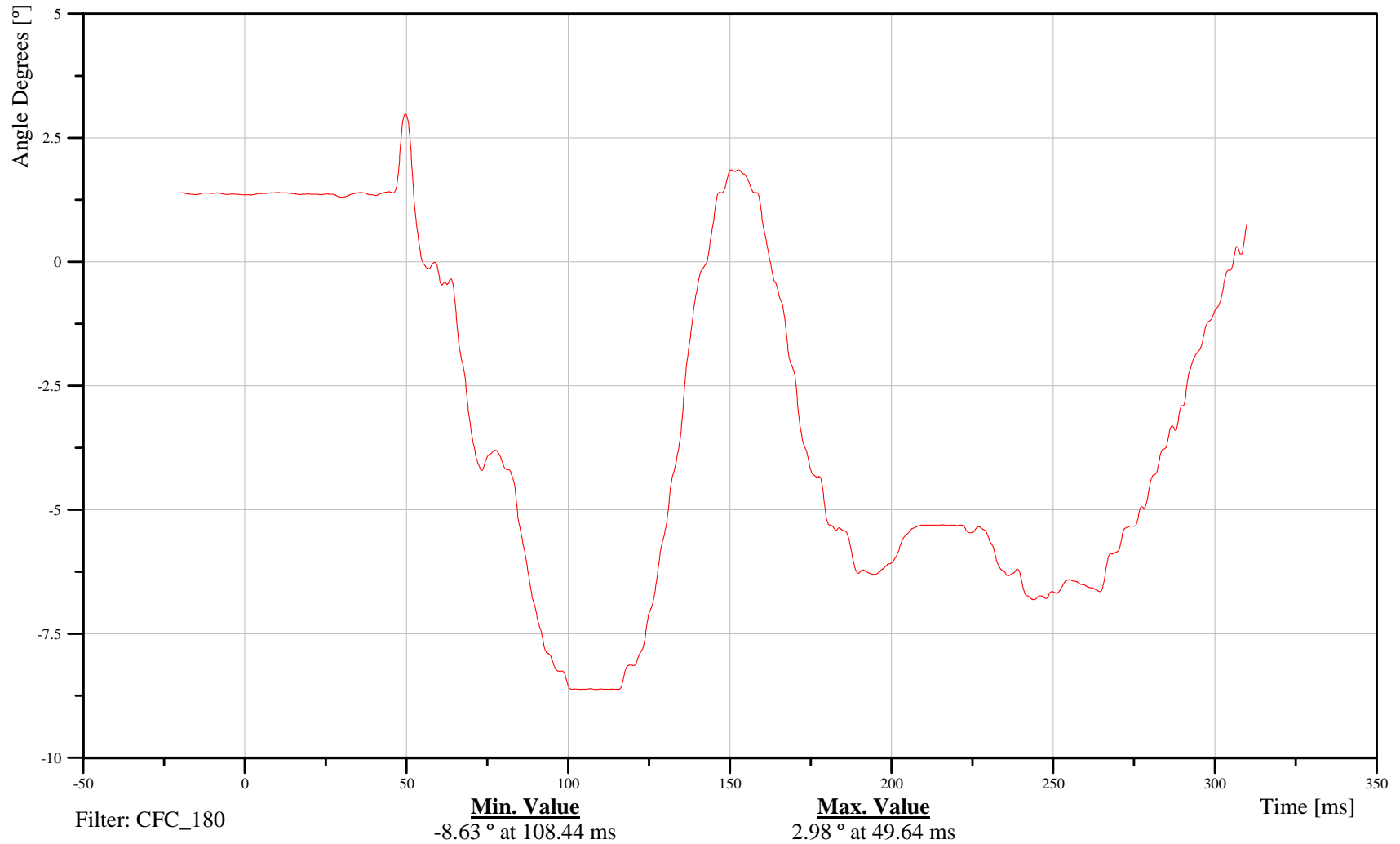
Bullet Vehicle Driver Right Foot Z-Axis Angular Displacement

Customer: VRTC

11FOOTRILXH3ANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-236

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

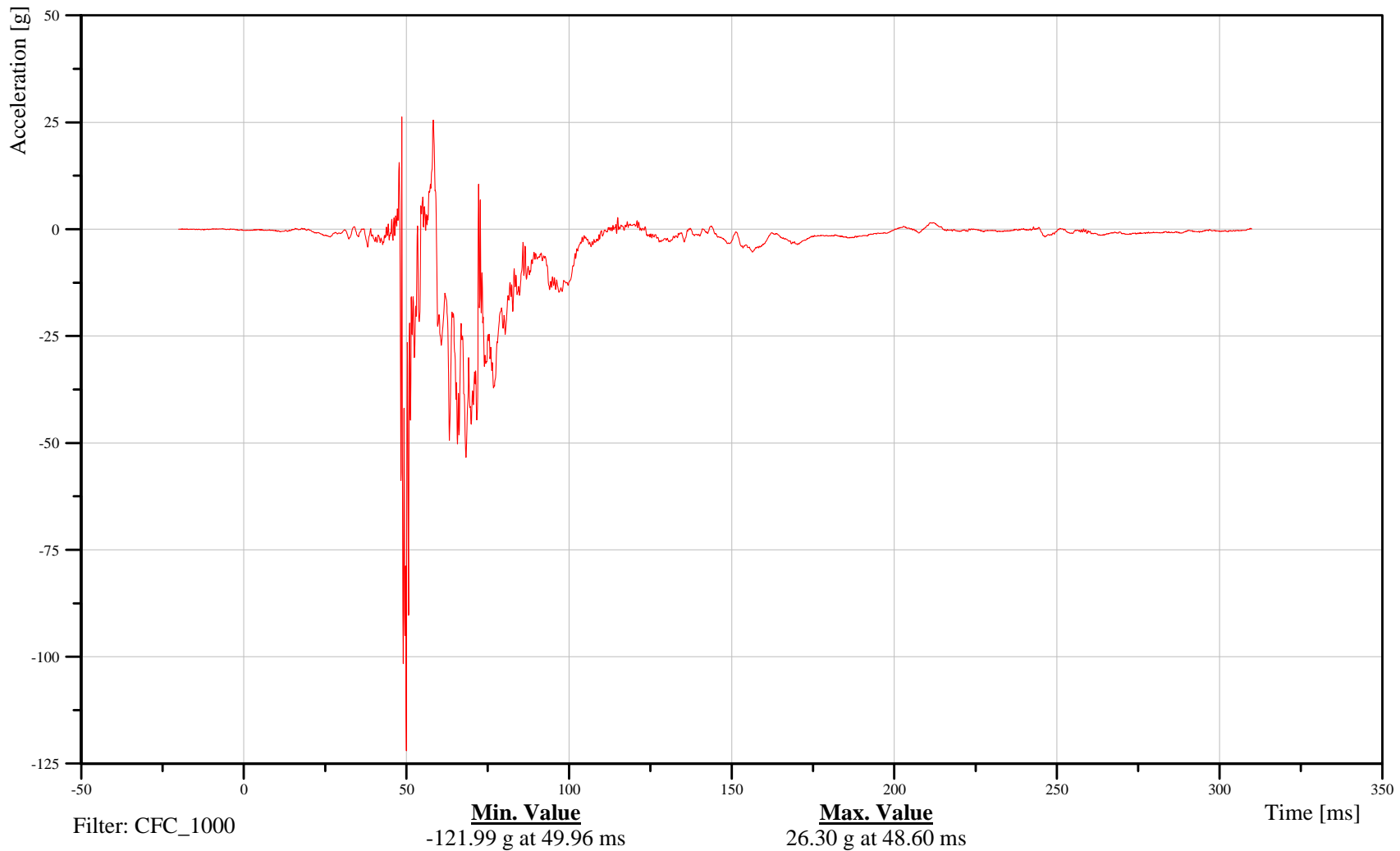
Bullet Vehicle Driver Right Foot X-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-237

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

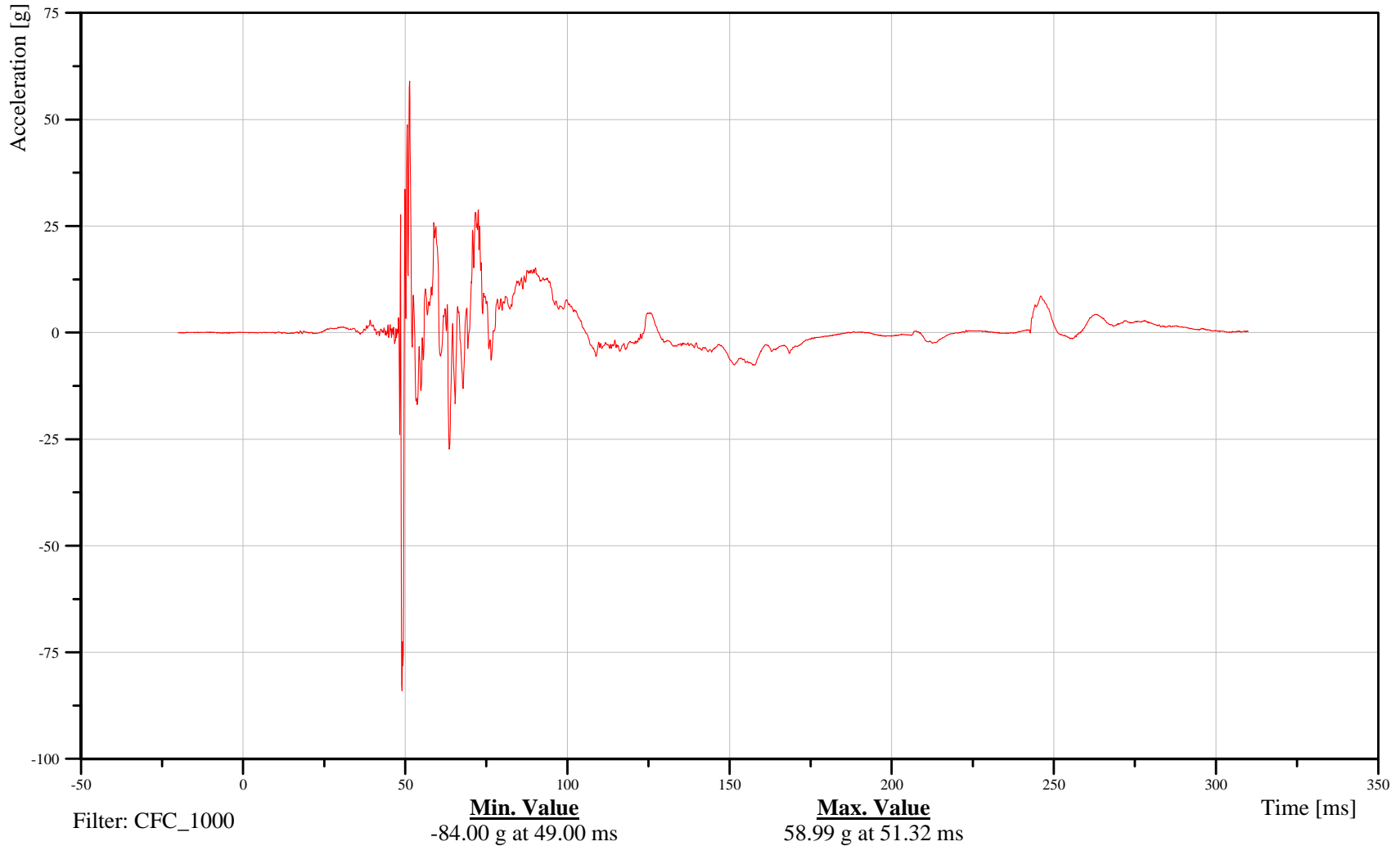
Bullet Vehicle Driver Right Foot Y-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-238

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

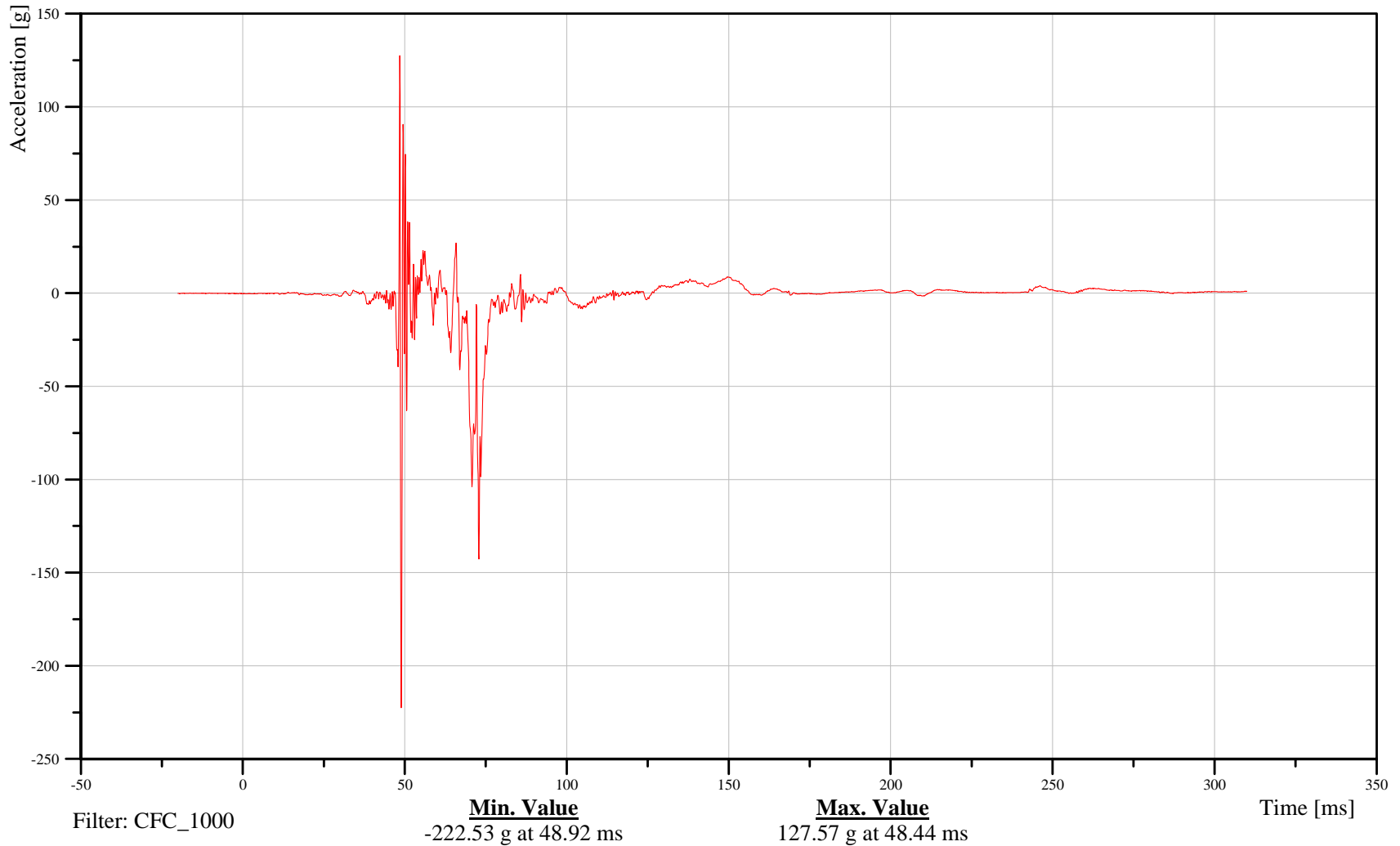
Bullet Vehicle Driver Right Foot Z-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-239

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

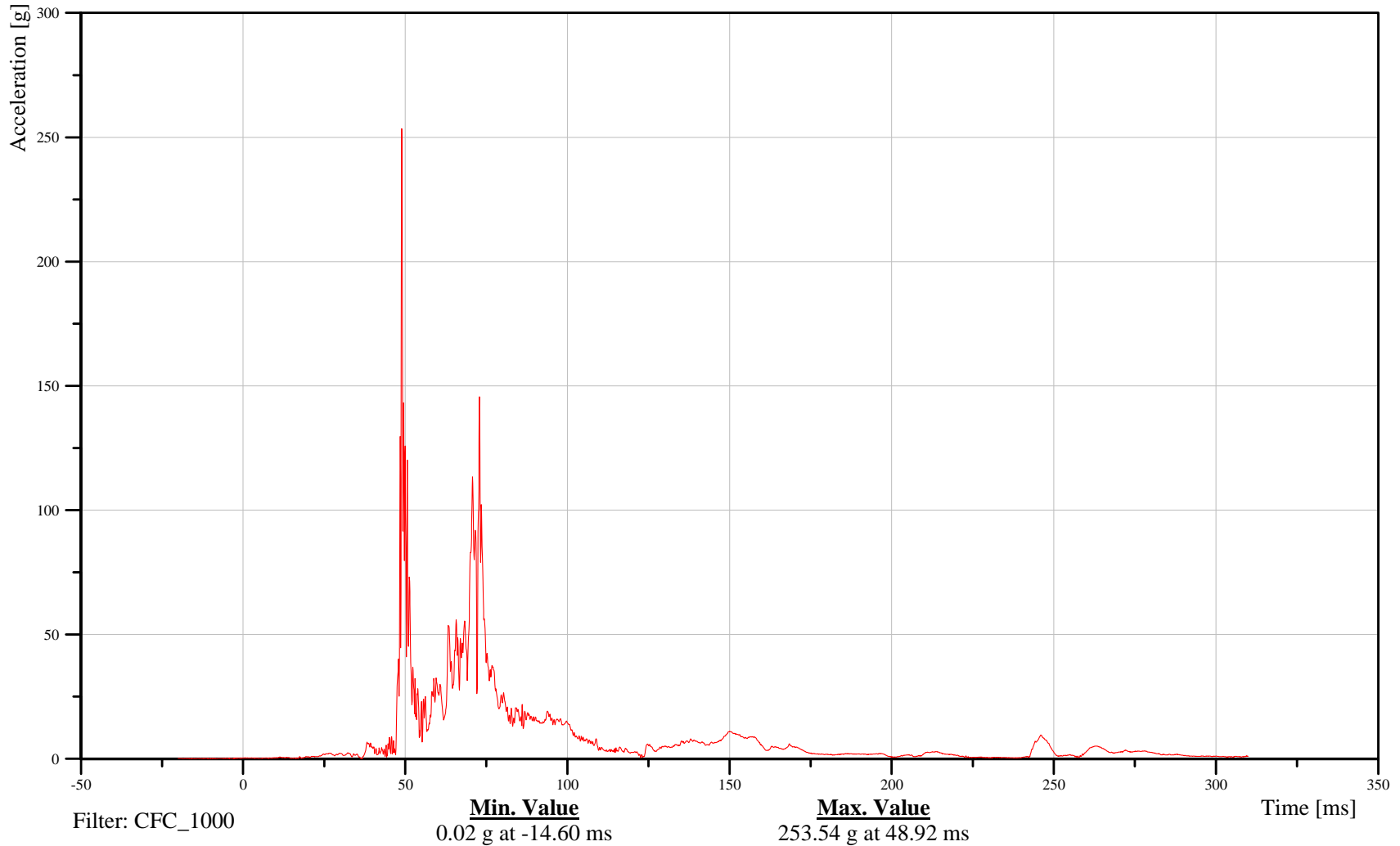
Bullet Vehicle Driver Right Foot Resultant Acceleration

Customer: VRTC

11FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-240

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

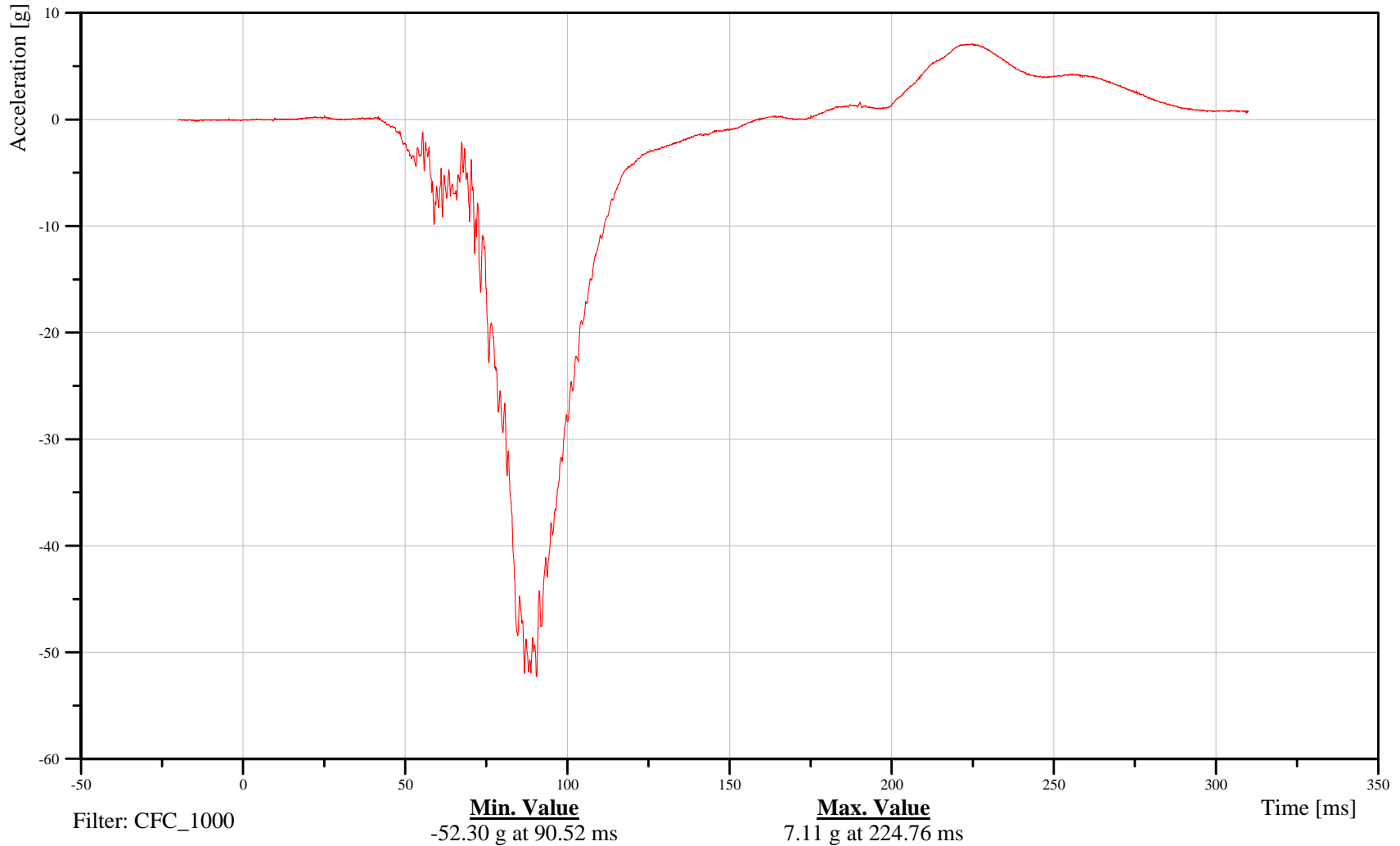
Bullet Vehicle Passenger Head X-Axis Acceleration

Customer: VRTC

13HEADCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-241

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

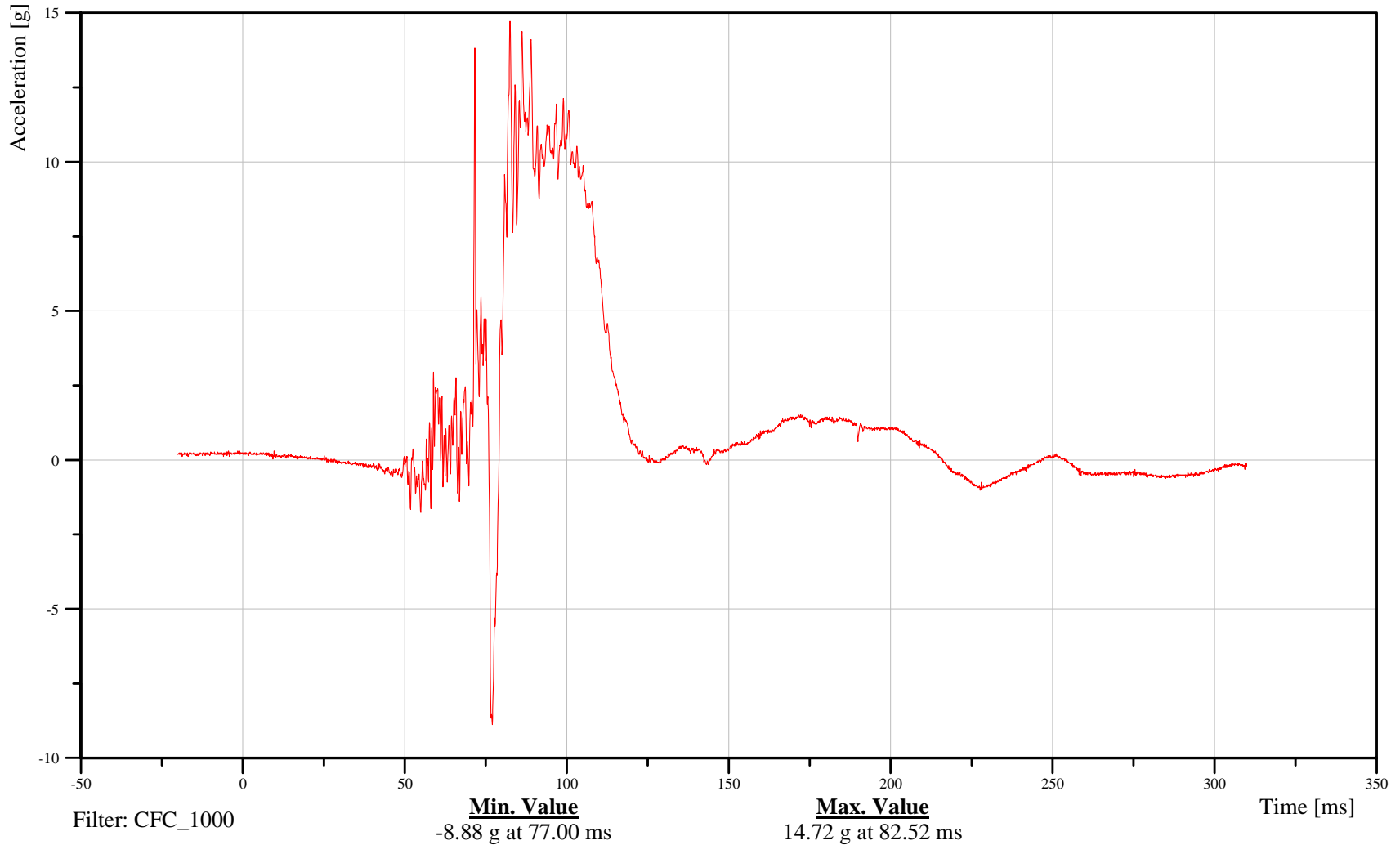
Bullet Vehicle Passenger Head Y-Axis Acceleration

Customer: VRTC

13HEADCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-242

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

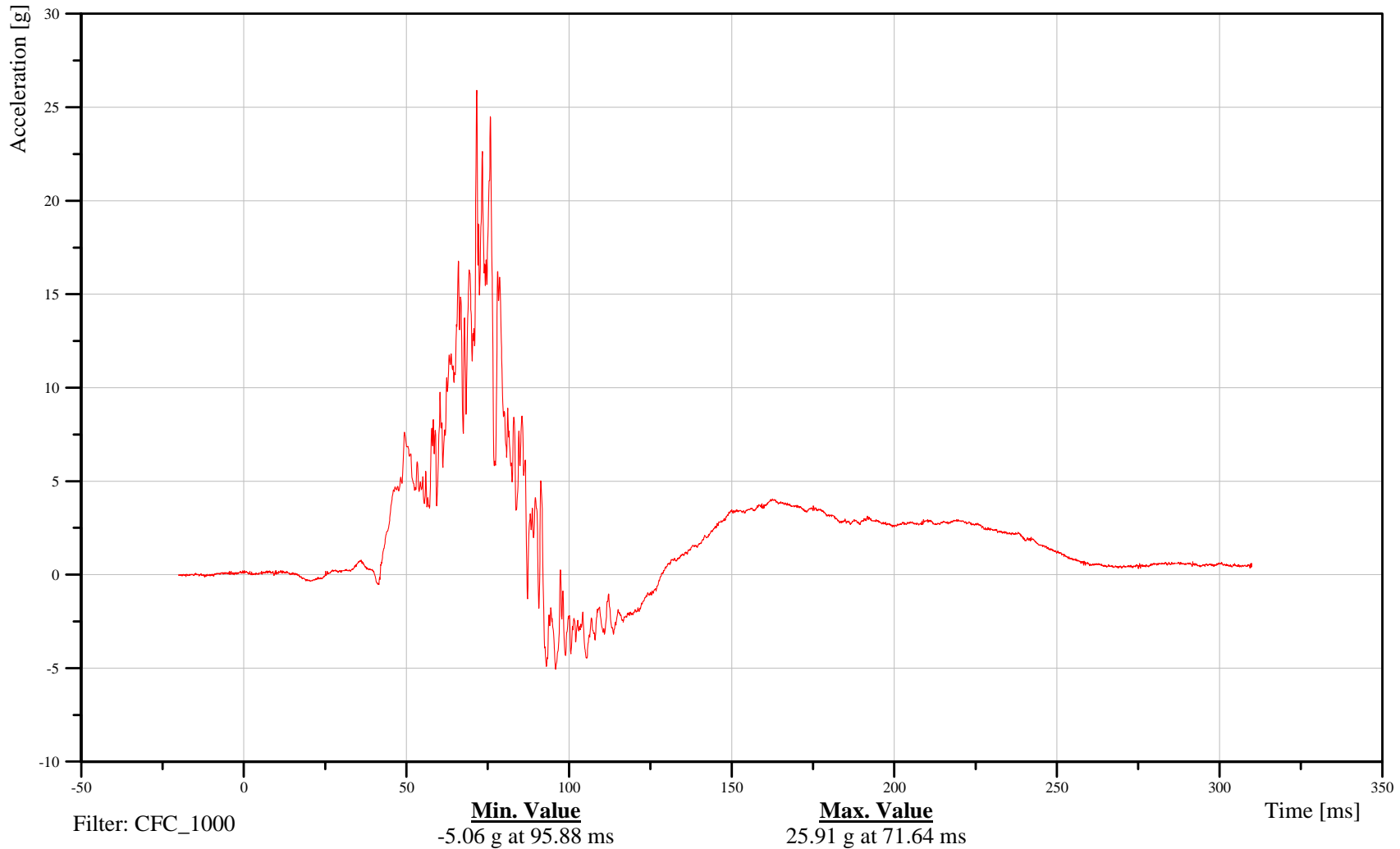
Bullet Vehicle Passenger Head Z-Axis Acceleration

Customer: VRTC

13HEADCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-243

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

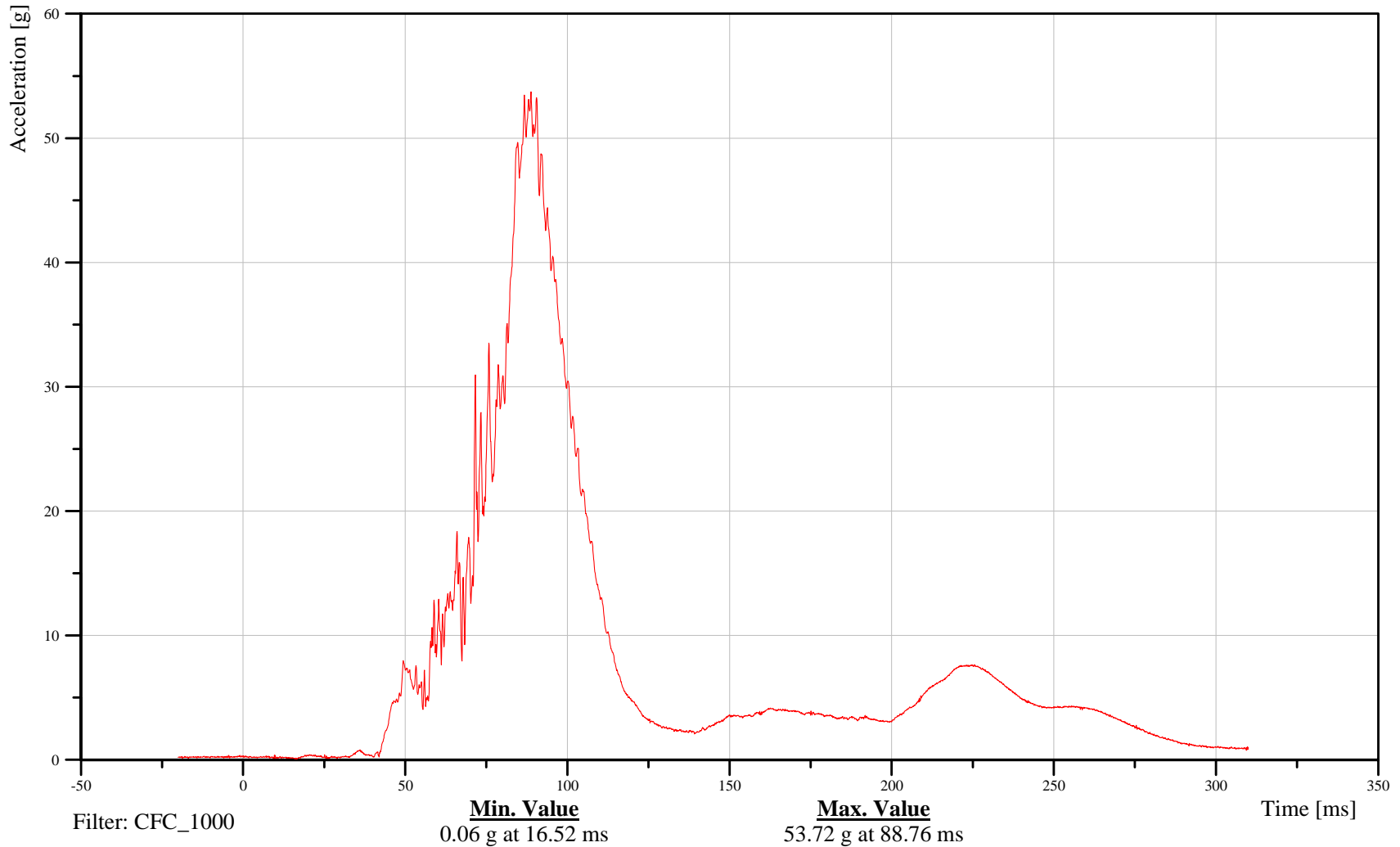
Bullet Vehicle Passenger Head Resultant Acceleration

Customer: VRTC

13HEADCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-244

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

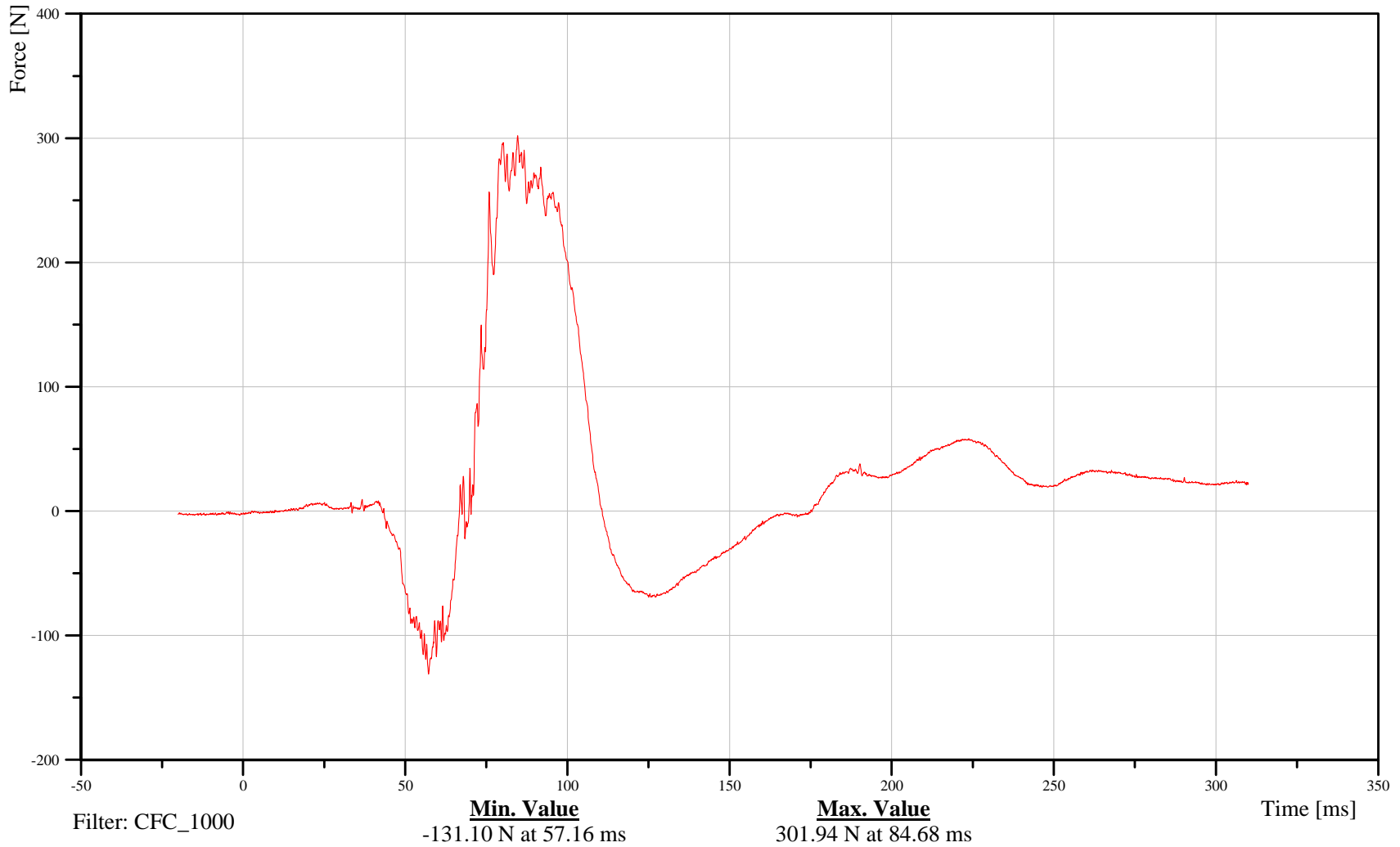
Bullet Vehicle Passenger Neck X-Axis Force

Customer: VRTC

13NECKUP00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-245

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

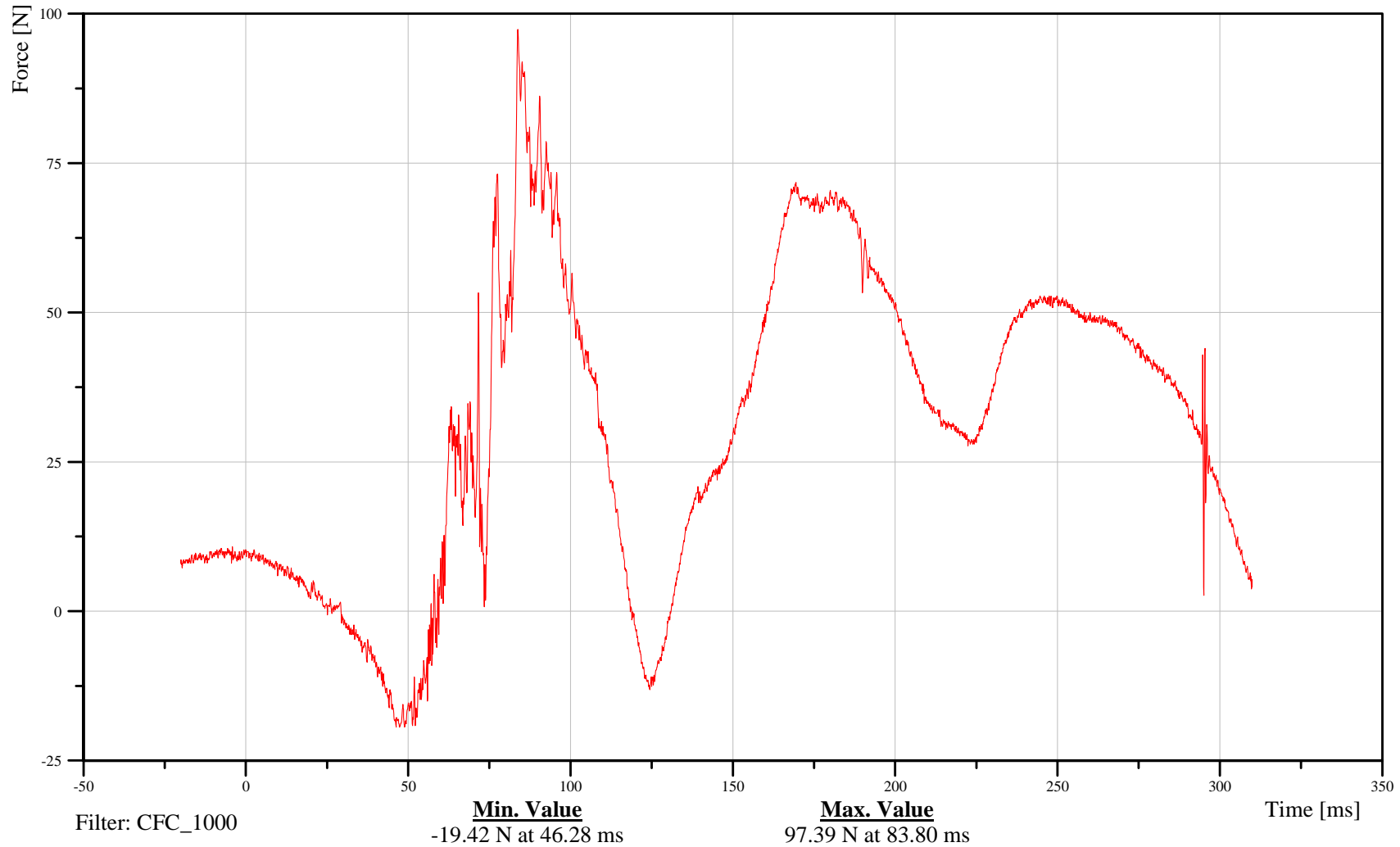
Bullet Vehicle Passenger Neck Y-Axis Force

Customer: VRTC

13NECKUP00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-246

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

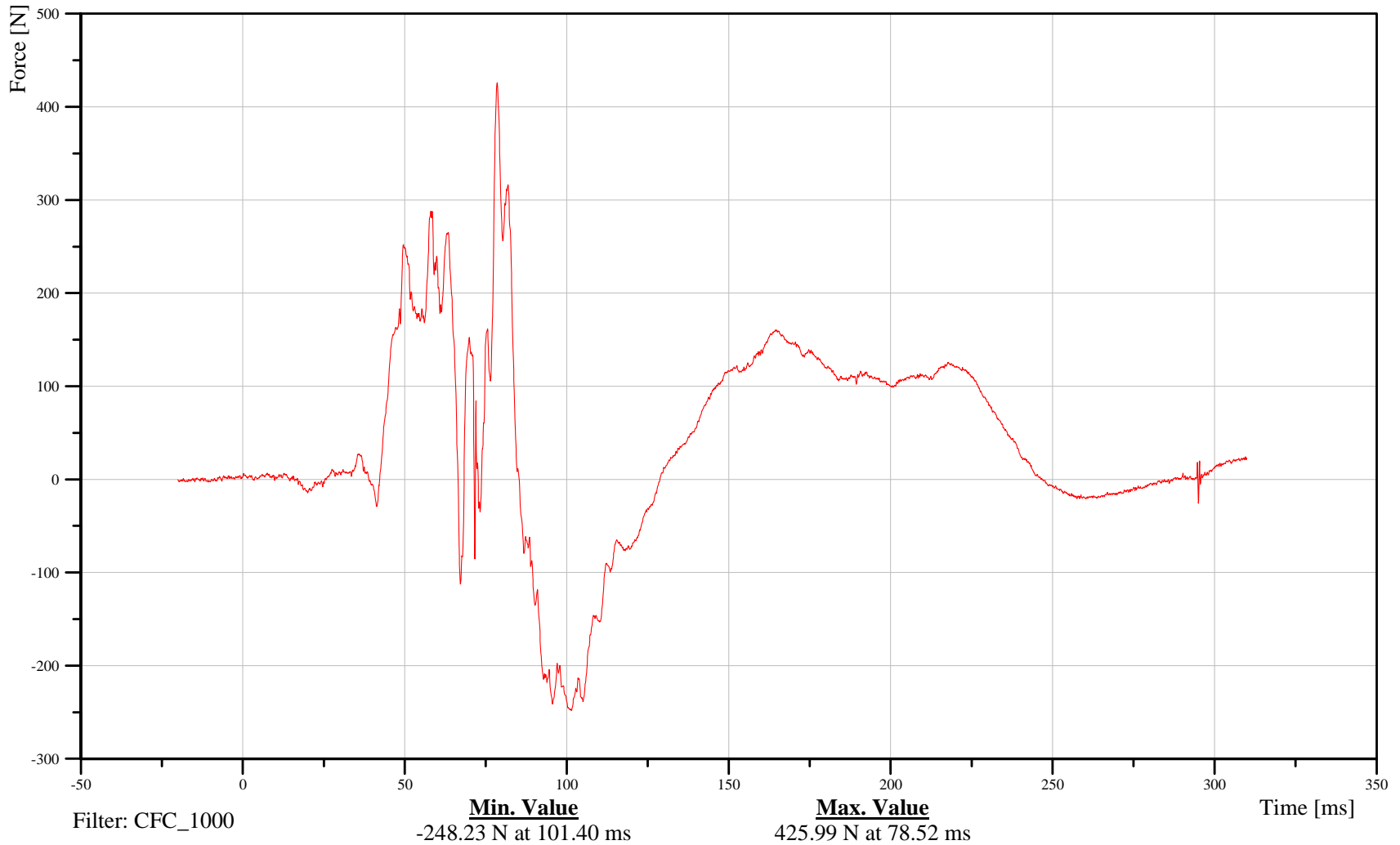
Bullet Vehicle Passenger Neck Z-Axis Force

Customer: VRTC

13NECKUP00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-247

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Passenger Neck Moment About X Axis

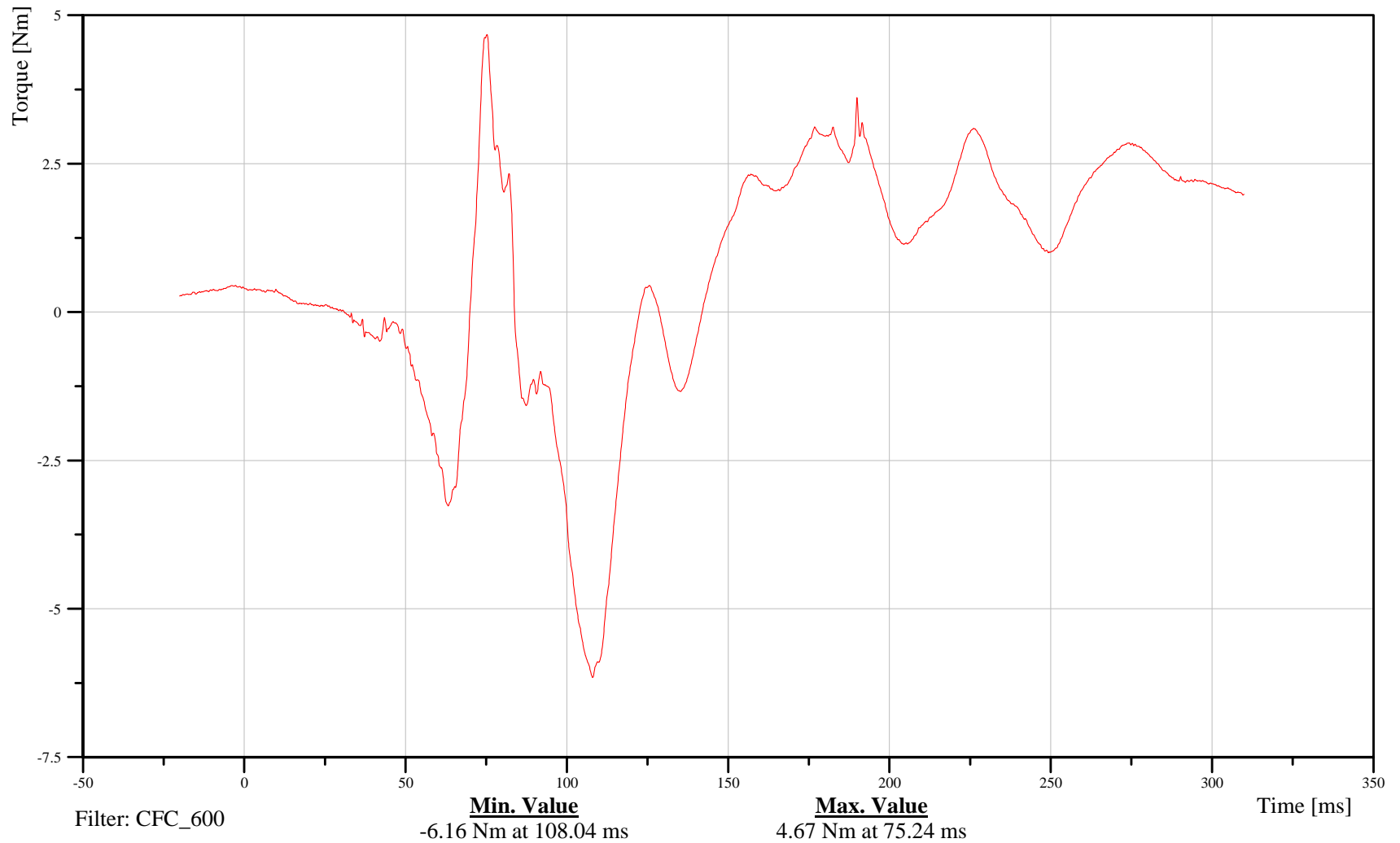
Time: 15:44

Customer: VRTC

13NECKUP00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-248

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

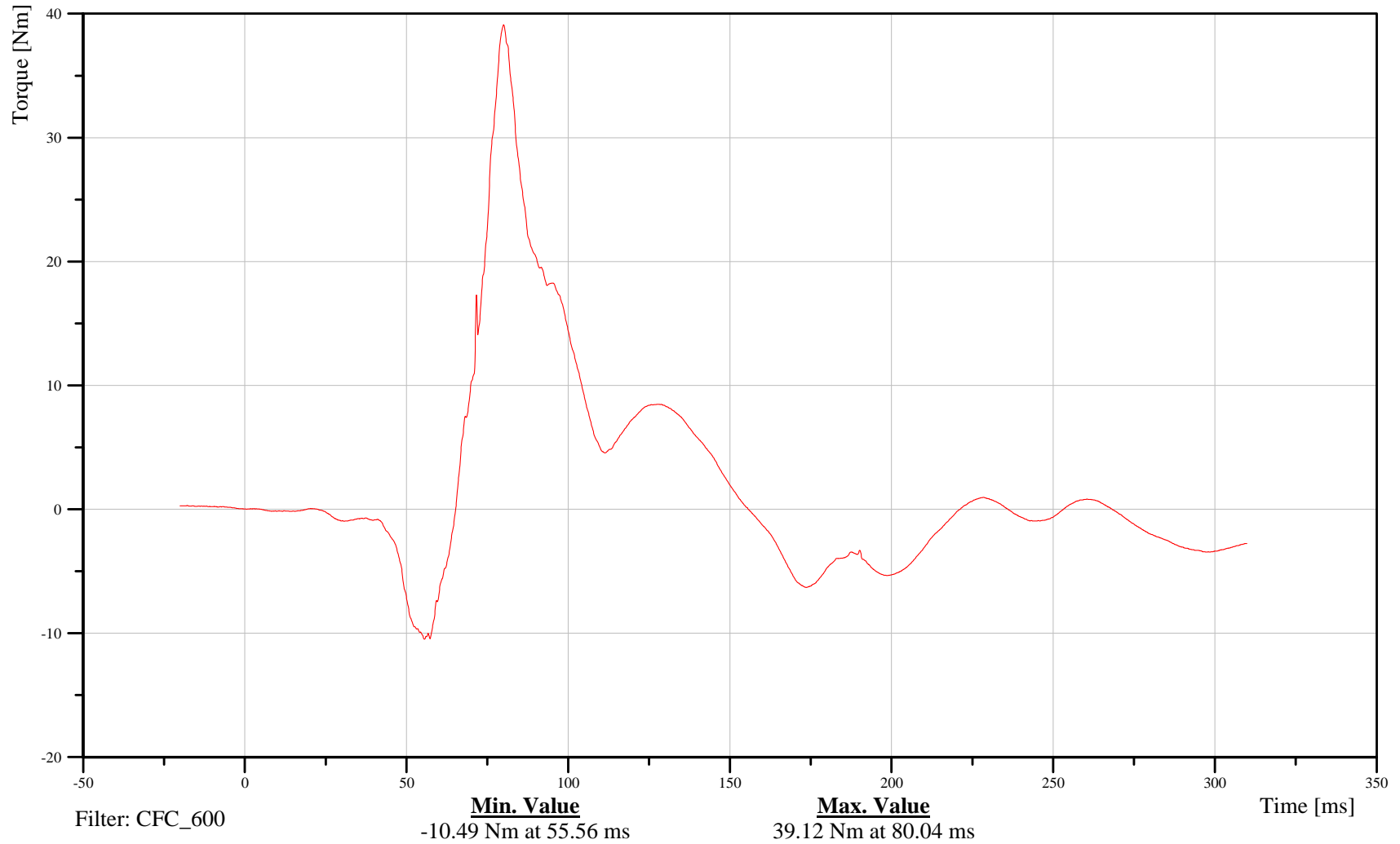
Bullet Vehicle Passenger Neck Moment About Y Axis

Customer: VRTC

13NECKUP00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-249

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

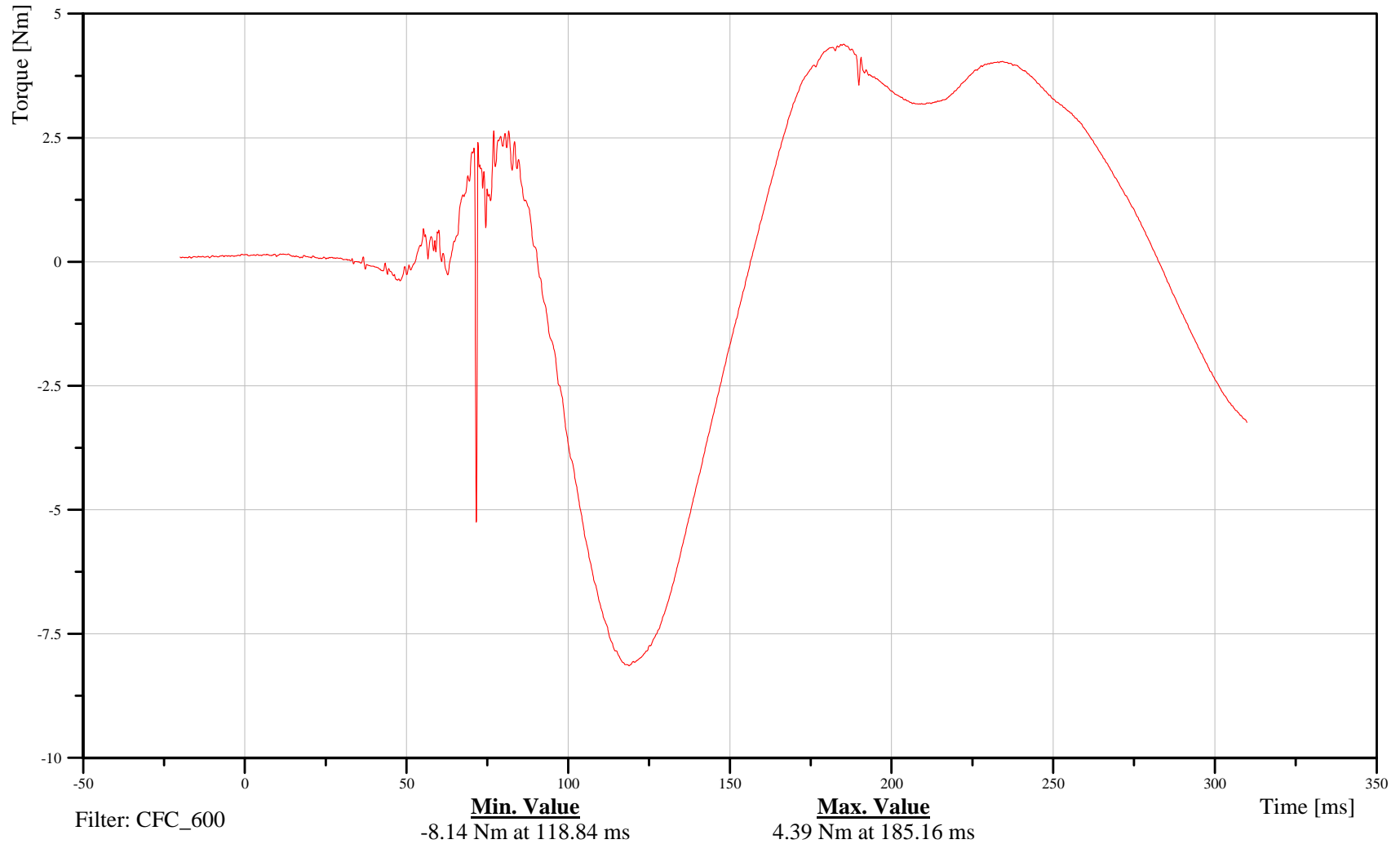
Bullet Vehicle Passenger Neck Moment About Z Axis

Customer: VRTC

13NECKUP00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-250

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

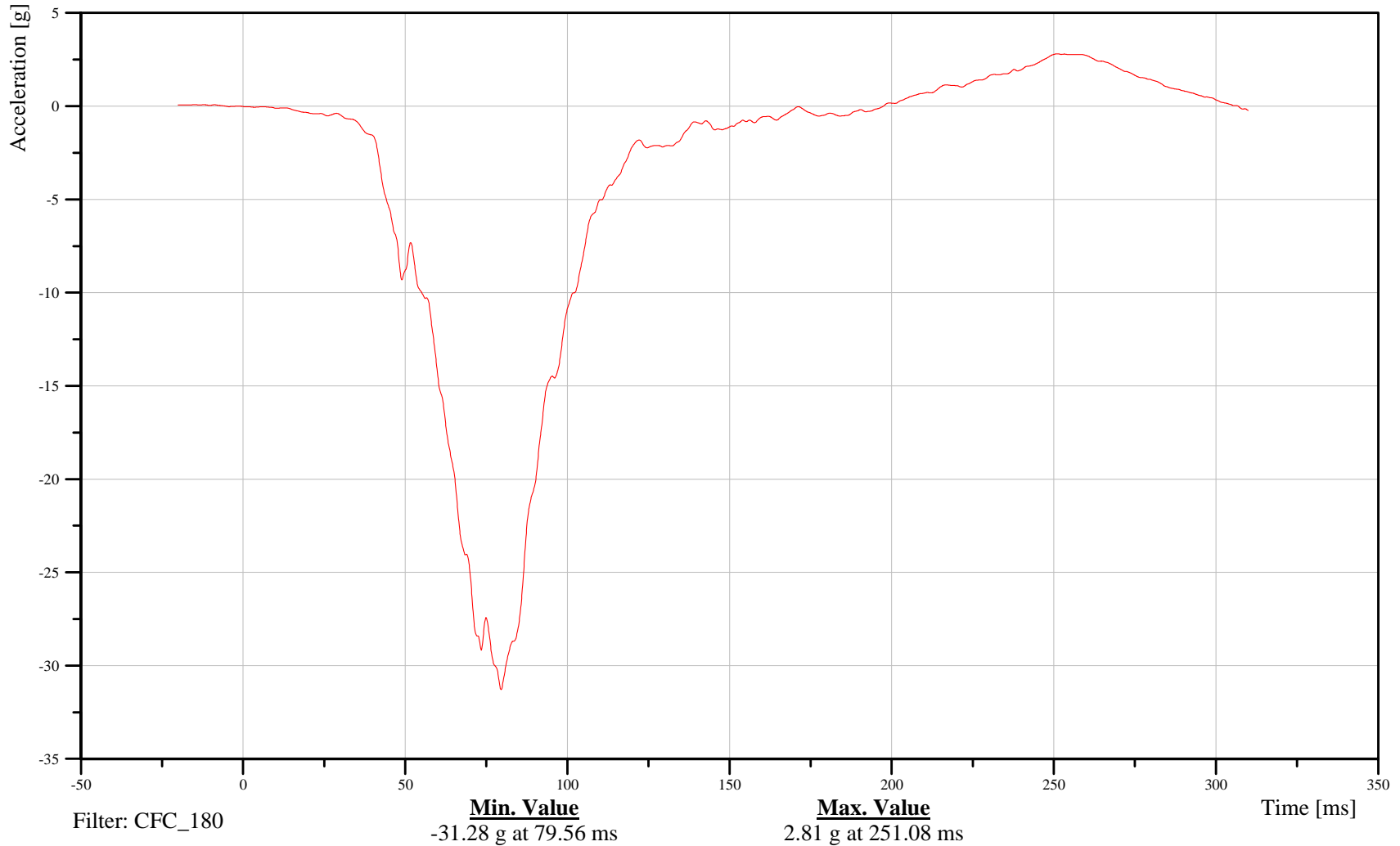
Bullet Vehicle Passenger Chest X-Axis Acceleration

Customer: VRTC

13CHSTCG00HFACXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-251

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

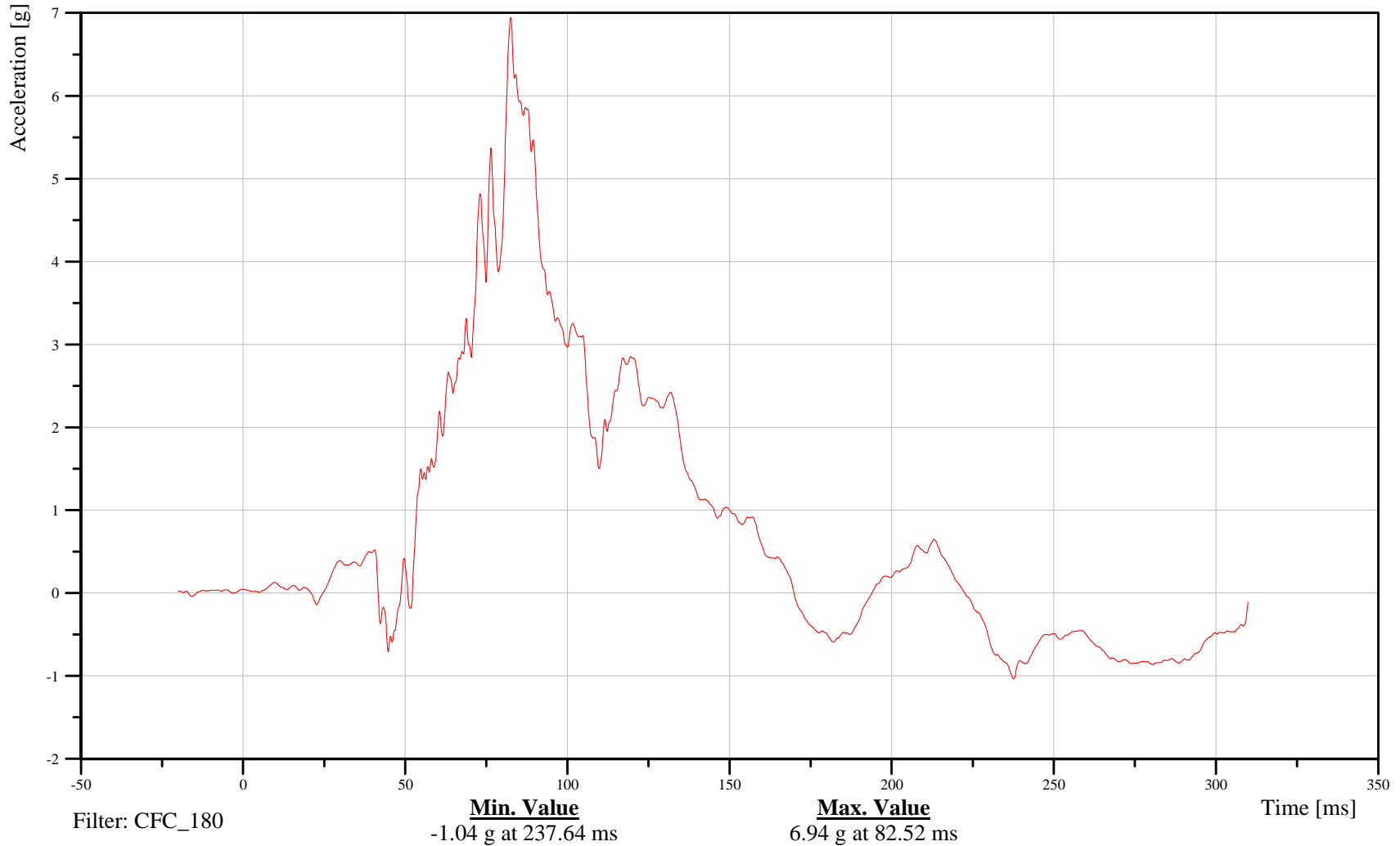
Bullet Vehicle Passenger Chest Y-Axis Acceleration

Customer: VRTC

13CHSTCG00HFACYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-252

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

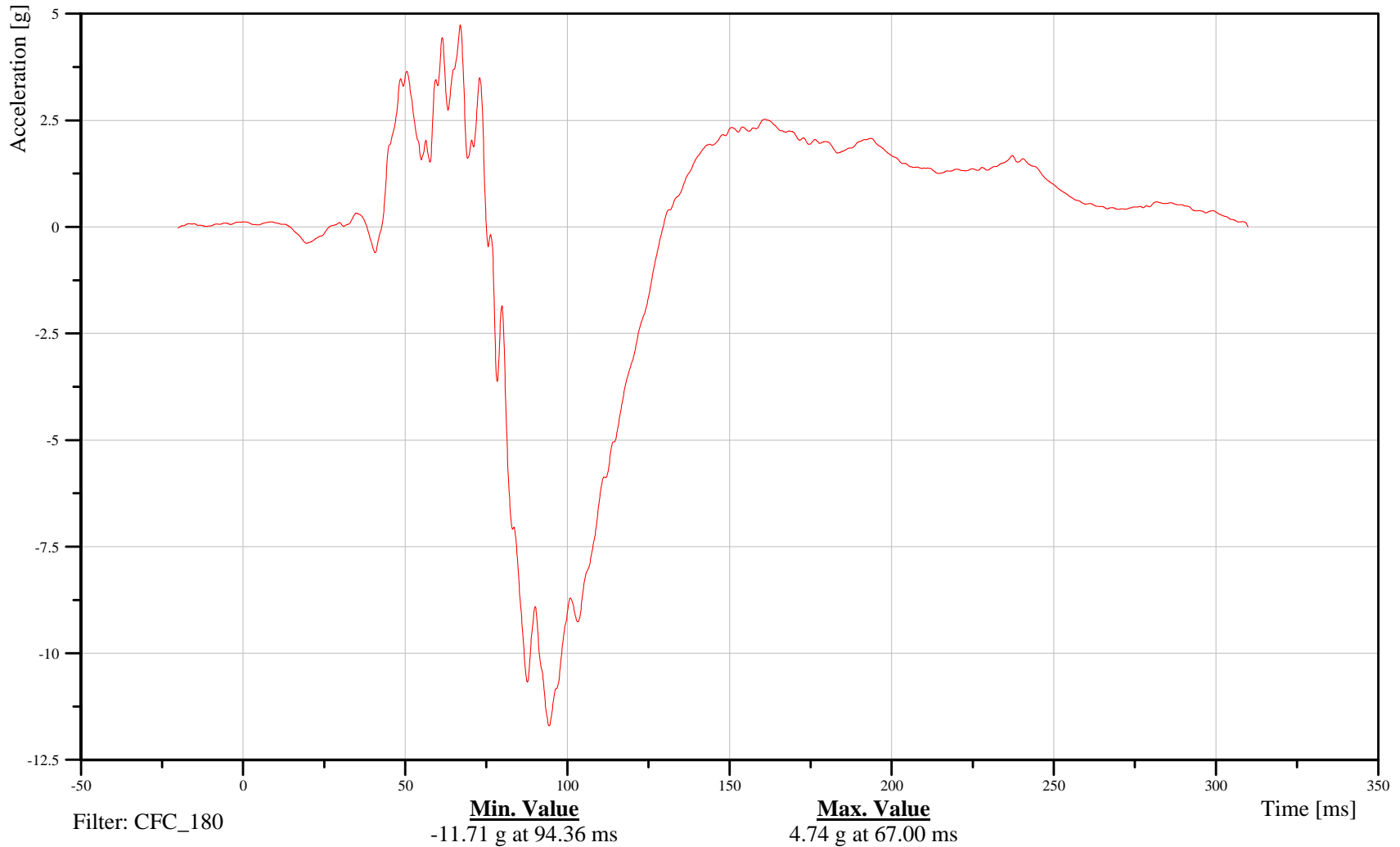
Bullet Vehicle Passenger Chest Z-Axis Acceleration

Customer: VRTC

13CHSTCG00HFACZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-253

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

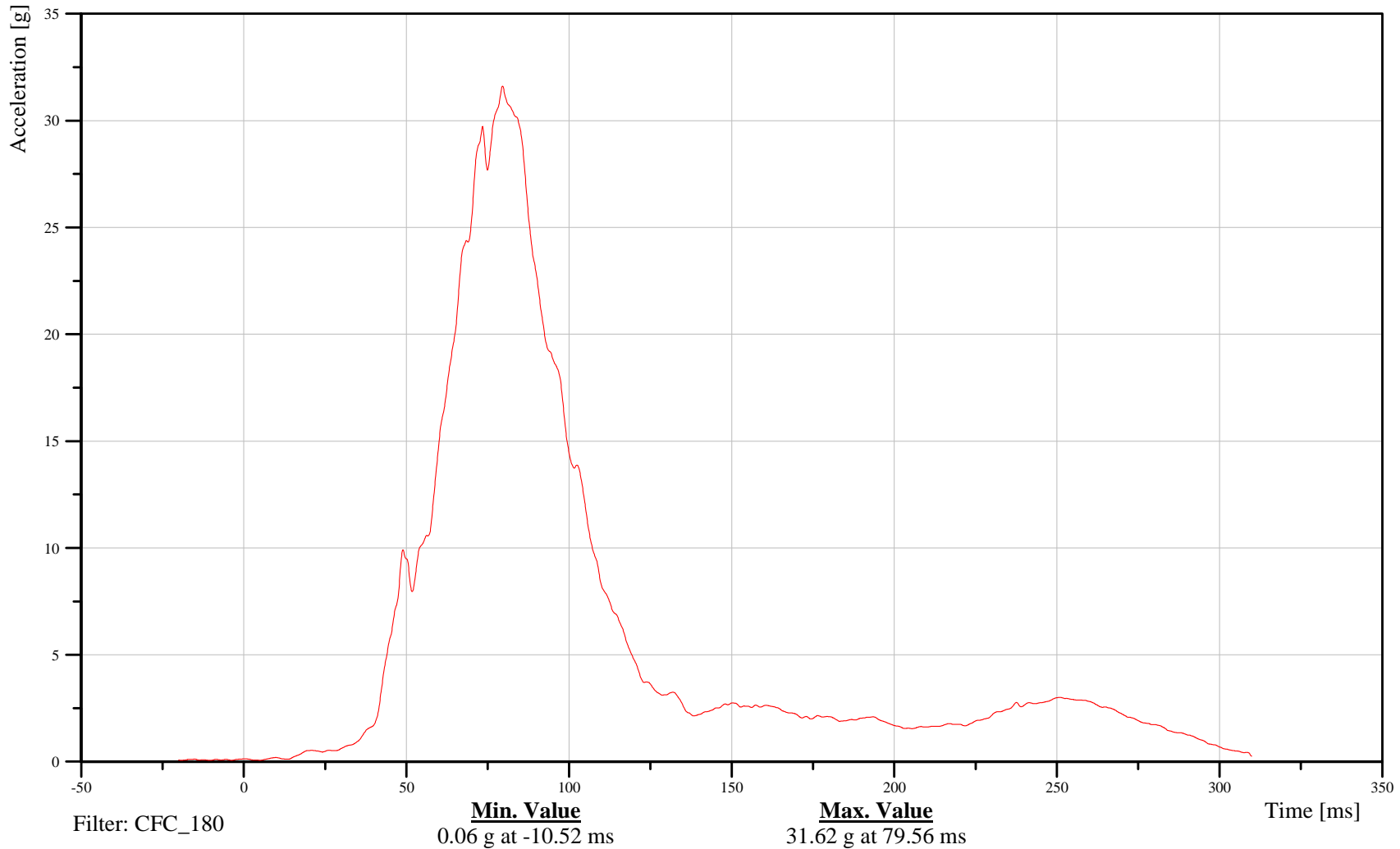
Bullet Vehicle Passenger Chest Resultant Acceleration

Customer: VRTC

13CHSTCG00HFACRC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-254

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

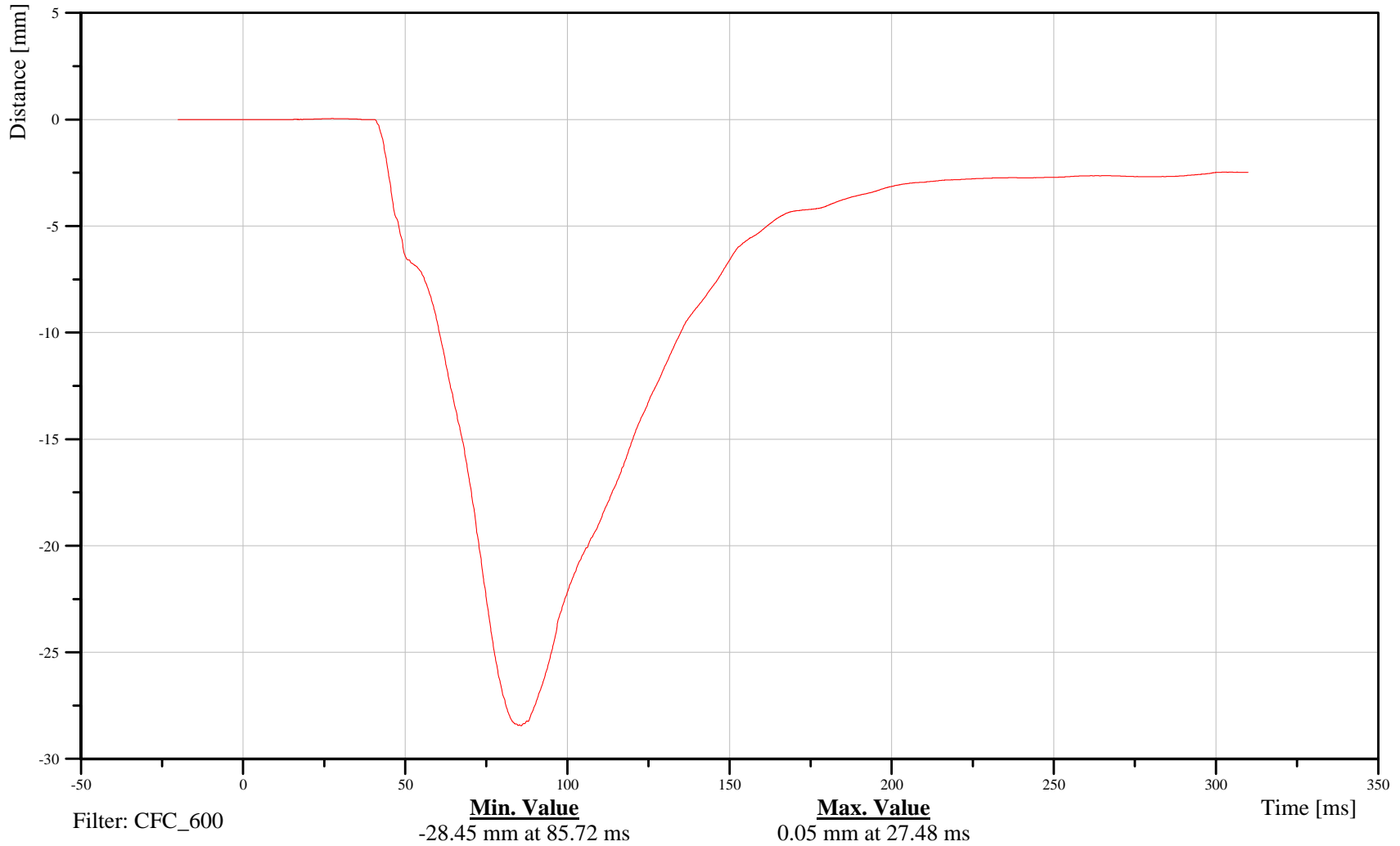
Bullet Vehicle Passenger Chest X-Axis Displacement

Customer: VRTC

13CHST0000HFDSXB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-255

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

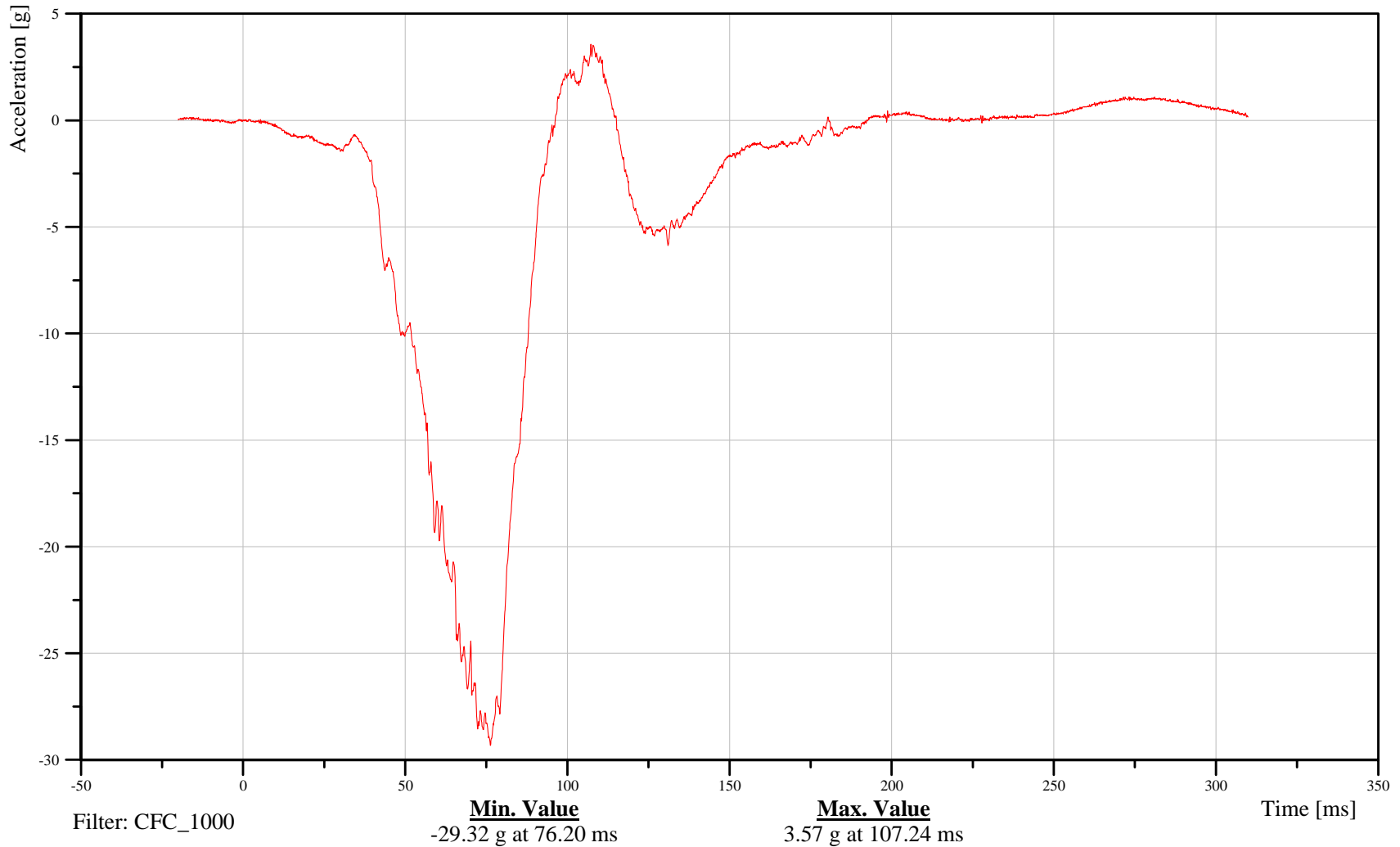
Bullet Vehicle Passenger Pelvis X-Axis Acceleration

Customer: VRTC

13PELVCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-256

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

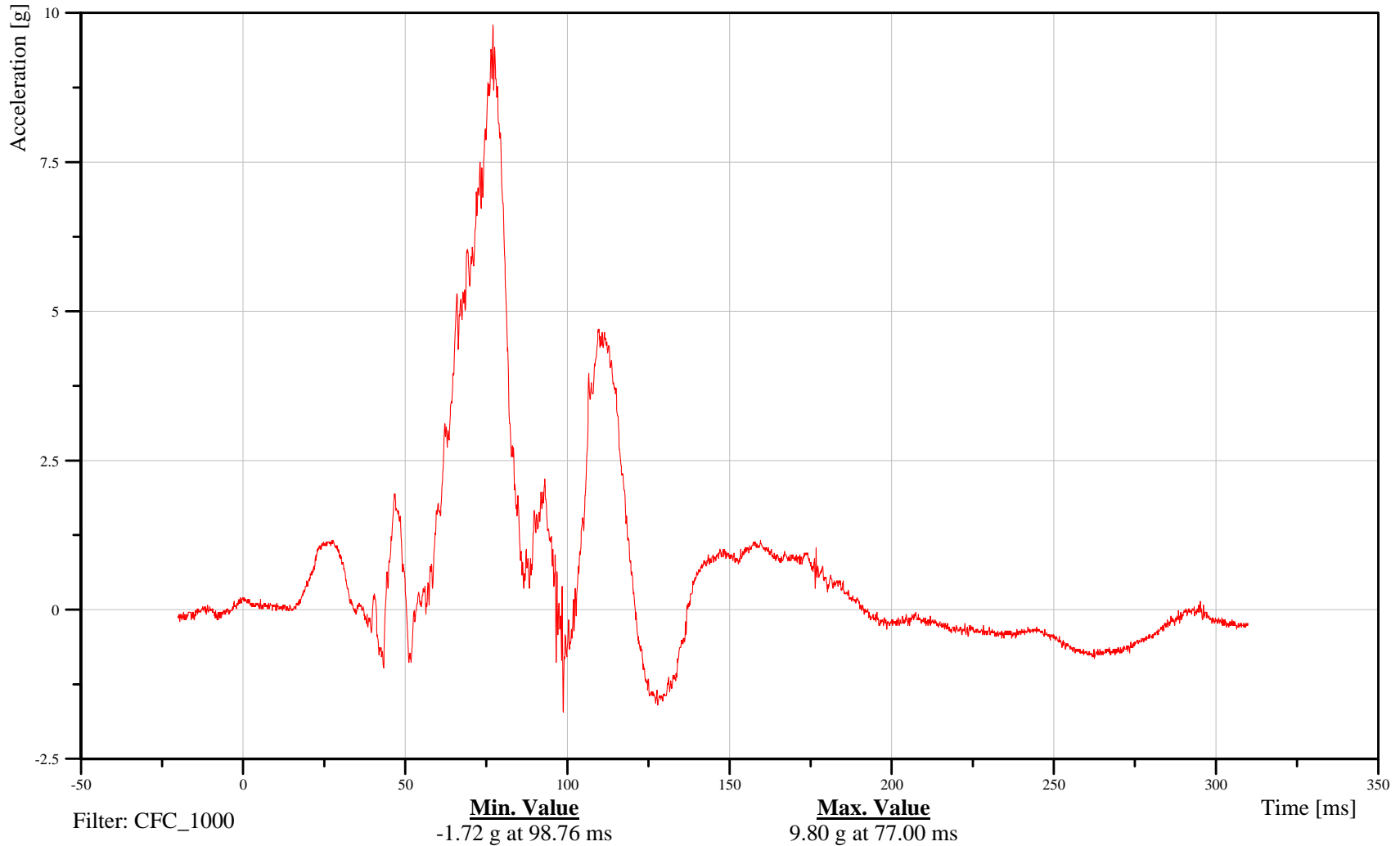
Bullet Vehicle Passenger Pelvis Y-Axis Acceleration

Customer: VRTC

13PELVCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-257

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

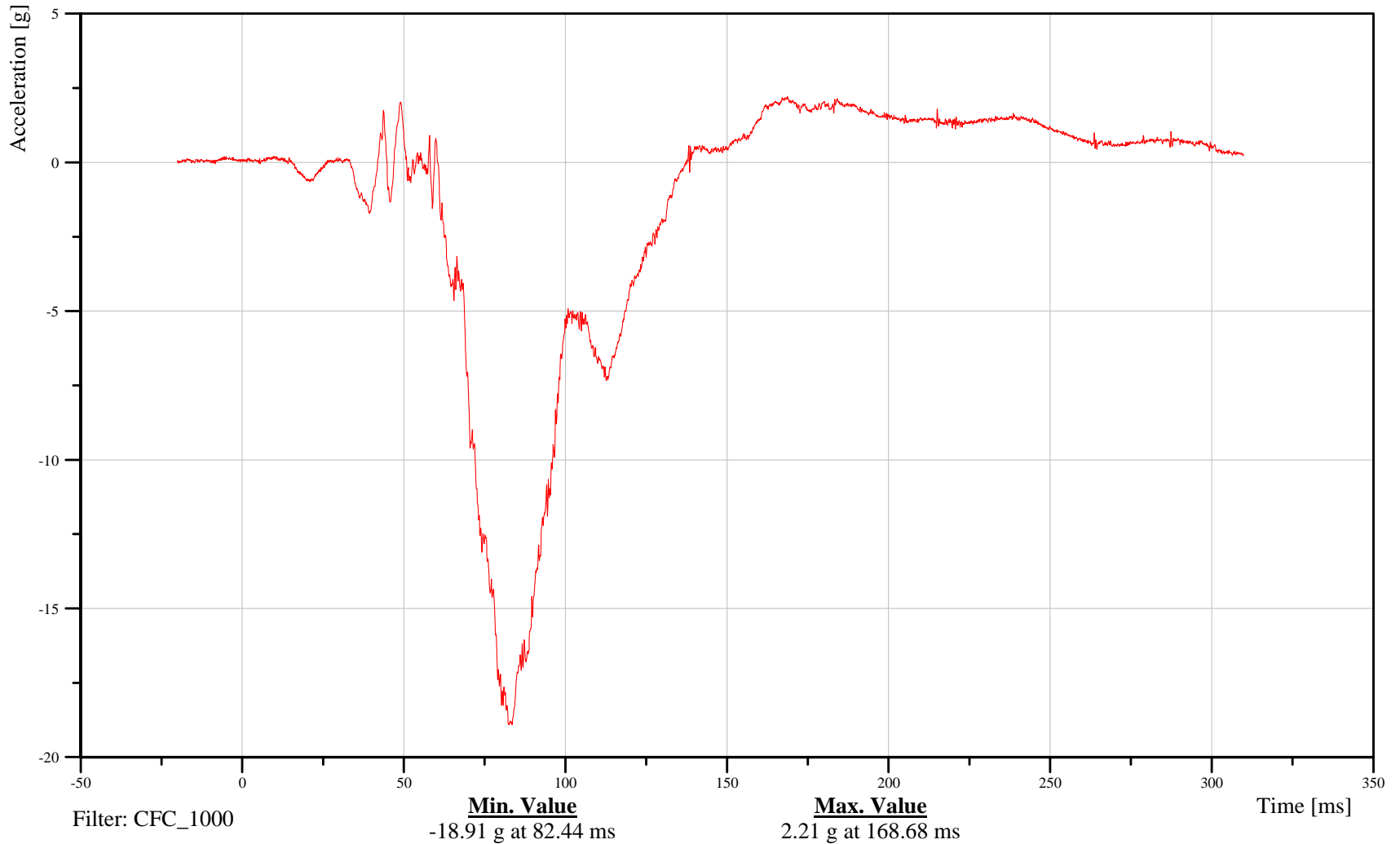
Bullet Vehicle Passenger Pelvis Z-Axis Acceleration

Customer: VRTC

13PELVCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-258

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

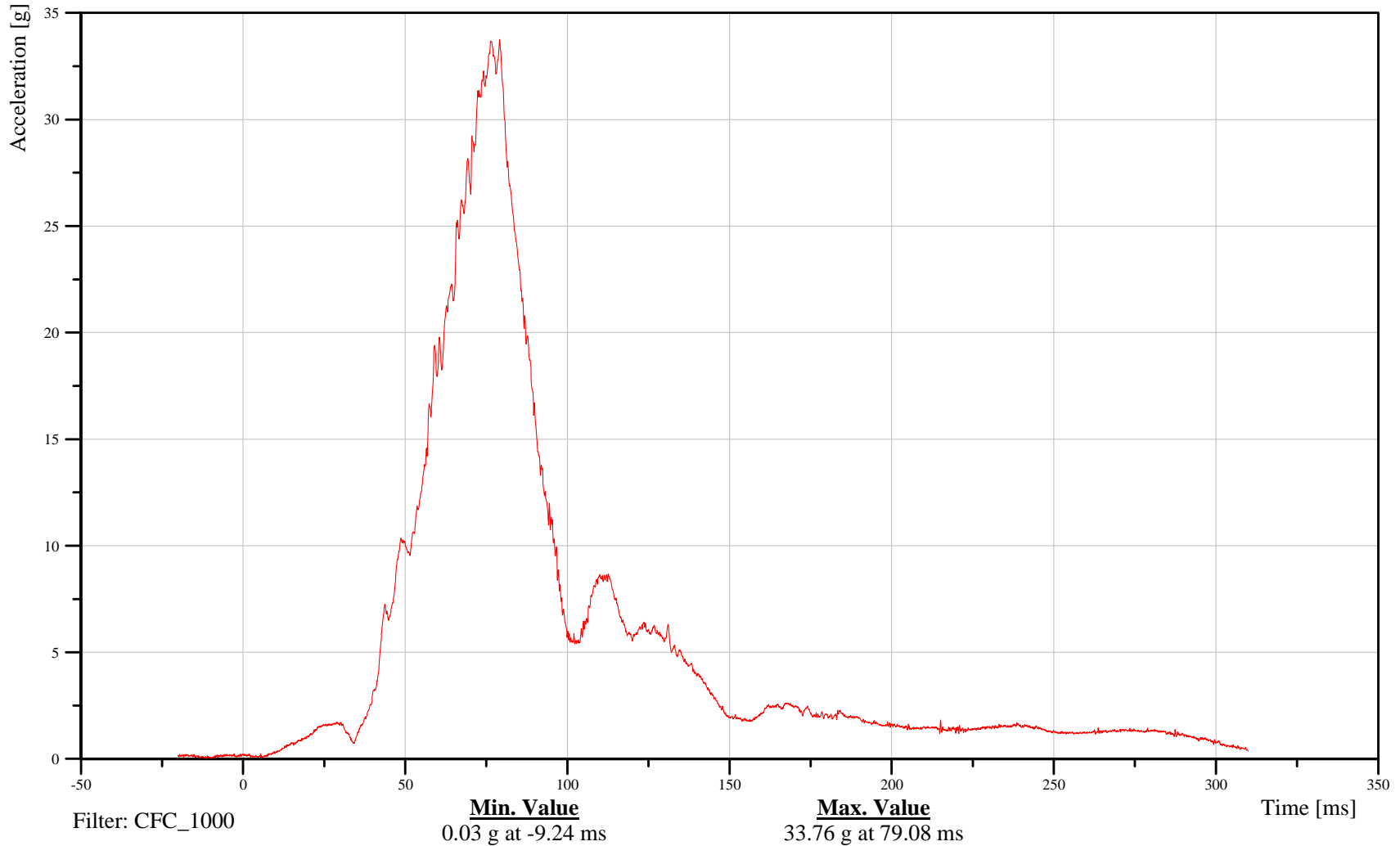
Bullet Vehicle Passenger Pelvis Resultant Acceleration

Customer: VRTC

13PELVCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-259

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

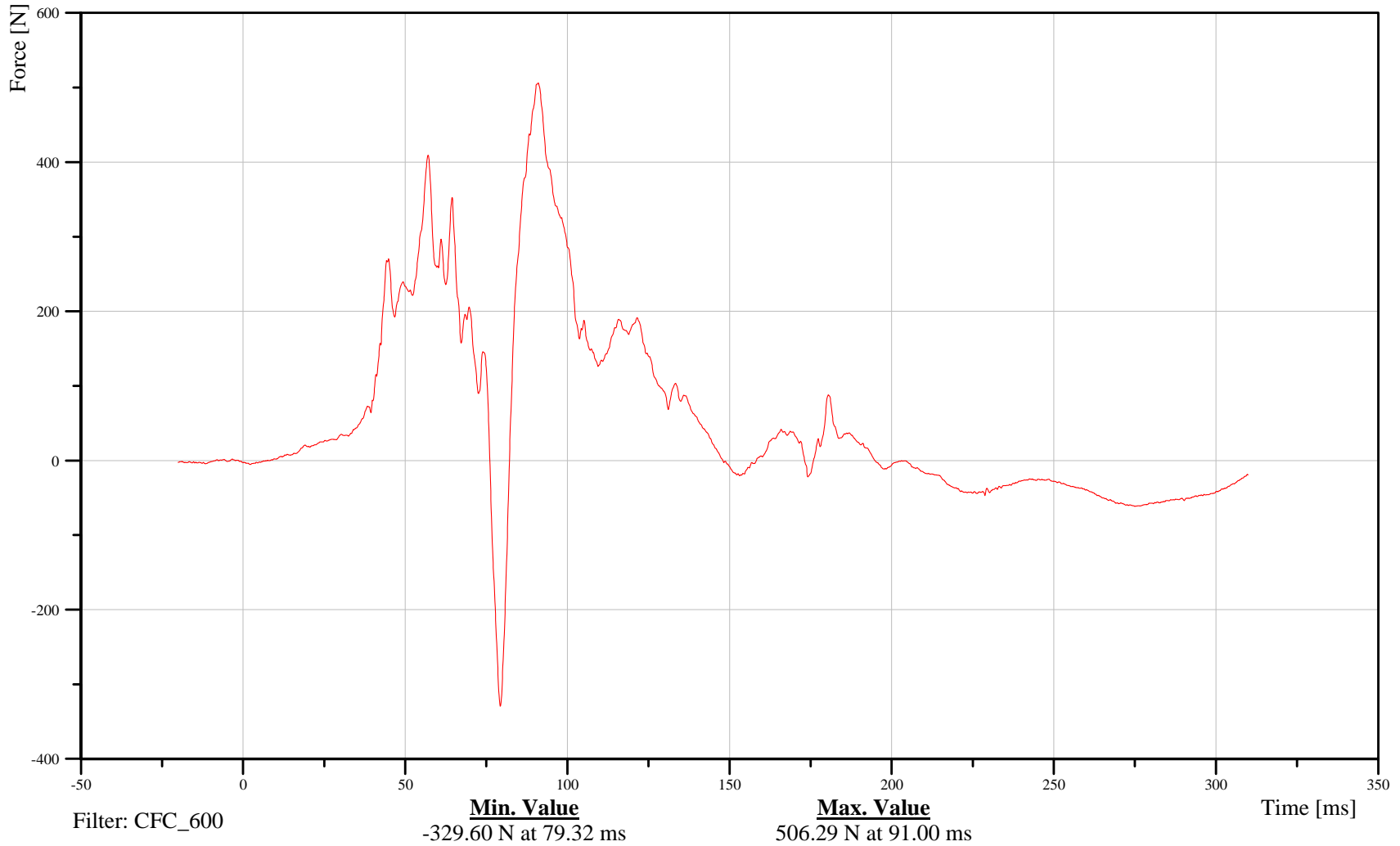
Bullet Vehicle Passenger Left Femur Z-Axis Force

Customer: VRTC

13FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-260

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

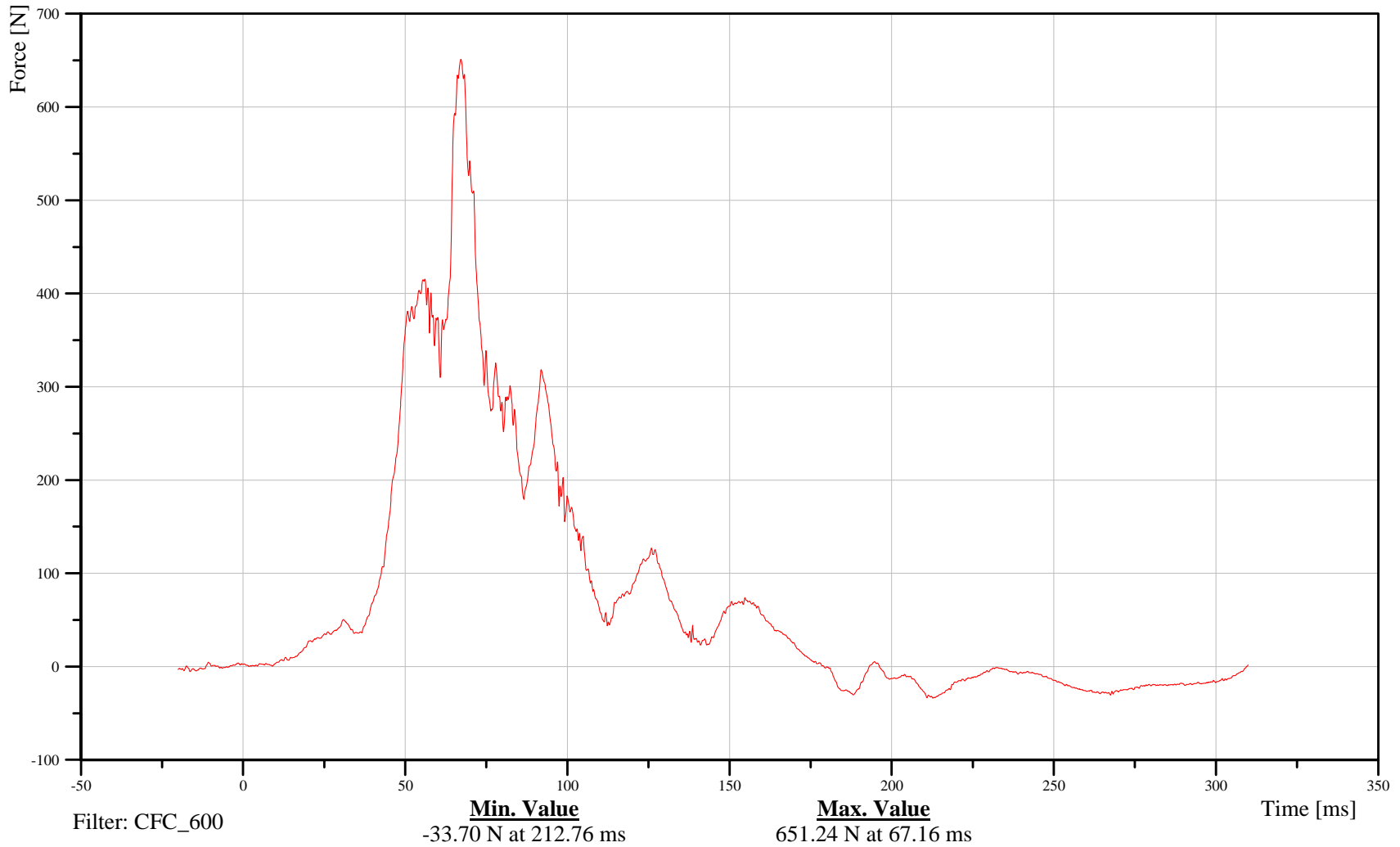
Bullet Vehicle Passenger Right Femur Z-Axis Force

Customer: VRTC

13FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 070607



B-261

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

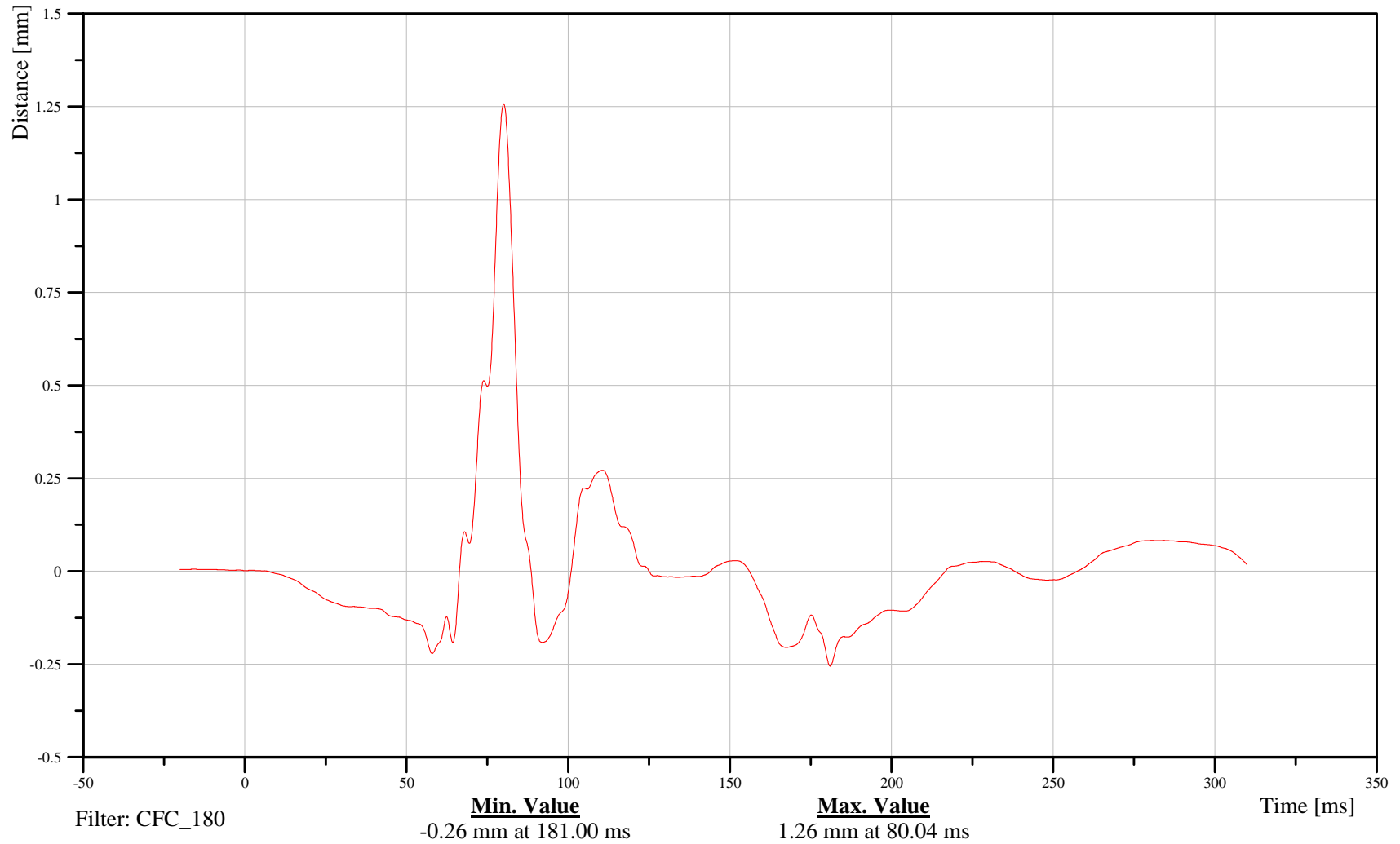
Bullet Vehicle Passenger Left Knee X-Axis Displacement

Customer: VRTC

13KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-262

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

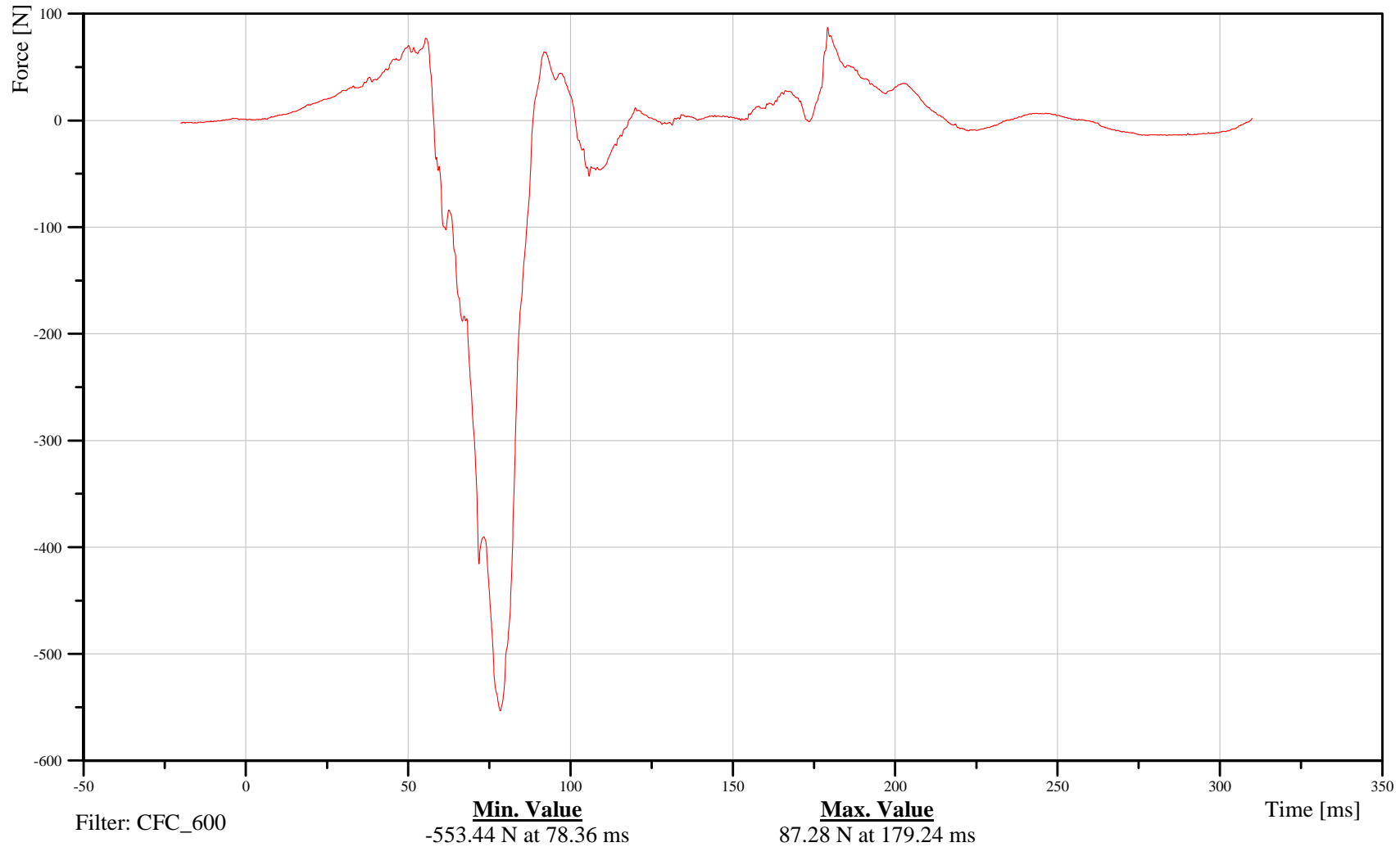
Bullet Vehicle Passenger Left Upper Tibia X-Axis Force

Customer: VRTC

13TIBILUFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-263

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

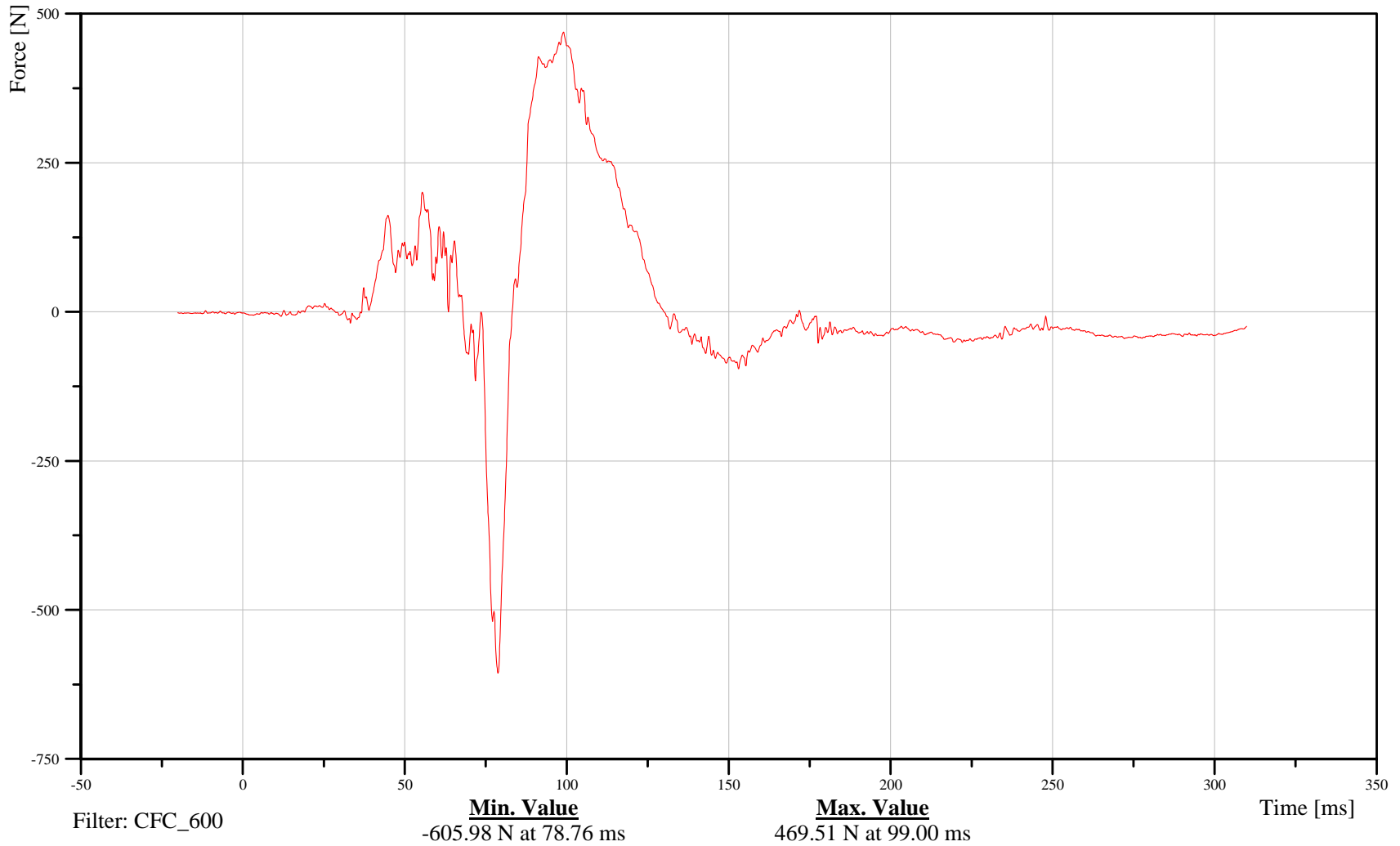
Bullet Vehicle Passenger Left Upper Tibia Z-Axis Force

Customer: VRTC

13TIBILUFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-264

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

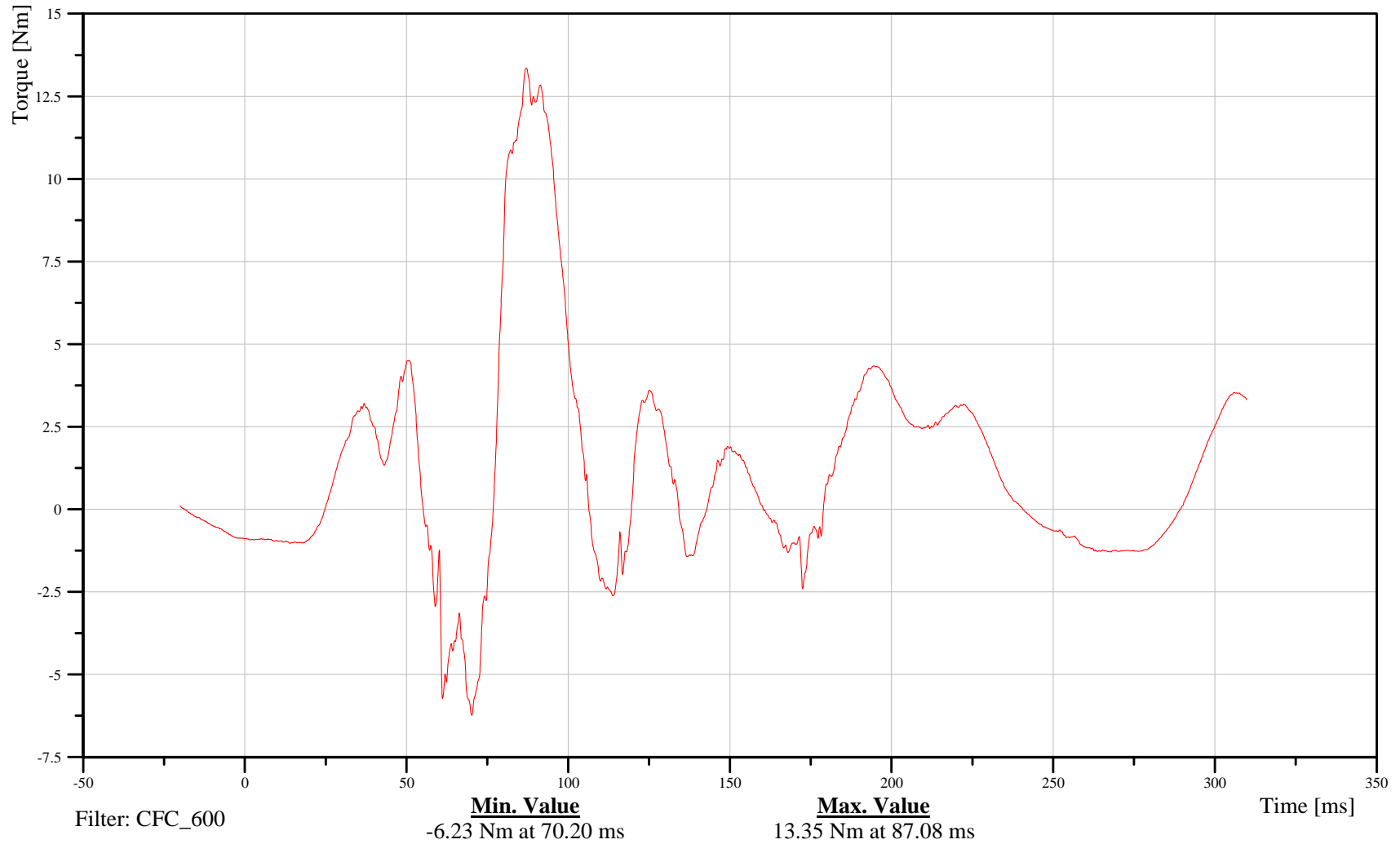
Bullet Vehicle Passenger Left Upper Tibia Moment About X Axis

Customer: VRTC

13TIBILUFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-265

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

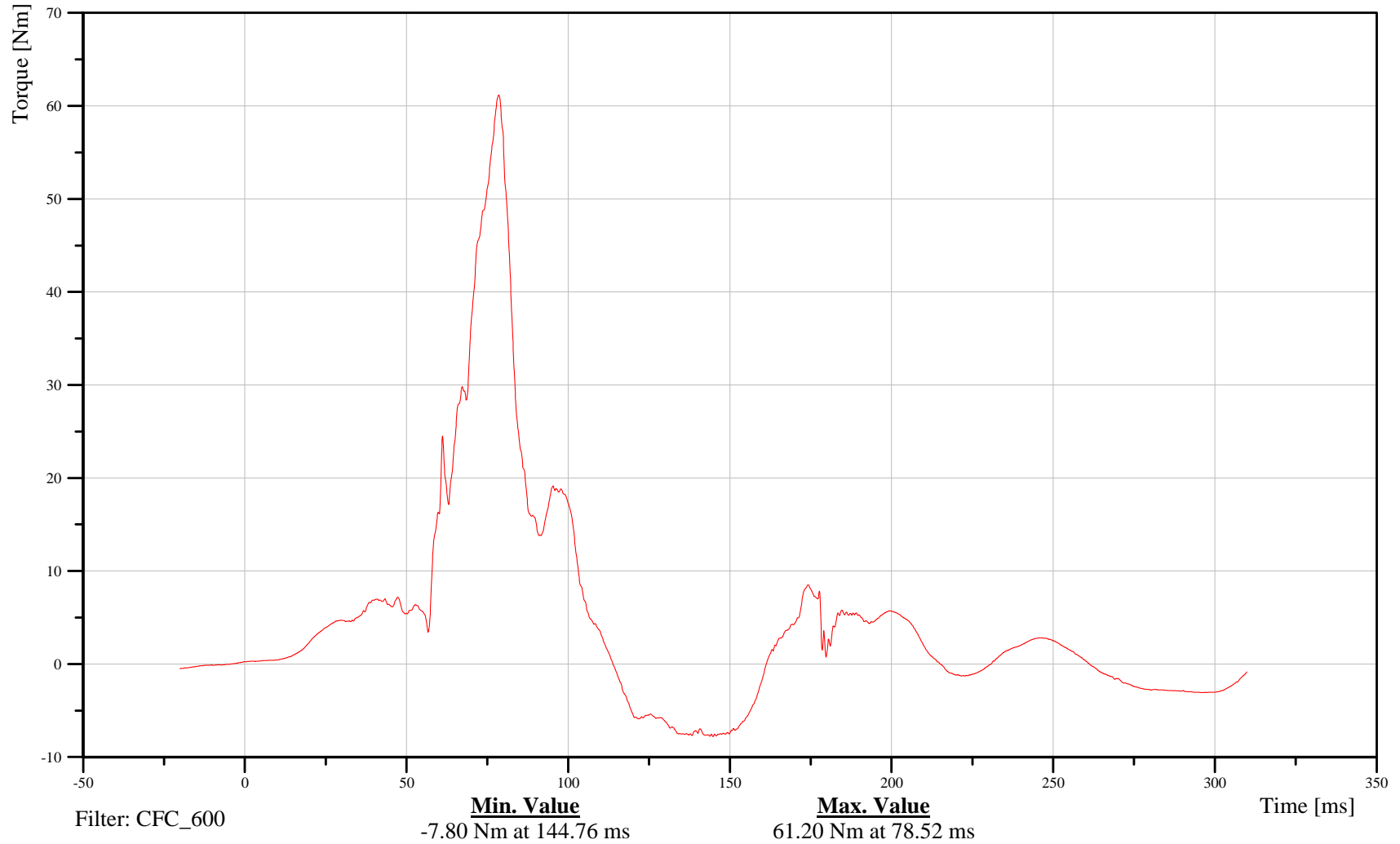
Bullet Vehicle Passenger Left Upper Tibia Moment About Y Axis

Customer: VRTC

13TIBILUFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-266

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

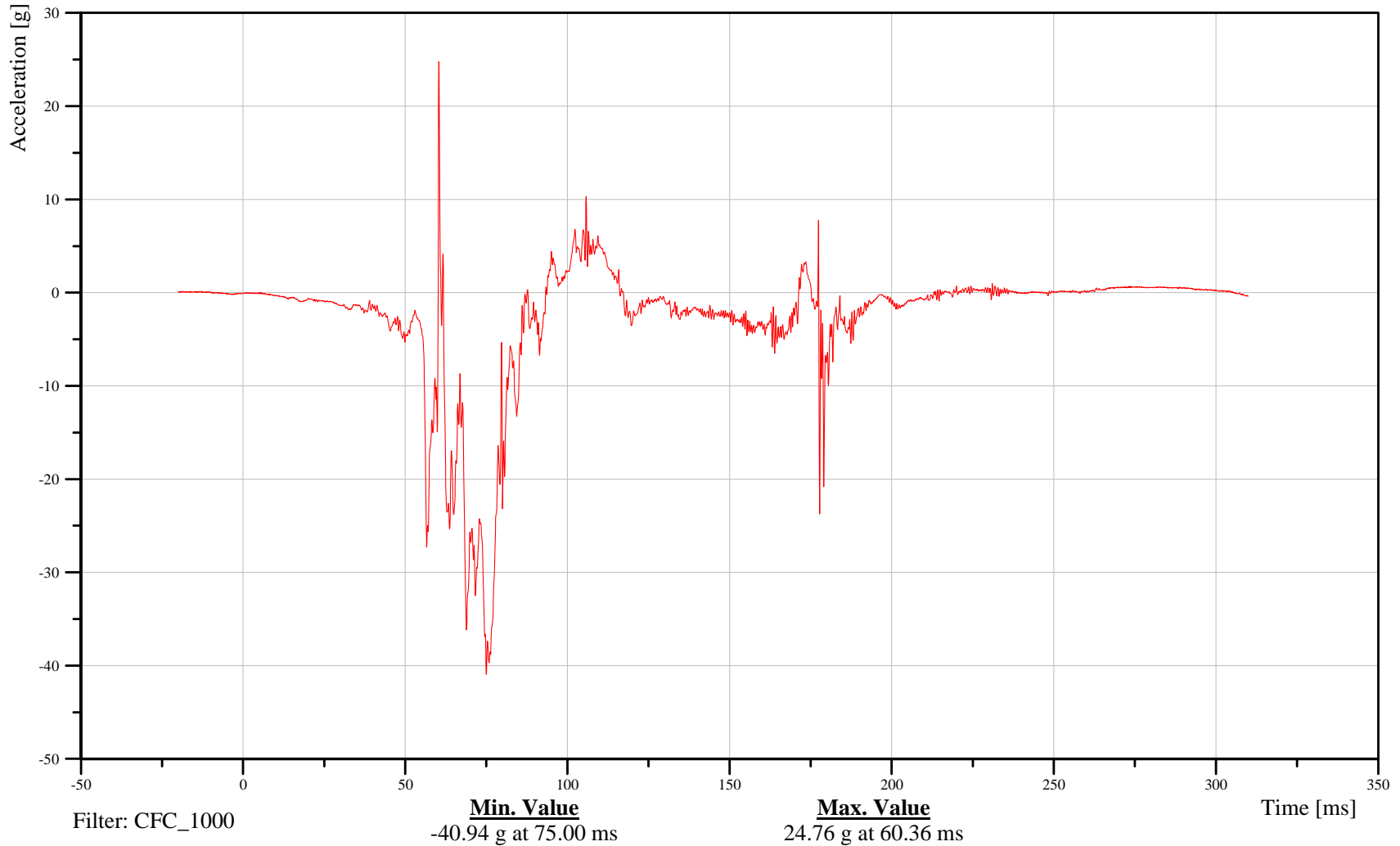
Bullet Vehicle Passenger Left Tibia X-Axis Acceleration

Customer: VRTC

13TIBILEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-267

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

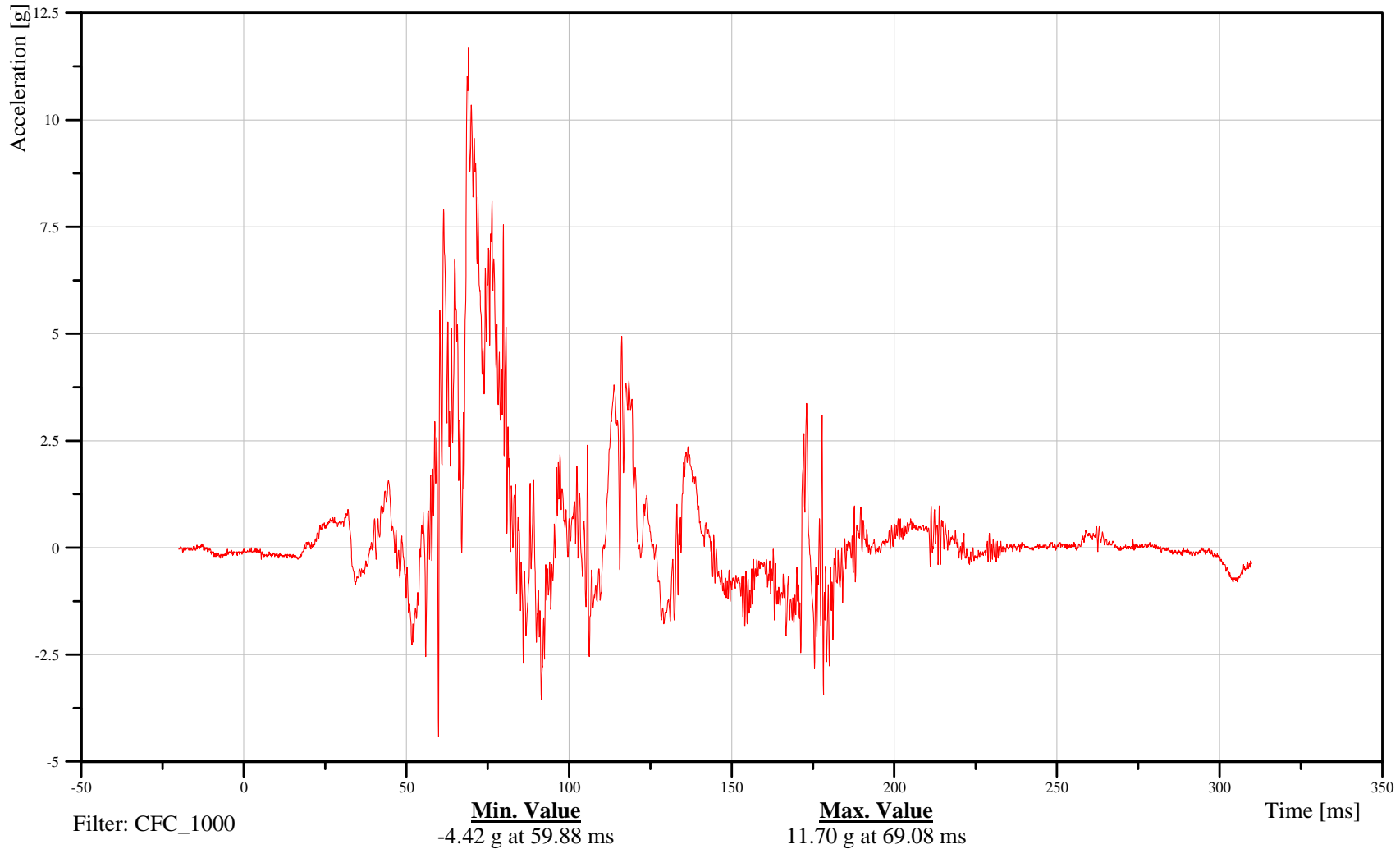
Bullet Vehicle Passenger Left Tibia Y-Axis Acceleration

Customer: VRTC

13TIBILEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-268

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

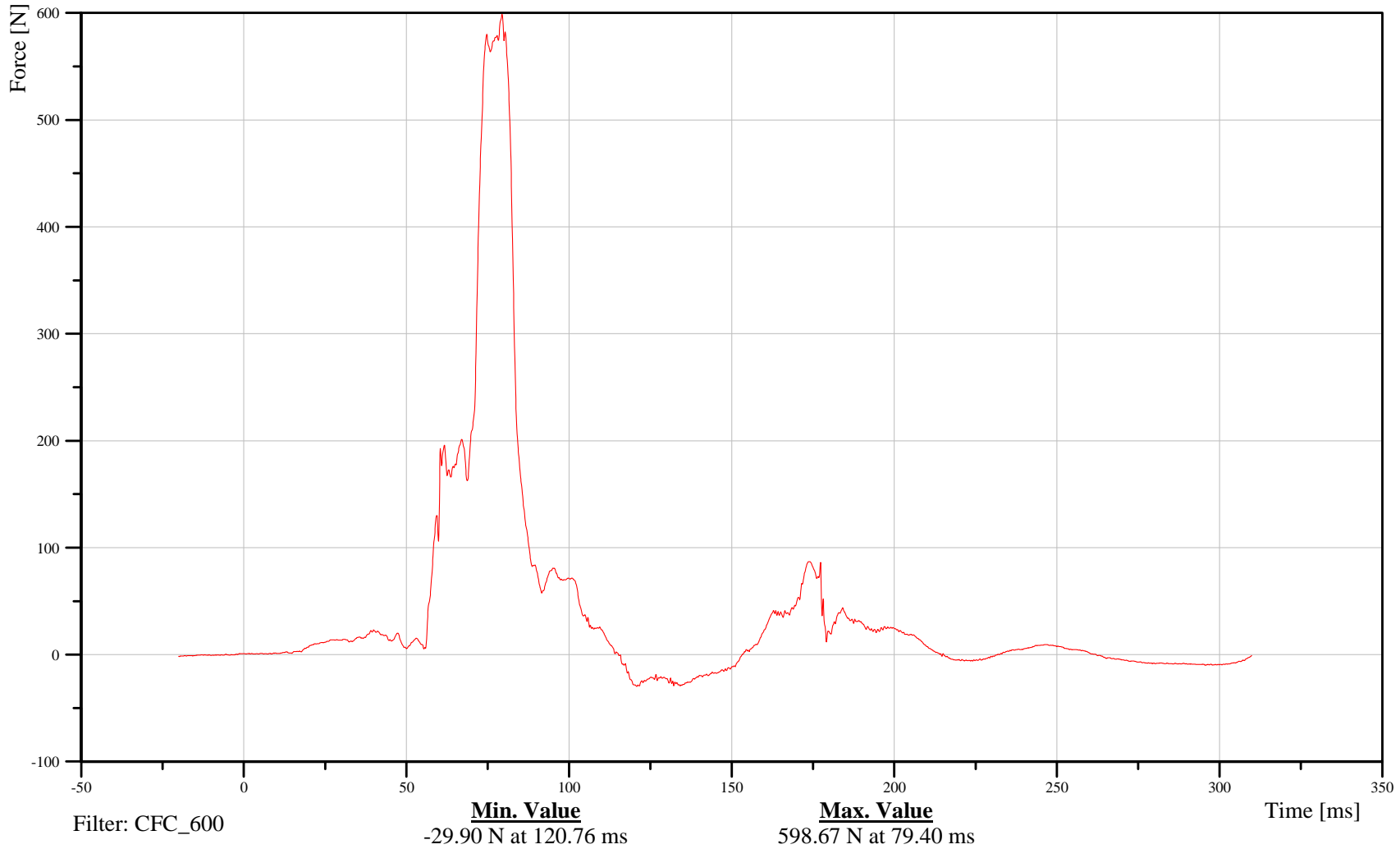
Bullet Vehicle Passenger Left Lower Tibia X-Axis Force

Customer: VRTC

13TIBILLFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-269

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

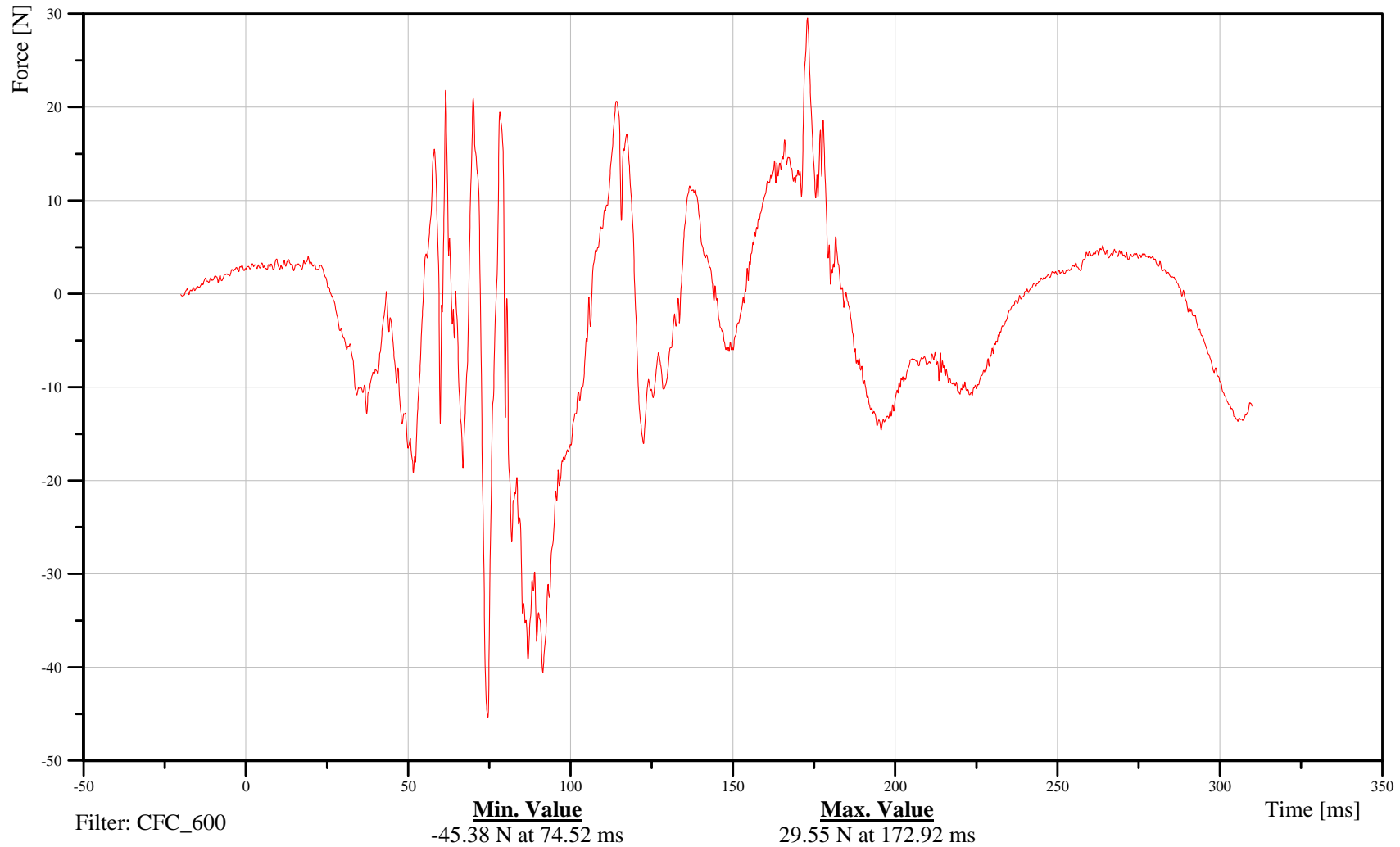
Bullet Vehicle Passenger Left Lower Tibia Y-Axis Force

Customer: VRTC

13TIBILLFXHFFOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-2770

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

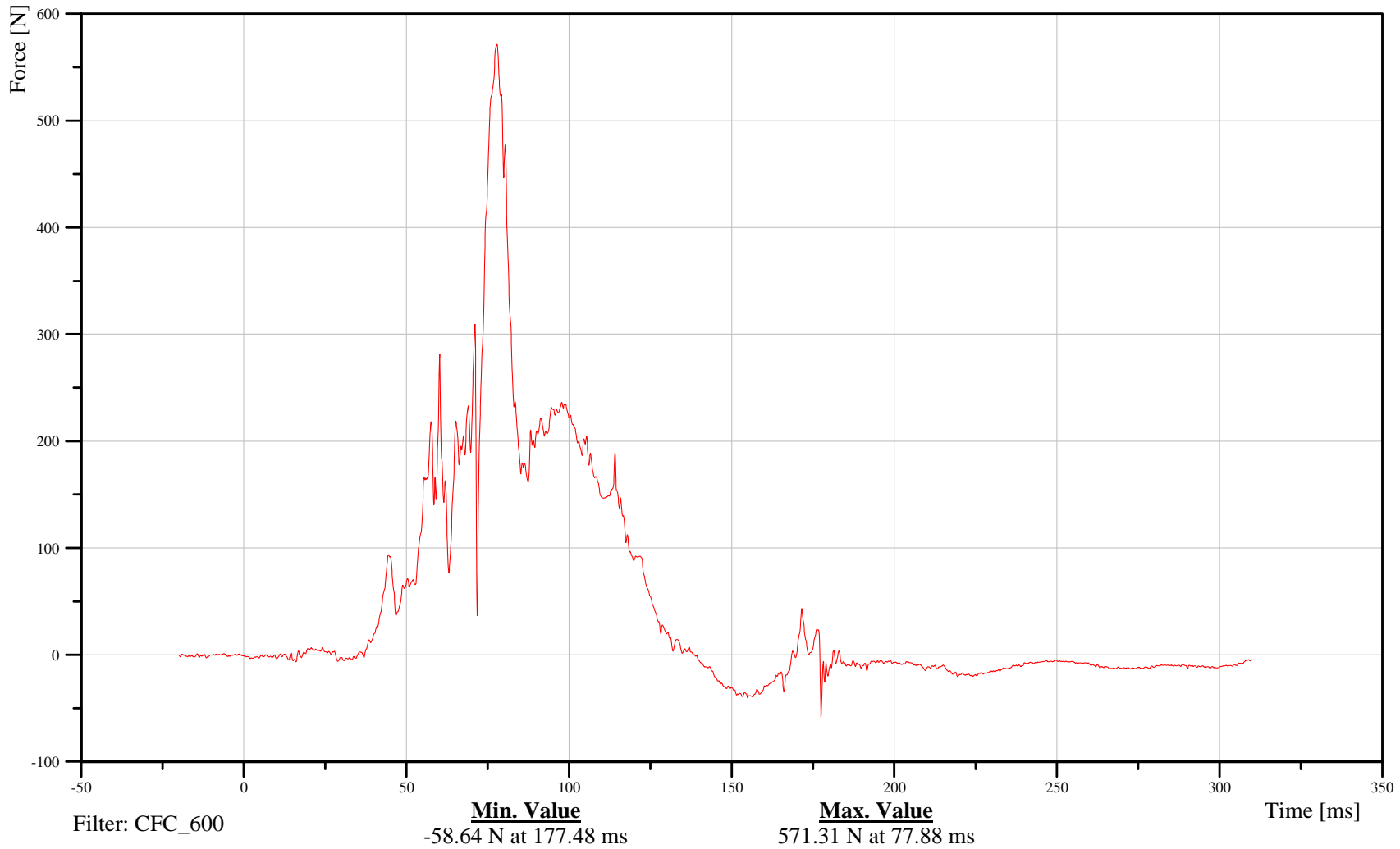
Bullet Vehicle Passenger Left Lower Tibia Z-Axis Force

Customer: VRTC

13TIBILLFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-271

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

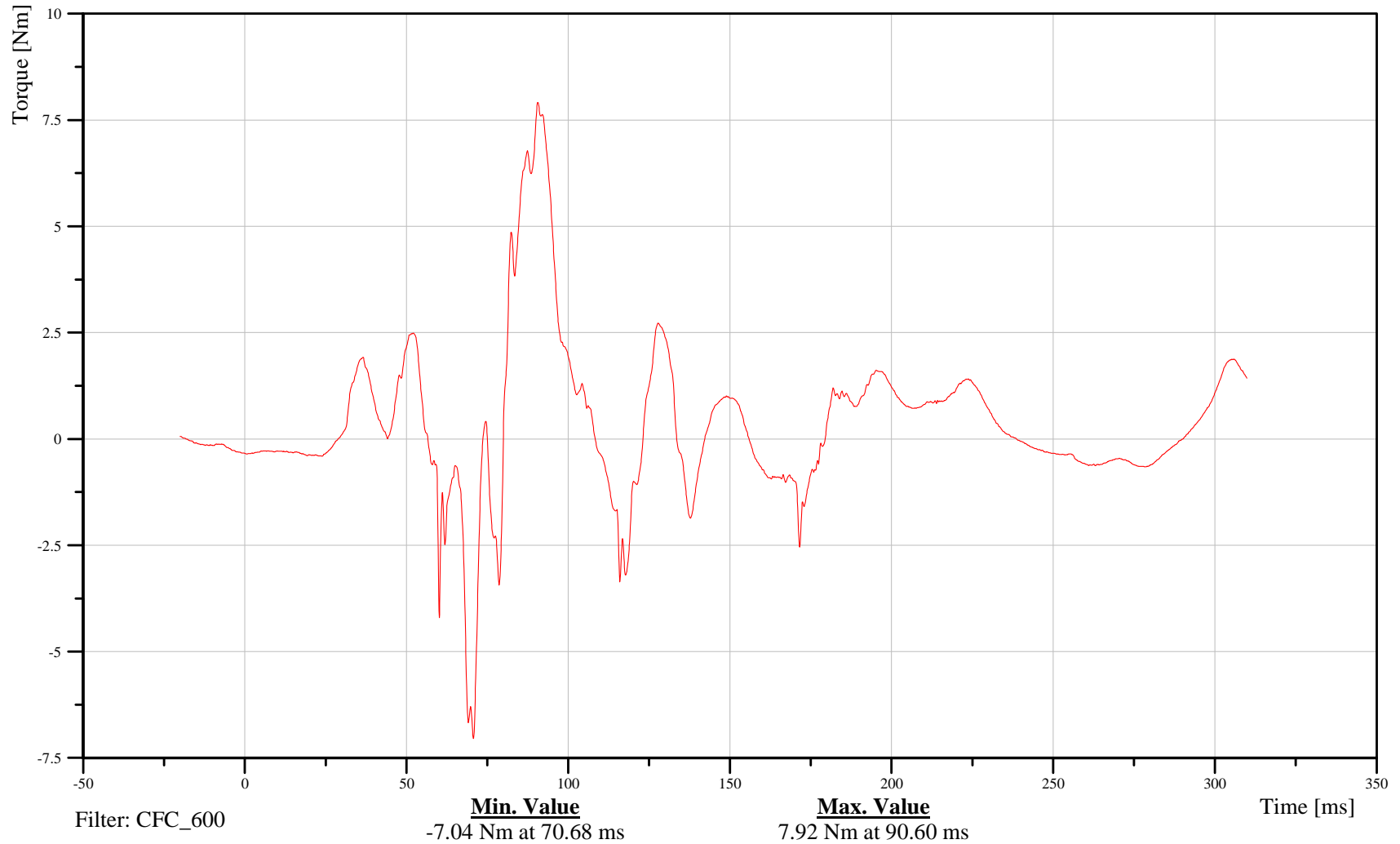
Bullet Vehicle Passenger Left Lower Tibia Moment About X Axis

Customer: VRTC

13TIBILLFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-2772

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Passenger Left Lower Tibia Moment About Y Axis

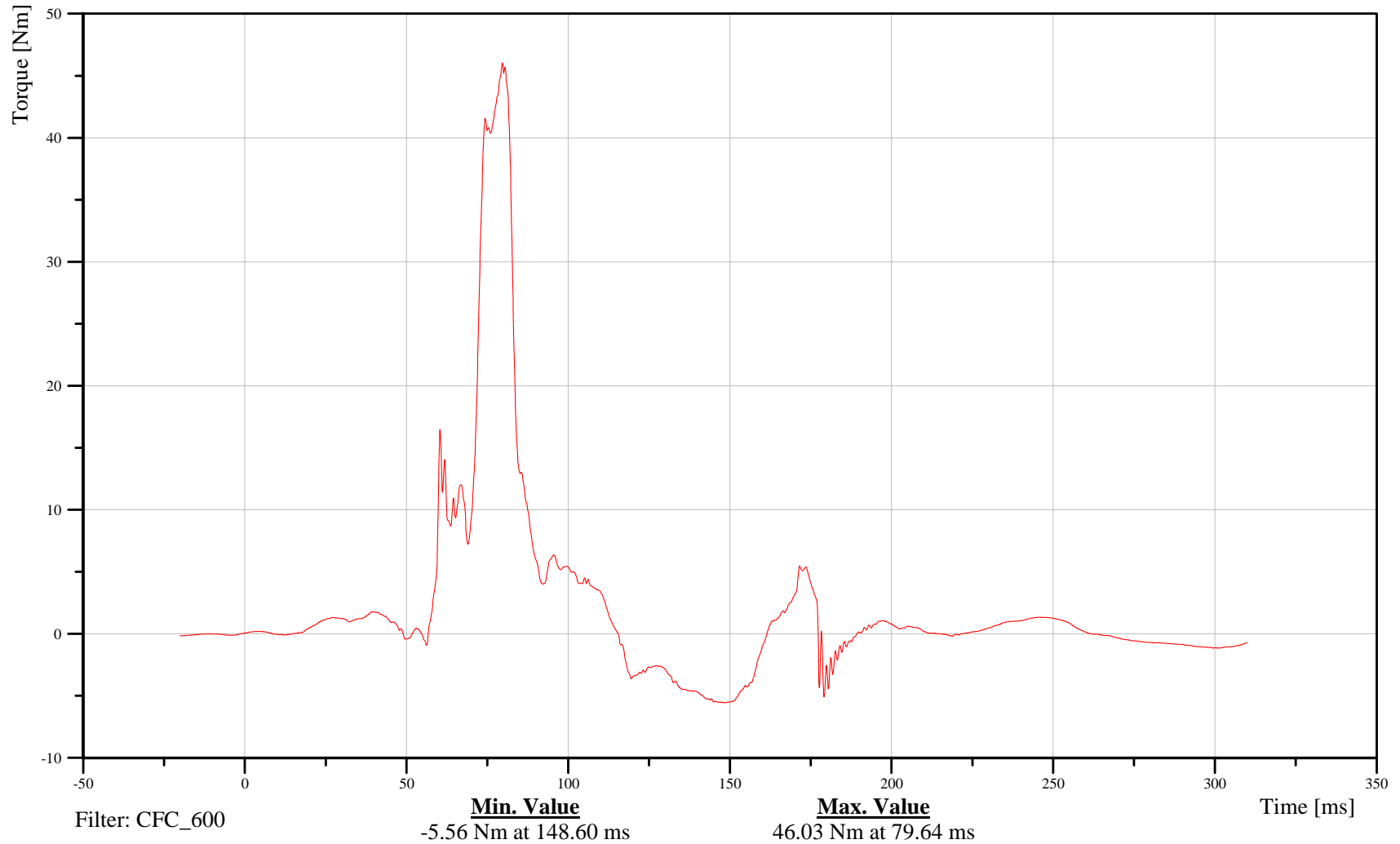
Time: 15:44

Customer: VRTC

13TIBILLFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-273

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

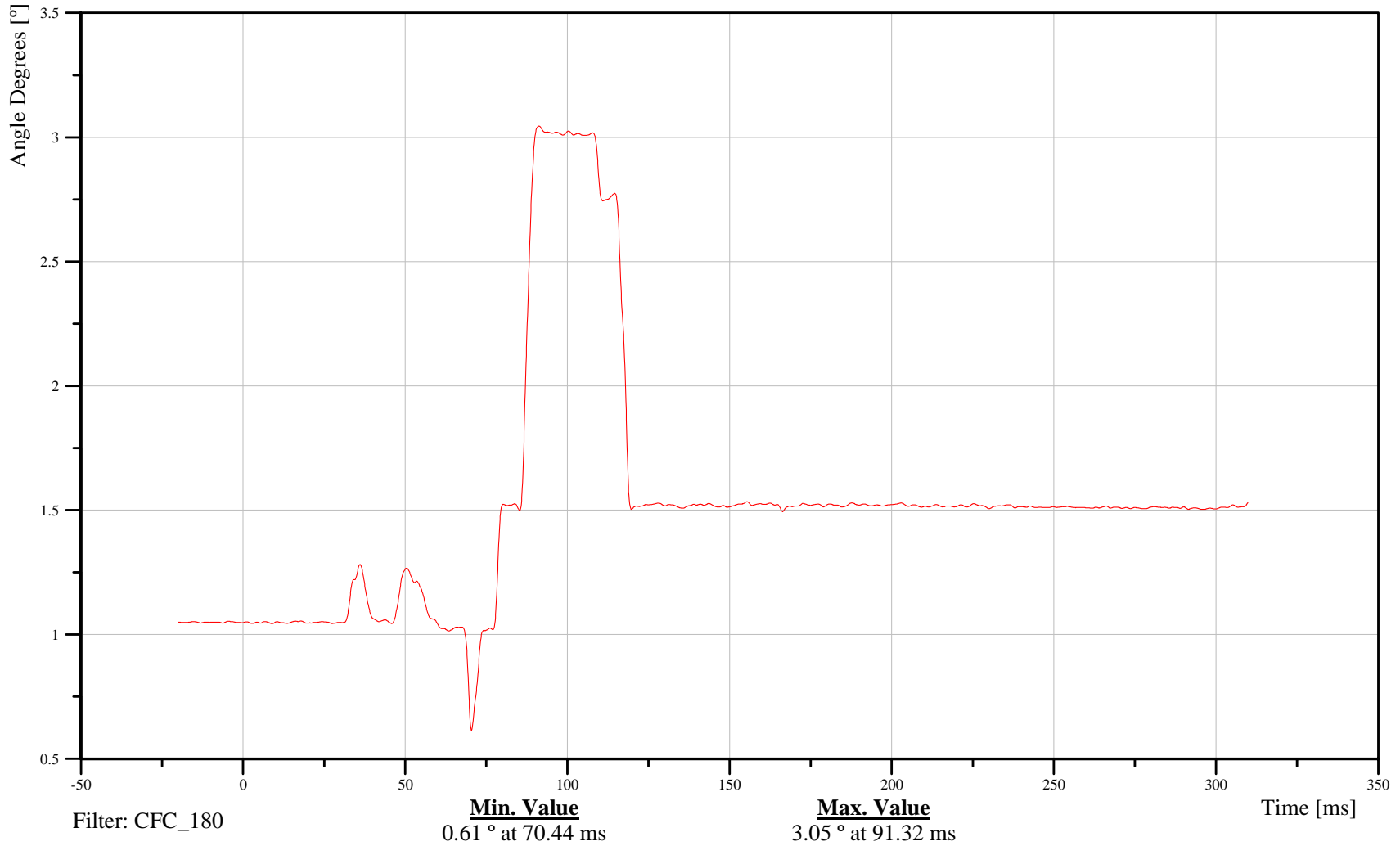
Bullet Vehicle Passenger Left Foot X-Axis Angular Displacement

Customer: VRTC

13FOOTLEFXHFANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-274

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

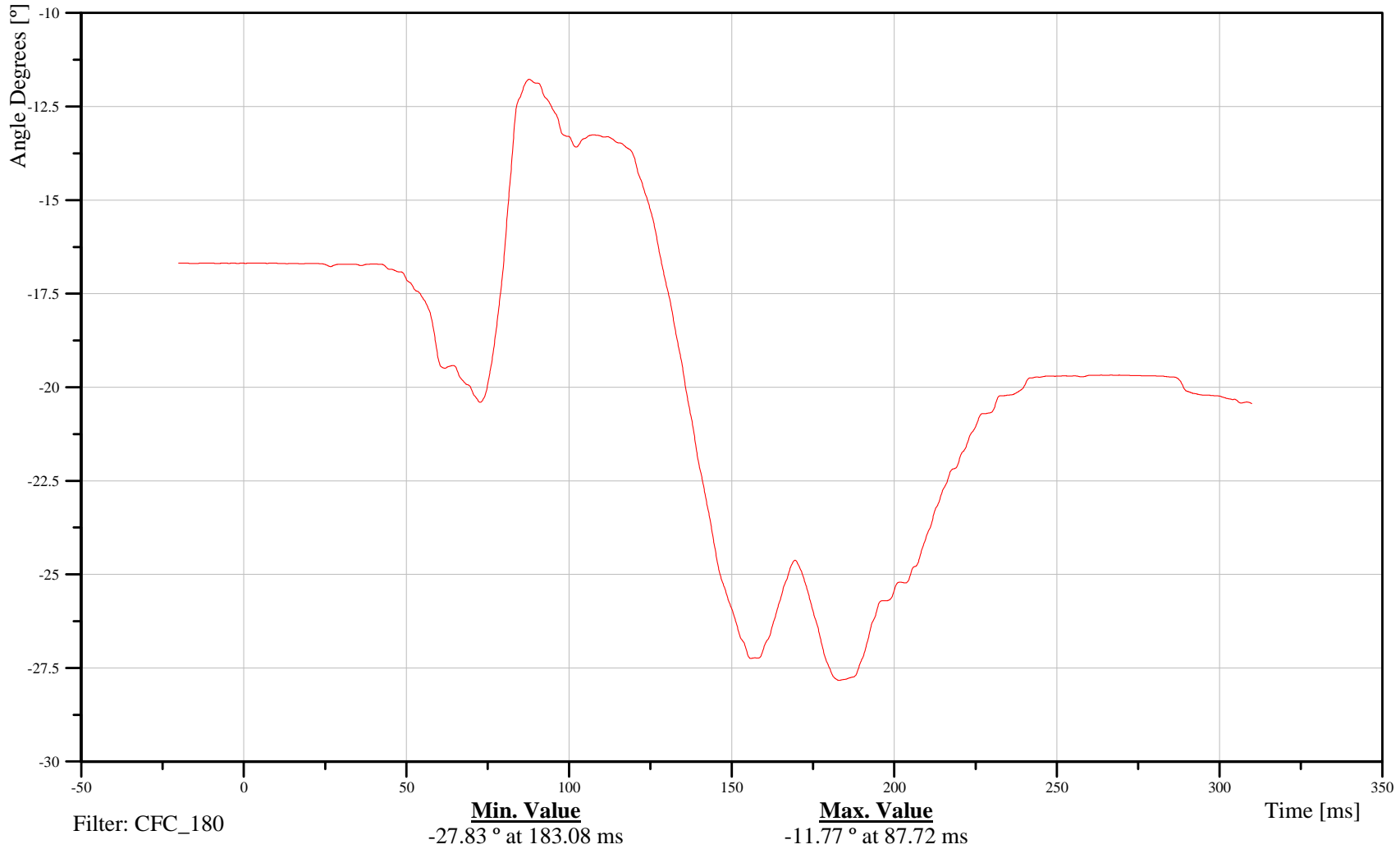
Bullet Vehicle Passenger Left Foot Y-Axis Angular Displacement

Customer: VRTC

13FOOTLEFXHFANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-275

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

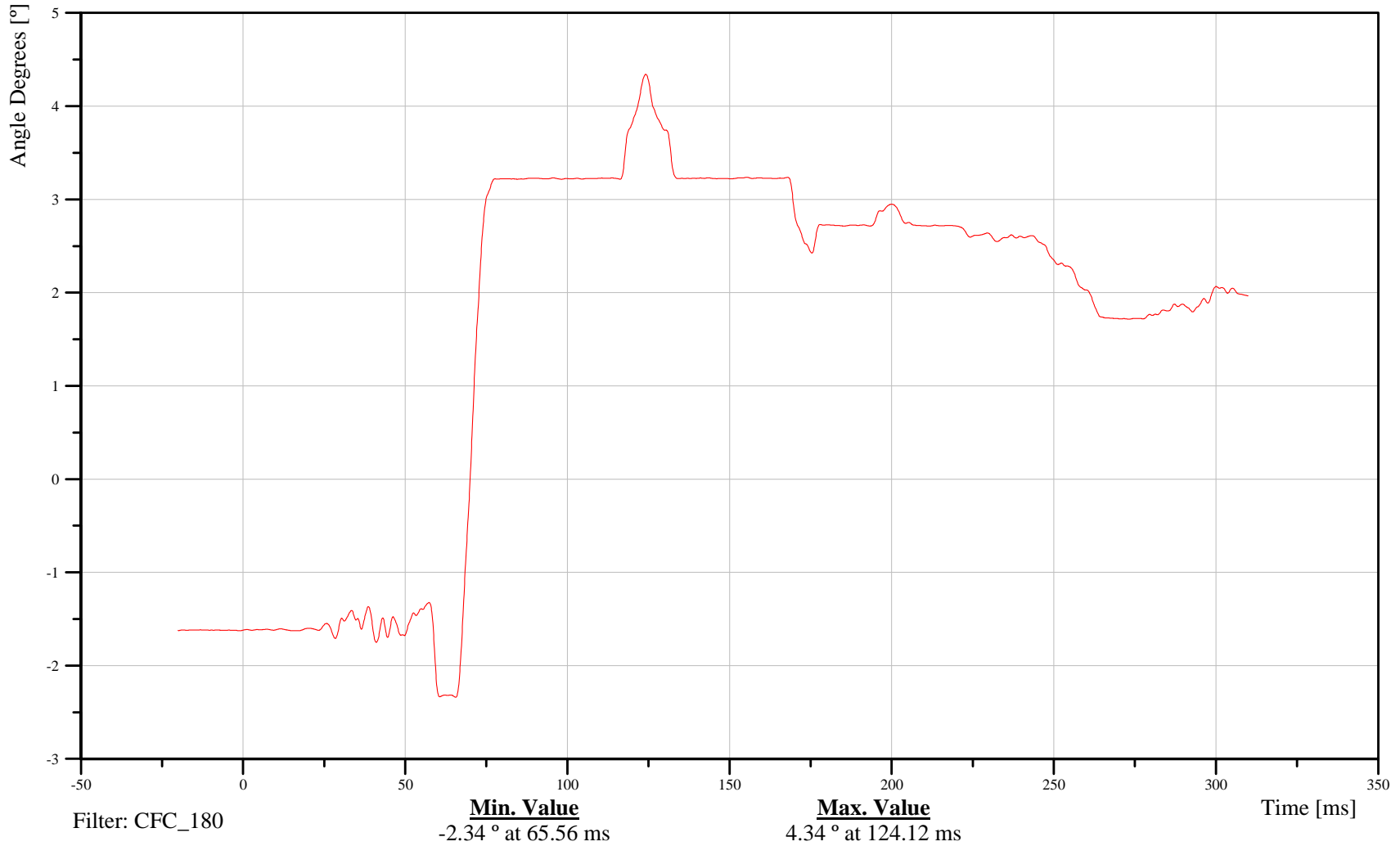
Bullet Vehicle Passenger Left Foot Z-Axis Angular Displacement

Customer: VRTC

13FOOTLEFXHFANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-276

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Passenger Left Foot X-Axis Acceleration

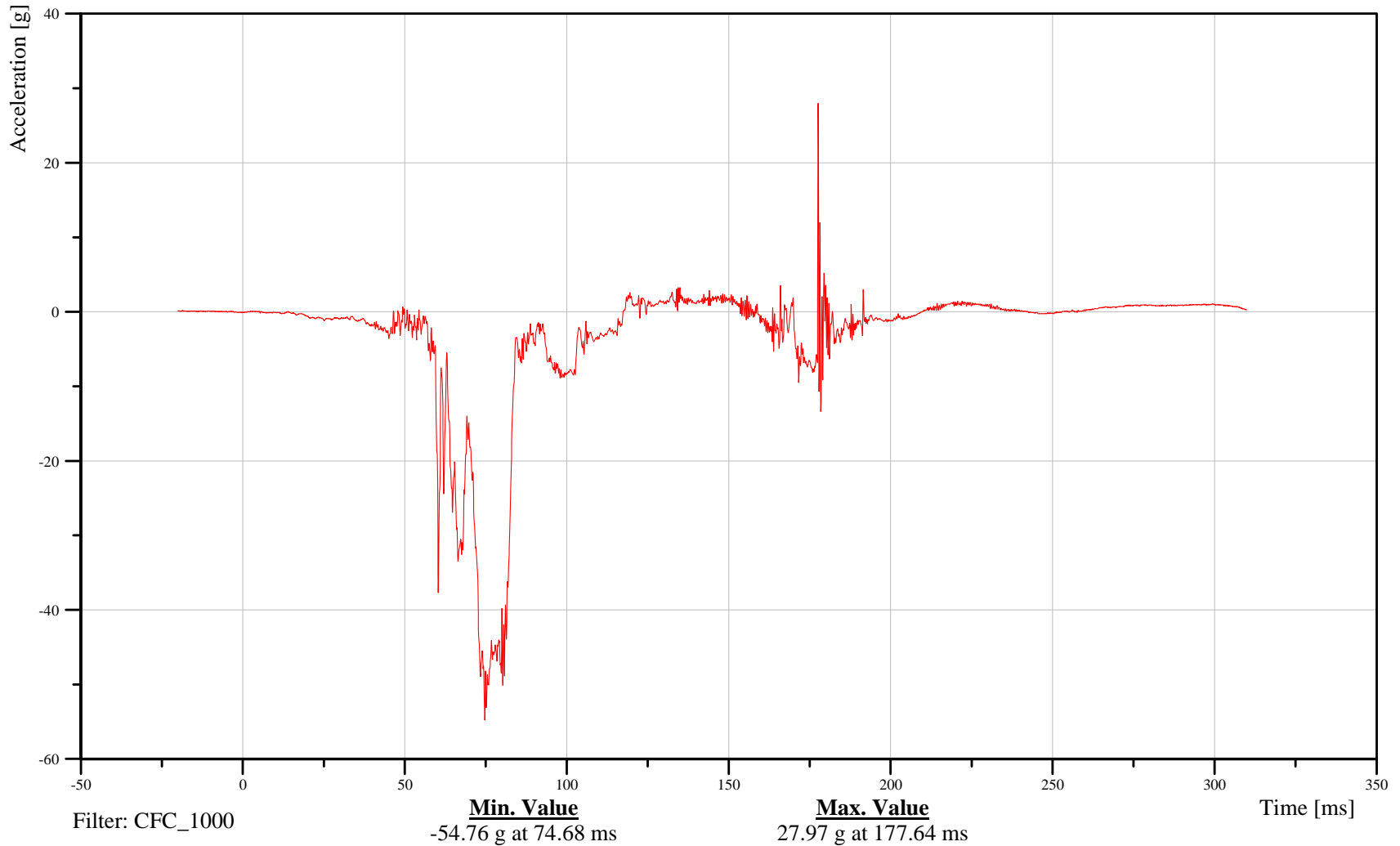
Time: 15:44

Customer: VRTC

13FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-277

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

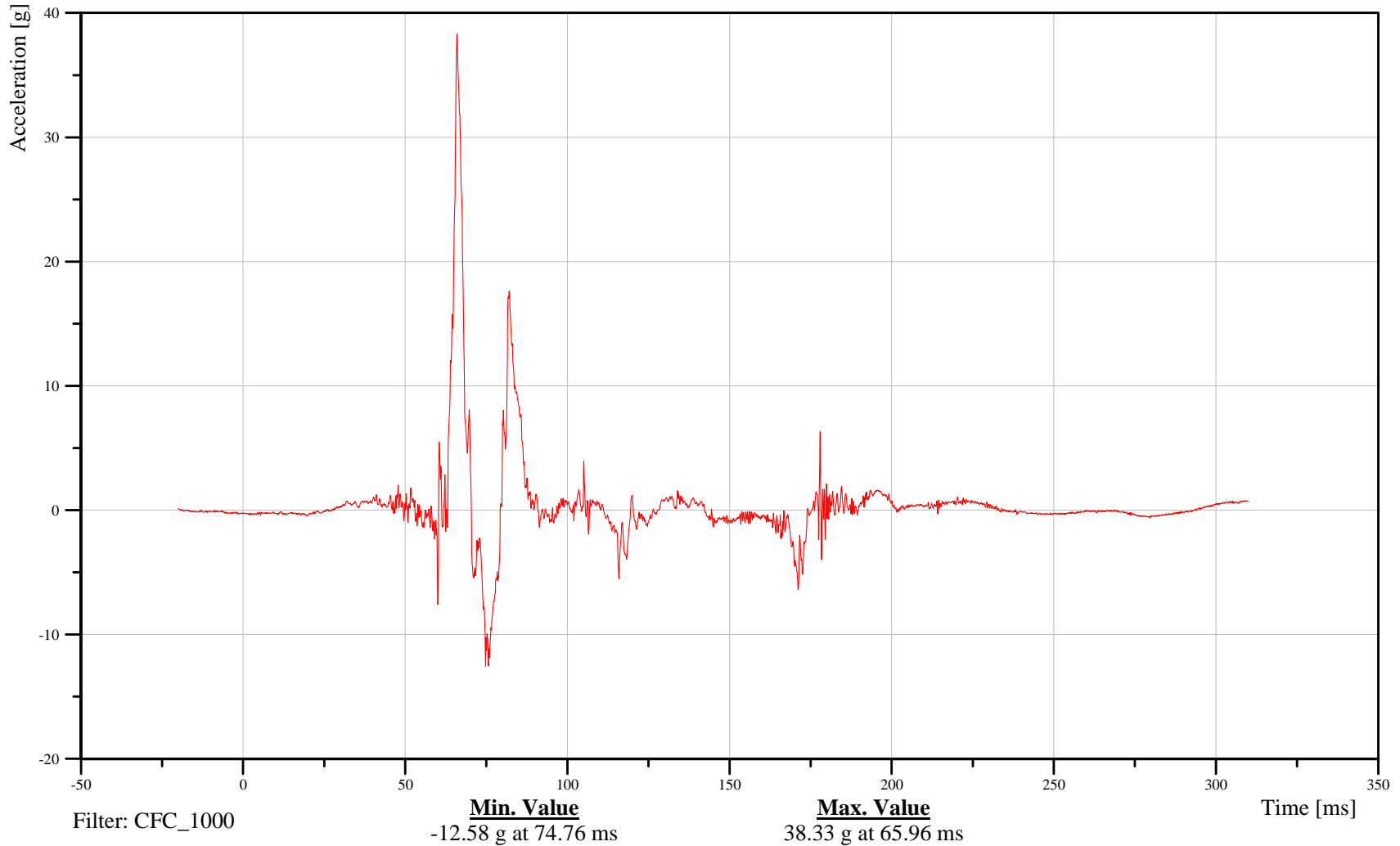
Bullet Vehicle Passenger Left Foot Y-Axis Acceleration

Customer: VRTC

13FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-278

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

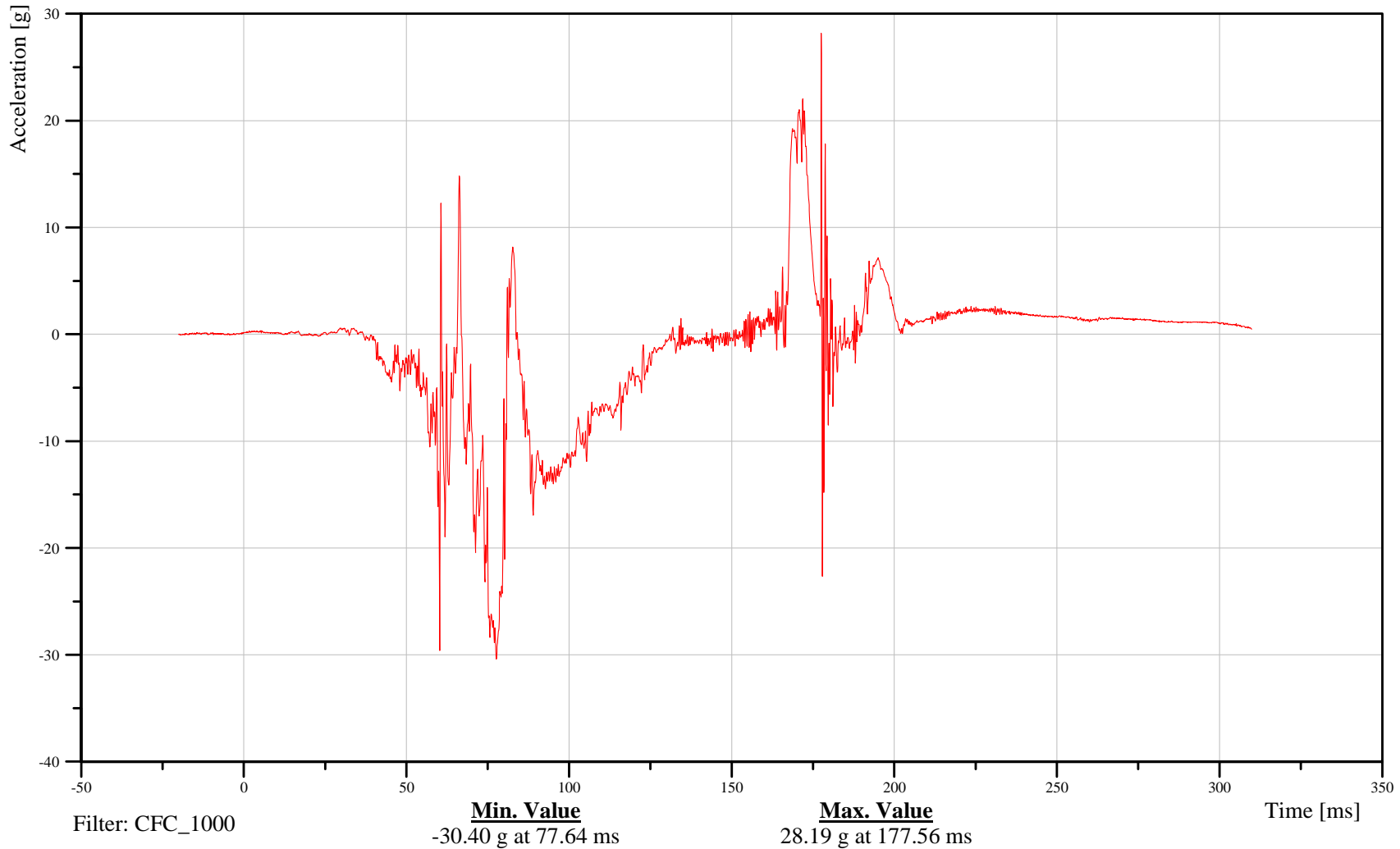
Bullet Vehicle Passenger Left Foot Z-Axis Acceleration

Customer: VRTC

13FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-279

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

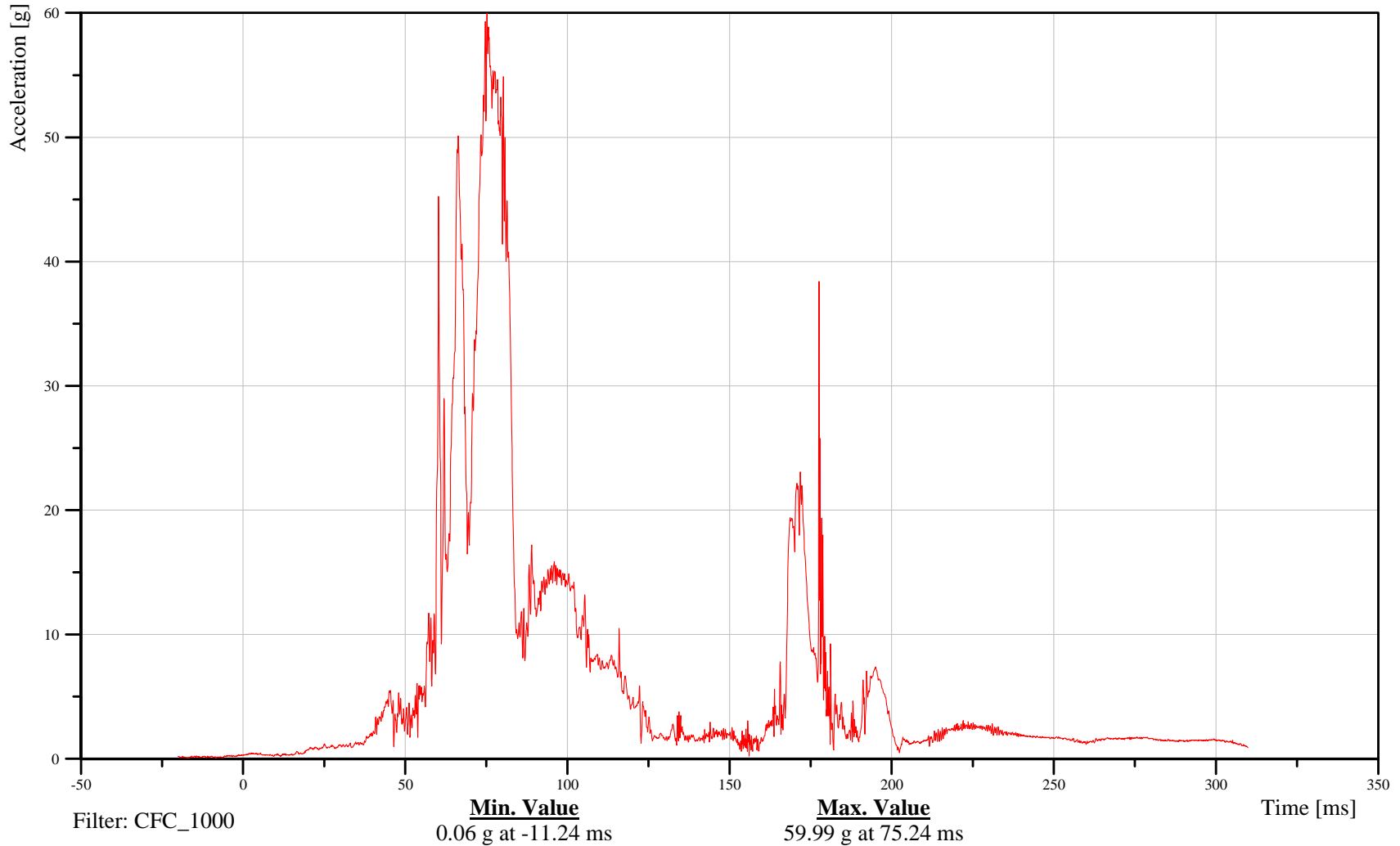
Bullet Vehicle Passenger Left Foot Resultant Acceleration

Customer: VRTC

13FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-280

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

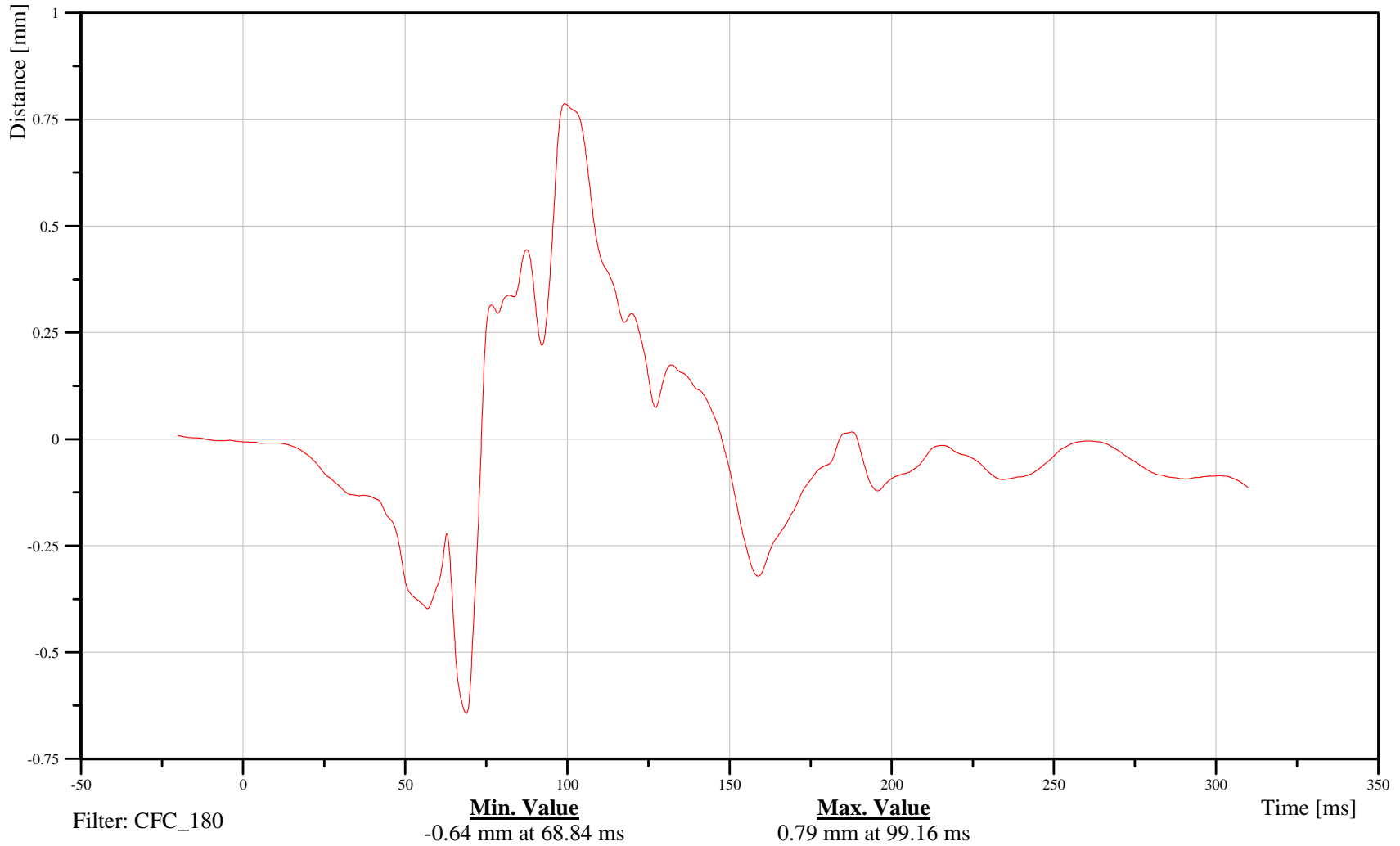
Bullet Vehicle Passenger Right Knee X-Axis Displacement

Customer: VRTC

13KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-281

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

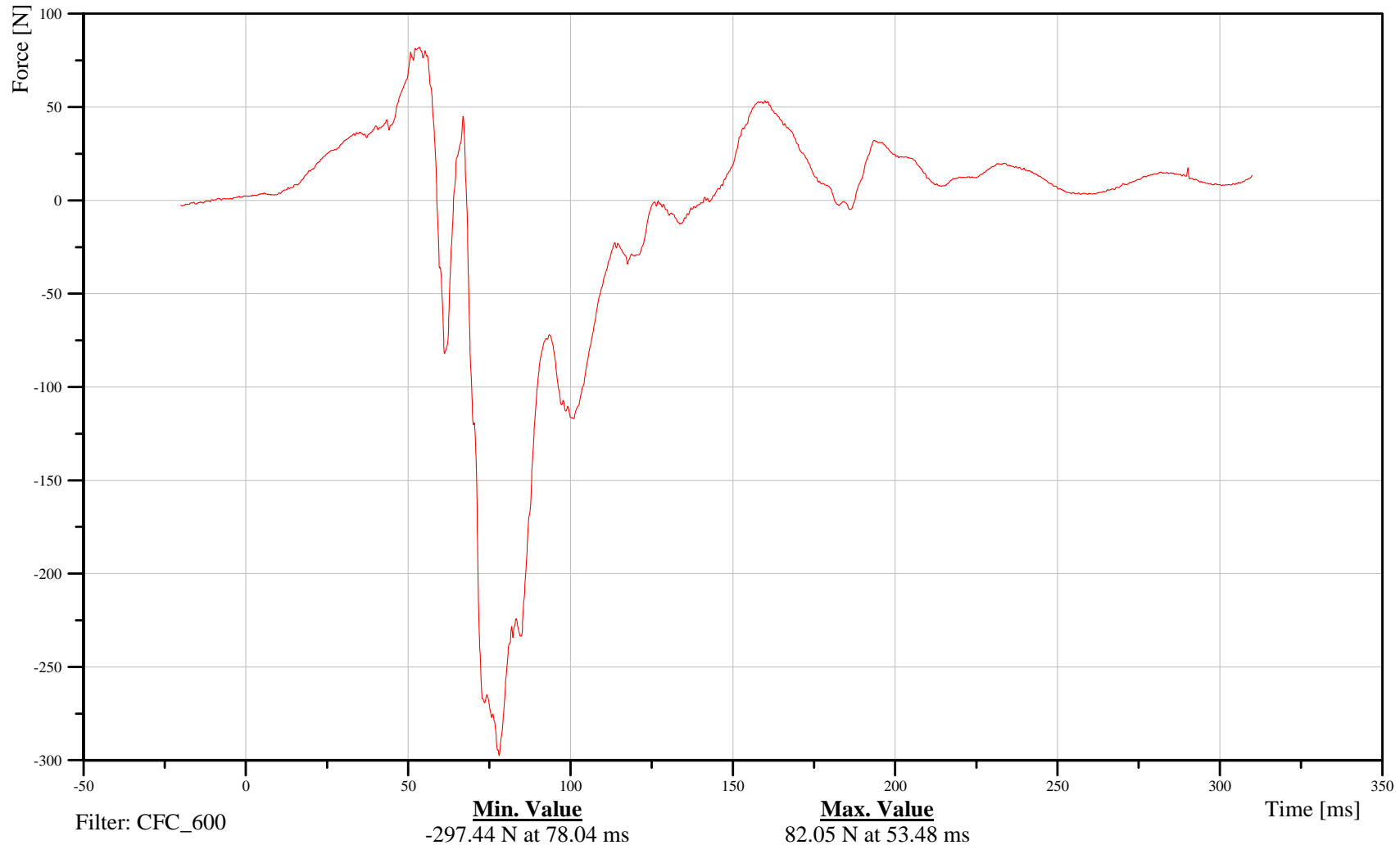
Bullet Vehicle Passenger Right Upper Tibia X-Axis Force

Customer: VRTC

13TIBIRUFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-282

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

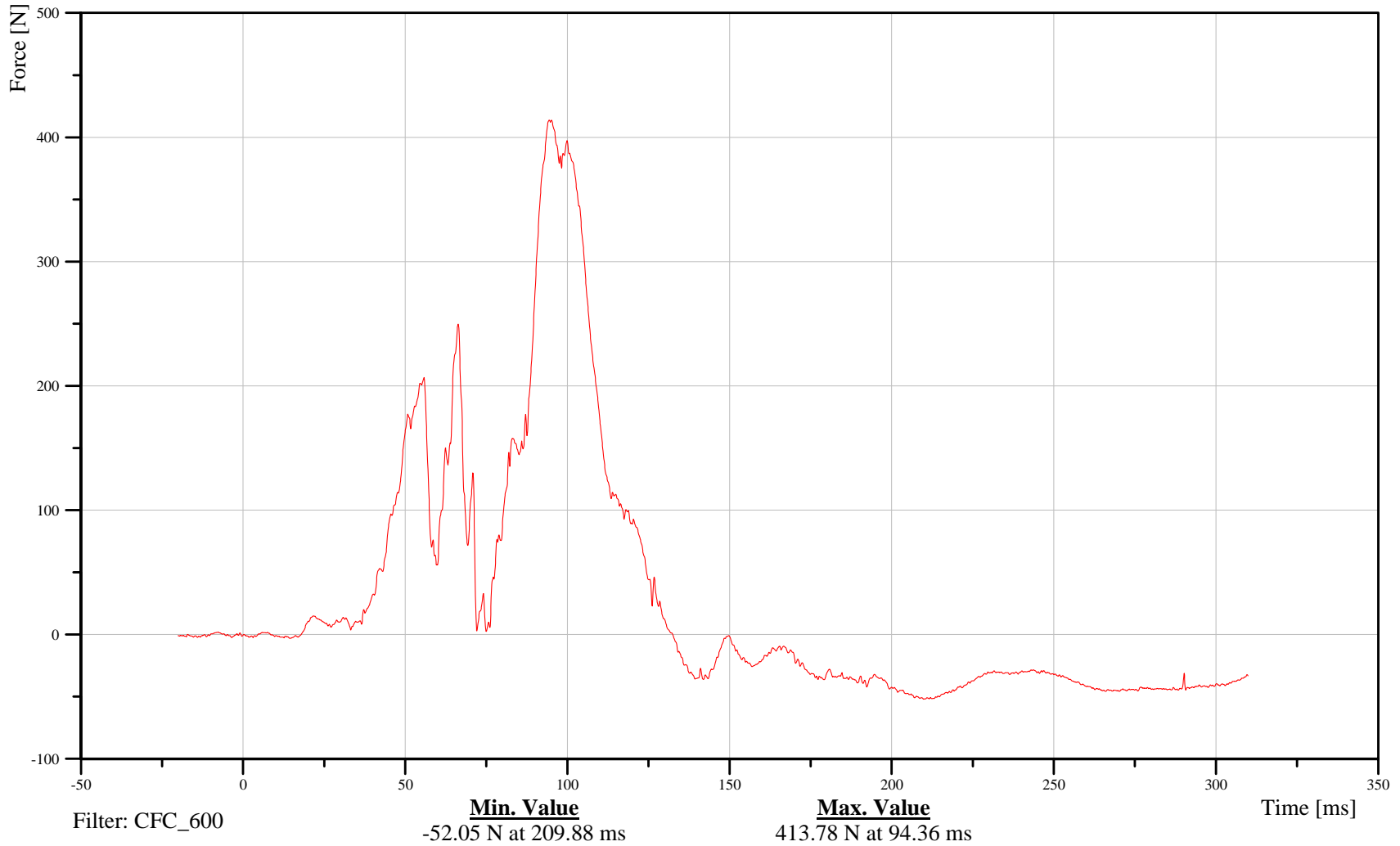
Bullet Vehicle Passenger Right Upper Tibia Z-Axis Force

Customer: VRTC

13TIBIRUFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-283

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Passenger Right Upper Tibia Moment About X Axis

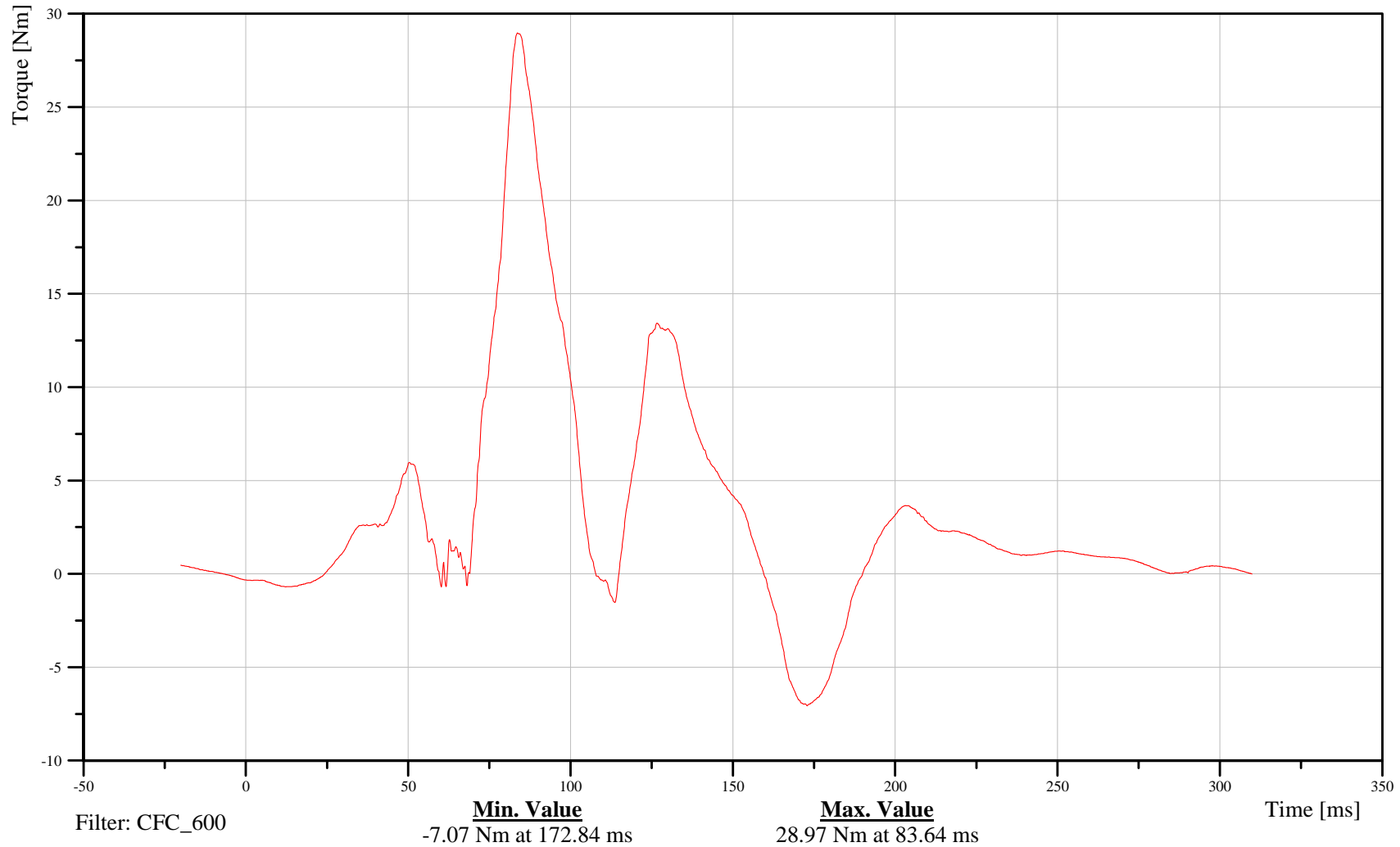
Time: 15:44

Customer: VRTC

13TIBIRUFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-284

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

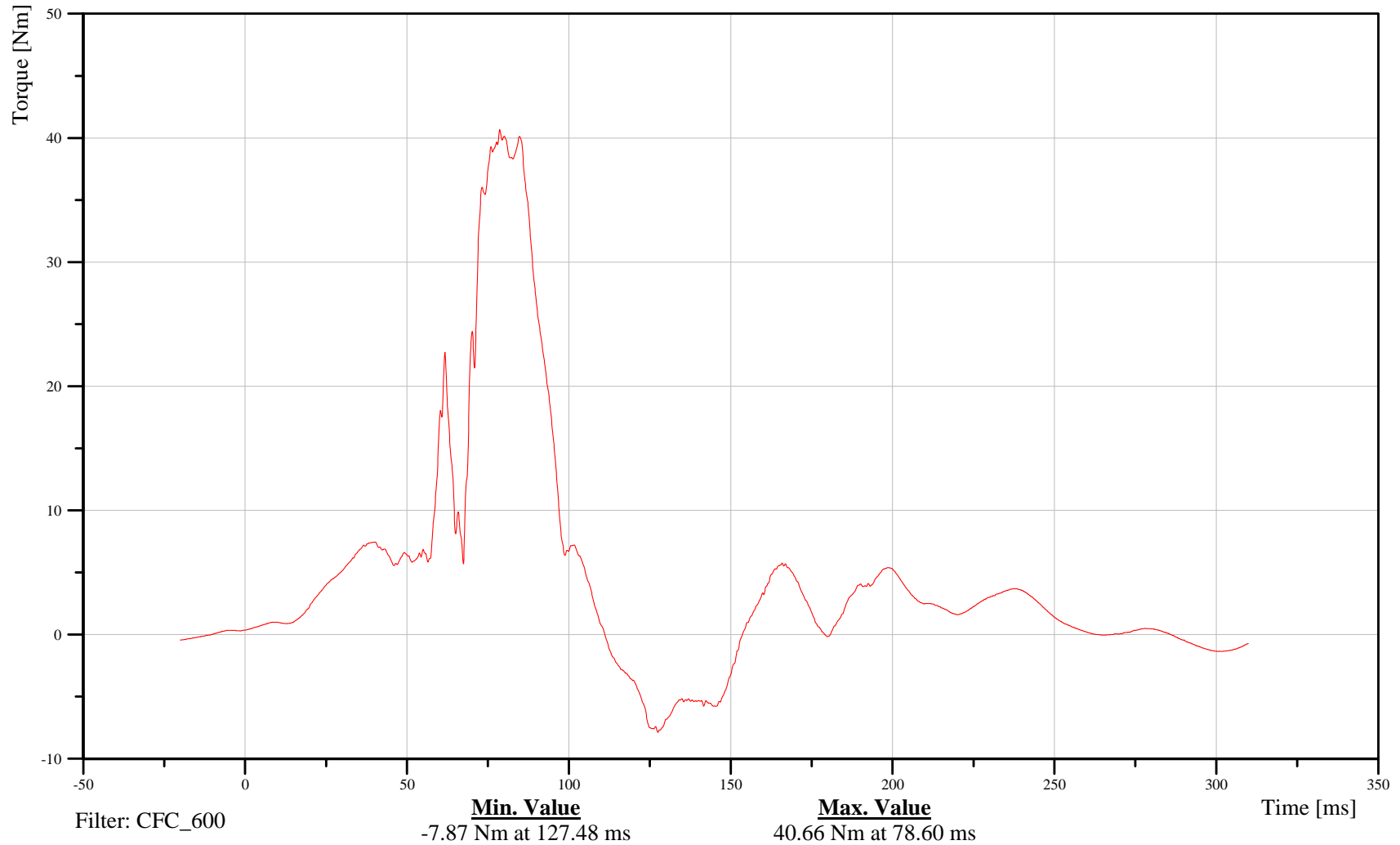
Bullet Vehicle Passenger Right Upper Tibia Moment About Y Axis

Customer: VRTC

13TIBIRUFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-285

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

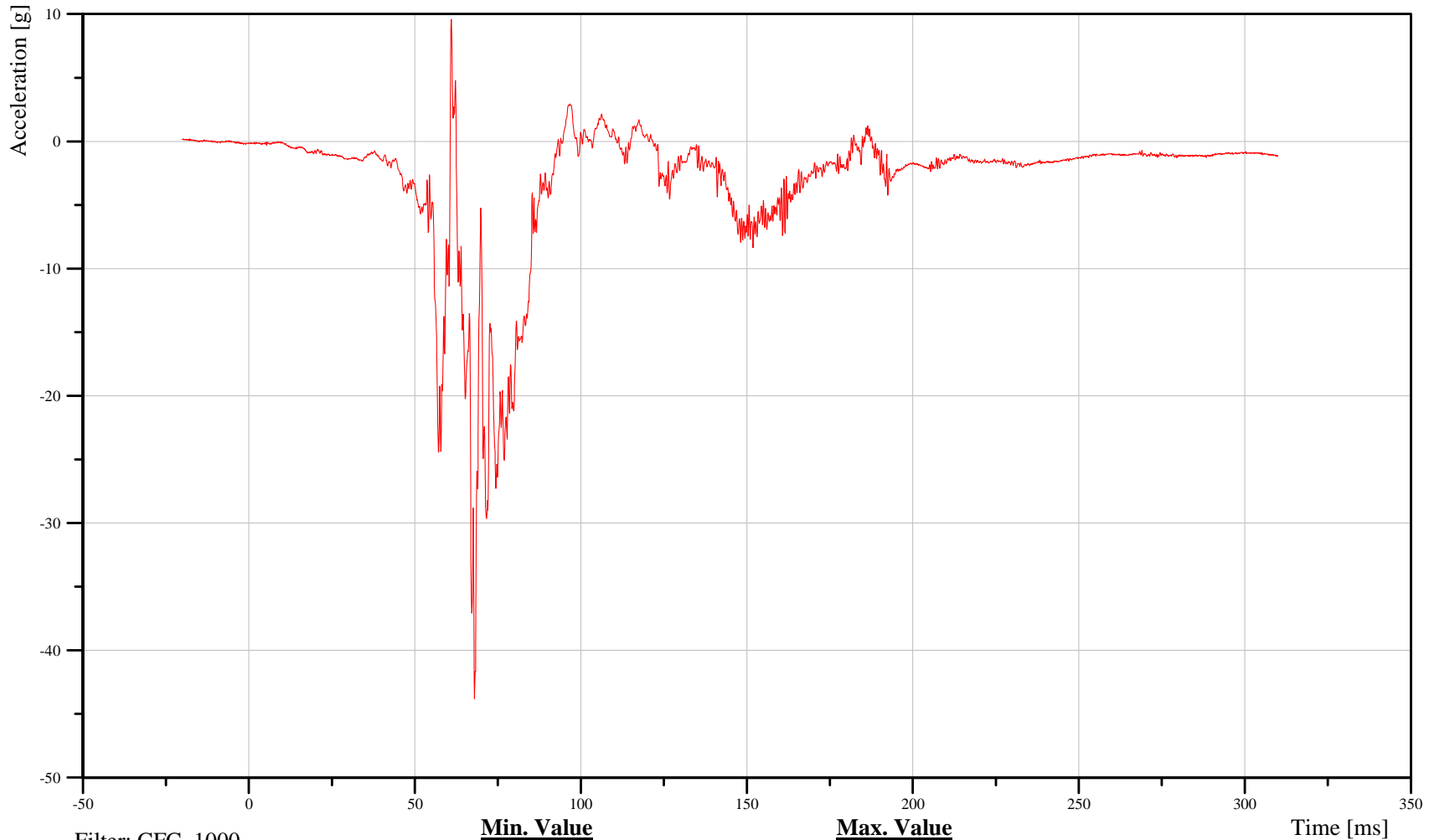
Bullet Vehicle Passenger Right Tibia X-Axis Acceleration

Customer: VRTC

13TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



Filter: CFC_1000

Min. Value
-43.79 g at 67.96 ms

Max. Value
9.58 g at 60.92 ms

Time [ms]

B-286

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

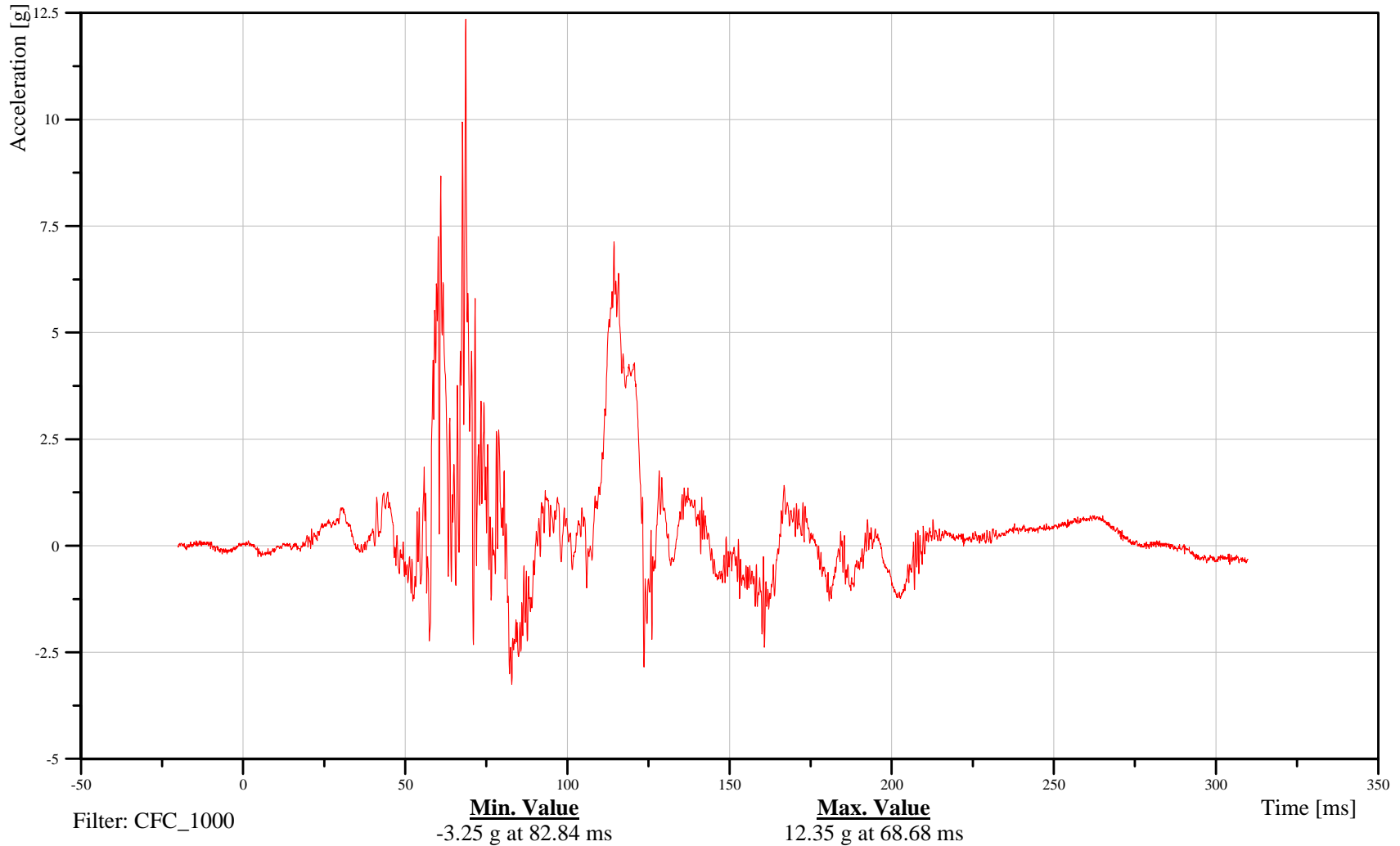
Bullet Vehicle Passenger Right Tibia Y-Axis Acceleration

Customer: VRTC

13TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-287

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

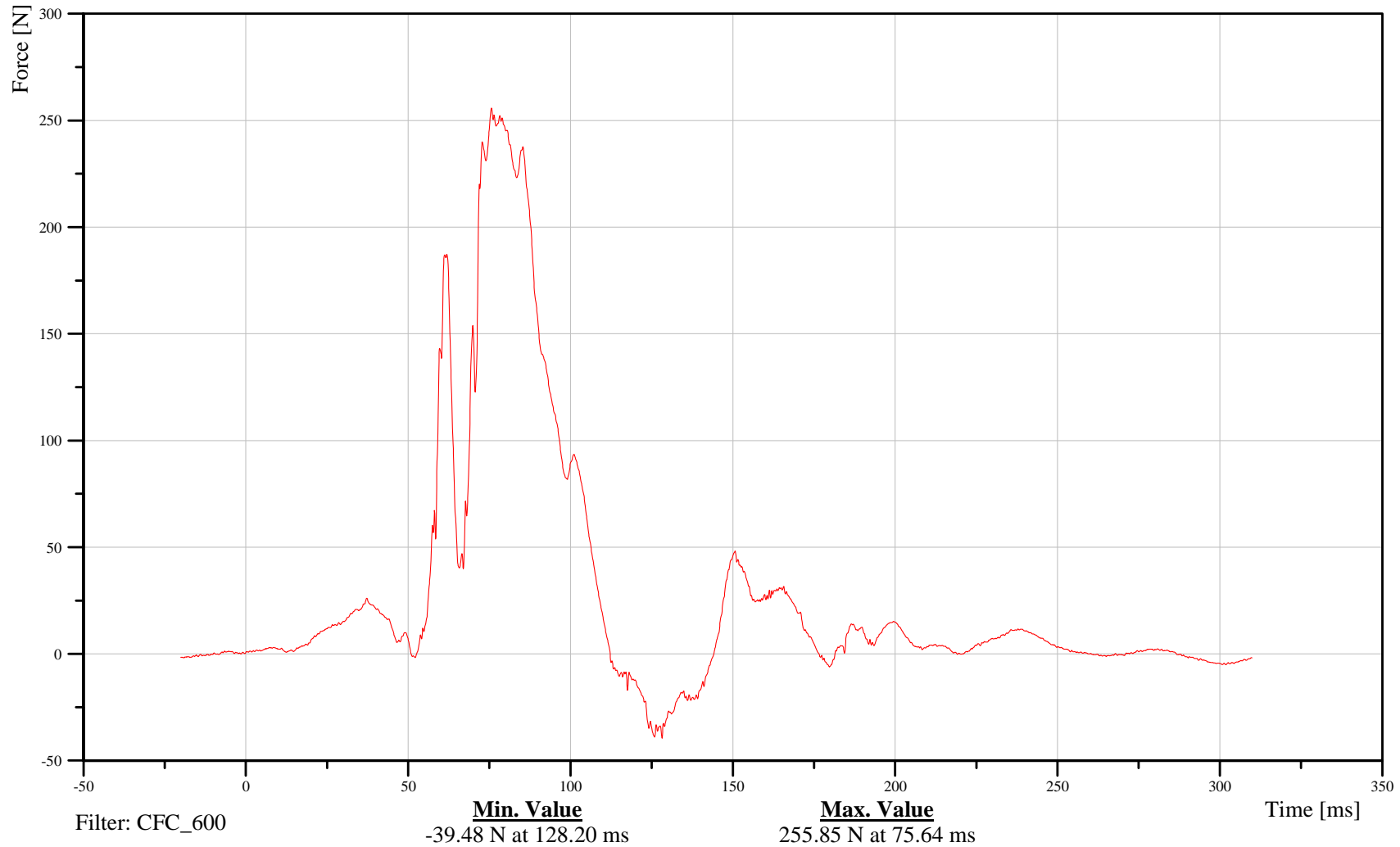
Bullet Vehicle Passenger Right Lower Tibia X-Axis Force

Customer: VRTC

13TIBIRLFXHFFOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-288

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

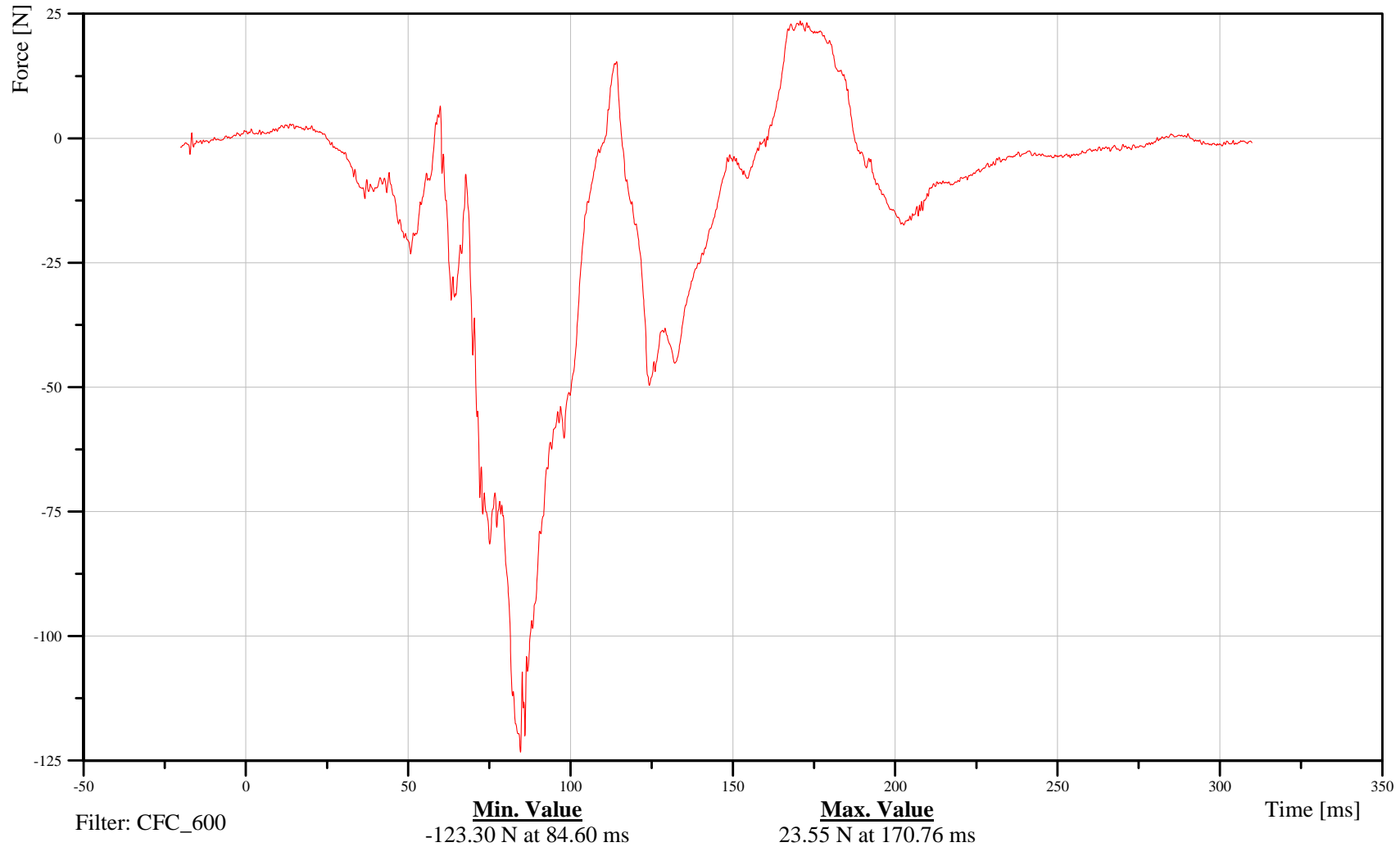
Bullet Vehicle Passenger Right Lower Tibia Y-Axis Force

Customer: VRTC

13TIBIRLFXHFFOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-289

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Passenger Right Lower Tibia Z-Axis Force

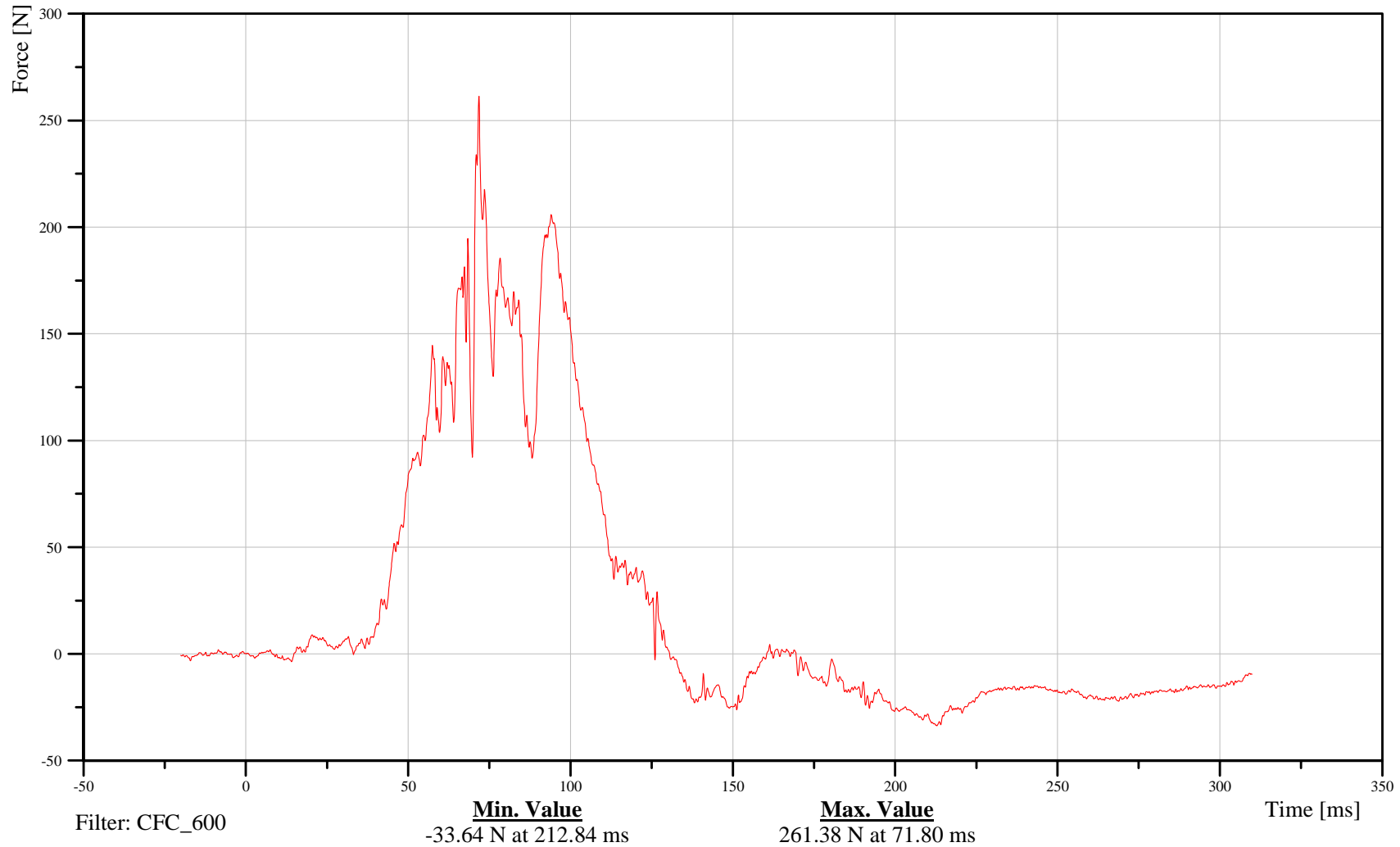
Time: 15:44

Customer: VRTC

13TIBIRLFXHFFOZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-290

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

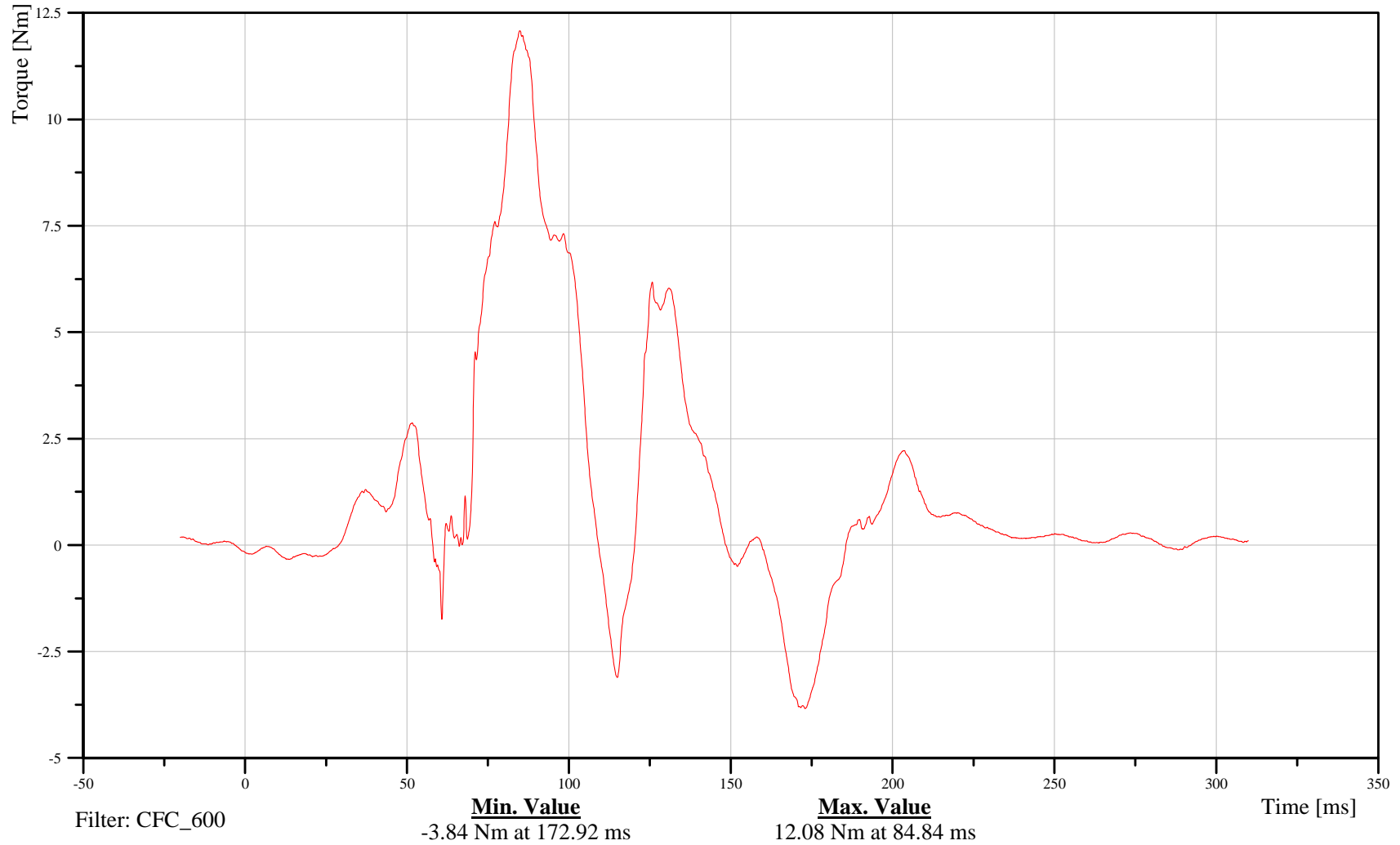
Bullet Vehicle Passenger Right Lower Tibia Moment About X Axis

Customer: VRTC

13TIBIRLFXHFMOXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-291

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Passenger Right Lower Tibia Moment About Y Axis

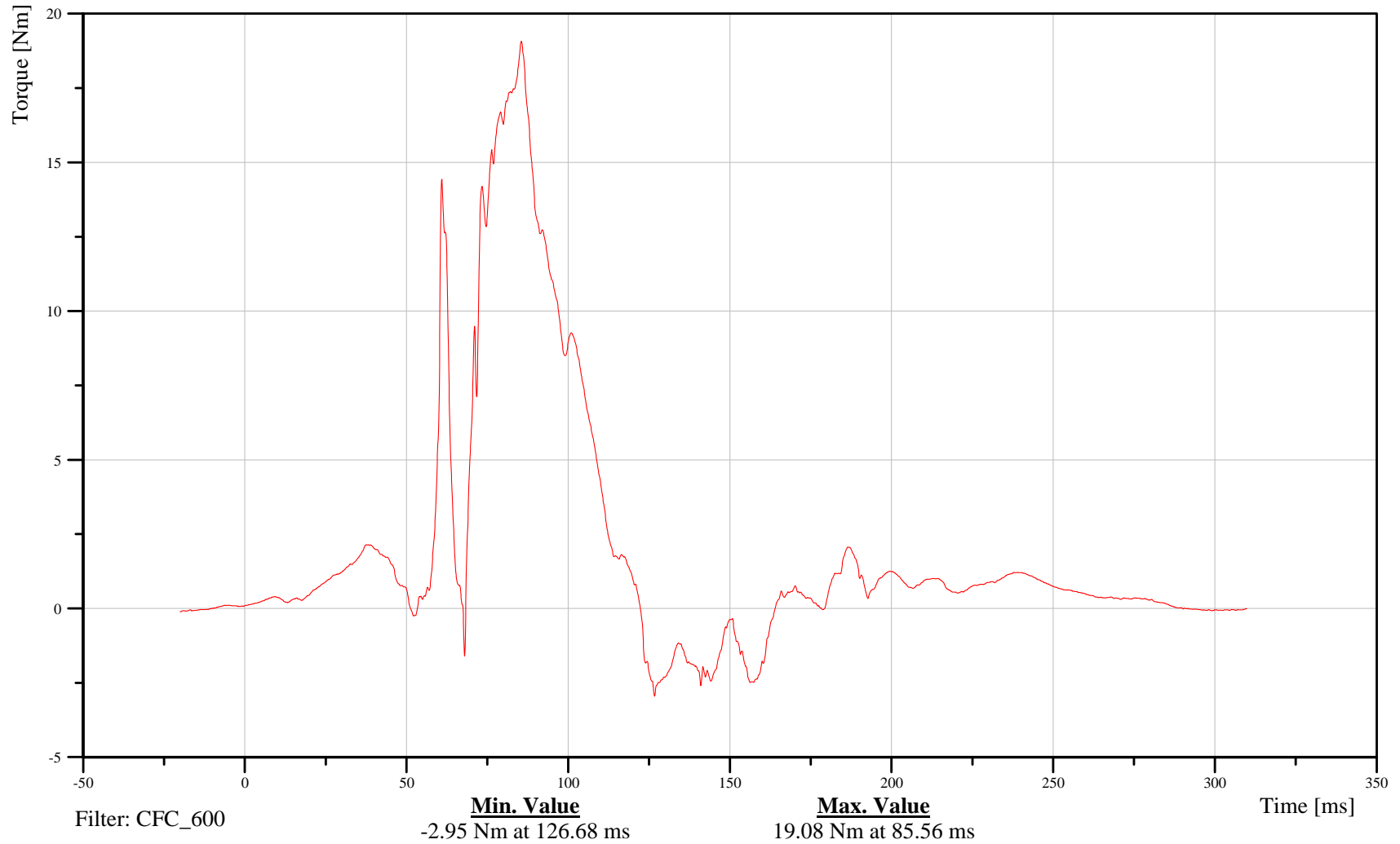
Time: 15:44

Customer: VRTC

13TIBIRLFXHFMOYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-292

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

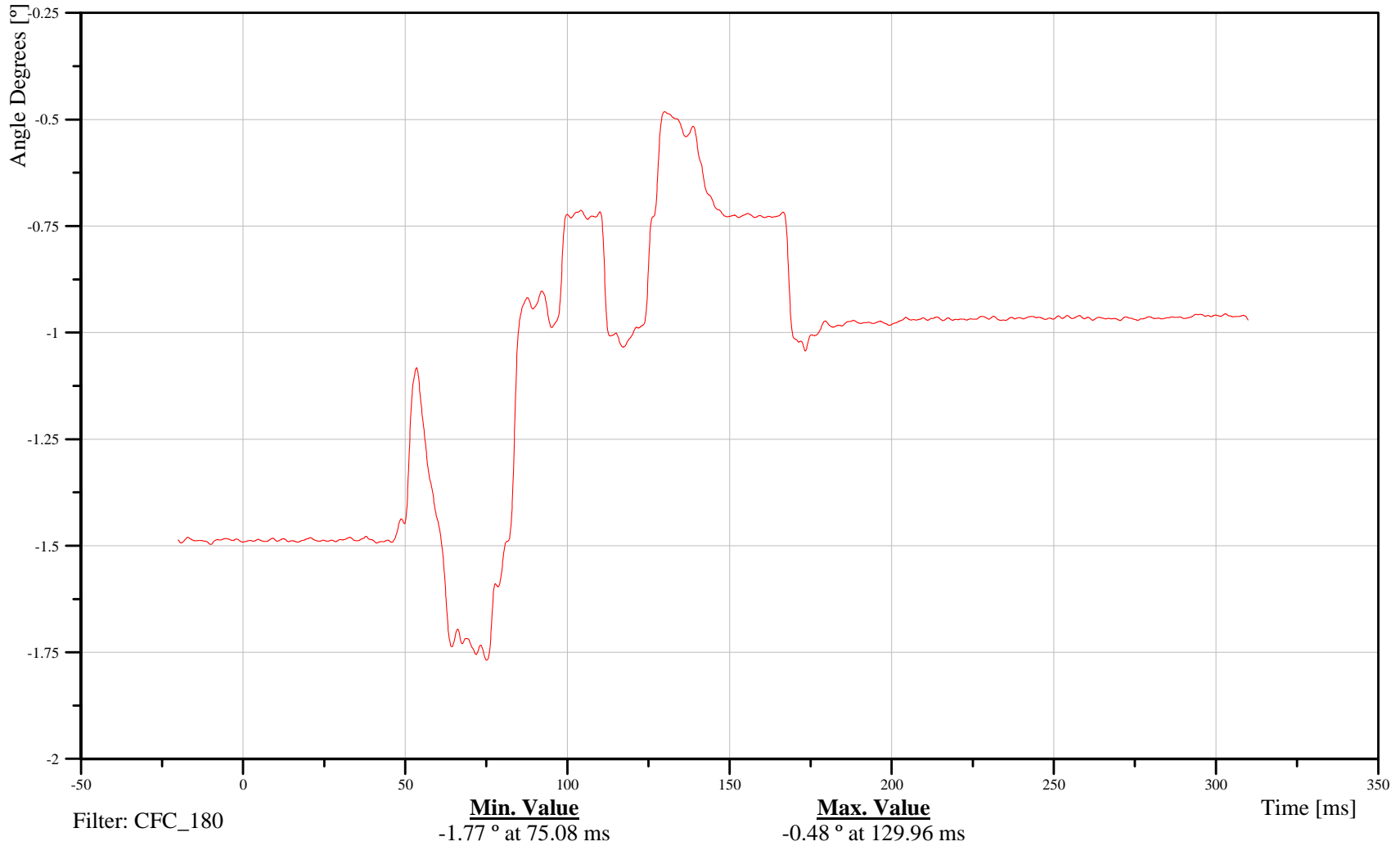
Bullet Vehicle Passenger Right Foot X-Axis Angular Displacement

Customer: VRTC

13FOOTRIFXHFANXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-293

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

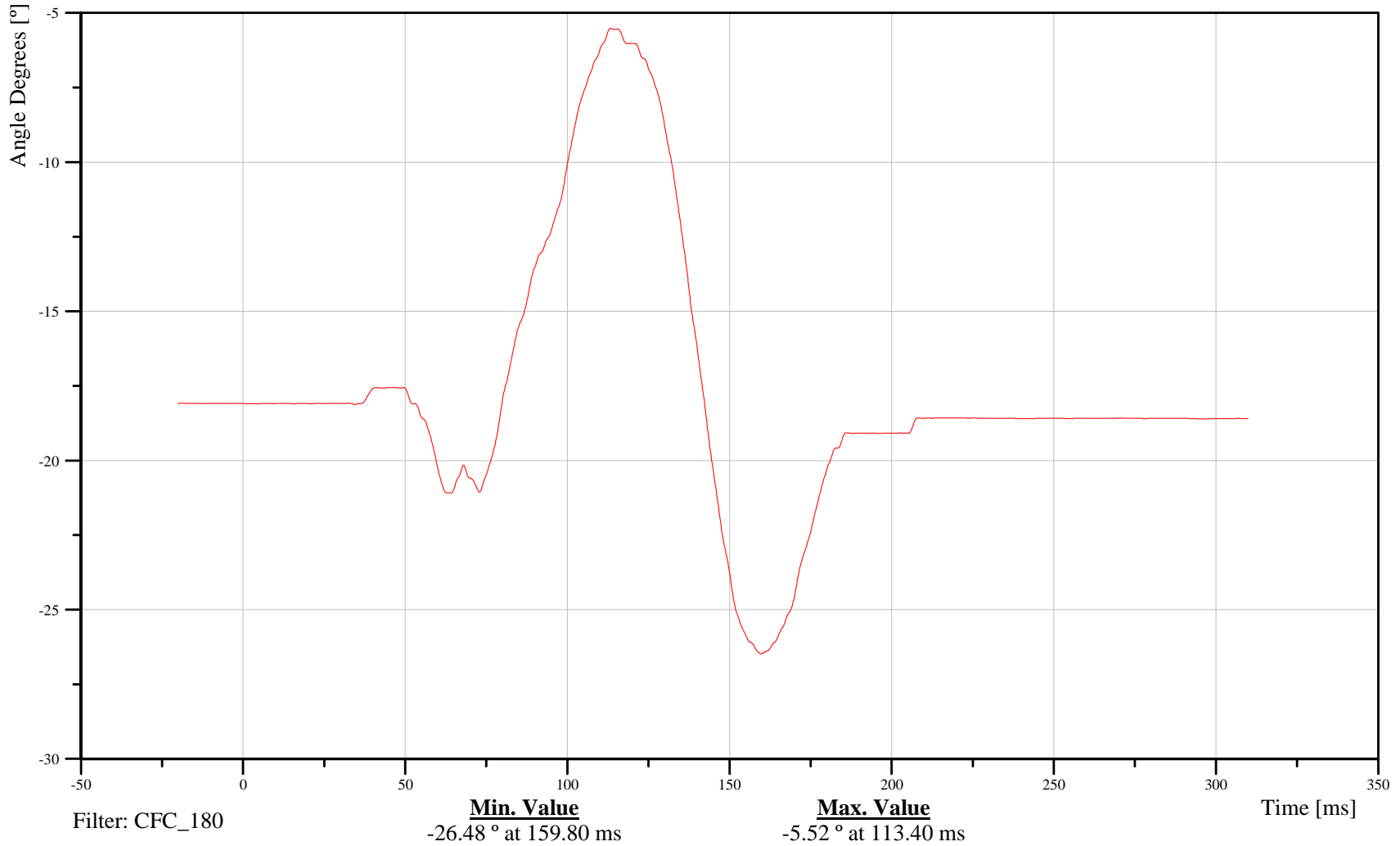
Bullet Vehicle Passenger Right Foot Y-Axis Angular Displacement

Customer: VRTC

13FOOTRIFXHFANYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-294

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

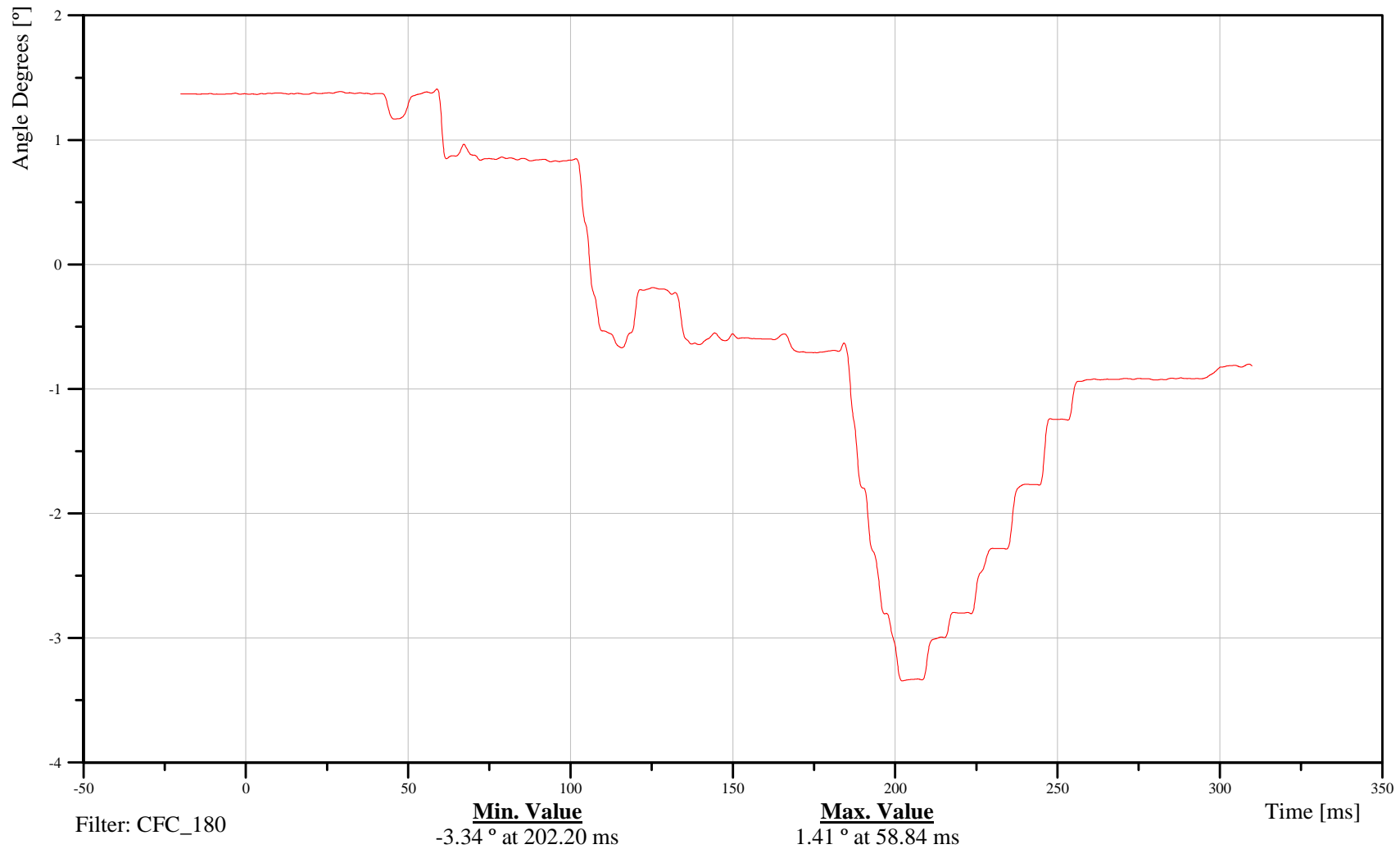
Bullet Vehicle Passenger Right Foot Z-Axis Angular Displacement

Customer: VRTC

13FOOTRIFXHFANZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-295

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

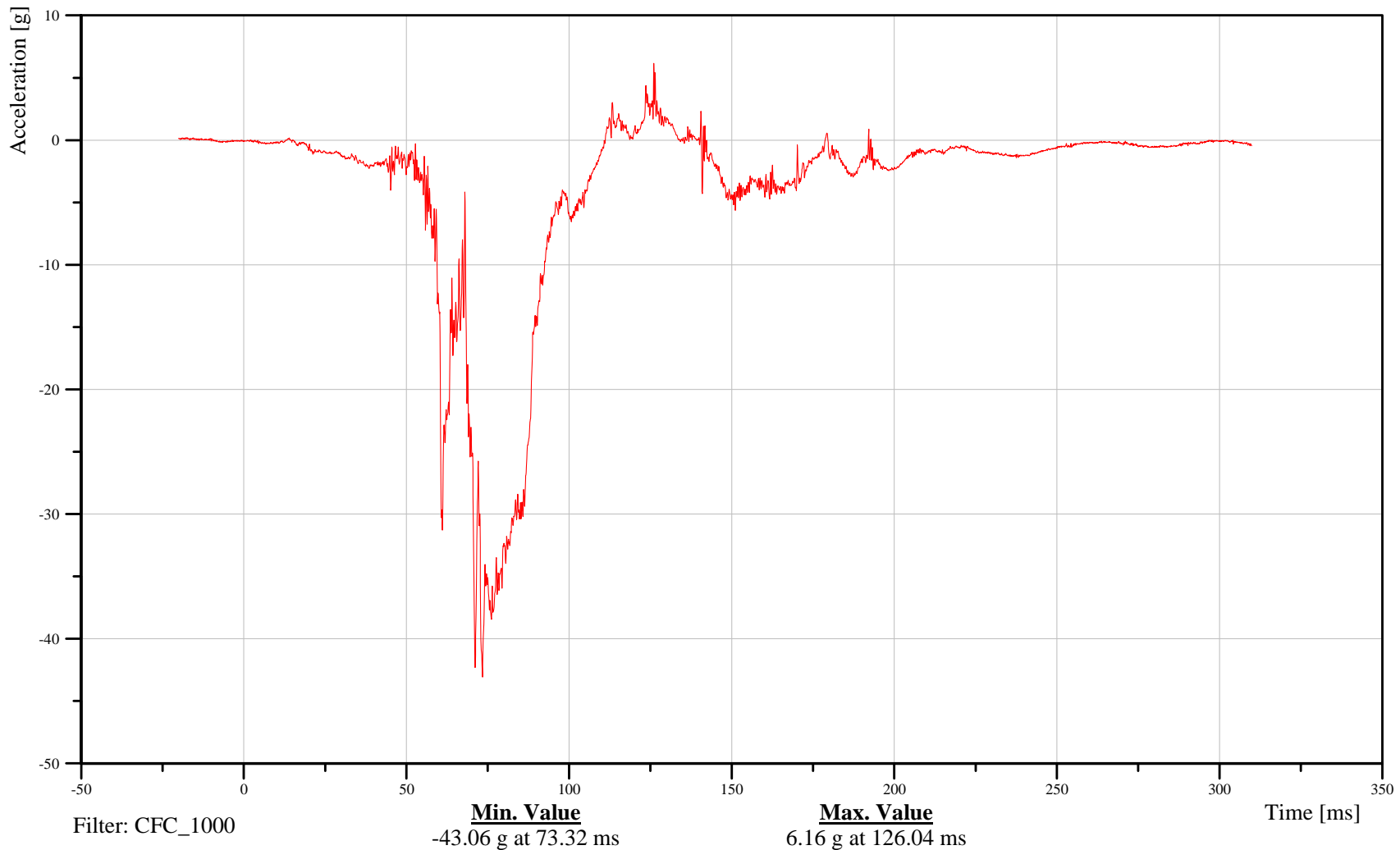
Bullet Vehicle Passenger Right Foot X-Axis Acceleration

Customer: VRTC

13FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-296

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

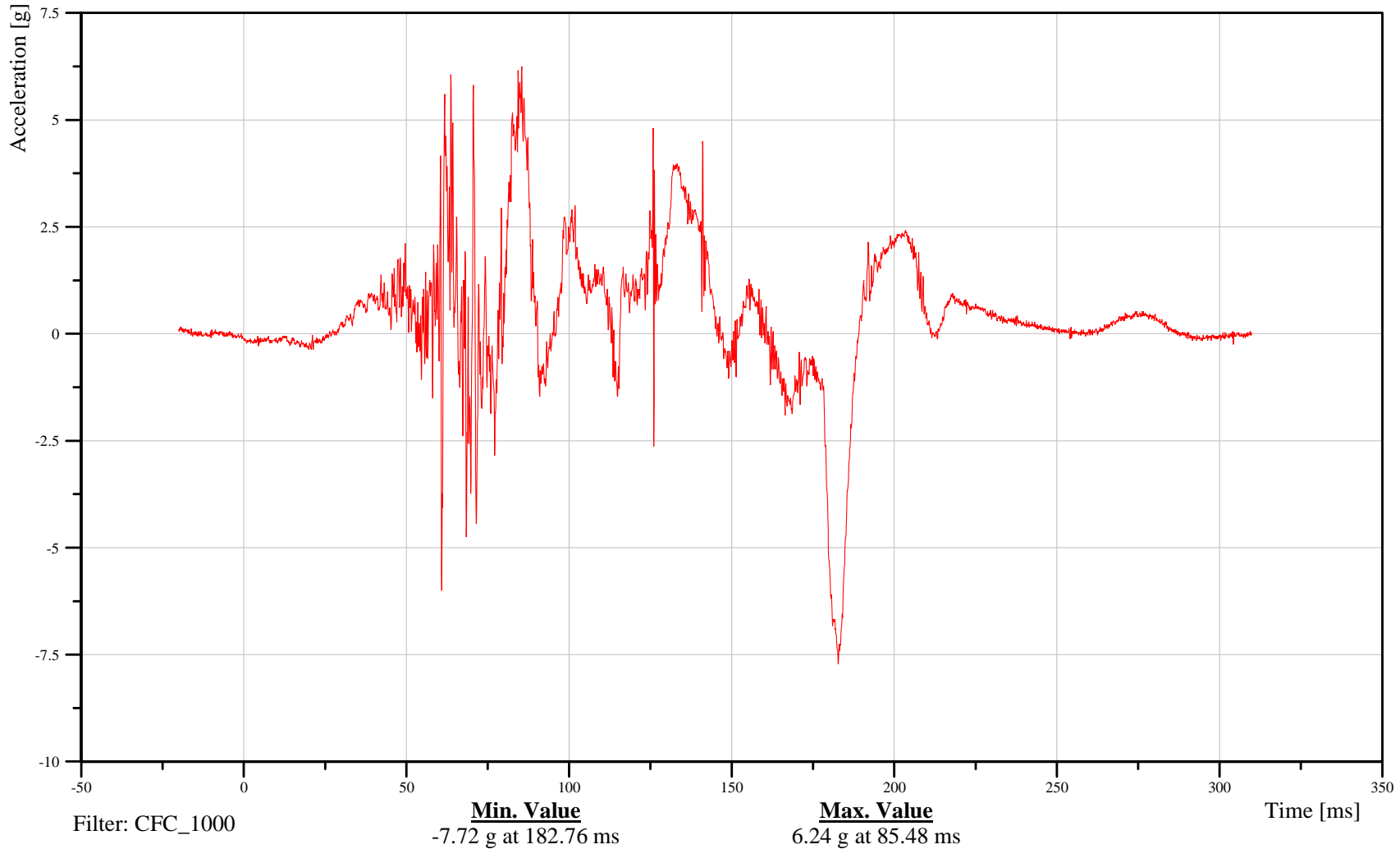
Bullet Vehicle Passenger Right Foot Y-Axis Acceleration

Customer: VRTC

13FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-297

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

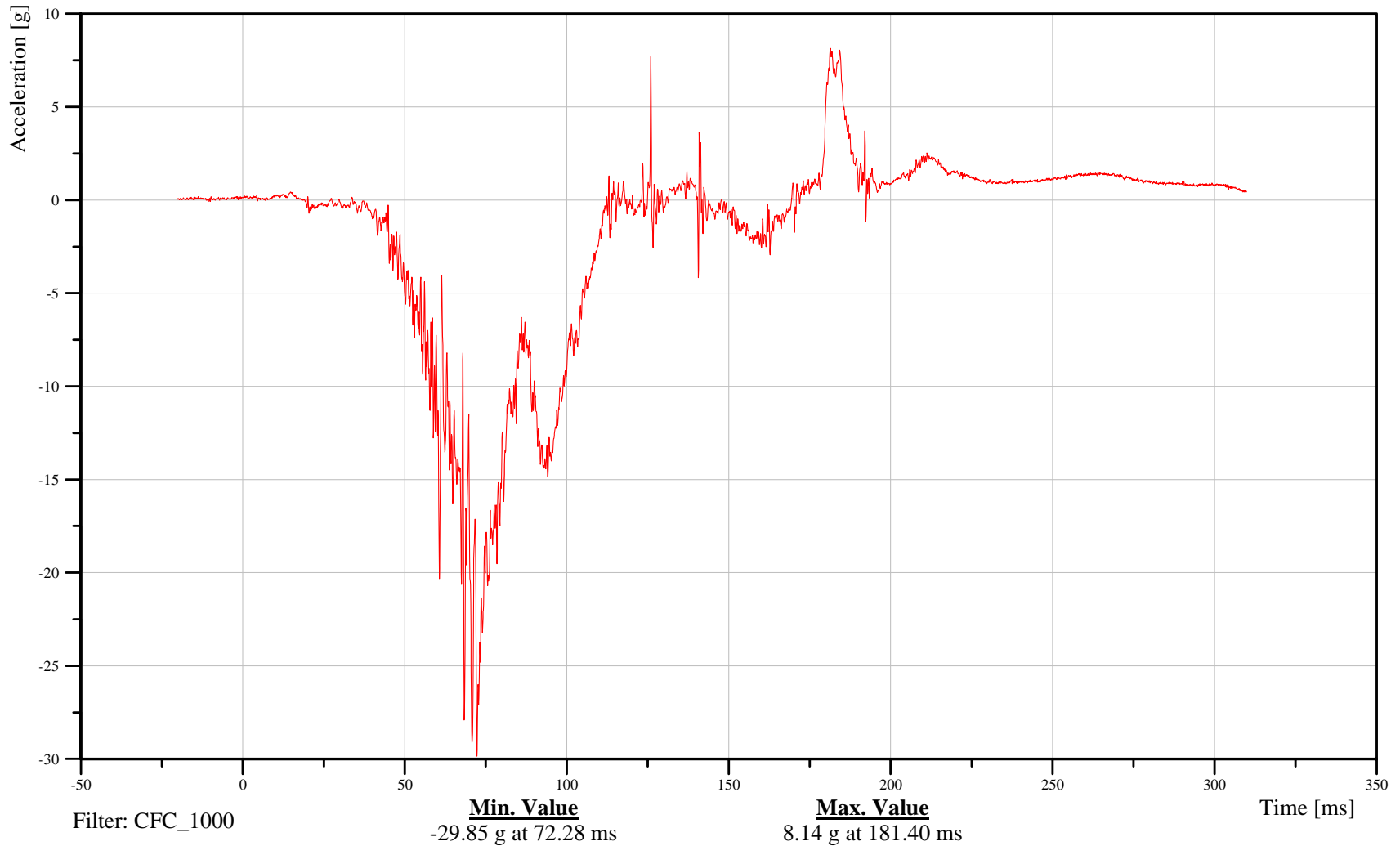
Bullet Vehicle Passenger Right Foot Z-Axis Acceleration

Customer: VRTC

13FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-298

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

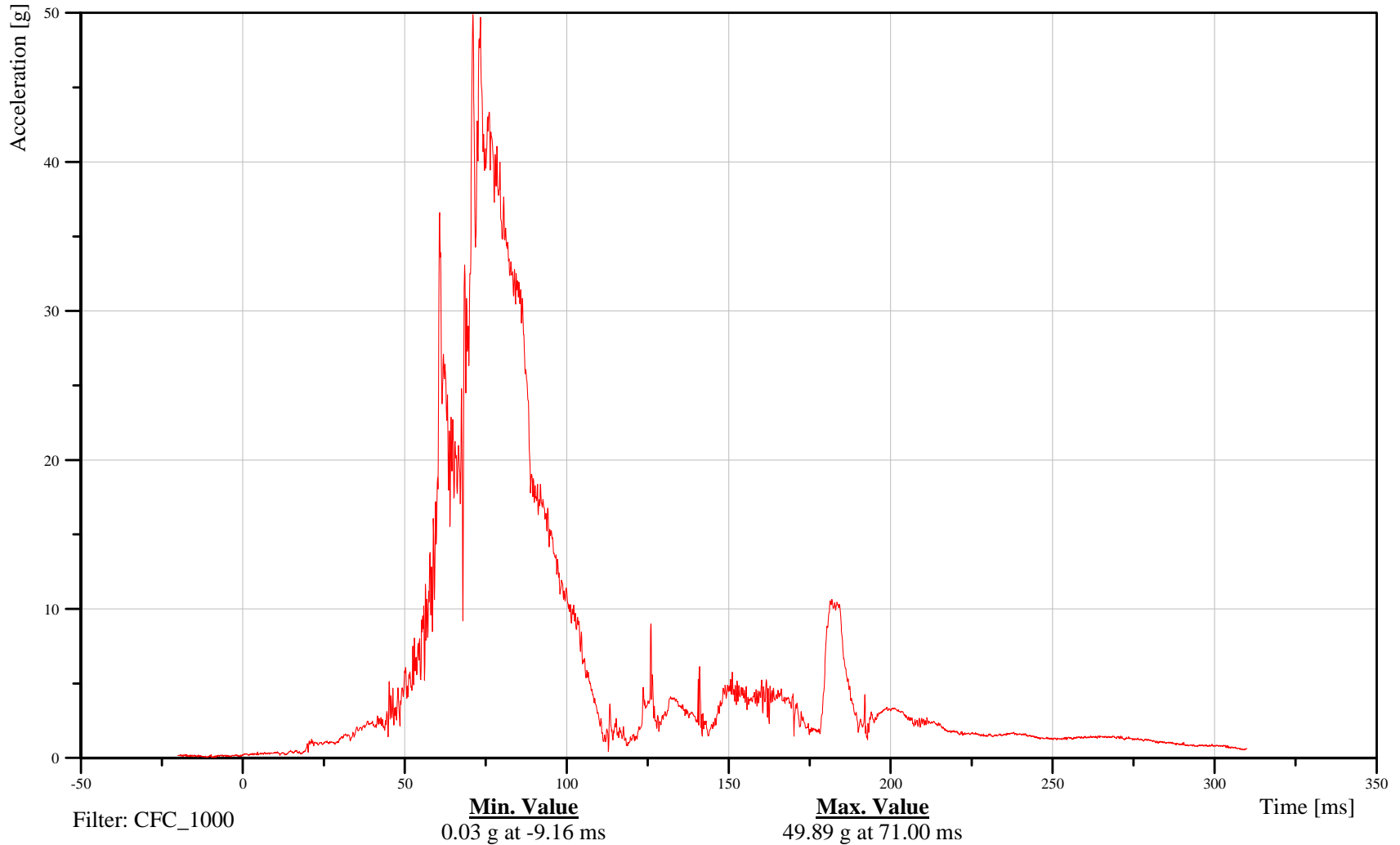
Bullet Vehicle Passenger Right Foot Resultant Acceleration

Customer: VRTC

13FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-299

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration

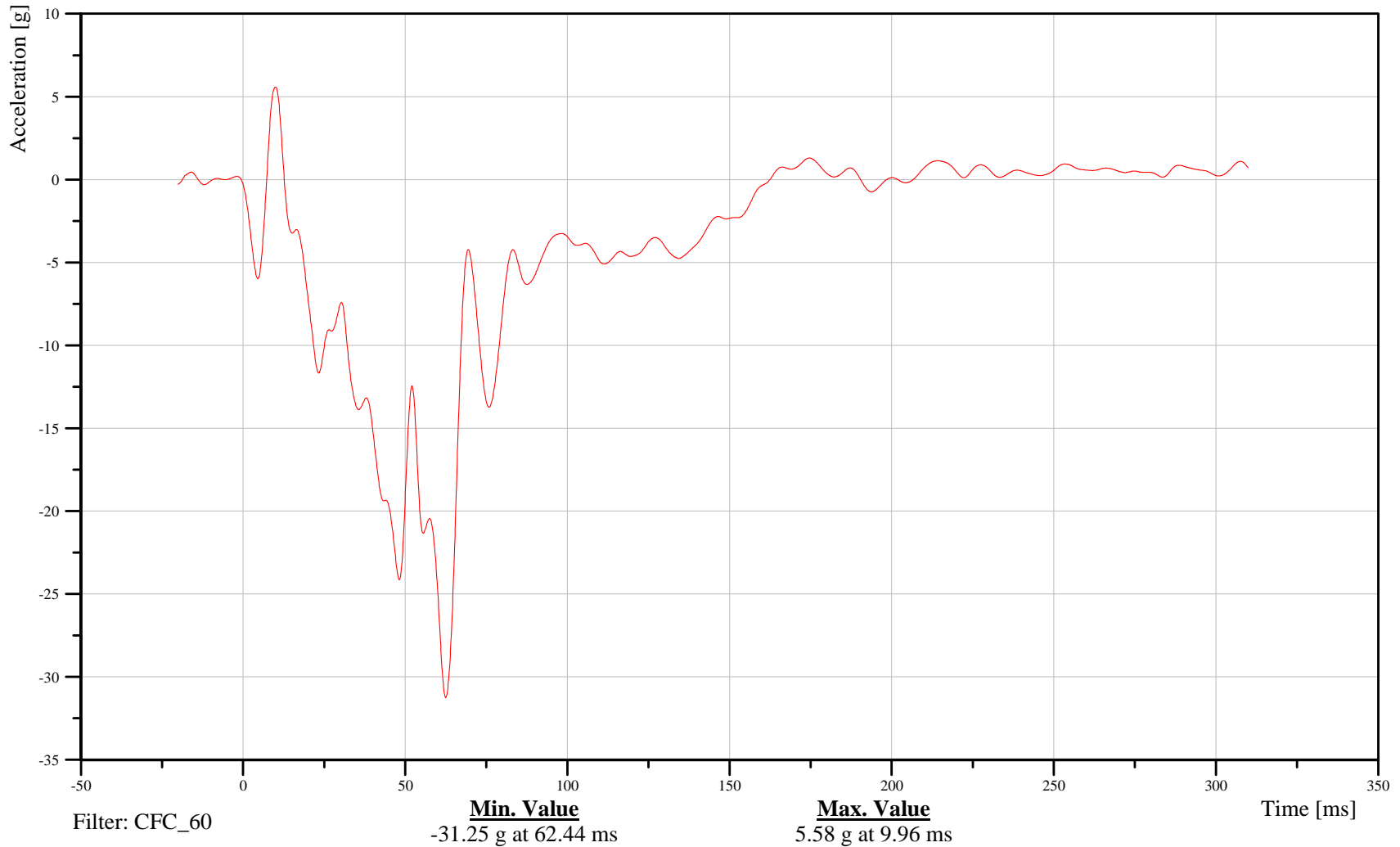
Time: 15:44

Customer: VRTC

14CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-300

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

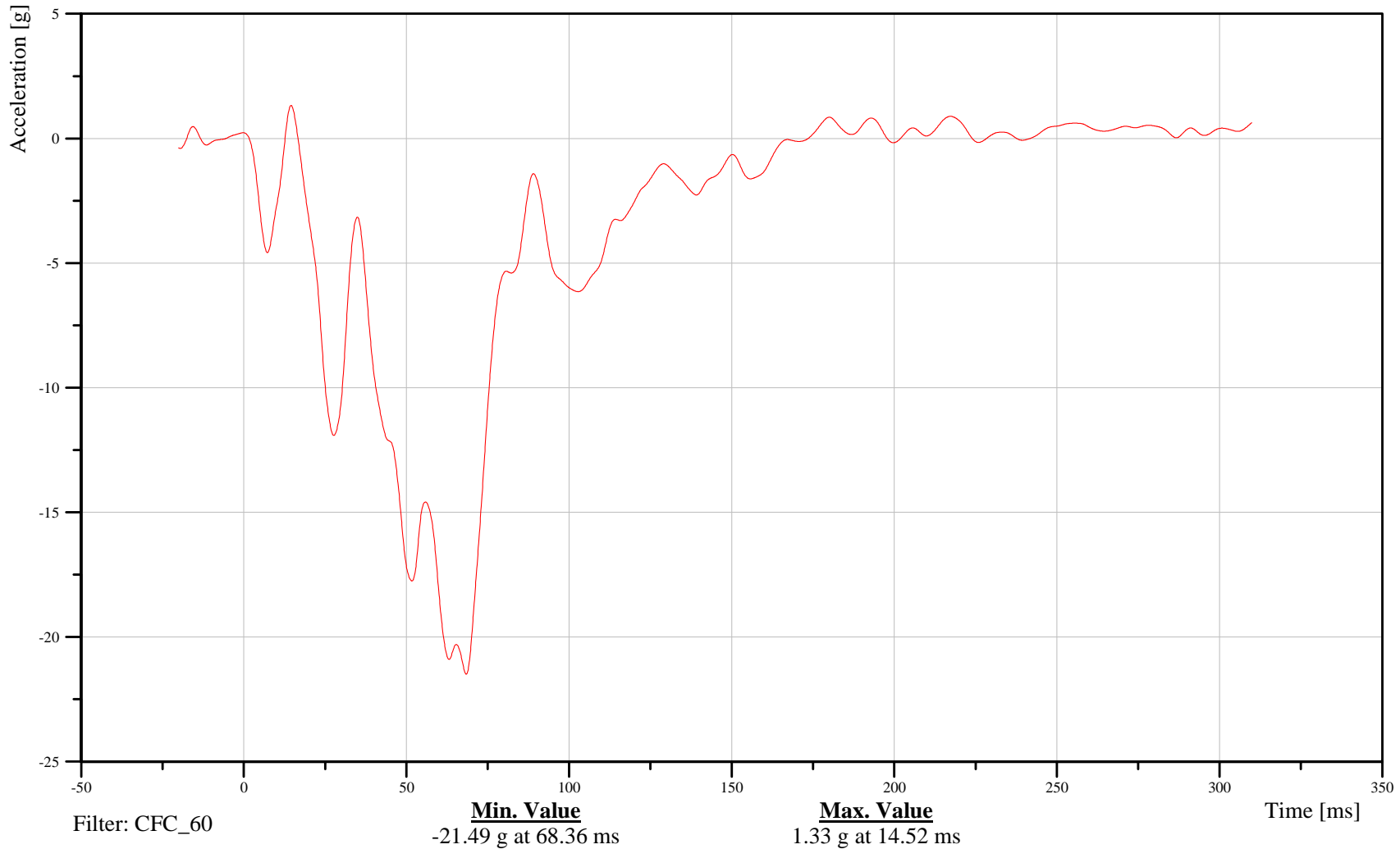
Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

16CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-301

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

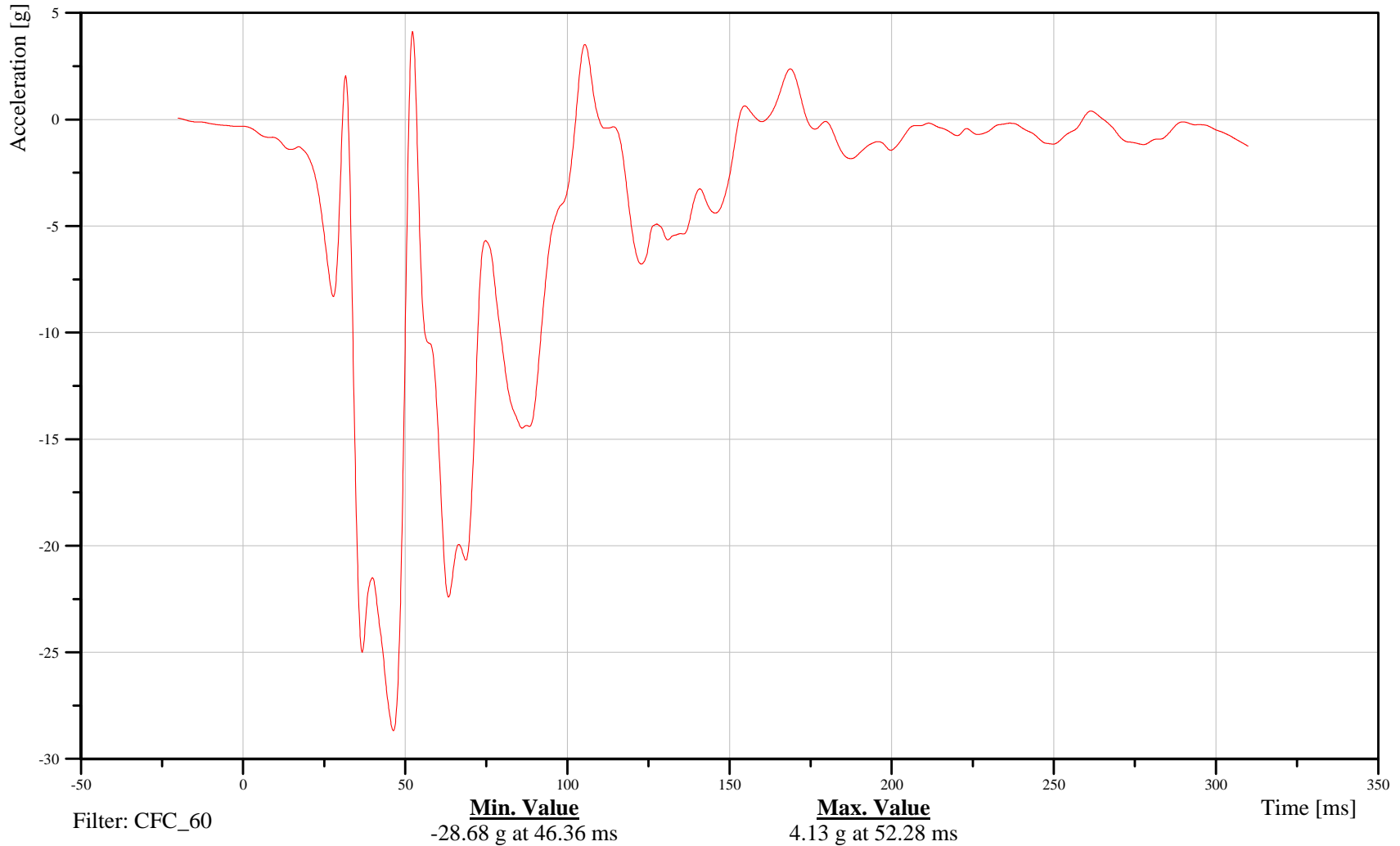
Bullet Vehicle Top of Engine X-Axis Acceleration

Customer: VRTC

12ENGNTP0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-302

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

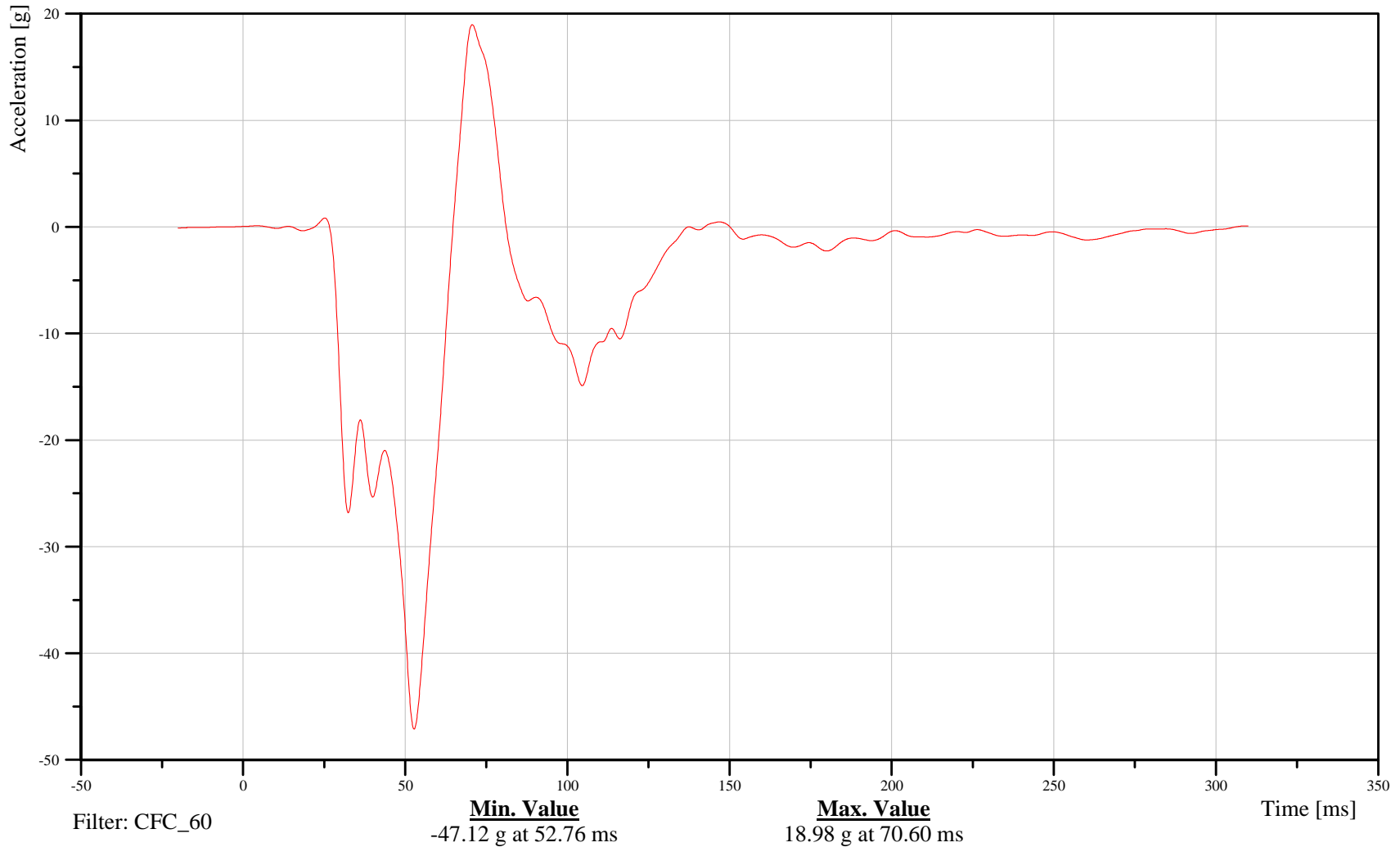
Bullet Vehicle Bottom of Engine X-Axis Acceleration

Customer: VRTC

12ENGNBO0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-303

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

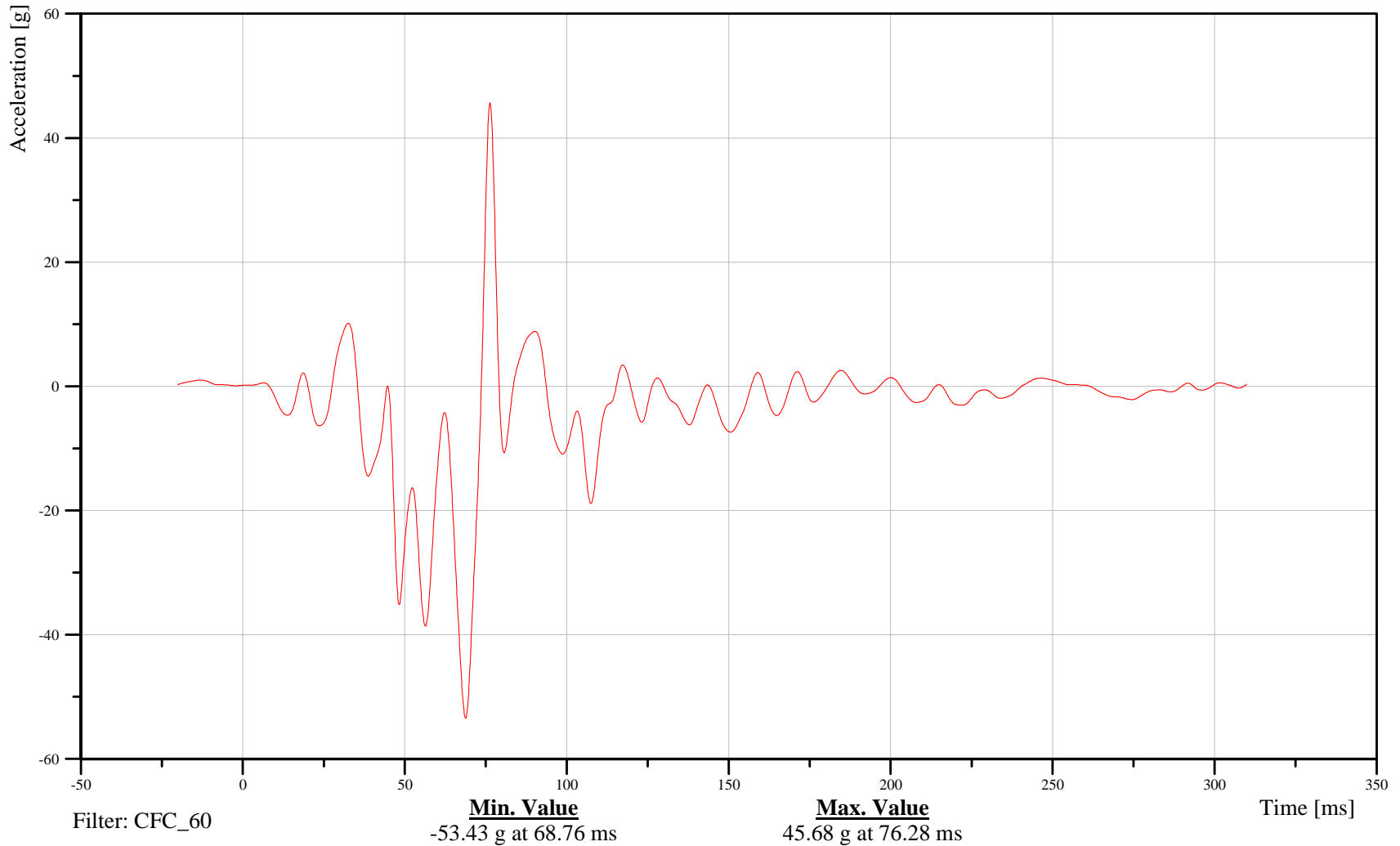
Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration

Customer: VRTC

13VEHCRI0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-304

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

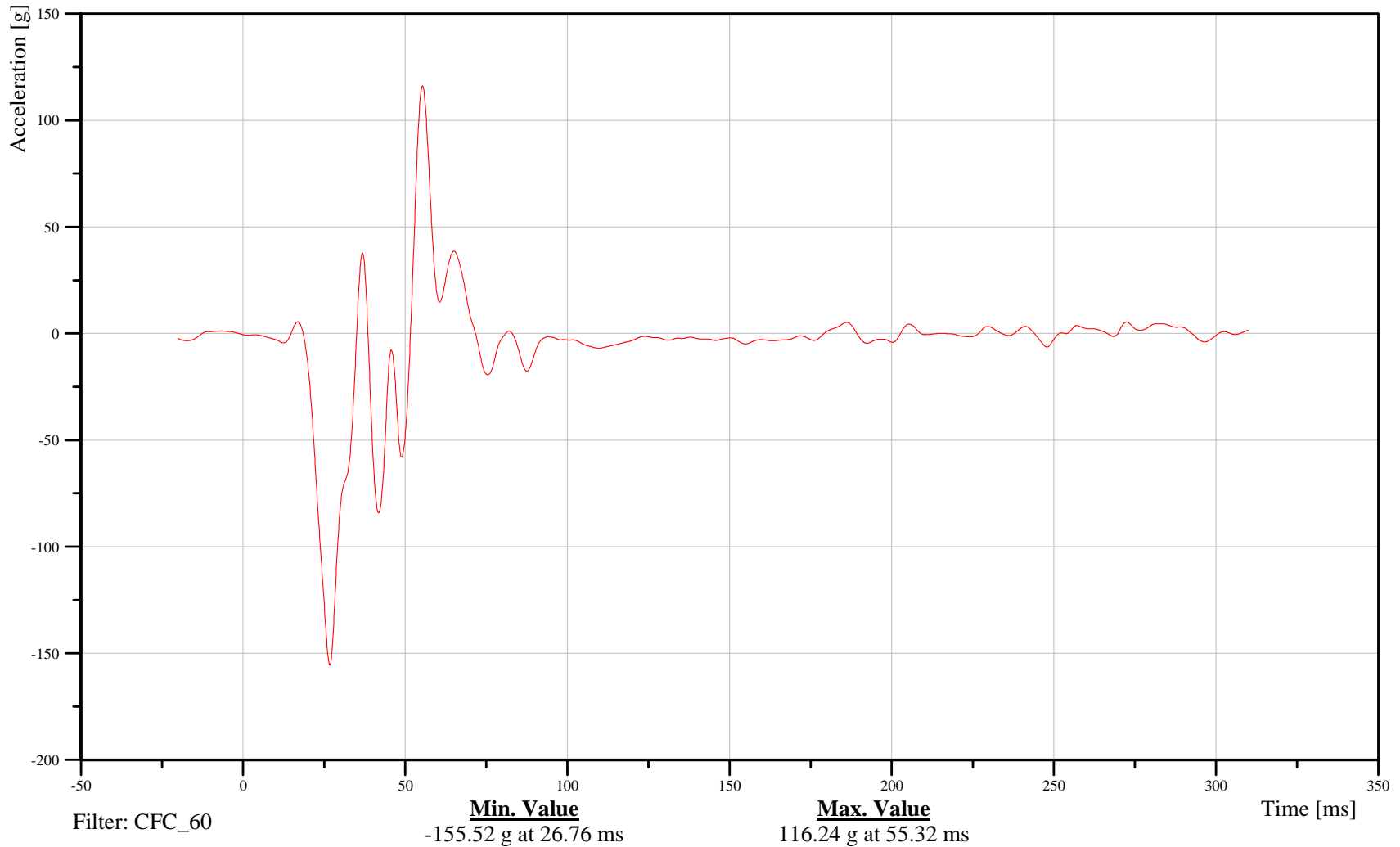
Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration

Customer: VRTC

11VEHICLE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-305

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

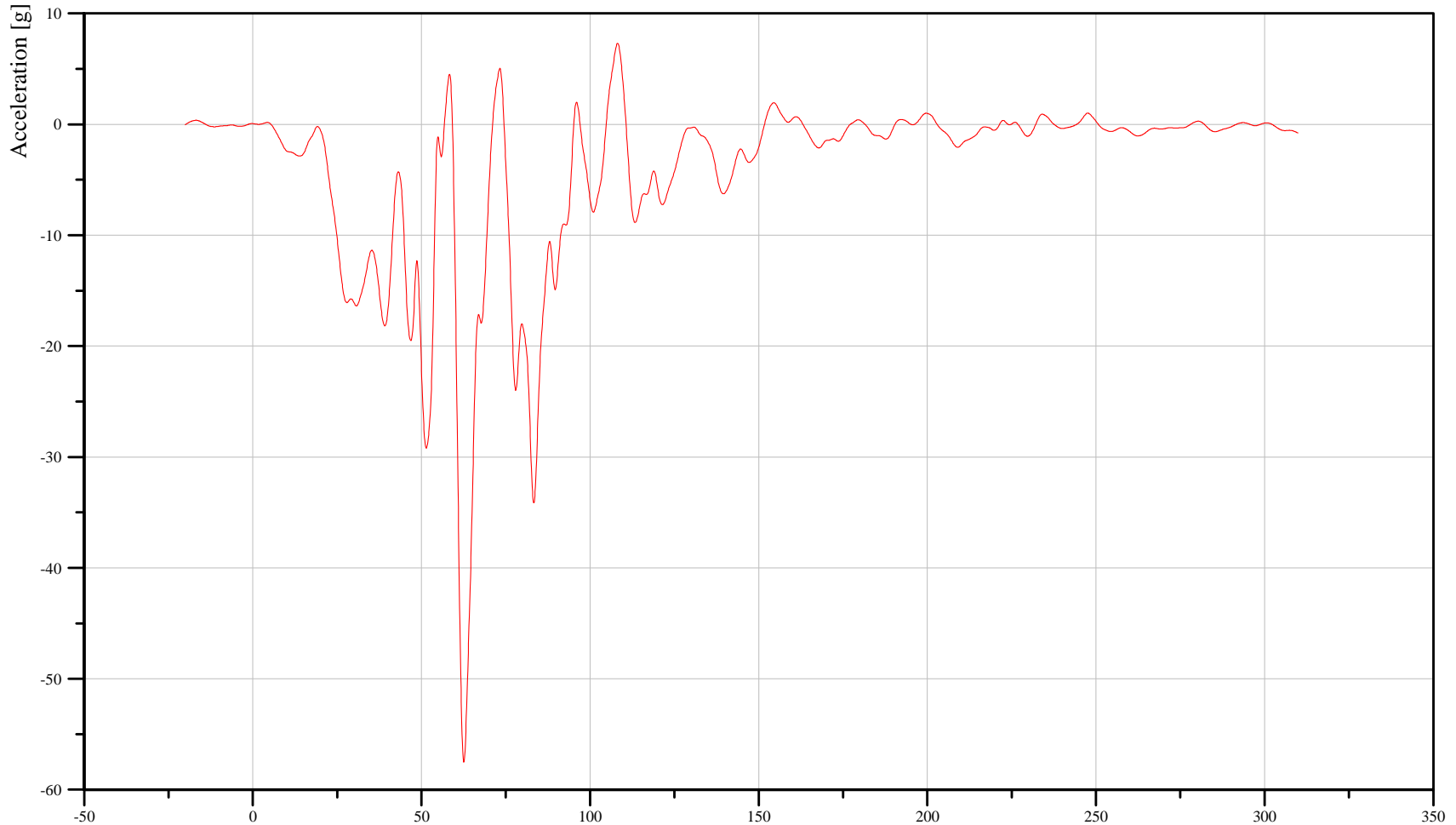
Bullet Vehicle Dash Center X-Axis Acceleration

Customer: VRTC

12DASH000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



Filter: CFC_60

Min. Value
-57.54 g at 62.52 ms

Max. Value
7.31 g at 108.12 ms

Time [ms]

B-306

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration

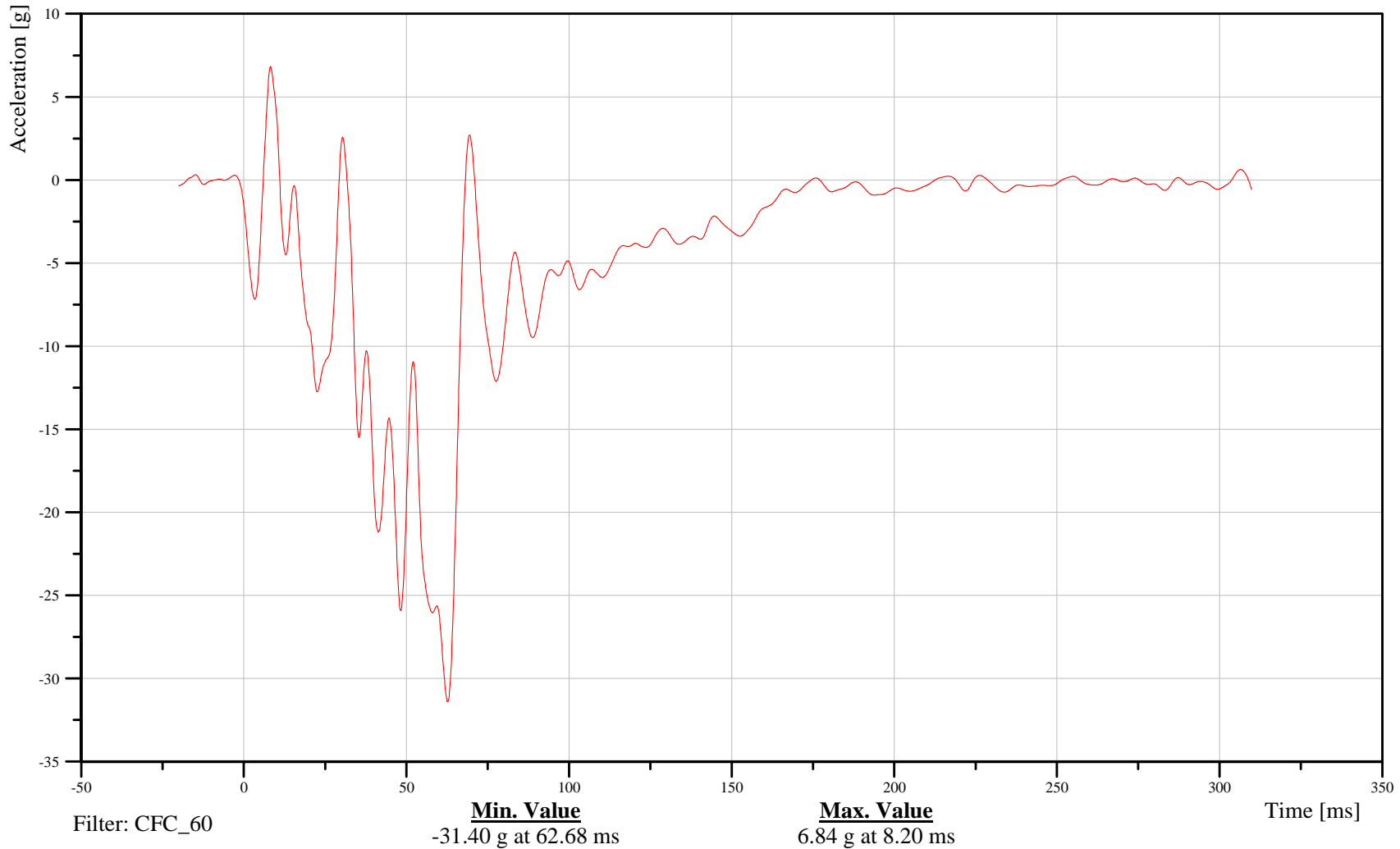
Time: 15:44

Customer: VRTC

11PEAC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-307

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

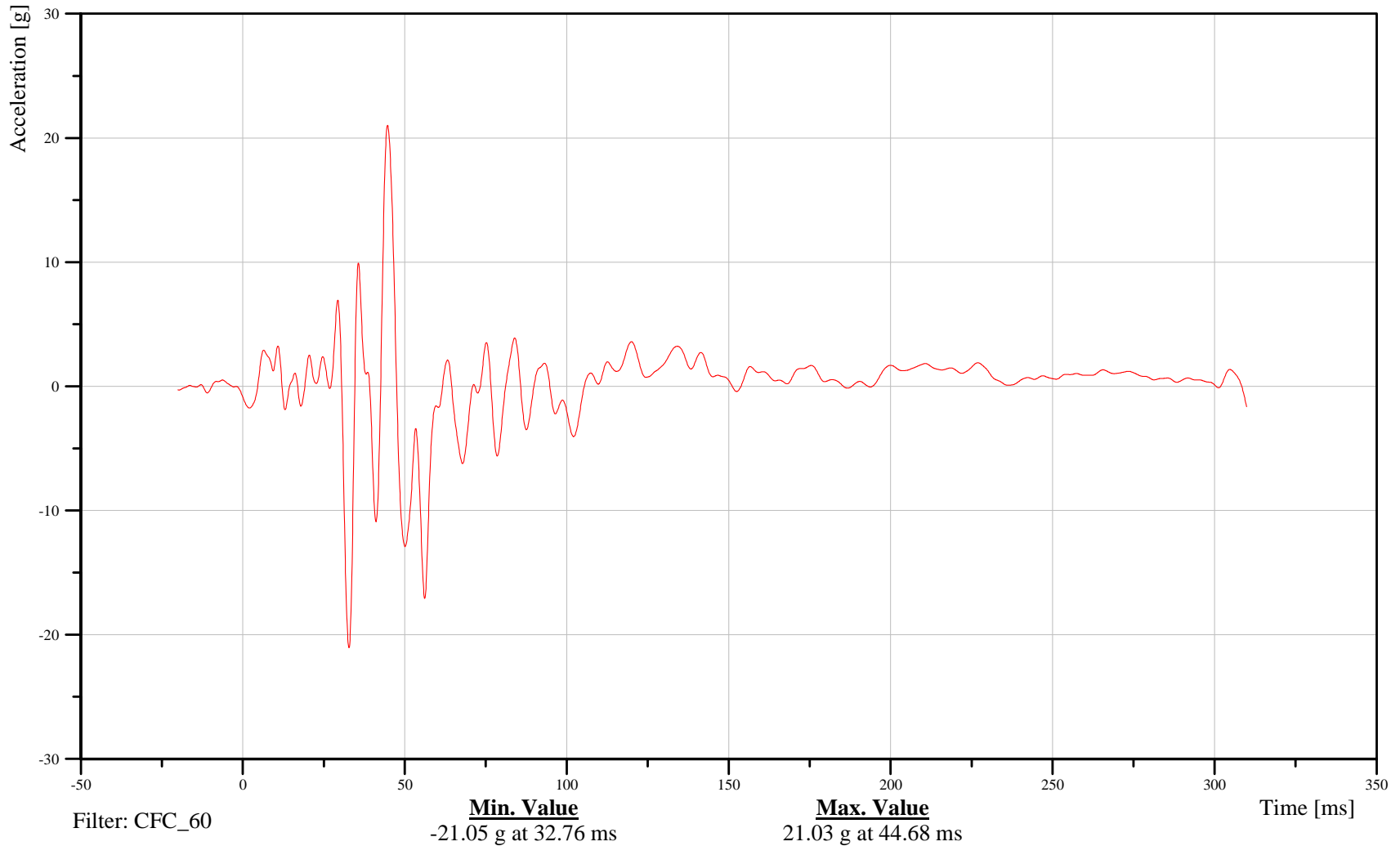
Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration

Customer: VRTC

11PEAC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-308

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

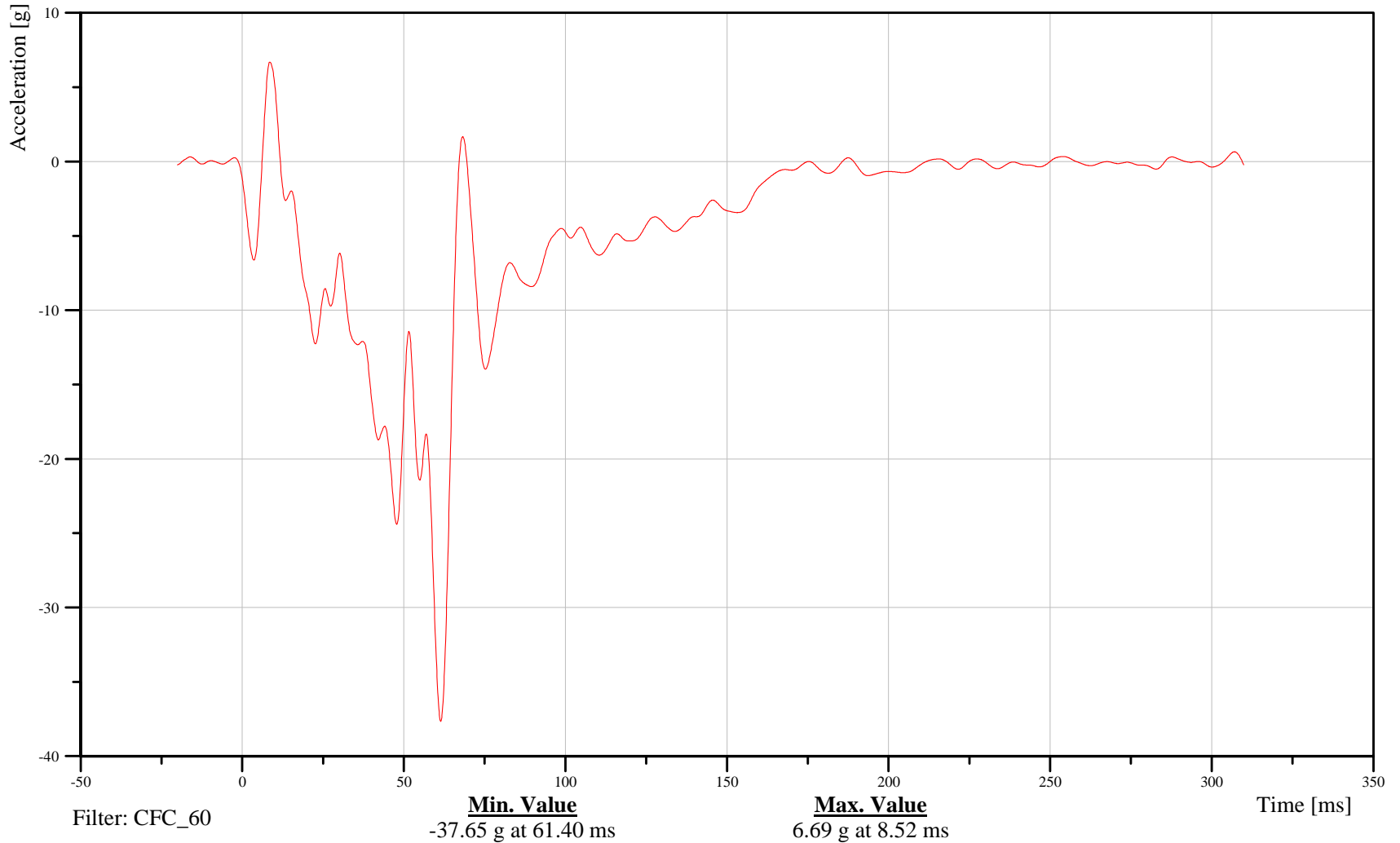
Bullet Vehicle Toe Pan Footrest X-Axis Acceleration

Customer: VRTC

11VEHC000001ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-309

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

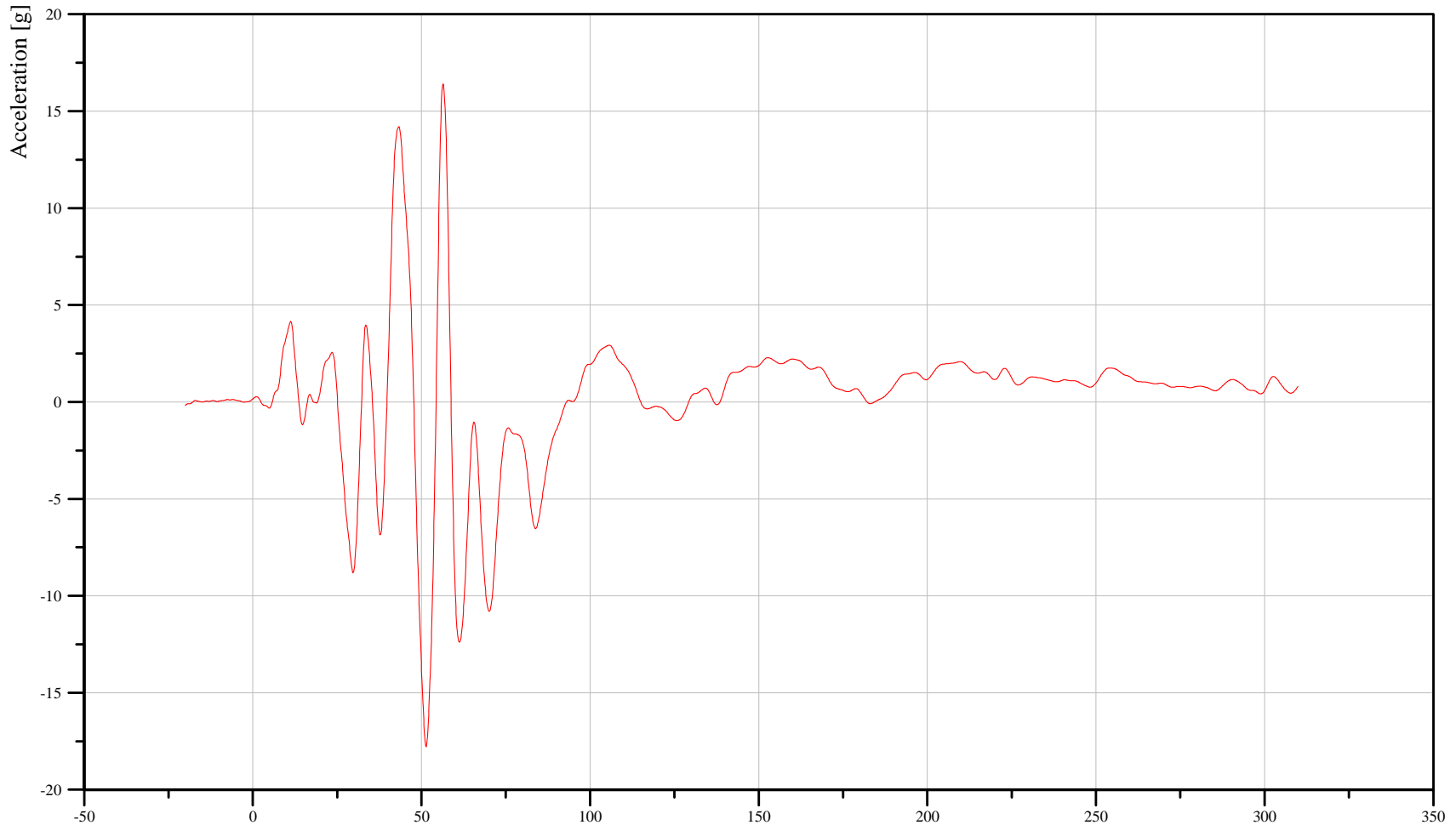
Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration

Customer: VRTC

11VEHC000001ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



Filter: CFC_60

Min. Value
-17.79 g at 51.40 ms

Max. Value
16.41 g at 56.44 ms

Time [ms]

B-310

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

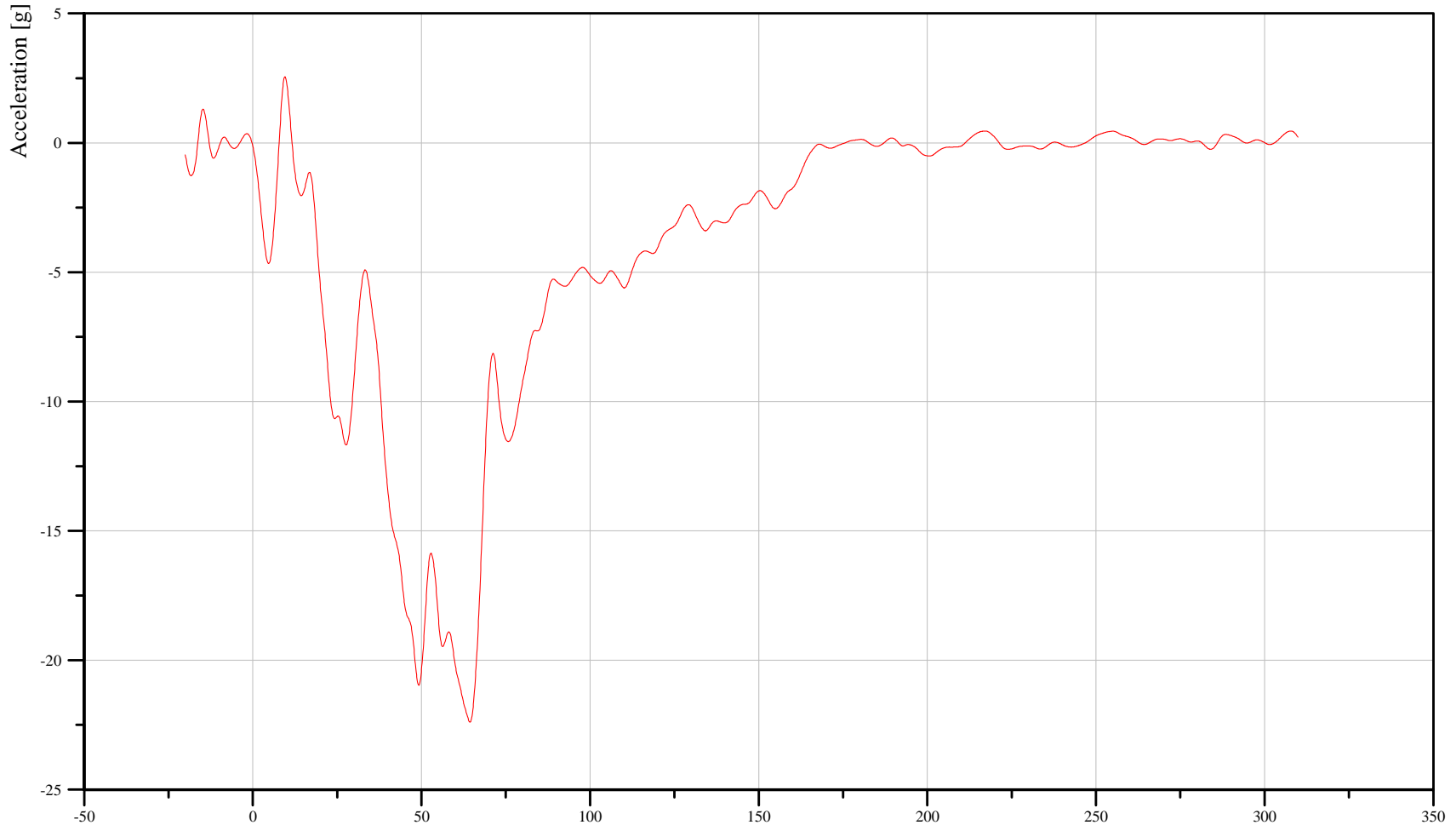
Bullet Vehicle Rear Tunnel Center X-Axis Acceleration

Customer: VRTC

15TUNNCY0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



Filter: CFC_60

Min. Value
-22.39 g at 64.44 ms

Max. Value
2.56 g at 9.56 ms

Time [ms]

B-311

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

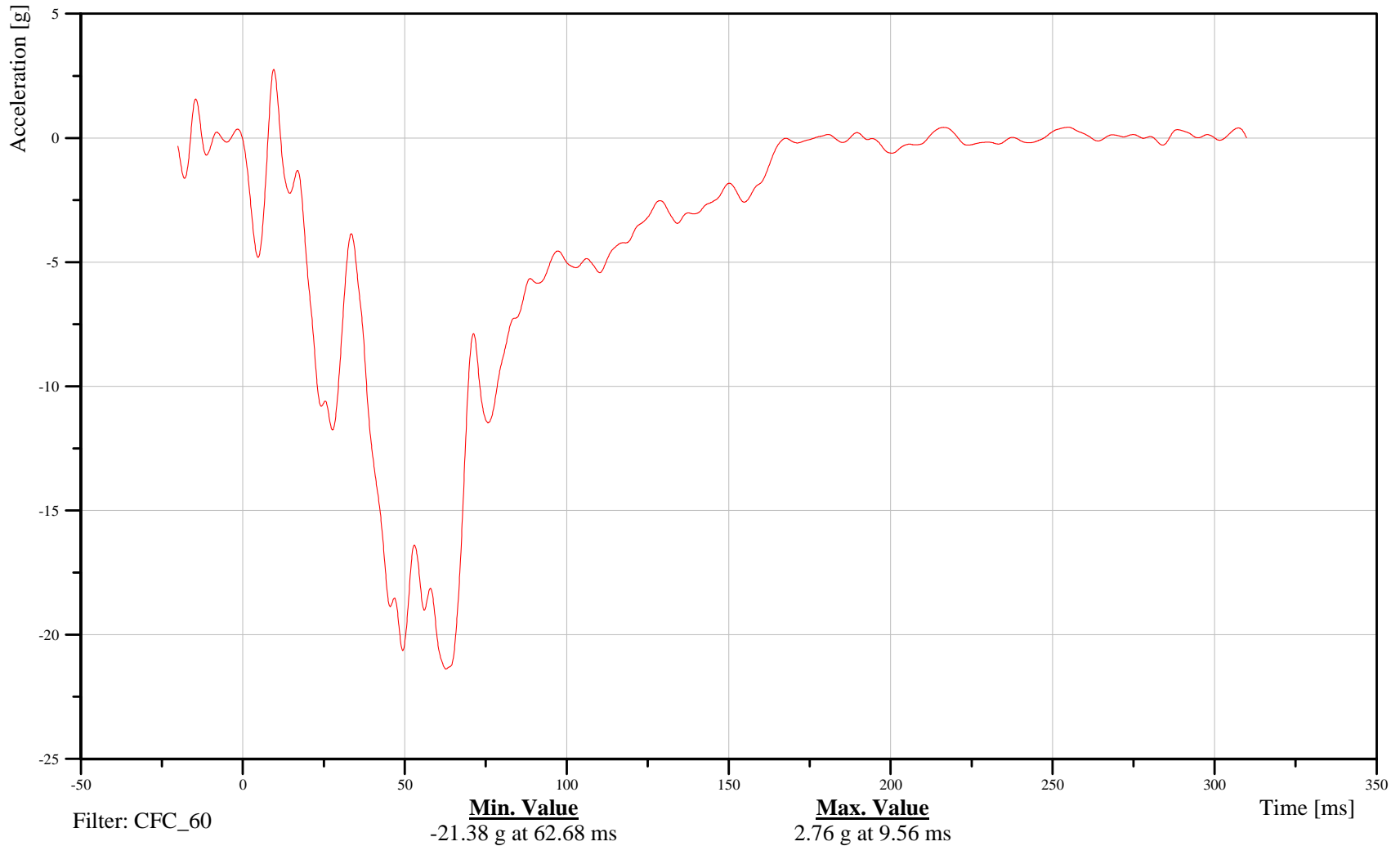
Bullet Vehicle CG X-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-312

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

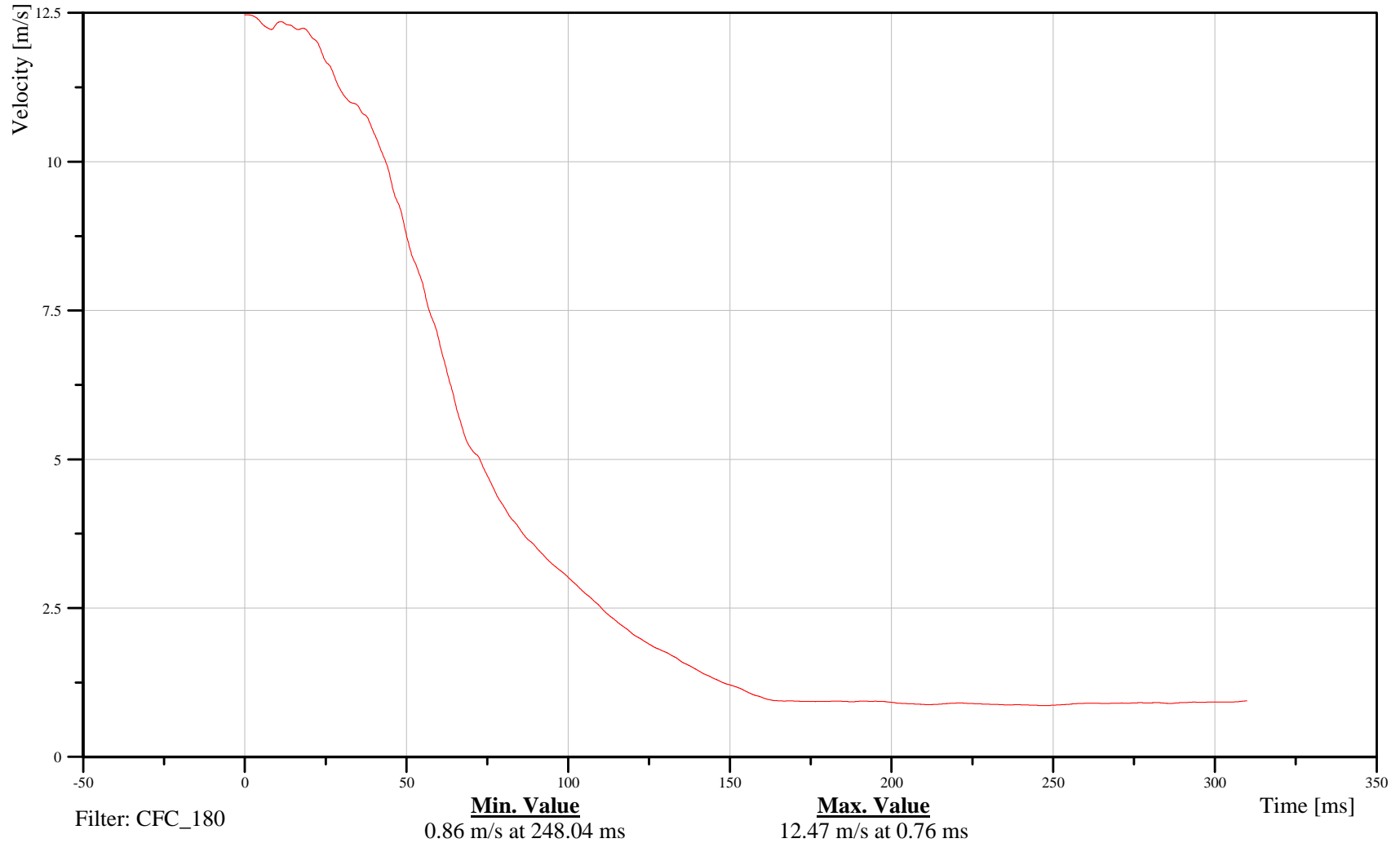
Bullet Vehicle CG X-Axis Velocity

Customer: VRTC

10VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-313

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

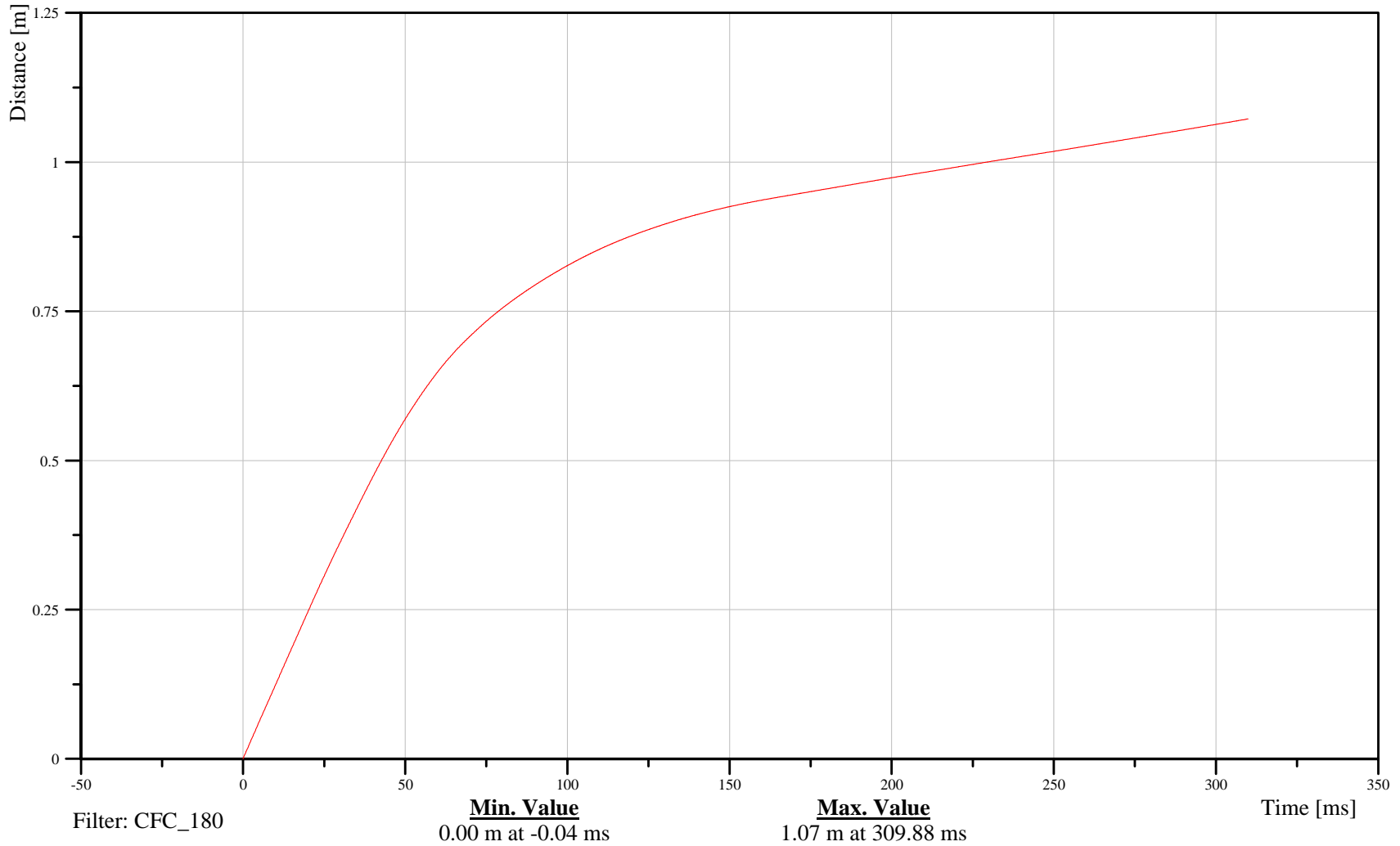
Bullet Vehicle CG X-Axis Displacement

Customer: VRTC

10VEHCCG0000DCXC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-314

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

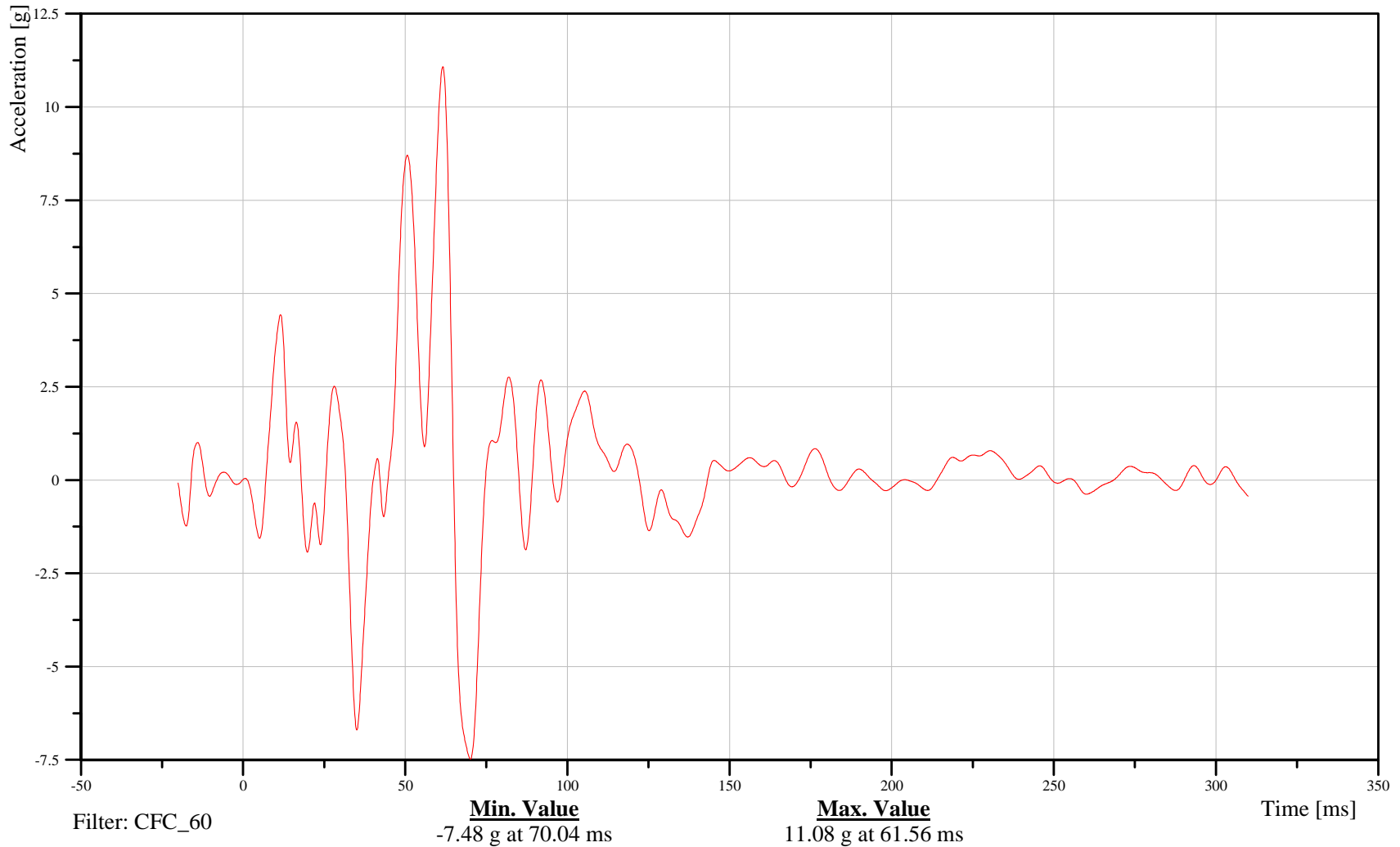
Bullet Vehicle CG Y-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-315

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

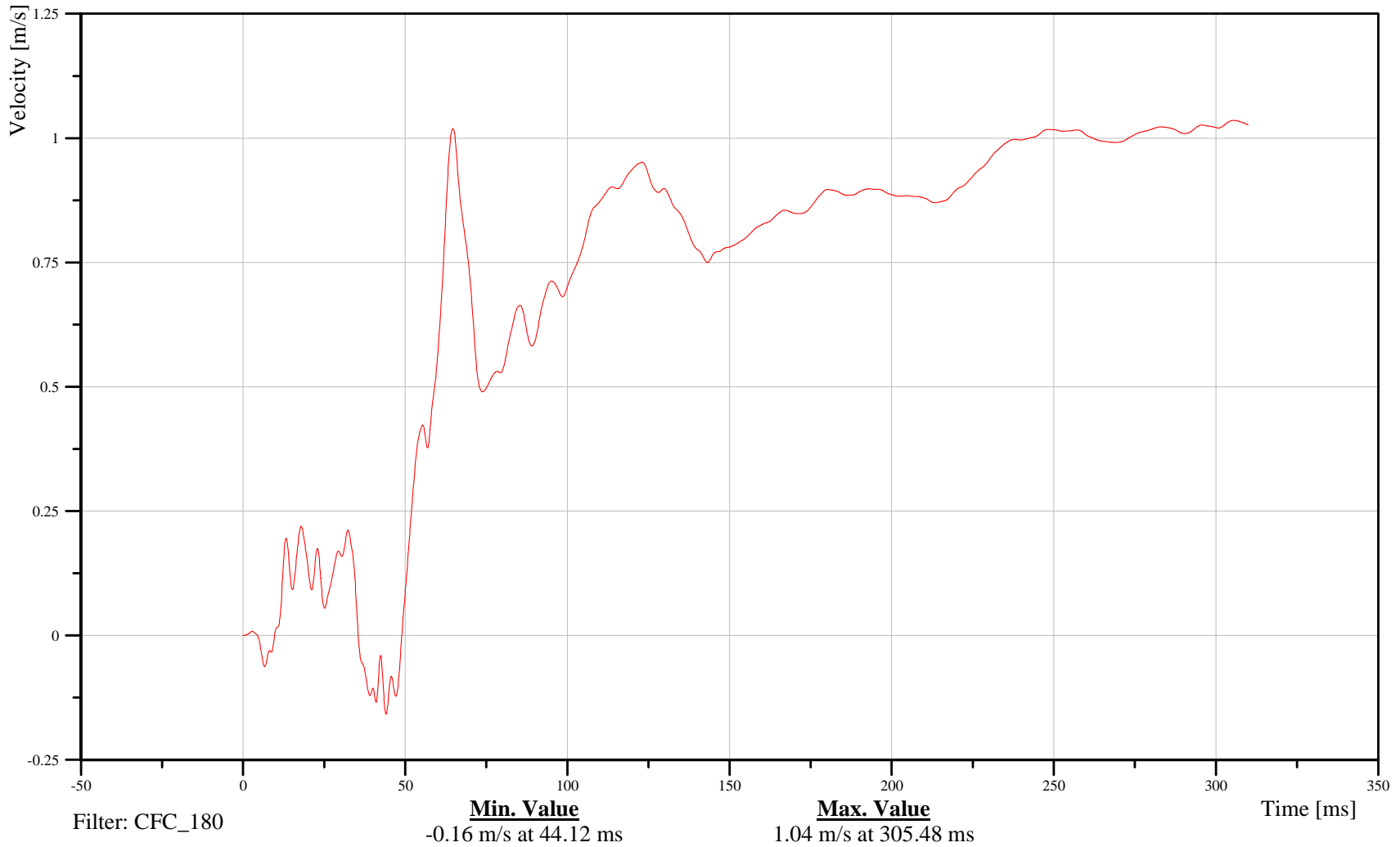
Bullet Vehicle CG Y-Axis Velocity

Customer: VRTC

10VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-316

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

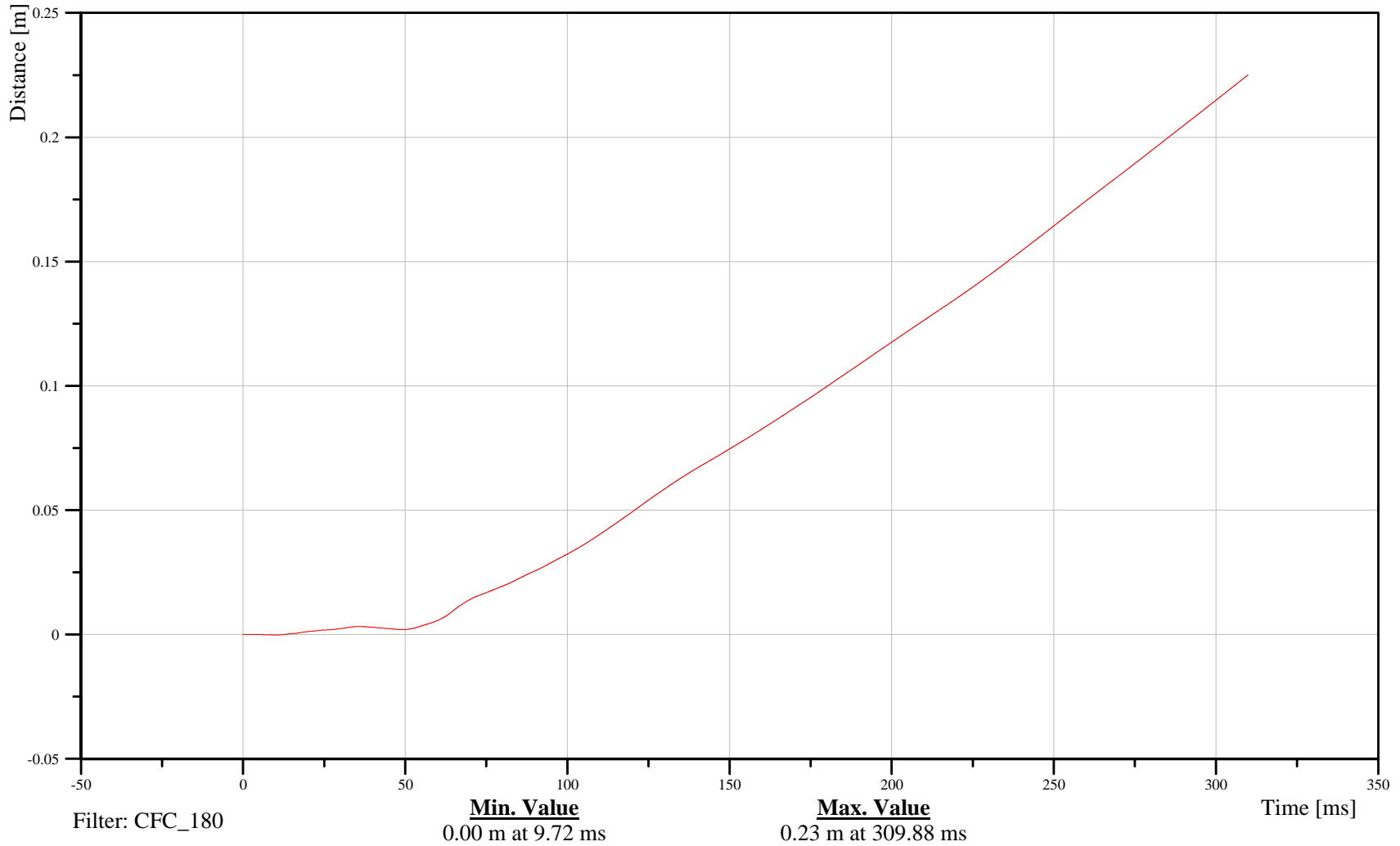
Bullet Vehicle CG Y-Axis Displacement

Customer: VRTC

10VEHCCG0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-317

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

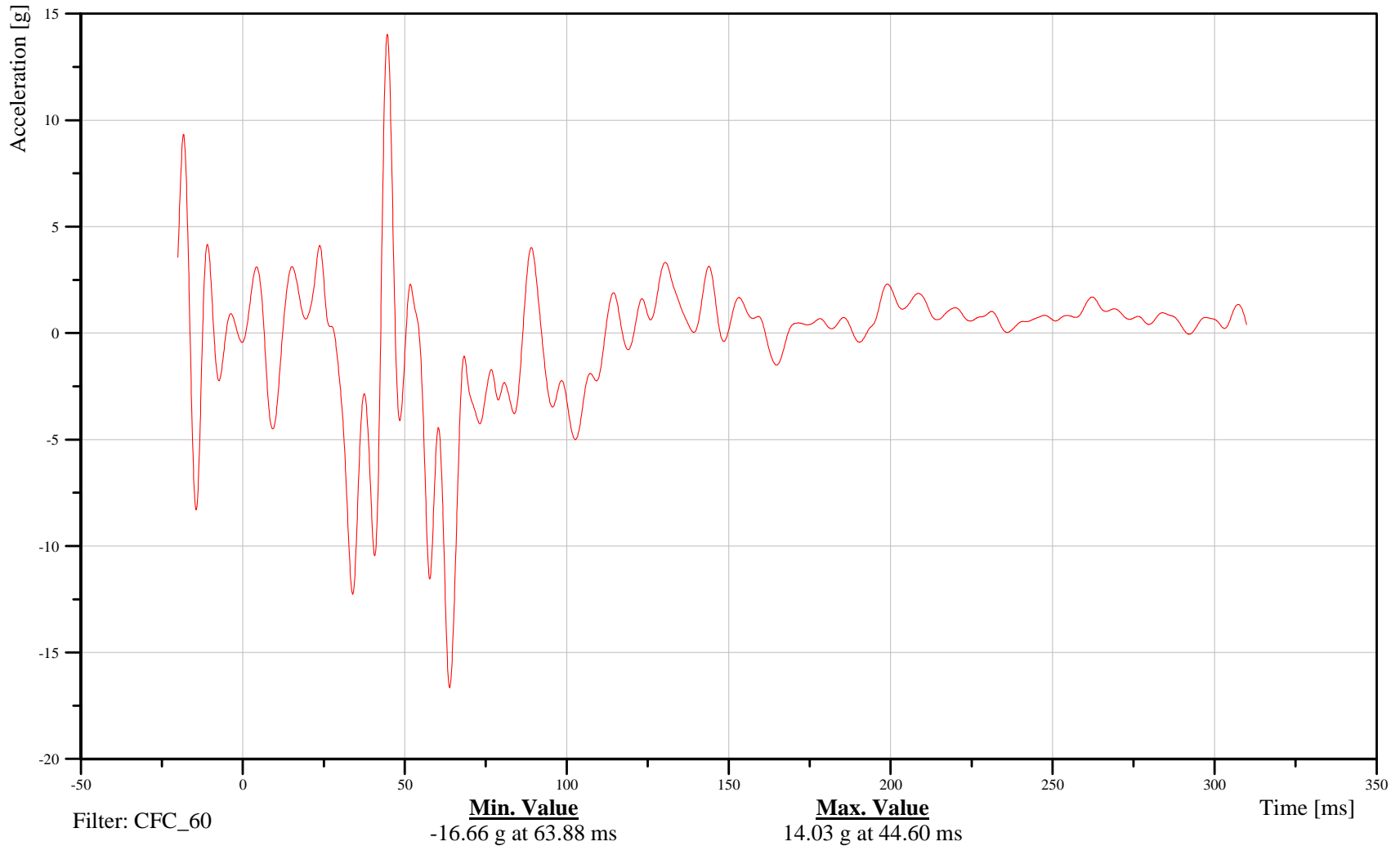
Bullet Vehicle CG Z-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-318

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

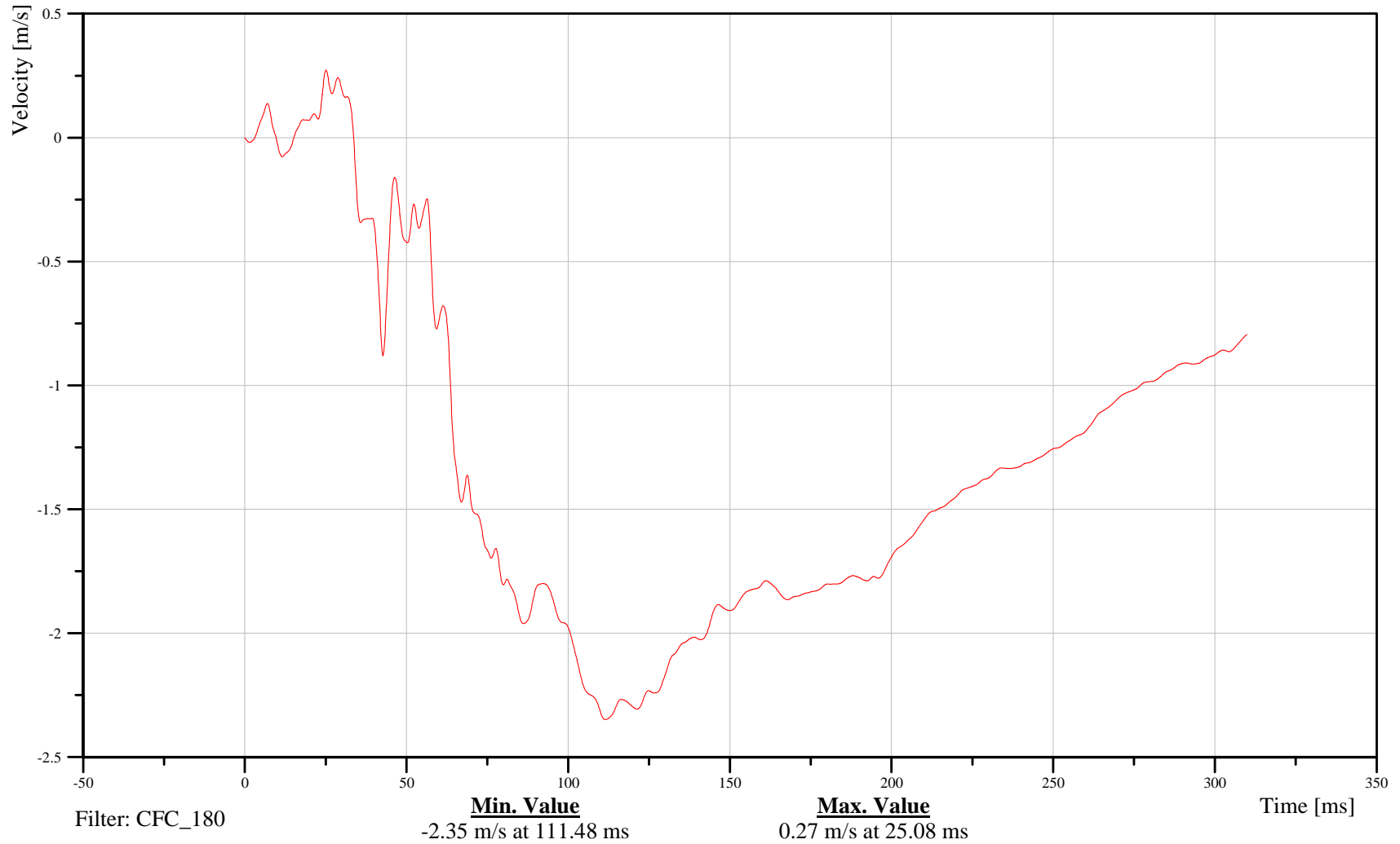
Bullet Vehicle CG Z-Axis Velocity

Customer: VRTC

10VEHCCG0000VEZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-319

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

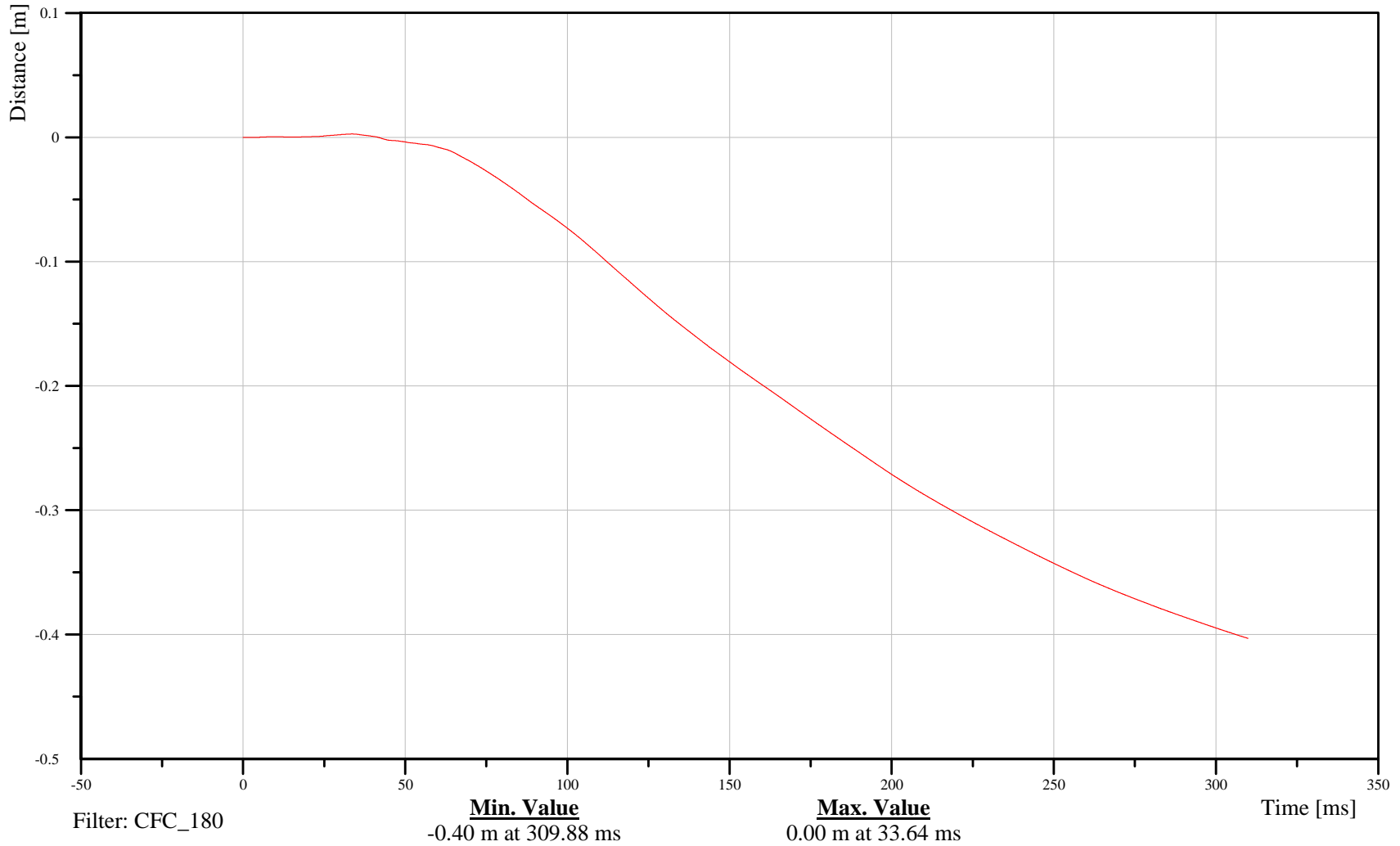
Bullet Vehicle CG Z-Axis Displacement

Customer: VRTC

10VEHCCG0000DCZC

TRC Inc. Test Lab: CTF

Test Number: 070607



B-320

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

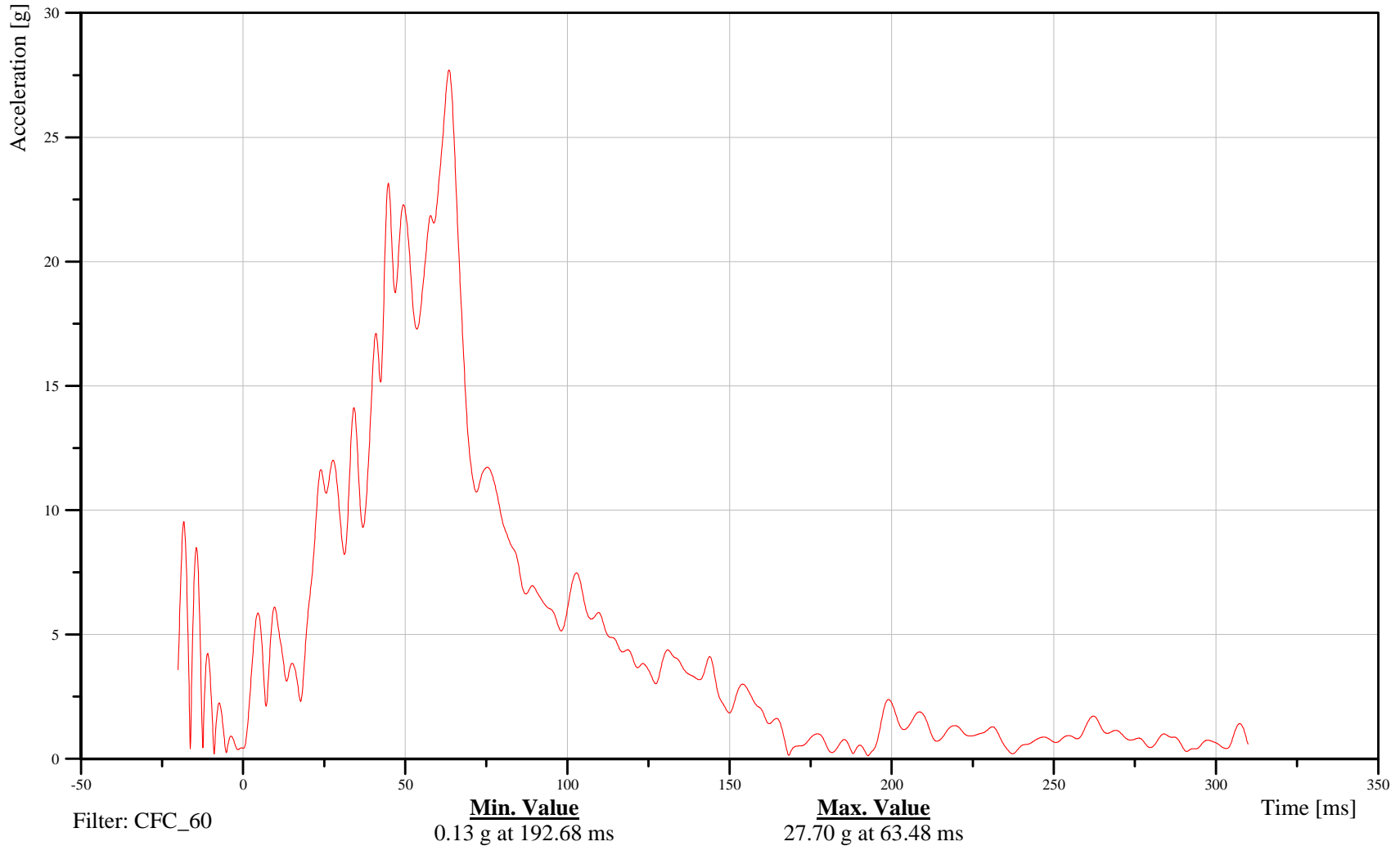
Bullet Vehicle CG Resultant Acceleration

Customer: VRTC

10VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-321

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

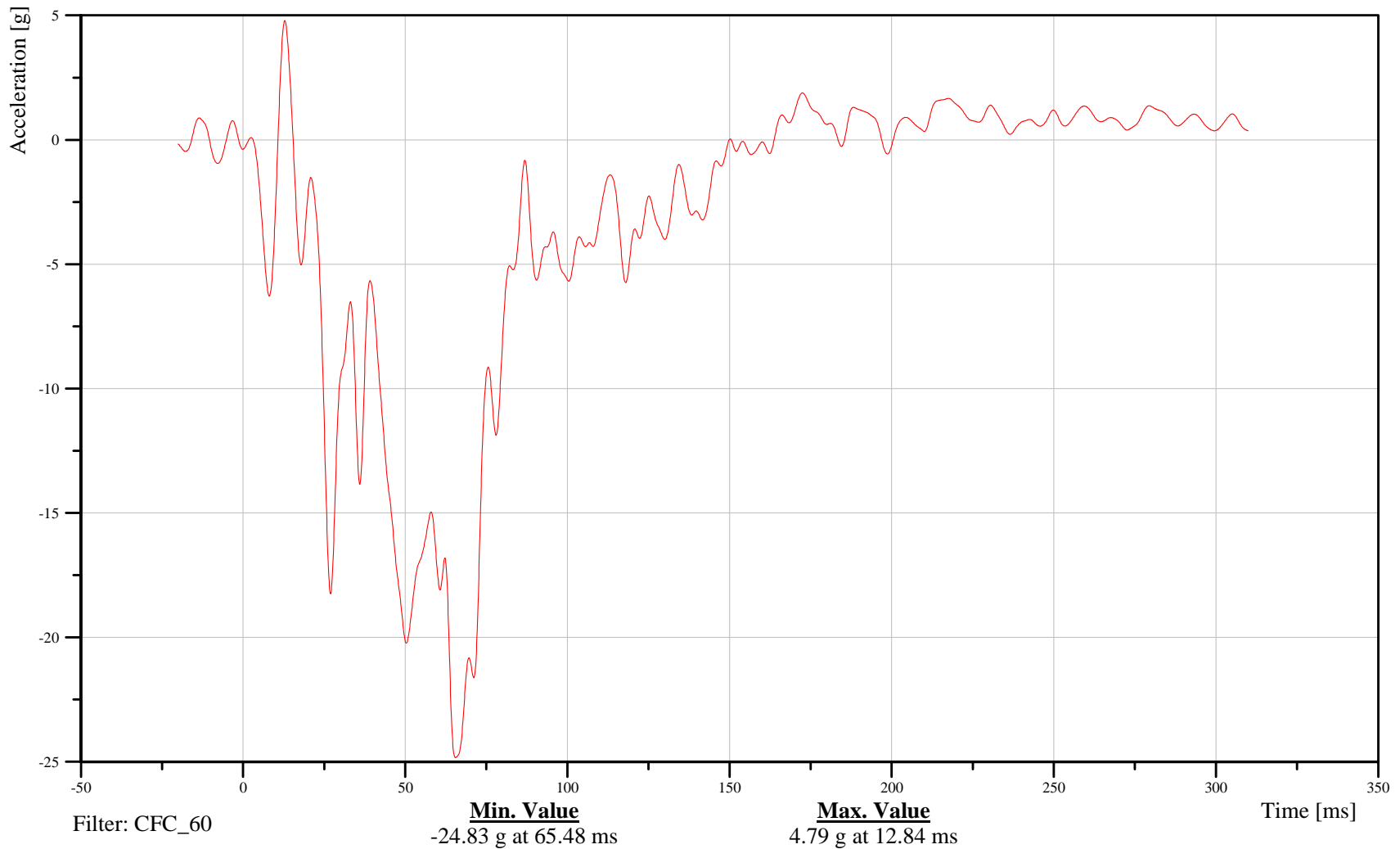
Bullet Vehicle Rear Deck X-Axis Acceleration

Customer: VRTC

18VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-322

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

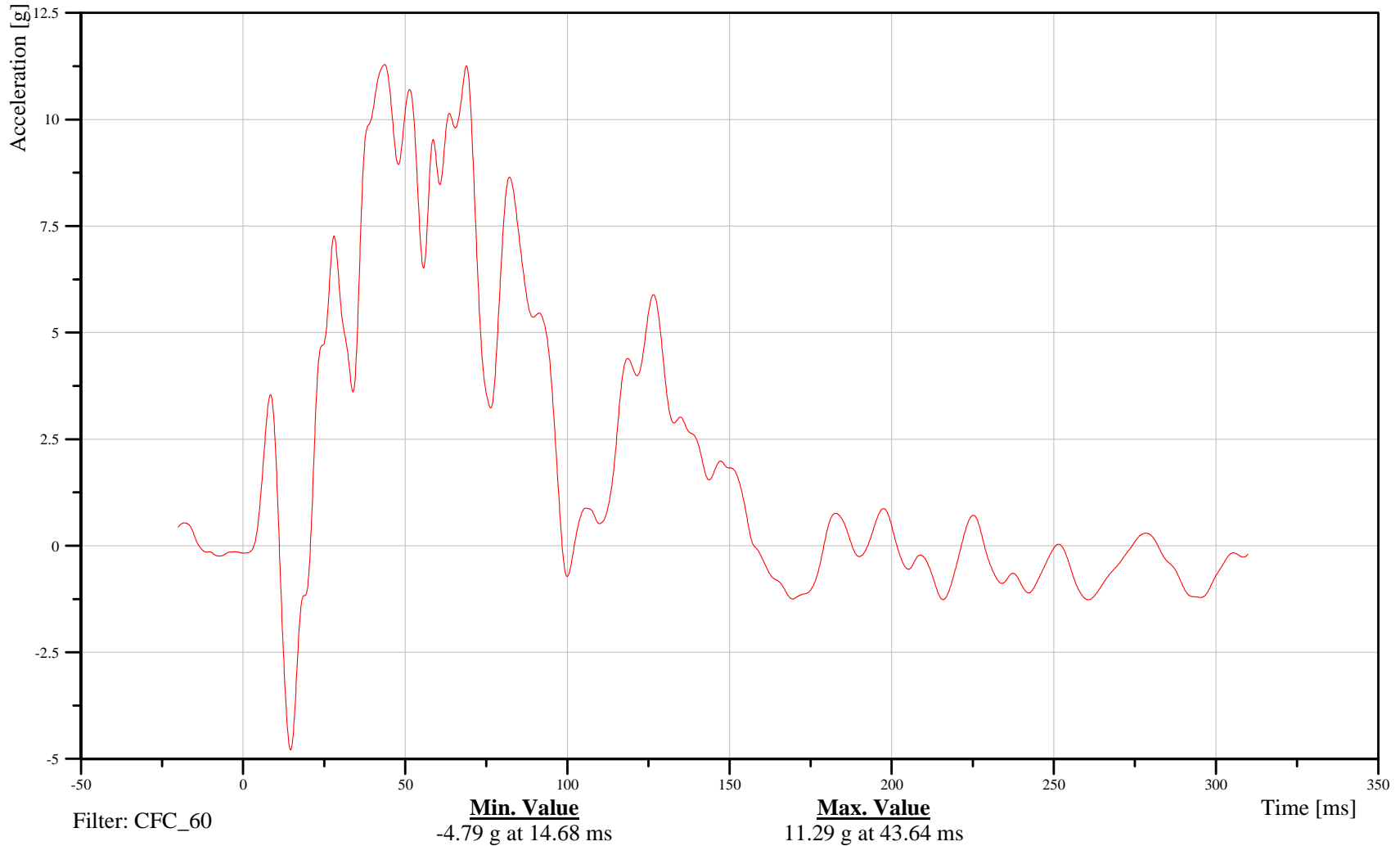
Bullet Vehicle Rear Deck Y-Axis Acceleration

Customer: VRTC

18VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-323

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

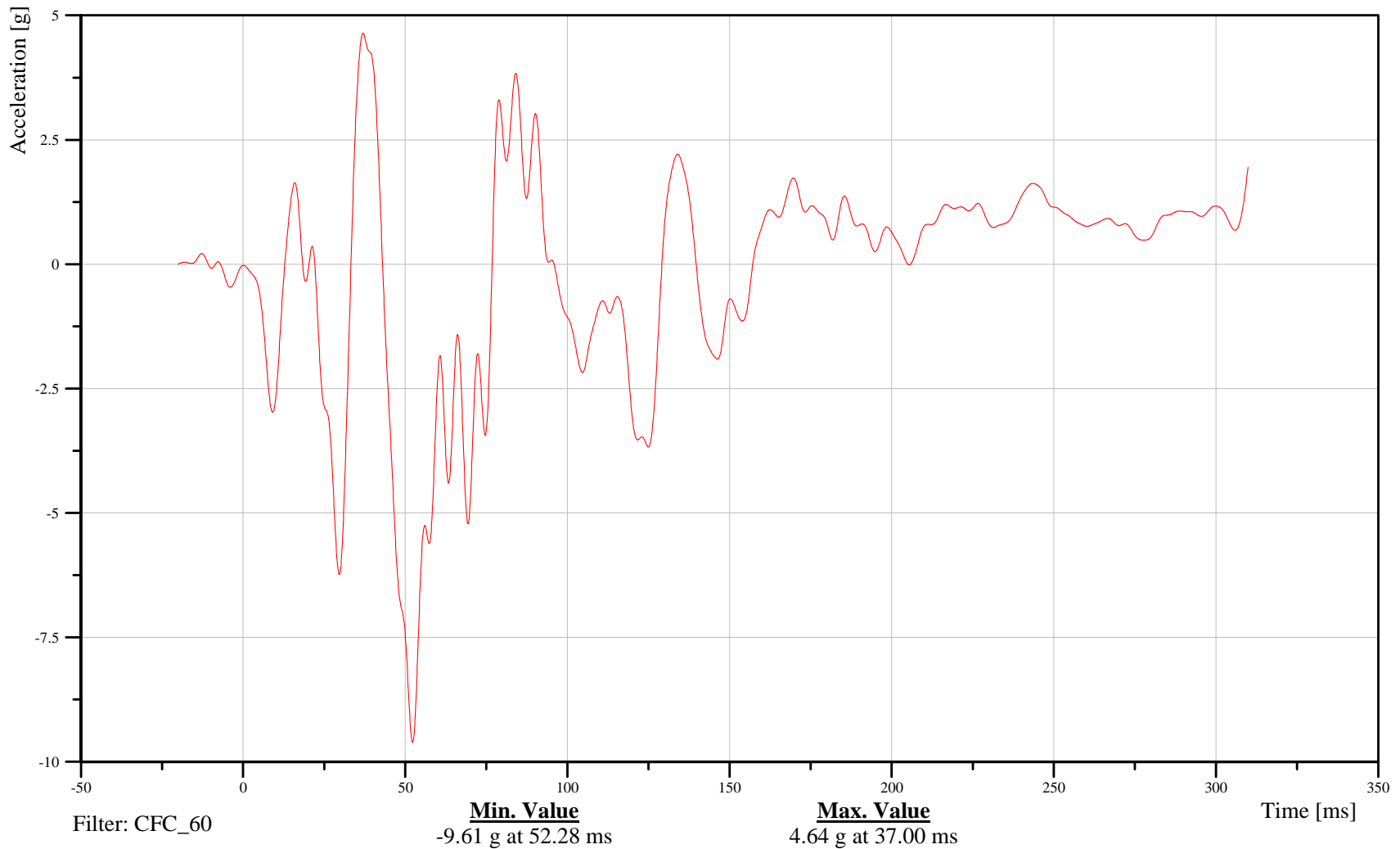
Bullet Vehicle Rear Deck Z-Axis Acceleration

Customer: VRTC

18VEHC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-324

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

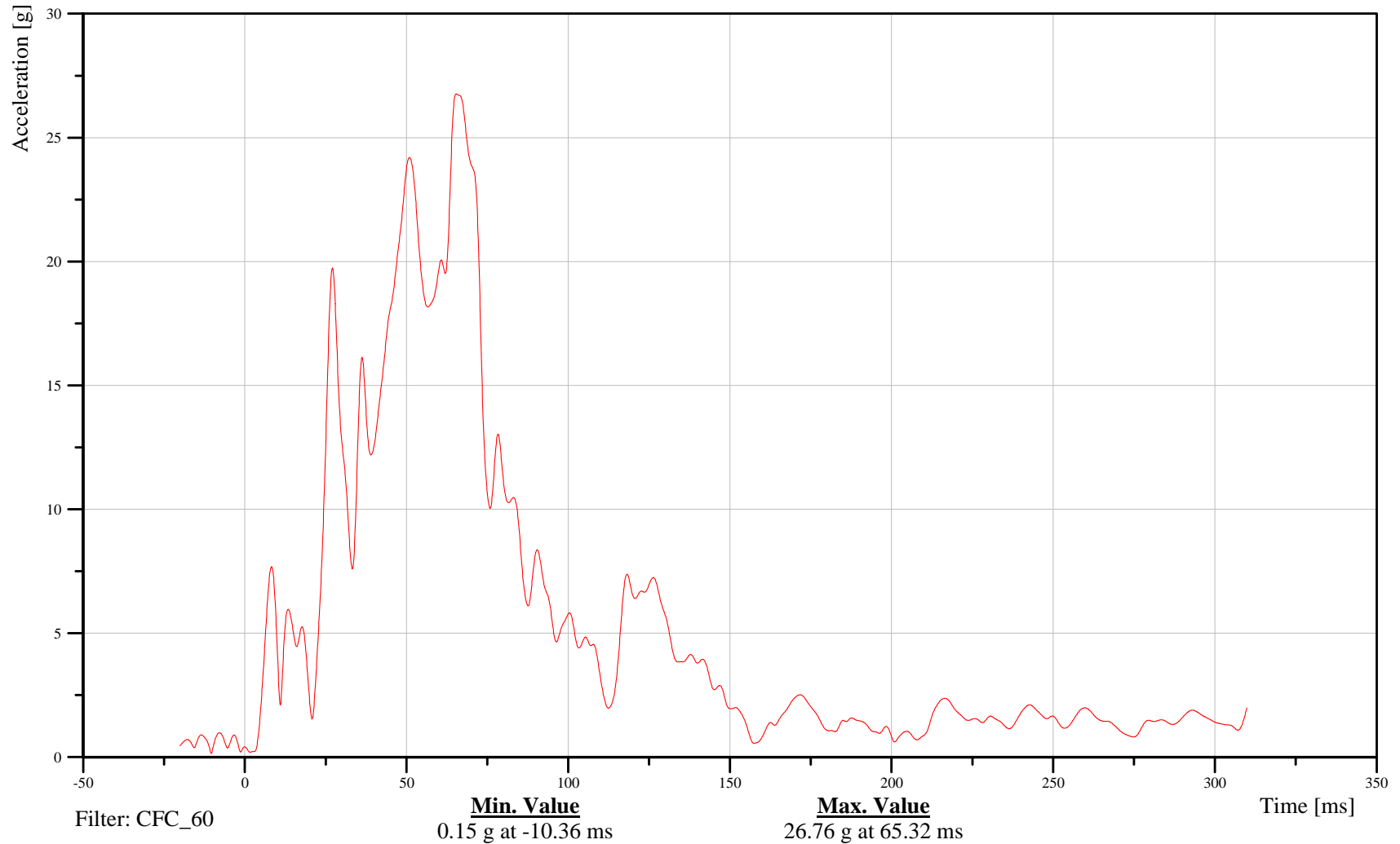
Bullet Vehicle Rear Deck Resultant Acceleration

Customer: VRTC

18VEHC000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 070607



B-325

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

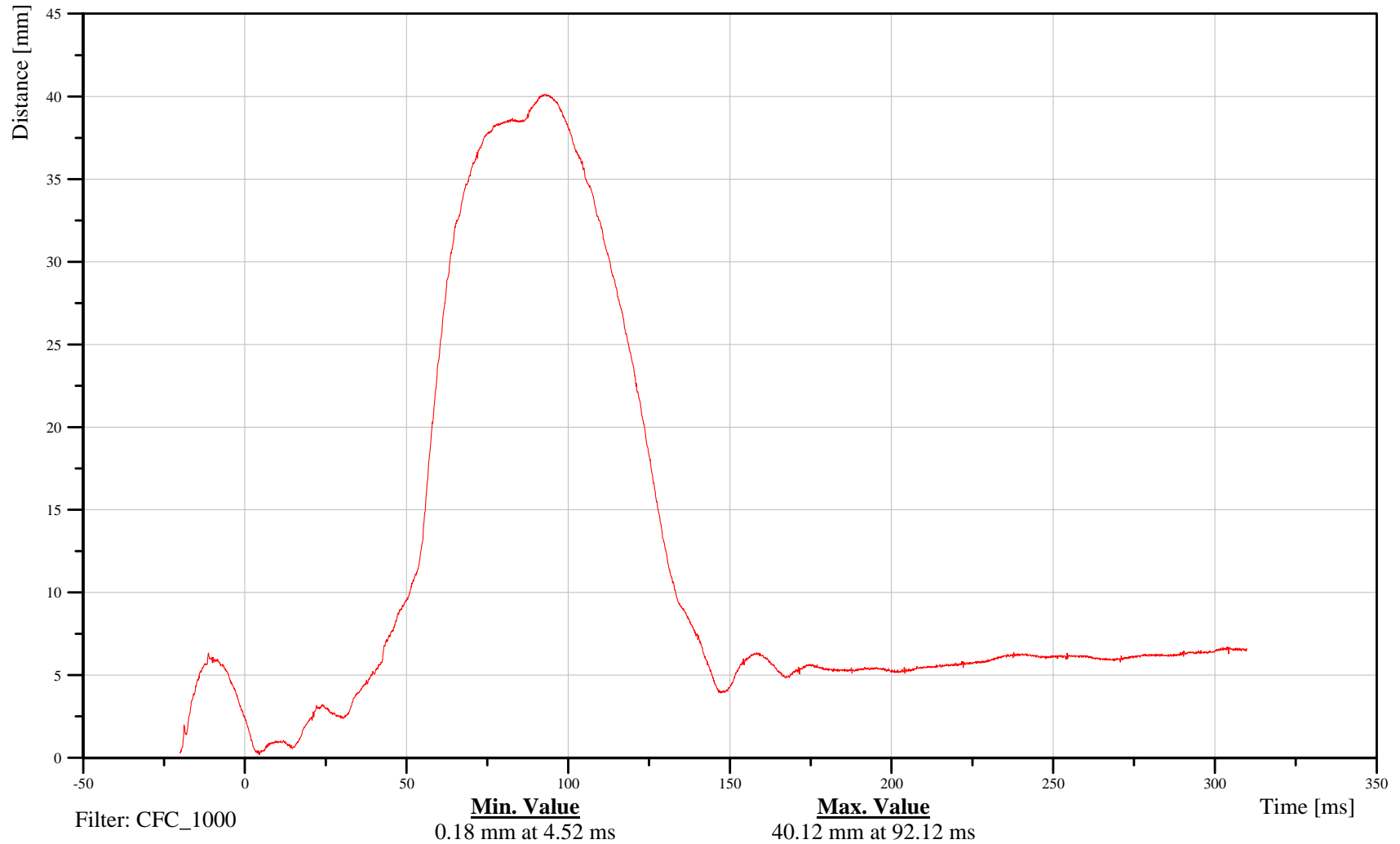
Bullet Vehicle Driver Lap Belt Spool

Customer: VRTC

11SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-326

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

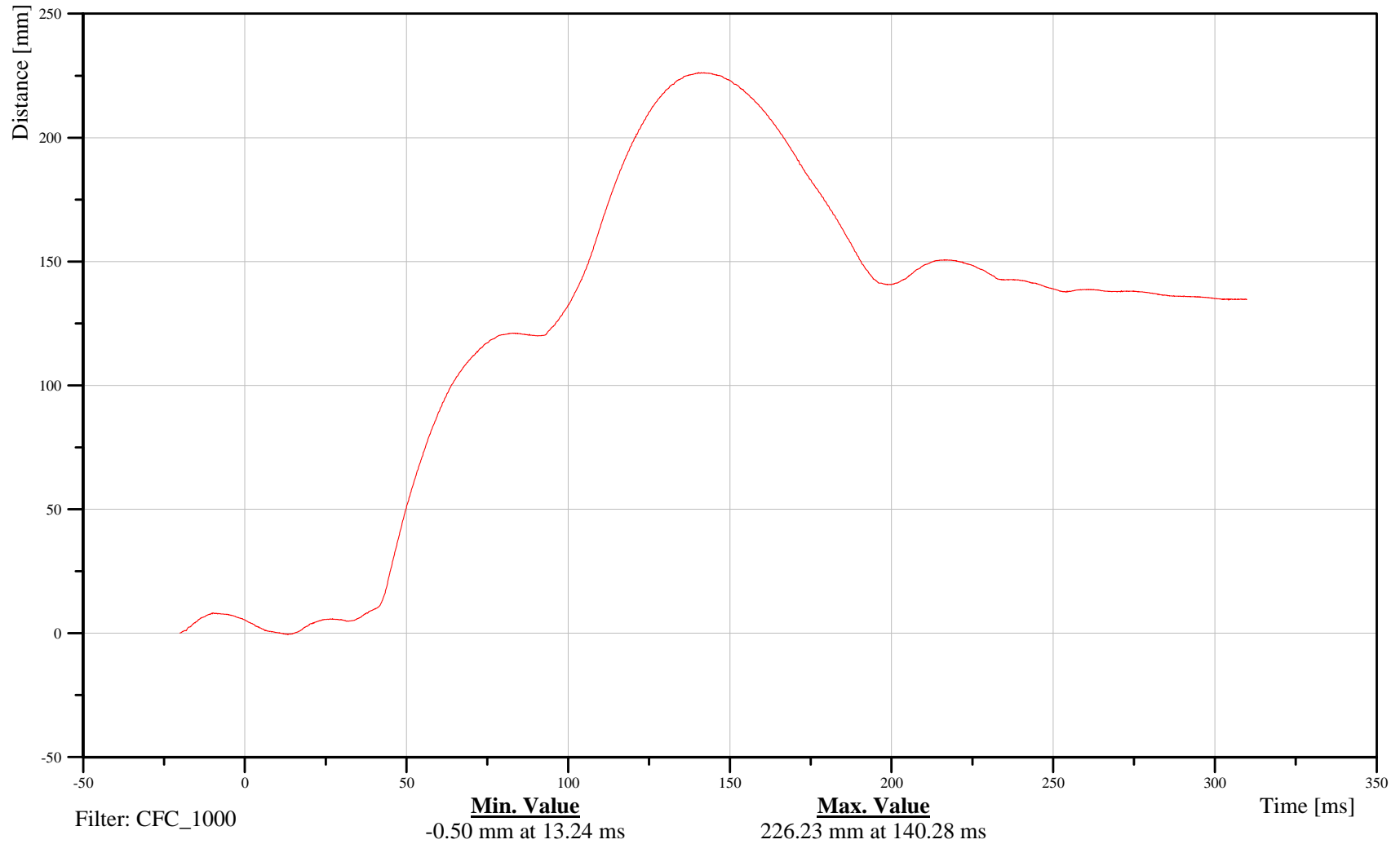
Bullet Vehicle Driver Shoulder Belt Spool and Retraction

Customer: VRTC

11SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-327

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

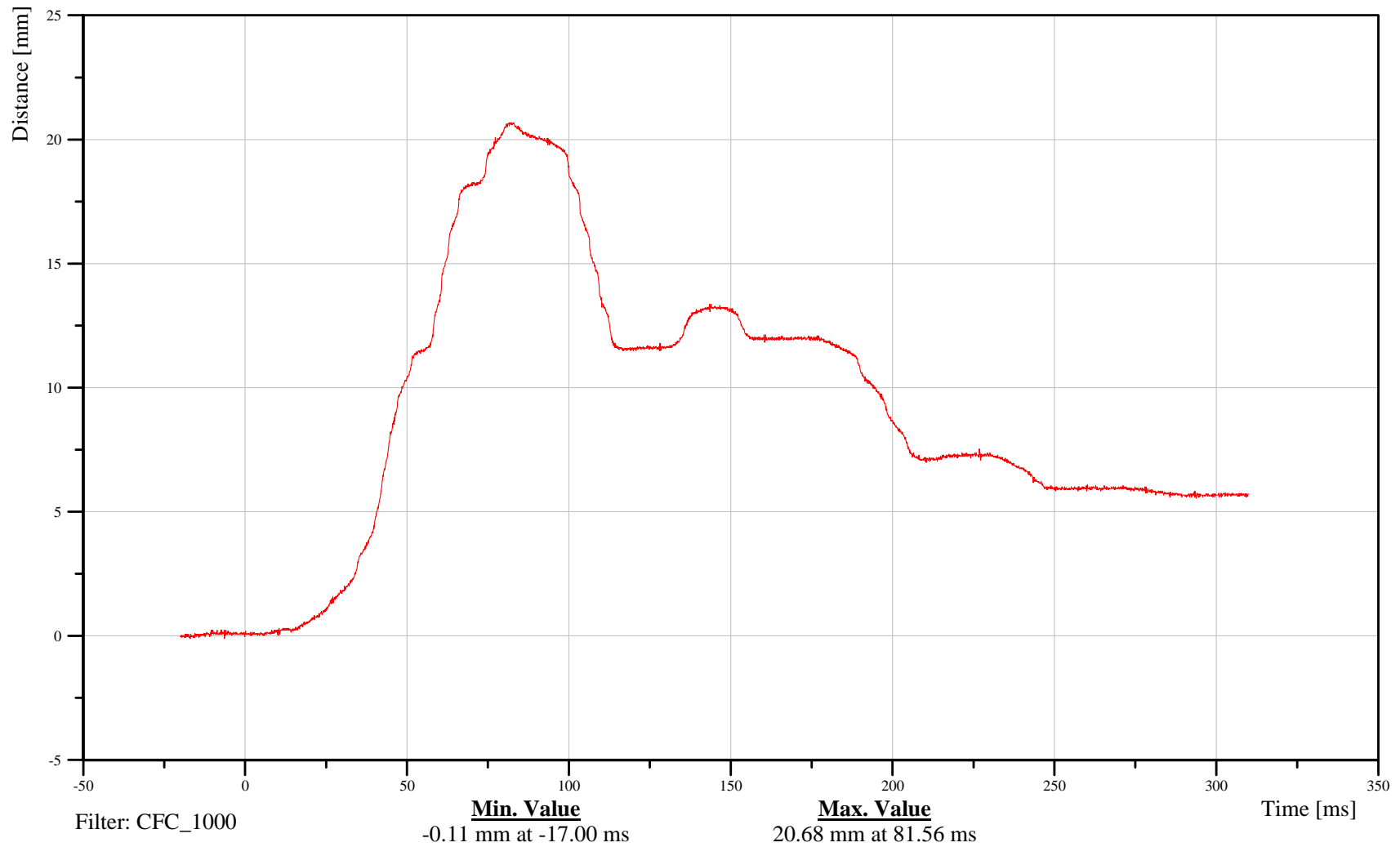
Bullet Vehicle Passenger Lap Belt Spool

Customer: VRTC

13SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-328

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

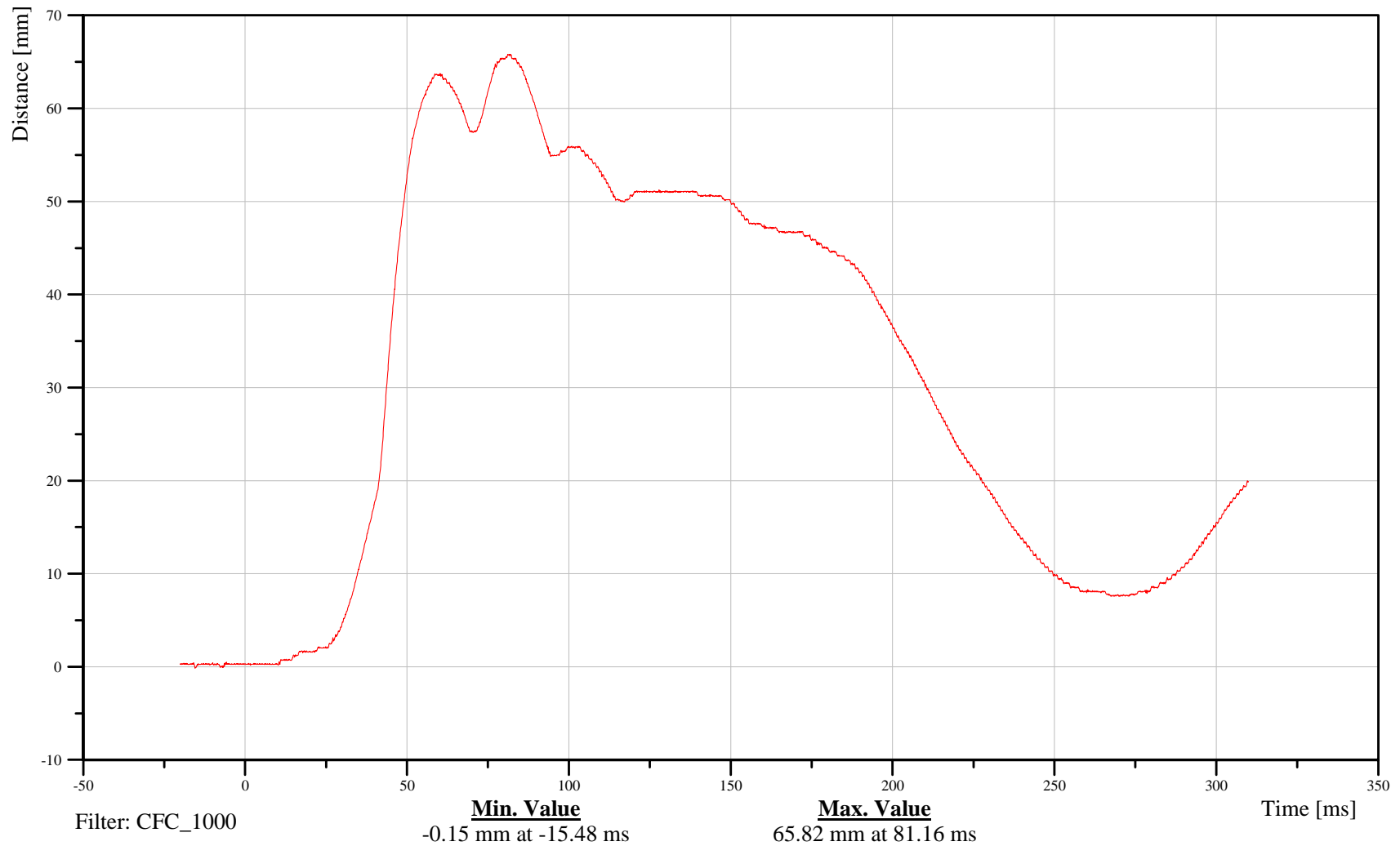
Bullet Vehicle Passenger Shoulder Belt Spool and Retraction

Customer: VRTC

13SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 070607



B-329

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

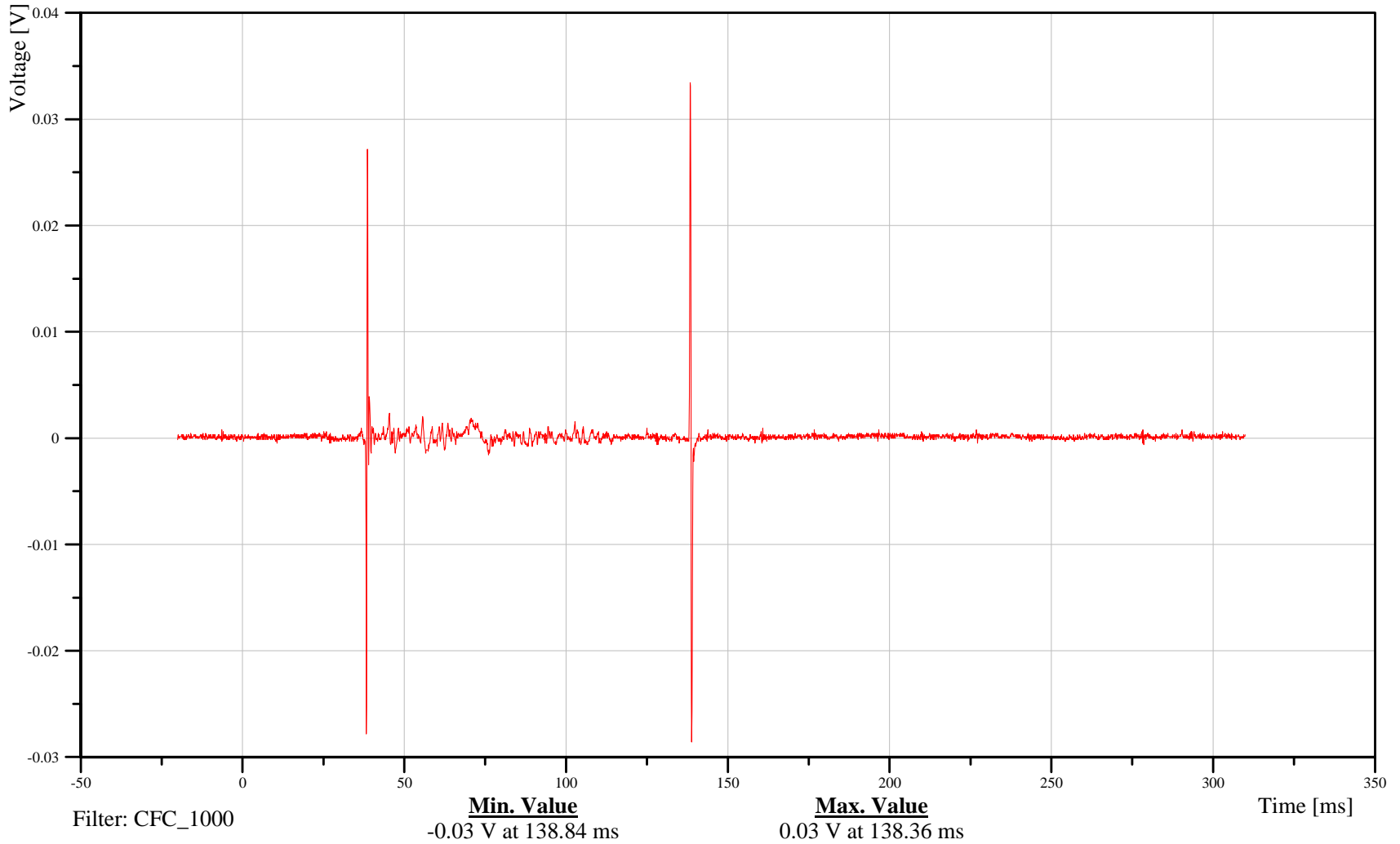
Bullet Vehicle Driver Front Airbag 1 Inductor

Customer: VRTC

11AIRBFR0100EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-330

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

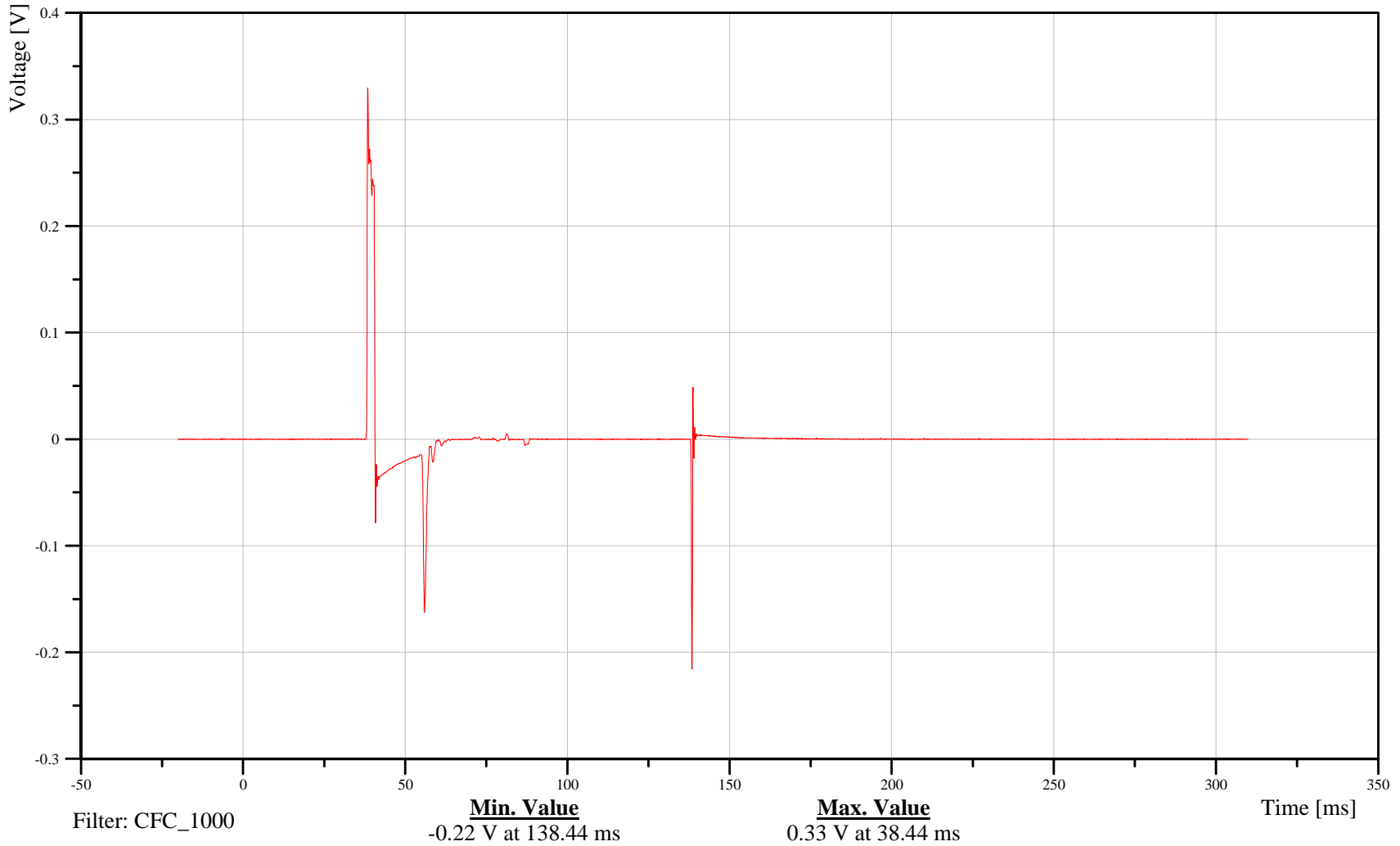
Bullet Vehicle Driver Front Airbag 2 Inductor

Customer: VRTC

11AIRBFR0200EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-331

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007
Time: 15:44

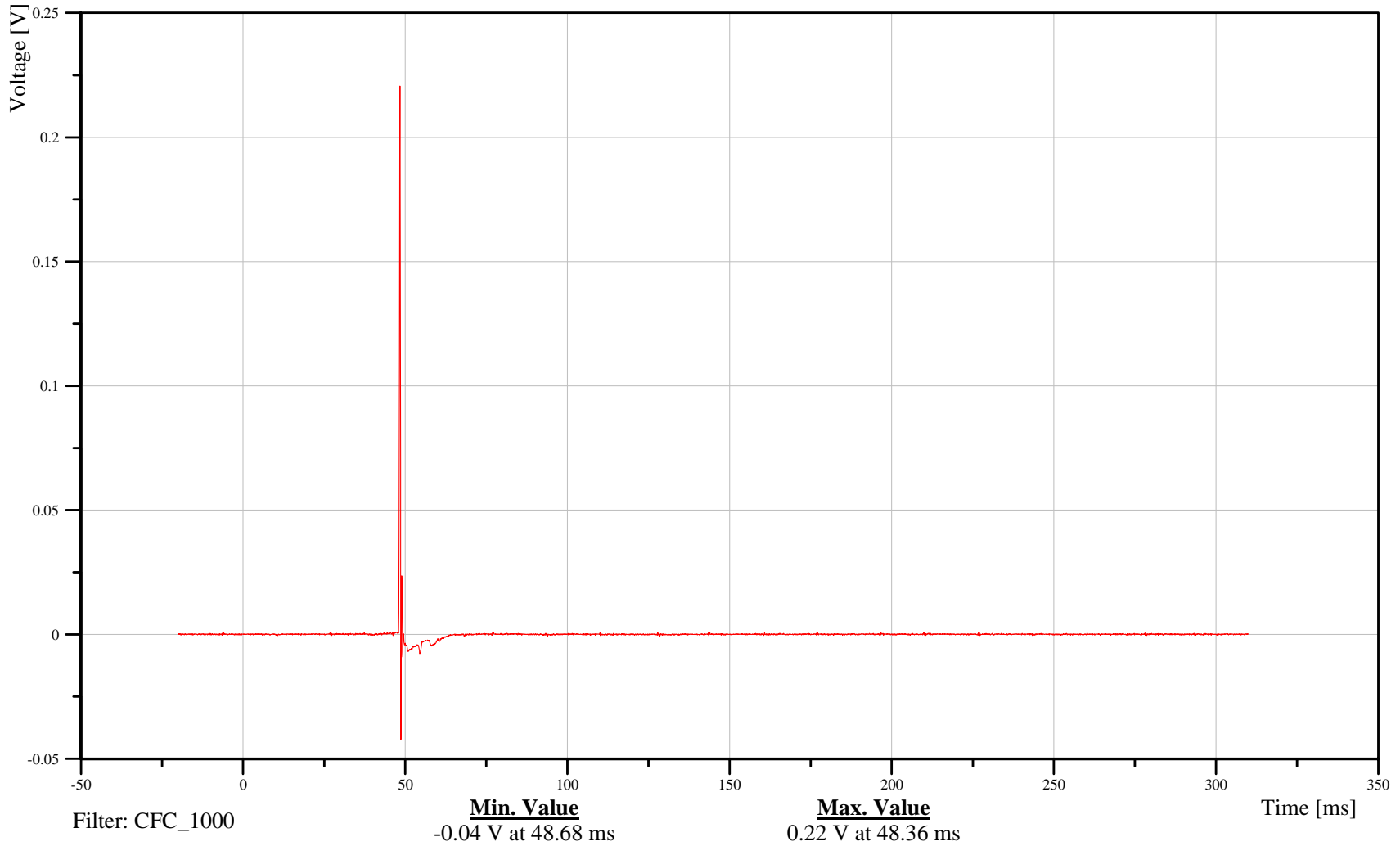
Bullet Vehicle Passenger Front Airbag 1 Inductor

Customer: VRTC

13AIRBFR0100EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-332

070607



2005 Chrysler Town and Country into 2002 Ford Focus 40% Offset Frontal

Date: 06/07/2007

Time: 15:44

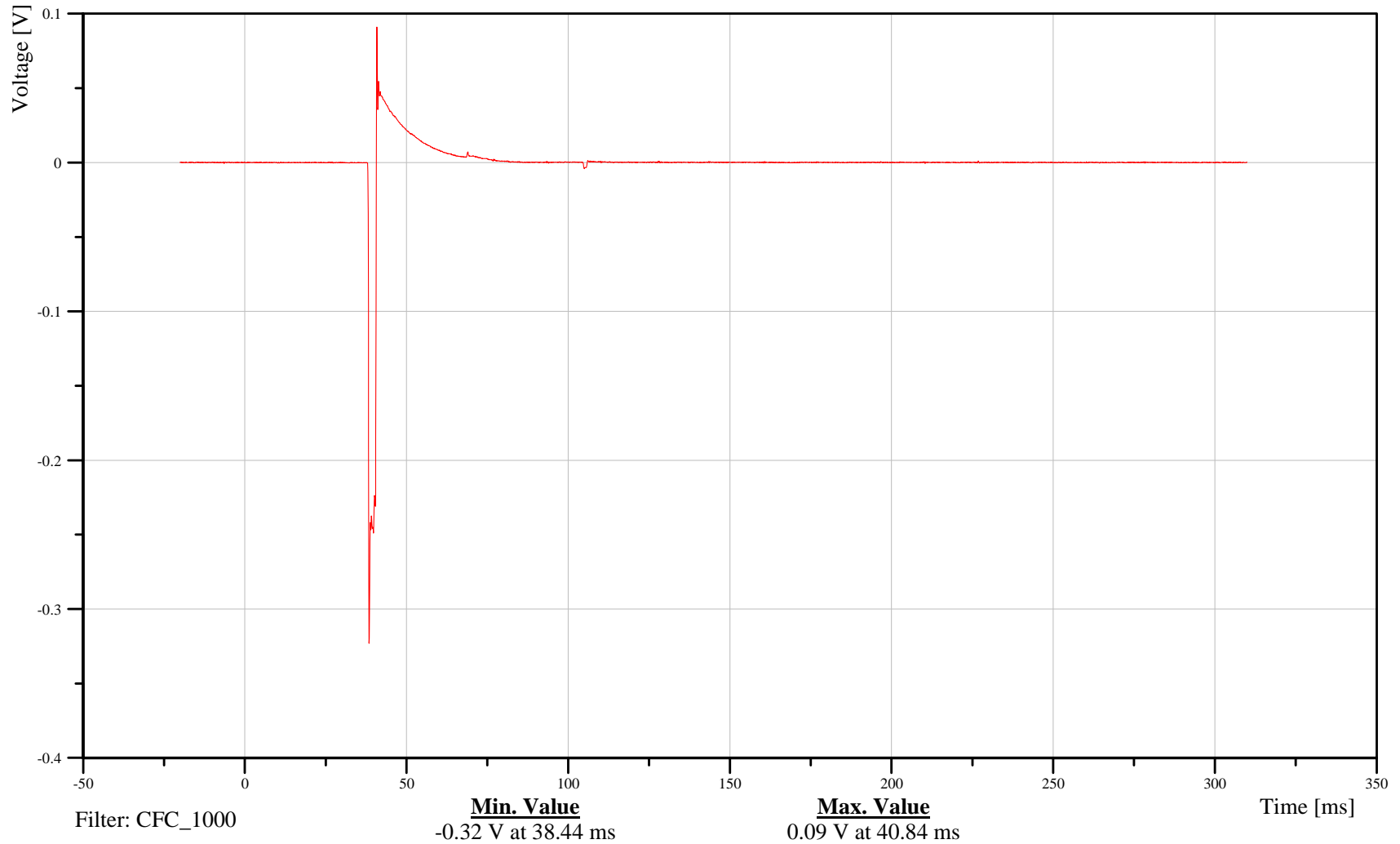
Bullet Vehicle Passenger Front Airbag 2 Inductor

Customer: VRTC

13AIRBFR0200EVOA

TRC Inc. Test Lab: CTF

Test Number: 070607



B-333

070607

Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

Target Vehicle Driver Dummy S/N: 855

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 855
Calibration No. 04

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	883	Yes
B	Shoulder Pivot Height	505.5 - 520.7	512	Yes
C	H-Point Height	83.8 - 88.9	87	Yes
D	H-Point From Seatback	134.6 - 139.7	138	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	90	Yes
F	Thigh Clearance	139.7 - 154.9	152	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	290	Yes
H	Skull Cap To Backline	40.6 - 45.7	45	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	333	Yes
J	Elbow Rest Height	190.5 - 210.8	202	Yes
K	Buttock Knee Length	579.1 - 604.5	600	Yes
L	Popliteal Height	429.3 - 454.7	438	Yes
M	Knee Pivot Height	485.1 - 500.4	490	Yes
N	Buttock Popliteal Length	452.1 - 477.5	472	Yes
O	Chest Depth	213.4 - 228.6	220	Yes
P	Foot Length	251.5 - 266.7	260	Yes
V	Shoulder Breadth	421.6 - 436.9	428	Yes
W	Foot Breadth	91.4 - 106.7	95	Yes
Y	Chest Circumference	970.3 - 1000.8	993	Yes
Z	Waist Circumference	835.7 - 866.1	863	Yes
AA	Location For Chest Circumference	429.3 - 434.3	430	Yes
BB	Location For Waist Circumference	226.1 - 231.1	230	Yes

Comment:

Technician

Approved

Charles W. Beall

Ron. Stoner

Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 855 Certification No. 4-1

Test Date: 5/31/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	266.5 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-5.8 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Charles W. Bell

Approved

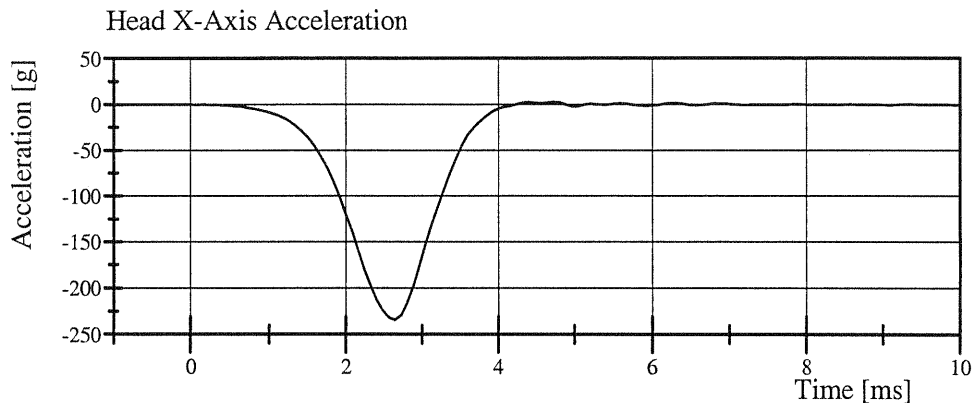
Ron Stone

Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 855 Certification No. 4-1

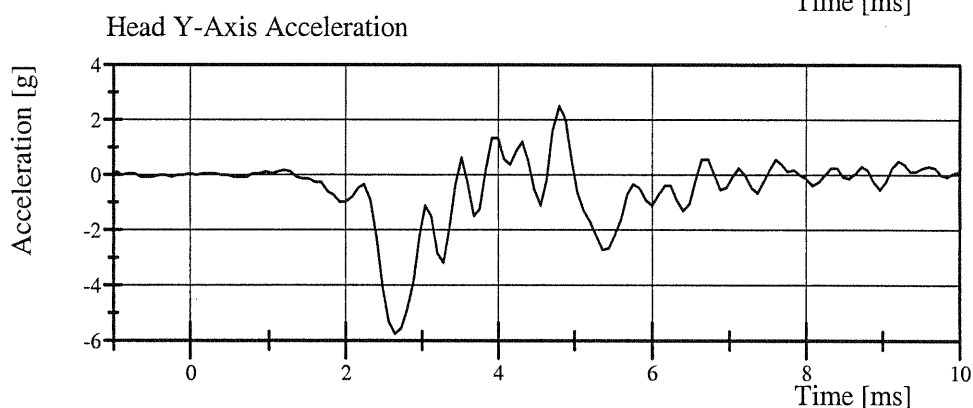
Test Date: 5/31/2007



Filter Class: CFC_1000

Max: 2.7 g at 4.7 ms

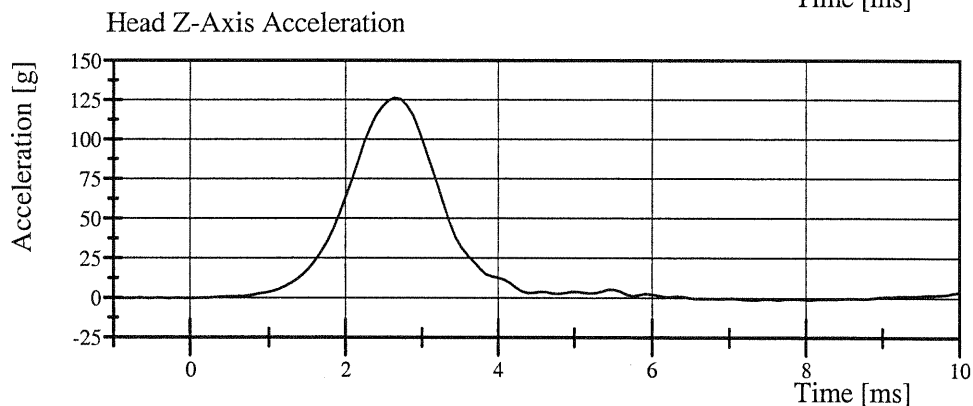
Min: -234.6 g at 2.6 ms



Filter Class: CFC_1000

Max: 2.5 g at 4.8 ms

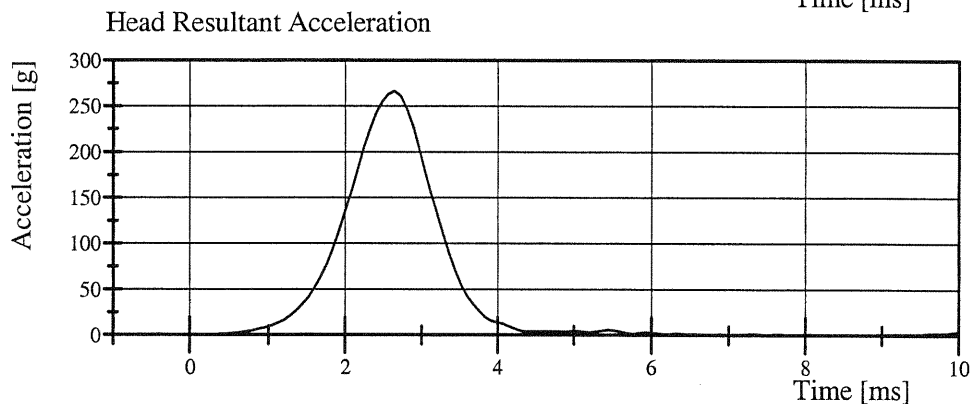
Min: -5.8 g at 2.6 ms



Filter Class: CFC_1000

Max: 126.5 g at 2.6 ms

Min: -1.2 g at 7.3 ms



Filter Class: CFC_1000

Max: 266.5 g at 2.6 ms

Min: 0.0 g at -0.3 ms

Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 855 Certification No. 4-2

Test Date: 5/31/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.953 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	36.3 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-25.73 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-21.16 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-15.35 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-15.35 g	Yes
Total Head D-Plane Rotation Peak	(-64) - (-78) °	-68.2 °	Yes
Time of Peak	57 - 64 ms	58.4 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	118.5 ms	Yes
Total Neck Occipital Condyles Moment Peak	88 - 108 N·m	96.9 N·m	Yes
Time of Peak	47 - 58 ms	49.6 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	100.1 ms	Yes

Test meets specifications.

Comments:

Technician

Charles W. Bell

Approved

Ron Storr

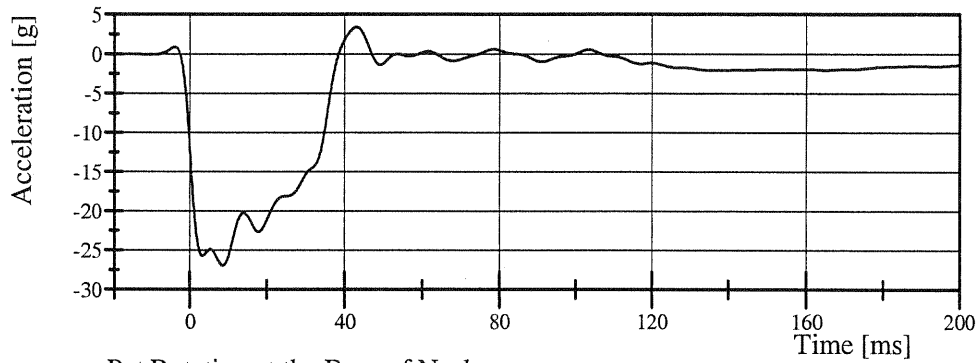
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 855 Certification No. 4-2

Test Date: 5/31/2007

Pendulum Acceleration

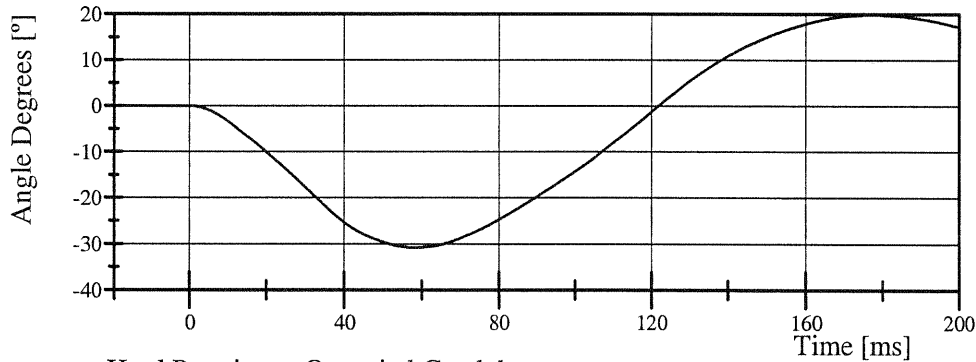


Filter Class: CFC_60

Max: 3.4 g at 43.0 ms

Min: -26.9 g at 8.6 ms

Pot Rotation at the Base of Neck

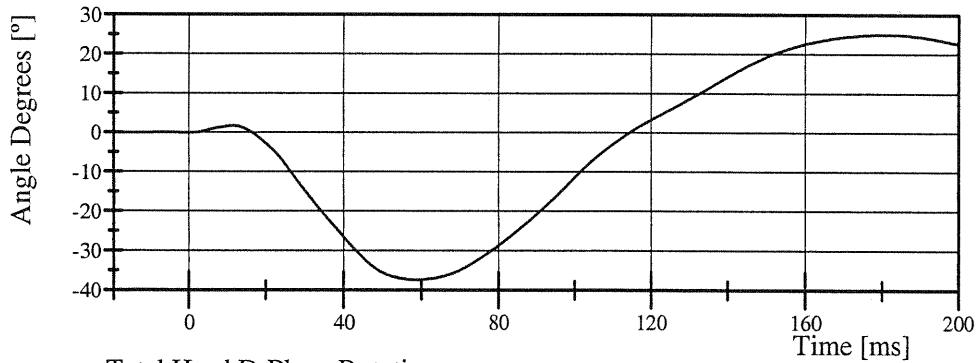


Filter Class: CFC_60

Max: 19.9 ° at 177.4 ms

Min: -30.8 ° at 58.1 ms

Head Rotation at Occipital Condyles

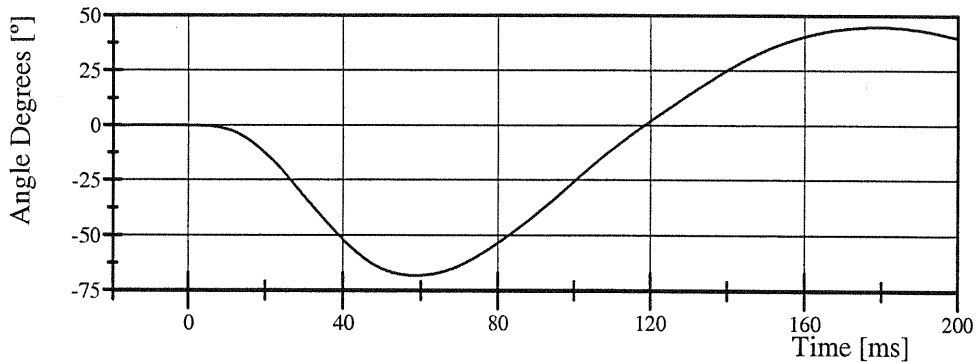


Filter Class: CFC_60

Max: 25.1 ° at 181.3 ms

Min: -37.4 ° at 58.6 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 44.9 ° at 179.2 ms

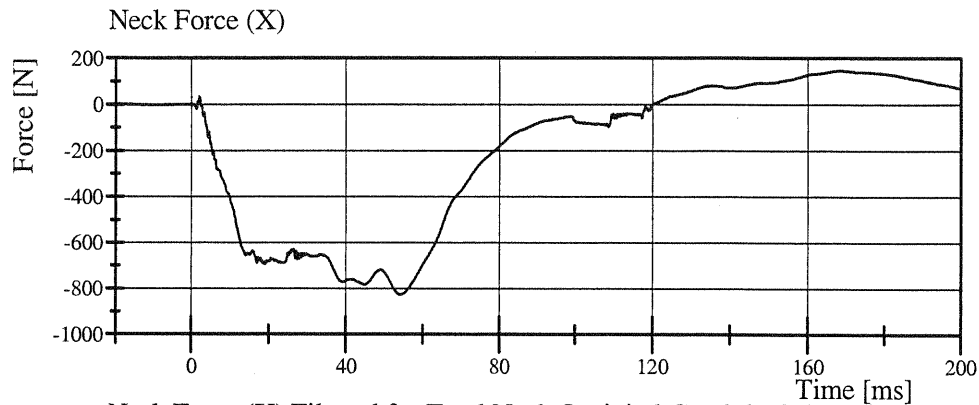
Min: -68.2 ° at 58.4 ms

Transportation Research Center Inc.

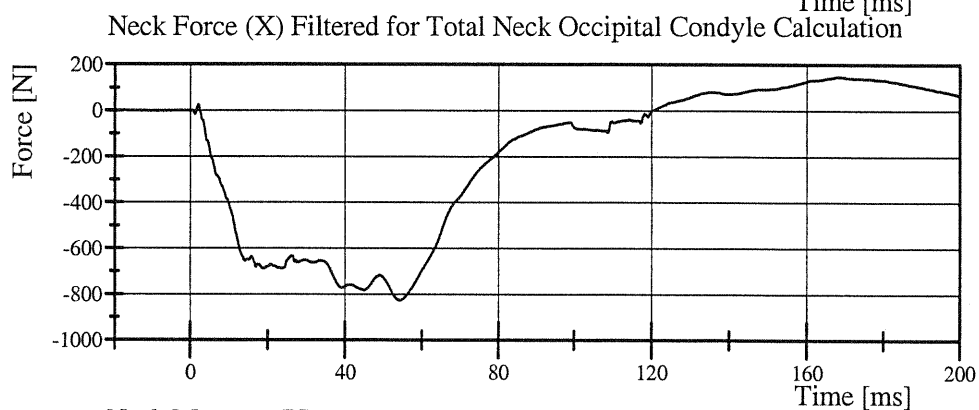
Neck Flexion

HIII 50th Serial No. 855 Certification No. 4-2

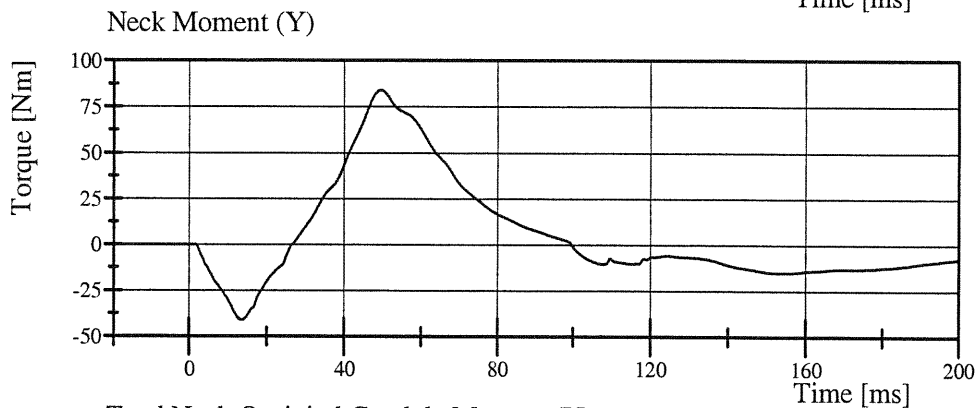
Test Date: 5/31/2007



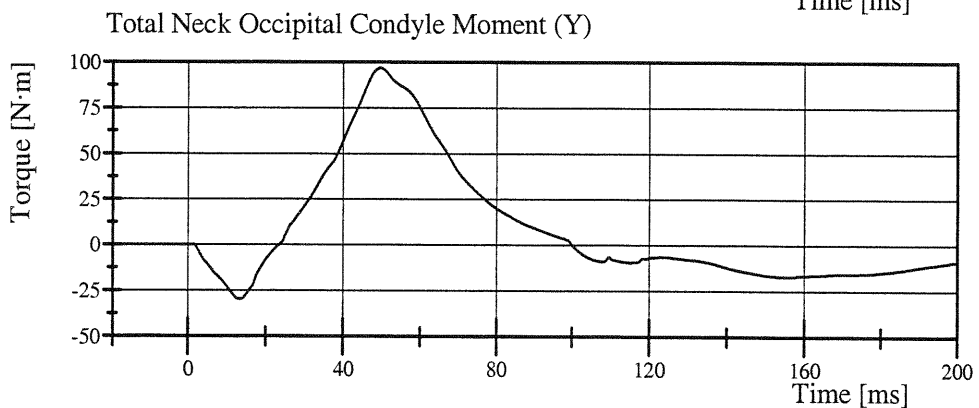
Filter Class: CFC_1000
Max: 148.5 N at 167.8 ms
Min: -826.6 N at 54.2 ms



Filter Class: CFC_600
Max: 147.8 N at 167.8 ms
Min: -826.4 N at 54.2 ms



Filter Class: CFC_600
Max: 84.1 Nm at 49.5 ms
Min: -41.1 Nm at 13.7 ms



Filter Class: CFC_600
Max: 96.9 N·m at 49.6 ms
Min: -29.8 N·m at 13.4 ms

Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 855 Certification No. 4-1

Test Date: 5/31/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.988 m/s	Yes
Pendulum Acceleration Decay			
Crossing 5g	38 - 46 ms	39.7 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	20.06 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	15.65 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	13.32 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	14.62 g	Yes
Total Head D-Plane Rotation			
Peak	81 - 106 °	91.6 °	Yes
Time of Peak	72 - 82 ms	77.0 ms	Yes
Total Head D-Plane Rotation			
Decay to 0°	147 - 174 ms	161.8 ms	Yes
Total Neck Occipital Condyles Moment			
Peak	(-53) - (-80) N·m	-62.9 N·m	Yes
Time of Peak	65 - 79 ms	72.0 ms	Yes
Total Neck Occipital Condyles Moment			
Decay to 0 N·m	120 - 148 ms	144.5 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



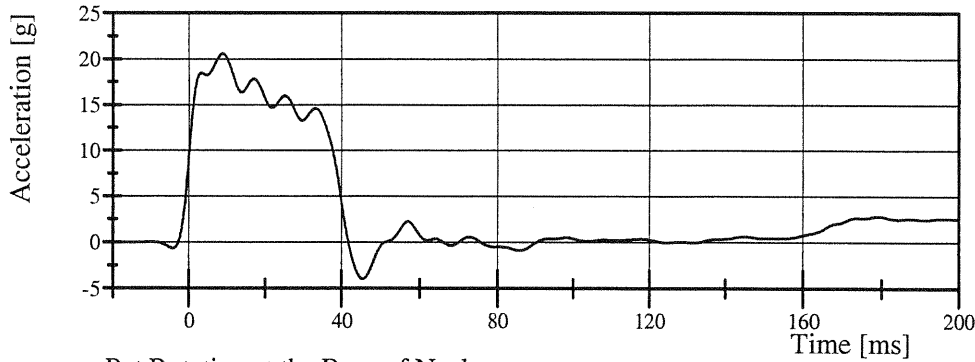
Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 855 Certification No. 4-1

Test Date: 5/31/2007

Pendulum Acceleration

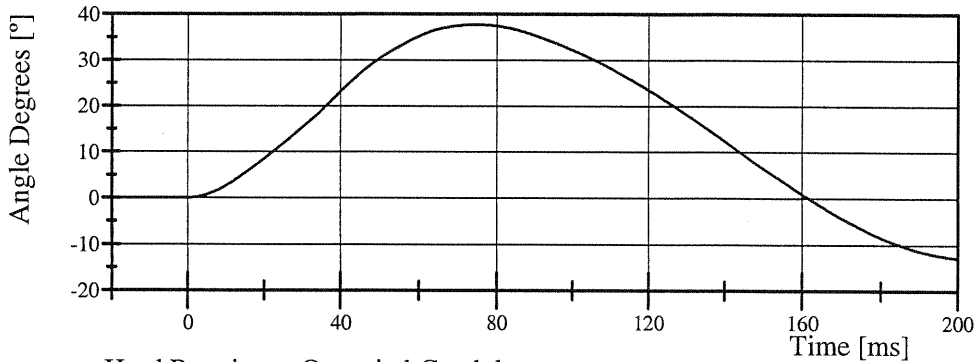


Filter Class: CFC_60

Max: 20.6 g at 8.8 ms

Min: -4.0 g at 45.4 ms

Pot Rotation at the Base of Neck

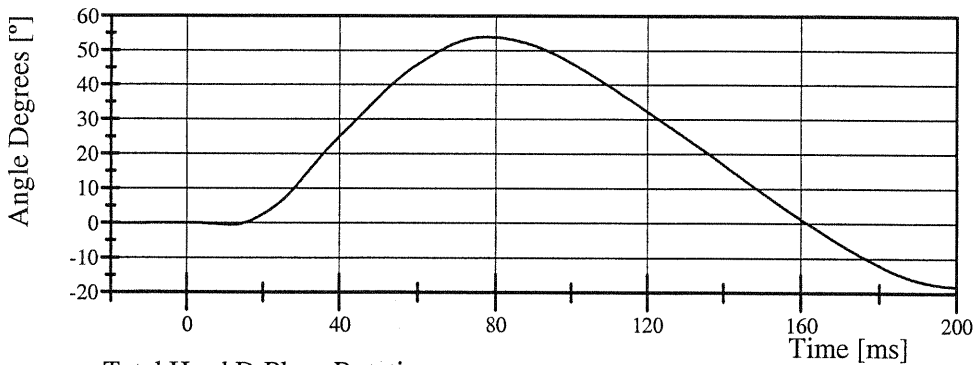


Filter Class: CFC_60

Max: 37.7 ° at 74.5 ms

Min: -12.9 ° at 200.0 ms

Head Rotation at Occipital Condyles

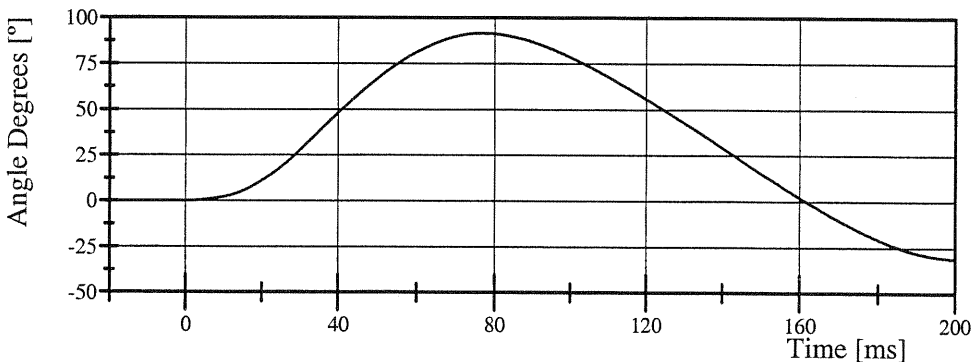


Filter Class: CFC_60

Max: 54.0 ° at 77.7 ms

Min: -18.1 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 91.6 ° at 77.0 ms

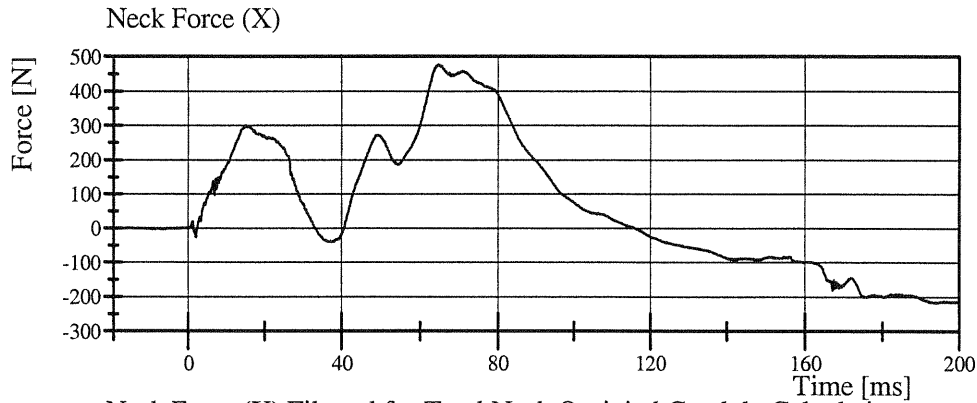
Min: -31.0 ° at 200.0 ms

Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 855 Certification No. 4-1

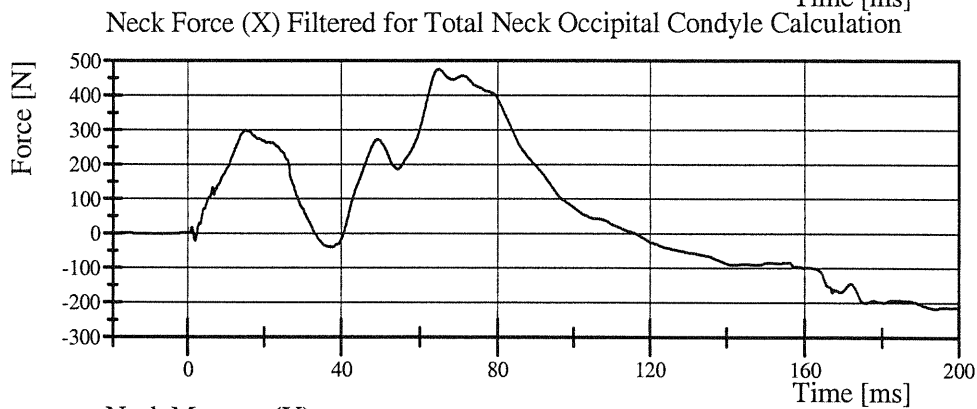
Test Date: 5/31/2007



Filter Class: CFC_1000

Max: 476.6 N at 64.7 ms

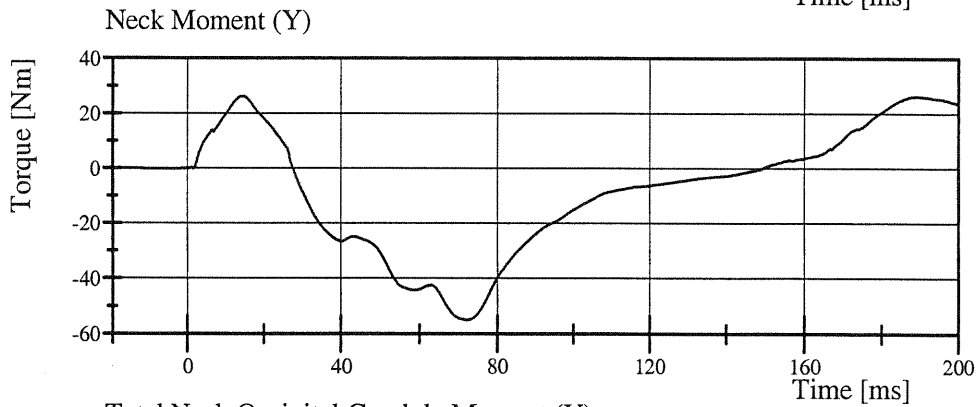
Min: -216.7 N at 193.9 ms



Filter Class: CFC_600

Max: 475.9 N at 64.8 ms

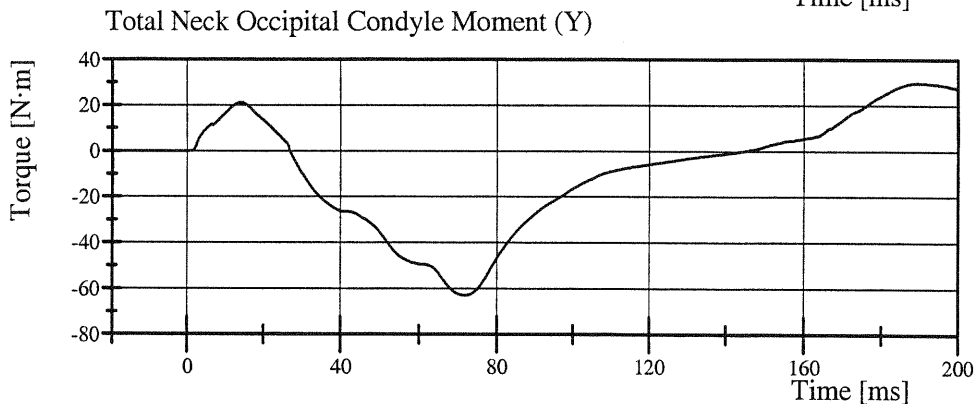
Min: -216.1 N at 193.8 ms



Filter Class: CFC_600

Max: 26.3 Nm at 189.3 ms

Min: -54.9 Nm at 72.3 ms



Filter Class: CFC_600

Max: 29.9 N·m at 189.4 ms

Min: -62.9 N·m at 72.0 ms

Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 855 Certification No. 4-2

Test Date: 6/4/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	58 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.698 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,800.6 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-66.14 mm	Yes
Internal Hysteresis	65 - 85 %	75.3 %	Yes

Test meets specifications.

Comments:

Technician



Approved



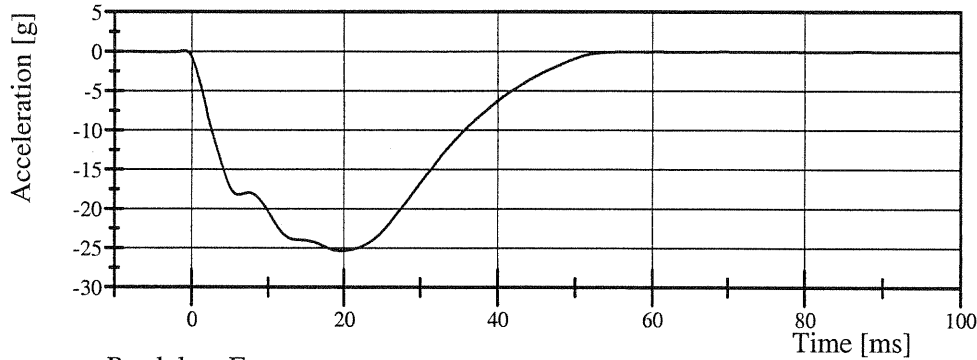
Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 855 Certification No. 4-2

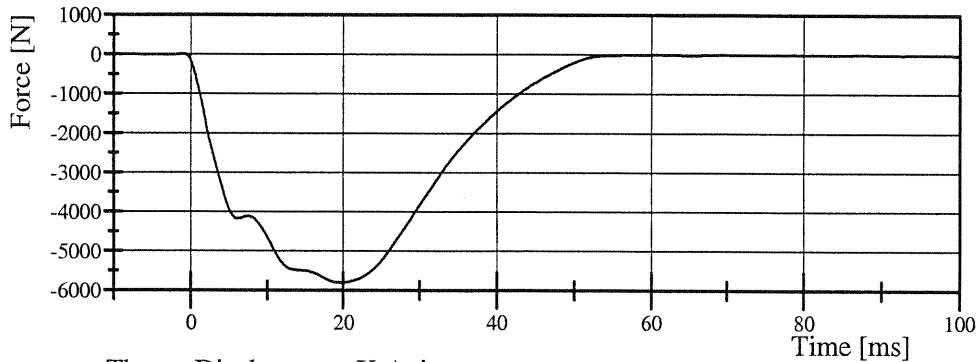
Test Date: 6/4/2007

Pendulum Acceleration



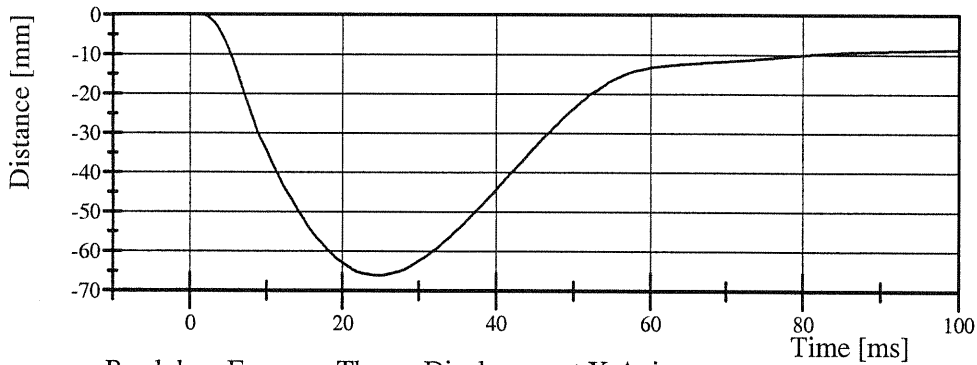
Filter Class: CFC_180
Max: 0.1 g at -1.0 ms
Min: -25.3 g at 19.7 ms

Pendulum Force



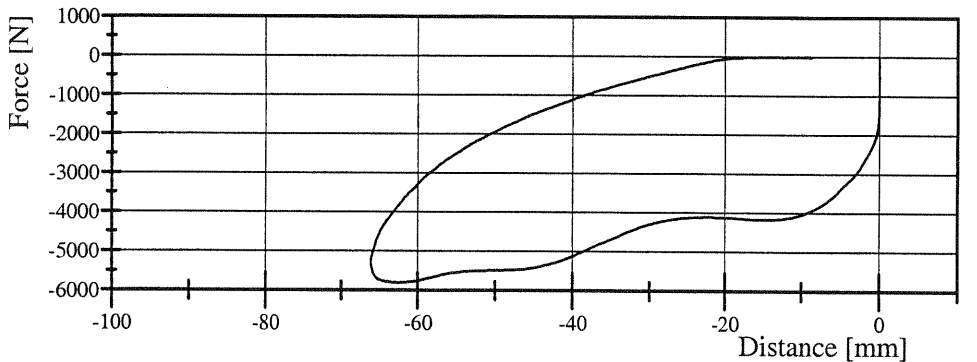
Filter Class: CFC_180
Max: 19.1 N at -1.0 ms
Min: -5,800.6 N at 19.7 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -9.2 ms
Min: -66.1 mm at 24.9 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 19.1 N at -0.0 mm
Min: -5,800.6 N at -62.5 mm



Applied Safety Technologies Corp.

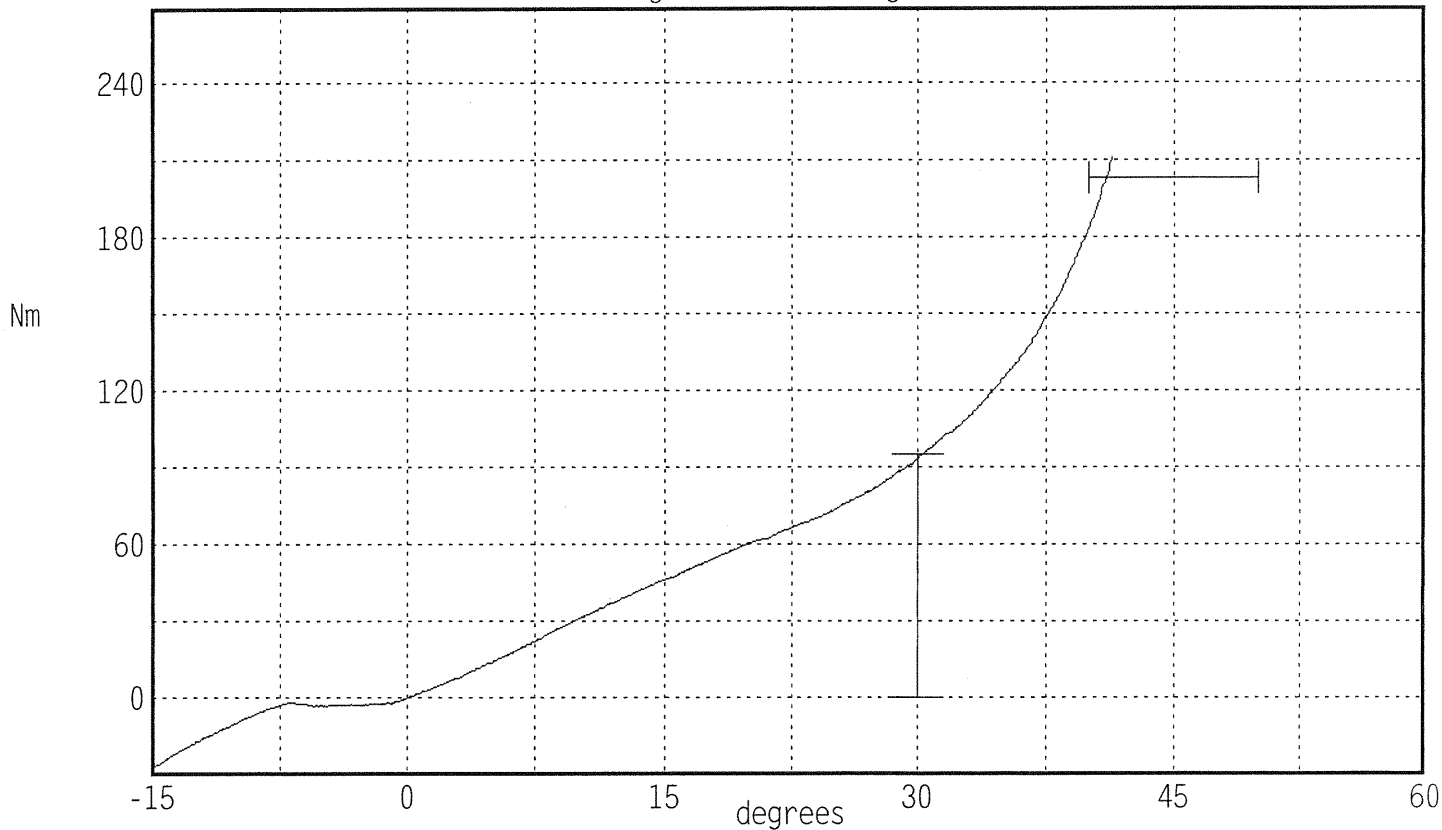
Hybrid III Hip Range of Motion

Serial Number: 885L
Test Number: 885C04
Comments:

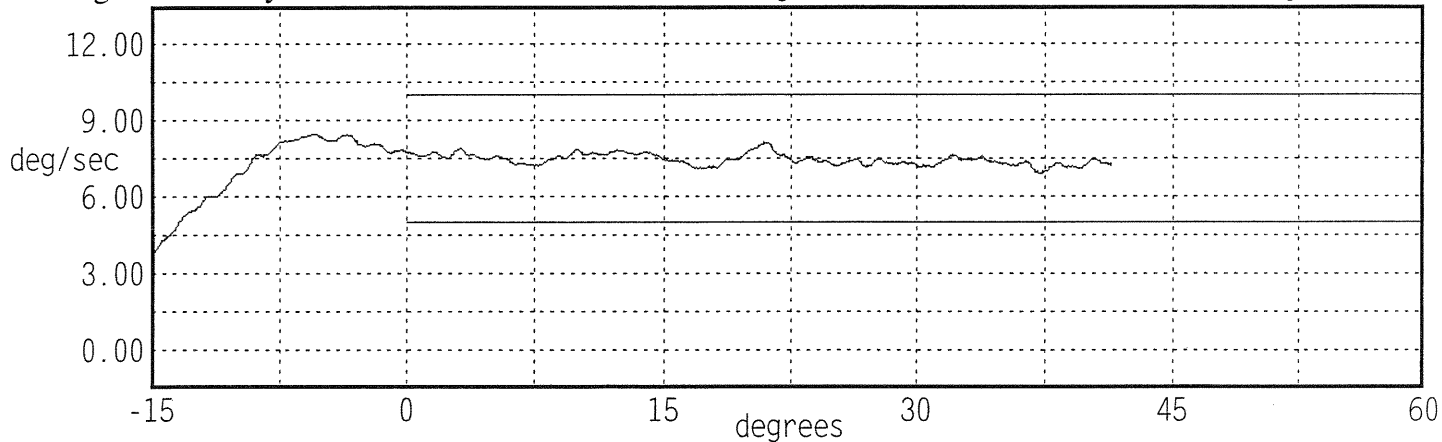
Date: 06/01/2007
Time: 07:23

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	21.1 °C	Pass
Humidity	10 - 70	63 %	Pass
Moment at 30 deg	<= 94.9	93.2 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	41.0 deg	Pass
Average Velocity	5.0 - 10.0	7.4 deg/sec	Pass

Moment About H-Point
Peak Moment: 211.1 Nm at 41.3 deg
Peak Angle: 41.3 deg at 209.8 Nm



Angular Velocity Max: 8.1 deg/sec Min: 6.9 deg/sec



Applied Safety Technologies Corp.

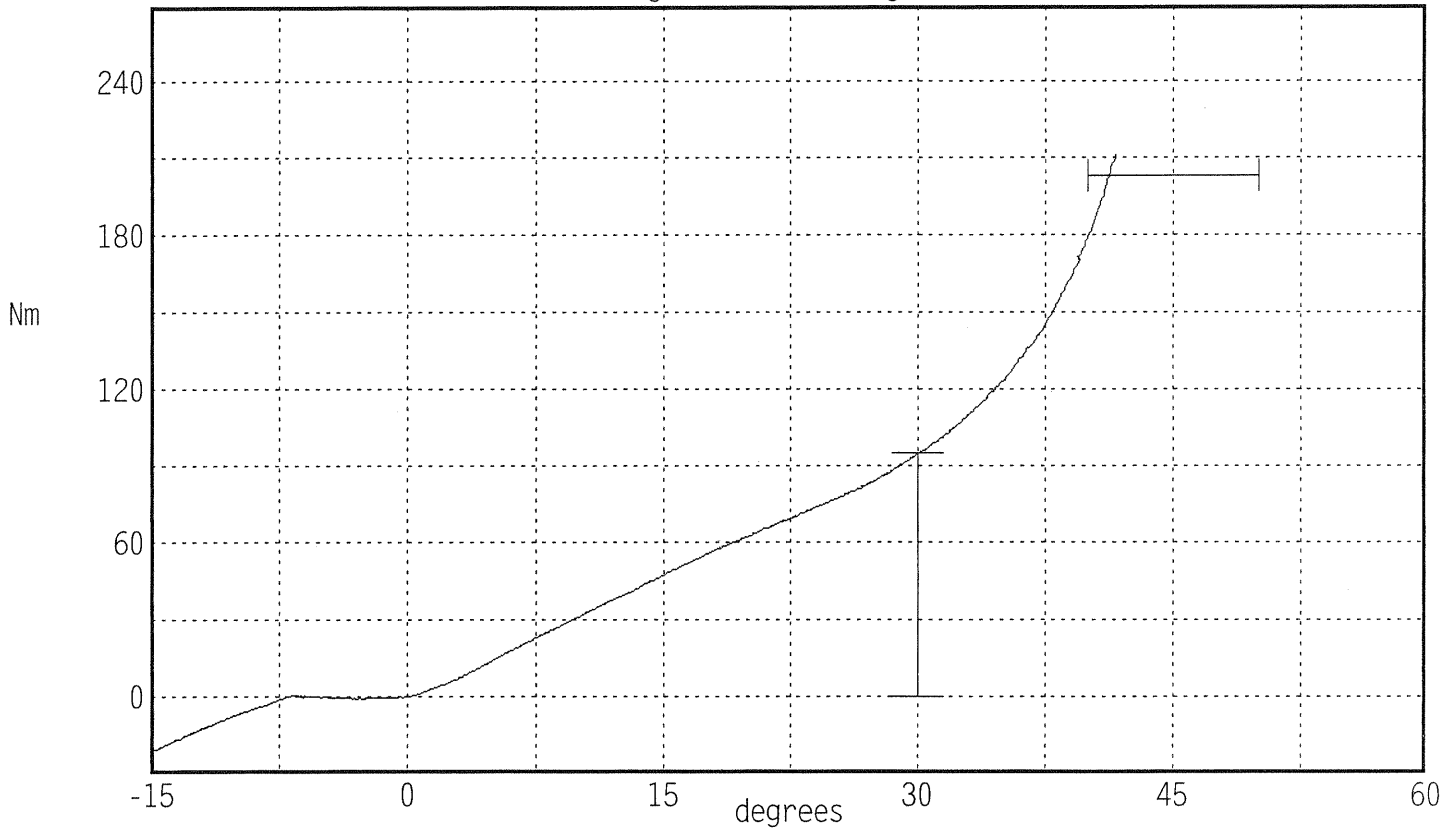
Hybrid III Hip Range of Motion

Serial Number: 885R
Test Number: 885C04
Comments:

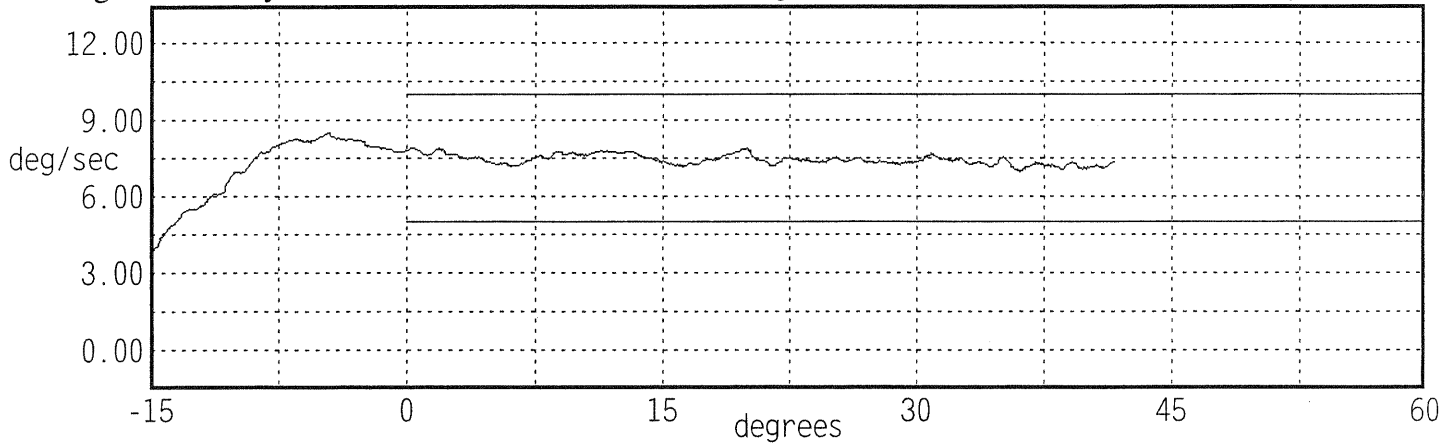
Date: 06/01/2007
Time: 08:05

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	20.9 °C	Pass
Humidity	10 - 70	58 %	Pass
Moment at 30 deg	<= 94.9	94.6 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	41.3 deg	Pass
Average Velocity	5.0 - 10.0	7.4 deg/sec	Pass

Moment About H-Point
Peak Moment: 211.1 Nm at 41.6 deg
Peak Angle: 41.6 deg at 209.7 Nm



Angular Velocity Max: 7.9 deg/sec Min: 7.0 deg/sec



Pre-Test Dummy Configuration and Performance Verification Data

Target Vehicle Passenger Dummy S/N: 324

Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 324 Calibration No. 06
With Thor FLX Legs

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	779	Yes
B	Shoulder Pivot Height	431.8 - 457.2	445	Yes
C	Hip Pivot Height	81.3 - 86.3	82	Yes
D	Hip Pivot from Backline	144.8 - 149.8	146	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	80	Yes
F	Thigh Clearance	119.4 - 134.6	130	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	255	Yes
H	Head Back to Backline	43.2 - 48.2	47	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	284	Yes
J	Elbow Rest Height	182.8 - 203.2	184	Yes
K	Buttock Knee Length	520.7 - 546.1	535	Yes
L	Popliteal Height	355.6 - 376.0	366	Yes
M	Knee Pivot Height	393.7 - 419.1	401	Yes
N	Buttock Popliteal Height	414.0 - 439.4	427	Yes
O	Chest Depth without Jacket	175.3 - 190.5	182	Yes
P	Foot Length	218.5 - 233.7	221	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	475	Yes
S	Head Breadth	137.1 - 147.3	142	Yes
T	Head Depth	177.8 - 188.0	181	Yes
U	Hip Breadth	299.7 - 314.9	305	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	88	Yes
X	Head Circumference	528.3 - 548.7	535	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	868	Yes
Z	Waist Circumference	759.5 - 789.9	780	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	355	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician

Approved

Charles W. Dell

Ron Stover



Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 324 Certification No. 6-1

Test Date: 5/30/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	54 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	264.2 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	7.4 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Rant Borucki

Approved

Ron Stone

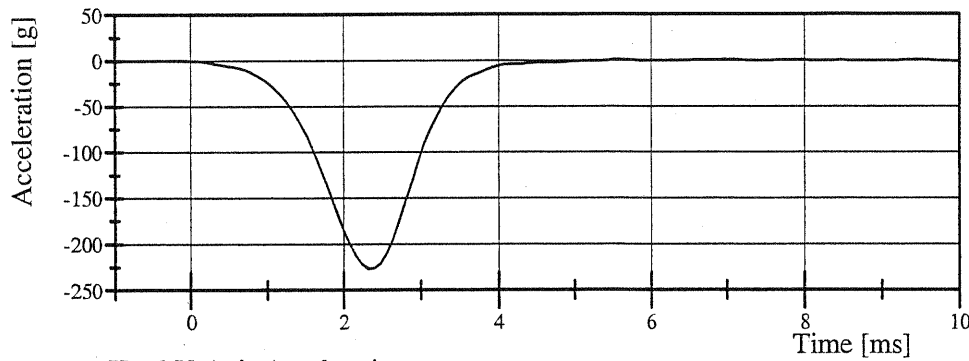
Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 324 Certification No. 6-1

Test Date: 5/30/2007

Head X-Axis Acceleration

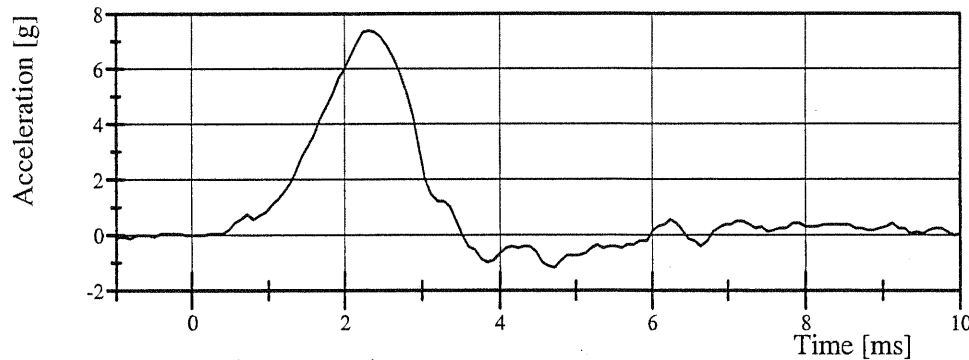


Filter Class: CFC_1000

Max: 1.0 g at 5.6 ms

Min: -226.5 g at 2.3 ms

Head Y-Axis Acceleration

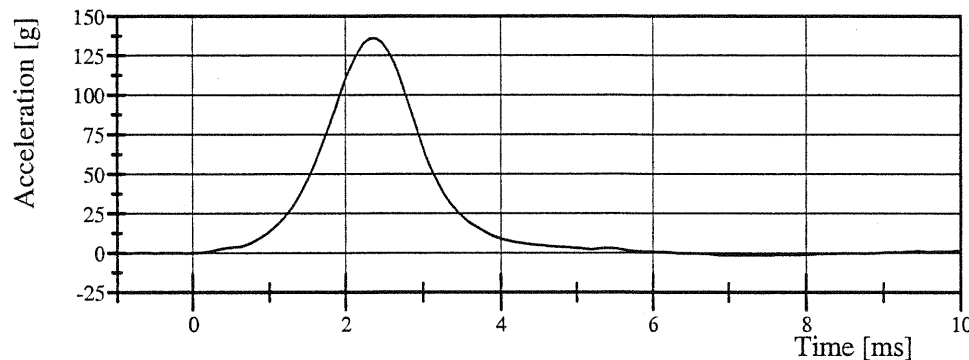


Filter Class: CFC_1000

Max: 7.4 g at 2.3 ms

Min: -1.2 g at 4.7 ms

Head Z-Axis Acceleration

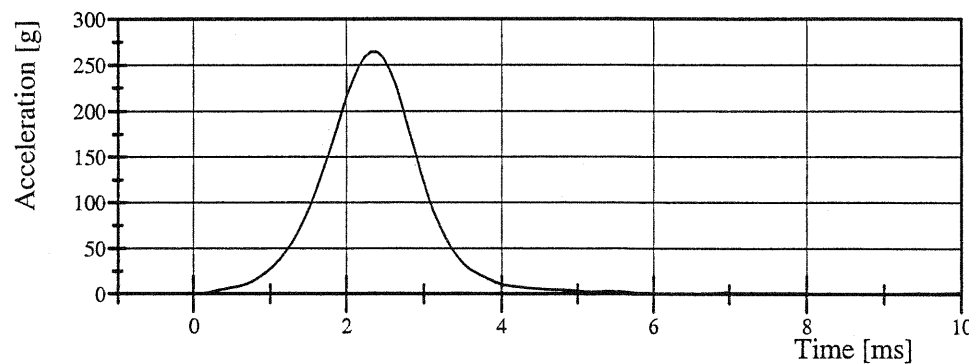


Filter Class: CFC_1000

Max: 136.1 g at 2.4 ms

Min: -1.4 g at 7.0 ms

Head Resultant Acceleration



Filter Class: CFC_1000

Max: 264.2 g at 2.4 ms

Min: 0.0 g at -0.6 ms

Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

Test Date: 6/1/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	56 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.032 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	(-2.1) - (-2.5) m/s	-2.41 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	(-4.0) - (-5.0) m/s	-4.86 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.97 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-82.1 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	70.1 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	87.0 ms	Yes

Test meets specifications.

Comments:

Technician

Paul Boreau

Approved

Ron Stoner

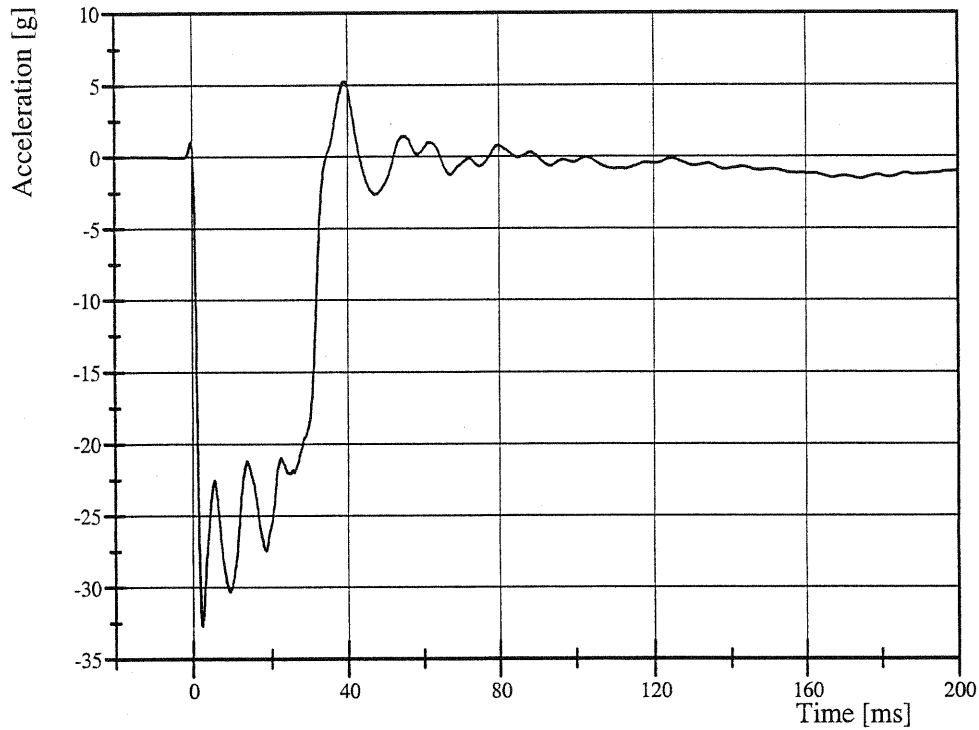
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

Test Date: 6/1/2007

Pendulum Acceleration

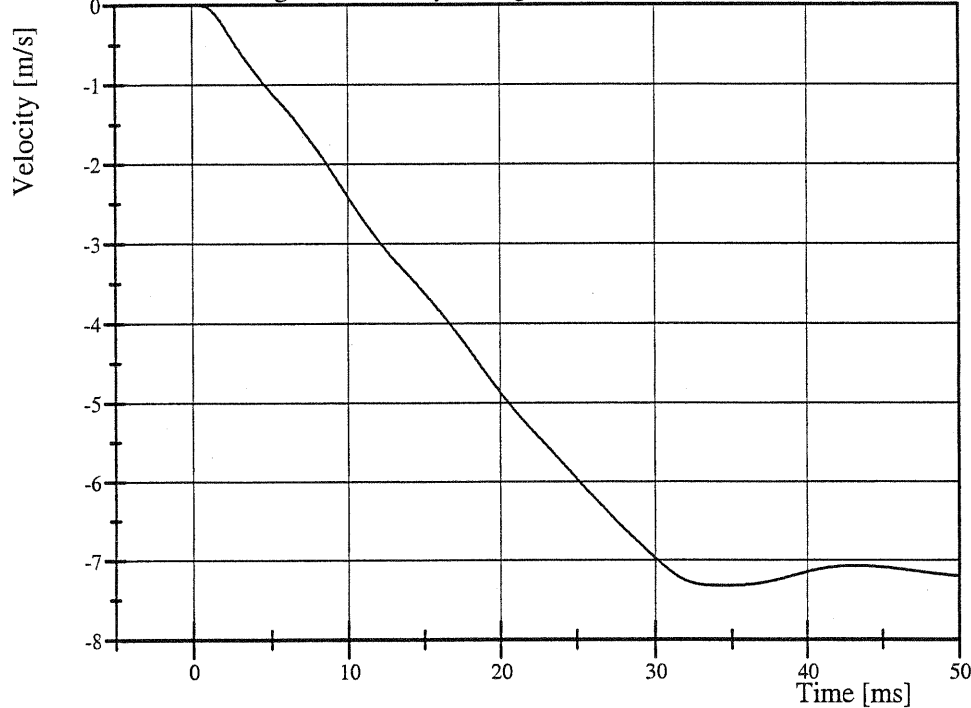


Filter Class: CFC_180

Max: 5.2 g at 39.1 ms

Min: -32.7 g at 2.3 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180

Max: 0.0 m/s at 0.2 ms

Min: -7.3 m/s at 34.3 ms

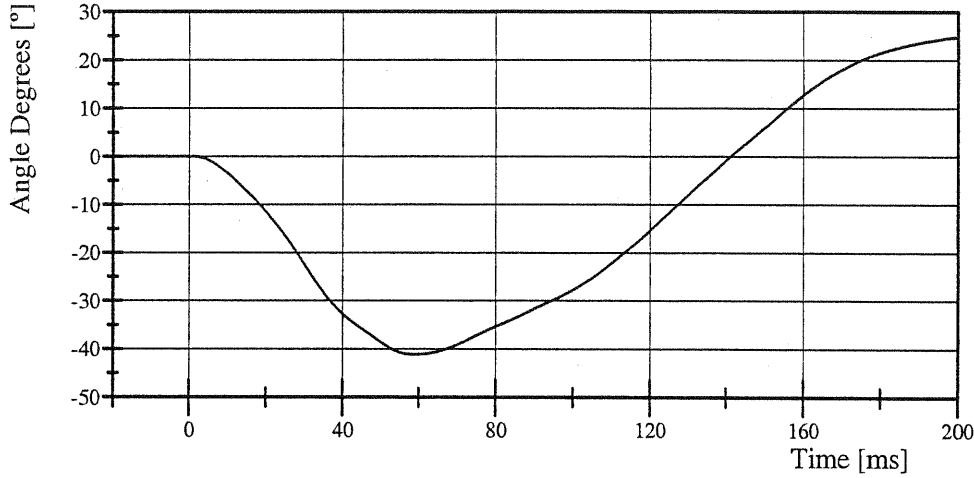
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

Test Date: 6/1/2007

Pot Rotation at the Base of Neck

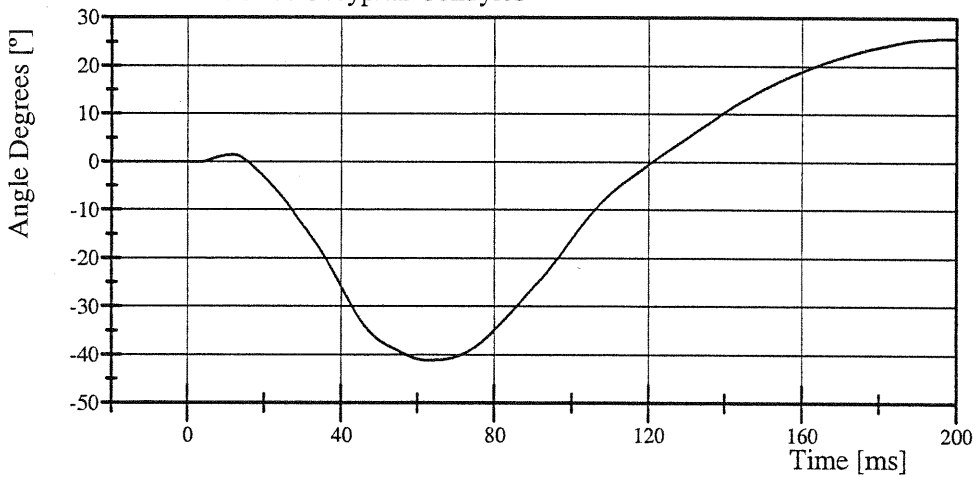


Filter Class: CFC_60

Max: 24.8 ° at 200.0 ms

Min: -41.1 ° at 59.2 ms

Head Rotation at Occipital Condyles

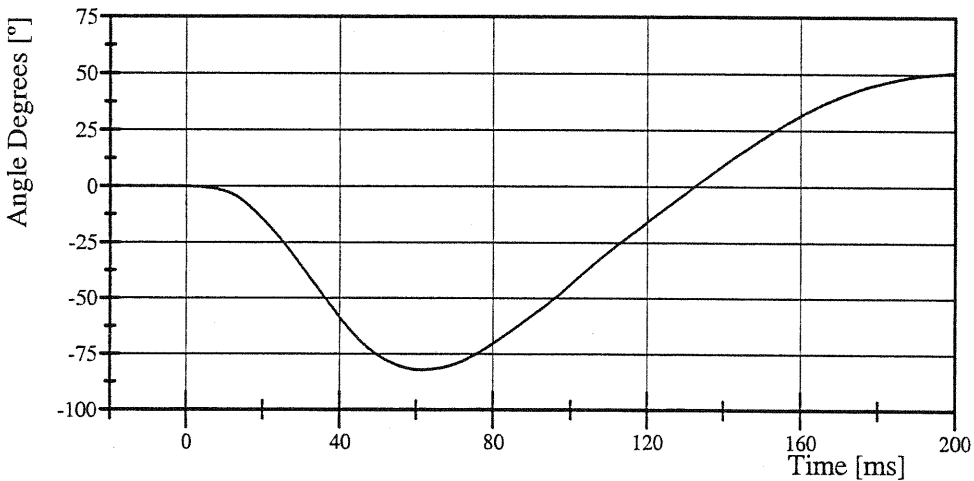


Filter Class: CFC_60

Max: 25.8 ° at 197.7 ms

Min: -41.1 ° at 63.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 50.6 ° at 200.0 ms

Min: -82.1 ° at 61.5 ms

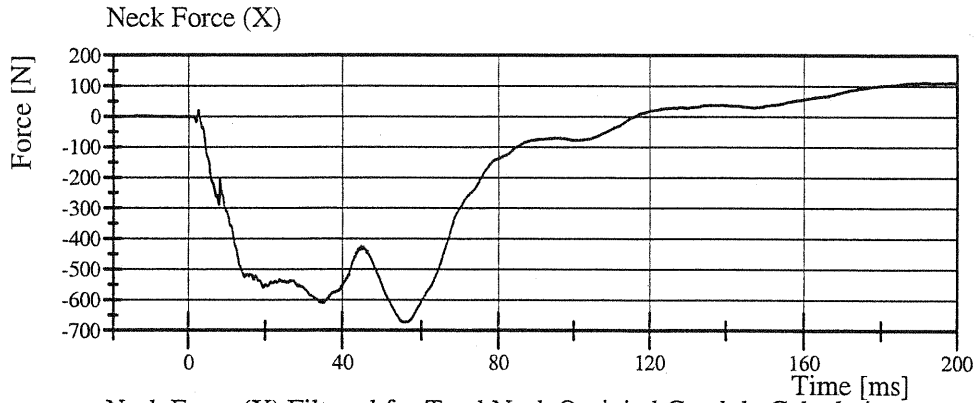


Transportation Research Center Inc.

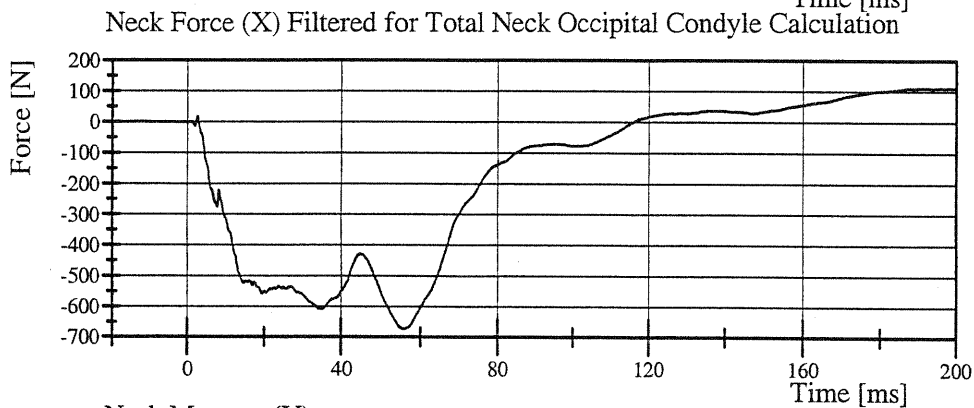
Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

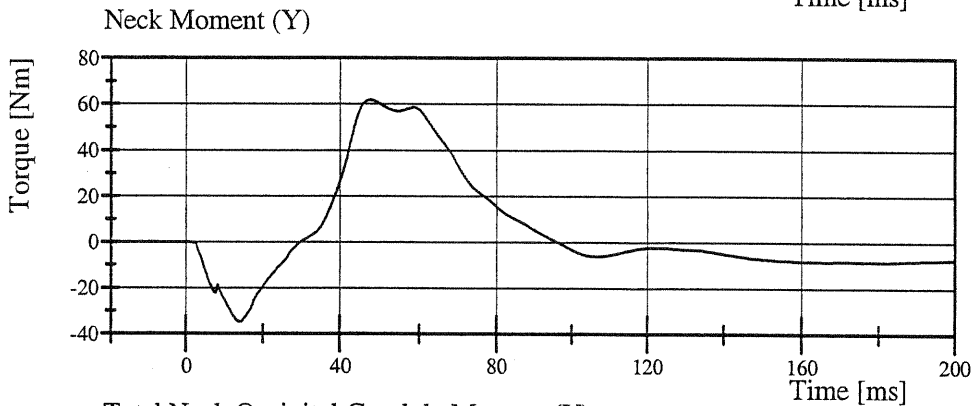
Test Date: 6/1/2007



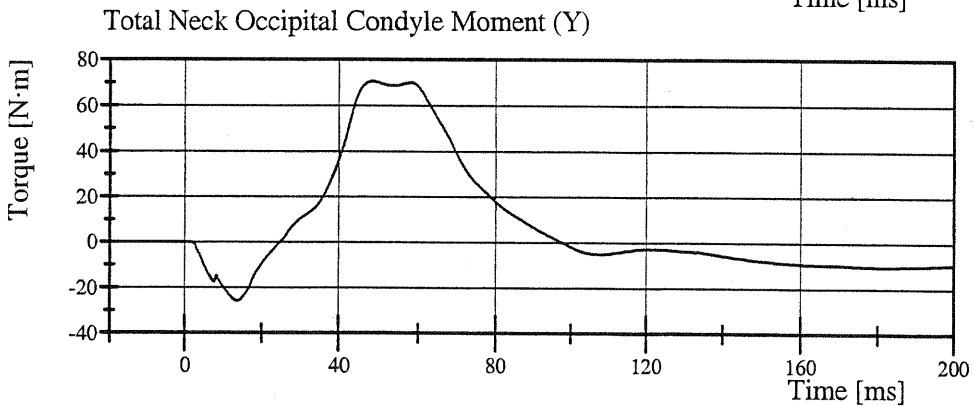
Filter Class: CFC_1000
Max: 112.0 N at 191.9 ms
Min: -673.7 N at 55.8 ms



Filter Class: CFC_600
Max: 111.7 N at 191.9 ms
Min: -673.5 N at 55.8 ms



Filter Class: CFC_600
Max: 61.9 Nm at 47.7 ms
Min: -34.8 Nm at 14.2 ms



Filter Class: CFC_600
Max: 70.6 N·m at 48.6 ms
Min: -25.9 N·m at 13.7 ms



Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

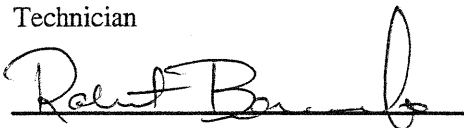
Test Date: 6/4/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	60 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-5.954 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.78 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.51 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	5.06 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	101.5 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-59.1 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	103.3 ms	Yes

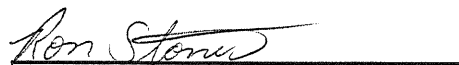
Test meets specifications.

Comments:

Technician



Approved

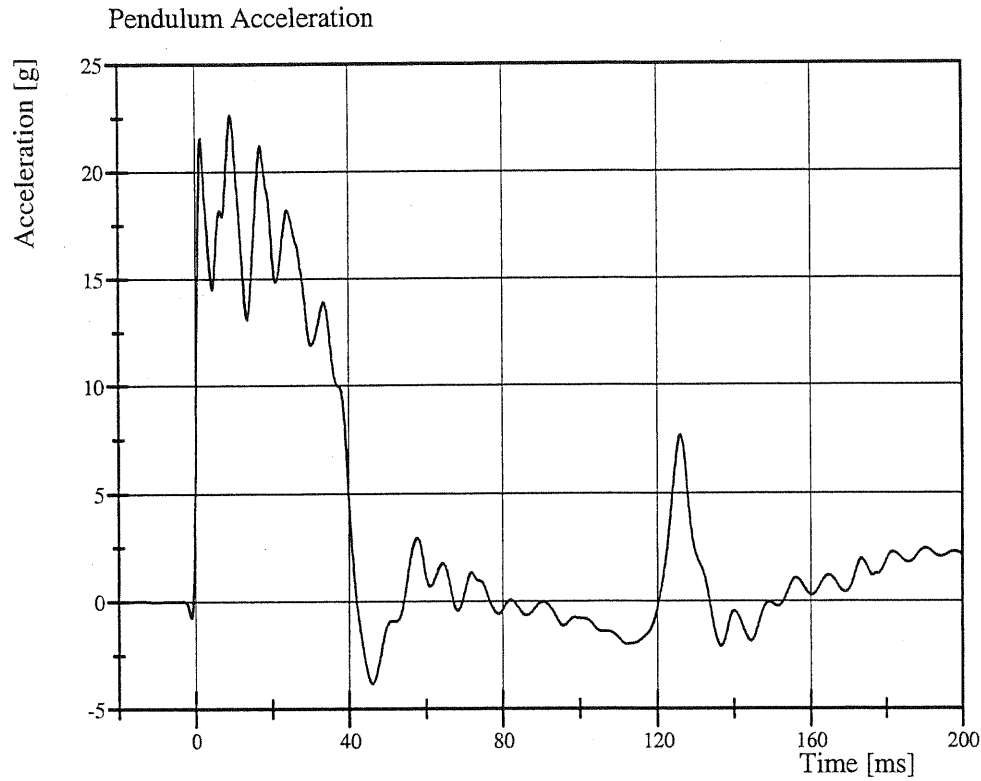


Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

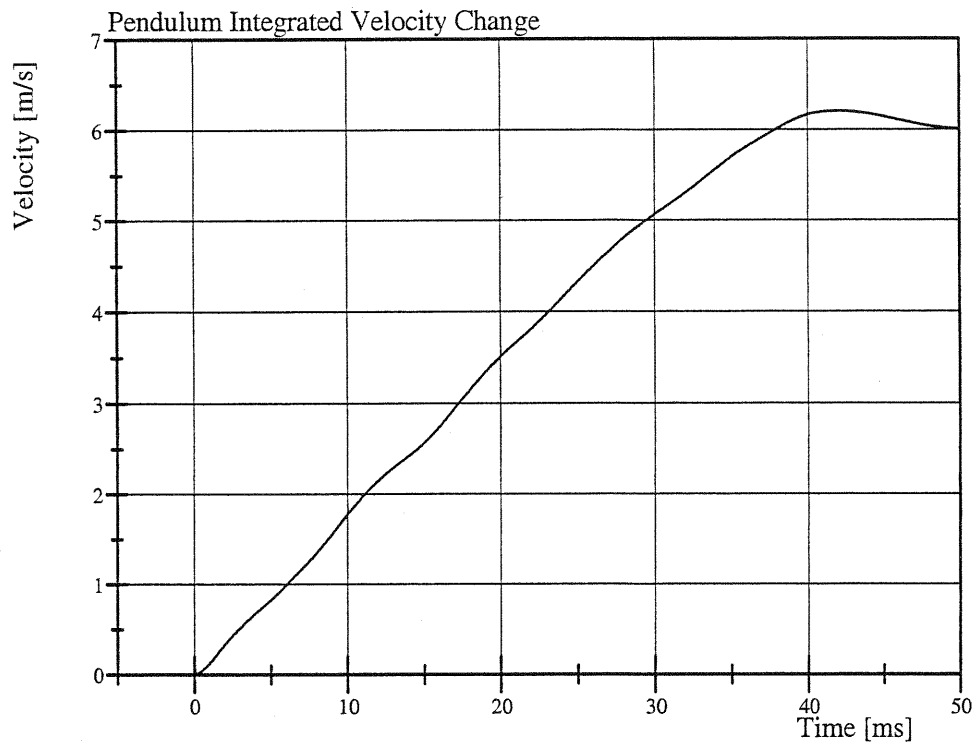
Test Date: 6/4/2007



Filter Class: CFC_180

Max: 22.6 g at 9.3 ms

Min: -3.8 g at 46.2 ms



Filter Class: CFC_180

Max: 6.2 m/s at 42.0 ms

Min: 0.0 m/s at 0.0 ms

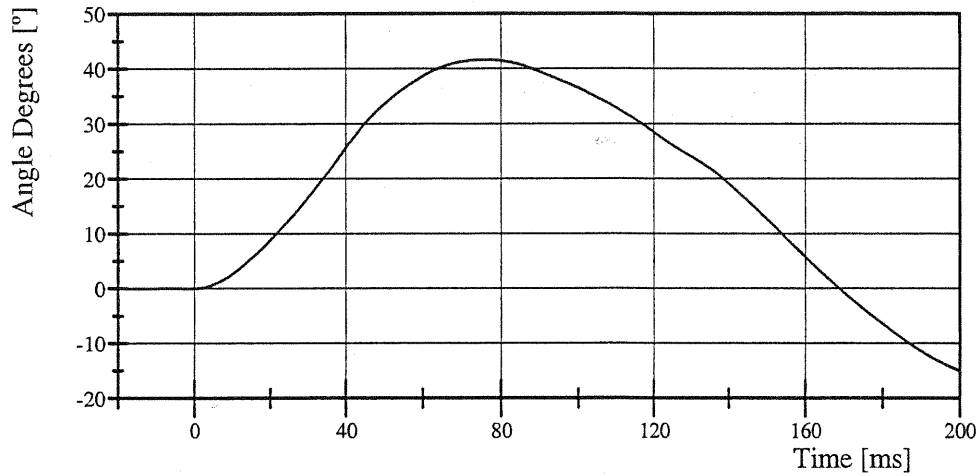
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

Test Date: 6/4/2007

Pot Rotation at the Base of Neck

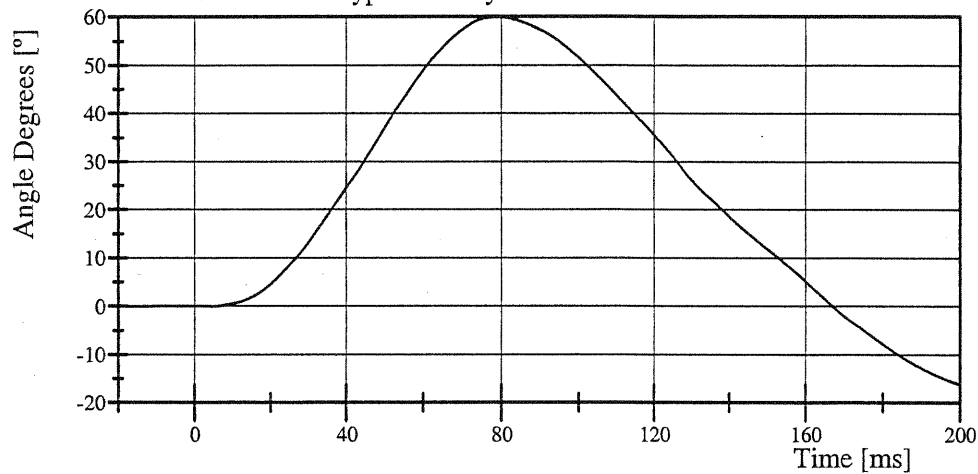


Filter Class: CFC_60

Max: 41.6 ° at 76.1 ms

Min: -15.0 ° at 200.0 ms

Head Rotation at Occypital Condyles

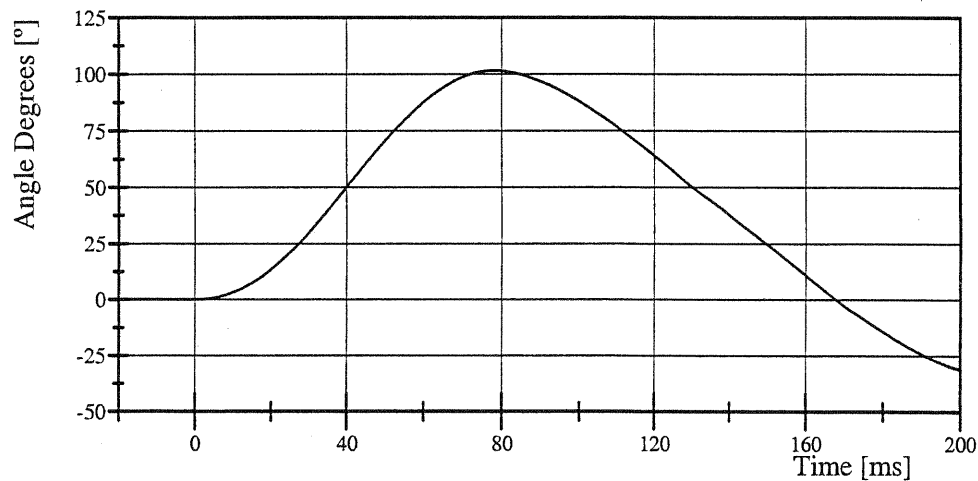


Filter Class: CFC_60

Max: 60.0 ° at 79.4 ms

Min: -16.2 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 101.5 ° at 78.4 ms

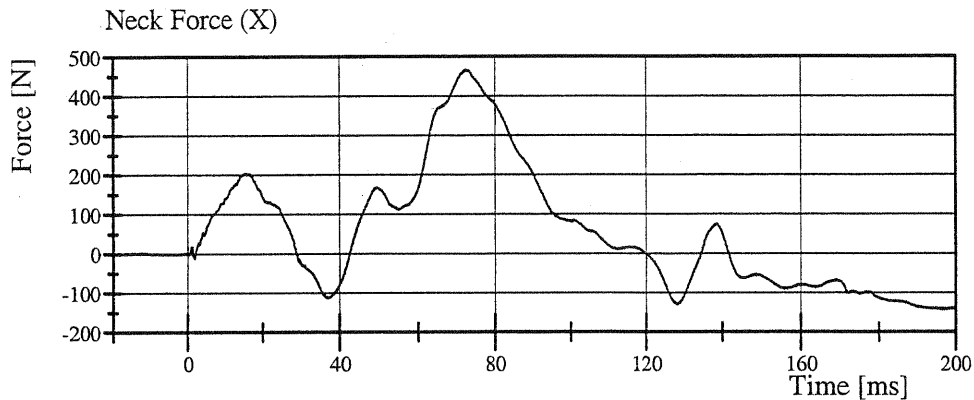
Min: -31.1 ° at 200.0 ms

Transportation Research Center Inc.

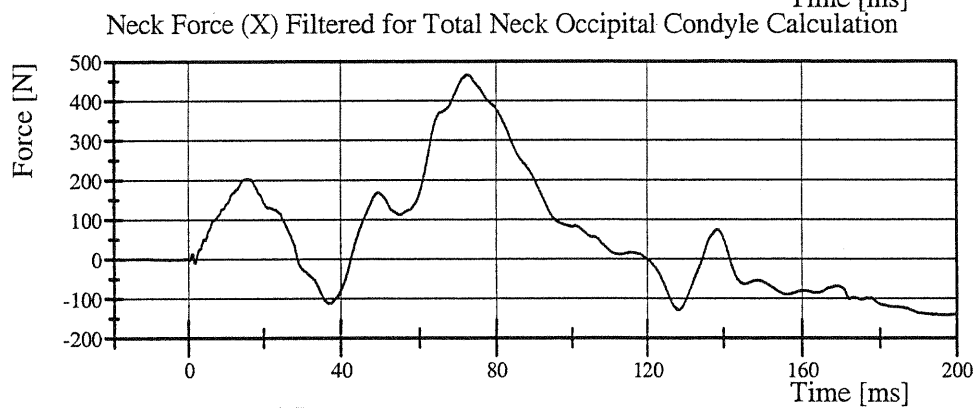
Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

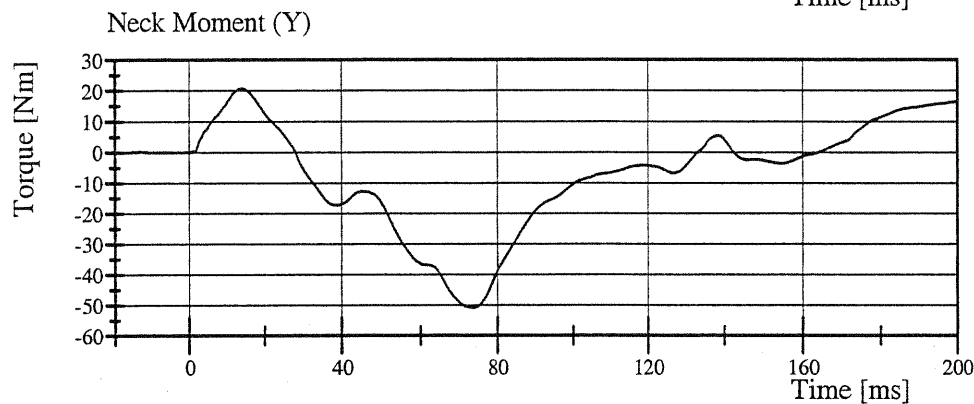
Test Date: 6/4/2007



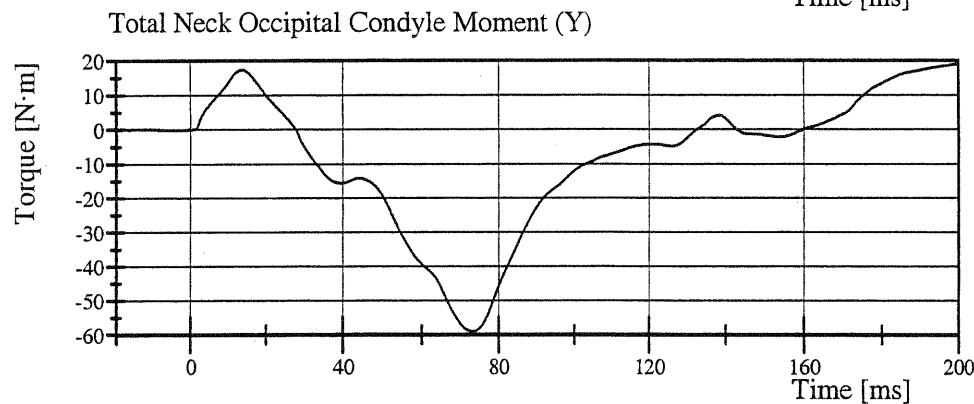
Filter Class: CFC_1000
Max: 466.4 N at 72.4 ms
Min: -142.3 N at 197.0 ms



Filter Class: CFC_600
Max: 466.3 N at 72.5 ms
Min: -141.6 N at 197.7 ms



Filter Class: CFC_600
Max: 20.8 Nm at 14.2 ms
Min: -50.9 Nm at 73.8 ms



Filter Class: CFC_600
Max: 19.0 N·m at 200.0 ms
Min: -59.1 N·m at 73.1 ms

Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 324 Certification No. 6-4

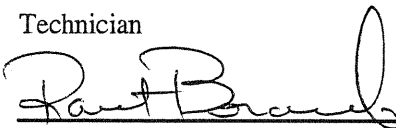
Test Date: 6/4/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.610 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,061.5 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	>= (-4,600) N	-3,959.7 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-55.0 mm	Yes
Internal Hysteresis	69 - 85 %	74.1 %	Yes

Test meets specifications.

Comments:

Technician



Approved



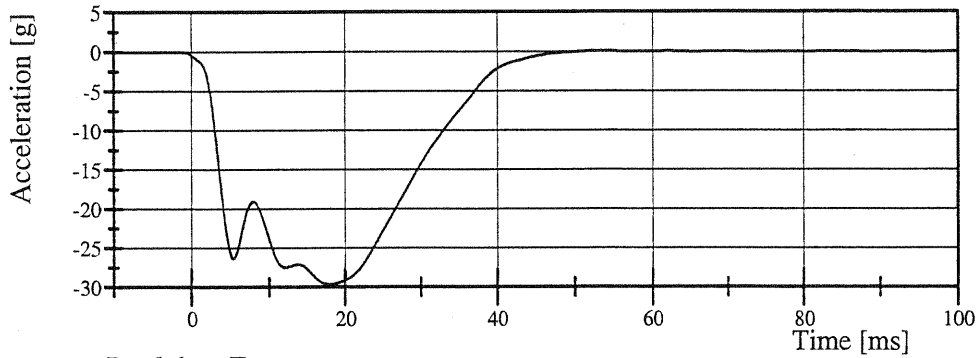
Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 324 Certification No. 6-4

Test Date: 6/4/2007

Pendulum Acceleration

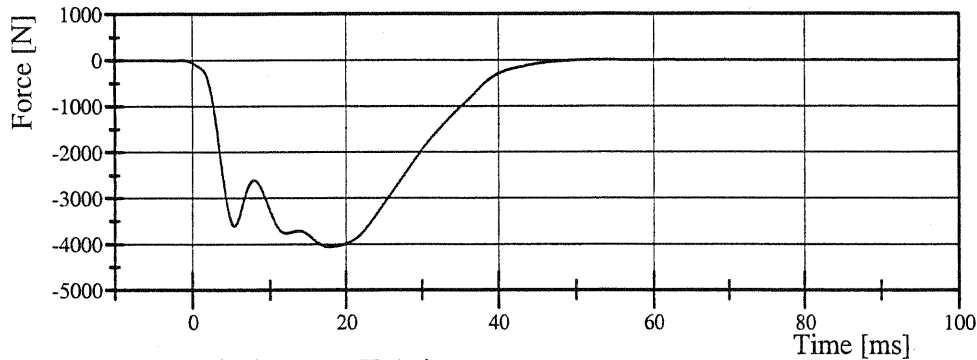


Filter Class: CFC_180

Max: 0.1 g at 54.3 ms

Min: -29.6 g at 18.0 ms

Pendulum Force

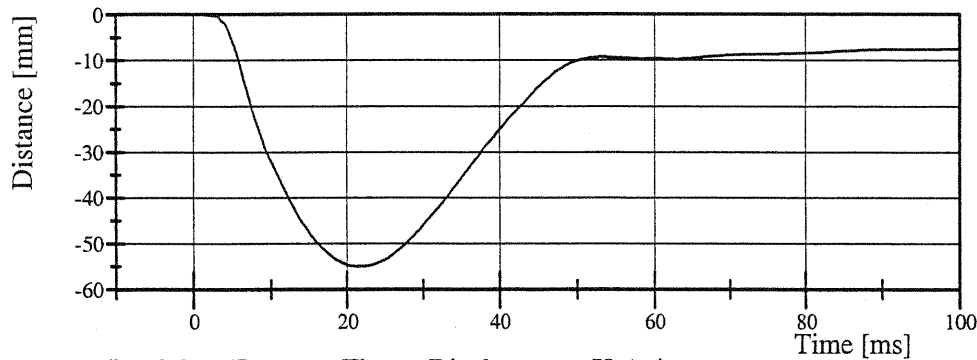


Filter Class: CFC_180

Max: 11.7 N at 54.3 ms

Min: -4,061.5 N at 18.0 ms

Thorax Displacement X-Axis

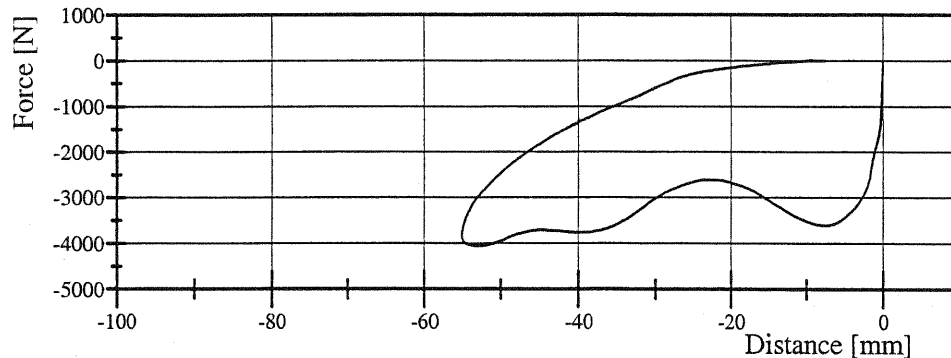


Filter Class: CFC_600

Max: 0.0 mm at 9.0 ms

Min: -55.0 mm at 21.6 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180

Max: 11.7 N at -9.3 mm

Min: -4,061.5 N at -52.9 mm

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 04-Jun-07

TRC, INC. TEST NO: TOFL-01 572 O SN324 TORSO FLEX CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TIME	NA	1530
TEMPERATURE	18.9 – 25.6° C	21.1° C
RELATIVE HUMIDITY	10 – 70 %	62 %
INITIAL ANGLE OF UNSUPPORTED DUMMY	<= 20° REFERENCED TO VERTICAL	17.1°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	362.2 N
RETURN ANGLE – (DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE)	+/- 8 ° OF INTIAL ANGLE	4.6°
RATE	0.5° - 1.5 °/sec	0.96°/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN Charles W. Bell

Pre-Test Dummy Configuration and Performance Verification Data

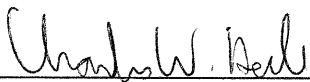
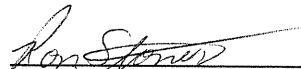
Bullet Vehicle Driver Dummy S/N: 001

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 001 Calibration No. 01

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	882	Yes
B	Shoulder Pivot Height	505.5 - 520.7	510	Yes
C	H-Point Height	83.8 - 88.9	88	Yes
D	H-Point From Seatback	134.6 - 139.7	138	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	92	Yes
F	Thigh Clearance	139.7 - 154.9	153	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	295	Yes
H	Skull Cap To Backline	40.6 - 45.7	45	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	332	Yes
J	Elbow Rest Height	190.5 - 210.8	198	Yes
K	Buttock Knee Length	579.1 - 604.5	595	Yes
L	Popliteal Height	429.3 - 454.7	435	Yes
M	Knee Pivot Height	485.1 - 500.4	496	Yes
N	Buttock Popliteal Length	452.1 - 477.5	475	Yes
O	Chest Depth	213.4 - 228.6	219	Yes
P	Foot Length	251.5 - 266.7	260	Yes
V	Shoulder Breadth	421.6 - 436.9	430	Yes
W	Foot Breadth	91.4 - 106.7	99	Yes
Y	Chest Circumference	970.3 - 1000.8	985	Yes
Z	Waist Circumference	835.7 - 866.1	858	Yes
AA	Location For Chest Circumference	429.3 - 434.3	430	Yes
BB	Location For Waist Circumference	226.1 - 231.1	230	Yes

Technician

Approved

Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 001 Certification No. 1-1

Test Date: 5/31/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	59 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	253.6 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-4.8 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Charles W. Bell

Approved

Ron Stoner

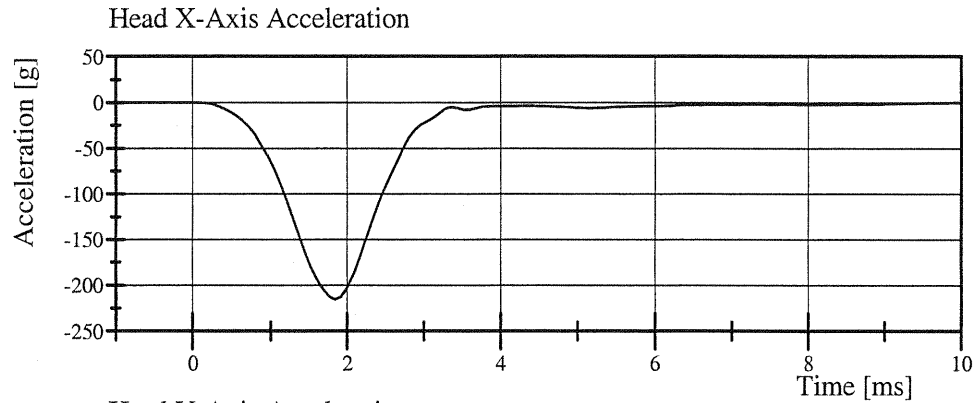


Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 001 Certification No. 1-1

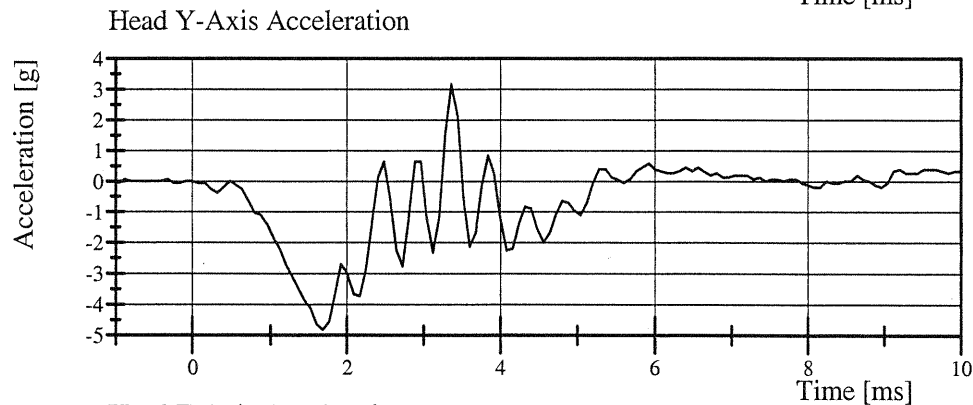
Test Date: 5/31/2007



Filter Class: CFC_1000

Max: 0.1 g at -1.0 ms

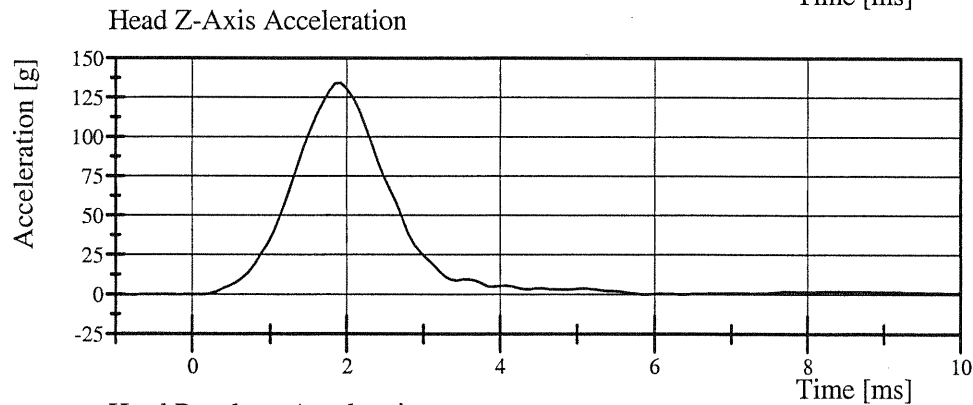
Min: -215.4 g at 1.8 ms



Filter Class: CFC_1000

Max: 3.2 g at 3.4 ms

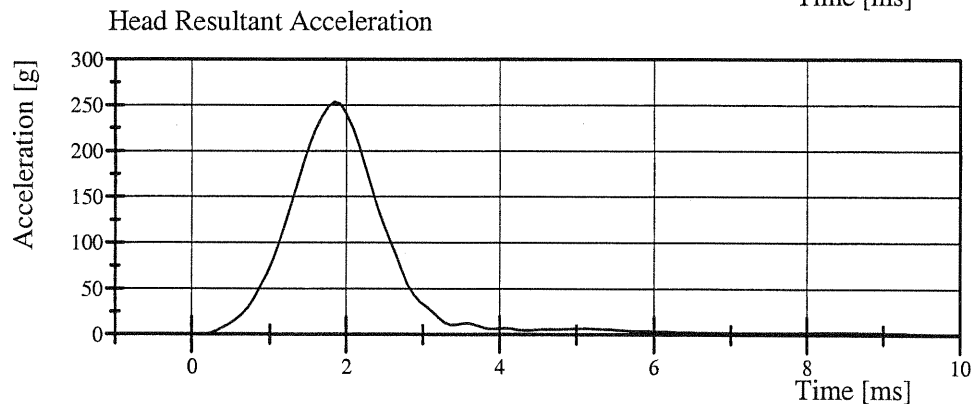
Min: -4.8 g at 1.7 ms



Filter Class: CFC_1000

Max: 134.4 g at 1.9 ms

Min: -0.2 g at -1.0 ms



Filter Class: CFC_1000

Max: 253.6 g at 1.8 ms

Min: 0.0 g at -0.7 ms

Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 001 Certification No. 1-1

Test Date: 5/31/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.947 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	35.2 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-25.63 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-22.44 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-16.65 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-16.65 g	Yes
Total Head D-Plane Rotation Peak	(-64) - (-78) °	-70.1 °	Yes
Time of Peak	57 - 64 ms	58.8 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	114.2 ms	Yes
Total Neck Occipital Condyles Moment Peak	88 - 108 N·m	99.6 N·m	Yes
Time of Peak	47 - 58 ms	48.2 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	99.3 ms	Yes


Test meets specifications.

Comments:

Technician



Approved

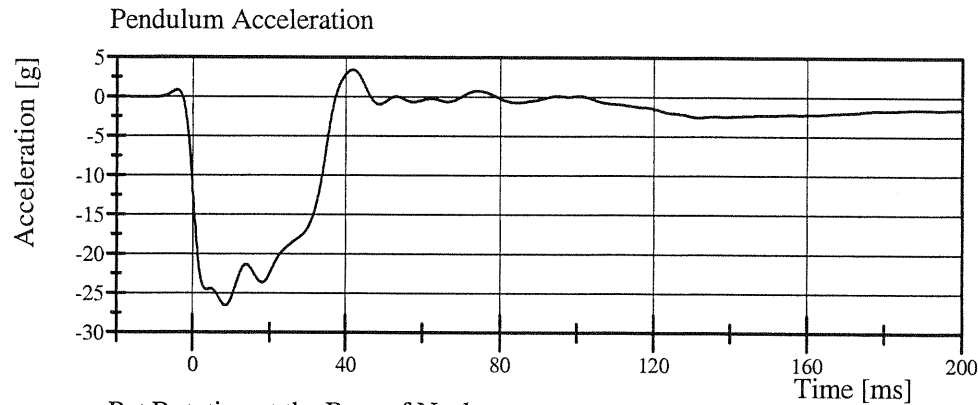


Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 001 Certification No. 1-1

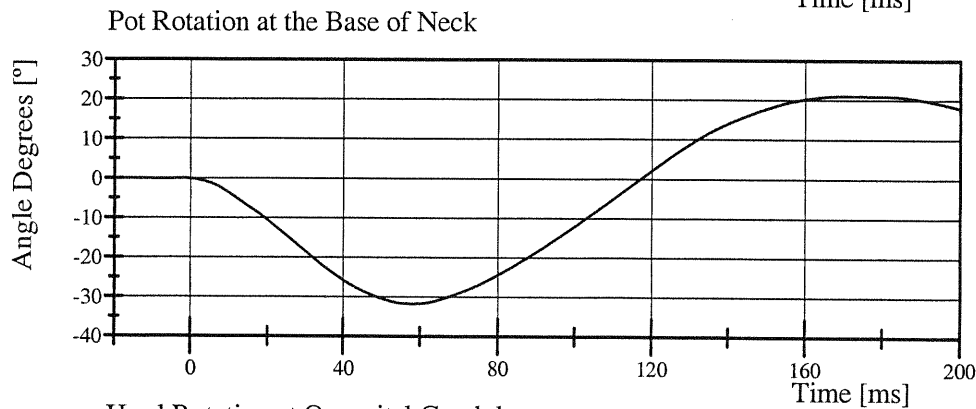
Test Date: 5/31/2007



Filter Class: CFC_60

Max: 3.4 g at 41.8 ms

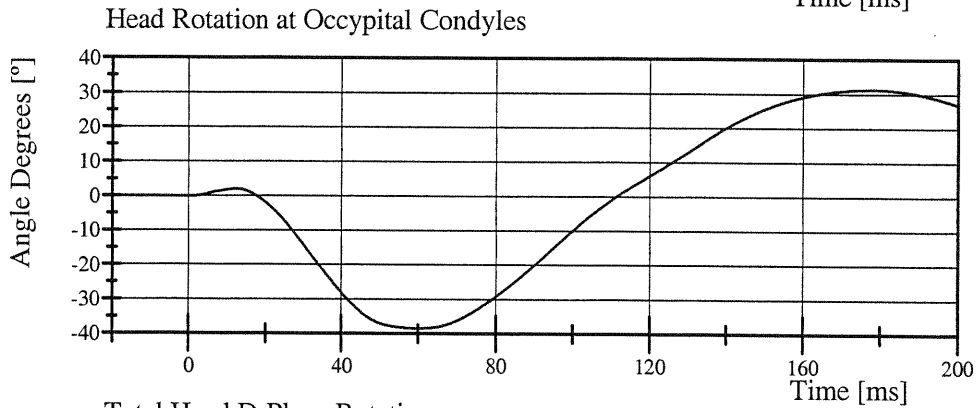
Min: -26.5 g at 8.6 ms



Filter Class: CFC_60

Max: 21.2 ° at 171.8 ms

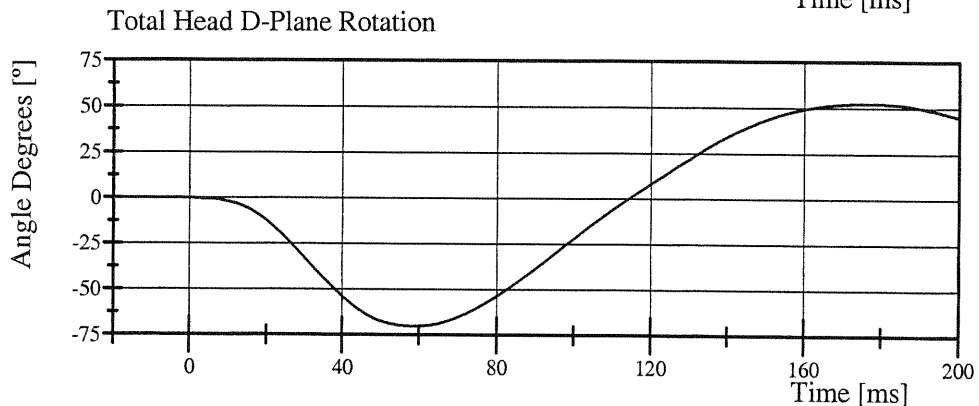
Min: -31.7 ° at 58.2 ms



Filter Class: CFC_60

Max: 31.3 ° at 177.6 ms

Min: -38.4 ° at 60.1 ms



Filter Class: CFC_60

Max: 52.4 ° at 175.8 ms

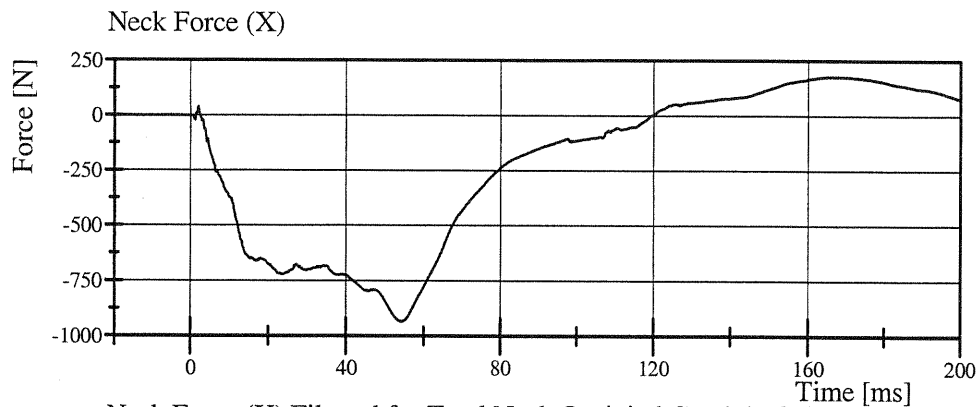
Min: -70.1 ° at 58.8 ms

Transportation Research Center Inc.

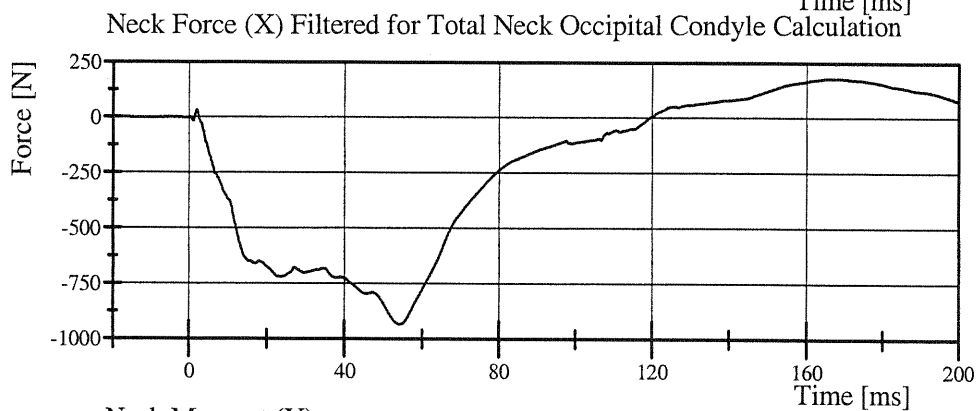
Neck Flexion

HIII 50th Serial No. 001 Certification No. 1-1

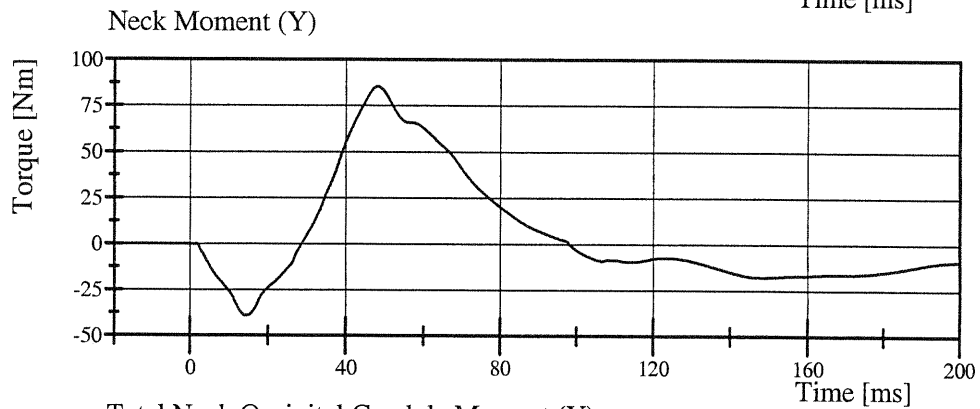
Test Date: 5/31/2007



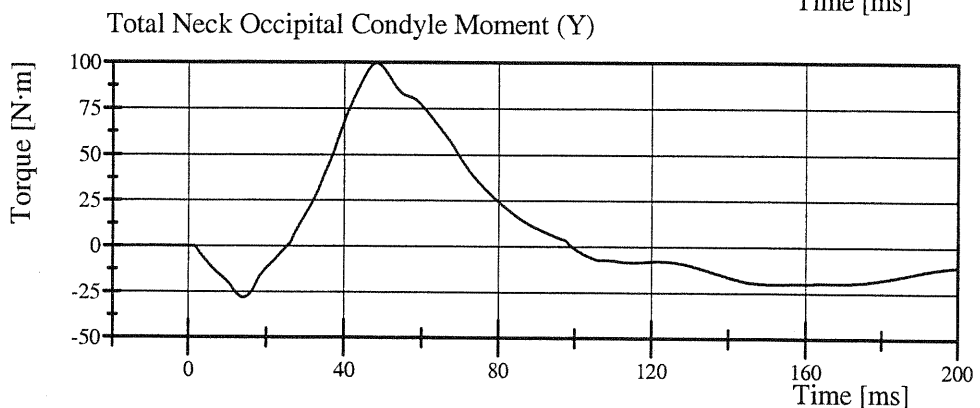
Filter Class: CFC_1000
Max: 180.4 N at 166.2 ms
Min: -933.9 N at 54.2 ms



Filter Class: CFC_600
Max: 180.3 N at 166.2 ms
Min: -933.8 N at 54.2 ms



Filter Class: CFC_600
Max: 85.5 Nm at 48.2 ms
Min: -39.3 Nm at 14.2 ms



Filter Class: CFC_600
Max: 99.6 N·m at 48.2 ms
Min: -28.1 N·m at 14.2 ms

Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 001 Certification No. 1-2

Test Date: 5/31/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.985 m/s	Yes
Pendulum Acceleration Decay Crossing 5g	38 - 46 ms	41.2 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	18.84 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	16.54 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	12.98 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	12.98 g	Yes
Total Head D-Plane Rotation Peak	81 - 106 °	94.2 °	Yes
Time of Peak	72 - 82 ms	76.4 ms	Yes
Total Head D-Plane Rotation Decay to 0°	147 - 174 ms	156.3 ms	Yes
Total Neck Occipital Condyles Moment Peak	(-53) - (-80) N·m	-68.8 N·m	Yes
Time of Peak	65 - 79 ms	72.4 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	120 - 148 ms	144.6 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



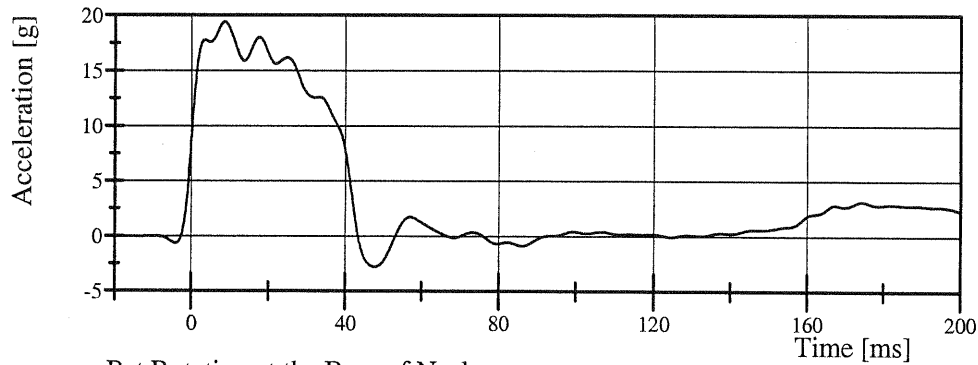
Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 001 Certification No. 1-2

Test Date: 5/31/2007

Pendulum Acceleration

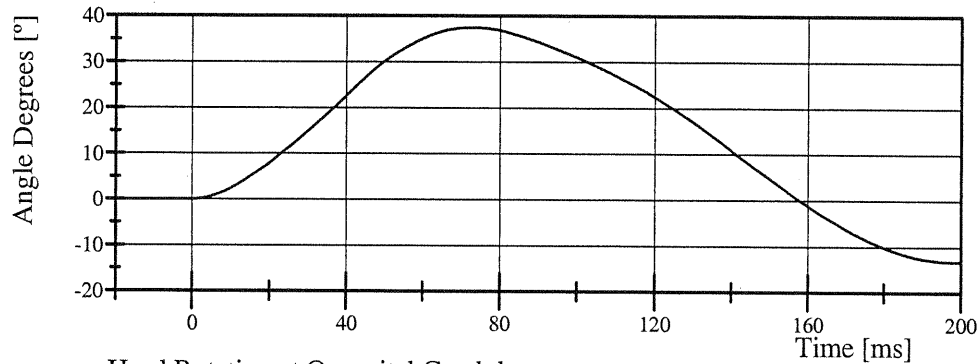


Filter Class: CFC_60

Max: 19.4 g at 8.6 ms

Min: -2.8 g at 47.8 ms

Pot Rotation at the Base of Neck

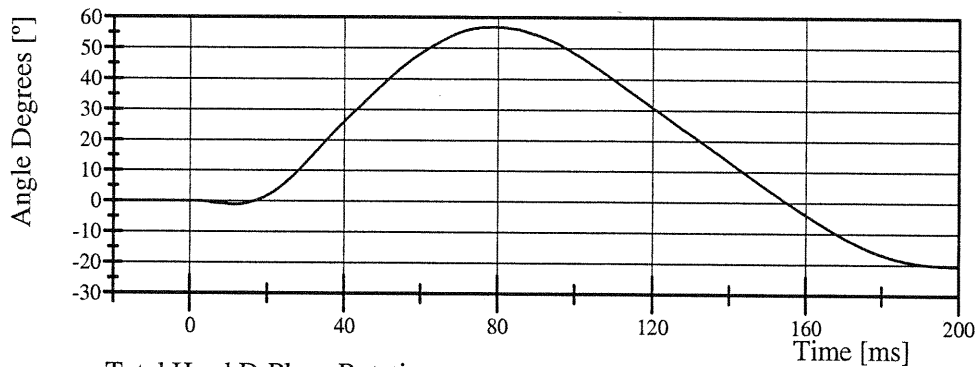


Filter Class: CFC_60

Max: 37.5 ° at 73.0 ms

Min: -13.3 ° at 199.3 ms

Head Rotation at Occipital Condyles

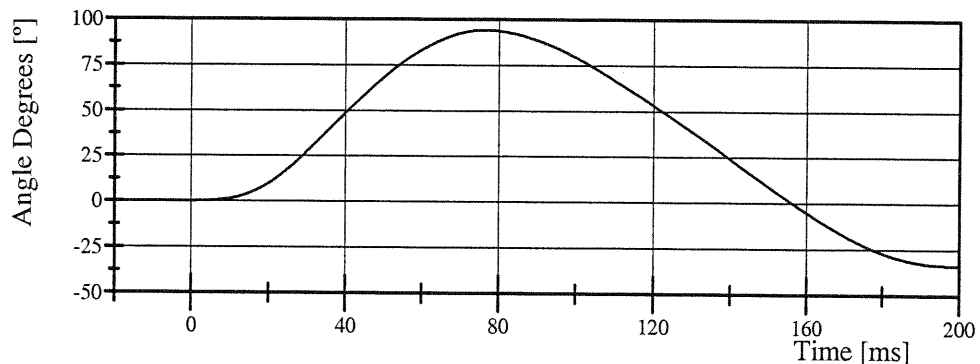


Filter Class: CFC_60

Max: 56.9 ° at 79.0 ms

Min: -20.4 ° at 199.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 94.2 ° at 76.4 ms

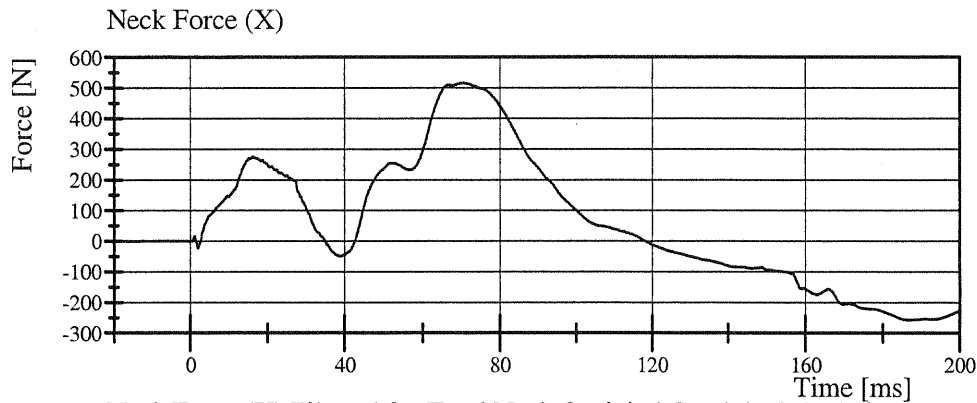
Min: -33.6 ° at 199.1 ms

Transportation Research Center Inc.

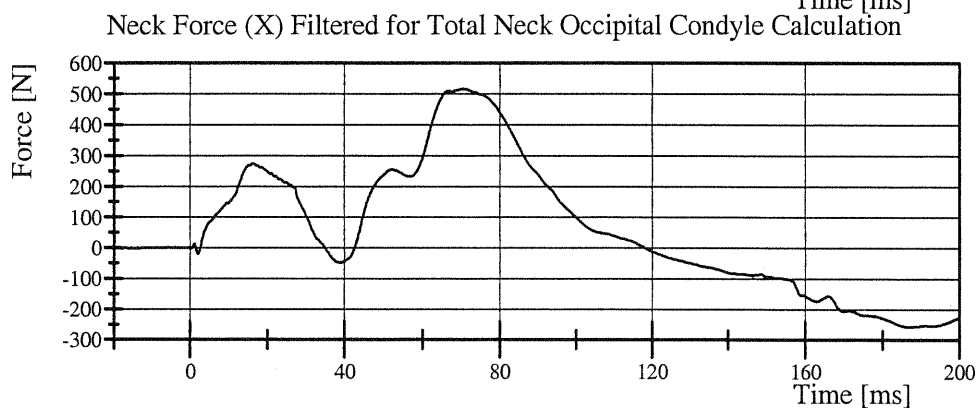
Neck Extension

HIII 50th Serial No. 001 Certification No. 1-2

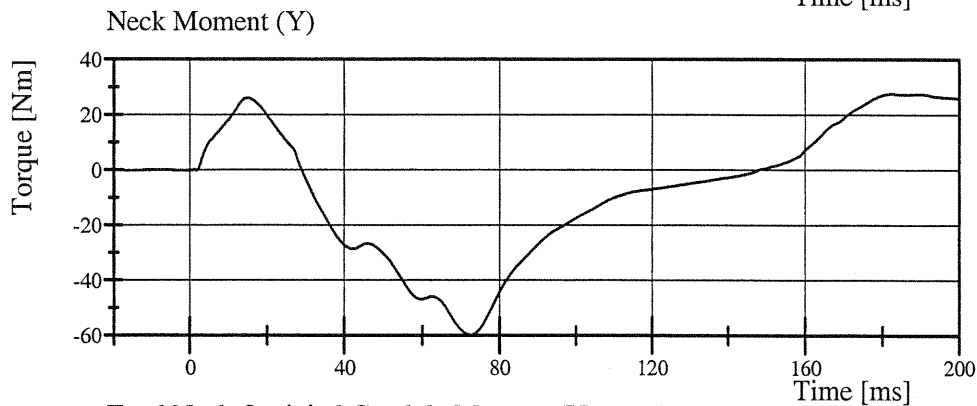
Test Date: 5/31/2007



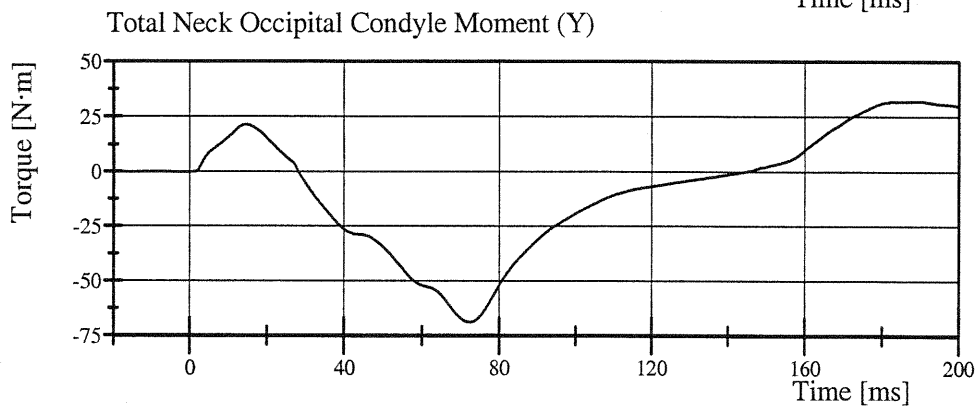
Filter Class: CFC_1000
Max: 516.7 N at 70.5 ms
Min: -257.4 N at 187.2 ms



Filter Class: CFC_600
Max: 516.5 N at 70.6 ms
Min: -257.0 N at 187.1 ms



Filter Class: CFC_600
Max: 27.6 Nm at 182.5 ms
Min: -59.8 Nm at 72.8 ms



Filter Class: CFC_600
Max: 32.0 N·m at 189.1 ms
Min: -68.8 N·m at 72.4 ms

Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 001 Certification No. 1-3

Test Date: 6/4/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	59 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.694 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,672.3 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-64.16 mm	Yes
Internal Hysteresis	65 - 85 %	74.8 %	Yes

Test meets specifications.

Comments:

Technician



Approved



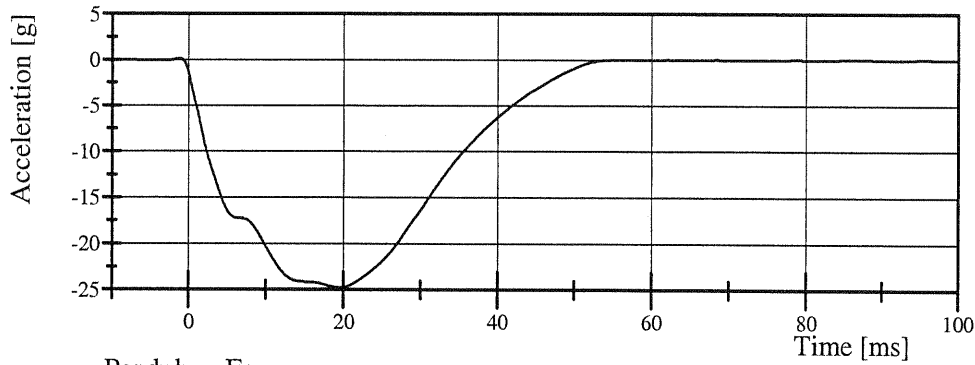
Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 001 Certification No. 1-3

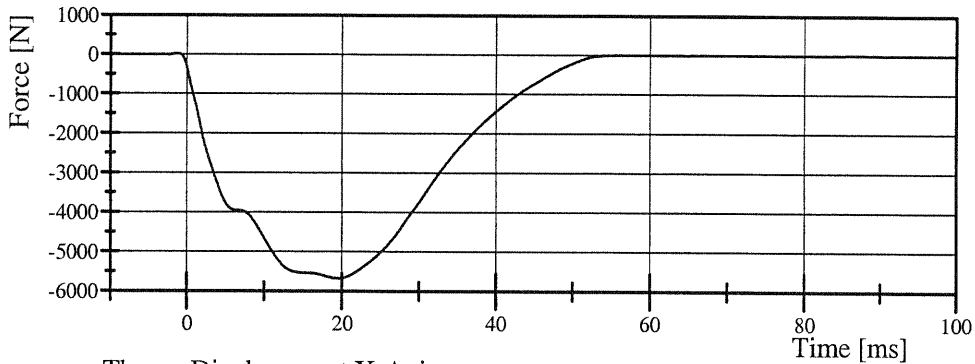
Test Date: 6/4/2007

Pendulum Acceleration



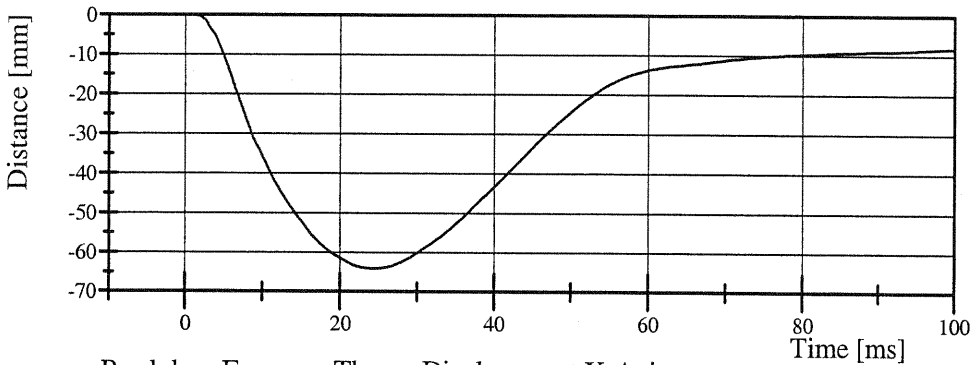
Filter Class: CFC_180
Max: 0.1 g at -1.2 ms
Min: -24.8 g at 19.6 ms

Pendulum Force



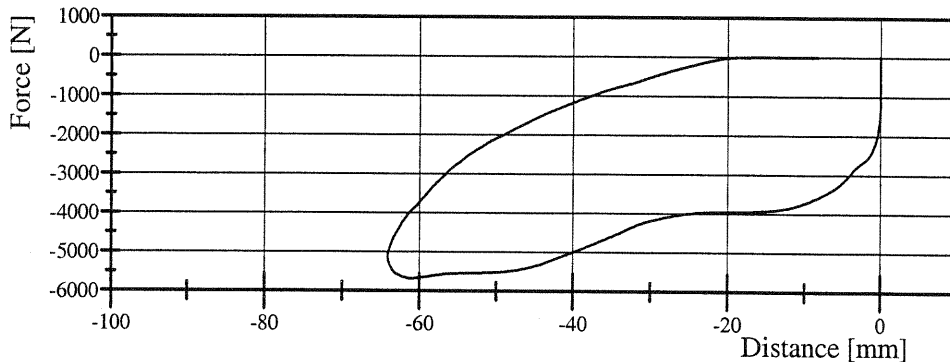
Filter Class: CFC_180
Max: 28.4 N at -1.2 ms
Min: -5,672.3 N at 19.6 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -9.0 ms
Min: -64.2 mm at 24.4 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 28.4 N at -0.0 mm
Min: -5,672.3 N at -61.0 mm

Applied Safety Technologies Corp.

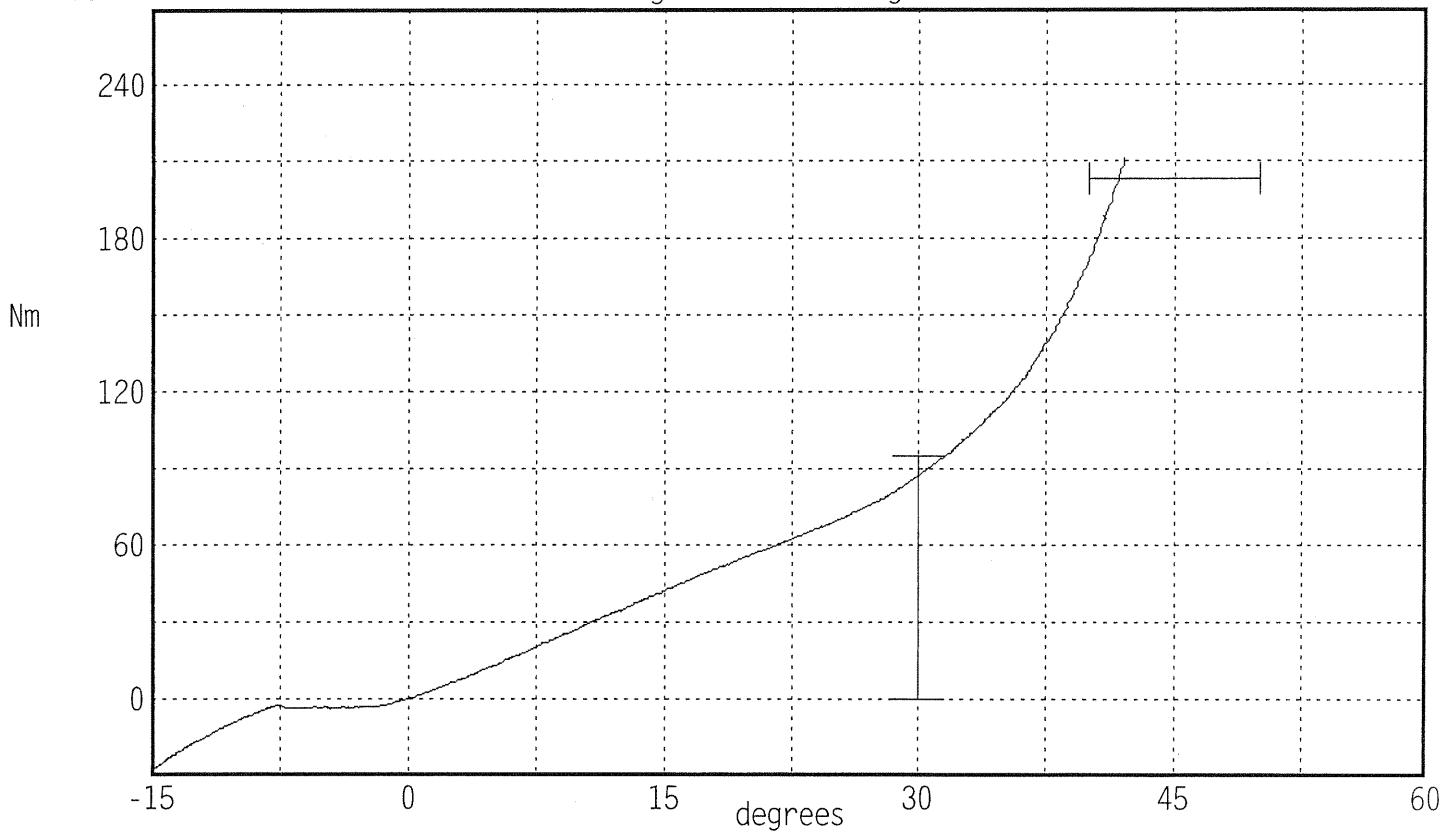
Hybrid III Hip Range of Motion

Serial Number: 001L
Test Number: 001C01
Comments:

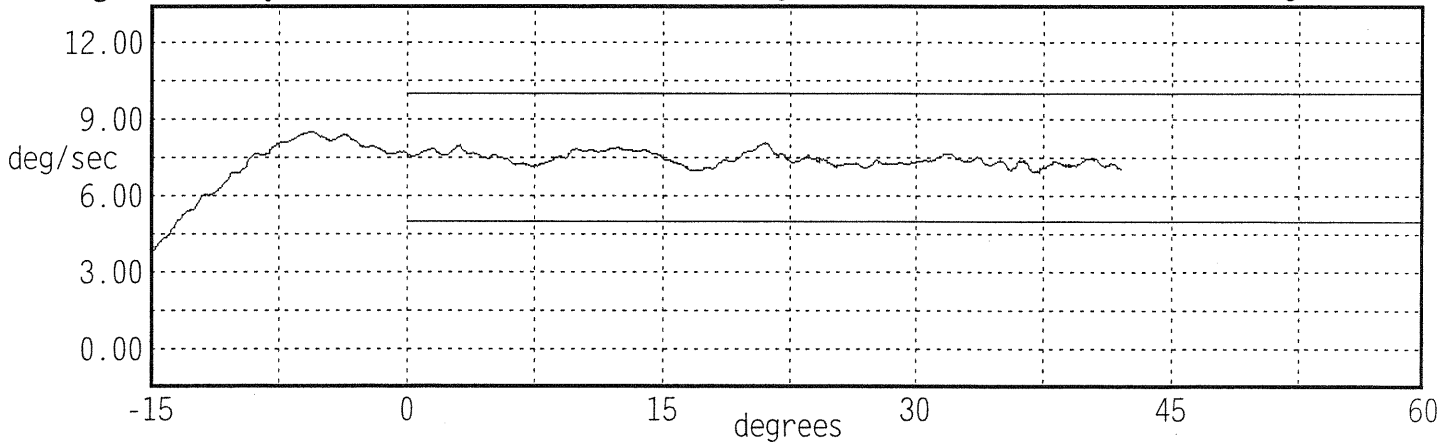
Date: 05/31/2007
Time: 12:49

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	21.0 °C	Pass
Humidity	10 - 70	63 %	Pass
Moment at 30 deg	<= 94.9	87.4 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	41.7 deg	Pass
Average Velocity	5.0 - 10.0	7.4 deg/sec	Pass

Moment About H-Point
Peak Moment: 210.8 Nm at 42.0 deg
Peak Angle: 42.0 deg at 210.8 Nm



Angular Velocity Max: 8.1 deg/sec Min: 7.0 deg/sec



Applied Safety Technologies Corp.

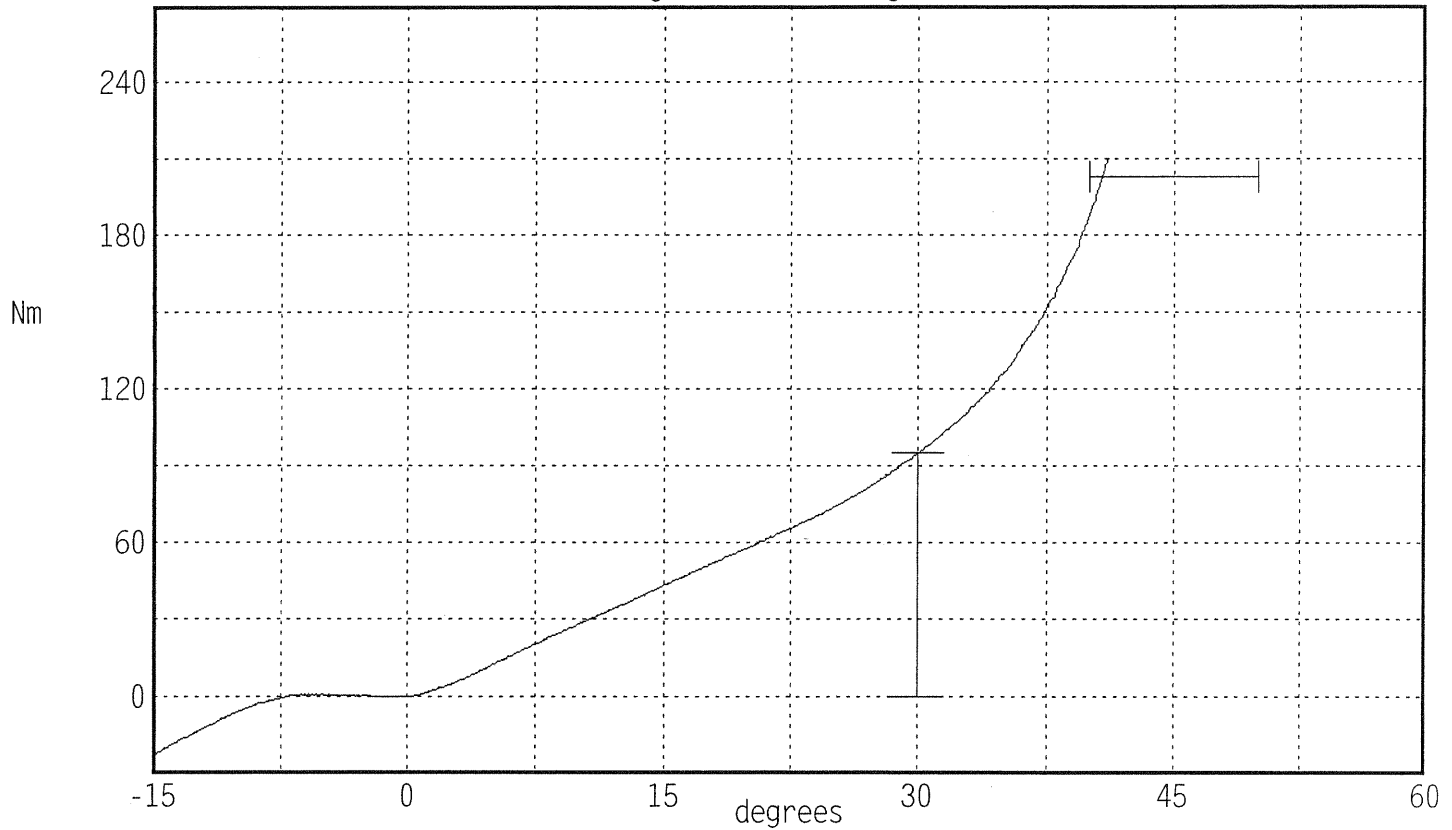
Hybrid III Hip Range of Motion

Serial Number: 001R
Test Number: 001C01
Comments:

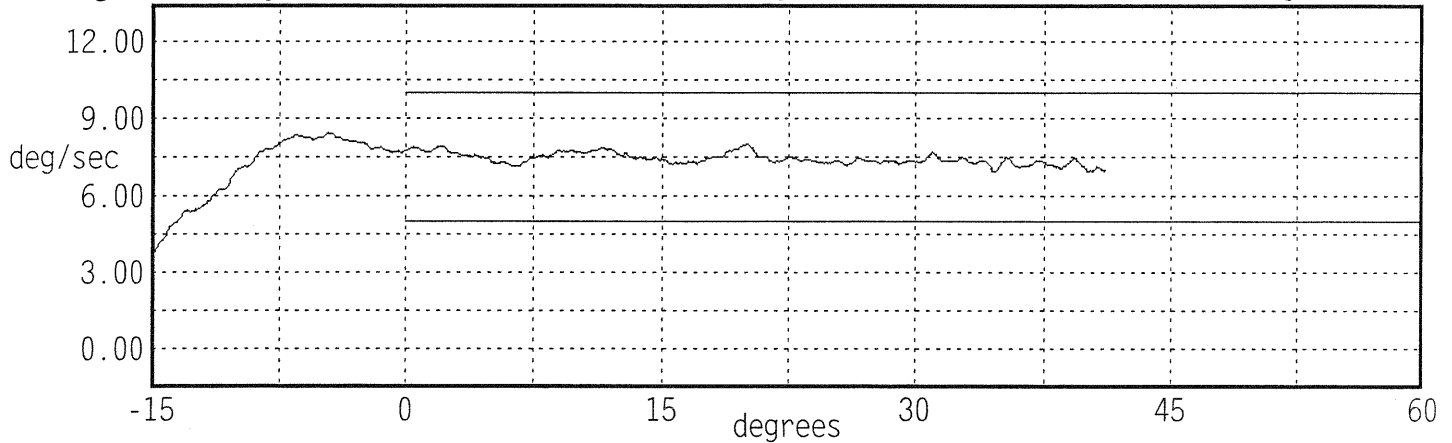
Date: 05/31/2007
Time: 12:59

TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	21.4 °C	Pass
Humidity	10 - 70	58 %	Pass
Moment at 30 deg	<= 94.9	94.8 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	40.8 deg	Pass
Average Velocity	5.0 - 10.0	7.4 deg/sec	Pass

Moment About H-Point
Peak Moment: 210.2 Nm at 41.1 deg
Peak Angle: 41.1 deg at 210.2 Nm



Angular Velocity Max: 8.0 deg/sec Min: 7.0 deg/sec



Pre-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Passenger Dummy S/N: 416

Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 416 Calibration No. 42
With Thor FLX Legs

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	777	Yes
B	Shoulder Pivot Height	431.8 - 457.2	439	Yes
C	Hip Pivot Height	81.3 - 86.3	84	Yes
D	Hip Pivot from Backline	144.8 - 149.8	148	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	80	Yes
F	Thigh Clearance	119.4 - 134.6	130	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	249	Yes
H	Head Back to Backline	43.2 - 48.2	47	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	288	Yes
J	Elbow Rest Height	182.8 - 203.2	187	Yes
K	Buttock Knee Length	520.7 - 546.1	536	Yes
L	Popliteal Height	355.6 - 376.0	360	Yes
M	Knee Pivot Height	393.7 - 419.1	406	Yes
N	Buttock Popliteal Height	414.0 - 439.4	427	Yes
O	Chest Depth without Jacket	175.3 - 190.5	181	Yes
P	Foot Length	218.5 - 233.7	221	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	475	Yes
S	Head Breadth	137.1 - 147.3	140	Yes
T	Head Depth	177.8 - 188.0	180	Yes
U	Hip Breadth	299.7 - 314.9	302	Yes
V	Shoulder Breadth	350.5 - 365.7	360	Yes
W	Foot Breadth	78.8 - 94.0	88	Yes
X	Head Circumference	528.3 - 548.7	535	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	859	Yes
Z	Waist Circumference	759.5 - 789.9	770	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	355	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician

Approved

Charles W. Bell

Ron Storaas

Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 42-1

Test Date: 5/30/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	56 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	273.6 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	8.4 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved

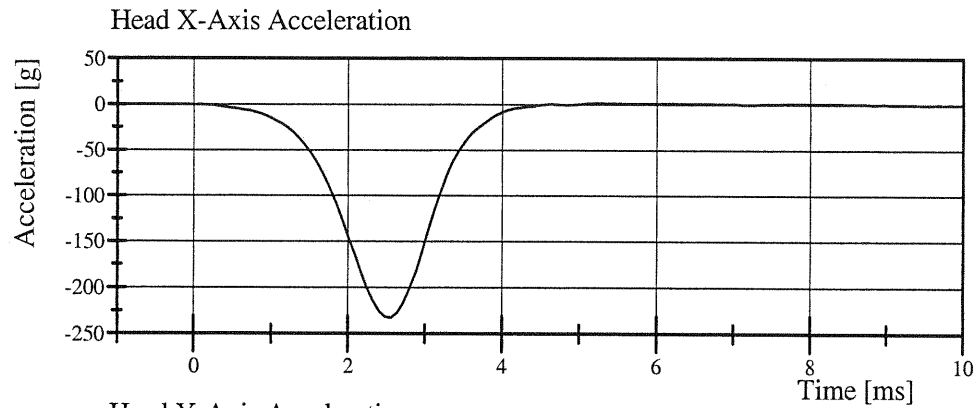


Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 42-1

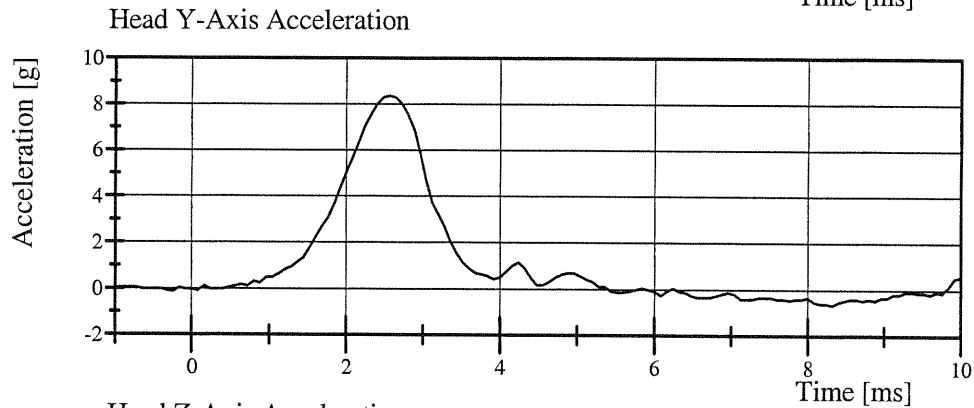
Test Date: 5/30/2007



Filter Class: CFC_1000

Max: 1.8 g at 5.2 ms

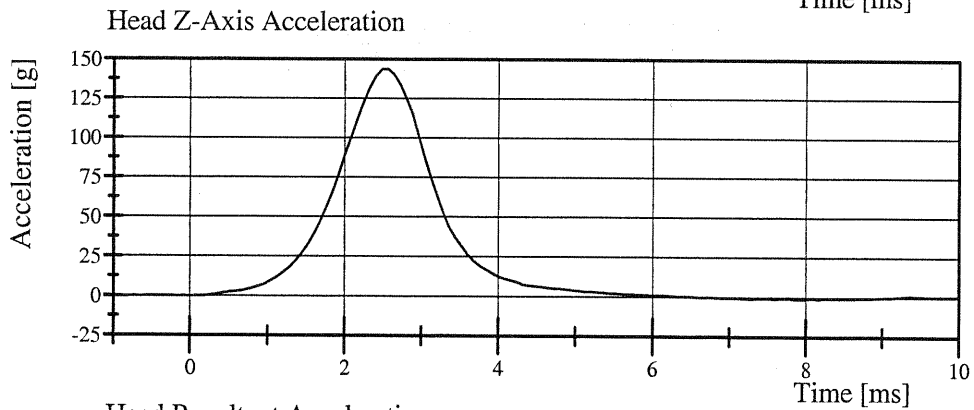
Min: -232.6 g at 2.6 ms



Filter Class: CFC_1000

Max: 8.4 g at 2.6 ms

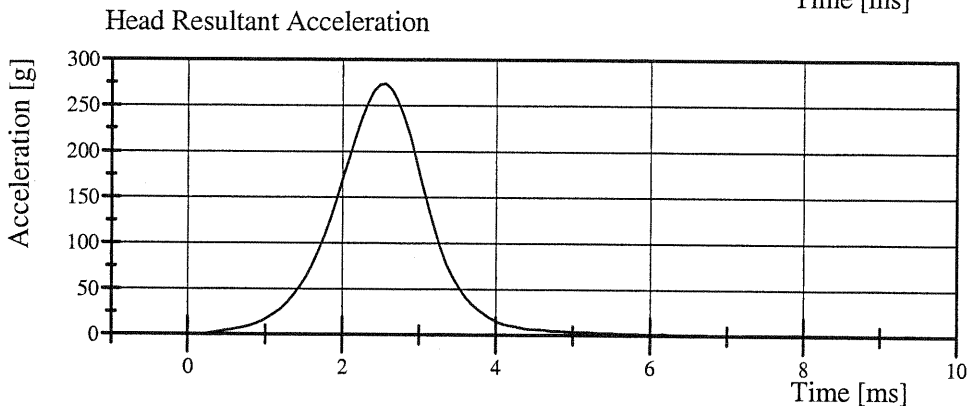
Min: -0.7 g at 8.3 ms



Filter Class: CFC_1000

Max: 143.9 g at 2.6 ms

Min: -0.8 g at 7.9 ms



Filter Class: CFC_1000

Max: 273.6 g at 2.6 ms

Min: 0.0 g at -1.0 ms

Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

Test Date: 5/30/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.065 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	(-2.1) - (-2.5) m/s	-2.46 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	(-4.0) - (-5.0) m/s	-4.70 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.71 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-78.2 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	74.6 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	86.1 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



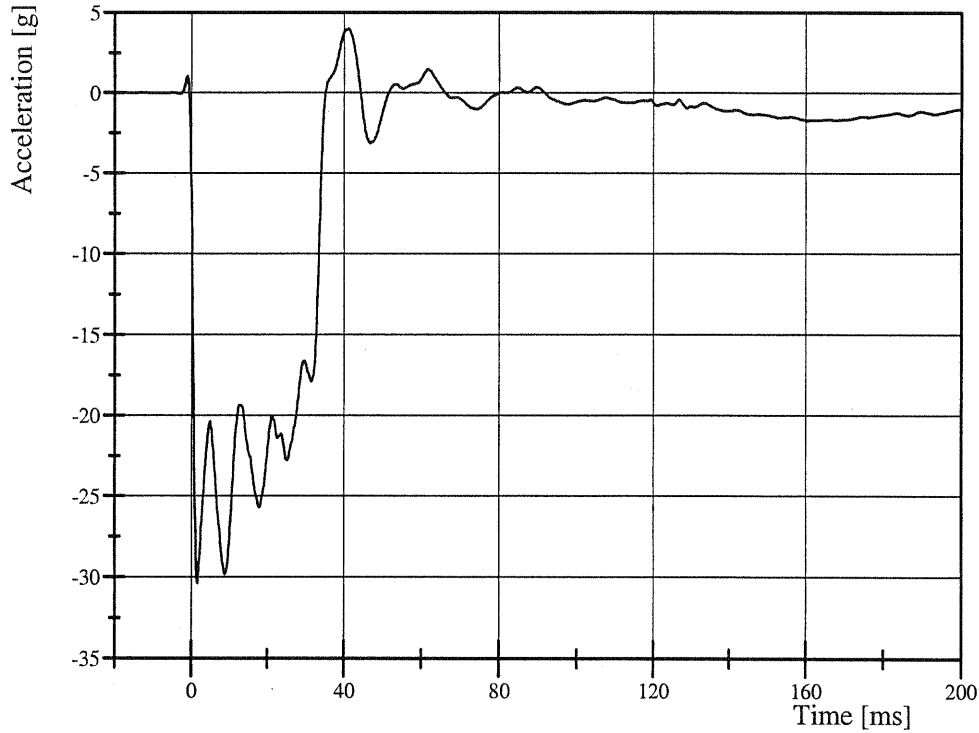
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

Test Date: 5/30/2007

Pendulum Acceleration

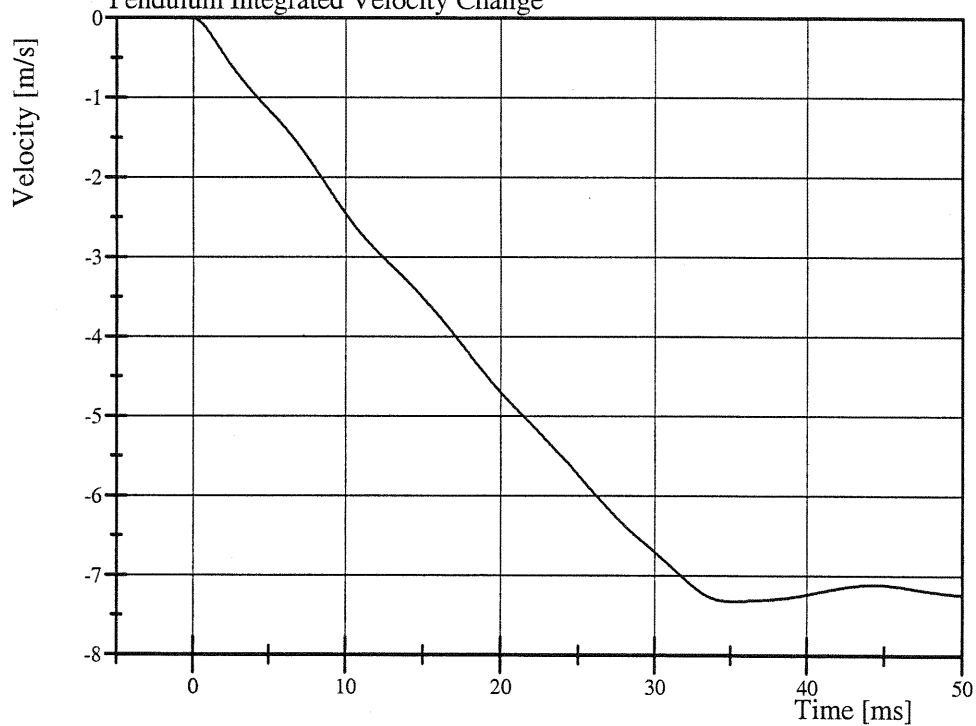


Filter Class: CFC_180

Max: 4.0 g at 41.2 ms

Min: -30.4 g at 1.5 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180

Max: 0.0 m/s at 0.0 ms

Min: -7.3 m/s at 35.1 ms

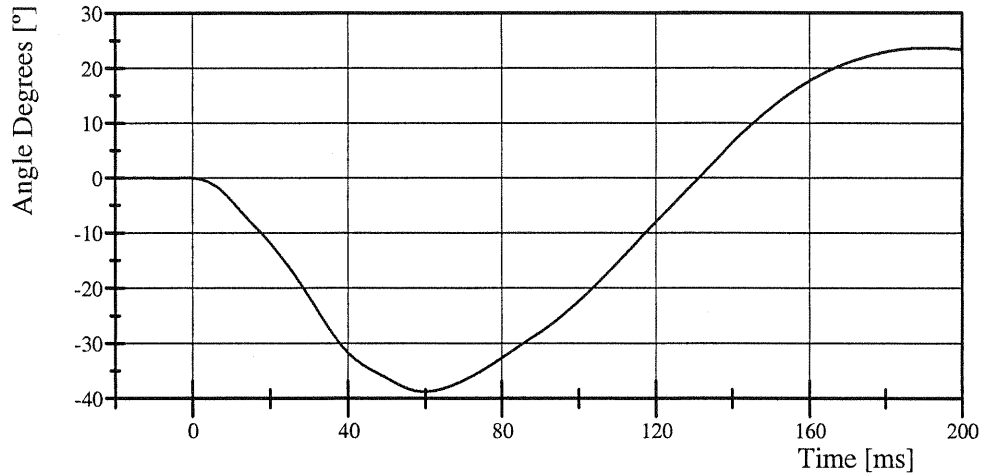
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

Test Date: 5/30/2007

Pot Rotation at the Base of Neck

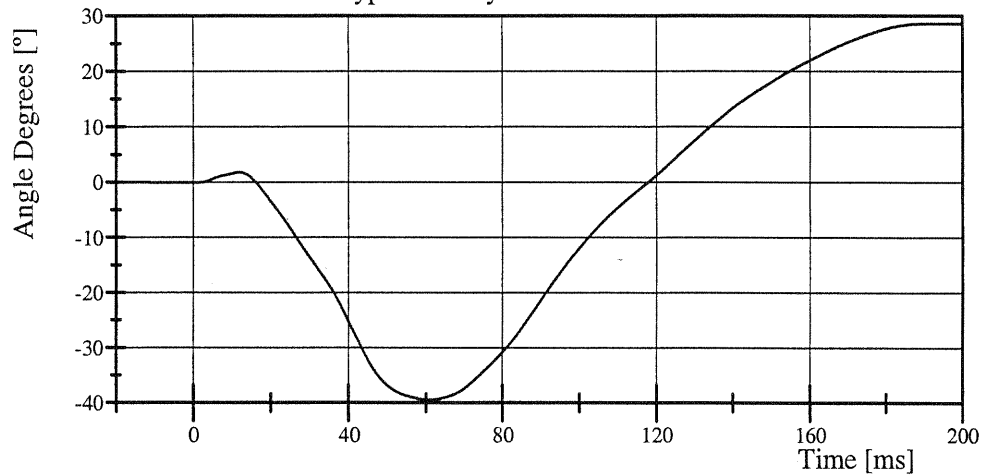


Filter Class: CFC_60

Max: 23.6 ° at 192.3 ms

Min: -38.7 ° at 59.7 ms

Head Rotation at Occypital Condyles

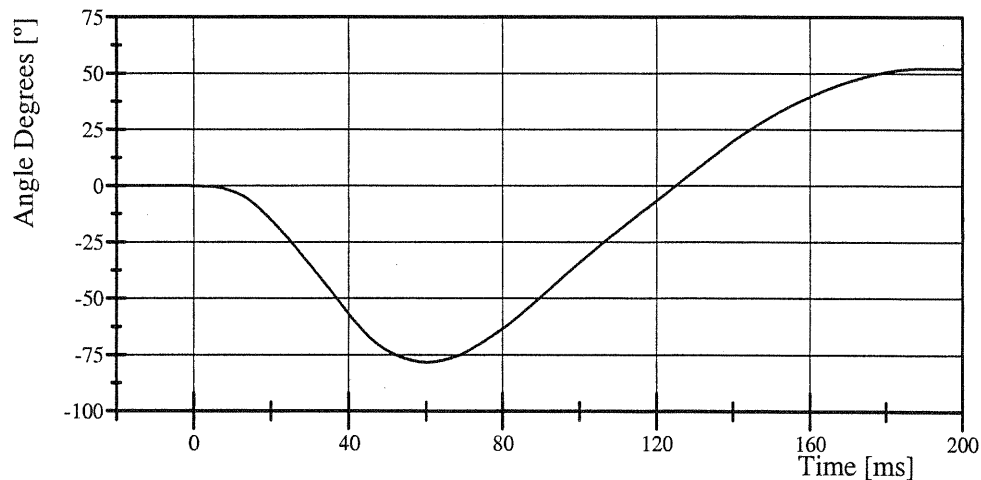


Filter Class: CFC_60

Max: 28.6 ° at 197.4 ms

Min: -39.5 ° at 60.9 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 52.3 ° at 192.9 ms

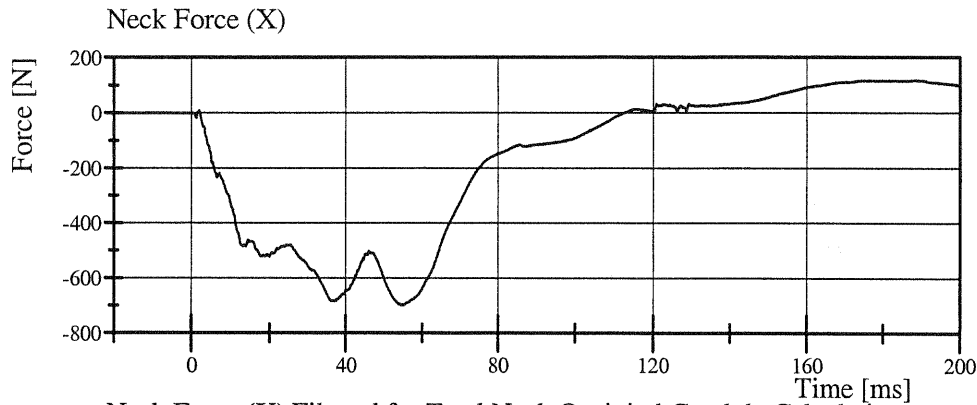
Min: -78.2 ° at 60.3 ms

Transportation Research Center Inc.

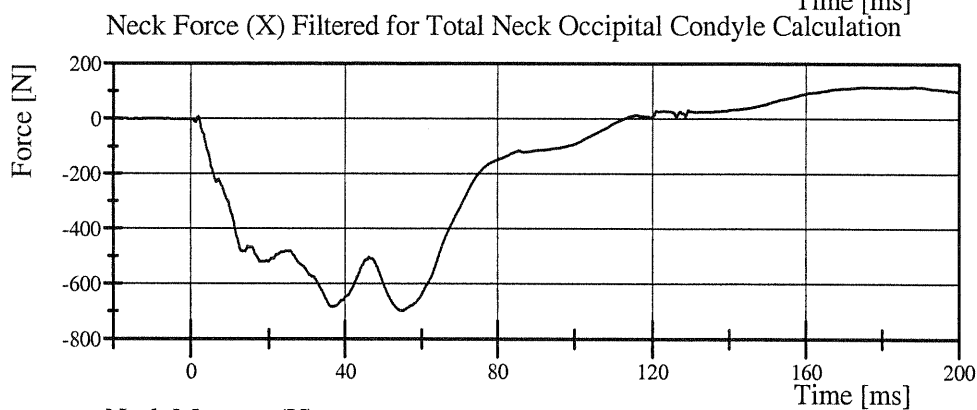
Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

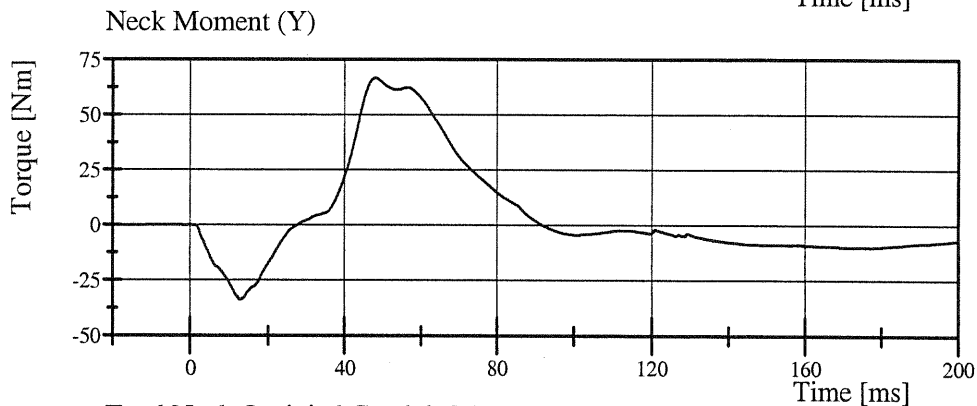
Test Date: 5/30/2007



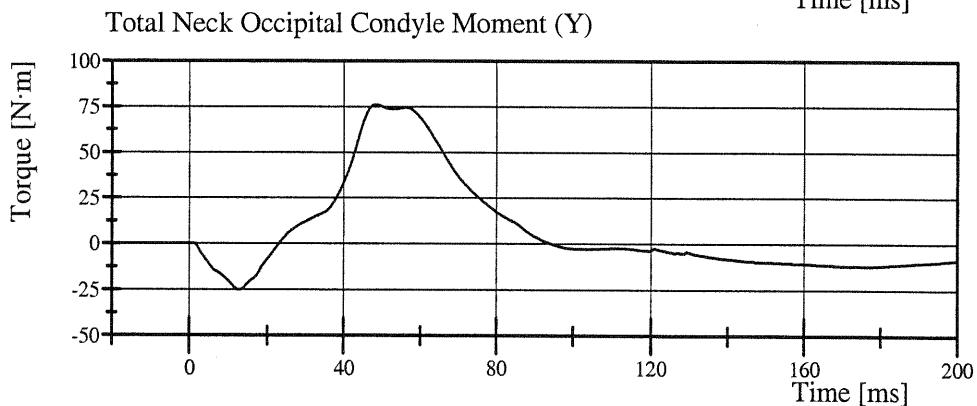
Filter Class: CFC_1000
Max: 118.4 N at 187.4 ms
Min: -697.4 N at 54.5 ms



Filter Class: CFC_600
Max: 117.7 N at 188.4 ms
Min: -697.3 N at 55.0 ms



Filter Class: CFC_600
Max: 66.7 Nm at 47.9 ms
Min: -33.6 Nm at 12.8 ms



Filter Class: CFC_600
Max: 76.2 N·m at 48.4 ms
Min: -25.1 N·m at 12.7 ms

Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 42-2

Test Date: 5/30/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-6.042 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.87 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.72 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	5.36 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	101.4 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-60.1 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	101.4 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



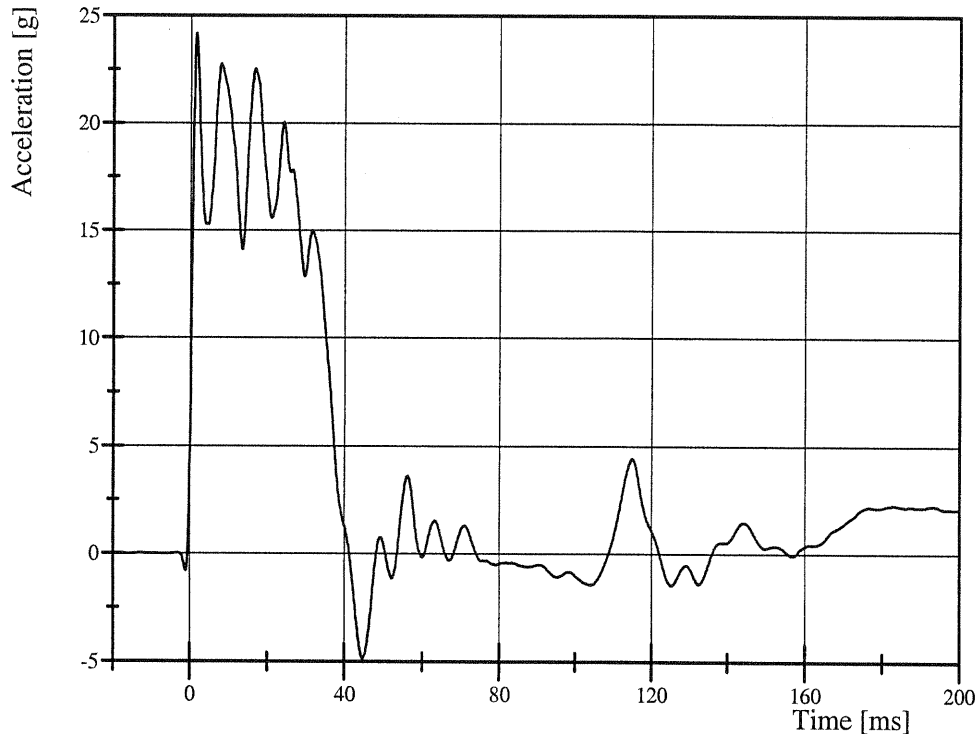
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 42-2

Test Date: 5/30/2007

Pendulum Acceleration

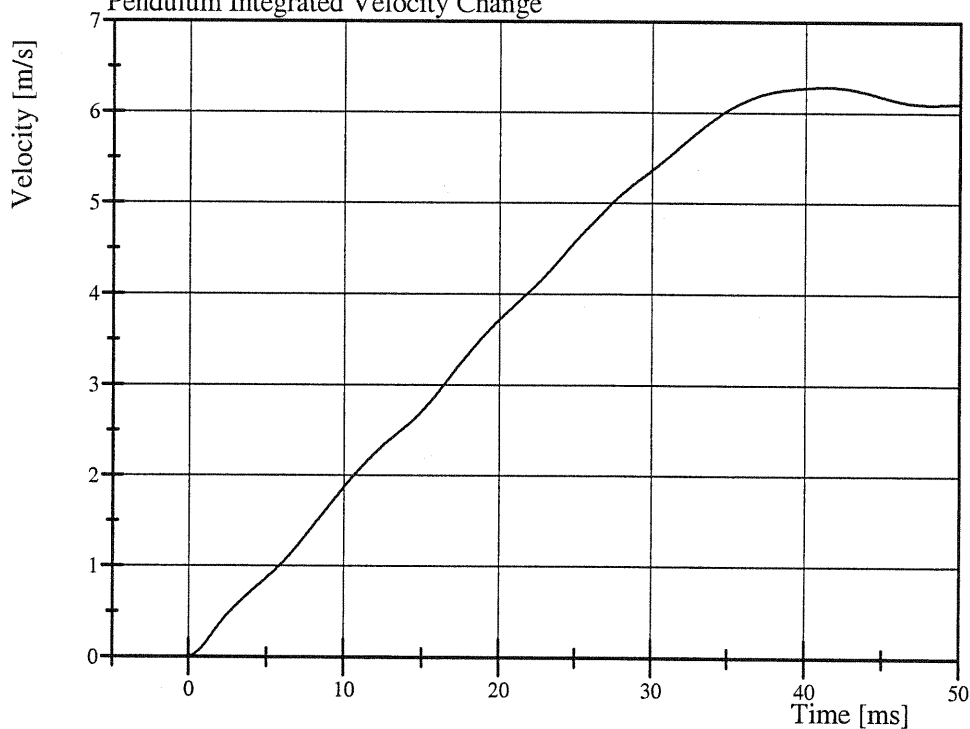


Filter Class: CFC_180

Max: 24.2 g at 1.5 ms

Min: -4.9 g at 44.7 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180

Max: 6.3 m/s at 41.3 ms

Min: 0.0 m/s at 0.0 ms

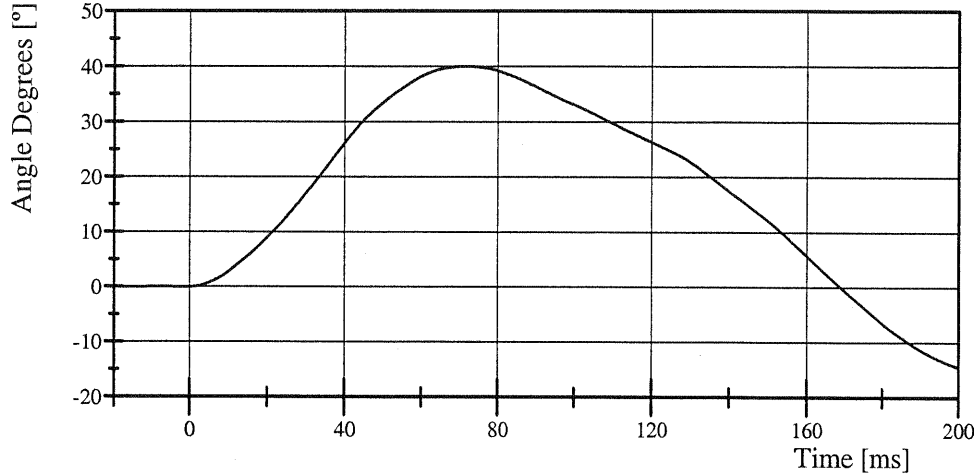
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 42-2

Test Date: 5/30/2007

Pot Rotation at the Base of Neck

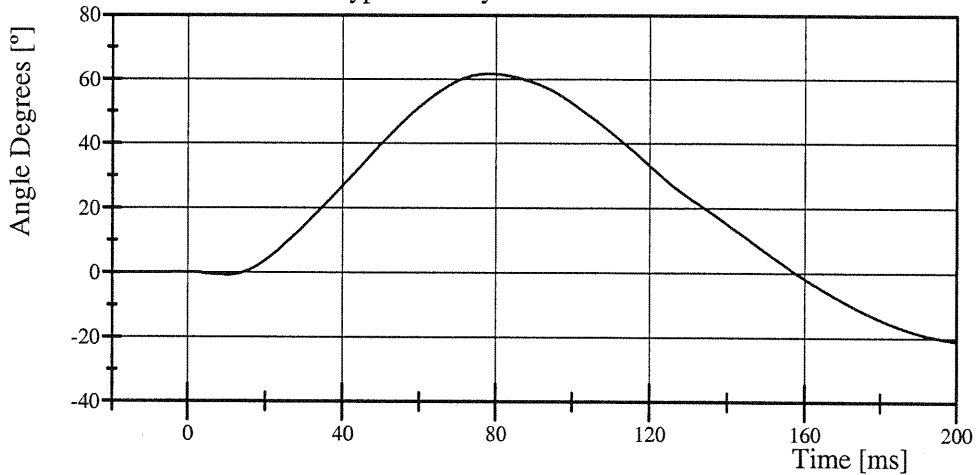


Filter Class: CFC_60

Max: 40.0 ° at 71.8 ms

Min: -14.5 ° at 200.0 ms

Head Rotation at Occypital Condyles

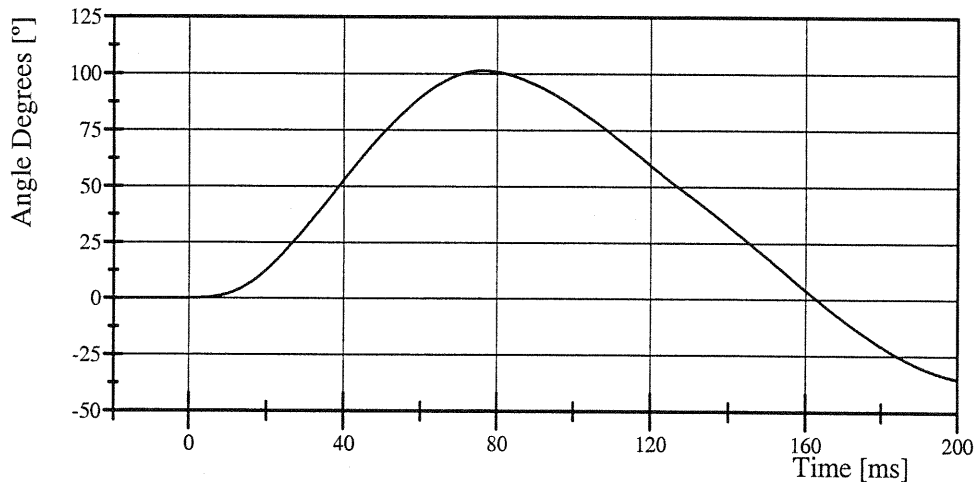


Filter Class: CFC_60

Max: 61.7 ° at 78.5 ms

Min: -20.9 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 101.4 ° at 76.3 ms

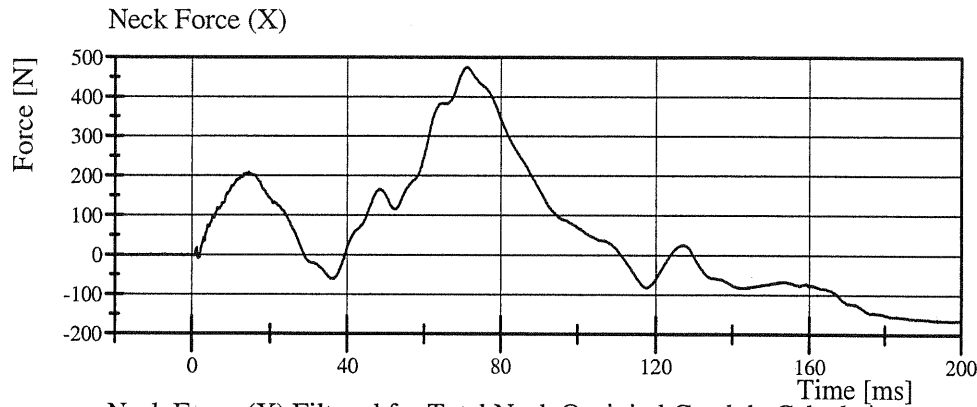
Min: -35.4 ° at 200.0 ms

Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 42-2

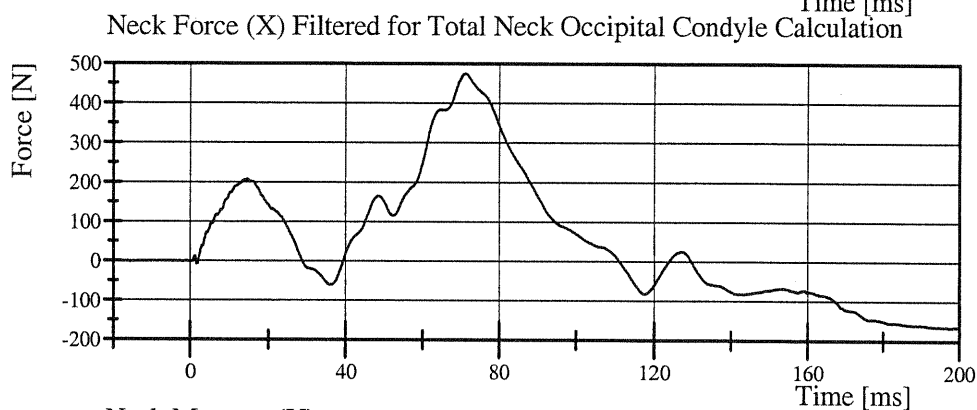
Test Date: 5/30/2007



Filter Class: CFC_1000

Max: 475.6 N at 70.9 ms

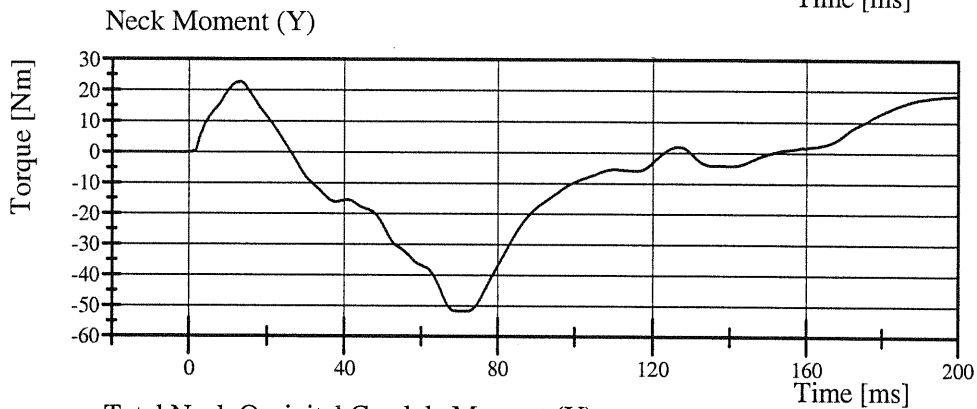
Min: -166.0 N at 197.8 ms



Filter Class: CFC_600

Max: 475.5 N at 71.0 ms

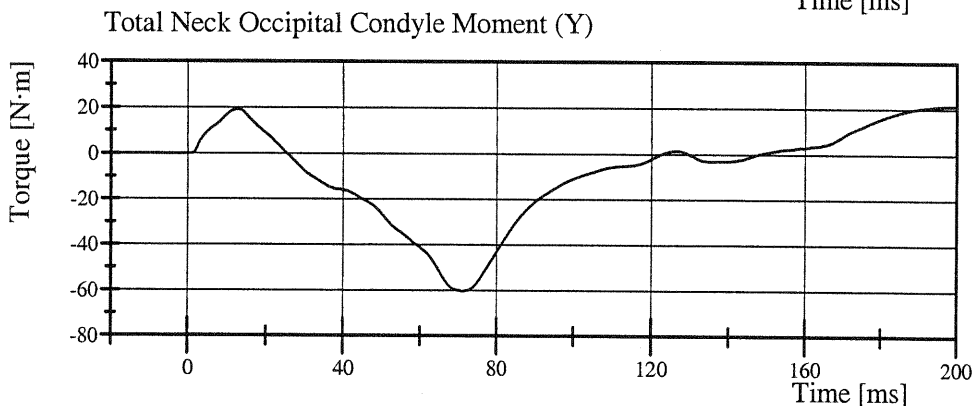
Min: -165.5 N at 197.7 ms



Filter Class: CFC_600

Max: 22.7 Nm at 13.3 ms

Min: -51.7 Nm at 72.0 ms



Filter Class: CFC_600

Max: 21.4 N·m at 199.1 ms

Min: -60.1 N·m at 71.4 ms

Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 42-4

Test Date: 6/1/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	59 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.616 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,007.0 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	\geq (-4,600) N	-3,703.1 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-57.5 mm	Yes
Internal Hysteresis	69 - 85 %	72.4 %	Yes

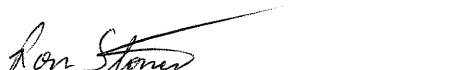
Test meets specifications.

Comments:

Technician



Approved



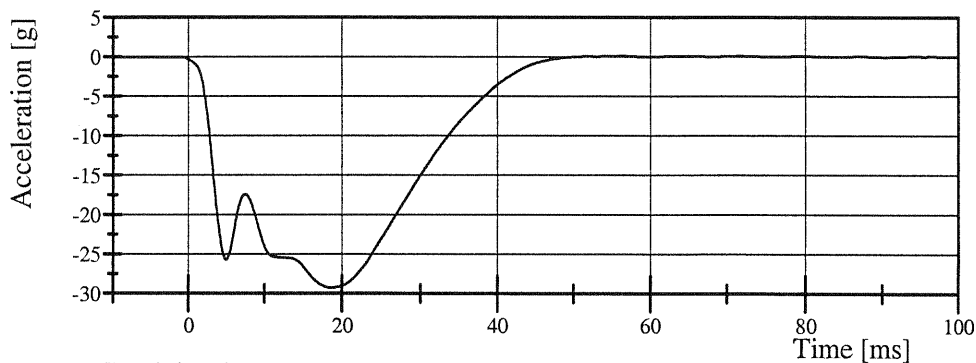
Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 42-4

Test Date: 6/1/2007

Pendulum Acceleration

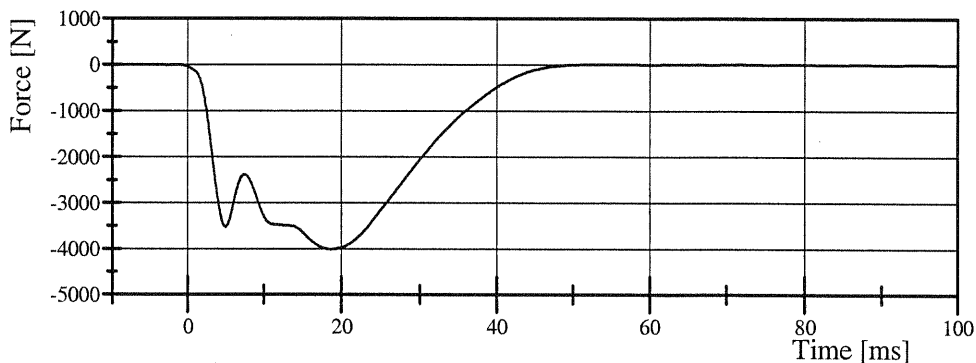


Filter Class: CFC_180

Max: 0.1 g at 71.8 ms

Min: -29.2 g at 18.6 ms

Pendulum Force

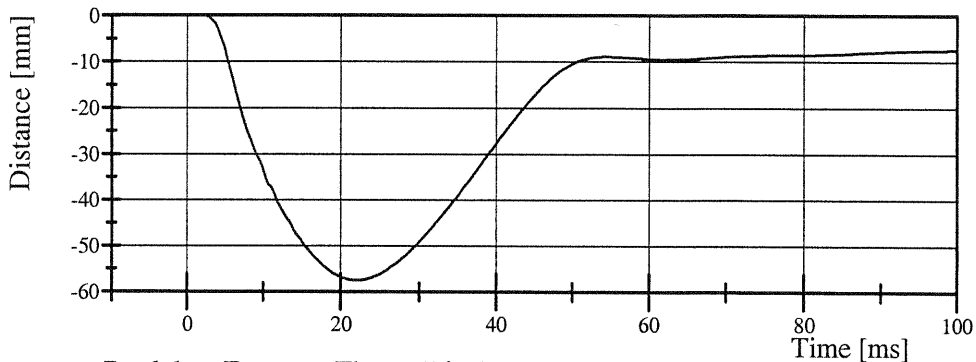


Filter Class: CFC_180

Max: 14.4 N at 71.8 ms

Min: -4,007.0 N at 18.6 ms

Thorax Displacement X-Axis

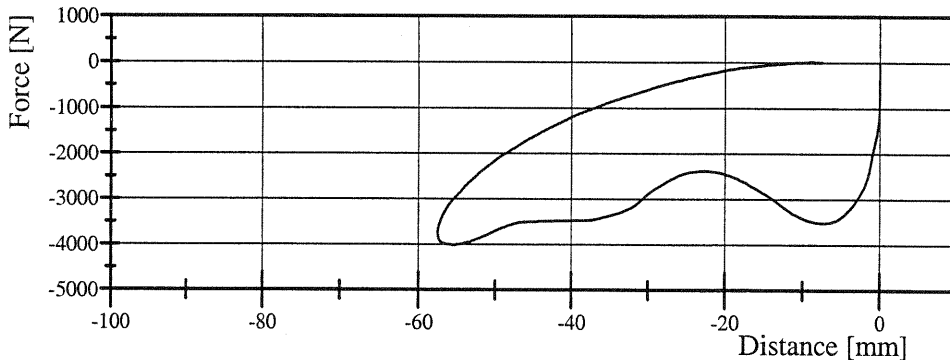


Filter Class: CFC_600

Max: 0.0 mm at -7.4 ms

Min: -57.5 mm at 22.1 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180

Max: 14.4 N at -8.7 mm

Min: -4,007.0 N at -55.5 mm

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

CAL DATE: 05-Jun-07

TRC, INC. TEST NO: TOFL-07 572 O SN416 TORSO FLEX CAL 42

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.2° C
RELATIVE HUMIDITY	10 – 70 %	51 %
INITIAL ANGLE OF UNSUPPORTTED DUMMY	<= 20° REFERENCED TO VERTICAL	18.8°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	326.9 N
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	5.9 °
RATE	0.5° - 1.5°/sec	0.97 °/sec

TEST MEETS SPECIFICATIONS

Comments: New abdomen

TECHNICIAN Charles W. Heil

Appendix D

Test Equipment and Instrumentation Calibration Information

Sign Convention
SAE J211 MAR95

Accelerometers:

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

Potentiometers:

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

Rotation potentiometers:

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

Load cells:

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

Neck load cells:

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

Tibia load cells:

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

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 070607

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
1	Trig D1	10ZERO00000VO0A	EVENT		1 Logic	+	Bipolar	
2	05H06-L26	21HEADCG00H3ACXA	Head Accel X	1000	g	-	Rearward	1-855 HIII 50th FTSS.001
3	05G20-L20	21HEADCG00H3ACYA	Head Accel Y	1000	g	-	Leftward	1-855 HIII 50th FTSS.002
4	05G15-L02	21HEADCG00H3ACZA	Head Accel Z	1000	g	-	Upward	1-855 HIII 50th FTSS.003
5	1716A-1037-FX	21NECKUP00H3FOXA	Neck Force X	8896	N	-	Head forward, chest rearward	1-855 HIII 50th FTSS.004
6	1716A-1037-FY	21NECKUP00H3FOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	1-855 HIII 50th FTSS.005
7	1716A-1037-FZ	21NECKUP00H3FOZA	Neck Force Z	13344	N	+	Head upward, chest downward	1-855 HIII 50th FTSS.006
8	1716A-1037-MX	21NECKUP00H3MOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	1-855 HIII 50th FTSS.007
9	1716A-1037-MY	21NECKUP00H3MOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	1-855 HIII 50th FTSS.008
10	1716A-1037-MZ	21NECKUP00H3MOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	1-855 HIII 50th FTSS.009
11	01G19-F02	21CHSTCG00H3ACXA	Chest Accel X	1000	g	+	Forward	1-855 HIII 50th FTSS.010
12	01G25-N10	21CHSTCG00H3ACYA	Chest Accel Y	1000	g	-	Leftward	1-855 HIII 50th FTSS.011
13	01H02-N07	21CHSTCG00H3ACZA	Chest Accel Z	1000	g	-	Upward	1-855 HIII 50th FTSS.012
14	CST855	21CHST0000H3DSXA	Chest Deflection X	100	mm	+	Forward	1-855 HIII 50th FTSS.013
15	05G20-L21	21PELVCG00H3ACXA	Pelvis Accel X	1000	g	-	Rearward	1-855 HIII 50th FTSS.014
16	02I02I10-N24	21PELVCG00H3ACYA	Pelvis Accel Y	1000	g	-	Leftward	1-855 HIII 50th FTSS.015
17	05G11-X33	21PELVCG00H3ACZA	Pelvis Accel Z	1000	g	-	Upward	1-855 HIII 50th FTSS.016
18	2121A-1394-FZ	21FEMRLL00H3FOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-855 HIII 50th FTSS.017
19	2121A-1396	21FEMRRL00H3FOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-855 HIII 50th FTSS.018
20	150-0121VR-028876	21KNSLLE00H3DSXA	Left Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX0036 &0037 VRTC.001
21	4509-104-FX	21TIBILULXH3FOXA	Left Upper Tibia Force X	11120.5	N	+	Tibia forward, knee rearward	1-LX0036 &0037 VRTC.002
22	4509-104-FZ	21TIBILULXH3FOZA	Left Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX0036 &0037 VRTC.004
23	4509-104-MX	21TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.005
24	4509-104-MY	21TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.006
25	01G18-F13	21TIBILELXH3ACXA	Left Tibia Accel X	1000	g	+	Tibia forward	1-LX0036 &0037 VRTC.007

D-5

070607

Channel Report Test Number 070607

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
26	02I02I10-N22	21TIBILELXH3ACYA	Left Tibia Accel Y	1000	g	+	Tibia right	1-LX0036 &0037 VRTC.008
27	4929J-140-FX	21TIBILLLXH3FOXA	Left Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX0036 &0037 VRTC.009
28	4929J-140-FY	21TIBILLLXH3FOYA	Left Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX0036 &0037 VRTC.010
29	4929J-140-FZ	21TIBILLLXH3FOZA	Left Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX0036 &0037 VRTC.011
30	4929J-140-MX	21TIBILLLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.012
31	4929J-140-MY	21TIBILLLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.013
32	PD210-4B-0371	21FOOTLELXH3ANXA	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	1-LX0036 &0037 VRTC.014
33	PD210-4B-0367	21FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	1-LX0036 &0037 VRTC.015
34	PD210-4B-0365	21FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX104Z	318	°	-	External rotation	1-LX0036 &0037 VRTC.016
35	04J04I20-Z24	21FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX0036 &0037 VRTC.017
36	05G20-L03	21FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX0036 &0037 VRTC.018
37	05G20-L24	21FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX0036 &0037 VRTC.019
38	150-0121VL-028868	21KNSLR100H3DSXA	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX0036 &0037 VRTC.020
39	4509-111-FX	21TIBIRULXH3FOXA	Right Upper Tibia Force X	11120.5	N	+	Tibia forward, knee rearward	1-LX0036 &0037 VRTC.021
40	4509-111-FZ	21TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX0036 &0037 VRTC.023
41	4509-111-MX	21TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.024
42	4509-111-MY	21TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.025
43	01G18-F15	21TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX0036 &0037 VRTC.026
44	05I07-Z25	21TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX0036 &0037 VRTC.027
45	4929J-142-FX	21TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX0036 &0037 VRTC.028
46	4929J-142-FY	21TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX0036 &0037 VRTC.029
47	4929J-142-FZ	21TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX0036 &0037 VRTC.030

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
48	4929J-142-MX	21TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.031
49	4929J-142-MY	21TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.032
50	PD210-4B-7921-0368	21FOOTRILXH3ANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	1-LX0036 &0037 VRTC.033
51	PD210-4B-7921-0369	21FOOTRILXH3ANYA	Right Foot Angular Dis. Y AK225Y	318	°	+	Dorsiflexion	1-LX0036 &0037 VRTC.034
52	PD210-4B-7921-0370	21FOOTRILXH3ANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	1-LX0036 &0037 VRTC.035
53	01J02-F16	21FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Foot forward	1-LX0036 &0037 VRTC.036
54	98H10-F13	21FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Foot rightward	1-LX0036 &0037 VRTC.037
55	98H10-F10	21FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Foot down	1-LX0036 &0037 VRTC.038
56	05G20-L18	23HEADCG00HFACXA	Head Accel X	1000	g	-	Rearward	3-324 HIII 5th FTSS.001
57	00L20-A20	23HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-324 HIII 5th FTSS.002
58	03D03C27-N07	23HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-324 HIII 5th FTSS.003
59	IF-205-287-FX	23NECKUP00HFFOXA	Neck Force X	8896	N	-	Head forward, chest rearward	3-324 HIII 5th FTSS.004
60	IF-205-287-FY	23NECKUP00HFFOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	3-324 HIII 5th FTSS.005
61	IF-205-287-FZ	23NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-324 HIII 5th FTSS.006
62	IF-205-287-MX	23NECKUP00HFMOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	3-324 HIII 5th FTSS.007
63	IF-205-287-MY	23NECKUP00HFMOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	3-324 HIII 5th FTSS.008
64	IF-205-287-MZ	23NECKUP00HFMOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	3-324 HIII 5th FTSS.009
65	05G20-L01	23CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-324 HIII 5th FTSS.016
66	05I07-Z12	23CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-324 HIII 5th FTSS.017
67	05G15-L04	23CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-324 HIII 5th FTSS.018
68	CST324	23CHST0000HFDSXA	Chest Deflection X	100	mm	+	Forward	3-324 HIII 5th FTSS.019
69	P52157	23PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-324 HIII 5th FTSS.020
70	03E03D30-N18	23PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-324 HIII 5th FTSS.021
71	03E03E20-N13	23PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-324 HIII 5th FTSS.022
72	2121AJ-1520	23FEMRLL00HFFOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	3-324 HIII 5th FTSS.023
73	2121AJ-1521	23FEMRRL00HFFOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	3-324 HIII 5th FTSS.024
74	150-0121VR-033681	23KNSLLE00HFDSXA	Left Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	3-FLX017 & 018 VRTC.001

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
75	4825J-94-FX	23TIBILULXHFFOXA	Left Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX017 & 018 VRTC.002
76	4825J-94-FZ	23TIBILULXHFFOZA	Left Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX017 & 018 VRTC.003
77	4825J-94-MX	23TIBILULXHFMOMA	Left Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.004
78	4825J-94-MY	23TIBILULXHFMOMA	Left Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.005
79	06A04-R12	23TIBILELXHFACEXA	Left Tibia Accel X	1000	g	+	Tibia forward	3-FLX017 & 018 VRTC.006
80	01G25-N04	23TIBILELXHFACEYA	Left Tibia Accel Y	1000	g	+	Tibia right	3-FLX017 & 018 VRTC.007
81	4826J-105-FX	23TIBILLLXHFFOXA	Left Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX017 & 018 VRTC.008
82	4826J-105-FY	23TIBILLLXHFFOYA	Left Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX017 & 018 VRTC.009
83	4826J-105-FZ	23TIBILLLXHFFOZA	Left Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX017 & 018 VRTC.010
84	4826J-105-MX	23TIBILLLXHFMOMA	Left Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.011
85	4826J-105-MY	23TIBILLLXHFMOMA	Left Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.012
86	PD210-4B-7921-0407	23FOOTLELXHFACEXA	Left Foot Angular Dis. X	LX104X	318	°	- Inversion	3-FLX017 & 018 VRTC.013
87	PD210-4B-7921-0392	23FOOTLELXHFACEYA	Left Foot Angular Dis. Y	LX104Y	318	°	+ Dorsiflexion	3-FLX017 & 018 VRTC.014
88	PD210-4B-7921-0408	23FOOTLELXHFACEZA	Left Foot Angular Dis. Z	LX104Z	318	°	- External rotation	3-FLX017 & 018 VRTC.015
89	05107-Z14	23FOOTLELXHFACEXA	Left Foot Accel X	1000	g	+	Foot forward	3-FLX017 & 018 VRTC.016
90	02102105-F09	23FOOTLELXHFACEYA	Left Foot Accel Y	1000	g	+	Foot rightward	3-FLX017 & 018 VRTC.017
91	05107-Z13	23FOOTLELXHFACEZA	Left Foot Accel Z	1000	g	+	Foot down	3-FLX017 & 018 VRTC.018
92	150-0121VL-033650	23KNSLR100HFDSXA	Right Knee Displacement X	40	°	-	Hold femur in place, tibia rearward	3-FLX017 & 018 VRTC.019
93	4825J-99-FX	23TIBIRULXHFFOXA	Right Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX017 & 018 VRTC.020
94	4825J-99-FZ	23TIBIRULXHFFOZA	Right Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX017 & 018 VRTC.021
95	4825J-99-MX	23TIBIRULXHFMOMA	Right Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.022

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
96	4825J-99-MY	23TIBIRULXHFMOYA	Right Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.023
97	05G20-L14	23TIBIRILXHFACXA	Right Tibia Accel X	1000	g	+	Tibia forward	3-FLX017 & 018 VRTC.024
98	98H13-F19	23TIBIRILXHFACYA	Right Tibia Accel Y	1000	g	+	Tibia right	3-FLX017 & 018 VRTC.025
99	4826J-106-FX	23TIBIRLLXHFFOXA	Right Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX017 & 018 VRTC.026
100	4826J-106-FY	23TIBIRLLXHFFOYA	Right Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX017 & 018 VRTC.027
101	4826J-106-FZ	23TIBIRLLXHFFOZA	Right Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX017 & 018 VRTC.028
102	4826J-106-MX	23TIBIRLLXHFMOXA	Right Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.029
103	4826J-106-MY	23TIBIRLLXHFMOYA	Right Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.030
104	PD210-4B-7921-0398	23FOOTRILXHFANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	3-FLX017 & 018 VRTC.031
105	PD210-4B-7921-0400	23FOOTRILXHFANYA	Right Foot Angular Dis. Y AK225Y	317	°	+	Dorsiflexion	3-FLX017 & 018 VRTC.032
106	PD210-4B-7921-0399	23FOOTRILXHFANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	3-FLX017 & 018 VRTC.033
107	06A07-R14	23FOOTRILXHFACXA	Right Foot Accel X	1000	g	+	Foot forward	3-FLX017 & 018 VRTC.034
108	05G20-L12	23FOOTRILXHFACYA	Right Foot Accel Y	1000	g	+	Foot rightward	3-FLX017 & 018 VRTC.035
109	98H10-F03	23FOOTRILXHFACZA	Right Foot Accel Z	1000	g	+	Foot down	3-FLX017 & 018 VRTC.036
110	P48062	24CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	-	Rearward	
111	P50470	26CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	-	Rearward	
112	P49899	22ENGNTP0000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
113	P54588	22ENGNBO0000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	
114	P54517	23VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
115	P48041	21VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
116	P54117	22DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
117	P50885	21PEAC000000ACXA	Toe Pan Accelerator X-axis acceleration	2000	g	+	Forward	
118	P50294	21PEAC000000ACZA	Toe Pan Accelerator Z-axis acceleration	2000	g	-	Upward	
119	P50930	21VEHC000001ACXA	Toe Pan footrest X-axis acceleration	2000	g	+	Forward	
120	p50910	21VEHC000001ACZA	Toe Pan footrest Z-axis acceleration	2000	g	-	Upward	
121	P50578	25TUNNCY0000ACXA	Rear Tunnel center X-axis acceleration	1000	g	+	Forward	
122	p54441	20VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
123	P46926	20VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	-	Leftward	
124	P49333	20VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
125	P54323	28VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
126	P48547	28VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
127	p48632	28VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	-	Upward	

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
128	39311	21SEBA0000B5DS0A	Driver lap belt spool	750	mm	+	Tension	
129	40664	21SEBA0000B3DS0A	Driver shoulder belt spool and retraction	750	mm	+	Tension	
130	40662	23SEBA0000B5DS0A	RF Pass lap belt spool	750	mm	+	Tension	
131	14672	23SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction (D)	635	mm	+	Tension	
132	ABFire1	21AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND (IP 112)	5	V	+	Bipolar	
133	ABFire2	21AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND (IP 31)	5	V	+	Bipolar	
134	ABFire3	23AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND (IP 55)	5	V	+	Bipolar	
135	ABFire4	23AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND (IP 03)	5	V	+	Bipolar	

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
1	Trig D1	10ZERO00000VO0A	EVENT		1 Logic	+	Bipolar	
2	P15345	11HEADCG00H3ACXA	Head Accel X	1000 g		-	Rearward	1-001 VRTC H3 50th.001
3	P46524	11HEADCG00H3ACYA	Head Accel Y	1000 g		-	Leftward	1-001 VRTC H3 50th.002
4	J32220	11HEADCG00H3ACZA	Head Accel Z	1000 g		-	Upward	1-001 VRTC H3 50th.003
5	1716A-1872-FX	11NECKUP00H3FOXA	Neck Force X	8896 N		-	Head forward, chest rearward	1-001 VRTC H3 50th.004
6	1716A-1872-FY	11NECKUP00H3FOYA	Neck Force Y	8896 N		+	Head leftward, chest rightward	1-001 VRTC H3 50th.005
7	1716A-1872-FZ	11NECKUP00H3FOZA	Neck Force Z	13344 N		+	Head upward, chest downward	1-001 VRTC H3 50th.006
8	1716A-1872-MX	11NECKUP00H3MOXA	Neck Moment X	282.5 Nm		-	Right ear toward right shoulder	1-001 VRTC H3 50th.007
9	1716A-1872-MY	11NECKUP00H3MOYA	Neck Moment Y	282.5 Nm		+	Chin toward sternum	1-001 VRTC H3 50th.008
10	1716A-1872-MZ	11NECKUP00H3MOZA	Neck Moment Z	282.5 Nm		+	Chin toward left shoulder	1-001 VRTC H3 50th.009
11	03E03D30-N22	11CHSTCG00H3ACXA	Chest Accel X	1000 g		+	Forward	1-001 VRTC H3 50th.010
12	J32100	11CHSTCG00H3ACYA	Chest Accel Y	1000 g		-	Leftward	1-001 VRTC H3 50th.011
13	P52159	11CHSTCG00H3ACZA	Chest Accel Z	1000 g		-	Upward	1-001 VRTC H3 50th.012
14	CST001	11CHST0000H3DSXA	Chest Deflection X	100 mm		+	Forward	1-001 VRTC H3 50th.013
15	P52154	11PELVCG00H3ACXA	Pelvis Accel X	1000 g		-	Rearward	1-001 VRTC H3 50th.014
16	P49192	11PELVCG00H3ACYA	Pelvis Accel Y	1000 g		-	Leftward	1-001 VRTC H3 50th.015
17	P49170	11PELVCG00H3ACZA	Pelvis Accel Z	1000 g		-	Upward	1-001 VRTC H3 50th.016
18	2121AJ-1519	11FEMRLL00H3FOZA	Left Femur Force Z	13344 N		+	Knee forward, pelvis rearward	1-001 VRTC H3 50th.017
19	2121A-1420	11FEMRRL00H3FOZA	Right Femur Force Z	13344 N		+	Knee forward, pelvis rearward	1-001 VRTC H3 50th.018
20	150-0121VL-021203	11KNSLLE00H3DSXA	Left Knee Displacement X	33 mm		-	Hold femur in place, tibia rearward	1-LX045-046 VOLPE THOR LEGS.001
21	4509-95-FX	11TIBILULXH3FOXA	Left Upper Tibia Force X	11120.5 N		+	Tibia forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.002
22	4509-95-FZ	11TIBILULXH3FOZA	Left Upper Tibia Force Z	11120.5 N		+	Tibia downward, femur upward	1-LX045-046 VOLPE THOR LEGS.004
23	4509-95-MX	11TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4 Nm		+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.005
24	4509-95-MY	11TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4 Nm		+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.006
25	02102105-F16	11TIBILELXH3ACXA	Left Tibia Accel X	1000 g		+	Tibia forward	1-LX045-046 VOLPE THOR LEGS.007
26	04J04107-Z15	11TIBILELXH3ACYA	Left Tibia Accel Y	1000 g		+	Tibia right	1-LX045-046 VOLPE THOR LEGS.008
27	4929J-139-FX	11TIBILLLXH3FOXA	Left Lower Tibia Force X	11120.5 N		+	Ankle forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.009

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
28	4929J-139-FY	11TIBILLXH3FOYA	Left Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX045-046 VOLPE THOR LEGS.010
29	4929J-139-FZ	11TIBILLXH3FOZA	Left Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX045-046 VOLPE THOR LEGS.011
30	4929J-139-MX	11TIBILLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.012
31	4929J-139-MY	11TIBILLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.013
32	7921-0525-PD210-4B-426	11FOOTLELXH3ANXA	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	1-LX045-046 VOLPE THOR LEGS.014
33	7921-0524-PD210-4B-424	11FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	1-LX045-046 VOLPE THOR LEGS.015
34	7921-0523-PD210-4B-423	11FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX104Z	318	°	-	External rotation	1-LX045-046 VOLPE THOR LEGS.016
35	05H31-Z12	11FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX045-046 VOLPE THOR LEGS.017
36	04J04I20-Z06	11FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX045-046 VOLPE THOR LEGS.018
37	02I02I05-F22	11FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX045-046 VOLPE THOR LEGS.019
38	150-0121VL-33646	11KNSLRIO0H3DSXA	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX045-046 VOLPE THOR LEGS.020
39	4509-88-FX	11TIBIRULXH3FOXA	Right Upper Tibia Force X	11120.5	N	+	Tibia forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.021
40	4509-88-FZ	11TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX045-046 VOLPE THOR LEGS.023
41	4509-88-MX	11TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.024
42	4509-88-MY	11TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.025
43	04J04I01-R09	11TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX045-046 VOLPE THOR LEGS.026
44	01G25-N06	11TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX045-046 VOLPE THOR LEGS.027
45	4929J-138-FX	11TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.028
46	4929J-138-FY	11TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX045-046 VOLPE THOR LEGS.029
47	4929J-138-FZ	11TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX045-046 VOLPE THOR LEGS.030
48	4929J-138-MX	11TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.031
49	4929J-138-MY	11TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.032
50	7921-0528-PD210-4B-427	11FOOTRILXH3ANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	1-LX045-046 VOLPE THOR LEGS.033
51	7921-0526-PD210-4B-425	11FOOTRILXH3ANYA	Right Foot Angular Dis. Y AK225Y	318	°	+	Dorsiflexion	1-LX045-046 VOLPE THOR LEGS.034

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070607

Channel Report Test Number 070607

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
52	7921-0527-PD210-4B-422	11FOOTRILXH3ANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	1-LX045-046 VOLPE THOR LEGS.035
53	01J02-F22	11FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Foot forward	1-LX045-046 VOLPE THOR LEGS.036
54	05G20-L06	11FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Foot rightward	1-LX045-046 VOLPE THOR LEGS.037
55	04J04I20-A17	11FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Foot down	1-LX045-046 VOLPE THOR LEGS.038
56	05H10-M20	13HEADCG00HFACXA	Head Accel X	1000	g	-	Rearward	3-416 HIII 5th FTSS.001
57	02I02I05-F11	13HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.002
58	05H06-L20	13HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.003
59	1716A-0440-FX	13NECKUP00HFFOXA	Neck Force X	8896	N	-	Head forward, chest rearward	3-416 HIII 5th FTSS.004
60	1716A-0440-FY	13NECKUP00HFFOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	3-416 HIII 5th FTSS.005
61	1716A-0440-FZ	13NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-416 HIII 5th FTSS.006
62	1716A-0440-MX	13NECKUP00HFMOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	3-416 HIII 5th FTSS.007
63	1716A-0440-MY	13NECKUP00HFMOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	3-416 HIII 5th FTSS.008
64	1716A-0440-MZ	13NECKUP00HFMOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	3-416 HIII 5th FTSS.009
65	P52155	13CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.010
66	P52160	13CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.011
67	P52152	13CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.012
68	14CB1-2897-416	13CHST0000HFDSXA	Chest Deflection X 516	100	mm	+	Forward	3-416 HIII 5th FTSS.013
69	P52161	13PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-416 HIII 5th FTSS.014
70	P52151	13PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.015
71	P52156	13PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.016
72	2121AJ-1517	13FEMRLL00HFFOZA	Left Femur Force Z #8	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.017
73	2121A-1421	13FEMRRL00HFFOZA	Right Femur Force Z 507	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.018
74	150-0121VR-028849	13KNSLLE00HFDSXA	Left Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	3-FLX013 &014 VRTC.001
75	4825J-97-FX	13TIBILULXHFFOXA	Left Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX013 &014 VRTC.002
76	4825J-97-FZ	13TIBILULXHFFOZA	Left Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX013 &014 VRTC.003
77	4825J-97-MX	13TIBILULXHFM0XA	Left Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.004
78	4825J-97-MY	13TIBILULXHFM0YA	Left Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.005
79	03D03D09-N02	13TIBILELXHACXA	Left Tibia Accel X	1000	g	+	Tibia forward	3-FLX013 &014 VRTC.006
80	01G25-N18	13TIBILELXHACYA	Left Tibia Accel Y	1000	g	+	Tibia right	3-FLX013 &014 VRTC.007

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Channel Report Test Number 070607

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
81	4826J-107-FX	13TIBILLXHFFOX A	Left Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX013 &014 VRTC.008
82	4826J-107-FY	13TIBILLXHFFOY A	Left Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX013 &014 VRTC.009
83	4826J-107-FZ	13TIBILLXHFFOZ A	Left Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX013 &014 VRTC.010
84	4826J-107-MX	13TIBILLXHFMOX A	Left Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.011
85	4826J-107-MY	13TIBILLXHFMOY A	Left Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.012
86	PD210-4B-7921-0381	13FOOTLELXHFANX A	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	3-FLX013 &014 VRTC.013
87	PD210-4B-7921-0374	13FOOTLELXHFANY A	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	3-FLX013 &014 VRTC.014
88	PD210-4B-7921-0373	13FOOTLELXHFANZ A	Left Foot Angular Dis. Z LX104Z	318	°	-	External rotation	3-FLX013 &014 VRTC.015
89	04J04I10-H10	13FOOTLELXHFCX A	Left Foot Accel X	1000	g	+	Foot forward	3-FLX013 &014 VRTC.016
90	98H13-F11	13FOOTLELXHFCY A	Left Foot Accel Y	1000	g	+	Foot rightward	3-FLX013 &014 VRTC.017
91	05107-Z23	13FOOTLELXHFCZ A	Left Foot Accel Z	1000	g	+	Foot down	3-FLX013 &014 VRTC.018
92	150-0121VL-028866	13KNSLR100HFDSX A	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	3-FLX013 &014 VRTC.019
93	4825J-96-FX	13TIBIRULXHFFOX A	Right Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX013 &014 VRTC.020
94	4825J-96-FZ	13TIBIRULXHFFOZ A	Right Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX013 &014 VRTC.021
95	4825J-96-MX	13TIBIRULXHFMOX A	Right Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.022
96	4825J-96-MY	13TIBIRULXHFMOY A	Right Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.023
97	05107-Z07	13TIBIRILXHFCX A	Right Tibia Accel X	1000	g	+	Tibia forward	3-FLX013 &014 VRTC.024
98	04J04I01-R11	13TIBIRILXHFCY A	Right Tibia Accel Y	1000	g	+	Tibia right	3-FLX013 &014 VRTC.025
99	4826J-104-FX	13TIBIRLLXHFFOX A	Right Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX013 &014 VRTC.026
100	4826J-104-FY	13TIBIRLLXHFFOY A	Right Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX013 &014 VRTC.027
101	4826J-104-FZ	13TIBIRLLXHFFOZ A	Right Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX013 &014 VRTC.028
102	4826J-104-MX	13TIBIRLLXHFMOX A	Right Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.029
103	4826J-104-MY	13TIBIRLLXHFMOY A	Right Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.030

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070607

Channel Report Test Number 070607

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
104	PD210-4B-7921-0372	13FOOTRILXHFANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	3-FLX013 &014 VRTC.031
105	PD210-4B-7921-0334	13FOOTRILXHFANYA	Right Foot Angular Dis. Y AK225Y	318	°	+	Dorsiflexion	3-FLX013 &014 VRTC.032
106	PD210-4B-7921-0336	13FOOTRILXHFANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	3-FLX013 &014 VRTC.033
107	03E03E18-F09	13FOOTRILXHFACXA	Right Foot Accel X	1000	g	+	Foot forward	3-FLX013 &014 VRTC.034
108	01G18-F05	13FOOTRILXHFACYA	Right Foot Accel Y	1000	g	+	Foot rightward	3-FLX013 &014 VRTC.035
109	02A18-N04	13FOOTRILXHFACZA	Right Foot Accel Z	1000	g	+	Foot down	3-FLX013 &014 VRTC.036
110	P48066	14CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
111	P54821	16CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
112	P54760	12ENGNTP0000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
113	P47681	12ENGNBO0000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	
114	P46612	13VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
115	P54832	11VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	-	Rearward	
116	p54490	12DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
117	p54457	11PEAC000000ACXA	Toe Pan Accelerator X-axis acceleration	2000	g	+	Forward	
118	P54765	11PEAC000000ACZA	Toe Pan Accelerator Z-axis acceleration	2000	g	-	Upward	
119	p48634	11VEHC000001ACXA	Toe Pan footrest X-axis acceleration	2000	g	+	Forward	
120	P46609	11VEHC000001ACZA	Toe Pan footrest Z-axis acceleration	2000	g	-	Upward	
121	P47730	15TUNNCY0000ACXA	Rear Tunnel center X-axis acceleration	1000	g	+	Forward	
122	P54196	10VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	-	Rearward	
123	P50283	10VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	+	Rightward	
124	P54288	10VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
125	P54544	18VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
126	P50954	18VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
127	p47393	18VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	+	Downward	
128	K1506281A	11SEBA0000B5DS0A	Driver lap belt spool (S3)	1270	mm	+	Tension	
129	K1506280A	11SEBA0000B3DS0A	Driver shoulder belt spool and retraction (SP08)	1270	mm	+	Tension	
130	K1506282A	13SEBA0000B5DS0A	RF Pass lap belt spool (SP03)	1270	mm	+	Tension	
131	A23306	13SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction (SP04)	1524	mm	+	Tension	
132	ABFire1	11AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND (IP 54)	5	V	+	Bipolar	
133	ABFire2	11AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND (IP 07)	5	V	+	Bipolar	
134	ABFire3	13AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND (IP 25)	5	V	+	Bipolar	
135	ABFire4	13AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND (IP 28)	5	V	+	Bipolar	

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Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
1	21HEADCG00H3ACXA	Target Vehicle Driver Head X-Axis Acceleration	1000	+	yes	1000
2	21HEADCG00H3ACYA	Target Vehicle Driver Head Y-Axis Acceleration	1000	+	yes	1000
3	21HEADCG00H3ACZA	Target Vehicle Driver Head Z-Axis Acceleration	1000	+	yes	1000
3A	21HEADCG00H3ACRA	Target Vehicle Driver Head Resultant Acceleration	1000			
4	21NECKUP00H3FOXA	Target Vehicle Driver Neck X-Axis Force	1000	+	yes	8896
5	21NECKUP00H3FOYA	Target Vehicle Driver Neck Y-Axis Force	1000	+	yes	8896
6	21NECKUP00H3FOZA	Target Vehicle Driver Neck Z-Axis Force	1000	+	yes	13344
7	21NECKUP00H3MOXA	Target Vehicle Driver Neck Moment About X Axis	600	+	yes	282.5
8	21NECKUP00H3MOYA	Target Vehicle Driver Neck Moment About Y Axis	600	+	yes	282.5
9	21NECKUP00H3MOZA	Target Vehicle Driver Neck Moment About Z Axis	600	+	yes	282.5
10	21CHSTCG00H3ACXA	Target Vehicle Driver Chest X-Axis Acceleration	180	+	yes	1000
11	21CHSTCG00H3ACYA	Target Vehicle Driver Chest Y-Axis Acceleration	180	+	yes	1000
12	21CHSTCG00H3ACZA	Target Vehicle Driver Chest Z-Axis Acceleration	180	+	yes	1000
12A	21CHSTCG00H3ACRA	Target Vehicle Driver Chest Resultant Acceleration	180			
13	21CHST0000H3DSXA	Target Vehicle Driver Chest X-Axis Displacement	600	+	yes	100
14	21PELVCG00H3ACXA	Target Vehicle Driver Pelvis X-Axis Acceleration	1000	+	yes	1000
15	21PELVCG00H3ACYA	Target Vehicle Driver Pelvis Y-Axis Acceleration	1000	+	yes	1000
16	21PELVCG00H3ACZA	Target Vehicle Driver Pelvis Z-Axis Acceleration	1000	+	yes	1000
16A	21PELVCG00H3ACRA	Target Vehicle Driver Pelvis Resultant Acceleration	1000			
17	21FEMRLL00H3FOZA	Target Vehicle Driver Left Femur Z-Axis Force	600	+	yes	13344
18	21FEMRRL00H3FOXA	Target Vehicle Driver Right Femur Z-Axis Force	600	+	yes	13344
19	21KNSLLE00H3DSXA	Target Vehicle Driver Left Knee X-Axis Displacement	180	+	yes	40
20	21TIBILULXH3FOXA	Target Vehicle Driver Left Upper Tibia X-Axis Force	600	+	yes	11120.5
21	21TIBILULXH3FOZA	Target Vehicle Driver Left Upper Tibia Z-Axis Force	600	+	yes	11120.5
22	21TIBILULXH3MOXA	Target Vehicle Driver Left Upper Tibia Moment About X Axis	600	+	yes	395.4
23	21TIBILULXH3MOYA	Target Vehicle Driver Left Upper Tibia Moment About Y Axis	600	+	yes	395.4
24	21TIBILELXH3ACXA	Target Vehicle Driver Left Tibia X-Axis Acceleration	1000	+	yes	1000
25	21TIBILELXH3ACYA	Target Vehicle Driver Left Tibia Y-Axis Acceleration	1000	+	yes	1000
26	21TIBILLLXH3FOXA	Target Vehicle Driver Left Lower Tibia X-Axis Force	600	+	yes	11120.5
27	21TIBILLLXH3FOYA	Target Vehicle Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120.5
28	21TIBILLLXH3FOZA	Target Vehicle Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120.5
29	21TIBILLLXH3MOXA	Target Vehicle Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
30	21TIBILLLXH3MOYA	Target Vehicle Driver Left Lower Tibia Moment About Y Axis	600	+	yes	395.4
31	21FOOTLELXH3ANXA	Target Vehicle Driver Left Foot X-Axis Angular Displacement	180	+	no	318
32	21FOOTLELXH3ANYA	Target Vehicle Driver Left Foot Y-Axis Angular Displacement	180	+	no	318
33	21FOOTLELXH3ANZA	Target Vehicle Driver Left Foot Z-Axis Angular Displacement	180	+	no	318
34	21FOOTLELXH3ACXA	Target Vehicle Driver Left Foot X-Axis Acceleration	1000	+	yes	1000

Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter	Class	Flip	Zero	Full Scale
35	21FOOTLELXH3ACYA	Target Vehicle Driver Left Foot Y-Axis Acceleration	1000		+	yes	1000
36	21FOOTLELXH3ACZA	Target Vehicle Driver Left Foot Z-Axis Acceleration	1000		+	yes	1000
36A	21FOOTLELXH3ACRA	Target Vehicle Driver Left Foot Resultant Acceleration	1000				
37	21KNSLR100H3DSXA	Target Vehicle Driver Right Knee X-Axis Displacement	180		+	yes	40
38	21TIBIRULXH3FOXA	Target Vehicle Driver Right Upper Tibia X-Axis Force	600		+	yes	11120.5
39	21TIBIRULXH3FOZA	Target Vehicle Driver Right Upper Tibia Z-Axis Force	600		+	yes	11120.5
40	21TIBIRULXH3MOXA	Target Vehicle Driver Right Upper Tibia Moment About X Axis	600		+	yes	395.4
41	21TIBIRULXH3MOYA	Target Vehicle Driver Right Upper Tibia Moment About Y Axis	600		+	yes	395.4
42	21TIBIRILXH3ACXA	Target Vehicle Driver Right Tibia X-Axis Acceleration	1000		+	yes	1000
43	21TIBIRILXH3ACYA	Target Vehicle Driver Right Tibia Y-Axis Acceleration	1000		+	yes	1000
44	21TIBIRLLXH3FOXA	Target Vehicle Driver Right Lower Tibia X-Axis Force	600		+	yes	11120.5
45	21TIBIRLLXH3FOYA	Target Vehicle Driver Right Lower Tibia Y-Axis Force	600		+	yes	11120.5
46	21TIBIRLLXH3FOZA	Target Vehicle Driver Right Lower Tibia Z-Axis Force	600		+	yes	11120.5
47	21TIBIRLLXH3MOXA	Target Vehicle Driver Right Lower Tibia Moment About X Axis	600		+	yes	395.4
48	21TIBIRLLXH3MOYA	Target Vehicle Driver Right Lower Tibia Moment About Y Axis	600		+	yes	395.4
49	21FOOTRILXH3ANXA	Target Vehicle Driver Right Foot X-Axis Angular Displacement	180		+	no	318
50	21FOOTRILXH3ANYA	Target Vehicle Driver Right Foot Y-Axis Angular Displacement	180		+	no	318
51	21FOOTRILXH3ANZA	Target Vehicle Driver Right Foot Z-Axis Angular Displacement	180		+	no	318
52	21FOOTRILXH3ACXA	Target Vehicle Driver Right Foot X-Axis Acceleration	1000		+	yes	1000
53	21FOOTRILXH3ACYA	Target Vehicle Driver Right Foot Y-Axis Acceleration	1000		+	yes	1000
54	21FOOTRILXH3ACZA	Target Vehicle Driver Right Foot Z-Axis Acceleration	1000		+	yes	1000
54A	21FOOTRILXH3ACRA	Target Vehicle Driver Right Foot Resultant Acceleration	1000				
55	23HEADCG00HFACXA	Target Vehicle Passenger Head X-Axis Acceleration	1000		+	yes	1000
56	23HEADCG00HFACYA	Target Vehicle Passenger Head Y-Axis Acceleration	1000		+	yes	1000
57	23HEADCG00HFACZA	Target Vehicle Passenger Head Z-Axis Acceleration	1000		+	yes	1000
57A	23HEADCG00HFACRA	Target Vehicle Passenger Head Resultant Acceleration	1000				
58	23NECKUP00HFFOXA	Target Vehicle Passenger Neck X-Axis Force	1000		+	yes	8896
59	23NECKUP00HFFOYA	Target Vehicle Passenger Neck Y-Axis Force	1000		+	yes	8896
60	23NECKUP00HFFOZA	Target Vehicle Passenger Neck Z-Axis Force	1000		+	yes	13344
61	23NECKUP00HFMOXA	Target Vehicle Passenger Neck Moment About X Axis	600		+	yes	282.5
62	23NECKUP00HFMOYA	Target Vehicle Passenger Neck Moment About Y Axis	600		+	yes	282.5
63	23NECKUP00HFMOZA	Target Vehicle Passenger Neck Moment About Z Axis	600		+	yes	282.5
64	23CHSTCG00HFACXA	Target Vehicle Passenger Chest X-Axis Acceleration	180		+	yes	1000
65	23CHSTCG00HFACYA	Target Vehicle Passenger Chest Y-Axis Acceleration	180		+	yes	1000
66	23CHSTCG00HFACZA	Target Vehicle Passenger Chest Z-Axis Acceleration	180		+	yes	1000
66A	23CHSTCG00HFACRA	Target Vehicle Passenger Chest Resultant Acceleration	180				
67	23CHST0000HFDSXA	Target Vehicle Passenger Chest X-Axis Displacement	600		+	yes	100

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070607

Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
68	23PELVCG00HFACXA	Target Vehicle Passenger Pelvis X-Axis Acceleration	1000	+	yes	1000
69	23PELVCG00HFACYA	Target Vehicle Passenger Pelvis Y-Axis Acceleration	1000	+	yes	1000
70	23PELVCG00HFACZA	Target Vehicle Passenger Pelvis Z-Axis Acceleration	1000	+	yes	1000
70A	23PELVCG00HFACRA	Target Vehicle Passenger Pelvis Resultant Acceleration	1000			
71	23FEMRLL00HFFOZA	Target Vehicle Passenger Left Femur Z-Axis Force	600	+	yes	13344
72	23FEMRRL00HFFOZA	Target Vehicle Passenger Right Femur Z-Axis Force	600	+	yes	13344
73	23KNSLLE00HFDSXA	Target Vehicle Passenger Left Knee X-Axis Displacement	180	+	yes	40
74	23TIBILULXHFFOXA	Target Vehicle Passenger Left Upper Tibia X-Axis Force	600	+	yes	8896
75	23TIBILULXHFFOZA	Target Vehicle Passenger Left Upper Tibia Z-Axis Force	600	+	yes	8896
76	23TIBILULXHFMOMA	Target Vehicle Passenger Left Upper Tibia Moment About X Axis	600	+	yes	282.5
77	23TIBILULXHFMOMA	Target Vehicle Passenger Left Upper Tibia Moment About Y Axis	600	+	yes	282.5
78	23TIBILELXHFAFAXA	Target Vehicle Passenger Left Tibia X-Axis Acceleration	1000	+	yes	1000
79	23TIBILELXHFAFYA	Target Vehicle Passenger Left Tibia Y-Axis Acceleration	1000	+	yes	1000
80	23TIBILLLXHFFOXA	Target Vehicle Passenger Left Lower Tibia X-Axis Force	600	+	yes	8896
81	23TIBILLLXHFFOYA	Target Vehicle Passenger Left Lower Tibia Y-Axis Force	600	+	yes	8896
82	23TIBILLLXHFFOZA	Target Vehicle Passenger Left Lower Tibia Z-Axis Force	600	+	yes	8896
83	23TIBILLLXHFMOMA	Target Vehicle Passenger Left Lower Tibia Moment About X Axis	600	+	yes	282.5
84	23TIBILLLXHFMOMA	Target Vehicle Passenger Left Lower Tibia Moment About Y Axis	600	+	yes	282.5
85	23FOOTLELXHFFANXA	Target Vehicle Passenger Left Foot X-Axis Angular Displacement	180	+	no	318
86	23FOOTLELXHFFANYA	Target Vehicle Passenger Left Foot Y-Axis Angular Displacement	180	+	no	318
87	23FOOTLELXHFFANZA	Target Vehicle Passenger Left Foot Z-Axis Angular Displacement	180	+	no	318
88	23FOOTLELXHFAFAXA	Target Vehicle Passenger Left Foot X-Axis Acceleration	1000	+	yes	1000
89	23FOOTLELXHFAFYA	Target Vehicle Passenger Left Foot Y-Axis Acceleration	1000	+	yes	1000
90	23FOOTLELXHFAFACZA	Target Vehicle Passenger Left Foot Z-Axis Acceleration	1000	+	yes	1000
90A	23FOOTLELXHFAFACRA	Target Vehicle Passenger Left Foot Resultant Acceleration	1000			
91	23KNSLRIO0HFDSXA	Target Vehicle Passenger Right Knee X-Axis Displacement	180	+	yes	40
92	23TIBIRULXHFFOXA	Target Vehicle Passenger Right Upper Tibia X-Axis Force	600	+	yes	8896
93	23TIBIRULXHFFOZA	Target Vehicle Passenger Right Upper Tibia Z-Axis Force	600	+	yes	8896
94	23TIBIRULXHFMOMA	Target Vehicle Passenger Right Upper Tibia Moment About X Axis	600	+	yes	282.5
95	23TIBIRULXHFMOMA	Target Vehicle Passenger Right Upper Tibia Moment About Y Axis	600	+	yes	282.5
96	23TIBIRILXHFAFAXA	Target Vehicle Passenger Right Tibia X-Axis Acceleration	1000	+	yes	1000
97	23TIBIRILXHFAFYA	Target Vehicle Passenger Right Tibia Y-Axis Acceleration	1000	+	yes	1000
98	23TIBIRLLXHFFOXA	Target Vehicle Passenger Right Lower Tibia X-Axis Force	600	+	yes	8896
99	23TIBIRLLXHFFOYA	Target Vehicle Passenger Right Lower Tibia Y-Axis Force	600	+	yes	8896
100	23TIBIRLLXHFFOZA	Target Vehicle Passenger Right Lower Tibia Z-Axis Force	600	+	yes	8896
101	23TIBIRLLXHFMOMA	Target Vehicle Passenger Right Lower Tibia Moment About X Axis	600	+	yes	282.5
102	23TIBIRLLXHFMOMA	Target Vehicle Passenger Right Lower Tibia Moment About Y Axis	600	+	yes	282.5

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Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
103	23FOOTRILXHFANXA	Target Vehicle Passenger Right Foot X-Axis Angular Displacement	180	+	no	318
104	23FOOTRILXHFANYA	Target Vehicle Passenger Right Foot Y-Axis Angular Displacement	180	+	no	317
105	23FOOTRILXHFANZA	Target Vehicle Passenger Right Foot Z-Axis Angular Displacement	180	+	no	318
106	23FOOTRILXHFACXA	Target Vehicle Passenger Right Foot X-Axis Acceleration	1000	+	yes	1000
107	23FOOTRILXHFACYA	Target Vehicle Passenger Right Foot Y-Axis Acceleration	1000	+	yes	1000
108	23FOOTRILXHFACZA	Target Vehicle Passenger Right Foot Z-Axis Acceleration	1000	+	yes	1000
108A	23FOOTRILXHFACRA	Target Vehicle Passenger Right Foot Resultant Acceleration	1000			
109	24CRME000000ACXA	Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
110	26CRME000000ACXA	Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
111	22ENGNT000000ACXA	Target Vehicle Top of Engine X-Axis Acceleration	60	+	yes	2000
112	22ENGNB000000ACXA	Target Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000
113	23VEHCRI000000ACXA	Target Vehicle Right Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
114	21VEHCLE000000ACXA	Target Vehicle Left Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
115	22DASH000000ACXA	Target Vehicle Dash Center X-Axis Acceleration	60	+	yes	1500
116	21PEAC000000ACXA	Target Vehicle Toe Pan Accelerator X-Axis Acceleration	60	+	yes	2000
117	21PEAC000000ACZA	Target Vehicle Toe Pan Accelerator Z-Axis Acceleration	60	+	yes	2000
118	21VEHC000001ACXA	Target Vehicle Toe Pan Footrest X-Axis Acceleration	60	+	yes	2000
119	21VEHC000001ACZA	Target Vehicle Toe Pan Footrest Z-Axis Acceleration	60	+	yes	2000
120	25TUNNCY000000ACXA	Target Vehicle Rear Tunnel Center X-Axis Acceleration	60	+	yes	1000
121	20VEHCCG000000ACXA	Target Vehicle CG X-Axis Acceleration	60	+	yes	1500
121A	20VEHCCG000000VEXC	Target Vehicle CG X-Axis Velocity	180			
121B	20VEHCCG000000DCXC	Target Vehicle CG X-Axis Displacement	180			
122	20VEHCCG000000ACYA	Target Vehicle CG Y-Axis Acceleration	60	+	yes	1500
122A	20VEHCCG000000VEYC	Target Vehicle CG Y-Axis Velocity	180			
122B	20VEHCCG000000DCYC	Target Vehicle CG Y-Axis Displacement	180			
123	20VEHCCG000000ACZA	Target Vehicle CG Z-Axis Acceleration	60	+	yes	1500
123A	20VEHCCG000000VEZC	Target Vehicle CG Z-Axis Velocity	180			
123B	20VEHCCG000000DCZC	Target Vehicle CG Z-Axis Displacement	180			
123C	20VEHCCG000000ACRA	Target Vehicle CG Resultant Acceleration	60			
124	28VEHC000000ACXA	Target Vehicle Rear Deck X-Axis Acceleration	60	+	yes	1000
125	28VEHC000000ACYA	Target Vehicle Rear Deck Y-Axis Acceleration	60	+	yes	1000
126	28VEHC000000ACZA	Target Vehicle Rear Deck Z-Axis Acceleration	60	+	yes	1000
126A	28VEHC000000ACRA	Target Vehicle Rear Deck Resultant Acceleration	60			
127	21SEBA0000B5DS0A	Target Vehicle Driver Lap Belt Spool	1000	+	yes	750
128	21SEBA0000B3DS0A	Target Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	750
129	23SEBA0000B5DS0A	Target Vehicle Passenger Lap Belt Spool	1000	+	yes	750
130	23SEBA0000B3DS0A	Target Vehicle Passenger Shoulder Belt Spool and Retraction	1000	+	yes	635

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Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
131	21AIRBFR0100EV0A	Target Vehicle Driver Front Airbag 1 Inductor	1000	+	no	5
132	21AIRBFR0200EV0A	Target Vehicle Driver Front Airbag 2 Inductor	1000	+	no	5
133	23AIRBFR0100EV0A	Target Vehicle Passenger Front Airbag 1 Inductor	1000	+	no	5
134	23AIRBFR0200EV0A	Target Vehicle Passenger Front Airbag 2 Inductor	1000	+	no	5
135	11HEADCG00H3ACXA	Bullet Vehicle Driver Head X-Axis Acceleration	1000	+	yes	1000
136	11HEADCG00H3ACYA	Bullet Vehicle Driver Head Y-Axis Acceleration	1000	+	yes	1000
137	11HEADCG00H3ACZA	Bullet Vehicle Driver Head Z-Axis Acceleration	1000	+	yes	1000
137A	11HEADCG00H3ACRA	Bullet Vehicle Driver Head Resultant Acceleration	1000			
138	11NECKUP00H3FOXA	Bullet Vehicle Driver Neck X-Axis Force	1000	+	yes	8896
139	11NECKUP00H3FOYA	Bullet Vehicle Driver Neck Y-Axis Force	1000	+	yes	8896
140	11NECKUP00H3FOZA	Bullet Vehicle Driver Neck Z-Axis Force	1000	+	yes	13344
141	11NECKUP00H3MOXA	Bullet Vehicle Driver Neck Moment About X Axis	600	+	yes	282.5
142	11NECKUP00H3MOYA	Bullet Vehicle Driver Neck Moment About Y Axis	600	+	yes	282.5
143	11NECKUP00H3MOZA	Bullet Vehicle Driver Neck Moment About Z Axis	600	+	yes	282.5
144	11CHSTCG00H3ACXA	Bullet Vehicle Driver Chest X-Axis Acceleration	180	+	yes	1000
145	11CHSTCG00H3ACYA	Bullet Vehicle Driver Chest Y-Axis Acceleration	180	+	yes	1000
146	11CHSTCG00H3ACZA	Bullet Vehicle Driver Chest Z-Axis Acceleration	180	+	yes	1000
146A	11CHSTCG00H3ACRA	Bullet Vehicle Driver Chest Resultant Acceleration	180			
147	11CHST0000H3DSXA	Bullet Vehicle Driver Chest X-Axis Displacement	600	+	yes	100
148	11PELVCG00H3ACXA	Bullet Vehicle Driver Pelvis X-Axis Acceleration	1000	+	yes	1000
149	11PELVCG00H3ACYA	Bullet Vehicle Driver Pelvis Y-Axis Acceleration	1000	+	yes	1000
150	11PELVCG00H3ACZA	Bullet Vehicle Driver Pelvis Z-Axis Acceleration	1000	+	yes	1000
150A	11PELVCG00H3ACRA	Bullet Vehicle Driver Pelvis Resultant Acceleration	1000			
151	11FEMRLL00H3FOZA	Bullet Vehicle Driver Left Femur Z-Axis Force	600	+	yes	13344
152	11FEMRRL00H3FOZA	Bullet Vehicle Driver Right Femur Z-Axis Force	600	+	yes	13344
153	11KNSLLE00H3DSXA	Bullet Vehicle Driver Left Knee X-Axis Displacement	180	+	yes	33
154	11TIBILULXH3FOXA	Bullet Vehicle Driver Left Upper Tibia X-Axis Force	600	+	yes	11120.5
155	11TIBILULXH3FOZA	Bullet Vehicle Driver Left Upper Tibia Z-Axis Force	600	+	yes	11120.5
156	11TIBILULXH3MOXA	Bullet Vehicle Driver Left Upper Tibia Moment About X Axis	600	+	yes	395.4
157	11TIBILULXH3MOYA	Bullet Vehicle Driver Left Upper Tibia Moment About Y Axis	600	+	yes	395.4
158	11TIBILELXH3ACXA	Bullet Vehicle Driver Left Tibia X-Axis Acceleration	1000	+	yes	1000
159	11TIBILELXH3ACYA	Bullet Vehicle Driver Left Tibia Y-Axis Acceleration	1000	+	yes	1000
160	11TIBILLLXH3FOXA	Bullet Vehicle Driver Left Lower Tibia X-Axis Force	600	+	yes	11120.5
161	11TIBILLLXH3FOYA	Bullet Vehicle Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120.5
162	11TIBILLLXH3FOZA	Bullet Vehicle Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120.5
163	11TIBILLLXH3MOXA	Bullet Vehicle Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
164	11TIBILLLXH3MOYA	Bullet Vehicle Driver Left Lower Tibia Moment About Y Axis	600	+	yes	395.4

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Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
165	11FOOTLELXH3ANXA	Bullet Vehicle Driver Left Foot X-Axis Angular Displacement	180	+	no	318
166	11FOOTLELXH3ANYA	Bullet Vehicle Driver Left Foot Y-Axis Angular Displacement	180	+	no	318
167	11FOOTLELXH3ANZA	Bullet Vehicle Driver Left Foot Z-Axis Angular Displacement	180	+	no	318
168	11FOOTLELXH3ACXA	Bullet Vehicle Driver Left Foot X-Axis Acceleration	1000	+	yes	1000
169	11FOOTLELXH3ACYA	Bullet Vehicle Driver Left Foot Y-Axis Acceleration	1000	+	yes	1000
170	11FOOTLELXH3ACZA	Bullet Vehicle Driver Left Foot Z-Axis Acceleration	1000	+	yes	1000
170A	11FOOTLELXH3ACRA	Bullet Vehicle Driver Left Foot Resultant Acceleration	1000			
171	11KNSLRI00H3DSXA	Bullet Vehicle Driver Right Knee X-Axis Displacement	180	+	yes	40
172	11TIBIRULXH3FOXA	Bullet Vehicle Driver Right Upper Tibia X-Axis Force	600	+	yes	11120.5
173	11TIBIRULXH3FOZA	Bullet Vehicle Driver Right Upper Tibia Z-Axis Force	600	+	yes	11120.5
174	11TIBIRULXH3MOXA	Bullet Vehicle Driver Right Upper Tibia Moment About X Axis	600	+	yes	395.4
175	11TIBIRULXH3MOYA	Bullet Vehicle Driver Right Upper Tibia Moment About Y Axis	600	+	yes	395.4
176	11TIBIRILXH3ACXA	Bullet Vehicle Driver Right Tibia X-Axis Acceleration	1000	+	yes	1000
177	11TIBIRILXH3ACYA	Bullet Vehicle Driver Right Tibia Y-Axis Acceleration	1000	+	yes	1000
178	11TIBIRLLXH3FOXA	Bullet Vehicle Driver Right Lower Tibia X-Axis Force	600	+	yes	11120.5
179	11TIBIRLLXH3FOYA	Bullet Vehicle Driver Right Lower Tibia Y-Axis Force	600	+	yes	11120.5
180	11TIBIRLLXH3FOZA	Bullet Vehicle Driver Right Lower Tibia Z-Axis Force	600	+	yes	11120.5
181	11TIBIRLLXH3MOXA	Bullet Vehicle Driver Right Lower Tibia Moment About X Axis	600	+	yes	395.4
182	11TIBIRLLXH3MOYA	Bullet Vehicle Driver Right Lower Tibia Moment About Y Axis	600	+	yes	395.4
183	11FOOTRILXH3ANXA	Bullet Vehicle Driver Right Foot X-Axis Angular Displacement	180	+	no	318
184	11FOOTRILXH3ANYA	Bullet Vehicle Driver Right Foot Y-Axis Angular Displacement	180	+	no	318
185	11FOOTRILXH3ANZA	Bullet Vehicle Driver Right Foot Z-Axis Angular Displacement	180	+	no	318
186	11FOOTRILXH3ACXA	Bullet Vehicle Driver Right Foot X-Axis Acceleration	1000	+	yes	1000
187	11FOOTRILXH3ACYA	Bullet Vehicle Driver Right Foot Y-Axis Acceleration	1000	+	yes	1000
188	11FOOTRILXH3ACZA	Bullet Vehicle Driver Right Foot Z-Axis Acceleration	1000	+	yes	1000
188A	11FOOTRILXH3ACRA	Bullet Vehicle Driver Right Foot Resultant Acceleration	1000			
189	13HEADCG00HFACXA	Bullet Vehicle Passenger Head X-Axis Acceleration	1000	+	yes	1000
190	13HEADCG00HFACYA	Bullet Vehicle Passenger Head Y-Axis Acceleration	1000	+	yes	1000
191	13HEADCG00HFACZA	Bullet Vehicle Passenger Head Z-Axis Acceleration	1000	+	yes	1000
191A	13HEADCG00HFACRA	Bullet Vehicle Passenger Head Resultant Acceleration	1000			
192	13NECKUP00HFFOXA	Bullet Vehicle Passenger Neck X-Axis Force	1000	+	yes	8896
193	13NECKUP00HFFOYA	Bullet Vehicle Passenger Neck Y-Axis Force	1000	+	yes	8896
194	13NECKUP00HFFOZA	Bullet Vehicle Passenger Neck Z-Axis Force	1000	+	yes	13344
195	13NECKUP00HFMOXA	Bullet Vehicle Passenger Neck Moment About X Axis	600	+	yes	282.5
196	13NECKUP00HFMOYA	Bullet Vehicle Passenger Neck Moment About Y Axis	600	+	yes	282.5
197	13NECKUP00HFMOZA	Bullet Vehicle Passenger Neck Moment About Z Axis	600	+	yes	282.5
198	13CHSTCG00HFACXA	Bullet Vehicle Passenger Chest X-Axis Acceleration	180	+	yes	1000

Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
199	13CHSTCG00HFACYA	Bullet Vehicle Passenger Chest Y-Axis Acceleration	180	+	yes	1000
200	13CHSTCG00HFACZA	Bullet Vehicle Passenger Chest Z-Axis Acceleration	180	+	yes	1000
200A	13CHSTCG00HFACRA	Bullet Vehicle Passenger Chest Resultant Acceleration	180			
201	13CHST0000HFDSXA	Bullet Vehicle Passenger Chest X-Axis Displacement	600	+	yes	100
202	13PELVCG00HFACXA	Bullet Vehicle Passenger Pelvis X-Axis Acceleration	1000	+	yes	1000
203	13PELVCG00HFACYA	Bullet Vehicle Passenger Pelvis Y-Axis Acceleration	1000	+	yes	1000
204	13PELVCG00HFACZA	Bullet Vehicle Passenger Pelvis Z-Axis Acceleration	1000	+	yes	1000
204A	13PELVCG00HFACRA	Bullet Vehicle Passenger Pelvis Resultant Acceleration	1000			
205	13FEMRLL00HFFOZA	Bullet Vehicle Passenger Left Femur Z-Axis Force	600	+	yes	13344
206	13FEMRRL00HFFOZA	Bullet Vehicle Passenger Right Femur Z-Axis Force	600	+	yes	13344
207	13KNSLLE00HFDSXA	Bullet Vehicle Passenger Left Knee X-Axis Displacement	180	+	yes	40
208	13TIBILULXHFFOXA	Bullet Vehicle Passenger Left Upper Tibia X-Axis Force	600	+	yes	8896
209	13TIBILULXHFFOZA	Bullet Vehicle Passenger Left Upper Tibia Z-Axis Force	600	+	yes	8896
210	13TIBILULXHFMOMA	Bullet Vehicle Passenger Left Upper Tibia Moment About X Axis	600	+	yes	282.5
211	13TIBILULXHFMOMA	Bullet Vehicle Passenger Left Upper Tibia Moment About Y Axis	600	+	yes	282.5
212	13TIBILELXHFCAXA	Bullet Vehicle Passenger Left Tibia X-Axis Acceleration	1000	+	yes	1000
213	13TIBILELXHFCAYA	Bullet Vehicle Passenger Left Tibia Y-Axis Acceleration	1000	+	yes	1000
214	13TIBILLLXHFFOXA	Bullet Vehicle Passenger Left Lower Tibia X-Axis Force	600	+	yes	8896
215	13TIBILLLXHFFOYA	Bullet Vehicle Passenger Left Lower Tibia Y-Axis Force	600	+	yes	8896
216	13TIBILLLXHFFOZA	Bullet Vehicle Passenger Left Lower Tibia Z-Axis Force	600	+	yes	8896
217	13TIBILLLXHFMOMA	Bullet Vehicle Passenger Left Lower Tibia Moment About X Axis	600	+	yes	282.5
218	13TIBILLLXHFMOMA	Bullet Vehicle Passenger Left Lower Tibia Moment About Y Axis	600	+	yes	282.5
219	13FOOTLELXHFXA	Bullet Vehicle Passenger Left Foot X-Axis Angular Displacement	180	+	no	318
220	13FOOTLELXHFXA	Bullet Vehicle Passenger Left Foot Y-Axis Angular Displacement	180	+	no	318
221	13FOOTLELXHFXA	Bullet Vehicle Passenger Left Foot Z-Axis Angular Displacement	180	+	no	318
222	13FOOTLELXHFCAXA	Bullet Vehicle Passenger Left Foot X-Axis Acceleration	1000	+	yes	1000
223	13FOOTLELXHFCAYA	Bullet Vehicle Passenger Left Foot Y-Axis Acceleration	1000	+	yes	1000
224	13FOOTLELXHFCAZA	Bullet Vehicle Passenger Left Foot Z-Axis Acceleration	1000	+	yes	1000
224A	13FOOTLELXHFCARA	Bullet Vehicle Passenger Left Foot Resultant Acceleration	1000			
225	13KNSLRI00HFDSXA	Bullet Vehicle Passenger Right Knee X-Axis Displacement	180	+	yes	40
226	13TIBIRULXHFFOXA	Bullet Vehicle Passenger Right Upper Tibia X-Axis Force	600	+	yes	8896
227	13TIBIRULXHFFOZA	Bullet Vehicle Passenger Right Upper Tibia Z-Axis Force	600	+	yes	8896
228	13TIBIRULXHFMOMA	Bullet Vehicle Passenger Right Upper Tibia Moment About X Axis	600	+	yes	282.5
229	13TIBIRULXHFMOMA	Bullet Vehicle Passenger Right Upper Tibia Moment About Y Axis	600	+	yes	282.5
230	13TIBIRILXHFCAXA	Bullet Vehicle Passenger Right Tibia X-Axis Acceleration	1000	+	yes	1000
231	13TIBIRILXHFCAYA	Bullet Vehicle Passenger Right Tibia Y-Axis Acceleration	1000	+	yes	1000
232	13TIBIRILLXHFFOXA	Bullet Vehicle Passenger Right Lower Tibia X-Axis Force	600	+	yes	8896

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Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
233	13TIBIRLLXHFFOYA	Bullet Vehicle Passenger Right Lower Tibia Y-Axis Force	600	+	yes	8896
234	13TIBIRLLXHFFOZA	Bullet Vehicle Passenger Right Lower Tibia Z-Axis Force	600	+	yes	8896
235	13TIBIRLLXHFMOMA	Bullet Vehicle Passenger Right Lower Tibia Moment About X Axis	600	+	yes	282.5
236	13TIBIRLLXHFMOMA	Bullet Vehicle Passenger Right Lower Tibia Moment About Y Axis	600	+	yes	282.5
237	13FOOTRILXHFANXA	Bullet Vehicle Passenger Right Foot X-Axis Angular Displacement	180	+	no	318
238	13FOOTRILXHFANYA	Bullet Vehicle Passenger Right Foot Y-Axis Angular Displacement	180	+	no	318
239	13FOOTRILXHFANZA	Bullet Vehicle Passenger Right Foot Z-Axis Angular Displacement	180	+	no	318
240	13FOOTRILXHFACXA	Bullet Vehicle Passenger Right Foot X-Axis Acceleration	1000	+	yes	1000
241	13FOOTRILXHFACYA	Bullet Vehicle Passenger Right Foot Y-Axis Acceleration	1000	+	yes	1000
242	13FOOTRILXHFACZA	Bullet Vehicle Passenger Right Foot Z-Axis Acceleration	1000	+	yes	1000
242A	13FOOTRILXHFACRA	Bullet Vehicle Passenger Right Foot Resultant Acceleration	1000			
243	14CRME000000ACXA	Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
244	16CRME000000ACXA	Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
245	12ENGNT000000ACXA	Bullet Vehicle Top of Engine X-Axis Acceleration	60	+	yes	2000
246	12ENGNB000000ACXA	Bullet Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000
247	13VEHCRI0000ACXA	Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
248	11VEHCLE0000ACXA	Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
249	12DASH000000ACXA	Bullet Vehicle Dash Center X-Axis Acceleration	60	+	yes	1500
250	11PEAC000000ACXA	Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration	60	+	yes	2000
251	11PEAC000000ACZA	Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration	60	+	yes	2000
252	11VEHC000001ACXA	Bullet Vehicle Toe Pan Footrest X-Axis Acceleration	60	+	yes	2000
253	11VEHC000001ACZA	Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration	60	+	yes	2000
254	15TUNNCY0000ACXA	Bullet Vehicle Rear Tunnel Center X-Axis Acceleration	60	+	yes	1000
255	10VEHCCG0000ACXA	Bullet Vehicle CG X-Axis Acceleration	60	+	yes	1500
255A	10VEHCCG0000VEXC	Bullet Vehicle CG X-Axis Velocity	180			
255B	10VEHCCG0000DCXC	Bullet Vehicle CG X-Axis Displacement	180			
256	10VEHCCG0000ACYA	Bullet Vehicle CG Y-Axis Acceleration	60	+	yes	1500
256A	10VEHCCG0000VEYC	Bullet Vehicle CG Y-Axis Velocity	180			
256B	10VEHCCG0000DCYC	Bullet Vehicle CG Y-Axis Displacement	180			
257	10VEHCCG0000ACZA	Bullet Vehicle CG Z-Axis Acceleration	60	+	yes	1500
257A	10VEHCCG0000VEZC	Bullet Vehicle CG Z-Axis Velocity	180			
257B	10VEHCCG0000DCZC	Bullet Vehicle CG Z-Axis Displacement	180			
257C	10VEHCCG0000ACRA	Bullet Vehicle CG Resultant Acceleration	60			
258	18VEHC000000ACXA	Bullet Vehicle Rear Deck X-Axis Acceleration	60	+	yes	1000
259	18VEHC000000ACYA	Bullet Vehicle Rear Deck Y-Axis Acceleration	60	+	yes	1000
260	18VEHC000000ACZA	Bullet Vehicle Rear Deck Z-Axis Acceleration	60	+	yes	1000
260A	18VEHC000000ACRA	Bullet Vehicle Rear Deck Resultant Acceleration	60			

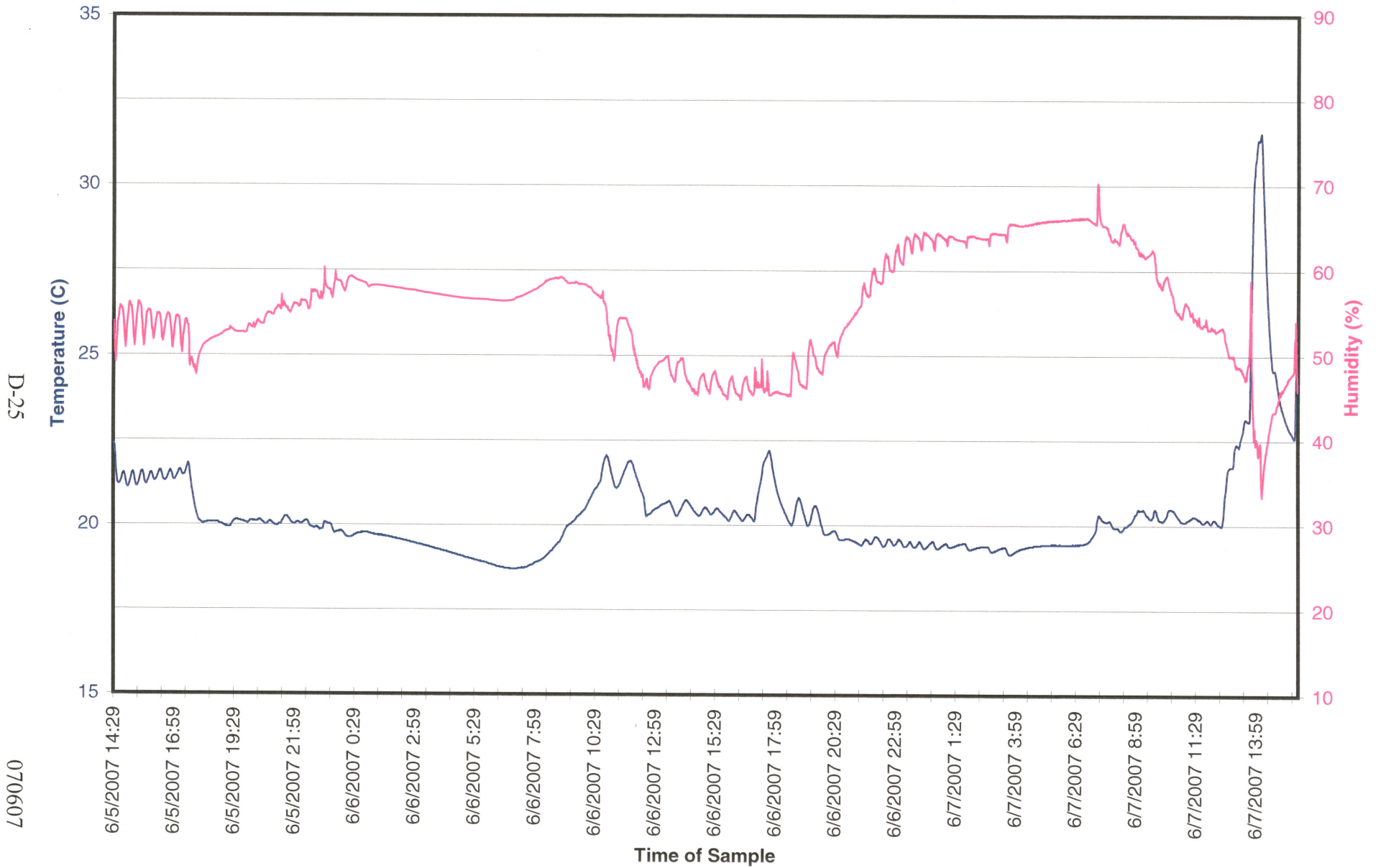
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Command File Test Number 070607

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
261	11SEBA0000B5DS0A	Bullet Vehicle Driver Lap Belt Spool	1000	+	yes	1270
262	11SEBA0000B3DS0A	Bullet Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	1270
263	13SEBA0000B5DS0A	Bullet Vehicle Passenger Lap Belt Spool	1000	+	yes	1270
264	13SEBA0000B3DS0A	Bullet Vehicle Passenger Shoulder Belt Spool and Retraction	1000	+	yes	1524
265	11AIRBFR0100EV0A	Bullet Vehicle Driver Front Airbag 1 Inductor	1000	+	no	5
266	11AIRBFR0200EV0A	Bullet Vehicle Driver Front Airbag 2 Inductor	1000	+	no	5
267	13AIRBFR0100EV0A	Bullet Vehicle Passenger Front Airbag 1 Inductor	1000	+	no	5
268	13AIRBFR0200EV0A	Bullet Vehicle Passenger Front Airbag 2 Inductor	1000	+	no	5

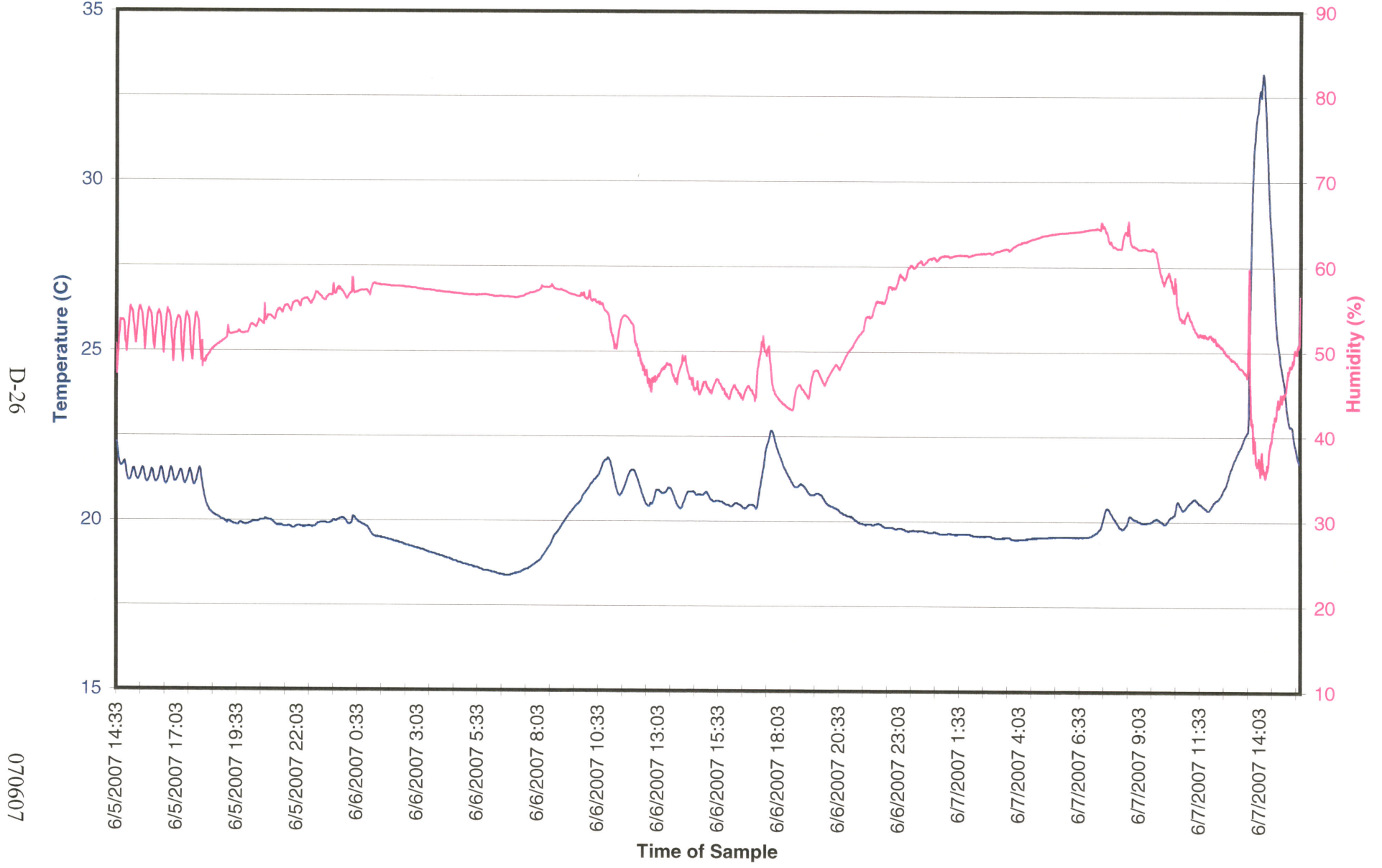
2005 CHRYSLER TOWN AND COUNTRY INTO 2002 FORD FOCUS 40% OFFSET FRONTAL-TARGET



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2005 CHRYSLER TOWN AND COUNTRY INTO 2002 FORD FOCUS 40% OFFSET FRONTAL-BULLET



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Appendix E

INSIA Report on Structural Measurements

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

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March, 1999

REPORT DOCUMENTATION PAGE**Title:**

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

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Supplementary notes:

Under contract to:

THE EUROPEAN COMMUNITY

Project: “Improvement of Crash Compatibility between Cars”
Contract N°: RO – 97 – SC.1064

Abstract:

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

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

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

This report shows the methodology followed to get these measurements.

Subject terms:

Crash compatibility, geometric compatibility, resistant elements, measure methodology

Date:

March, 1999

1.- METHODOLOGY.

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

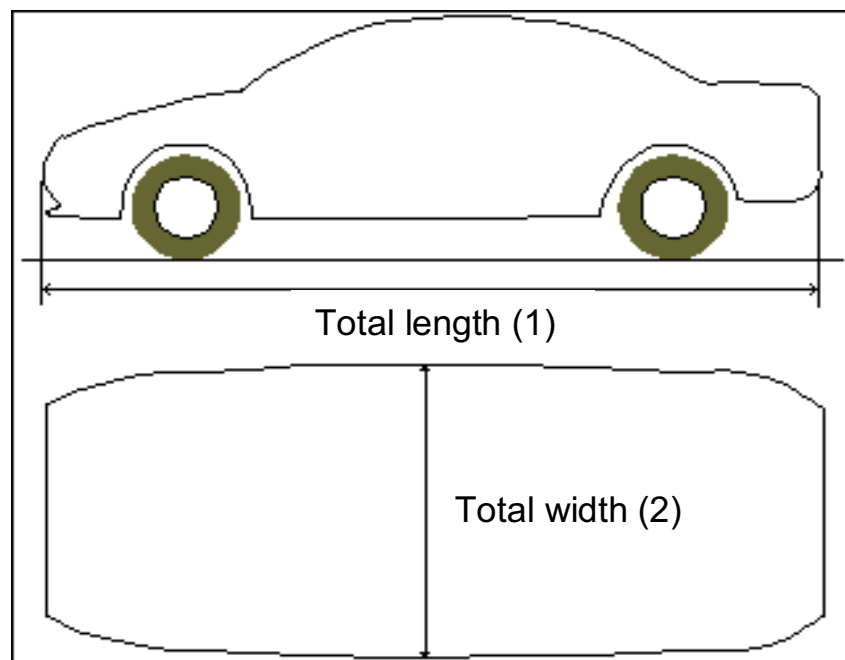


Figure 1.- Definition of the main resistant elements. General dimensions.

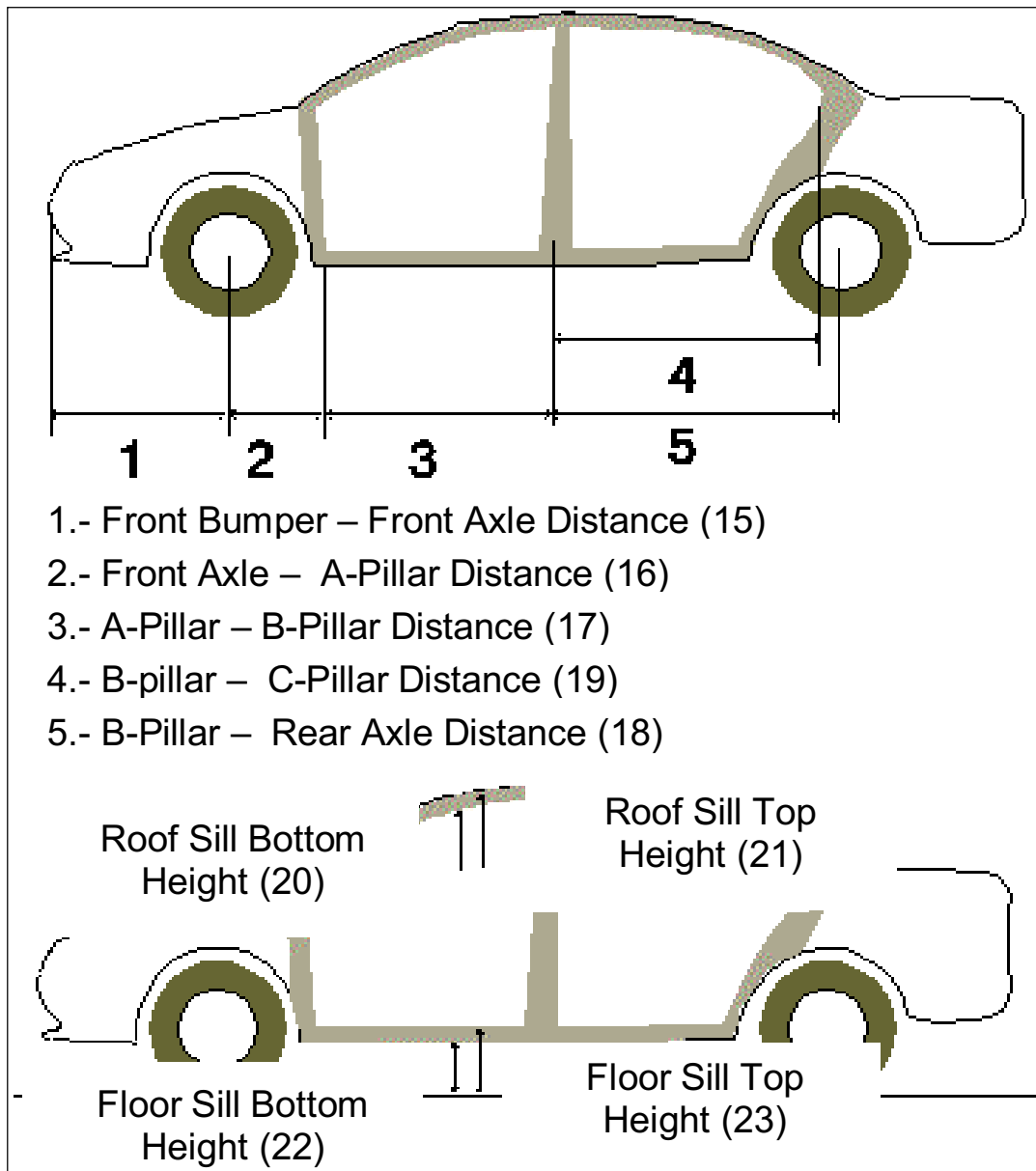


Figure 2.- Definition of the main resistant elements. Side elements.

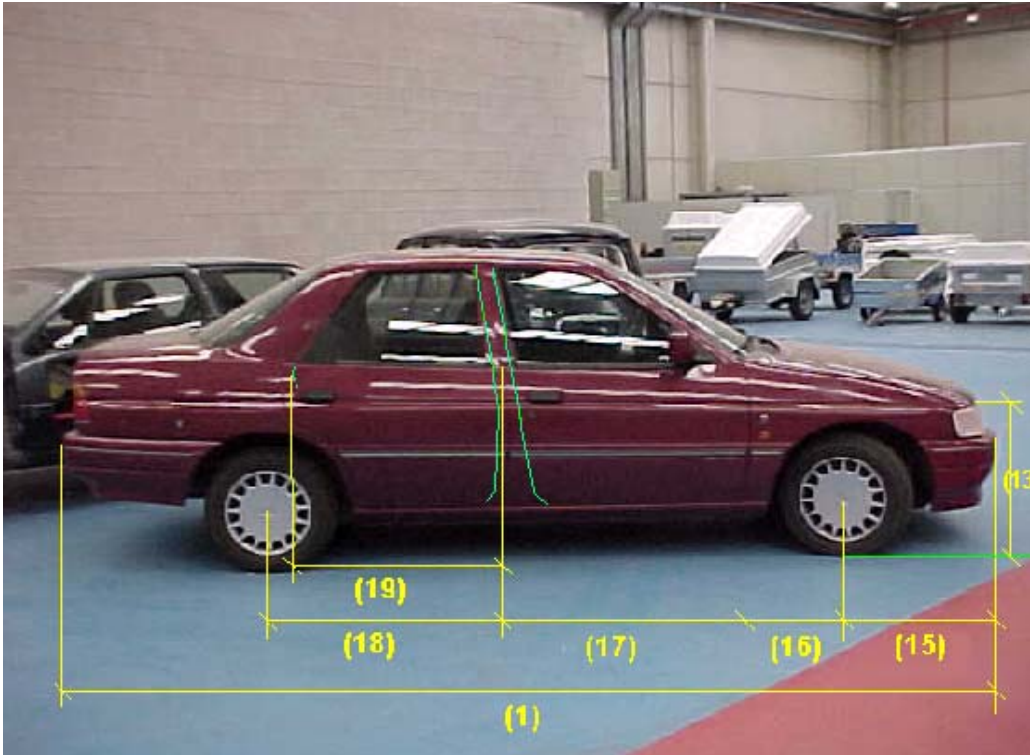
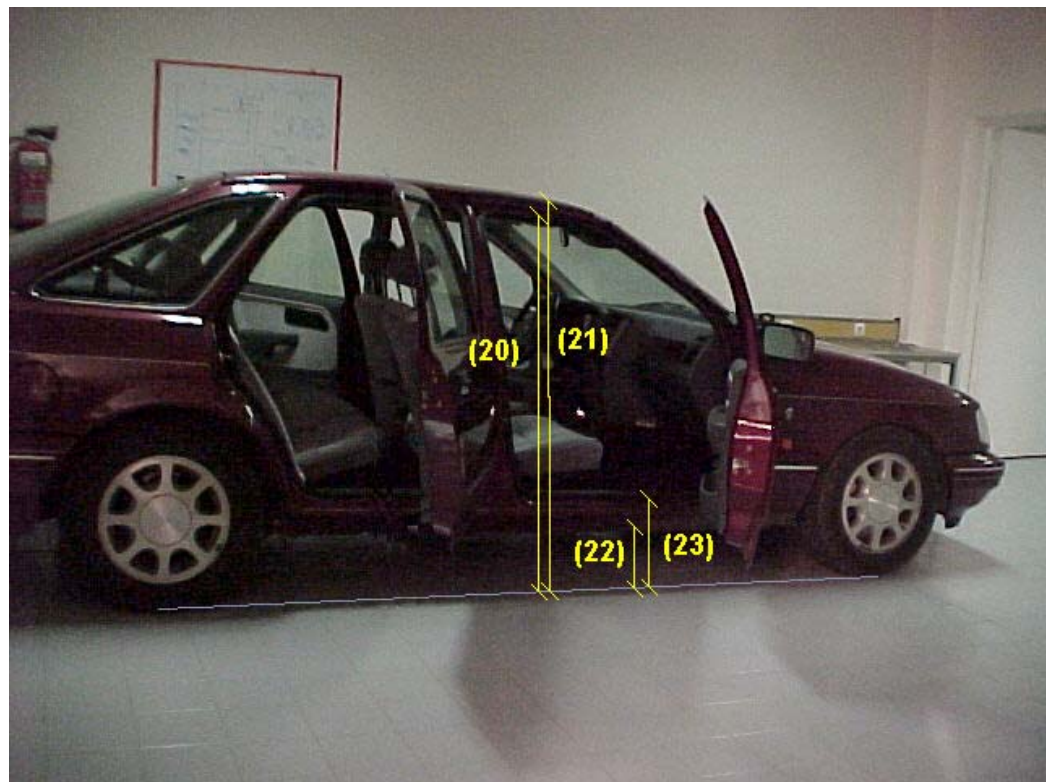


Figure 3.-
Measurements of
the side resistant
elements (outer).

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



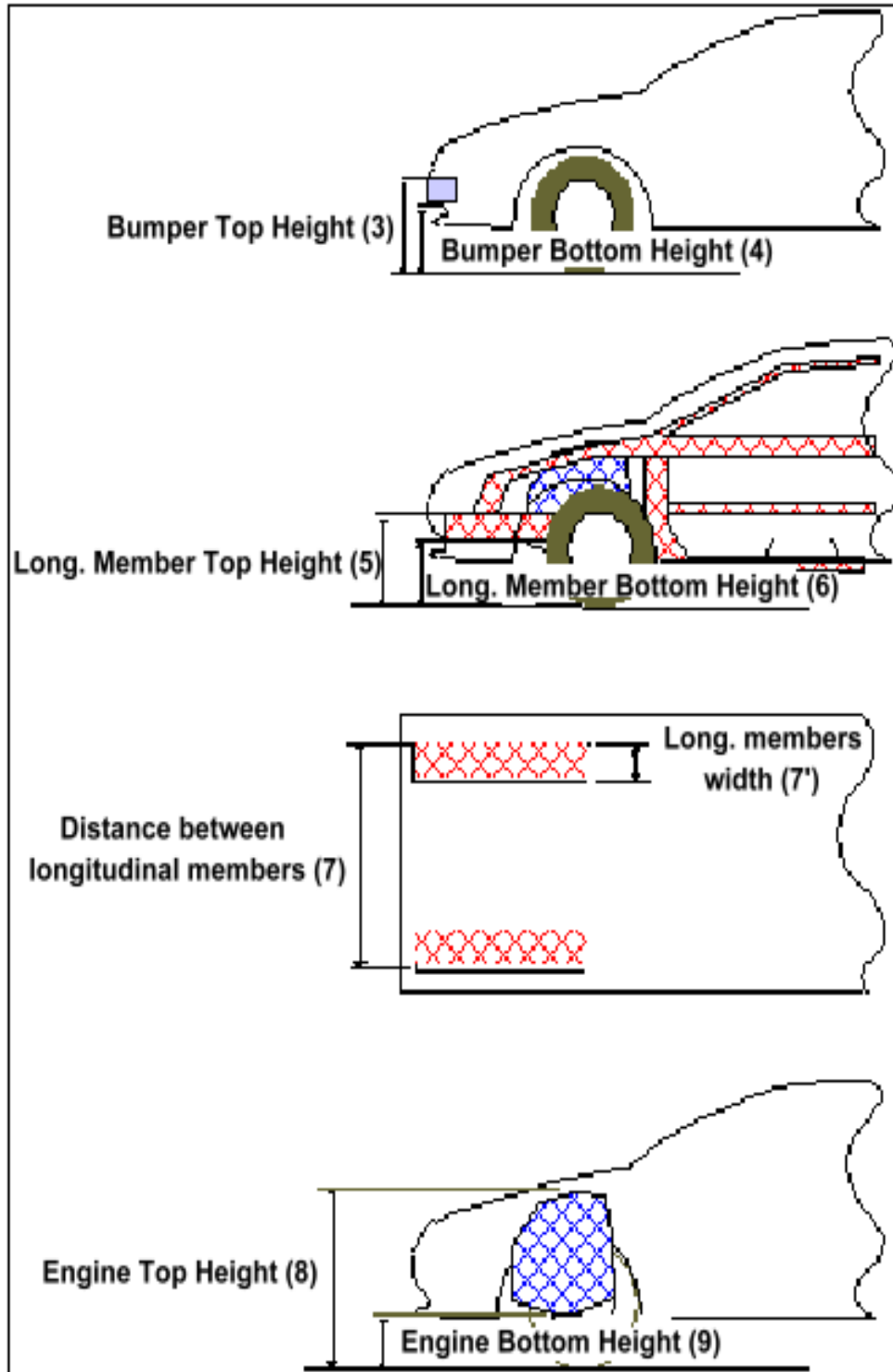


Figure 5.- Definition of the main resistant elements. Front elements.

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

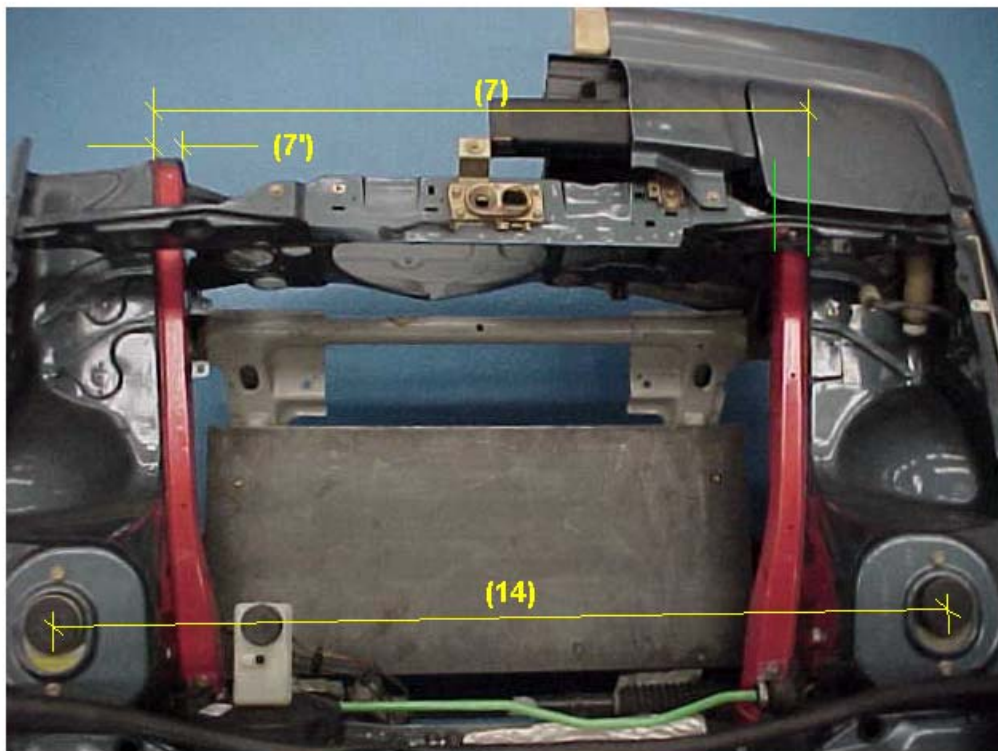
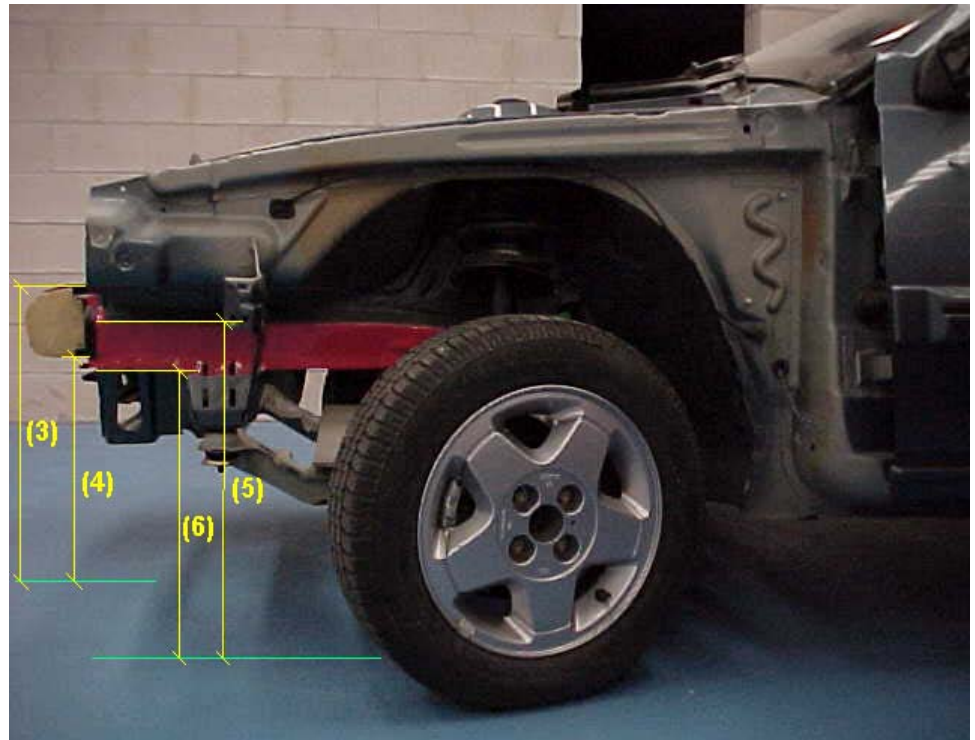


Figure 7.-
Measurements
of the main
resistant
elements. Front
elements 2.

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

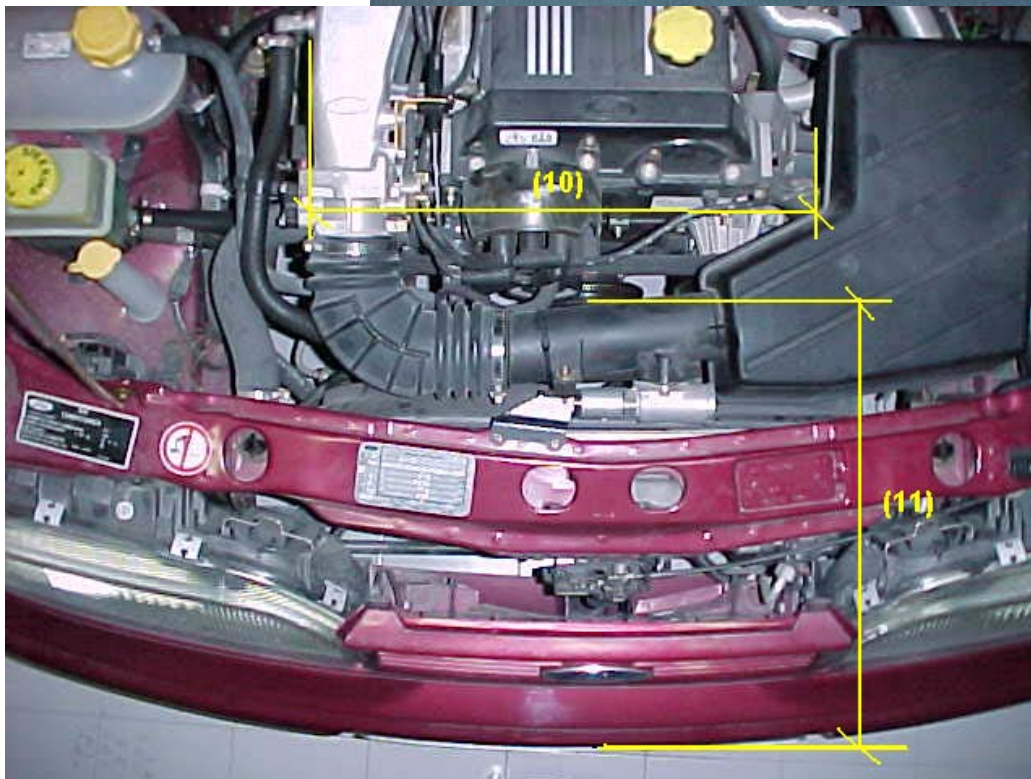
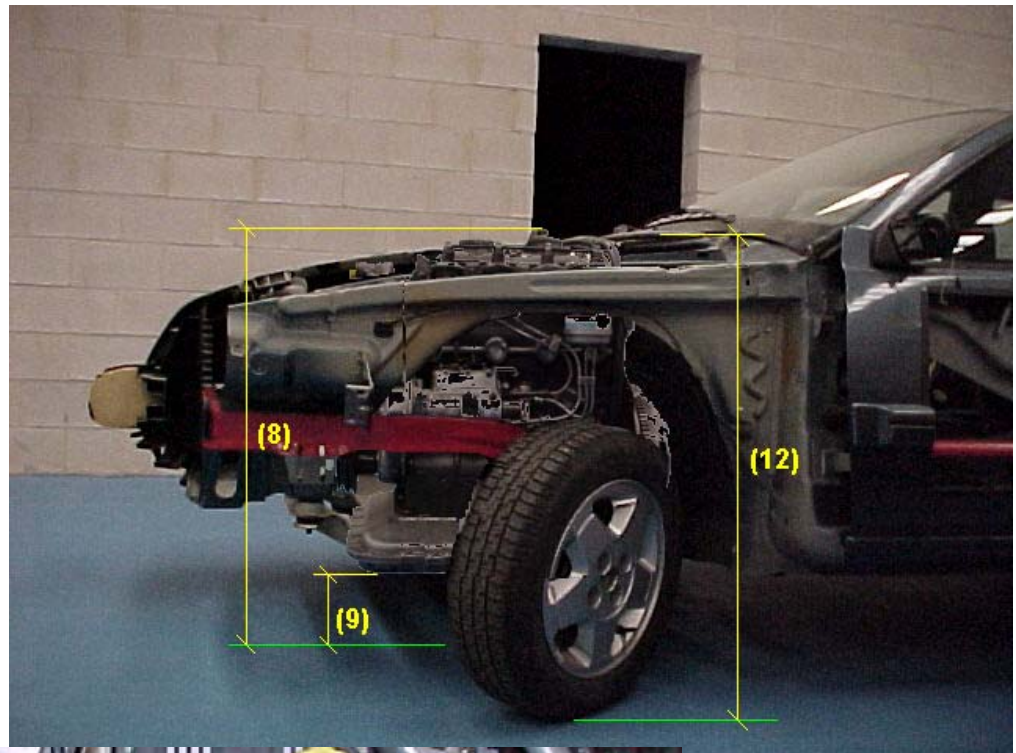


Figure 9.-
Definition of
the main
resistant
elements. Front
elements
(Longitudinal
engine).

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

FRONT ELEMENTS

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

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

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

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

SIDE ELEMENTS

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

NOTE

- N/A: dimension not available.