Vehicle Research and Test Center

2003 Chevrolet Silverado into

Front of a 2002 Ford Focus SE

TRC Inc. Test Number: 070620

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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 39.9 km/h to impact the target vehicle moving at 64.4 km/h at an impact angle of 0 degrees. The purpose of this test was to evaluate the aggressiveness of the bullet vehicle, a 2003 Chevrolet Silverado 4-door pickup, and the vehicle and occupant response of the target vehicle, a 2002 Ford Focus SE 4-door sedan, 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 sedan, 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 2003 Chevrolet Silverado 4-door pickup, 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 39.1 to 40.7 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) 50^{th} percentile adult male Hybrid III dummy and one (1) 5^{th} percentile adult female dummy were placed in the target vehicle’s left front and right front designated seating positions, respectively. The Hybrid III 50^{th} dummy was positioned according to the draft mid track based seating procedure while the Hybrid III 5^{th} dummy was positioned according to NHTSA Laboratory Test Procedure TP-208-12. 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 an array of six (6) accelerometers in the head, plus six (6) chest and three (3) pelvis accelerometers to measure longitudinal, lateral

and vertical accelerations (primary and redundant in the head and chest). 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 six (6) accelerometers in the head, plus six (6) chest, and three (3) pelvis accelerometers to measure longitudinal, lateral, and vertical accelerations (primary and redundant in the head and chest). 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) 50^{th} percentile adult male Hybrid III dummy and one (1) 5^{th} percentile adult female dummy were placed in the bullet vehicle's left front and right front designated seating positions, respectively. The Hybrid III 50^{th} dummy was positioned according to the draft mid track based seating procedure while the Hybrid III 5^{th} dummy was positioned according to NHTSA Laboratory Test Procedure TP-208-12. 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 an array of six (6) accelerometers in the head, plus six (6) chest and three (3) pelvis accelerometers to measure longitudinal, lateral and vertical accelerations (primary and redundant in the head and chest). 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-LX lower legs and with upper and lower tibia load cells to measure forces and moments.

The 286 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 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 103.8 km/h 0° 40% offset frontal collinear vehicle-to-vehicle impact test was conducted by TRC Inc. on June 20, 2007.

The target test vehicle, a 2002 Ford Focus SE 4-door sedan, 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 1492.6 kg. The target vehicle's impact speed was 64.2 km/h.

The bullet test vehicle, a 2003 Chevrolet Silverado 4-door pickup, was equipped with a 4.3-liter inline engine, automatic transmission, power steering, power brakes, and dual stage front airbags. The bullet vehicle's test weight was 2409.1 kg. The bullet vehicle's impact speed was 39.6 km/h.

Injury Criteria Data Summary						
	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
HIC (15 ms)	700	700	997	223	104	175
HIC (36 ms)	1000	---	997	240	148	224
Chest 3 ms (g)	60	60	37.6	32.5	27.5	27.2
Chest Deflection (mm)	63	52	27	29	13	13
Upper Neck						
NTF	1.0	1.0	0.28	0.17	0.10	0.28
NTE	1.0	1.0	0.17	0.42	0.20	0.14
NCF	1.0	1.0	0.46	0.25	0.01	0.08
NCE	1.0	1.0	0.74	0.18	0.02	0.11

Test Results Summary, Continued

Injury Criteria Data Summary, Continued						
	Limits		Target Vehicle		Bullet Vehicle	
			Driver	Passenger	Driver	Passenger
Neck Tension (N)	4170	2620	1342	835	818	612
Neck Compression (N)	4000	2520	3612	823	44	277
Left Femur (N)	10000	6805	2153	3069	4896	3555
Right Femur (N)	10000	6805	4765	718	5677	1695
Maximum Left Upper Tibia Index (SAE)	0.91	0.91	0.57	0.65	1.78	0.40
Maximum Right Upper Tibia Index (SAE)	0.91	0.91	0.61	0.39	1.49	0.44
Maximum Left Lower Tibia Index (SAE)	0.91	0.91	0.65	0.48	1.65	0.39
Maximum Right Lower Tibia Index (SAE)	0.91	0.91	0.65	0.43	1.44	0.35

Data Acquisition Explanations

The target vehicle's left front brake caliper X-axis acceleration data channel, 21VEHCLE0000ACXA, exceeded full-scale at approximately 59 milliseconds.

The bullet vehicle driver dummy's redundant head Y-axis acceleration data channel, 11HEADCGRDH3ACYA, recorded no valid data throughout the event. This affected the resultant calculation.

The bullet vehicle driver dummy's left upper tibia force Z-axis data channel, 11TIBILULXH3FOZA, exceeded full-scale at approximately 66 milliseconds and recorded questionable data thereafter.

The bullet vehicle driver dummy's left lower tibia force Z-axis data channel, 11TIBLLLXH3FOZA, exceeded full-scale at approximately 66 milliseconds and recorded questionable data thereafter.

The bullet vehicle driver dummy's right upper tibia force Z-axis data channel, 11TIBIRULXH3FOZA, recorded questionable data throughout the event.

The bullet vehicle driver dummy's right lower tibia force Z-axis data channel, 11TIBIRLLXH3FOZA, recorded questionable data throughout the event.

The bullet vehicle passenger dummy's upper neck force Y-axis data channel, 13NECKUP00HFFOYA, recorded questionable data after approximately 25 milliseconds.

The bullet vehicle passenger dummy's pelvis Y-axis acceleration data channel, 13PELVCG00HFACYA, recorded no valid data throughout the event. This affected the resultant calculation.

The bullet vehicle's toe pan accelerator Z-axis acceleration data channel, 11PEAC000000ACZA, recorded no valid data throughout the event. This affected the resultant calculation.

The bullet vehicle's toe pan footrest Z-axis acceleration data channel, 11VEHC000001ACZA, recorded no valid data throughout the event. This affected the resultant calculation.

Table 1 Crash Test Summary

Test mode:	40% Offset Frontal Collinear	
Test date:	06/20/07	
Test time:	16:18	
Ambient temperature:	26° C	
Target vehicle year/make/ model/body style:	2002/Ford/Focus SE/4-door sedan	
Target vehicle test weight:	1492.6 kg	
Bullet vehicle year/make/ model/body style:	2003/Chevrolet/Silverado/4-door pickup	
Bullet vehicle test weight:	2409.1 kg	
Impact angle[1]:	0°	
Impact velocity[2]:	Target vehicle = 64.2 km/h Bullet vehicle = 39.6 km/h	
Total number of data channels:	286	
Number of cameras:		
High-speed digital:	19	
Real-time:	1	
Target vehicle dummies:	Driver #001	Passenger #416
Type:	HIII 50th	HIII 5th
Location:	Left front	Right front
Restraint:	3-pt. seat belt, dual-stage airbag	3-pt. seat belt, dual-stage airbag
Bullet vehicle dummies:	Driver #855	Passenger #324
Type:	HIII 50th	HIII 5th
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 position for test:	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 #15 of 23
Passenger:	Full forward
Bullet vehicle seat back positions for test:	
Driver:	11.2°; measured at head restraint support post
Passenger:	1.1°; measured at head restraint support post
Bullet vehicle head restraint positions for test:	
Driver:	Full up
Passenger:	Full down
Bullet vehicle steering column position for test:	Middle of geometric range of travel
Bullet vehicle D-ring positions for test:	
Driver:	Fixed
Passenger:	Fixed

Table 2 Target Vehicle General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2002/Ford/Focus SE/4-door sedan
VIN:	1FAFP34322W182088
Model year:	2002
Body style:	4-door sedan
Color:	Red
Engine data:	
Cylinders:	4
Displacement	2.0 liters
Type:	Straight
Placement:	Transverse
Transmission data:	_3_ speed, __ manual, _X_ automatic, _X_ overdrive
Final drive:	_X_ FWD, __ RWD, __ 4WD
Date vehicle received:	06/08/2007
Odometer reading:	46,286 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:		12/01	
VIN:		1FAFP34322W182088	
GVWR:		1651 kg	(3640 lb)
GAWR:	Front:	895 kg	(1975 lb)
	Rear:	791 kg	(1745 lb)

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

Tires on vehicle (mfr., line, size):	Cooper, Touring SLE, P195/60R15
Tire pressure with maximum capacity vehicle load:	
Front:	28 psi (193 kPa)
Rear:	32 psi (221 kPa)
Spare tire (mfr., line, size):	Hankook, Temp, T125/80R15
Type of seats:	
Front	Bucket
Rear	Split bench
Maximum width:	1710 mm
Wheelbase:	2615 mm

Location of "Recommended Tire Pressure" label:

Drive 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 632 mm;	RF 640 mm;	LR 617 mm;	RR 622 mm
Post-test attitude:	LF ----[1];	RF 592 mm;	LR 591 mm;	RR 659 mm

[1] Left front tire was flattened during event.

Table 2 Target Vehicle General Test and Vehicle Parameter Data Continued

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

Right front	417.0 kg	Right rear	339.2 kg
Left front	396.8 kg	Left rear	339.6 kg
Total front weight	813.8 kg	(54.5% of total vehicle weight)	
Total rear weight	678.8 kg	(45.5% of total vehicle weight)	
Total test weight	1492.6 kg		

Weight of ballast secured in vehicle: None

Components removed to meet target test weight: None

Location of Vehicle's CG: 1189 mm rearward of front wheel centerline

Fuel System Data:

Usable fuel system capacity	57.0 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:	2003/Chevrolet/Silverado/4-door pickup
VIN:	1GCEC19X13Z168880
Model year:	2003
Body style:	4-door pickup
Color:	Black
Engine data:	
Cylinders:	6
Displacement	4.3 liters
Type:	V
Placement:	Inline
Transmission data:	_4_ speed, __ manual, _X_ automatic, _X_ overdrive
Final drive:	__ FWD, _X_ RWD, __ 4WD
Date vehicle received:	06/08/2007
Odometer reading:	122,931 miles
Dealer's name and address:	Vehicle supplied by VRTC

Accessories:

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

Certification data from vehicle's label:

Vehicle manufactured by:	General Motors Corporation	
Date of manufacture:	10/02	
VIN:	1GCEC19X13Z168880	
GVWR:	2812 kg	(6200 lbs)
GAWR: Front:	1633 kg	(3600 lbs)
Rear:	1672 kg	(3686 lbs)

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

Tires on vehicle (mfr., line, size):	Dayton, Timberline, P245/75R16
Tire pressure with maximum capacity vehicle load:	
Front:	Not available
Rear:	Not available
Spare tire (mfr., line, size):	None
Type of seats:	
Front	Bucket
Rear	Bench
Maximum width:	1985 mm
Wheelbase:	3650 mm

Location of "Recommended Tire Pressure" label:

Driver B-Pillar

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

Recommended tire size:	P235/75R16
Recommended cold tire pressure:	Front: 35 psi (240 kPa) Rear: 35 psi (240 kPa)
Seating capacity:	Front: Not available Rear: Not available Total: Not available
Vehicle capacity weight:	Not available
Rated cargo/luggage weight:	Not available

Test vehicle attitude:

Pre-test attitude:	LF 830 mm;	RF 833 mm;	LR 884 mm;	RR 890 mm
Post-test attitude:	LF 883 mm;	RF 844 mm;	LR 832 mm;	RR 970 mm

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

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

Right front	700.0 kg	Right rear	516.5 kg
Left front	660.6 kg	Left rear	532.0 kg
Total front weight	1360.6 kg	(56.5% of total vehicle weight)	
Total rear weight	1048.5 kg	(43.5% of total vehicle weight)	
Total test weight	2409.1 kg		

Weight of ballast secured in vehicle: 34.0 kg steel plate behind passenger seat

Components removed to meet target test weight: Tailgate

Location of Vehicle's CG: 1589 mm rearward of front wheel centerline

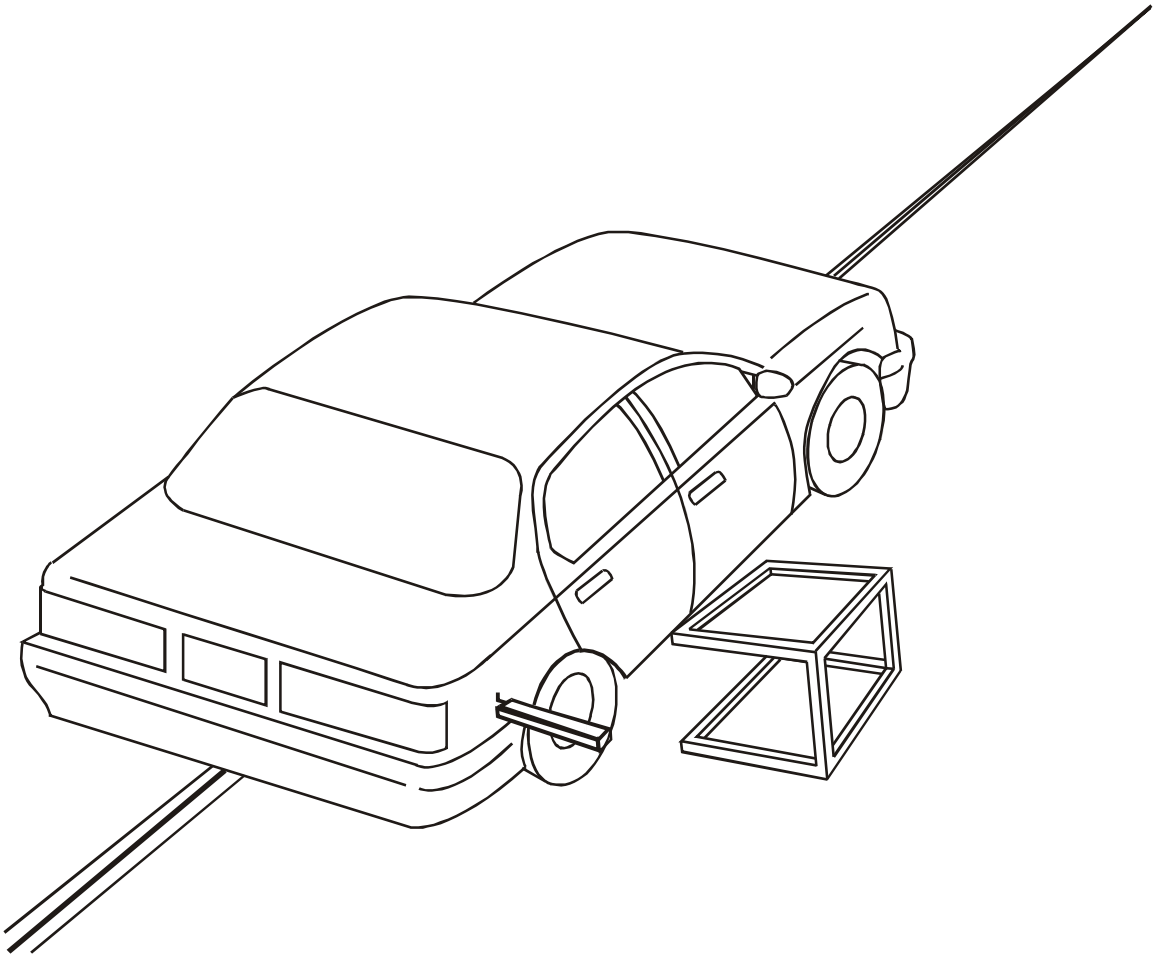
Fuel System Data:

Usable fuel system capacity	128.7 liters (from owner's manual)
Actual test volume:	119.6 liters (93% of usable)

Table 4 Post-Impact Data

Test number:	070620
Test date:	06/20/07
Test time:	16:18
Test type:	Car to car 40% offset collinear
Impact angle:	0°
Ambient temperature at impact area:	26° C
Impact velocity:	
Target vehicle:	64.2 km/h
Bullet vehicle:	39.6 km/h
Required impact velocity range:	
Target vehicle:	63.6 to 65.2 km/h
Bullet vehicle:	39.1 to 40.7 km/h
Distance from each vehicle to intended impact point:	
Entering velocity trap:	660 mm
Exiting velocity trap:	50 mm, approximately
Impact point:	0 mm from 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 Max. (g)	Positive Direction Time (ms)	Negative Direction Max. (g)	Negative Direction Time (ms)
1	Left Rear Seat Cross-member	X	3.8	22.9	27.5	54.6
2	Right Rear Seat Cross-member	X	4.4	23.2	29.2	50.2
3	Top of Engine	X	4.7	107.8	66.8	35.4
4	Bottom of Engine	X	18.5	59.6	64.4	45.5
5	Right Front Brake Caliper	X	11.4	60.1	43.4	67.1
6	Left Front Brake Caliper	X	56.2	45.4	2189.4	63.1
7	Dash Center	X	14.2	23.9	76.9	59.9
8	Toe Pan Accelerator	X	4.9	21.9	59.2	49.4
		Z	70.0	56.1	51.3	50.2
9	Toe Pan Footrest	X	7.0	119.0	38.4	68.1
		Z	17.0	11.8	28.4	42.8
10	Rear Tunnel Center	X	5.2	22.4	31.0	48.4
11	Vehicle Center of Gravity	X	9.2	115.8	41.8	57.8
		Y	15.2	123.6	33.2	57.4
		Z	39.5	54.8	30.7	67.4
	Resultant	R	59.4	55.4		
12	Vehicle Rear Deck	X	15.5	27.5	41.5	54.0
		Y	14.1	39.2	3.0	253.9
		Z	10.5	126.6	14.9	51.8
	Resultant	R	42.2	53.8		

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.

Table 6 Bullet Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction Max. (g)	Positive Direction Time (ms)	Negative Direction Max. (g)	Negative Direction Time (ms)
1	Left Rear Seat Cross-member	X	4.0	70.0	25.1	88.4
2	Right Rear Seat Cross-member	X	2.3	289.7	21.8	61.3
3	Top of Engine	X	0.0	0.1	17.8	58.2
4	Bottom of Engine	X	2.7	110.5	28.0	75.6
5	Right Front Brake Caliper	X	67.4	64.6	79.7	71.9
6	Left Front Brake Caliper	X	19.7	64.9	1697.0	106.5
7	Dash Center	X	7.8	41.8	37.6	47.0
8	Toe Pan Accelerator[1]	X	1.8	98.6	31.7	72.9
		Z	0.0	303.0	0.0	308.6
9	Toe Pan Footrest[1]	X	86.1	80.2	147.9	61.4
		Z	0.0	308.6	0.0	303.0
10	Rear Tunnel Center	X	4.7	309.9	20.7	90.6
11	Vehicle Center of Gravity	X	1.1	291.8	18.7	94.6
		Y	20.7	60.3	8.7	105.3
		Z	17.8	115.0	18.6	72.0
	Resultant	R	26.1	60.5		
12	Vehicle Rear Deck	X	1.6	238.7	14.7	64.6
		Y	9.3	112.8	3.1	60.1
		Z	10.0	48.6	11.7	94.9
	Resultant	R	19.5	95.0		

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	997	223	104	175
Start time (ms)			115.4	120.6	101.3	41.4
End time (ms)			120.6	135.7	116.3	55.8
HIC (36 ms) [1]	1000	---	997	240	148	224
Start time (ms)			115.4	103.7	94.8	84.0
End time (ms)			120.6	139.7	125.5	120.0
Chest 3 ms (g) [2]	60	60	37.6	32.5	27.5	27.2
Start time (ms)			116.6	67.5	102.6	88.6
End time (ms)			119.6	70.5	105.6	91.6
Chest Deflection (mm)	63	52	27	29	13	13
Upper Neck						
NTF	1.0	1.0	0.28	0.17	0.10	0.28
NTE	1.0	1.0	0.17	0.42	0.20	0.14
NCF	1.0	1.0	0.46	0.25	0.01	0.08
NCE	1.0	1.0	0.74	0.18	0.02	0.11
Neck Tension (N)	4170	2620	1342	835	818	612
Neck Compression (N)	4000	2520	3612	823	44	277
Left Femur (N)	10000	6805	2153	3069	4896	3555
Right Femur (N)	10000	6805	4765	718	5677	1695
Maximum Left Upper Tibia Index (SAE)	0.91	0.91	0.57	0.65	1.78	0.40
Maximum Right Upper Tibia Index (SAE)	0.91	0.91	0.61	0.39	1.49	0.44
Maximum Left Lower Tibia Index (SAE)	0.91	0.91	0.65	0.48	1.65	0.39
Maximum Right Lower Tibia Index (SAE)	0.91	0.91	0.65	0.43	1.44	0.35

[1] As defined in FMVSS No. 208.
[2] Defined as equal to or exceeding 0.003 sec. duration.

Table 8 Target Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	Driver	Passenger
Head	Airbag, A-pillar	Airbag, head restraint
Chest	Airbag	Airbag
Abdomen	Airbag	Airbag
Left knee	Knee bolster	Glove box
Right knee	Knee bolster	Glove box

Door opening:

	Left	Right
Front	Tools	Easy
Rear	Easy	Easy

Seat movement:

	Seat back failure	Seat shift
Left Front	None	None
Right Front	None	None
Left Rear	None	None
Right Rear	None	None

Glazing damage: Windshield shattered

Other notable impact effects: None

Table 9 Bullet Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	Driver	Passenger
Head	Airbag, head restraint	Airbag, head restraint
Chest	Airbag	Airbag
Abdomen	Airbag	Airbag
Left knee	Knee bolster	Glove box
Right knee	Knee bolster	Glove box

Door opening:

	Left	Right
Front	Tools	Easy
Rear	Tools	Easy

Seat movement:

	Seat back failure	Seat shift
Left Front	None	None
Right Front	None	None
Left Rear	None	None
Right Rear	None	None

Glazing damage: None

Other notable impact effects: None

Section 4.0

Occupant, Camera, and Vehicle Information

Figure 2 Vehicle Dummy Measurement Locations for Front Seat Occupants

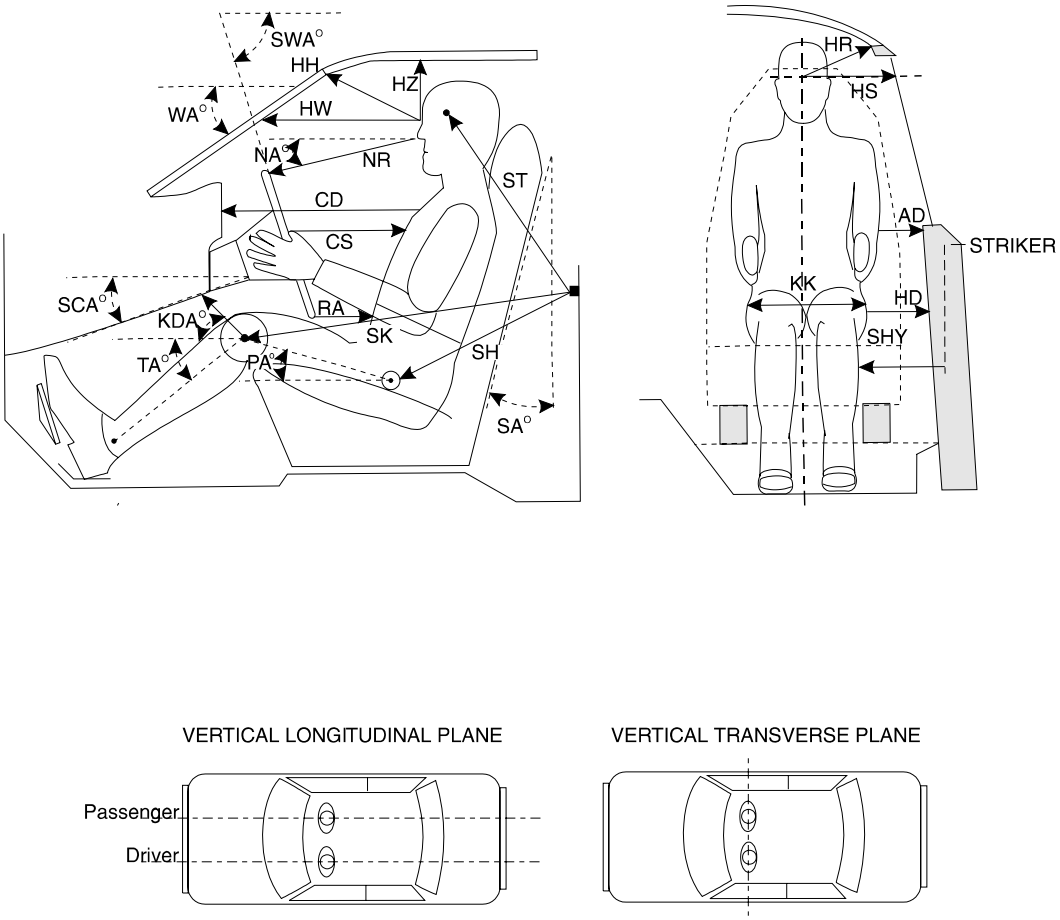


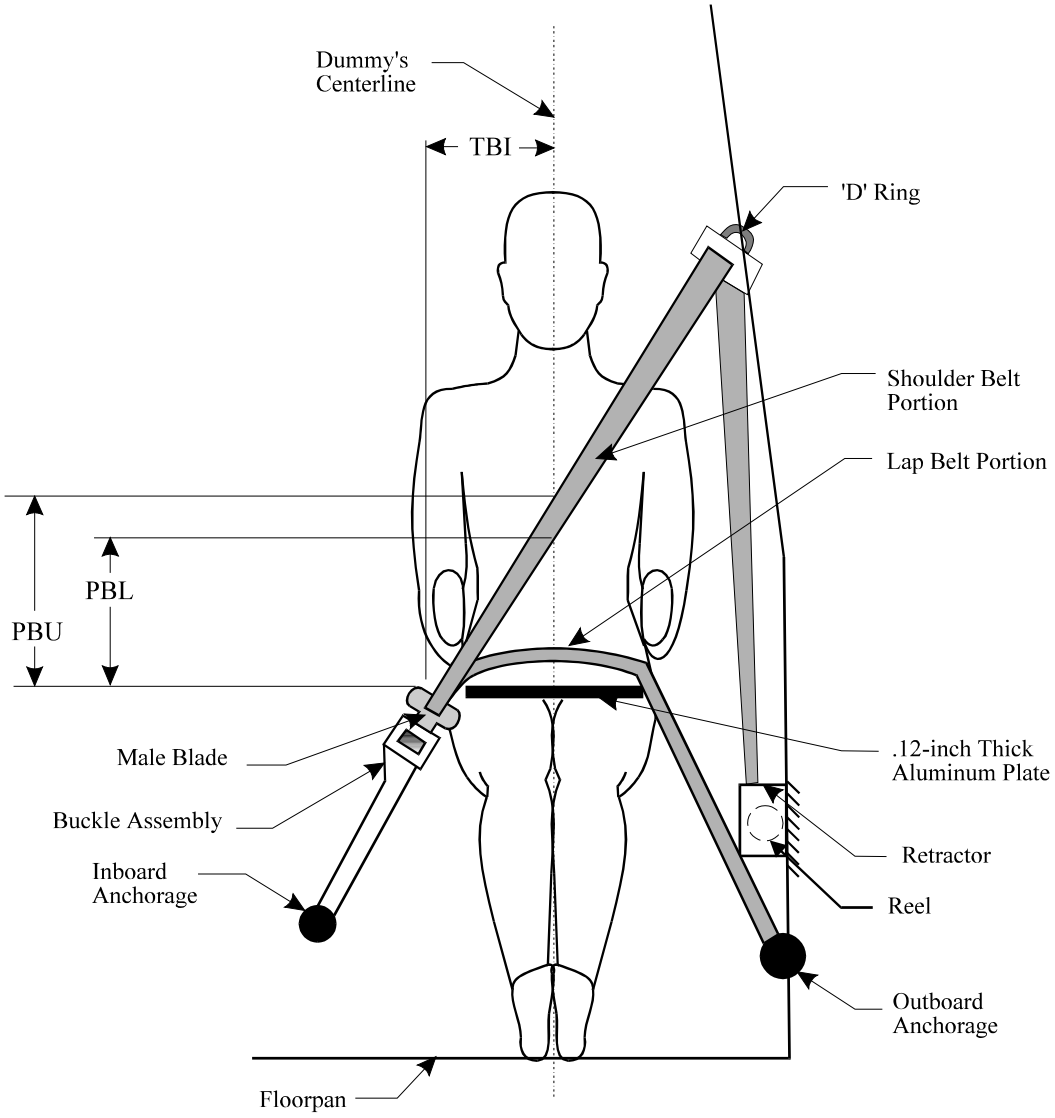
Table 10 Target Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 001)	Passenger (Serial # 416)
WA	Windshield angle	24.7°	N/A
SWA	Steering wheel angle	67.0°	N/A
SCA	Steering column angle	23.0°	N/A
SA	Seat back angle	14.4°	7.5°
HZ	Head to roof	242 mm	208 mm
HH	Head to header	448 mm	258 mm
HW	Head to windshield	782 mm	604 mm
HR	Head to side header	228 mm	234 mm
NR	Nose to rim	541 mm	N/A
NA	Nose to rim angle	5.4°	N/A
CD	Chest to dash	668 mm	363 mm
CS	Steering wheel to chest	412 mm	N/A
RA	Rim to abdomen	325 mm	N/A
KDL	Left knee to dash	285 mm	24 mm
KDR	Right knee to dash	276 mm	29 mm
KDA	Outboard knee to dash angle	16.4°	26.0°
PA	Pelvic angle	26.4°	21.0°
TA	Tibia angle	31.9°	59.9°
KK	Knee to knee	350 mm	163 mm
ST[1]	Striker to head	510 mm	510 mm
	Striker to head angle	83.5°	-67.0°
SK[1]	Striker to knee	461 mm	726 mm
	Striker to knee angle	6.3°	0.9°
SH[1]	Striker to H-point	163 mm	350 mm
	Striker to H-point angle	61.4°	16.3°
SHY	Striker to H-point (Y dir.)	203 mm	151 mm
HS	Head to side window	315 mm	327 mm
HD	H-point to door	89 mm	88 mm
AD	Arm to door	76 mm	155 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	335 mm	249 mm
PBL - Top surface of aluminum plate to belt lower edge	272 mm	176 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	245 mm	205 mm
Total belt length	2560 mm	1800 mm
Lap belt length	820 mm	910 mm
Shoulder belt length	800 mm	870 mm

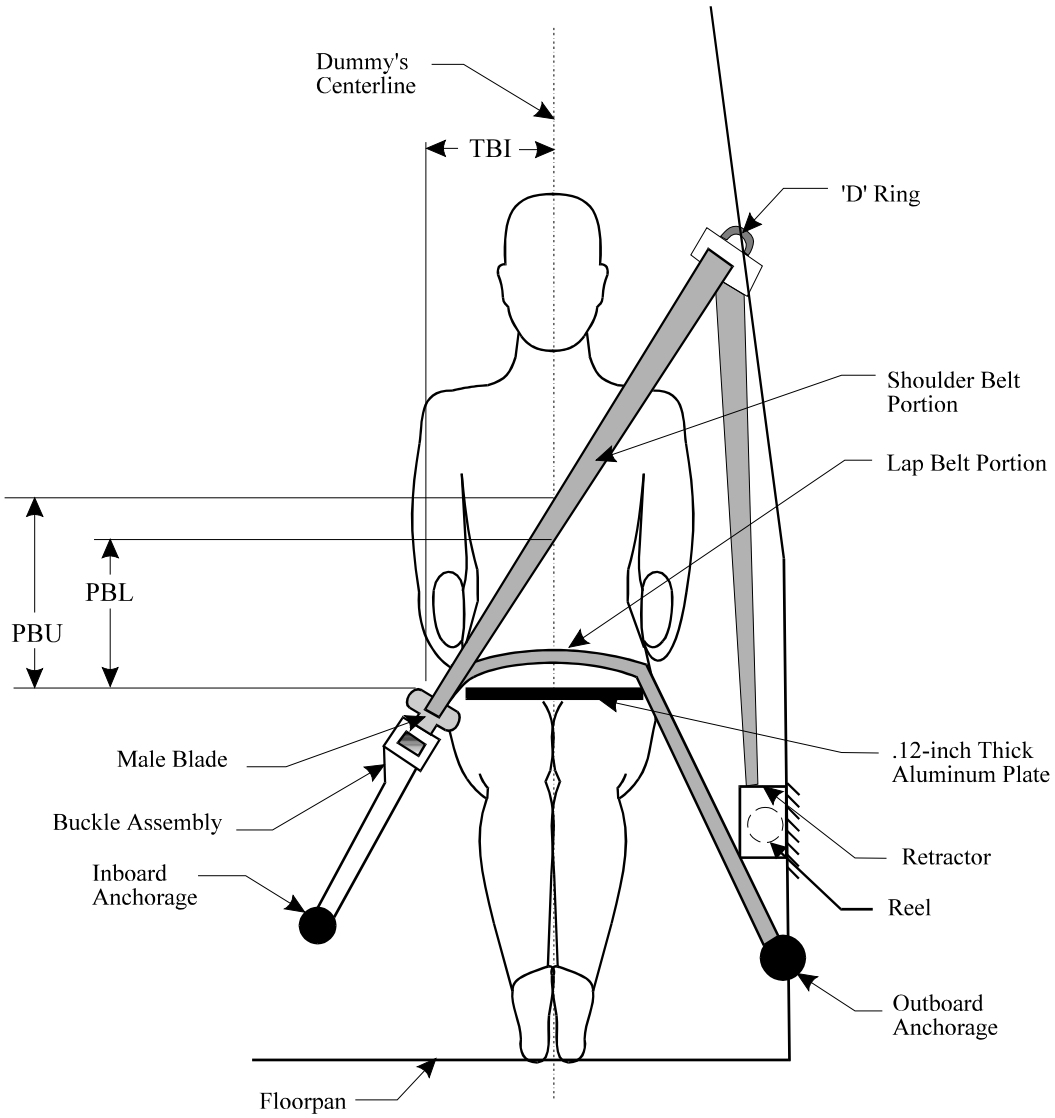
Table 11 Bullet Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 855)	Passenger (Serial # 324)
WA	Windshield angle	36.8°	N/A
SWA	Steering wheel angle	67.9°	N/A
SCA	Steering column angle	22.1°	N/A
SA	Seat back angle	11.2°	1.1°
HZ	Head to roof	296 mm	342 mm
HH	Head to header	575 mm	429 mm
HW	Head to windshield	796 mm	679 mm
HR	Head to side header	276 mm	324 mm
NR	Nose to rim	446 mm	N/A
NA	Nose to rim angle	5.0°	N/A
CD	Chest to dash	644 mm	333 mm
CS	Steering wheel to chest	369 mm	N/A
RA	Rim to abdomen	248 mm	N/A
KDL	Left knee to dash	216 mm	58 mm
KDR	Right knee to dash	223 mm	66 mm
KDA	Outboard knee to dash angle	16.3°	19.6°
PA	Pelvic angle	27.3°	19.0°
TA	Tibia angle	39.2°	59.6°
KK	Knee to knee	377 mm	159 mm
ST[1]	Striker to head	606 mm	605 mm
	Striker to head angle	-76.6°	-56.1°
SK[1]	Striker to knee	668 mm	833 mm
	Striker to knee angle	-1.7°	-1.4°
SH[1]	Striker to H-point	284 mm	432 mm
	Striker to H-point angle	10.6°	7.7°
SHY	Striker to H-point (Y dir.)	157 mm	112 mm
HS	Head to side window	349 mm	339 mm
HD	H-point to door	86 mm	42 mm
AD	Arm to door	139 mm	191 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	328 mm	265 mm
PBL - Top surface of aluminum plate to belt lower edge	245 mm	180 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	185 mm	205 mm
Total belt length	1570 mm	1285 mm
Lap belt length	560 mm	550 mm
Shoulder belt length	790 mm	730 mm

Figure 5 Target Vehicle FMVSS 212 Test Data

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

Adhesive, Plastic, N/A

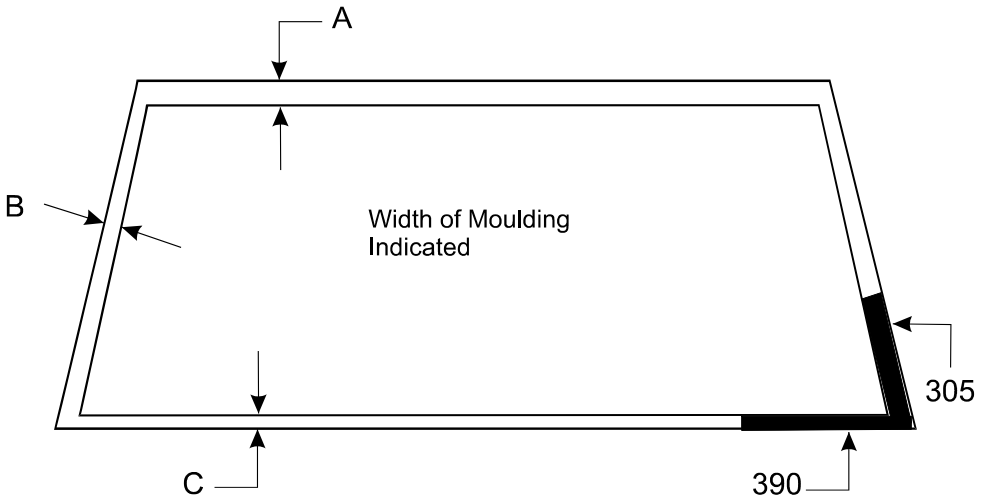
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	Pre-test	Post-test	Percent retention
Right side	2130 mm	2130 mm	100.0 %
Left side	2130 mm	1435 mm	67.4 %
Total	4260 mm	3565 mm	83.7 %

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: 305 mm left side bottom; 390 mm left bottom

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

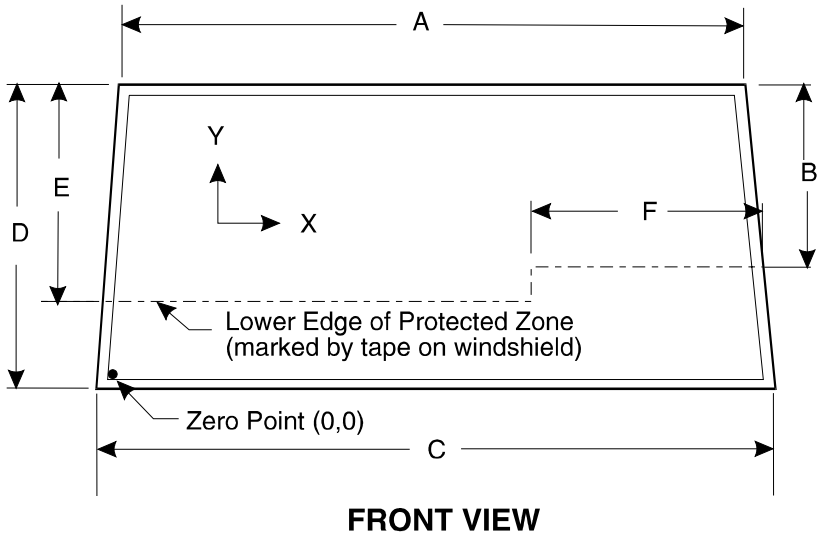
B = 448 mm

C = 1520 mm

D = 805 mm

E = 532 mm

F = 693 mm



FRONT VIEW

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

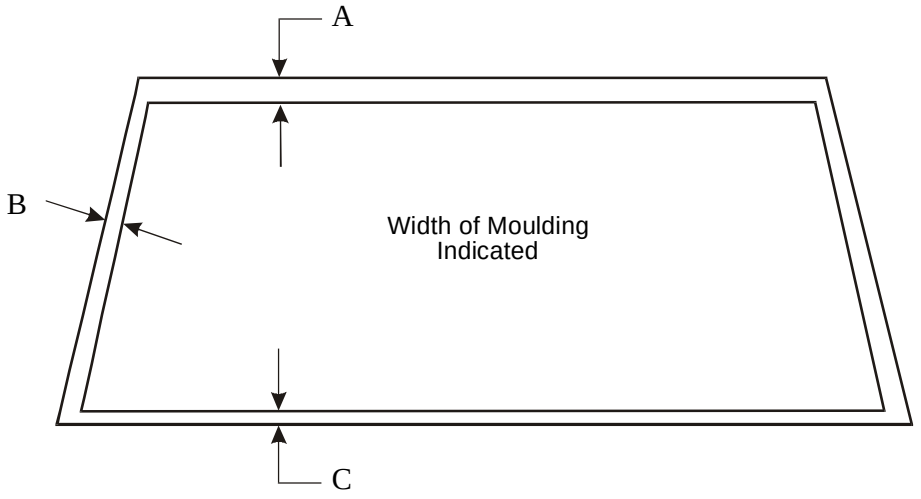
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	Pre-test	Post-test	Percent retention
Right side	2260 mm	2260 mm	100.0 %
Left side	2260 mm	2260 mm	100.0 %
Total	4520 mm	4520 mm	100.0 %

Pre-test windshield mounting material temperature: N/A

A = 20 mm
B = 20 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 = 1405 mm

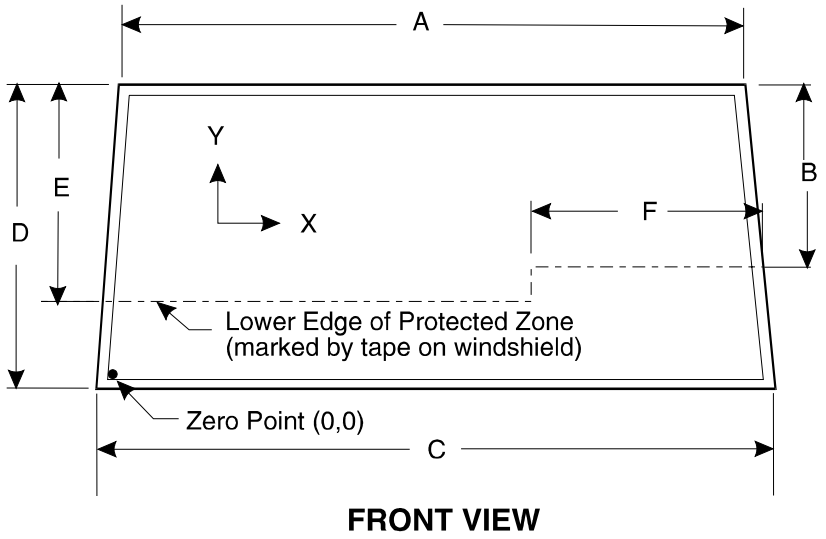
B = 380 mm

C = 1775 mm

D = 670 mm

E = 480 mm

F = 1040 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.		

Table 12 Target Vehicle Structural Measurements[1]

	Elements	Pre-Test
1	Total Length	4339
2	Total Width	1705
3	Bumper Top Height	534
4	Bumper Bottom Height	411
5	Longitudinal Member Top Height	506
6	Longitudinal Member Bottom Height	434
7	Distance Between Longitudinal Members	1075
7´	Longitudinal Member Width	80
8	Engine Top Height	792
9	Engine Bottom Height	201
10	Engine and Gearbox Width	930
11	Front Bumper - Engine Distance	420
12	Front Shock Absorber Fixing Height	831
13	Bonnet Leading Edge Height	685
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	1300
21	Roof Sill Top Height	1360
22	Floor Sill Bottom Height	302
23	Floor Sill Top Height	333

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

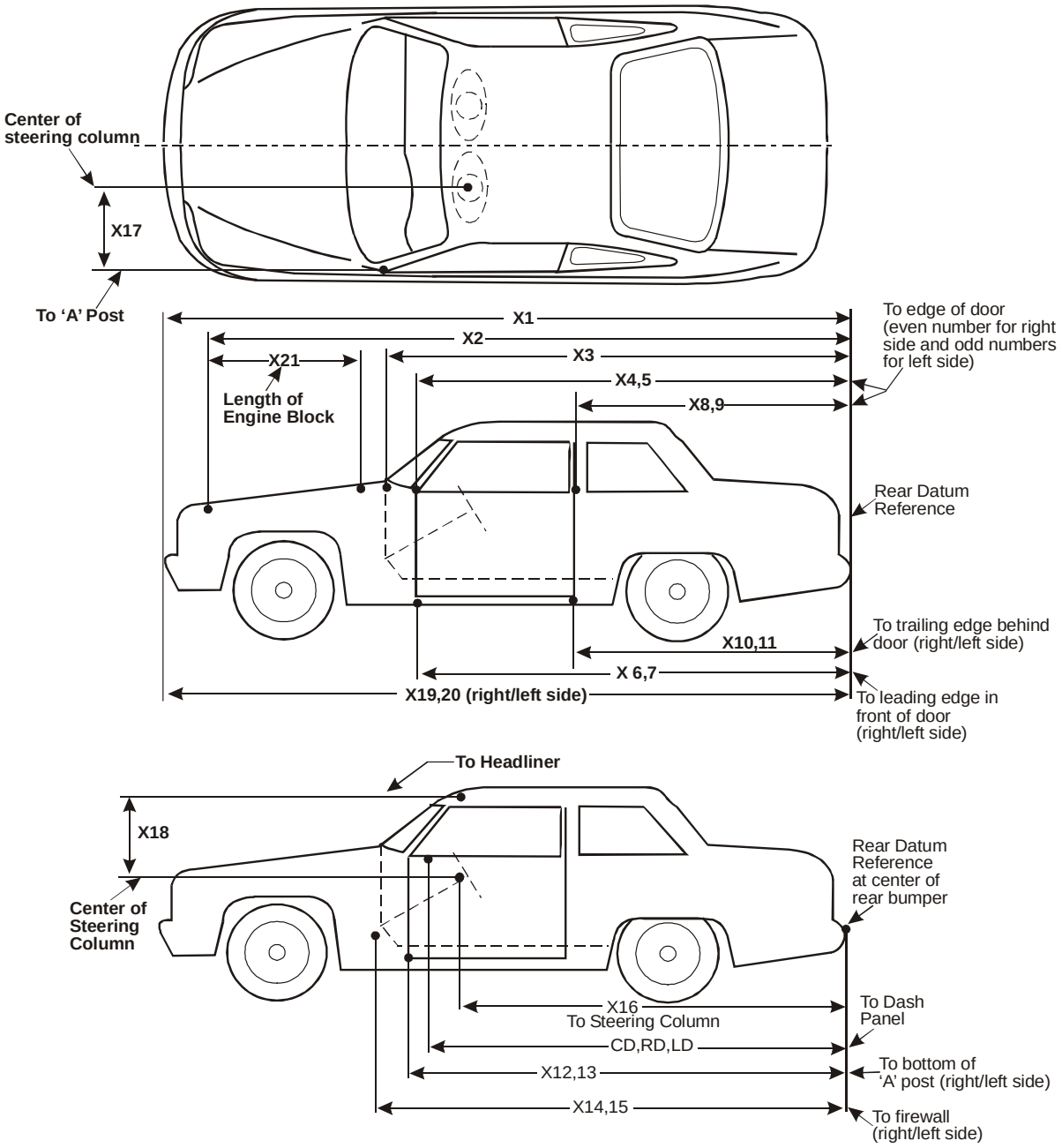


Table 13 Target Vehicle Impacted Measurements

Test number: 070620

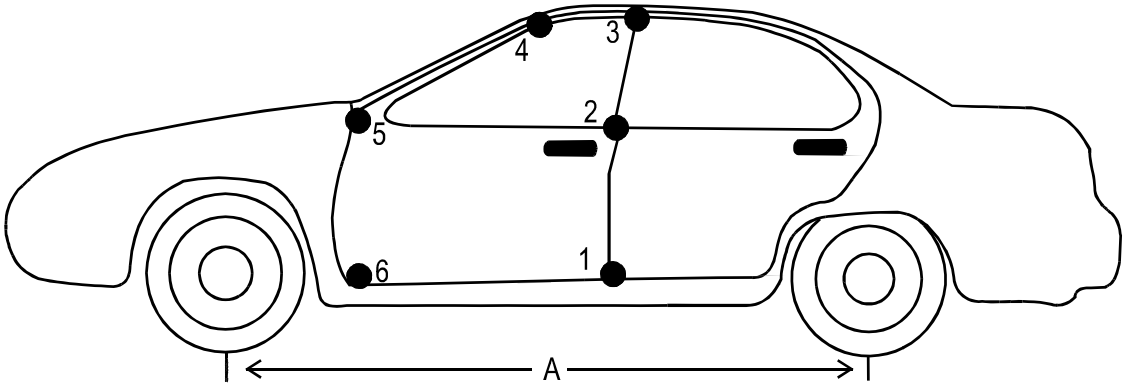
Vehicle year/make/model/body style: 2002/Ford/Focus SE/4-door sedan

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4328	4032	296
X2	Rear Surface of Vehicle to Front of Engine Block	3876	3790	86
X3	Rear Surface of Vehicle to Firewall	3468	3383	85
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3073	3082	-9
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3072	2795	277
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3031	3012	19
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3040	2809	231
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2060	2062	-2
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2057	1921	136
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2050	2031	19
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2055	1872	183
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	2995	3005	-10
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	2990	2649	341
X14	Rear Surface of Vehicle to Firewall - Right Side	3454	3502	-48
X15	Rear Surface of Vehicle to Firewall - Left Side	3450	2917	533
X16	Rear Surface of Vehicle to Steering Wheel Center	2620	2383	237
X17	Center of Steering Column to " A " Post	293	320	-27
X18	Center of Steering Column to Headliner	445	610	-165
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4304	4350	-46
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4300	3822	478
X21	Length of Engine Block	530	530	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2930	2910	20
CD	Rear Surface of Vehicle to Center of Dash Panel	2860	2720	140
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2930	2596	334

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	2225	-769	228	2237	-730	295	12	39	67
2	2097	-741	-202	2126	-704	-144	29	37	58
3	2002	-563	-788	2041	-520	-729	39	43	59
4	2506	-609	-743	2481	-573	-883	-25	36	-140
5	2979	-717	-202	2692	-671	-149	-287	46	53
6	2946	-764	246	2808	-748	288	-138	16	42

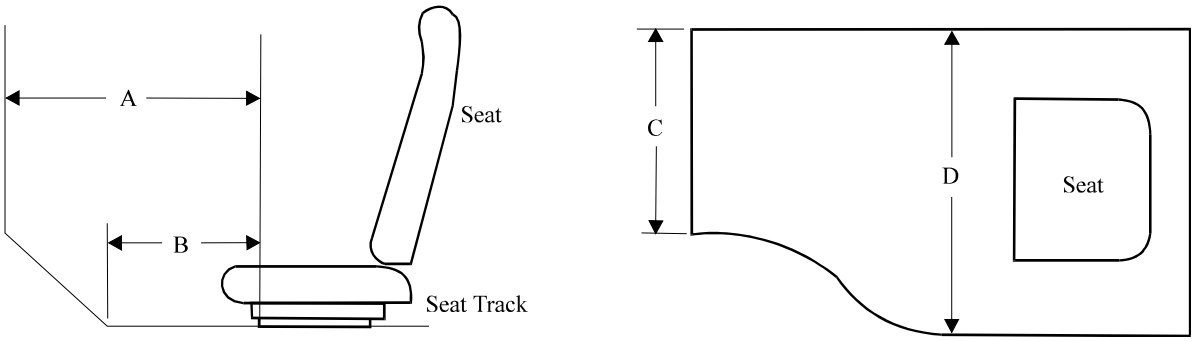
Right Front

Point Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
1	2227	764	225	2233	779	215	6	15	-10
2	2099	731	-199	2102	748	-208	3	17	-9
3	1999	551	-789	1998	571	-798	-1	20	-9
4	2502	596	-750	2503	620	-773	1	24	-23
5	2978	710	-199	2978	728	-220	0	18	-21
6	2948	759	238	2954	759	221	6	0	-17

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	2615 mm	2615 mm
Post-Test	2377 mm	2634 mm
Difference	238 mm	-19 mm

Figure 11 Target Vehicle Intrusion Measurements

Static Footwell Deformation



Driver's Side

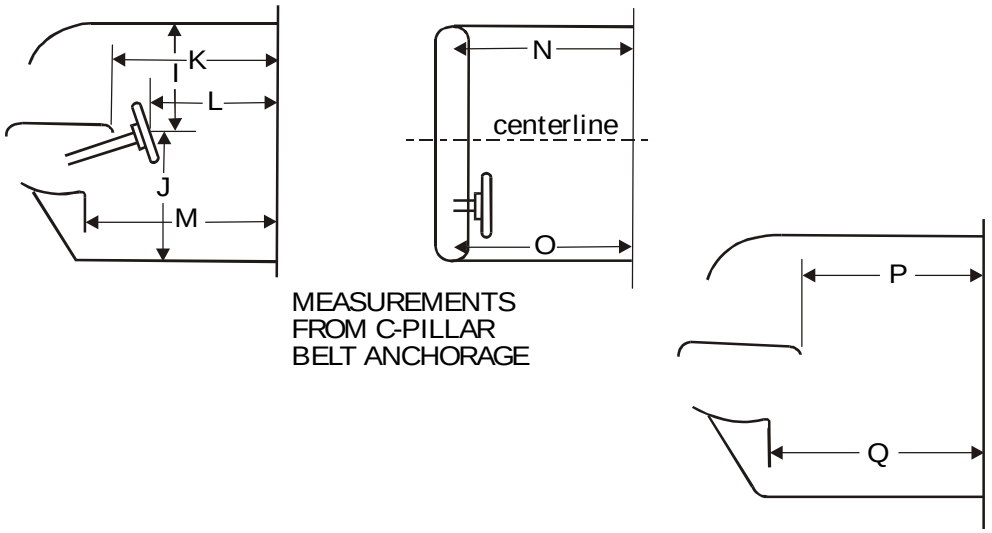
Measurement	Pre-Test	Post-Test	Difference
A	500 mm	422 mm	-78 mm
B	408 mm	383 mm	-25 mm
C	452 mm	401 mm	-51 mm
D	473 mm	462 mm	-11 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	552 mm	540 mm	-12 mm
B	393 mm	390 mm	-3 mm
C	447 mm	450 mm	3 mm
D	457 mm	455 mm	-2 mm

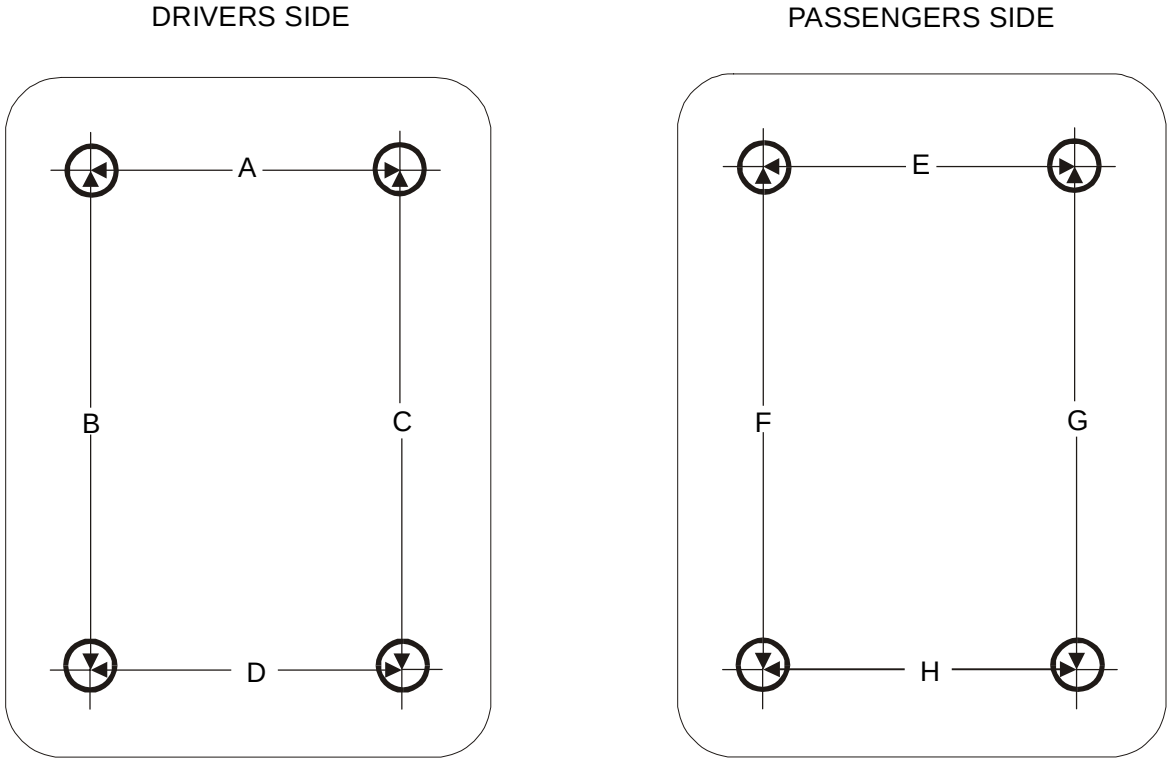
Figure 12 Target Vehicle Intrusion Measurements

Static Passenger Compartment Intrusion



Measurement	Pre-Test	Post-Test	Difference
I	445 mm	610 mm	-165 mm
J	660 mm	678 mm	-18 mm
K (driver's side)	1960 mm	1630 mm	330 mm
L	1670 mm	1457 mm	213 mm
M (driver's side)	1950 mm	1740 mm	210 mm
N (passenger's side)	1935 mm	1878 mm	57 mm
O (driver's side)	1872 mm	1612 mm	260 mm
P (passenger's side)	1970 mm	1955 mm	15 mm
Q (passenger's side)	1948 mm	1961 mm	-13 mm

Figure 13 Target Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	467 mm	461 mm	-6 mm
B	408 mm	383 mm	-25 mm
C	406 mm	360 mm	-46 mm
D	473 mm	462 mm	-11 mm
E	454 mm	454 mm	0 mm
F	393 mm	390 mm	-3 mm
G	393 mm	392 mm	-1 mm
H	457 mm	455 mm	-2 mm

Table 14 Target Vehicle Frontal Profile Measurements

Bottom of Front Bumper[1]

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 Bumper[1]

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 Grill[1]

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

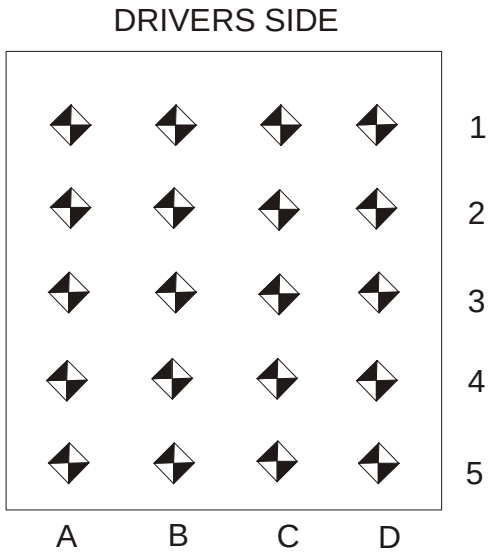
Front of Hood

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	-714	-203	3203	-696	-458	-715	18	-255
2	4267	-417	-102	3485	-454	-192	-782	-37	-90
3	4318	-146	-90	3725	-333	-247	-593	-187	-157
4	4318	146	-91	3921	-164	-372	-397	-310	-281
5	4250	429	-116	4029	79	-480	-221	-350	-364
6	3917	708	-207	3867	488	-476	-50	-220	-269

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

[1] Fascia removed prior to 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	3145	3216	3217	3229	2972	3064	3089	3135	-173	-152	-128	-94
2	3125	3129	3131	3135	2983	3000	3024	3044	-142	-129	-107	-91
3	3053	3034	3039	3052	2933	2926	2938	2961	-120	-108	-101	-91
4	2835	2839	2849	2852	2721	2734	2753	2778	-114	-105	-96	-74
5	2645	2645	2645	2646	2550	2543	2579	2601	-95	-102	-66	-45

TARGET DRIVER TOEPAN Y-AXIS

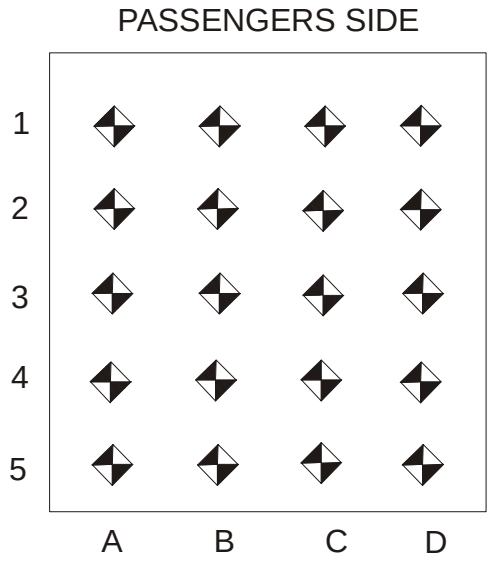
	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-605	-453	-309	-153	-574	-461	-321	-173	31	-8	-12	-20
2	-622	-464	-315	-157	-604	-462	-318	-162	18	2	-3	-5
3	-626	-481	-313	-159	-617	-472	-307	-156	9	9	6	3
4	-625	-465	-298	-147	-603	-443	-285	-141	22	22	13	6
5	-627	-468	-279	-154	-594	-433	-256	-132	33	35	23	22

TARGET DRIVER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	248	254	256	258	246	214	217	230	-2	-40	-39	-28
2	302	308	317	313	296	294	300	285	-6	-14	-17	-28
3	358	360	362	361	358	367	352	333	0	7	-10	-28
4	361	365	367	362	404	399	381	368	43	34	14	6
5	378	380	377	360	448	445	426	407	70	65	49	47

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	3199	3192	3197	3147	3160	3167	3179	3144	-39	-25	-18	-3
2	3130	3124	3121	3135	3096	3102	3110	3133	-34	-22	-11	-2
3	3040	3035	3032	3034	3010	3016	3022	3034	-30	-19	-10	0
4	2860	2856	2856	2845	2832	2837	2846	2846	-28	-19	-10	1
5	2647	2642	2642	2641	2620	2625	2635	2642	-27	-17	-7	1

TARGET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	162	324	481	609	140	301	458	590	-22	-23	-23	-19
2	156	326	483	615	139	310	465	596	-17	-16	-18	-19
3	159	324	480	613	148	313	468	602	-11	-11	-12	-11
4	153	305	462	618	156	305	462	618	3	0	0	0
5	156	294	464	613	171	309	478	626	15	15	14	13

TARGET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	264	269	264	240	239	245	239	220	-25	-24	-25	-20
2	313	321	313	298	296	302	292	275	-17	-19	-21	-23
3	358	360	359	358	349	347	343	340	-9	-13	-16	-18
4	359	363	362	361	366	360	357	348	7	-3	-5	-13
5	358	378	378	378	385	395	384	370	27	17	6	-8

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

		Pre-Test			Post-Test			Difference		
Index	Description	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	2628	-353	-326	2399	-242	-261	-229	111	65
2	Driver's Lower Left Instrument Panel	2857	-502	-100	2673	-438	-49	-184	64	51
3	Driver's Lower Right Instrument Panel	2850	-202	-101	2693	-150	-57	-157	52	44
4	Brake Pedal Center	3079	-325	158	2889	-275	148	-190	50	-10
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3299	-472	160	3083	-476	97	-216	-4	-63
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3298	-317	166	3124	-331	108	-174	-14	-58
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	3299	-149	142	3166	-169	100	-133	-20	-42
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3198	-568	162	2967	-507	161	-231	61	-1
9	Left Front Driver's Seat Mounting Bolt	2580	-596	289	2561	-557	367	-19	39	78
10	Right Front Driver's Seat Mounting Bolt	2573	-144	268	2549	-111	324	-24	33	56
11	Left Rear Driver's Seat Mounting Bolt	2194	-631	305	2201	-607	365	7	24	60
12	Right Rear Driver's Seat Mounting Bolt	2144	-110	302	2118	-88	340	-26	22	38
17	Exterior A-Pillar at Height of Bottom Front Window	3001	-704	-354	2701	-644	-301	-300	60	53
18	Exterior B-Pillar at Height of A-Pillar Measurement Location	2039	-742	-355	2072	-705	-297	33	37	58

[1] Post-test measurement was not taken.

Table 16 Target Vehicle Bumper Measurements

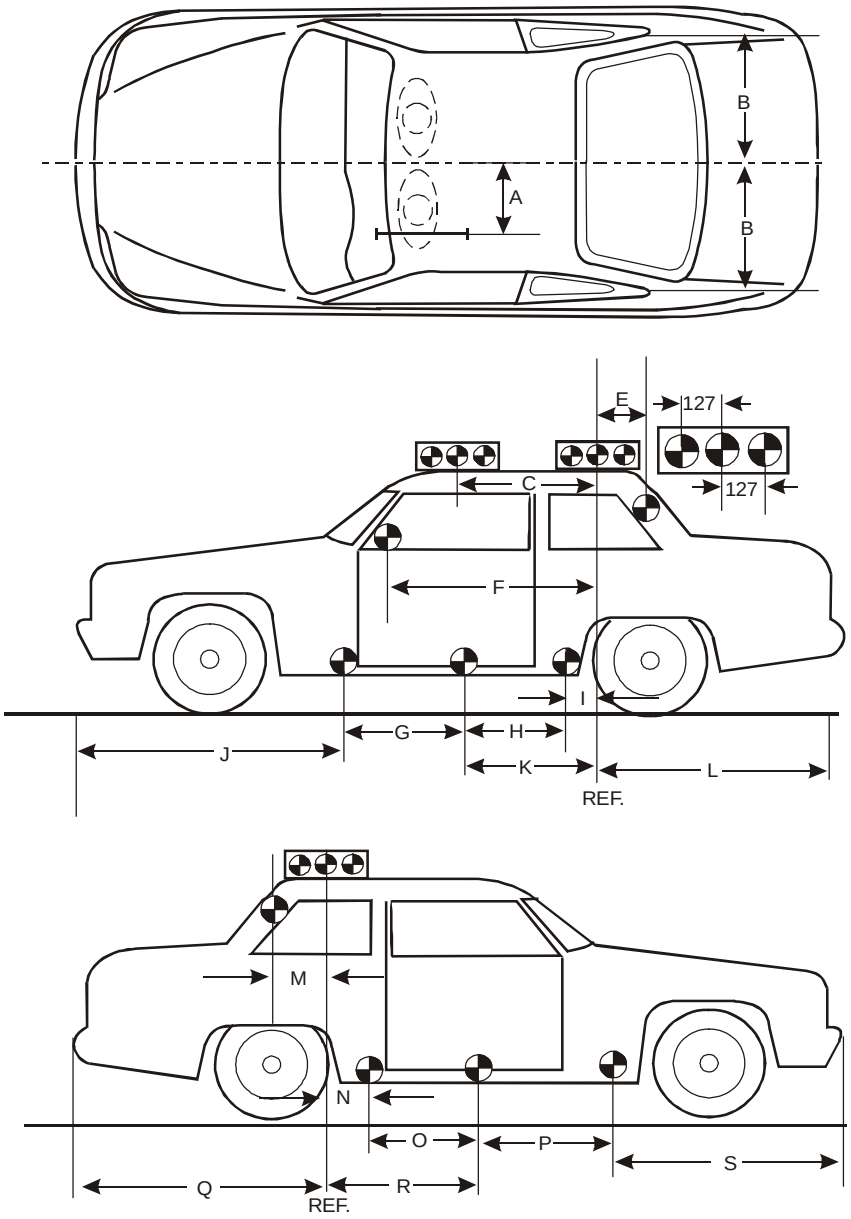
Index	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	4314	-611	183	3867	-659	332	-447	-48	149
2	4335	-498	185	3857	-547	340	-478	-49	155
3	4335	-359	181	3861	-431	313	-474	-72	132
4	4335	-244	182	3920	-337	283	-415	-93	101
5	4335	-117	180	3987	-236	246	-348	-119	66
6	4335	1	180	4043	-137	215	-292	-138	35
7	4335	122	180	4101	-35	184	-234	-157	4
8	4335	238	178	4158	60	150	-177	-178	-28
9	4335	363	177	4218	164	117	-117	-199	-60
10	4335	488	179	4278	269	85	-57	-219	-94
11	4315	604	177	4317	374	50	2	-230	-127

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 357 mm	F	1195 mm	M	450 mm
	Right 345 mm	G	885 mm	N	-460 mm
B	Left 598 mm	H	890 mm	O	890 mm
	Right 598 mm	I	-230 mm	P	888 mm
C	Left 610 mm	J	1160 mm	Q	1625 mm
	Right 610 mm	K	660 mm	R	630 mm
E	430 mm	L	1595 mm	S	1161 mm

[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 Measurements[1]

	Elements	Pre-Test
1	Total Length	5840
2	Total Width	1985
3	Bumper Top Height	632
4	Bumper Bottom Height	466
5	Longitudinal Member Top Height	486
6	Longitudinal Member Bottom Height	374
7	Distance Between Longitudinal Members	880
7´	Longitudinal Member Width	110
8	Engine Top Height	892
9	Engine Bottom Height	320
10	Engine and Gearbox Width	570
11	Front Bumper - Engine Distance	805
12	Front Shock Absorber Fixing Height	615
13	Bonnet Leading Edge Height	1000
14	Front Shock Absorber Fixing Width	960
15	Front Bumper - Front Axle Distance	975
16	Front Axle - A Pillar Distance	545
17	A Pillar - B Pillar Distance	1165
18	B Pillar - Rear Axle Distance	1900
19	B Pillar - C Pillar Distance	705
20	Roof Sill Bottom Height	1646
21	Roof Sill Top Height	1734
22	Floor Sill Bottom Height	369
23	Floor Sill Top Height	469

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

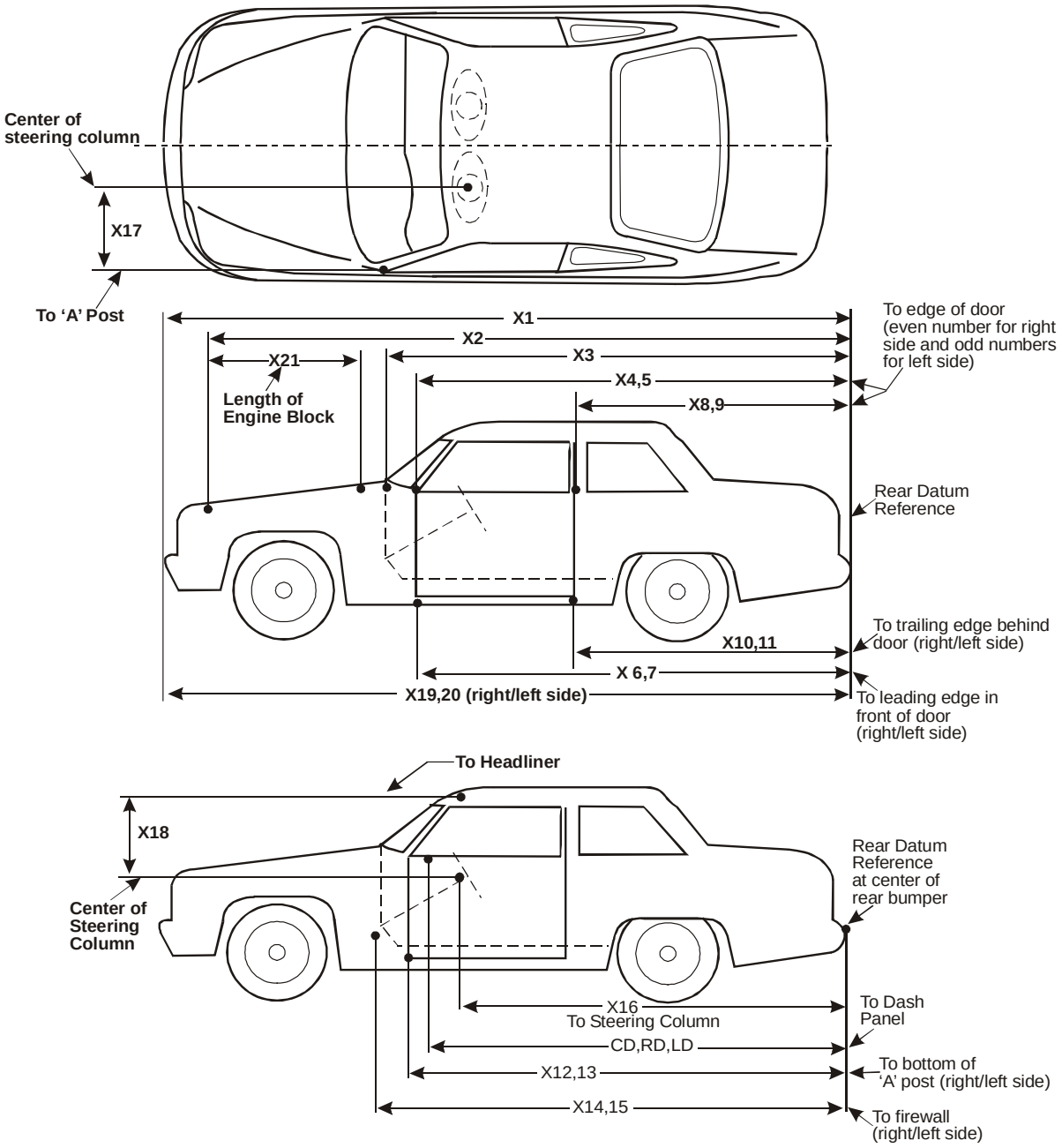


Table 18 Bullet Vehicle Impacted Measurements

Test number: 070620

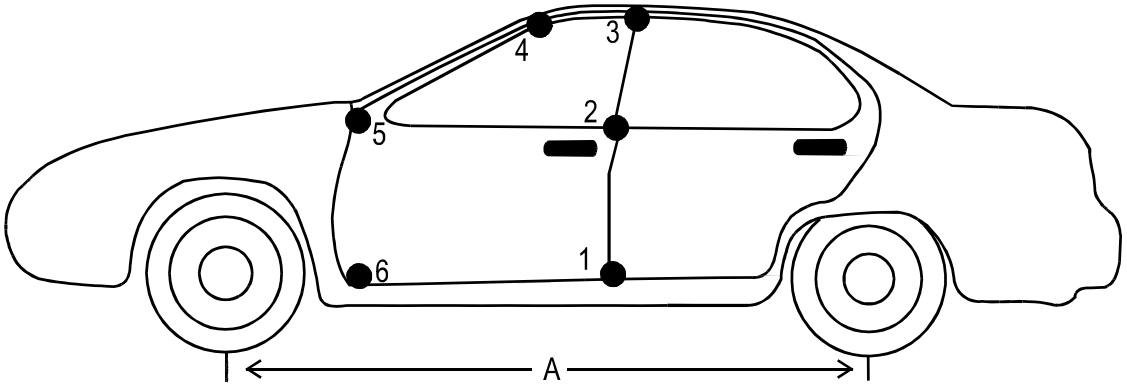
Vehicle year/make/model/body style: 2003/Chevrolet/Silverado/4-door pickup

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5840	5543	297
X2	Rear Surface of Vehicle to Front of Engine Block	4978	5227	-249
X3	Rear Surface of Vehicle to Firewall	4610	4669	-59
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	4260	4194	66
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	4275	4217	58
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	4213	4220	-7
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	4235	4152	83
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	3140	3164	-24
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	3150	3090	60
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	3110	3119	-9
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	3135	3052	83
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	4265	4281	-16
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	4275	4191	84
X14	Rear Surface of Vehicle to Firewall - Right Side	4584	4117	467
X15	Rear Surface of Vehicle to Firewall - Left Side	4600	4677	-77
X16	Rear Surface of Vehicle to Steering Wheel Center	3820	3758	62
X17	Center of Steering Column to " A " Post	305	289	16
X18	Center of Steering Column to Headliner	450	460	-10
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5740	5619	121
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5740	4476	1264
X21	Length of Engine Block	500	500	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3990	4010	-20
CD	Rear Surface of Vehicle to Center of Dash Panel	3970	3989	-19
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3980	3935	45

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	3139	-908	16	3115	-907	11	-24	1	-5
2	3117	-878	-391	3094	-881	-395	-23	-3	-4
3	3164	-708	-1131	3145	-726	-1139	-19	-18	-8
4	3790	-704	-1097	3771	-718	-1131	-19	-25	-34
5	4262	-859	-390	4185	-903	-391	-77	-44	-1
6	4213	-869	33	4139	-931	31	-74	-62	-2

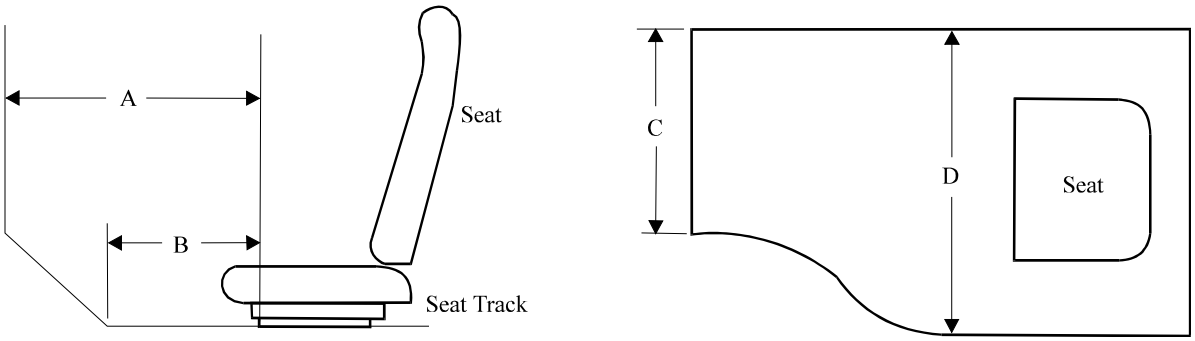
Right Front

Point Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
1	3131	911	-2	3130	913	-3	-1	2	-1
2	3118	876	-394	3120	875	-395	2	-1	-1
3	3166	703	-1131	3171	695	-1130	5	-8	1
4	3792	697	-1101	3798	676	-1099	6	-21	2
5	4261	853	-383	4268	829	-382	7	-24	1
6	4201	865	36	4200	856	36	-1	-9	0

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	3650 mm	3650 mm
Post-Test	3097 mm	3829 mm
Difference	553 mm	-179 mm

Figure 18 Bullet Vehicle Intrusion Measurements

Static Footwell Deformation



Driver's Side

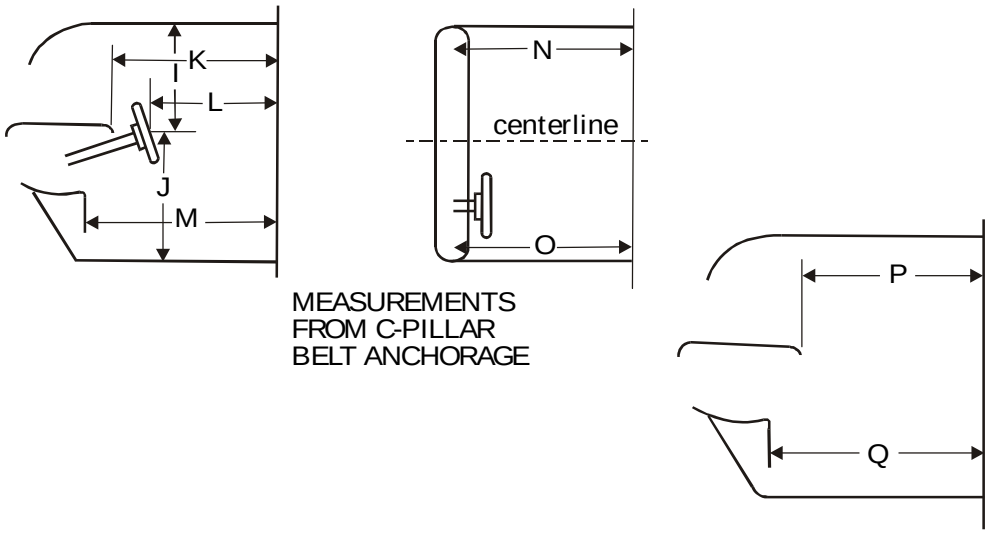
Measurement	Pre-Test	Post-Test	Difference
A	584 mm	334 mm	-250 mm
B	453 mm	-3793 mm	-4246 mm
C	425 mm	375 mm	-50 mm
D	443 mm	444 mm	1 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	472 mm	448 mm	-24 mm
B	325 mm	329 mm	4 mm
C	340 mm	334 mm	-6 mm
D	322 mm	323 mm	1 mm

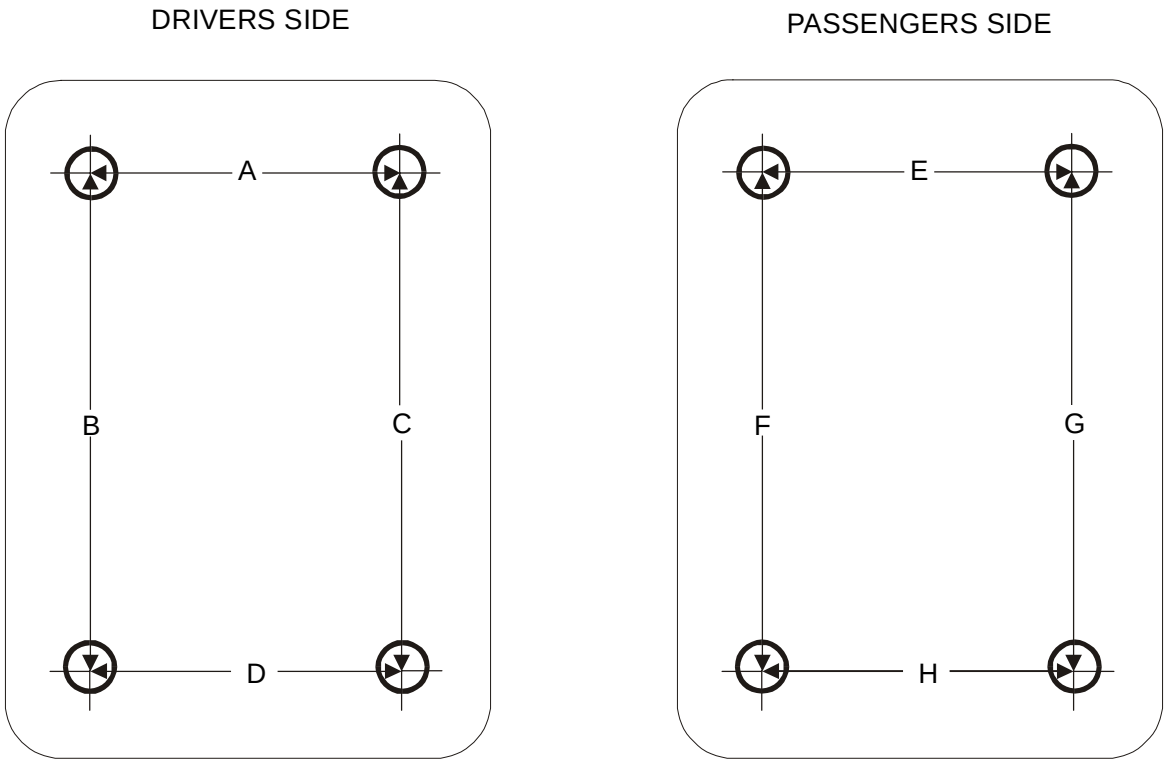
Figure 19 Bullet Vehicle Intrusion Measurements

Static Passenger Compartment Intrusion



Measurement	Pre-Test	Post-Test	Difference
I	460 mm	436 mm	24 mm
J	665 mm	729 mm	-64 mm
K (driver's side)	1563 mm	1575 mm	-12 mm
L	1423 mm	1411 mm	12 mm
M (driver's side)	1720 mm	1631 mm	89 mm
N (passenger's side)	1532 mm	1511 mm	21 mm
O (driver's side)	1628 mm	1645 mm	-17 mm
P (passenger's side)	1585 mm	1574 mm	11 mm
Q (passenger's side)	1743 mm	1711 mm	32 mm

Figure 20 Bullet Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	434 mm	-249 mm	-683 mm
B	453 mm	-3793 mm	-4246 mm
C	377 mm	368 mm	-9 mm
D	443 mm	444 mm	1 mm
E	332 mm	332 mm	0 mm
F	325 mm	329 mm	4 mm
G	391 mm	393 mm	2 mm
H	322 mm	323 mm	1 mm

Table 19 Bullet Vehicle Frontal Profile Measurements

Bottom of Front Bumper[1]

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 Bumper[1]

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 Grill

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	5613	-838	-327	N/A	N/A	N/A	N/A	N/A	N/A
2	5708	-508	-322	5191	-596	-234	-517	-88	88
3	5750	-177	-319	5394	-333	-203	-356	-156	116
4	5751	169	-321	5587	-46	-201	-164	-215	120
5	5709	499	-324	N/A	N/A	N/A	N/A	N/A	N/A
6	5610	829	-330	N/A	N/A	N/A	N/A	N/A	N/A

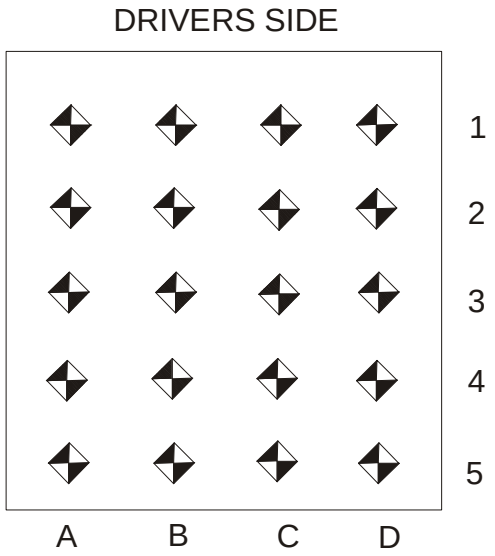
Front of Hood

Pre-Test				Post-Test			Difference[4]		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	5535	-840	-504	5318	-1029	-600	-217	-189	-96
2	5665	-503	-461	5384	-684	-495	-281	-181	-34
3	5692	-175	-486	5523	-389	-473	-169	-214	13
4	5693	161	-487	5591	-58	-460	-102	-219	27
5	5665	492	-463	5640	271	-448	-25	-221	15
6	5536	828	-507	5574	622	-493	38	-206	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 to bumper beam only.

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	4398	4441	4438	4389	4127	4180	4210	4231	-271	-261	-228	-158
2	4361	4359	4366	4323	4065	4105	4150	4197	-296	-254	-216	-126
3	4267	4261	4258	4241	N/A	4051	N/A	4190	N/A	-210	N/A	-51
4	4043	4031	4029	4031	3937	N/A	3989	3988	-106	N/A	-40	-43
5	3814	3820	3859	3864	3793	3794	3824	3822	-21	-26	-35	-42

BULLET DRIVER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-692	-560	-423	-267	-639	-510	-408	-264	53	50	15	3
2	-692	-574	-419	-264	-621	-526	-385	-233	71	48	34	31
3	-706	-569	-419	-272	N/A	-488	N/A	-249	N/A	81	N/A	23
4	-721	-566	-419	-257	-639	N/A	-400	-242	82	N/A	19	15
5	-706	-568	-420	-263	-703	-568	-414	-259	3	0	6	4

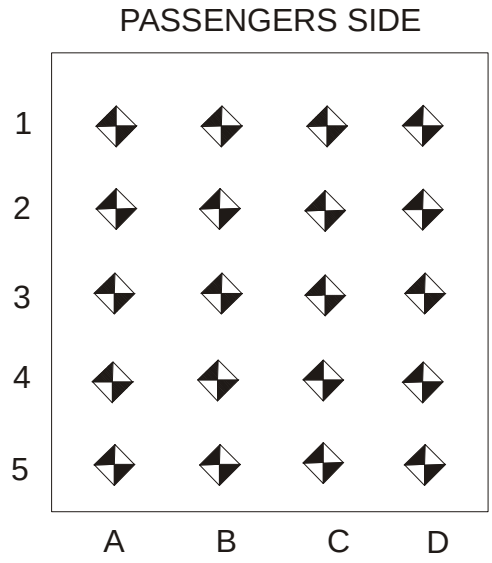
BULLET DRIVER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-43	-25	-13	-33	-225	-202	-117	-76	-182	-177	-104	-43
2	12	13	9	19	-197	-149	-95	1	-209	-162	-104	-18
3	62	62	62	61	N/A	54	N/A	46	N/A	-8	N/A	-15
4	58	58	54	57	78	N/A	65	78	20	N/A	11	21
5	52	52	51	53	88	92	87	105	36	40	36	52

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	4373	4388	4396	4396	4336	4368	4391	4405	-37	-20	-5	9
2	4318	4317	4318	4314	4304	4306	4311	4312	-14	-11	-7	-2
3	4226	4225	4222	4222	4217	4218	4217	4219	-9	-7	-5	-3
4	4039	4030	4004	4010	4027	4021	3997	4005	-12	-9	-7	-5
5	3901	3873	3816	3831	3888	3863	3809	3826	-13	-10	-7	-5

BULLET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	406	527	644	746	392	511	625	726	-14	-16	-19	-20
2	406	533	639	755	395	521	627	741	-11	-12	-12	-14
3	413	532	638	745	403	524	630	735	-10	-8	-8	-10
4	395	512	630	729	389	507	625	724	-6	-5	-5	-5
5	384	500	602	706	381	497	600	704	-3	-3	-2	-2

BULLET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-59	-65	-73	-74	-59	-56	-62	-63	0	9	11	11
2	-7	-9	-10	-8	-1	-2	-5	-4	6	7	5	4
3	58	57	56	55	67	64	60	57	9	7	4	2
4	54	53	52	51	68	66	61	56	14	13	9	5
5	50	49	47	47	69	65	58	51	19	16	11	4

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

		Pre-Test			Post-Test			Difference		
Index	Description	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	3786	-430	-677	3742	-449	-715	-44	-19	-38
2	Driver's Lower Left Instrument Panel	4029	-580	-420	3956	-605	-437	-73	-25	-17
3	Driver's Lower Right Instrument Panel	4030	-280	-420	3969	-305	-436	-61	-25	-16
4	Brake Pedal Center	4246	-439	-134	4074	-452	-200	-172	-13	-66
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	4476	-588	-134	4270	-570	-259	-206	18	-125
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	4557	-437	-134	4365	-482	-154	-192	-45	-20
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	4495	-296	-152	4351	-329	-160	-144	-33	-8
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	4436	-684	-134	4219	-660	-269	-217	24	-135
9	Left Front Driver's Seat Mounting Bolt	3711	-681	-28	3693	-679	12	-18	2	40
10	Right Front Driver's Seat Mounting Bolt	3702	-238	-36	3685	-240	13	-17	-2	49
11	Left Rear Driver's Seat Mounting Bolt	3288	-683	-39	3271	-684	-23	-17	-1	16
12	Right Rear Driver's Seat Mounting Bolt	3303	-240	-47	3289	-241	-40	-14	-1	7
17	Exterior A-Pillar at Height of Bottom Front Window	4218	-840	-654	4159	-877	-656	-59	-37	-2
18	Exterior B-Pillar at Height of A-Pillar Measurement Location	3145	-843	-654	3119	-849	-658	-26	-6	-4

[1] Post-test measurement was not taken.

Table 21 Bullet Vehicle Bumper Measurements

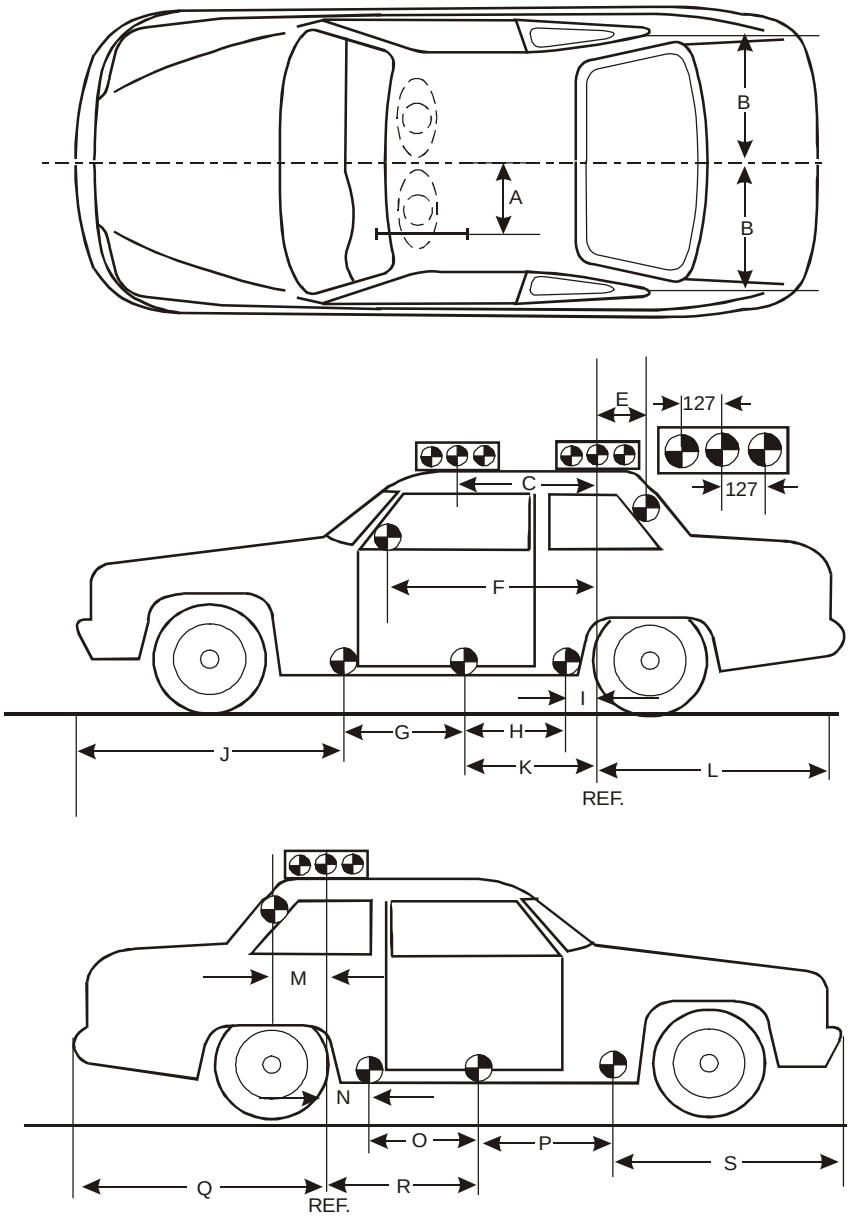
Index	Pre-Test			Post-Test			Difference		
	X	Y	Z	X	Y	Z	X	Y	Z
1	5316	-945	131	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
2	5547	-924	66	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
3	5730	-786	58	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
4	5786	-536	51	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
5	5818	-283	49	5363	-581	-45	-455	-298	-94
6	5836	-8	50	5499	-353	-29	-337	-345	-79
7	5822	248	47	5635	-138	6	-187	-386	-41
8	5788	527	54	5770	103	61	-18	-424	7
9	5739	761	58	5831	327	122	92	-434	64
10	5551	913	64	5720	535	170	169	-378	106
11	5318	933	118	5517	650	228	199	-283	110

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.

[1] Front bumper destroyed post-test.

Figure 22 Bullet Vehicle Reference Photo Target Locations



Measurement	Pre-Test	Measurement	Pre-Test	Measurement	Pre-Test
A	Left 480 mm	F	3995 mm	M	2430 mm
	Right 470 mm	G	1300 mm	N	1725 mm
B	Left 727 mm	H	1280 mm	O	1276 mm
	Right 727 mm	I	1735 mm	P	1305 mm
C	Left 610 mm	J	5740 mm	Q	2960 mm
	Right 610 mm	K	3020 mm	R	2997 mm
E	530 mm	L	2955 mm	S	5740 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

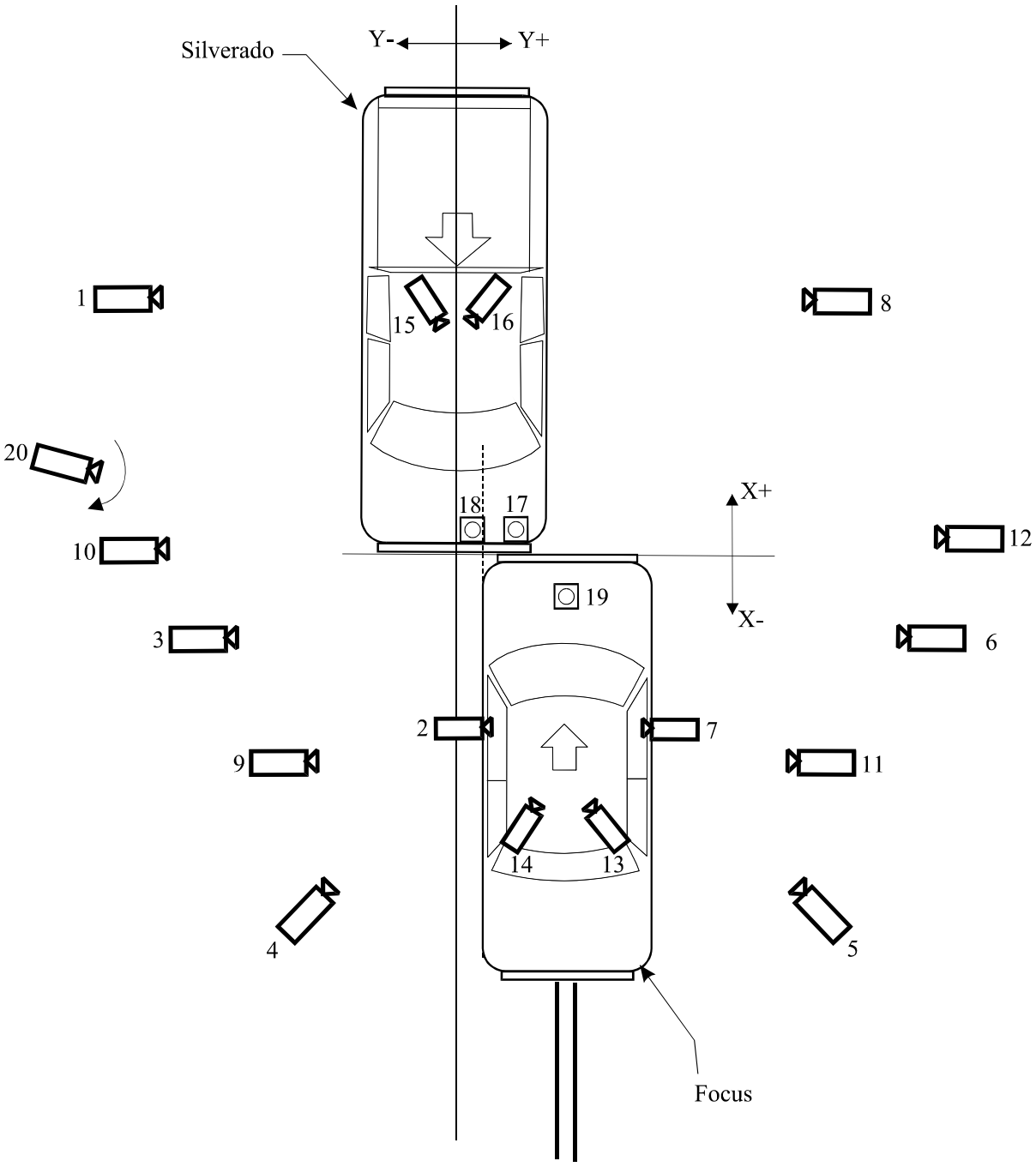


Table 22 Camera Information

Camera Number	Location	Location, mm X	Y	Z	Angle (deg.)	Lens (mm)	Speed (fps)
1	Bullet vehicle passenger side	1000	13350	-1270	0º	25	1000
2	Onboard target vehicle - driver	2060	410	-1140	10.0º	6.5	1000
3	Target vehicle left tight	-850	9030	-1050	4.0º	50	1000
4	Target vehicle driver angled	-4550	3150	-1780	11.0º	25	1000
5	Target vehicle passenger angled	-4930	3850	-1870	13.0º	25	1000
6	Target vehicle right tight	-650	11350	-1040	3.0º	50	1000
7	Onboard target vehicle - passenger	2060	1180	-1140	13.0º	6.5	1000
8	Bullet vehicle driver side	300	13850	-1260	1.0º	25	1000
9	Target vehicle driver side wide	-1550	11060	-1070	1.0º	25	1000
10	Left overall wide (reference to target vehicle)	0	10300	-1120	1.0º	12.5	1000
11	Target vehicle passenger side wide	-1300	13150	-1050	4.0º	25	1000
12	Right overall wide (reference to target vehicle)	0	10500	-1230	1.0º	12.5	1000
13	Onboard target vehicle - driver over shoulder	3070	0	-1260	8.6º	12.5	1000
14	Onboard target vehicle - passenger over shoulder	3070	520	-1260	6.9º	12.5	1000
15	Onboard bullet vehicle - driver over shoulder	3000	490	-1410	8.0°	12.5	1000
16	Onboard bullet vehicle - passenger over shoulder	3000	0	-1410	7.0°	12.5	1000
17	Overhead wide	0	0	-5500	90.0º	12.5	1000
18	Overhead tight	800	0	-5500	90.0º	25	1000
19	Underbody crush area of target vehicle	0	0	-3160	90.0º	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

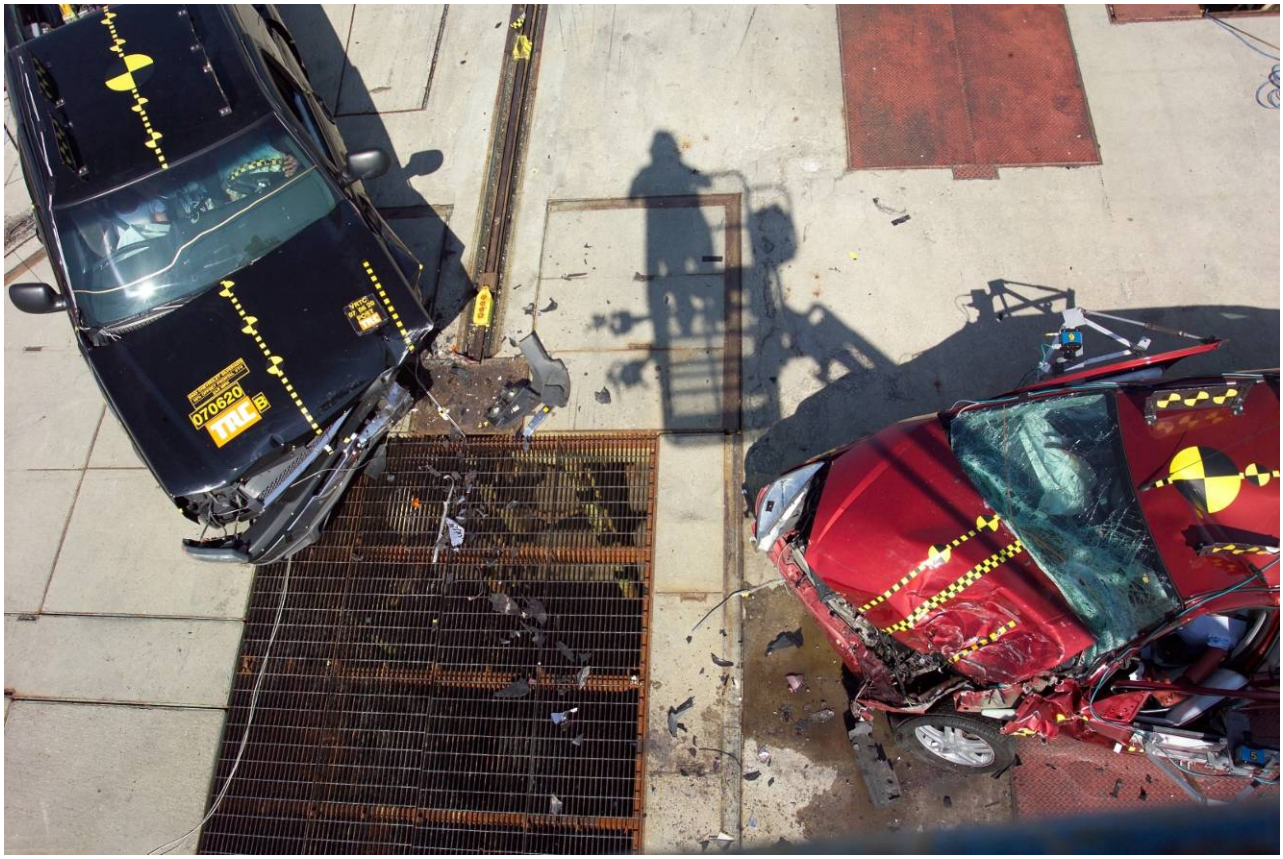


Figure A-6 Post-Test Impact Alignment - View 1



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

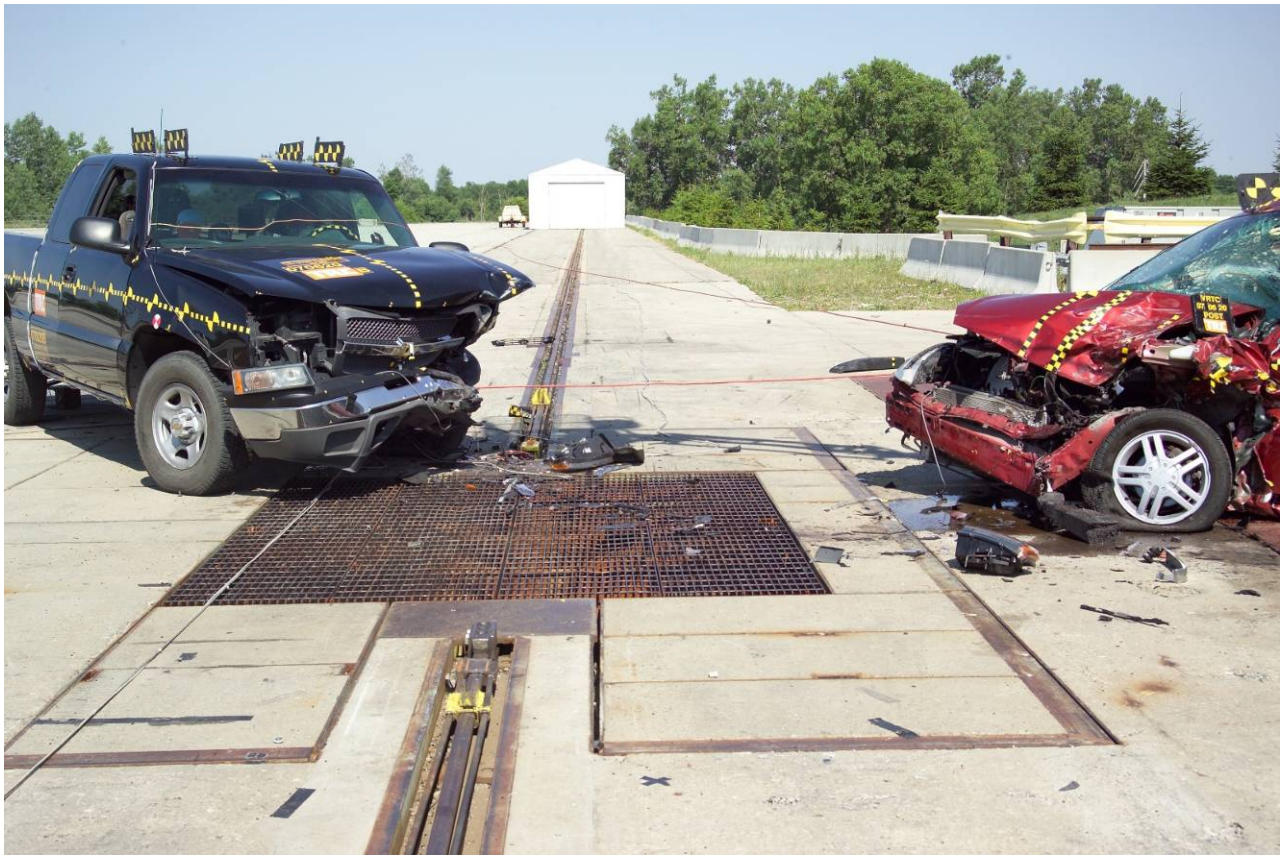


Figure A-8 Post-Test Impact Alignment - View 2



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

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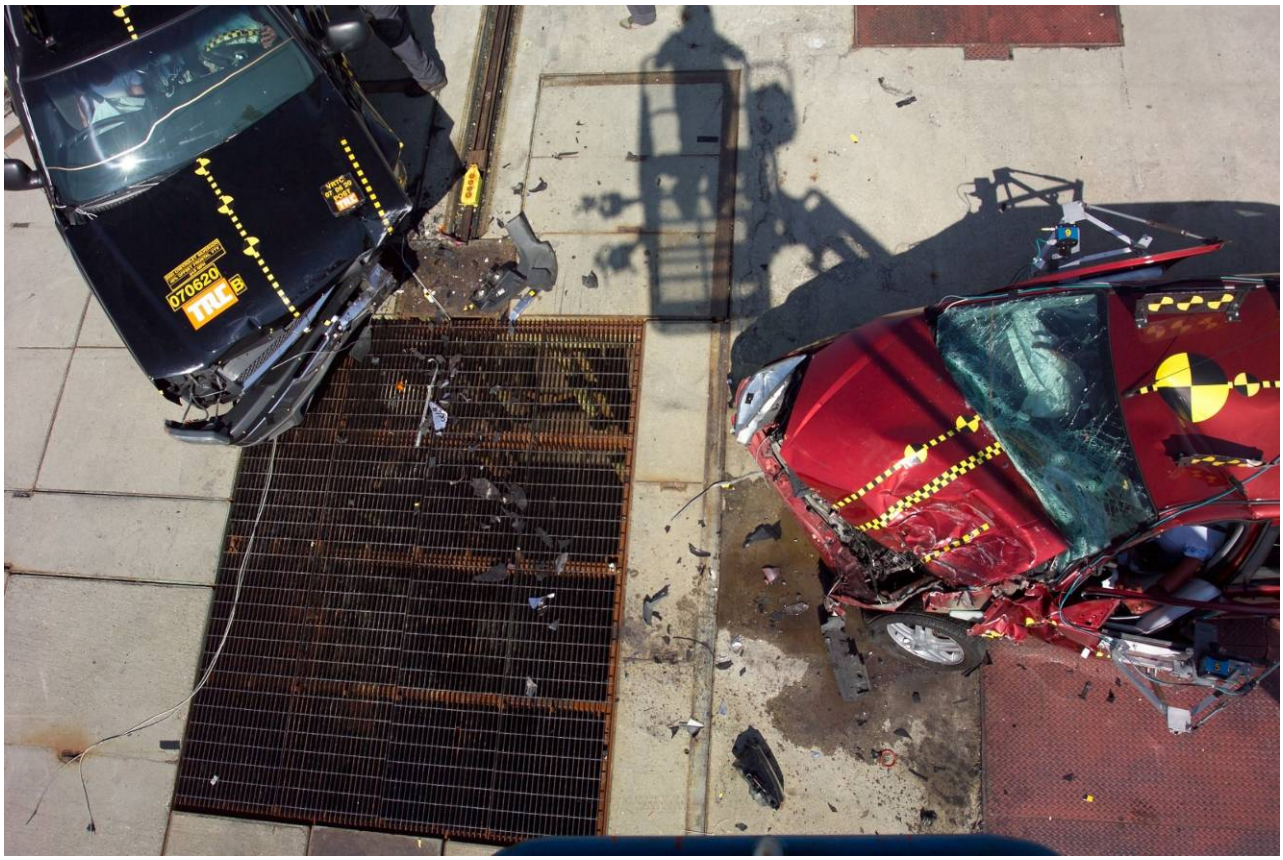


Figure A-10 Post-Test Overhead Wide View

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Figure A-11 Post-Test Overhead Target Vehicle View

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Figure A-12 Post-Test Overhead Bullet Vehicle View

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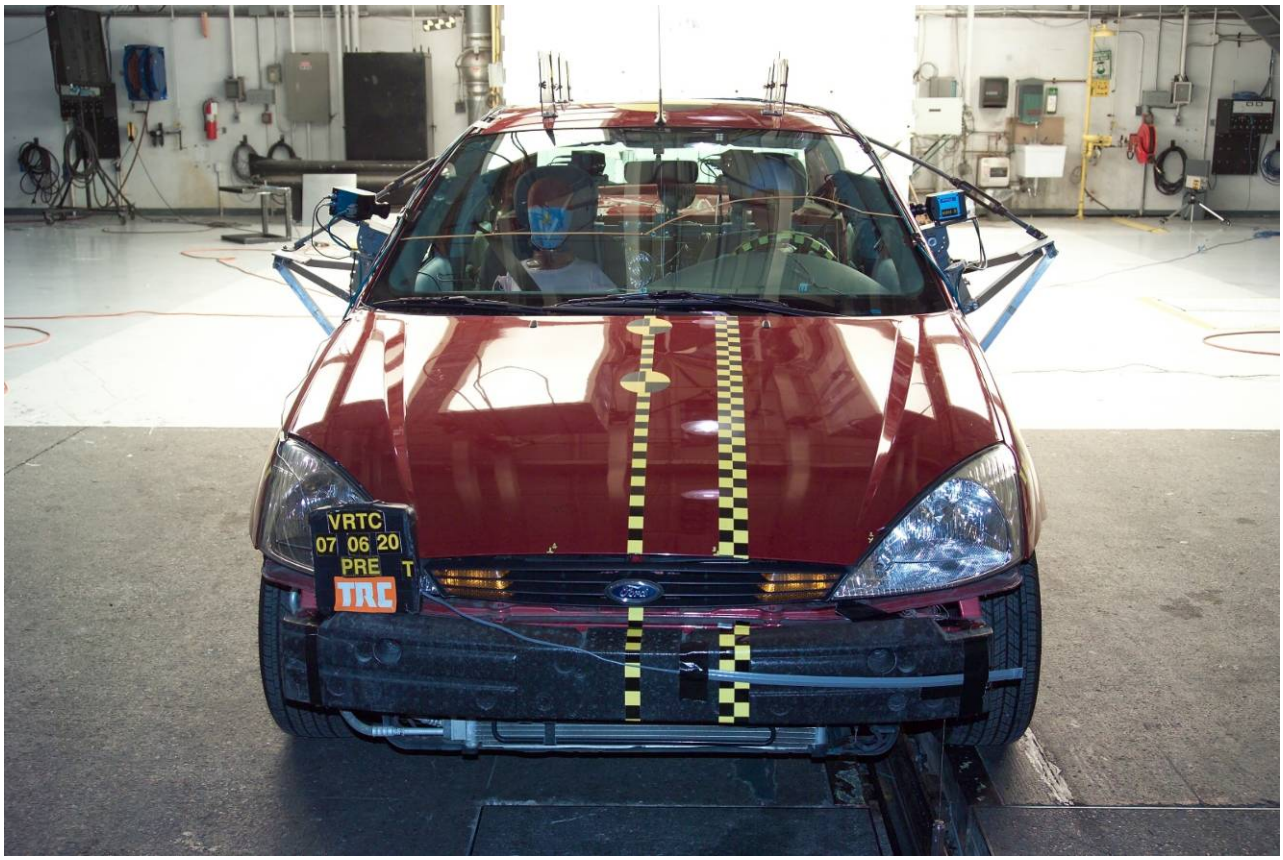


Figure A-13 Pre-Test Target Vehicle Front View

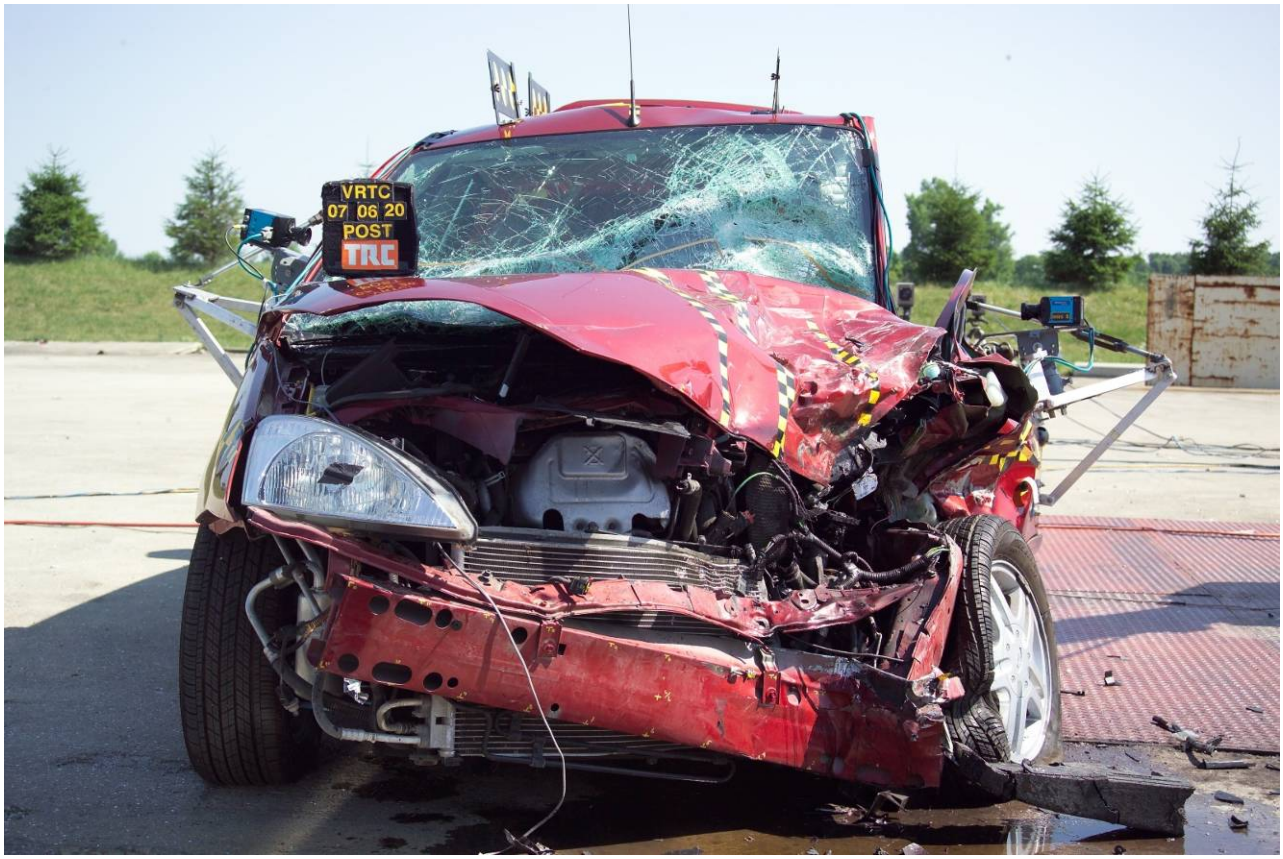


Figure A-14 Post-Test Target Vehicle Front View



Figure A-15 Pre-Test Target Vehicle Left Front View

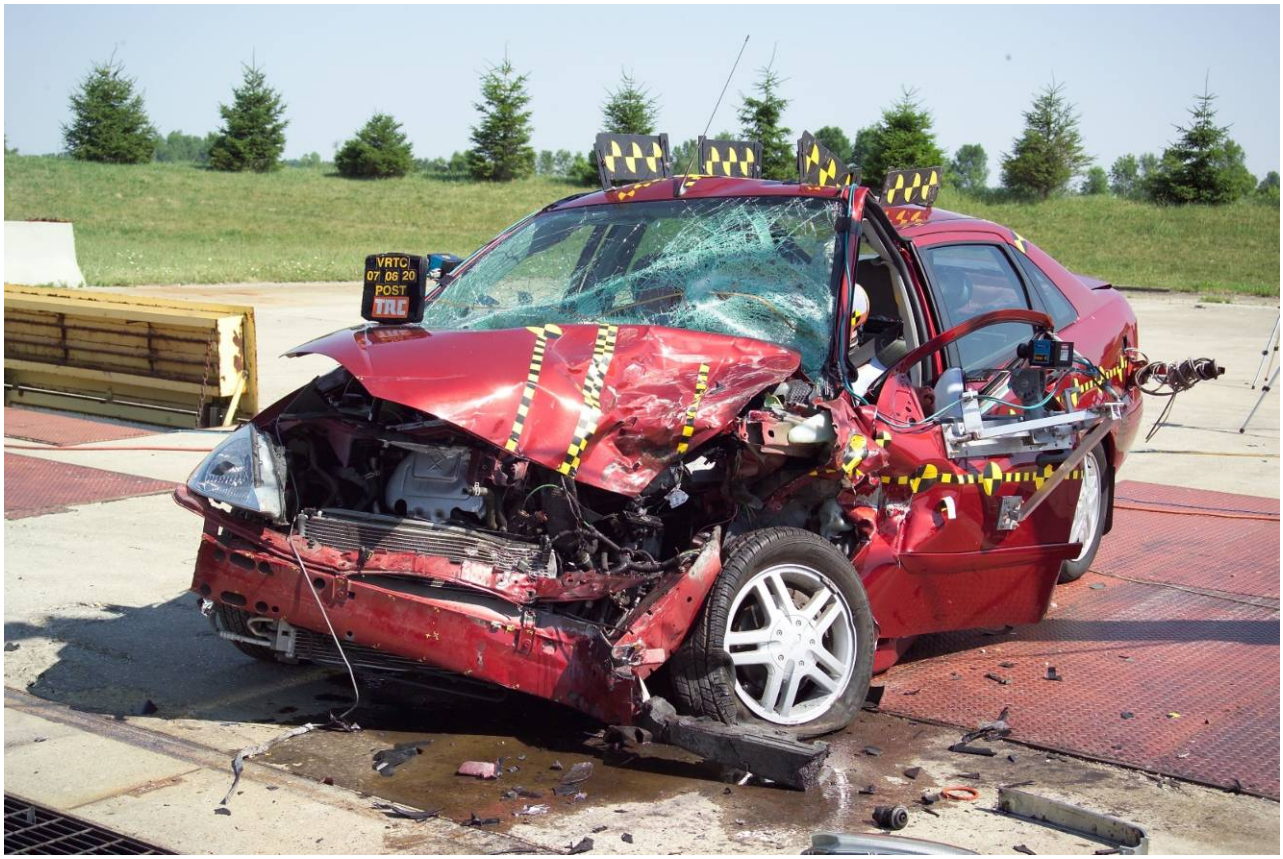


Figure A-16 Post-Test Target Vehicle Left Front View



Figure A-17 Pre-Test Target Vehicle Left Side View



Figure A-18 Post-Test Target Vehicle Left Side View



Figure A-19 Pre-Test Target Vehicle Left Rear View



Figure A-20 Post-Test Target Vehicle Left Rear View

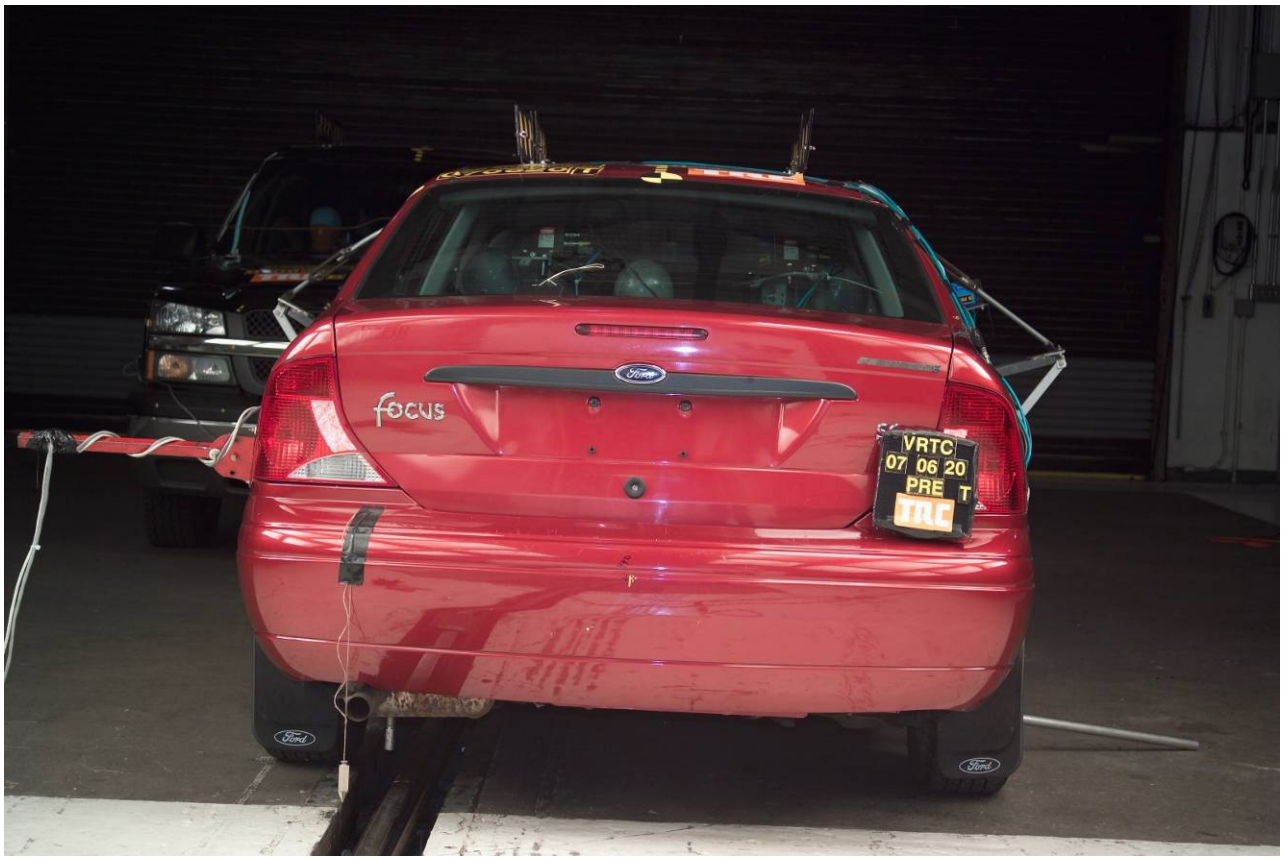


Figure A-21 Pre-Test Target Vehicle Rear View



Figure A-22 Post-Test Target Vehicle Rear View



Figure A-23 Pre-Test Target Vehicle Right Rear View



Figure A-24 Post-Test Target Vehicle Right Rear View



Figure A-25 Pre-Test Target Vehicle Right Side View



Figure A-26 Post-Test Target Vehicle Right Side View



Figure A-27 Pre-Test Target Vehicle Right Front View



Figure A-28 Post-Test Target Vehicle Right Front View

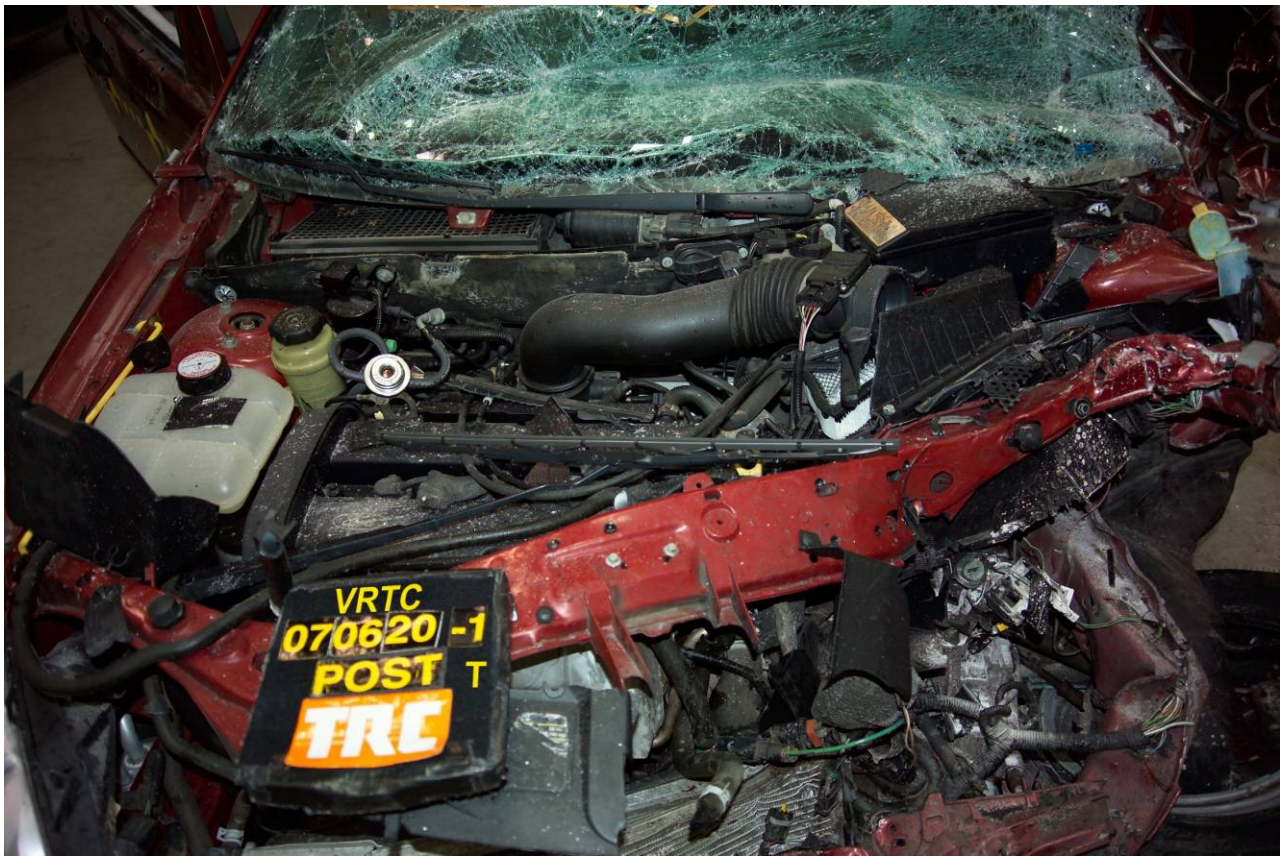


Figure A-29 Post-Test Target Vehicle Engine Compartment View

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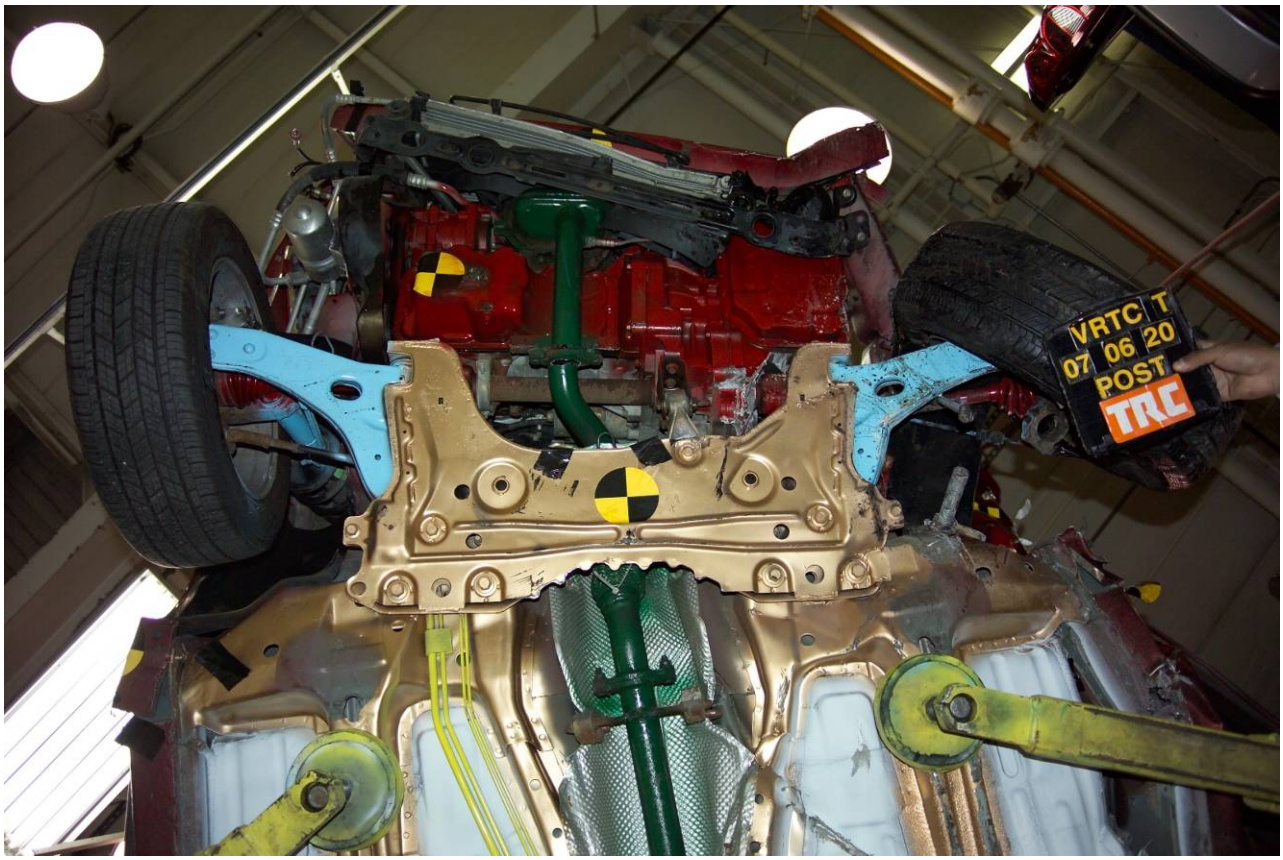


Figure A-30 Post-Test Target Vehicle Front Underbody View

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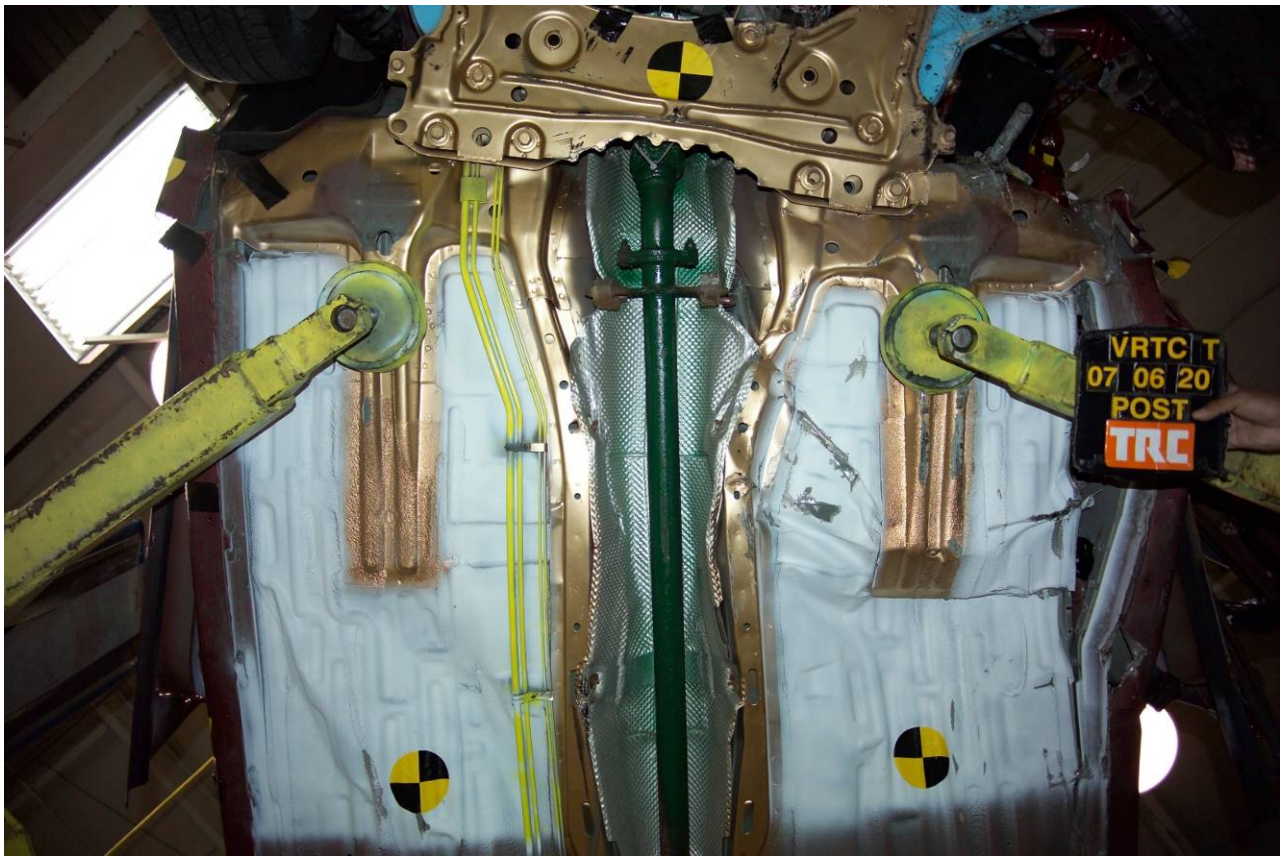


Figure A-31 Post-Test Target Vehicle Mid Front Underbody View

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Figure A-32 Post-Test Target Vehicle Mid Rear Underbody View

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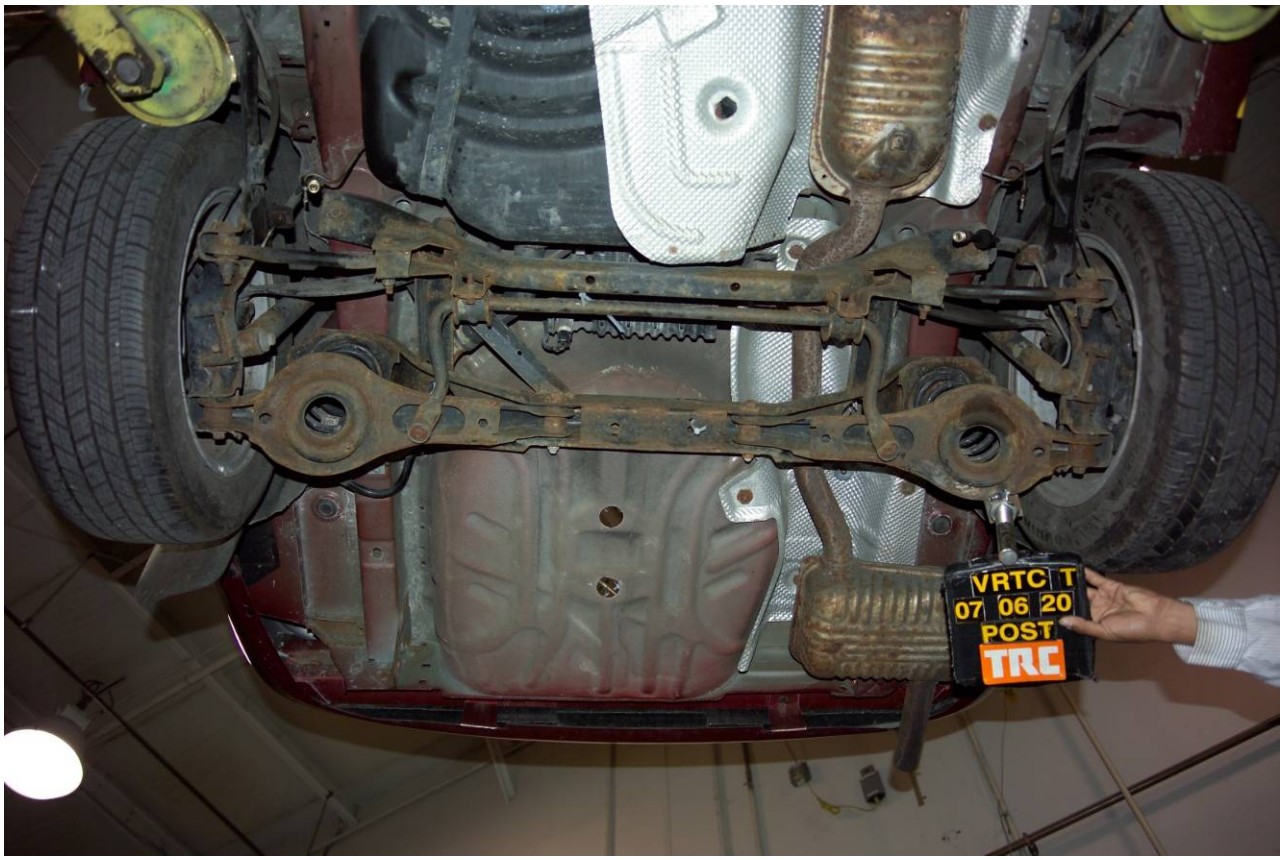


Figure A-33 Post-Test Target Vehicle Rear Underbody View

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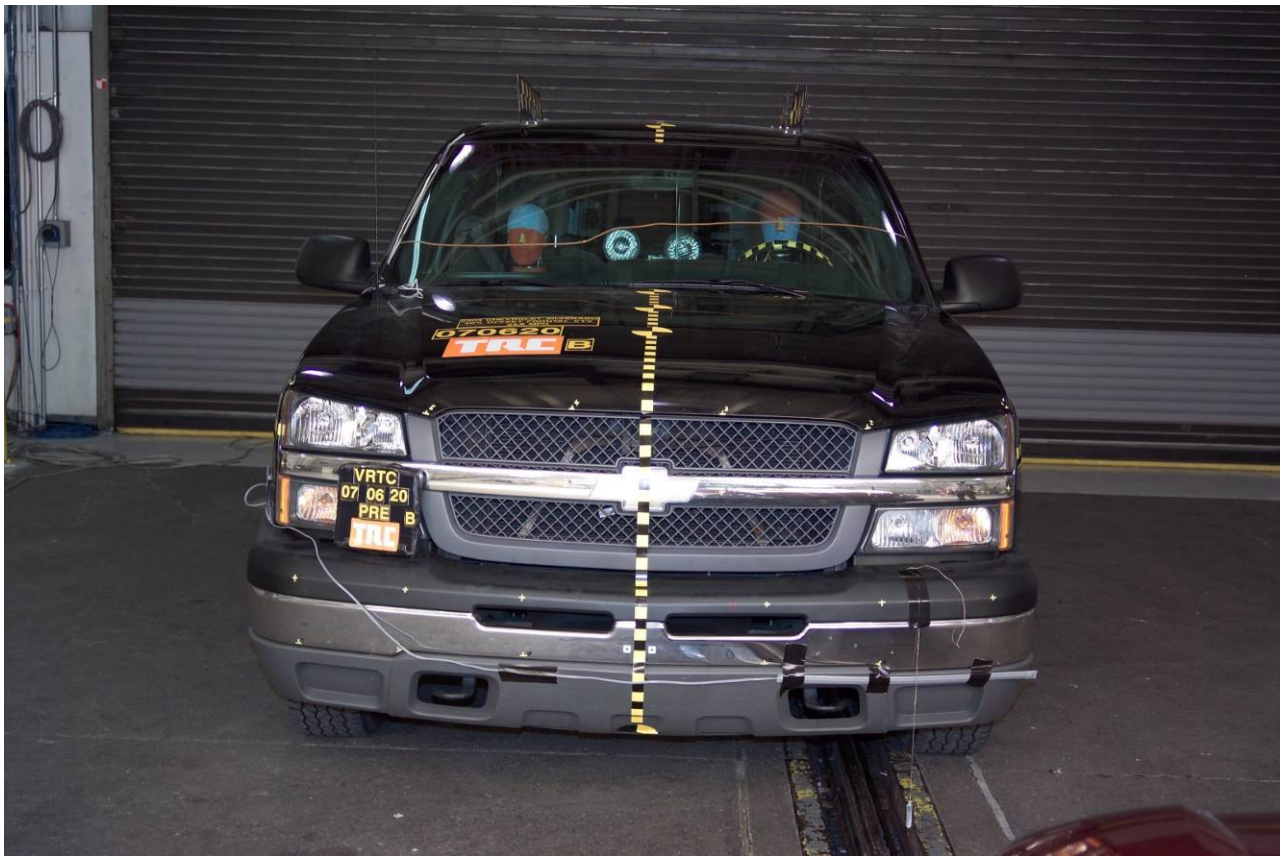


Figure A-34 Pre-Test Bullet Vehicle Front View

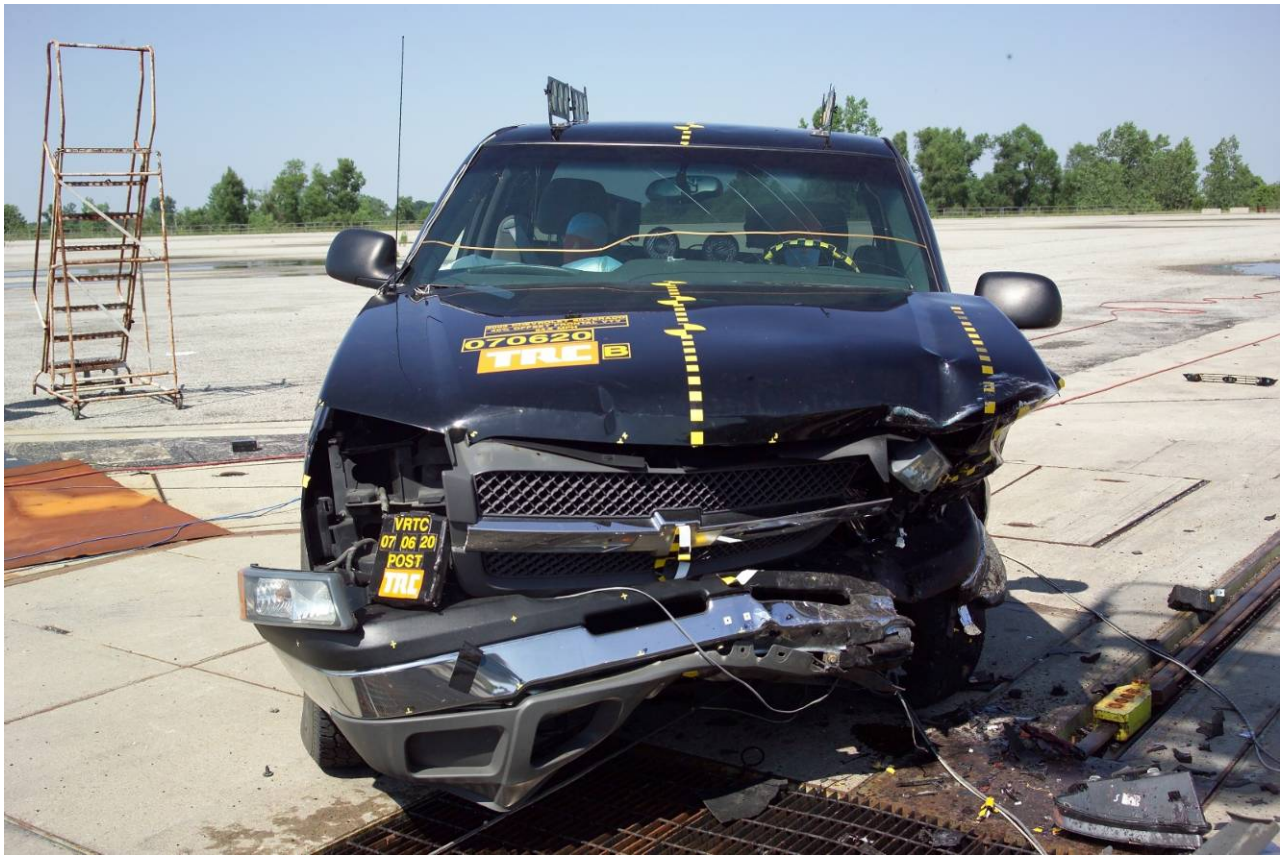


Figure A-35 Post-Test Bullet Vehicle Front View



Figure A-36 Pre-Test Bullet Vehicle Left Front View

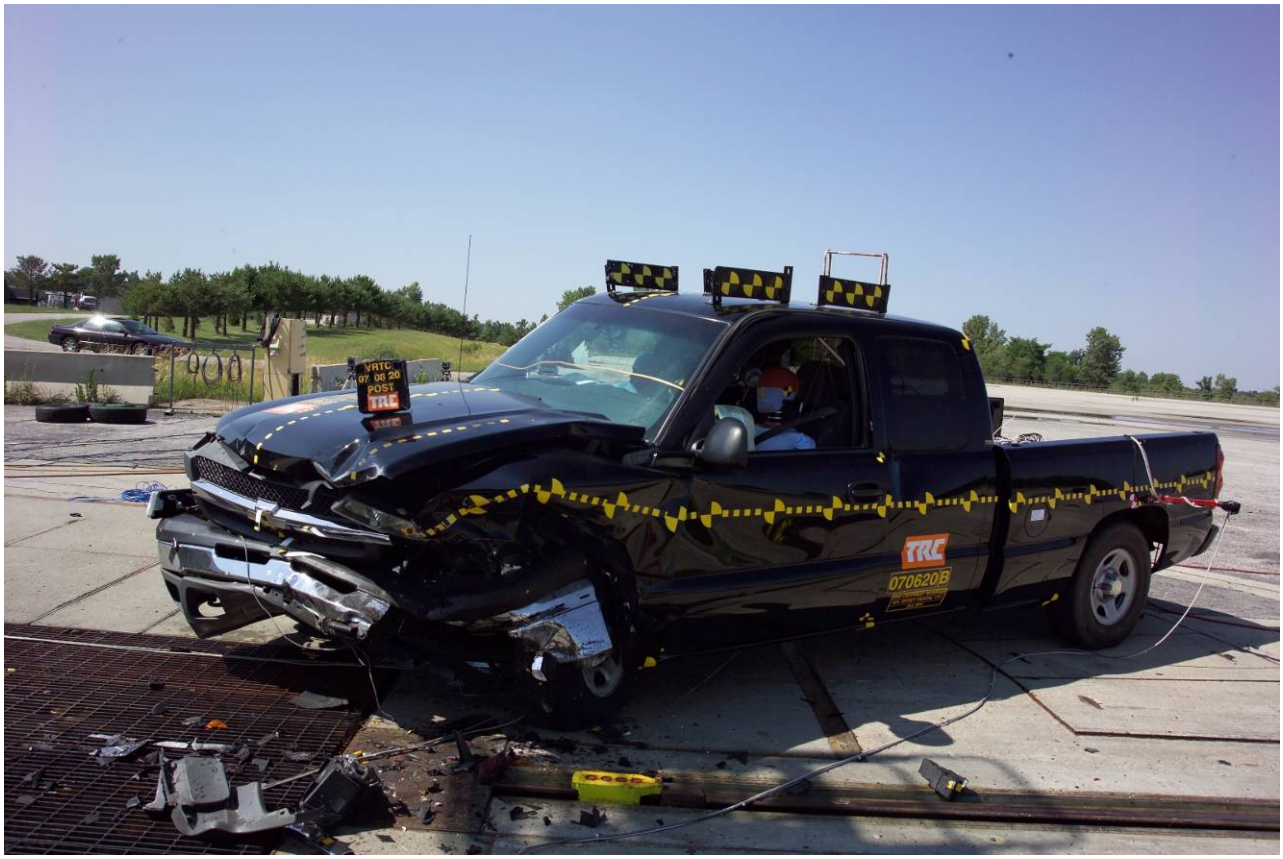


Figure A-37 Post-Test Bullet Vehicle Left Front View



Figure A-38 Pre-Test Bullet Vehicle Left Side View



Figure A-39 Post-Test Bullet Vehicle Left Side View



Figure A-40 Pre-Test Bullet Vehicle Left Rear View



Figure A-41 Post-Test Bullet Vehicle Left Rear View



Figure A-42 Pre-Test Bullet Vehicle Rear View



Figure A-43 Post-Test Bullet Vehicle Rear View



Figure A-44 Pre-Test Bullet Vehicle Right Rear View



Figure A-45 Post-Test Bullet Vehicle Right Rear View



Figure A-46 Pre-Test Bullet Vehicle Right Side View



Figure A-47 Post-Test Bullet Vehicle Right Side View



Figure A-48 Pre-Test Bullet Vehicle Right Front View



Figure A-49 Post-Test Bullet Vehicle Right Front View

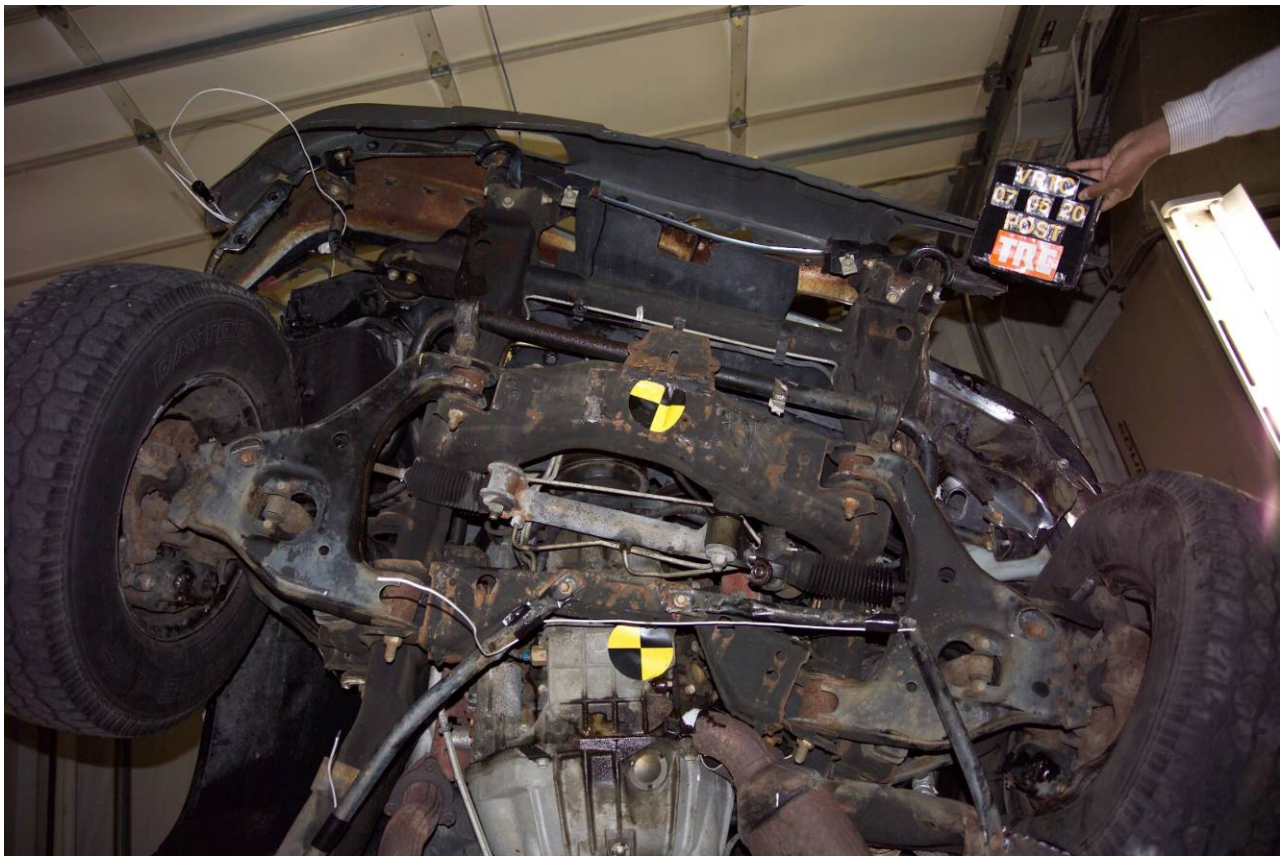


Figure A-50 Post-Test Bullet Vehicle Front Underbody View

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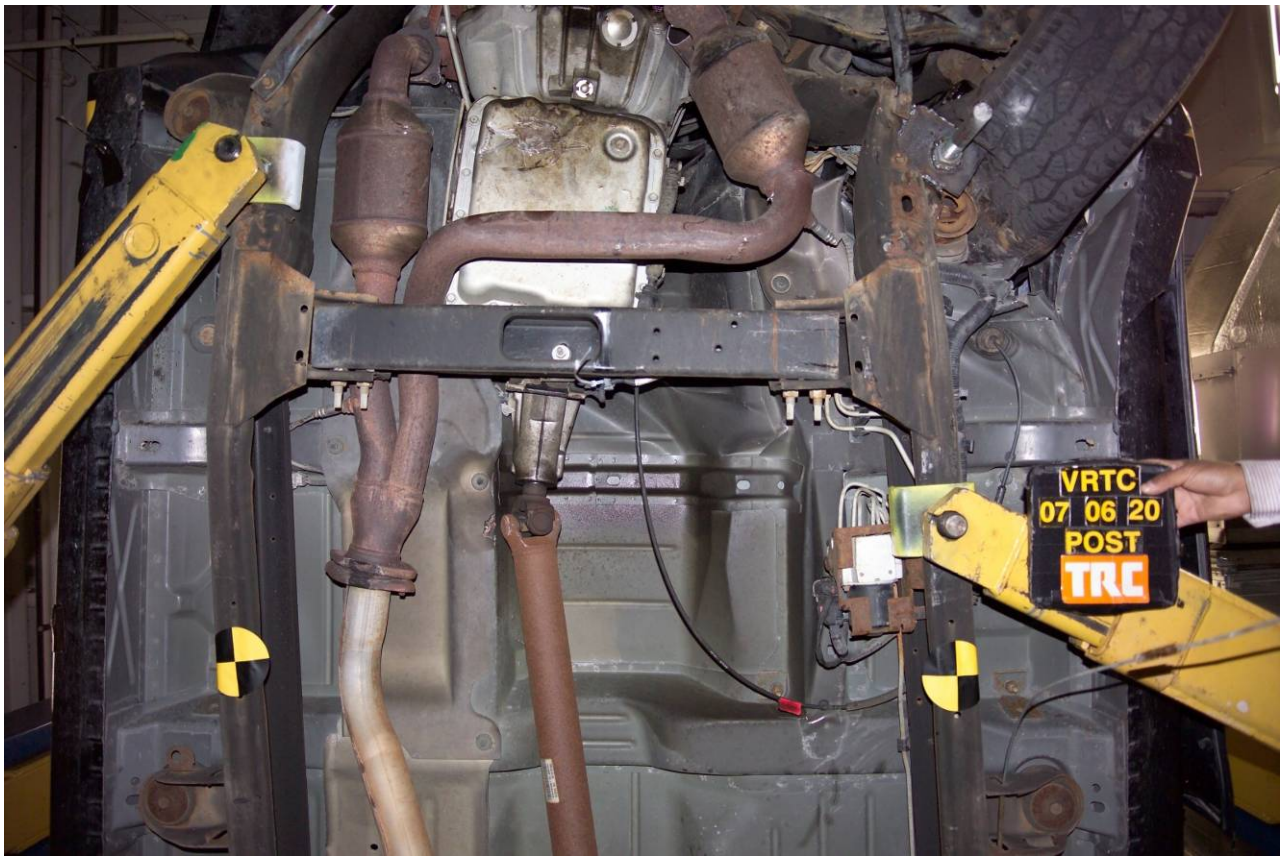


Figure A-51 Post-Test Bullet Vehicle Mid Front Underbody View

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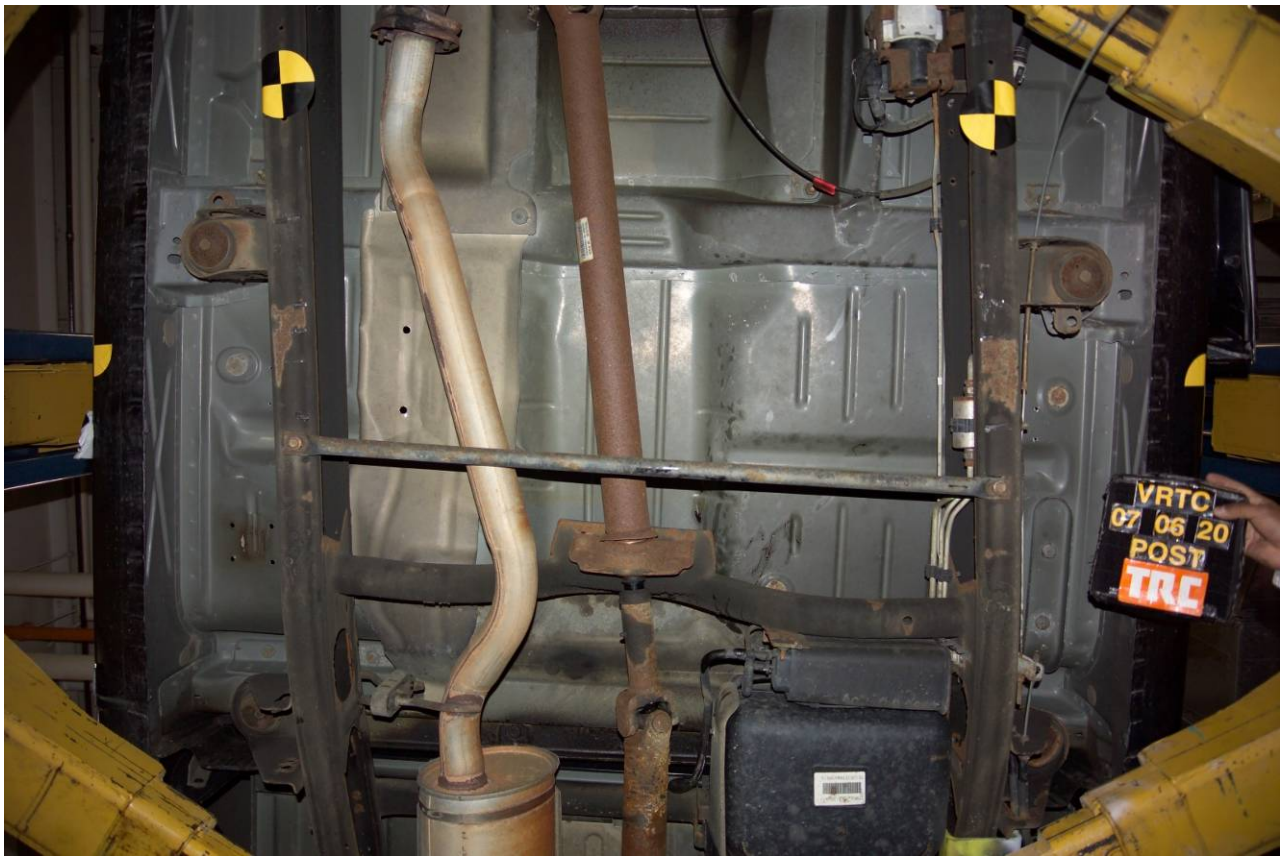


Figure A-52 Post-Test Bullet Vehicle Mid Underbody View

Intentionally Left Blank



Figure A-53 Post-Test Bullet Vehicle Mid Rear Underbody View

Intentionally Left Blank



Figure A-54 Post-Test Bullet Vehicle Rear Underbody View

Intentionally Left Blank



Figure A-55 Pre-Test Target Vehicle Windshield View



Figure A-56 Post-Test Target Vehicle Windshield View



Figure A-57 Pre-Test Target Vehicle Driver and Passenger Dummies through Windshield View



Figure A-58 Post-Test Target Vehicle Driver and Passenger Dummies through Windshield View

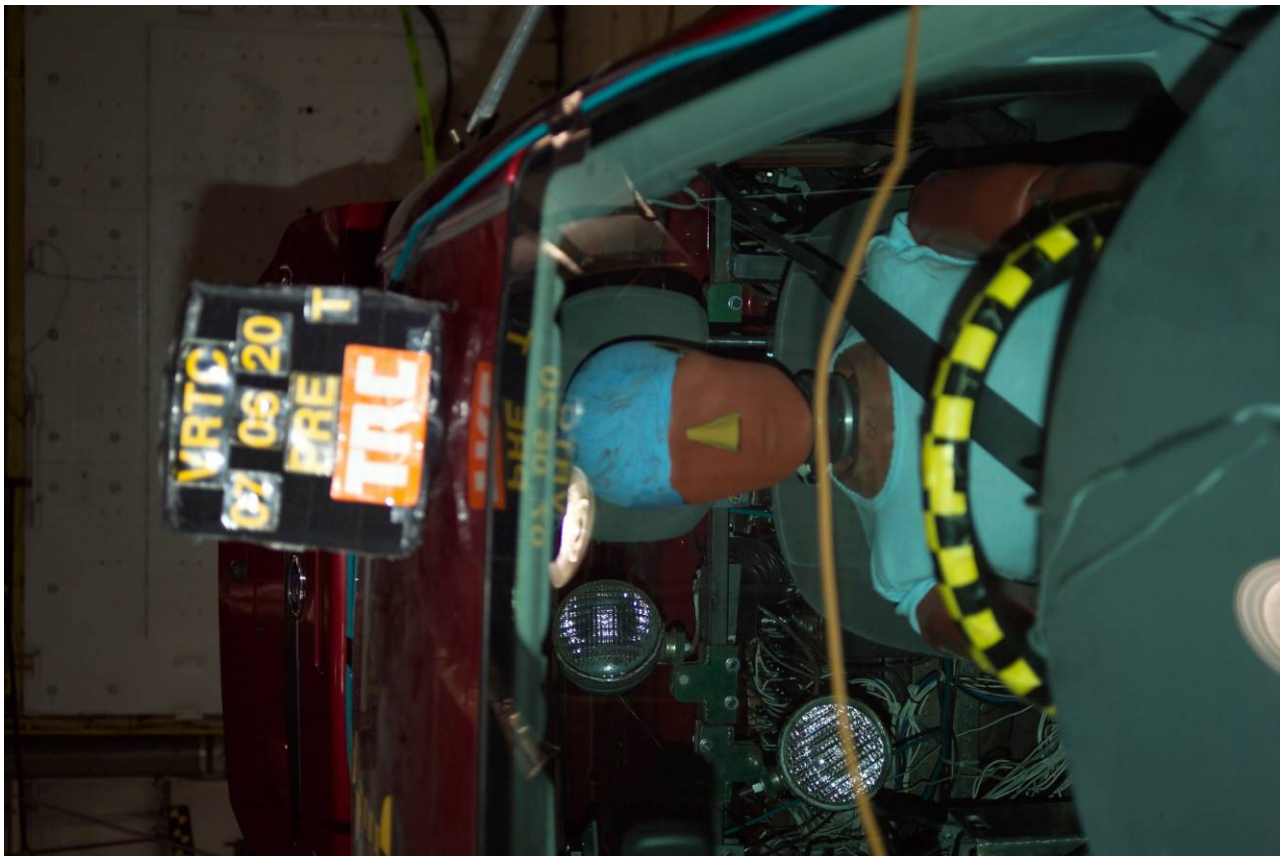


Figure A-59 Pre-Test Target Vehicle Driver Dummy - View 1

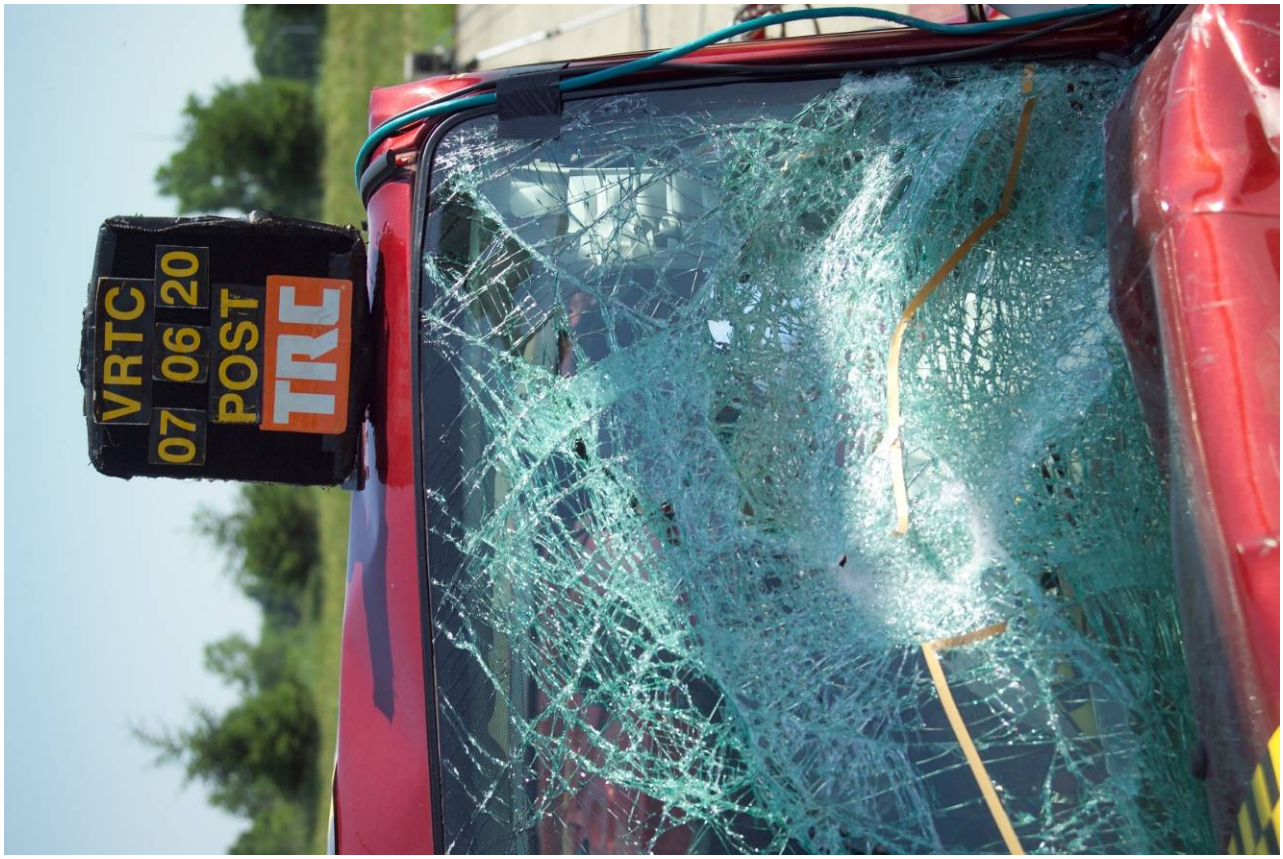


Figure A-60 Post-Test Target Vehicle Driver Dummy - View 1



Figure A-61 Pre-Test Target Vehicle Driver Dummy - View 2



Figure A-62 Post-Test Target Vehicle Driver Dummy - View 2



Figure A-63 Pre-Test Target Vehicle Driver Dummy - View 3



Figure A-64 Post-Test Target Vehicle Driver Dummy - View 3



Figure A-65 Pre-Test Target Vehicle Driver Dummy - View 4



Figure A-66 Post-Test Target Vehicle Driver Dummy - View 4



Figure A-67 Pre-Test Target Vehicle Driver Dummy Foot Position View

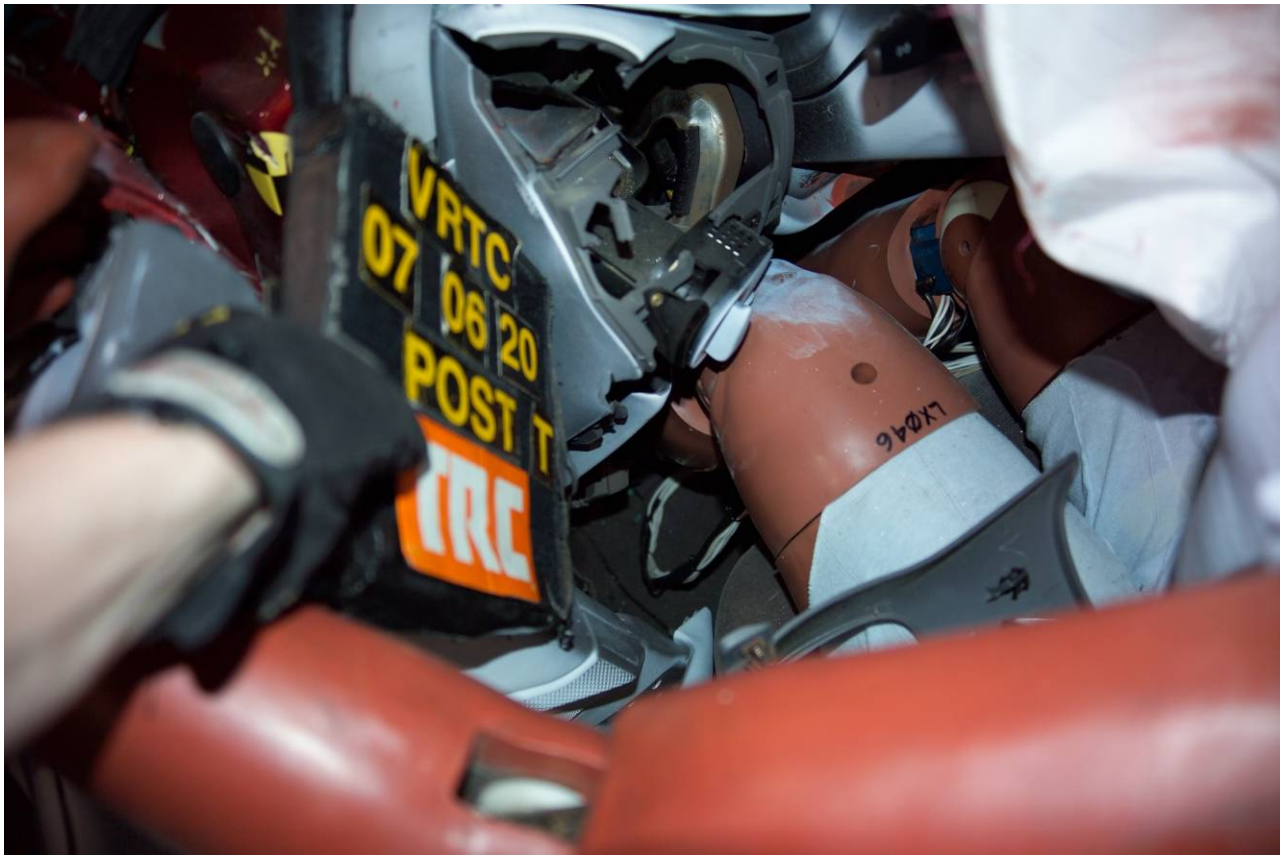


Figure A-68 Post-Test Target Vehicle Driver Dummy Foot Position View



Figure A-69 Pre-Test Target Vehicle Passenger Dummy - View 1



Figure A-70 Post-Test Target Vehicle Passenger Dummy - View 1



Figure A-71 Pre-Test Target Vehicle Passenger Dummy - View 2



Figure A-72 Post-Test Target Vehicle Passenger Dummy - View 2



Figure A-73 Pre-Test Target Vehicle Passenger Dummy - View 3



Figure A-74 Post-Test Target Vehicle Passenger Dummy - View 3



Figure A-75 Pre-Test Target Vehicle Passenger Dummy - View 4



Figure A-76 Post-Test Target Vehicle Passenger Dummy - View 4



Figure A-77 Pre-Test Target Vehicle Passenger Dummy Foot Position View



Figure A-78 Post-Test Target Vehicle Passenger Dummy Foot Position View



Figure A-79 Pre-Test Bullet Vehicle Windshield View



Figure A-80 Post-Test Bullet Vehicle Windshield View



Figure A-81 Pre-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View

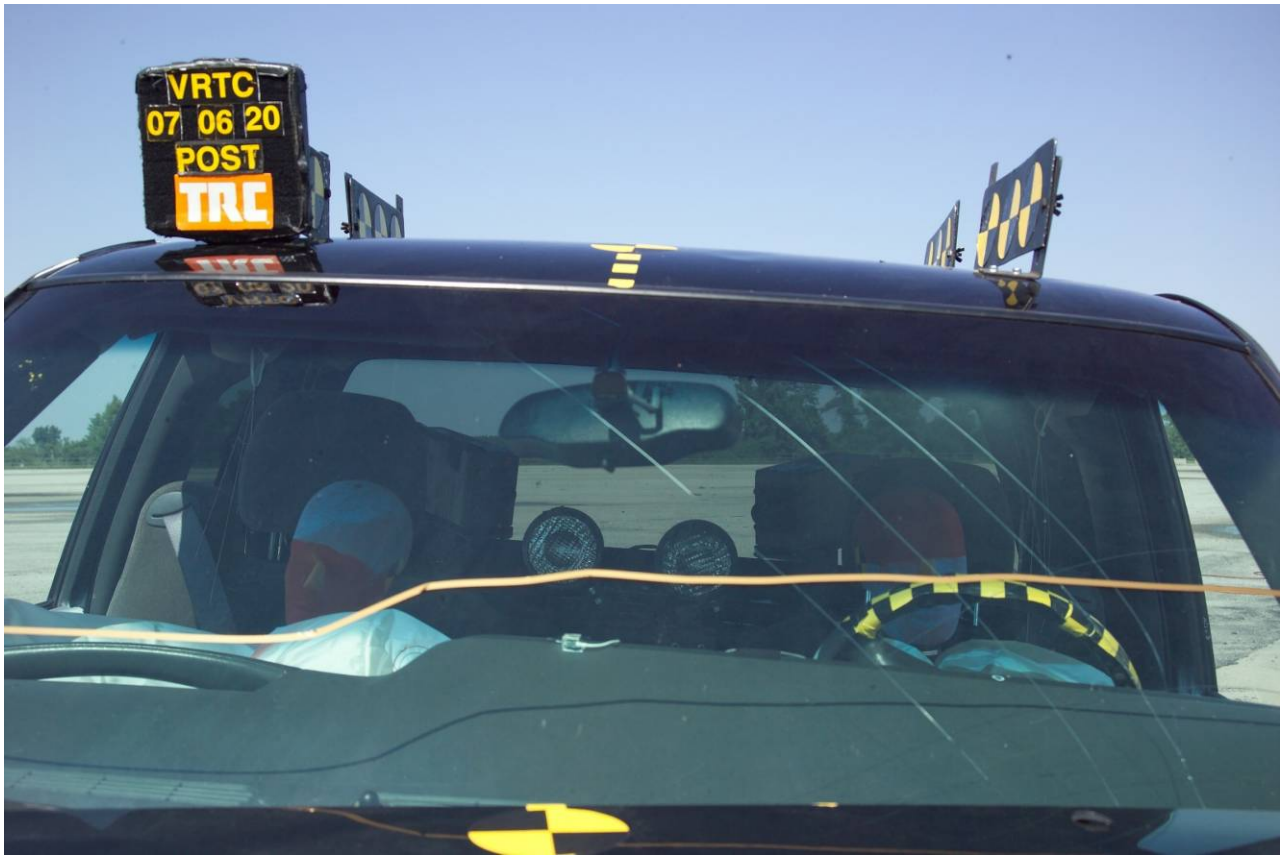


Figure A-82 Post-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View

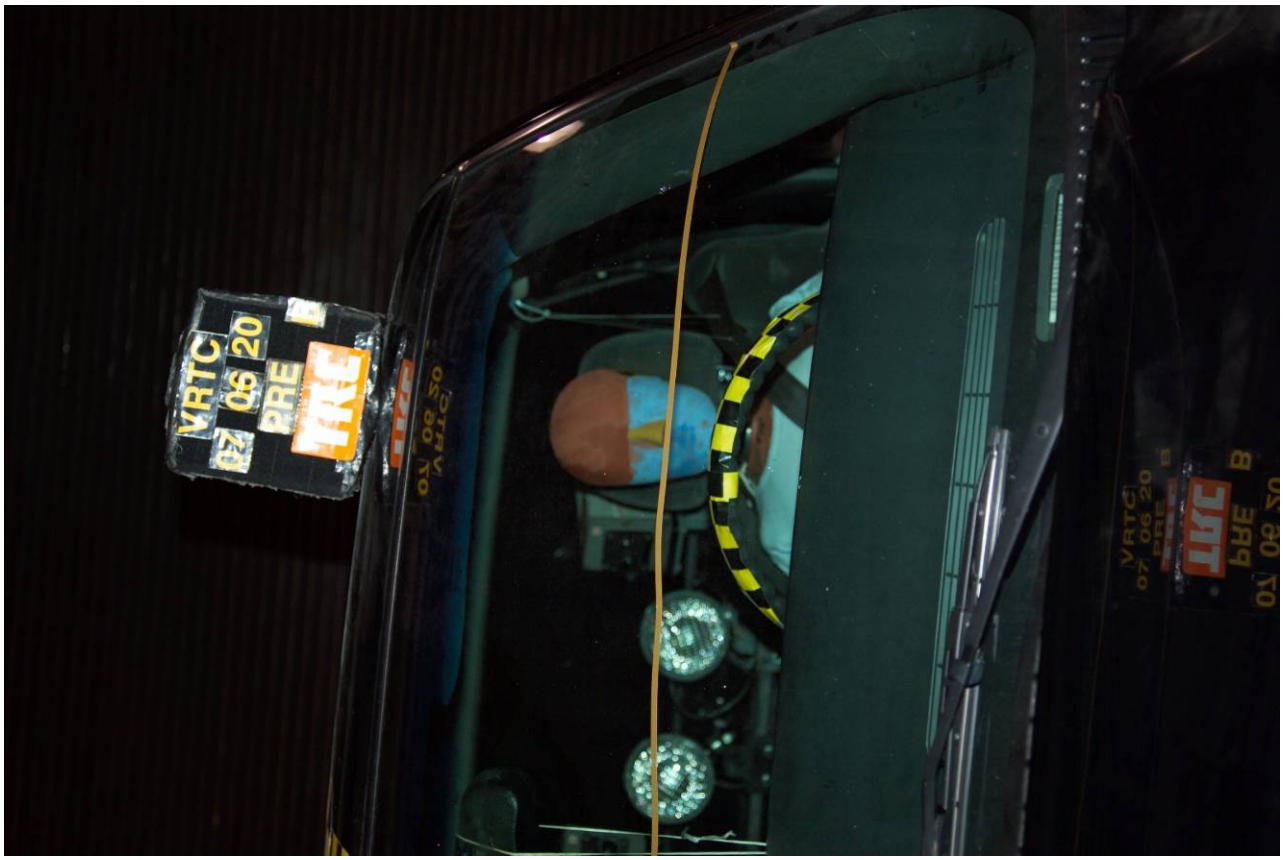


Figure A-83 Pre-Test Bullet Vehicle Driver Dummy - View 1



Figure A-84 Post-Test Bullet Vehicle Driver Dummy - View 1



Figure A-85 Pre-Test Bullet Vehicle Driver Dummy - View 2



Figure A-86 Post-Test Bullet Vehicle Driver Dummy - View 2



Figure A-87 Pre-Test Bullet Vehicle Driver Dummy - View 3



Figure A-88 Post-Test Bullet Vehicle Driver Dummy - View 3



Figure A-89 Pre-Test Bullet Vehicle Driver Dummy - View 4



Figure A-90 Post-Test Bullet Vehicle Driver Dummy - View 4



Figure A-91 Pre-Test Bullet Vehicle Driver Dummy Foot Position View



Figure A-92 Post-Test Bullet Vehicle Driver Dummy Foot Position View

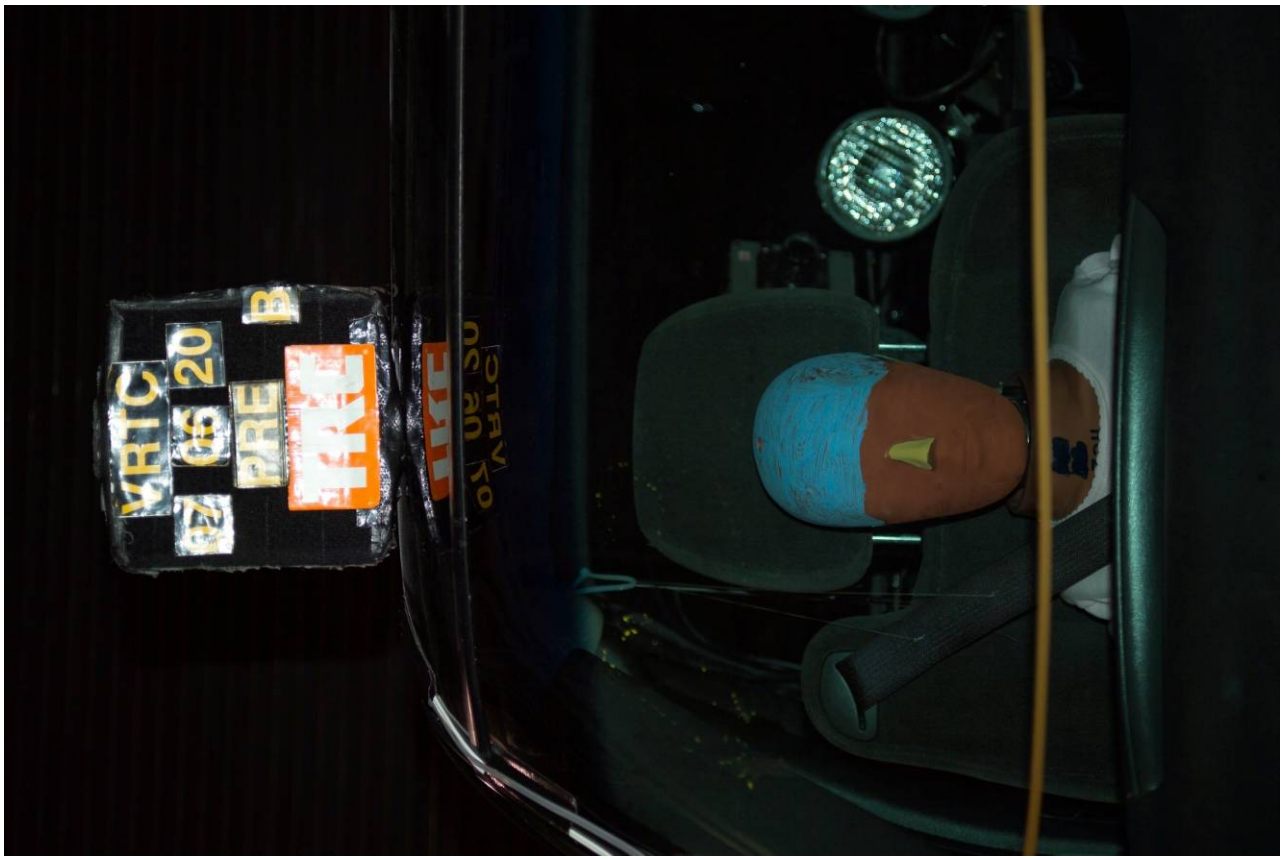


Figure A-93 Pre-Test Bullet Vehicle Passenger Dummy - View 1

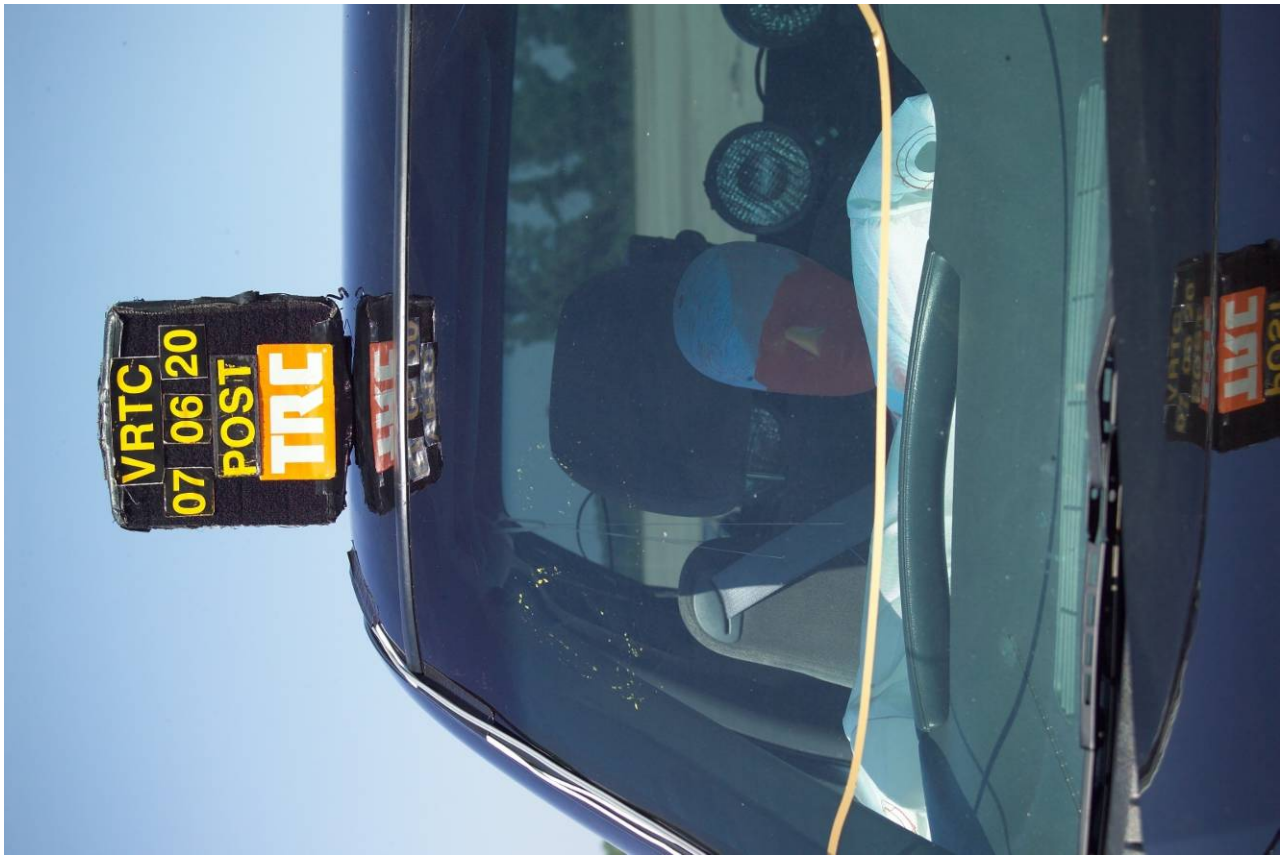


Figure A-94 Post-Test Bullet Vehicle Passenger Dummy - View 1



Figure A-95 Pre-Test Bullet Vehicle Passenger Dummy - View 2



Figure A-96 Post-Test Bullet Vehicle Passenger Dummy - View 2

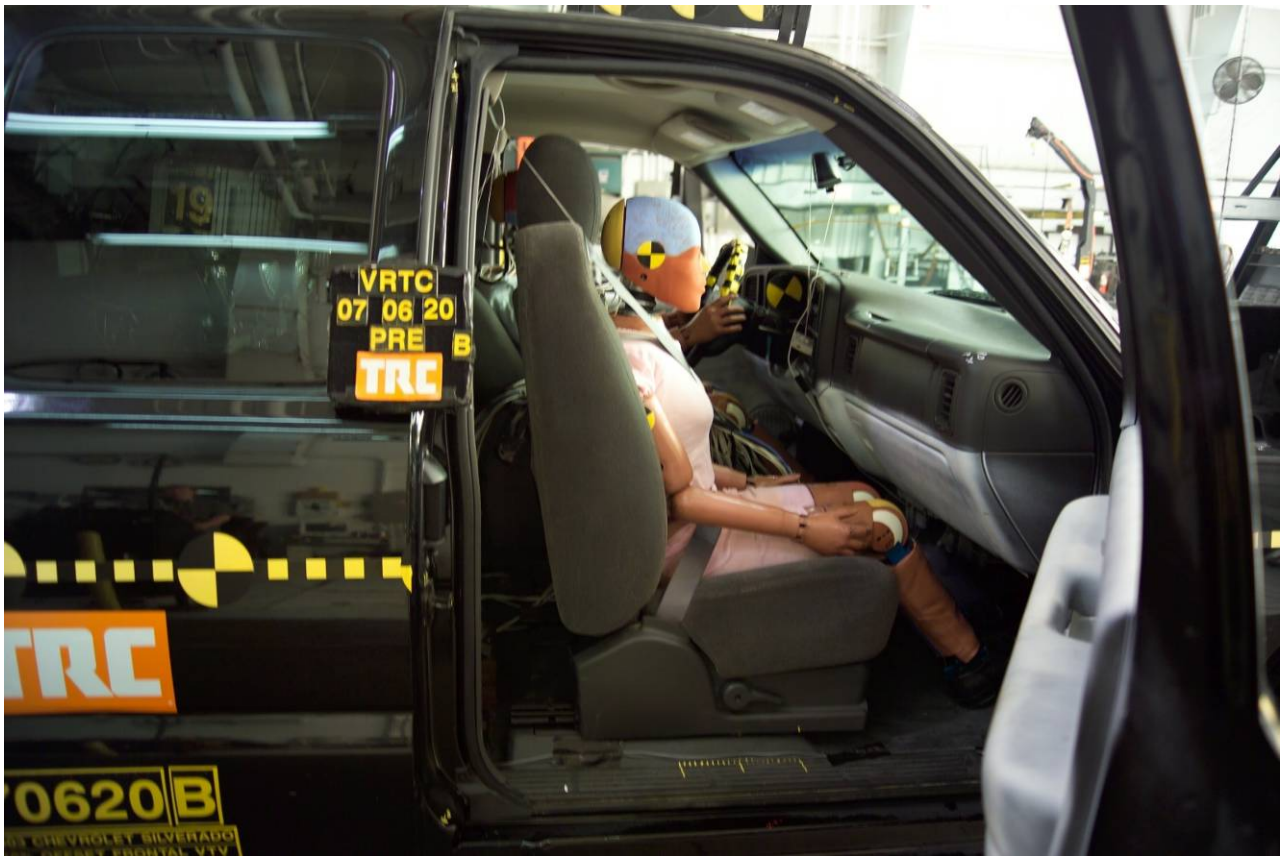


Figure A-97 Pre-Test Bullet Vehicle Passenger Dummy - View 3

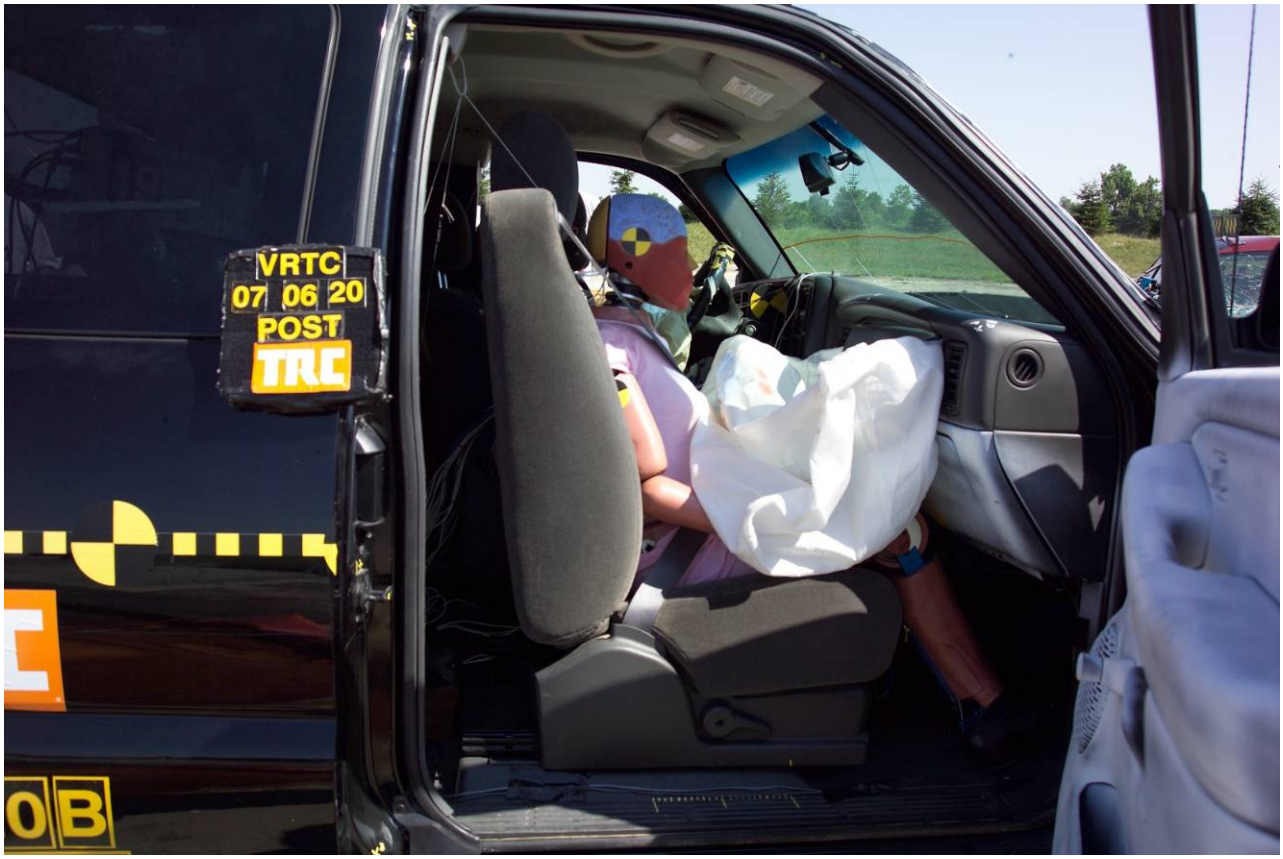


Figure A-98 Post-Test Bullet Vehicle Passenger Dummy - View 3

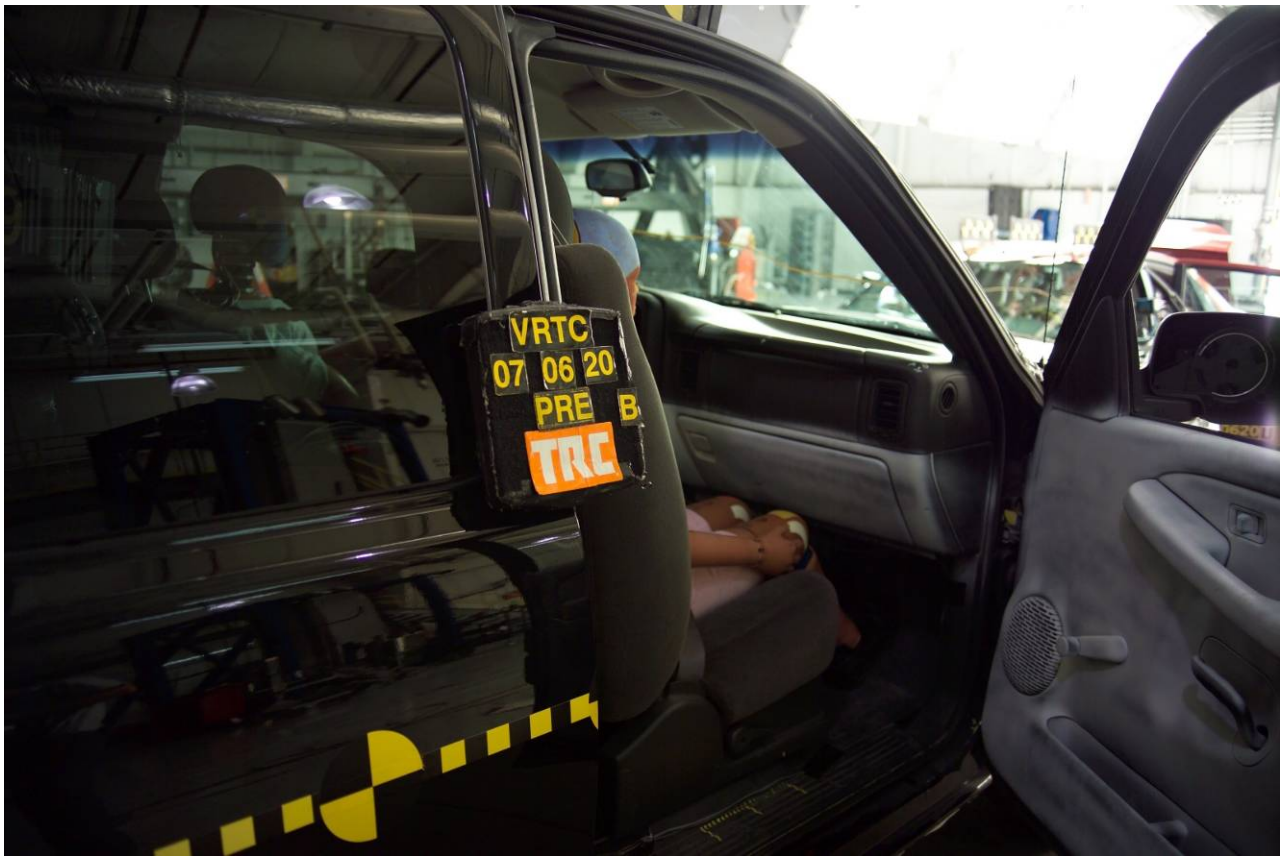


Figure A-99 Pre-Test Bullet Vehicle Passenger Dummy - View 4



Figure A-100 Post-Test Bullet Vehicle Passenger Dummy - View 4



Figure A-101 Pre-Test Bullet Vehicle Passenger Dummy Foot Position View



Figure A-102 Post-Test Bullet Vehicle Passenger Dummy Foot Position View



Figure A-103 Post-Test Target Vehicle Driver Dummy Overall Contact View



Figure A-104 Post-Test Target Vehicle Driver Dummy Head Contact - View 1



Figure A-105 Post-Test Target Vehicle Driver Dummy Head Contact - View 2



Figure A-106 Post-Test Target Vehicle Driver Dummy Head Contact - View 3



Figure A-107 Post-Test Target Vehicle Driver Dummy Knee Contact View

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Figure A-108 Post-Test Target Vehicle Driver Floorboard Deformation View

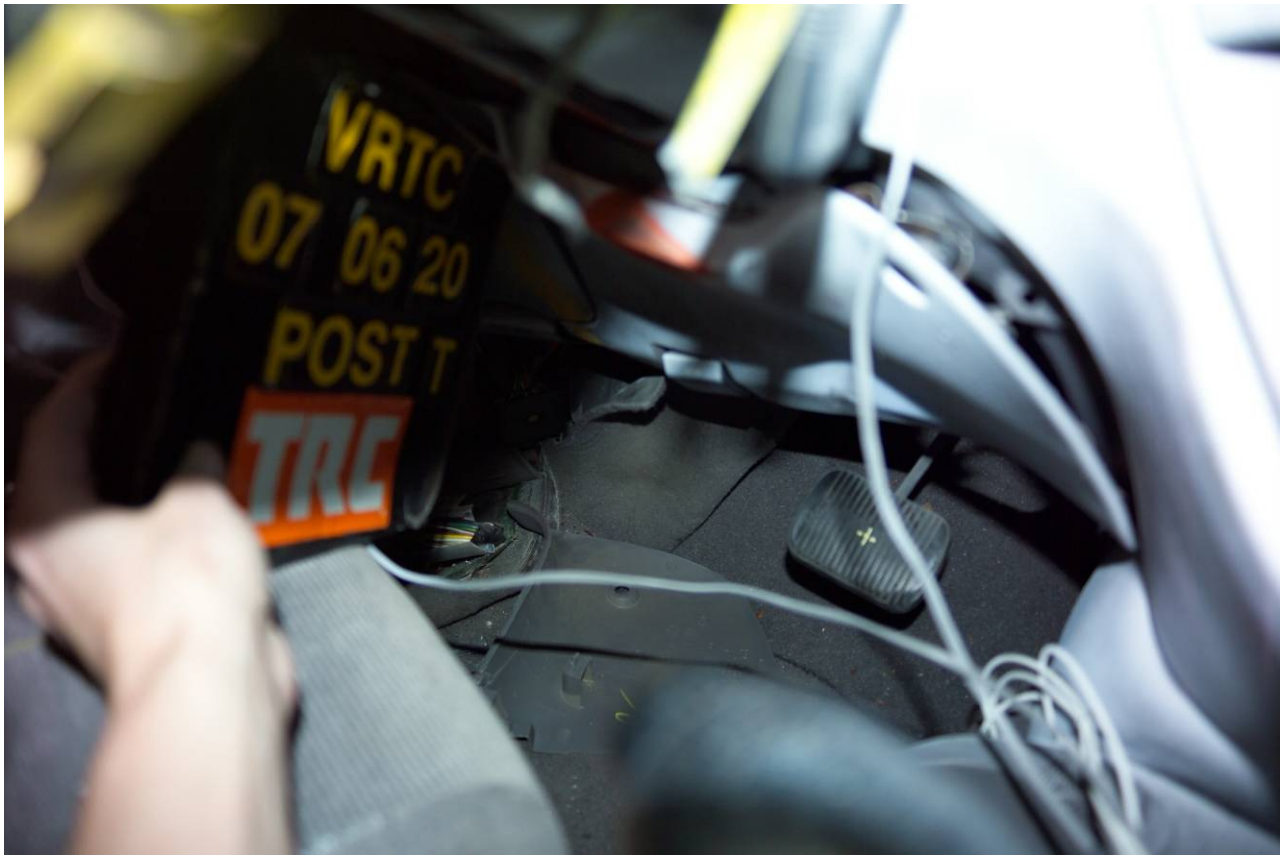


Figure A-109 Post-Test Target Vehicle Driver Toeboard Deformation View



Figure A-110 Post-Test Target Vehicle Passenger Dummy Overall Contact View

Intentionally Left Blank



Figure A-111 Post-Test Target Vehicle Passenger Dummy Head Contact - View 1



Figure A-112 Post-Test Target Vehicle Passenger Dummy Head Contact - View 2



Figure A-113 Post-Test Target Vehicle Passenger Dummy Knee Contact - View 1



Figure A-114 Post-Test Target Vehicle Passenger Dummy Knee Contact - View 2



Figure A-115 Post-Test Target Vehicle Passenger Floorboard Deformation View

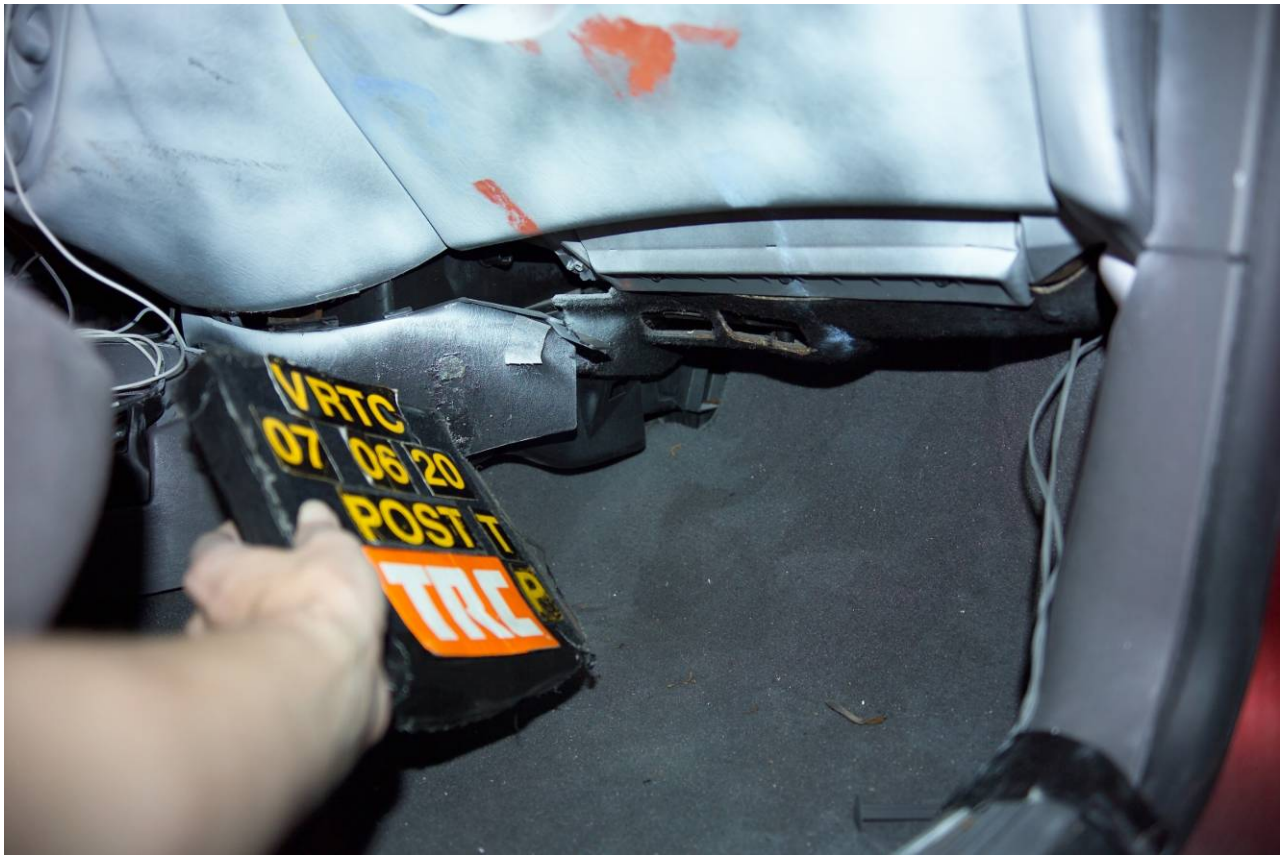


Figure A-116 Post-Test Target Vehicle Passenger Toeboard Deformation View



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

Intentionally Left Blank



Figure A-118 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 1



Figure A-119 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 2



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

Intentionally Left Blank



Figure A-121 Post-Test Bullet Vehicle Driver Floorboard Deformation View



Figure A-122 Post-Test Bullet Vehicle Driver Toeboard Deformation View



Figure A-123 Post-Test Bullet Vehicle Passenger Dummy Overall Contact View

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Figure A-124 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 1



Figure A-125 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 2

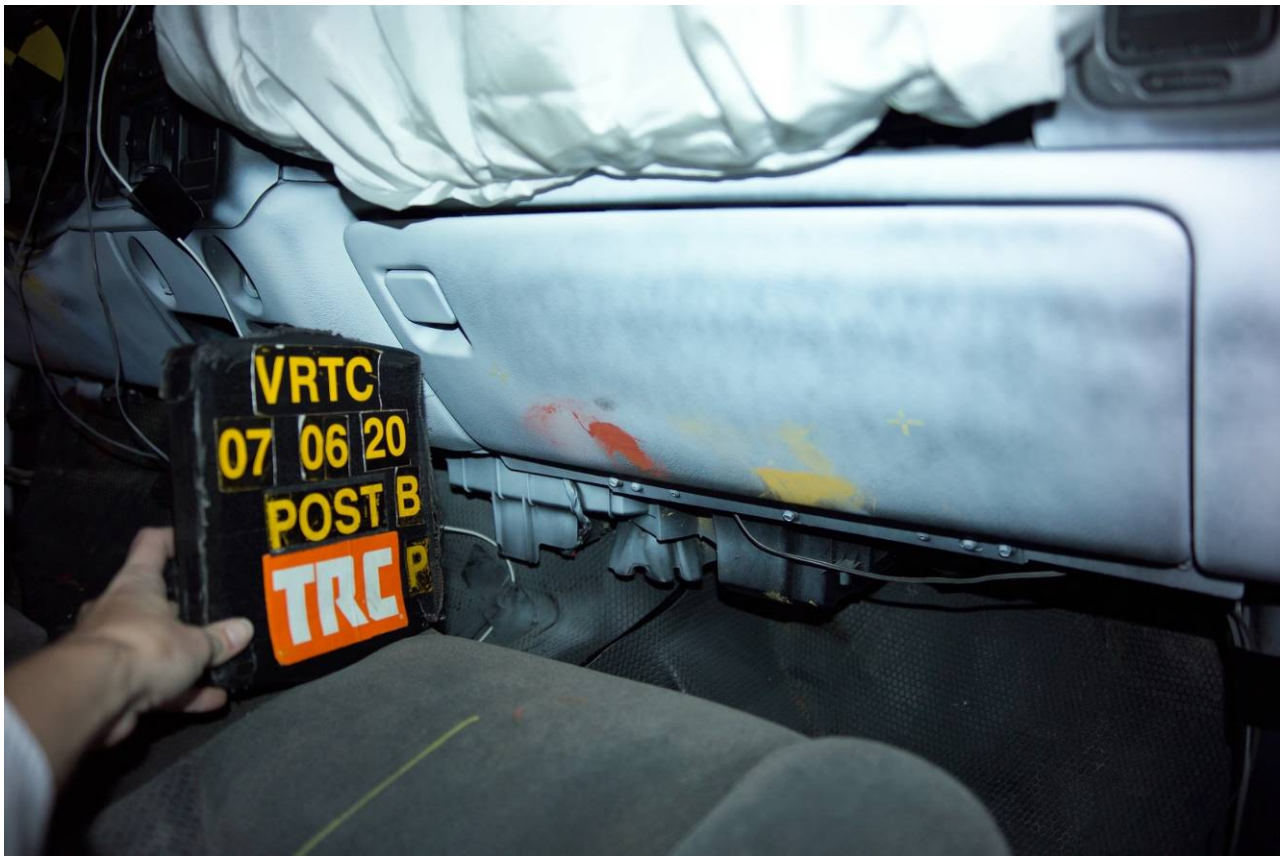


Figure A-126 Post-Test Bullet Vehicle Passenger Dummy Knee Contact View

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Figure A-127 Post-Test Bullet Vehicle Passenger Floorboard Deformation View



Figure A-128 Post-Test Bullet Vehicle Passenger Toeboard Deformation View

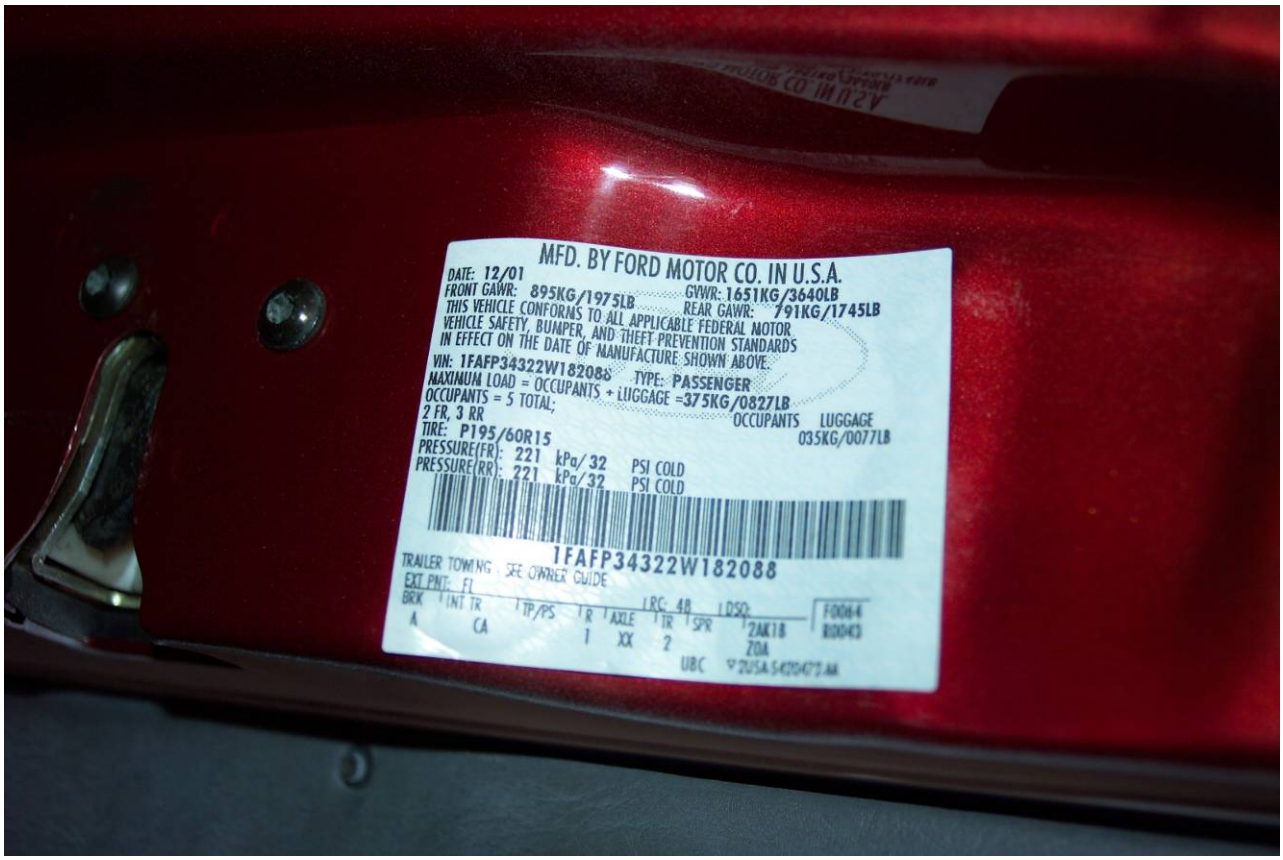


Figure A-129 Target Vehicle Certification and Recommended Tire Pressure Label View



Figure A-130 Bullet Vehicle Certification and Recommended Tire Pressure Label View



Figure A-131 Pre-Test Bullet Vehicle Ballast View

Appendix B

Data Plots

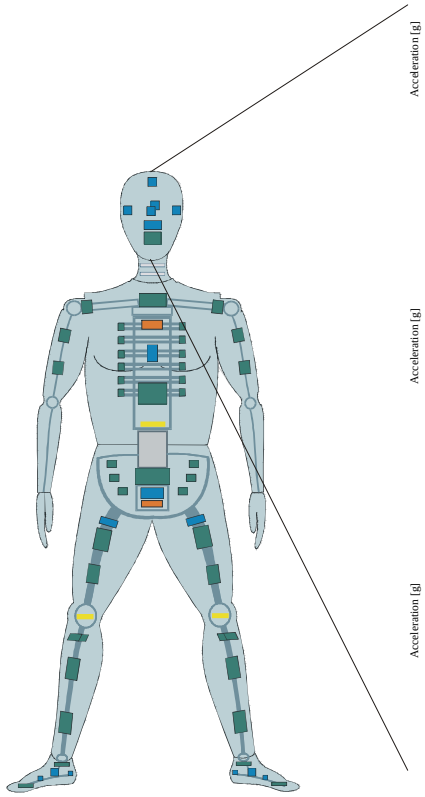
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Head Injury Criterion (HIC)

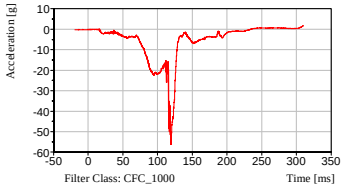
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Time: 08:05

Customer: VRTC

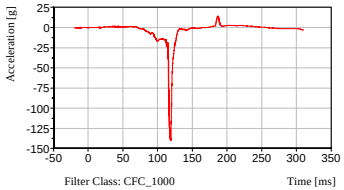
TRC Inc. Test Lab: CTF
Test Number: 070620



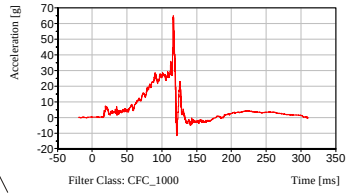
21HEADCG00H3ACXA



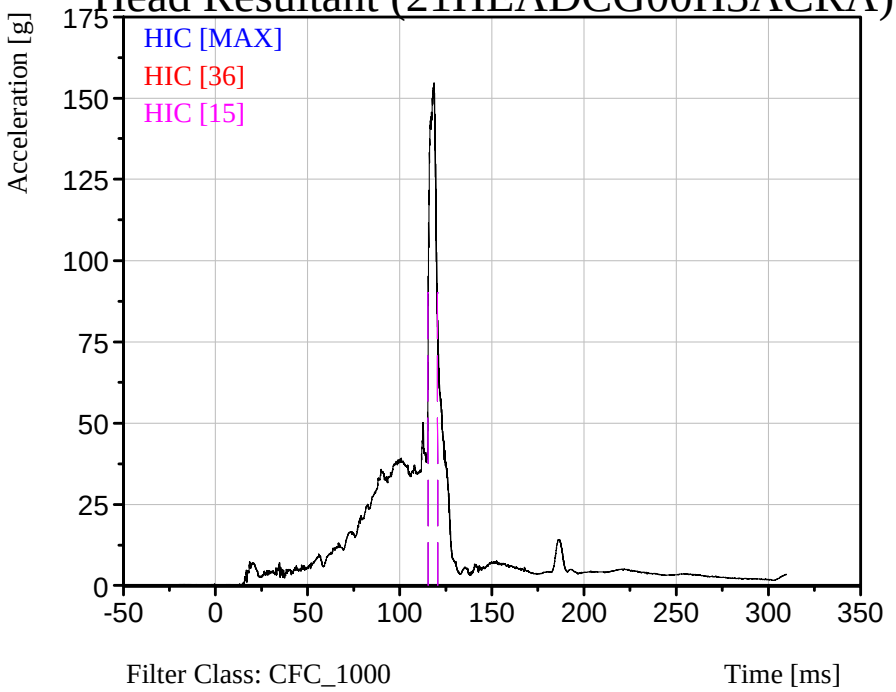
21HEADCG00H3ACYA



21HEADCG00H3ACZA



Head Resultant (21HEADCG00H3ACRA)



	T1 (Begin)	T2 (End)	Avg. g T1 to T2
HIC [Max.] = 996.66	115.36 ms	120.56 ms	128.93 g
HIC [36] = 996.66	115.36 ms	120.56 ms	128.93 g
HIC [15] = 996.66	115.36 ms	120.56 ms	128.93 g

Dummy:HIII 50th Male
Seating Position:
Driver

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

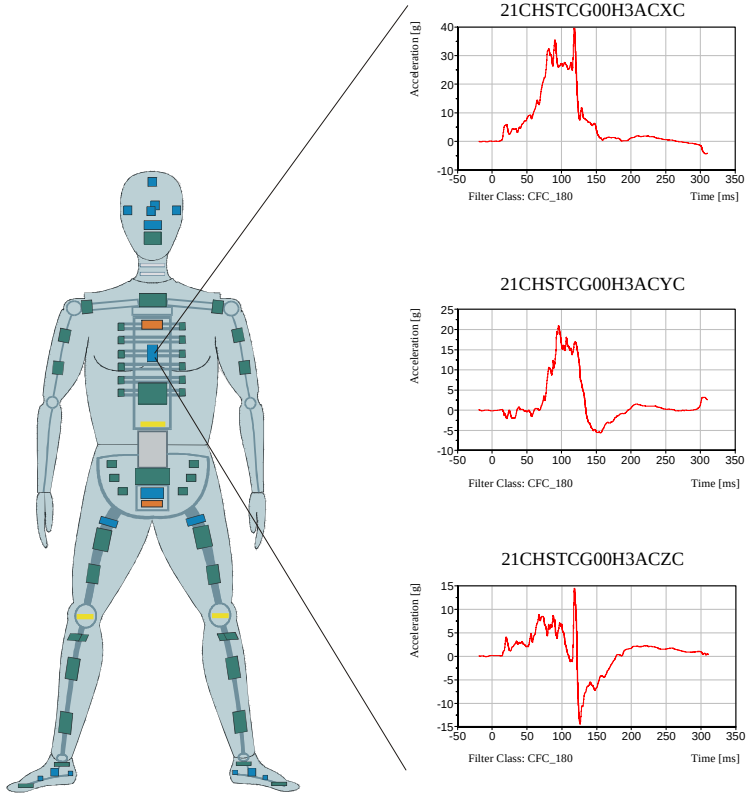
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

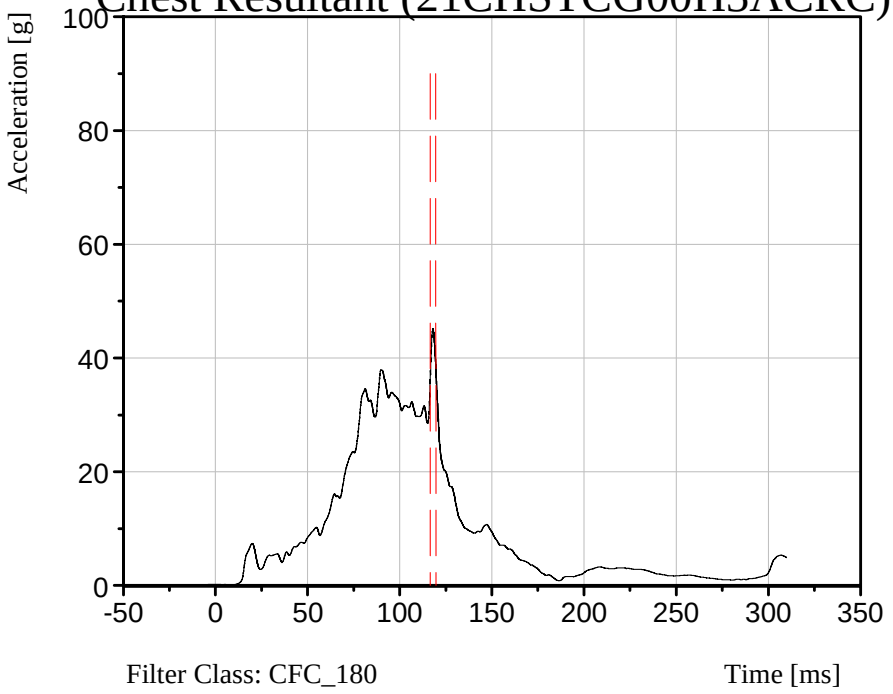
3 ms Duration Acceleration (Chest)

Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620





	T1 (Begin)	T2 (End)
3 ms Duration Acceleration = 37.60 g	116.62 ms	119.62 ms

Chest Severity Index = 339.05

Dummy:HIII 50th Male
Seating Position:
Driver

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

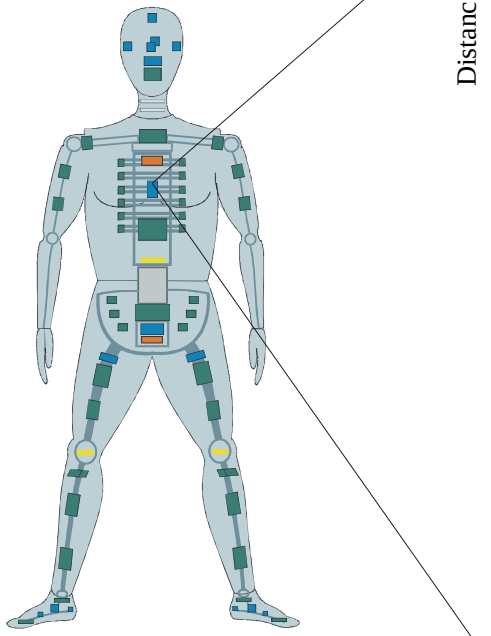
Chest Deflection

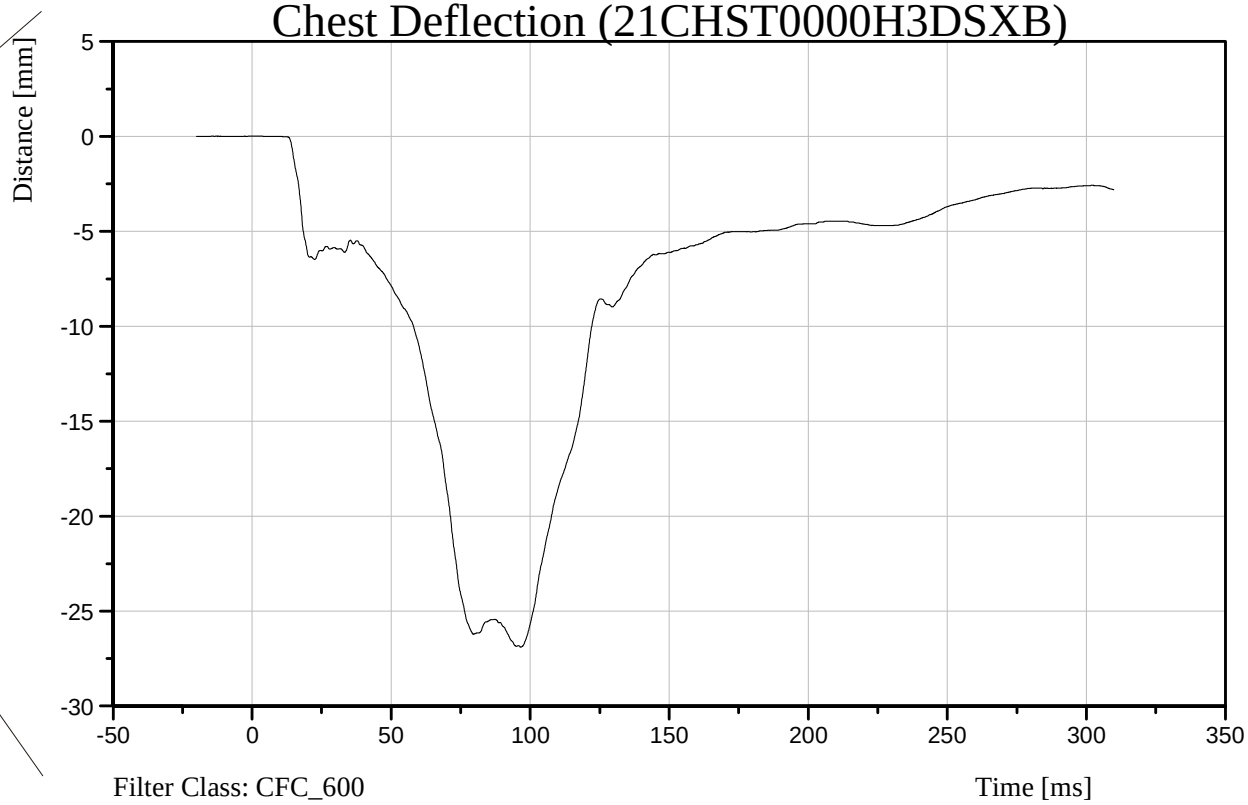
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

Test Orientation = Frontal





Dummy:HIII 50th Male
Seating Position:
Driver

[Max.] 0.02 mm at 0.16 ms
[Min.] -26.90 mm at 96.64 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal
Neck Moment about the Occipital Condyle (NECK OM)

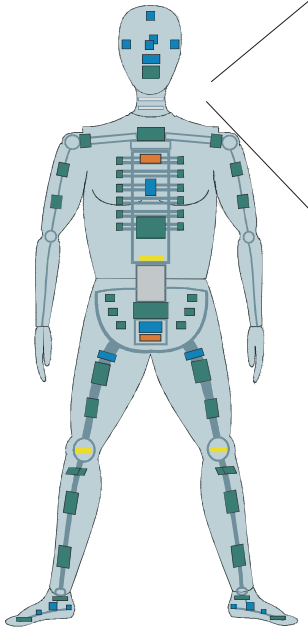
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Customer: VRTC

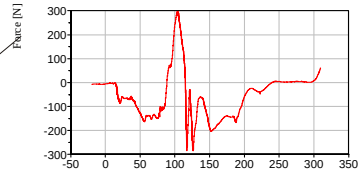
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Test Number: 070620

Test Orientation = Frontal

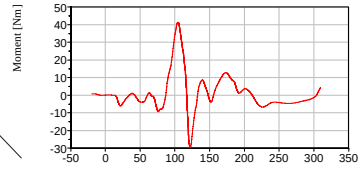


21NECKUP00H3FOXB



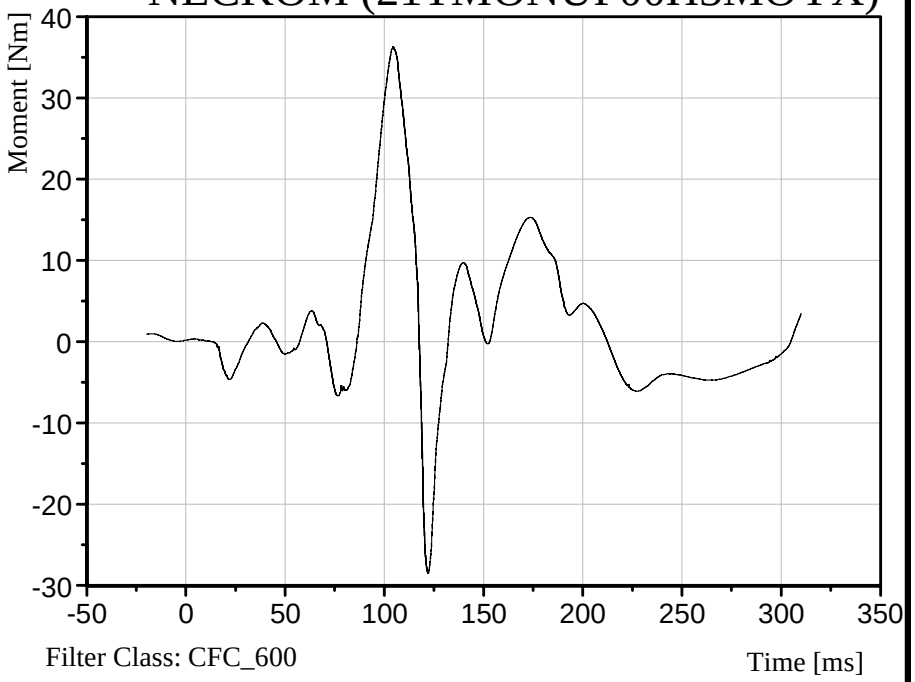
Filter Class: CFC_600

21NECKUP00H3MOYB



Filter Class: CFC_600

NECKOM (21TMONUP00H3MOYX)



Filter Class: CFC_600

Dummy:HIII 50th Male
Seating Position:
Driver

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

[Max.] 36.35 Nm at 104.32 ms
[Min.] -28.49 Nm at 121.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

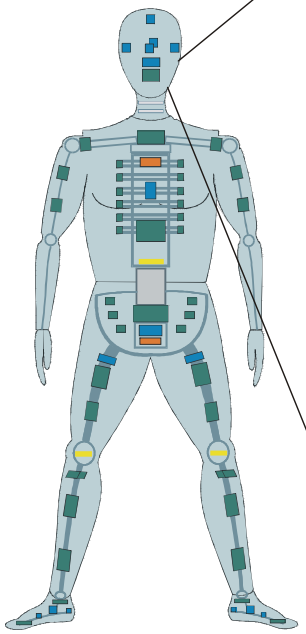
Neck Injury Predictor (NIJ)

Date: 06/20/2007
Time: 08:05

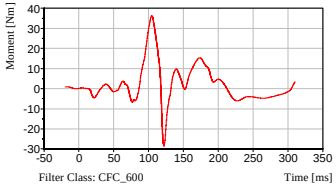
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TRC Inc. Test Lab: CTF
Test Number: 070620

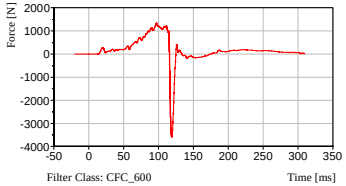
Test Orientation = Frontal
Fzc(Tension) = 6806
Fzc(Compression) = 6160
Myc(Extension) = 135
Myc(Flexion) = 310



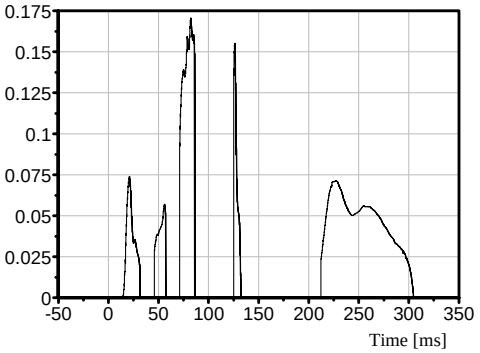
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21NECKUP00H3FOZB

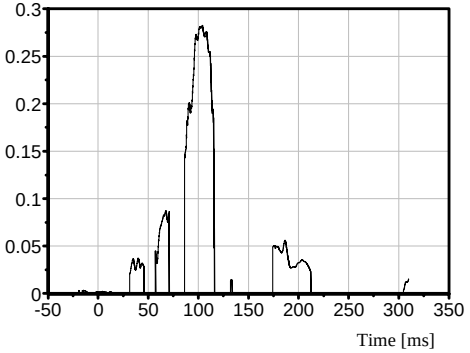


21NIJCUPTEH300YX



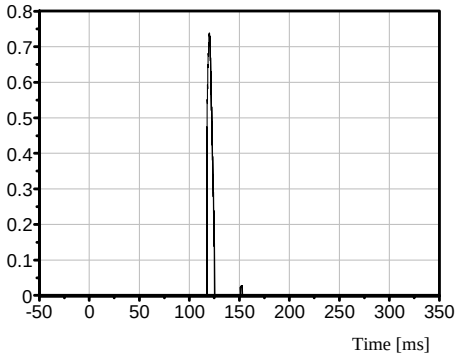
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21NIJCUPTFH300YX



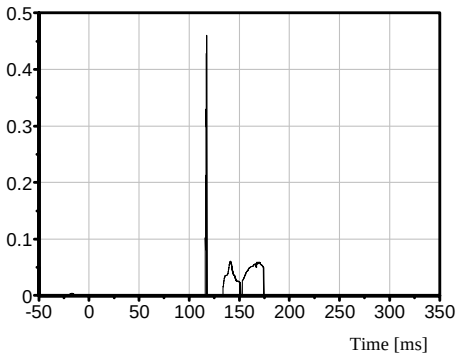
Max [NTF] 0.2825 at 104.08 ms

21NIJCUPCEH300YX



Max [NCE] 0.7382 at 119.92 ms

21NIJCUPCFH300YX



Max [NCF] 0.4605 at 117.44 ms

Dummy:HIII 50th Male
Seating Position:
Driver

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Femur Load

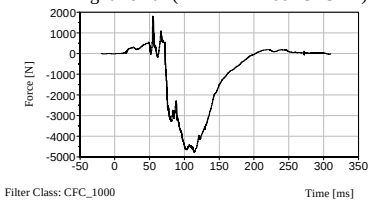
Date: 06/20/2007
Time: 08:05

Customer: VRTC

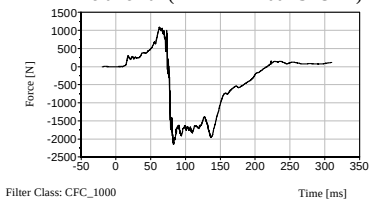
TRC Inc. Test Lab: CTF

Test Number: 070620

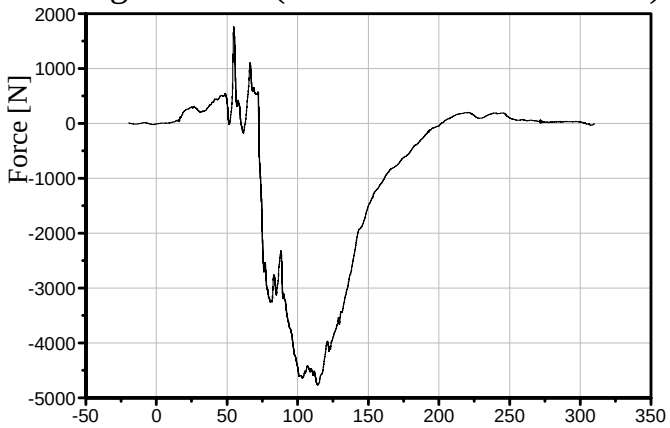
Right Femur (21FEMRRL00H3FOZA)

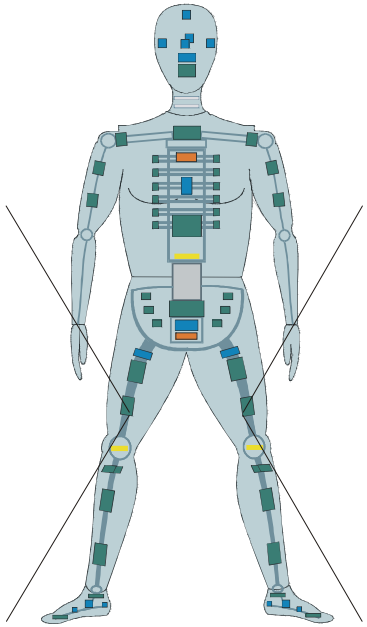


Left Femur (21FEMRLL00H3FOZA)

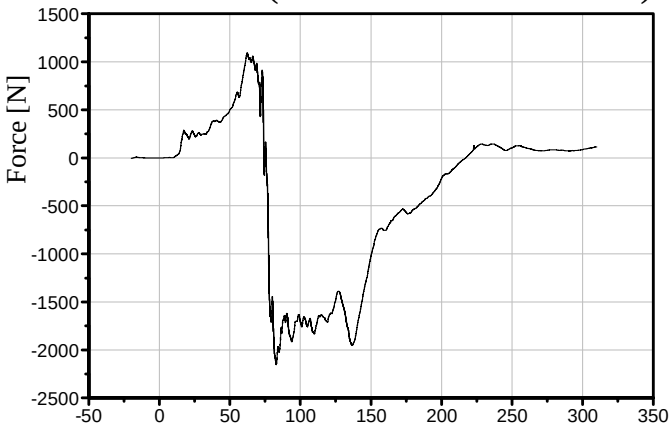


Right Femur (21FEMRRL00H3FOZB)





Left Femur (21FEMRLL00H3FOZB)



Max [Tension] 1,763.02 N at 54.56 ms
Min [Compression] -4,765.30 N at 114.08 ms

Dummy:HIII 50th Male
Seating Position:
Driver

Max [Tension] 1,093.30 N at 62.24 ms
Min [Compression] -2,152.82 N at 82.88 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Tibia Index (TI)

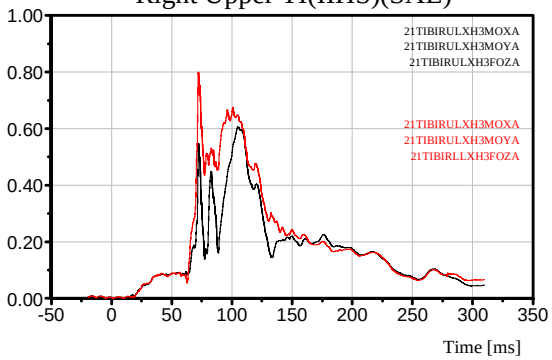
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

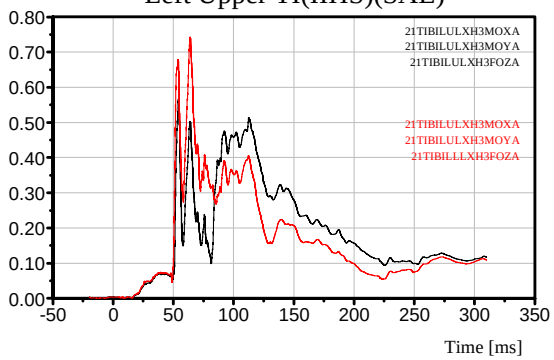
Critical Bending Moment = 240 N·m
Critical Compression Force = 12000 N

Right Upper TI(IIHS)(SAE)

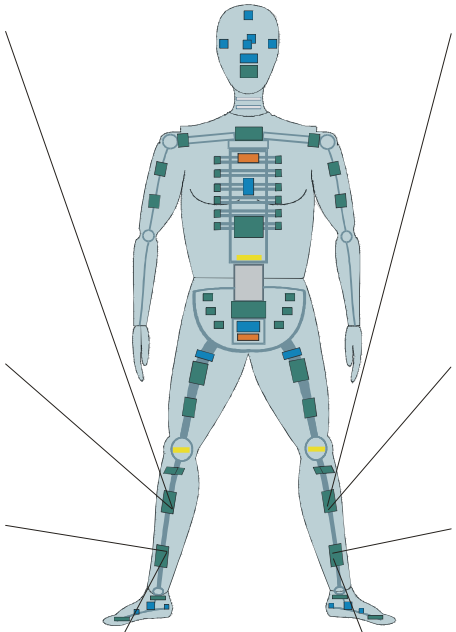


Max = 0.61 at 104.80 ms (SAE)
Max = 0.80 at 72.16 ms (IIHS)

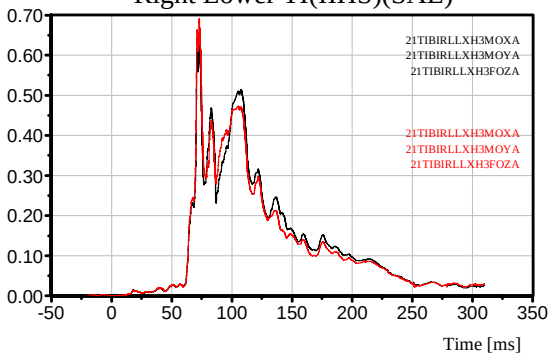
Left Upper TI(IIHS)(SAE)



Max = 0.57 at 54.24 ms (SAE)
Max = 0.74 at 64.00 ms (IIHS)



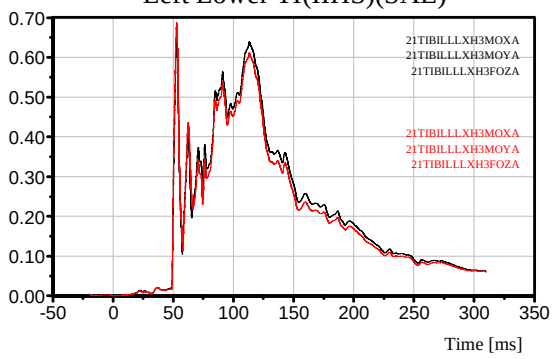
Right Lower TI(IIHS)(SAE)



Max = 0.65 at 72.80 ms (SAE)
Max = 0.69 at 72.80 ms (IIHS)

Dummy:HIII 50th Male
Seating Position:
Driver

Left Lower TI(IIHS)(SAE)



Max = 0.65 at 52.80 ms (SAE)
Max = 0.69 at 52.80 ms (IIHS)

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

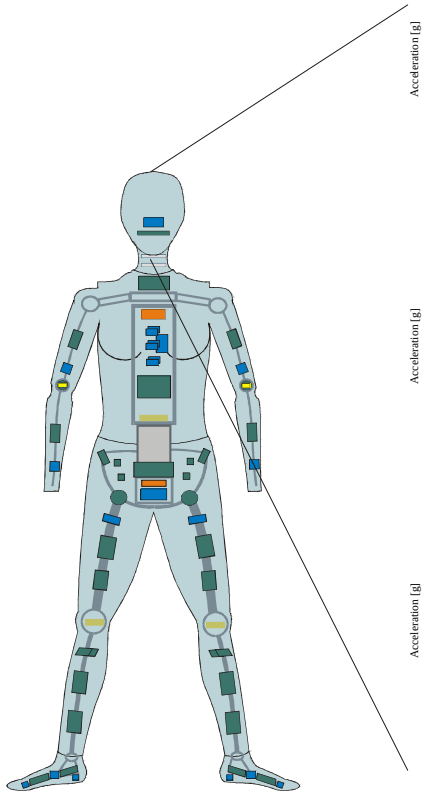
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

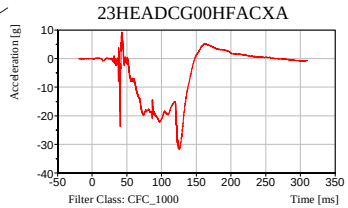
Head Injury Criterion (HIC)

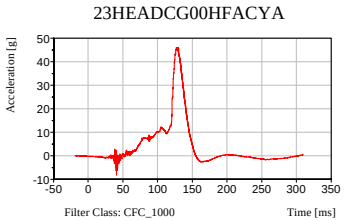
Date: 06/20/2007
Time: 08:05

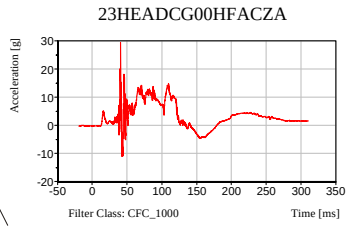
Customer: VRTC

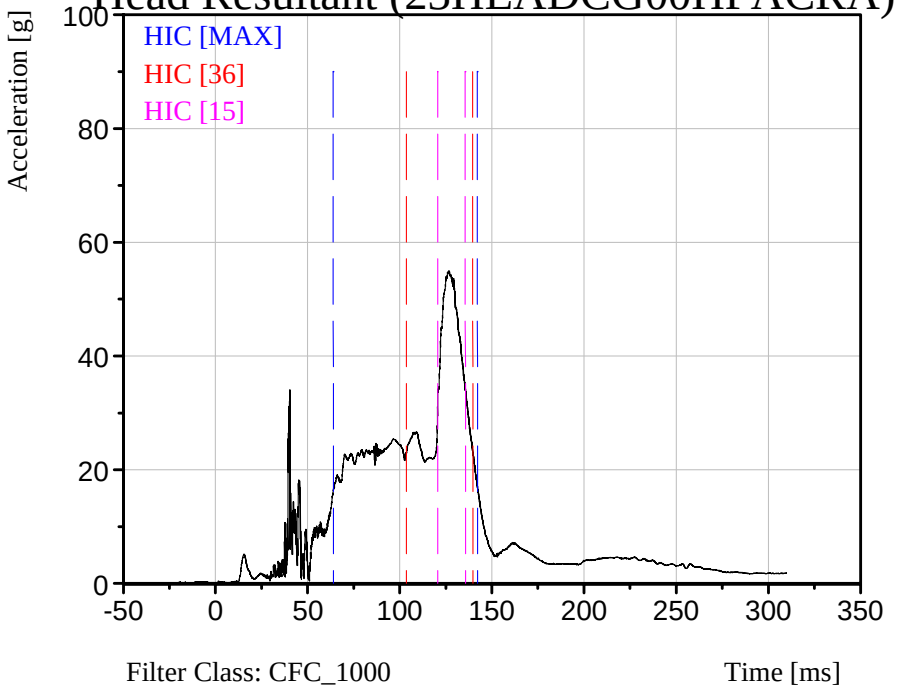
TRC Inc. Test Lab: CTF
Test Number: 070620











	T1 (Begin)	T2 (End)	Avg. g T1 to T2
HIC [Max.] = 315.15	64.00 ms	142.24 ms	27.66 g
HIC [36] = 240.03	103.68 ms	139.68 ms	33.83 g
HIC [15] = 222.92	120.64 ms	135.68 ms	46.53 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)

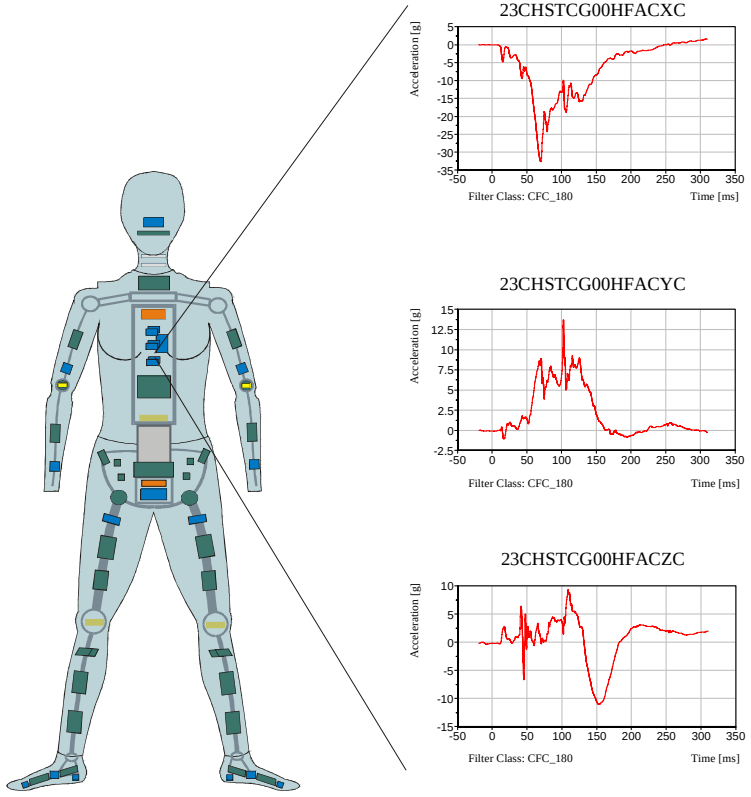
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

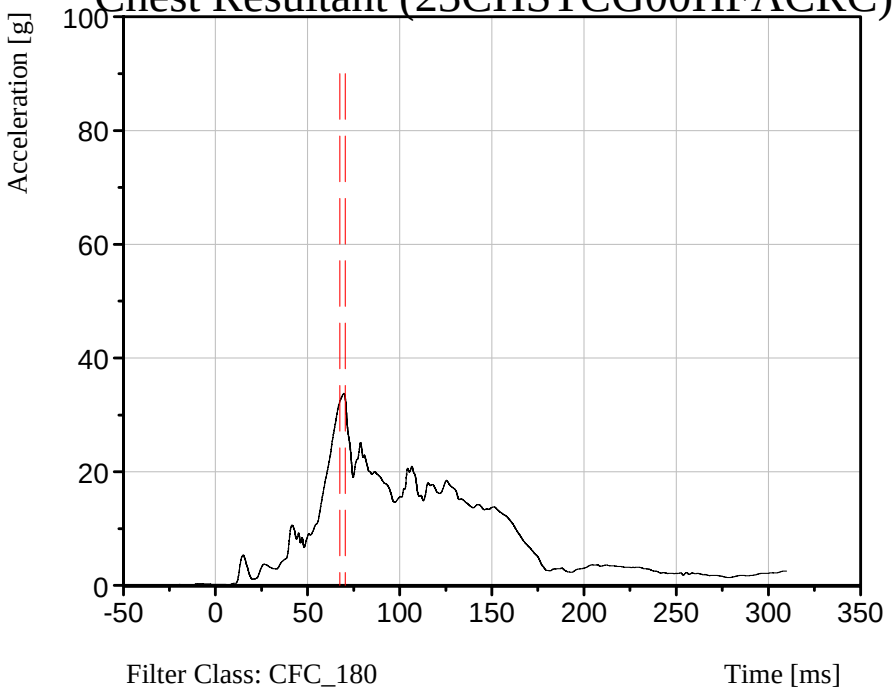
3 ms Duration Acceleration (Chest)

Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620





	T1 (Begin)	T2 (End)
3 ms Duration Acceleration = 32.46 g	67.51 ms	70.51 ms
Chest Severity Index = 176.74		

Dummy:HIII 5th Female
Seating Position:

Right Front Passenger

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

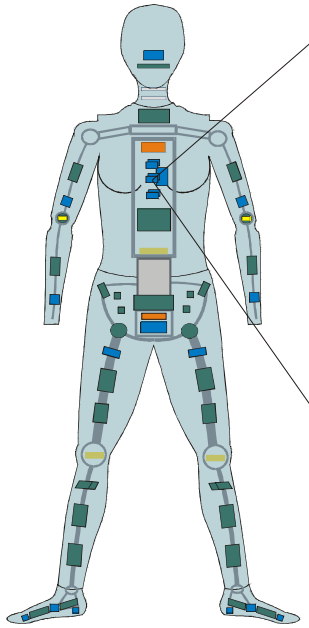
Chest Deflection

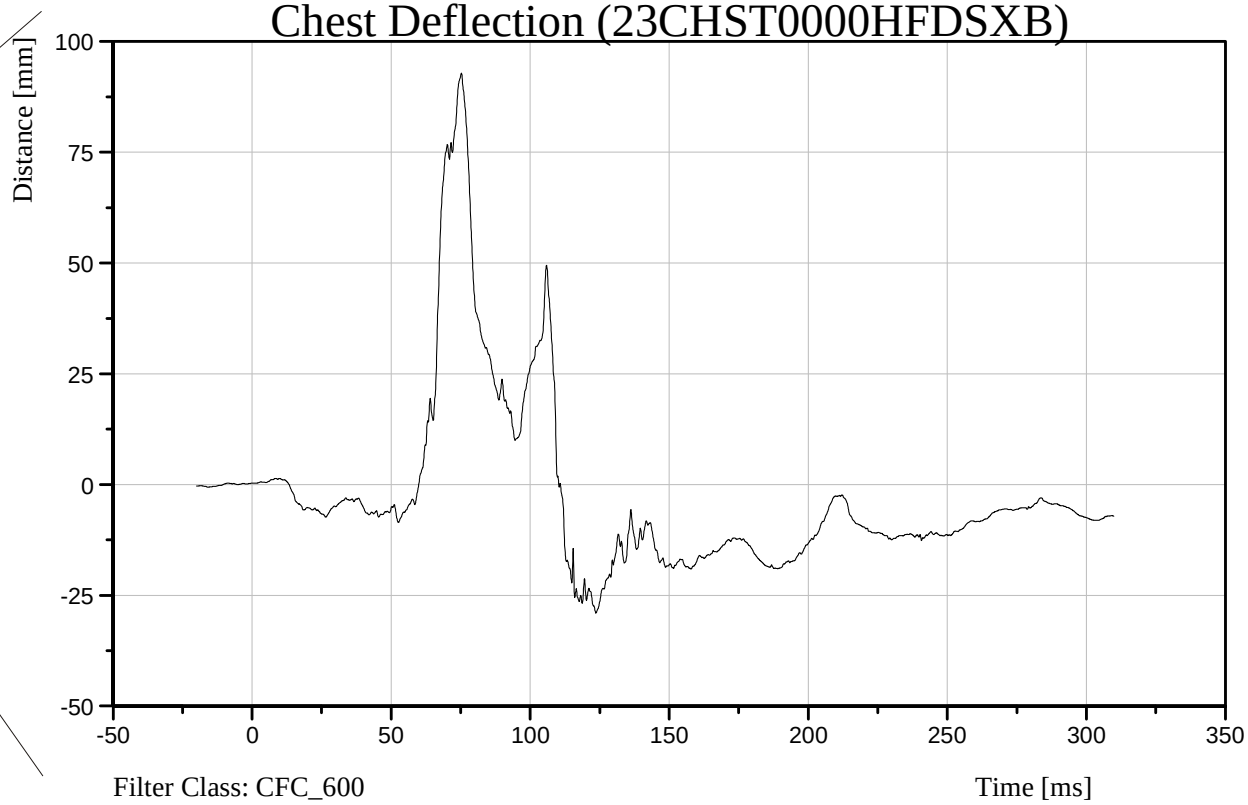
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

Test Orientation = Frontal





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

[Max.] 92.85 mm at 75.28 ms
[Min.] -29.02 mm at 123.60 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal
Neck Moment about the Occipital Condyle (NECK OM)

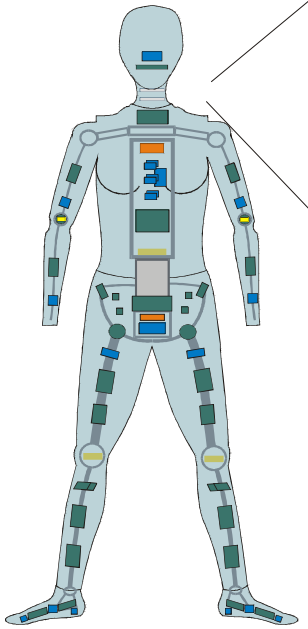
Date: 06/20/2007
Time: 08:05

Customer: VRTC

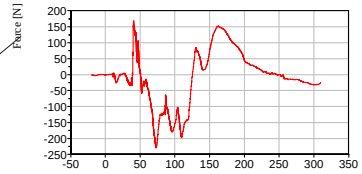
TRC Inc. Test Lab: CTF

Test Number: 070620

Test Orientation = Frontal

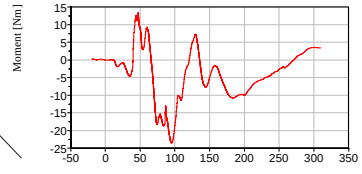


23NECKUP00HFFOXB



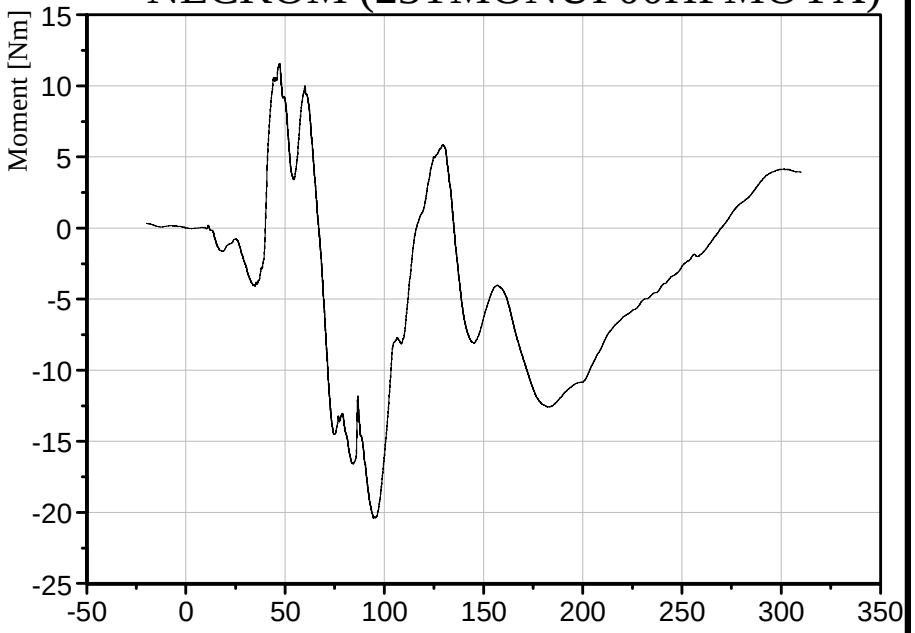
Filter Class: CFC_600

23NECKUP00HFMOYB



Filter Class: CFC_600

NECKOM (23TMONUP00HFMOYX)



Filter Class: CFC_600

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

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

[Max.] 11.59 Nm at 47.12 ms

[Min.] -20.40 Nm at 94.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

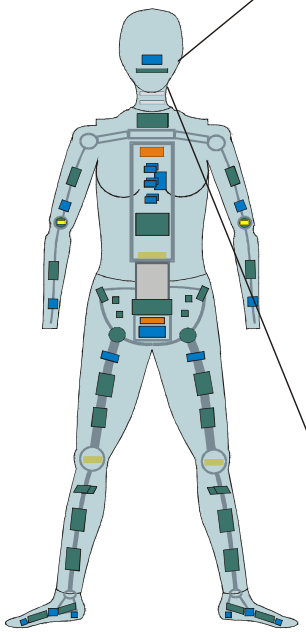
Neck Injury Predictor (NIJ)

Date: 06/20/2007
Time: 08:05

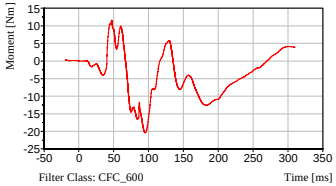
Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

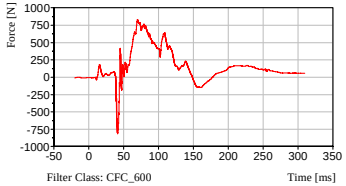
Test Orientation = Frontal
Fzc(Tension) = 4287
Fzc(Compression) = 3880
Myc(Extension) = 67
Myc(Flexion) = 155



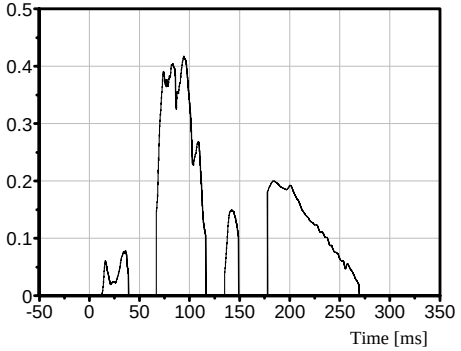
23TMONUP00HFMOYX



23NECKUP00HFFOZB

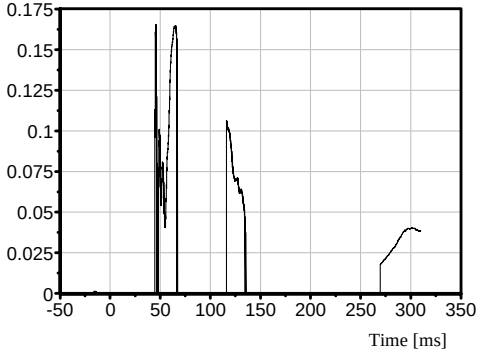


23NIJCUPTEHF00YX



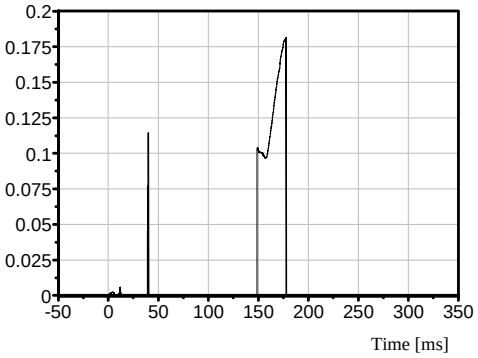
Max [NTE] 0.4180 at 94.24 ms

23NIJCUPTFHF00YX



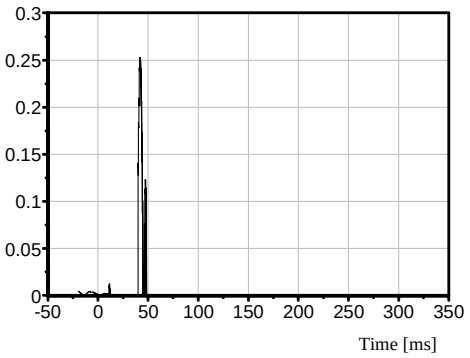
Max [NTF] 0.1655 at 45.36 ms

23NIJCUPCEHF00YX



Max [NCE] 0.1813 at 177.76 ms

23NIJCUPCFHF00YX



Max [NCF] 0.2528 at 41.76 ms

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

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Femur Load

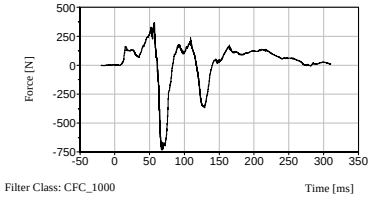
Date: 06/20/2007
Time: 08:05

Customer: VRTC

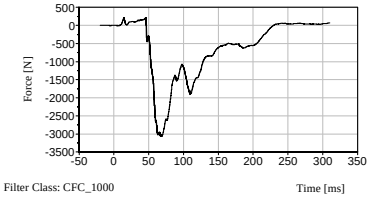
TRC Inc. Test Lab: CTF

Test Number: 070620

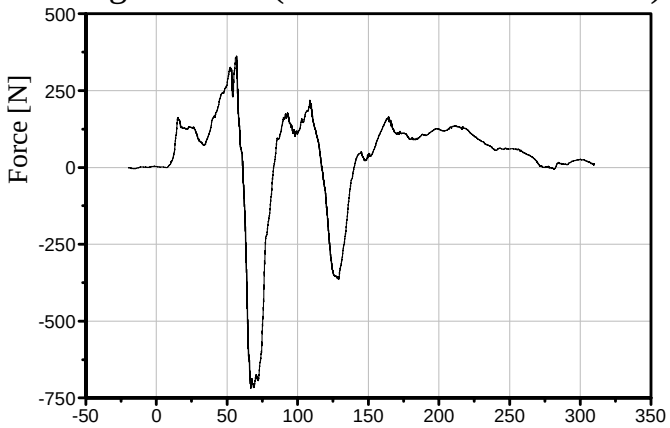
Right Femur (23FEMRRL00HFFOZA)

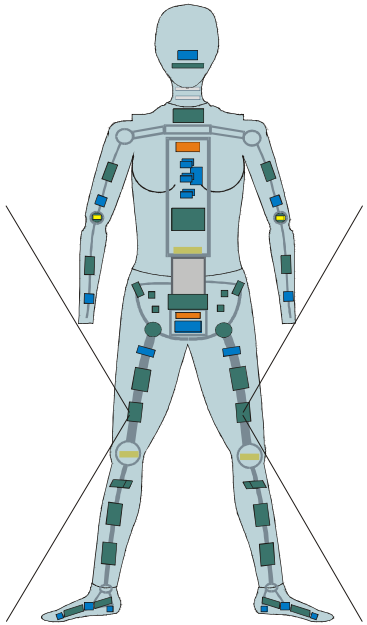


Left Femur (23FEMRLL00HFFOZA)



Right Femur (23FEMRRL00HFFOZB)





Left Femur (23FEMRLL00HFFOZB)



Max [Tension] 362.94 N at 56.56 ms
Min [Compression] -717.63 N at 66.72 ms

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

Max [Tension] 218.90 N at 45.76 ms
Min [Compression] -3,069.08 N at 68.40 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Tibia Index (TI)

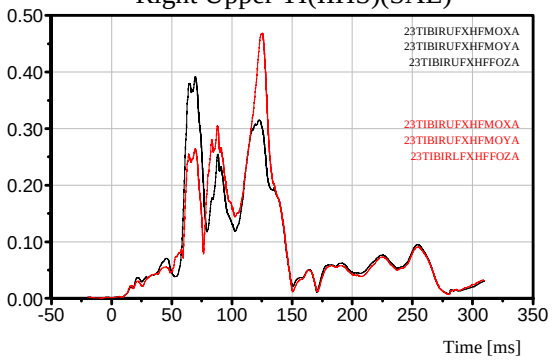
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

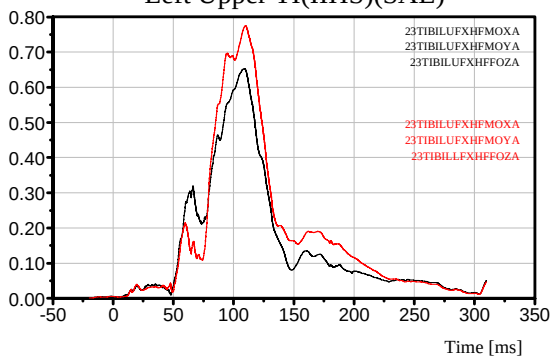
Critical Bending Moment = 146 N·m
Critical Compression Force = 8600 N

Right Upper TI(IIHS)(SAE)



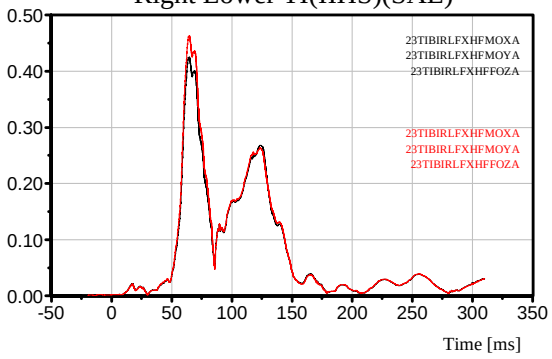
Max = 0.39 at 69.52 ms (SAE)
Max = 0.47 at 125.36 ms (IIHS)

Left Upper TI(IIHS)(SAE)

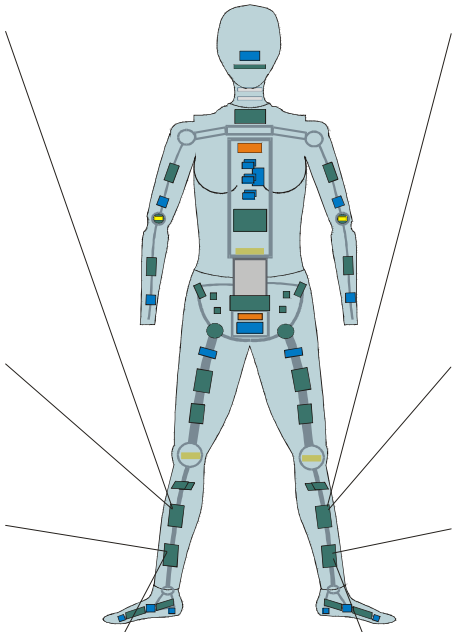


Max = 0.65 at 108.40 ms (SAE)
Max = 0.77 at 110.08 ms (IIHS)

Right Lower TI(IIHS)(SAE)

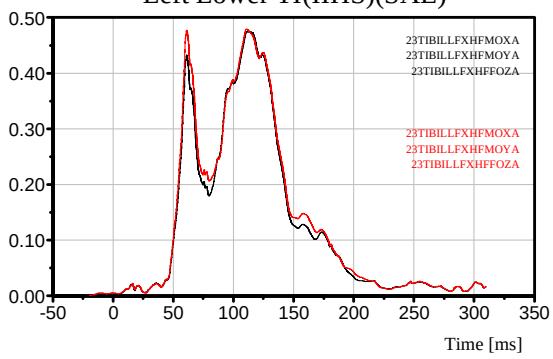


Max = 0.43 at 64.56 ms (SAE)
Max = 0.46 at 64.64 ms (IIHS)



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

Left Lower TI(IIHS)(SAE)



Max = 0.48 at 111.84 ms (SAE)
Max = 0.48 at 111.12 ms (IIHS)

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

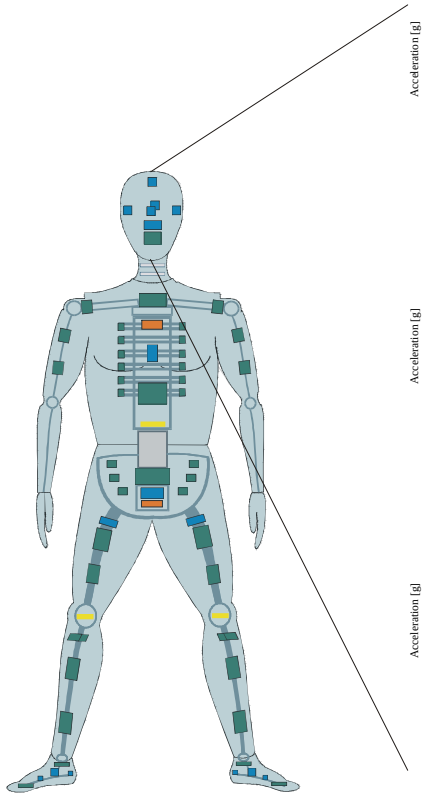
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

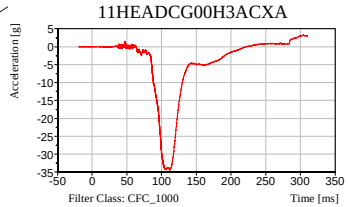
Head Injury Criterion (HIC)

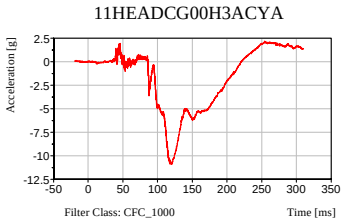
Date: 06/20/2007
Time: 08:05

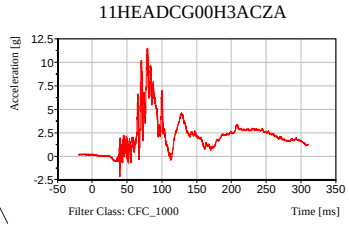
Customer: VRTC

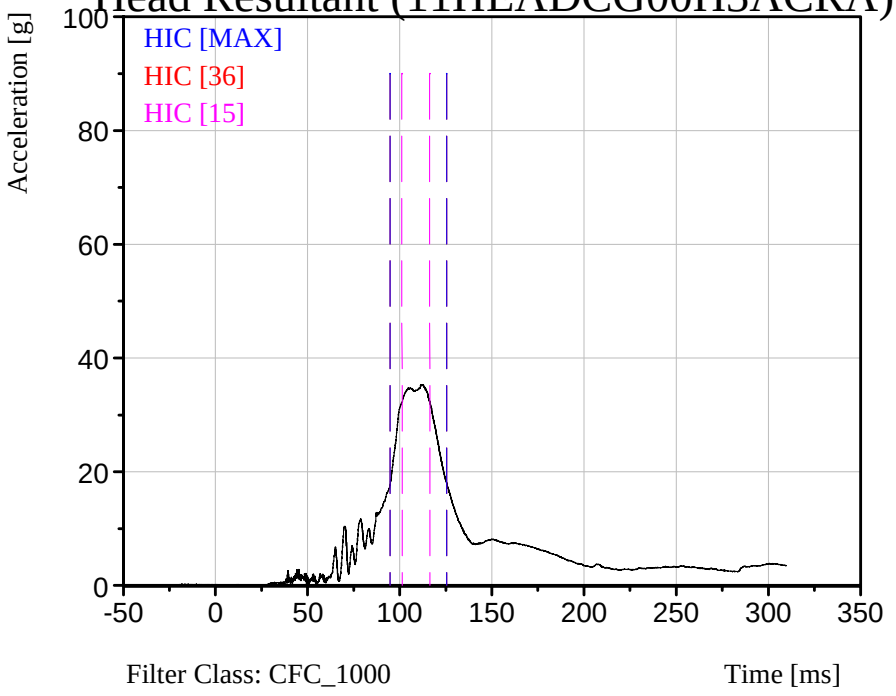
TRC Inc. Test Lab: CTF
Test Number: 070620











	T1 (Begin)	T2 (End)	Avg. g T1 to T2
HIC [Max.] = 147.76	94.80 ms	125.52 ms	29.68 g
HIC [36] = 147.76	94.80 ms	125.52 ms	29.68 g
HIC [15] = 103.50	101.28 ms	116.32 ms	34.27 g

Dummy:HIII 50th Male
Seating Position:
Driver

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

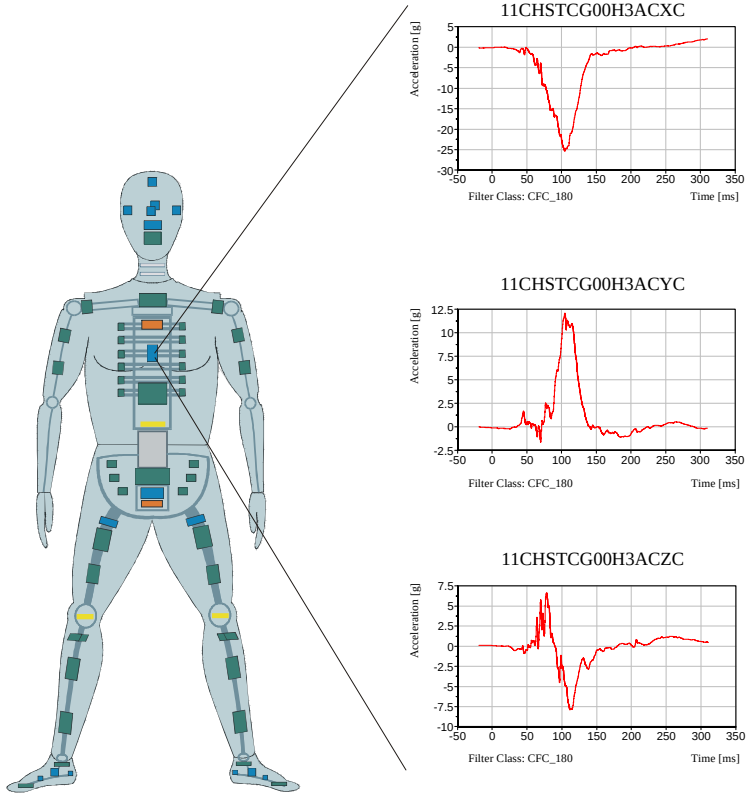
3 ms Duration Acceleration (Chest)

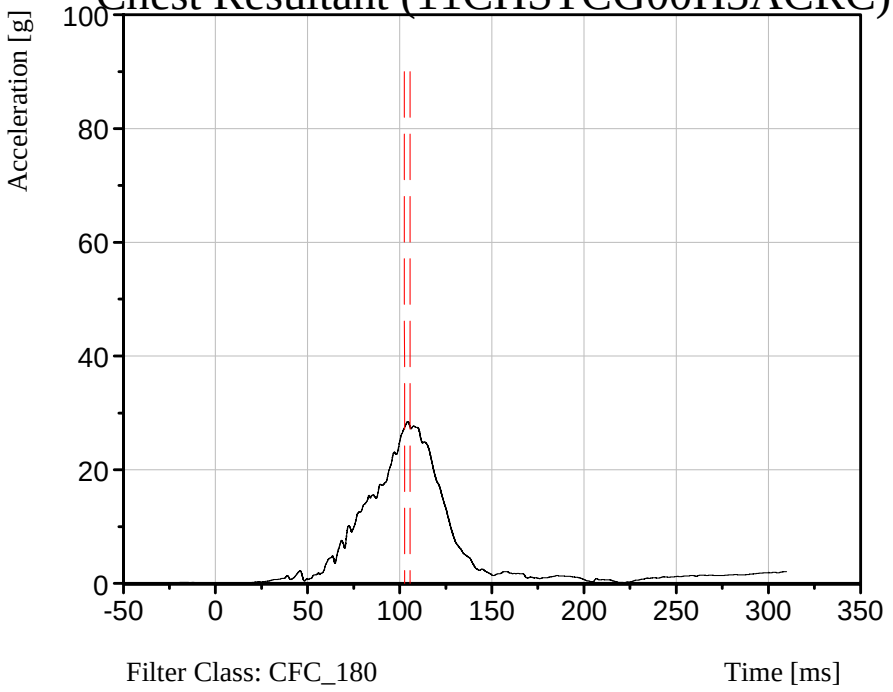
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 070620





	T1 (Begin)	T2 (End)
3 ms Duration Acceleration = 27.51 g	102.60 ms	105.60 ms
Chest Severity Index = 107.82		

Dummy:HIII 50th Male
Seating Position:
Driver

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

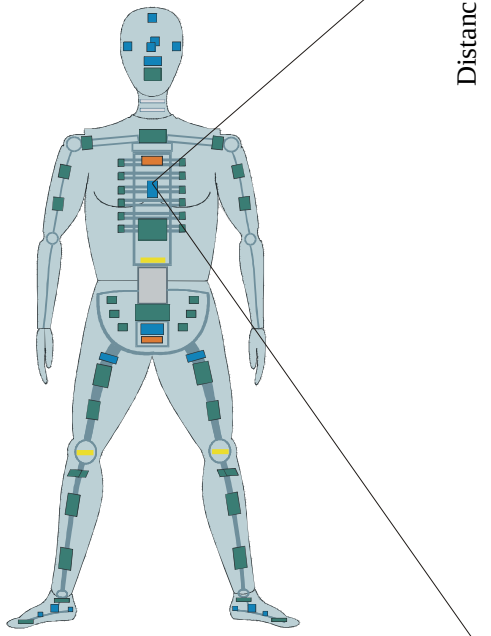
Chest Deflection

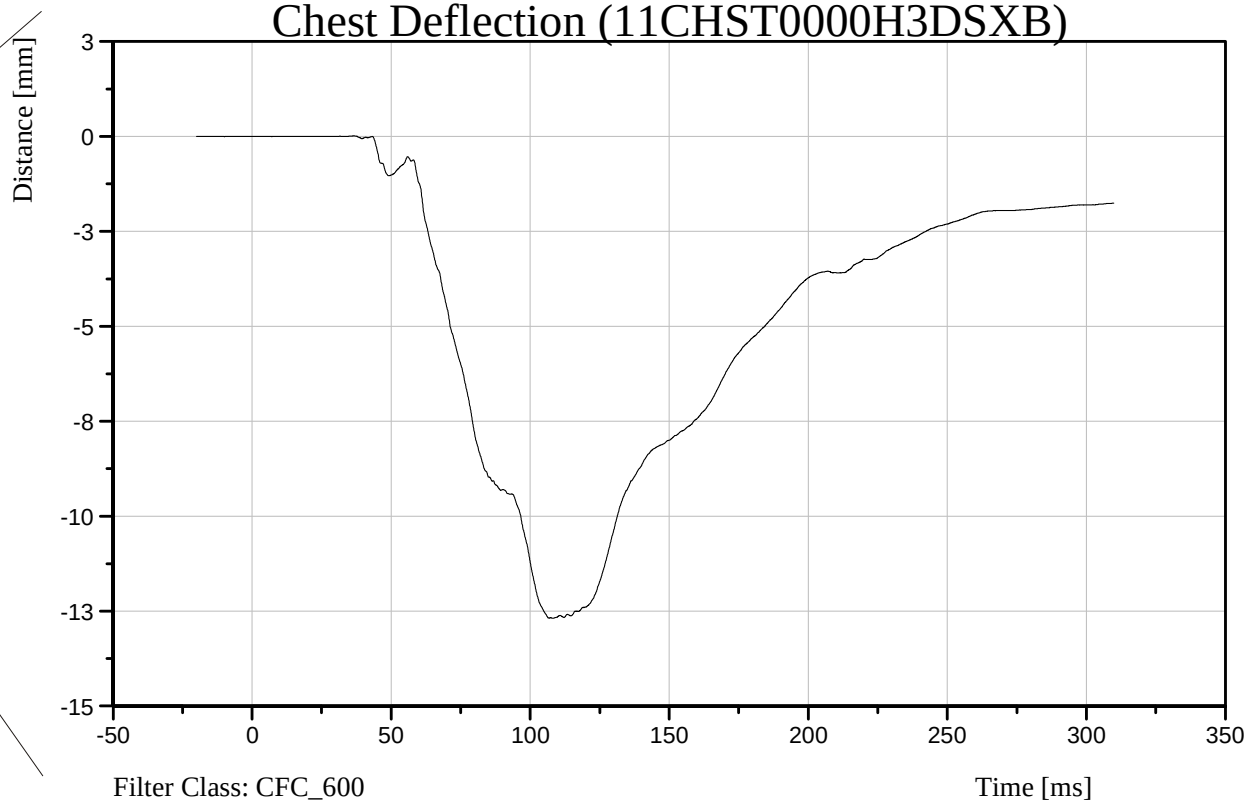
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

Test Orientation = Frontal





Dummy:HIII 50th Male
Seating Position:
Driver

[Max.] 0.02 mm at 36.48 ms
[Min.] -12.69 mm at 108.24 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal
Neck Moment about the Occipital Condyle (NECK OM)

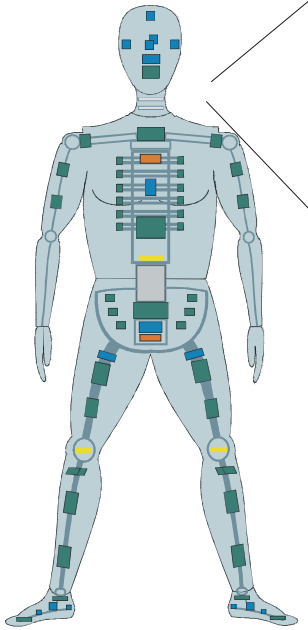
Date: 06/20/2007
Time: 08:05

Customer: VRTC

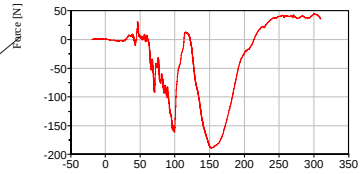
TRC Inc. Test Lab: CTF

Test Number: 070620

Test Orientation = Frontal

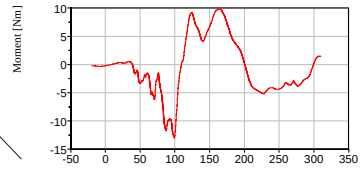


11NECKUP00H3FOXB



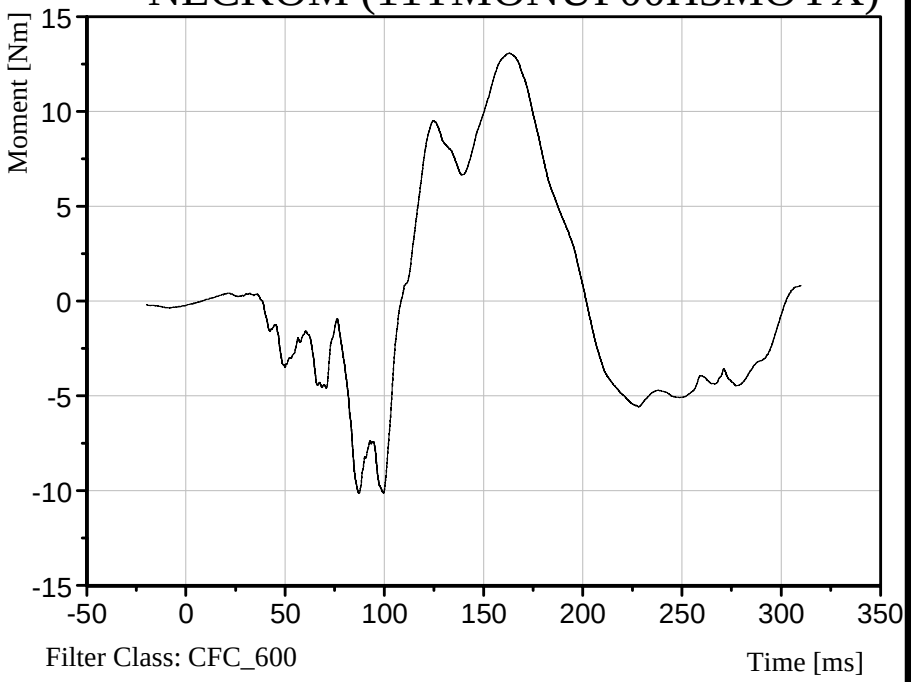
Filter Class: CFC_600

11NECKUP00H3MOYB



Filter Class: CFC_600

NECKOM (11TMONUP00H3MOYX)



Filter Class: CFC_600

Dummy:HIII 50th Male
Seating Position:
Driver

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

[Max.] 13.09 Nm at 162.88 ms

[Min.] -10.13 Nm at 99.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

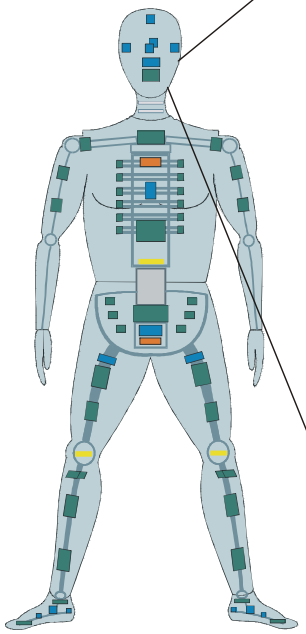
Neck Injury Predictor (NIJ)

Date: 06/20/2007
Time: 08:05

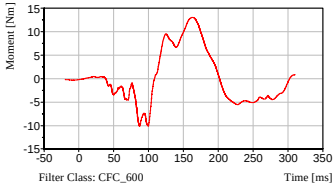
Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

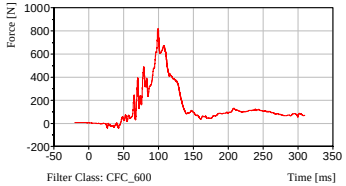
Test Orientation = Frontal
Fzc(Tension) = 6806
Fzc(Compression) = 6160
Myc(Extension) = 135
Myc(Flexion) = 310



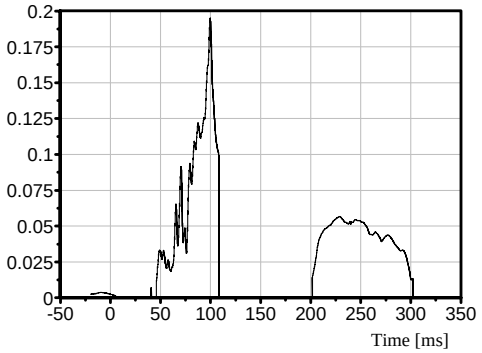
11TMONUP00H3MOYX



11NECKUP00H3FOZB

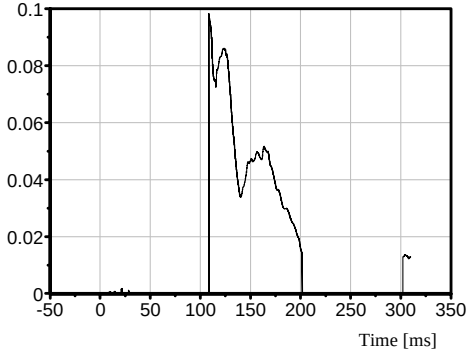


11NIJCUPTEH300YX



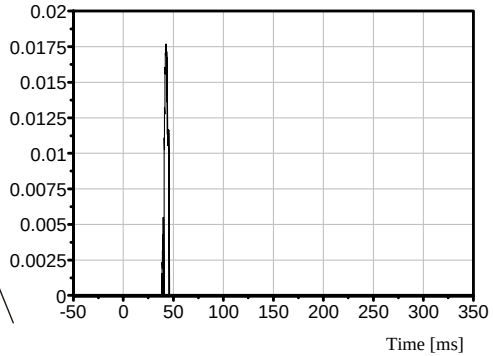
Max [NTE] 0.1952 at 99.52 ms

11NIJCUPTFH300YX



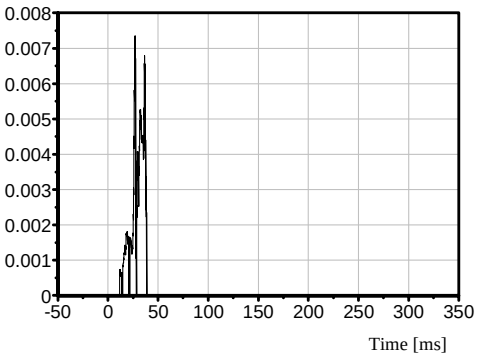
Max [NTF] 0.0983 at 108.32 ms

11NIJCUPCEH300YX



Max [NCE] 0.0177 at 42.64 ms

11NIJCUPCFH300YX



Max [NCF] 0.0074 at 26.96 ms

Dummy:HIII 50th Male
Seating Position:
Driver

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Femur Load

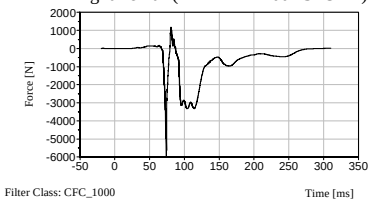
Date: 06/20/2007
Time: 08:05

Customer: VRTC

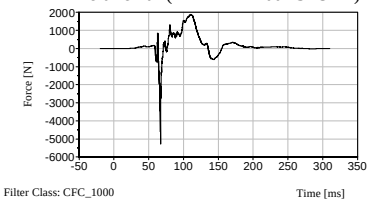
TRC Inc. Test Lab: CTF

Test Number: 070620

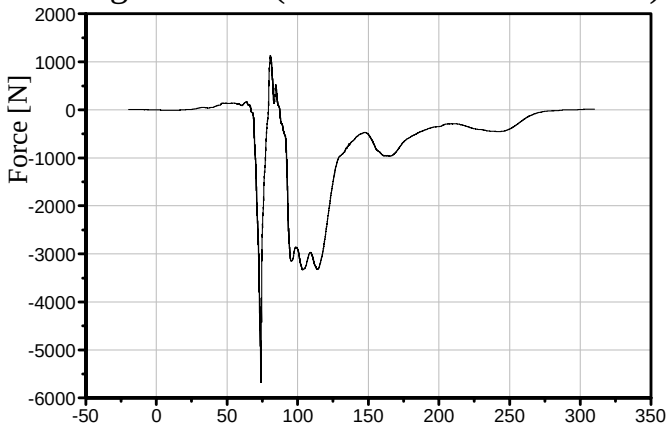
Right Femur (11FEMRRL00H3FOZA)

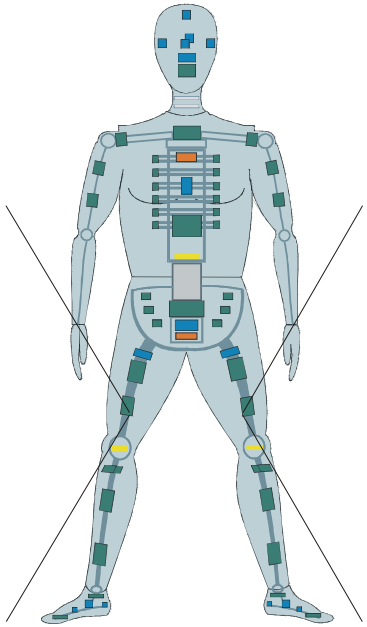


Left Femur (11FEMRLL00H3FOZA)

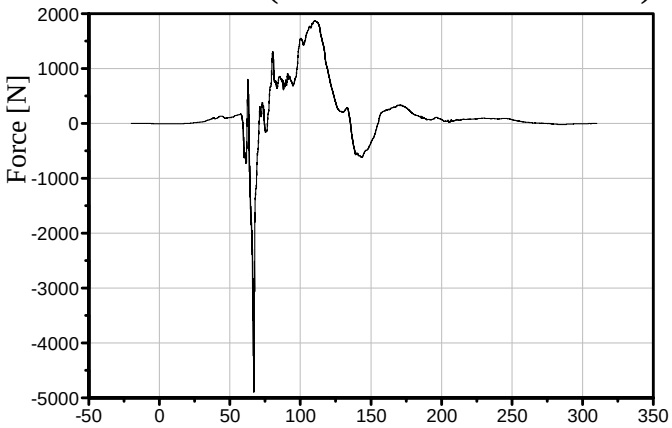


Right Femur (11FEMRRL00H3FOZB)





Left Femur (11FEMRLL00H3FOZB)



Max [Tension] 1,134.50 N at 80.48 ms
Min [Compression] -5,677.49 N at 73.92 ms

Dummy:HIII 50th Male
Seating Position:
Driver

Max [Tension] 1,876.62 N at 110.64 ms
Min [Compression] -4,895.83 N at 67.12 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Tibia Index (TI)

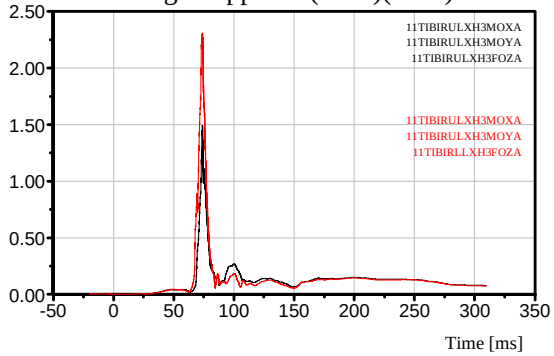
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

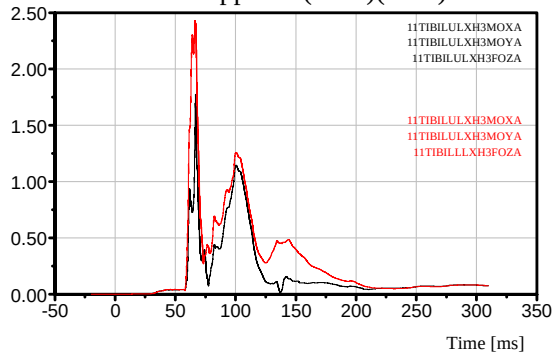
Critical Bending Moment = 240 N·m
Critical Compression Force = 12000 N

Right Upper TI(IIHS)(SAE)



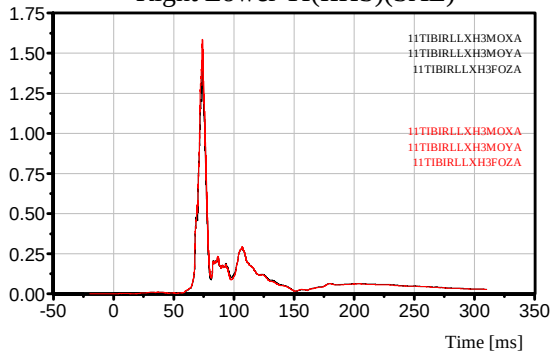
Max = 1.49 at 73.68 ms (SAE)
Max = 2.31 at 73.76 ms (IIHS)

Left Upper TI(IIHS)(SAE)

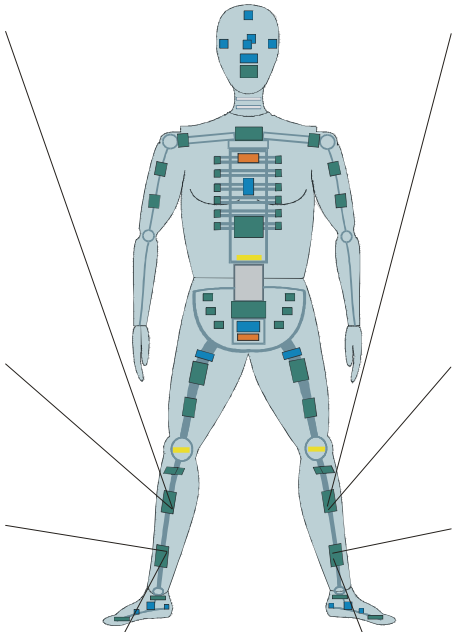


Max = 1.78 at 66.88 ms (SAE)
Max = 2.43 at 66.24 ms (IIHS)

Right Lower TI(IIHS)(SAE)

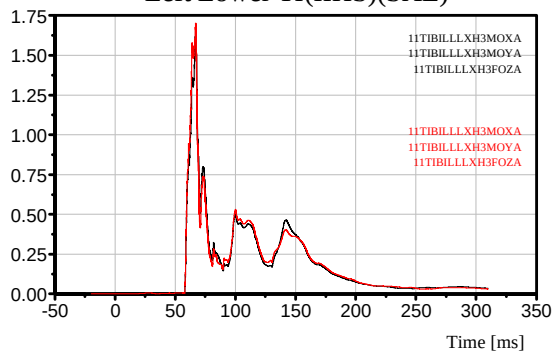


Max = 1.44 at 73.76 ms (SAE)
Max = 1.59 at 73.68 ms (IIHS)



Dummy:HIII 50th Male
Seating Position:
Driver

Left Lower TI(IIHS)(SAE)



Max = 1.65 at 66.96 ms (SAE)
Max = 1.70 at 66.96 ms (IIHS)

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

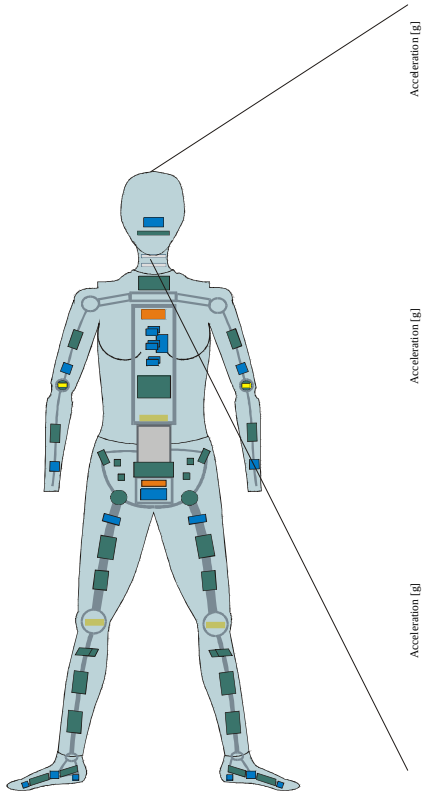
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Head Injury Criterion (HIC)

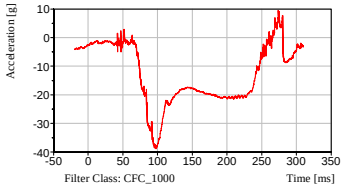
Date: 06/20/2007
Time: 08:05

Customer: VRTC

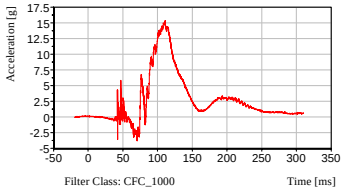
TRC Inc. Test Lab: CTF
Test Number: 070620



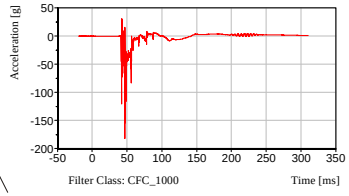
13HEADCG00HFACXA



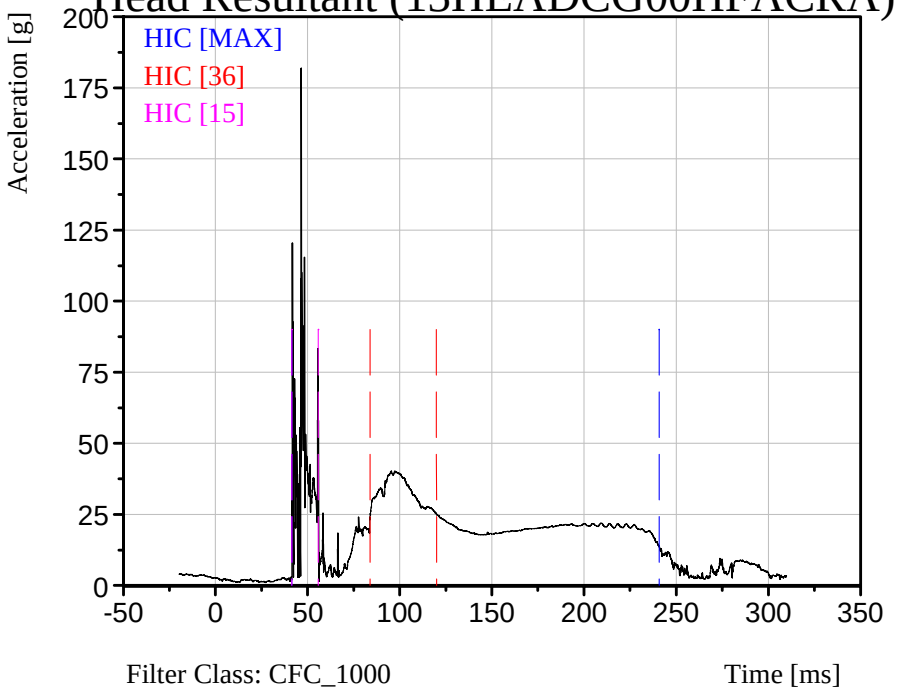
13HEADCG00HFACYA



13HEADCG00HFACZA



Head Resultant (13HEADCG00HFACRA)



	T1 (Begin)	T2 (End)	Avg. g T1 to T2
HIC [Max.] = 496.92	41.44 ms	240.80 ms	22.83 g
HIC [36] = 223.52	84.00 ms	120.00 ms	32.88 g
HIC [15] = 175.43	41.44 ms	55.84 ms	42.95 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)

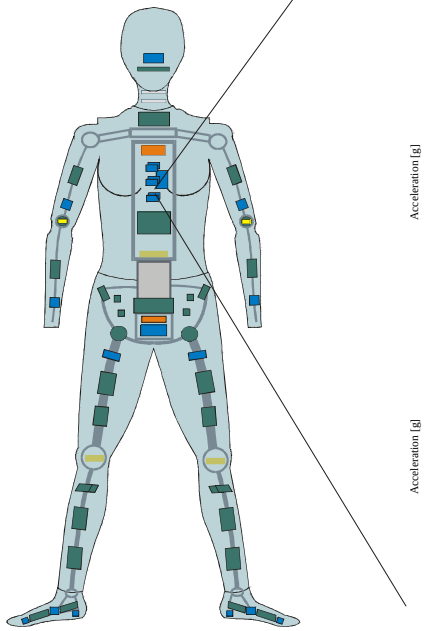
2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

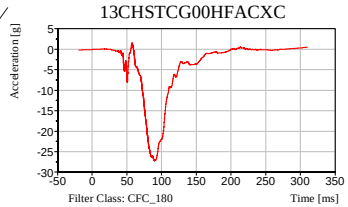
3 ms Duration Acceleration (Chest)

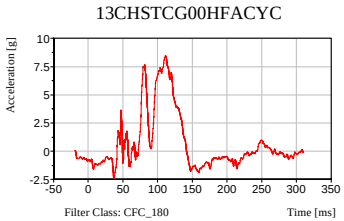
Date: 06/20/2007
Time: 08:05

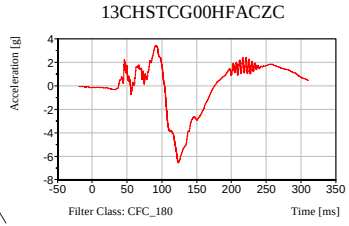
Customer: VRTC

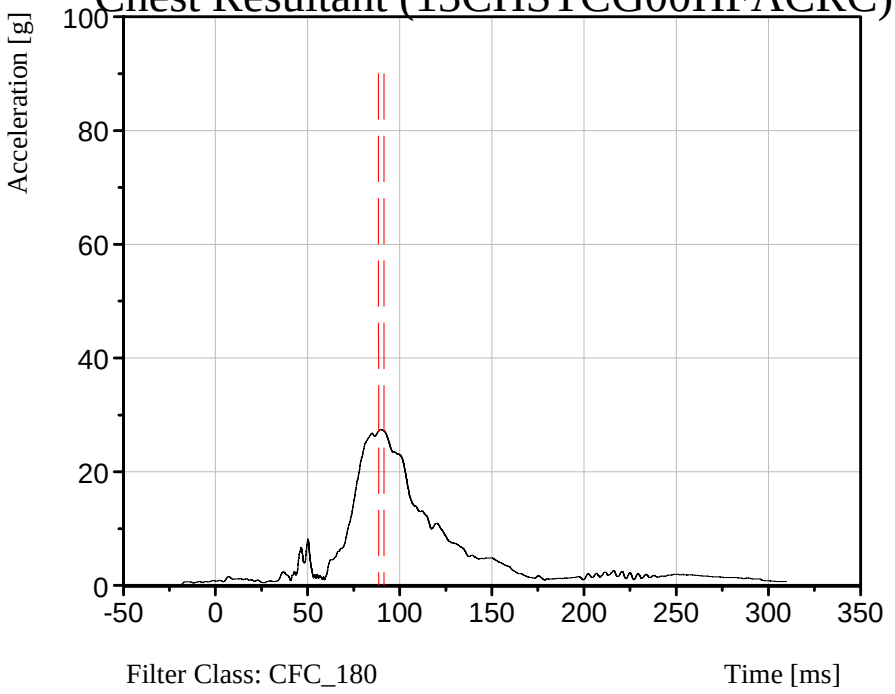
TRC Inc. Test Lab: CTF
Test Number: 070620











	T1 (Begin)	T2 (End)
3 ms Duration Acceleration = 27.18 g	88.55 ms	91.55 ms
Chest Severity Index = 101.37		

Dummy:HIII 5th Female
Seating Position:

Right Front Passenger

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

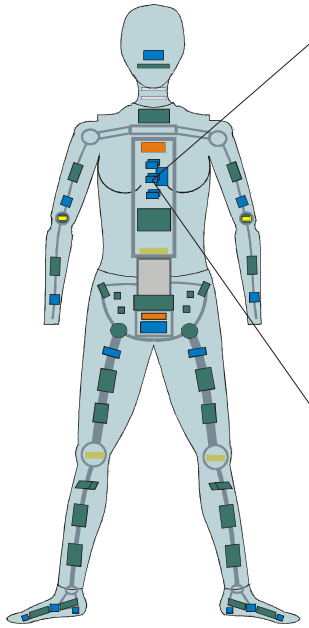
Chest Deflection

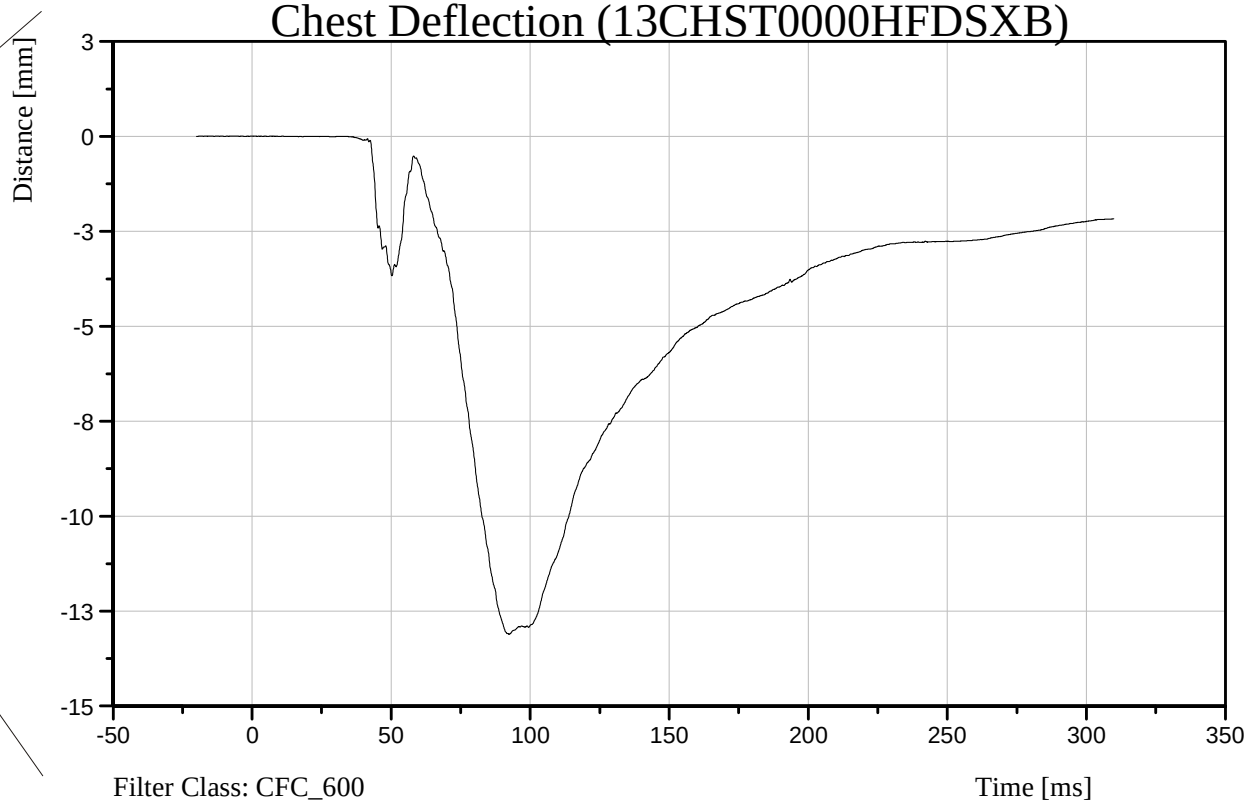
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

Test Orientation = Frontal





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

[Max.] 0.01 mm at -7.12 ms
[Min.] -13.11 mm at 92.48 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal
Neck Moment about the Occipital Condyle (NECK OM)

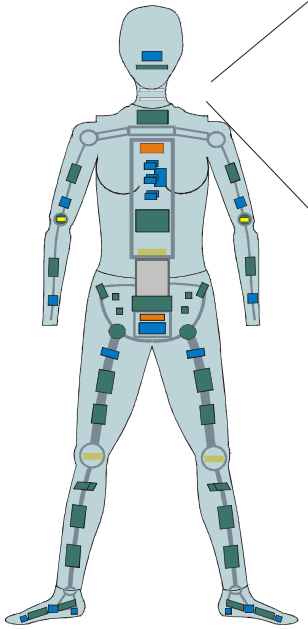
Date: 06/20/2007
Time: 08:05

Customer: VRTC

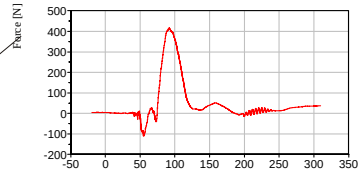
TRC Inc. Test Lab: CTF

Test Number: 070620

Test Orientation = Frontal

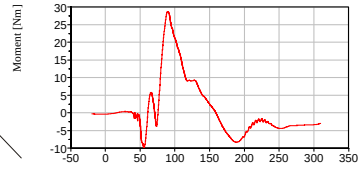


13NECKUP00HFFOXB



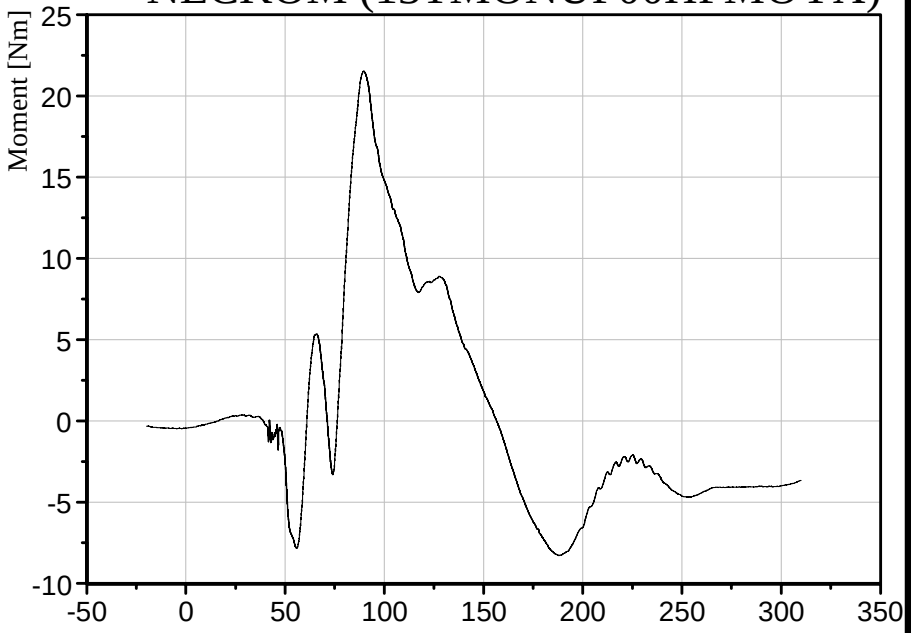
Filter Class: CFC_600

13NECKUP00HFMOYB



Filter Class: CFC_600

NECKOM (13TMONUP00HFMOYX)



Filter Class: CFC_600

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

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

[Max.] 21.55 Nm at 89.52 ms

[Min.] -8.27 Nm at 187.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

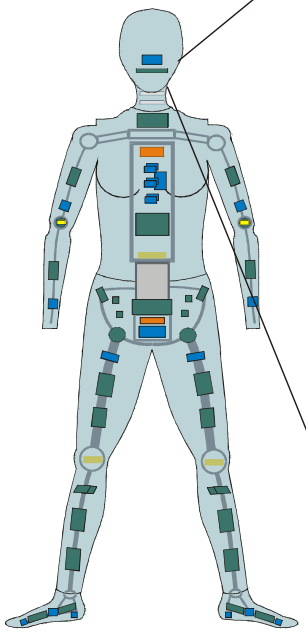
Neck Injury Predictor (NIJ)

Date: 06/20/2007
Time: 08:05

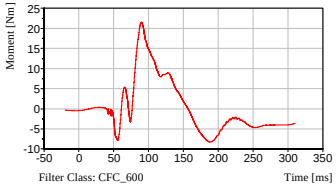
Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

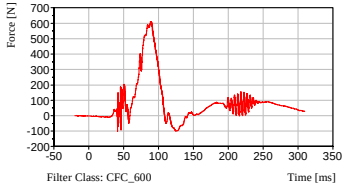
Test Orientation = Frontal
Fzc(Tension) = 4287
Fzc(Compression) = 3880
Myc(Extension) = 67
Myc(Flexion) = 155



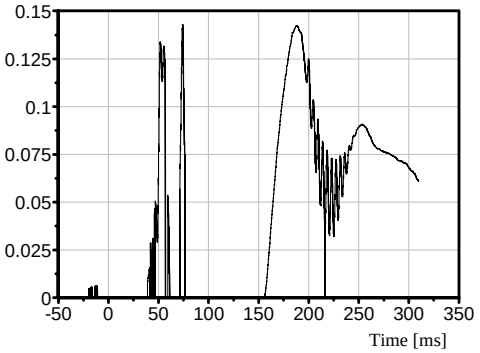
13TMONUP00HFMOYX



13NECKUP00HFFOZB

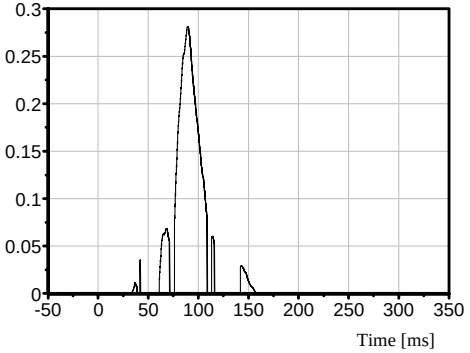


13NIJCUPTEHF00YX



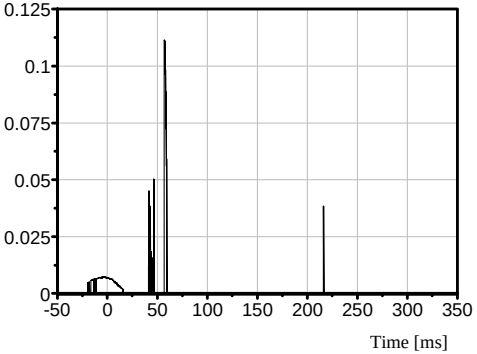
Max [NTE] 0.1430 at 73.84 ms

13NIJCUPTFHF00YX



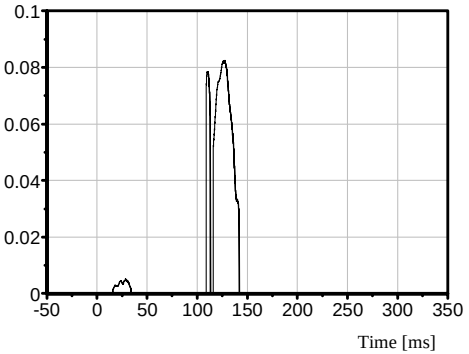
Max [NTF] 0.2812 at 89.04 ms

13NIJCUPCEHF00YX



Max [NCE] 0.1115 at 56.96 ms

13NIJCUPCFHF00YX



Max [NCF] 0.0825 at 127.36 ms

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

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Femur Load

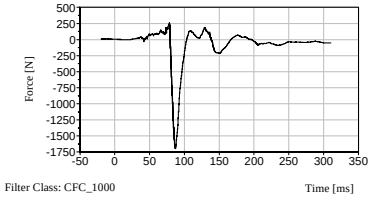
Date: 06/20/2007
Time: 08:05

Customer: VRTC

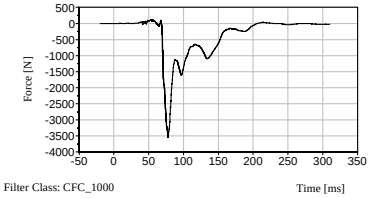
TRC Inc. Test Lab: CTF

Test Number: 070620

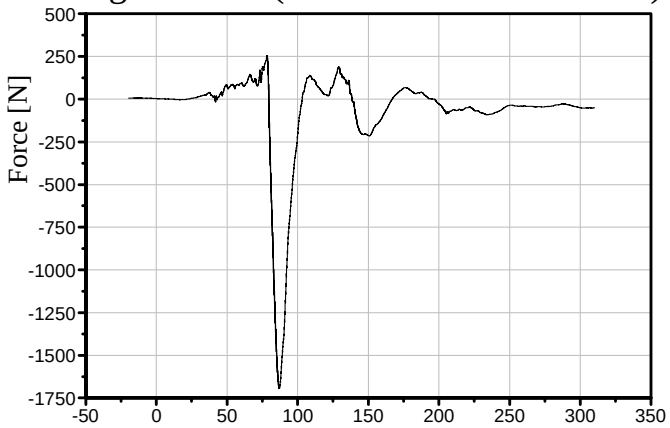
Right Femur (13FEMRRL00HFFOZA)

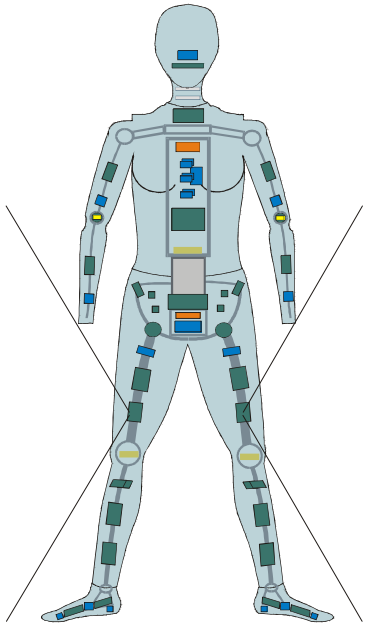


Left Femur (13FEMRLL00HFFOZA)

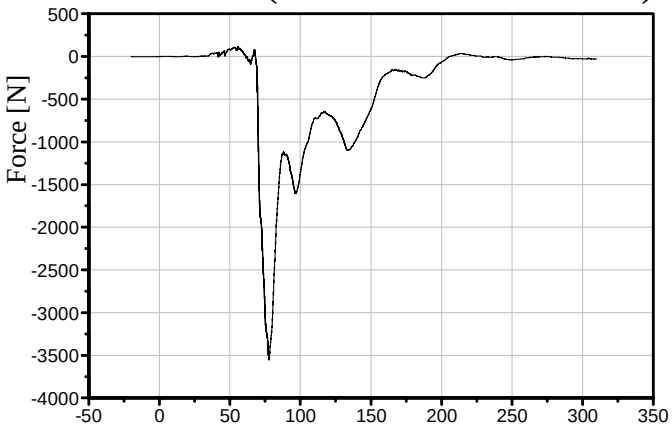


Right Femur (13FEMRRL00HFFOZB)





Left Femur (13FEMRLL00HFFOZB)



Max [Tension] 256.35 N at 78.16 ms
Min [Compression] -1,695.28 N at 86.80 ms

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

Max [Tension] 118.64 N at 55.84 ms
Min [Compression] -3,554.71 N at 77.76 ms

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

Tibia Index (TI)

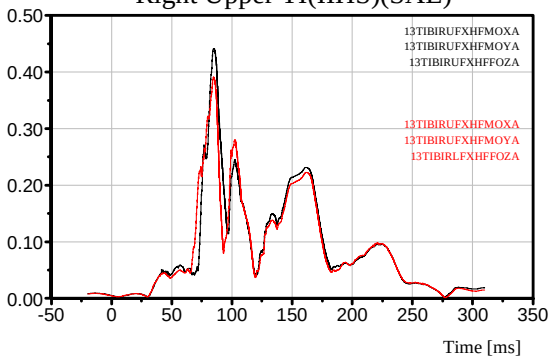
Date: 06/20/2007
Time: 08:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 070620

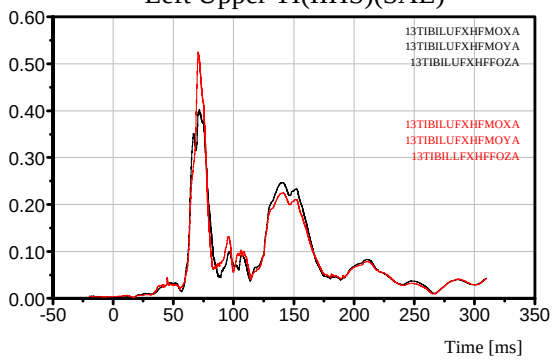
Critical Bending Moment = 146 N·m
Critical Compression Force = 8600 N

Right Upper TI(IIHS)(SAE)



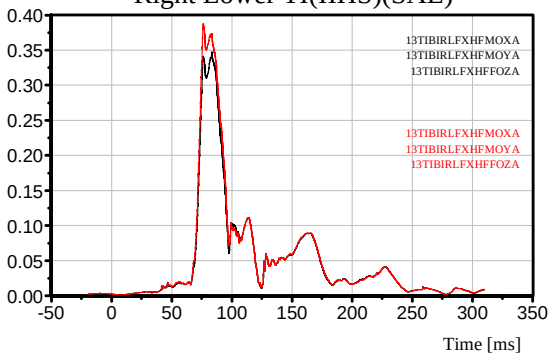
Max = 0.44 at 85.04 ms (SAE)
Max = 0.39 at 84.72 ms (IIHS)

Left Upper TI(IIHS)(SAE)

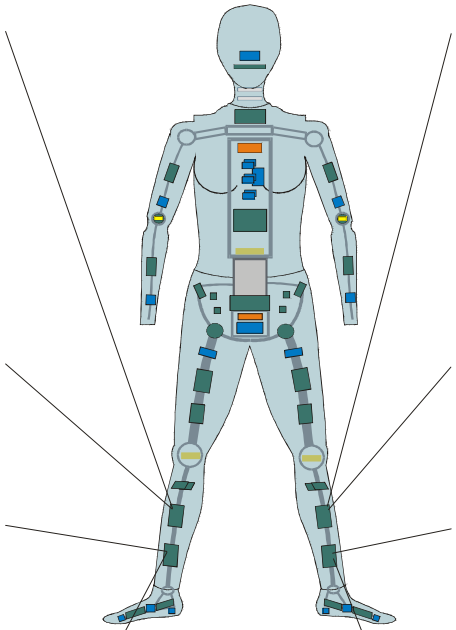


Max = 0.40 at 71.60 ms (SAE)
Max = 0.53 at 70.56 ms (IIHS)

Right Lower TI(IIHS)(SAE)

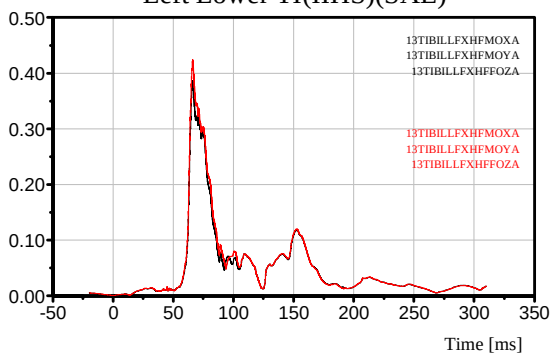


Max = 0.35 at 83.28 ms (SAE)
Max = 0.39 at 76.16 ms (IIHS)



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

Left Lower TI(IIHS)(SAE)



Max = 0.39 at 66.08 ms (SAE)
Max = 0.42 at 66.08 ms (IIHS)

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

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

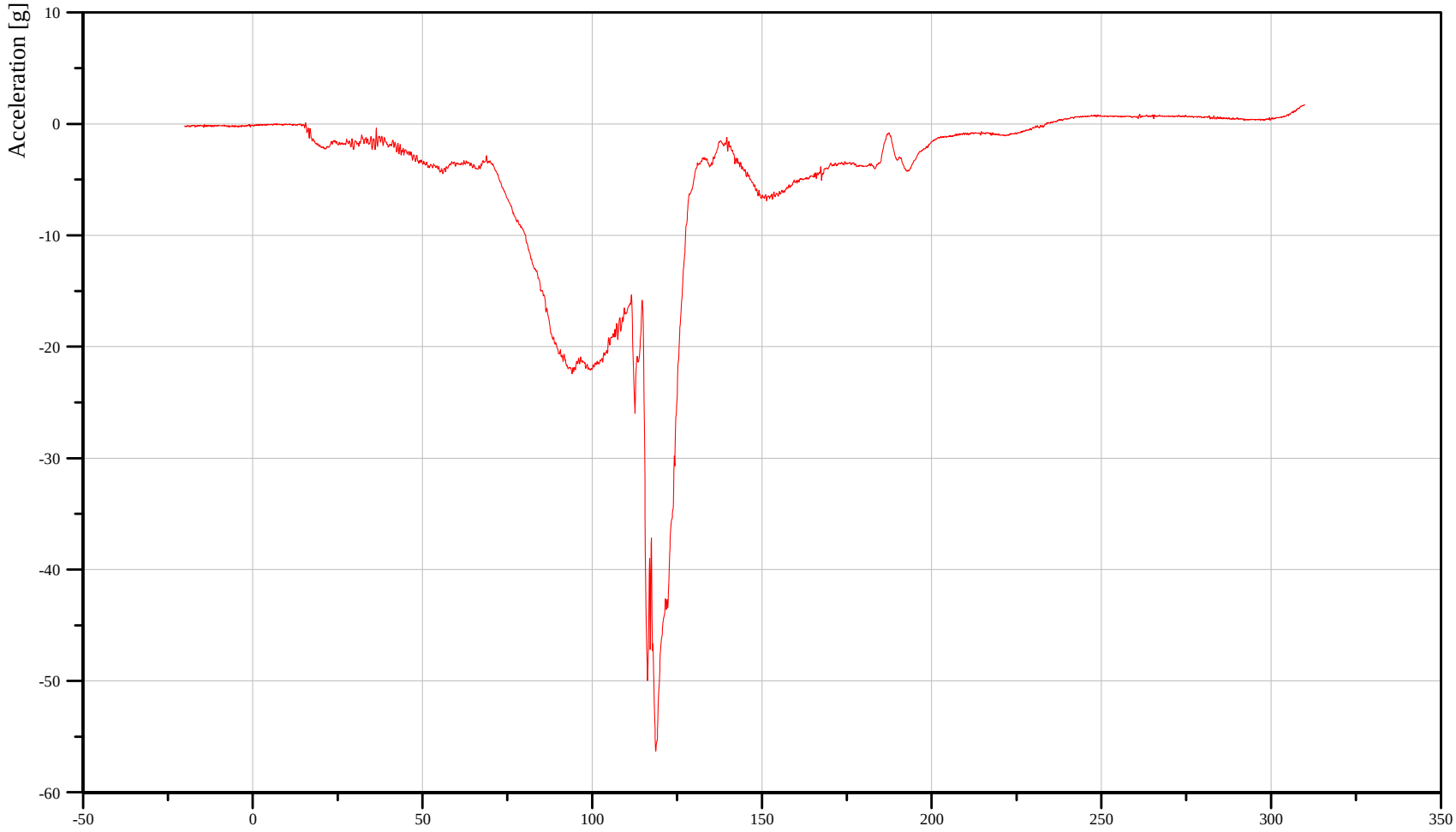
Target Vehicle Driver Head X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-56.29 g at 118.72 ms

Max. Value
1.73 g at 309.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

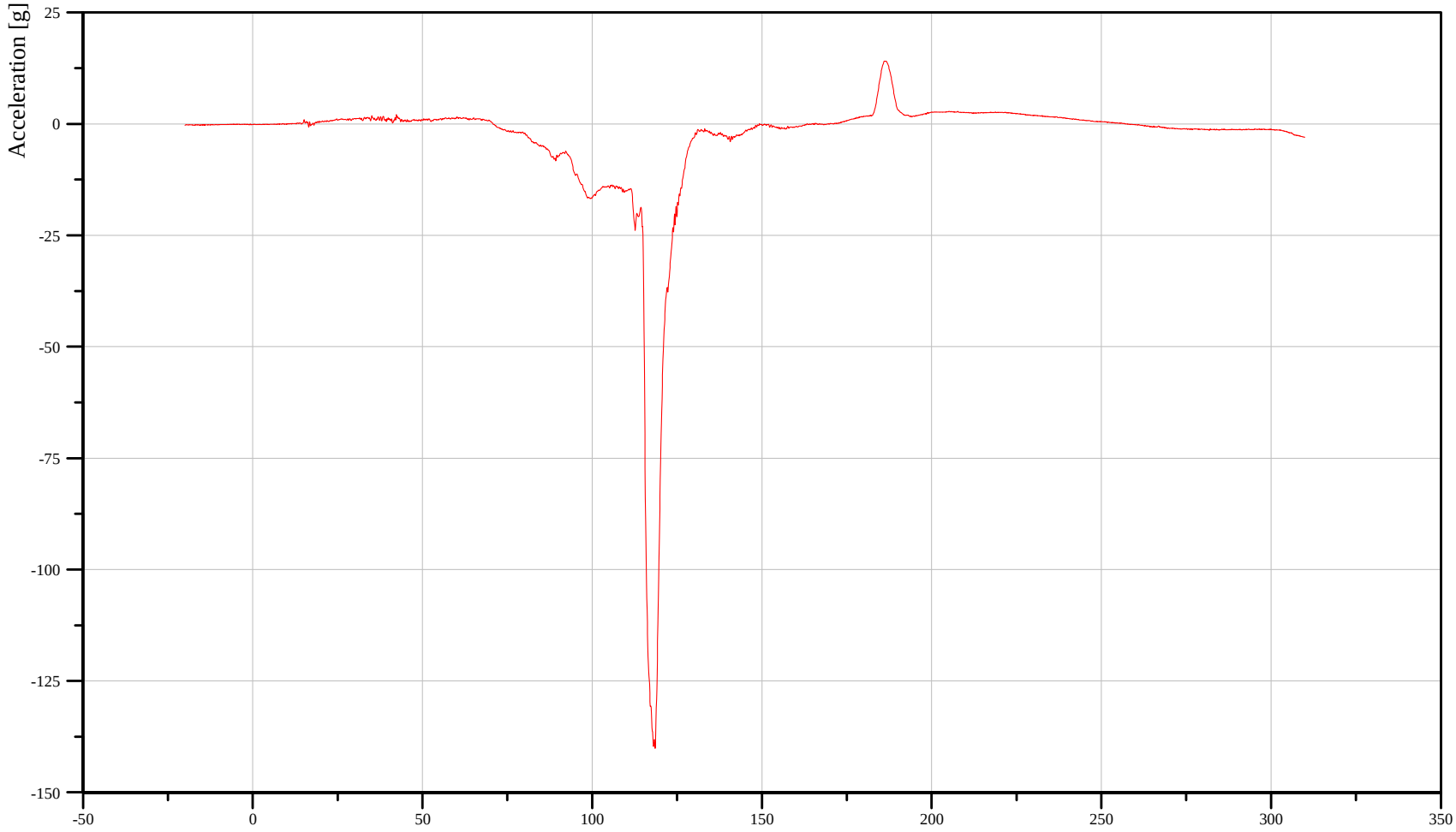
Target Vehicle Driver Head Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-140.14 g at 118.56 ms

Max. Value
14.09 g at 186.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

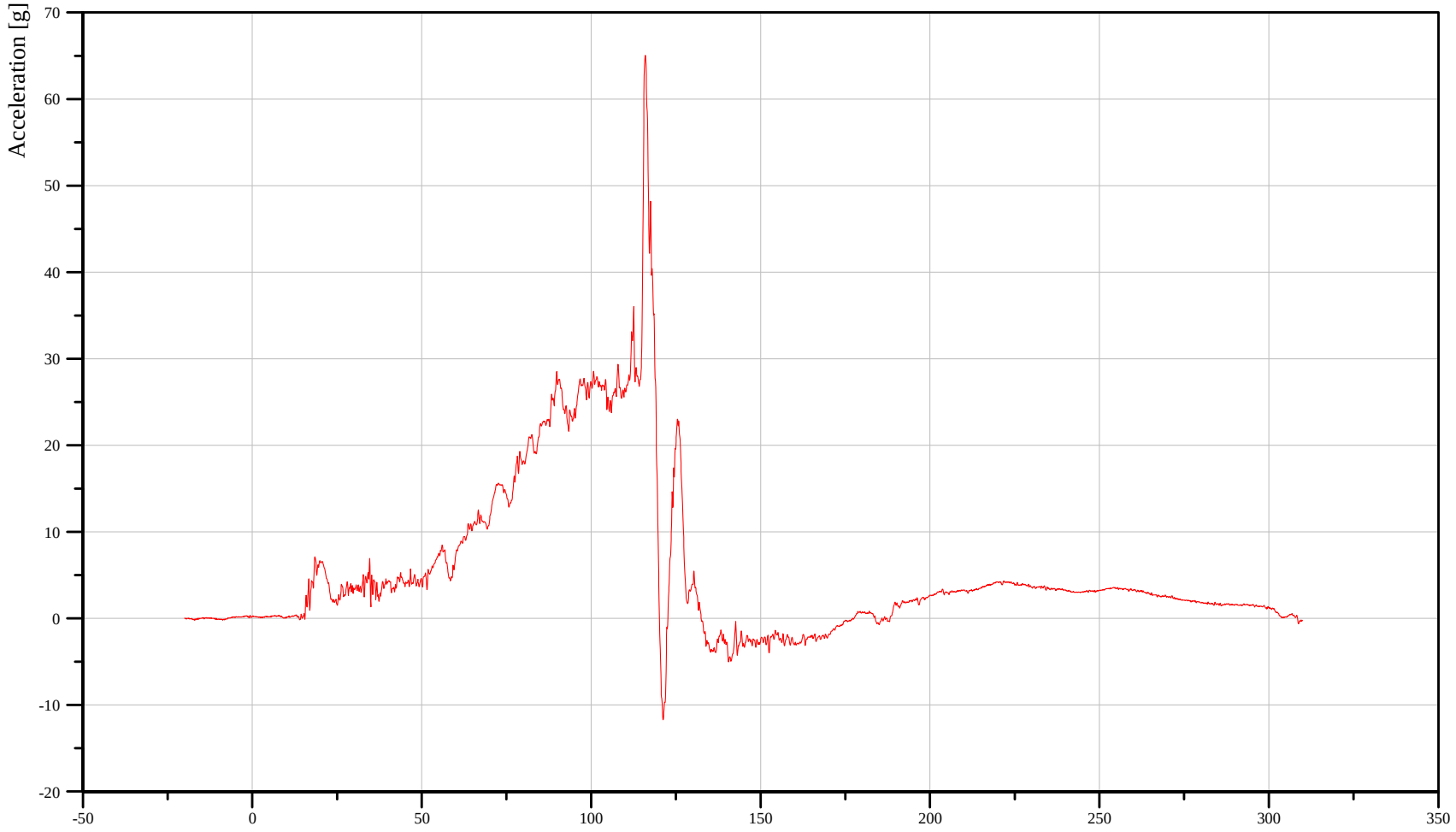
Target Vehicle Driver Head Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-11.71 g at 121.20 ms

Max. Value
65.05 g at 116.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

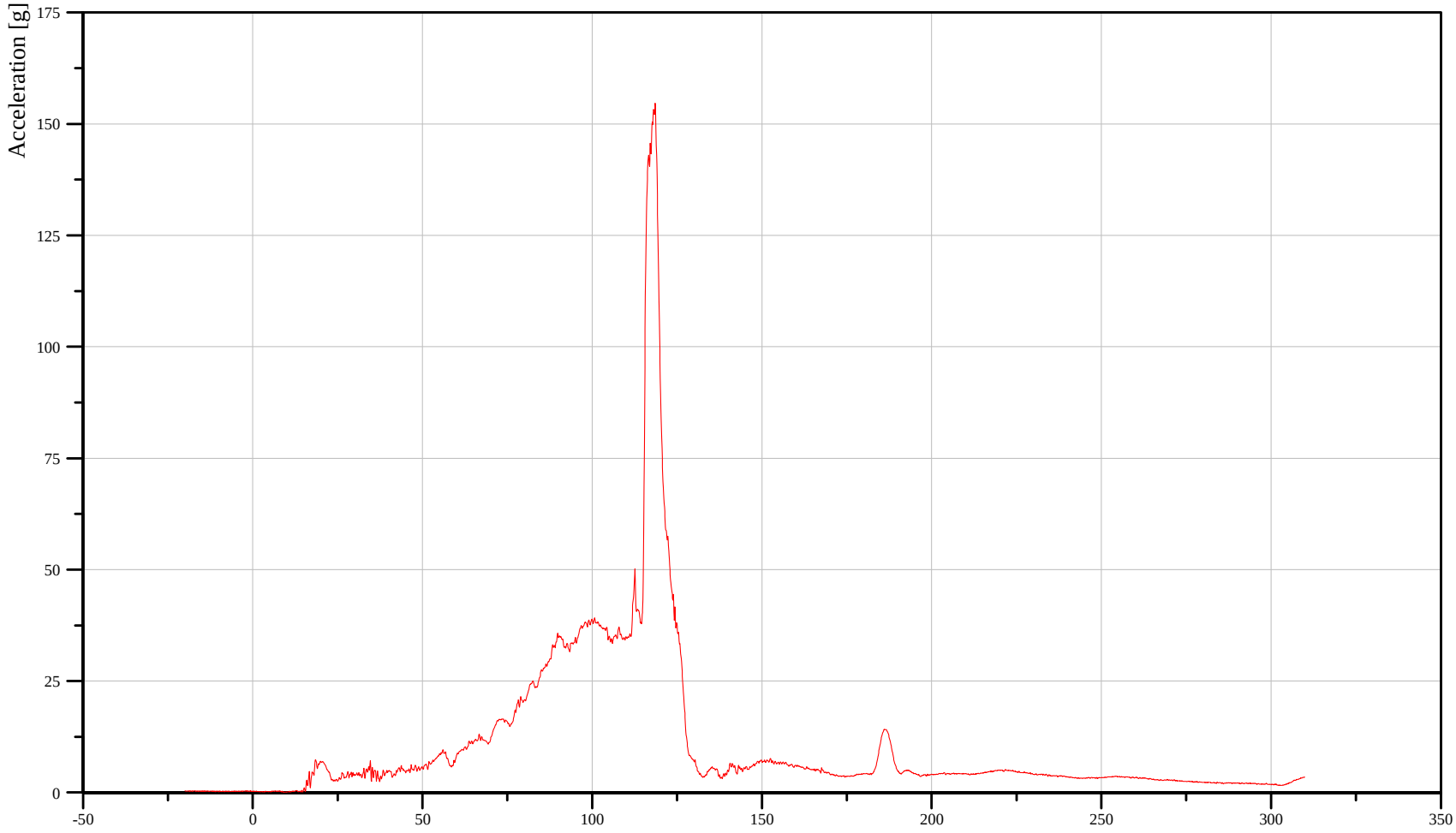
Target Vehicle Driver Head Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.06 g at 9.20 ms

Max. Value
154.67 g at 118.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

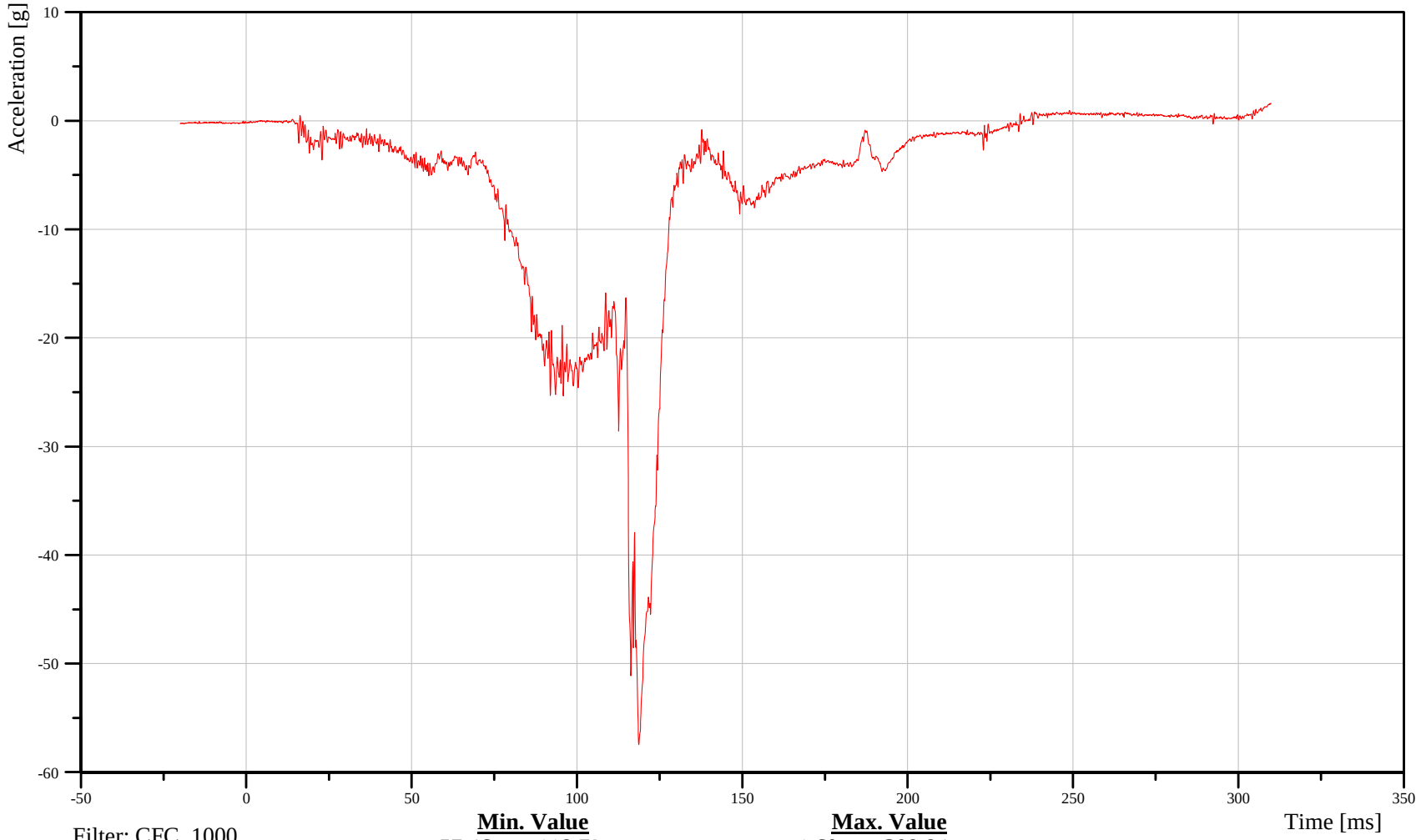
Target Vehicle Driver Head X-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCGRDH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-57.46 g at 118.72 ms

Max. Value
1.60 g at 309.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

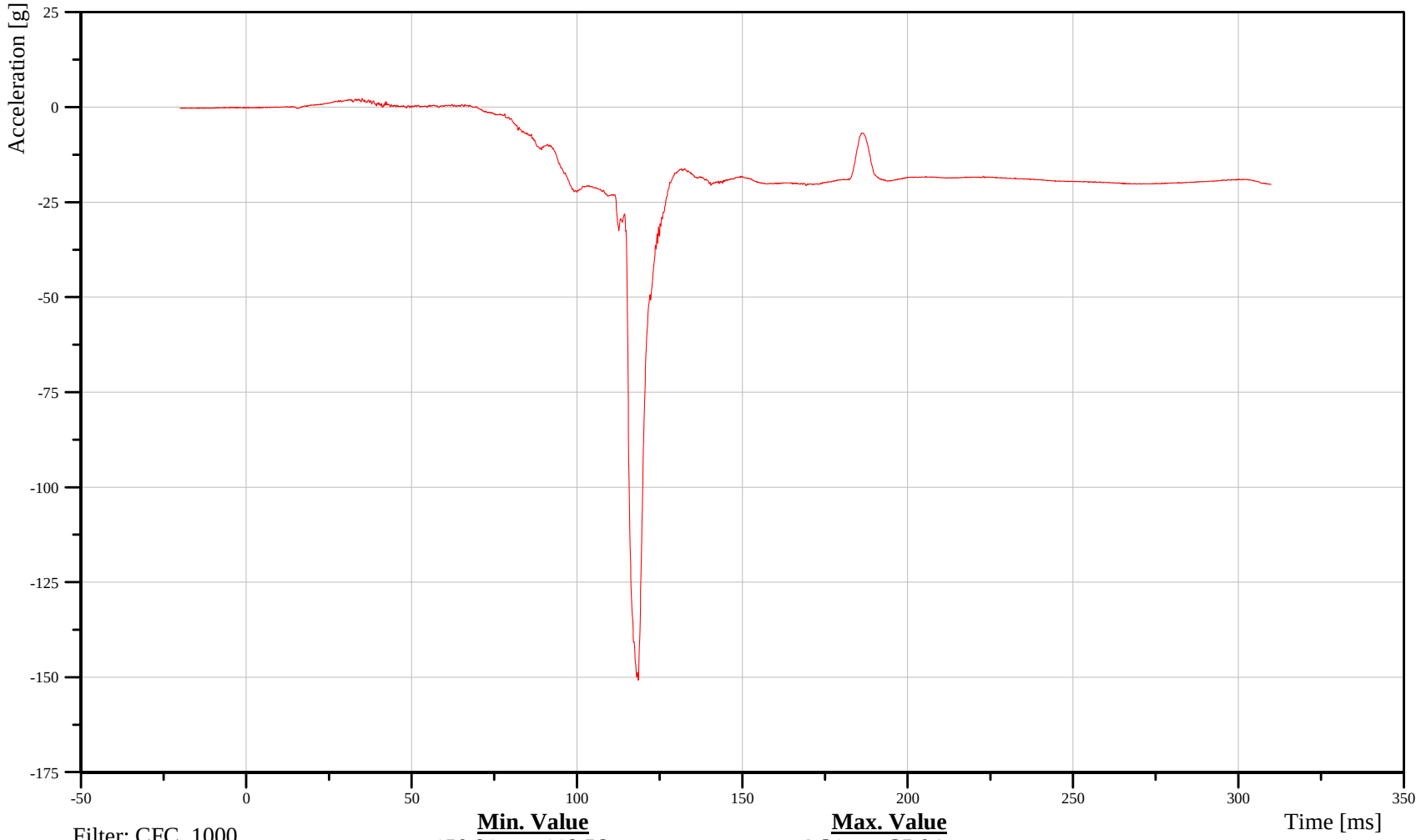
Target Vehicle Driver Head Y-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCGRDH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-150.81 g at 118.56 ms

Max. Value
2.31 g at 35.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

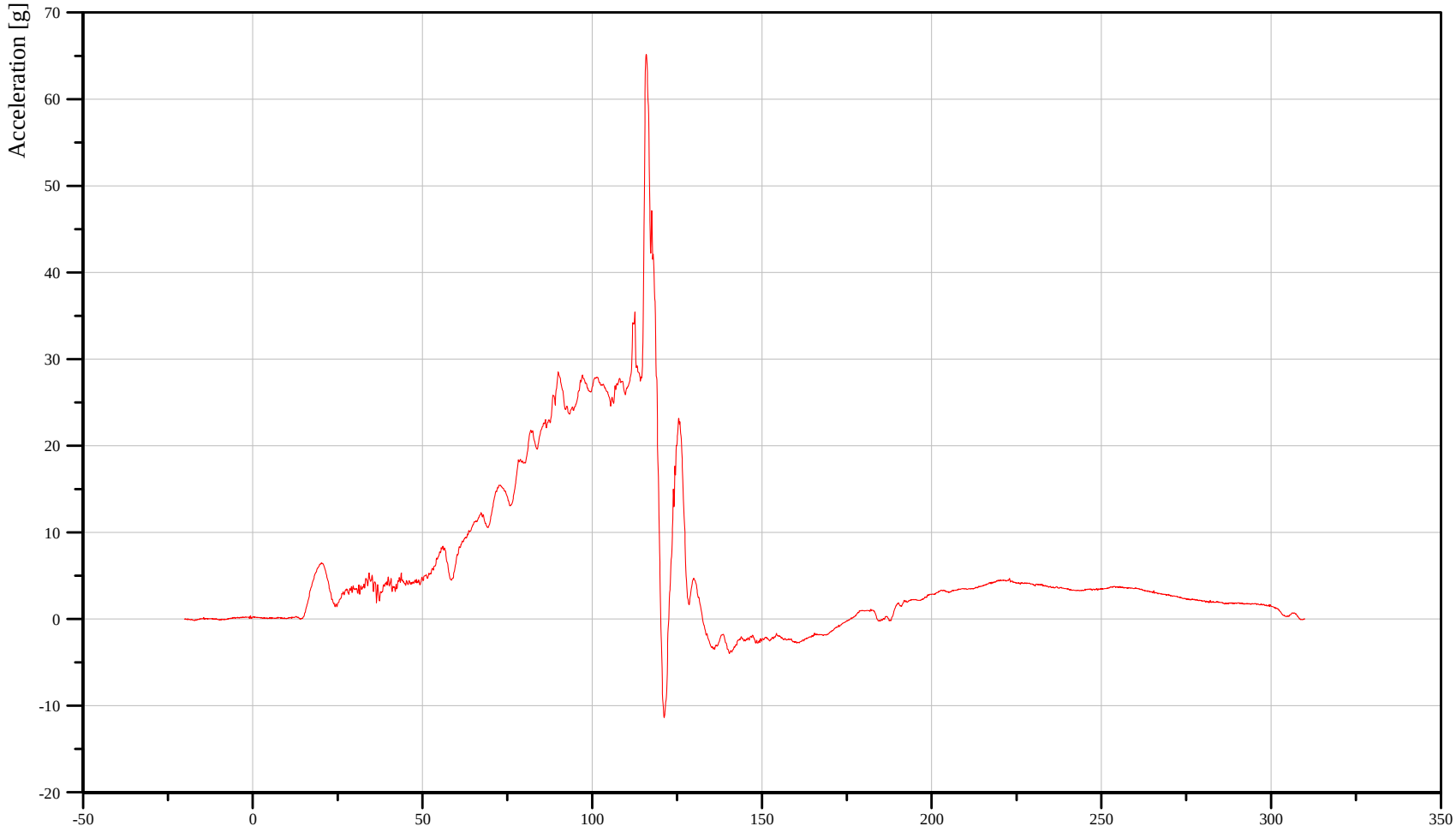
Target Vehicle Driver Head Z-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCGRDH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-11.35 g at 121.20 ms

Max. Value
65.18 g at 115.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

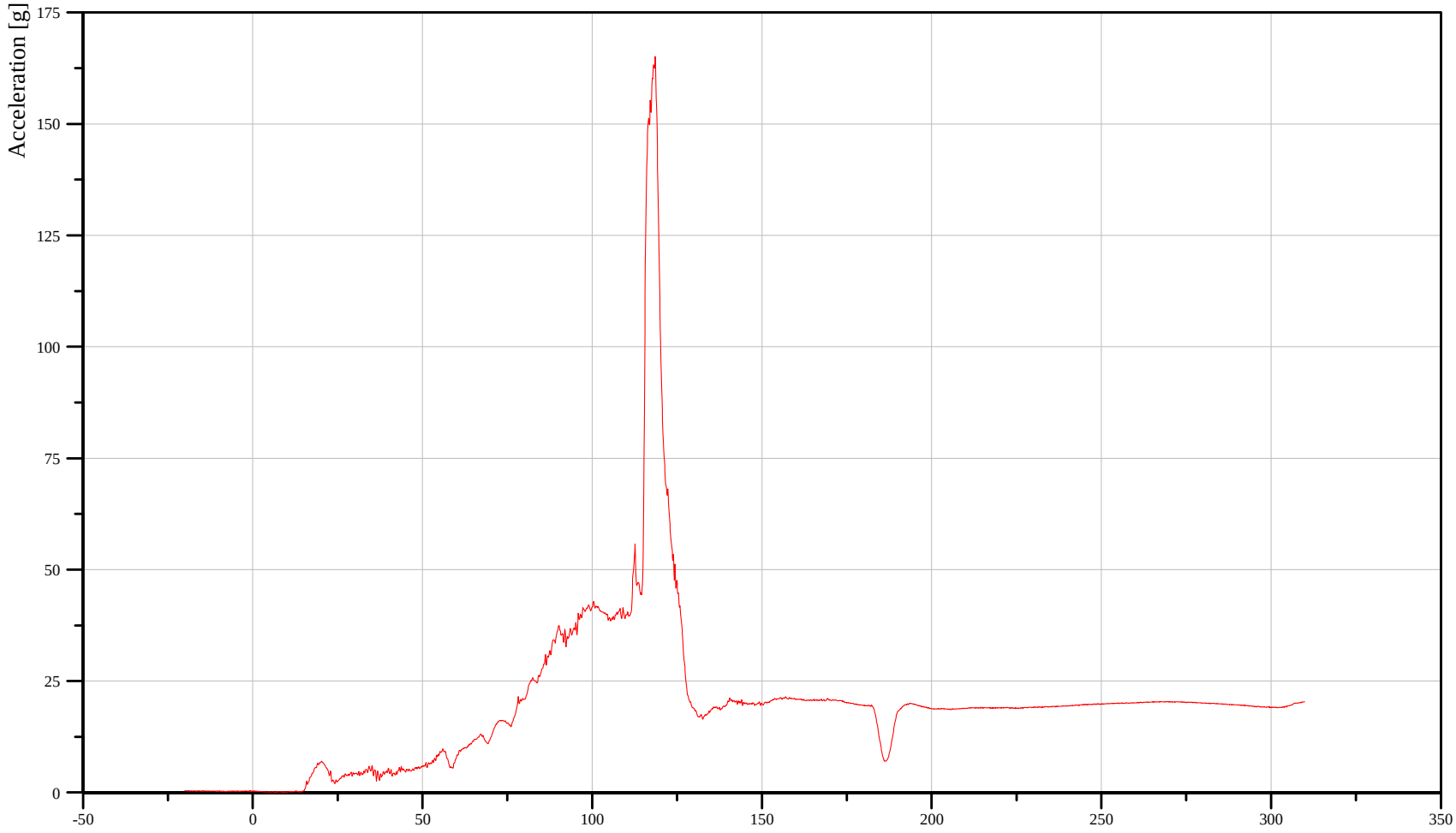
Target Vehicle Driver Head Resultant Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21HEADCGRDH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.08 g at 5.44 ms

Max. Value
165.11 g at 118.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

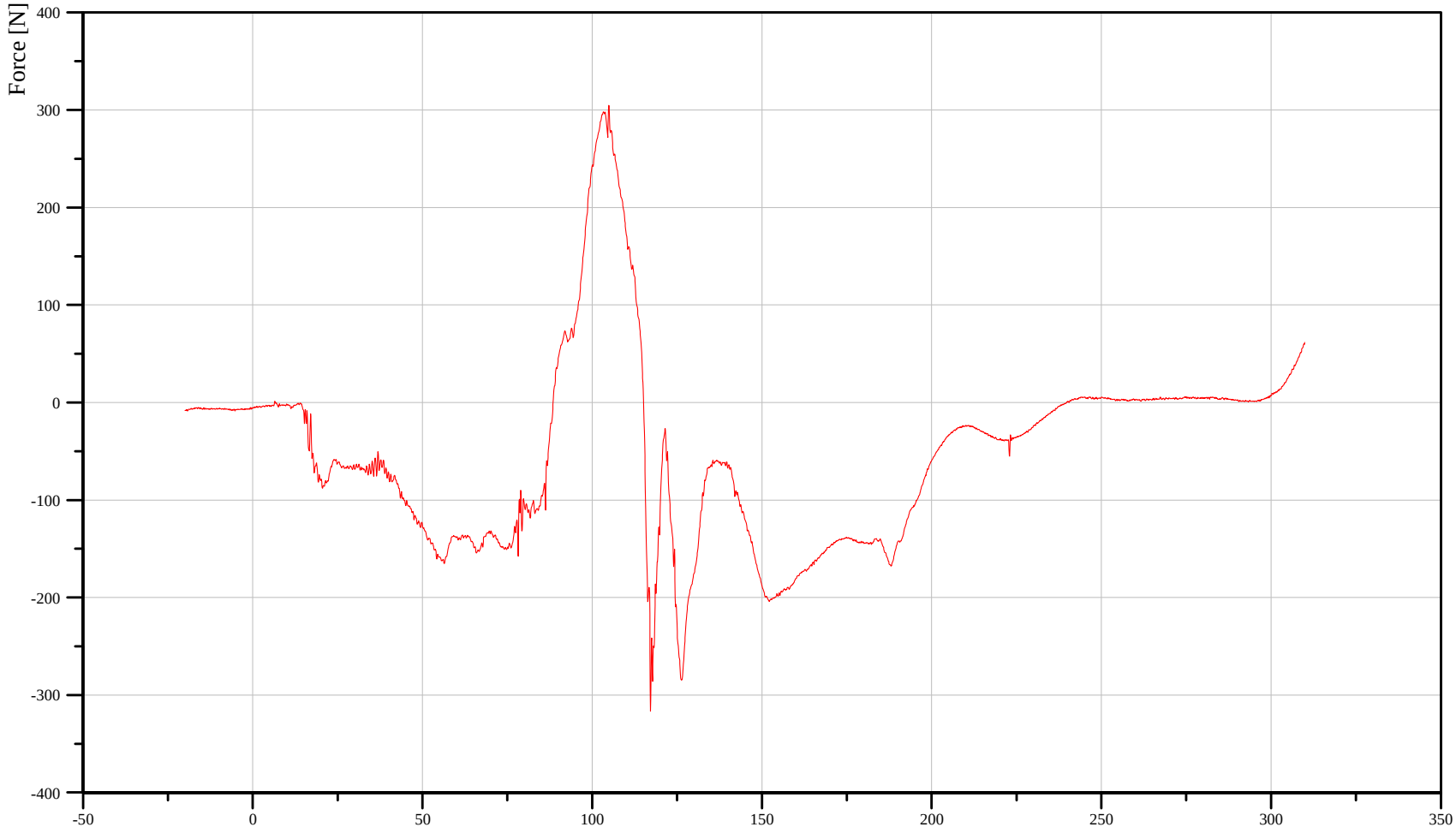
Target Vehicle Driver Neck X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21NECKUP00H3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-316.72 N at 117.20 ms

Max. Value
304.83 N at 104.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

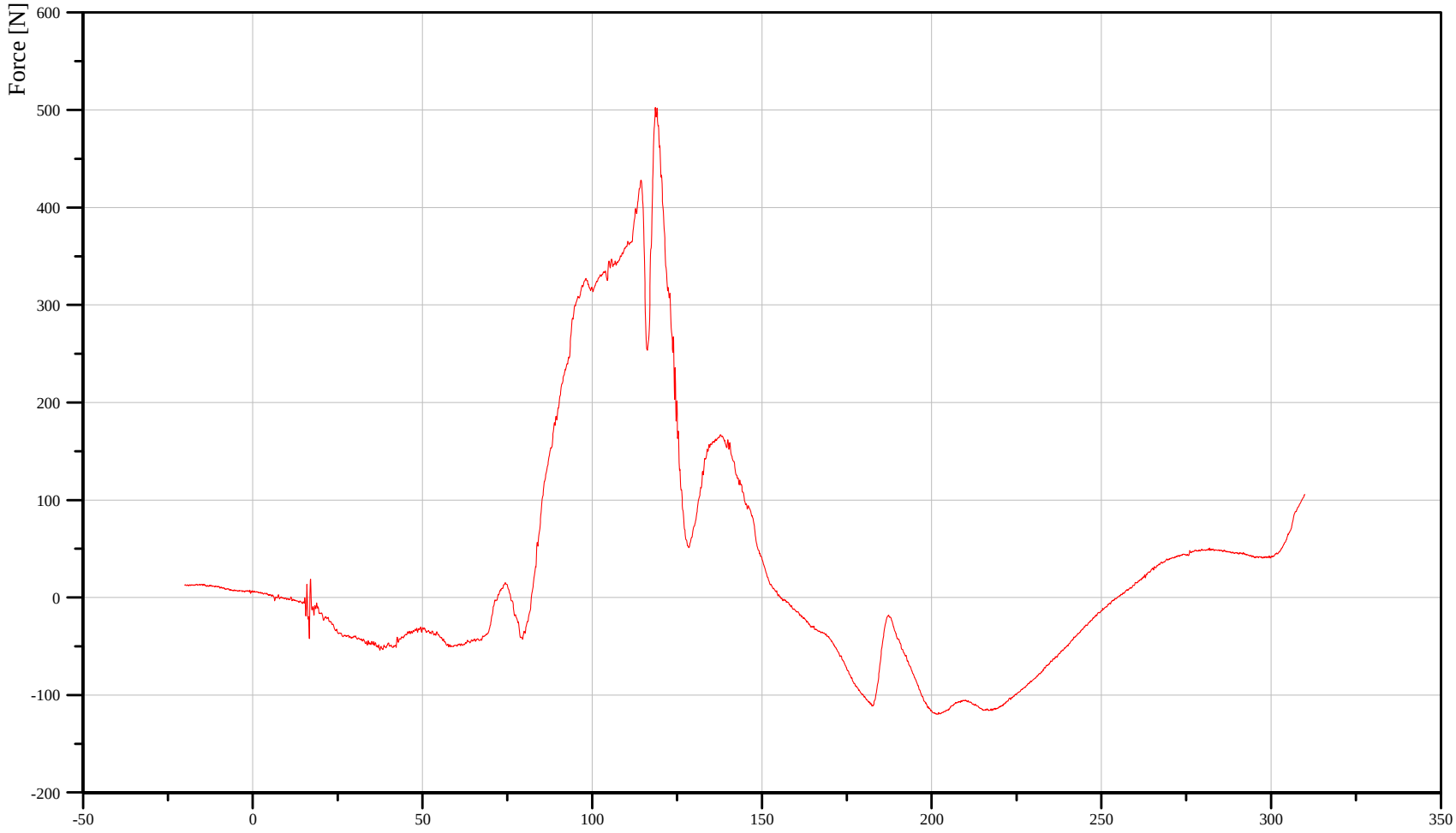
Target Vehicle Driver Neck Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21NECKUP00H3FOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value	**Max. Value**
-119.61 N at 201.44 ms	502.57 N at 118.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

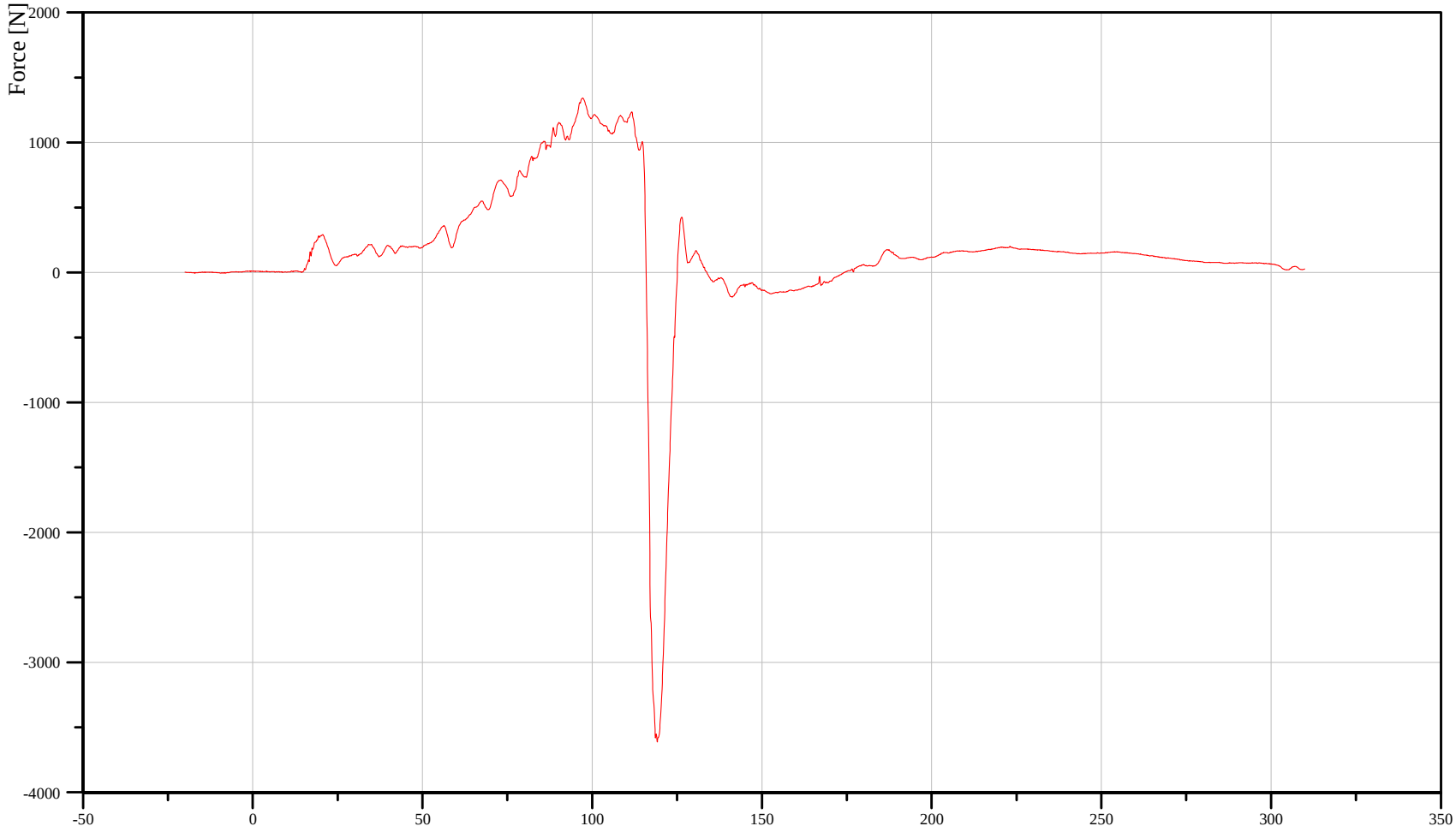
Target Vehicle Driver Neck Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21NECKUP00H3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-3,612.46 N at 119.20 ms

Max. Value
1,341.87 N at 97.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

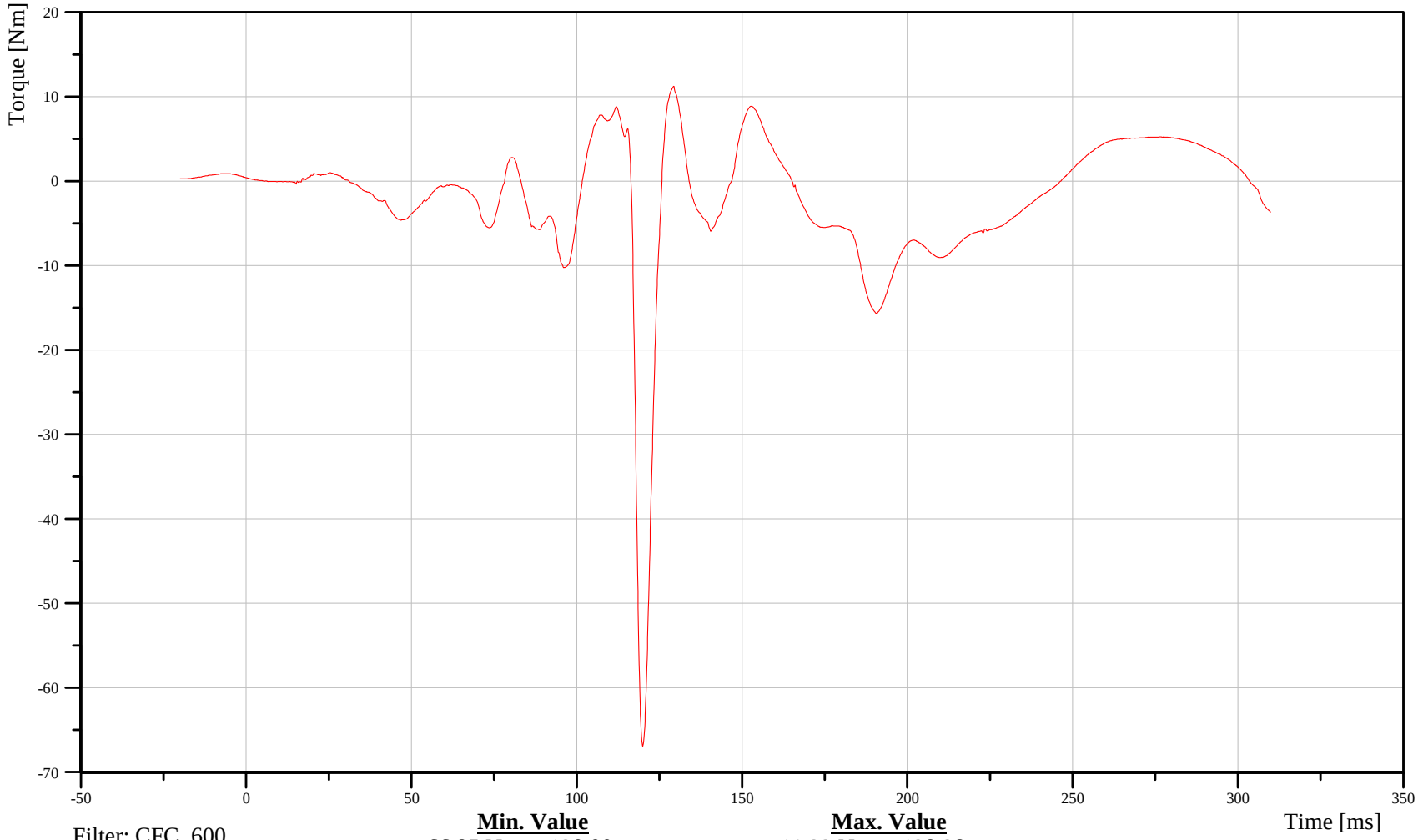
Target Vehicle Driver Neck Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21NECKUP00H3MOXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-66.95 Nm at 120.00 ms

Max. Value
11.22 Nm at 129.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

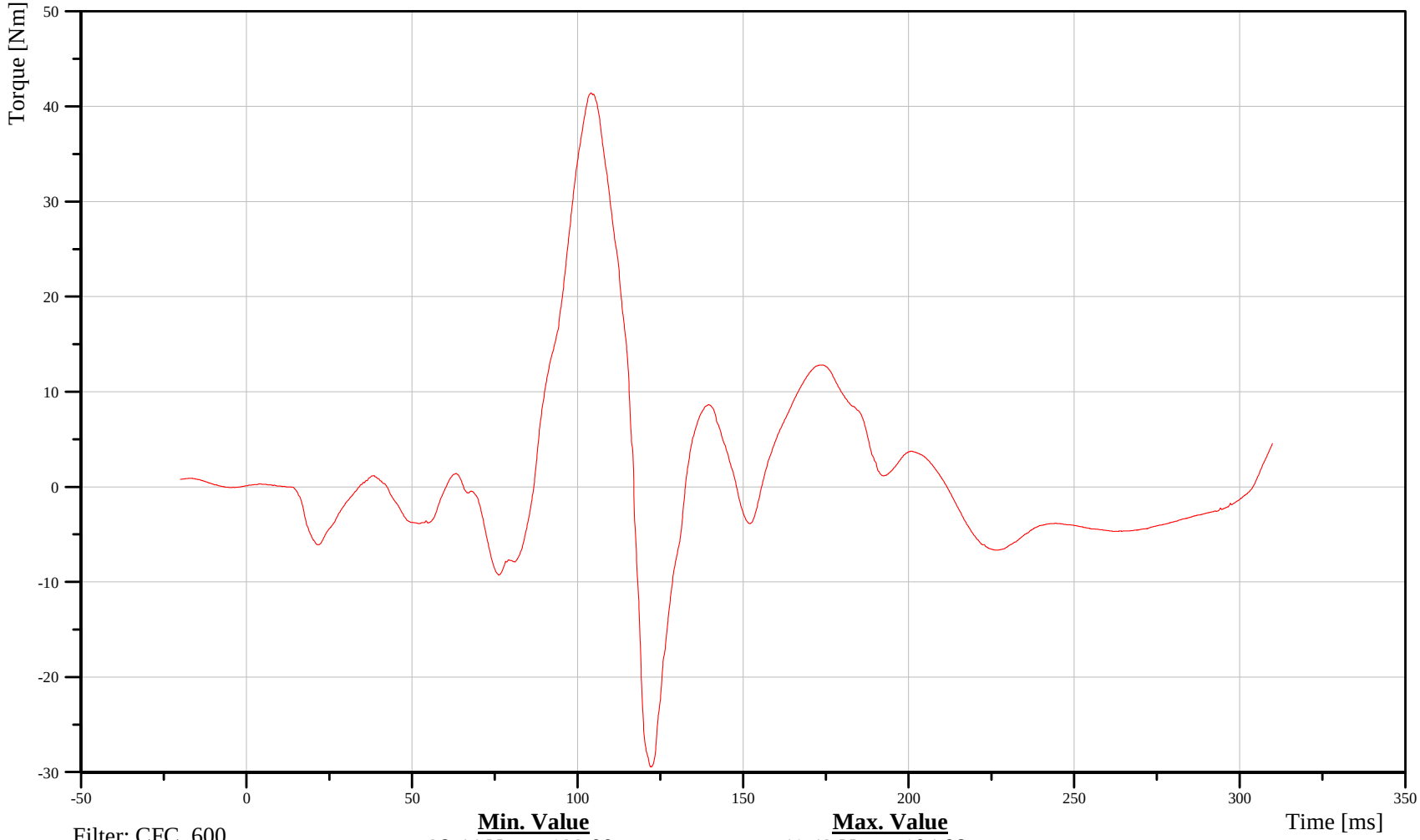
Target Vehicle Driver Neck Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21NECKUP00H3MOYB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-29.44 Nm at 122.00 ms

Max. Value
41.42 Nm at 104.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

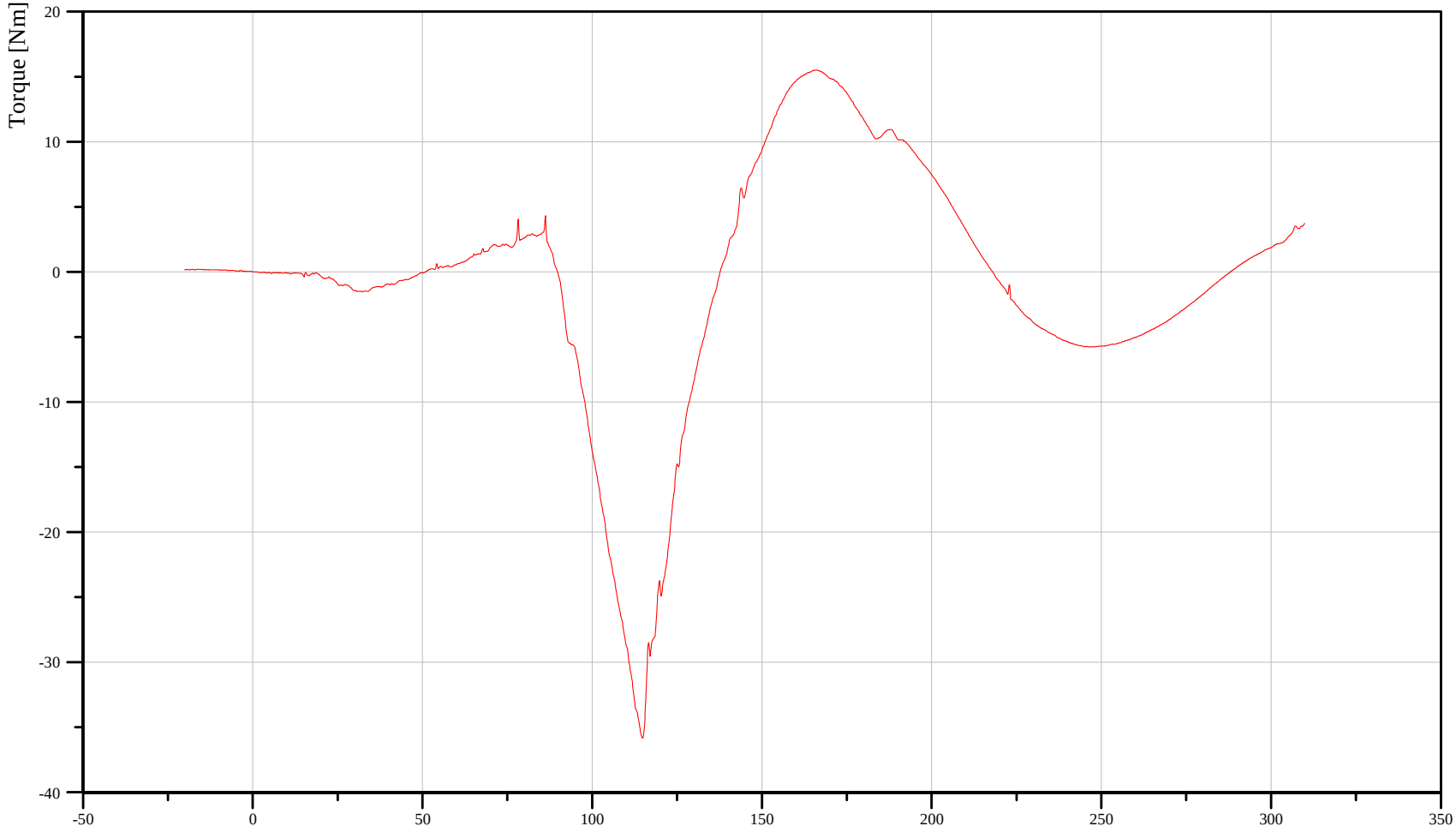
Target Vehicle Driver Neck Moment About Z Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21NECKUP00H3MOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-35.83 Nm at 114.88 ms

Max. Value
15.51 Nm at 165.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

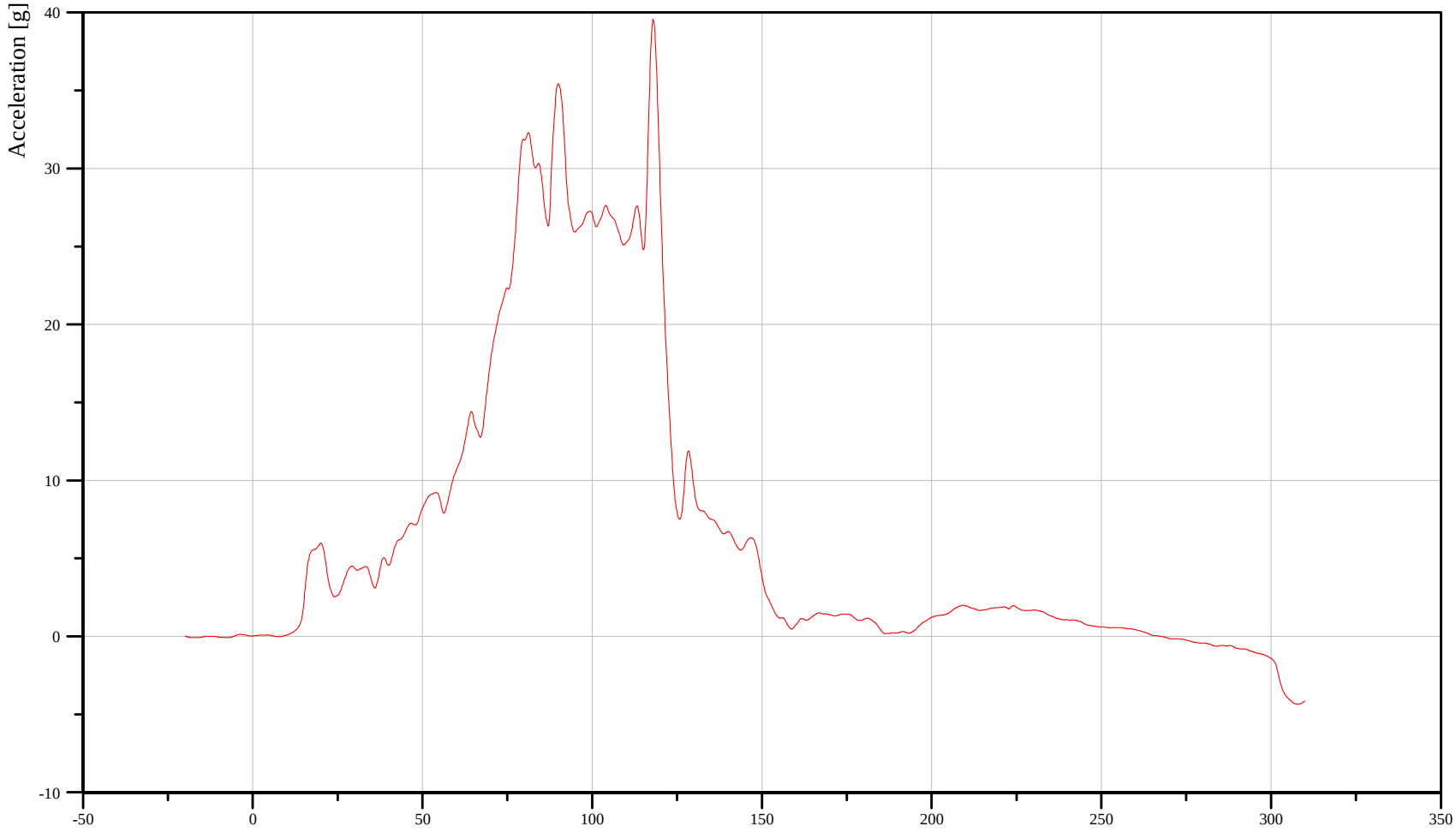
Target Vehicle Driver Chest X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-4.34 g at 307.84 ms

Max. Value
39.56 g at 118.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

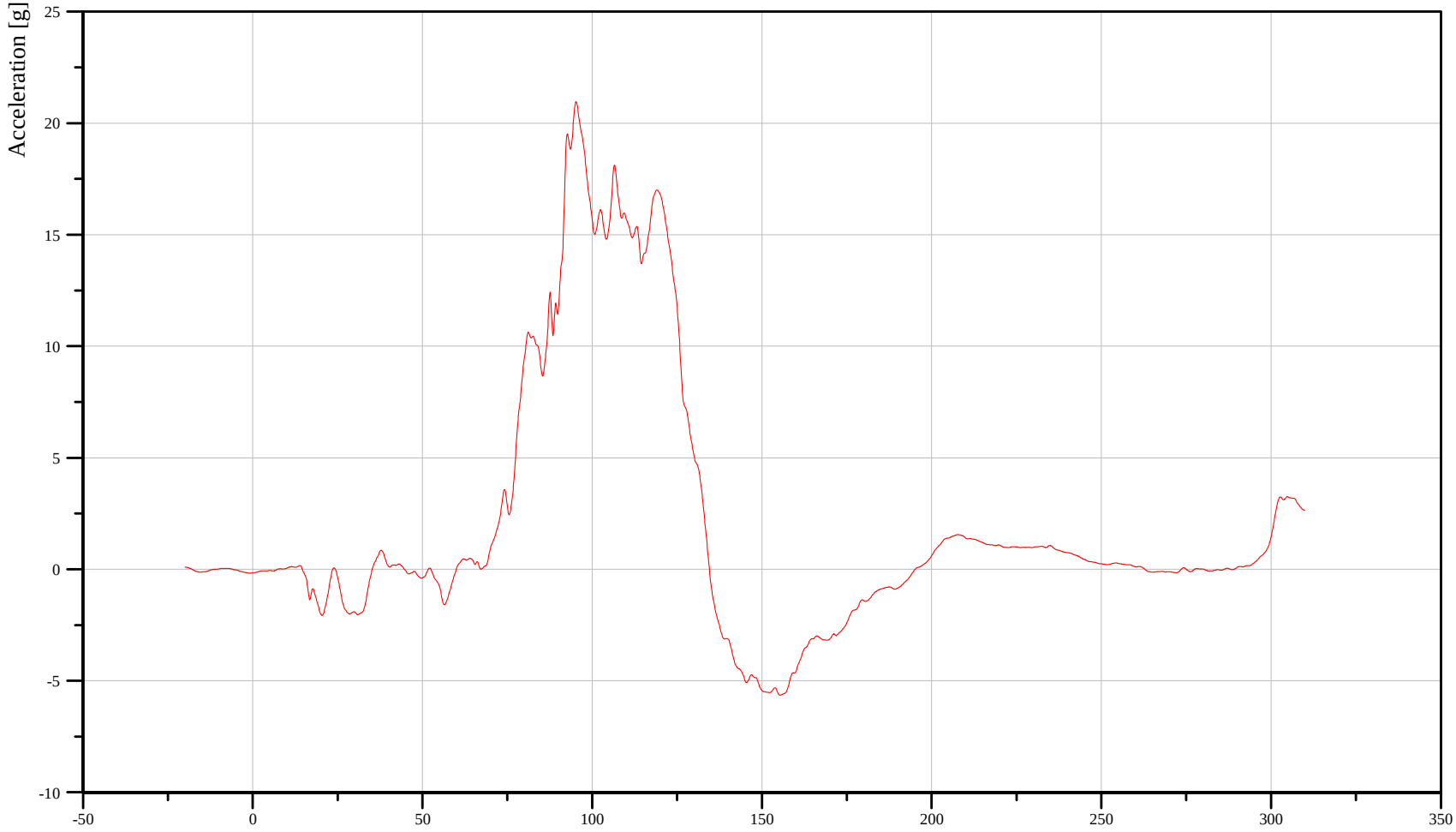
Target Vehicle Driver Chest Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-5.64 g at 155.28 ms

Max. Value
20.96 g at 95.20 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

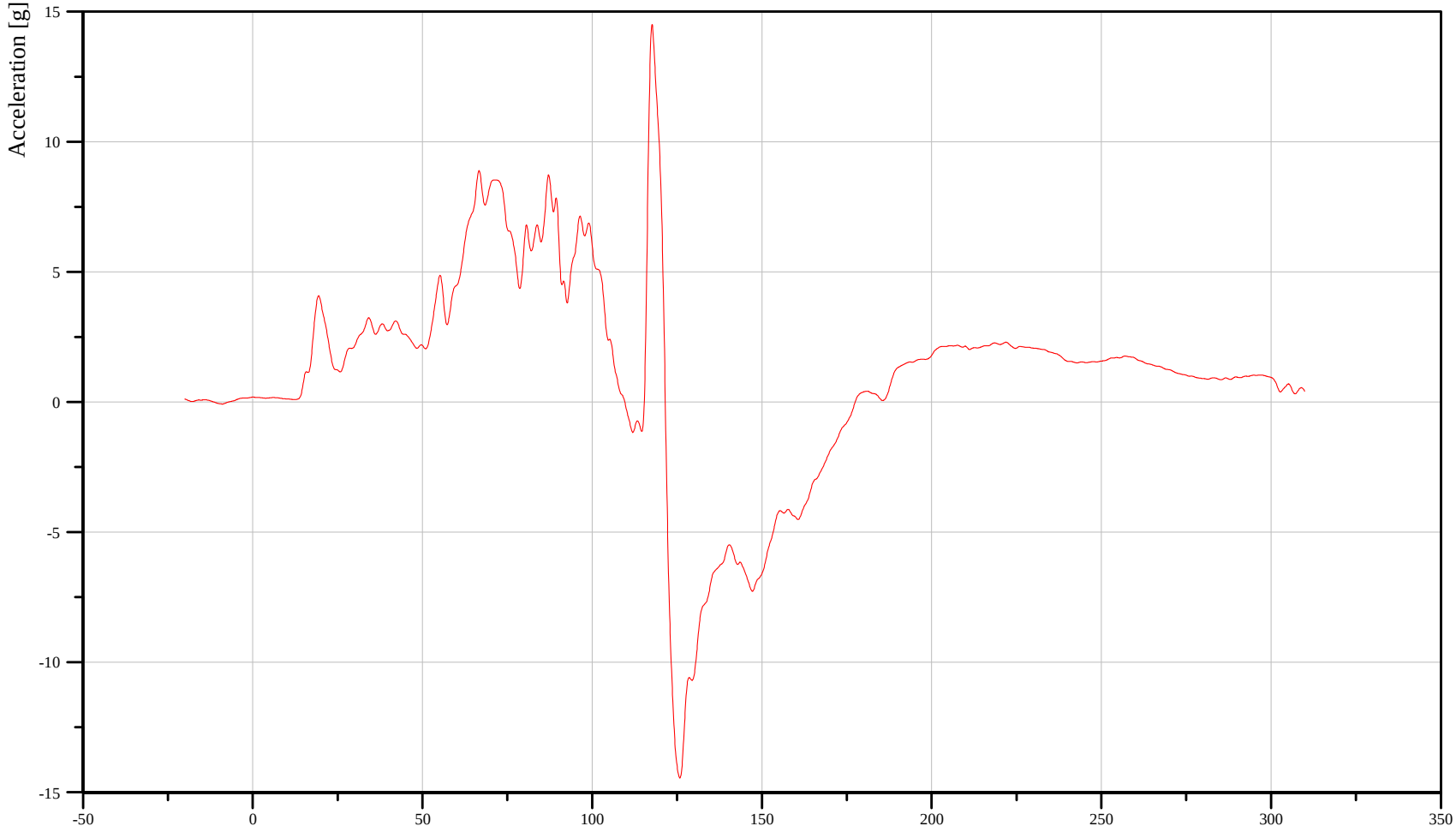
Target Vehicle Driver Chest Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-14.45 g at 125.84 ms

Max. Value
14.50 g at 117.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

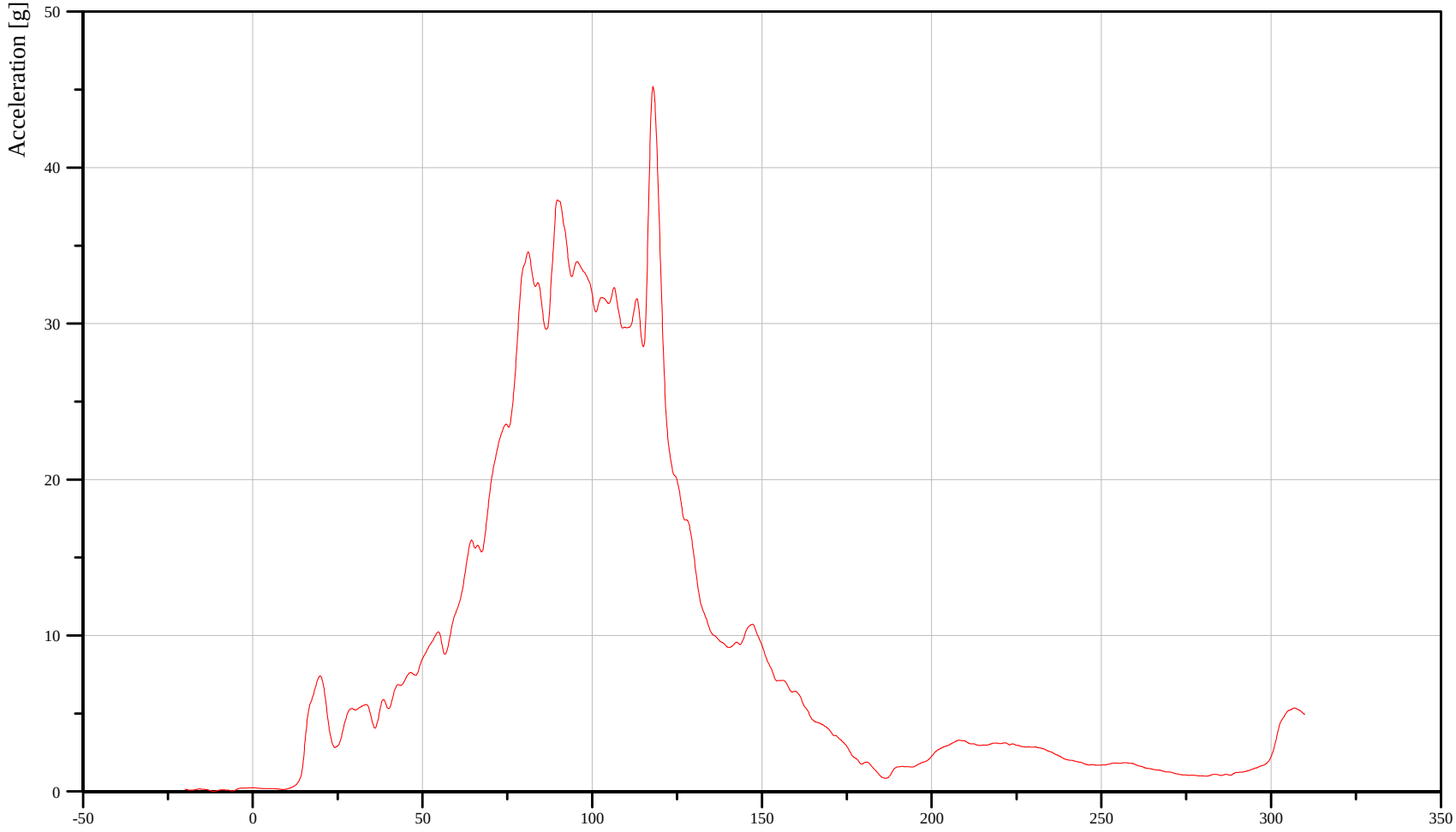
Target Vehicle Driver Chest Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.01 g at -11.44 ms

Max. Value
45.20 g at 117.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

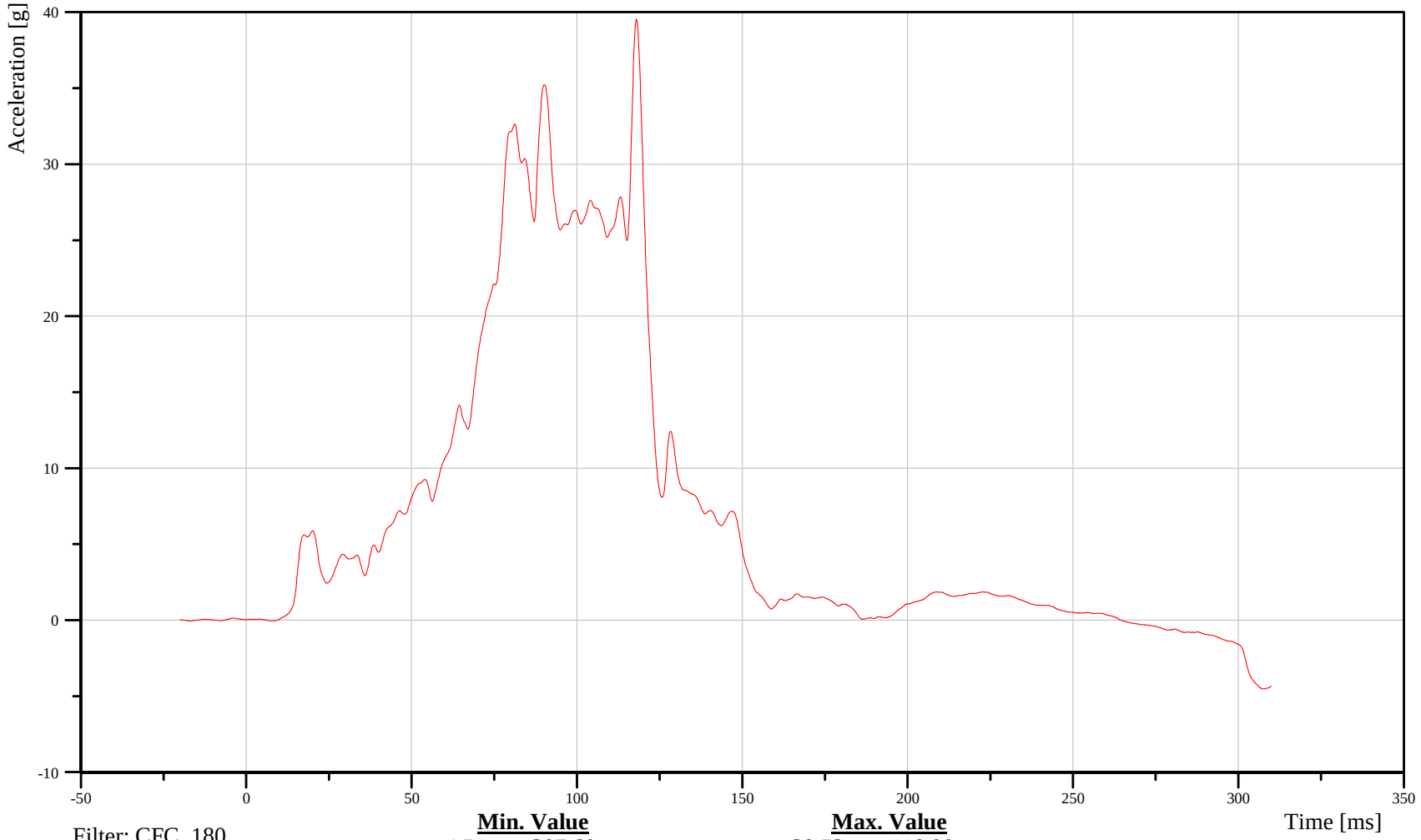
Target Vehicle Driver Chest X-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-4.51 g at 307.60 ms

Max. Value
39.53 g at 118.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

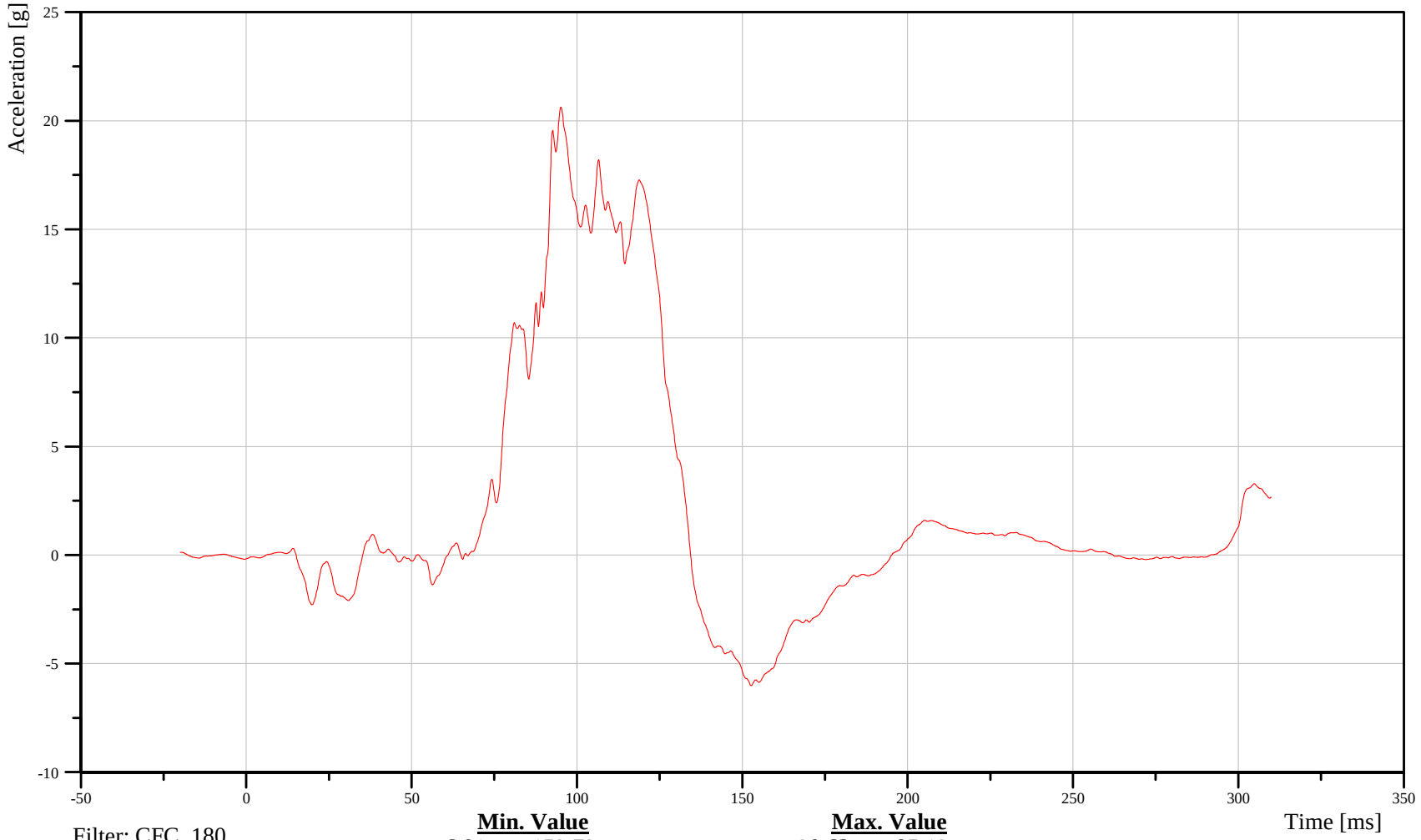
Target Vehicle Driver Chest Y-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-6.01 g at 152.72 ms

Max. Value
20.63 g at 95.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

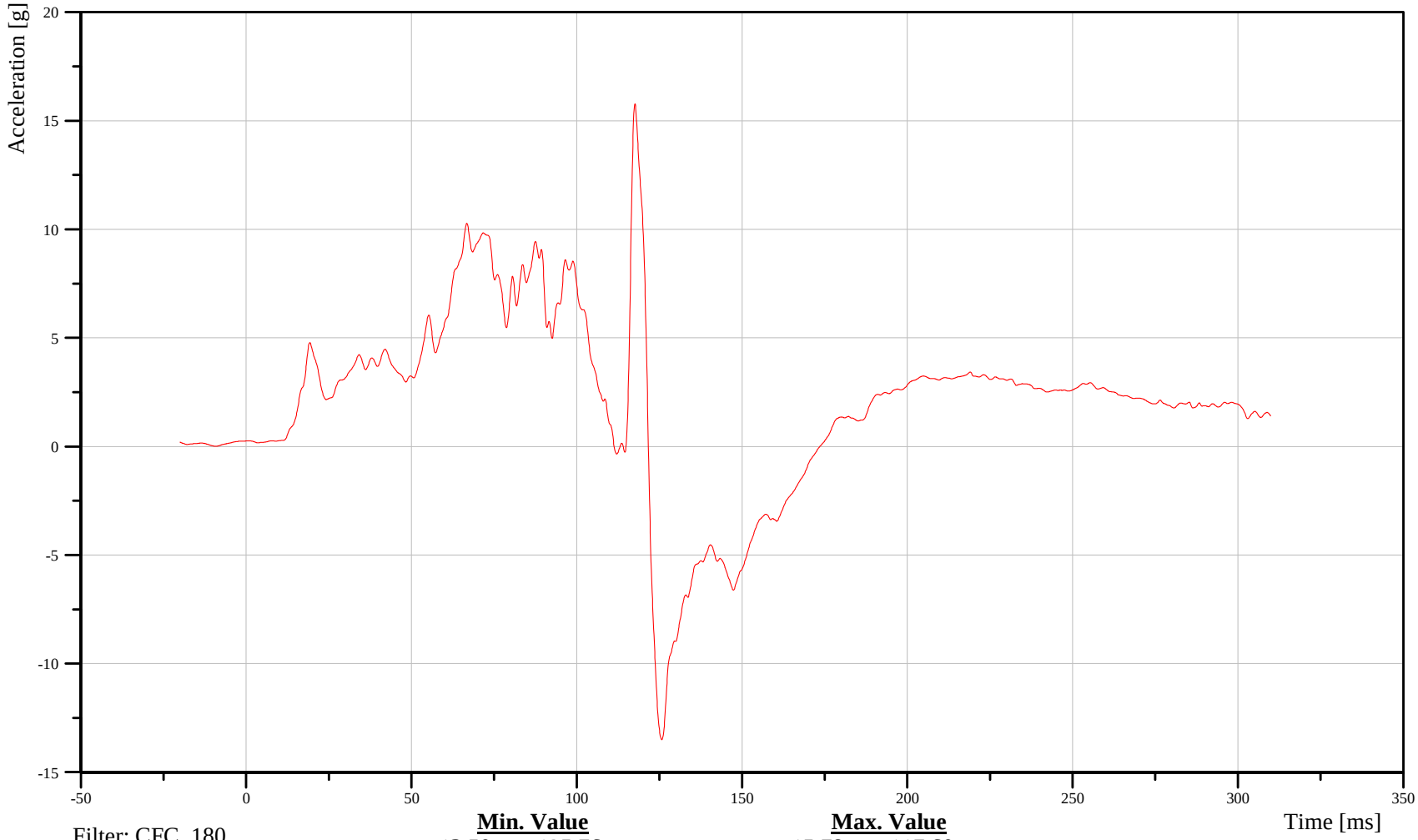
Target Vehicle Driver Chest Z-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-13.50 g at 125.76 ms

Max. Value
15.78 g at 117.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

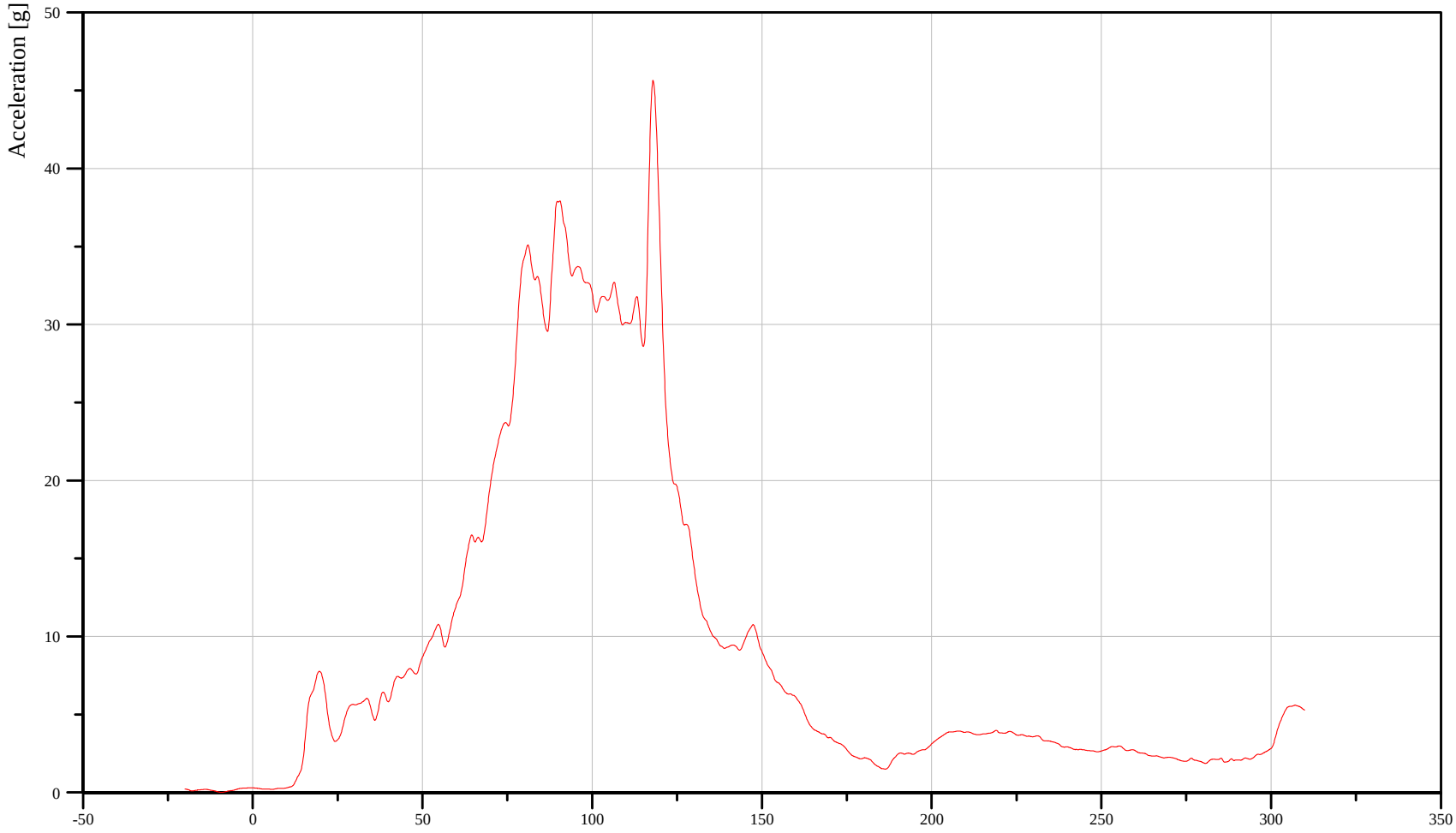
Target Vehicle Driver Chest Resultant Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.01 g at -9.20 ms

Max. Value
45.65 g at 117.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

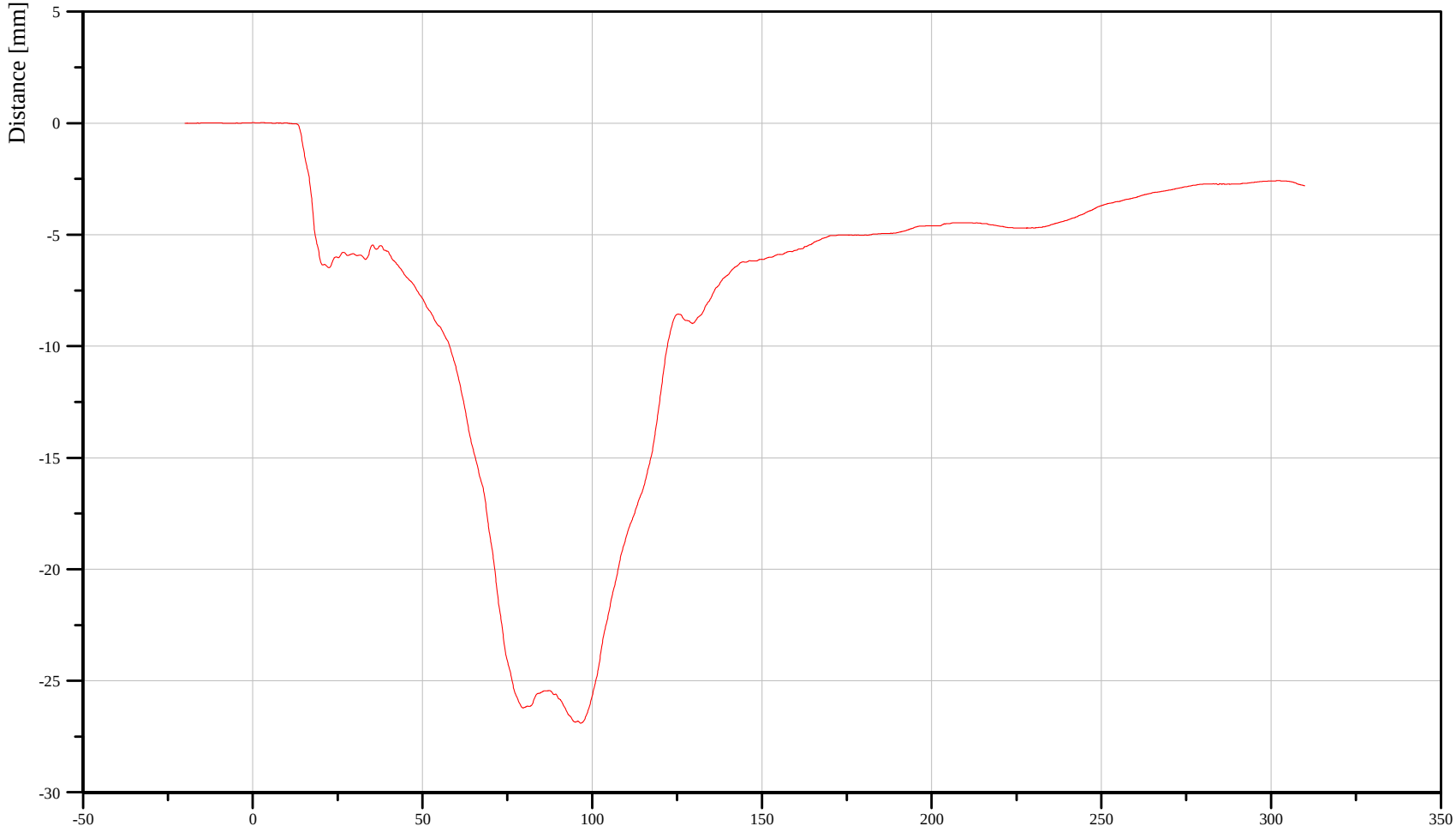
Target Vehicle Driver Chest X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21CHST0000H3DSXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-26.90 mm at 96.64 ms

Max. Value
0.02 mm at 0.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

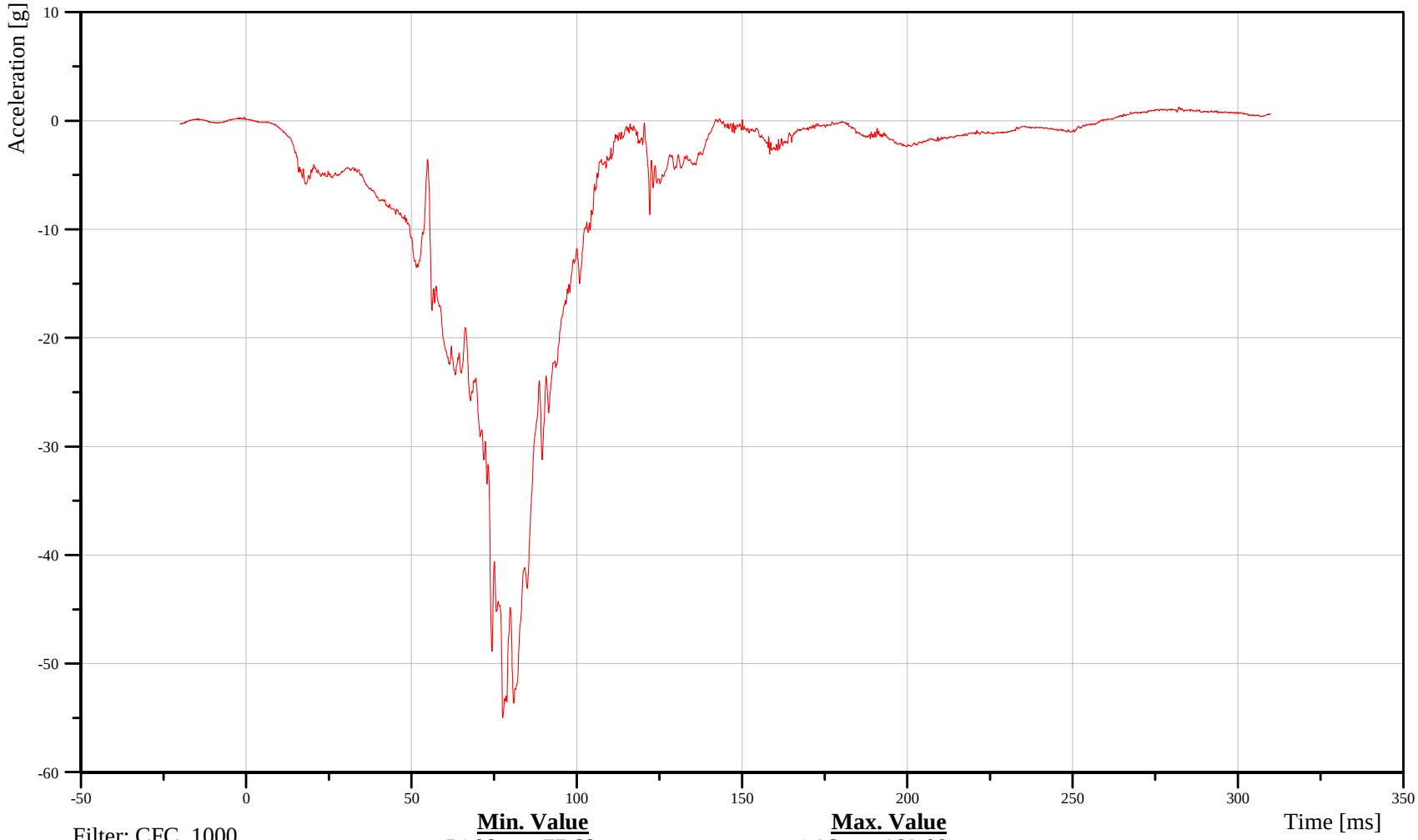
Target Vehicle Driver Pelvis X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21PELVCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-54.98 g at 77.68 ms

Max. Value
1.26 g at 282.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

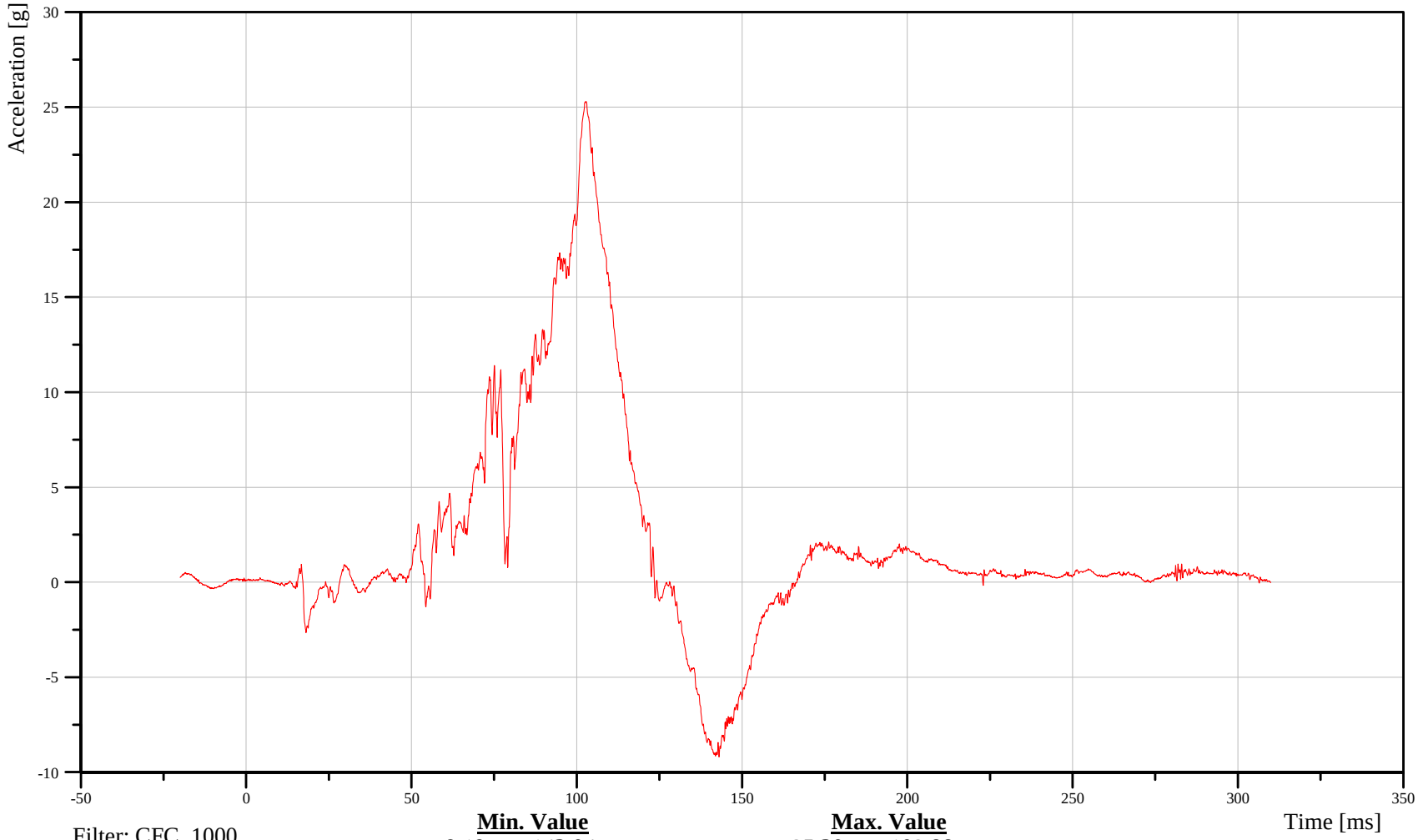
Target Vehicle Driver Pelvis Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21PELVCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-9.19 g at 143.04 ms

Max. Value
25.30 g at 102.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

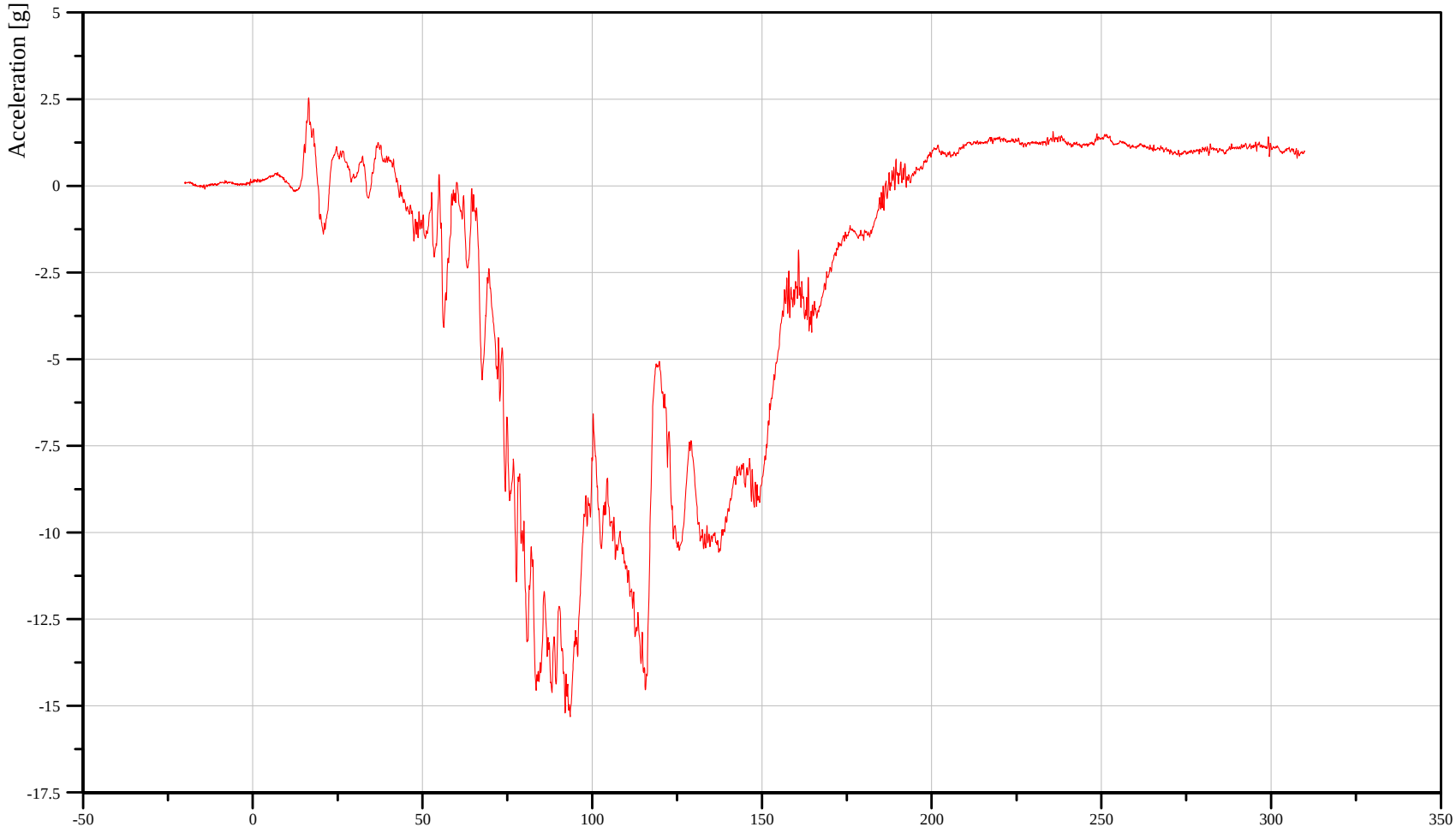
Target Vehicle Driver Pelvis Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21PELVCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-15.31 g at 93.52 ms

Max. Value
2.54 g at 16.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

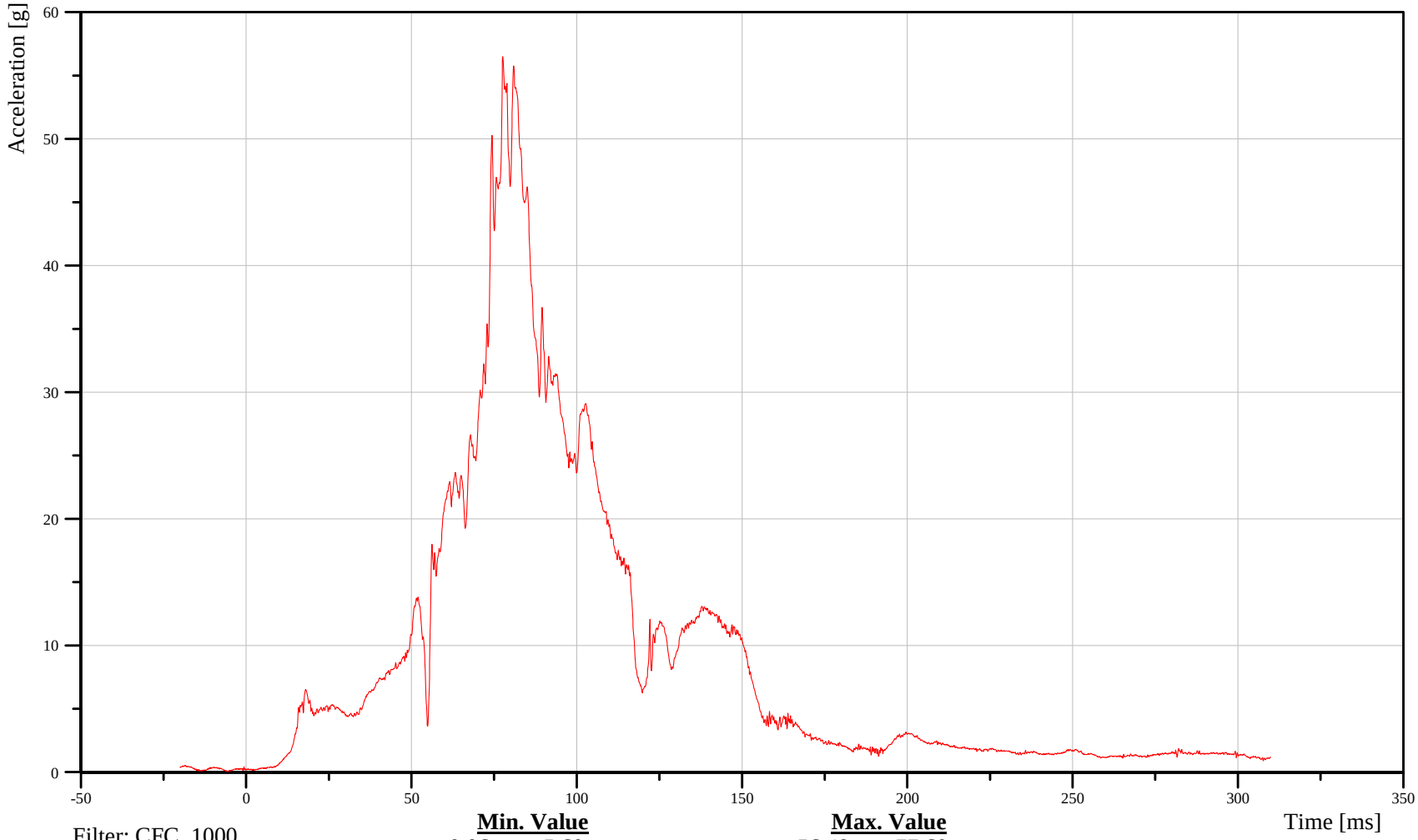
Target Vehicle Driver Pelvis Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21PELVCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.06 g at -5.60 ms

Max. Value
56.49 g at 77.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

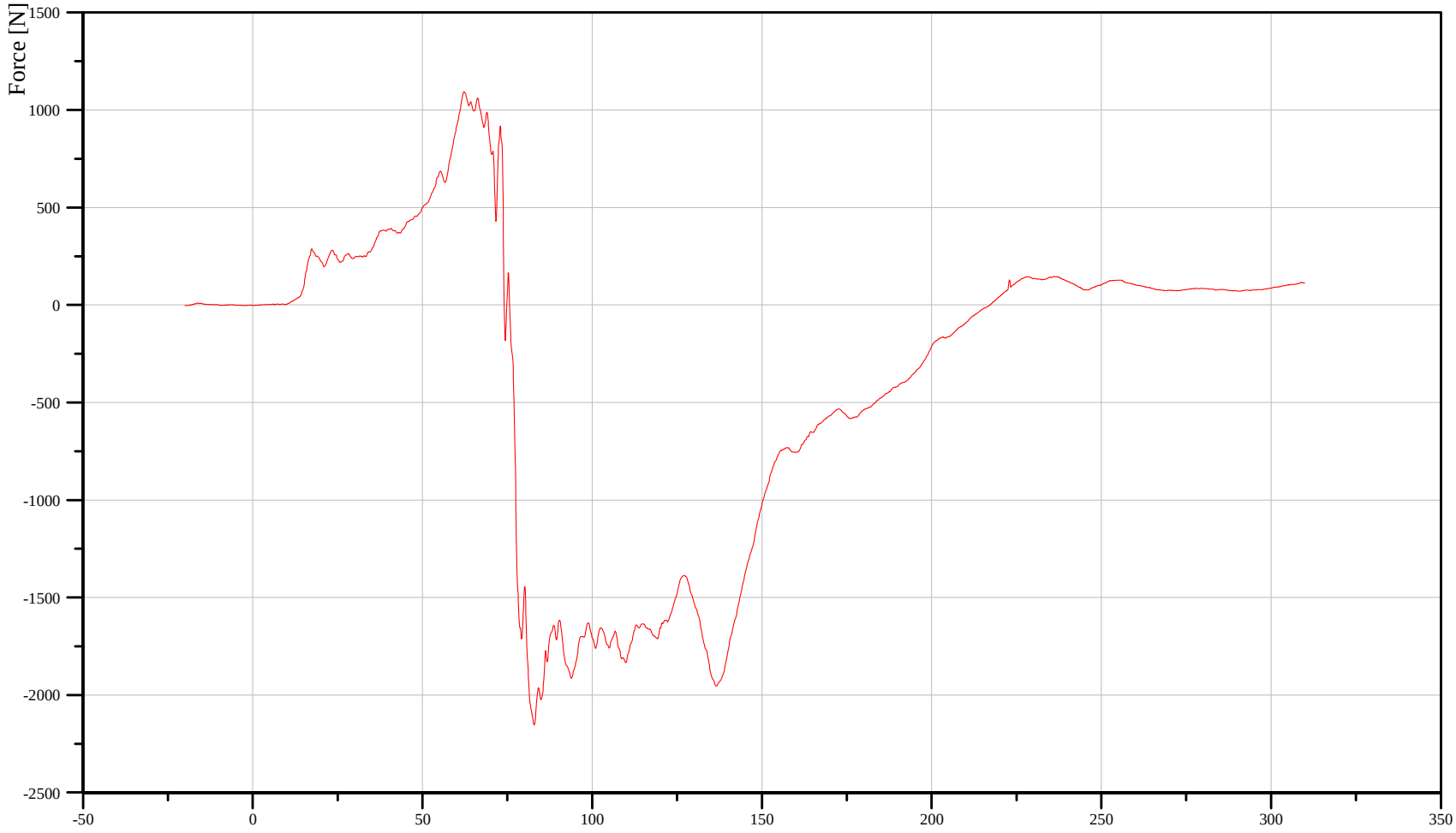
Target Vehicle Driver Left Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-2,152.82 N at 82.88 ms

Max. Value
1,093.30 N at 62.24 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

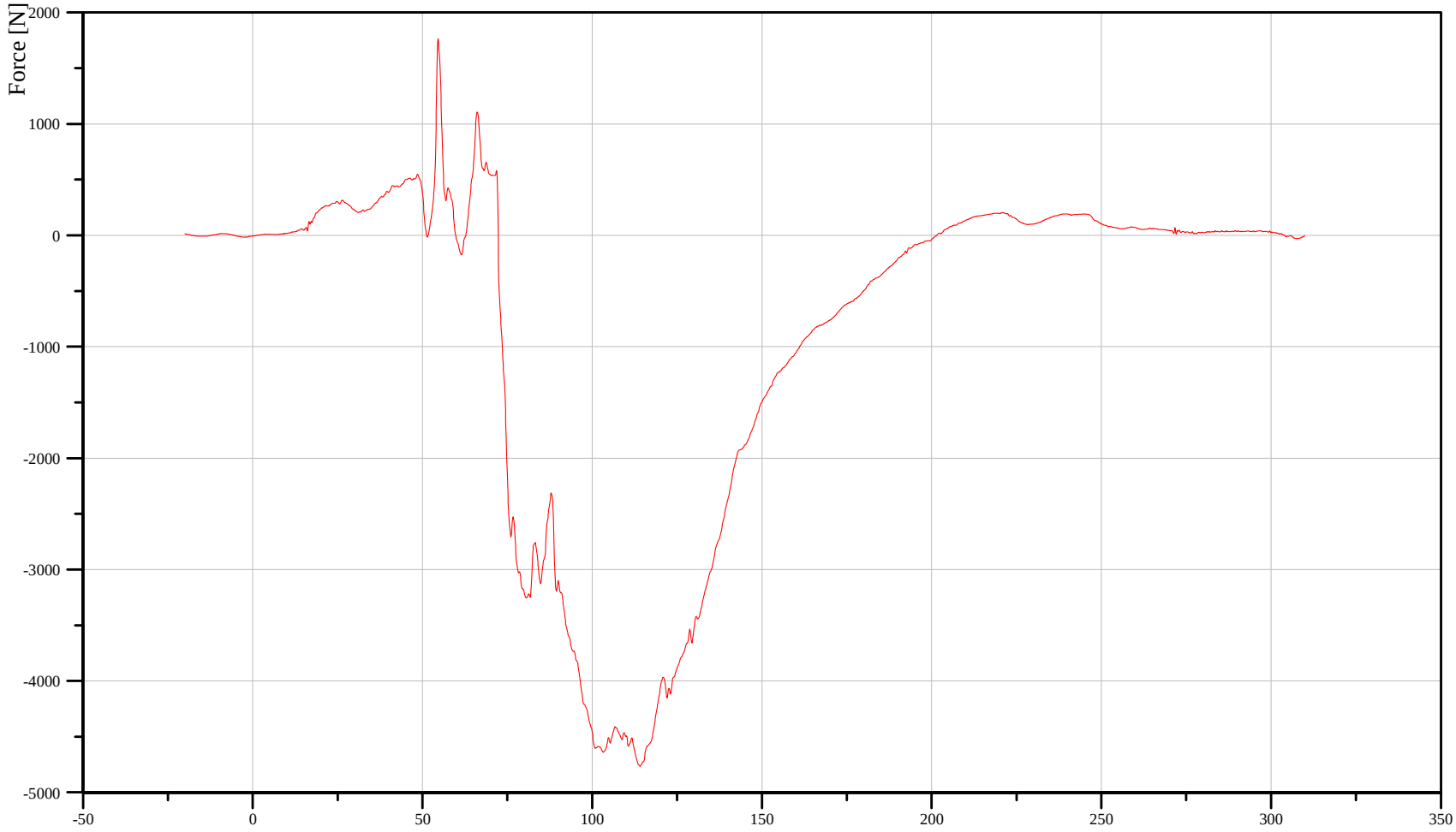
Target Vehicle Driver Right Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-4,765.30 N at 114.08 ms

Max. Value
1,763.02 N at 54.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

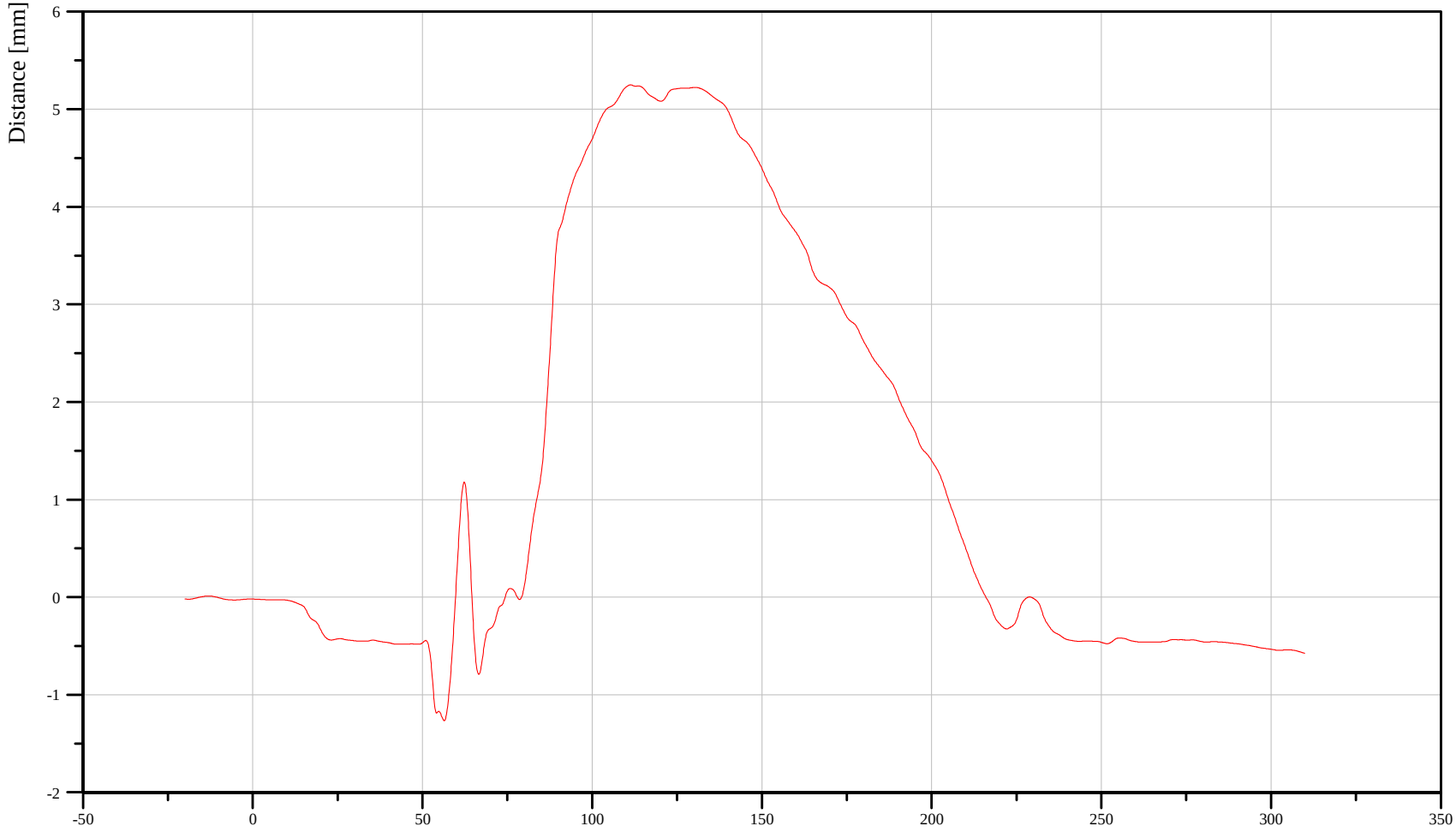
Target Vehicle Driver Left Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.27 mm at 56.40 ms

Max. Value
5.25 mm at 111.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

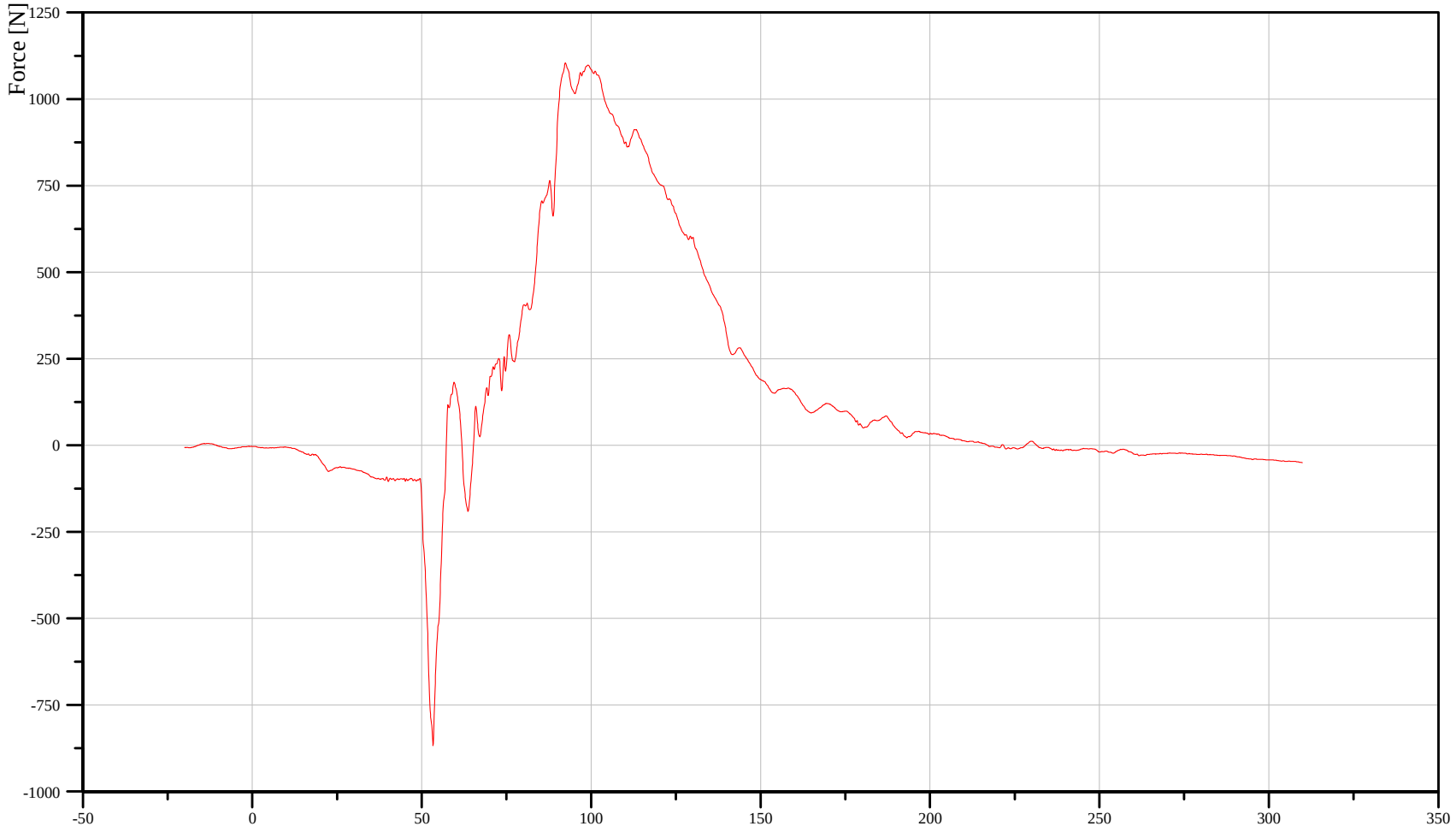
Target Vehicle Driver Left Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILULXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-867.42 N at 53.36 ms

Max. Value
1,104.14 N at 92.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

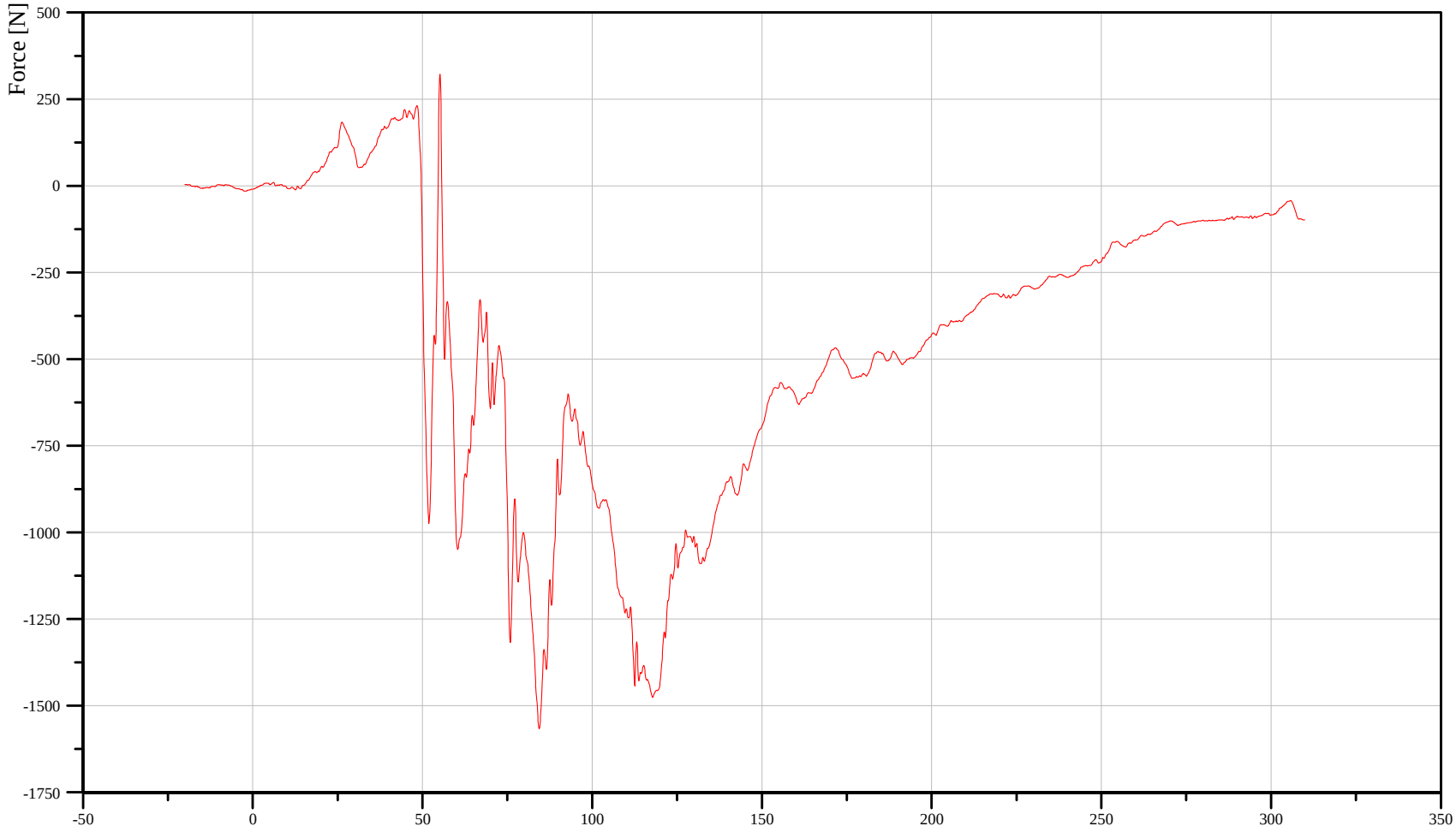
Target Vehicle Driver Left Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILULXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,566.22 N at 84.40 ms

Max. Value
322.20 N at 55.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

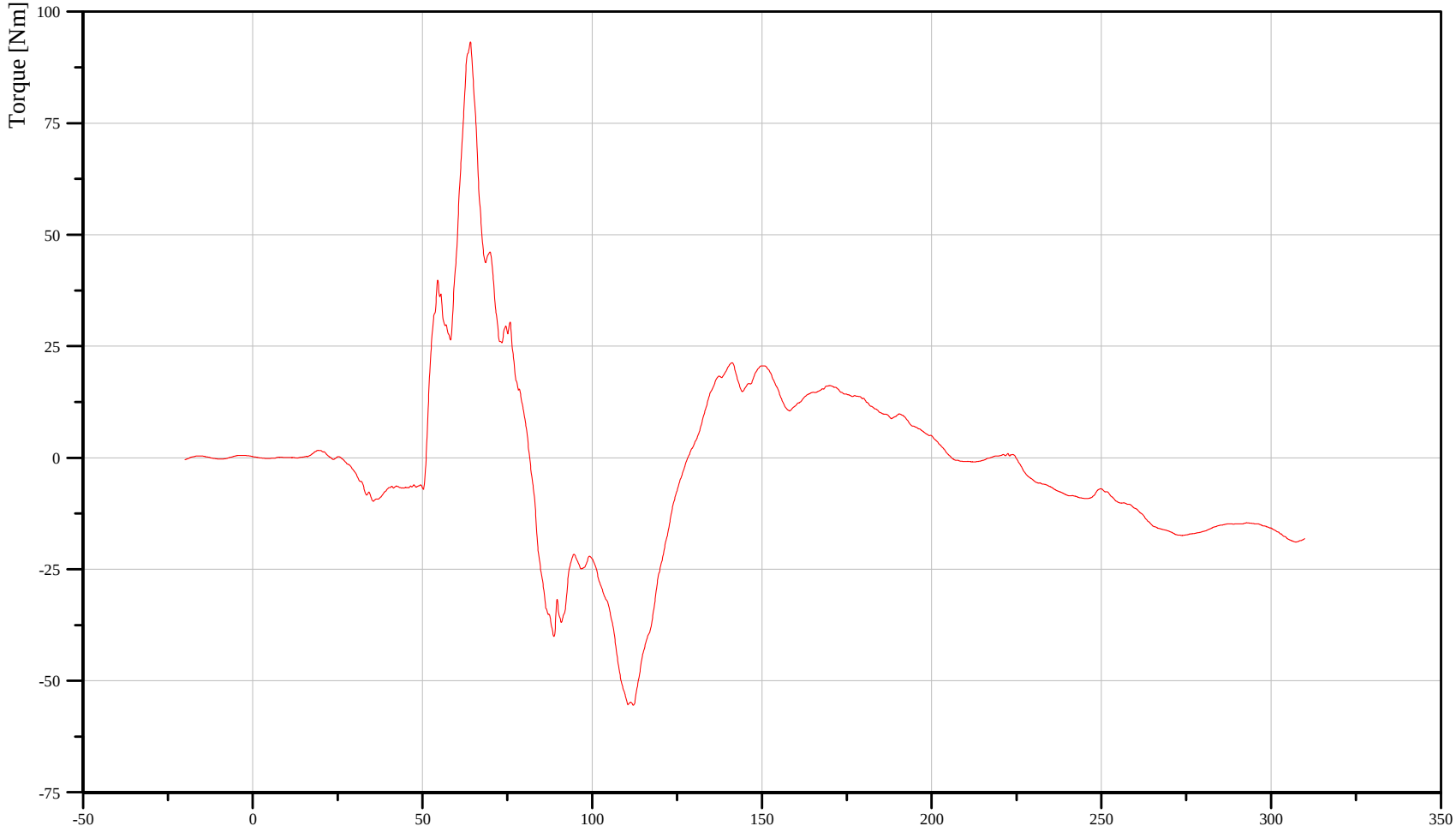
Target Vehicle Driver Left Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILULXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-55.45 Nm at 112.16 ms

Max. Value
93.20 Nm at 64.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

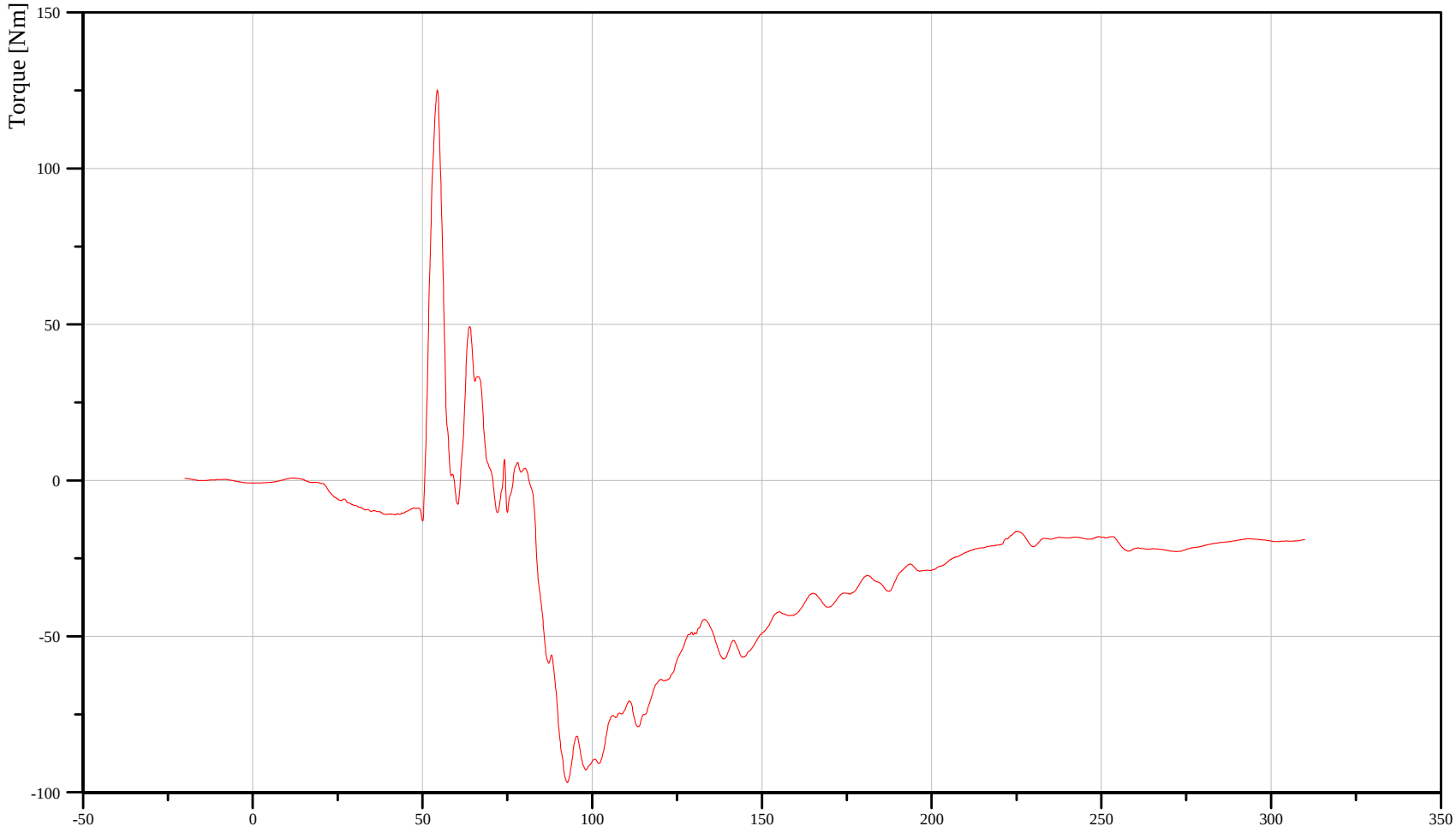
Target Vehicle Driver Left Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILULXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-96.85 Nm at 92.72 ms

Max. Value
125.20 Nm at 54.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

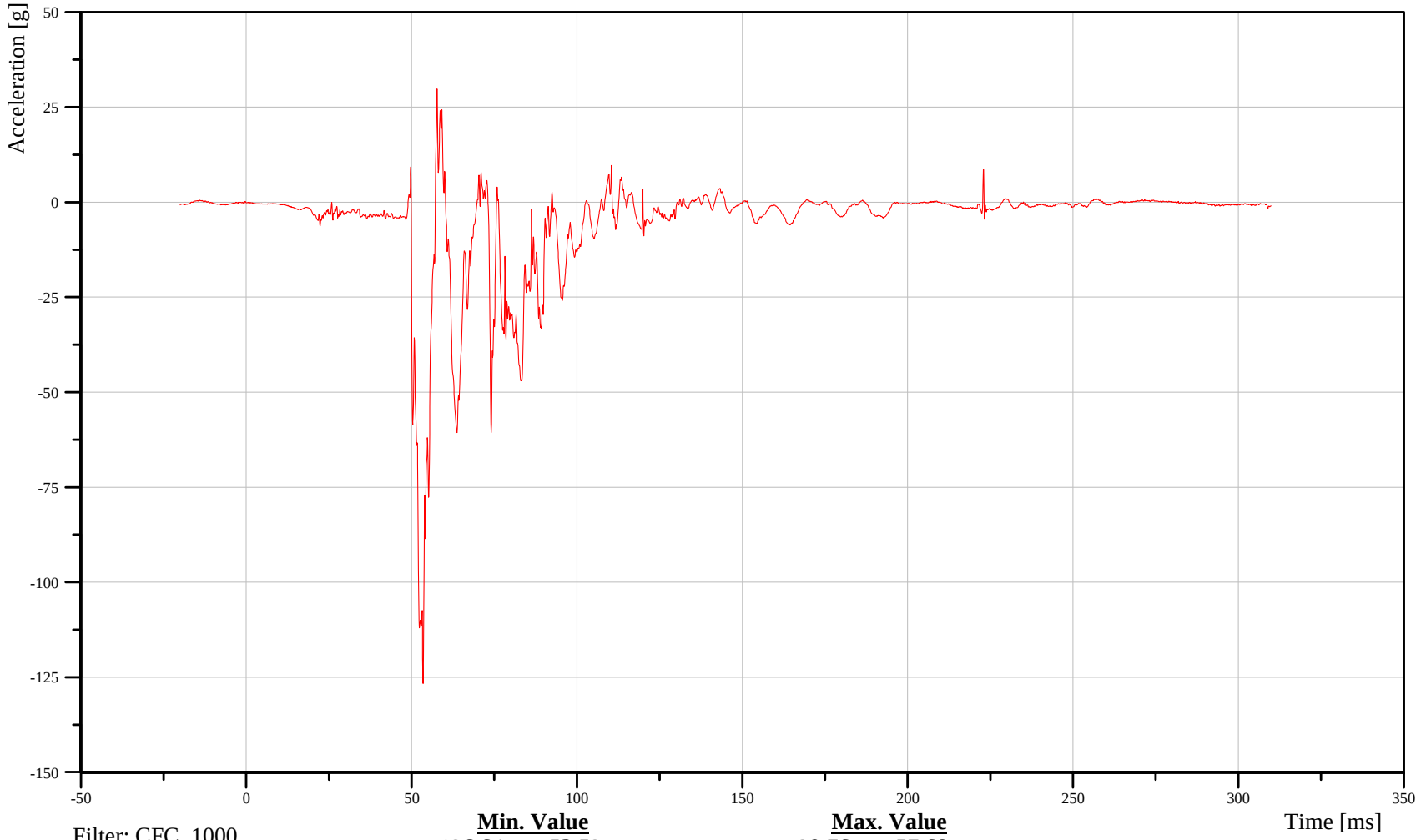
Target Vehicle Driver Left Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-126.64 g at 53.52 ms

Max. Value
29.76 g at 57.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

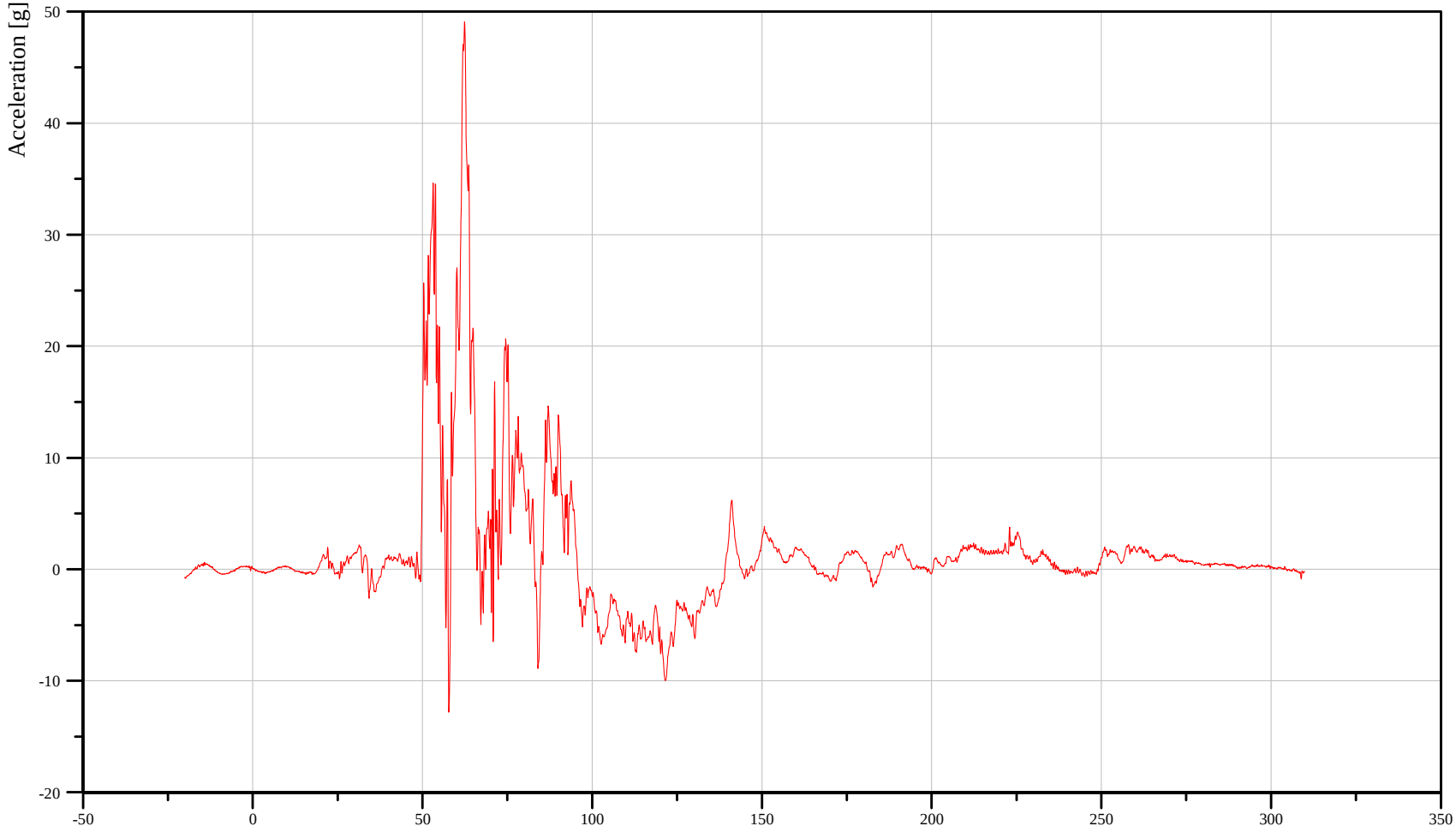
Target Vehicle Driver Left Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-12.81 g at 57.76 ms

Max. Value
49.08 g at 62.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

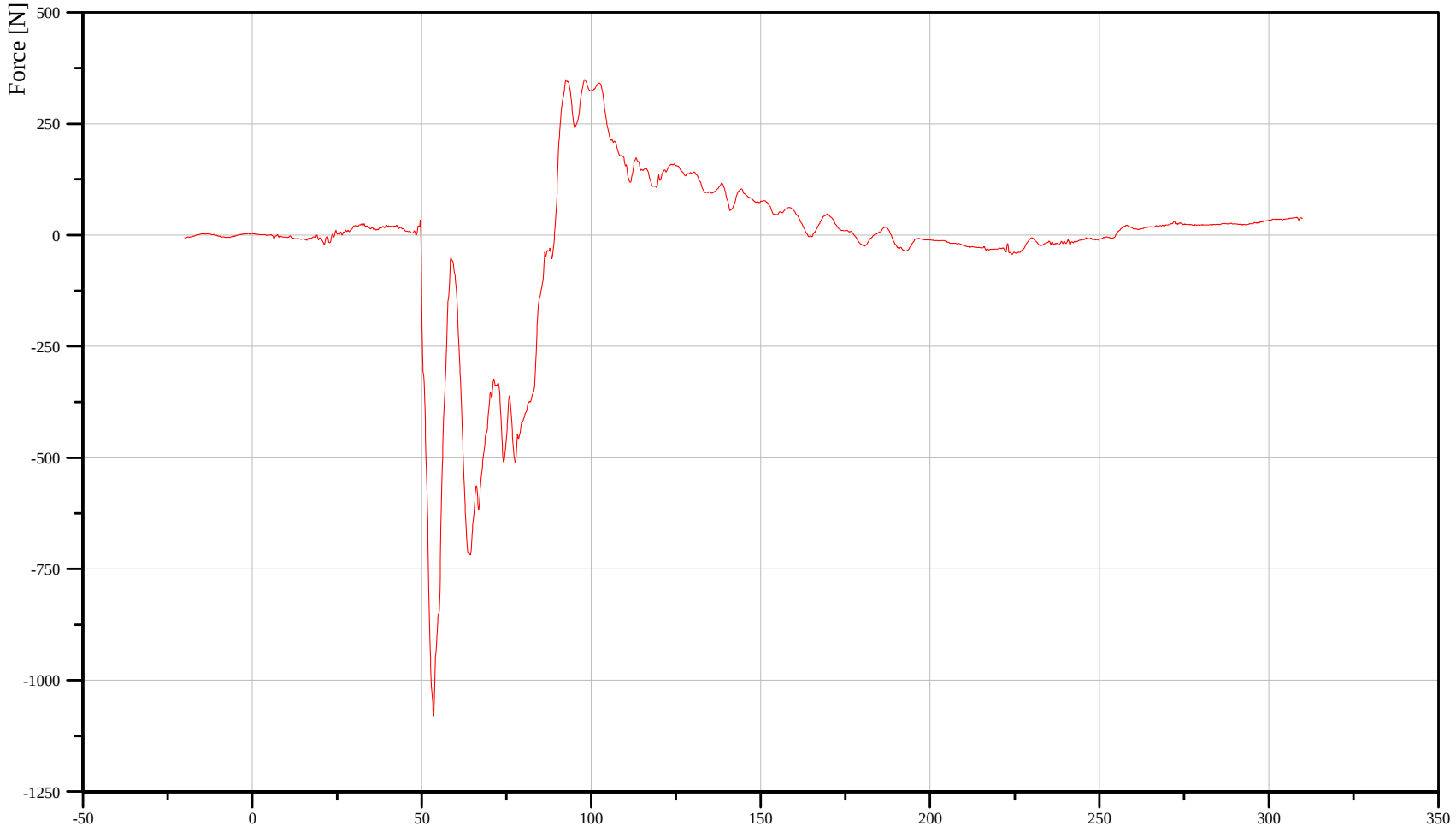
Target Vehicle Driver Left Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILLLXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,080.22 N at 53.52 ms

Max. Value
349.24 N at 98.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

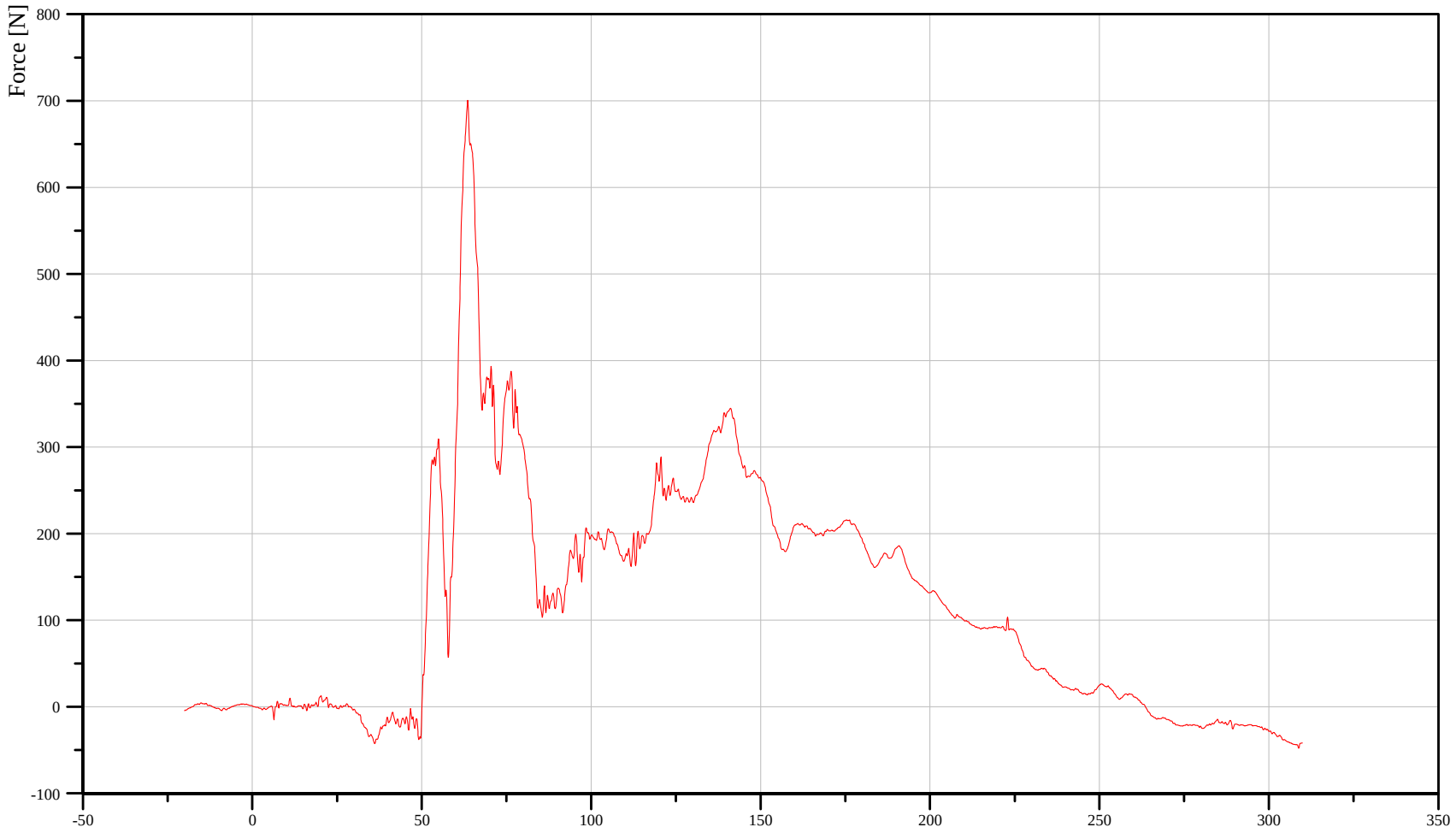
Target Vehicle Driver Left Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILLLXH3FOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-47.59 N at 308.80 ms

Max. Value
700.73 N at 63.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

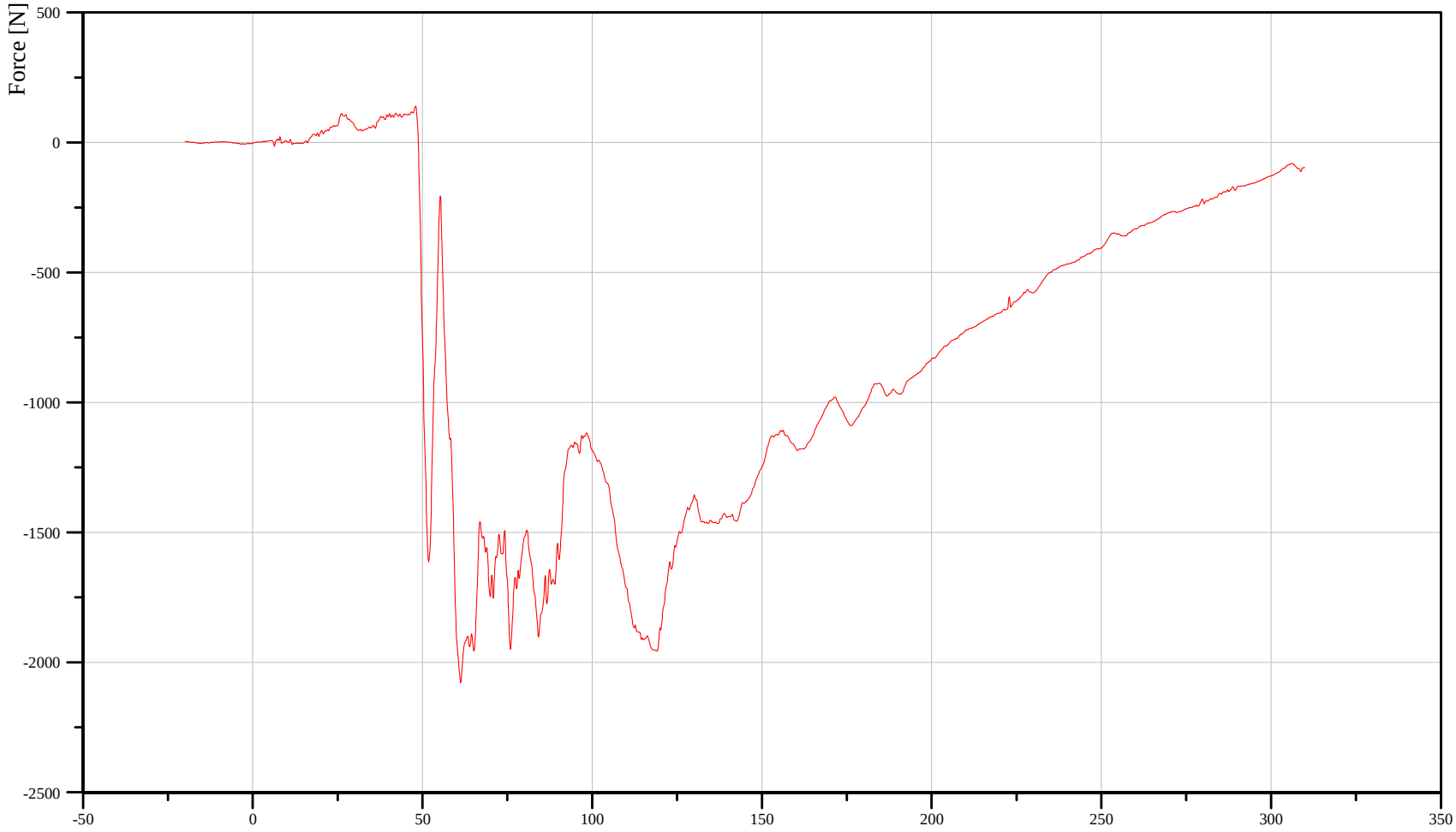
Target Vehicle Driver Left Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILLLXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-2,077.77 N at 61.28 ms

Max. Value
139.47 N at 48.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

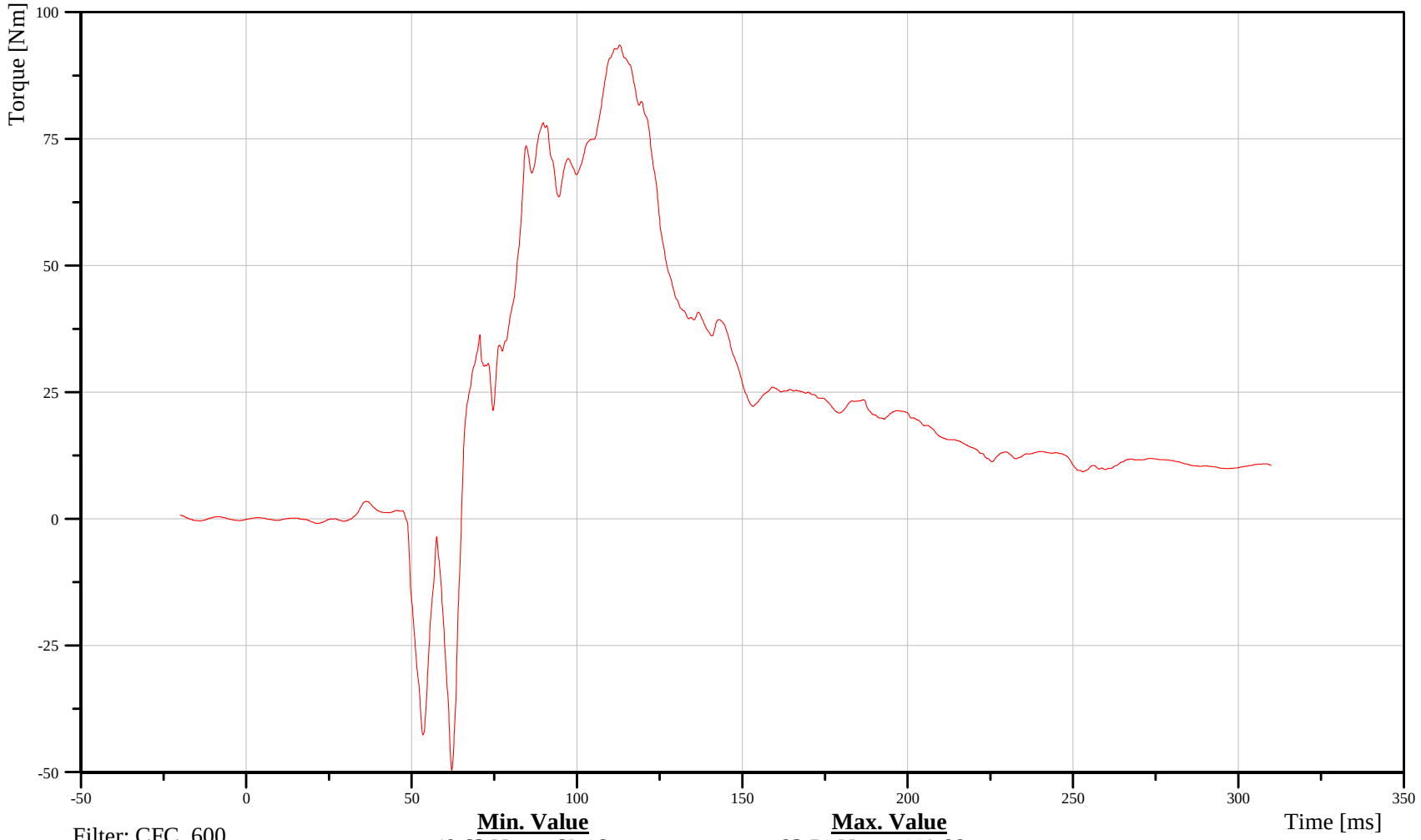
Target Vehicle Driver Left Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILLLXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-49.63 Nm at 62.16 ms

Max. Value
93.51 Nm at 112.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

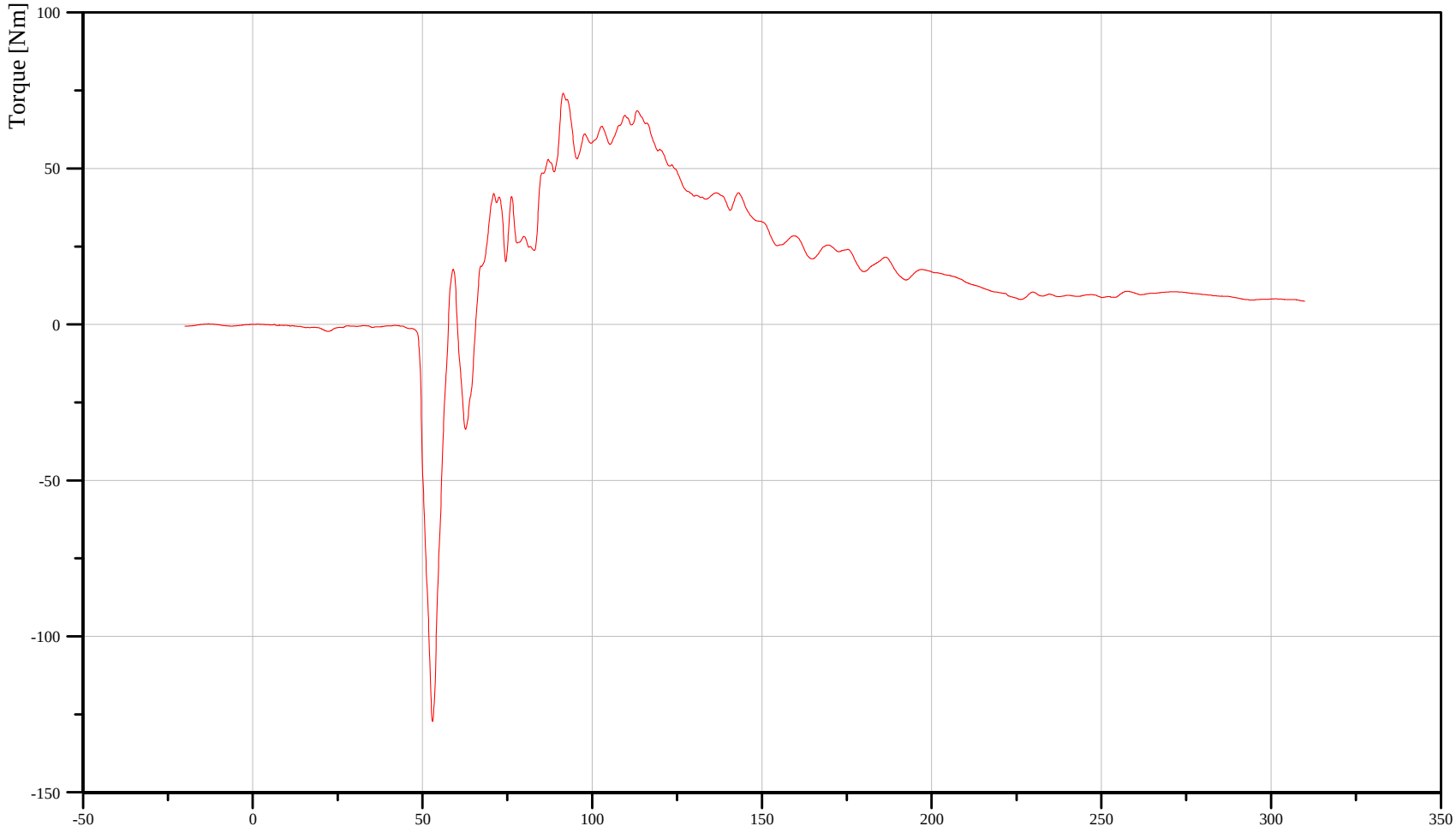
Target Vehicle Driver Left Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBILLLXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-127.27 Nm at 52.96 ms

Max. Value
74.11 Nm at 91.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

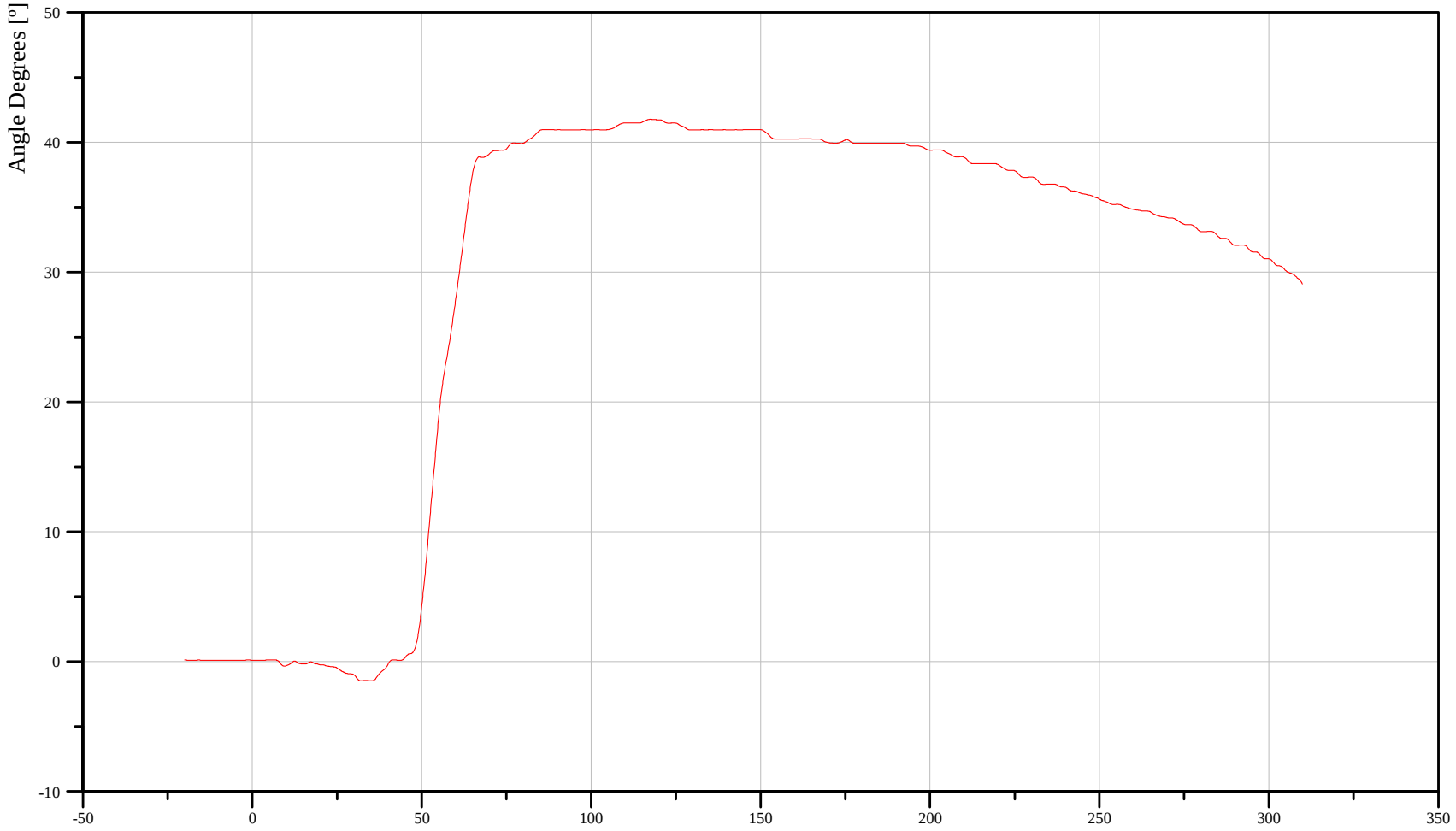
Target Vehicle Driver Left Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value	Max. Value
-1.47 ° at 35.20 ms	41.77 ° at 117.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

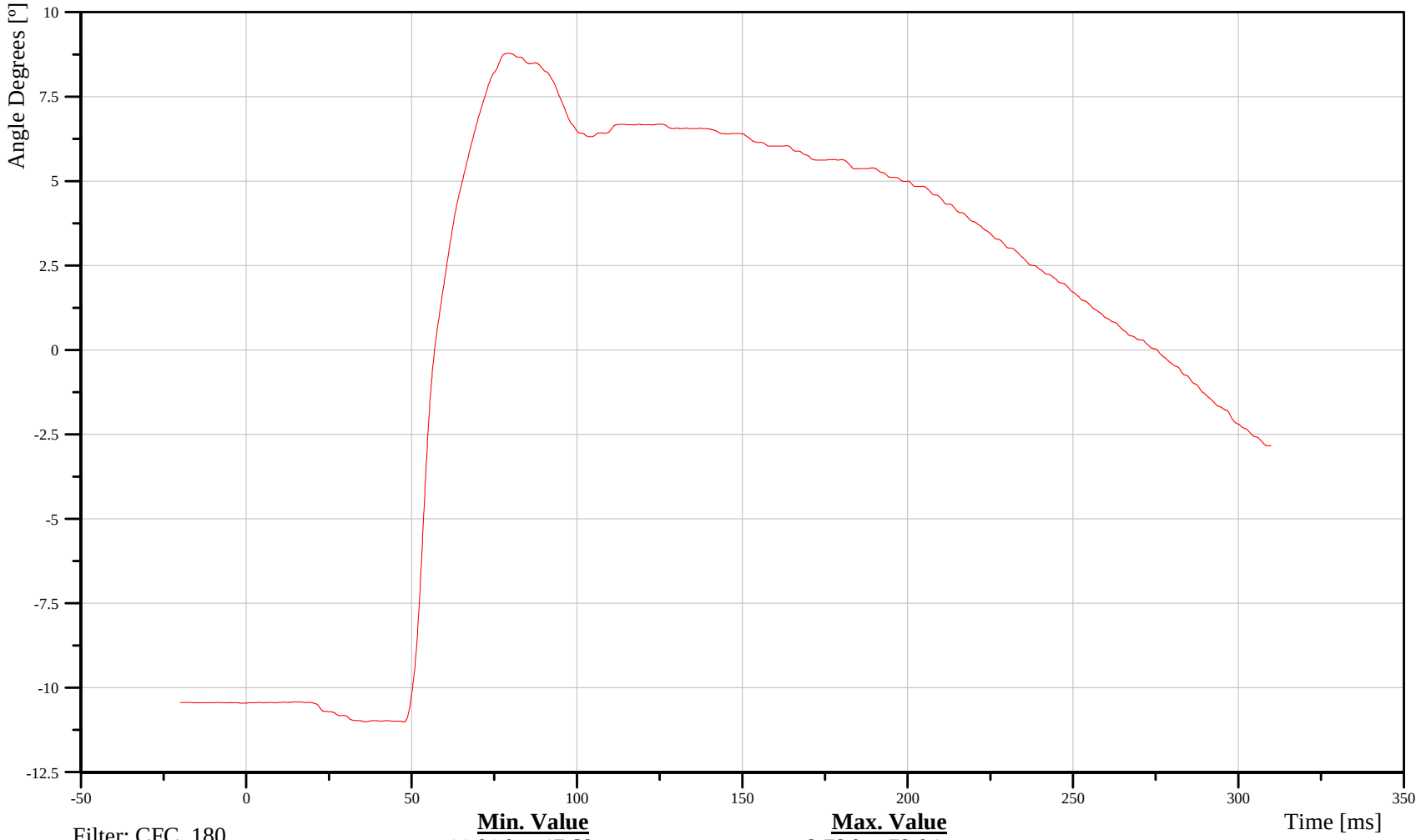
Target Vehicle Driver Left Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-11.01 ° at 47.68 ms

Max. Value
8.78 ° at 79.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

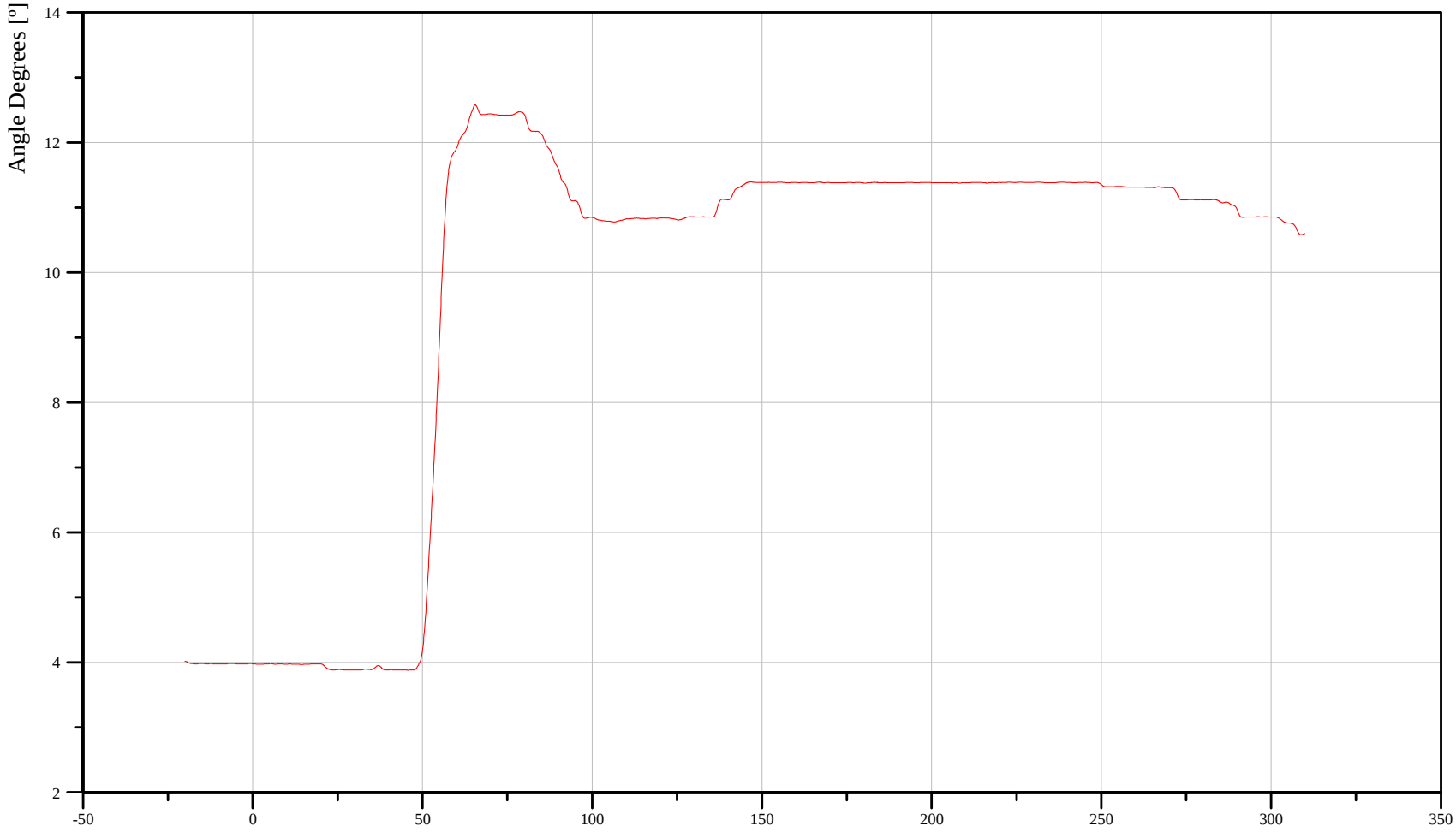
Target Vehicle Driver Left Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
3.88 ° at 45.84 ms

Max. Value
12.58 ° at 65.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

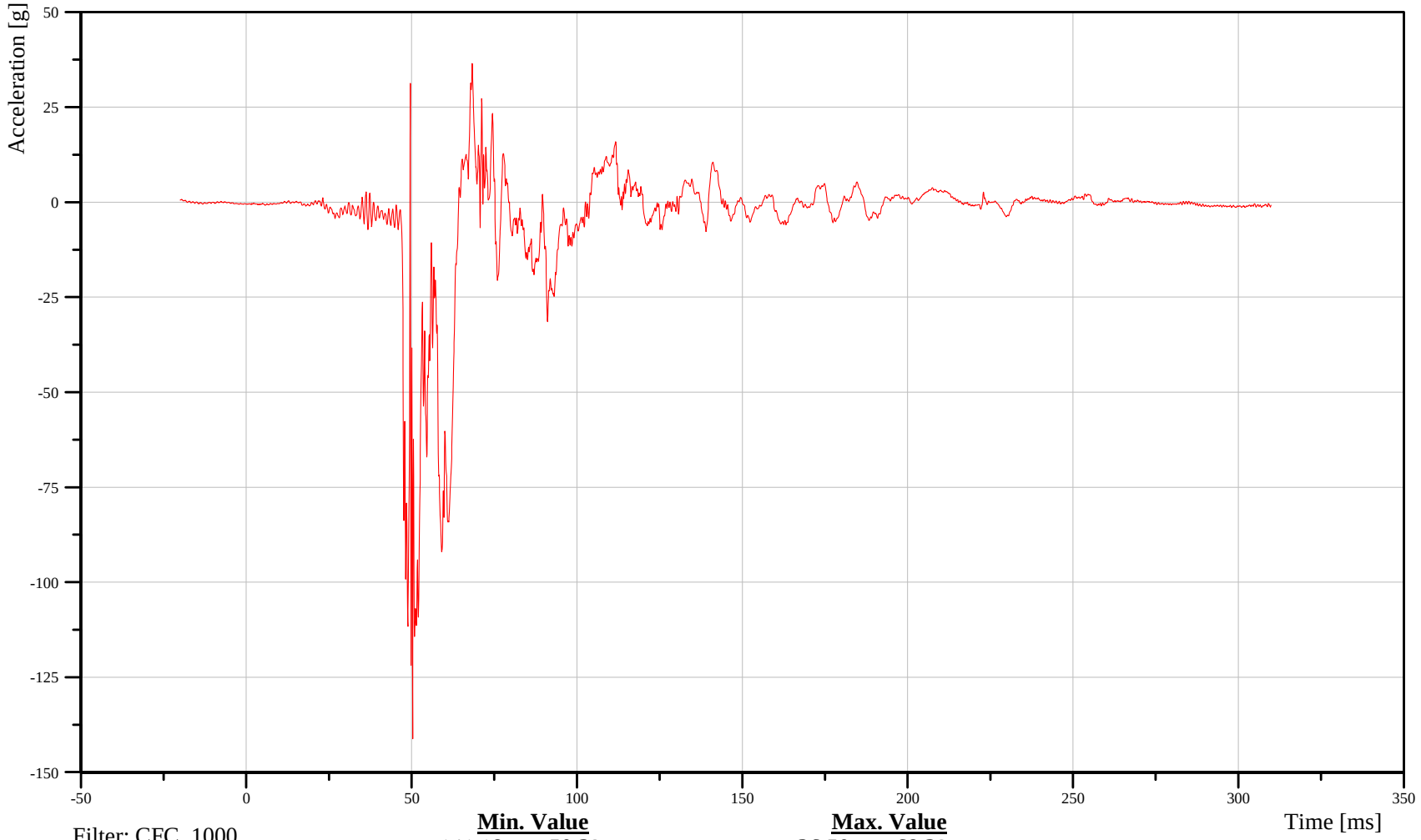
Target Vehicle Driver Left Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-141.18 g at 50.32 ms

Max. Value
36.50 g at 68.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

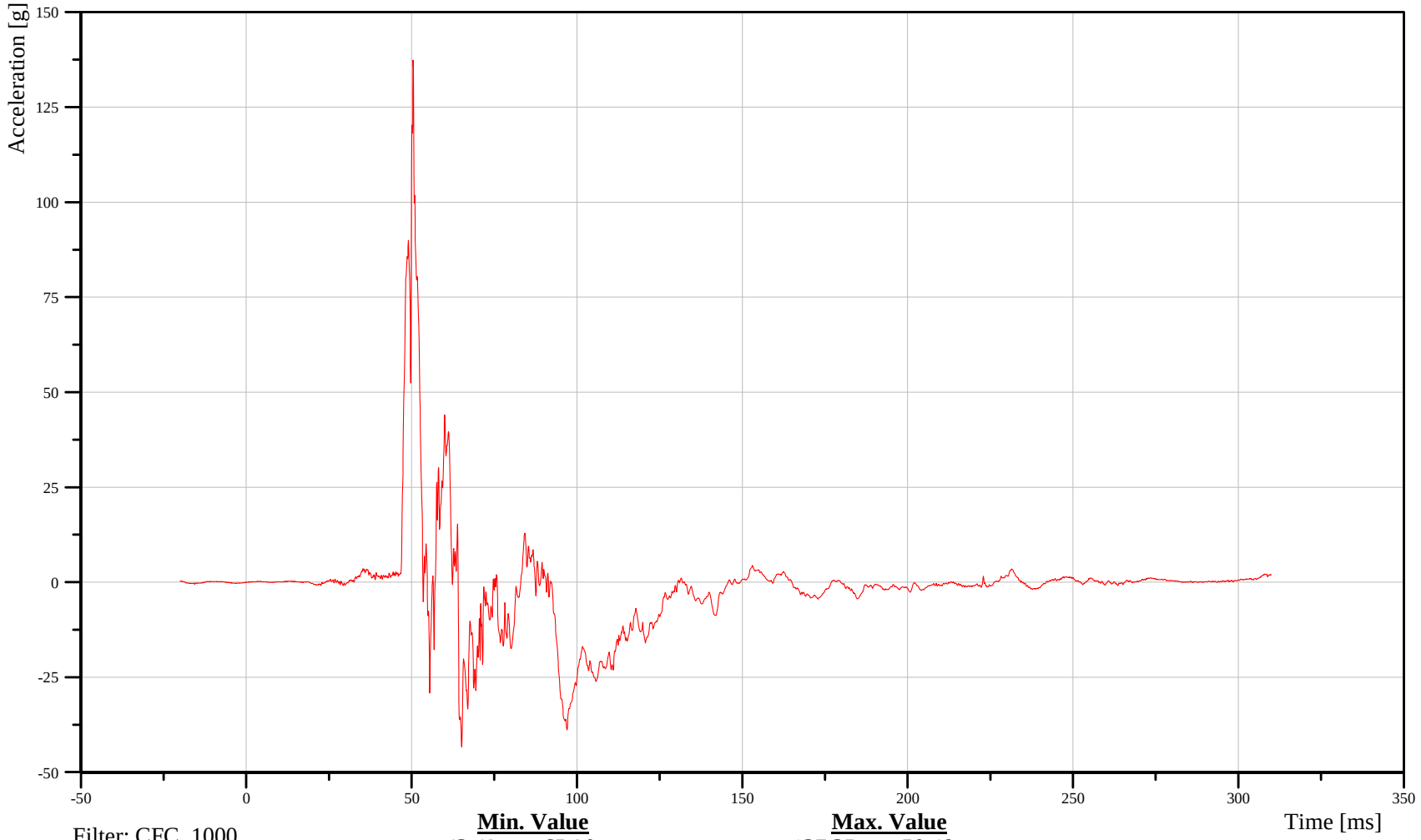
Target Vehicle Driver Left Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-43.42 g at 65.20 ms

Max. Value
137.35 g at 50.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

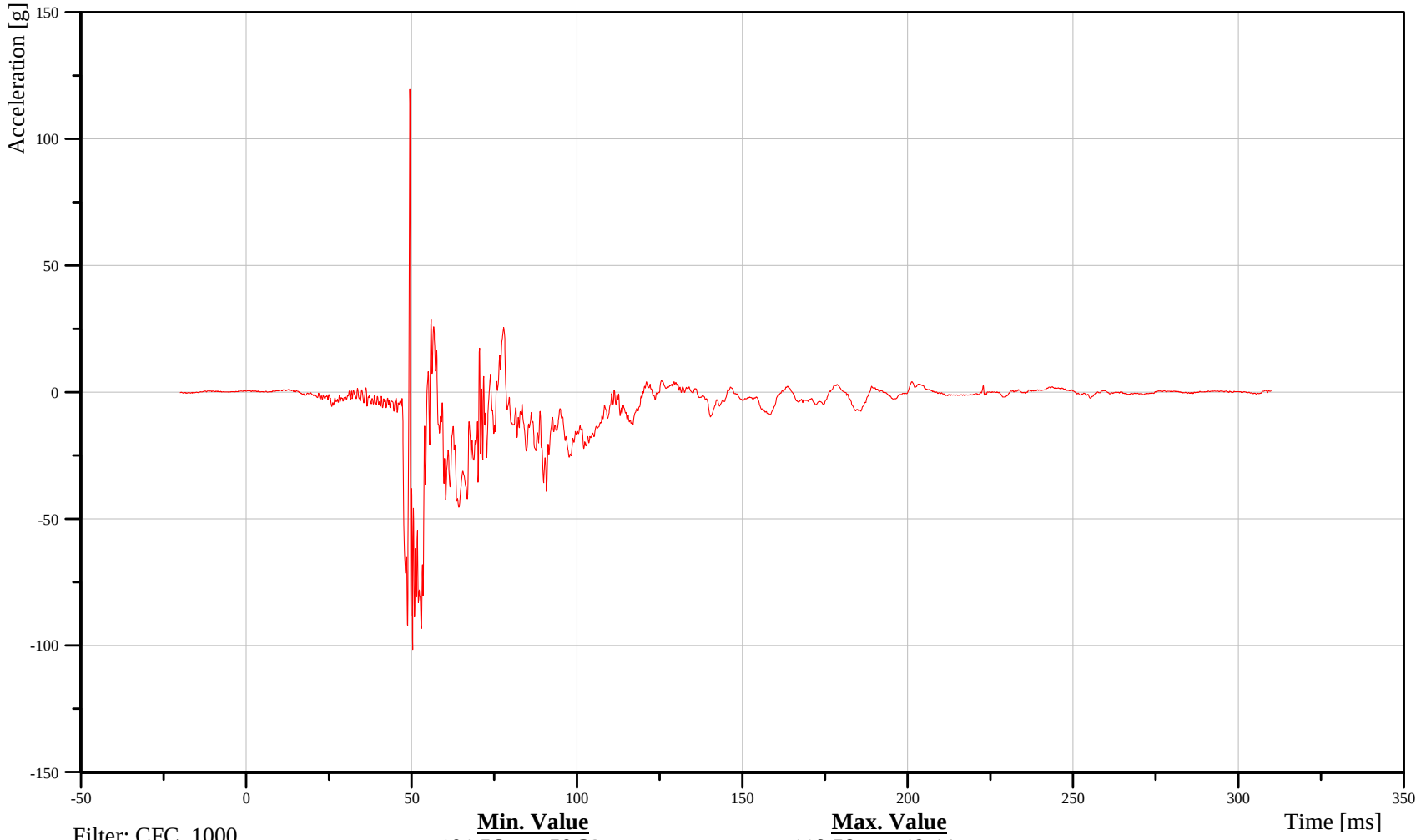
Target Vehicle Driver Left Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-101.56 g at 50.32 ms

Max. Value
119.58 g at 49.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

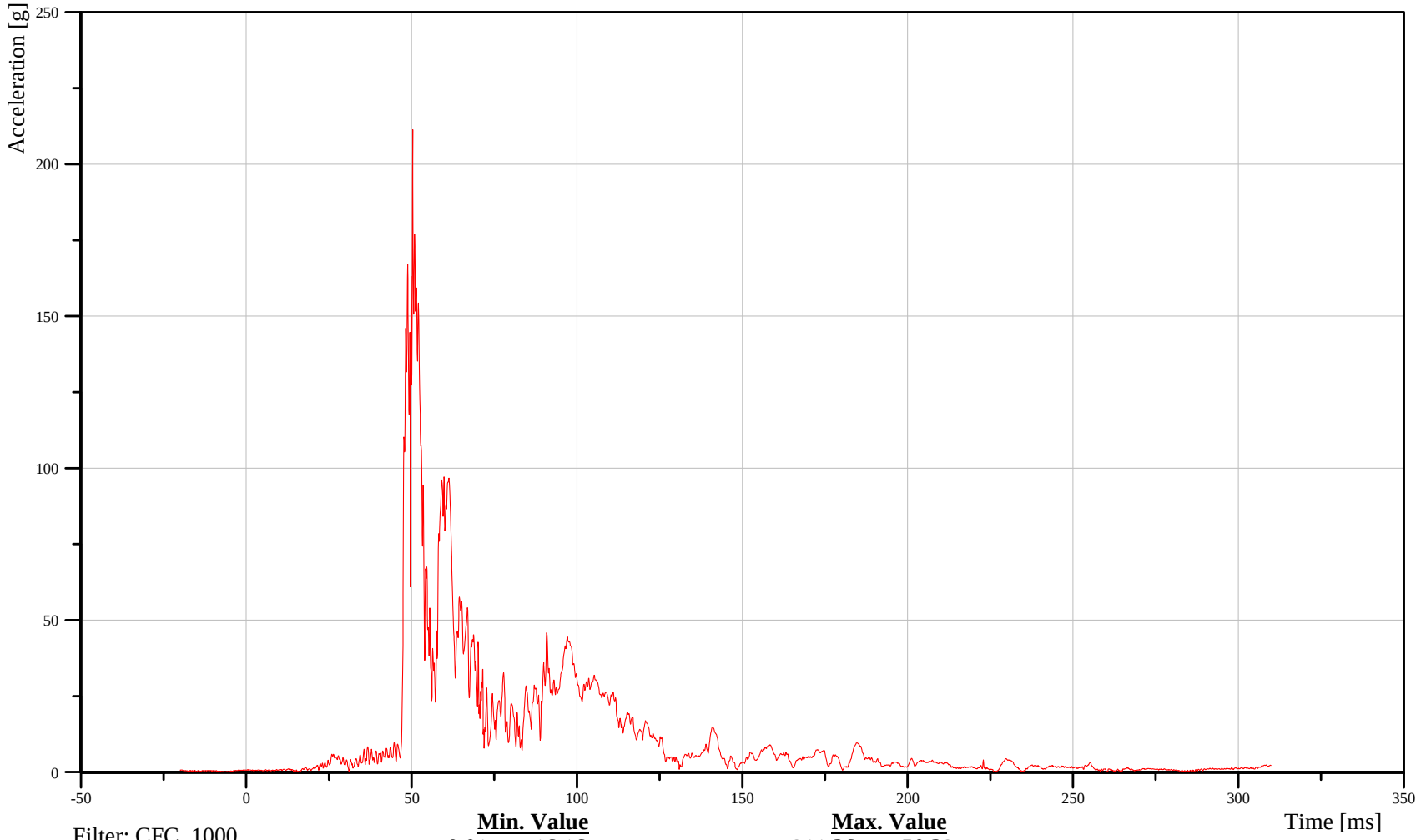
Target Vehicle Driver Left Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.01 g at 16.16 ms

Max. Value
211.36 g at 50.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

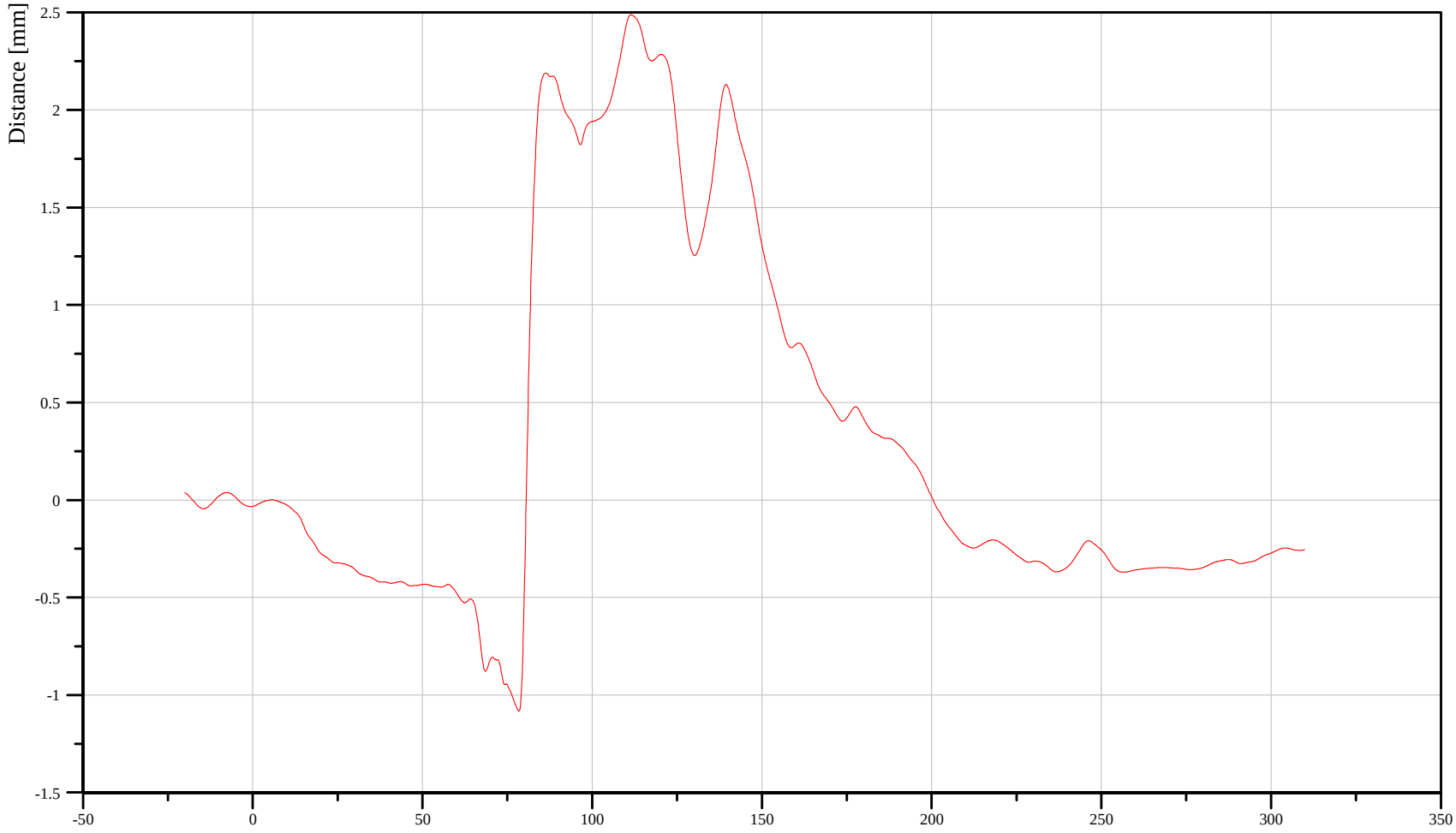
Target Vehicle Driver Right Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.08 mm at 78.40 ms

Max. Value
2.49 mm at 111.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

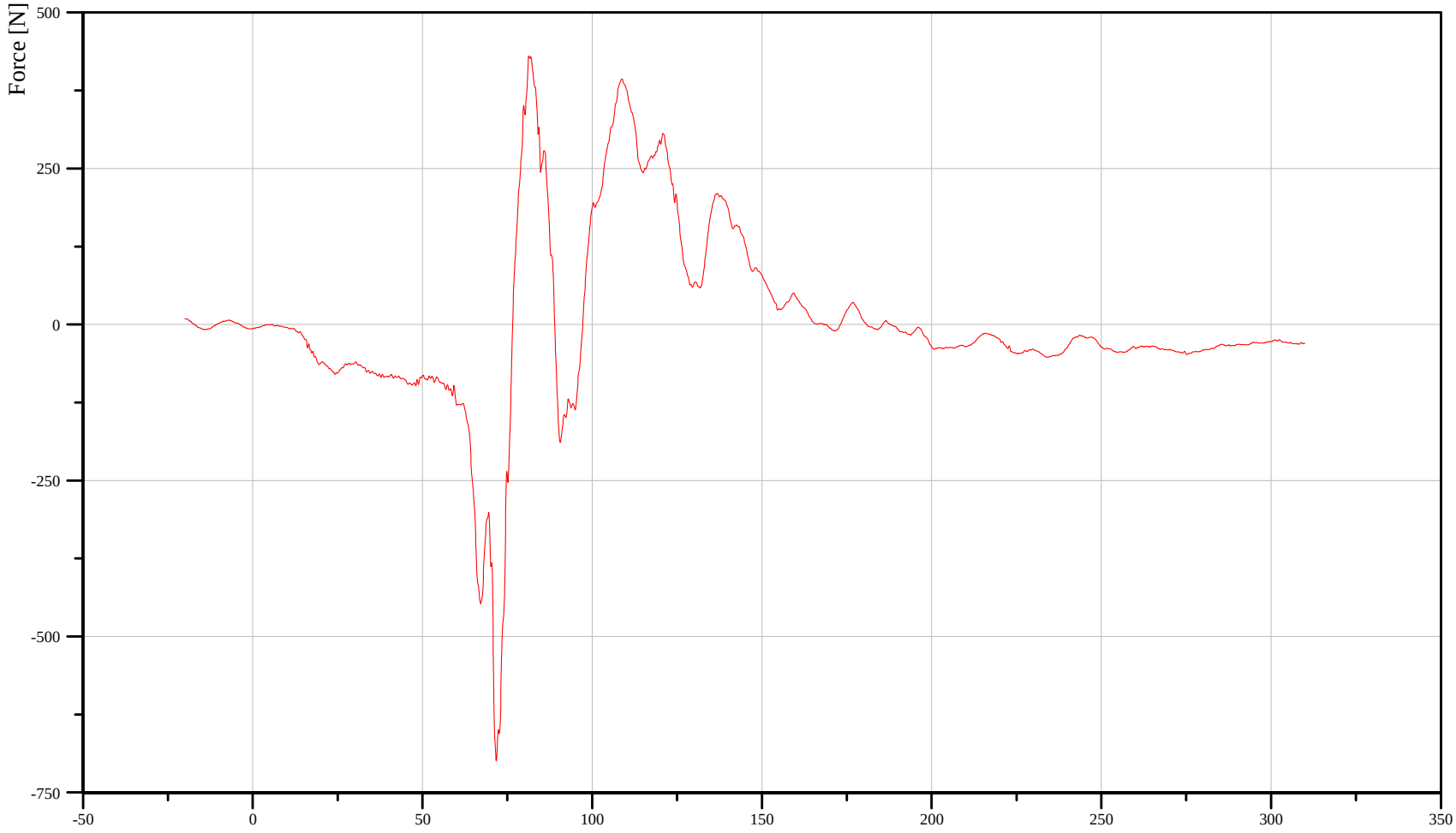
Target Vehicle Driver Right Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRULXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-699.31 N at 71.76 ms

Max. Value
430.25 N at 81.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

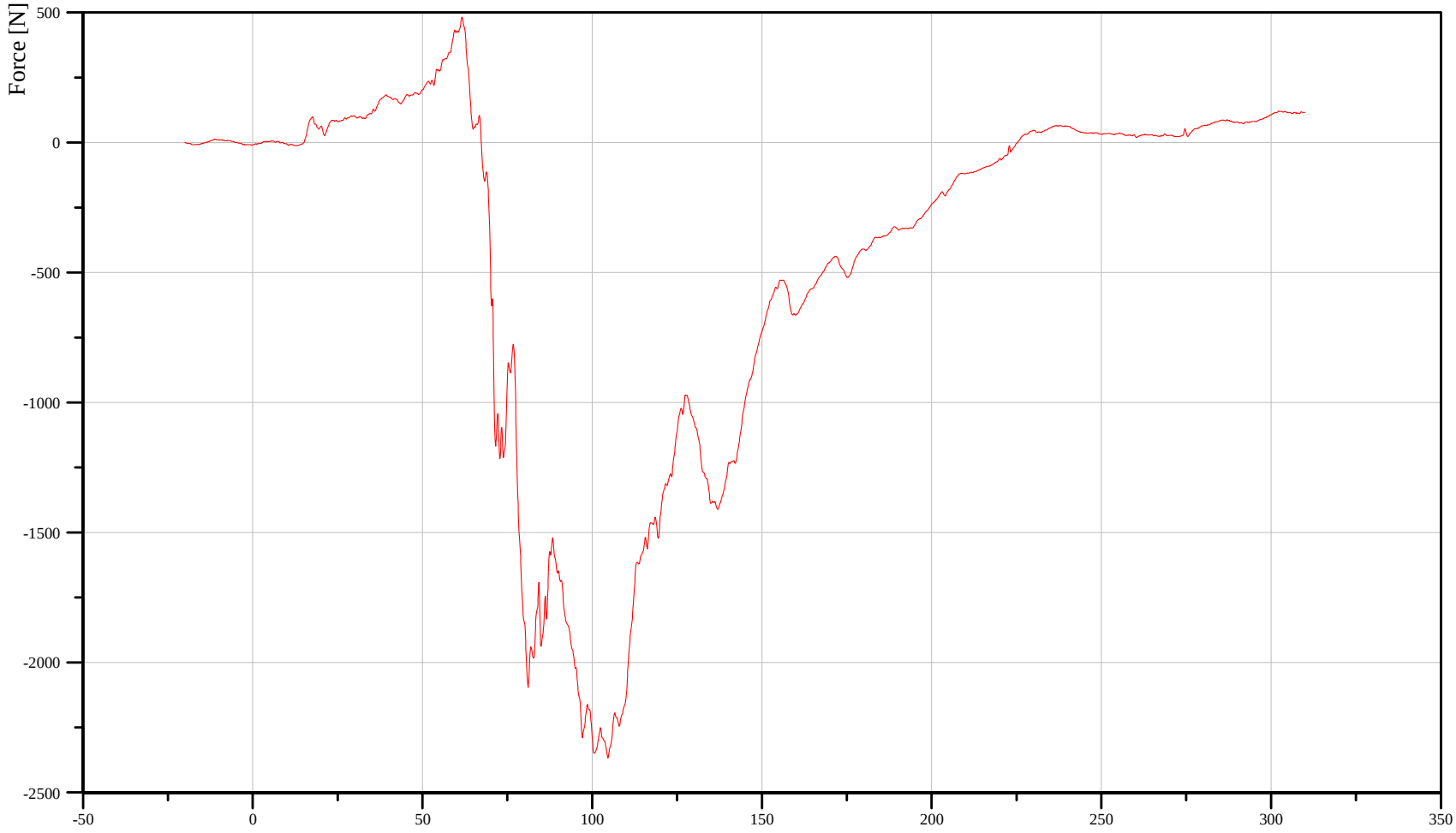
Target Vehicle Driver Right Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRULXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-2,366.39 N at 104.64 ms

Max. Value
482.14 N at 61.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

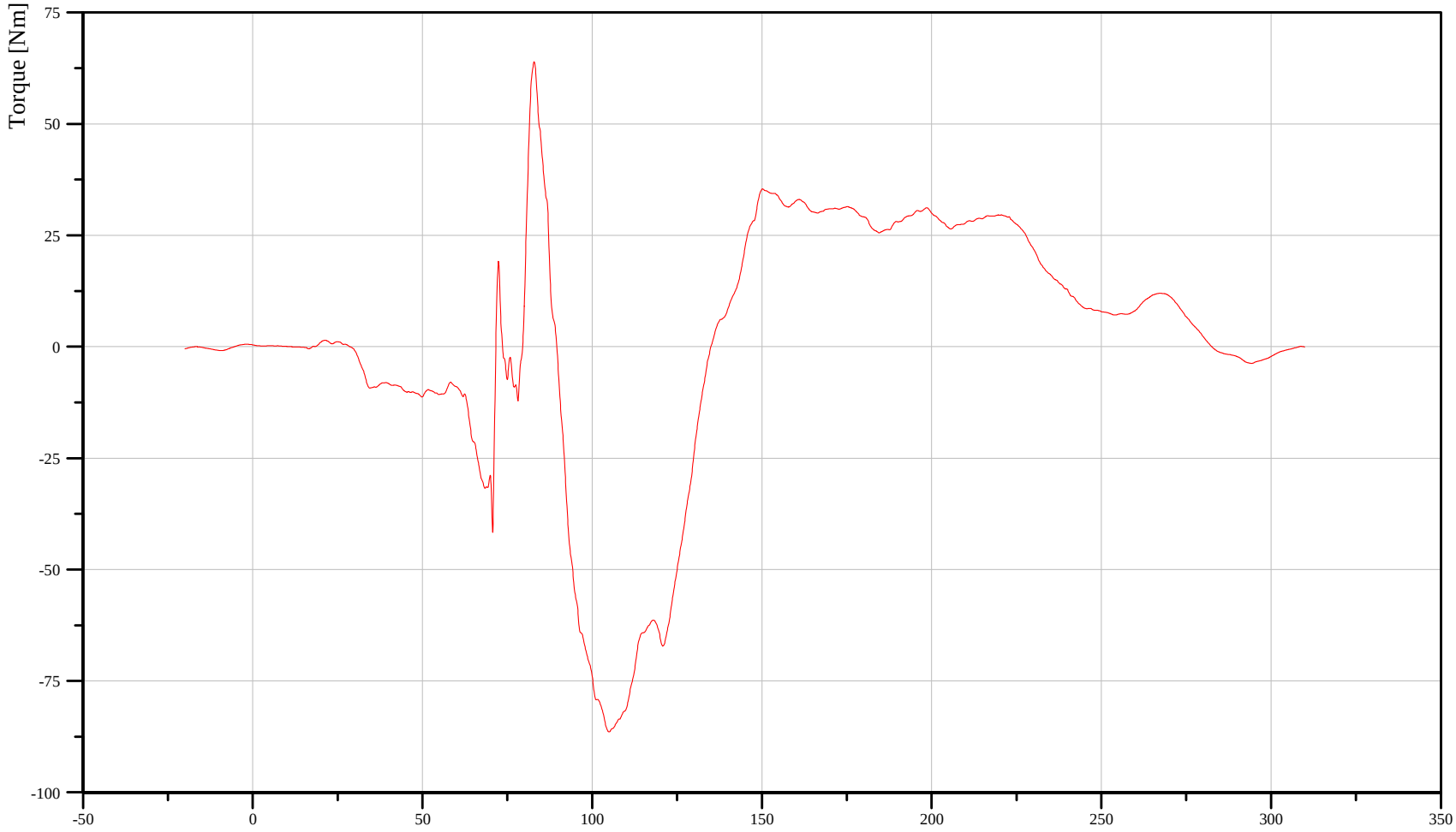
Target Vehicle Driver Right Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRULXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-86.44 Nm at 104.96 ms

Max. Value
63.91 Nm at 82.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

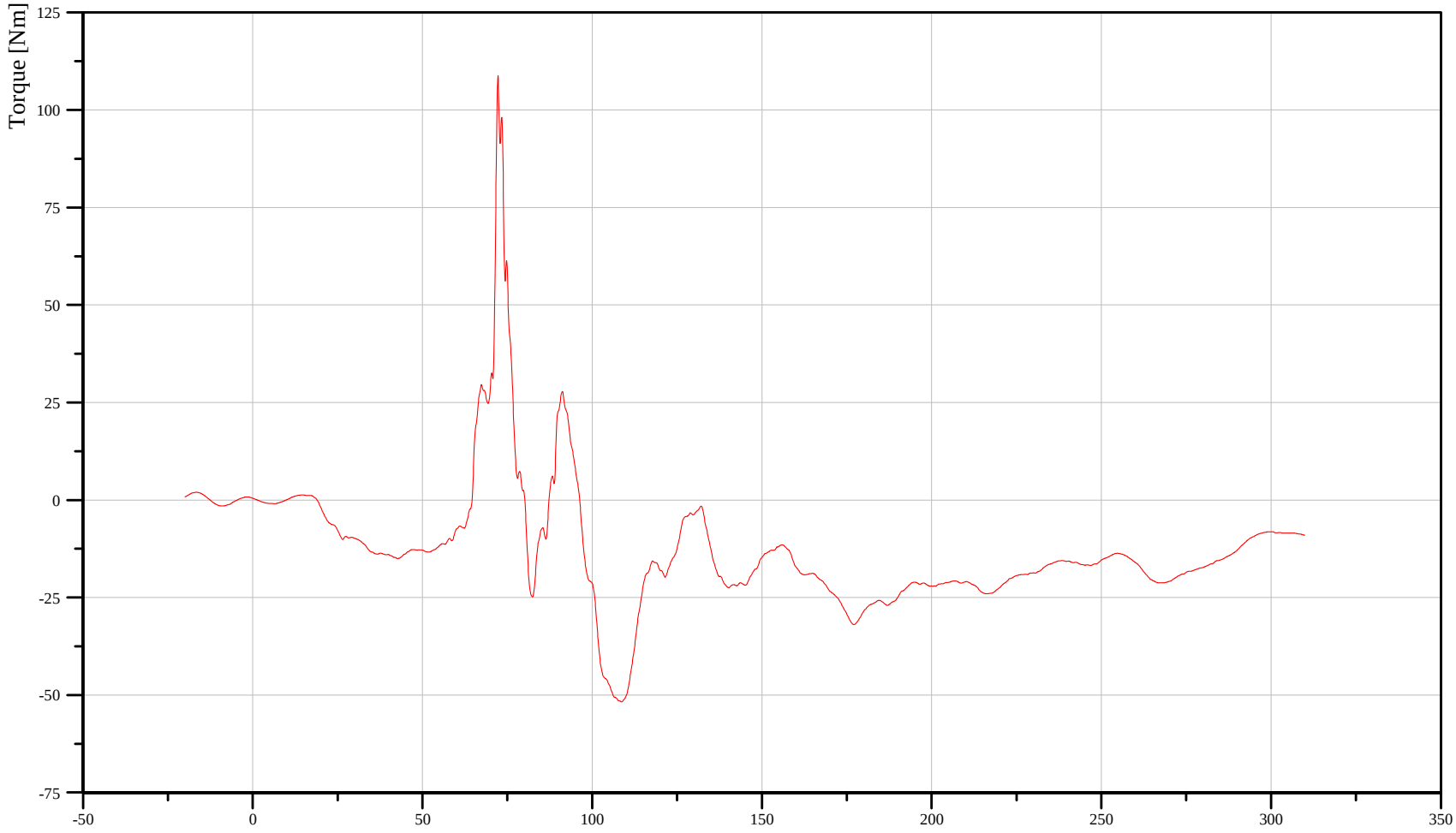
Target Vehicle Driver Right Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRULXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-51.76 Nm at 108.64 ms

Max. Value
108.88 Nm at 72.24 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

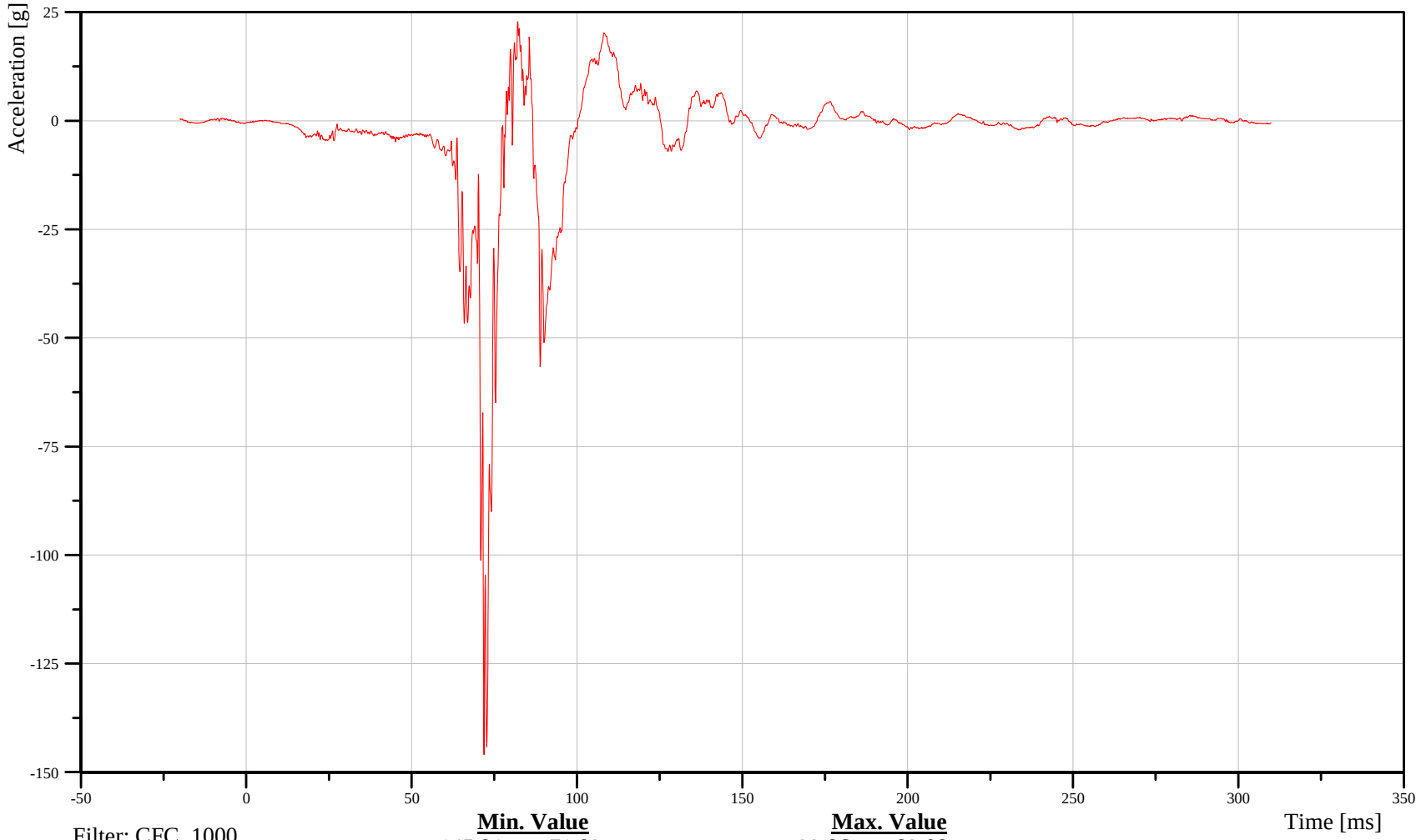
Target Vehicle Driver Right Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-145.91 g at 71.92 ms

Max. Value
22.86 g at 82.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

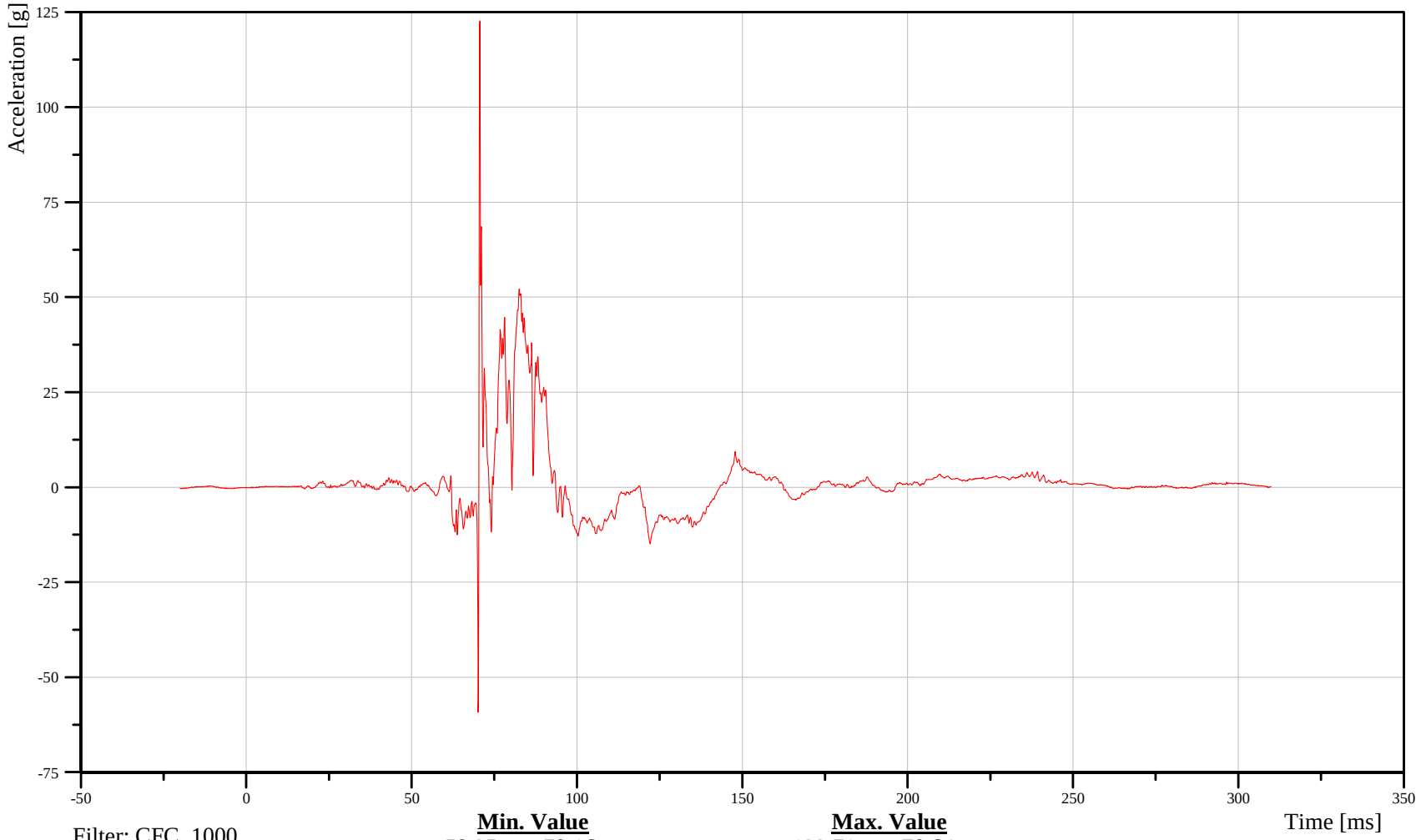
Target Vehicle Driver Right Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-59.25 g at 70.16 ms

Max. Value
122.71 g at 70.64 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

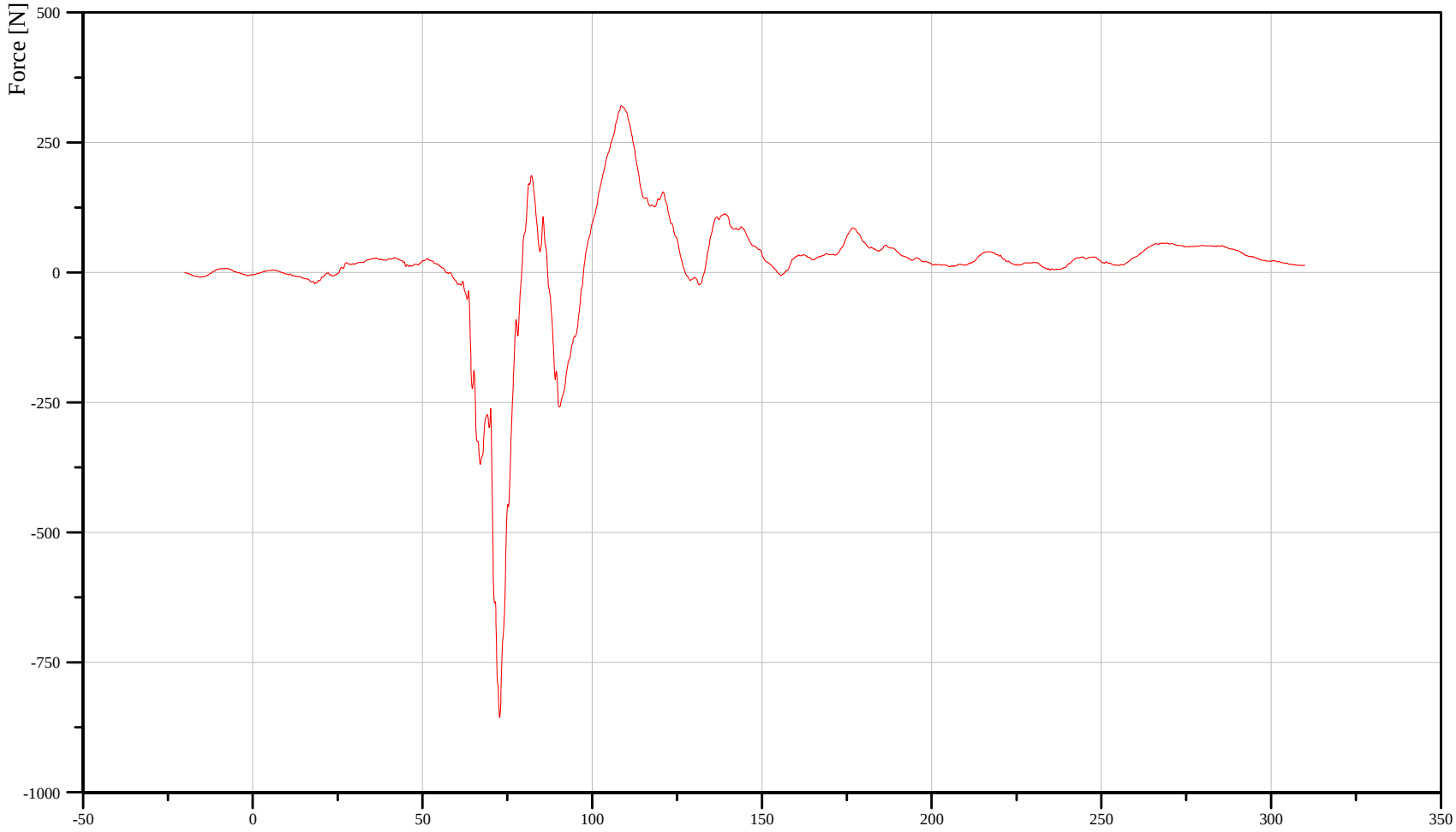
Target Vehicle Driver Right Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRLLXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-855.76 N at 72.72 ms

Max. Value
320.53 N at 108.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

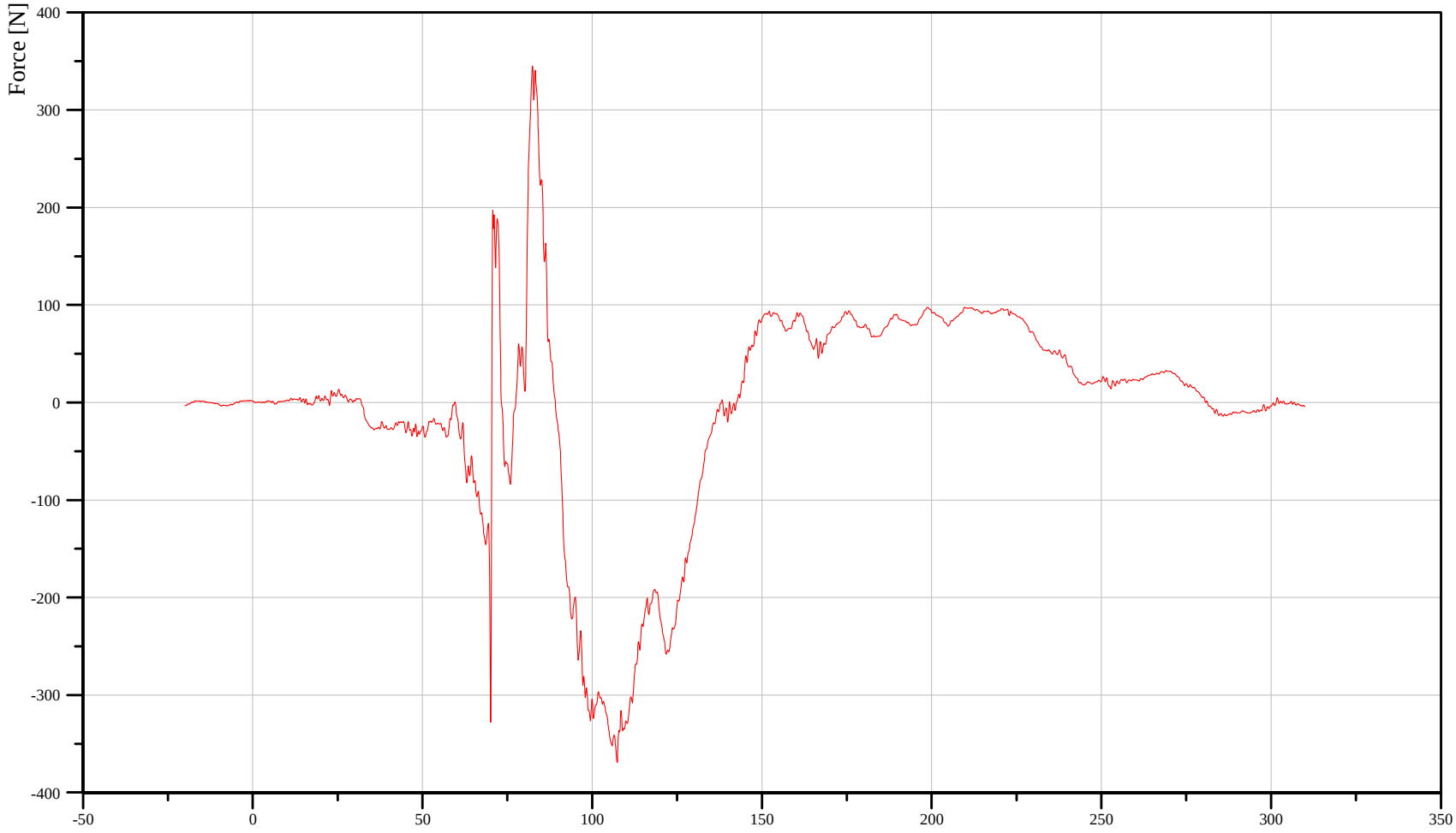
Target Vehicle Driver Right Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRLLXH3FOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-369.25 N at 107.36 ms

Max. Value
345.24 N at 82.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

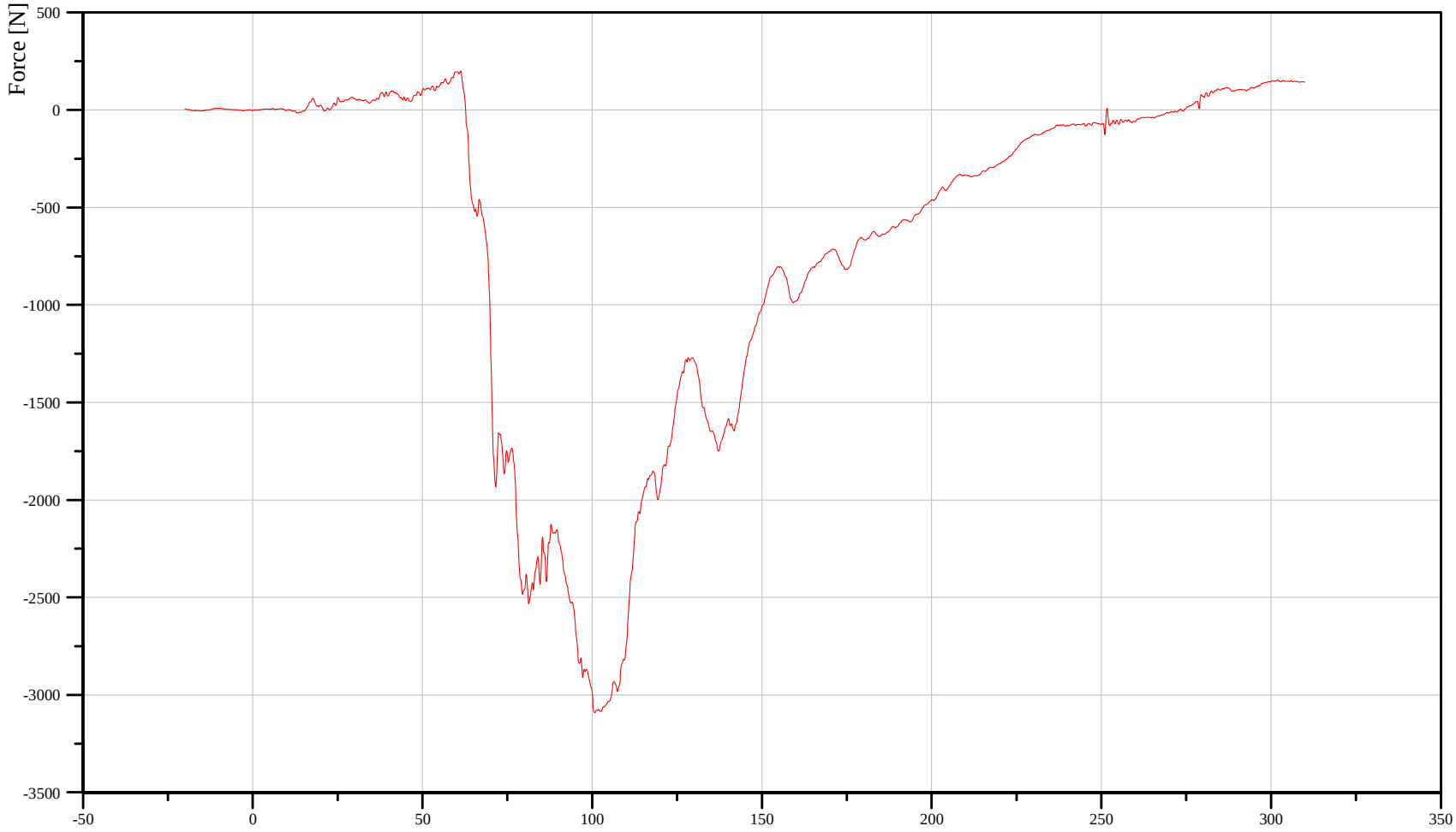
Target Vehicle Driver Right Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRLLXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-3,091.13 N at 100.72 ms

Max. Value
200.14 N at 61.28 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

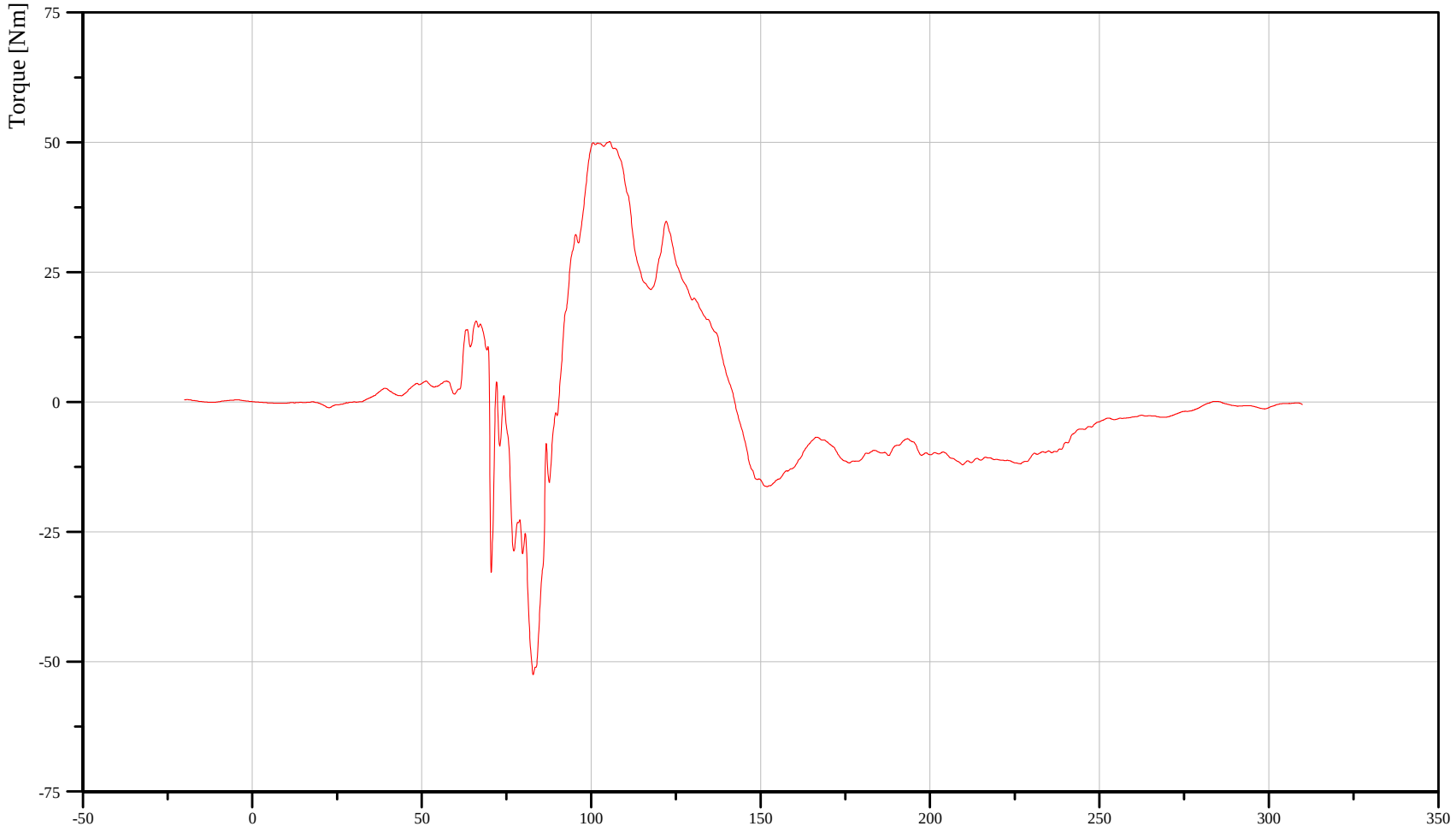
Target Vehicle Driver Right Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRLLXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-52.50 Nm at 82.88 ms

Max. Value
50.16 Nm at 105.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

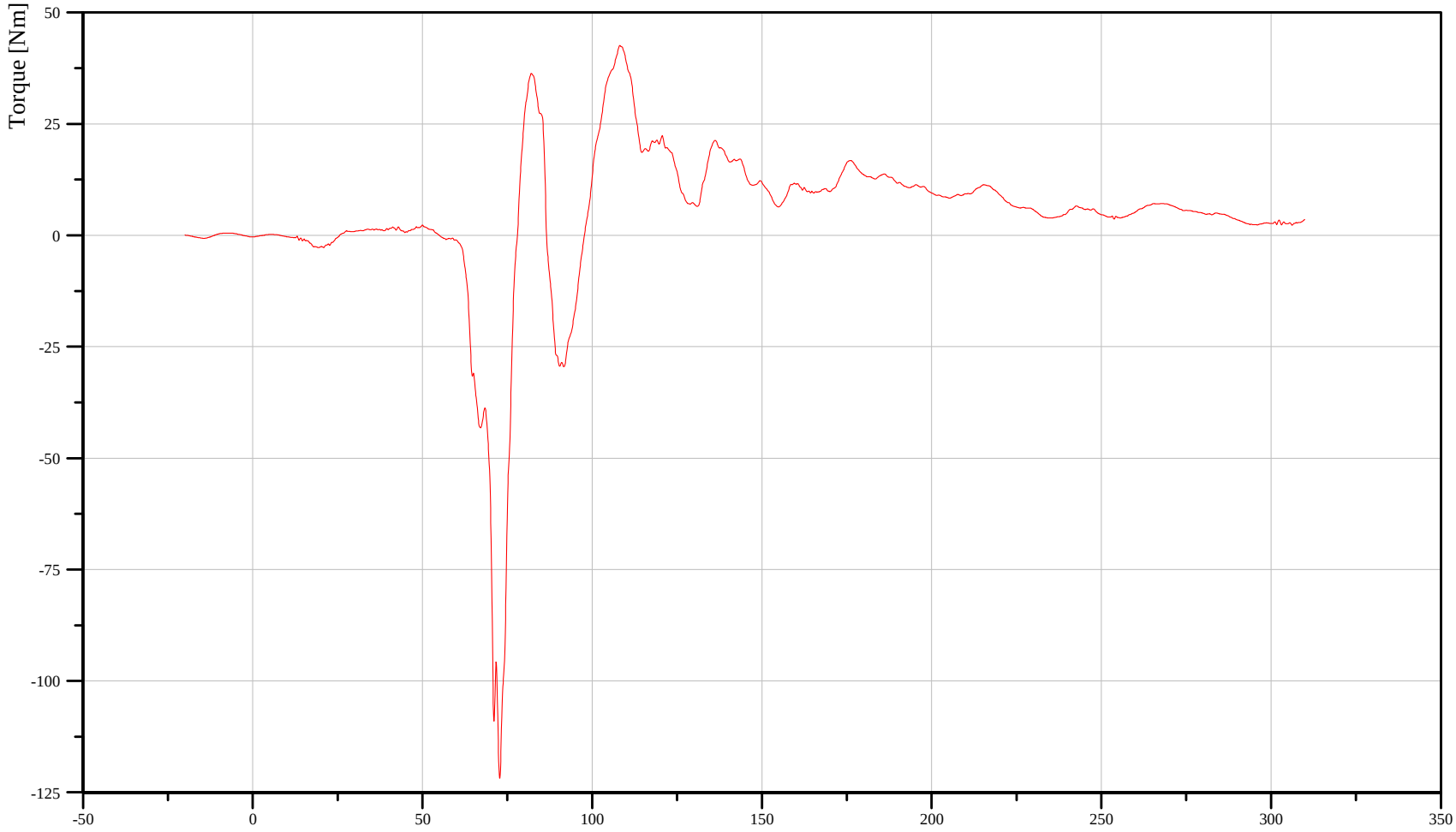
Target Vehicle Driver Right Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21TIBIRLLXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-121.85 Nm at 72.80 ms

Max. Value
42.55 Nm at 108.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

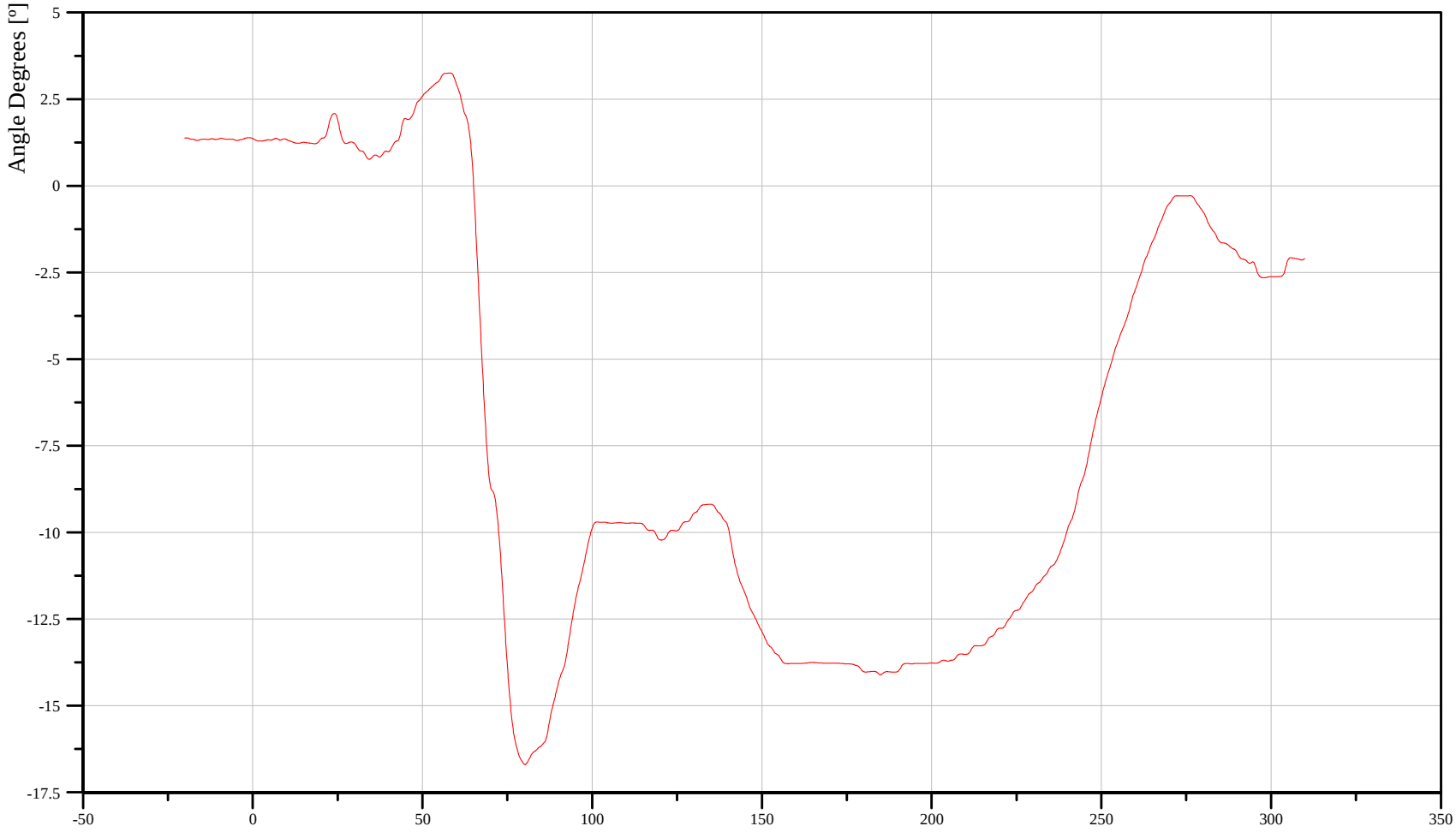
Target Vehicle Driver Right Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-16.70 ° at 80.24 ms

Max. Value
3.26 ° at 58.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

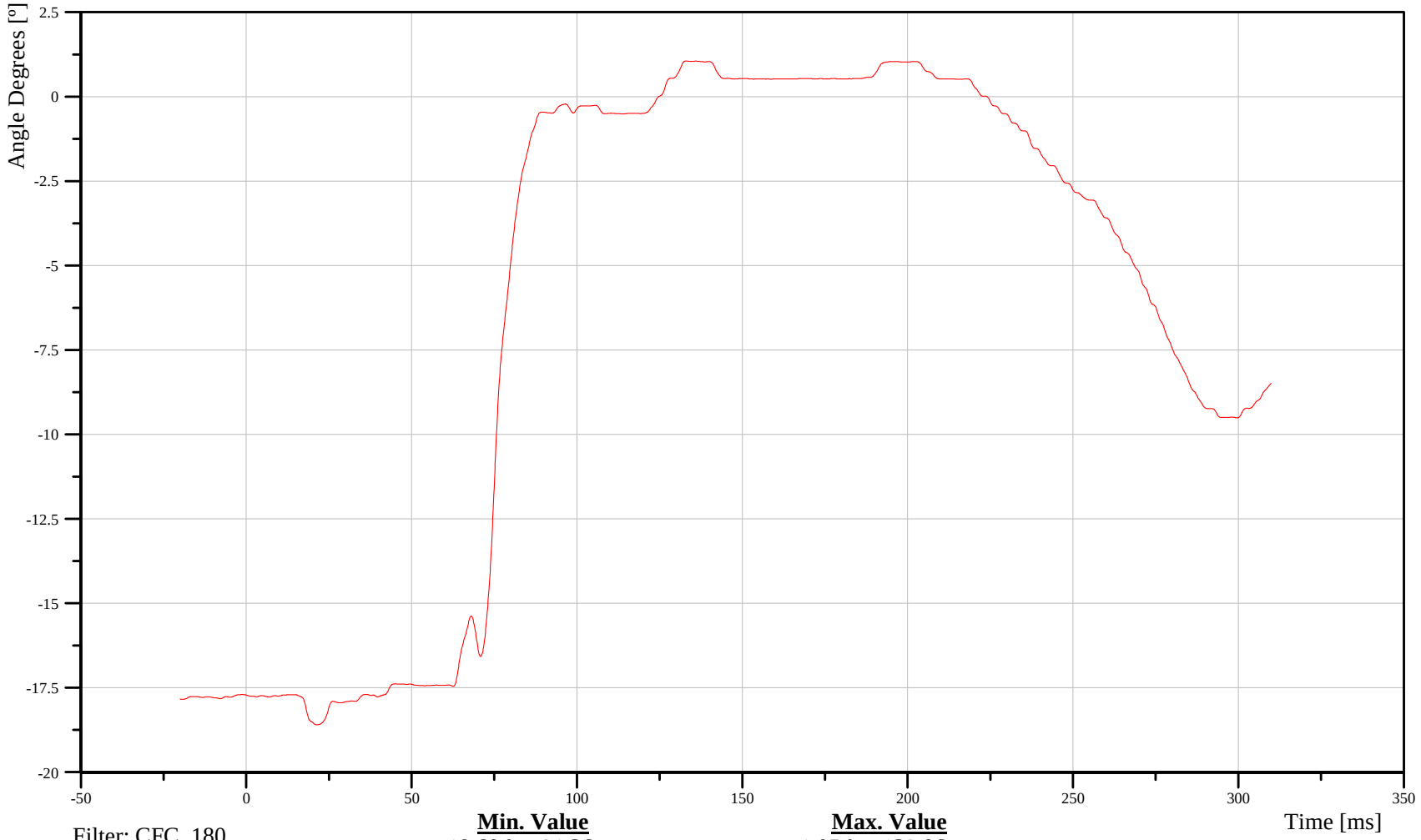
Target Vehicle Driver Right Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-18.60 ° at 21.36 ms

Max. Value
1.05 ° at 132.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

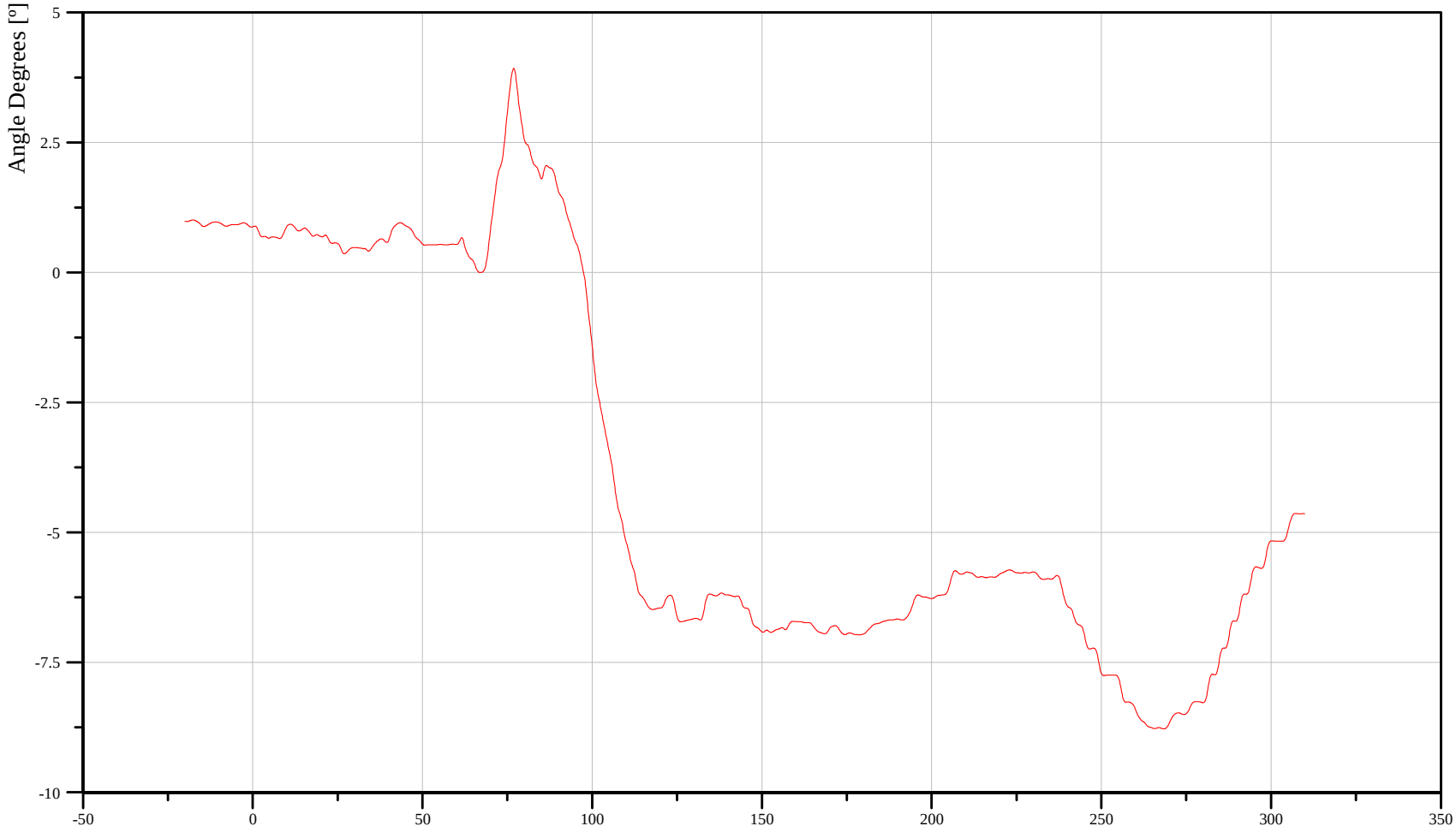
Target Vehicle Driver Right Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-8.78 ° at 268.40 ms

Max. Value
3.92 ° at 76.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

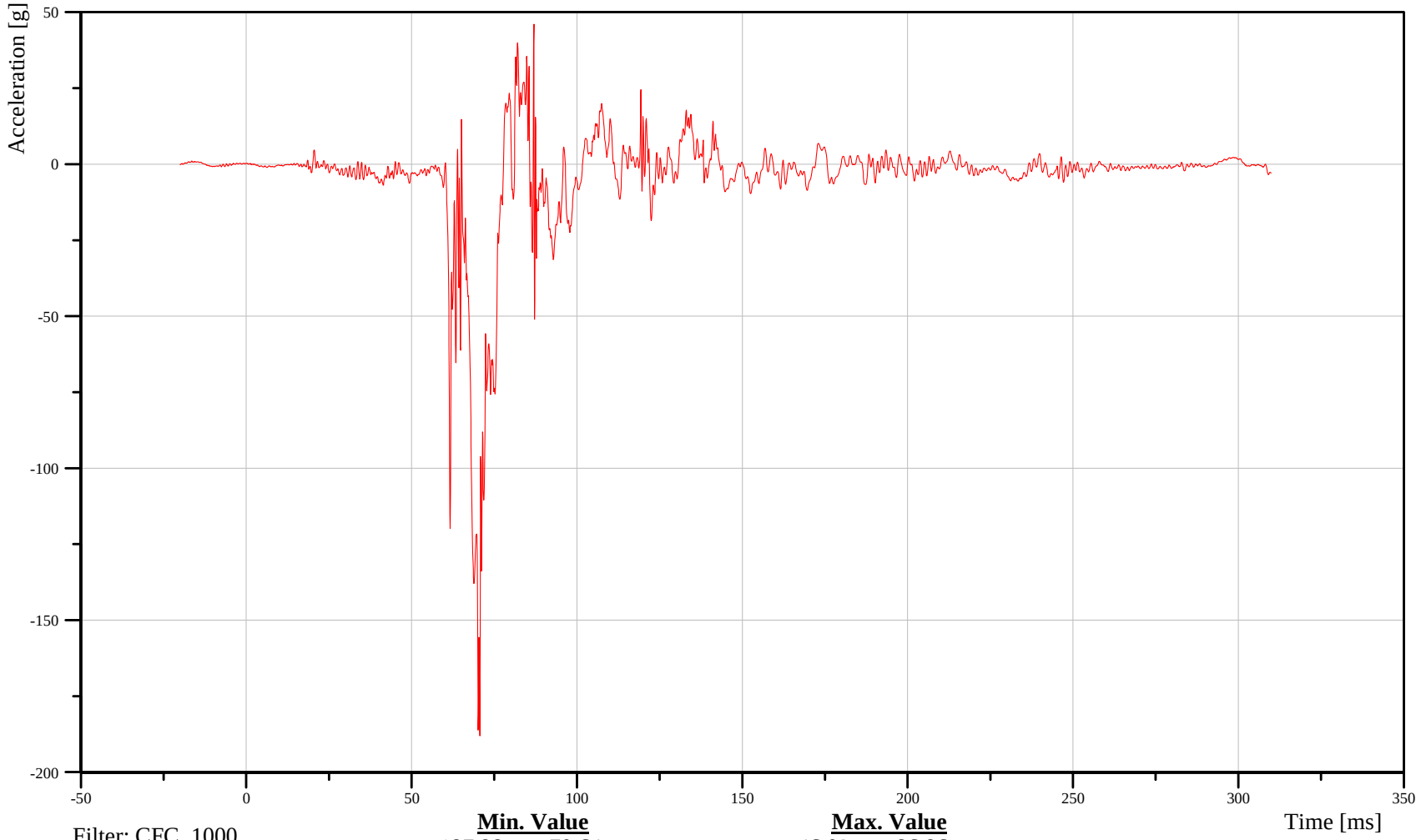
Target Vehicle Driver Right Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-187.98 g at 70.64 ms

Max. Value
46.02 g at 86.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

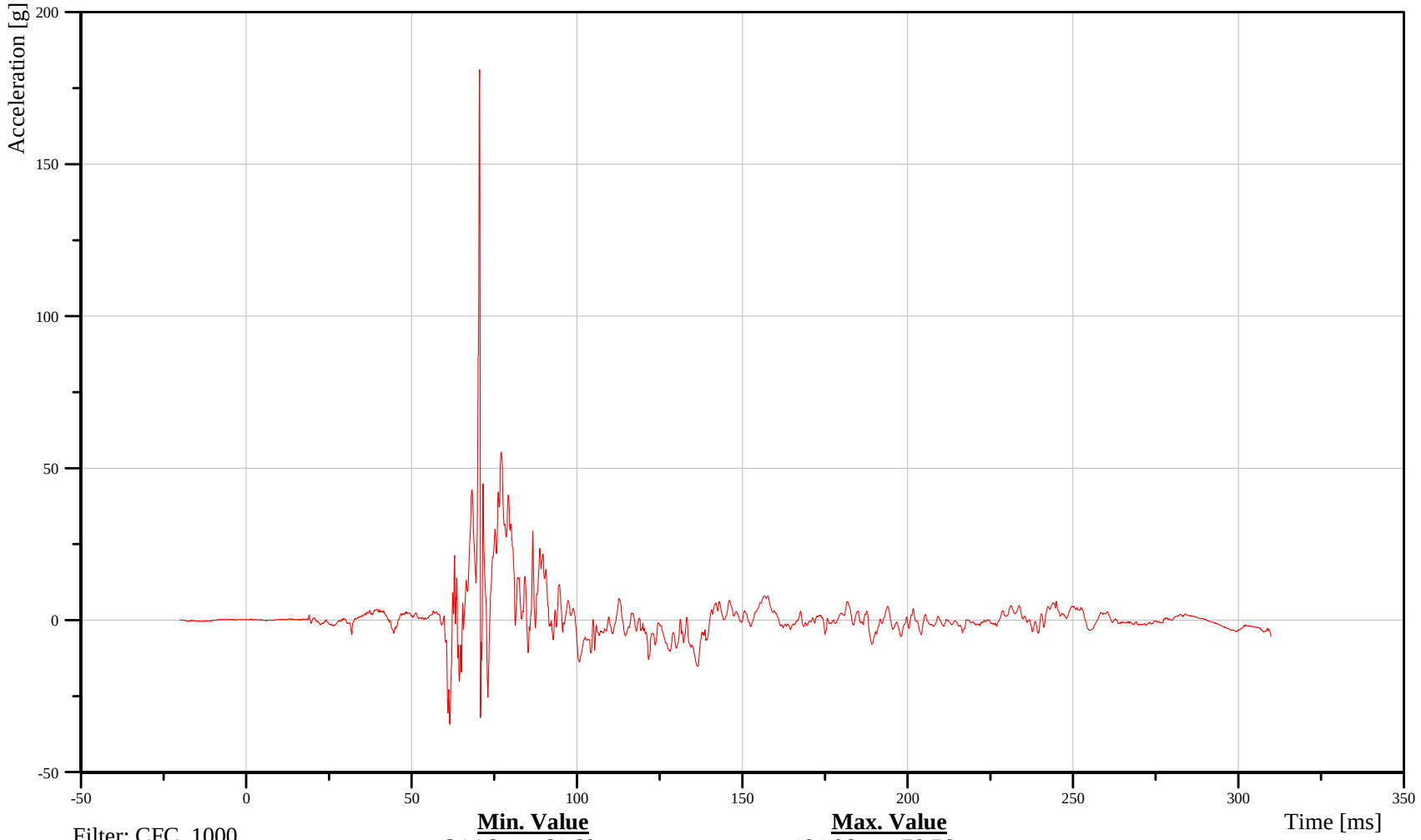
Target Vehicle Driver Right Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-34.26 g at 61.60 ms

Max. Value
181.06 g at 70.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

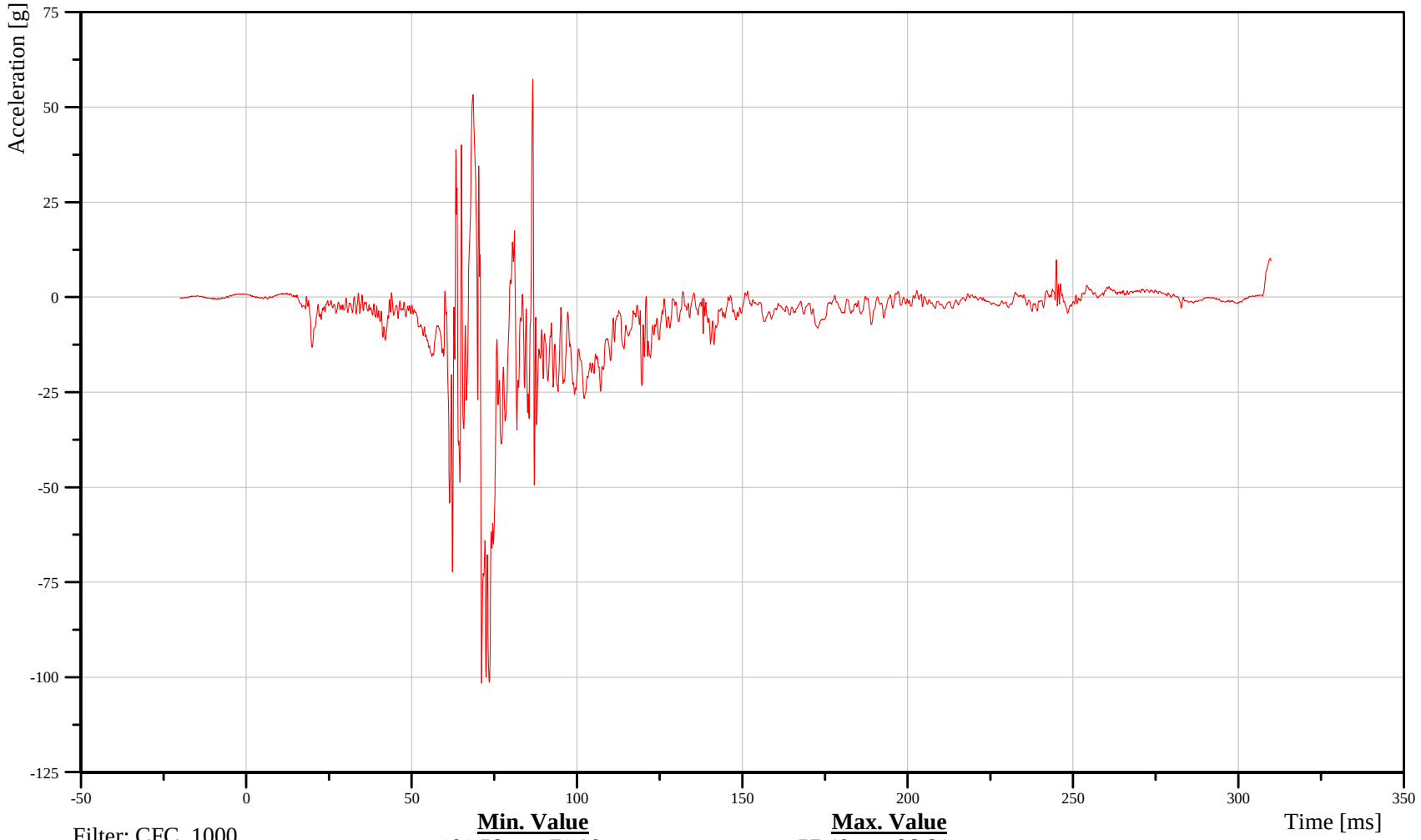
Target Vehicle Driver Right Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-101.58 g at 71.20 ms

Max. Value
57.40 g at 86.64 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

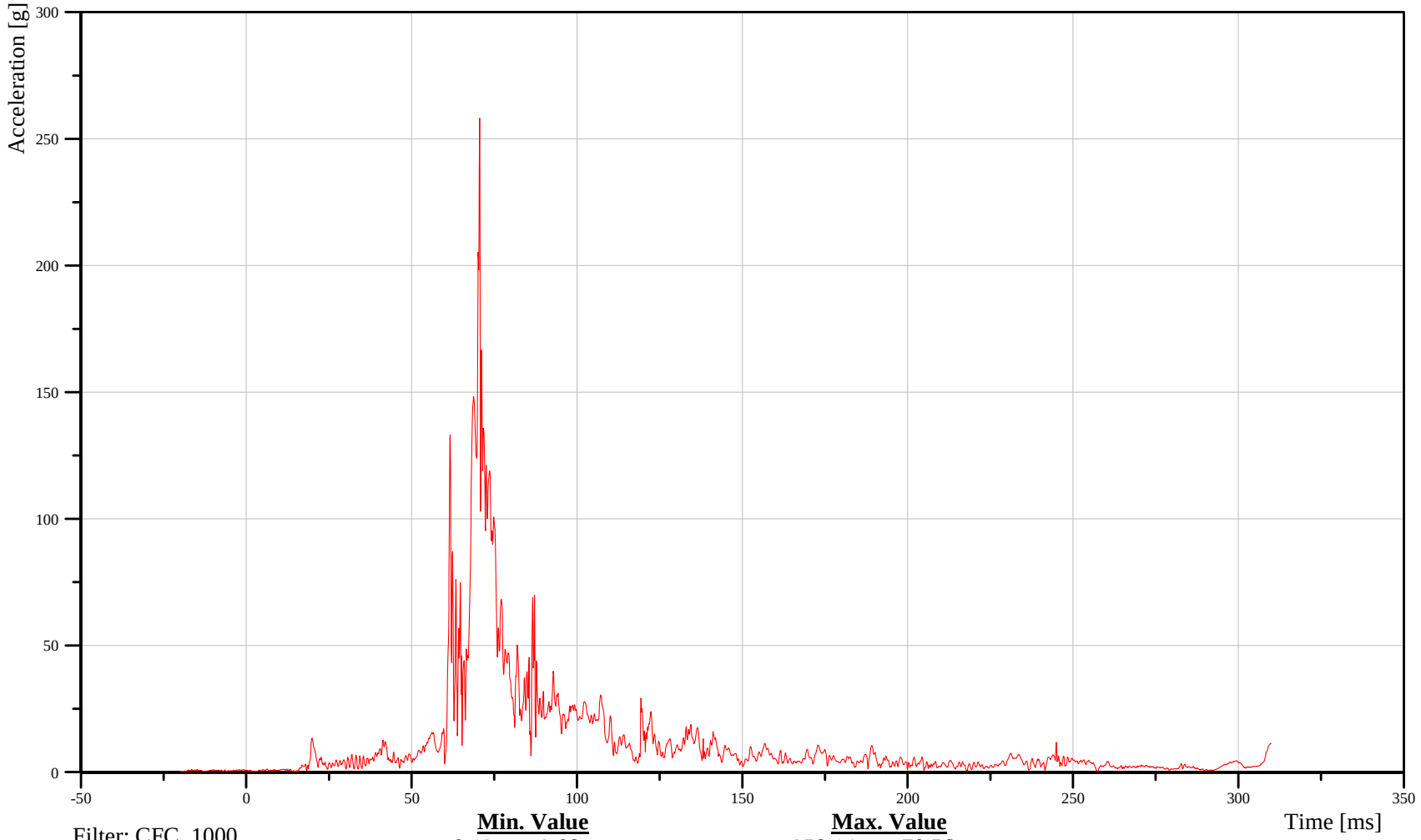
Target Vehicle Driver Right Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.12 g at 2.08 ms

Max. Value
258.14 g at 70.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

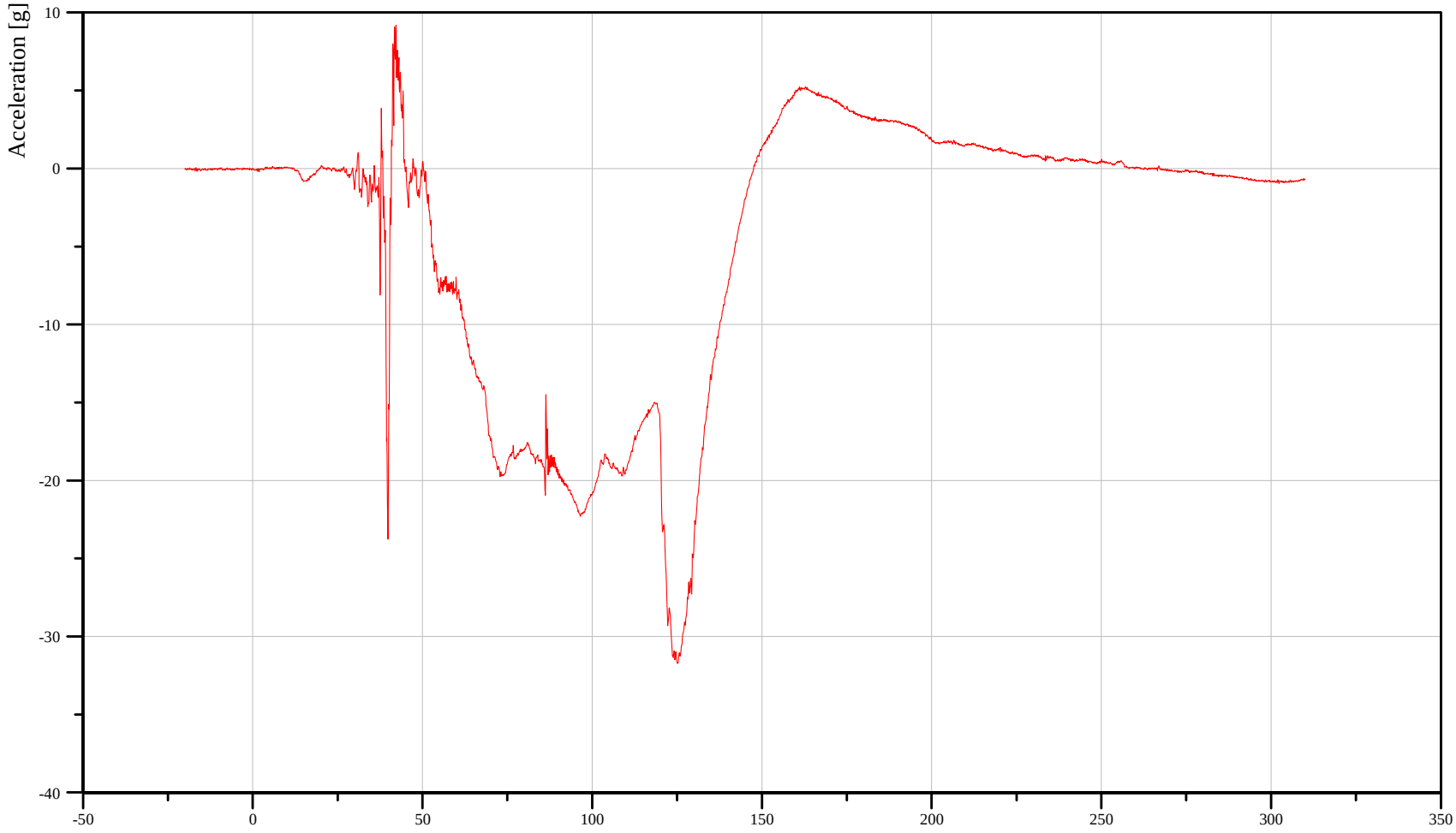
Target Vehicle Passenger Head X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-31.73 g at 125.04 ms

Max. Value
9.19 g at 42.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

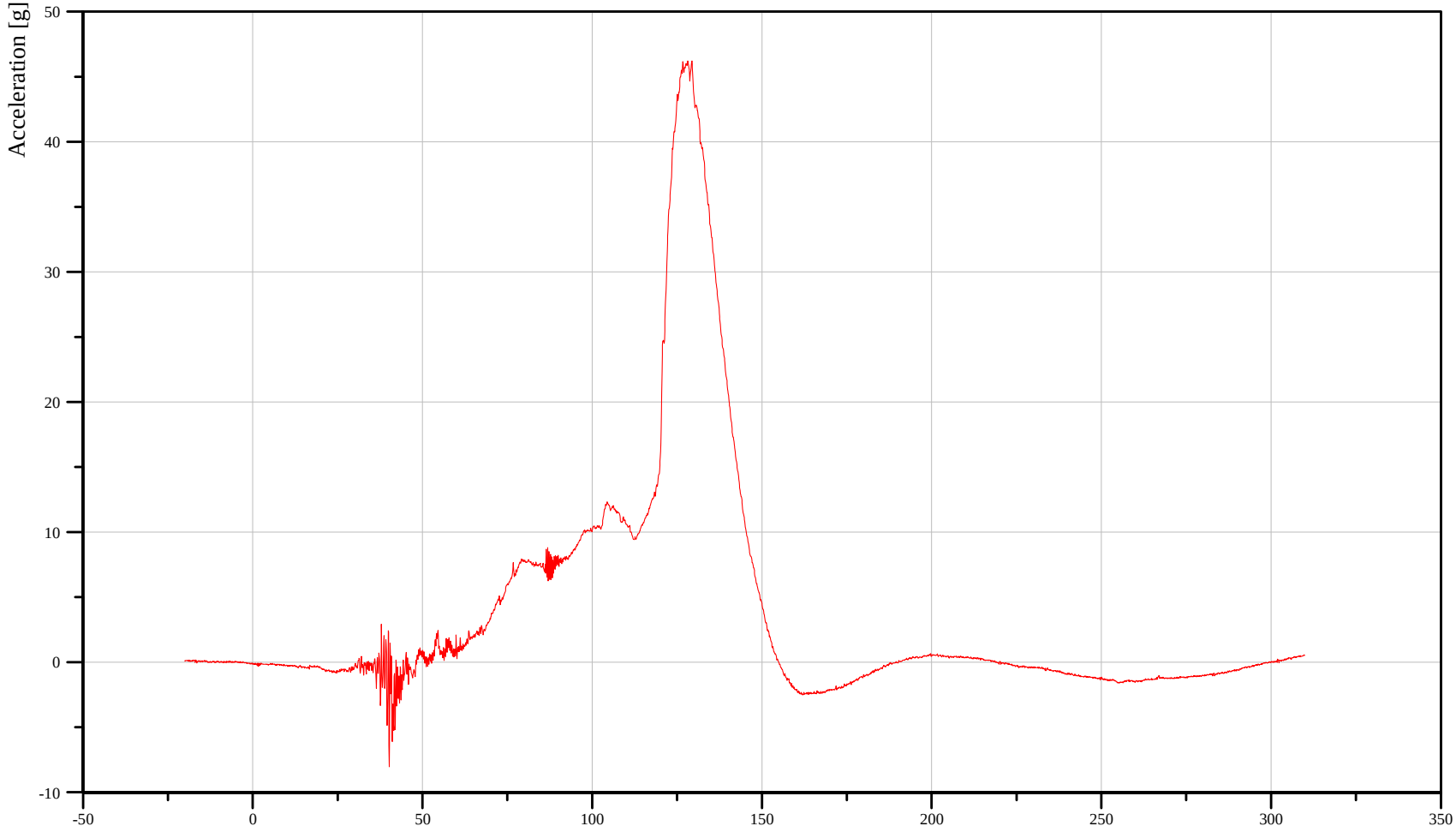
Target Vehicle Passenger Head Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-8.05 g at 40.24 ms

Max. Value
46.20 g at 128.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

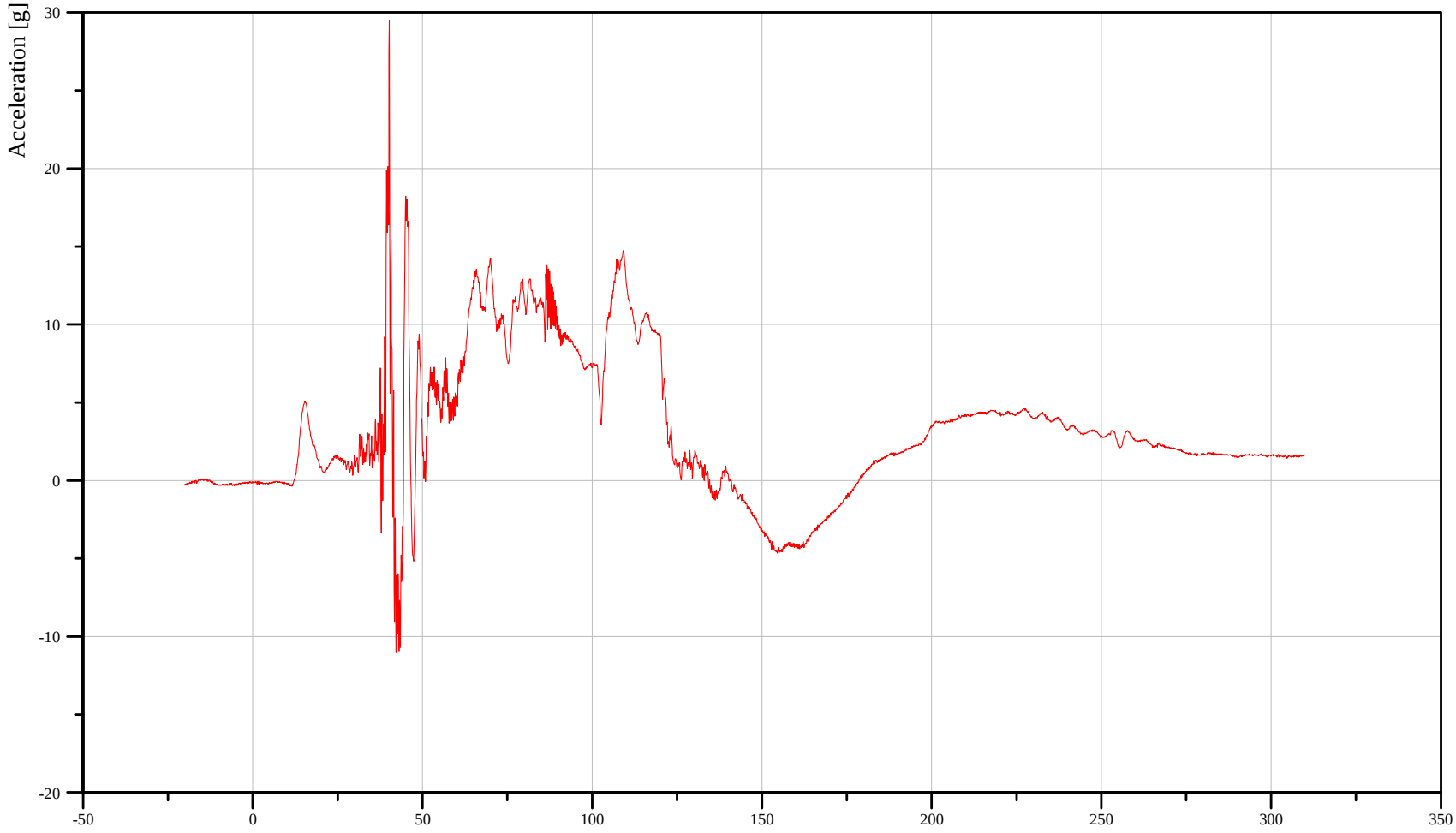
Target Vehicle Passenger Head Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-11.04 g at 42.16 ms

Max. Value
29.52 g at 40.24 ms

B-100

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

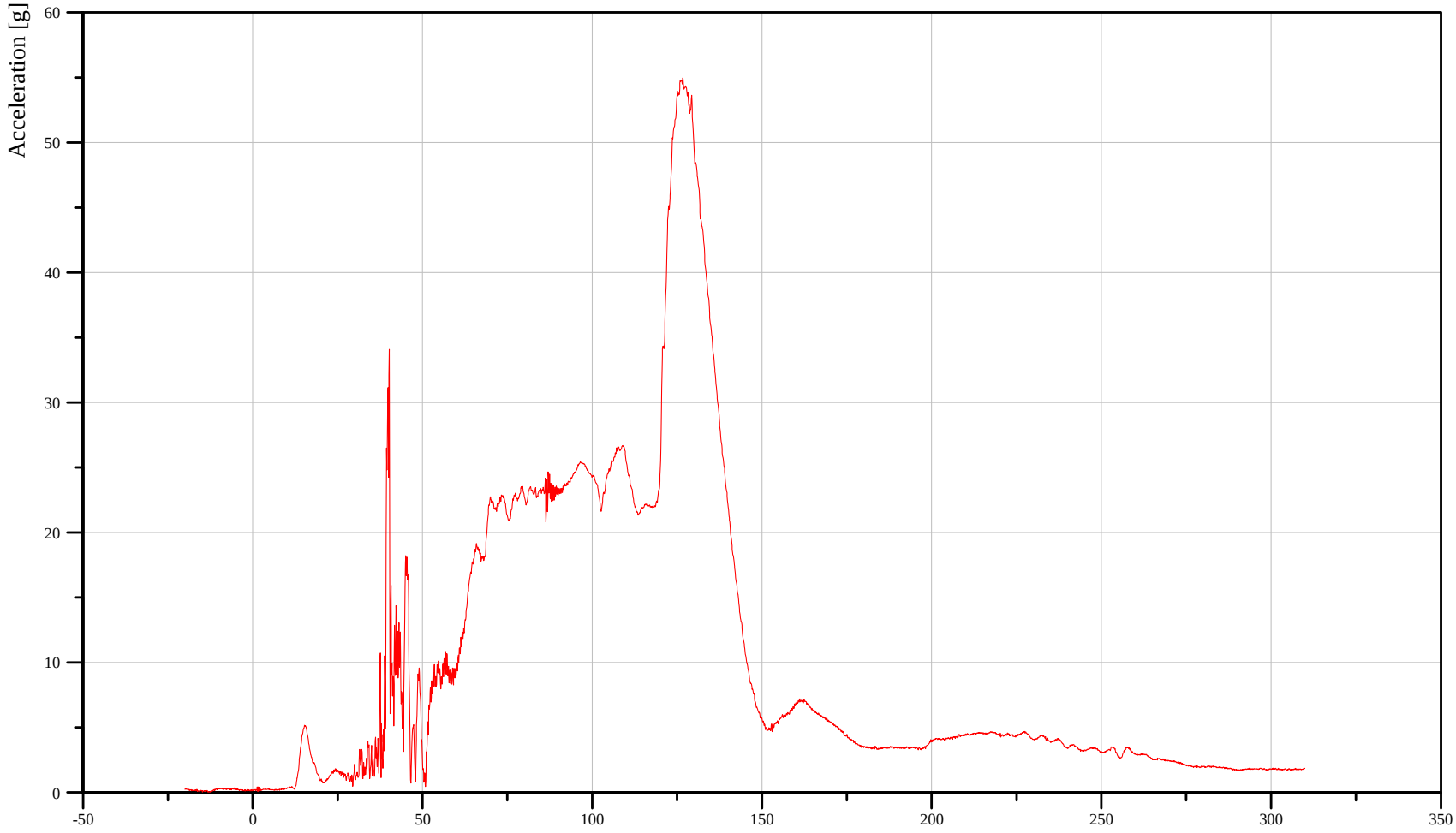
Target Vehicle Passenger Head Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.04 g at -12.96 ms

Max. Value
54.97 g at 126.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

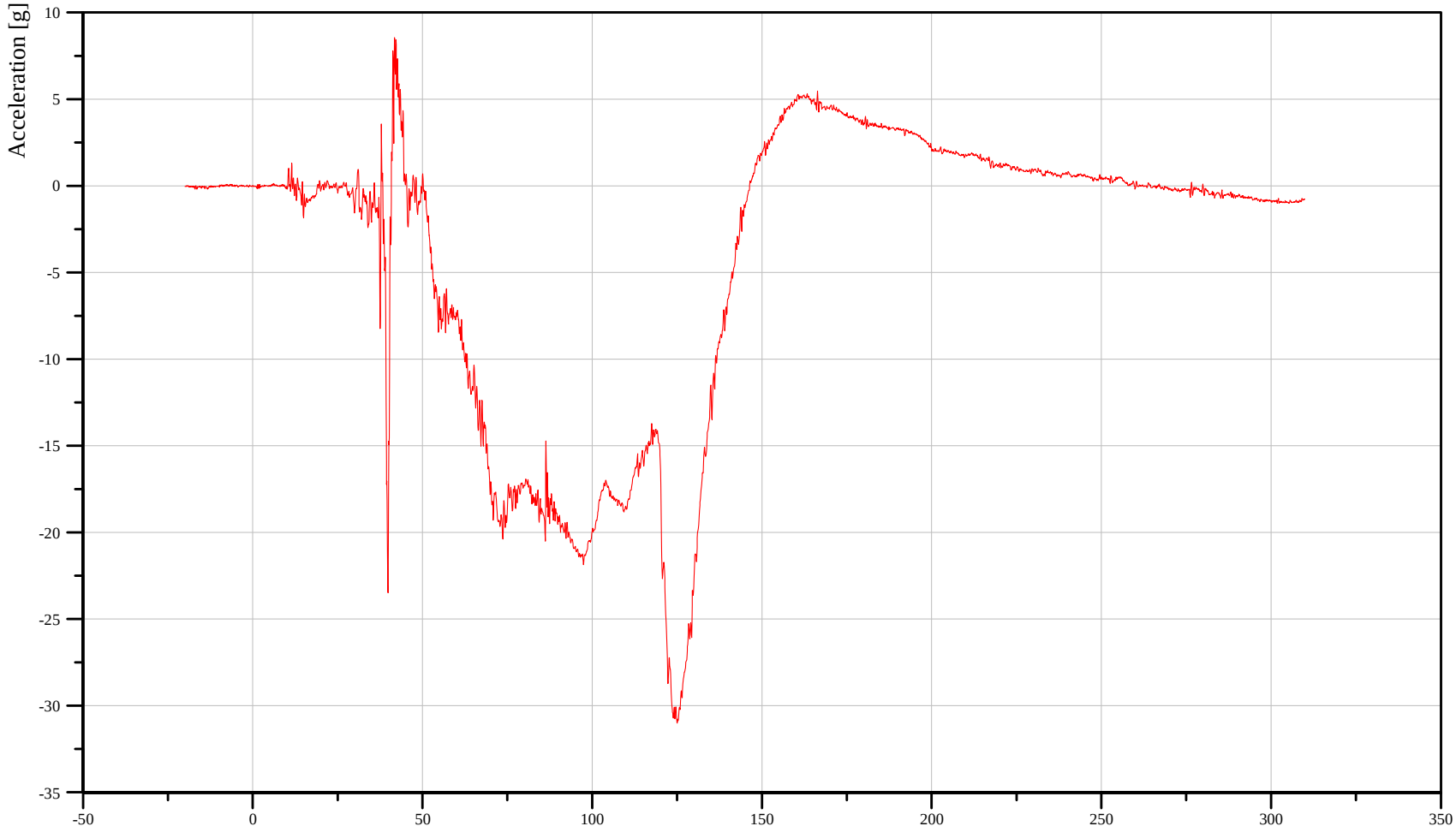
Target Vehicle Passenger Head X-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCGRDHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-30.99 g at 124.96 ms

Max. Value
8.54 g at 41.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

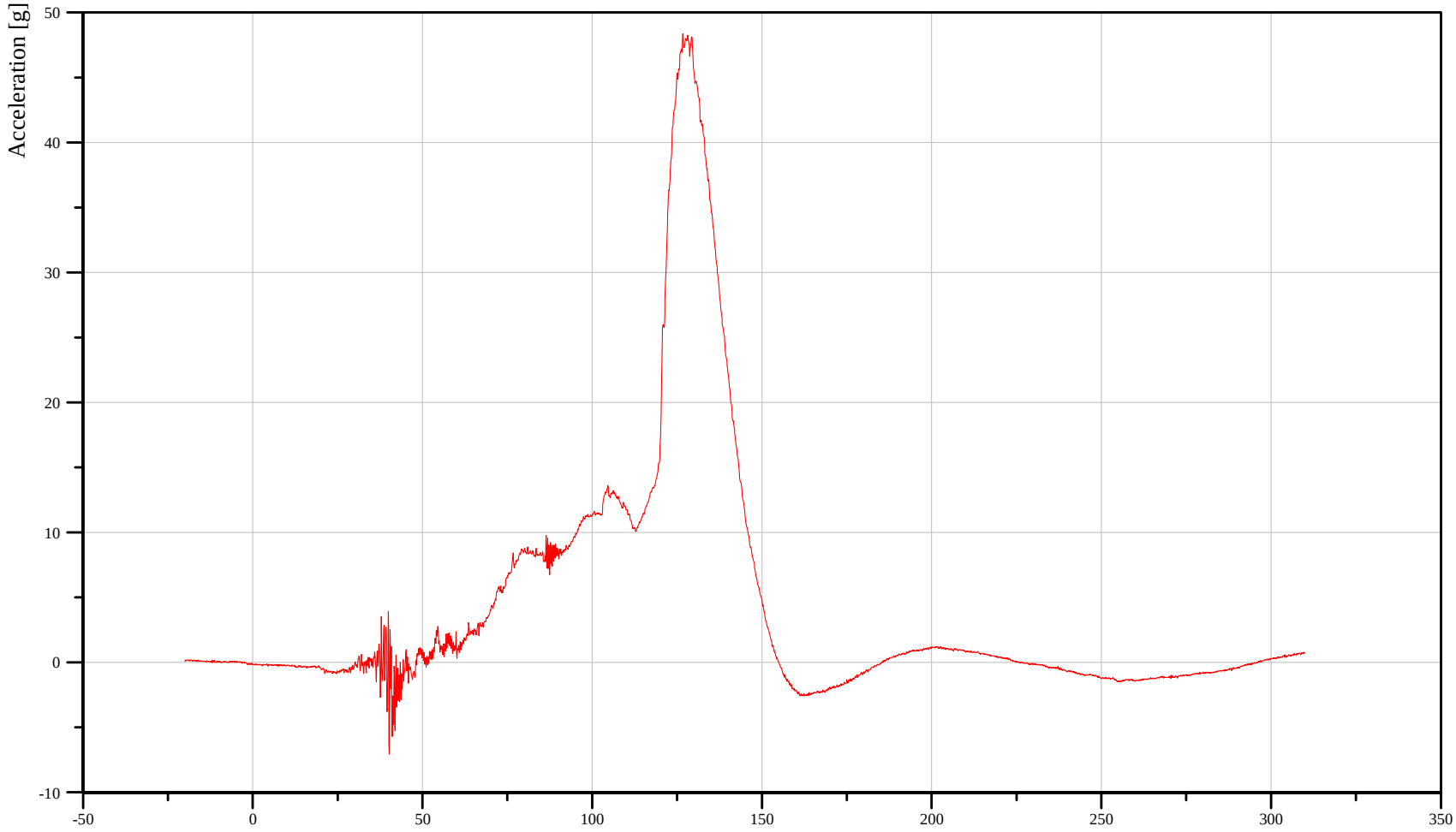
Target Vehicle Passenger Head Y-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCGRDHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-7.05 g at 40.24 ms

Max. Value
48.38 g at 126.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

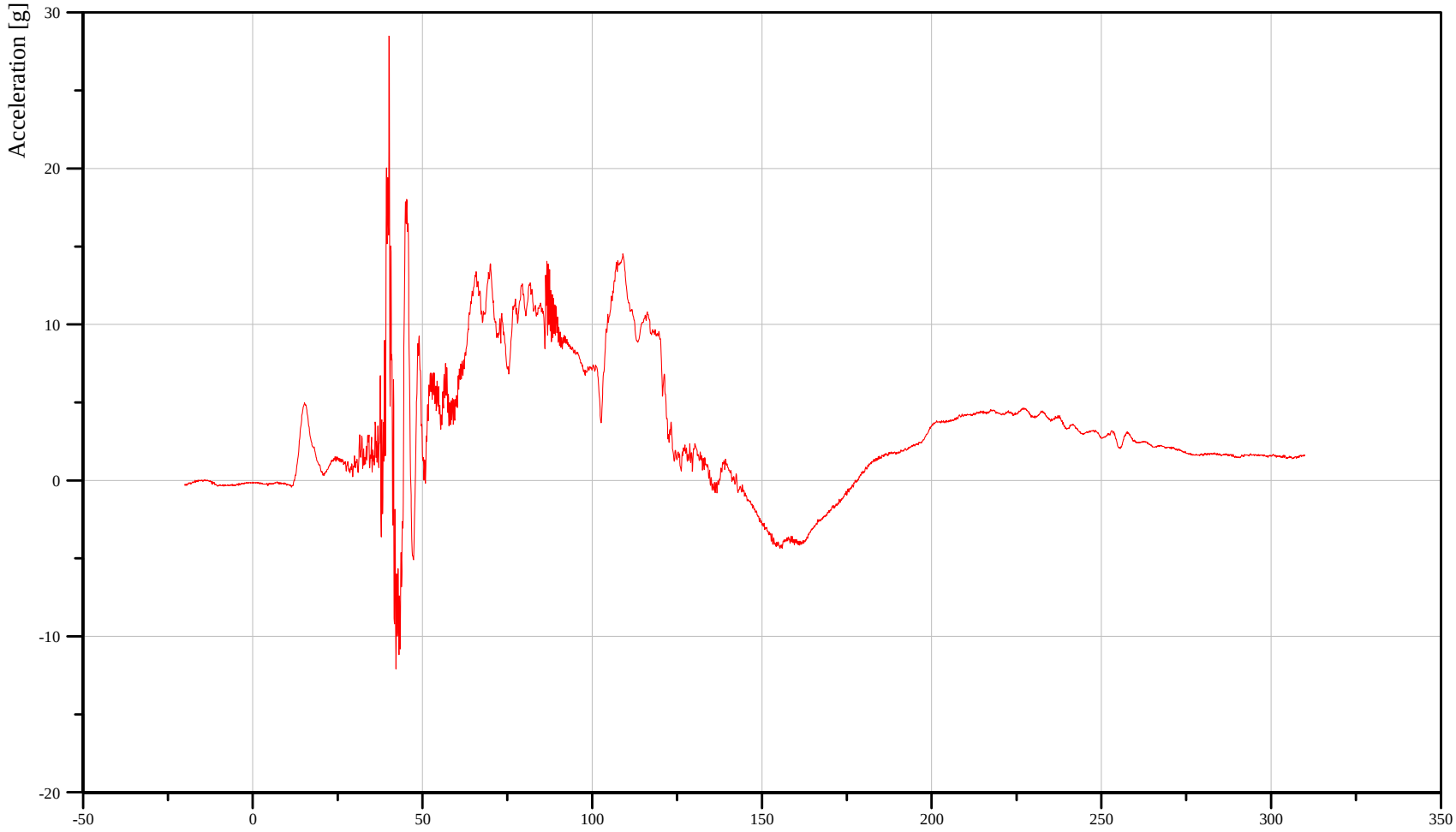
Target Vehicle Passenger Head Z-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCGRDHFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-12.09 g at 42.16 ms

Max. Value
28.49 g at 40.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

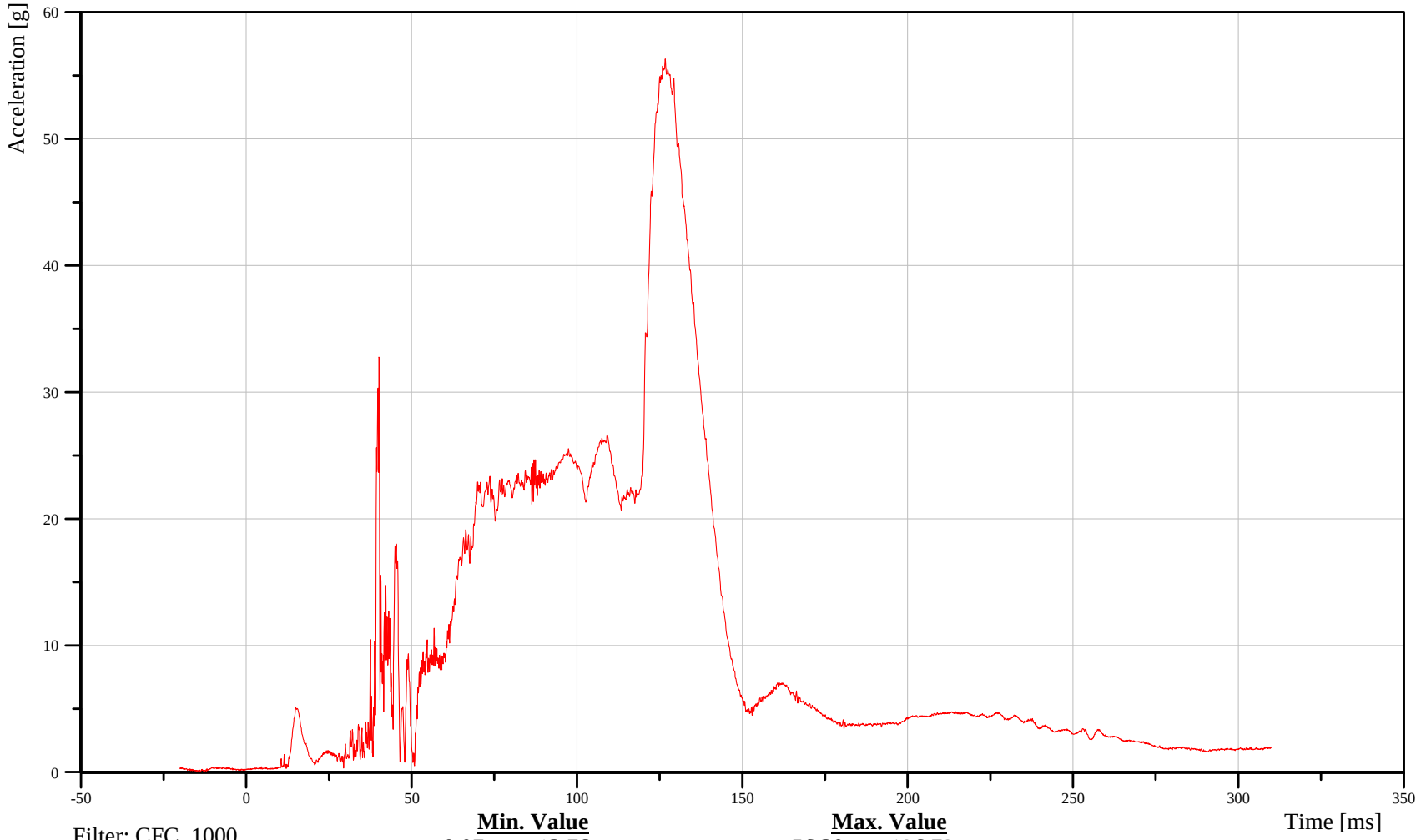
Target Vehicle Passenger Head Resultant Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23HEADCGRDHFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.07 g at -13.76 ms

Max. Value
56.30 g at 126.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

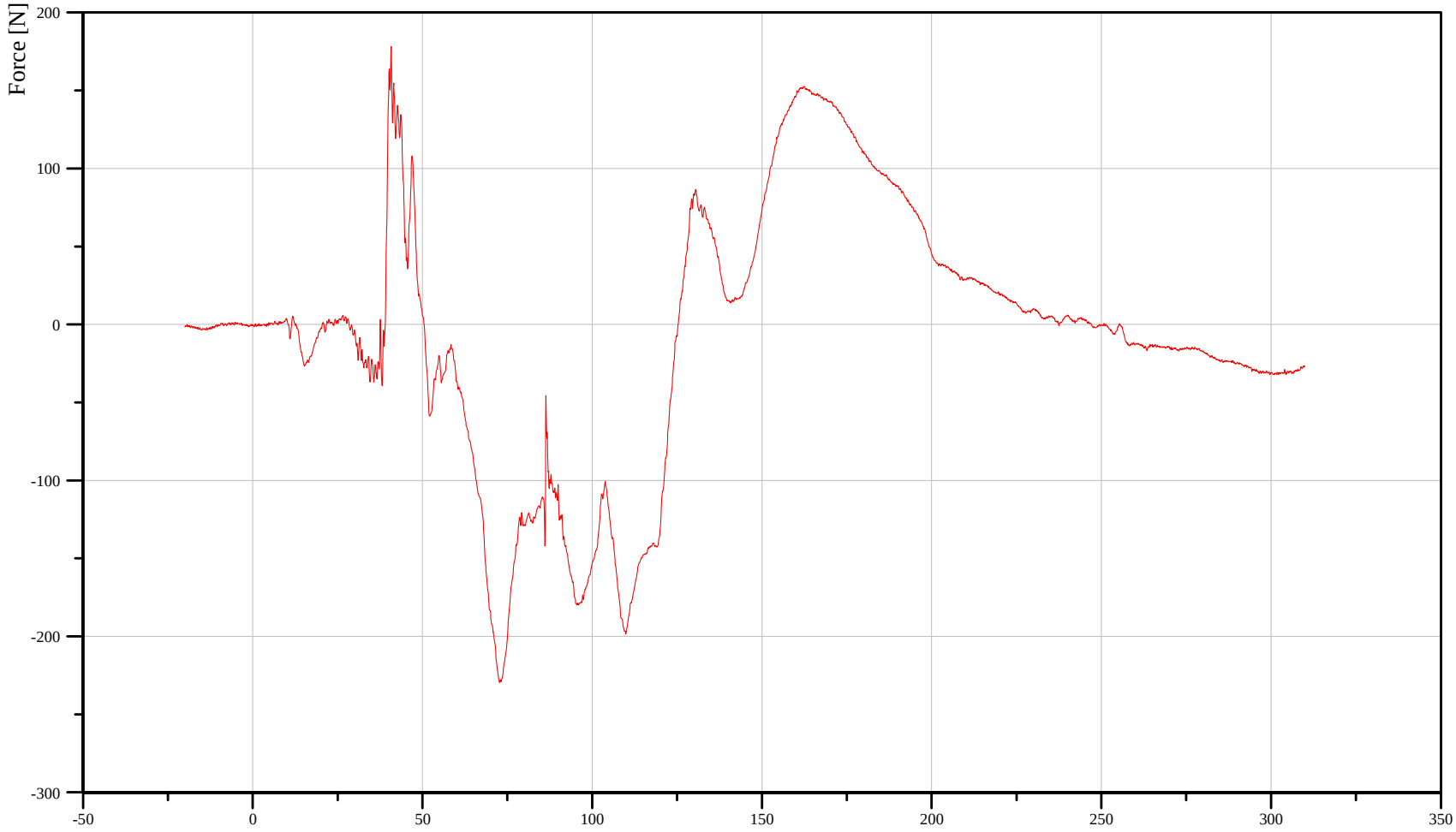
Target Vehicle Passenger Neck X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23NECKUP00HFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-229.59 N at 72.72 ms

Max. Value
178.18 N at 40.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

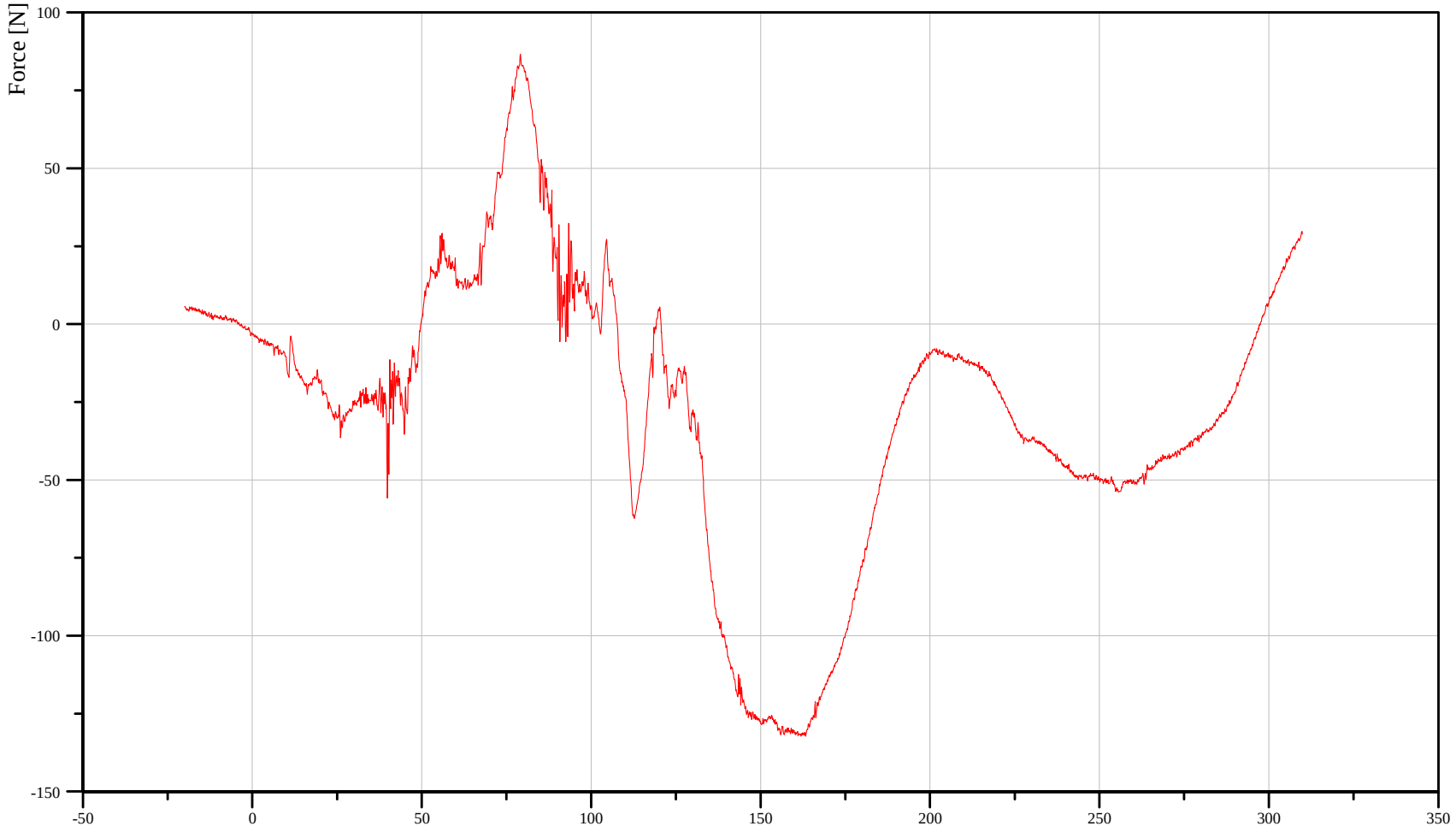
Target Vehicle Passenger Neck Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23NECKUP00HFFOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-132.30 N at 161.92 ms

Max. Value
86.61 N at 79.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

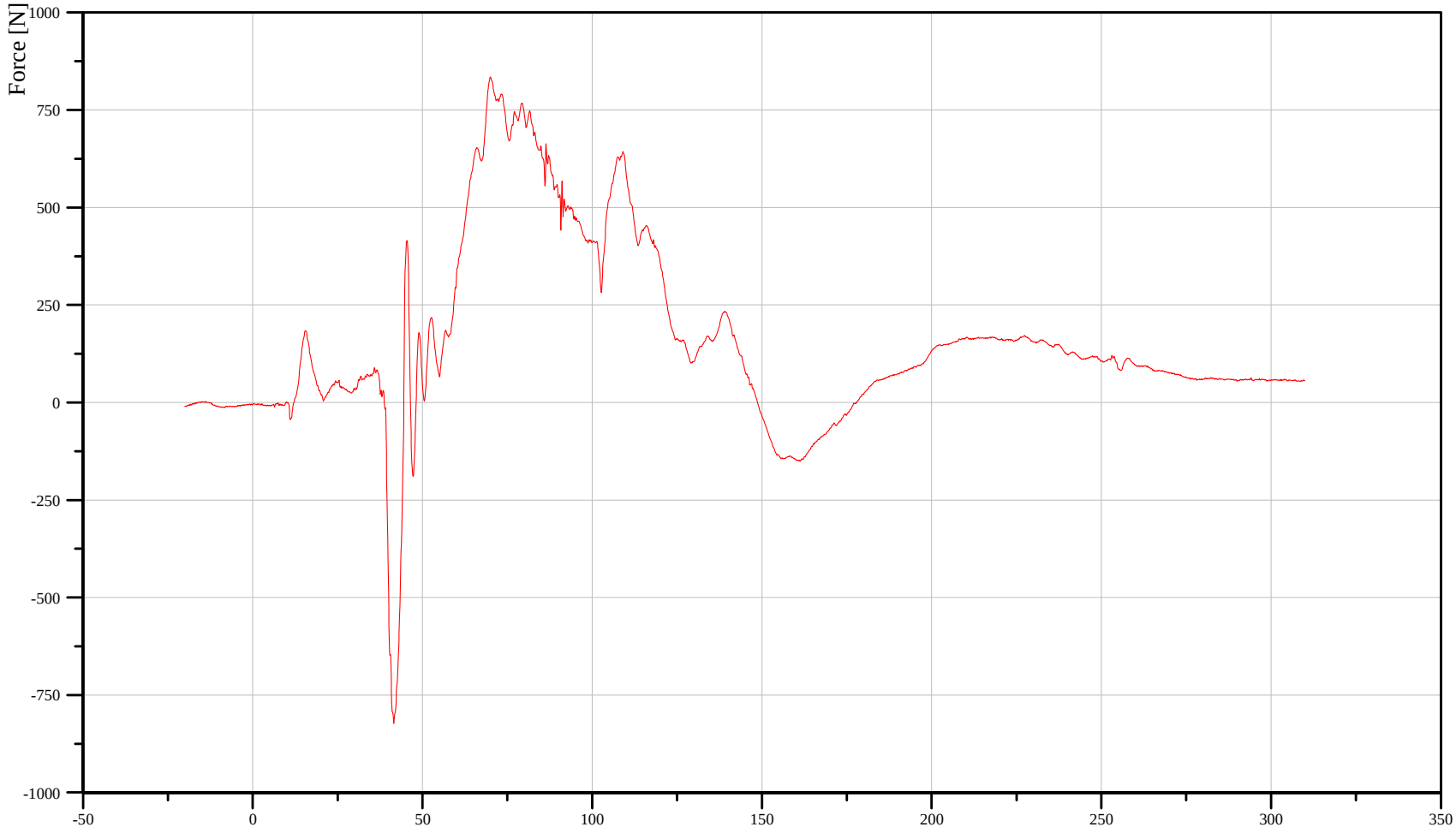
Target Vehicle Passenger Neck Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23NECKUP00HFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-822.56 N at 41.52 ms

Max. Value
834.83 N at 70.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

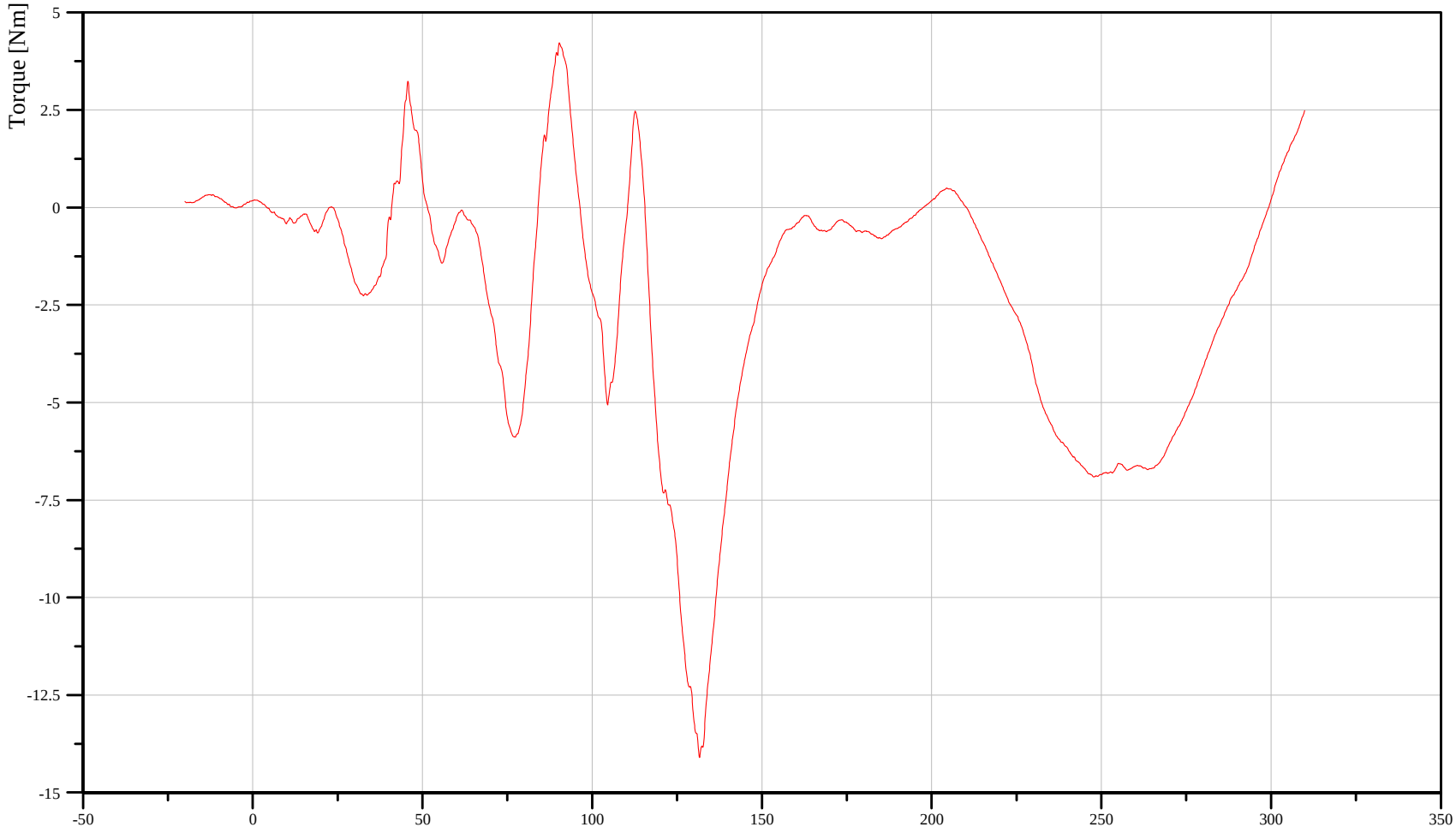
Target Vehicle Passenger Neck Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23NECKUP00HFMOXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-14.10 Nm at 131.60 ms

Max. Value
4.22 Nm at 90.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

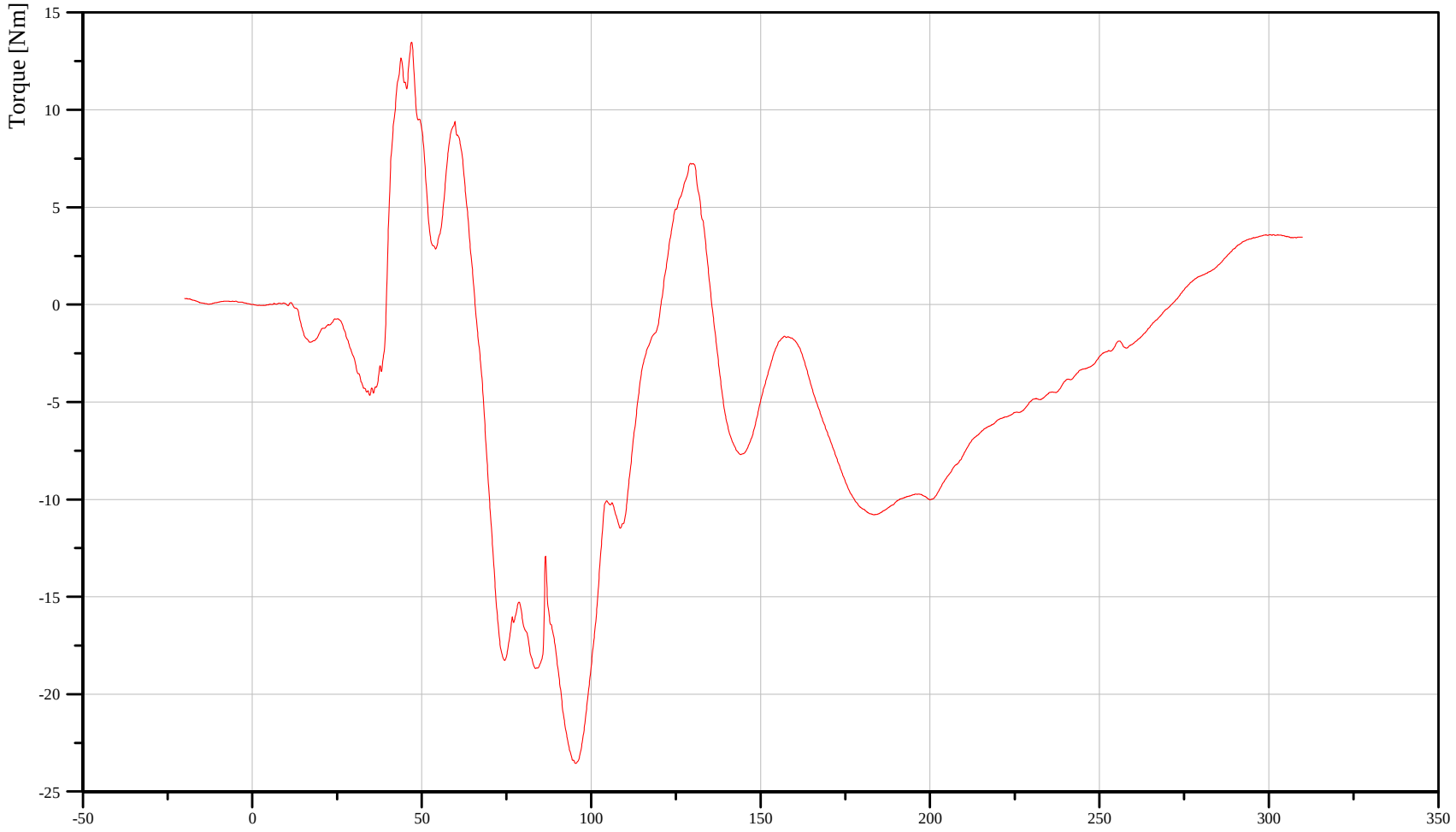
Target Vehicle Passenger Neck Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23NECKUP00HFMOYB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-23.56 Nm at 95.44 ms

Max. Value
13.48 Nm at 47.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

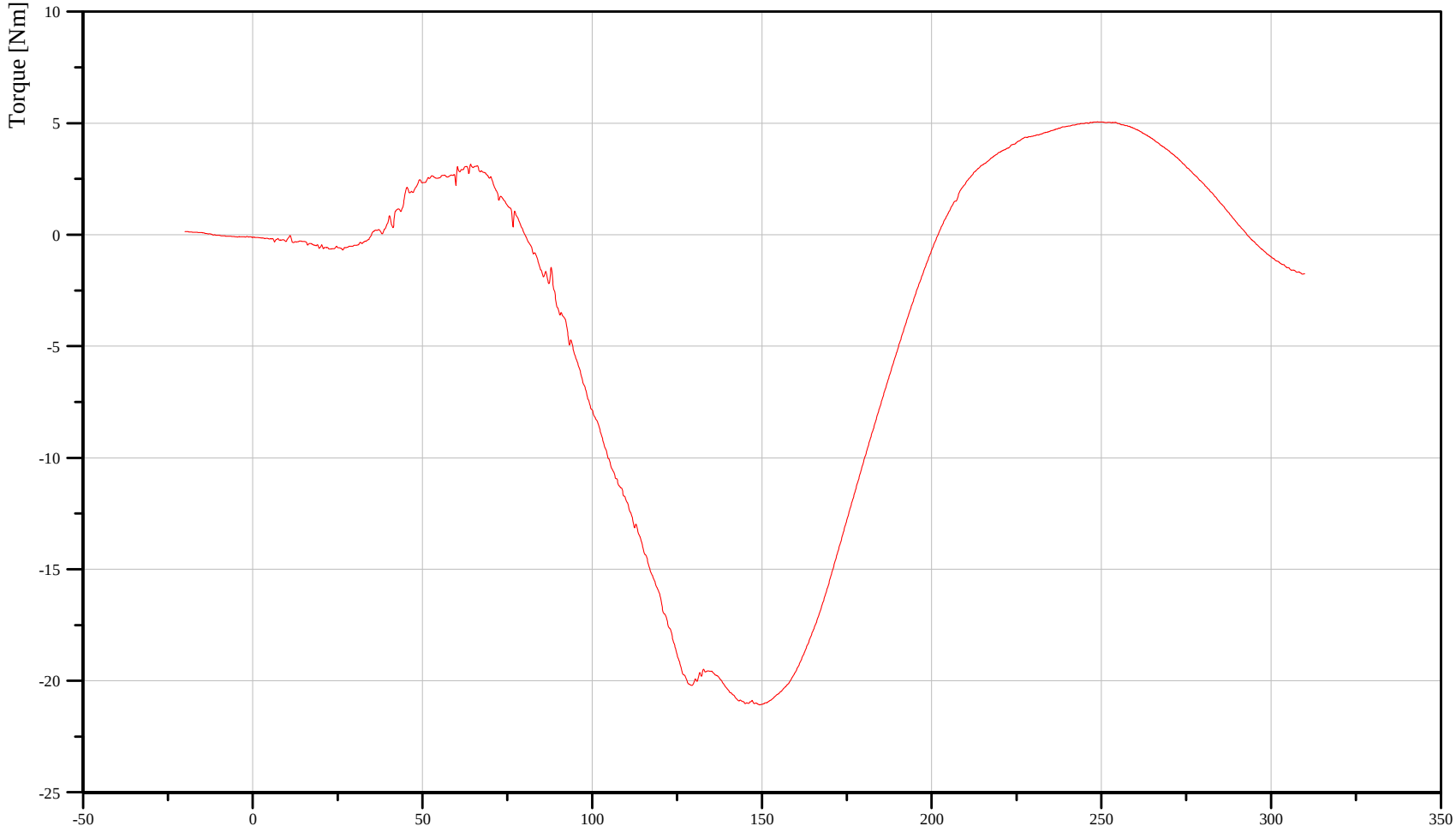
Target Vehicle Passenger Neck Moment About Z Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23NECKUP00HFMOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-21.07 Nm at 149.44 ms

Max. Value
5.06 Nm at 248.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

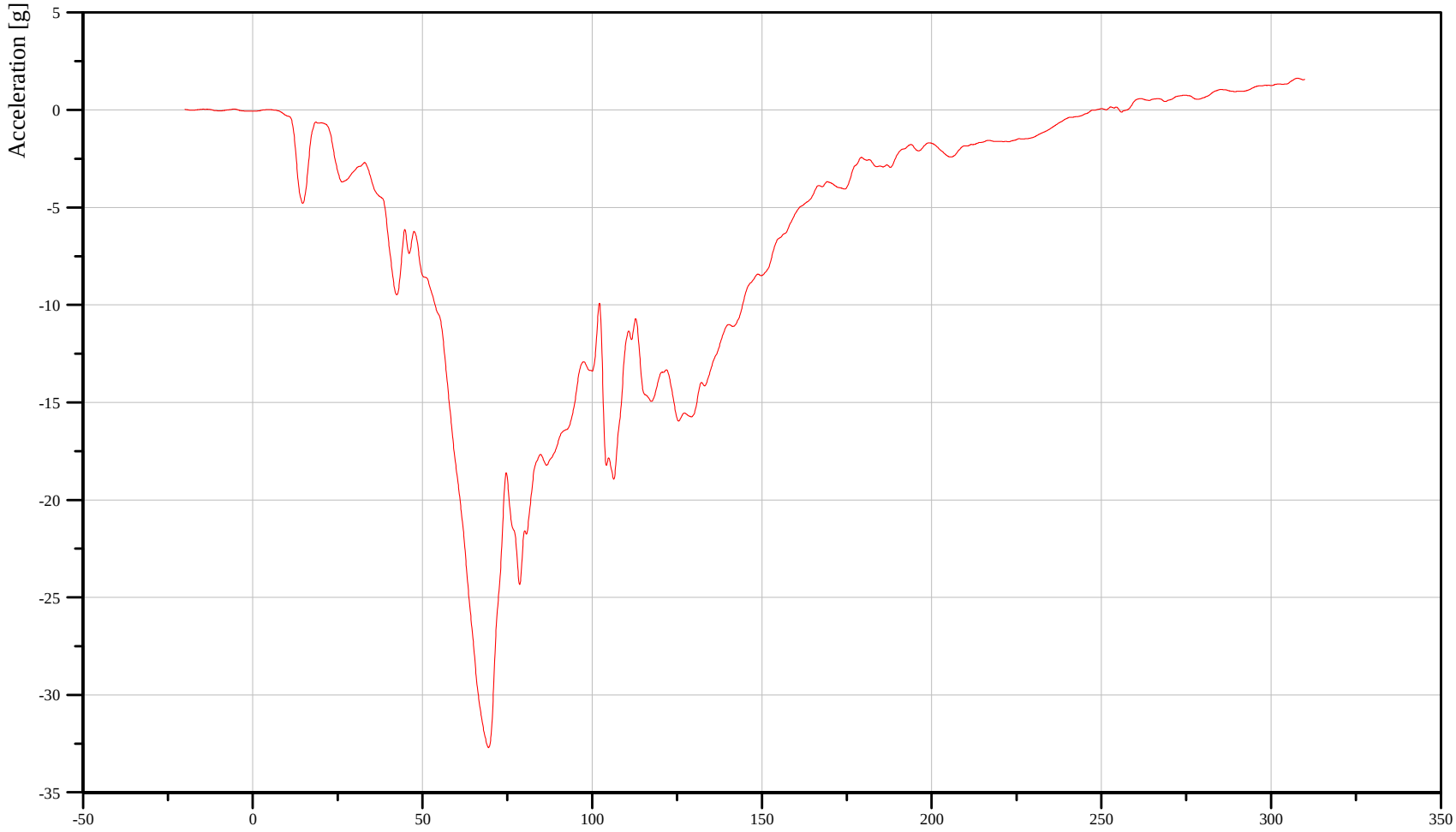
Target Vehicle Passenger Chest X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCG00HFACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-32.70 g at 69.44 ms

Max. Value
1.63 g at 307.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

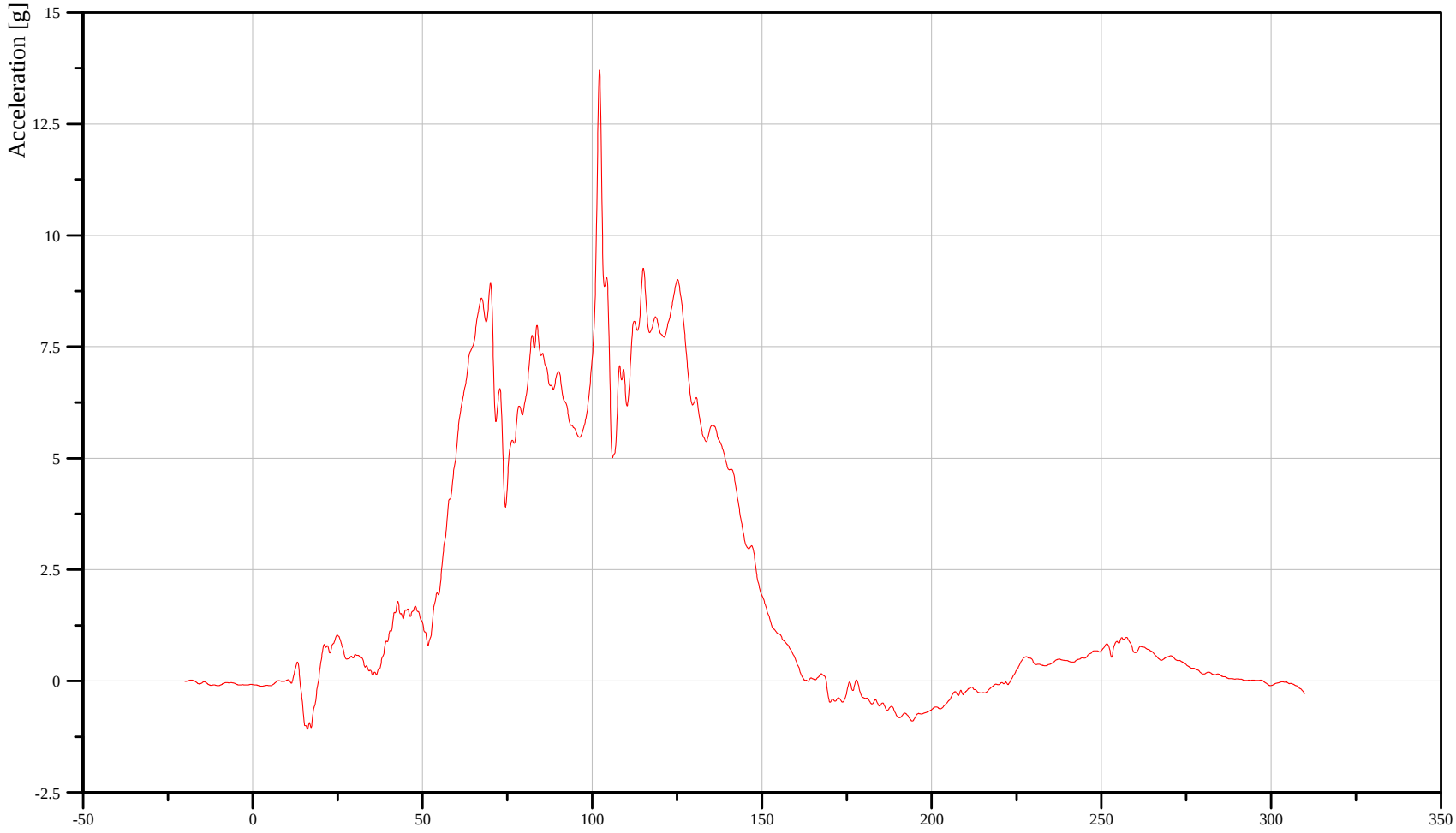
Target Vehicle Passenger Chest Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCG00HFACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.08 g at 16.08 ms

Max. Value
13.71 g at 102.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

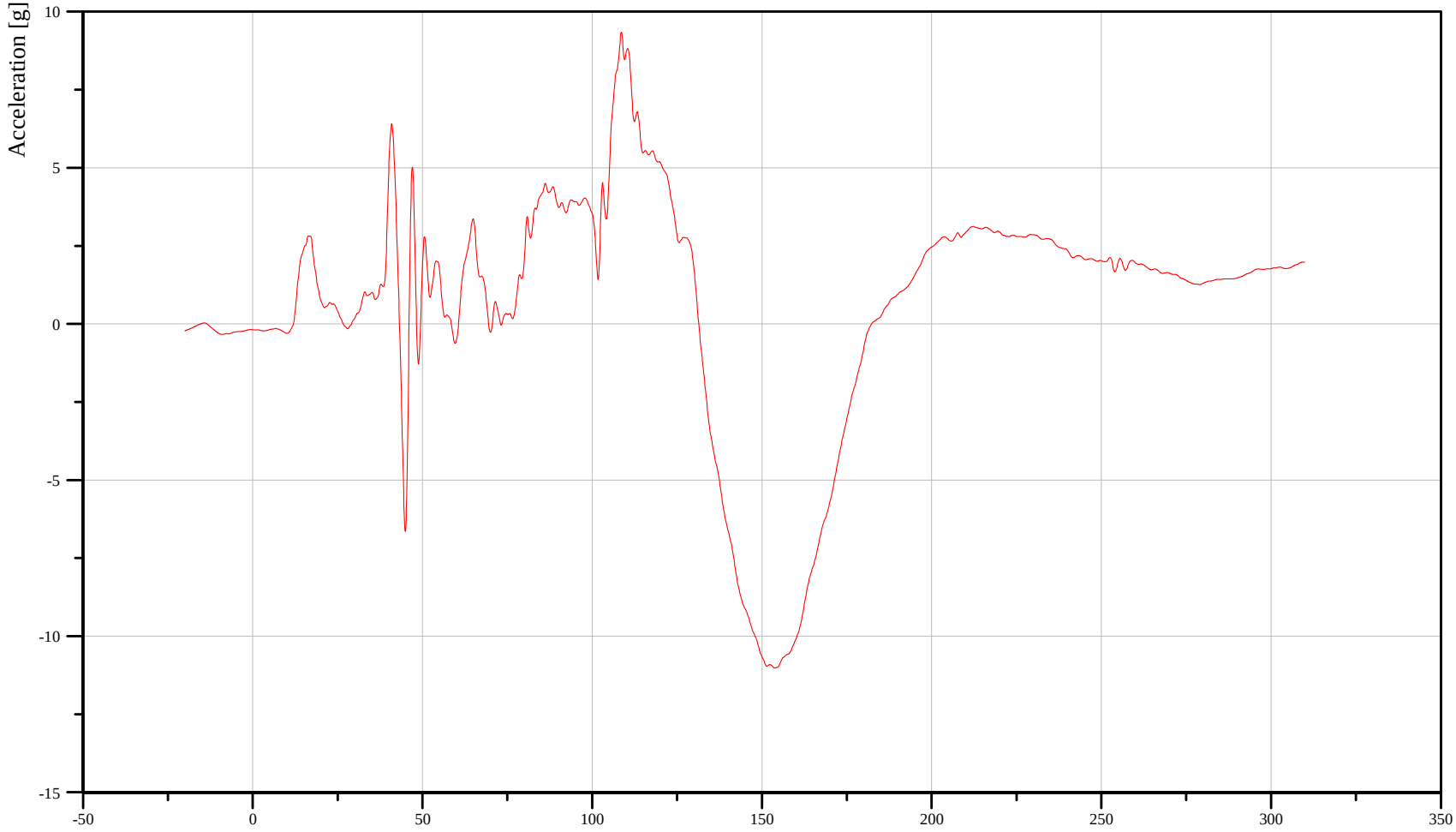
Target Vehicle Passenger Chest Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCG00HFACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-11.02 g at 153.76 ms

Max. Value
9.34 g at 108.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

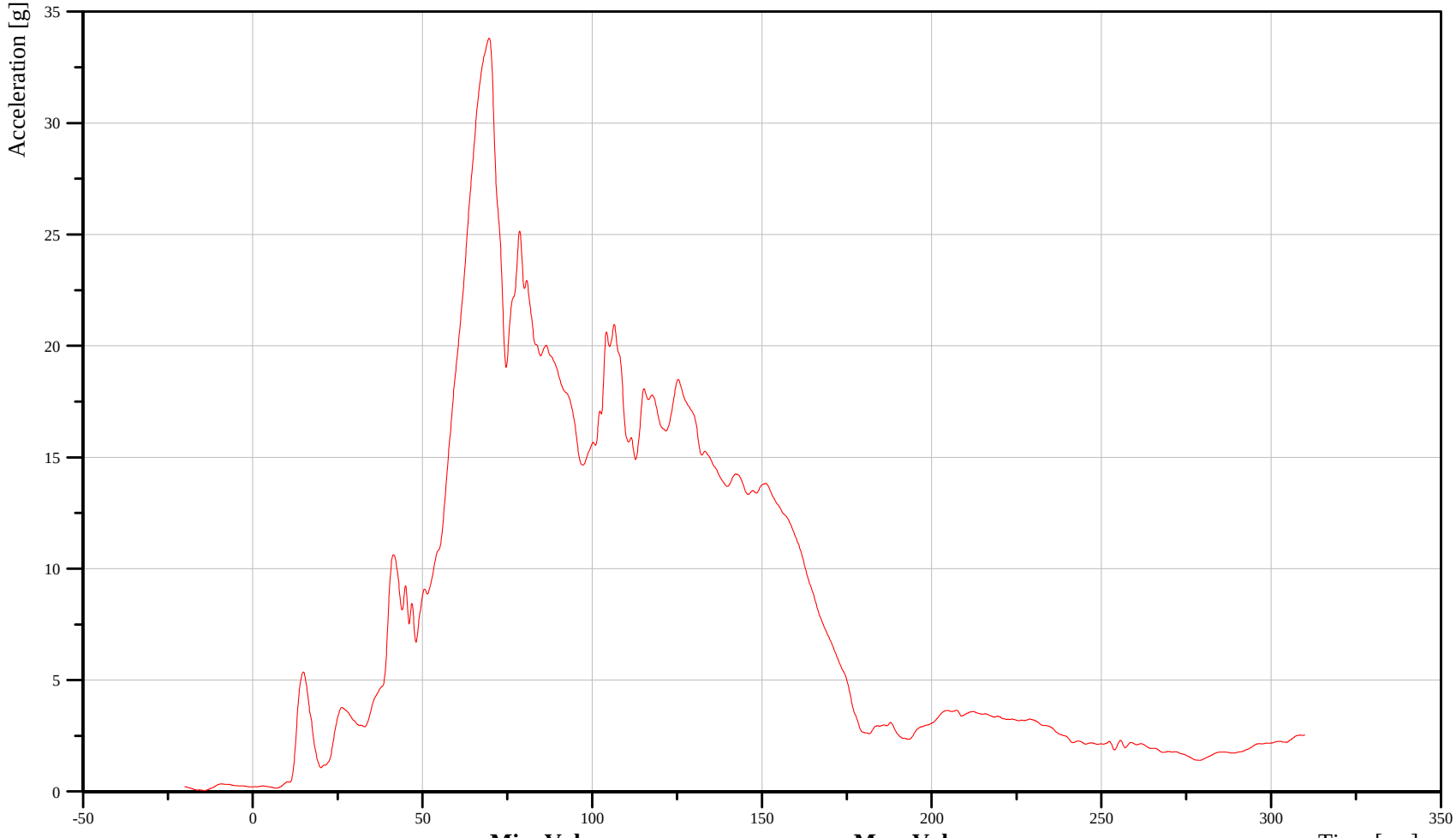
Target Vehicle Passenger Chest Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCG00HFACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.05 g at -14.08 ms

Max. Value
33.80 g at 69.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

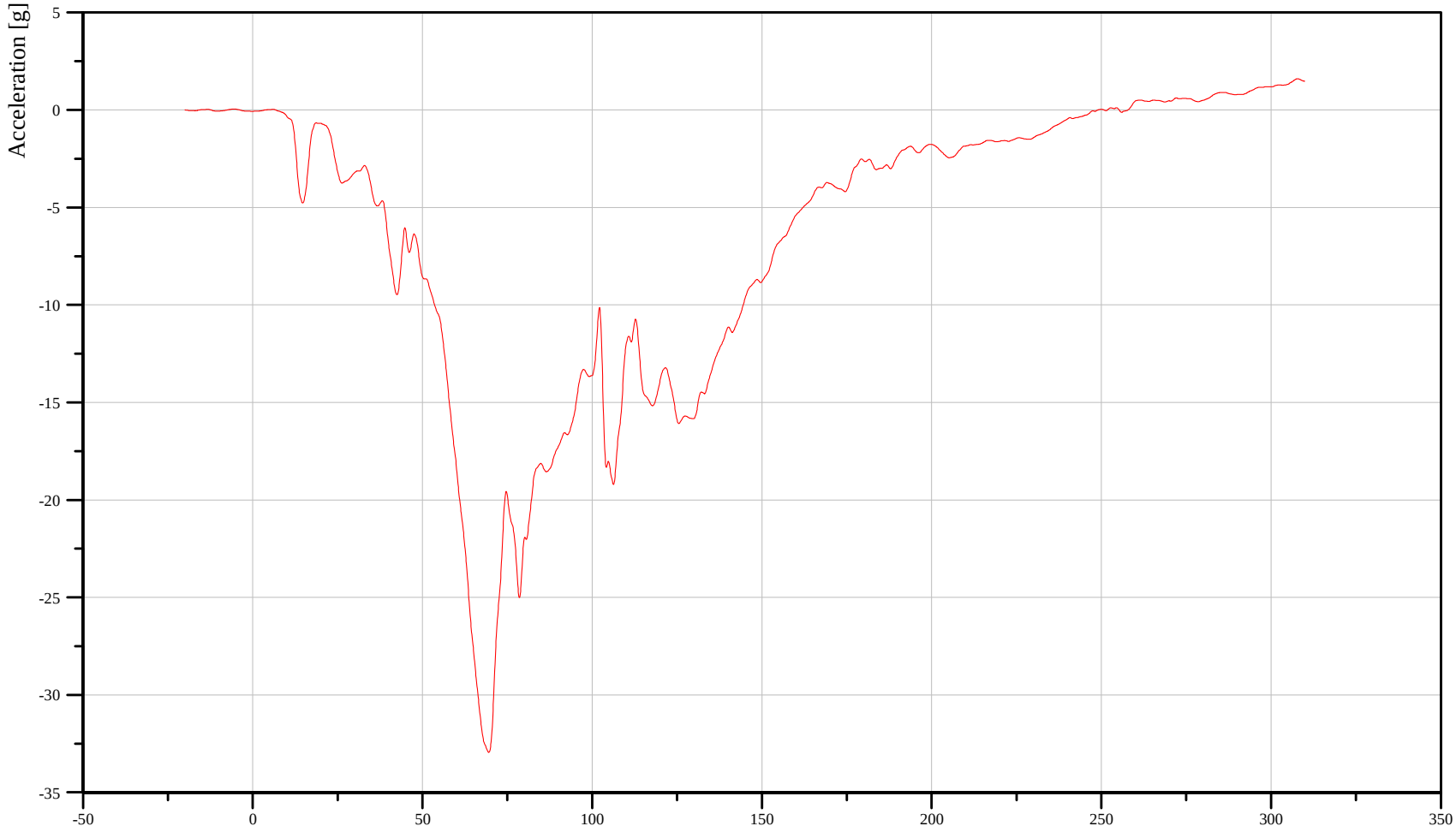
Target Vehicle Passenger Chest X-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCGRDHFACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-32.95 g at 69.52 ms

Max. Value
1.60 g at 307.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

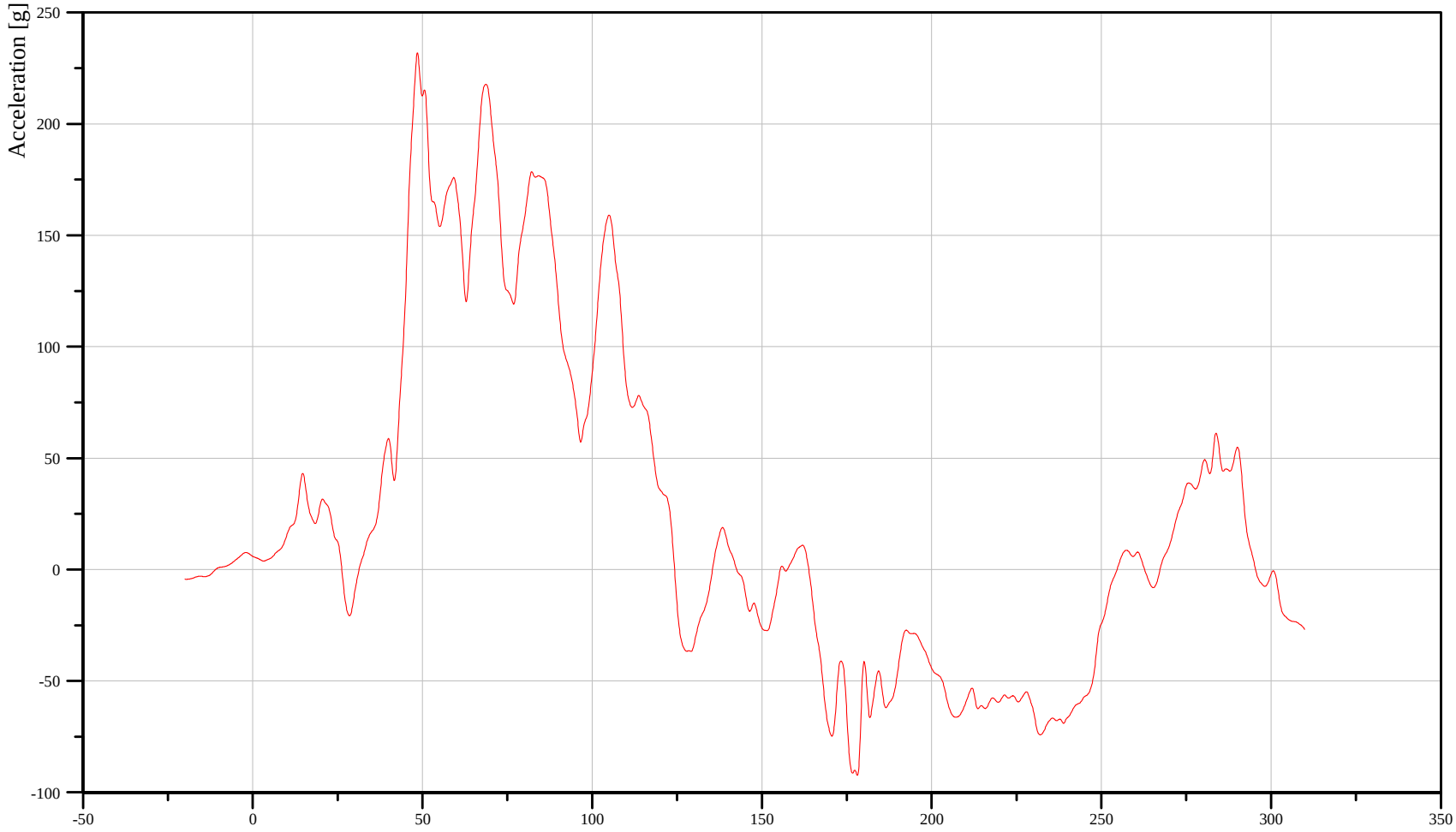
Target Vehicle Passenger Chest Y-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCGRDHFACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-92.33 g at 178.16 ms

Max. Value
231.87 g at 48.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

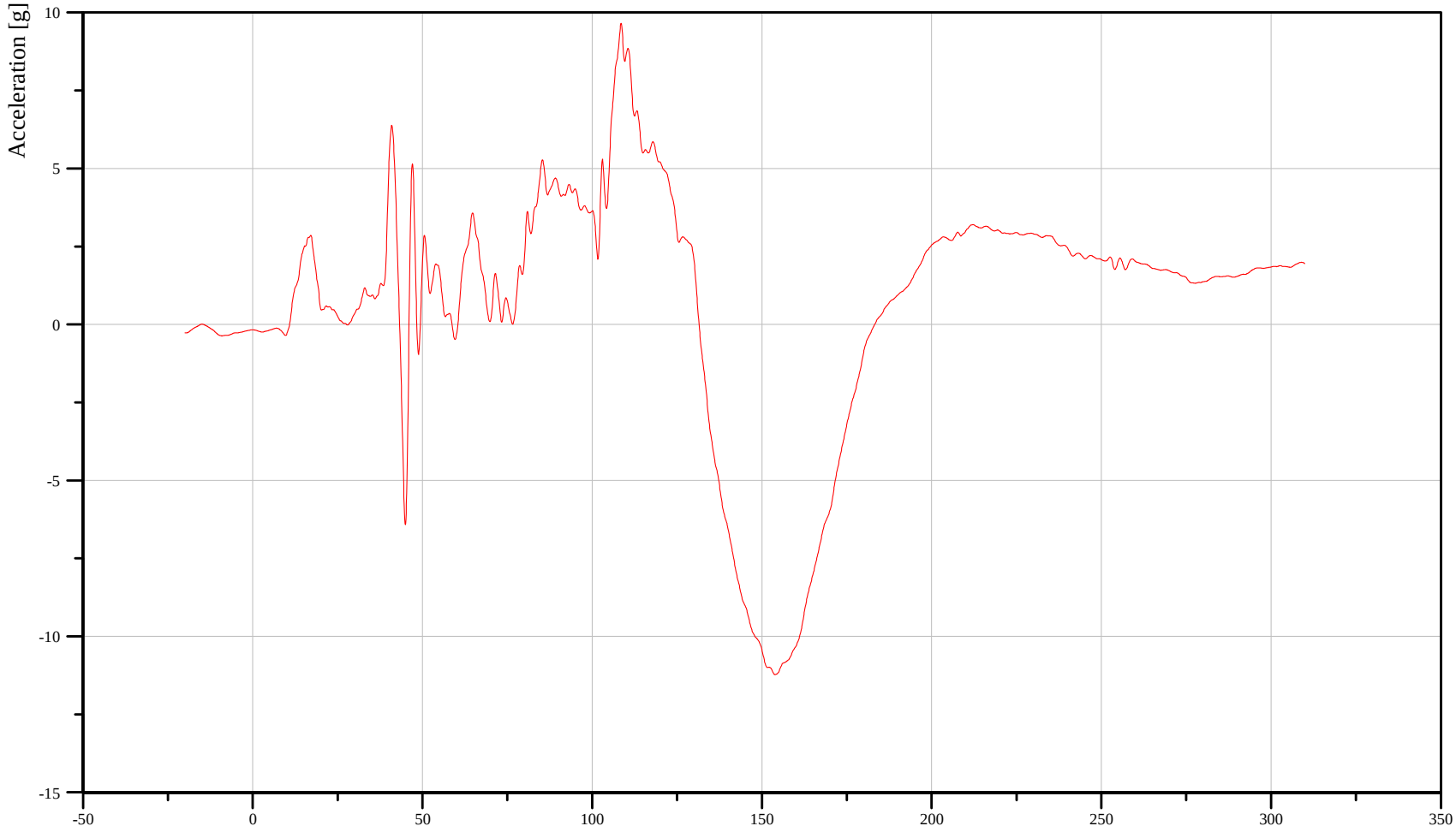
Target Vehicle Passenger Chest Z-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCGRDHFACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-11.22 g at 153.84 ms

Max. Value
9.65 g at 108.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

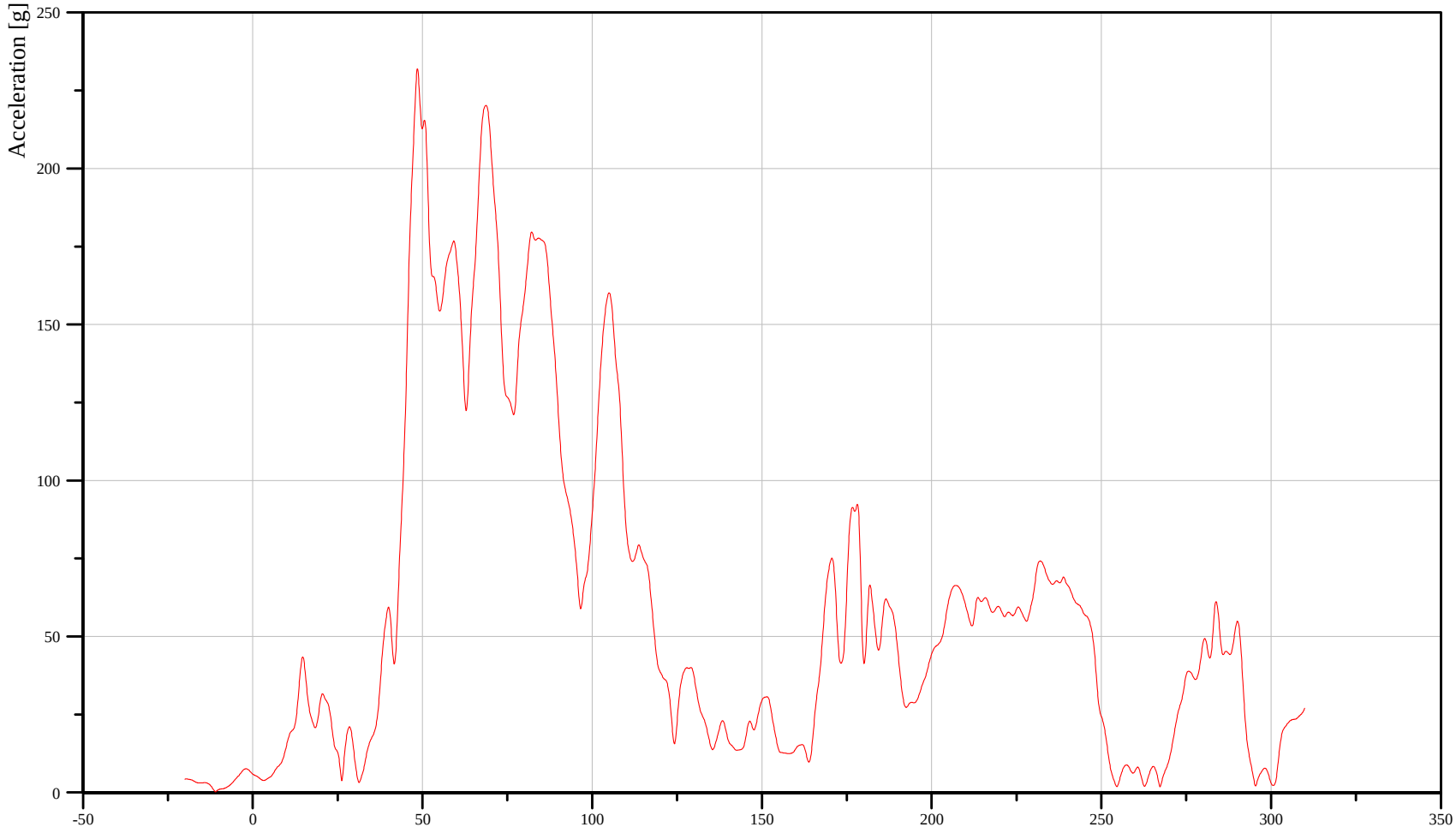
Target Vehicle Passenger Chest Resultant Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHSTCGRDHFACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.26 g at -10.96 ms

Max. Value
231.97 g at 48.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

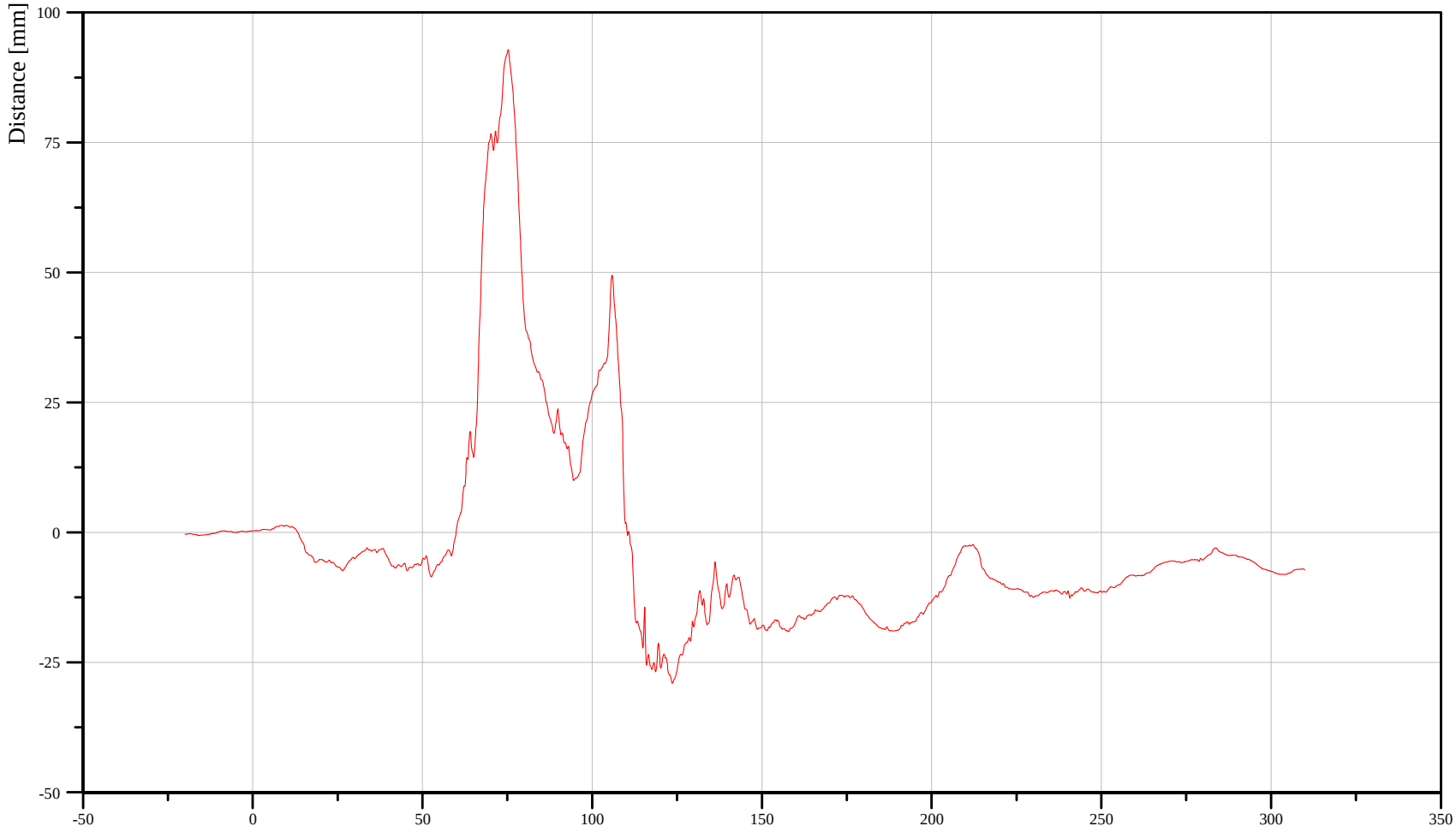
Target Vehicle Passenger Chest X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23CHST0000HFDSXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-29.02 mm at 123.60 ms

Max. Value
92.85 mm at 75.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

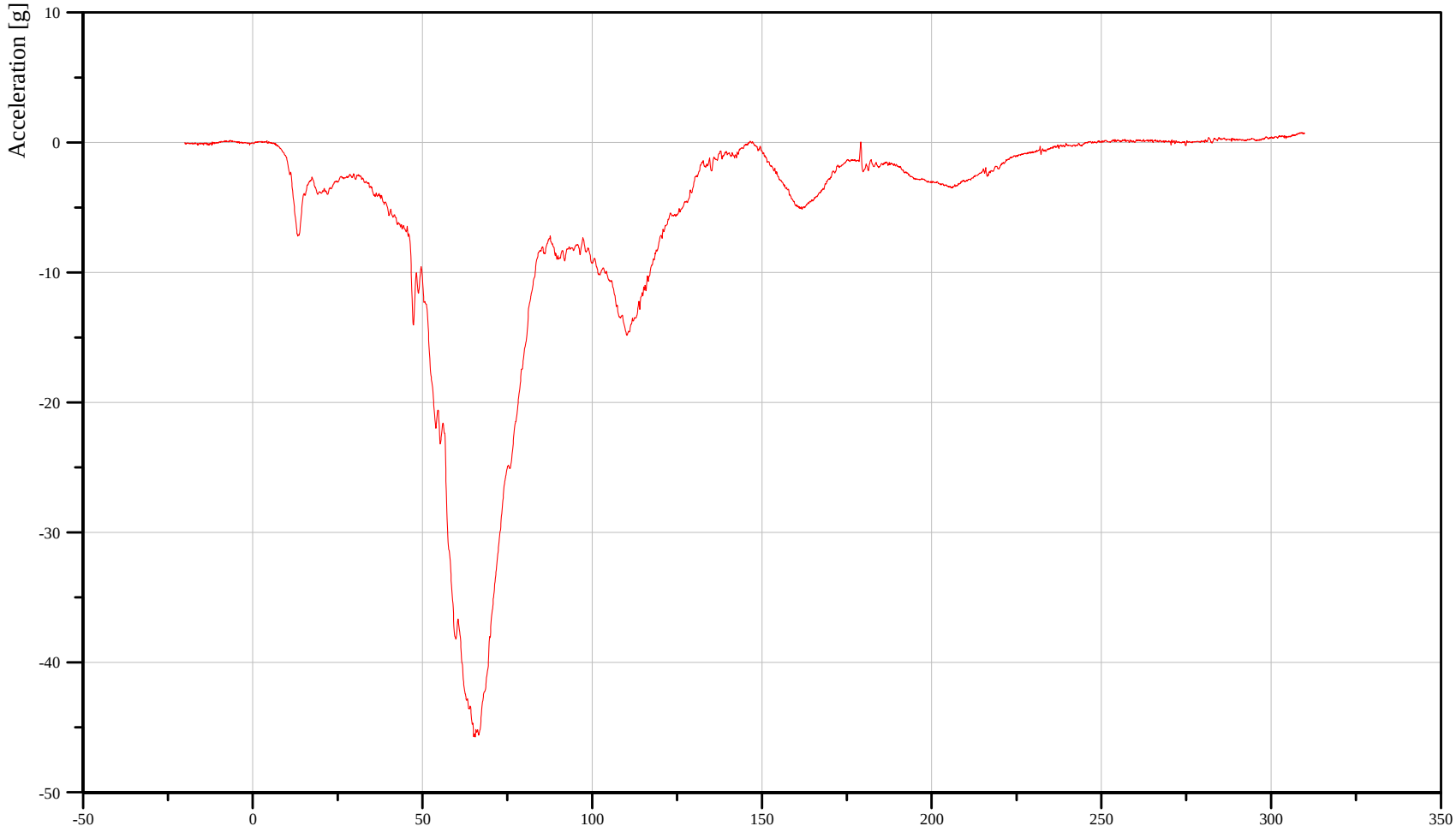
Target Vehicle Passenger Pelvis X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23PELVCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-45.75 g at 65.52 ms

Max. Value
0.76 g at 308.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

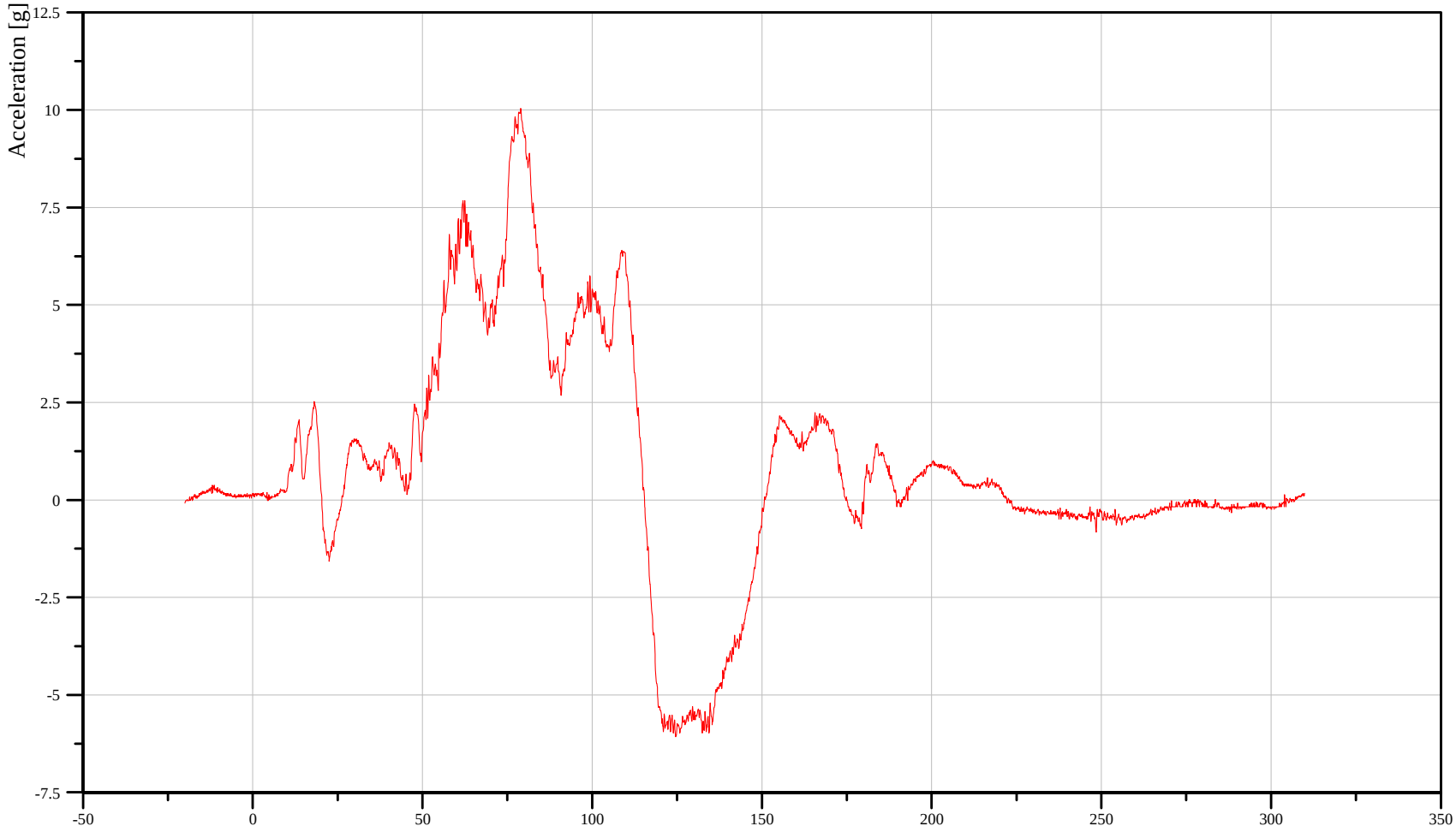
Target Vehicle Passenger Pelvis Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23PELVCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-6.07 g at 124.56 ms

Max. Value
10.04 g at 78.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

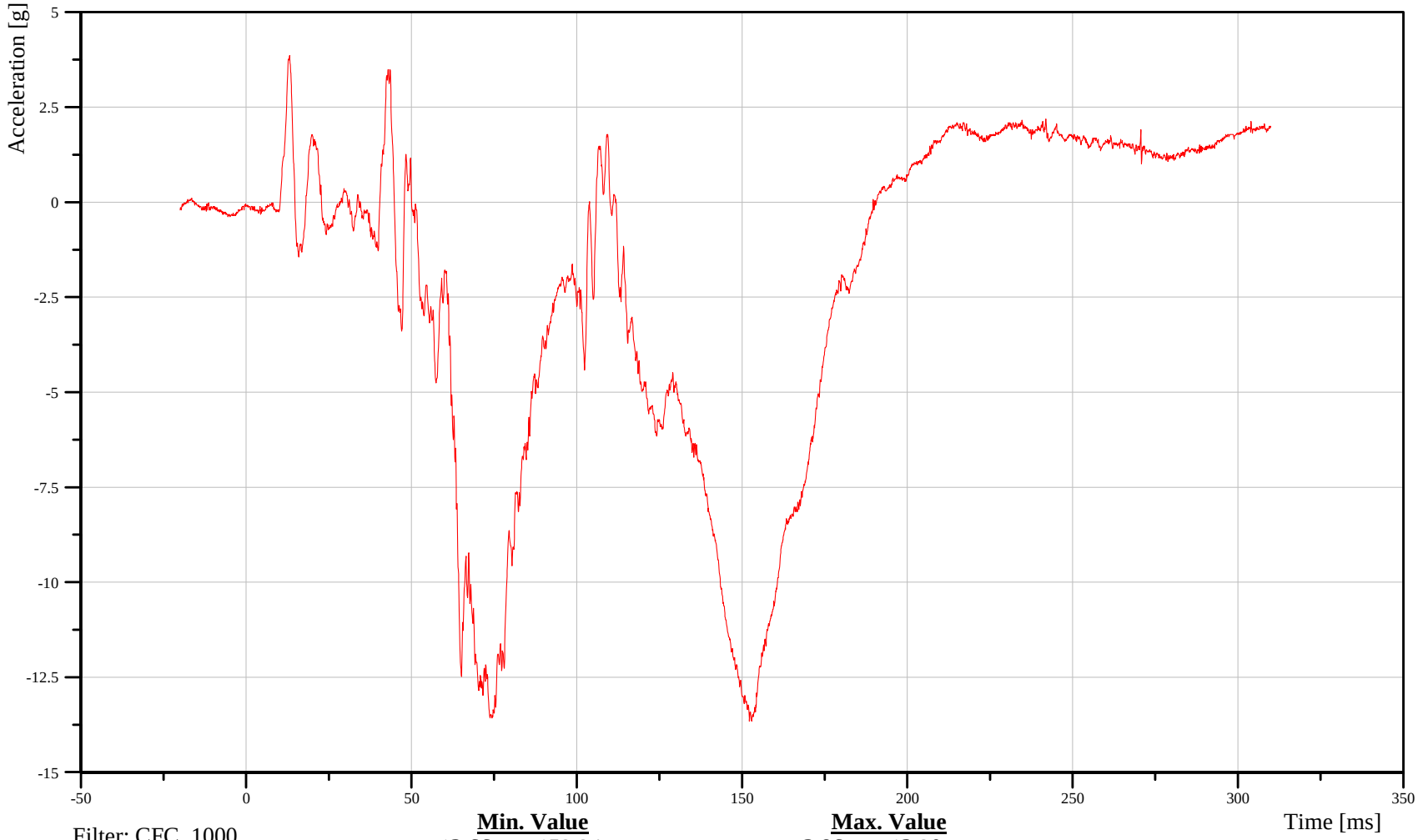
Target Vehicle Passenger Pelvis Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23PELVCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-13.66 g at 152.24 ms

Max. Value
3.86 g at 13.20 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

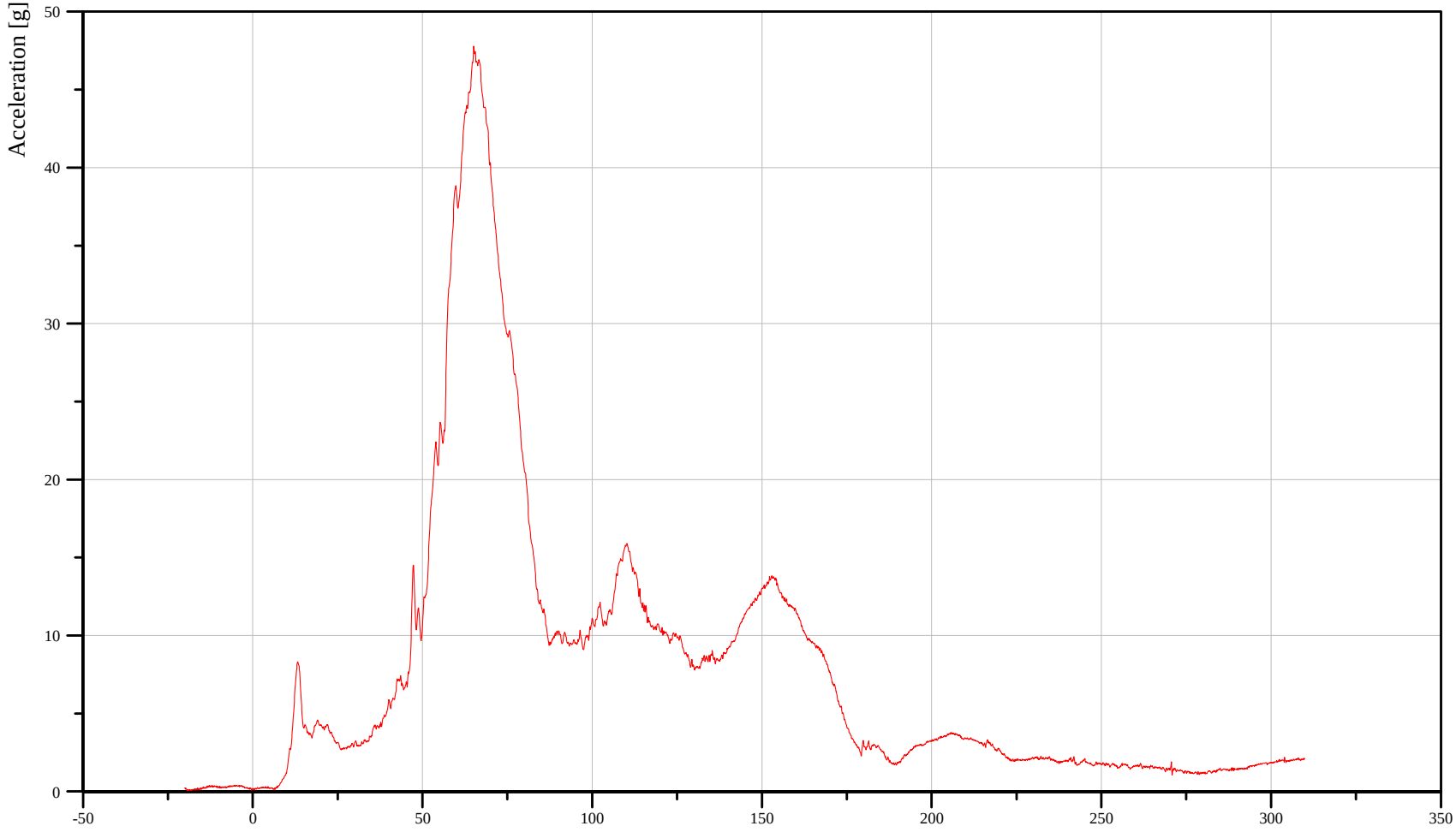
Target Vehicle Passenger Pelvis Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23PELVCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.06 g at -19.36 ms

Max. Value
47.77 g at 65.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

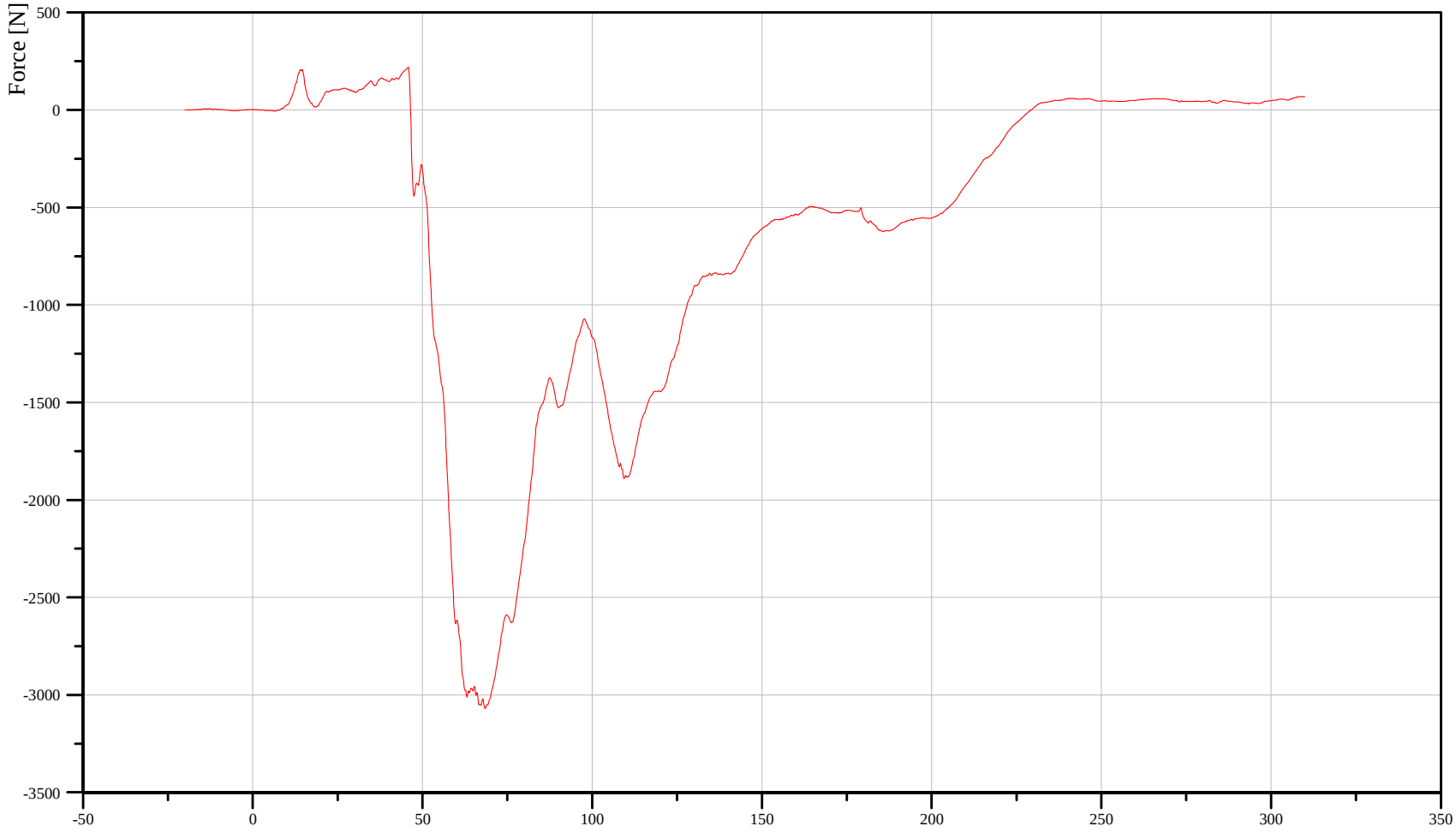
Target Vehicle Passenger Left Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-3,069.08 N at 68.40 ms

Max. Value
218.90 N at 45.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

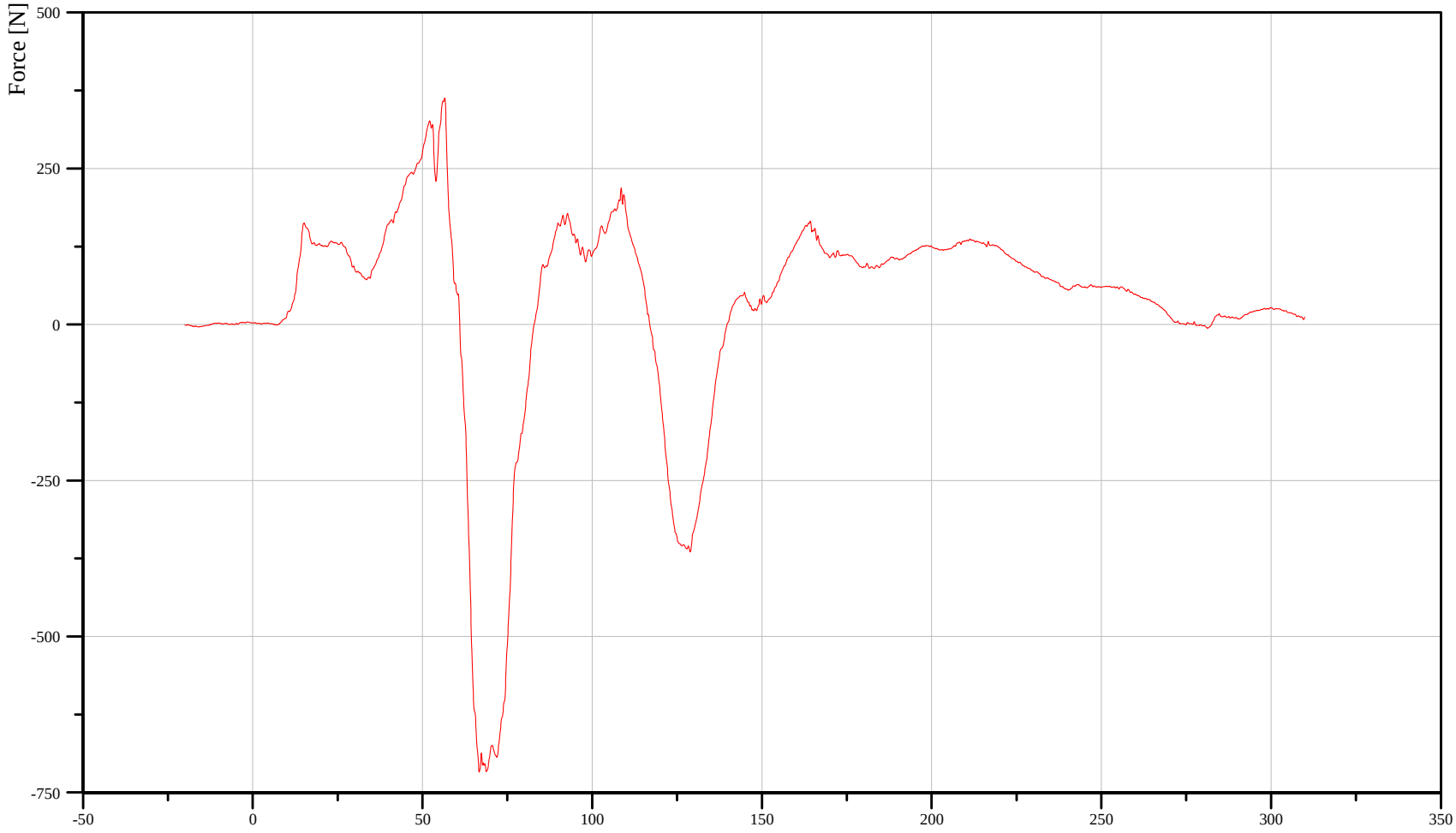
Target Vehicle Passenger Right Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-717.63 N at 66.72 ms

Max. Value
362.94 N at 56.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

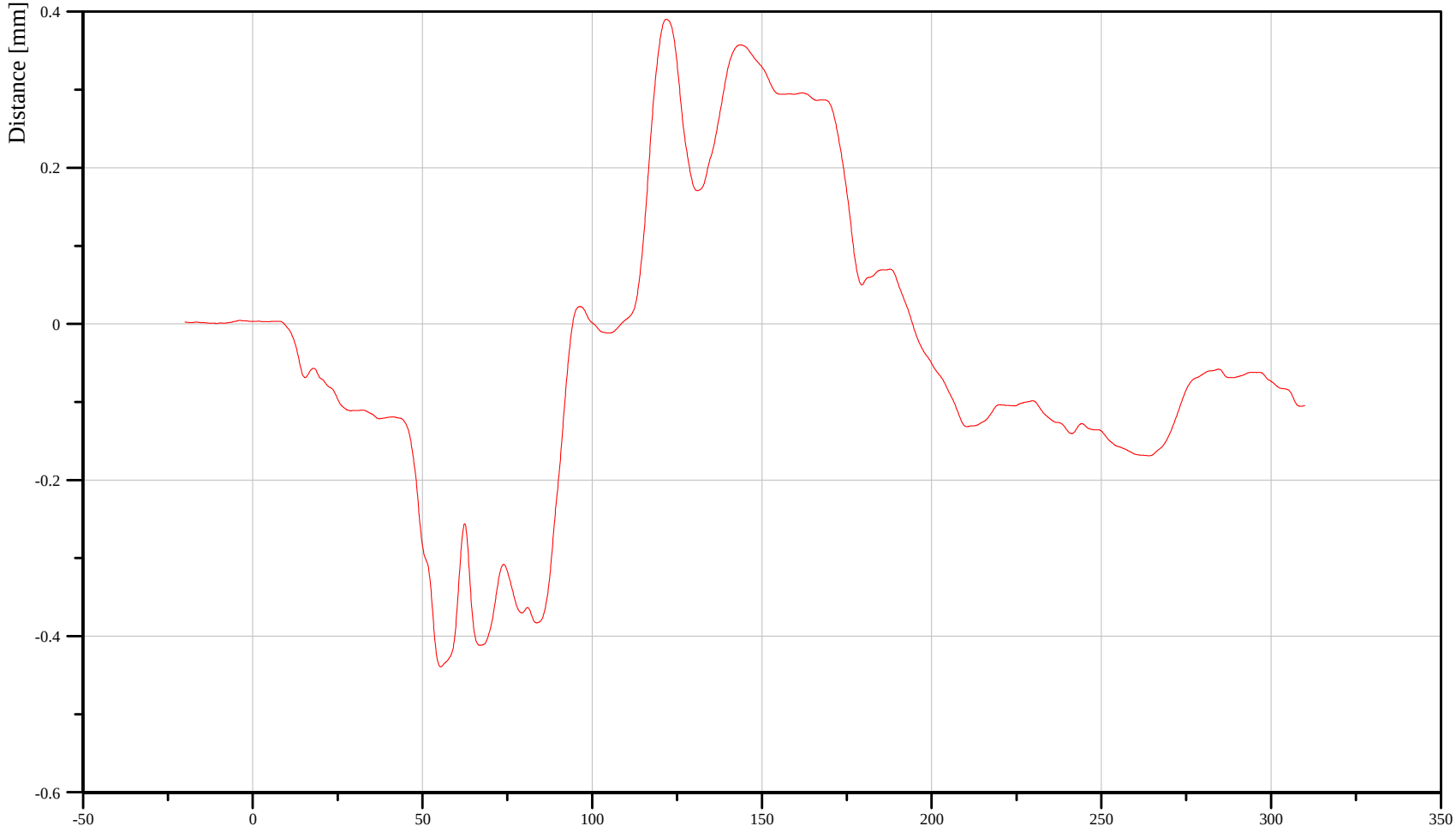
Target Vehicle Passenger Left Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.44 mm at 55.36 ms

Max. Value
0.39 mm at 121.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

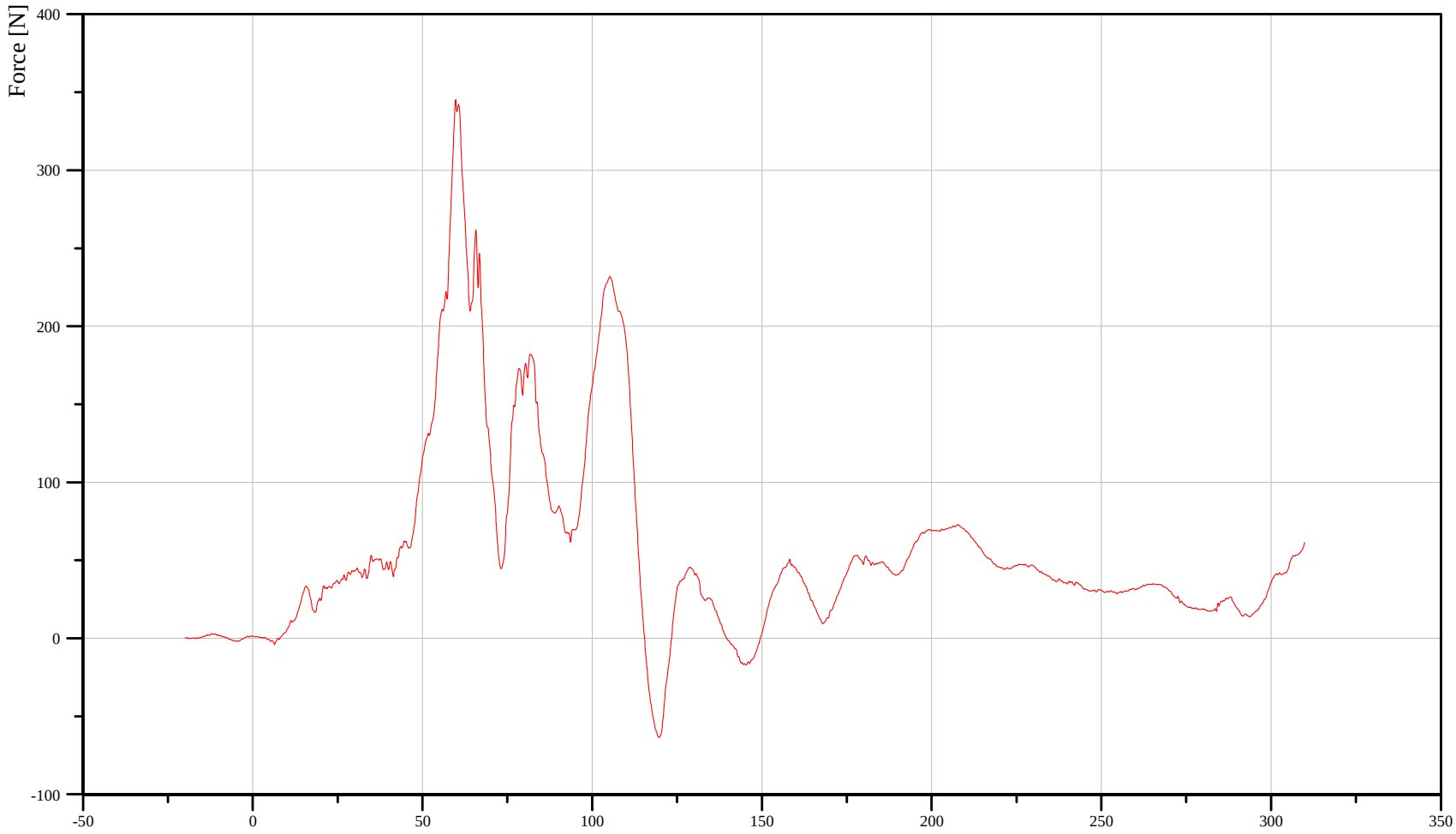
Target Vehicle Passenger Left Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILUFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-63.31 N at 119.76 ms

Max. Value
345.18 N at 59.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

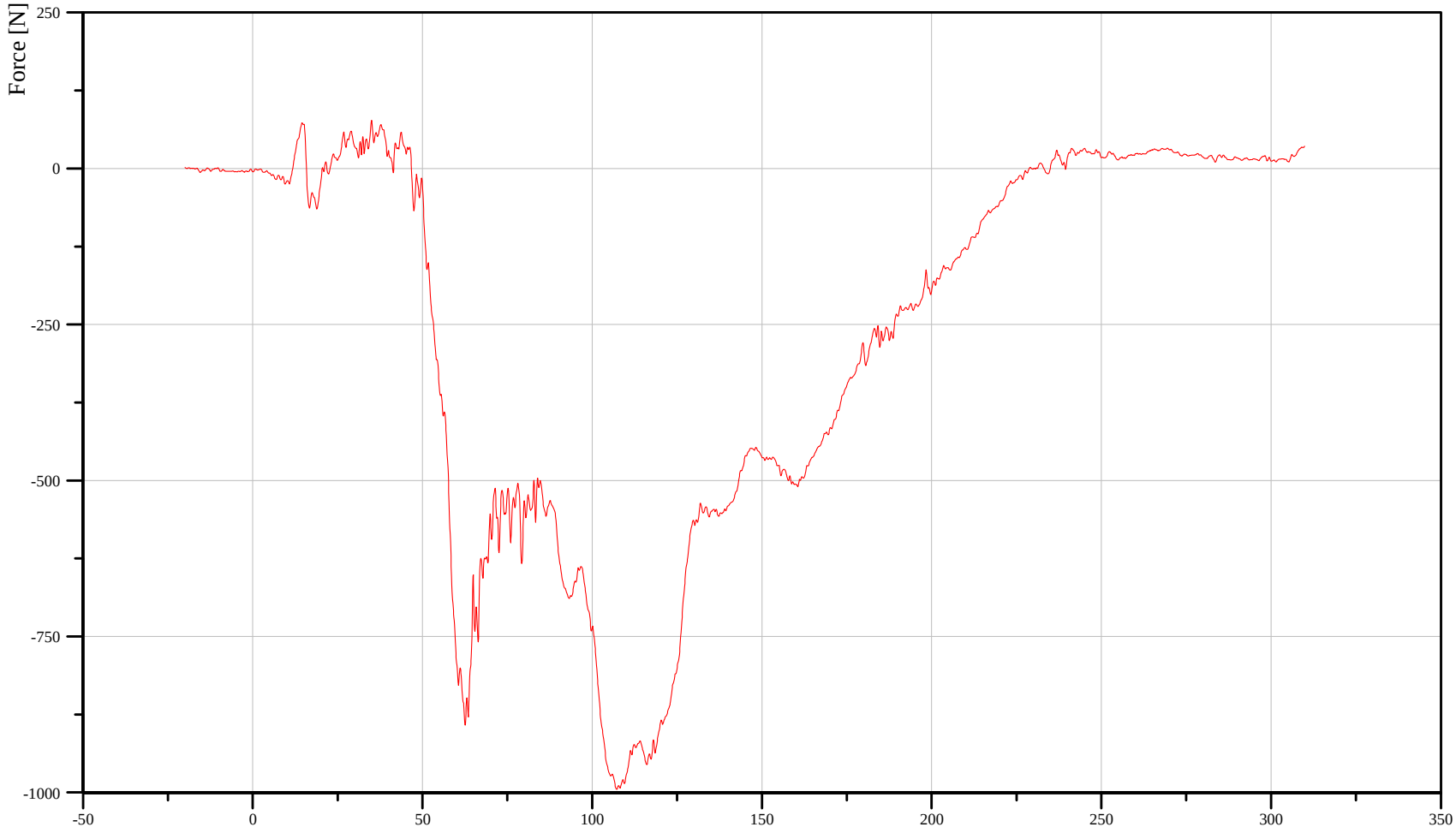
Target Vehicle Passenger Left Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILUFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-994.72 N at 107.20 ms

Max. Value
77.04 N at 35.04 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

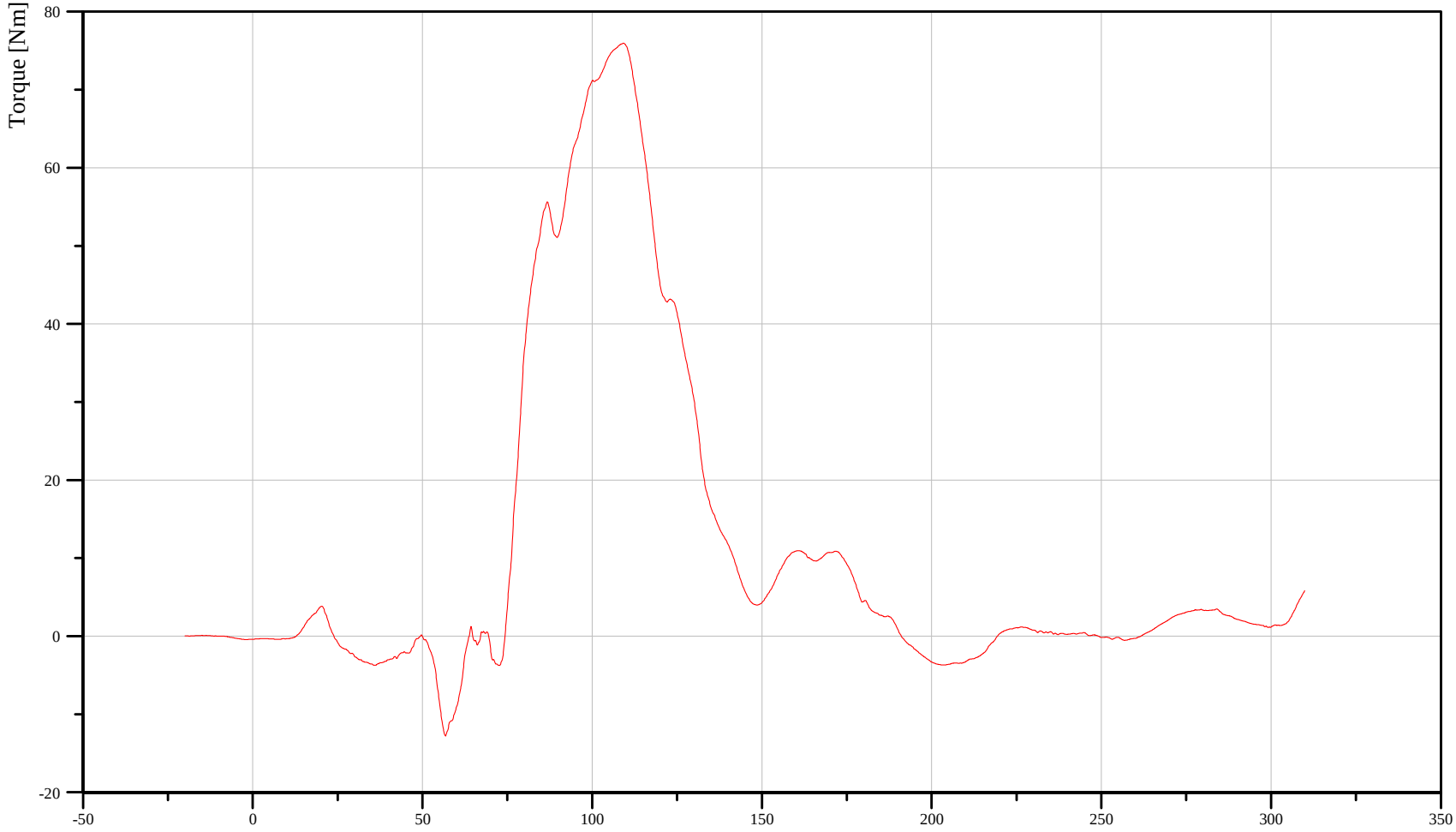
Target Vehicle Passenger Left Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILUFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-12.77 Nm at 56.80 ms

Max. Value
75.95 Nm at 109.28 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

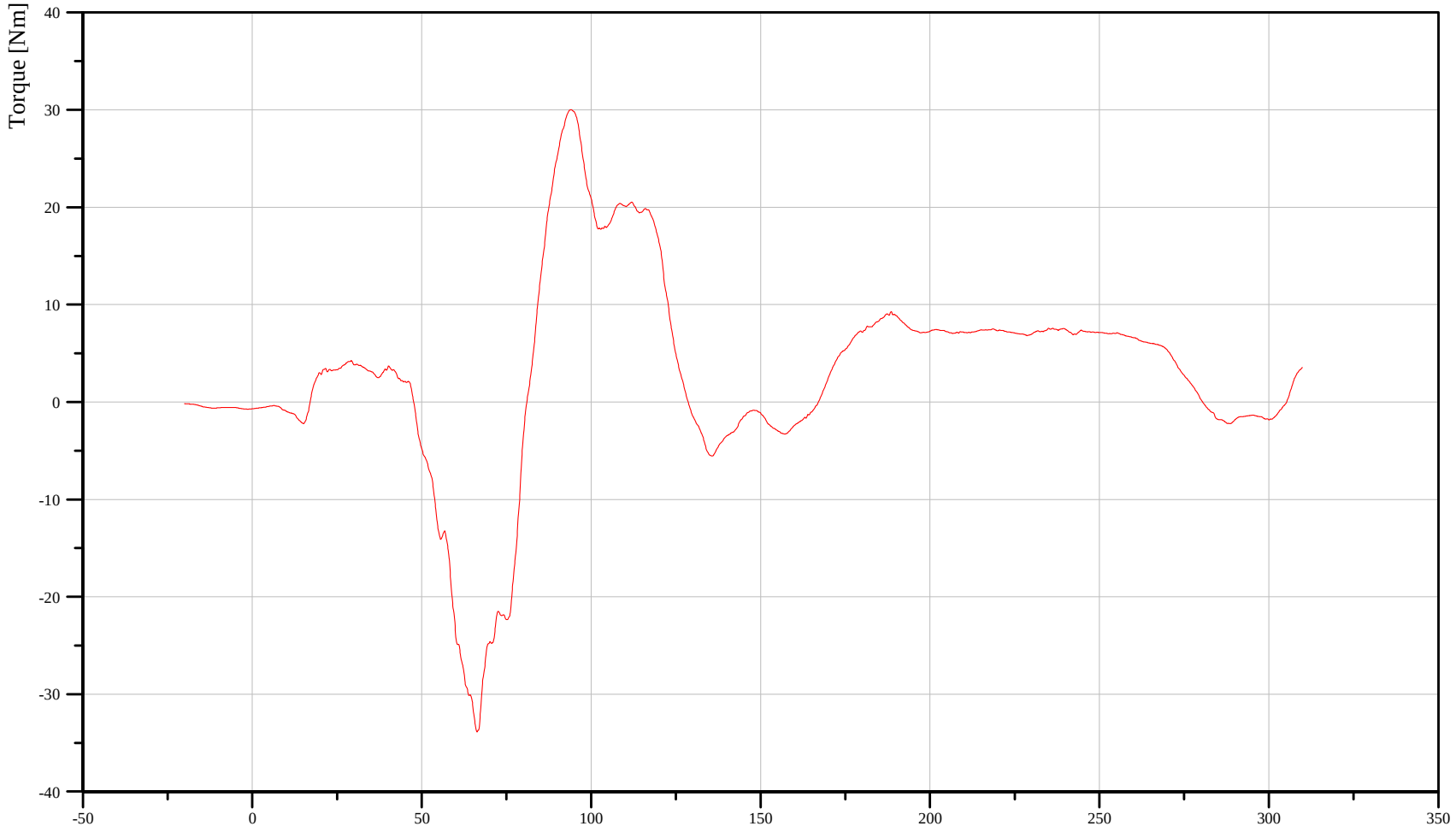
Target Vehicle Passenger Left Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILUFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-33.87 Nm at 66.32 ms

Max. Value
30.02 Nm at 94.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

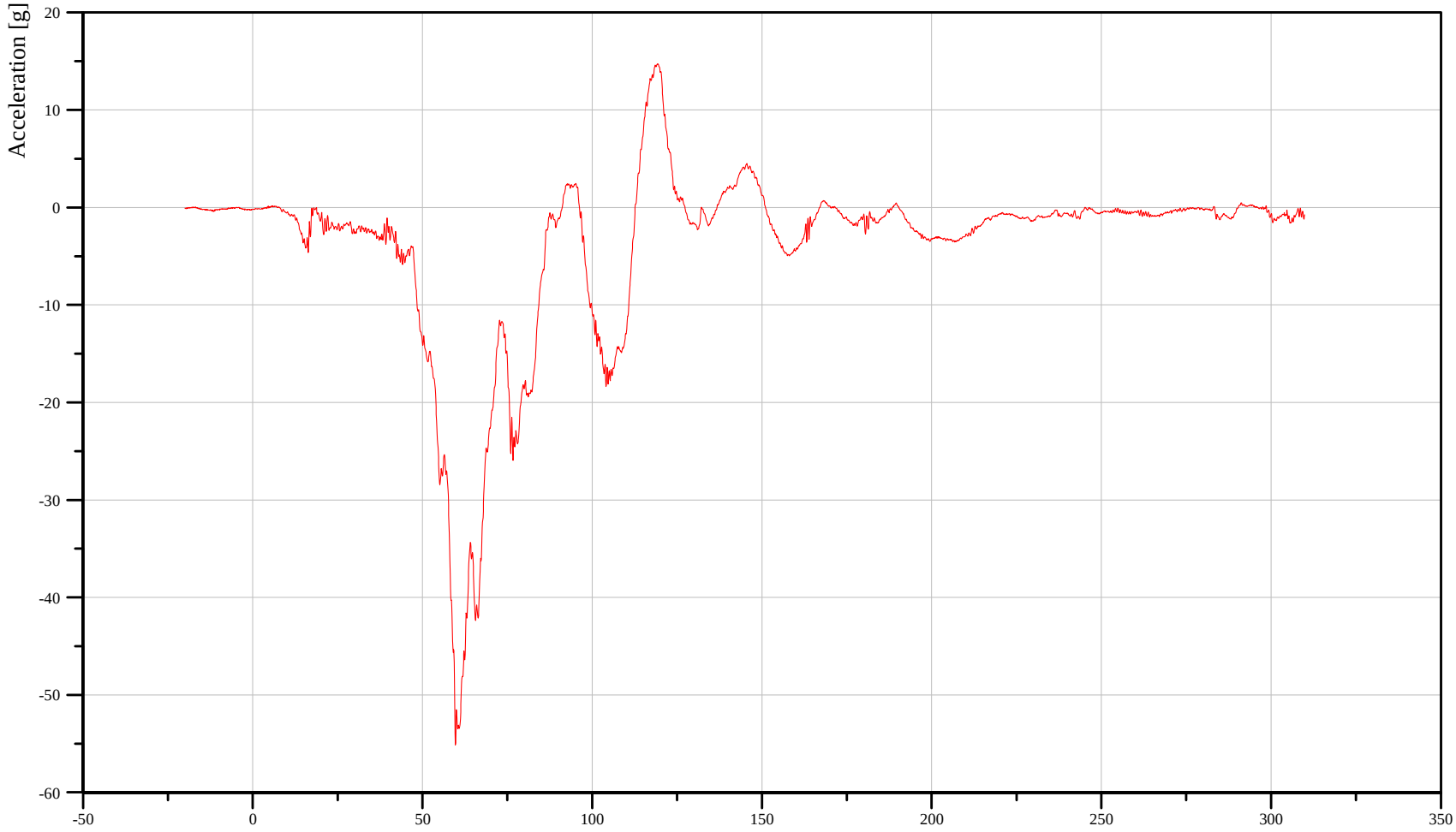
Target Vehicle Passenger Left Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILEFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-55.13 g at 59.68 ms

Max. Value
14.73 g at 119.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

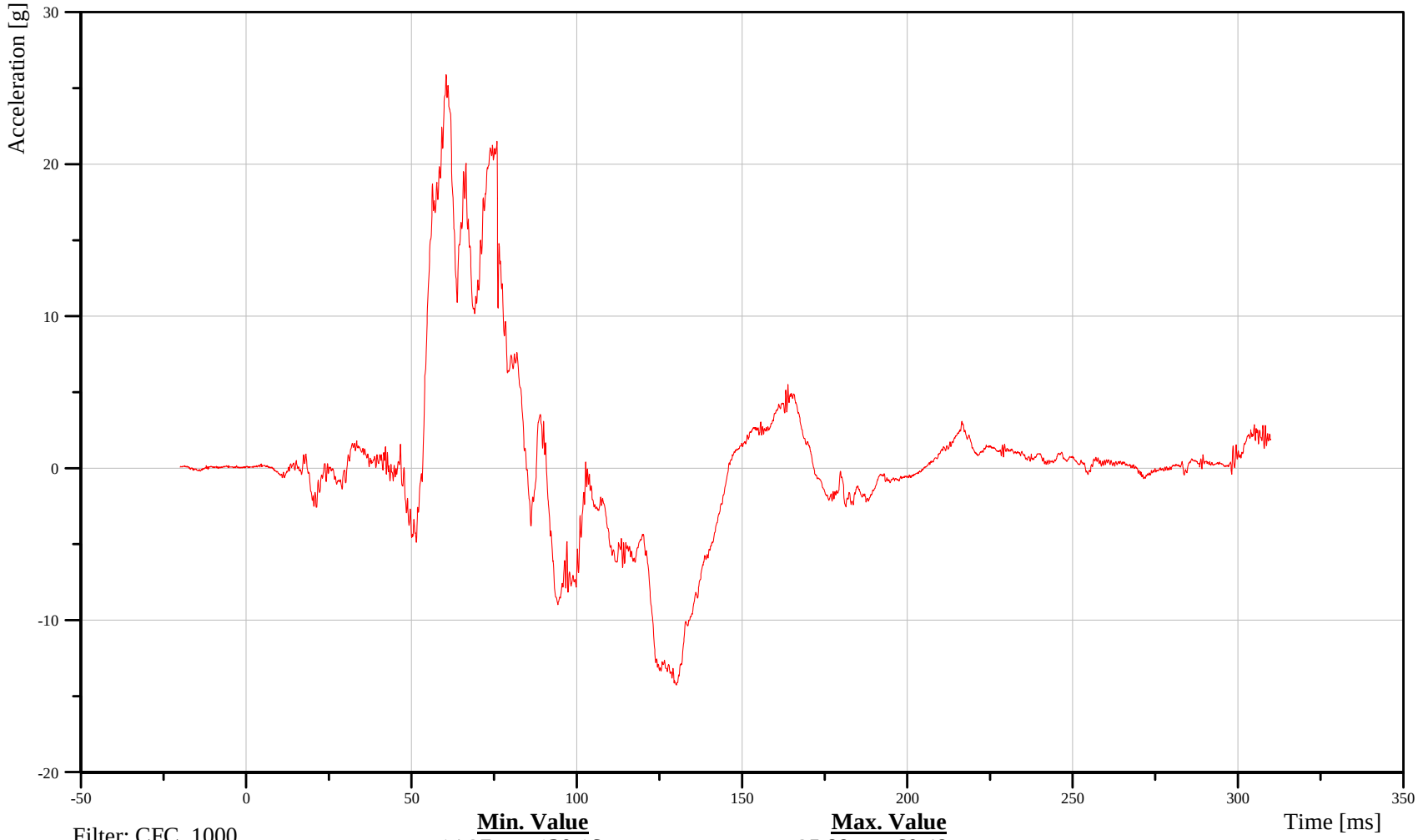
Target Vehicle Passenger Left Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILEFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-14.27 g at 130.16 ms

Max. Value
25.89 g at 60.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

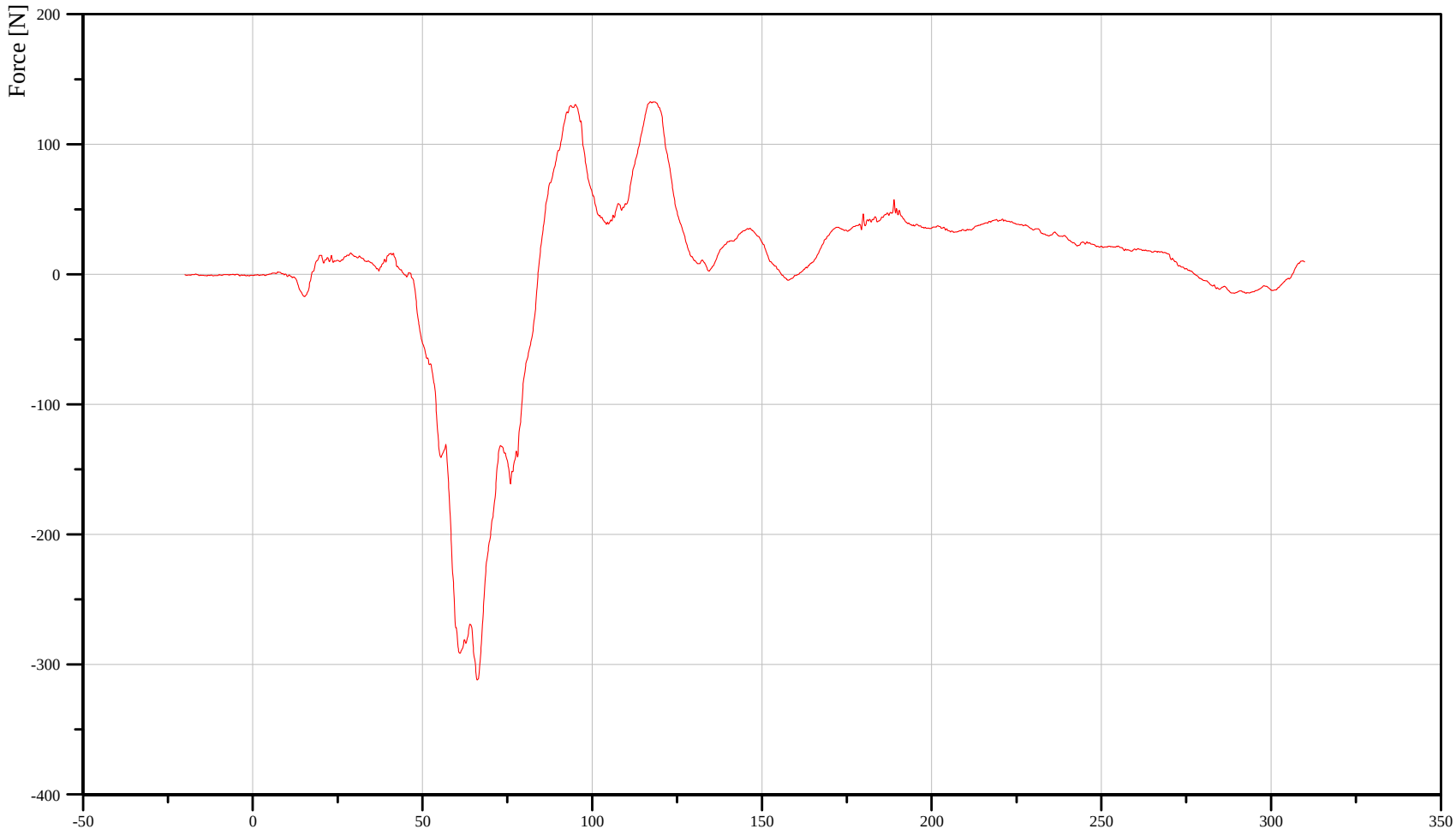
Target Vehicle Passenger Left Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILLFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-311.88 N at 66.16 ms

Max. Value
132.69 N at 117.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

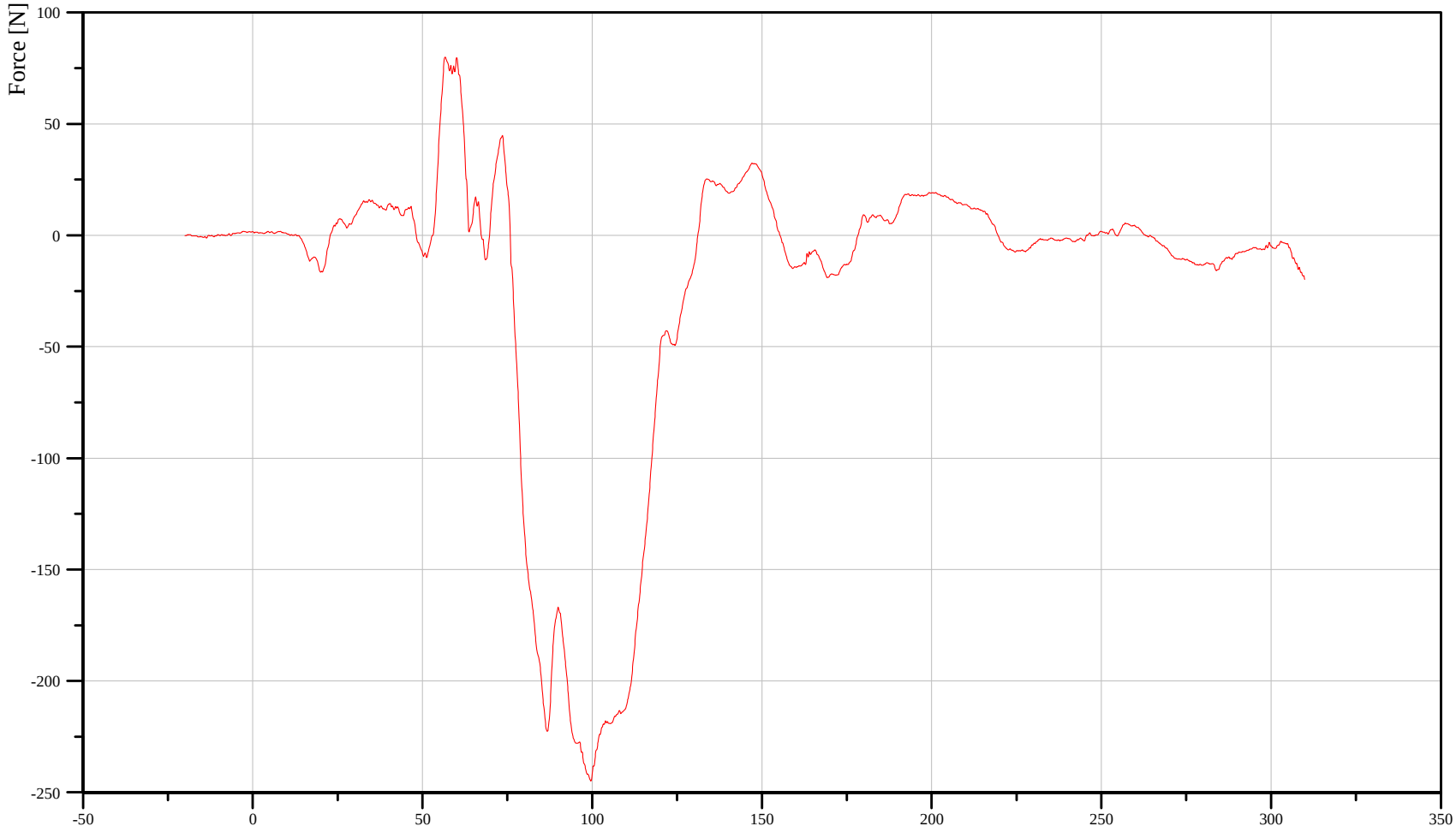
Target Vehicle Passenger Left Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILLFXHFFOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-244.86 N at 99.60 ms

Max. Value
79.97 N at 56.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

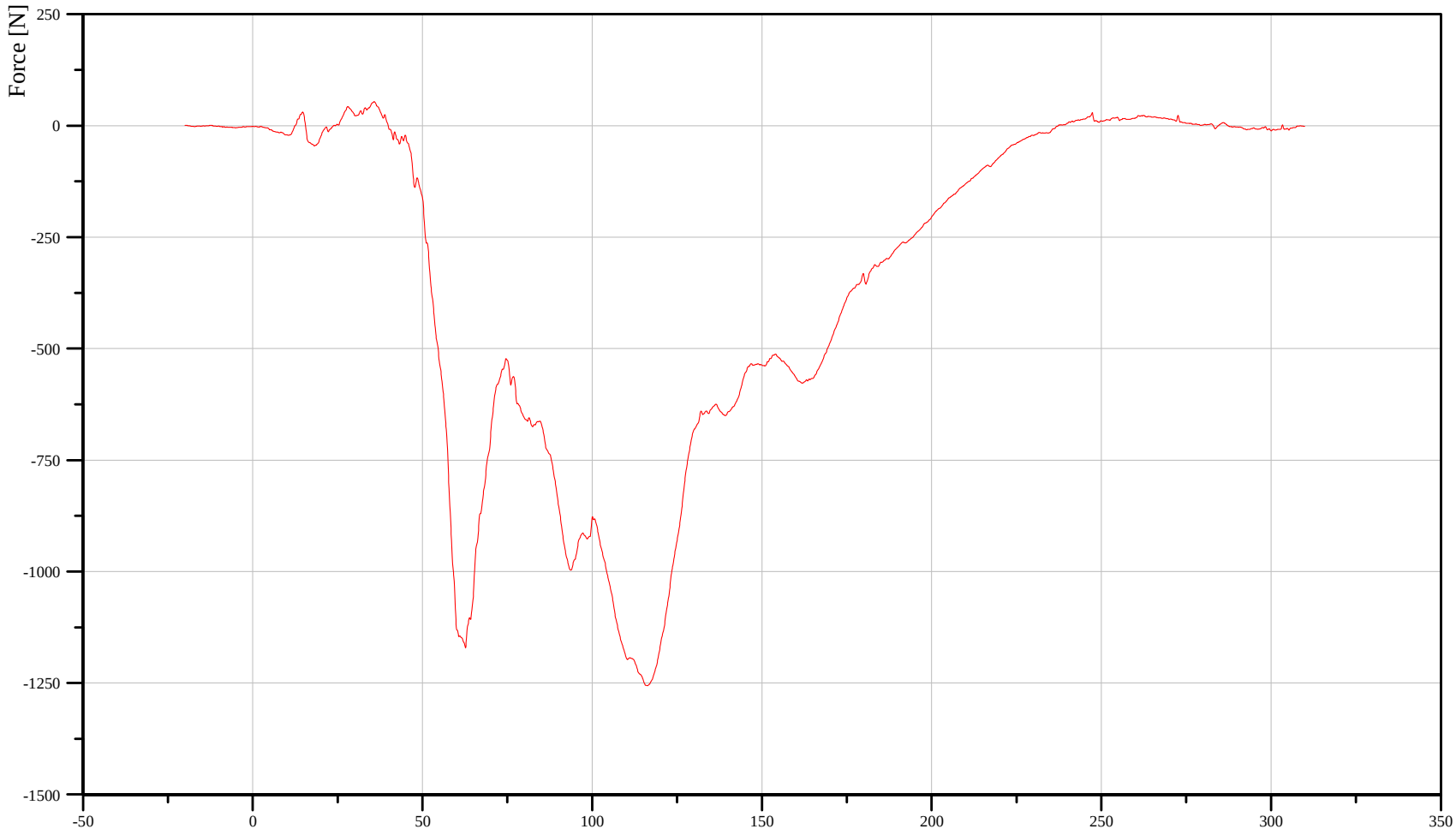
Target Vehicle Passenger Left Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILLFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,256.12 N at 116.32 ms

Max. Value
53.74 N at 35.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

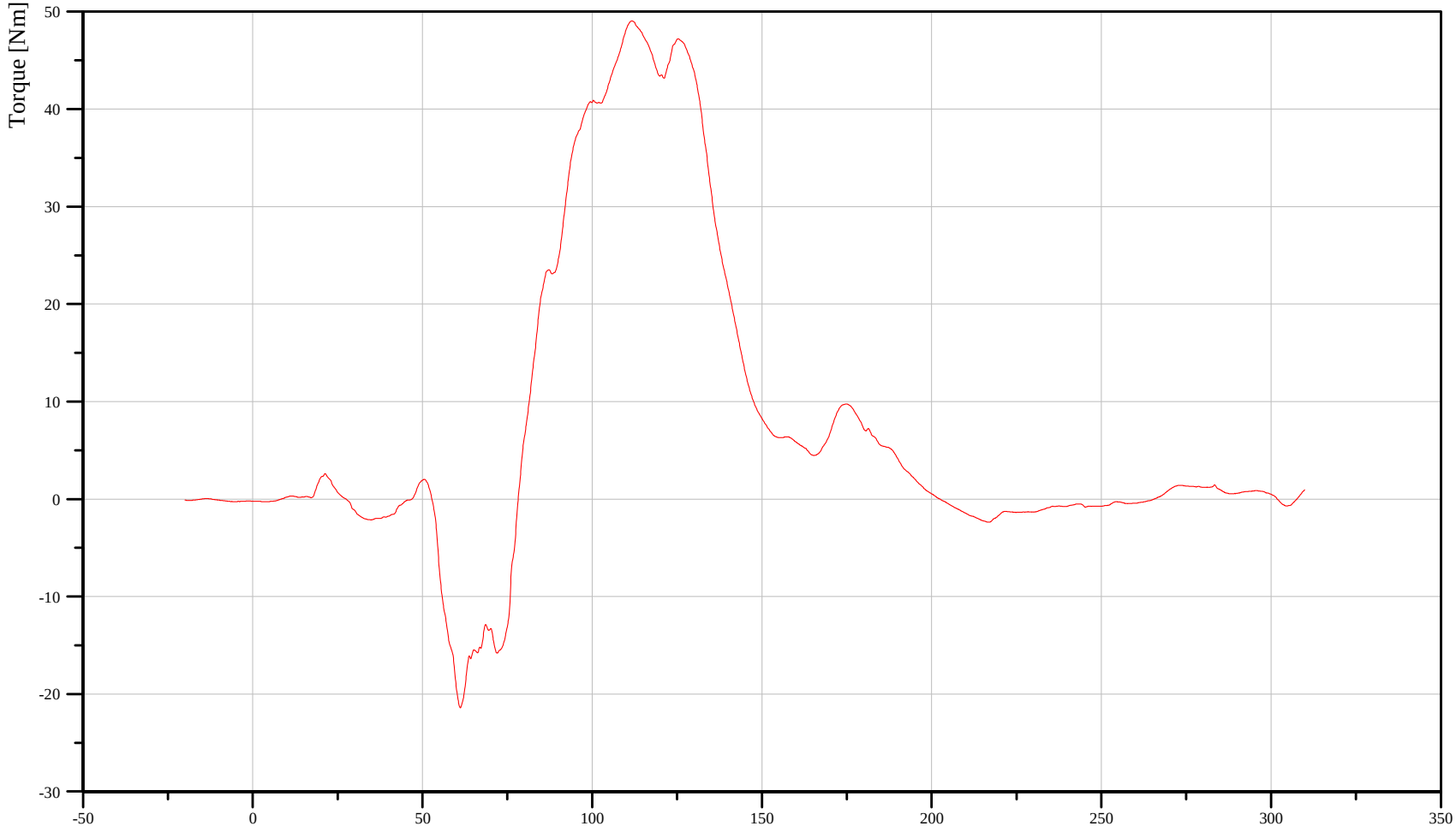
Target Vehicle Passenger Left Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILLFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-21.41 Nm at 61.12 ms

Max. Value
49.06 Nm at 111.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

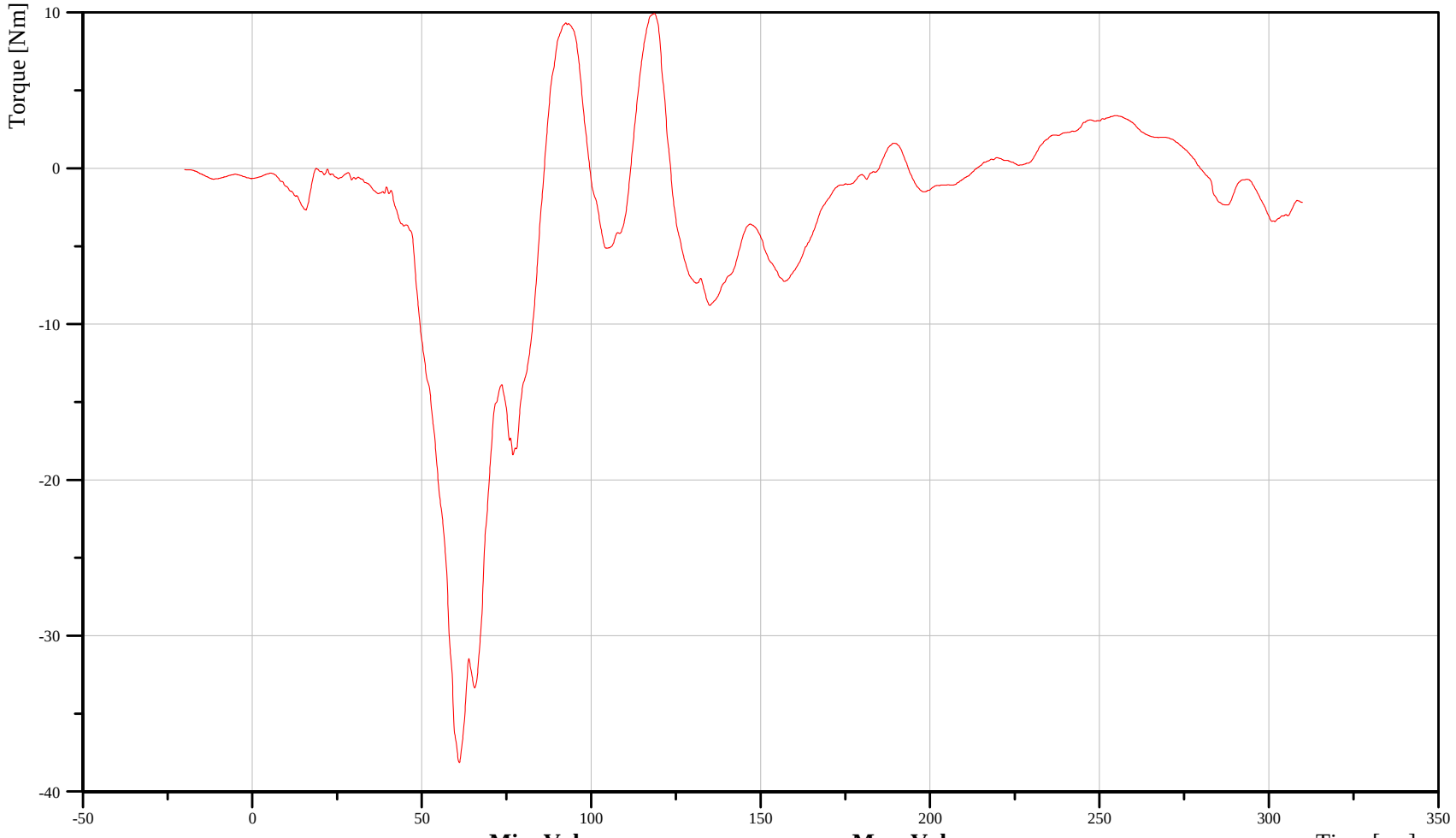
Target Vehicle Passenger Left Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBILLFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-38.14 Nm at 61.12 ms

Max. Value
9.94 Nm at 118.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

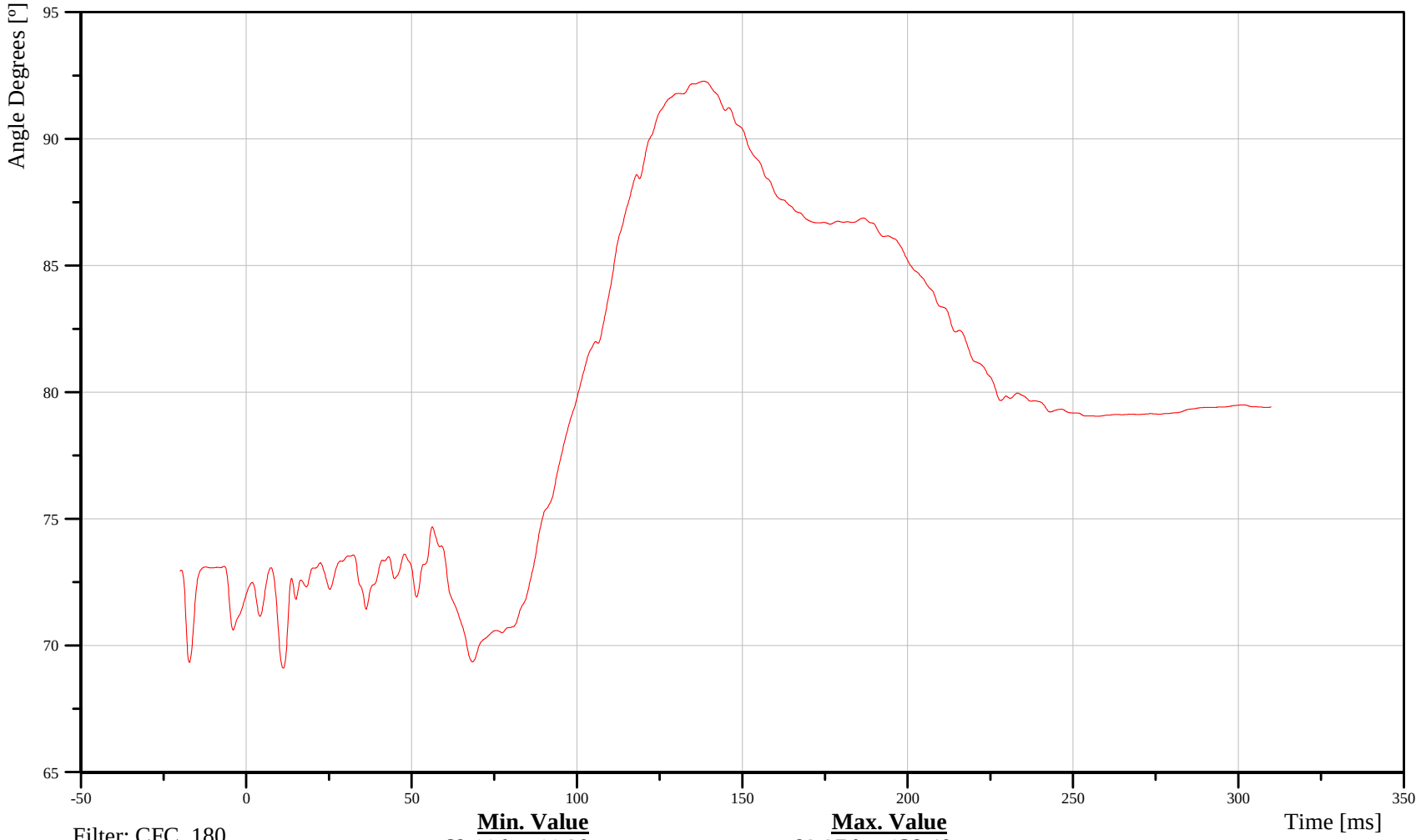
Target Vehicle Passenger Left Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
69.11 ° at 11.20 ms

Max. Value
92.27 ° at 138.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

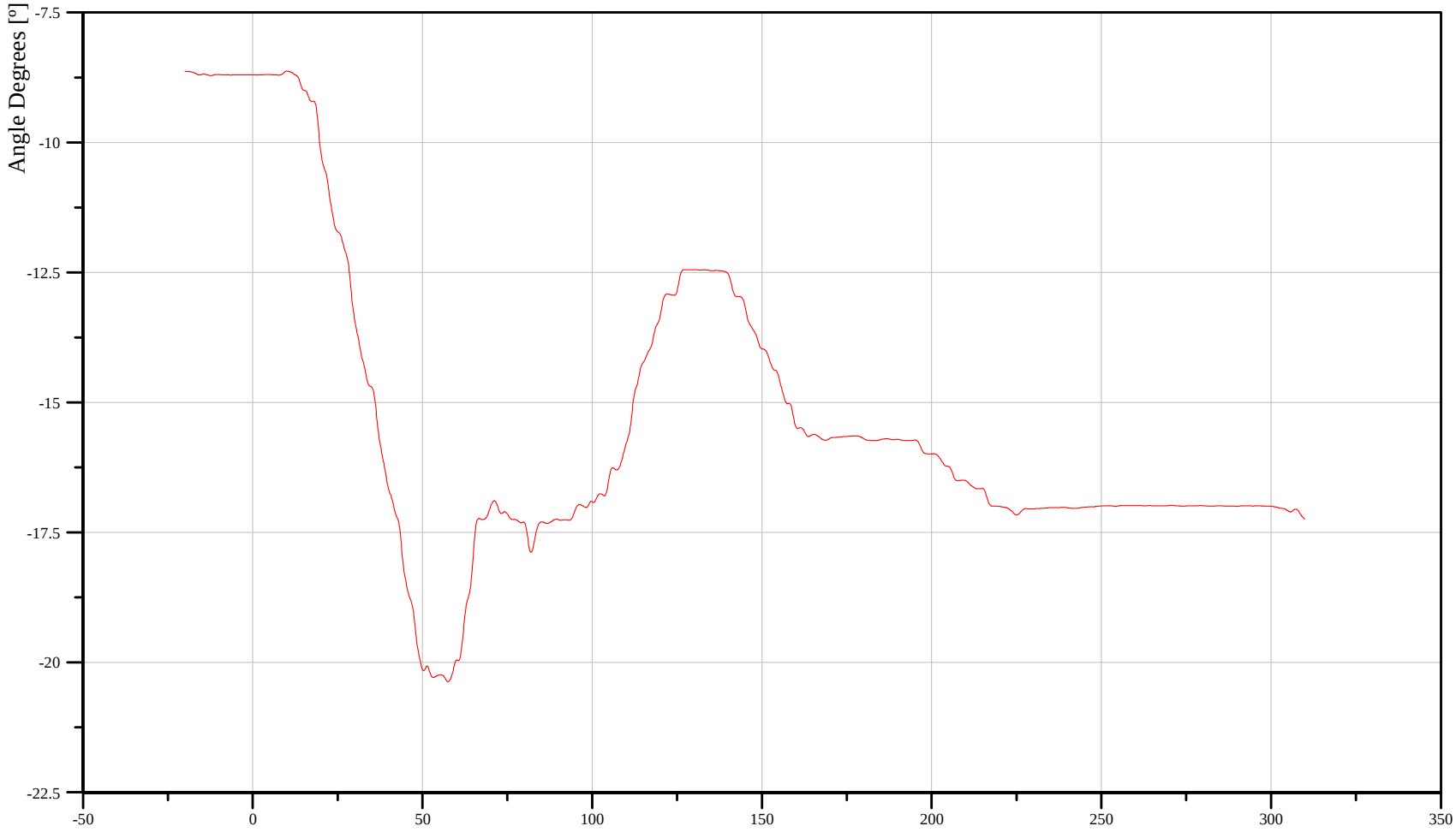
Target Vehicle Passenger Left Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-20.37 ° at 57.52 ms

Max. Value
-8.63 ° at 10.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

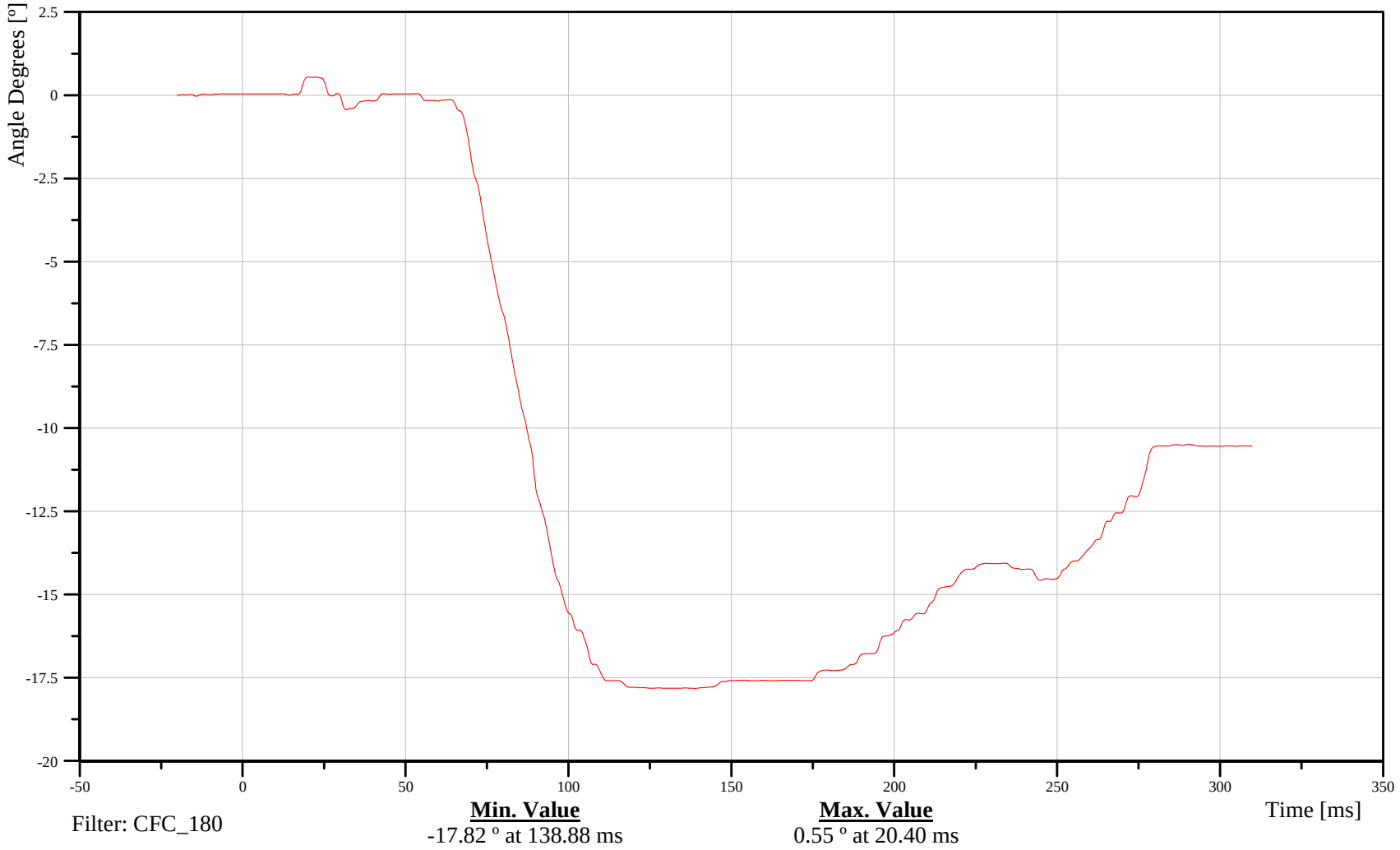
Target Vehicle Passenger Left Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-17.82 ° at 138.88 ms

Max. Value
0.55 ° at 20.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

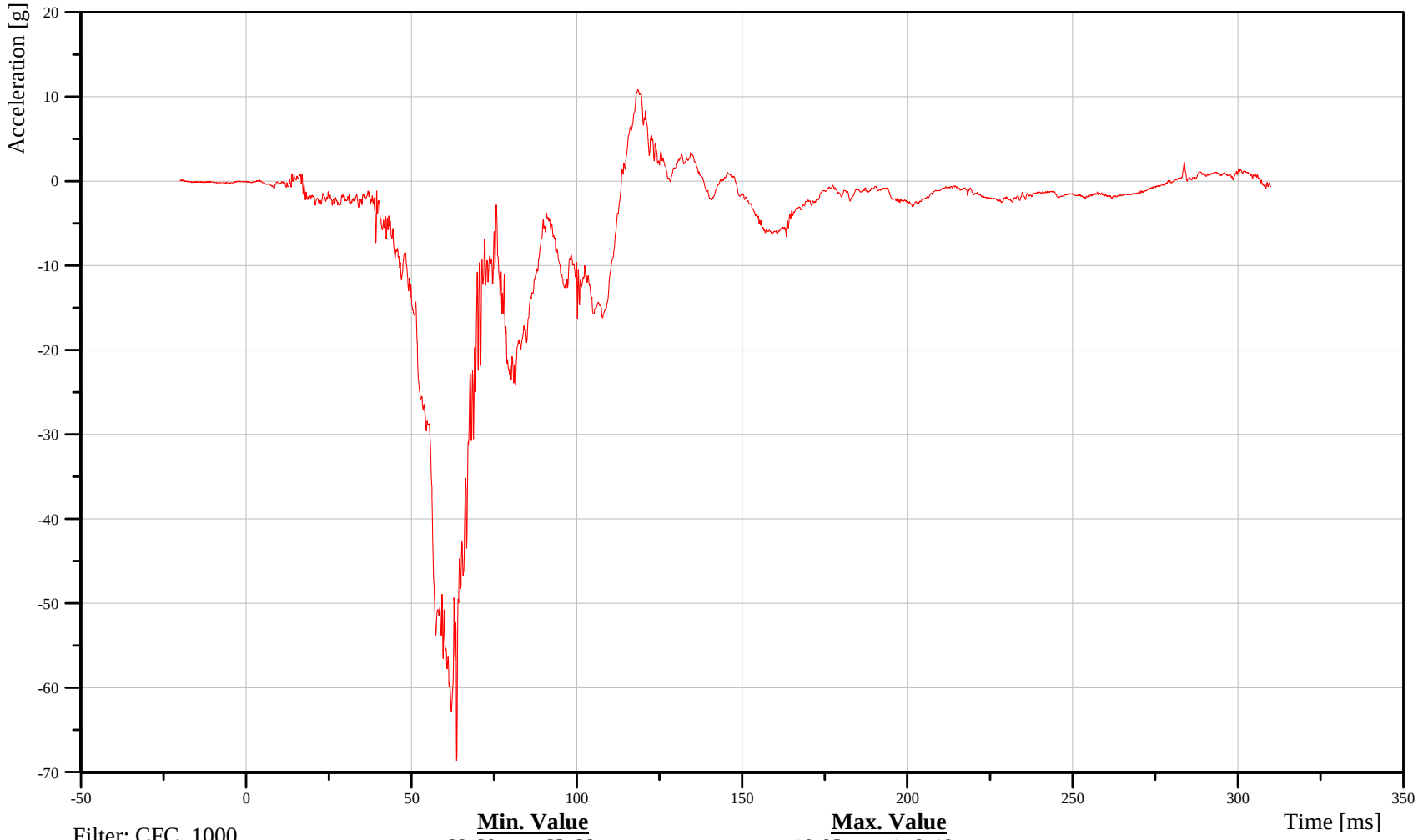
Target Vehicle Passenger Left Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-68.60 g at 63.68 ms

Max. Value
10.83 g at 118.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

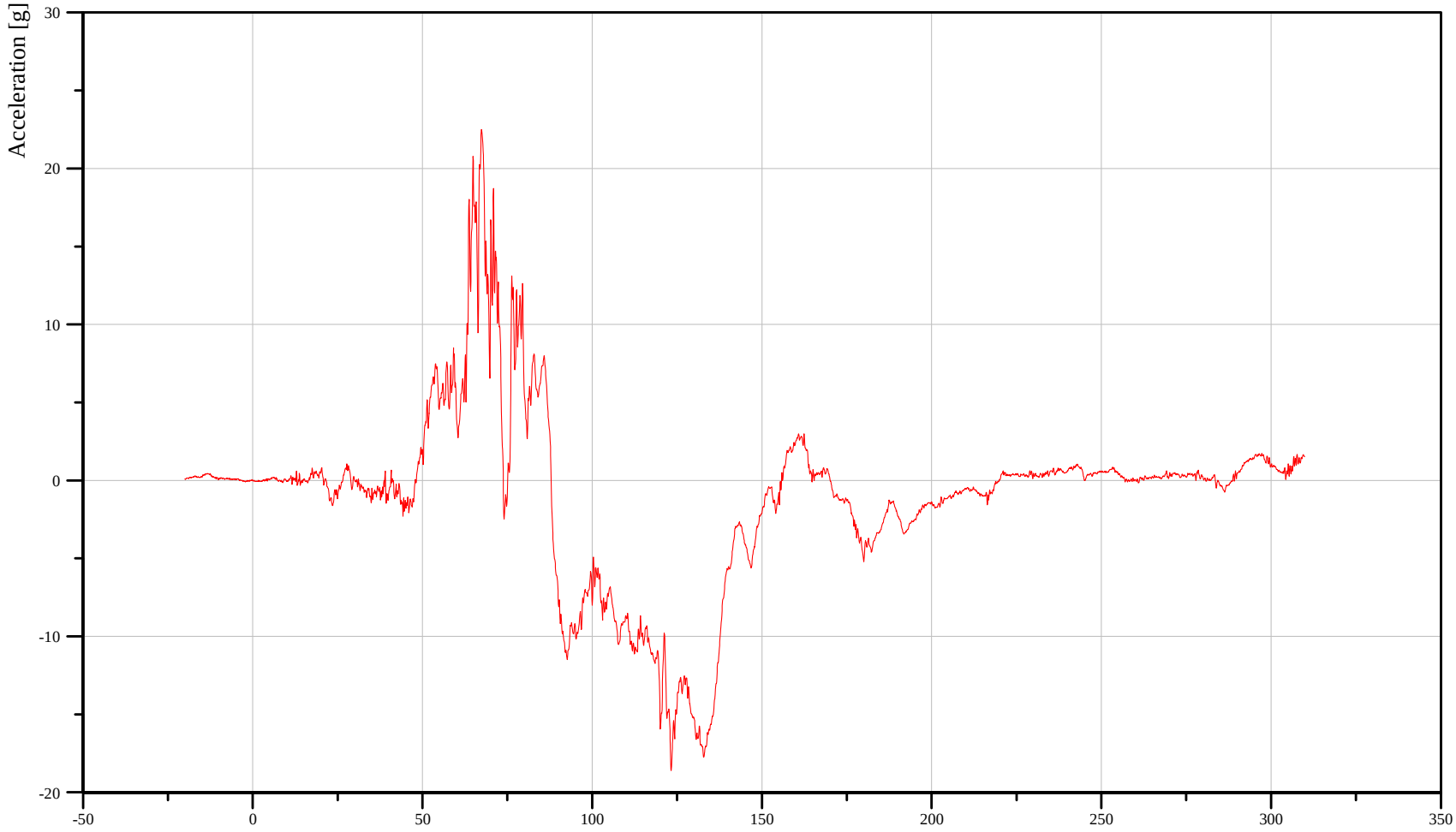
Target Vehicle Passenger Left Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-18.61 g at 123.28 ms

Max. Value
22.51 g at 67.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

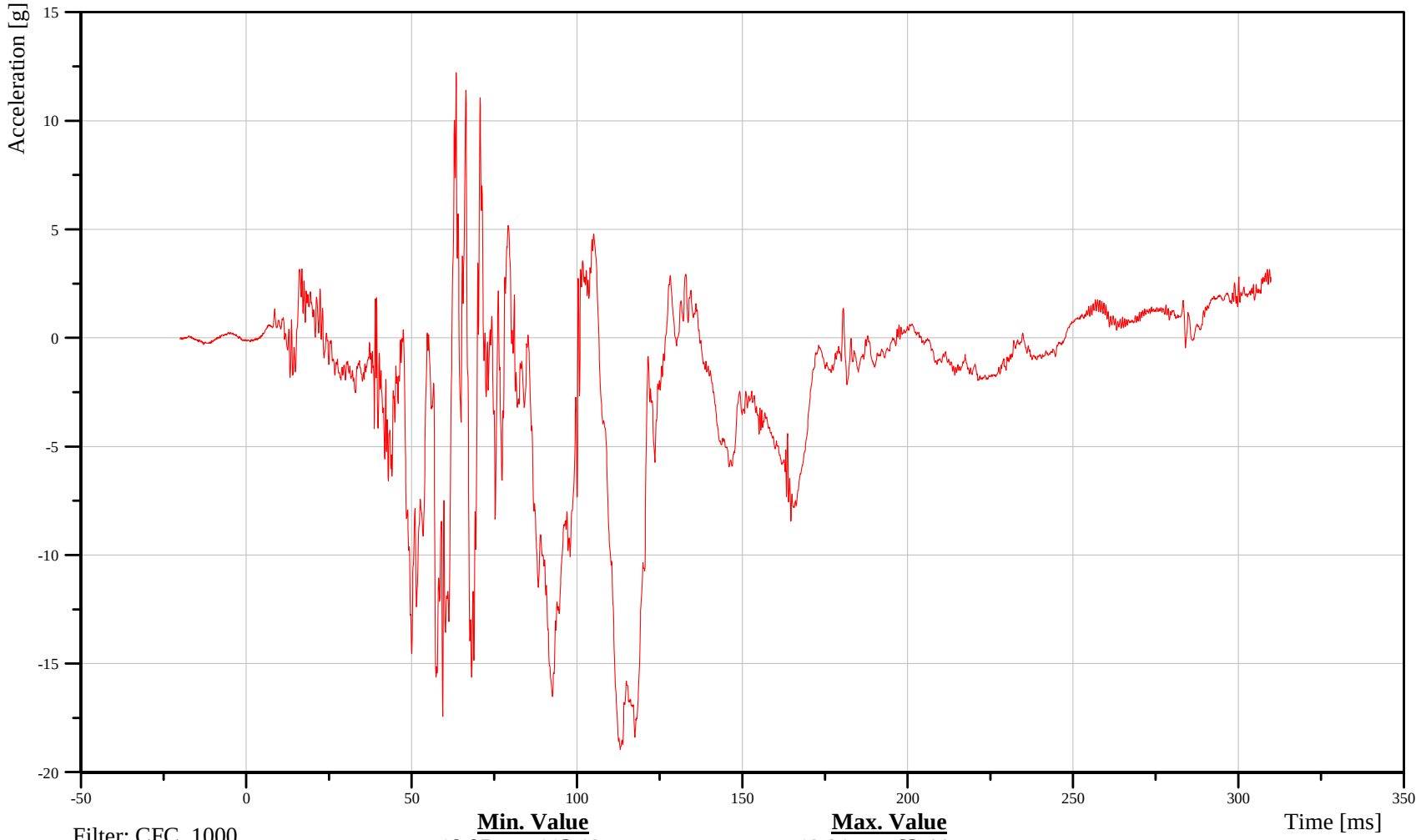
Target Vehicle Passenger Left Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-18.95 g at 113.12 ms

Max. Value
12.21 g at 63.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

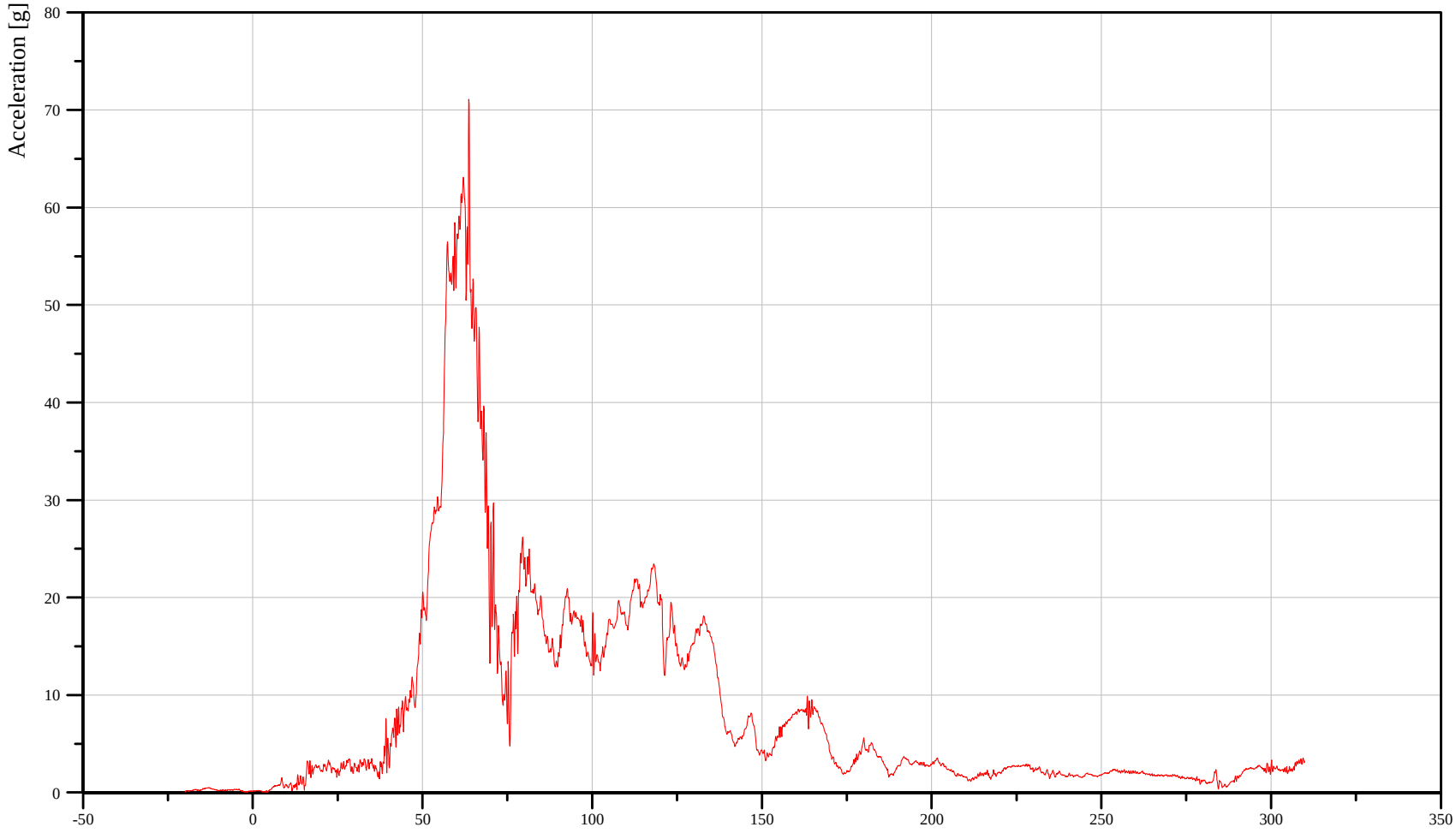
Target Vehicle Passenger Left Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.02 g at -1.76 ms

Max. Value
71.11 g at 63.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

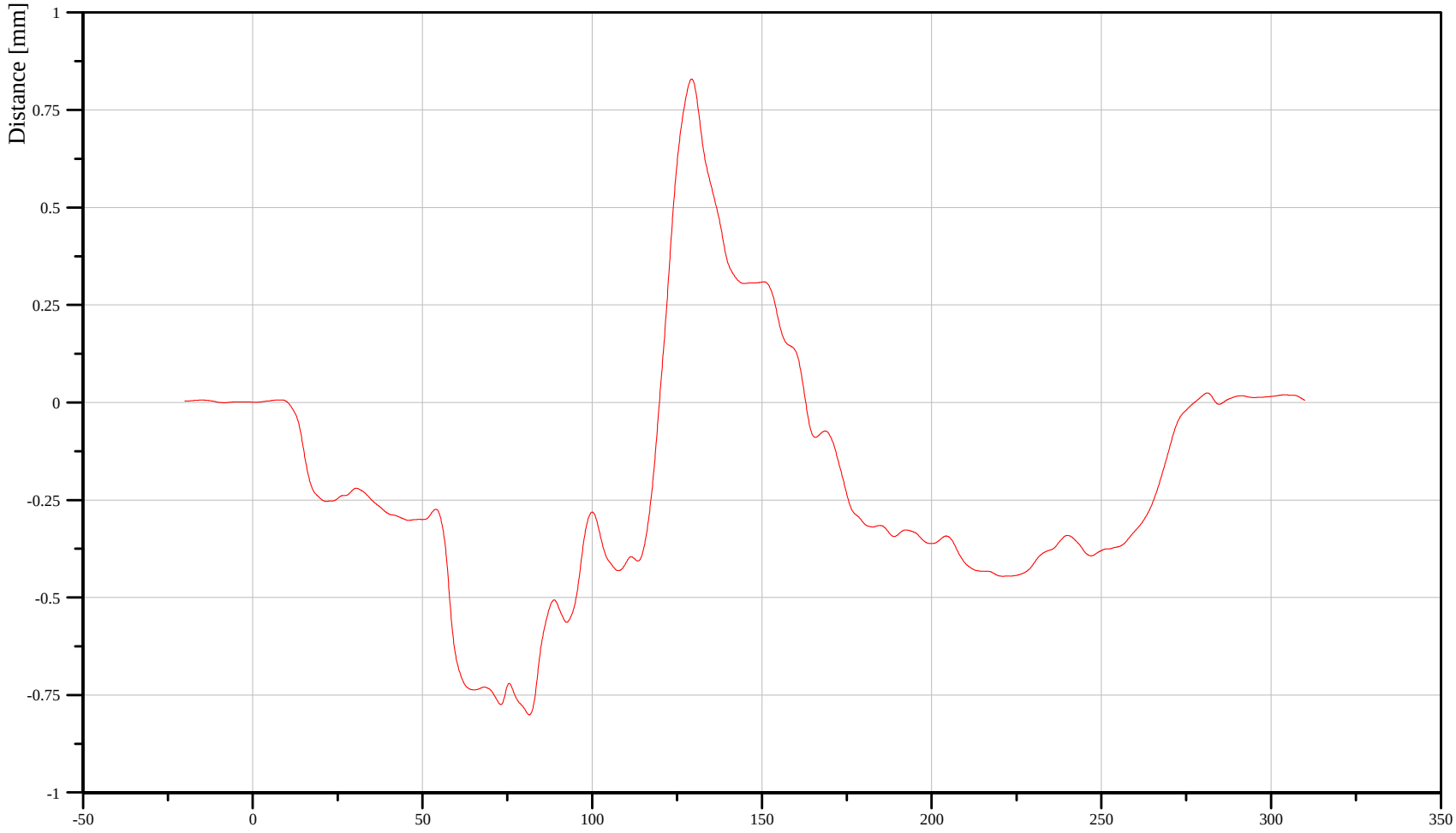
Target Vehicle Passenger Right Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.80 mm at 81.52 ms

Max. Value
0.83 mm at 129.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

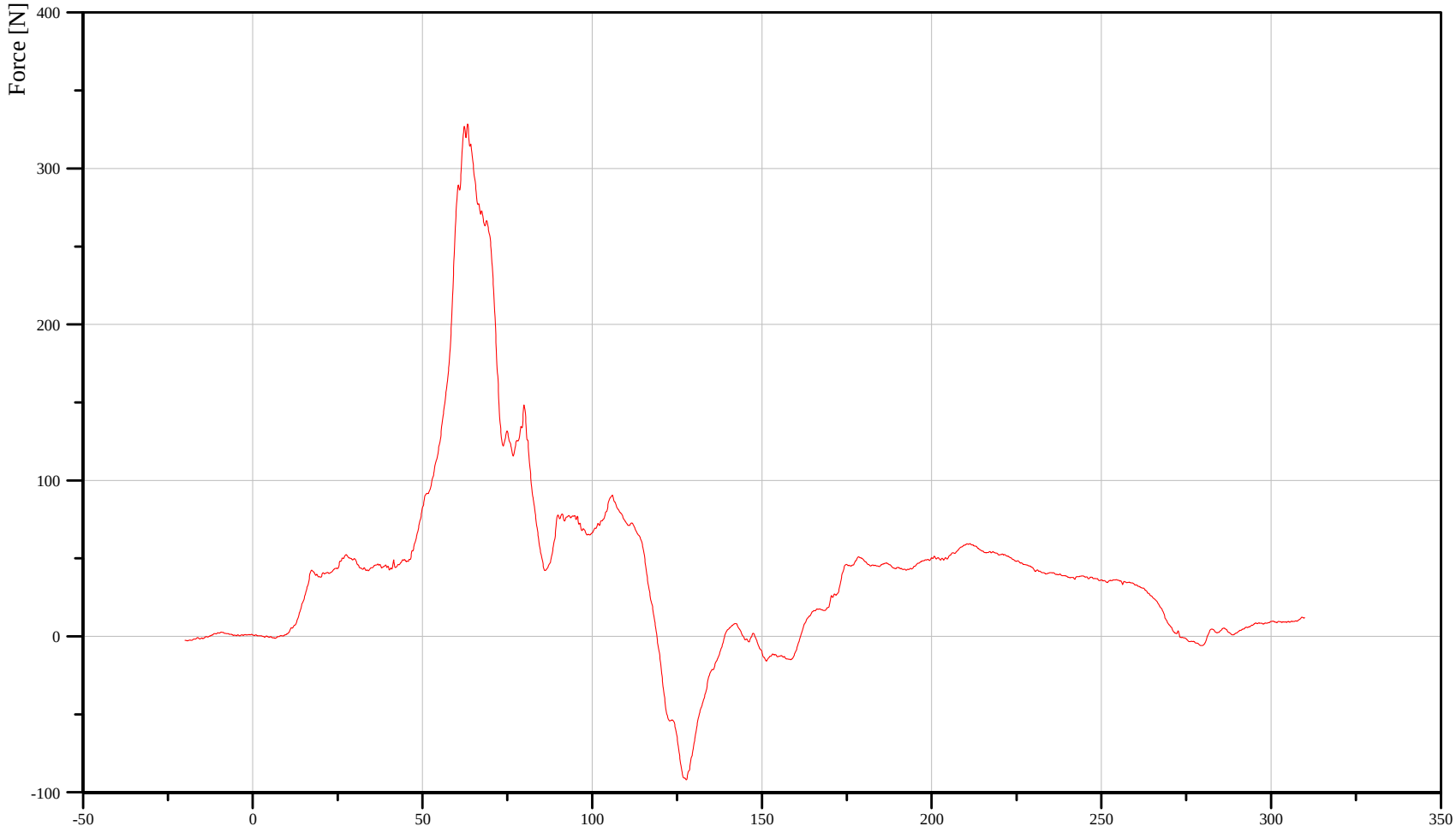
Target Vehicle Passenger Right Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRUFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-91.83 N at 127.76 ms

Max. Value
328.52 N at 63.28 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

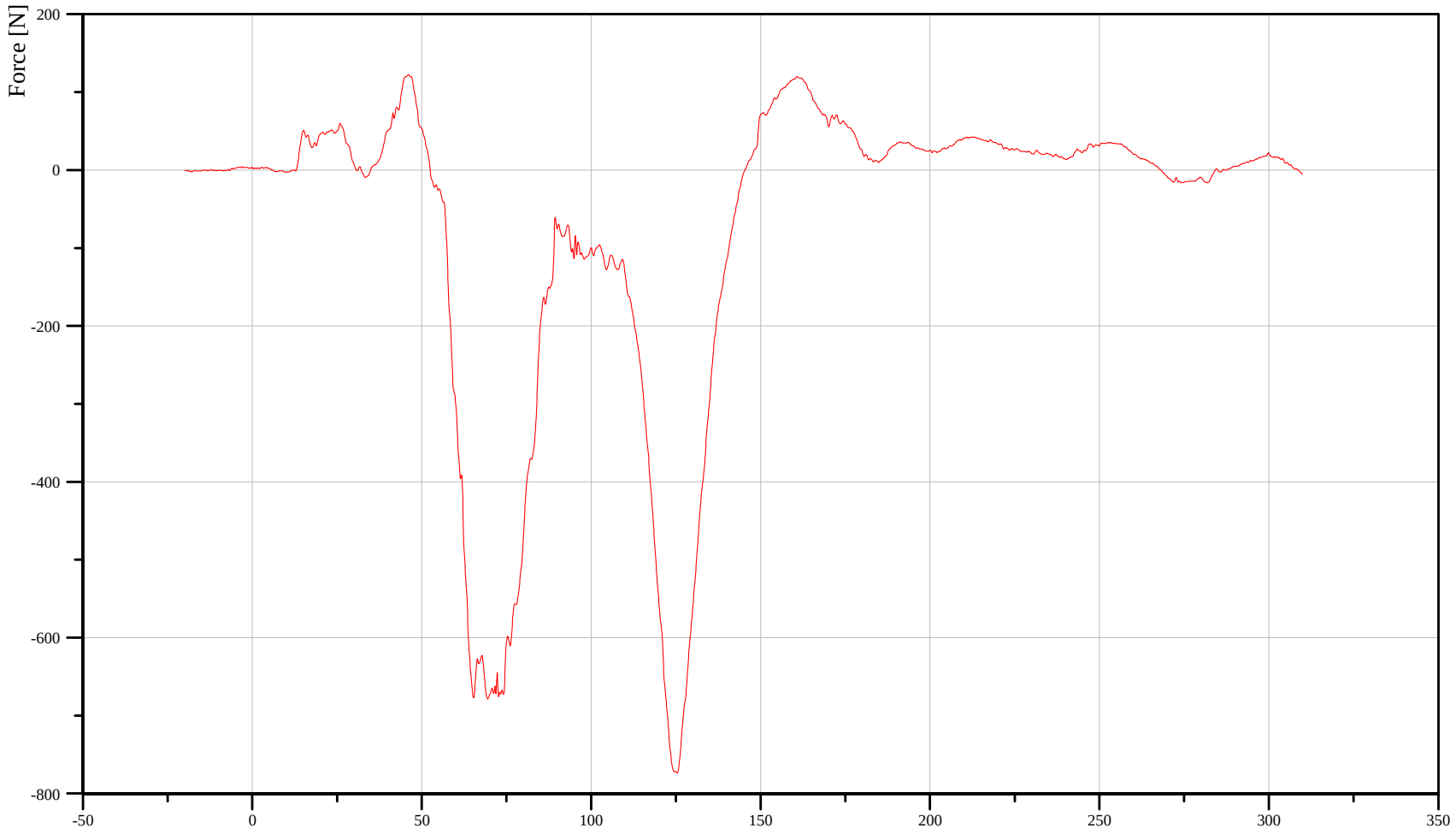
Target Vehicle Passenger Right Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRUFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-773.67 N at 125.36 ms

Max. Value
122.56 N at 46.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

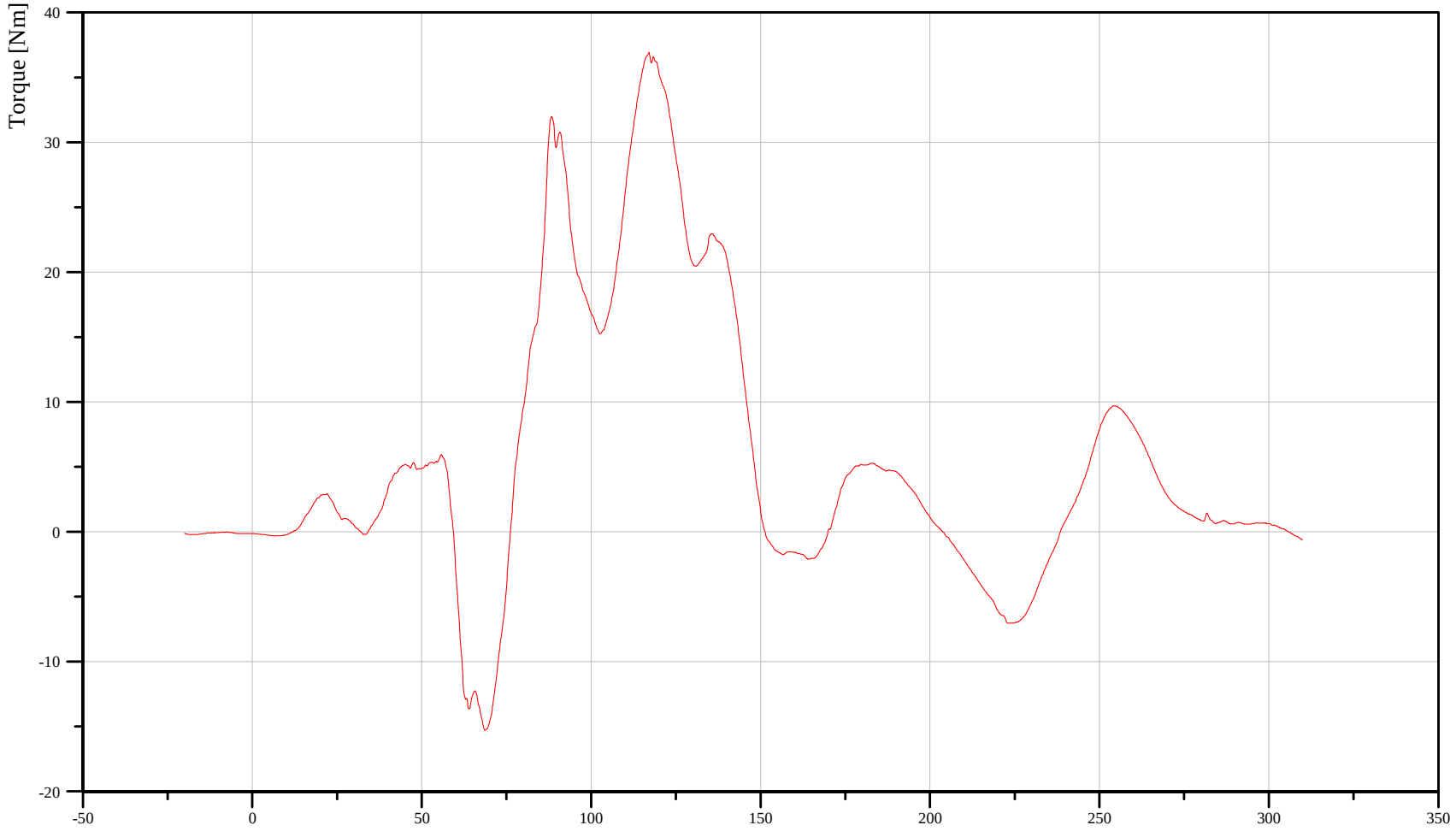
Target Vehicle Passenger Right Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRUFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-15.29 Nm at 68.72 ms

Max. Value
36.91 Nm at 117.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

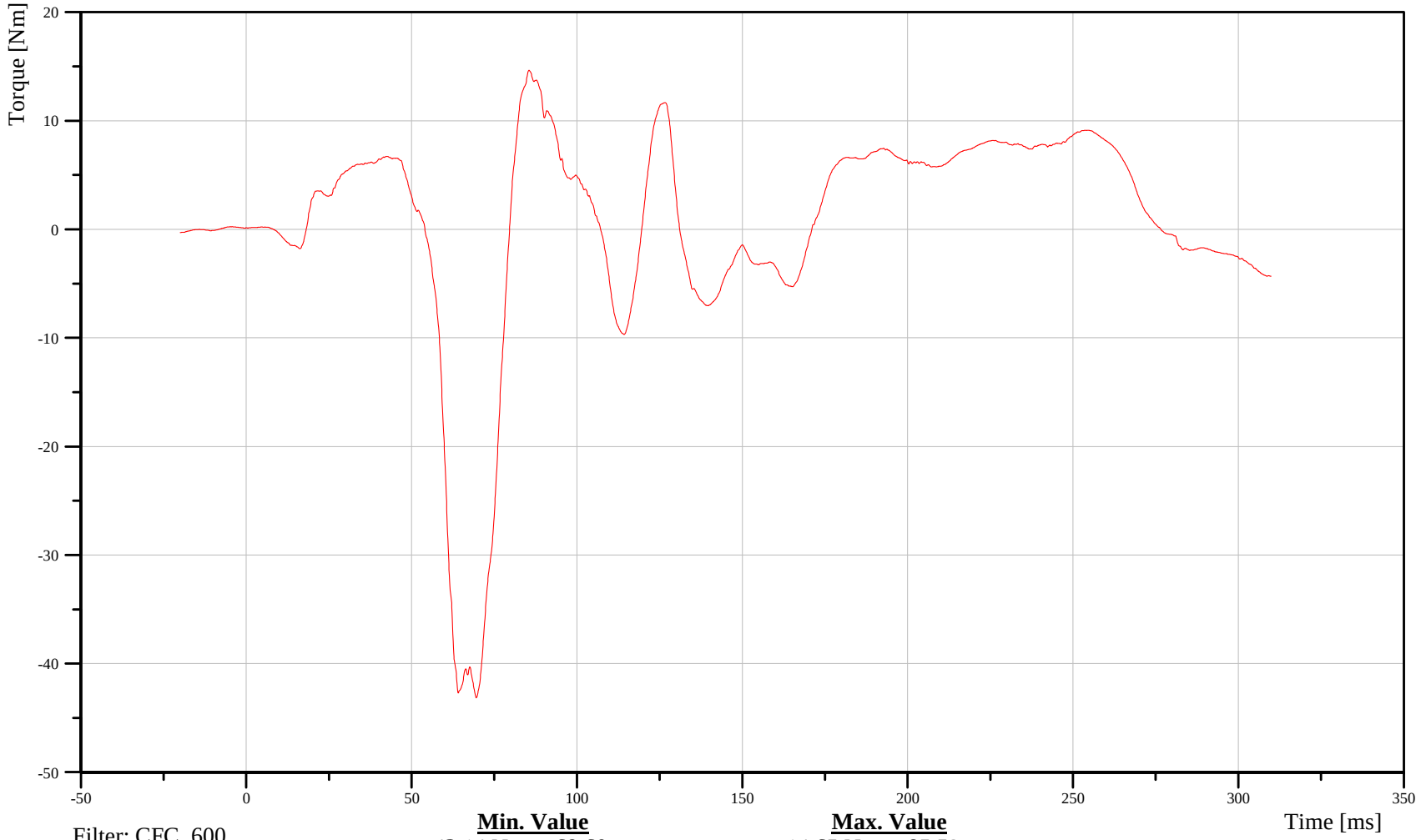
Target Vehicle Passenger Right Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRUFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-43.14 Nm at 69.60 ms

Max. Value
14.65 Nm at 85.52 ms

B-150

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

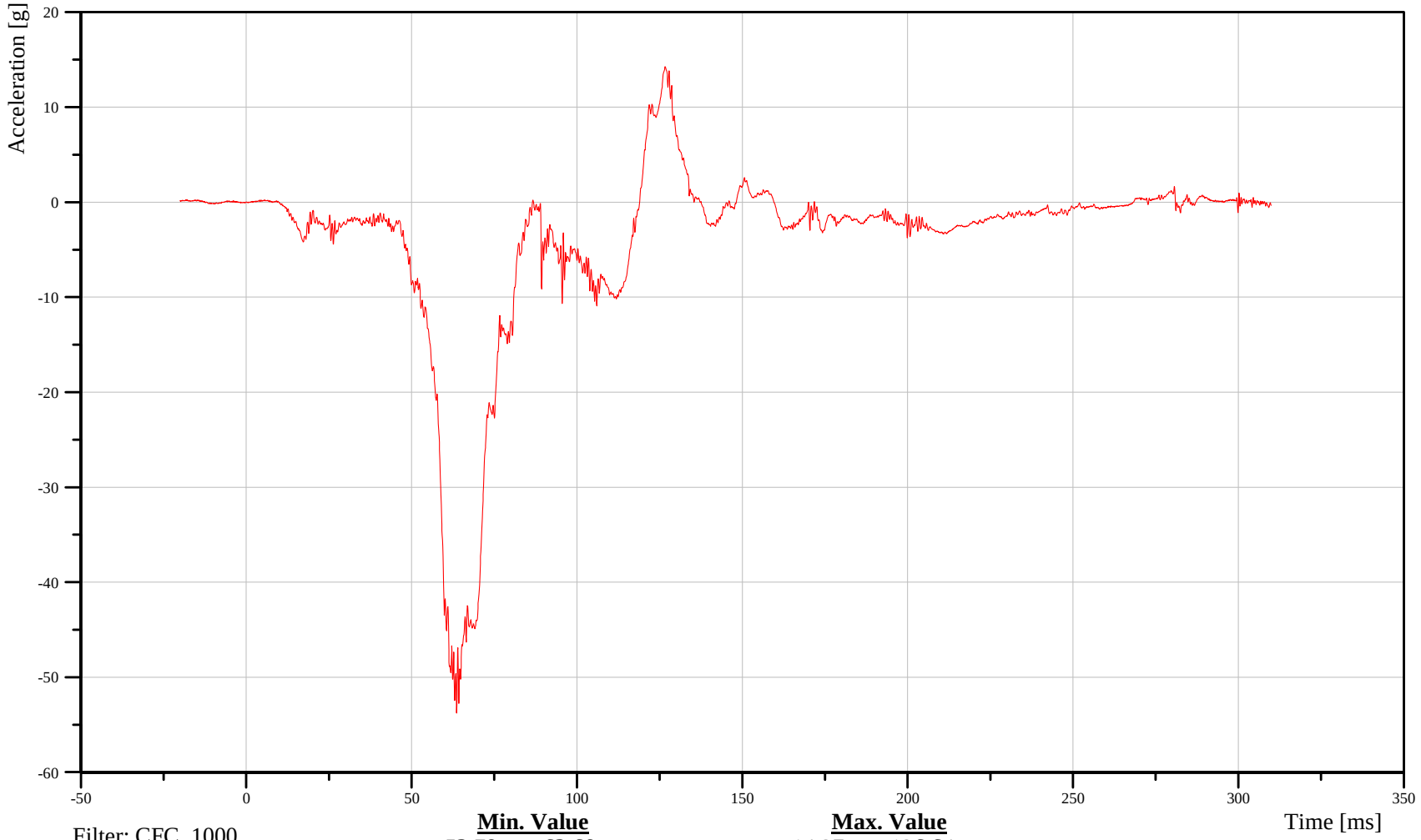
Target Vehicle Passenger Right Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-53.78 g at 63.68 ms

Max. Value
14.27 g at 126.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

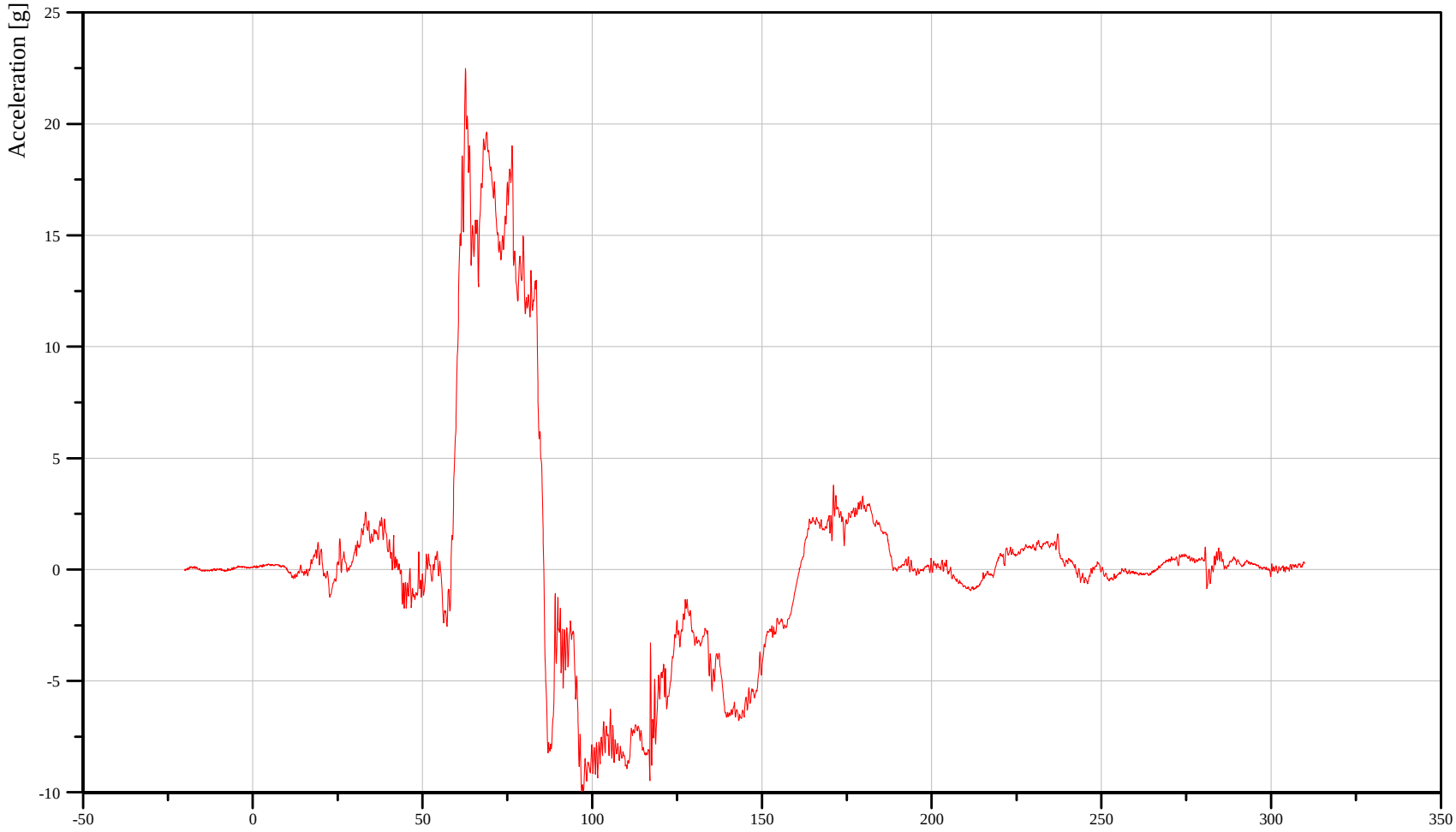
Target Vehicle Passenger Right Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-9.96 g at 96.88 ms

Max. Value
22.48 g at 62.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

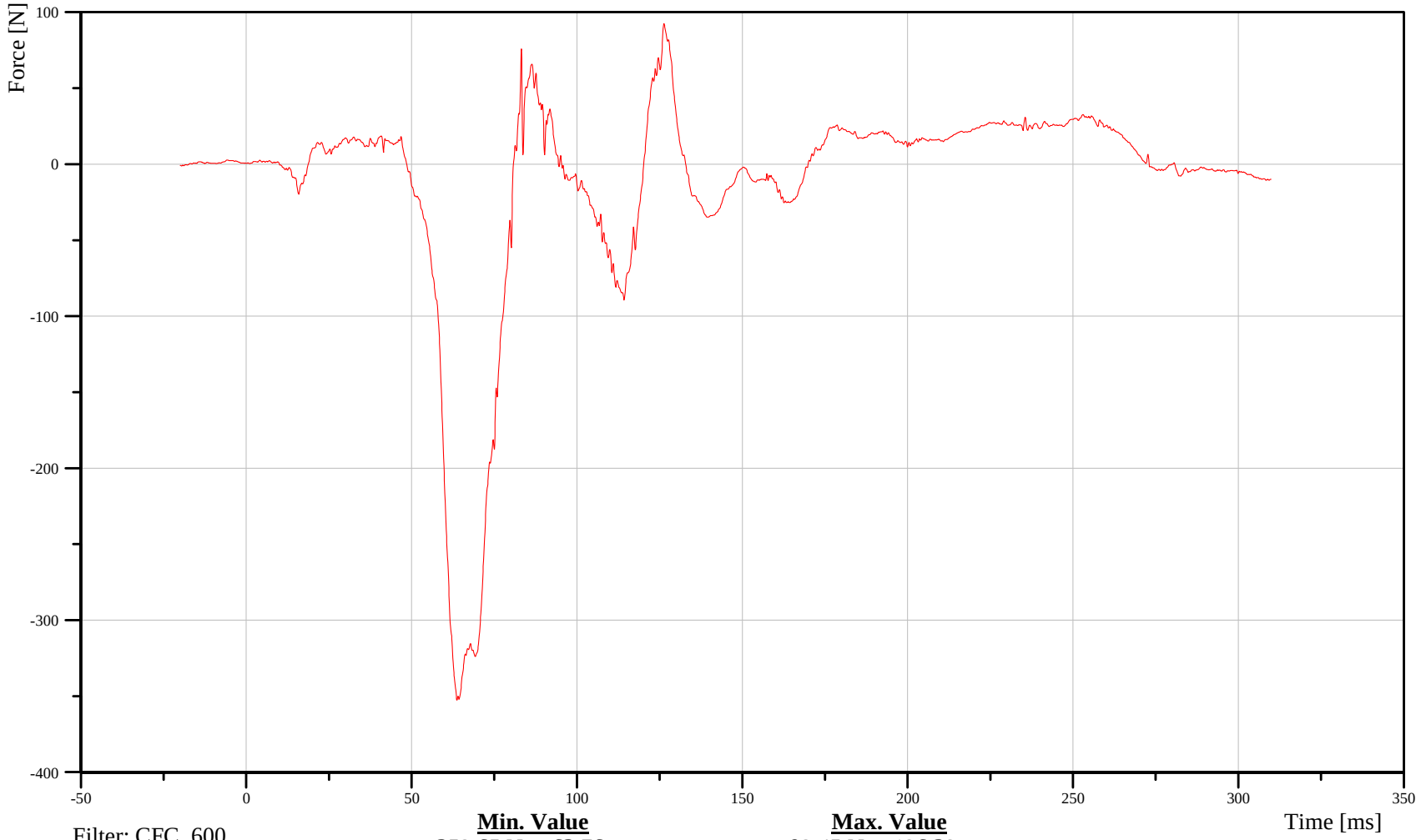
Target Vehicle Passenger Right Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRLFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-352.65 N at 63.76 ms

Max. Value
92.45 N at 126.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

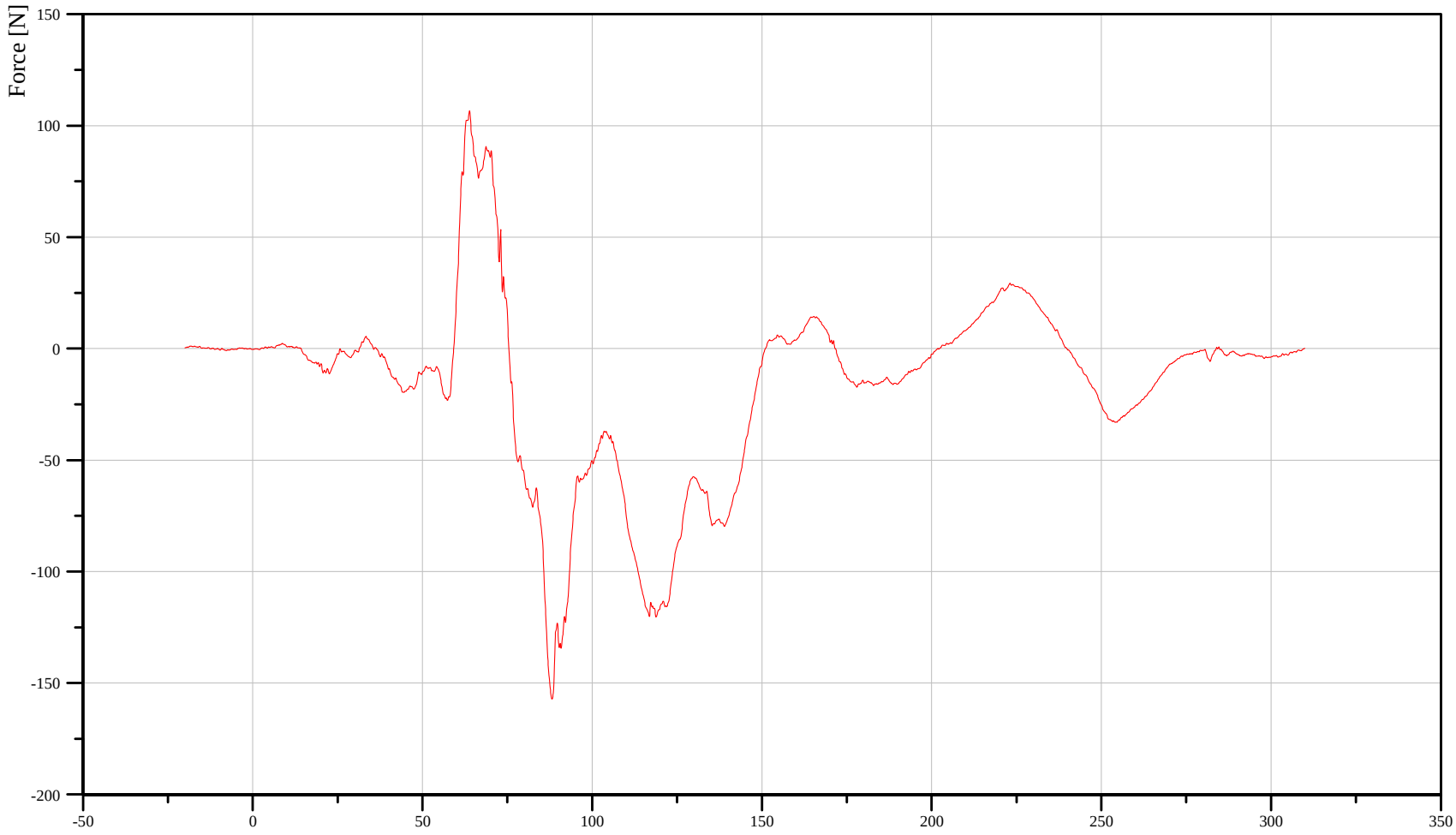
Target Vehicle Passenger Right Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRLFXHFFOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-157.26 N at 88.16 ms

Max. Value
106.62 N at 63.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

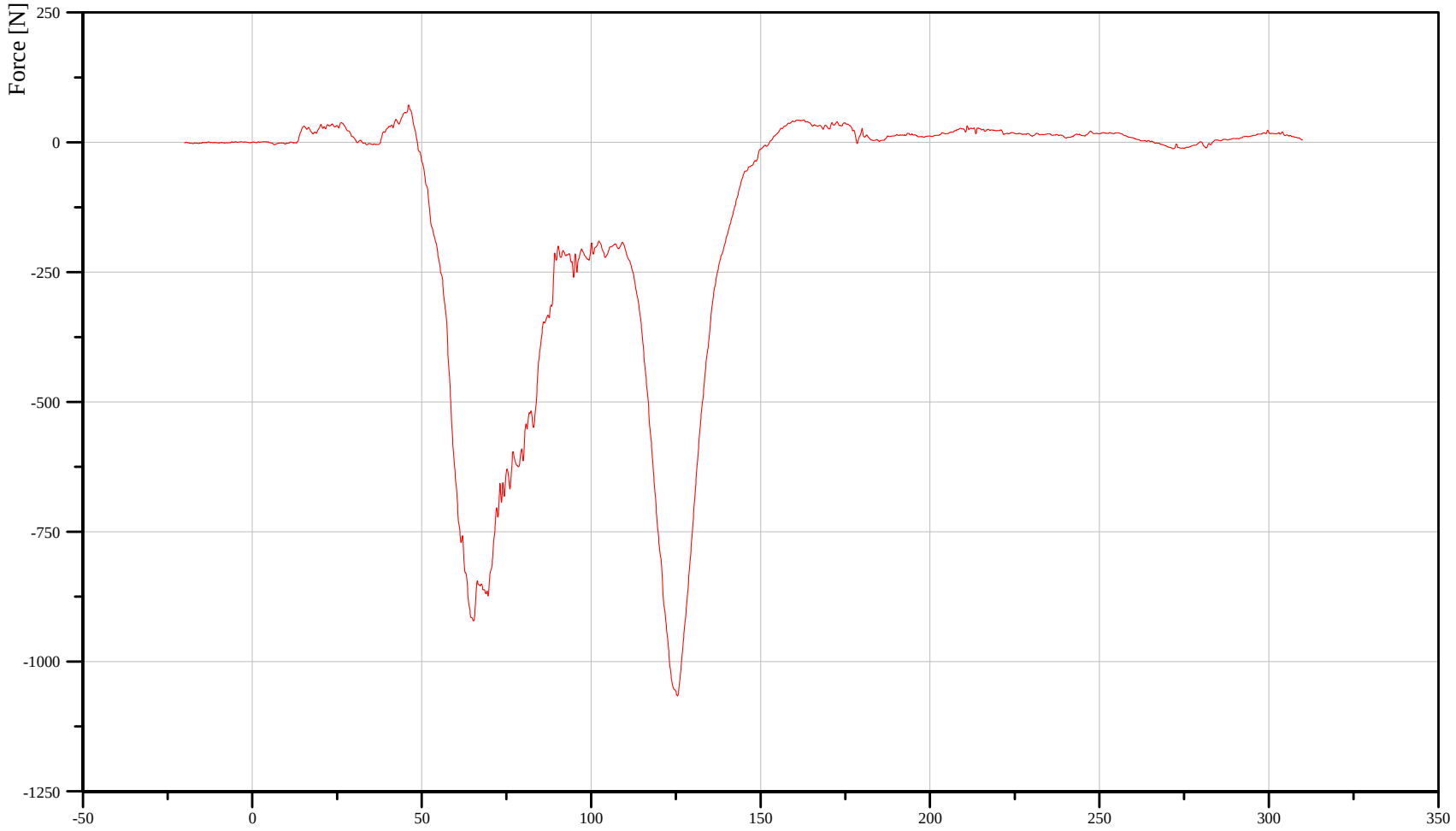
Target Vehicle Passenger Right Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRLFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,065.87 N at 125.52 ms

Max. Value
72.17 N at 46.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

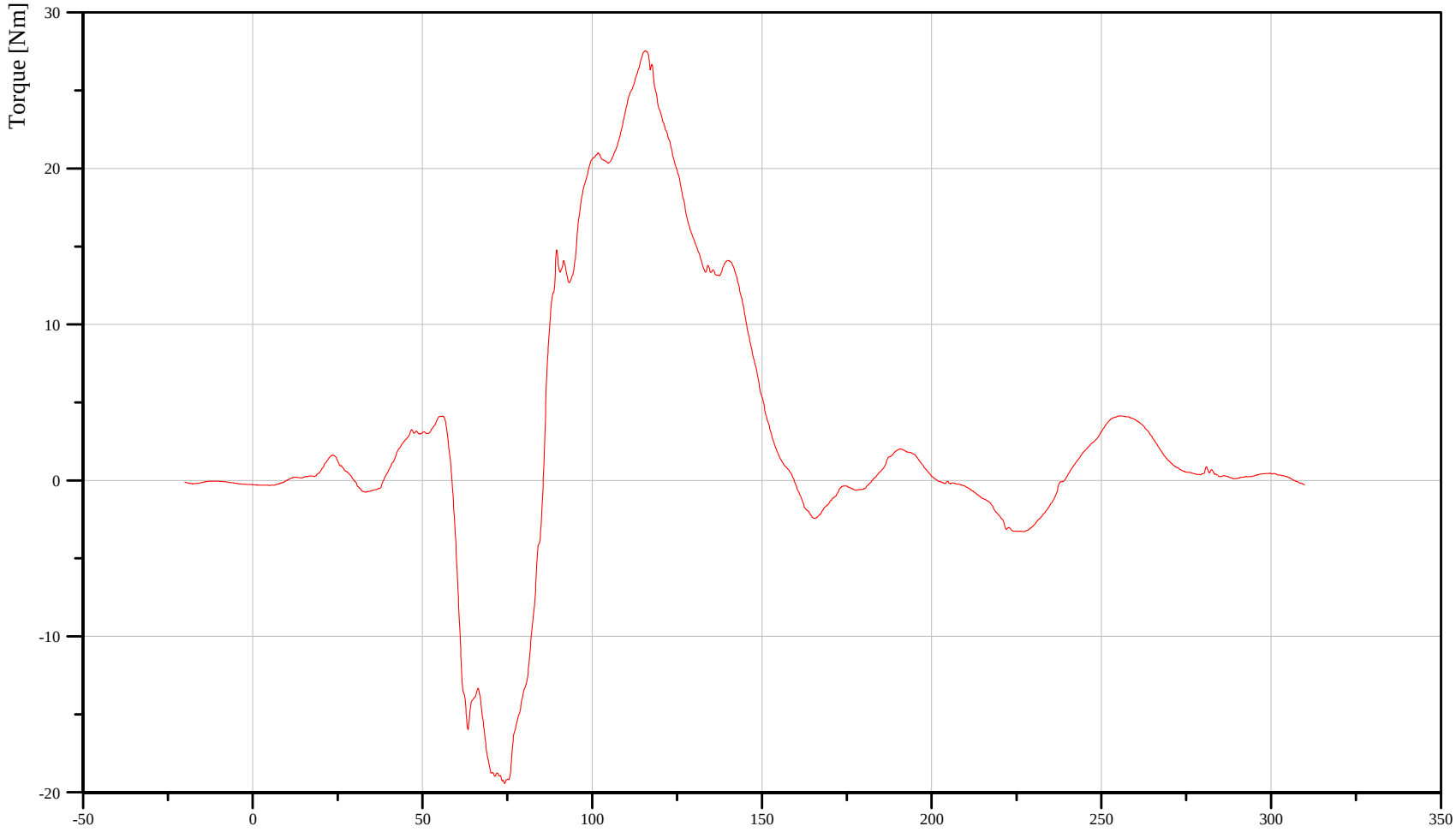
Target Vehicle Passenger Right Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRLFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-19.42 Nm at 74.24 ms

Max. Value
27.54 Nm at 115.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

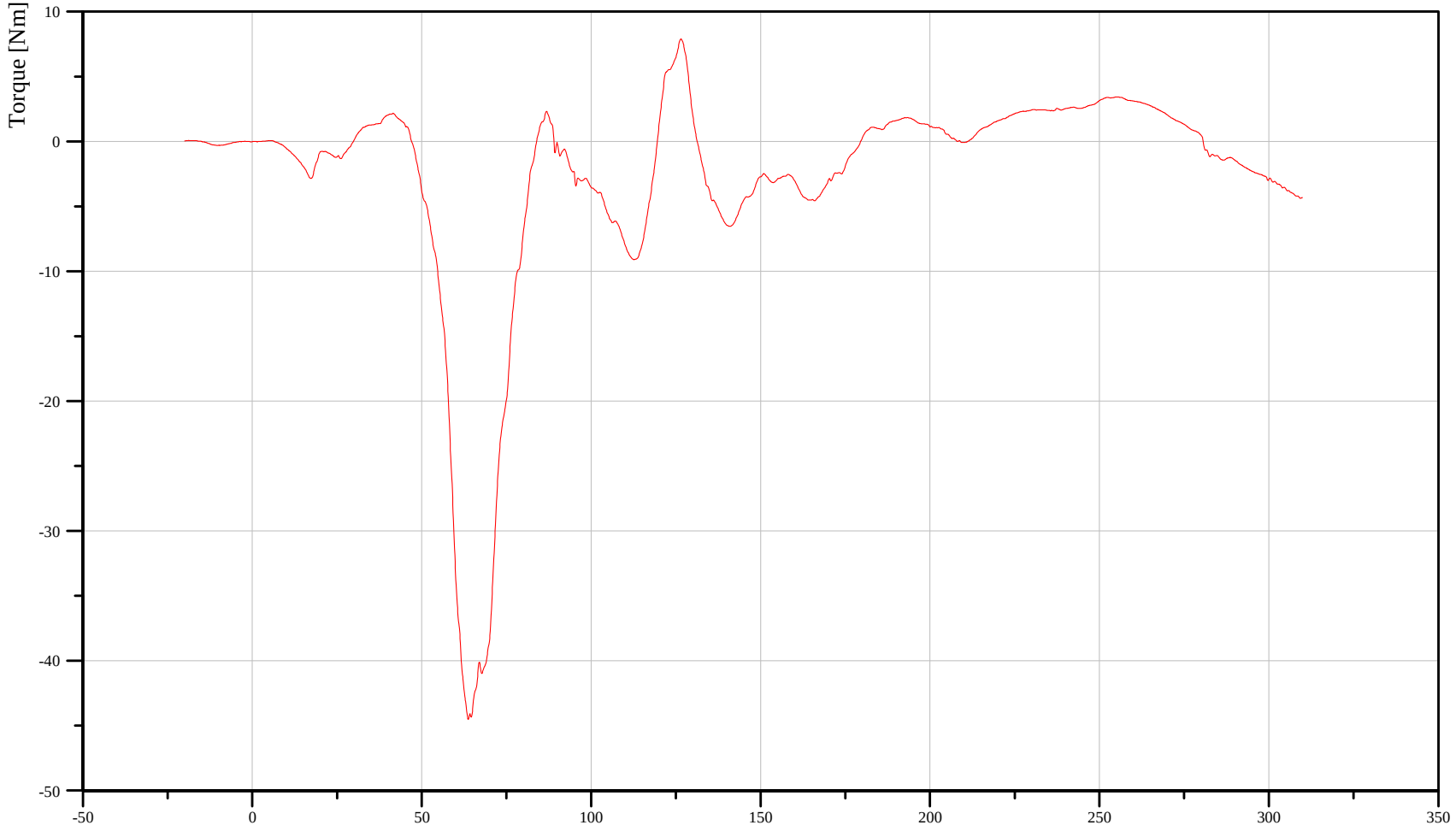
Target Vehicle Passenger Right Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23TIBIRLFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-44.51 Nm at 63.76 ms

Max. Value
7.89 Nm at 126.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

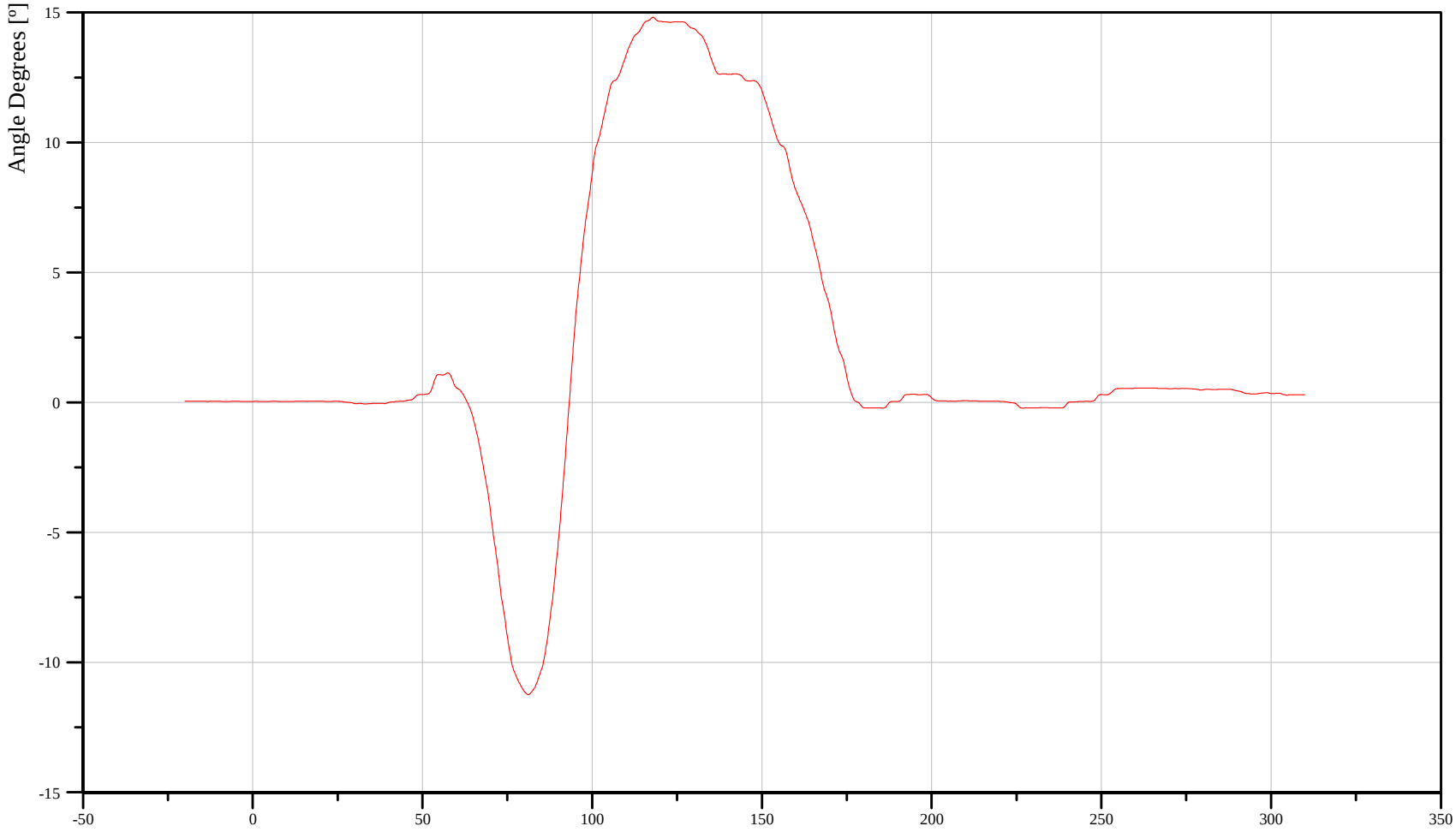
Target Vehicle Passenger Right Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-11.24 ° at 81.20 ms

Max. Value
14.82 ° at 117.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

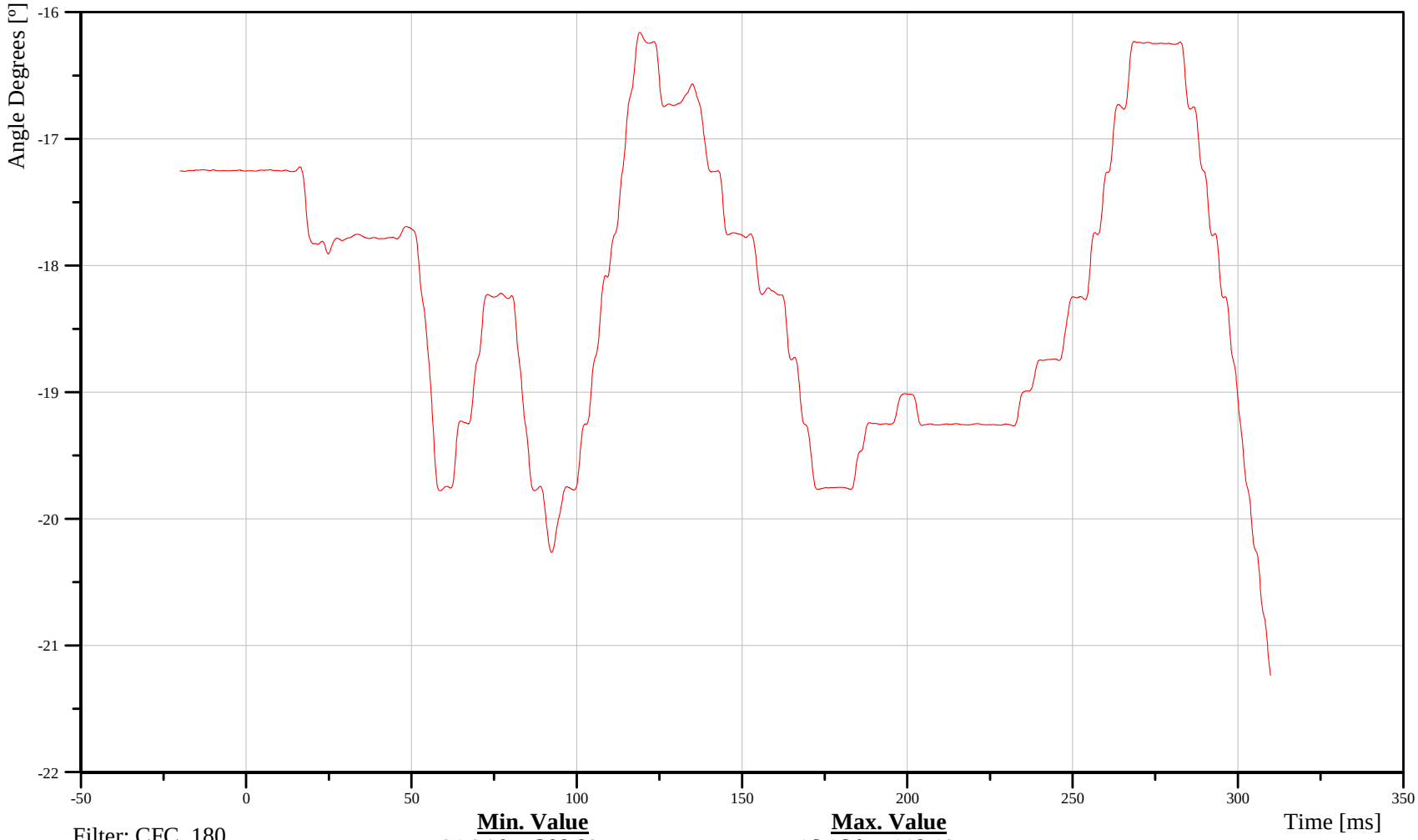
Target Vehicle Passenger Right Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-21.24 ° at 309.92 ms

Max. Value
-16.16 ° at 119.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

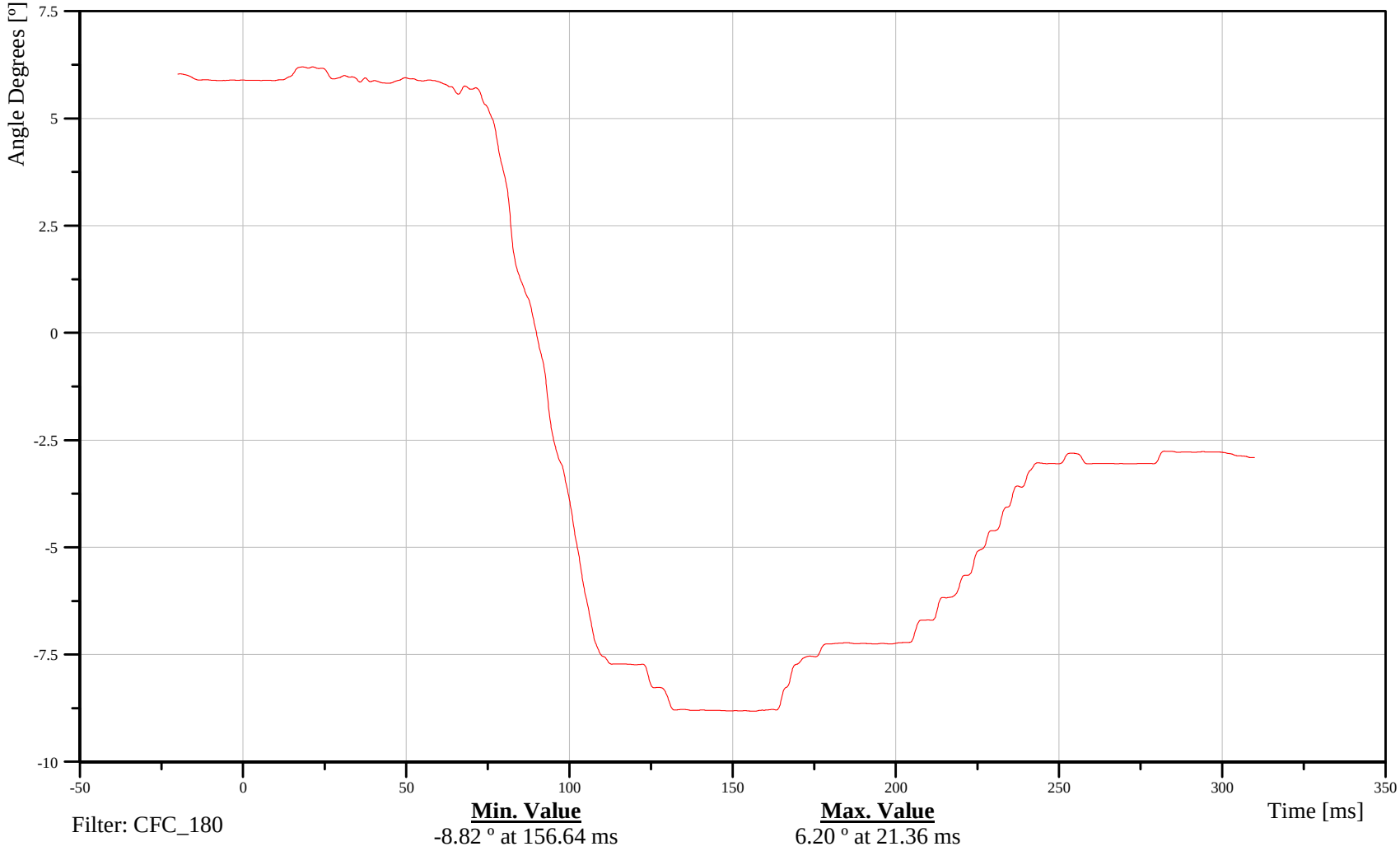
Target Vehicle Passenger Right Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-8.82 ° at 156.64 ms

Max. Value
6.20 ° at 21.36 ms

B-160

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

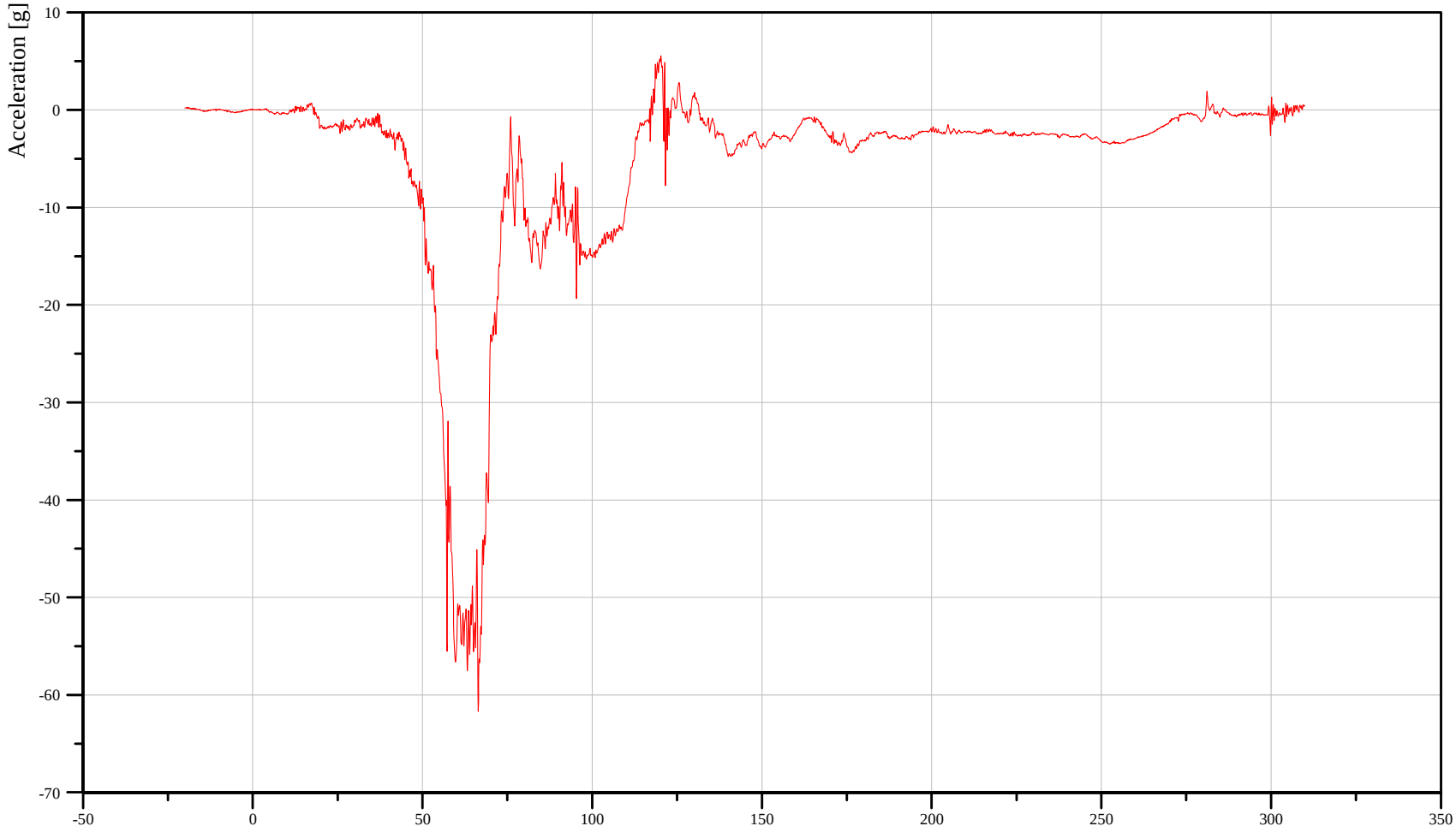
Target Vehicle Passenger Right Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-61.68 g at 66.40 ms

Max. Value
5.58 g at 120.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

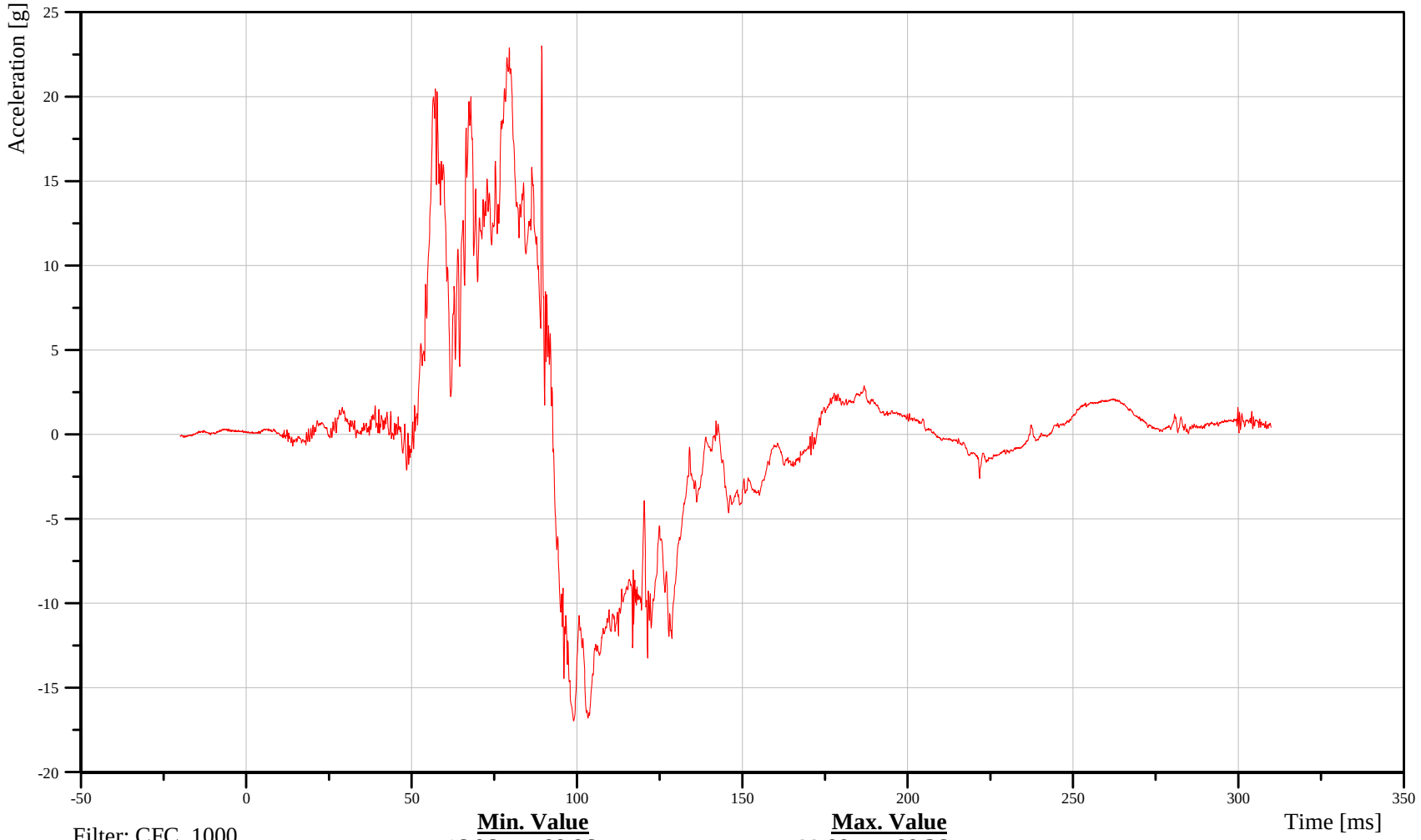
Target Vehicle Passenger Right Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-16.96 g at 98.96 ms

Max. Value
22.99 g at 89.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

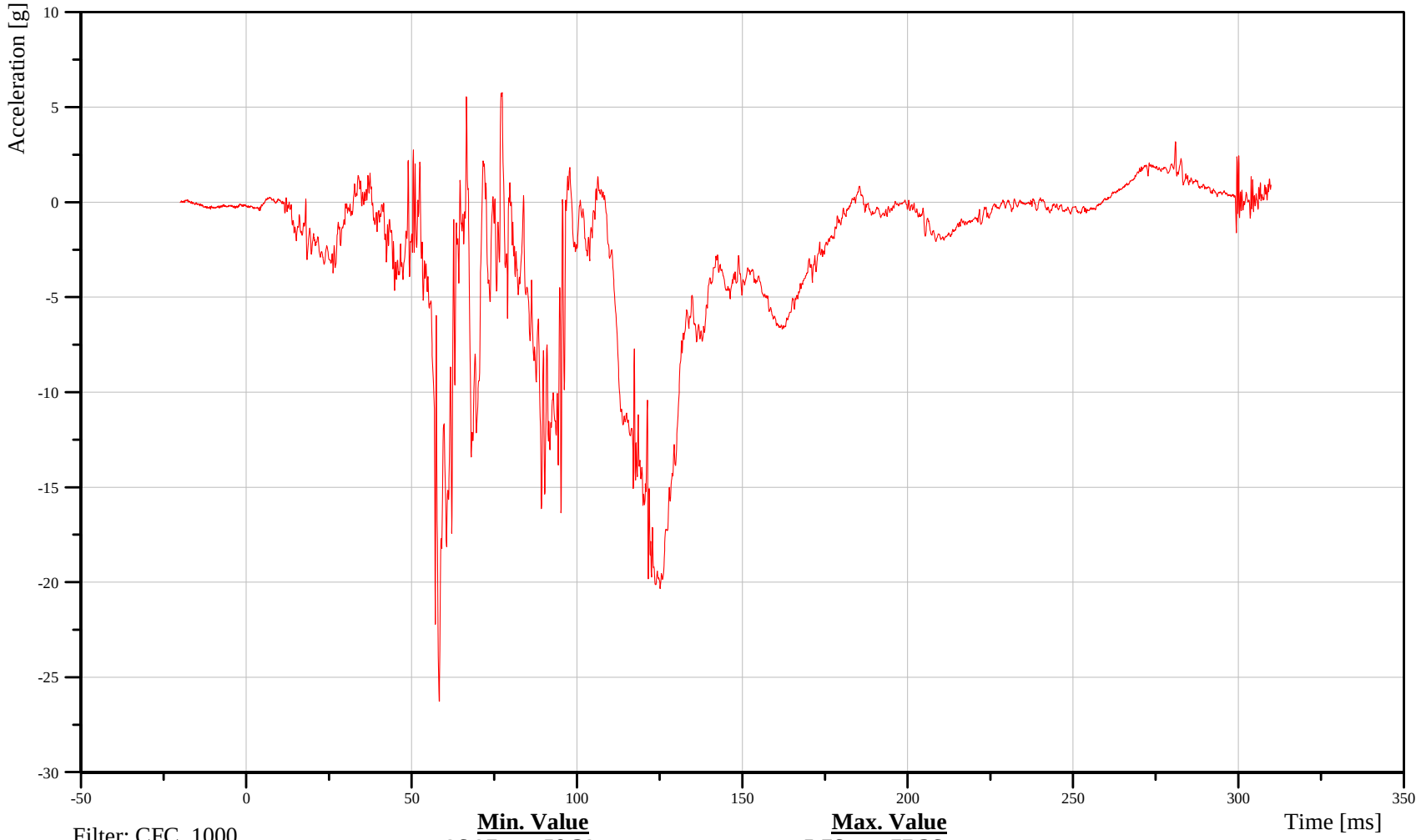
Target Vehicle Passenger Right Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-26.27 g at 58.32 ms

Max. Value
5.76 g at 77.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

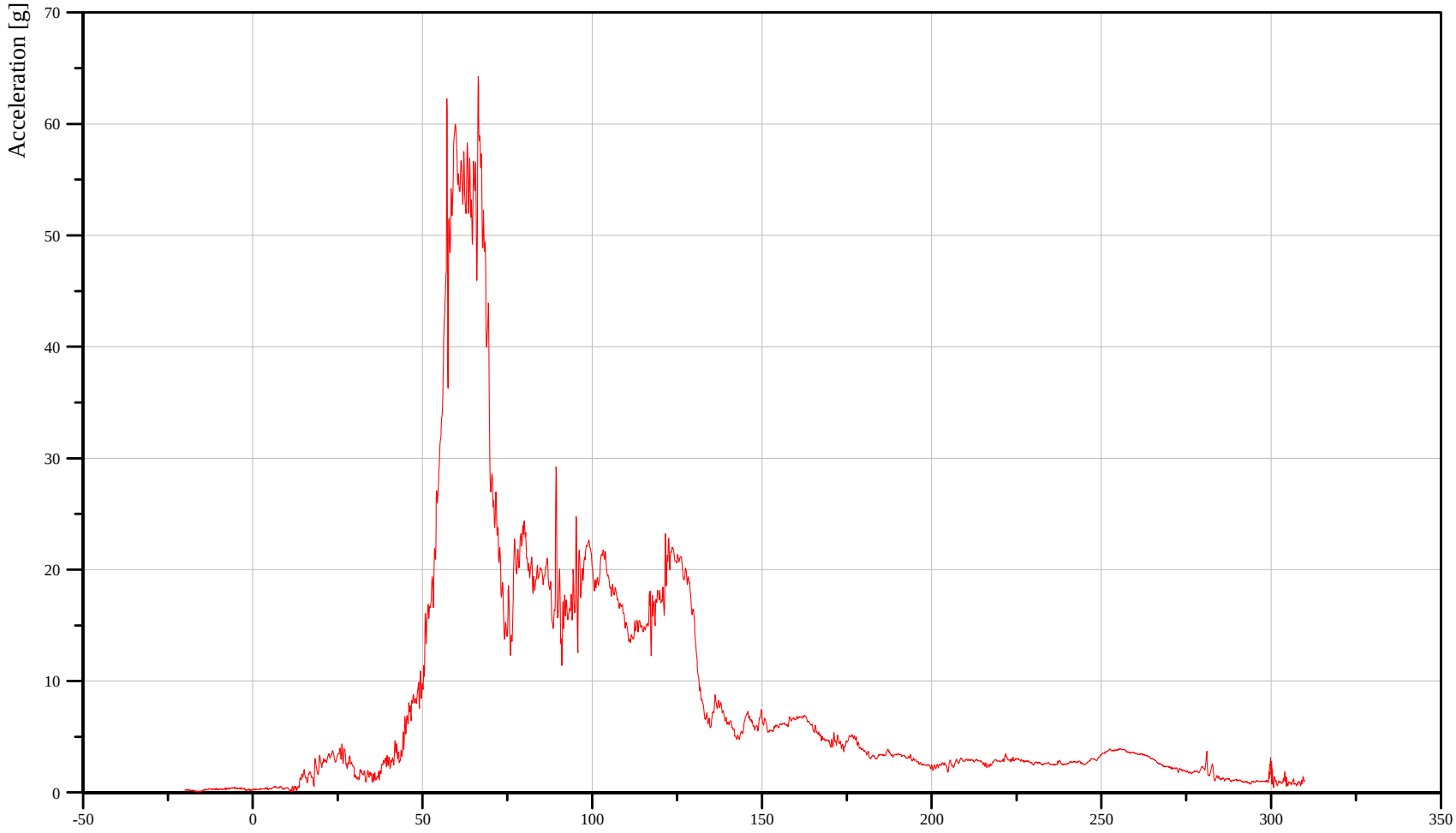
Target Vehicle Passenger Right Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.03 g at -16.16 ms

Max. Value
64.26 g at 66.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

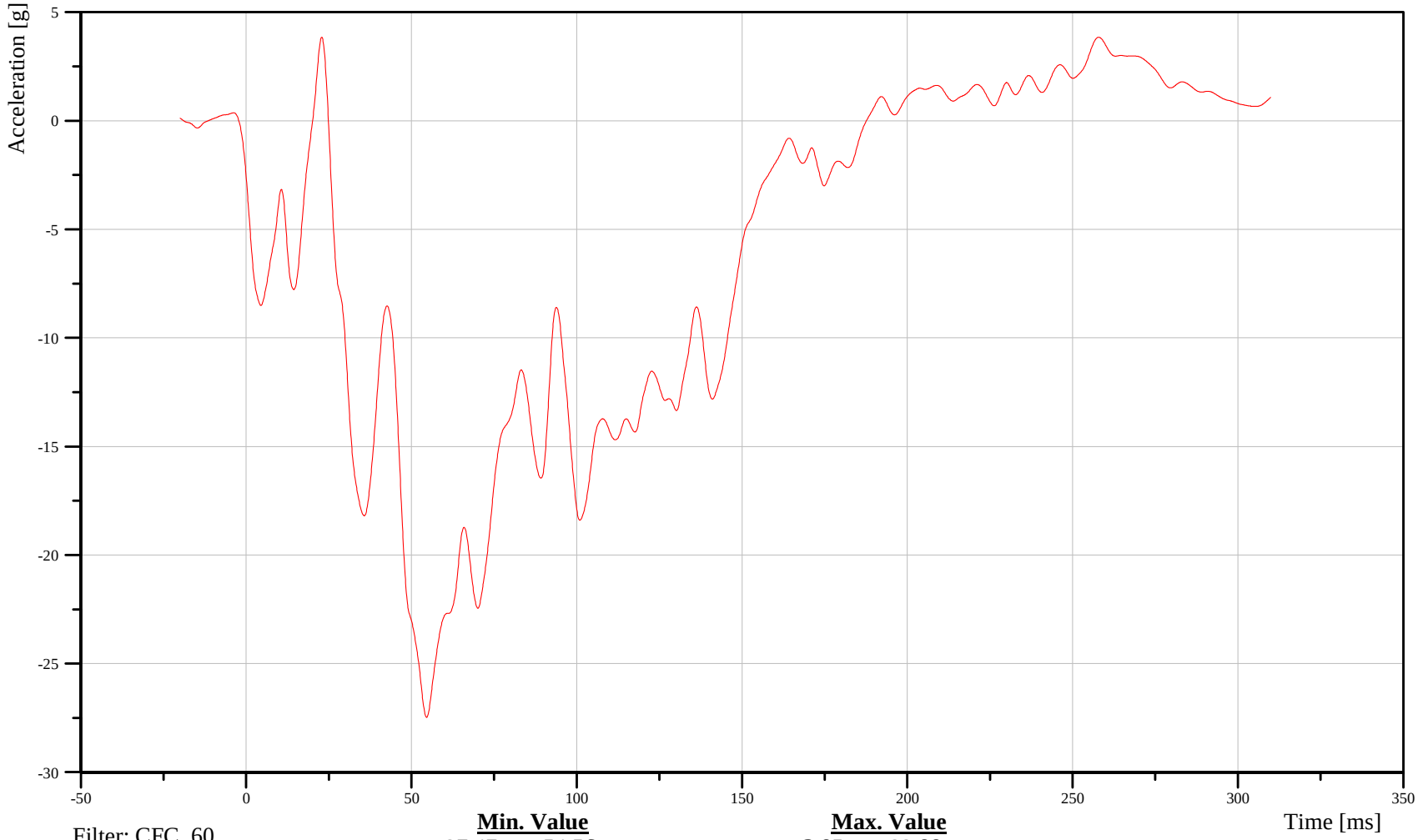
Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

24CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-27.47 g at 54.56 ms

Max. Value
3.85 g at 22.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

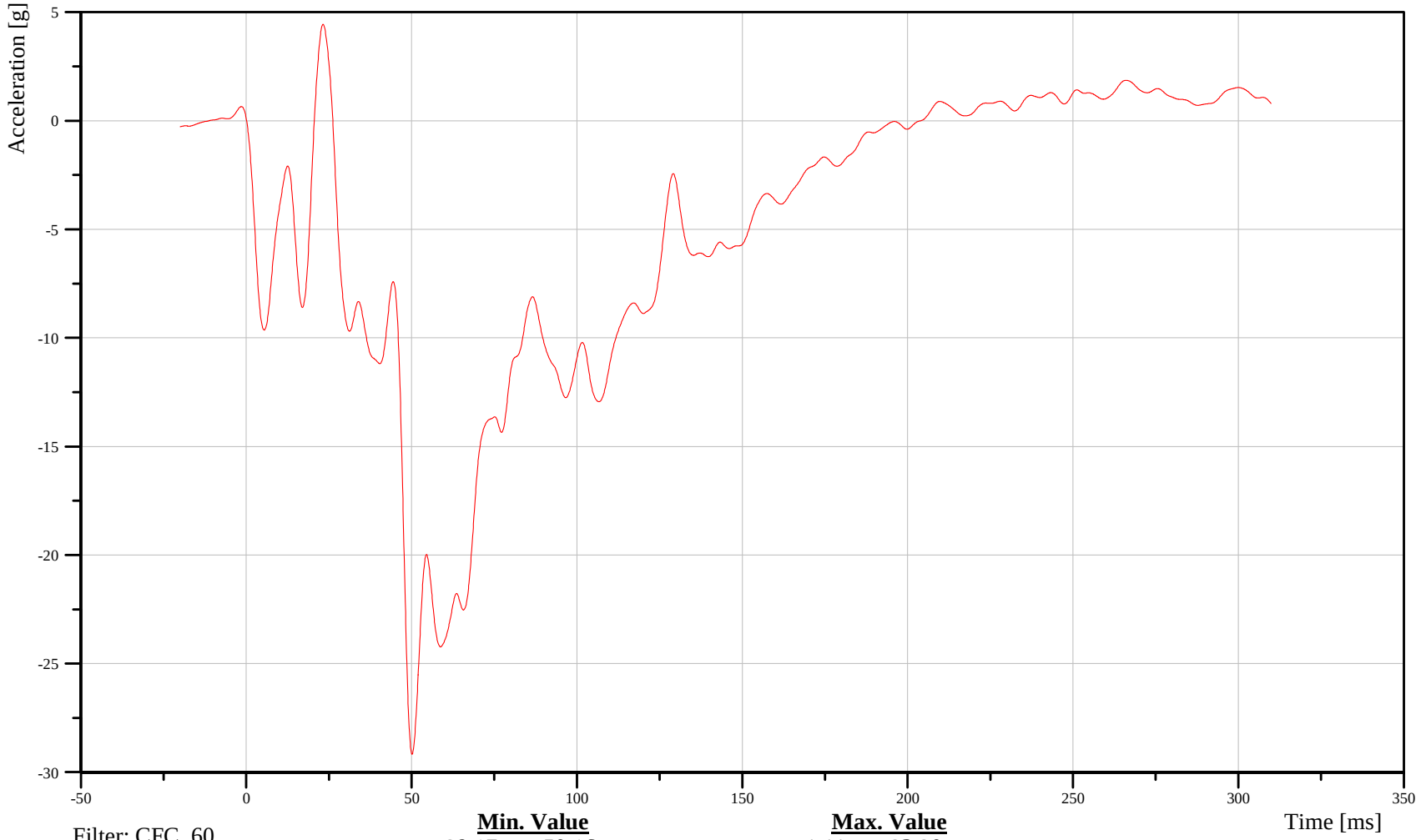
Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

26CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-29.17 g at 50.16 ms

Max. Value
4.44 g at 23.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

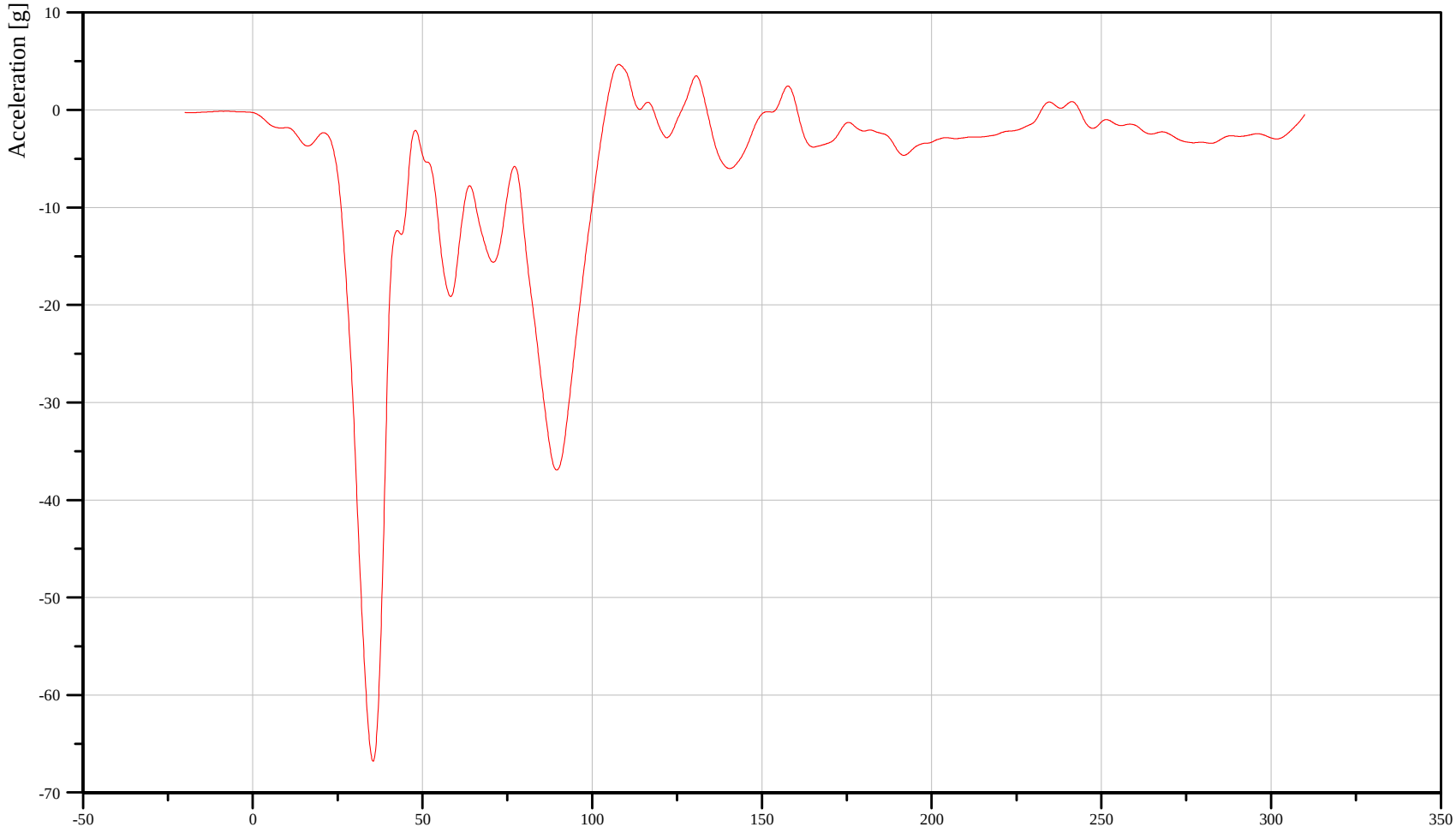
Target Vehicle Top of Engine X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

22ENGNTP0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-66.80 g at 35.44 ms

Max. Value
4.67 g at 107.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

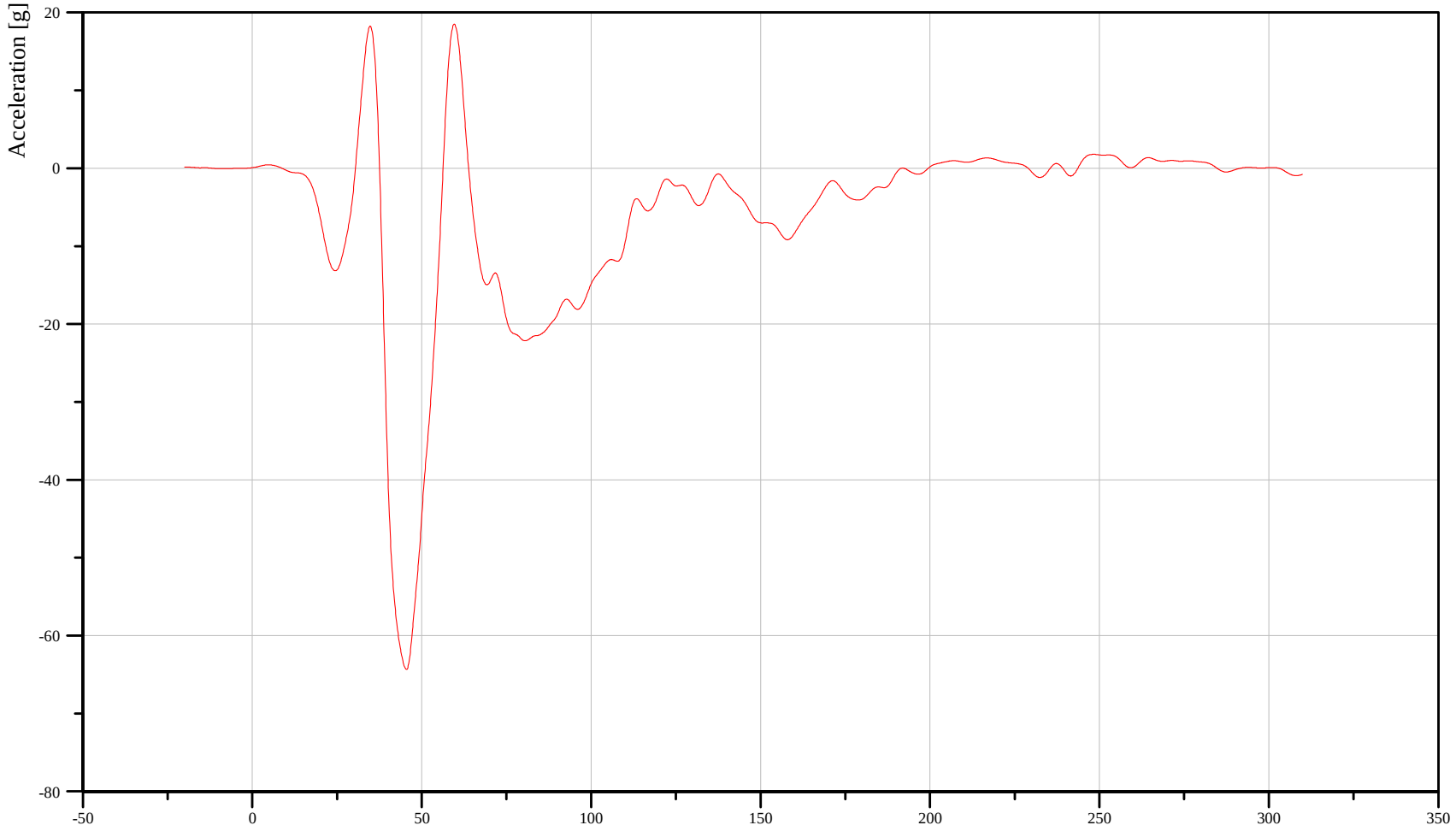
Target Vehicle Bottom of Engine X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

22ENGNBO0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-64.36 g at 45.52 ms

Max. Value
18.51 g at 59.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

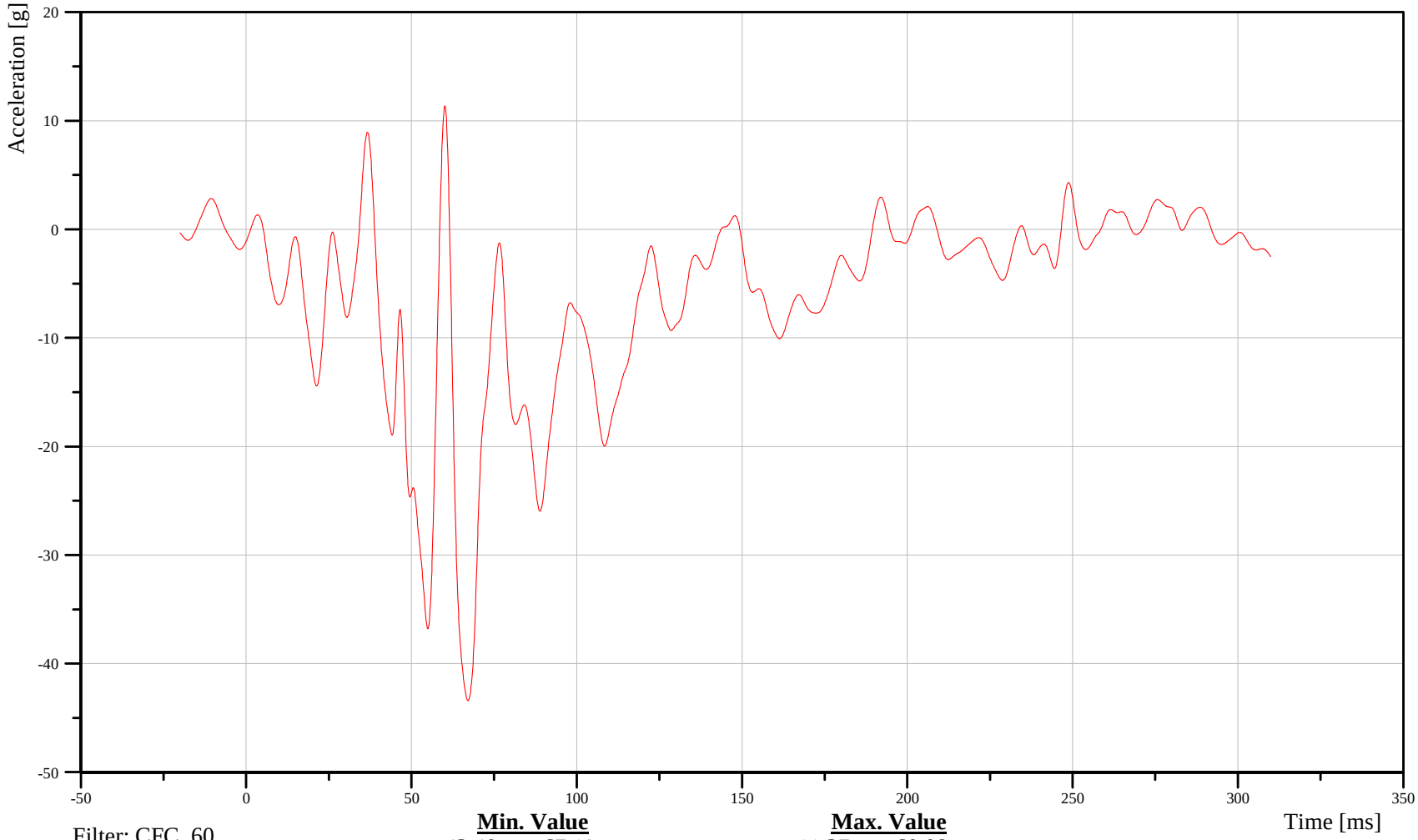
Target Vehicle Right Front Brake Caliper X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23VEHCRI0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-43.40 g at 67.12 ms

Max. Value
11.37 g at 60.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

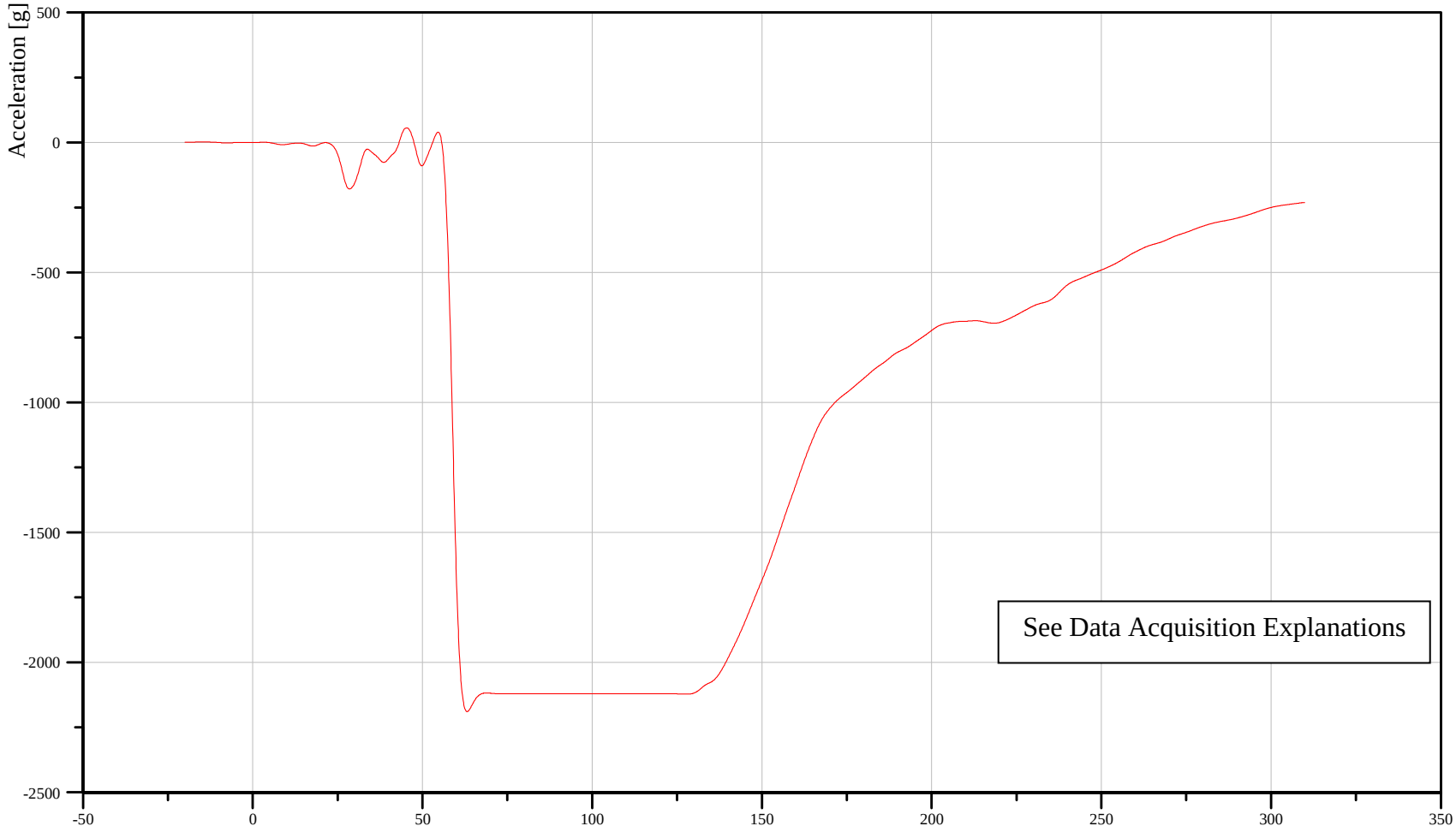
Target Vehicle Left Front Brake Caliper X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21VEHCLE0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-2,189.42 g at 63.12 ms

Max. Value
56.23 g at 45.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

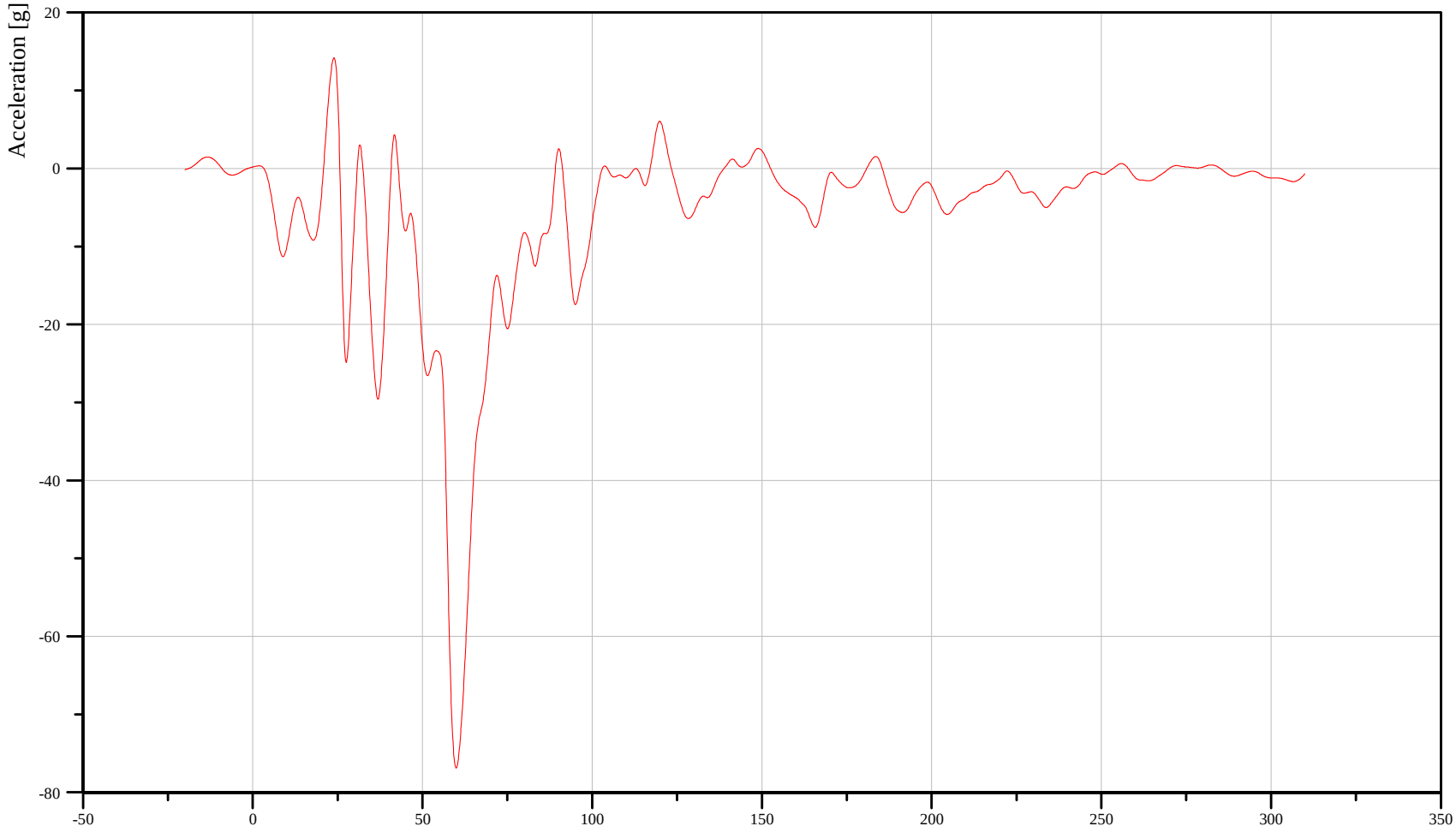
Target Vehicle Dash Center X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

22DASH000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-76.89 g at 59.92 ms

Max. Value
14.18 g at 23.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

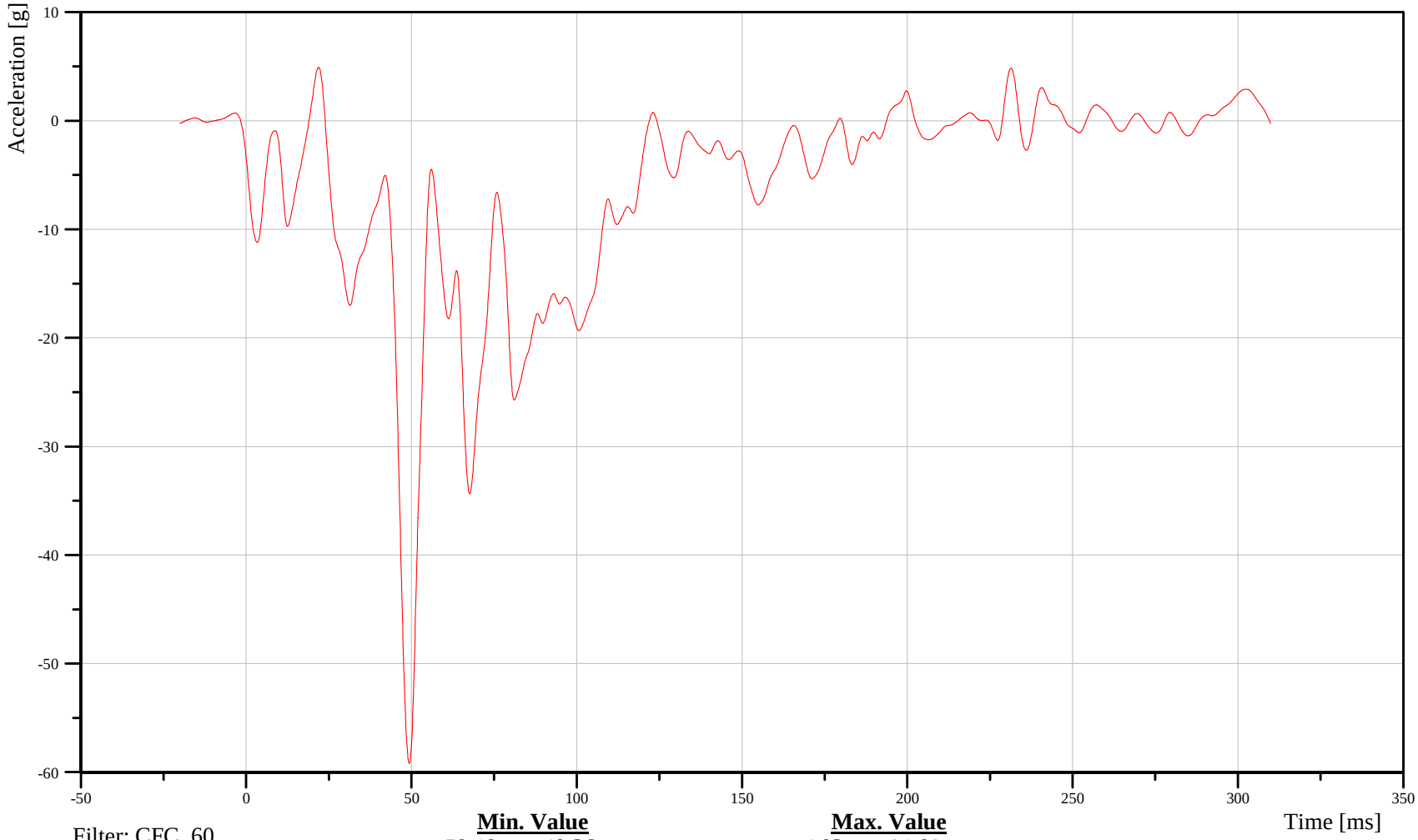
Target Vehicle Toe Pan Accelerator X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21PEAC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-59.19 g at 49.36 ms

Max. Value
4.93 g at 21.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

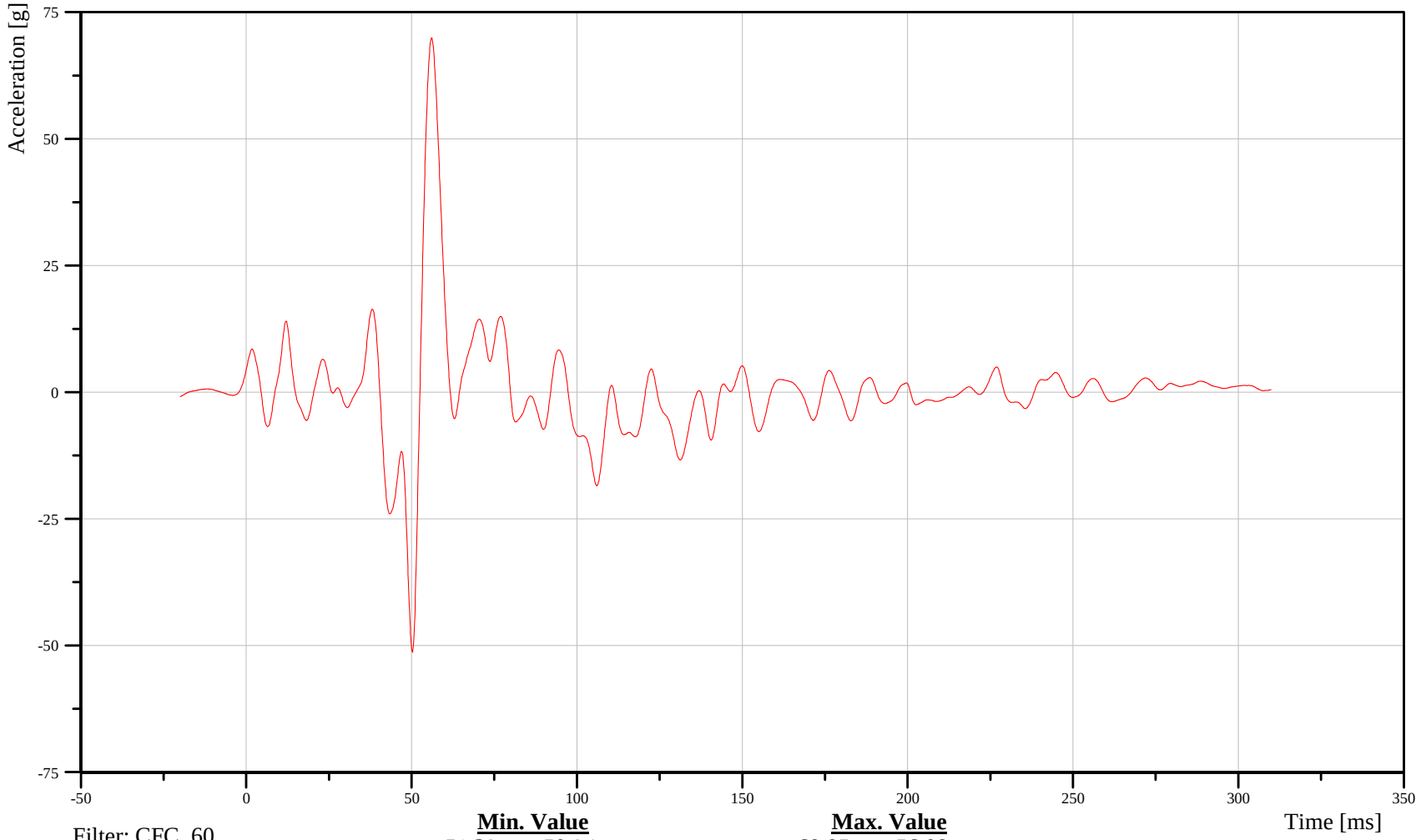
Target Vehicle Toe Pan Accelerator Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21PEAC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-51.32 g at 50.24 ms

Max. Value
69.95 g at 56.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

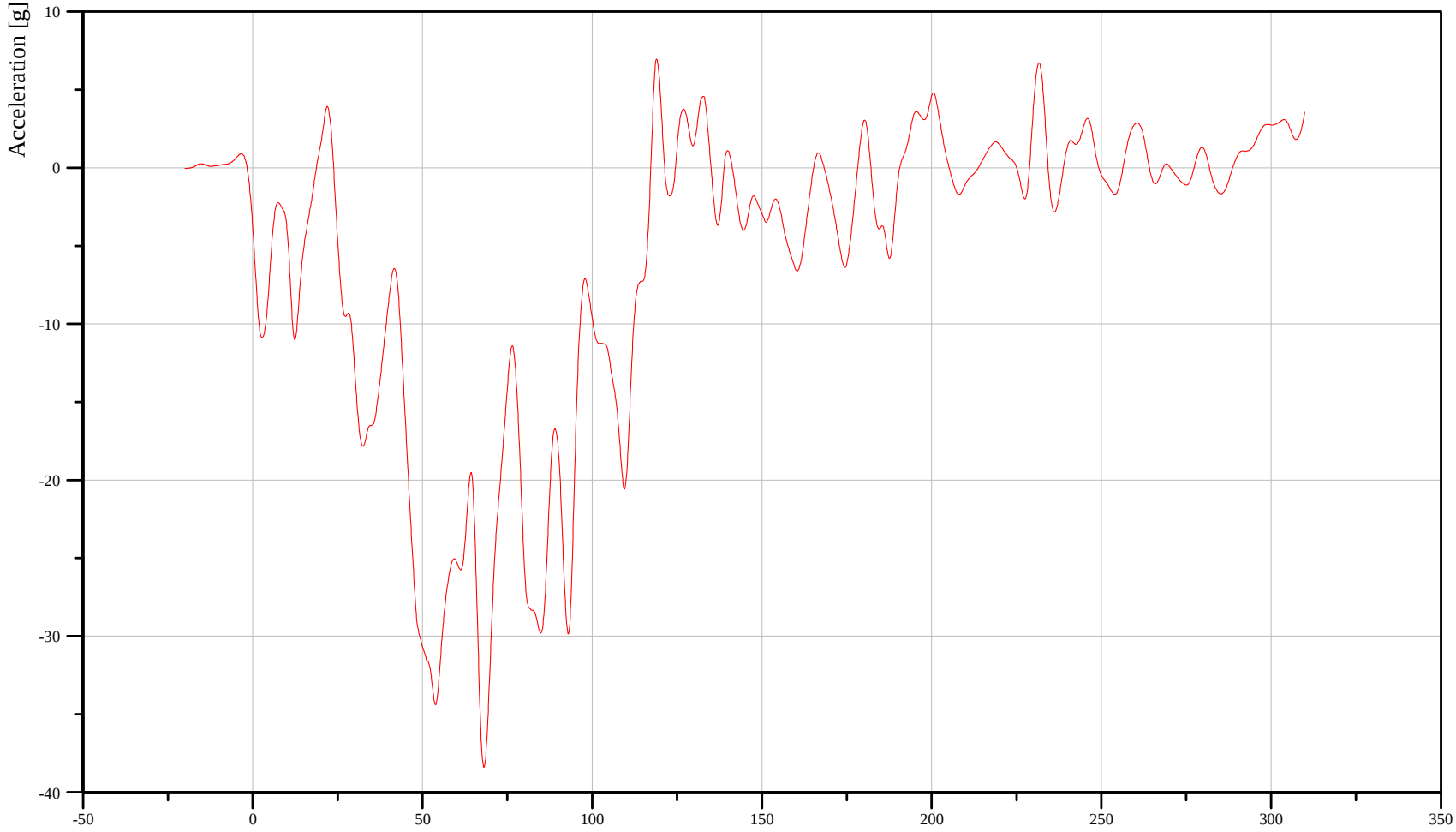
Target Vehicle Toe Pan Footrest X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21VEHC000001ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-38.39 g at 68.08 ms

Max. Value
6.96 g at 118.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

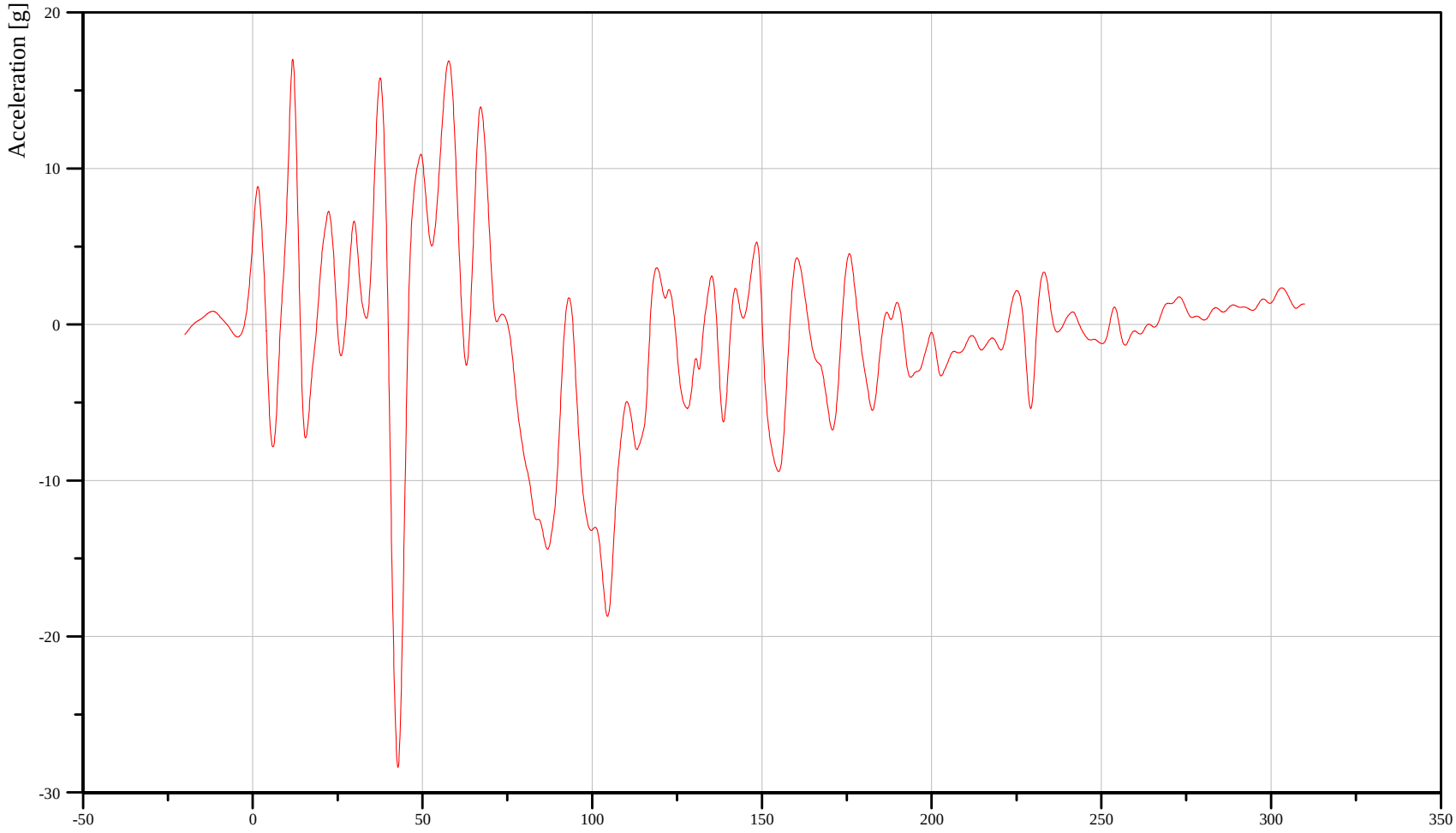
Target Vehicle Toe Pan Footrest Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21VEHC000001ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-28.38 g at 42.80 ms

Max. Value
16.99 g at 11.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

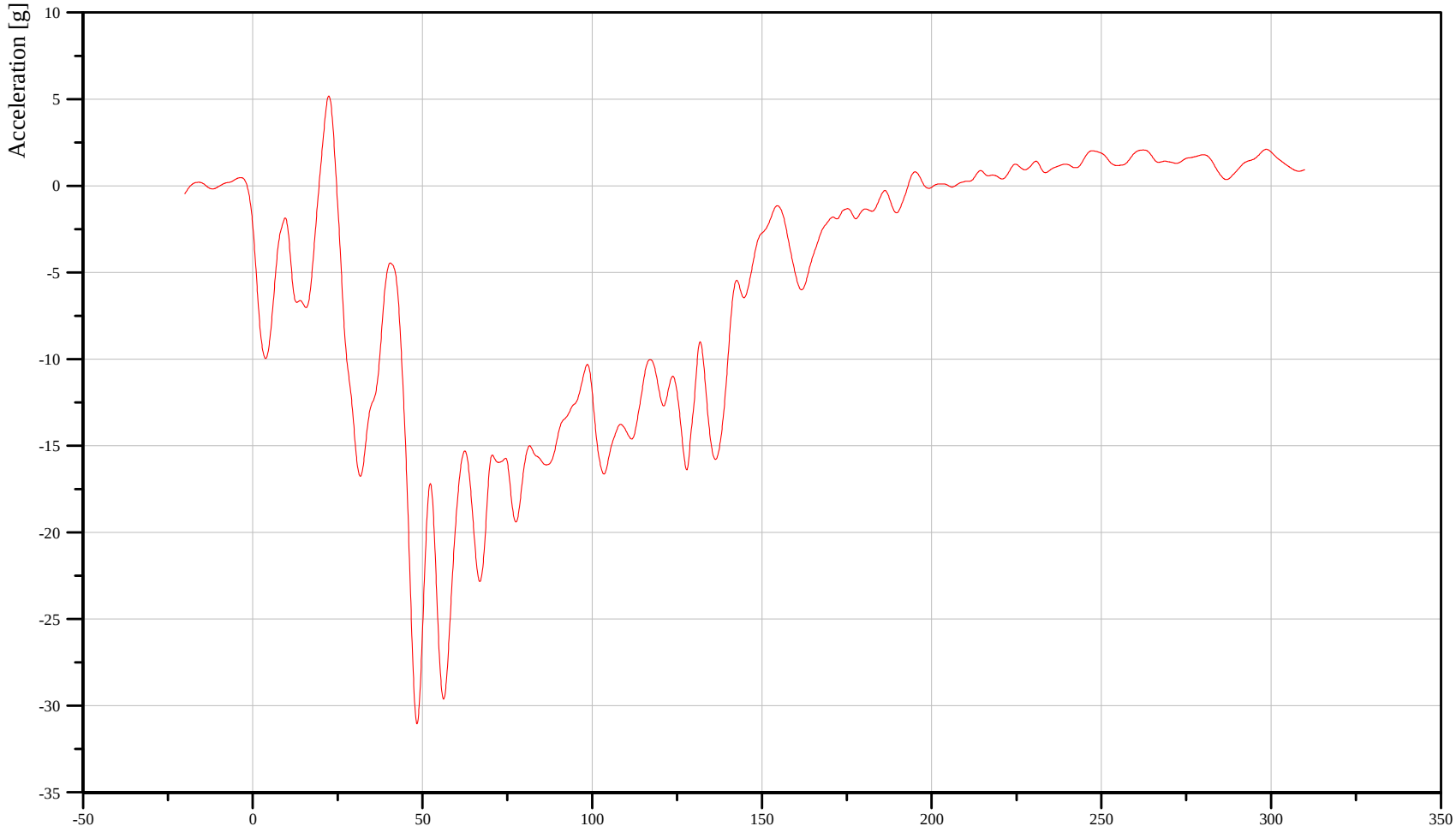
Target Vehicle Rear Tunnel Center X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

25TUNNCY0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-31.04 g at 48.40 ms

Max. Value
5.18 g at 22.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

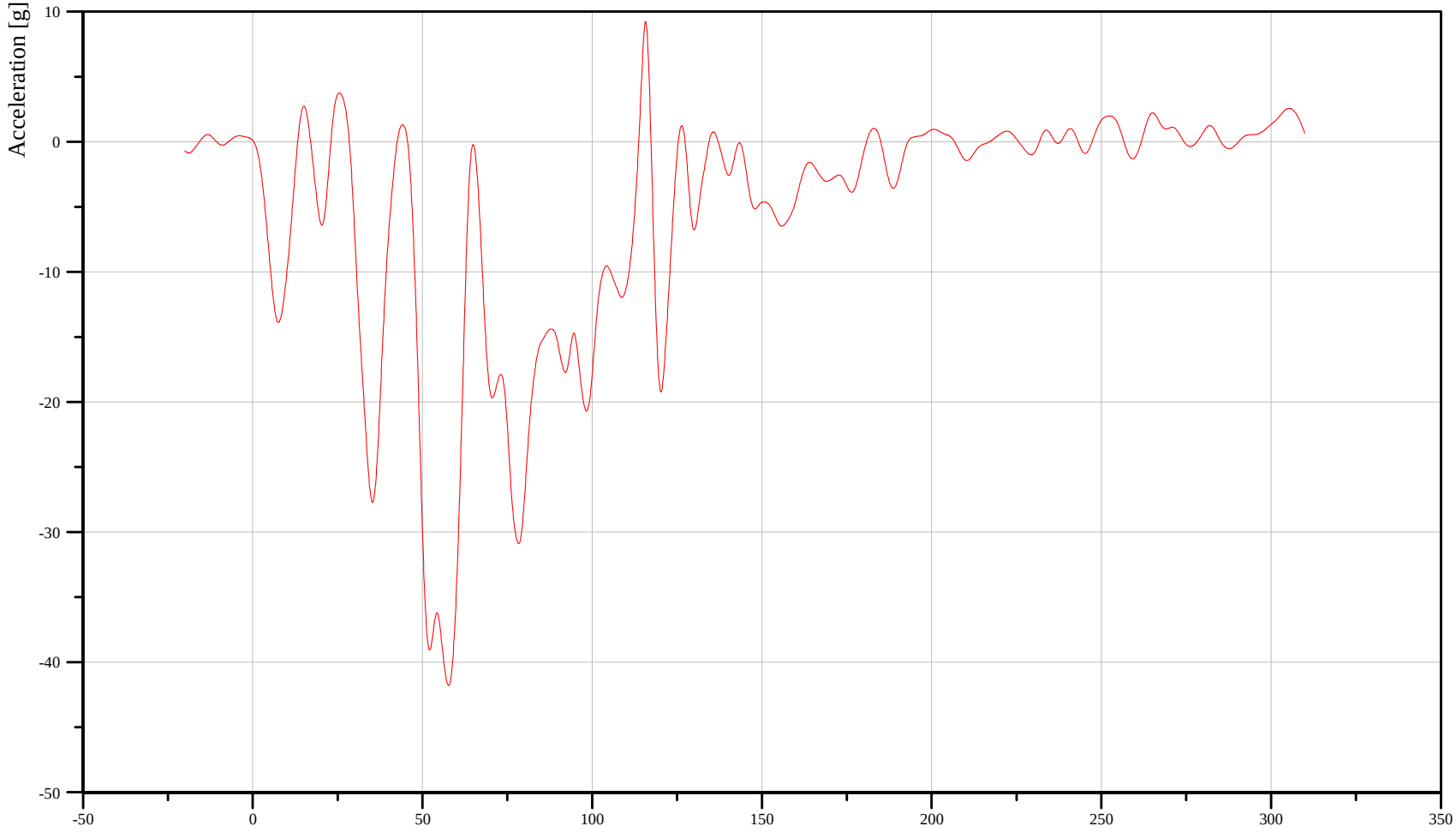
Target Vehicle CG X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-41.80 g at 57.76 ms

Max. Value
9.24 g at 115.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

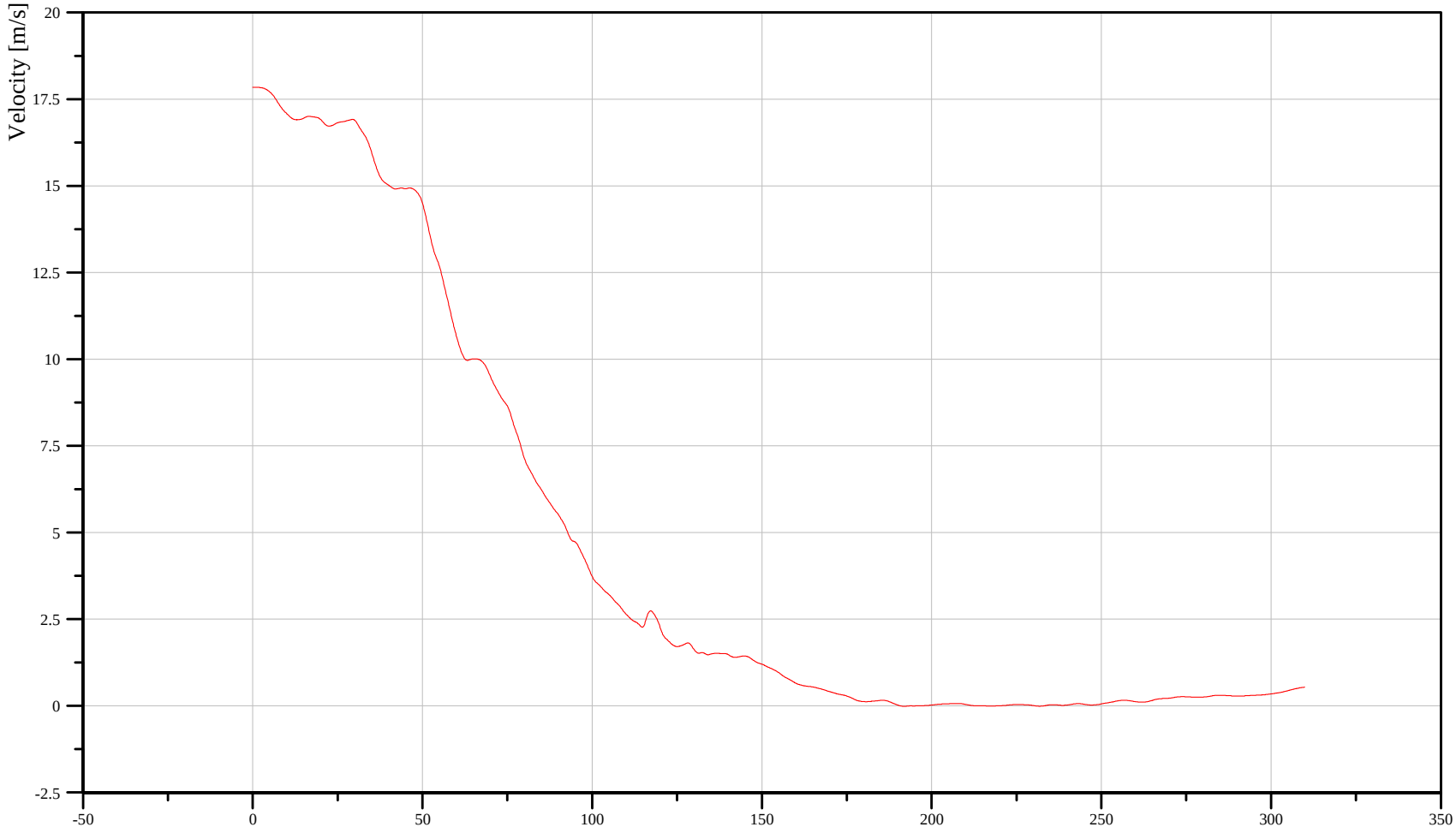
Target Vehicle CG X-Axis Velocity

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000VEXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.01 m/s at 191.92 ms

Max. Value
17.84 m/s at 0.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

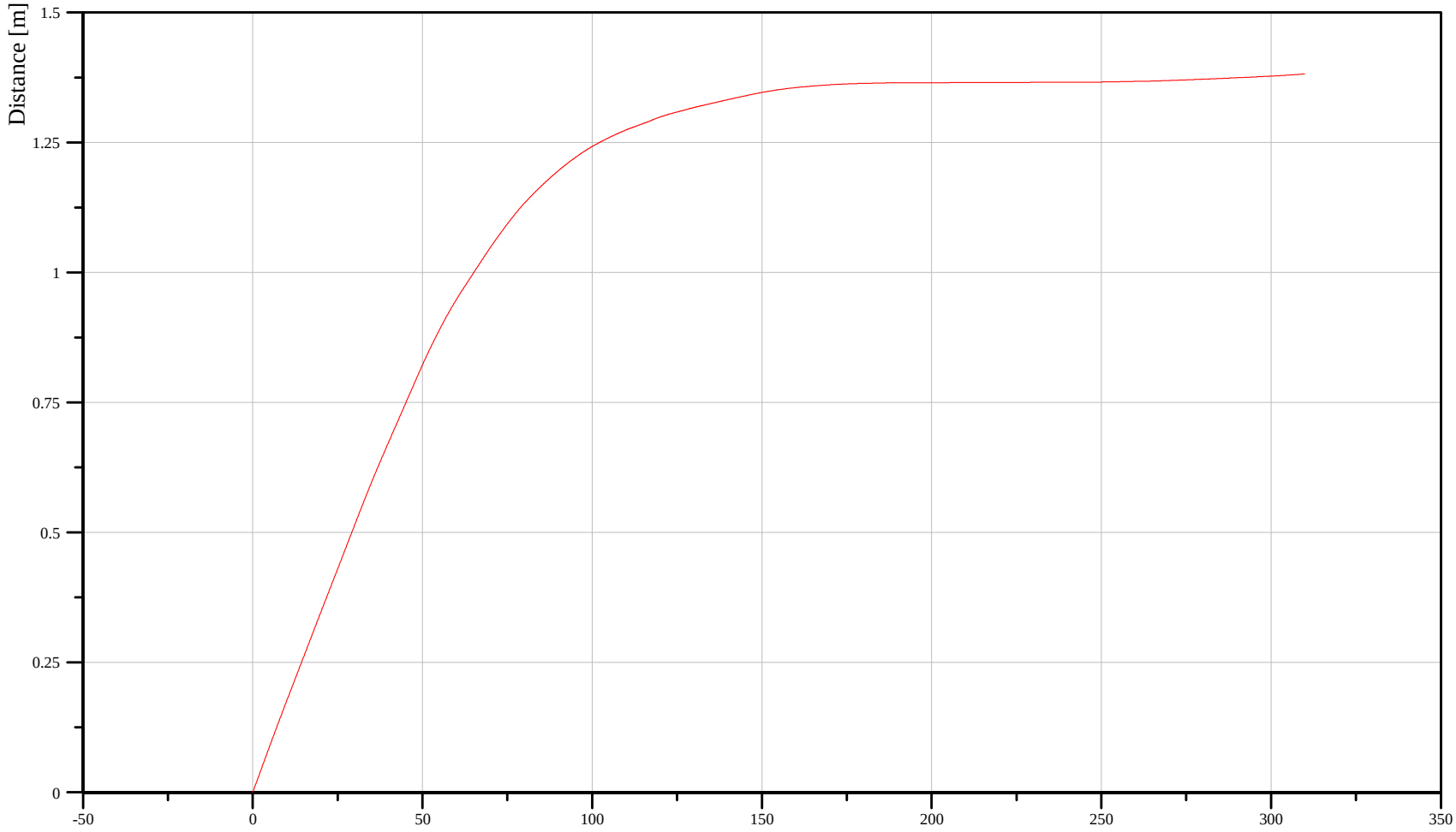
Target Vehicle CG X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000DCXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.00 m at 0.00 ms

Max. Value
1.38 m at 309.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

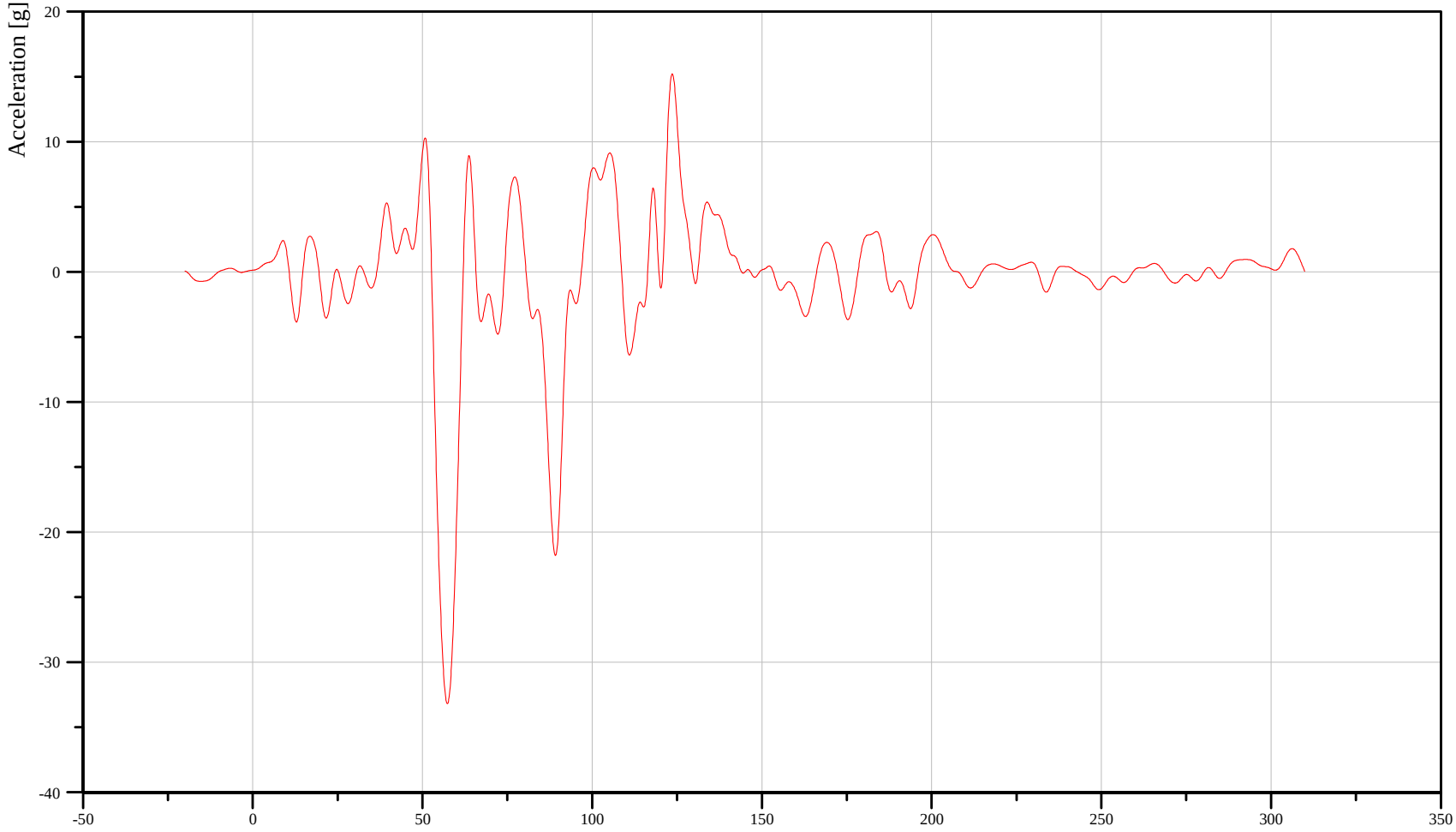
Target Vehicle CG Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000ACYD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-33.18 g at 57.36 ms

Max. Value
15.23 g at 123.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

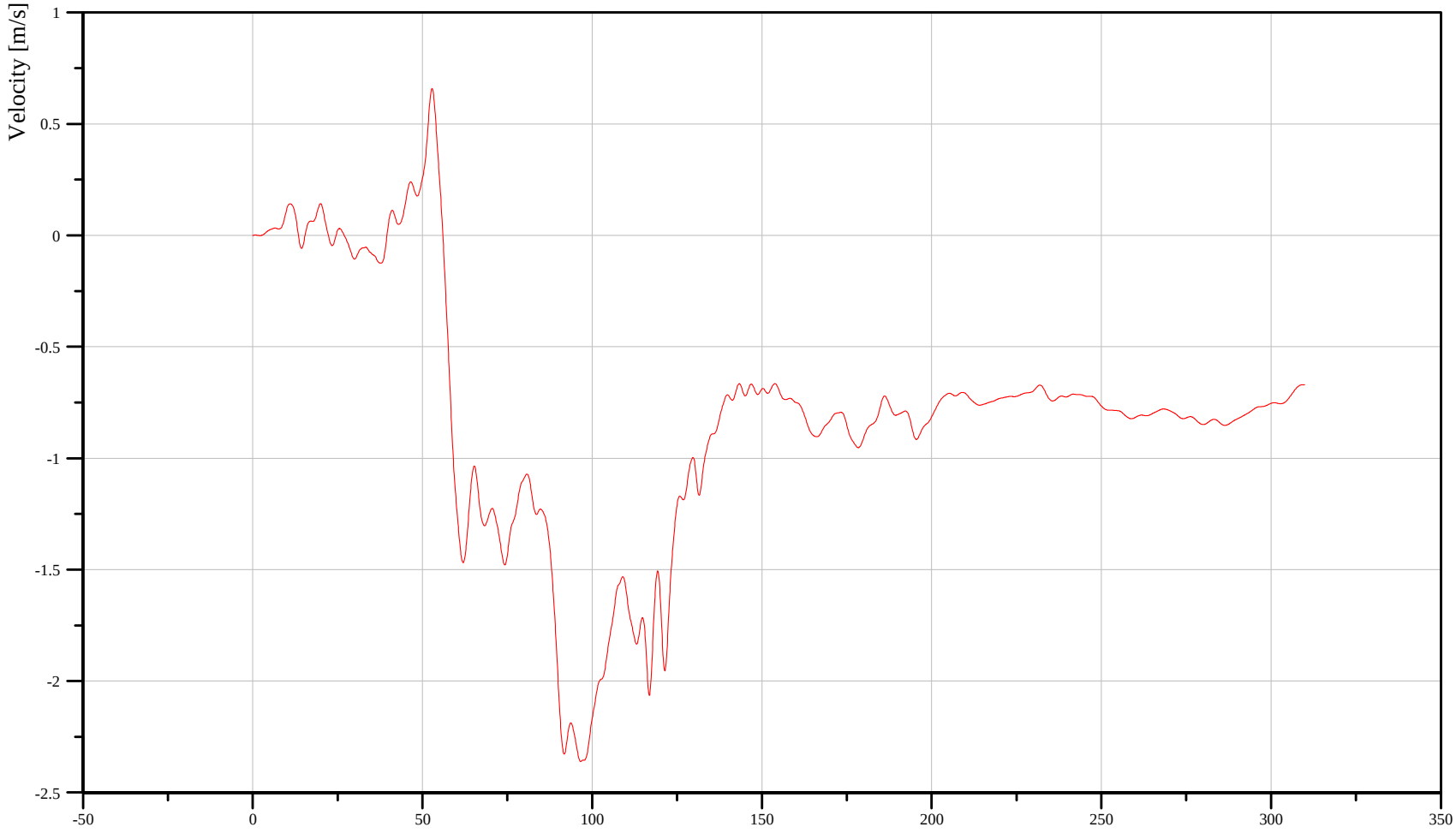
Target Vehicle CG Y-Axis Velocity

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000VEYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-2.36 m/s at 96.56 ms

Max. Value
0.66 m/s at 52.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

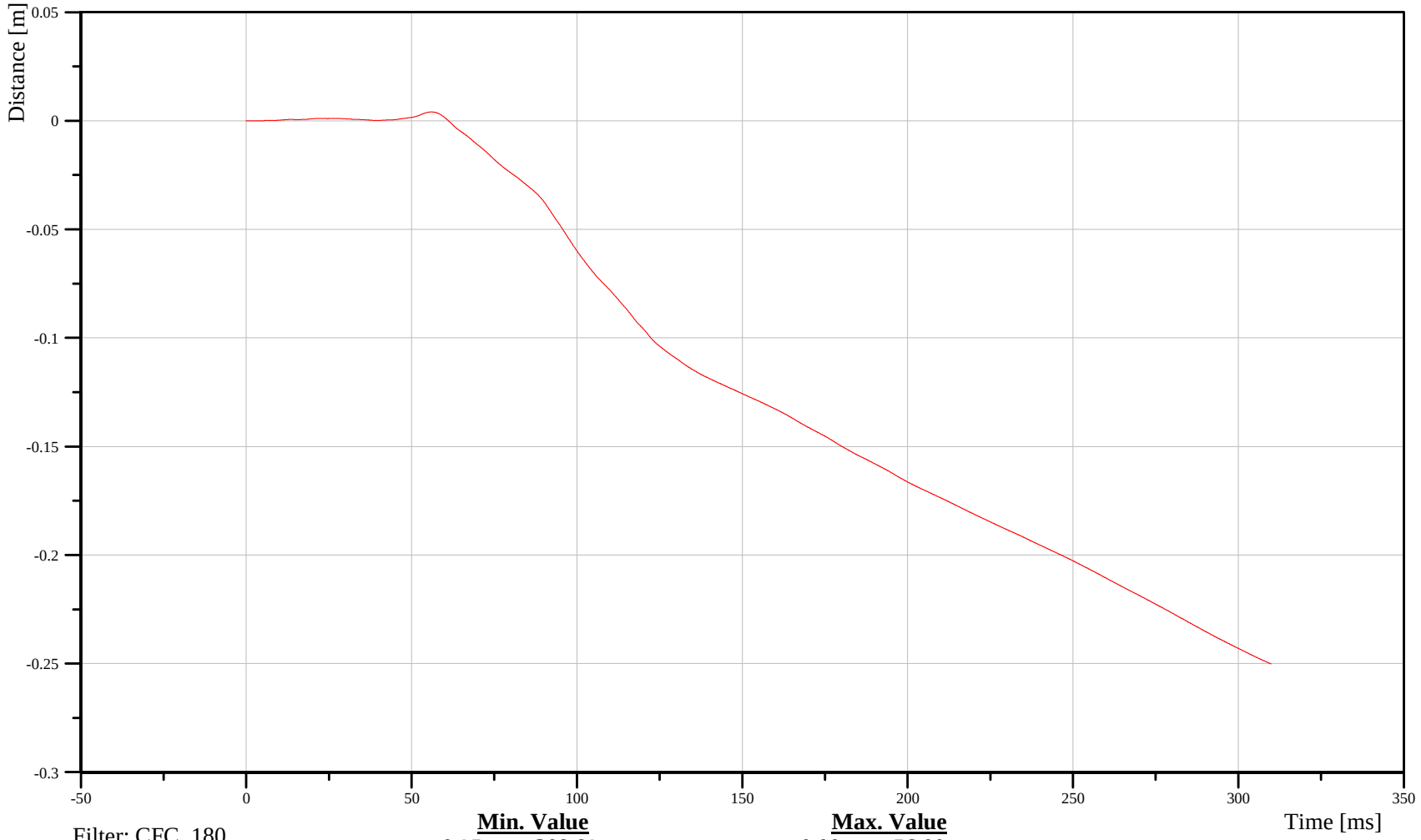
Target Vehicle CG Y-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000DCYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.25 m at 309.92 ms

Max. Value
0.00 m at 56.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

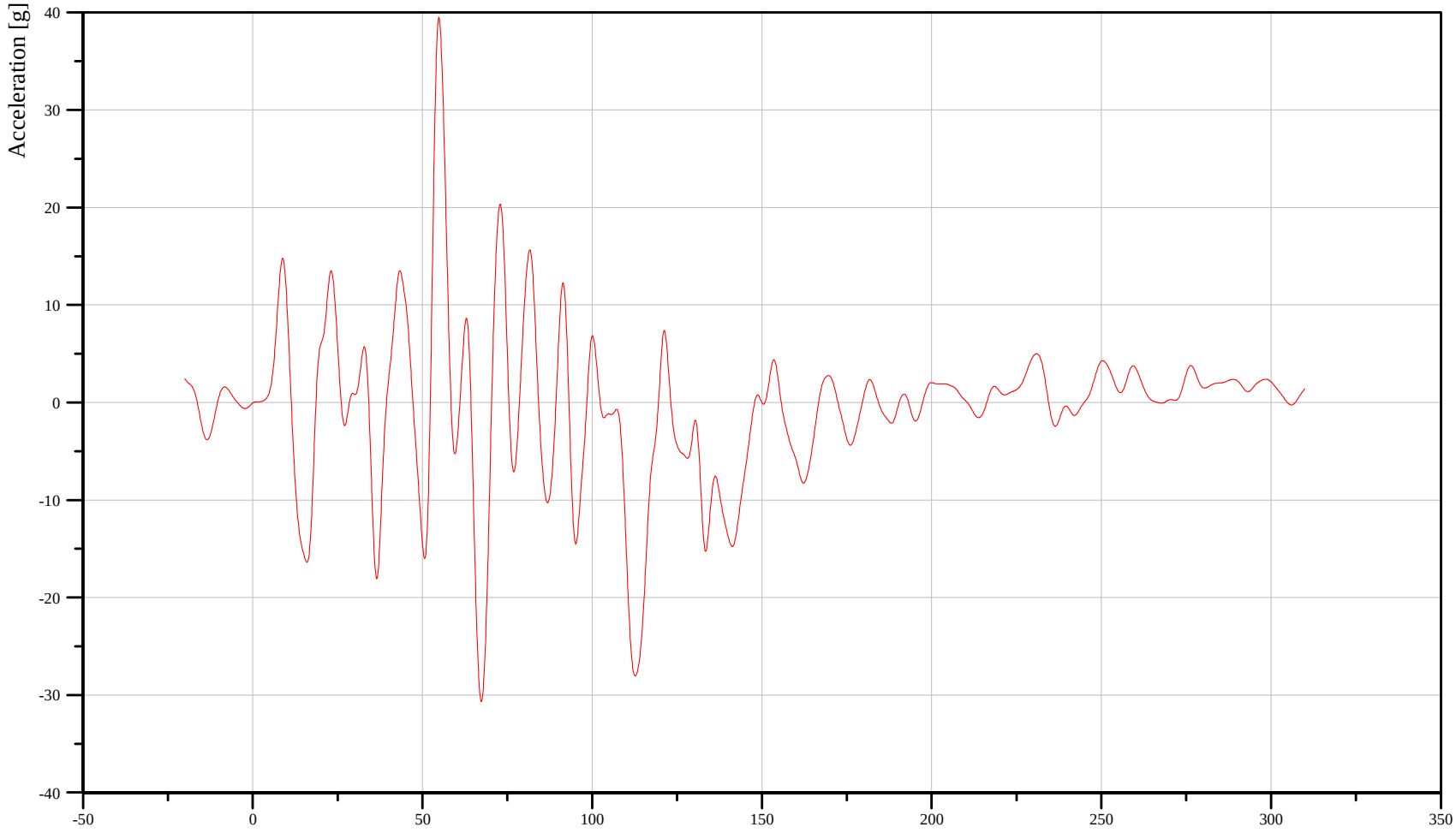
Target Vehicle CG Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-30.67 g at 67.36 ms

Max. Value
39.51 g at 54.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

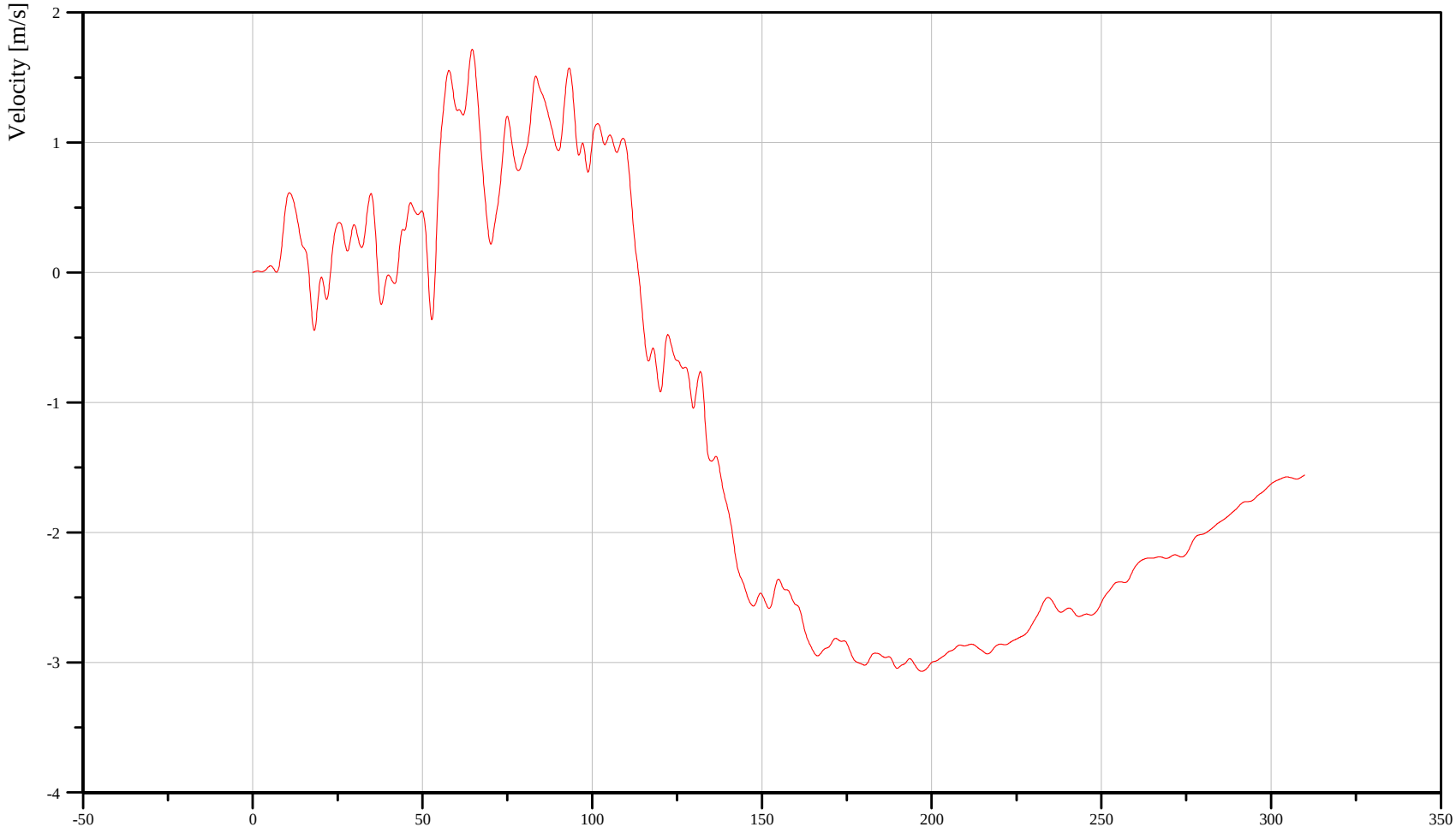
Target Vehicle CG Z-Axis Velocity

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000VEZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-3.07 m/s at 197.04 ms

Max. Value
1.72 m/s at 64.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

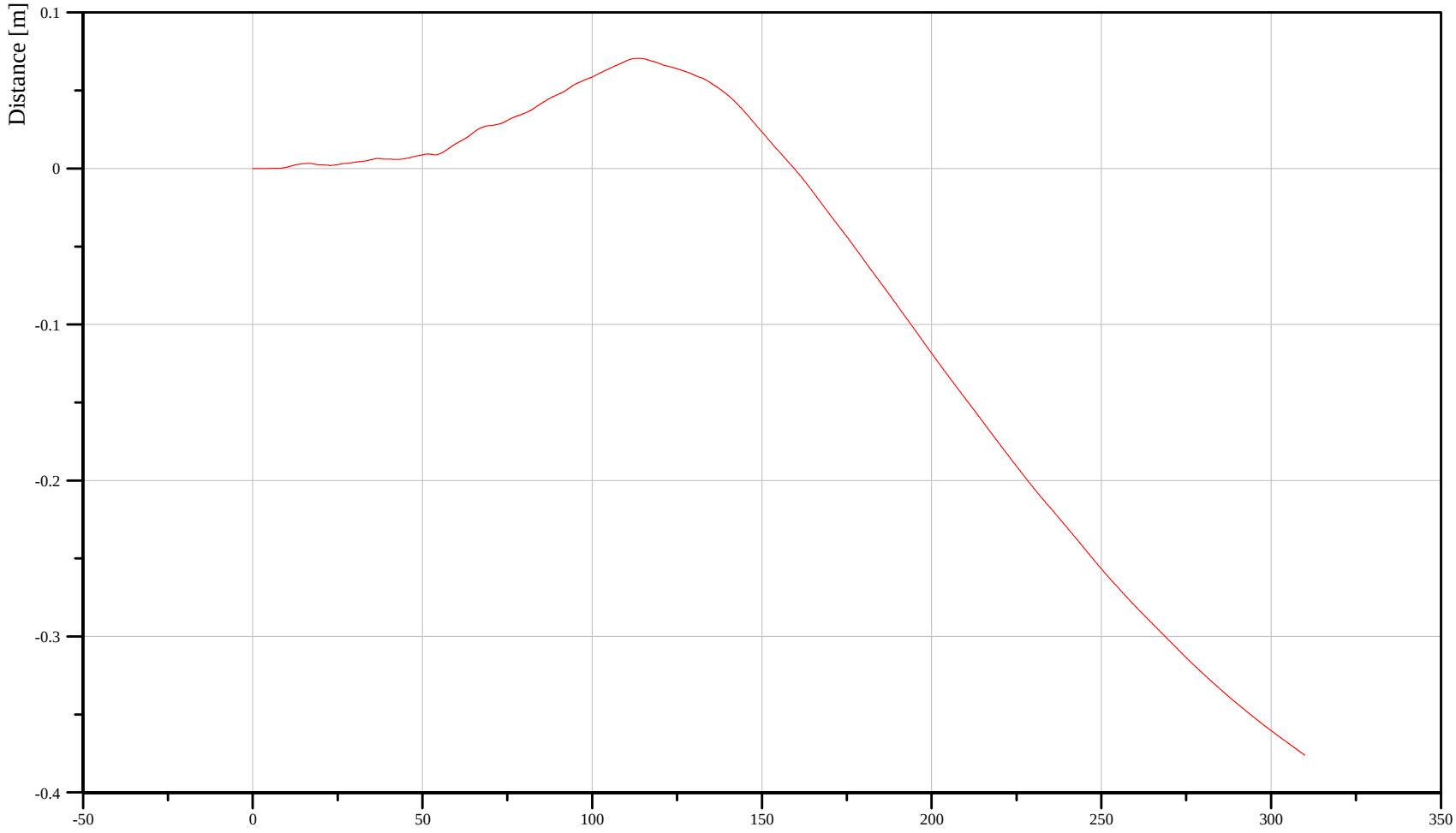
Date: 06/20/2007
Time: 08:11

Target Vehicle CG Z-Axis Displacement

Customer: VRTC

20VEHCCG0000DCZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.38 m at 309.92 ms

Max. Value
0.07 m at 113.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

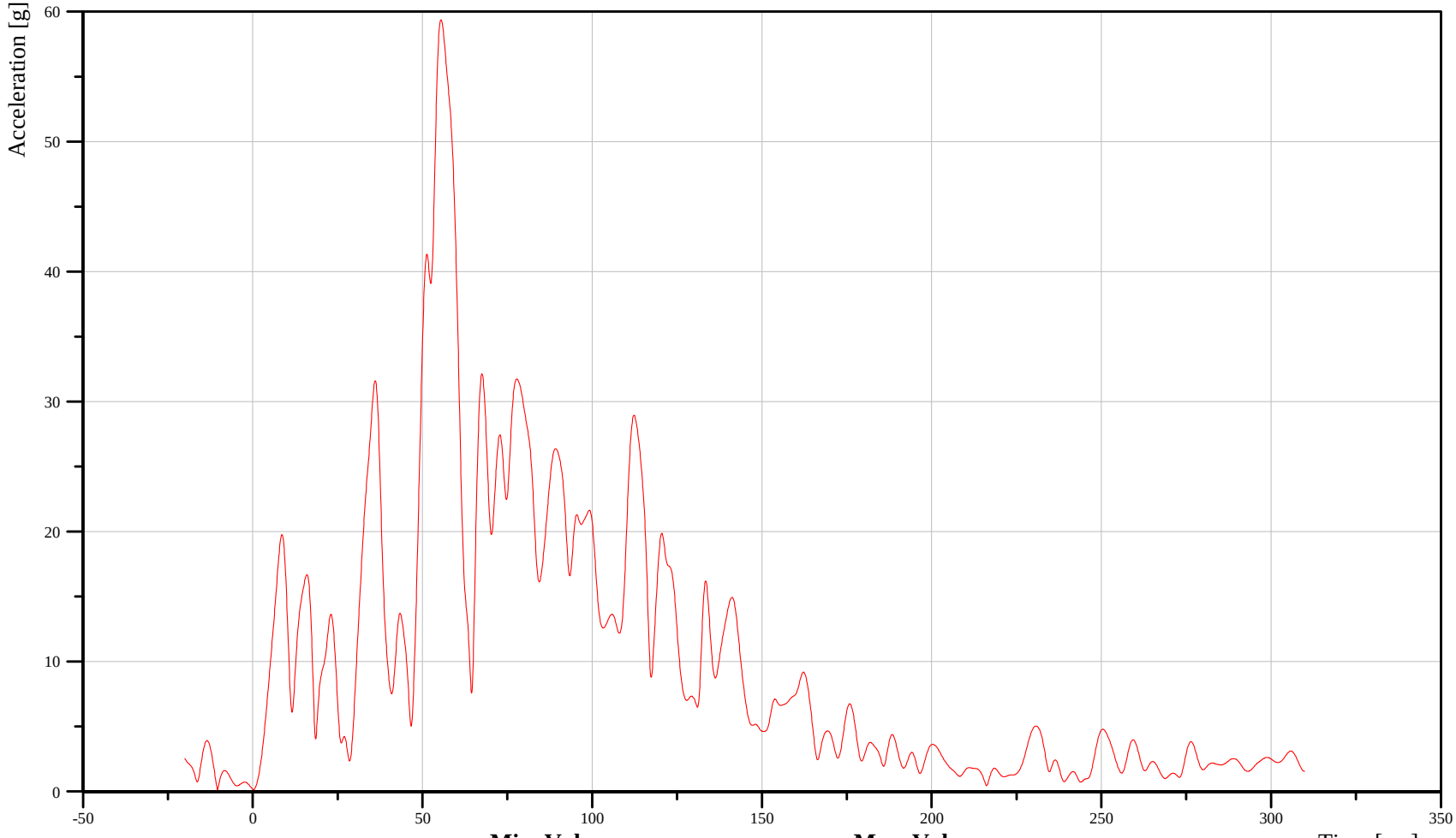
Target Vehicle CG Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

20VEHCCG0000ACRD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
0.10 g at -10.40 ms

Max. Value
59.39 g at 55.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

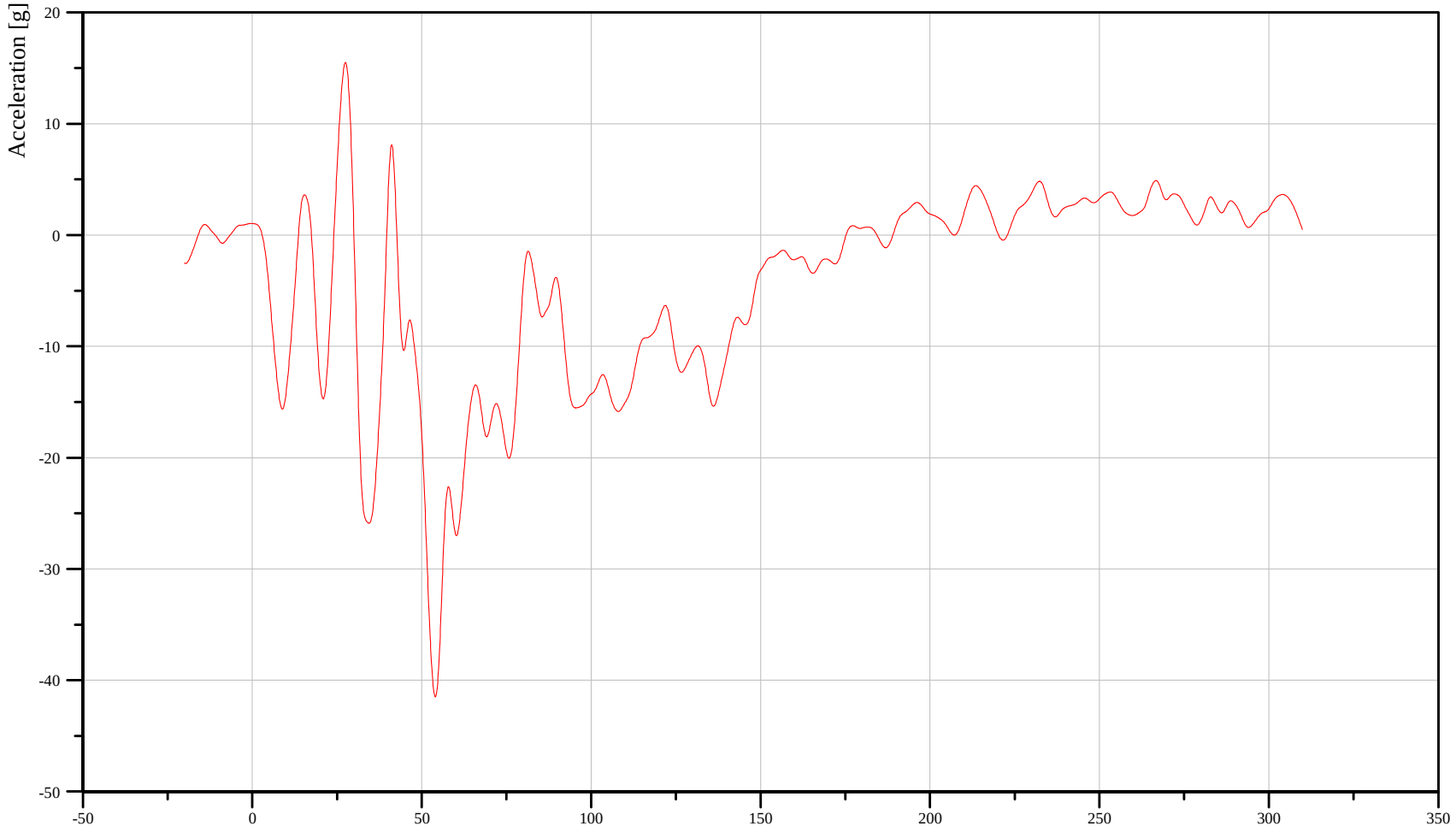
Target Vehicle Rear Deck X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

28VEHC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-41.50 g at 54.00 ms

Max. Value
15.52 g at 27.52 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

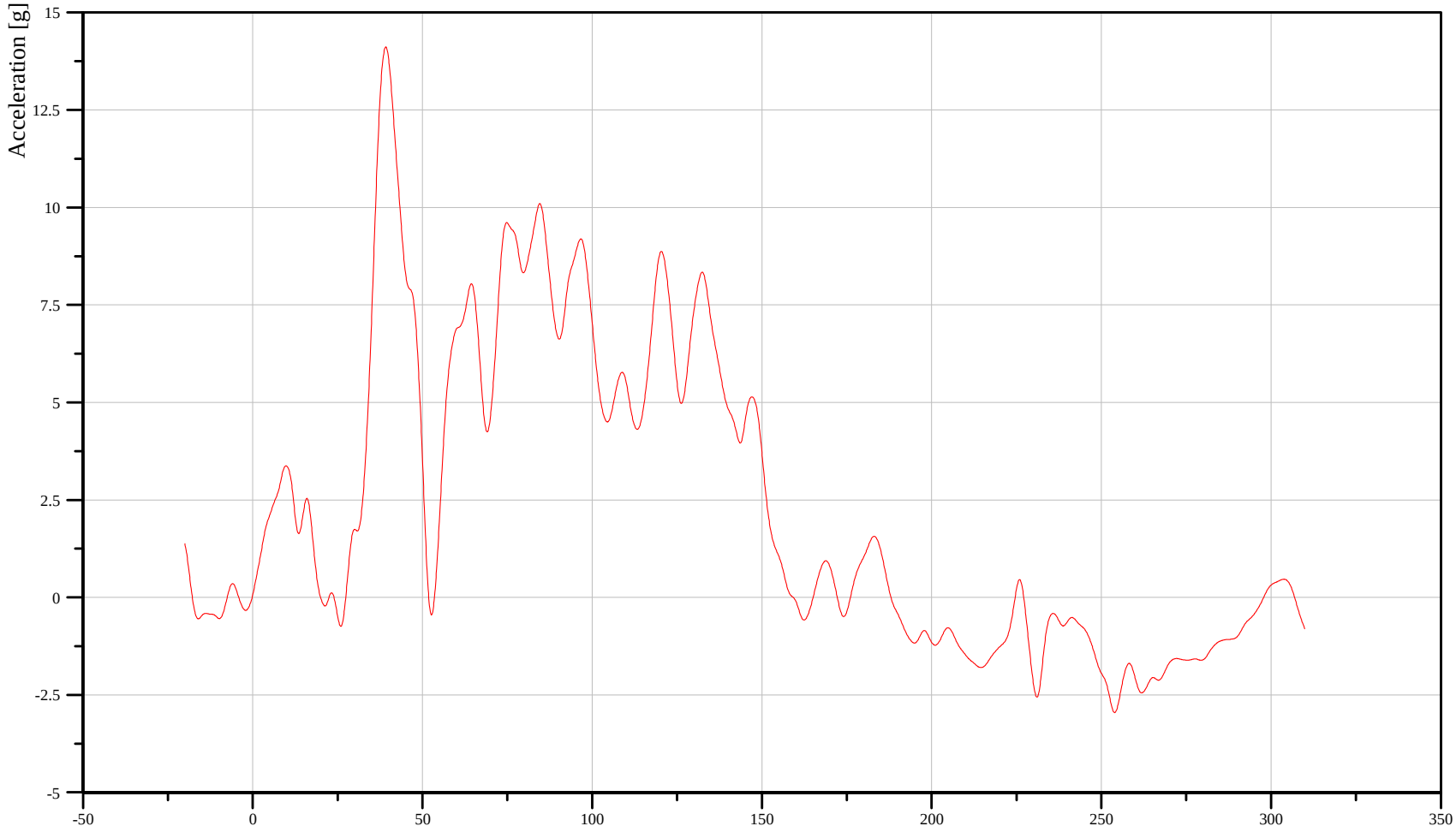
Target Vehicle Rear Deck Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

28VEHC000000ACYD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-2.95 g at 253.92 ms

Max. Value
14.12 g at 39.20 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

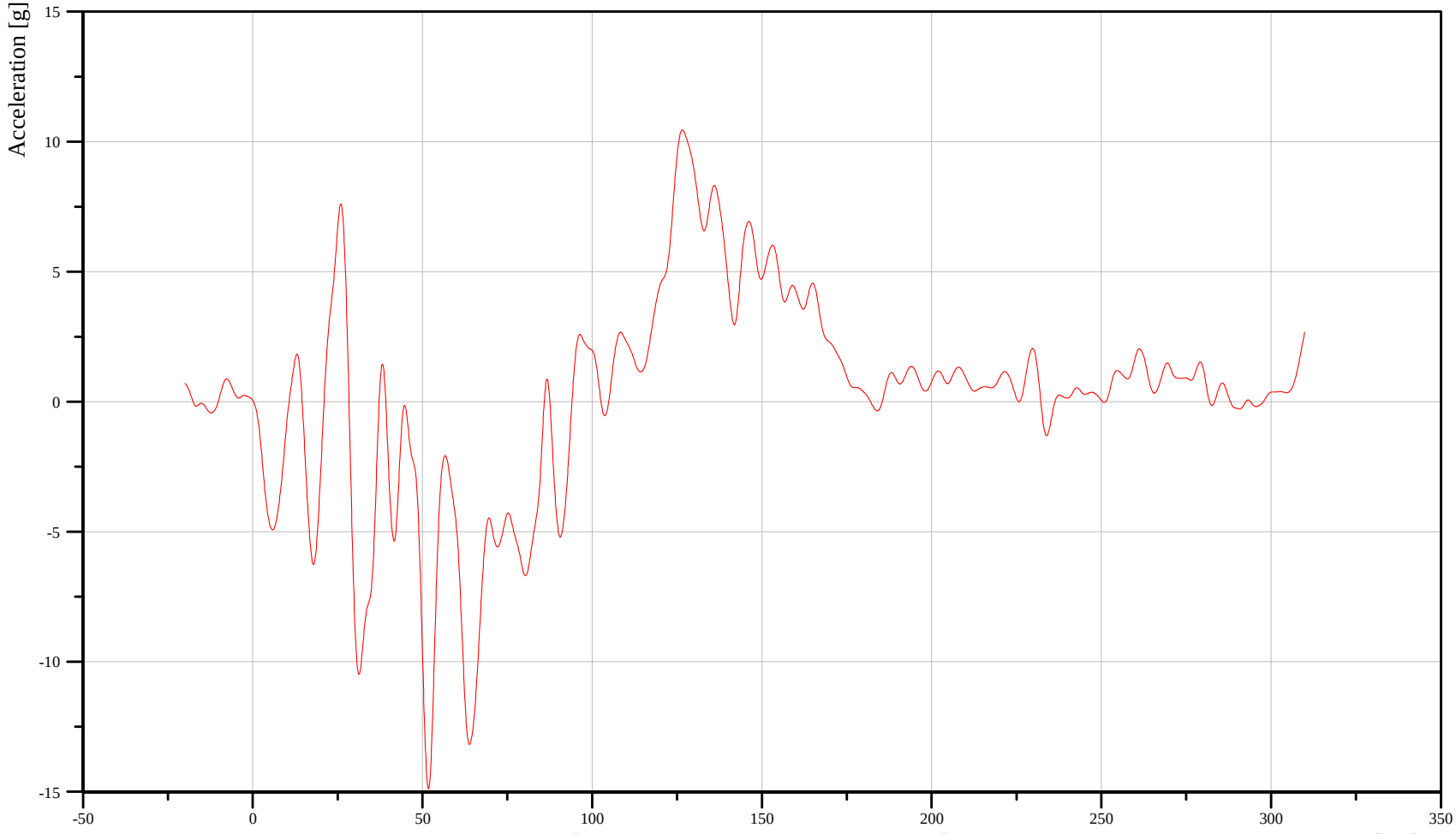
Target Vehicle Rear Deck Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

28VEHC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-14.89 g at 51.76 ms

Max. Value
10.45 g at 126.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

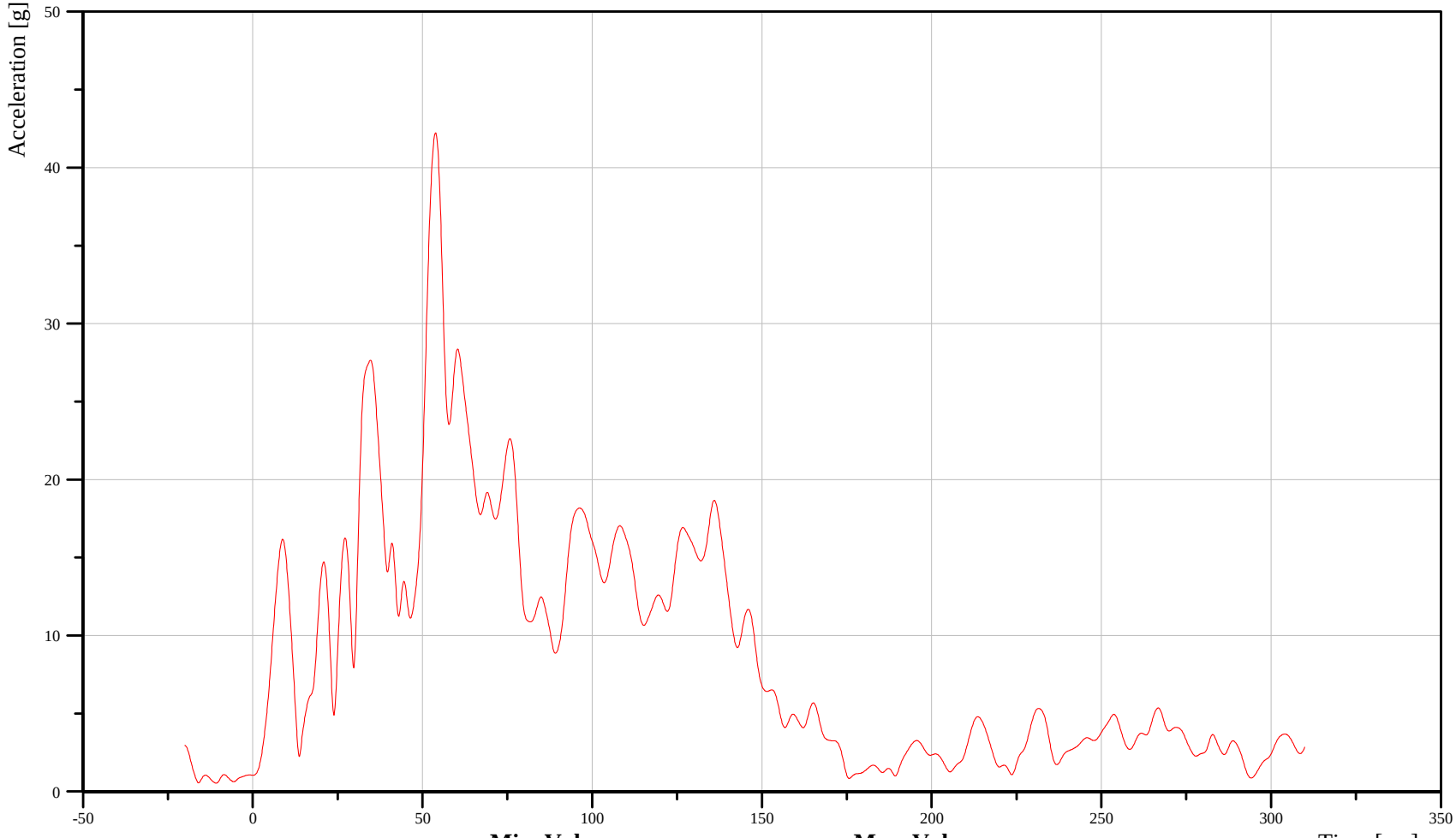
Target Vehicle Rear Deck Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

28VEHC000000ACRD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
0.54 g at -10.80 ms

Max. Value
42.23 g at 53.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

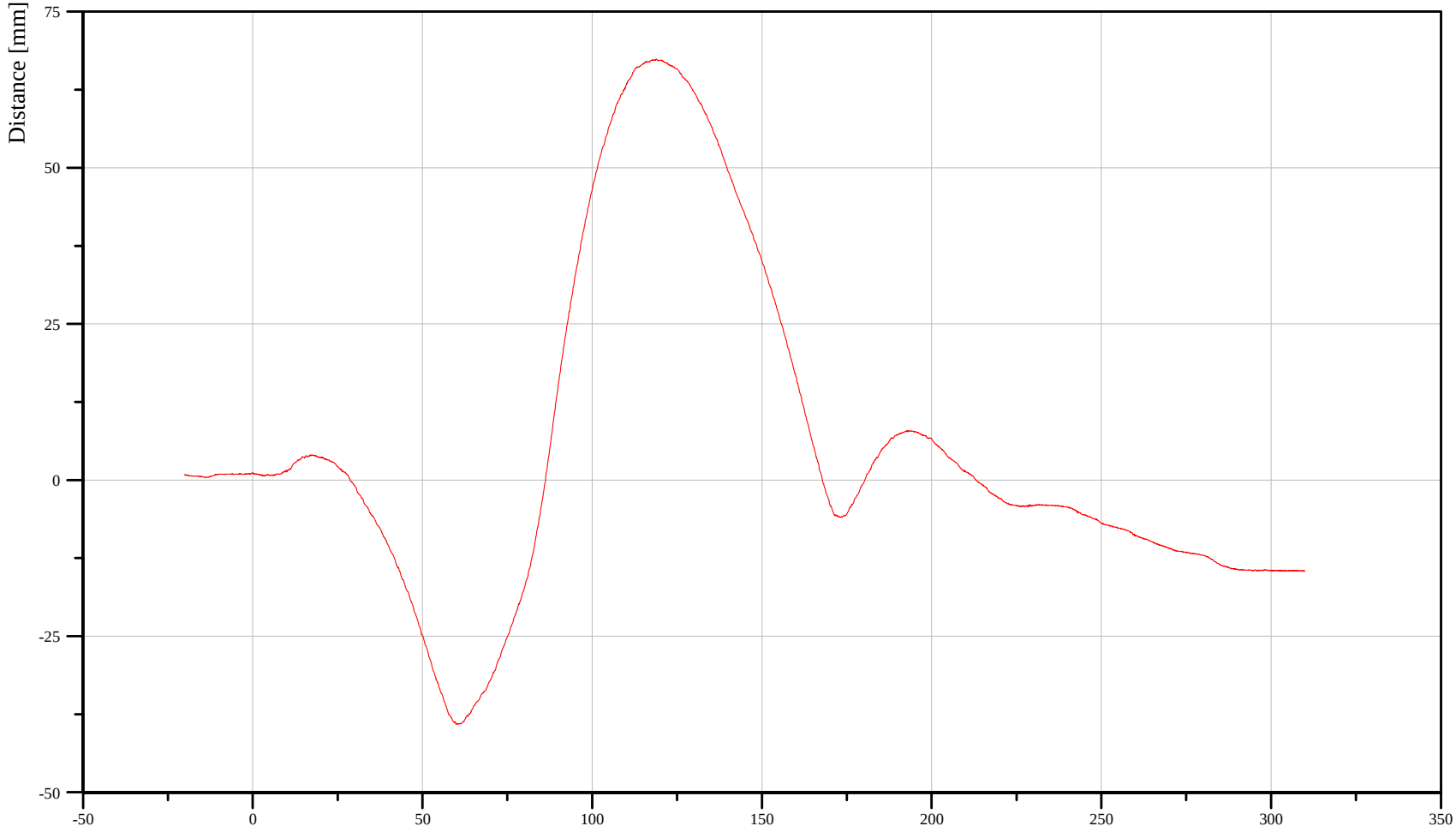
Target Vehicle Driver Lap Belt Spool

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21SEBA0000B5DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-39.09 mm at 59.84 ms

Max. Value
67.39 mm at 118.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

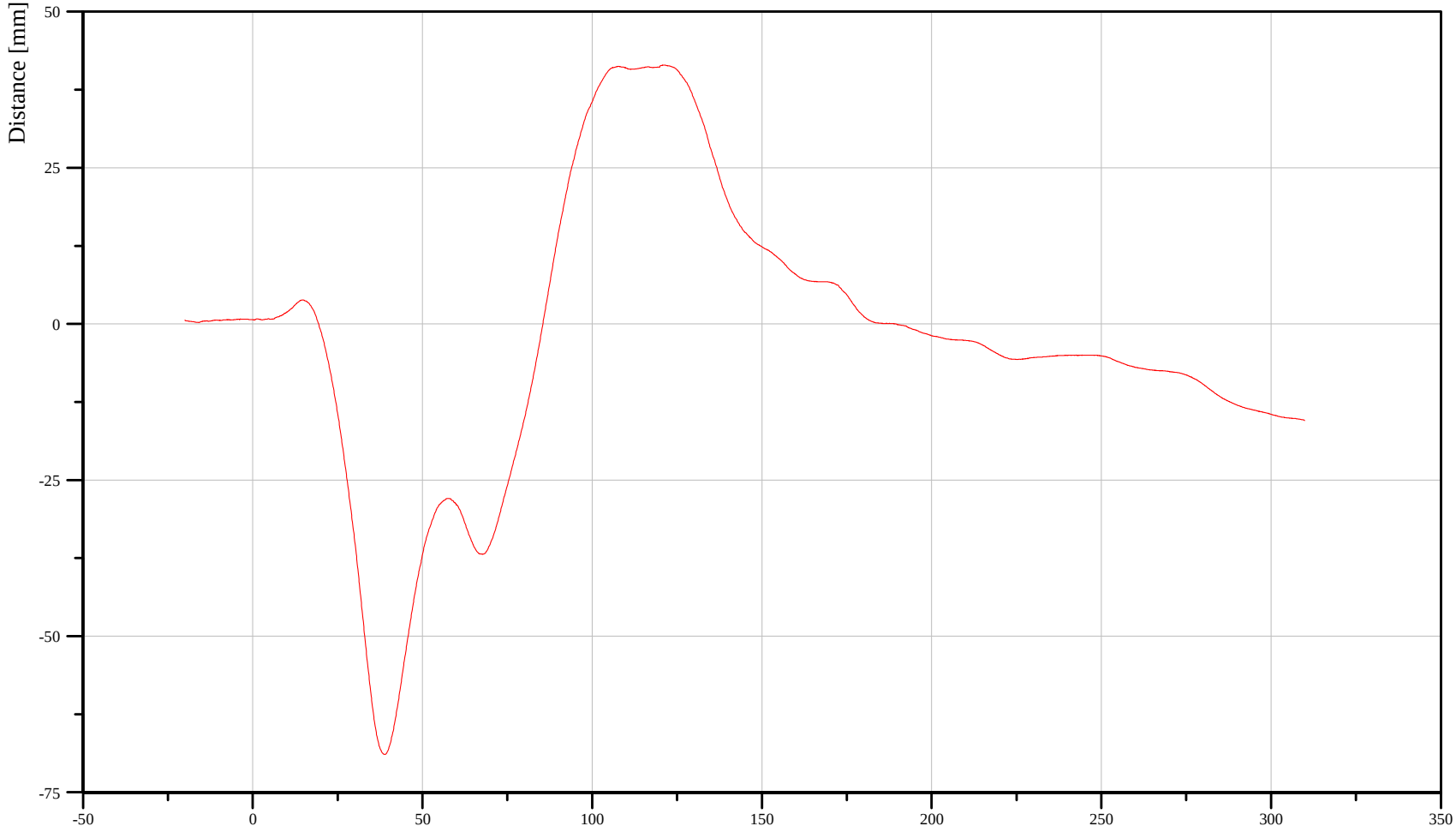
Target Vehicle Driver Shoulder Belt Spool and Retraction

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21SEBA0000B3DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-68.92 mm at 38.88 ms

Max. Value
41.44 mm at 121.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

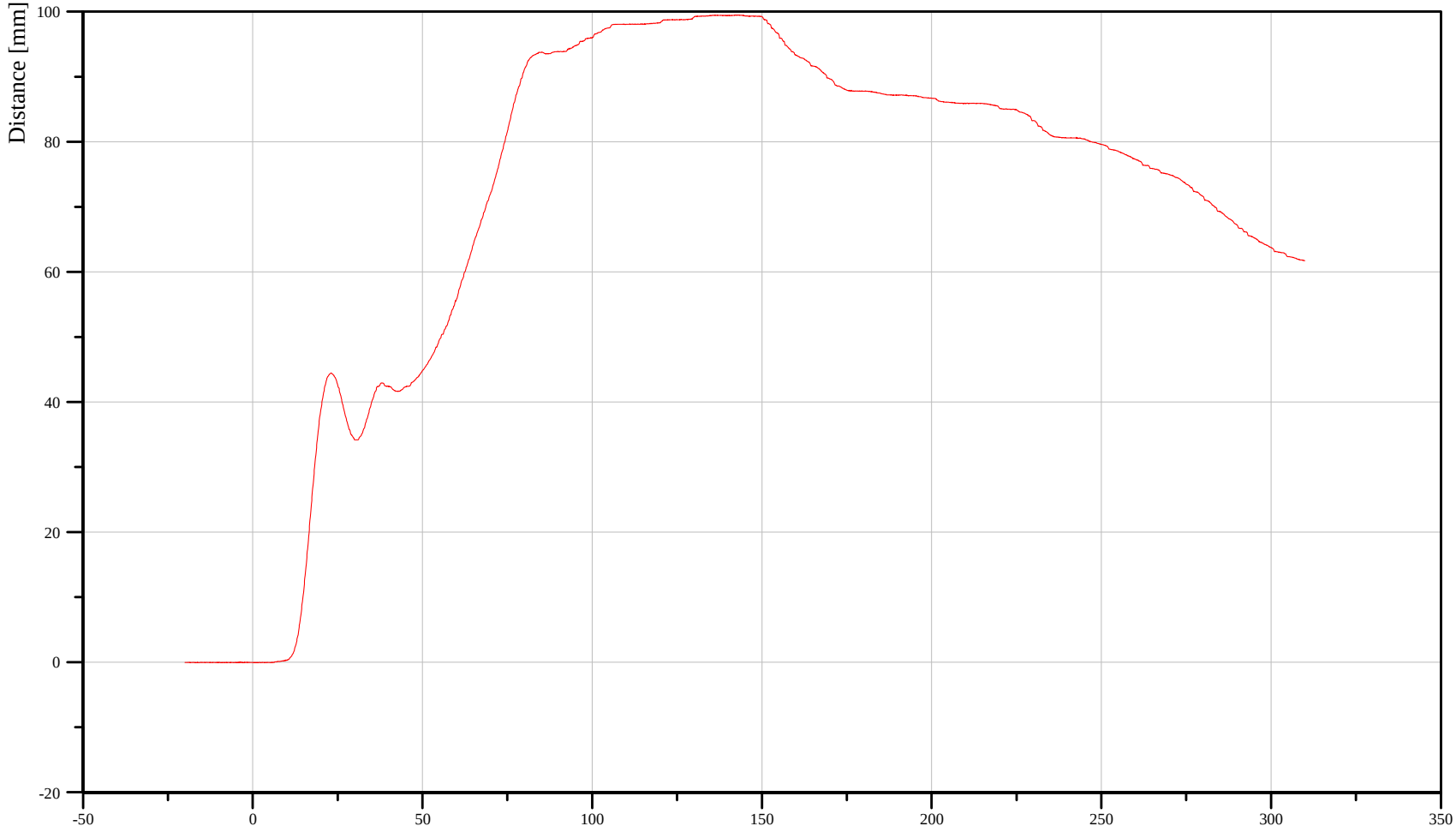
Target Vehicle Passenger Lap Belt Spool

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23SEBA0000B5DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.08 mm at -18.24 ms

Max. Value
99.48 mm at 135.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

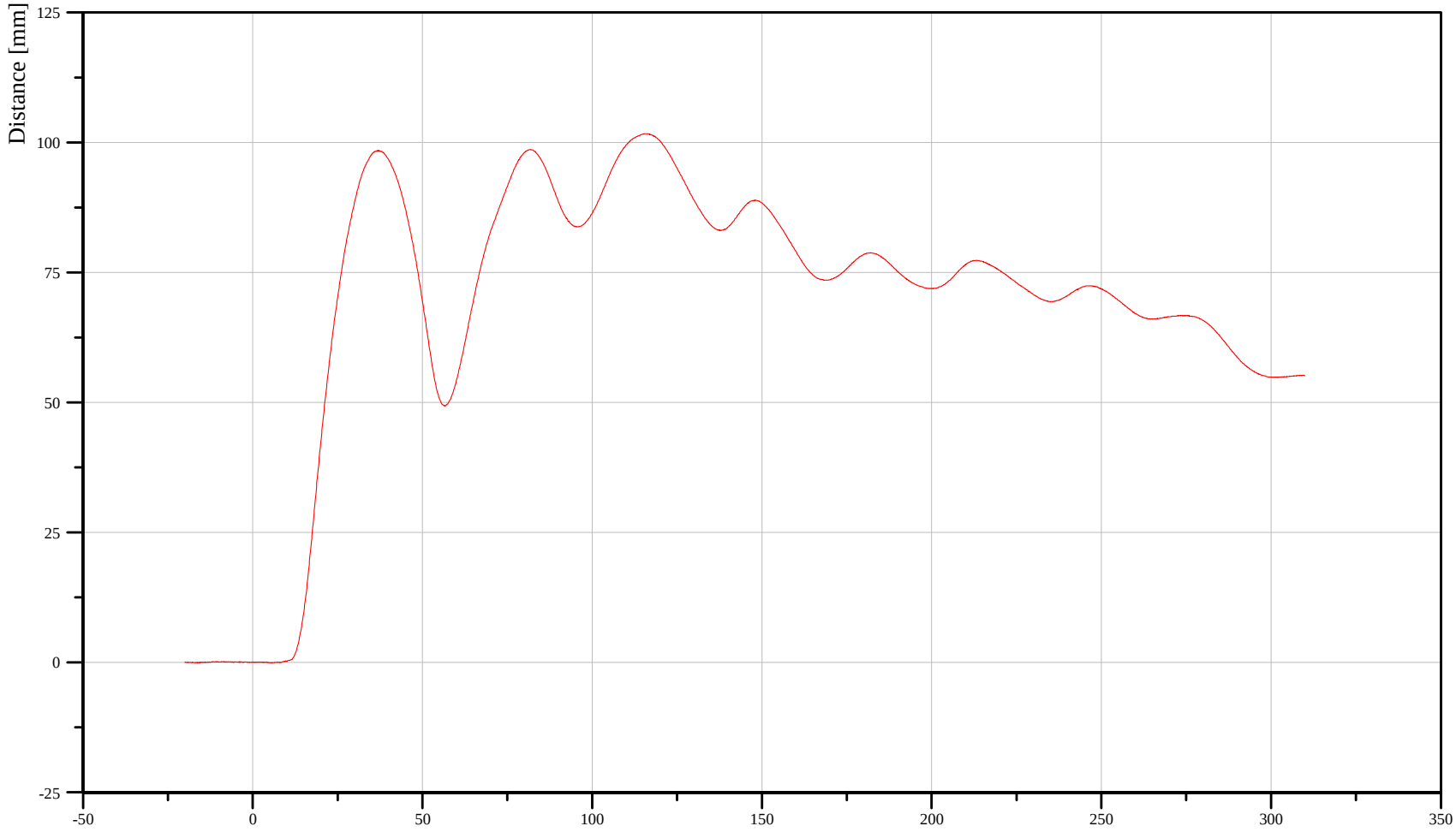
Target Vehicle Passenger Shoulder Belt Spool and Retraction

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23SEBA0000B3DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.08 mm at 5.28 ms

Max. Value
101.71 mm at 115.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

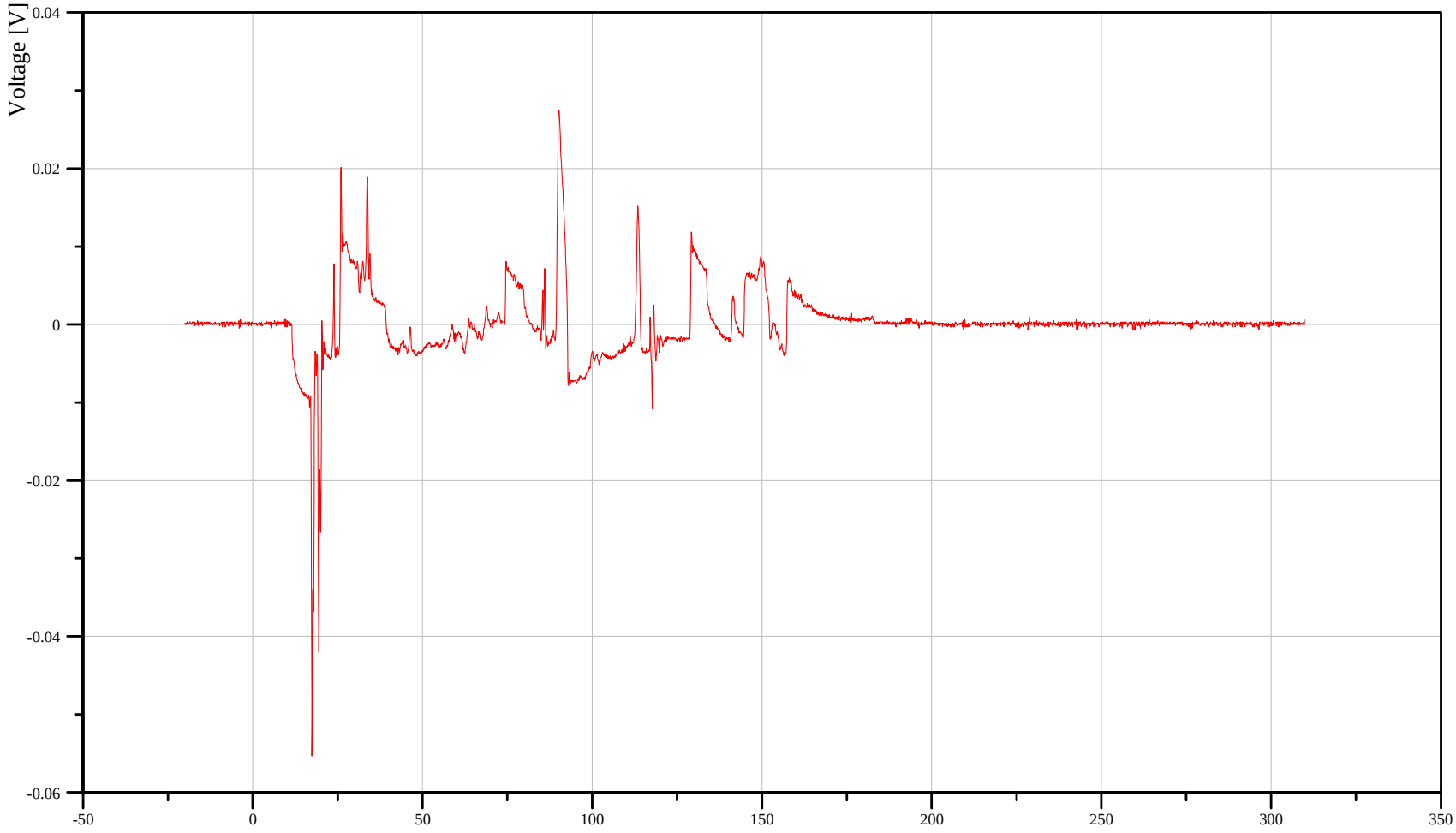
Target Vehicle Driver Front Airbag 1 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21AIRBFR0100EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.06 V at 17.44 ms

Max. Value
0.03 V at 90.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

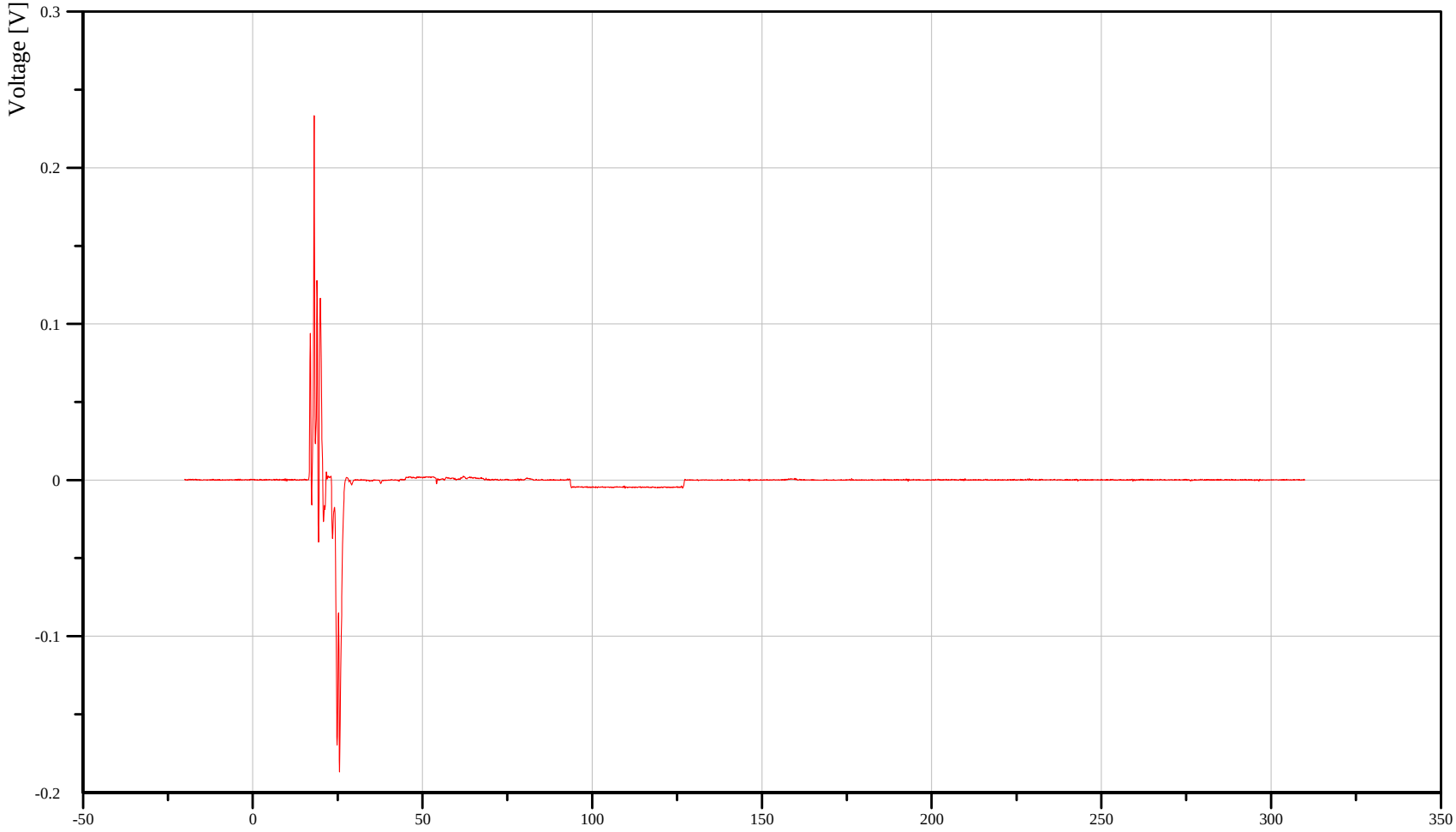
Target Vehicle Driver Front Airbag 2 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

21AIRBFR0200EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.19 V at 25.60 ms

Max. Value
0.23 V at 18.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

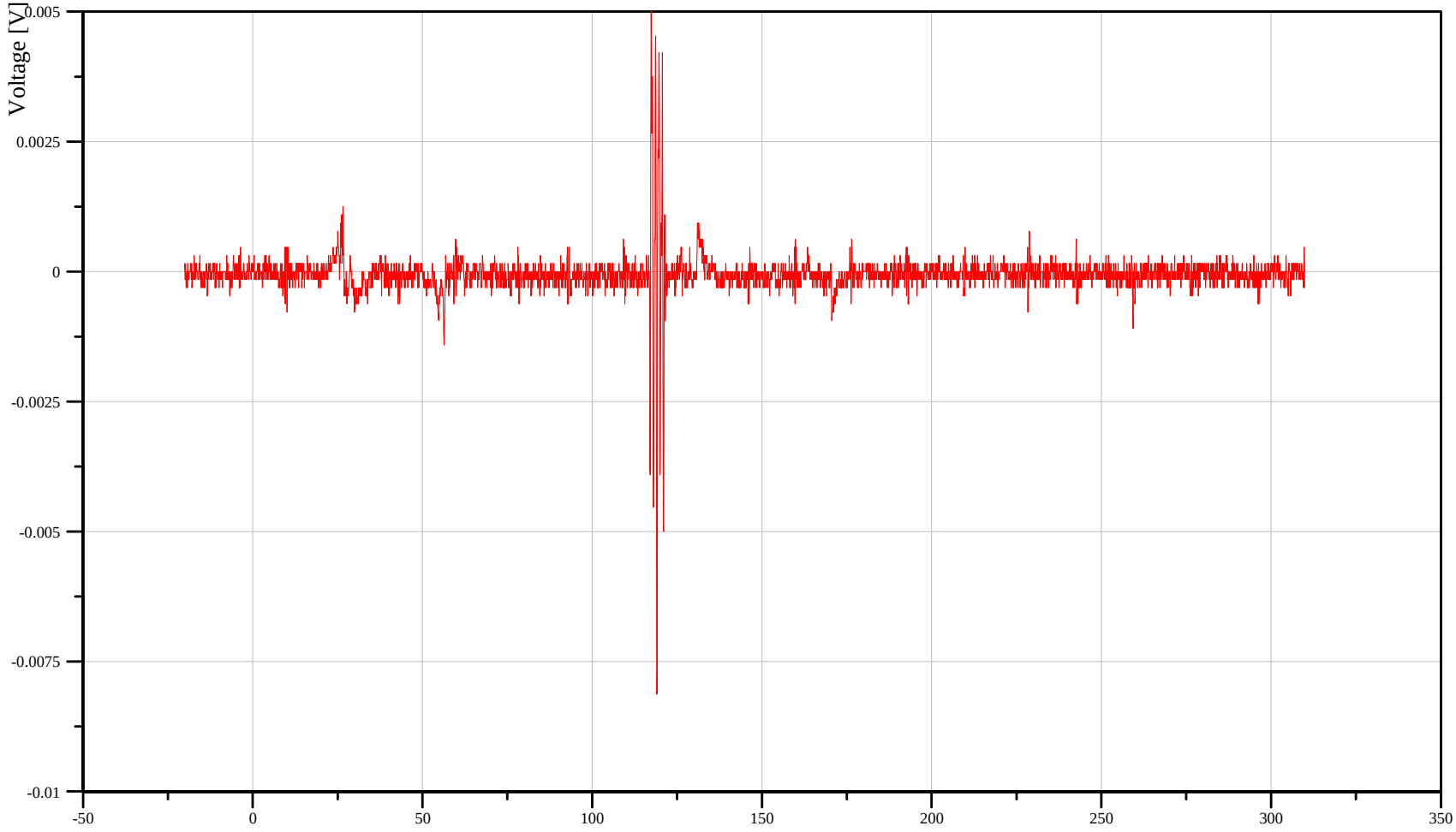
Target Vehicle Passenger Front Airbag 1 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23AIRBFR0100EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.01 V at 119.04 ms

Max. Value
0.00 V at 117.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

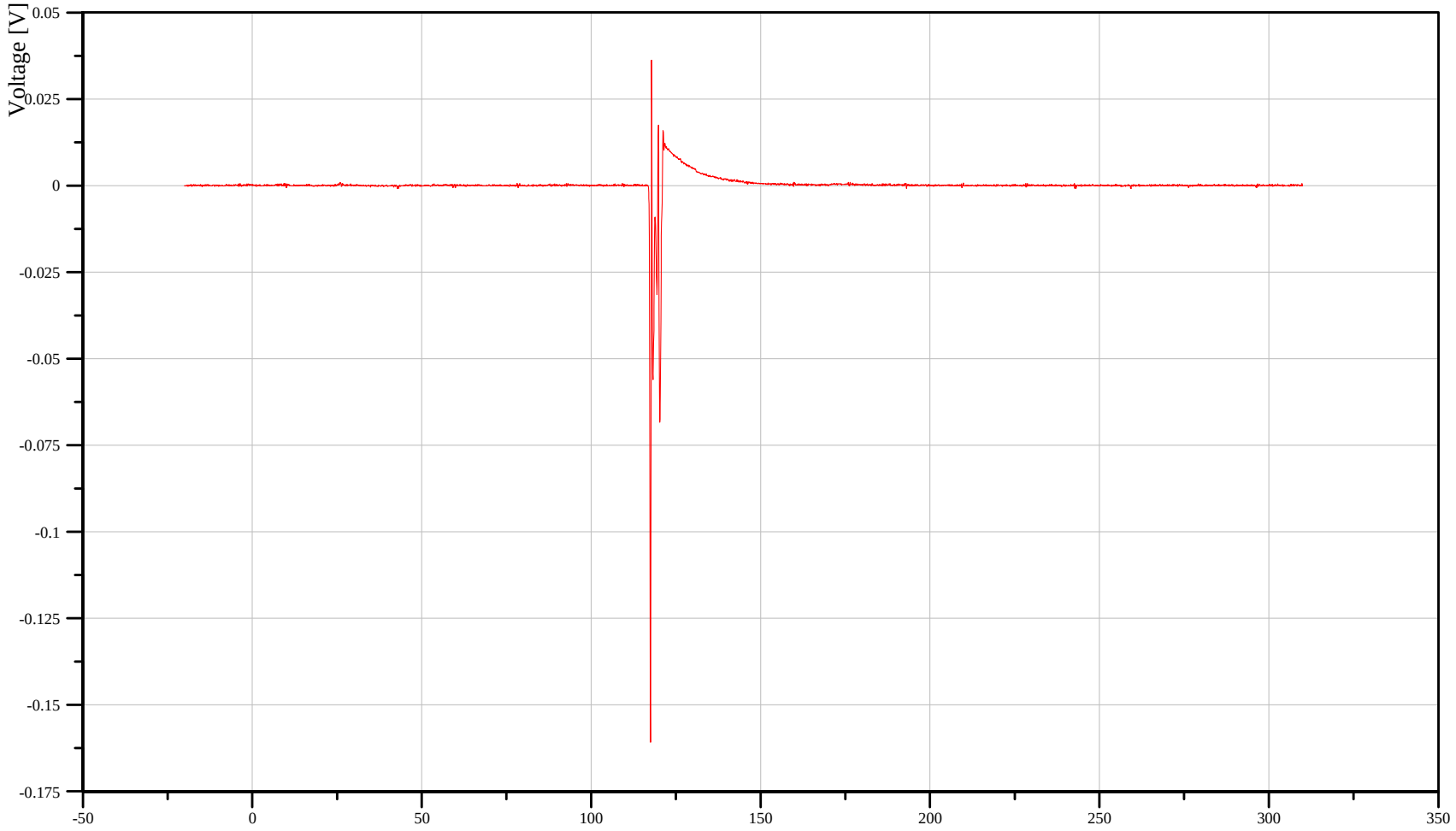
Target Vehicle Passenger Front Airbag 2 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

23AIRBFR0200EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.16 V at 117.52 ms

Max. Value
0.04 V at 117.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

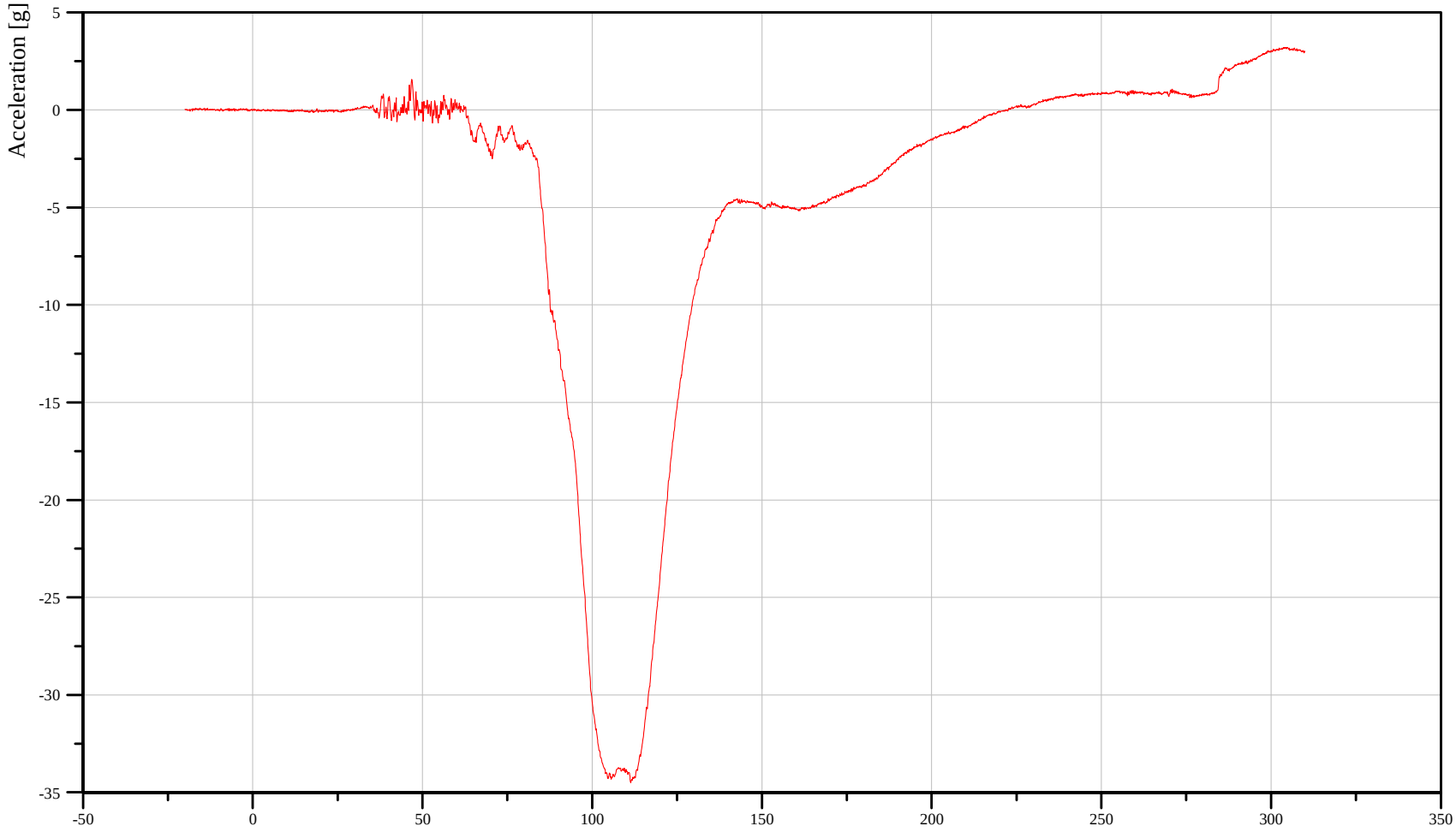
Bullet Vehicle Driver Head X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-34.51 g at 111.36 ms

Max. Value
3.21 g at 303.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

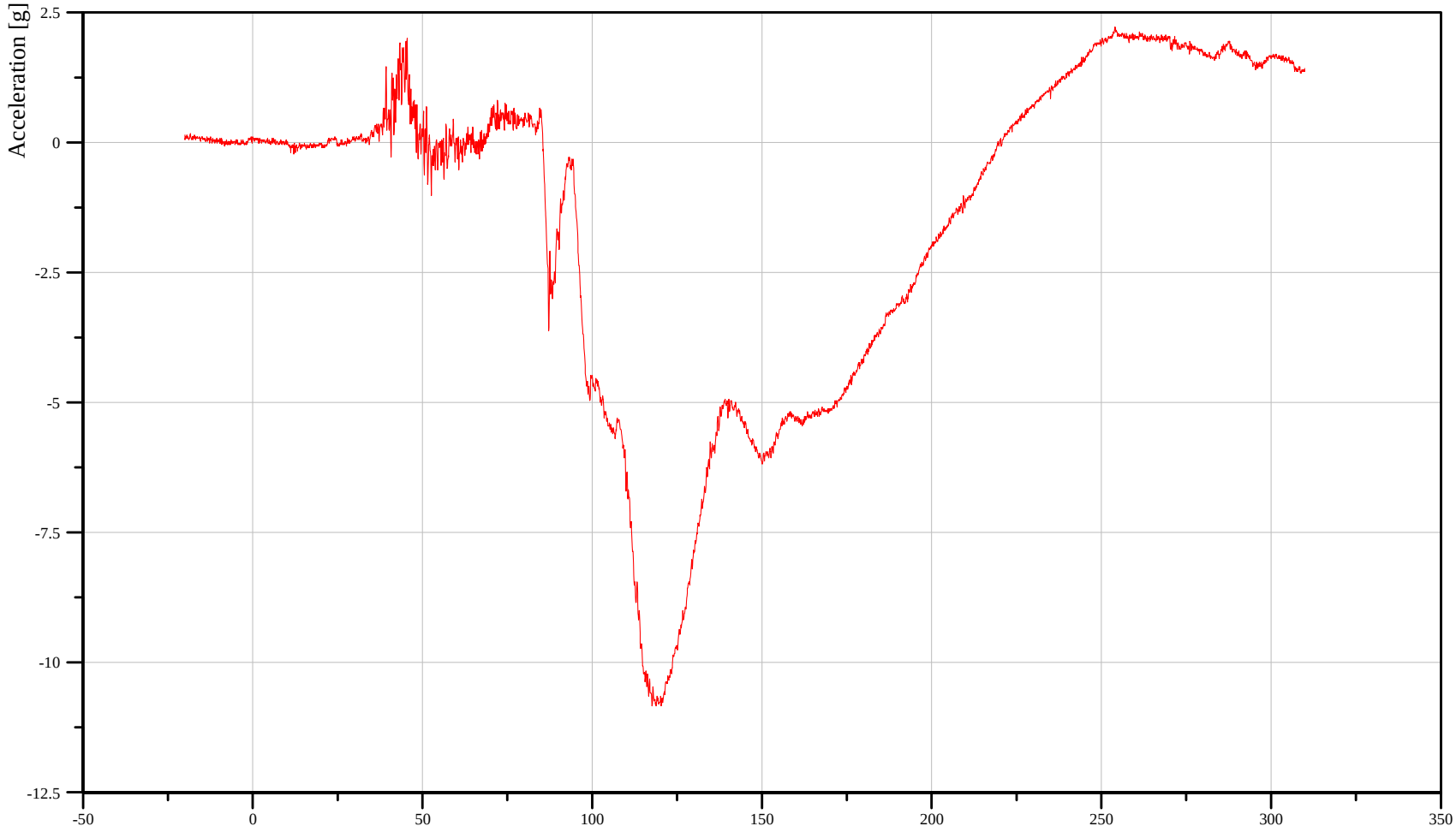
Bullet Vehicle Driver Head Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-10.83 g at 117.60 ms

Max. Value
2.22 g at 254.08 ms

B-200

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

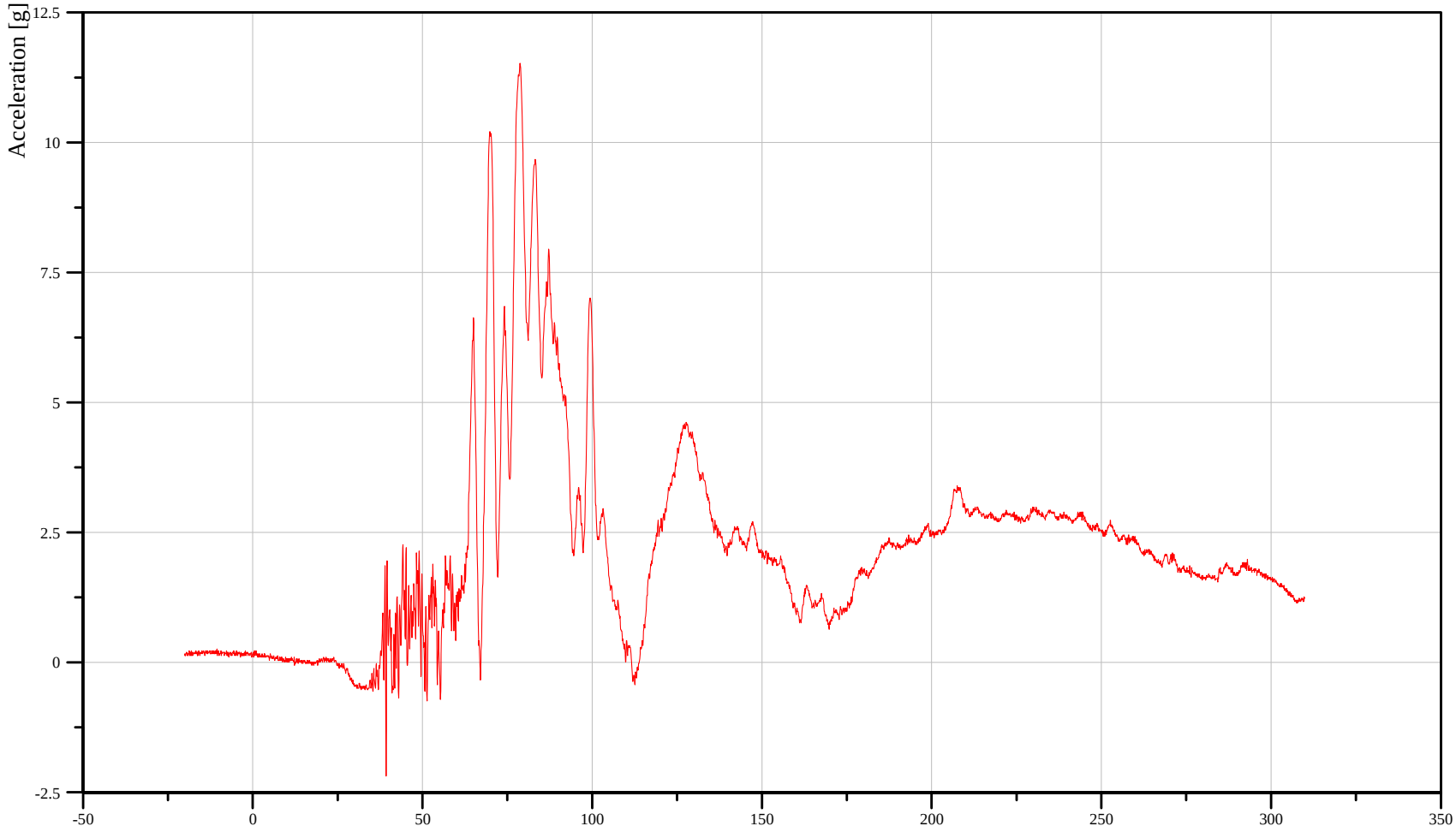
Bullet Vehicle Driver Head Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-2.19 g at 39.28 ms

Max. Value
11.53 g at 78.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

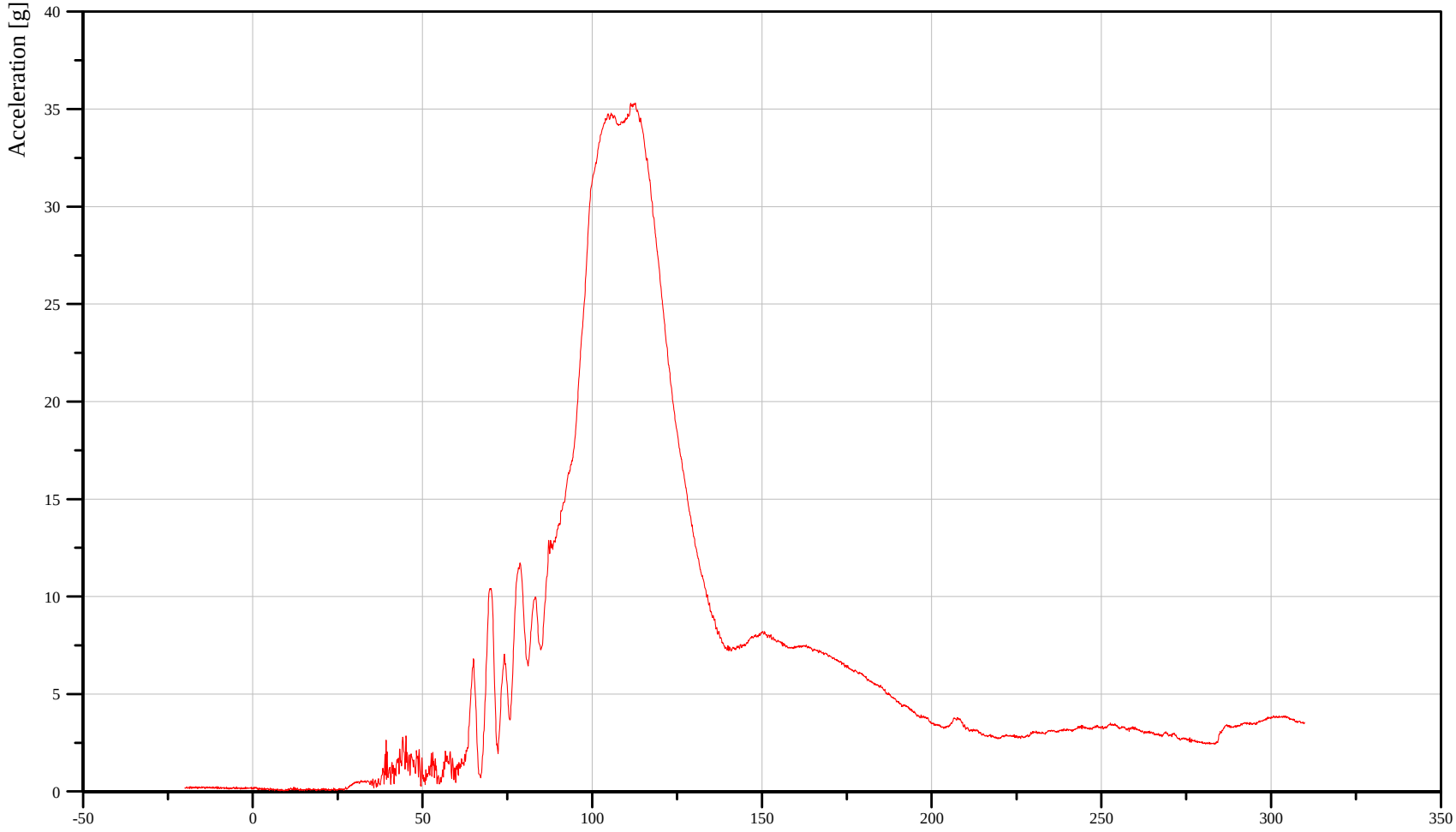
Bullet Vehicle Driver Head Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.04 g at 10.32 ms

Max. Value
35.32 g at 112.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

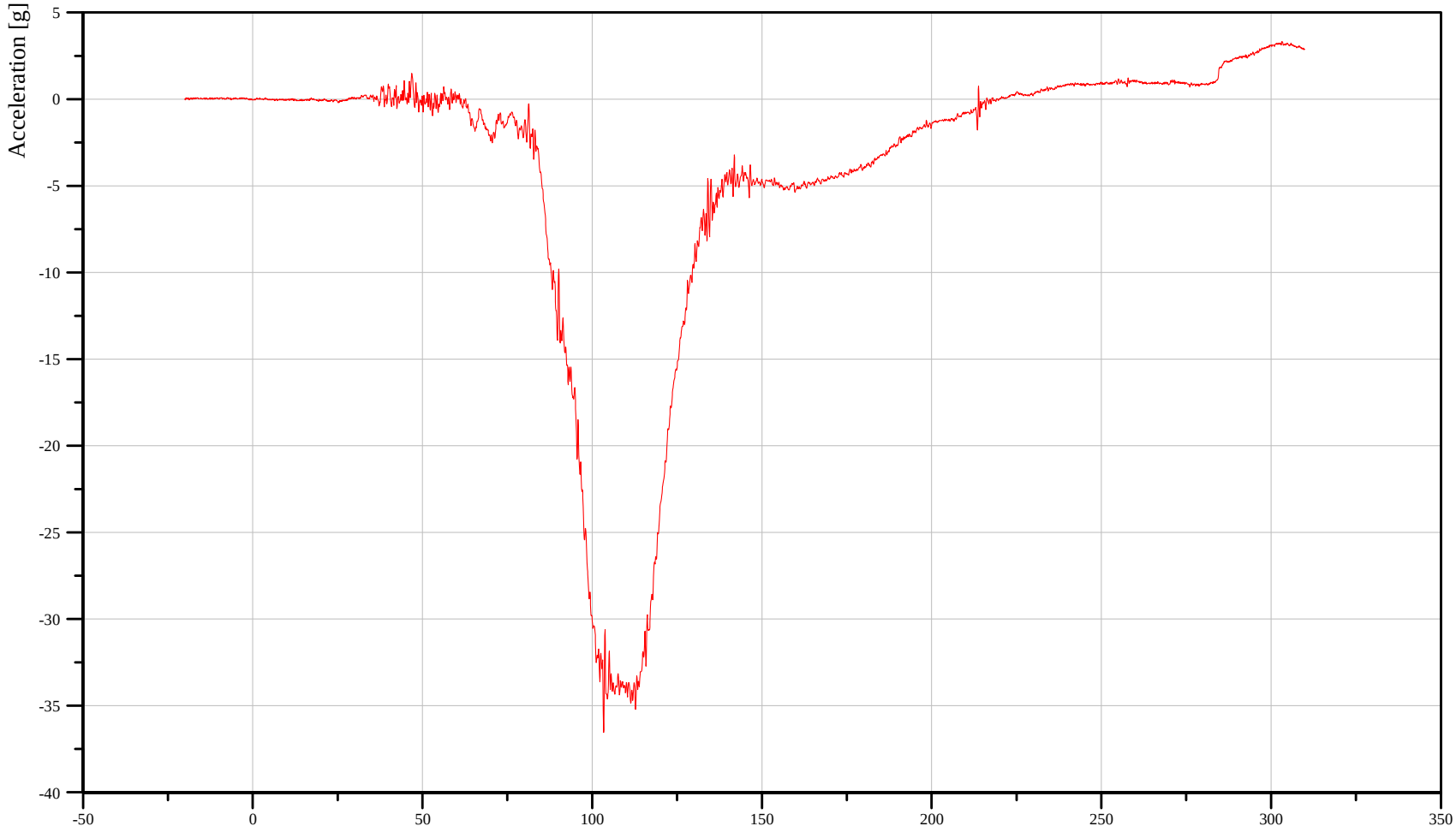
Bullet Vehicle Driver Head X-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCGRDH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-36.54 g at 103.36 ms

Max. Value
3.32 g at 303.20 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

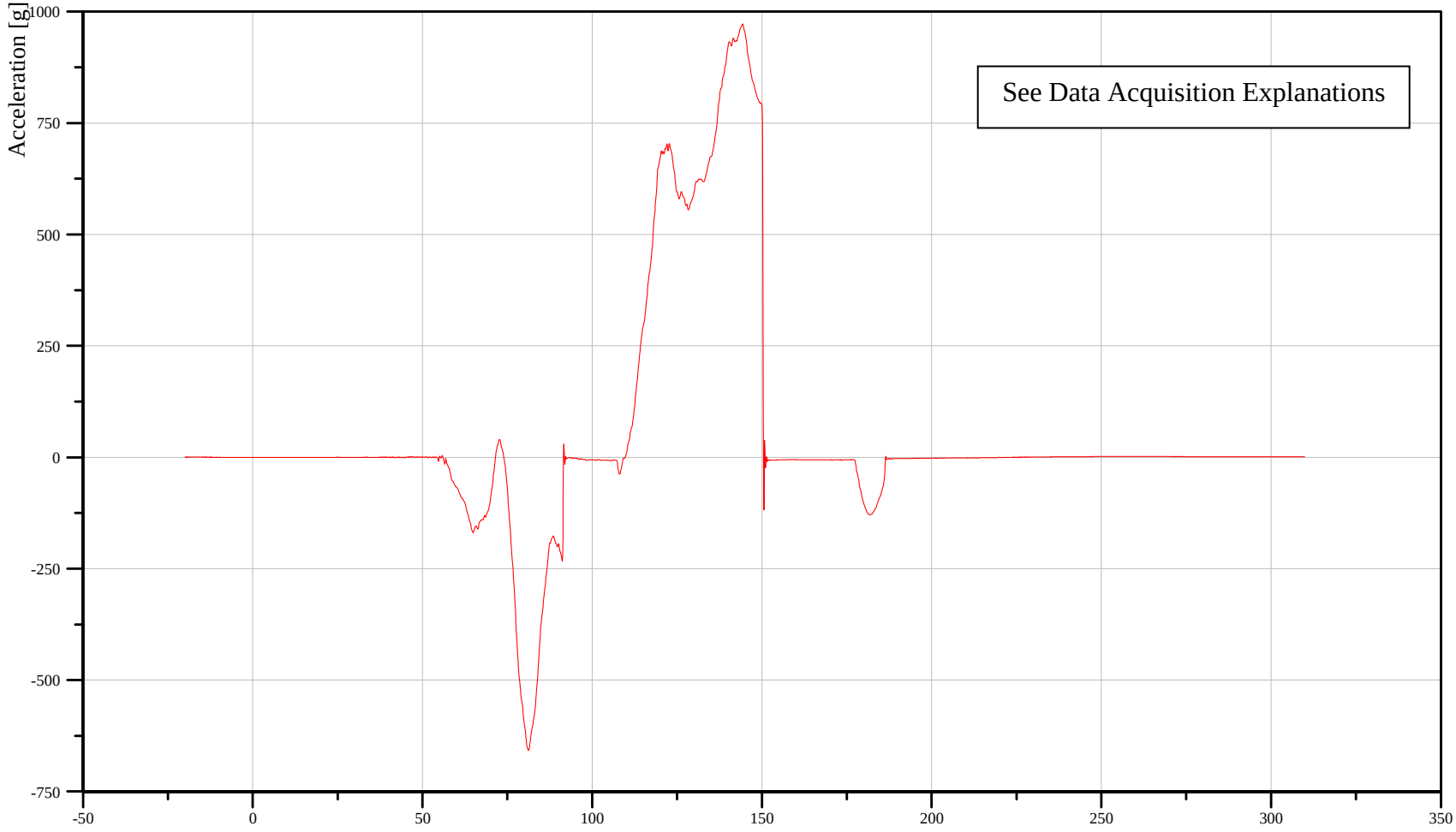
Bullet Vehicle Driver Head Y-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCGRDH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-657.22 g at 81.20 ms

Max. Value
972.60 g at 144.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

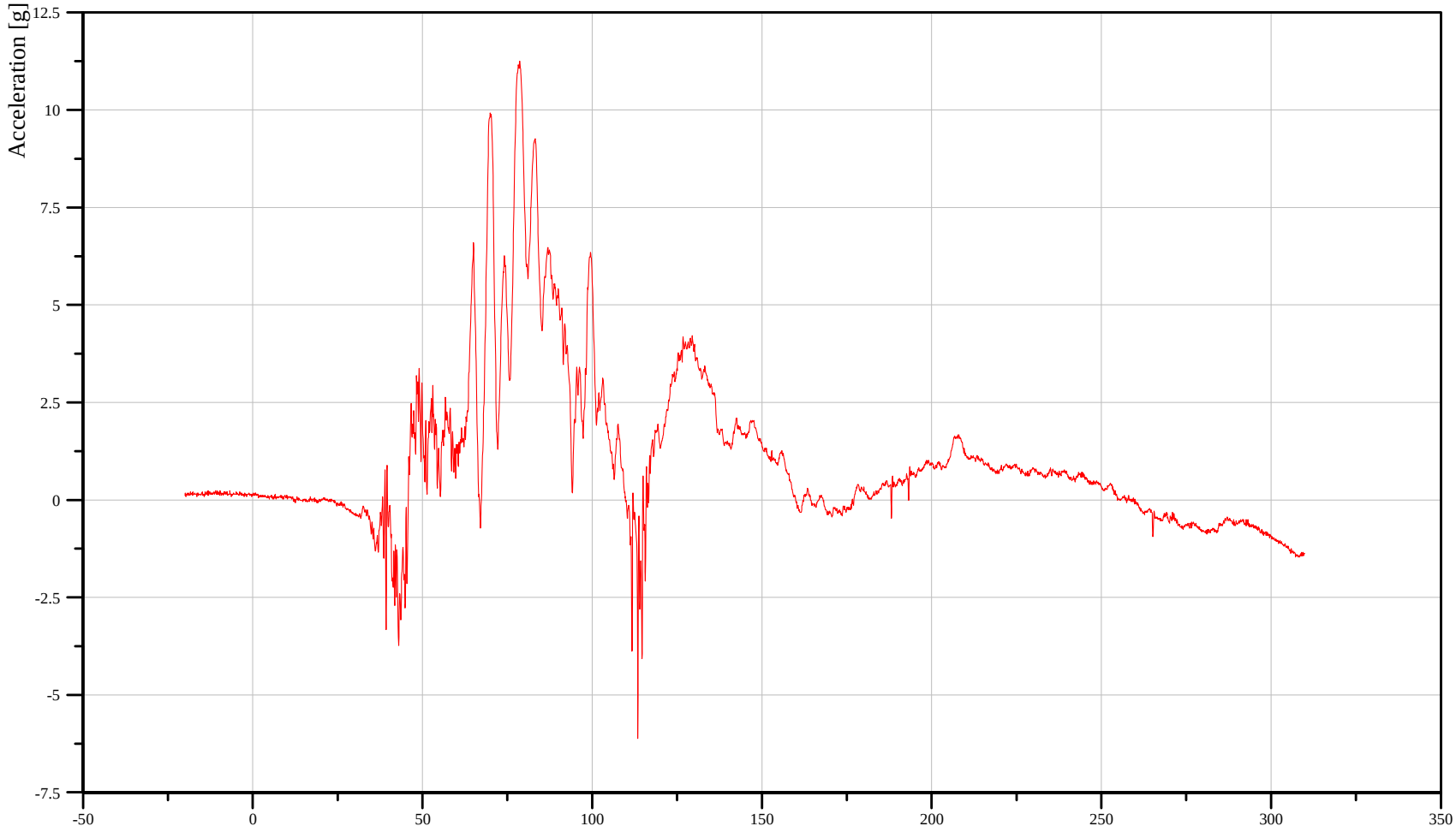
Bullet Vehicle Driver Head Z-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCGRDH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-6.12 g at 113.44 ms

Max. Value
11.25 g at 78.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

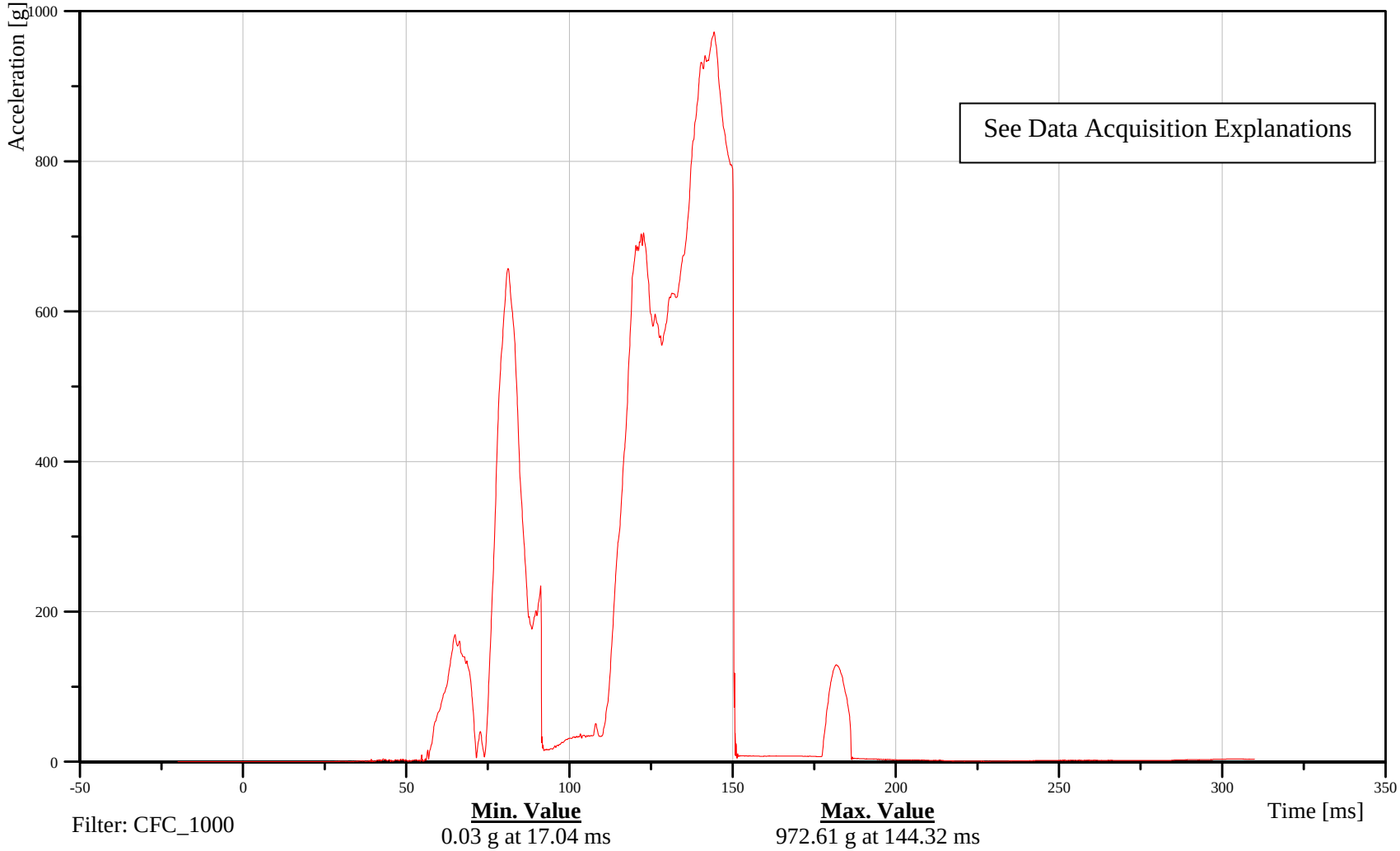
Bullet Vehicle Driver Head Resultant Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11HEADCGRDH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.03 g at 17.04 ms

Max. Value
972.61 g at 144.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

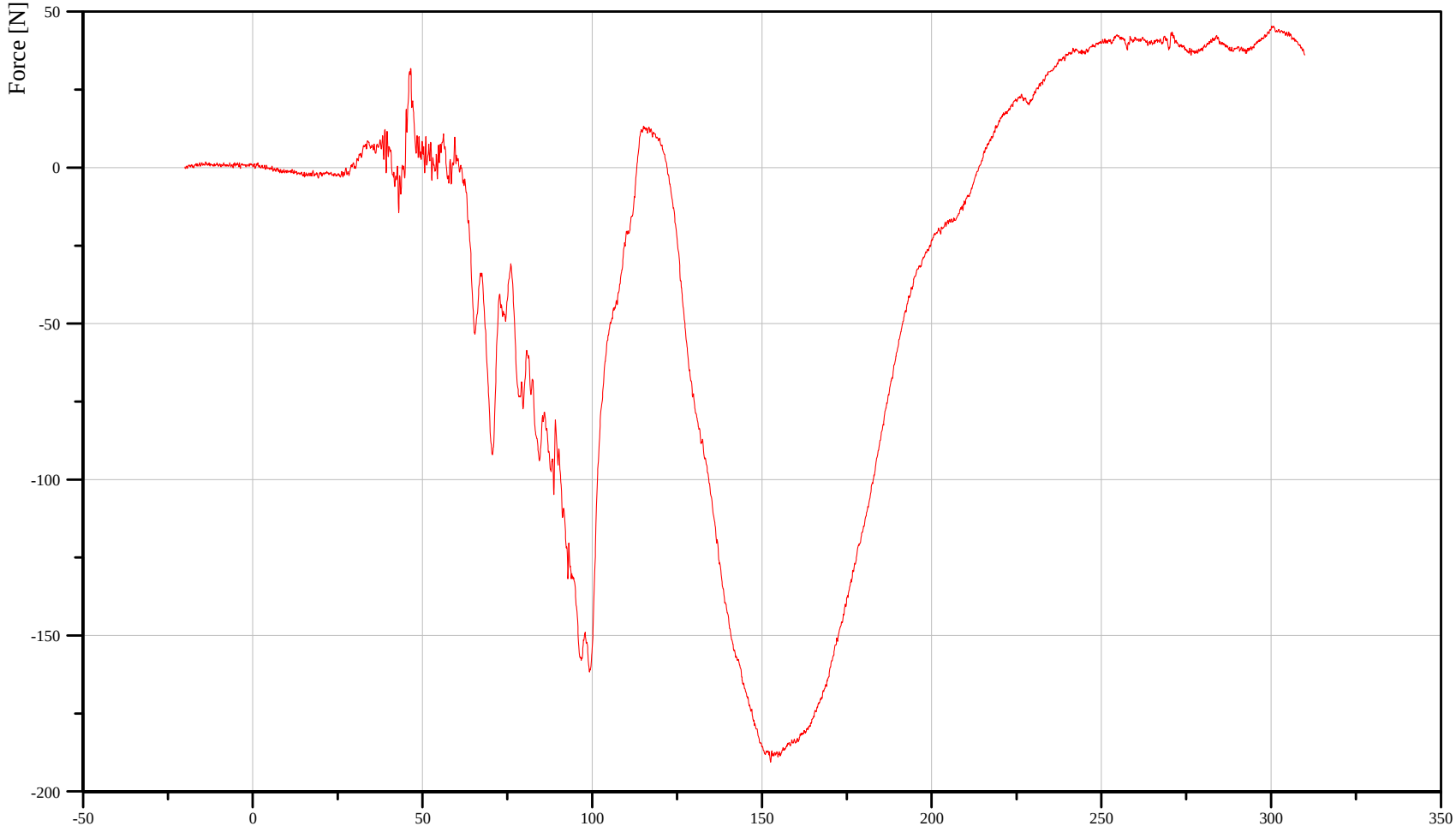
Bullet Vehicle Driver Neck X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11NECKUP00H3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-190.53 N at 152.56 ms

Max. Value
45.36 N at 300.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

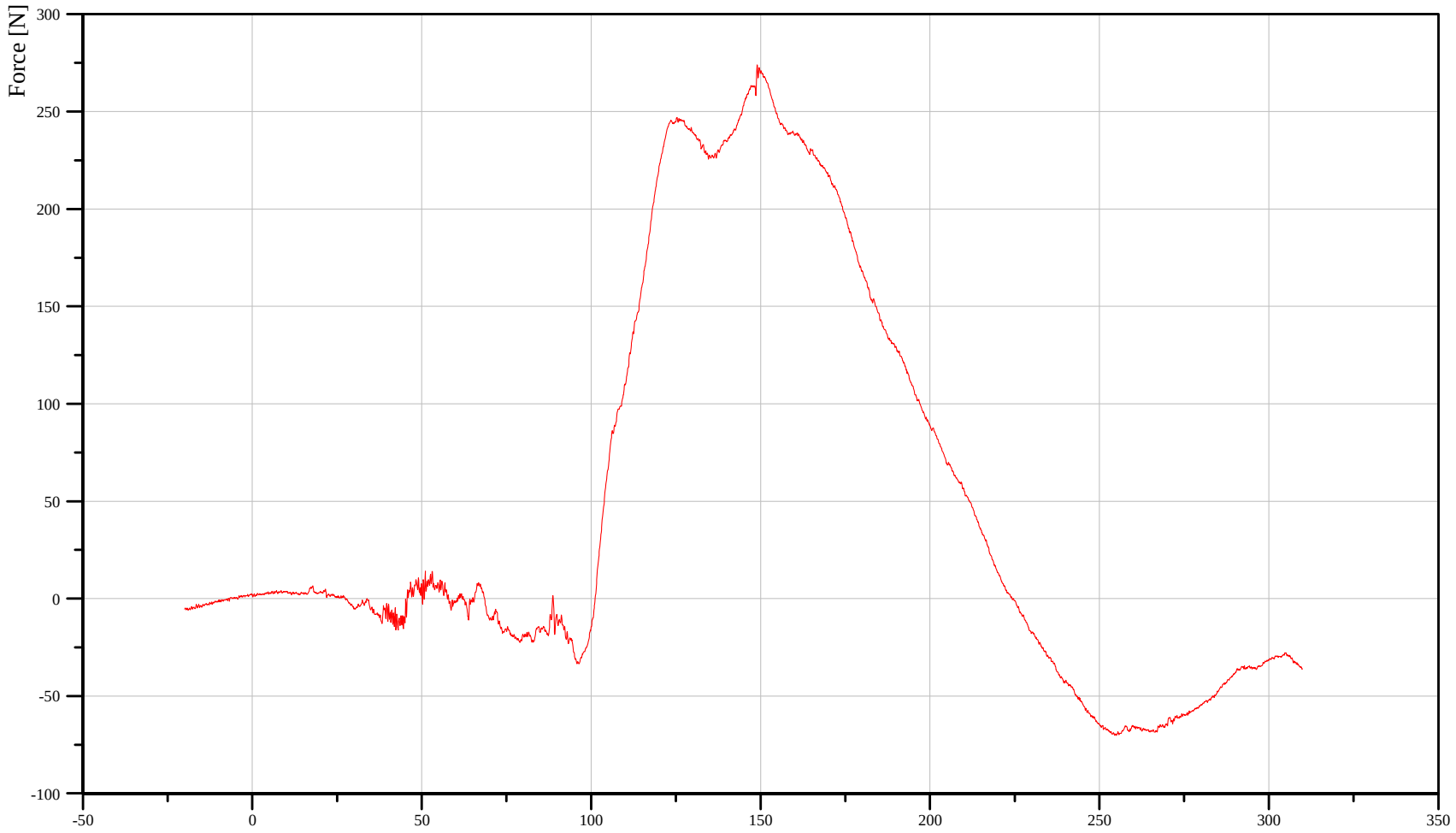
Bullet Vehicle Driver Neck Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11NECKUP00H3FOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-70.17 N at 254.48 ms

Max. Value
273.97 N at 148.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

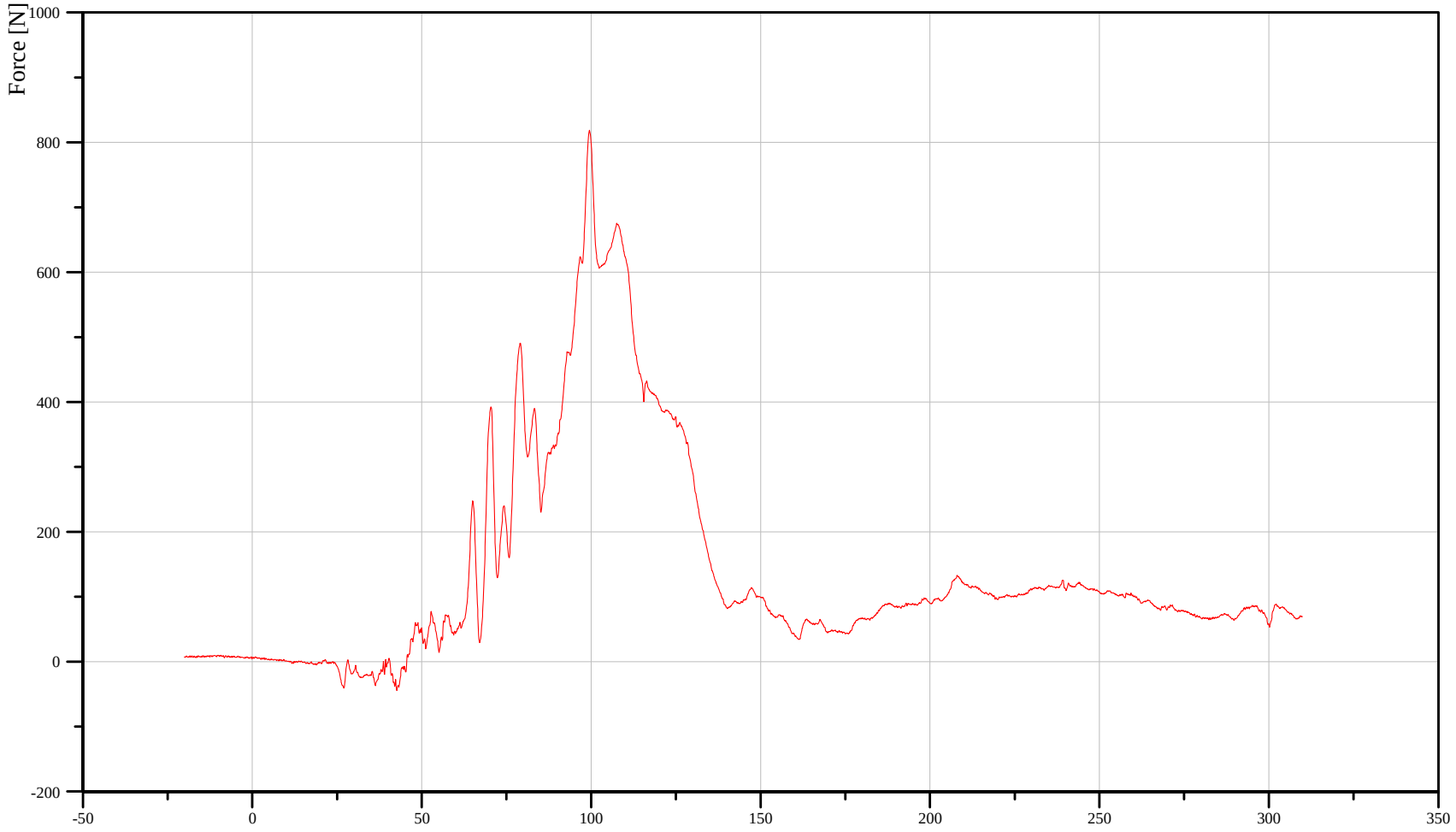
Bullet Vehicle Driver Neck Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11NECKUP00H3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-44.43 N at 42.64 ms

Max. Value
818.50 N at 99.52 ms

B-209

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

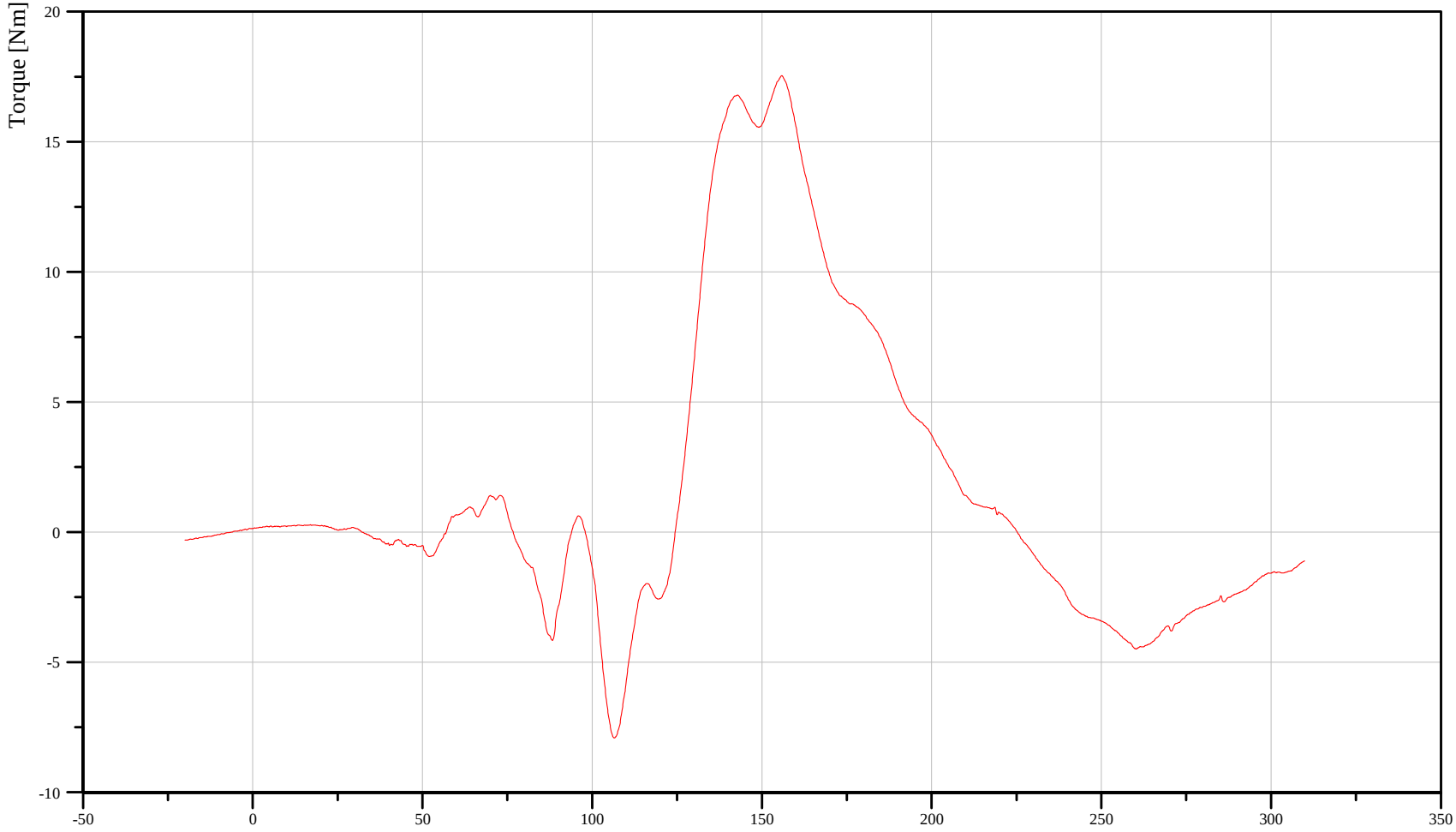
Bullet Vehicle Driver Neck Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11NECKUP00H3MOXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-7.91 Nm at 106.48 ms

Max. Value
17.54 Nm at 155.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

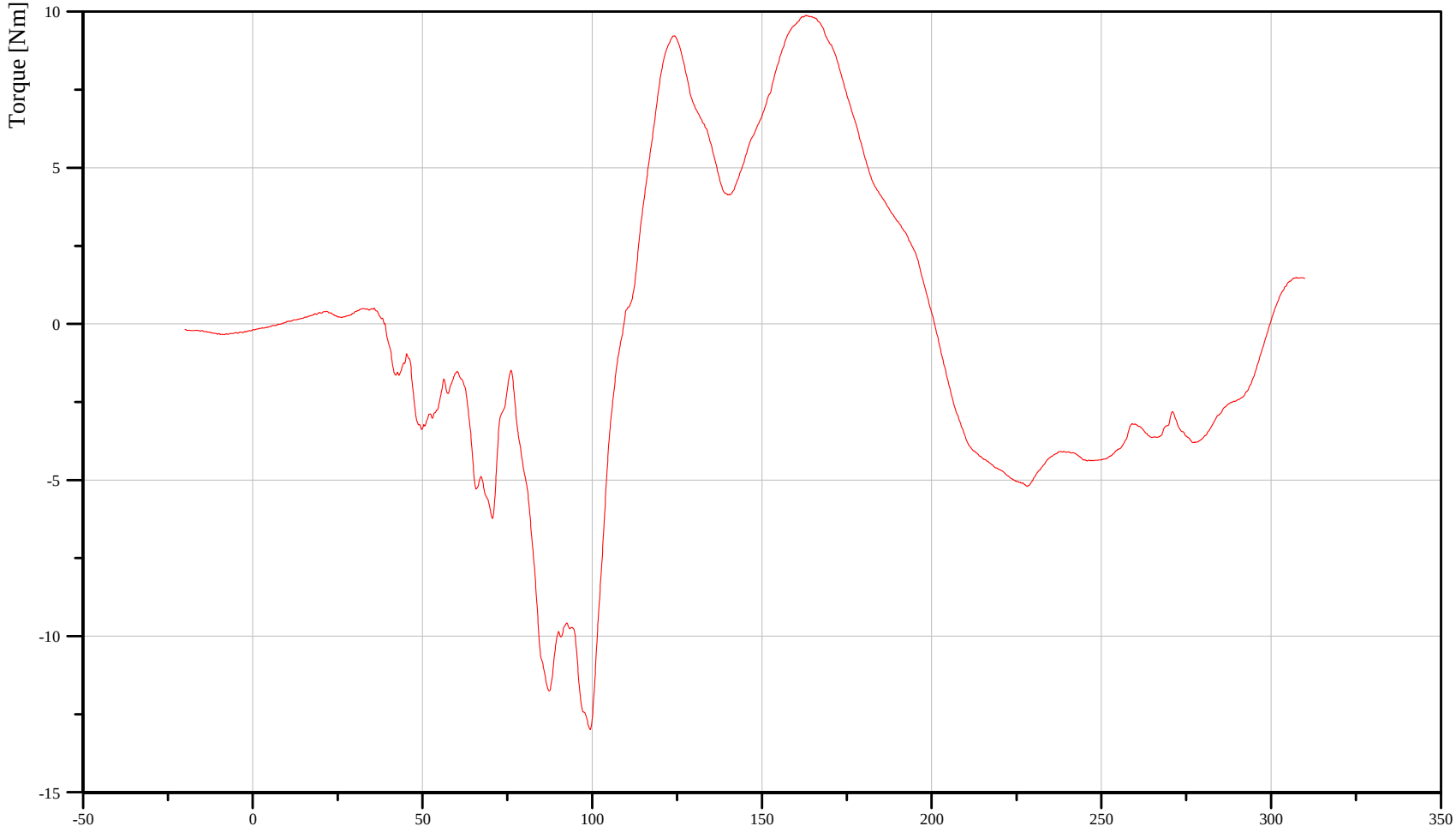
Bullet Vehicle Driver Neck Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11NECKUP00H3MOYB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-12.99 Nm at 99.44 ms

Max. Value
9.88 Nm at 162.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

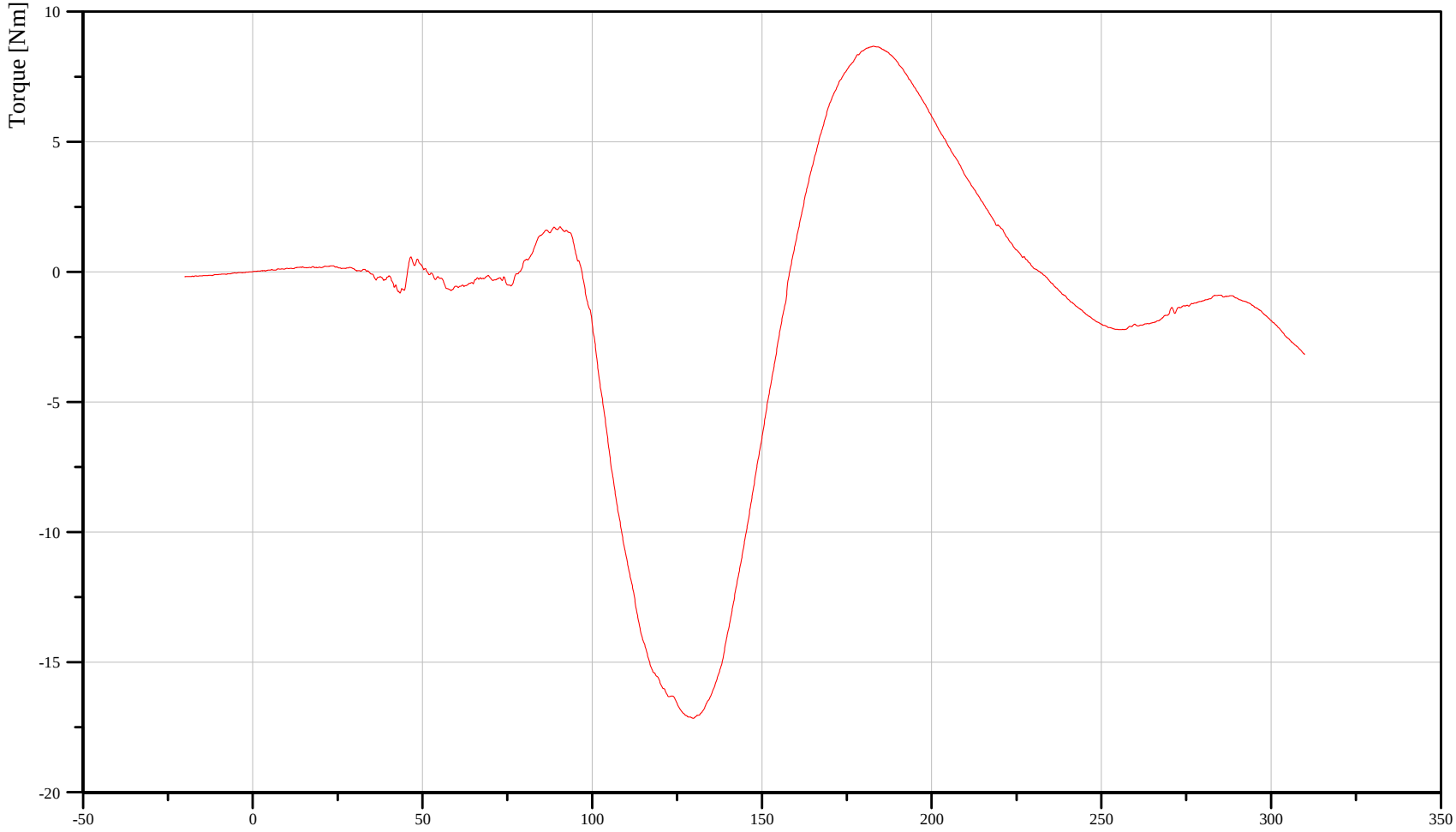
Bullet Vehicle Driver Neck Moment About Z Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11NECKUP00H3MOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-17.15 Nm at 129.84 ms

Max. Value
8.67 Nm at 182.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

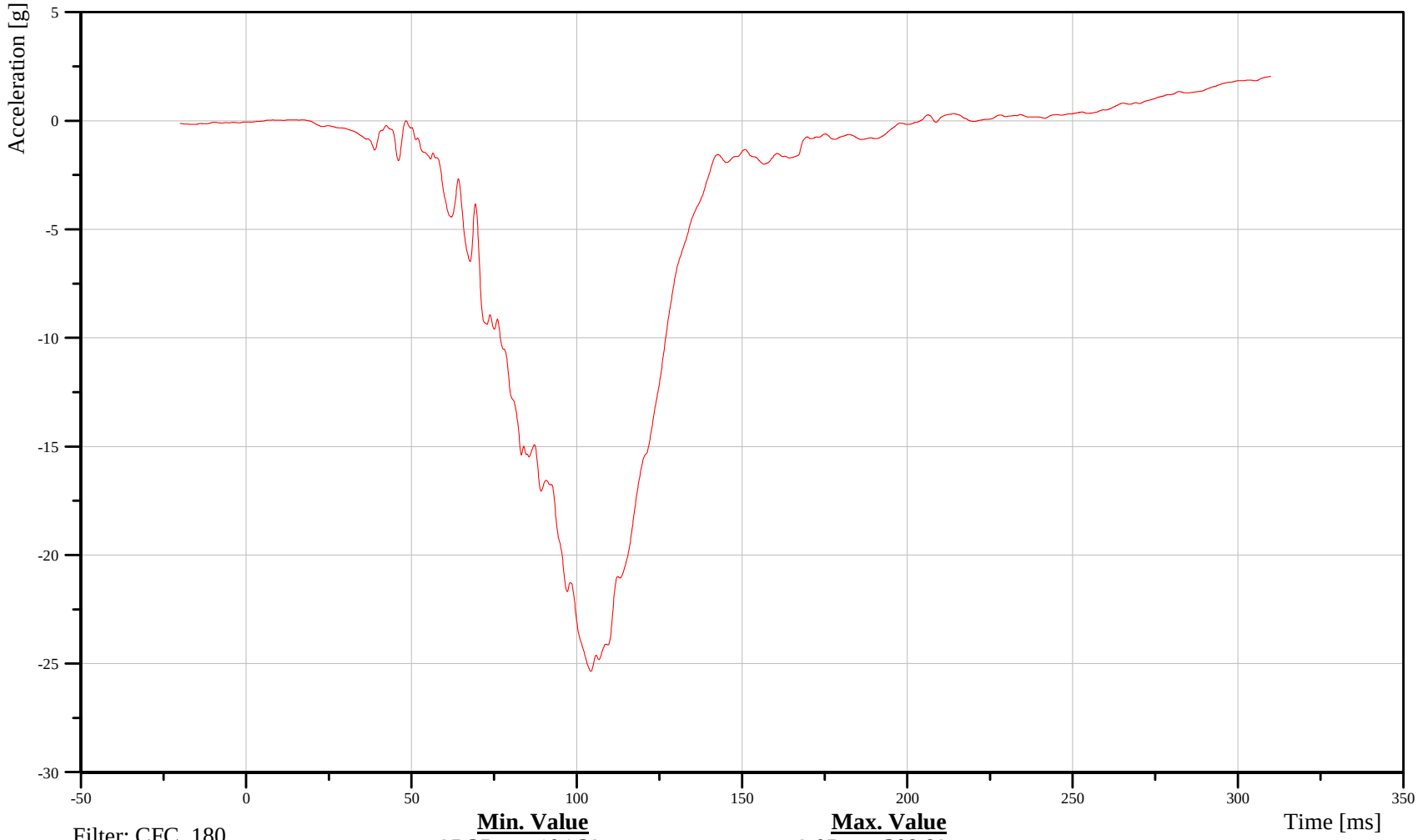
Bullet Vehicle Driver Chest X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-25.35 g at 104.32 ms

Max. Value
2.05 g at 309.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

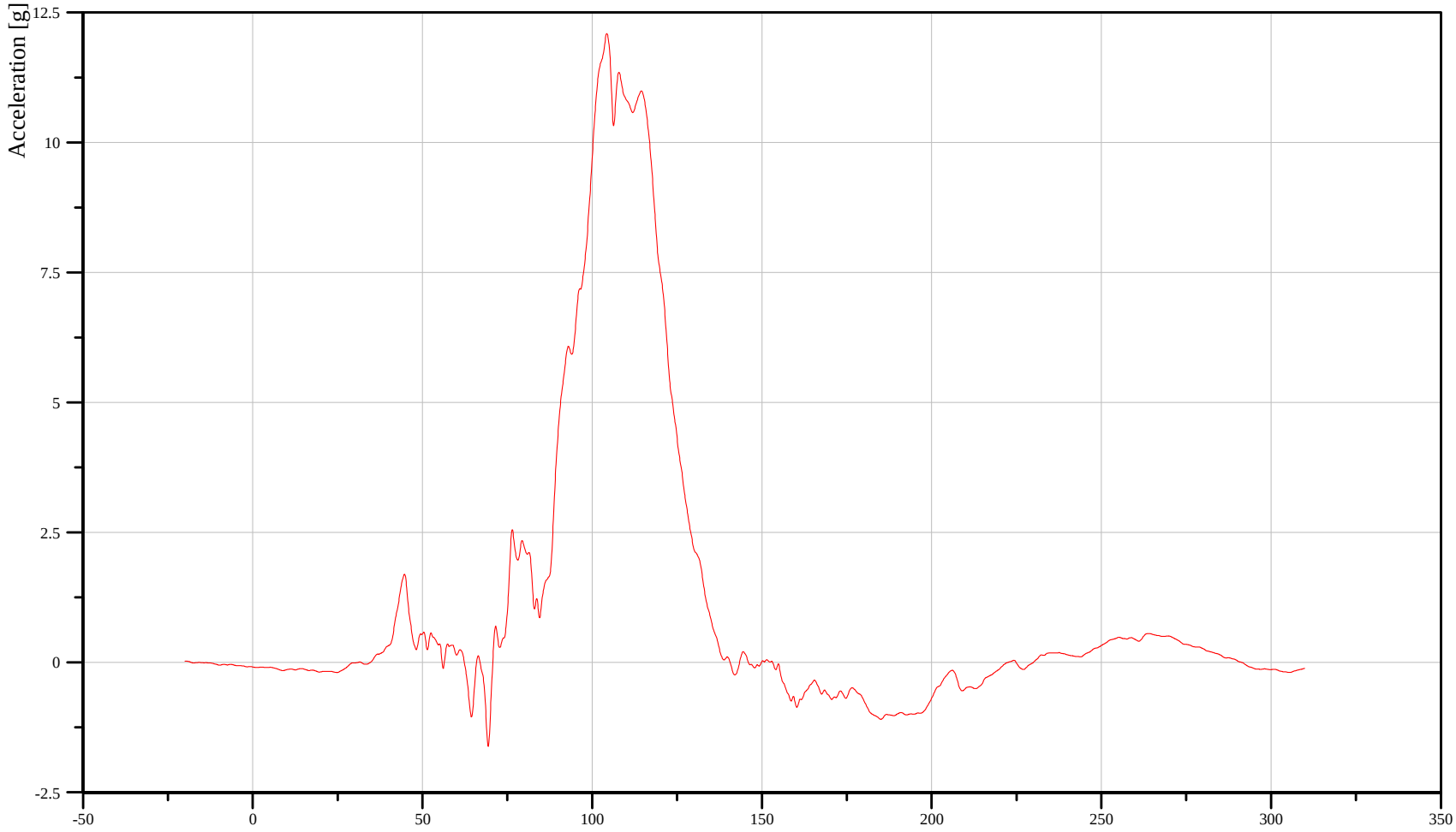
Bullet Vehicle Driver Chest Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.62 g at 69.36 ms

Max. Value
12.09 g at 104.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

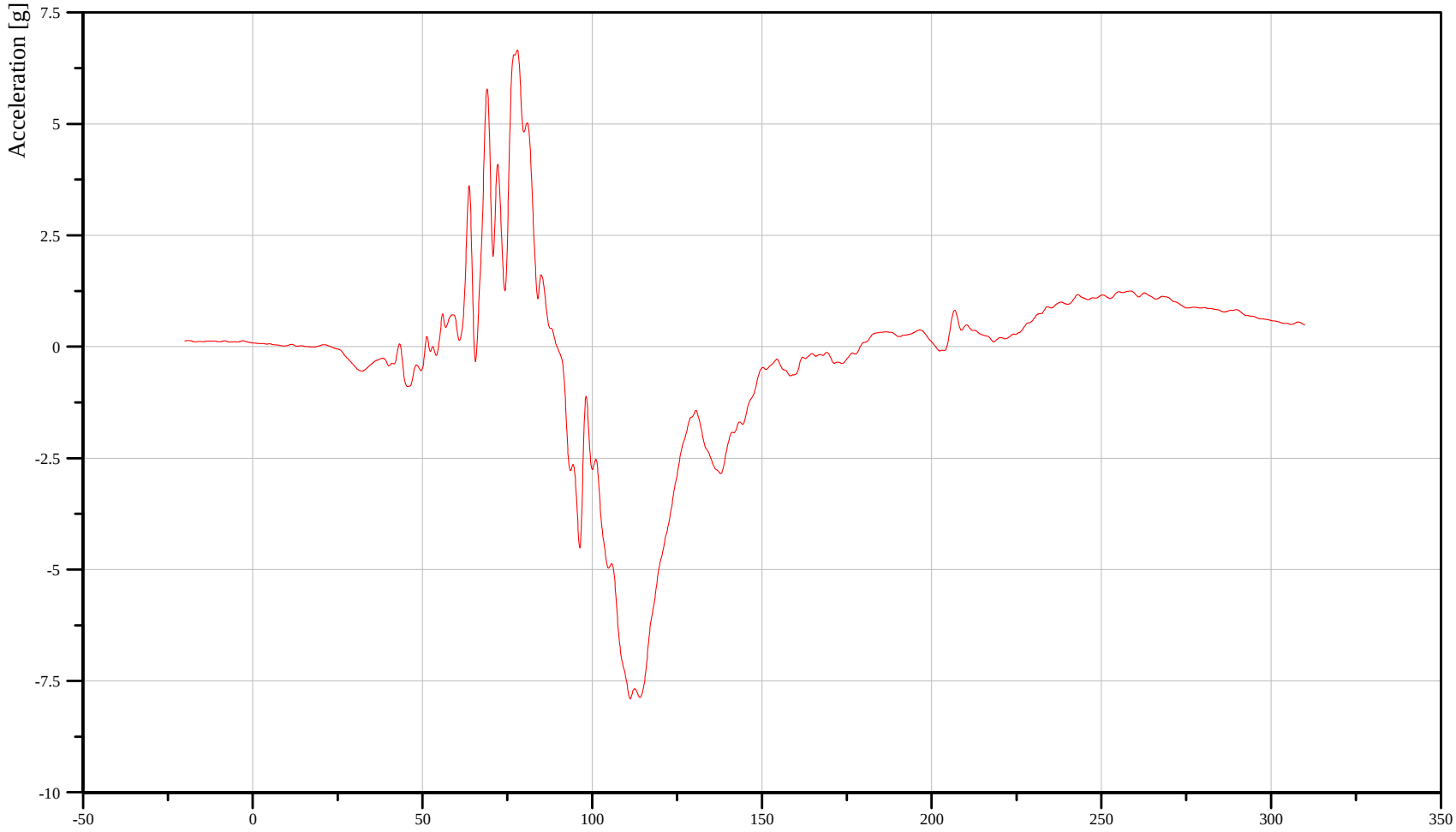
Bullet Vehicle Driver Chest Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-7.90 g at 111.20 ms

Max. Value
6.65 g at 78.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

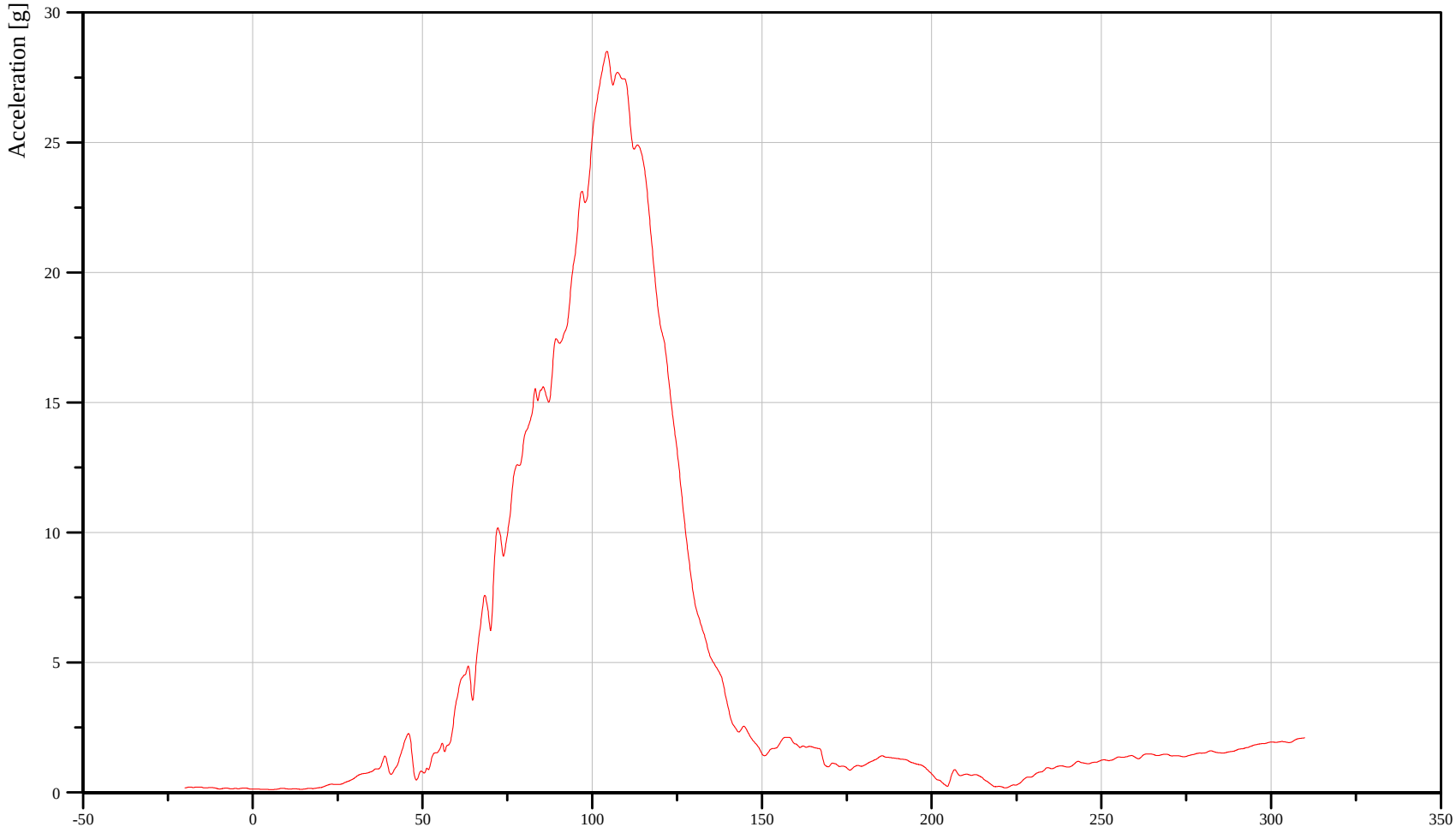
Bullet Vehicle Driver Chest Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.11 g at 5.68 ms

Max. Value
28.51 g at 104.32 ms

B-216

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

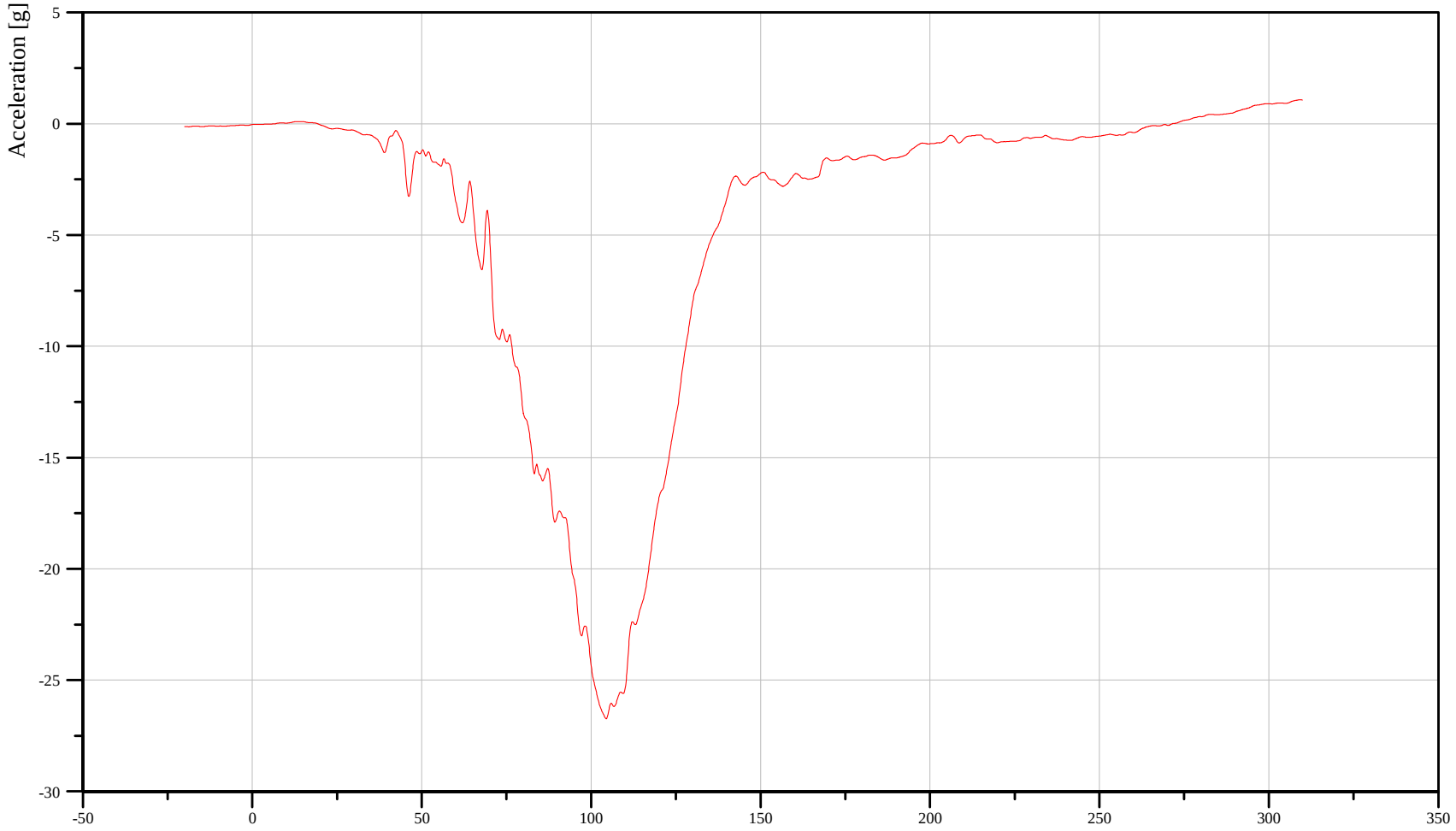
Bullet Vehicle Driver Chest X-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-26.73 g at 104.40 ms

Max. Value
1.08 g at 309.28 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

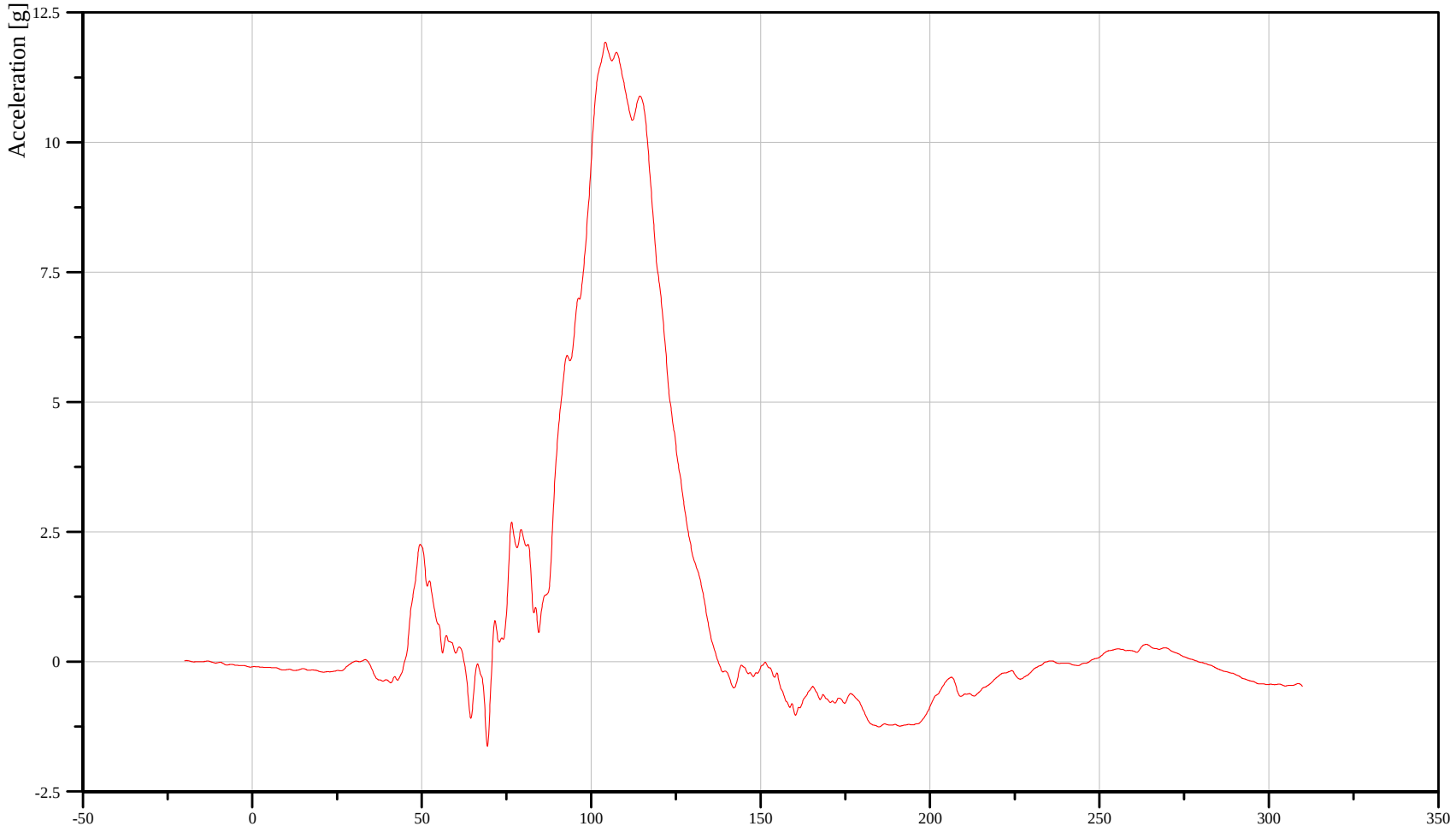
Bullet Vehicle Driver Chest Y-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.63 g at 69.36 ms

Max. Value
11.93 g at 104.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

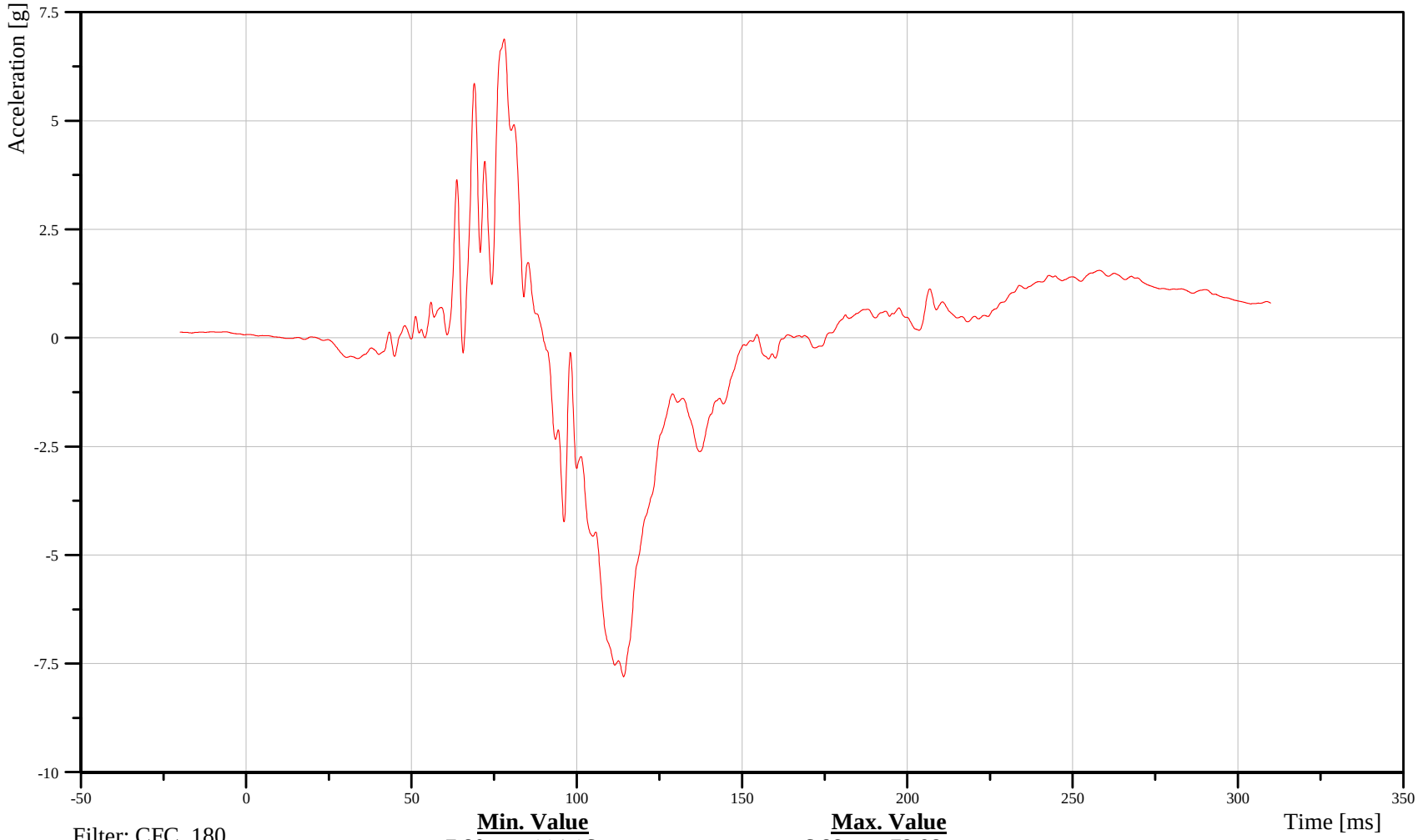
Bullet Vehicle Driver Chest Z-Axis Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-7.80 g at 114.16 ms

Max. Value
6.88 g at 78.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

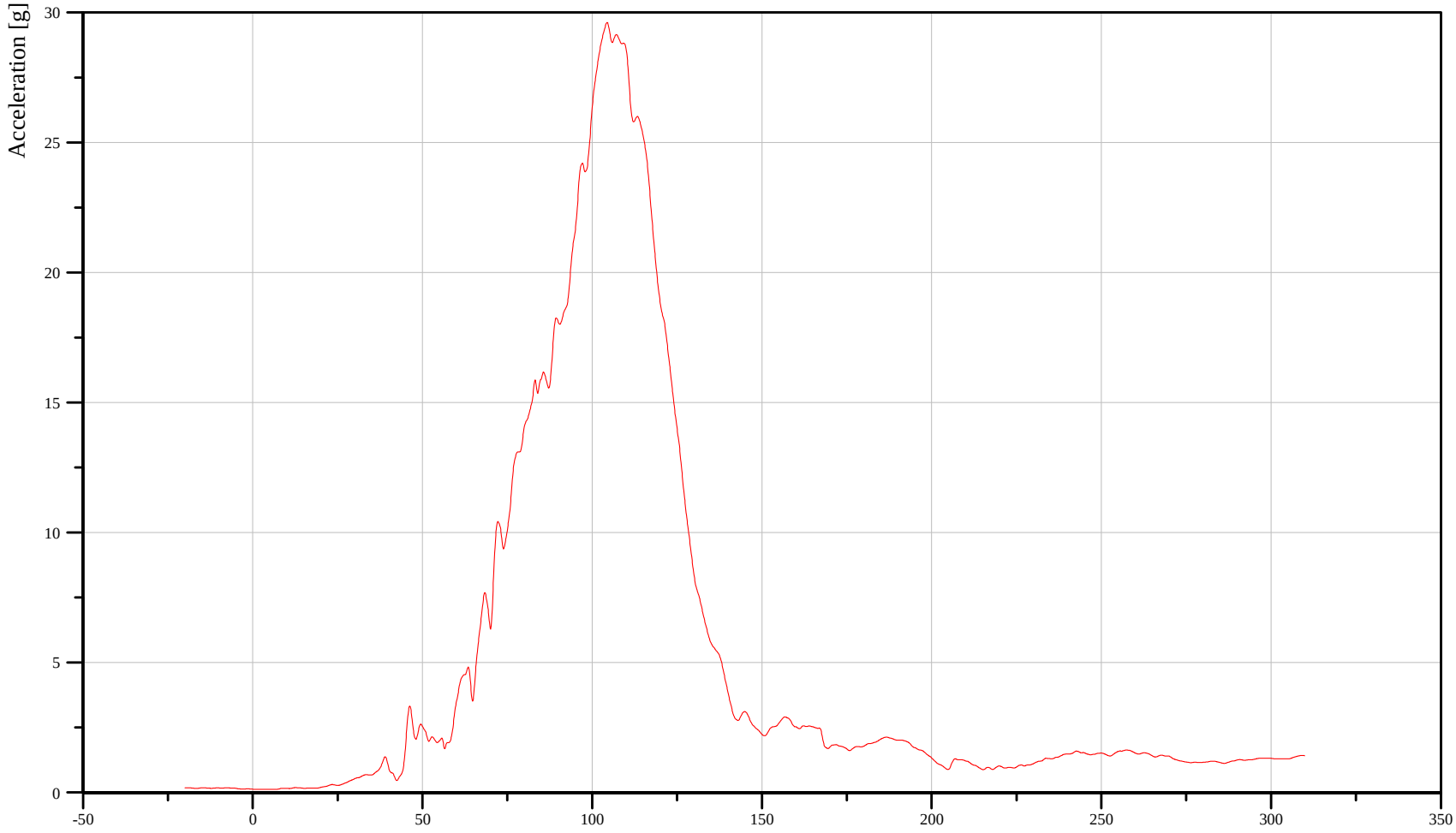
Bullet Vehicle Driver Chest Resultant Acceleration Redundant

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.12 g at 3.44 ms

Max. Value
29.61 g at 104.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

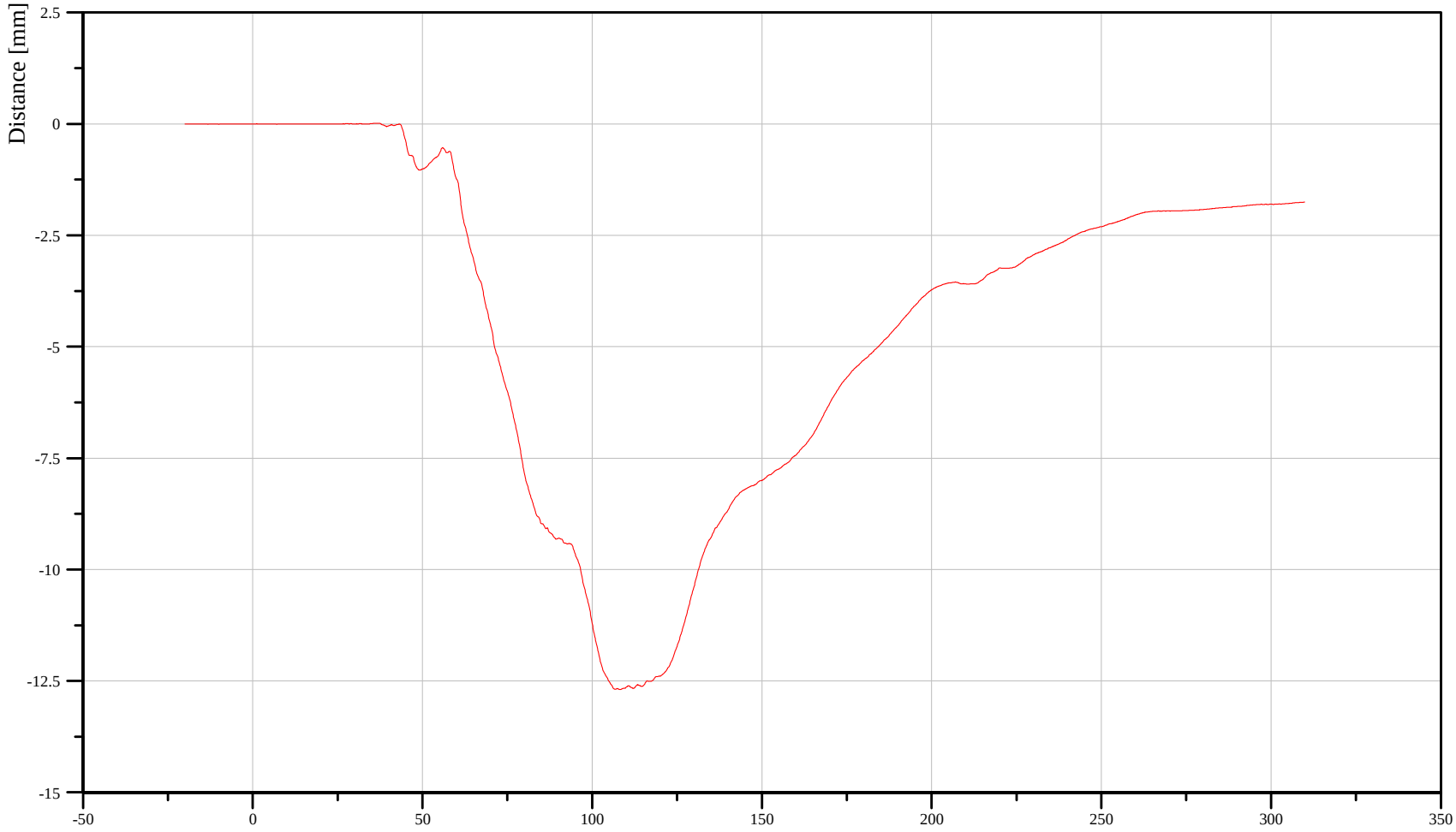
Bullet Vehicle Driver Chest X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11CHST0000H3DSXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-12.69 mm at 108.24 ms

Max. Value
0.02 mm at 36.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

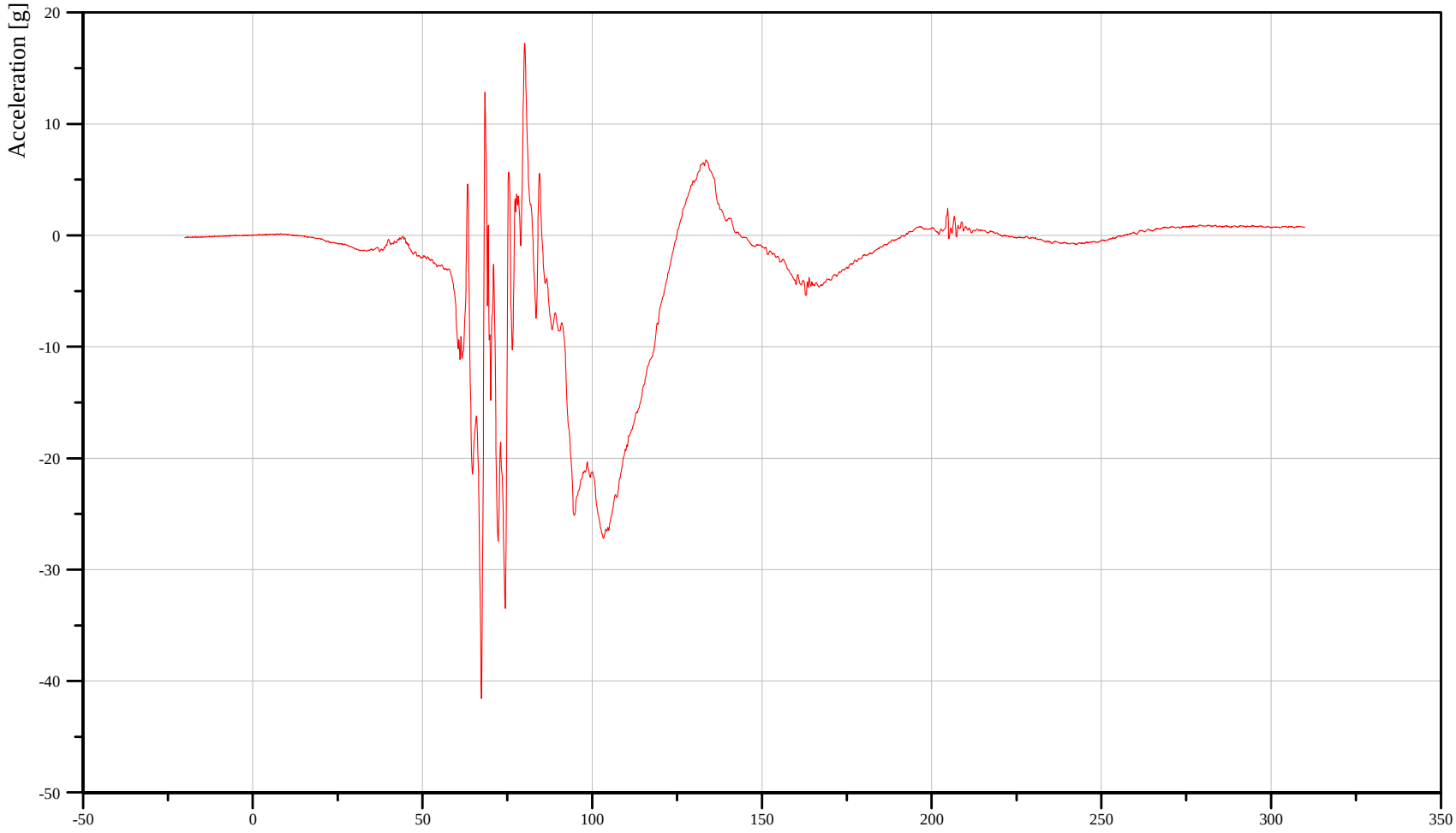
Bullet Vehicle Driver Pelvis X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11PELVCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-41.57 g at 67.36 ms

Max. Value
17.24 g at 80.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

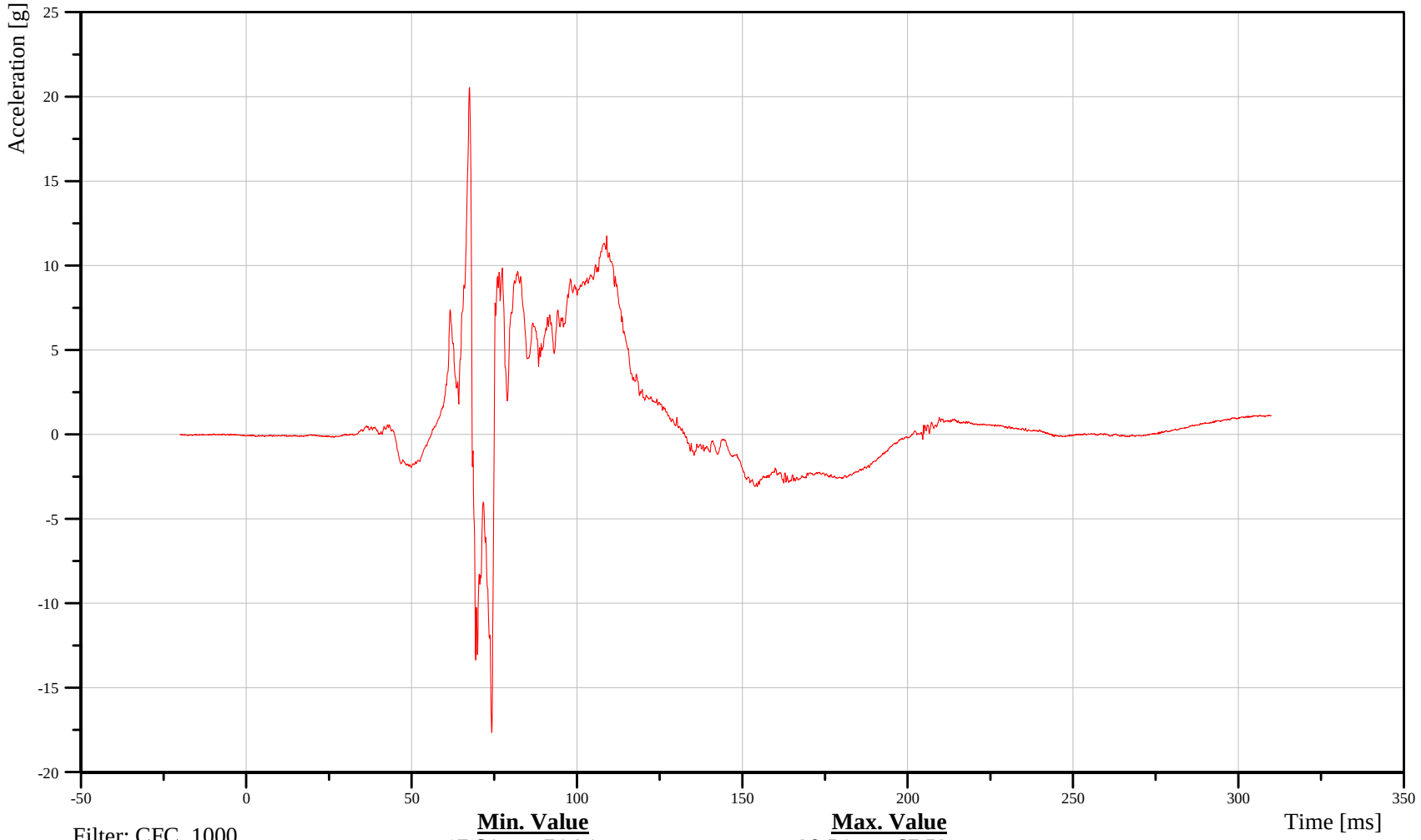
Bullet Vehicle Driver Pelvis Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11PELVCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-17.64 g at 74.24 ms

Max. Value
20.54 g at 67.52 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

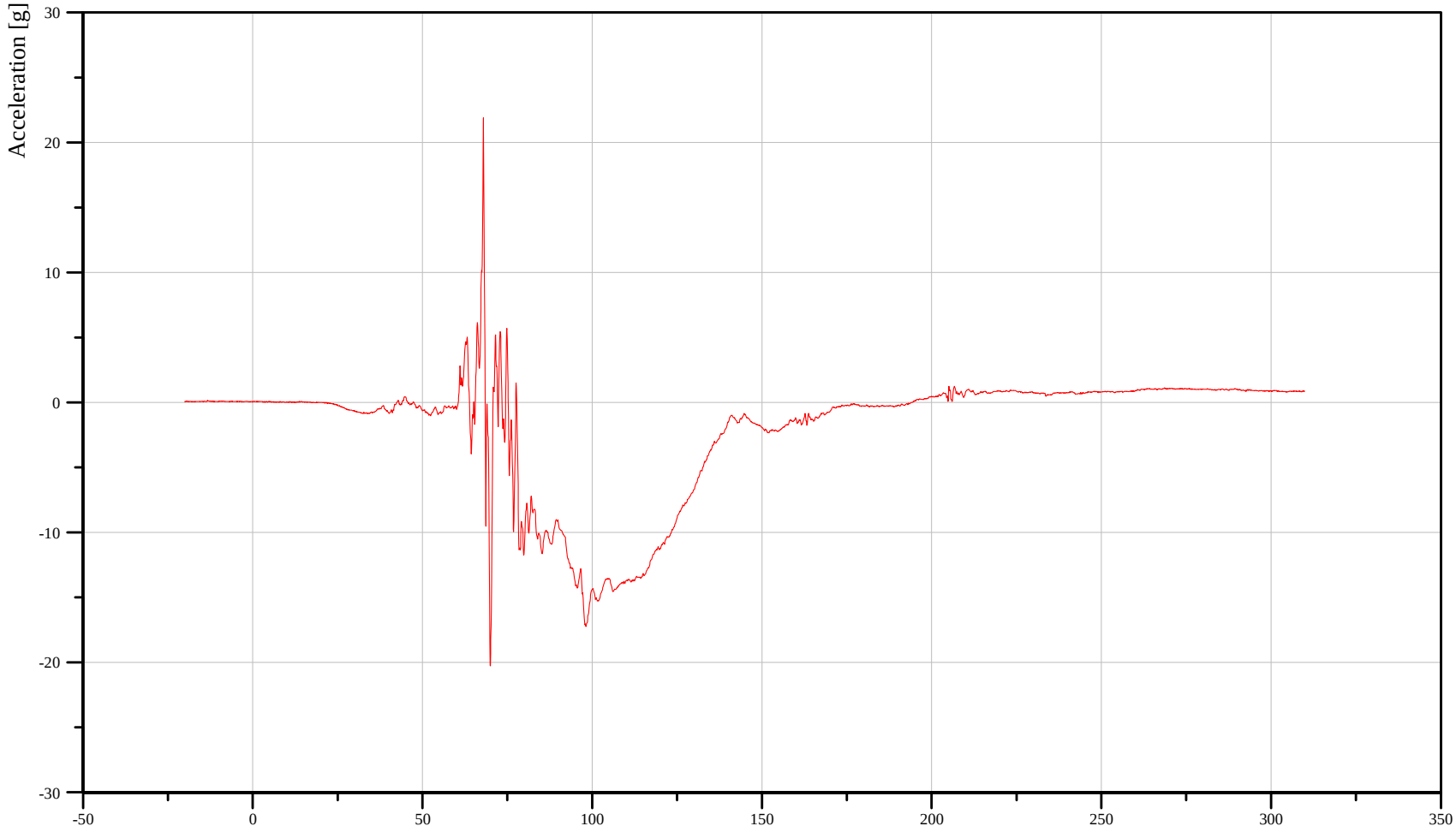
Bullet Vehicle Driver Pelvis Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11PELVCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-20.27 g at 70.00 ms

Max. Value
21.89 g at 67.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

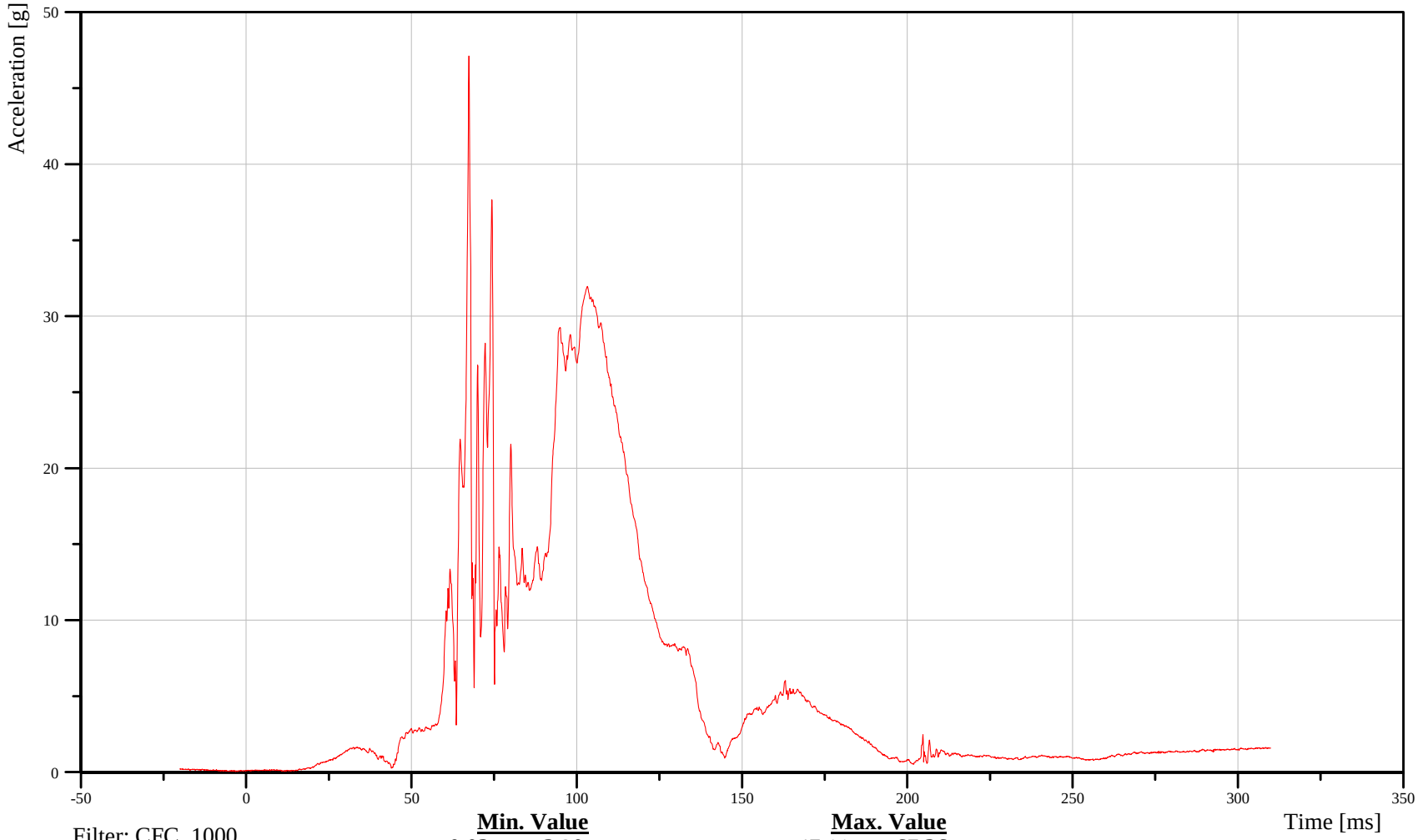
Bullet Vehicle Driver Pelvis Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11PELVCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.03 g at -3.20 ms

Max. Value
47.11 g at 67.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

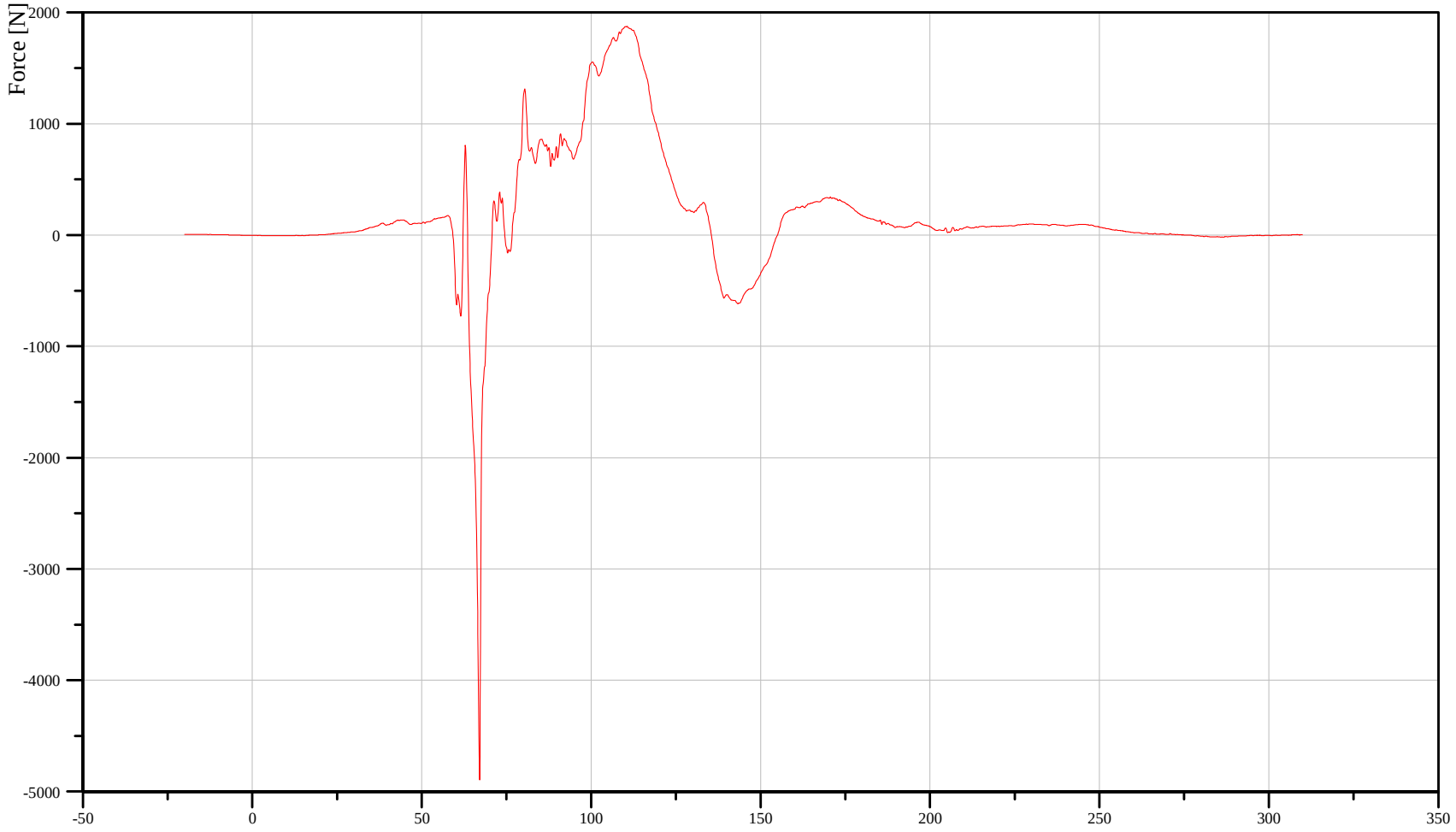
Bullet Vehicle Driver Left Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-4,895.83 N at 67.12 ms

Max. Value
1,876.62 N at 110.64 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

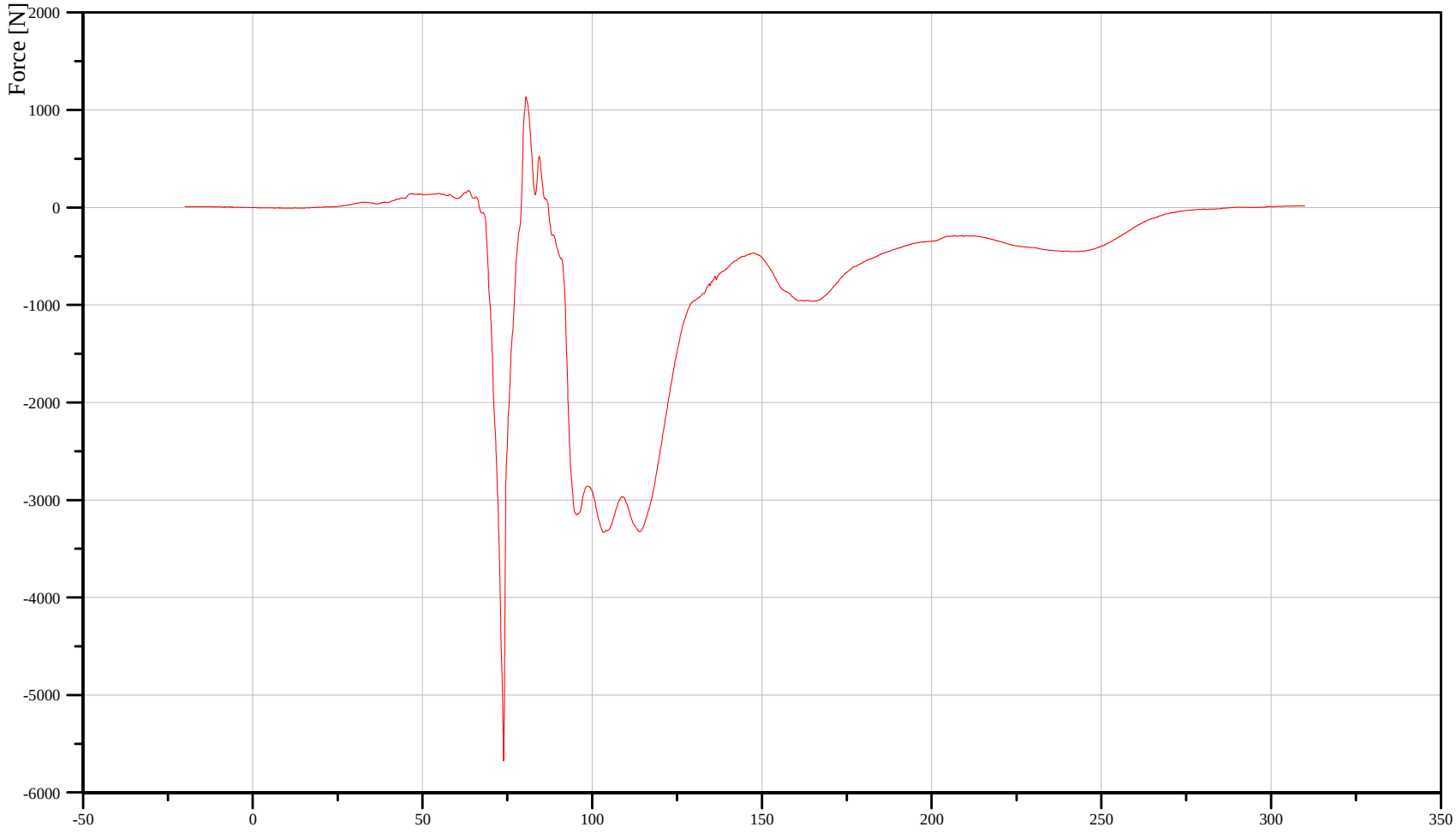
Bullet Vehicle Driver Right Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-5,677.49 N at 73.92 ms

Max. Value
1,134.50 N at 80.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

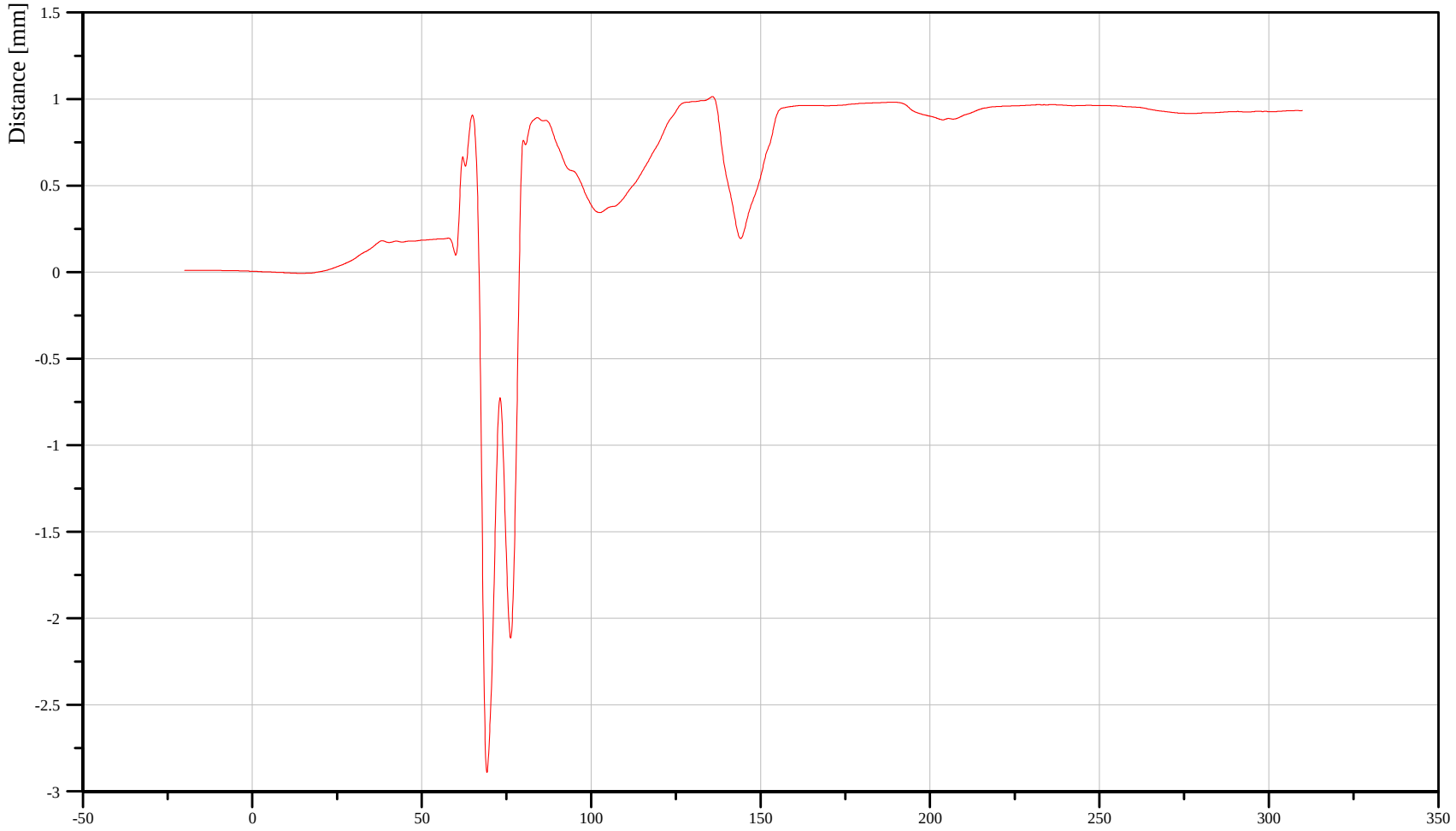
Bullet Vehicle Driver Left Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-2.89 mm at 69.28 ms

Max. Value
1.01 mm at 135.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

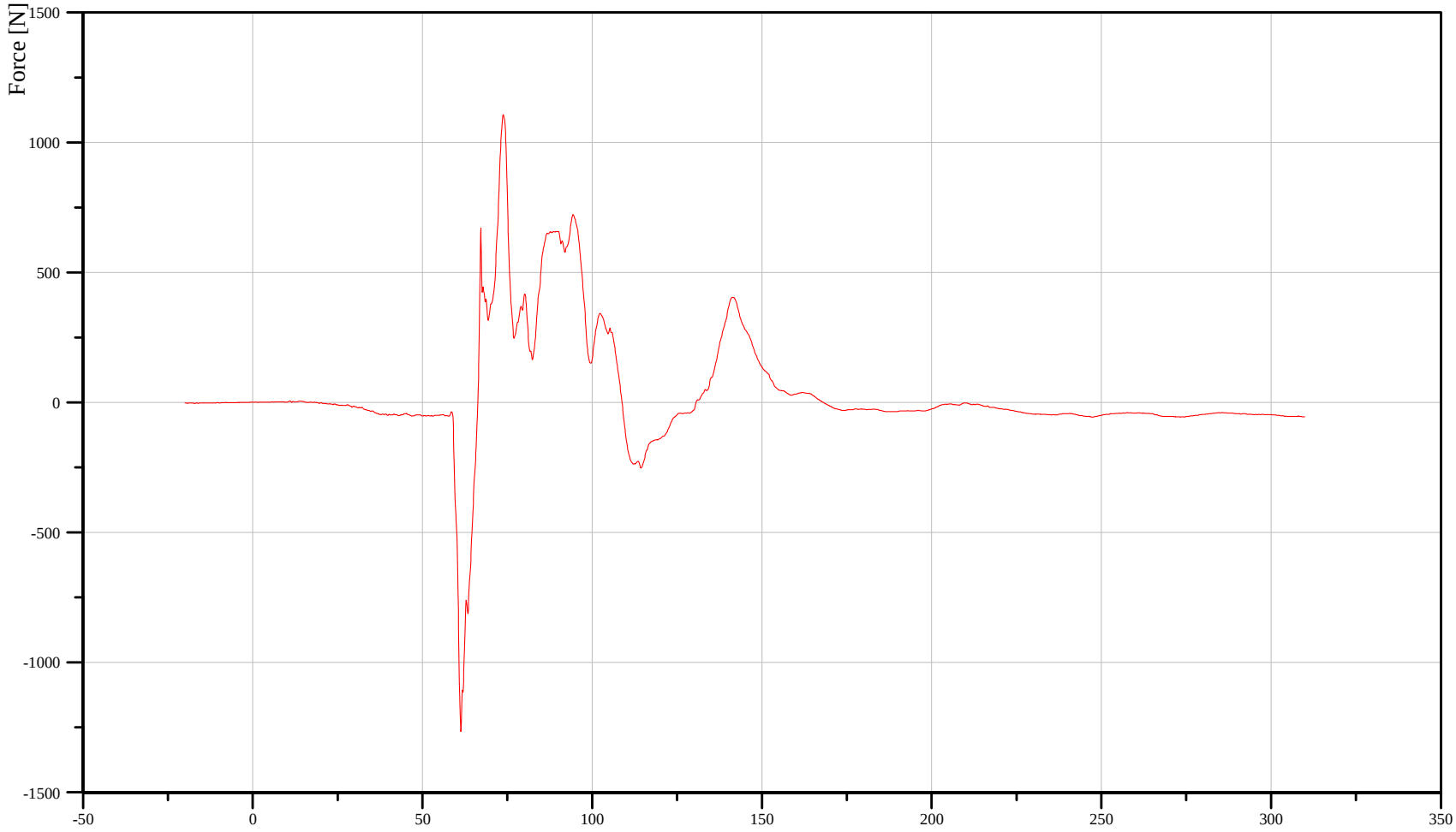
Bullet Vehicle Driver Left Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILULXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,265.85 N at 61.36 ms

Max. Value
1,107.35 N at 73.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

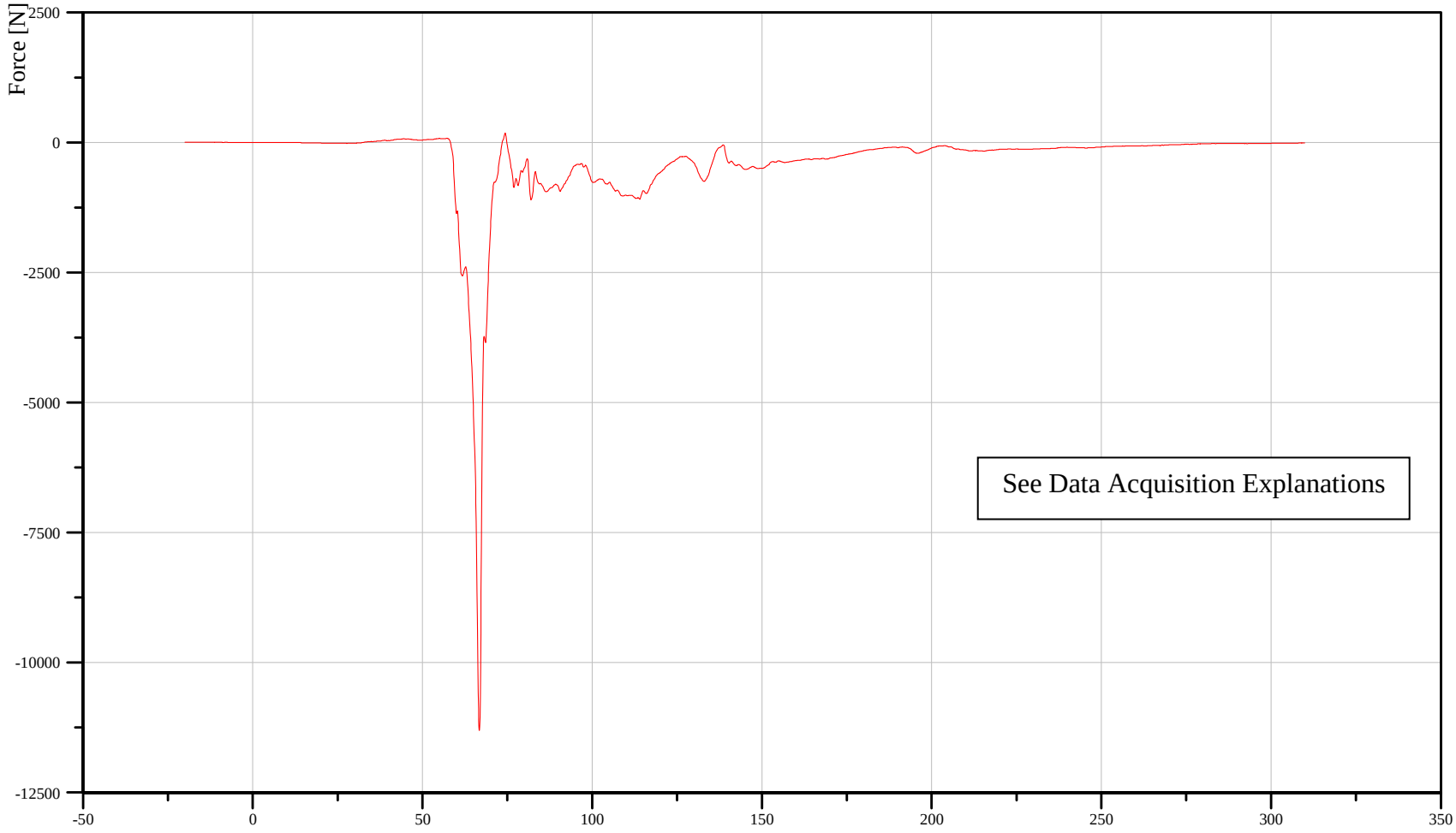
Bullet Vehicle Driver Left Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILULXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-11,304.89 N at 66.80 ms

Max. Value
179.68 N at 74.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

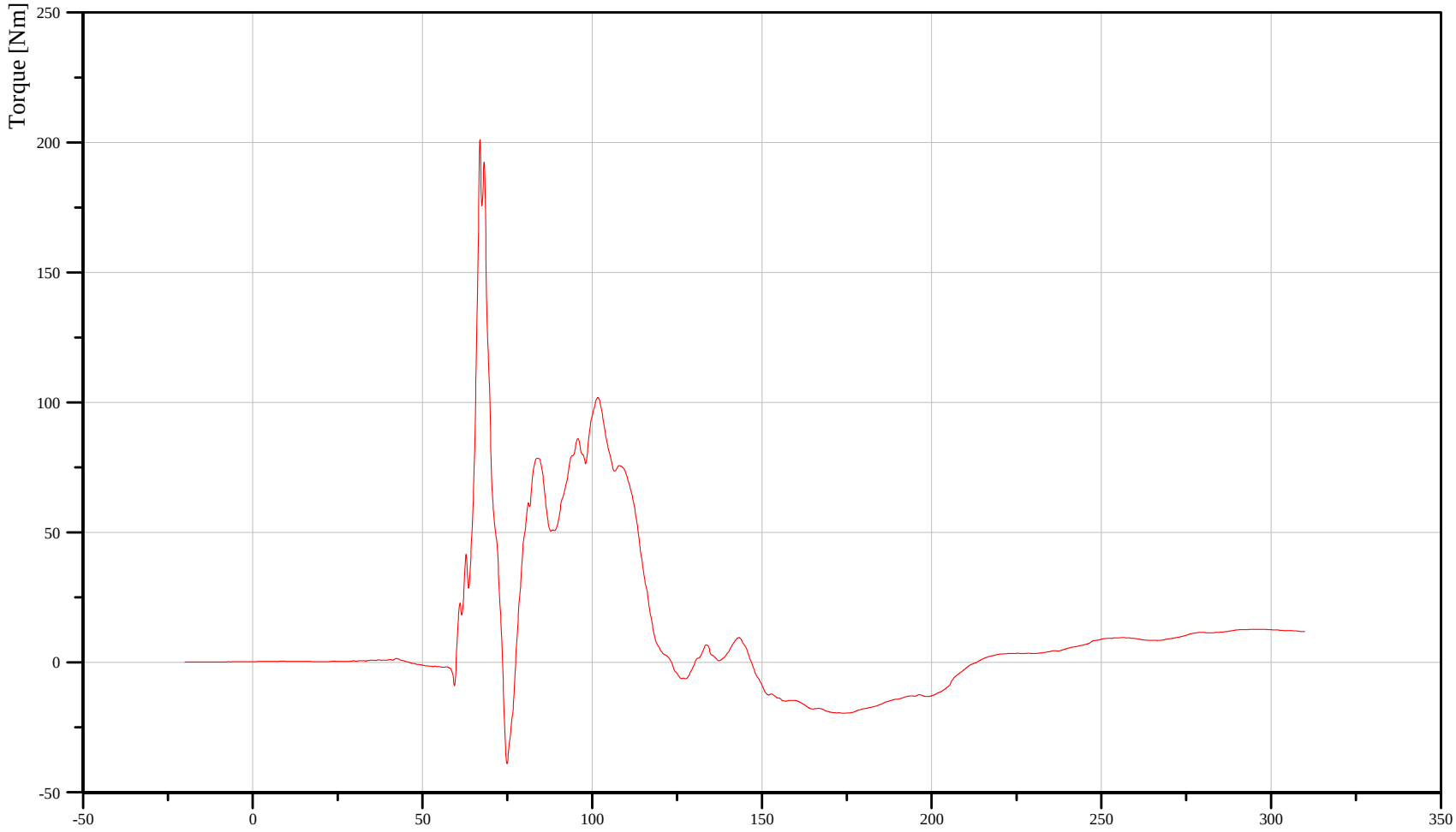
Bullet Vehicle Driver Left Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILULXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-38.95 Nm at 74.96 ms

Max. Value
201.11 Nm at 66.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

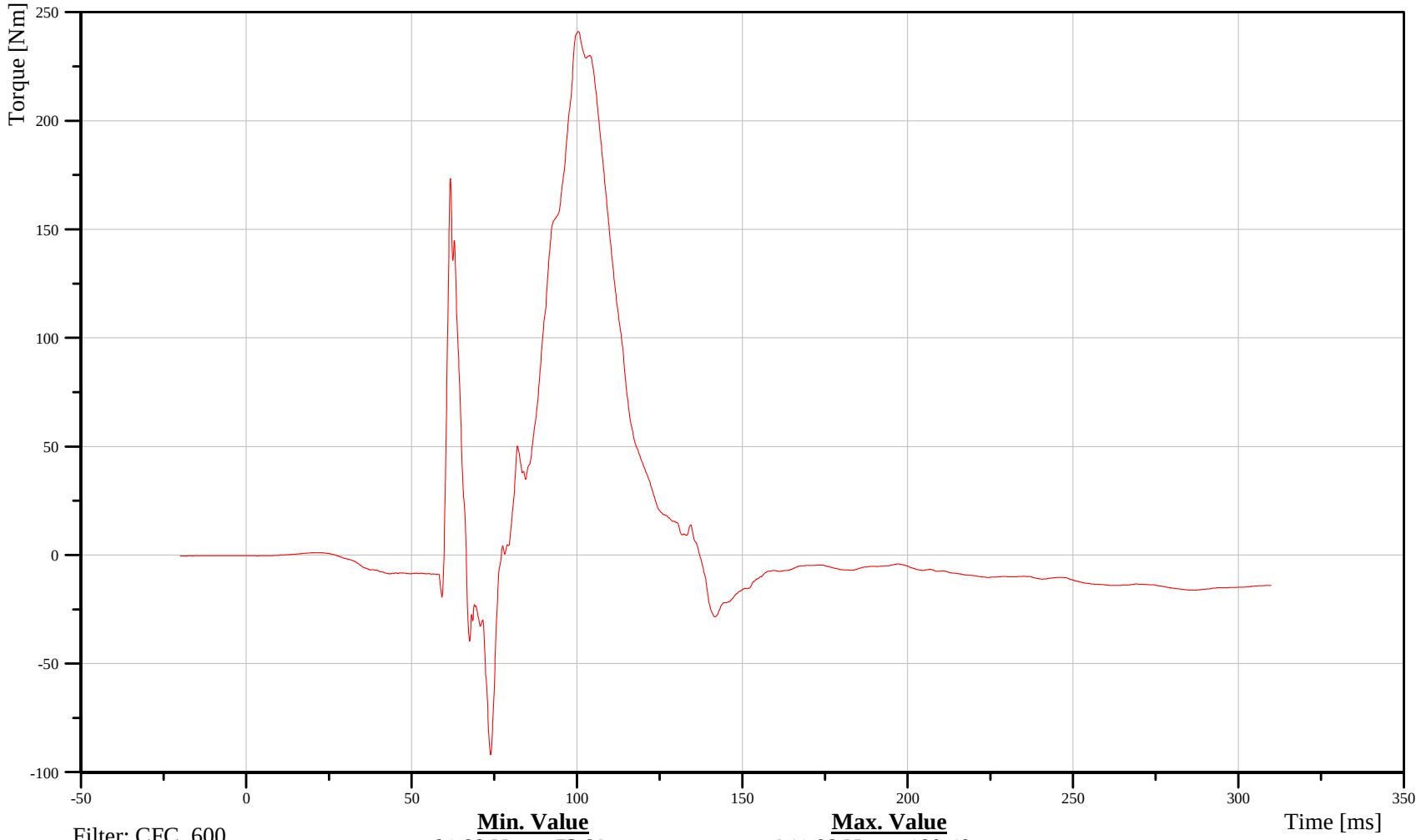
Bullet Vehicle Driver Left Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILULXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-91.99 Nm at 73.92 ms

Max. Value
241.08 Nm at 100.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

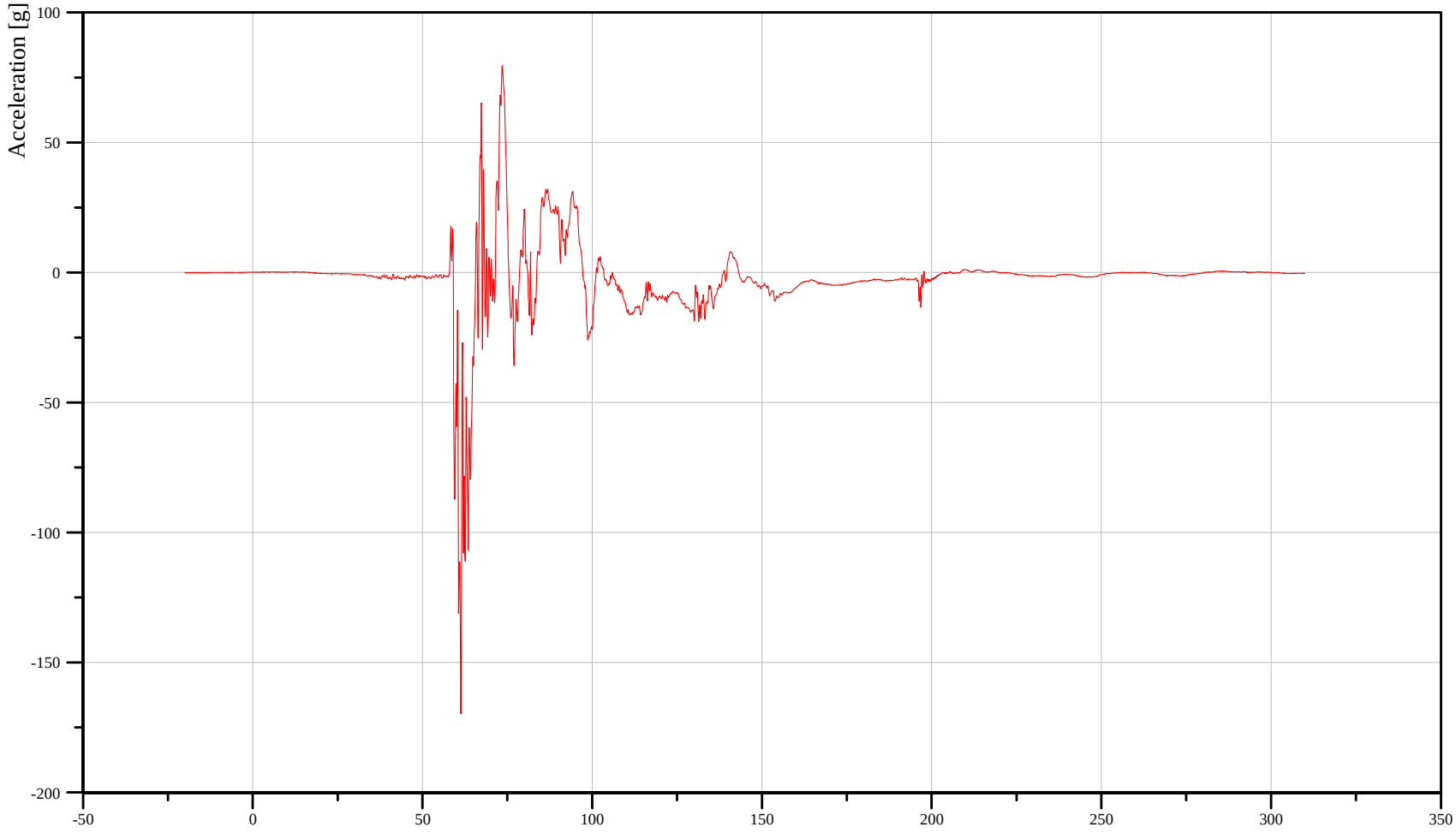
Bullet Vehicle Driver Left Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-169.62 g at 61.36 ms

Max. Value
79.58 g at 73.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

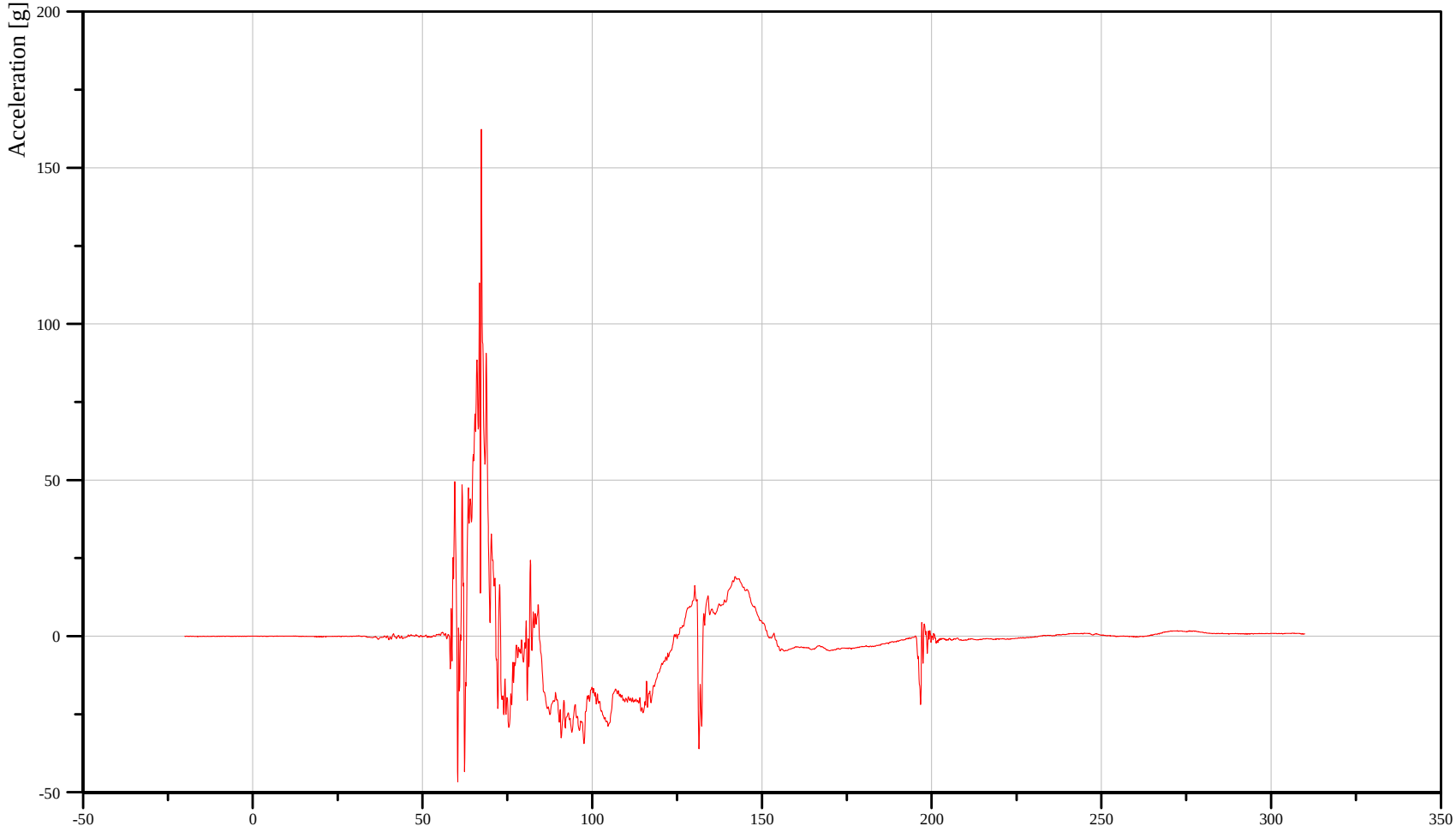
Bullet Vehicle Driver Left Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-46.62 g at 60.40 ms

Max. Value
162.31 g at 67.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

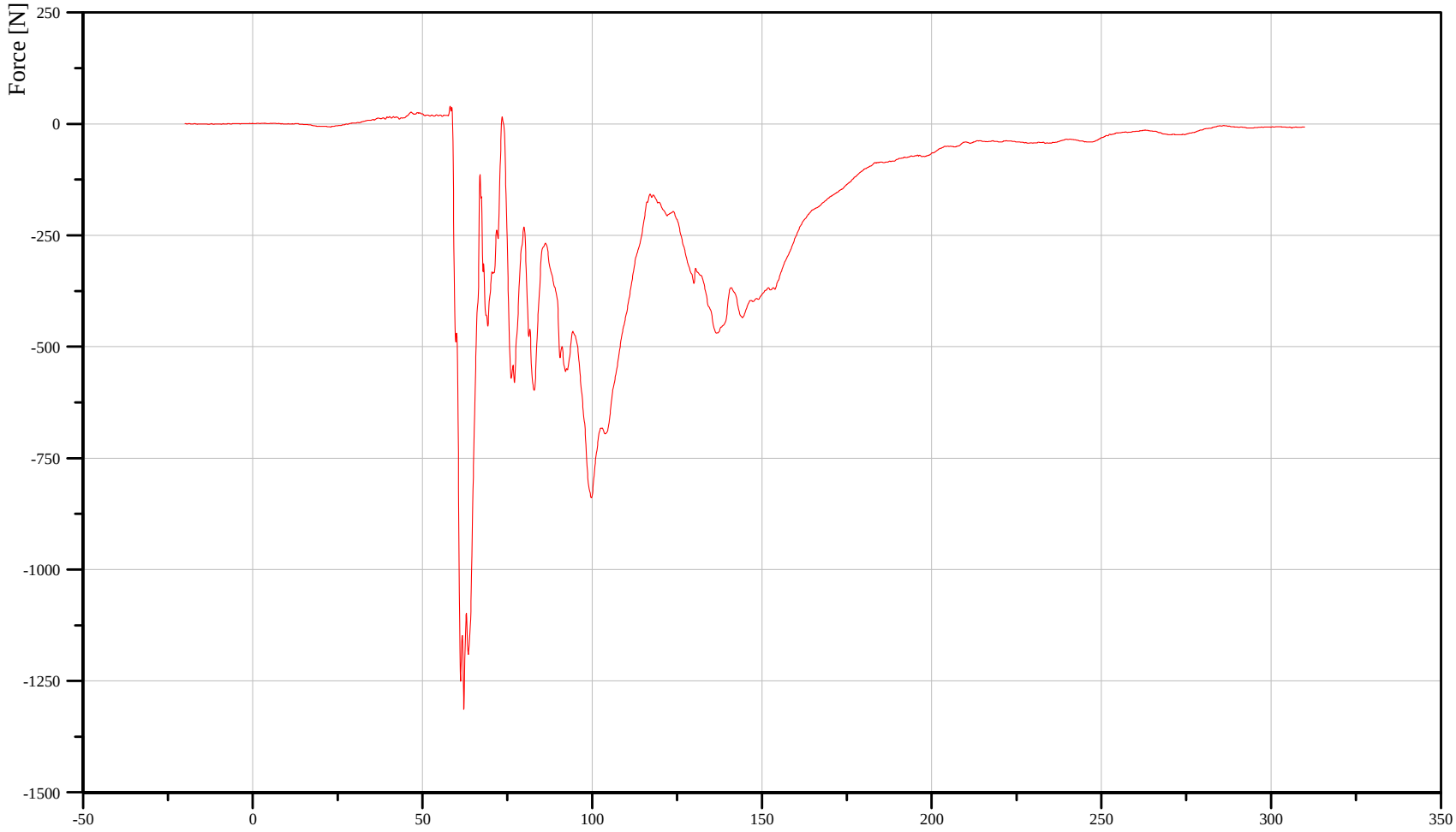
Bullet Vehicle Driver Left Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILLLXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,313.71 N at 62.16 ms

Max. Value
39.41 N at 58.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

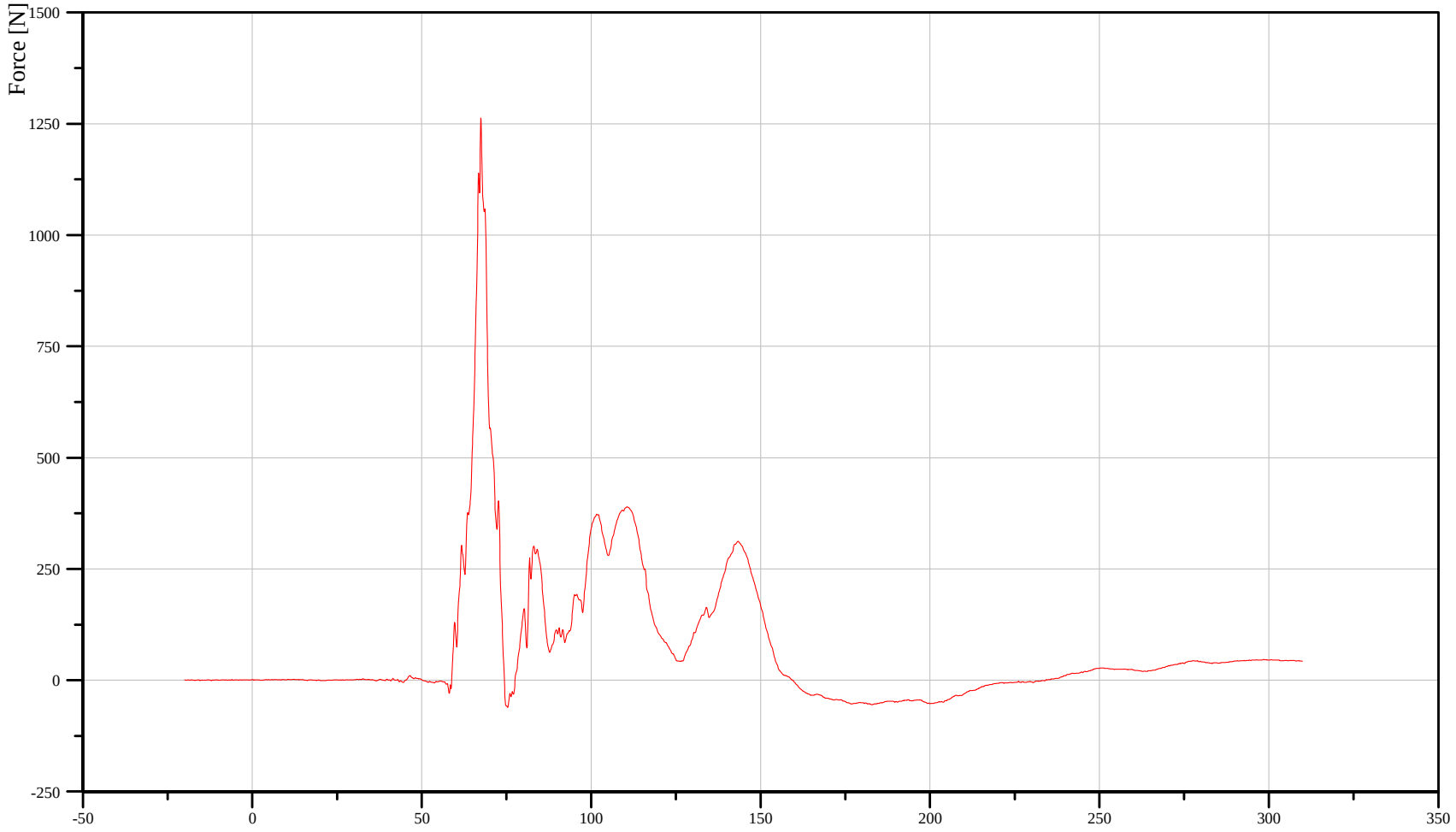
Bullet Vehicle Driver Left Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILLLXH3FOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-61.08 N at 75.36 ms

Max. Value
1,263.09 N at 67.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

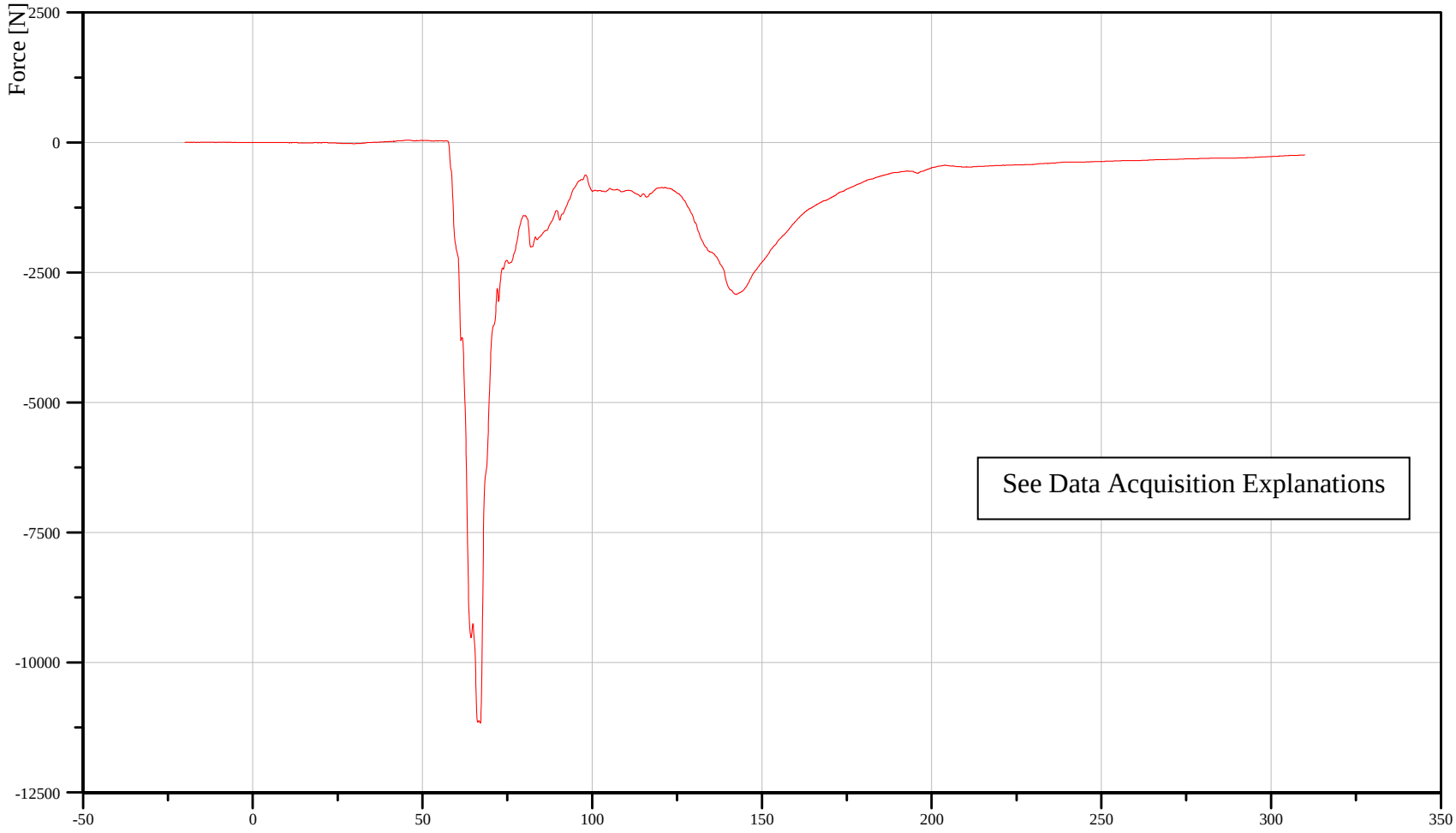
Bullet Vehicle Driver Left Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILLLXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-11,168.34 N at 67.04 ms

Max. Value
46.78 N at 45.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

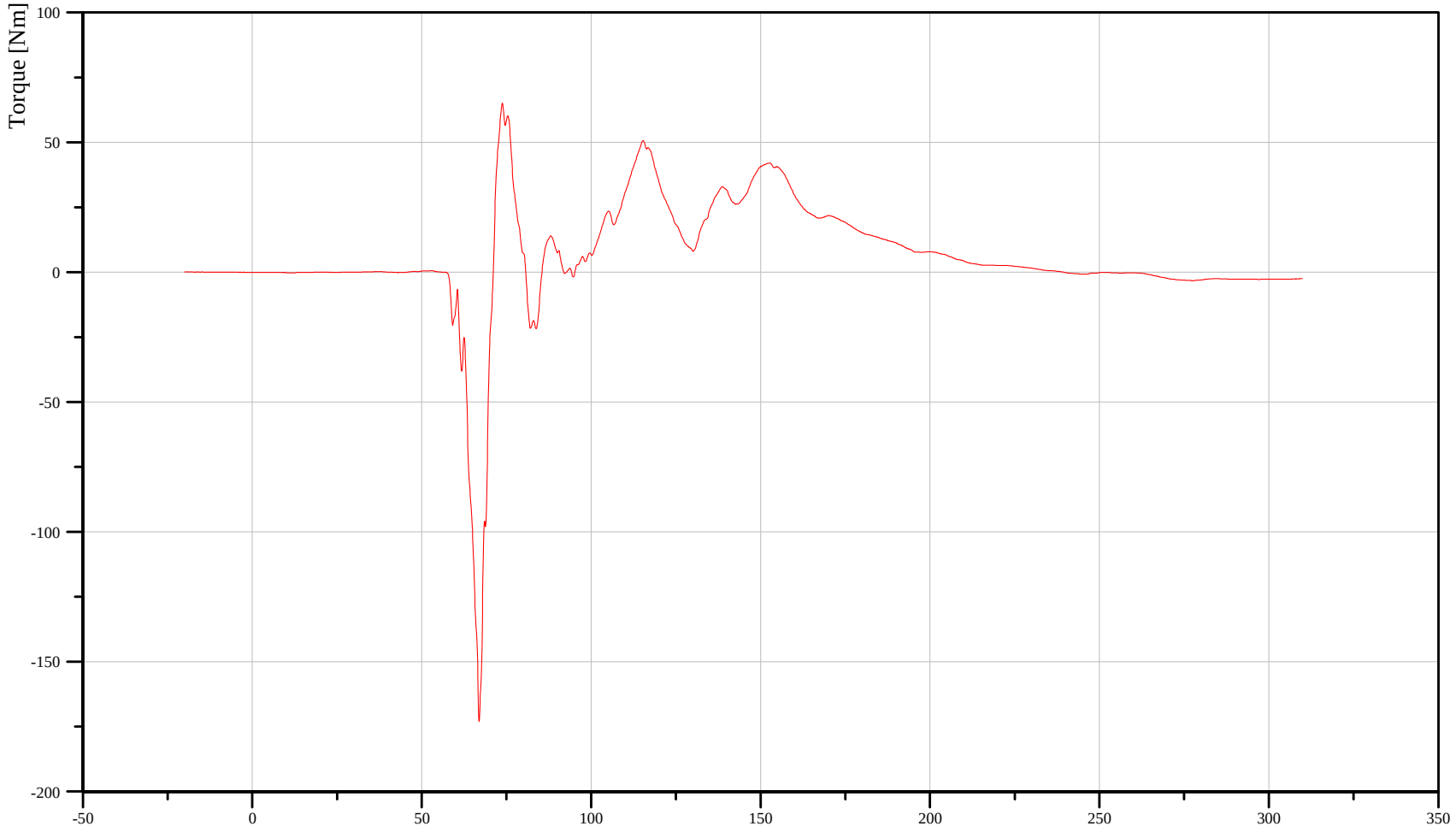
Bullet Vehicle Driver Left Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILLLXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-172.94 Nm at 66.96 ms

Max. Value
65.12 Nm at 73.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

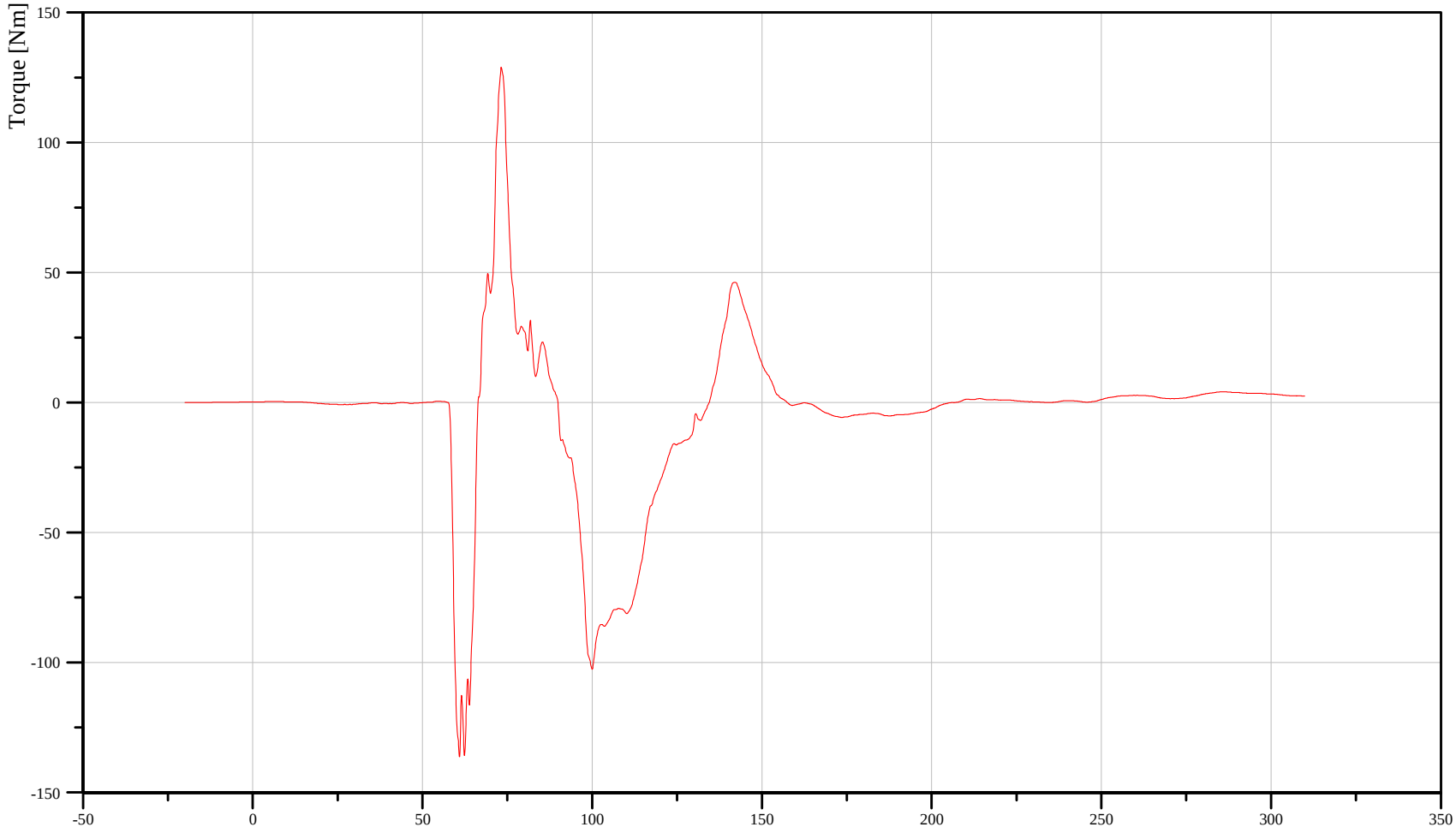
Bullet Vehicle Driver Left Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBILLLXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-136.23 Nm at 60.88 ms

Max. Value
128.89 Nm at 73.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

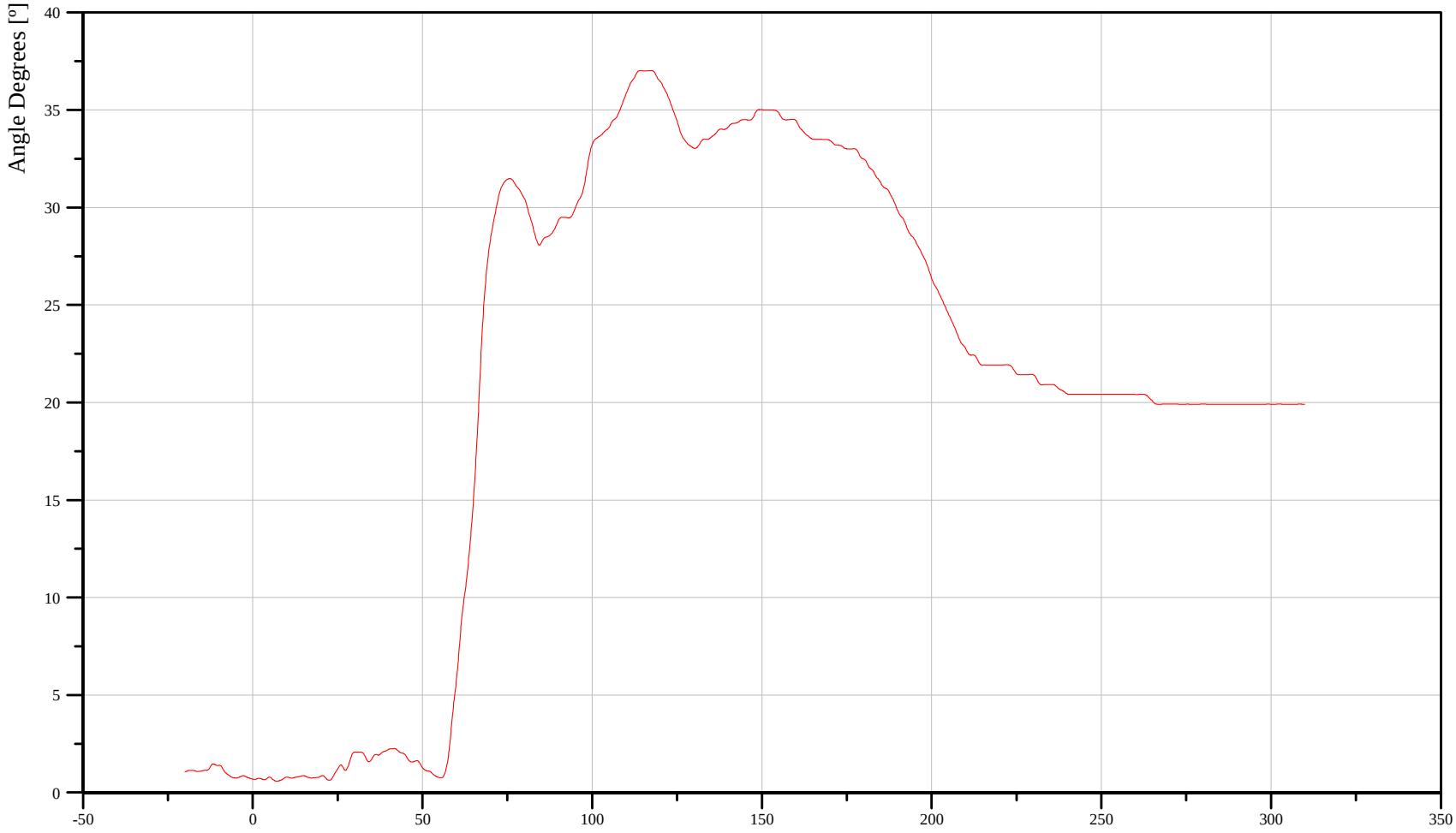
Bullet Vehicle Driver Left Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.58 ° at 7.12 ms

Max. Value
37.02 ° at 117.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

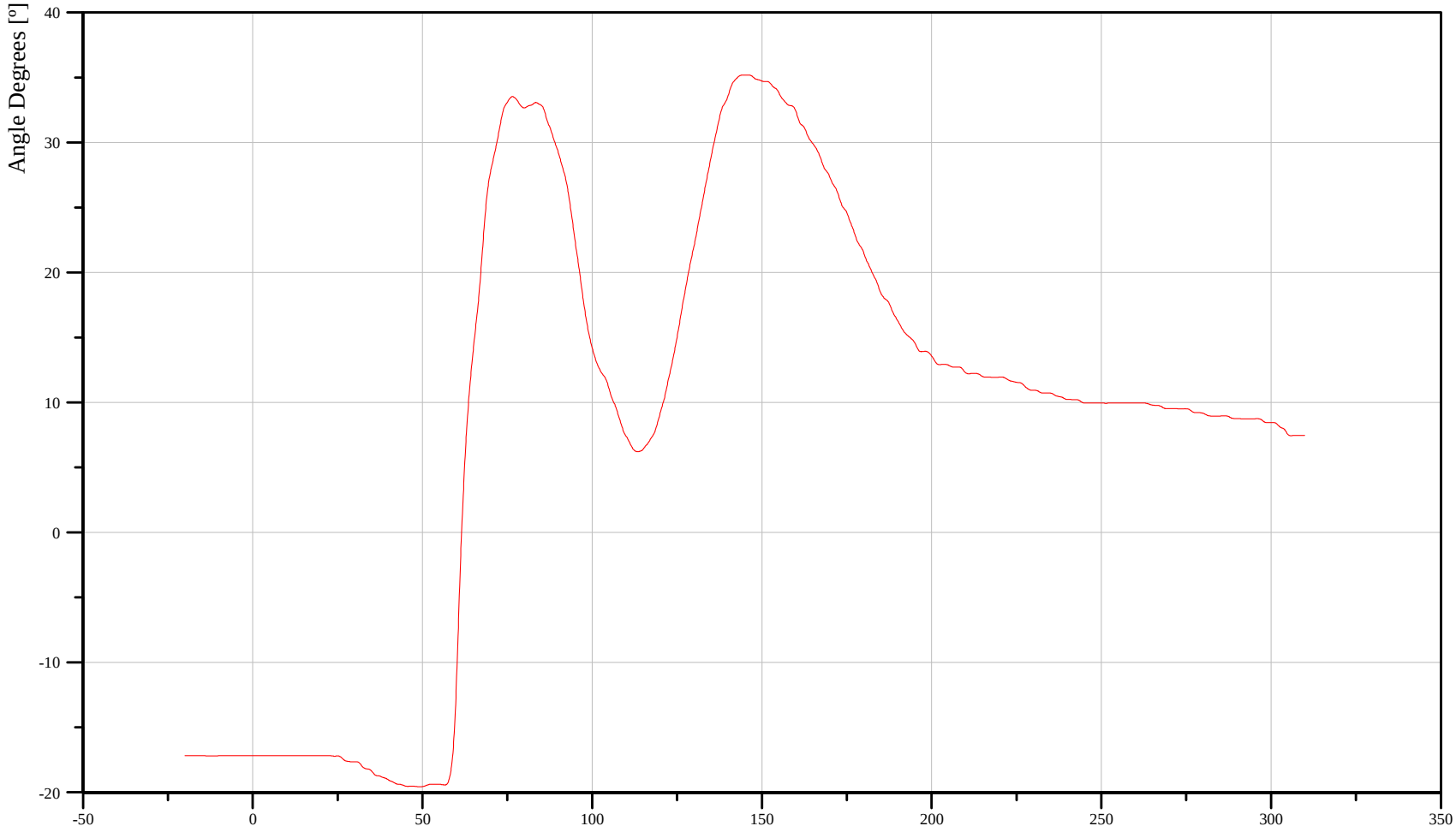
Bullet Vehicle Driver Left Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-19.58 ° at 49.20 ms

Max. Value
35.18 ° at 146.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

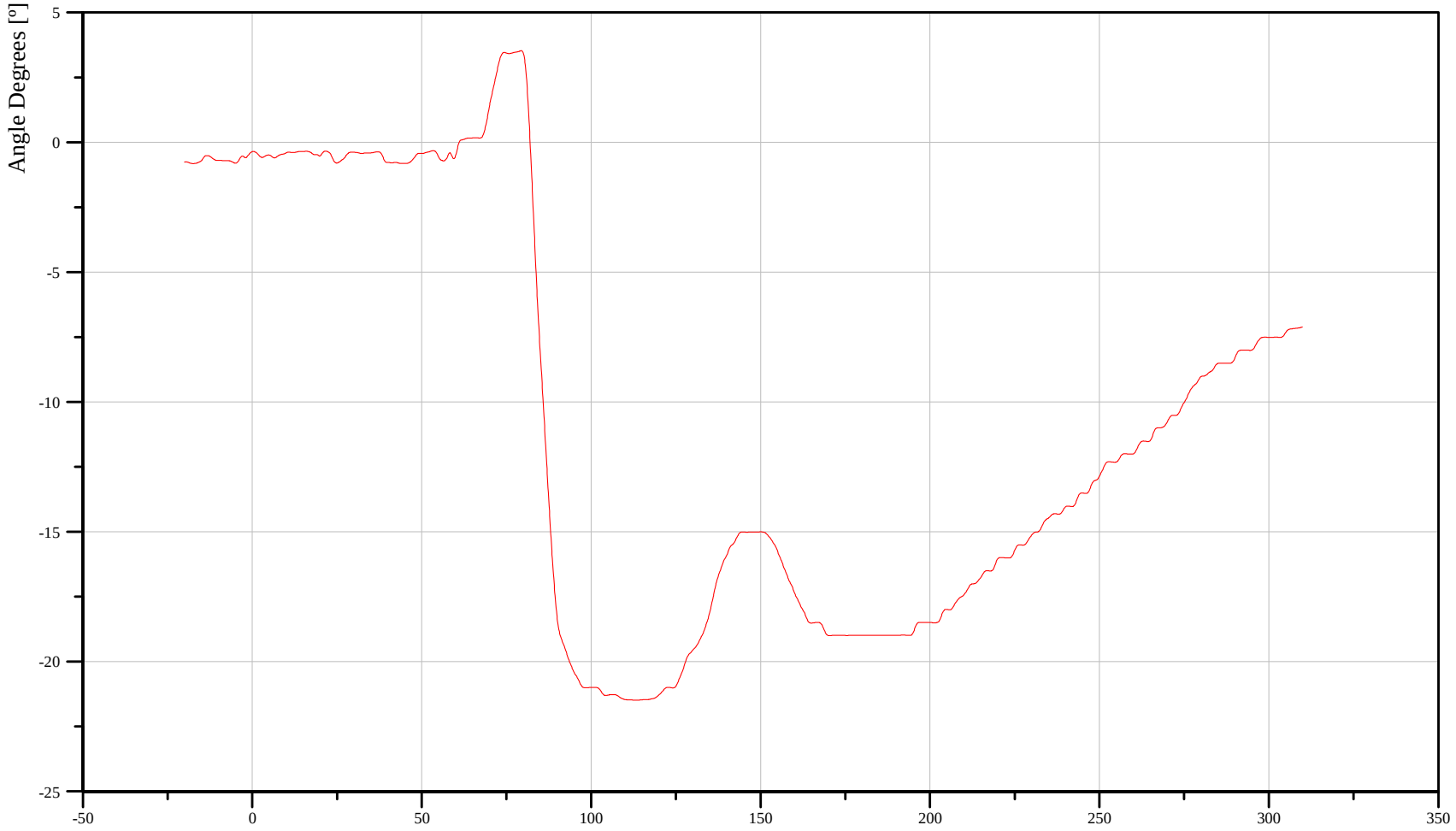
Bullet Vehicle Driver Left Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-21.49 ° at 113.28 ms

Max. Value
3.53 ° at 79.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

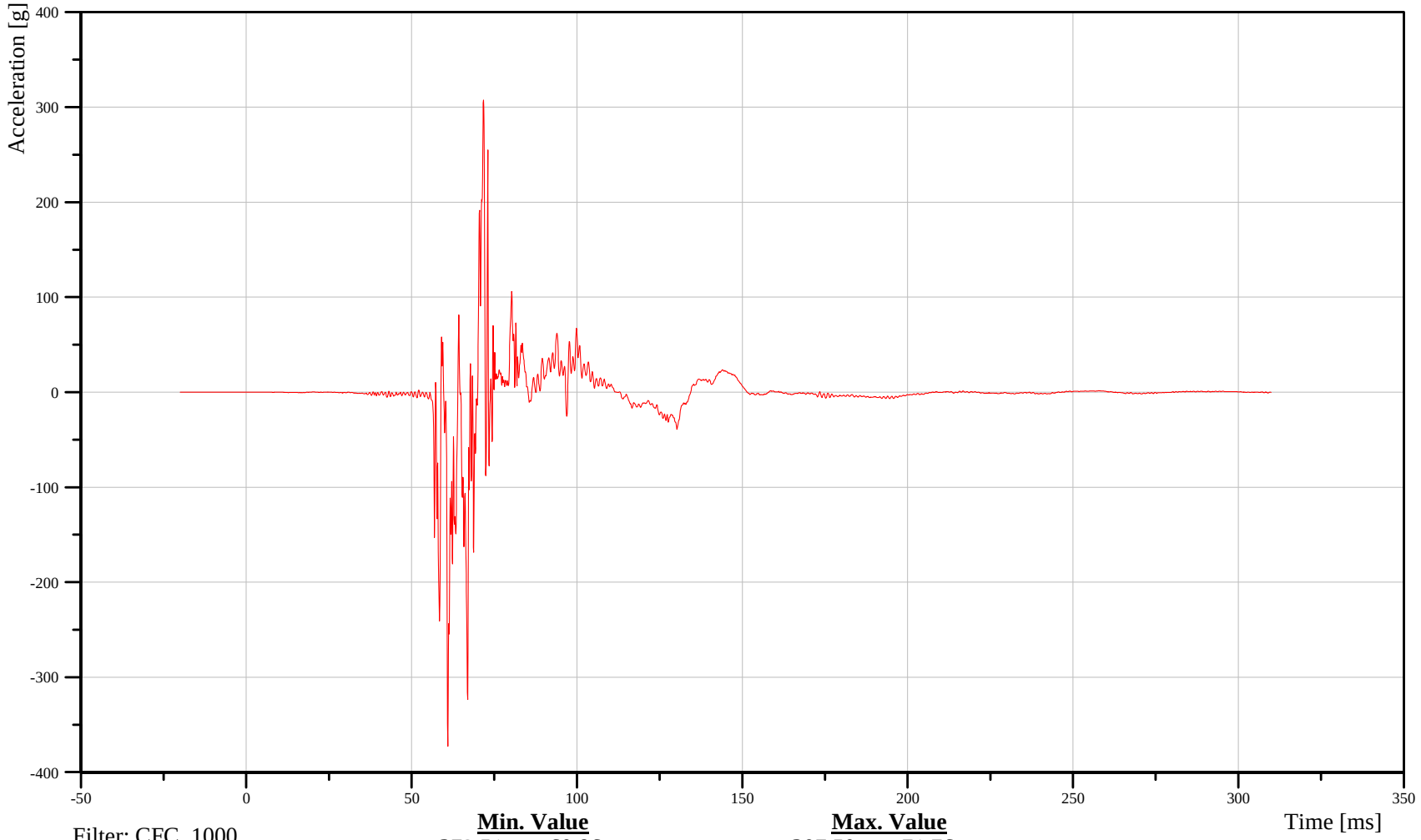
Bullet Vehicle Driver Left Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-372.51 g at 60.96 ms

Max. Value
307.50 g at 71.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

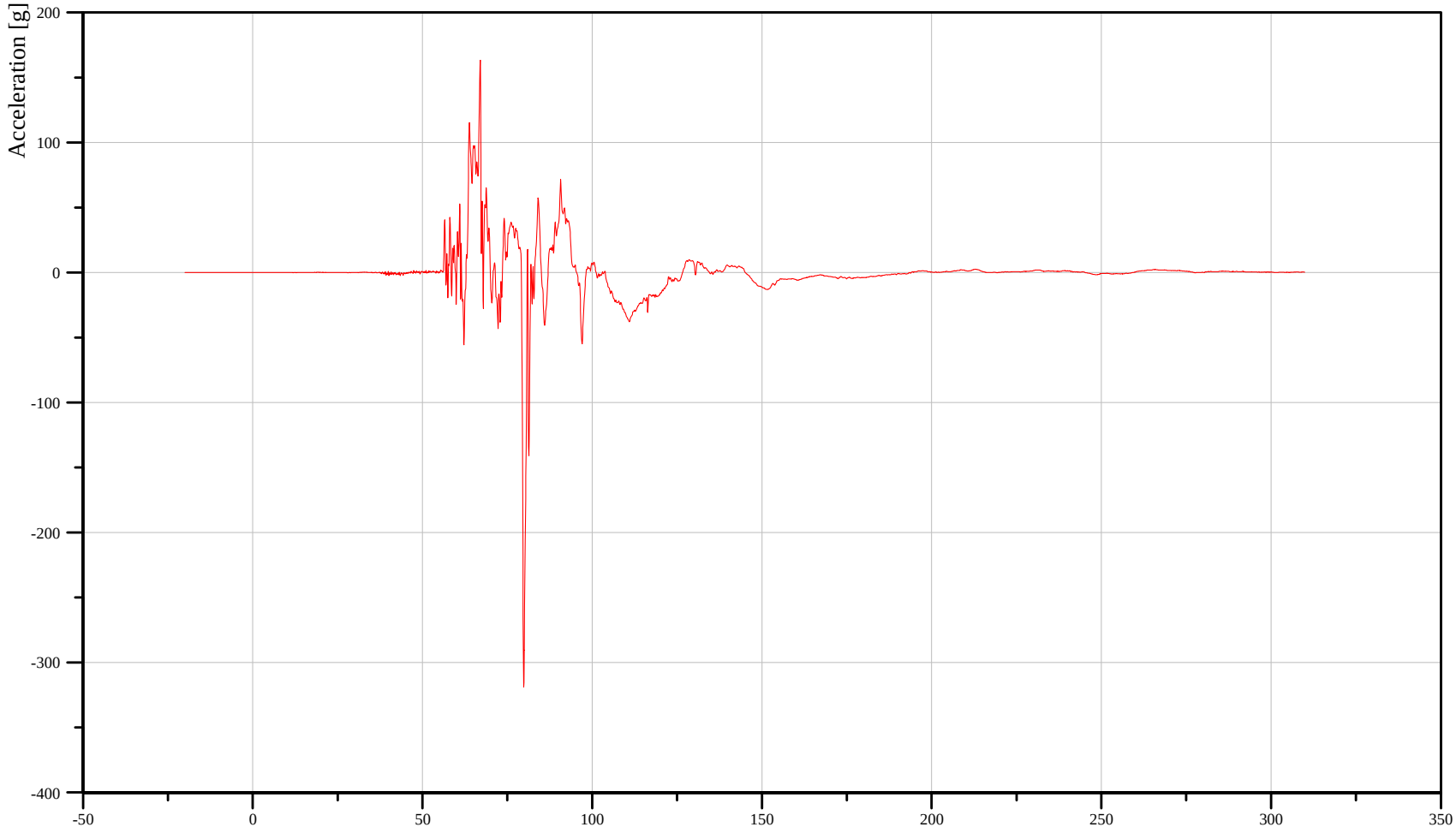
Bullet Vehicle Driver Left Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-318.97 g at 79.84 ms

Max. Value
163.30 g at 67.04 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

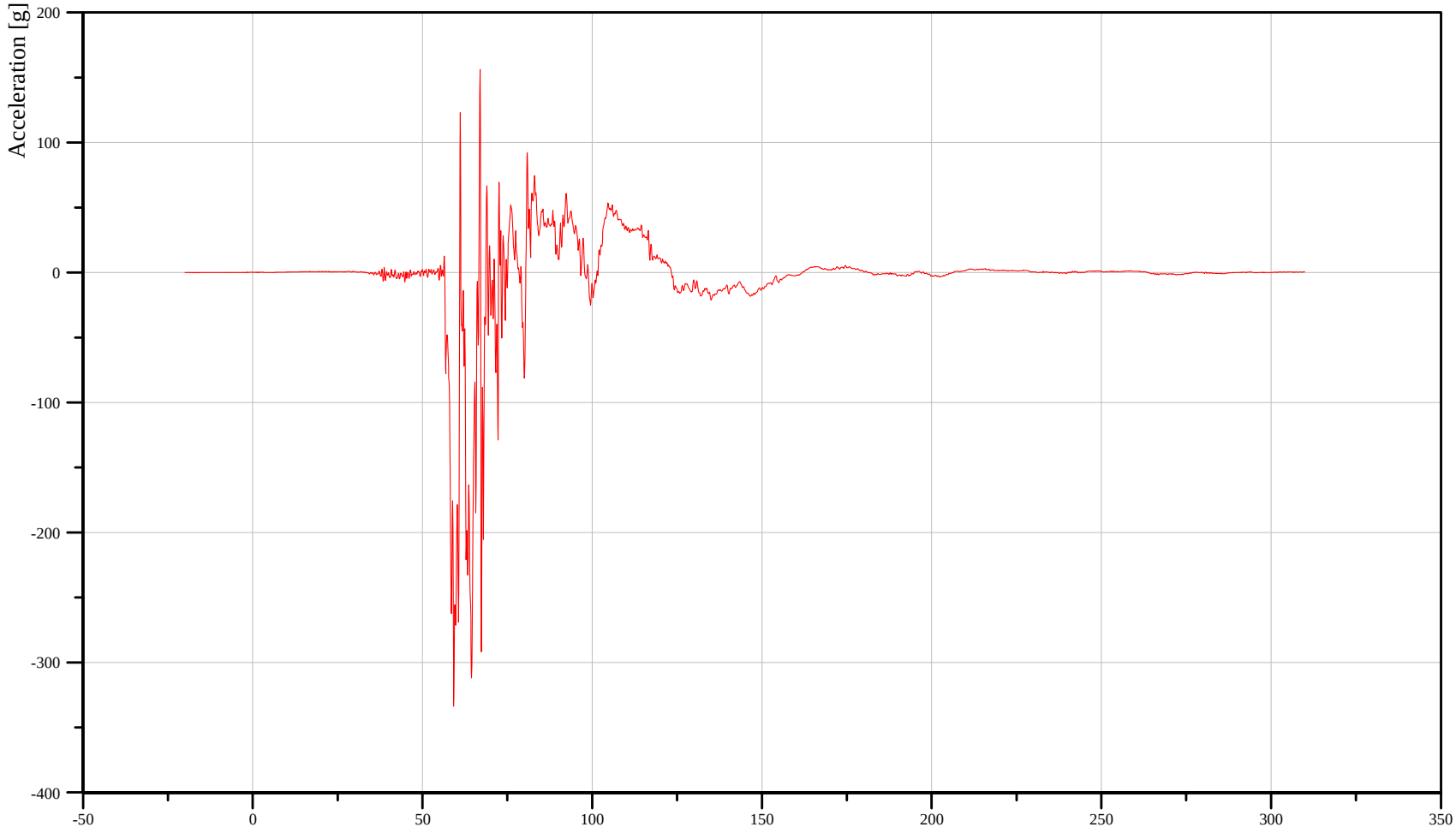
Bullet Vehicle Driver Left Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-333.65 g at 59.20 ms

Max. Value
156.16 g at 66.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

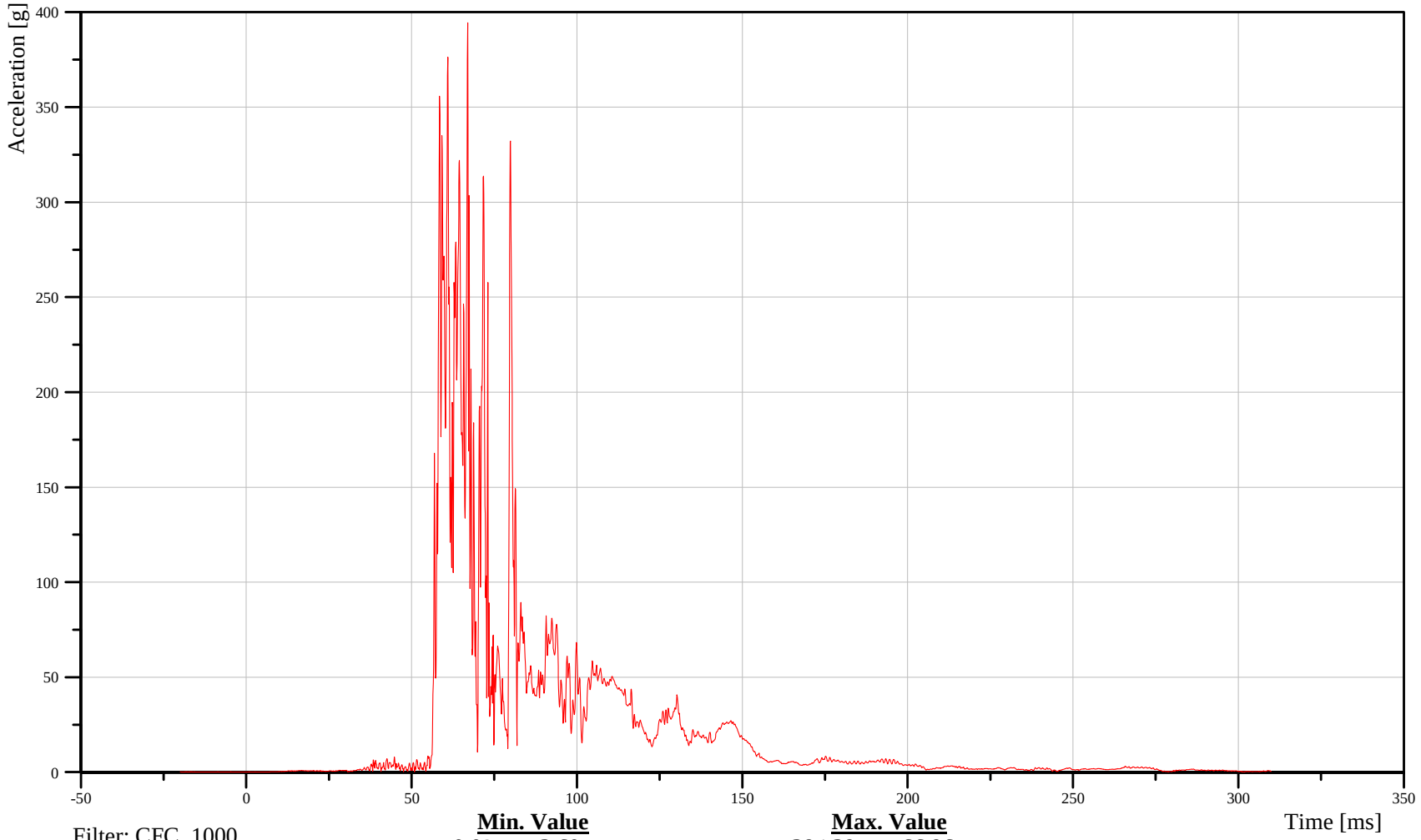
Bullet Vehicle Driver Left Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.02 g at 3.60 ms

Max. Value
394.39 g at 66.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

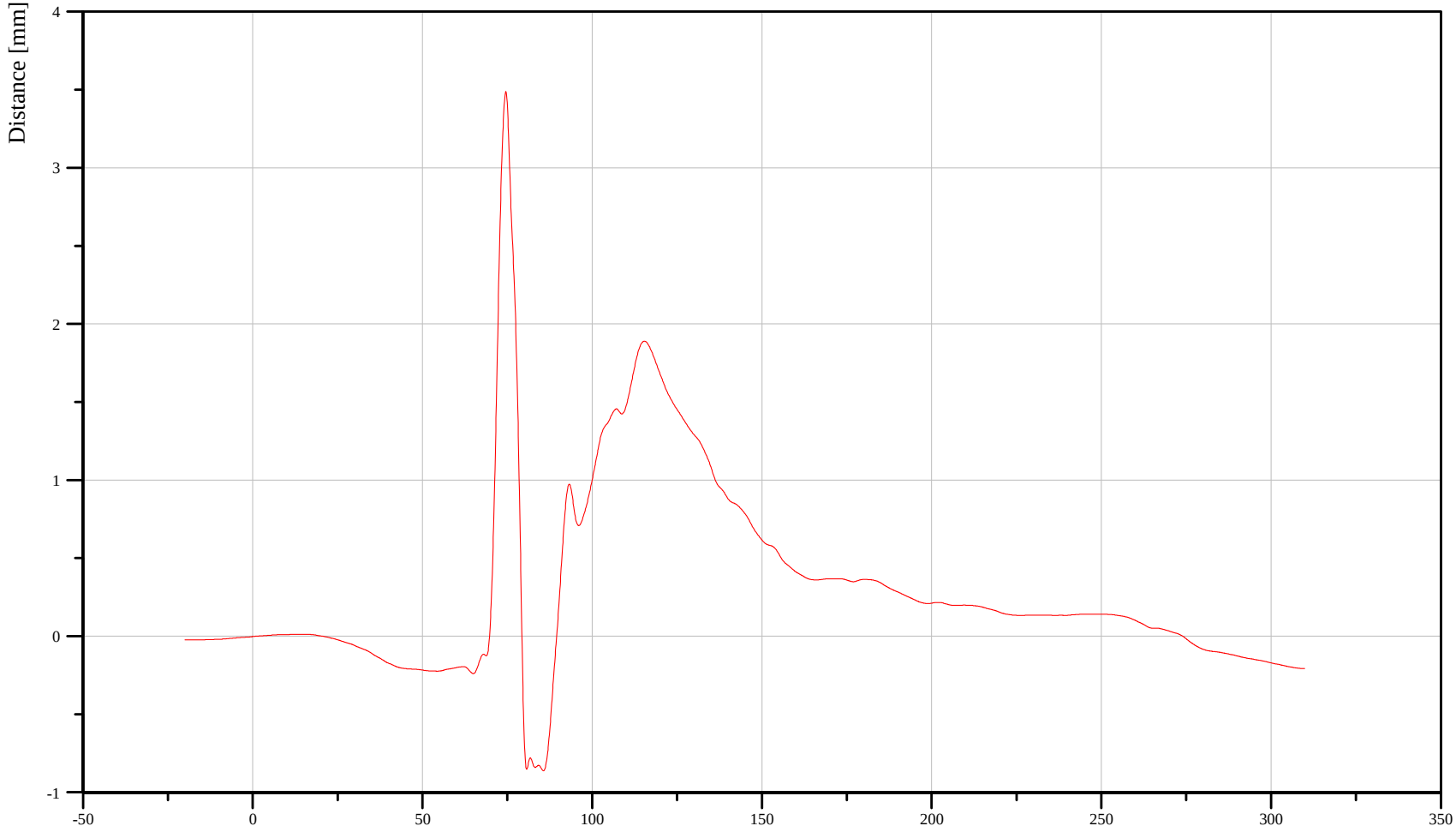
Bullet Vehicle Driver Right Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.86 mm at 85.68 ms

Max. Value
3.49 mm at 74.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

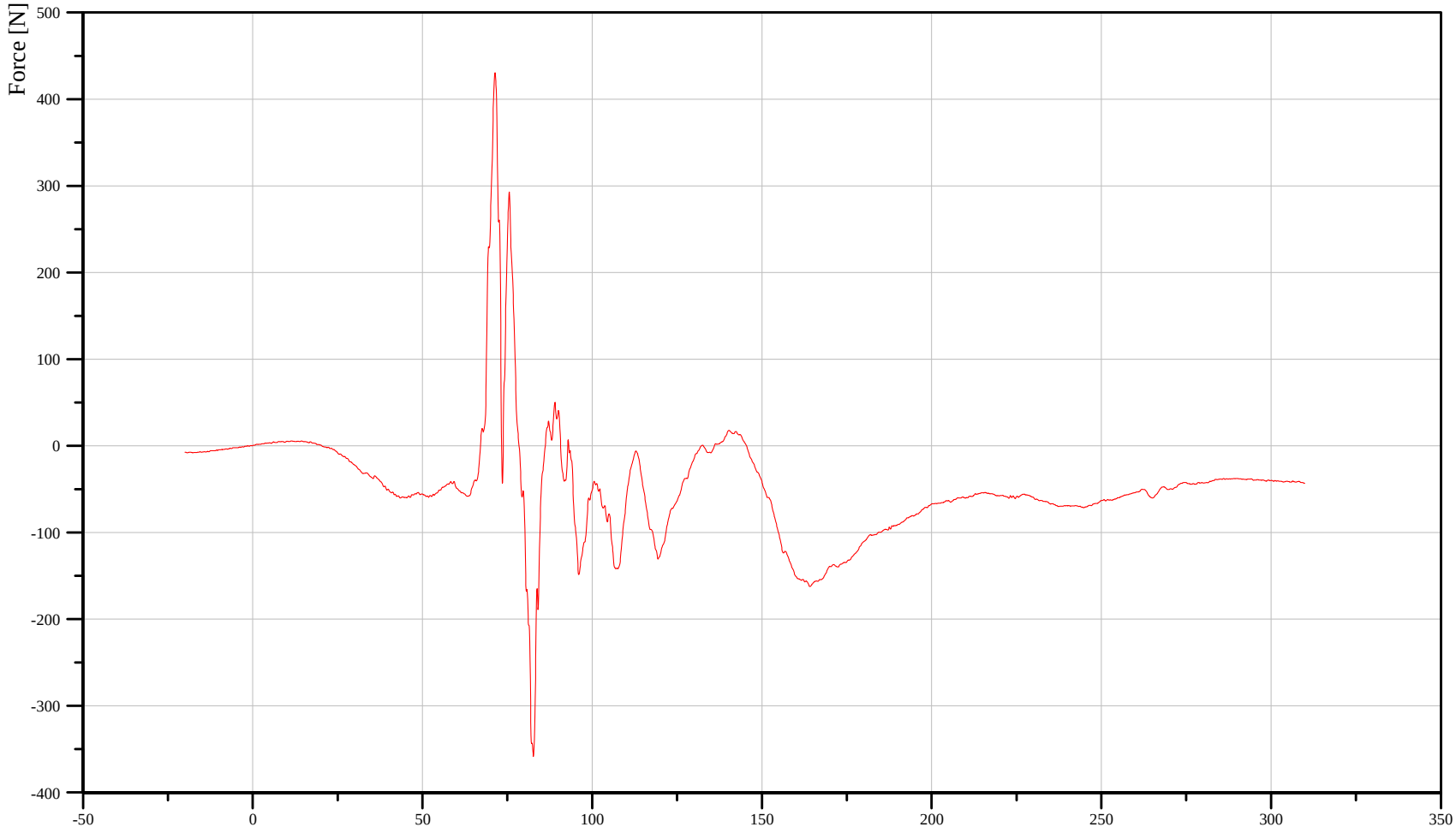
Bullet Vehicle Driver Right Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRULXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-358.39 N at 82.72 ms

Max. Value
430.34 N at 71.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

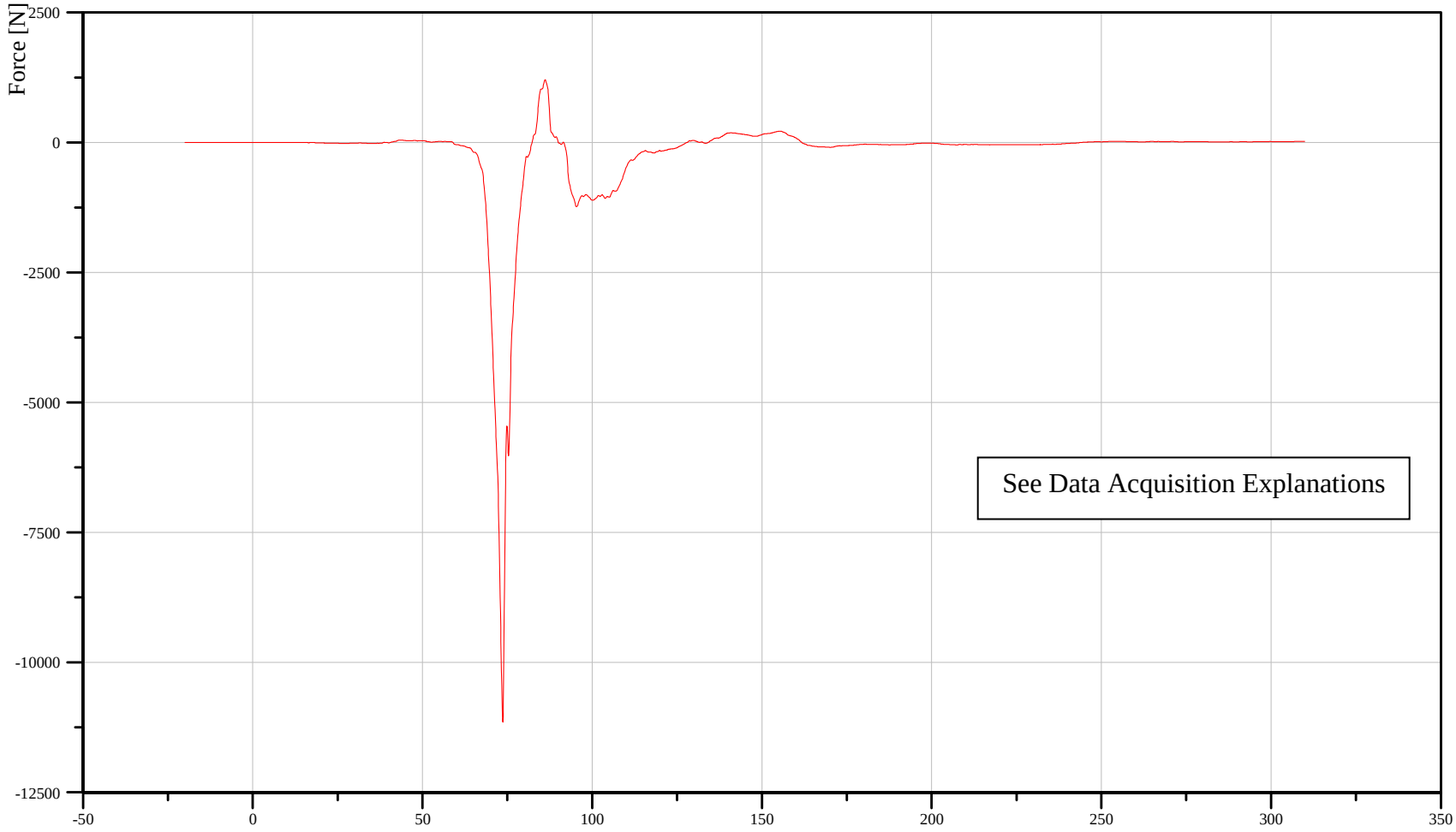
Bullet Vehicle Driver Right Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRULXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-11,149.71 N at 73.68 ms

Max. Value
1,204.81 N at 86.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

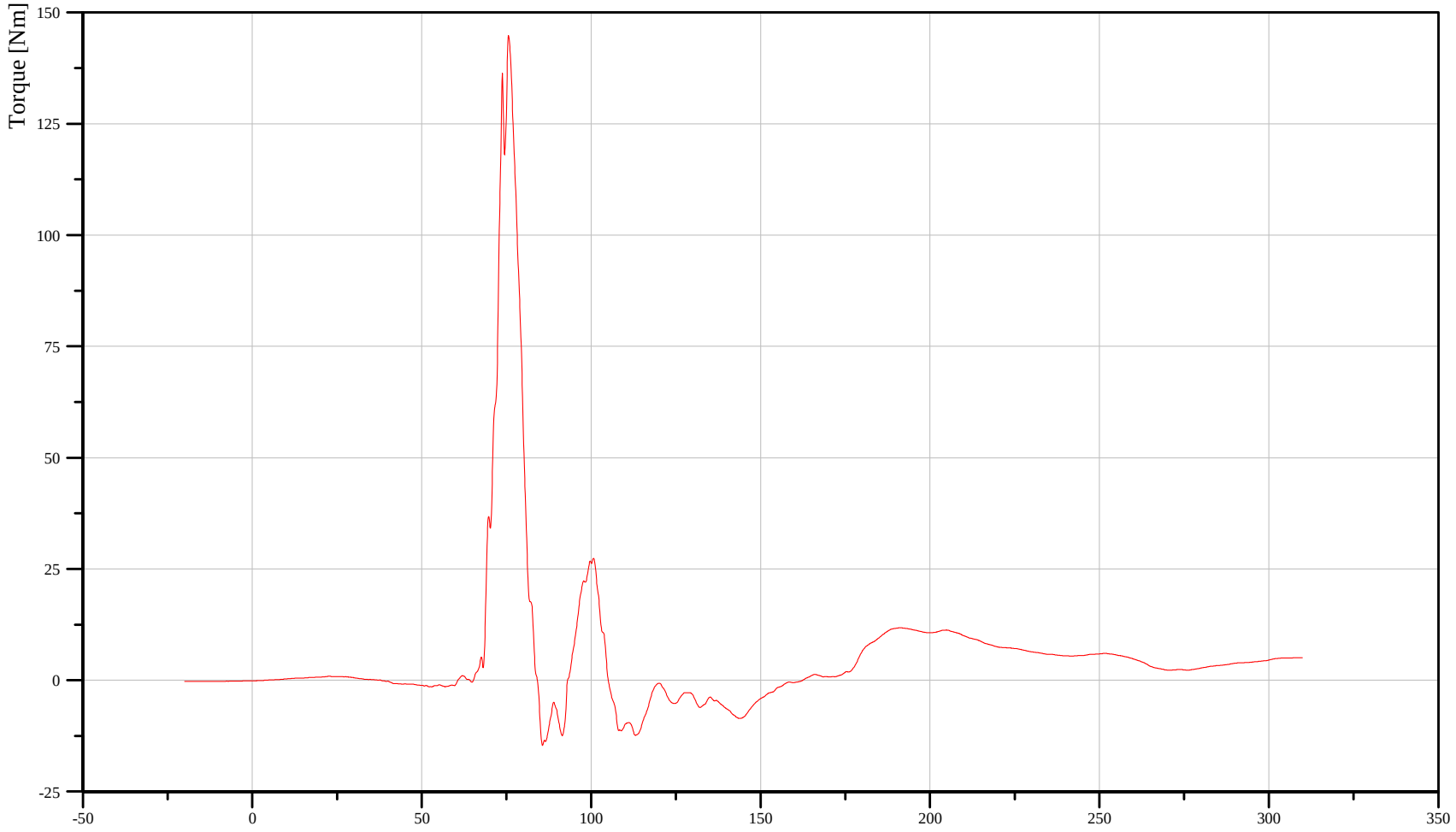
Bullet Vehicle Driver Right Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRULXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-14.64 Nm at 85.60 ms

Max. Value
144.81 Nm at 75.60 ms

B-250

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

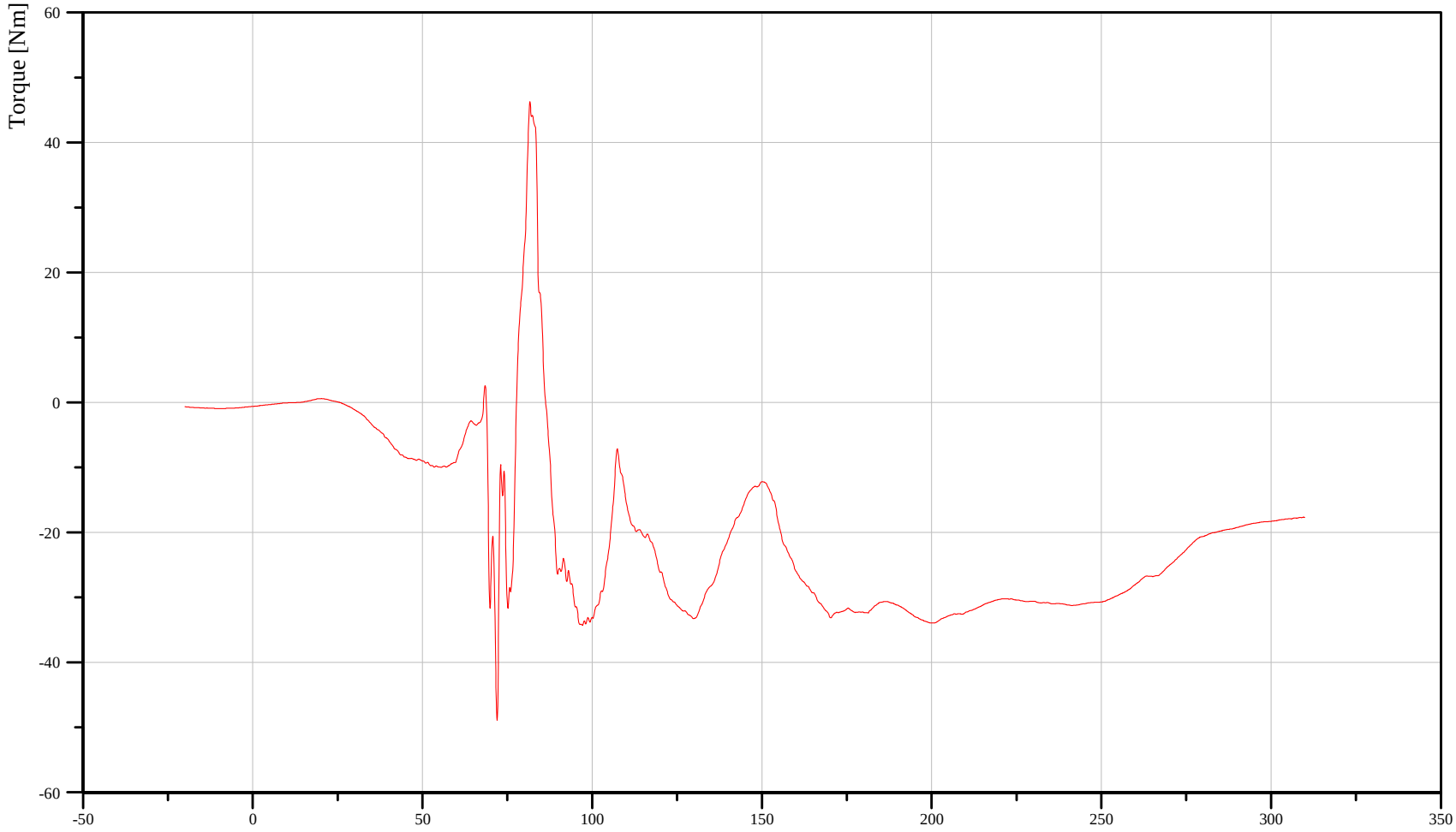
Bullet Vehicle Driver Right Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRULXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-48.92 Nm at 72.00 ms

Max. Value
46.28 Nm at 81.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

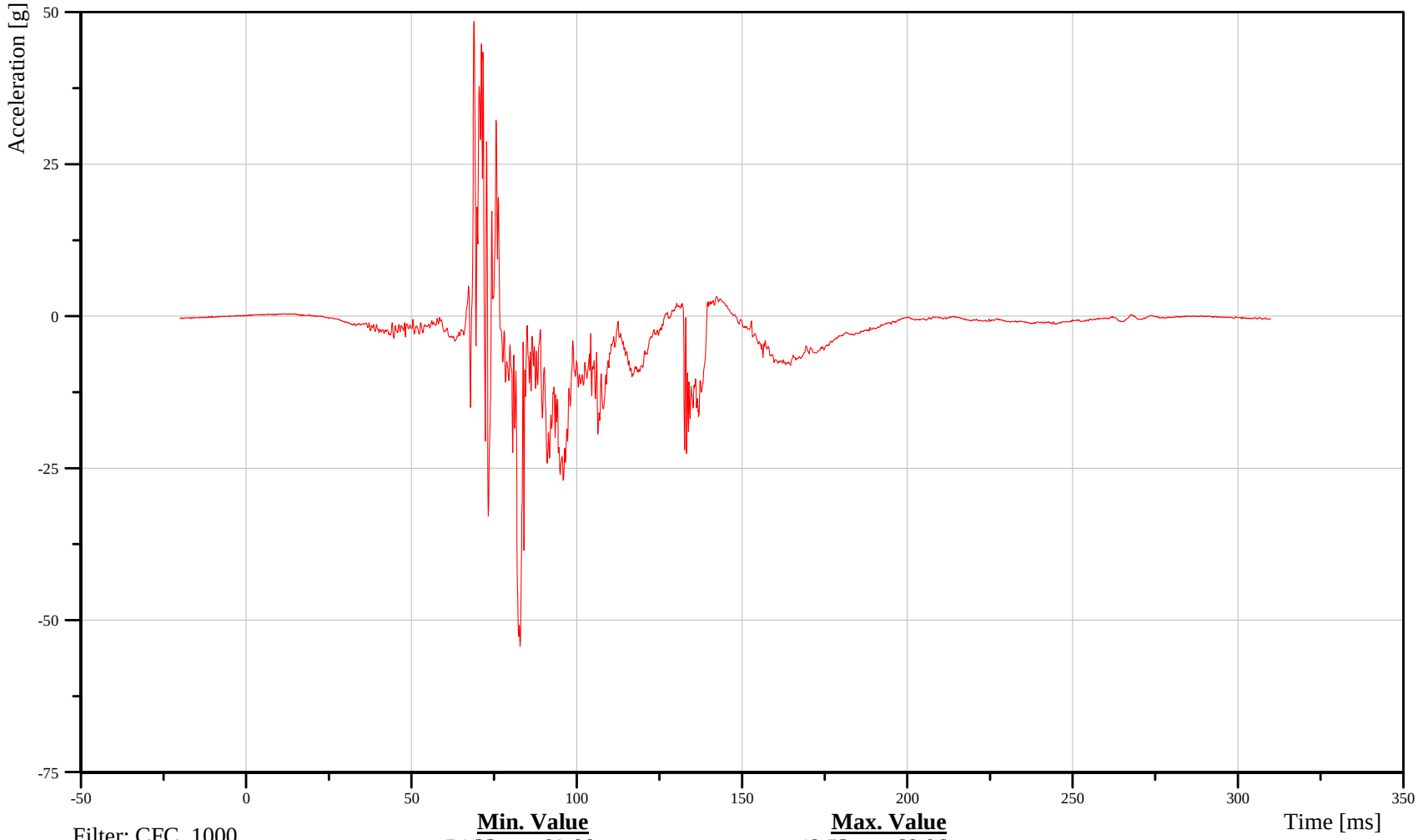
Bullet Vehicle Driver Right Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-54.33 g at 82.88 ms

Max. Value
48.53 g at 68.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

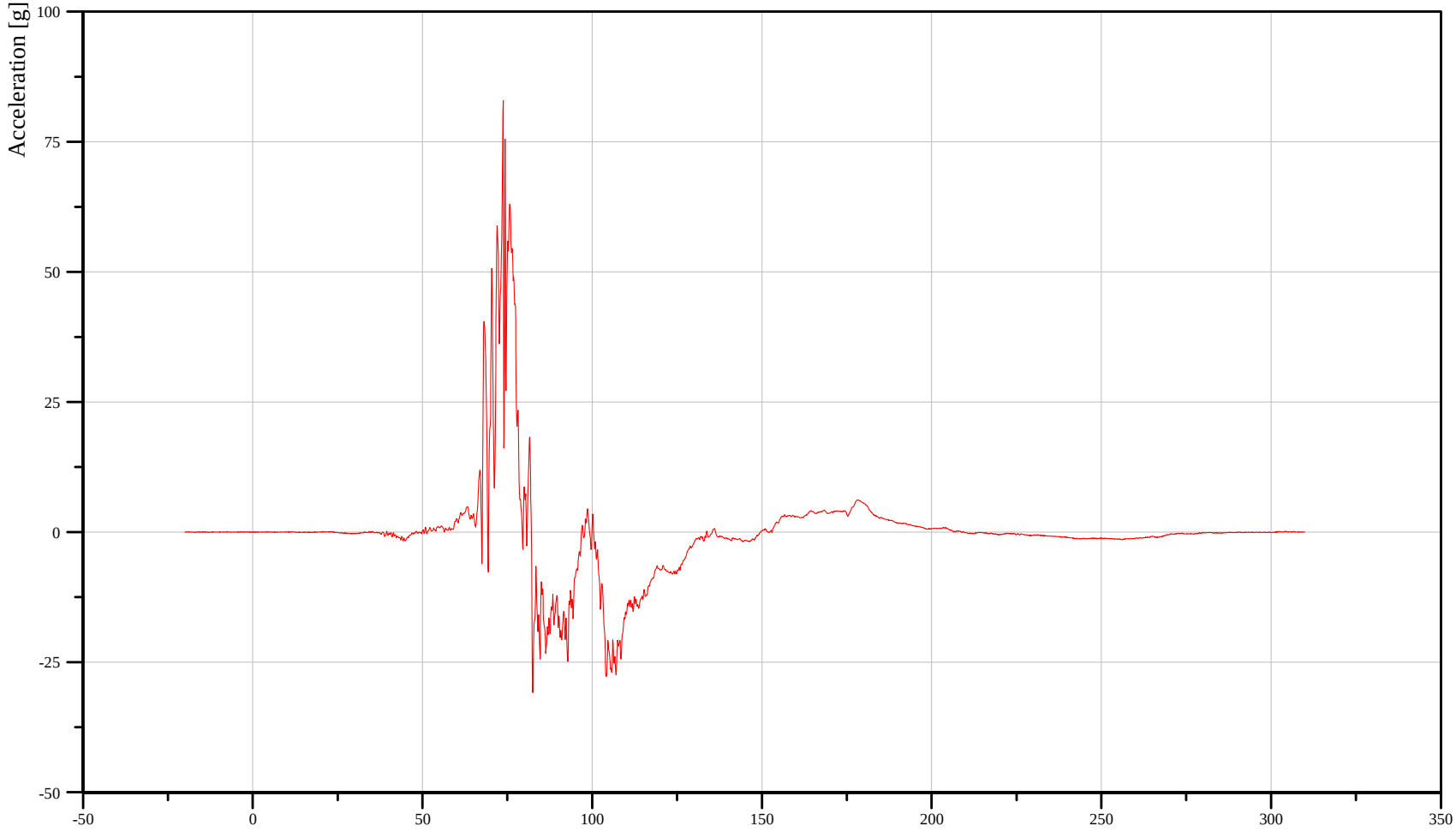
Bullet Vehicle Driver Right Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-30.87 g at 82.48 ms

Max. Value
82.90 g at 73.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

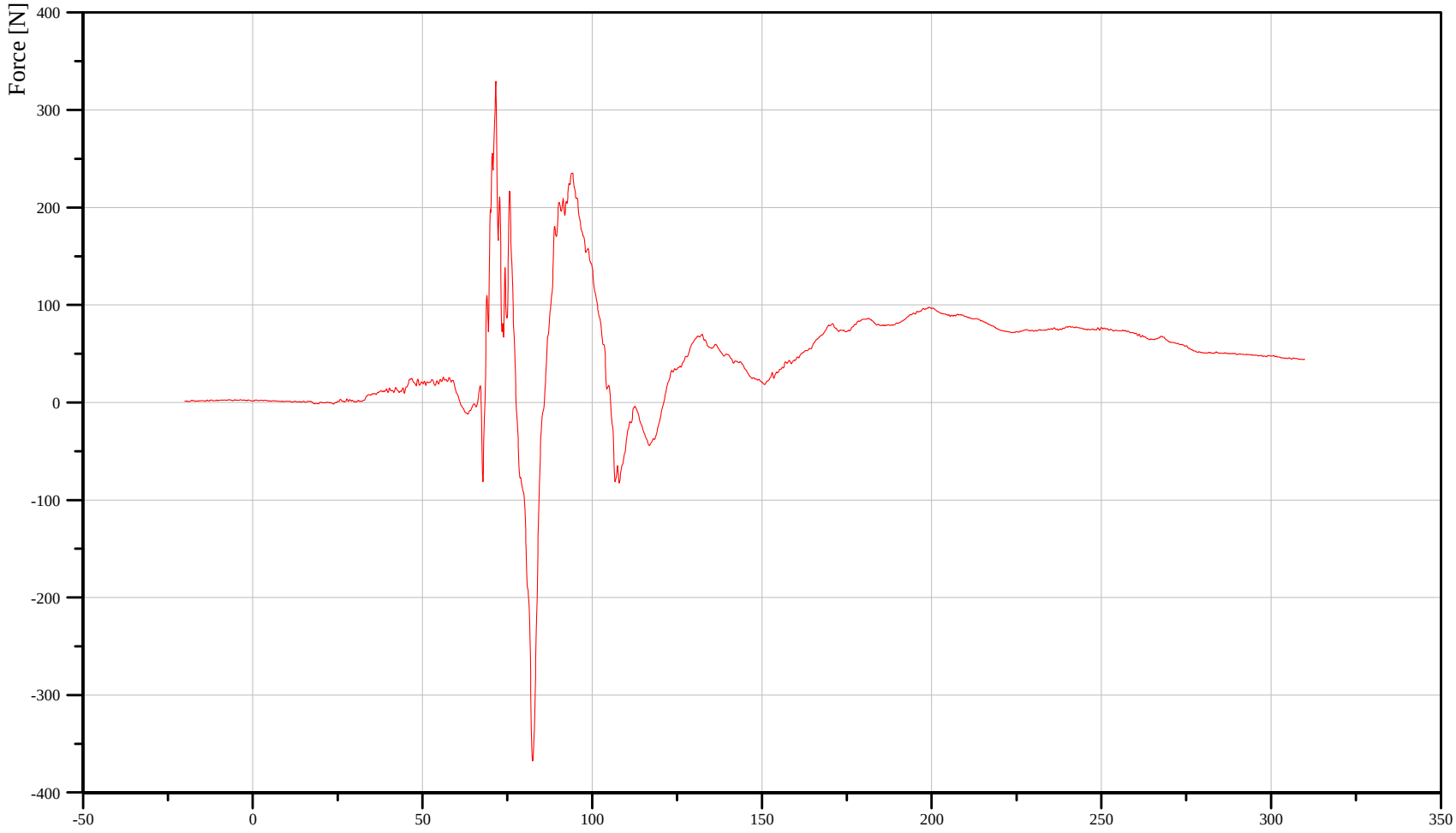
Bullet Vehicle Driver Right Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRLLXH3FOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-367.63 N at 82.48 ms

Max. Value
329.30 N at 71.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

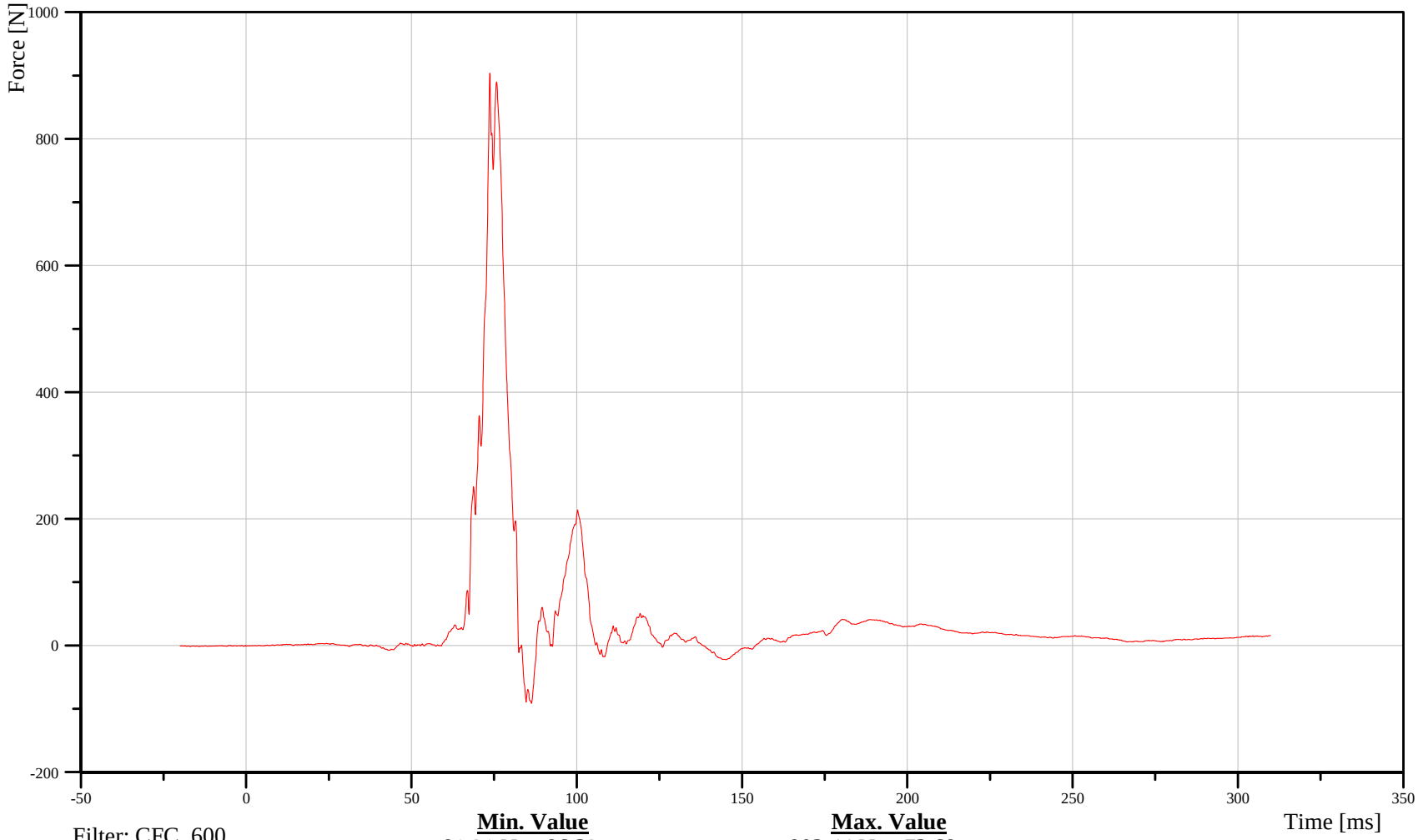
Bullet Vehicle Driver Right Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRLLXH3FOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-91.21 N at 86.32 ms

Max. Value
903.44 N at 73.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

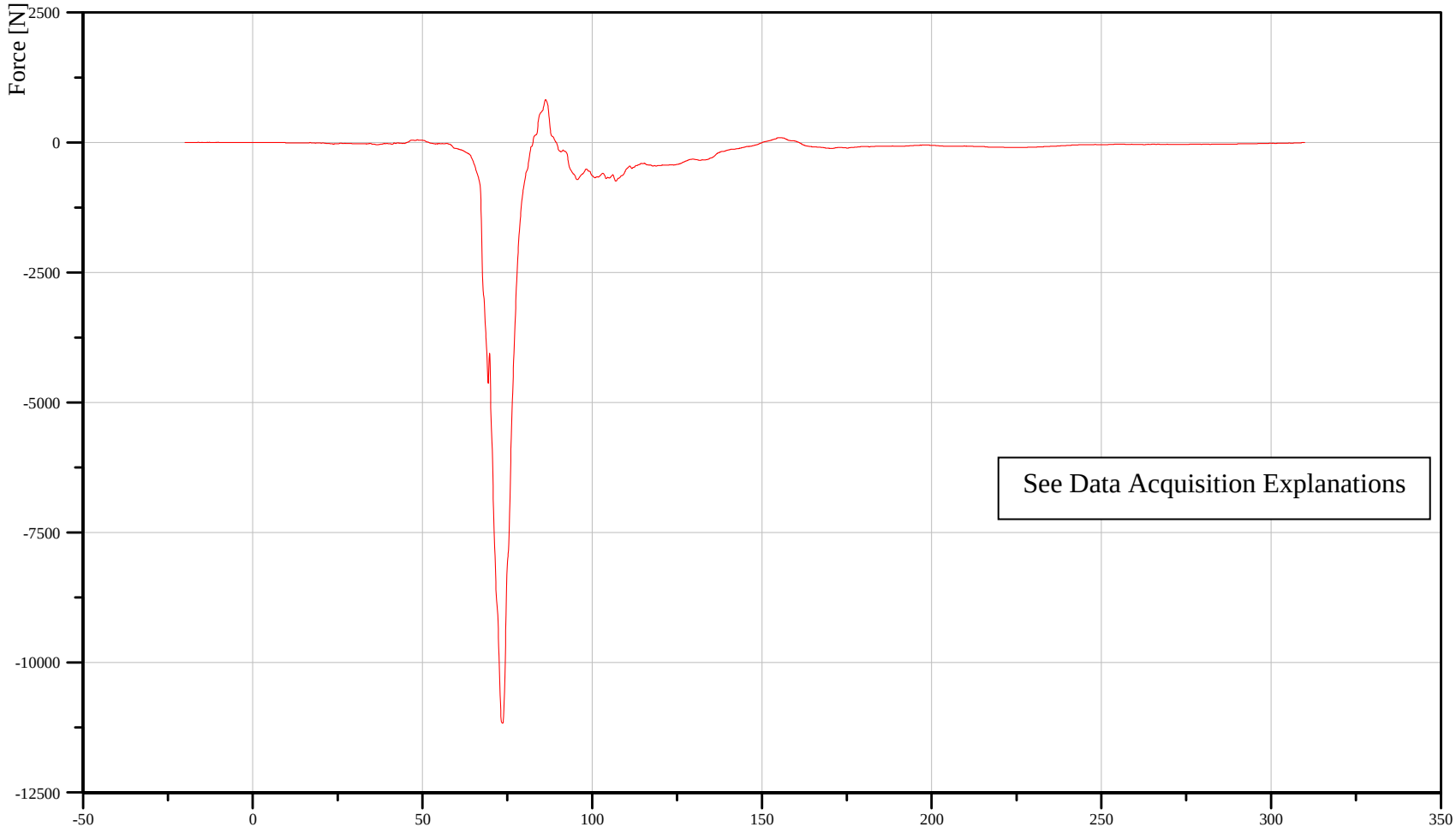
Bullet Vehicle Driver Right Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRLLXH3FOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-11,164.53 N at 73.60 ms

Max. Value
826.61 N at 86.24 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

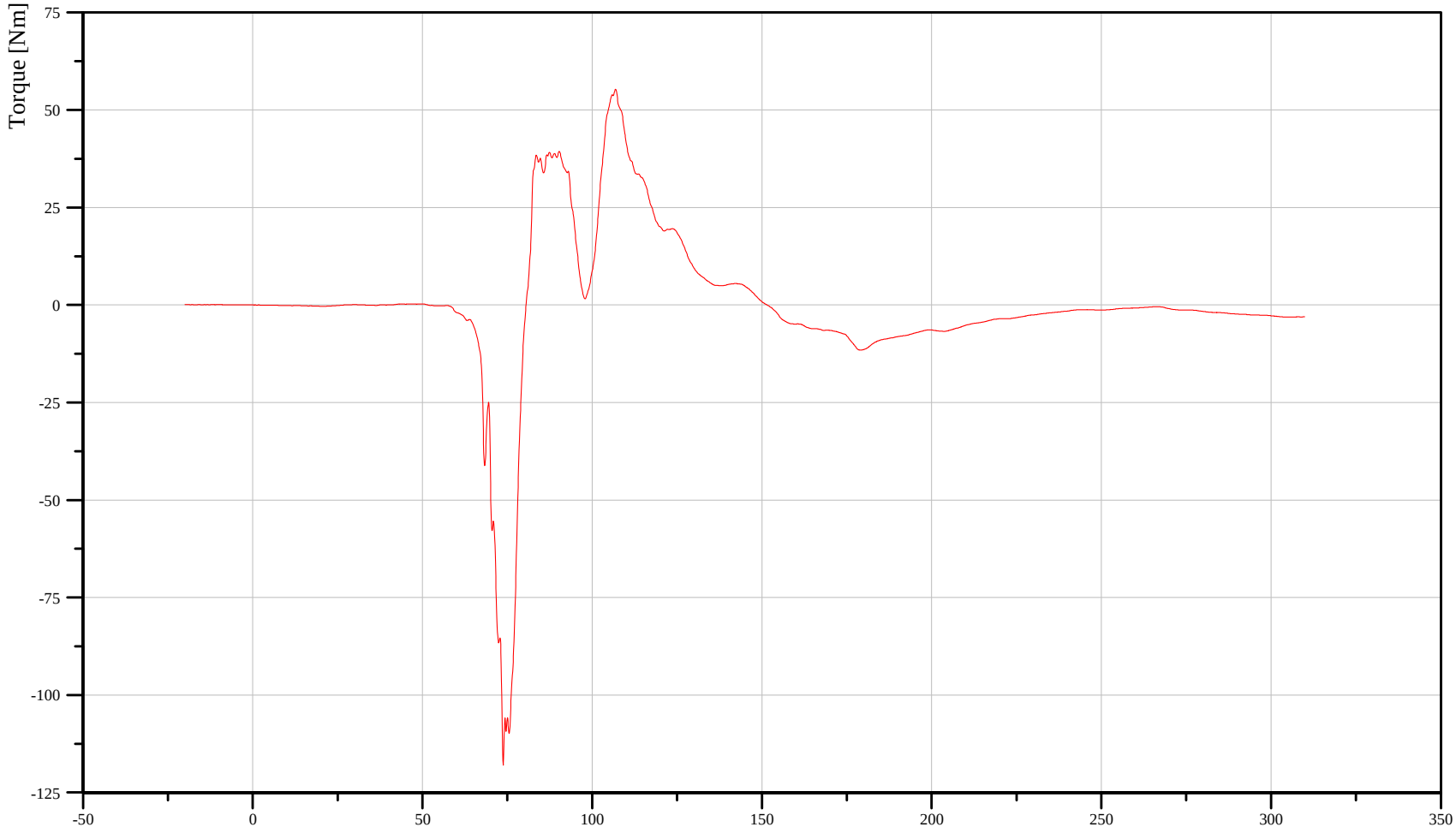
Bullet Vehicle Driver Right Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRLLXH3MOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-118.02 Nm at 73.76 ms

Max. Value
55.31 Nm at 106.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

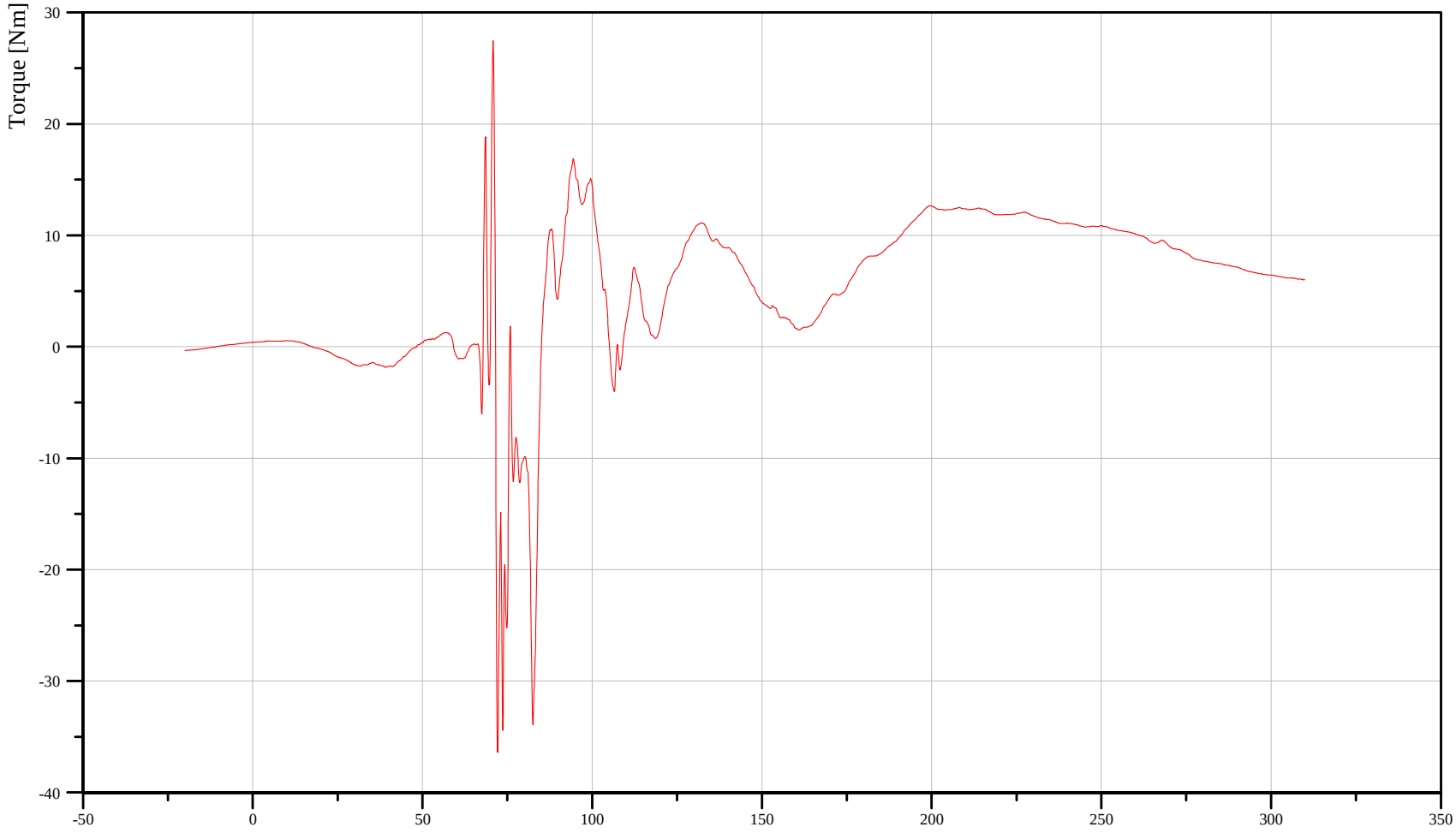
Bullet Vehicle Driver Right Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11TIBIRLLXH3MOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-36.41 Nm at 72.16 ms

Max. Value
27.47 Nm at 70.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

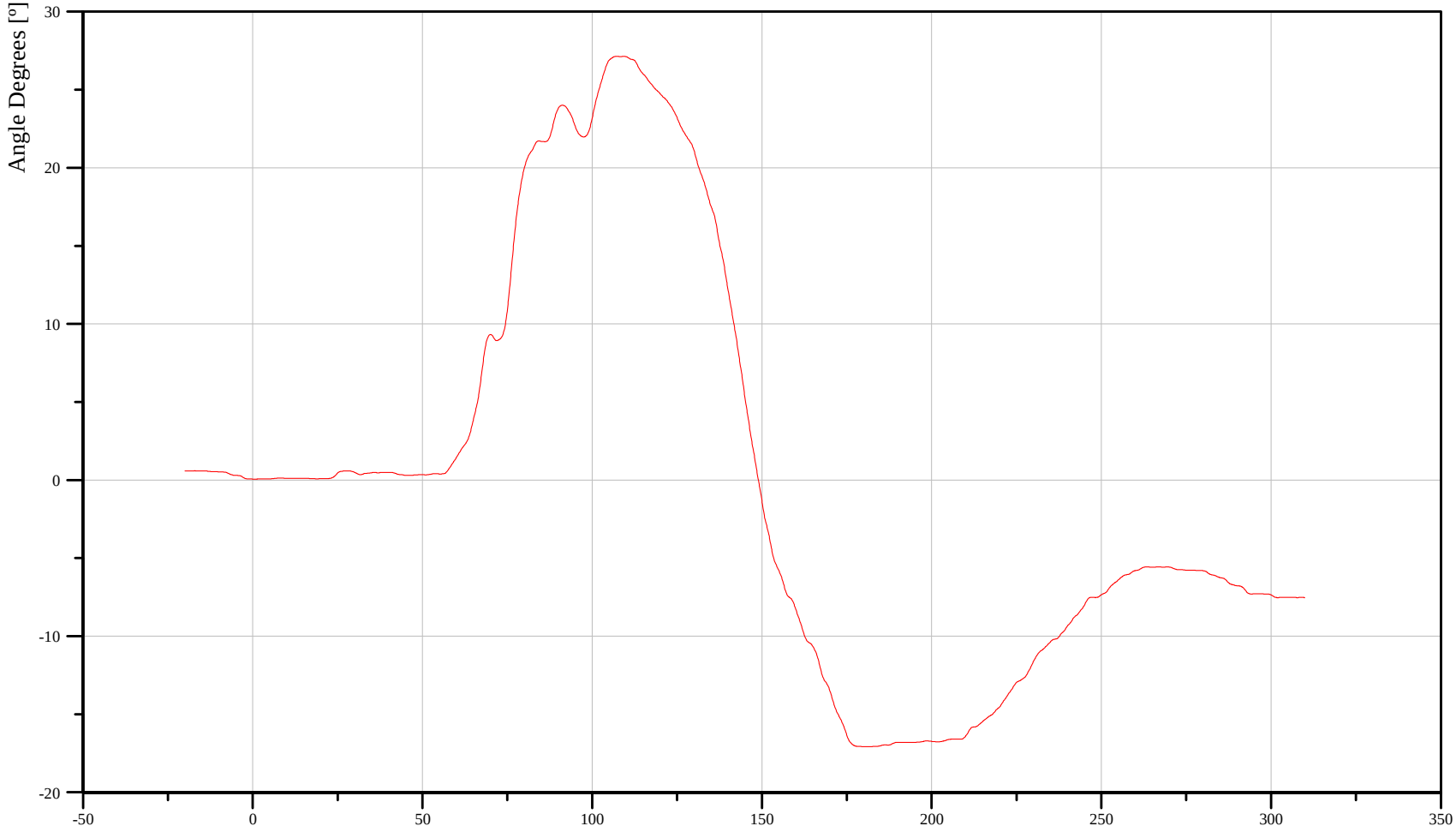
Bullet Vehicle Driver Right Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-17.08 ° at 181.44 ms

Max. Value
27.13 ° at 107.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

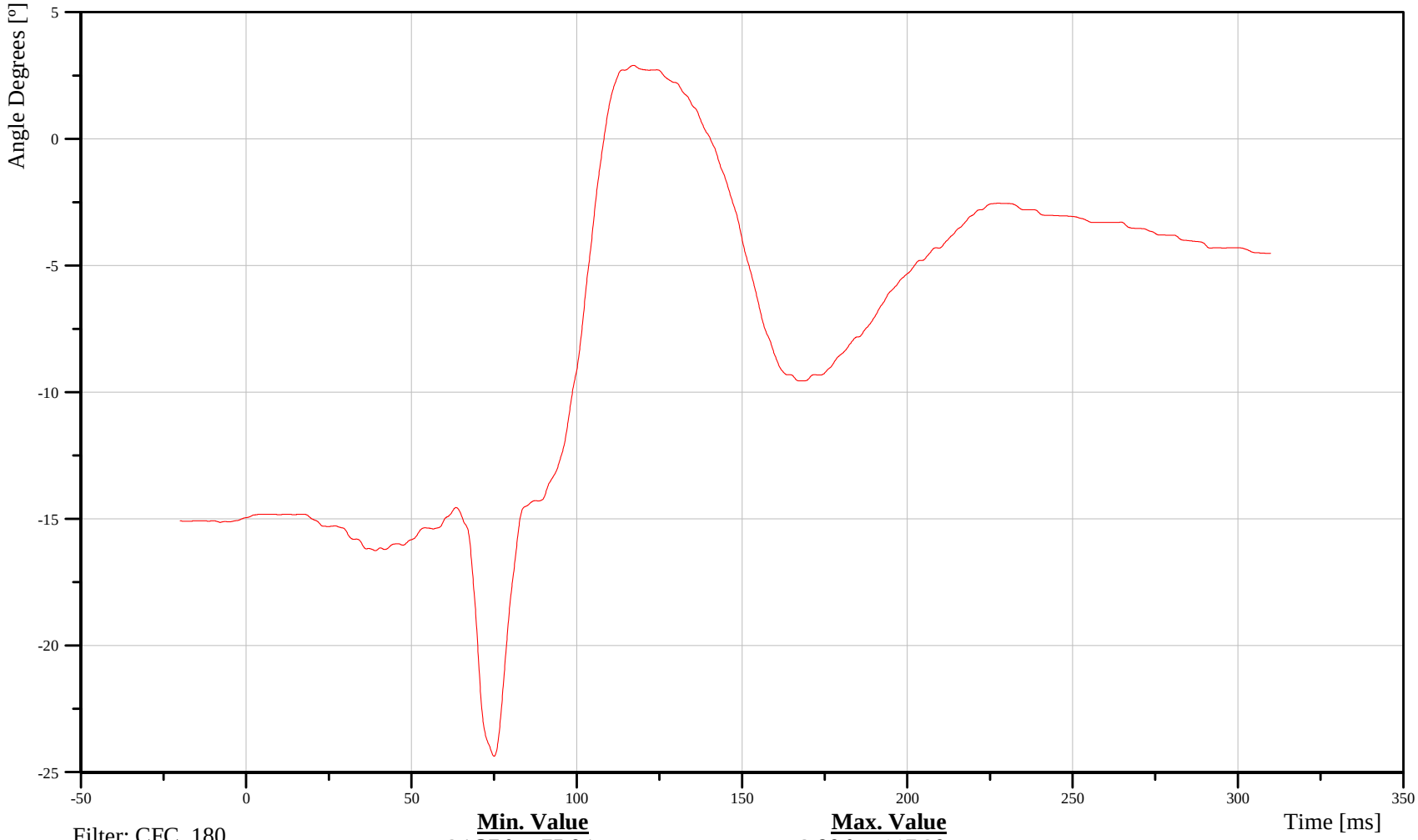
Bullet Vehicle Driver Right Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-24.37 ° at 75.04 ms

Max. Value
2.90 ° at 117.20 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

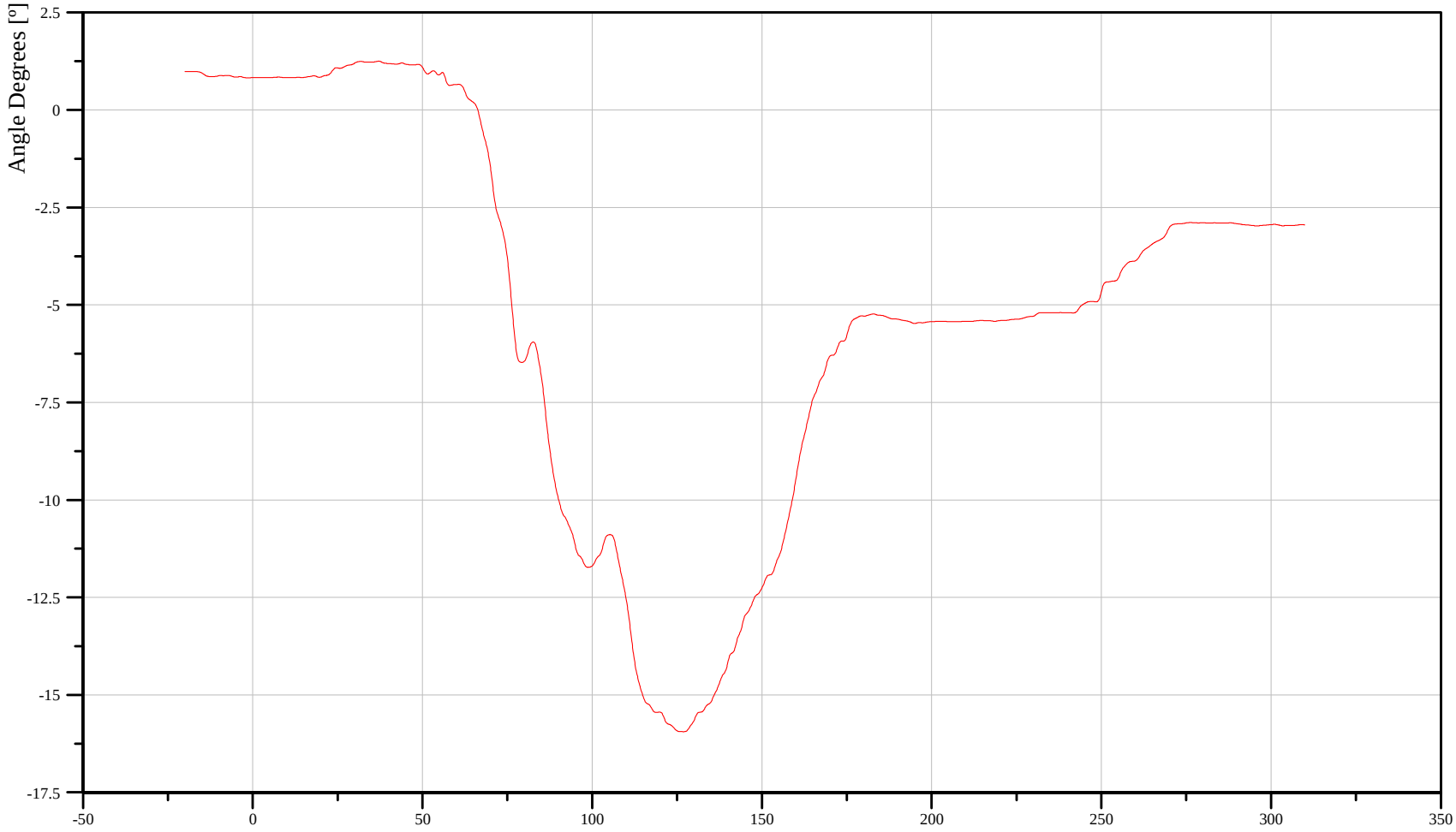
Bullet Vehicle Driver Right Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-15.94 ° at 126.96 ms

Max. Value
1.25 ° at 37.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

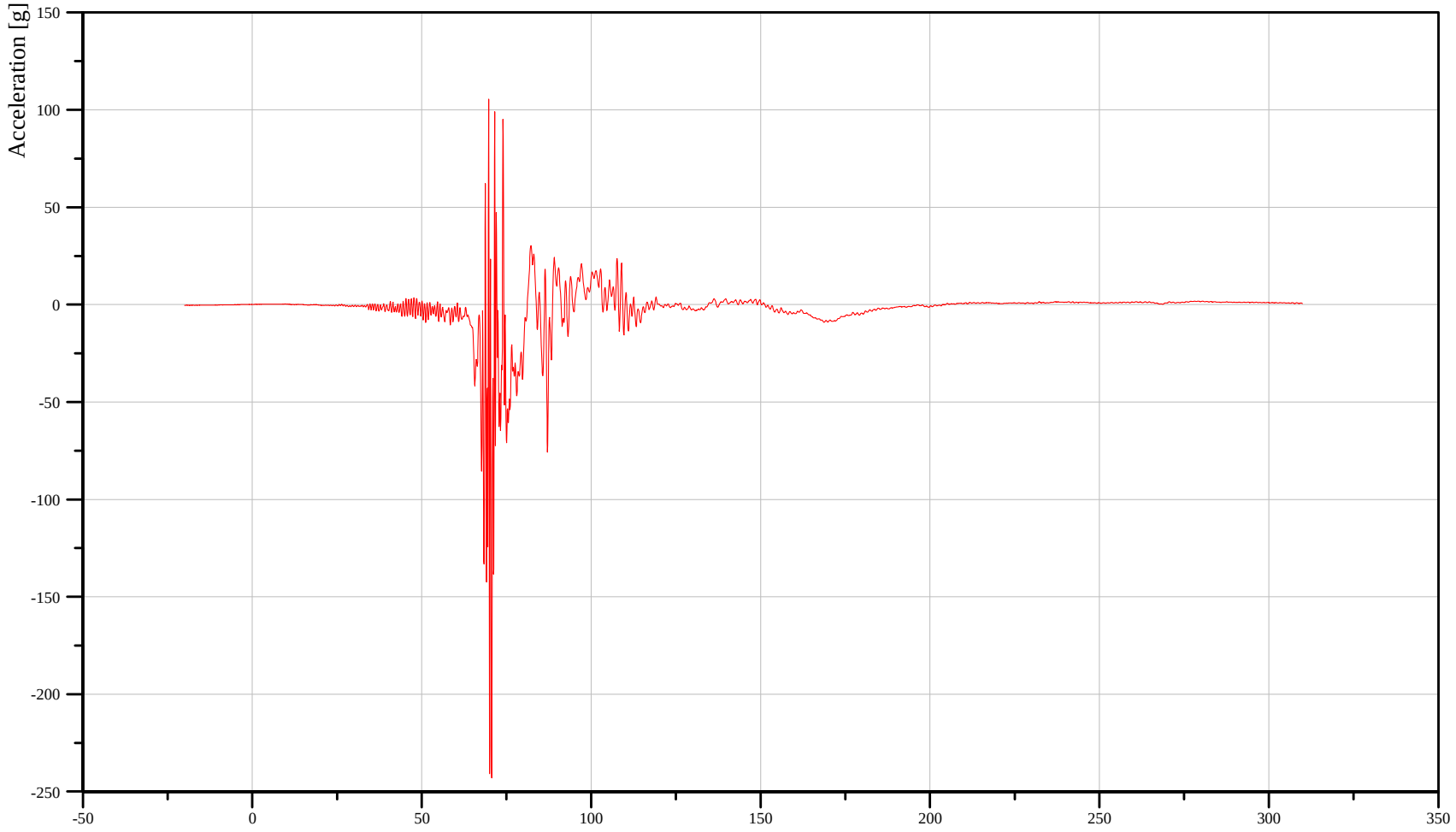
Bullet Vehicle Driver Right Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-242.98 g at 70.64 ms

Max. Value
105.46 g at 69.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

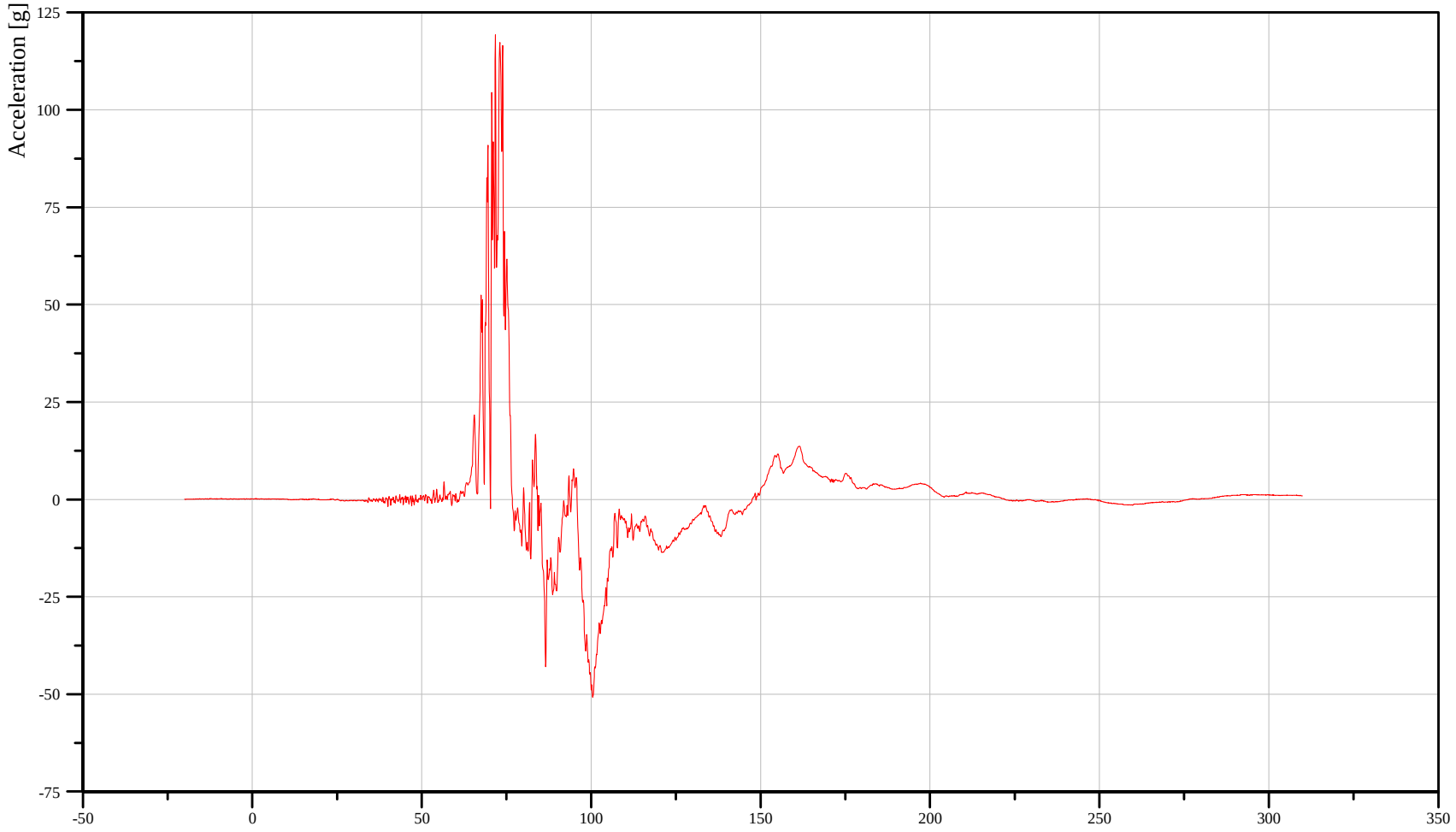
Bullet Vehicle Driver Right Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-50.78 g at 100.48 ms

Max. Value
119.29 g at 71.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

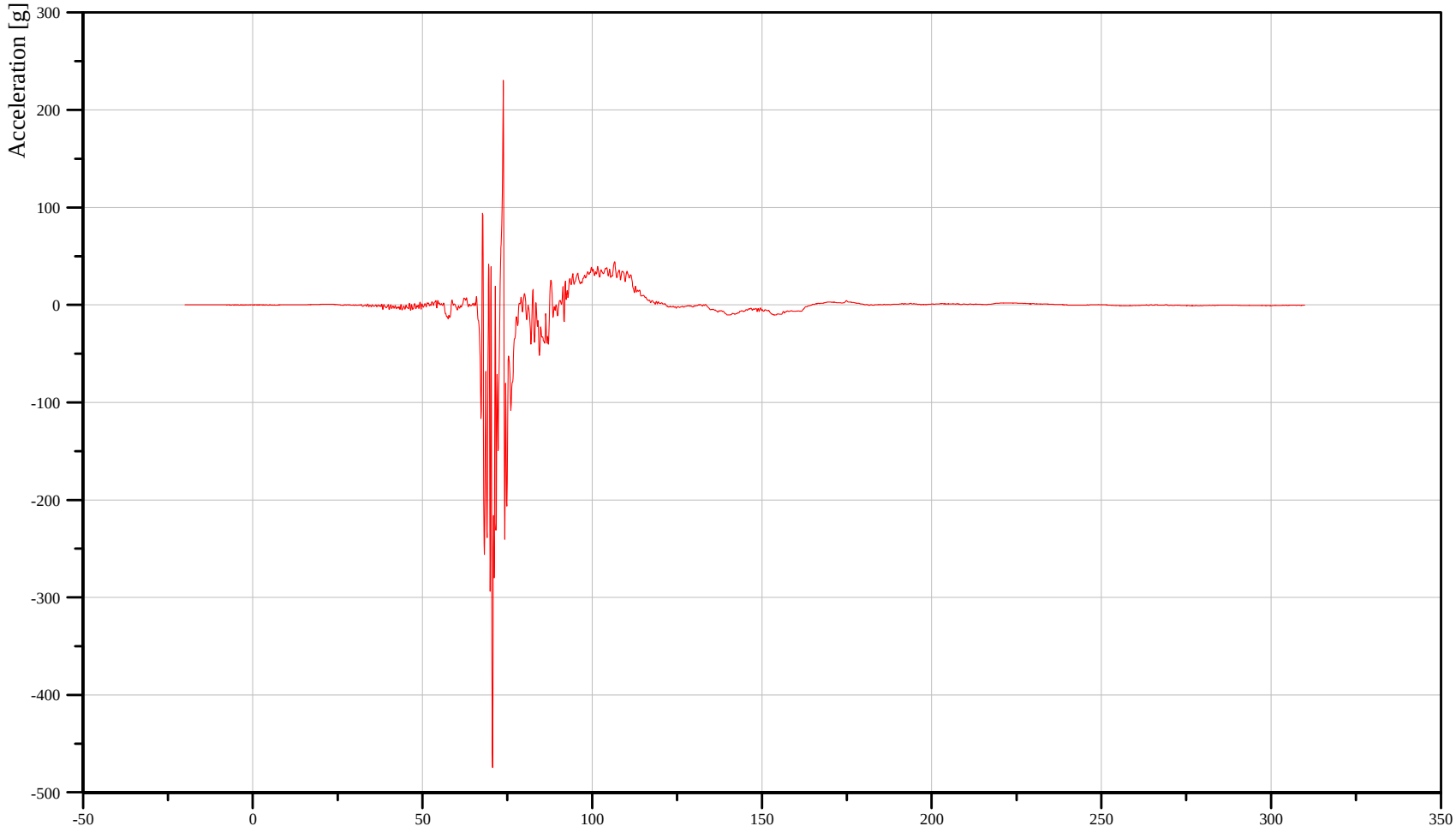
Bullet Vehicle Driver Right Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-474.48 g at 70.64 ms

Max. Value
230.24 g at 73.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

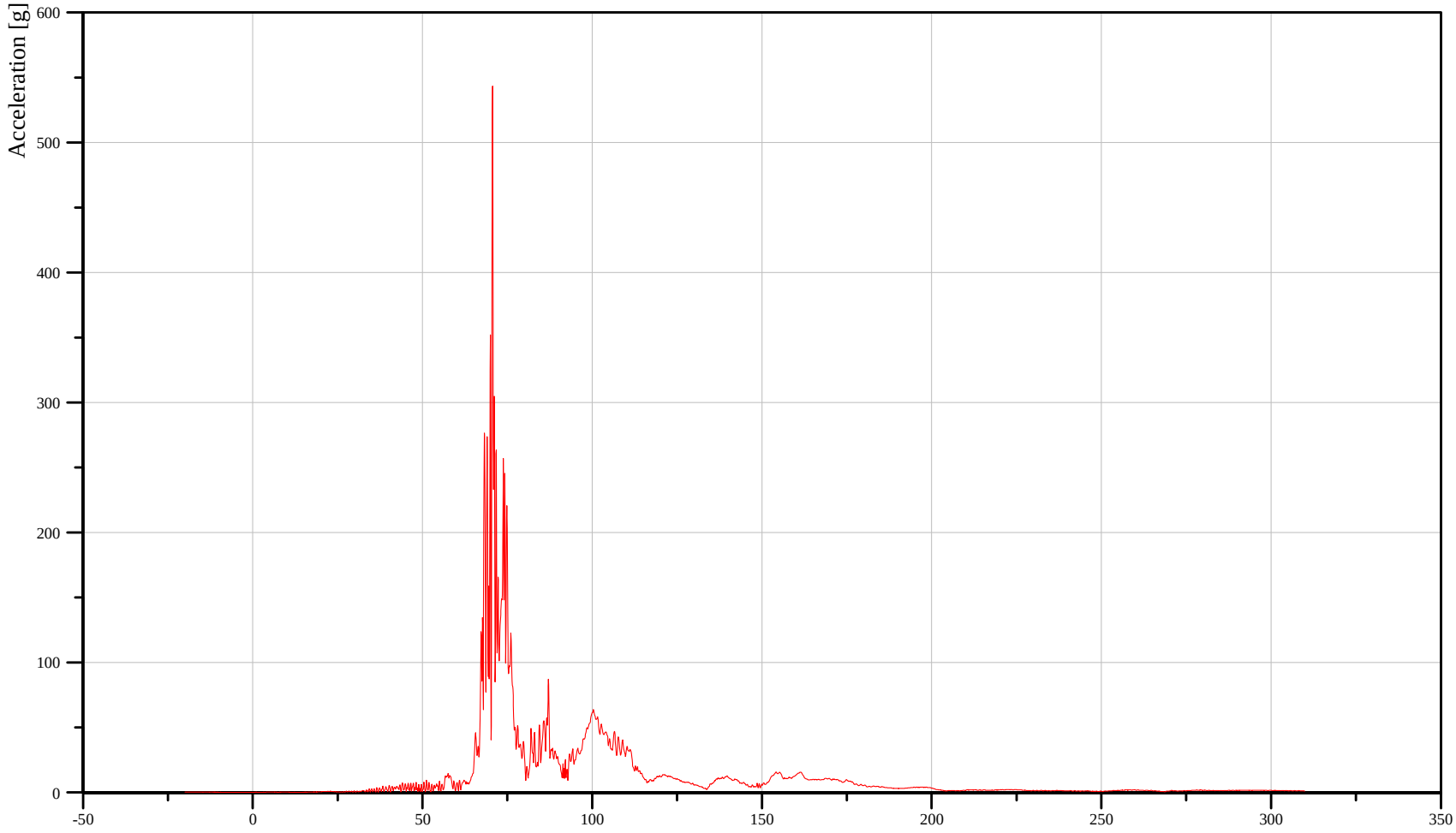
Bullet Vehicle Driver Right Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.06 g at -4.80 ms

Max. Value
543.22 g at 70.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

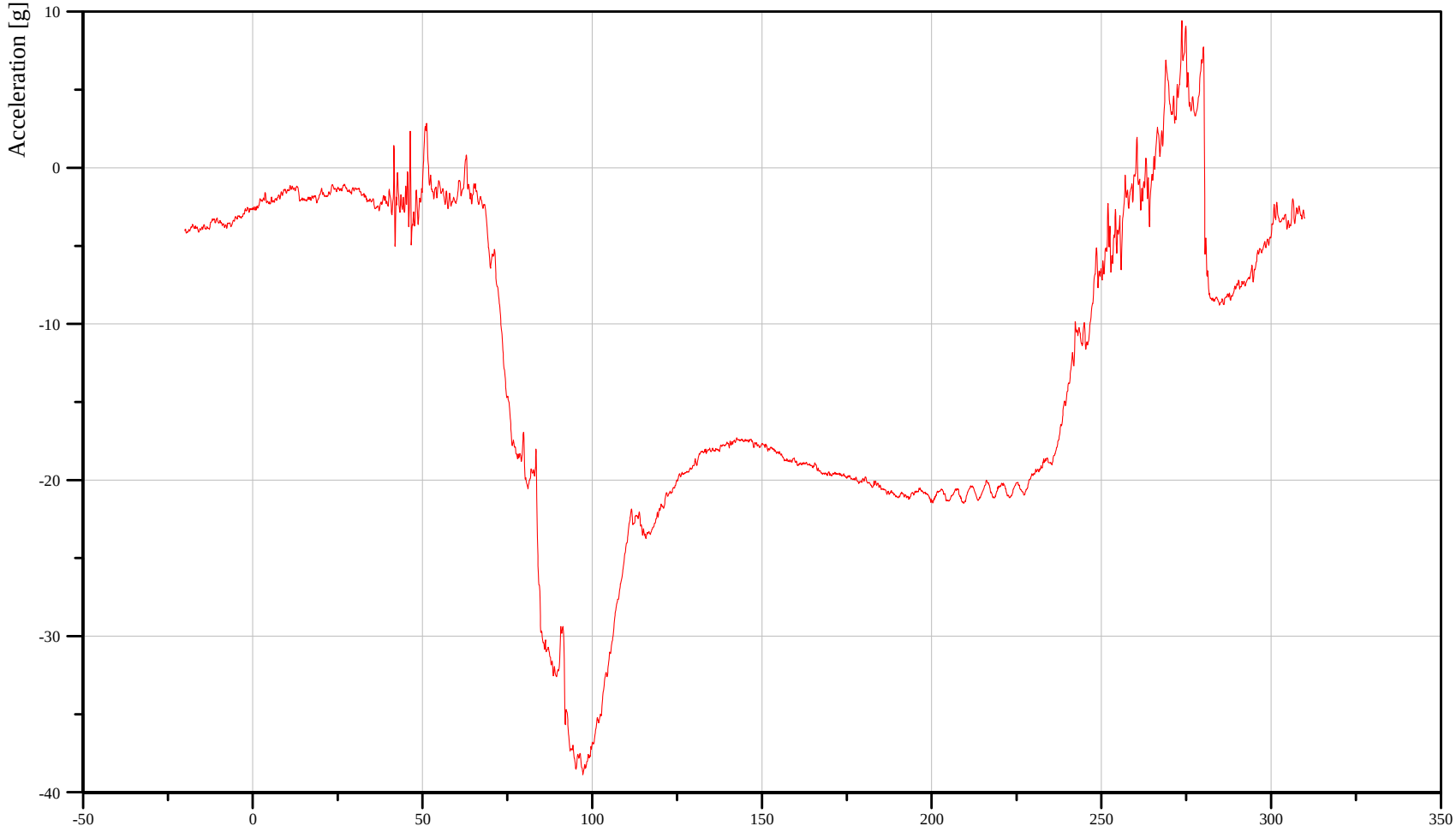
Bullet Vehicle Passenger Head X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13HEADCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-38.87 g at 97.28 ms

Max. Value
9.43 g at 273.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

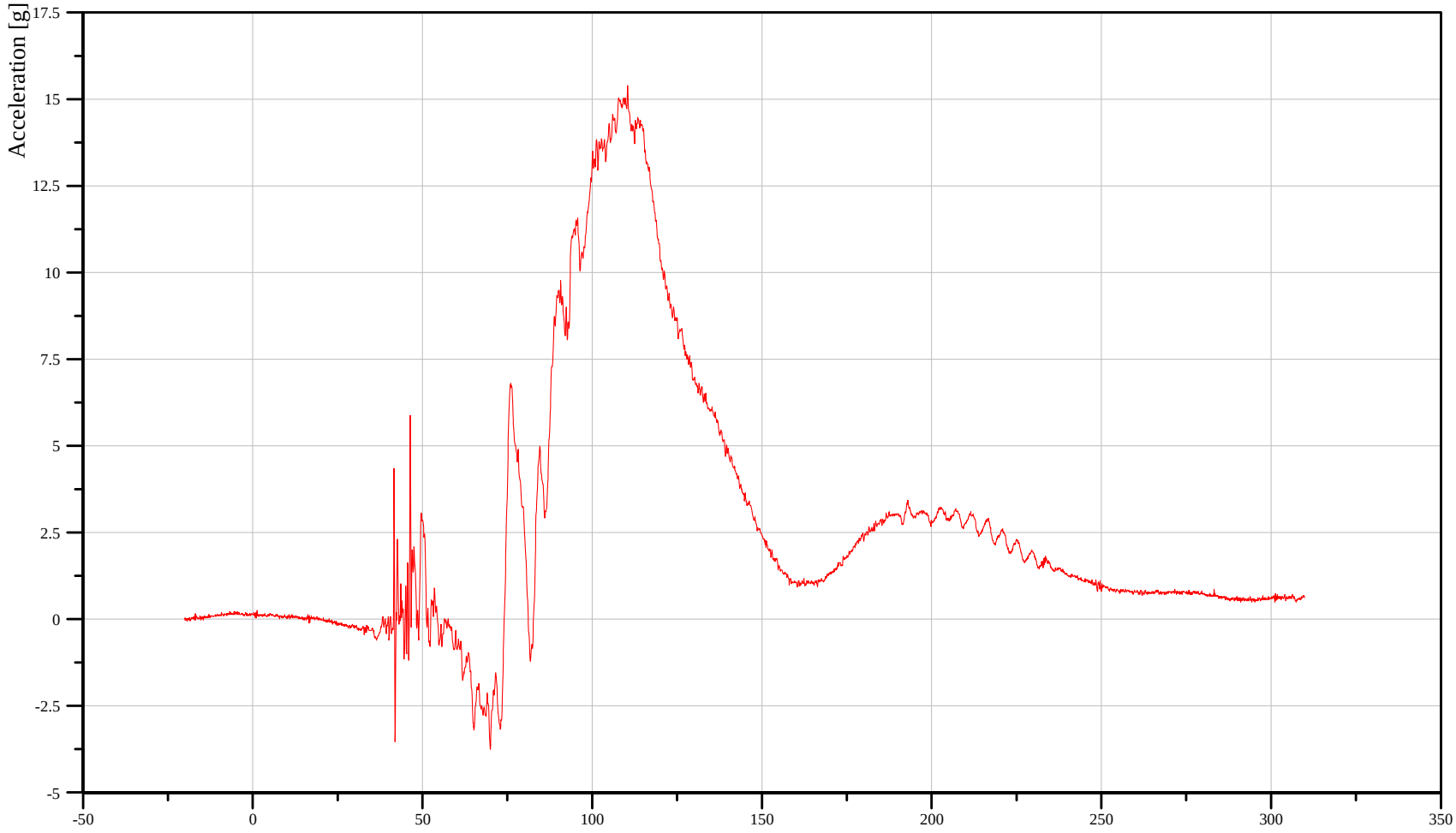
Bullet Vehicle Passenger Head Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13HEADCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-3.75 g at 70.00 ms

Max. Value
15.39 g at 110.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

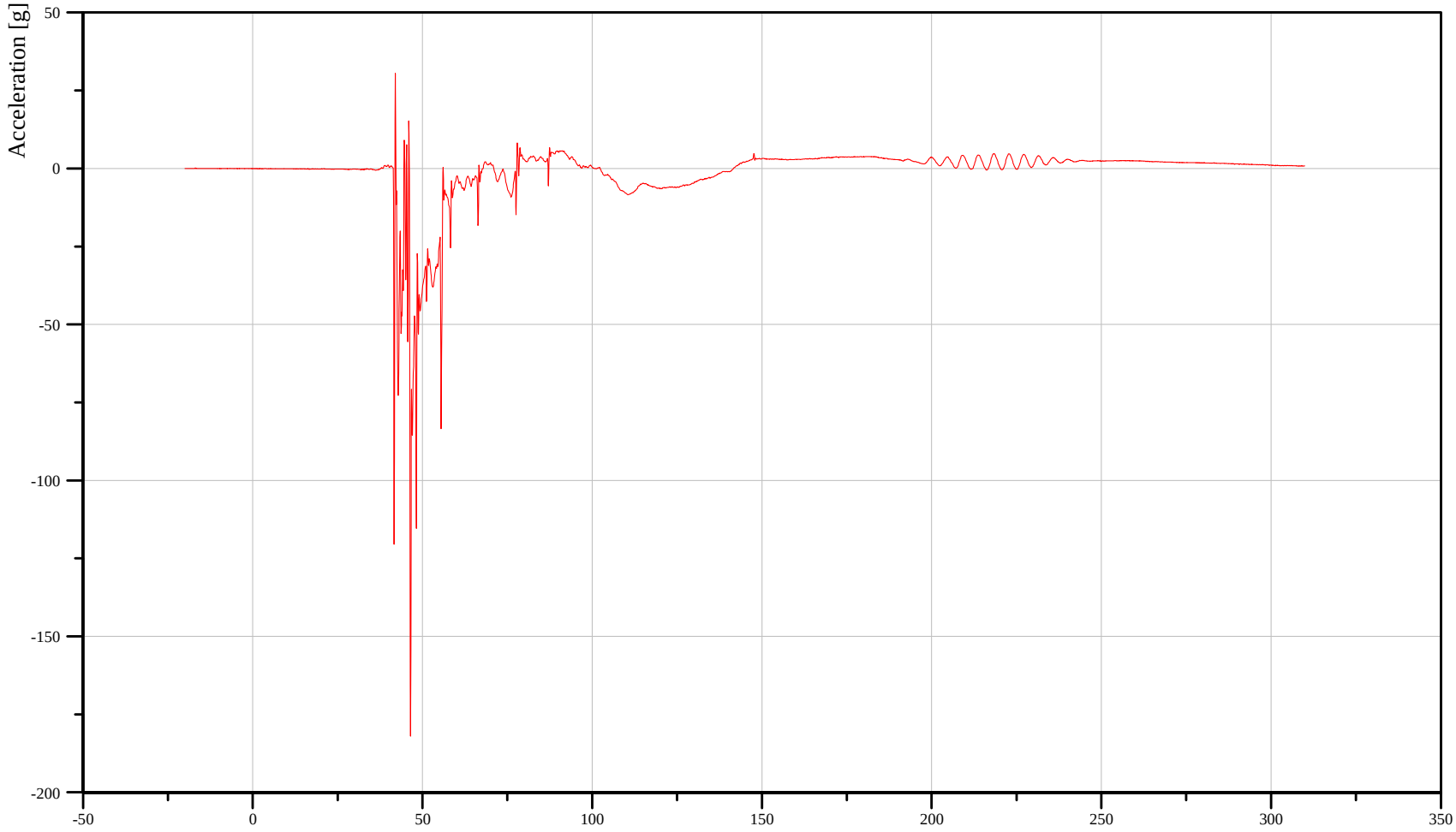
Bullet Vehicle Passenger Head Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13HEADCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-181.99 g at 46.48 ms

Max. Value
30.47 g at 42.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

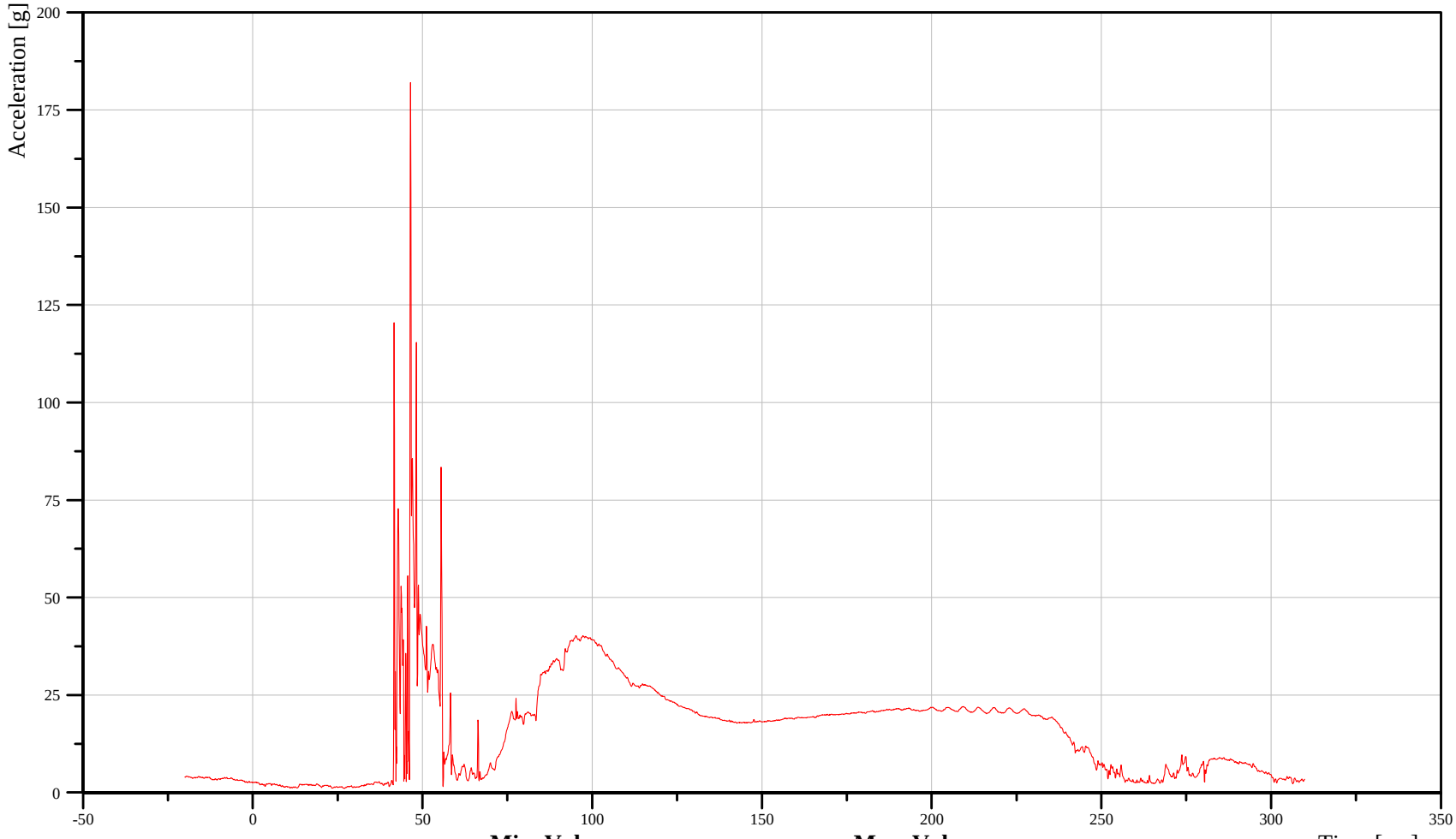
Bullet Vehicle Passenger Head Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13HEADCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
1.09 g at 27.12 ms

Max. Value
182.05 g at 46.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

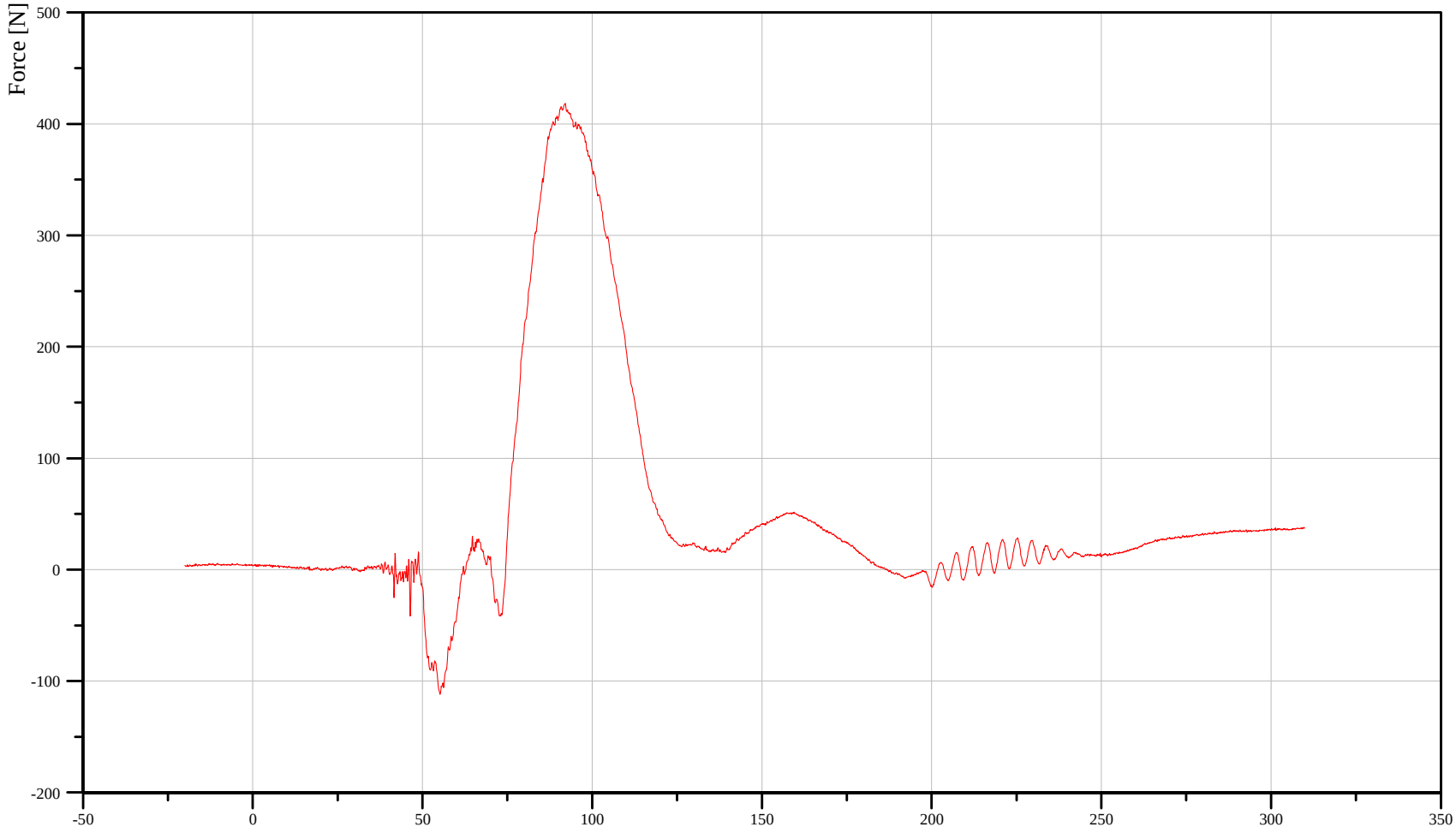
Bullet Vehicle Passenger Neck X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13NECKUP00HFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-112.09 N at 55.20 ms

Max. Value
418.16 N at 92.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

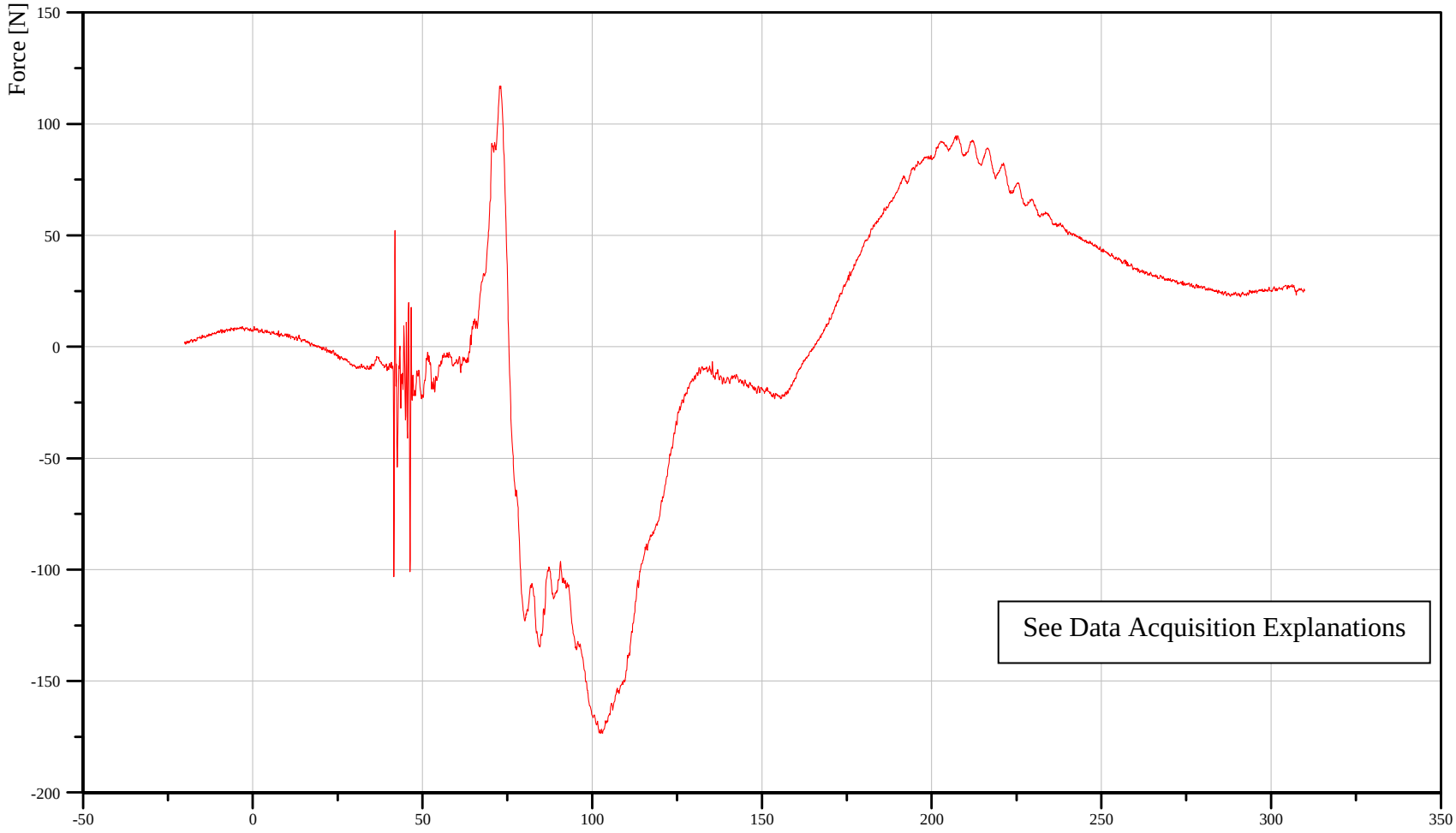
Bullet Vehicle Passenger Neck Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13NECKUP00HFFOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-173.52 N at 102.56 ms

Max. Value
116.89 N at 72.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

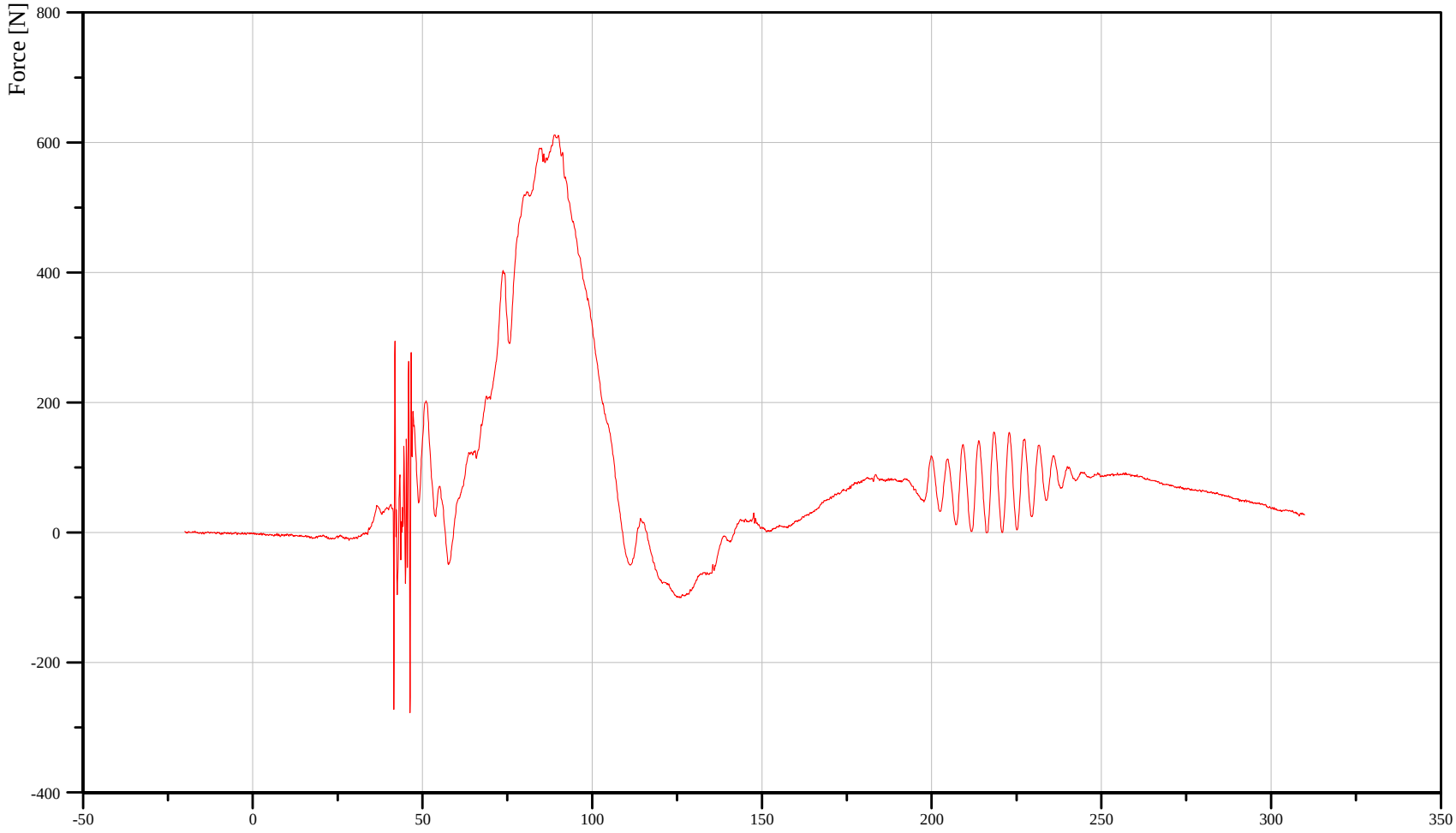
Bullet Vehicle Passenger Neck Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13NECKUP00HFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-277.48 N at 46.32 ms

Max. Value
611.54 N at 88.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

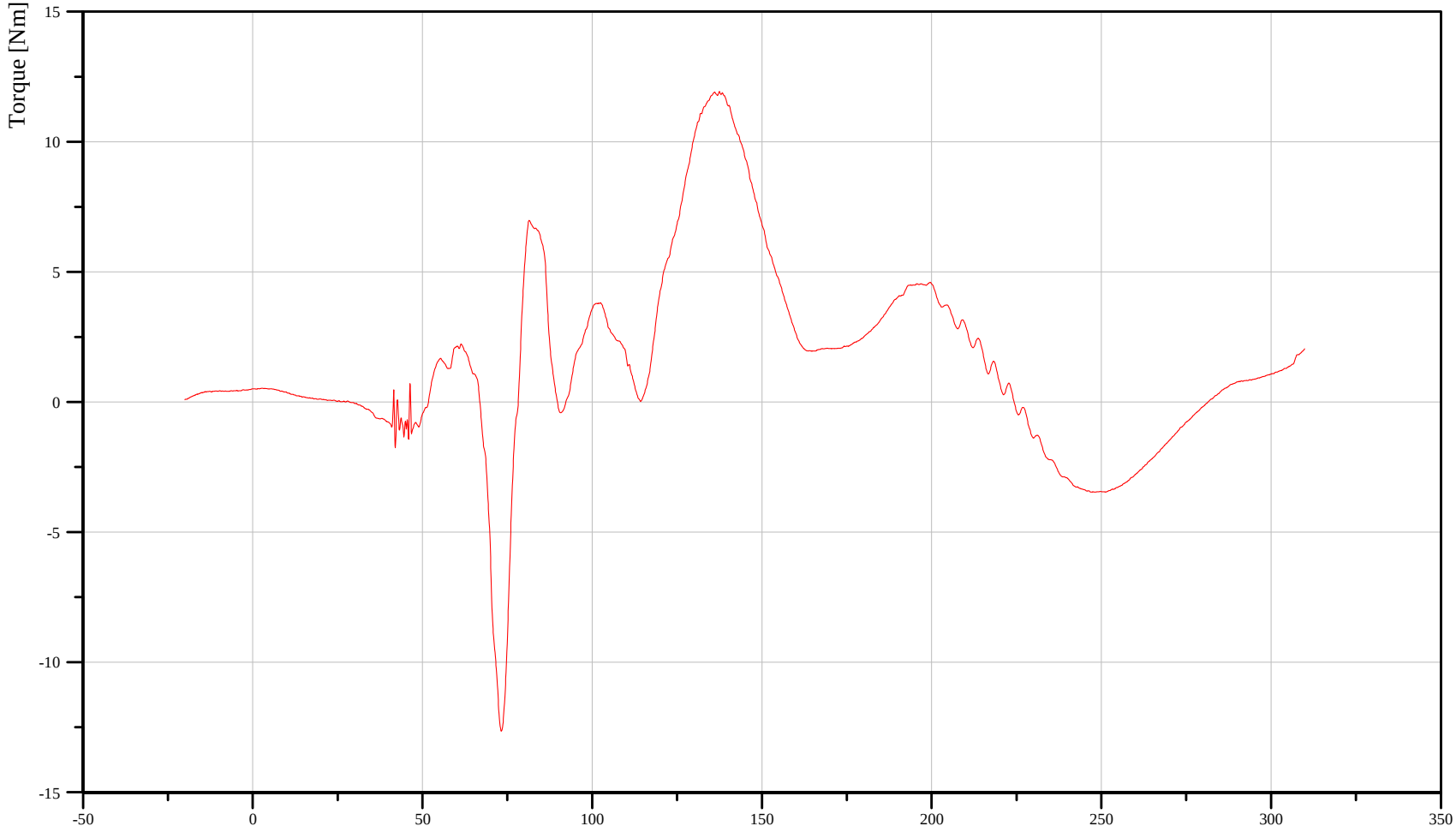
Bullet Vehicle Passenger Neck Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13NECKUP00HFMOXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-12.65 Nm at 73.20 ms

Max. Value
11.93 Nm at 137.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

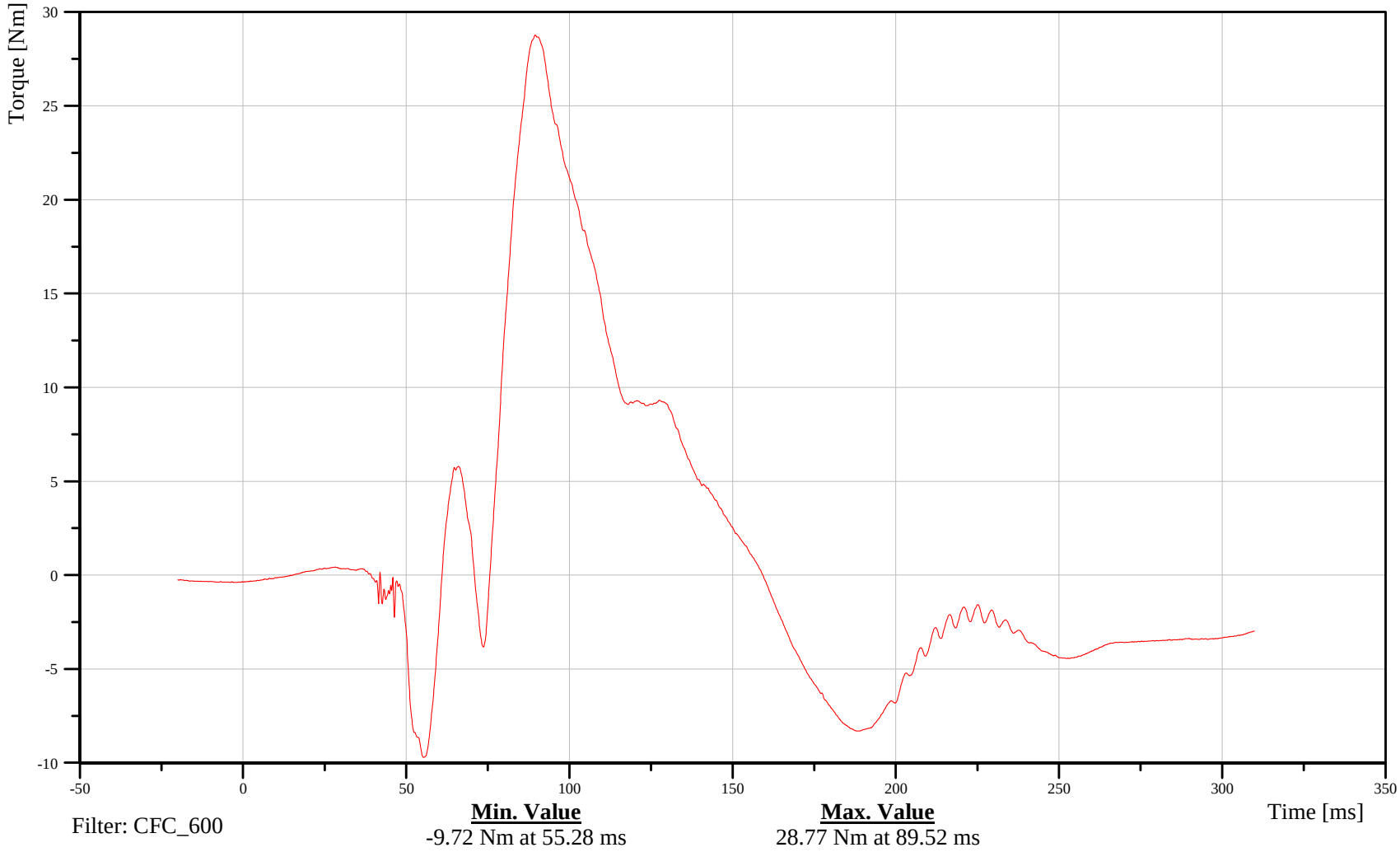
Bullet Vehicle Passenger Neck Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13NECKUP00HFMOYB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-9.72 Nm at 55.28 ms

Max. Value
28.77 Nm at 89.52 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

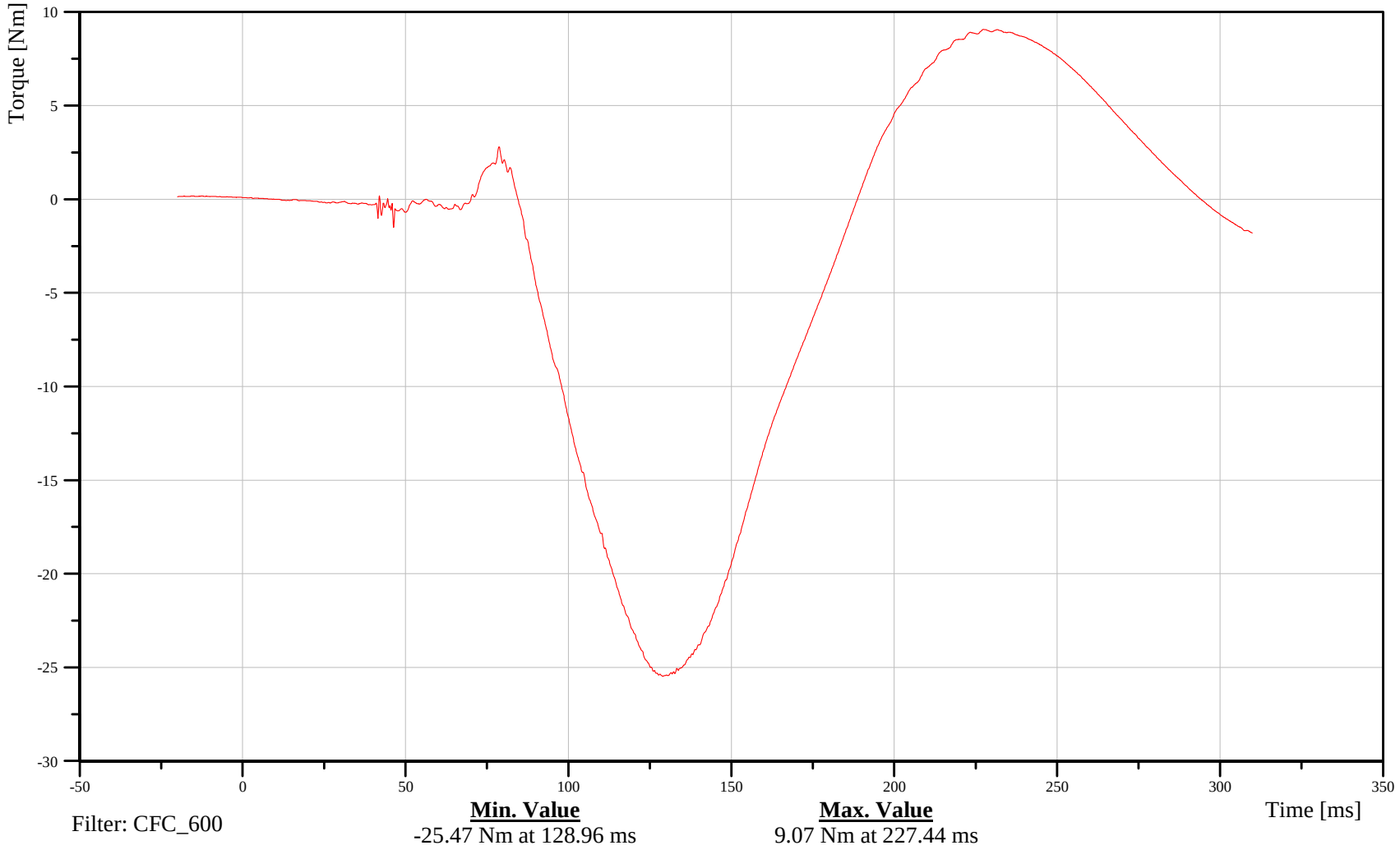
Bullet Vehicle Passenger Neck Moment About Z Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13NECKUP00HFMOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-25.47 Nm at 128.96 ms

Max. Value
9.07 Nm at 227.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

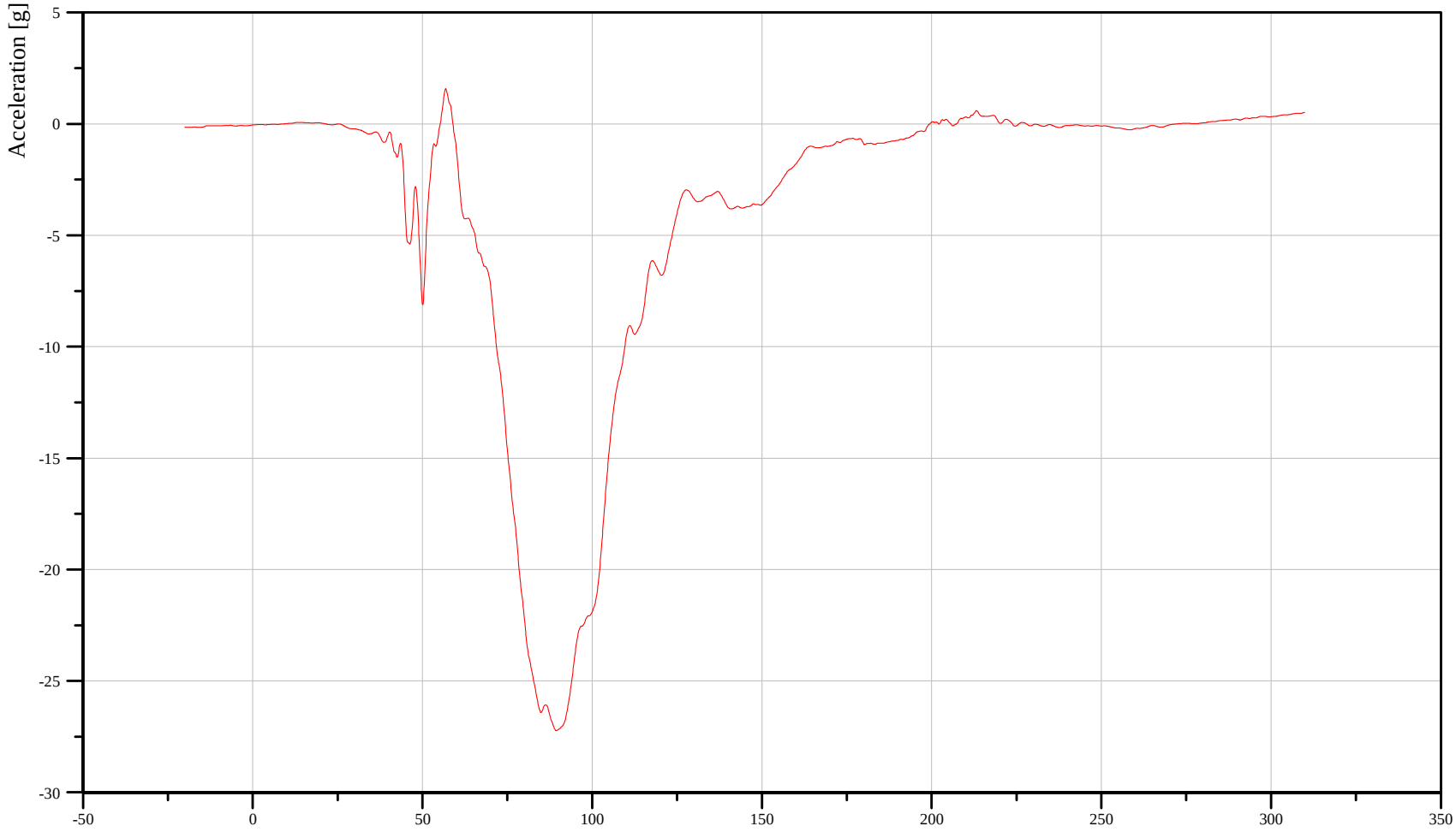
Bullet Vehicle Passenger Chest X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13CHSTCG00HFACXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-27.23 g at 89.44 ms

Max. Value
1.58 g at 56.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

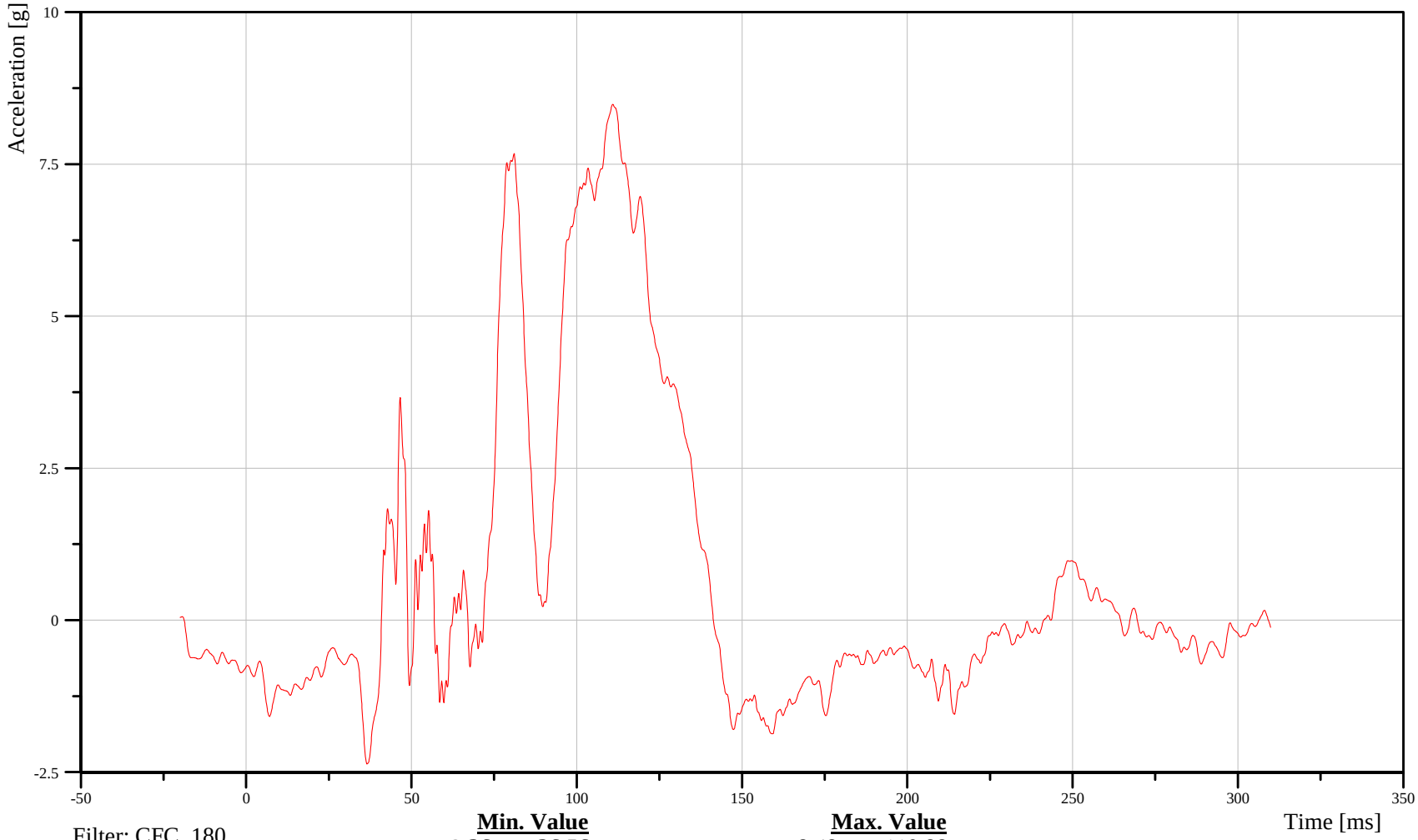
Bullet Vehicle Passenger Chest Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13CHSTCG00HFACYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-2.36 g at 36.56 ms

Max. Value
8.48 g at 110.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

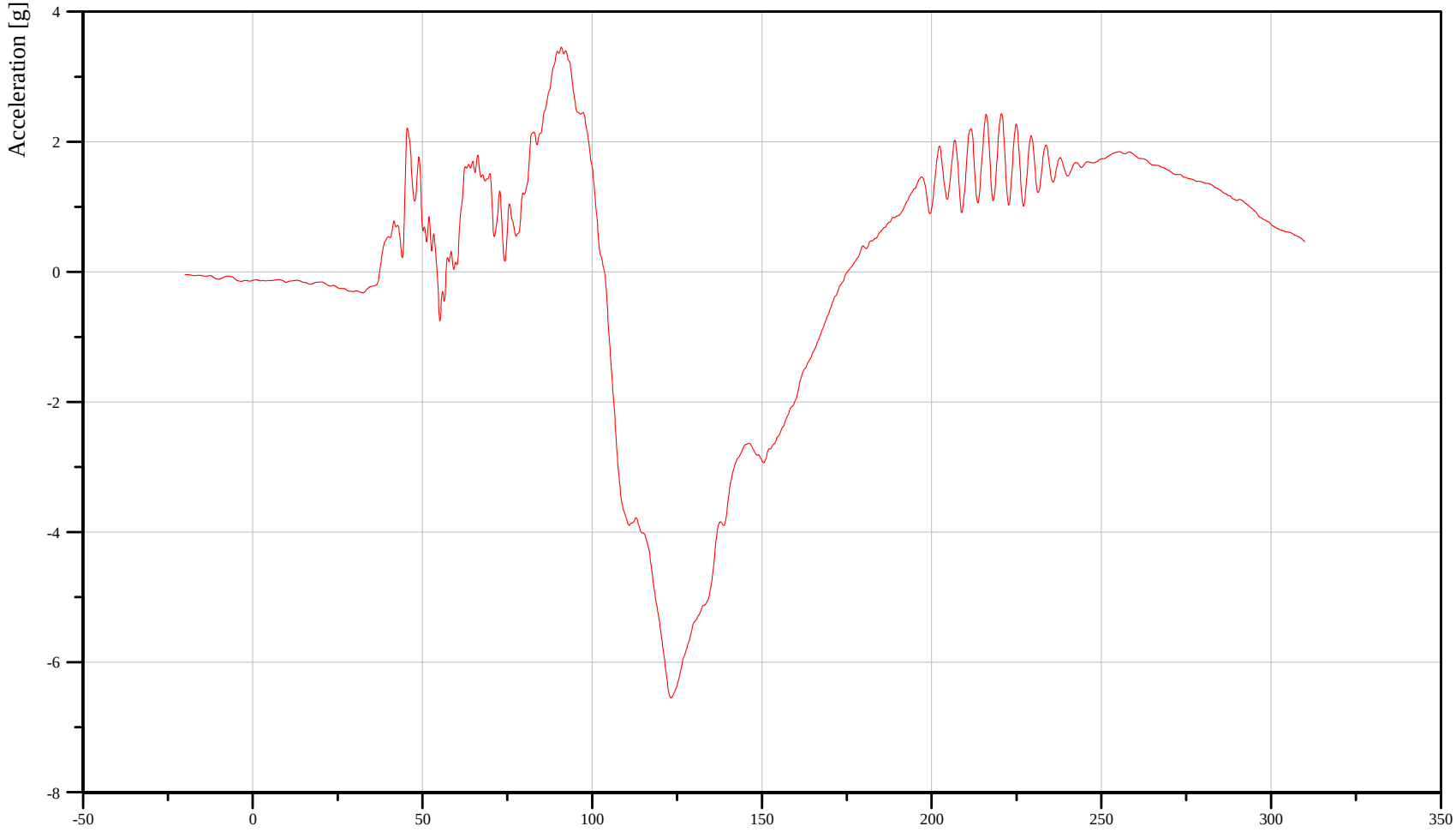
Bullet Vehicle Passenger Chest Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13CHSTCG00HFACZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-6.55 g at 123.20 ms

Max. Value
3.45 g at 90.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

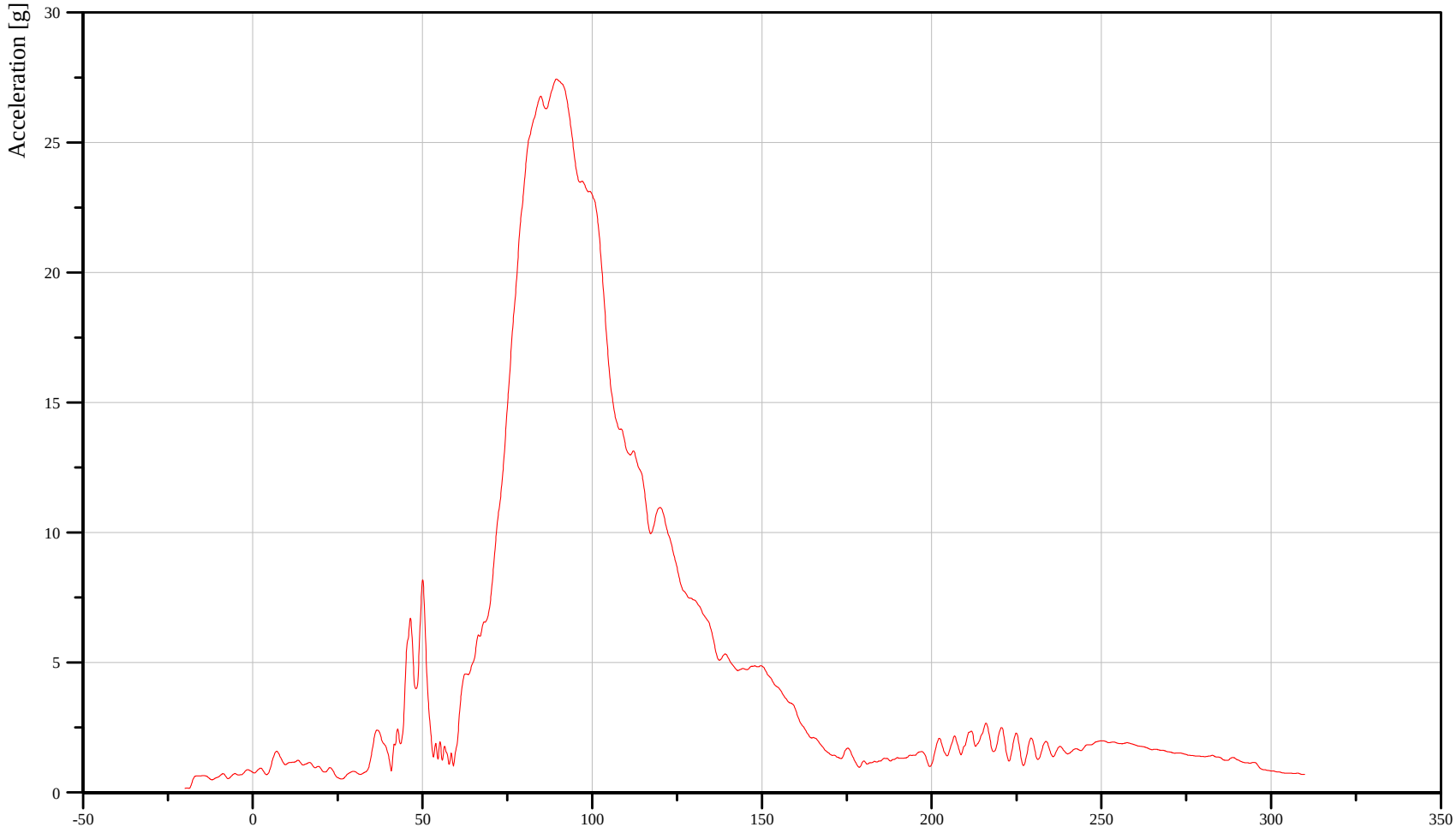
Bullet Vehicle Passenger Chest Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13CHSTCG00HFACRC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.16 g at -20.00 ms

Max. Value
27.44 g at 89.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

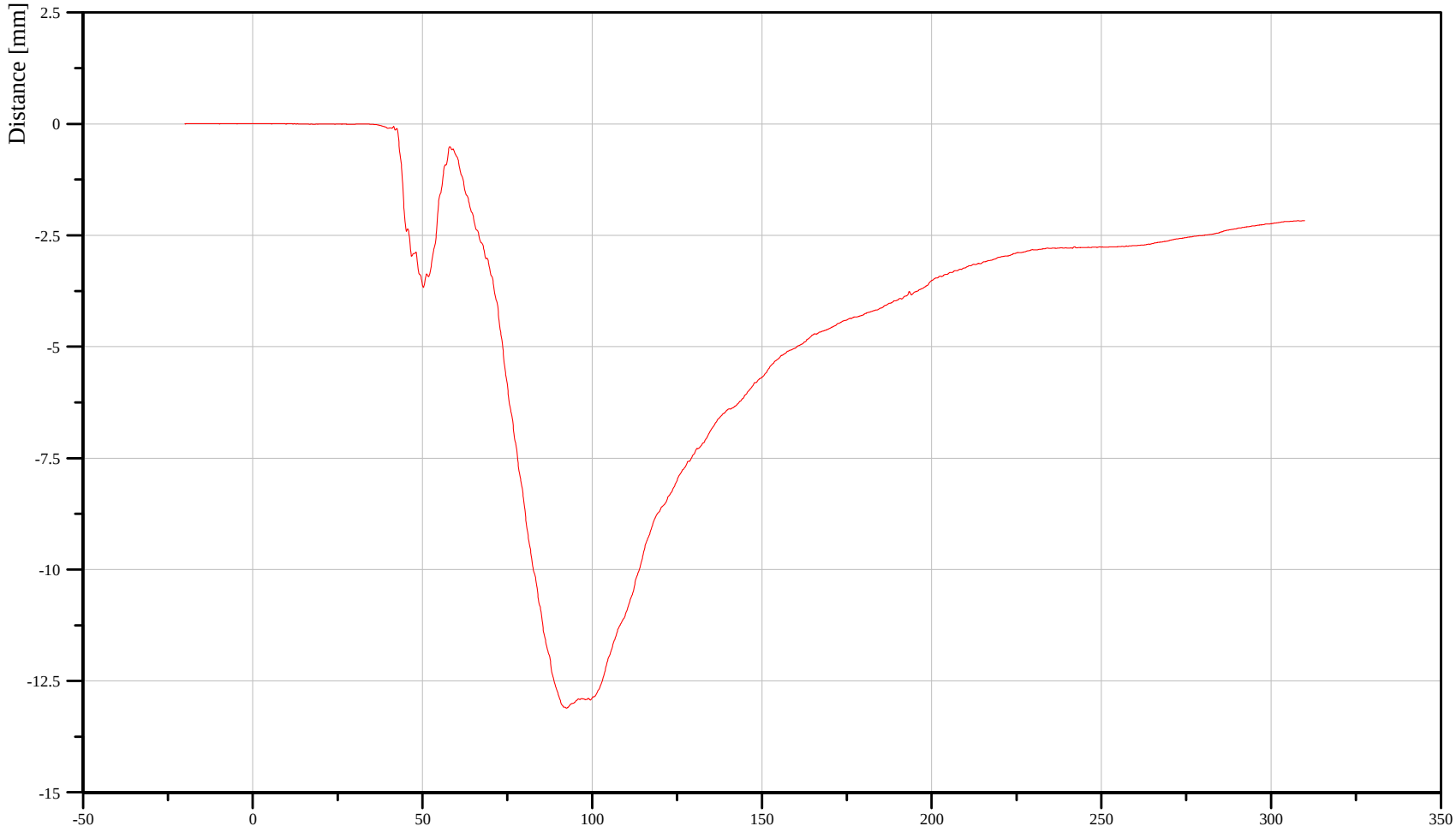
Bullet Vehicle Passenger Chest X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13CHST0000HFDSXB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-13.11 mm at 92.48 ms

Max. Value
0.01 mm at -7.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

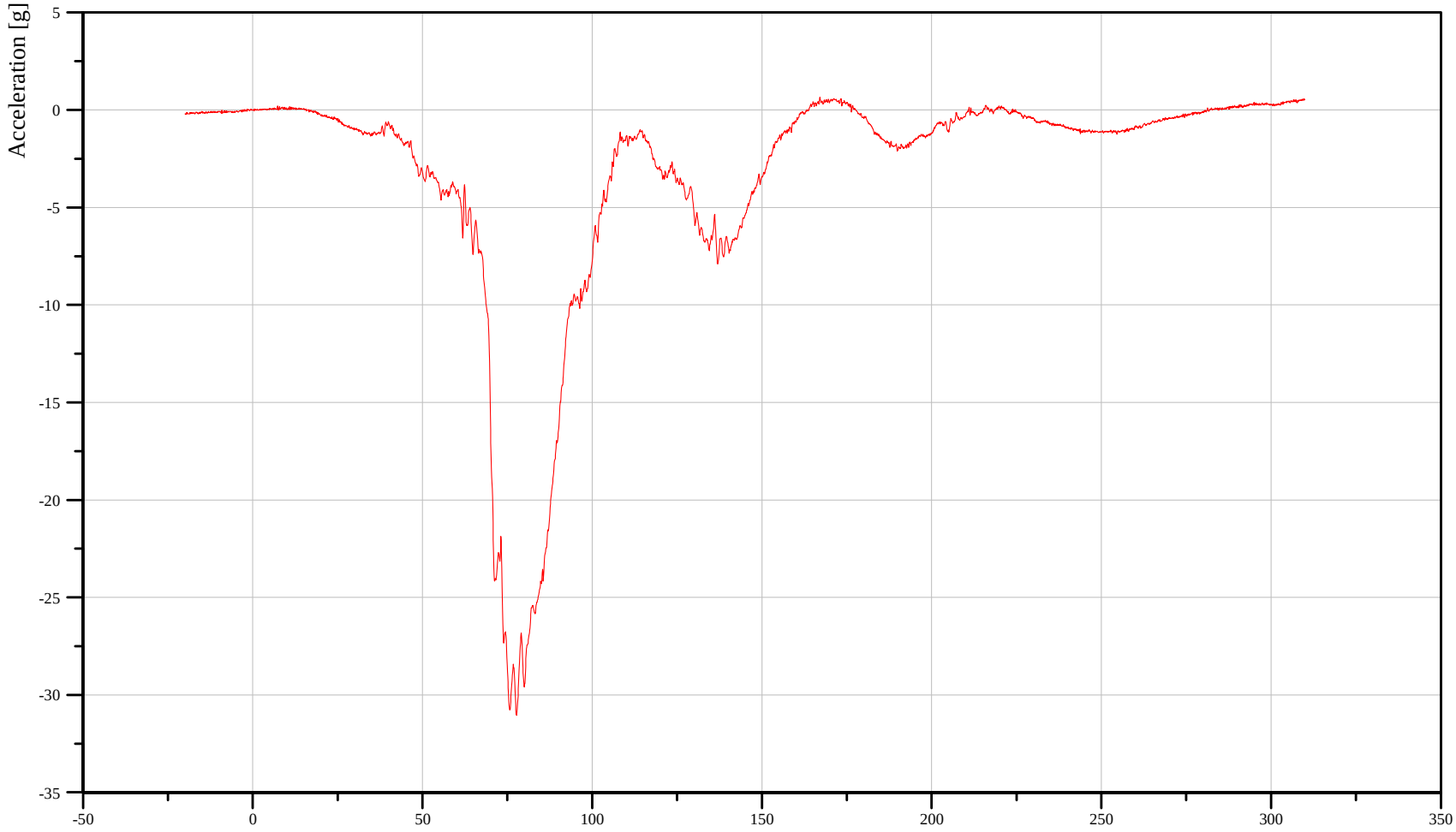
Bullet Vehicle Passenger Pelvis X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13PELVCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-31.04 g at 77.76 ms

Max. Value
0.67 g at 167.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

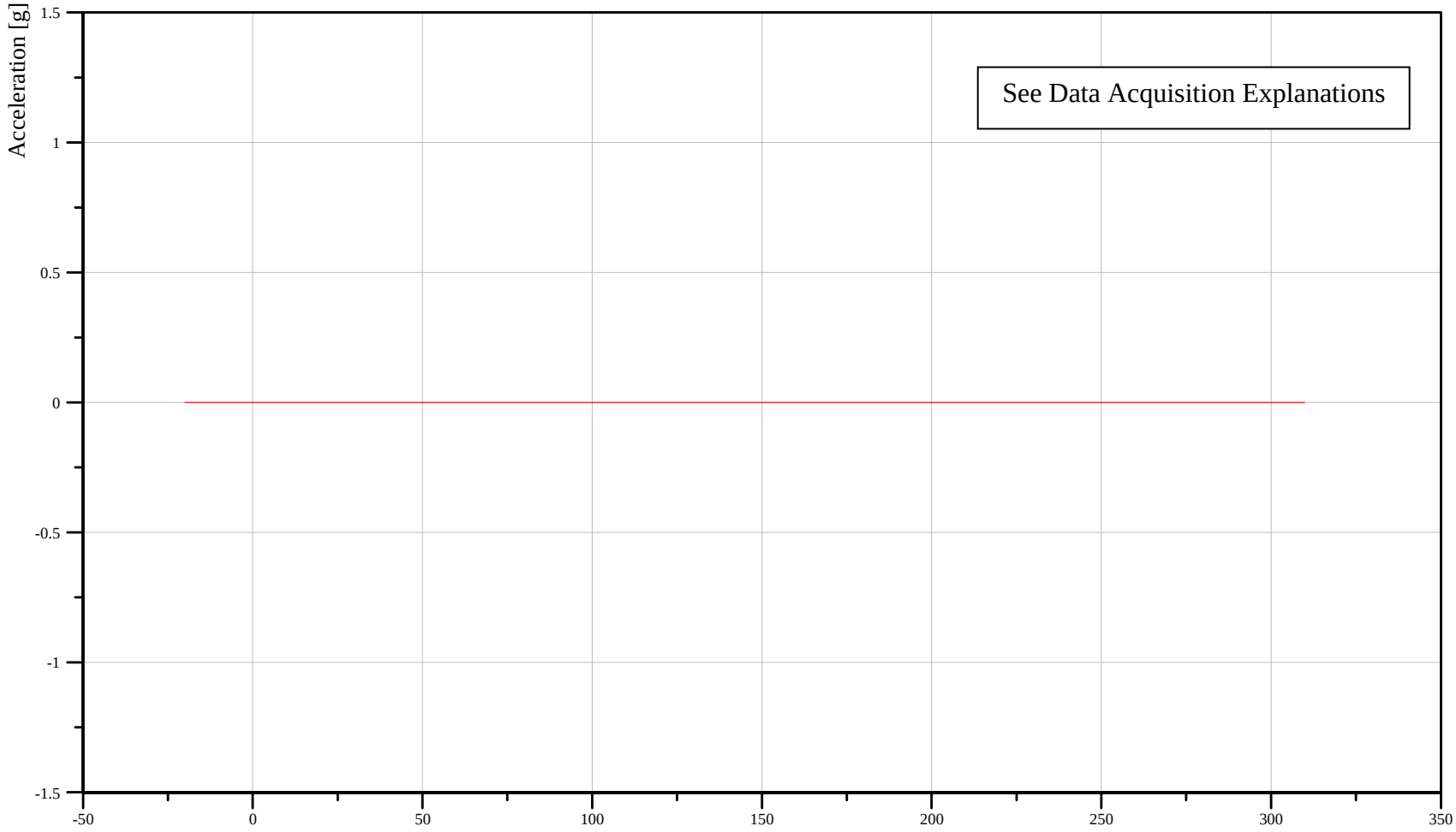
Bullet Vehicle Passenger Pelvis Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13PELVCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.00 g at -20.00 ms

Max. Value
0.00 g at -20.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

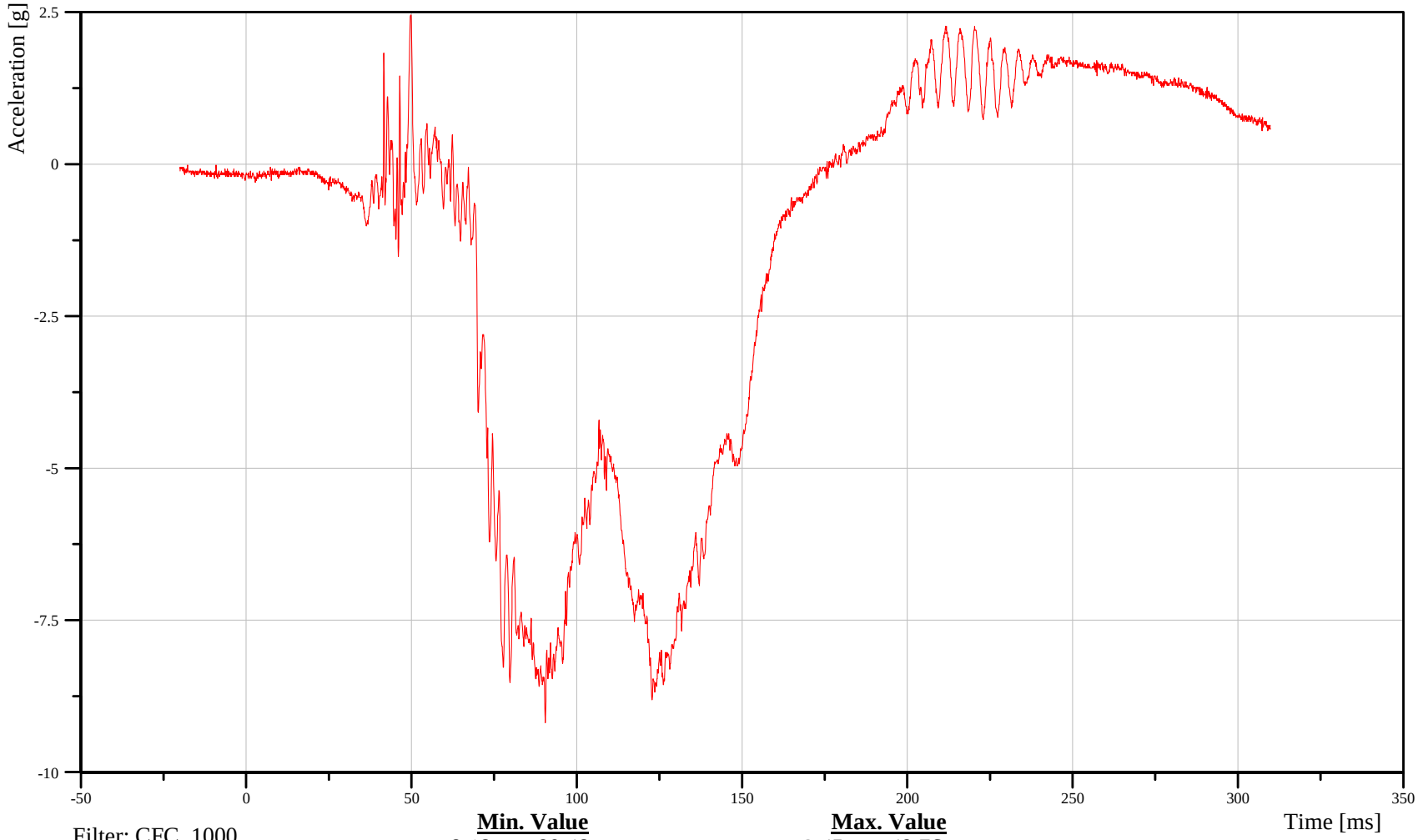
Bullet Vehicle Passenger Pelvis Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13PELVCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-9.18 g at 90.48 ms

Max. Value
2.45 g at 49.76 ms

B-283

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

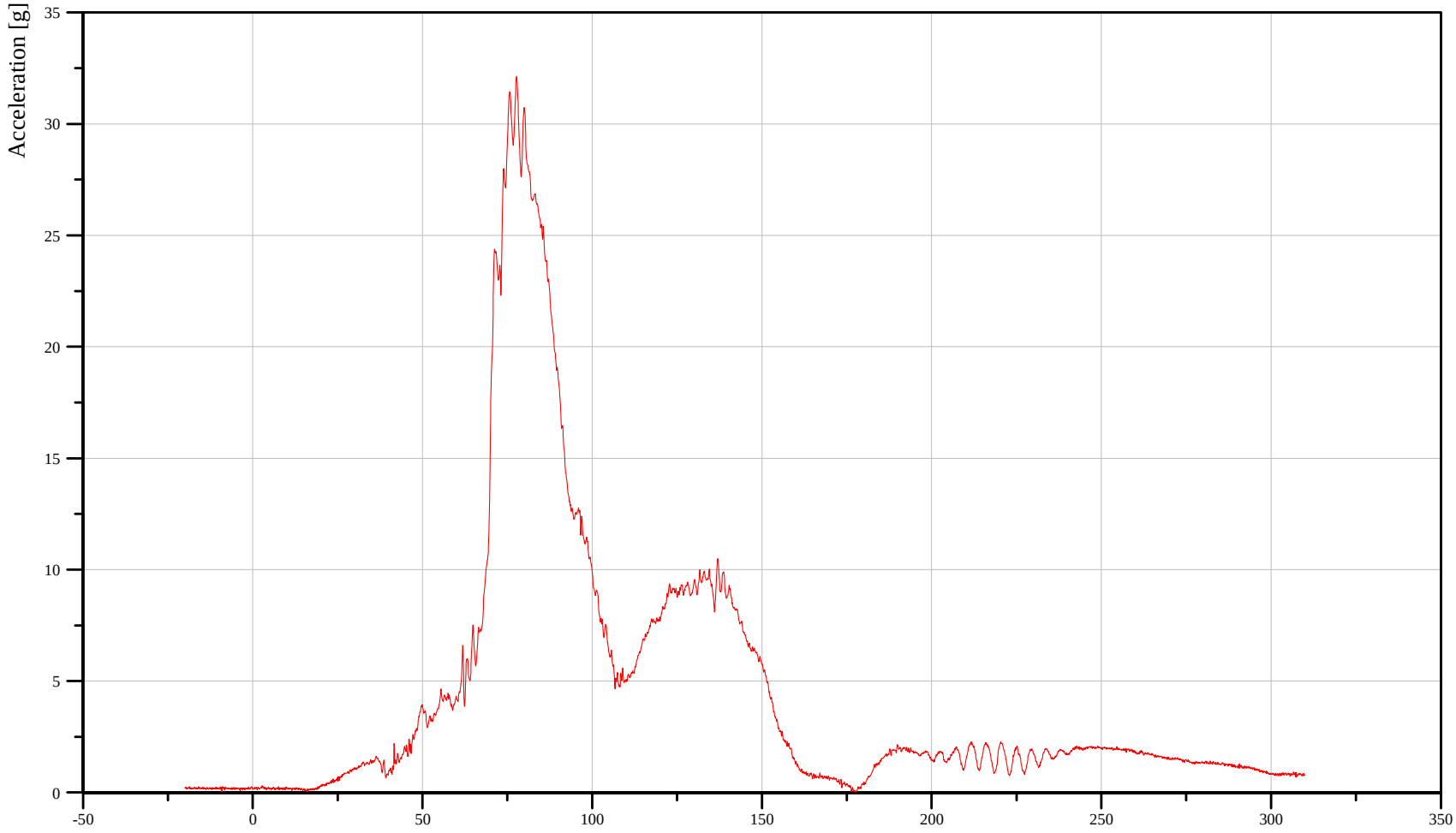
Bullet Vehicle Passenger Pelvis Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13PELVCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.02 g at -9.12 ms

Max. Value
32.13 g at 77.76 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

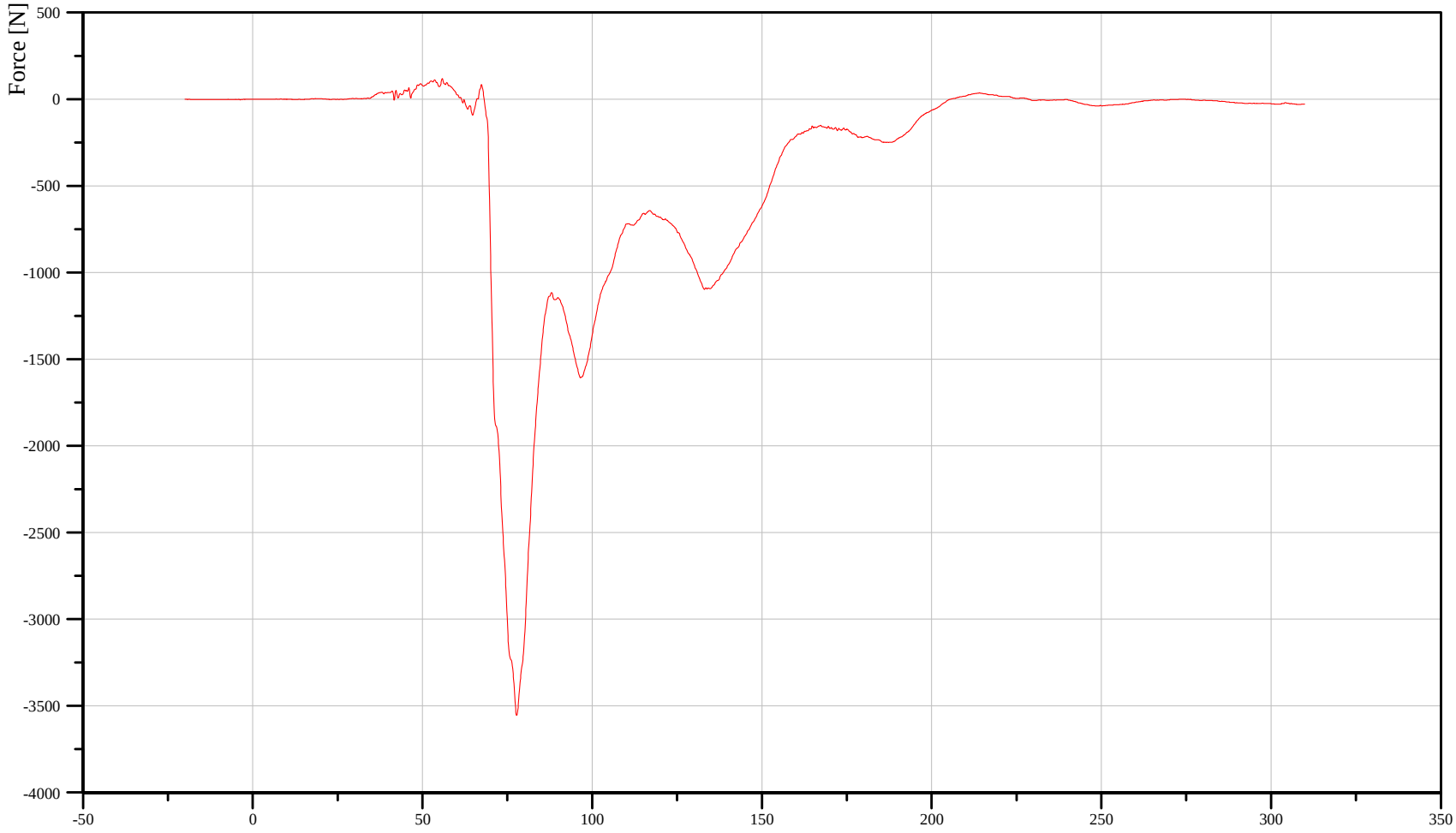
Bullet Vehicle Passenger Left Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-3,554.71 N at 77.76 ms

Max. Value
118.64 N at 55.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

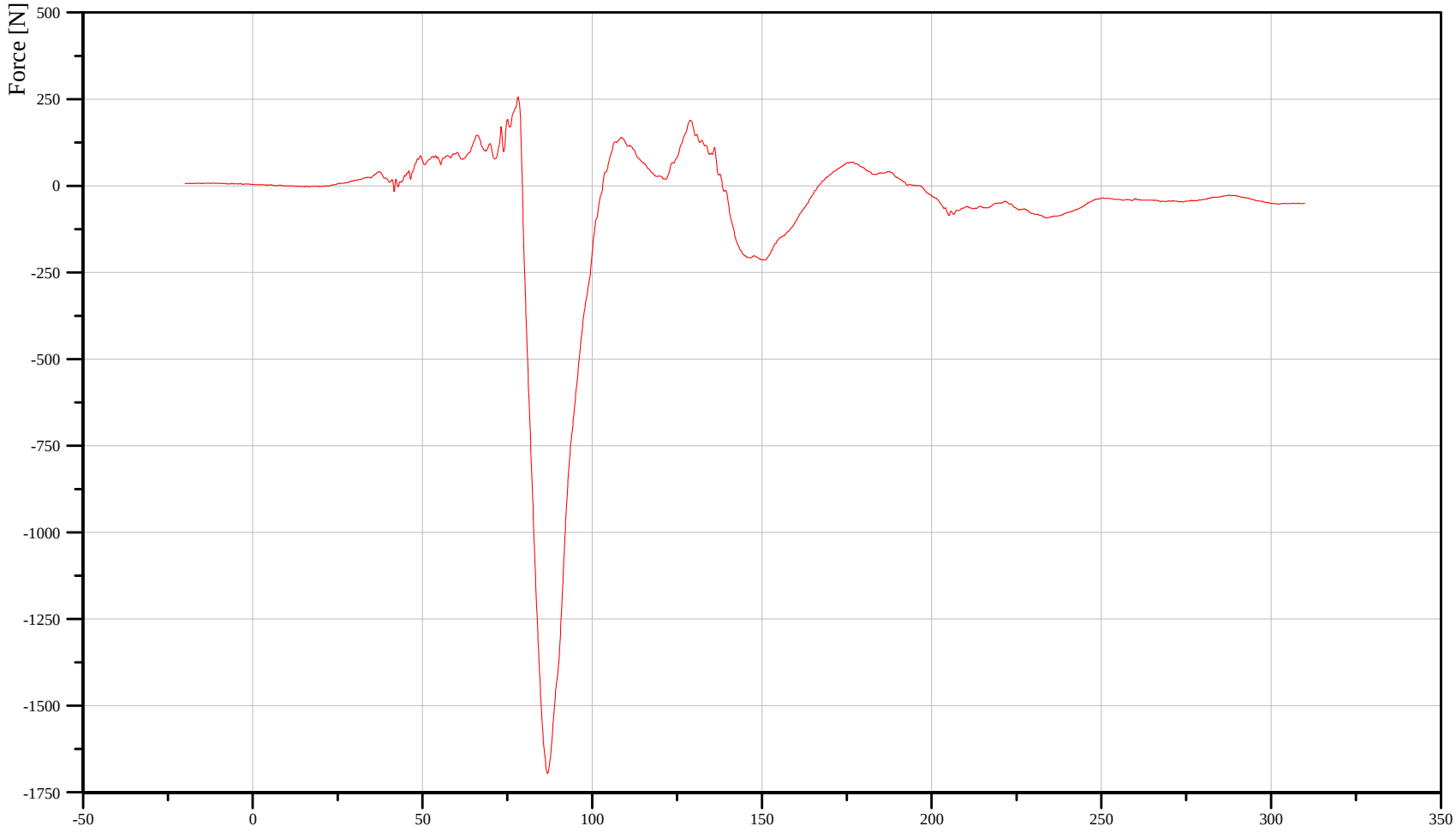
Bullet Vehicle Passenger Right Femur Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,695.28 N at 86.80 ms

Max. Value
256.35 N at 78.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

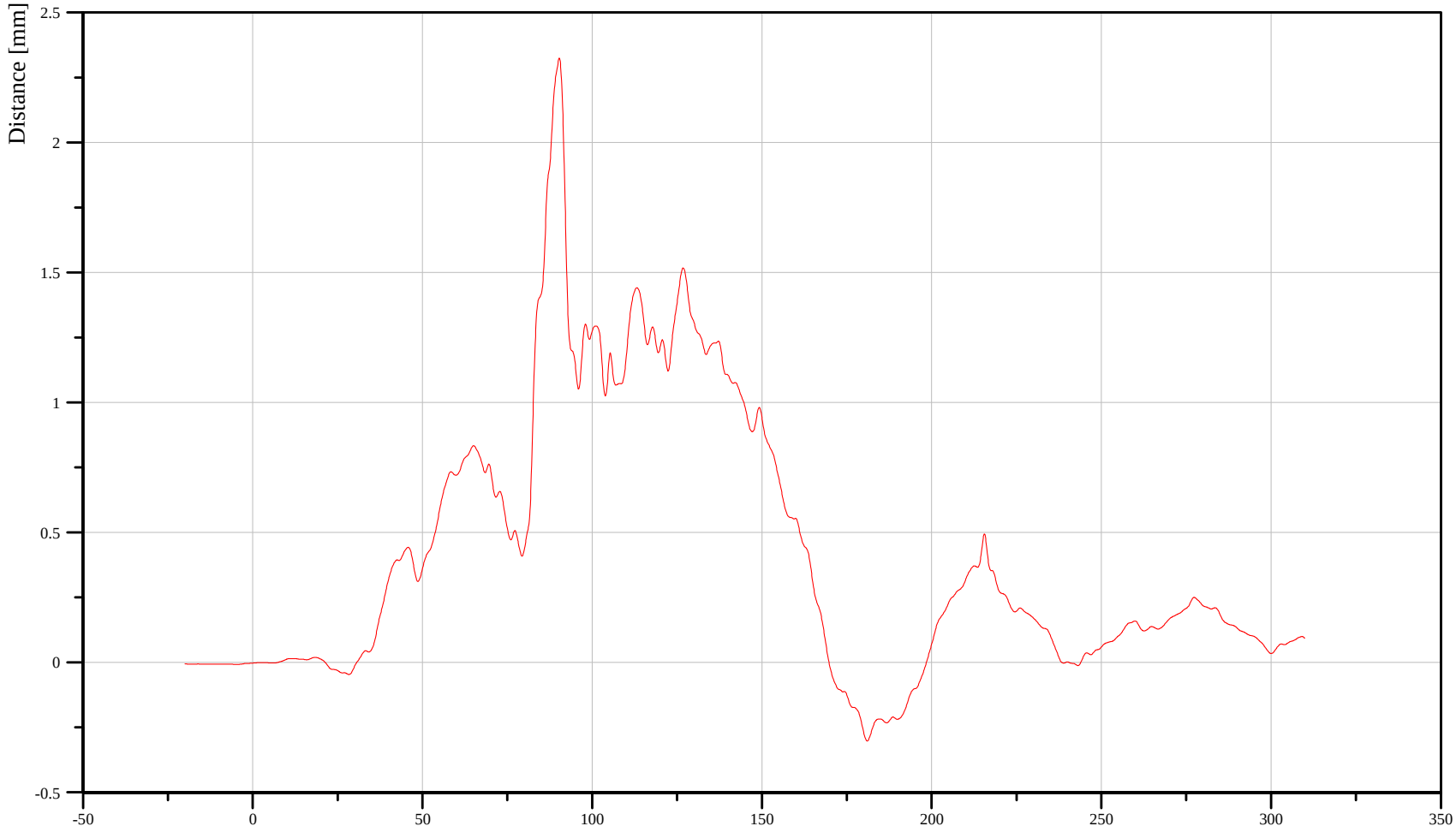
Bullet Vehicle Passenger Left Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.30 mm at 181.04 ms

Max. Value
2.32 mm at 90.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

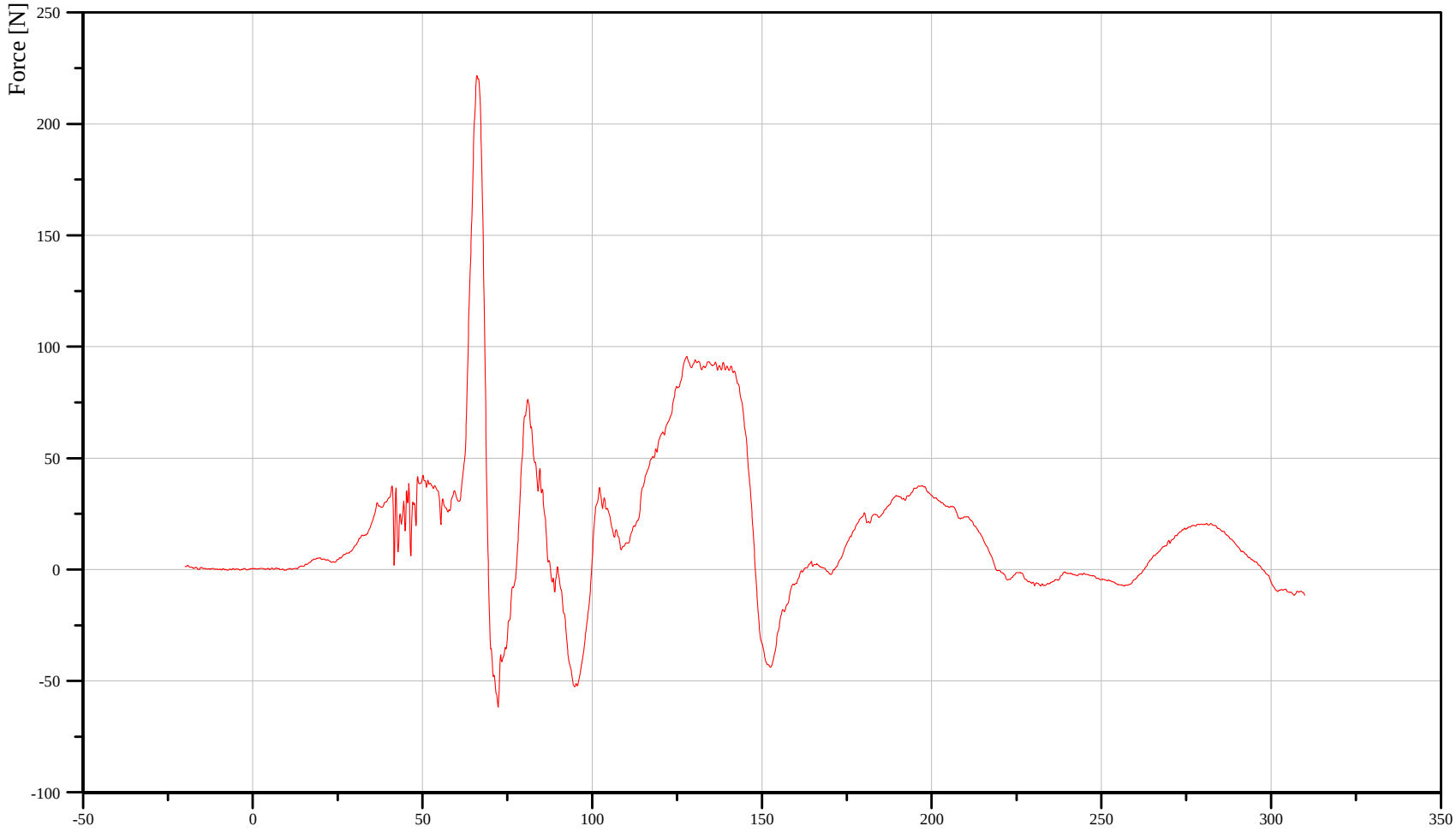
Bullet Vehicle Passenger Left Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILUFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-61.70 N at 72.32 ms

Max. Value
221.73 N at 66.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

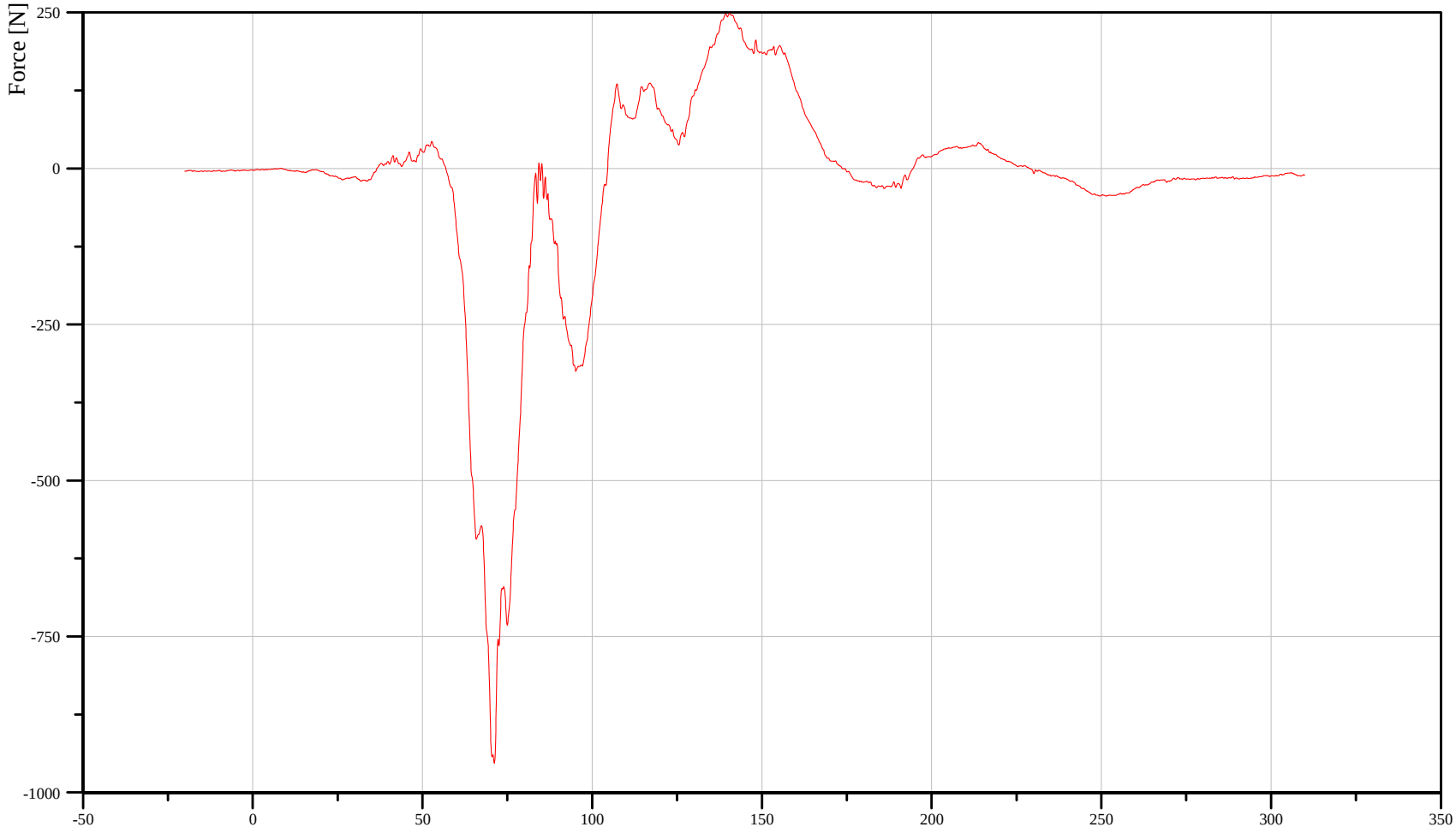
Bullet Vehicle Passenger Left Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILUFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-952.87 N at 71.20 ms

Max. Value
248.42 N at 140.48 ms

B-289

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

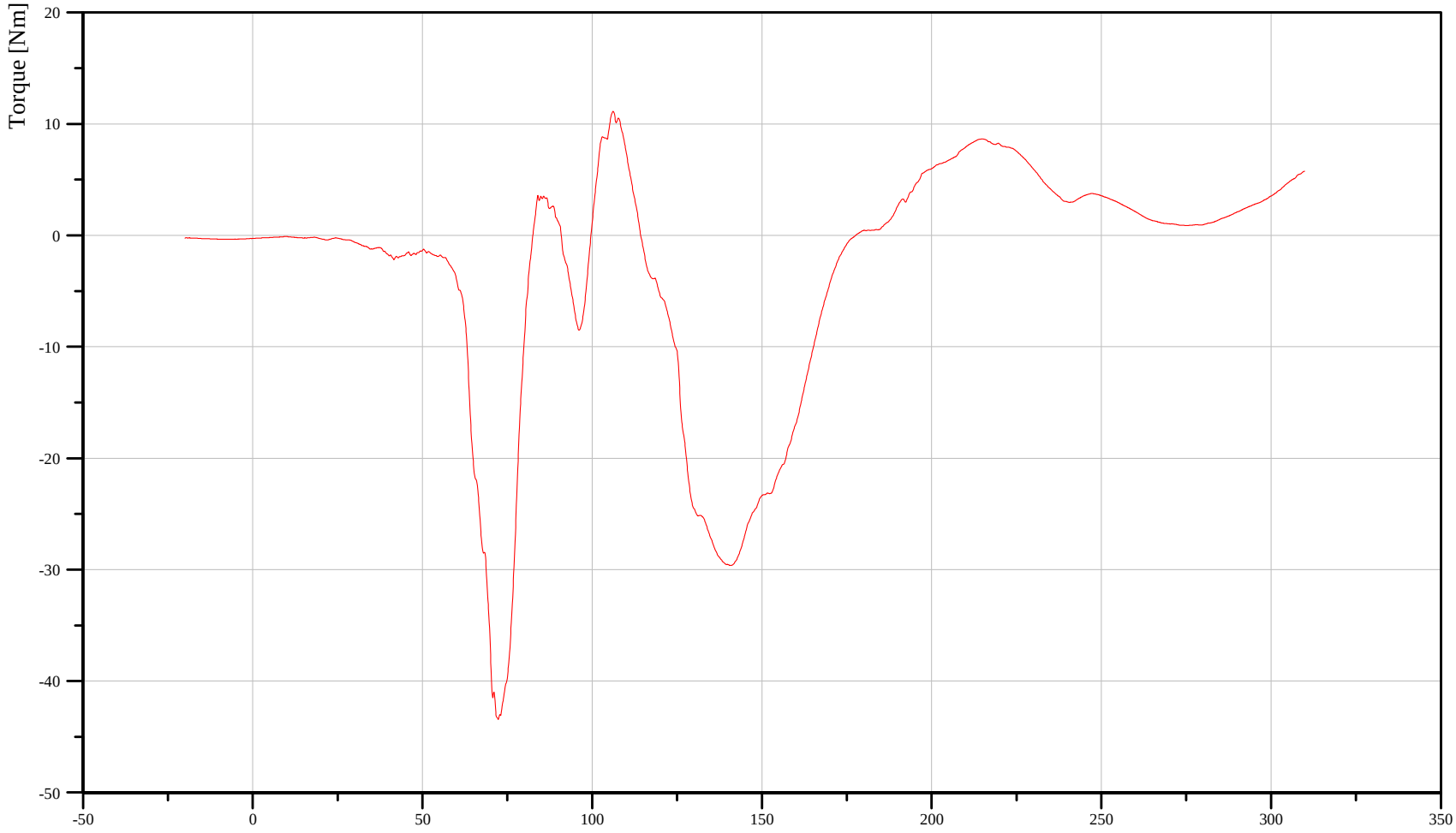
Bullet Vehicle Passenger Left Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILUFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-43.45 Nm at 72.32 ms

Max. Value
11.12 Nm at 106.16 ms

B-290

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

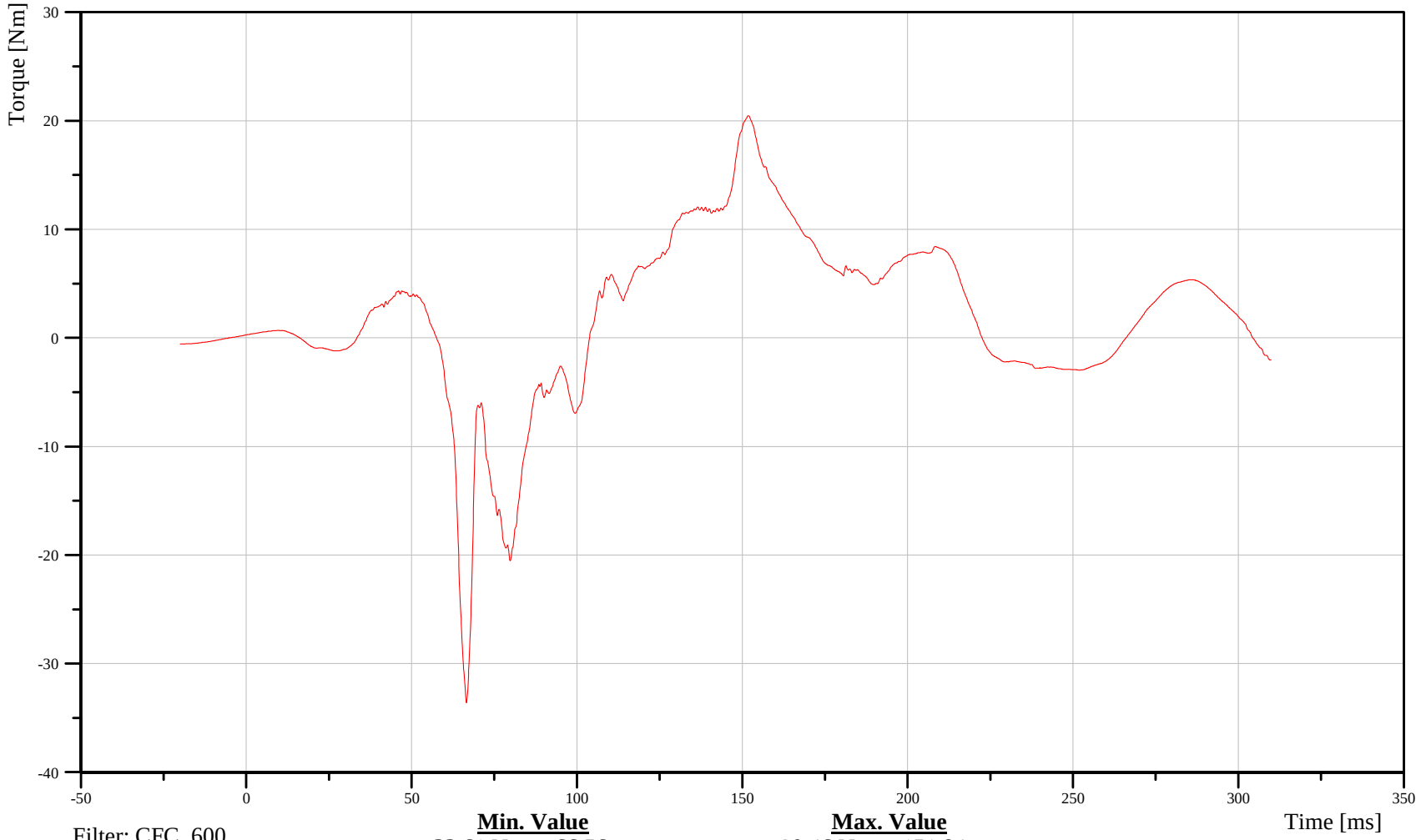
Bullet Vehicle Passenger Left Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILUFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-33.61 Nm at 66.56 ms

Max. Value
20.46 Nm at 151.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

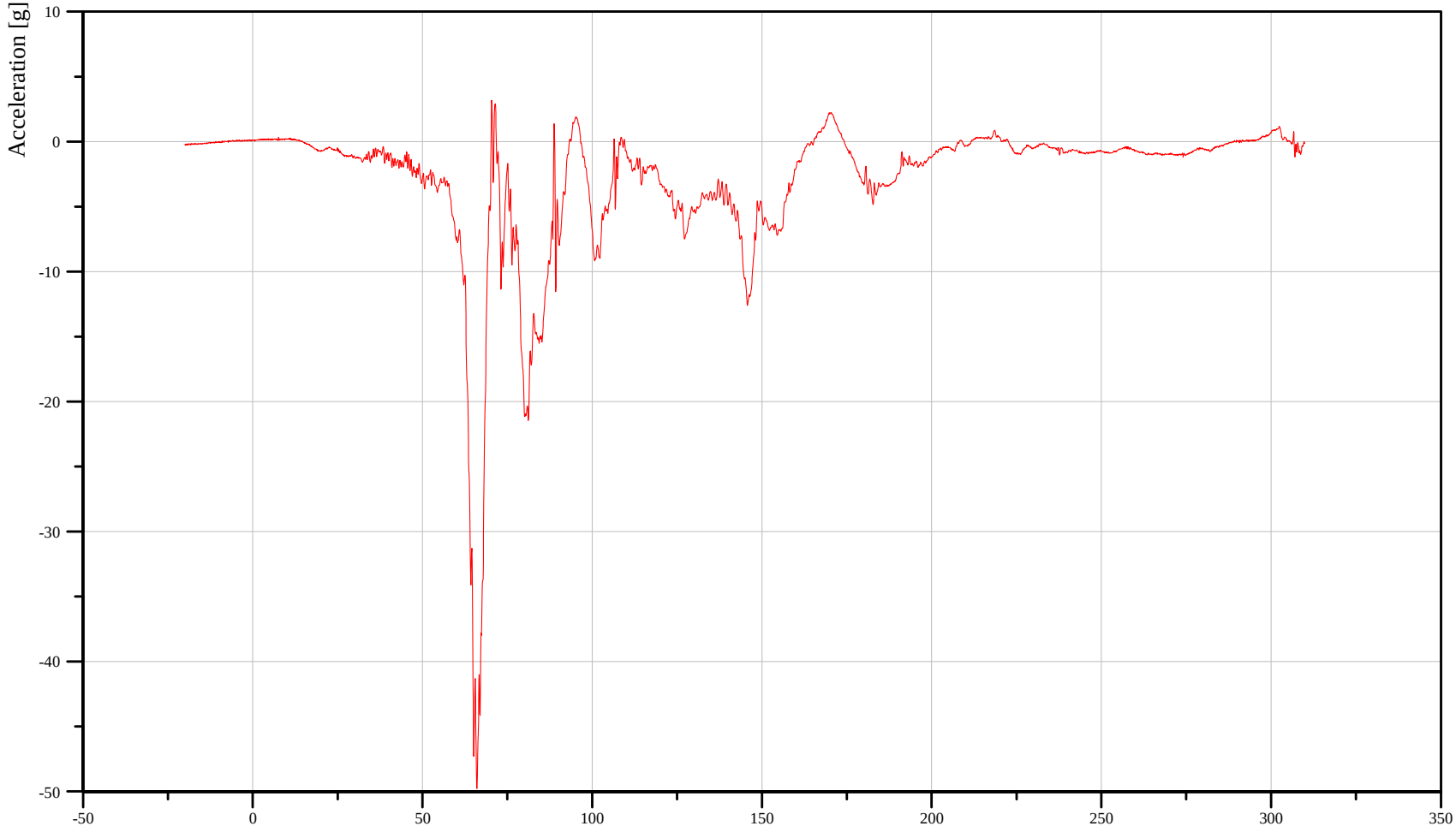
Bullet Vehicle Passenger Left Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILEFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-49.78 g at 66.08 ms

Max. Value
3.19 g at 70.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

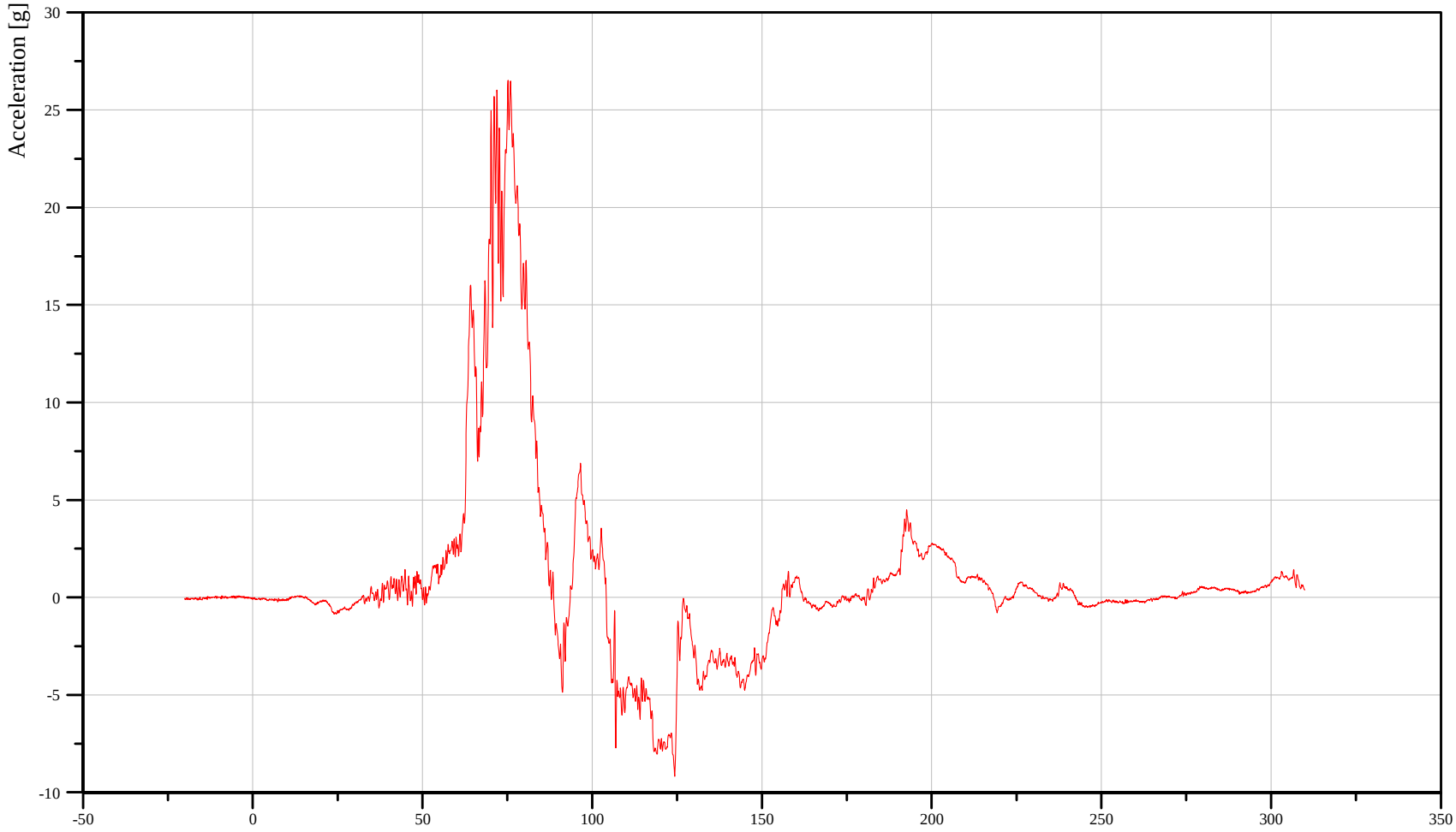
Bullet Vehicle Passenger Left Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILEFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-9.18 g at 124.24 ms

Max. Value
26.52 g at 75.20 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

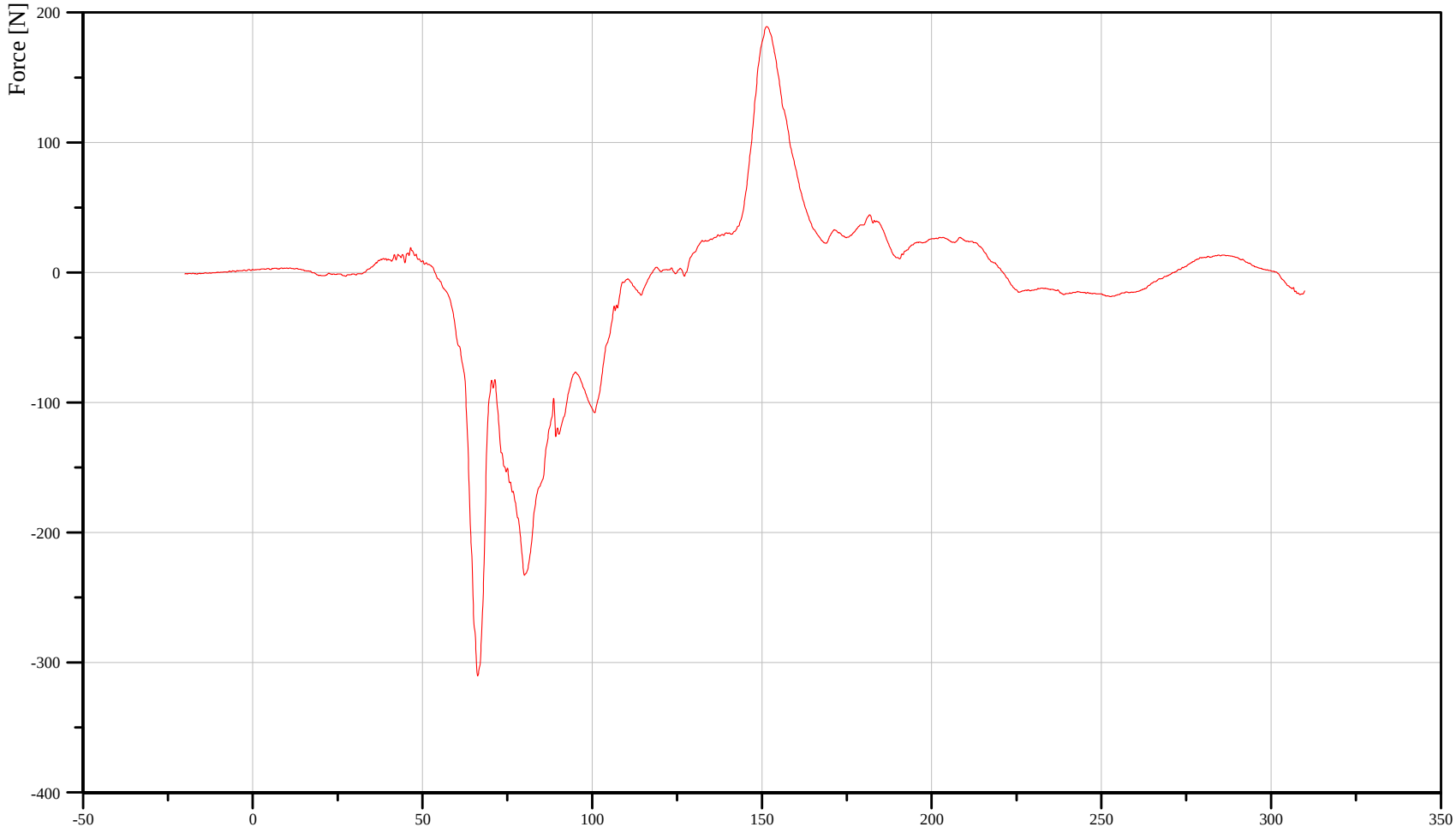
Bullet Vehicle Passenger Left Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILLFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-310.17 N at 66.24 ms

Max. Value
189.14 N at 151.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

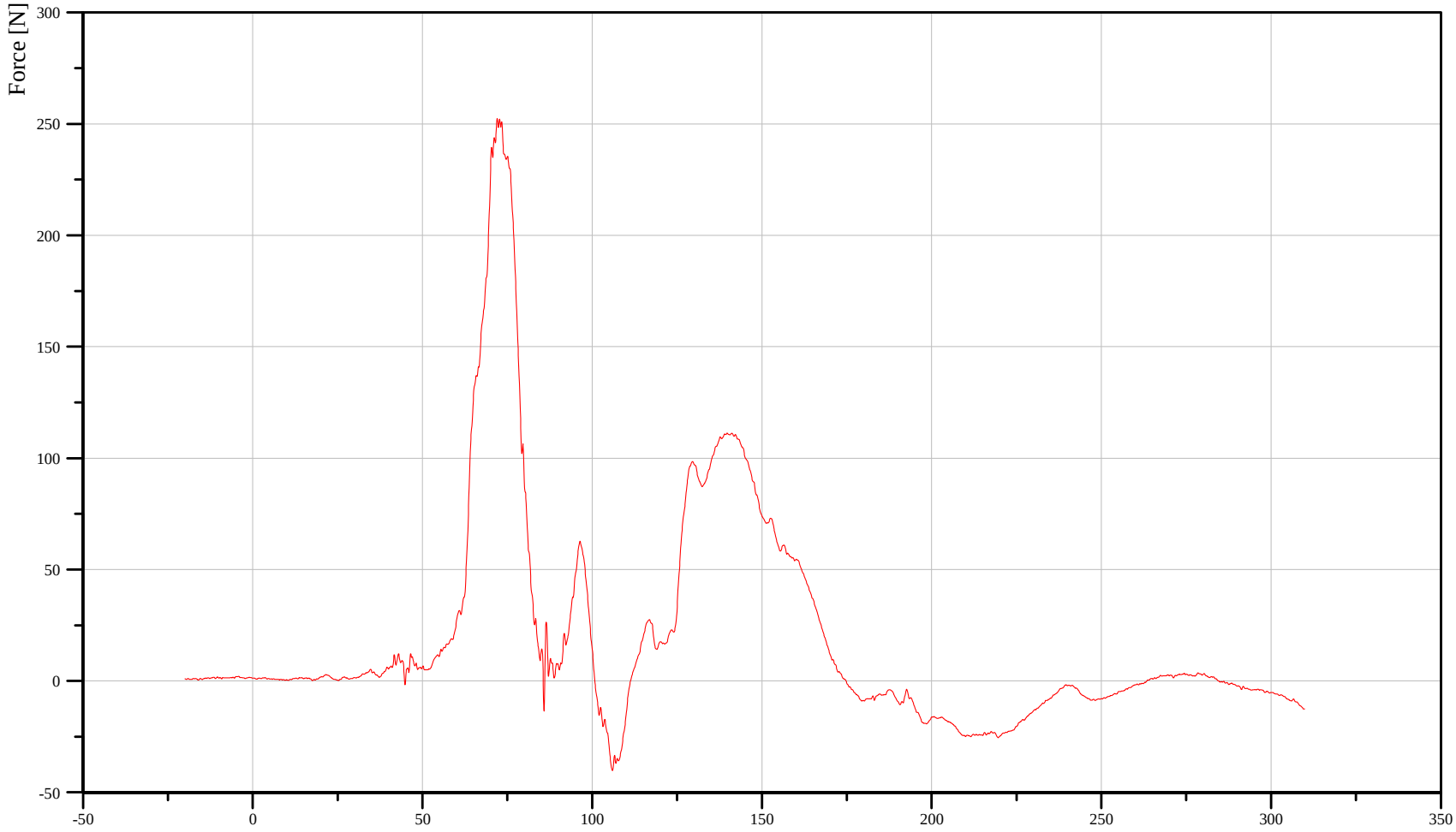
Bullet Vehicle Passenger Left Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILLFXHFFOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-40.25 N at 106.00 ms

Max. Value
252.46 N at 72.00 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

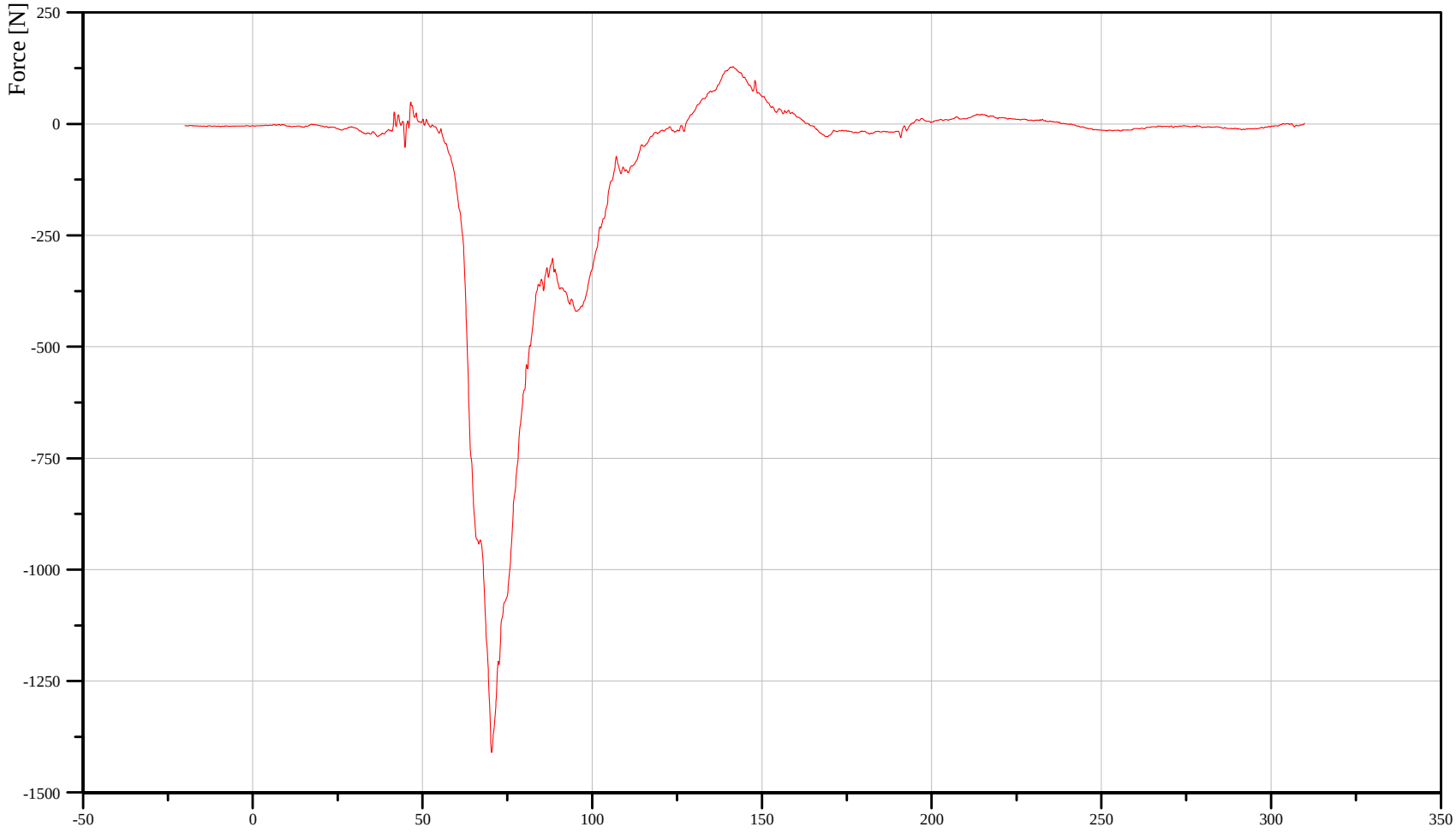
Bullet Vehicle Passenger Left Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILLFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,410.20 N at 70.40 ms

Max. Value
128.32 N at 141.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

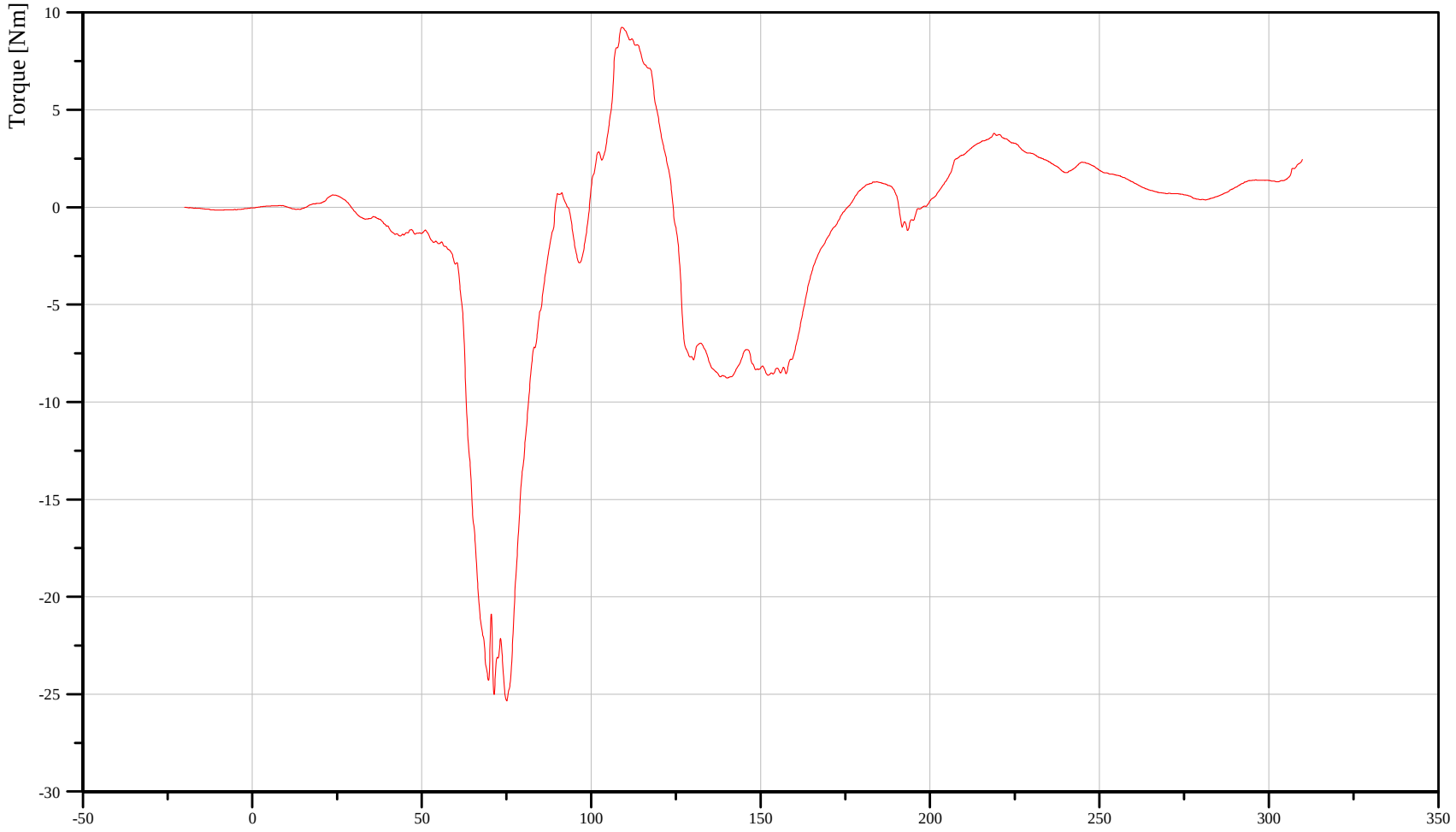
Bullet Vehicle Passenger Left Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILLFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-25.34 Nm at 75.12 ms

Max. Value
9.24 Nm at 109.04 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

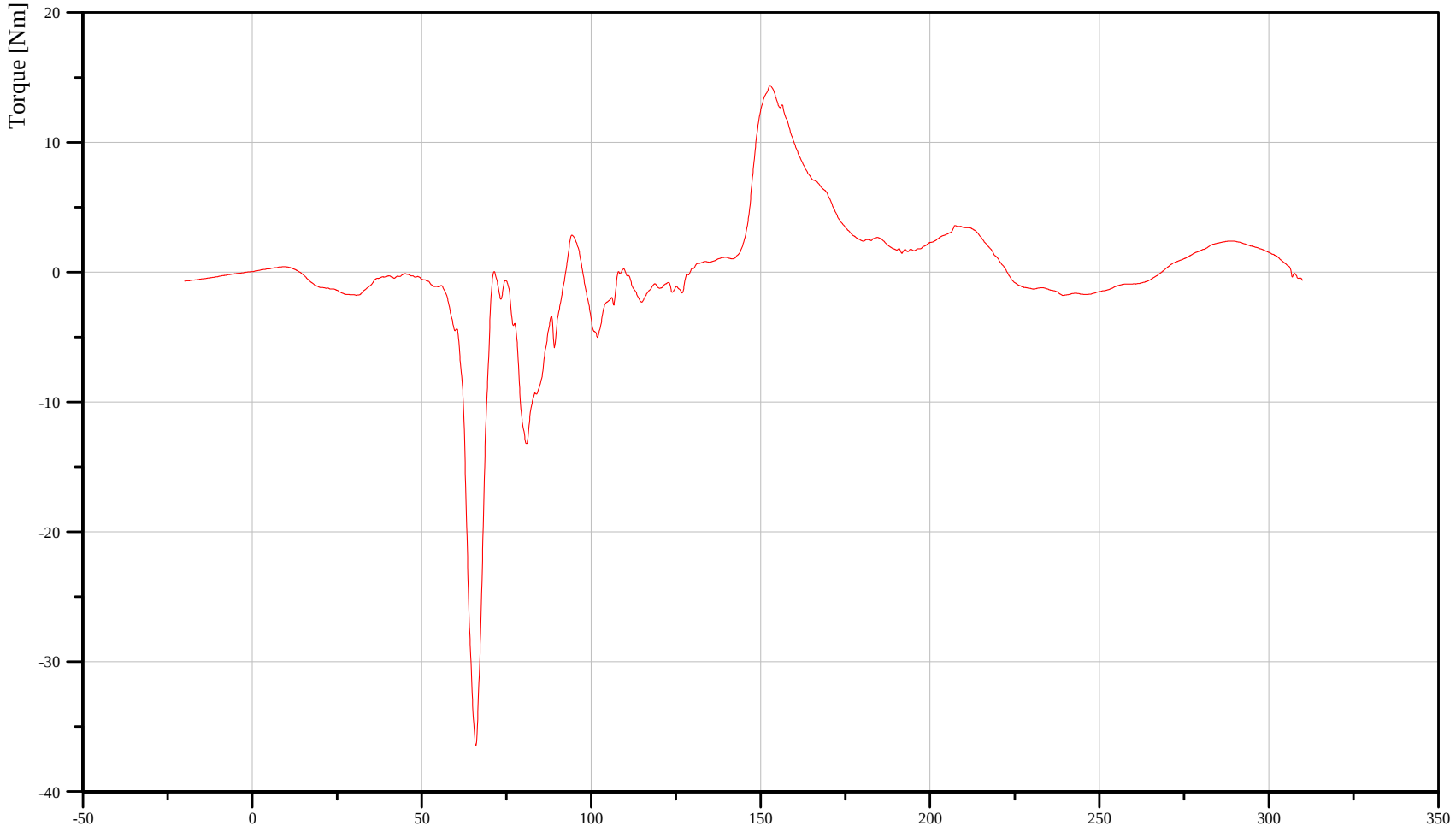
Bullet Vehicle Passenger Left Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBILLFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-36.50 Nm at 66.00 ms

Max. Value
14.37 Nm at 152.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

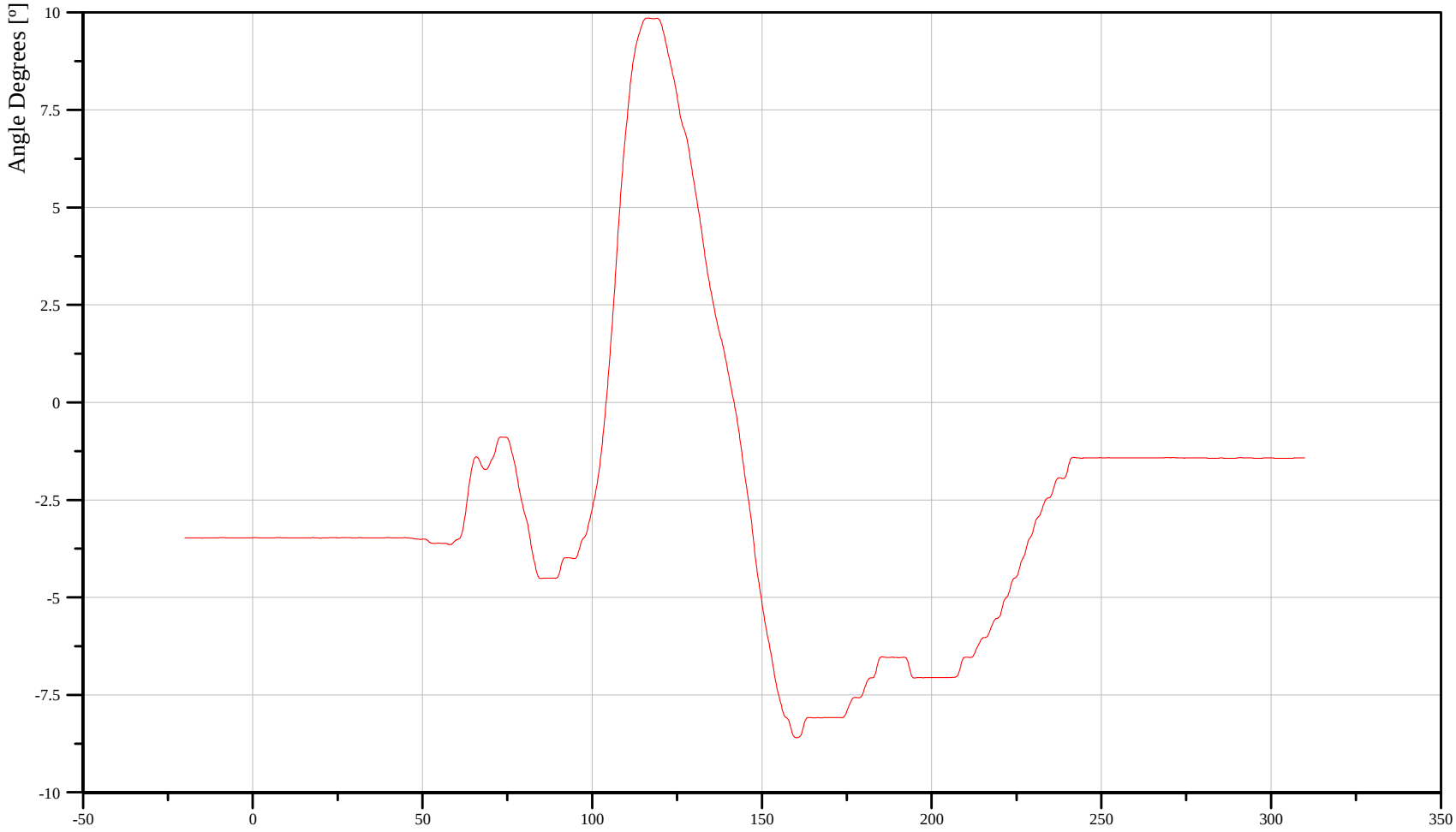
Bullet Vehicle Passenger Left Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-8.60 ° at 160.16 ms

Max. Value
9.86 ° at 116.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

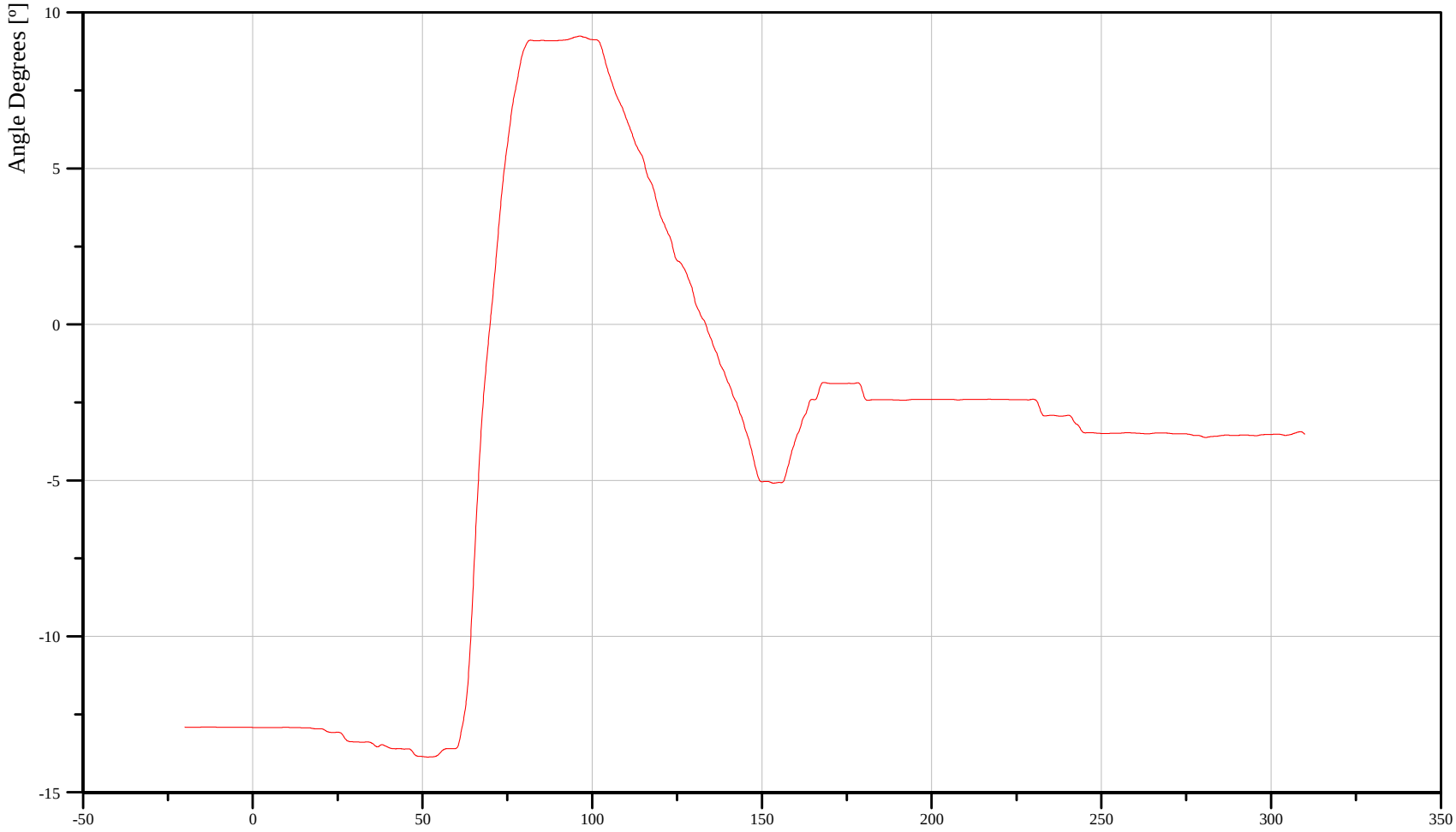
Bullet Vehicle Passenger Left Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-13.87 ° at 51.60 ms

Max. Value
9.24 ° at 96.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

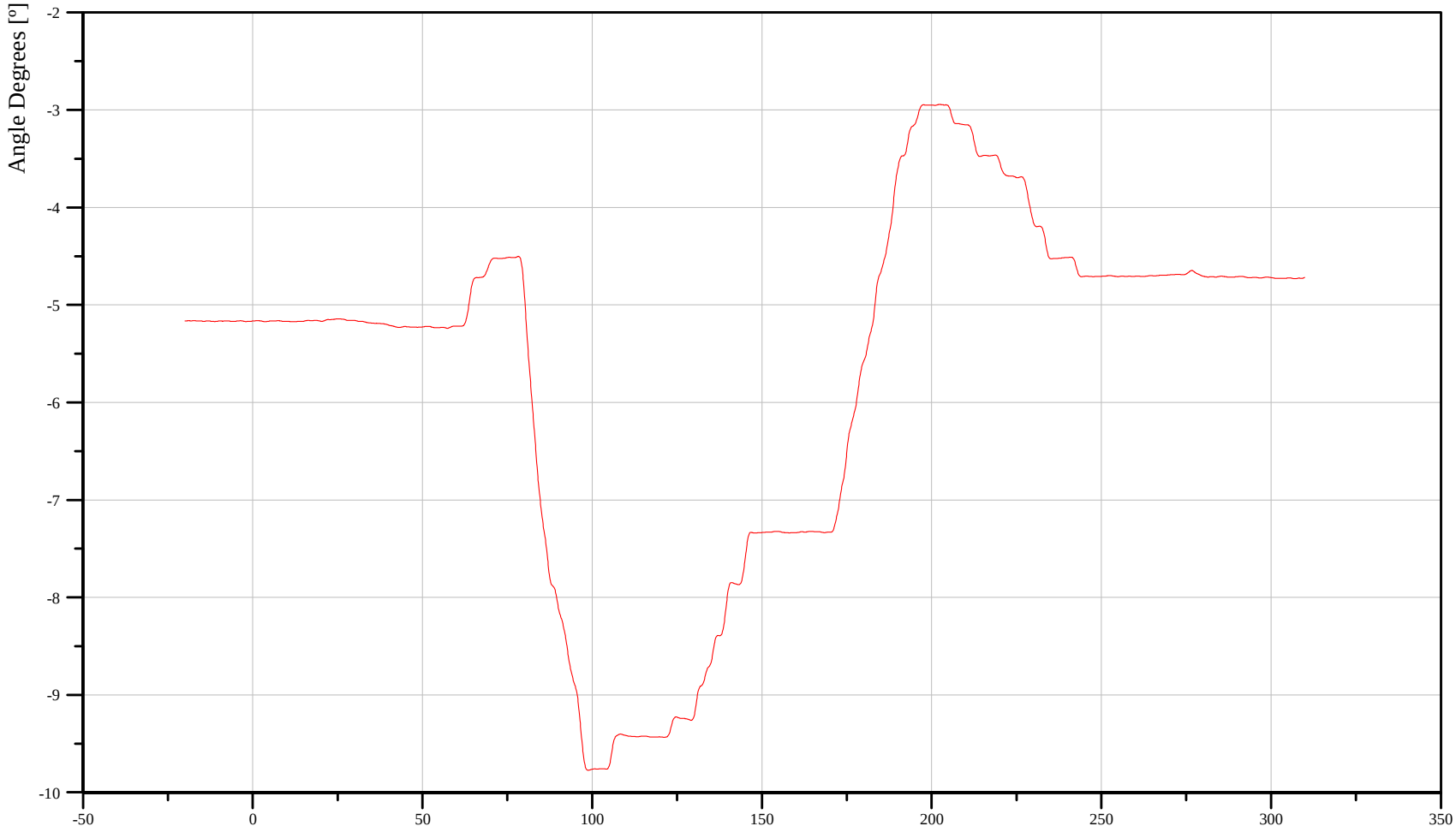
Bullet Vehicle Passenger Left Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-9.77 ° at 98.80 ms

Max. Value
-2.94 ° at 202.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

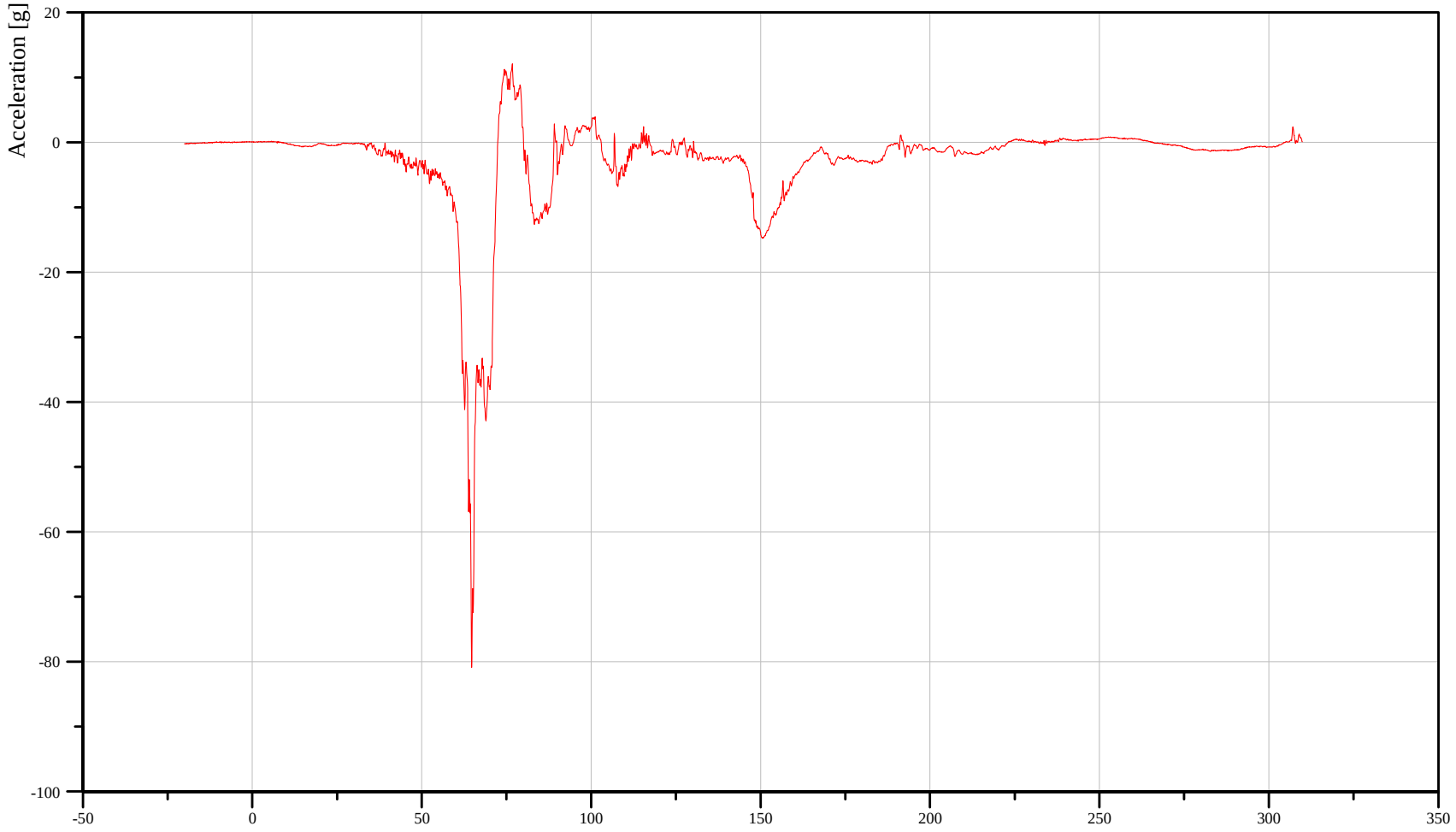
Bullet Vehicle Passenger Left Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-80.86 g at 64.72 ms

Max. Value
12.09 g at 76.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

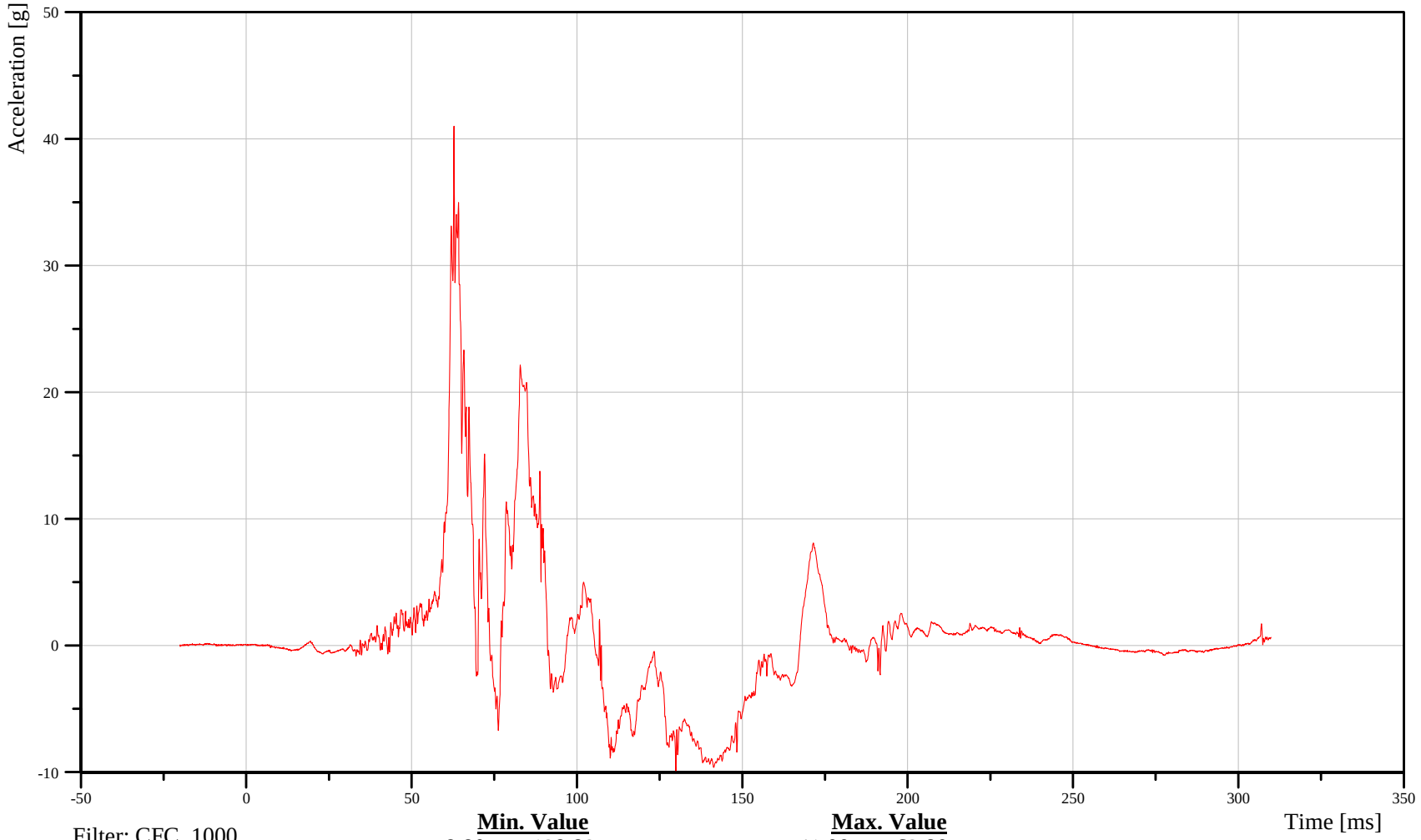
Bullet Vehicle Passenger Left Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-9.90 g at 129.92 ms

Max. Value
41.00 g at 62.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

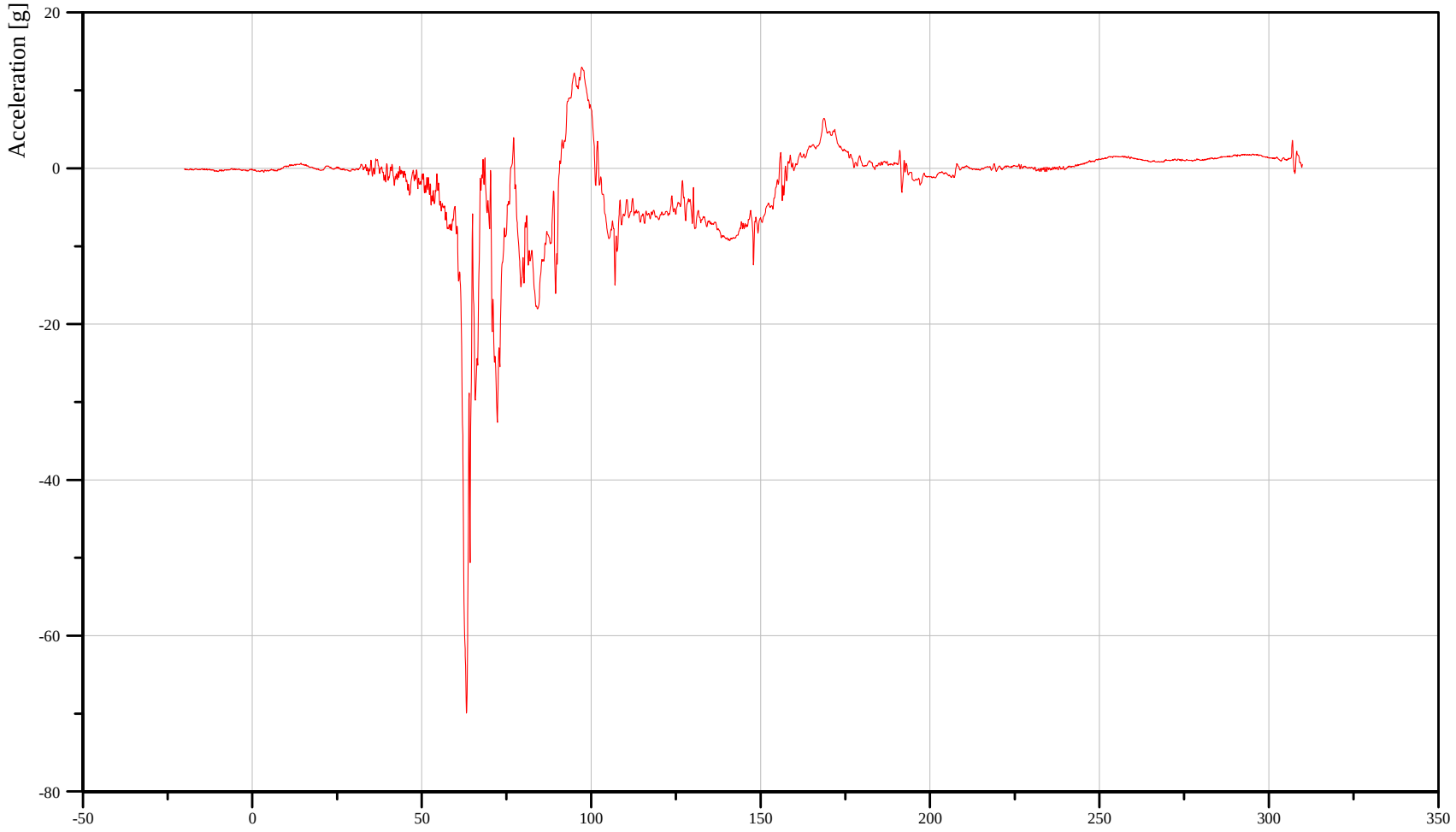
Bullet Vehicle Passenger Left Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-69.92 g at 63.20 ms

Max. Value
12.99 g at 97.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

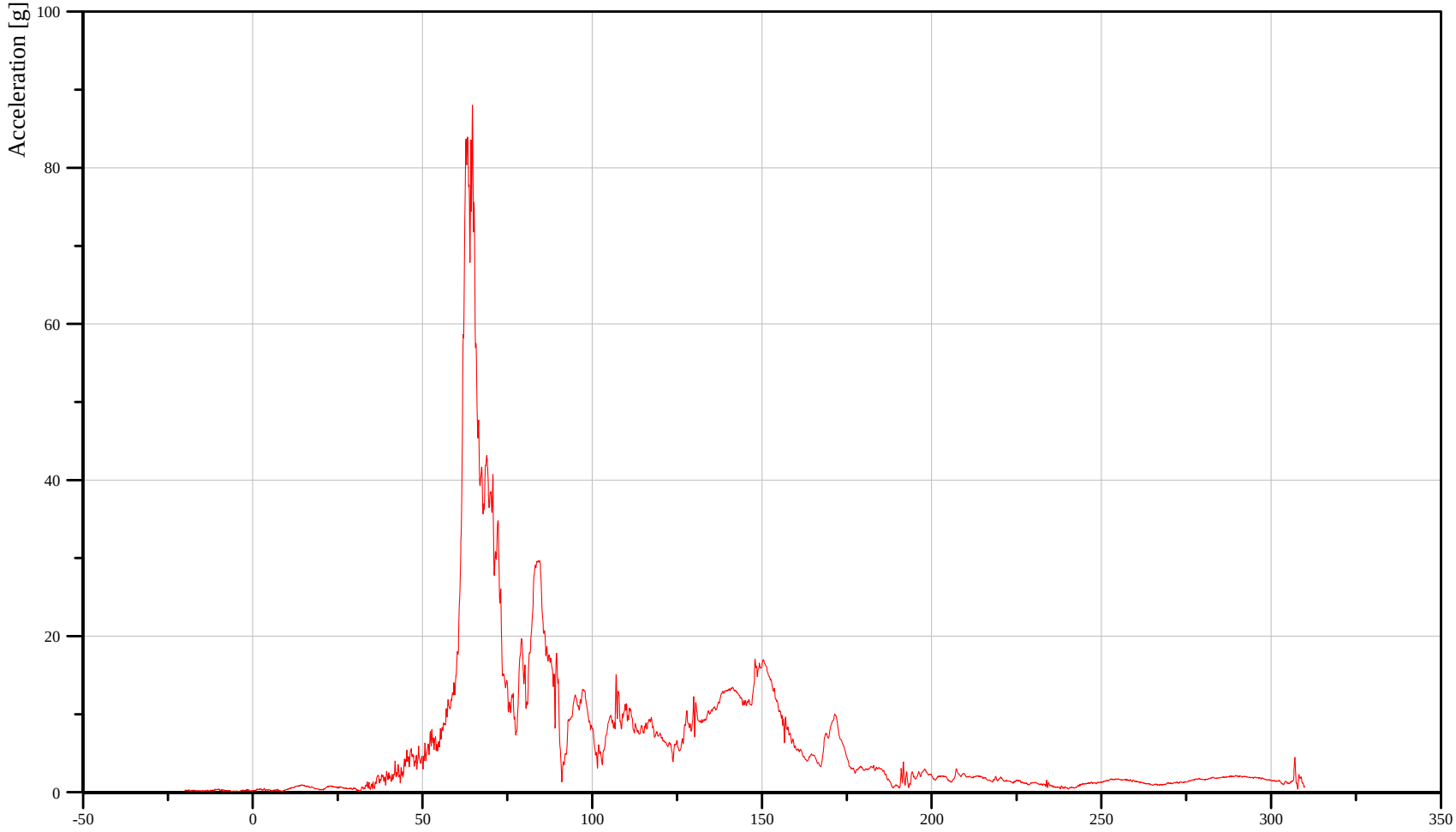
Bullet Vehicle Passenger Left Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.06 g at -6.08 ms

Max. Value
88.00 g at 64.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

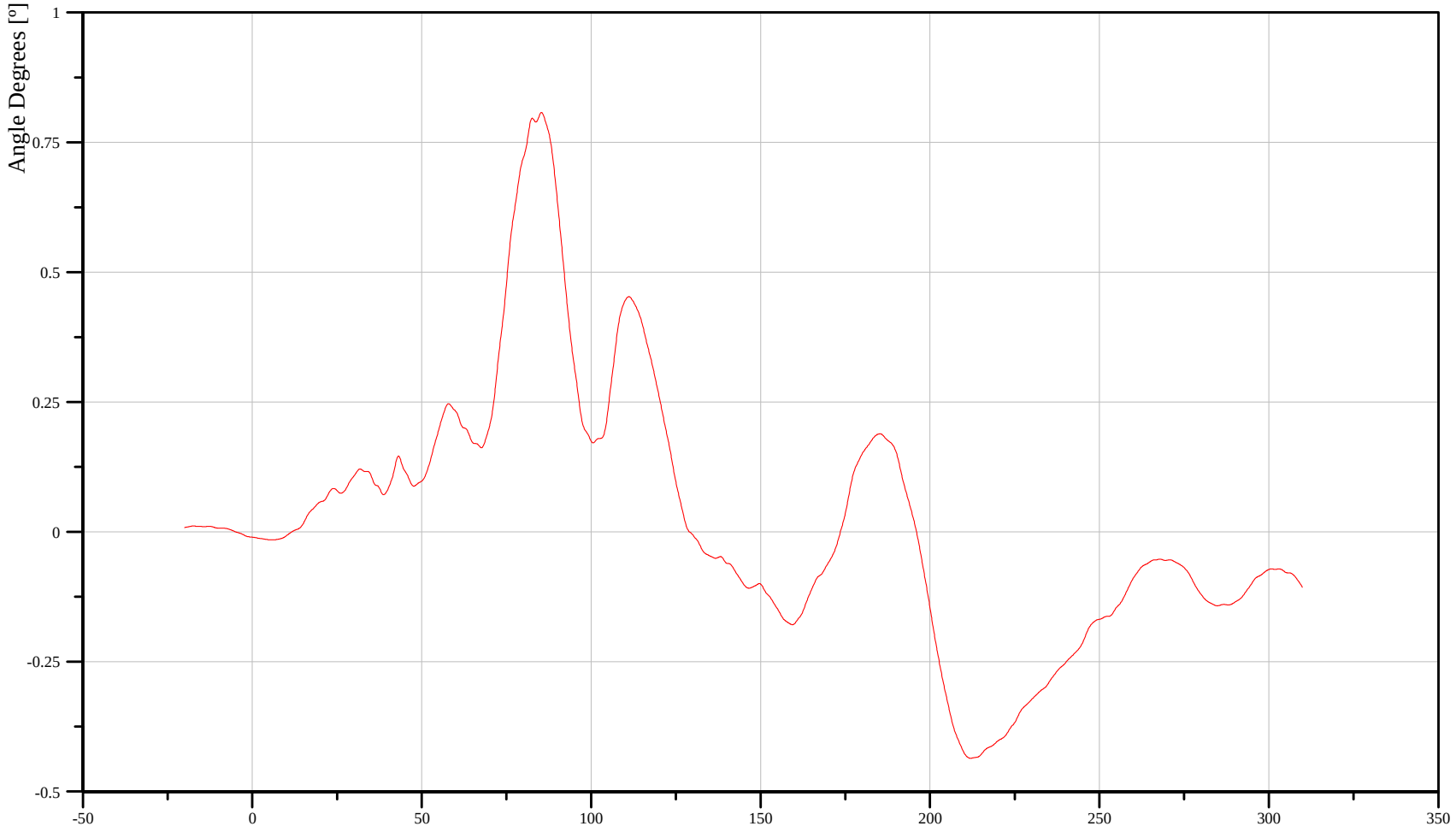
Bullet Vehicle Passenger Right Knee X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.44 ° at 212.00 ms

Max. Value
0.81 ° at 85.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

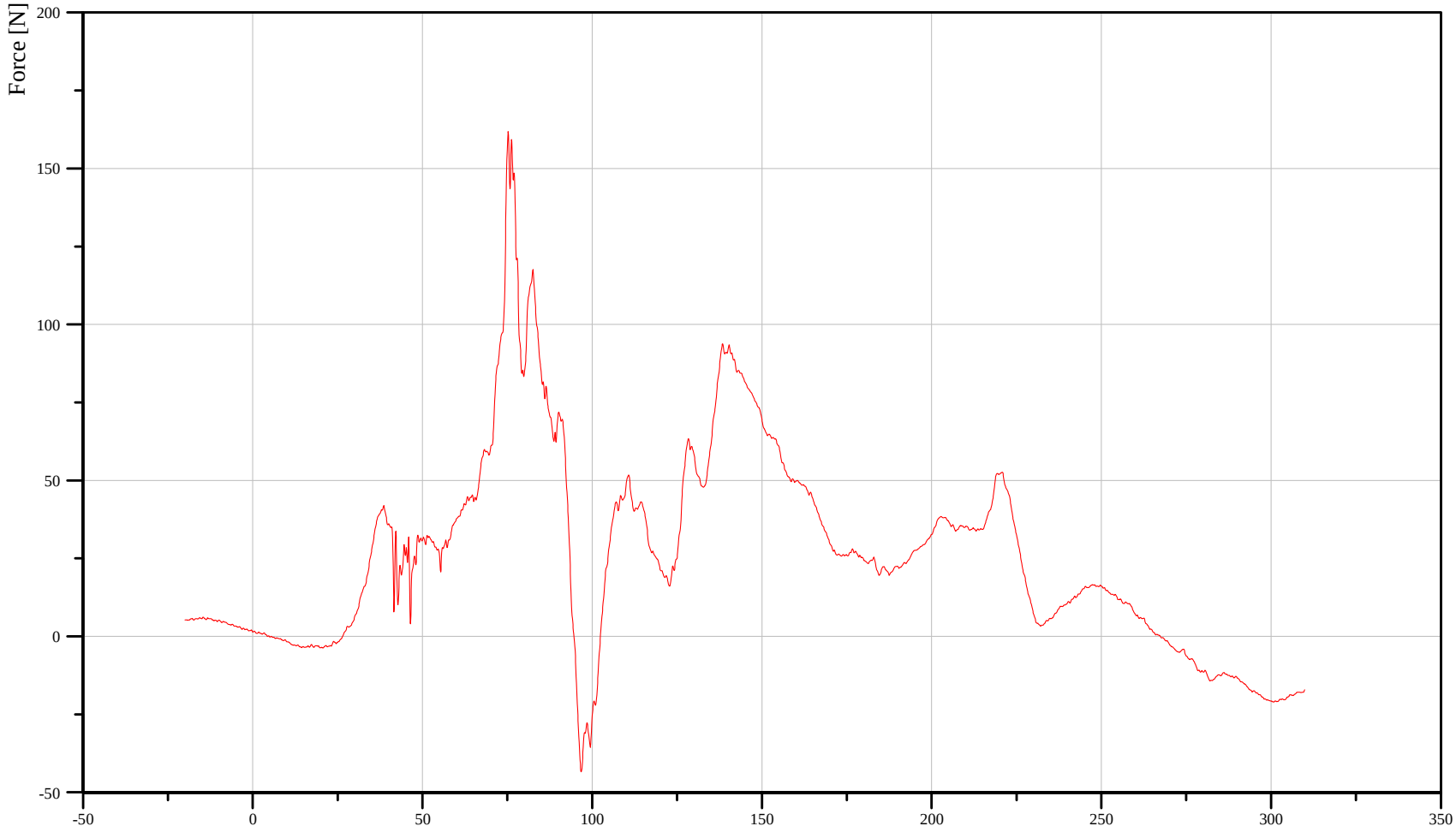
Bullet Vehicle Passenger Right Upper Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRUFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-43.42 N at 96.80 ms

Max. Value
161.82 N at 75.28 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

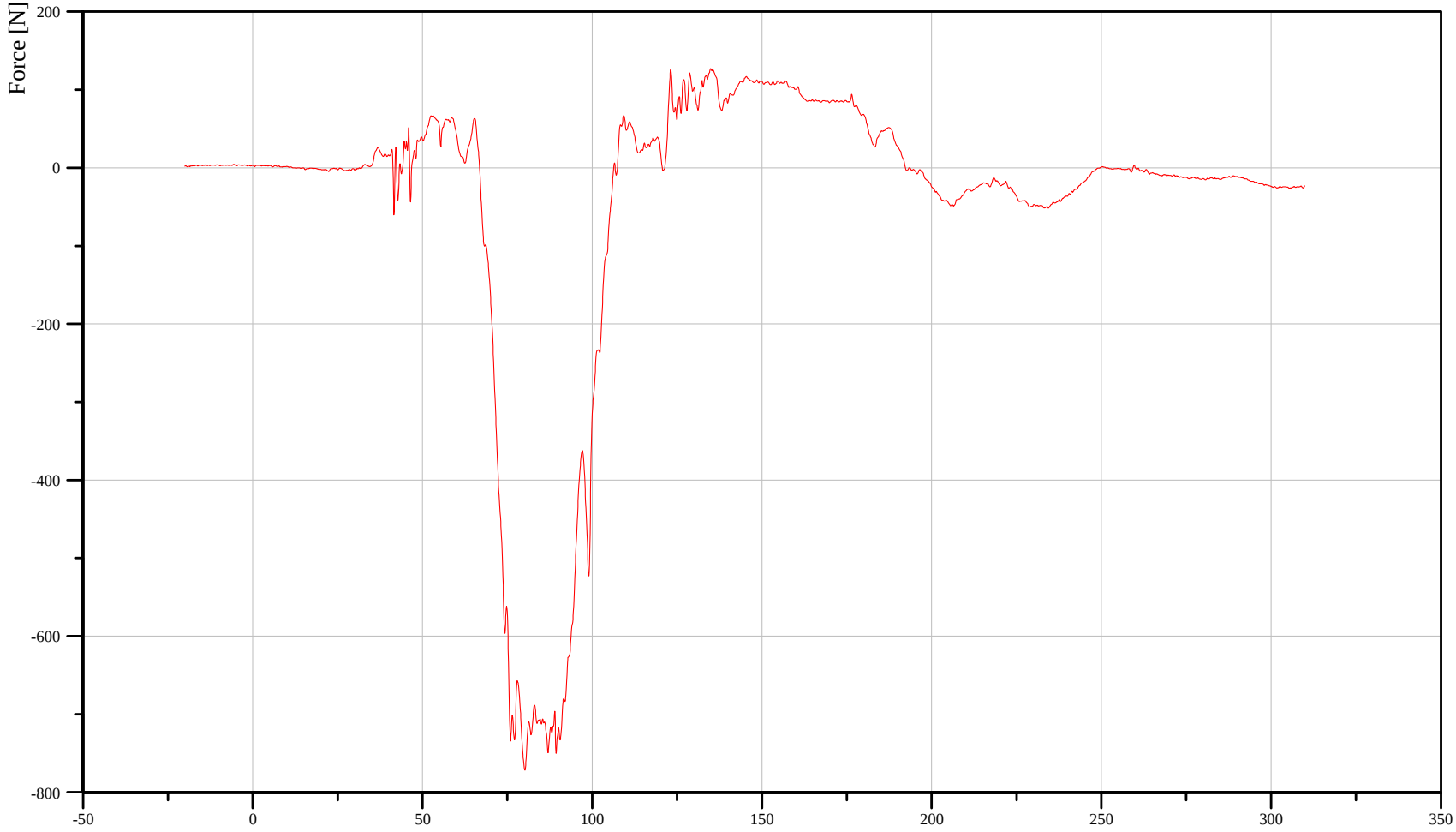
Bullet Vehicle Passenger Right Upper Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRUFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-771.68 N at 80.16 ms

Max. Value
126.89 N at 134.88 ms

B-308

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

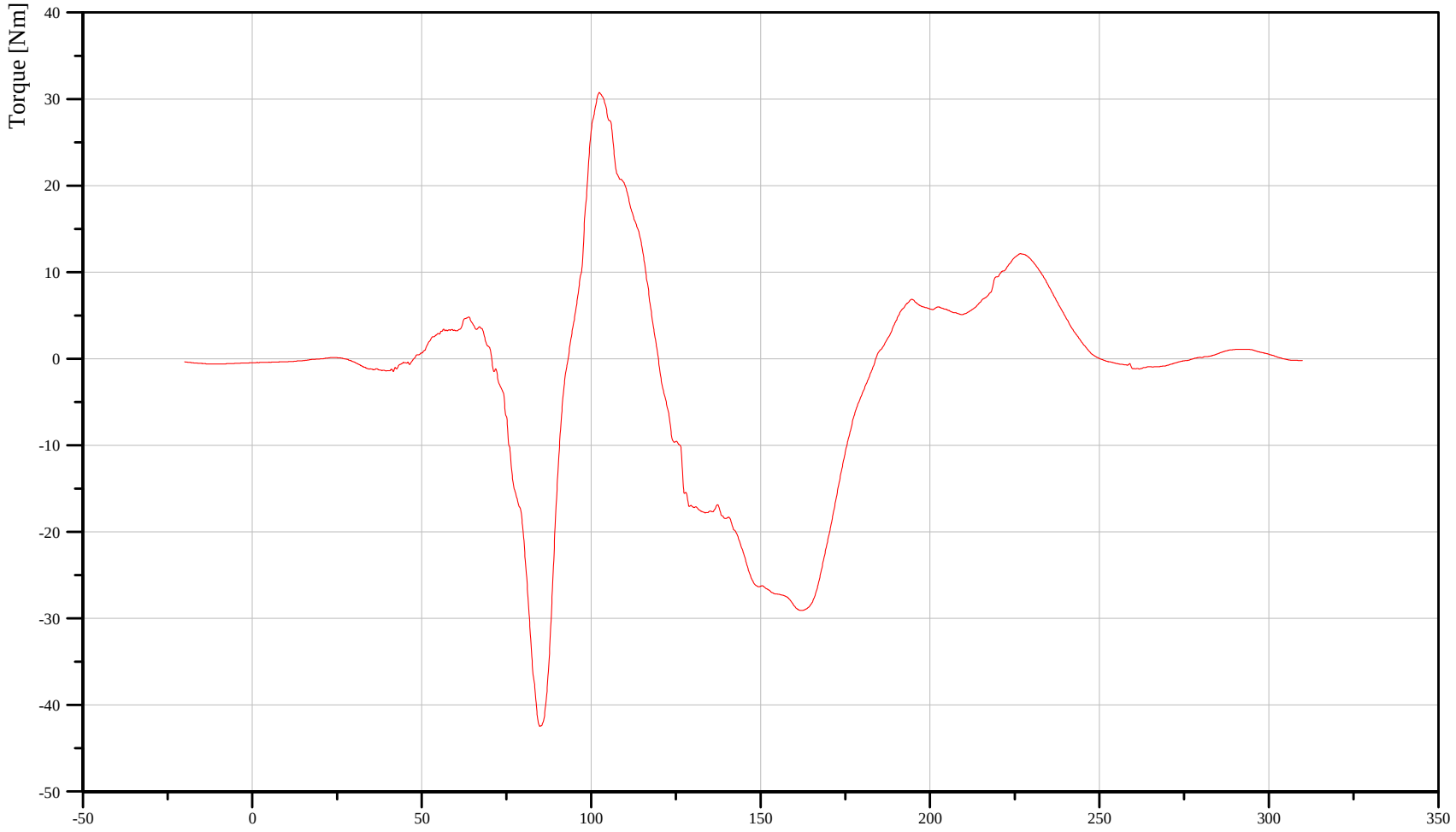
Bullet Vehicle Passenger Right Upper Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRUFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-42.45 Nm at 84.88 ms

Max. Value
30.75 Nm at 102.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

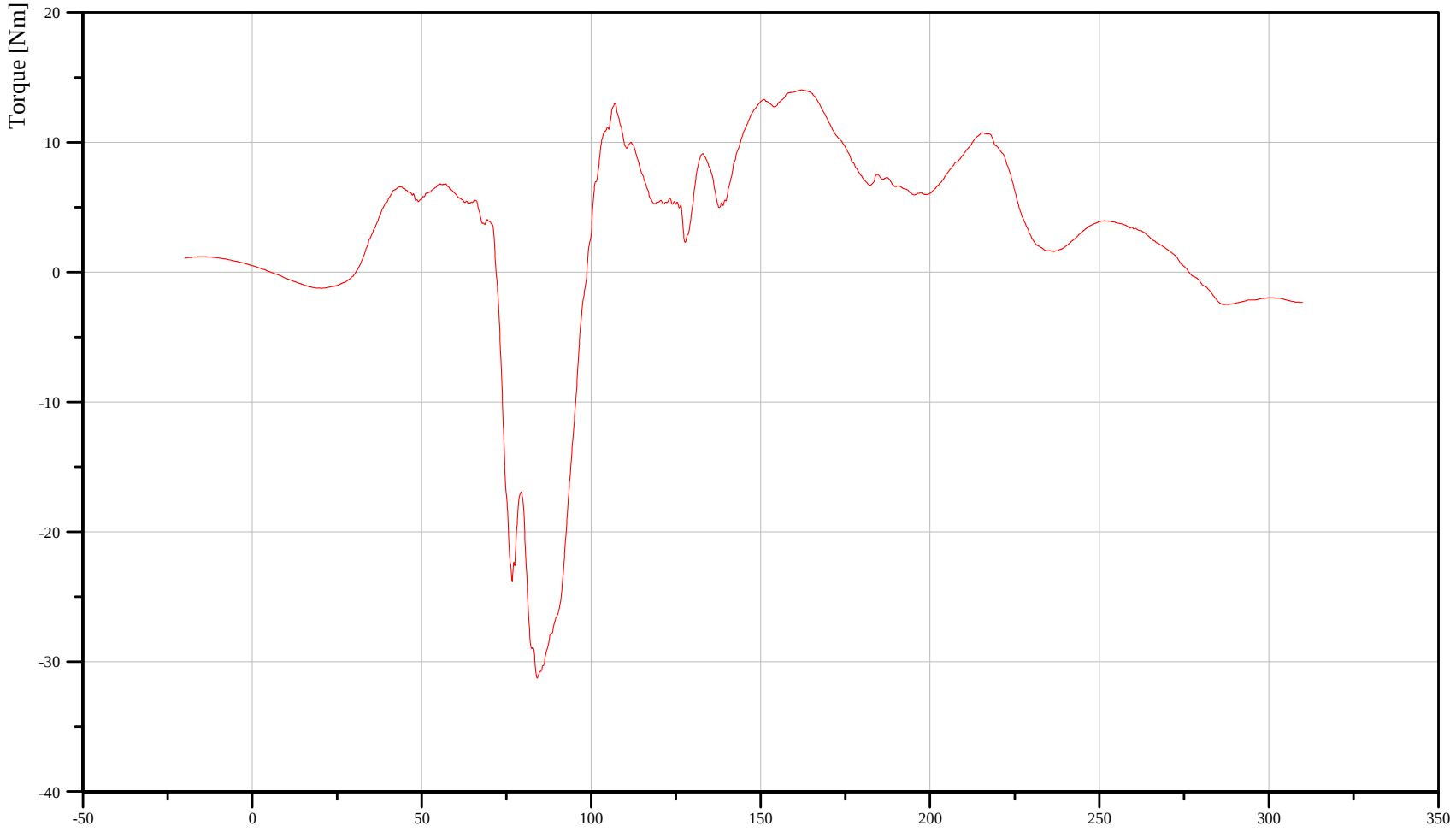
Bullet Vehicle Passenger Right Upper Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRUFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-31.26 Nm at 84.08 ms

Max. Value
14.03 Nm at 162.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

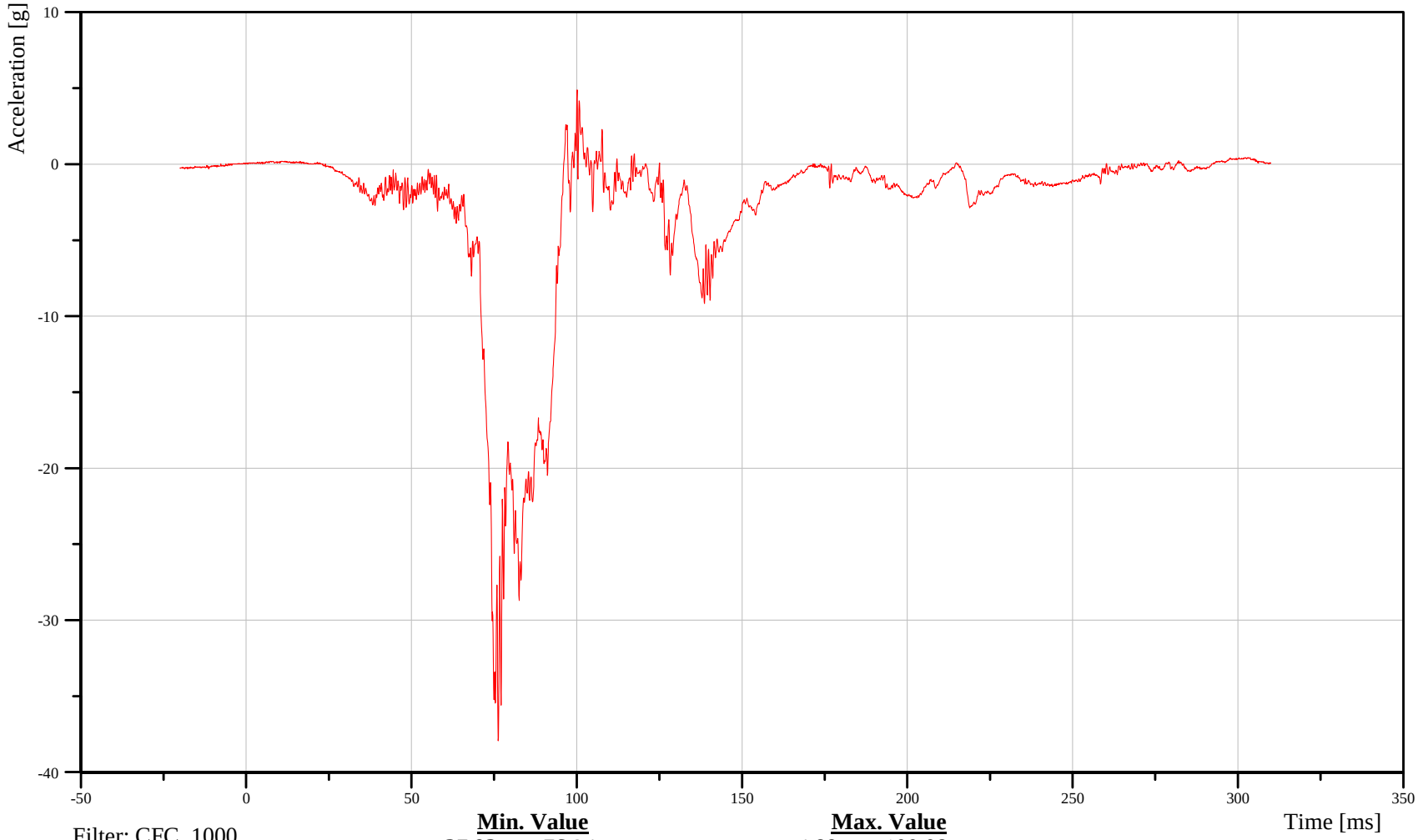
Bullet Vehicle Passenger Right Tibia X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-37.93 g at 76.24 ms

Max. Value
4.89 g at 100.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

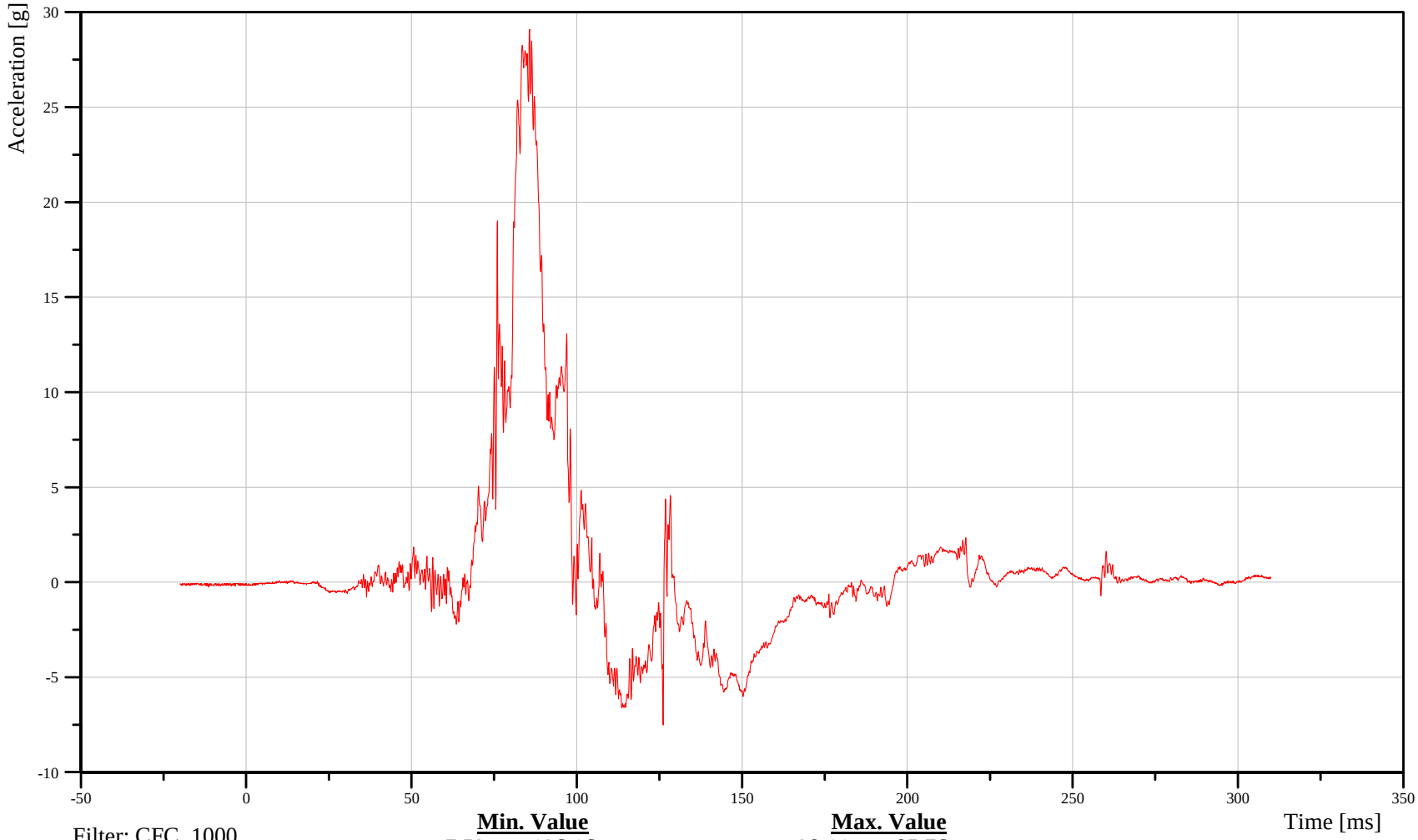
Bullet Vehicle Passenger Right Tibia Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-7.52 g at 126.16 ms

Max. Value
29.11 g at 85.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

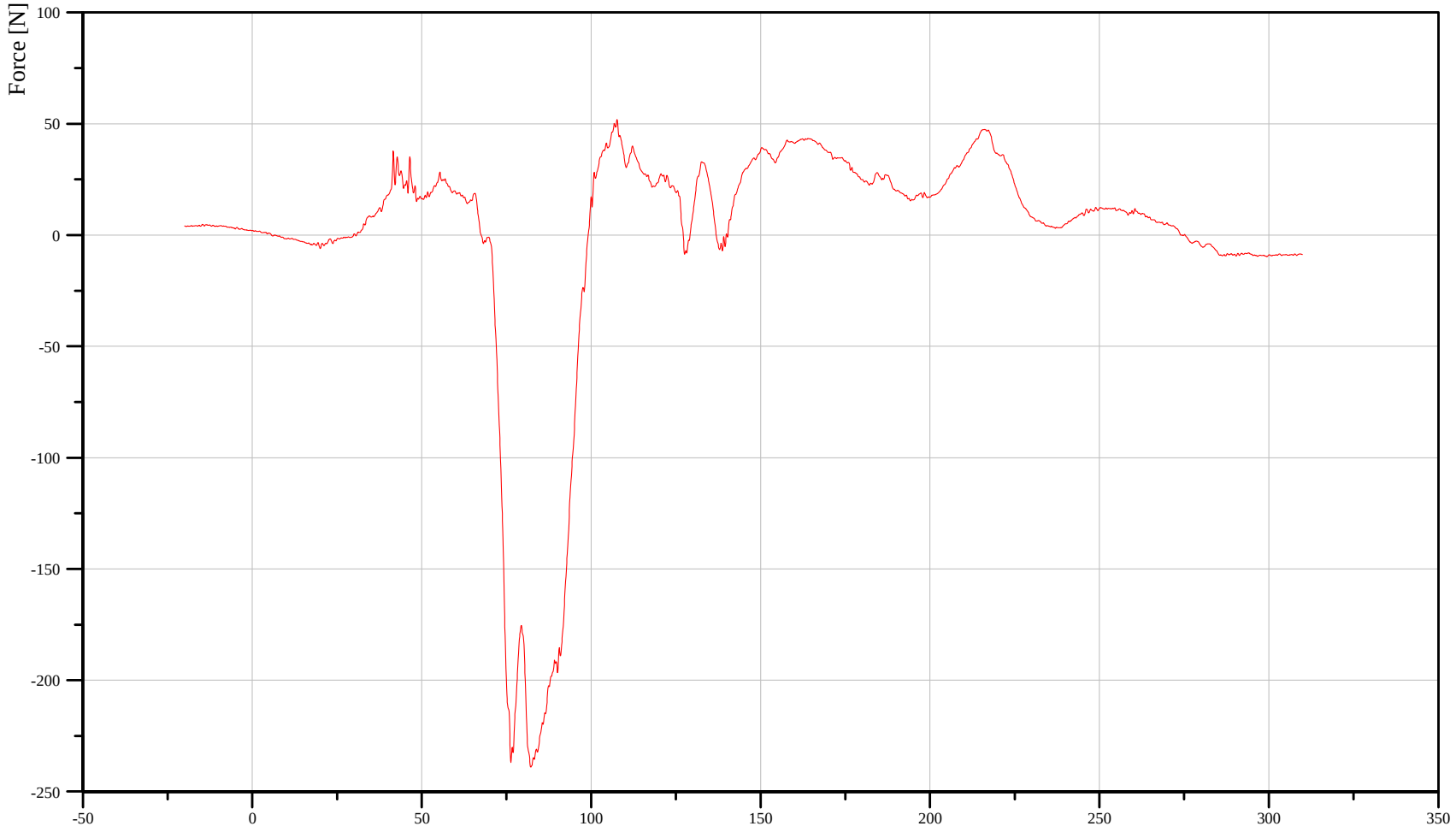
Bullet Vehicle Passenger Right Lower Tibia X-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRLFXHFFOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-239.00 N at 82.16 ms

Max. Value
51.84 N at 107.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

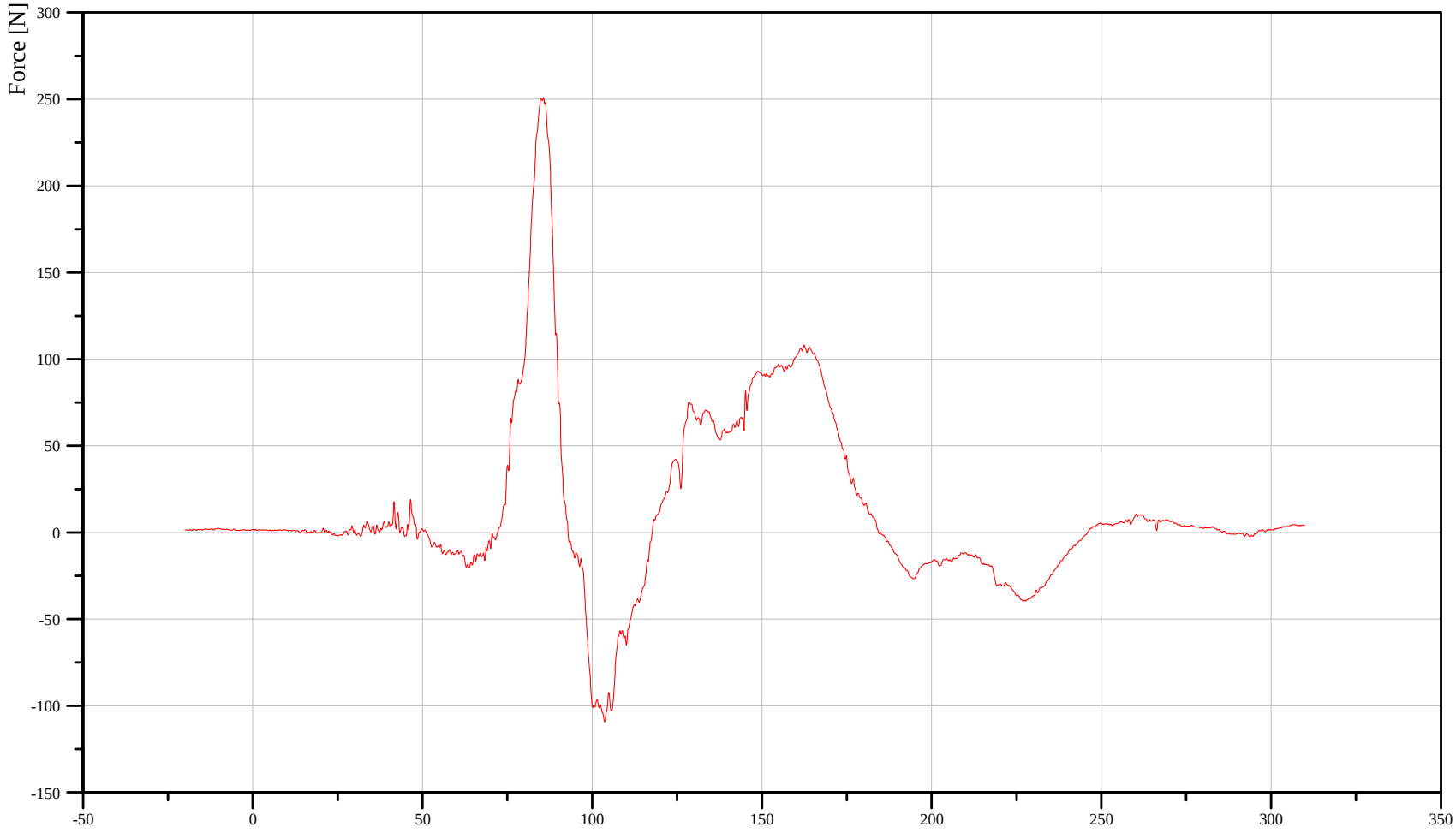
Bullet Vehicle Passenger Right Lower Tibia Y-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRLFXHFFOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-109.08 N at 103.60 ms

Max. Value
250.87 N at 85.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

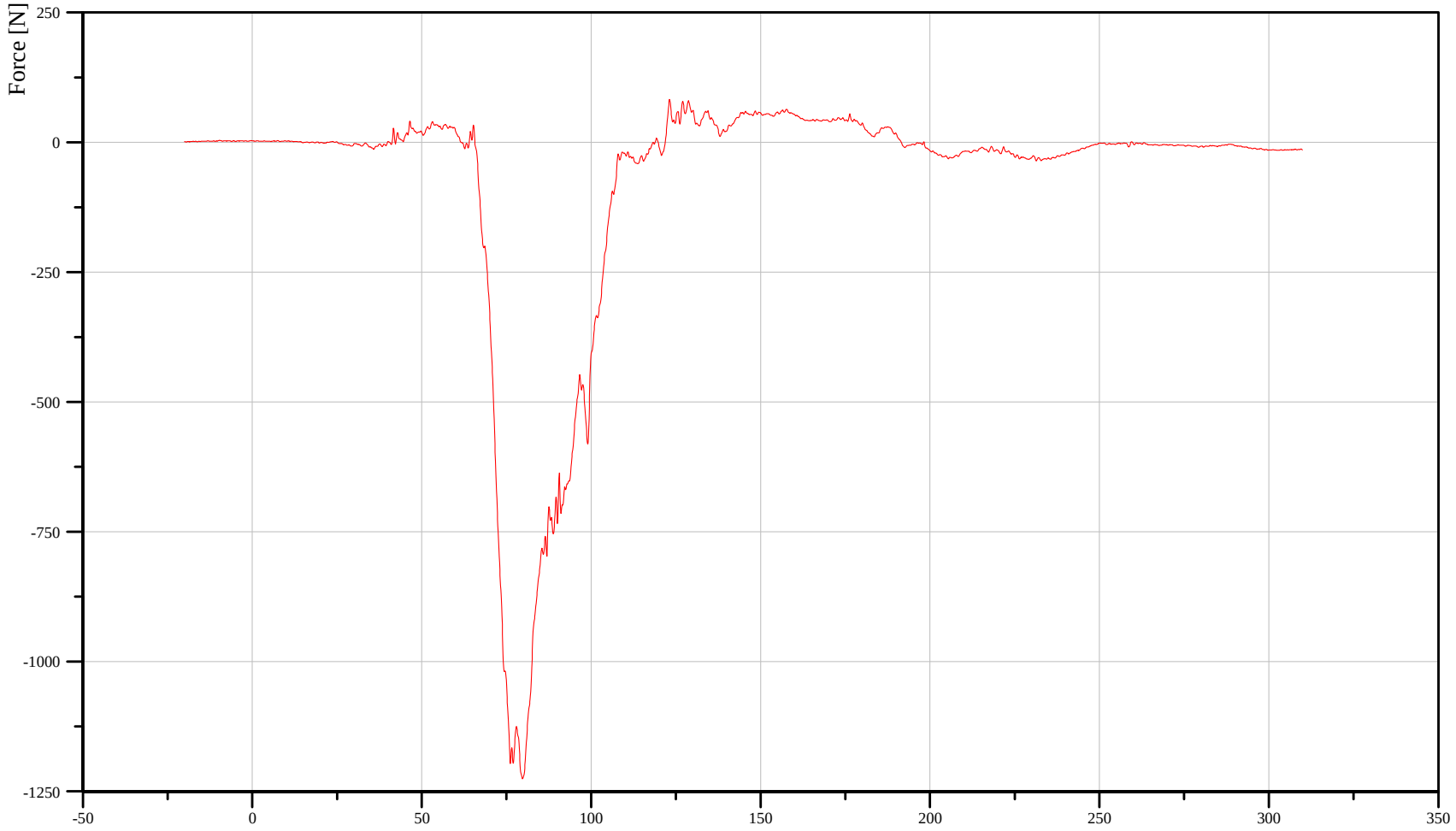
Bullet Vehicle Passenger Right Lower Tibia Z-Axis Force

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRLFXHFFOZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-1,225.71 N at 79.76 ms

Max. Value
82.71 N at 123.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

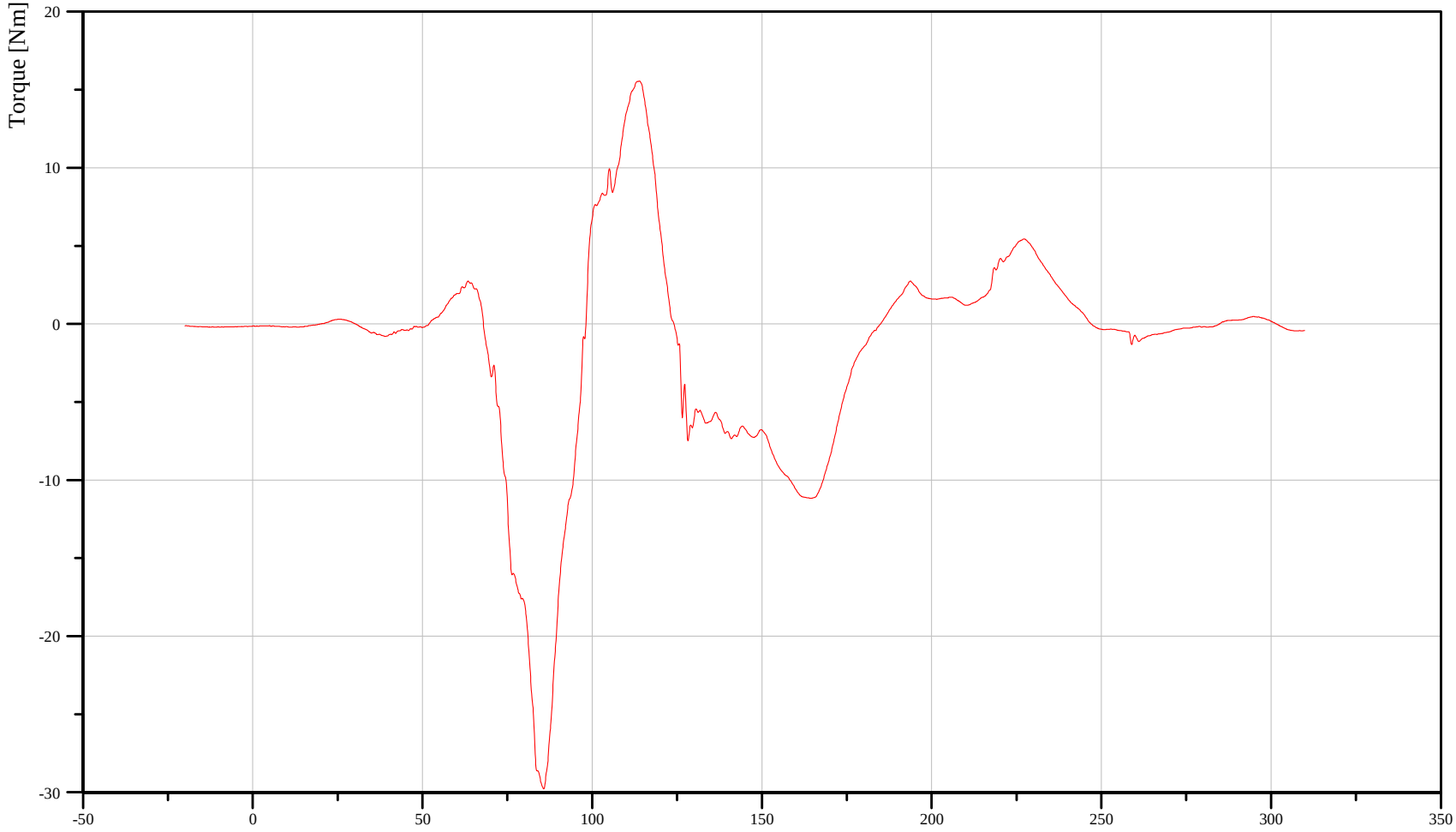
Bullet Vehicle Passenger Right Lower Tibia Moment About X Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRLFXHFMOXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-29.78 Nm at 85.76 ms

Max. Value
15.55 Nm at 113.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

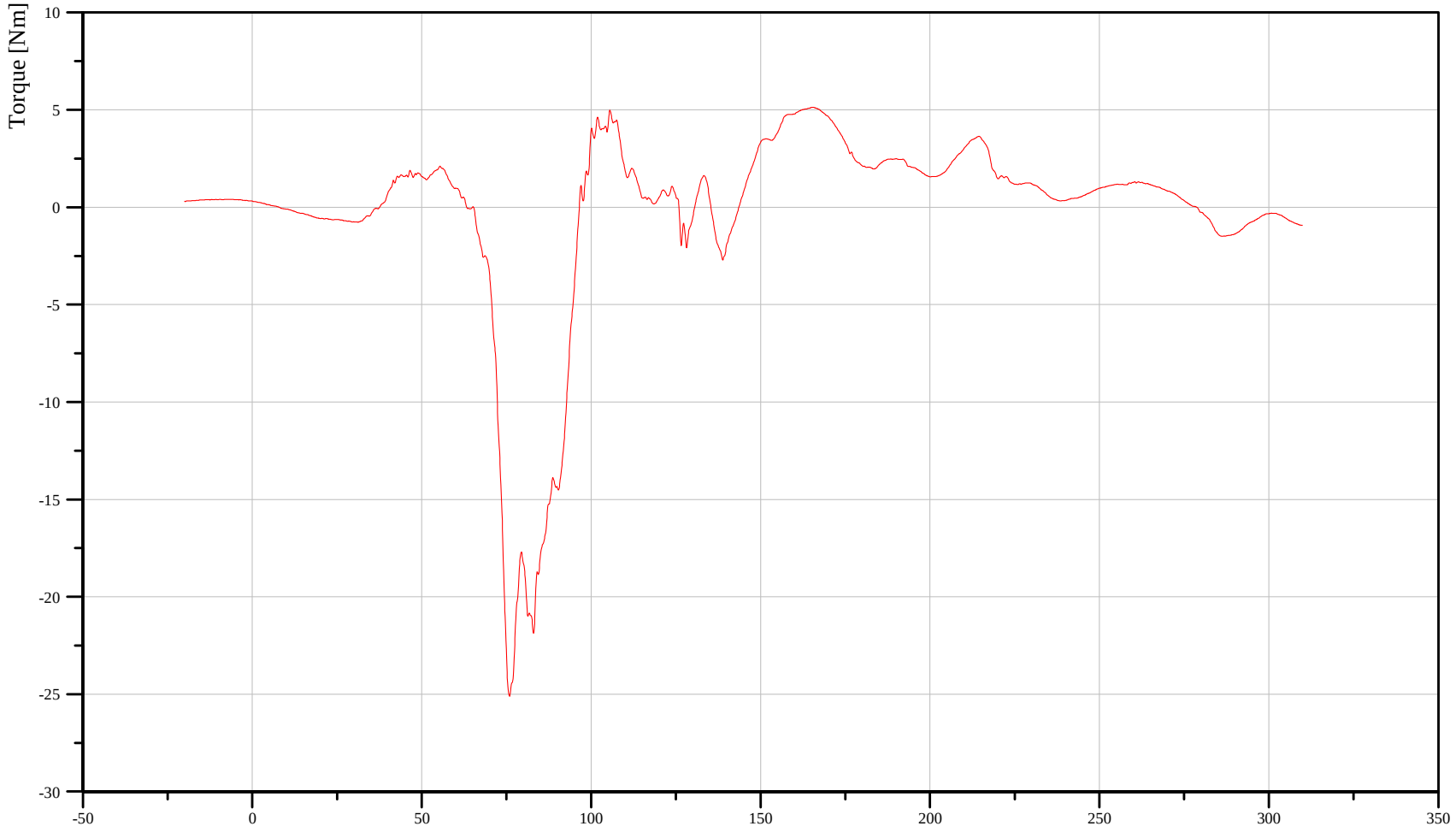
Bullet Vehicle Passenger Right Lower Tibia Moment About Y Axis

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13TIBIRLFXHFMOYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_600

Min. Value
-25.11 Nm at 75.92 ms

Max. Value
5.13 Nm at 165.44 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

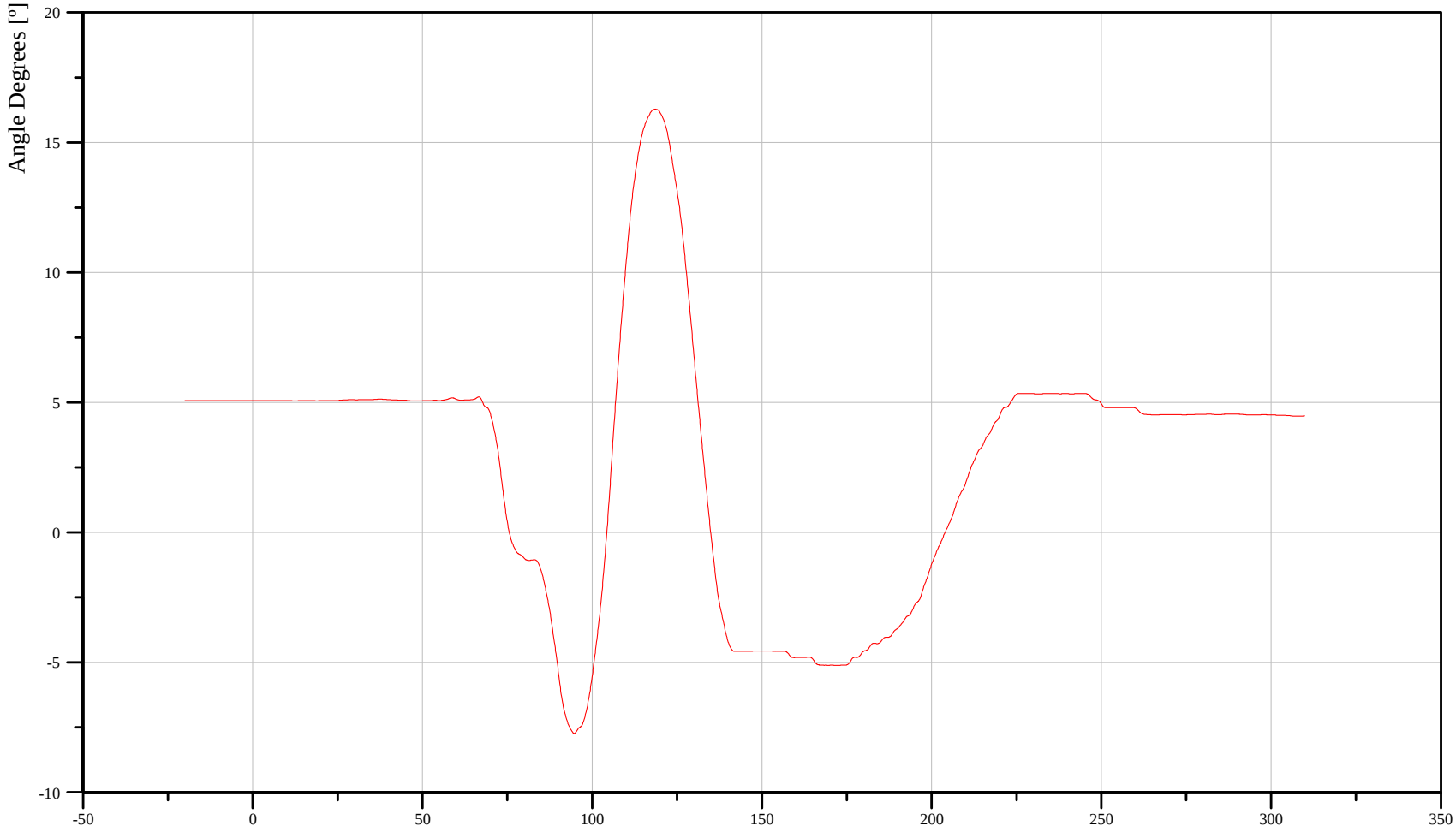
Bullet Vehicle Passenger Right Foot X-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFANXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-7.73 ° at 94.72 ms

Max. Value
16.28 ° at 118.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

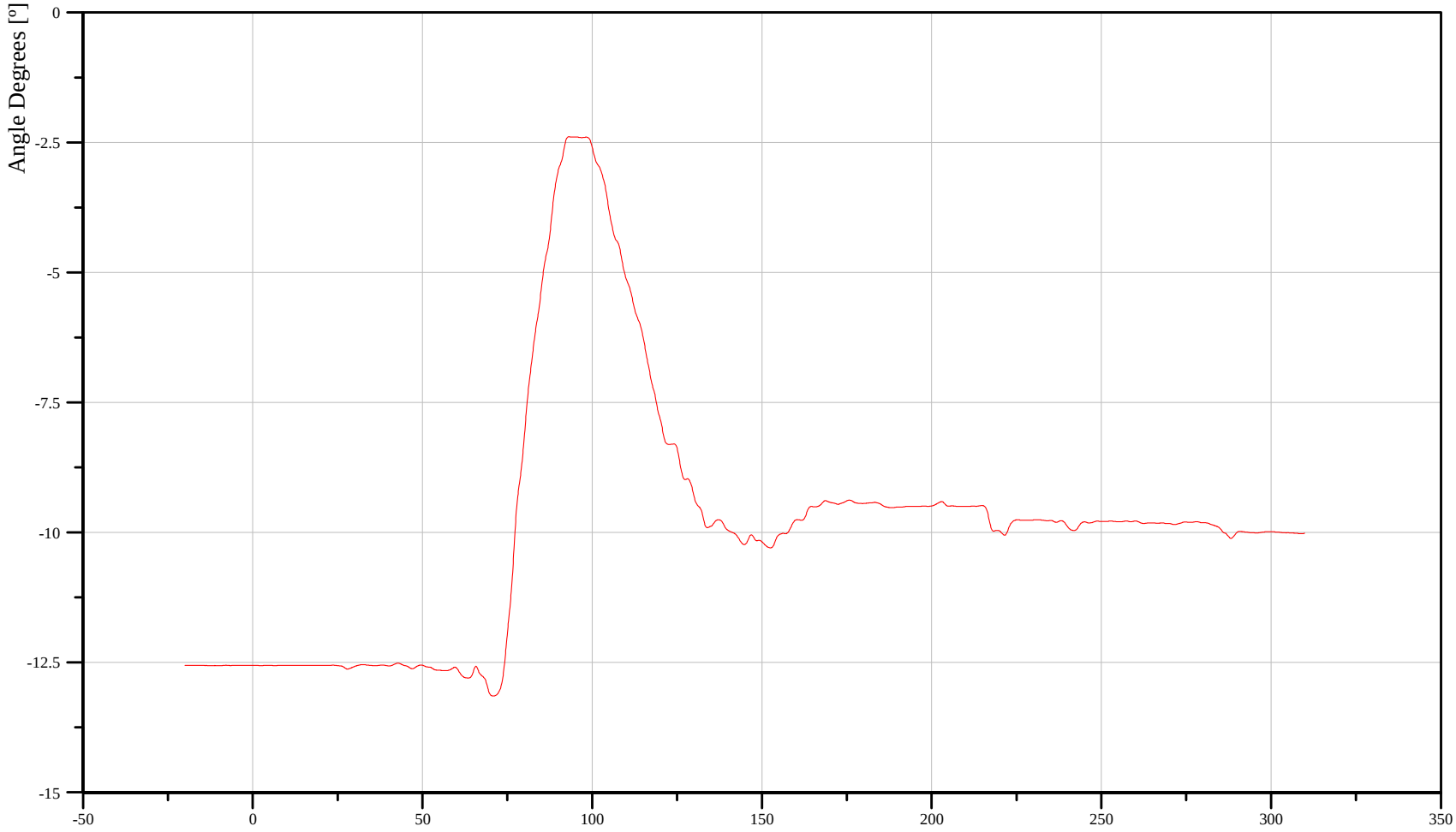
Bullet Vehicle Passenger Right Foot Y-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFANYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-13.14 ° at 70.88 ms

Max. Value
-2.39 ° at 93.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

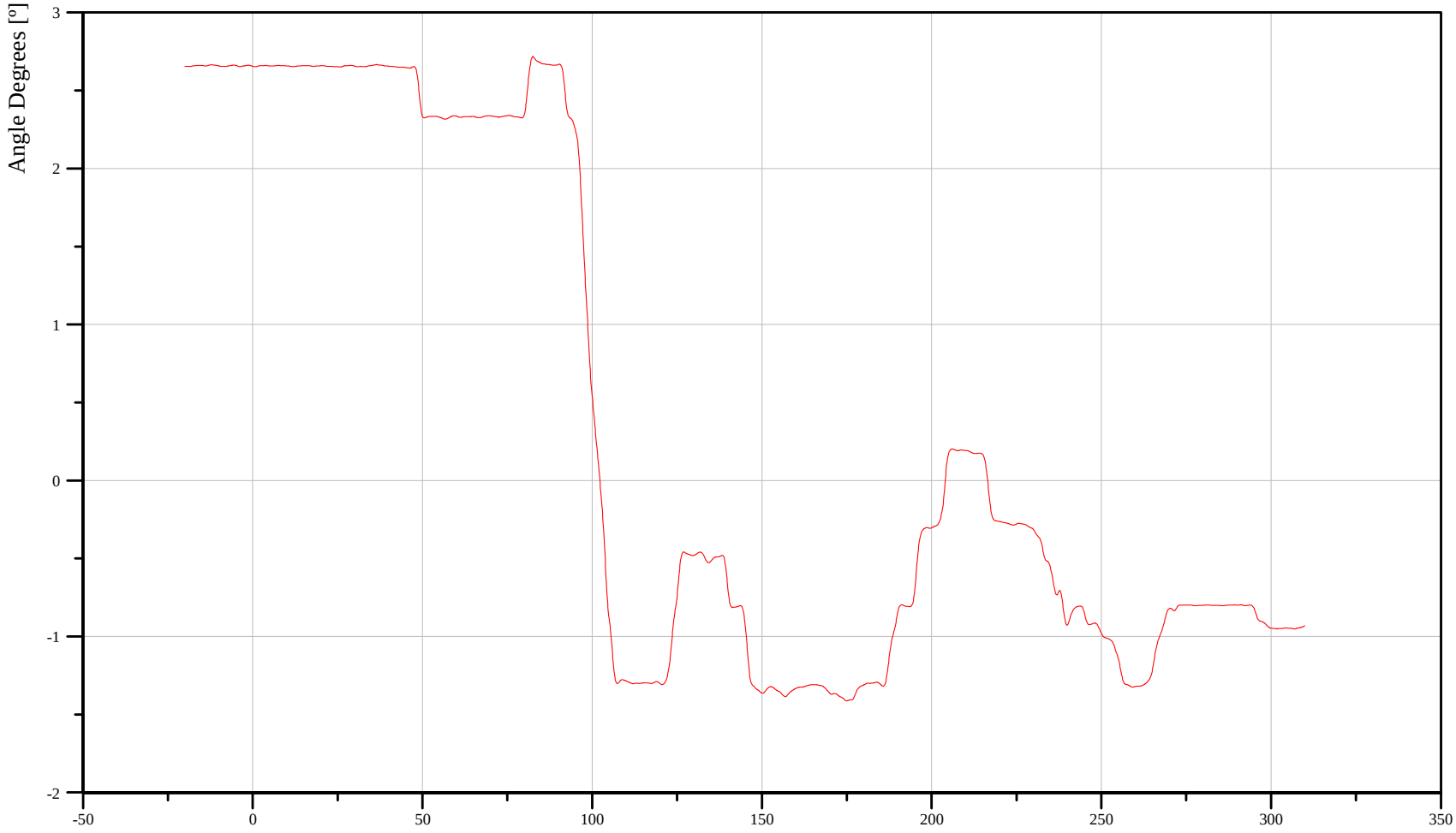
Bullet Vehicle Passenger Right Foot Z-Axis Angular Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFANZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.41 ° at 174.96 ms

Max. Value
2.72 ° at 82.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

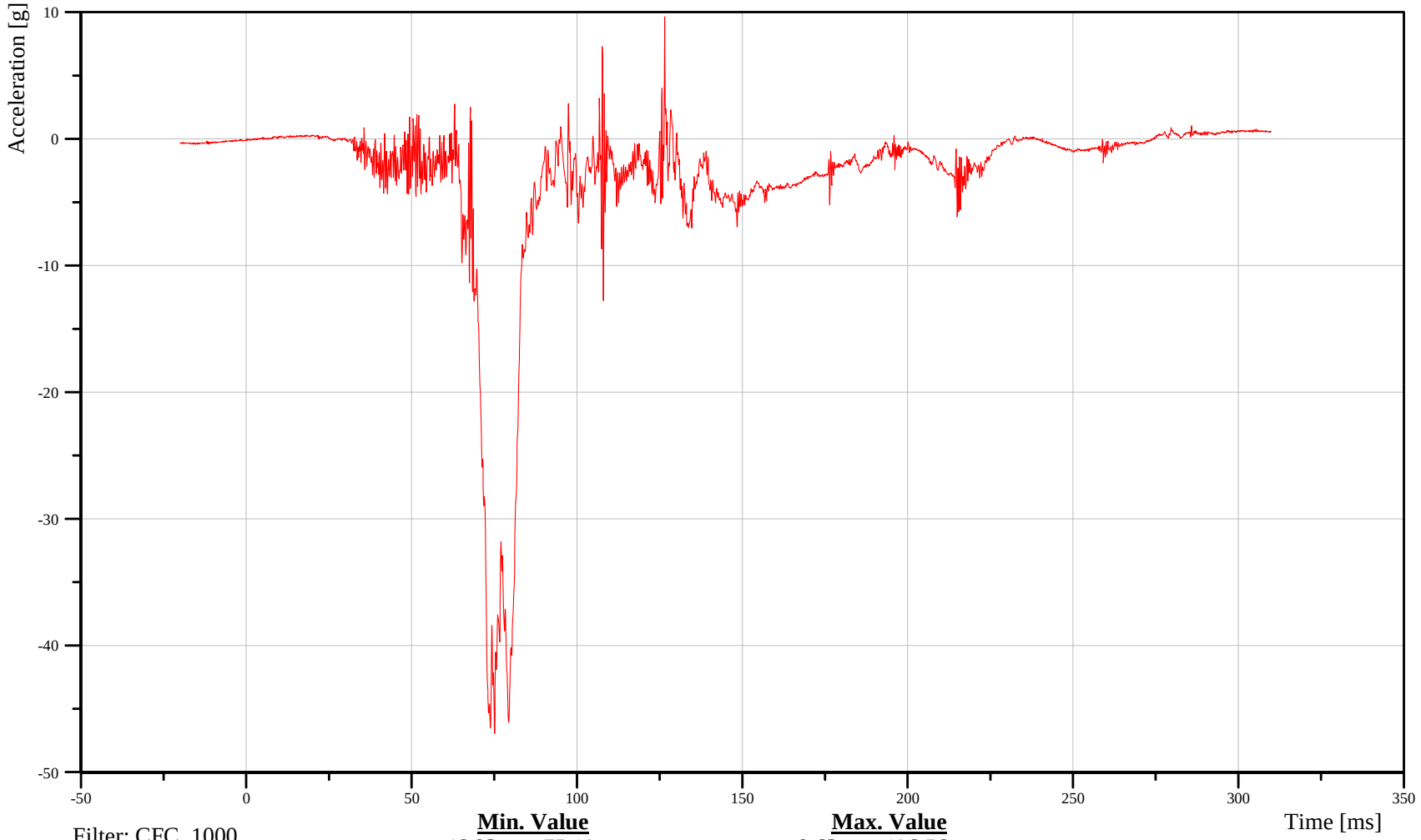
Bullet Vehicle Passenger Right Foot X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-46.93 g at 75.12 ms

Max. Value
9.63 g at 126.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

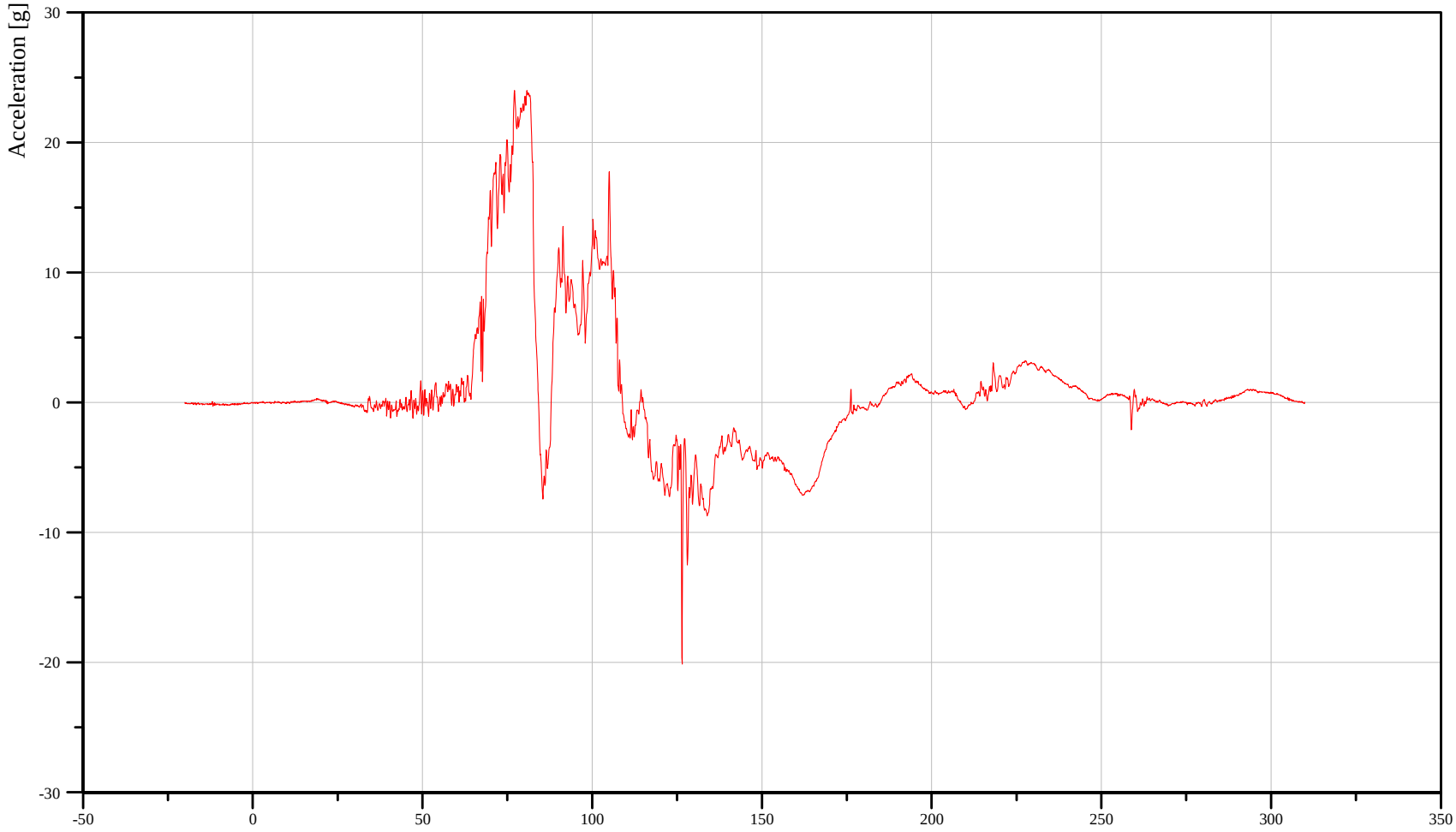
Bullet Vehicle Passenger Right Foot Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-20.13 g at 126.48 ms

Max. Value
23.99 g at 77.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

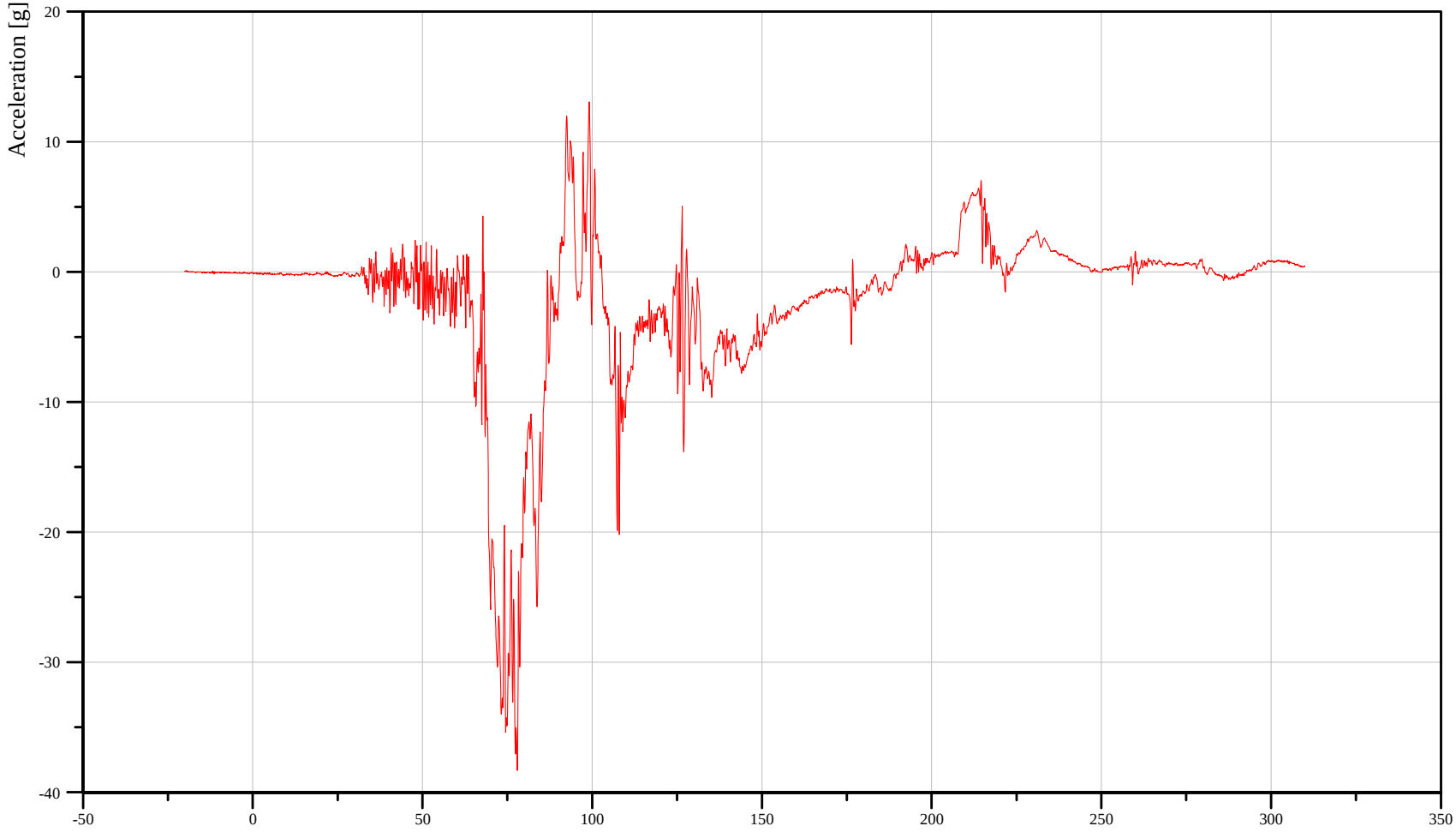
Bullet Vehicle Passenger Right Foot Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-38.32 g at 77.92 ms

Max. Value
13.06 g at 99.12 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

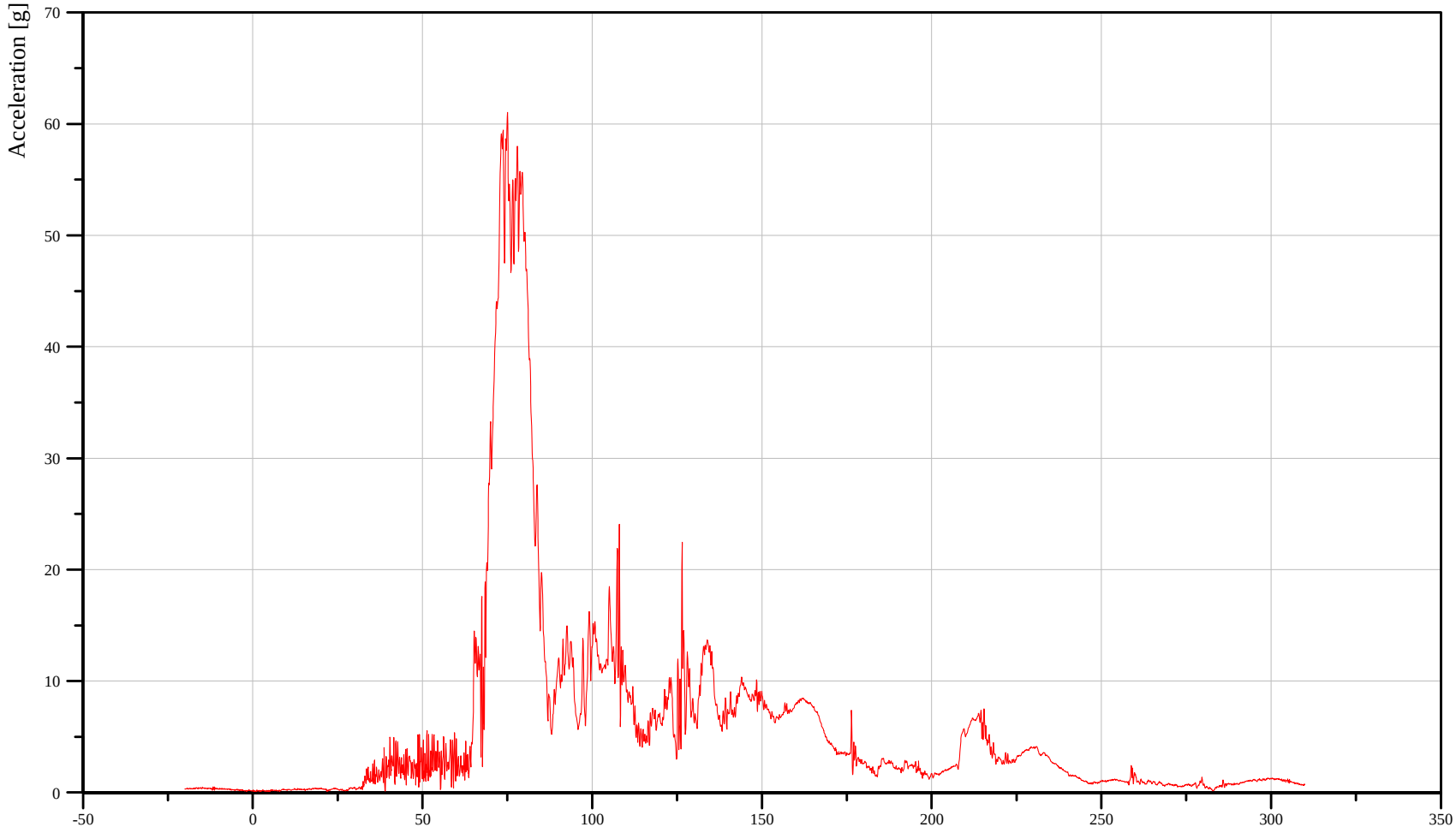
Bullet Vehicle Passenger Right Foot Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.08 g at 5.12 ms

Max. Value
61.04 g at 75.04 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

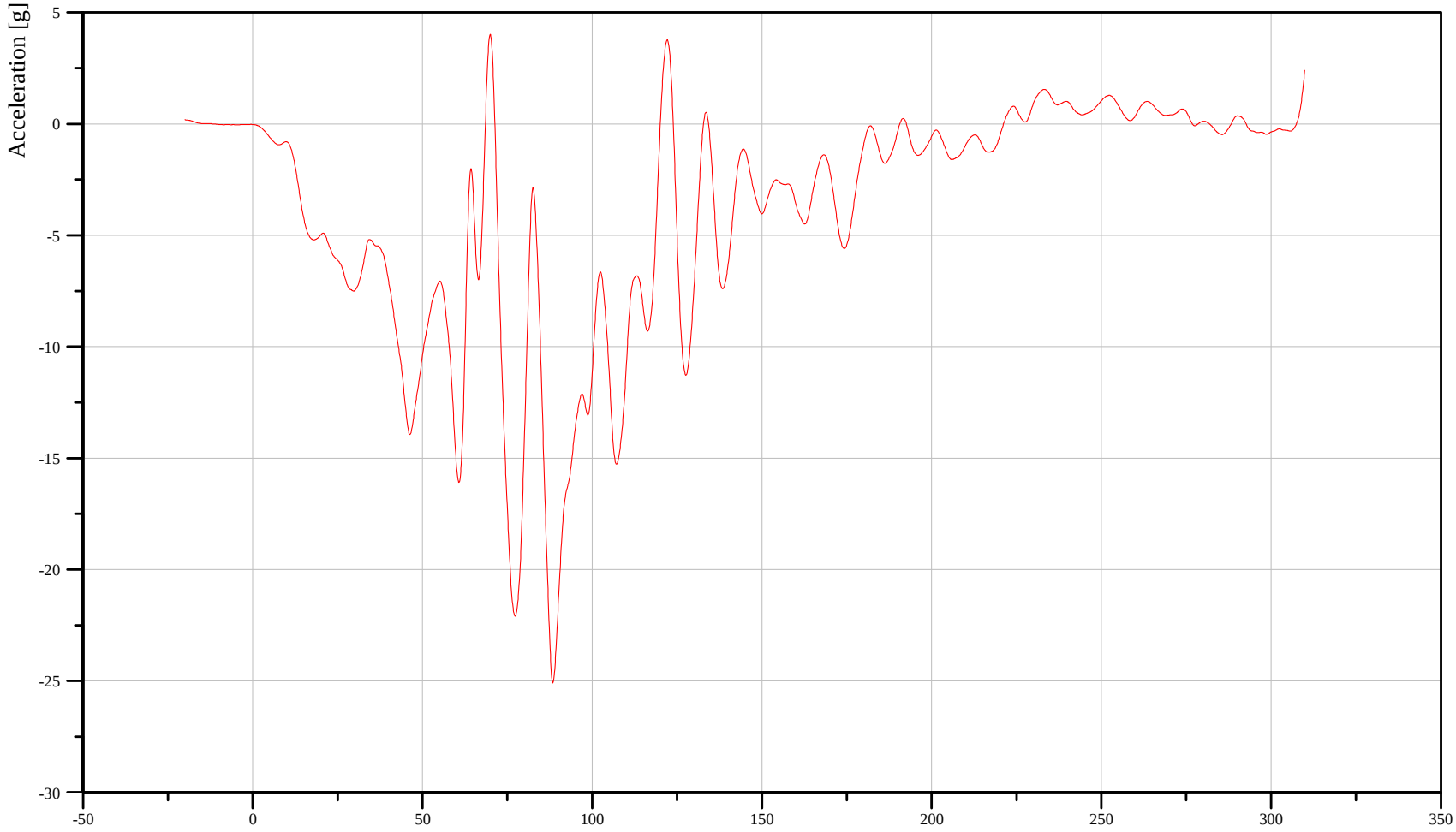
Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

14CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-25.09 g at 88.40 ms

Max. Value
4.02 g at 70.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

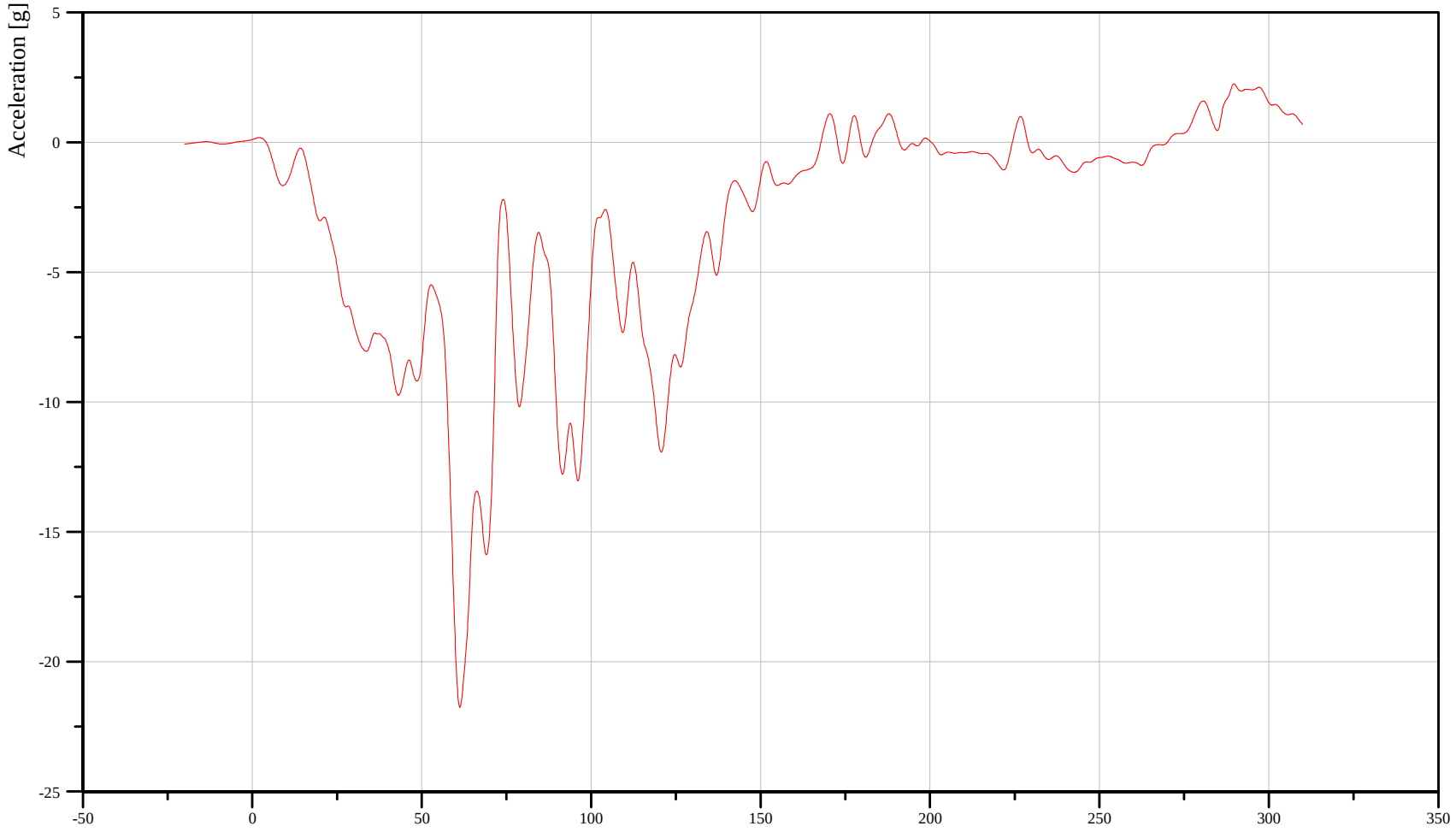
Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

16CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-21.76 g at 61.28 ms

Max. Value
2.25 g at 289.68 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

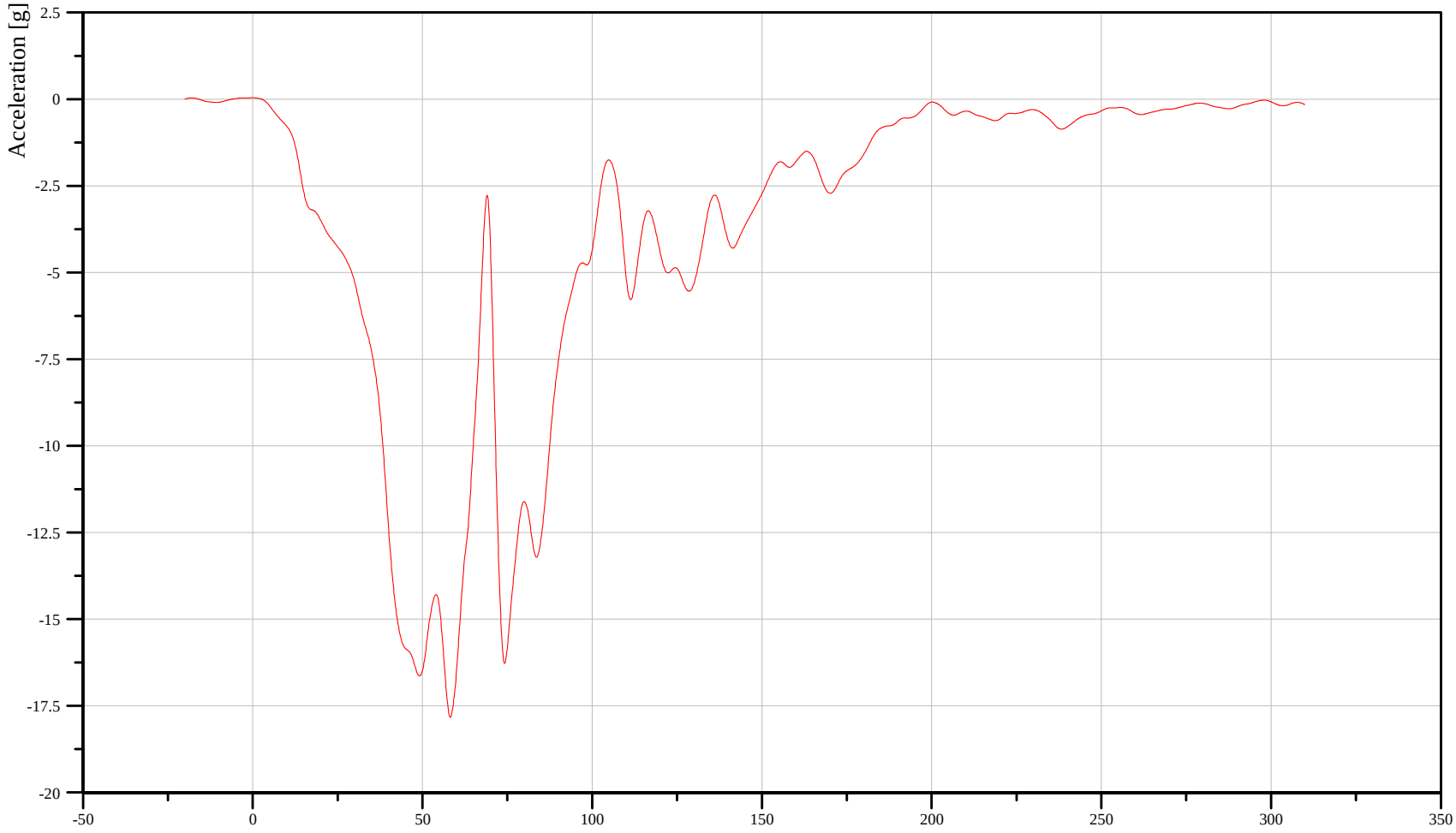
Bullet Vehicle Top of Engine X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

12ENGNTP0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-17.83 g at 58.16 ms

Max. Value
0.04 g at 0.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

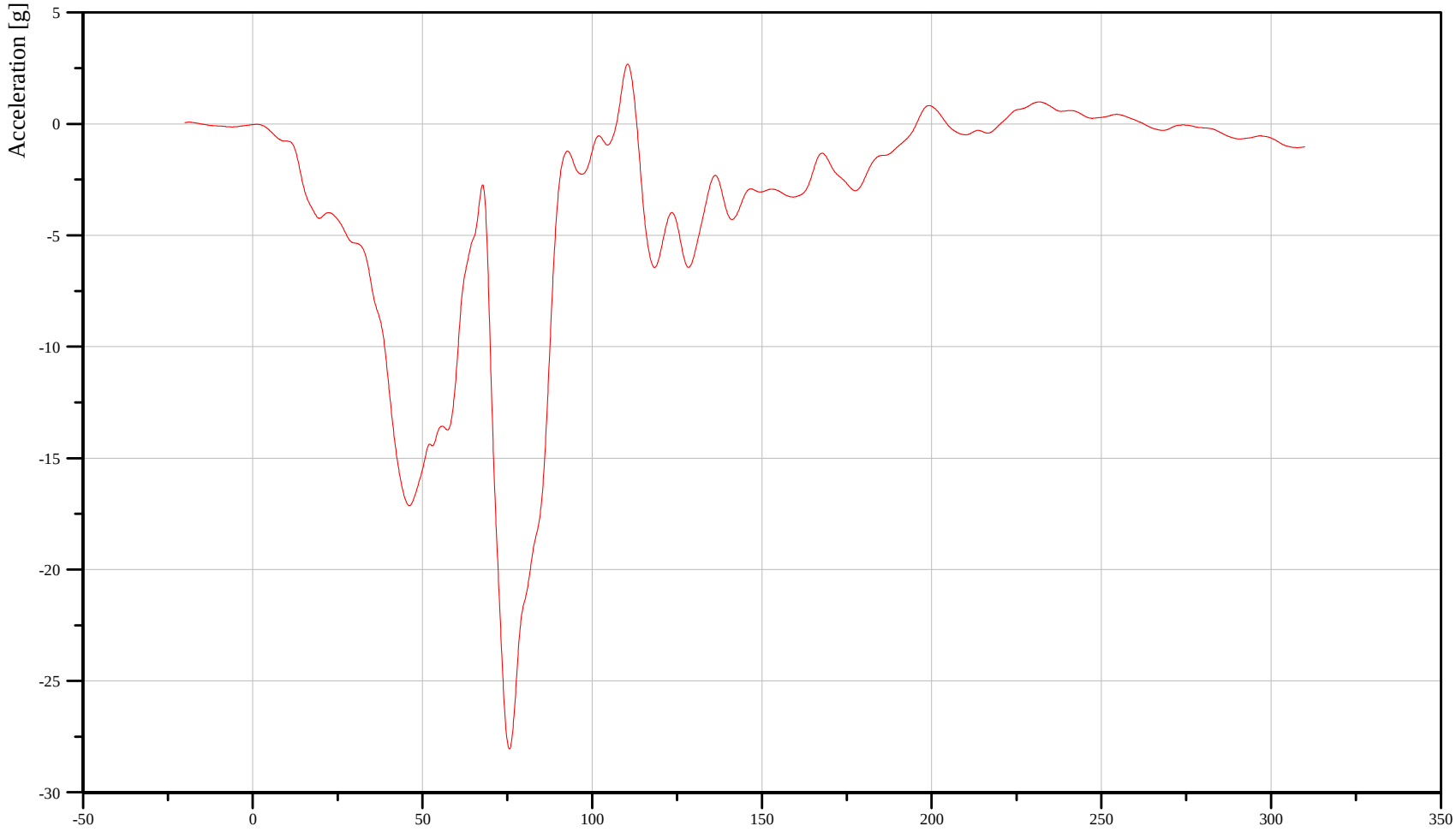
Bullet Vehicle Bottom of Engine X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

12ENGNBO0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-28.05 g at 75.60 ms

Max. Value
2.68 g at 110.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

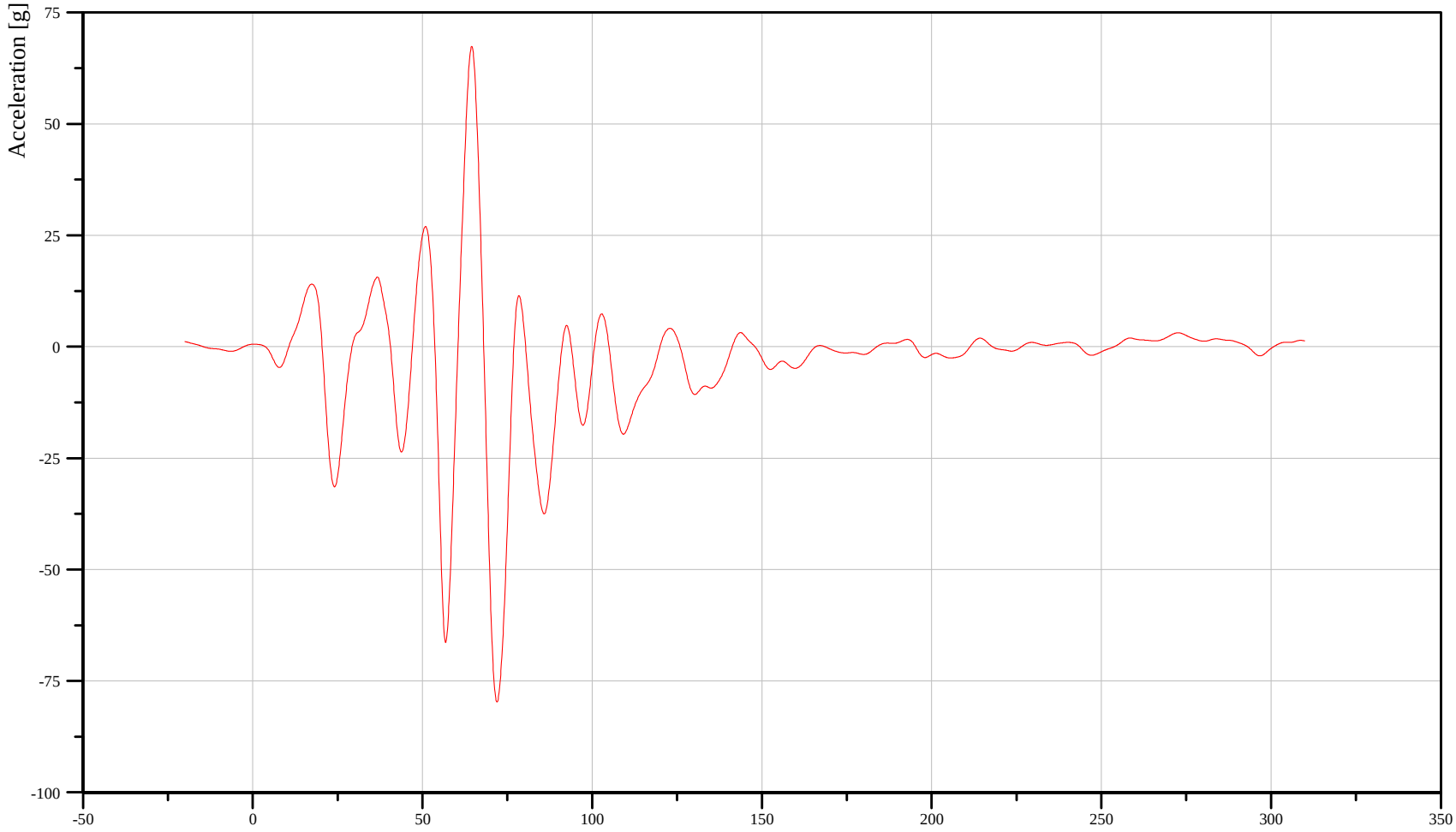
Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13VEHCRI0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-79.73 g at 71.92 ms

Max. Value
67.37 g at 64.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

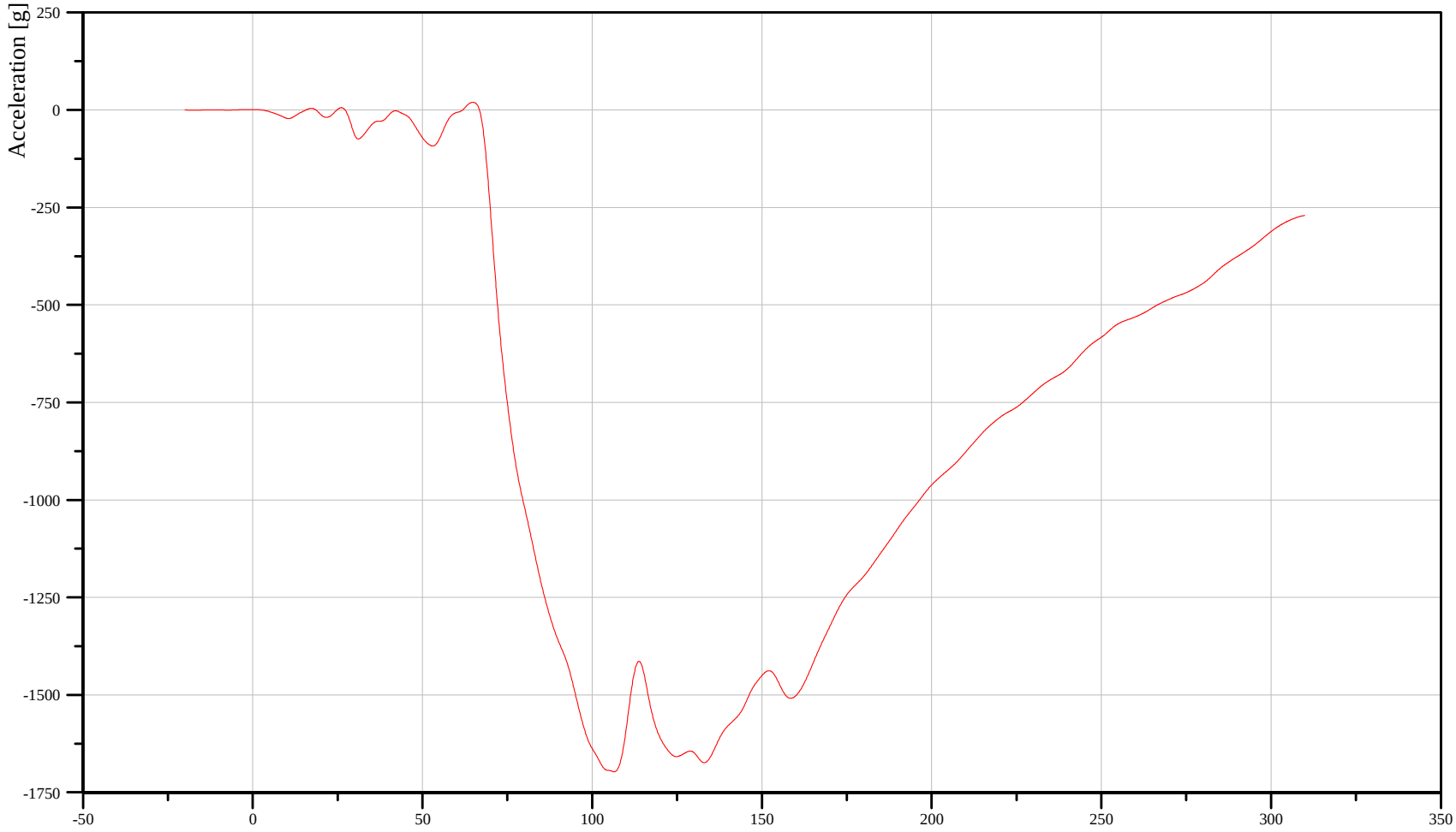
Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11VEHCLE0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-1,696.98 g at 106.48 ms

Max. Value
19.71 g at 64.88 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

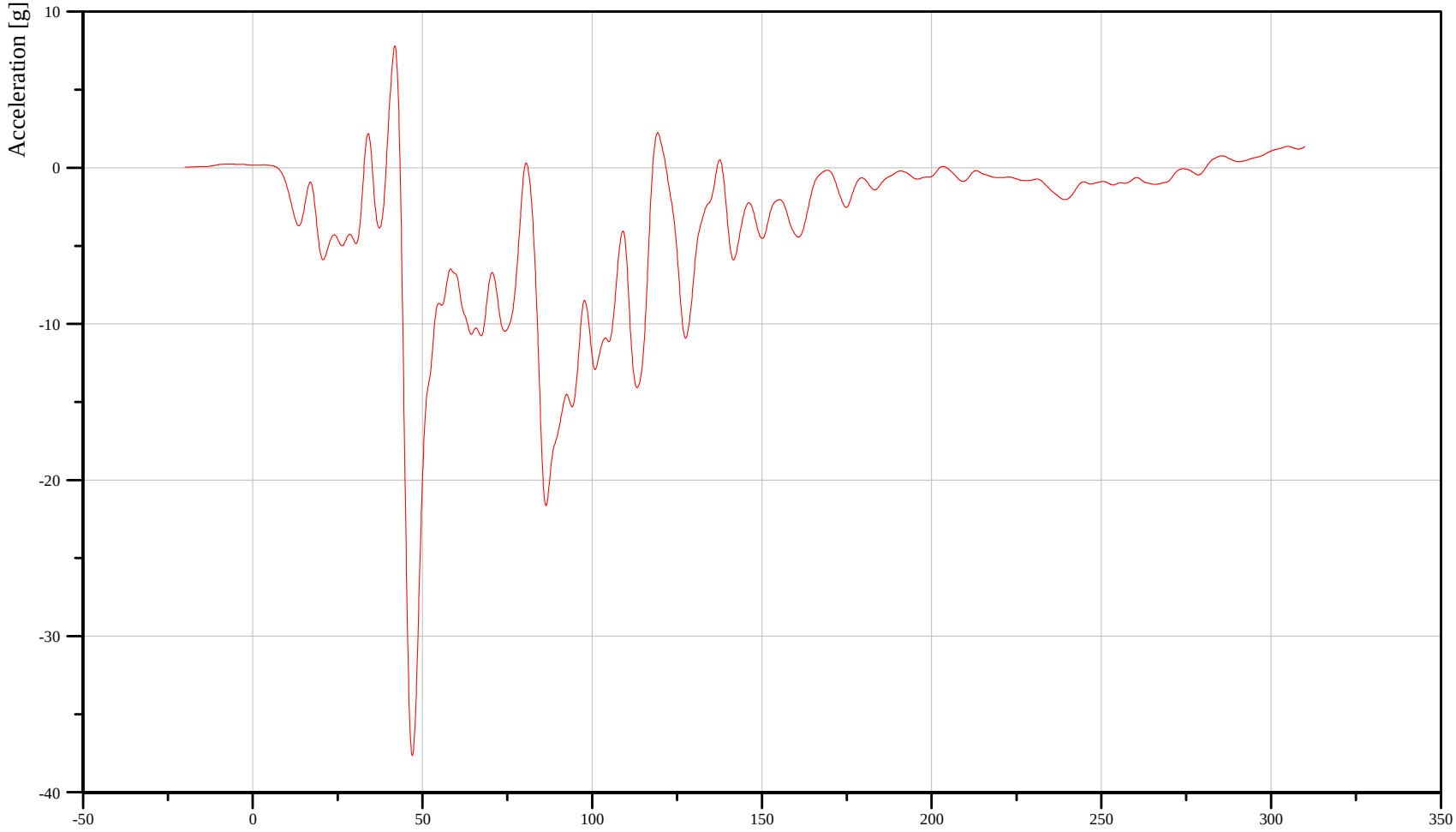
Bullet Vehicle Dash Center X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

12DASH000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-37.64 g at 47.04 ms

Max. Value
7.81 g at 41.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

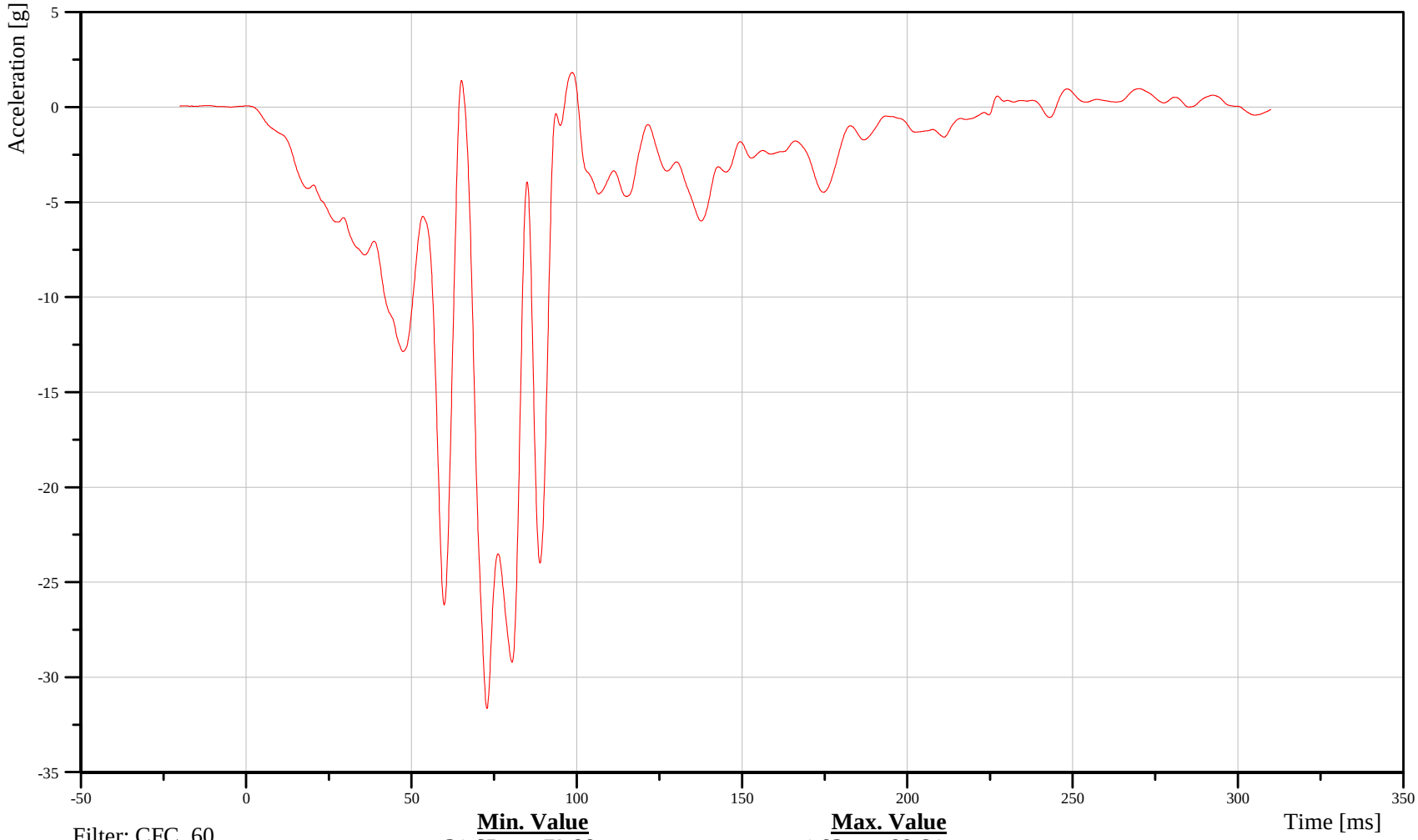
Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11PEAC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-31.65 g at 72.88 ms

Max. Value
1.83 g at 98.64 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

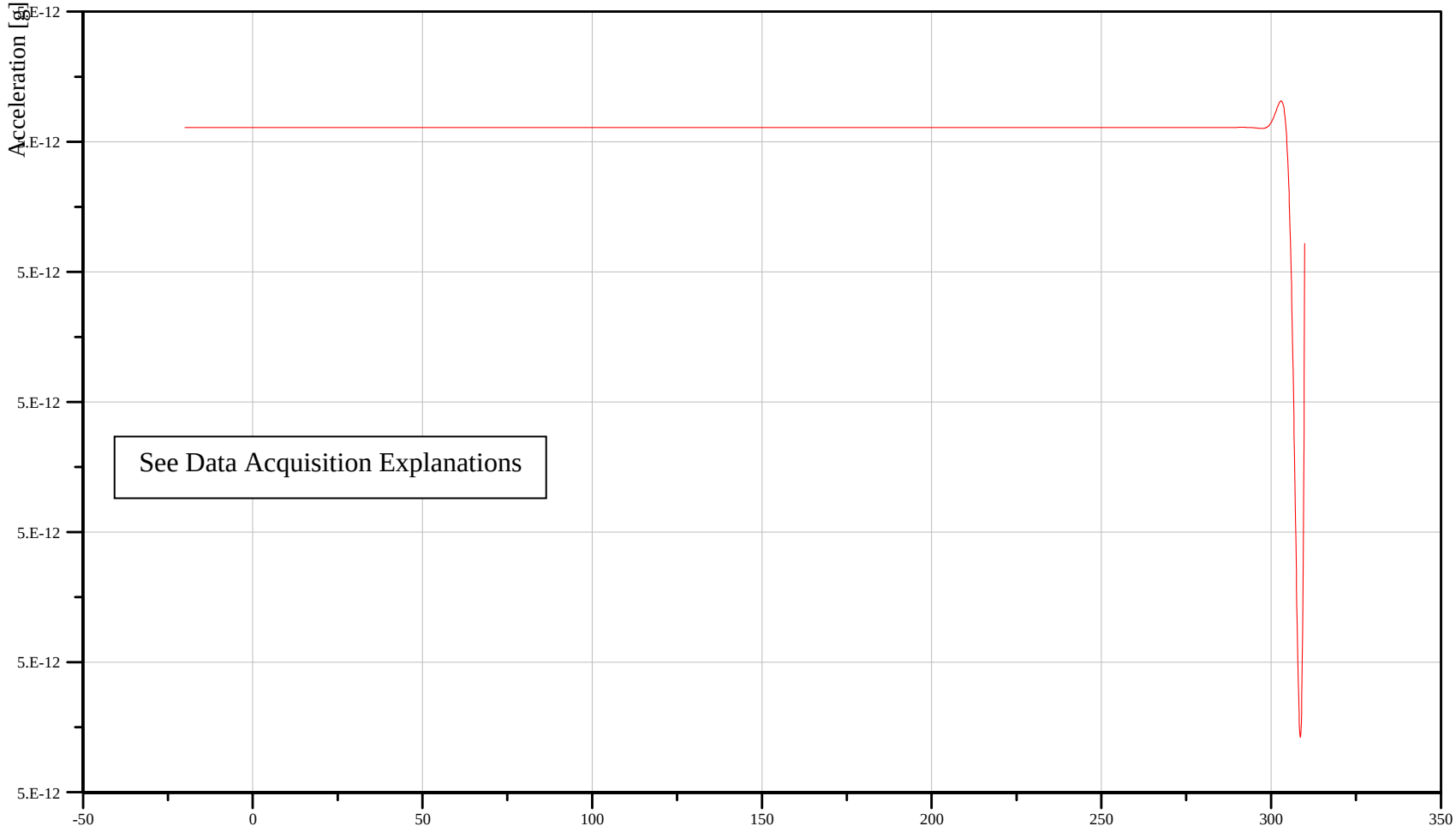
Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11PEAC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
0.00 g at 308.64 ms

Max. Value
0.00 g at 302.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

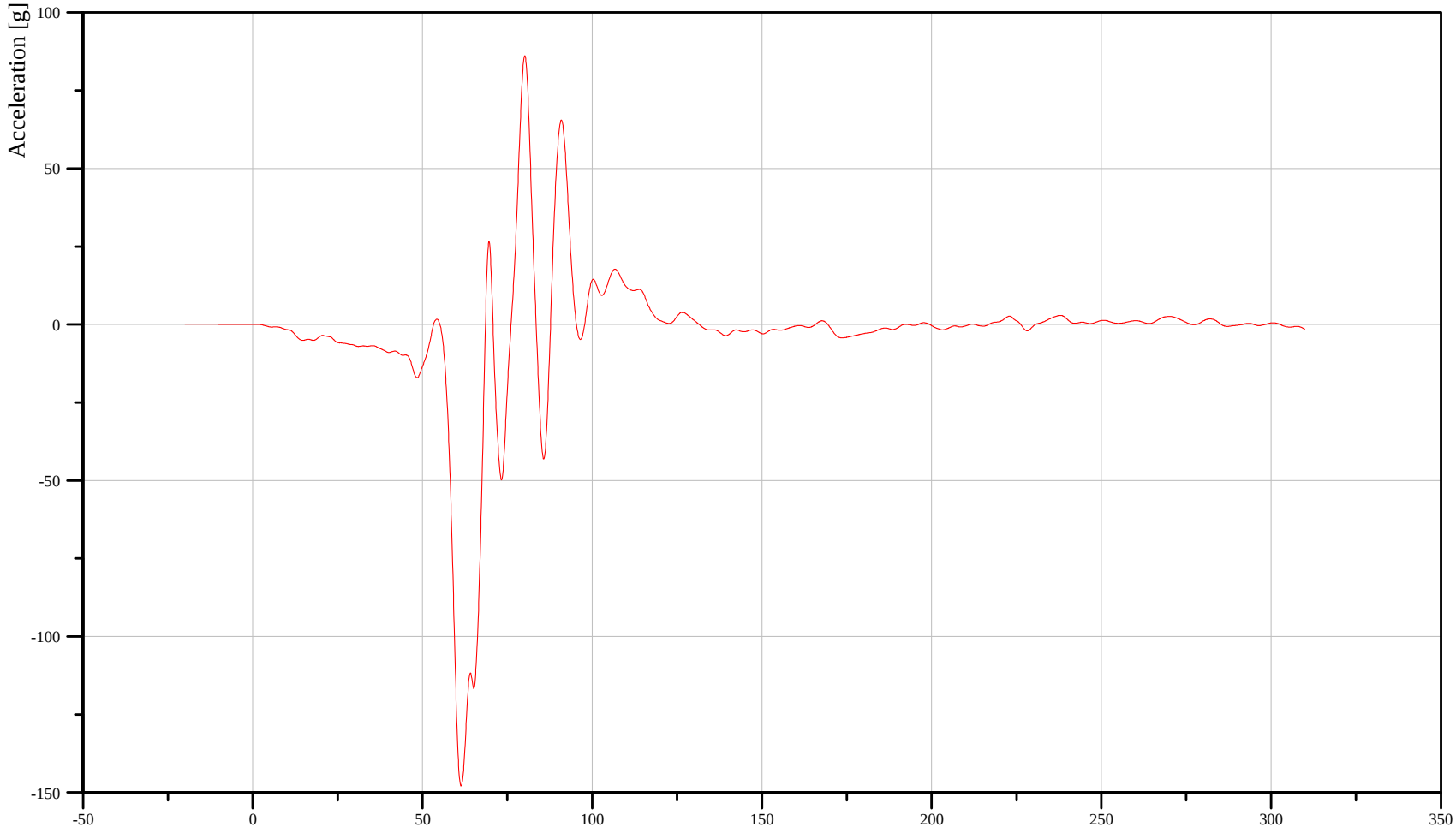
Bullet Vehicle Toe Pan Footrest X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11VEHC000001ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-147.88 g at 61.36 ms

Max. Value
86.12 g at 80.16 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

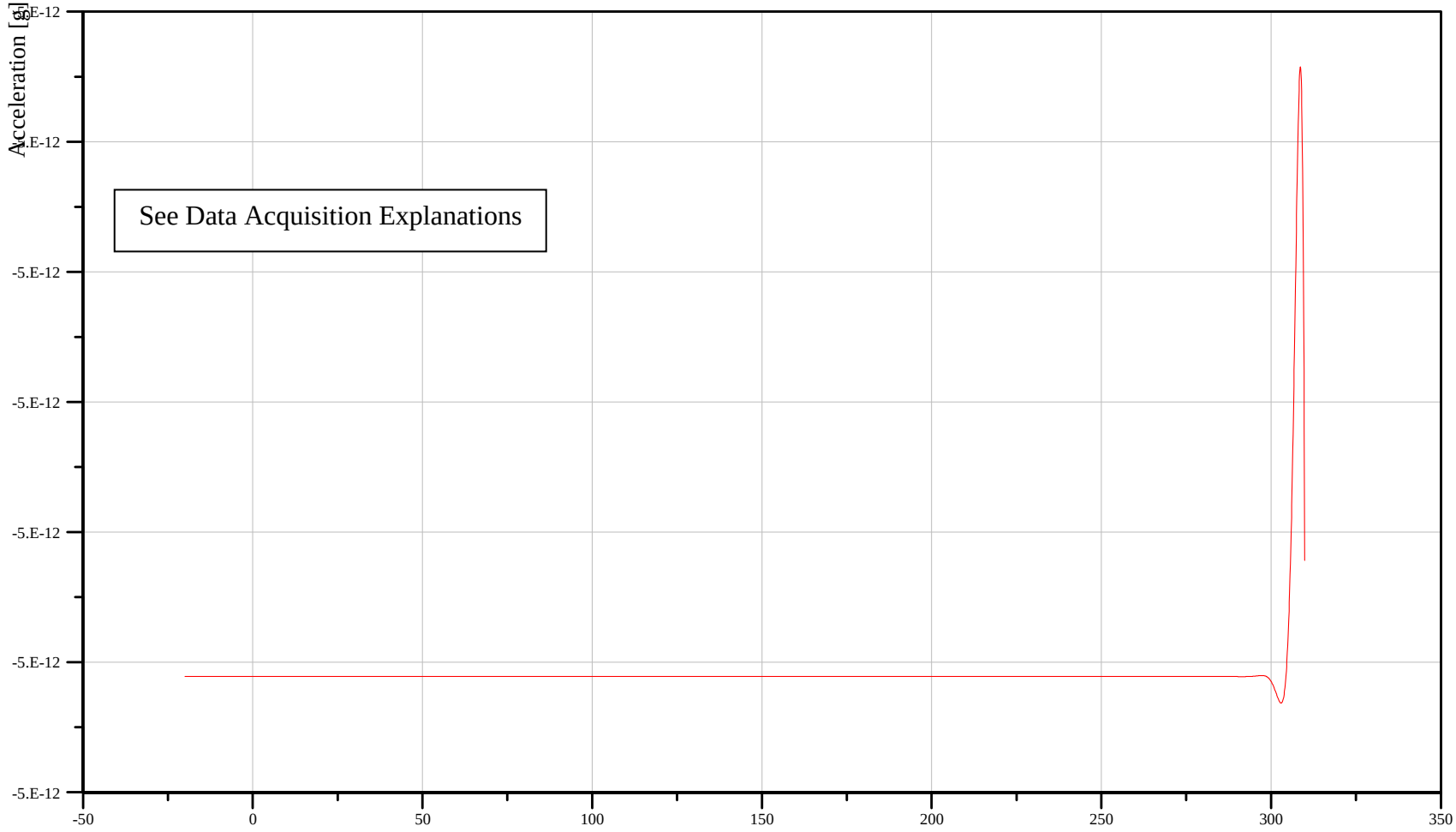
Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11VEHC000001ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
0.00 g at 302.96 ms

Max. Value
0.00 g at 308.64 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

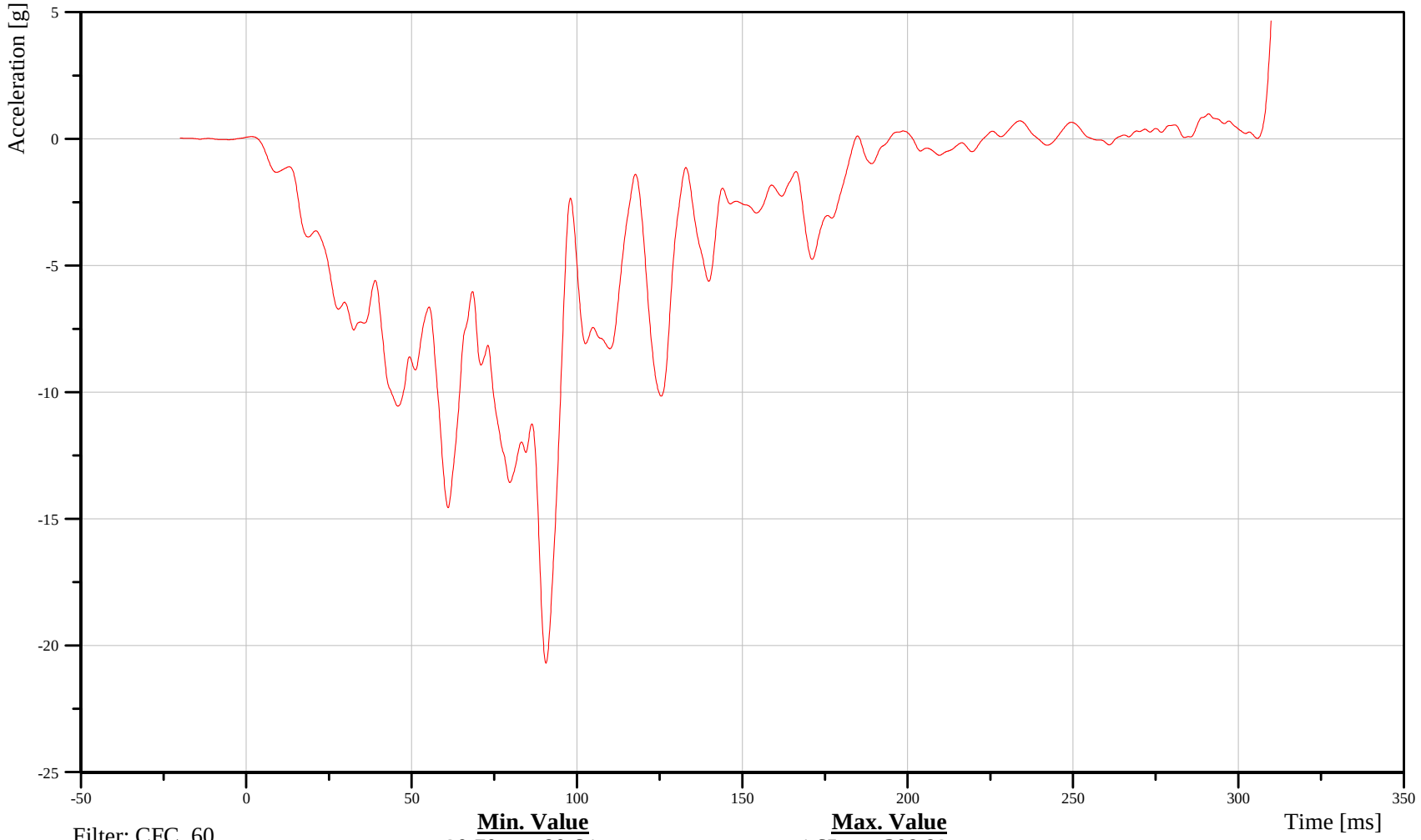
Bullet Vehicle Rear Tunnel Center X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

15TUNNCY0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-20.70 g at 90.64 ms

Max. Value
4.65 g at 309.92 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

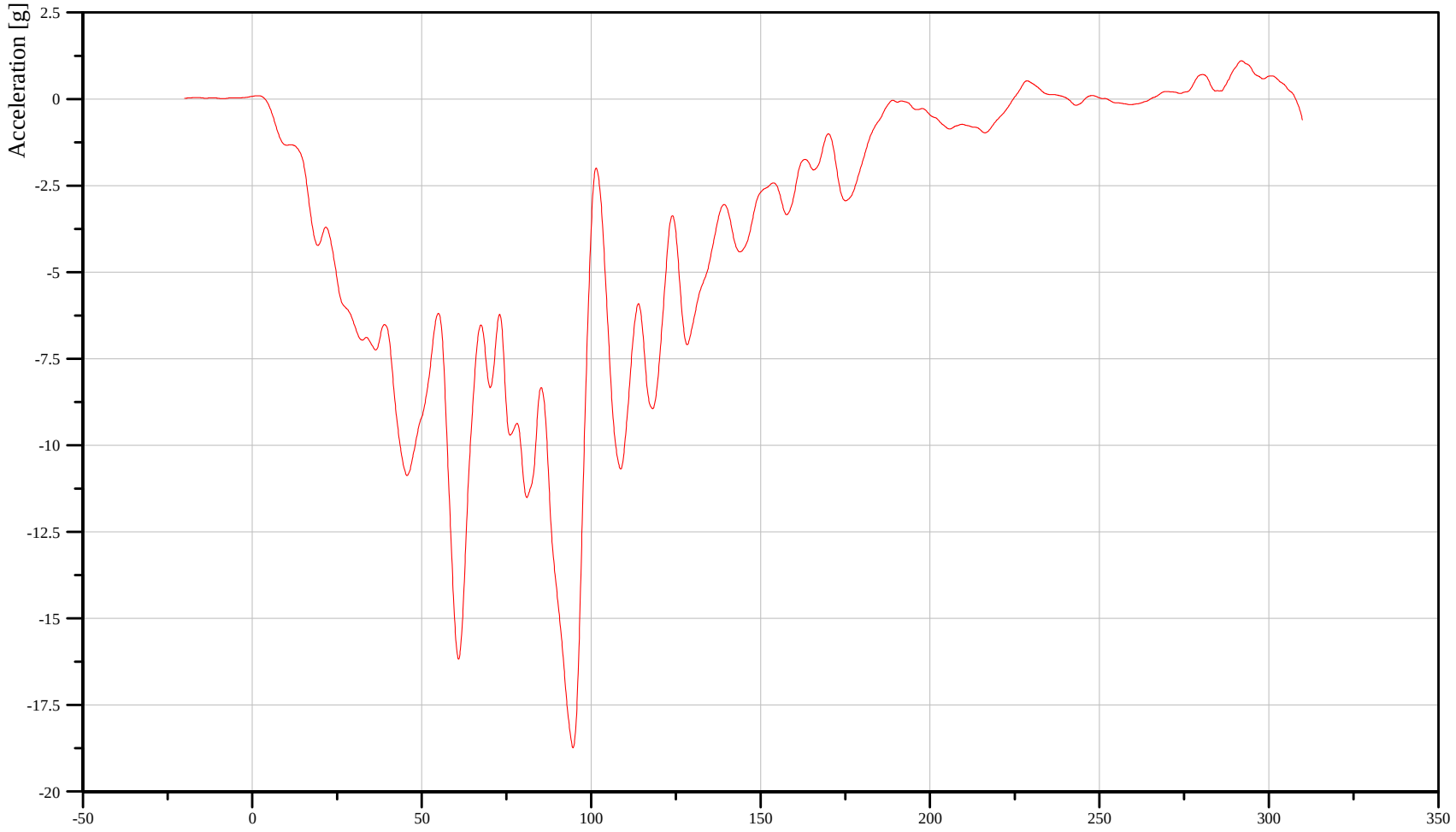
Bullet Vehicle CG X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-18.73 g at 94.64 ms

Max. Value
1.11 g at 291.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

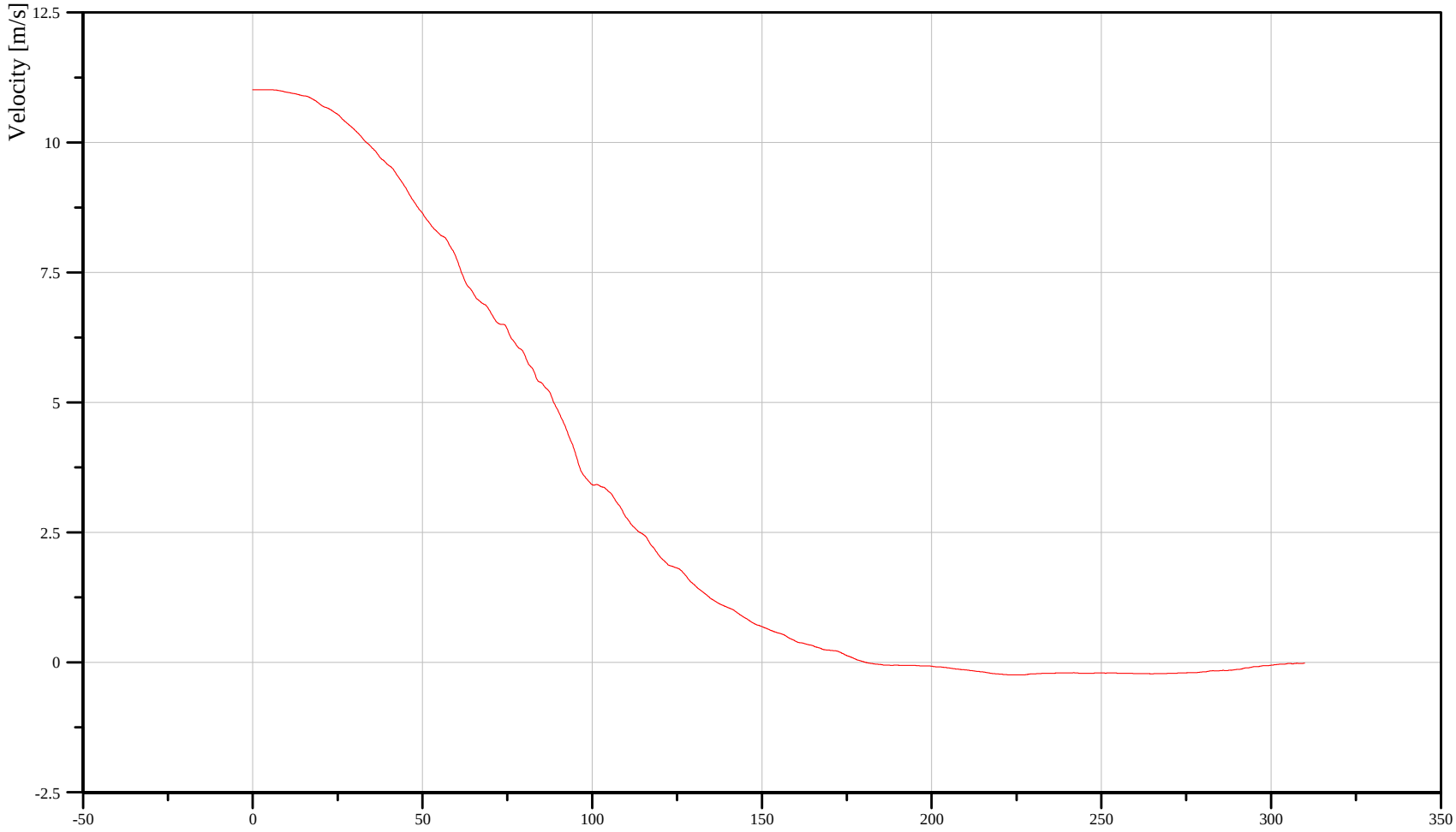
Bullet Vehicle CG X-Axis Velocity

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000VEXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.24 m/s at 224.08 ms

Max. Value
11.01 m/s at 3.36 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

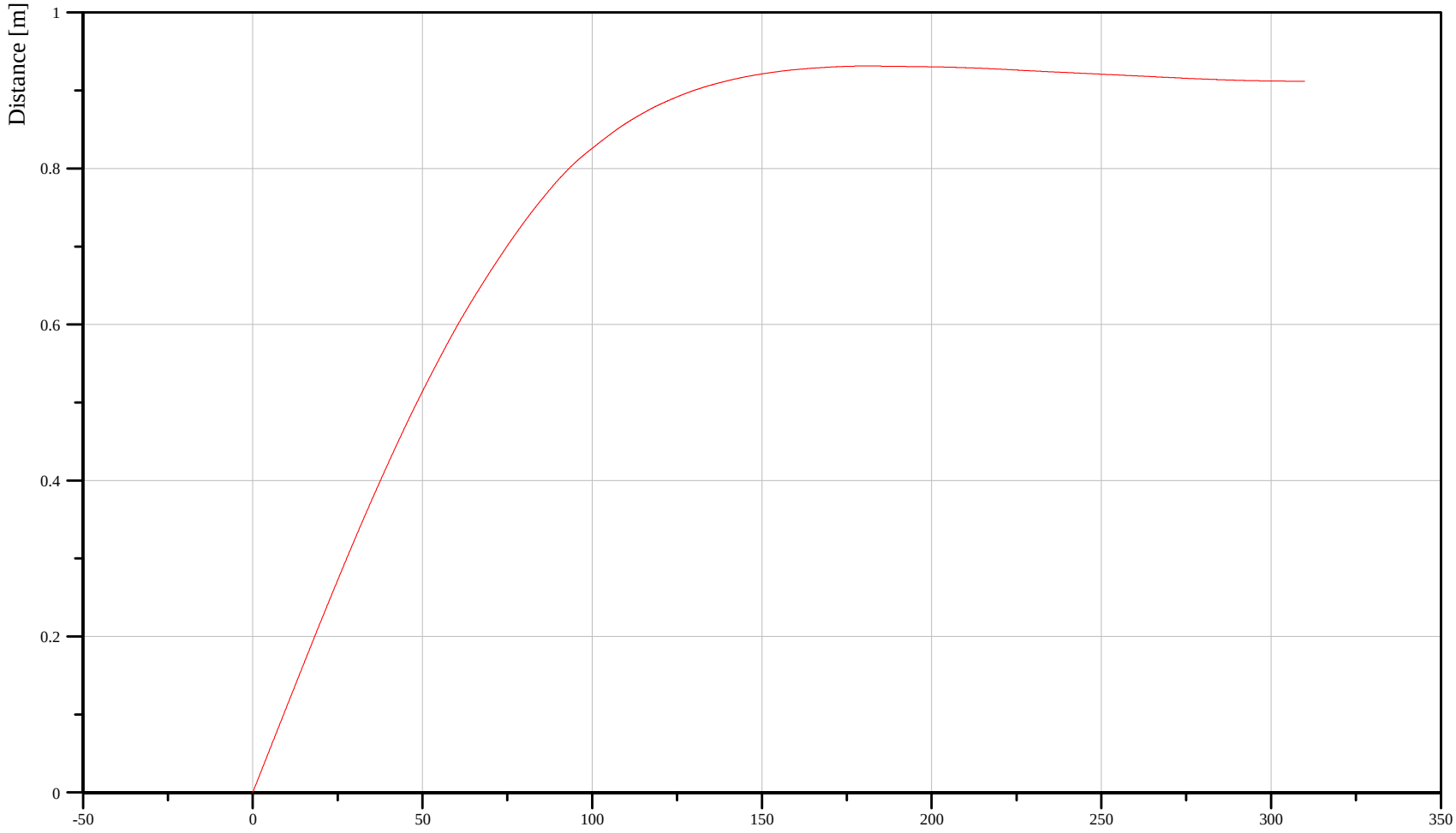
Bullet Vehicle CG X-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000DCXC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.00 m at 0.00 ms

Max. Value
0.93 m at 180.64 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

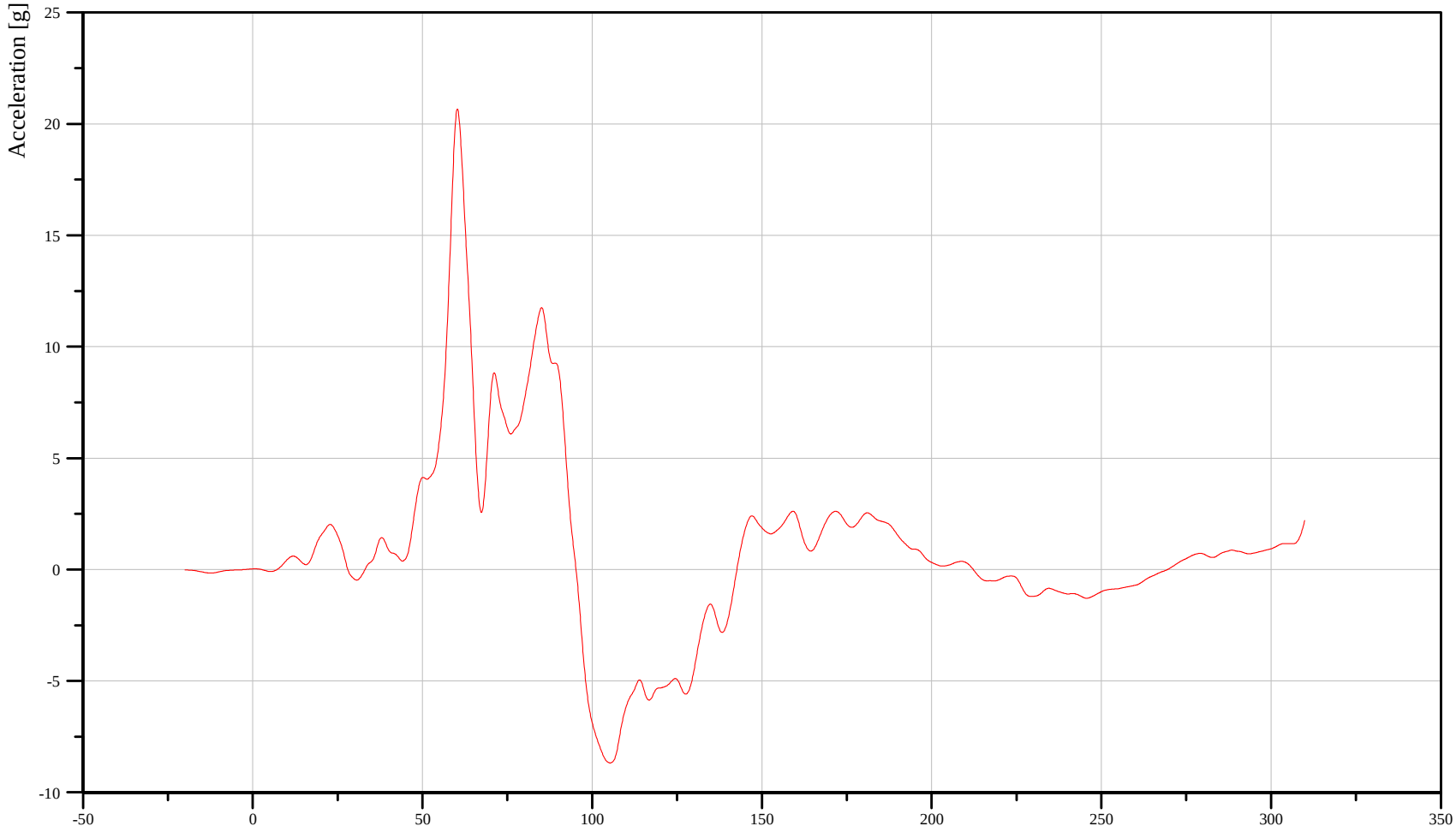
Bullet Vehicle CG Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000ACYD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-8.68 g at 105.28 ms

Max. Value
20.67 g at 60.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

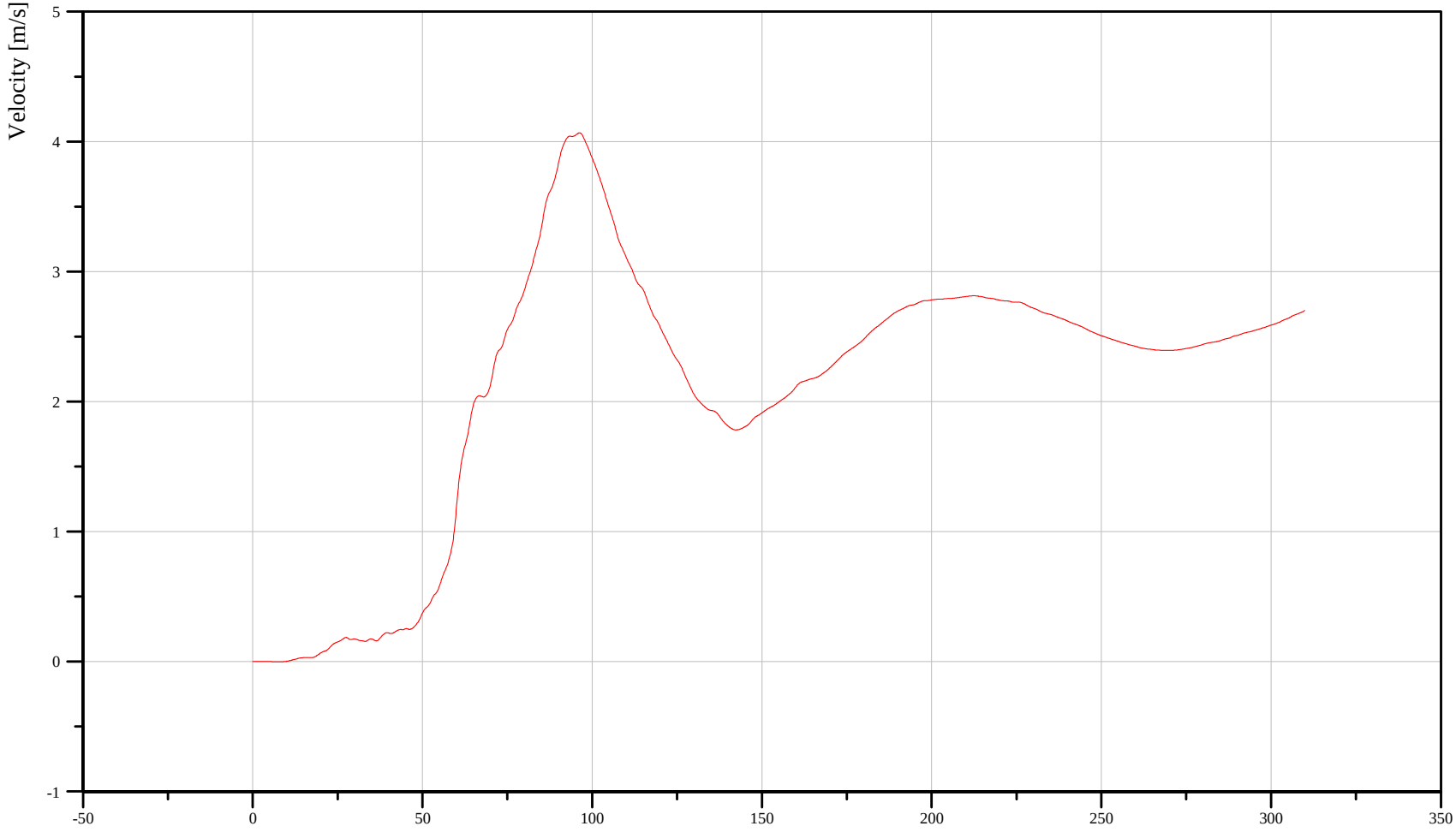
Bullet Vehicle CG Y-Axis Velocity

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000VEYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.00 m/s at 7.12 ms

Max. Value
4.07 m/s at 96.32 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

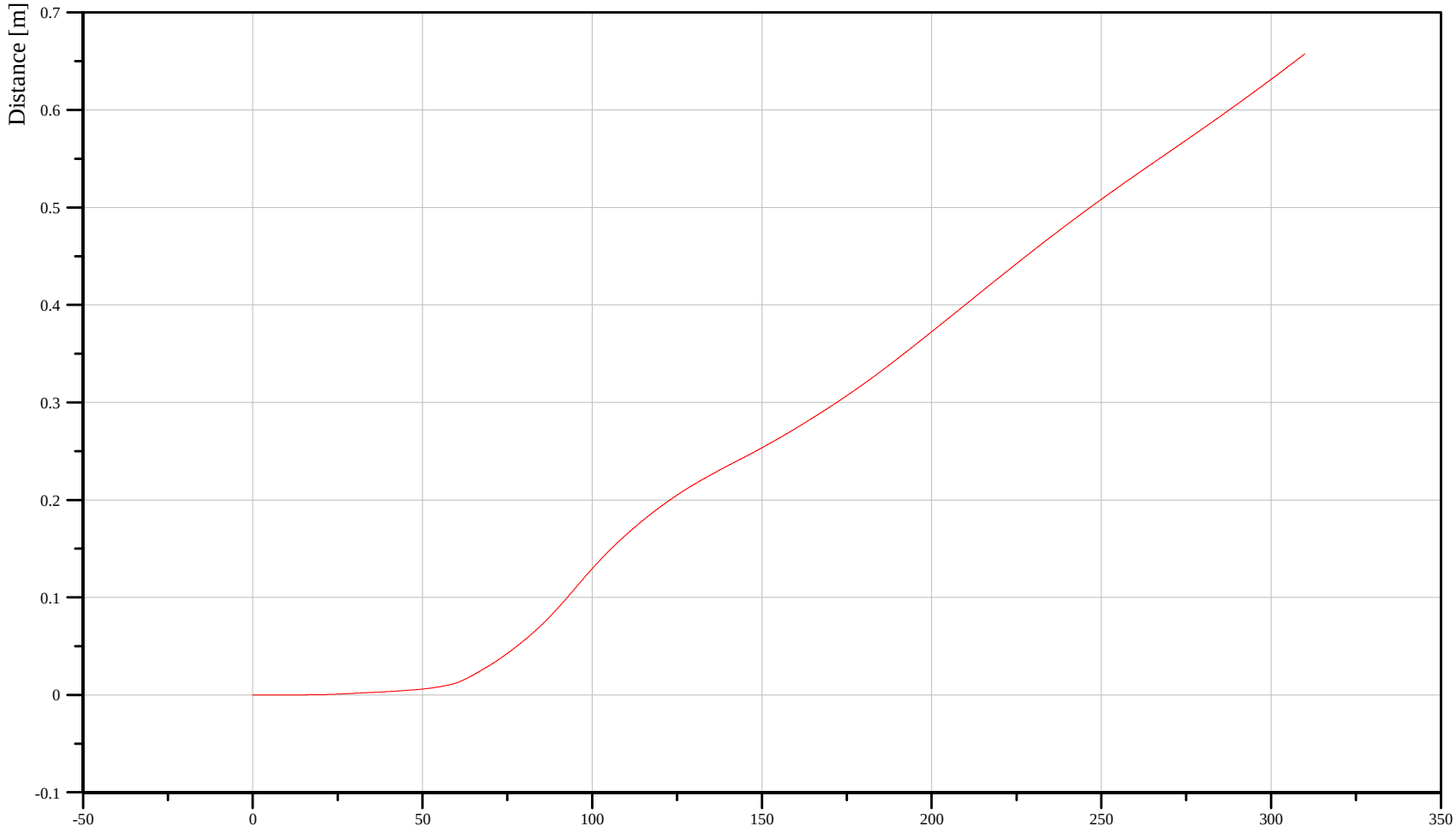
Bullet Vehicle CG Y-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000DCYC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
0.00 m at 9.36 ms

Max. Value
0.66 m at 309.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

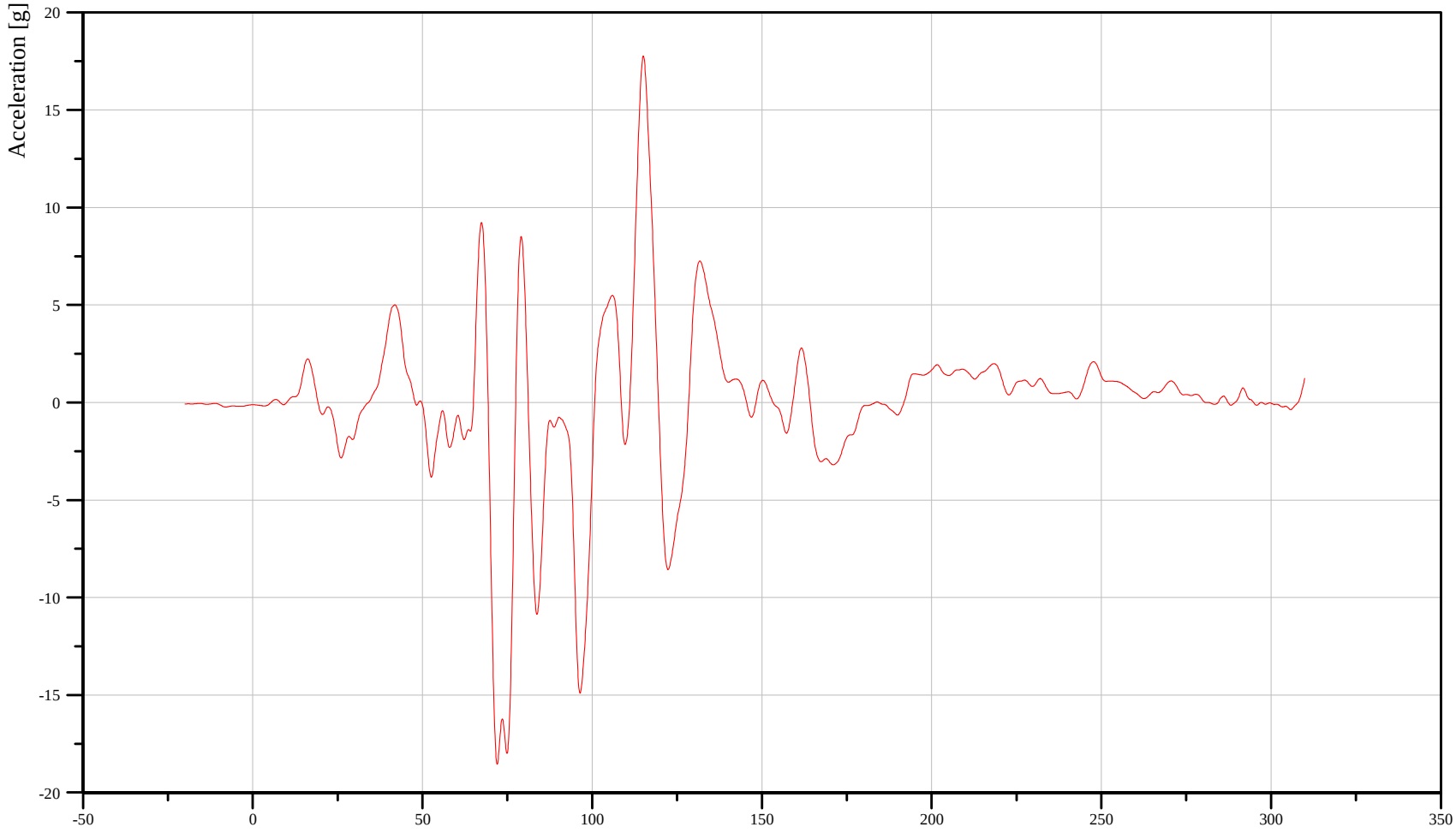
Bullet Vehicle CG Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-18.55 g at 72.00 ms

Max. Value
17.76 g at 115.04 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

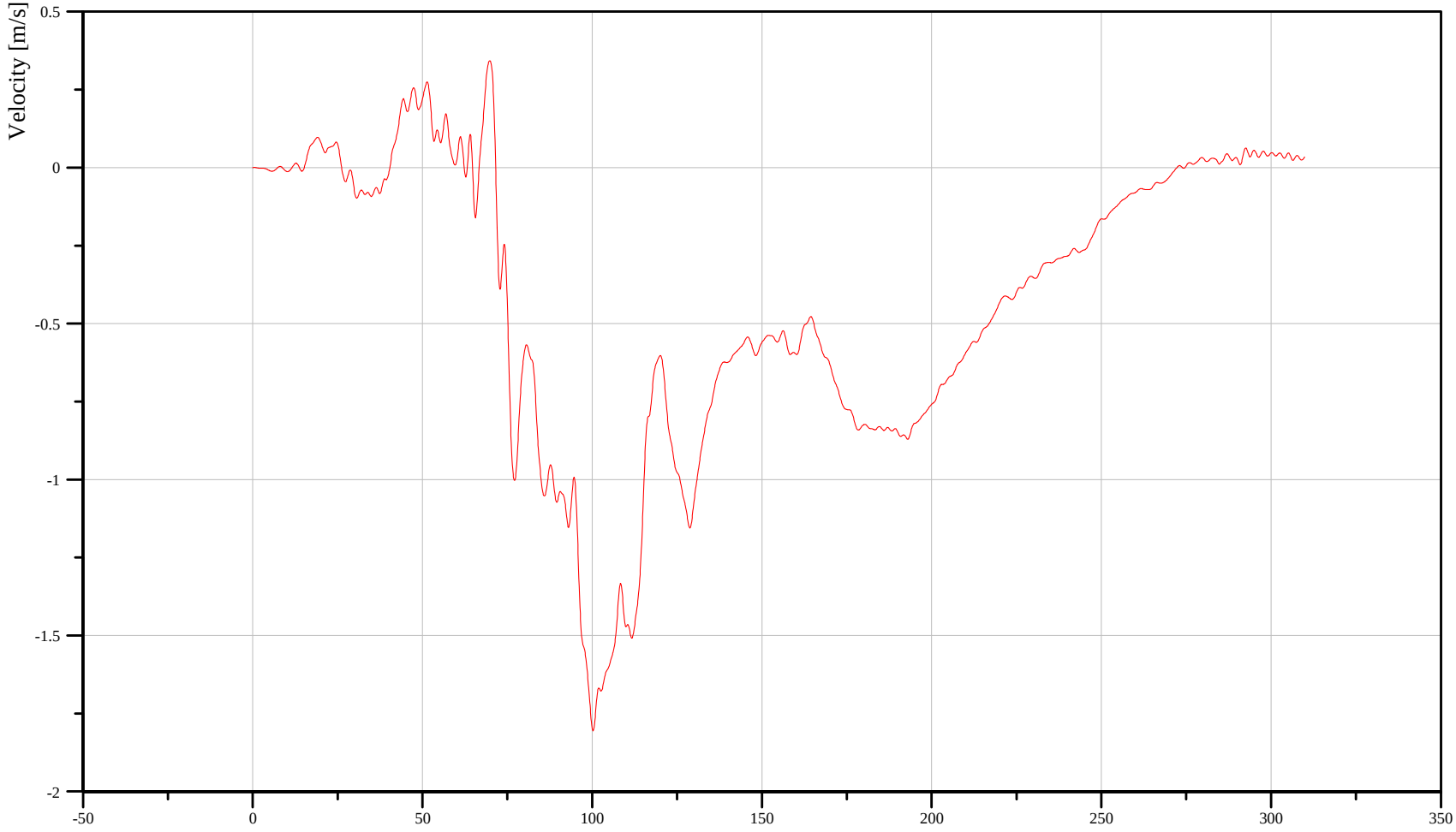
Bullet Vehicle CG Z-Axis Velocity

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000VEZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-1.81 m/s at 100.24 ms

Max. Value
0.34 m/s at 69.84 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

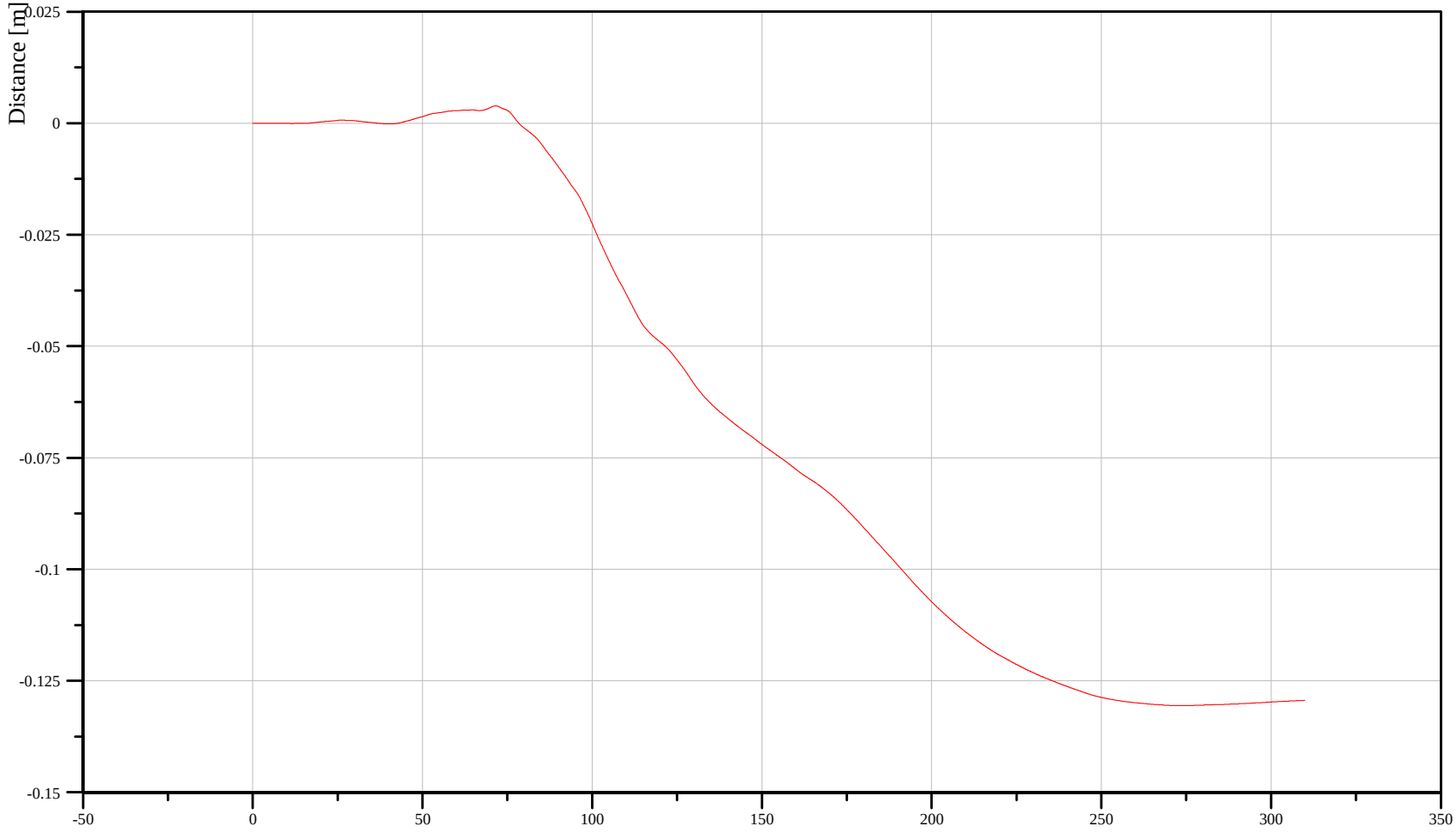
Bullet Vehicle CG Z-Axis Displacement

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000DCZC

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_180

Min. Value
-0.13 m at 272.24 ms

Max. Value
0.00 m at 71.60 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

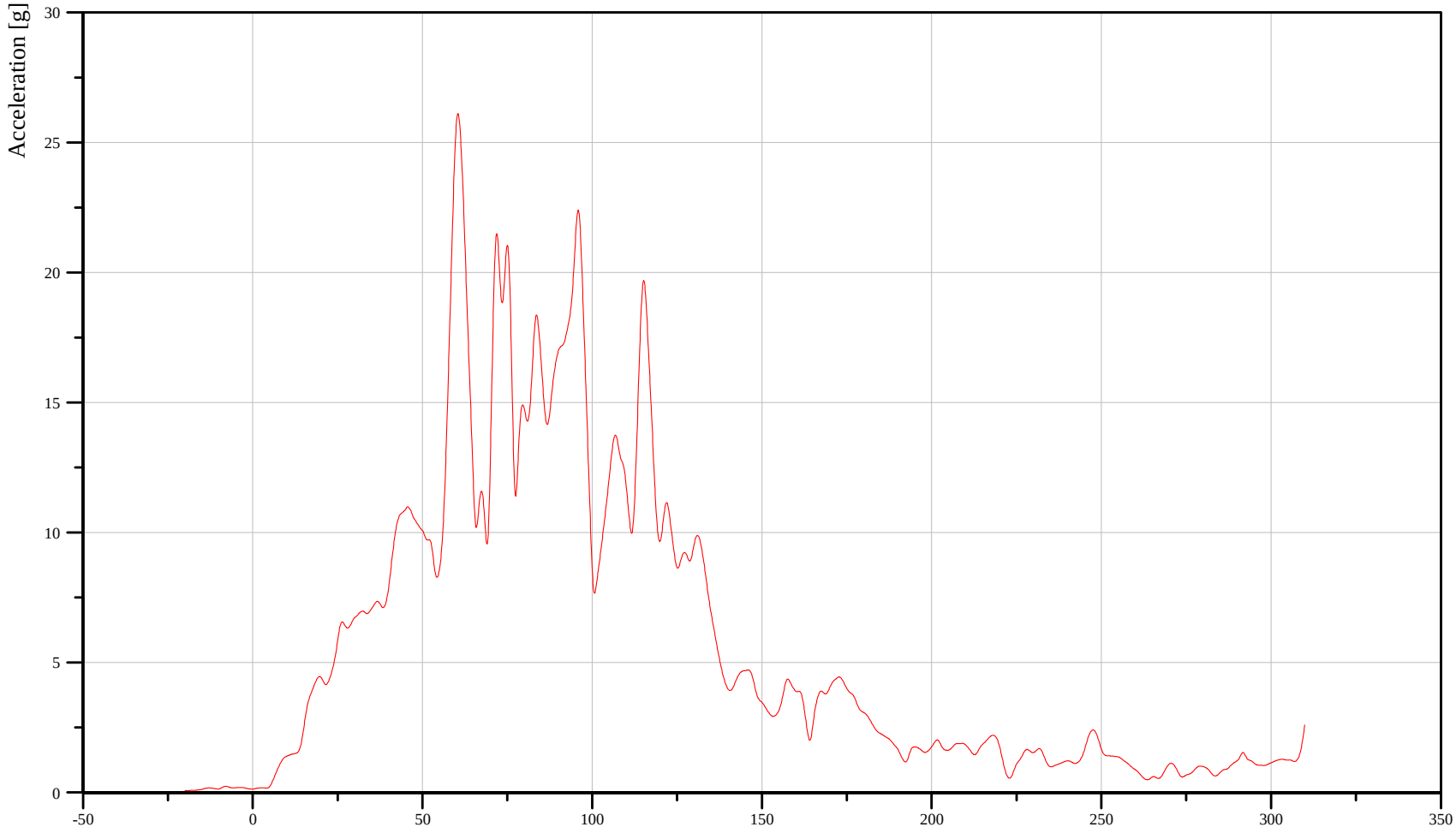
Bullet Vehicle CG Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

10VEHCCG0000ACRD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
0.08 g at -19.52 ms

Max. Value
26.12 g at 60.48 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

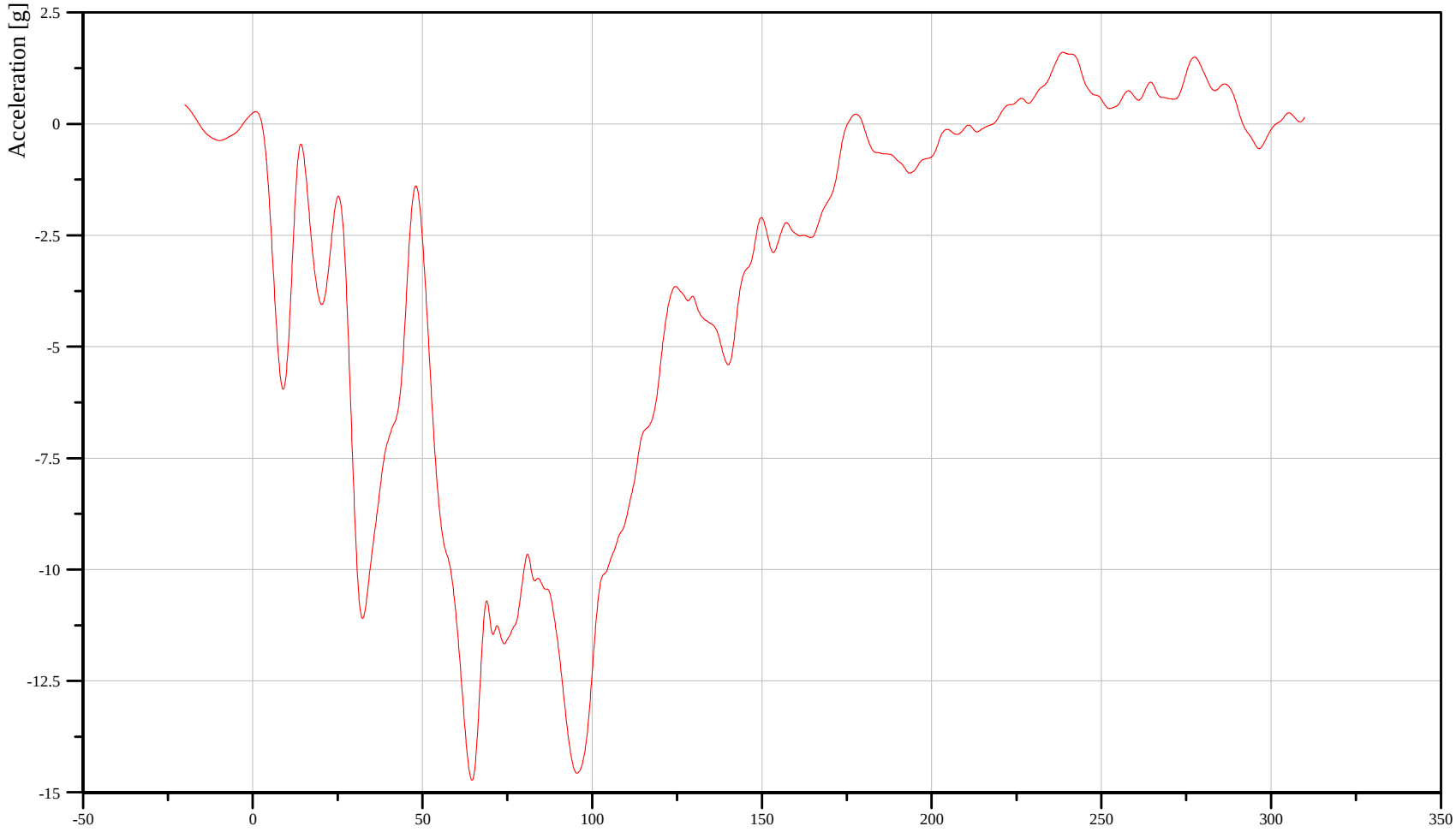
Bullet Vehicle Rear Deck X-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

18VEHC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-14.73 g at 64.64 ms

Max. Value
1.61 g at 238.72 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

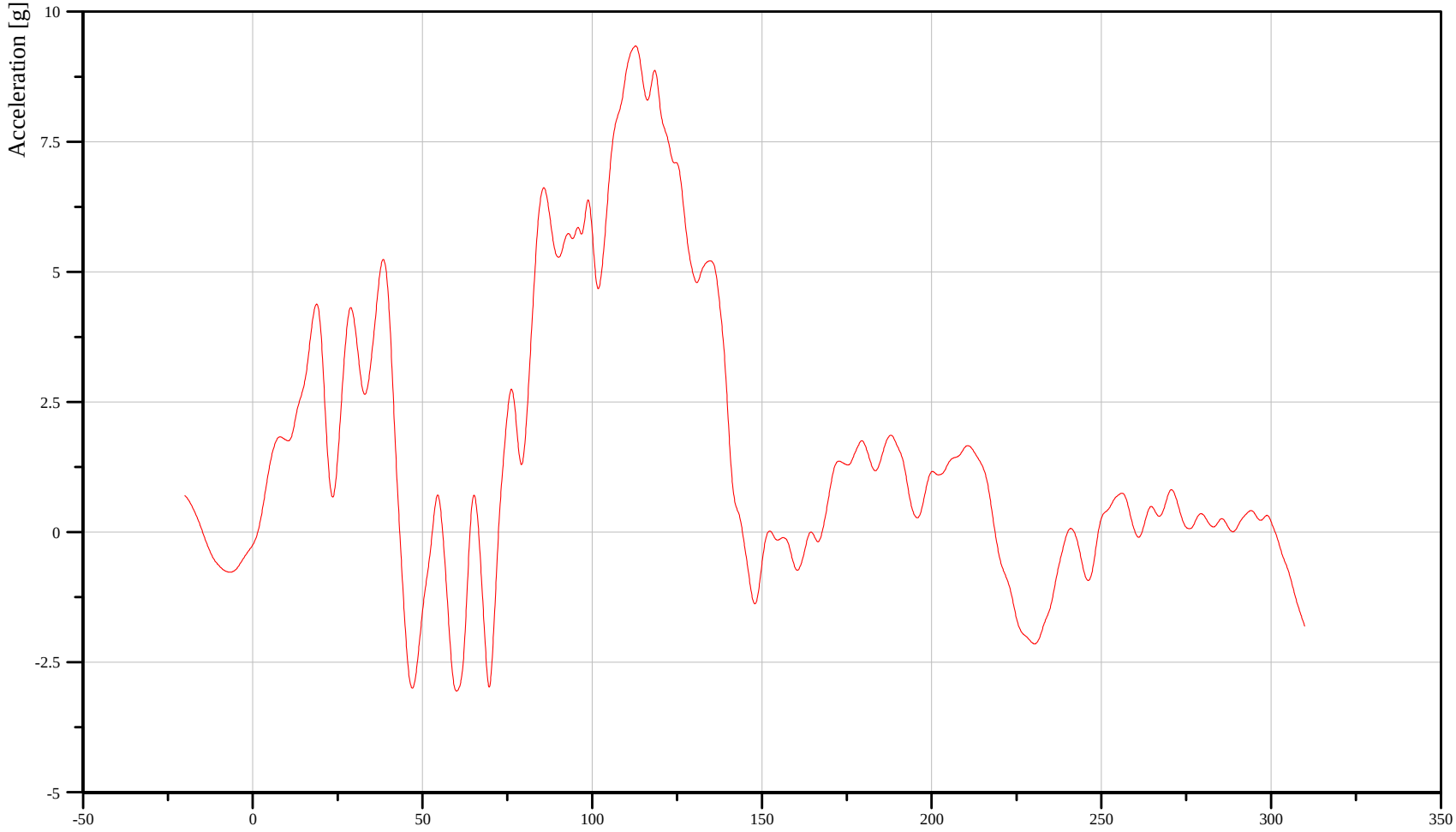
Bullet Vehicle Rear Deck Y-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

18VEHC000000ACYD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-3.05 g at 60.08 ms

Max. Value
9.34 g at 112.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

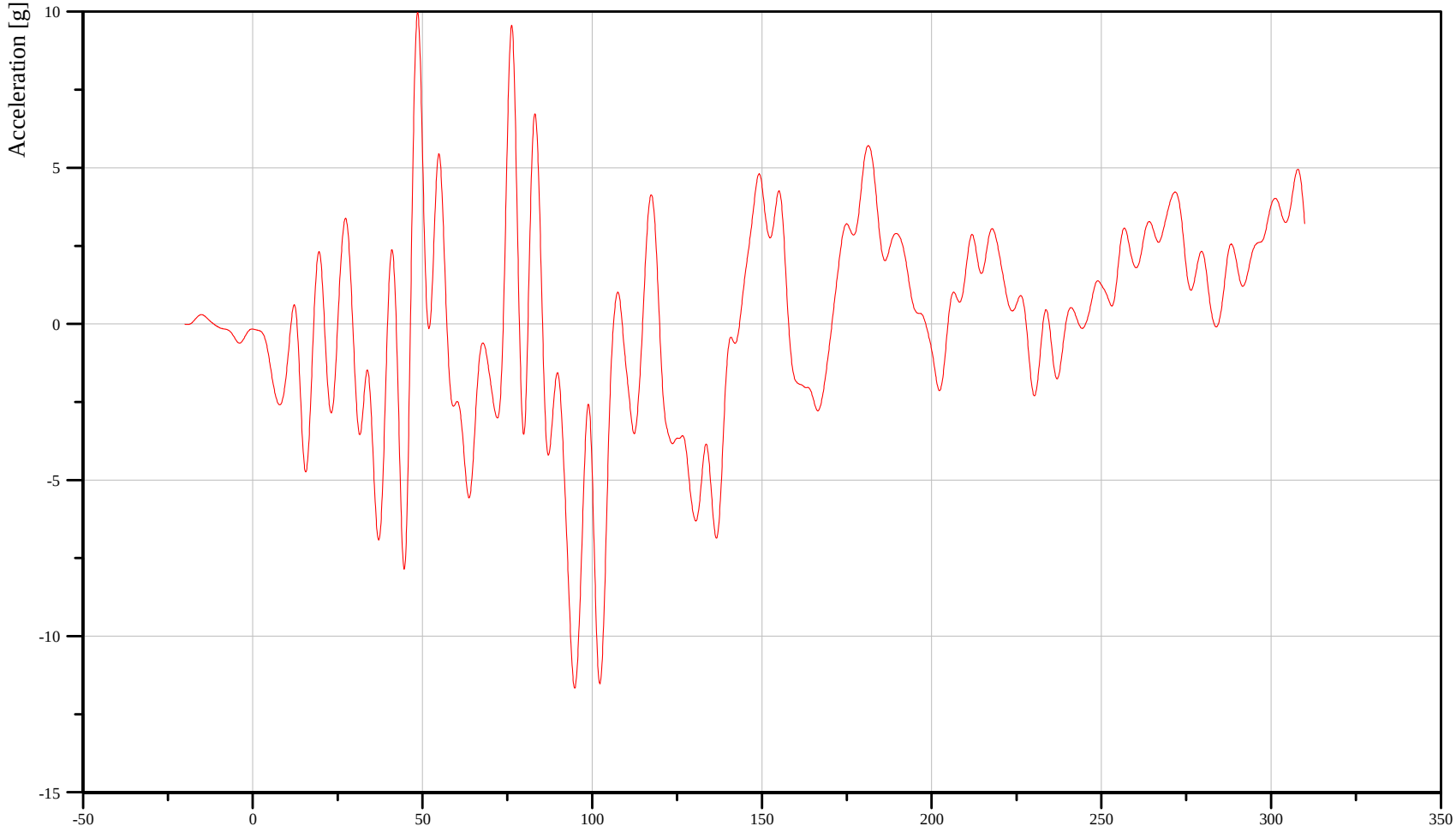
Bullet Vehicle Rear Deck Z-Axis Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

18VEHC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
-11.66 g at 94.88 ms

Max. Value
9.97 g at 48.56 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

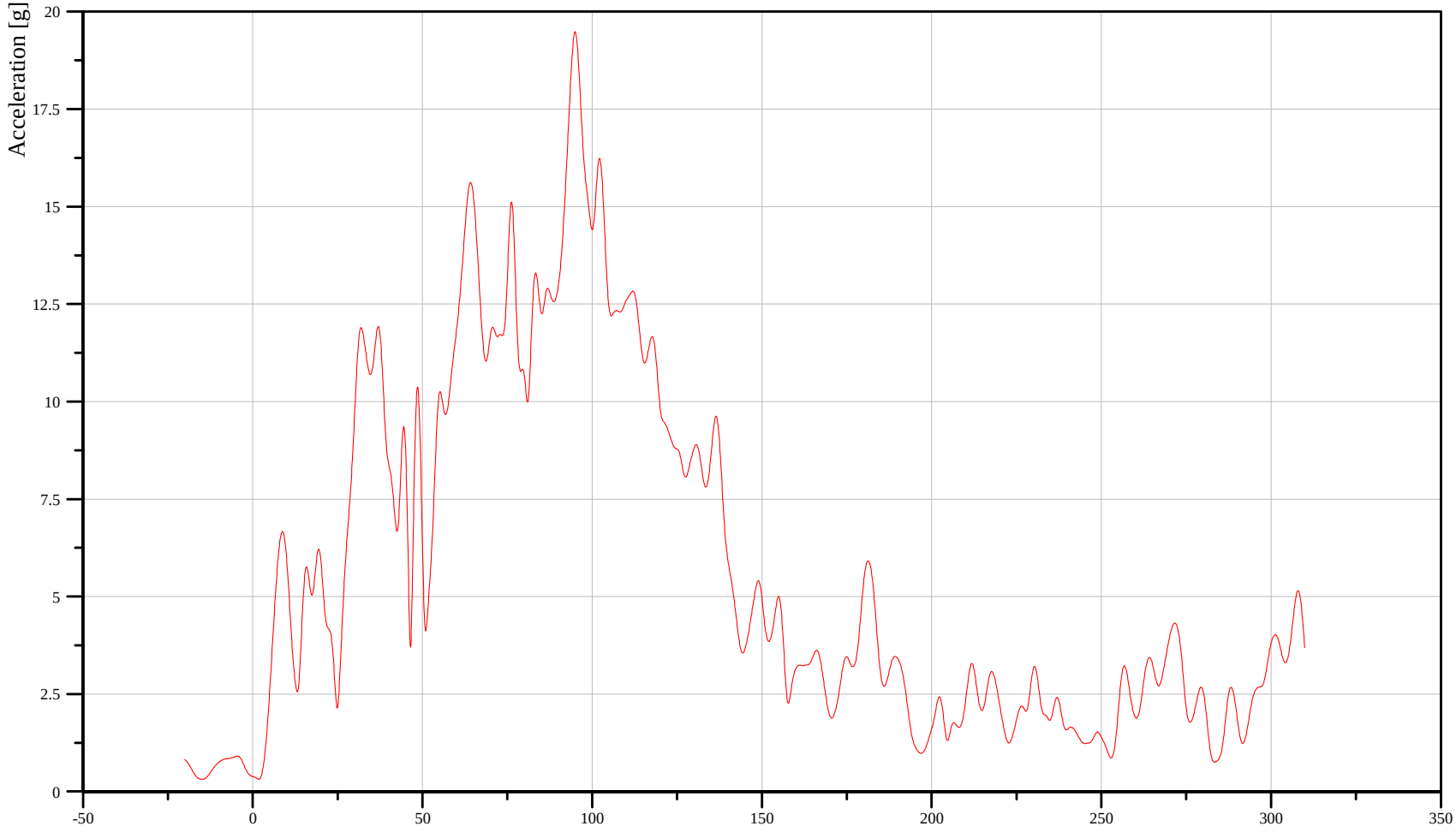
Bullet Vehicle Rear Deck Resultant Acceleration

Date: 06/20/2007
Time: 08:11

Customer: VRTC

18VEHC000000ACRD

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_60

Min. Value
0.31 g at -14.88 ms

Max. Value
19.49 g at 94.96 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

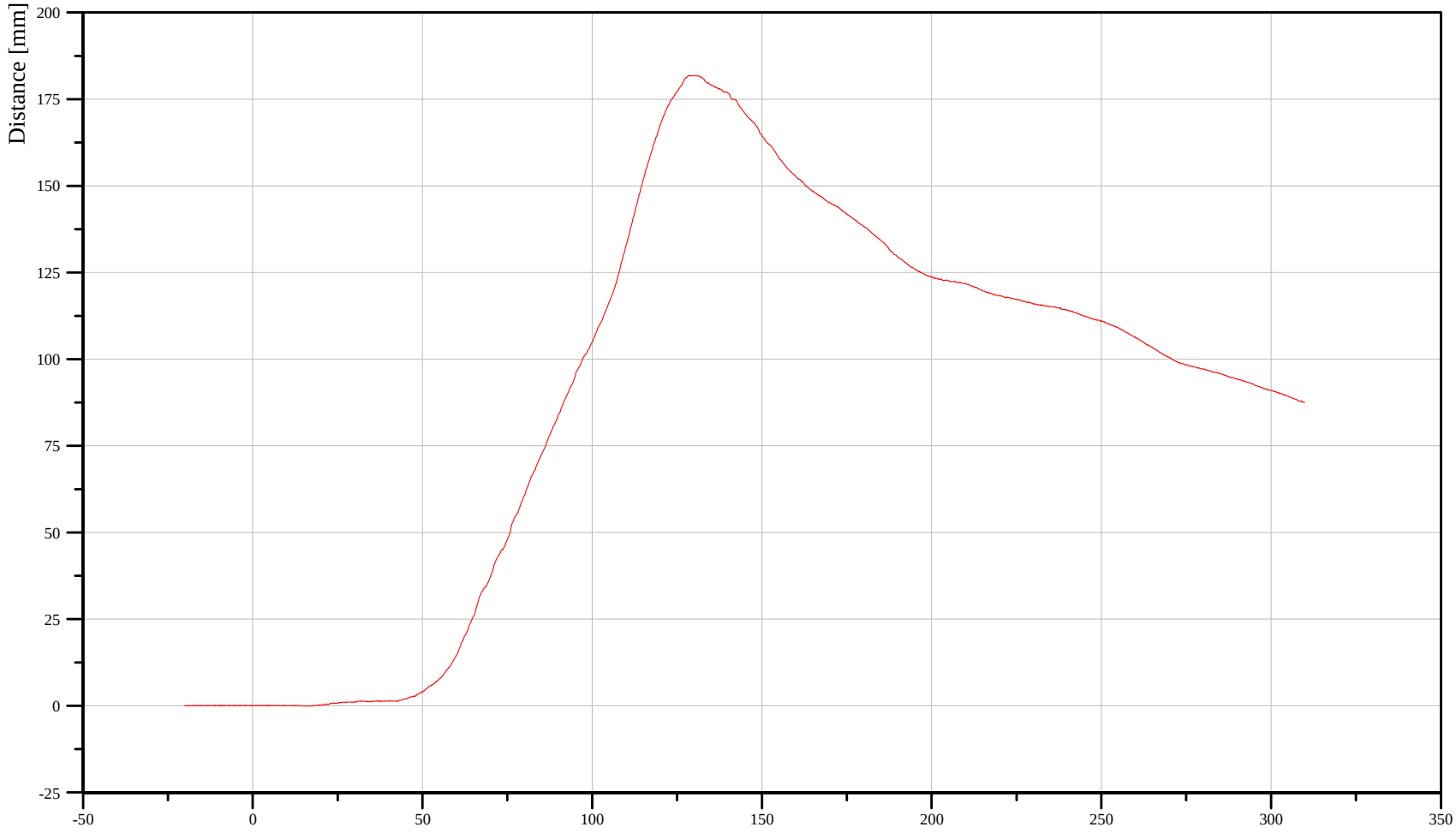
Bullet Vehicle Driver Lap Belt Spool

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11SEBA0000B5DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.09 mm at 16.72 ms

Max. Value
181.85 mm at 130.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

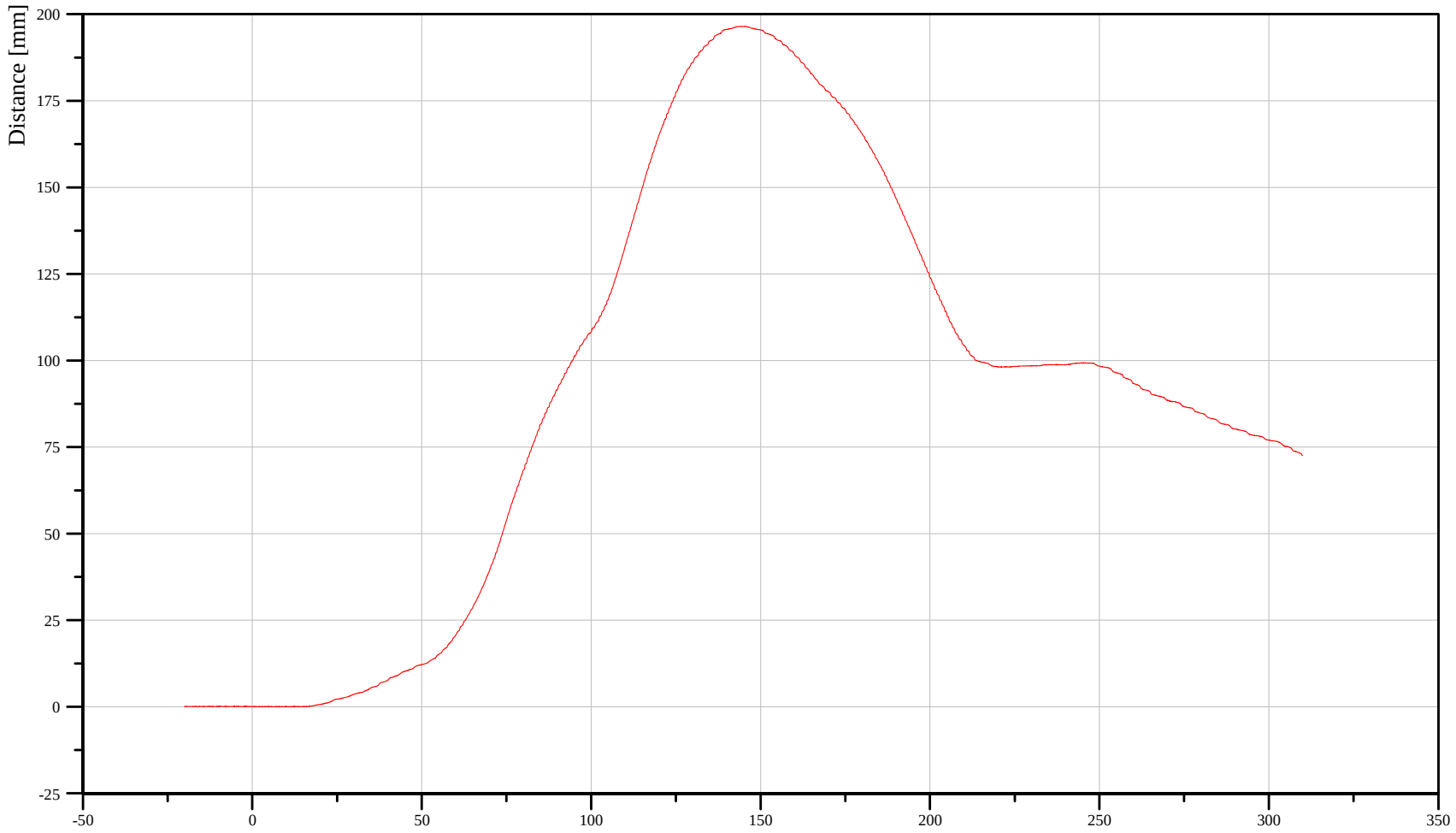
Bullet Vehicle Driver Shoulder Belt Spool and Retraction

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11SEBA0000B3DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.07 mm at 4.40 ms

Max. Value
196.51 mm at 144.40 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

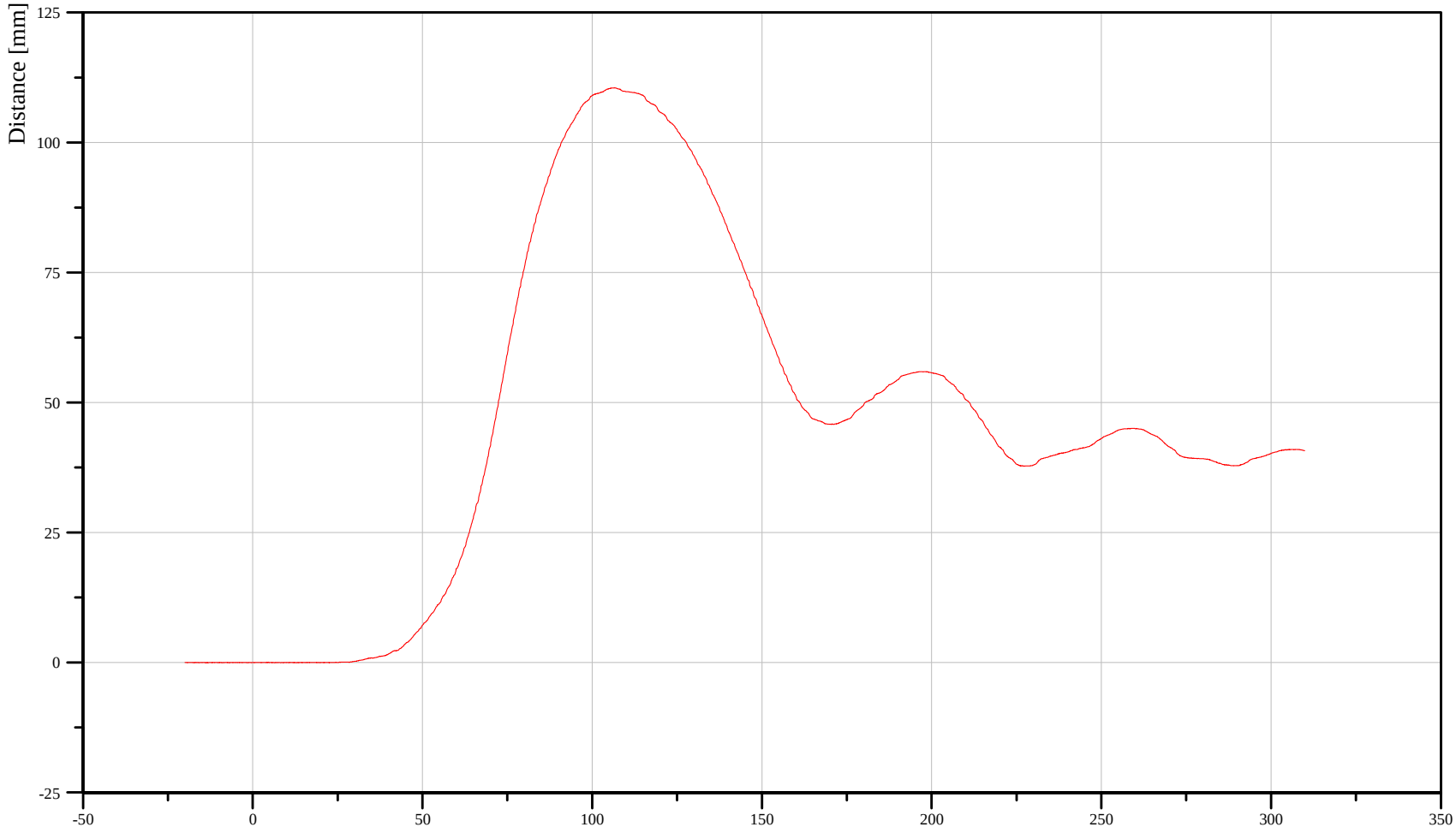
Bullet Vehicle Passenger Lap Belt Spool

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13SEBA0000B5DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.06 mm at -19.28 ms

Max. Value
110.52 mm at 106.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

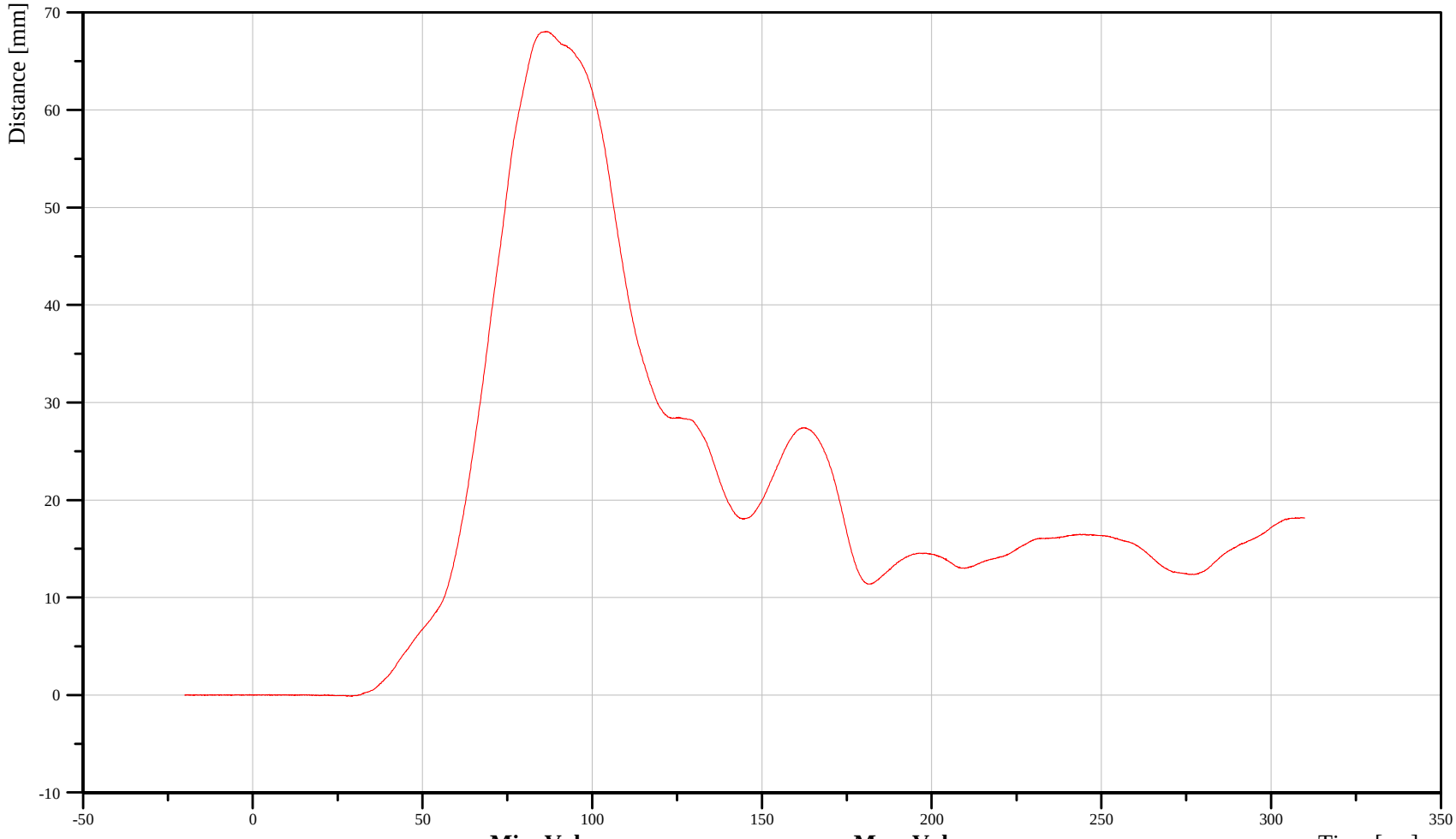
Bullet Vehicle Passenger Shoulder Belt Spool and Retraction

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13SEBA0000B3DS0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.13 mm at 27.92 ms

Max. Value
68.07 mm at 86.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

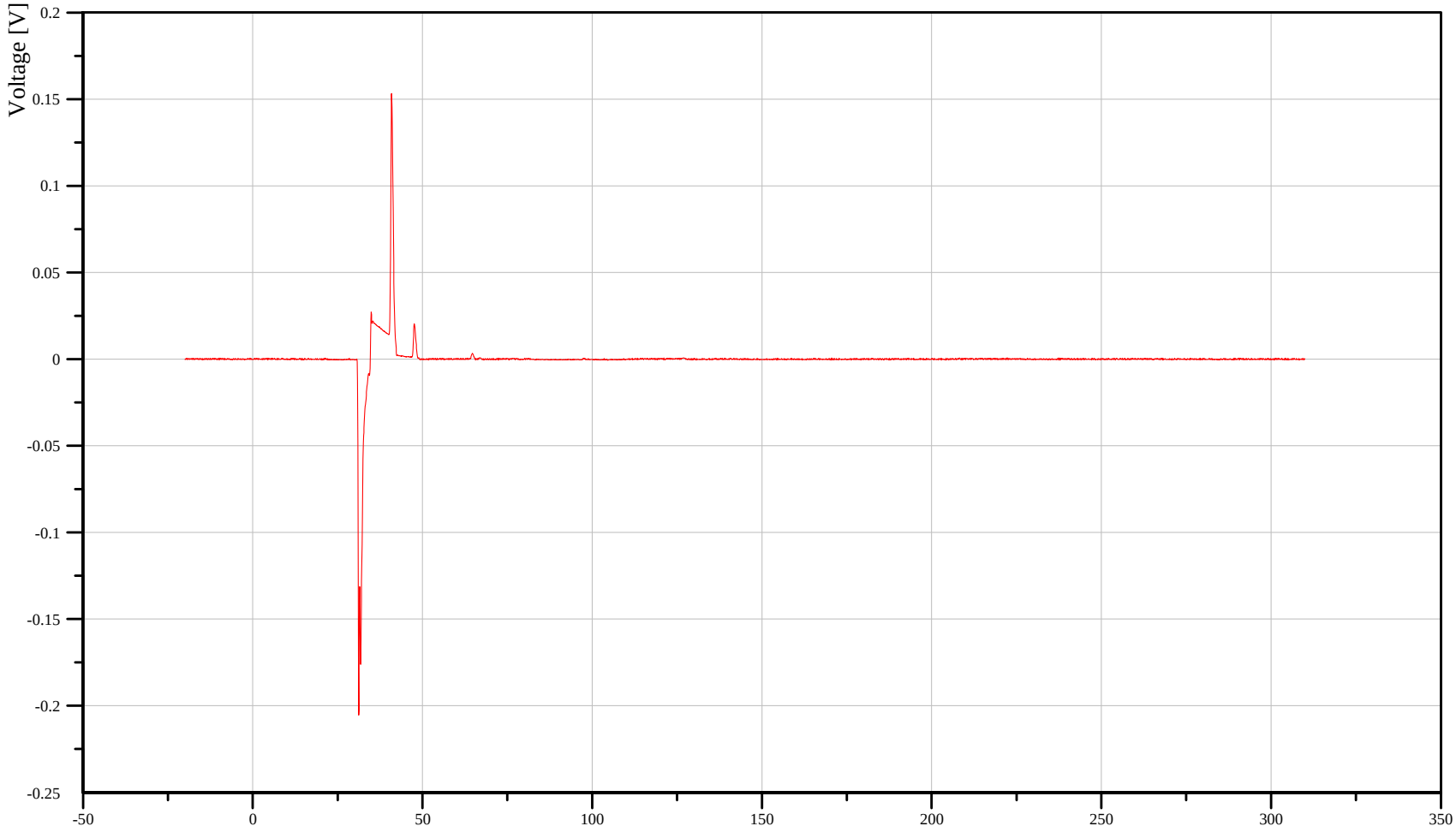
Bullet Vehicle Driver Front Airbag 1 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11AIRBFR0100EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.21 V at 31.20 ms

Max. Value
0.15 V at 40.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

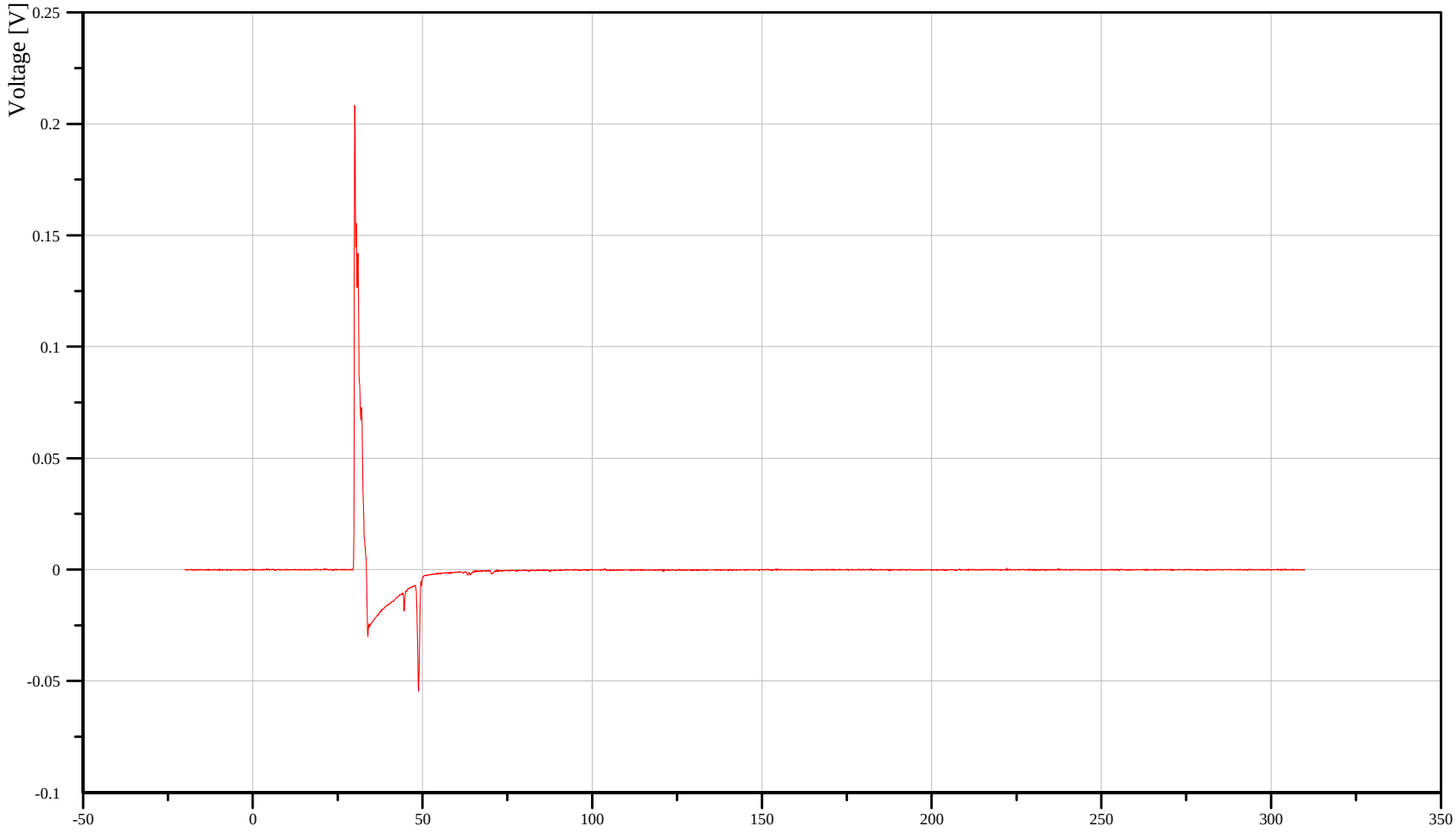
Bullet Vehicle Driver Front Airbag 2 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

11AIRBFR0200EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-0.05 V at 48.80 ms

Max. Value
0.21 V at 30.08 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

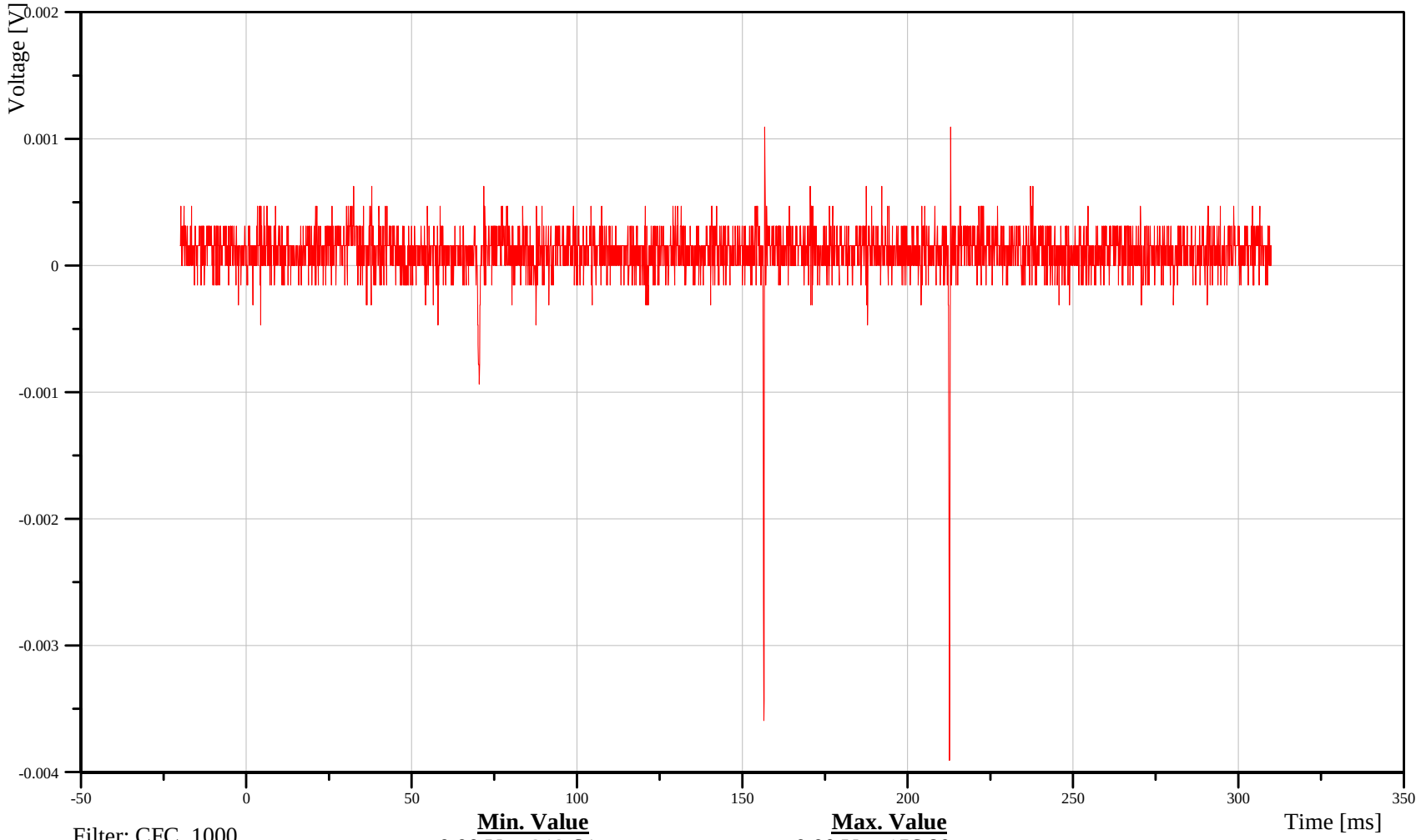
Bullet Vehicle Passenger Front Airbag 1 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13AIRBFR0100EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
0.00 V at 212.64 ms

Max. Value
0.00 V at 156.80 ms

070620

2003 Chevrolet Silverado into 2002 Ford Focus 40% Offset Frontal

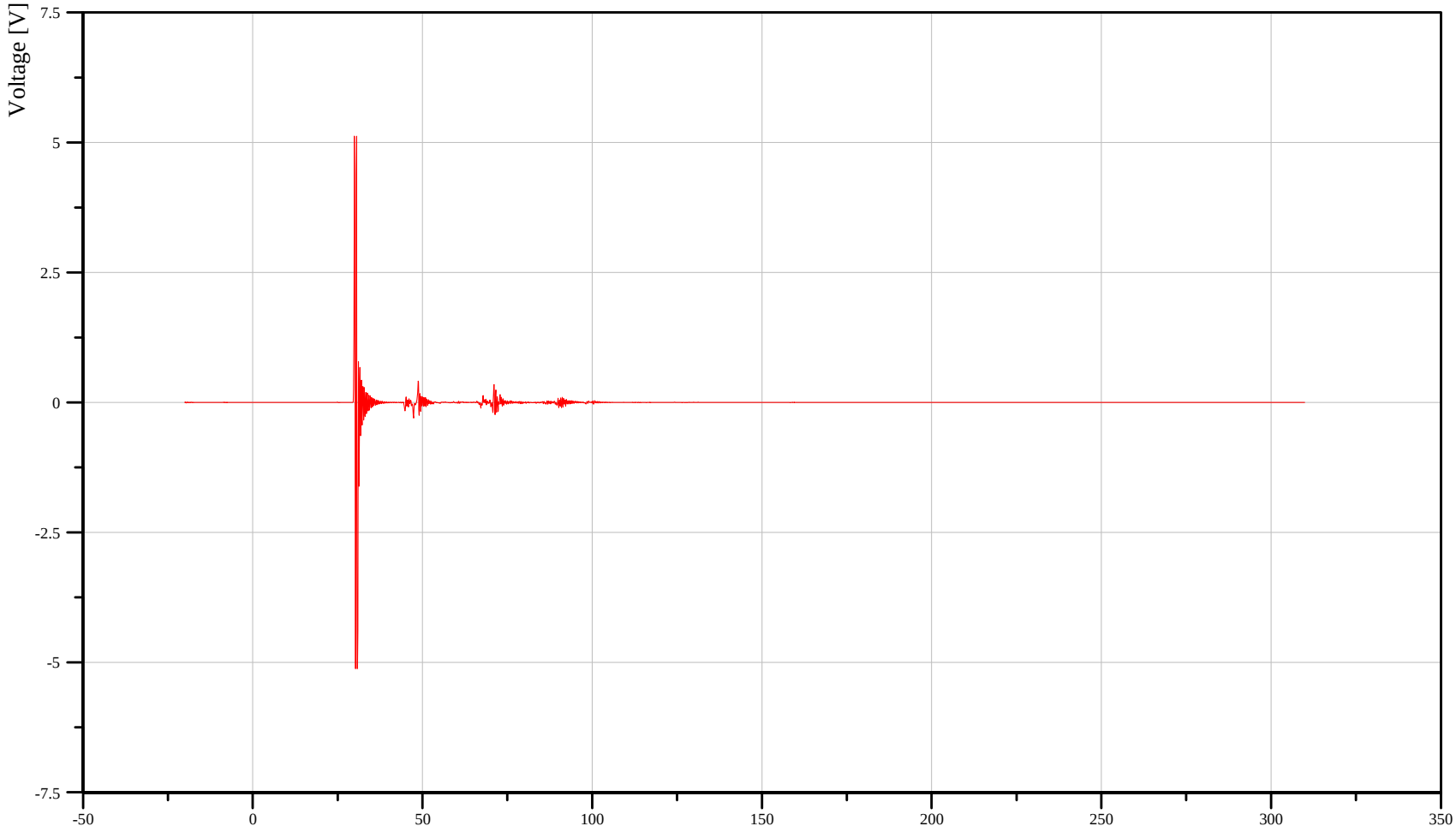
Bullet Vehicle Passenger Front Airbag 2 Inductor

Date: 06/20/2007
Time: 08:11

Customer: VRTC

13AIRBFR0200EV0A

TRC Inc. Test Lab: CTF
Test Number: 070620



Filter: CFC_1000

Min. Value
-5.12 V at 30.24 ms

Max. Value
5.12 V at 29.92 ms

Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

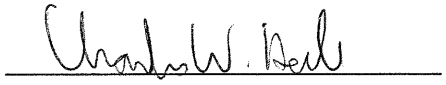
Target Vehicle Driver Dummy S/N: 001

1

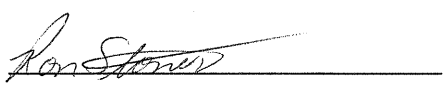
Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 001 Calibration No. 01

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. 2-1
Test Date: 6/11/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	20.7 °C	Yes
Relative Humidity	10 - 70 %	47 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	257.8 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	10.6 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Charles W. Ball

Approved

Ron Stover

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

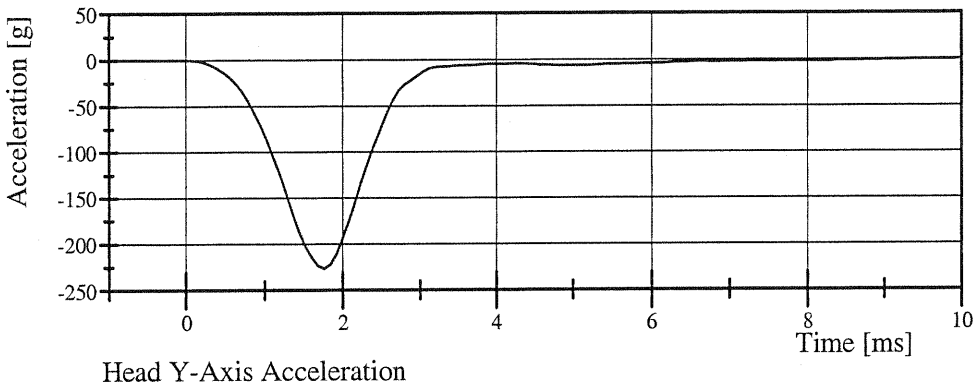
06.11.2007 08:54:20 614

070620

Transportation Research Center Inc.

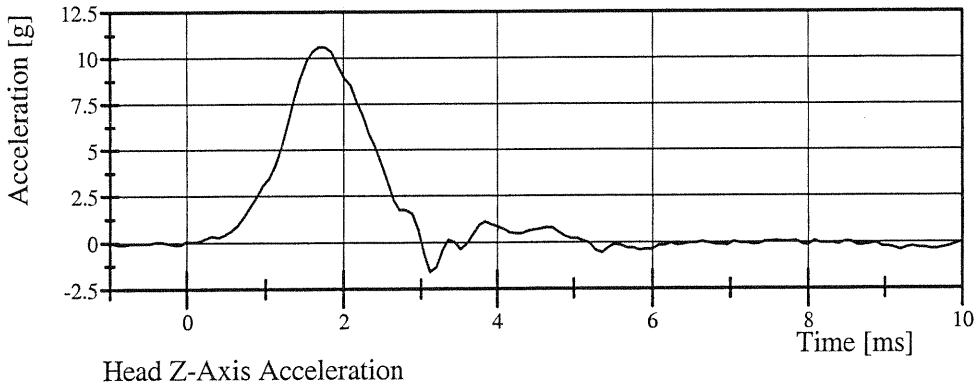
Front Head Drop
HIII 50th Serial No. 001 Certification No. 2-1
Test Date: 6/11/2007

Head X-Axis Acceleration



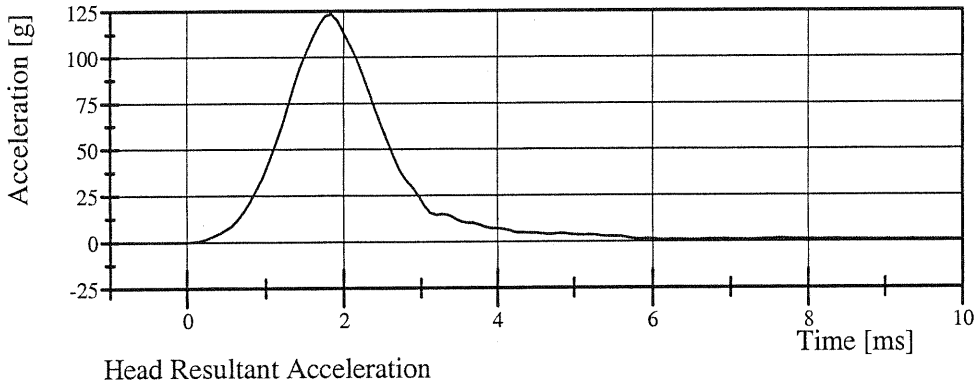
Filter Class: CFC_1000
Max: 0.3 g at 10.0 ms
Min: -226.7 g at 1.8 ms

Head Y-Axis Acceleration



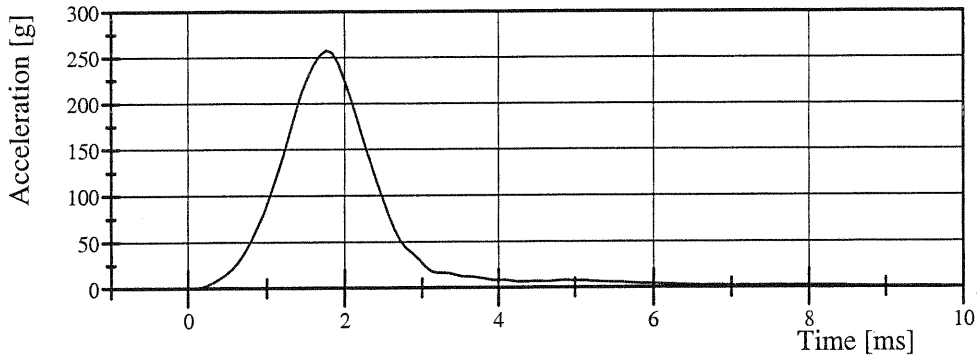
Filter Class: CFC_1000
Max: 10.6 g at 1.7 ms
Min: -1.6 g at 3.1 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 123.3 g at 1.8 ms
Min: -0.1 g at -0.4 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 257.8 g at 1.8 ms
Min: 0.1 g at -1.0 ms

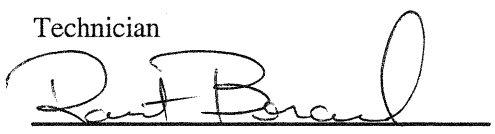
Transportation Research Center Inc.

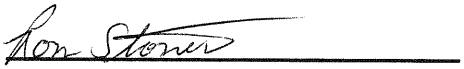
Neck Flexion
HIII 50th Serial No. 001 Certification No. 1-1
Test Date: 5/31/2007

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 

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

05.31.2007 11:06:07 557

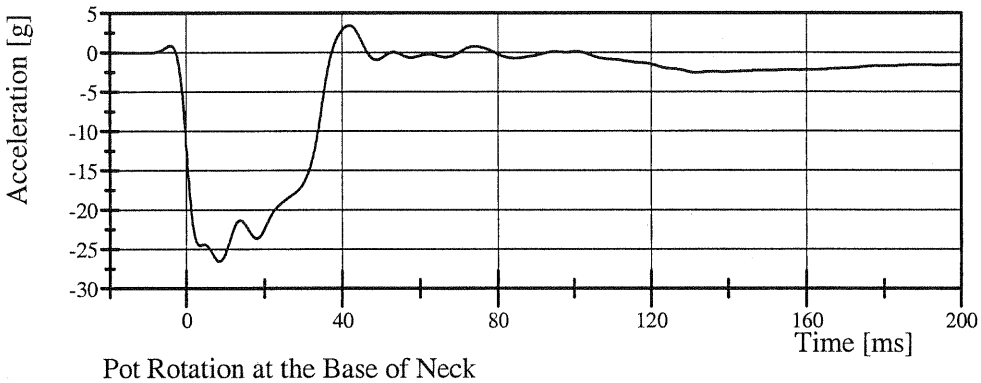
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 001 Certification No. 1-1

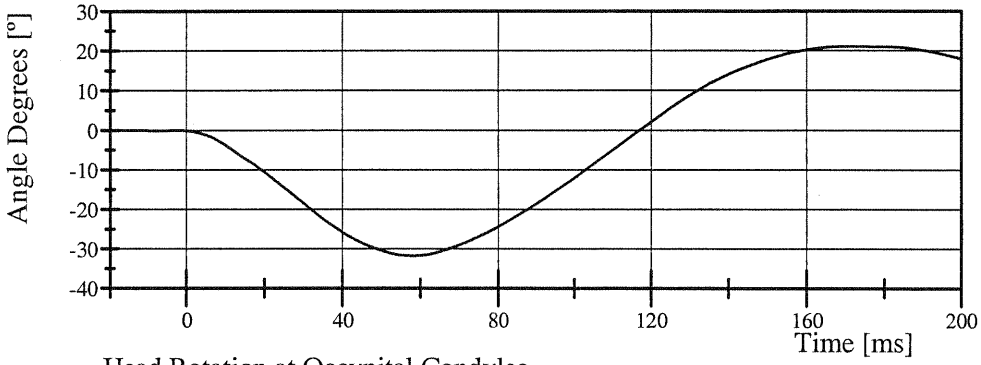
Test Date: 5/31/2007

Pendulum Acceleration



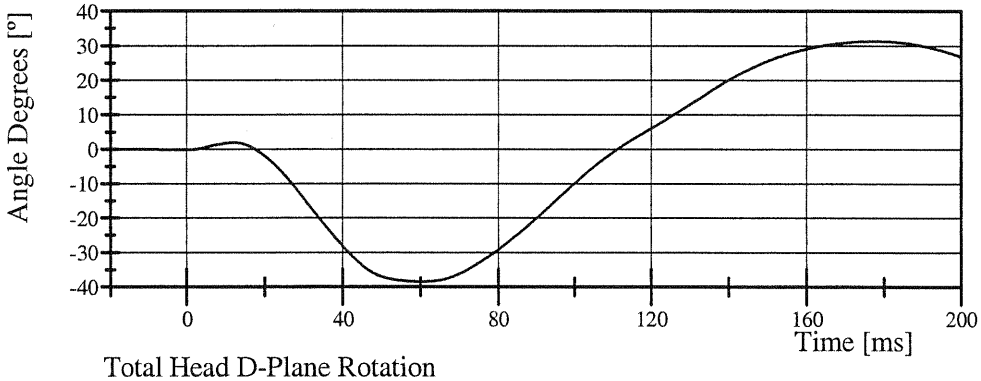
Filter Class: CFC_60
Max: 3.4 g at 41.8 ms
Min: -26.5 g at 8.6 ms

Pot Rotation at the Base of Neck



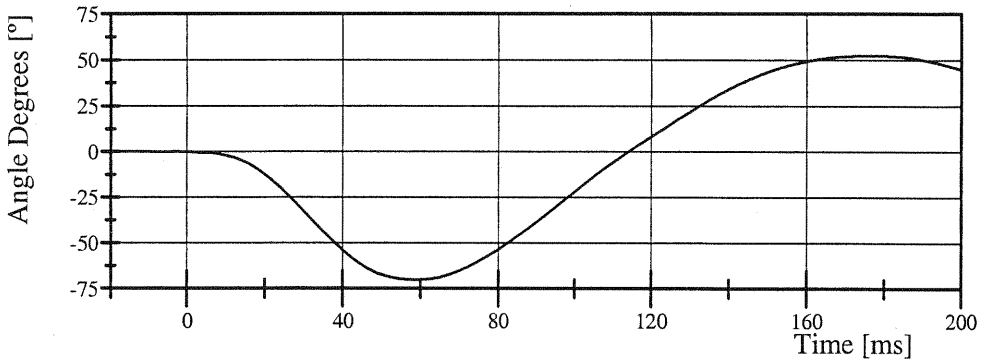
Filter Class: CFC_60
Max: 21.2 ° at 171.8 ms
Min: -31.7 ° at 58.2 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 31.3 ° at 177.6 ms
Min: -38.4 ° at 60.1 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 52.4 ° at 175.8 ms
Min: -70.1 ° at 58.8 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

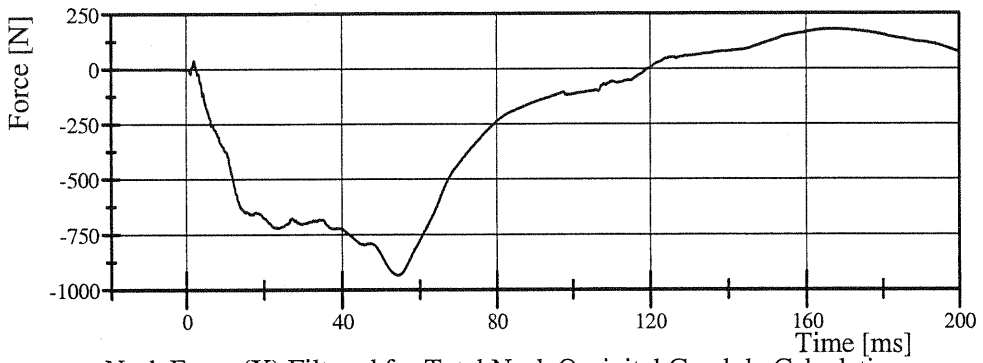
05.31.2007 11:06:16 557

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Transportation Research Center Inc.

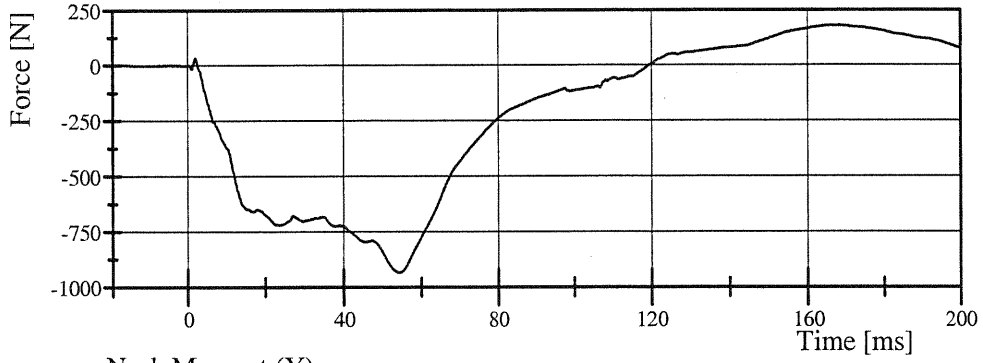
Neck Flexion
HIII 50th Serial No. 001 Certification No. 1-1
Test Date: 5/31/2007

Neck Force (X)



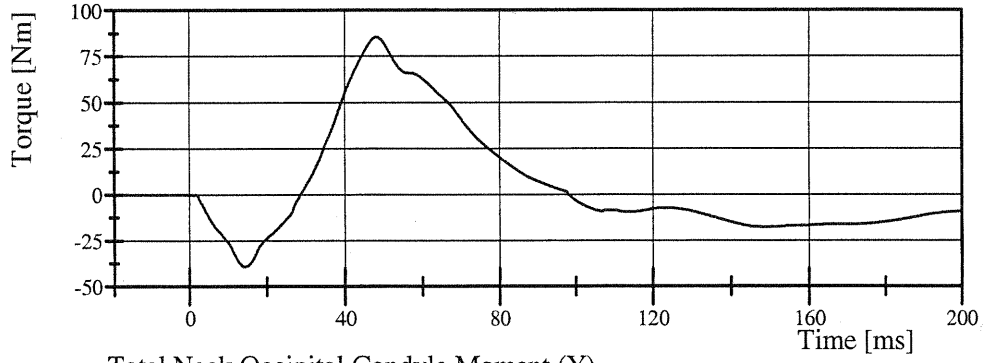
Filter Class: CFC_1000
Max: 180.4 N at 166.2 ms
Min: -933.9 N at 54.2 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



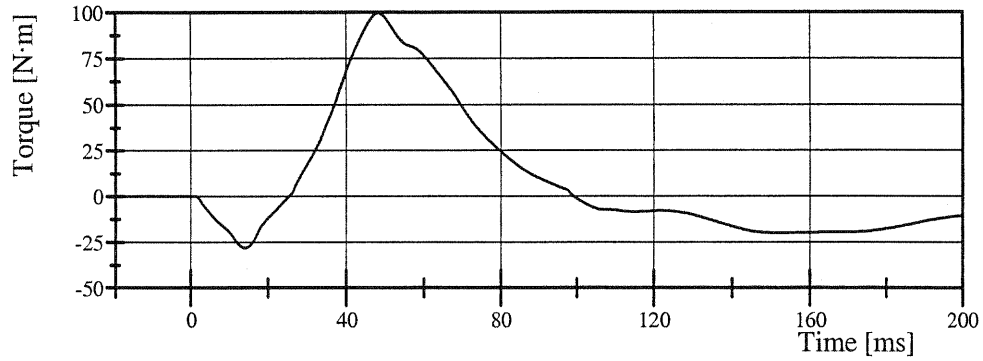
Filter Class: CFC_600
Max: 180.3 N at 166.2 ms
Min: -933.8 N at 54.2 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 85.5 Nm at 48.2 ms
Min: -39.3 Nm at 14.2 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 99.6 N·m at 48.2 ms
Min: -28.1 N·m at 14.2 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

05.31.2007 11:06:17 557

070620

Transportation Research Center Inc.

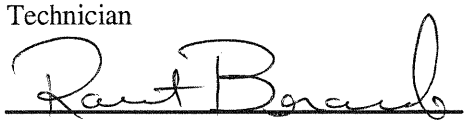
Neck Extension
HIII 50th Serial No. 001 Certification No. 1-2
Test Date: 5/31/2007

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



Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

05.31.2007 12:19:11 633

070620

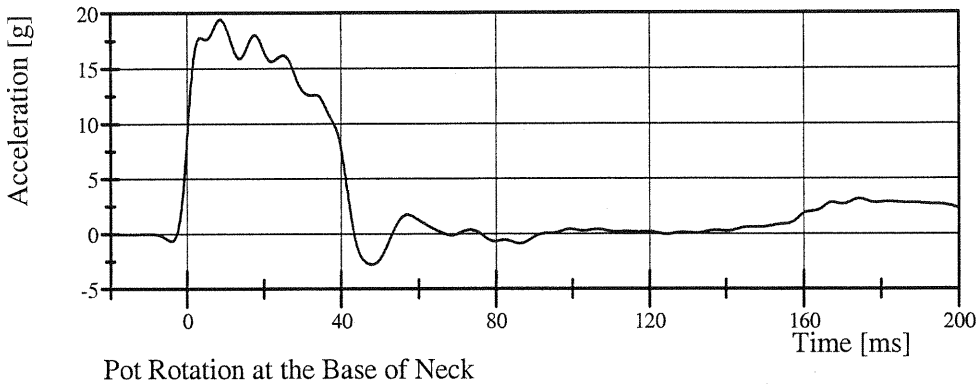
Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 001 Certification No. 1-2

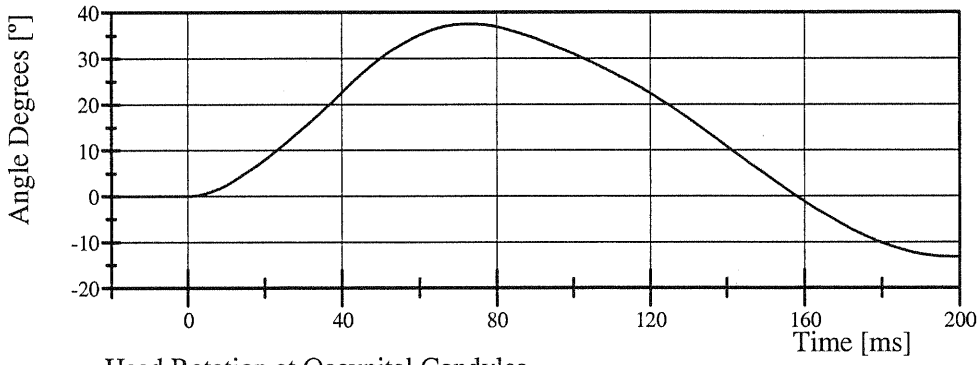
Test Date: 5/31/2007

Pendulum Acceleration



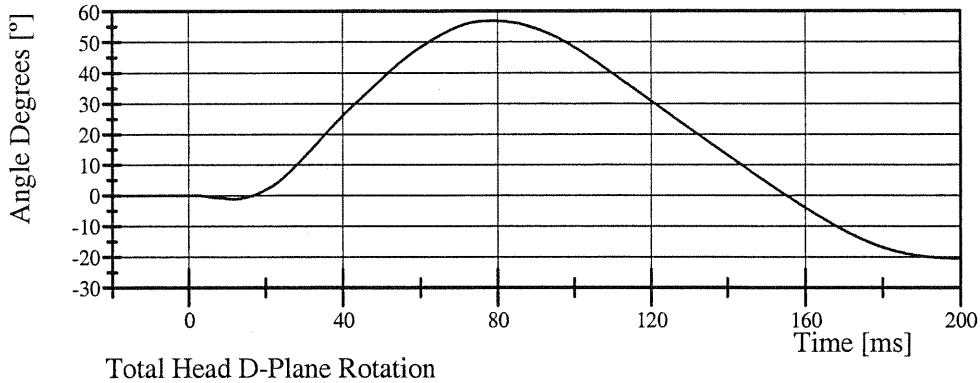
Filter Class: CFC_60
Max: 19.4 g at 8.6 ms
Min: -2.8 g at 47.8 ms

Pot Rotation at the Base of Neck



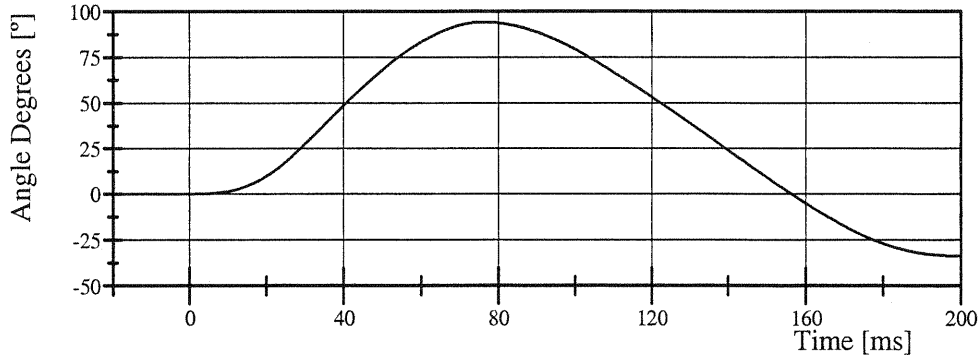
Filter Class: CFC_60
Max: 37.5 ° at 73.0 ms
Min: -13.3 ° at 199.3 ms

Head Rotation at Occypital 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

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

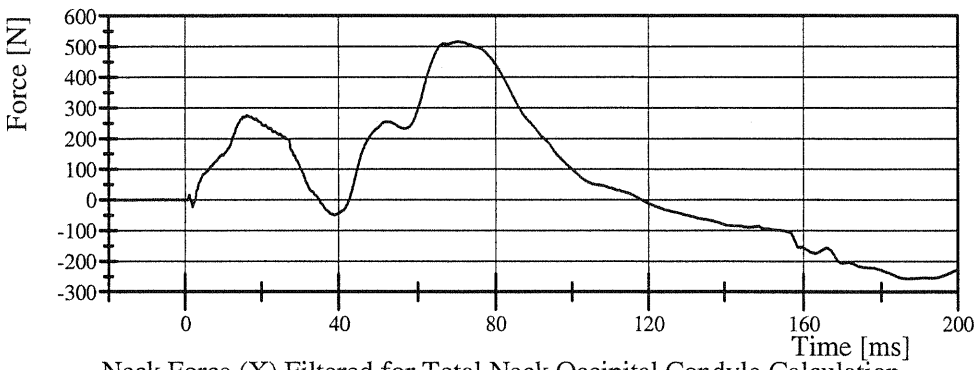
05.31.2007 12:19:29 633

070620

Transportation Research Center Inc.

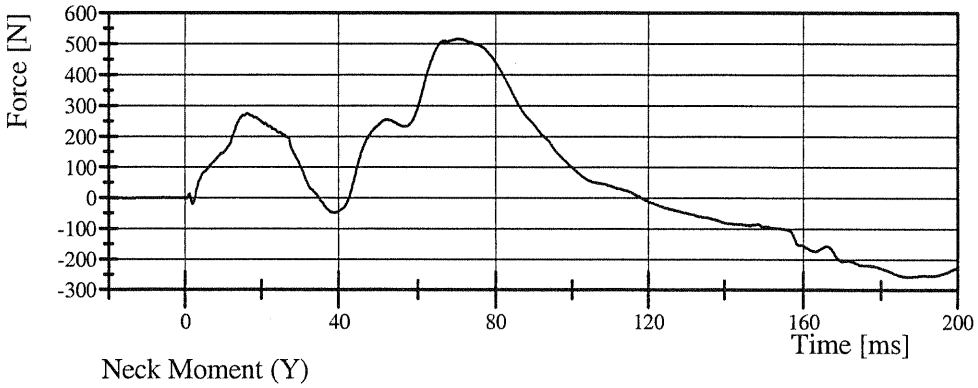
Neck Extension
HIII 50th Serial No. 001 Certification No. 1-2
Test Date: 5/31/2007

Neck Force (X)



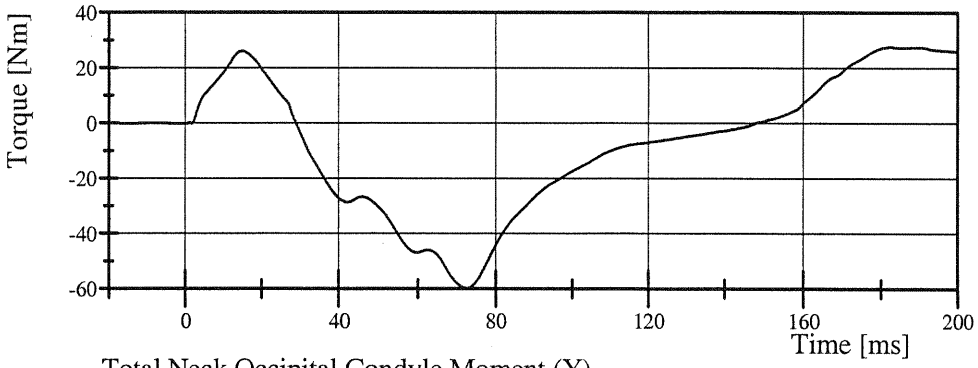
Filter Class: CFC_1000
Max: 516.7 N at 70.5 ms
Min: -257.4 N at 187.2 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



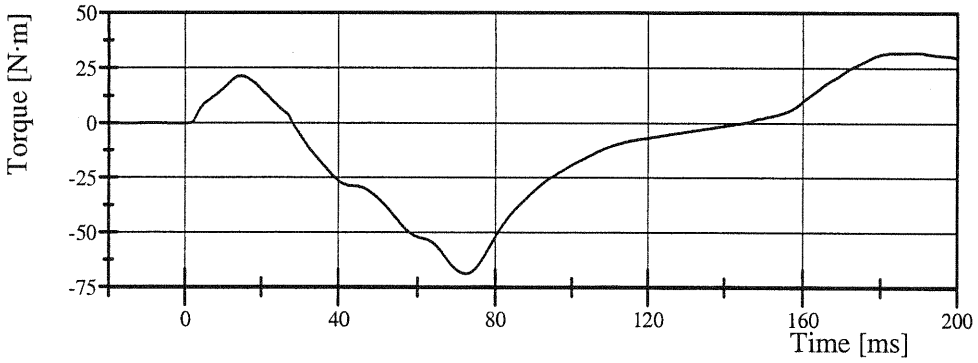
Filter Class: CFC_600
Max: 516.5 N at 70.6 ms
Min: -257.0 N at 187.1 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 27.6 Nm at 182.5 ms
Min: -59.8 Nm at 72.8 ms

Total Neck Occipital Condyle Moment (Y)



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. 2-1
Test Date: 6/11/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.608 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,795.6 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-64.77 mm	Yes
Internal Hysteresis	65 - 85 %	74.1 %	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart P
with Polarity in accordance with J211

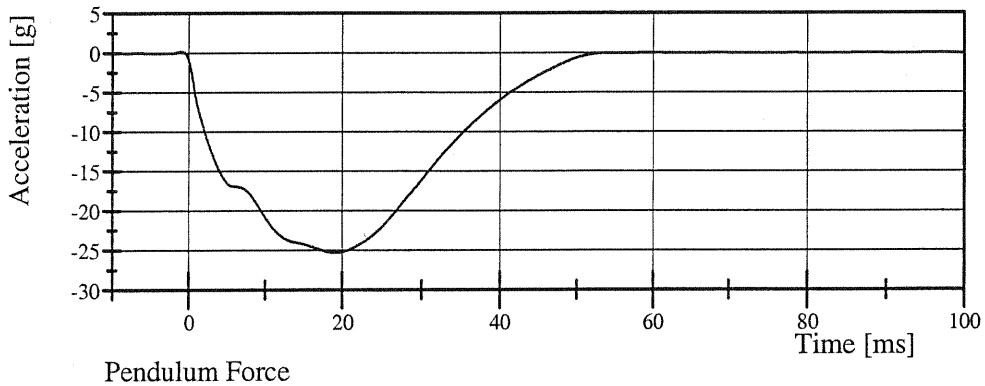
06.11.2007 10:42:29 420

070620

Transportation Research Center Inc.

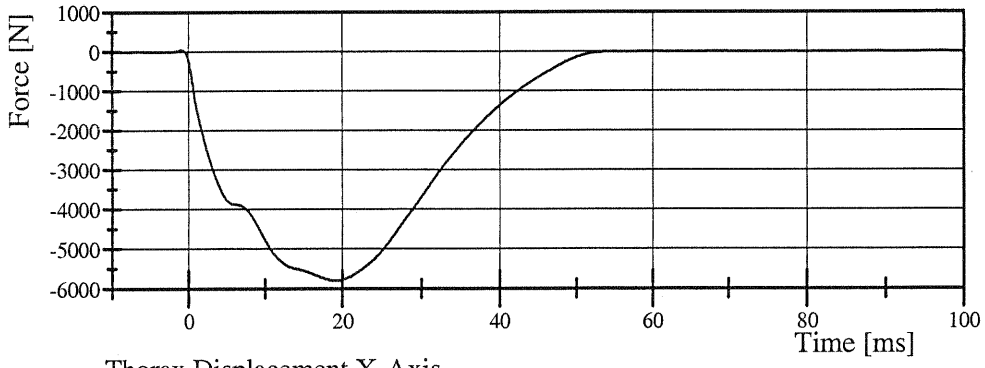
Front Thorax
HIII 50th Serial No. 001 Certification No. 2-1
Test Date: 6/11/2007

Pendulum Acceleration



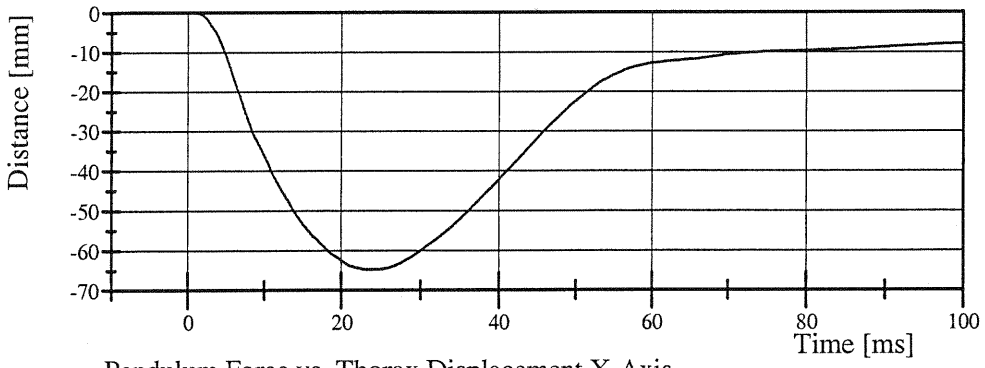
Filter Class: CFC_180
Max: 0.2 g at -0.9 ms
Min: -25.3 g at 19.0 ms

Pendulum Force



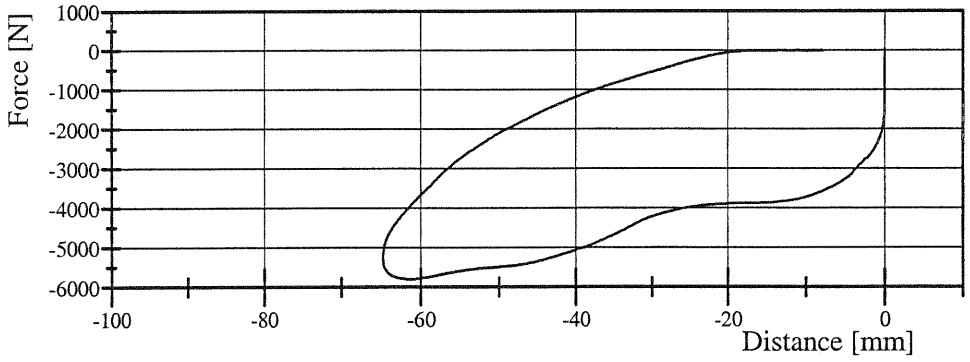
Filter Class: CFC_180
Max: 40.2 N at -0.9 ms
Min: -5,795.6 N at 19.0 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -4.8 ms
Min: -64.8 mm at 24.2 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 40.2 N at 0.0 mm
Min: -5,795.6 N at -61.3 mm

Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

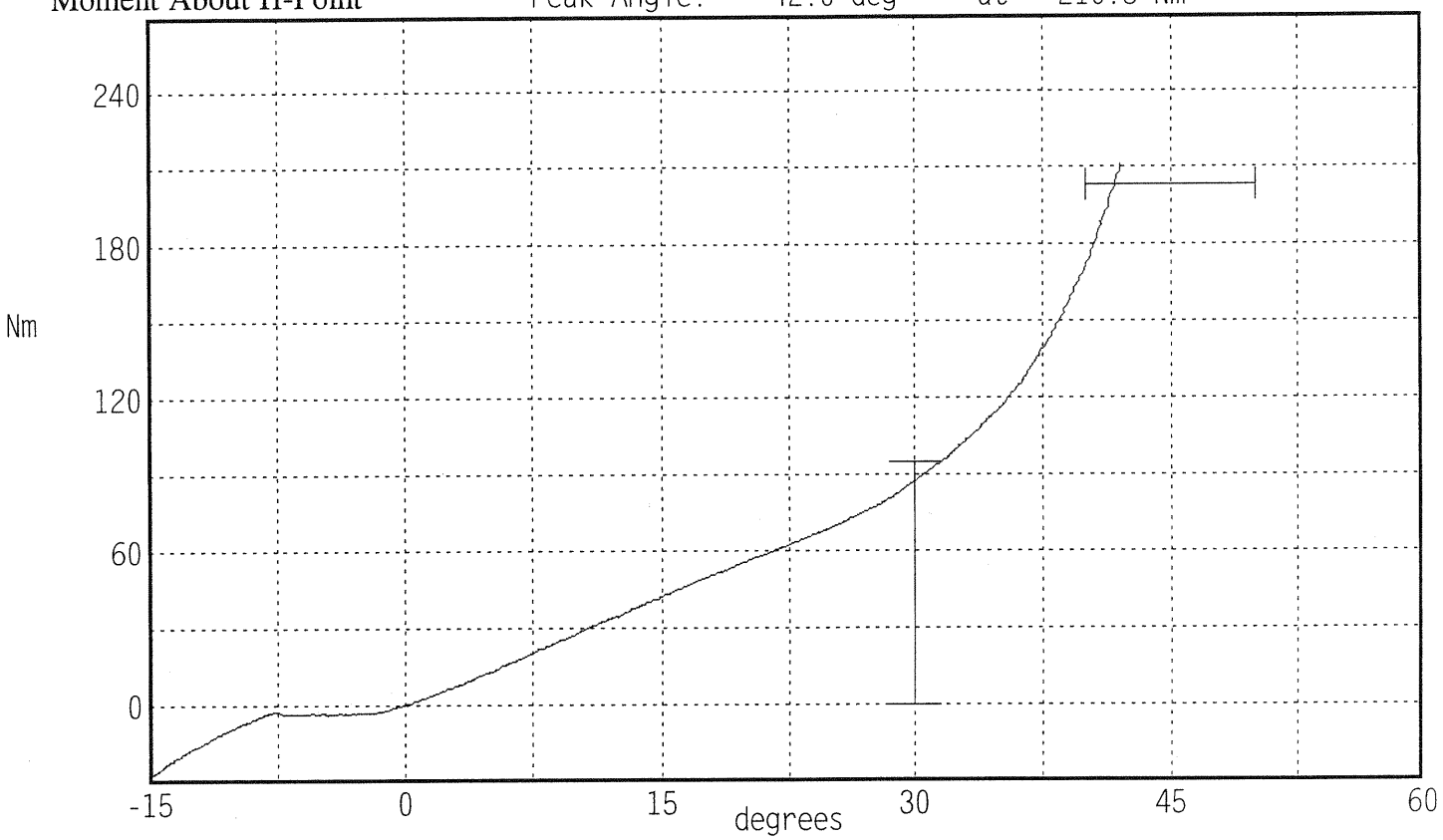
Serial Number: 001L
Test Number: 001C01
Comments:

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

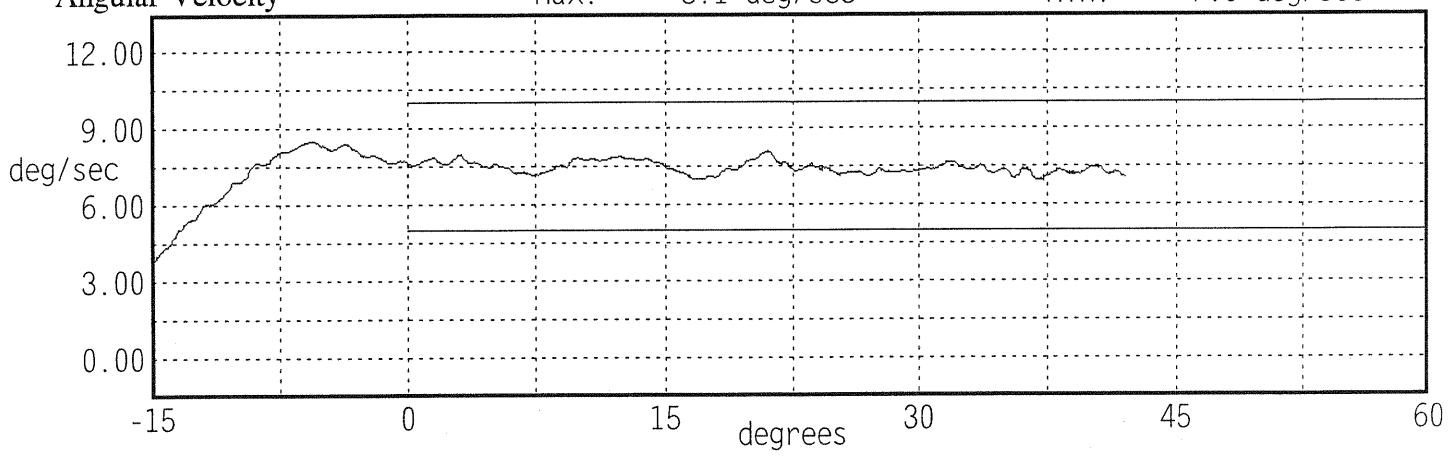
Moment About H-Point

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

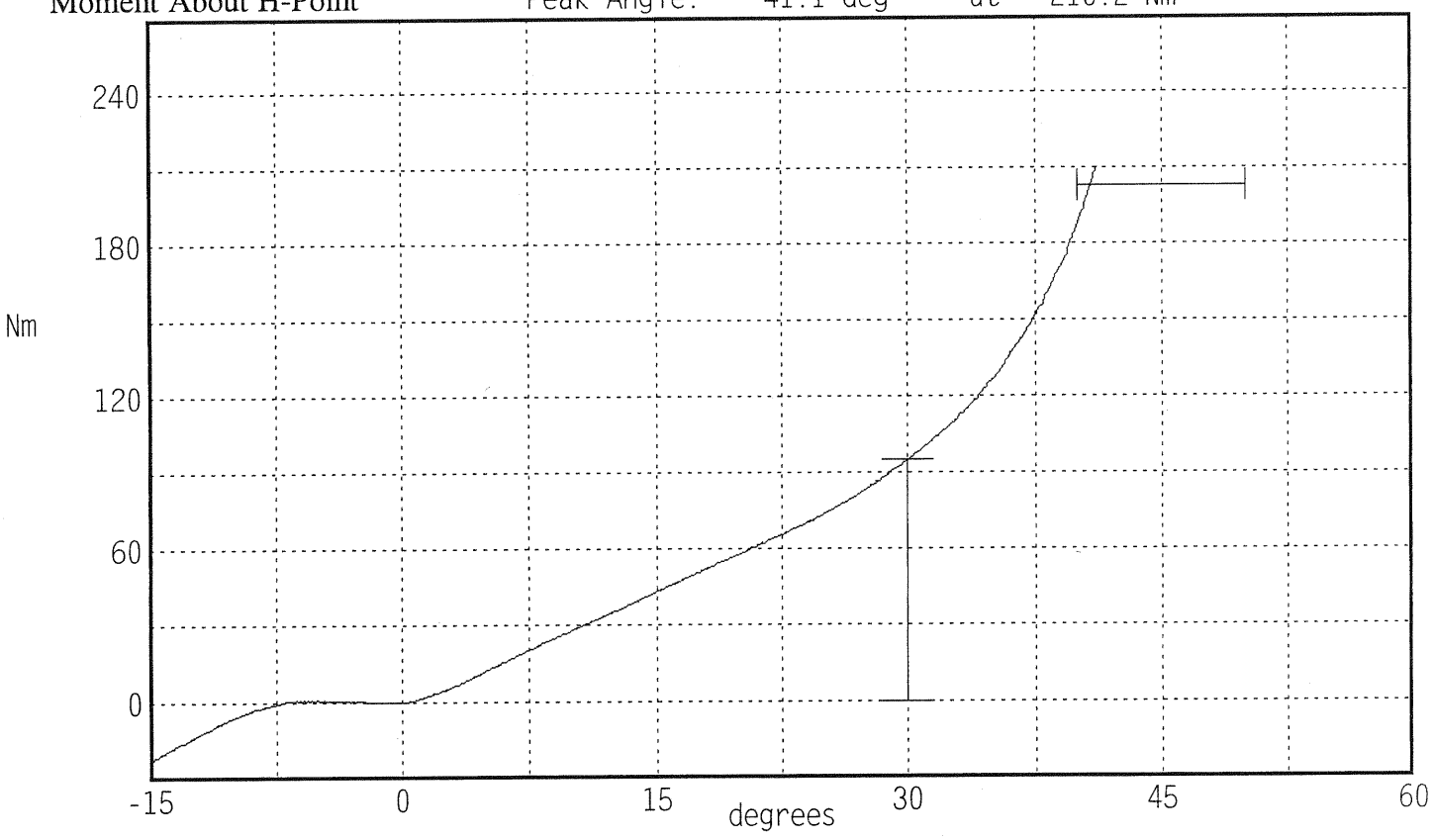
Serial Number: 001R
Test Number: 001C01
Comments:

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

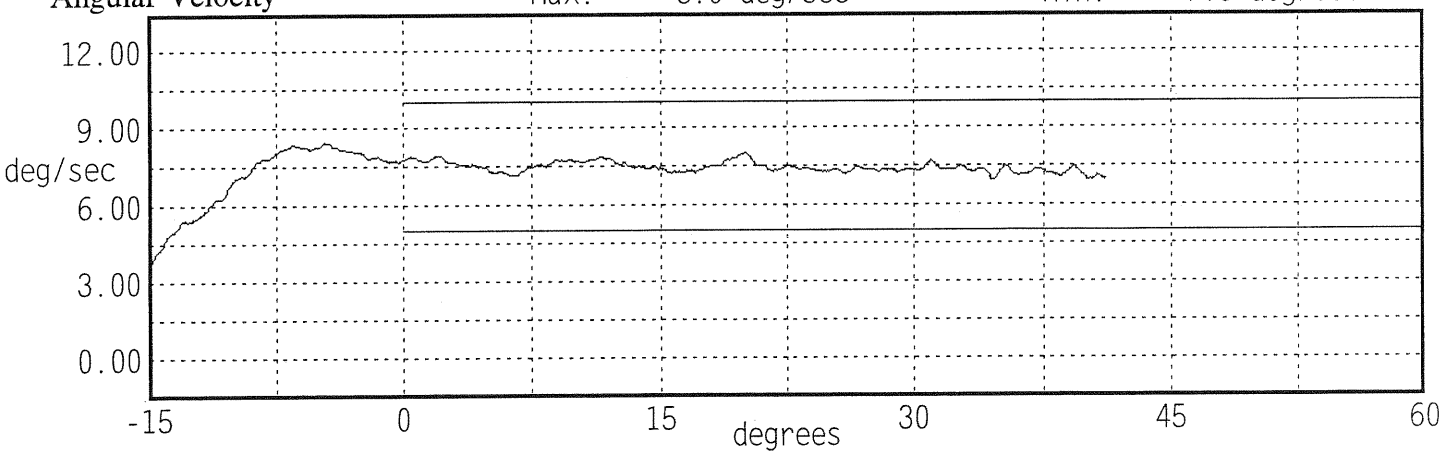
Moment About H-Point

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



Post-Test Dummy Configuration and Performance Verification Data

Target Vehicle Driver Dummy S/N: 001

1

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 001 Calibration No. 03

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	880	Yes
B	Shoulder Pivot Height	505.5 - 520.7	512	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	89	Yes
F	Thigh Clearance	139.7 - 154.9	152	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	293	Yes
H	Skull Cap To Backline	40.6 - 45.7	45	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	335	Yes
J	Elbow Rest Height	190.5 - 210.8	200	Yes
K	Buttock Knee Length	579.1 - 604.5	592	Yes
L	Popliteal Height	429.3 - 454.7	439	Yes
M	Knee Pivot Height	485.1 - 500.4	495	Yes
N	Buttock Popliteal Length	452.1 - 477.5	473	Yes
O	Chest Depth	213.4 - 228.6	218	Yes
P	Foot Length	251.5 - 266.7	260	Yes
V	Shoulder Breadth	421.6 - 436.9	427	Yes
W	Foot Breadth	91.4 - 106.7	99	Yes
Y	Chest Circumference	970.3 - 1000.8	979	Yes
Z	Waist Circumference	835.7 - 866.1	856	Yes
AA	Location For Chest Circumference	429.3 - 434.3	430	Yes
BB	Location For Waist Circumference	226.1 - 231.1	230	Yes

Technician

Charles W. Bell

Approved

Ron Stoner

Transportation Research Center Inc.

Front Head Drop
HIII 50th Serial No. 001 Certification No. 3-1
Test Date: 6/26/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	265.4 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	4.6 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

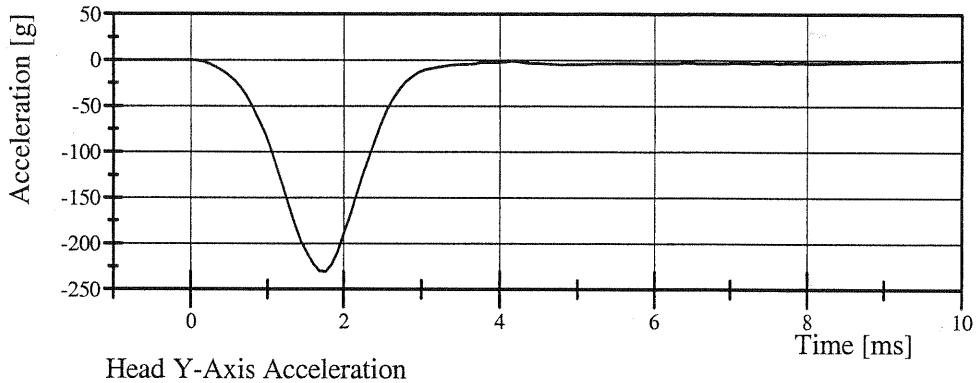
06.26.2007 08:15:19 615

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Transportation Research Center Inc.

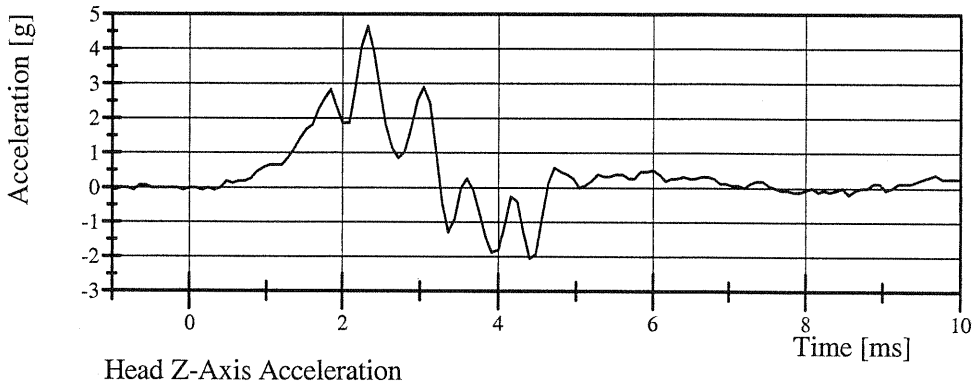
Front Head Drop
HIII 50th Serial No. 001 Certification No. 3-1
Test Date: 6/26/2007

Head X-Axis Acceleration



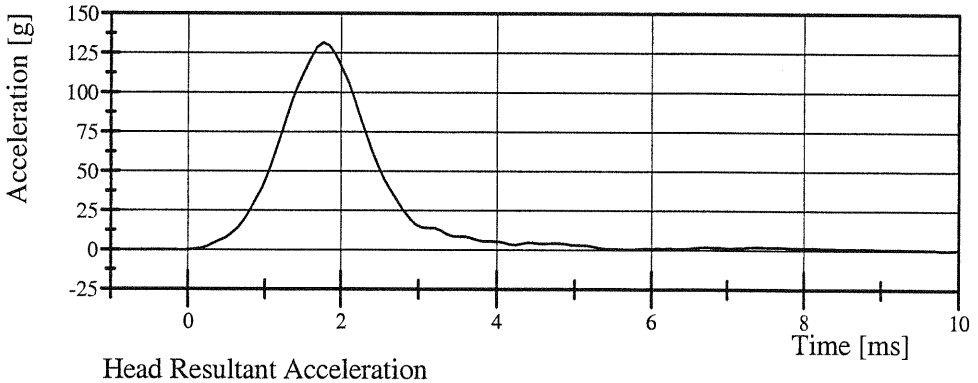
Filter Class: CFC_1000
Max: 0.2 g at -0.4 ms
Min: -230.4 g at 1.8 ms

Head Y-Axis Acceleration



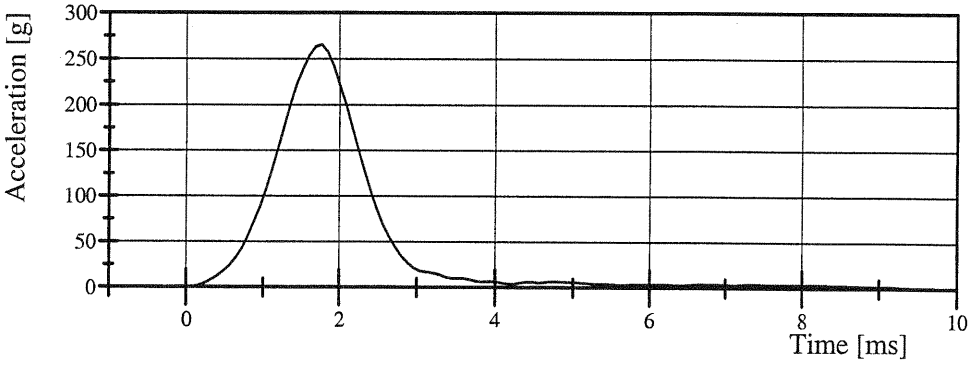
Filter Class: CFC_1000
Max: 4.6 g at 2.3 ms
Min: -2.1 g at 4.4 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 131.7 g at 1.8 ms
Min: -0.1 g at -1.0 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 265.4 g at 1.8 ms
Min: 0.0 g at -0.9 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

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Transportation Research Center Inc.

Neck Flexion
HIII 50th Serial No. 001 Certification No. 3-1
Test Date: 6/26/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	59 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.945 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	38.4 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-23.64 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-20.09 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-16.43 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-16.43 g	Yes
Total Head D-Plane Rotation			
Peak	(-64) - (-78) °	-70.1 °	Yes
Time of Peak	57 - 64 ms	60.8 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	116.5 ms	Yes
Total Neck Occipital Condyles Moment			
Peak	88 - 108 N·m	96.6 N·m	Yes
Time of Peak	47 - 58 ms	51.6 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	101.3 ms	Yes

Test meets specifications.

Comments:

Technician

Charles W. Bell

Approved

Ron Stover

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

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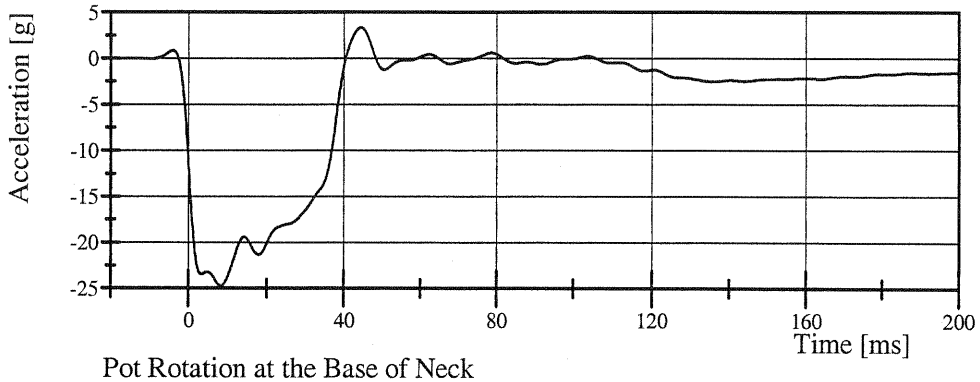
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 001 Certification No. 3-1

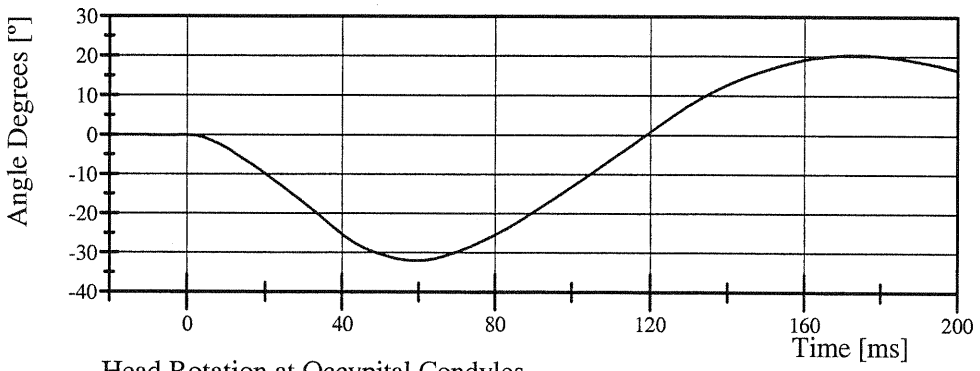
Test Date: 6/26/2007

Pendulum Acceleration



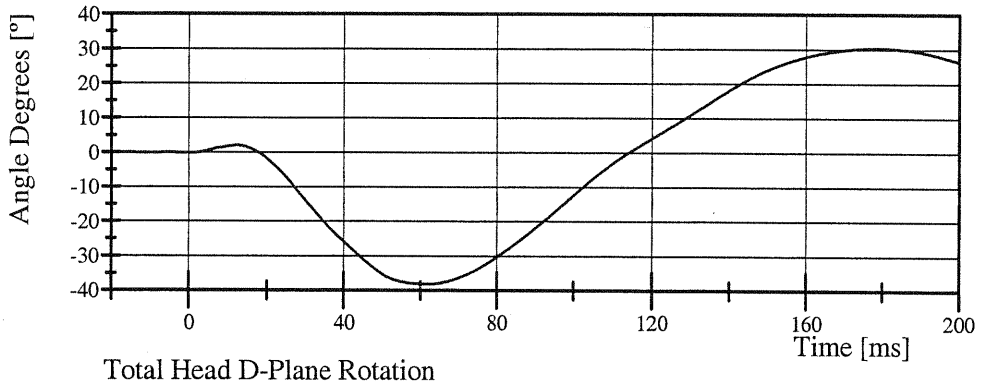
Filter Class: CFC_60
Max: 3.4 g at 44.3 ms
Min: -24.7 g at 8.2 ms

Pot Rotation at the Base of Neck



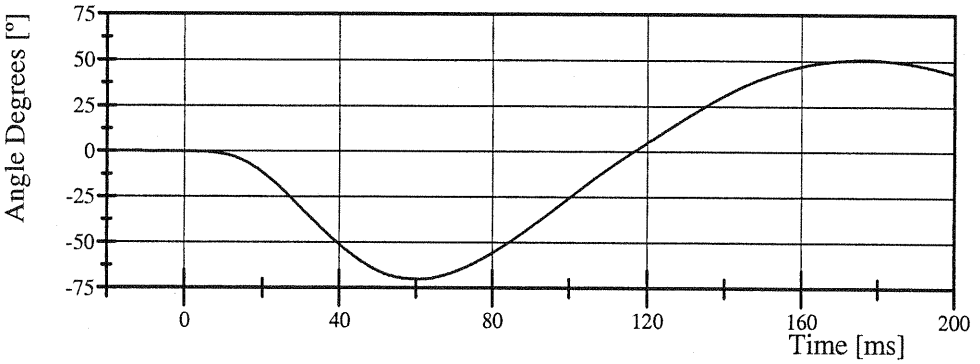
Filter Class: CFC_60
Max: 20.4 ° at 173.7 ms
Min: -32.0 ° at 59.5 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 30.4 ° at 178.4 ms
Min: -38.2 ° at 62.1 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 50.7 ° at 176.6 ms
Min: -70.1 ° at 60.8 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

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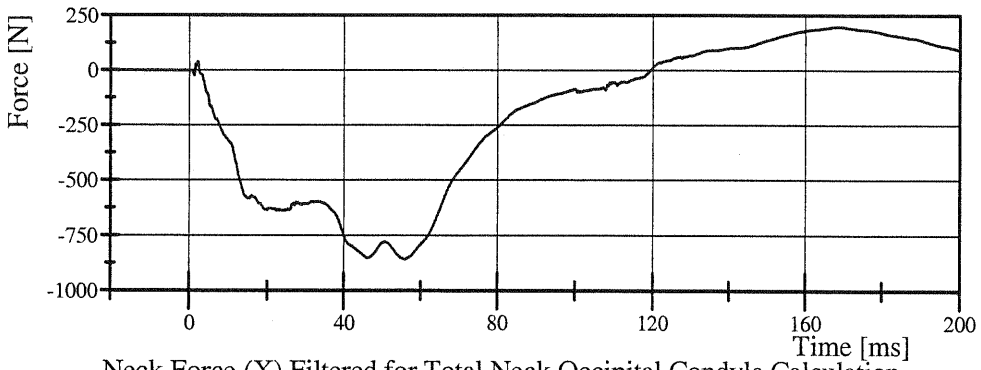
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 001 Certification No. 3-1

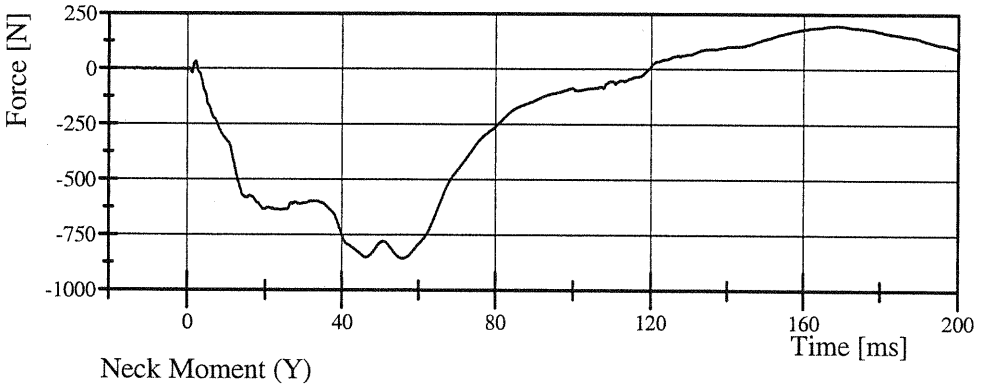
Test Date: 6/26/2007

Neck Force (X)



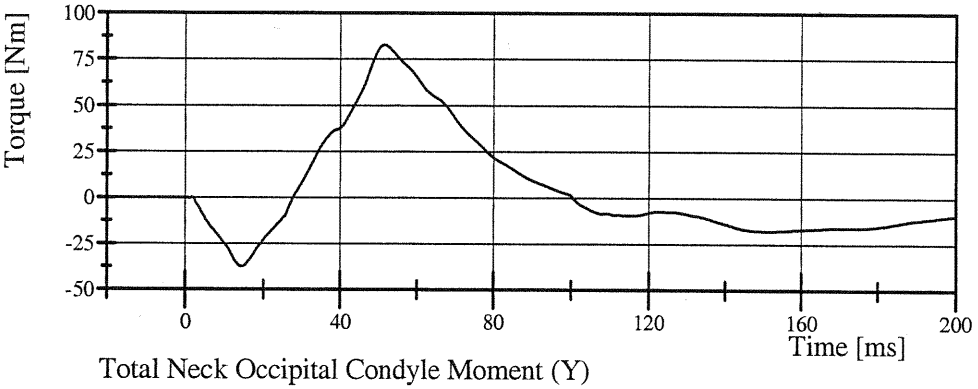
Filter Class: CFC_1000
Max: 199.1 N at 168.8 ms
Min: -856.4 N at 55.9 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



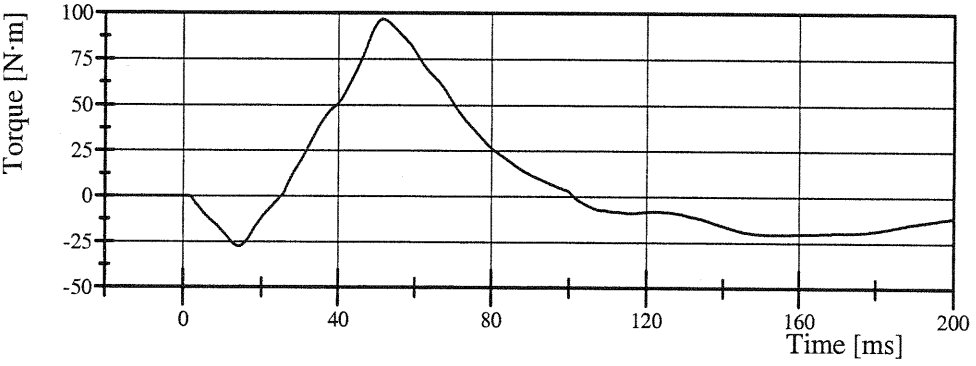
Filter Class: CFC_600
Max: 198.9 N at 168.9 ms
Min: -856.2 N at 55.9 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 82.8 Nm at 51.4 ms
Min: -37.5 Nm at 14.2 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 96.6 N·m at 51.6 ms
Min: -27.4 N·m at 14.2 ms

Transportation Research Center Inc.

Neck Extension
HIII 50th Serial No. 001 Certification No. 3-1
Test Date: 6/26/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.981 m/s	Yes
Pendulum Acceleration Decay Crossing 5g	38 - 46 ms	45.3 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	17.83 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	15.48 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	12.74 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	12.74 g	Yes
Total Head D-Plane Rotation			
Peak	81 - 106 °	92.9 °	Yes
Time of Peak	72 - 82 ms	78.2 ms	Yes
Total Head D-Plane Rotation Decay to 0°	147 - 174 ms	157.0 ms	Yes
Total Neck Occipital Condyles Moment			
Peak	(-53) - (-80) N·m	-63.3 N·m	Yes
Time of Peak	65 - 79 ms	74.7 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	120 - 148 ms	145.0 ms	Yes

Test meets specifications.

Comments:

Technician

Charles W. Bell

Approved

Ron Stonier

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

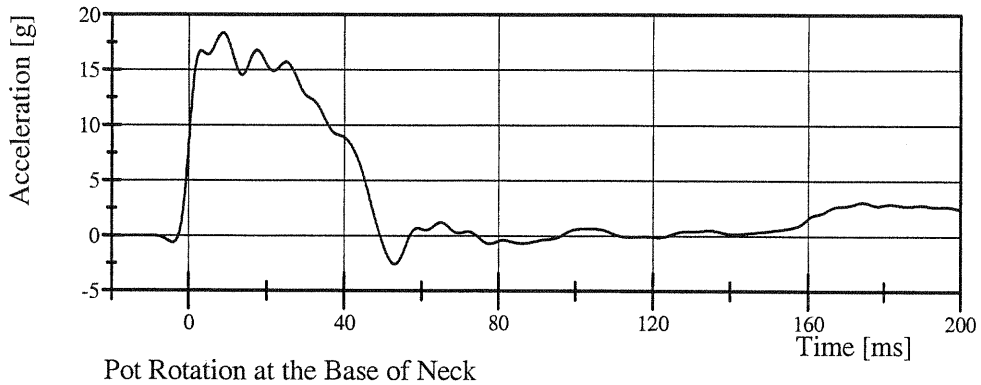
06.26.2007 09:27:22 638

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Transportation Research Center Inc.

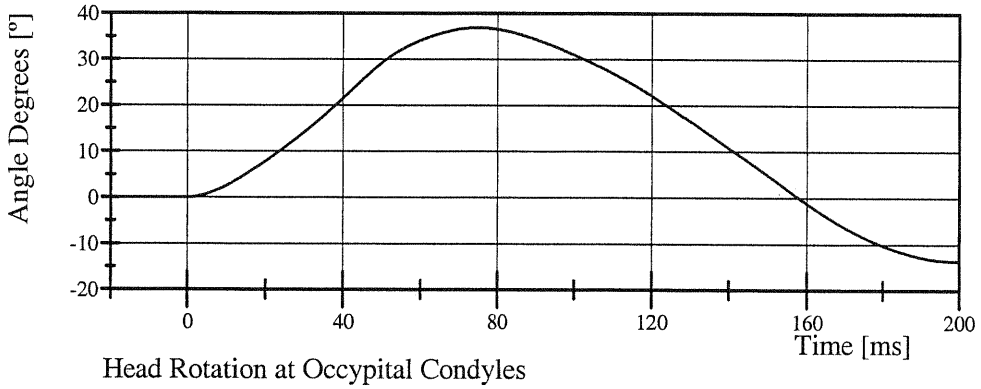
Neck Extension
HIII 50th Serial No. 001 Certification No. 3-1
Test Date: 6/26/2007

Pendulum Acceleration



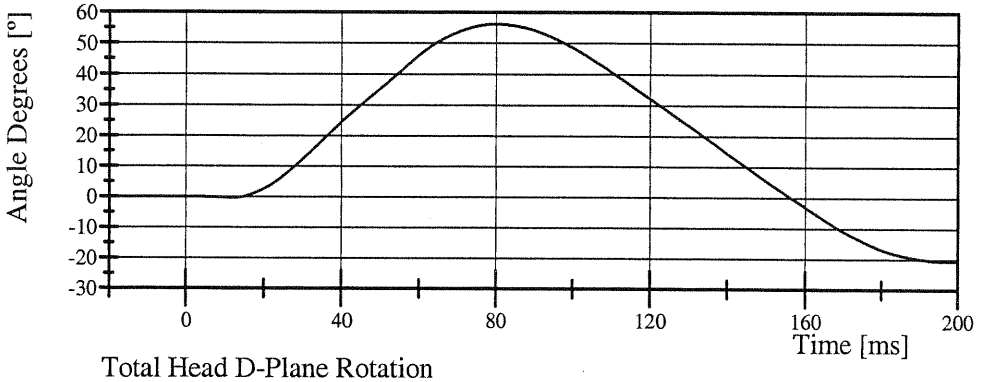
Filter Class: CFC_60
Max: 18.4 g at 8.8 ms
Min: -2.6 g at 53.0 ms

Pot Rotation at the Base of Neck



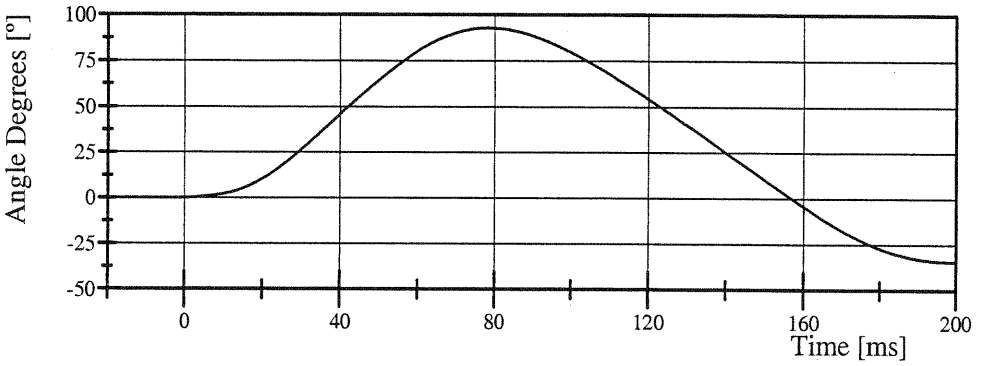
Filter Class: CFC_60
Max: 36.9 ° at 75.2 ms
Min: -13.7 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 56.2 ° at 79.8 ms
Min: -20.6 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 92.9 ° at 78.2 ms
Min: -34.3 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

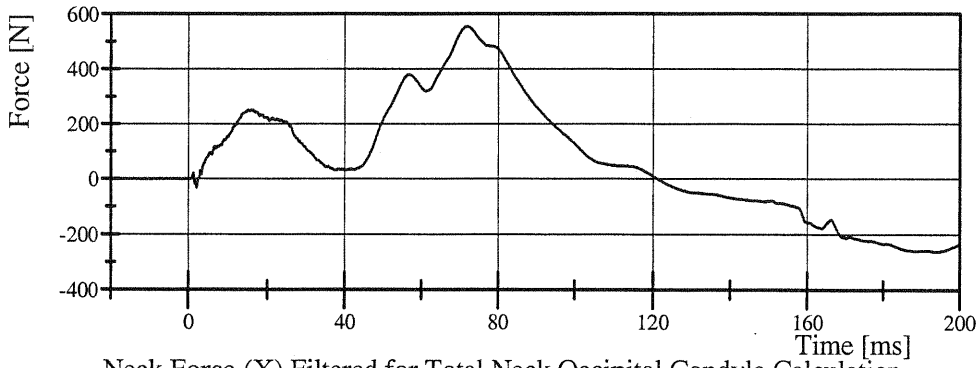
06.26.2007 09:27:31 638

070620

Transportation Research Center Inc.

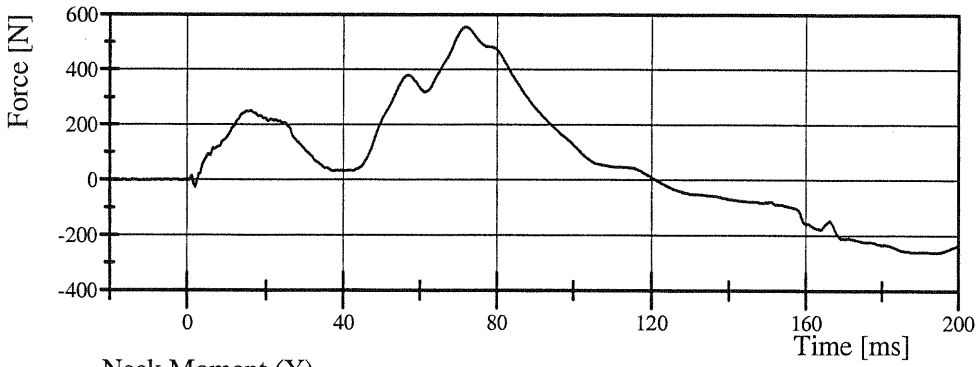
Neck Extension
HIII 50th Serial No. 001 Certification No. 3-1
Test Date: 6/26/2007

Neck Force (X)



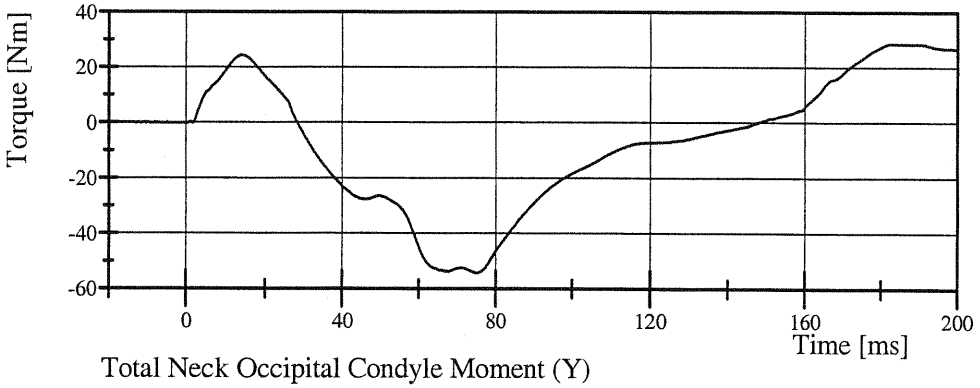
Filter Class: CFC_1000
Max: 556.2 N at 71.8 ms
Min: -261.1 N at 193.5 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



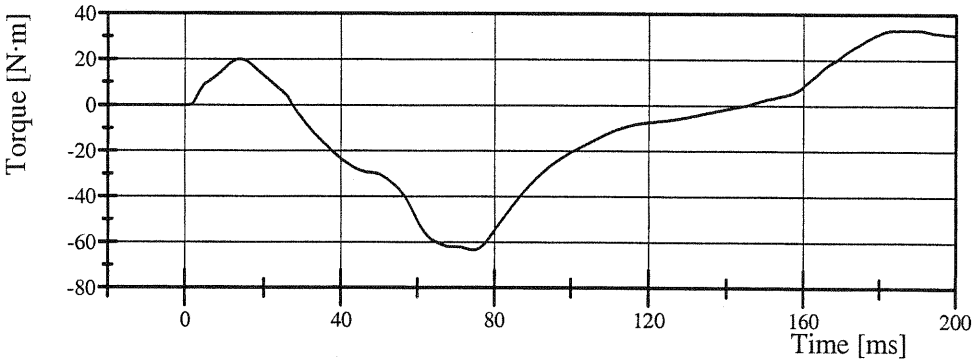
Filter Class: CFC_600
Max: 556.0 N at 71.8 ms
Min: -261.0 N at 193.5 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 28.7 Nm at 183.4 ms
Min: -54.2 Nm at 75.0 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 33.1 N·m at 189.4 ms
Min: -63.3 N·m at 74.7 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

06.26.2007 09:27:31 638

070620

Transportation Research Center Inc.

Front Thorax
HIII 50th Serial No. 001 Certification No. 3-3
Test Date: 6/27/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.627 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,889.5 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-67.67 mm	Yes
Internal Hysteresis	65 - 85 %	73.8 %	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart P
with Polarity in accordance with J211

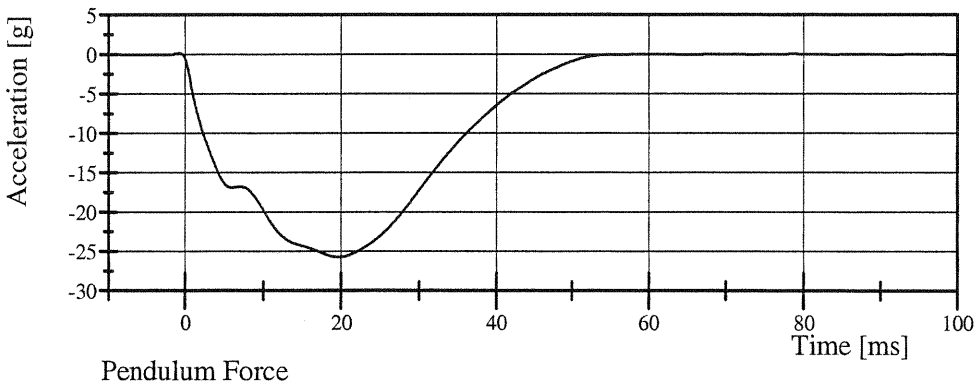
06.27.2007 09:56:24 412

070620

Transportation Research Center Inc.

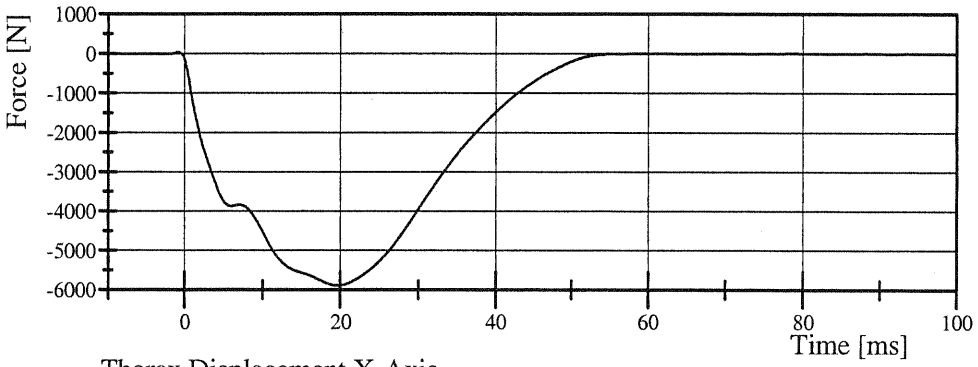
Front Thorax
HIII 50th Serial No. 001 Certification No. 3-3
Test Date: 6/27/2007

Pendulum Acceleration



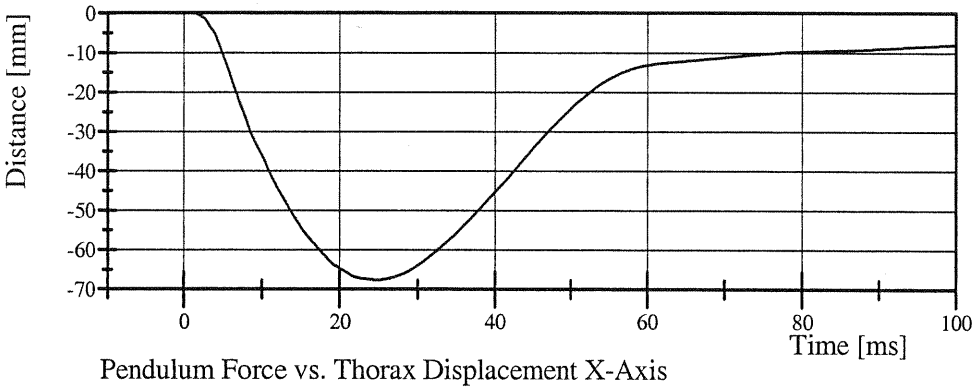
Filter Class: CFC_180
Max: 0.2 g at -0.8 ms
Min: -25.7 g at 19.7 ms

Pendulum Force



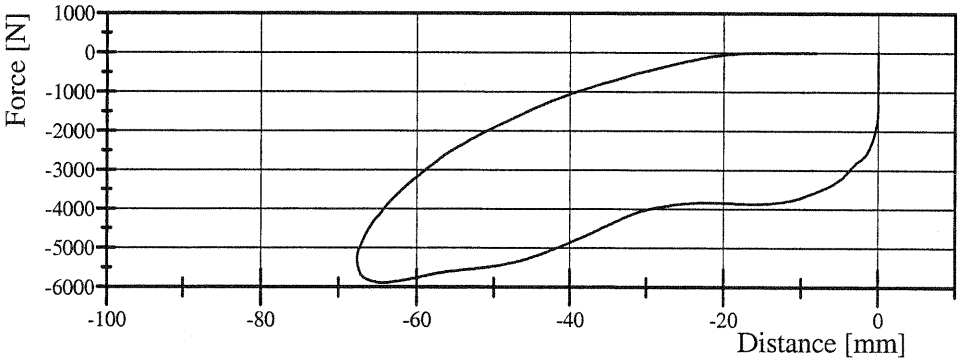
Filter Class: CFC_180
Max: 36.2 N at -0.8 ms
Min: -5,889.5 N at 19.7 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -7.8 ms
Min: -67.7 mm at 24.8 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 36.2 N at -0.0 mm
Min: -5,889.5 N at -64.4 mm

Specification Source: CFR49 Part 572 Subpart P
with Polarity in accordance with J211

06.27.2007 09:56:33 412

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Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

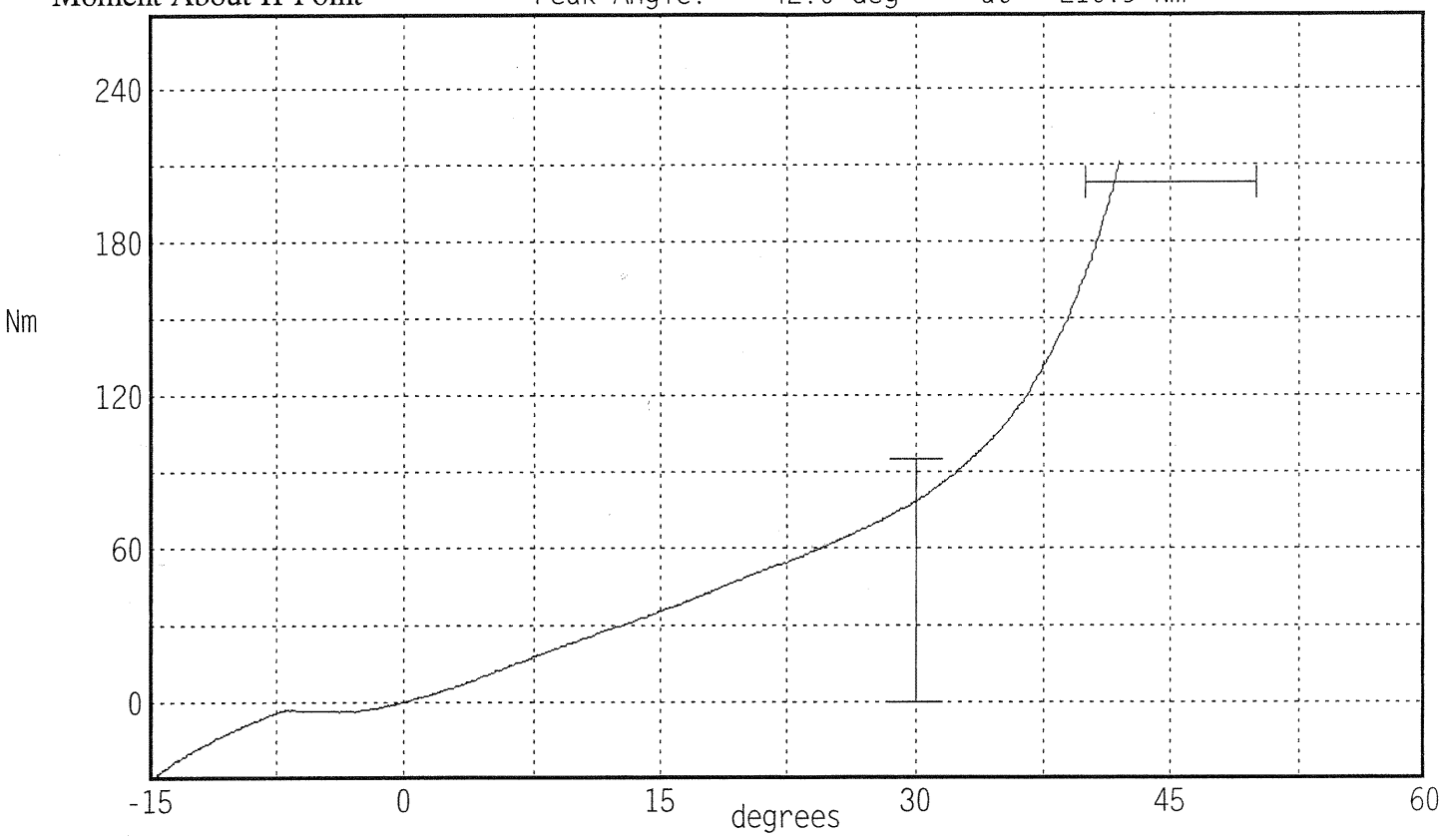
Serial Number: 001L
Test Number: 001C03
Comments:

Date: 06/26/2007
Time: 09:03

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.4	°C	Pass
Humidity	10 - 70	65	%	Pass
Moment at 30 deg	<= 94.9	78.7	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

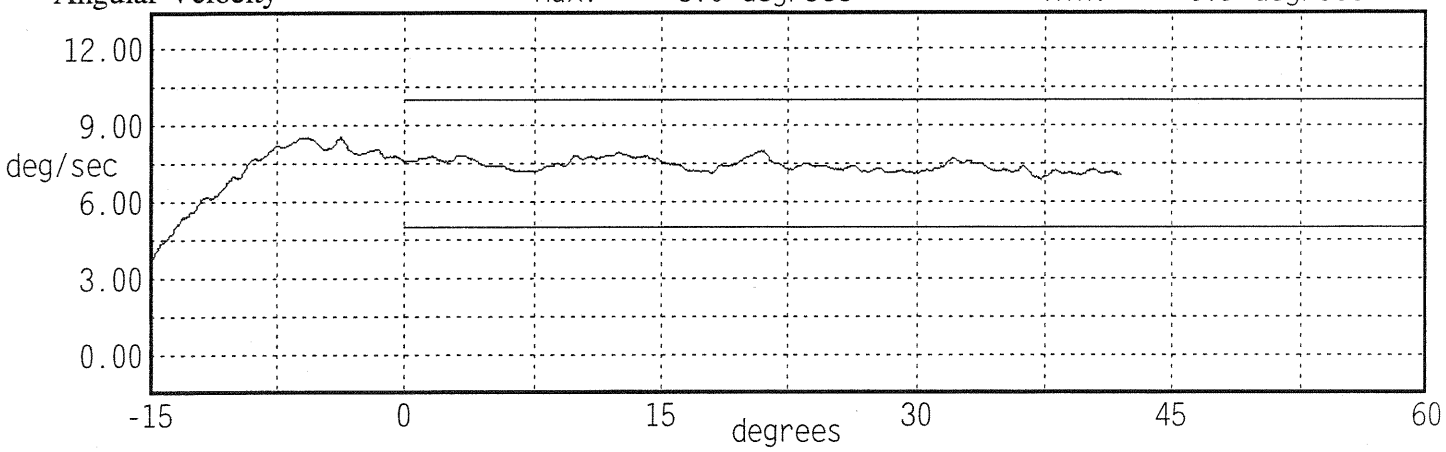
Moment About H-Point

Peak Moment: 210.9 Nm at 42.0 deg
Peak Angle: 42.0 deg at 210.9 Nm



Angular Velocity

Max: 8.0 deg/sec Min: 6.9 deg/sec



Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

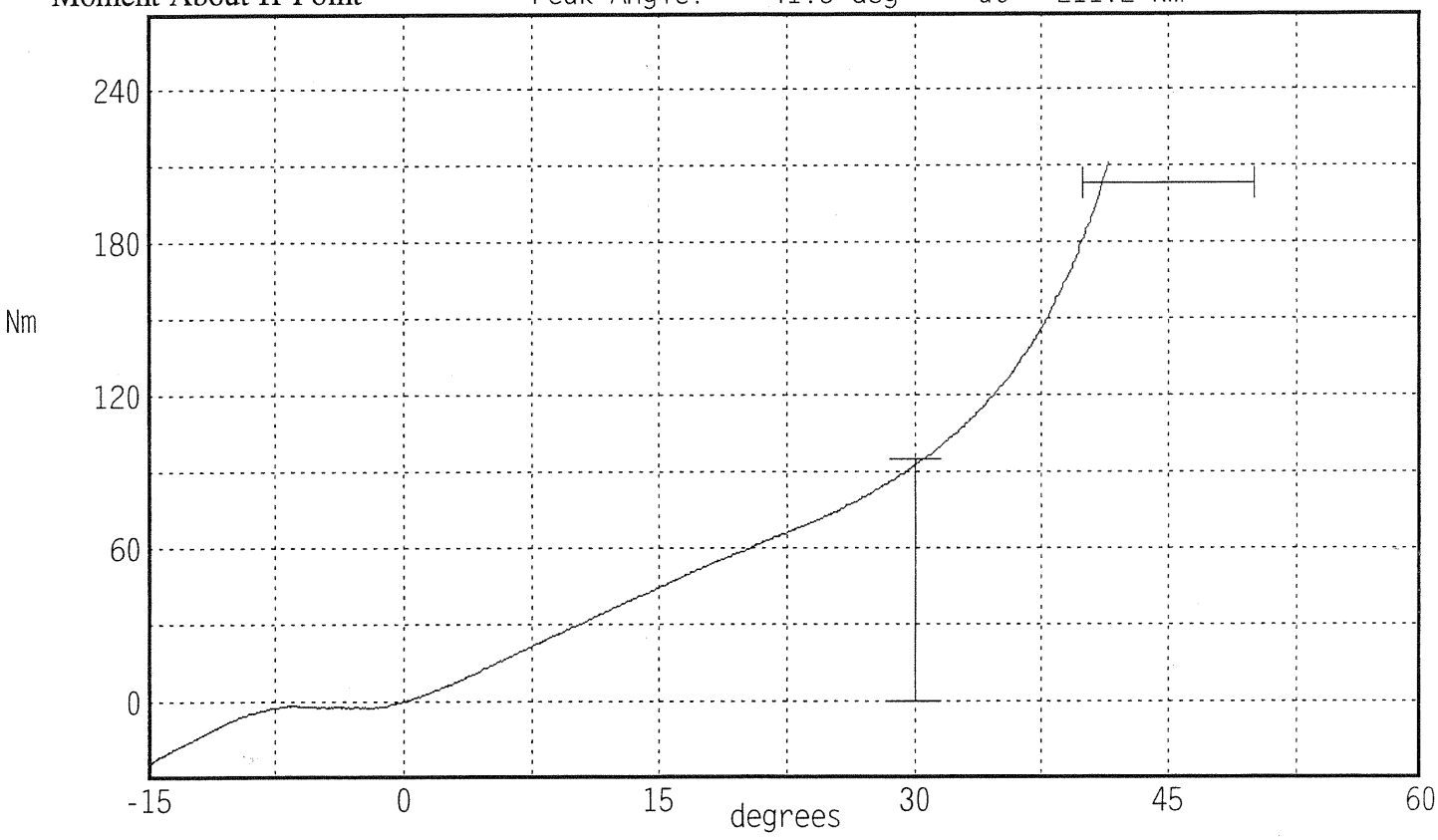
Serial Number: 001R
Test Number: 001C03
Comments:

Date: 06/26/2007
Time: 09:11

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.2	°C	Pass
Humidity	10 - 70	60	%	Pass
Moment at 30 deg	<= 94.9	92.9	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	41.1	deg	Pass
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

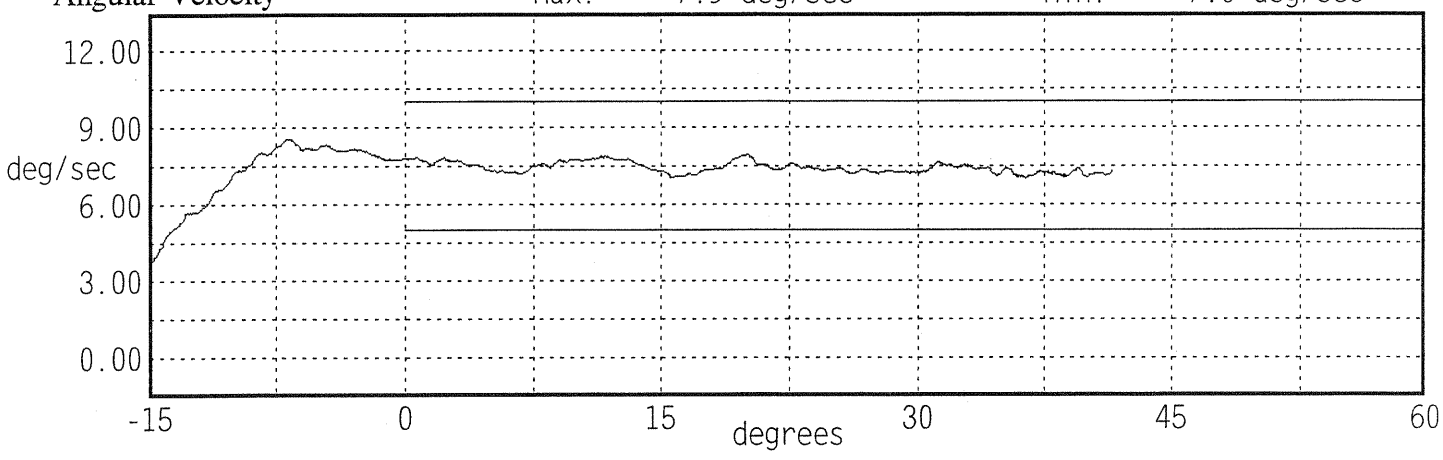
Moment About H-Point

Peak Moment: 211.2 Nm at 41.5 deg
Peak Angle: 41.5 deg at 211.2 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: 416

Transportation Research Center Inc.
572O 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

Revised 3/19/3003

070620

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

Specification Source: CFR49 Part 572 Subpart O with Polarity in accordance with J211

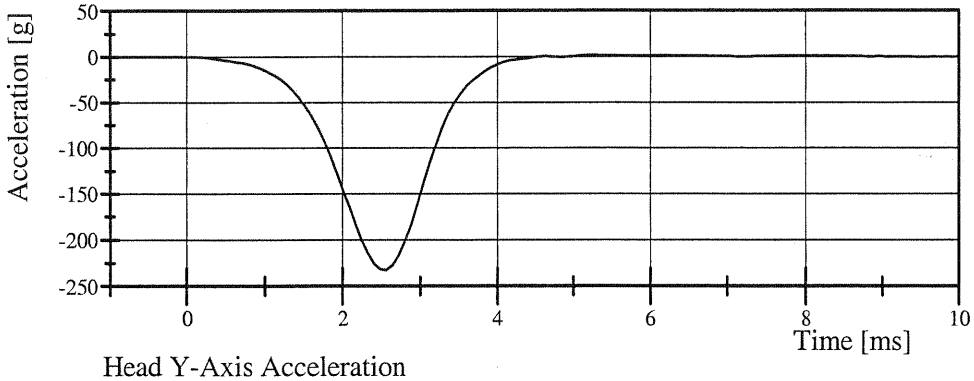
05.30.2007 10:10:51 233

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Transportation Research Center Inc.

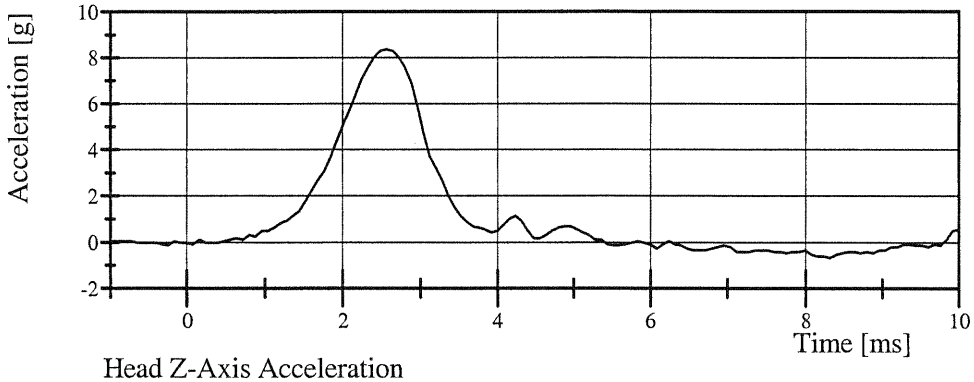
Front Head Drop
HIII 5th Serial No. 416 Certification No. 42-1
Test Date: 5/30/2007

Head X-Axis Acceleration



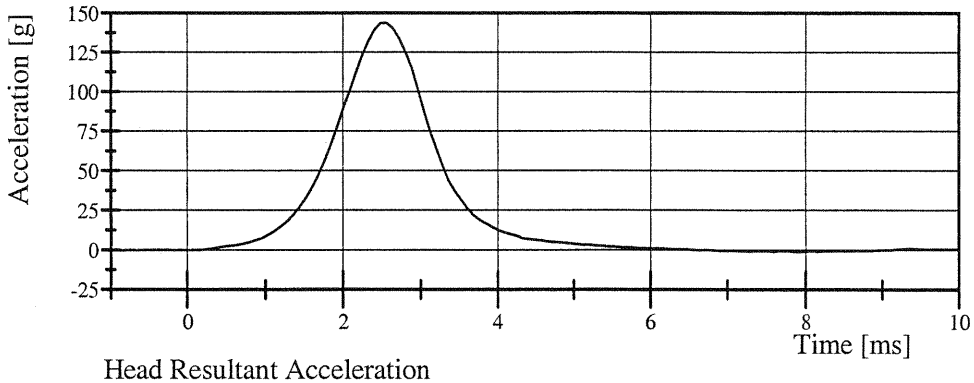
Filter Class: CFC_1000
Max: 1.8 g at 5.2 ms
Min: -232.6 g at 2.6 ms

Head Y-Axis Acceleration



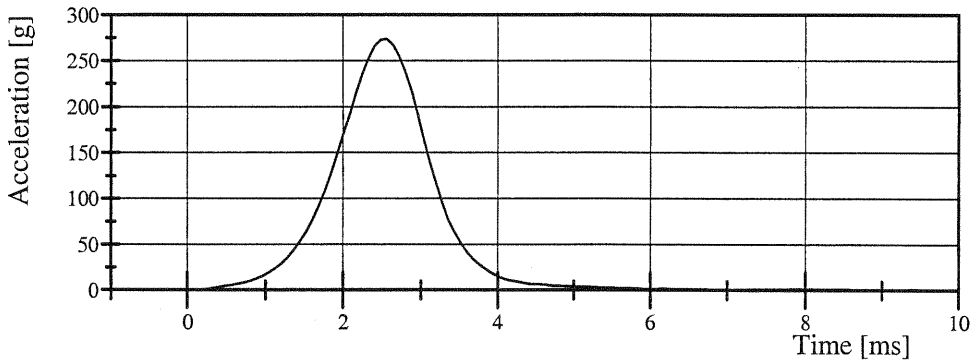
Filter Class: CFC_1000
Max: 8.4 g at 2.6 ms
Min: -0.7 g at 8.3 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 143.9 g at 2.6 ms
Min: -0.8 g at 7.9 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 273.6 g at 2.6 ms
Min: 0.0 g at -1.0 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

05.30.2007 10:10:56 233

070620

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

Specification Source: CFR49 Part 572 Subpart O with Polarity in accordance with J211

05.30.2007 13:04:23 544

070620

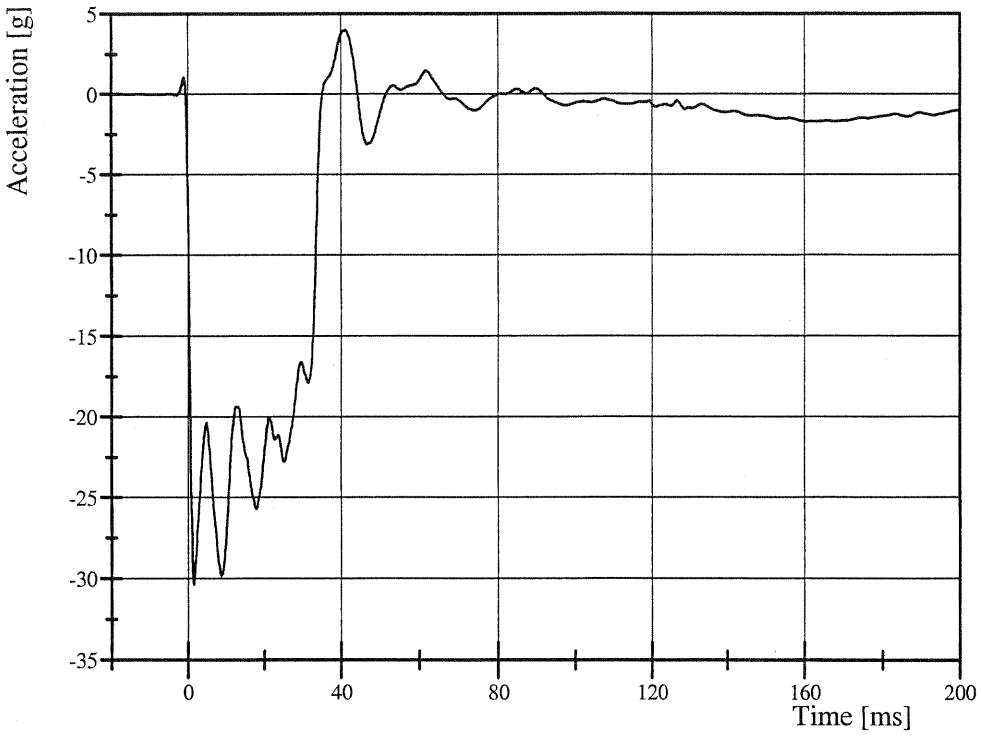
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

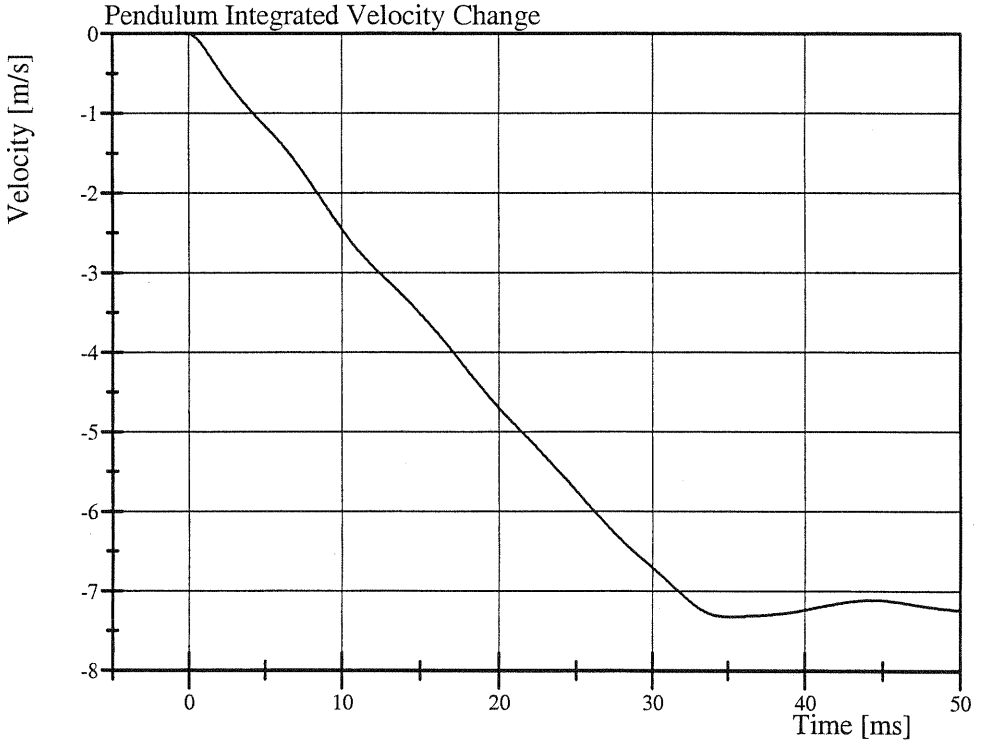
Test Date: 5/30/2007

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

05.30.2007 13:04:31 544

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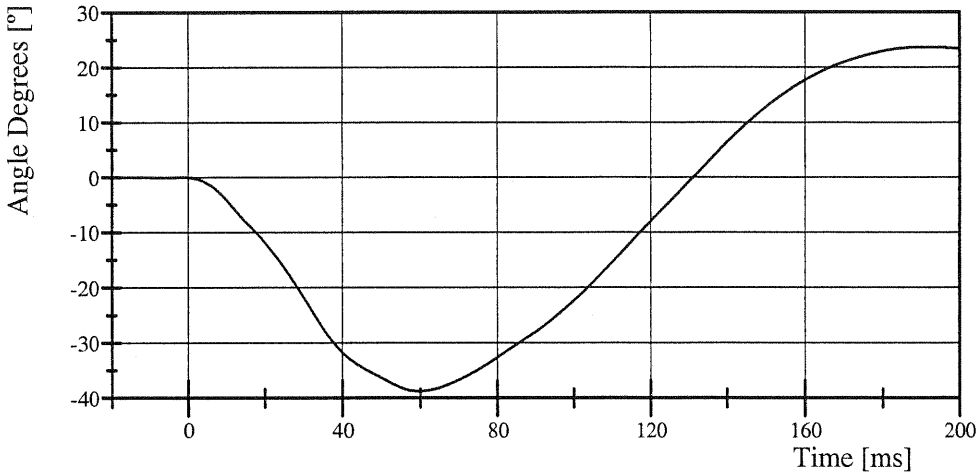
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

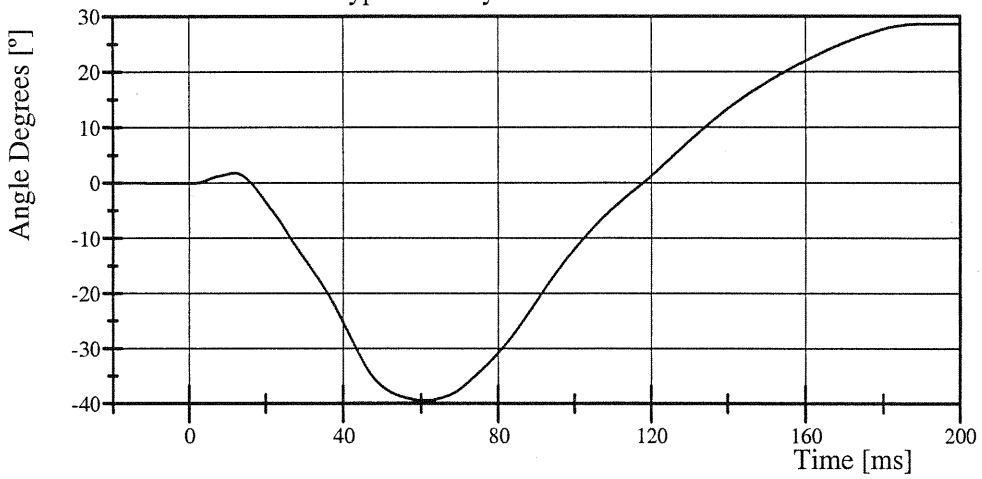
Test Date: 5/30/2007

Pot Rotation at the Base of Neck



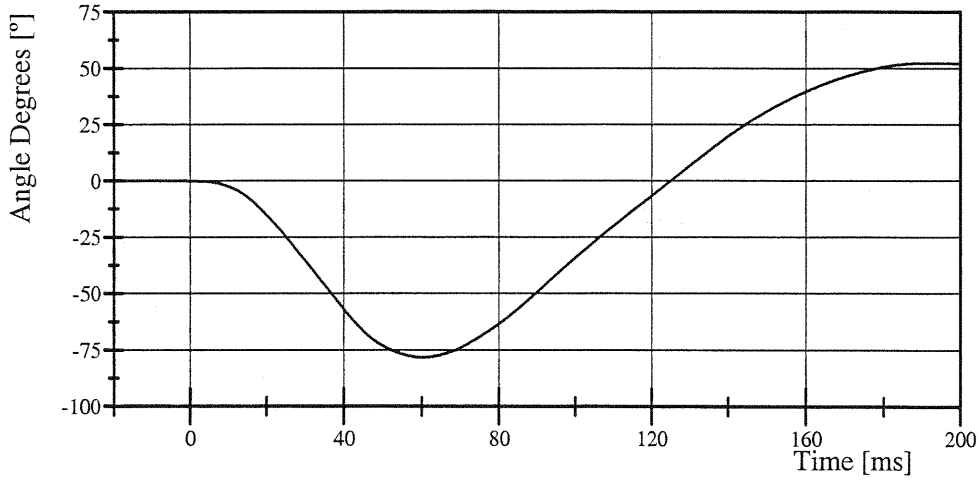
Filter Class: CFC_60
Max: 23.6 ° at 192.3 ms
Min: -38.7 ° at 59.7 ms

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

05.30.2007 13:04:31 544

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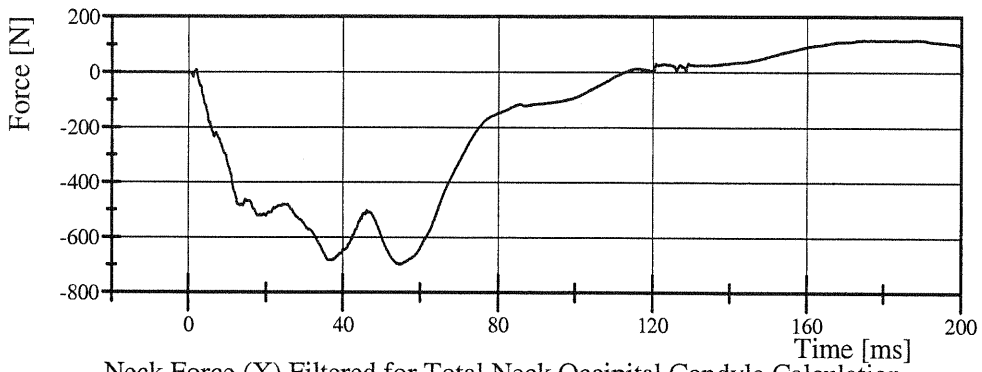
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 42-2

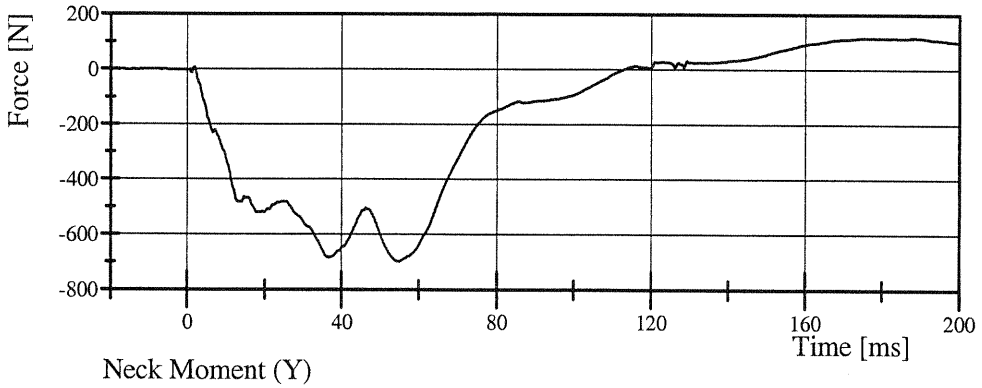
Test Date: 5/30/2007

Neck Force (X)



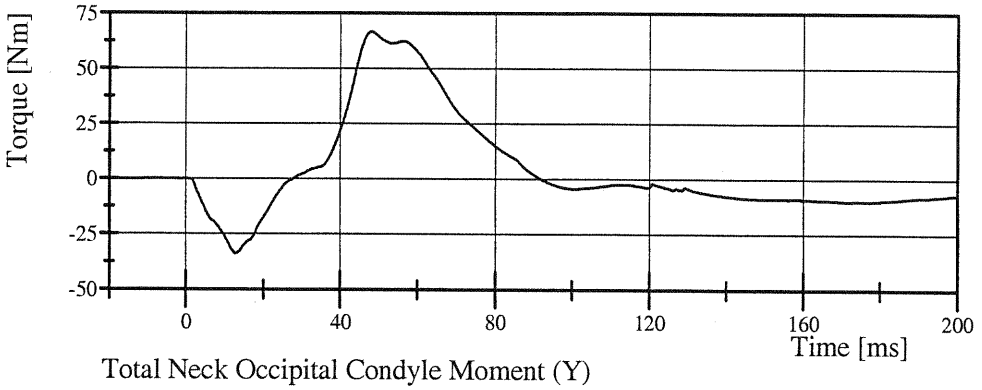
Filter Class: CFC_1000
Max: 118.4 N at 187.4 ms
Min: -697.4 N at 54.5 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



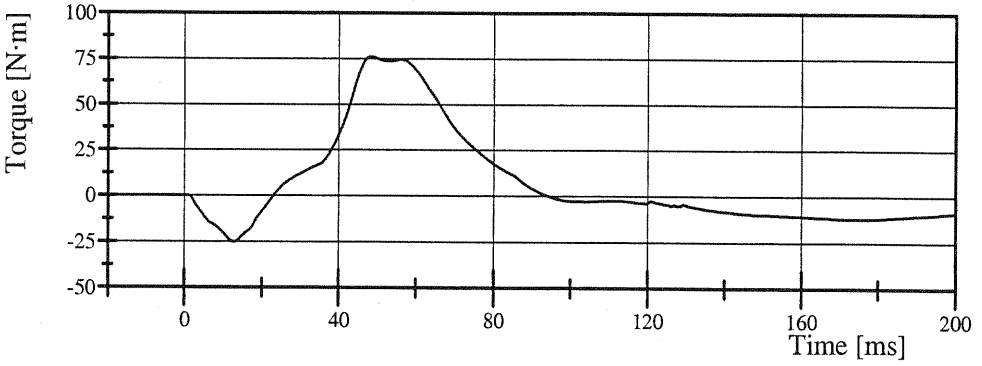
Filter Class: CFC_600
Max: 117.7 N at 188.4 ms
Min: -697.3 N at 55.0 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 66.7 Nm at 47.9 ms
Min: -33.6 Nm at 12.8 ms

Total Neck Occipital Condyle Moment (Y)



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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

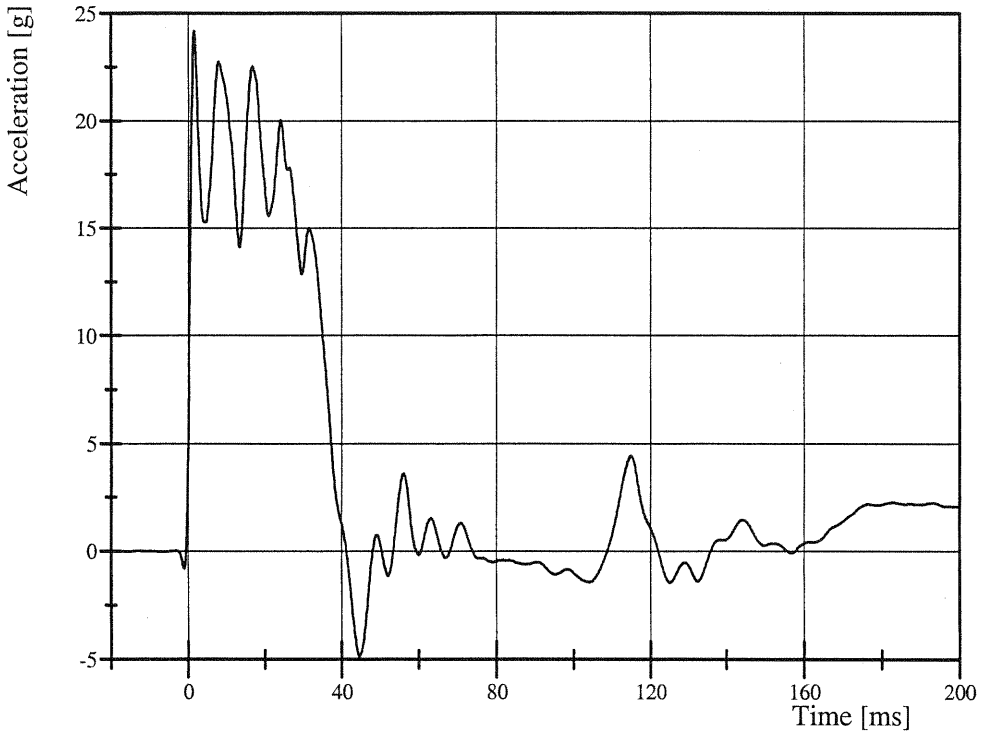
05.30.2007 14:05:35 626

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Transportation Research Center Inc.

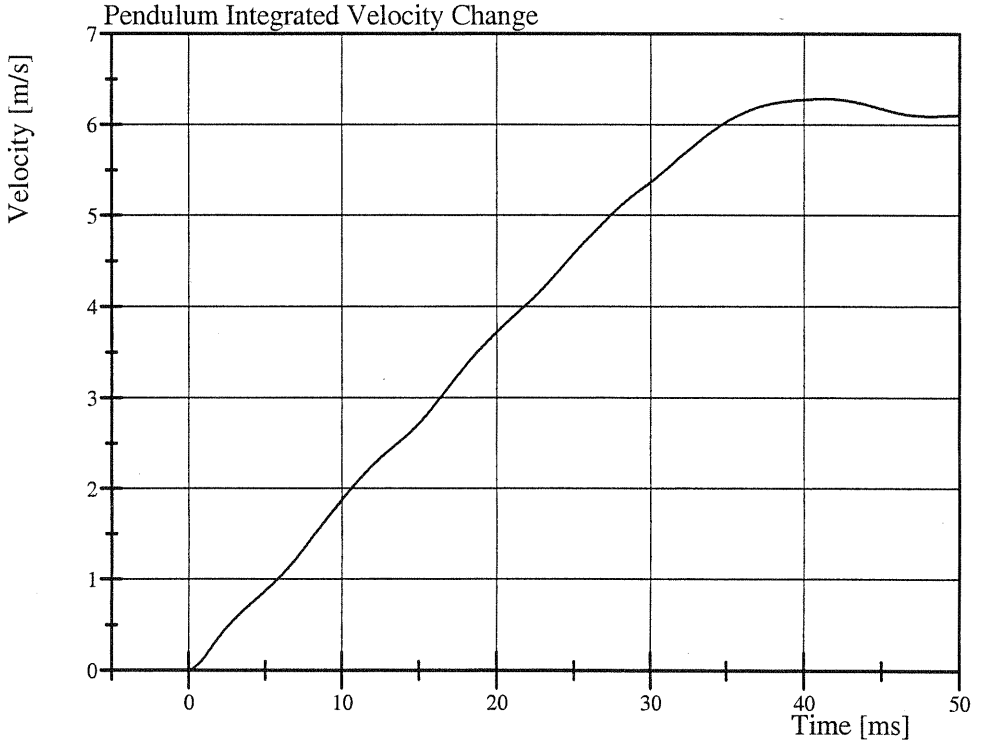
Neck Extension
HIII 5th Serial No. 416 Certification No. 42-2
Test Date: 5/30/2007

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

05.30.2007 14:05:42 626

070620

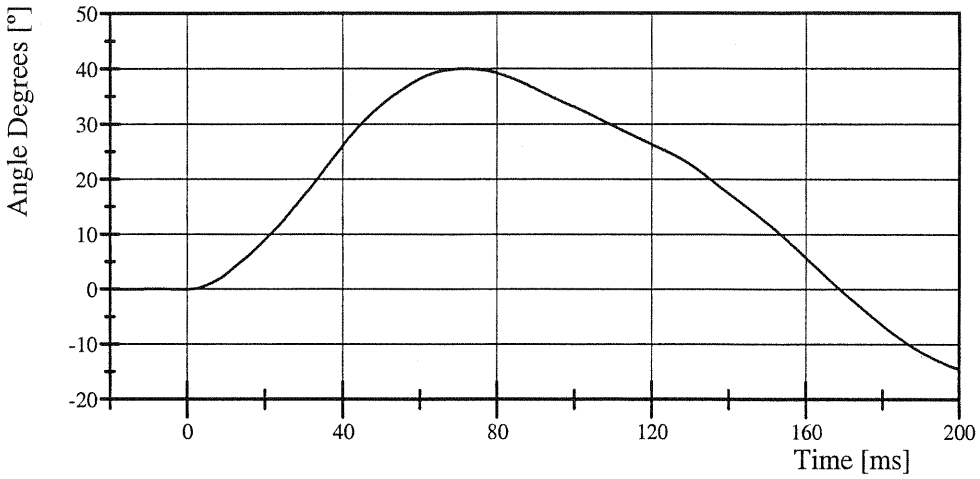
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 42-2

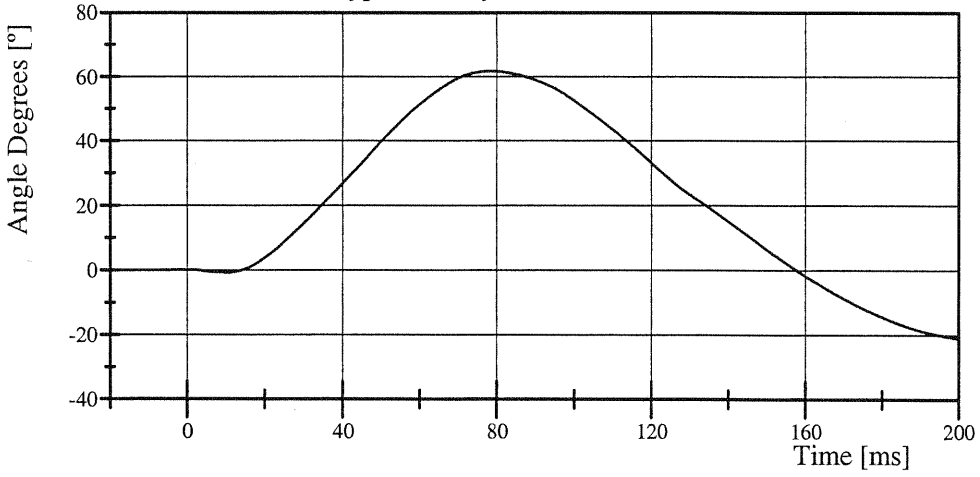
Test Date: 5/30/2007

Pot Rotation at the Base of Neck



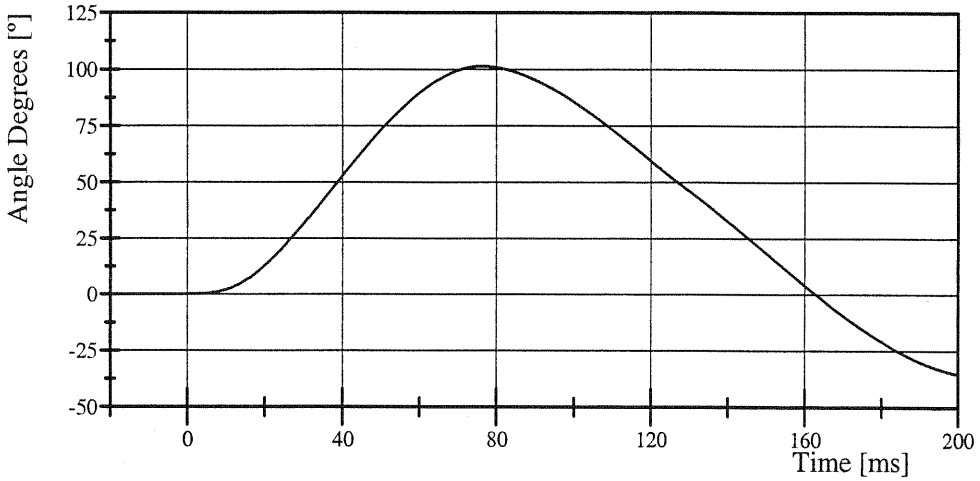
Filter Class: CFC_60
Max: 40.0 ° at 71.8 ms
Min: -14.5 ° at 200.0 ms

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

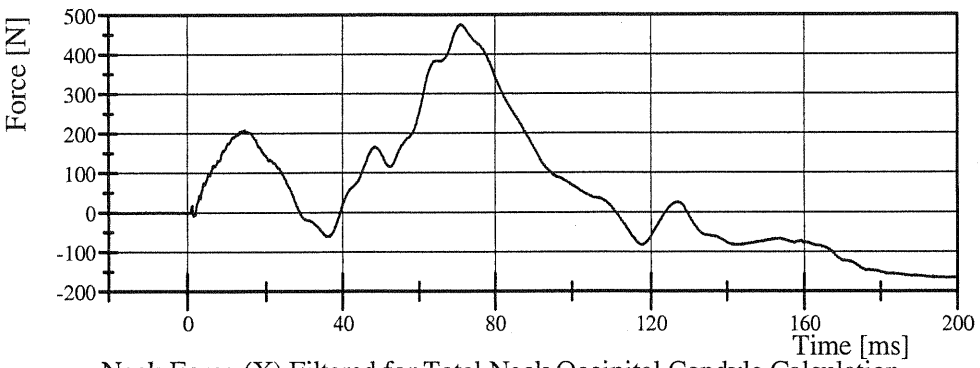
05.30.2007 14:05:43 626

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Transportation Research Center Inc.

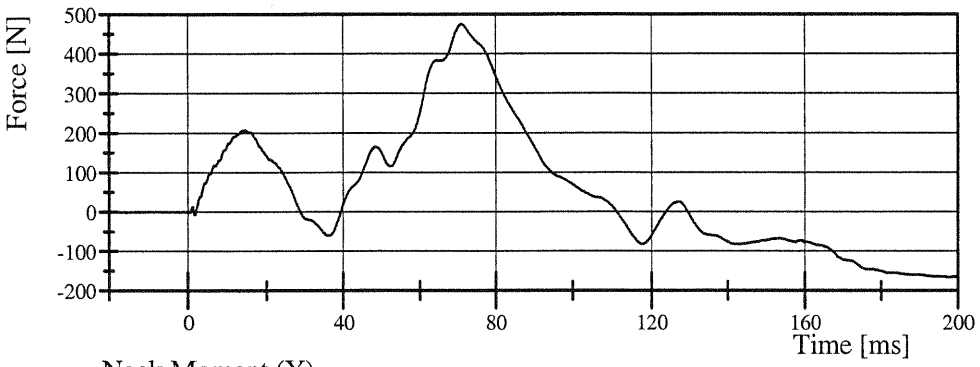
Neck Extension
HIII 5th Serial No. 416 Certification No. 42-2
Test Date: 5/30/2007

Neck Force (X)



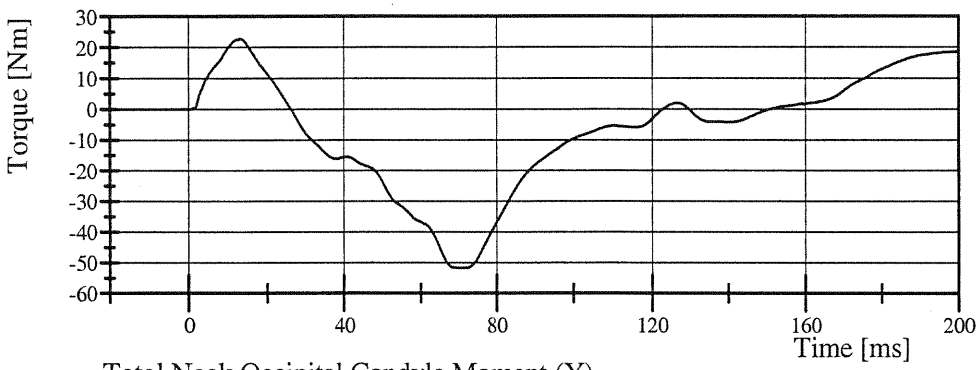
Filter Class: CFC_1000
Max: 475.6 N at 70.9 ms
Min: -166.0 N at 197.8 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



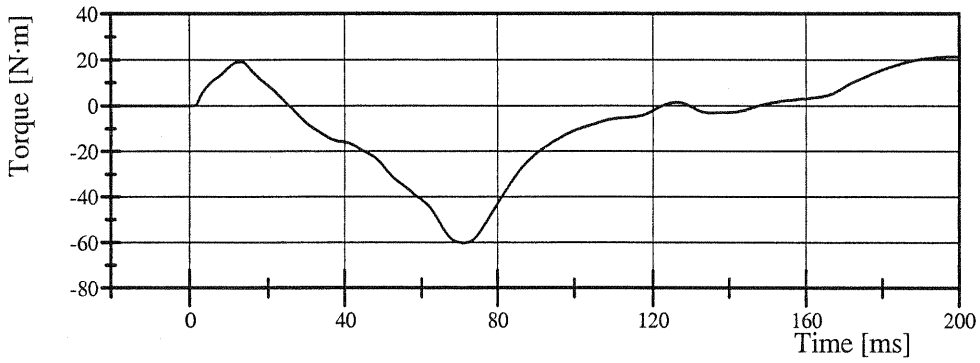
Filter Class: CFC_600
Max: 475.5 N at 71.0 ms
Min: -165.5 N at 197.7 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 22.7 Nm at 13.3 ms
Min: -51.7 Nm at 72.0 ms

Total Neck Occipital Condyle Moment (Y)



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	>= (-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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

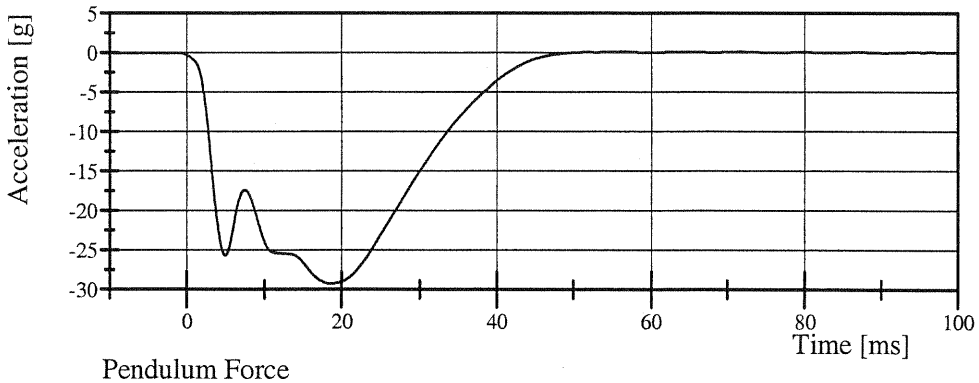
06.01.2007 10:44:26 409

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Transportation Research Center Inc.

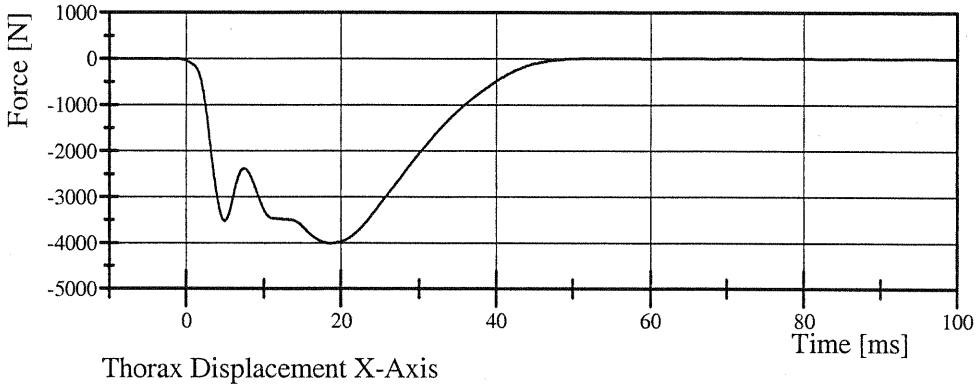
Front Thorax
HIII 5th Serial No. 416 Certification No. 42-4
Test Date: 6/1/2007

Pendulum Acceleration



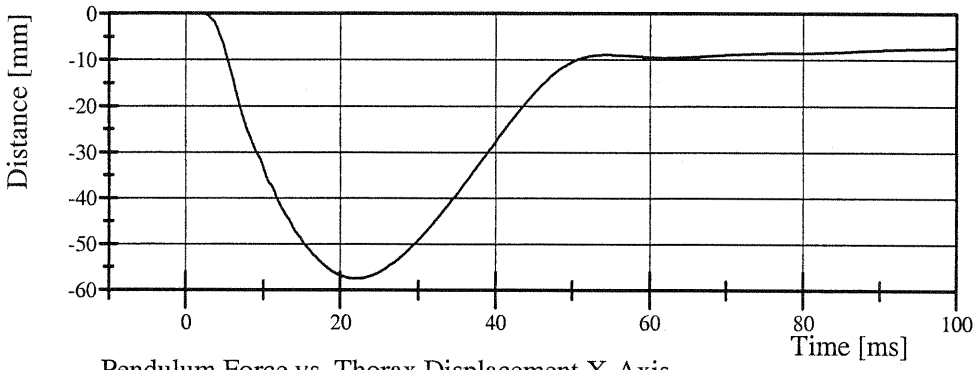
Filter Class: CFC_180
Max: 0.1 g at 71.8 ms
Min: -29.2 g at 18.6 ms

Pendulum Force



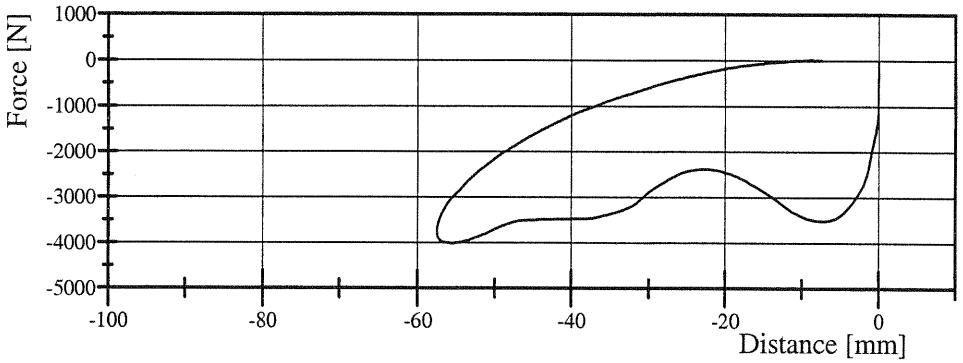
Filter Class: CFC_180
Max: 14.4 N at 71.8 ms
Min: -4,007.0 N at 18.6 ms

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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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 UNSUPPORRTED 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 Bell

Post-Test Dummy Configuration and Performance Verification Data

Target Vehicle Passenger Dummy S/N: 416

Transportation Research Center Inc.
572O HIII 5th Female Dummy
External Dimensions
Serial No. 416 Calibration No. 43
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	440	Yes
C	Hip Pivot Height	81.3 - 86.3	84	Yes
D	Hip Pivot from Backline	144.8 - 149.8	147	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	79	Yes
F	Thigh Clearance	119.4 - 134.6	128	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	252	Yes
H	Head Back to Backline	43.2 - 48.2	46	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	290	Yes
J	Elbow Rest Height	182.8 - 203.2	190	Yes
K	Buttock Knee Length	520.7 - 546.1	537	Yes
L	Popliteal Height	355.6 - 376.0	361	Yes
M	Knee Pivot Height	393.7 - 419.1	407	Yes
N	Buttock Popliteal Height	414.0 - 439.4	430	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	477	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	304	Yes
V	Shoulder Breadth	350.5 - 365.7	361	Yes
W	Foot Breadth	78.8 - 94.0	88	Yes
X	Head Circumference	528.3 - 548.7	533	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	860	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

Transportation Research Center Inc.

Front Head Drop
HIII 5th Serial No. 416 Certification No. 43-1
Test Date: 6/25/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	60 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	281.0 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	3.8 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

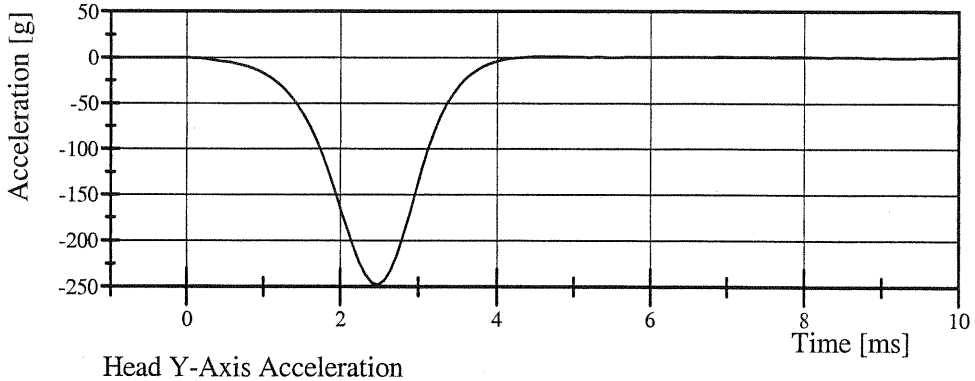
06.25.2007 13:13:26 234

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Transportation Research Center Inc.

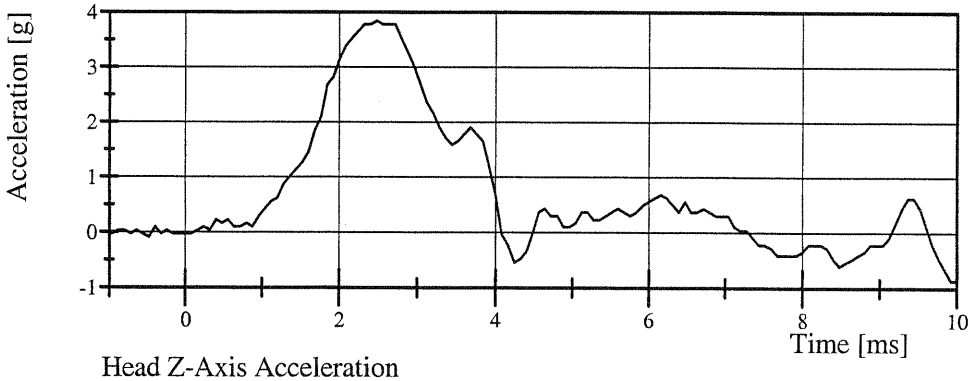
Front Head Drop
HIII 5th Serial No. 416 Certification No. 43-1
Test Date: 6/25/2007

Head X-Axis Acceleration



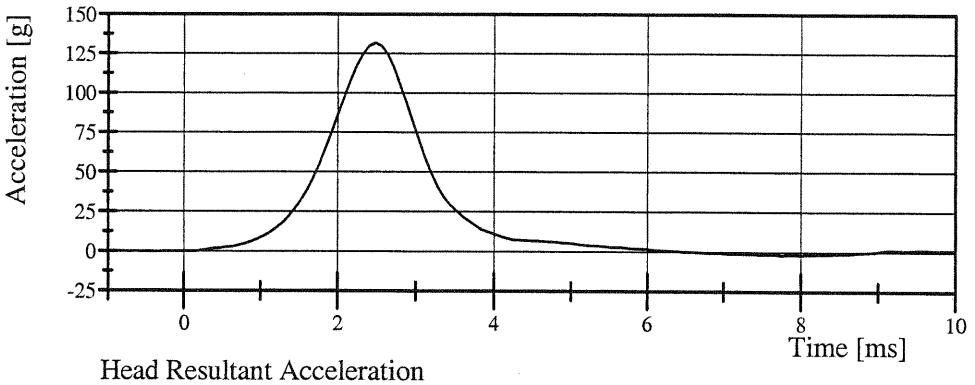
Filter Class: CFC_1000
Max: 0.9 g at 4.5 ms
Min: -248.1 g at 2.5 ms

Head Y-Axis Acceleration



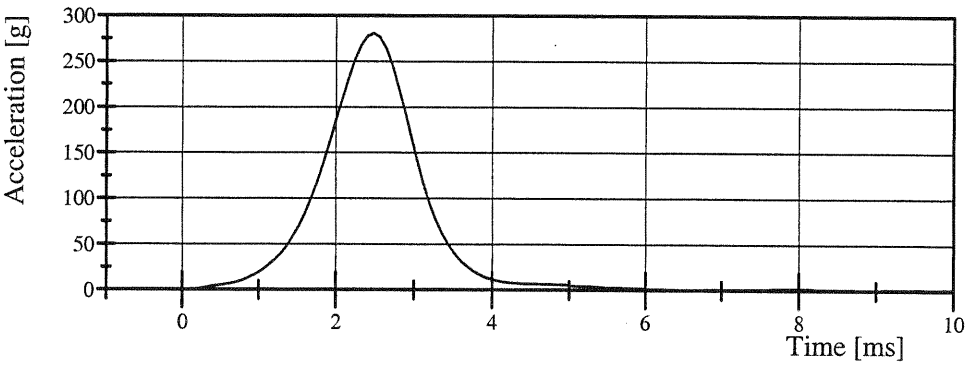
Filter Class: CFC_1000
Max: 3.8 g at 2.5 ms
Min: -0.9 g at 9.9 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 131.9 g at 2.5 ms
Min: -1.8 g at 8.0 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 281.0 g at 2.5 ms
Min: 0.0 g at -1.0 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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Transportation Research Center Inc.

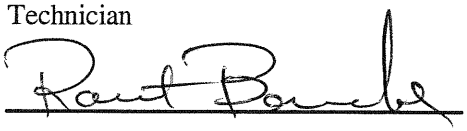
Neck Flexion
HIII 5th Serial No. 416 Certification No. 43-1
Test Date: 6/25/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	58 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.056 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	-4.71 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.65 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-79.7 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	74.8 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	86.0 ms	Yes

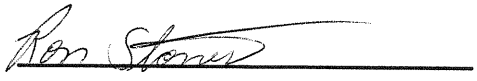
Test meets specifications.

Comments:

Technician



Approved



Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.25.2007 13:54:50 548

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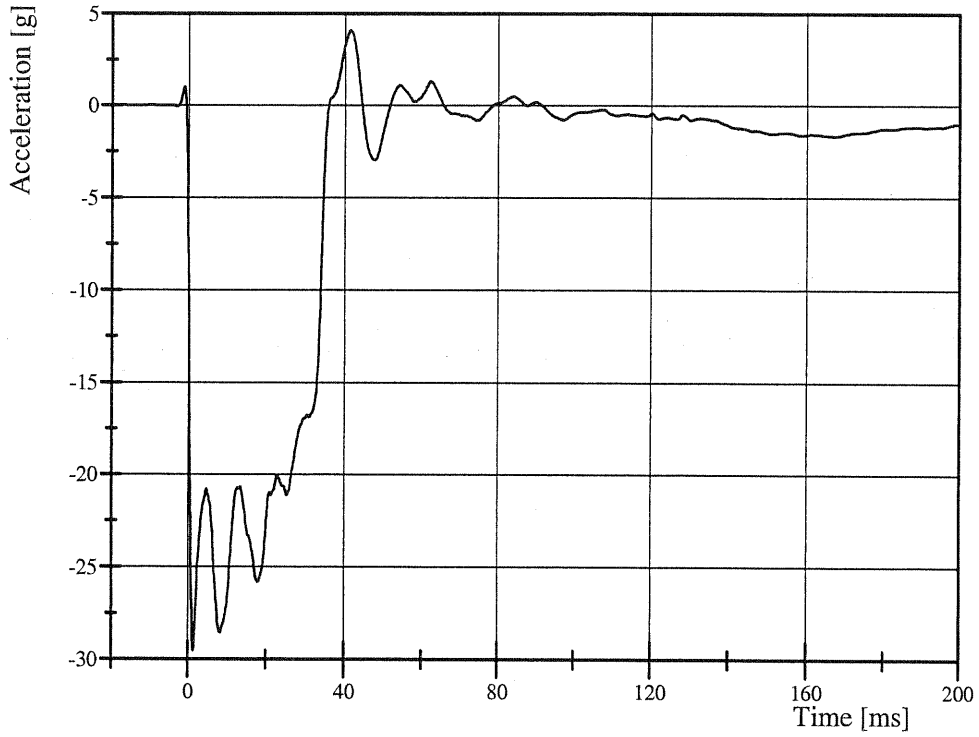
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 43-1

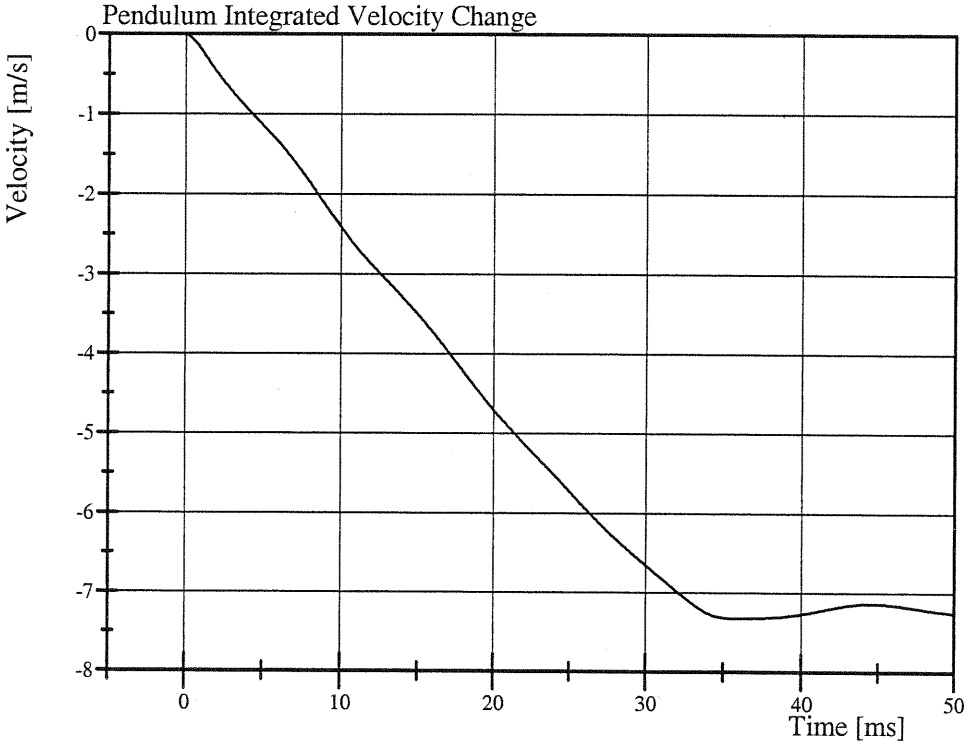
Test Date: 6/25/2007

Pendulum Acceleration



Filter Class: CFC_180
Max: 4.1 g at 41.5 ms
Min: -29.5 g at 1.4 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 0.0 m/s at 0.0 ms
Min: -7.3 m/s at 35.9 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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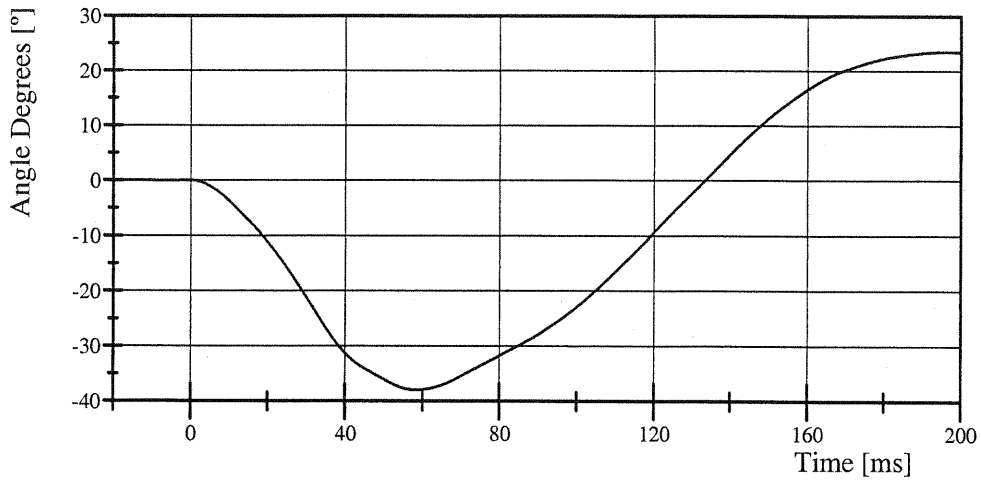
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 43-1

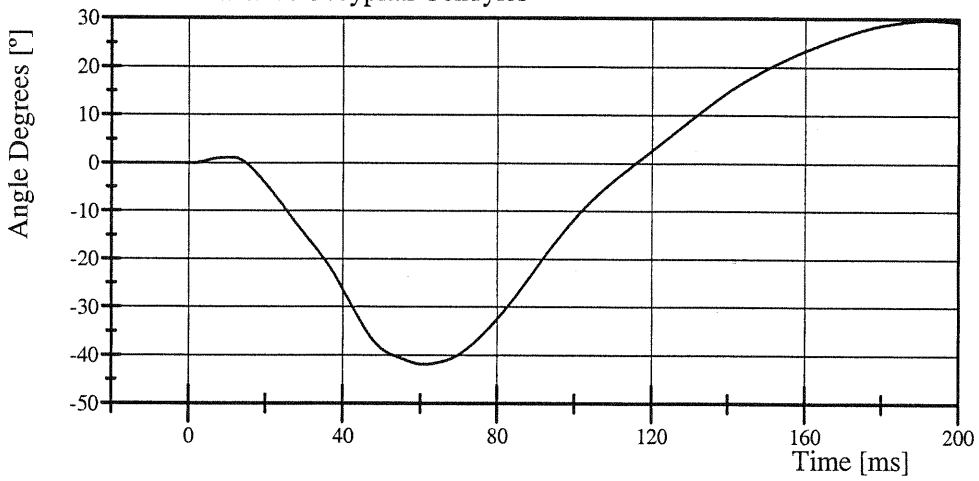
Test Date: 6/25/2007

Pot Rotation at the Base of Neck



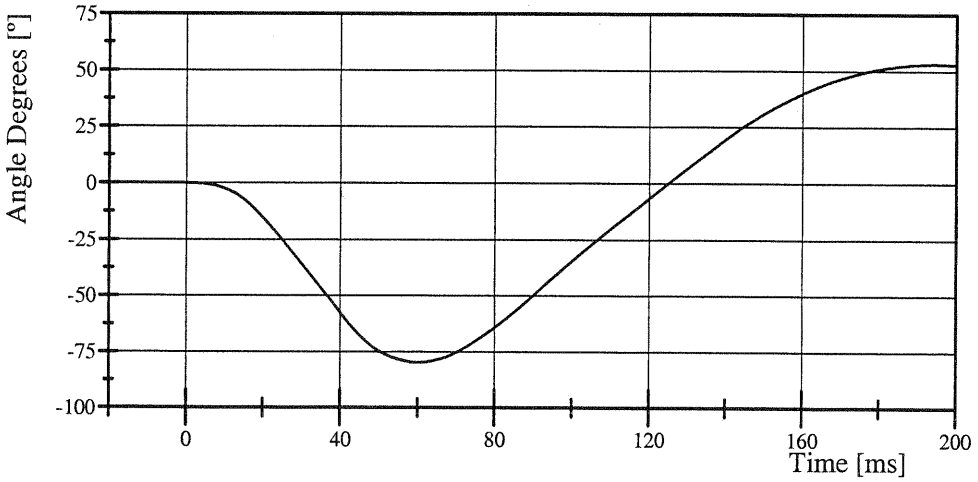
Filter Class: CFC_60
Max: 23.5 ° at 196.2 ms
Min: -37.9 ° at 58.4 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 29.7 ° at 192.2 ms
Min: -41.9 ° at 61.1 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 53.2 ° at 194.1 ms
Min: -79.7 ° at 60.2 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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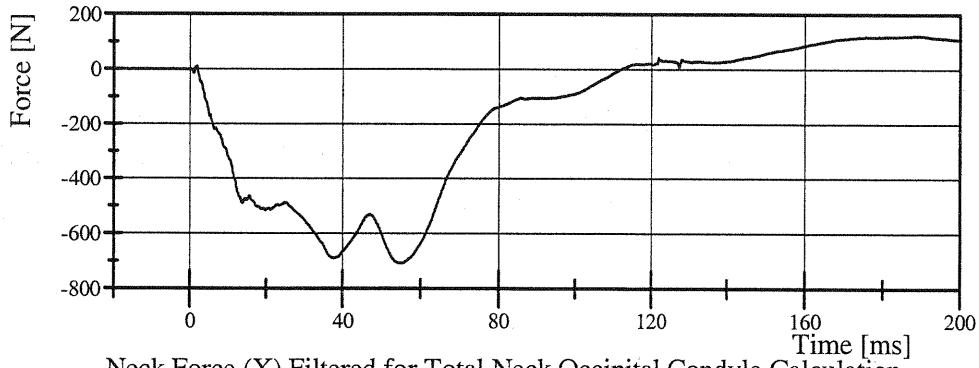
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 43-1

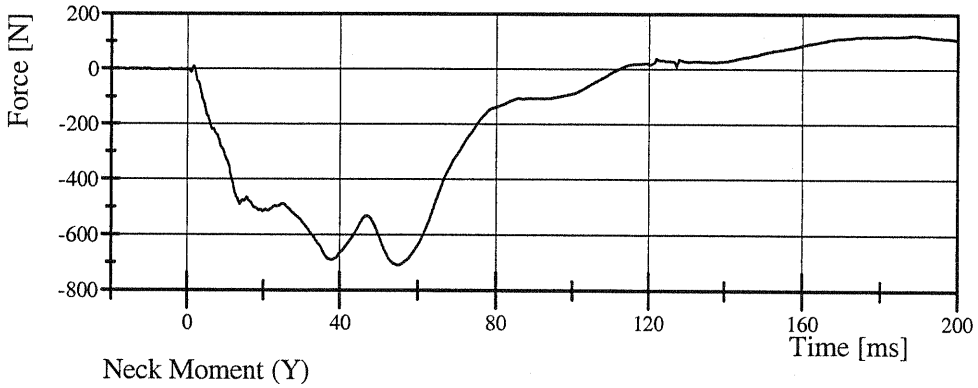
Test Date: 6/25/2007

Neck Force (X)



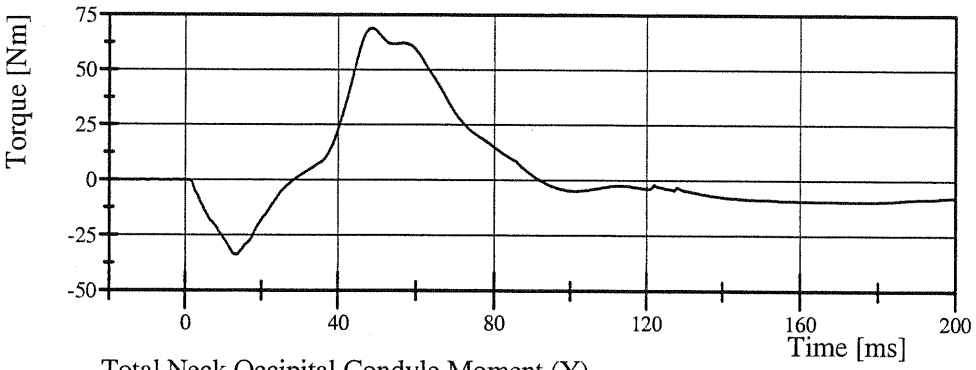
Filter Class: CFC_1000
Max: 124.4 N at 188.3 ms
Min: -707.7 N at 54.6 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



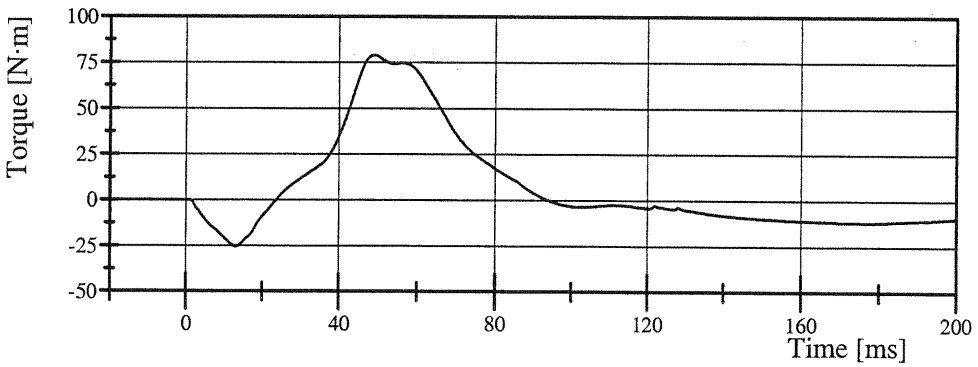
Filter Class: CFC_600
Max: 123.9 N at 189.4 ms
Min: -707.6 N at 54.9 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 68.9 Nm at 48.7 ms
Min: -33.7 Nm at 13.5 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 79.0 N·m at 49.0 ms
Min: -25.2 N·m at 13.0 ms

Transportation Research Center Inc.

Neck Extension
HIII 5th Serial No. 416 Certification No. 43-1
Test Date: 6/25/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	59 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-6.039 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.86 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.63 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	5.31 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	104.2 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-60.2 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	102.7 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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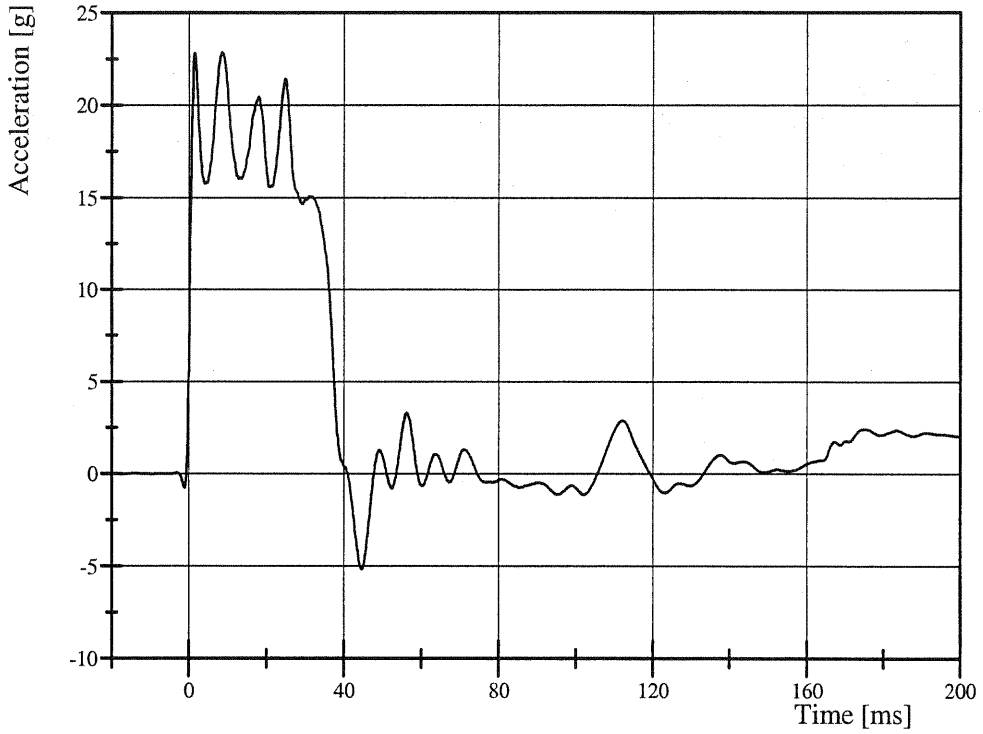
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 43-1

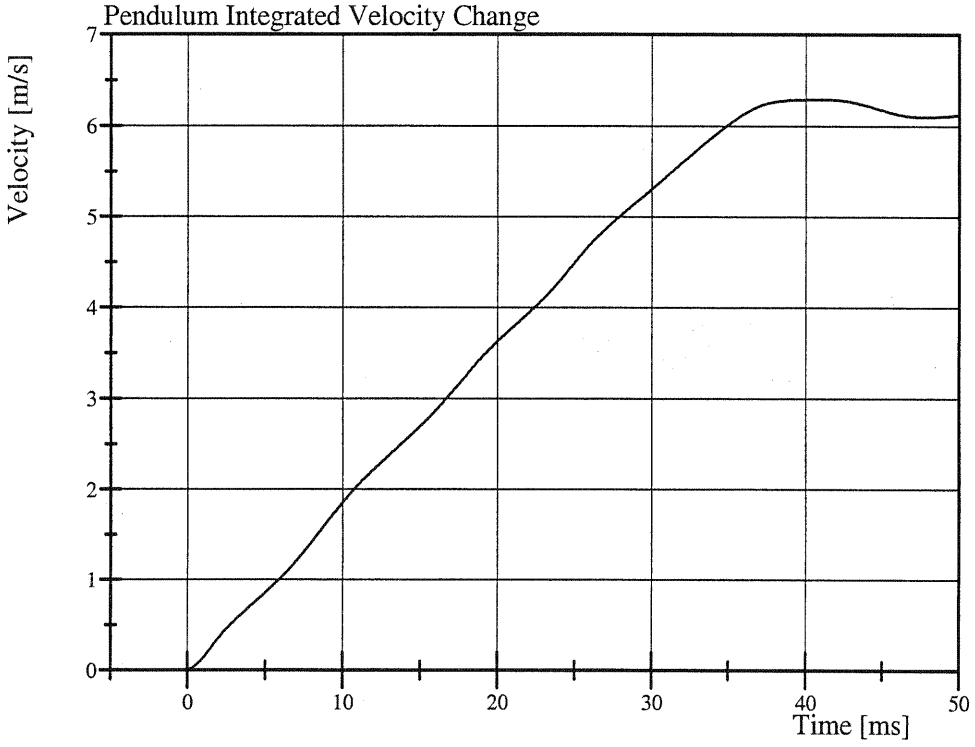
Test Date: 6/25/2007

Pendulum Acceleration



Filter Class: CFC_180
Max: 22.8 g at 8.6 ms
Min: -5.2 g at 44.7 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 6.3 m/s at 41.0 ms
Min: 0.0 m/s at 0.0 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.25.2007 14:32:49 628

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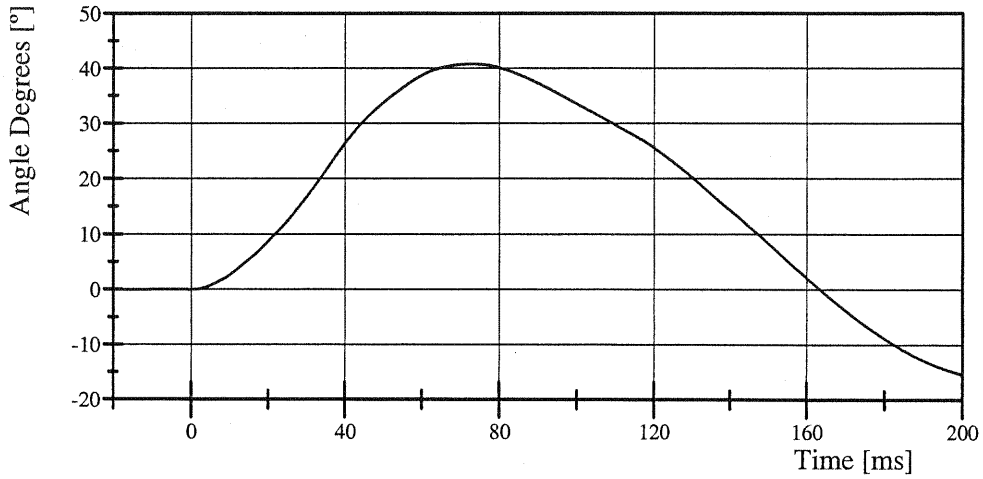
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 43-1

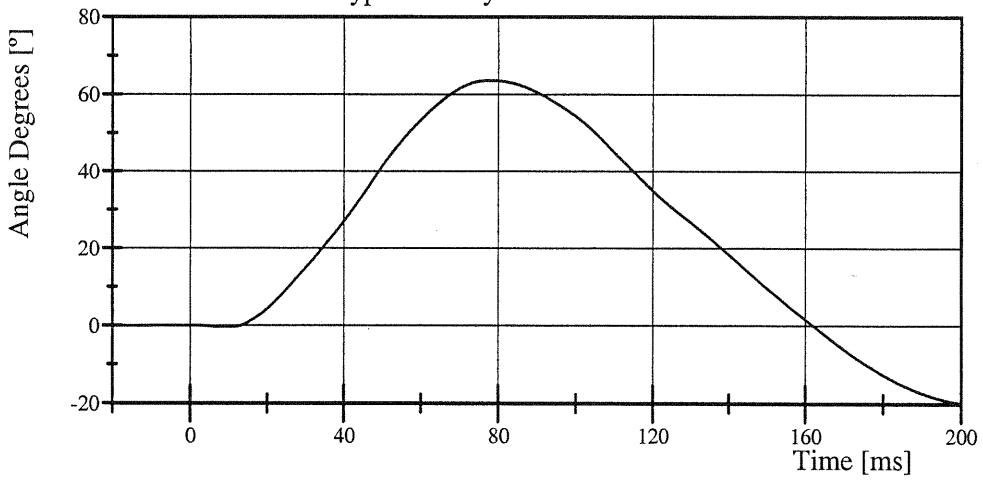
Test Date: 6/25/2007

Pot Rotation at the Base of Neck



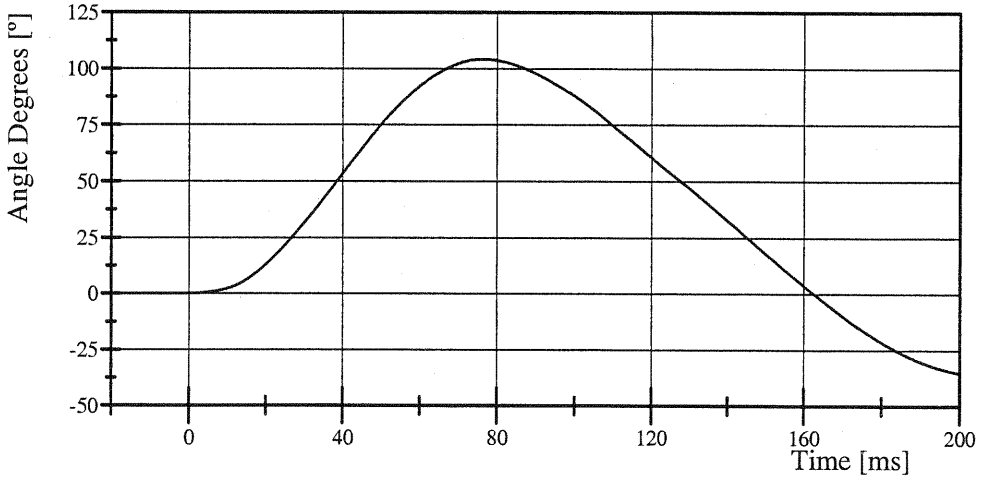
Filter Class: CFC_60
Max: 40.8 ° at 73.0 ms
Min: -15.3 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 63.7 ° at 78.3 ms
Min: -19.9 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 104.2 ° at 76.1 ms
Min: -35.2 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.25.2007 14:32:49 628

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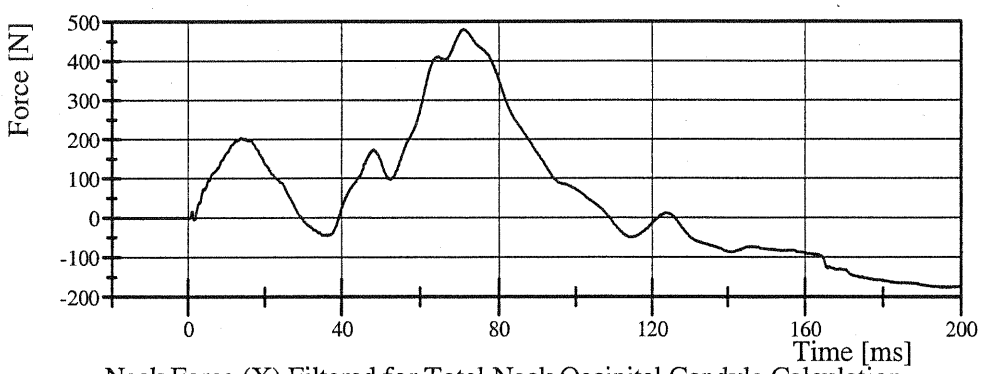
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 43-1

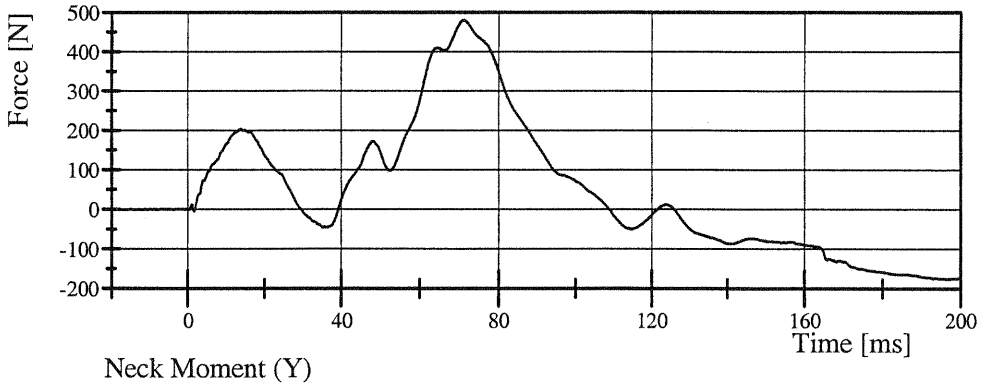
Test Date: 6/25/2007

Neck Force (X)



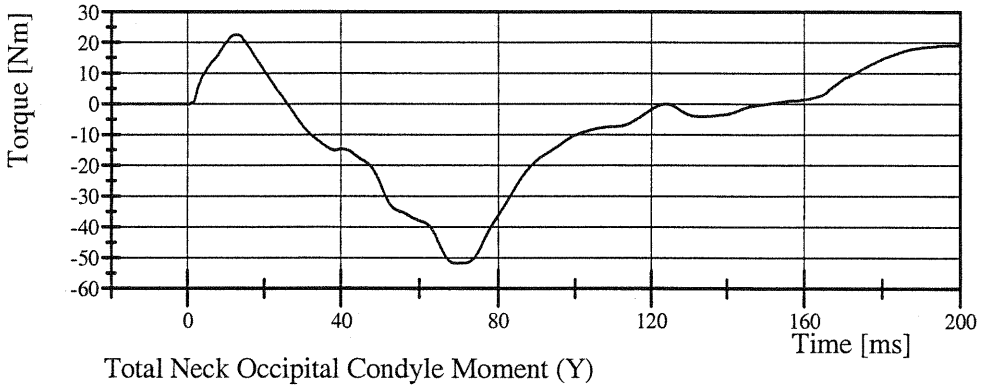
Filter Class: CFC_1000
Max: 481.1 N at 71.1 ms
Min: -175.4 N at 195.9 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



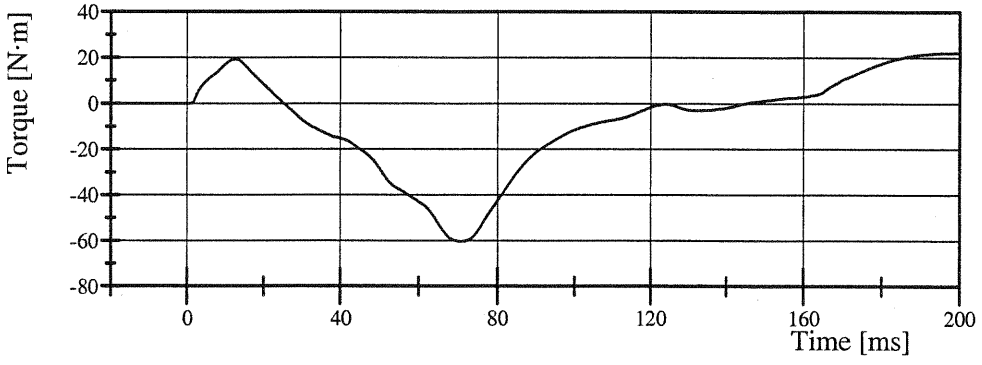
Filter Class: CFC_600
Max: 480.6 N at 71.0 ms
Min: -175.3 N at 196.2 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 22.6 Nm at 13.0 ms
Min: -51.8 Nm at 69.8 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 22.2 N·m at 199.0 ms
Min: -60.2 N·m at 71.1 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.25.2007 14:32:50 628

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Transportation Research Center Inc.

Front Thorax
HIII 5th Serial No. 416 Certification No. 43-11
Test Date: 6/27/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.602 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-3,973.9 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	>= (-4,600) N	-3,852.0 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-55.7 mm	Yes
Internal Hysteresis	69 - 85 %	73.3 %	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O with Polarity in accordance with J211

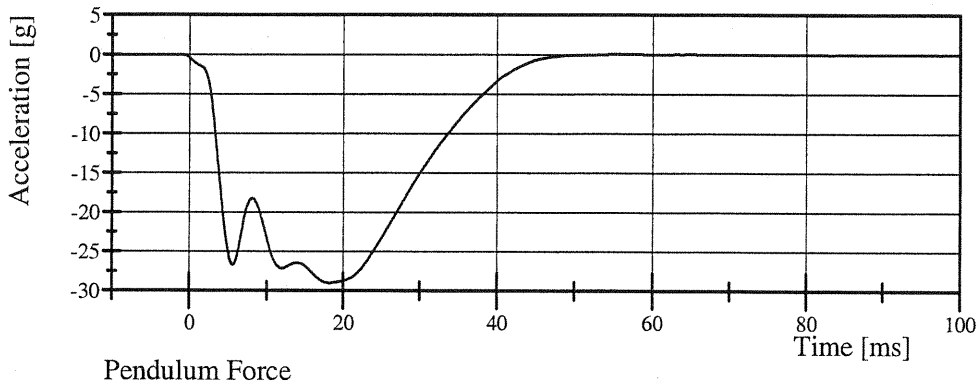
06.27.2007 13:21:07 409

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Transportation Research Center Inc.

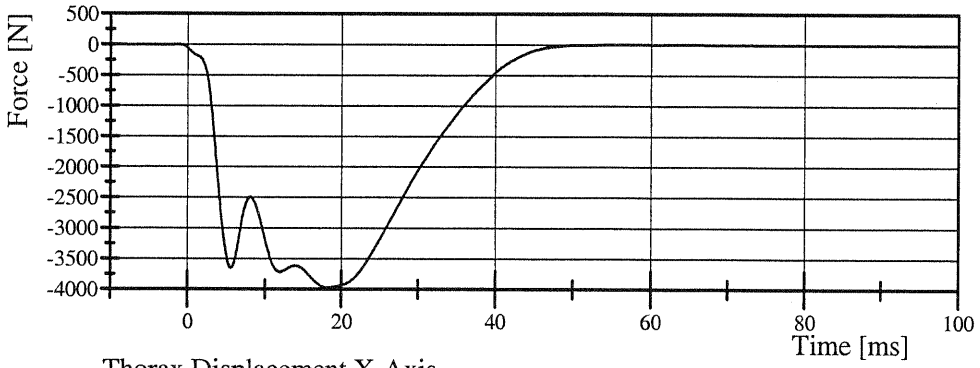
Front Thorax
HIII 5th Serial No. 416 Certification No. 43-11
Test Date: 6/27/2007

Pendulum Acceleration



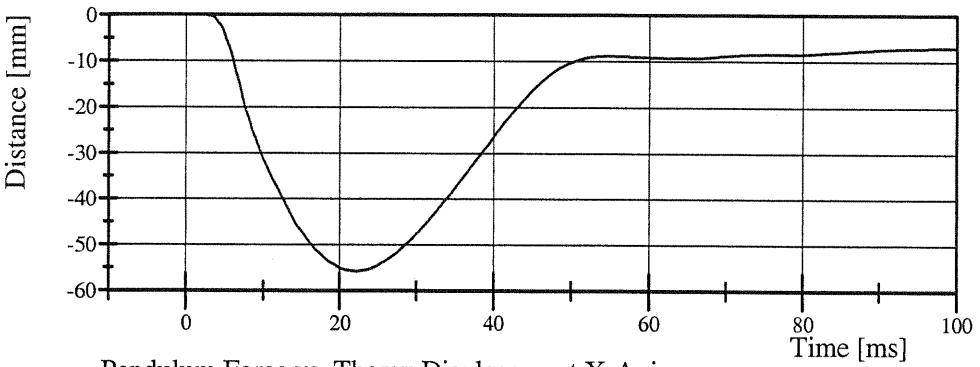
Filter Class: CFC_180
Max: 0.1 g at 57.8 ms
Min: -29.0 g at 18.2 ms

Pendulum Force



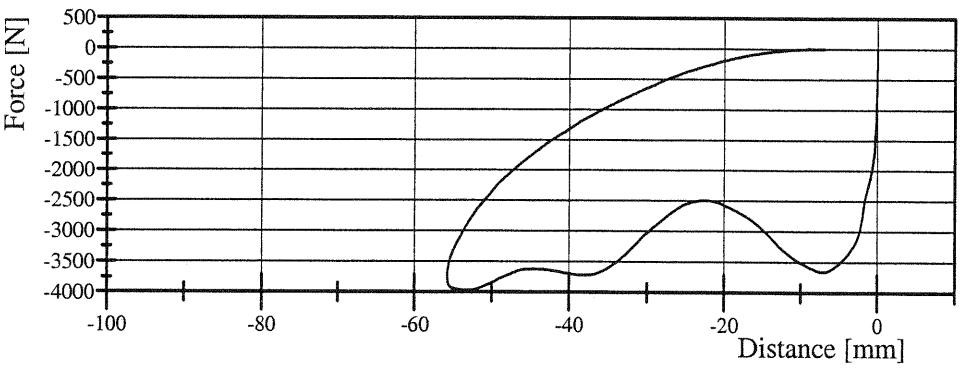
Filter Class: CFC_180
Max: 8.7 N at 57.8 ms
Min: -3,973.9 N at 18.2 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -4.1 ms
Min: -55.7 mm at 22.2 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 8.7 N at -8.9 mm
Min: -3,973.9 N at -53.2 mm

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

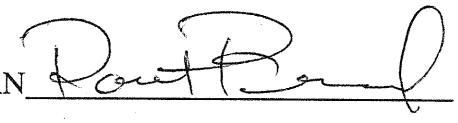
CAL DATE: 26-Jun-07

TRC, INC. **TEST NO: TOFL-03** **572 O SN416 TORSO FLEX CAL 43**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	20.9° C
RELATIVE HUMIDITY	10 – 70 %	57 %
INITIAL ANGLE OF UNSUPPORRTED DUMMY	<= 20° REFERENCED TO VERTICAL	18.9°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	343.6 N
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	5.1 °
RATE	0.5° - 1.5°/sec	0.95 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN 

Pre-Test Dummy Configuration and Performance Verification Data

Bullet 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

Charles W. Beall

Approved

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

Approved

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

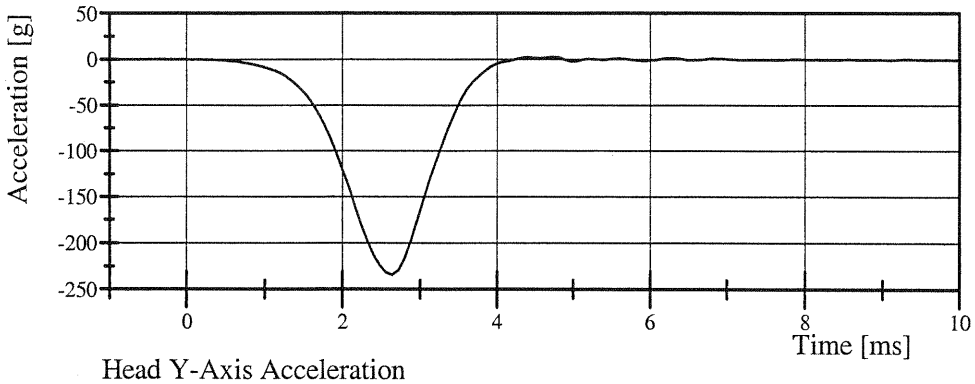
05.31.2007 10:55:07 606

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Transportation Research Center Inc.

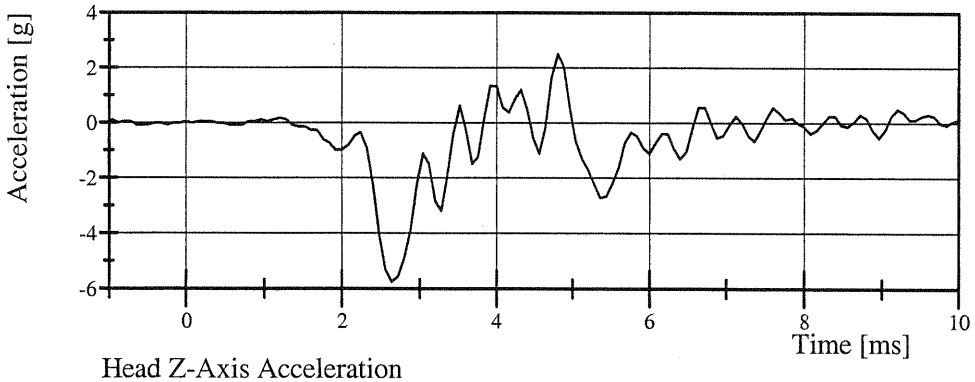
Front Head Drop
HIII 50th Serial No. 855 Certification No. 4-1
Test Date: 5/31/2007

Head X-Axis Acceleration



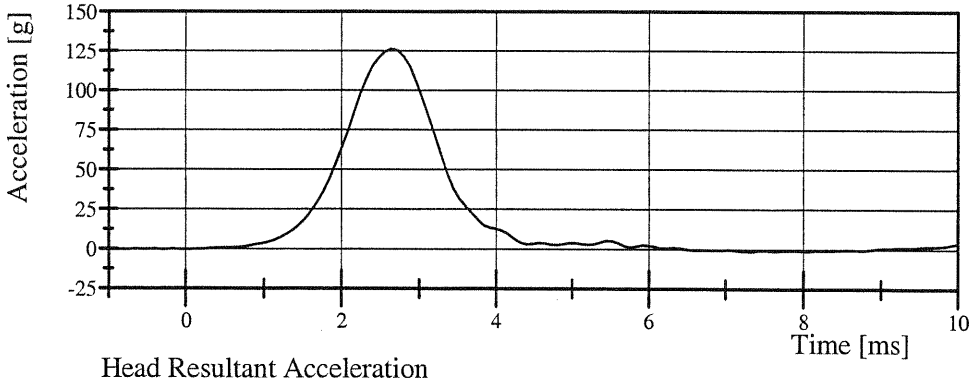
Filter Class: CFC_1000
Max: 2.7 g at 4.7 ms
Min: -234.6 g at 2.6 ms

Head Y-Axis Acceleration



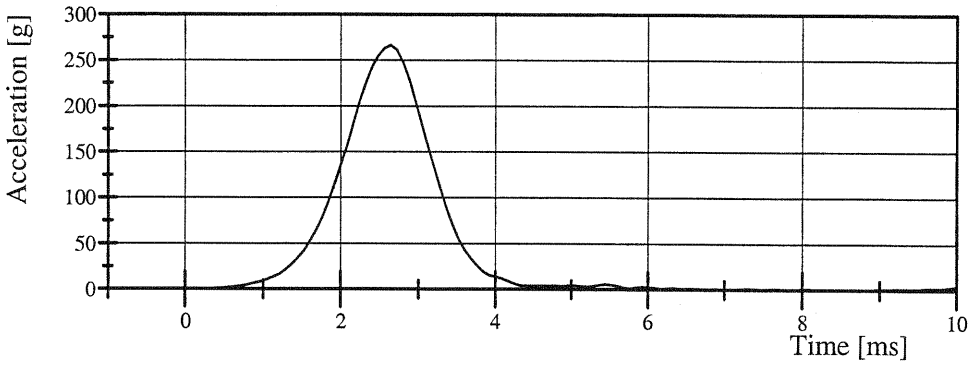
Filter Class: CFC_1000
Max: 2.5 g at 4.8 ms
Min: -5.8 g at 2.6 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 126.5 g at 2.6 ms
Min: -1.2 g at 7.3 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 266.5 g at 2.6 ms
Min: 0.0 g at -0.3 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

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Transportation Research Center Inc.

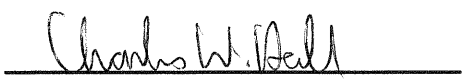
Neck Flexion
HIII 50th Serial No. 855 Certification No. 4-2
Test Date: 5/31/2007

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

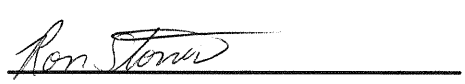
Test meets specifications.

Comments:

Technician



Approved



Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

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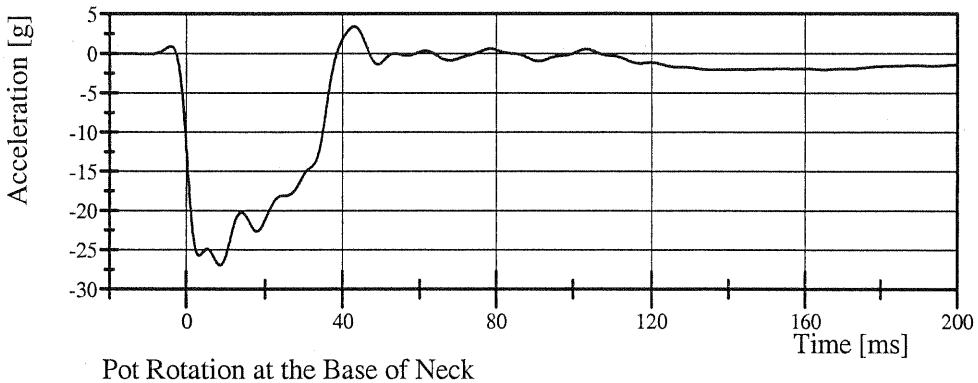
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 855 Certification No. 4-2

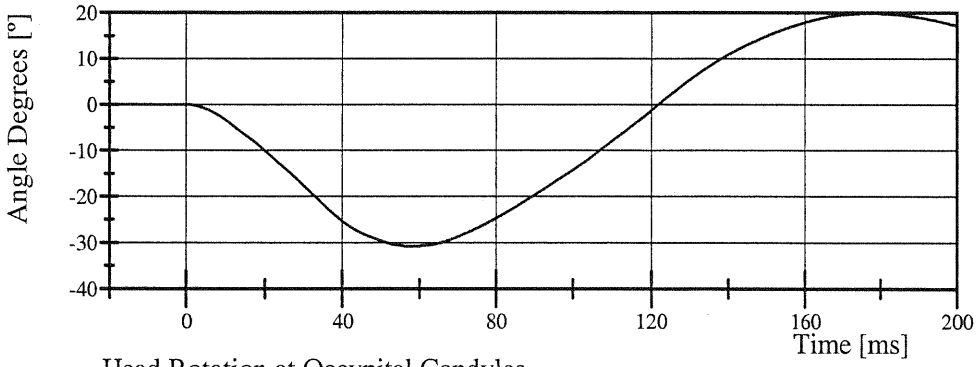
Test Date: 5/31/2007

Pendulum Acceleration



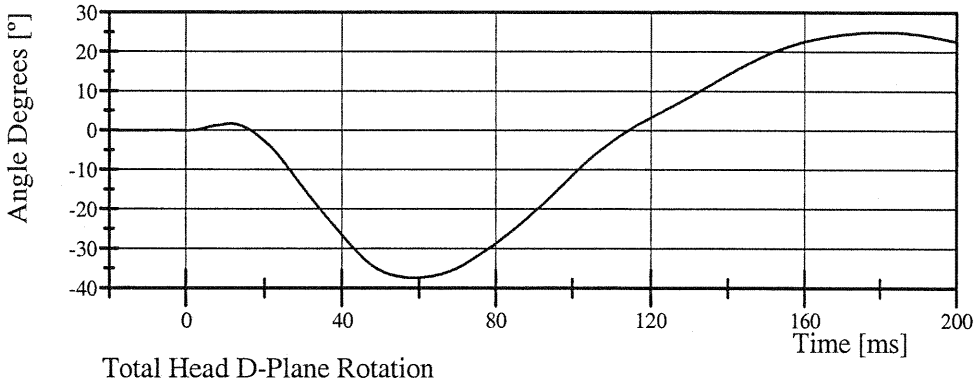
Filter Class: CFC_60
Max: 3.4 g at 43.0 ms
Min: -26.9 g at 8.6 ms

Pot Rotation at the Base of Neck



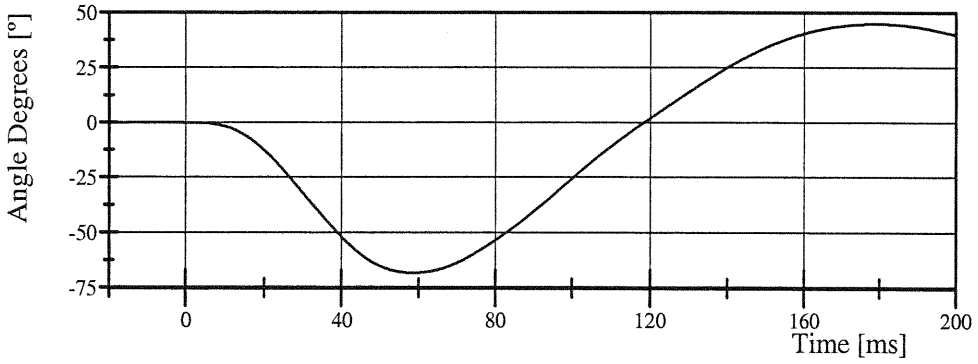
Filter Class: CFC_60
Max: 19.9 ° at 177.4 ms
Min: -30.8 ° at 58.1 ms

Head Rotation at Occypital 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

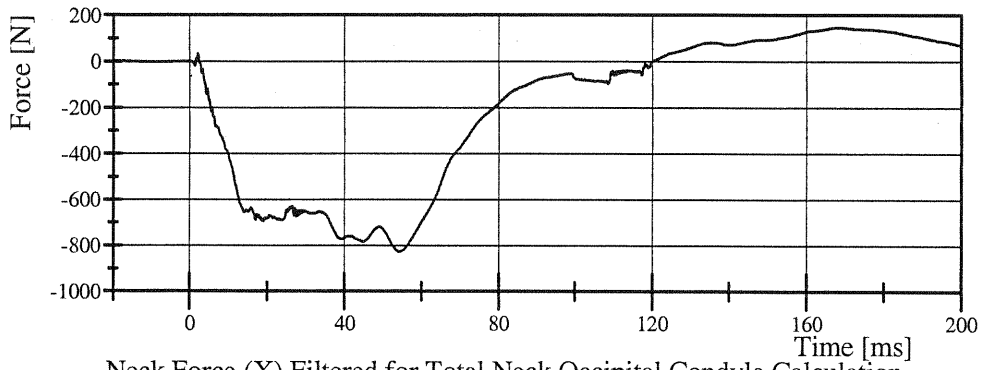
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 855 Certification No. 4-2

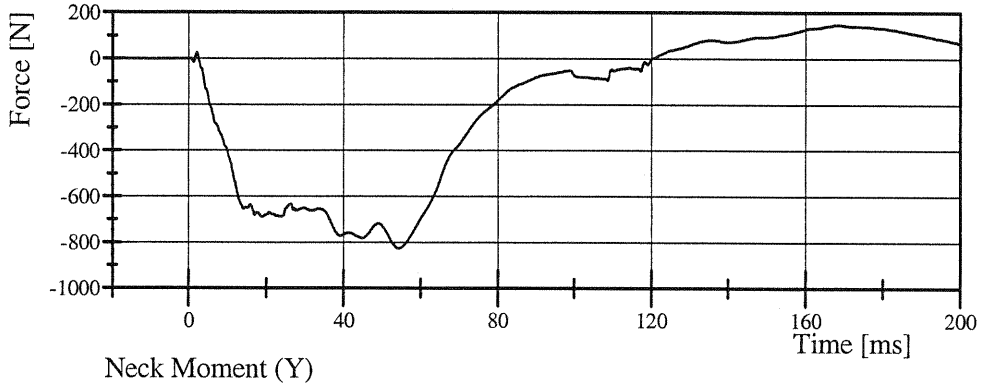
Test Date: 5/31/2007

Neck Force (X)



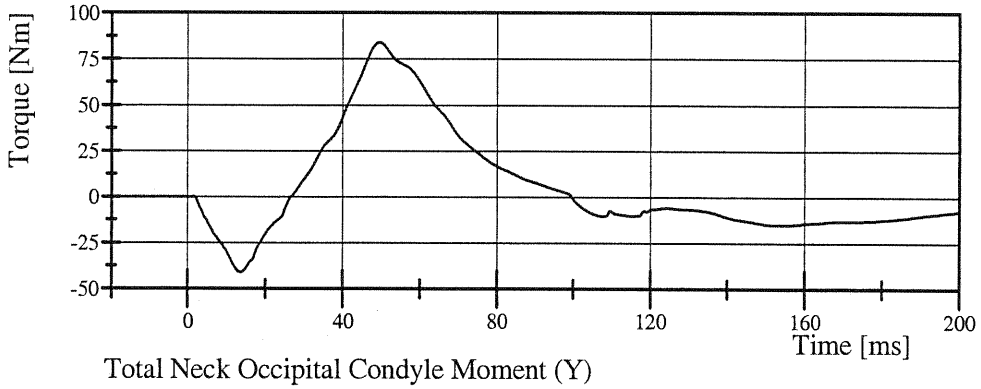
Filter Class: CFC_1000
Max: 148.5 N at 167.8 ms
Min: -826.6 N at 54.2 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



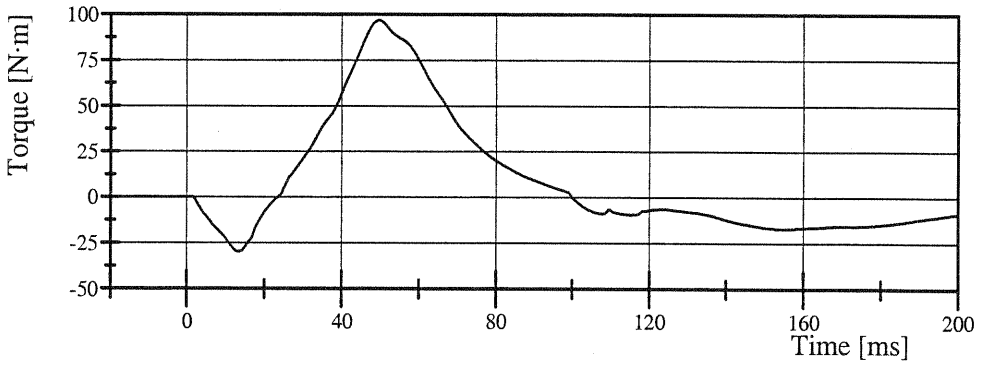
Filter Class: CFC_600
Max: 147.8 N at 167.8 ms
Min: -826.4 N at 54.2 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 84.1 Nm at 49.5 ms
Min: -41.1 Nm at 13.7 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 96.9 N·m at 49.6 ms
Min: -29.8 N·m at 13.4 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

05.31.2007 13:50:25 553

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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 

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

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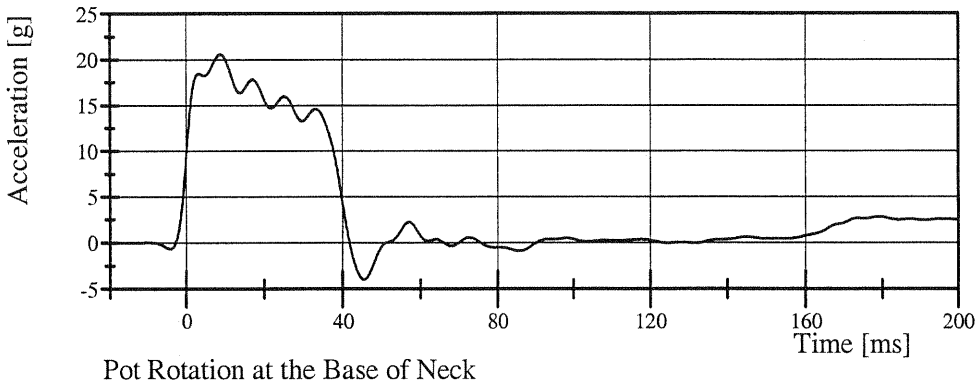
Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 855 Certification No. 4-1

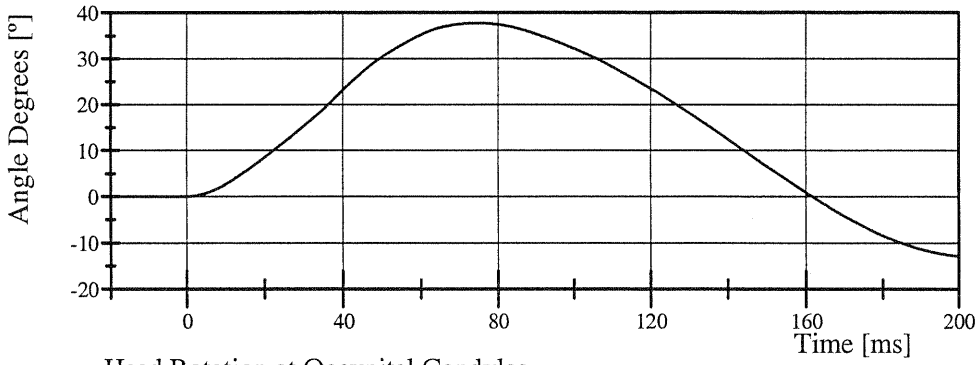
Test Date: 5/31/2007

Pendulum Acceleration



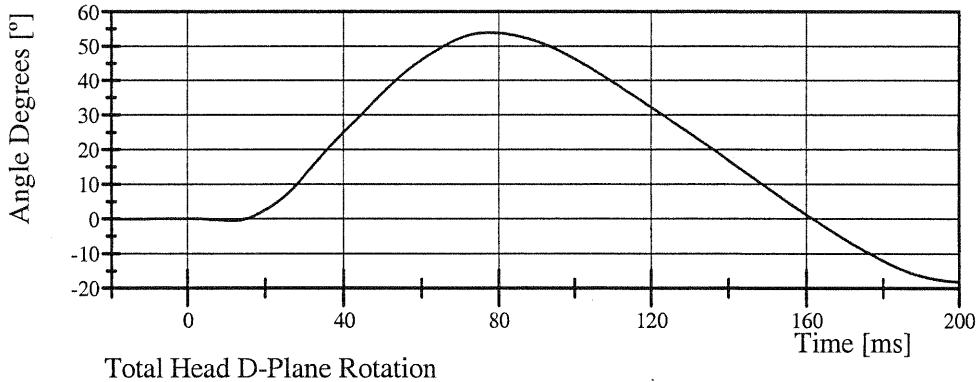
Filter Class: CFC_60
Max: 20.6 g at 8.8 ms
Min: -4.0 g at 45.4 ms

Pot Rotation at the Base of Neck



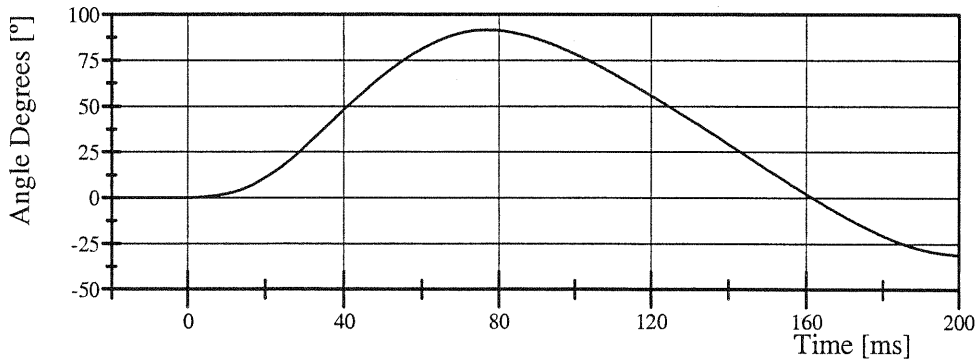
Filter Class: CFC_60
Max: 37.7 ° at 74.5 ms
Min: -12.9 ° at 200.0 ms

Head Rotation at Occypital 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

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

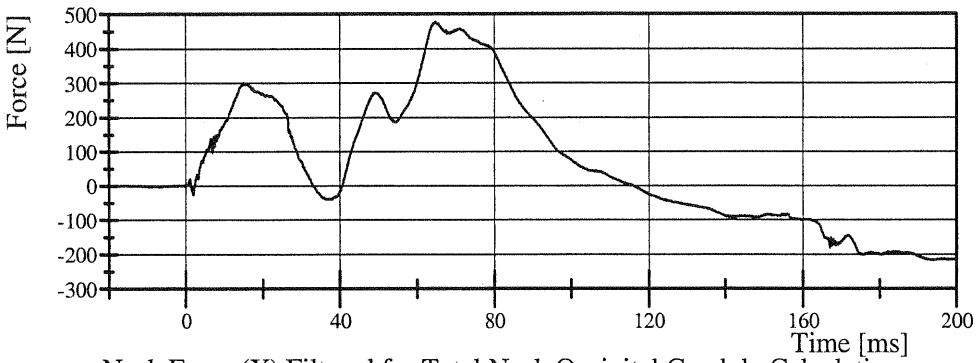
05.31.2007 14:40:33 636

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Transportation Research Center Inc.

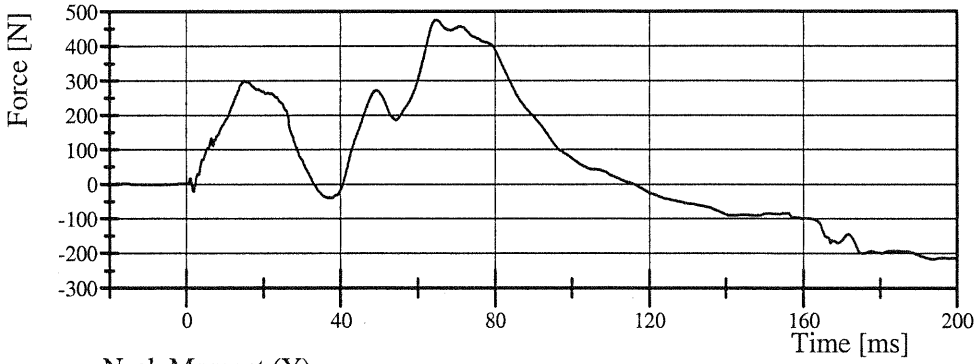
Neck Extension
HIII 50th Serial No. 855 Certification No. 4-1
Test Date: 5/31/2007

Neck Force (X)



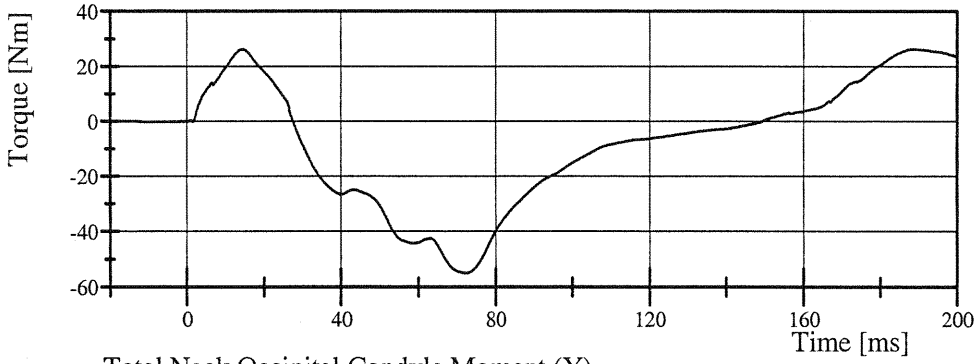
Filter Class: CFC_1000
Max: 476.6 N at 64.7 ms
Min: -216.7 N at 193.9 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



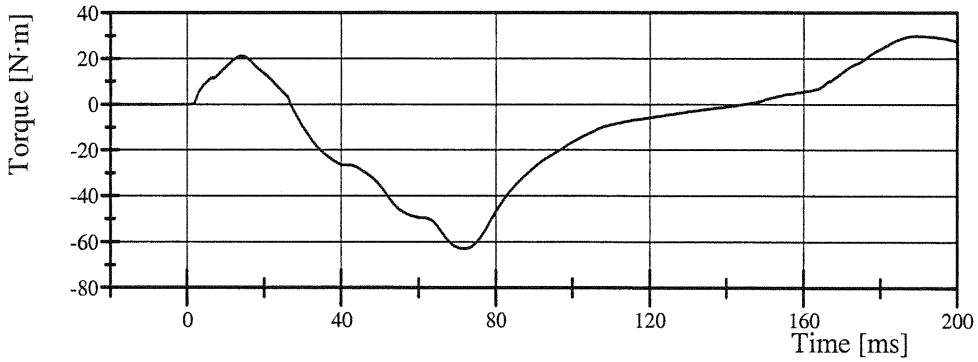
Filter Class: CFC_600
Max: 475.9 N at 64.8 ms
Min: -216.1 N at 193.8 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 26.3 Nm at 189.3 ms
Min: -54.9 Nm at 72.3 ms

Total Neck Occipital Condyle Moment (Y)



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

Specification Source: CFR49 Part 572 Subpart P
with Polarity in accordance with J211

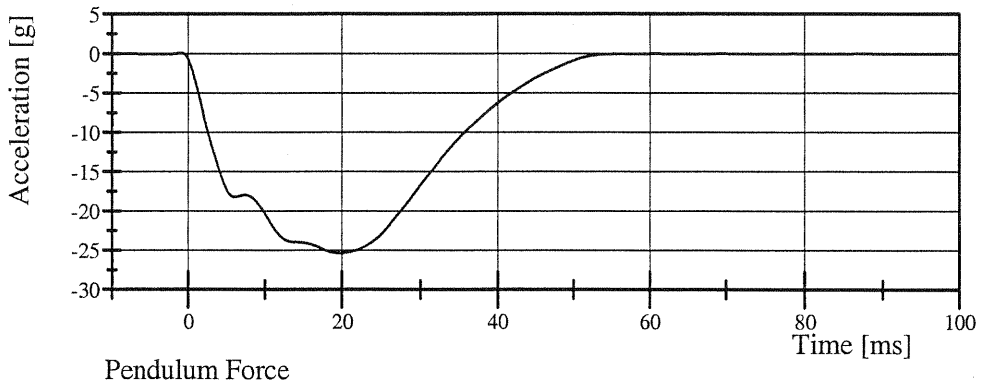
06.04.2007 10:33:50 407

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Transportation Research Center Inc.

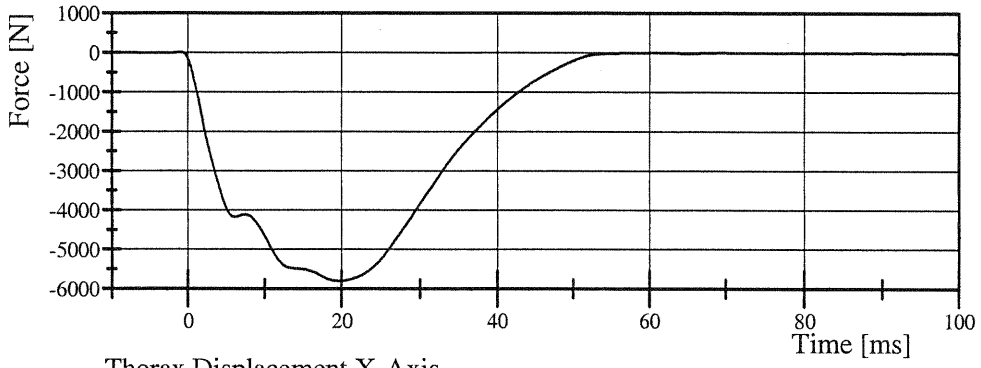
Front Thorax
HIII 50th Serial No. 855 Certification No. 4-2
Test Date: 6/4/2007

Pendulum Acceleration



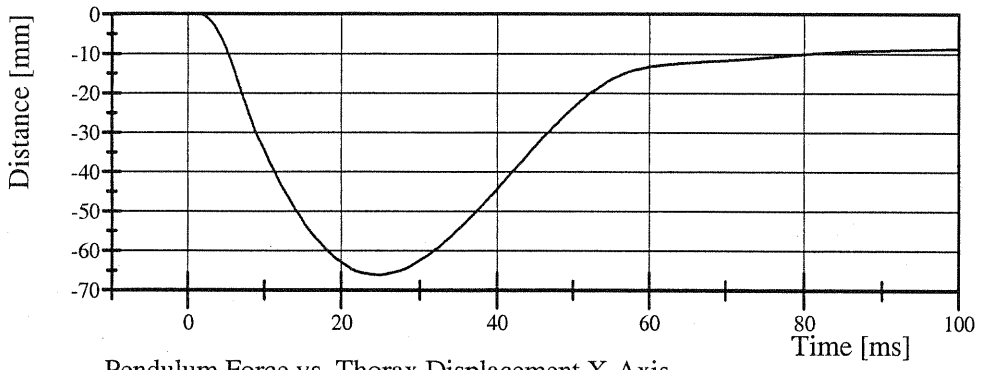
Filter Class: CFC_180
Max: 0.1 g at -1.0 ms
Min: -25.3 g at 19.7 ms

Pendulum Force



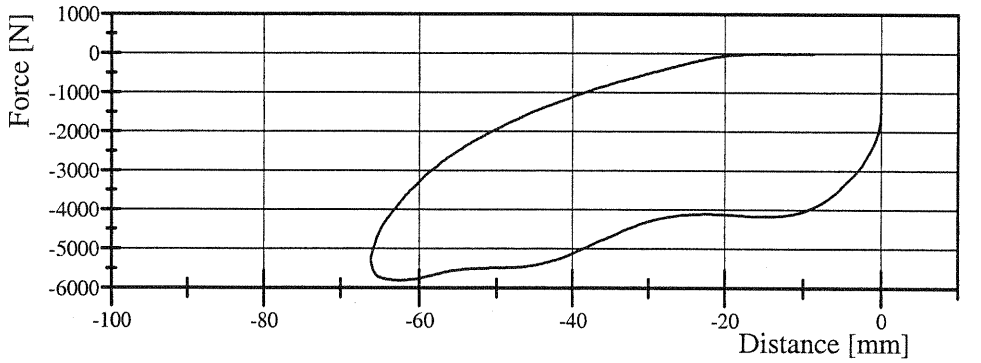
Filter Class: CFC_180
Max: 19.1 N at -1.0 ms
Min: -5,800.6 N at 19.7 ms

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

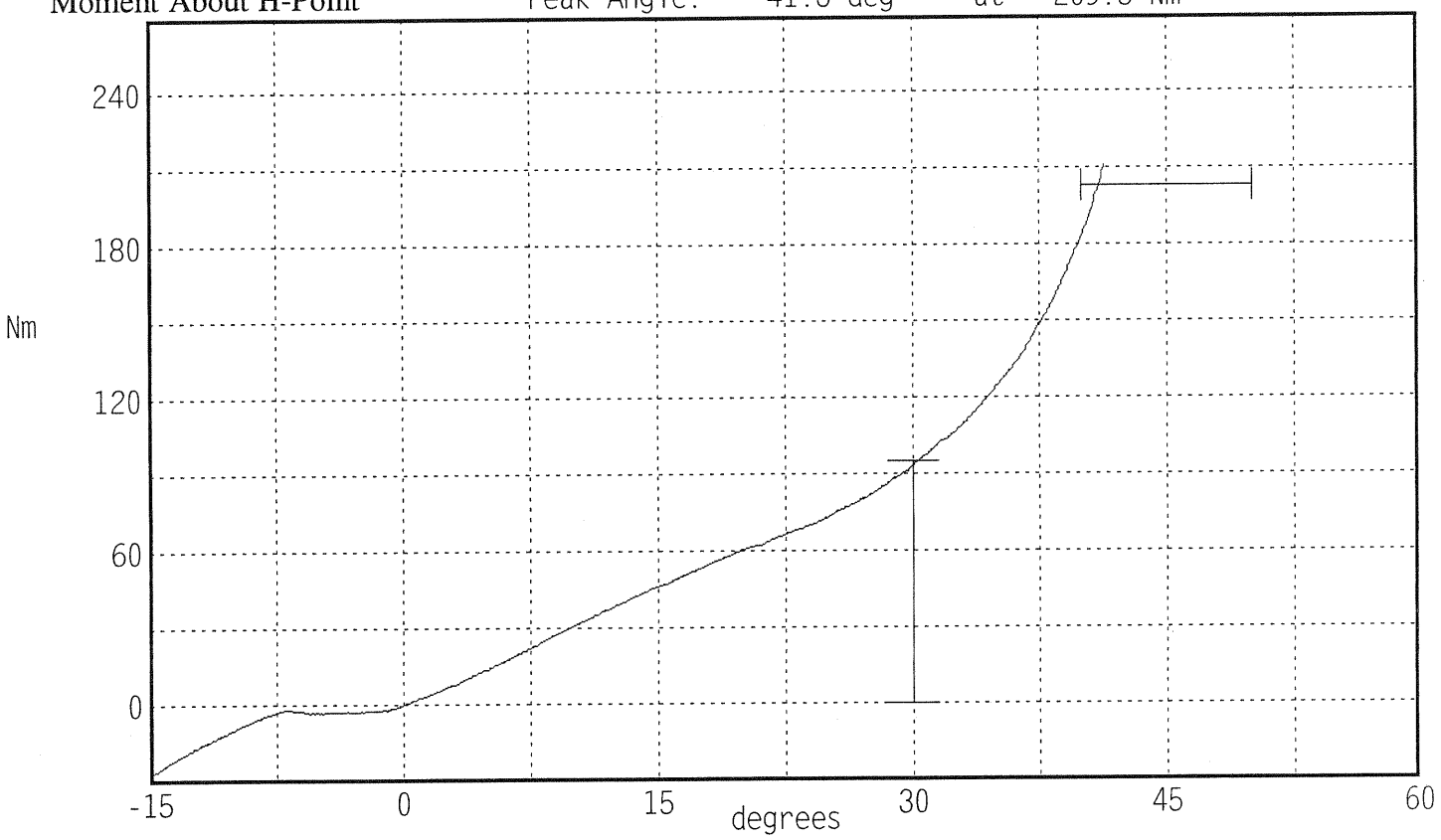
Serial Number: 885L
Test Number: 885C04
Comments:

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

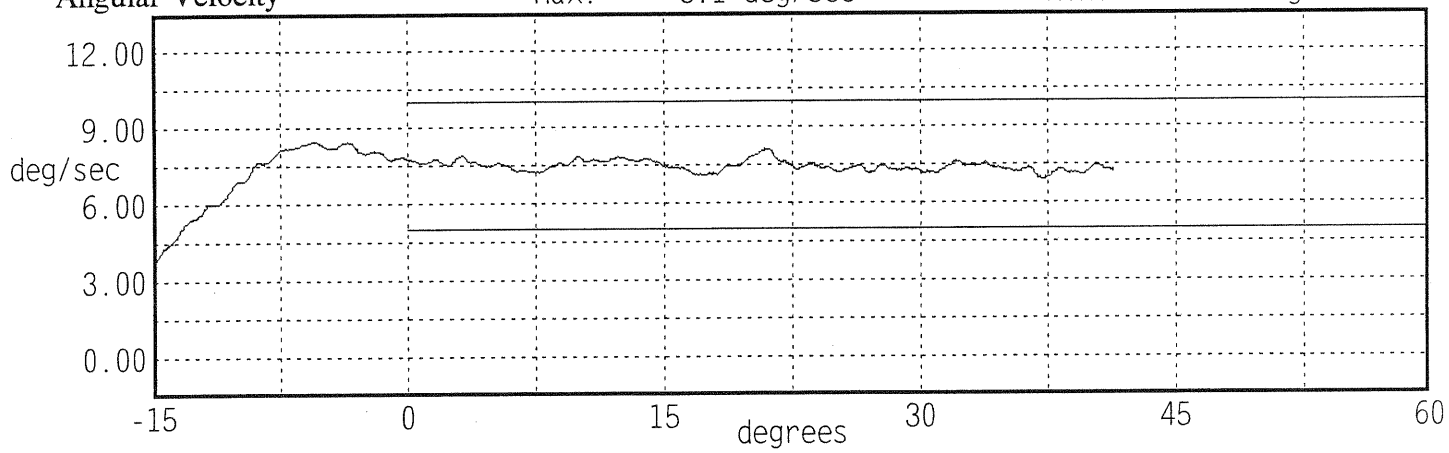
Moment About H-Point

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

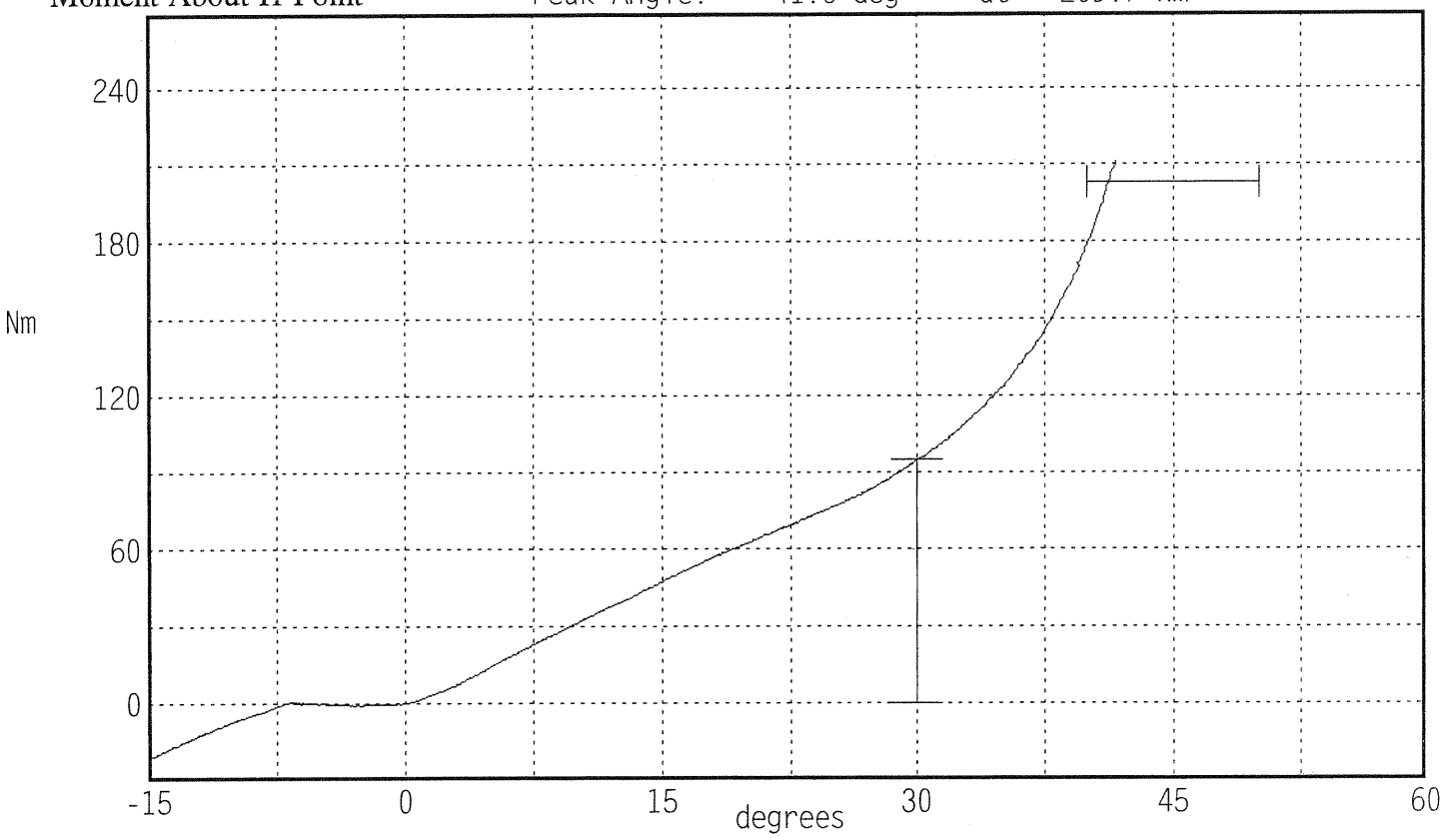
Serial Number: 885R
Test Number: 885C04
Comments:

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

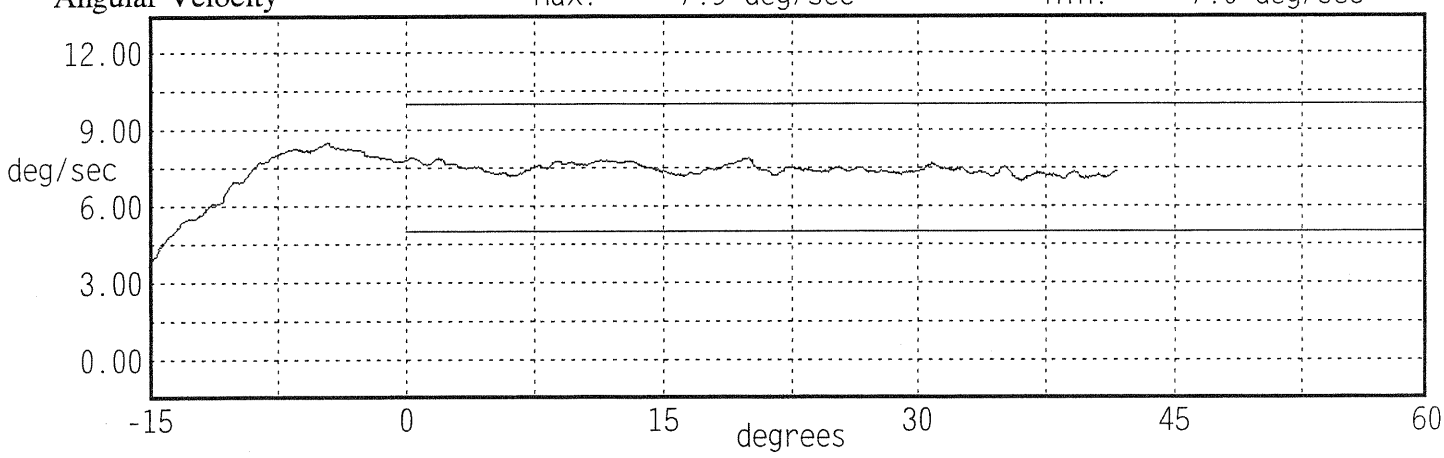
Moment About H-Point

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



Post-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Driver Dummy S/N: 855

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 855
Calibration No. 05

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	884	Yes
B	Shoulder Pivot Height	505.5 - 520.7	513	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	292	Yes
H	Skull Cap To Backline	40.6 - 45.7	45	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	335	Yes
J	Elbow Rest Height	190.5 - 210.8	199	Yes
K	Buttock Knee Length	579.1 - 604.5	601	Yes
L	Popliteal Height	429.3 - 454.7	440	Yes
M	Knee Pivot Height	485.1 - 500.4	490	Yes
N	Buttock Popliteal Length	452.1 - 477.5	474	Yes
O	Chest Depth	213.4 - 228.6	217	Yes
P	Foot Length	251.5 - 266.7	260	Yes
V	Shoulder Breadth	421.6 - 436.9	425	Yes
W	Foot Breadth	91.4 - 106.7	95	Yes
Y	Chest Circumference	970.3 - 1000.8	990	Yes
Z	Waist Circumference	835.7 - 866.1	861	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

Charles W. Daly

Approved

Ron Stoner

Revised 3/13/3003

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Transportation Research Center Inc.

Front Head Drop
HIII 50th Serial No. 855 Certification No. 5-2
Test Date: 6/26/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	270.7 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	4.6 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

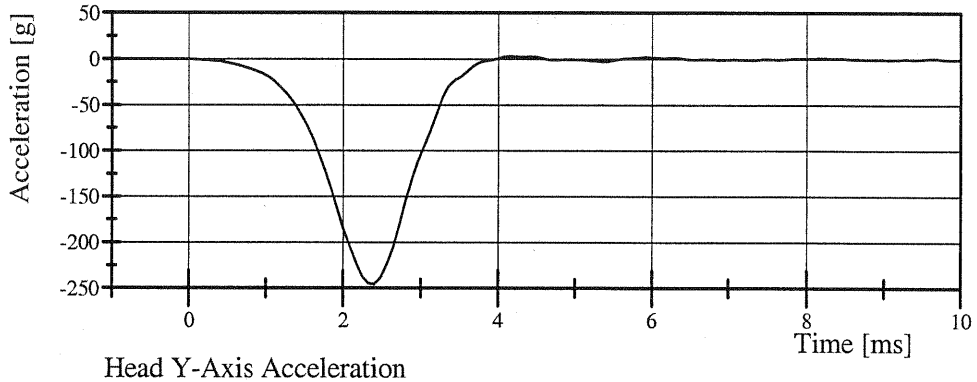
06.26.2007 12:24:12 609

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Transportation Research Center Inc.

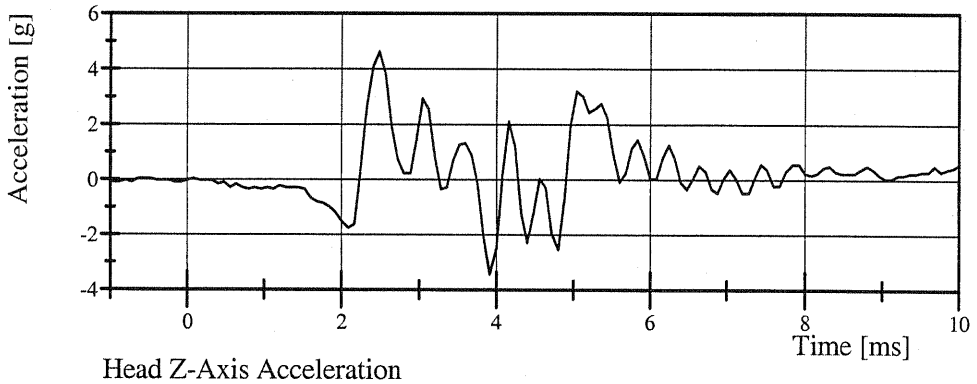
Front Head Drop
HIII 50th Serial No. 855 Certification No. 5-2
Test Date: 6/26/2007

Head X-Axis Acceleration



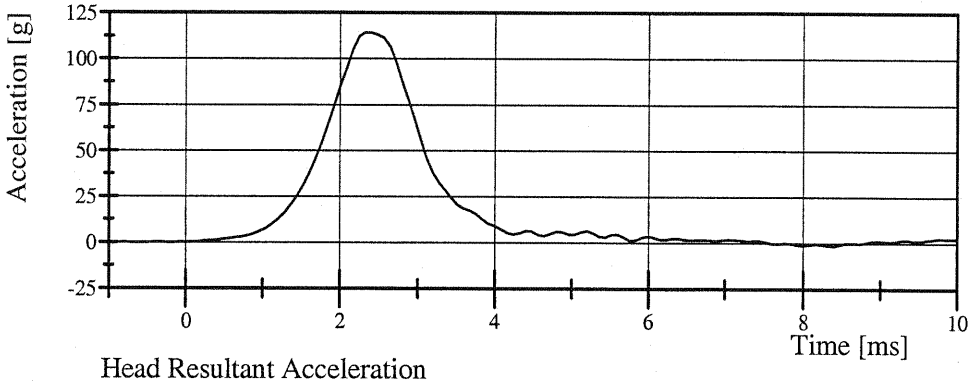
Filter Class: CFC_1000
Max: 3.3 g at 4.2 ms
Min: -245.4 g at 2.4 ms

Head Y-Axis Acceleration



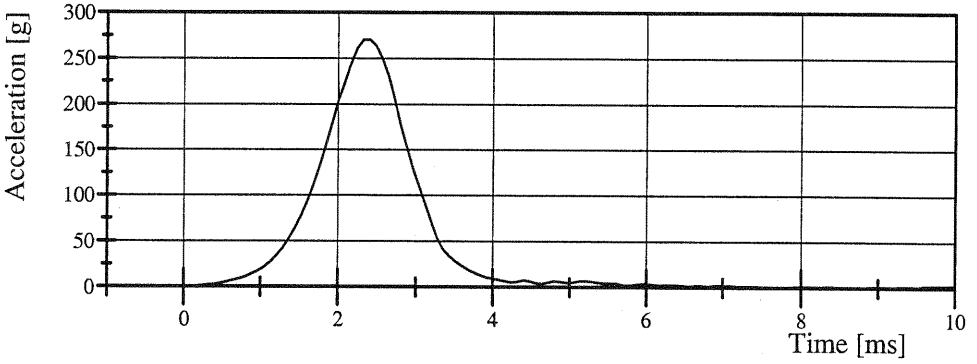
Filter Class: CFC_1000
Max: 4.6 g at 2.5 ms
Min: -3.4 g at 3.9 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 114.4 g at 2.3 ms
Min: -1.4 g at 8.4 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 270.7 g at 2.4 ms
Min: 0.1 g at -0.2 ms

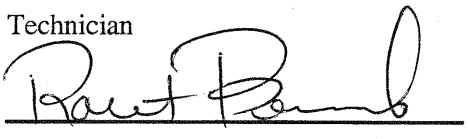
Transportation Research Center Inc.

Neck Flexion
HIII 50th Serial No. 855 Certification No. 5-1
Test Date: 6/26/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	60 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.956 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	38.6 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-24.90 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-21.22 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-14.46 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-14.46 g	Yes
Total Head D-Plane Rotation Peak	(-64) - (-78) °	-68.1 °	Yes
Total Head D-Plane Rotation Time of Peak	57 - 64 ms	59.1 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	119.1 ms	Yes
Total Neck Occipital Condyles Moment Peak	88 - 108 N·m	95.7 N·m	Yes
Total Neck Occipital Condyles Moment Time of Peak	47 - 58 ms	51.8 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	98.1 ms	Yes

Test meets specifications.

Comments:

Technician 

Approved 

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

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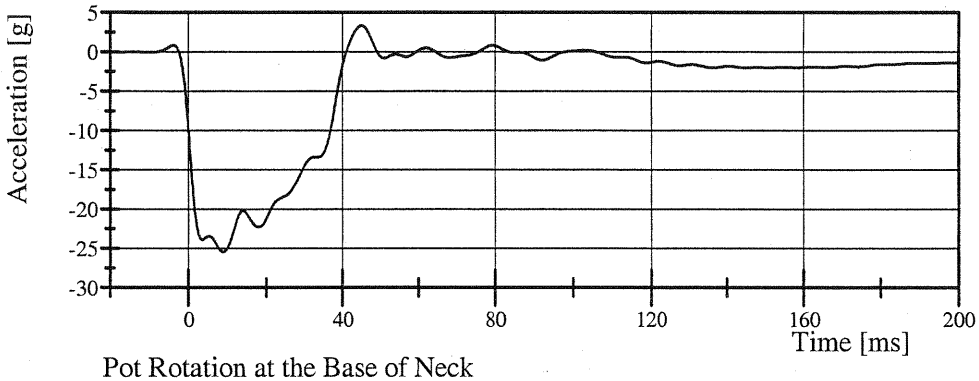
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 855 Certification No. 5-1

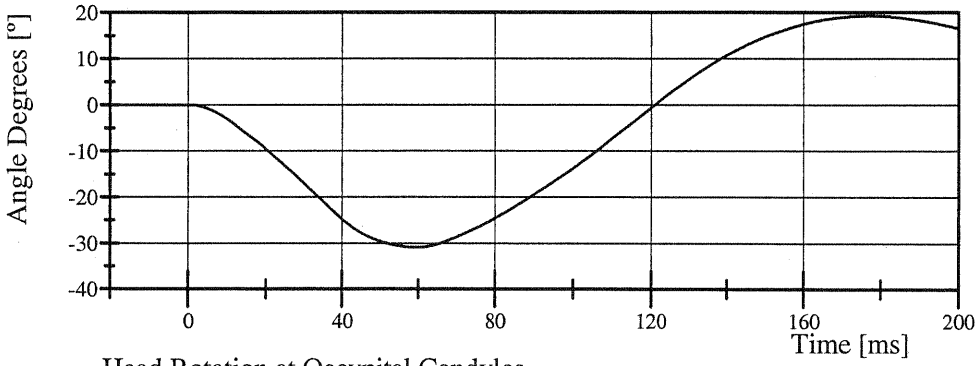
Test Date: 6/26/2007

Pendulum Acceleration



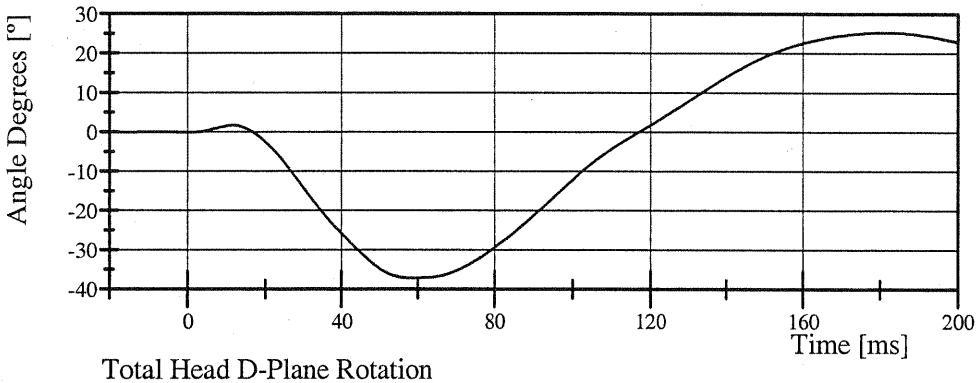
Filter Class: CFC_60
Max: 3.4 g at 45.0 ms
Min: -25.4 g at 8.9 ms

Pot Rotation at the Base of Neck



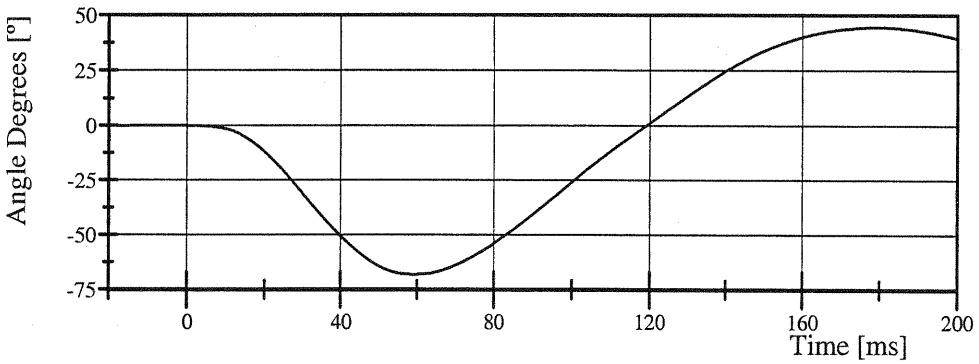
Filter Class: CFC_60
Max: 19.2 ° at 177.3 ms
Min: -30.9 ° at 59.4 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 25.4 ° at 181.2 ms
Min: -37.2 ° at 58.9 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 44.6 ° at 179.0 ms
Min: -68.1 ° at 59.1 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

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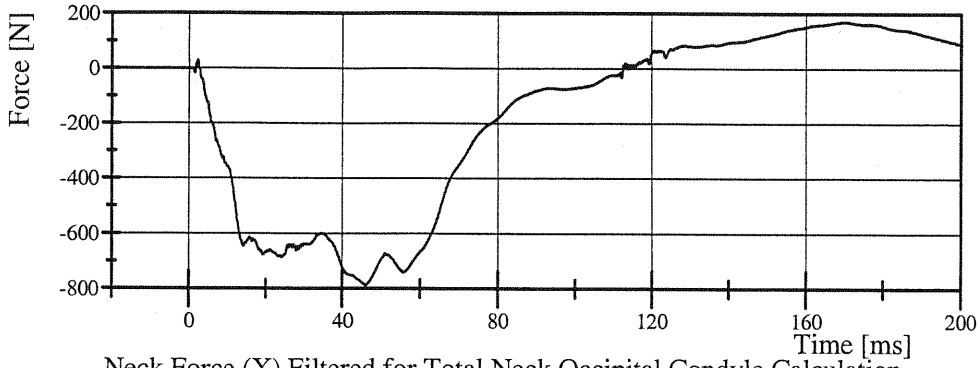
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 855 Certification No. 5-1

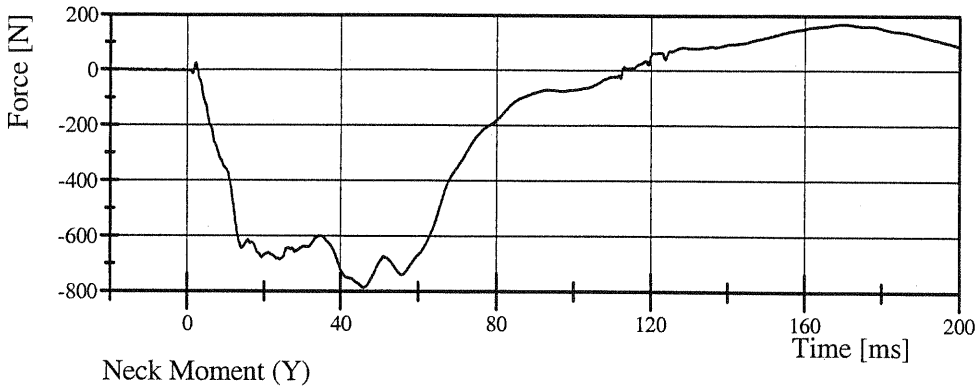
Test Date: 6/26/2007

Neck Force (X)



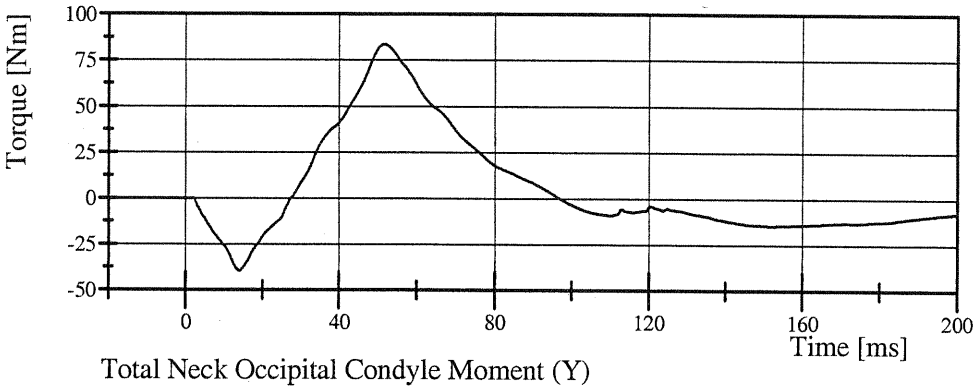
Filter Class: CFC_1000
Max: 171.6 N at 169.3 ms
Min: -786.1 N at 45.9 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



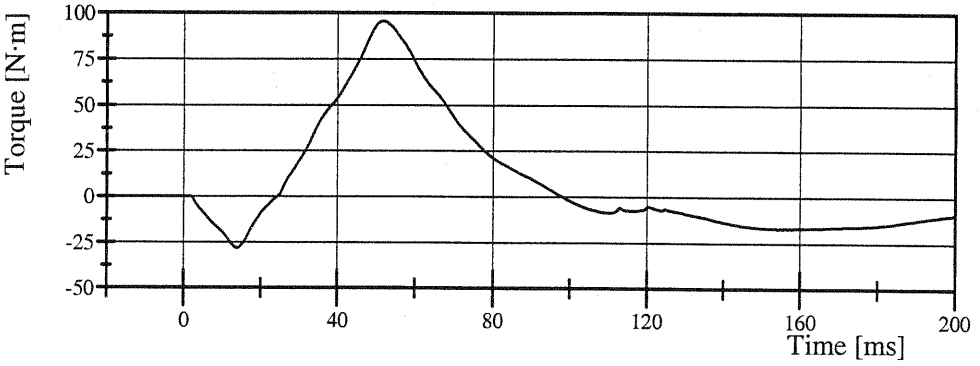
Filter Class: CFC_600
Max: 171.4 N at 170.2 ms
Min: -785.9 N at 45.9 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 83.7 Nm at 51.7 ms
Min: -39.4 Nm at 13.9 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 95.7 N·m at 51.8 ms
Min: -28.1 N·m at 13.8 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

06.26.2007 10:24:24 551

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Transportation Research Center Inc.

Neck Extension
HIII 50th Serial No. 855 Certification No. 5-1
Test Date: 6/26/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	57 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.988 m/s	Yes
Pendulum Acceleration Decay Crossing 5g	38 - 46 ms	41.3 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	18.77 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	16.40 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	14.35 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	14.35 g	Yes
Total Head D-Plane Rotation			
Peak	81 - 106 °	91.3 °	Yes
Time of Peak	72 - 82 ms	78.3 ms	Yes
Total Head D-Plane Rotation Decay to 0°	147 - 174 ms	161.7 ms	Yes
Total Neck Occipital Condyles Moment			
Peak	(-53) - (-80) N·m	-64.5 N·m	Yes
Time of Peak	65 - 79 ms	72.2 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	120 - 148 ms	143.0 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart E with Polarity in accordance with J211

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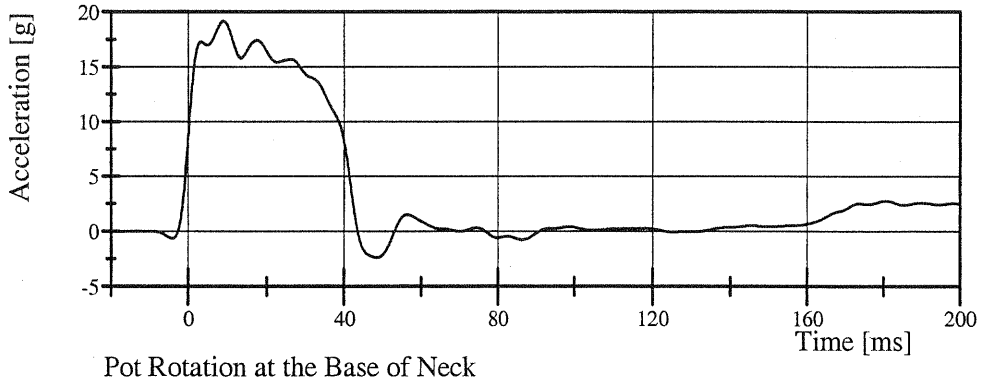
Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 855 Certification No. 5-1

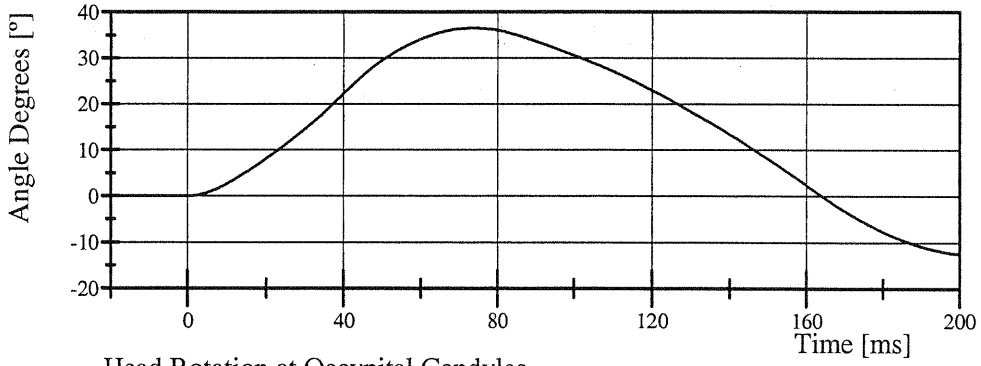
Test Date: 6/26/2007

Pendulum Acceleration



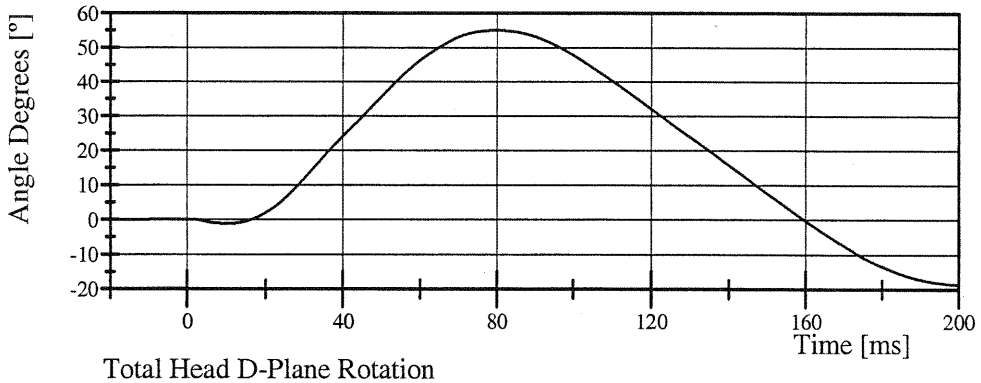
Filter Class: CFC_60
Max: 19.2 g at 8.9 ms
Min: -2.4 g at 48.5 ms

Pot Rotation at the Base of Neck



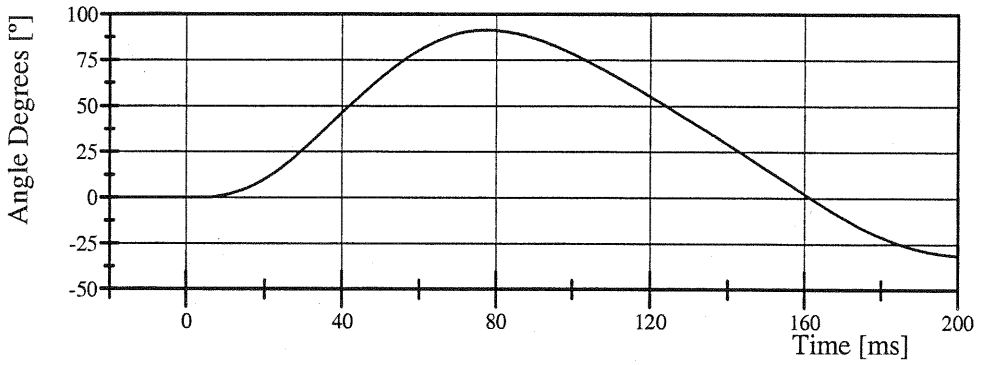
Filter Class: CFC_60
Max: 36.5 ° at 73.8 ms
Min: -12.5 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 55.1 ° at 80.0 ms
Min: -18.6 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 91.3 ° at 78.3 ms
Min: -31.0 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart E
with Polarity in accordance with J211

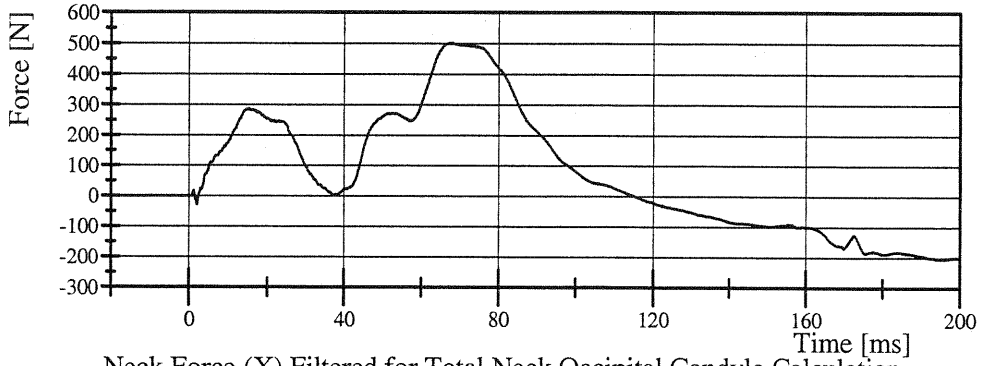
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Transportation Research Center Inc.

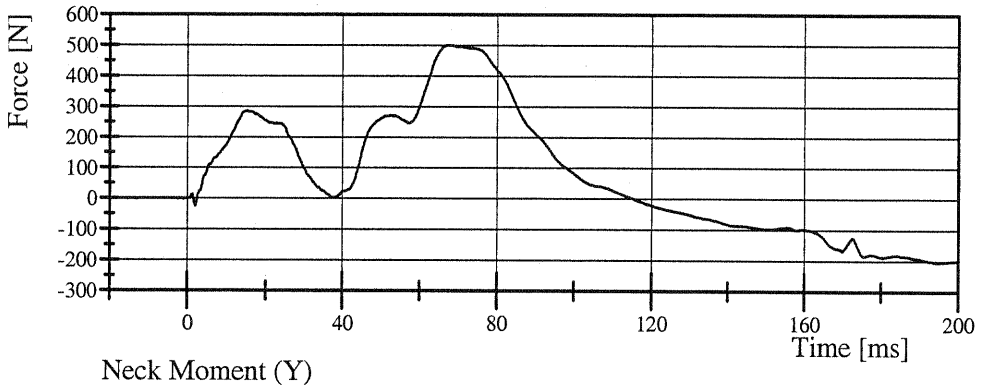
Neck Extension
HIII 50th Serial No. 855 Certification No. 5-1
Test Date: 6/26/2007

Neck Force (X)



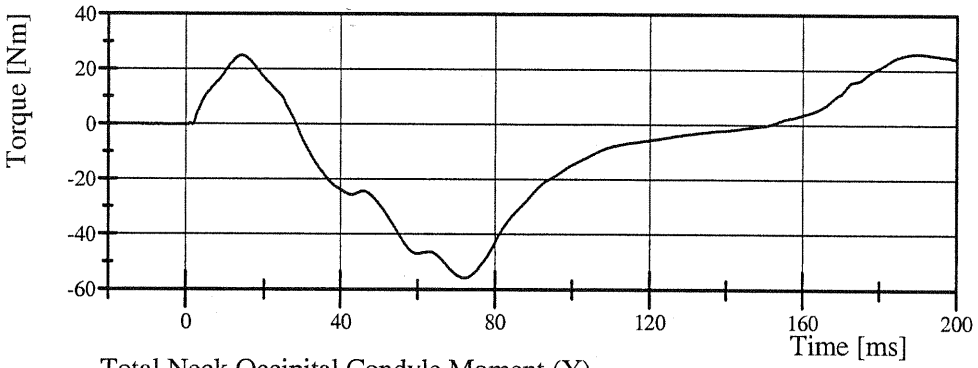
Filter Class: CFC_1000
Max: 501.1 N at 67.4 ms
Min: -205.0 N at 195.9 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



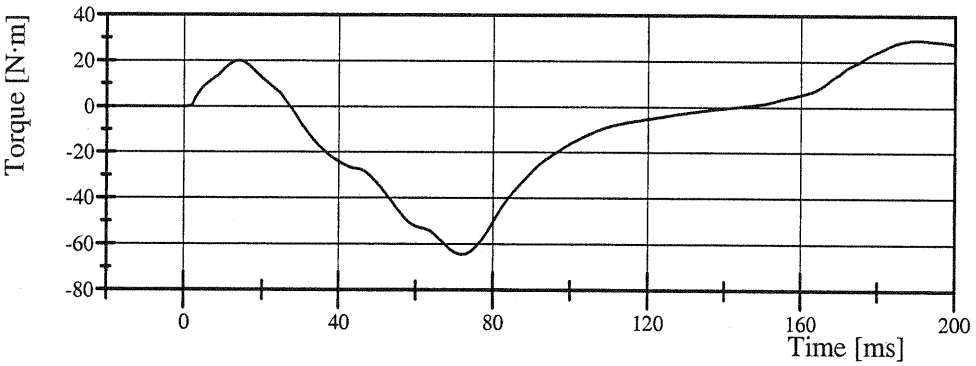
Filter Class: CFC_600
Max: 501.0 N at 67.4 ms
Min: -204.7 N at 195.9 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 26.0 Nm at 189.7 ms
Min: -55.8 Nm at 72.3 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 29.4 N·m at 190.4 ms
Min: -64.5 N·m at 72.2 ms

Transportation Research Center Inc.

Front Thorax
HIII 50th Serial No. 855 Certification No. 5-2
Test Date: 6/27/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	55 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.695 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,746.5 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-65.71 mm	Yes
Internal Hysteresis	65 - 85 %	75.5 %	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart P
with Polarity in accordance with J211

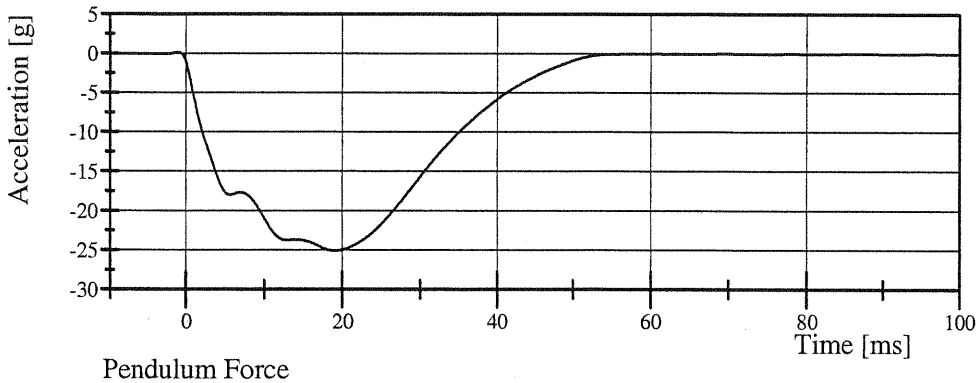
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Transportation Research Center Inc.

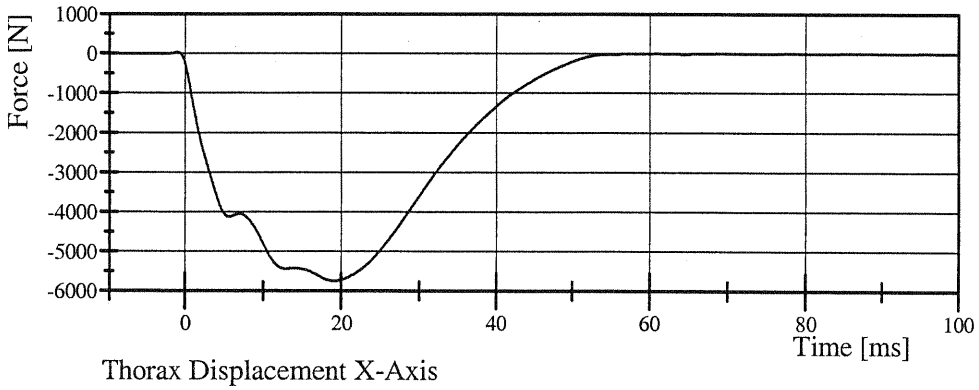
Front Thorax
HIII 50th Serial No. 855 Certification No. 5-2
Test Date: 6/27/2007

Pendulum Acceleration



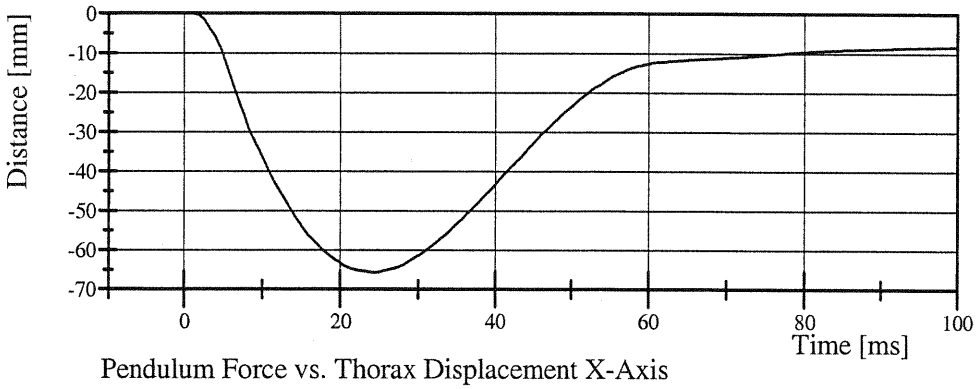
Filter Class: CFC_180
Max: 0.1 g at -1.0 ms
Min: -25.1 g at 19.0 ms

Pendulum Force



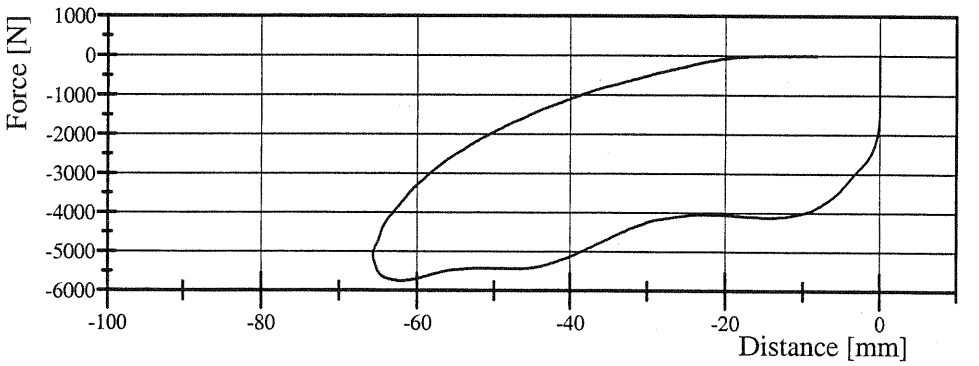
Filter Class: CFC_180
Max: 31.6 N at -1.0 ms
Min: -5,746.5 N at 19.0 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -8.7 ms
Min: -65.7 mm at 24.5 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 31.6 N at 0.0 mm
Min: -5,746.5 N at -62.1 mm

Specification Source: CFR49 Part 572 Subpart P
with Polarity in accordance with J211

06.27.2007 11:26:08 409

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Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

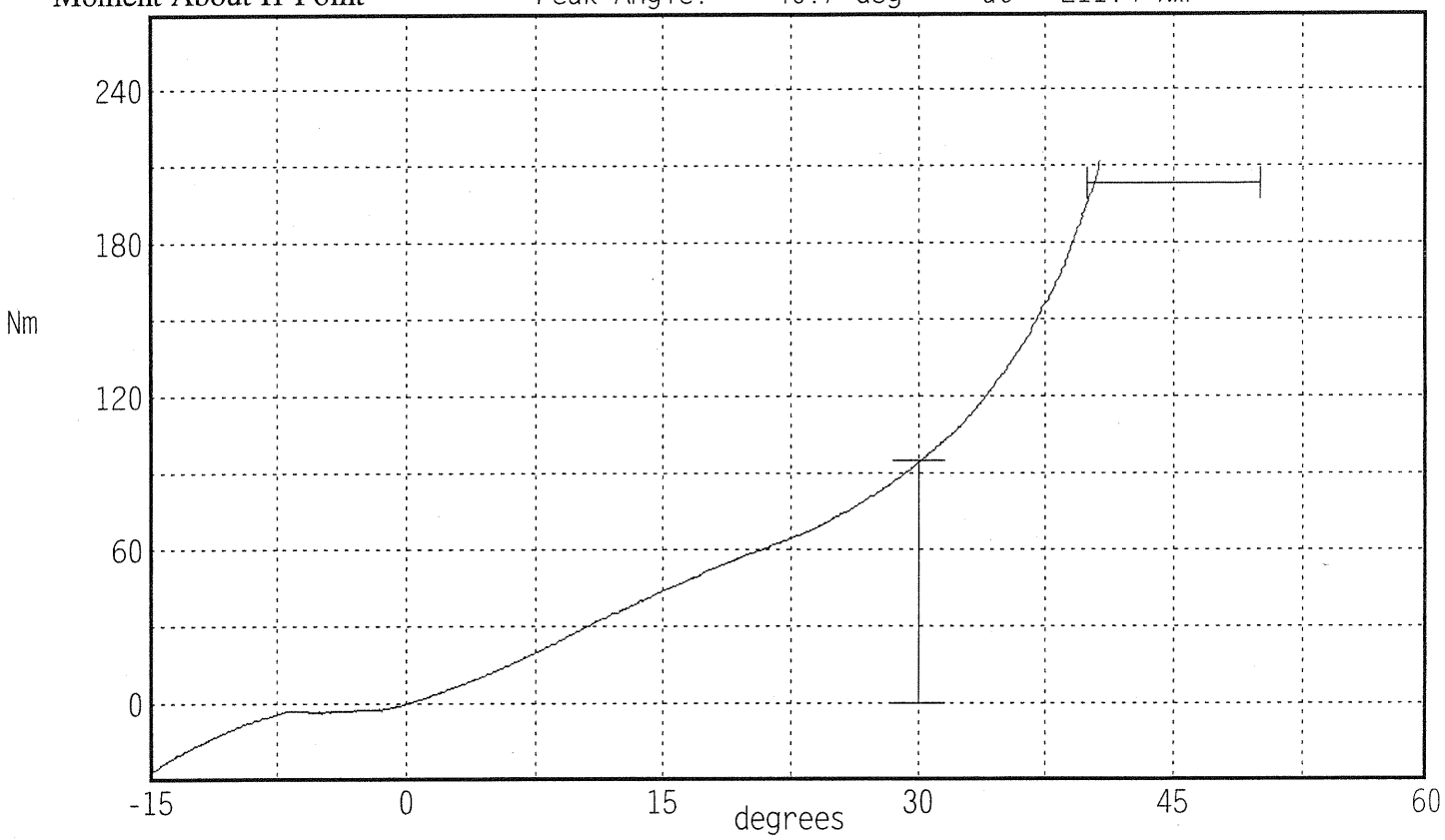
Serial Number: 855L
Test Number: 855C05
Comments:

Date: 06/26/2007
Time: 13:10

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.2	°C	Pass
Humidity	10 - 70	55	%	Pass
Moment at 30 deg	<= 94.9	94.5	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	40.5	deg	Pass
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

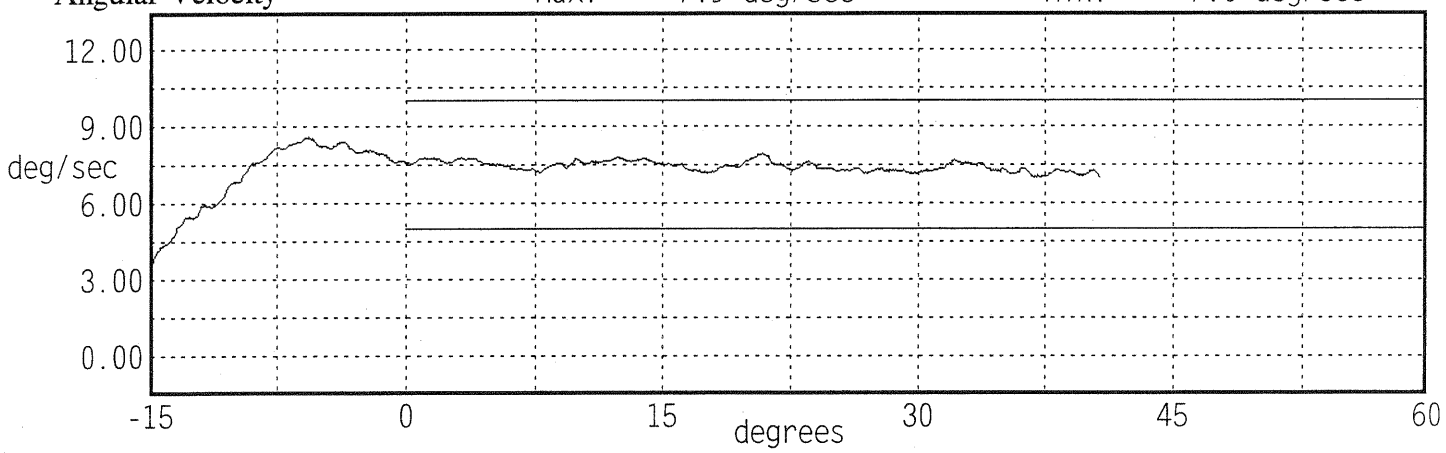
Moment About H-Point

Peak Moment: 211.4 Nm at 40.7 deg
Peak Angle: 40.7 deg at 211.4 Nm



Angular Velocity

Max: 7.9 deg/sec Min: 7.0 deg/sec



Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

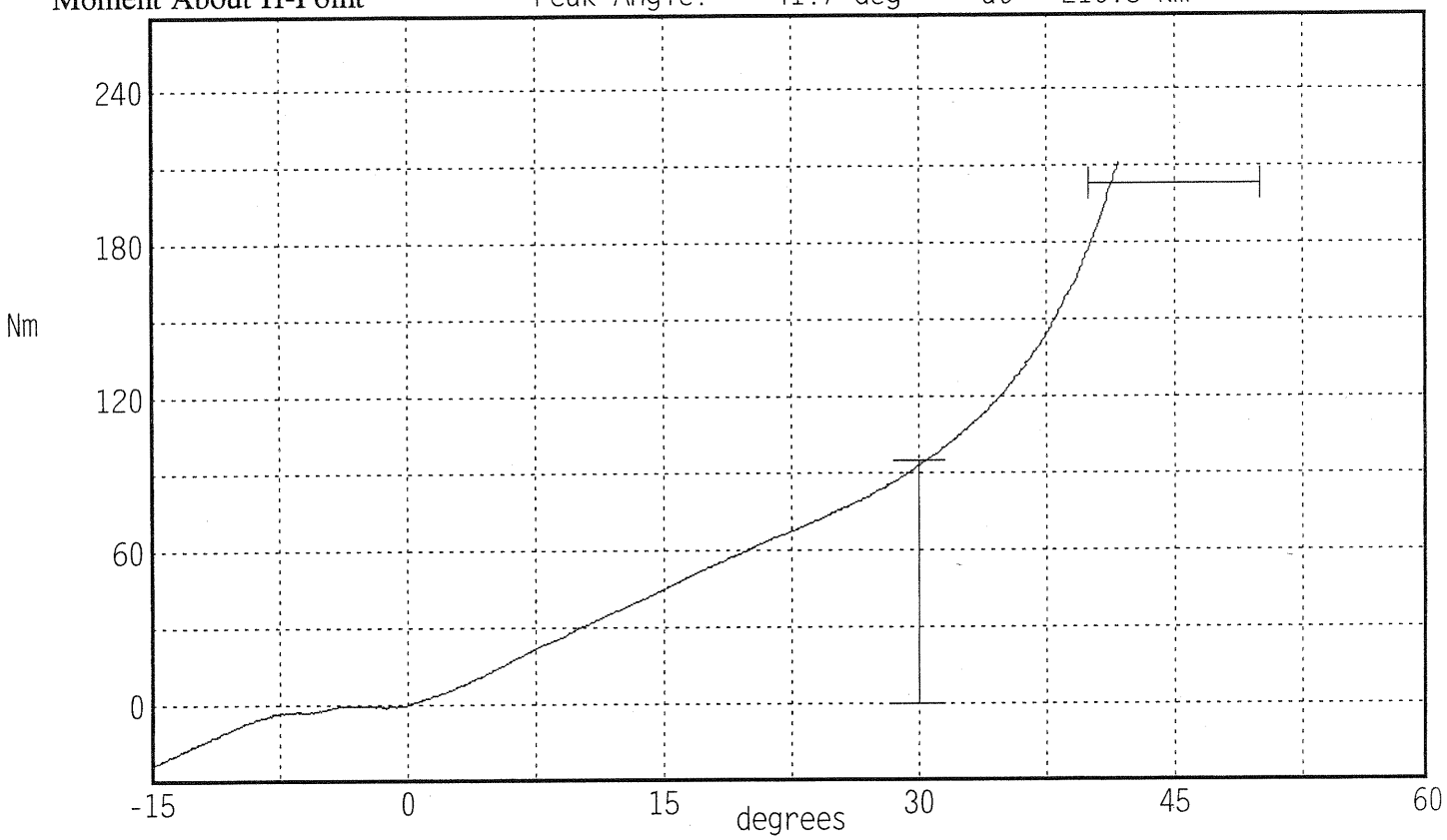
Serial Number: 855R
Test Number: 855C05
Comments:

Date: 06/26/2007
Time: 13:33

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.2	°C	Pass
Humidity	10 - 70	55	%	Pass
Moment at 30 deg	<= 94.9	93.1	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	41.4	deg	Pass
Average Velocity	5.0 - 10.0	7.4	deg/sec	Pass

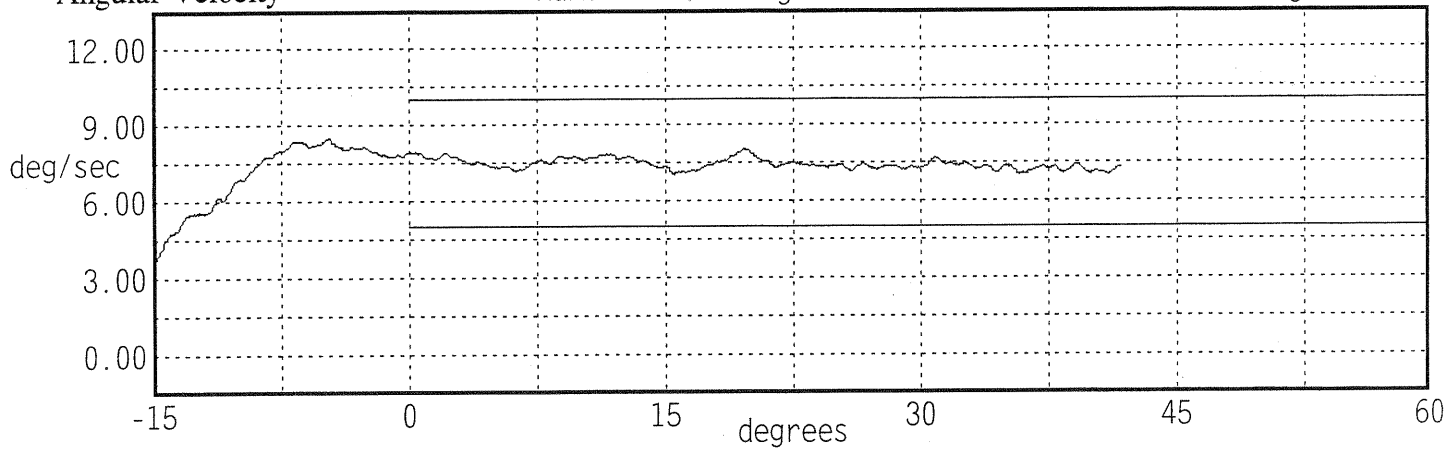
Moment About H-Point

Peak Moment: 210.8 Nm at 41.7 deg
Peak Angle: 41.7 deg at 210.8 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: 324

Transportation Research Center Inc.
572O 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

Charles W. Bell

Approved

Ron Stover

TRC

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

Approved

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

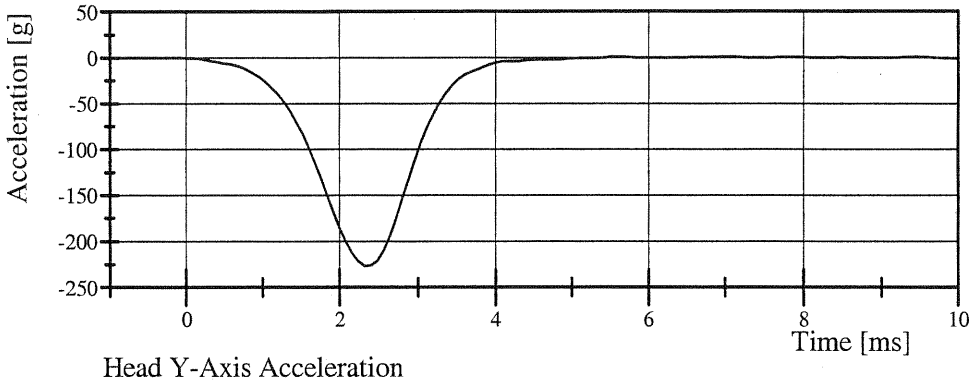
05.30.2007 09:22:29 235

070620

Transportation Research Center Inc.

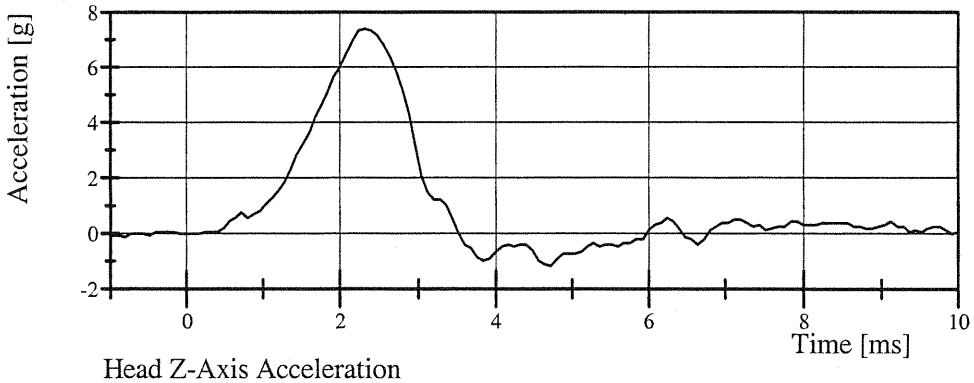
Front Head Drop
HIII 5th Serial No. 324 Certification No. 6-1
Test Date: 5/30/2007

Head X-Axis Acceleration



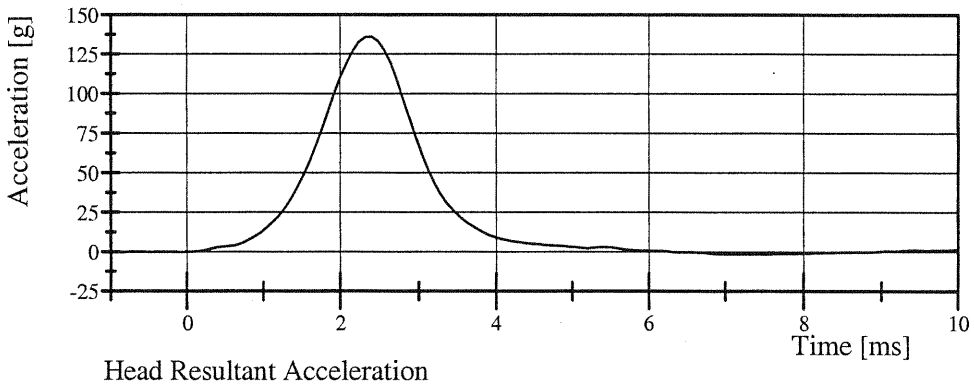
Filter Class: CFC_1000
Max: 1.0 g at 5.6 ms
Min: -226.5 g at 2.3 ms

Head Y-Axis Acceleration



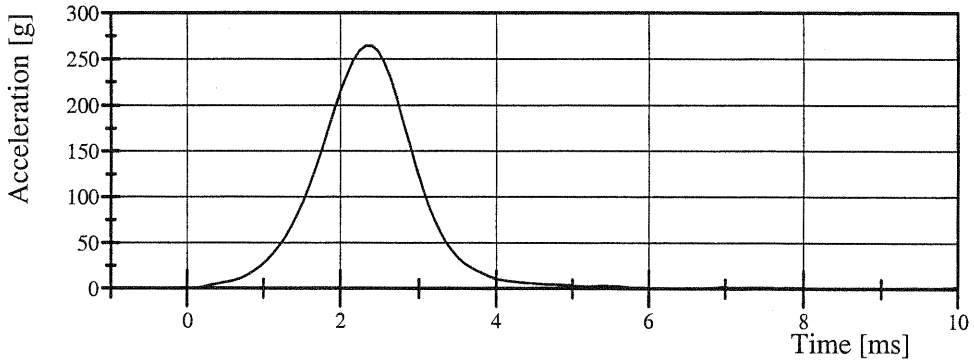
Filter Class: CFC_1000
Max: 7.4 g at 2.3 ms
Min: -1.2 g at 4.7 ms

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

05.30.2007 09:22:35 235

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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

Approved

Specification Source: CFR49 Part 572 Subpart O with Polarity in accordance with J211

06.01.2007 14:41:35 540

070620

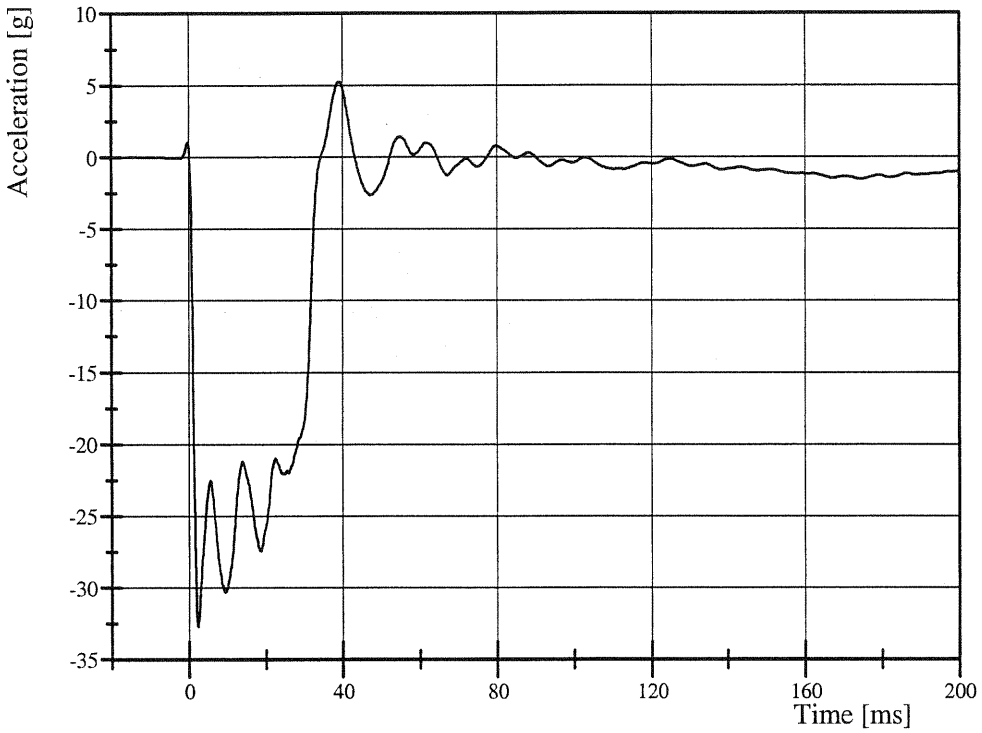
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

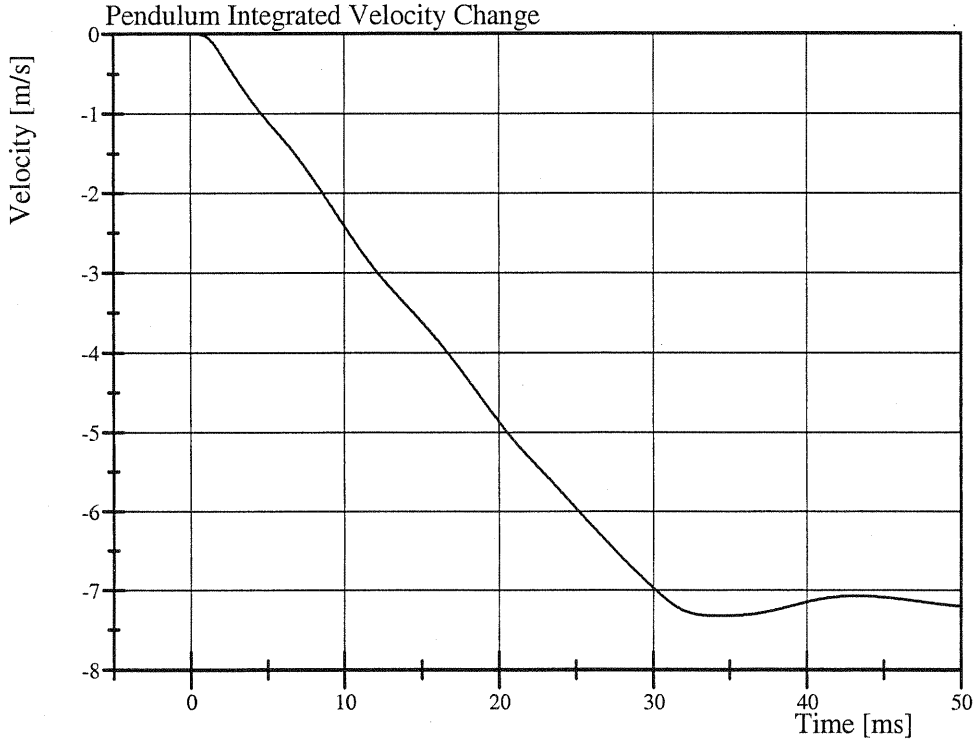
Test Date: 6/1/2007

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.01.2007 14:41:51 540

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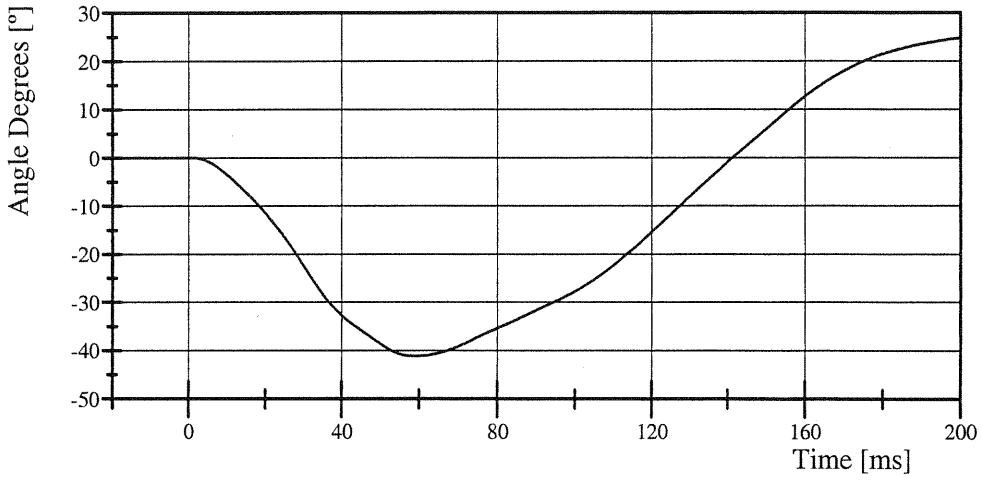
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

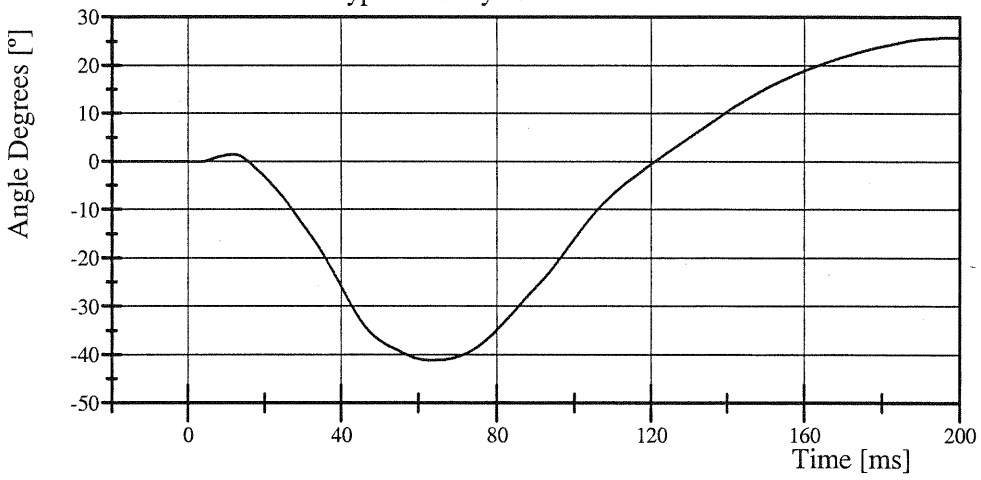
Test Date: 6/1/2007

Pot Rotation at the Base of Neck



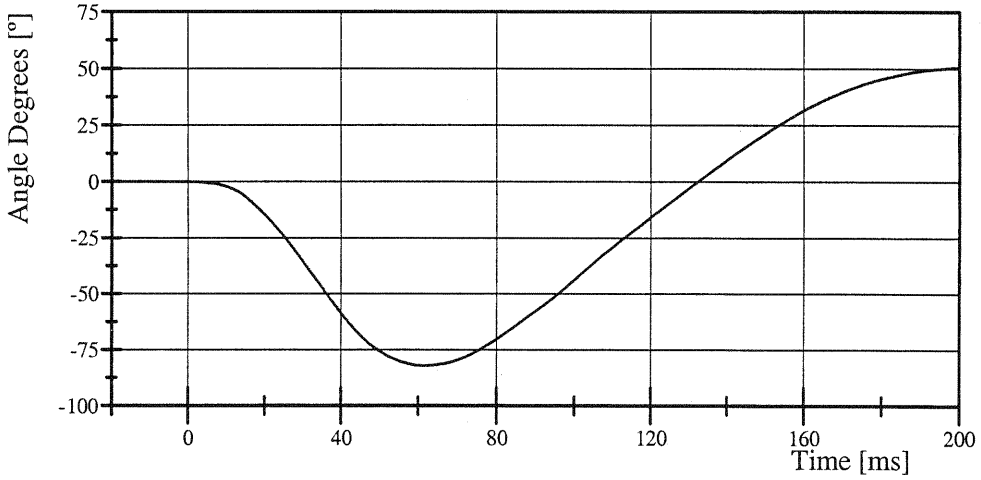
Filter Class: CFC_60
Max: 24.8 ° at 200.0 ms
Min: -41.1 ° at 59.2 ms

Head Rotation at Occypital 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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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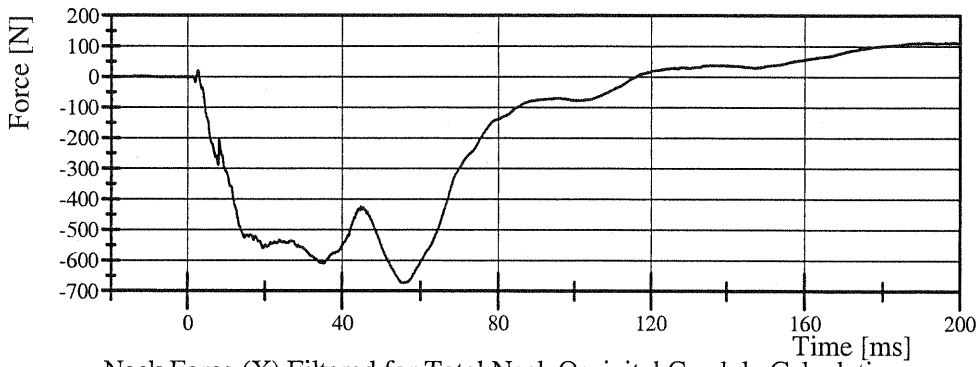
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 6-12

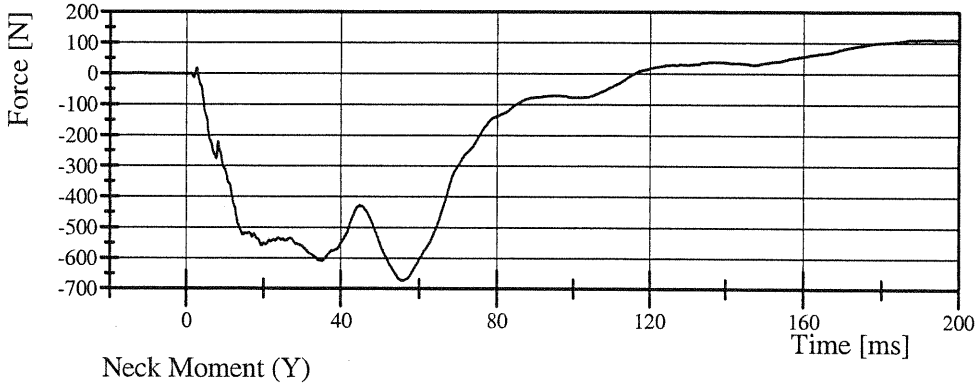
Test Date: 6/1/2007

Neck Force (X)



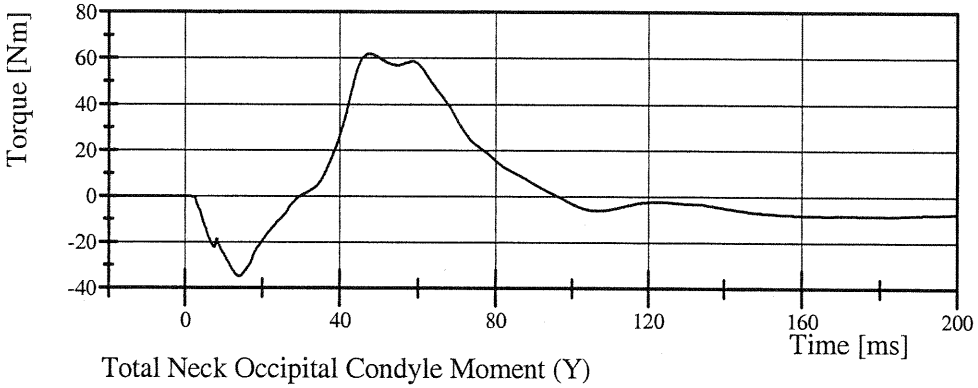
Filter Class: CFC_1000
Max: 112.0 N at 191.9 ms
Min: -673.7 N at 55.8 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



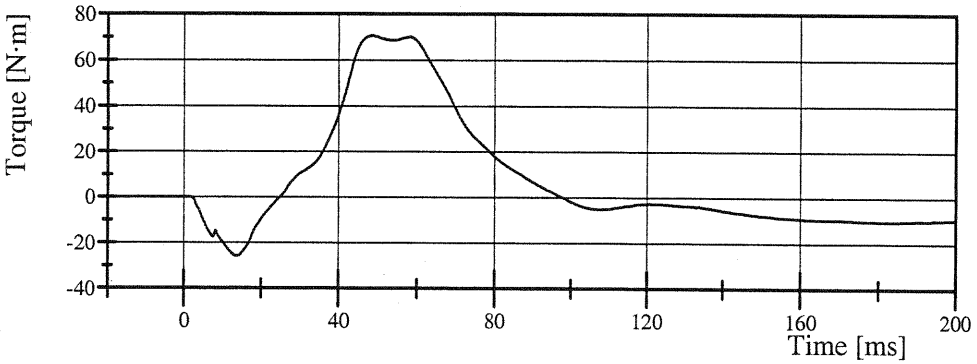
Filter Class: CFC_600
Max: 111.7 N at 191.9 ms
Min: -673.5 N at 55.8 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 61.9 Nm at 47.7 ms
Min: -34.8 Nm at 14.2 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 70.6 N·m at 48.6 ms
Min: -25.9 N·m at 13.7 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.01.2007 14:41:52 540

070620

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.04.2007 10:17:20 642

070620

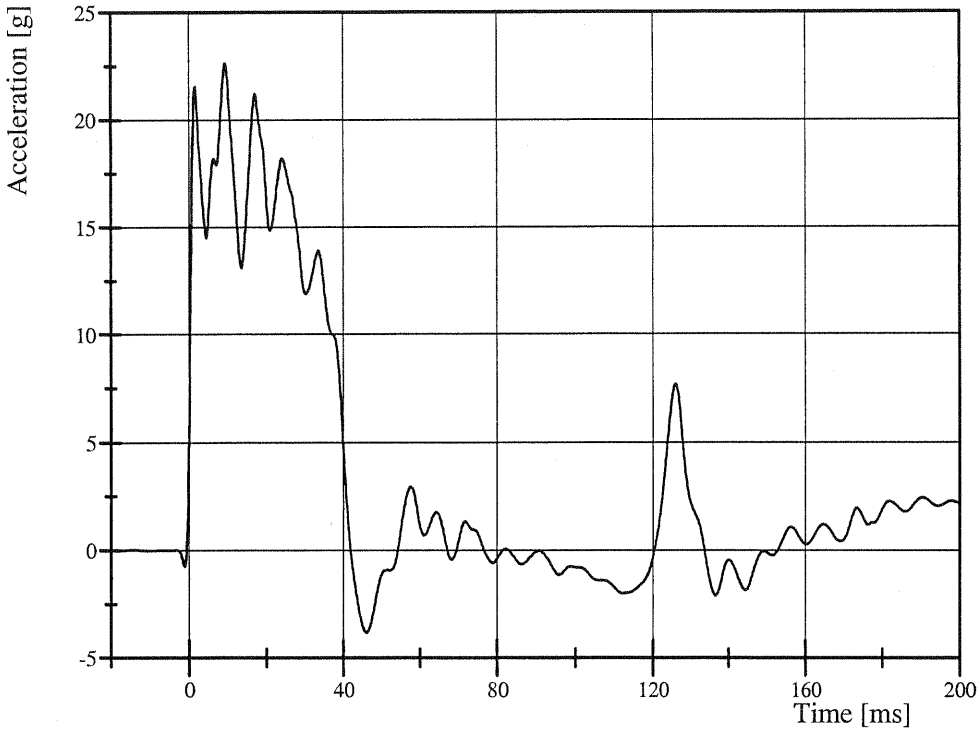
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

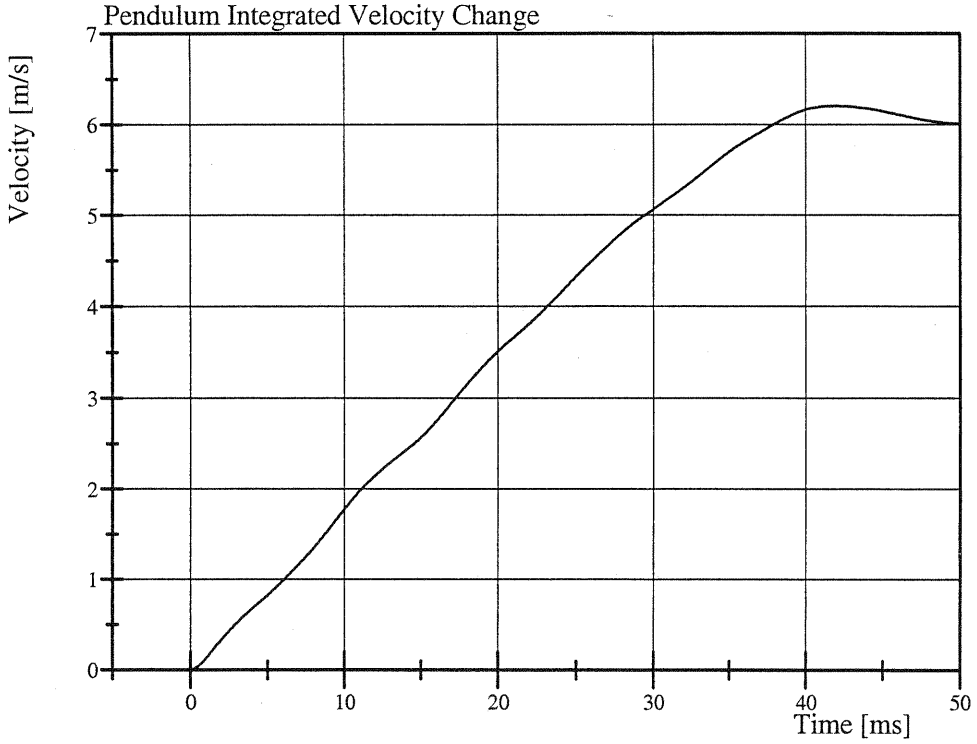
Test Date: 6/4/2007

Pendulum Acceleration



Filter Class: CFC_180
Max: 22.6 g at 9.3 ms
Min: -3.8 g at 46.2 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 6.2 m/s at 42.0 ms
Min: 0.0 m/s at 0.0 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.04.2007 10:17:31 642

070620

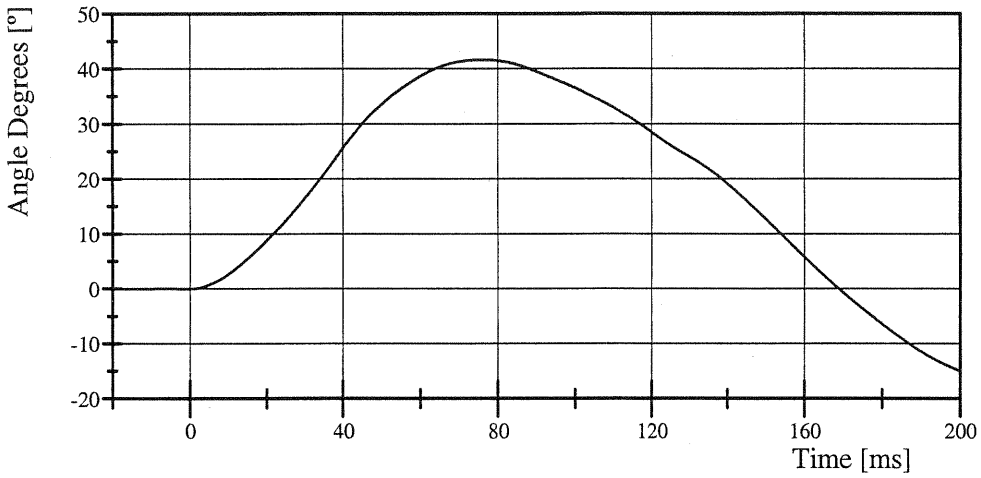
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

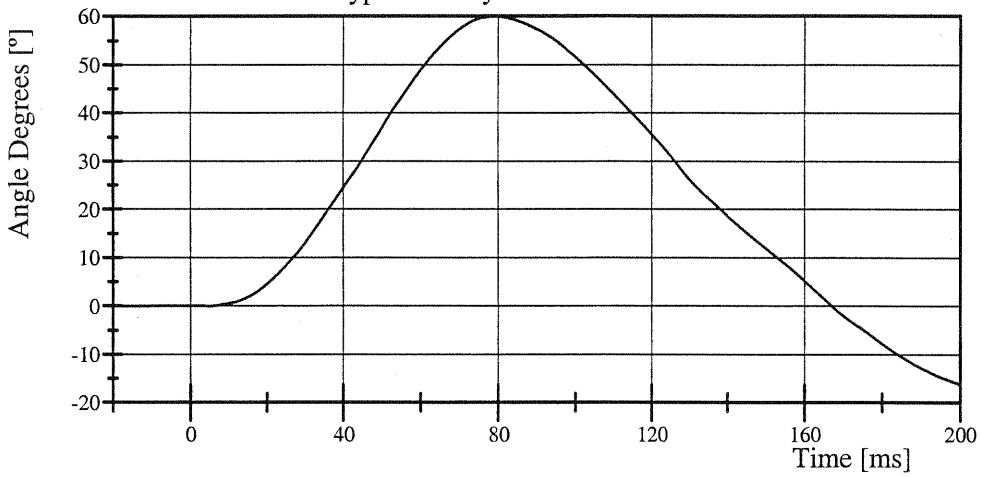
Test Date: 6/4/2007

Pot Rotation at the Base of Neck



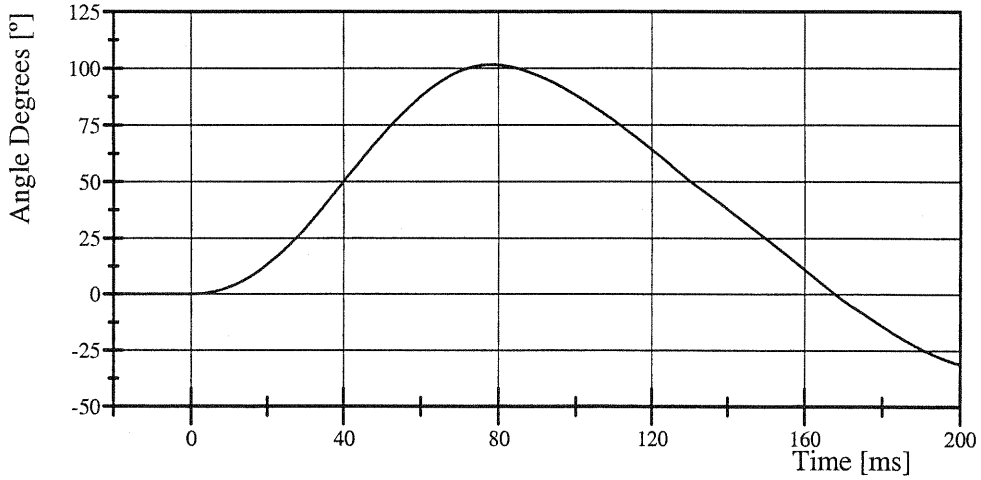
Filter Class: CFC_60
Max: 41.6 ° at 76.1 ms
Min: -15.0 ° at 200.0 ms

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.04.2007 10:17:31 642

070620

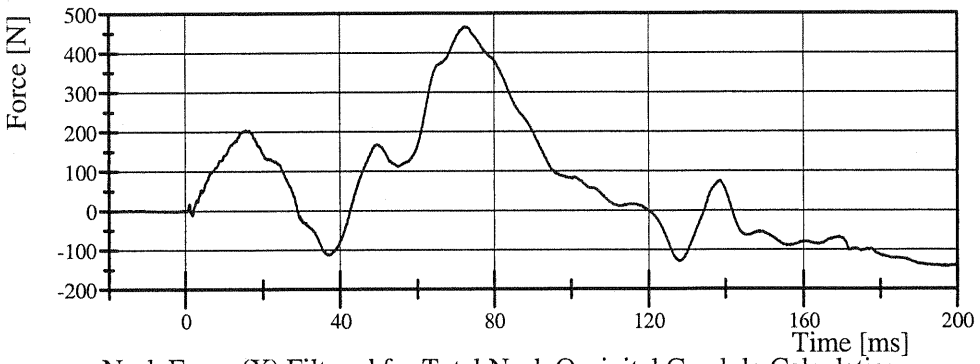
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 6-6

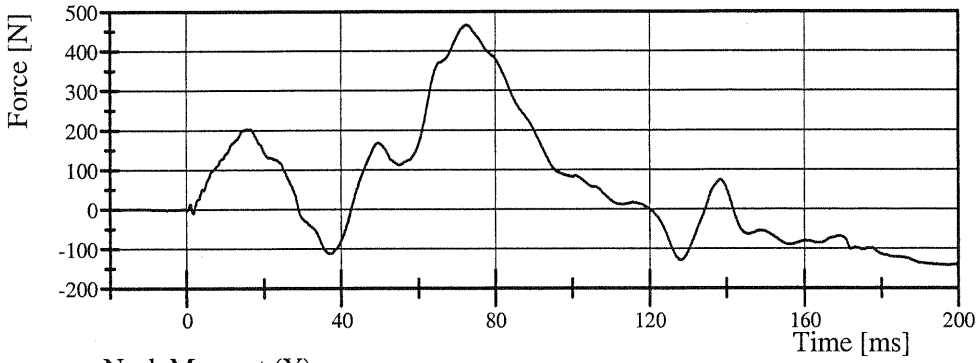
Test Date: 6/4/2007

Neck Force (X)



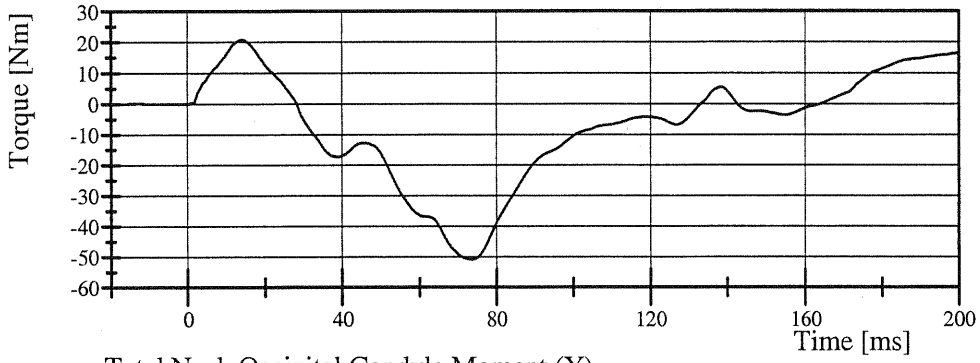
Filter Class: CFC_1000
Max: 466.4 N at 72.4 ms
Min: -142.3 N at 197.0 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



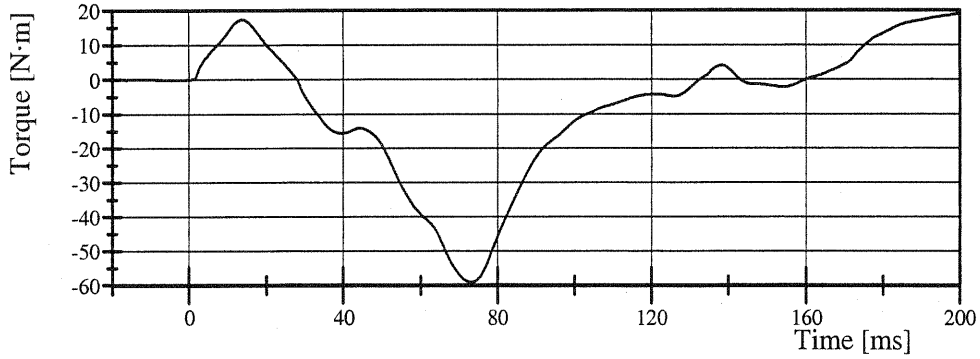
Filter Class: CFC_600
Max: 466.3 N at 72.5 ms
Min: -141.6 N at 197.7 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 20.8 Nm at 14.2 ms
Min: -50.9 Nm at 73.8 ms

Total Neck Occipital Condyle Moment (Y)



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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

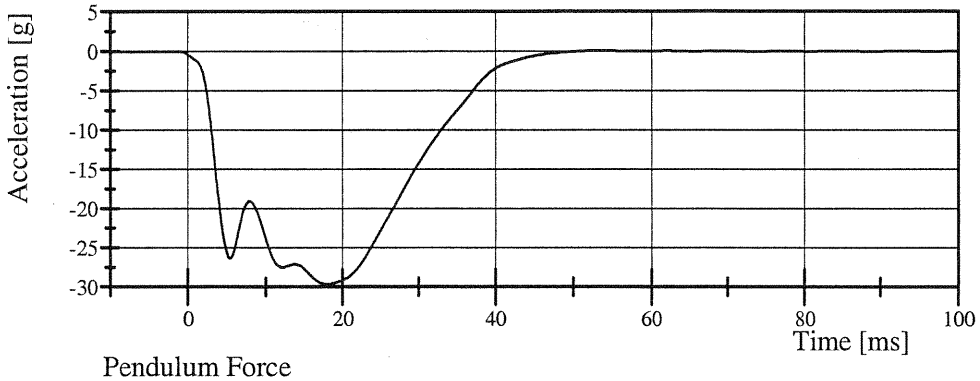
06.04.2007 13:09:04 414

070620

Transportation Research Center Inc.

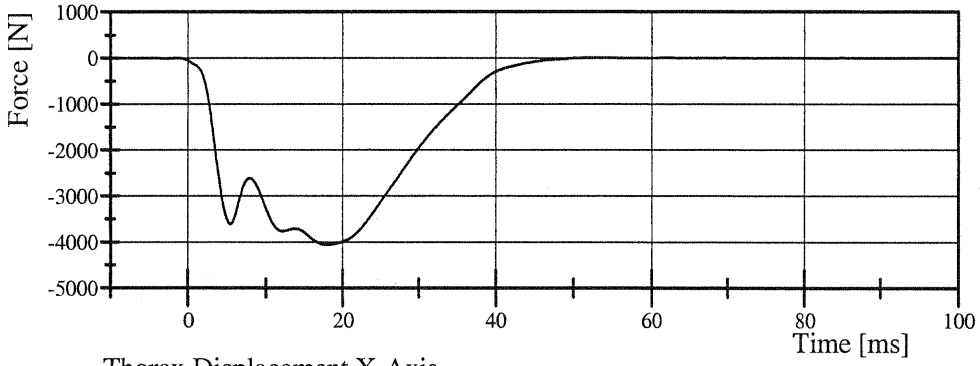
Front Thorax
HIII 5th Serial No. 324 Certification No. 6-4
Test Date: 6/4/2007

Pendulum Acceleration



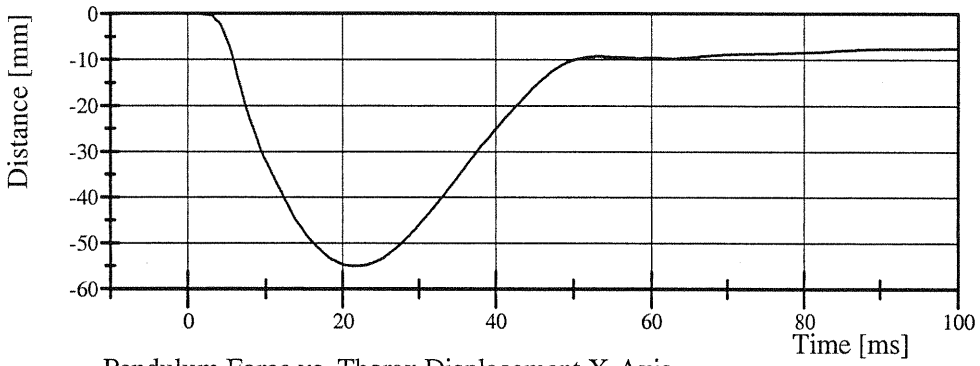
Filter Class: CFC_180
Max: 0.1 g at 54.3 ms
Min: -29.6 g at 18.0 ms

Pendulum Force



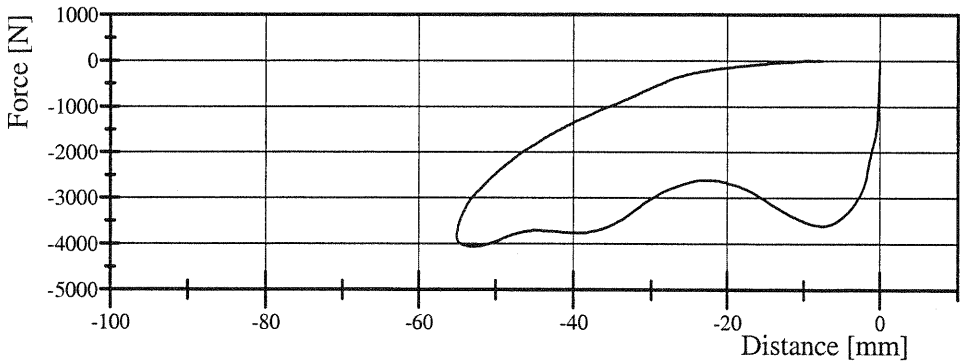
Filter Class: CFC_180
Max: 11.7 N at 54.3 ms
Min: -4,061.5 N at 18.0 ms

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

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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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 UNSUPPORRTED 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

Post-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Passenger Dummy S/N: 324

Transportation Research Center Inc.
572O HIII 5th Female Dummy
External Dimensions
Serial No. 324 Calibration No. 07
With Thor FLX Legs

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	778	Yes
B	Shoulder Pivot Height	431.8 - 457.2	444	Yes
C	Hip Pivot Height	81.3 - 86.3	82	Yes
D	Hip Pivot from Backline	144.8 - 149.8	147	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	80	Yes
F	Thigh Clearance	119.4 - 134.6	125	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	254	Yes
H	Head Back to Backline	43.2 - 48.2	47	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	283	Yes
J	Elbow Rest Height	182.8 - 203.2	189	Yes
K	Buttock Knee Length	520.7 - 546.1	543	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	186	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	364	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	870	Yes
Z	Waist Circumference	759.5 - 789.9	781	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

Charles W. Ball

Approved

Ron Stowe

Transportation Research Center Inc.

Front Head Drop
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/25/2007

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	65 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	273.4 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-1.9 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

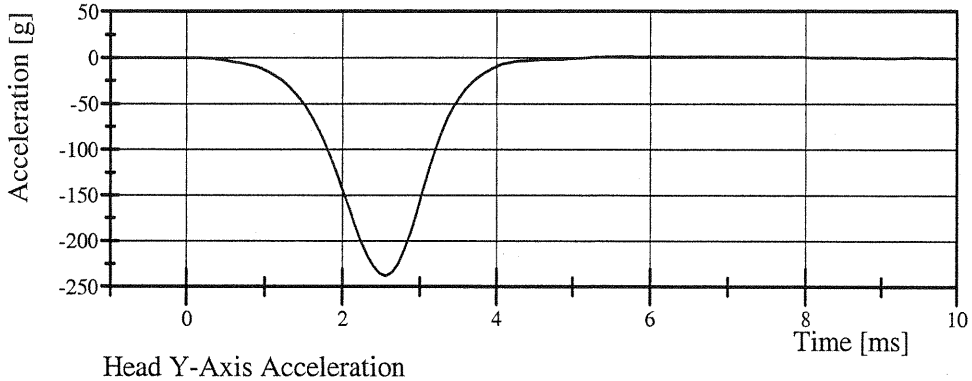
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Transportation Research Center Inc.

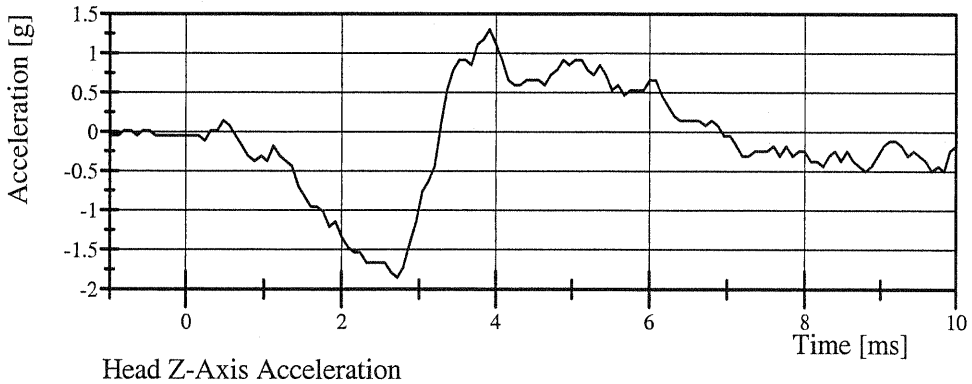
Front Head Drop
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/25/2007

Head X-Axis Acceleration



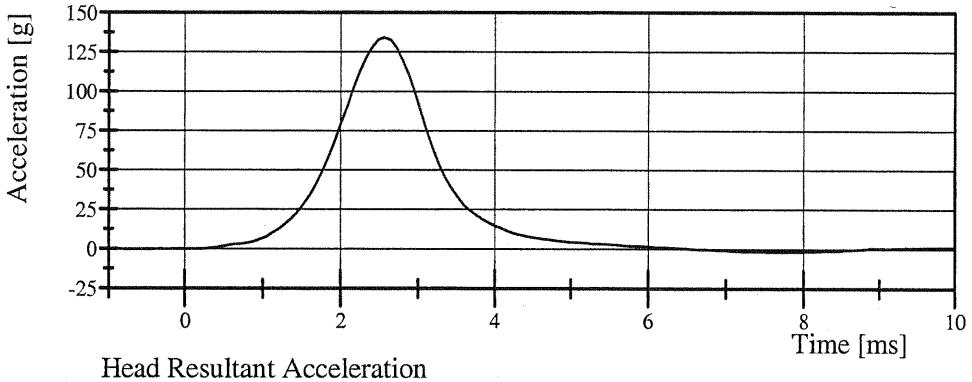
Filter Class: CFC_1000
Max: 1.2 g at 6.2 ms
Min: -238.0 g at 2.6 ms

Head Y-Axis Acceleration



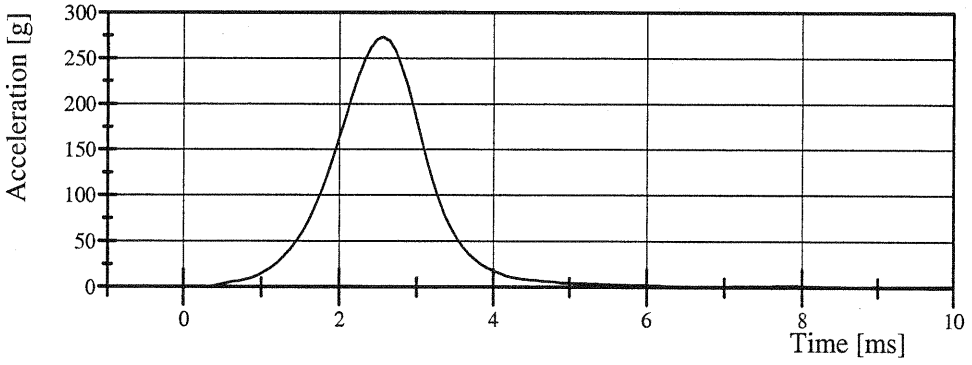
Filter Class: CFC_1000
Max: 1.3 g at 3.9 ms
Min: -1.9 g at 2.7 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 134.5 g at 2.6 ms
Min: -1.7 g at 7.8 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 273.4 g at 2.6 ms
Min: 0.0 g at -0.8 ms

Transportation Research Center Inc.

Neck Flexion
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/25/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	64 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.021 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	(-2.1) - (-2.5) m/s	-2.42 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	-6.74 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-84.4 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	71.1 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	89.0 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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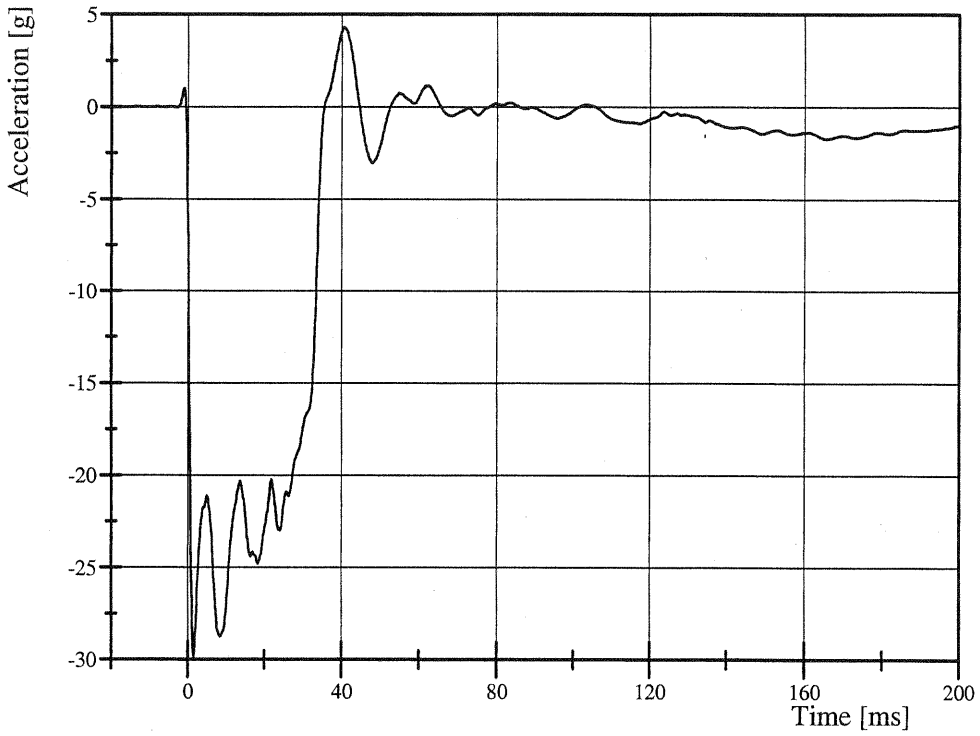
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 7-1

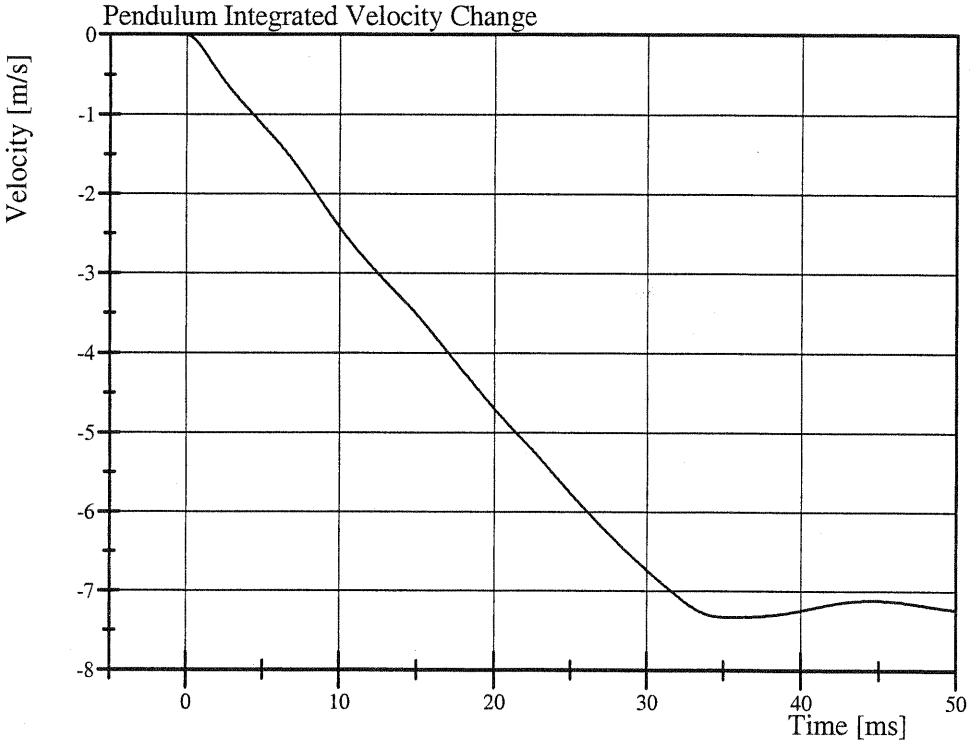
Test Date: 6/25/2007

Pendulum Acceleration



Filter Class: CFC_180
Max: 4.3 g at 40.6 ms
Min: -29.8 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 35.4 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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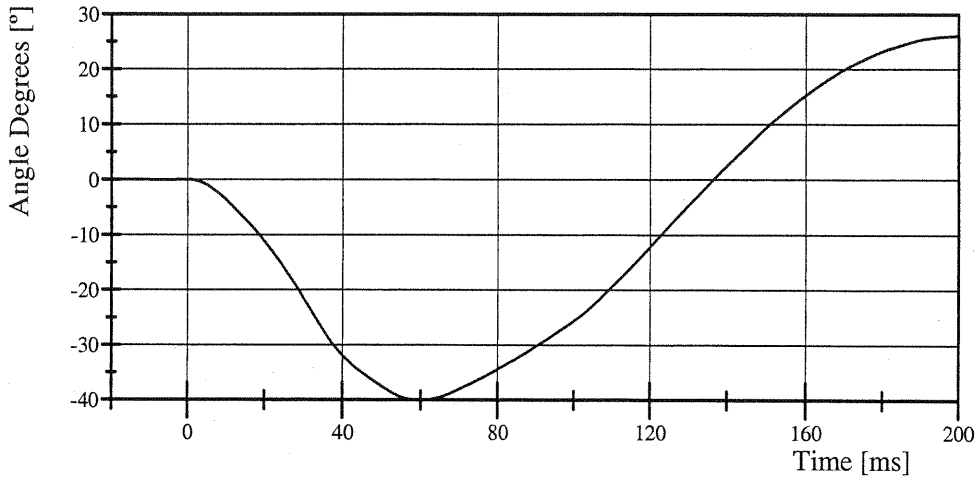
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 7-1

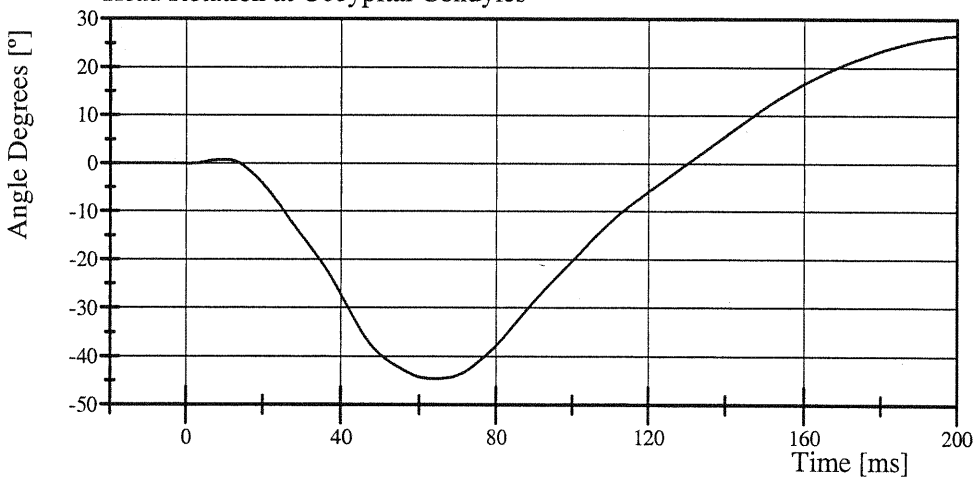
Test Date: 6/25/2007

Pot Rotation at the Base of Neck



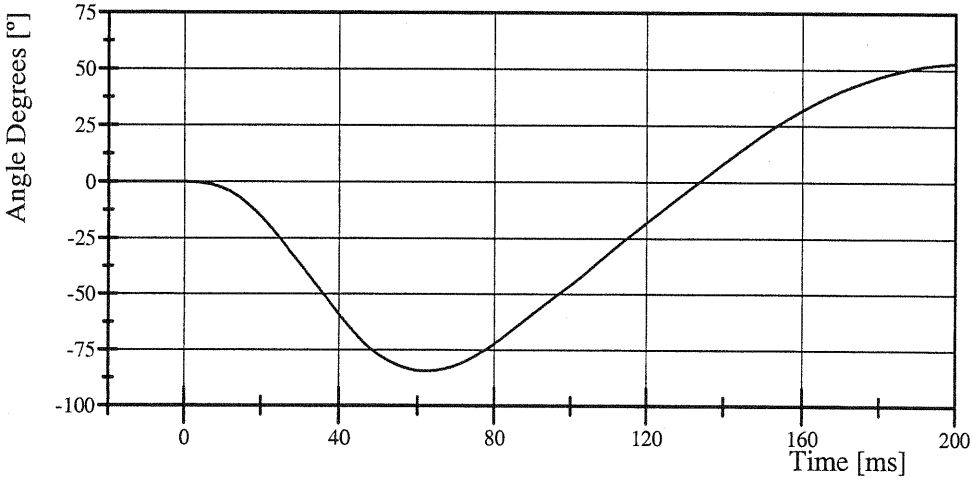
Filter Class: CFC_60
Max: 26.1 ° at 200.0 ms
Min: -40.0 ° at 59.9 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 26.7 ° at 200.0 ms
Min: -44.6 ° at 63.9 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 52.8 ° at 200.0 ms
Min: -84.4 ° at 62.1 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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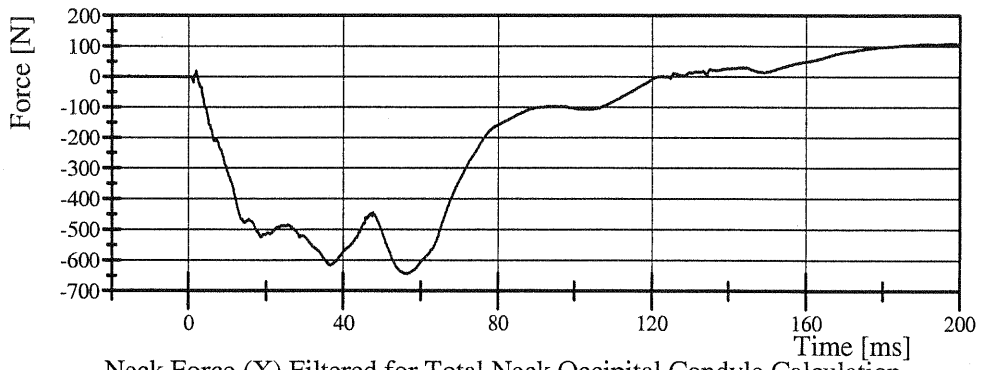
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 324 Certification No. 7-1

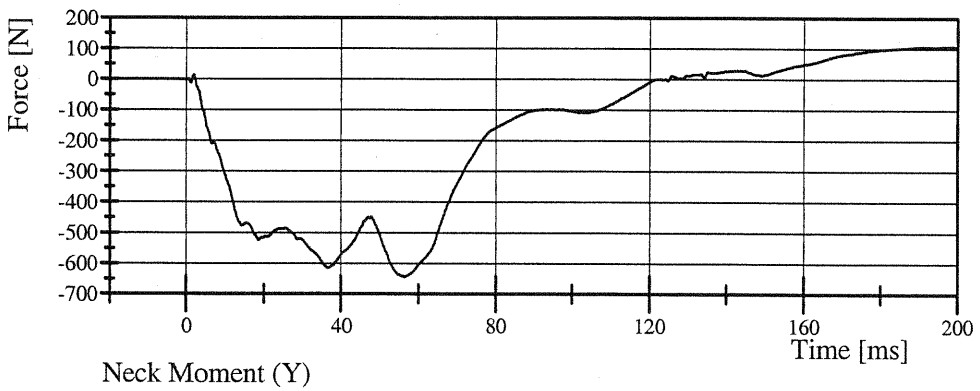
Test Date: 6/25/2007

Neck Force (X)



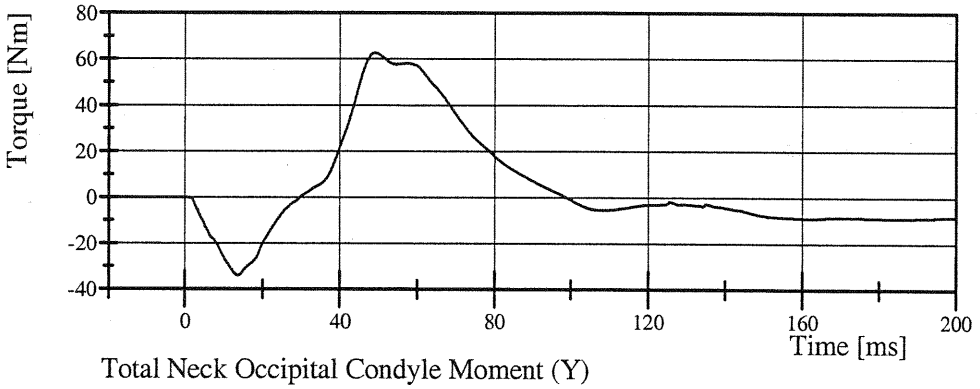
Filter Class: CFC_1000
Max: 109.2 N at 197.8 ms
Min: -644.5 N at 56.5 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



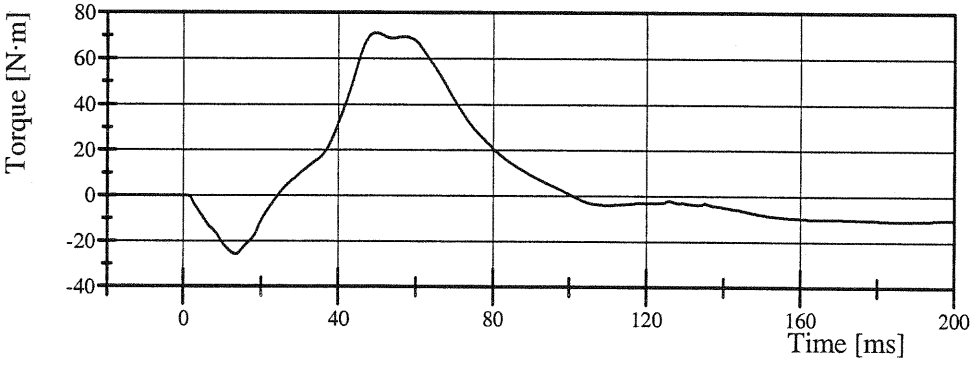
Filter Class: CFC_600
Max: 108.7 N at 198.2 ms
Min: -643.9 N at 56.5 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 62.6 Nm at 49.0 ms
Min: -33.9 Nm at 13.5 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 71.2 N·m at 49.4 ms
Min: -25.7 N·m at 13.4 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.25.2007 10:04:46 549

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Transportation Research Center Inc.

Neck Extension
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/25/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	62 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-5.963 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.61 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.22 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	4.75 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	103.4 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-53.9 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	106.6 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

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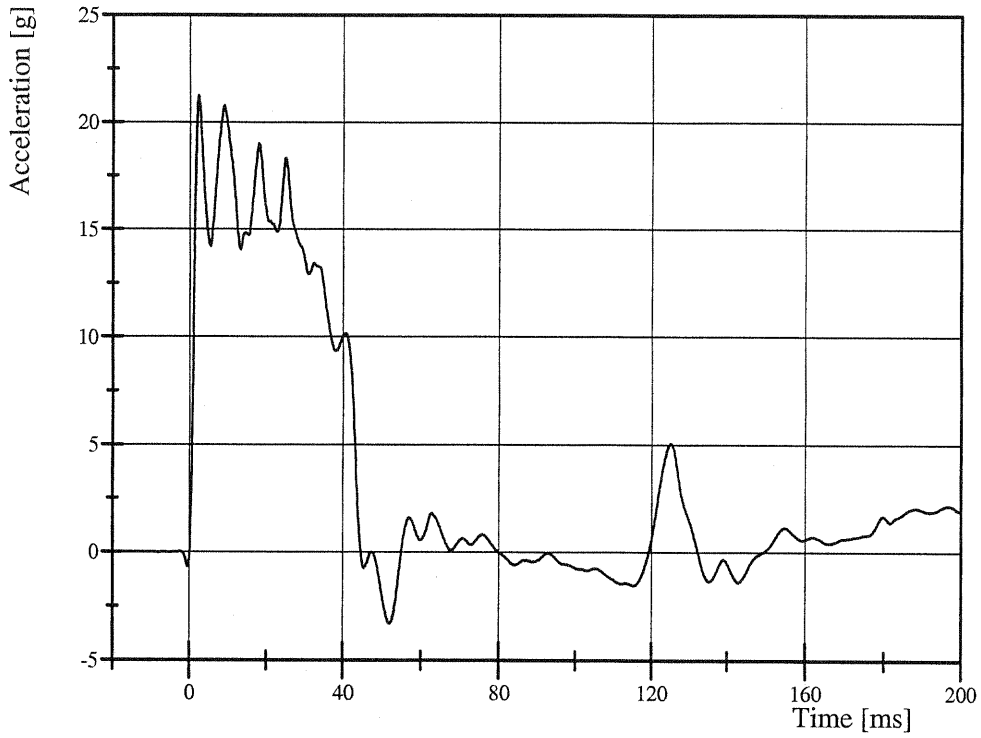
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 7-1

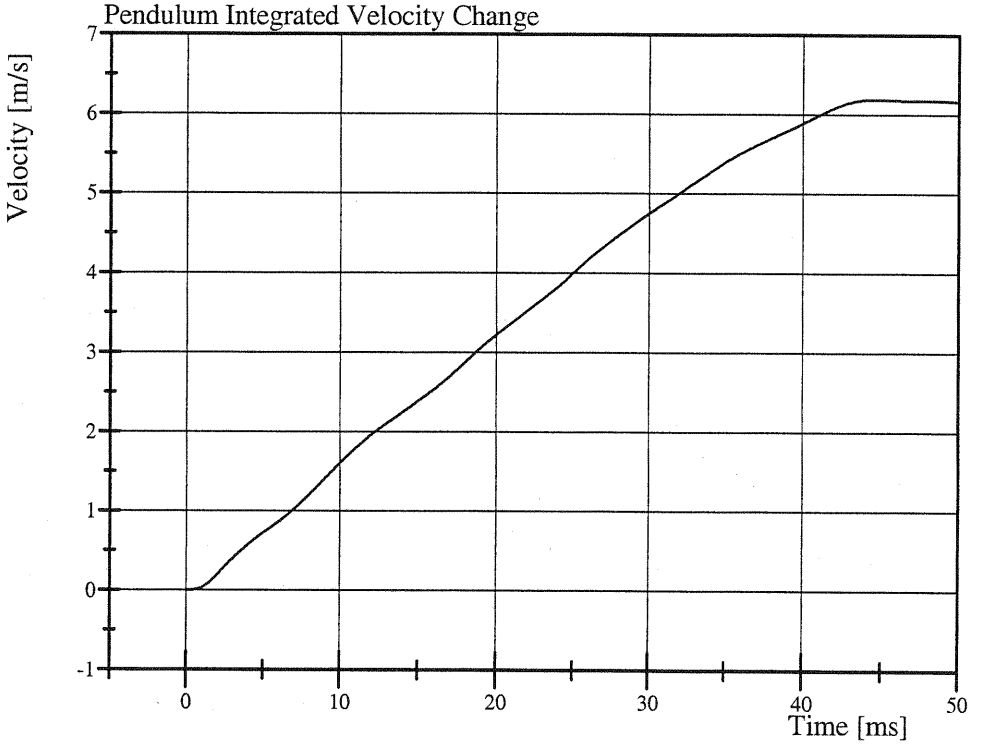
Test Date: 6/25/2007

Pendulum Acceleration



Filter Class: CFC_180
Max: 21.2 g at 2.2 ms
Min: -3.3 g at 52.1 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 6.2 m/s at 44.6 ms
Min: -0.0 m/s at 0.1 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.25.2007 10:39:52 631

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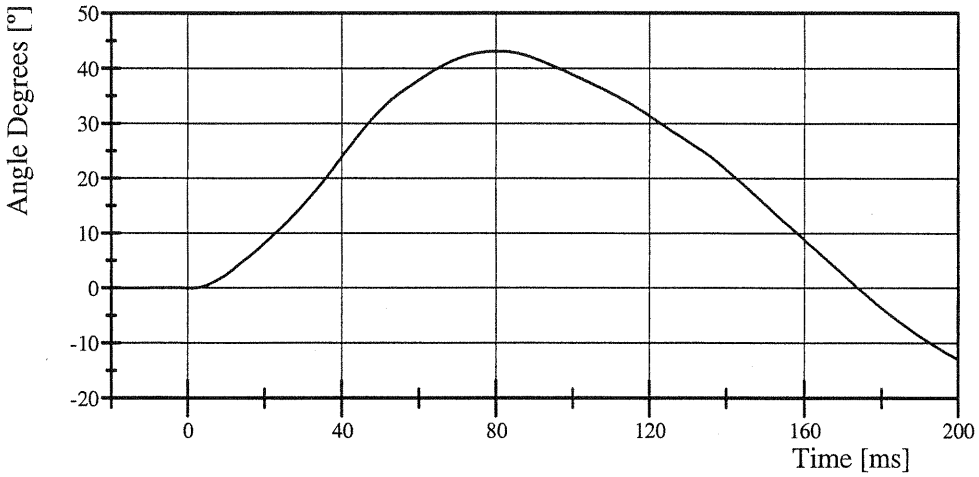
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 324 Certification No. 7-1

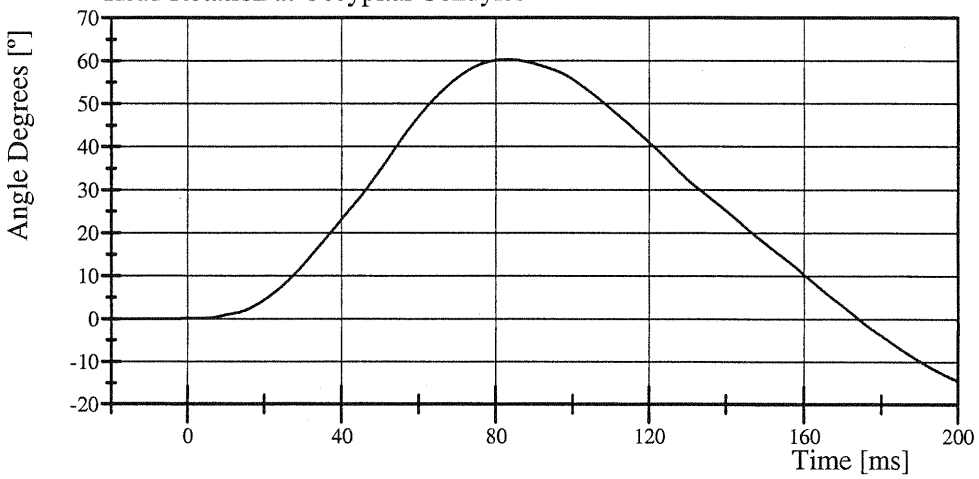
Test Date: 6/25/2007

Pot Rotation at the Base of Neck



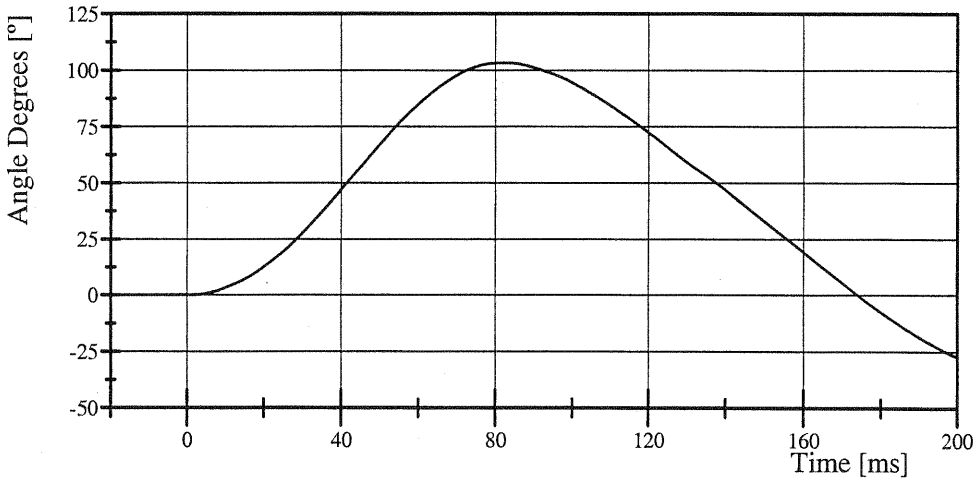
Filter Class: CFC_60
Max: 43.1 ° at 80.6 ms
Min: -12.9 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 60.3 ° at 83.4 ms
Min: -14.5 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60
Max: 103.4 ° at 82.2 ms
Min: -27.4 ° at 200.0 ms

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

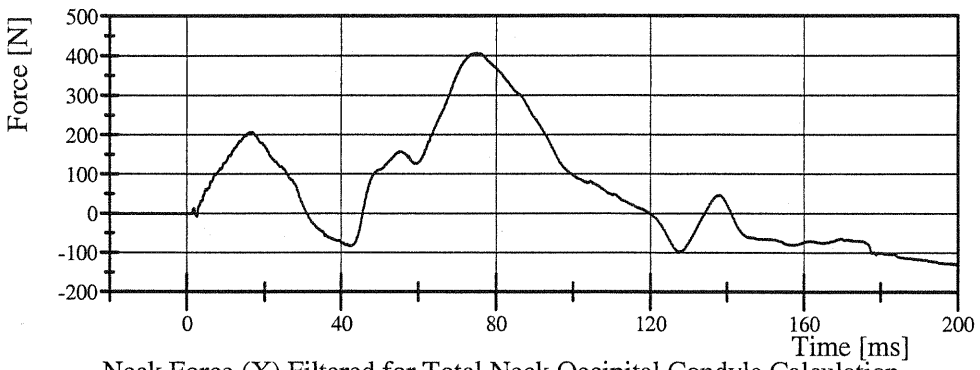
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Transportation Research Center Inc.

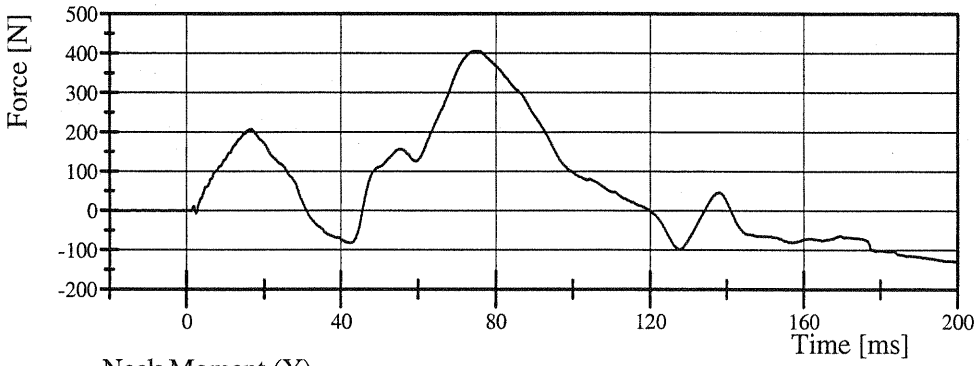
Neck Extension
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/25/2007

Neck Force (X)



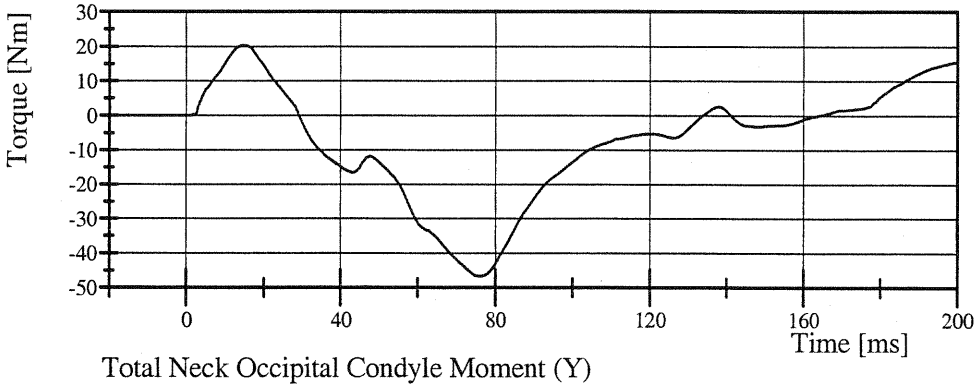
Filter Class: CFC_1000
Max: 406.1 N at 75.0 ms
Min: -129.6 N at 199.4 ms

Neck Force (X) Filtered for Total Neck Occipital Condyle Calculation



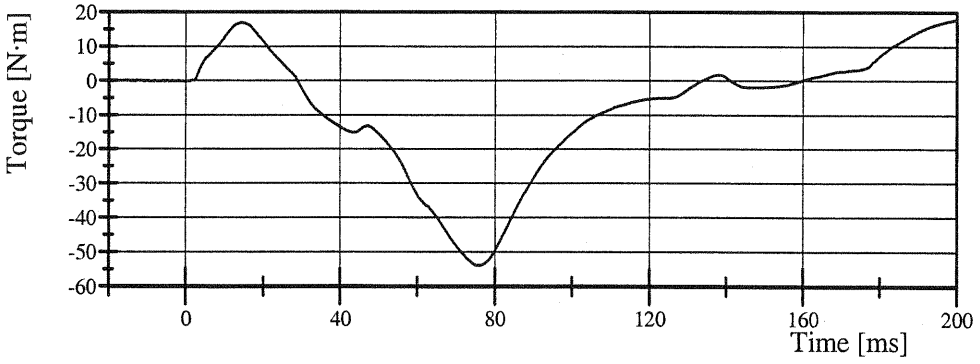
Filter Class: CFC_600
Max: 405.9 N at 75.1 ms
Min: -129.5 N at 200.0 ms

Neck Moment (Y)



Filter Class: CFC_600
Max: 20.4 Nm at 14.7 ms
Min: -46.7 Nm at 76.1 ms

Total Neck Occipital Condyle Moment (Y)



Filter Class: CFC_600
Max: 17.9 N·m at 200.0 ms
Min: -53.9 N·m at 76.0 ms

Transportation Research Center Inc.

Front Thorax
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/22/2007

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	53 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.598 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,085.4 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	>= (-4,600) N	-3,986.7 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-55.4 mm	Yes
Internal Hysteresis	69 - 85 %	73.1 %	Yes

Test meets specifications.

Comments:

Technician

Approved

Specification Source: CFR49 Part 572 Subpart O with Polarity in accordance with J211

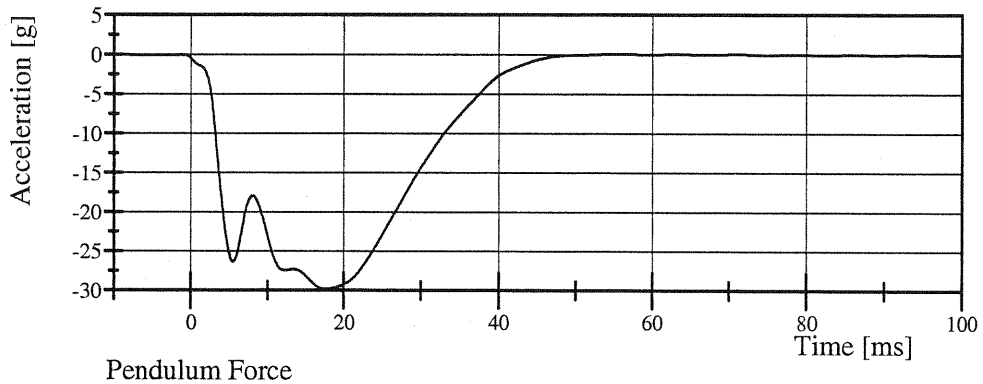
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Transportation Research Center Inc.

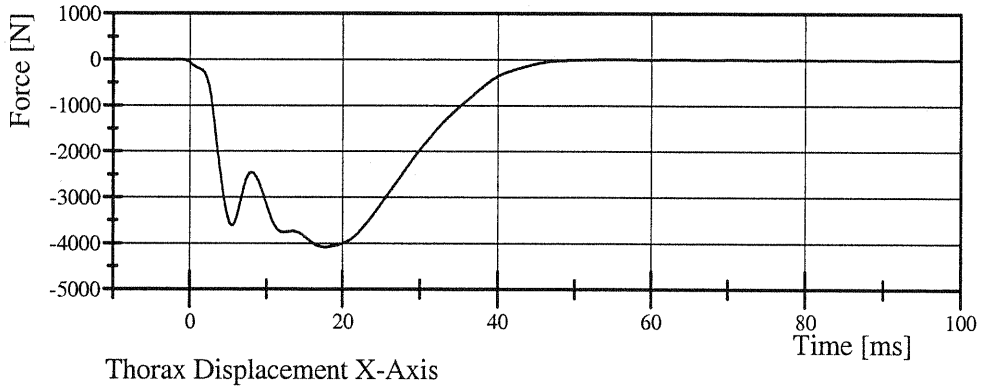
Front Thorax
HIII 5th Serial No. 324 Certification No. 7-1
Test Date: 6/22/2007

Pendulum Acceleration



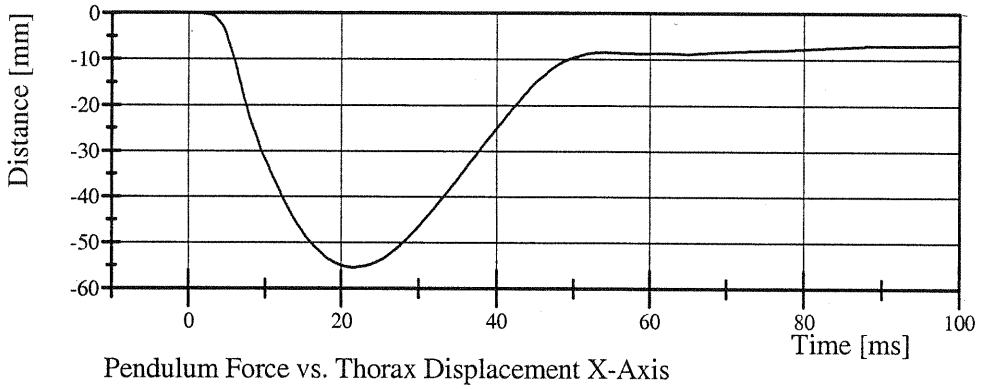
Filter Class: CFC_180
Max: 0.1 g at 55.4 ms
Min: -29.8 g at 17.7 ms

Pendulum Force



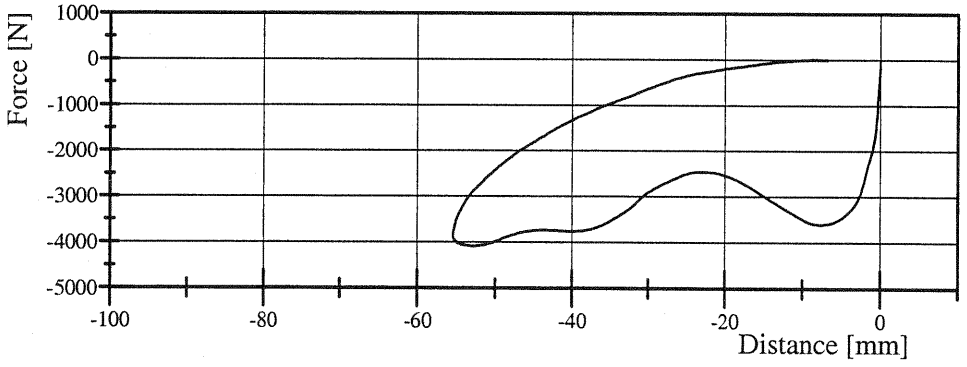
Filter Class: CFC_180
Max: 13.6 N at 55.4 ms
Min: -4,085.4 N at 17.7 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -5.4 ms
Min: -55.4 mm at 21.5 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 13.6 N at -8.5 mm
Min: -4,085.4 N at -52.8 mm

Specification Source: CFR49 Part 572 Subpart O
with Polarity in accordance with J211

06.22.2007 13:40:12 422

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TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

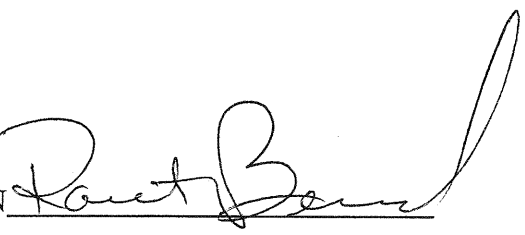
CAL DATE: 25-Jun-07

TRC, INC. **TEST NO: TOFL-01** **572 O SN324 TORSO FLEX CAL 01**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TIME	1300	
TEMPERATURE	18.9 – 25.6° C	**21.1**° C
RELATIVE HUMIDITY	10 – 70 %	**58** %
INITIAL ANGLE OF UNSUPPORRTED DUMMY	<= 20° REFERENCED TO VERTICAL	**17.7**°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	**369.9** N
RETURN ANGLE – (DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE)	+/- 8 ° OF INTIAL ANGLE	**4.8**°
RATE	0.5° - 1.5 °/sec	**.95**°/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN 

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

Typical Test Measurements	Channel Class
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 070620

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
1	Trig D1	10ZERO000000VO0A	EVENT	1	Logic	+	Bipolar	
2	P15345	21HEADCG00H3ACXA	Head Accel X	1000	g	-	Rearward	1-001 VRTC H3 50th.001
3	P46524	21HEADCG00H3ACYA	Head Accel Y	1000	g	-	Leftward	1-001 VRTC H3 50th.002
4	J32220	21HEADCG00H3ACZA	Head Accel Z	1000	g	-	Upward	1-001 VRTC H3 50th.003
5	J23914	21HEADCGRDH3ACXA	Head Accel X Redundant	1000	g	-	Rearward	1-001 VRTC H3 50th.004
6	AE833	21HEADCGRDH3ACYA	Head Accel Y Redundant	1000	g	-	Leftward	1-001 VRTC H3 50th.005
7	J18730	21HEADCGRDH3ACZA	Head Accel Z Redundant	1000	g	-	Upward	1-001 VRTC H3 50th.006
8	1716A-1872-FX	21NECKUP00H3FOXA	Neck Force X	8896	N	-	Head forward, chest rearward	1-001 VRTC H3 50th.007
9	1716A-1872-FY	21NECKUP00H3FOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	1-001 VRTC H3 50th.008
10	1716A-1872-FZ	21NECKUP00H3FOZA	Neck Force Z	13344	N	+	Head upward, chest downward	1-001 VRTC H3 50th.009
11	1716A-1872-MX	21NECKUP00H3MOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	1-001 VRTC H3 50th.010
12	1716A-1872-MY	21NECKUP00H3MOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	1-001 VRTC H3 50th.011
13	1716A-1872-MZ	21NECKUP00H3MOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	1-001 VRTC H3 50th.012
14	03E03D30-N22	21CHSTCG00H3ACXA	Chest Accel X	1000	g	+	Forward	1-001 VRTC H3 50th.013
15	J32100	21CHSTCG00H3ACYA	Chest Accel Y	1000	g	-	Leftward	1-001 VRTC H3 50th.014
16	P52159	21CHSTCG00H3ACZA	Chest Accel Z	1000	g	-	Upward	1-001 VRTC H3 50th.015
17	ACCY2	21CHSTCGRDH3ACXA	Chest Accel X Redundant	1000	g	-	Rearward	1-001 VRTC H3 50th.016
18	J20125	21CHSTCGRDH3ACYA	Chest Accel Y Redundant	1000	g	-	Leftward	1-001 VRTC H3 50th.017
19	J35562	21CHSTCGRDH3ACZA	Chest Accel Z Redundant	1000	g	-	Upward	1-001 VRTC H3 50th.018
20	CST001	21CHST0000H3DSXA	Chest Deflection X	100	mm	+	Forward	1-001 VRTC H3 50th.019
21	P52154	21PELVCG00H3ACXA	Pelvis Accel X	600	g	-	Rearward	1-001 VRTC H3 50th.020
22	P49192	21PELVCG00H3ACYA	Pelvis Accel Y	600	g	-	Leftward	1-001 VRTC H3 50th.021
23	P49170	21PELVCG00H3ACZA	Pelvis Accel Z	600	g	-	Upward	1-001 VRTC H3 50th.022
24	2121AJ-1519	21FEMRLL00H3FOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-001 VRTC H3 50th.023
25	2121A-1420	21FEMRRL00H3FOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-001 VRTC H3 50th.024
26	150-0121VR-022689	21KNSLLE00H3DSXA	Left Knee Displacement X	33	mm	-	Hold femur in place, tibia rearward	1-LX045-046 VOLPE THOR LEGS.001
27	4509-95-FX	21TIBILULXH3FOXA	Left Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.002
28	4509-95-FZ	21TIBILULXH3FOZA	Left Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX045-046 VOLPE THOR LEGS.004
29	4509-95-MX	21TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.005

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
30	4509-95-MY	21TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.006
31	02I02I05-F16	21TIBILELXH3ACXA	Left Tibia Accel X	1000	g	+	Tibia forward	1-LX045-046 VOLPE THOR LEGS.007
32	04J04I07-Z15	21TIBILELXH3ACYA	Left Tibia Accel Y	1000	g	+	Tibia right	1-LX045-046 VOLPE THOR LEGS.008
33	4929J-139-FX	21TIBILLLXH3FOXA	Left Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.009
34	4929J-139-FY	21TIBILLLXH3FOYA	Left Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX045-046 VOLPE THOR LEGS.010
35	4929J-139-FZ	21TIBILLLXH3FOZA	Left Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX045-046 VOLPE THOR LEGS.011
36	4929J-139-MX	21TIBILLLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.012
37	4929J-139-MY	21TIBILLLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.013
38	7921-0525-PD210-4B-426	21FOOTLELXH3ANXA	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	1-LX045-046 VOLPE THOR LEGS.014
39	7921-0524-PD210-4B-424	21FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	1-LX045-046 VOLPE THOR LEGS.015
40	7921-0523-PD210-4B-423	21FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX104Z	318	°	-	External rotation	1-LX045-046 VOLPE THOR LEGS.016
41	05H31-Z12	21FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX045-046 VOLPE THOR LEGS.017
42	04J04I20-Z06	21FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX045-046 VOLPE THOR LEGS.018
43	02I02I05-F22	21FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX045-046 VOLPE THOR LEGS.019
44	150-0121VL-33646	21KNSLRI00H3DSXA	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX045-046 VOLPE THOR LEGS.020
45	4509-88-FX	21TIBIRULXH3FOXA	Right Upper Tibia Force X	11120.5	N	+	Tibia forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.021
46	4509-88-FZ	21TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX045-046 VOLPE THOR LEGS.023
47	4509-88-MX	21TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.024
48	4509-88-MY	21TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.025
49	04J04I01-R09	21TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX045-046 VOLPE THOR LEGS.026
50	01G25-N06	21TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX045-046 VOLPE THOR LEGS.027
51	4929J-138-FX	21TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX045-046 VOLPE THOR LEGS.028
52	4929J-138-FY	21TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX045-046 VOLPE THOR LEGS.029
53	4929J-138-FZ	21TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX045-046 VOLPE THOR LEGS.030

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
54	4929J-138-MX	21TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.031
55	4929J-138-MY	21TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX045-046 VOLPE THOR LEGS.032
56	7921-0528-PD210-4B-427	21FOOTRILXH3ANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	1-LX045-046 VOLPE THOR LEGS.033
57	7921-0526-PD210-4B-425	21FOOTRILXH3ANYA	Right Foot Angular Dis. Y AK225Y	318	°	+	Dorsiflexion	1-LX045-046 VOLPE THOR LEGS.034
58	7921-0527-PD210-4B-422	21FOOTRILXH3ANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	1-LX045-046 VOLPE THOR LEGS.035
59	01J02-F22	21FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Foot forward	1-LX045-046 VOLPE THOR LEGS.036
60	05G20-L06	21FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Foot rightward	1-LX045-046 VOLPE THOR LEGS.037
61	04J04I20-A17	21FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Foot down	1-LX045-046 VOLPE THOR LEGS.038
62	05H10-M20	23HEADCG00HFACXA	Head Accel X	1000	g	-	Rearward	3-416 HIII 5th FTSS.001
63	02I02I05-F11	23HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.002
64	05H06-L20	23HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.003
65	J27466	23HEADCGRDHFACXA	Head Accel X Redundant	1000	g	-	Rearward	3-416 HIII 5th FTSS.004
66	04J04I01-R10	23HEADCGRDHFACYA	Head Accel Y Redundant	1000	g	-	Leftward	3-416 HIII 5th FTSS.005
67	01G19-F03	23HEADCGRDHFACZA	Head Accel Z Redundant	1000	g	-	Upward	3-416 HIII 5th FTSS.006
68	1716A-0440-FX	23NECKUP00HFFOXA	Neck Force X	8896	N	-	Head forward, chest rearward	3-416 HIII 5th FTSS.007
69	1716A-0440-FY	23NECKUP00HFFOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	3-416 HIII 5th FTSS.008
70	1716A-0440-FZ	23NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-416 HIII 5th FTSS.009
71	1716A-0440-MX	23NECKUP00HFMOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	3-416 HIII 5th FTSS.010
72	1716A-0440-MY	23NECKUP00HFMOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	3-416 HIII 5th FTSS.011
73	1716A-0440-MZ	23NECKUP00HFMOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	3-416 HIII 5th FTSS.012
74	P52155	23CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.013
75	P52160	23CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.014
76	P52152	23CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.015
77	J20093	23CHSTCGRDHFACXA	Chest Accel X Redundant	1000	g	-	Rearward	3-416 HIII 5th FTSS.016
78	J19227	23CHSTCGRDHFACYA	Chest Accel Y Redundant	1000	g	-	Leftward	3-416 HIII 5th FTSS.017
79	J27467	23CHSTCGRDHFACZA	Chest Accel Z Redundant	1000	g	-	Upward	3-416 HIII 5th FTSS.018
80	14CB1-2897-416	23CHST0000HFDSXA	Chest Deflection X 516	100	mm	+	Forward	3-416 HIII 5th FTSS.019
81	P52161	23PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-416 HIII 5th FTSS.020
82	P52151	23PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.021
83	P52156	23PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.022
84	2121AJ-1517	23FEMRLL00HFFOZA	Left Femur Force Z #8	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.023
85	2121A-1421	23FEMRRL00HFFOZA	Right Femur Force Z 507	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.024

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
86	150-0121VR-028849	23KNSLLE00HFDSXA	Left Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	3-FLX013 &014 VRTC.001
87	4825J-97-FX	23TIBILULXHFFOXA	Left Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX013 &014 VRTC.002
88	4825J-97-FZ	23TIBILULXHFFOZA	Left Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX013 &014 VRTC.003
89	4825J-97-MX	23TIBILULXHFMOXA	Left Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.004
90	4825J-97-MY	23TIBILULXHFMOYA	Left Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.005
91	03D03D09-N02	23TIBILELXHFACXA	Left Tibia Accel X	1000	g	+	Tibia forward	3-FLX013 &014 VRTC.006
92	01G25-N18	23TIBILELXHFACYA	Left Tibia Accel Y	1000	g	+	Tibia right	3-FLX013 &014 VRTC.007
93	4826J-107-FX	23TIBILLLXHFFOXA	Left Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX013 &014 VRTC.008
94	4826J-107-FY	23TIBILLLXHFFOYA	Left Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX013 &014 VRTC.009
95	4826J-107-FZ	23TIBILLLXHFFOZA	Left Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX013 &014 VRTC.010
96	4826J-107-MX	23TIBILLLXHFMOXA	Left Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.011
97	4826J-107-MY	23TIBILLLXHFMOYA	Left Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.012
98	PD210-4B-7921-0381	23FOOTLELXHFANXA	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	3-FLX013 &014 VRTC.013
99	PD210-4B-7921-0374	23FOOTLELXHFANYA	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	3-FLX013 &014 VRTC.014
100	PD210-4B-7921-0373	23FOOTLELXHFANZA	Left Foot Angular Dis. Z LX104Z	318	°	-	External rotation	3-FLX013 &014 VRTC.015
101	04J04I10-H10	23FOOTLELXHFACXA	Left Foot Accel X	1000	g	+	Foot forward	3-FLX013 &014 VRTC.016
102	AAMF2	23FOOTLELXHFACYA	Left Foot Accel Y	1000	g	+	Foot rightward	3-FLX013 &014 VRTC.017
103	05I07-Z23	23FOOTLELXHFACZA	Left Foot Accel Z	1000	g	+	Foot down	3-FLX013 &014 VRTC.018
104	150-0121VL-028866	23KNSLRI00HFDSXA	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	3-FLX013 &014 VRTC.019
105	4825J-96-FX	23TIBIRULXHFFOXA	Right Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX013 &014 VRTC.020
106	4825J-96-FZ	23TIBIRULXHFFOZA	Right Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX013 &014 VRTC.021
107	4825J-96-MX	23TIBIRULXHFMOXA	Right Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.022

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
108	4825J-96-MY	23TIBIRULXHFMOYA	Right Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.023
109	05I07-Z07	23TIBIRILXHFACXA	Right Tibia Accel X	1000	g	+	Tibia forward	3-FLX013 &014 VRTC.024
110	04J04I01-R11	23TIBIRILXHFACYA	Right Tibia Accel Y	1000	g	+	Tibia right	3-FLX013 &014 VRTC.025
111	4826J-104-FX	23TIBIRLLXHFFOXA	Right Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX013 &014 VRTC.026
112	4826J-104-FY	23TIBIRLLXHFFOYA	Right Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX013 &014 VRTC.027
113	4826J-104-FZ	23TIBIRLLXHFFOZA	Right Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX013 &014 VRTC.028
114	4826J-104-MX	23TIBIRLLXHFMOXA	Right Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX013 &014 VRTC.029
115	4826J-104-MY	23TIBIRLLXHFMOYA	Right Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX013 &014 VRTC.030
116	PD210-4B-7921-0372	23FOOTRILXHFANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	3-FLX013 &014 VRTC.031
117	PD210-4B-7921-0334	23FOOTRILXHFANYA	Right Foot Angular Dis. Y AK225Y	318	°	+	Dorsiflexion	3-FLX013 &014 VRTC.032
118	PD210-4B-7921-0336	23FOOTRILXHFANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	3-FLX013 &014 VRTC.033
119	03E03E18-F09	23FOOTRILXHFACXA	Right Foot Accel X	1000	g	+	Foot forward	3-FLX013 &014 VRTC.034
120	01G18-F05	23FOOTRILXHFACYA	Right Foot Accel Y	1000	g	+	Foot rightward	3-FLX013 &014 VRTC.035
121	02A18-N04	23FOOTRILXHFACZA	Right Foot Accel Z	1000	g	+	Foot down	3-FLX013 &014 VRTC.036
122	P48543	24CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
123	p48544	26CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
124	P54863	22ENGNTP0000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
125	P54542	22ENGNBO0000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	
126	P54236	23VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
127	P54525	21VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
128	P47546	22DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
129	P54866	21PEAC000000ACXA	Toe Pan Accelerator X-axis acceleration	2000	g	+	Forward	
130	P54829	21PEAC000000ACZA	Toe Pan Accelerator Z-axis acceleration	2000	g	-	Upward	
131	P47552	21VEHC000001ACXA	Toe Pan footrest X-axis acceleration	2000	g	+	Forward	
132	P47549	21VEHC000001ACZA	Toe Pan footrest Z-axis acceleration	2000	g	-	Upward	
133	P47550	25TUNNCY0000ACXA	Rear Tunnel center X-axis acceleration	1000	g	+	Forward	
134	P54196	20VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
135	P54867	20VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	+	Rightward	
136	P54288	20VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
137	p54295	28VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
138	P54421	28VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
139	P54329	28VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	-	Upward	
140	K1506280A	21SEBA0000B5DS0A	Driver lap belt spool (S3)	1270	mm	+	Tension	
141	40664	21SEBA0000B3DS0A	Driver shoulder belt spool and retraction	750	mm	+	Tension	
142	14672	23SEBA0000B5DS0A	RF Pass lap belt spool	635	mm	+	Tension	
143	43372	23SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction	750	mm	+	Tension	

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
144	ABFire1	21AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND (IP 08)	5	V	+	Bipolar	
145	ABFire2	21AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND (IP 01)	5	V	+	Bipolar	
146	ABFire3	23AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND (IP 54)	5	V	+	Bipolar	
147	ABFire4	23AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND (IP 07)	5	V	+	Bipolar	

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
1	Trig D1	10ZERO000000VO0A	EVENT	1	Logic	+	Bipolar	
2	05H06-L26	11HEADCG00H3ACXA	Head Accel X	1000	g	-	Rearward	1-855 HIII 50th FTSS.001
3	05G20-L20	11HEADCG00H3ACYA	Head Accel Y	1000	g	-	Leftward	1-855 HIII 50th FTSS.002
4	05G15-L02	11HEADCG00H3ACZA	Head Accel Z	1000	g	-	Upward	1-855 HIII 50th FTSS.003
5	J23772	11HEADCGRDH3ACXA	Head Accel X Redundant	1000	g	-	Rearward	1-855 HIII 50th FTSS.004
6	J14668	11HEADCGRDH3ACYA	Head Accel Y Redundant	1000	g	-	Leftward	1-855 HIII 50th FTSS.005
7	BD88J	11HEADCGRDH3ACZA	Head Accel Z Redundant	1000	g	-	Upward	1-855 HIII 50th FTSS.006
8	1716A-1037-FX	11NECKUP00H3FOXA	Neck Force X	8896	N	-	Head forward, chest rearward	1-855 HIII 50th FTSS.007
9	1716A-1037-FY	11NECKUP00H3FOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	1-855 HIII 50th FTSS.008
10	1716A-1037-FZ	11NECKUP00H3FOZA	Neck Force Z	13344	N	+	Head upward, chest downward	1-855 HIII 50th FTSS.009
11	1716A-1037-MX	11NECKUP00H3MOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	1-855 HIII 50th FTSS.010
12	1716A-1037-MY	11NECKUP00H3MOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	1-855 HIII 50th FTSS.011
13	1716A-1037-MZ	11NECKUP00H3MOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	1-855 HIII 50th FTSS.012
14	01G19-F02	11CHSTCG00H3ACXA	Chest Accel X	1000	g	+	Forward	1-855 HIII 50th FTSS.013
15	01G25-N10	11CHSTCG00H3ACYA	Chest Accel Y	1000	g	-	Leftward	1-855 HIII 50th FTSS.014
16	01H02-N07	11CHSTCG00H3ACZA	Chest Accel Z	1000	g	-	Upward	1-855 HIII 50th FTSS.015
17	J14189	11CHSTCGRDH3ACXA	Chest Accel X Redundant	1000	g	-	Rearward	1-855 HIII 50th FTSS.016
18	BR34J	11CHSTCGRDH3ACYA	Chest Accel Y Redundant	1000	g	-	Leftward	1-855 HIII 50th FTSS.017
19	J19611	11CHSTCGRDH3ACZA	Chest Accel Z Redundant	1000	g	-	Upward	1-855 HIII 50th FTSS.018
20	CST855	11CHST0000H3DSXA	Chest Deflection X	100	mm	+	Forward	1-855 HIII 50th FTSS.019
21	05G20-L21	11PELVCG00H3ACXA	Pelvis Accel X	600	g	-	Rearward	1-855 HIII 50th FTSS.020
22	02I02I10-N24	11PELVCG00H3ACYA	Pelvis Accel Y	600	g	-	Leftward	1-855 HIII 50th FTSS.021
23	05G11-X33	11PELVCG00H3ACZA	Pelvis Accel Z	600	g	-	Upward	1-855 HIII 50th FTSS.022
24	2121A-1394-FZ	11FEMRLL00H3FOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-855 HIII 50th FTSS.023
25	2121A-1396	11FEMRRL00H3FOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-855 HIII 50th FTSS.024
26	150-0121VR-023174	11KNSLLE00H3DSXA	Left Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX0036 &0037 VRTC.001
27	4509-104-FX	11TIBILULXH3FOXA	Left Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX0036 &0037 VRTC.002
28	4509-104-FZ	11TIBILULXH3FOZA	Left Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX0036 &0037 VRTC.004

Channel Report Test Number 070620

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
29	4509-104-MX	11TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.005
30	4509-104-MY	11TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.006
31	01G18-F13	11TIBILELXH3ACXA	Left Tibia Accel X	1000	g	+	Tibia forward	1-LX0036 &0037 VRTC.007
32	02I02I10-N22	11TIBILELXH3ACYA	Left Tibia Accel Y	1000	g	+	Tibia right	1-LX0036 &0037 VRTC.008
33	4929J-140-FX	11TIBILLLXH3FOXA	Left Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX0036 &0037 VRTC.009
34	4929J-140-FY	11TIBILLLXH3FOYA	Left Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX0036 &0037 VRTC.010
35	4929J-140-FZ	11TIBILLLXH3FOZA	Left Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX0036 &0037 VRTC.011
36	4929J-140-MX	11TIBILLLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.012
37	4929J-140-MY	11TIBILLLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.013
38	PD210-4B-0371	11FOOTLELXH3ANXA	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	1-LX0036 &0037 VRTC.014
39	PD210-4B-0367	11FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	1-LX0036 &0037 VRTC.015
40	PD210-4B-0365	11FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX104Z	318	°	-	Exernal rotation	1-LX0036 &0037 VRTC.016
41	04J04I20-Z24	11FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX0036 &0037 VRTC.017
42	05G20-L03	11FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX0036 &0037 VRTC.018
43	05G20-L24	11FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX0036 &0037 VRTC.019
44	150-0121VL-028868	11KNSLRI00H3DSXA	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX0036 &0037 VRTC.020
45	4509-111-FX	11TIBIRULXH3FOXA	Right Upper Tibia Force X	11120.5	N	+	Tibia forward, knee rearward	1-LX0036 &0037 VRTC.021
46	4509-111-FZ	11TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120.5	N	+	Tibia downward, femur upward	1-LX0036 &0037 VRTC.023
47	4509-111-MX	11TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.024
48	4509-111-MY	11TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.025
49	01G18-F15	11TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX0036 &0037 VRTC.026
50	05I07-Z25	11TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX0036 &0037 VRTC.027

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
51	4929J-142-FX	11TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120.5	N	+	Ankle forward, knee rearward	1-LX0036 &0037 VRTC.028
52	4929J-142-FY	11TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120.5	N	+	Ankle rightward, knee leftward	1-LX0036 &0037 VRTC.029
53	4929J-142-FZ	11TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120.5	N	+	Ankle downward, knee upward	1-LX0036 &0037 VRTC.030
54	4929J-142-MX	11TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX0036 &0037 VRTC.031
55	4929J-142-MY	11TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX0036 &0037 VRTC.032
56	PD210-4B-7921-0368	11FOOTRILXH3ANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	1-LX0036 &0037 VRTC.033
57	PD210-4B-7921-0369	11FOOTRILXH3ANYA	Right Foot Angular Dis. Y AK225Y	318	°	+	Dorsiflexion	1-LX0036 &0037 VRTC.034
58	PD210-4B-7921-0370	11FOOTRILXH3ANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	1-LX0036 &0037 VRTC.035
59	01J02-F16	11FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Foot forward	1-LX0036 &0037 VRTC.036
60	98H10-F13	11FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Foot rightward	1-LX0036 &0037 VRTC.037
61	98H10-F10	11FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Foot down	1-LX0036 &0037 VRTC.038
62	05G20-L18	13HEADCG00HFACXA	Head Accel X	1000	g	-	Rearward	3-324 HIII 5th FTSS.001
63	00L20-A20	13HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-324 HIII 5th FTSS.002
64	03D03C27-N07	13HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-324 HIII 5th FTSS.003
65	IF-205-287-FX	13NECKUP00HFFOXA	Neck Force X	8896	N	-	Head forward, chest rearward	3-324 HIII 5th FTSS.004
66	IF-205-287-FY	13NECKUP00HFFOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	3-324 HIII 5th FTSS.005
67	IF-205-287-FZ	13NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-324 HIII 5th FTSS.006
68	IF-205-287-MX	13NECKUP00HFMOXA	Neck Moment X	282.5	Nm	-	Right ear toward right shoulder	3-324 HIII 5th FTSS.007
69	IF-205-287-MY	13NECKUP00HFMOYA	Neck Moment Y	282.5	Nm	+	Chin toward sternum	3-324 HIII 5th FTSS.008
70	IF-205-287-MZ	13NECKUP00HFMOZA	Neck Moment Z	282.5	Nm	+	Chin toward left shoulder	3-324 HIII 5th FTSS.009
71	05G20-L01	13CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-324 HIII 5th FTSS.016
72	05I07-Z12	13CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-324 HIII 5th FTSS.017
73	05G15-L04	13CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-324 HIII 5th FTSS.018
74	CST324	13CHST0000HFDSXA	Chest Deflection X	100	mm	+	Forward	3-324 HIII 5th FTSS.019
75	P52157	13PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-324 HIII 5th FTSS.020
76	03E03D30-N18	13PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-324 HIII 5th FTSS.021
77	03E03E20-N13	13PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-324 HIII 5th FTSS.022

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
78	2121AJ-1520	13FEMRLL00HFFOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	3-324 HIII 5th FTSS.023
79	2121AJ-1521	13FEMRRL00HFFOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	3-324 HIII 5th FTSS.024
80	150-0121VR-033681	13KNSLLE00HFDSXA	Left Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	3-FLX017 & 018 VRTC.001
81	4825J-94-FX	13TIBILULXHFFOXA	Left Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX017 & 018 VRTC.002
82	4825J-94-FZ	13TIBILULXHFFOZA	Left Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX017 & 018 VRTC.003
83	4825J-94-MX	13TIBILULXHFMOXA	Left Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.004
84	4825J-94-MY	13TIBILULXHFMOYA	Left Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.005
85	06A04-R12	13TIBILELXHFACXA	Left Tibia Accel X	1000	g	+	Tibia forward	3-FLX017 & 018 VRTC.006
86	01G25-N04	13TIBILELXHFACYA	Left Tibia Accel Y	1000	g	+	Tibia right	3-FLX017 & 018 VRTC.007
87	4826J-105-FX	13TIBILLLXHFFOXA	Left Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX017 & 018 VRTC.008
88	4826J-105-FY	13TIBILLLXHFFOYA	Left Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX017 & 018 VRTC.009
89	4826J-105-FZ	13TIBILLLXHFFOZA	Left Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX017 & 018 VRTC.010
90	4826J-105-MX	13TIBILLLXHFMOXA	Left Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.011
91	4826J-105-MY	13TIBILLLXHFMOYA	Left Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.012
92	PD210-4B-7921-0407	13FOOTLELXHFANXA	Left Foot Angular Dis. X LX104X	318	°	-	Inversion	3-FLX017 & 018 VRTC.013
93	PD210-4B-7921-0392	13FOOTLELXHFANYA	Left Foot Angular Dis. Y LX104Y	318	°	+	Dorsiflexion	3-FLX017 & 018 VRTC.014
94	PD210-4B-7921-0408	13FOOTLELXHFANZA	Left Foot Angular Dis. Z LX104Z	318	°	-	Exernal rotation	3-FLX017 & 018 VRTC.015
95	05I07-Z14	13FOOTLELXHFACXA	Left Foot Accel X	1000	g	+	Foot forward	3-FLX017 & 018 VRTC.016
96	02I02I05-F09	13FOOTLELXHFACYA	Left Foot Accel Y	1000	g	+	Foot rightward	3-FLX017 & 018 VRTC.017
97	05I07-Z13	13FOOTLELXHFACZA	Left Foot Accel Z	1000	g	+	Foot down	3-FLX017 & 018 VRTC.018
98	150-0121VL-033650	13KNSLRI00HFDSXA	Right Knee Displacement X	40	°	-	Hold femur in place, tibia rearward	3-FLX017 & 018 VRTC.019

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
99	4825J-99-FX	13TIBIRULXHFFOXA	Right Upper Tibia Force X	8896	N	+	Tibia forward, knee rearward	3-FLX017 & 018 VRTC.020
100	4825J-99-FZ	13TIBIRULXHFFOZA	Right Upper Tibia Force Z	8896	N	+	Tibia downward, femur upward	3-FLX017 & 018 VRTC.021
101	4825J-99-MX	13TIBIRULXHFMOXA	Right Upper Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.022
102	4825J-99-MY	13TIBIRULXHFMOYA	Right Upper Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.023
103	05G20-L14	13TIBIRILXHFACXA	Right Tibia Accel X	1000	g	+	Tibia forward	3-FLX017 & 018 VRTC.024
104	98H13-F19	13TIBIRILXHFACYA	Right Tibia Accel Y	1000	g	+	Tibia right	3-FLX017 & 018 VRTC.025
105	4826J-106-FX	13TIBIRLLXHFFOXA	Right Lower Tibia Force X	8896	N	+	Ankle forward, knee rearward	3-FLX017 & 018 VRTC.026
106	4826J-106-FY	13TIBIRLLXHFFOYA	Right Lower Tibia Force Y	8896	N	+	Ankle rightward, knee leftward	3-FLX017 & 018 VRTC.027
107	4826J-106-FZ	13TIBIRLLXHFFOZA	Right Lower Tibia Force Z	8896	N	+	Ankle downward, knee upward	3-FLX017 & 018 VRTC.028
108	4826J-106-MX	13TIBIRLLXHFMOXA	Right Lower Tibia Moment X	282.5	Nm	+	Ankle leftward, hold knee in place	3-FLX017 & 018 VRTC.029
109	4826J-106-MY	13TIBIRLLXHFMOYA	Right Lower Tibia Moment Y	282.5	Nm	+	Ankle forward, hold knee in place	3-FLX017 & 018 VRTC.030
110	PD210-4B-7921-0398	13FOOTRILXHFANXA	Right Foot Angular Dis. X AK037X	318	°	-	Eversion	3-FLX017 & 018 VRTC.031
111	PD210-4B-7921-0400	13FOOTRILXHFANYA	Right Foot Angular Dis. Y AK225Y	317	°	+	Dorsiflexion	3-FLX017 & 018 VRTC.032
112	PD210-4B-7921-0399	13FOOTRILXHFANZA	Right Foot Angular Dis. Z AK039Z	318	°	-	Internal rotation	3-FLX017 & 018 VRTC.033
113	06A07-R14	13FOOTRILXHFACXA	Right Foot Accel X	1000	g	+	Foot forward	3-FLX017 & 018 VRTC.034
114	05G20-L12	13FOOTRILXHFACYA	Right Foot Accel Y	1000	g	+	Foot rightward	3-FLX017 & 018 VRTC.035
115	98H10-F03	13FOOTRILXHFACZA	Right Foot Accel Z	1000	g	+	Foot down	3-FLX017 & 018 VRTC.036
116	P54858	14CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
117	P47556	16CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	2000	g	+	Forward	
118	P54812	12ENGNTP0000ACXA	Top of Engine X-axis Acceleration	2000	g	-	Rearward	
119	P47554	12ENGNBO0000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	
120	P54811	13VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
121	P47574	11VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	-	Rearward	
122	P47553	12DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
123	P47572	11PEAC000000ACXA	Toe Pan Accelerator X-axis acceleration	2000	g	+	Forward	
124	P54819	11PEAC000000ACZA	Toe Pan Accelerator Z-axis acceleration	2000	g	-	Upward	
125	P50913	11VEHC000001ACXA	Toe Pan footrest X-axis acceleration	2000	g	+	Forward	
126	P49333	11VEHC000001ACZA	Toe Pan footrest Z-axis acceleration	2000	g	-	Upward	

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
127	P47544	15TUNNCY0000ACXA	Rear Tunnel center X-axis acceleration	1000	g	+	Forward	
128	P54531	10VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
129	p54422	10VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	-	Leftward	
130	P54768	10VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
131	P54230	18VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
132	P54555	18VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
133	P54330	18VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	-	Upward	
134	A23305	11SEBA0000B5DS0A	Driver lap belt spool (SP 03)	635	mm	+	Tension	
135	K1506282A	11SEBA0000B3DS0A	Driver shoulder belt spool and retraction (SP 04)	1270	mm	+	Tension	
136	K1506281A	13SEBA0000B5DS0A	RF Pass lap belt spool (5S)	635	mm	+	Tension	
137	43373	13SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction	750	mm	+	Tension	
138	ABFire1	11AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND (IP 25)	5	V	+	Bipolar	
139	ABFire2	11AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND (IP 11)	5	V	+	Bipolar	
140	ABFire3	13AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND (IP 09)	5	V	+	Bipolar	
141	ABFire4	13AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND (IP 28)	5	V	+	Bipolar	

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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	21HEADCGRDH3ACXA	Target Vehicle Driver Head X-Axis Acceleration Redundant	1000	+	yes	1000
5	21HEADCGRDH3ACYA	Target Vehicle Driver Head Y-Axis Acceleration Redundant	1000	+	yes	1000
6	21HEADCGRDH3ACZA	Target Vehicle Driver Head Z-Axis Acceleration Redundant	1000	+	yes	1000
6A	21HEADCGRDH3ACRA	Target Vehicle Driver Head Resultant Acceleration Redundant	1000			
7	21NECKUP00H3FOXA	Target Vehicle Driver Neck X-Axis Force	1000	+	yes	8896
8	21NECKUP00H3FOYA	Target Vehicle Driver Neck Y-Axis Force	1000	+	yes	8896
9	21NECKUP00H3FOZA	Target Vehicle Driver Neck Z-Axis Force	1000	+	yes	13344
10	21NECKUP00H3MOXA	Target Vehicle Driver Neck Moment About X Axis	600	+	yes	282.5
11	21NECKUP00H3MOYA	Target Vehicle Driver Neck Moment About Y Axis	600	+	yes	282.5
12	21NECKUP00H3MOZA	Target Vehicle Driver Neck Moment About Z Axis	600	+	yes	282.5
13	21CHSTCG00H3ACXA	Target Vehicle Driver Chest X-Axis Acceleration	180	+	yes	1000
14	21CHSTCG00H3ACYA	Target Vehicle Driver Chest Y-Axis Acceleration	180	+	yes	1000
15	21CHSTCG00H3ACZA	Target Vehicle Driver Chest Z-Axis Acceleration	180	+	yes	1000
15A	21CHSTCG00H3ACRA	Target Vehicle Driver Chest Resultant Acceleration	180			
16	21CHSTCGRDH3ACXA	Target Vehicle Driver Chest X-Axis Acceleration Redundant	180	+	yes	1000
17	21CHSTCGRDH3ACYA	Target Vehicle Driver Chest Y-Axis Acceleration Redundant	180	+	yes	1000
18	21CHSTCGRDH3ACZA	Target Vehicle Driver Chest Z-Axis Acceleration Redundant	180	+	yes	1000
18A	21CHSTCGRDH3ACRA	Target Vehicle Driver Chest Resultant Acceleration Redundant	180			
19	21CHST0000H3DSXA	Target Vehicle Driver Chest X-Axis Displacement	600	+	yes	100
20	21PELVCG00H3ACXA	Target Vehicle Driver Pelvis X-Axis Acceleration	1000	+	yes	600
21	21PELVCG00H3ACYA	Target Vehicle Driver Pelvis Y-Axis Acceleration	1000	+	yes	600
22	21PELVCG00H3ACZA	Target Vehicle Driver Pelvis Z-Axis Acceleration	1000	+	yes	600
22A	21PELVCG00H3ACRA	Target Vehicle Driver Pelvis Resultant Acceleration	1000			
23	21FEMRLL00H3FOZA	Target Vehicle Driver Left Femur Z-Axis Force	600	+	yes	13344
24	21FEMRRL00H3FOZA	Target Vehicle Driver Right Femur Z-Axis Force	600	+	yes	13344
25	21KNSLLE00H3DSXA	Target Vehicle Driver Left Knee X-Axis Displacement	180	+	yes	40
26	21TIBILULXH3FOXA	Target Vehicle Driver Left Upper Tibia X-Axis Force	600	+	yes	11120
27	21TIBILULXH3FOZA	Target Vehicle Driver Left Upper Tibia Z-Axis Force	600	+	yes	11120.5
28	21TIBILULXH3MOXA	Target Vehicle Driver Left Upper Tibia Moment About X Axis	600	+	yes	395.4
29	21TIBILULXH3MOYA	Target Vehicle Driver Left Upper Tibia Moment About Y Axis	600	+	yes	395.4
30	21TIBILELXH3ACXA	Target Vehicle Driver Left Tibia X-Axis Acceleration	1000	+	yes	1000
31	21TIBILELXH3ACYA	Target Vehicle Driver Left Tibia Y-Axis Acceleration	1000	+	yes	1000
32	21TIBILLLXH3FOXA	Target Vehicle Driver Left Lower Tibia X-Axis Force	600	+	yes	11120.5

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Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
33	21TIBILLLXH3FOYA	Target Vehicle Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120.5
34	21TIBILLLXH3FOZA	Target Vehicle Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120.5
35	21TIBILLLXH3MOXA	Target Vehicle Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
36	21TIBILLLXH3MOYA	Target Vehicle Driver Left Lower Tibia Moment About Y Axis	600	+	yes	395.4
37	21FOOTLELXH3ANXA	Target Vehicle Driver Left Foot X-Axis Angular Displacement	180	+	no	318
38	21FOOTLELXH3ANYA	Target Vehicle Driver Left Foot Y-Axis Angular Displacement	180	+	no	318
39	21FOOTLELXH3ANZA	Target Vehicle Driver Left Foot Z-Axis Angular Displacement	180	+	no	318
40	21FOOTLELXH3ACXA	Target Vehicle Driver Left Foot X-Axis Acceleration	1000	+	yes	1000
41	21FOOTLELXH3ACYA	Target Vehicle Driver Left Foot Y-Axis Acceleration	1000	+	yes	1000
42	21FOOTLELXH3ACZA	Target Vehicle Driver Left Foot Z-Axis Acceleration	1000	+	yes	1000
42A	21FOOTLELXH3ACRA	Target Vehicle Driver Left Foot Resultant Acceleration	1000			
43	21KNSLRI00H3DSXA	Target Vehicle Driver Right Knee X-Axis Displacement	180	+	yes	40
44	21TIBIRULXH3FOXA	Target Vehicle Driver Right Upper Tibia X-Axis Force	600	+	yes	11120.5
45	21TIBIRULXH3FOZA	Target Vehicle Driver Right Upper Tibia Z-Axis Force	600	+	yes	11120.5
46	21TIBIRULXH3MOXA	Target Vehicle Driver Right Upper Tibia Moment About X Axis	600	+	yes	395.4
47	21TIBIRULXH3MOYA	Target Vehicle Driver Right Upper Tibia Moment About Y Axis	600	+	yes	395.4
48	21TIBIRILXH3ACXA	Target Vehicle Driver Right Tibia X-Axis Acceleration	1000	+	yes	1000
49	21TIBIRILXH3ACYA	Target Vehicle Driver Right Tibia Y-Axis Acceleration	1000	+	yes	1000
50	21TIBIRLLXH3FOXA	Target Vehicle Driver Right Lower Tibia X-Axis Force	600	+	yes	11120.5
51	21TIBIRLLXH3FOYA	Target Vehicle Driver Right Lower Tibia Y-Axis Force	600	+	yes	11120.5
52	21TIBIRLLXH3FOZA	Target Vehicle Driver Right Lower Tibia Z-Axis Force	600	+	yes	11120.5
53	21TIBIRLLXH3MOXA	Target Vehicle Driver Right Lower Tibia Moment About X Axis	600	+	yes	395.4
54	21TIBIRLLXH3MOYA	Target Vehicle Driver Right Lower Tibia Moment About Y Axis	600	+	yes	395.4
55	21FOOTRILXH3ANXA	Target Vehicle Driver Right Foot X-Axis Angular Displacement	180	+	no	318
56	21FOOTRILXH3ANYA	Target Vehicle Driver Right Foot Y-Axis Angular Displacement	180	+	no	318
57	21FOOTRILXH3ANZA	Target Vehicle Driver Right Foot Z-Axis Angular Displacement	180	+	no	318
58	21FOOTRILXH3ACXA	Target Vehicle Driver Right Foot X-Axis Acceleration	1000	+	yes	1000
59	21FOOTRILXH3ACYA	Target Vehicle Driver Right Foot Y-Axis Acceleration	1000	+	yes	1000
60	21FOOTRILXH3ACZA	Target Vehicle Driver Right Foot Z-Axis Acceleration	1000	+	yes	1000
60A	21FOOTRILXH3ACRA	Target Vehicle Driver Right Foot Resultant Acceleration	1000			
61	23HEADCG00HFACXA	Target Vehicle Passenger Head X-Axis Acceleration	1000	+	yes	1000
62	23HEADCG00HFACYA	Target Vehicle Passenger Head Y-Axis Acceleration	1000	+	yes	1000
63	23HEADCG00HFACZA	Target Vehicle Passenger Head Z-Axis Acceleration	1000	+	yes	1000
63A	23HEADCG00HFACRA	Target Vehicle Passenger Head Resultant Acceleration	1000			
64	23HEADCGRDHFACXA	Target Vehicle Passenger Head X-Axis Acceleration Redundant	1000	+	yes	1000
65	23HEADCGRDHFACYA	Target Vehicle Passenger Head Y-Axis Acceleration Redundant	1000	+	yes	1000
66	23HEADCGRDHFACZA	Target Vehicle Passenger Head Z-Axis Acceleration Redundant	1000	+	yes	1000

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Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
66A	23HEADCGRDHFACRA	Target Vehicle Passenger Head Resultant Acceleration Redundant	1000			
67	23NECKUP00HFFOXA	Target Vehicle Passenger Neck X-Axis Force	1000	+	yes	8896
68	23NECKUP00HFFOYA	Target Vehicle Passenger Neck Y-Axis Force	1000	+	yes	8896
69	23NECKUP00HFFOZA	Target Vehicle Passenger Neck Z-Axis Force	1000	+	yes	13344
70	23NECKUP00HFMOXA	Target Vehicle Passenger Neck Moment About X Axis	600	+	yes	282.5
71	23NECKUP00HFMOYA	Target Vehicle Passenger Neck Moment About Y Axis	600	+	yes	282.5
72	23NECKUP00HFMOZA	Target Vehicle Passenger Neck Moment About Z Axis	600	+	yes	282.5
73	23CHSTCG00HFACXA	Target Vehicle Passenger Chest X-Axis Acceleration	180	+	yes	1000
74	23CHSTCG00HFACYA	Target Vehicle Passenger Chest Y-Axis Acceleration	180	+	yes	1000
75	23CHSTCG00HFACZA	Target Vehicle Passenger Chest Z-Axis Acceleration	180	+	yes	1000
75A	23CHSTCG00HFACRA	Target Vehicle Passenger Chest Resultant Acceleration	180			
76	23CHSTCGRDHFACXA	Target Vehicle Passenger Chest X-Axis Acceleration Redundant	180	+	yes	1000
77	23CHSTCGRDHFACYA	Target Vehicle Passenger Chest Y-Axis Acceleration Redundant	180	+	yes	1000
78	23CHSTCGRDHFACZA	Target Vehicle Passenger Chest Z-Axis Acceleration Redundant	180	+	yes	1000
78A	23CHSTCGRDHFACRA	Target Vehicle Passenger Chest Resultant Acceleration Redundant	180			
79	23CHST0000HFDSXA	Target Vehicle Passenger Chest X-Axis Displacement	600	+	yes	100
80	23PELVCG00HFACXA	Target Vehicle Passenger Pelvis X-Axis Acceleration	1000	+	yes	1000
81	23PELVCG00HFACYA	Target Vehicle Passenger Pelvis Y-Axis Acceleration	1000	+	yes	1000
82	23PELVCG00HFACZA	Target Vehicle Passenger Pelvis Z-Axis Acceleration	1000	+	yes	1000
82A	23PELVCG00HFACRA	Target Vehicle Passenger Pelvis Resultant Acceleration	1000			
83	23FEMRLL00HFFOZA	Target Vehicle Passenger Left Femur Z-Axis Force	600	+	yes	13344
84	23FEMRRL00HFFOZA	Target Vehicle Passenger Right Femur Z-Axis Force	600	+	yes	13344
85	23KNSLLE00HFDSXA	Target Vehicle Passenger Left Knee X-Axis Displacement	180	+	yes	40
86	23TIBILUFXHFFOXA	Target Vehicle Passenger Left Upper Tibia X-Axis Force	600	+	yes	8896
87	23TIBILUFXHFFOZA	Target Vehicle Passenger Left Upper Tibia Z-Axis Force	600	+	yes	8896
88	23TIBILUFXHFMOXA	Target Vehicle Passenger Left Upper Tibia Moment About X Axis	600	+	yes	282.5
89	23TIBILUFXHFMOYA	Target Vehicle Passenger Left Upper Tibia Moment About Y Axis	600	+	yes	282.5
90	23TIBILEFXHFACXA	Target Vehicle Passenger Left Tibia X-Axis Acceleration	1000	+	yes	1000
91	23TIBILEFXHFACYA	Target Vehicle Passenger Left Tibia Y-Axis Acceleration	1000	+	yes	1000
92	23TIBILLFXHFFOXA	Target Vehicle Passenger Left Lower Tibia X-Axis Force	600	+	yes	8896
93	23TIBILLFXHFFOYA	Target Vehicle Passenger Left Lower Tibia Y-Axis Force	600	+	yes	8896
94	23TIBILLFXHFFOZA	Target Vehicle Passenger Left Lower Tibia Z-Axis Force	600	+	yes	8896
95	23TIBILLFXHFMOXA	Target Vehicle Passenger Left Lower Tibia Moment About X Axis	600	+	yes	282.5
96	23TIBILLFXHFMOYA	Target Vehicle Passenger Left Lower Tibia Moment About Y Axis	600	+	yes	282.5
97	23FOOTLEFXHFANXA	Target Vehicle Passenger Left Foot X-Axis Angular Displacement	180	+	no	318
98	23FOOTLEFXHFANYA	Target Vehicle Passenger Left Foot Y-Axis Angular Displacement	180	+	no	318
99	23FOOTLEFXHFANZA	Target Vehicle Passenger Left Foot Z-Axis Angular Displacement	180	+	no	318

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Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
100	23FOOTLEFXHFACXA	Target Vehicle Passenger Left Foot X-Axis Acceleration	1000	+	yes	1000
101	23FOOTLEFXHFACYA	Target Vehicle Passenger Left Foot Y-Axis Acceleration	1000	+	yes	1000
102	23FOOTLEFXHFACZA	Target Vehicle Passenger Left Foot Z-Axis Acceleration	1000	+	yes	1000
102A	23FOOTLEFXHFACRA	Target Vehicle Passenger Left Foot Resultant Acceleration	1000			
103	23KNSLRI00HFDSXA	Target Vehicle Passenger Right Knee X-Axis Displacement	180	+	yes	40
104	23TIBIRUFXHFFOXA	Target Vehicle Passenger Right Upper Tibia X-Axis Force	600	+	yes	8896
105	23TIBIRUFXHFFOZA	Target Vehicle Passenger Right Upper Tibia Z-Axis Force	600	+	yes	8896
106	23TIBIRUFXHFMOXA	Target Vehicle Passenger Right Upper Tibia Moment About X Axis	600	+	yes	282.5
107	23TIBIRUFXHFMOYA	Target Vehicle Passenger Right Upper Tibia Moment About Y Axis	600	+	yes	282.5
108	23TIBIRIFXHFACXA	Target Vehicle Passenger Right Tibia X-Axis Acceleration	1000	+	yes	1000
109	23TIBIRIFXHFACYA	Target Vehicle Passenger Right Tibia Y-Axis Acceleration	1000	+	yes	1000
110	23TIBIRLFXHFFOXA	Target Vehicle Passenger Right Lower Tibia X-Axis Force	600	+	yes	8896
111	23TIBIRLFXHFFOYA	Target Vehicle Passenger Right Lower Tibia Y-Axis Force	600	+	yes	8896
112	23TIBIRLFXHFFOZA	Target Vehicle Passenger Right Lower Tibia Z-Axis Force	600	+	yes	8896
113	23TIBIRLFXHFMOXA	Target Vehicle Passenger Right Lower Tibia Moment About X Axis	600	+	yes	282.5
114	23TIBIRLFXHFMOYA	Target Vehicle Passenger Right Lower Tibia Moment About Y Axis	600	+	yes	282.5
115	23FOOTRIFXHFANXA	Target Vehicle Passenger Right Foot X-Axis Angular Displacement	180	+	no	318
116	23FOOTRIFXHFANYA	Target Vehicle Passenger Right Foot Y-Axis Angular Displacement	180	+	no	318
117	23FOOTRIFXHFANZA	Target Vehicle Passenger Right Foot Z-Axis Angular Displacement	180	+	no	318
118	23FOOTRIFXHFACXA	Target Vehicle Passenger Right Foot X-Axis Acceleration	1000	+	yes	1000
119	23FOOTRIFXHFACYA	Target Vehicle Passenger Right Foot Y-Axis Acceleration	1000	+	yes	1000
120	23FOOTRIFXHFACZA	Target Vehicle Passenger Right Foot Z-Axis Acceleration	1000	+	yes	1000
120A	23FOOTRIFXHFACRA	Target Vehicle Passenger Right Foot Resultant Acceleration	1000			
121	24CRME000000ACXA	Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
122	26CRME000000ACXA	Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
123	22ENGNTP0000ACXA	Target Vehicle Top of Engine X-Axis Acceleration	60	+	yes	2000
124	22ENGNBO0000ACXA	Target Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000
125	23VEHCRI0000ACXA	Target Vehicle Right Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
126	21VEHCLE0000ACXA	Target Vehicle Left Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
127	22DASH000000ACXA	Target Vehicle Dash Center X-Axis Acceleration	60	+	yes	1500
128	21PEAC000000ACXA	Target Vehicle Toe Pan Accelerator X-Axis Acceleration	60	+	yes	2000
129	21PEAC000000ACZA	Target Vehicle Toe Pan Accelerator Z-Axis Acceleration	60	+	yes	2000
130	21VEHC000001ACXA	Target Vehicle Toe Pan Footrest X-Axis Acceleration	60	+	yes	2000
131	21VEHC000001ACZA	Target Vehicle Toe Pan Footrest Z-Axis Acceleration	60	+	yes	2000
132	25TUNNCY0000ACXA	Target Vehicle Rear Tunnel Center X-Axis Acceleration	60	+	yes	1000
133	20VEHCCG0000ACXA	Target Vehicle CG X-Axis Acceleration	60	+	yes	1500
133A	20VEHCCG0000VEXC	Target Vehicle CG X-Axis Velocity	180			

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Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
133B	20VEHCCG0000DCXC	Target Vehicle CG X-Axis Displacement	180			
134	20VEHCCG0000ACYA	Target Vehicle CG Y-Axis Acceleration	60	+	yes	1500
134A	20VEHCCG0000VEYC	Target Vehicle CG Y-Axis Velocity	180			
134B	20VEHCCG0000DCYC	Target Vehicle CG Y-Axis Displacement	180			
135	20VEHCCG0000ACZA	Target Vehicle CG Z-Axis Acceleration	60	+	yes	1500
135A	20VEHCCG0000VEZC	Target Vehicle CG Z-Axis Velocity	180			
135B	20VEHCCG0000DCZC	Target Vehicle CG Z-Axis Displacement	180			
135C	20VEHCCG0000ACRA	Target Vehicle CG Resultant Acceleration	60			
136	28VEHC000000ACXA	Target Vehicle Rear Deck X-Axis Acceleration	60	+	yes	1000
137	28VEHC000000ACYA	Target Vehicle Rear Deck Y-Axis Acceleration	60	+	yes	1000
138	28VEHC000000ACZA	Target Vehicle Rear Deck Z-Axis Acceleration	60	+	yes	1000
138A	28VEHC000000ACRA	Target Vehicle Rear Deck Resultant Acceleration	60			
139	21SEBA0000B5DS0A	Target Vehicle Driver Lap Belt Spool	1000	+	yes	1270
140	21SEBA0000B3DS0A	Target Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	750
141	23SEBA0000B5DS0A	Target Vehicle Passenger Lap Belt Spool	1000	+	yes	635
142	23SEBA0000B3DS0A	Target Vehicle Passenger Shoulder Belt Spool and Retraction	1000	+	yes	750
143	21AIRBFR0100EV0A	Target Vehicle Driver Front Airbag 1 Inductor	1000	+	no	5
144	21AIRBFR0200EV0A	Target Vehicle Driver Front Airbag 2 Inductor	1000	+	no	5
145	23AIRBFR0100EV0A	Target Vehicle Passenger Front Airbag 1 Inductor	1000	+	no	5
146	23AIRBFR0200EV0A	Target Vehicle Passenger Front Airbag 2 Inductor	1000	+	no	5
147	11HEADCG00H3ACXA	Bullet Vehicle Driver Head X-Axis Acceleration	1000	+	yes	1000
148	11HEADCG00H3ACYA	Bullet Vehicle Driver Head Y-Axis Acceleration	1000	+	yes	1000
149	11HEADCG00H3ACZA	Bullet Vehicle Driver Head Z-Axis Acceleration	1000	+	yes	1000
149A	11HEADCG00H3ACRA	Bullet Vehicle Driver Head Resultant Acceleration	1000			
150	11HEADCGRDH3ACXA	Bullet Vehicle Driver Head X-Axis Acceleration Redundant	1000	+	yes	1000
151	11HEADCGRDH3ACYA	Bullet Vehicle Driver Head Y-Axis Acceleration Redundant	1000	+	yes	1000
152	11HEADCGRDH3ACZA	Bullet Vehicle Driver Head Z-Axis Acceleration Redundant	1000	+	yes	1000
152A	11HEADCGRDH3ACRA	Bullet Vehicle Driver Head Resultant Acceleration Redundant	1000			
153	11NECKUP00H3FOXA	Bullet Vehicle Driver Neck X-Axis Force	1000	+	yes	8896
154	11NECKUP00H3FOYA	Bullet Vehicle Driver Neck Y-Axis Force	1000	+	yes	8896
155	11NECKUP00H3FOZA	Bullet Vehicle Driver Neck Z-Axis Force	1000	+	yes	13344
156	11NECKUP00H3MOXA	Bullet Vehicle Driver Neck Moment About X Axis	600	+	yes	282.5
157	11NECKUP00H3MOYA	Bullet Vehicle Driver Neck Moment About Y Axis	600	+	yes	282.5
158	11NECKUP00H3MOZA	Bullet Vehicle Driver Neck Moment About Z Axis	600	+	yes	282.5
159	11CHSTCG00H3ACXA	Bullet Vehicle Driver Chest X-Axis Acceleration	180	+	yes	1000
160	11CHSTCG00H3ACYA	Bullet Vehicle Driver Chest Y-Axis Acceleration	180	+	yes	1000
161	11CHSTCG00H3ACZA	Bullet Vehicle Driver Chest Z-Axis Acceleration	180	+	yes	1000

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Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
161A	11CHSTCG00H3ACRA	Bullet Vehicle Driver Chest Resultant Acceleration	180			
162	11CHSTCGRDH3ACXA	Bullet Vehicle Driver Chest X-Axis Acceleration Redundant	180	+	yes	1000
163	11CHSTCGRDH3ACYA	Bullet Vehicle Driver Chest Y-Axis Acceleration Redundant	180	+	yes	1000
164	11CHSTCGRDH3ACZA	Bullet Vehicle Driver Chest Z-Axis Acceleration Redundant	180	+	yes	1000
164A	11CHSTCGRDH3ACRA	Bullet Vehicle Driver Chest Resultant Acceleration Redundant	180			
165	11CHST0000H3DSXA	Bullet Vehicle Driver Chest X-Axis Displacement	600	+	yes	100
166	11PELVCG00H3ACXA	Bullet Vehicle Driver Pelvis X-Axis Acceleration	1000	+	yes	600
167	11PELVCG00H3ACYA	Bullet Vehicle Driver Pelvis Y-Axis Acceleration	1000	+	yes	600
168	11PELVCG00H3ACZA	Bullet Vehicle Driver Pelvis Z-Axis Acceleration	1000	+	yes	600
168A	11PELVCG00H3ACRA	Bullet Vehicle Driver Pelvis Resultant Acceleration	1000			
169	11FEMRLL00H3FOZA	Bullet Vehicle Driver Left Femur Z-Axis Force	600	+	yes	13344
170	11FEMRRL00H3FOZA	Bullet Vehicle Driver Right Femur Z-Axis Force	600	+	yes	13344
171	11KNSLLE00H3DSXA	Bullet Vehicle Driver Left Knee X-Axis Displacement	180	+	yes	40
172	11TIBILULXH3FOXA	Bullet Vehicle Driver Left Upper Tibia X-Axis Force	600	+	yes	11120
173	11TIBILULXH3FOZA	Bullet Vehicle Driver Left Upper Tibia Z-Axis Force	600	+	yes	11120.5
174	11TIBILULXH3MOXA	Bullet Vehicle Driver Left Upper Tibia Moment About X Axis	600	+	yes	395.4
175	11TIBILULXH3MOYA	Bullet Vehicle Driver Left Upper Tibia Moment About Y Axis	600	+	yes	395.4
176	11TIBILELXH3ACXA	Bullet Vehicle Driver Left Tibia X-Axis Acceleration	1000	+	yes	1000
177	11TIBILELXH3ACYA	Bullet Vehicle Driver Left Tibia Y-Axis Acceleration	1000	+	yes	1000
178	11TIBILLLXH3FOXA	Bullet Vehicle Driver Left Lower Tibia X-Axis Force	600	+	yes	11120.5
179	11TIBILLLXH3FOYA	Bullet Vehicle Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120.5
180	11TIBILLLXH3FOZA	Bullet Vehicle Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120.5
181	11TIBILLLXH3MOXA	Bullet Vehicle Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
182	11TIBILLLXH3MOYA	Bullet Vehicle Driver Left Lower Tibia Moment About Y Axis	600	+	yes	395.4
183	11FOOTLELXH3ANXA	Bullet Vehicle Driver Left Foot X-Axis Angular Displacement	180	+	no	318
184	11FOOTLELXH3ANYA	Bullet Vehicle Driver Left Foot Y-Axis Angular Displacement	180	+	no	318
185	11FOOTLELXH3ANZA	Bullet Vehicle Driver Left Foot Z-Axis Angular Displacement	180	+	no	318
186	11FOOTLELXH3ACXA	Bullet Vehicle Driver Left Foot X-Axis Acceleration	1000	+	yes	1000
187	11FOOTLELXH3ACYA	Bullet Vehicle Driver Left Foot Y-Axis Acceleration	1000	+	yes	1000
188	11FOOTLELXH3ACZA	Bullet Vehicle Driver Left Foot Z-Axis Acceleration	1000	+	yes	1000
188A	11FOOTLELXH3ACRA	Bullet Vehicle Driver Left Foot Resultant Acceleration	1000			
189	11KNSLRI00H3DSXA	Bullet Vehicle Driver Right Knee X-Axis Displacement	180	+	yes	40
190	11TIBIRULXH3FOXA	Bullet Vehicle Driver Right Upper Tibia X-Axis Force	600	+	yes	11120.5
191	11TIBIRULXH3FOZA	Bullet Vehicle Driver Right Upper Tibia Z-Axis Force	600	+	yes	11120.5
192	11TIBIRULXH3MOXA	Bullet Vehicle Driver Right Upper Tibia Moment About X Axis	600	+	yes	395.4
193	11TIBIRULXH3MOYA	Bullet Vehicle Driver Right Upper Tibia Moment About Y Axis	600	+	yes	395.4
194	11TIBIRILXH3ACXA	Bullet Vehicle Driver Right Tibia X-Axis Acceleration	1000	+	yes	1000

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Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
195	11TIBIRILXH3ACYA	Bullet Vehicle Driver Right Tibia Y-Axis Acceleration	1000	+	yes	1000
196	11TIBIRLLXH3FOXA	Bullet Vehicle Driver Right Lower Tibia X-Axis Force	600	+	yes	11120.5
197	11TIBIRLLXH3FOYA	Bullet Vehicle Driver Right Lower Tibia Y-Axis Force	600	+	yes	11120.5
198	11TIBIRLLXH3FOZA	Bullet Vehicle Driver Right Lower Tibia Z-Axis Force	600	+	yes	11120.5
199	11TIBIRLLXH3MOXA	Bullet Vehicle Driver Right Lower Tibia Moment About X Axis	600	+	yes	395.4
200	11TIBIRLLXH3MOYA	Bullet Vehicle Driver Right Lower Tibia Moment About Y Axis	600	+	yes	395.4
201	11FOOTRILXH3ANXA	Bullet Vehicle Driver Right Foot X-Axis Angular Displacement	180	+	no	318
202	11FOOTRILXH3ANYA	Bullet Vehicle Driver Right Foot Y-Axis Angular Displacement	180	+	no	318
203	11FOOTRILXH3ANZA	Bullet Vehicle Driver Right Foot Z-Axis Angular Displacement	180	+	no	318
204	11FOOTRILXH3ACXA	Bullet Vehicle Driver Right Foot X-Axis Acceleration	1000	+	yes	1000
205	11FOOTRILXH3ACYA	Bullet Vehicle Driver Right Foot Y-Axis Acceleration	1000	+	yes	1000
206	11FOOTRILXH3ACZA	Bullet Vehicle Driver Right Foot Z-Axis Acceleration	1000	+	yes	1000
206A	11FOOTRILXH3ACRA	Bullet Vehicle Driver Right Foot Resultant Acceleration	1000			
207	13HEADCG00HFACXA	Bullet Vehicle Passenger Head X-Axis Acceleration	1000	+	yes	1000
208	13HEADCG00HFACYA	Bullet Vehicle Passenger Head Y-Axis Acceleration	1000	+	yes	1000
209	13HEADCG00HFACZA	Bullet Vehicle Passenger Head Z-Axis Acceleration	1000	+	yes	1000
209A	13HEADCG00HFACRA	Bullet Vehicle Passenger Head Resultant Acceleration	1000			
210	13NECKUP00HFFOXA	Bullet Vehicle Passenger Neck X-Axis Force	1000	+	yes	8896
211	13NECKUP00HFFOYA	Bullet Vehicle Passenger Neck Y-Axis Force	1000	+	yes	8896
212	13NECKUP00HFFOZA	Bullet Vehicle Passenger Neck Z-Axis Force	1000	+	yes	13344
213	13NECKUP00HFMOXA	Bullet Vehicle Passenger Neck Moment About X Axis	600	+	yes	282.5
214	13NECKUP00HFMOYA	Bullet Vehicle Passenger Neck Moment About Y Axis	600	+	yes	282.5
215	13NECKUP00HFMOZA	Bullet Vehicle Passenger Neck Moment About Z Axis	600	+	yes	282.5
216	13CHSTCG00HFACXA	Bullet Vehicle Passenger Chest X-Axis Acceleration	180	+	yes	1000
217	13CHSTCG00HFACYA	Bullet Vehicle Passenger Chest Y-Axis Acceleration	180	+	yes	1000
218	13CHSTCG00HFACZA	Bullet Vehicle Passenger Chest Z-Axis Acceleration	180	+	yes	1000
218A	13CHSTCG00HFACRA	Bullet Vehicle Passenger Chest Resultant Acceleration	180			
219	13CHST0000HFDSXA	Bullet Vehicle Passenger Chest X-Axis Displacement	600	+	yes	100
220	13PELVCG00HFACXA	Bullet Vehicle Passenger Pelvis X-Axis Acceleration	1000	+	yes	1000
221	13PELVCG00HFACYA	Bullet Vehicle Passenger Pelvis Y-Axis Acceleration	1000	+	yes	1000
222	13PELVCG00HFACZA	Bullet Vehicle Passenger Pelvis Z-Axis Acceleration	1000	+	yes	1000
222A	13PELVCG00HFACRA	Bullet Vehicle Passenger Pelvis Resultant Acceleration	1000			
223	13FEMRLL00HFFOZA	Bullet Vehicle Passenger Left Femur Z-Axis Force	600	+	yes	13344
224	13FEMRRL00HFFOZA	Bullet Vehicle Passenger Right Femur Z-Axis Force	600	+	yes	13344
225	13KNSLLE00HFDSXA	Bullet Vehicle Passenger Left Knee X-Axis Displacement	180	+	yes	40
226	13TIBILUFXHFFOXA	Bullet Vehicle Passenger Left Upper Tibia X-Axis Force	600	+	yes	8896
227	13TIBILUFXHFFOZA	Bullet Vehicle Passenger Left Upper Tibia Z-Axis Force	600	+	yes	8896

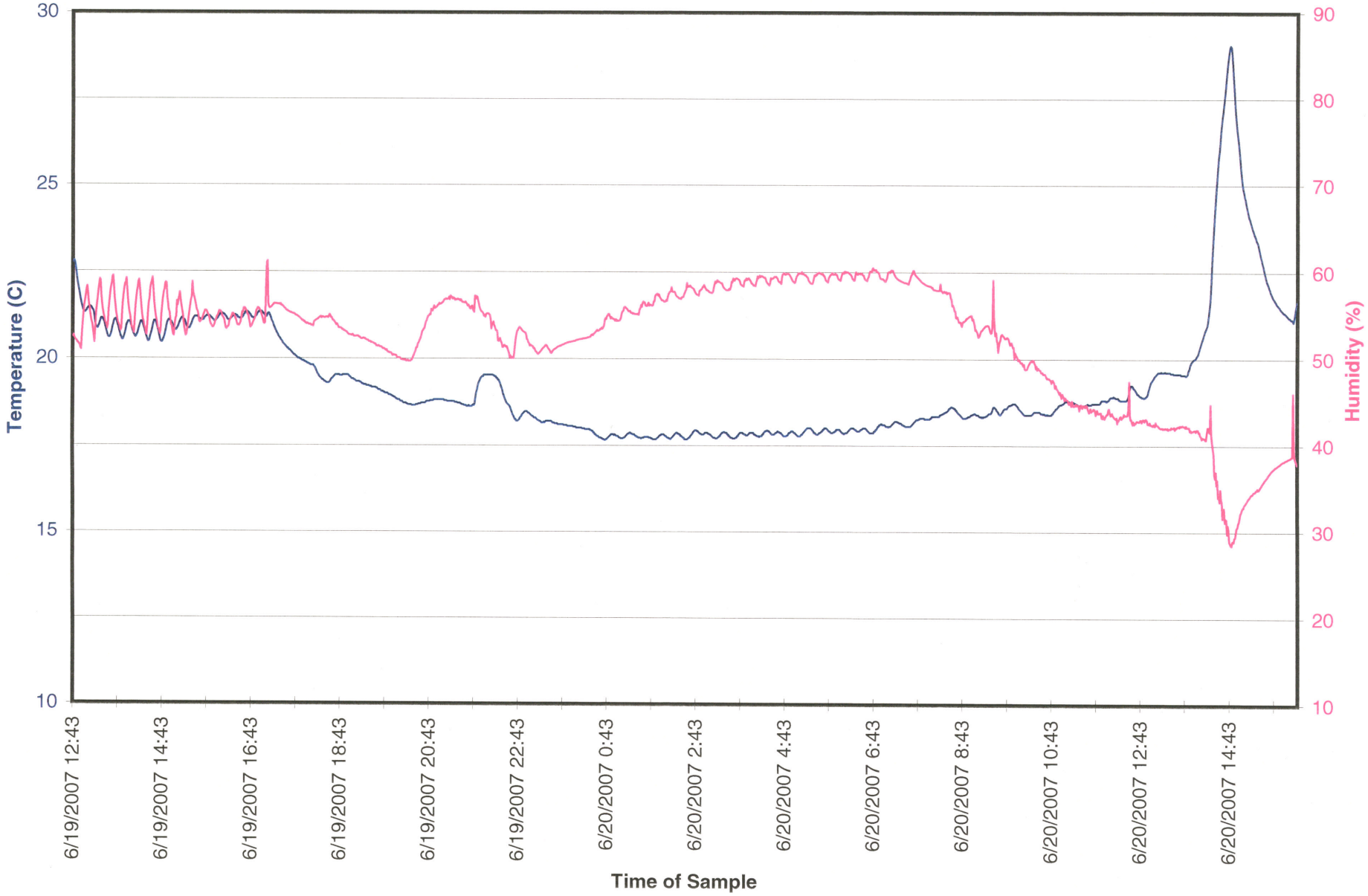
Command File Test Number 070620

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
228	13TIBILUFXHFMOXA	Bullet Vehicle Passenger Left Upper Tibia Moment About X Axis	600	+	yes	282.5
229	13TIBILUFXHFMOYA	Bullet Vehicle Passenger Left Upper Tibia Moment About Y Axis	600	+	yes	282.5
230	13TIBILEFXHFACXA	Bullet Vehicle Passenger Left Tibia X-Axis Acceleration	1000	+	yes	1000
231	13TIBILEFXHFACYA	Bullet Vehicle Passenger Left Tibia Y-Axis Acceleration	1000	+	yes	1000
232	13TIBILLFXHFFOXA	Bullet Vehicle Passenger Left Lower Tibia X-Axis Force	600	+	yes	8896
233	13TIBILLFXHFFOYA	Bullet Vehicle Passenger Left Lower Tibia Y-Axis Force	600	+	yes	8896
234	13TIBILLFXHFFOZA	Bullet Vehicle Passenger Left Lower Tibia Z-Axis Force	600	+	yes	8896
235	13TIBILLFXHFMOXA	Bullet Vehicle Passenger Left Lower Tibia Moment About X Axis	600	+	yes	282.5
236	13TIBILLFXHFMOYA	Bullet Vehicle Passenger Left Lower Tibia Moment About Y Axis	600	+	yes	282.5
237	13FOOTLEFXHFANXA	Bullet Vehicle Passenger Left Foot X-Axis Angular Displacement	180	+	no	318
238	13FOOTLEFXHFANYA	Bullet Vehicle Passenger Left Foot Y-Axis Angular Displacement	180	+	no	318
239	13FOOTLEFXHFANZA	Bullet Vehicle Passenger Left Foot Z-Axis Angular Displacement	180	+	no	318
240	13FOOTLEFXHFACXA	Bullet Vehicle Passenger Left Foot X-Axis Acceleration	1000	+	yes	1000
241	13FOOTLEFXHFACYA	Bullet Vehicle Passenger Left Foot Y-Axis Acceleration	1000	+	yes	1000
242	13FOOTLEFXHFACZA	Bullet Vehicle Passenger Left Foot Z-Axis Acceleration	1000	+	yes	1000
242A	13FOOTLEFXHFACRA	Bullet Vehicle Passenger Left Foot Resultant Acceleration	1000			
243	13KNSLRI00HFDSXA	Bullet Vehicle Passenger Right Knee X-Axis Displacement	180	+	yes	40
244	13TIBIRUFXHFFOXA	Bullet Vehicle Passenger Right Upper Tibia X-Axis Force	600	+	yes	8896
245	13TIBIRUFXHFFOZA	Bullet Vehicle Passenger Right Upper Tibia Z-Axis Force	600	+	yes	8896
246	13TIBIRUFXHFMOXA	Bullet Vehicle Passenger Right Upper Tibia Moment About X Axis	600	+	yes	282.5
247	13TIBIRUFXHFMOYA	Bullet Vehicle Passenger Right Upper Tibia Moment About Y Axis	600	+	yes	282.5
248	13TIBIRIFXHFACXA	Bullet Vehicle Passenger Right Tibia X-Axis Acceleration	1000	+	yes	1000
249	13TIBIRIFXHFACYA	Bullet Vehicle Passenger Right Tibia Y-Axis Acceleration	1000	+	yes	1000
250	13TIBIRLFXHFFOXA	Bullet Vehicle Passenger Right Lower Tibia X-Axis Force	600	+	yes	8896
251	13TIBIRLFXHFFOYA	Bullet Vehicle Passenger Right Lower Tibia Y-Axis Force	600	+	yes	8896
252	13TIBIRLFXHFFOZA	Bullet Vehicle Passenger Right Lower Tibia Z-Axis Force	600	+	yes	8896
253	13TIBIRLFXHFMOXA	Bullet Vehicle Passenger Right Lower Tibia Moment About X Axis	600	+	yes	282.5
254	13TIBIRLFXHFMOYA	Bullet Vehicle Passenger Right Lower Tibia Moment About Y Axis	600	+	yes	282.5
255	13FOOTRIFXHFANXA	Bullet Vehicle Passenger Right Foot X-Axis Angular Displacement	180	+	no	318
256	13FOOTRIFXHFANYA	Bullet Vehicle Passenger Right Foot Y-Axis Angular Displacement	180	+	no	317
257	13FOOTRIFXHFANZA	Bullet Vehicle Passenger Right Foot Z-Axis Angular Displacement	180	+	no	318
258	13FOOTRIFXHFACXA	Bullet Vehicle Passenger Right Foot X-Axis Acceleration	1000	+	yes	1000
259	13FOOTRIFXHFACYA	Bullet Vehicle Passenger Right Foot Y-Axis Acceleration	1000	+	yes	1000
260	13FOOTRIFXHFACZA	Bullet Vehicle Passenger Right Foot Z-Axis Acceleration	1000	+	yes	1000
260A	13FOOTRIFXHFACRA	Bullet Vehicle Passenger Right Foot Resultant Acceleration	1000			
261	14CRME000000ACXA	Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
262	16CRME000000ACXA	Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration	60	+	yes	2000

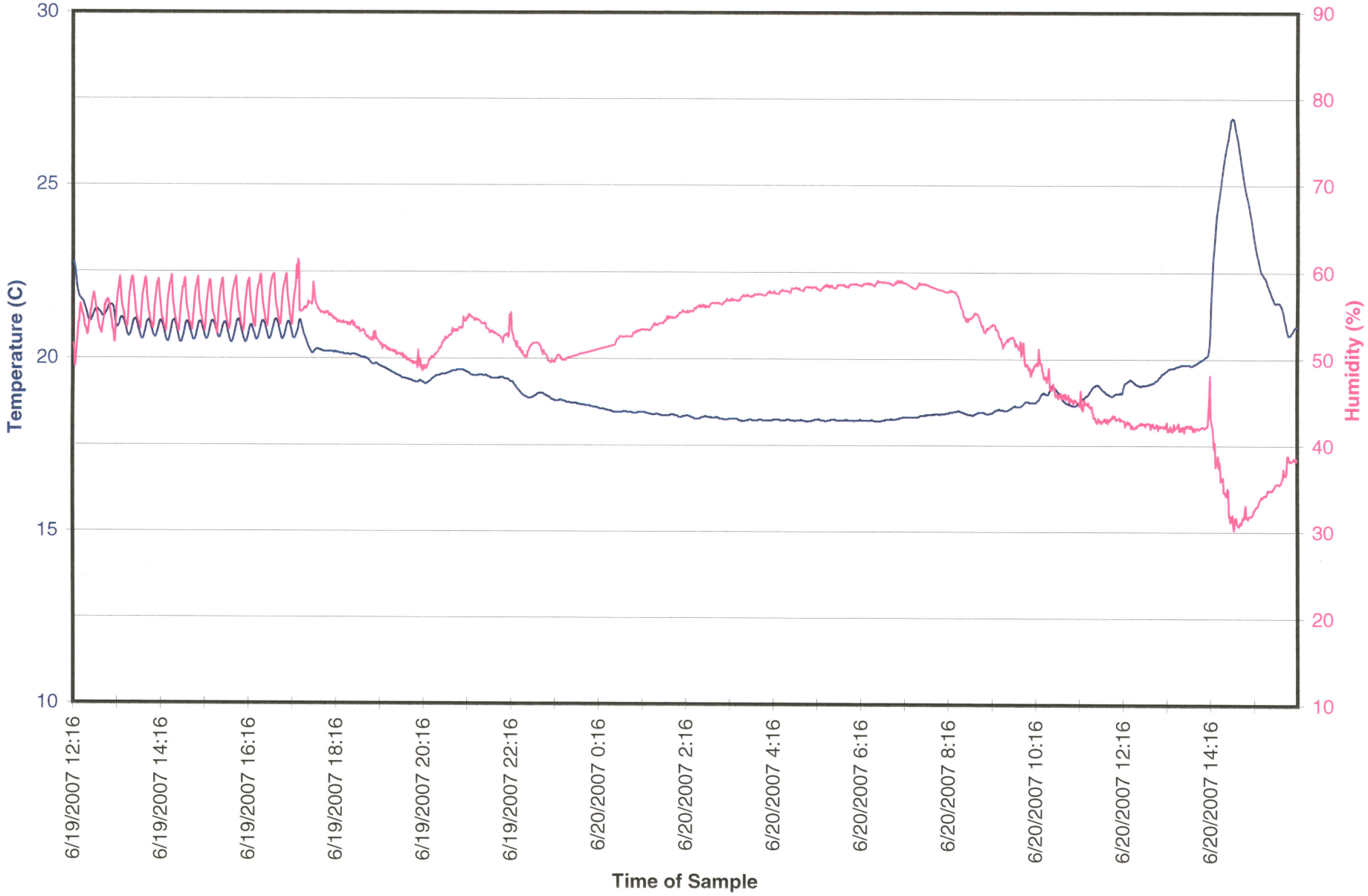
Command File Test Number 070620

Channel	ISO mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
263	12ENGNTP0000ACXA	Bullet Vehicle Top of Engine X-Axis Acceleration	60	+	yes	2000
264	12ENGNBO0000ACXA	Bullet Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000
265	13VEHCRI0000ACXA	Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
266	11VEHCLE0000ACXA	Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
267	12DASH000000ACXA	Bullet Vehicle Dash Center X-Axis Acceleration	60	+	yes	1500
268	11PEAC000000ACXA	Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration	60	+	yes	2000
269	11PEAC000000ACZA	Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration	60	+	yes	2000
270	11VEHC000001ACXA	Bullet Vehicle Toe Pan Footrest X-Axis Acceleration	60	+	yes	2000
271	11VEHC000001ACZA	Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration	60	+	yes	2000
272	15TUNNCY0000ACXA	Bullet Vehicle Rear Tunnel Center X-Axis Acceleration	60	+	yes	1000
273	10VEHCCG0000ACXA	Bullet Vehicle CG X-Axis Acceleration	60	+	yes	1500
273A	10VEHCCG0000VEXC	Bullet Vehicle CG X-Axis Velocity	180			
273B	10VEHCCG0000DCXC	Bullet Vehicle CG X-Axis Displacement	180			
274	10VEHCCG0000ACYA	Bullet Vehicle CG Y-Axis Acceleration	60	+	yes	1500
274A	10VEHCCG0000VEYC	Bullet Vehicle CG Y-Axis Velocity	180			
274B	10VEHCCG0000DCYC	Bullet Vehicle CG Y-Axis Displacement	180			
275	10VEHCCG0000ACZA	Bullet Vehicle CG Z-Axis Acceleration	60	+	yes	1500
275A	10VEHCCG0000VEZC	Bullet Vehicle CG Z-Axis Velocity	180			
275B	10VEHCCG0000DCZC	Bullet Vehicle CG Z-Axis Displacement	180			
275C	10VEHCCG0000ACRA	Bullet Vehicle CG Resultant Acceleration	60			
276	18VEHC000000ACXA	Bullet Vehicle Rear Deck X-Axis Acceleration	60	+	yes	1000
277	18VEHC000000ACYA	Bullet Vehicle Rear Deck Y-Axis Acceleration	60	+	yes	1000
278	18VEHC000000ACZA	Bullet Vehicle Rear Deck Z-Axis Acceleration	60	+	yes	1000
278A	18VEHC000000ACRA	Bullet Vehicle Rear Deck Resultant Acceleration	60			
279	11SEBA0000B5DS0A	Bullet Vehicle Driver Lap Belt Spool	1000	+	yes	635
280	11SEBA0000B3DS0A	Bullet Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	1270
281	13SEBA0000B5DS0A	Bullet Vehicle Passenger Lap Belt Spool	1000	+	yes	635
282	13SEBA0000B3DS0A	Bullet Vehicle Passenger Shoulder Belt Spool and Retraction	1000	+	yes	750
283	11AIRBFR0100EV0A	Bullet Vehicle Driver Front Airbag 1 Inductor	1000	+	no	5
284	11AIRBFR0200EV0A	Bullet Vehicle Driver Front Airbag 2 Inductor	1000	+	no	5
285	13AIRBFR0100EV0A	Bullet Vehicle Passenger Front Airbag 1 Inductor	1000	+	no	5
286	13AIRBFR0200EV0A	Bullet Vehicle Passenger Front Airbag 2 Inductor	1000	+	no	5

2003 CHEVROLET SILVERADO INTO 2002 FORD FOCUS 40% OFFSET FRONTAL/TARGET



2003 CHEVROLET SILVERADO INTO 2002 FORD FOCUS 40% OFFSET FRONTAL/BULLET



070620

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*
Author(s): Aparicio Izquierdo, Francisco Páez Ayuso, Francisco Javier
Performing Organisation name and address: INSIA – University Institute for Automobile Research Carretera de Valencia, Km. 7 – Campus Sur de la Universidad Politécnica de Madrid 28031 – Madrid – Spain
Suplementary notes: Under contract to: THE EUROPEAN COMMUNITY Project: "Improvement of Crash Compatibility between Cars" Contract Nº: 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.

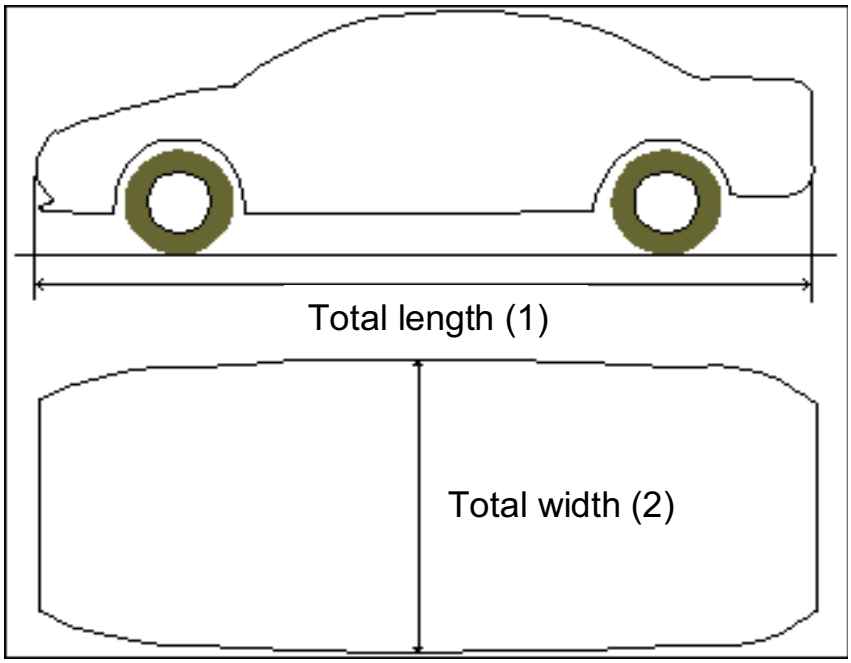


Figure 1.- Definition of the main resistant elements. General dimensions.

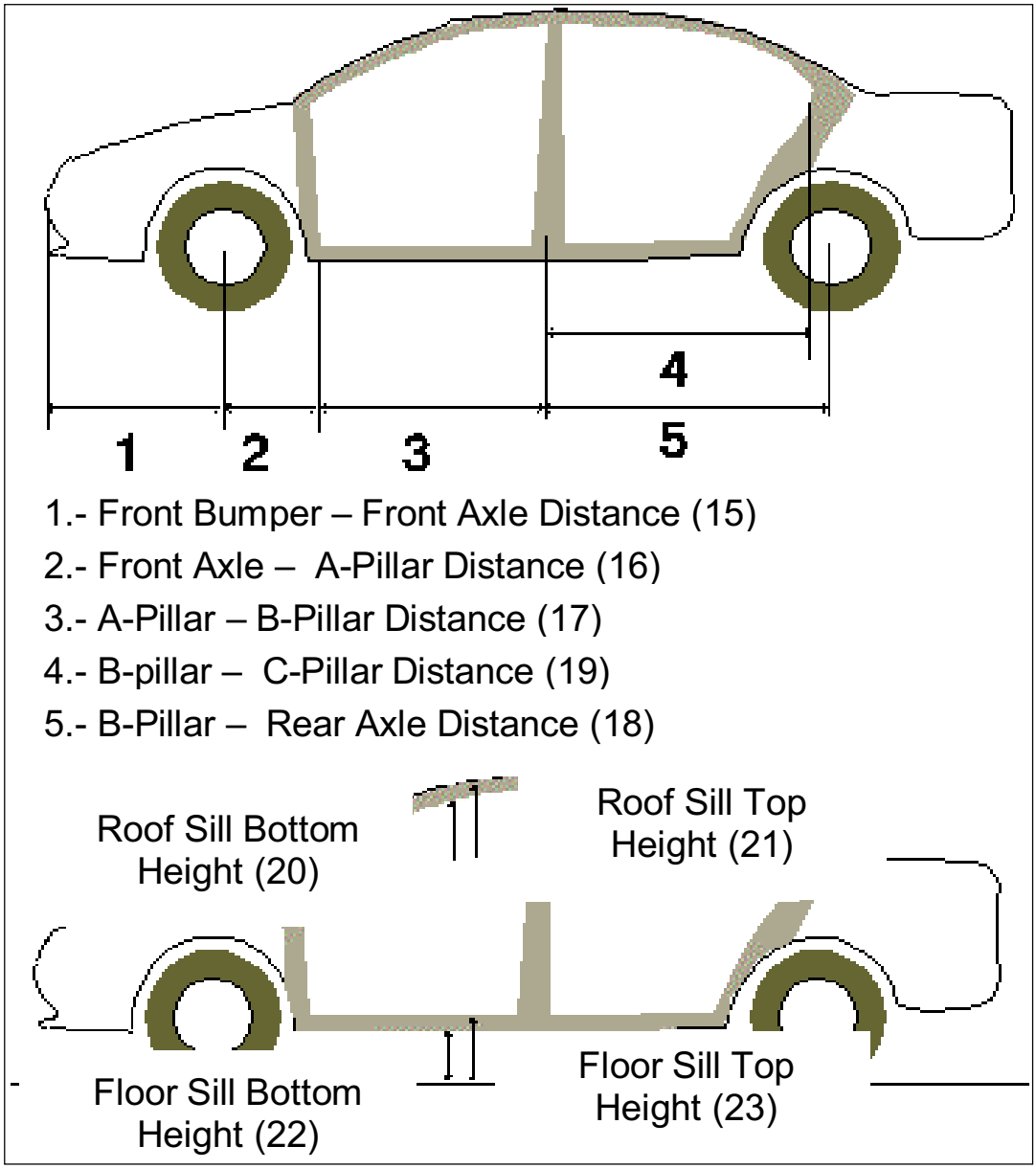


Figure 2.- Definition of the main resistant elements. Side elements.

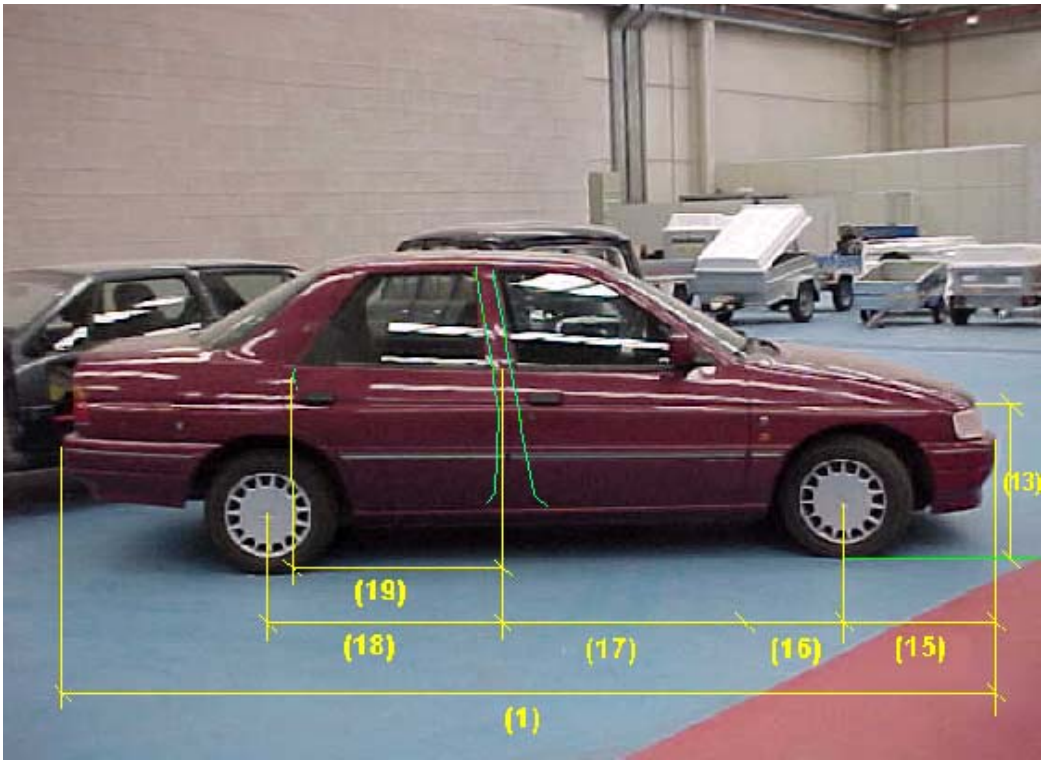


Figure 3.- Measurements of the side resistant elements (outer).

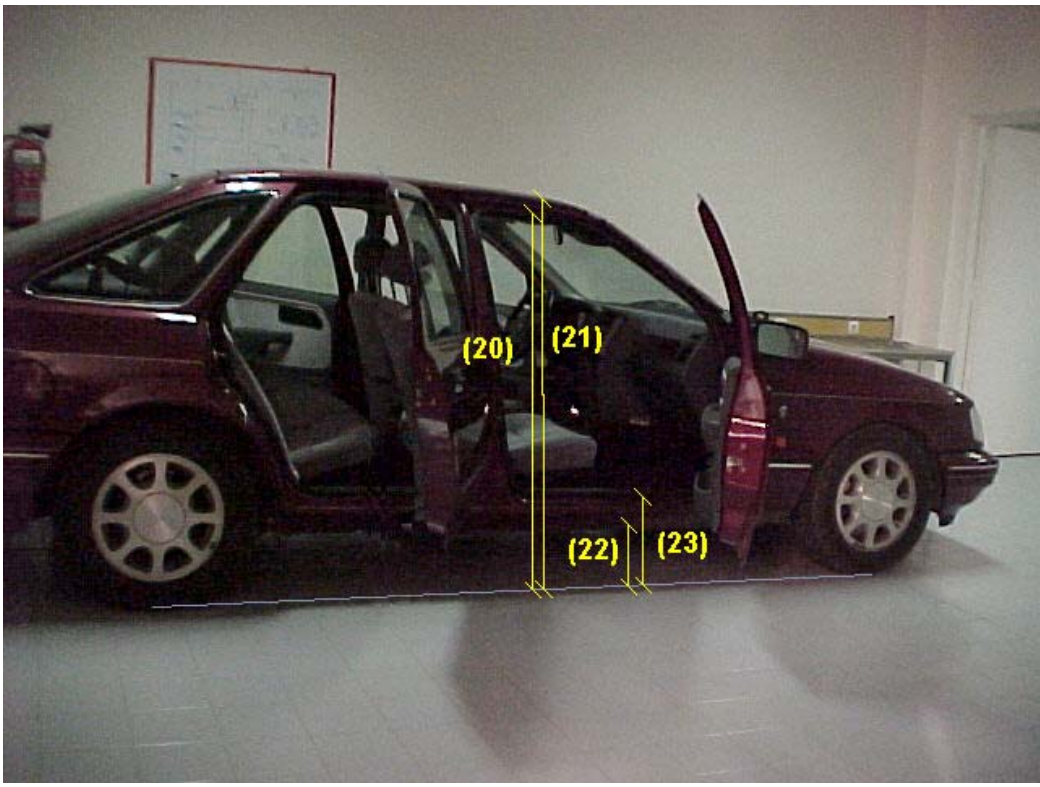


Figure 4.- Measurements of the side resistant elements (inner).

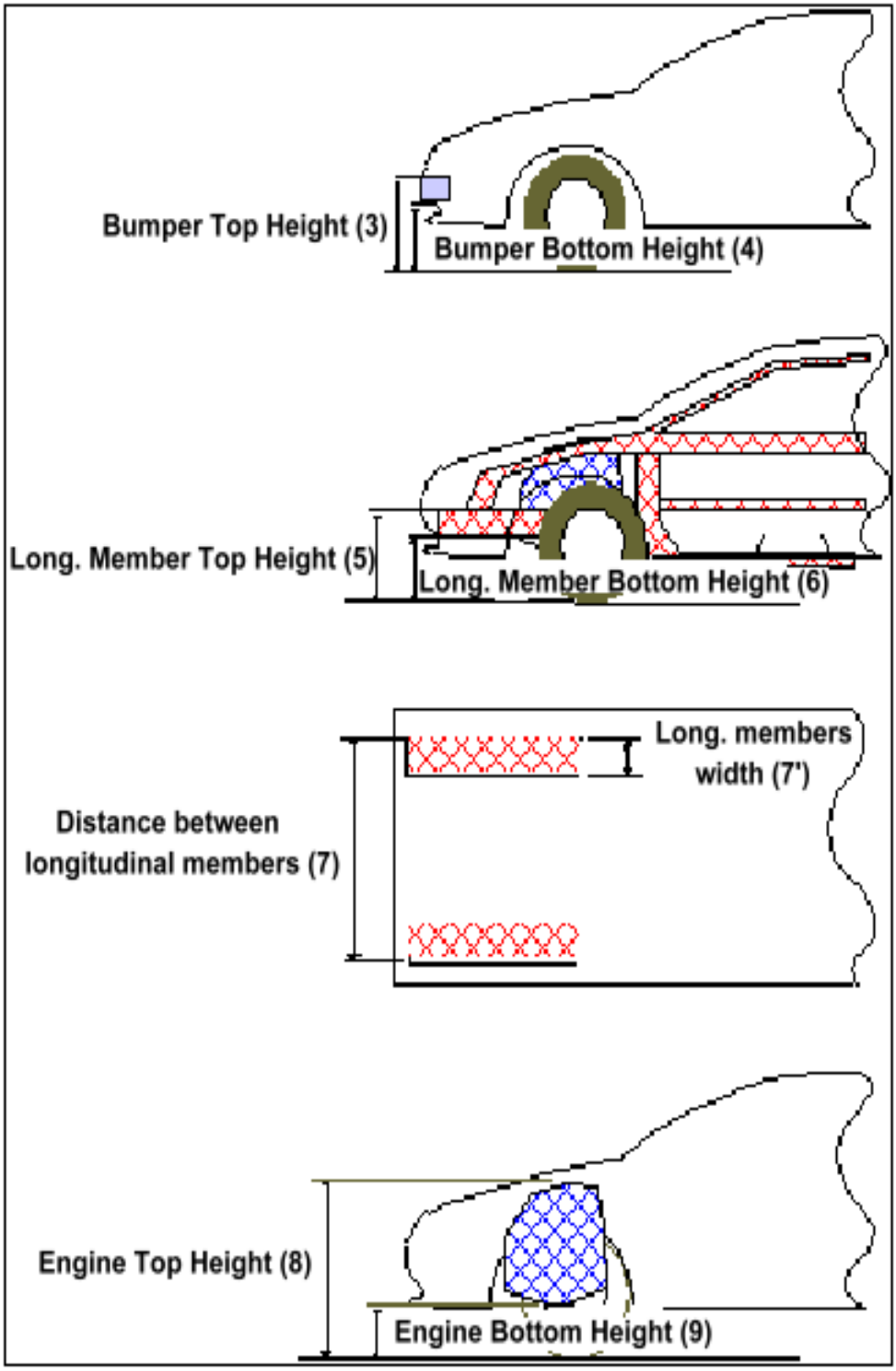


Figure 5.- Definition of the main resistant elements. Front elements.

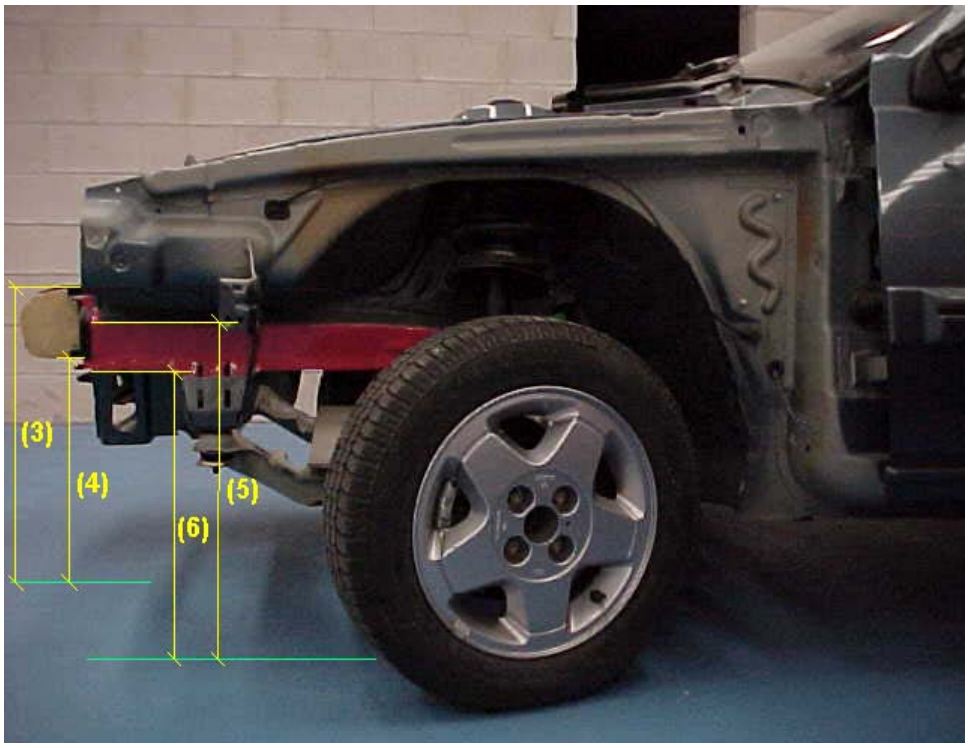


Figure 6.- Measurements of the main resistant elements. Front elements 1.

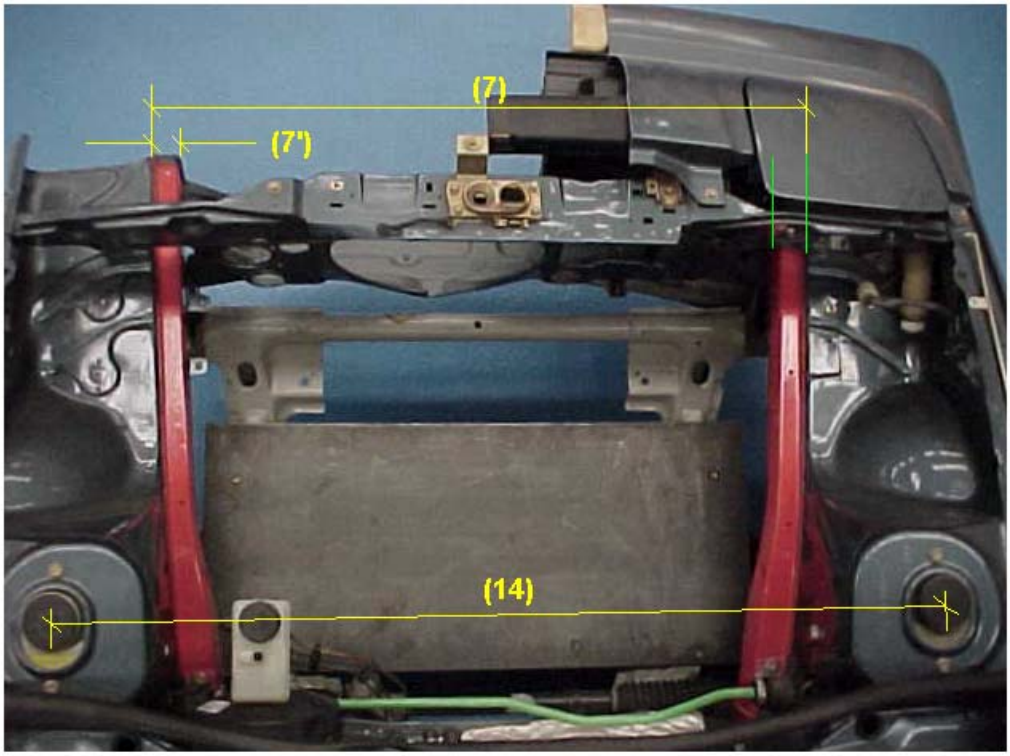


Figure 7.- Measurements of the main resistant elements. Front elements 2.

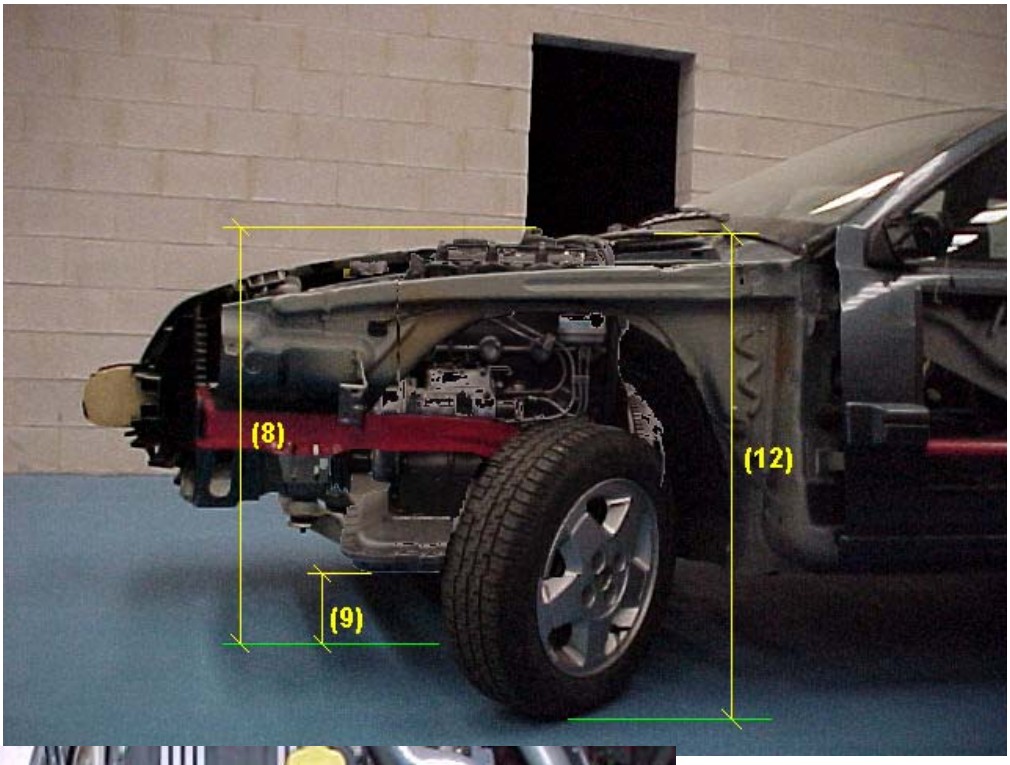


Figure 8.- Measurements of the main resistant elements. Front elements 3.

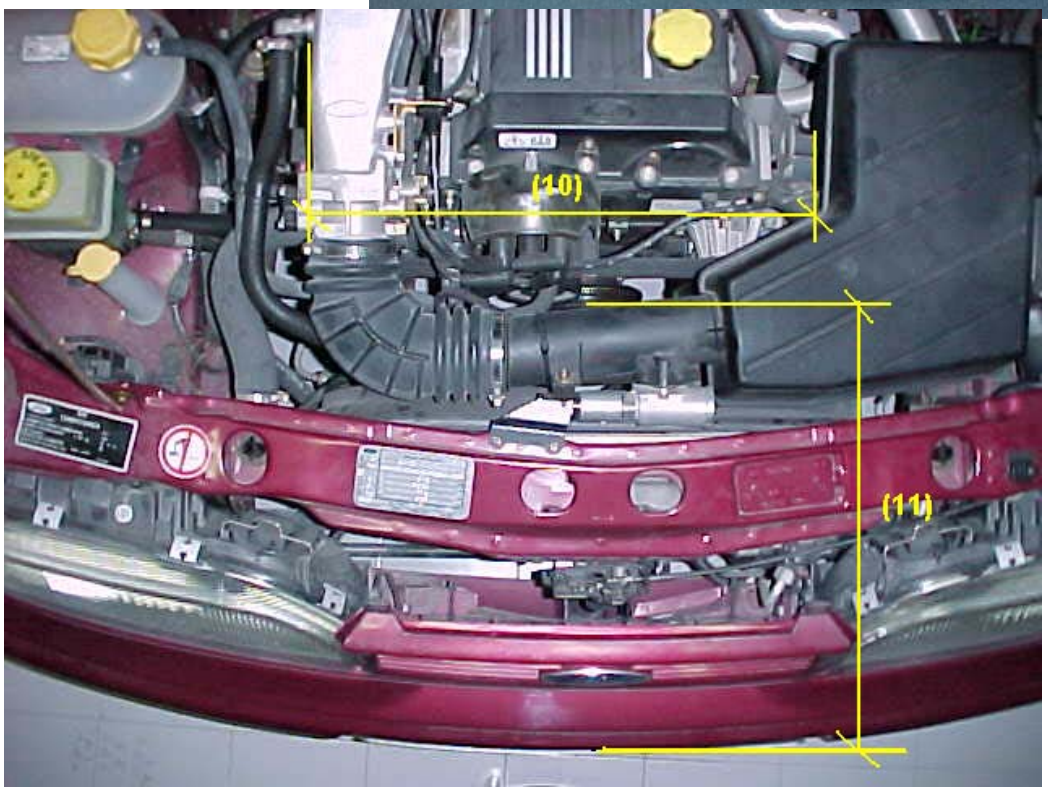


Figure 9.- Definition of the main resistant elements. Front elements (Longitudinal engine).

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.