Vehicle Research and Test Center

2003 Chevrolet Silverado

into Front of 2002 Ford Focus

TRC Inc. Test Number: 050627

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Section 1.0

Purpose and Test Procedure

Purpose

This 108.3 km/h (67.3 mph), full frontal colinear 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 with bullet vehicle moving at 108.3 km/h to impact the front of the target vehicle 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 pickup truck, and the vehicle and occupant response of the target vehicle, a 2002 Ford Focus 4-door, in this full frontal colinear vehicle-to-vehicle impact mode.

Test Procedure

This test was conducted in accordance with VRTC instructions for a full frontal colinear 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, was instrumented with seventeen (17) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver’s and passenger’s airbag signals were monitored with inductive pickups.

The bullet vehicle, a 2003 Chevrolet Silverado, was instrumented with seventeen (17) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver’s and passenger’s airbag signals were monitored with inductive pickups. The vehicle’s specified impact velocity range was 107.5 to 109.1 km/h.

The bullet vehicle impacted the front of the target, at an impact angle of 0 degrees. The bullet vehicle’s centerline was aligned with the target vehicle’s 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, 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 nine (9) 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 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 front outboard designated seating positions 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 driver dummy was instrumented with nine (9) 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 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 284 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 are presented in Section 2.0. The summary of FMVSS 208 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 13 and 16 of this report. Appendix F contains the vehicle manufacturer's information.

Section 2.0

Car into Car Impact Test Summary

Test Results Summary

This 108.3 km/h 30° full frontal colinear vehicle-to-vehicle impact test was conducted by TRC Inc. on June 27, 2005.

The target test vehicle, a 2002 Ford Focus 4-door, was equipped with a 2-liter transverse engine, automatic transmission, power steering, power brakes, and dual stage front airbags. The target vehicle's test weight was 1552.8 kg. The bullet test vehicle, a 2003 Chevrolet Silverado pickup truck, 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 2272.9 kg. The bullet vehicle's impact speed was 113.1 km/h.

Injury Criteria Data Summary				
	Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger
HIC (15 ms)	399	254	349	348
HIC (36 ms)	671	365	528	529
Chest 3 ms (g)	44.2	39.6	38.6	39.9
Chest Deflection (mm)	56	29	36	20
Upper Neck				
NTF	0.39	0.34	0.23	0.39
NTE	0.46	1.34	0.33	0.33
NCF	0.08	0.15	0.14	0.19
NCE	0.41	0.10	0.13	0.22
Neck Tension (N)	1906	3638	1620	848
Neck Compression (N)	473	523	302	642
Left Femur (N)	4318	3797	3580	3501
Right Femur (N)	3916	3412	4747	3248
Maximum Upper TI	0.82	0.92	0.43	N/A
Maximum Lower TI	0.87	1.03	0.44	N/A

Data Acquisition Explanations

The target vehicle's bottom of engine X-axis acceleration data channel, 12ENGNBO0000ACXA, exceeded full scale at approximately 76 milliseconds.

The target vehicle's right front brake caliper X-axis acceleration data channel, 13VEHCRI0000ACXA, exceeded full scale at approximately 76 milliseconds.

The target vehicle's left front brake caliper X-axis acceleration data channel, 11VEHCLE0000ACXA, exceeded full scale at approximately 86 milliseconds.

The bullet vehicle's bottom of engine X-axis acceleration data channel, 22ENGNBO0000ACXA, exceeded full scale at approximately 46 milliseconds.

The bullet vehicle's right front brake caliper X-axis acceleration data channel, 23VEHCRI0000ACXA, exceeded full scale at approximately 70 milliseconds.

The bullet vehicle's left front brake caliper X-axis acceleration data channel, 21VEHCLE0000ACXA, exceeded full scale at approximately 78 milliseconds.

The bullet vehicle's impact velocity of 113.1 km/h was outside of the acceptable range of 107.5 to 109.1 km/h.

Imaging data were lost from the following high speed digital imagers. No images are available from these views.

Target driver onboard view

Target passenger onboard view

Bullet vehicle driver side view

Target vehicle passenger side view

Overall impact event view - target vehicle passenger side

Table 1 Crash Test Summary

Test mode:	Full frontal colinear	
Test date:	06/27/05	
Test time:	17:22	
Ambient temperature:	31° C	
Target vehicle year/make/ model/body style:	2002/Ford/Focus/4-door	
Target vehicle test weight:	1552.8 kg	
Bullet vehicle year/make/ model/body style:	2003/Chevrolet/Silverado/Pickup truck	
Bullet vehicle test weight:	2272.9 kg	
Impact angle[1]:	0°	
Impact velocity[2]:	Bullet vehicle =113.1 km/h	
Total number of data channels:	284	
Number of cameras:	High-speed 19	Real-time 1
Target vehicle dummies:	Driver #110	Passenger #416
Type:	Hybrid III 50th	Hybrid III 5th
Location:	Left front	Right front
Restraint:	3pt seat belt, airbag	3pt seat belt, airbag
Bullet vehicle dummies:	Driver #090	Passenger #070
Type:	Hybrid III 50th	Hybrid III 5th
Location:	Left front	Right front
Restraint:	3pt seat belt, airbag	3pt seat belt, 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 position for test:	
Driver:	Middle; detent #9 of 17
Passenger:	Full forward
Target vehicle seat back position for test:	
Driver:	25°; dummy torso angle
Passenger:	14.2° measured at head restraint post
Target vehicle head restraint position for test:	
Driver:	Full up
Passenger:	Full down
Target vehicle steering column position for test:	24°; middle of geometric range of travel
Target vehicle D-ring position for test:	
Driver:	1 detent down from full up; (detent # 2 of 4)
Passenger:	Full down
Bullet vehicle seat track position for test:	
Driver:	Middle; detent #12 of 23
Passenger:	Full forward
Bullet vehicle seat back position for test:	
Driver:	25°; dummy torso angle
Passenger:	6.2°
Bullet vehicle head restraint position for test:	
Driver:	Full up
Passenger:	Full down
Bullet vehicle steering column position for test:	3 detents down from full up; (detent # 4 of 4)
Bullet vehicle D-ring position for test:	
Driver:	N/A
Passenger:	N/A

Table 2 Target General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2002/Ford/Focus/4-door
VIN:	1FAFP34352W135668
Model year:	2002
Body style:	4-door
Color:	Grey
Engine data:	
Cylinders:	4
Displacement	2 liters
Cylinder placement:	Straight
Engine placement:	Transverse
Transmission data:	_4_ speed, ___ manual, _X_ automatic, _X_ overdrive
Final drive:	_X_ FWD, __ RWD, ___ 4WD
Date vehicle received:	
Odometer reading:	37,980 miles
Dealer's name and address:	Vehicle provided 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	Yes
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:		11/01	
VIN:		1FAFP34352W135668	
GVWR:		1651 kg	(3640 lbs.)
GAWR:	Front:	895 kg	(1975 lbs.)
	Rear:	791 kg	(1745 lbs.)

Table 2 Target General Test and Vehicle Parameter Data, Continued

Tires on vehicle (mfr., line, size):	Fuzion, Fuzion, 195/60R15	
Tire pressure with maximum capacity vehicle load:		
Front:	44 psi	(300 kPa)
Rear:	44 psi	(300 kPa)
Spare tire (mfr., line, size):	Hankook, Temp, T125/80R15	
Type of seats:		
Front	Bucket	
Rear	Split bench	
Maximum width:	1700 mm	
Wheelbase:	2605 mm	

Location of "Recommended Tire Pressure" label:

The label was located on Left front door.

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)

Vehicle Capacity Data:

Number of Occupants (Designated seating capacity):	
Front	2
Mid	0
Rear	3
Total	5
Vehicle capacity weight:	375 kg (827 lbs.)
Rated cargo/luggage weight	77 kg (35 lbs.)

Test vehicle attitude:

Delivered attitude:	LF 683 mm;	RF 678 mm;	LR 690 mm;	RR 680 mm
Fully loaded attitude:	LF 651 mm;	RF 650 mm;	LR 640 mm;	RR 630 mm
Pre-test attitude:	LF 644 mm;	RF 640 mm;	LR 615 mm;	RR 612 mm
Post-test attitude:	LF 714 mm;	RF 640 mm;	LR 622 mm;	RR 648 mm

Table 2 Target General Test and Vehicle Parameter Data, Continued

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

Right front	371.0 kg	Right rear	250.0 kg
Left front	374.0 kg	Left rear	240.0 kg
Total front weight	745.0 kg	(60.3 % of total vehicle weight)	
Total rear weight	490.0 kg	(39.7 % of total vehicle weight)	
Total delivered weight	1235.0 kg		

Weight of test vehicle with required dummies and equipment:

Right front	408.8 kg	Right rear	369.4 kg
Left front	413.8 kg	Left rear	360.8 kg
Total front weight	822.6 kg	(53.0% of total vehicle weight)	
Total rear weight	730.2 kg	(47.0% of total vehicle weight)	
Total test weight	1552.8 kg		

Weight of ballast secured in vehicle: 0.0 kg

Components removed to meet target test weight: None

Location of Vehicle's CG: 1225 mm rearward of front wheel centerline

Fuel System Data:

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

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

[1] Cargo weight for multipurpose passenger vehicles, trucks, and buses is the vehicle's rated cargo and luggage weight from the vehicle's label or 136 kilograms, whichever is less.

Table 3 Bullet General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2003/Chevrolet/Silverado/Pickup truck
VIN:	2GCEC19X131322335
Model year:	2003
Body style:	Pickup truck
Color:	Silver
Engine data:	
Cylinders:	6
Displacement	4.3 liters
Cylinder placement:	V
Engine placement:	Inline
Transmission data:	_4_ speed, ___ manual, _X_ automatic, _X_ overdrive
Final drive:	__ FWD, _X_ RWD, ___ 4WD
Date vehicle received:	
Odometer reading:	18,735 miles
Dealer's name and address:	Vehicle provided 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:		03/03	
VIN:		2GCEC19X131322335	
GVWR:		2812 kg	(6200 lbs.)
GAWR:	Front:	1633 kg	(3600 lbs.)
	Rear:	1672 kg	(3686 lbs.)

Table 3 Bullet General Test and Vehicle Parameter Data, Continued

Tires on vehicle (mfr., line, size): Goodyear, Wrangler ST, P235/75R16

Tire pressure with maximum capacity vehicle load:

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

Spare tire (mfr., line, size): N/A

Type of seats:

Front	Split bench
Rear	Bench

Maximum width: 1981 mm

Wheelbase: 3660 mm

Location of "Recommended Tire Pressure" label:

The label was located on Left front door.

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)

Vehicle Capacity Data:

Number of Occupants (Designated seating capacity):

Front	3
Mid	0
Rear	3
Total	6

Vehicle capacity weight: N/A kg

Rated cargo/luggage weight N/A kg

Test vehicle attitude:

Delivered attitude:	LF 836 mm;	RF 851 mm;	LR 912 mm;	RR 917 mm
Fully loaded attitude:	LF 825 mm;	RF 840 mm;	LR 878 mm;	RR 884 mm
Pre-test attitude:	LF 824 mm;	RF 840 mm;	LR 882 mm;	RR 891 mm
Post-test attitude:	LF 791 mm;	RF 771 mm;	LR 892 mm;	RR 885 mm

Table 3 Bullet General Test and Vehicle Parameter Data, Continued

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

Right front	580.0 kg	Right rear	403.5 kg
Left front	622.5 kg	Left rear	426.5 kg
Total front weight	1202.5 kg	(59.2 % of total vehicle weight)	
Total rear weight	830.0 kg	(40.8 % of total vehicle weight)	
Total delivered weight	2032.5 kg		

Weight of test vehicle with required dummies and equipment:

Right front	626.6 kg	Right rear	483.6 kg
Left front	673.2 kg	Left rear	489.5 kg
Total front weight	1299.8 kg	(57.2% of total vehicle weight)	
Total rear weight	973.1 kg	(42.8% of total vehicle weight)	
Total test weight	2272.9 kg		

Weight of ballast secured in vehicle: 0

Components removed to meet target test weight: Tailgate, exhaust from catalyst back

Location of Vehicle's CG: 1567 mm rearward of front wheel centerline

Fuel System Data:

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

Actual test volume: 91.6 liters (93% of usable)

[1] Cargo weight for multipurpose passenger vehicles, trucks, and buses is the vehicle's rated cargo and luggage weight from the vehicle's label or 136 kilograms, whichever is less.

Table 4 Post-Impact Data

Test number:	050627
Test date:	06/27/05
Test time:	17:22
Test type:	Full frontal colinear
Impact angle:	0°
Ambient temperature at impact area:	31° C
Impact velocity:	
Bullet vehicle:	113.1 km/h[1]
Required impact velocity range:	107.5 to 109.1 km/h

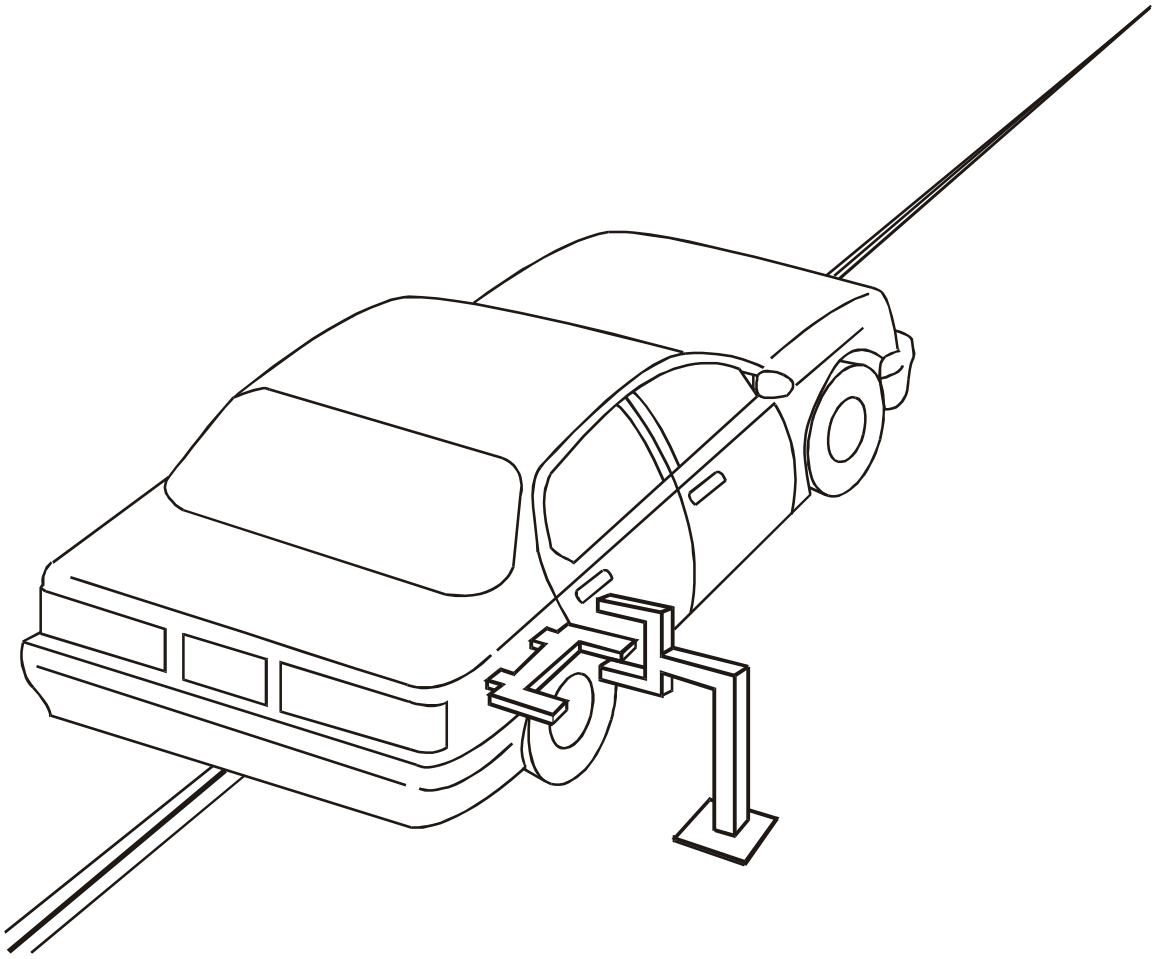
Distance from each vehicle to intended impact point:

Entering velocity trap:	661 mm
Exiting velocity trap:	51 mm, approximately

Impact point:	0 mm right of intended impact point (referenced to target vehicle coordinate system

[1] See Data Acquisition Explanations.

Figure 1 Impact Velocity Measurement System



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

The vanes 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	2.9	15.0	27.5	40.4
2	Right Rear Seat Cross-member	X	3.0	15.4	27.5	27.0
3	Top of Engine	X	70.6	48.7	143.7	20.6
4	Bottom of Engine[1]	X	---	---	---	---
5	Right Front Brake Caliper[1]	X	---	---	---	---
6	Left Front Brake Caliper[1]	X	---	---	---	---
7	Toe Pan Accelerator	X	9.9	12.8	41.8	59.8
		Z	32.2	33.7	31.6	66.1
8	Toe Pan Footrest	X	3.6	14.2	30.3	40.1
		Z	35.6	60.0	35.9	78.7
9	Rear Tunnel Center	Y	5.5	14.6	35.8	59.8
10	Vehicle Center of Gravity	X	18.2	93.5	46.8	28.2
		Y	19.8	56.0	20.4	69.8
		Z	46.5	30.2	56.6	70.1
	Resultant		63.5	29.8		
11	Vehicle Rear Deck	X	11.5	16.8	45.1	81.0
		Y	5.4	43.7	5.1	16.0
		Z	15.3	84.9	14.9	40.7
	Resultant		46.1	81.1		

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

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

[1] See Data Acquisition Explanations.

Table 6 Bullet Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction Max. (g)	Positive Direction Time (ms)	Negative Direction Max. (g)	Negative Direction Time (ms)
1	Left Rear Seat Cross-member	X	2.2	178.8	21.9	32.9
2	Right Rear Seat Cross-member	X	2.9	98.2	25.5	78.7
3	Top of Engine	X	15.3	82.2	53.3	57.4
4	Bottom of Engine[1]	X	---	---	---	---
5	Right Front Brake Caliper[1]	X	---	---	---	---
6	Left Front Brake Caliper[1]	X	---	---	---	---
7	Toe Pan Accelerator	X	2.5	245.0	25.4	63.3
		Z	14.0	25.3	23.8	48.9
8	Toe Pan Footrest	X	5.4	285.9	22.1	36.8
		Z	15.5	25.0	19.8	64.6
9	Rear Tunnel Center	Y	2.0	245.4	25.0	79.8
10	Vehicle Center of Gravity	X	2.1	246.8	26.0	80.1
		Y	5.6	49.4	6.8	75.2
		Z	15.3	118.7	11.4	30.4
	Resultant		26.8	80.1		
11	Vehicle Rear Deck	X	7.3	166.6	24.7	25.4
		Y	4.0	21.0	6.4	101.3
		Z	19.5	109.3	15.2	177.3
	Resultant		25.5	26.4		

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 FMVSS 208 Data

Table 7 Target Vehicle Dummy Injury Criteria Data

Maximum Acceleration[1]

	Head				Chest			
	X	Y	Z	R	X	Y	Z	R
Driver	-75.3 g	-21.0 g	25.1 g	77.7 g	-44.9 g	-6.7 g	-14.0 g	45.4 g
Passenger	67.6 g	9.3 g	-45.8 g	74.5 g	-51.2 g	4.7 g	-17.3 g	51.3 g

Maximum Femur Compressive Force

	Left Femur	Right Femur
Driver	4318 N	3916 N
Passenger	3797 N	3412 N

Head Injury Criteria[2]

36 millisecond

	HIC	Start Time t_1	End Time t_2
Driver	671	76.64 ms	112.64 ms
Passenger	365	53.12 ms	89.12 ms

15 millisecond

	HIC	Start Time t_1	End Time t_2
Driver	399	91.76 ms	106.80 ms
Passenger	254	107.84 ms	118.72 ms

Chest Maximum Resultant Acceleration[3]

	Acceleration	Start Time t_1	End Time t_2
Driver	44.2 g	85.83 ms	89.39 ms
Passenger	39.6 g	64.49 ms	67.49 ms

Table 7 Target Vehicle Dummy Injury Criteria Data, Continued

Maximum Chest Deflection

Driver	56 mm
Passenger	29 mm

Neck Injury Calculations (Nij)[2]

	NTF	NTE	NCF	NCE
Driver	0.39	0.46	0.08	0.41
Passenger	0.34	1.34	0.15	0.10

Upper Neck Axial Force

	Tension	Compression
Driver	1906 N	473 N
Passenger	3638 N	523 N

Tibia Index

	Upper Tibia	Lower Tibia
Driver-left	0.82	0.87
Driver-right	0.48	0.51
Passenger-left	0.69	1.03
Passenger-right	0.92	0.81

[1] See Report Sign Convention in Appendix D.
[2] As defined in FMVSS No. 208.
[3] Defined as equal to or exceeding 0.003 sec. duration.

Table 8 Bullet Vehicle Dummy Injury Criteria Data

Maximum Acceleration[1]

	Head				Chest			
	X	Y	Z	R	X	Y	Z	R
Driver	-59.4 g	5.7 g	23.0 g	59.5 g	-38.2 g	5.1 g	15.6 g	39.0 g
Passenger	-58.7 g	-7.5 g	19.7 g	59.4 g	-149.9 g	-5.6 g	-21.1 g	150.5 g

Maximum Femur Compressive Force

	Left Femur	Right Femur
Driver	3580 N	4747 N
Passenger	3501 N	3248 N

Head Injury Criteria[2]

36 millisecond

	HIC	Start Time t_1	End Time t_2
Driver	528	75.52 ms	110.00 ms
Passenger	529	65.92 ms	101.92 ms

15 millisecond

	HIC	Start Time t_1	End Time t_2
Driver	349	86.96 ms	102.00 ms
Passenger	348	78.72 ms	93.76 ms

Chest Maximum Resultant Acceleration[3]

	Acceleration	Start Time t_1	End Time t_2
Driver	38.6 g	85.51 ms	88.51 ms
Passenger	39.9 g	78.09 ms	81.09 ms

Table 8 Bullet Vehicle Dummy Injury Criteria Data, Continued

Maximum Chest Deflection

Driver	36 mm
Passenger	20 mm

Upper Neck Injury Calculations (Nij)[2]

	NTF	NTE	NCF	NCE
Driver	0.23	0.33	0.14	0.13
Passenger	0.39	0.33	0.19	0.22

Upper Neck Axial Force

	Tension	Compression
Driver	1620 N	302 N
Passenger	848 N	642 N

Tibia Index

	Upper Tibia	Lower Tibia
Driver-left	0.43	0.37
Driver-right	0.37	0.44

[1] See Report Sign Convention in Appendix D.
[2] As defined in FMVSS No. 208.
[3] Defined as equal to or exceeding 0.003 sec. duration.

Table 9 Target Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	Driver	Passenger
Head	Airbag, B-pillar	Airbag
Chest	Airbag	Airbag
Abdomen	None	None
Left knee	Knee bolster	Glove box
Right knee	Knee bolster	Glove box

Door opening:

	Left	Right
Front	Easy	Easy
Rear	Easy	Easy

Seat movement:

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

Glazing damage: Front windshield broken

Other notable impact effects: None

Table 10 Bullet Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	Driver	Passenger
Head	Airbag, head restraint	Airbag, head restraint
Chest	Airbag	Airbag
Abdomen	None	None
Left knee	Knee bolster	Glove box
Right knee	Knee bolster	Glove box

Door opening:

	Left	Right
Front	Easy	Easy
Rear	Easy	Easy

Seat movement:

	Seat back failure	Seat shift
Left Front	Bent	None
Right Front	Bent	None
Left Rear	N/A	N/A
Right Rear	N/A	N/A

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

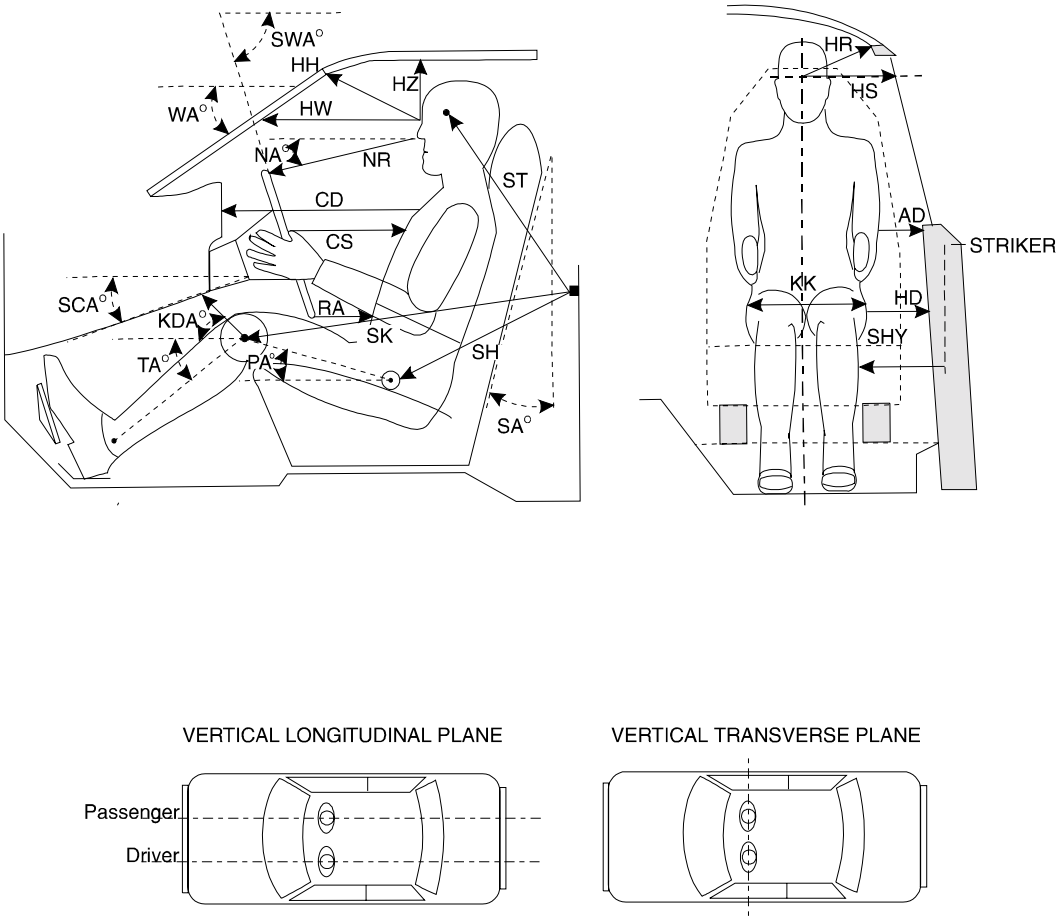


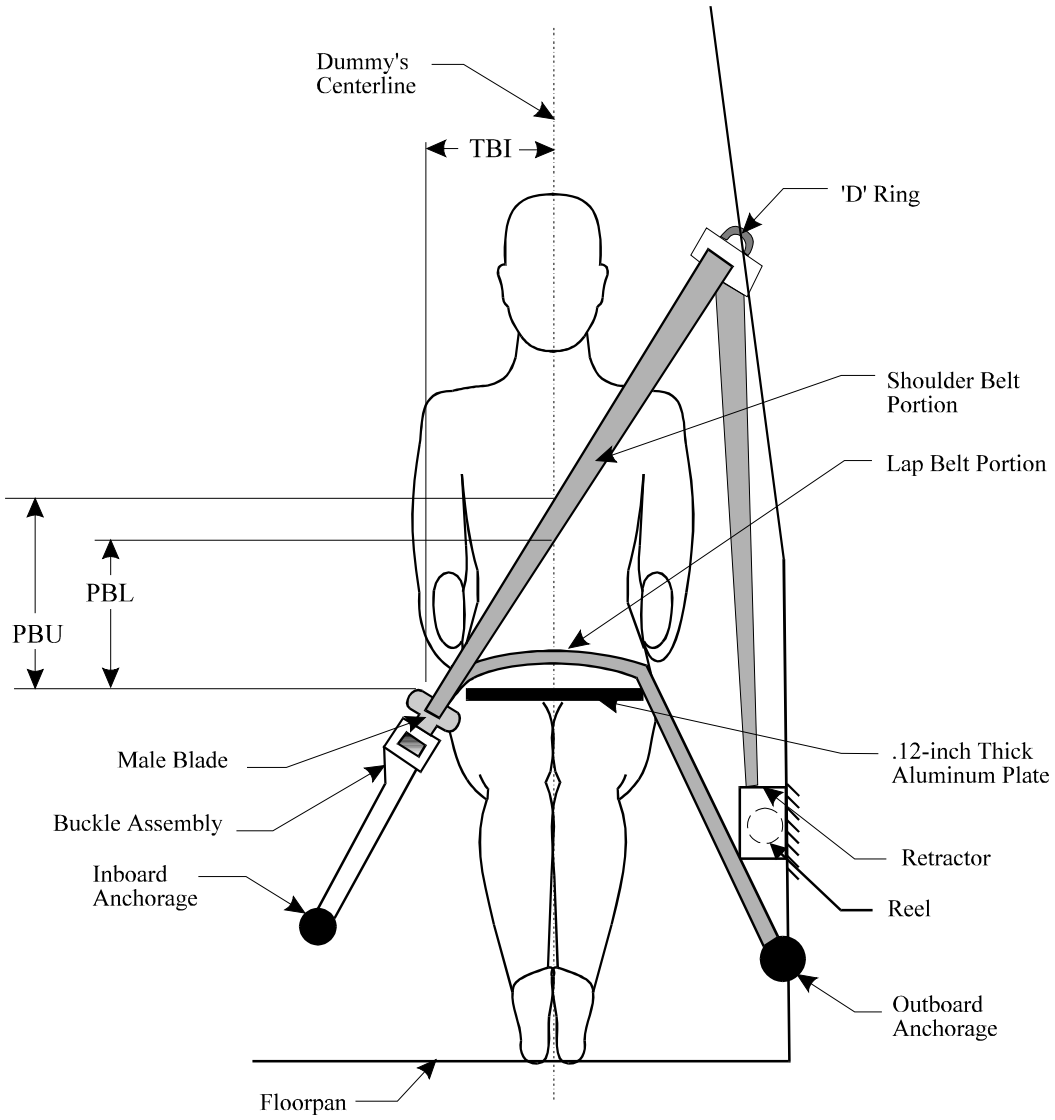
Table 11 Target Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 110)	Passenger (Serial # 416)
WA	Windshield angle	24.7°	24.7°
SWA	Steering wheel angle	65.9°	N/A
SCA	Steering column angle	24.1°	N/A
SA	Seat back angle	15.1°	14.3°
HZ	Head to roof	221 mm	226 mm
HH	Head to header	353 mm	294 mm
HW	Head to windshield	681 mm	670 mm
HR	Head to side header	223 mm	246 mm
NR	Nose to rim	427 mm	N/A
NA	Nose to rim angle	6.6°	N/A
CD	Chest to dash	568 mm	406 mm
CS	Steering wheel to chest	340 mm	N/A
RA	Rim to abdomen	224 mm	N/A
KDL	Left knee to dash	163 mm	49 mm
KDR	Right knee to dash	152 mm	59 mm
KDA	Outboard knee to dash angle	24.9°	10.5°
PA	Pelvic angle	24.6°	21.0°
TA	Tibia angle	41.7°	60.8°
KK	Knee to knee	326 mm	162 mm
ST[1]	Striker to head	516 mm	487 mm
	Striker to head angle	-85.2°	-71.4°
SK[1]	Striker to knee	568 mm	677 mm
	Striker to knee angle	1.1°	-0.7°
SH[1]	Striker to H-point	231 mm	321 mm
	Striker to H-point angle	37.6°	20.5°
SHY	Striker to H-point (Y dir.)	133 mm	149 mm
HS	Head to side window	316 mm	334 mm
HD	H-point to door	88 mm	150 mm
AD	Arm to door	107 mm	153 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	350 mm	260 mm
PBL - Top surface of aluminum plate to belt lower edge	275 mm	180 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	225 mm	200 mm
Total belt length	2452 mm	4480 mm
Lap belt length	852 mm	912 mm
Shoulder belt length	820 mm	840 mm

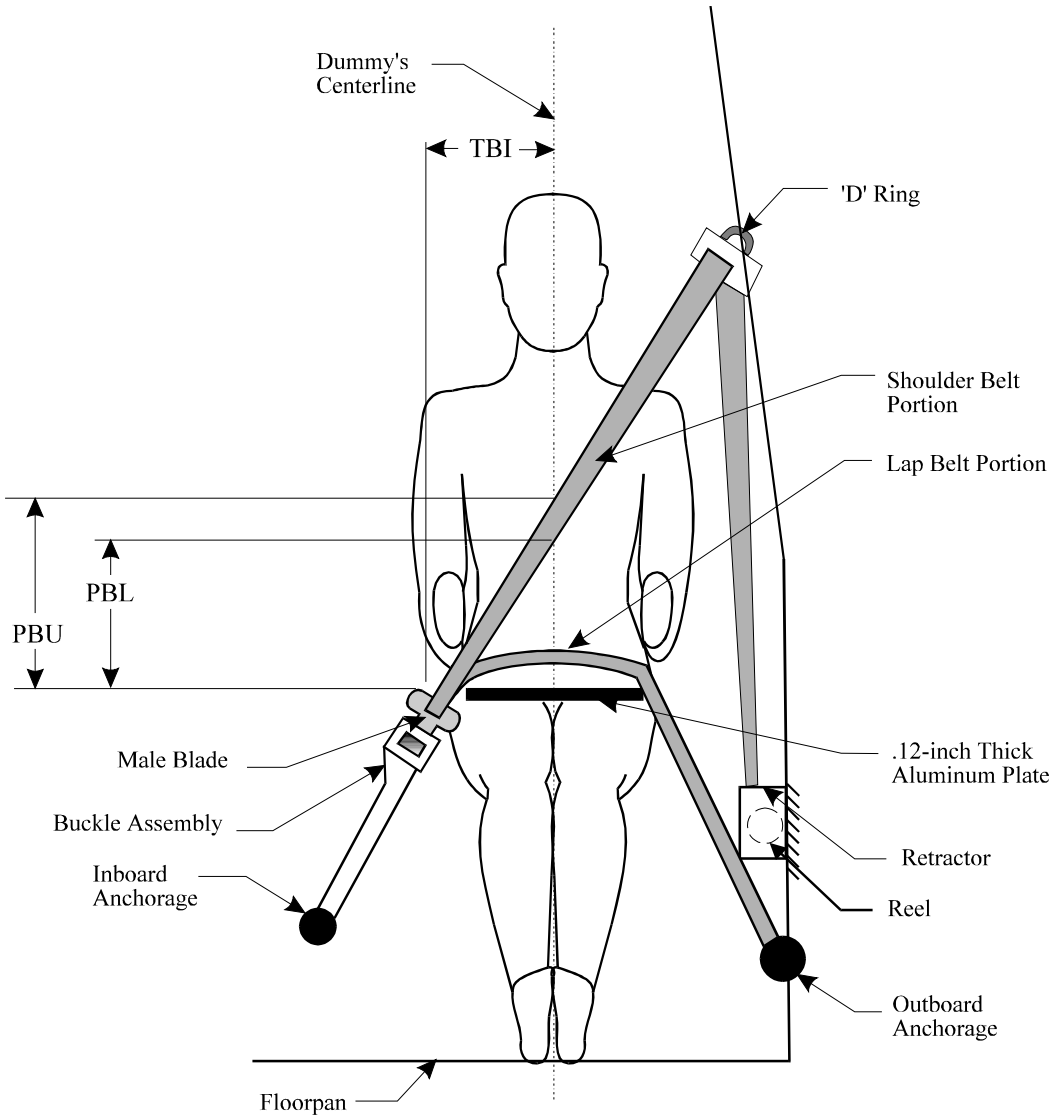
Table 12 Bullet Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 090)	Passenger (Serial # 070)
WA	Windshield angle	37.2°	37.2°
SWA	Steering wheel angle	63.5°	N/A
SCA	Steering column angle	26.5°	N/A
SA	Seat back angle	11.3°	0.9°
HZ	Head to roof	272 mm	334 mm
HH	Head to header	536 mm	434 mm
HW	Head to windshield	734 mm	694 mm
HR	Head to side header	246 mm	318 mm
NR	Nose to rim	438 mm	N/A
NA	Nose to rim angle	5.4°	N/A
CD	Chest to dash	607 mm	353 mm
CS	Steering wheel to chest	376 mm	N/A
RA	Rim to abdomen	211 mm	N/A
KDL	Left knee to dash	194 mm	49 mm
KDR	Right knee to dash	186 mm	47 mm
KDA	Outboard knee to dash angle	12.5°	14.7°
PA	Pelvic angle	24.2°	20.1°
TA	Tibia angle	42.5°	69.7°
KK	Knee to knee	326 mm	162 mm
ST[1]	Striker to head	628 mm	596 mm
	Striker to head angle	-74.4°	-56.9°
SK[1]	Striker to knee	687 mm	840 mm
	Striker to knee angle	-2.8°	-3.0°
SH[1]	Striker to H-point	302 mm	464 mm
	Striker to H-point angle	13.7°	7.2°
SHY	Striker to H-point (Y dir.)	146 mm	157 mm
HS	Head to side window	348 mm	372 mm
HD	H-point to door	156 mm	93 mm
AD	Arm to door	141 mm	113 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	310 mm	300 mm
PBL - Top surface of aluminum plate to belt lower edge	230 mm	220 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	180 mm	190 mm
Total belt length	2250 mm	2210 mm
Lap belt length	555 mm	540 mm
Shoulder belt length	780 mm	710 mm

Figure 5 Target Vehicle FMVSS 212 Test Data

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

Adhesive, plastic trim

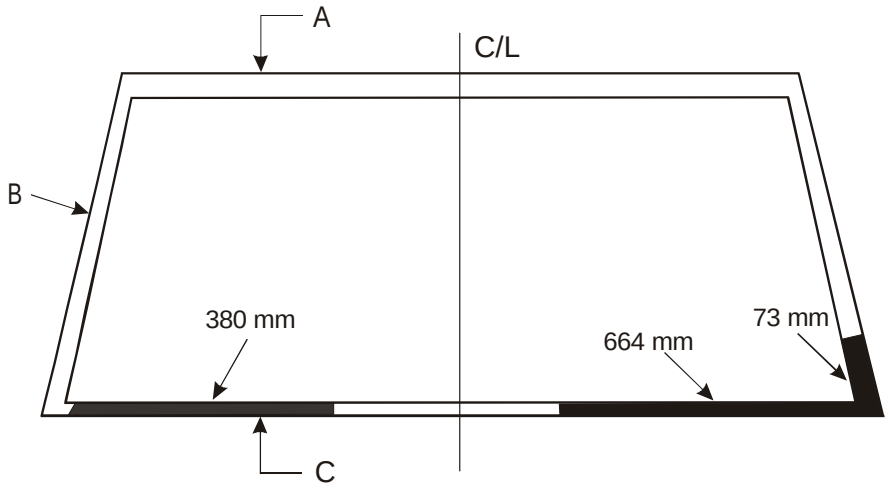
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	Pre-test	Post-test	Percent retention
Right side	2120 mm	1383 mm	65.2 %
Left side	2120 mm	1740 mm	82.1 %
Total	4240 mm	3123 mm	73.7 %

Pre-test windshield mounting material temperature: 34° C

A = 6 mm
B = 6 mm
C = 13 mm



Front view of windshield

Loss of windshield retention lengths: 380 mm on the bottom right, 737 mm on the bottom left

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 = 1105 mm

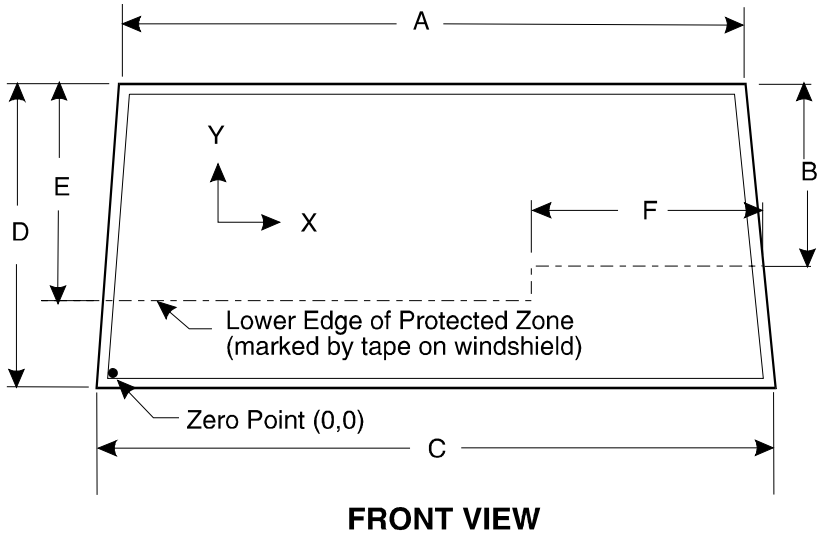
B = 450 mm

C = 1505 mm

D = 795 mm

E = 525 mm

F = 714 mm



FRONT VIEW

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

Areas of windshield template penetration greater than 6 mm: None

Areas of windshield penetration, below the protected zone, through the inner surface of the windshield: None

Figure 7 Bullet Vehicle FMVSS 212 Test Data

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

Adhesive, plastic

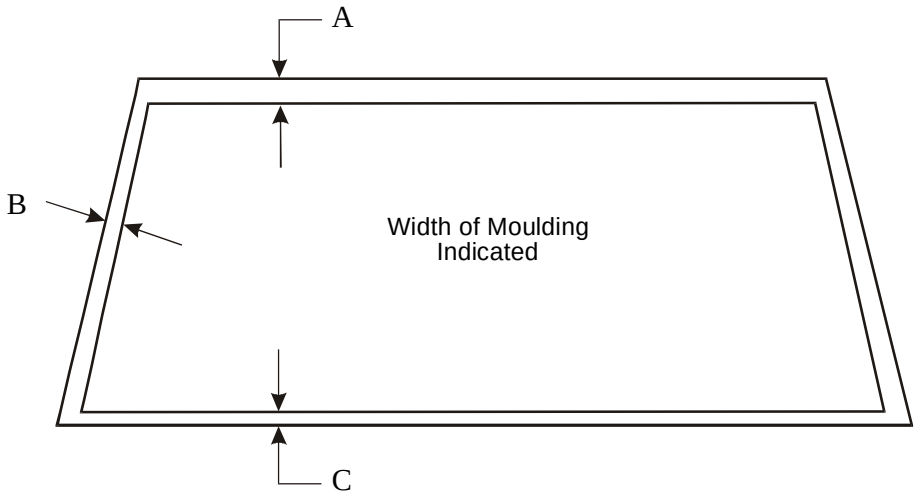
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	Pre-test	Post-test	Percent retention
Right side	2265 mm	2265 mm	100.0 %
Left side	2275 mm	2275 mm	100.0 %
Total	4540 mm	4540 mm	100.0 %

Pre-test windshield mounting material temperature: 25° C

A = 18 mm
B = 23 mm
C = 10 mm



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 = 1404 mm

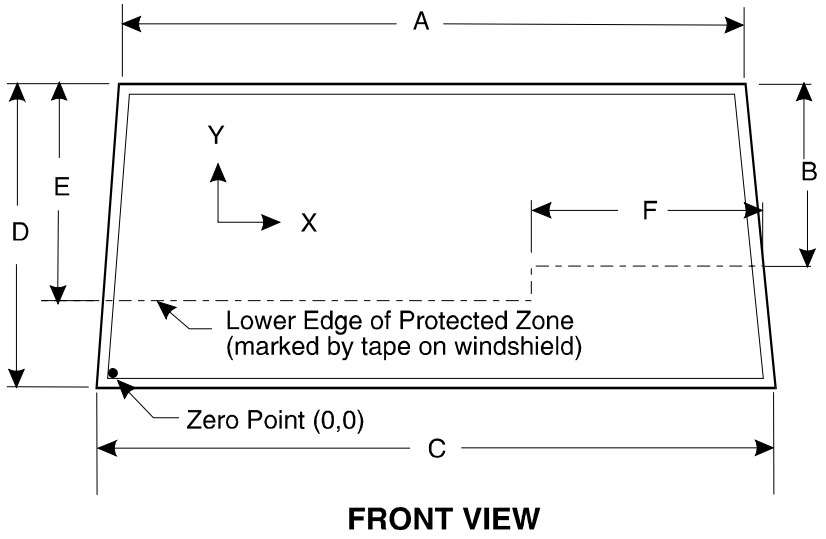
B = 364 mm

C = 1770 mm

D = 670 mm

E = 444 mm

F = 660 mm



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

Areas of windshield template penetration greater than 6 mm: None

Areas of windshield penetration, below the protected zone, through the inner surface of the windshield: None

Table 13 Target Vehicle Structural Measurements[1]

	Elements	Pre-Test
1	Total Length	4444
2	Total Width	1700
3	Bumper Top Height	536
4	Bumper Bottom Height	388
5	Longitudinal Member Top Height	524
6	Longitudinal Member Bottom Height	421
7	Distance Between Longitudinal Members	916
7´	Longitudinal Member Width	1082
8	Engine Top Height	758
9	Engine Bottom Height	168
10	Engine and Gearbox Width	777
11	Front Bumper - Engine Distance	526
12	Front Shock Absorber Fixing Height	817
13	Bonnet Leading Edge Height	674
14	Front Shock Absorber Fixing Width	1100
15	Front Bumper - Front Axle Distance	875
16	Front Axle - A Pillar Distance	555
17	A Pillar - B Pillar Distance	980
18	B Pillar - Rear Axle Distance	1085
19	B Pillar - C Pillar Distance	897
20	Roof Sill Bottom Height	1333
21	Roof Sill Top Height	1362
22	Floor Sill Bottom Height	254
23	Floor Sill Top Height	295

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

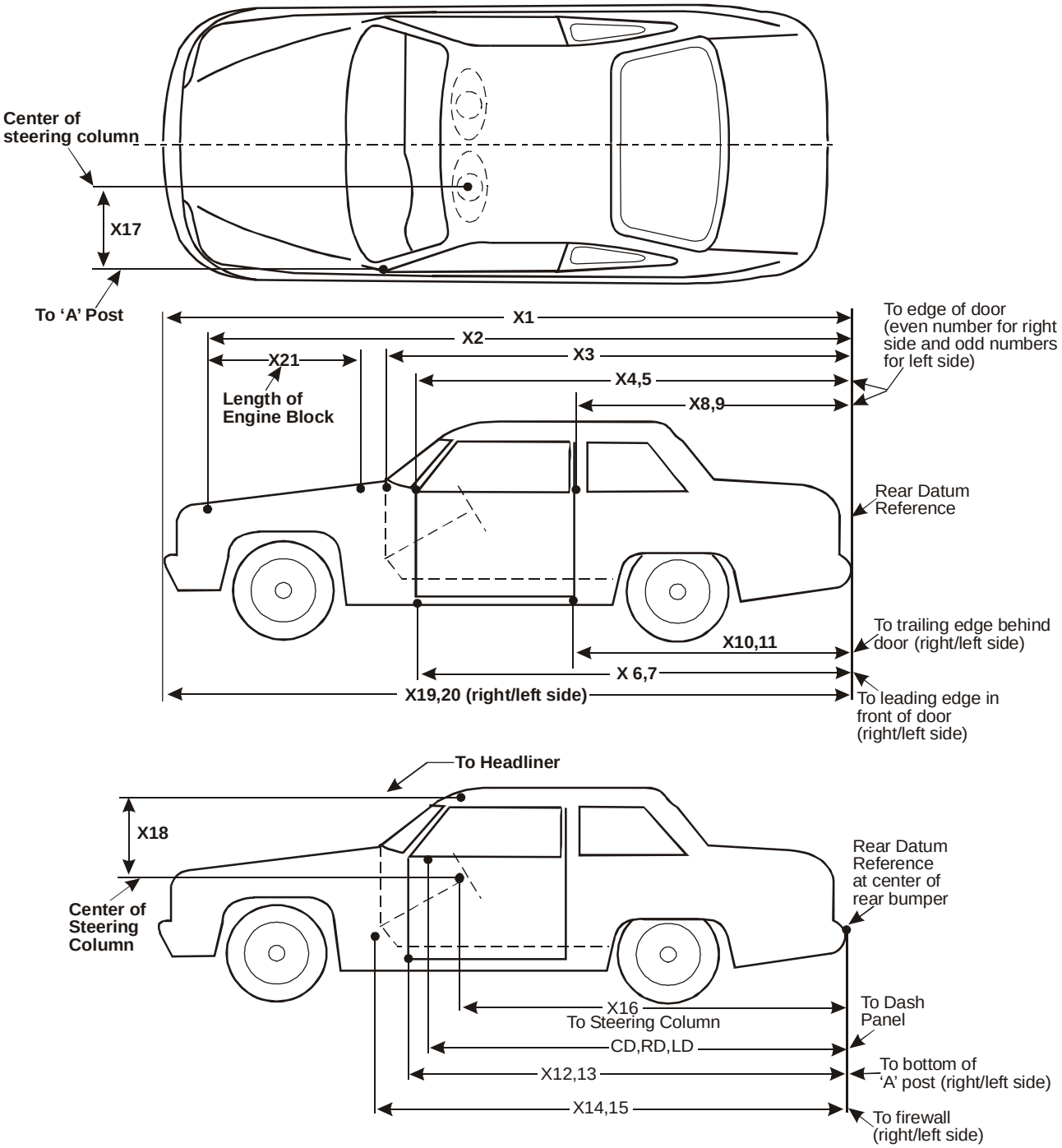


Table 14 Target Vehicle Impacted Measurements

Test number: 050627

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

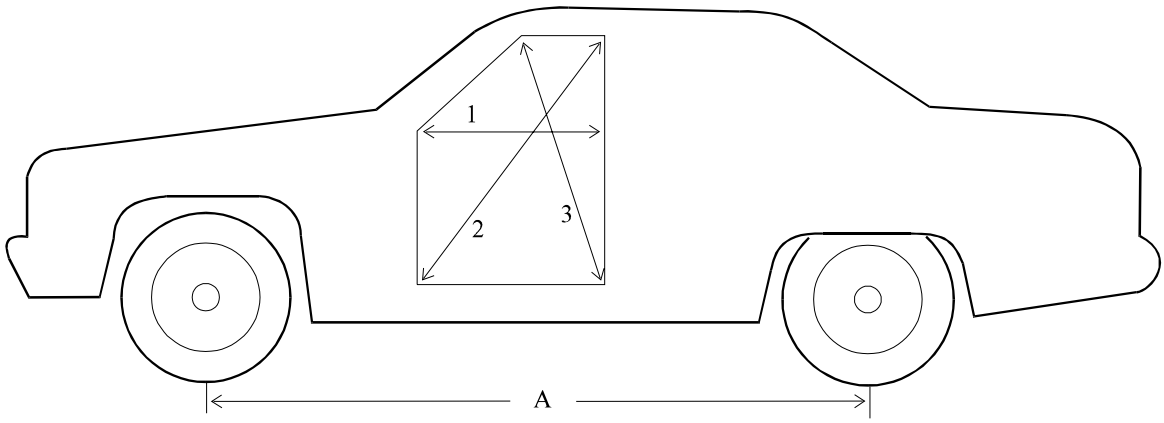
No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4444	---[1]	---[1]
X2	Rear Surface of Vehicle to Front of Engine Block	3889	3119	770
X3	Rear Surface of Vehicle to Firewall	3474	---[1]	---[1]
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3084	3053	31
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3080	3029	51
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3044	2972	72
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3030	2967	63
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2072	2045	27
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2064	2013	51
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2068	1997	71
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2059	1990	69
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3070	3004	66
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3064	3009	55
X14	Rear Surface of Vehicle to Firewall - Right Side	3474	---[1]	---[1]
X15	Rear Surface of Vehicle to Firewall - Left Side	3479	---[1]	---[1]
X16	Rear Surface of Vehicle to Steering Wheel Center	2644	2472	172
X17	Center of Steering Column to " A " Post	283	169	114
X18	Center of Steering Column to Headliner	430	603	-173
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4374	---[1]	---[1]
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4384	---[1]	---[1]
X21	Length of Engine Block	472	472	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2949	2713	236
CD	Rear Surface of Vehicle to Center of Dash Panel	2879	2614	265
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2946	2787	159

All distance measurements are in millimeters.

[1] Measurement point could not be located post test.

Figure 10 Target Vehicle Intrusion Measurements

Door Opening Width

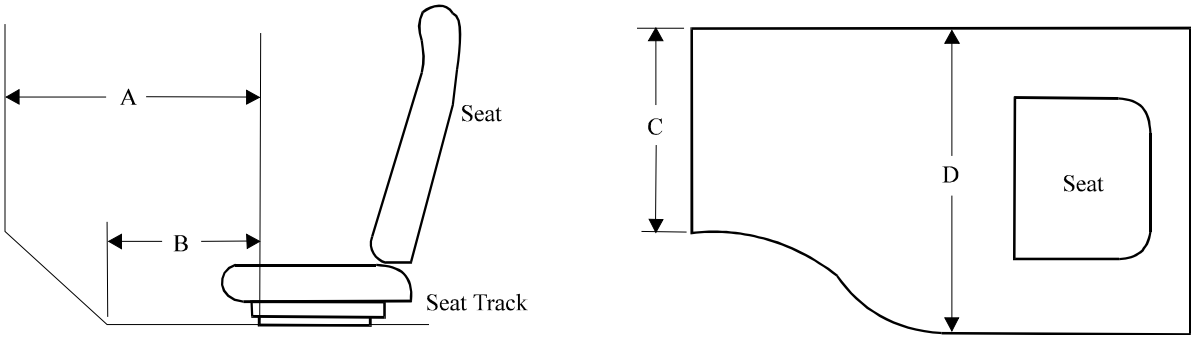


Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	897 mm	980 mm	1405 mm	893 mm	1000 mm	1390 mm
Post-Test	838 mm	1070 mm	1380 mm	833mm	1072 mm	1397 mm
Difference	59 mm	-90 mm	25 mm	60 mm	-72 mm	-7 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	2605 mm	2605 mm
Post-Test	2552 mm	2480 mm
Difference	53 mm	125 mm

Figure 11 Target Vehicle Intrusion Measurements

Static Footwell Deformation



Driver's Side

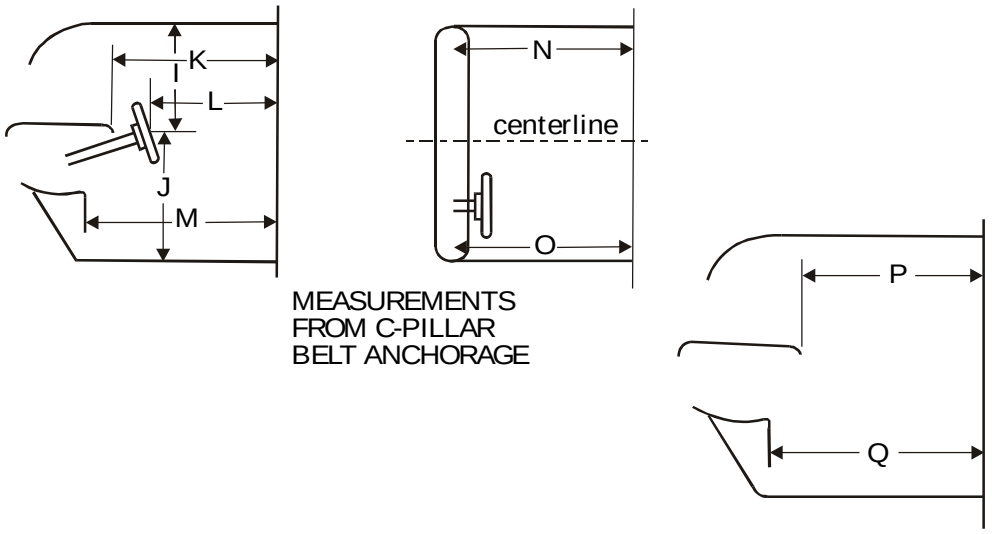
Measurement	Pre-Test	Post-Test	Difference
A	610 mm	547 mm	63 mm
B	514 mm	514 mm	0 mm
C	503 mm	503 mm	0 mm
D	487 mm	487 mm	0 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	575 mm	558 mm	17 mm
B	480 mm	480 mm	0 mm
C	420 mm	415 mm	5 mm
D	410 mm	412 mm	-2 mm

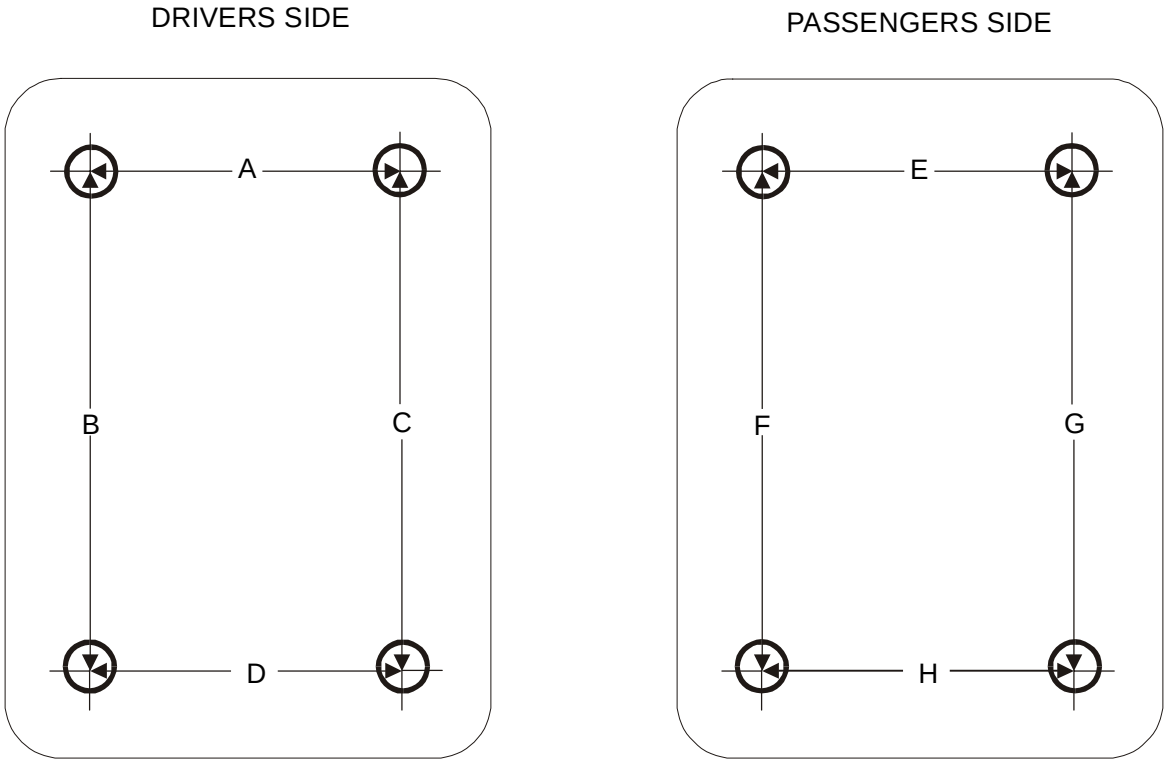
Figure 12 Target Vehicle Intrusion Measurements

Static Passenger Compartment Intrusion



Measurement	Pre-Test	Post-Test	Difference
I	430 mm	603 mm	-173 mm
J	712 mm	675 mm	37 mm
K (driver's side)	1873 mm	1705 mm	168 mm
L	1696 mm	1525 mm	171 mm
M (driver's side)	1964 mm	1905 mm	59 mm
N (passenger's side)	1935 mm	1705 mm	230 mm
O (driver's side)	1880 mm	1635 mm	245 mm
P (passenger's side)	1877 mm	1681 mm	196 mm
Q (passenger's side)	1966 mm	1857 mm	109 mm

Figure 13 Target Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	503 mm	503 mm	0 mm
B	400 mm	395 mm	5 mm
C	409 mm	402 mm	7 mm
D	487 mm	487 mm	0 mm
E	420 mm	415 mm	5 mm
F	330 mm	335 mm	-5 mm
G	315 mm	315 mm	0 mm
H	410 mm	412 mm	-2 mm

Table 15 Target Vehicle Frontal Profile Measurements

Bottom of Front Bumper

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4384	-600	-403	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
2	4435	-366	-420	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
3	4449	-117	-417	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
4	4449	128	-420	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
5	4437	378	-424	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
6	4379	620	-419	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]

Top of Front Bumper

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4374	-611	-539	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
2	4429	-365	-544	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
3	4459	-118	-546	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
4	4451	124	-547	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
5	4429	371	-550	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
6	4375	608	-551	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]

Center of Grill

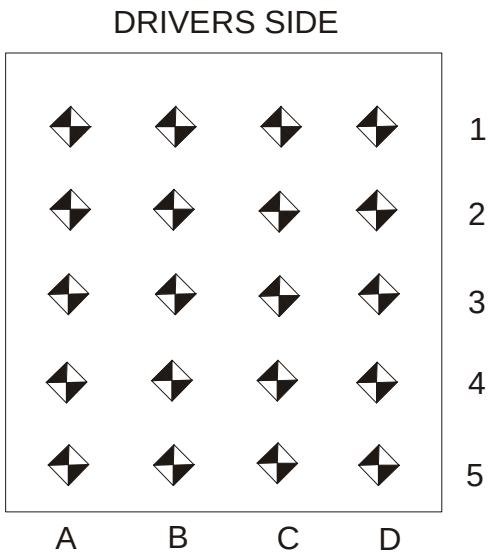
Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4244	-612	-645	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
2	4318	-370	-608	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
3	4344	-120	N/A	N/A[1]	N/A[1]	N/A	N/A[1]	N/A[1]	N/A
4	4346	132	N/A	N/A[1]	N/A[1]	N/A	N/A[1]	N/A[1]	N/A
5	4334	370	-608	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
6	4249	620	-646	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]

Front of Hood

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4049	-610	-773	3173	-615	-1374	-876	-5	-601
2	4317	-366	-658	3282	-365	-1210	-1035	1	-552
3	4331	-128	-672	3334	-125	-1195	-997	3	-523
4	4333	126	-669	3364	125	-1205	-969	-1	-536
5	4322	366	-662	3303	365	-1180	-1019	-1	-518
6	4047	616	-783	3183	619	-1314	-864	3	-531

[1] Measurement point could not be located post-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	599	683	675	670	516	583	592	593	-83	-100	-83	-77
2	556	589	595	593	530	534	541	553	-26	-55	-54	-40
3	510	501	525	532	502	483	508	510	-8	-18	-17	-22
4	314	304	321	325	308	298	316	316	-6	-6	-5	-9
5	115	110	118	117	112	106	112	109	-3	-4	-6	-8

TARGET DRIVER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-35	126	284	447	-36	138	292	459	-1	12	8	12
2	-28	140	288	456	-34	148	295	463	-6	8	7	7
3	-55	117	280	450	-49	121	283	453	6	4	3	3
4	-44	128	290	459	-42	130	292	461	2	2	2	2
5	-23	142	298	456	-23	141	296	455	0	-1	-2	-1

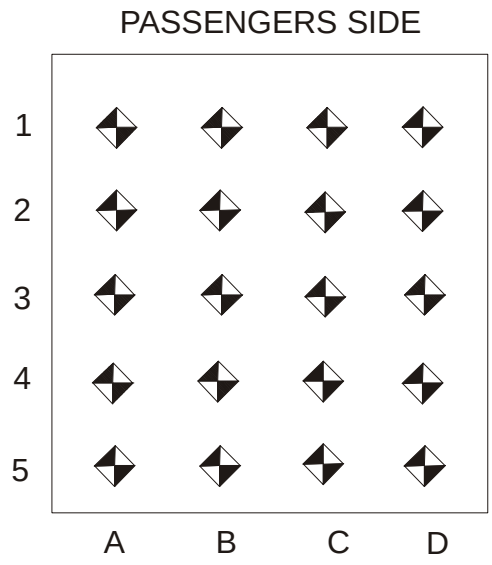
TARGET DRIVER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-123	-68	-60	-62	-177	-151	-128	-101	-54	-83	-68	-39
2	-42	-5	-1	-4	-85	-52	-44	-36	-43	-47	-43	-32
3	49	52	46	39	9	38	31	26	-40	-14	-15	-13
4	64	72	76	72	32	51	68	79	-32	-21	-8	7
5	85	88	88	72	70	76	95	86	-15	-12	7	14

Pre- and post-test measurement reference: +X forward; +Y right; +Z down.

0,0,0 origin is front outboard seat bolt.

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	634	640	635	574	579	576	580	537	-55	-64	-55	-37
2	568	569	562	531	536	531	527	525	-32	-38	-35	-6
3	484	483	483	477	472	474	475	473	-12	-9	-8	-4
4	323	324	320	318	314	316	313	313	-9	-8	-7	-5
5	152	157	154	161	145	150	149	158	-7	-7	-5	-3

TARGET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-376	-235	-94	38	-383	-250	-109	36	-7	-15	-15	-2
2	-382	-238	-98	48	-391	-250	-109	42	-9	-12	-11	-6
3	-385	-242	-105	38	-388	-247	-114	35	-3	-5	-9	-3
4	-393	-255	-110	32	-398	-260	-117	25	-5	-5	-7	-7
5	-389	-251	-111	28	-391	-255	-116	23	-2	-4	-5	-5

TARGET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-35	-43	-32	-79	-74	-96	-90	-91	-39	-53	-58	-12
2	13	4	9	-4	-9	-26	-25	-25	-22	-30	-34	-21
3	63	62	60	68	63	58	52	45	0	-4	-8	-23
4	67	73	69	65	78	71	57	47	11	-2	-12	-18
5	81	83	83	81	96	92	82	77	15	9	-1	-4

Pre- and post-test measurement reference: +X forward; +Y right; +Z down.

0,0,0 origin is front outboard seat bolt.

Table 16 Target Vehicle IIHS Measurements

TARGET IIHS MEASUREMENTS

Index	Description	Pre-Test			Post-Test			Difference		
		Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	Center of Steering Wheel on the Airbag Door	2431	-353	-238	2282	-430	-165	-149	-77	73
2	Driver's Lower Left Instrument Panel	2655	-502	-20	2567	-535	-6	-88	-33	14
3	Driver's Lower Right Instrument Panel	2674	-202	20	2551	-241	61	-123	-39	41
4	Brake Pedal Center	2894	-331	262	2843	-419	309	-51	-88	47
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3110	-482	265	2970	-464	170	-140	18	-95
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3120	-330	255	2982	-316	168	-138	14	-87
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3009	-577	270	2905	-575	216	-104	2	-54
9	Left Front Driver's Seat Mounting Bolt	2390	-601	393	2384	-598	394	-6	3	1
10	Right Front Driver's Seat Mounting Bolt	2386	-148	374	2382	-149	392	-4	-1	18
11	Left Rear Driver's Seat Mounting Bolt	2004	-634	409	1999	-635	412	-5	-1	3
12	Right Rear Driver's Seat Mounting Bolt	1959	-112	410	1953	-111	423	-6	1	13
17	Exterior A-Pillar at Height of Bottom of Front Window	2822	-727	-216	2748	-764	-244	-74	-37	-28
18	Exterior B-pillar at Height of A-Pillar Measurement Location	1838	-735	-265	1836	-733	-262	-2	2	3

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

Table 17 Target Vehicle Bumper Measurements

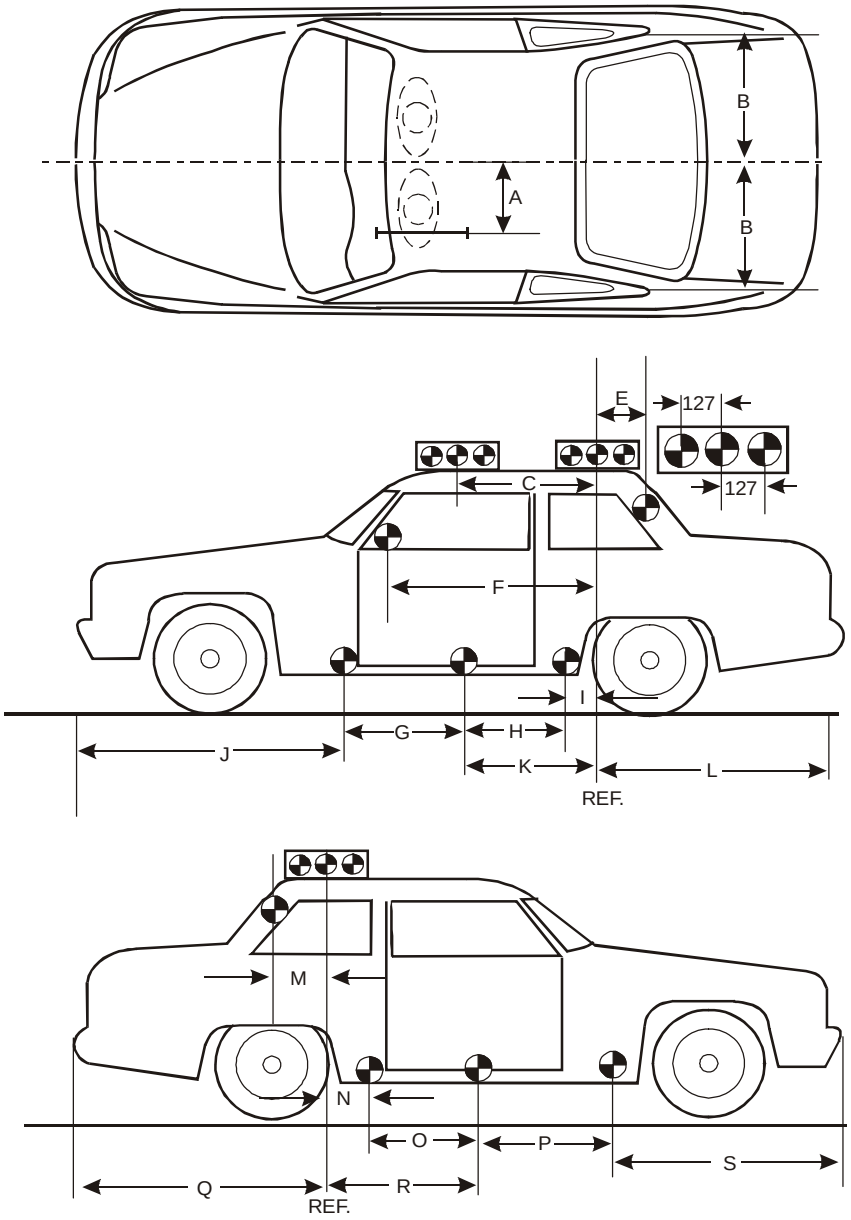
TARGET BUMPER PROFILE

	Pre-Test			Post-Test[1]			Difference[1]		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4124	-622	216	N/A	N/A	N/A	N/A	N/A	N/A
2	4148	-505	215	N/A	N/A	N/A	N/A	N/A	N/A
3	4149	-381	215	N/A	N/A	N/A	N/A	N/A	N/A
4	4149	-257	215	N/A	N/A	N/A	N/A	N/A	N/A
5	4149	-135	216	N/A	N/A	N/A	N/A	N/A	N/A
6	4149	-12	215	N/A	N/A	N/A	N/A	N/A	N/A
7	4150	106	216	N/A	N/A	N/A	N/A	N/A	N/A
8	4150	235	216	N/A	N/A	N/A	N/A	N/A	N/A
9	4151	358	216	N/A	N/A	N/A	N/A	N/A	N/A
10	4151	480	216	N/A	N/A	N/A	N/A	N/A	N/A
11	4130	599	215	N/A	N/A	N/A	N/A	N/A	N/A

[1] The post-test bumper profile measurements could not be taken; the bumper was destroyed during impact.

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

Figure 15 Target Vehicle Reference Photo Target Locations



Measurement	Pre-Test
A	Left 300 mm
	Right 300 mm
B	Left 595 mm
	Right 595 mm
C	Left 600 mm
	Right 600 mm
E[1]	300 mm

Measurement	Pre-Test
F	1185 mm
G	876 mm
H	905 mm
I	-281 mm
J	1252 mm
K	622 mm
L	1634 mm

Measurement	Pre-Test
M	351 mm
N	-152 mm
O	906 mm
P	875 mm
Q	1519 mm
R	755 mm
S	1225 mm

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

Table 18 Bullet Vehicle Structural Measurements[1]

	Elements	Pre-Test
1	Total Length	5825
2	Total Width	1981
3	Bumper Top Height	658
4	Bumper Bottom Height	448
5	Longitudinal Member Top Height	508
6	Longitudinal Member Bottom Height	380
7	Distance Between Longitudinal Members	895
7´	Longitudinal Member Width	112
8	Engine Top Height	1057
9	Engine Bottom Height	285
10	Engine and Gearbox Width	480
11	Front Bumper - Engine Distance	850
12	Front Shock Absorber Fixing Height	605
13	Bonnet Leading Edge Height	1013
14	Front Shock Absorber Fixing Width	945
15	Front Bumper - Front Axle Distance	986
16	Front Axle - A Pillar Distance	590
17	A Pillar - B Pillar Distance	1145
18	B Pillar - Rear Axle Distance	1920
19	B Pillar - C Pillar Distance	705
20	Roof Sill Bottom Height	1695
21	Roof Sill Top Height	1725
22	Floor Sill Bottom Height	427
23	Floor Sill Top Height	475

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

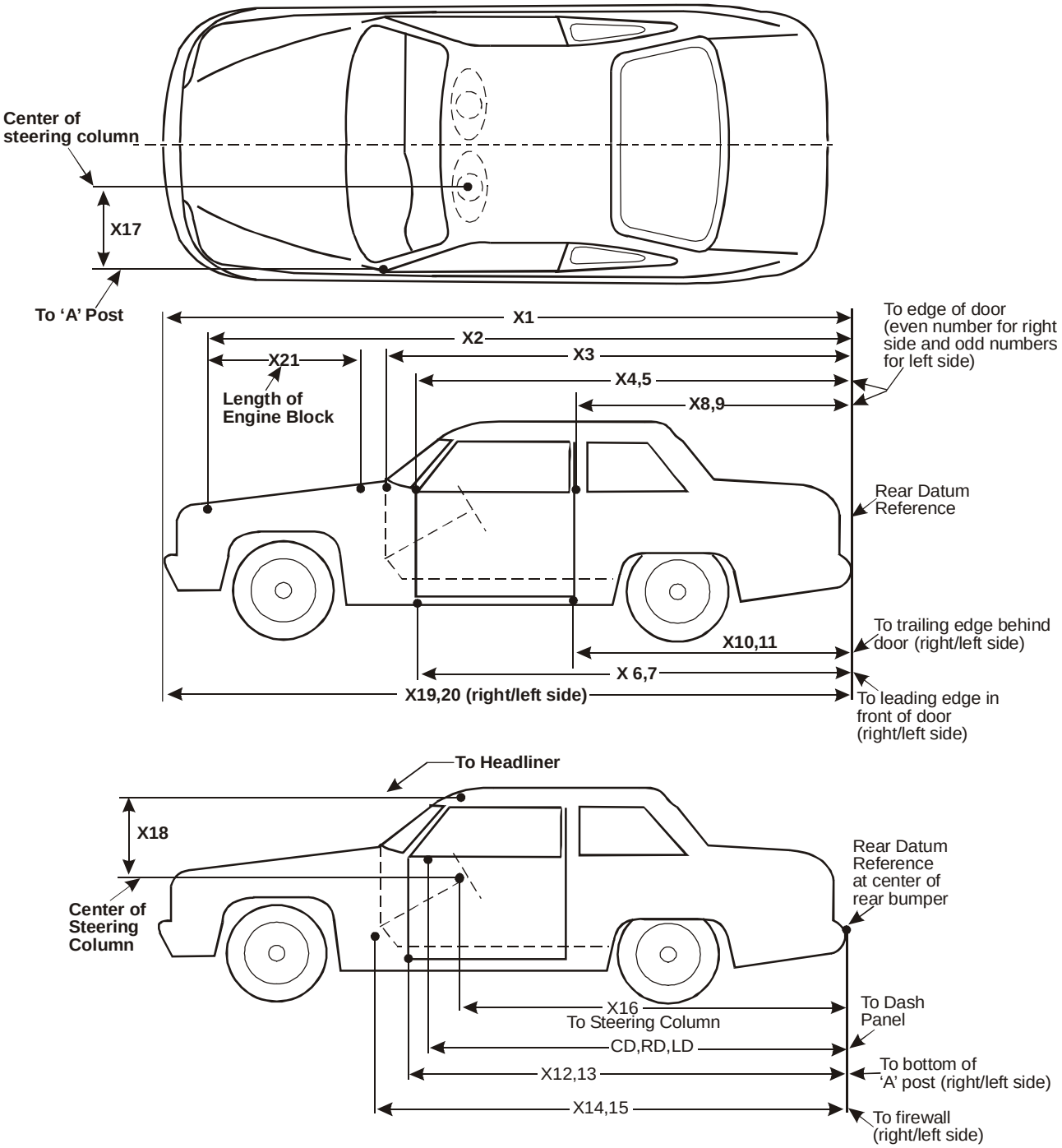


Table 19 Bullet Vehicle Impacted Measurements

Test number: 050627

Vehicle year/make/model/body style: 2003/Chevrolet/Silverado/Pickup truck

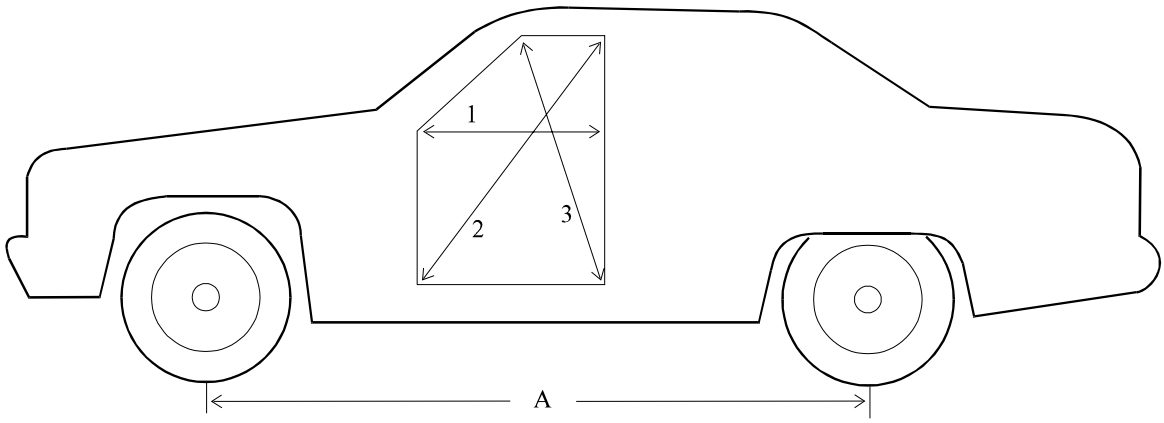
No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5825	5338	487
X2	Rear Surface of Vehicle to Front of Engine Block	4959	---[1]	---[1]
X3	Rear Surface of Vehicle to Firewall	4594	4550	44
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	4258	4215	43
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	4258	4230	28
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	4213	4183	30
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	4216	4188	28
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	3129	3088	41
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	3125	3097	28
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	3115	3087	28
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	3116	3084	32
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	4258	4221	37
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	4260	4235	25
X14	Rear Surface of Vehicle to Firewall - Right Side	4587	4570	17
X15	Rear Surface of Vehicle to Firewall - Left Side	4575	4572	3
X16	Rear Surface of Vehicle to Steering Wheel Center	3775	3771	4
X17	Center of Steering Column to " A " Post	295	305	-10
X18	Center of Steering Column to Headliner	444	460	-16
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5695	5360	335
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5695	5296	399
X21	Length of Engine Block	500	500	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3969	3935	34
CD	Rear Surface of Vehicle to Center of Dash Panel	3940	3905	35
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3958	3931	27

All distance measurements are in millimeters.

[1] Measurement point could not be located post test.

Figure 17 Bullet Vehicle Intrusion Measurements

Door Opening Width

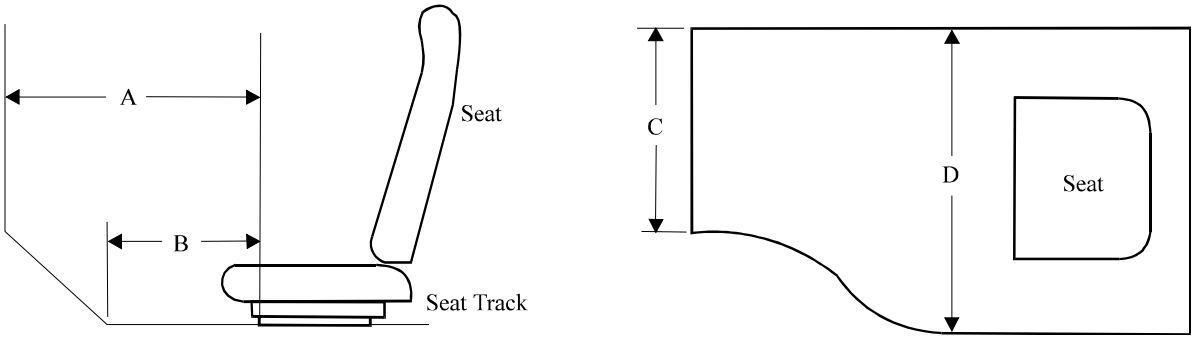


Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	1145 mm	1565 mm	1278 mm	1145 mm	1280 mm	1570 mm
Post-Test	1138 mm	1578 mm	1287 mm	1129 mm	1288 mm	1569 mm
Difference	7 mm	-13 mm	-9 mm	16 mm	-8 mm	1 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	3660 mm	3660 mm
Post-Test	3544 mm	3543 mm
Difference	116mm	117 mm

Figure 18 Bullet Vehicle Intrusion Measurements

Static Footwell Deformation



Driver's Side

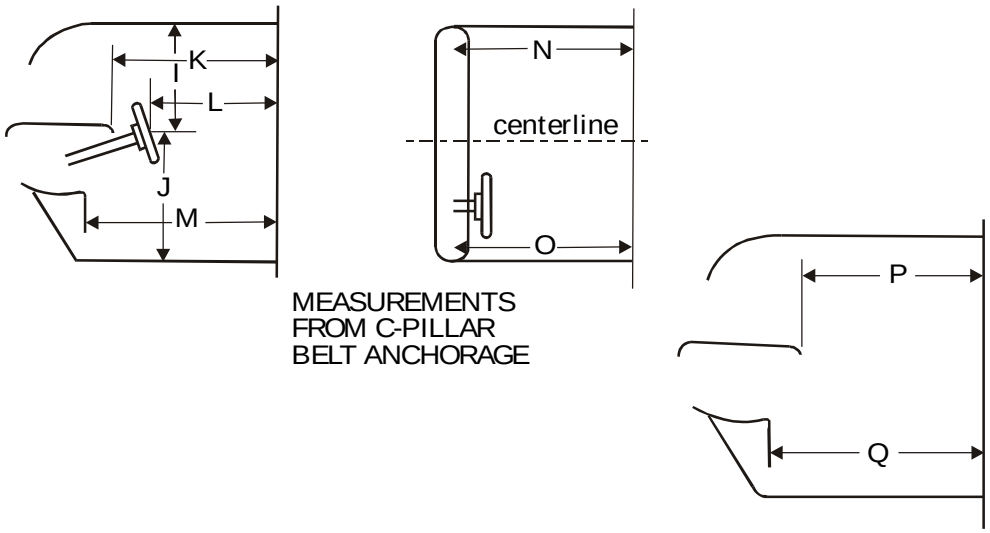
Measurement	Pre-Test	Post-Test	Difference
A	714 mm	695 mm	19 mm
B	678 mm	570 mm	108 mm
C	390 mm	392 mm	-2 mm
D	410 mm	410 mm	0 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	720 mm	705 mm	15 mm
B	535 mm	540 mm	-5 mm
C	321 mm	322 mm	-1 mm
D	295 mm	300 mm	-5 mm

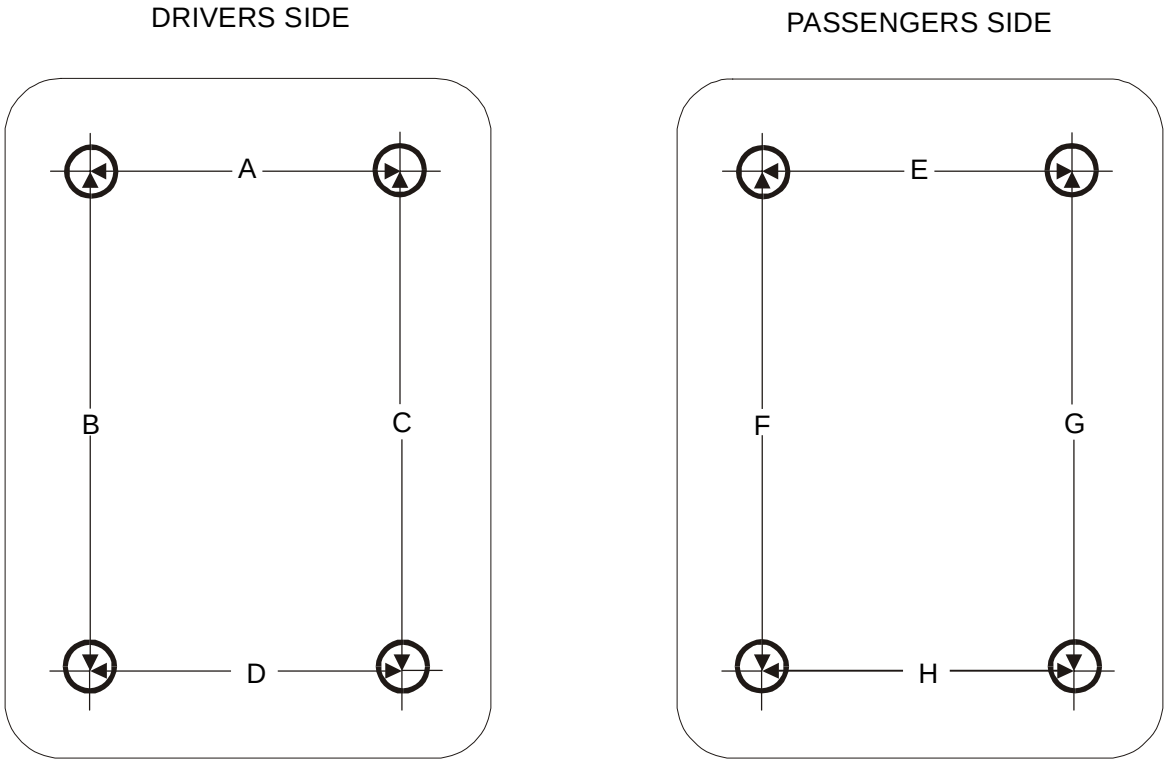
Figure 19 Bullet Vehicle Intrusion Measurements

Static Passenger Compartment Intrusion



Measurement	Pre-Test	Post-Test	Difference
I	444 mm	460 mm	-16 mm
J	696 mm	790 mm	-94 mm
K (driver's side)	1562 mm	1550 mm	12 mm
L	1440 mm	1438 mm	2 mm
M (driver's side)	1777 mm	1756 mm	21 mm
N (passenger's side)	1600 mm	1587 mm	13 mm
O (driver's side)	1620 mm	1619 mm	1 mm
P (passenger's side)	1580 mm	1568 mm	12 mm
Q (passenger's side)	1772 mm	1763 mm	9 mm

Figure 20 Bullet Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	390 mm	392 mm	-2 mm
B	432 mm	435 mm	-3 mm
C	393 mm	396 mm	-3 mm
D	410 mm	410 mm	0 mm
E	321 mm	322 mm	-1 mm
F	370 mm	375 mm	-5 mm
G	385 mm	387 mm	-2 mm
H	295 mm	300 mm	-5 mm

Table 20 Bullet Vehicle Frontal Profile Measurements

Bottom of Front Bumper

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	5675	-860	-467	5230	-835	-423	-445	25	44
2	5765	-510	-470	5294	-515	-503	-471	-5	-33
3	5790	-162	-470	5320	-195	-610	-470	-33	-140
4	5805	175	-474	5385	45	-680	-420	-130	-206
5	5775	520	-470	5455	366	-645	-320	-154	-175
6	5675	865	-463	5350	608	-460	-325	-257	3

Top of Front Bumper

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	5695	-855	-608	5296	-875	-555	-399	-20	53
2	5780	-510	-600	5315	-565	-603	-465	-55	-3
3	5805	-165	-599	5306	-210	-655	-499	-45	-56
4	5820	170	-598	5344	65	-685	-476	-105	-87
5	5790	520	-600	5381	400	-780	-409	-120	-180
6	5695	860	-601	5357	737	-770	-338	-123	-169

Center of Grill

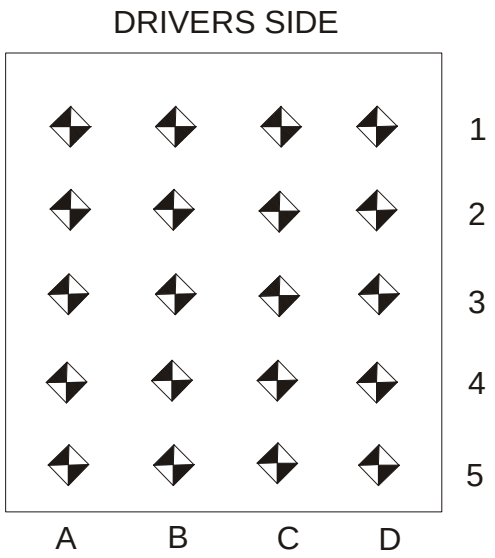
Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	5575	-855	-850	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
2	5680	-515	-848	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
3	5725	-169	-842	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
4	5725	171	-834	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
5	5690	518	-838	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]
6	5580	860	-844	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]

Front of Hood

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	5450	-860	-1031	5525	-855	-1205	75	5	-174
2	5625	-520	-989	5645	-520	-1182	20	0	-193
3	5670	-175	-1005	5674	-173	-1175	4	2	-170
4	5680	176	-1007	5668	175	-1166	-12	-1	-159
5	5645	520	-986	5643	519	-1170	-2	-1	-184
6	5510	860	-1010	5510	840	-1184	0	-20	-174

[1] Measurement point could not be located post-test.

Figure 21 Bullet Vehicle Toeboard Measurements



BULLET DRIVER TOEPAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	707	751	781	732	675	703	675	657	-32	-48	-106	-75
2	671	668	655	646	642	621	593	596	-29	-47	-62	-50
3	571	567	553	552	562	554	539	536	-9	-13	-14	-16
4	356	346	335	334	349	336	323	320	-7	-10	-12	-14
5	136	132	171	157	129	123	160	143	-7	-9	-11	-14

BULLET DRIVER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	9	132	270	391	23	153	274	403	14	21	4	12
2	11	141	271	398	28	156	284	412	17	15	13	14
3	15	145	280	406	30	161	298	420	15	16	18	14
4	7	141	275	410	22	155	287	423	15	14	12	13
5	-11	121	269	399	-2	131	279	407	9	10	10	8

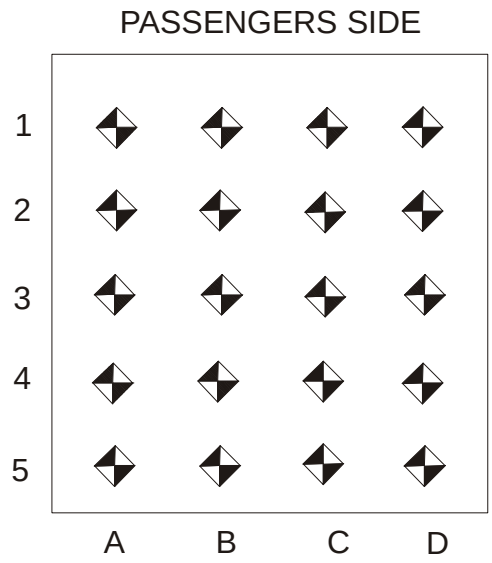
BULLET DRIVER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-87	-71	-43	-68	-156	-150	-167	-163	-69	-79	-124	-95
2	17	19	20	3	-51	-55	-57	-69	-68	-74	-77	-72
3	77	76	77	73	28	30	30	21	-49	-46	-47	-52
4	81	74	70	75	52	55	47	49	-29	-19	-23	-26
5	80	77	70	73	57	66	61	65	-23	-11	-9	-8

Pre- and post-test measurement reference: +X forward; +Y right; +Z down.

0,0,0 origin is front outboard seat bolt.

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	721	728	730	714	652	680	684	676	-69	-48	-46	-38
2	642	641	647	649	598	605	616	622	-44	-36	-31	-27
3	526	527	529	532	509	513	515	515	-17	-14	-14	-17
4	341	346	346	348	327	332	333	333	-14	-14	-13	-15
5	154	158	163	145	142	145	150	148	-12	-13	-13	3

BULLET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-264	-169	-70	30	-250	-163	-62	37	14	6	8	7
2	-277	-171	-63	43	-266	-160	-52	54	11	11	11	11
3	-274	-164	-60	49	-261	-153	-49	60	13	11	11	11
4	-271	-175	-70	33	-261	-164	-58	45	10	11	12	12
5	-258	-160	-62	38	-248	-149	-52	47	10	11	10	9

BULLET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-91	-94	-103	-115	-160	-152	-163	-174	-69	-58	-60	-59
2	5	3	-1	-10	-58	-53	-58	-64	-63	-56	-57	-54
3	77	75	74	72	31	29	28	25	-46	-46	-46	-47
4	74	79	79	78	42	46	46	49	-32	-33	-33	-29
5	78	78	74	78	63	60	53	52	-15	-18	-21	-26

Pre- and post-test measurement reference: +X forward; +Y right; +Z down.

0,0,0 origin is front outboard seat bolt.

Table 21 Bullet Vehicle IIHS Measurements

BULLET IIHS MEASUREMENTS

Index	Description	Pre-Test			Post-Test			Difference		
		Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	Center of Steering Wheel on the Airbag Door	3783	-417	-752	3752	-405	-779	-31	12	-27
2	Driver's Lower Left Instrument Panel	4015	-591	-461	3990	-580	-516	-25	11	-55
3	Driver's Lower Right Instrument Panel	4018	-266	-460	3985	-253	-518	-33	13	-58
4	Brake Pedal Center	4237	-422	-180	4211	-404	-241	-26	18	-61
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	4463	-569	-178	4414	-549	-255	-49	20	-77
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	4543	-419	-180	4441	-404	-298	-102	15	-118
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	4467	-270	-179	4402	-259	-266	-65	11	-87
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	4420	-670	-180	4390	-651	-255	-30	19	-75
9	Left Front Driver's Seat Mounting Bolt	3699	-671	-70	3697	-651	-87	-2	20	-17
10	Right Front Driver's Seat Mounting Bolt	3689	-228	-76	3681	-212	-81	-8	16	-5
11	Left Rear Driver's Seat Mounting Bolt	3276	-670	-74	3274	-659	-94	-2	11	-20
12	Right Rear Driver's Seat Mounting Bolt	3291	-232	-83	3285	-221	-100	-6	11	-17
17	Exterior A-Pillar at Height of Bottom of Front Window	4250	-844	-569	4220	-832	-626	-30	12	-57
18	Exterior B-pillar at Height of A-Pillar Measurement Location	3101	-869	-622	3082	-868	-639	-19	1	-17

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

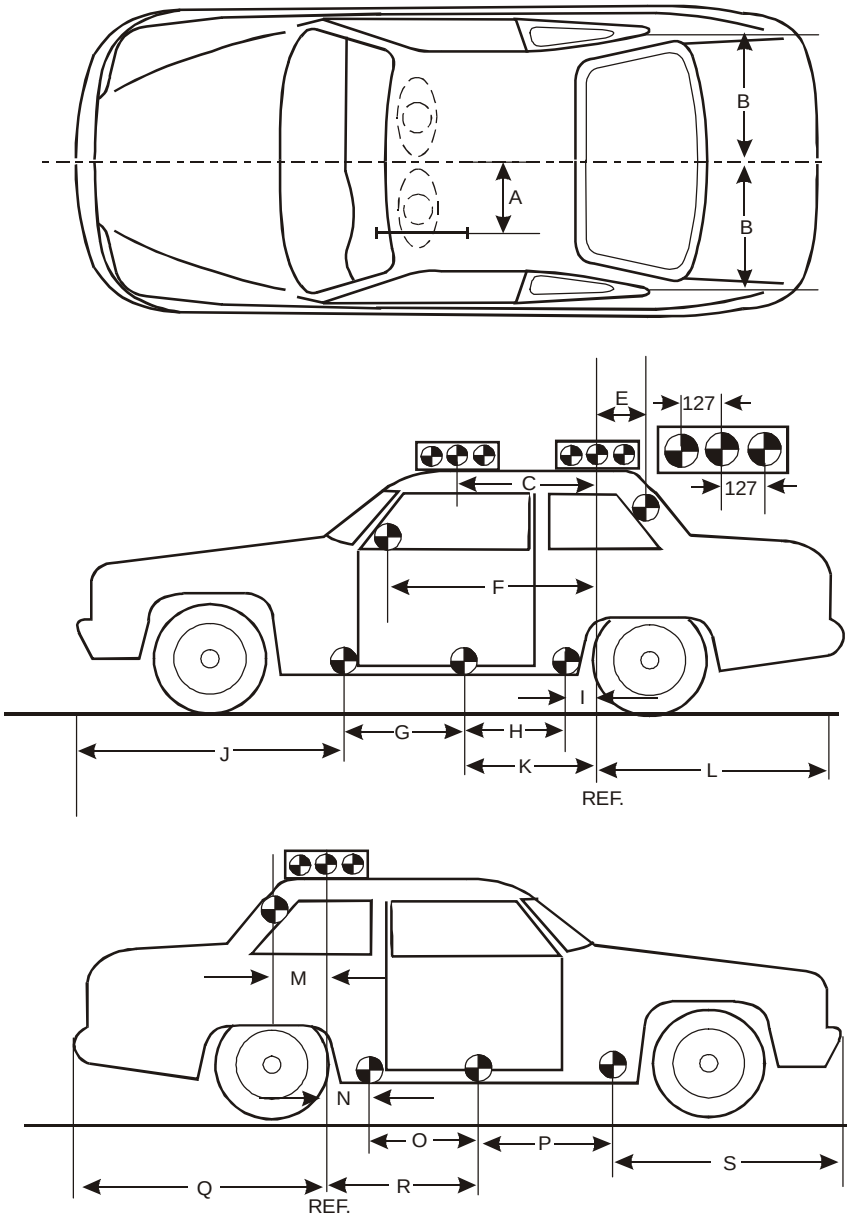
Table 22 Bullet Vehicle Bumper Measurements

BULLET BUMPER

Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	5296	-933	-54	4933	-1050	-260	-363	-117	-206
2	5551	-896	-72	5159	-928	-234	-392	-32	-162
3	5735	-742	-64	5258	-719	-241	-477	23	-177
4	5786	-489	-59	5268	-489	-291	-518	0	-232
5	5814	-233	-51	5279	-250	-369	-535	-17	-318
6	5832	25	-59	5315	-12	-424	-517	-37	-365
7	5814	280	-55	5355	240	-455	-459	-40	-400
8	5784	538	-72	5381	470	-459	-403	-68	-387
9	5731	791	-75	5351	655	-333	-380	-136	-258
10	5547	945	-81	5256	863	-246	-291	-82	-165
11	5287	980	-91	5076	1038	-174	-211	58	-83

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

Figure 22 Bullet Vehicle Reference Photo Target Locations



Measurement	Pre-Test
A	Left 495 mm
	Right 495 mm
B	Left 725 mm
	Right 725 mm
C	Left 600 mm
	Right 600 mm
E[1]	300 mm

Measurement	Pre-Test
F	1162 mm
G	1280 mm
H	1200 mm
I	-1019 mm
J	1399 mm
K	182 mm
L	2834 mm

Measurement	Pre-Test
M	404 mm
N	-1101 mm
O	1302 mm
P	1280 mm
Q	2811 mm
R	202 mm
S	1402 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

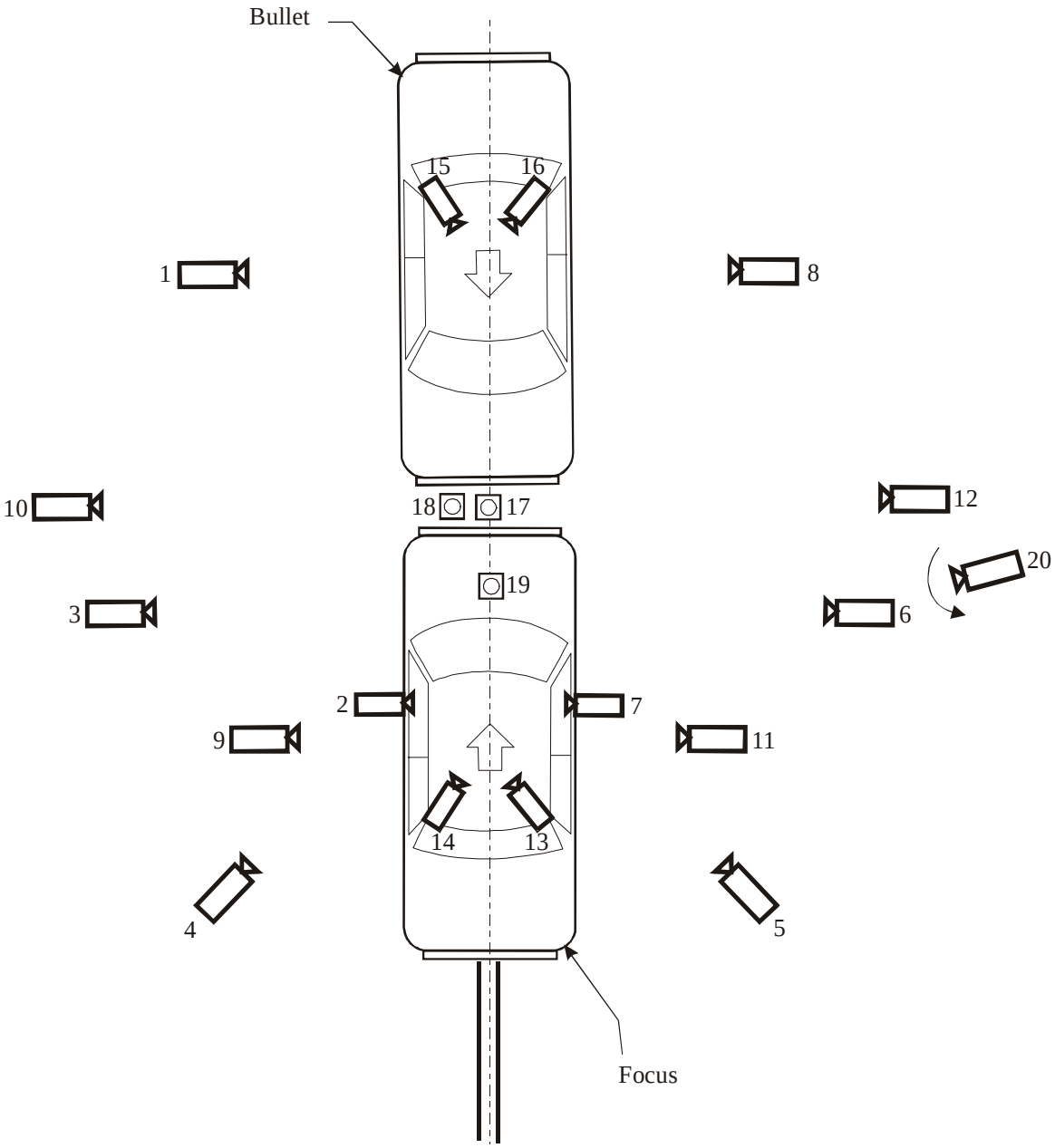


Table 23 Camera Information

Camera Number	Location	Location, mm X	Y	Z	Angle (deg.)	Lens (mm)	Speed (fps)
1	Bullet vehicle passenger side	2350	-11700	-990	0.0	13	1000
2	Onboard target vehicle - driver	-1980	-760	-1260	-30.0	6.5	---[1]
3	Target vehicle left tight	-1600	-12300	-970	0.0	50	1000
4	Target vehicle driver angled	-5600	-5800	-1975	-8.0	50	1000
5	Target vehicle passenger angled	-6100	5500	-2100	-9.0	50	1000
6	Target vehicle right tight	-11050	1350	-970	0.0	50	1000
7	Onboard target vehicle - passenger	-1980	760	-1260	-30.0	6.5	---[1]
8	Bullet vehicle driver side	13150	2600	-980	0.0	13	---[1]
9	Target vehicle driver side wide	-1750	-12500	-980	-2.0	13	1000
10	Left overall wide (reference to target vehicle)	0	-15700	1200	0.0	12.5	1000
11	Target vehicle passenger side wide	-11800	-2000	-1300	-2.0	13	---[1]
12	Right overall wide (reference to target vehicle)	14600	300	-1000	0.0	12.5	---[1]
13	Onboard target vehicle - driver overshoulder	-1150	300	-1200	-2.0	12.5	1000
14	Onboard target vehicle - passenger overshoulder	-1150	-300	-1200	-2.0	12.5	1000
15	Onboard bullet vehicle - driver overshoulder	2950	-250	-1500	-10.0	8	1000
16	Onboard bullet vehicle - passenger overshoulder	2800	450	-1500	-12.5	8	1000
17	Overhead wide	0	0	N/A	90.0	10	1000
18	Overhead tight	0	0	N/A	90.0	50	1000
19	Underbody tight on crush area of target vehicle	-700	0	3000	90.0	50	1000
20	Panning/documentary	N/A	N/A	N/A	N/A	13	24

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

[1] See Data Acquisition Explanations; camera view was lost.

Appendix A

Photographs

Figure A-1 Pre-Test Overall - View 1

Figure A-2 Pre-Test Overall - View 2

Figure A-3 Pre-Test Overall - View 3

Figure A-4 Pre-Test Overall - View 4

Figure A-5 Pre-Test Overall - View 5

Figure A-6 Pre-Test Overall - View 6

Figure A-7 Pre-Test Alignment - View 1

Figure A-8 Pre-Test Alignment - View 2

Figure A-9 Pre-Test Alignment - View 3

Figure A-10 Pre-Test Alignment - View 4

Figure A-11 Pre-Test Alignment - View 5

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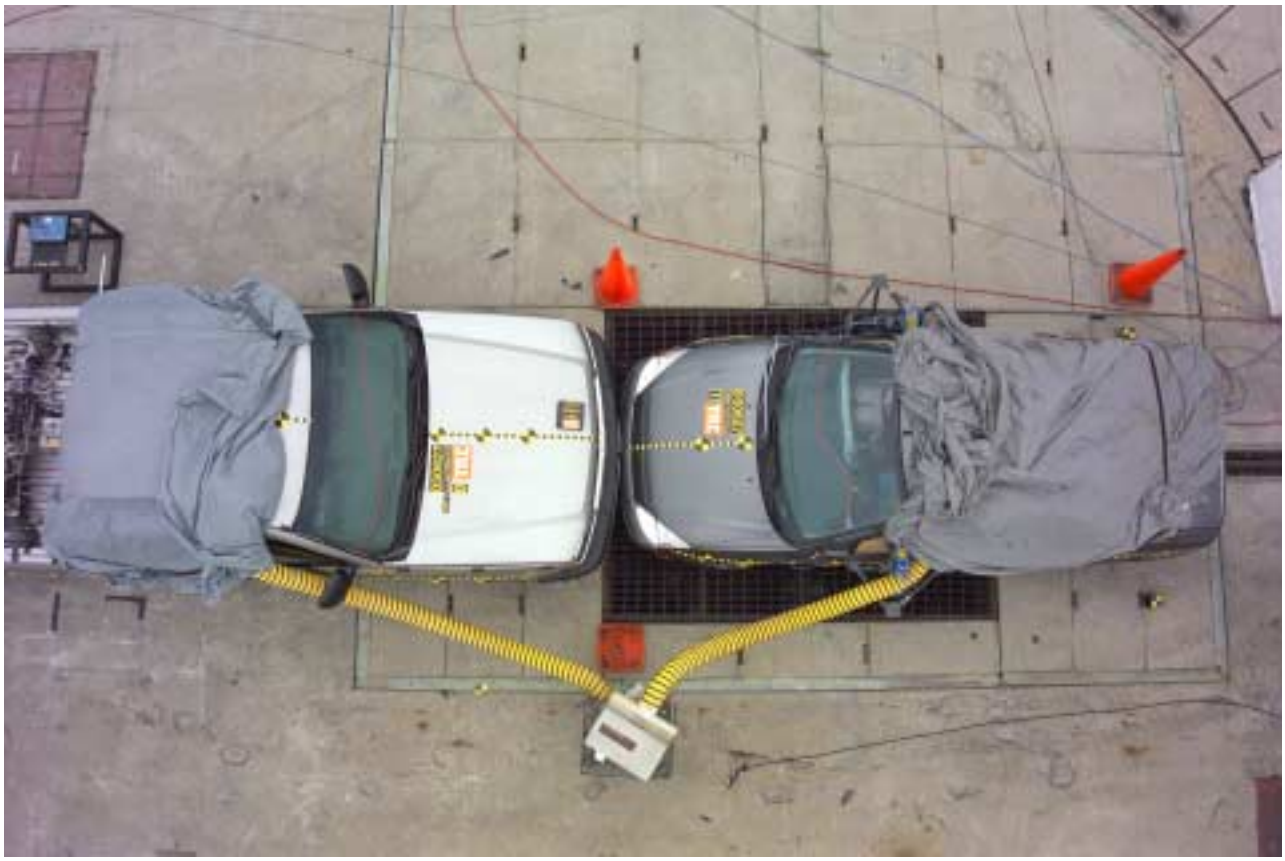

Figure A-12 Pre-Test Overhead Wide View

Figure A-13 Pre-Test Overhead Target Vehicle View

Figure A-14 Pre-Test Overhead Bullet Vehicle View

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Figure A-15 Pre-Test Target Vehicle Front View

Figure A-16 Post-Test Target Vehicle Front View

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

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

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

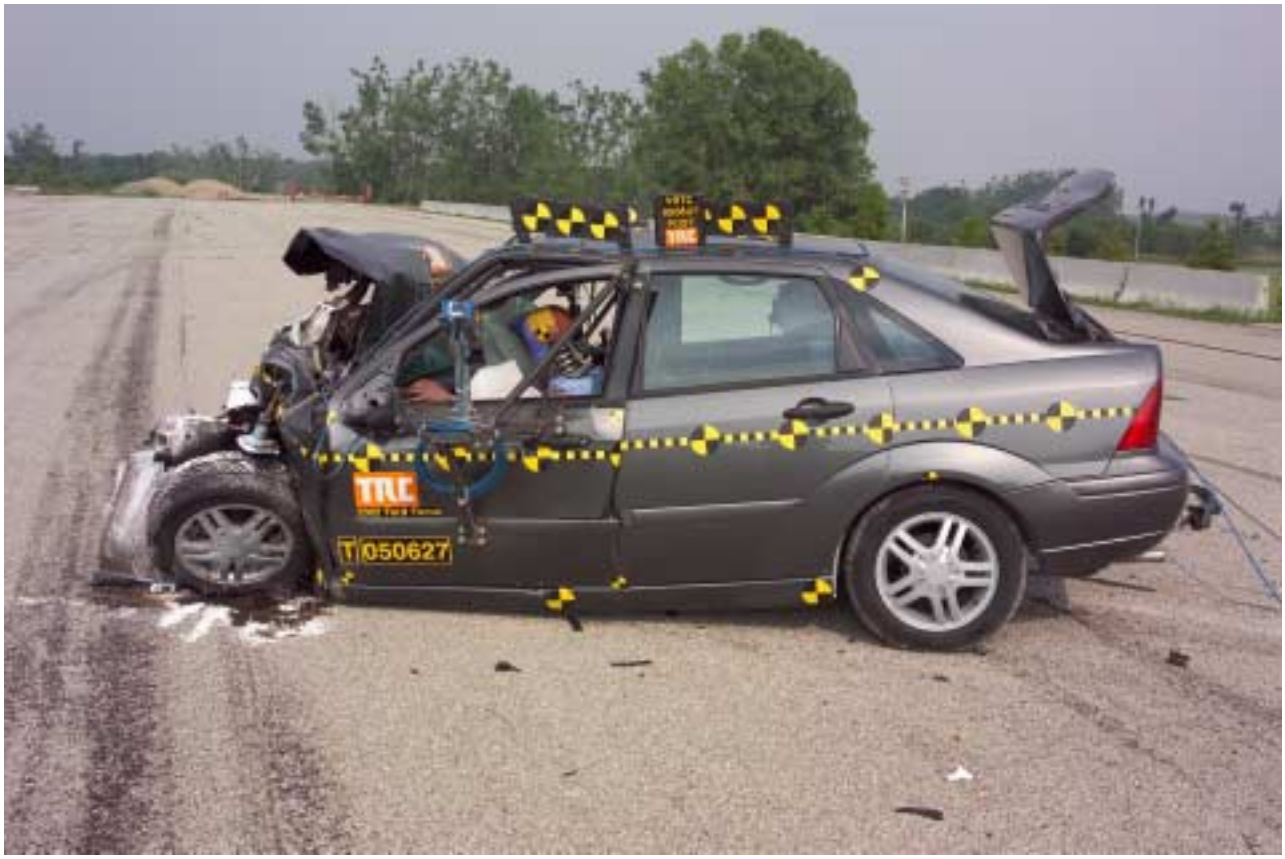

Figure A-20 Post-Test Target Vehicle Left Side View

Figure A-21 Pre-Test Target Vehicle Left Rear View

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

Figure A-23 Pre-Test Target Vehicle Rear View

Figure A-24 Post-Test Target Vehicle Rear View

Figure A-25 Post-Test Target Vehicle Right Rear View

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

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

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

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

Figure A-30 Pre-Test Target Vehicle Engine Compartment View

Figure A-31 Post-Test Target Vehicle Engine Compartment View

Figure A-32 Pre-Test Target Vehicle Front Underbody View

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

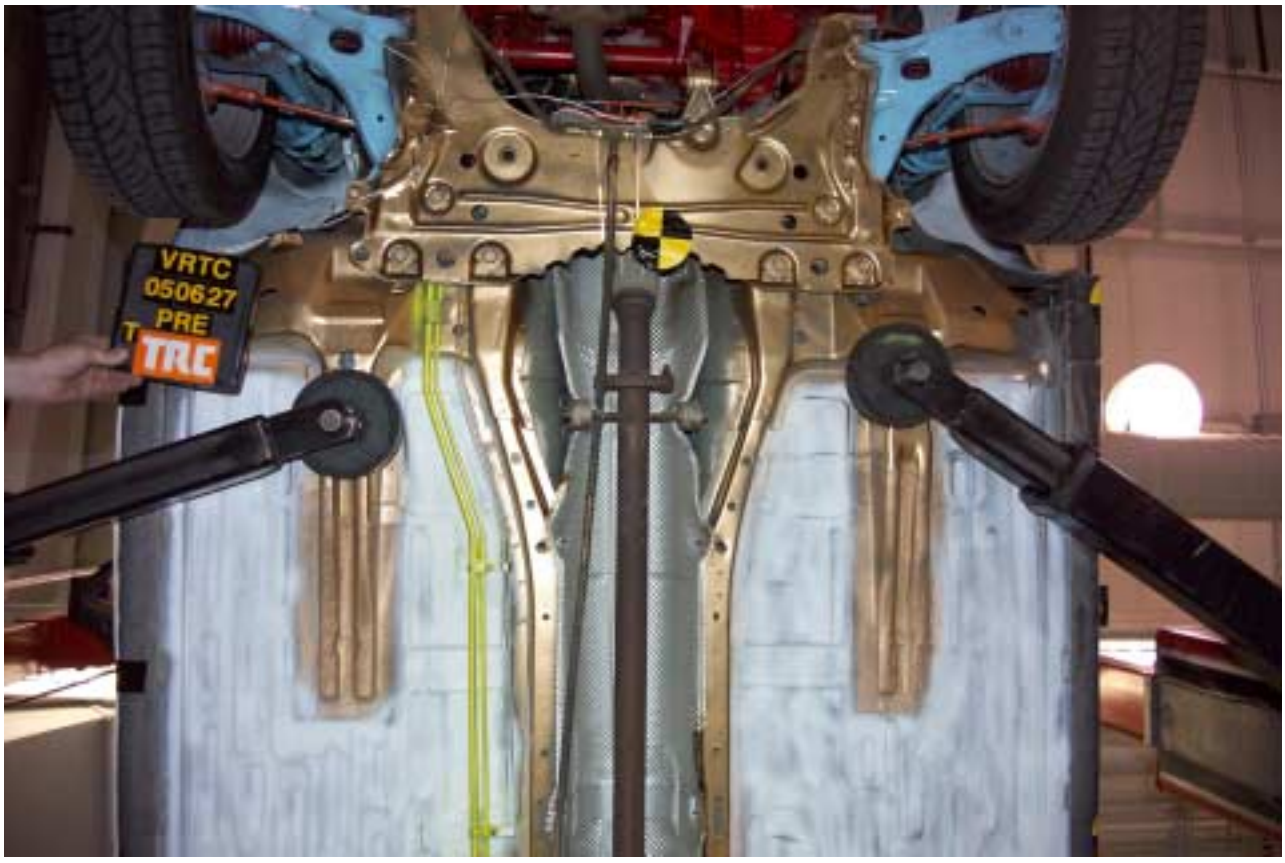


Figure A-34 Pre-Test Target Vehicle Front Mid Underbody View

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

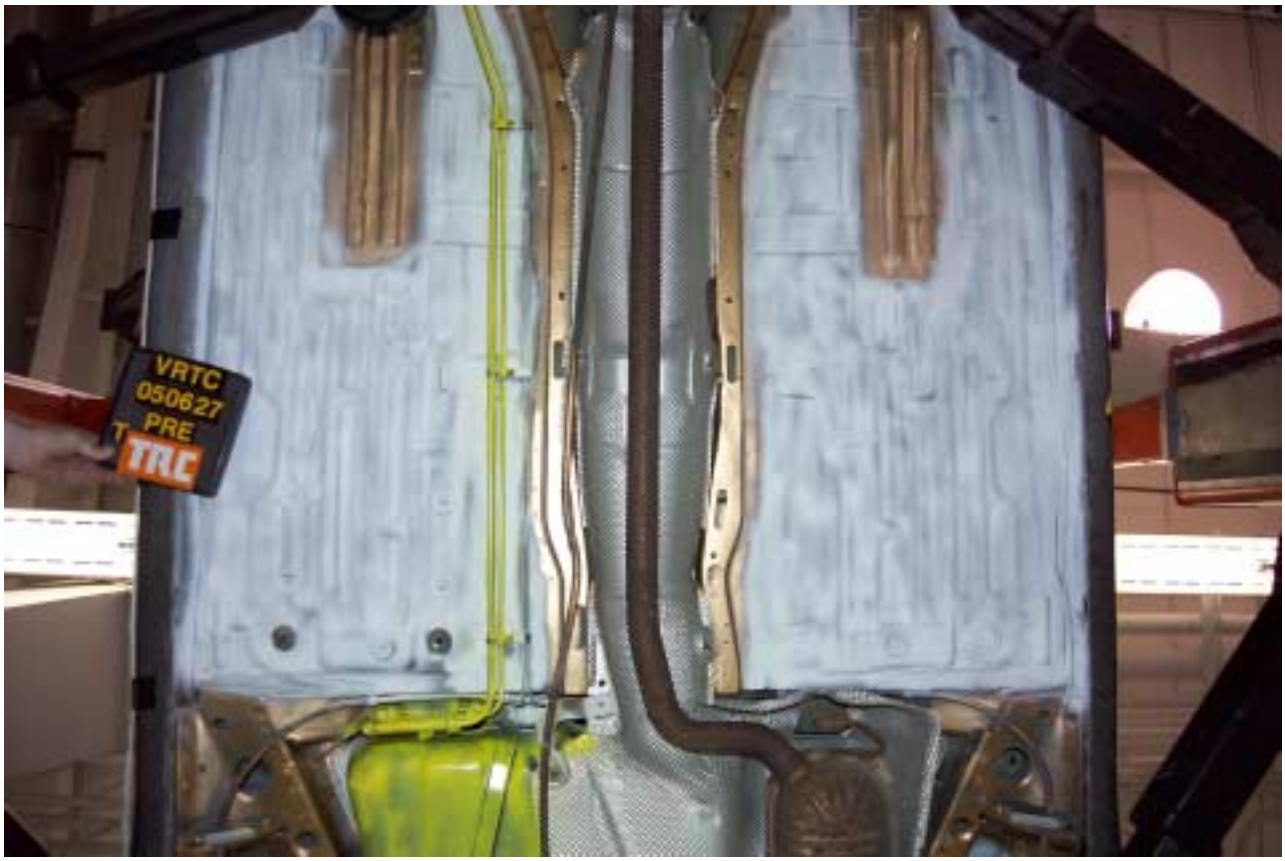


Figure A-36 Pre-Test Target Vehicle Mid Underbody View

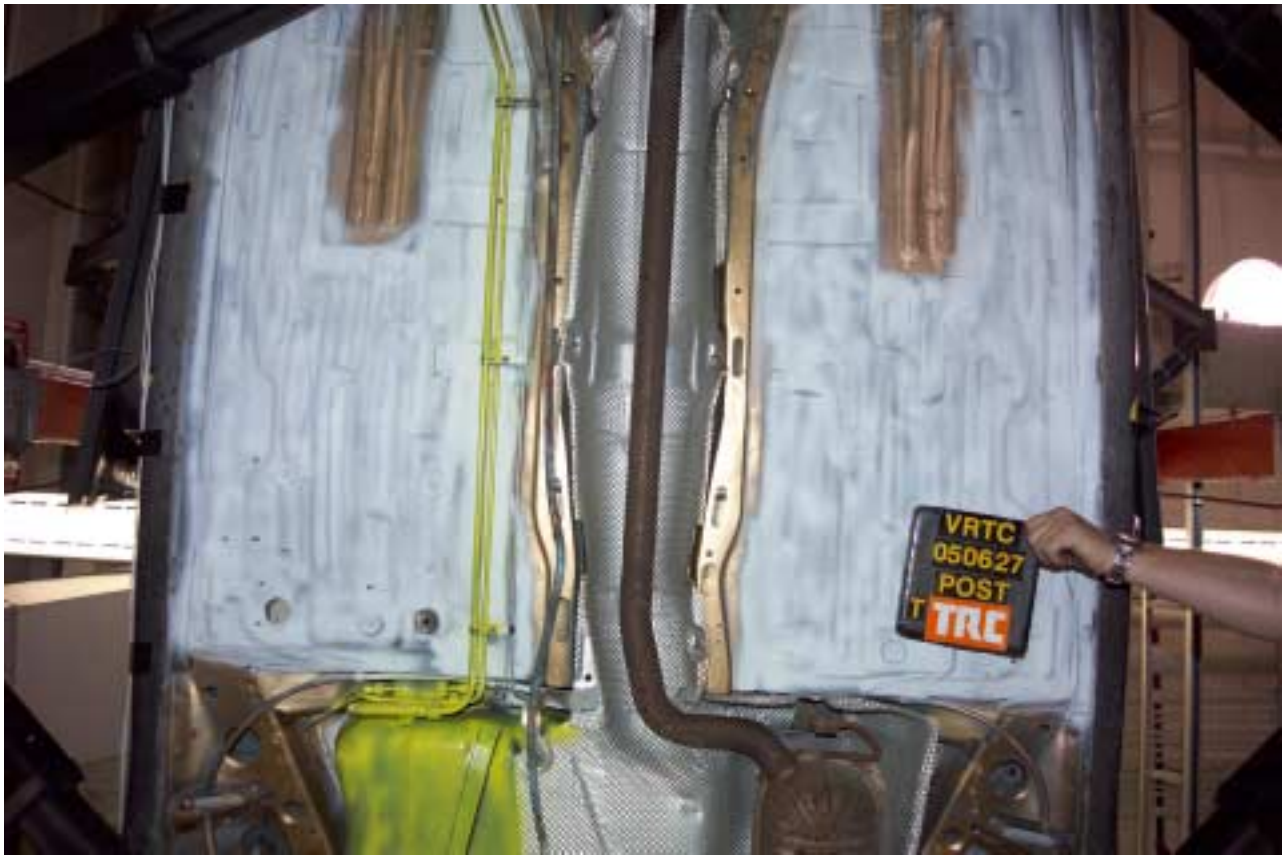


Figure A-37 Post-Test Target Vehicle Mid Underbody View

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

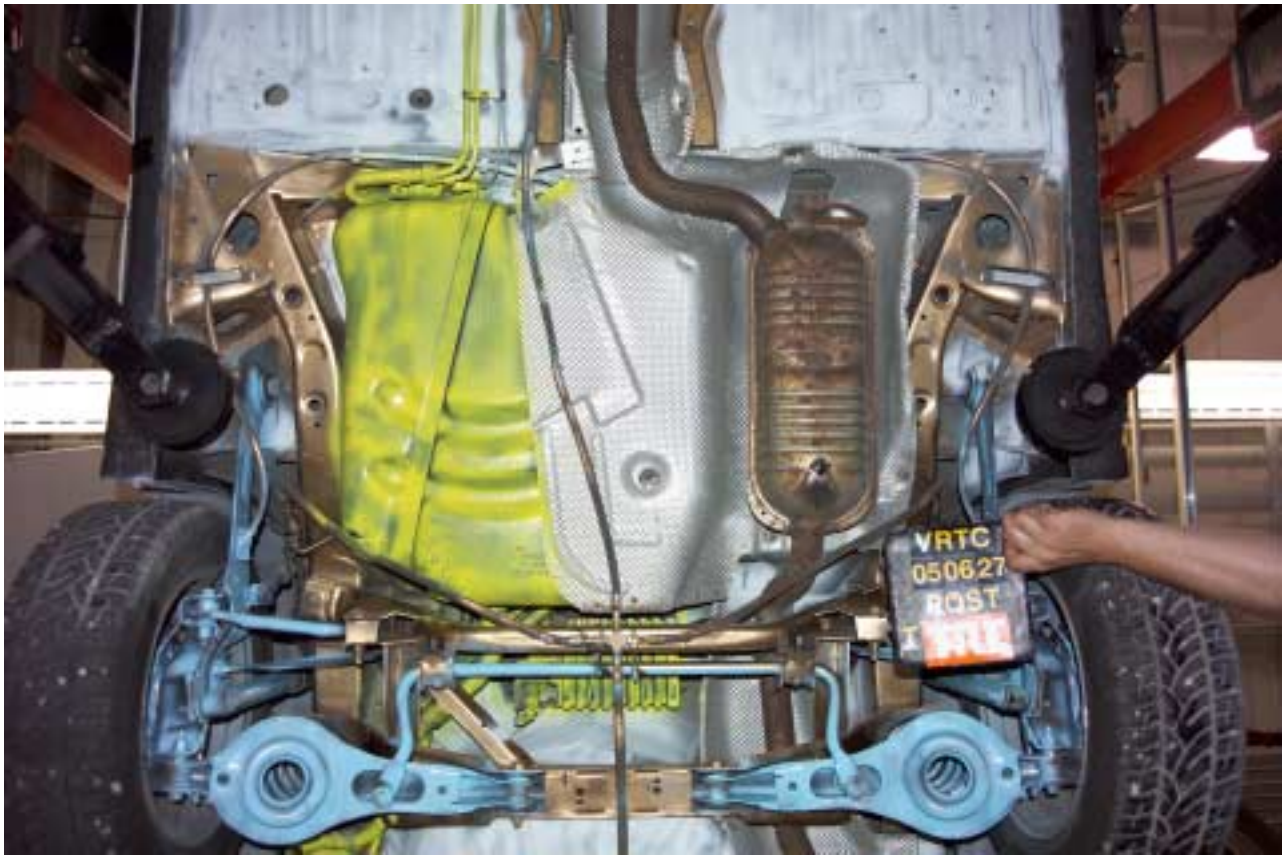


Figure A-39 Post-Test Target Vehicle Rear Mid Underbody View

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

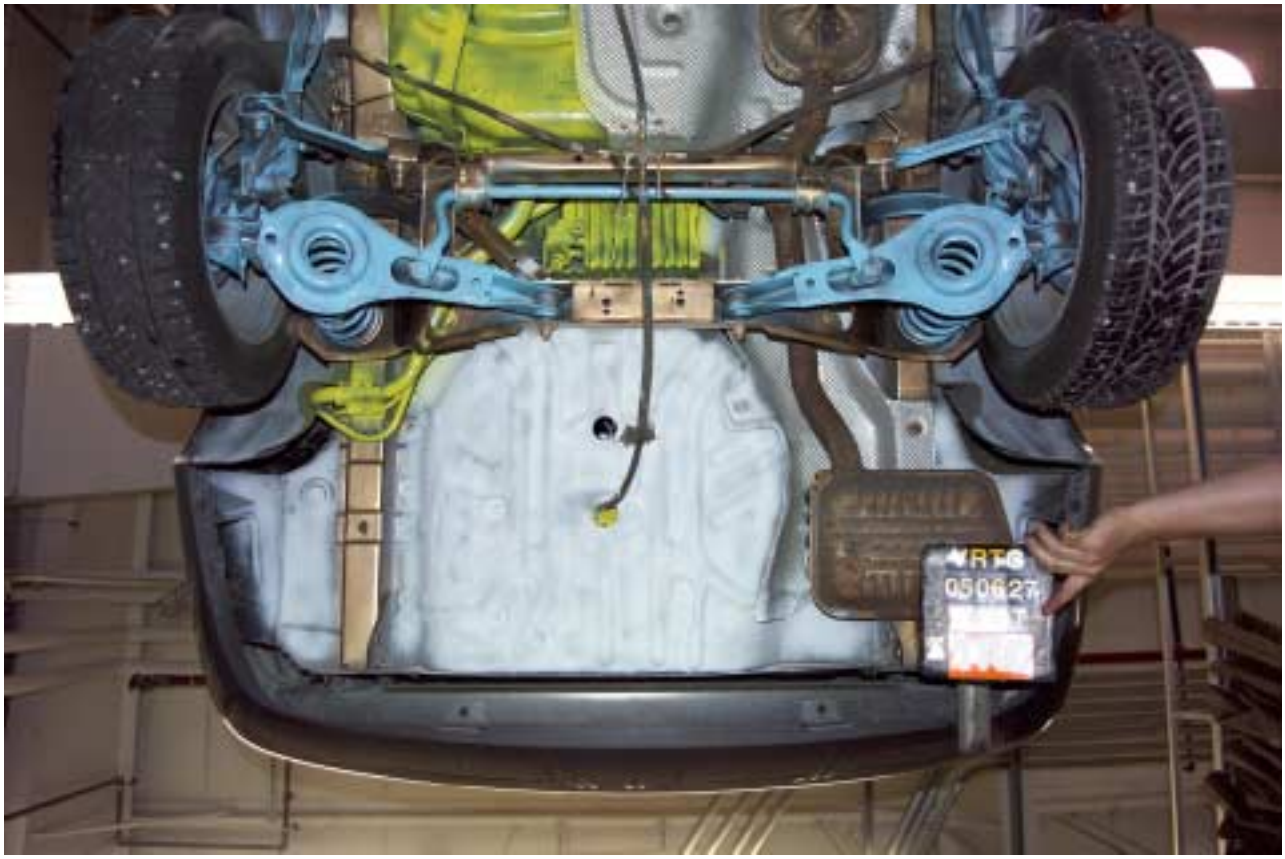


Figure A-41 Post-Test Target Vehicle Rear Underbody View

Figure A-42 Pre-Test Bullet Vehicle Front View

Figure A-43 Post-Test Bullet Vehicle Front View

Figure A-44 Pre-Test Bullet Vehicle Left Front View

Figure A-45 Post-Test Bullet Vehicle Left Front View

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

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

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

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

Figure A-50 Pre-Test Bullet Vehicle Rear View

Figure A-51 Post-Test Bullet Vehicle Rear View

Figure A-52 Pre-Test Bullet Vehicle Right Rear View

Figure A-53 Post-Test Bullet Vehicle Right Rear View

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

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

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

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

Figure A-58 Pre-Test Bullet Vehicle Engine Compartment View

Figure A-59 Post-Test Bullet Vehicle Engine Compartment View

Figure A-60 Pre-Test Bullet Vehicle Front Underbody View

Figure A-61 Post-Test Bullet Vehicle Front Underbody View

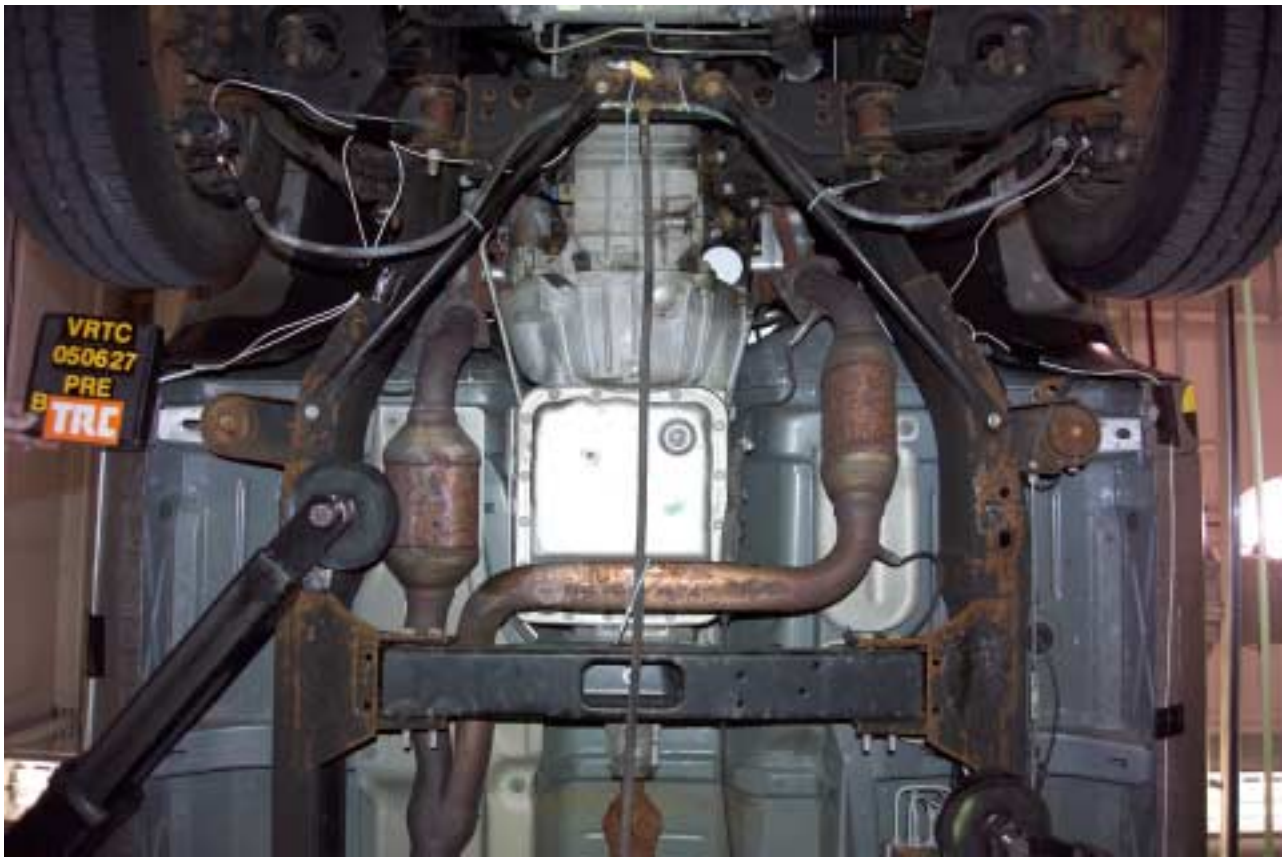


Figure A-62 Pre-Test Bullet Vehicle Front Mid Underbody View

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

Figure A-64 Pre-Test Bullet Vehicle Mid Underbody - View 1

Figure A-65 Post-Test Bullet Vehicle Mid Underbody - View 1

Figure A-66 Pre-Test Bullet Vehicle Mid Underbody - View 2

Figure A-67 Post-Test Bullet Vehicle Mid Underbody - View 2

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

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

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

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

Figure A-72 Pre-Test Target Vehicle Windshield View

Figure A-73 Post-Test Target Vehicle Windshield View

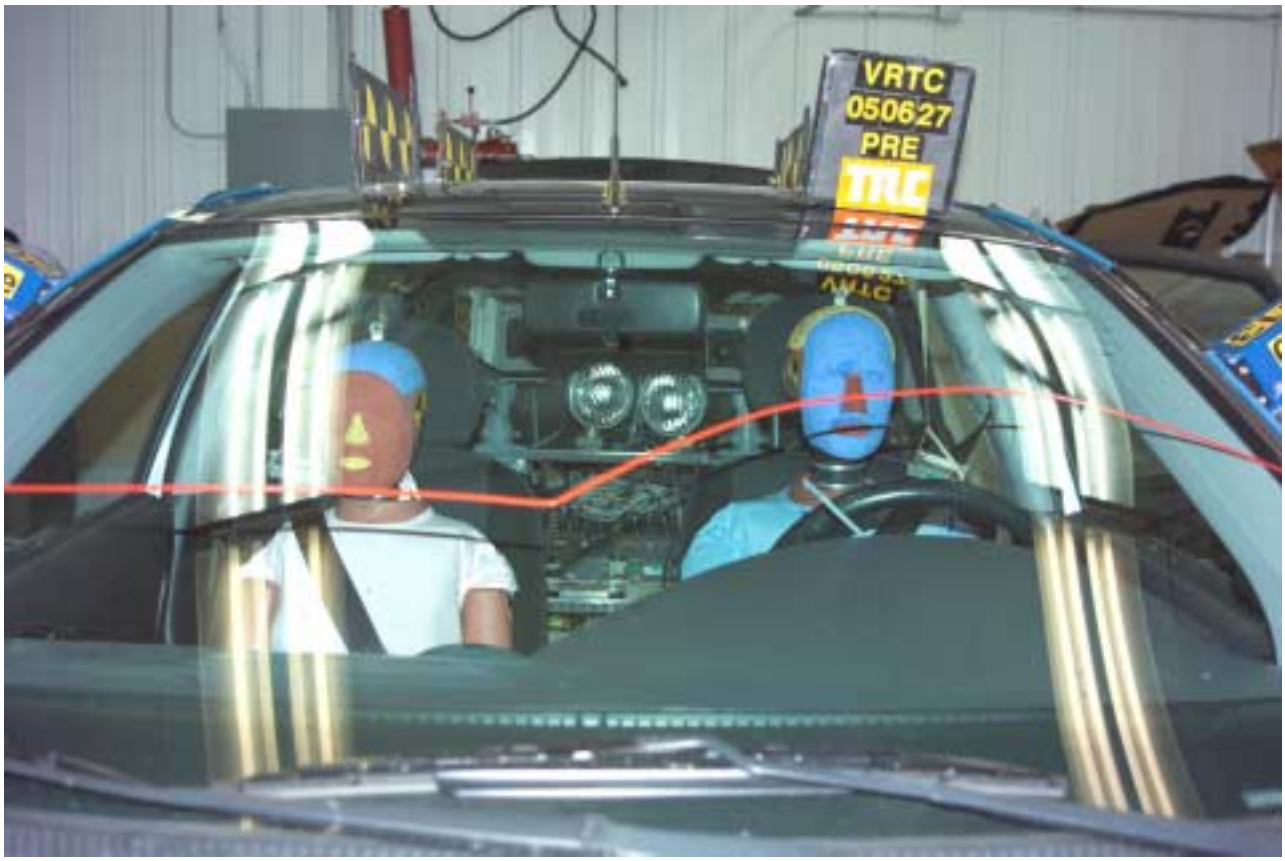


Figure A-74 Pre-Test Target Vehicle Driver and Passenger Dummies through Windshield View

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

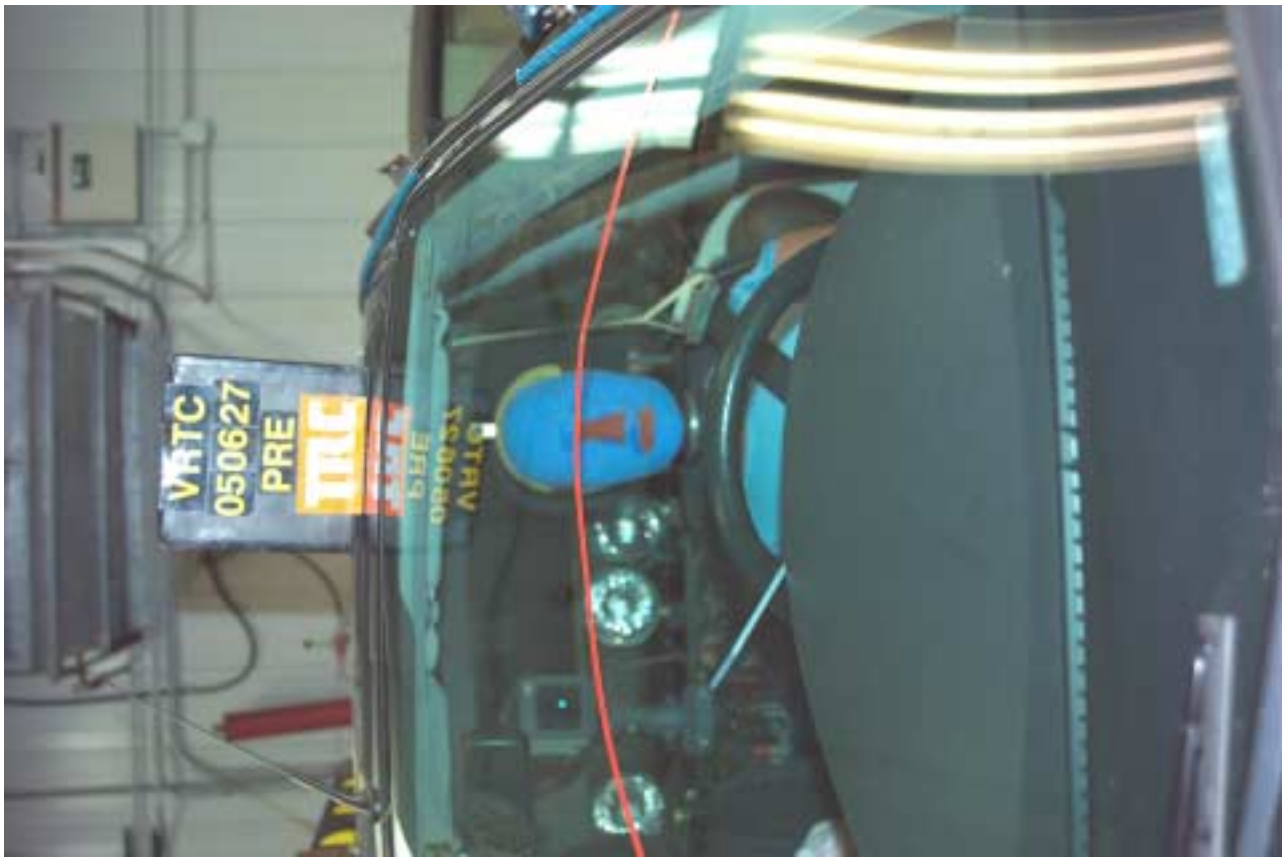


Figure A-76 Pre-Test Target Vehicle Driver Dummy - View 1

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

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

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

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

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

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

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

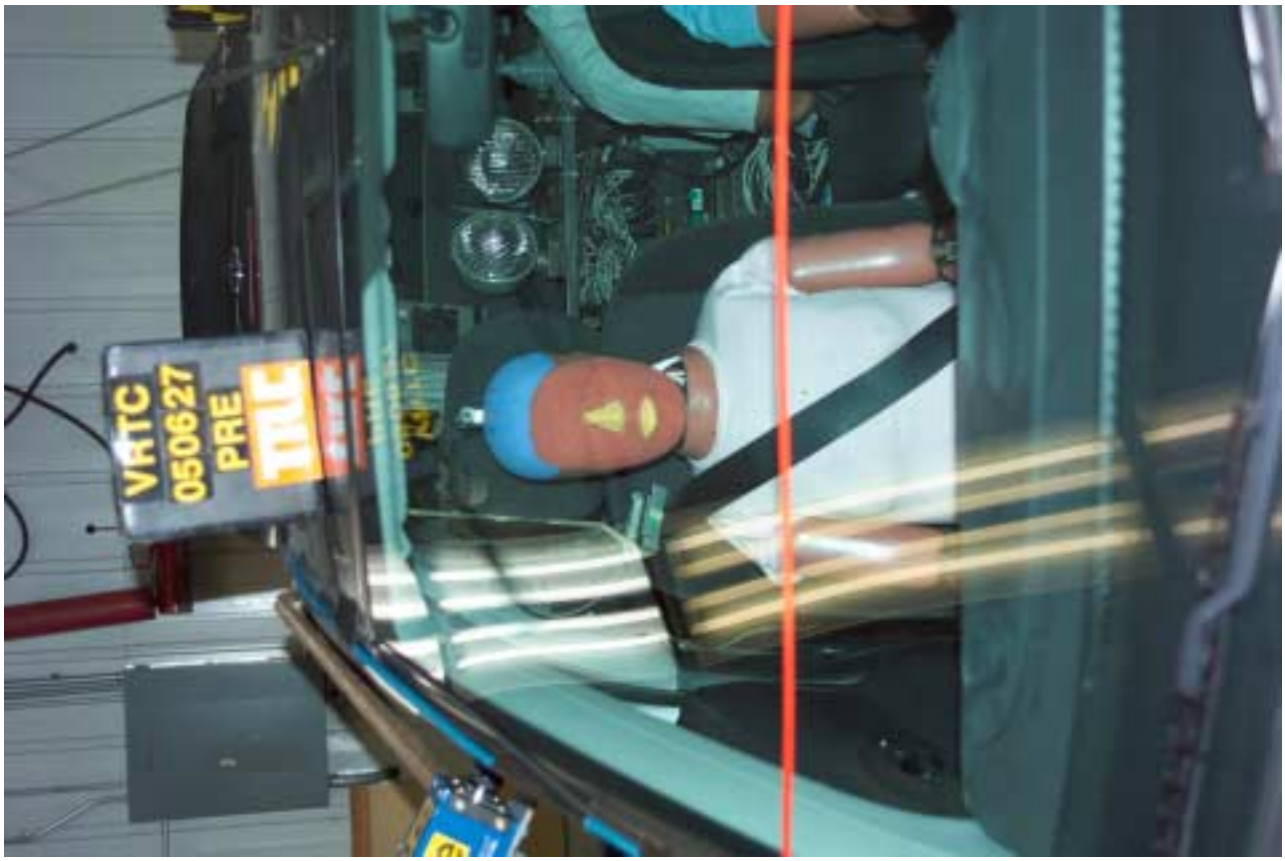


Figure A-84 Pre-Test Target Vehicle Passenger Dummy - View 1

Figure A-85 Post-Test Target Vehicle Passenger Dummy - View 1

Figure A-86 Pre-Test Target Vehicle Passenger Dummy - View 2

Figure A-87 Post-Test Target Vehicle Passenger Dummy - View 2

Figure A-88 Pre-Test Target Vehicle Passenger Dummy - View 3

Figure A-89 Post-Test Target Vehicle Passenger Dummy - View 3

Figure A-90 Pre-Test Target Vehicle Passenger Dummy - View 4

Figure A-91 Post-Test Target Vehicle Passenger Dummy - View 4

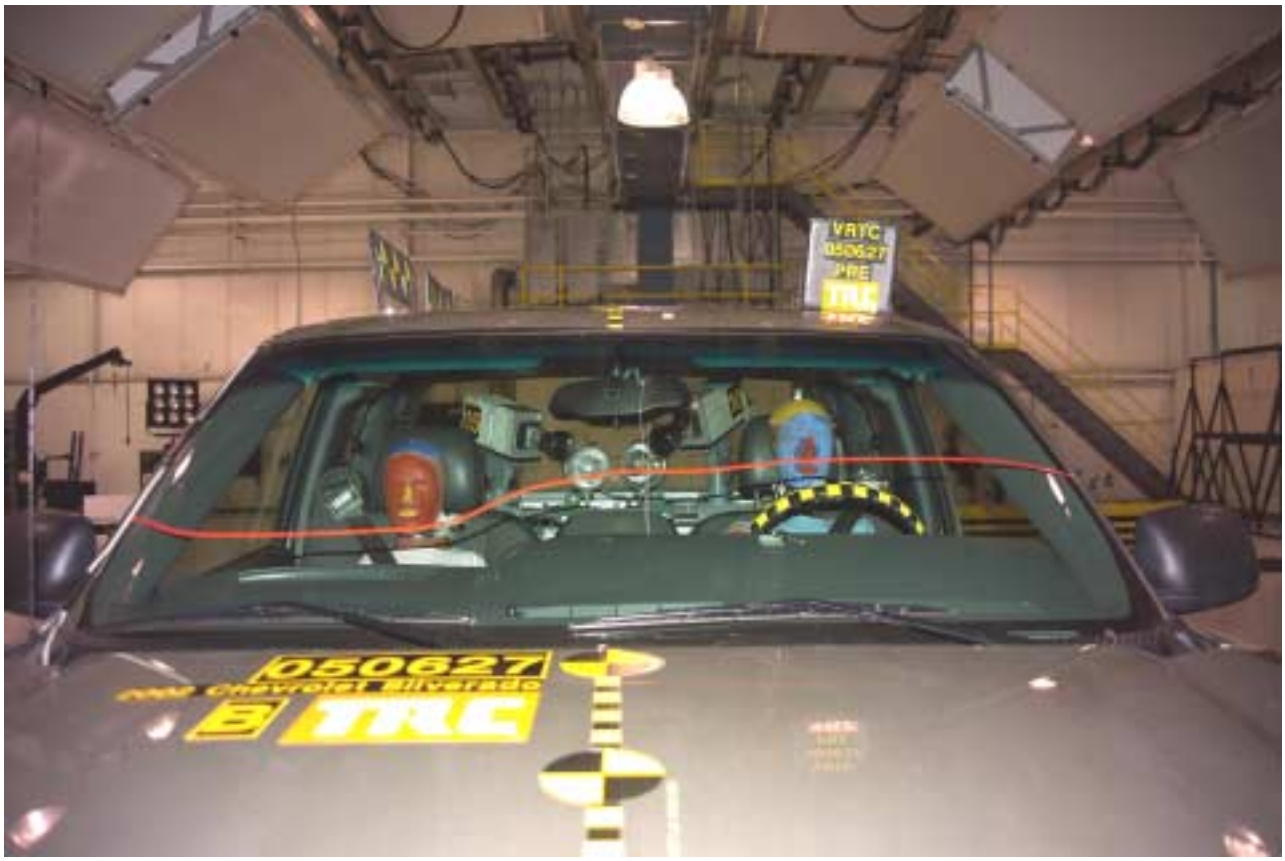


Figure A-92 Pre-Test Bullet Vehicle Windshield View

Figure A-93 Post-Test Bullet Vehicle Windshield View

Figure A-94 Pre-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View

Figure A-95 Post-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View

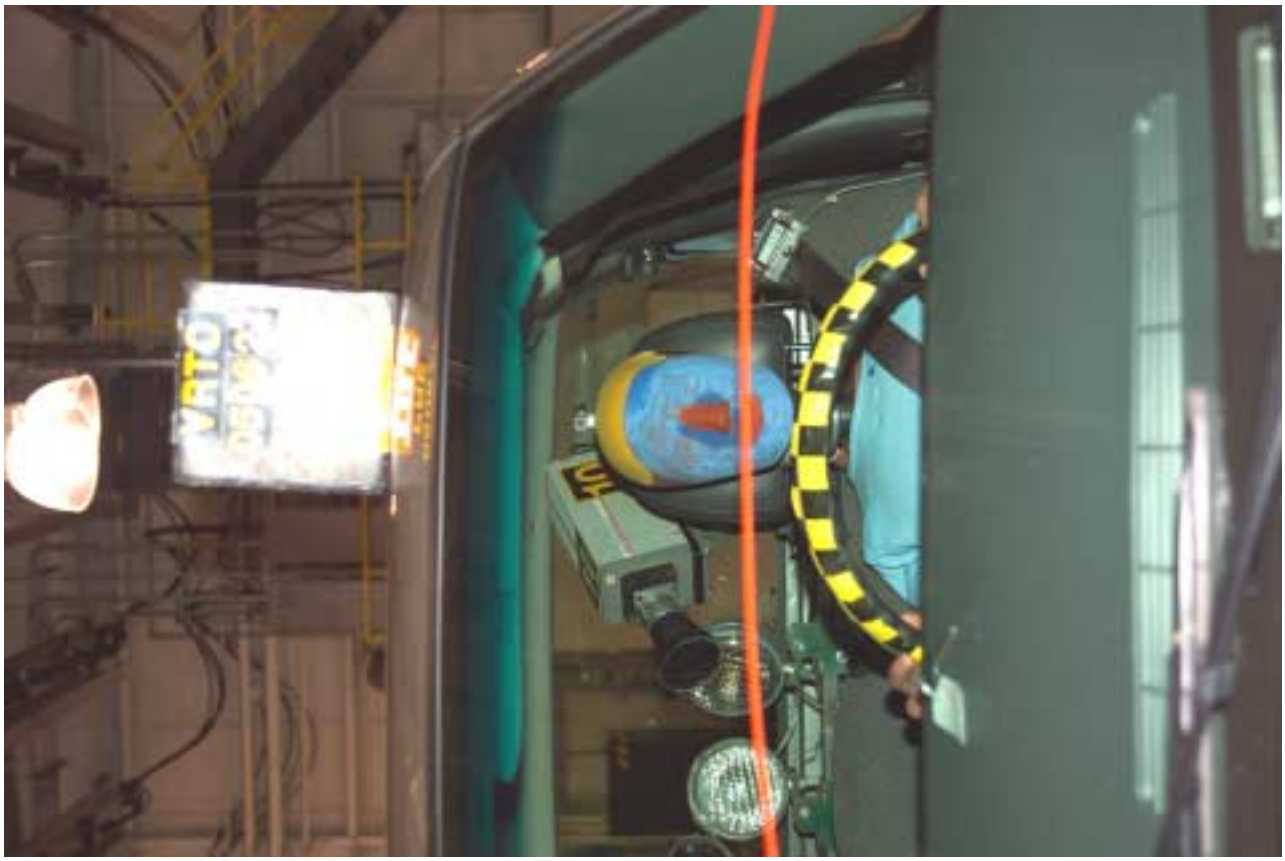


Figure A-96 Pre-Test Bullet Vehicle Driver Dummy - View 1

Figure A-97 Post-Test Bullet Vehicle Driver Dummy - View 1

Figure A-98 Pre-Test Bullet Vehicle Driver Dummy - View 2

Figure A-99 Post-Test Bullet Vehicle Driver Dummy - View 2

Figure A-100 Pre-Test Bullet Vehicle Driver Dummy - View 3

Figure A-101 Post-Test Bullet Vehicle Driver Dummy - View 3

Figure A-102 Pre-Test Bullet Vehicle Driver Dummy - View 4

Figure A-103 Post-Test Bullet Vehicle Driver Dummy - View 4

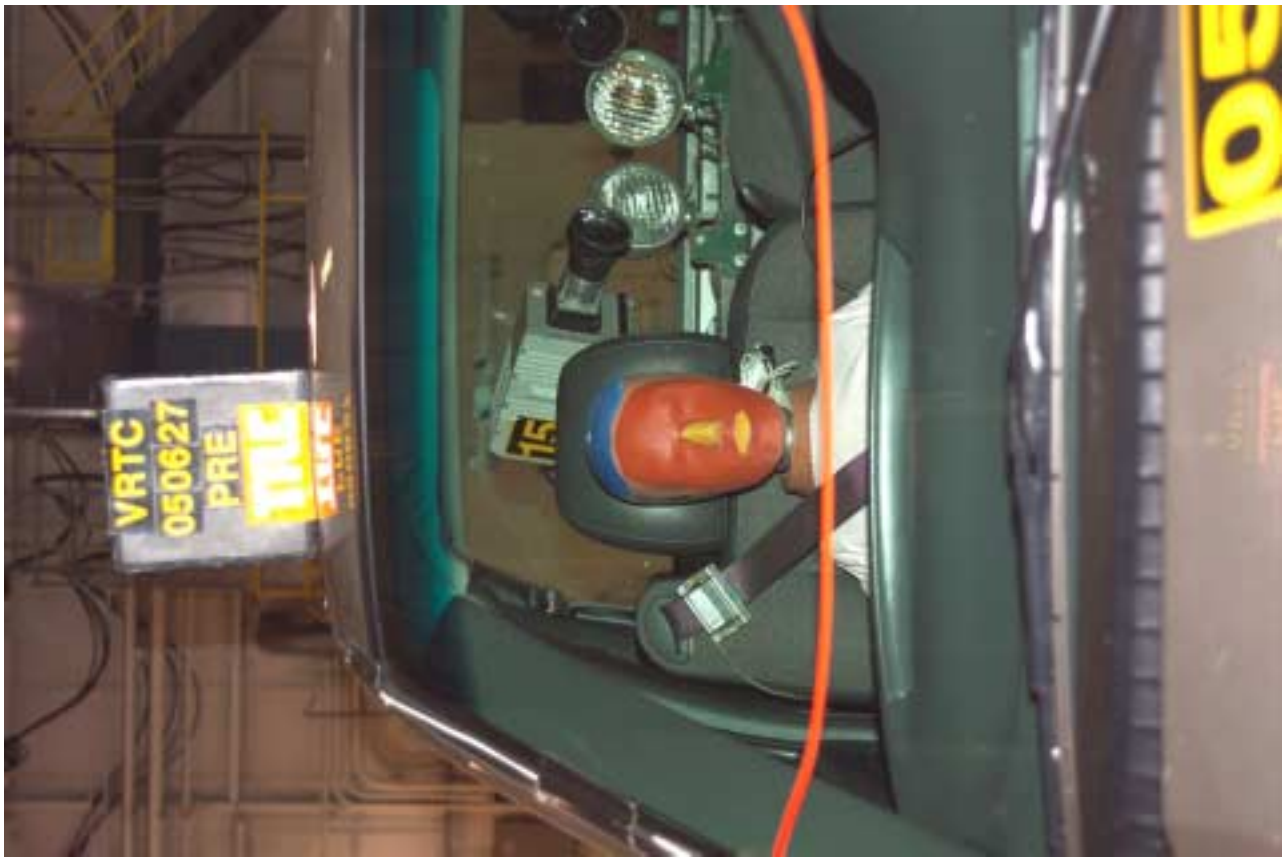


Figure A-104 Pre-Test Bullet Vehicle Passenger Dummy - View 1

Figure A-105 Post-Test Bullet Vehicle Passenger Dummy - View 1

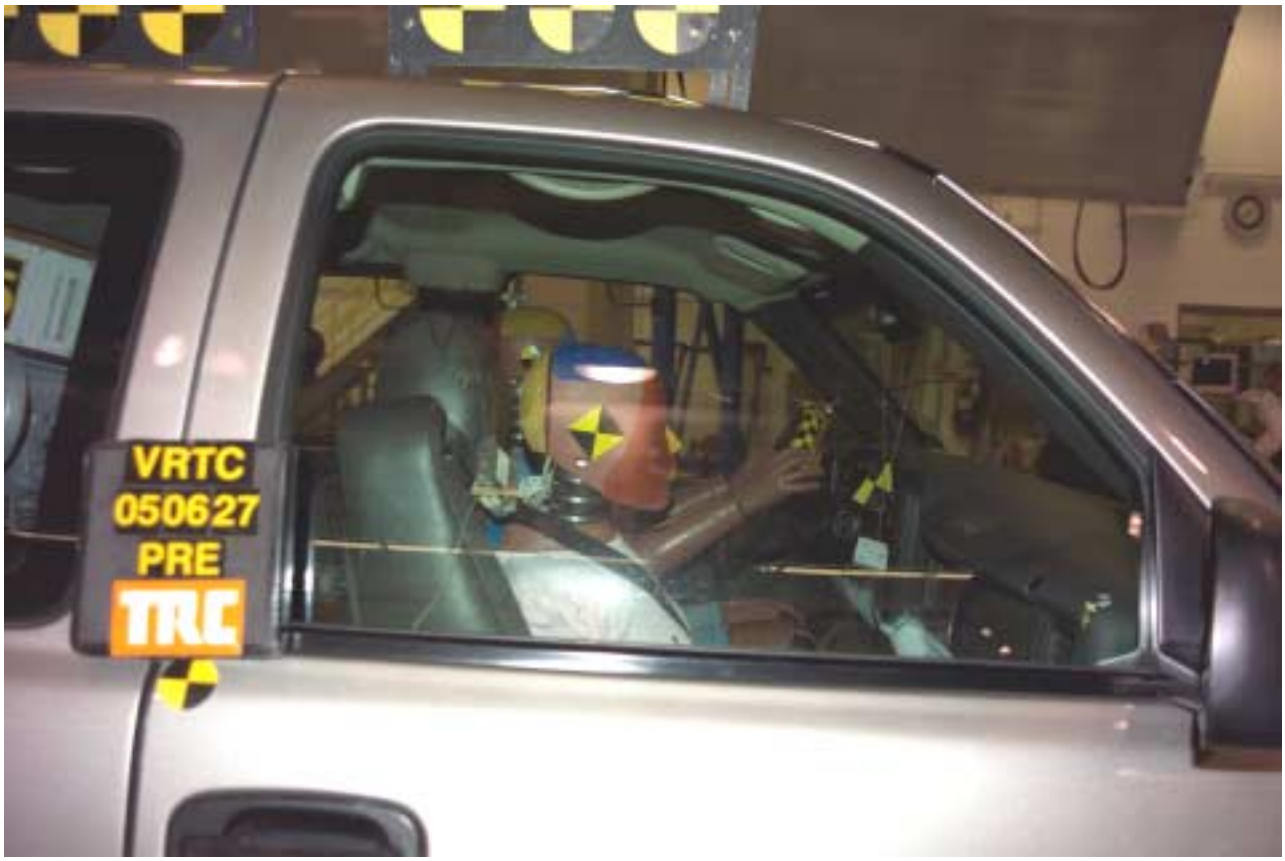


Figure A-106 Pre-Test Bullet Vehicle Passenger Dummy - View 2

Figure A-107 Post-Test Bullet Vehicle Passenger Dummy - View 2

Figure A-108 Pre-Test Bullet Vehicle Passenger Dummy - View 3

Figure A-109 Post-Test Bullet Vehicle Passenger Dummy - View 3

Figure A-110 Pre-Test Bullet Vehicle Passenger Dummy - View 4

Figure A-111 Post-Test Bullet Vehicle Passenger Dummy - View 4

Figure A-112 Post-Test Target Vehicle Driver Dummy Overall Contact View

Figure A-113 Post-Test Target Vehicle Driver Dummy Head Contact - View 1

Figure A-114 Post-Test Target Vehicle Driver Dummy Head Contact - View 2

Figure A-115 Post-Test Target Vehicle Driver Dummy Head Contact - View 3

Figure A-116 Post-Test Target Vehicle Driver Dummy Knee Contact - View 1

Figure A-117 Post-Test Target Vehicle Driver Dummy Knee Contact - View 2

Figure A-118 Post-Test Target Vehicle Passenger Dummy Overall Contact View

Figure A-119 Post-Test Target Vehicle Passenger Dummy Head Contact - View 1

Figure A-120 Post-Test Target Vehicle Passenger Dummy Head Contact - View 2

Intentionally Left Blank

Figure A-121 Post-Test Target Vehicle Passenger Dummy Knee Contact - View 1

Figure A-122 Post-Test Target Vehicle Passenger Dummy Knee Contact - View 2

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

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

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

Figure A-126 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 3

Figure A-127 Post-Test Bullet Vehicle Driver Dummy Knee Contact - View 1

Figure A-128 Post-Test Bullet Vehicle Driver Dummy Knee Contact - View 2

Figure A-129 Post-Test Bullet Vehicle Passenger Dummy Overall Contact View

Figure A-130 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 1

Figure A-131 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 2

Figure A-132 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 3

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

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

Figure A-135 Post-Test Target Vehicle Driver Floorboard Deformation View

Figure A-136 Post-Test Target Vehicle Driver Toeboard Deformation View

Figure A-137 Post-Test Target Vehicle Passenger Floorboard Deformation View

Figure A-138 Post-Test Target Vehicle Passenger Toeboard Deformation View

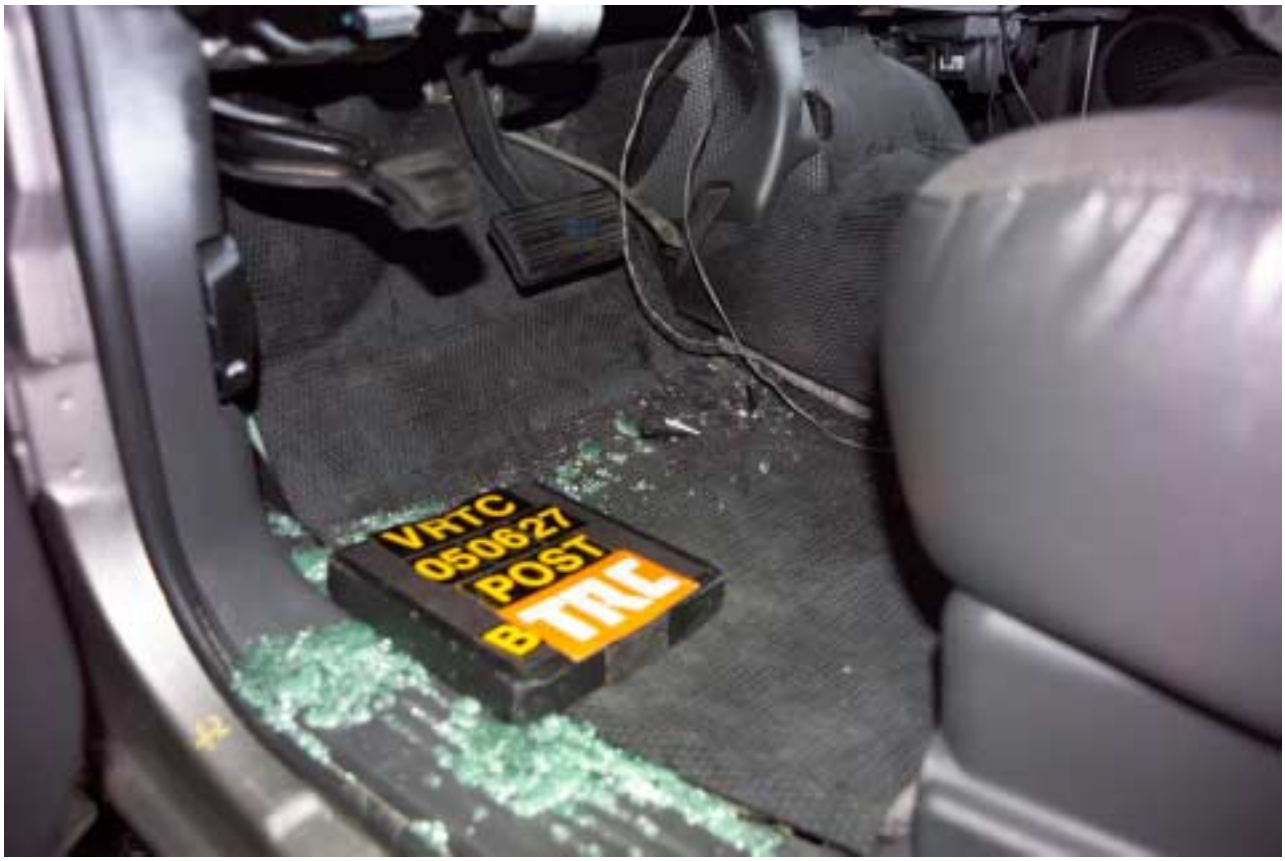


Figure A-139 Post-Test Bullet Vehicle Driver Floorboard Deformation View

Figure A-140 Post-Test Bullet Vehicle Driver Toeboard Deformation View

Figure A-141 Post-Test Bullet Vehicle Passenger Floorboard Deformation View

Figure A-142 Post-Test Bullet Vehicle Passenger Toeboard Deformation View

Figure A-143 Target Vehicle Certification Label View

Figure A-144 Bullet Vehicle Certification Label View

Appendix B

Data Plots

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

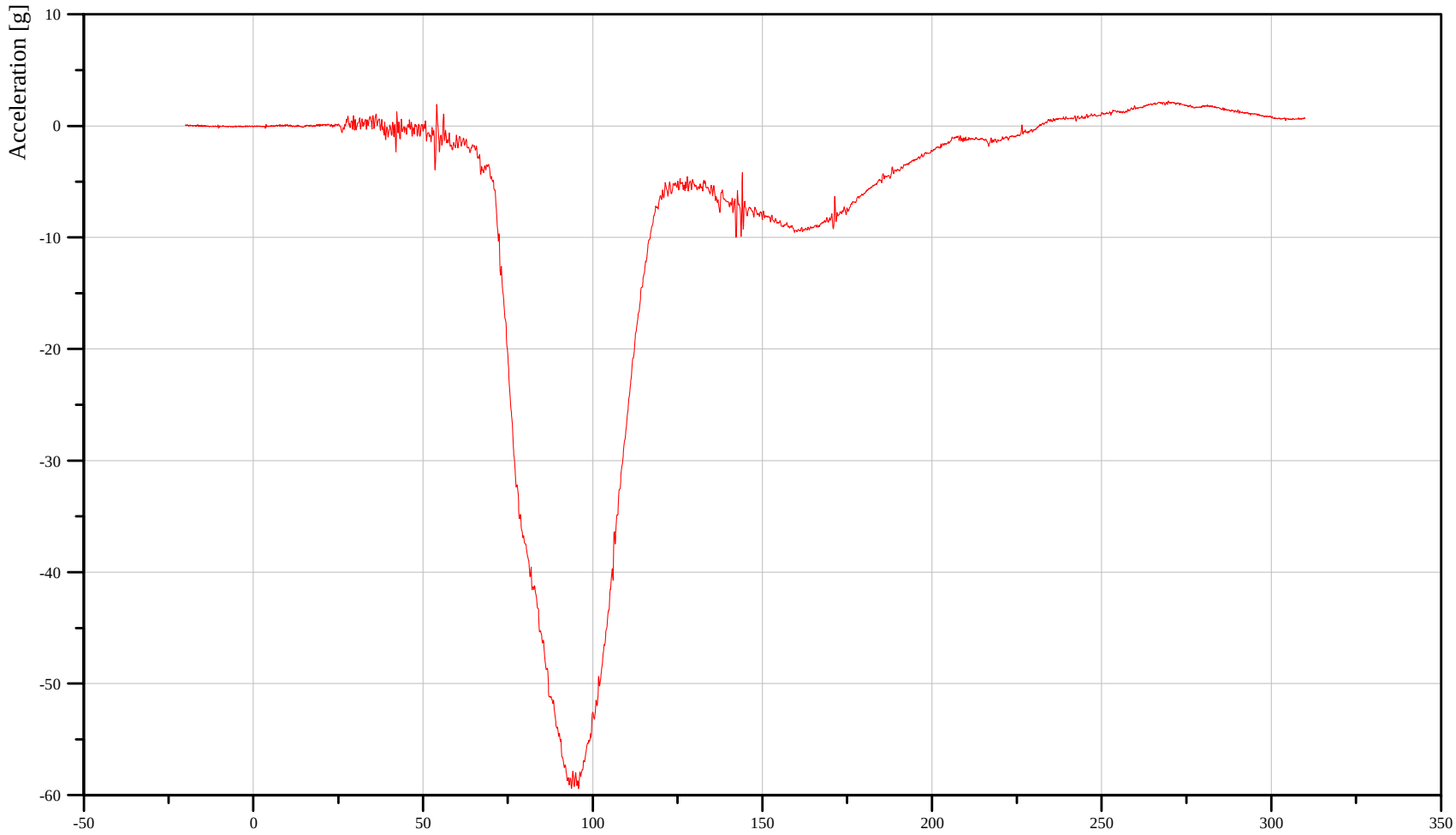
Head Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-59.41 g at 95.84 ms

Max. Value
2.25 g at 269.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

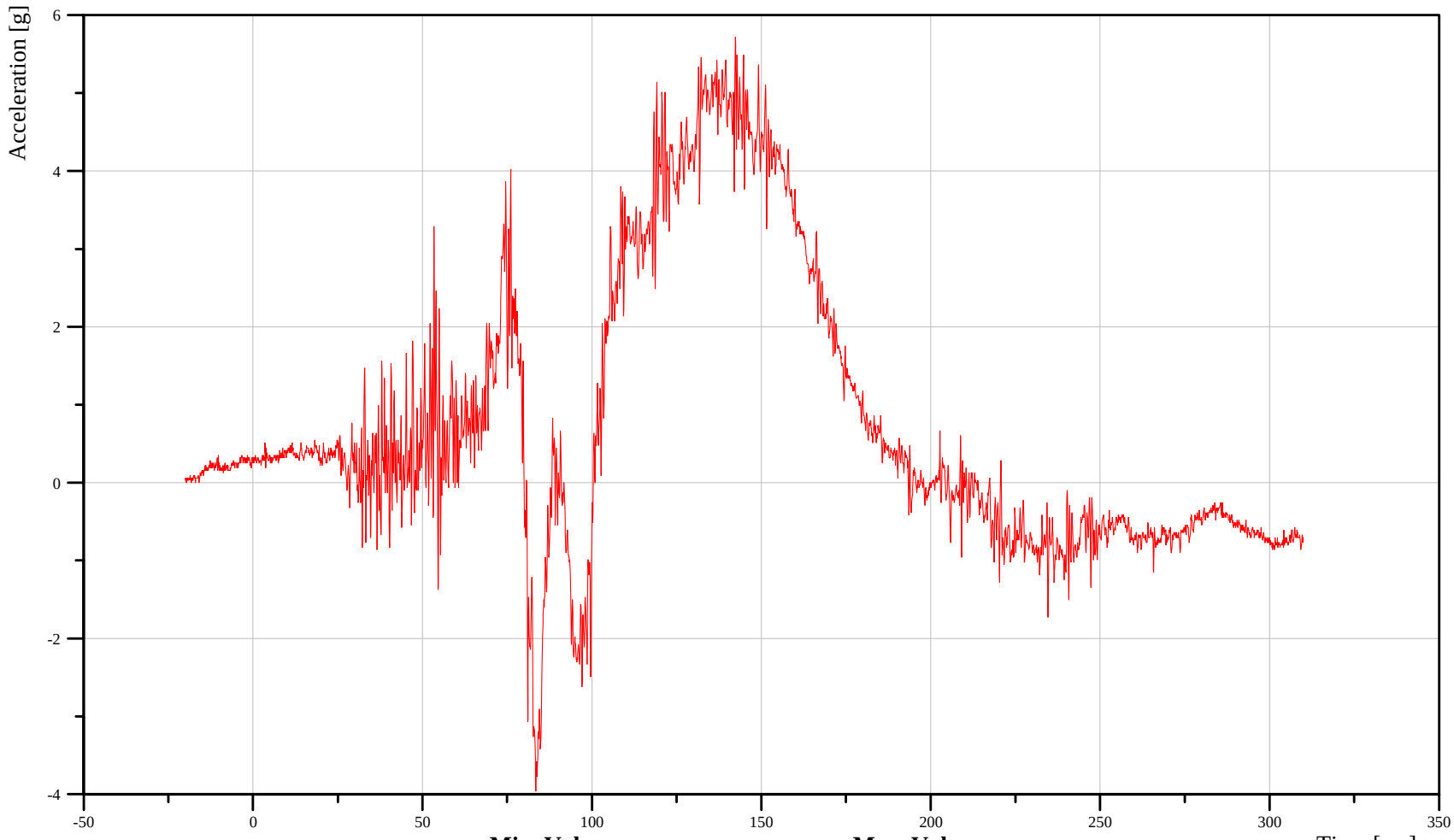
Head Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-3.96 g at 83.44 ms

Max. Value
5.71 g at 142.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

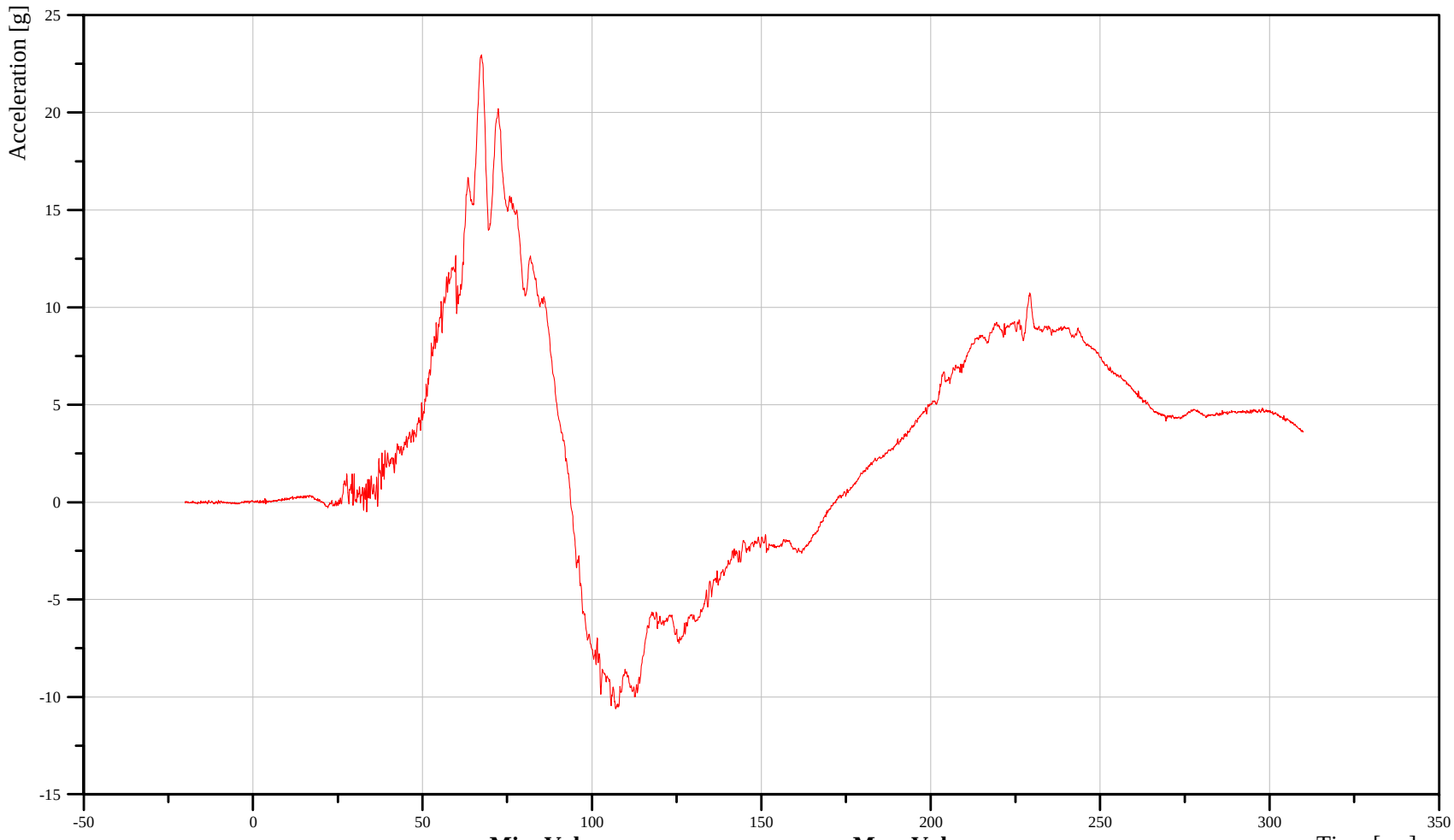
Head Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-10.62 g at 107.04 ms

Max. Value
22.97 g at 67.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

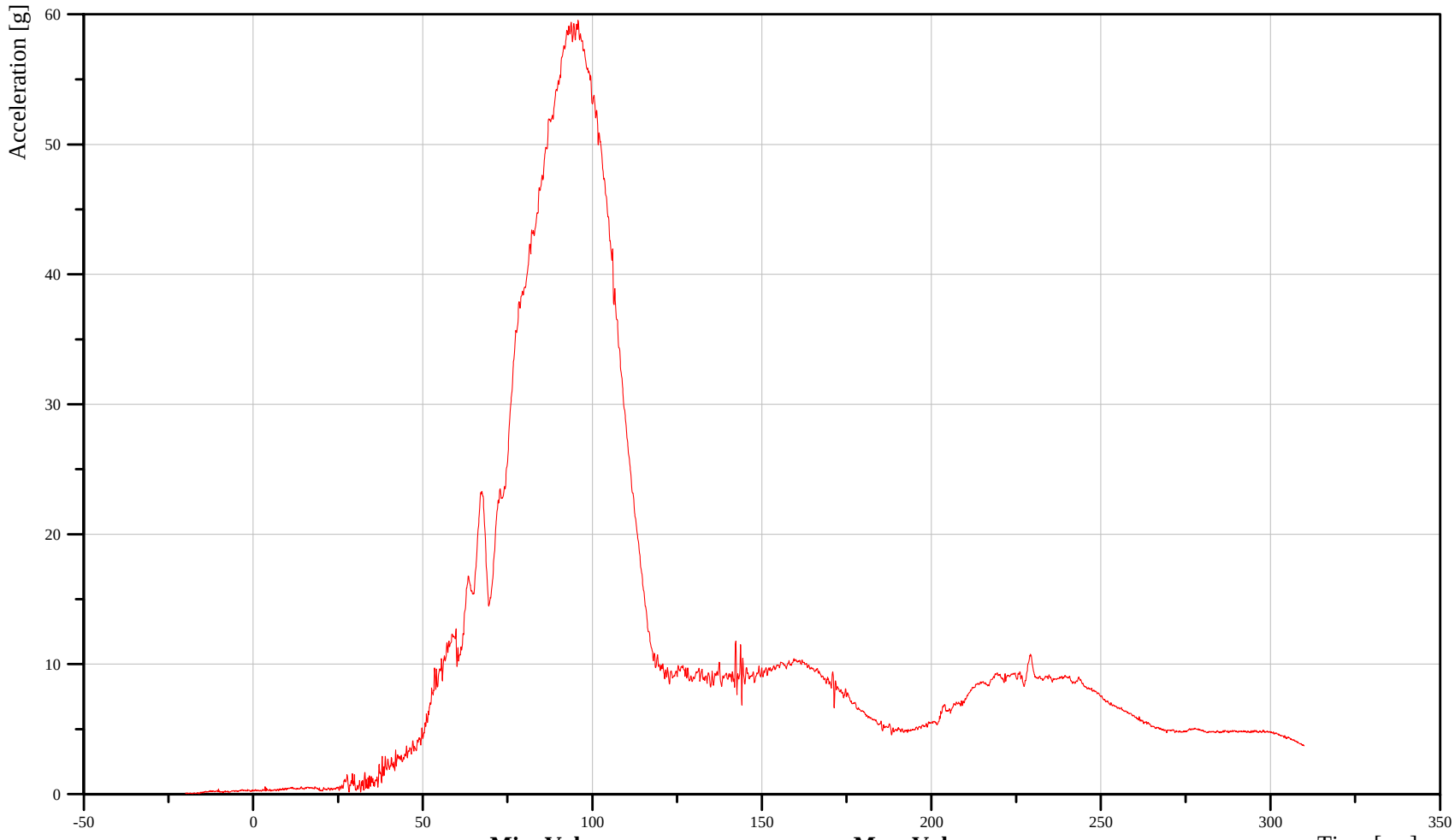
Head Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.04 g at -17.84 ms

Max. Value
59.53 g at 95.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

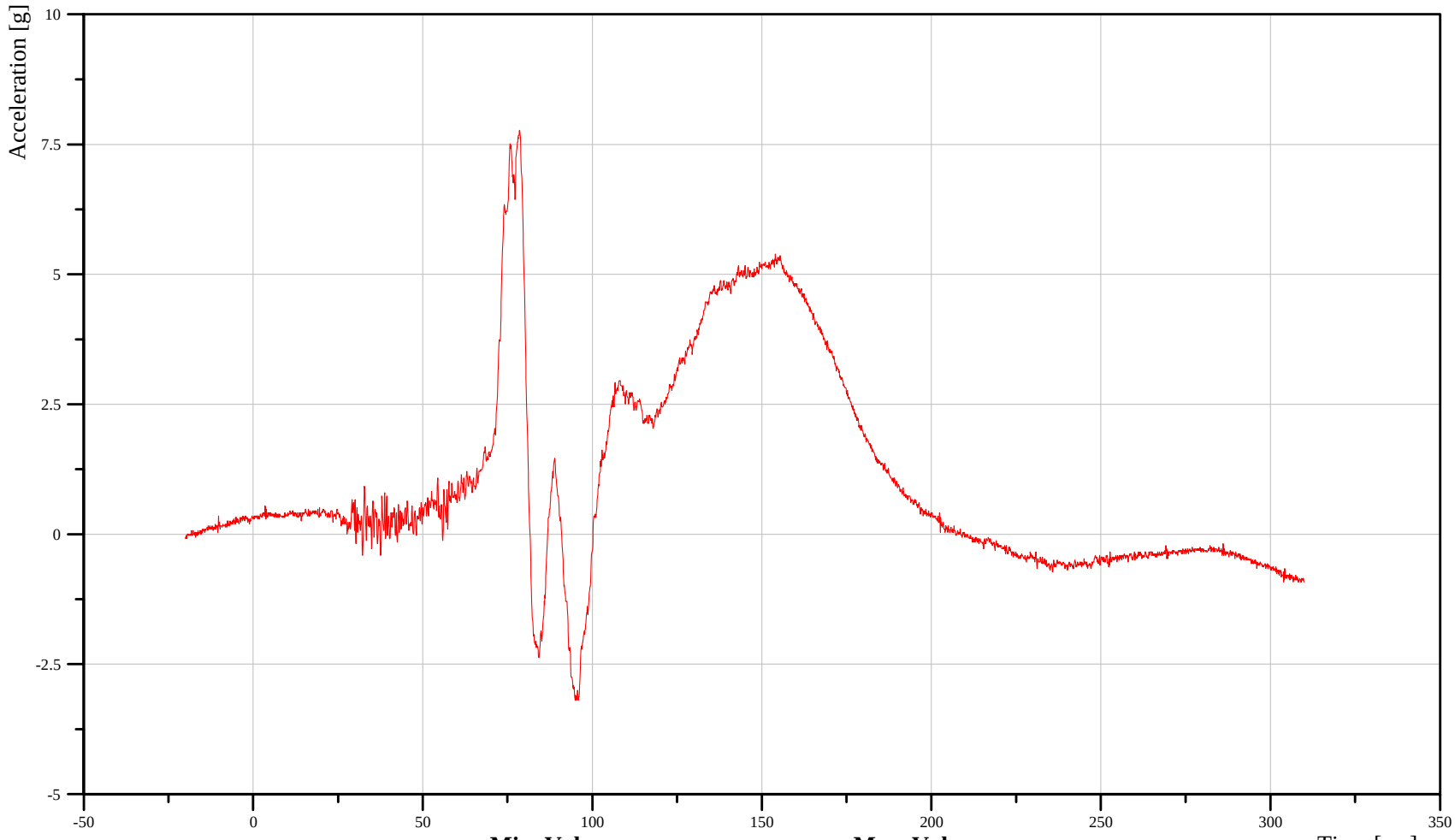
Head (FT) Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADFR00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-3.19 g at 94.96 ms

Max. Value
7.77 g at 78.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

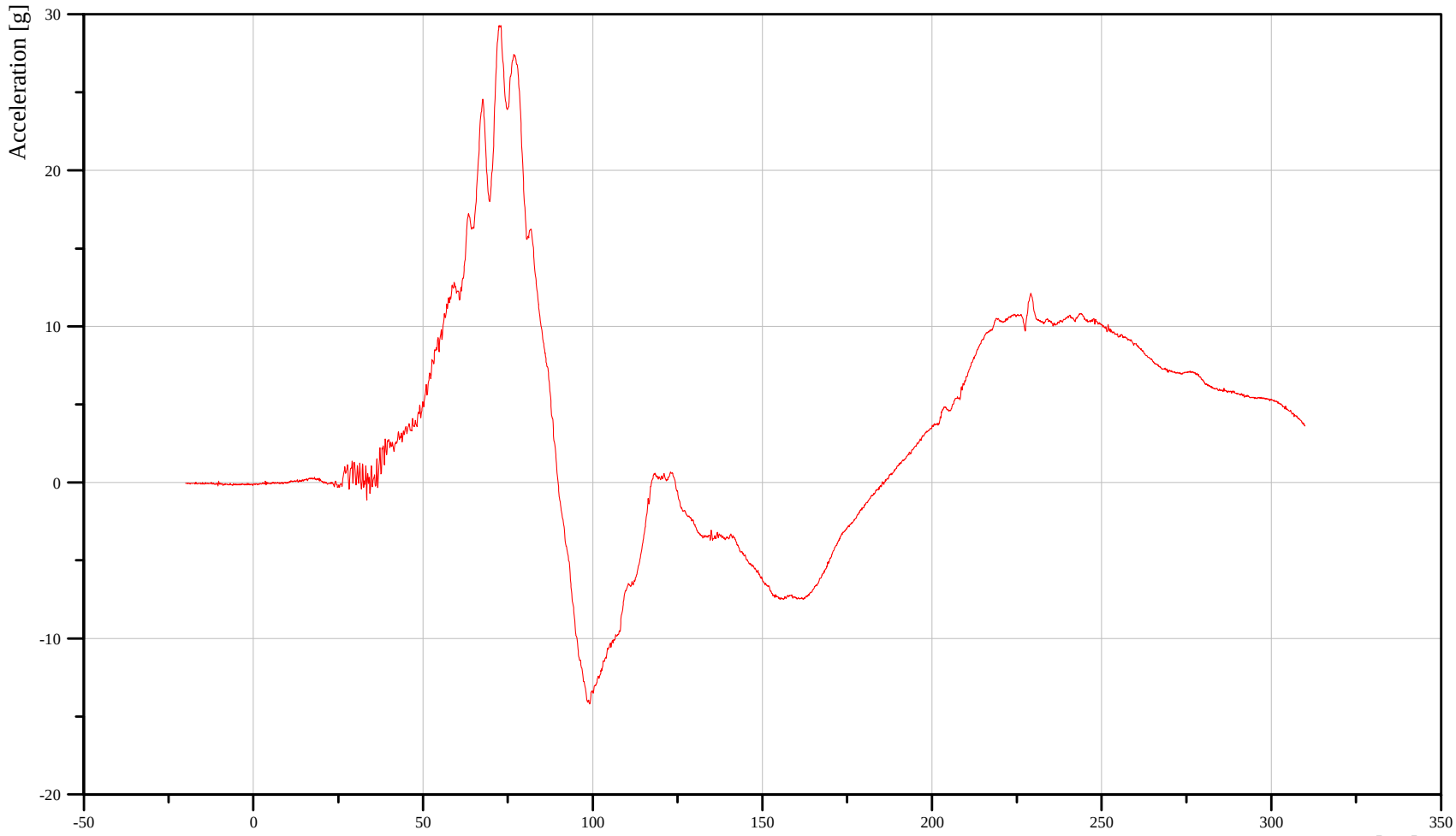
Head (FT) Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADFR00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-14.19 g at 99.12 ms

Max. Value
29.28 g at 72.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

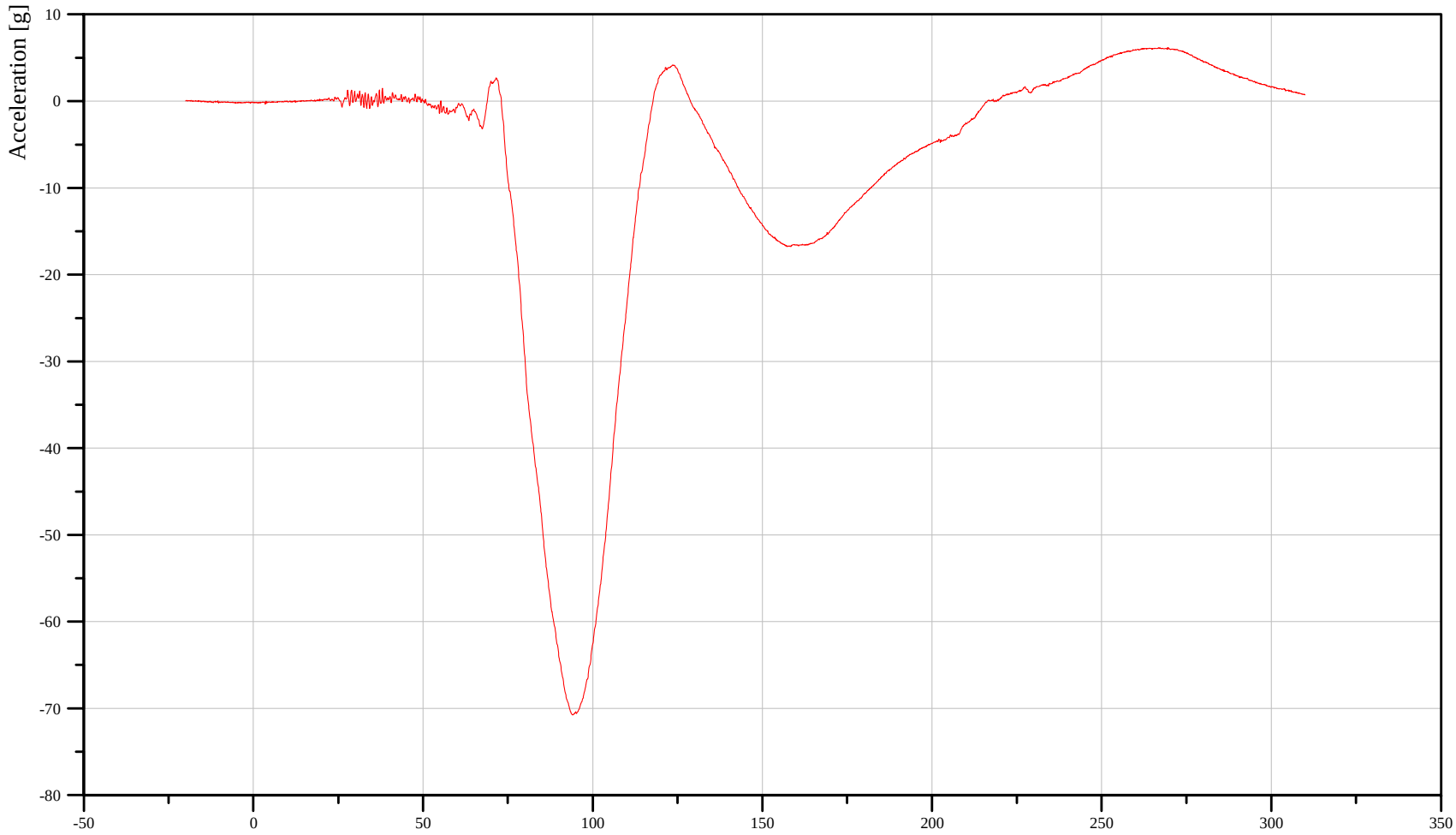
Head (TP) Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADUP00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-70.77 g at 94.08 ms

Max. Value
6.15 g at 266.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

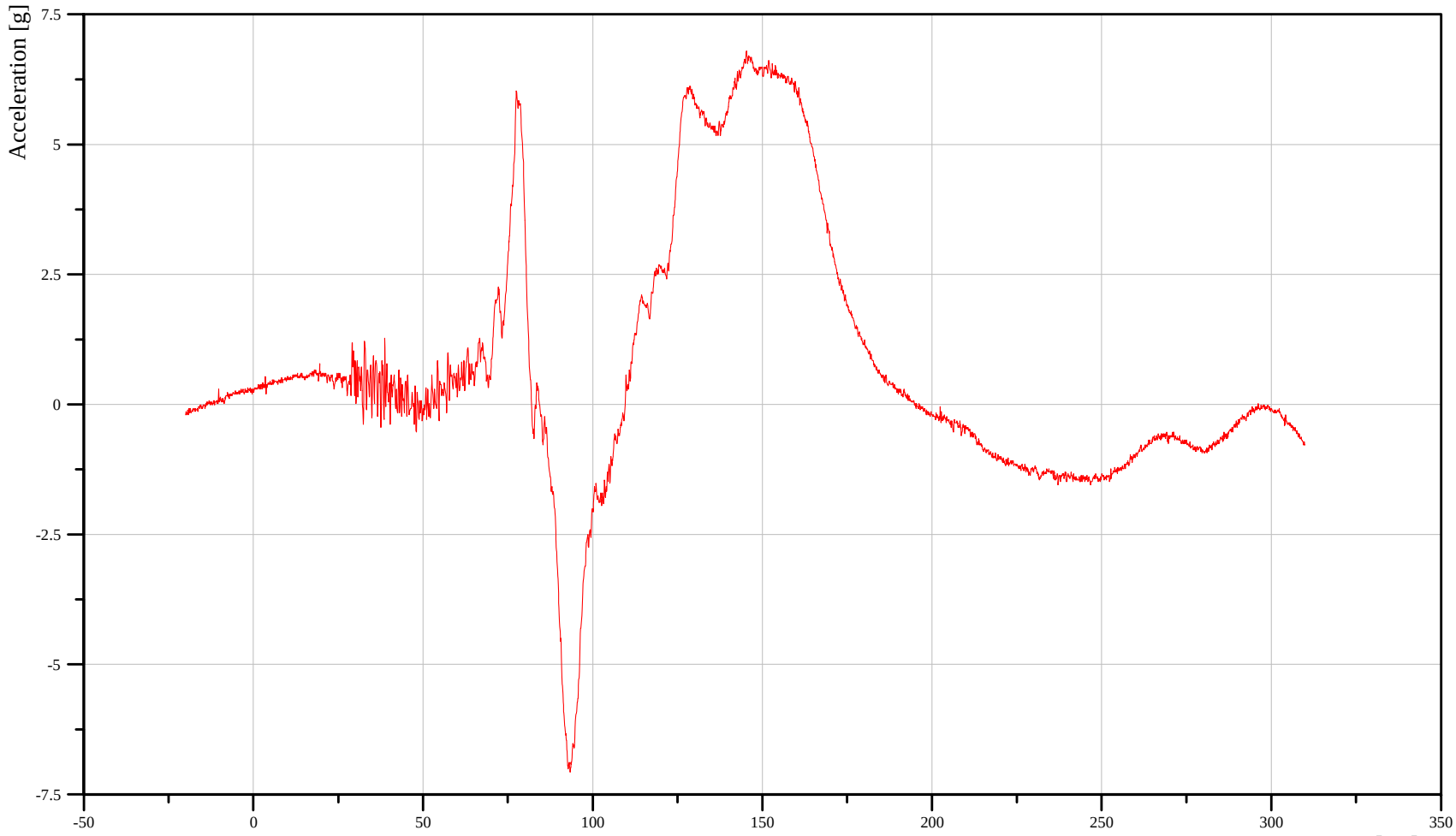
Head (TP) Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADUP00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-7.07 g at 93.36 ms

Max. Value
6.80 g at 145.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

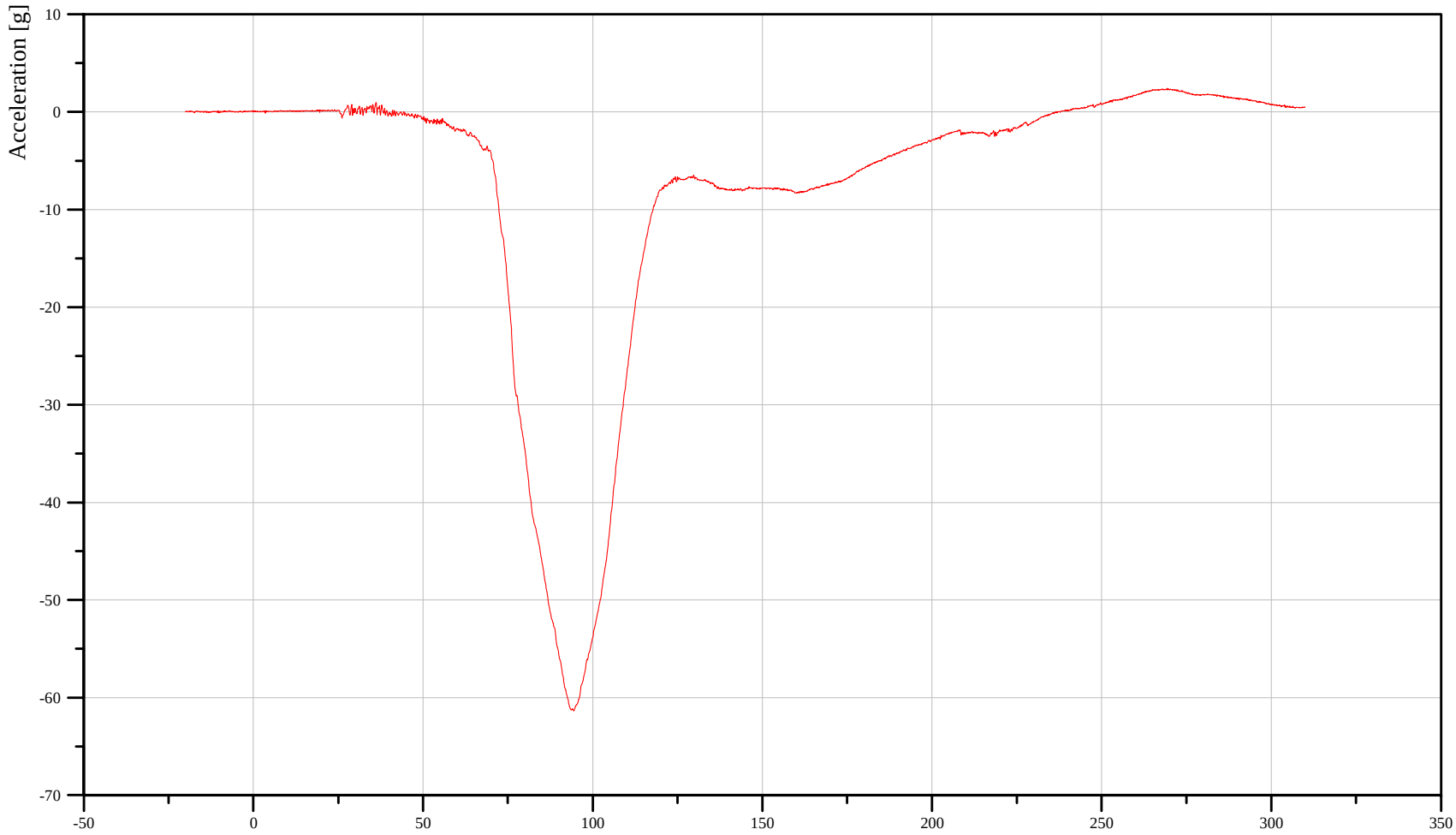
Head (LT) Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADLE00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-61.35 g at 94.32 ms

Max. Value
2.46 g at 269.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

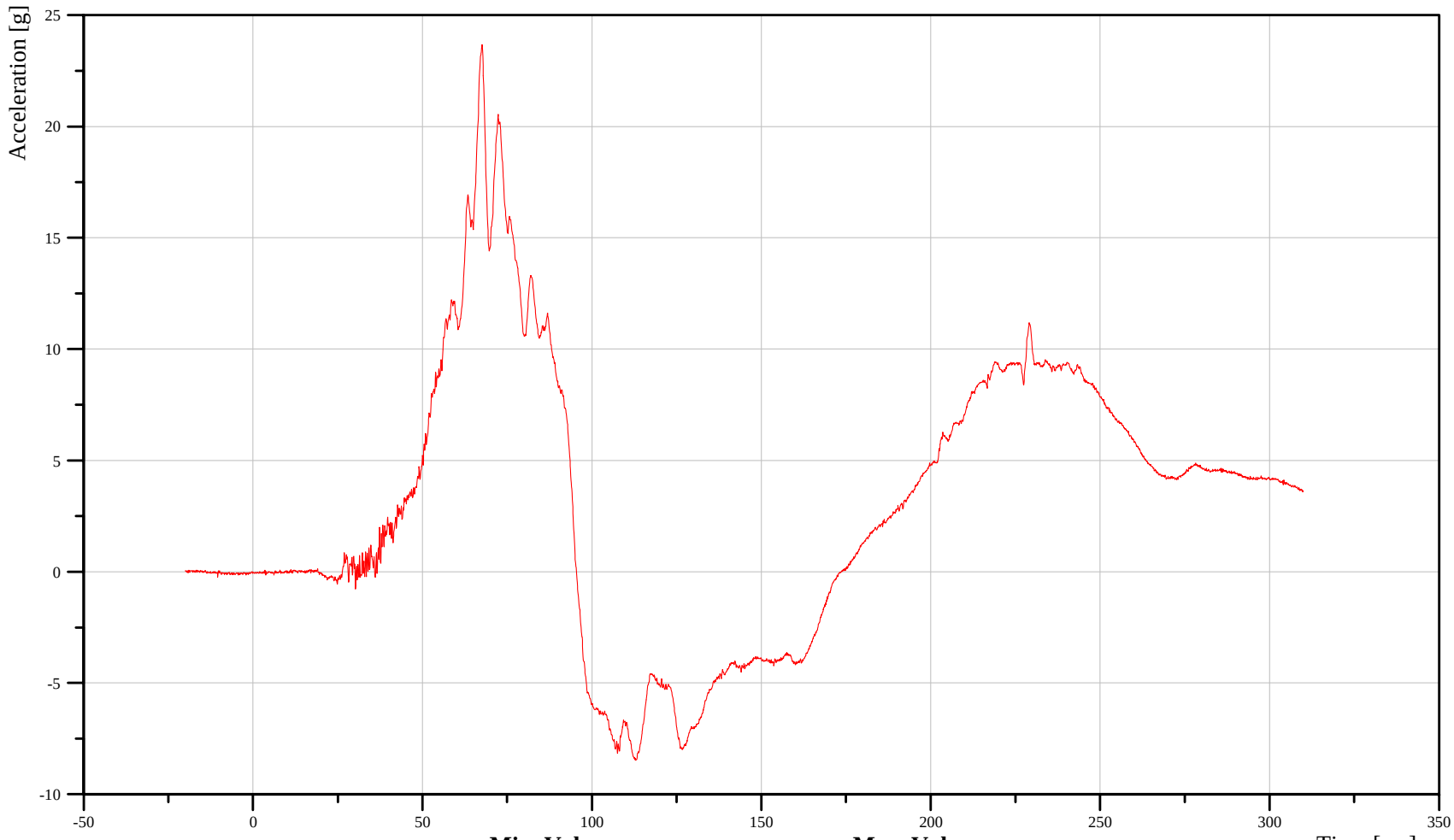
Head (LT) Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21HEADLE00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-8.48 g at 112.88 ms

Max. Value
23.68 g at 67.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

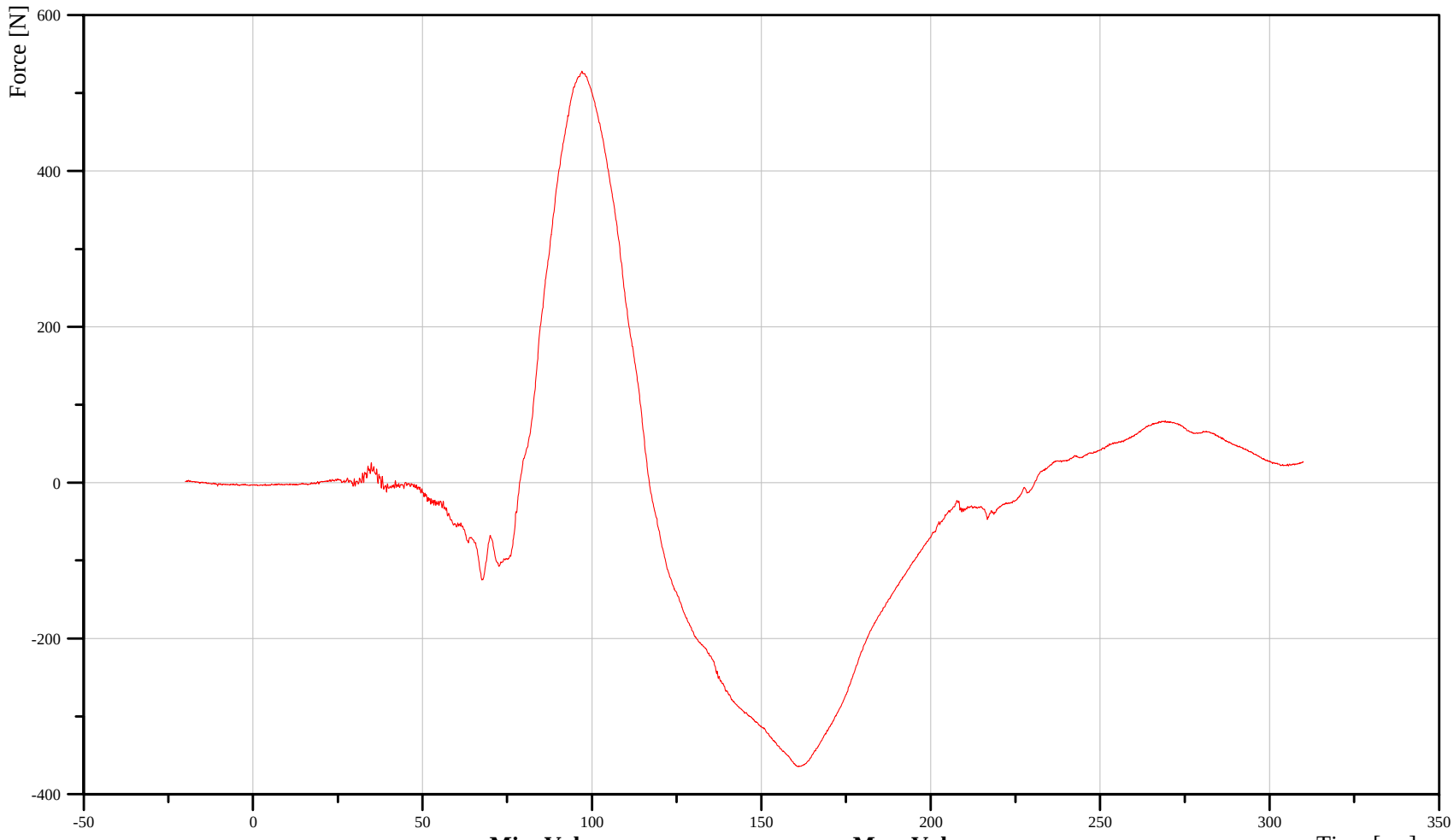
Neck Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKUP00H3FOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-364.23 N at 160.72 ms

Max. Value
528.15 N at 97.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

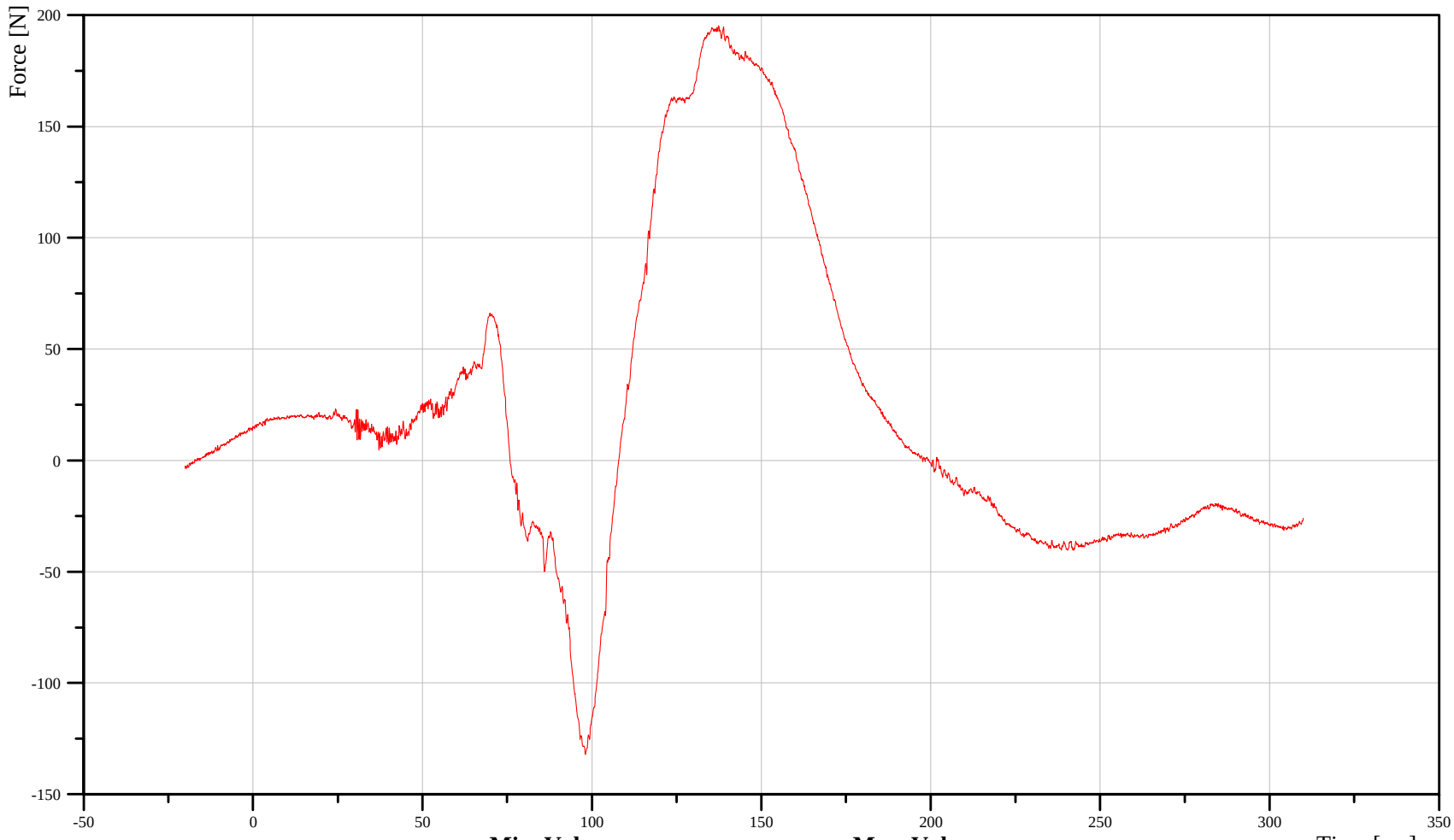
Neck Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKUP00H3FOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-132.14 N at 98.08 ms

Max. Value
195.21 N at 137.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

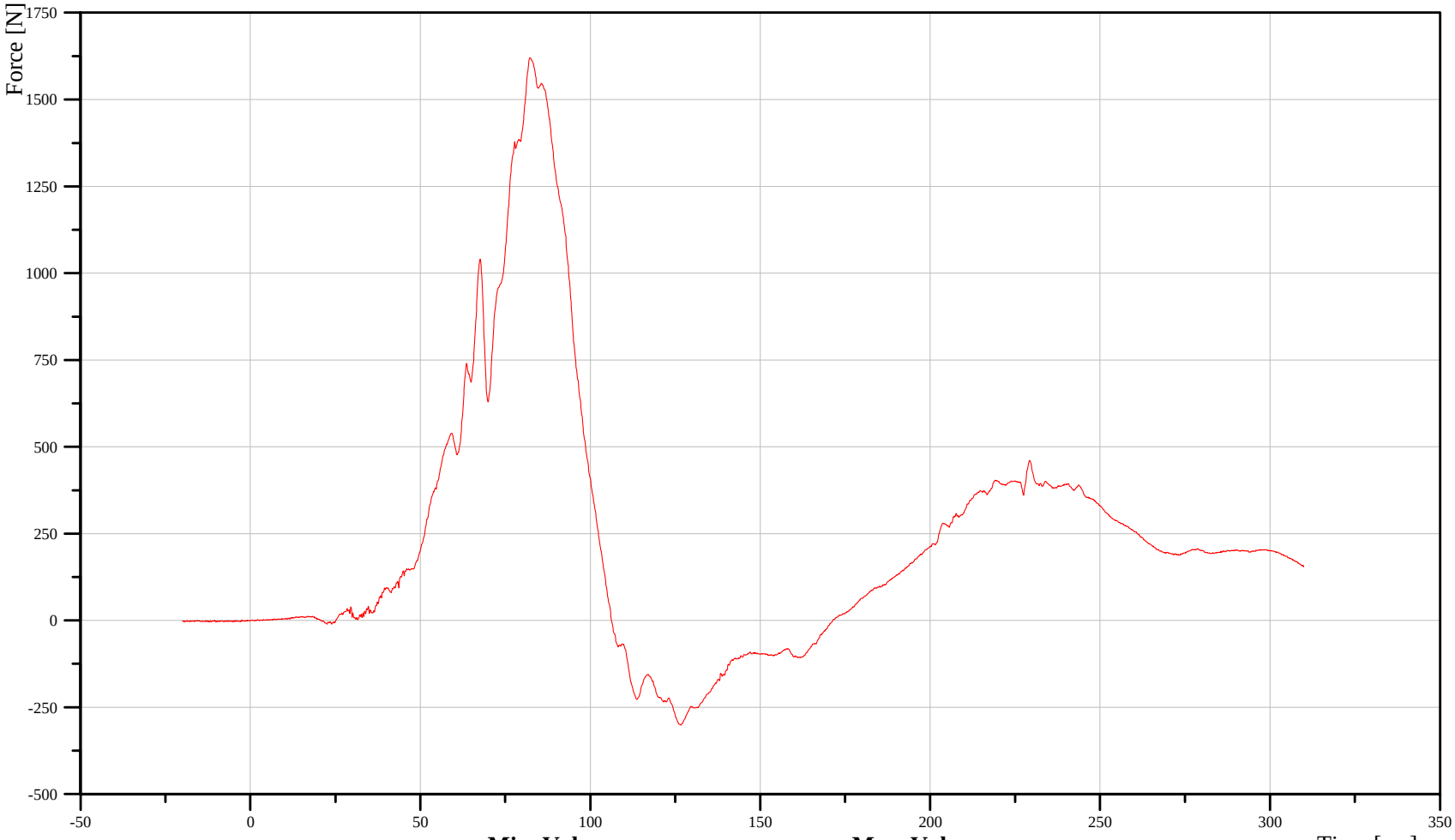
Neck Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKUP00H3FOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-301.53 N at 126.72 ms

Max. Value
1,620.23 N at 82.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

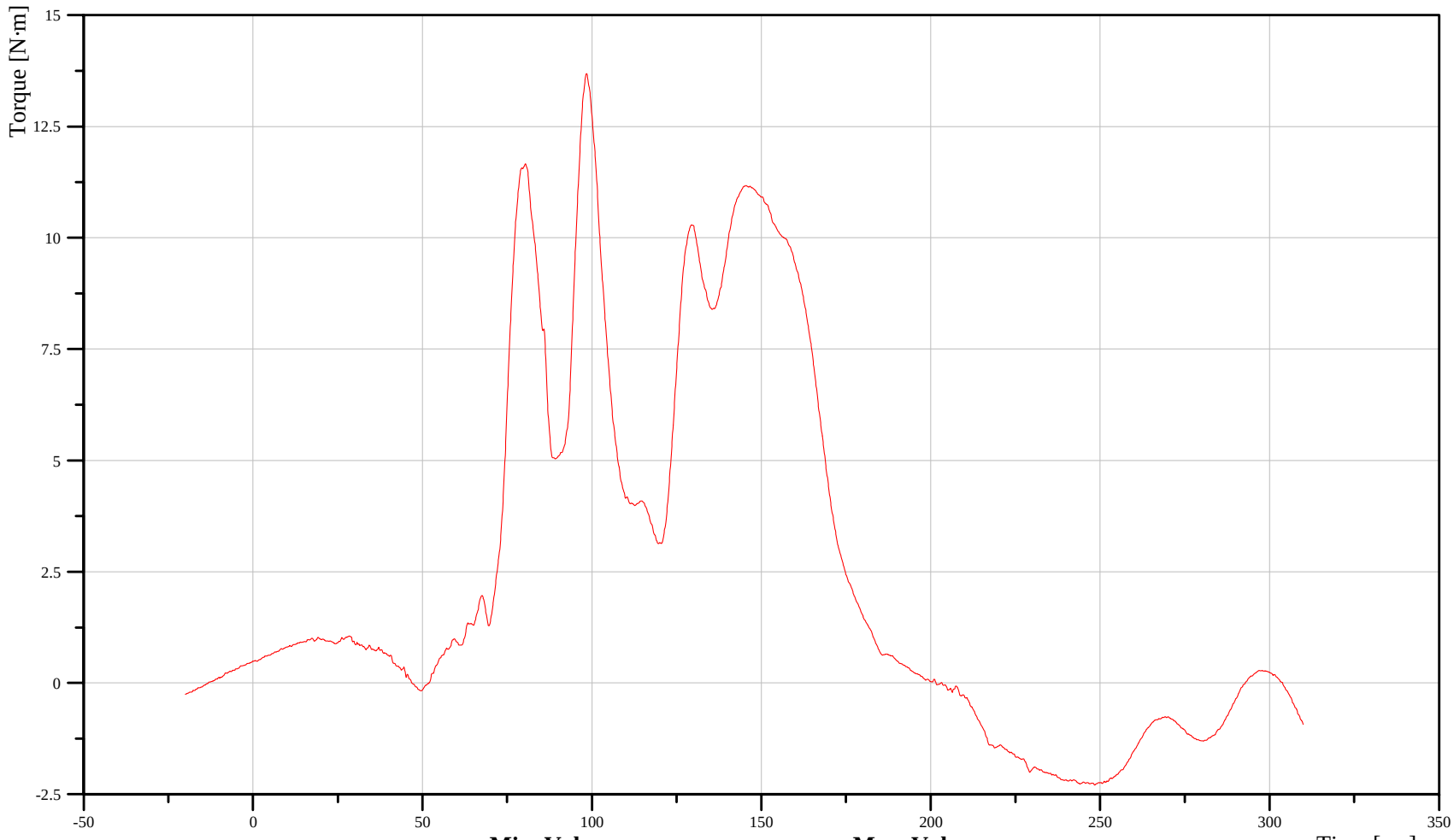
Neck Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKUP00H3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2.29 N·m at 248.40 ms

Max. Value
13.69 N·m at 98.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

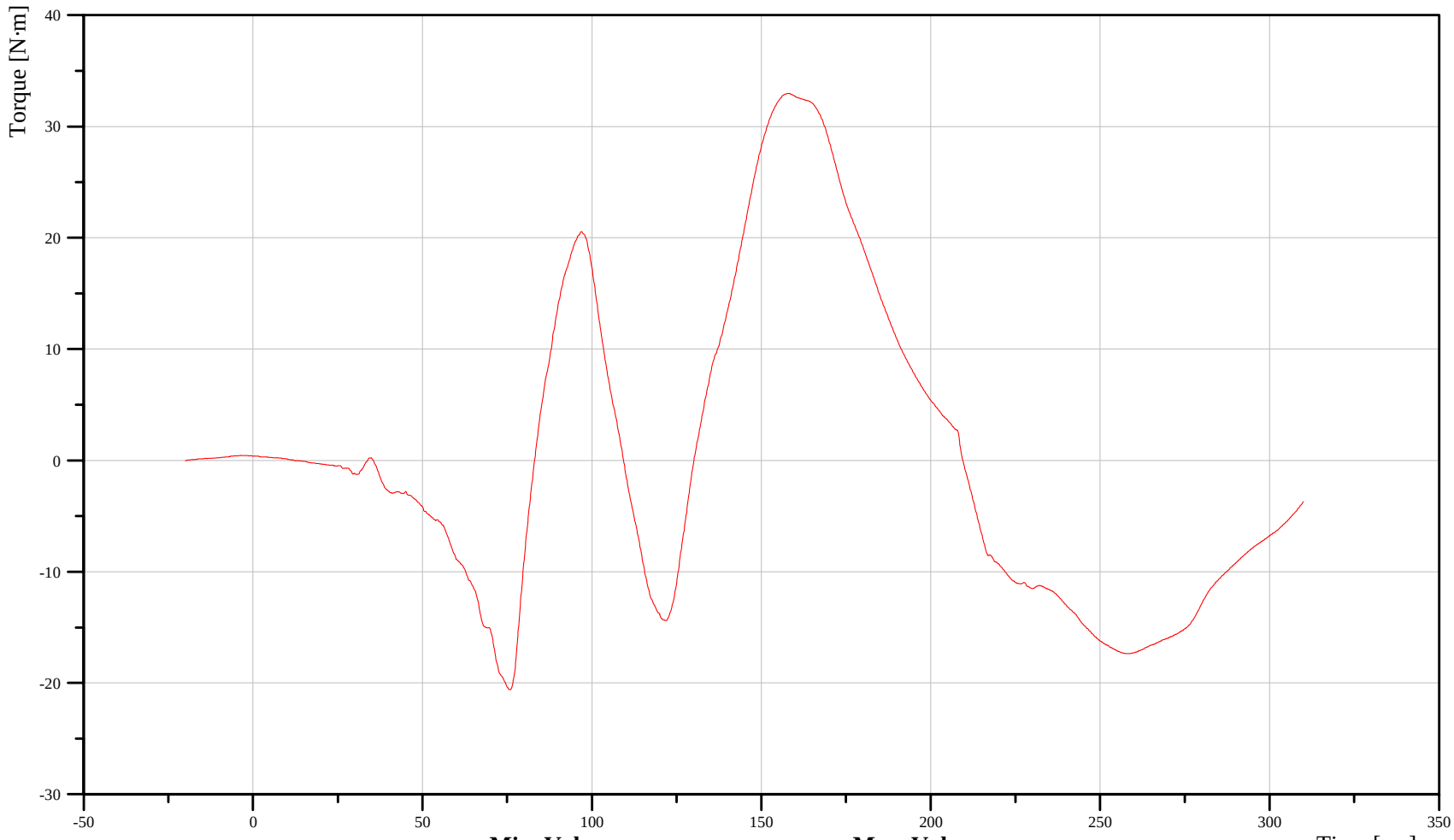
Neck Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKUP00H3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-20.59 N·m at 75.84 ms

Max. Value
32.96 N·m at 158.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

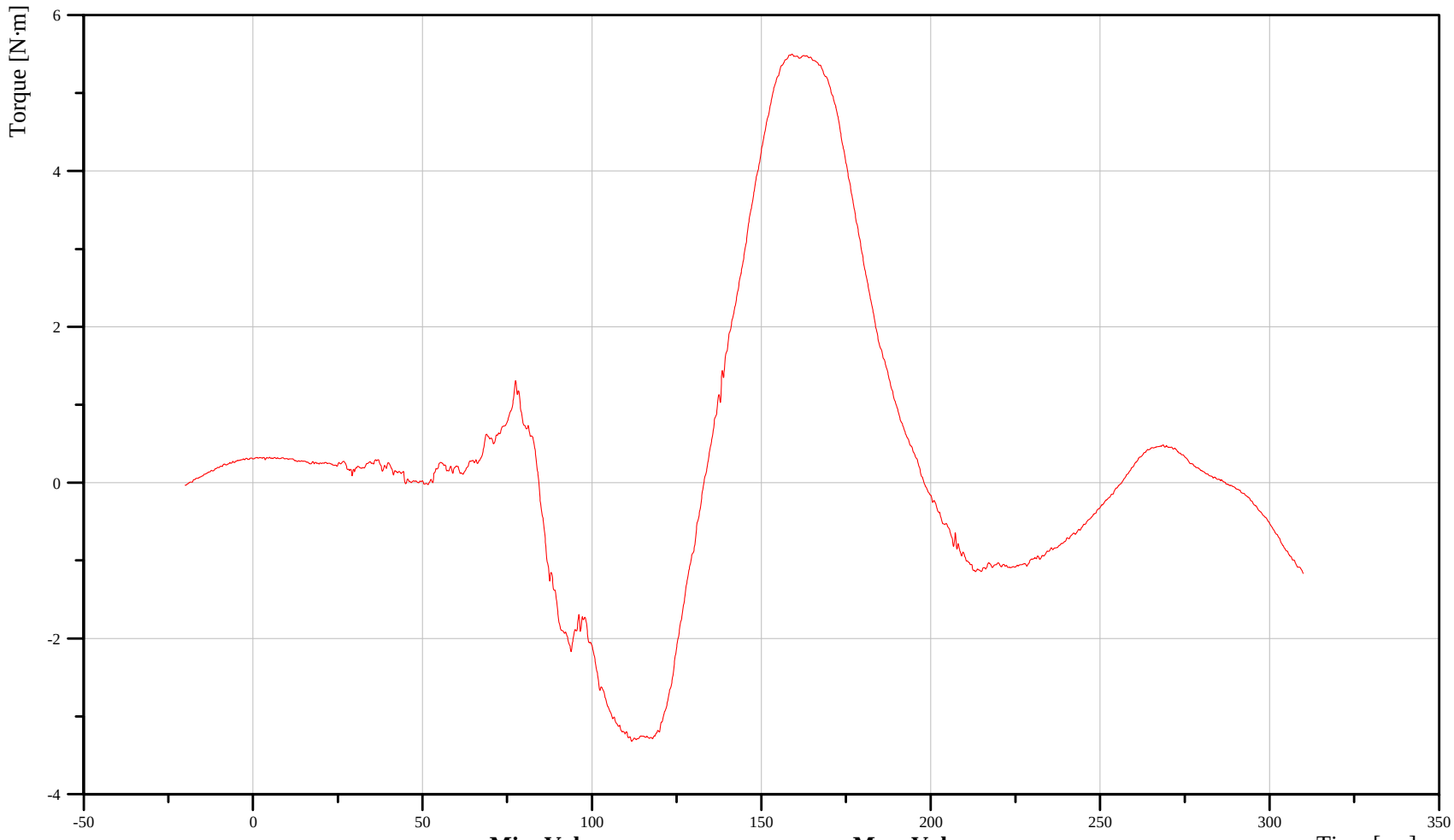
Neck Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKUP00H3MOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3.32 N·m at 111.76 ms

Max. Value
5.50 N·m at 159.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

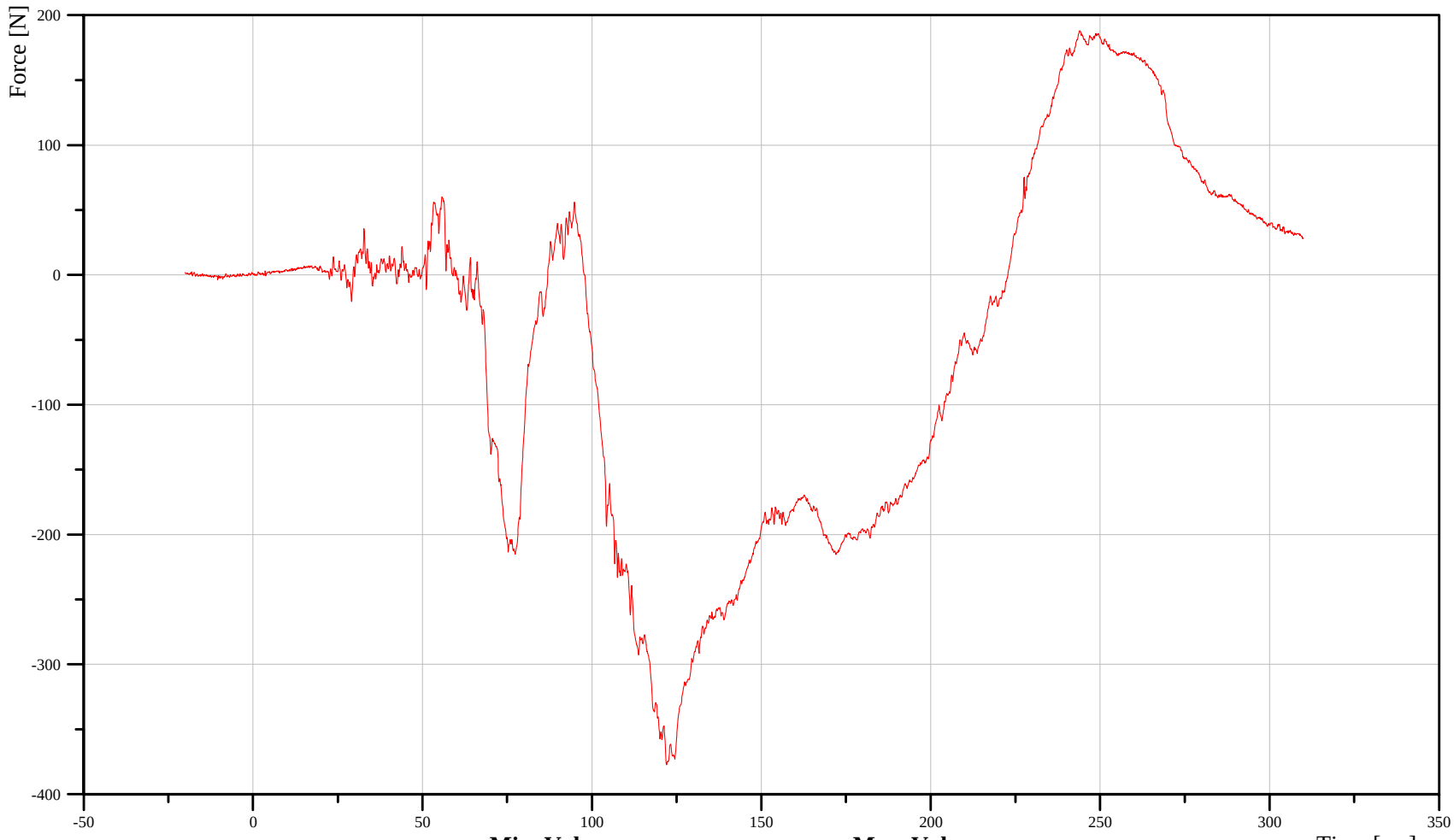
Neck Lower Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKLO00H3FOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-377.41 N at 122.00 ms

Max. Value
188.15 N at 243.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

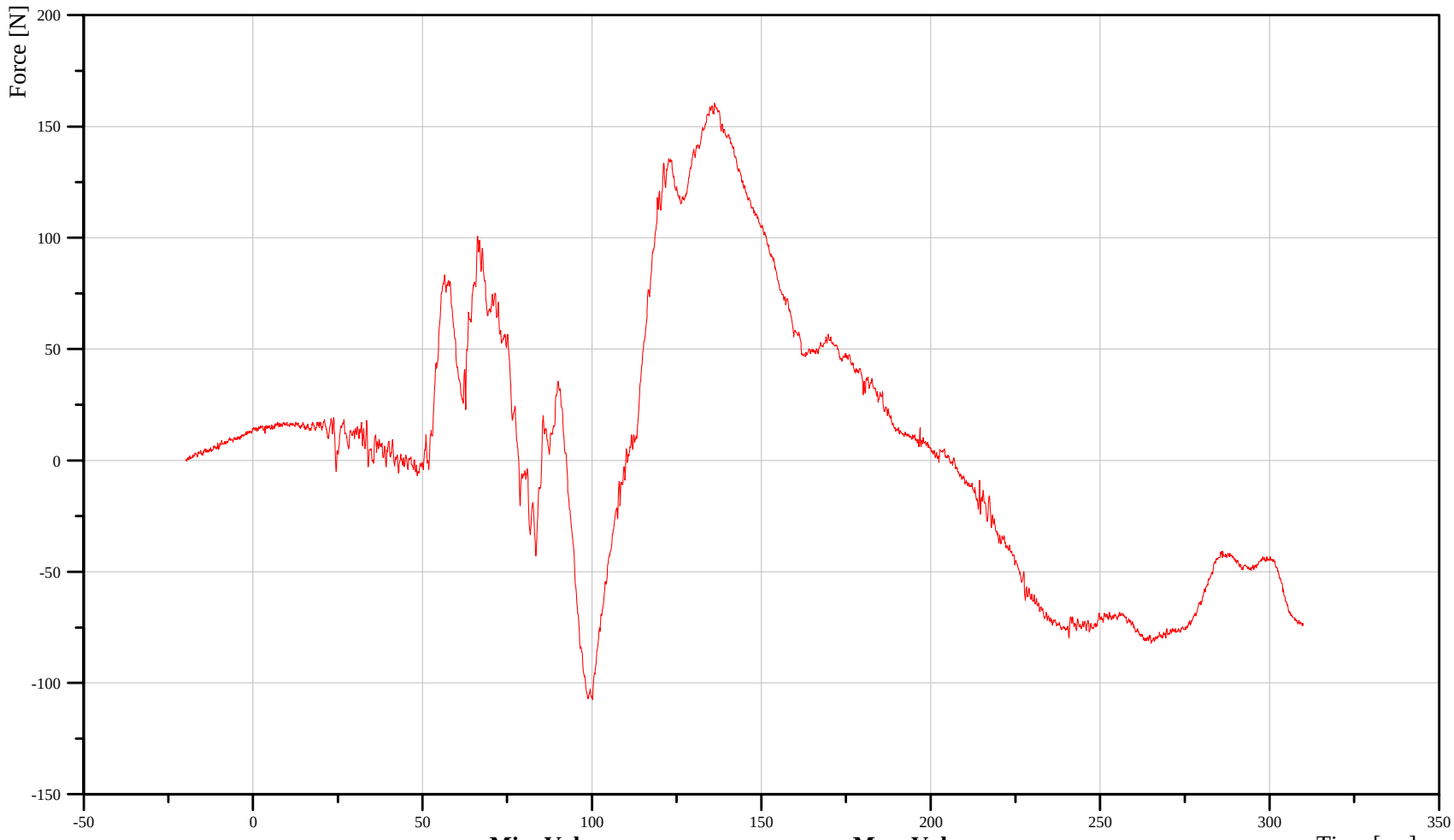
Neck Lower Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKLO00H3FOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-107.45 N at 100.16 ms

Max. Value
160.54 N at 136.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

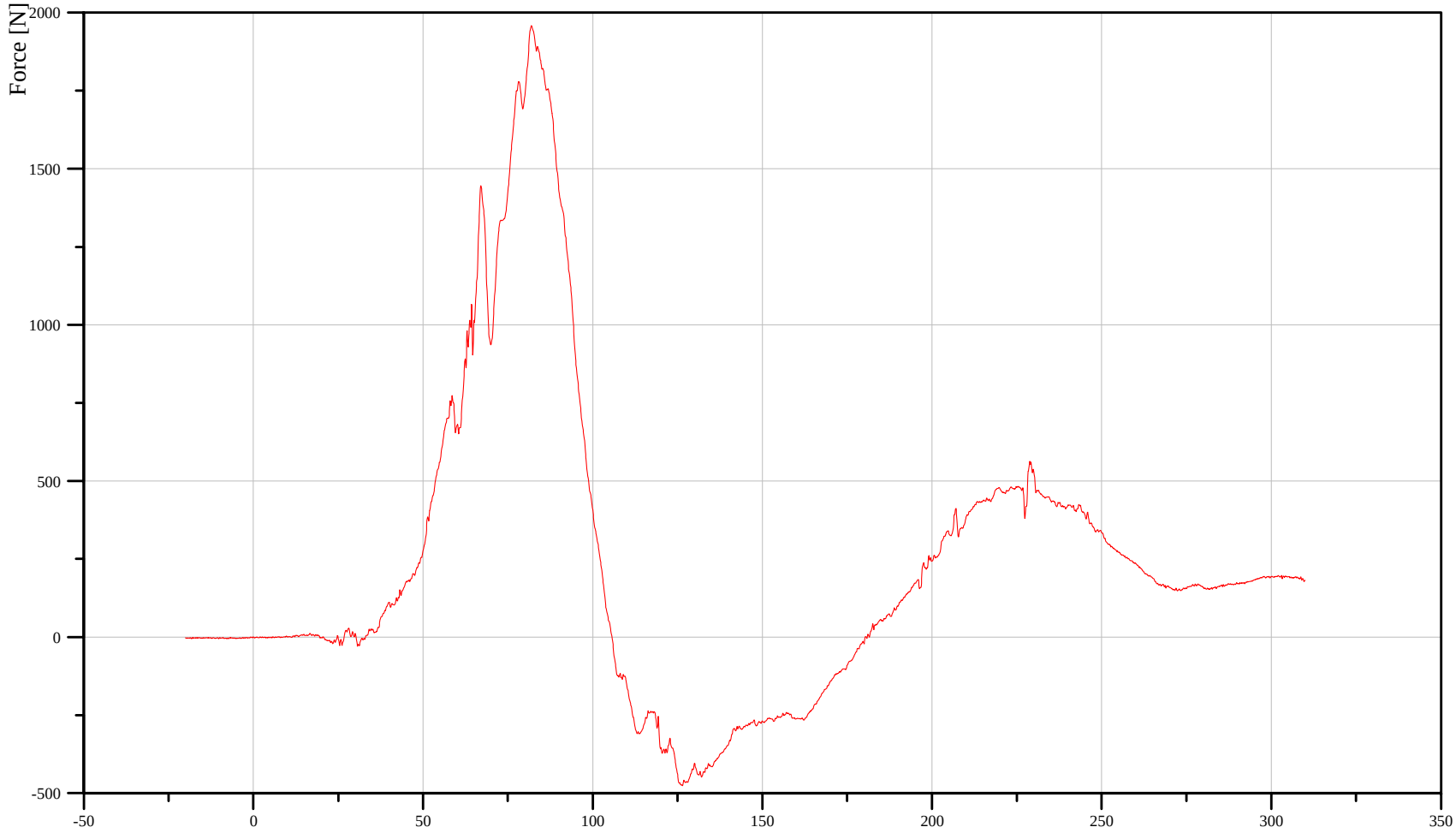
Neck Lower Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKLO00H3FOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-476.08 N at 126.48 ms

Max. Value
1,958.60 N at 82.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

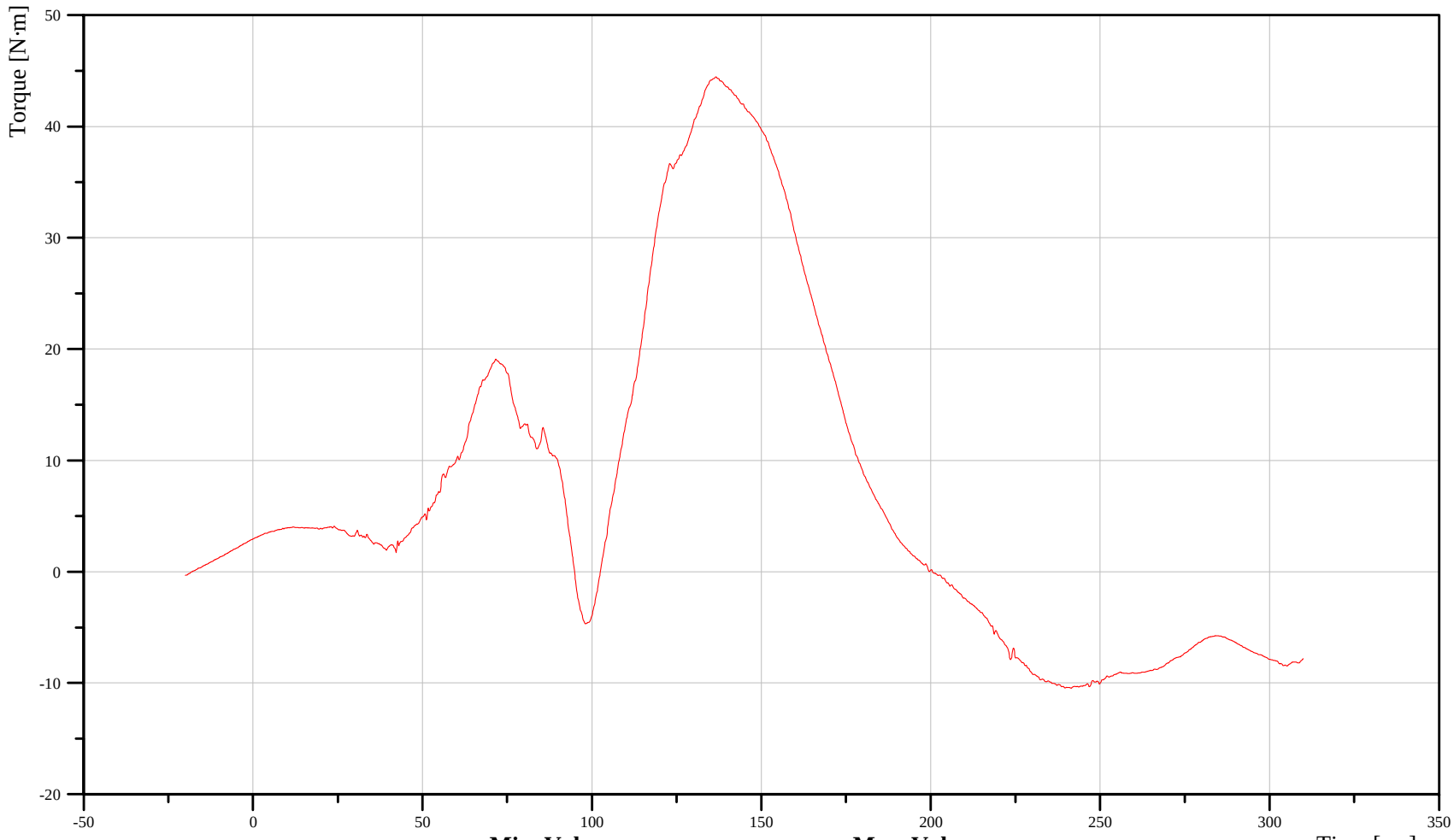
Neck Lower Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKLO00H3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-10.47 N·m at 241.44 ms

Max. Value
44.45 N·m at 136.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

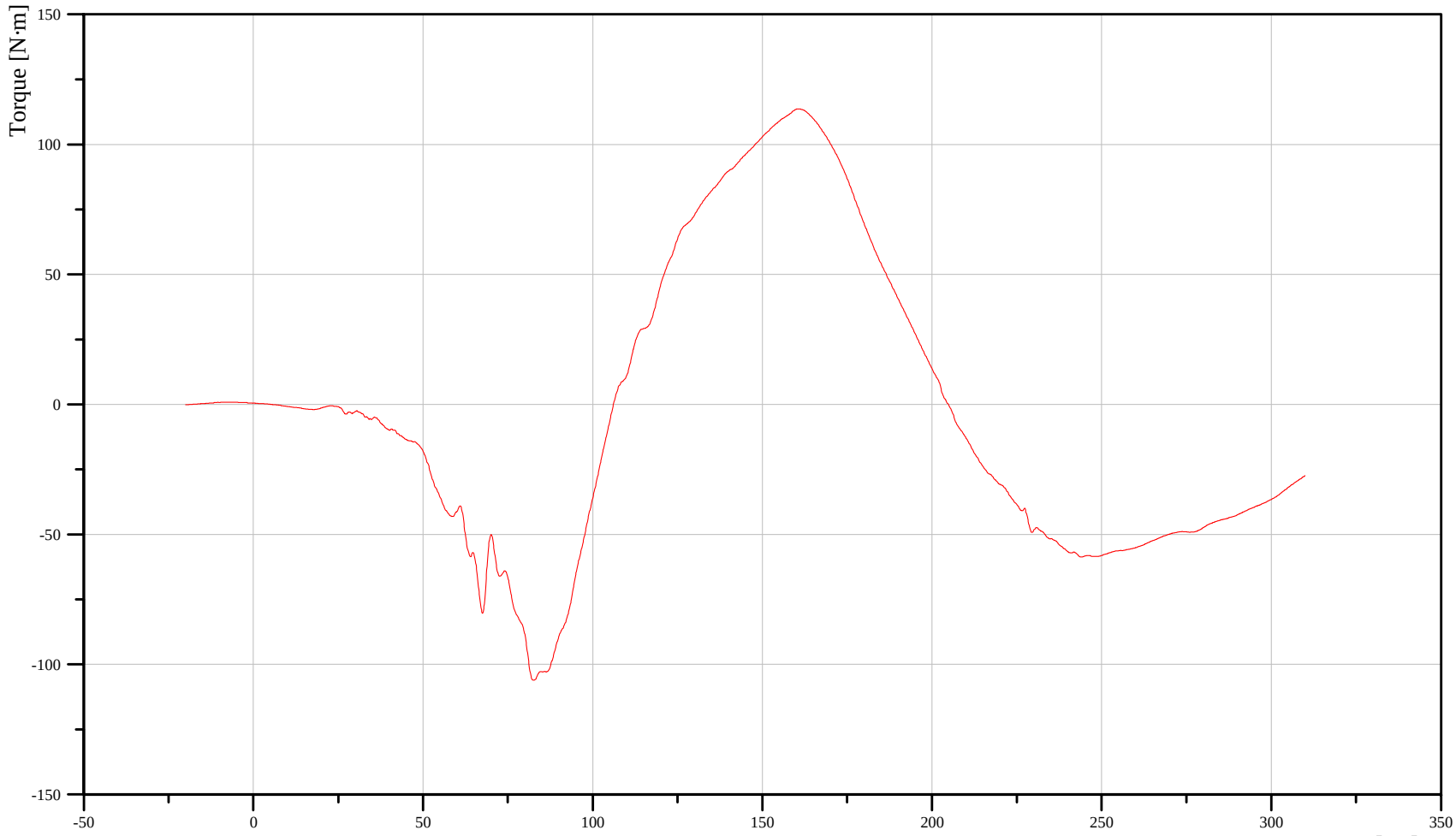
Neck Lower Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKLO00H3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-106.09 N·m at 82.64 ms

Max. Value
113.61 N·m at 160.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

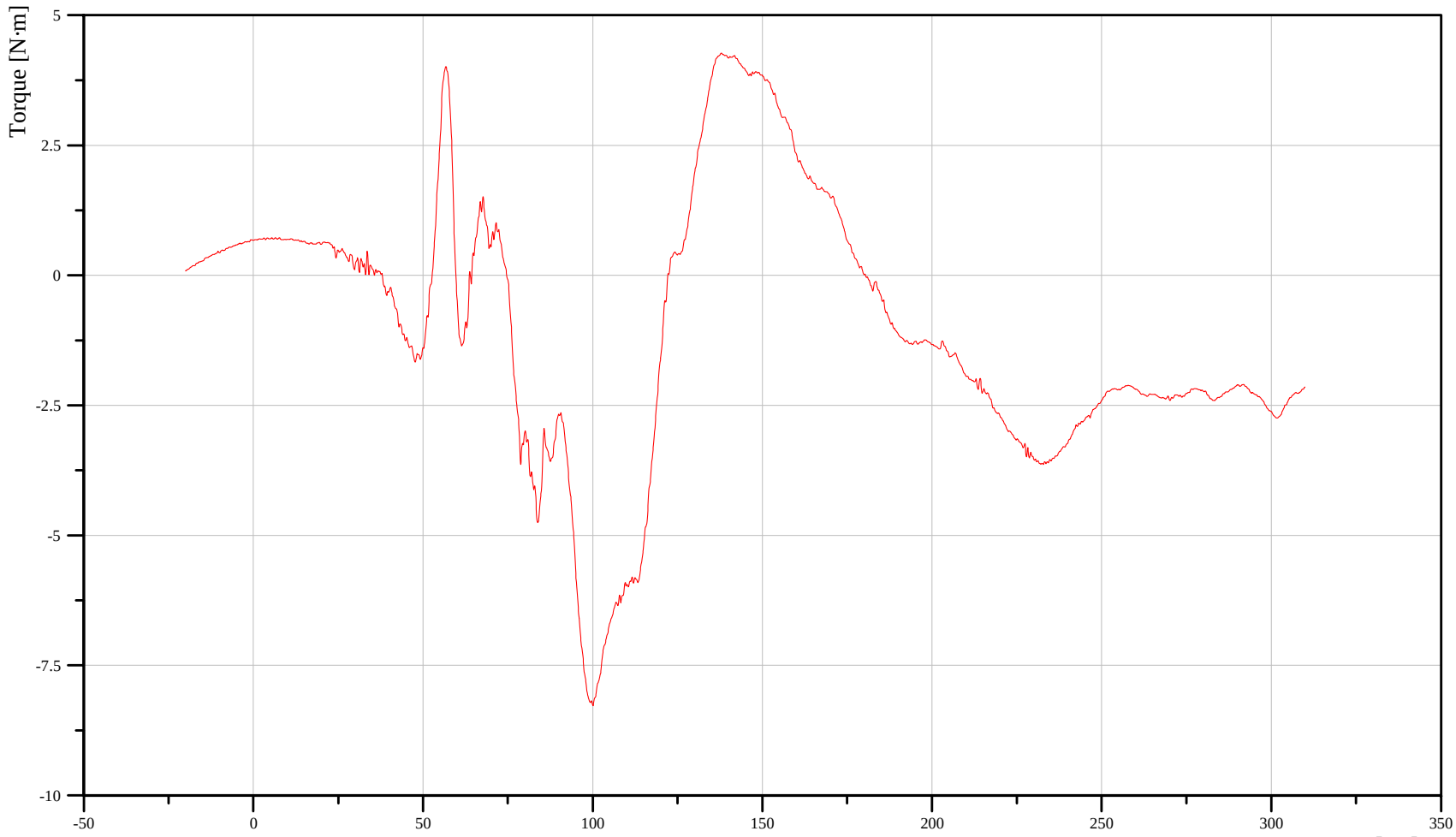
Neck Lower Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21NECKLO00H3MOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-8.27 N·m at 100.08 ms

Max. Value
4.27 N·m at 137.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

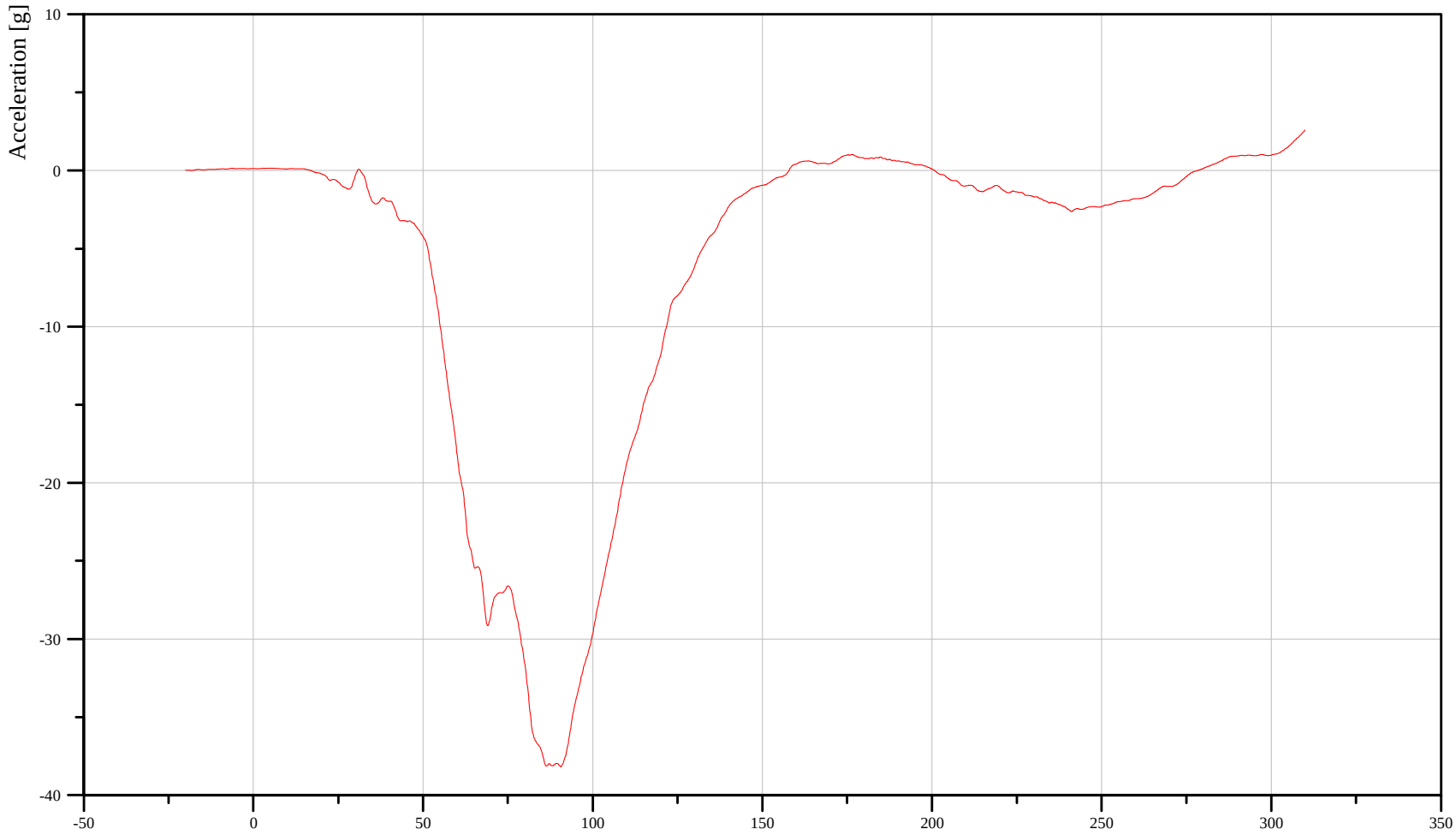
Chest Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-38.16 g at 90.56 ms

Max. Value
2.59 g at 310.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

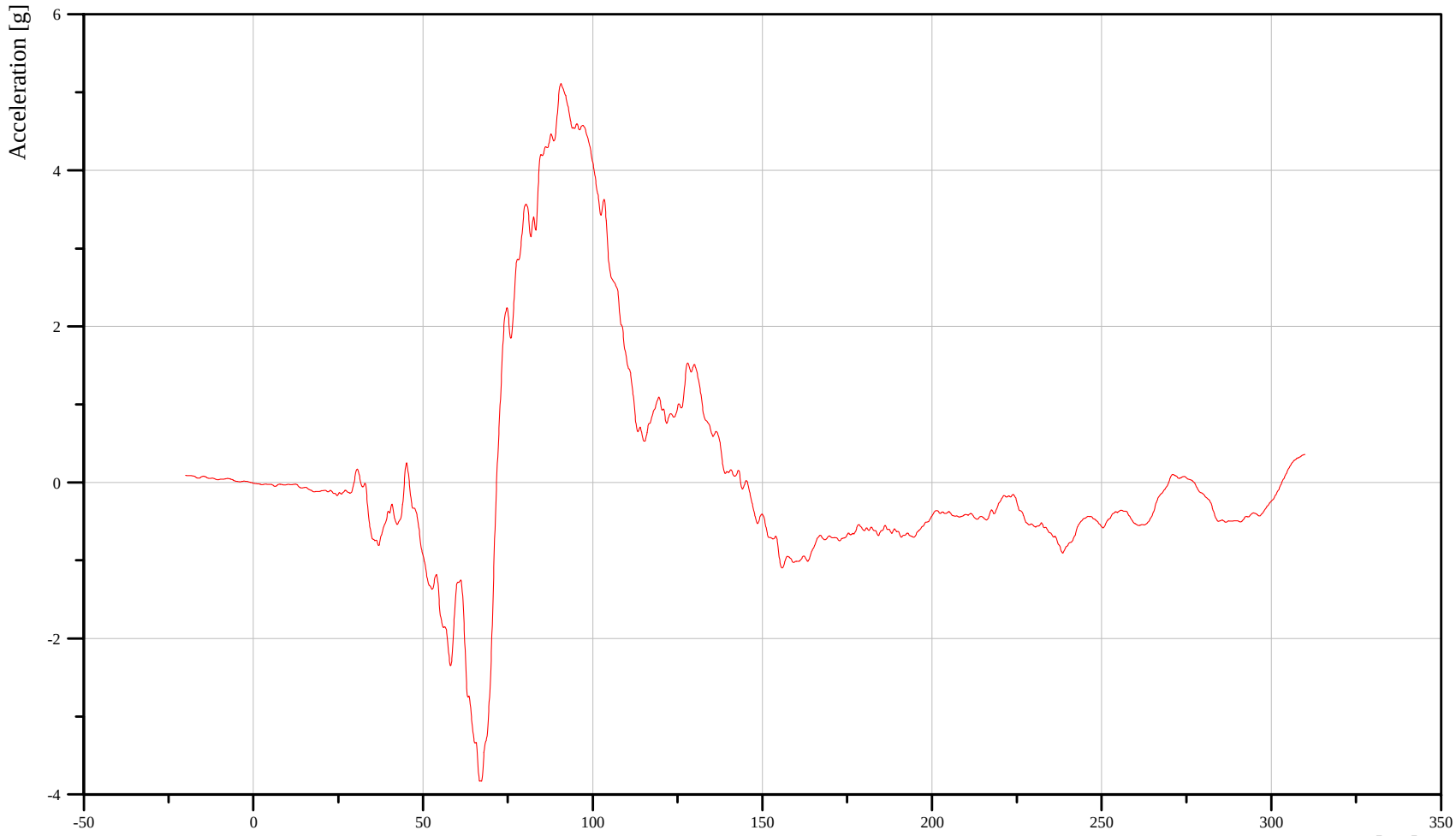
Chest Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-3.83 g at 67.12 ms

Max. Value
5.11 g at 90.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

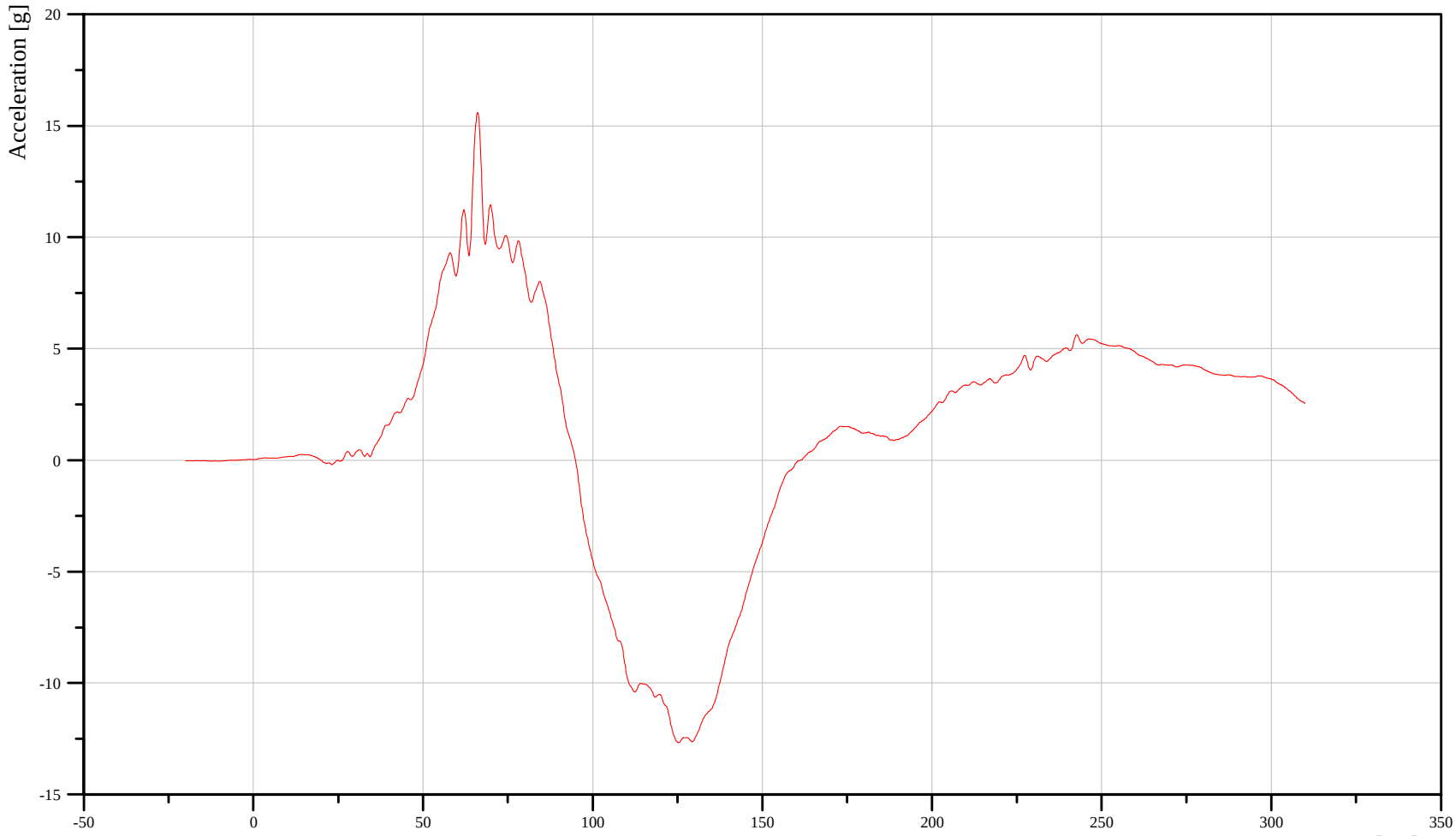
Chest Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-12.67 g at 125.28 ms

Max. Value
15.60 g at 66.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

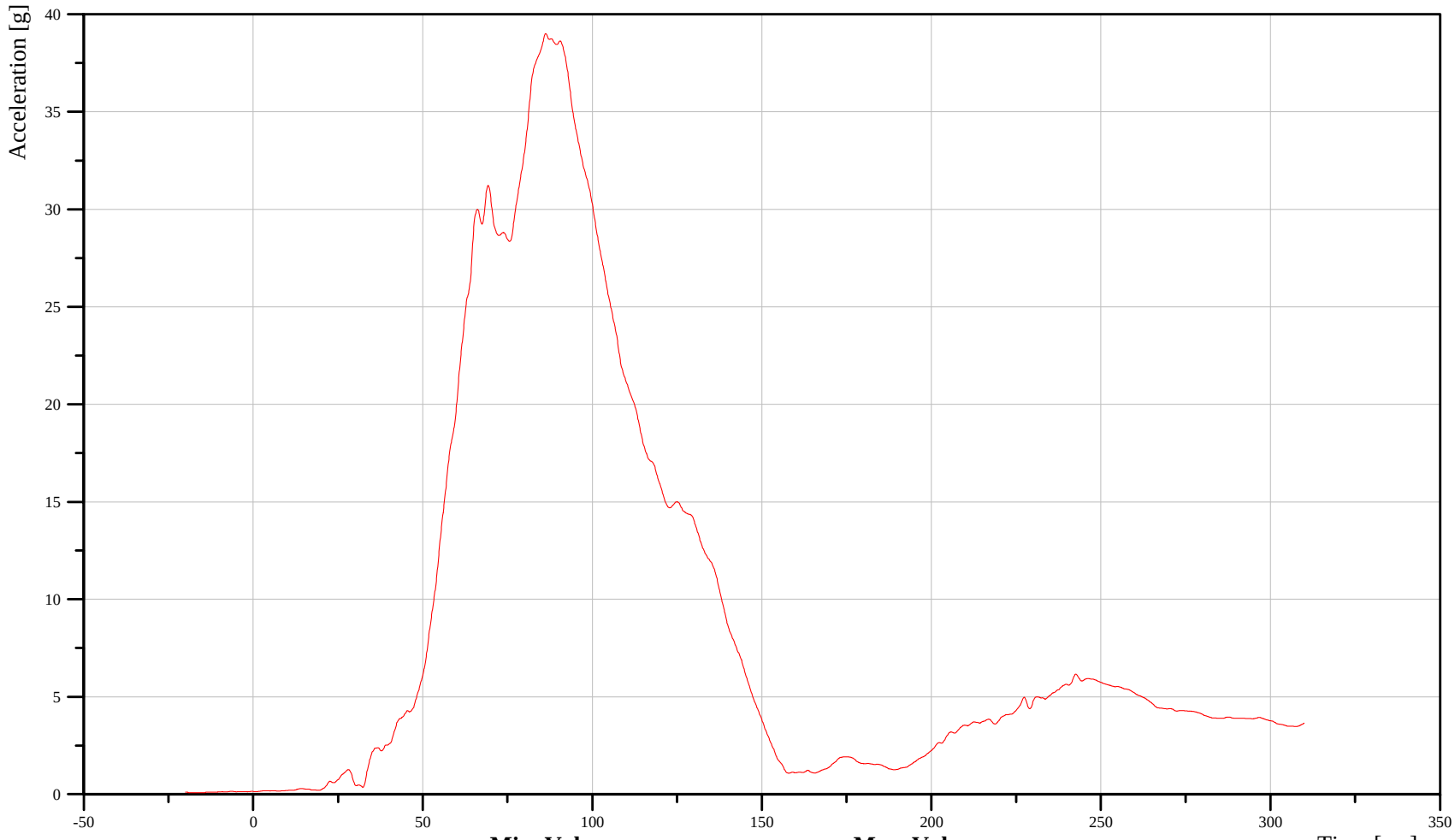
Chest Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.09 g at -15.20 ms

Max. Value
39.01 g at 86.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

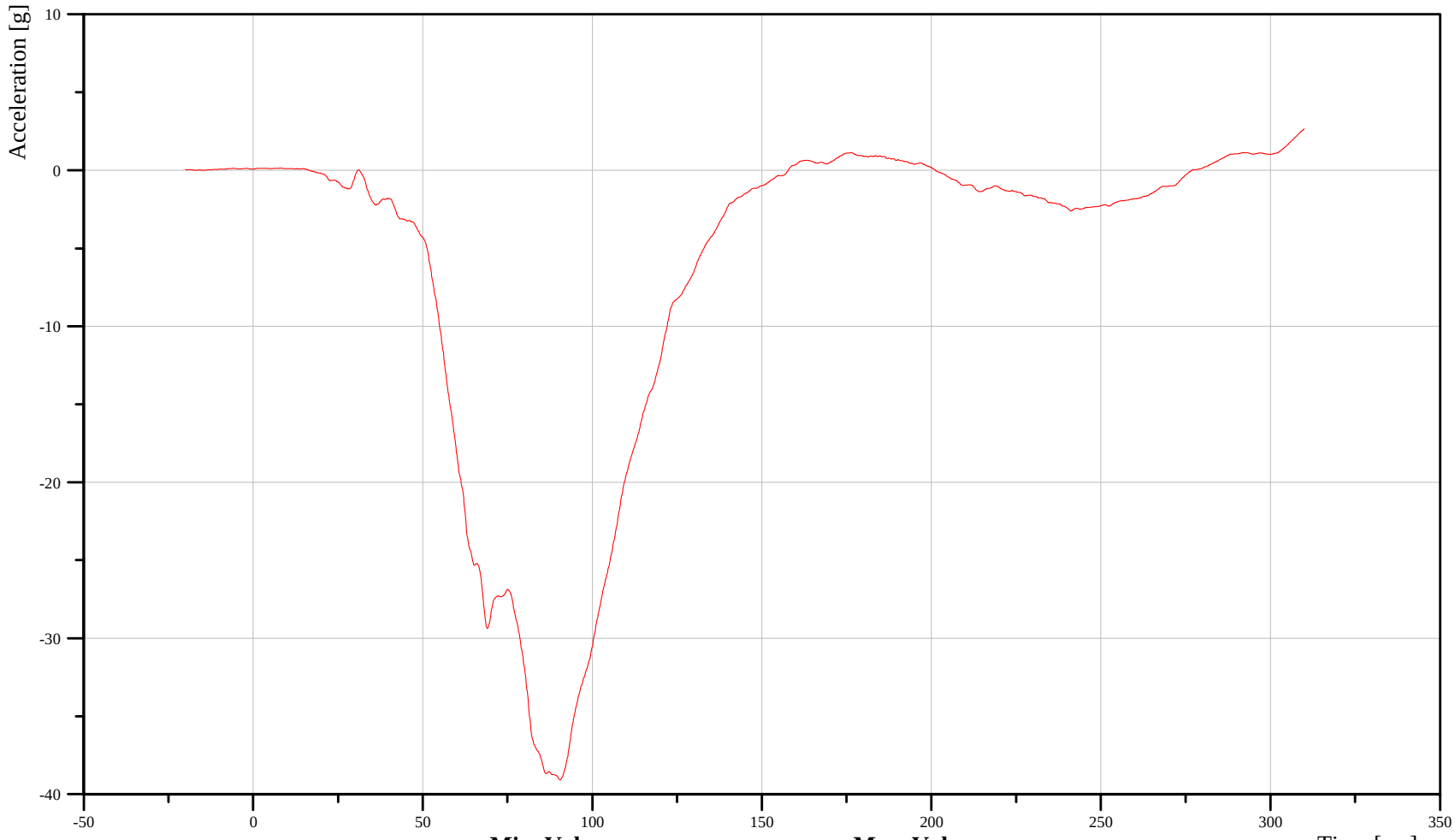
Chest Accel X Red.

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-39.07 g at 90.48 ms

Max. Value
2.65 g at 310.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

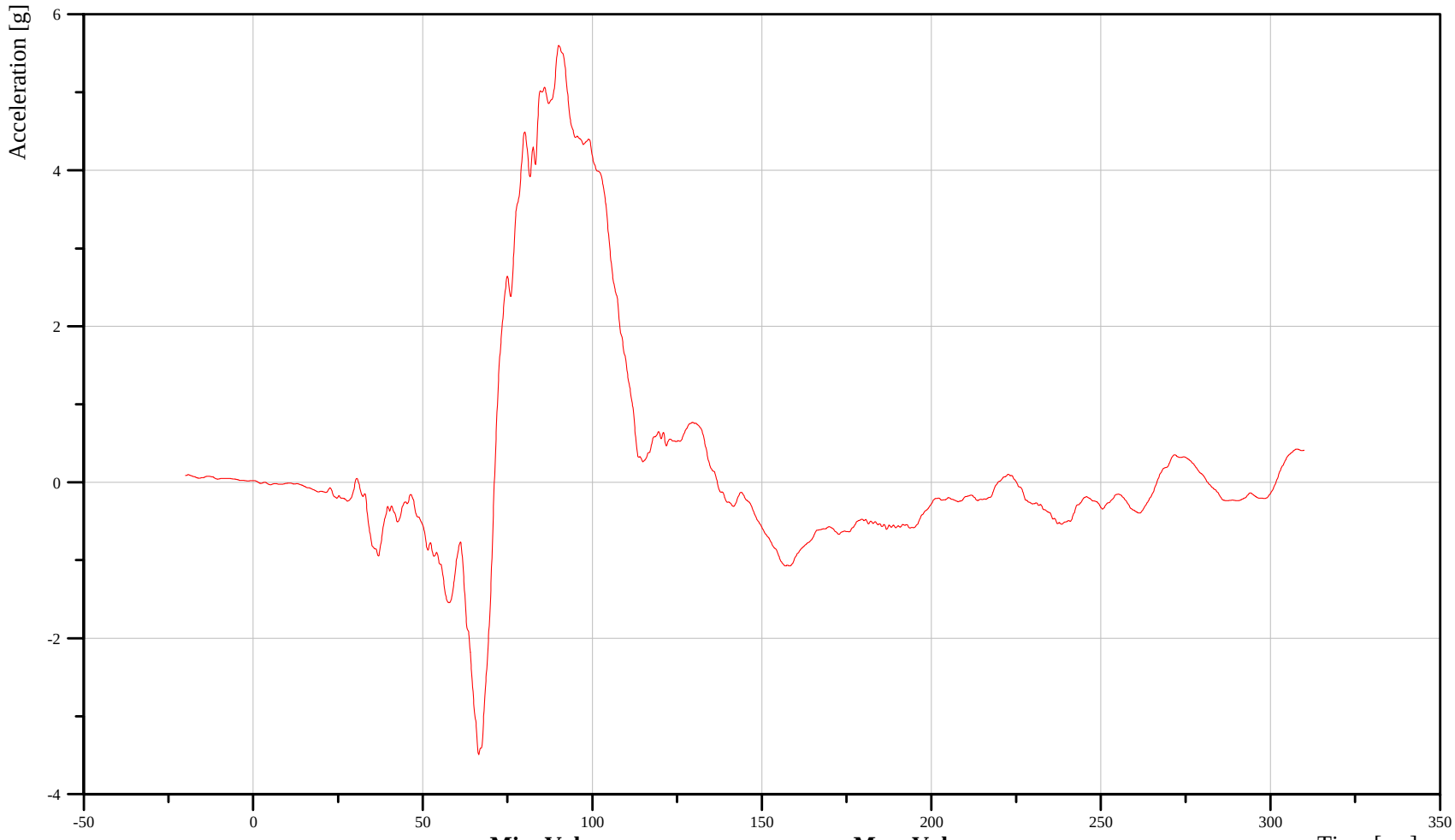
Chest Accel Y Red.

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-3.49 g at 66.48 ms

Max. Value
5.60 g at 90.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

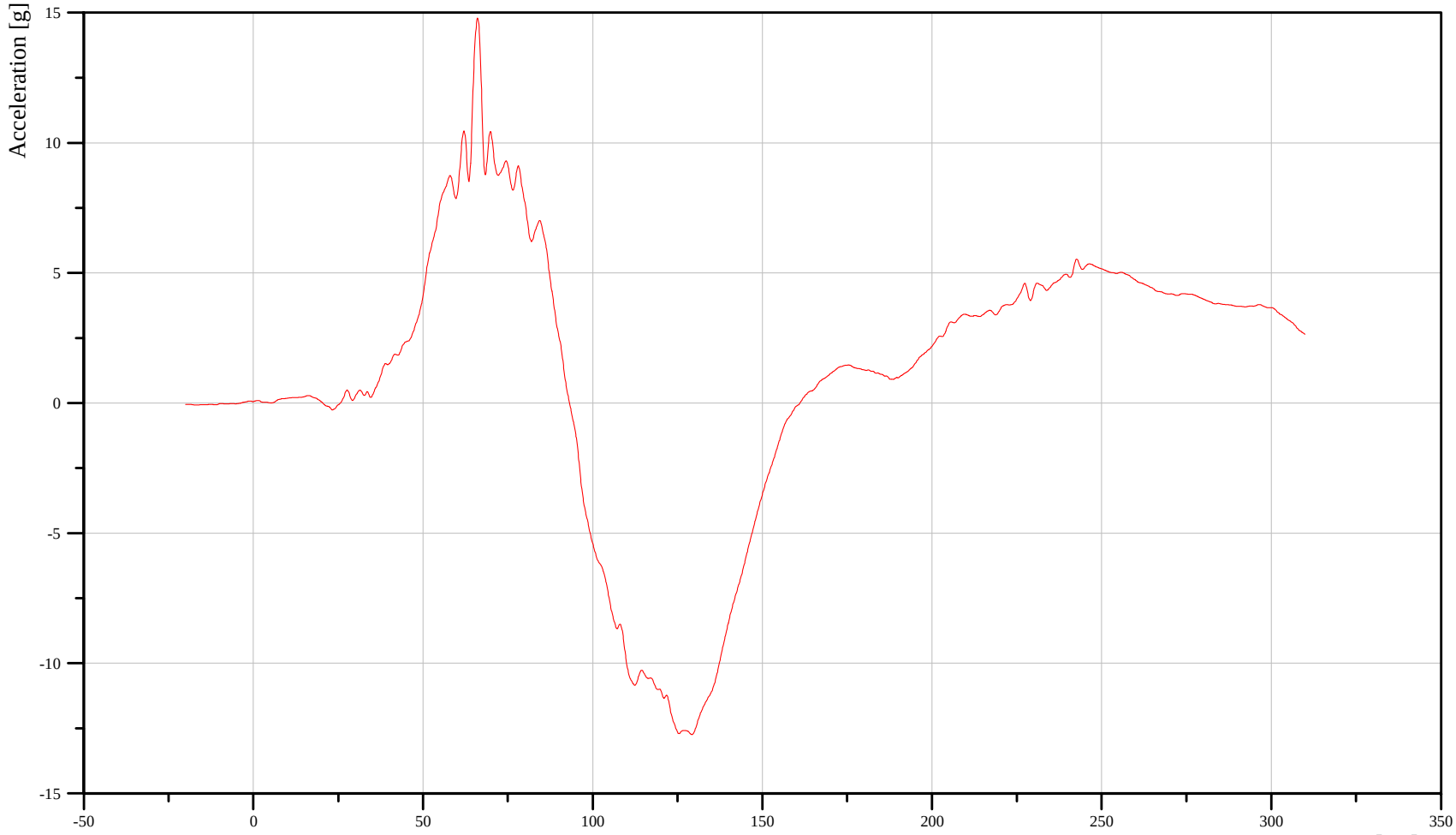
Chest Accel Z Red.

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-12.74 g at 129.20 ms

Max. Value
14.79 g at 66.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

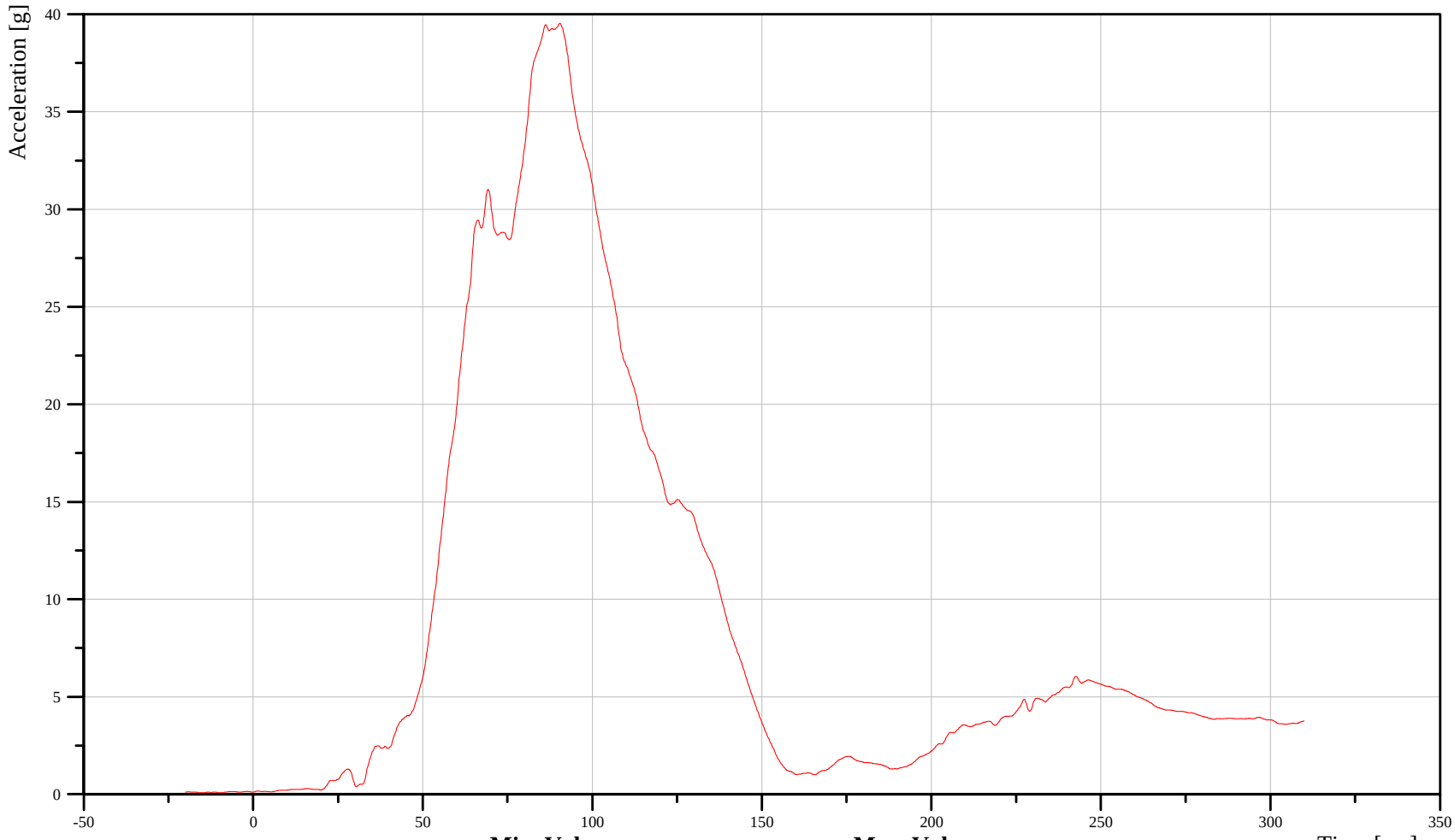
Chest Accel Red. Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.08 g at -15.36 ms

Max. Value
39.53 g at 90.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

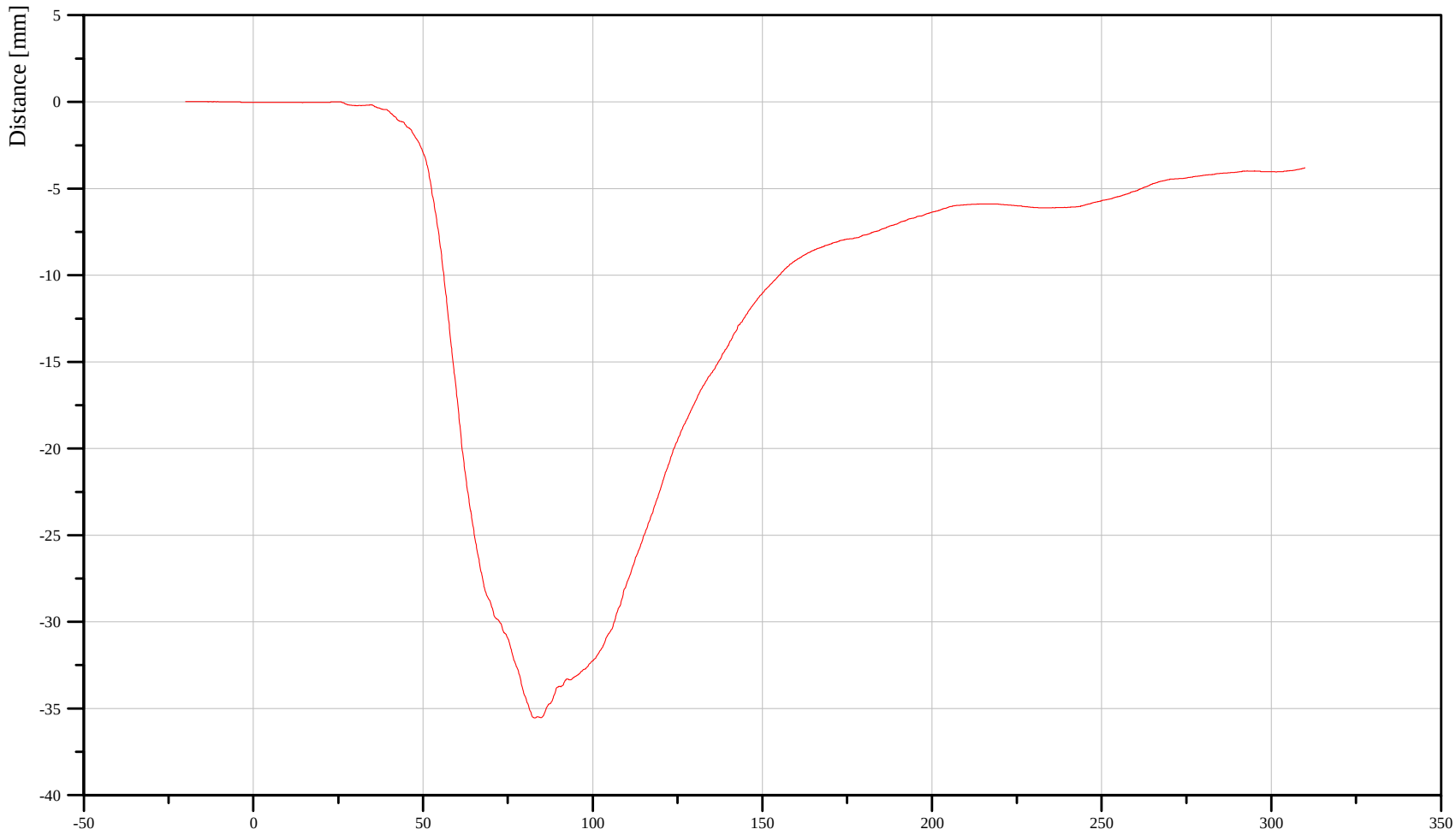
Chest Deflection X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21CHST0000H3DSXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-35.54 mm at 82.96 ms

Max. Value
0.01 mm at -18.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

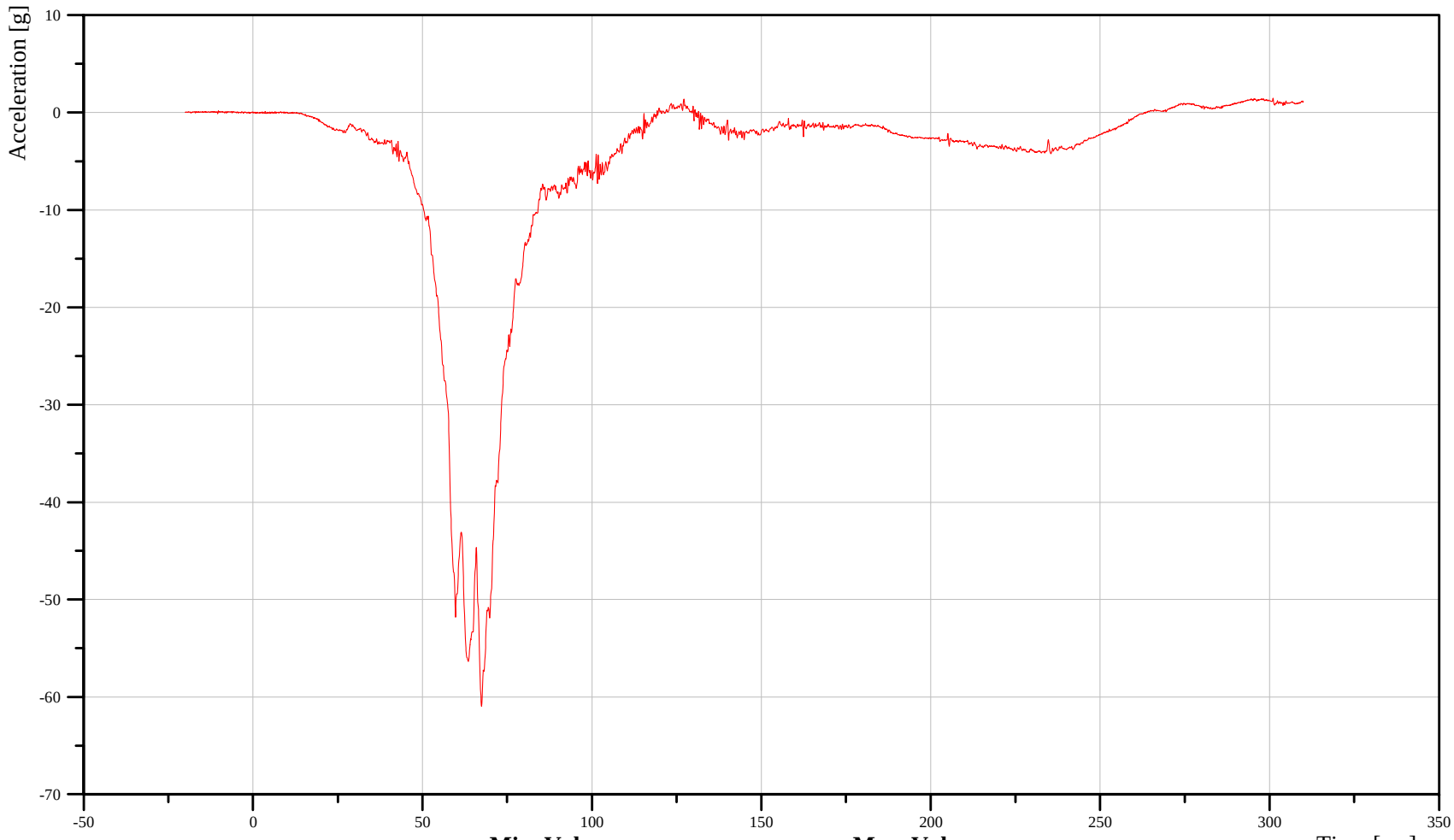
Pelvis Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21PELVCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-60.97 g at 67.44 ms

Max. Value
1.46 g at 301.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

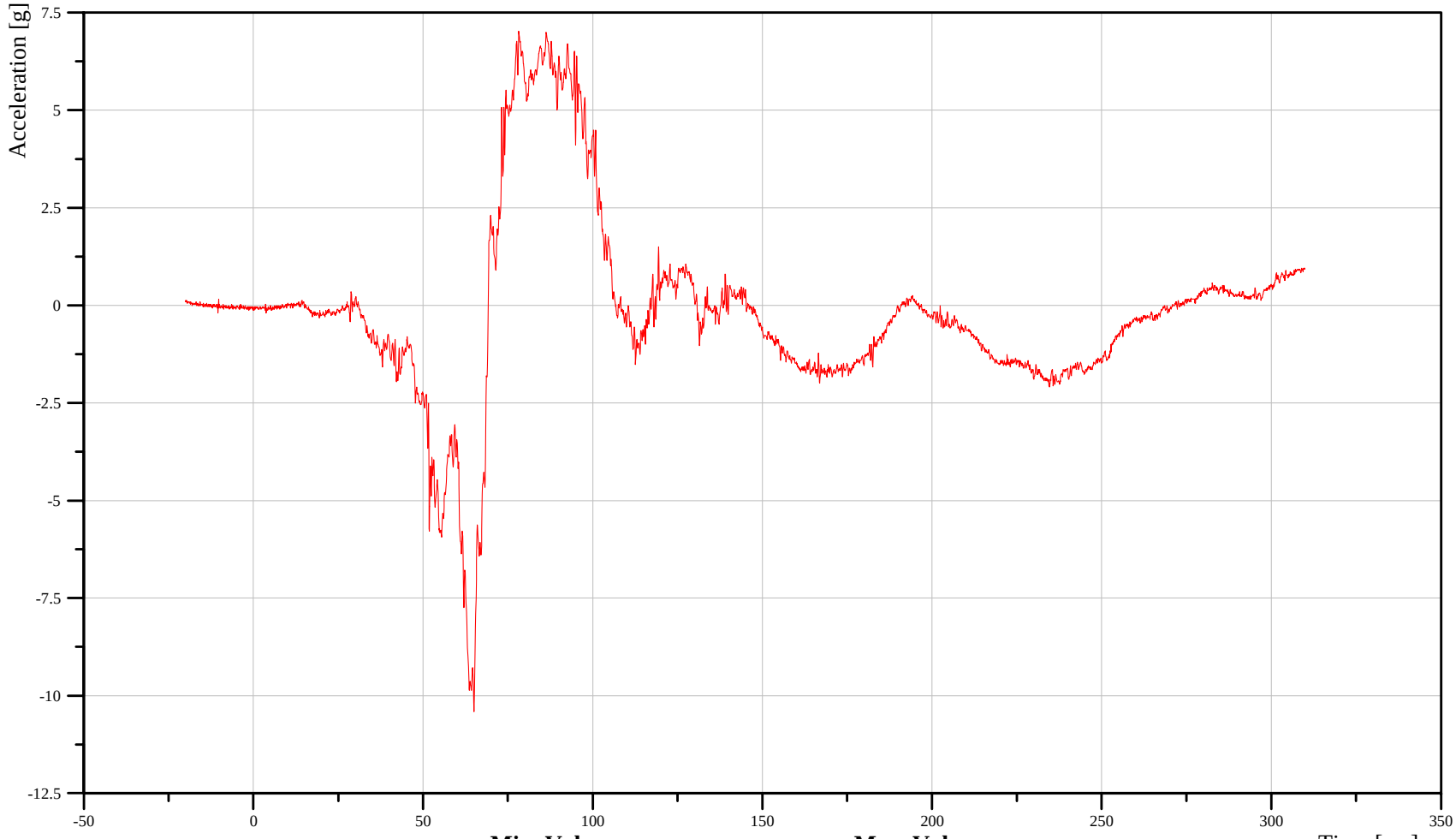
Pelvis Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21PELVCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-10.41 g at 64.96 ms

Max. Value
7.03 g at 78.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

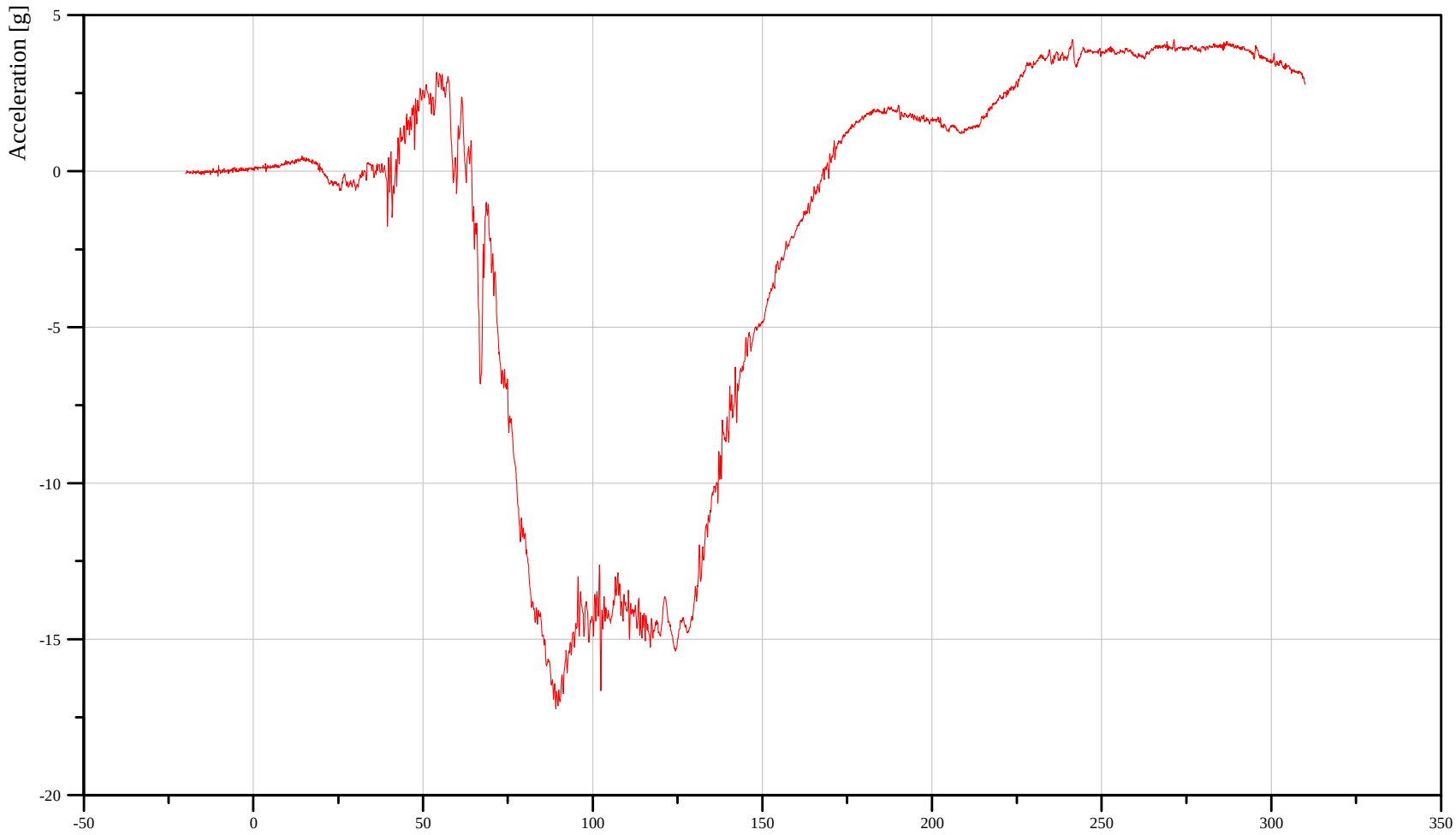
Pelvis Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21PELVCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-17.22 g at 89.12 ms

Max. Value
4.22 g at 241.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

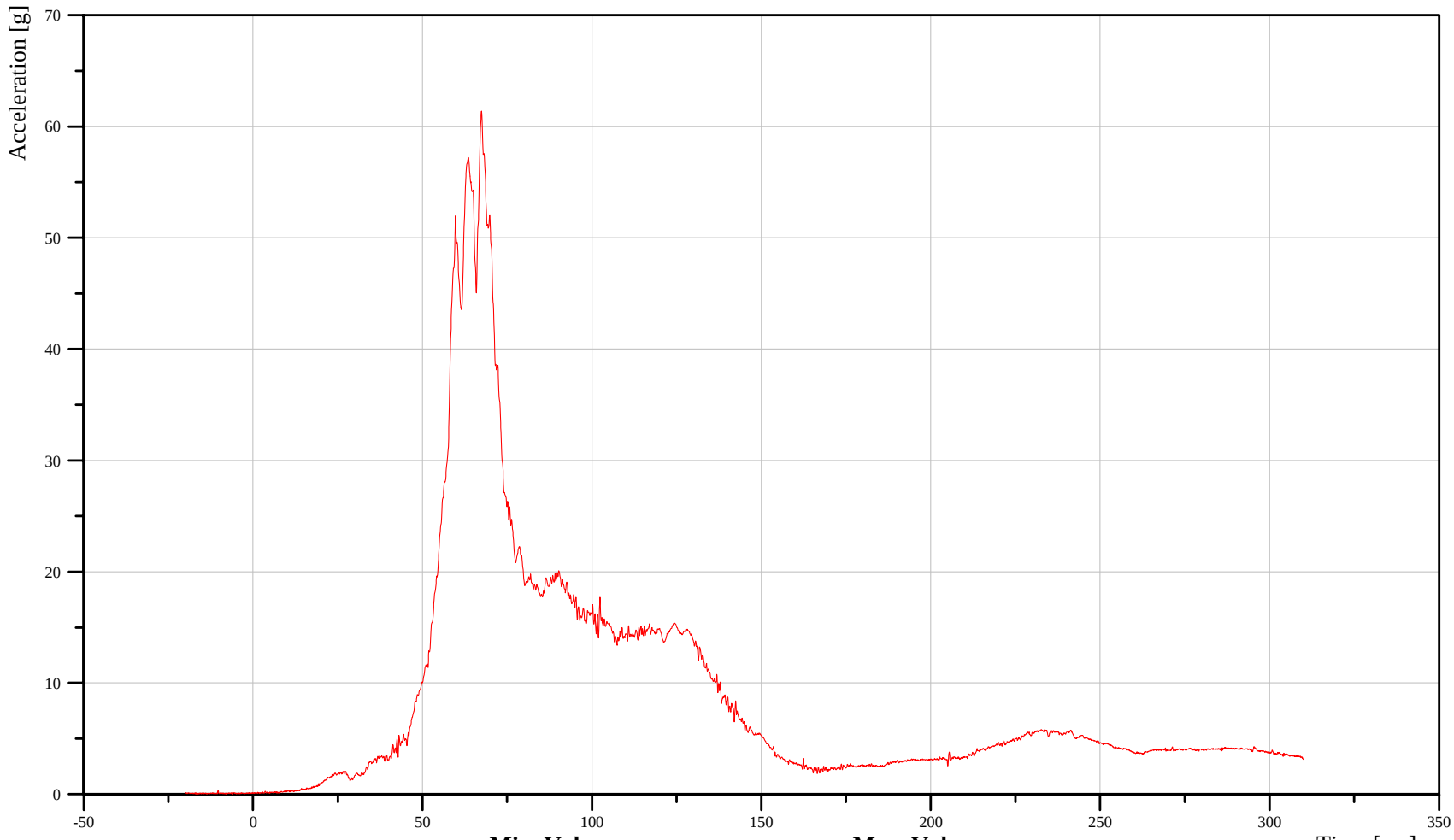
Pelvis Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21PELVCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.02 g at -16.72 ms

Max. Value
61.39 g at 67.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

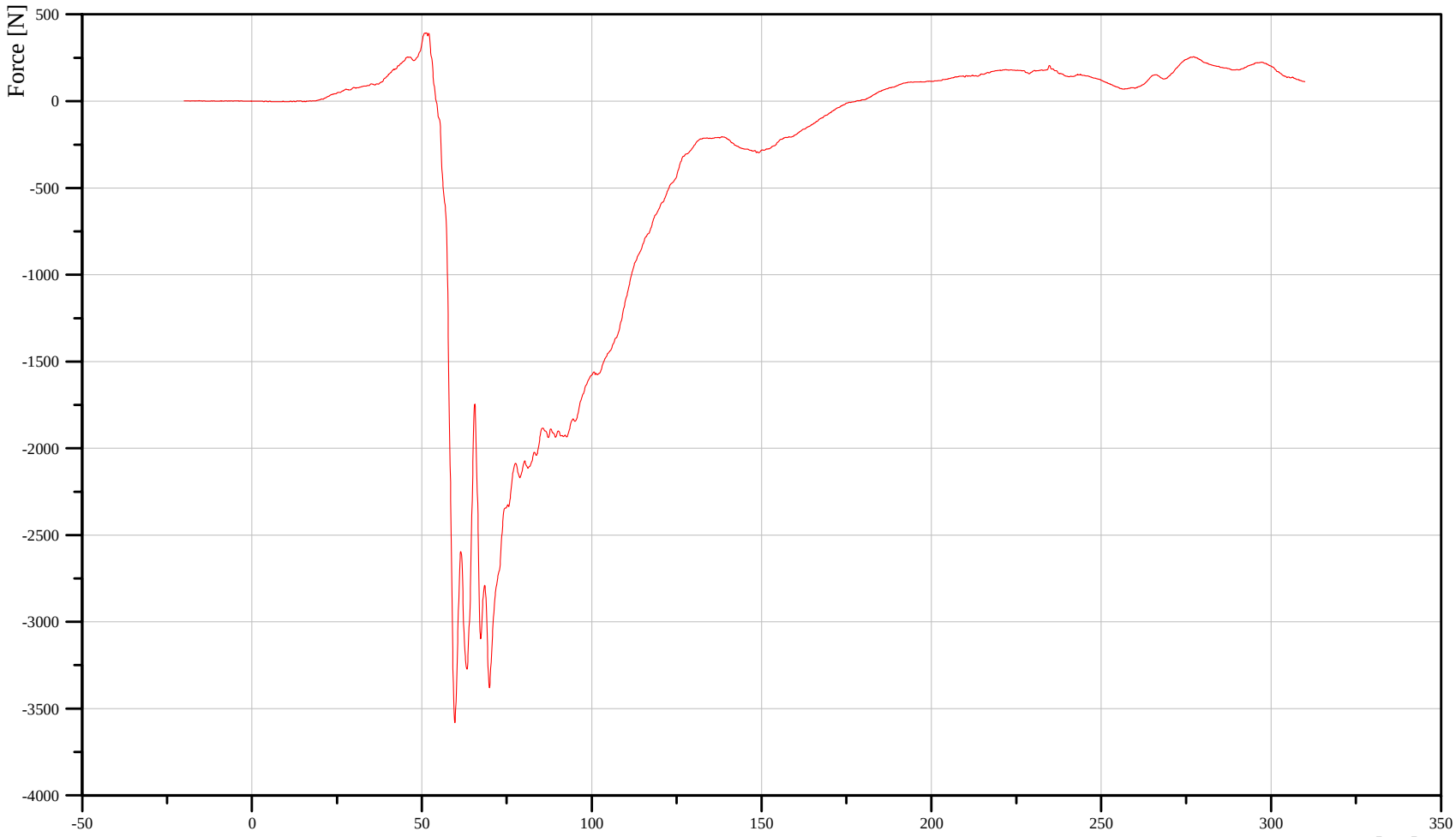
Left Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,580.33 N at 59.76 ms

Max. Value
393.21 N at 51.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

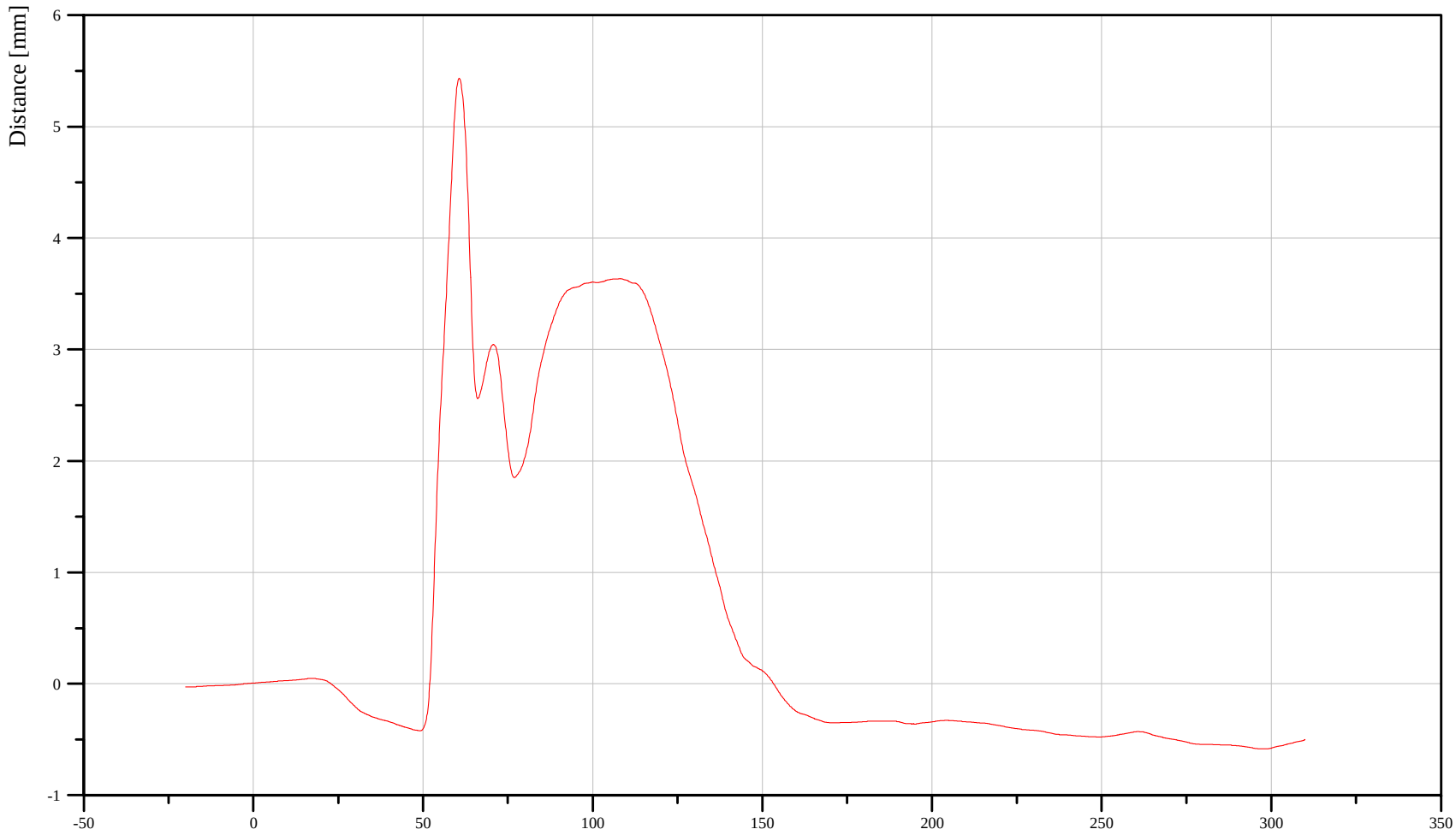
Left Knee Displacement X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.58 mm at 298.32 ms

Max. Value
5.43 mm at 60.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

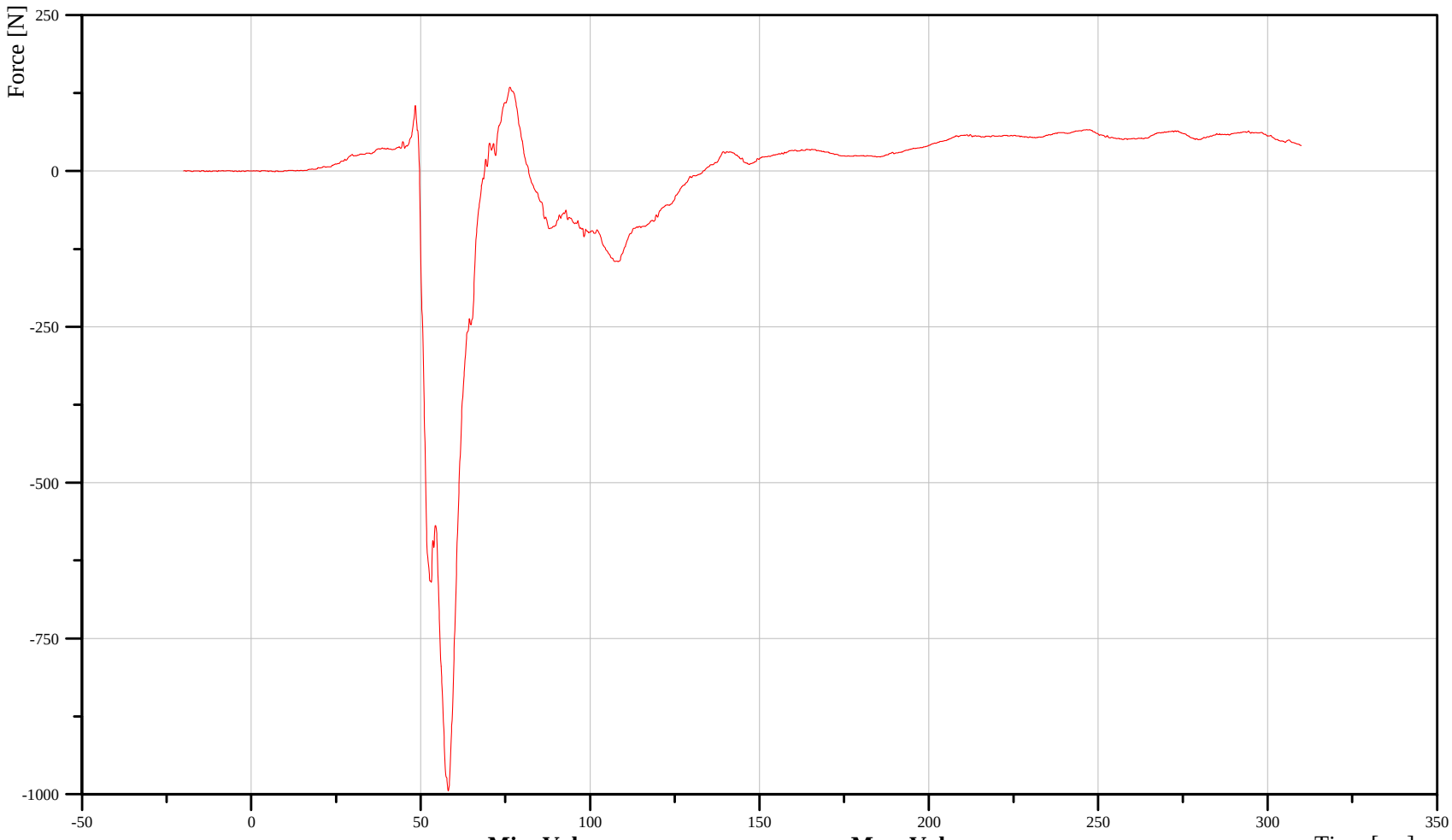
Left Upper Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILULXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-994.55 N at 58.16 ms

Max. Value
134.62 N at 76.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

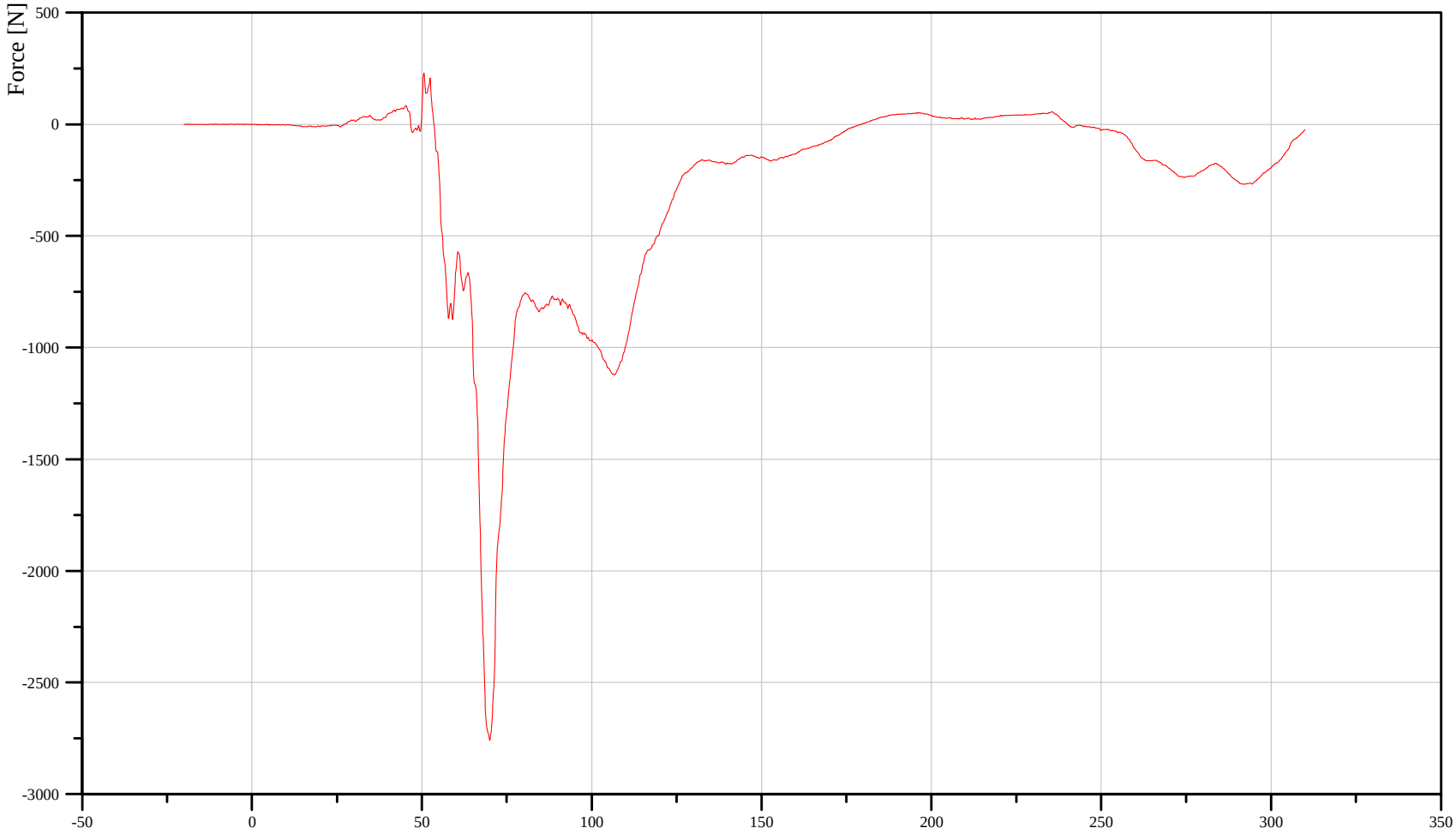
Left Upper Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILULXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2,758.20 N at 70.00 ms

Max. Value
229.91 N at 50.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

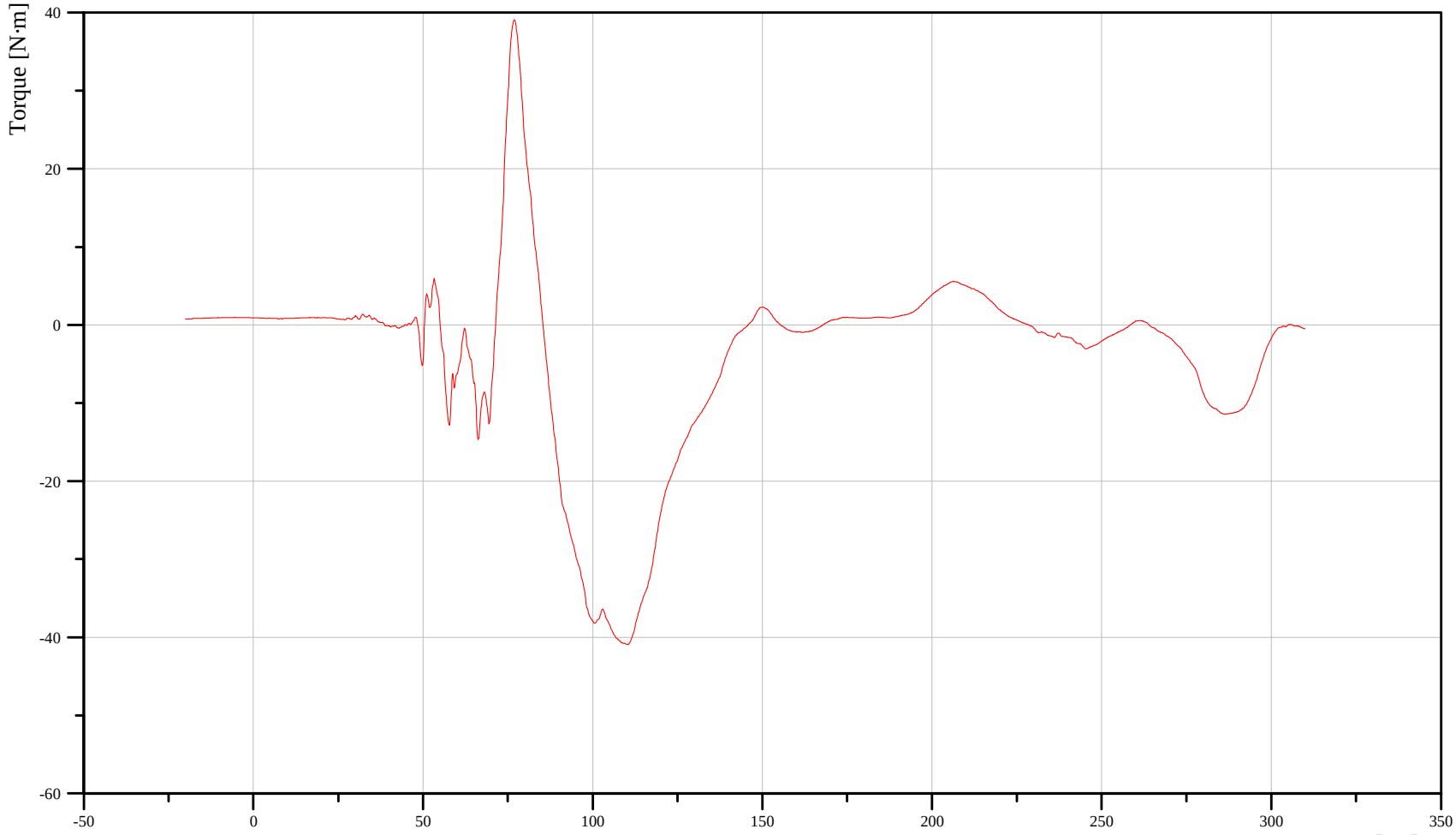
Left Upper Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILULXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-40.92 N·m at 110.32 ms

Max. Value
39.09 N·m at 76.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

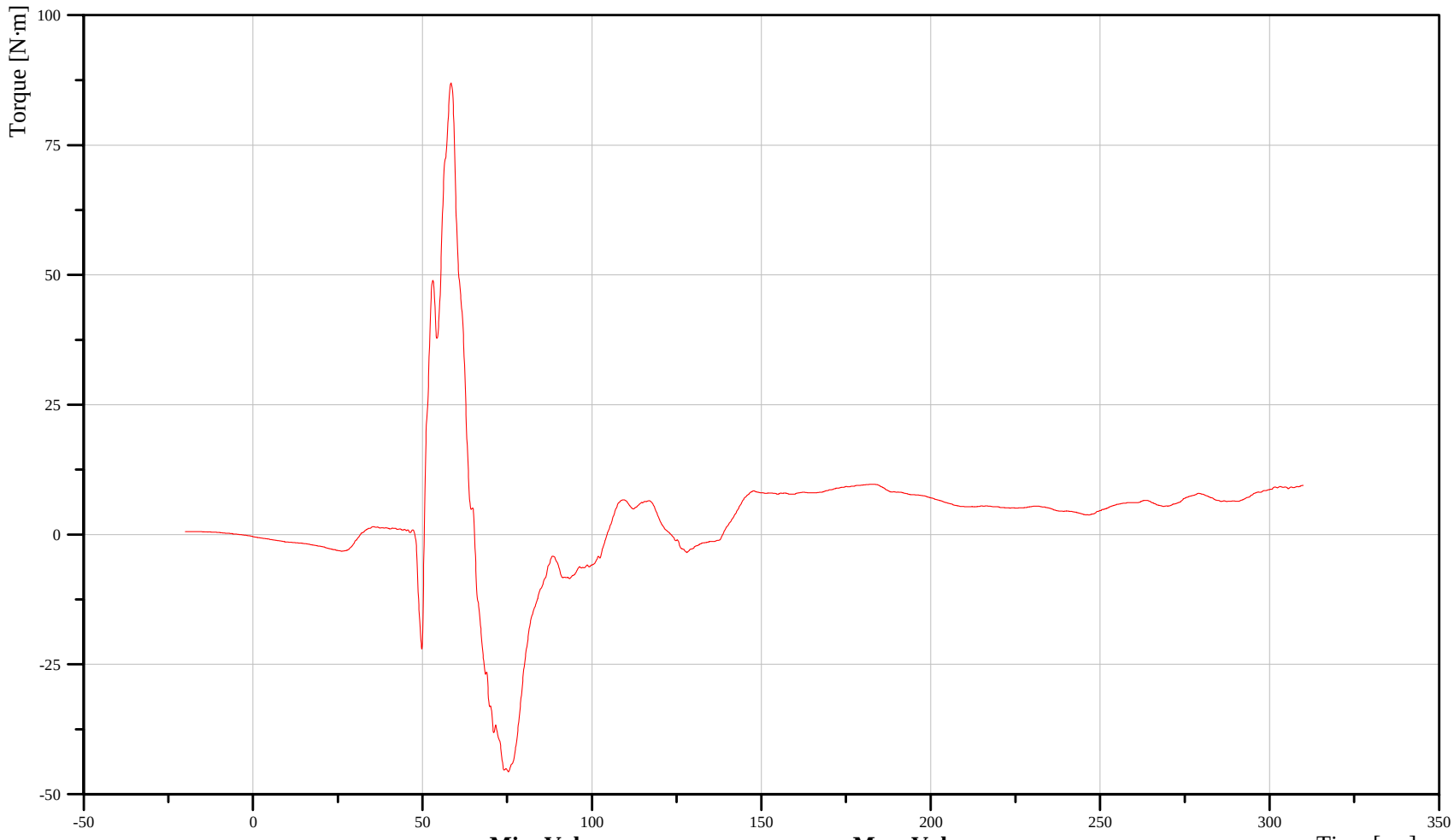
Left Upper Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILULXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-45.65 N·m at 75.36 ms

Max. Value
86.92 N·m at 58.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

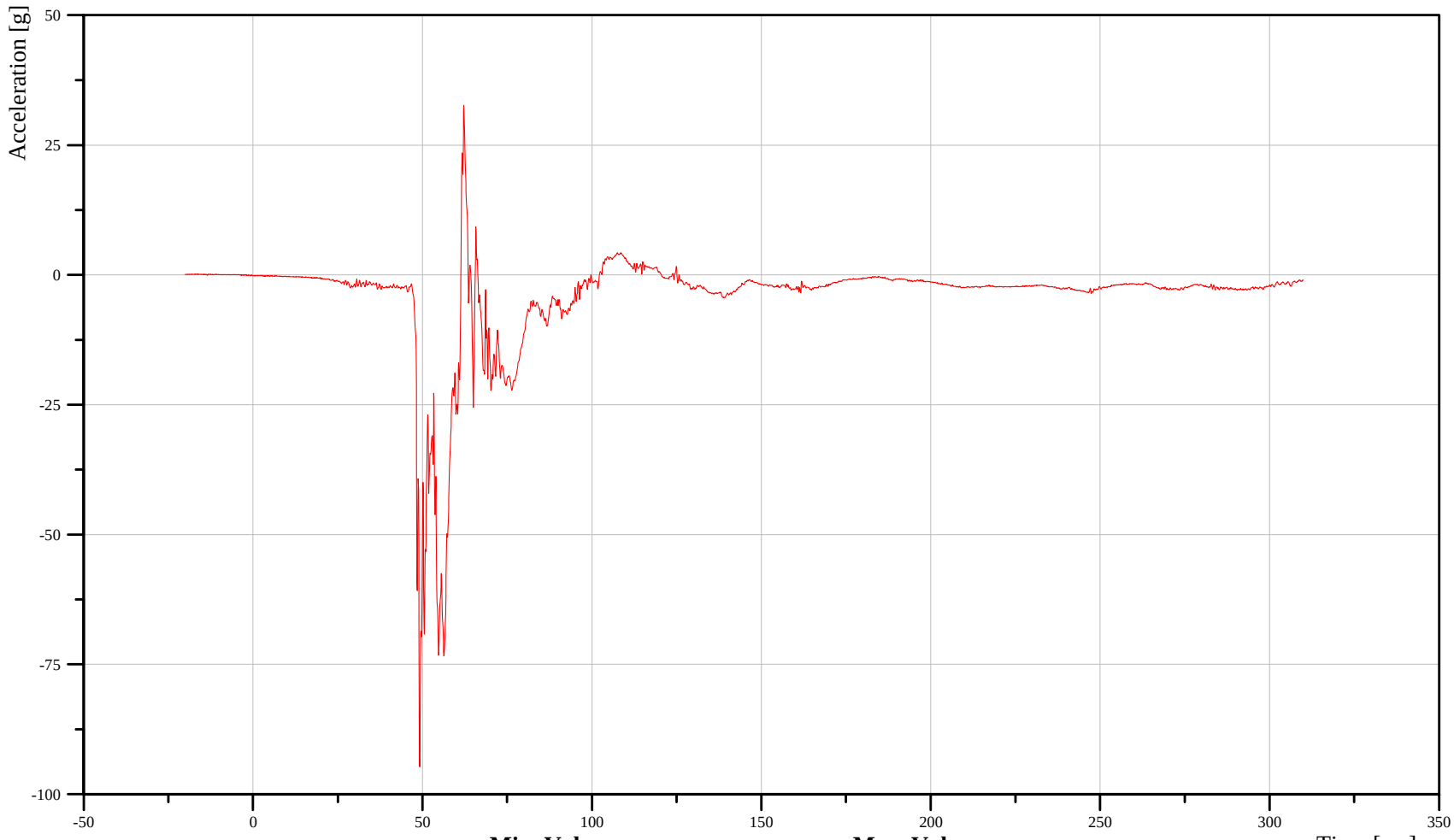
Left Tibia Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-94.72 g at 49.20 ms

Max. Value
32.65 g at 62.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

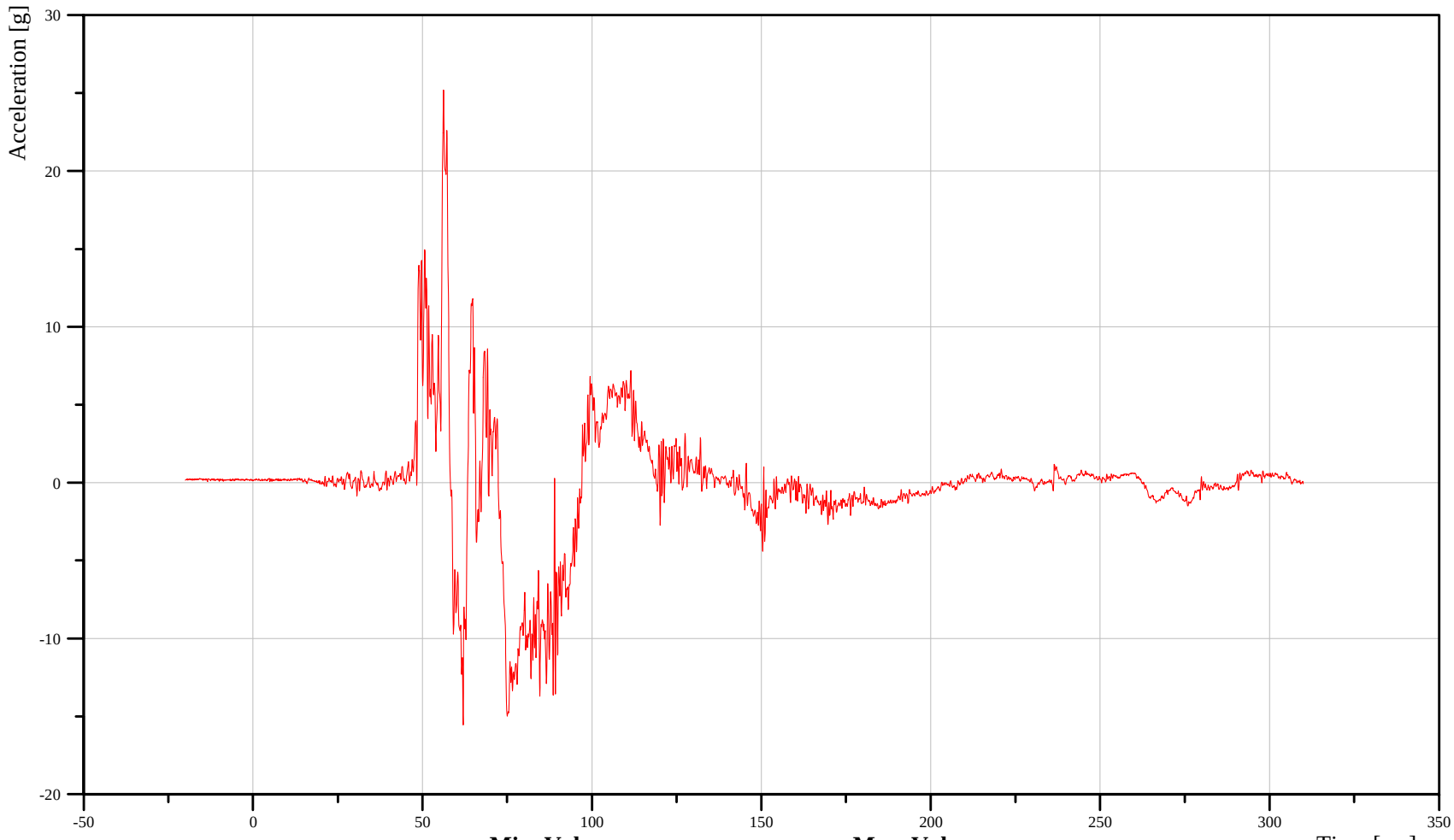
Left Tibia Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-15.55 g at 62.00 ms

Max. Value
25.19 g at 56.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

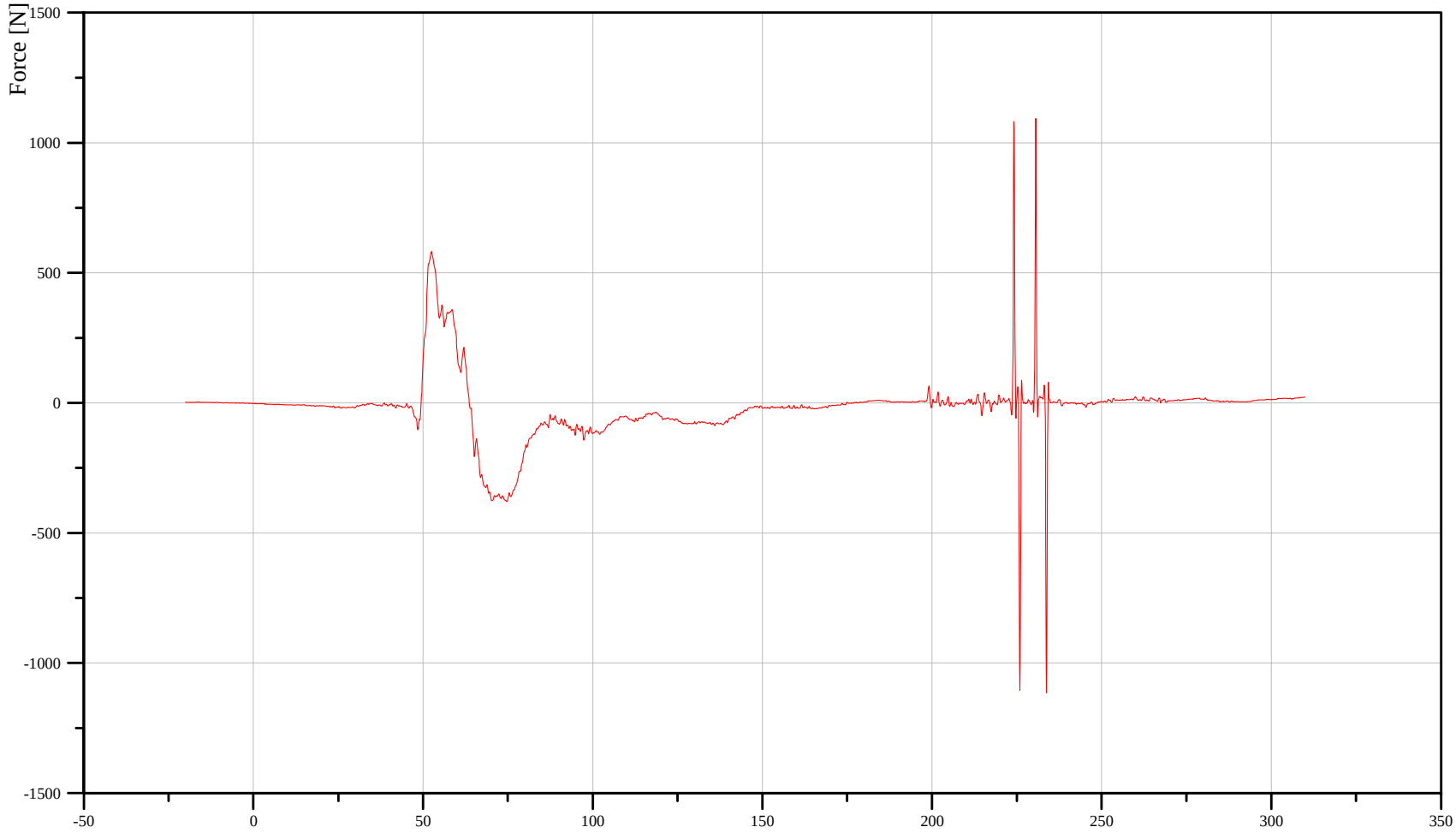
Left Lower Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILLLXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value	**Max. Value**
-1,113.33 N at 233.76 ms	1,093.40 N at 230.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

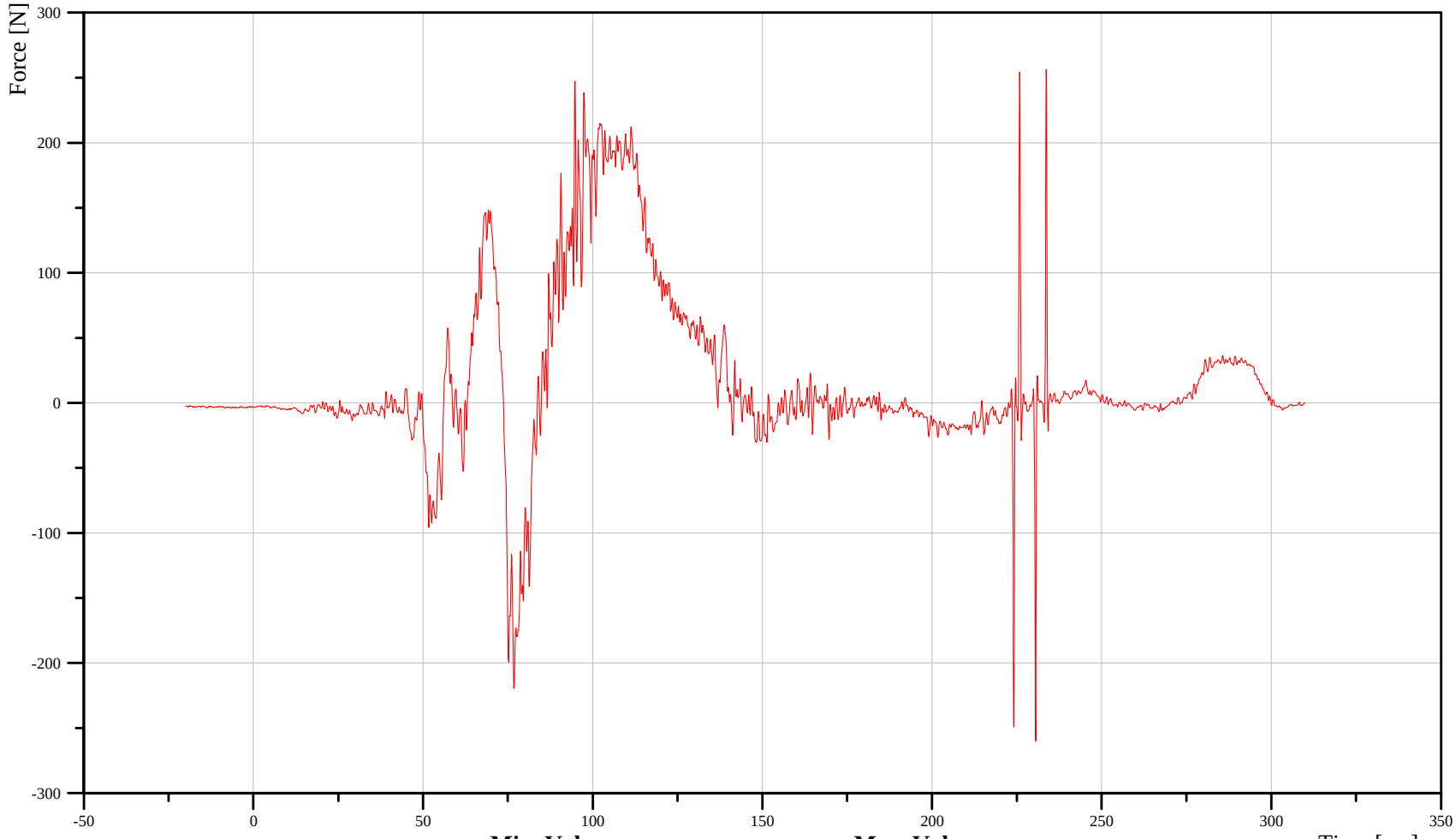
Left Lower Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILLLXH3FOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-259.82 N at 230.56 ms

Max. Value
256.26 N at 233.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

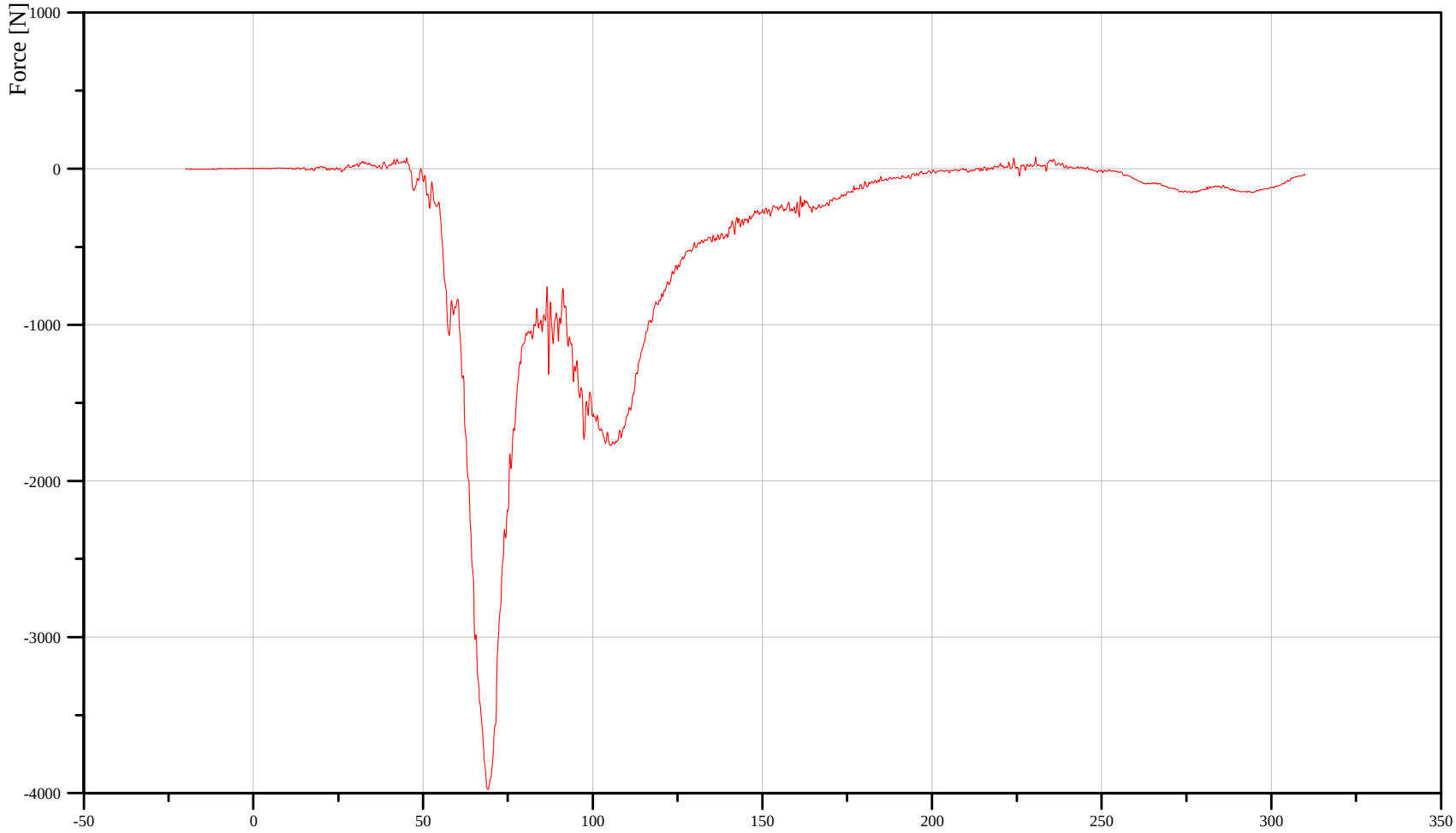
Left Lower Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILLLXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,975.52 N at 69.20 ms

Max. Value
73.16 N at 230.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

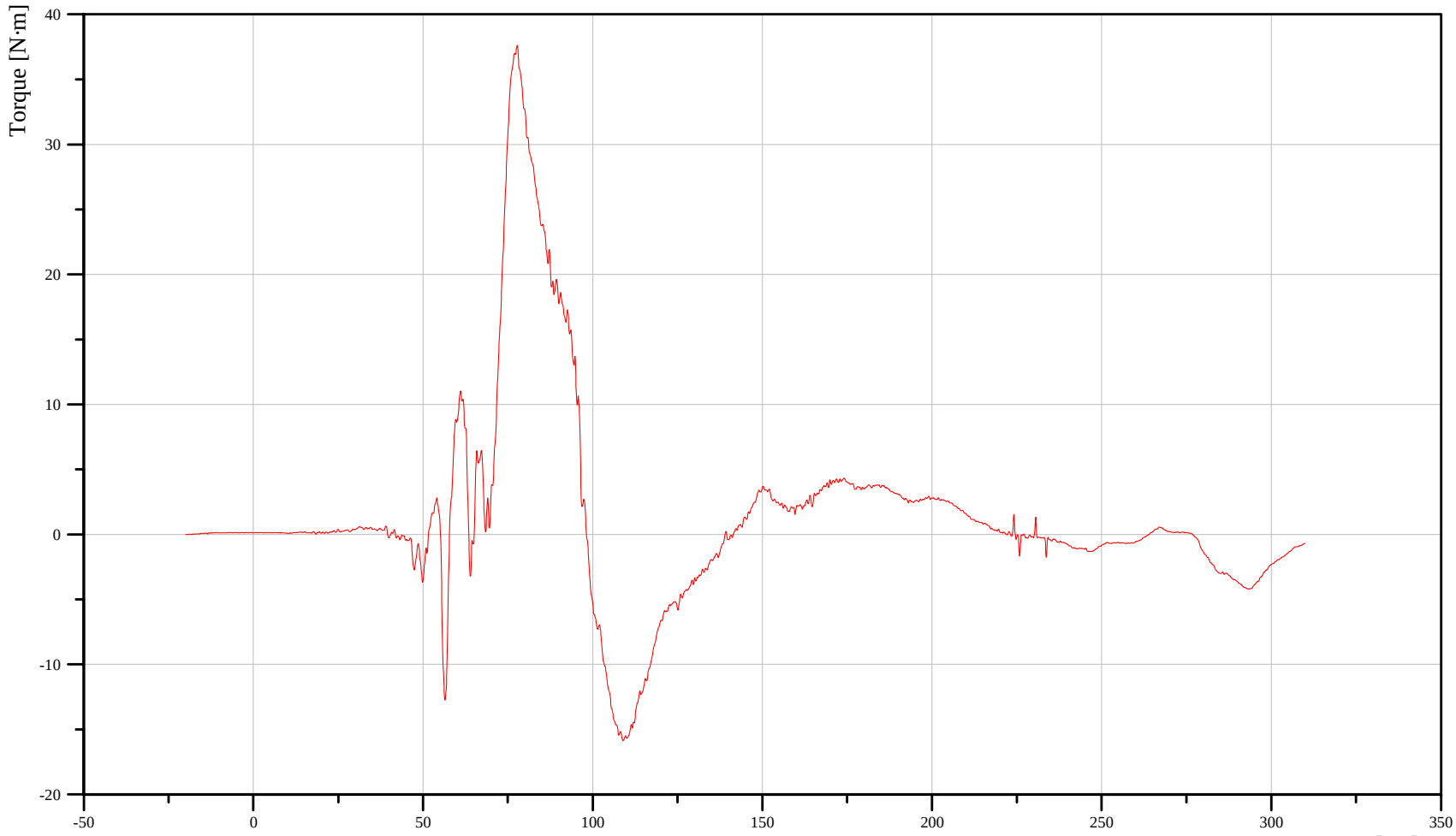
Left Lower Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILLLXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-15.85 N·m at 108.88 ms

Max. Value
37.63 N·m at 77.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

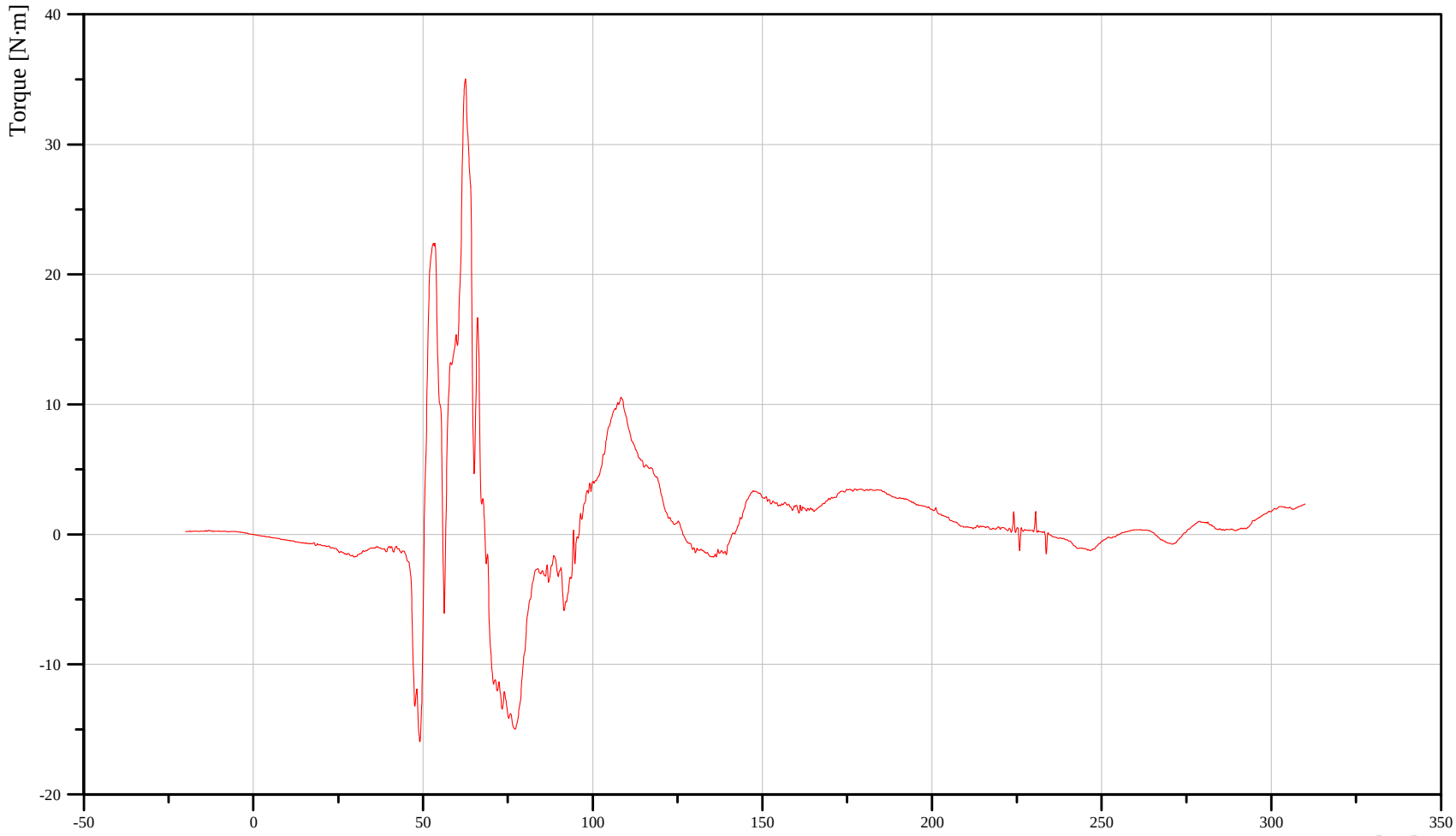
Left Lower Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBILLLXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-15.96 N·m at 49.04 ms

Max. Value
35.03 N·m at 62.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

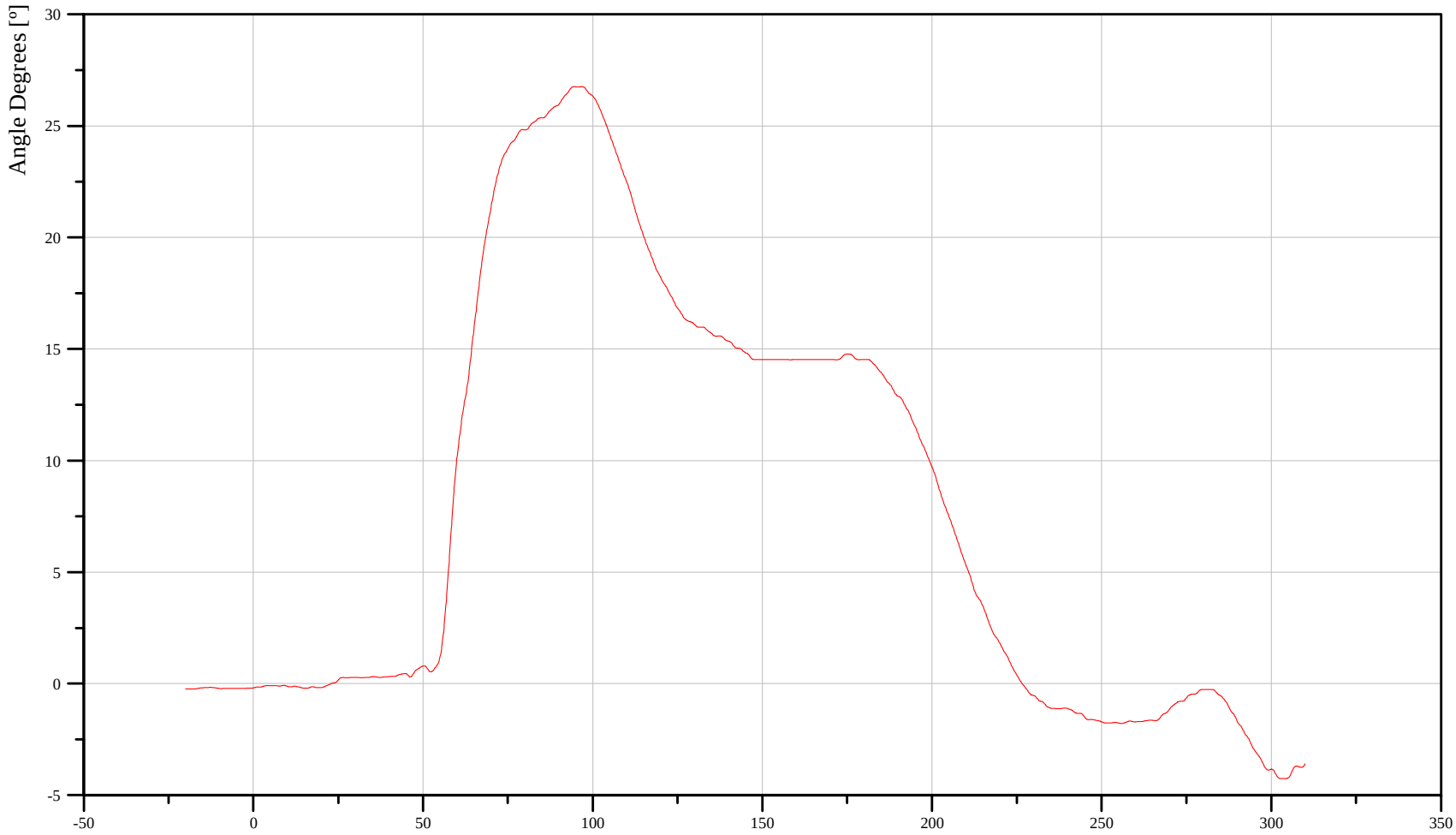
Left Foot Angular Dis. X LX104X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ANXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-4.26 ° at 303.12 ms

Max. Value
26.76 ° at 96.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

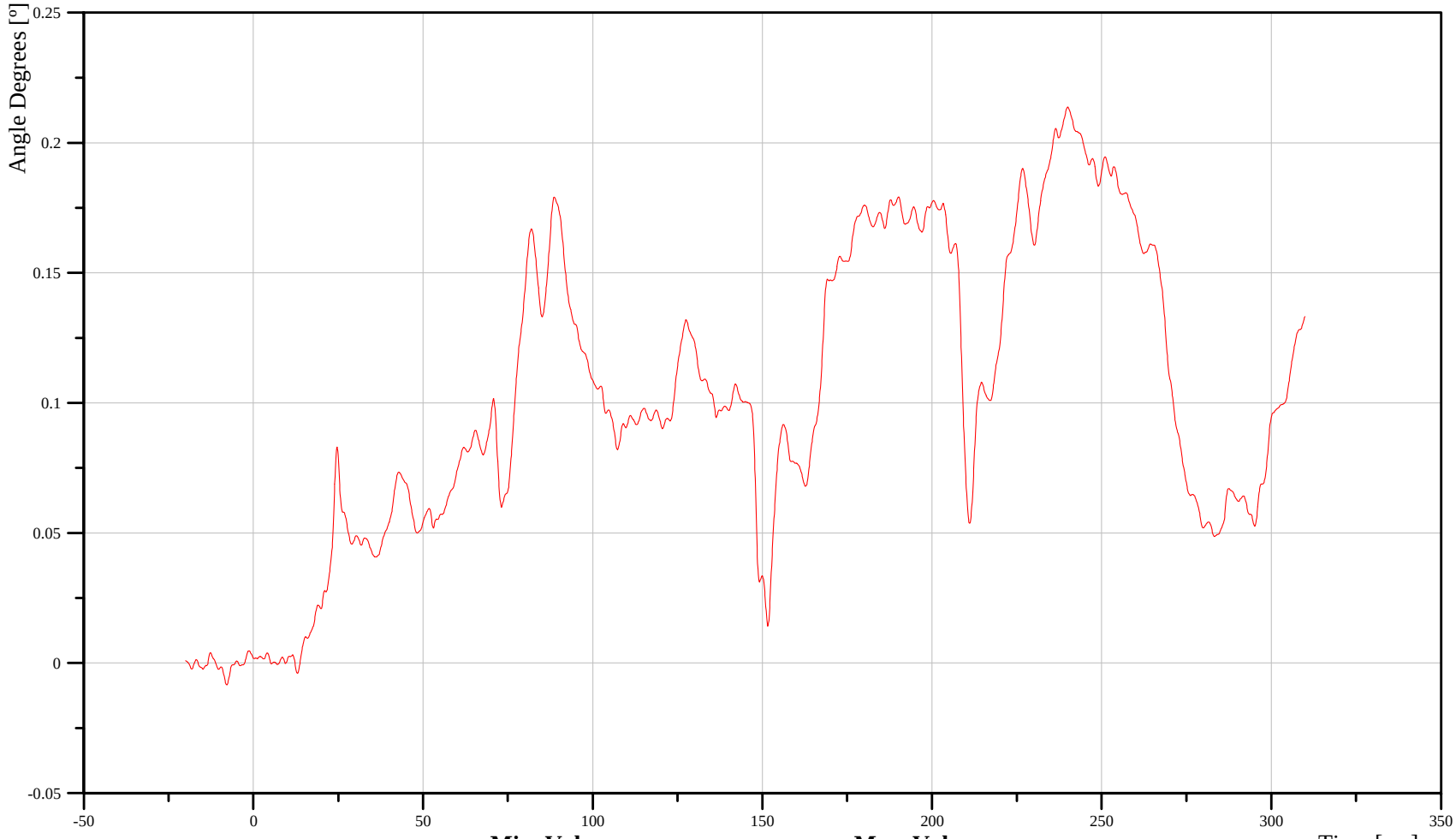
Left Foot Angular Dis. Y LX104Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ANYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.01 ° at -7.84 ms

Max. Value
0.21 ° at 240.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

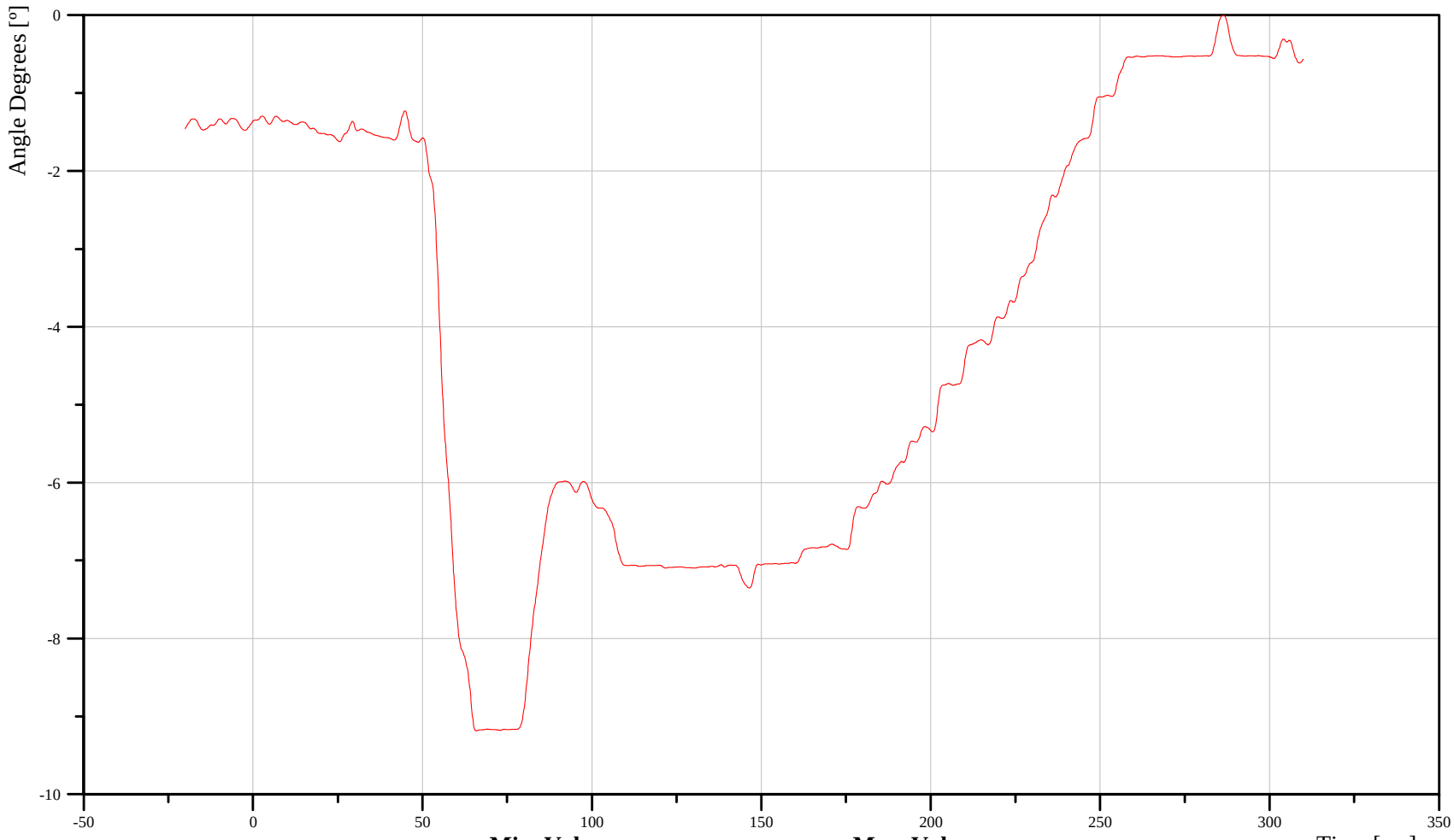
Left Foot Angular Dis. Z LX104Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ANZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-9.19 ° at 65.84 ms

Max. Value
-0.01 ° at 286.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

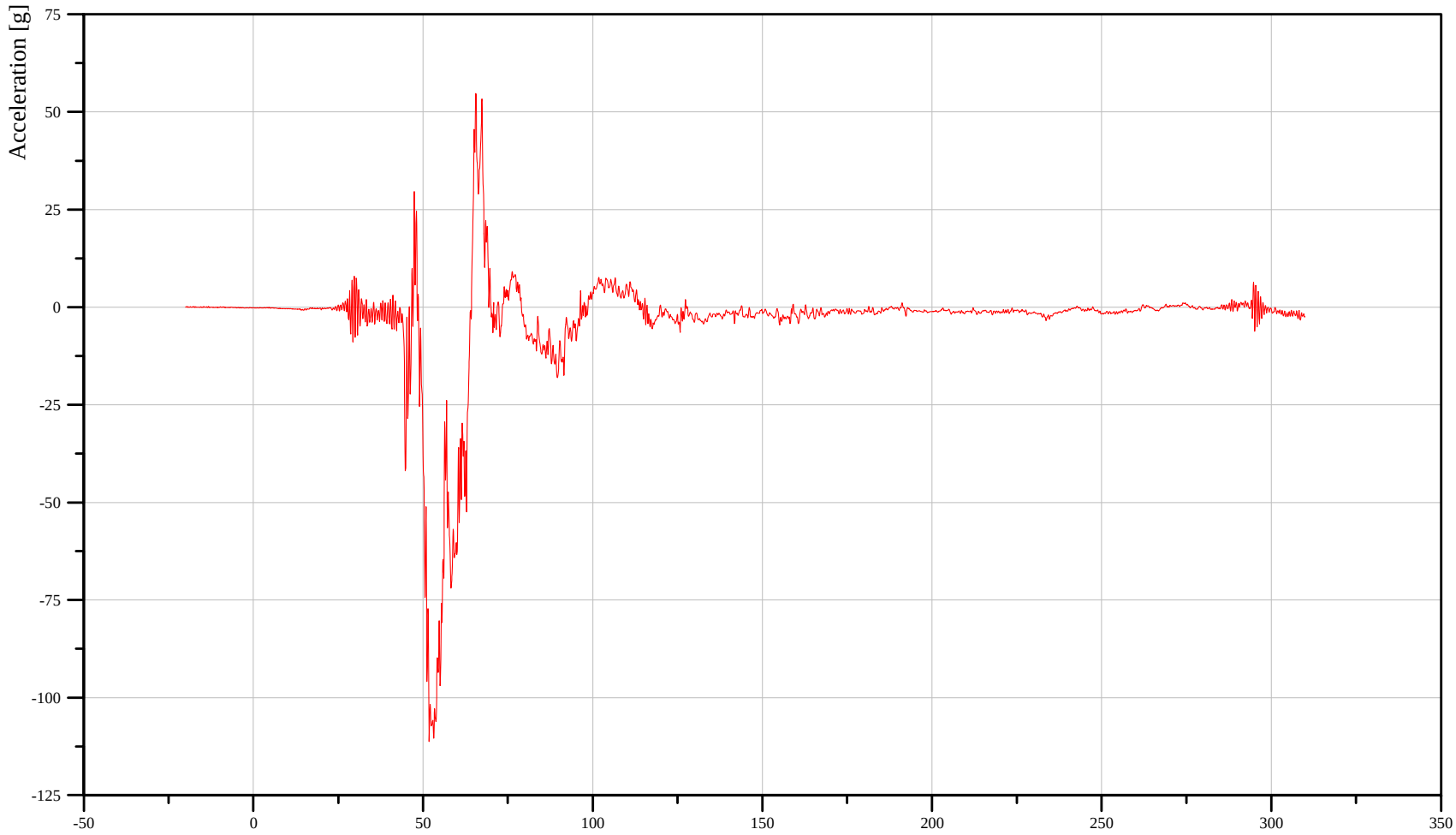
Left Foot Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-111.24 g at 51.84 ms

Max. Value
54.76 g at 65.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

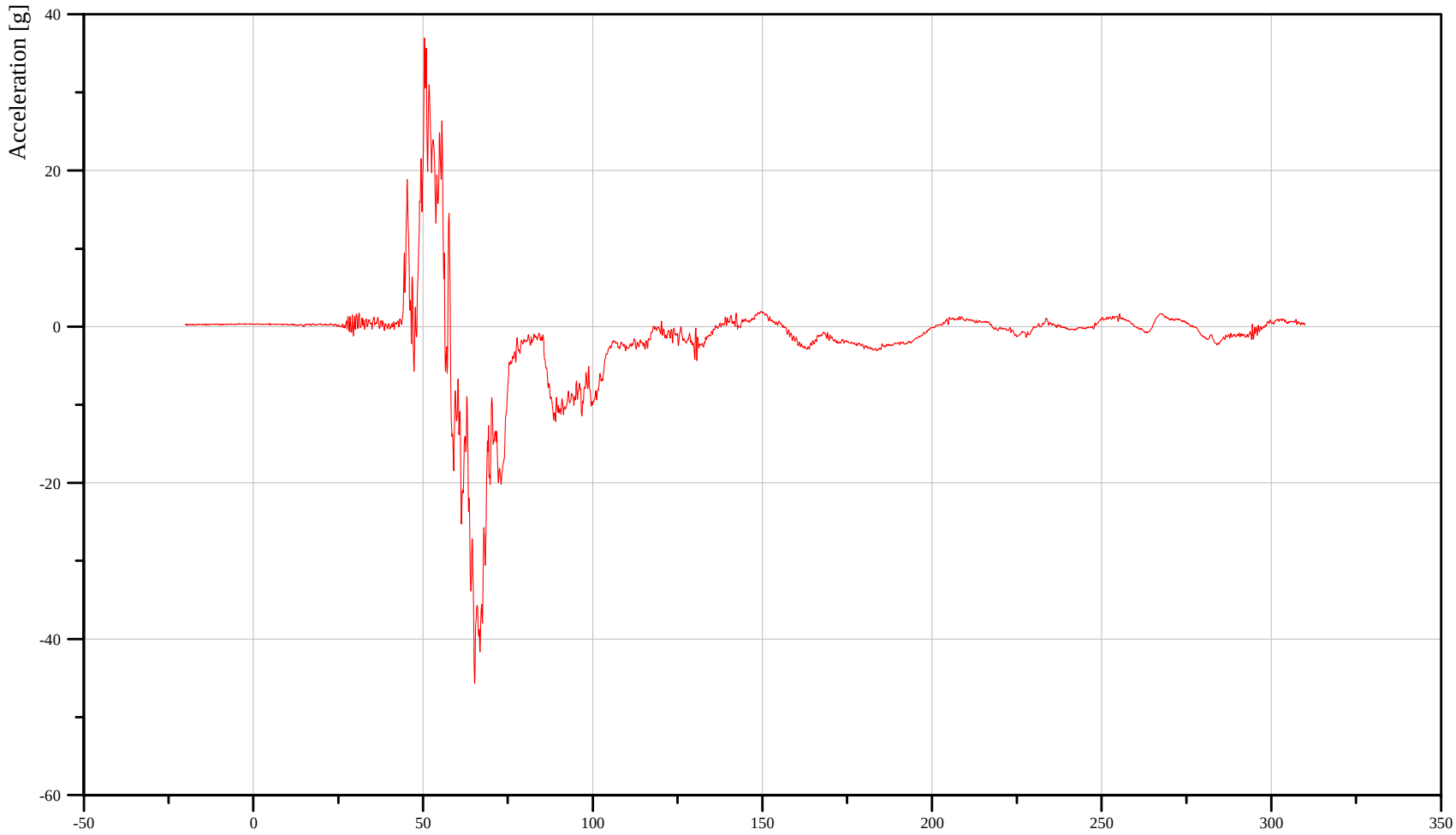
Left Foot Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-45.70 g at 65.28 ms

Max. Value
36.99 g at 50.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

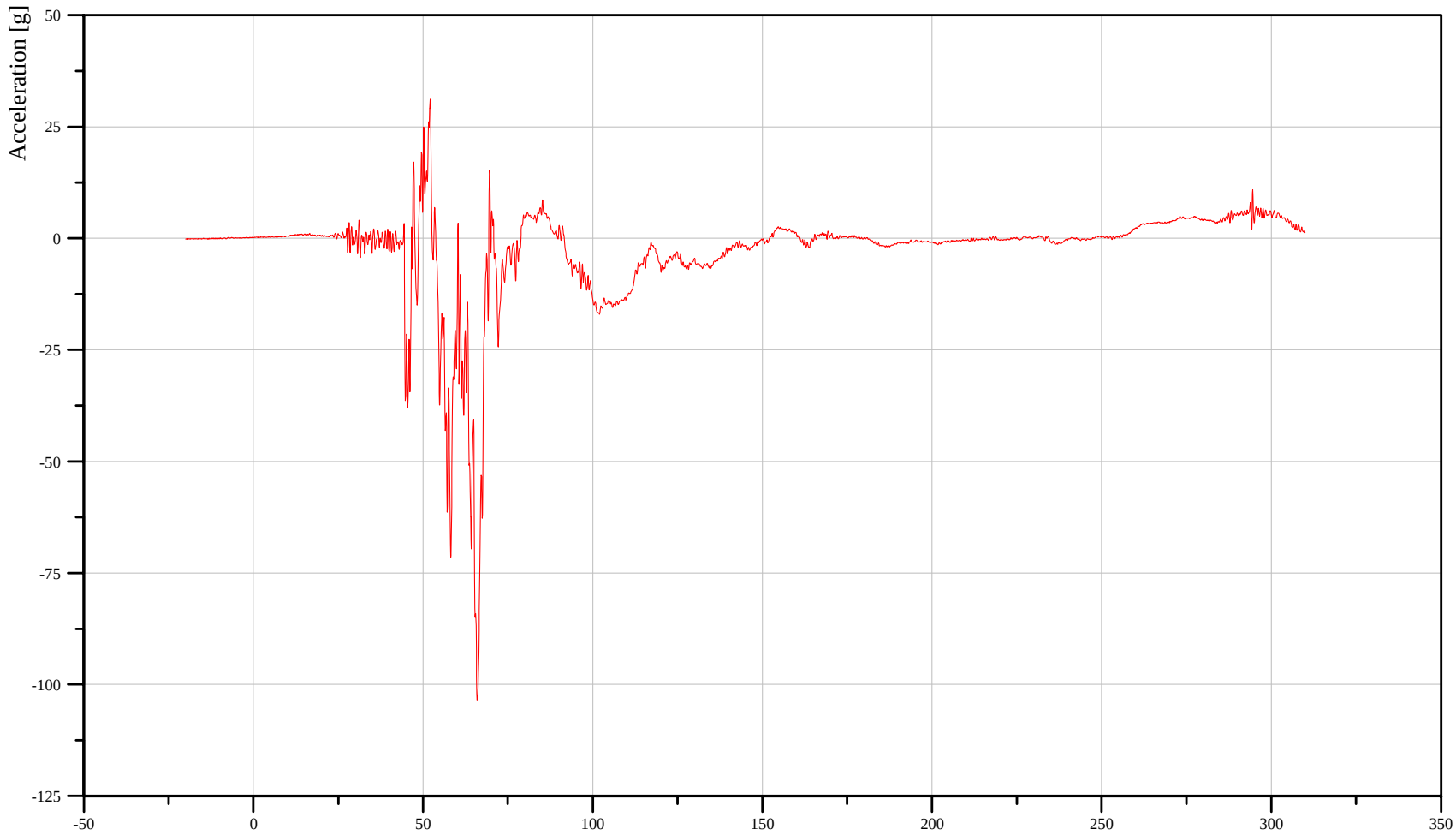
Left Foot Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-103.49 g at 65.92 ms

Max. Value
31.12 g at 52.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

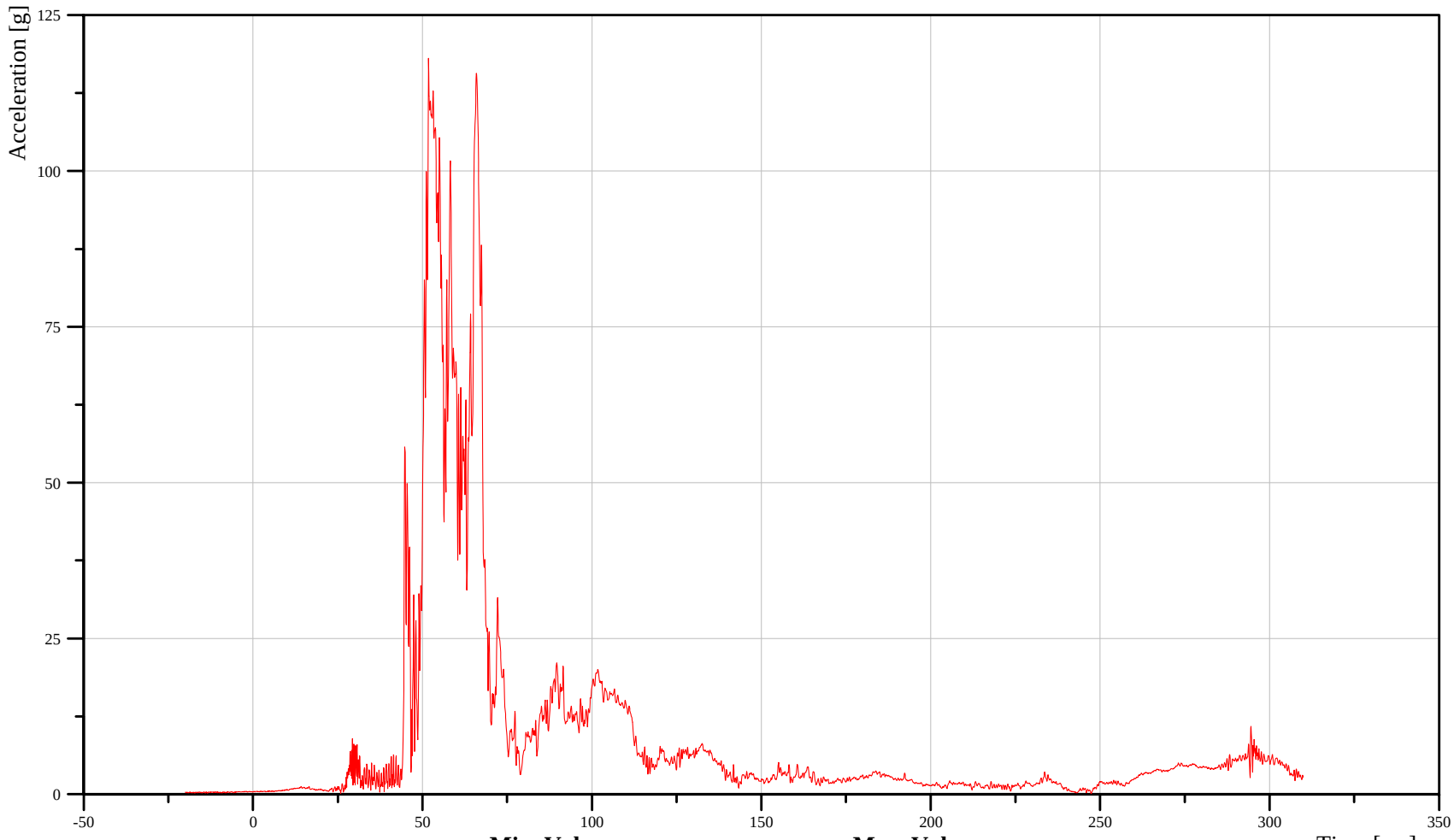
Left Foot Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.11 g at 247.28 ms

Max. Value
118.10 g at 51.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

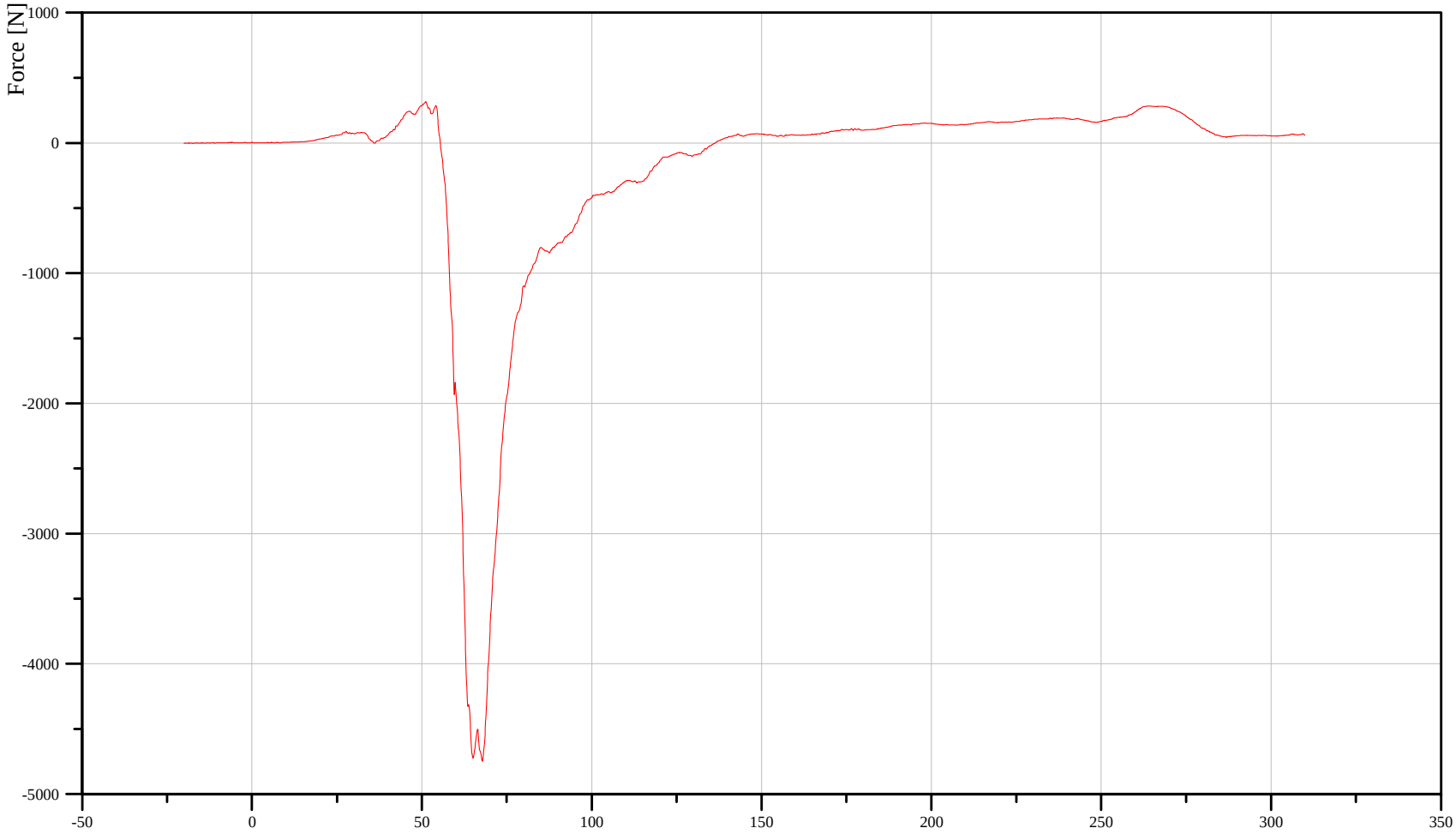
Right Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-4,746.91 N at 67.84 ms

Max. Value
315.22 N at 51.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

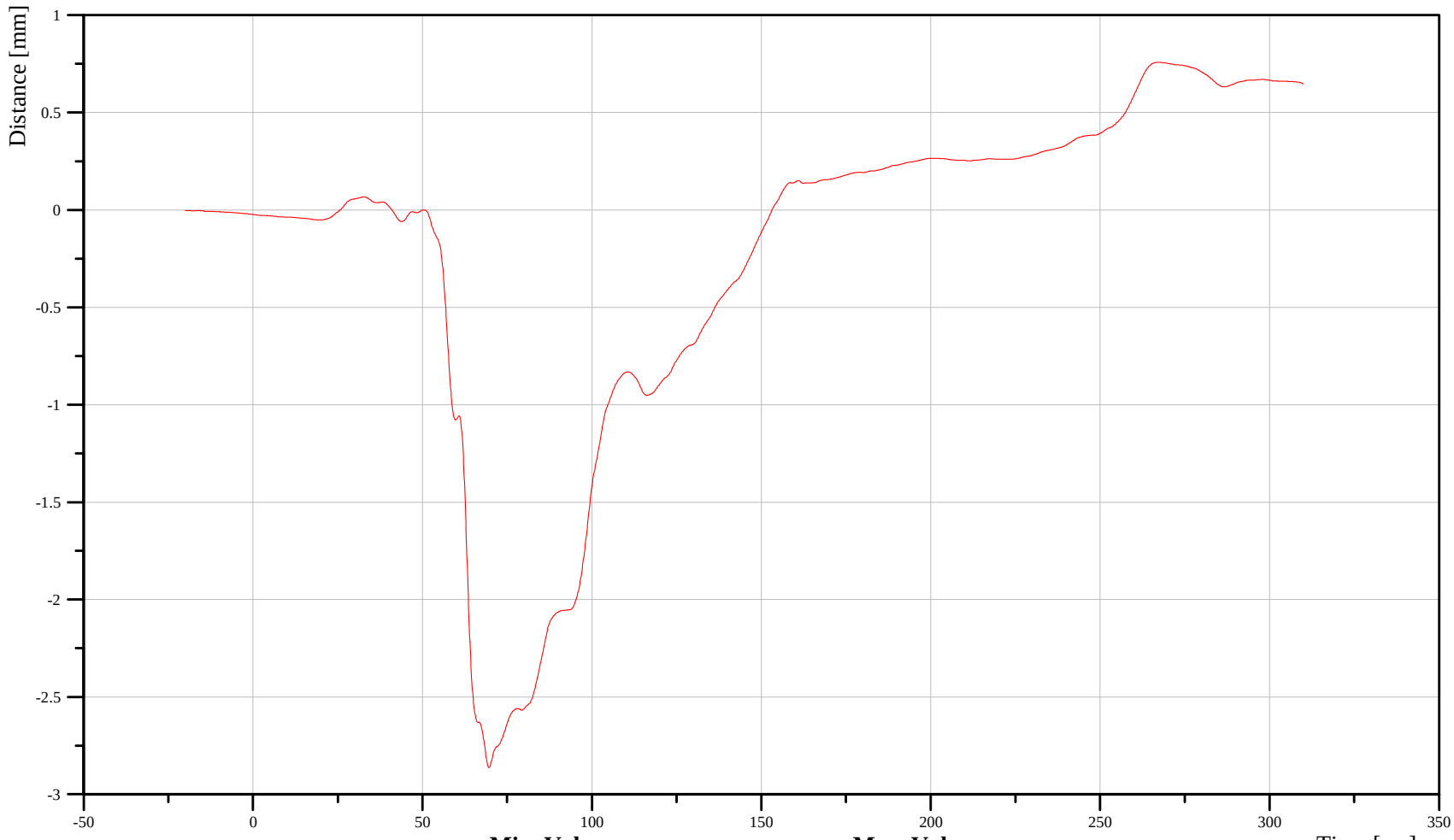
Right Knee Displacement X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-2.86 mm at 69.60 ms

Max. Value
0.76 mm at 267.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

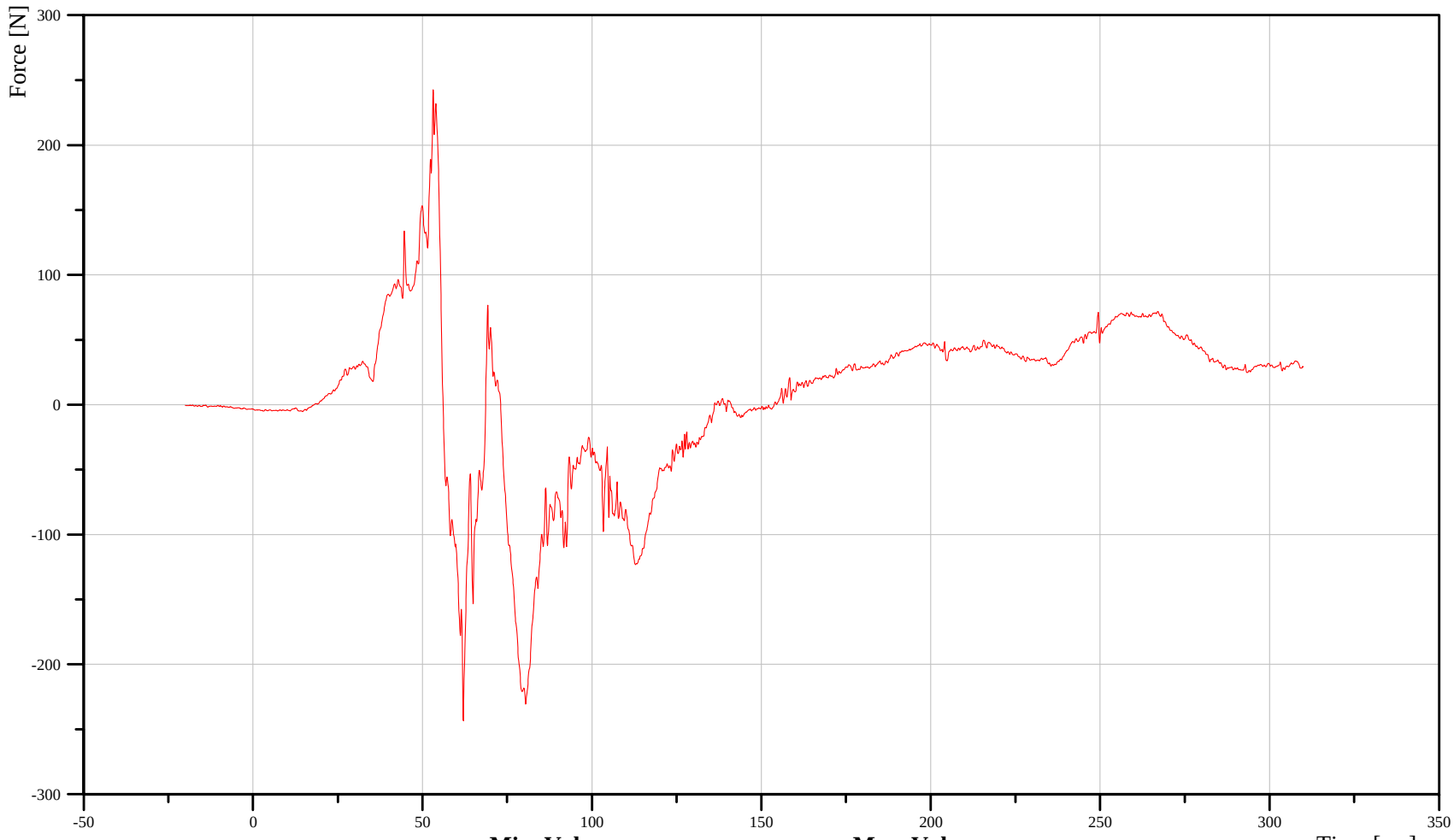
Right Upper Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRULXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-243.30 N at 62.08 ms

Max. Value
242.68 N at 53.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

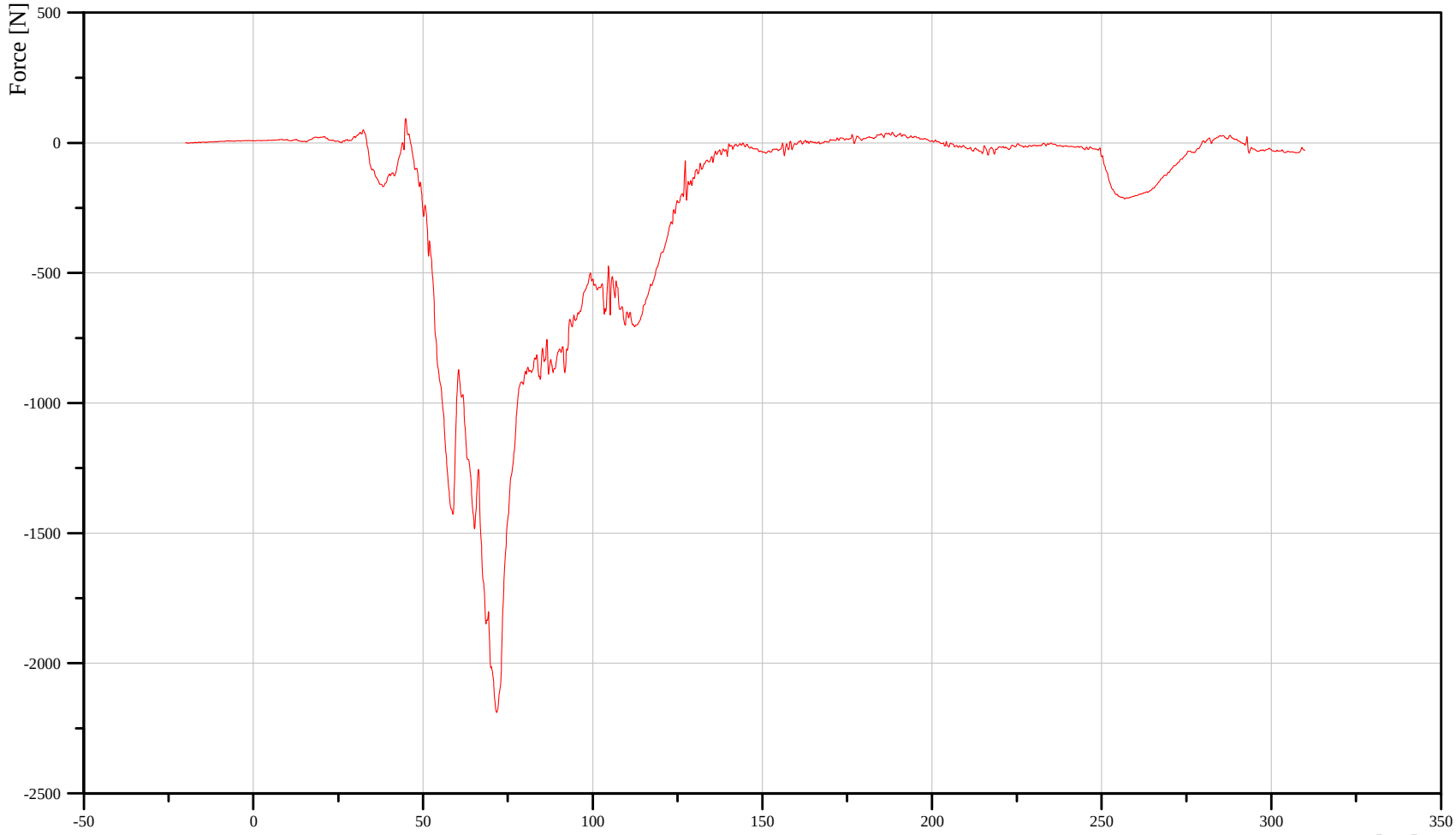
Right Upper Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRULXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2,188.83 N at 71.68 ms

Max. Value
93.72 N at 44.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

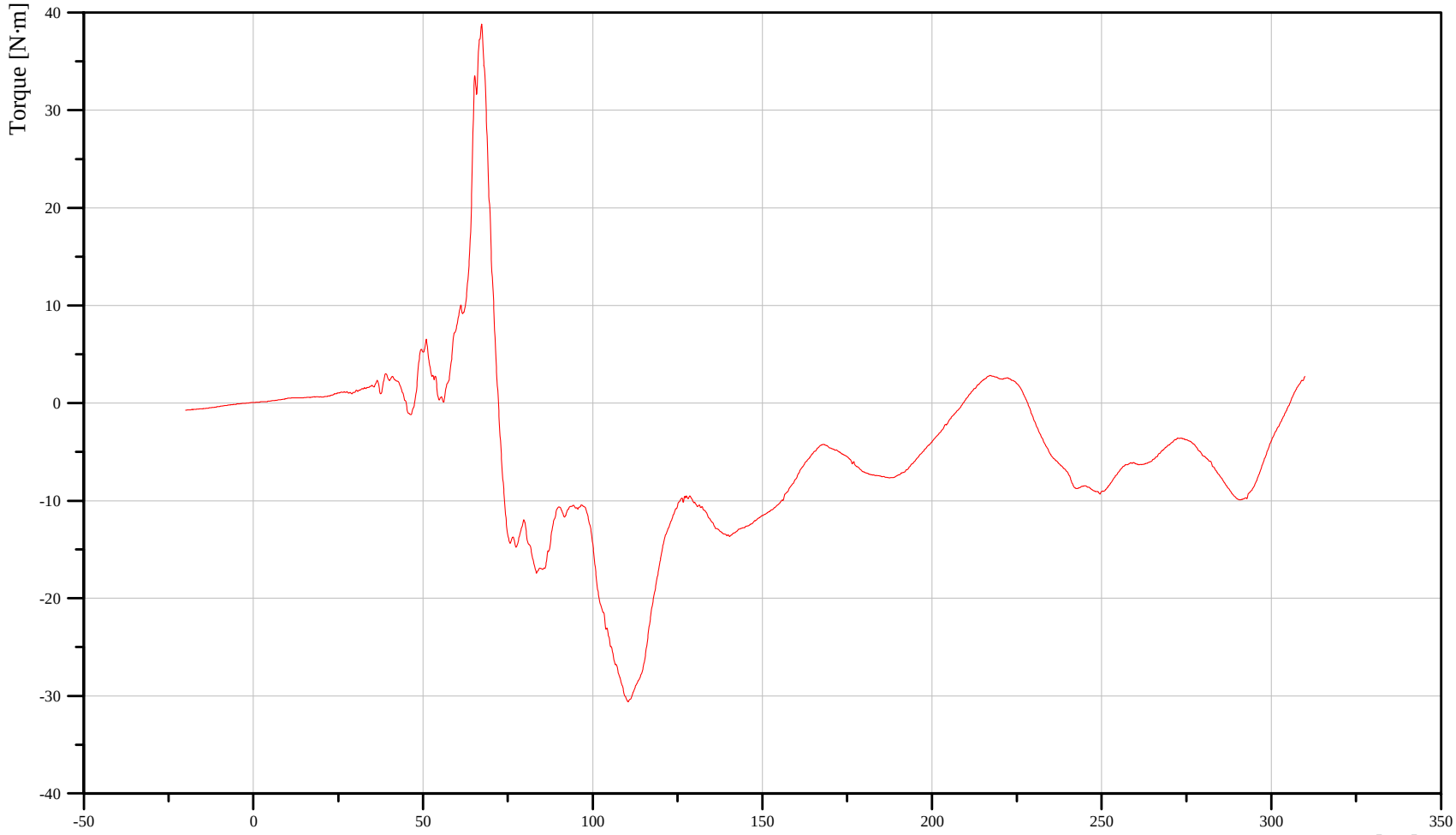
Right Upper Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRULXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-30.59 N·m at 110.40 ms

Max. Value
38.83 N·m at 67.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

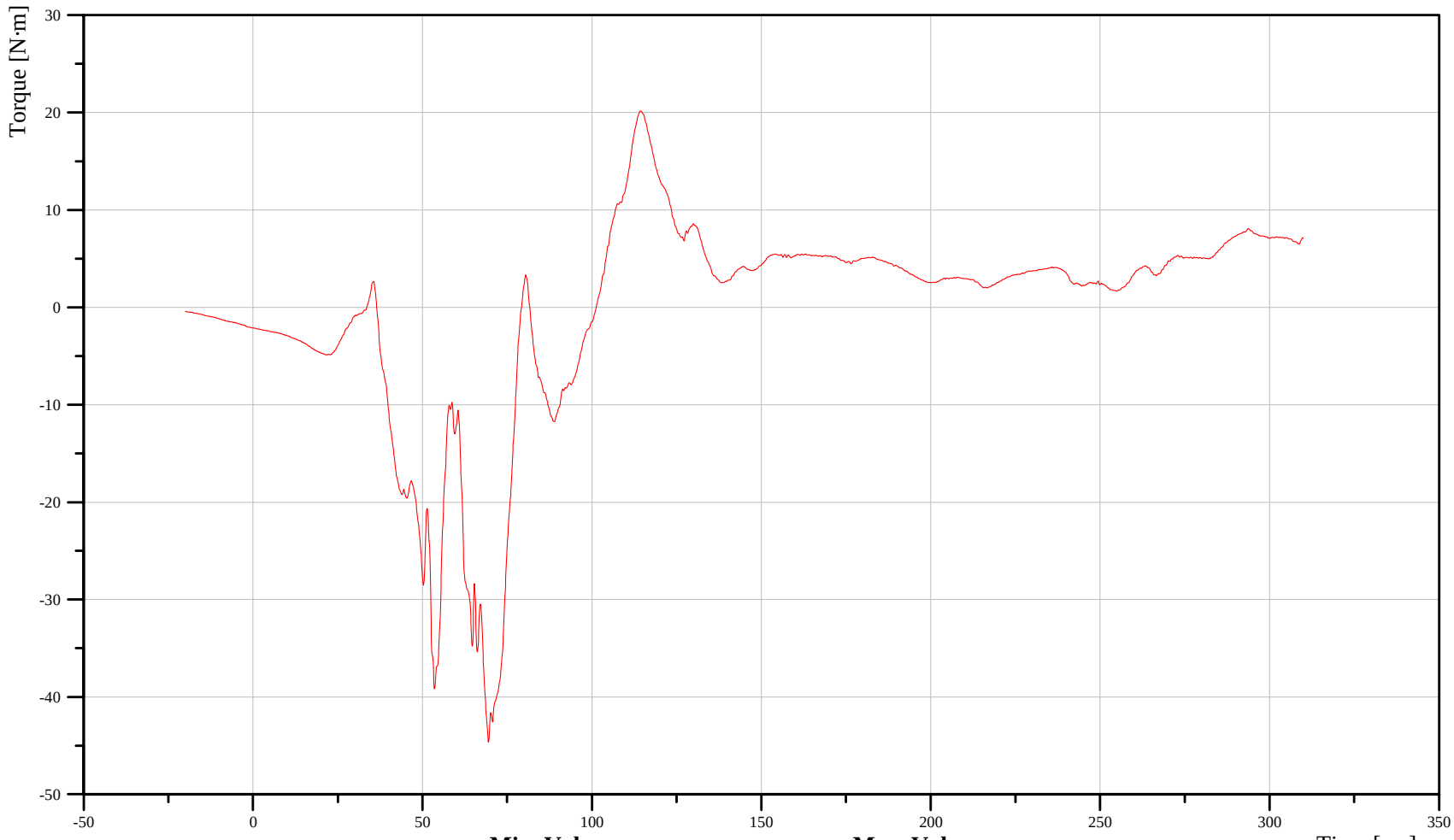
Right Upper Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRULXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-44.64 N·m at 69.52 ms

Max. Value
20.16 N·m at 114.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

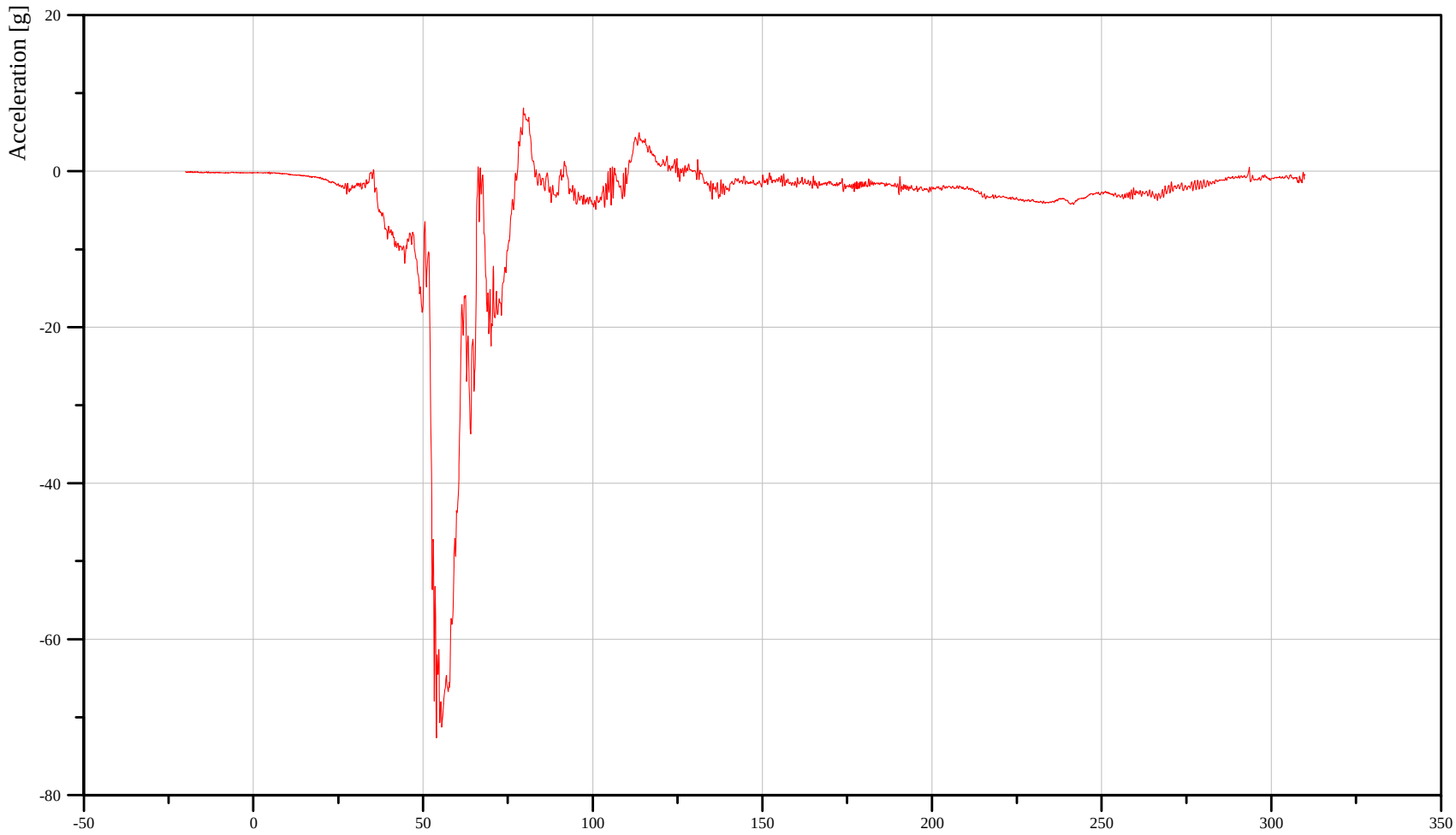
Right Tibia Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-72.63 g at 53.92 ms

Max. Value
8.13 g at 79.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

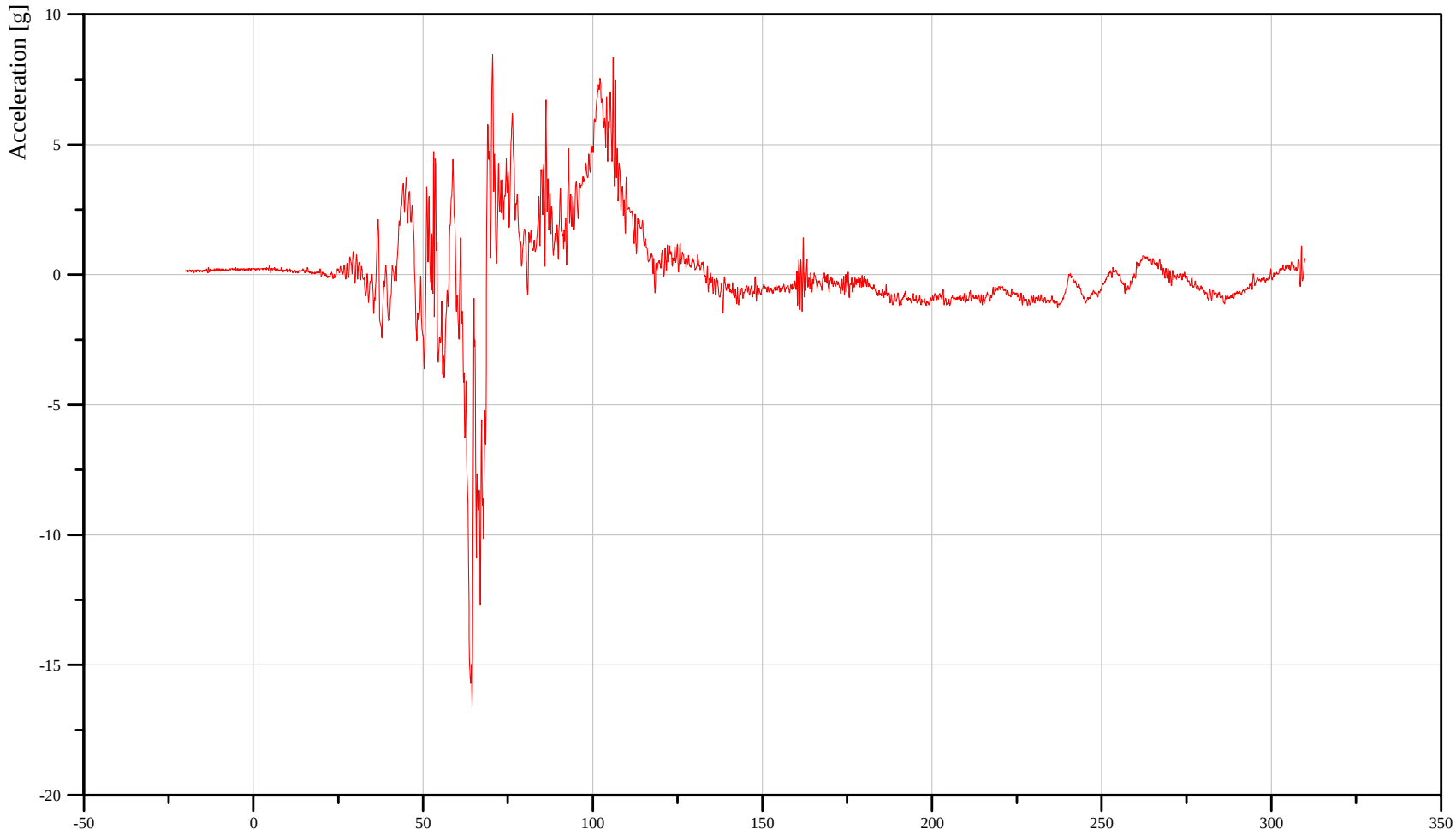
Right Tibia Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-16.57 g at 64.48 ms

Max. Value
8.46 g at 70.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

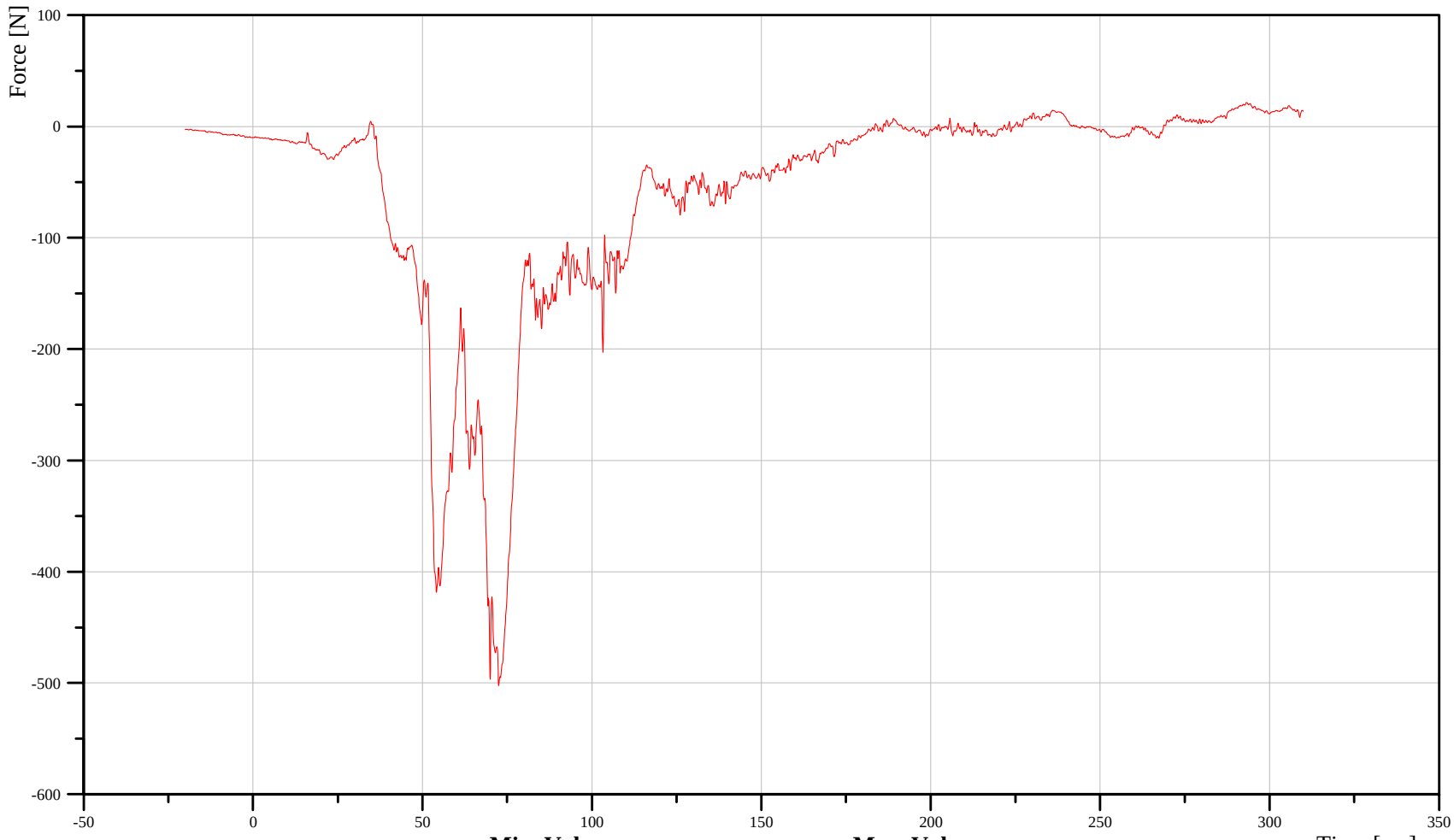
Right Lower Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRLLXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-502.39 N at 72.56 ms

Max. Value
21.61 N at 293.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

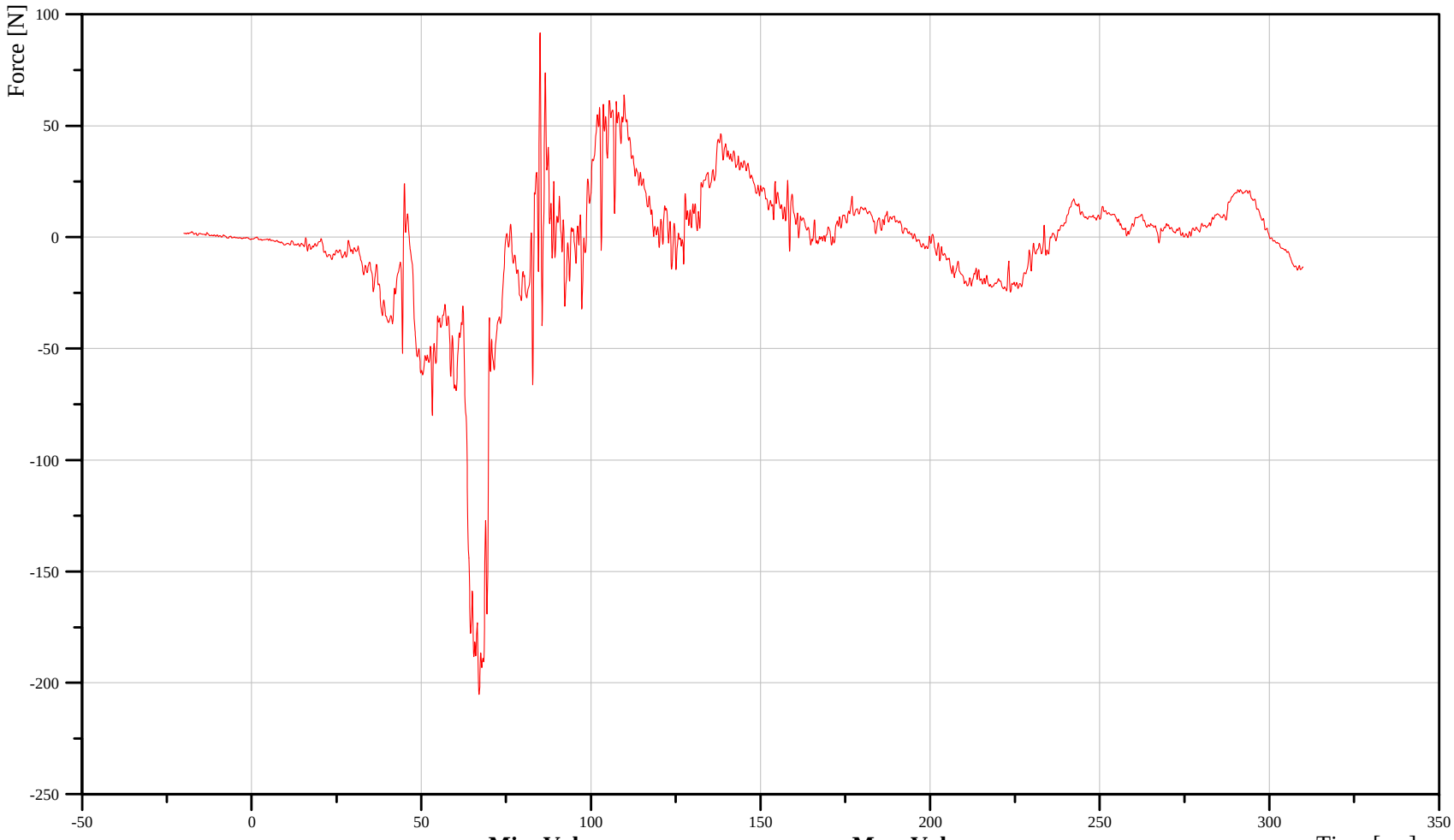
Right Lower Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRLLXH3FOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-205.15 N at 67.04 ms

Max. Value
91.75 N at 85.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

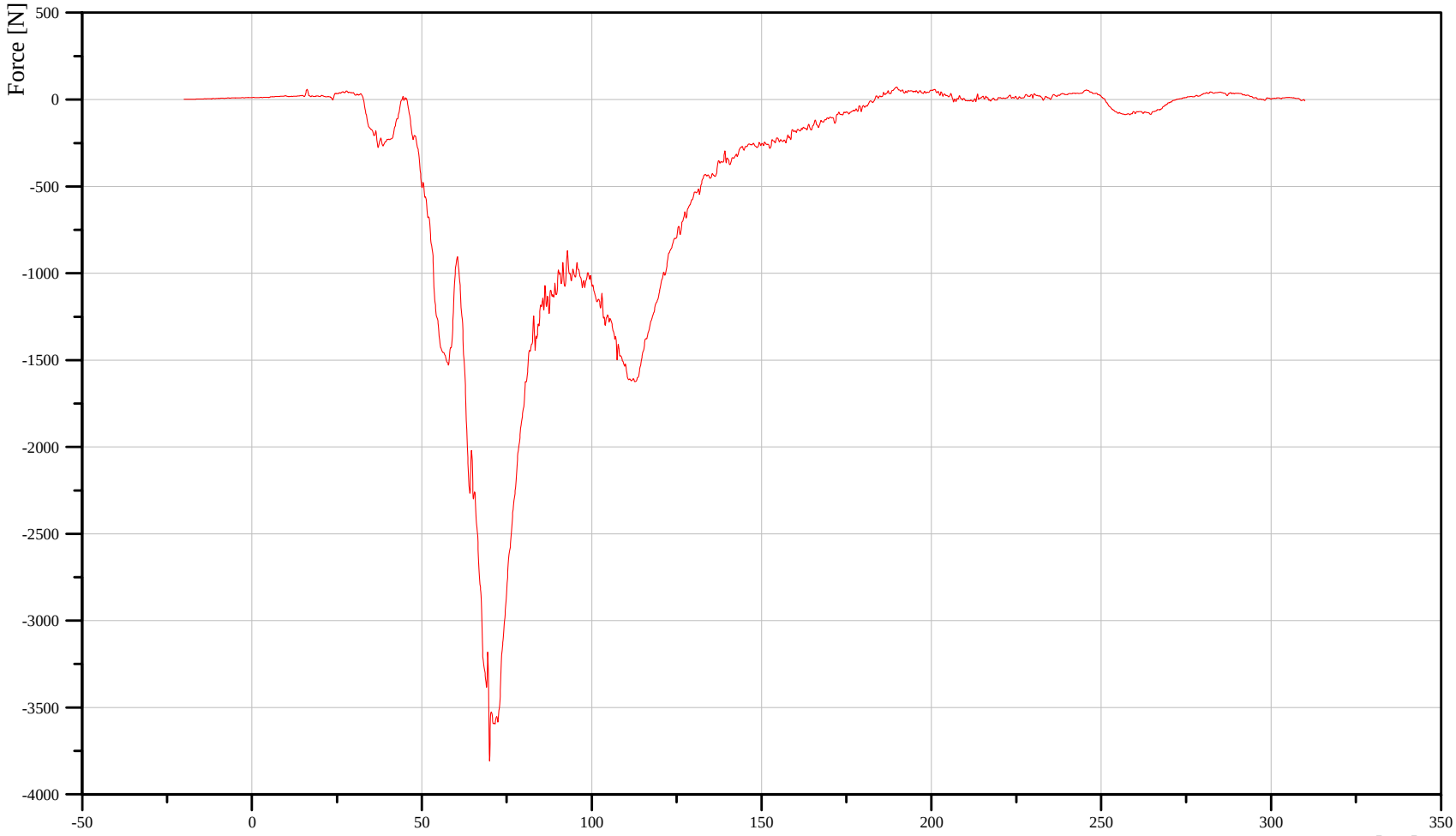
Right Lower Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRLLXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,807.17 N at 69.92 ms

Max. Value
72.07 N at 189.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

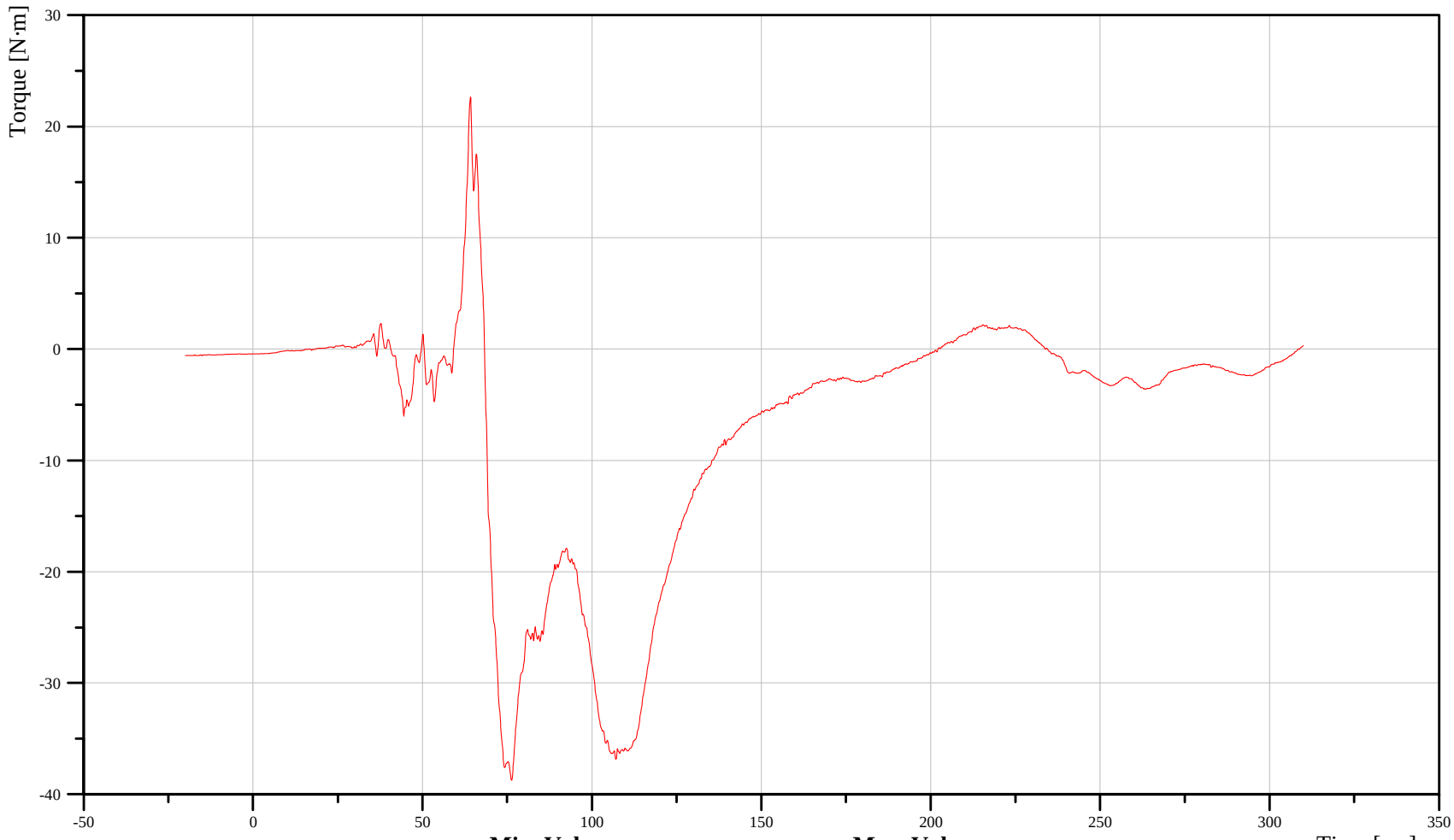
Right Lower Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRLLXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-38.73 N·m at 76.32 ms

Max. Value
22.68 N·m at 64.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

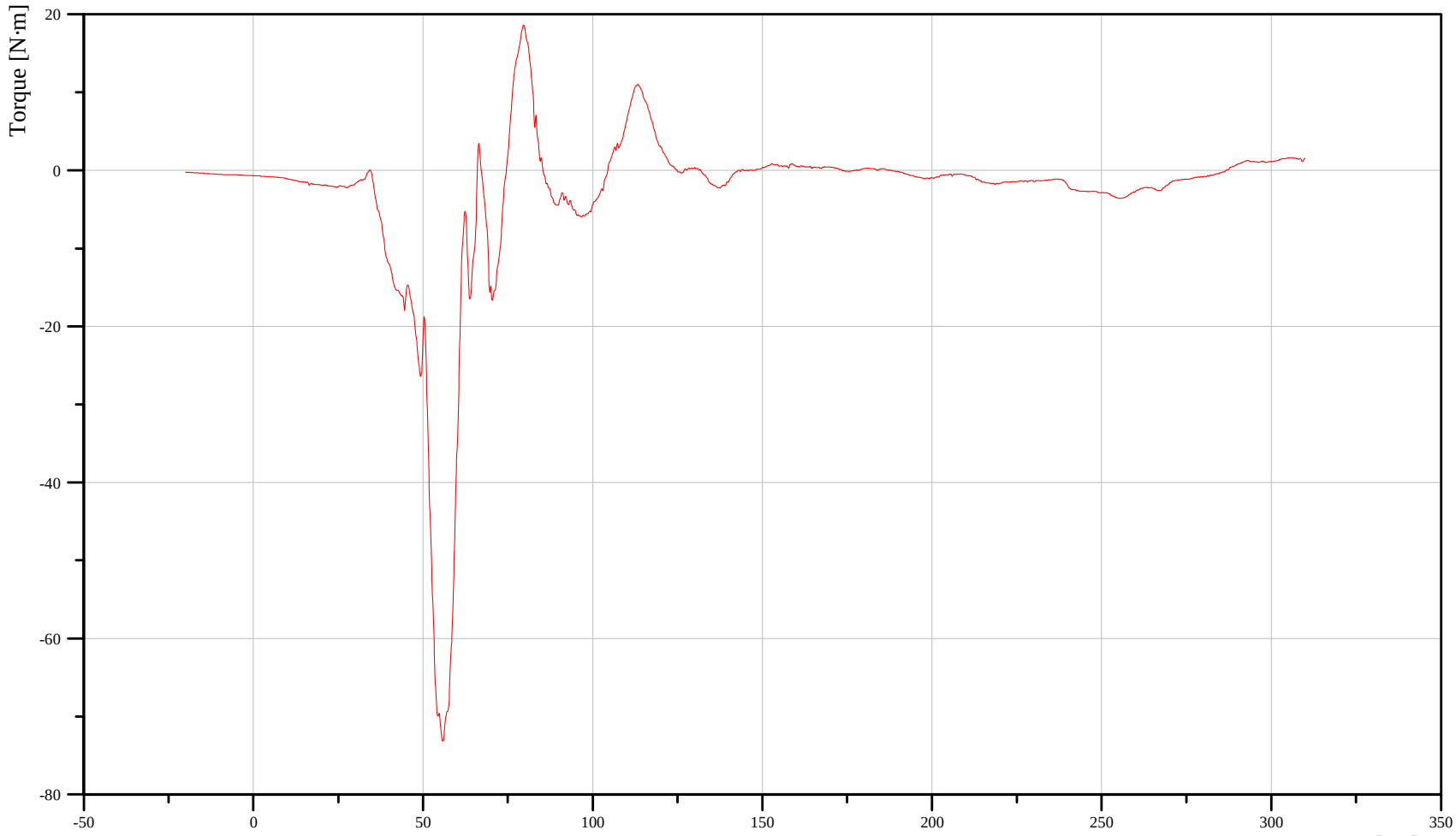
Right Lower Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21TIBIRLLXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-73.18 N·m at 55.84 ms

Max. Value
18.65 N·m at 79.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

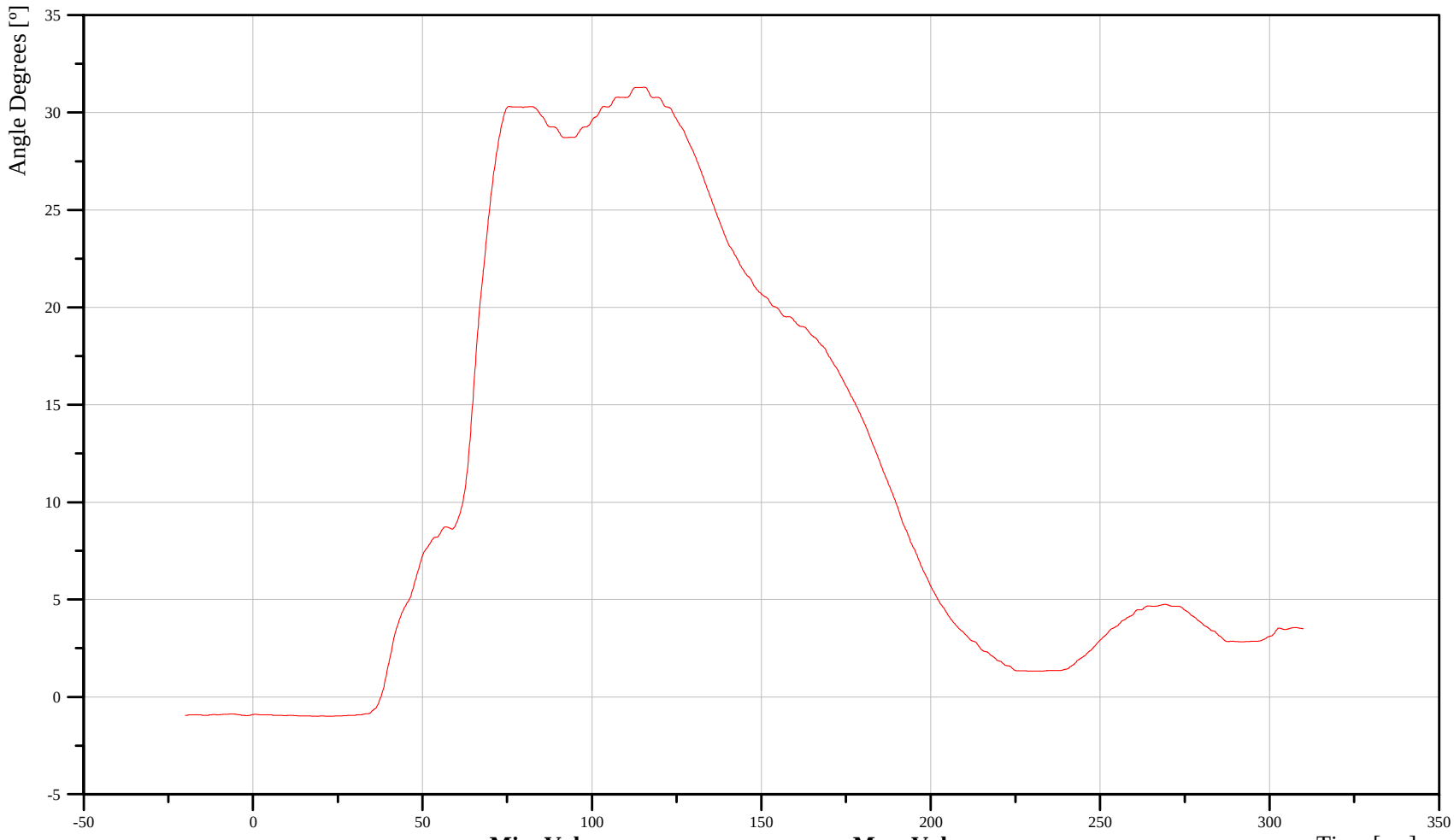
Right Foot Angular Dis. X AK037X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ANXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.98 ° at 22.40 ms

Max. Value
31.30 ° at 115.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

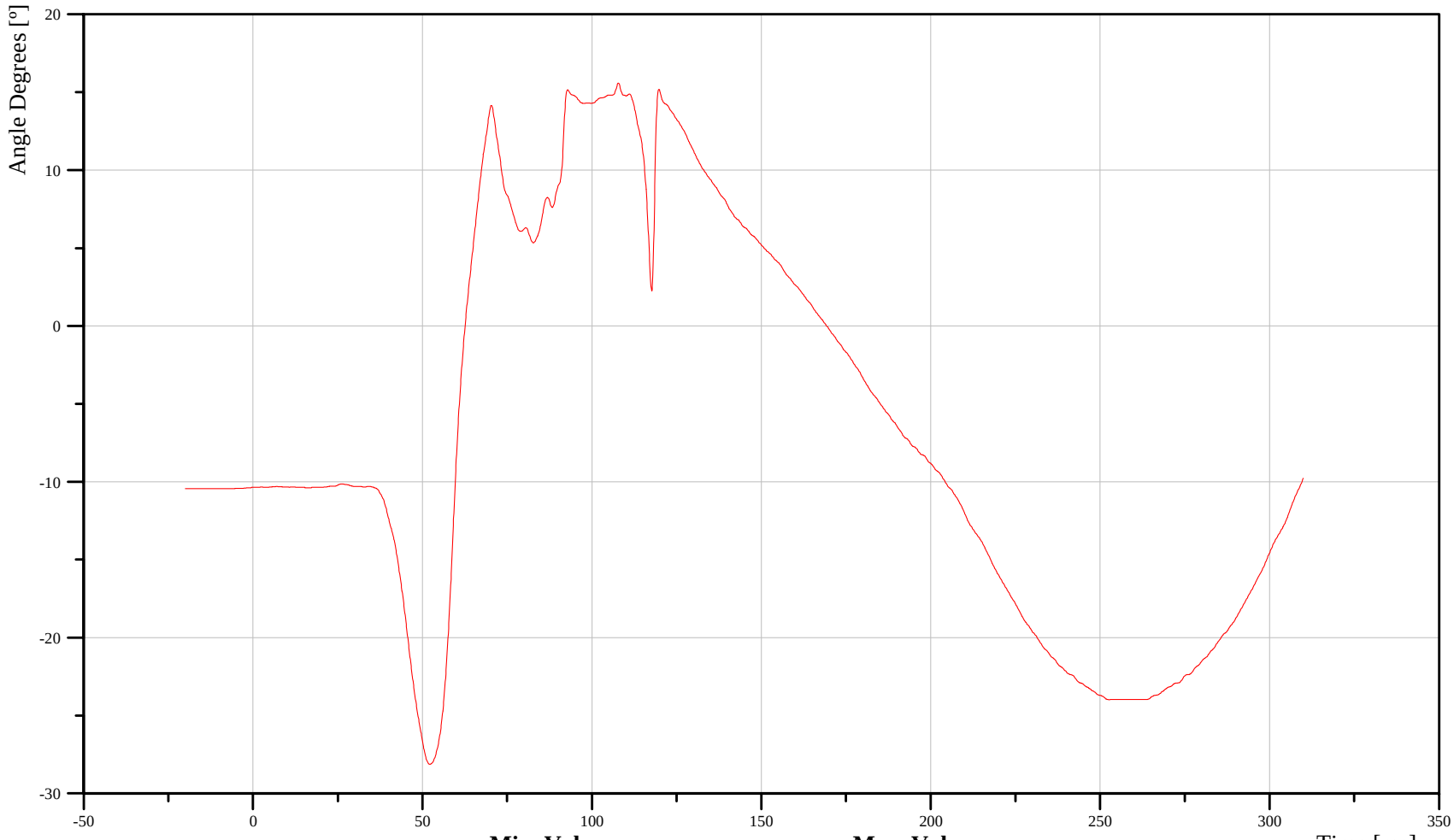
Right Foot Angular Dis. Y_AK225Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ANYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-28.13 ° at 52.24 ms

Max. Value
15.59 ° at 107.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

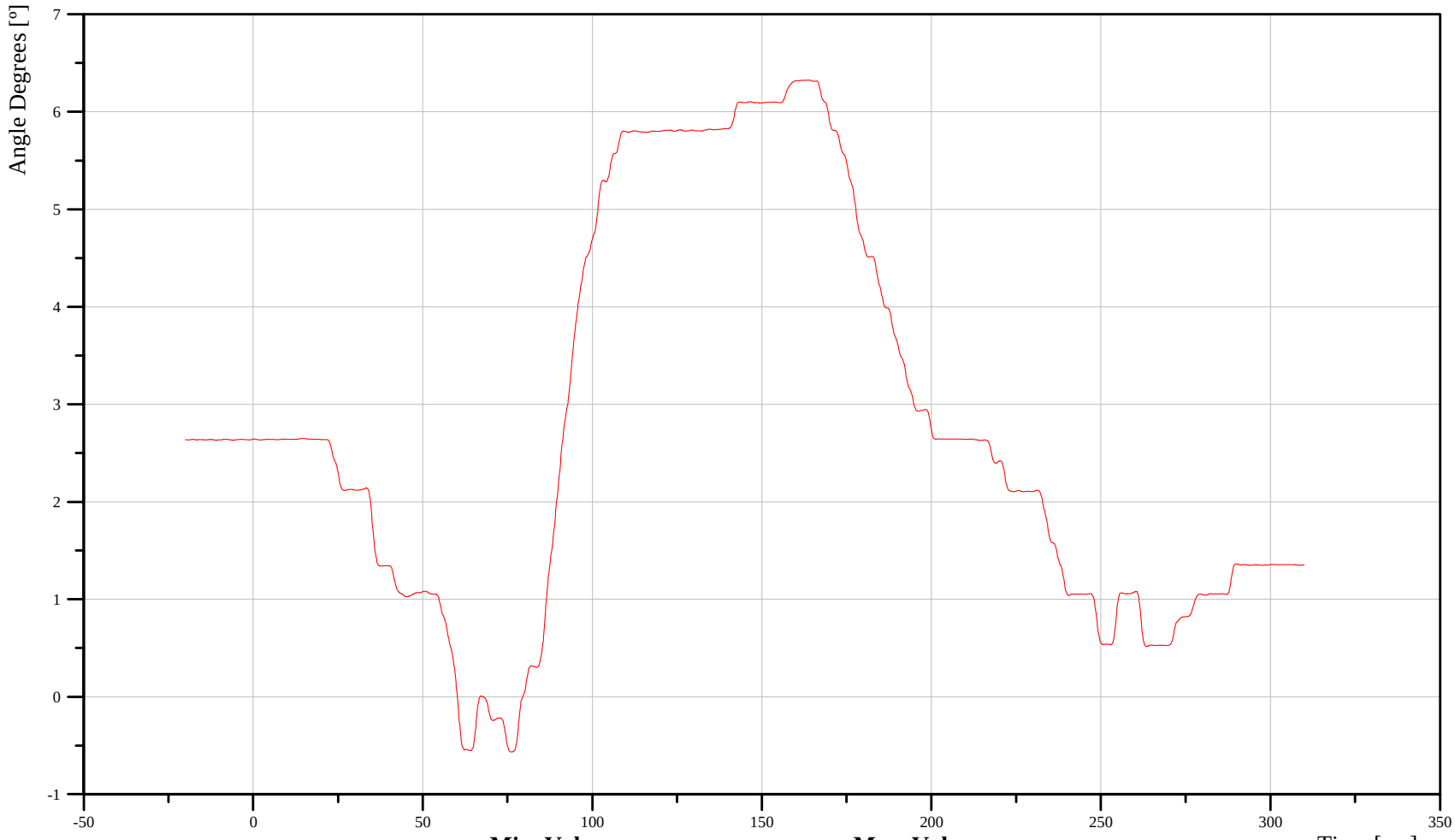
Right Foot Angular Dis. Z AK039Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ANZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.57 ° at 76.16 ms

Max. Value
6.33 ° at 163.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

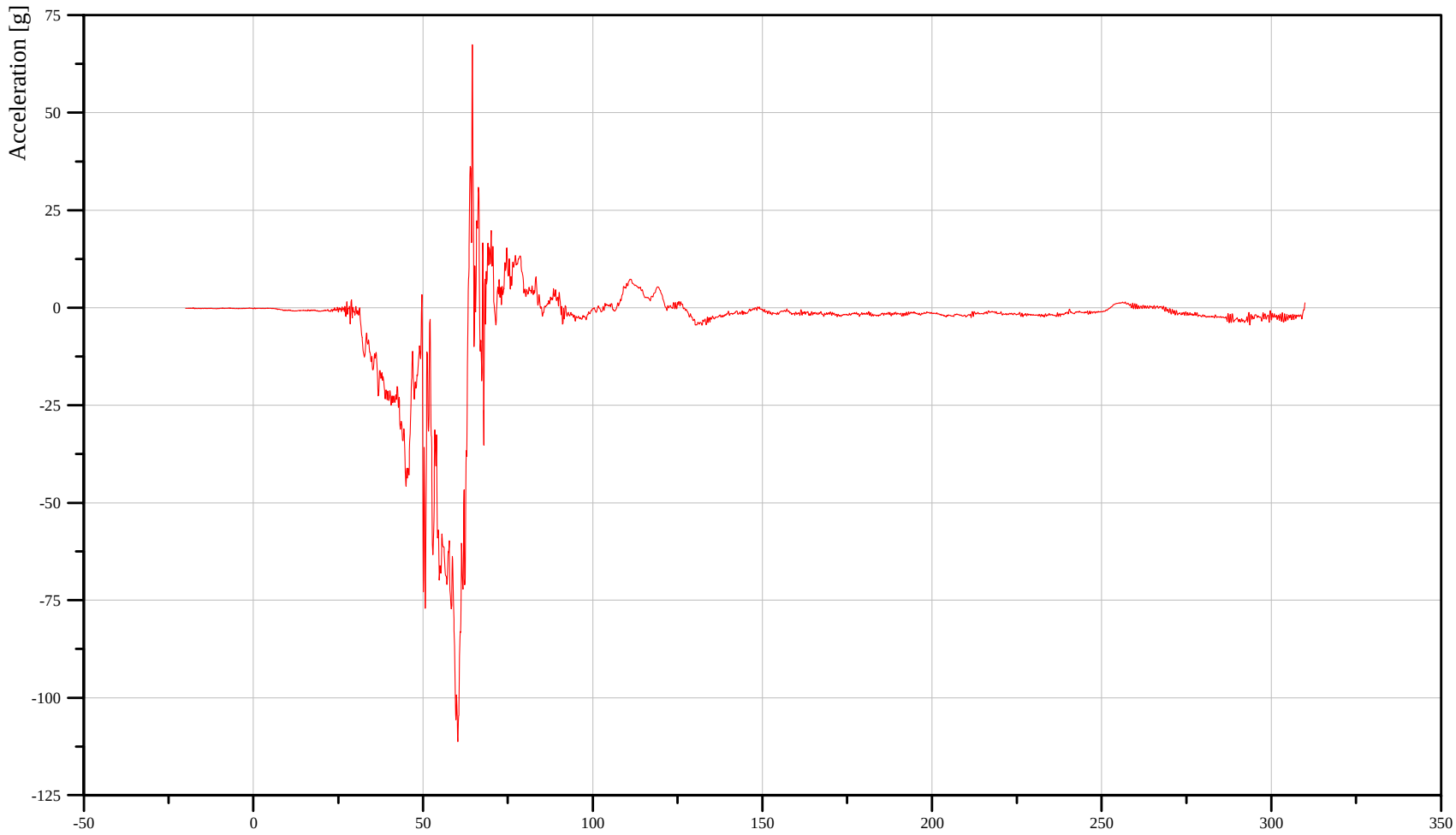
Right Foot Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-111.31 g at 60.24 ms

Max. Value
67.46 g at 64.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

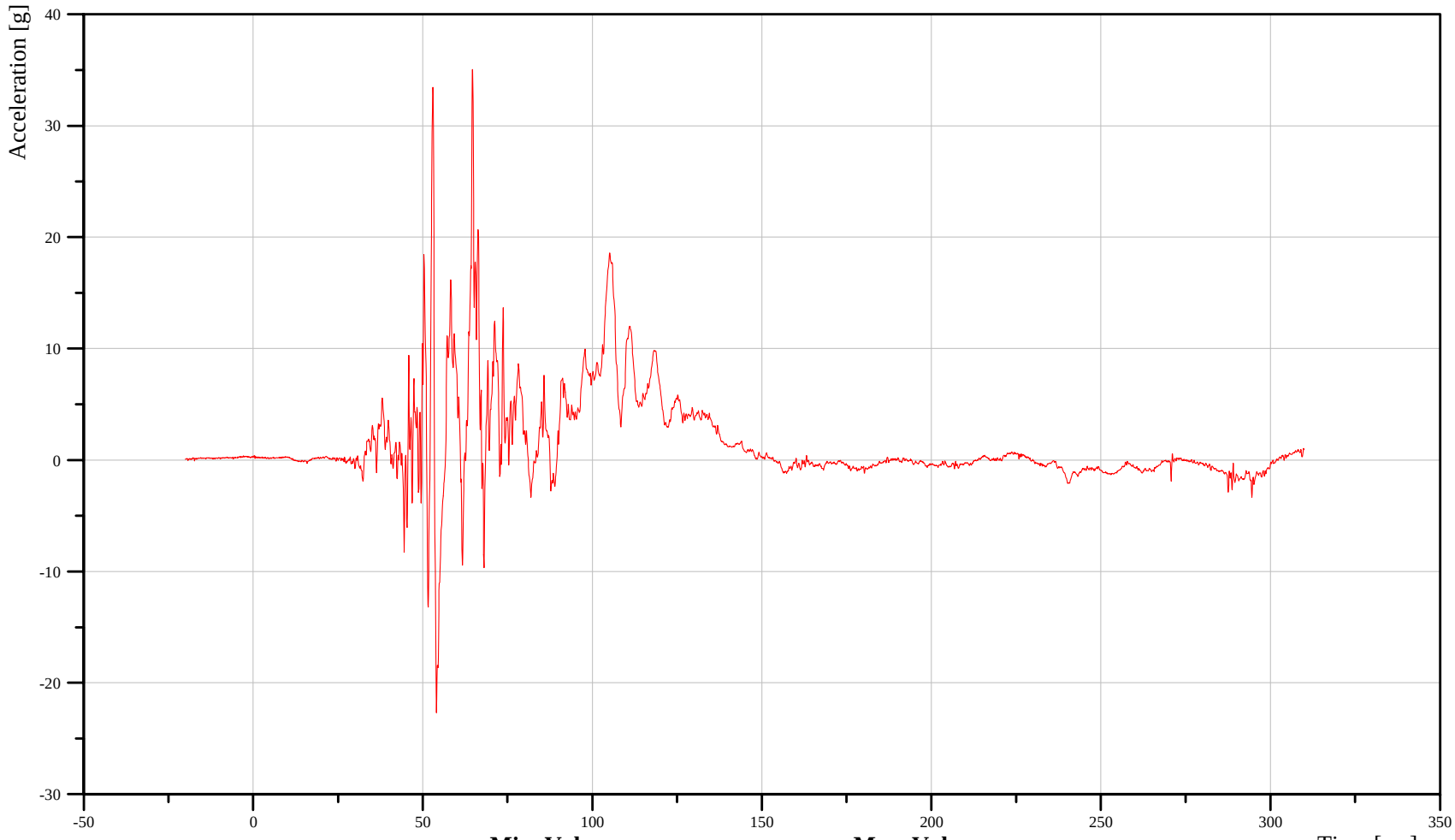
Right Foot Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-22.68 g at 54.00 ms

Max. Value
35.05 g at 64.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

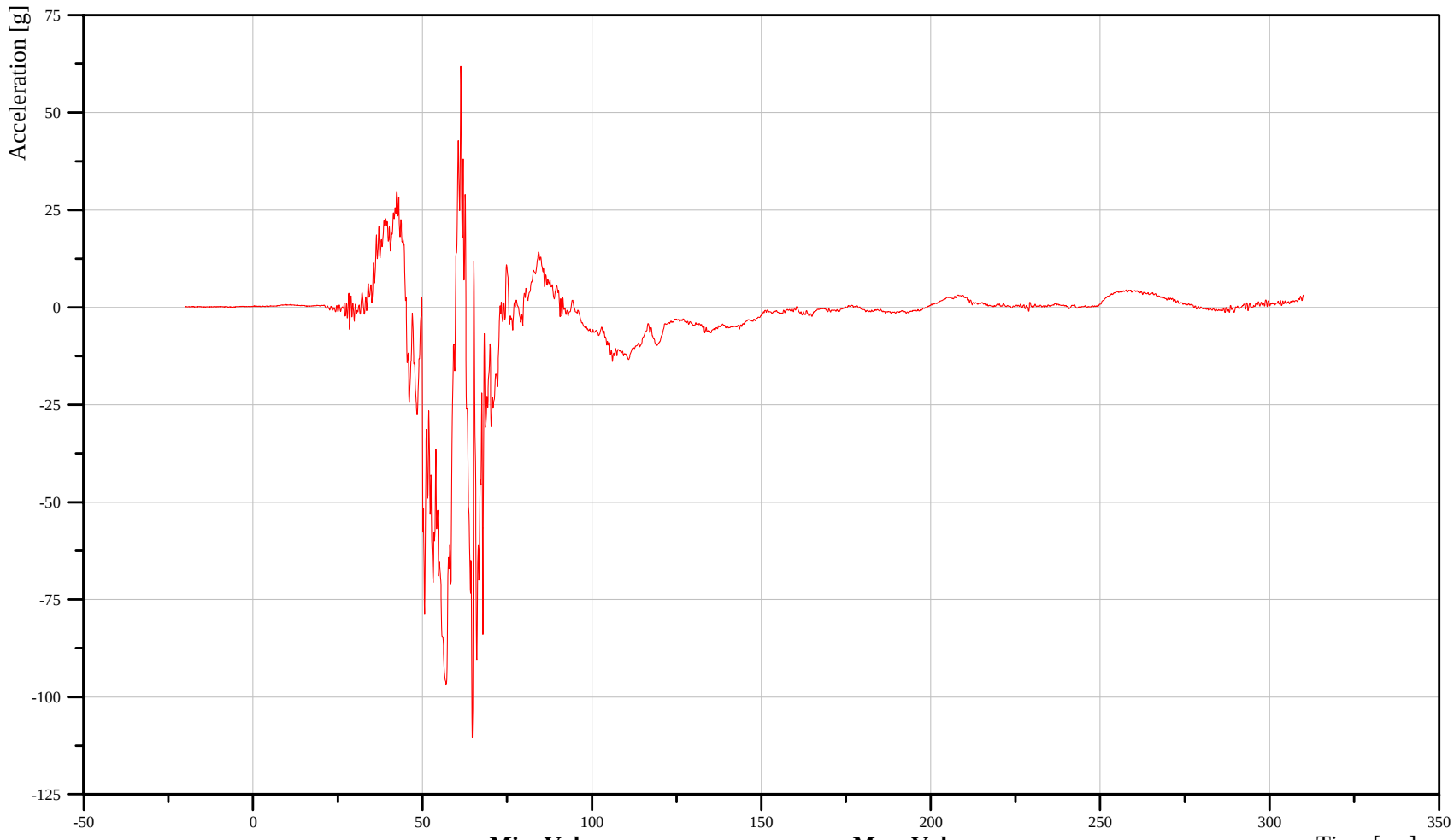
Right Foot Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-110.52 g at 64.72 ms

Max. Value
61.95 g at 61.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

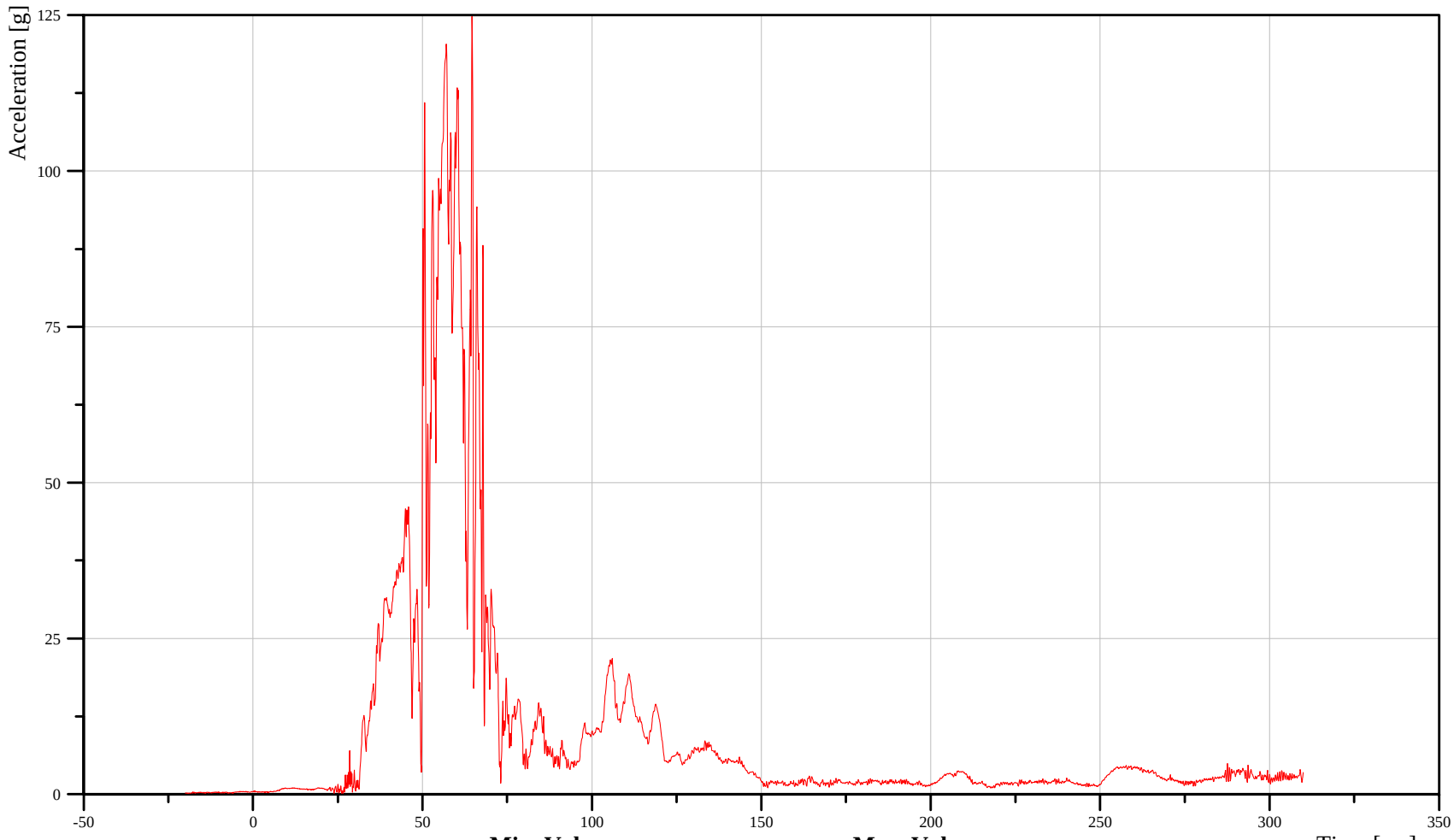
Right Foot Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.15 g at 23.92 ms

Max. Value
124.76 g at 64.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

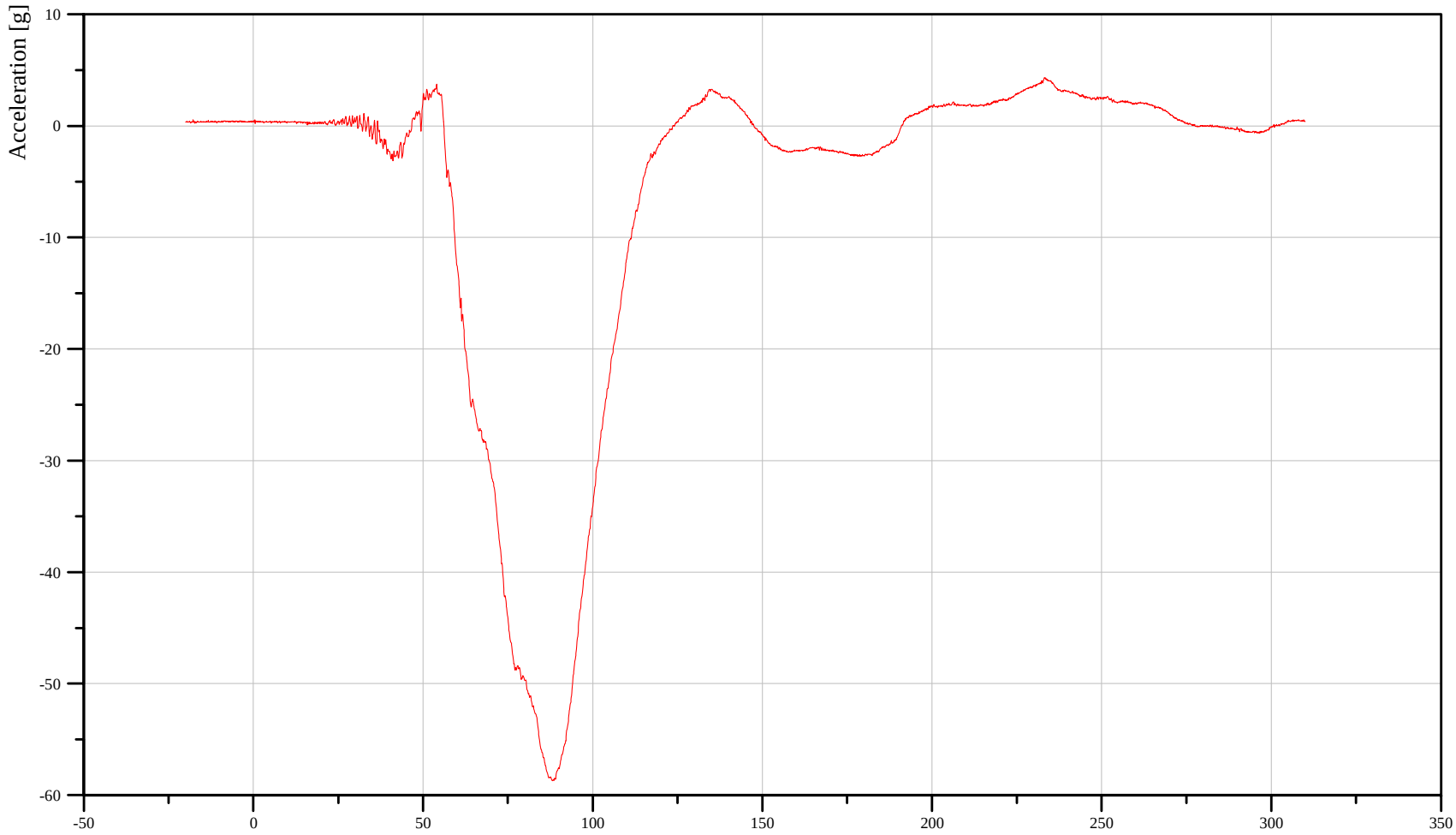
Head Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23HEADCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-58.70 g at 88.16 ms

Max. Value
4.35 g at 233.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

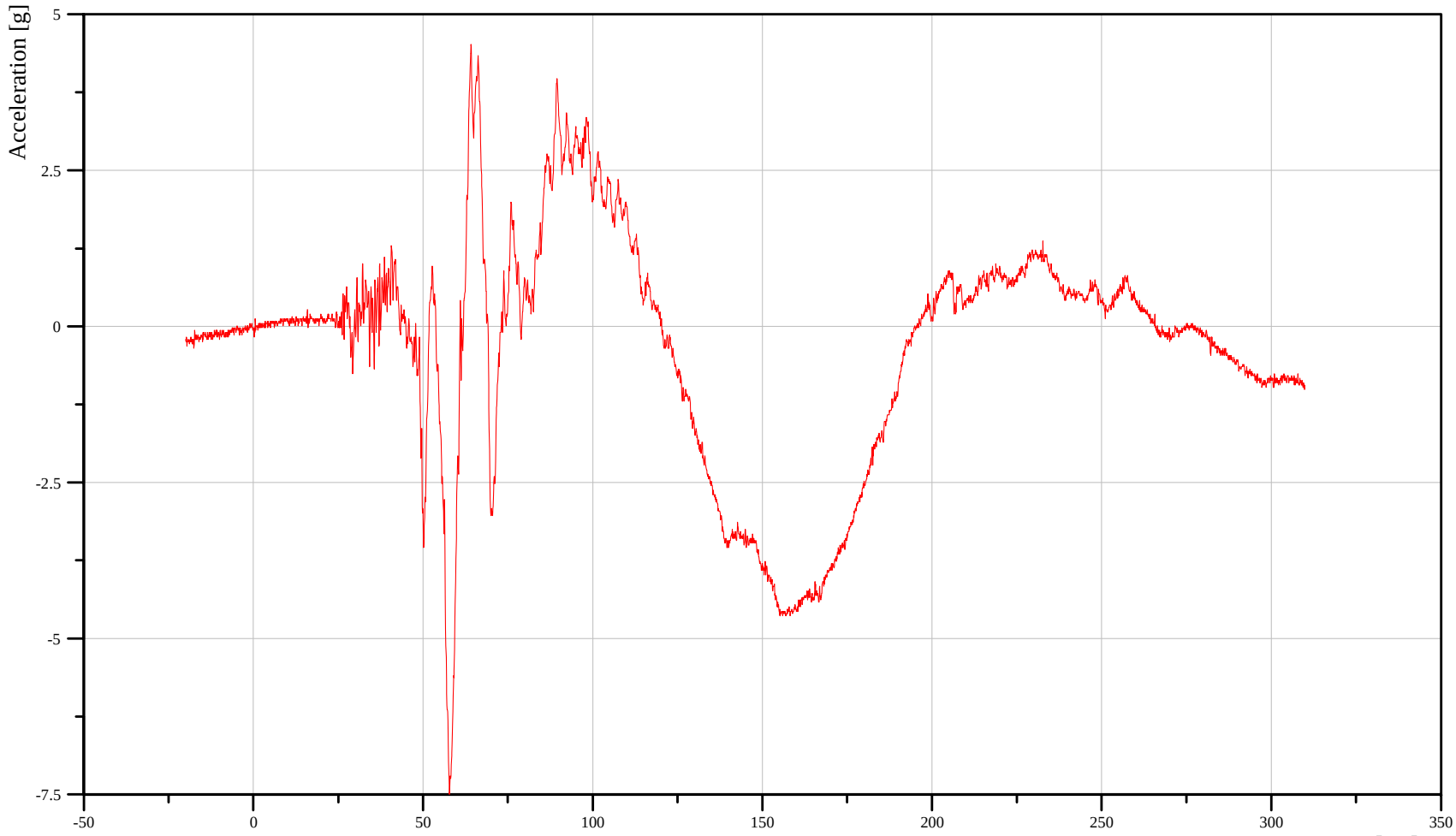
Head Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23HEADCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-7.50 g at 57.76 ms

Max. Value
4.52 g at 64.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

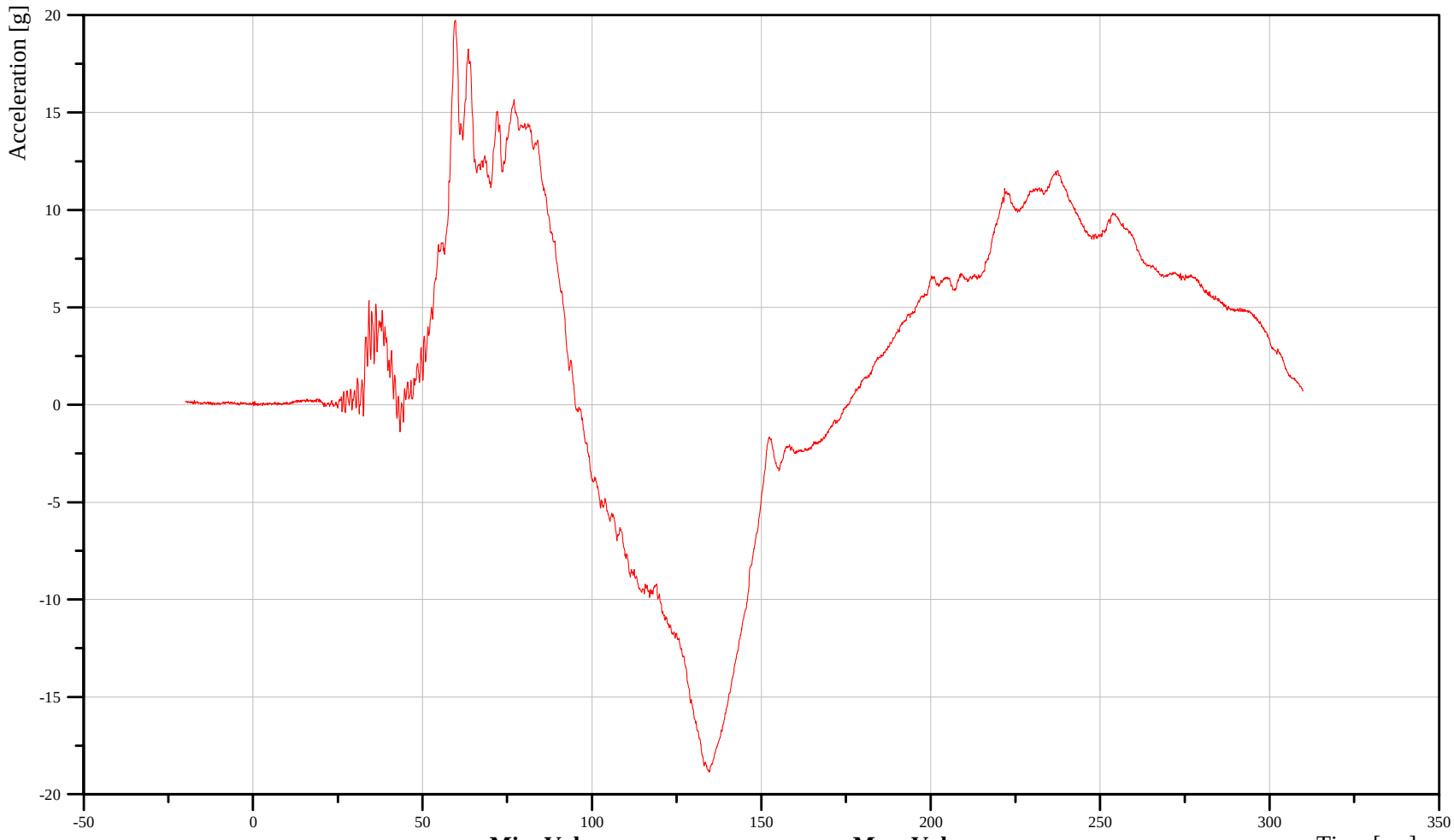
Head Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23HEADCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-18.84 g at 134.56 ms

Max. Value
19.74 g at 59.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

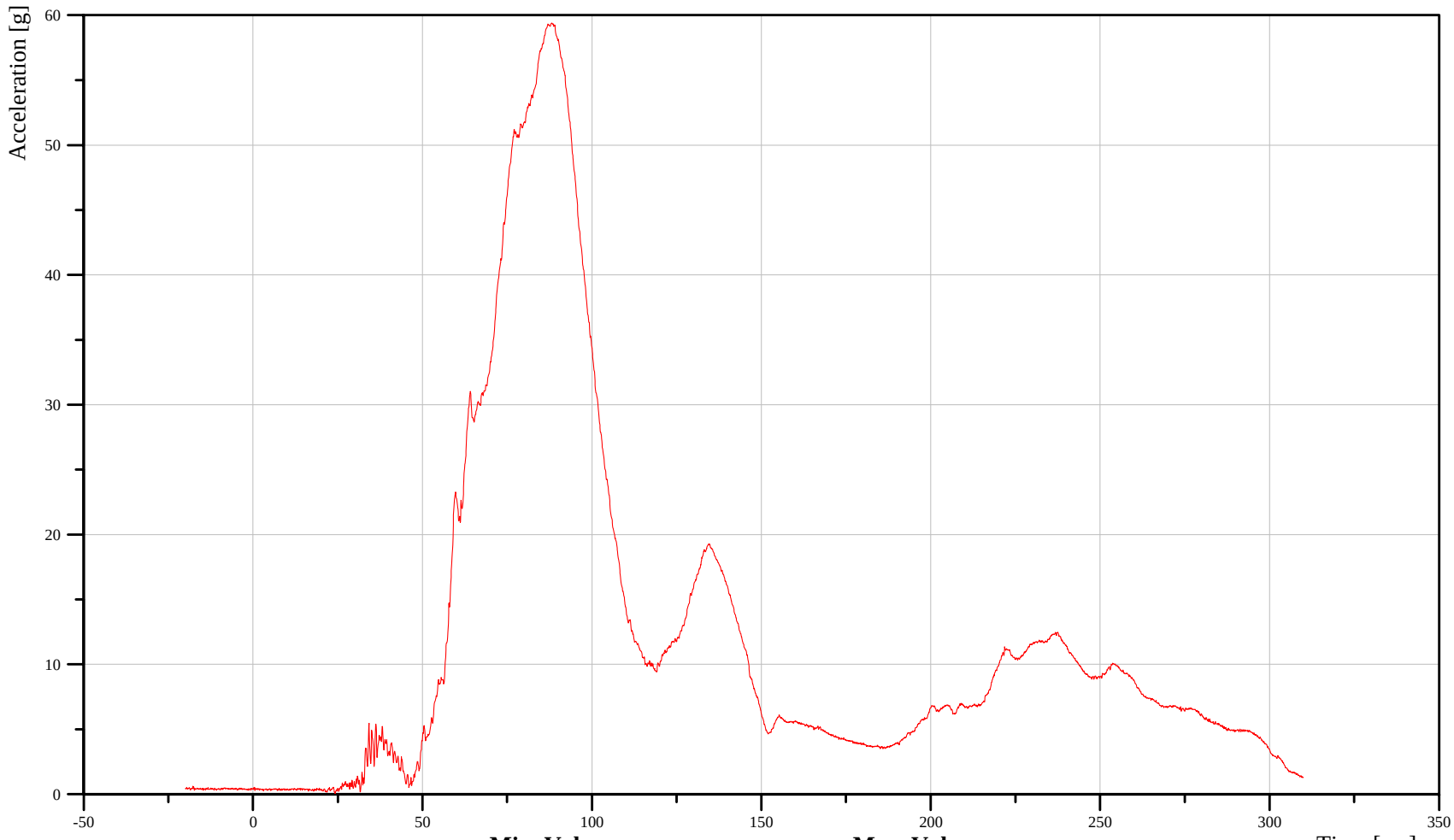
Head Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23HEADCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.05 g at 24.24 ms

Max. Value
59.40 g at 88.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

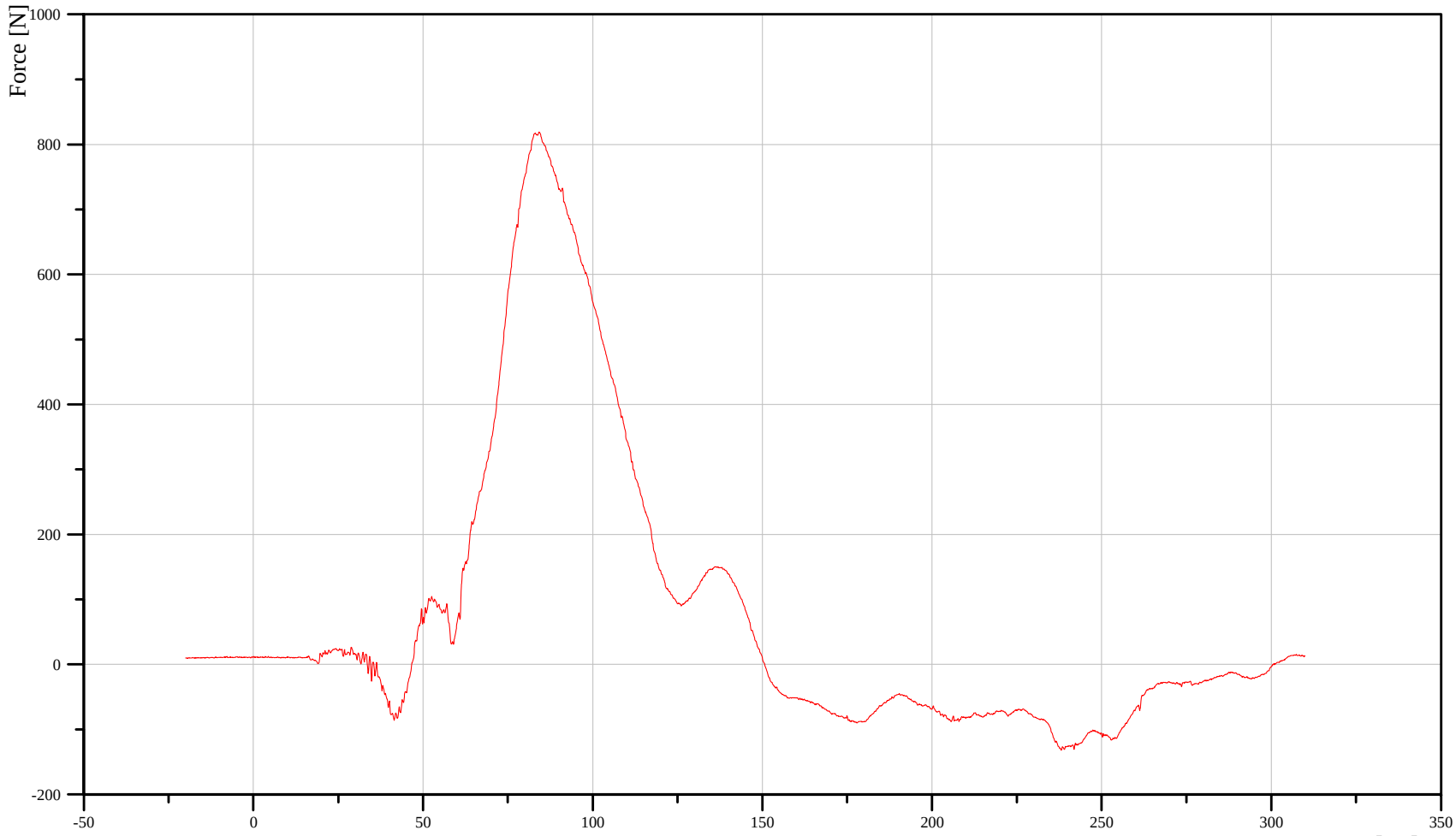
Neck Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKUP00HFFOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-131.74 N at 238.16 ms

Max. Value
819.04 N at 84.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

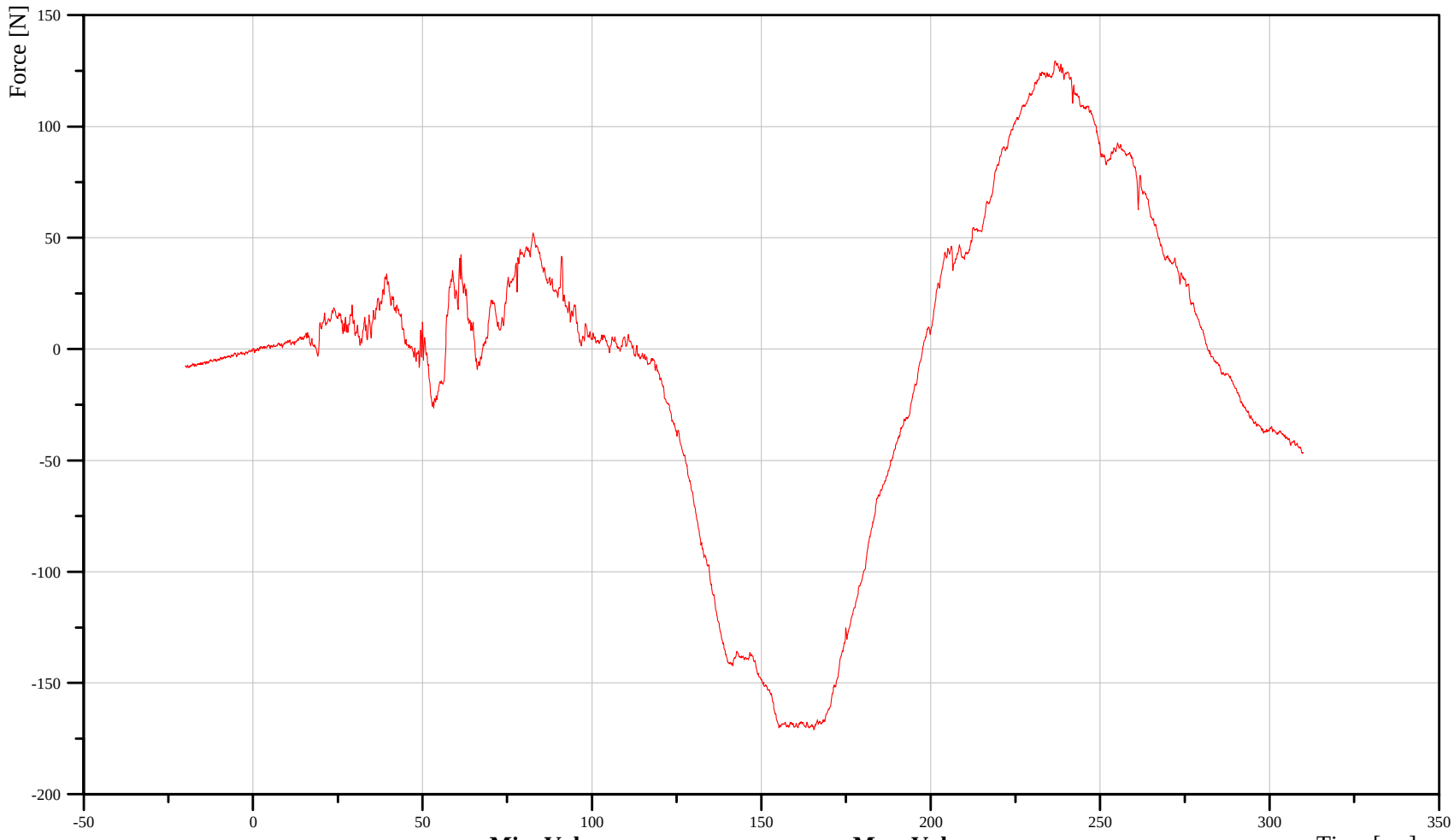
Neck Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKUP00HFFOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-171.09 N at 165.52 ms

Max. Value
129.43 N at 236.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

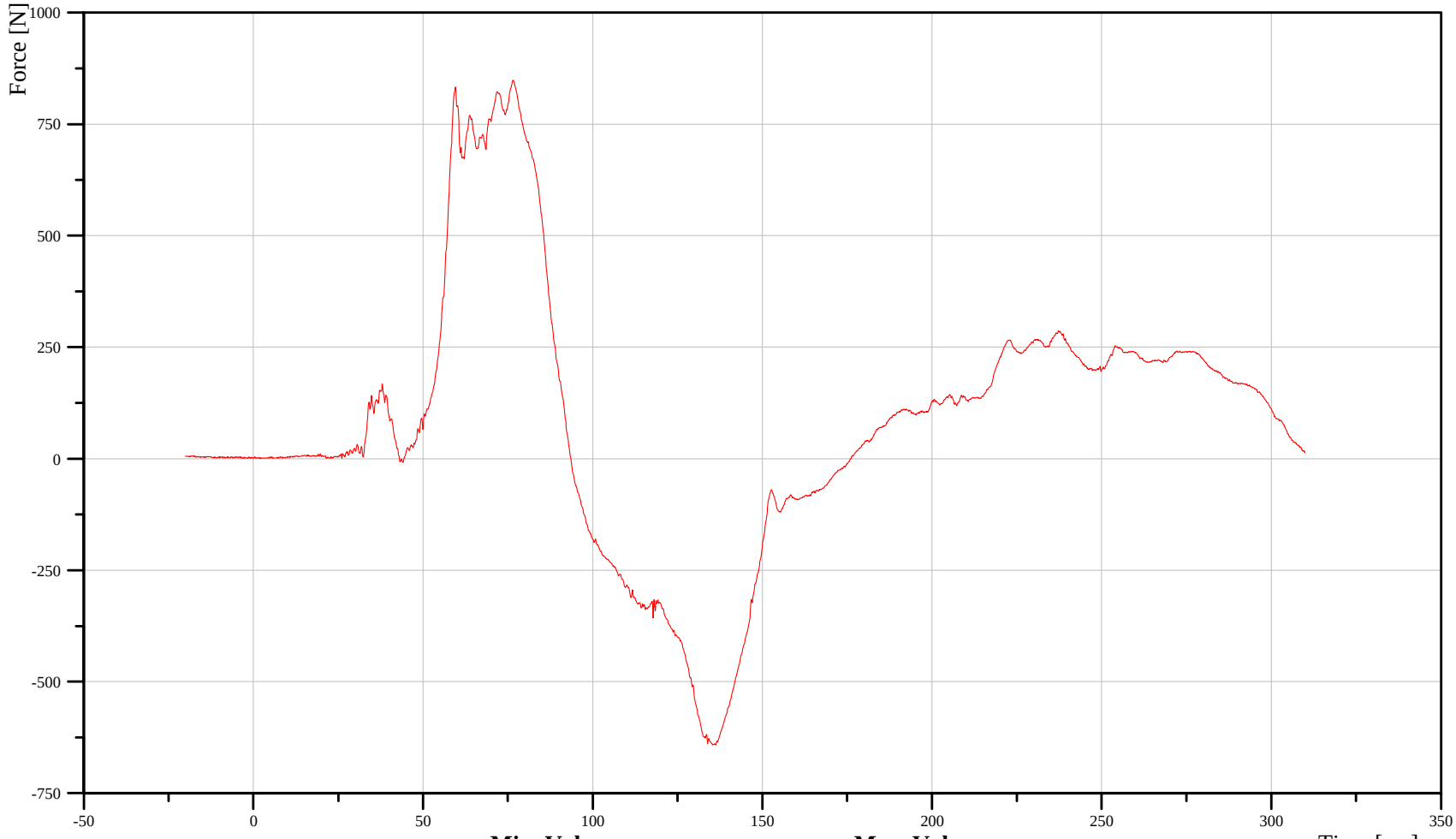
Neck Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKUP00HFFOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-642.14 N at 136.24 ms

Max. Value
848.49 N at 76.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

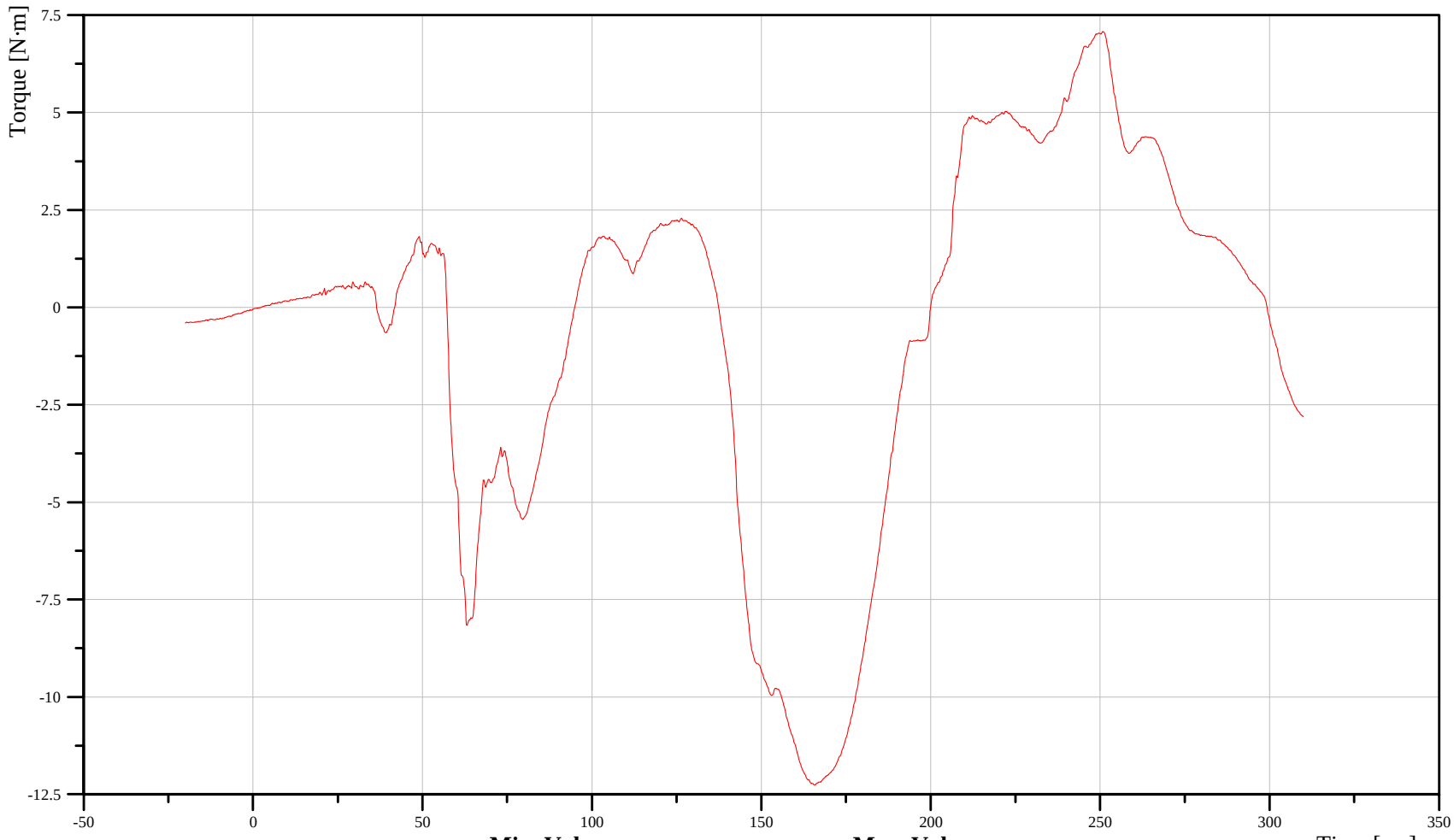
Neck Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKUP00HFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-12.25 N·m at 165.60 ms

Max. Value
7.08 N·m at 250.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

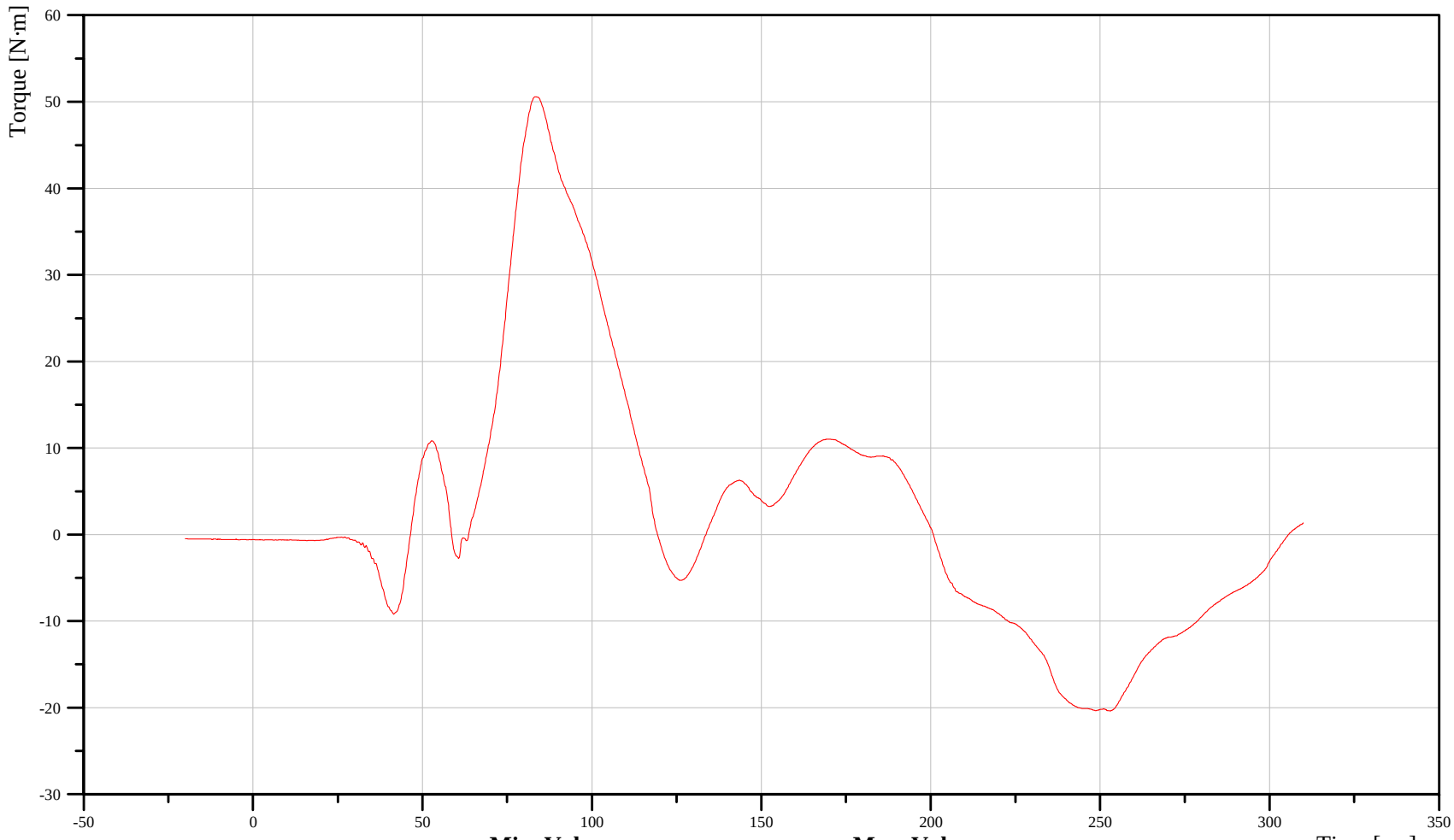
Neck Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKUP00HFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-20.38 N·m at 253.04 ms

Max. Value
50.60 N·m at 83.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

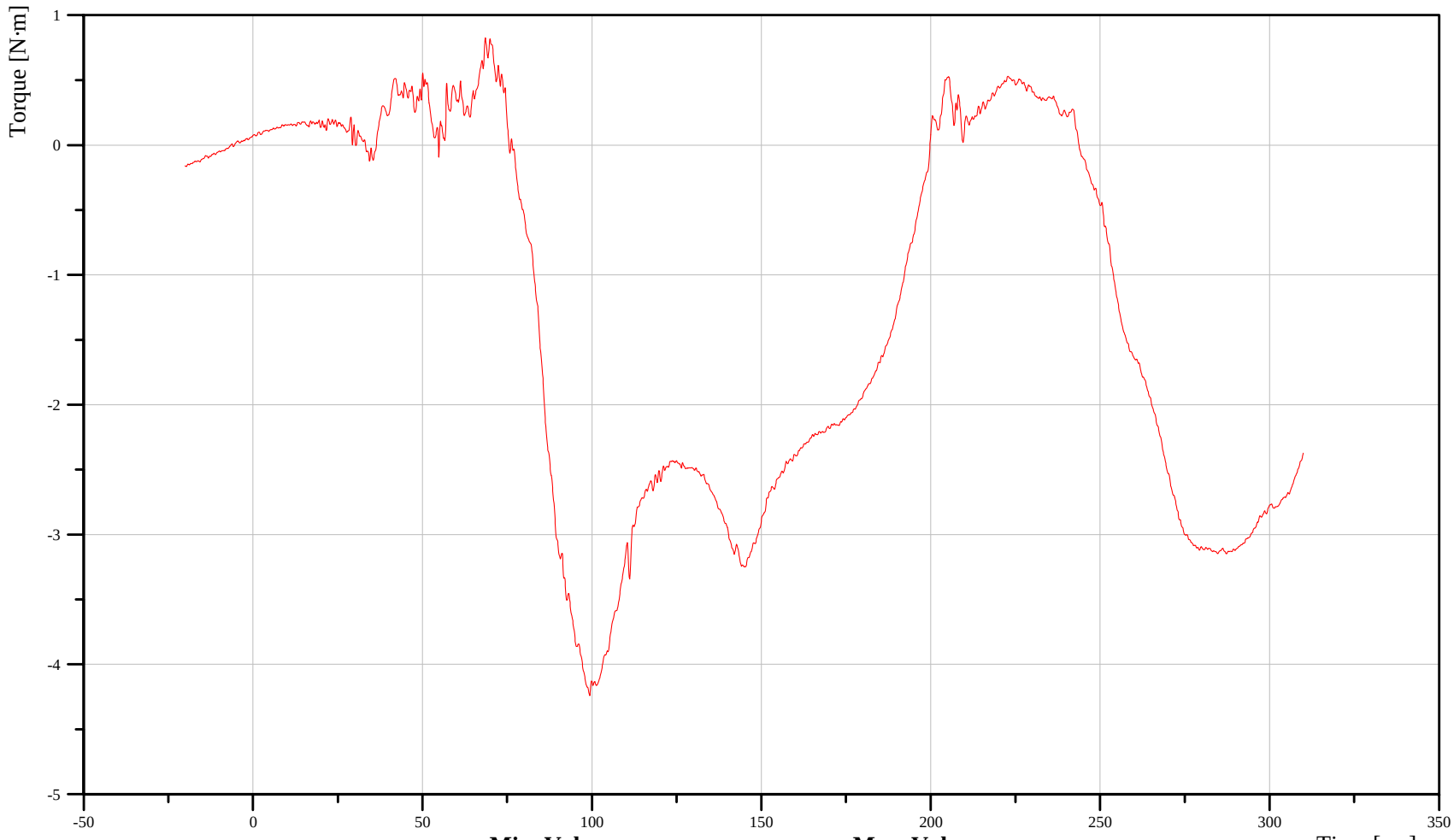
Neck Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKUP00HFMOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-4.24 N·m at 99.36 ms

Max. Value
0.82 N·m at 68.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

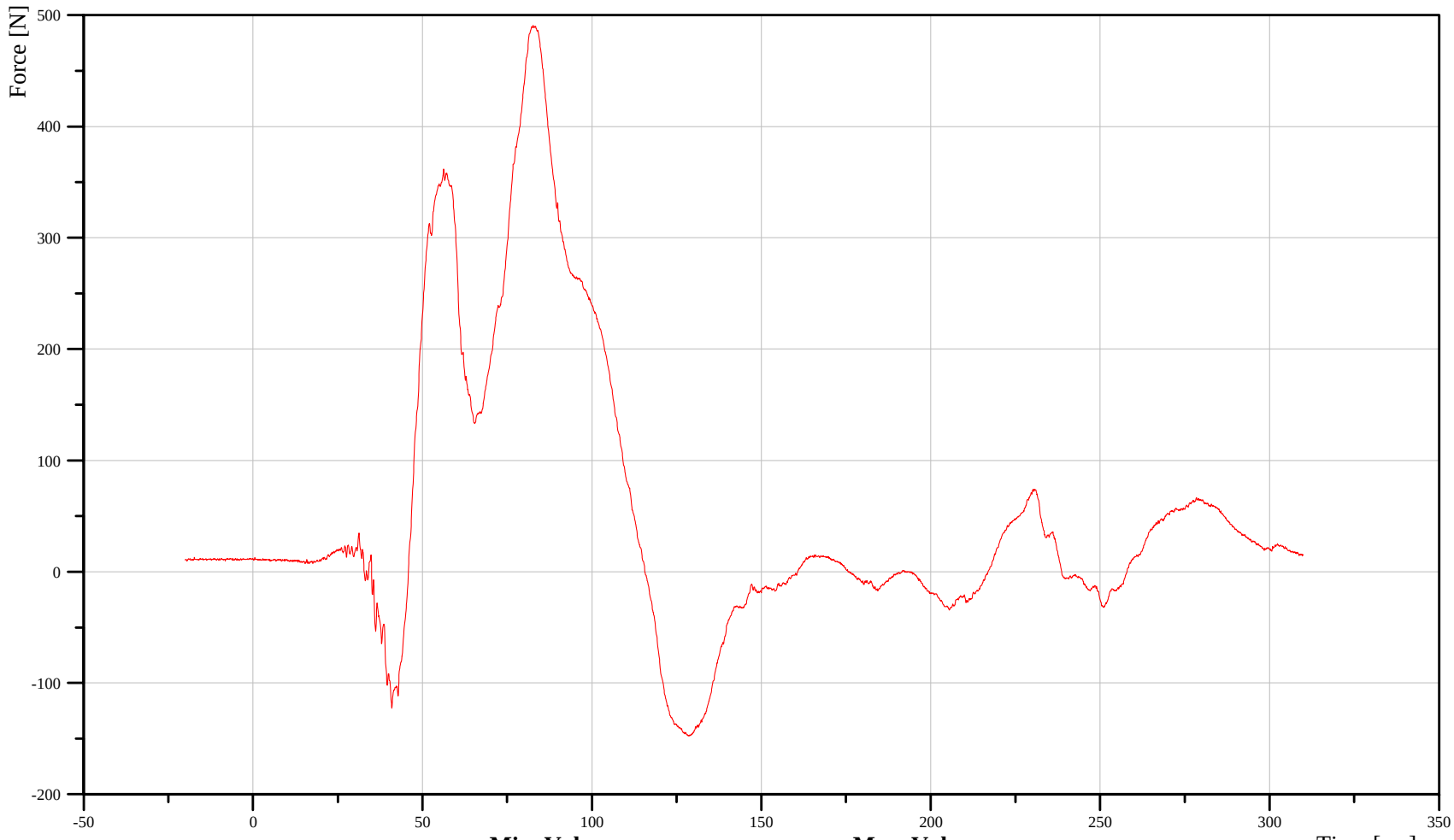
Neck Lower Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKLO00HFFOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-147.58 N at 128.40 ms

Max. Value
490.92 N at 82.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

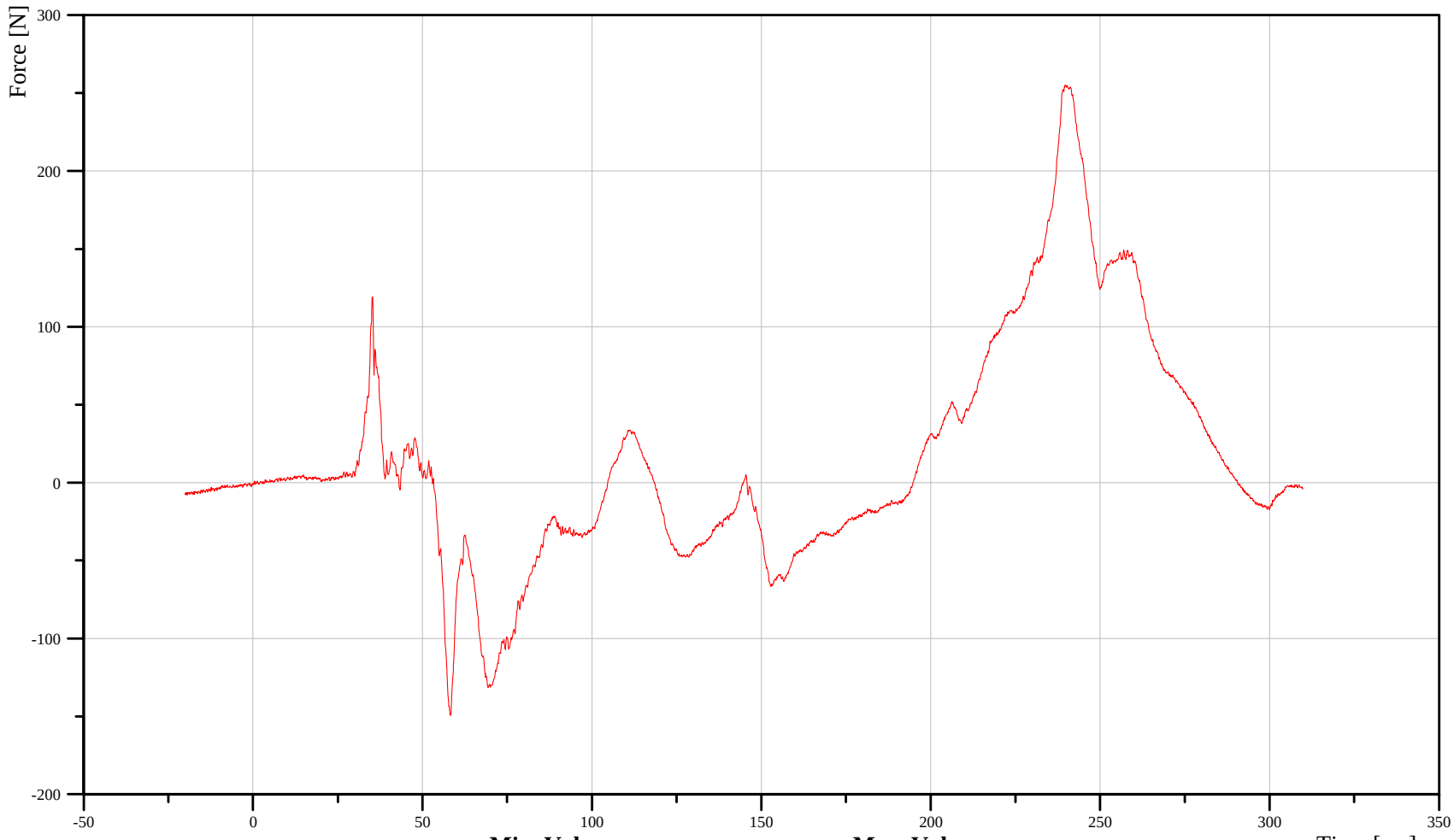
Neck Lower Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKLO00HFFOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-149.28 N at 58.24 ms

Max. Value
255.18 N at 239.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

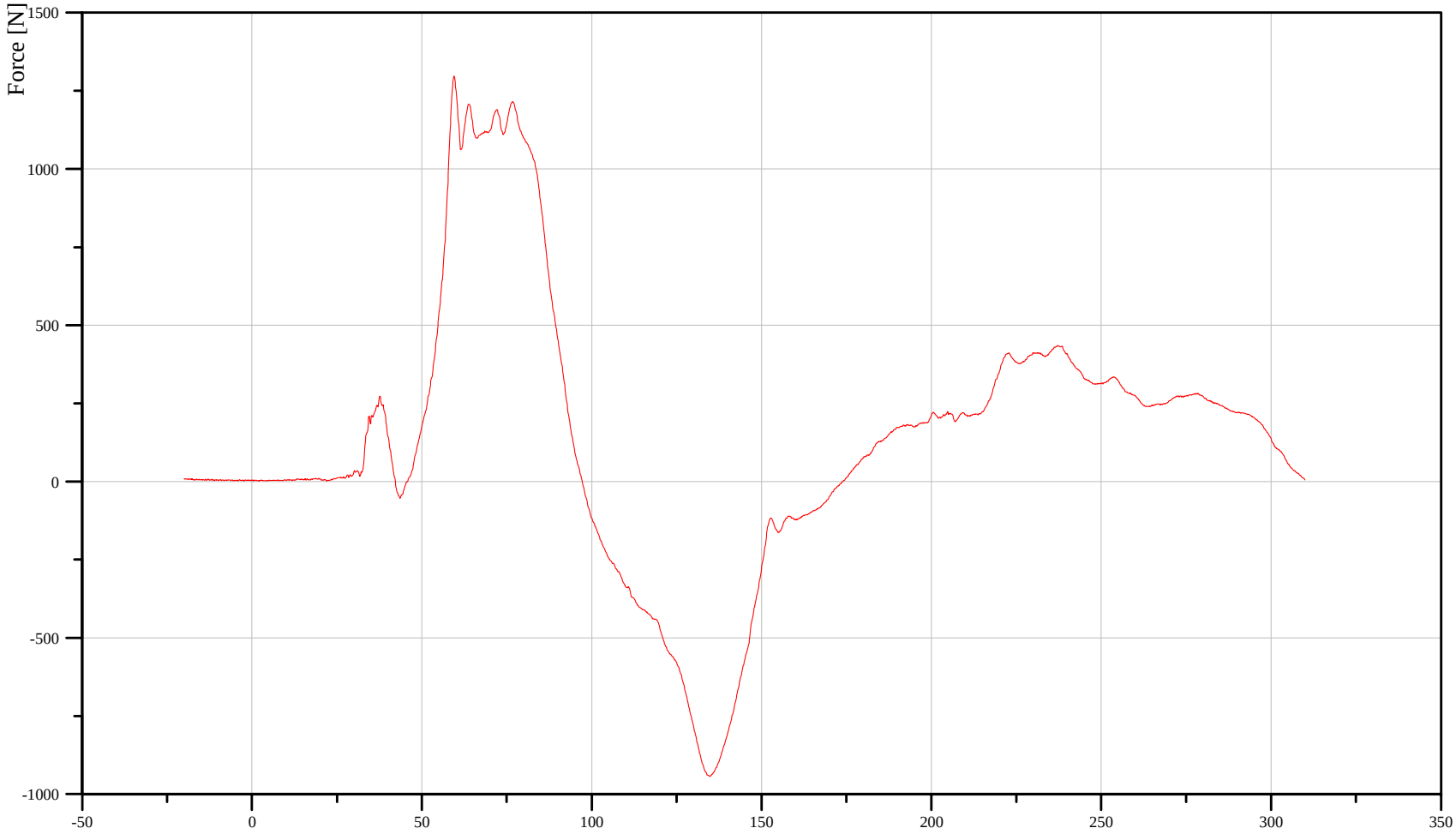
Neck Lower Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKLO00HFFOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-942.97 N at 134.88 ms

Max. Value
1,297.39 N at 59.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

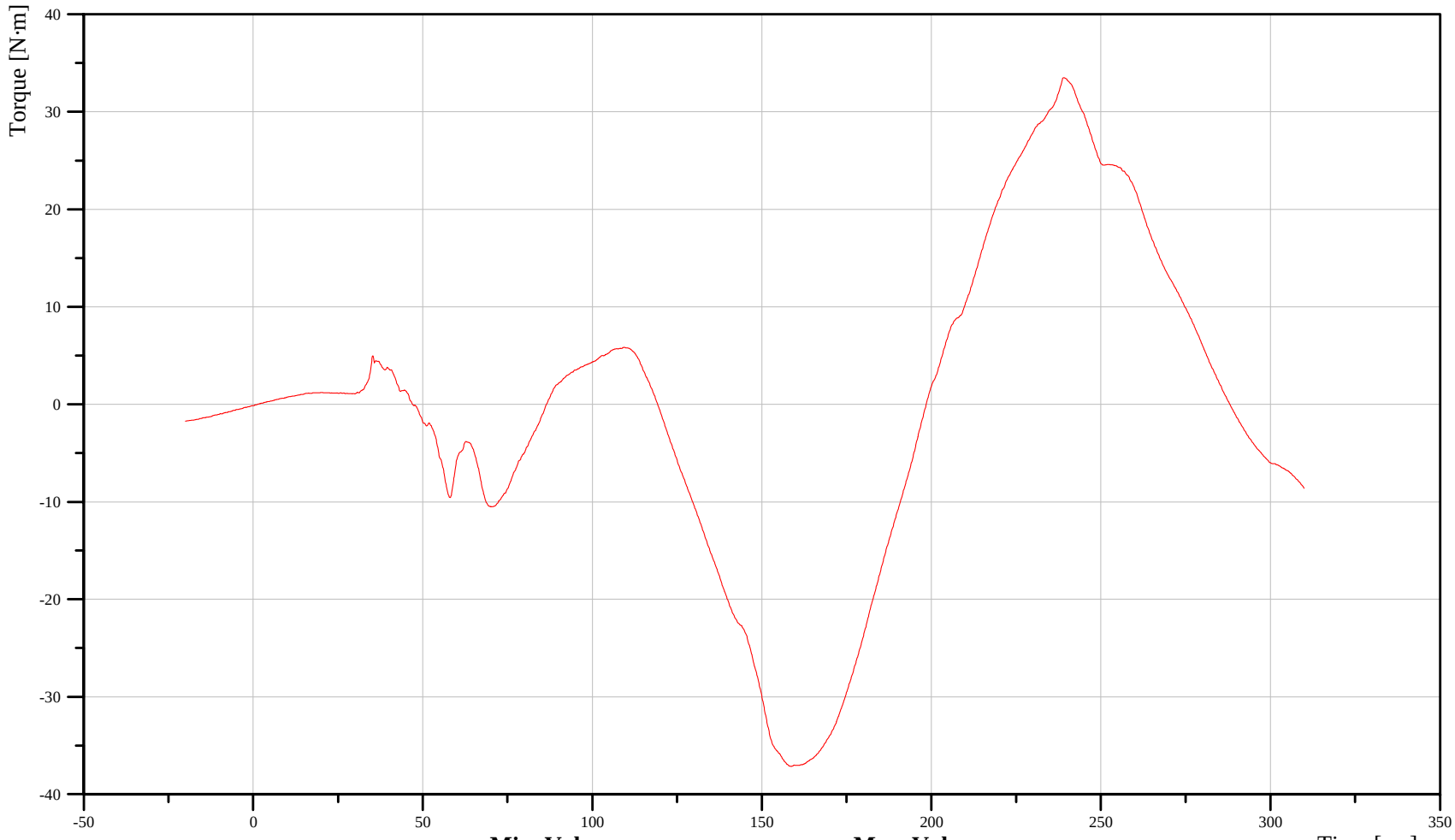
Neck Lower Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKLO00HFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-37.13 N·m at 158.72 ms

Max. Value
33.51 N·m at 239.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

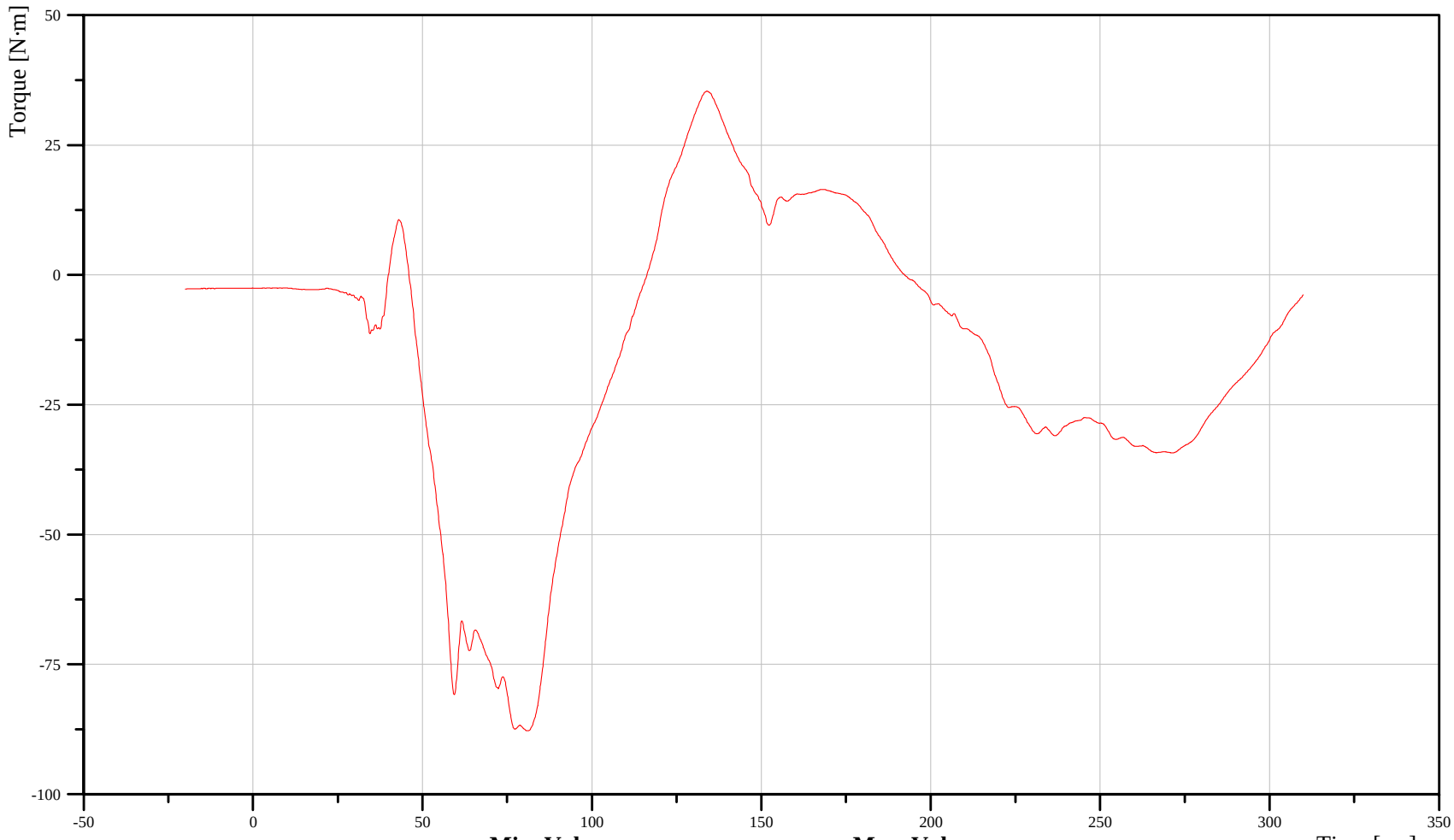
Neck Lower Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKLO00HFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-87.80 N·m at 81.20 ms

Max. Value
35.37 N·m at 134.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

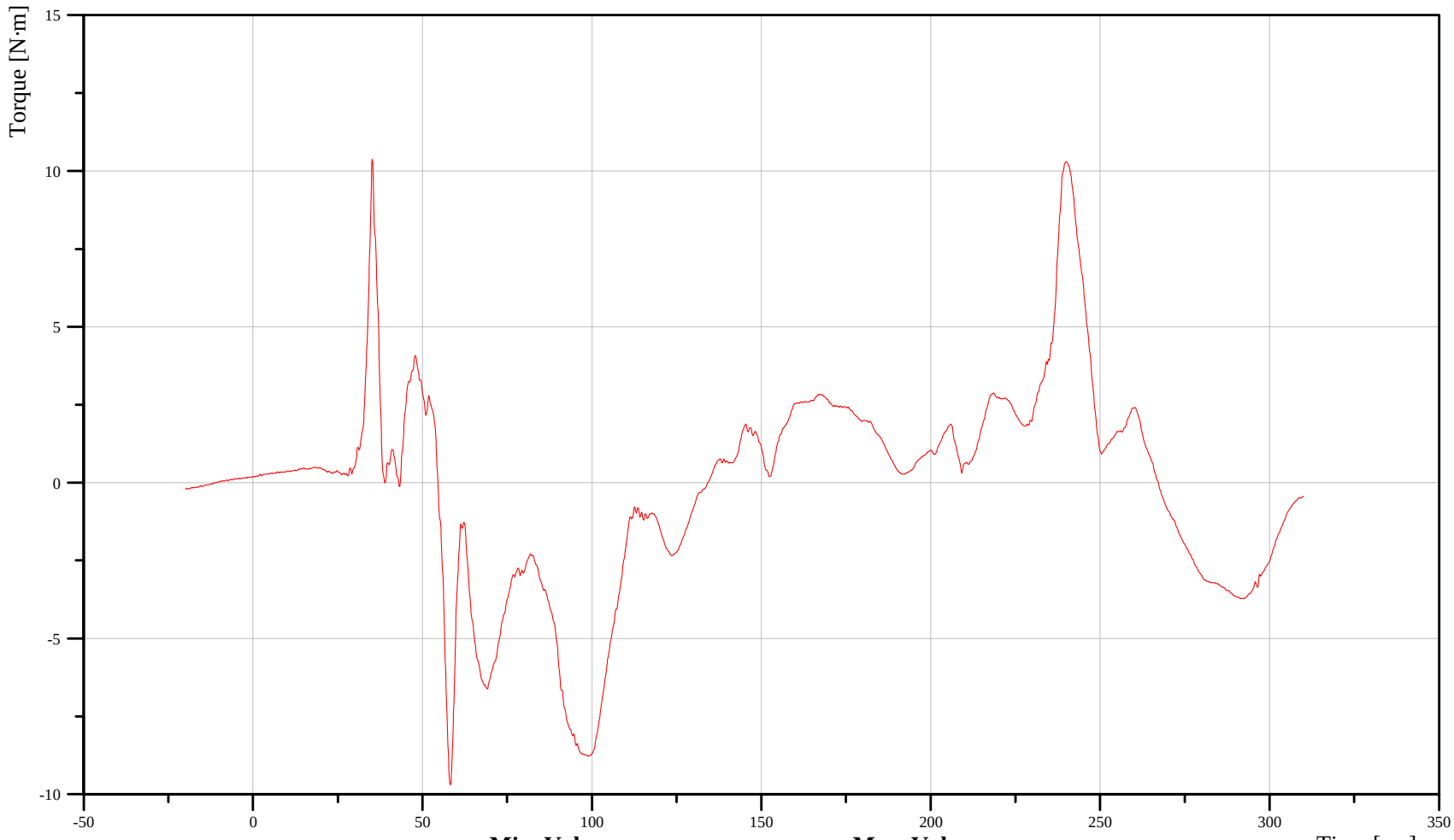
Neck Lower Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23NECKLO00HFMOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-9.69 N·m at 58.24 ms

Max. Value
10.37 N·m at 35.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

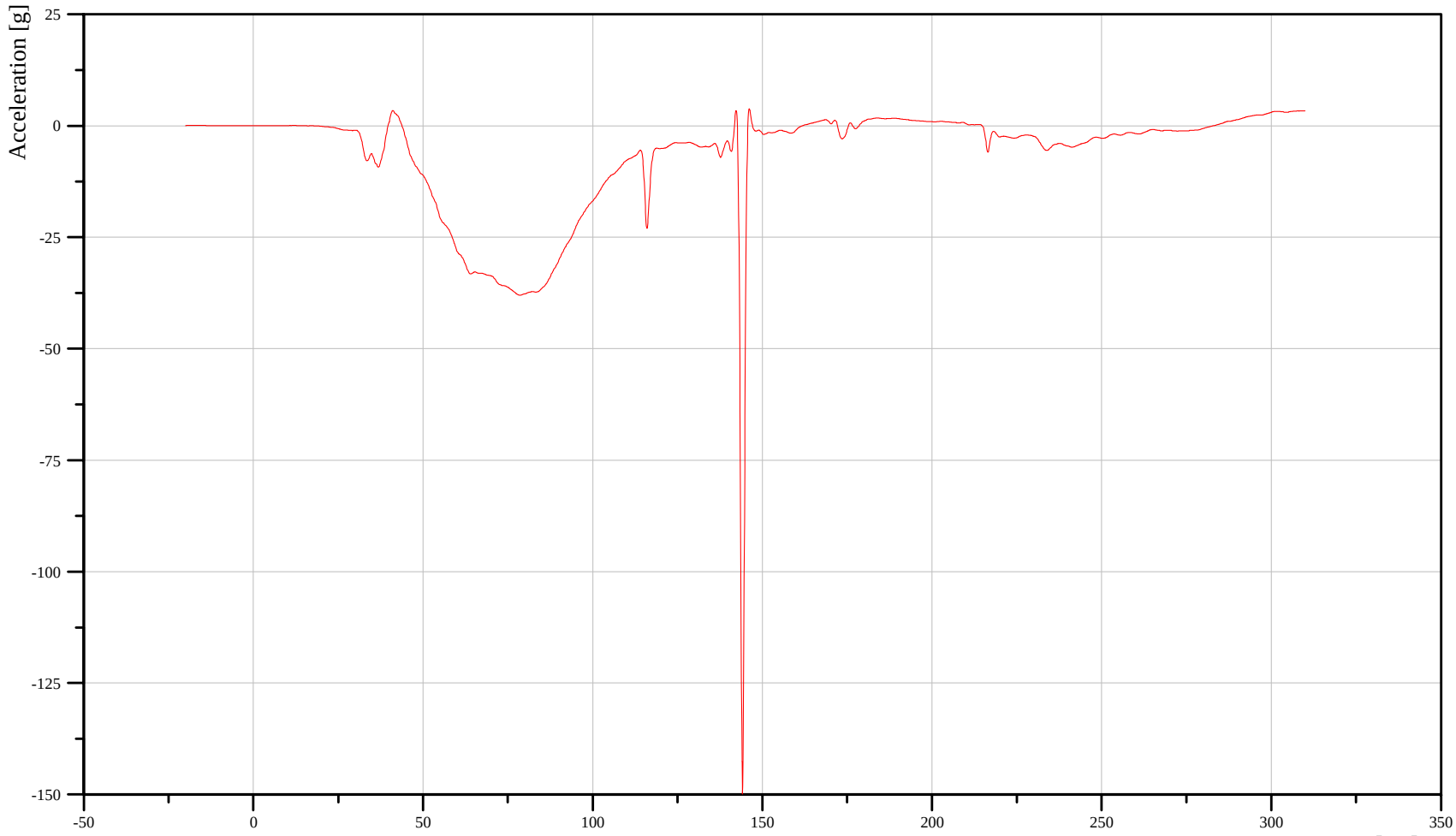
Chest Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23CHSTCG00HFACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-149.87 g at 144.16 ms

Max. Value
3.83 g at 146.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

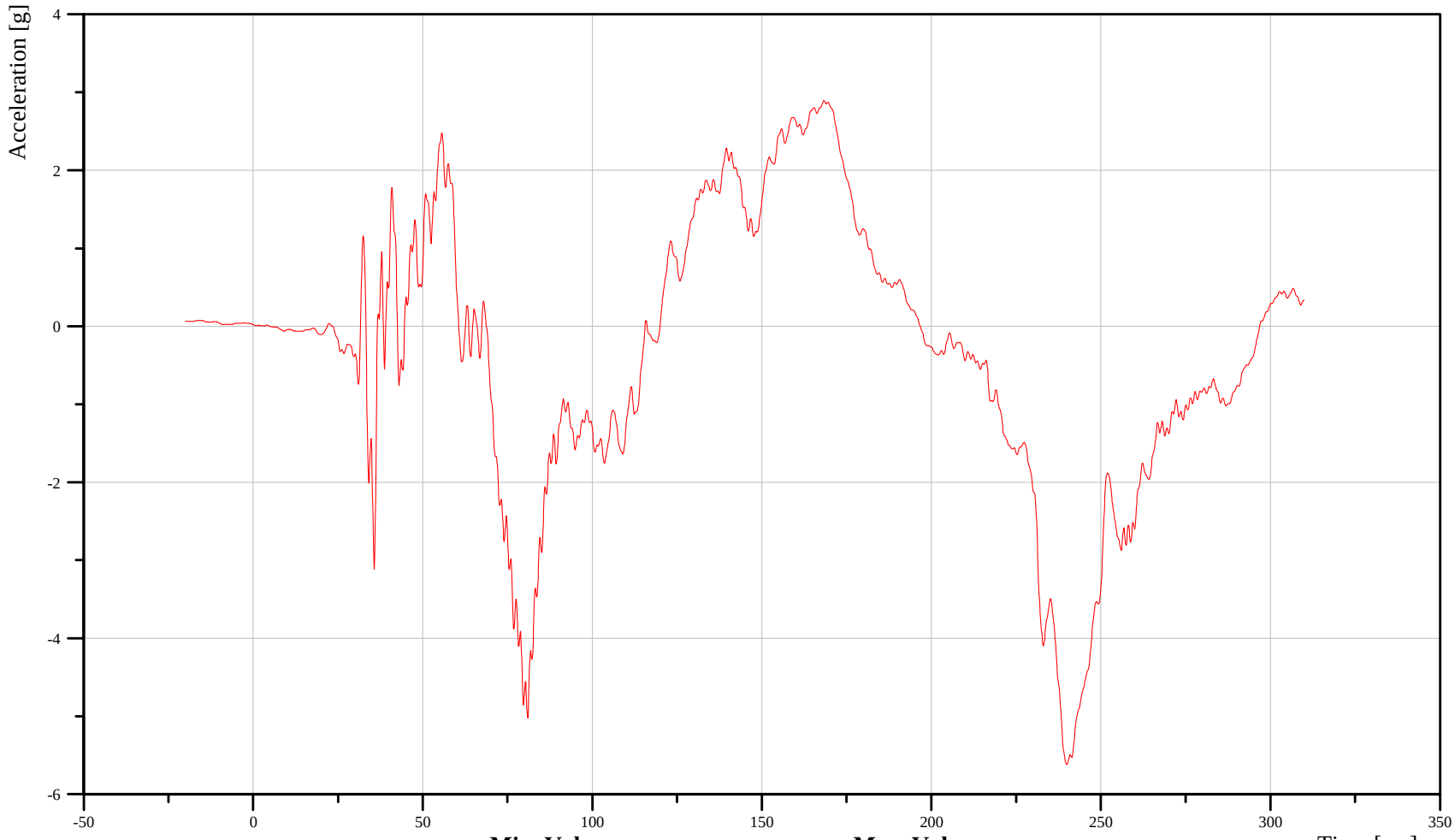
Chest Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23CHSTCG00HFACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-5.62 g at 239.92 ms

Max. Value
2.90 g at 168.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

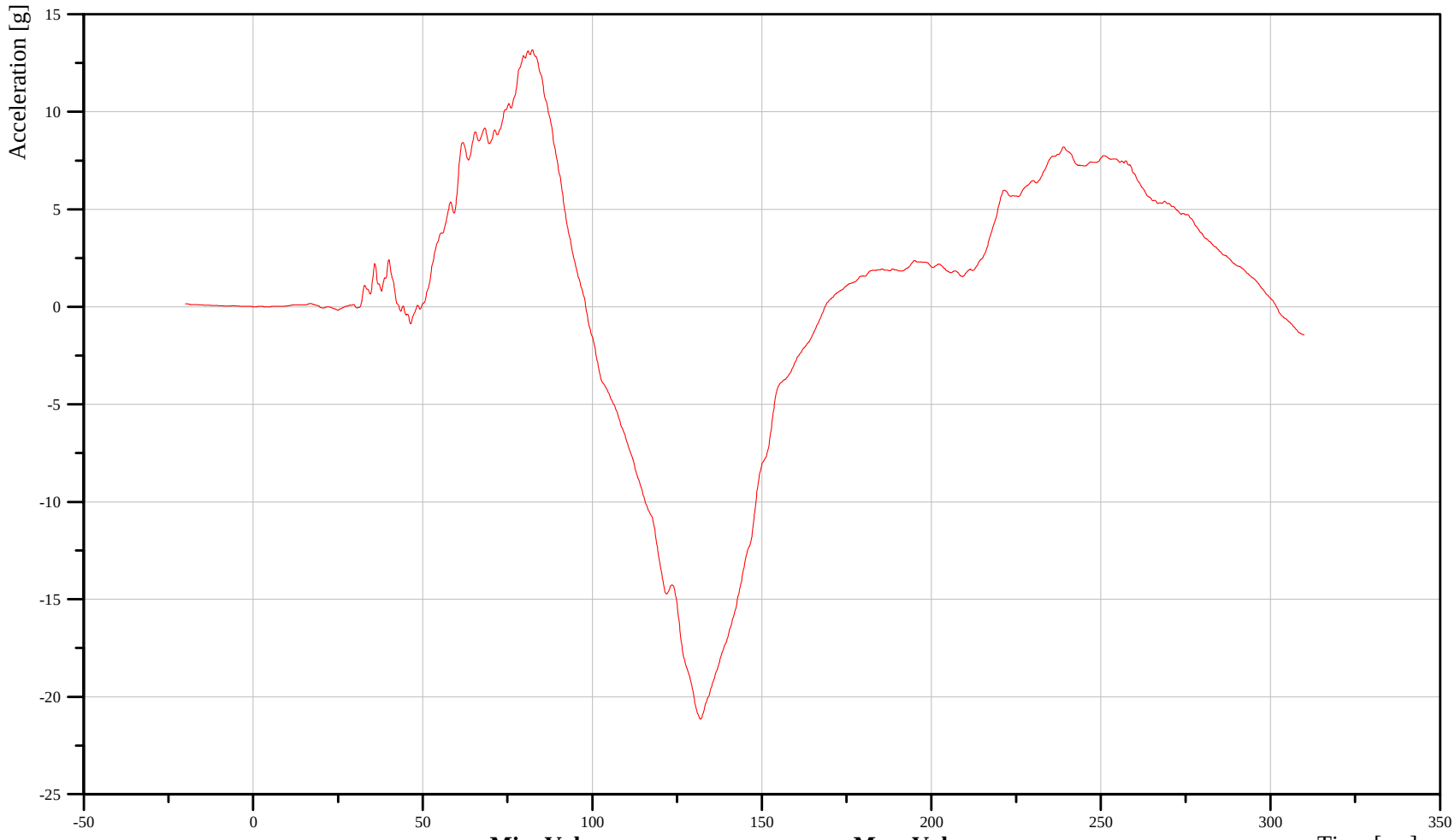
Chest Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23CHSTCG00HFACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-21.14 g at 131.92 ms

Max. Value
13.18 g at 82.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

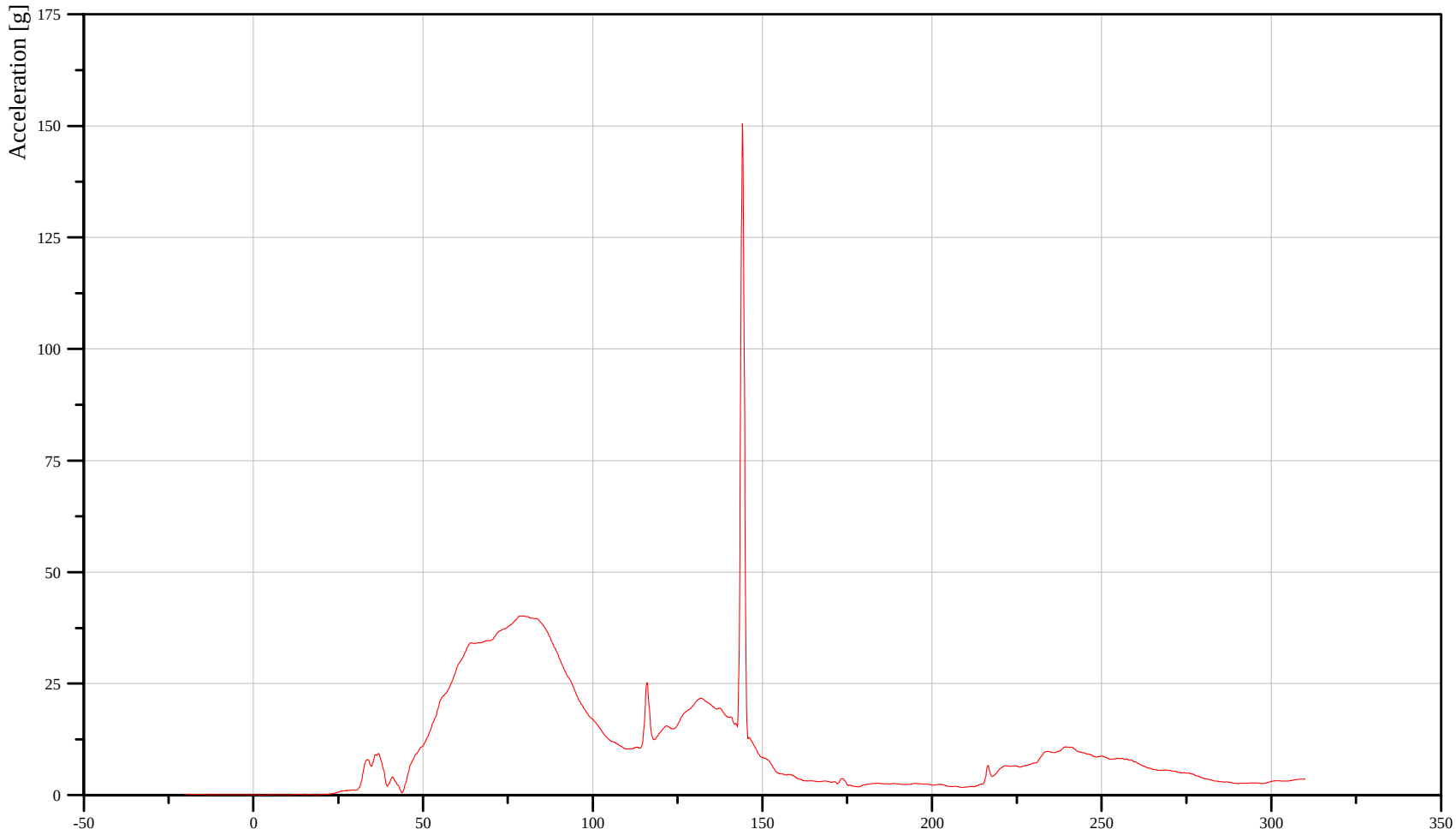
Chest Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23CHSTCG00HFACRC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.06 g at 3.28 ms

Max. Value
150.52 g at 144.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

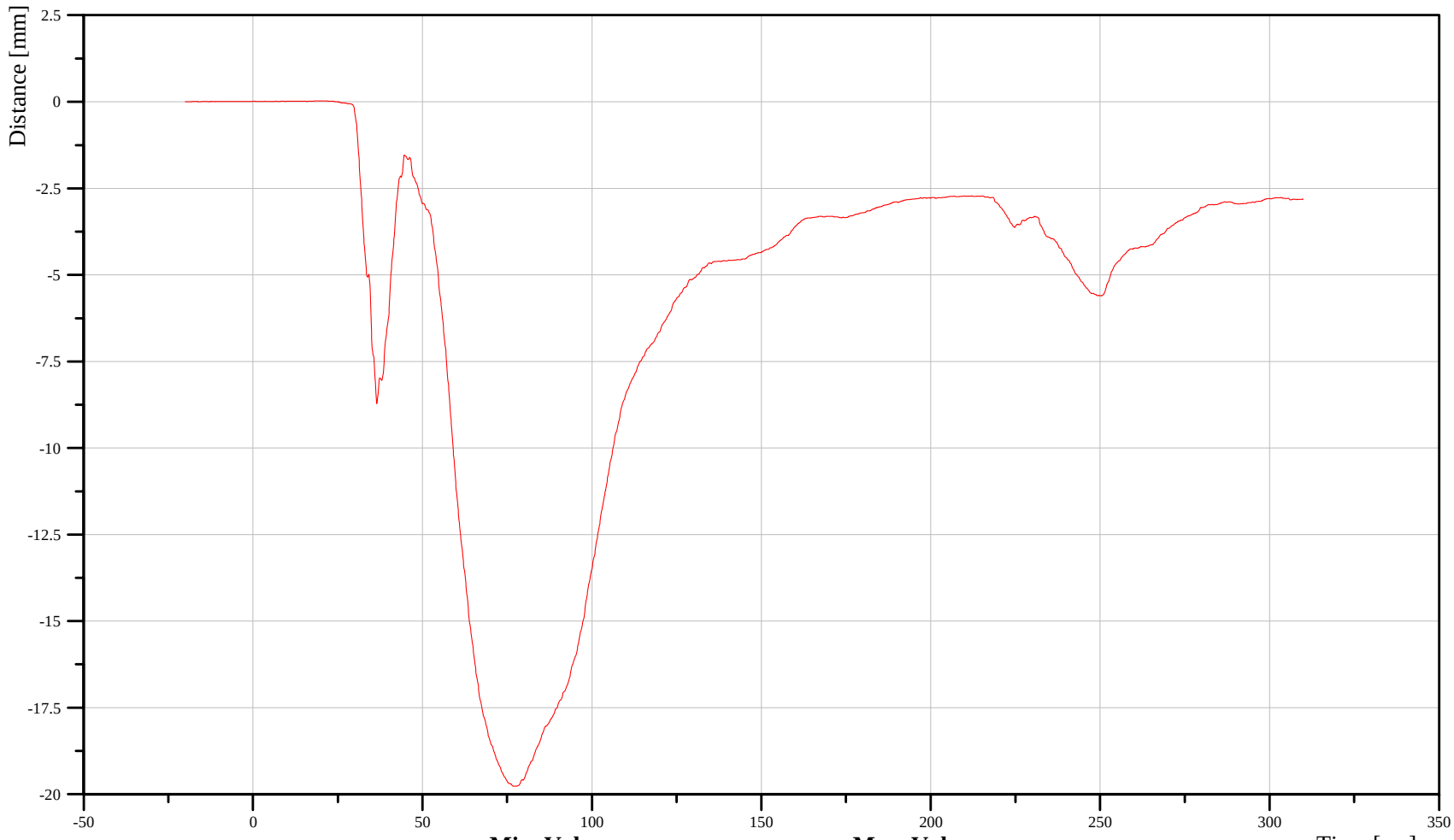
Chest Deflection X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23CHST0000HFDSXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-19.77 mm at 76.88 ms

Max. Value
0.02 mm at 19.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

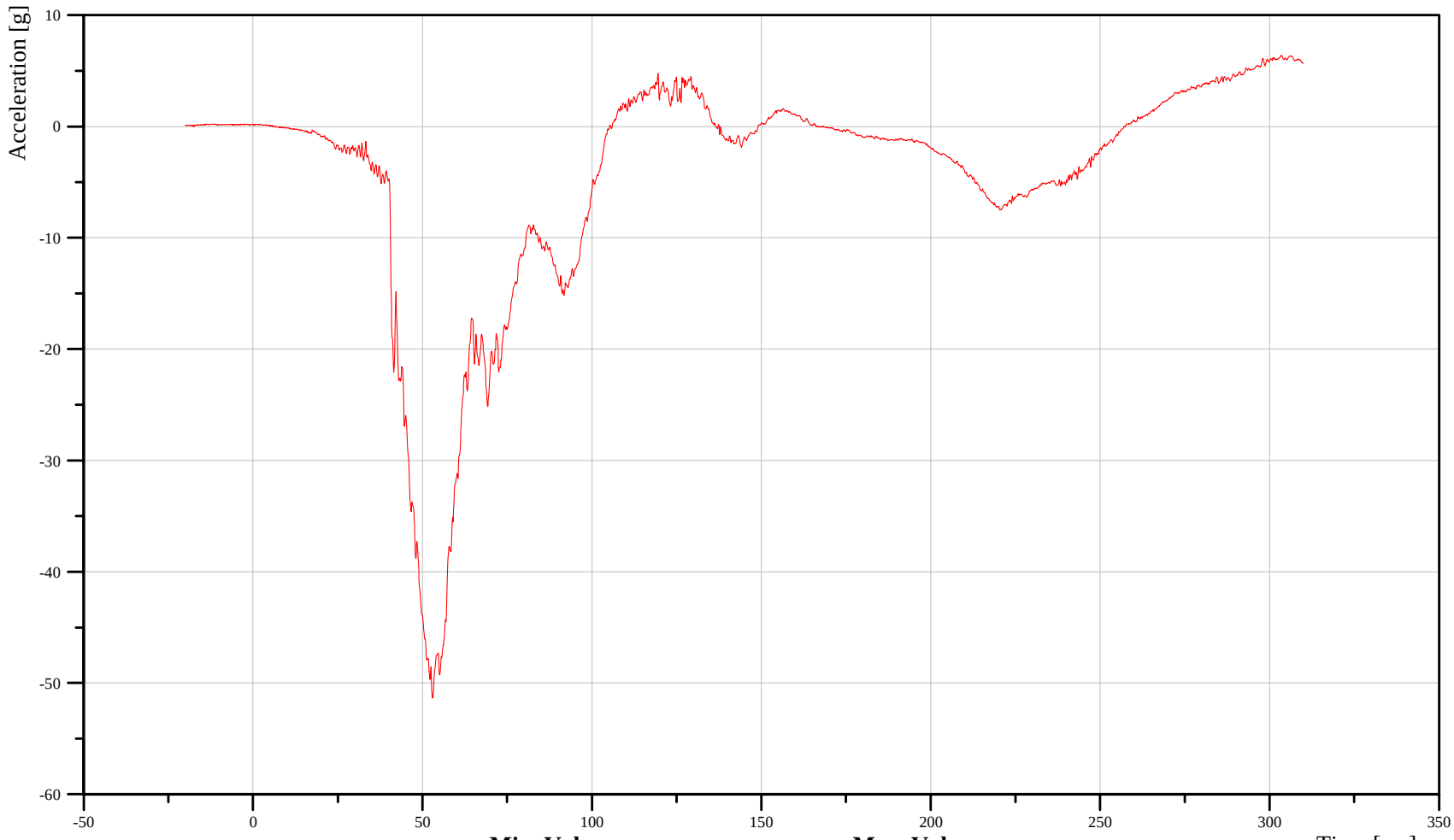
Pelvis Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23PELVCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-51.35 g at 52.96 ms

Max. Value
6.40 g at 303.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

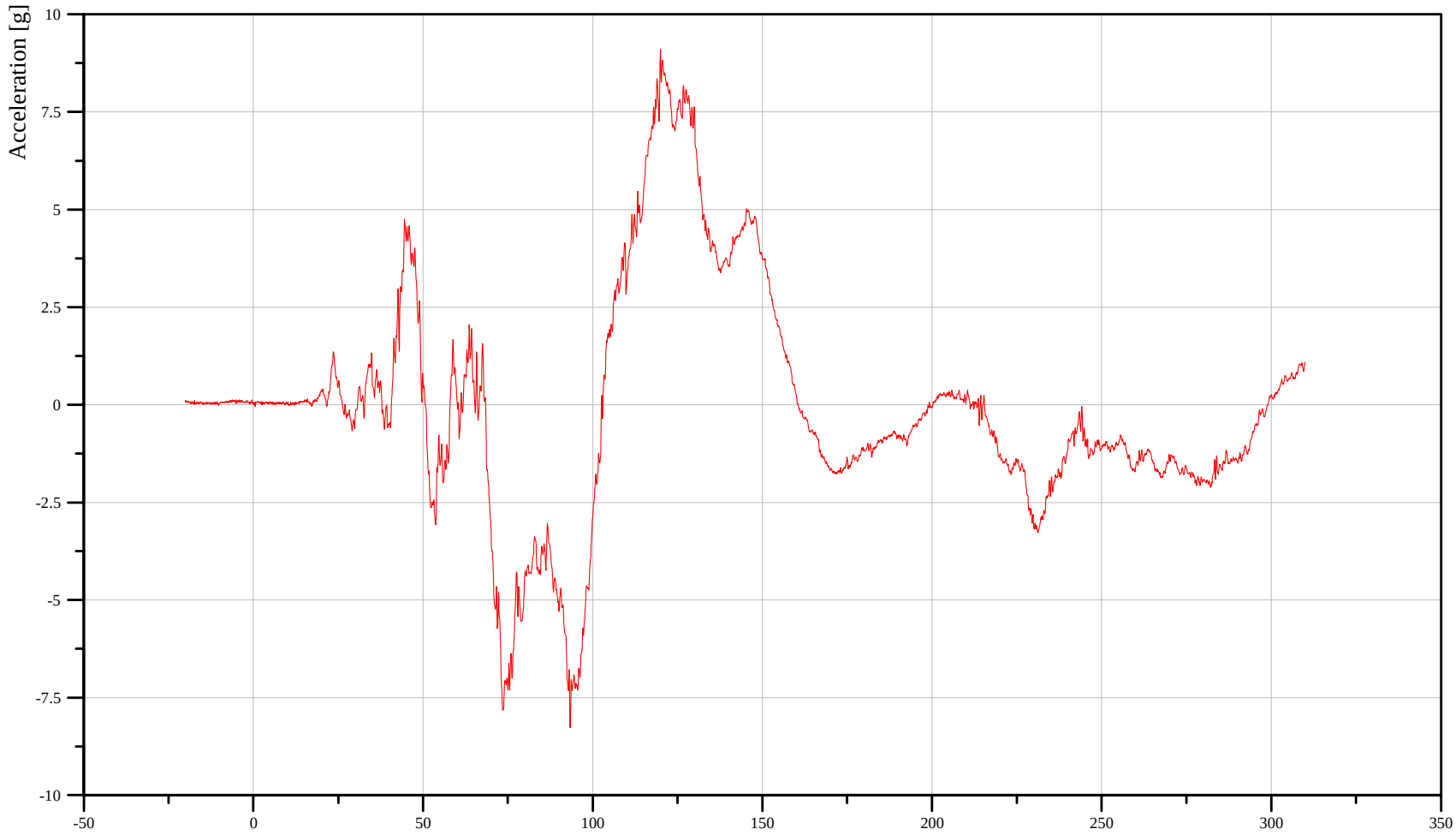
Pelvis Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23PELVCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-8.27 g at 93.36 ms

Max. Value
9.10 g at 119.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

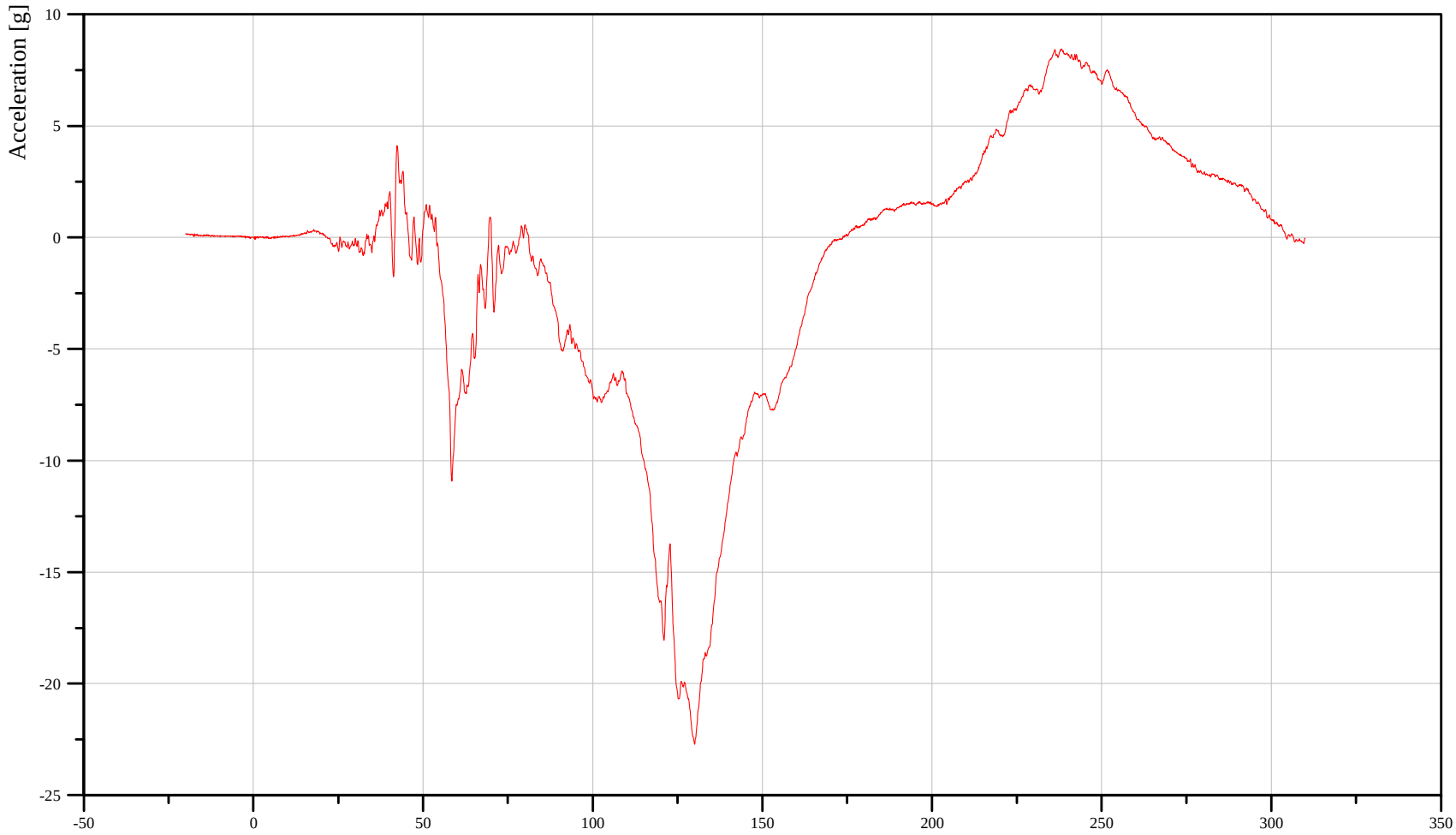
Pelvis Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23PELVCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-22.72 g at 130.08 ms

Max. Value
8.45 g at 238.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

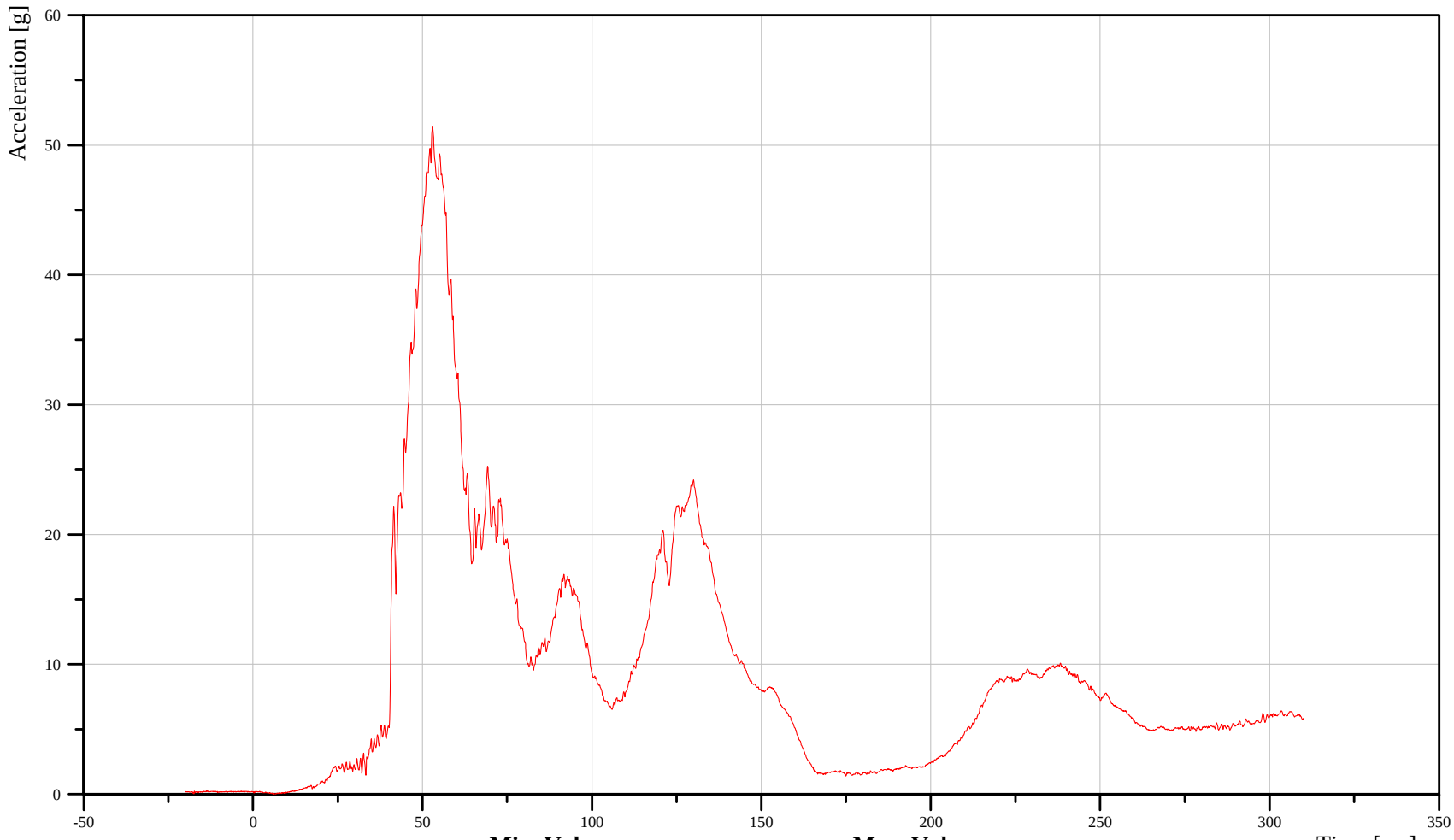
Pelvis Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23PELVCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.01 g at 6.56 ms

Max. Value
51.42 g at 52.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

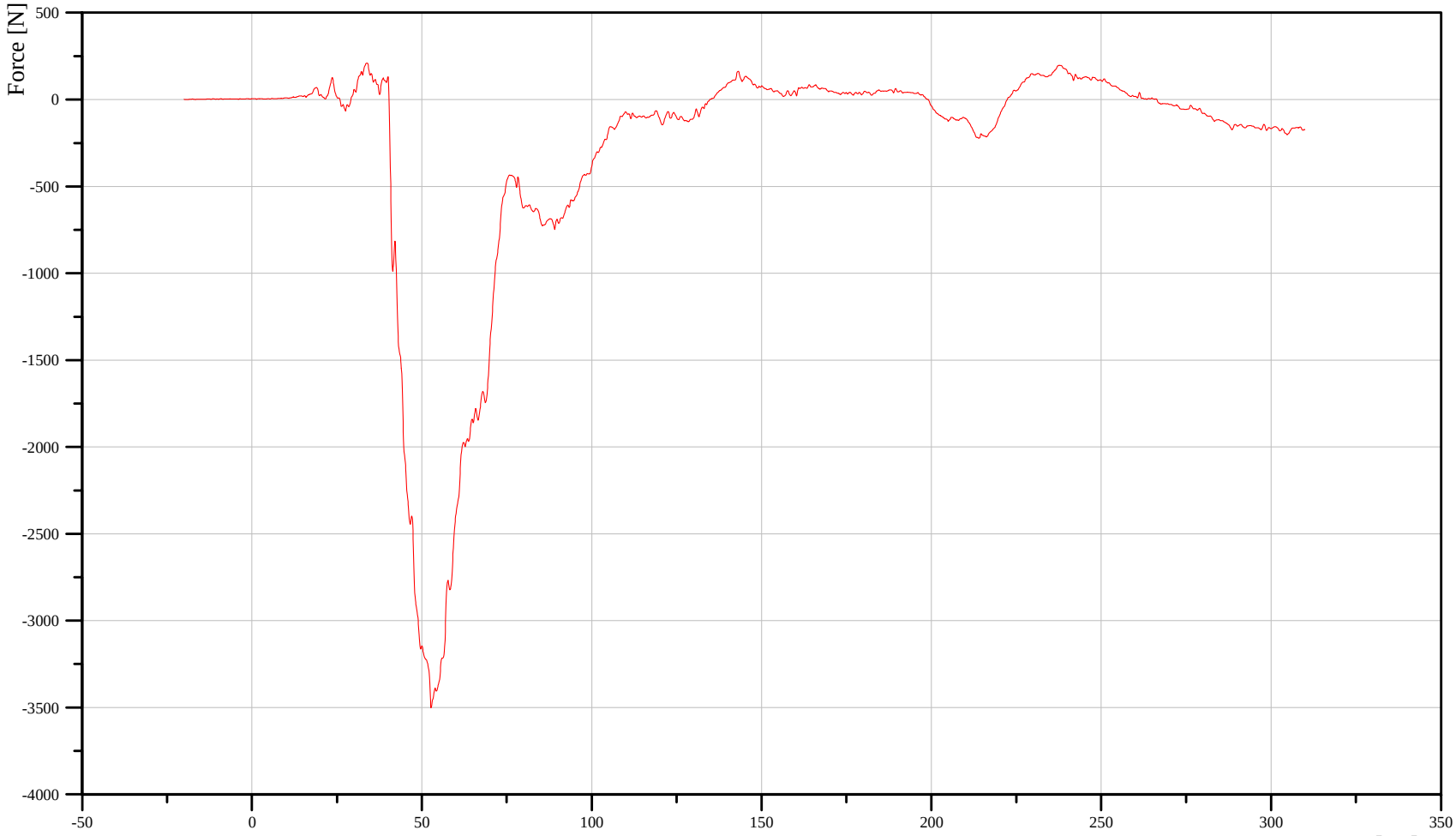
Left Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,501.14 N at 52.72 ms

Max. Value
210.14 N at 33.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

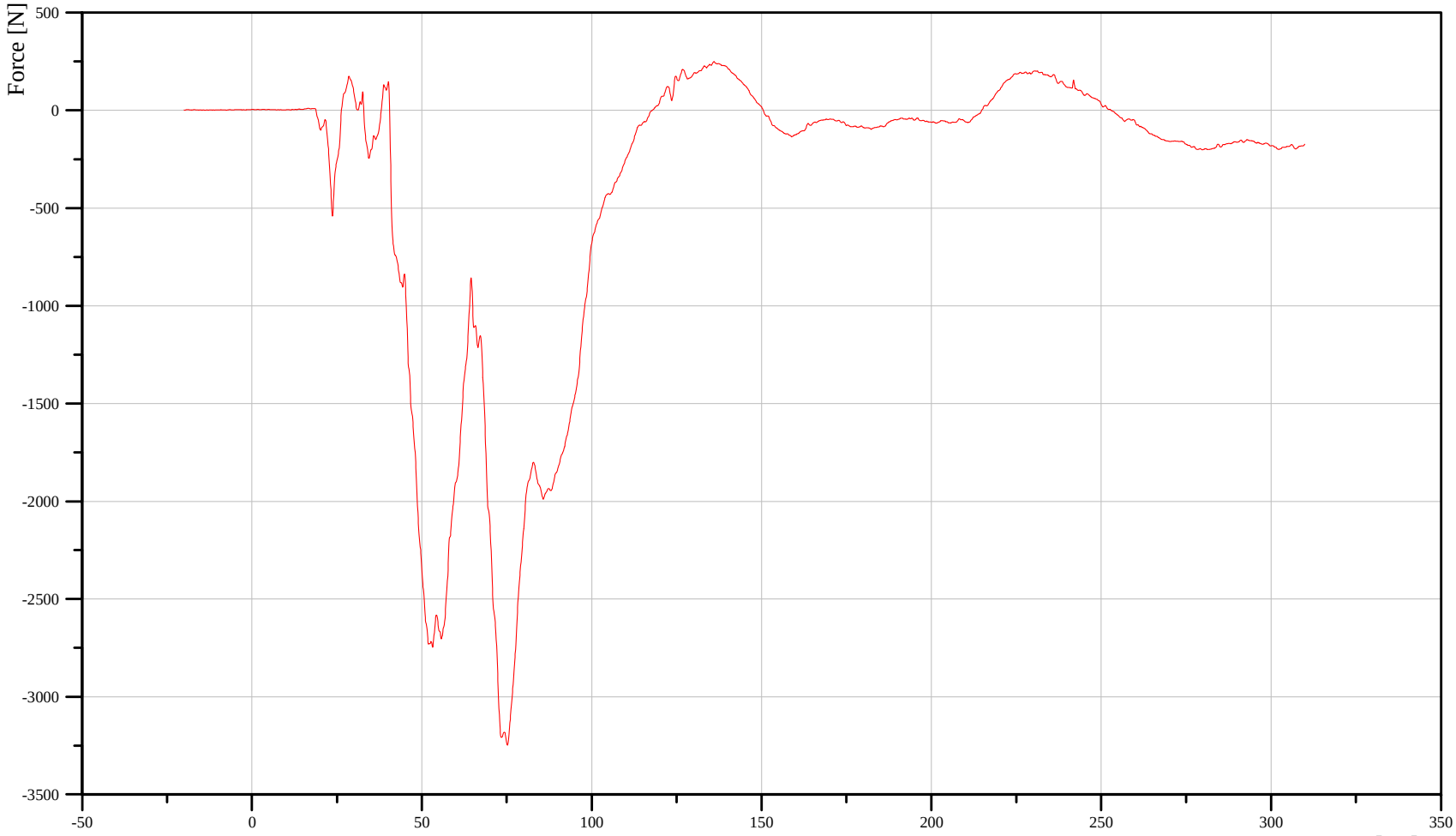
Right Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,247.56 N at 75.20 ms

Max. Value
248.28 N at 135.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

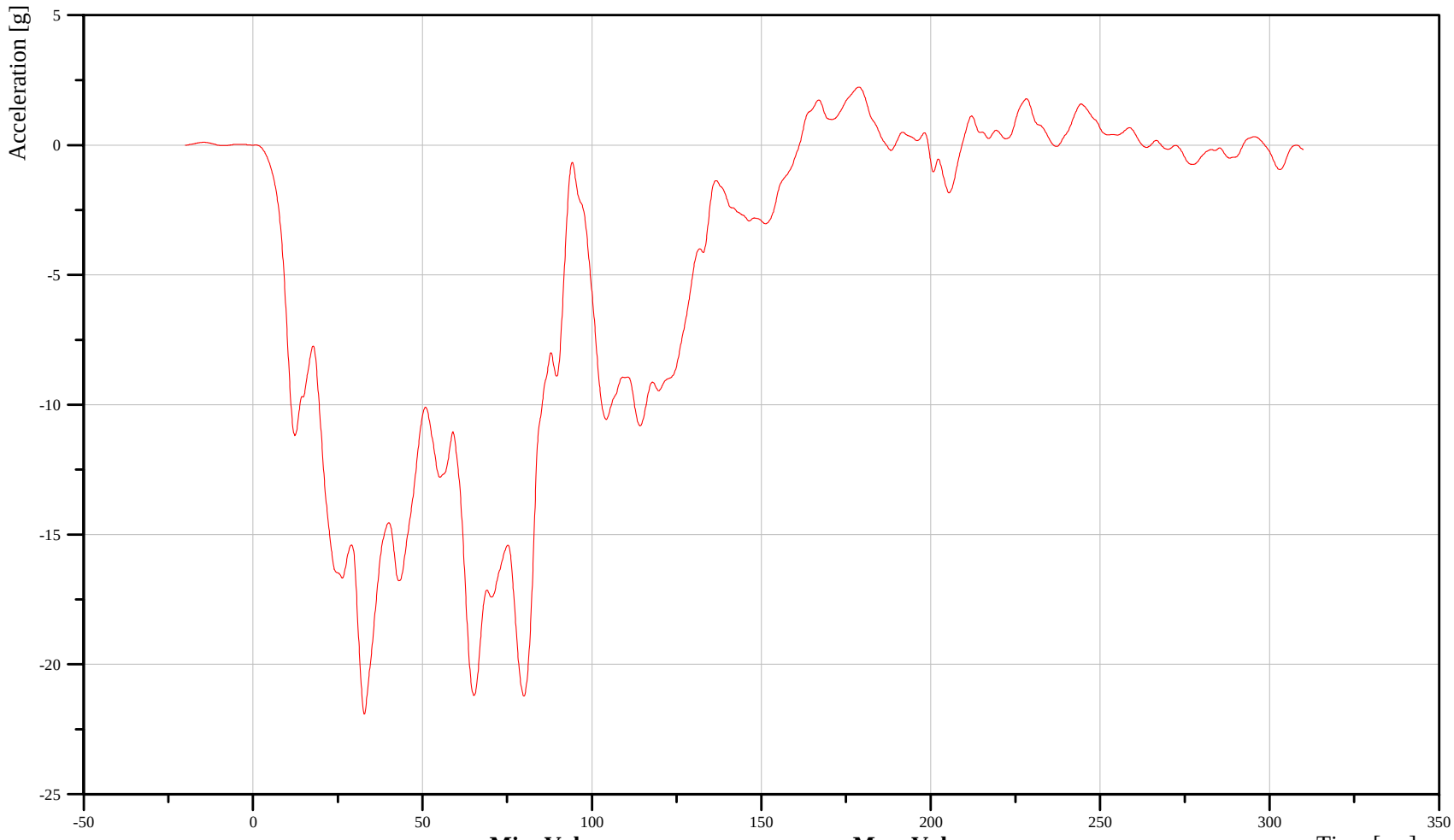
Left Rear Seat Cross-member X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

24CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-21.91 g at 32.88 ms

Max. Value
2.23 g at 178.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

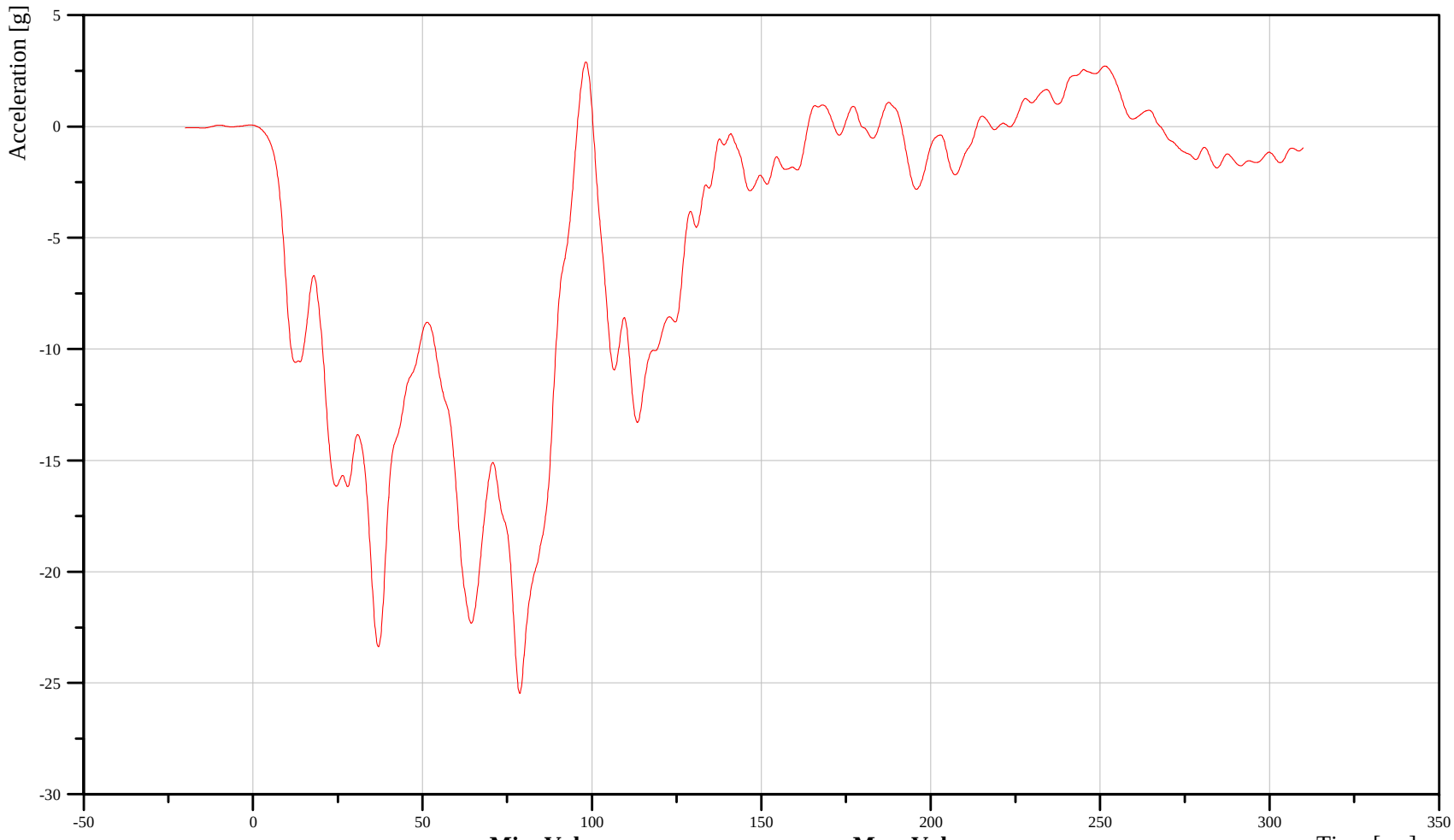
Right Rear Seat Cross-member X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

26CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-25.47 g at 78.72 ms

Max. Value
2.91 g at 98.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

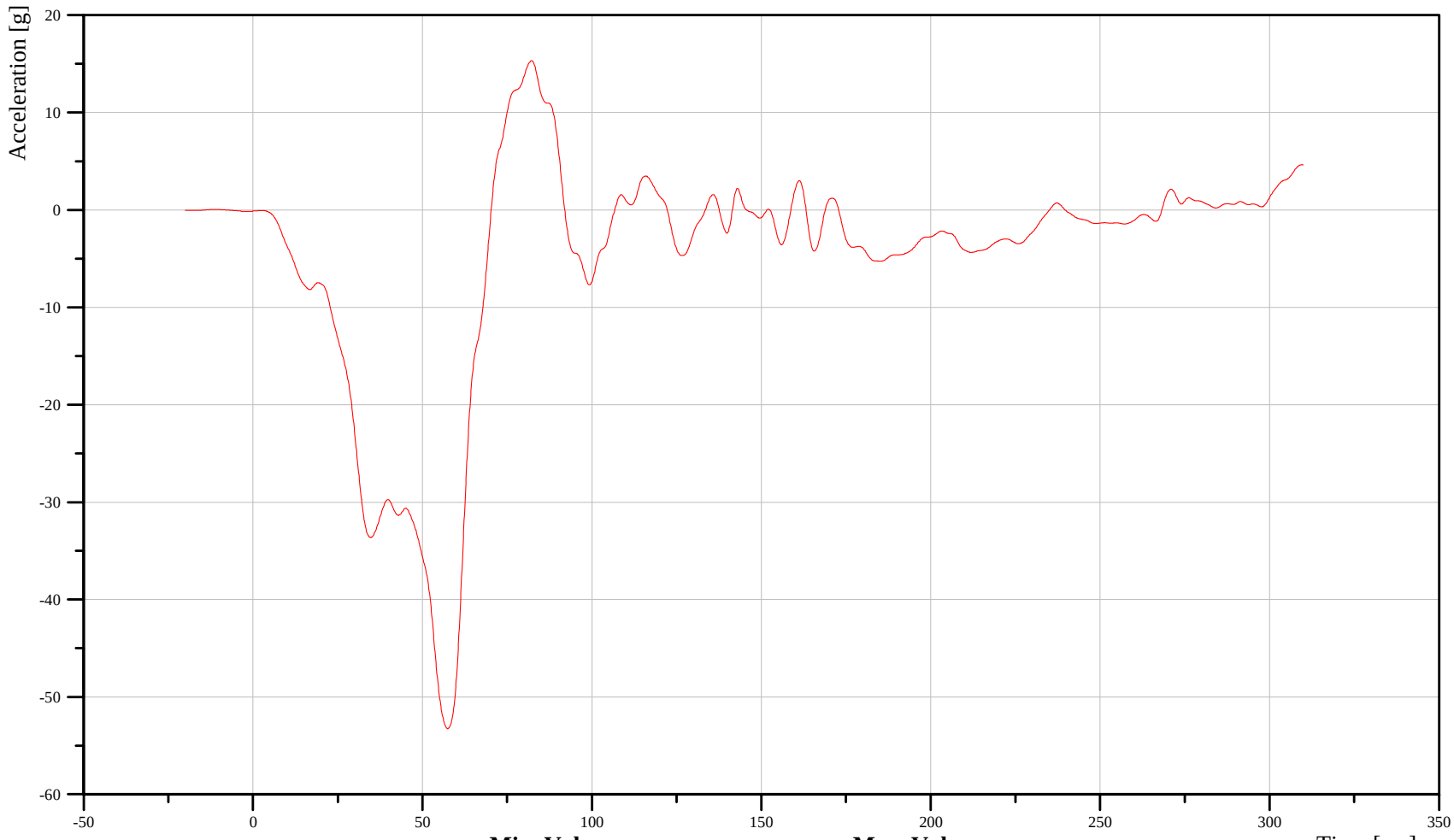
Top of Engine X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

22ENGNTP0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-53.25 g at 57.44 ms

Max. Value
15.34 g at 82.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

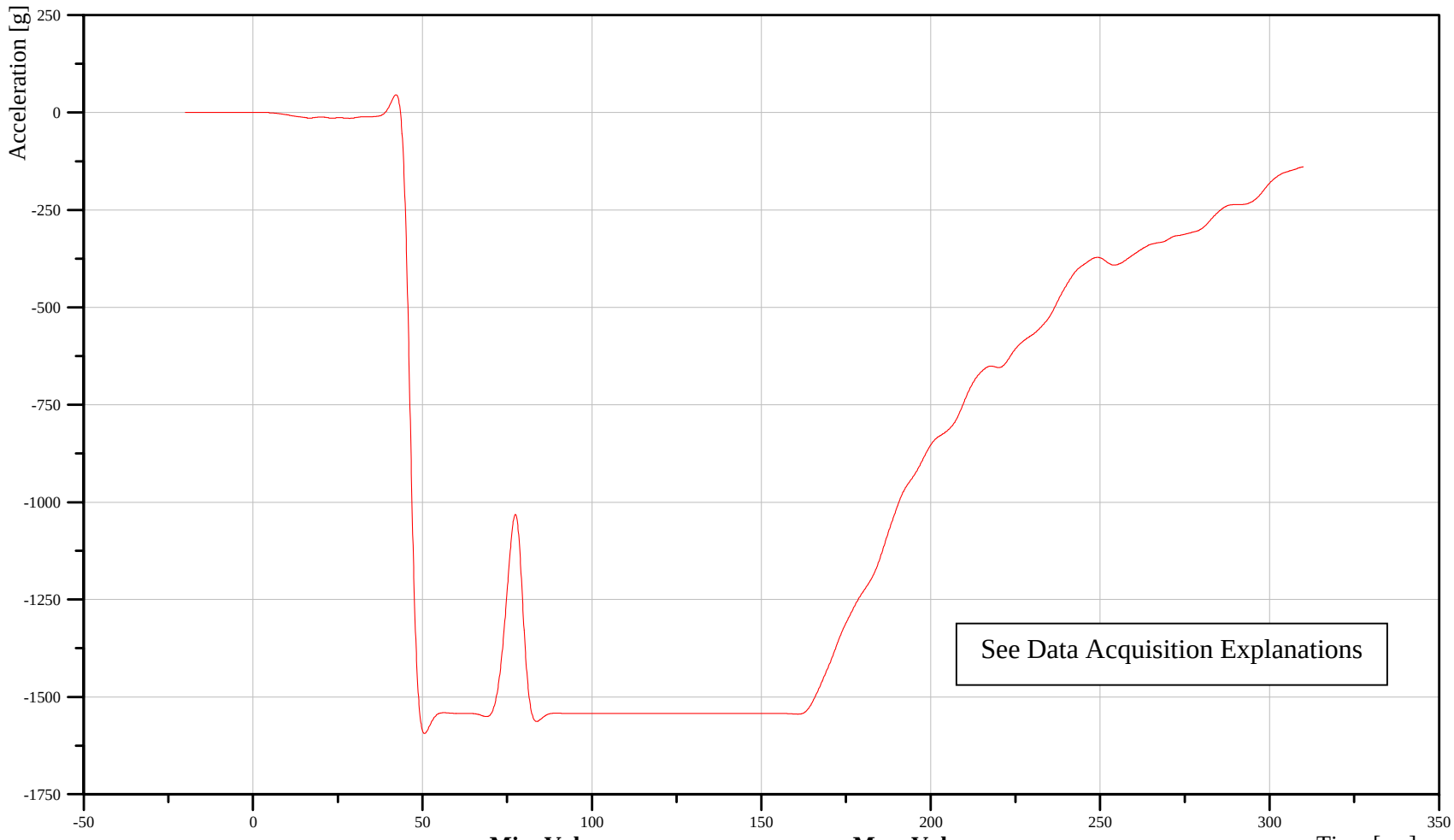
Bottom of Engine X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

22ENGNBO0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-1,593.91 g at 50.64 ms

Max. Value
45.78 g at 42.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

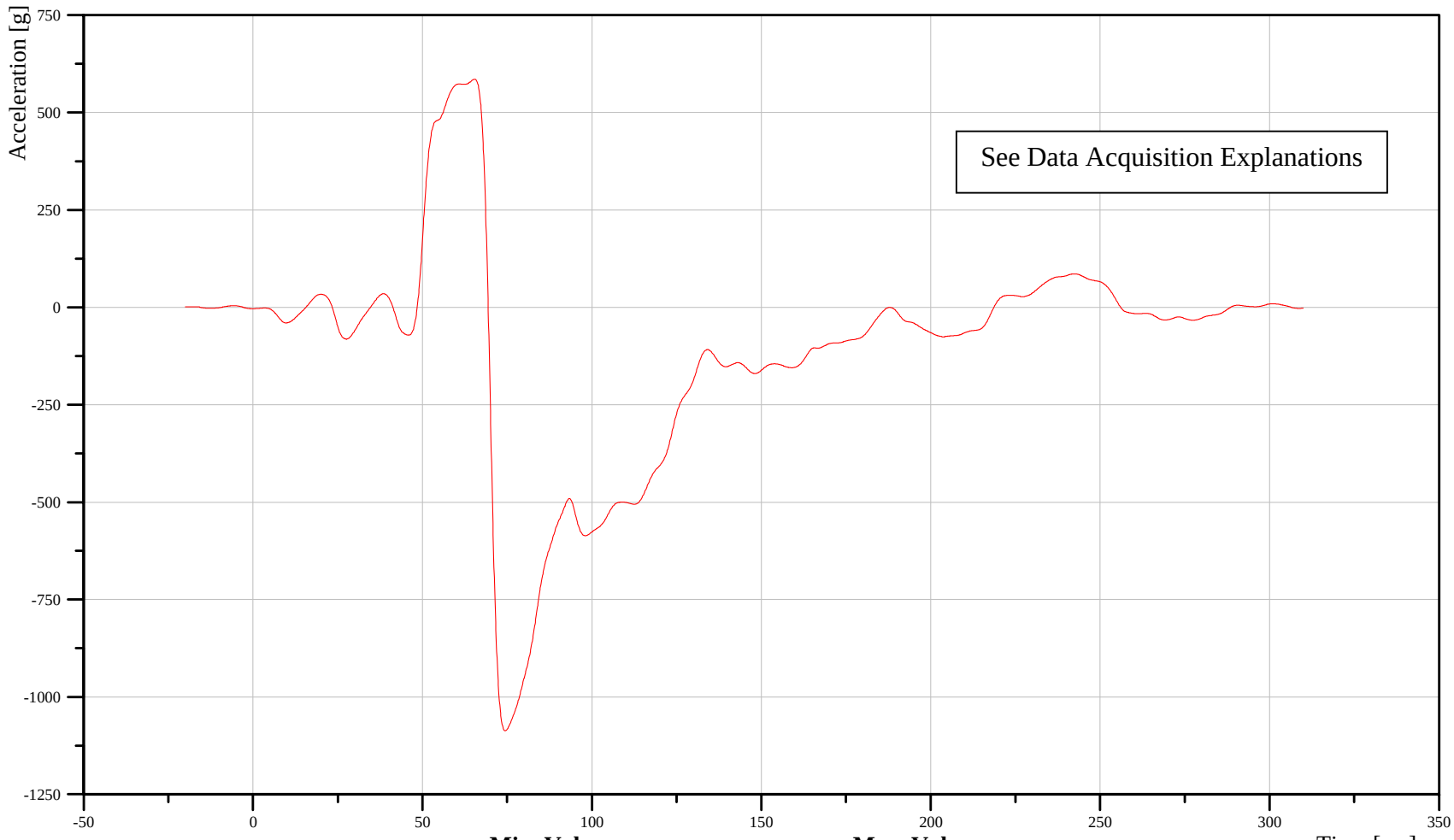
Right Front Brake Caliper X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23VEHCRI0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-1,087.10 g at 74.40 ms

Max. Value
585.71 g at 65.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

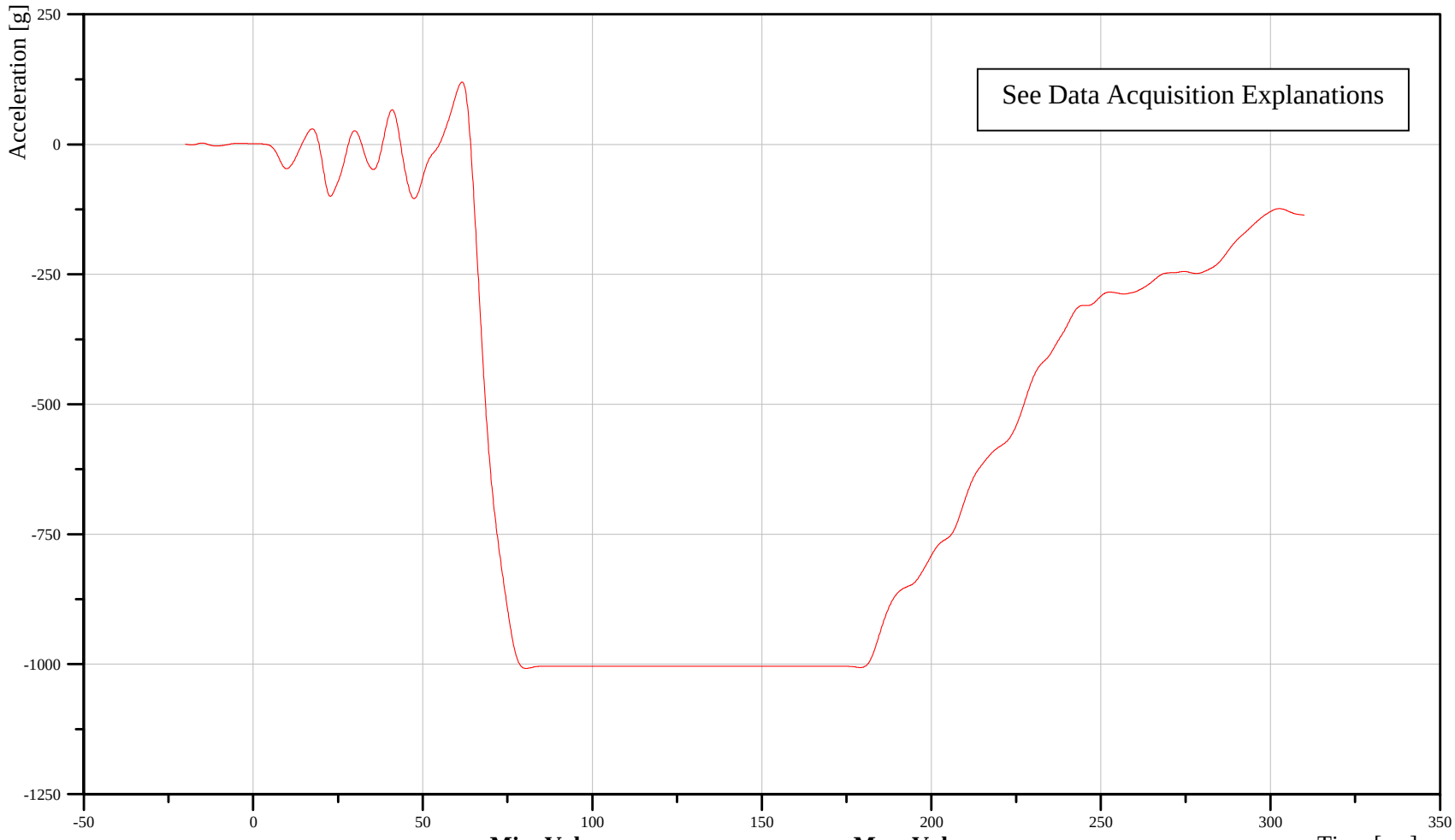
Left Front Brake Caliper X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21VEHCLE0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-1,007.95 g at 80.48 ms

Max. Value
119.68 g at 61.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

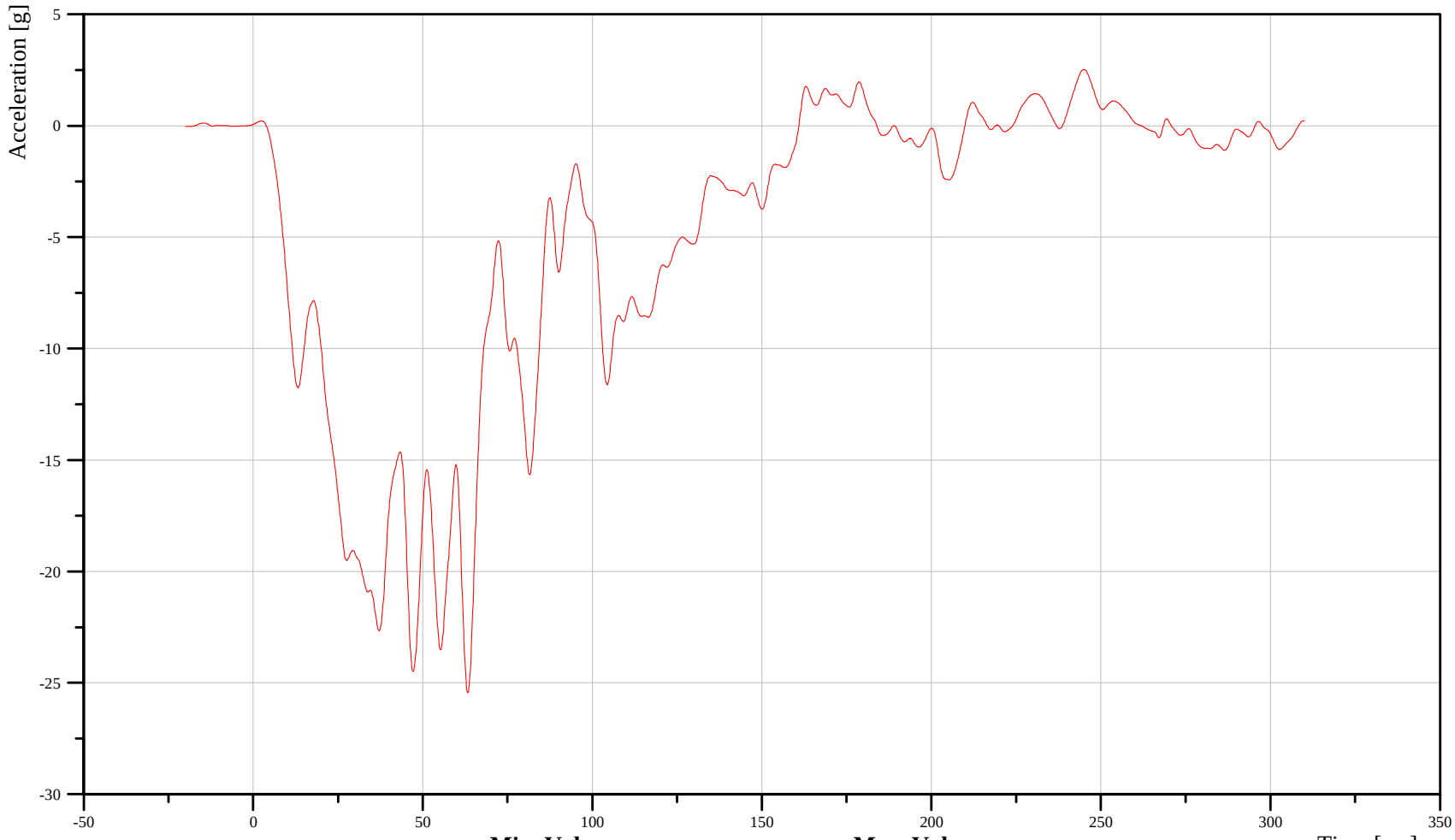
Toe Pan Accelerator x-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21PEAC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-25.45 g at 63.28 ms

Max. Value
2.53 g at 245.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

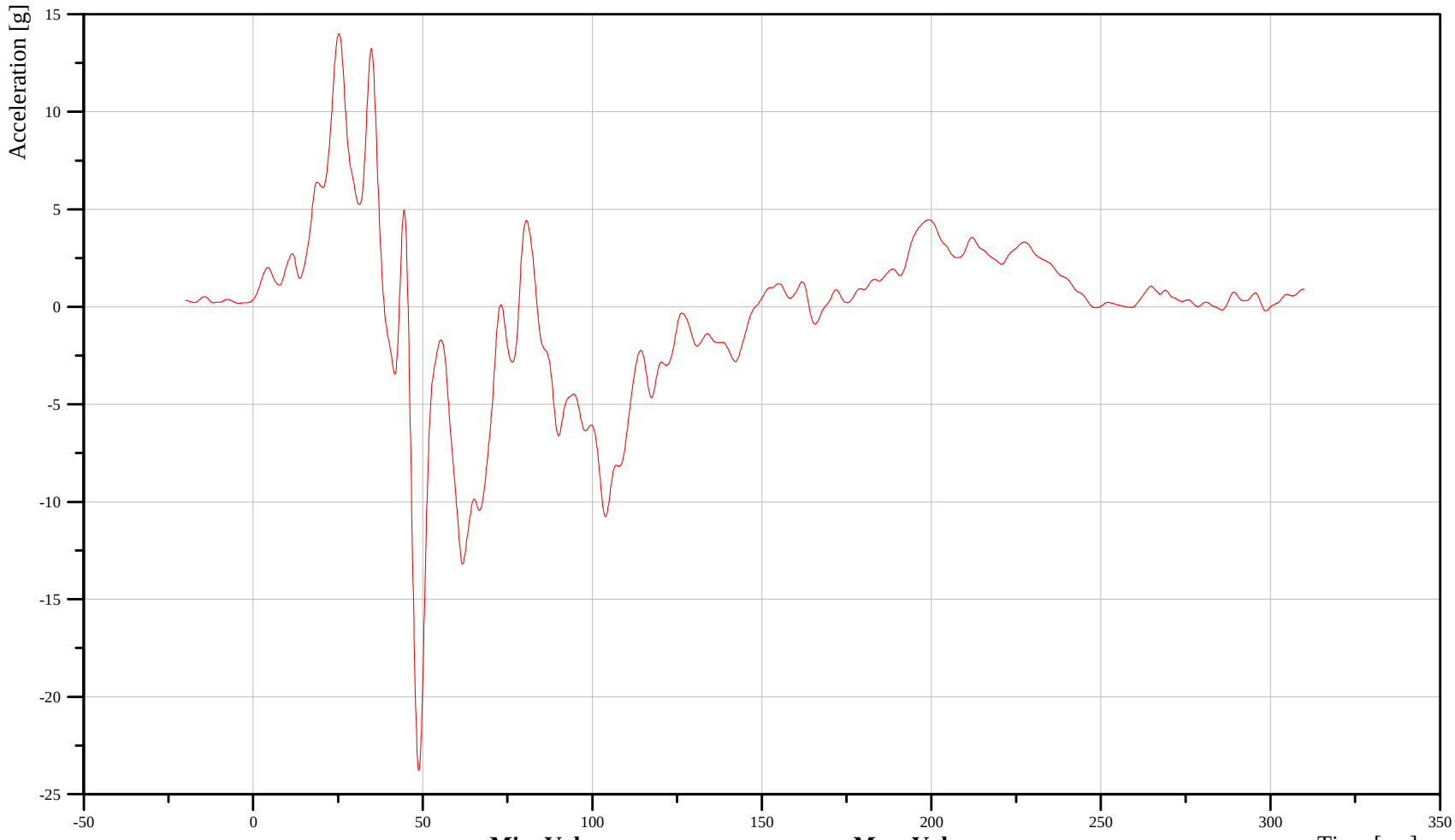
Toe Pan Accelerator z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21PEAC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-23.77 g at 48.88 ms

Max. Value
14.01 g at 25.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

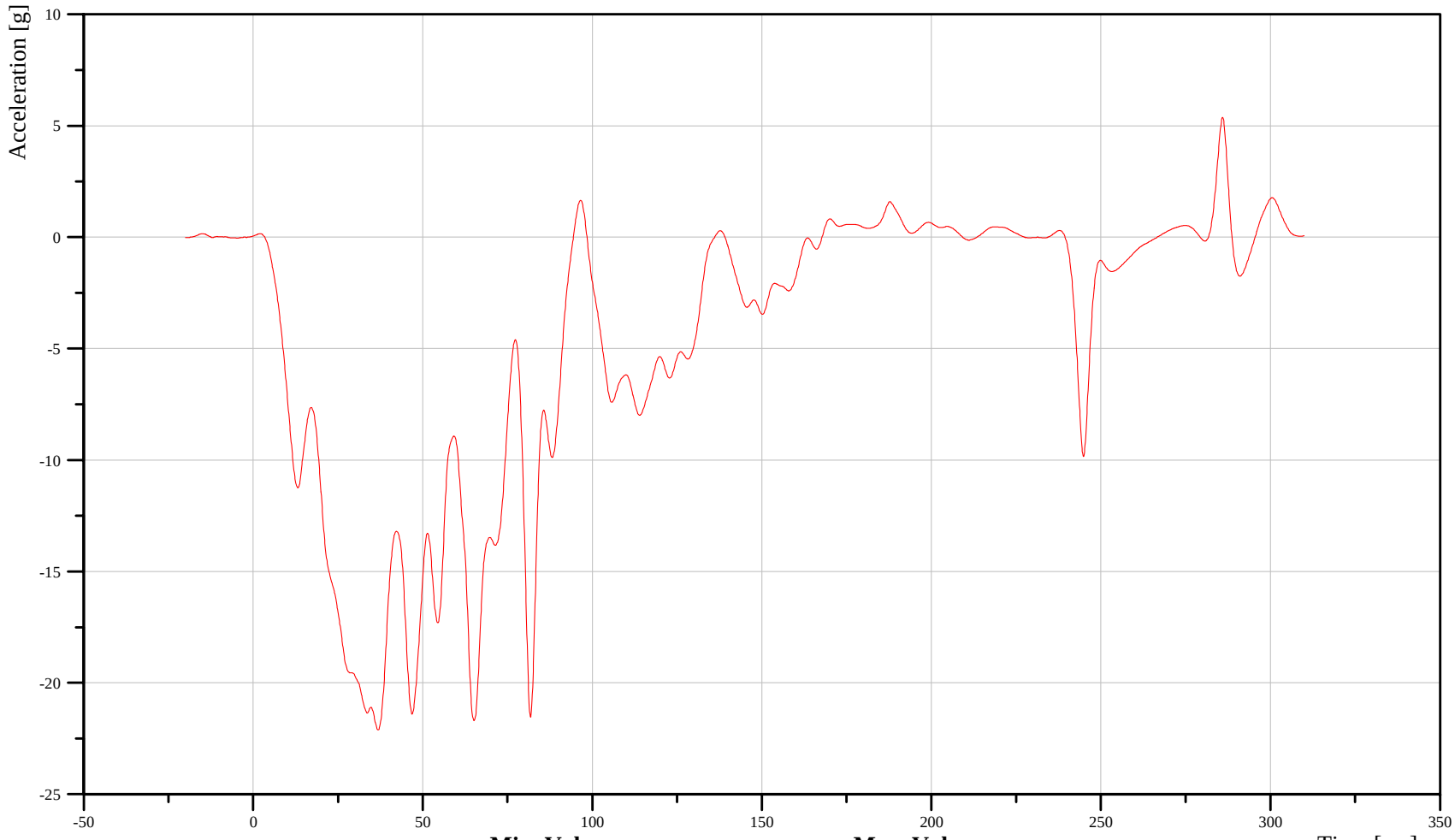
Toe Pan footrest x-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21VEHC000001ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-22.11 g at 36.80 ms

Max. Value
5.39 g at 285.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

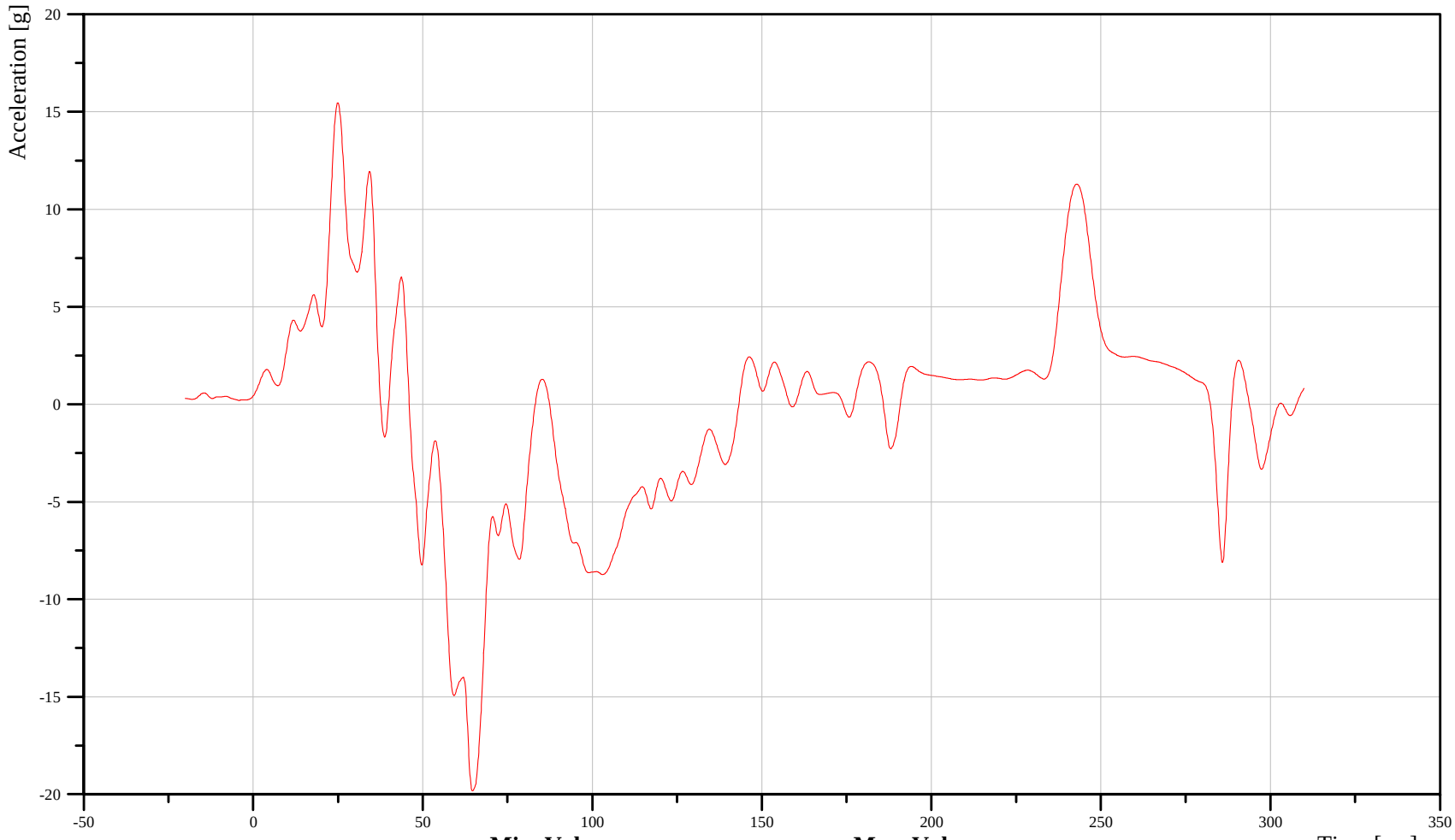
Toe Pan footrest z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21VEHC000001ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-19.82 g at 64.64 ms

Max. Value
15.46 g at 24.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

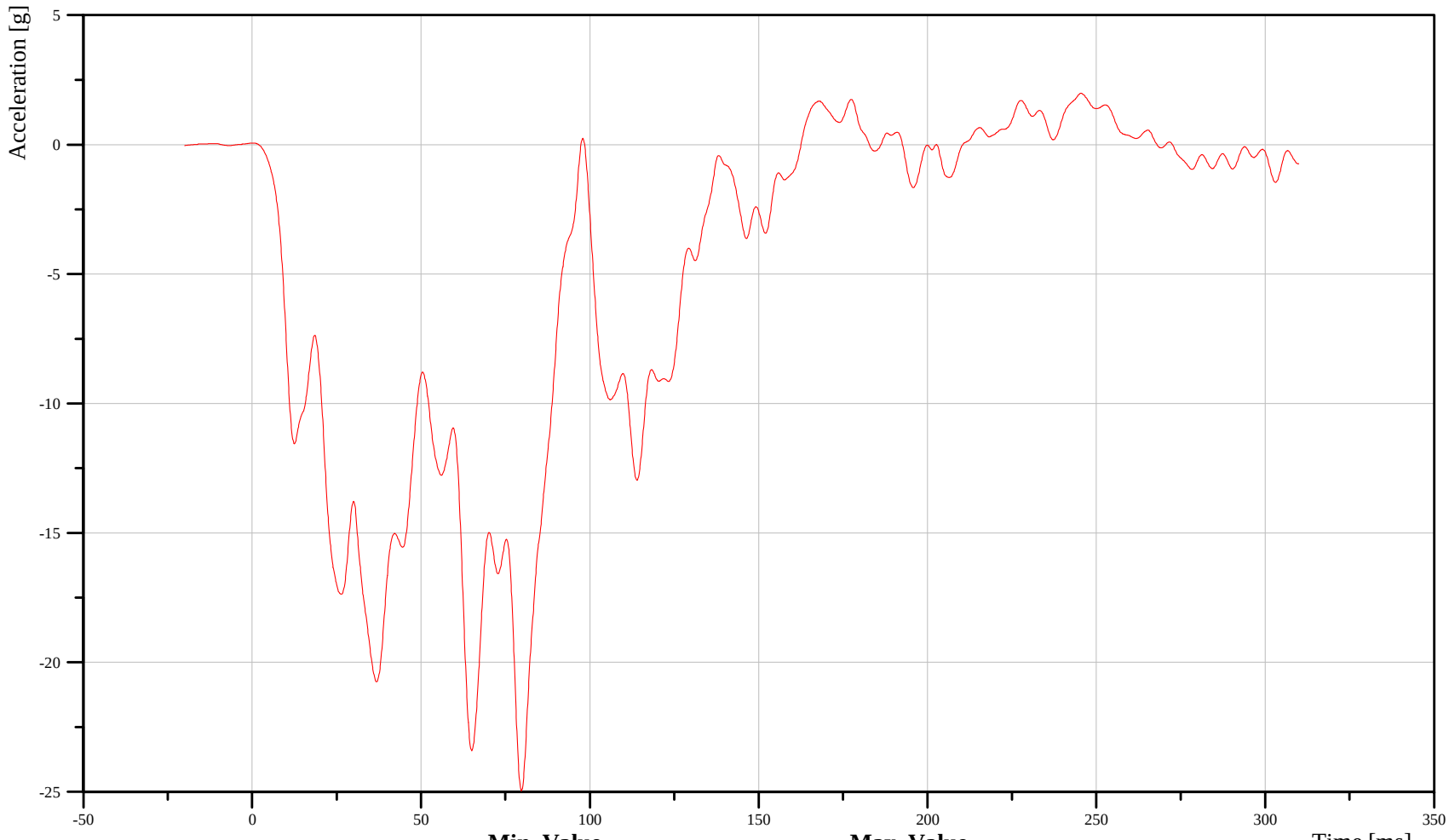
Rear Tunnel center x-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

25TUNNCY0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-24.96 g at 79.76 ms

Max. Value
1.98 g at 245.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

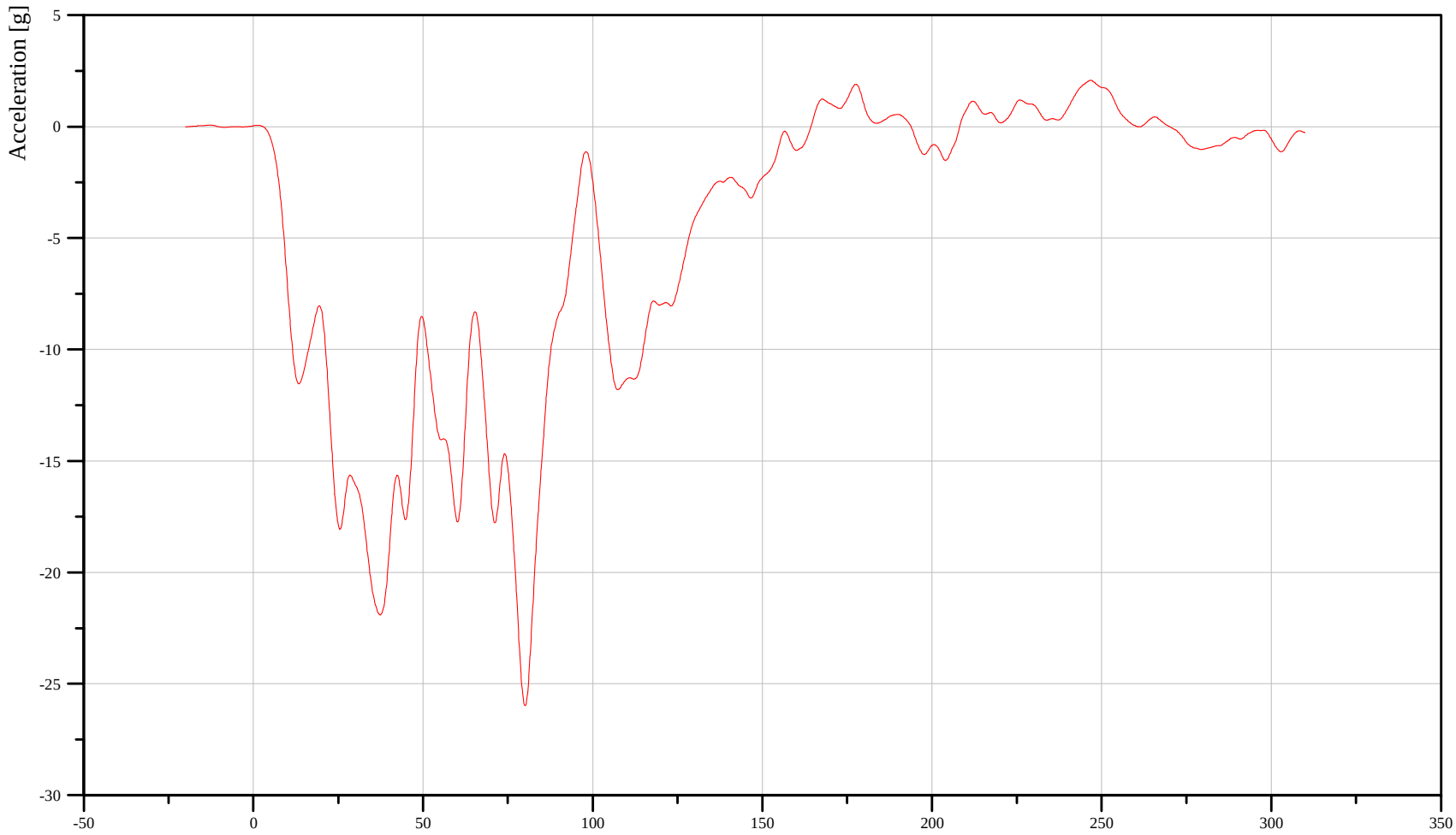
Vehicle CG X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-25.98 g at 80.08 ms

Max. Value
2.07 g at 246.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

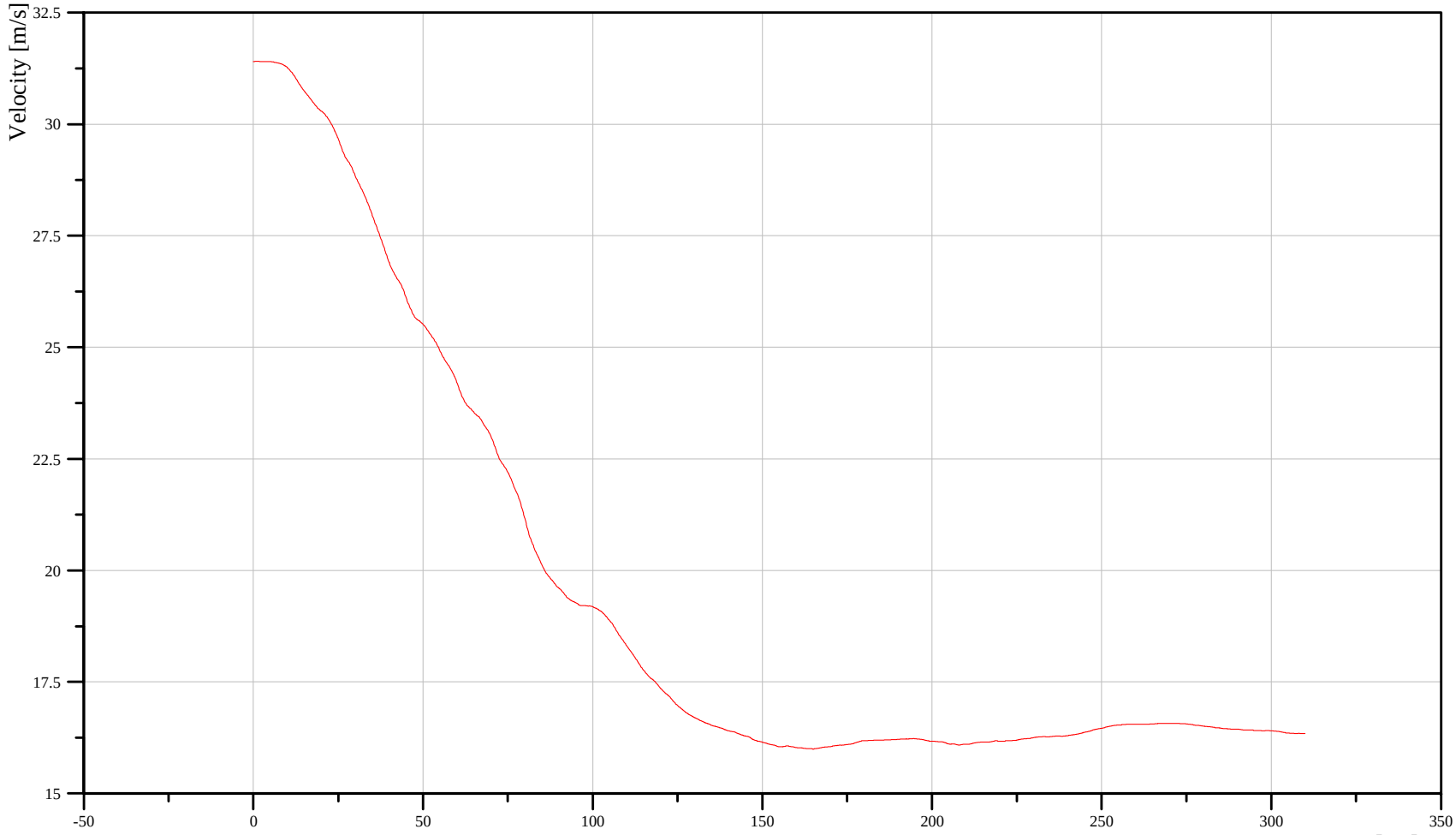
Vehicle CG X-axis Velocity

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000VEXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
16.00 m/s at 164.96 ms

Max. Value
31.41 m/s at 0.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

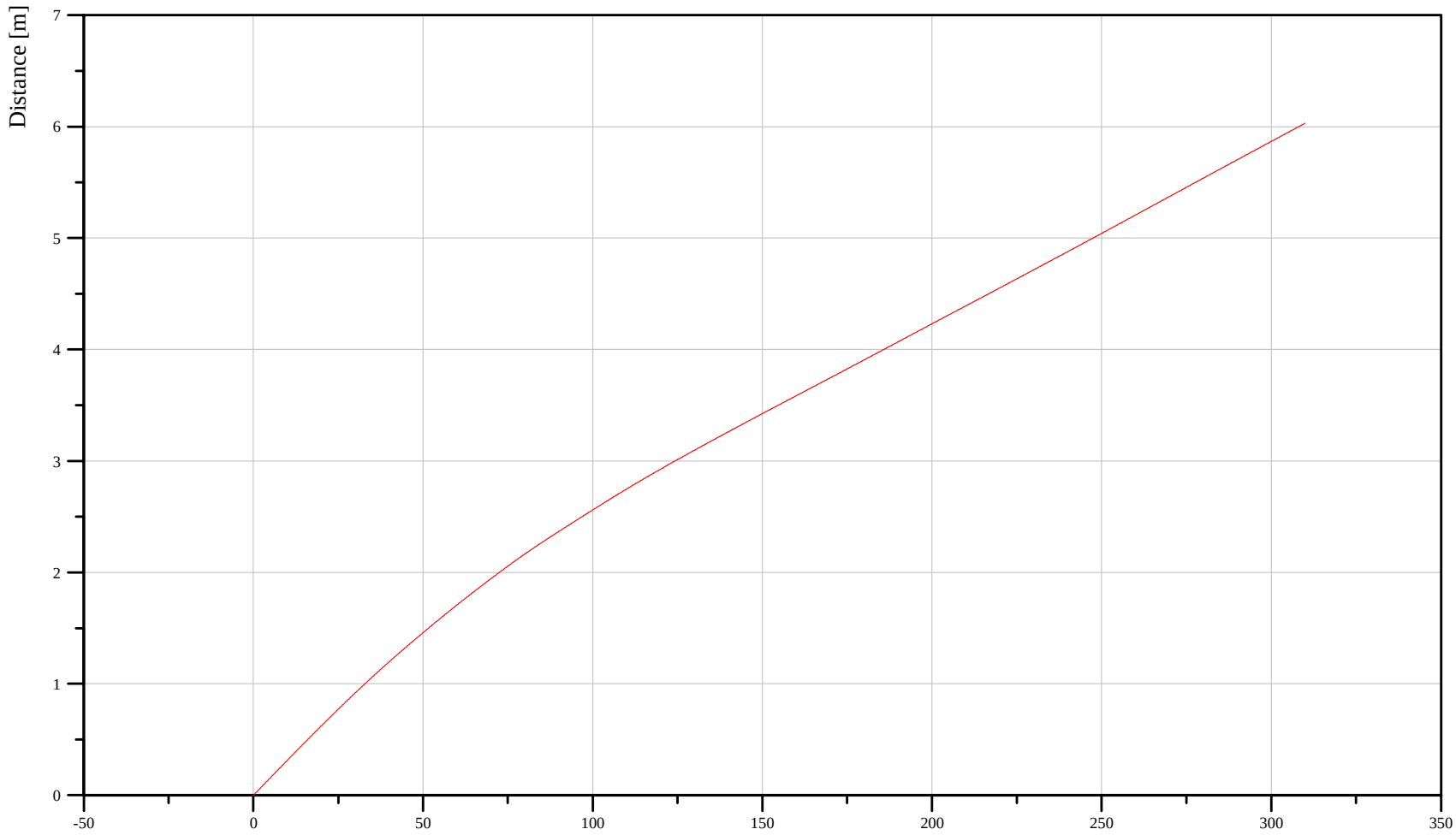
Vehicle CG X-axis Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000DCXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.00 m at 0.00 ms

Max. Value
6.03 m at 310.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

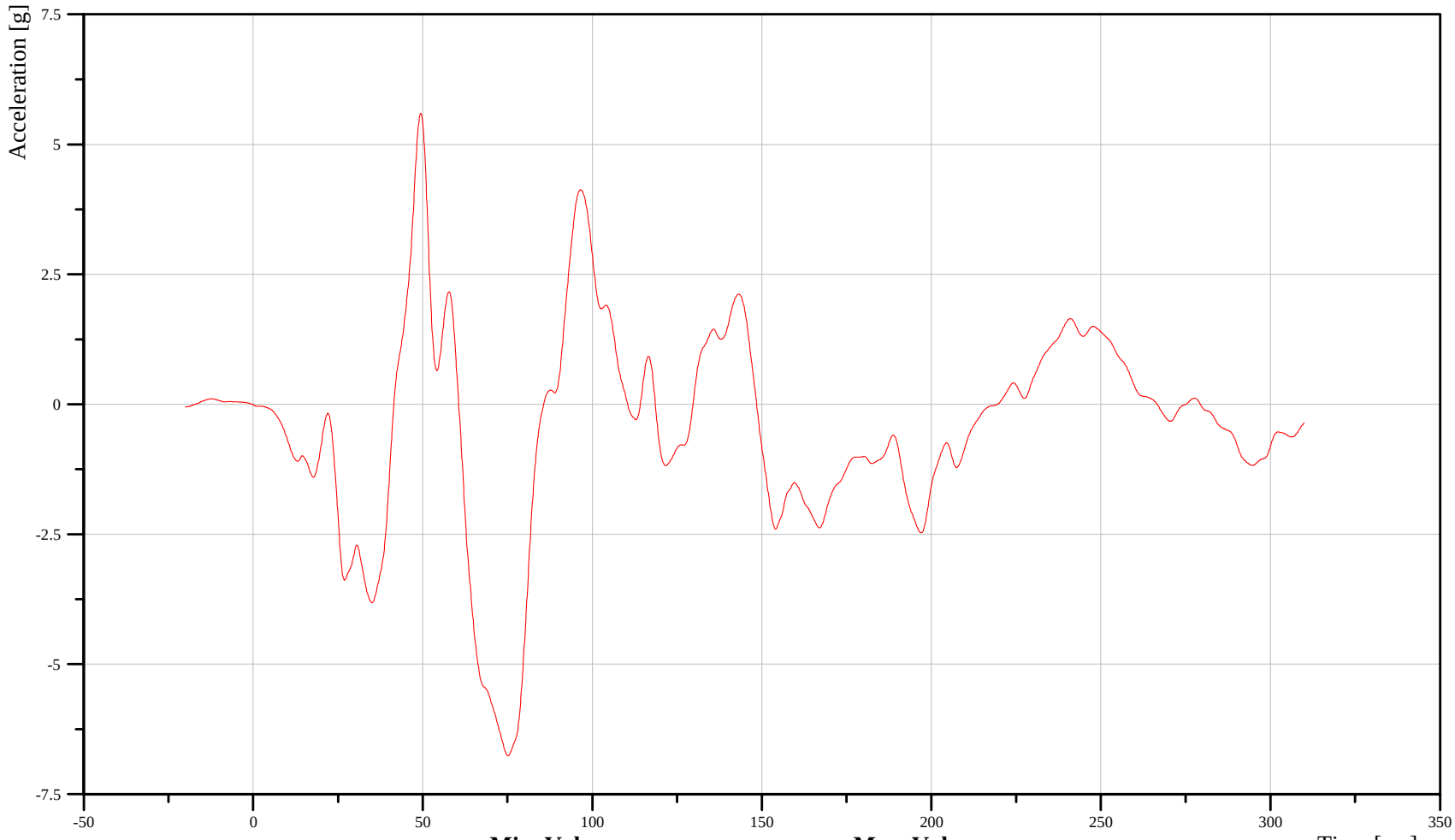
Vehicle CG Y-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000ACYD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-6.76 g at 75.20 ms

Max. Value
5.60 g at 49.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

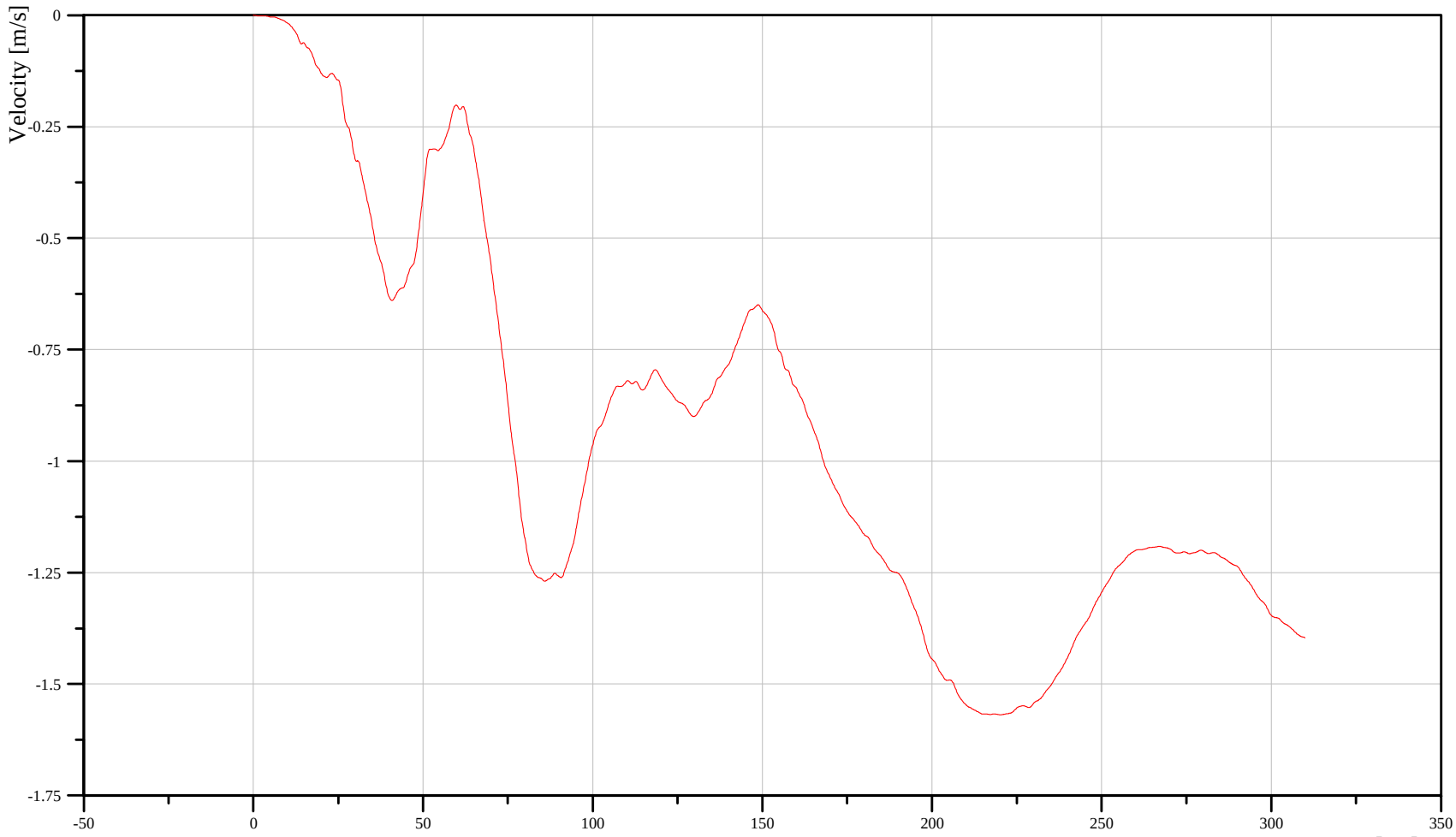
Vehicle CG Y-axis Velocity

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000VEYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-1.57 m/s at 220.24 ms

Max. Value
0.00 m/s at 0.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

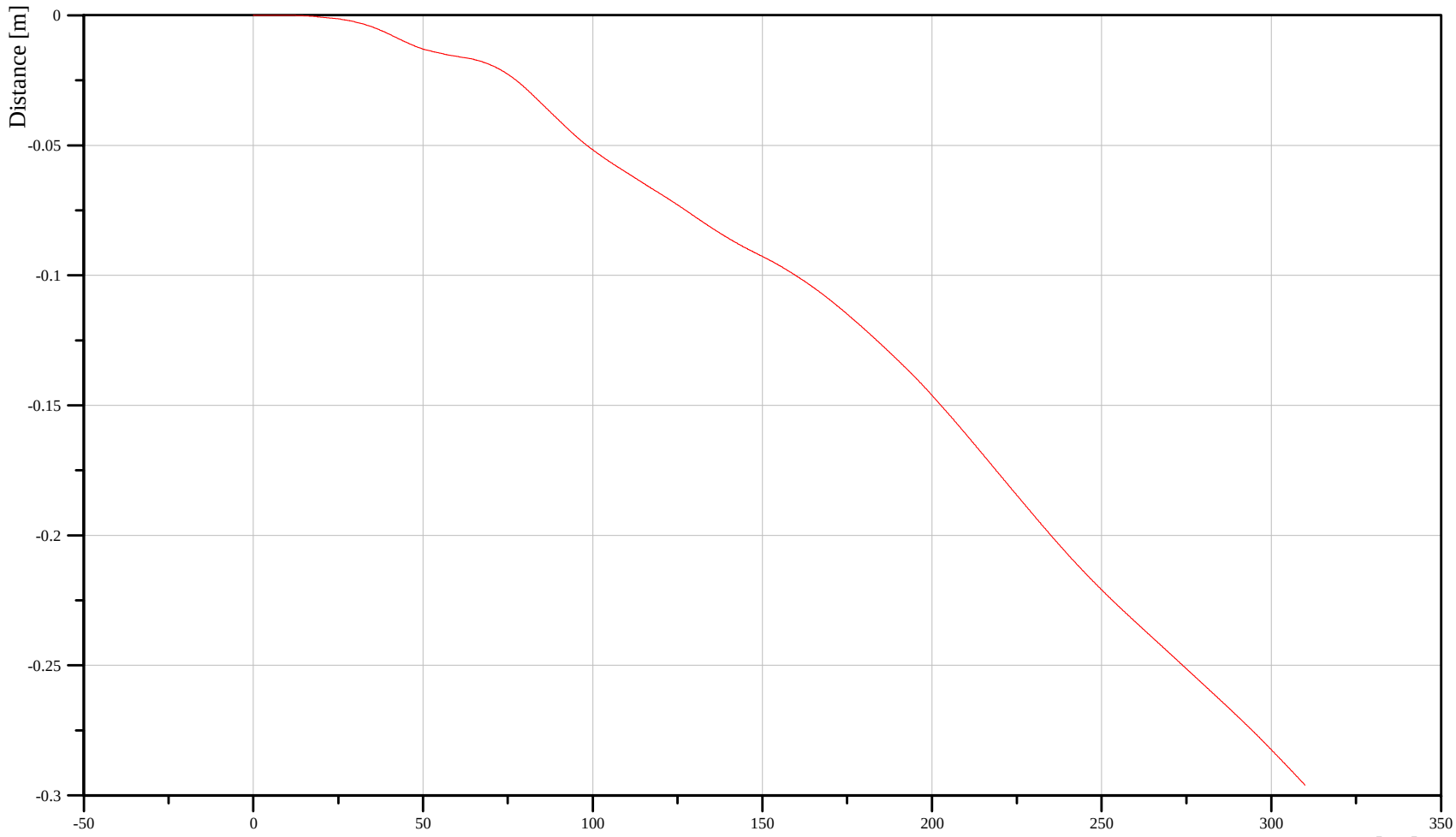
Vehicle CG Y-axis Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000DCYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.30 m at 310.00 ms

Max. Value
0.00 m at 0.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

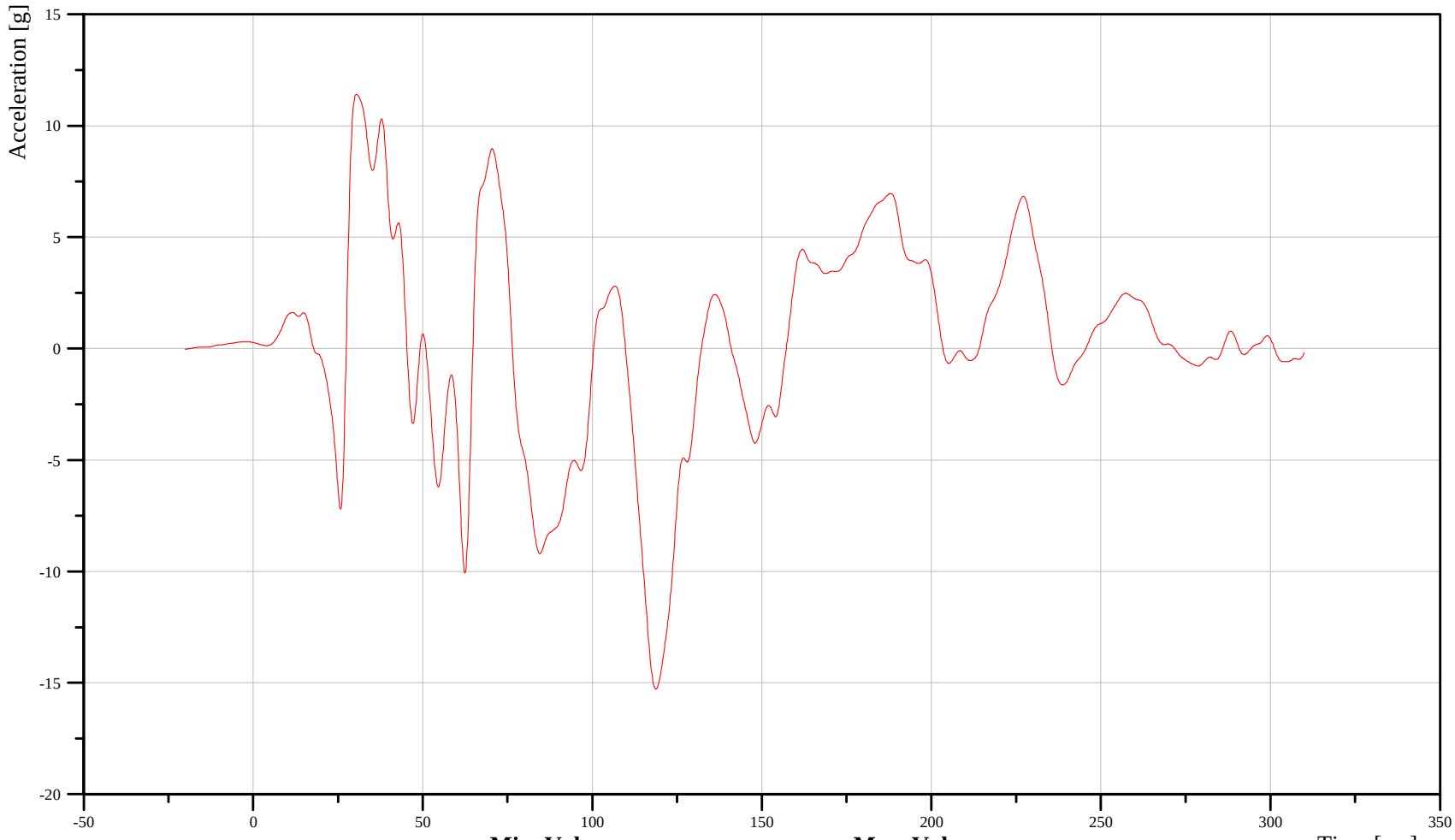
Vehicle CG Z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-15.27 g at 118.72 ms

Max. Value
11.41 g at 30.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

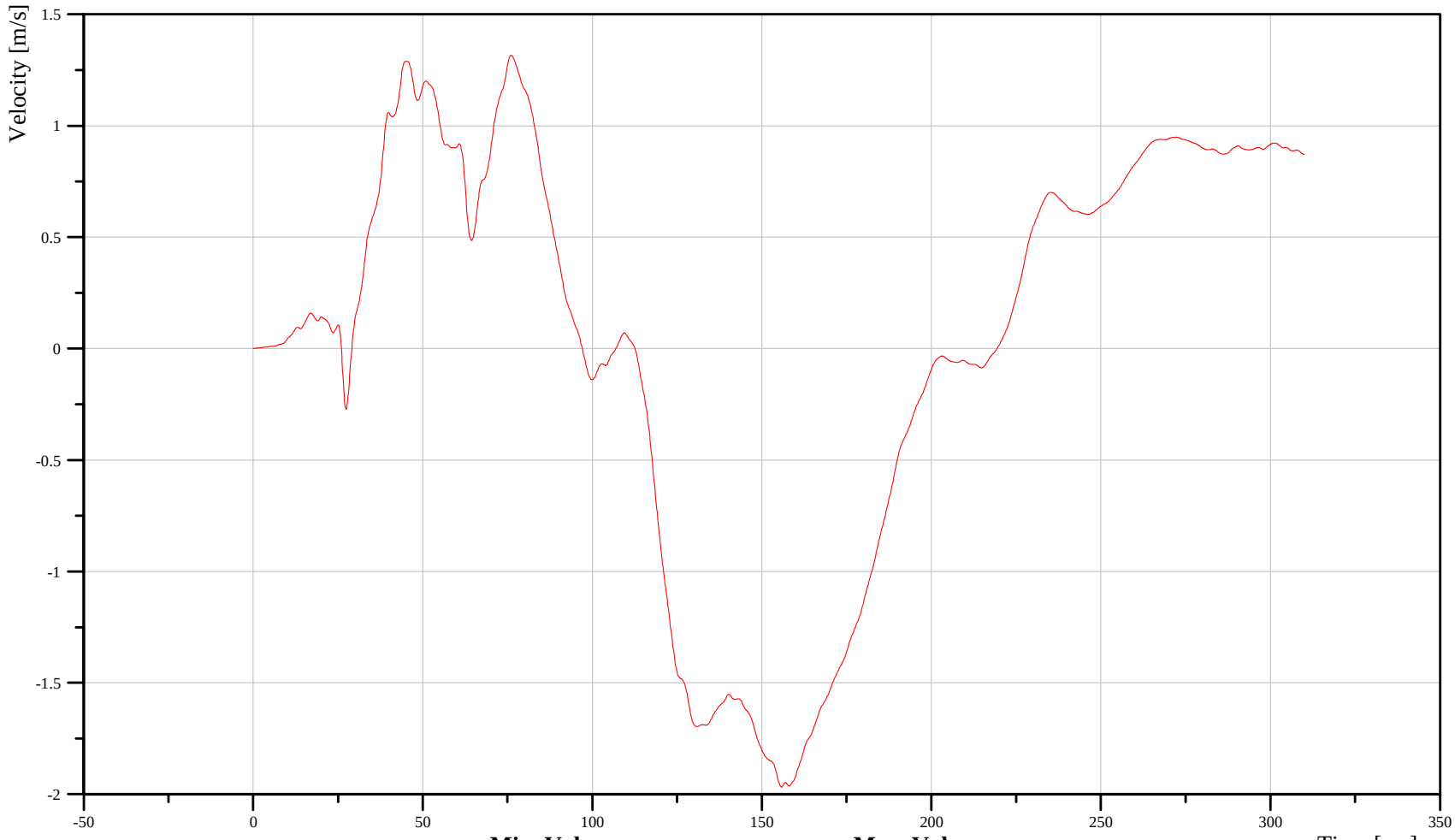
Vehicle CG Z-axis Velocity

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000VEZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-1.97 m/s at 155.84 ms

Max. Value
1.32 m/s at 76.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

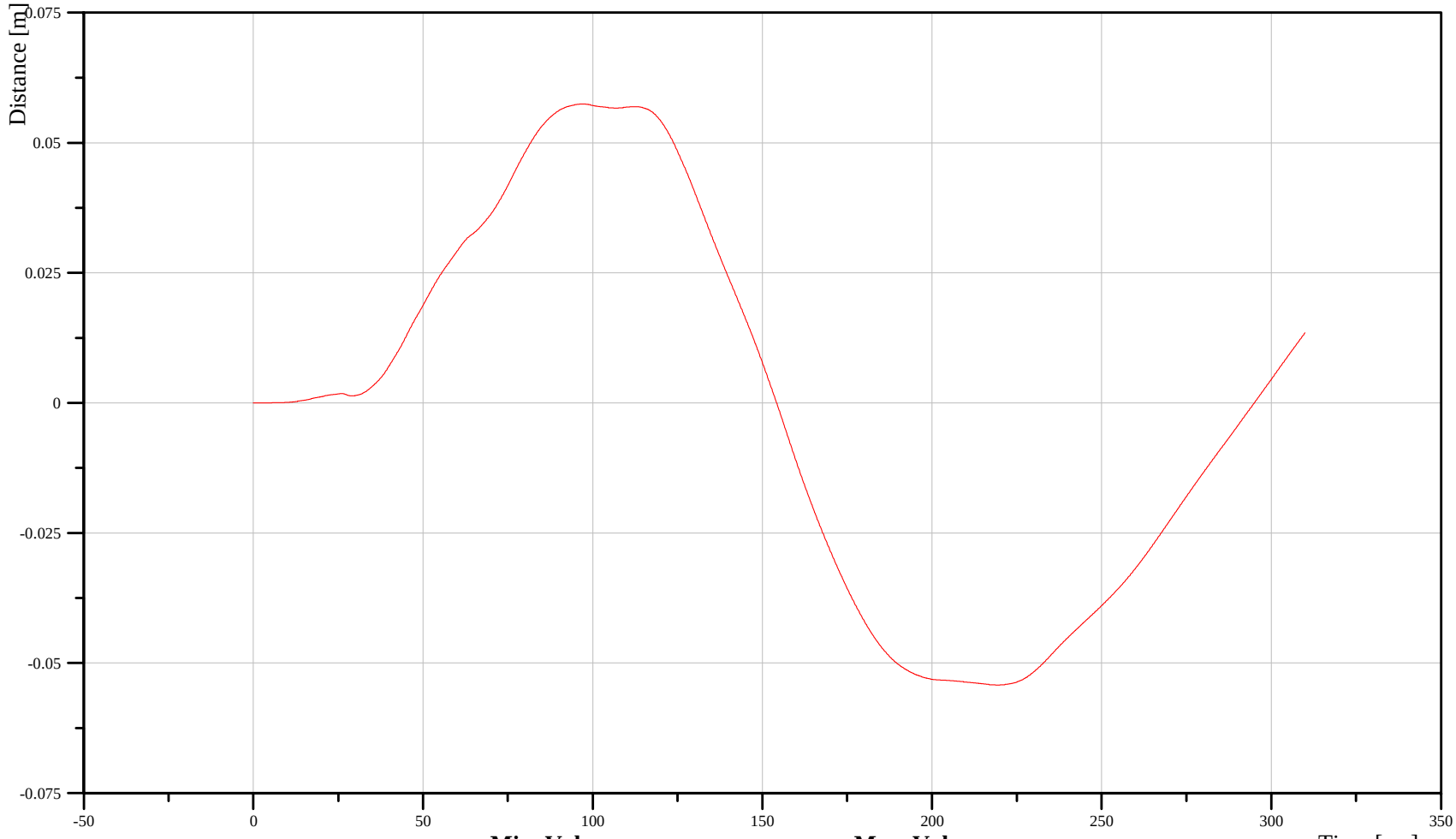
Vehicle CG Z-axis Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000DCZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.05 m at 219.36 ms

Max. Value
0.06 m at 97.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

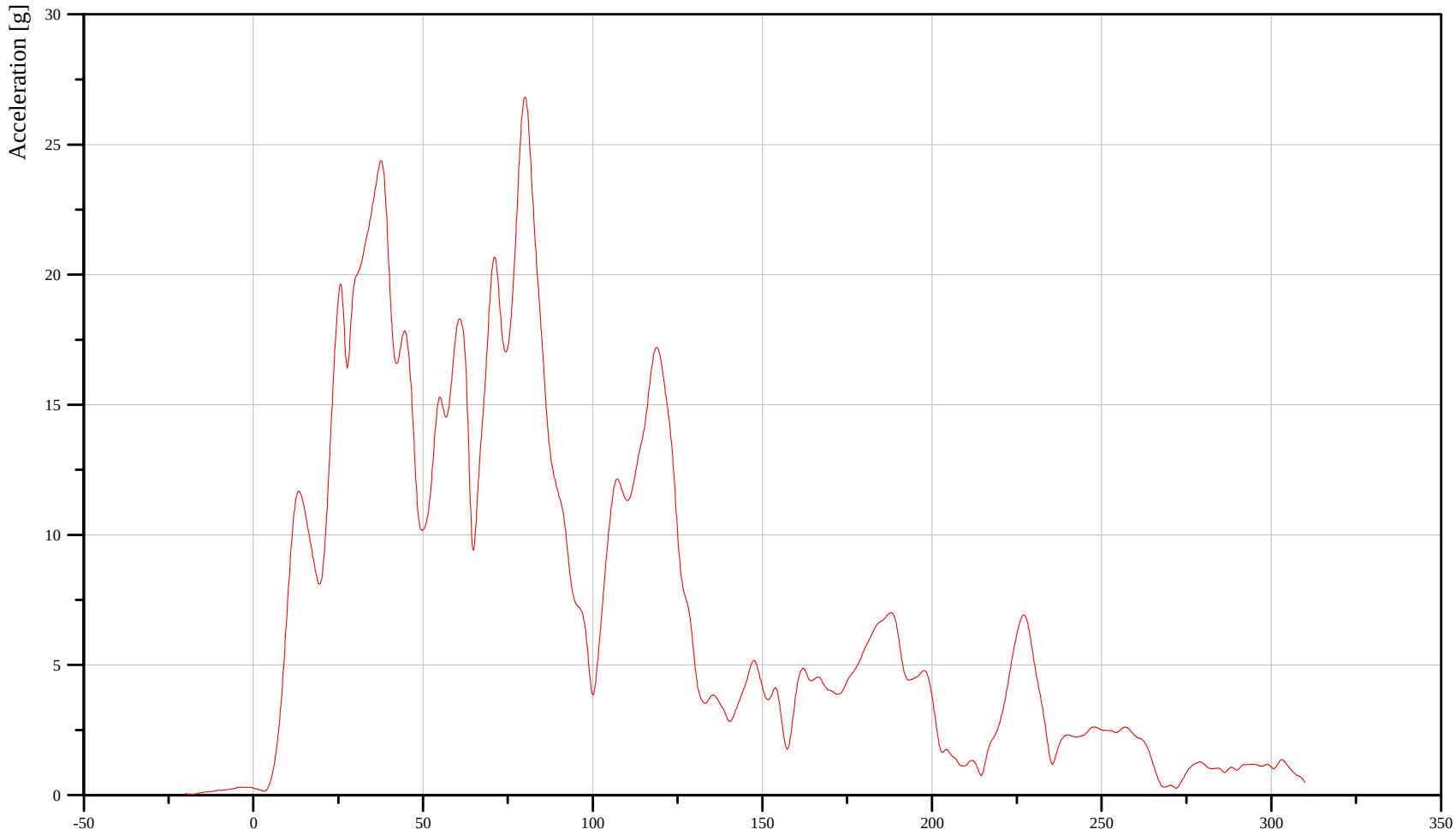
Vehicle CG Resultant acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

20VEHCCG0000ACRD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
0.03 g at -18.24 ms

Max. Value
26.81 g at 80.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

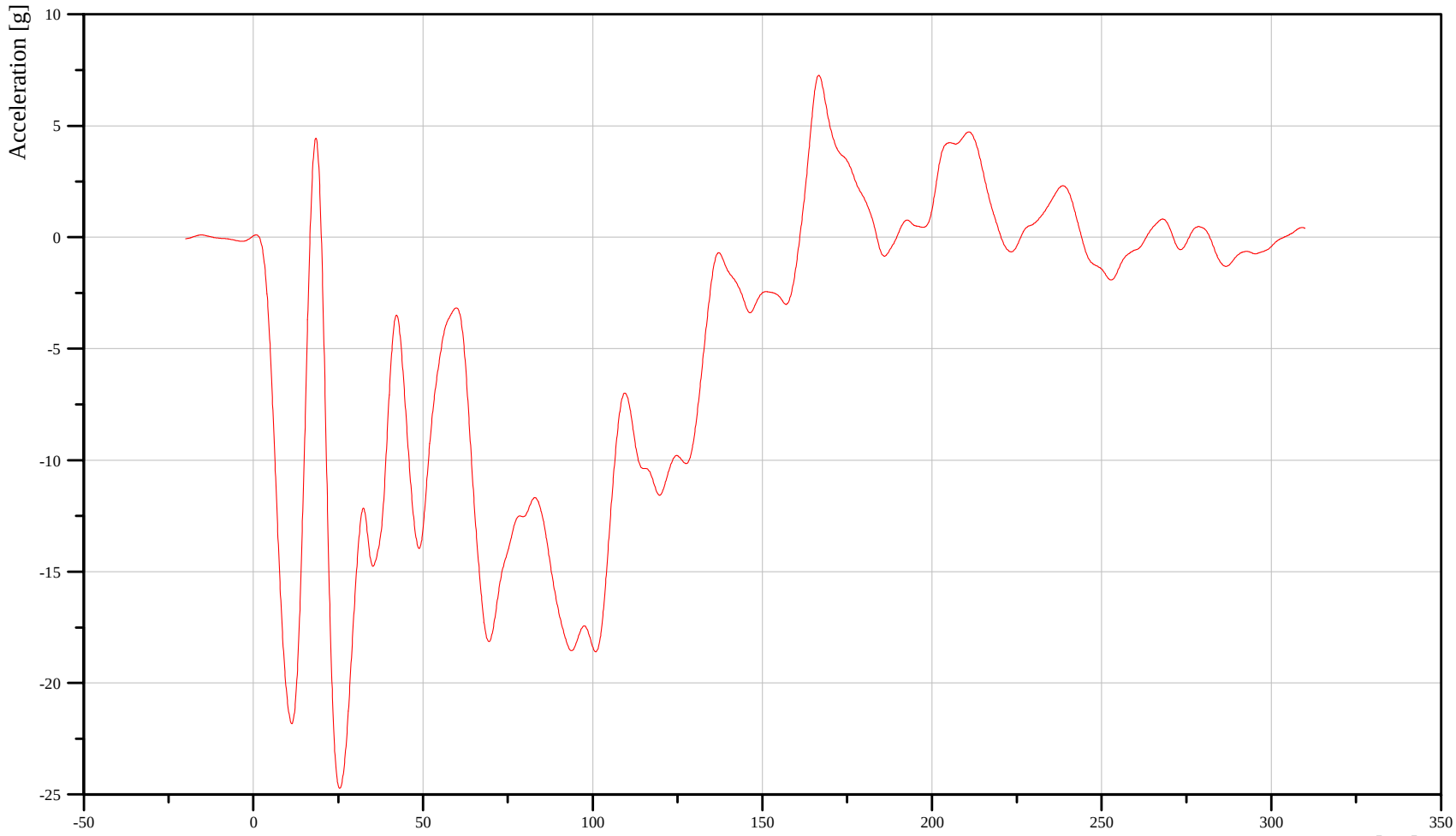
Vehicle rear deck X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

28VEHC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-24.73 g at 25.44 ms

Max. Value
7.27 g at 166.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

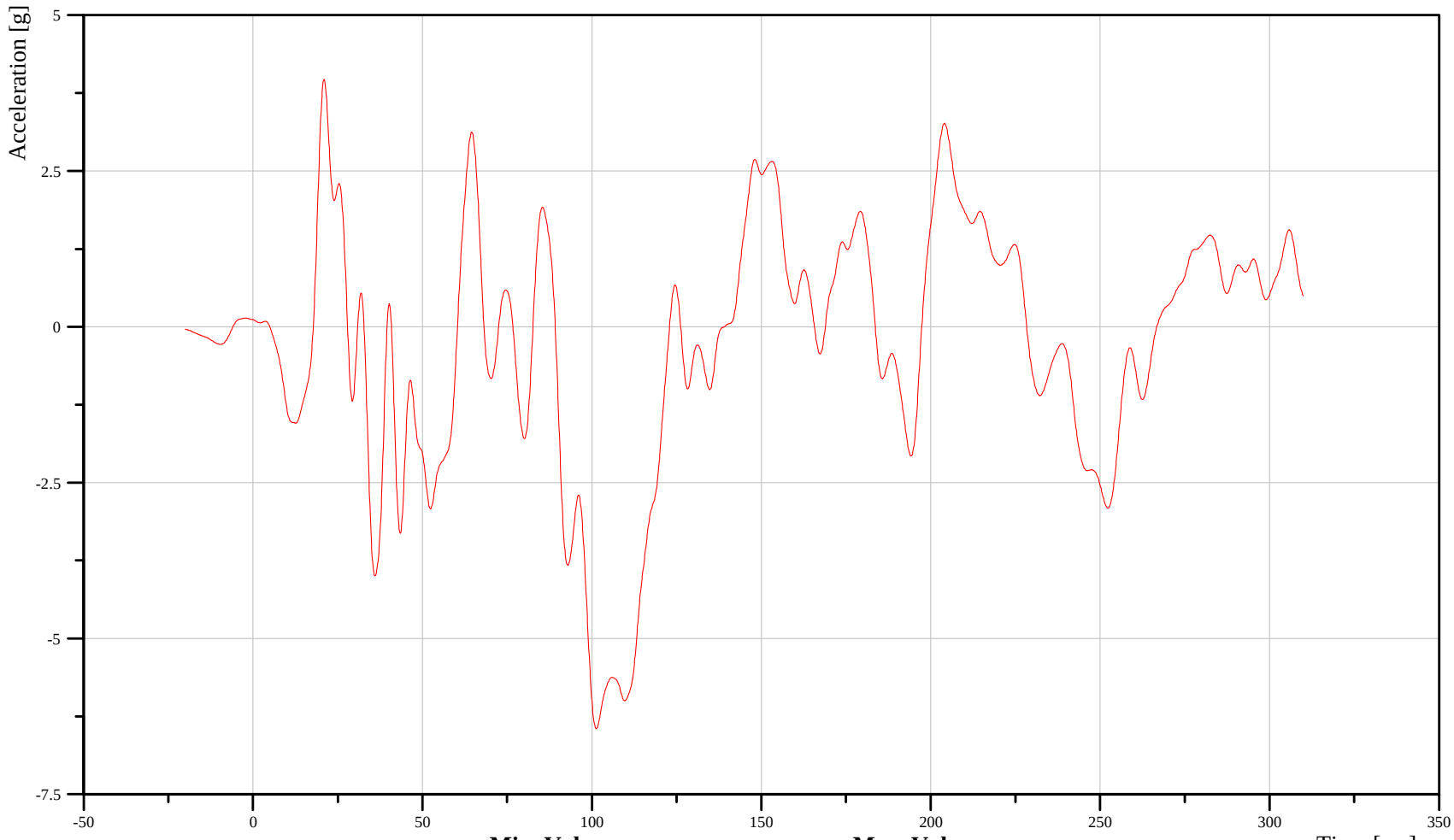
Vehicle rear deck Y-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

28VEHC000000ACYD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-6.45 g at 101.28 ms

Max. Value
3.97 g at 20.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

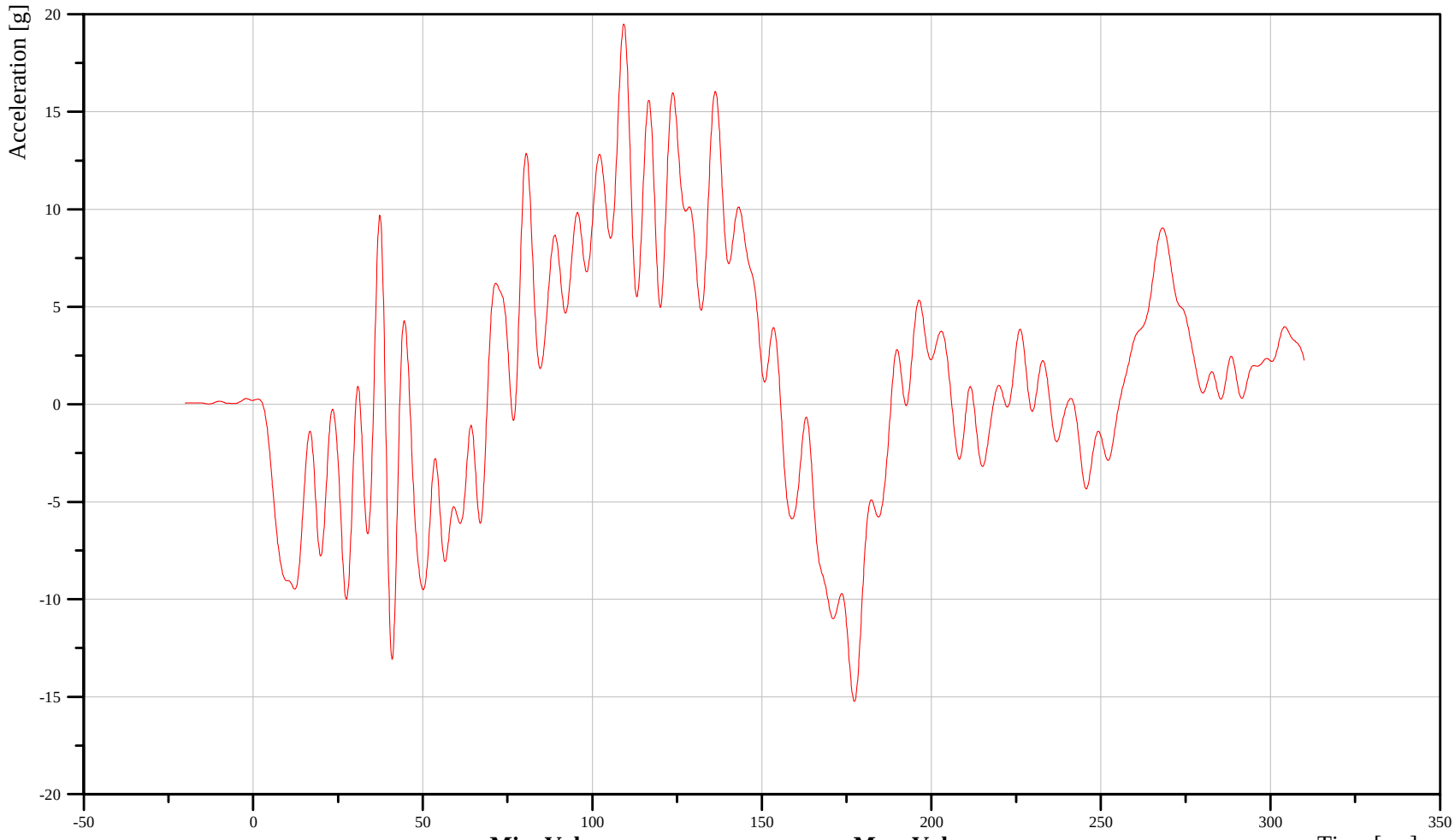
Vehicle rear deck Z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

28VEHC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-15.24 g at 177.28 ms

Max. Value
19.51 g at 109.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

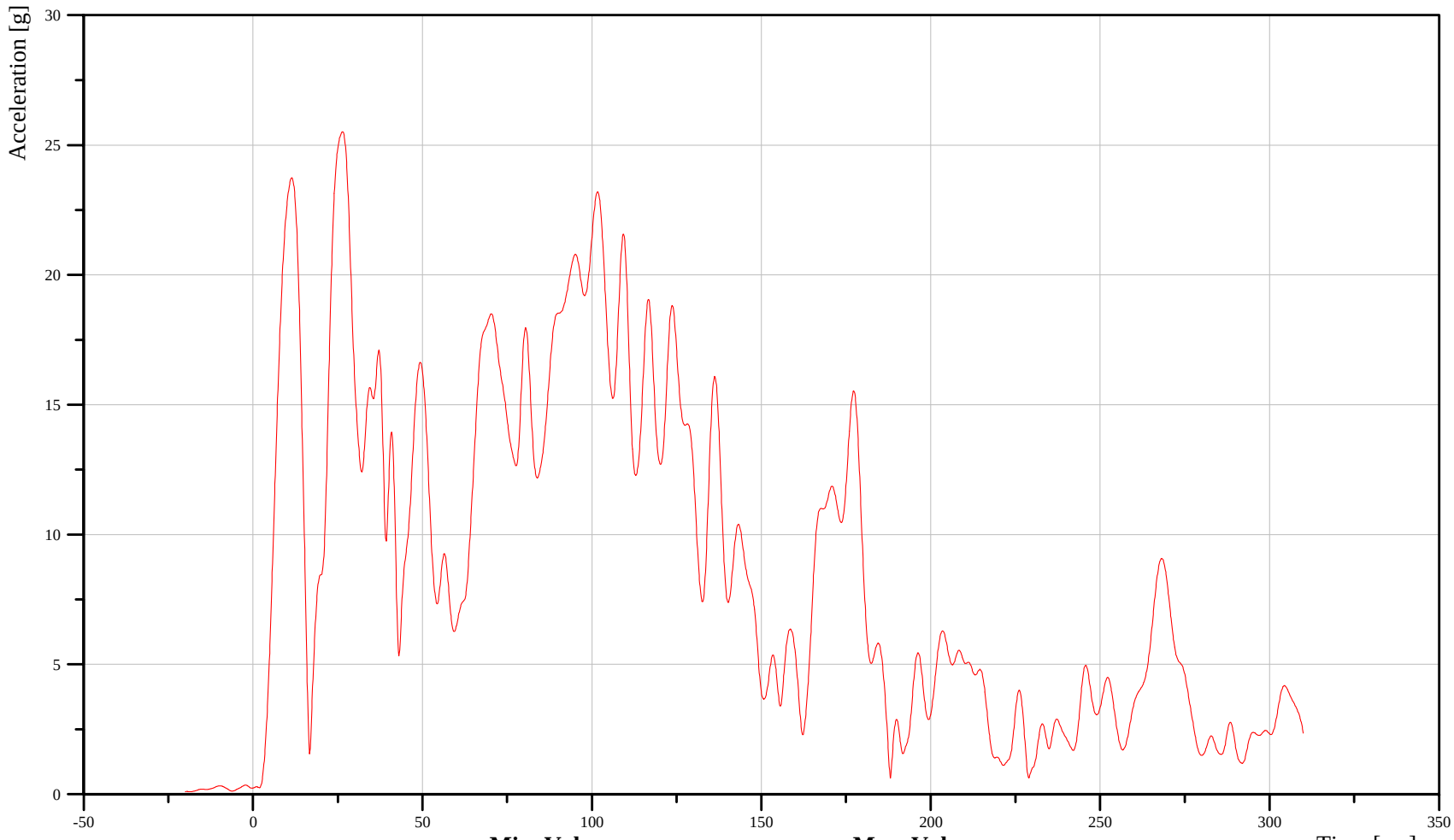
Vehicle rear deck Resultant acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

28VEHC000000ACRD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
0.10 g at -18.48 ms

Max. Value
25.51 g at 26.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

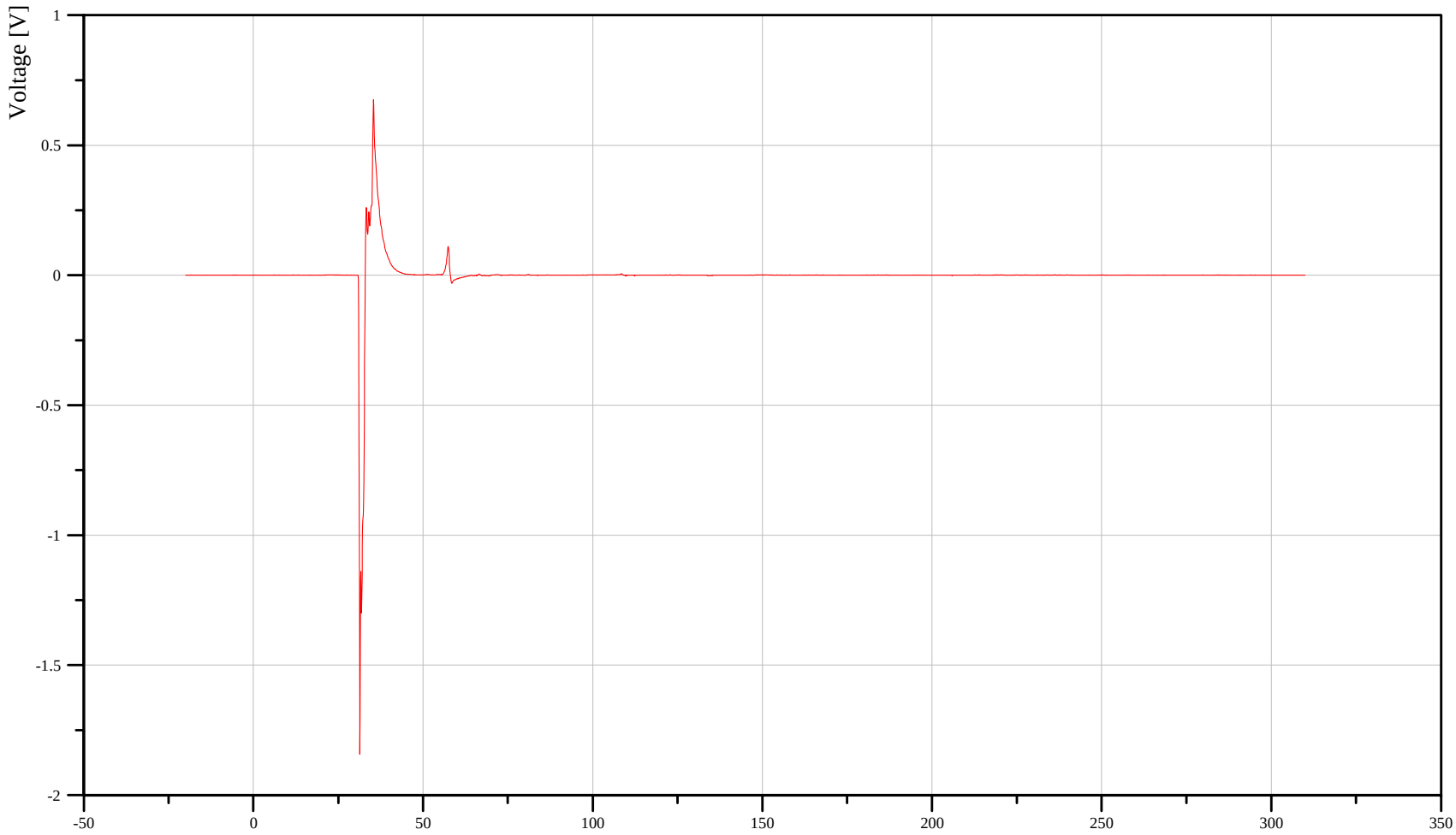
Driver airbag - primary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21SENS000001VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-1.84 V at 31.36 ms

Max. Value
0.68 V at 35.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

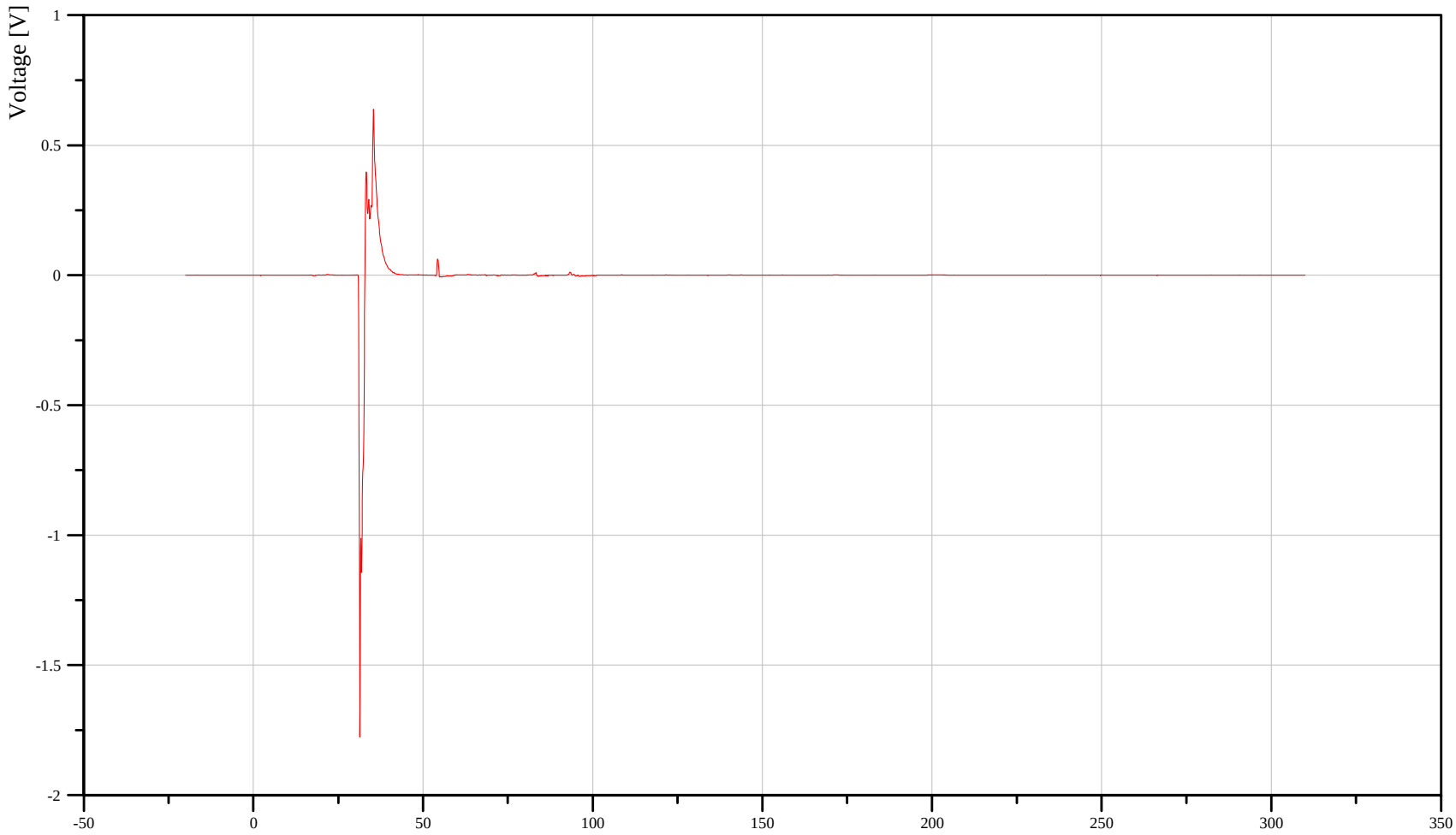
Driver airbag - secondary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21SENS000002VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-1.78 V at 31.36 ms

Max. Value
0.64 V at 35.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

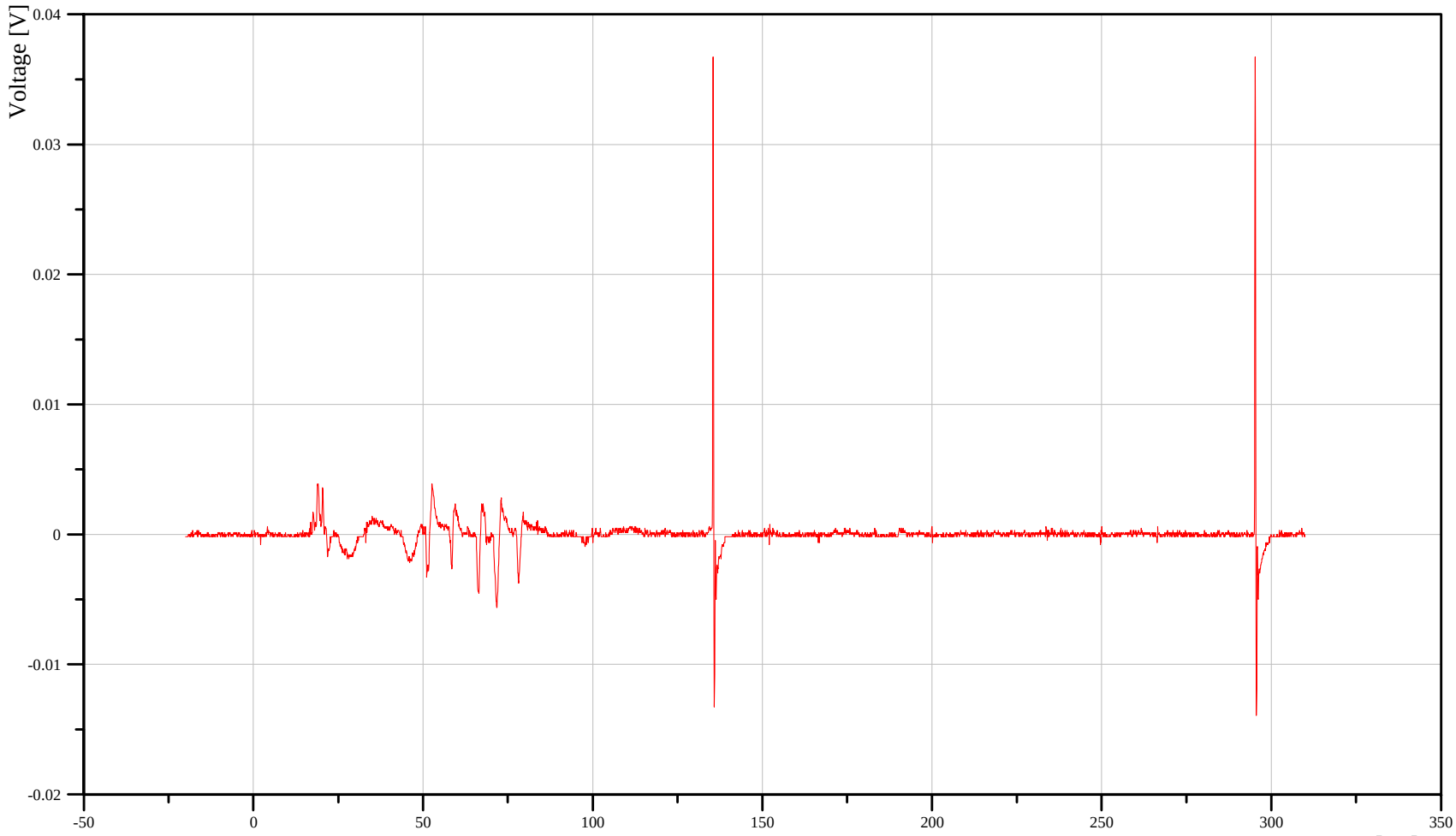
Passenger airbag - primary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23SENS000001VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.01 V at 295.60 ms

Max. Value
0.04 V at 135.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

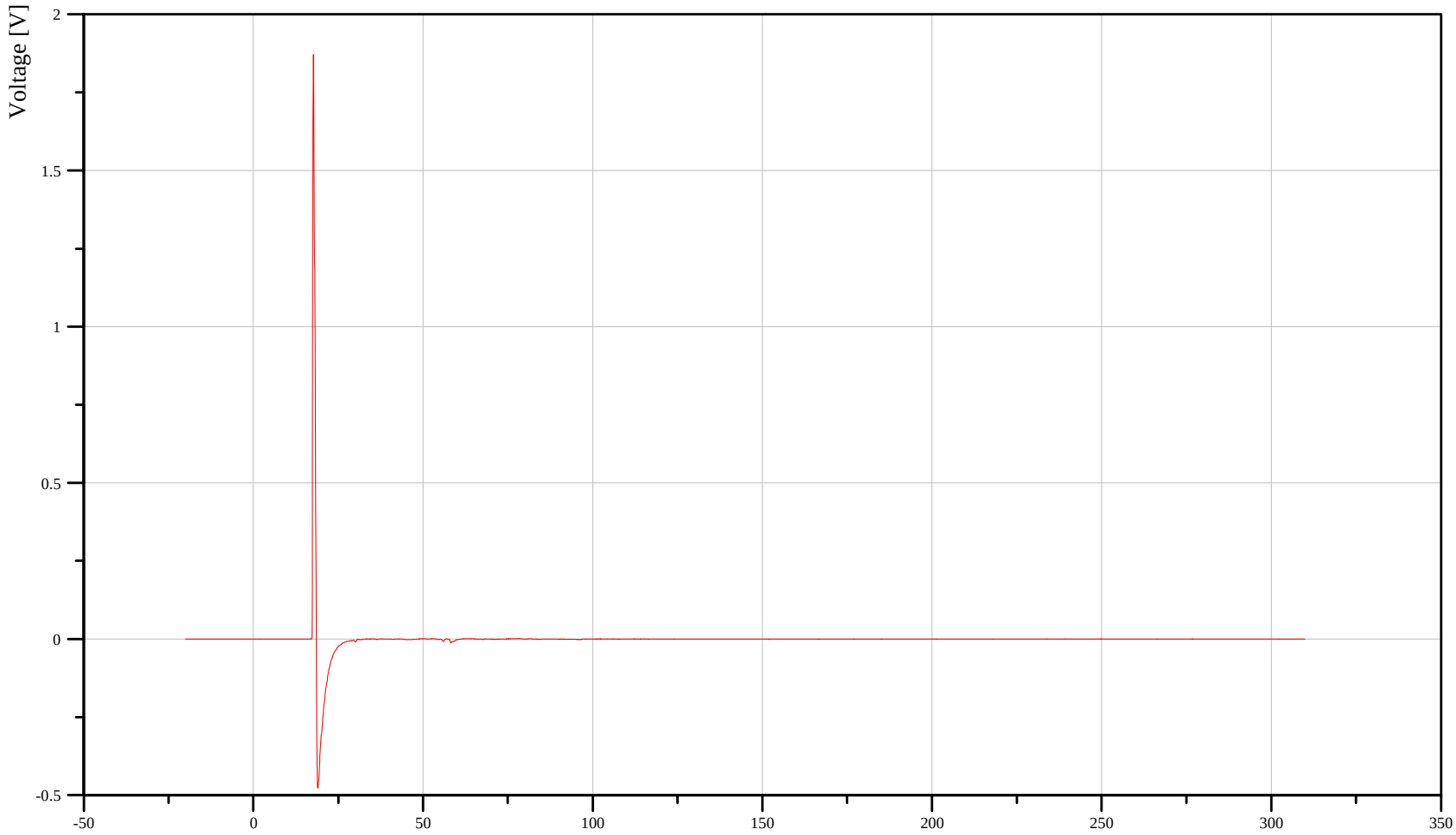
Passenger airbag - secondary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23SENS000002VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.48 V at 19.04 ms

Max. Value
1.87 V at 17.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

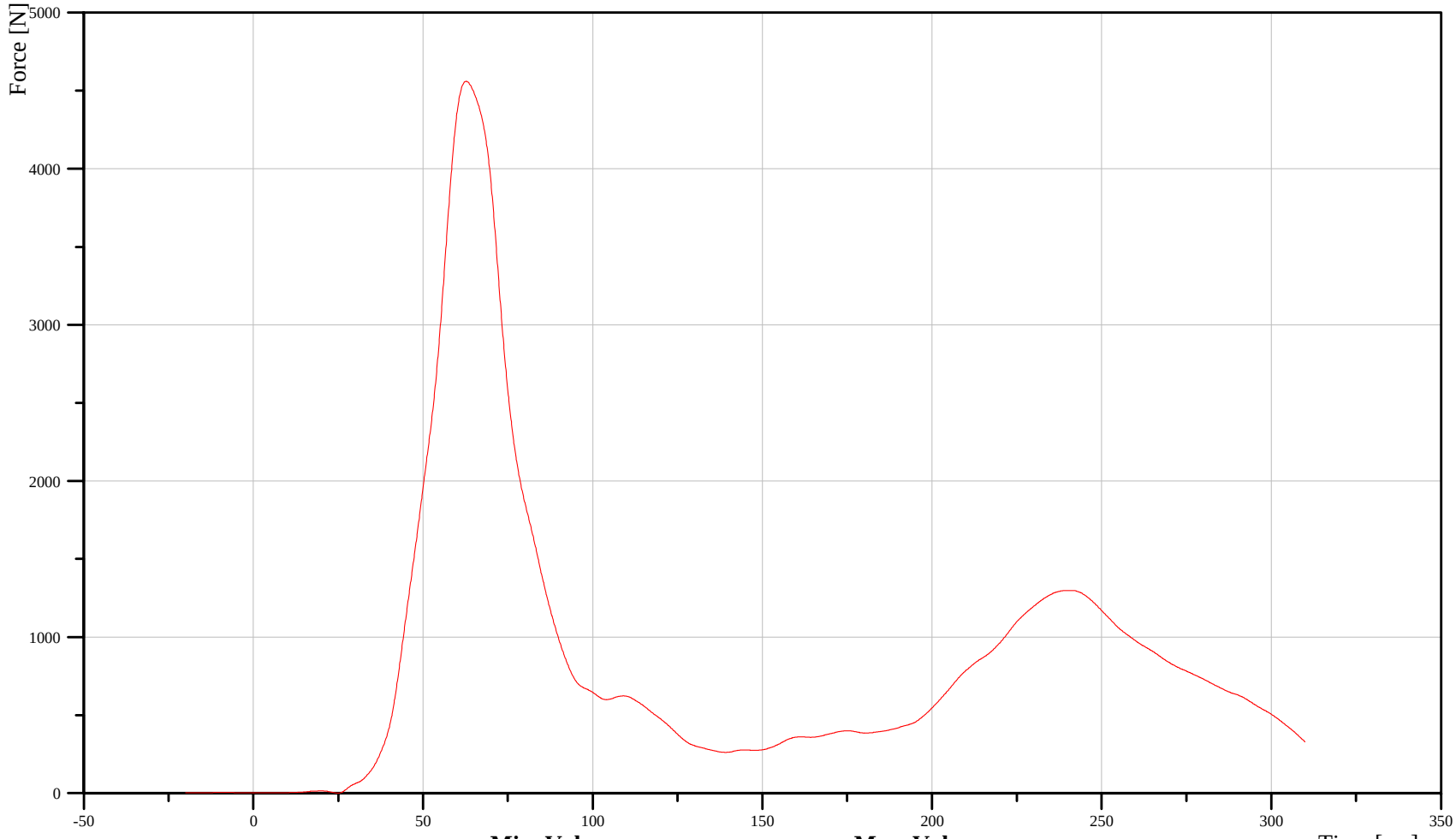
Driver lap belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21SEBE0000B5FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
0.42 N at 24.88 ms

Max. Value
4,560.62 N at 62.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

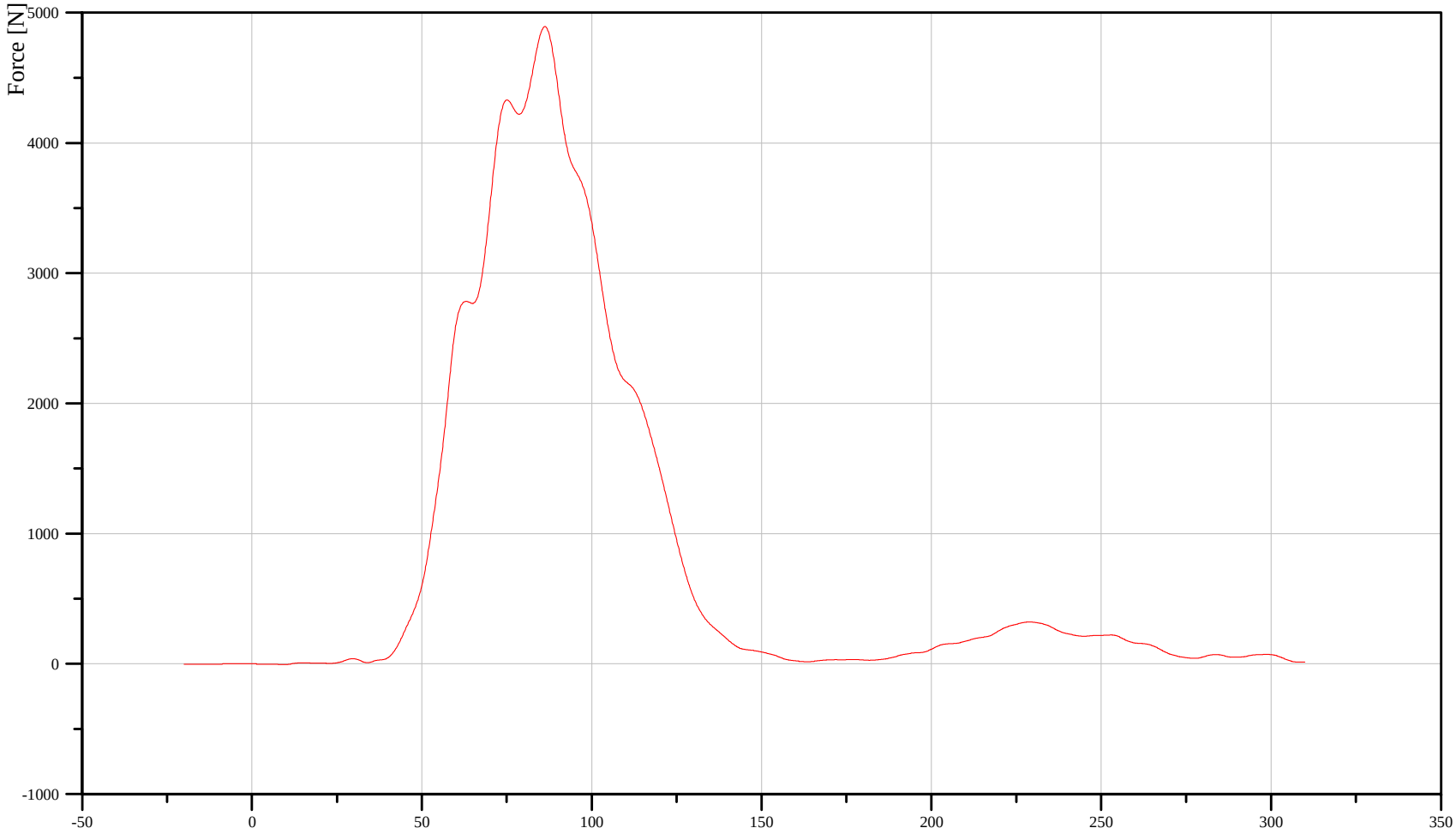
Driver shoulder belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

21SEBE0000B3FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-4.14 N at 9.36 ms

Max. Value
4,893.23 N at 86.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

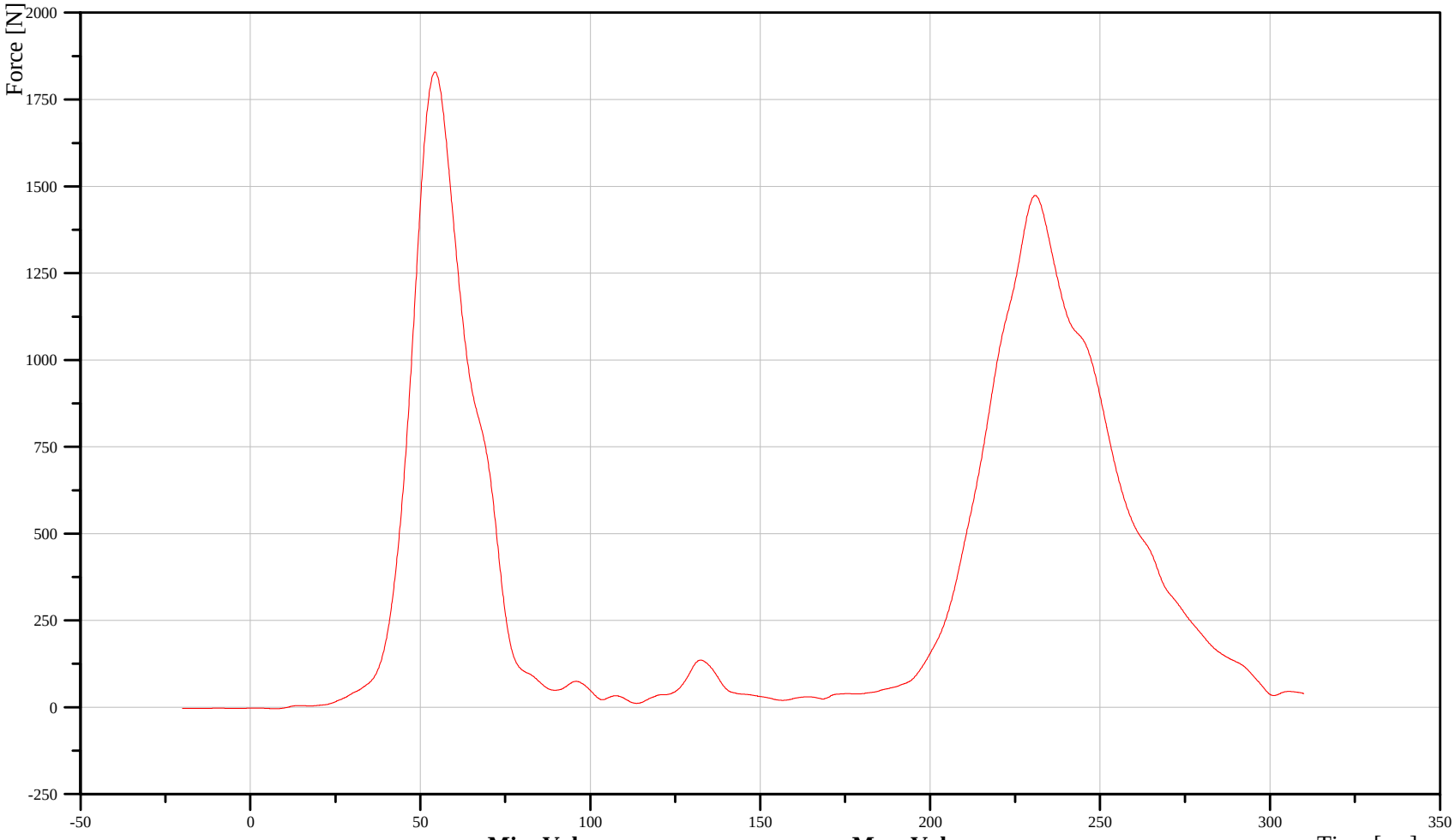
RF Pass lap belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23SEBE0000B5FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-4.35 N at 7.36 ms

Max. Value
1,828.98 N at 54.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

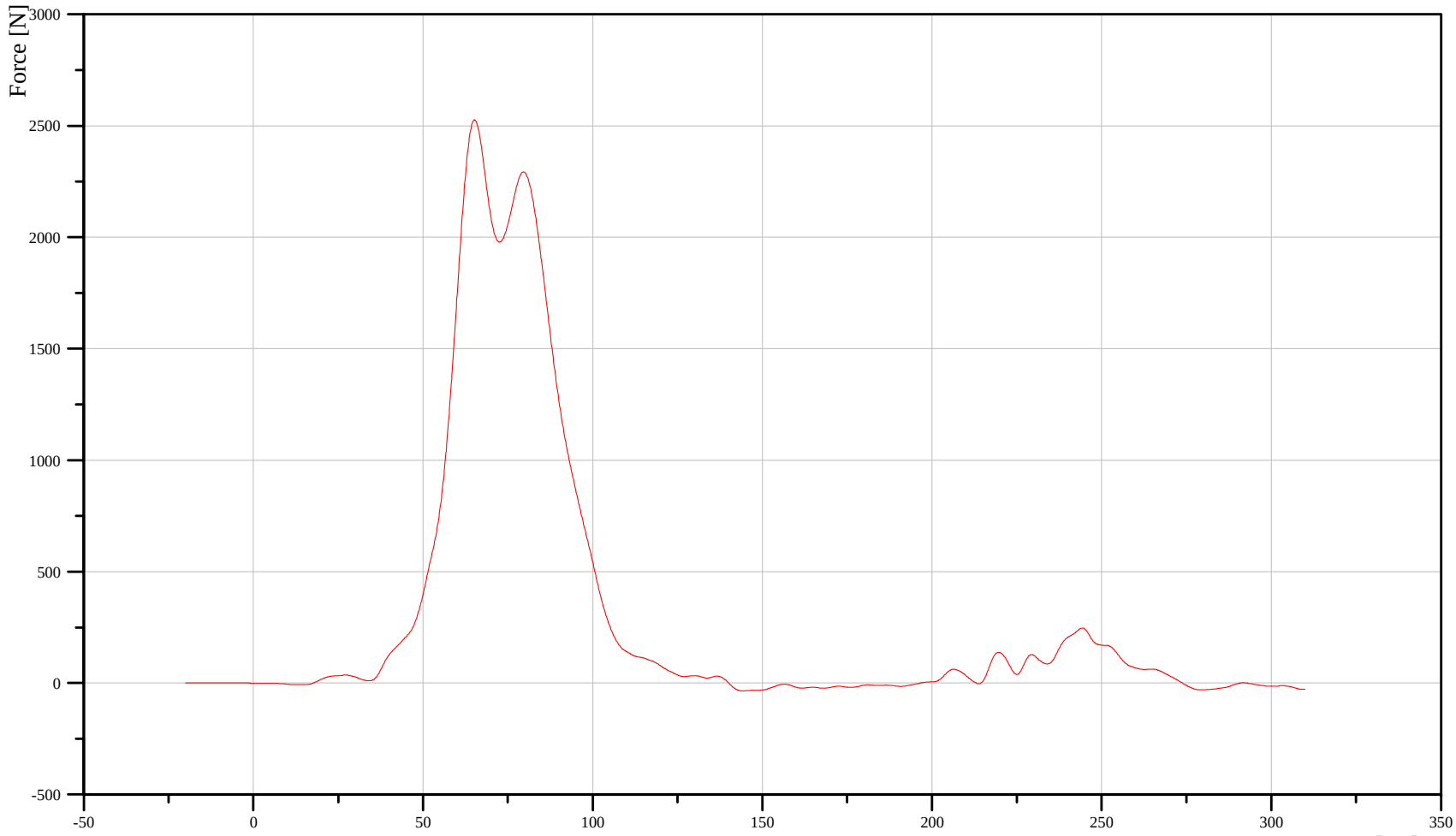
RF Pass shoulder belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

23SEBE0000B3FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-35.59 N at 144.32 ms

Max. Value
2,526.89 N at 65.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

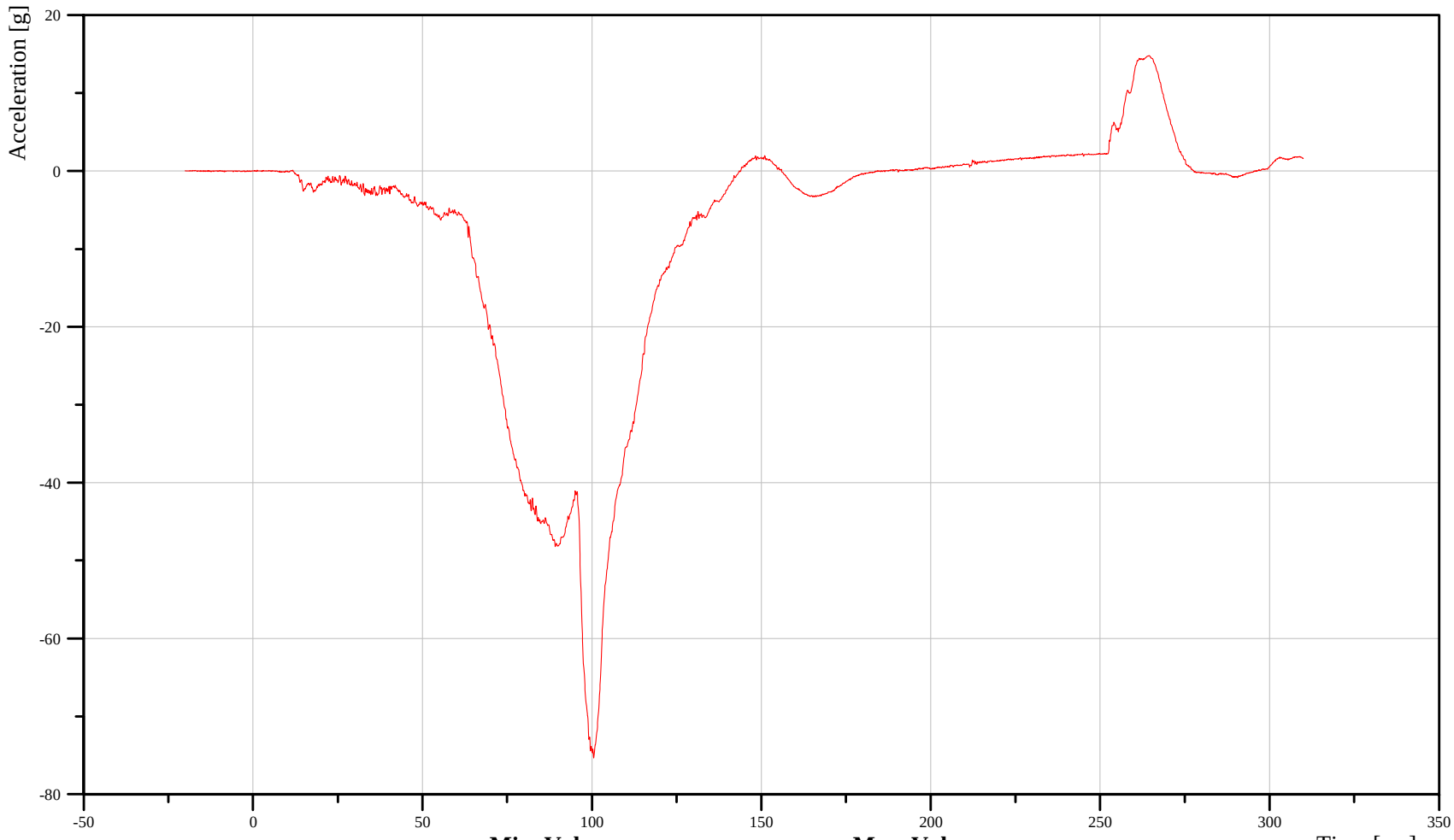
Head Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-75.34 g at 100.56 ms

Max. Value
14.82 g at 264.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

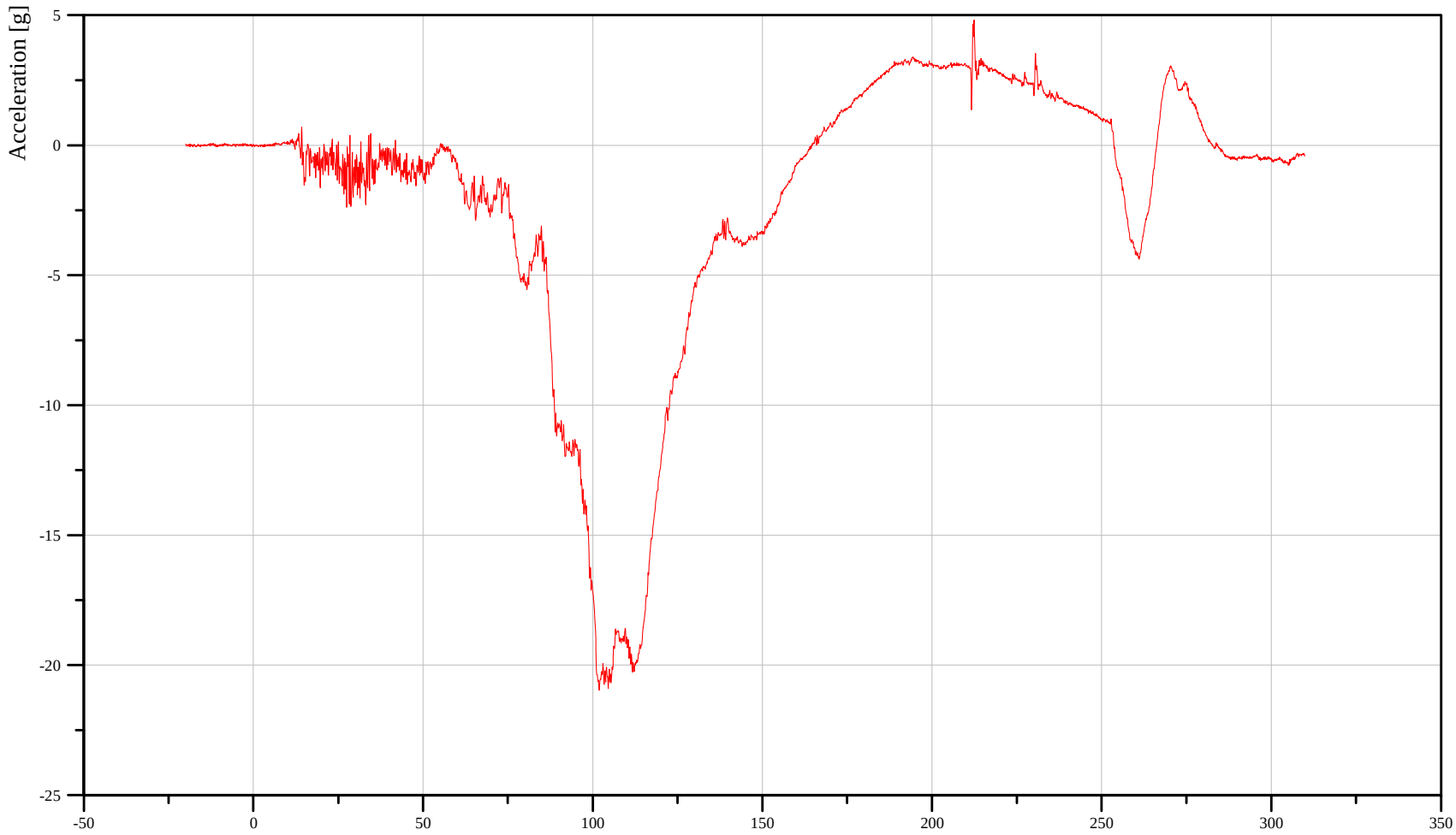
Head Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-20.96 g at 101.92 ms

Max. Value
4.81 g at 212.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

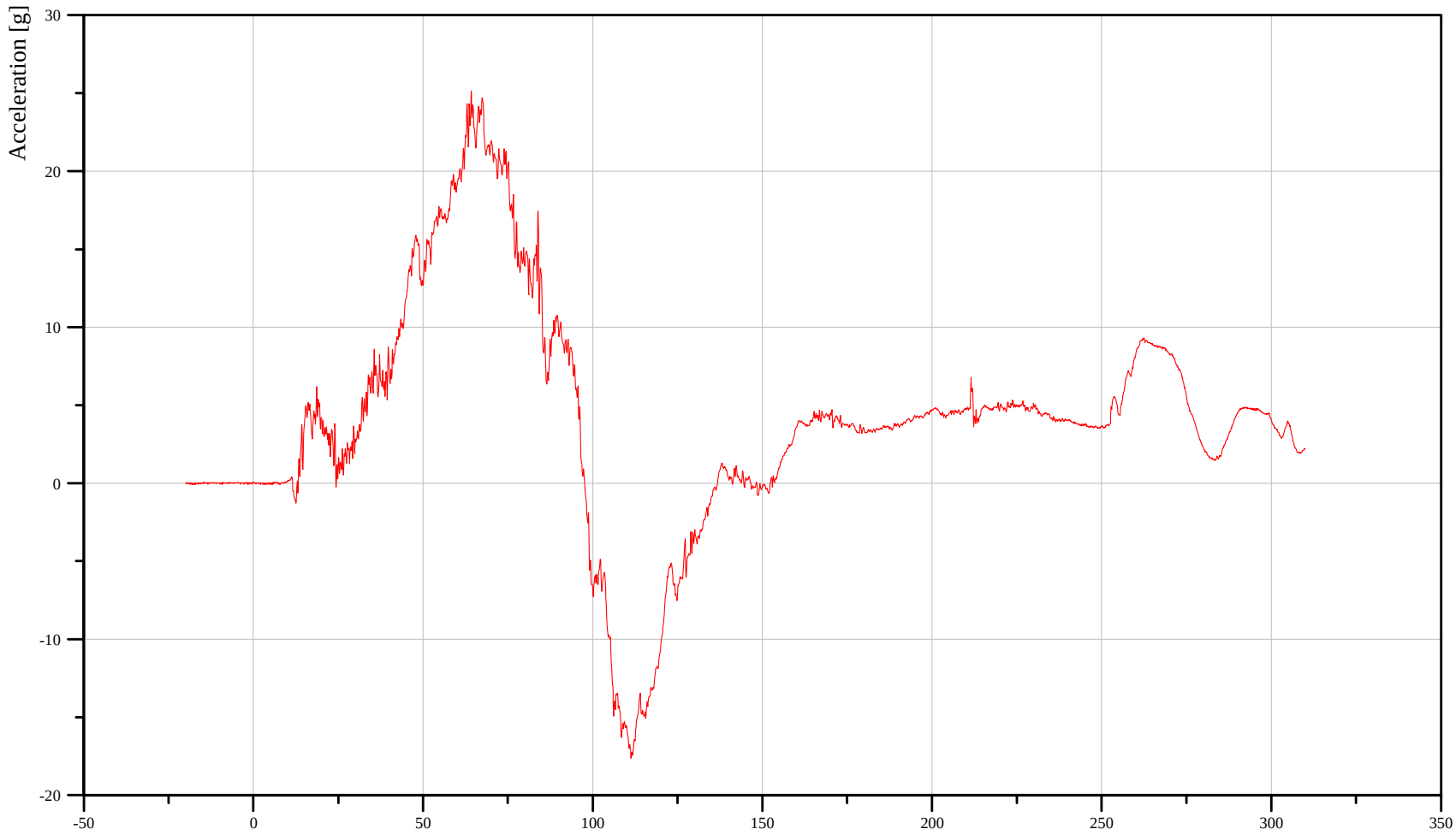
Head Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-17.64 g at 111.28 ms

Max. Value
25.12 g at 64.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

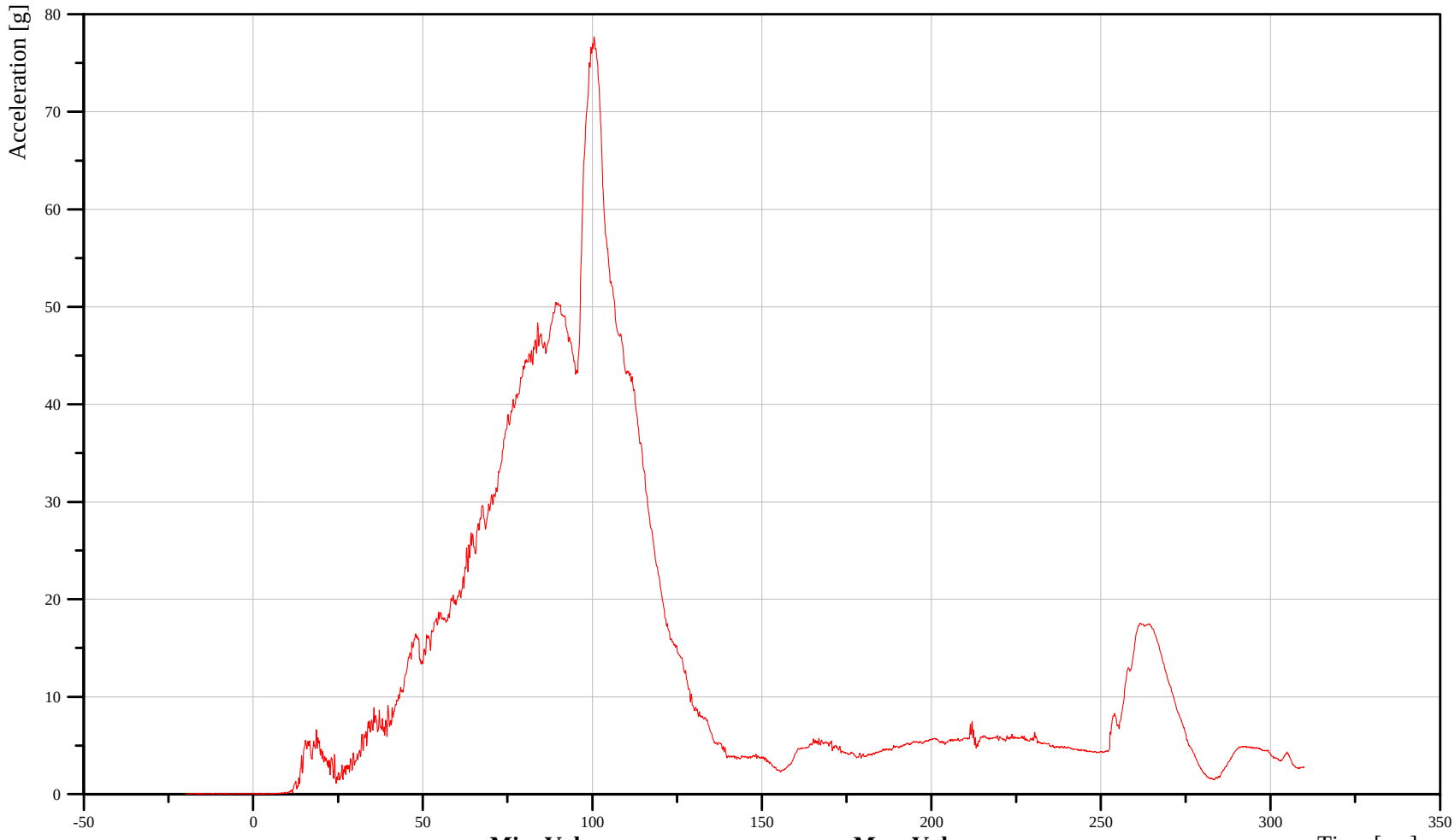
Head Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.01 g at -18.88 ms

Max. Value
77.69 g at 100.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

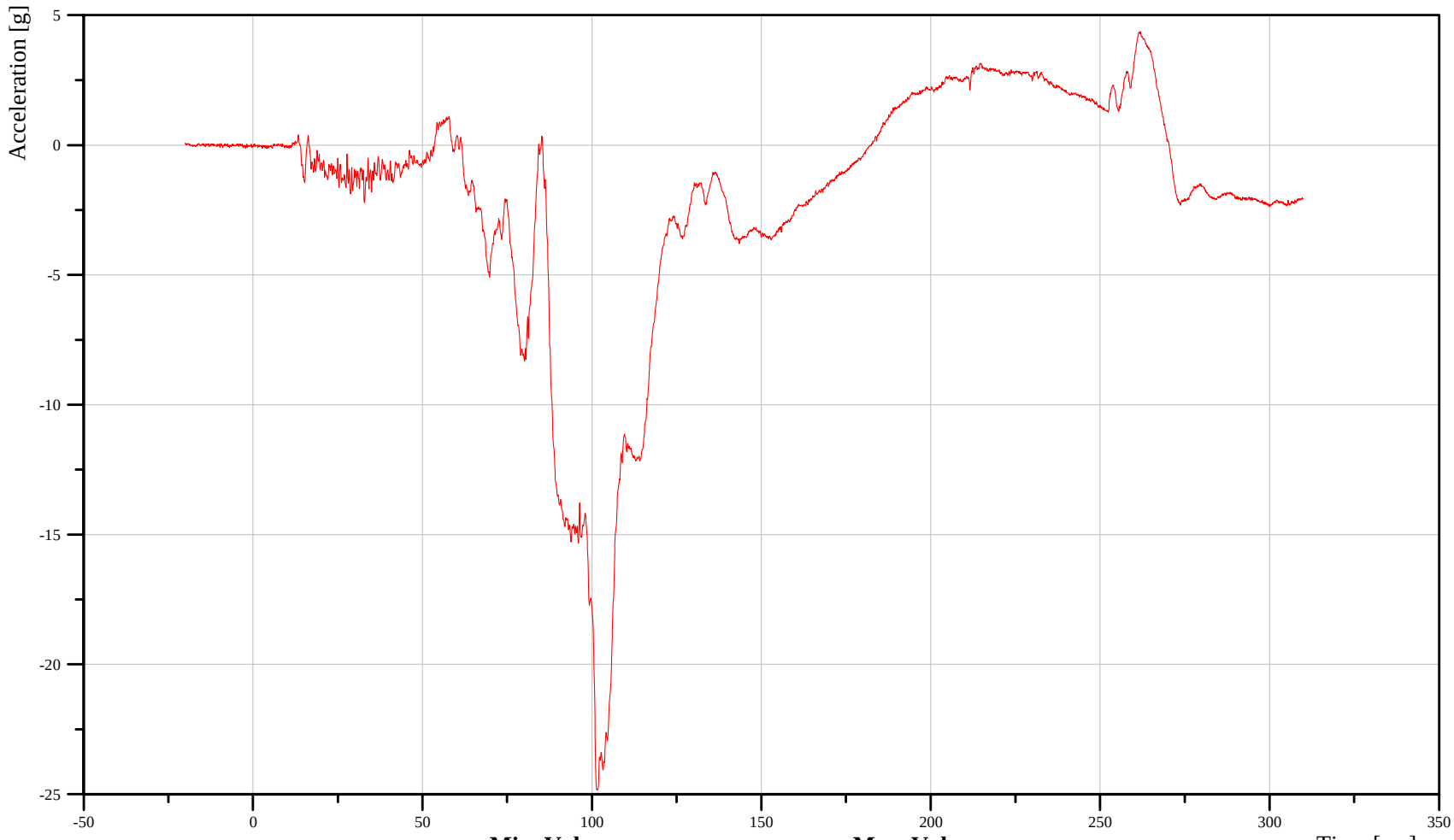
Head (FT) Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADFR00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-24.83 g at 101.52 ms

Max. Value
4.37 g at 261.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

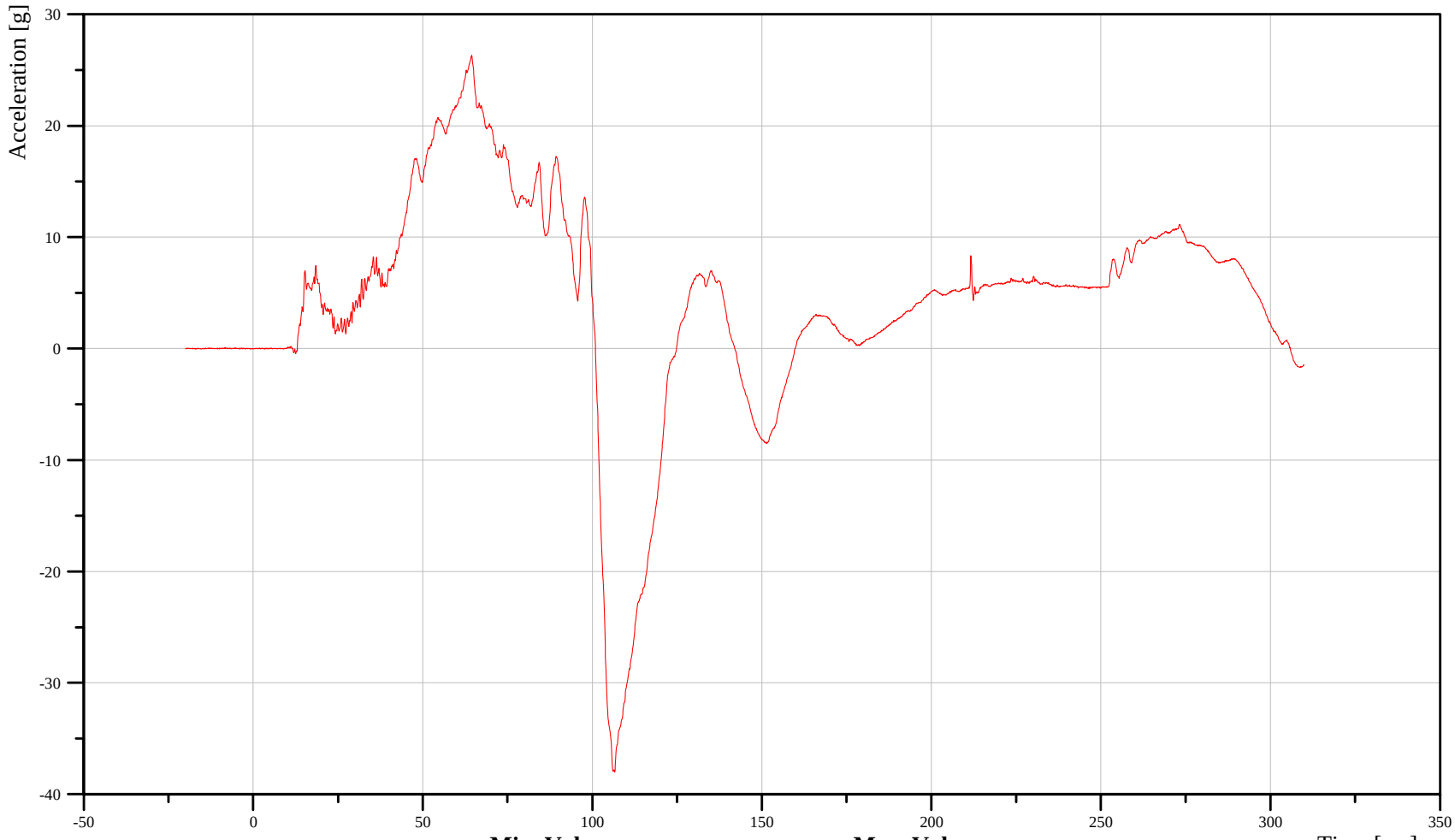
Head (FT) Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADFR00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-38.03 g at 106.56 ms

Max. Value
26.31 g at 64.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

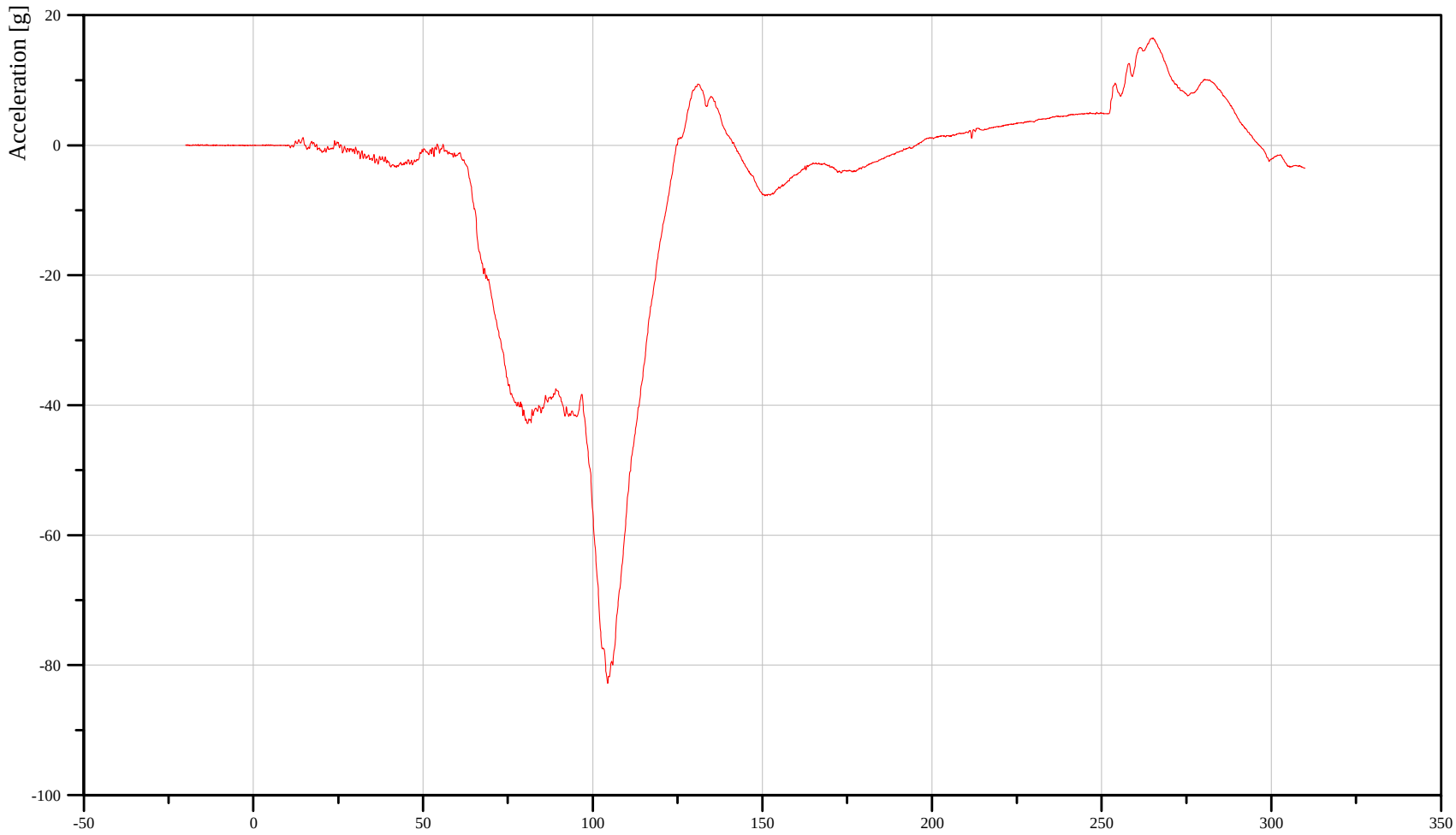
Head (TP) Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADUP00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-82.82 g at 104.40 ms

Max. Value
16.51 g at 265.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

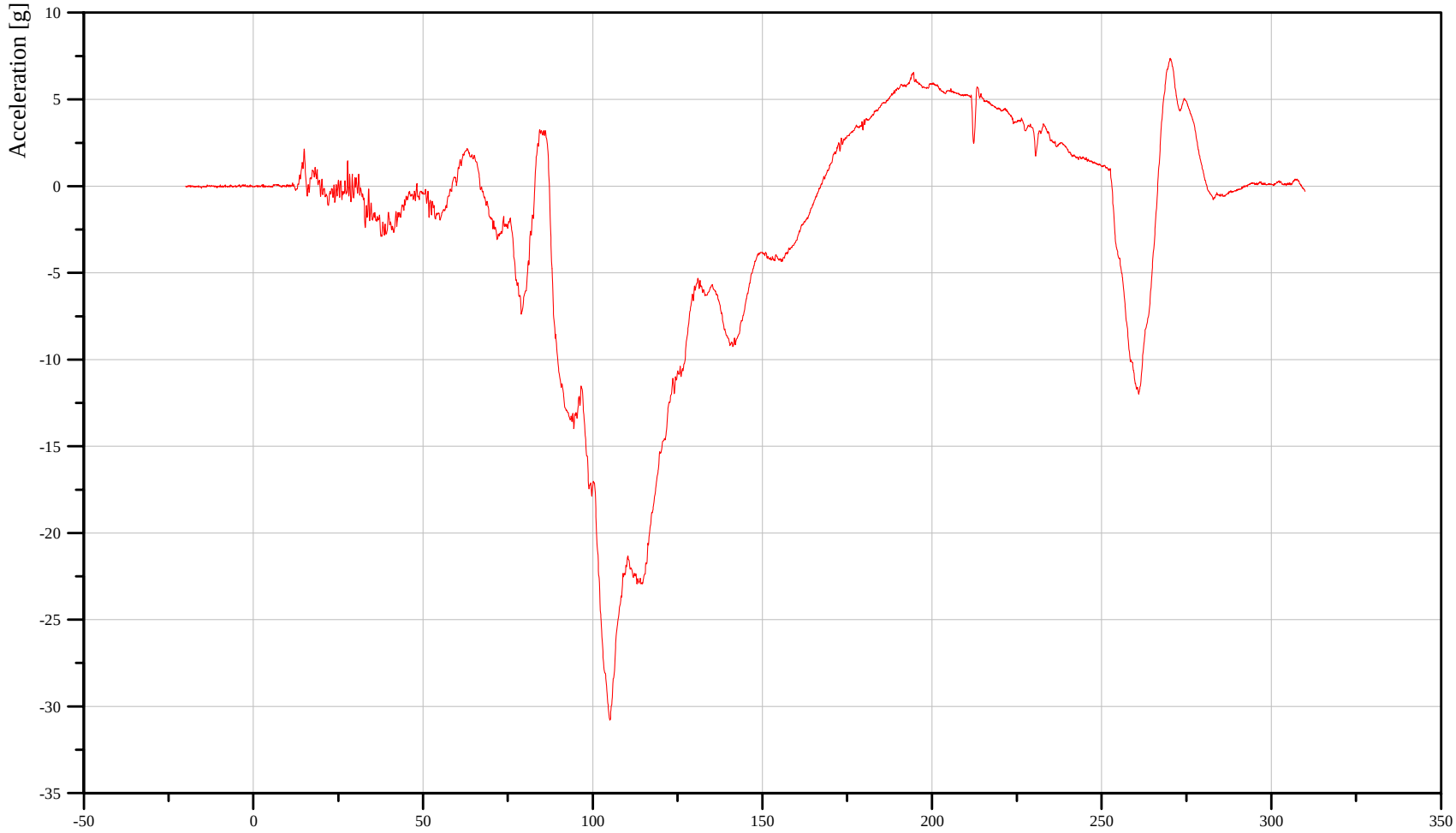
Head (TP) Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADUP00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-30.78 g at 105.04 ms

Max. Value
7.37 g at 270.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

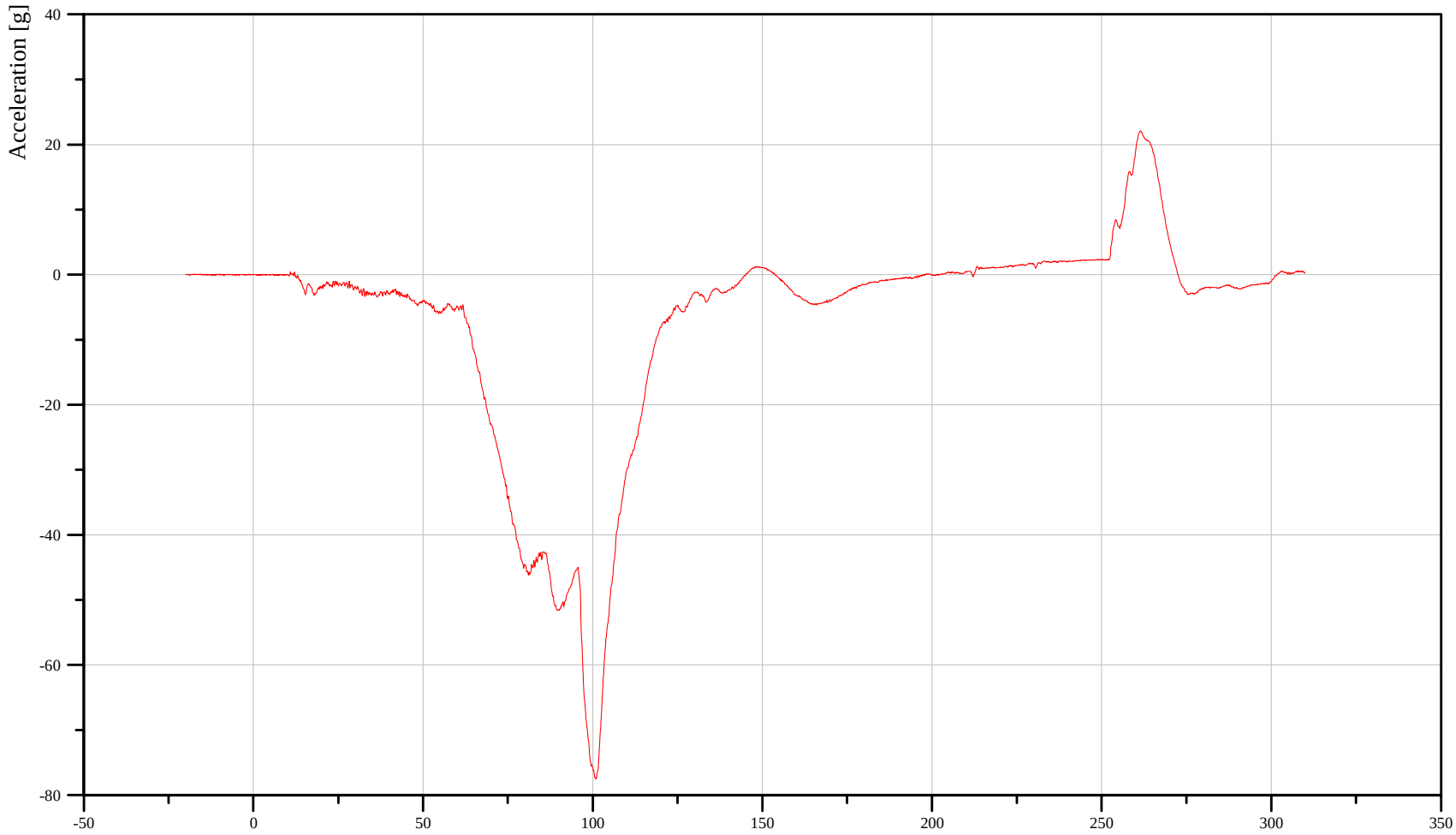
Head (LT) Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADLE00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-77.47 g at 100.96 ms

Max. Value
22.12 g at 261.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

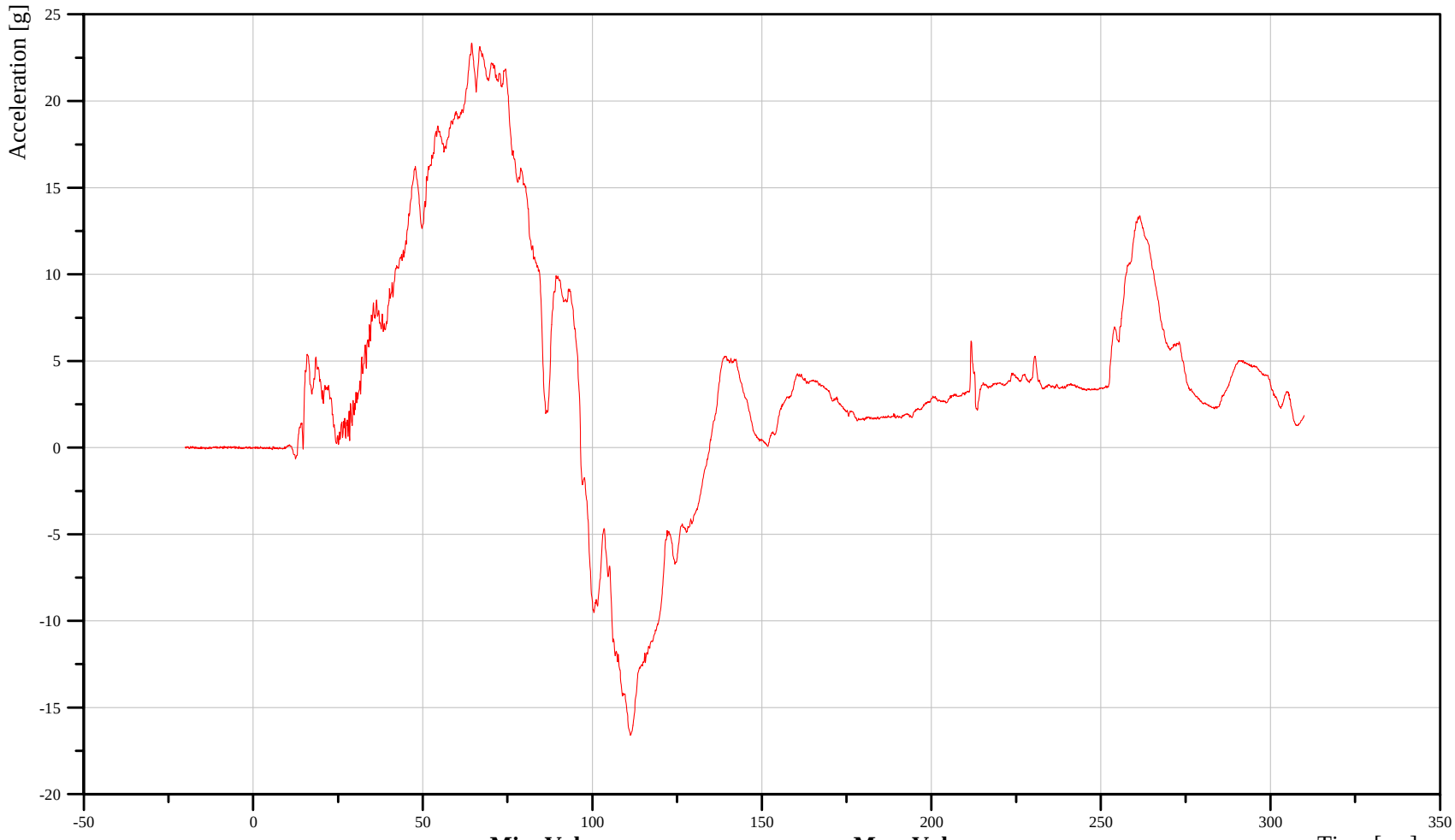
Head (LT) Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11HEADLE00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-16.59 g at 111.20 ms

Max. Value
23.35 g at 64.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

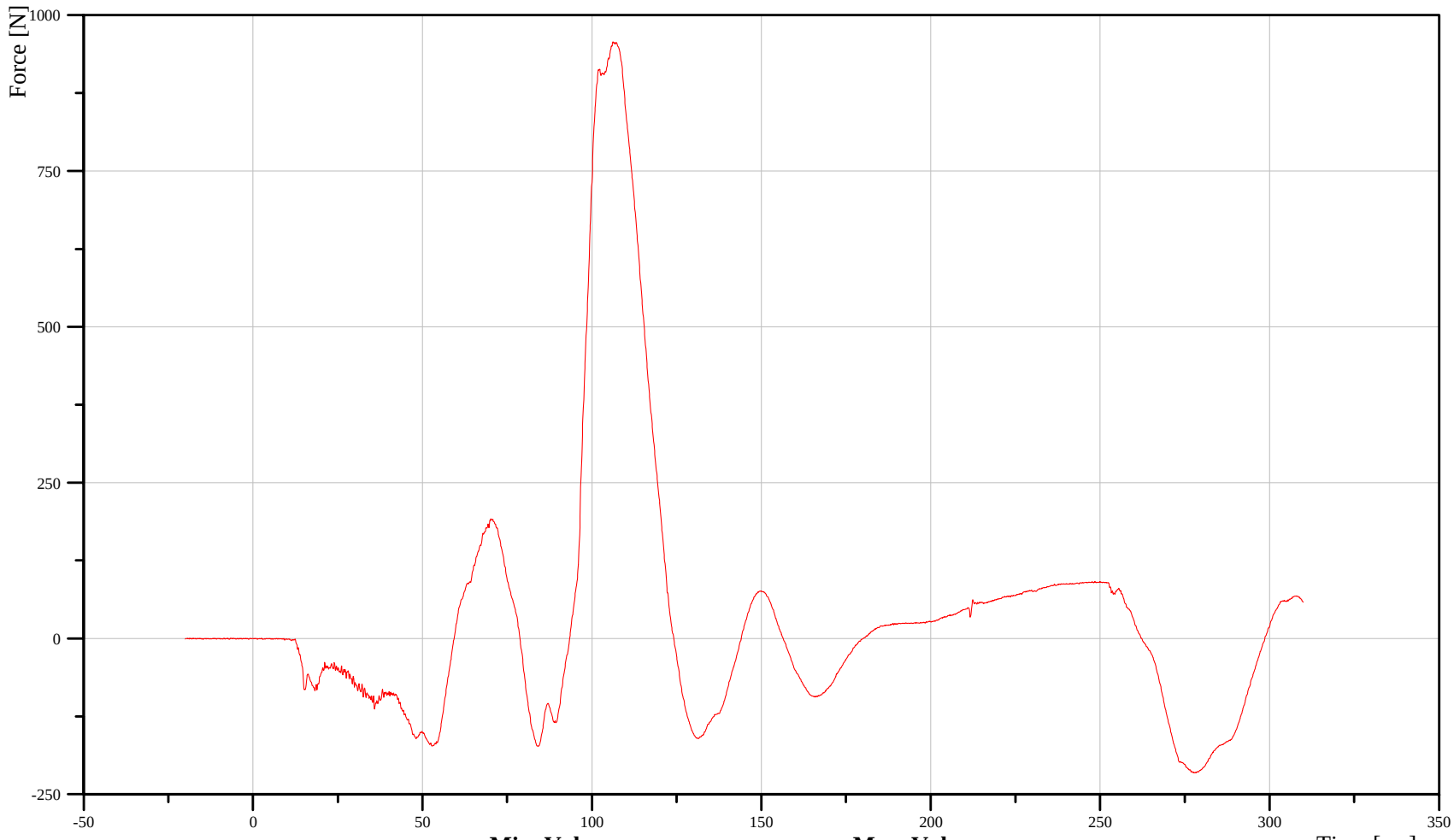
Neck Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKUP00H3FOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-215.66 N at 278.00 ms

Max. Value
957.26 N at 106.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

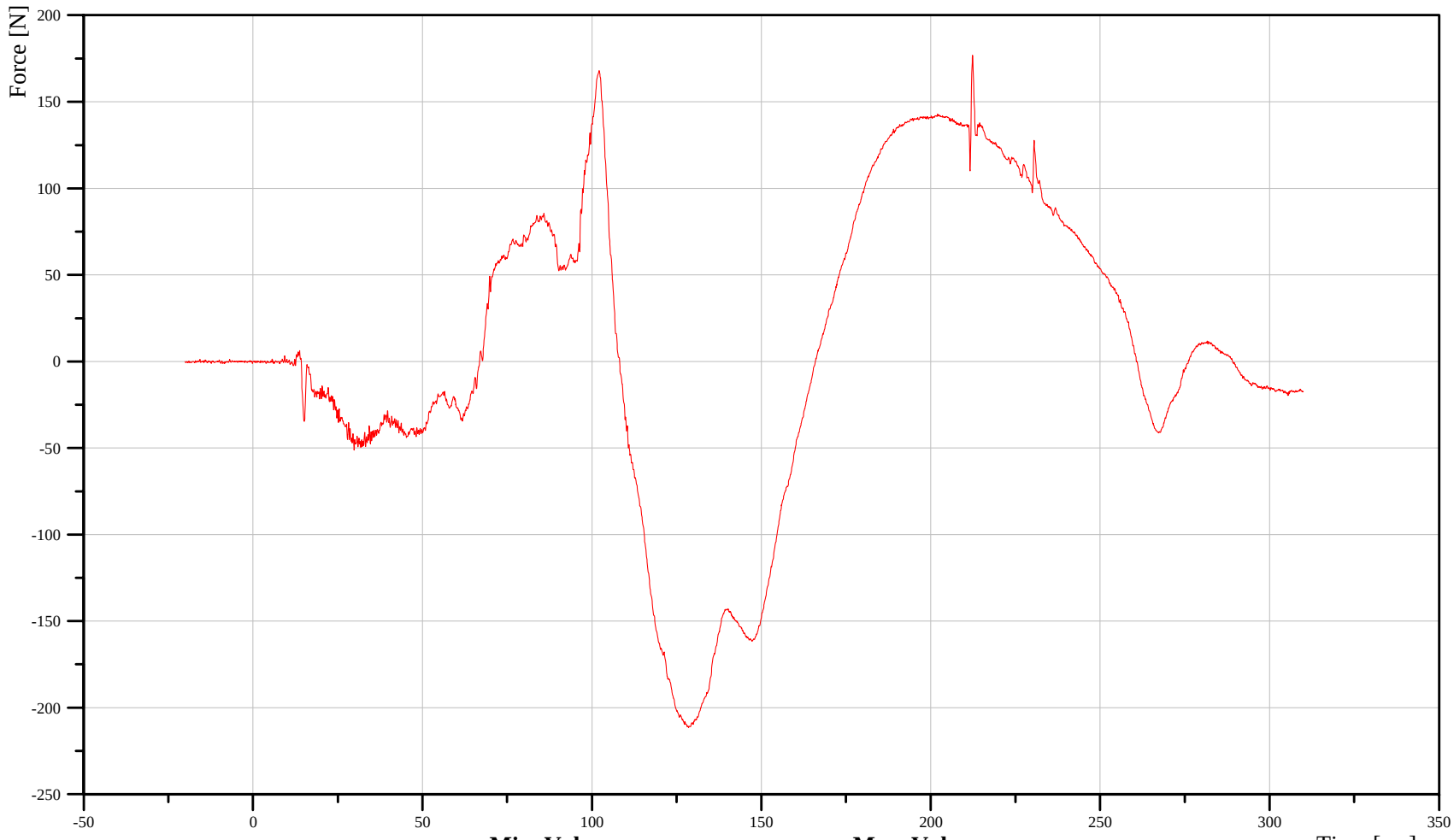
Neck Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKUP00H3FOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-211.47 N at 128.56 ms

Max. Value
176.82 N at 212.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

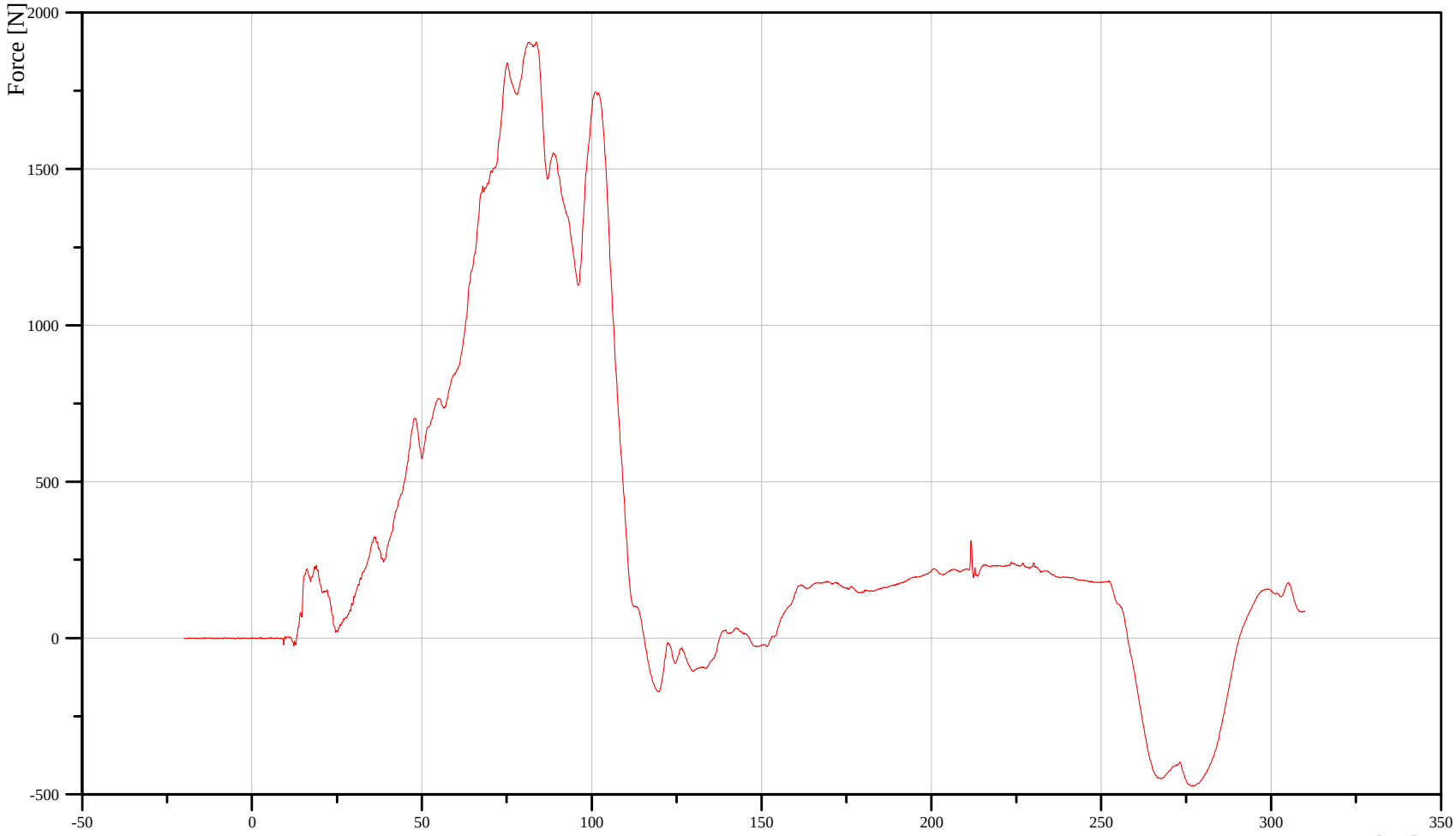
Neck Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKUP00H3FOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-472.73 N at 277.28 ms

Max. Value
1,906.35 N at 83.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

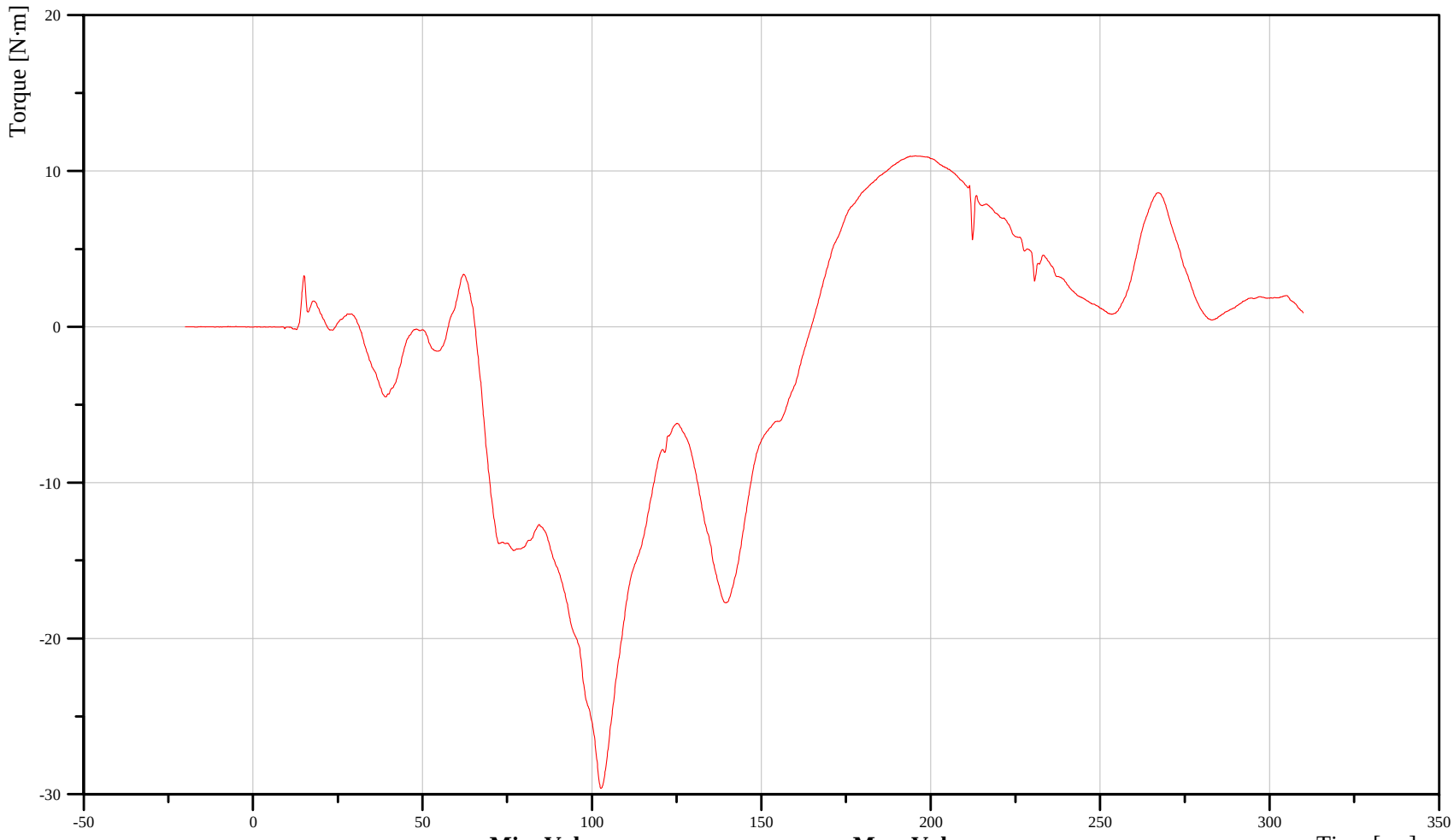
Neck Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKUP00H3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-29.61 N·m at 102.64 ms

Max. Value
10.97 N·m at 195.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

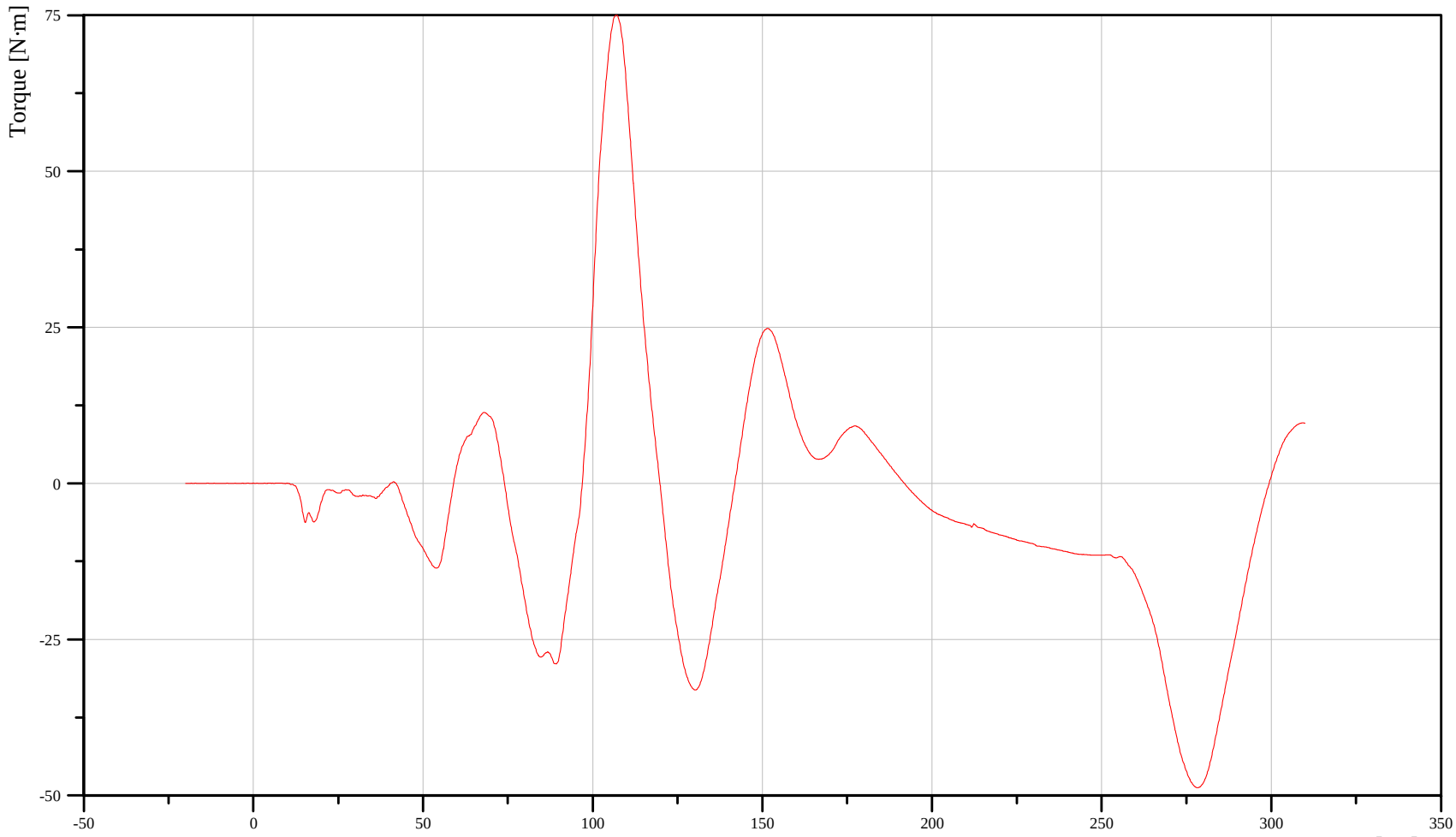
Neck Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKUP00H3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-48.77 N·m at 278.24 ms

Max. Value
75.02 N·m at 106.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

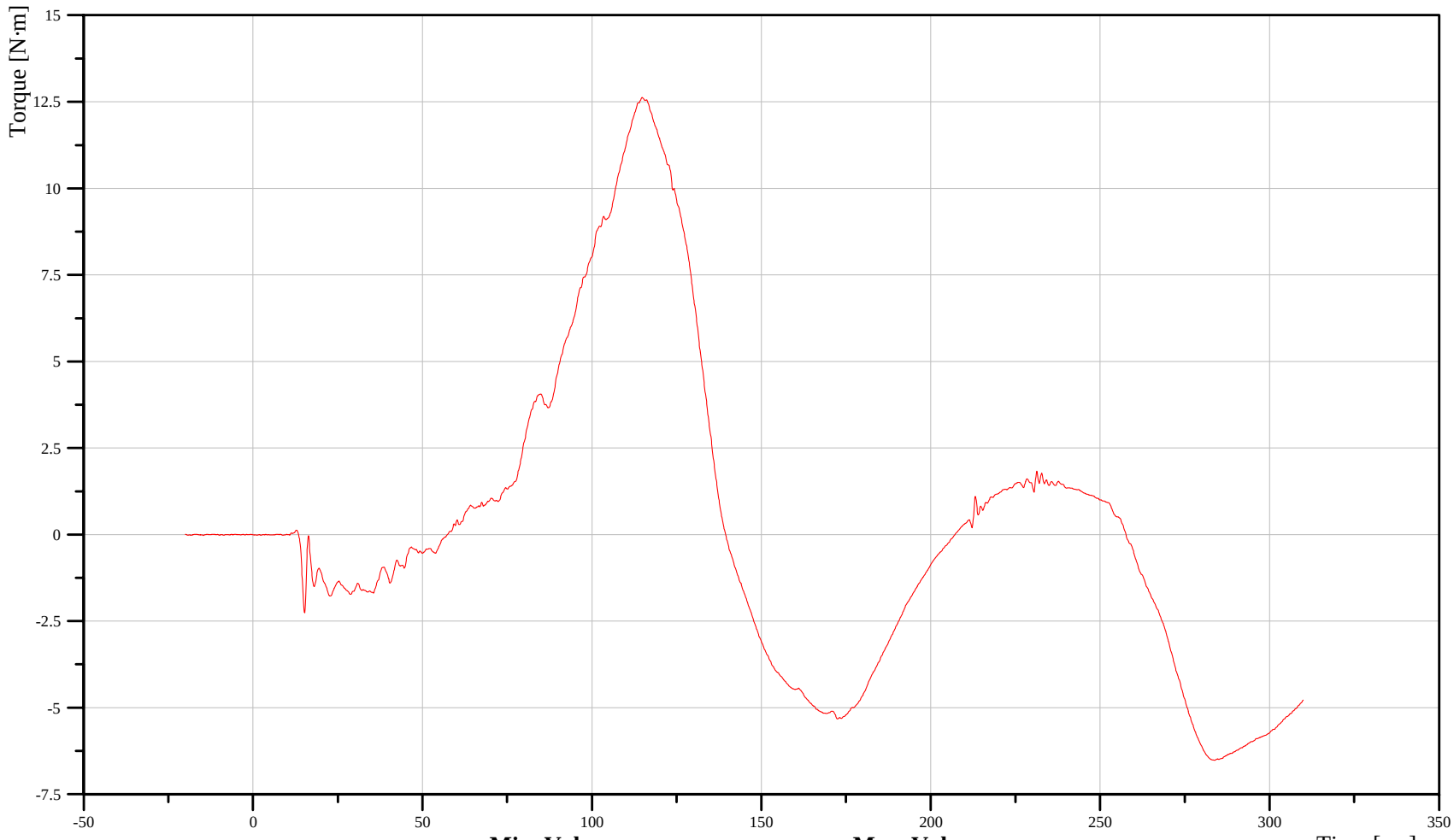
Neck Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKUP00H3MOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-6.52 N·m at 283.76 ms

Max. Value
12.63 N·m at 114.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

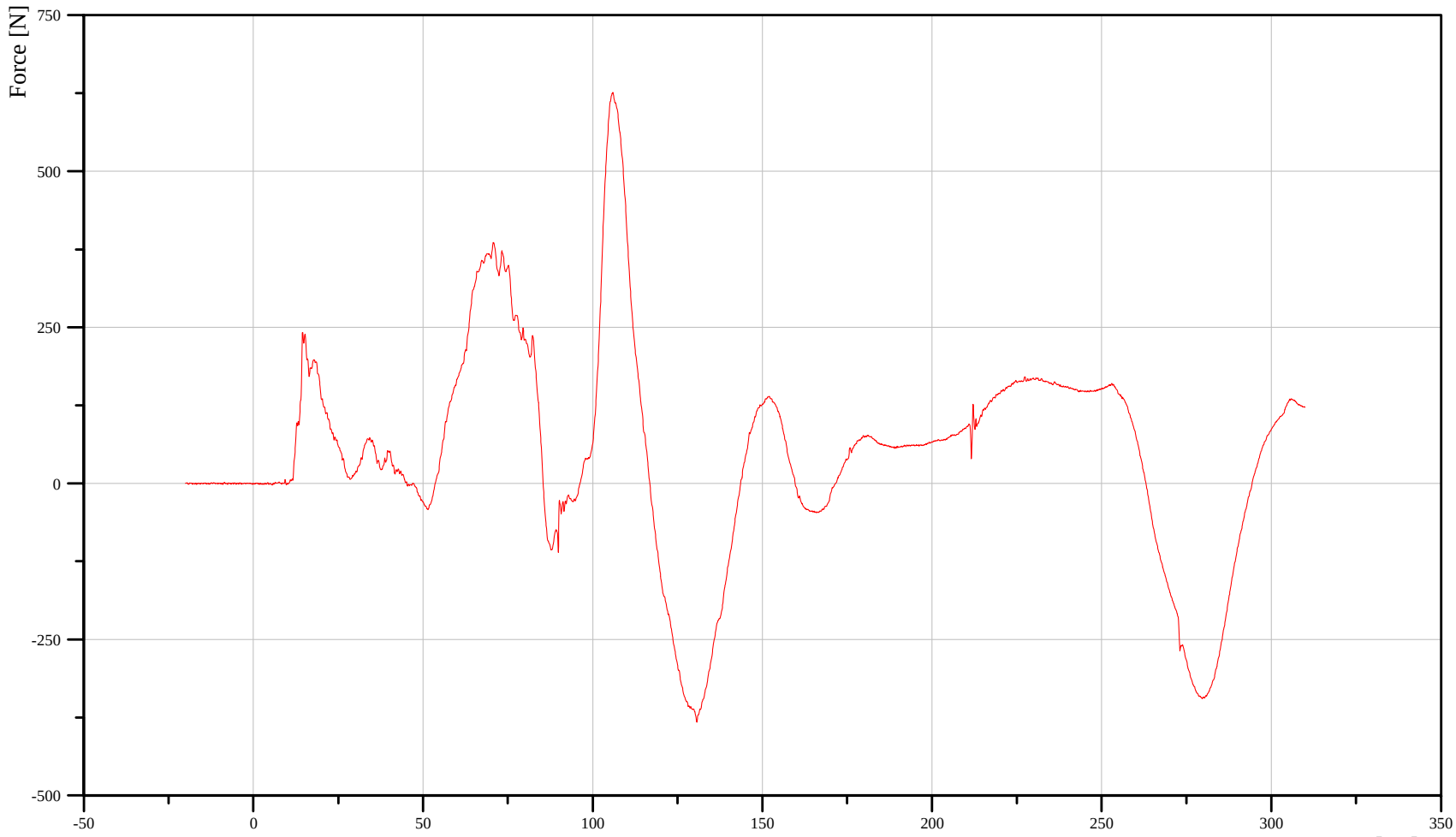
Neck Lower Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKLO00H3FOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-382.55 N at 130.72 ms

Max. Value
626.71 N at 105.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

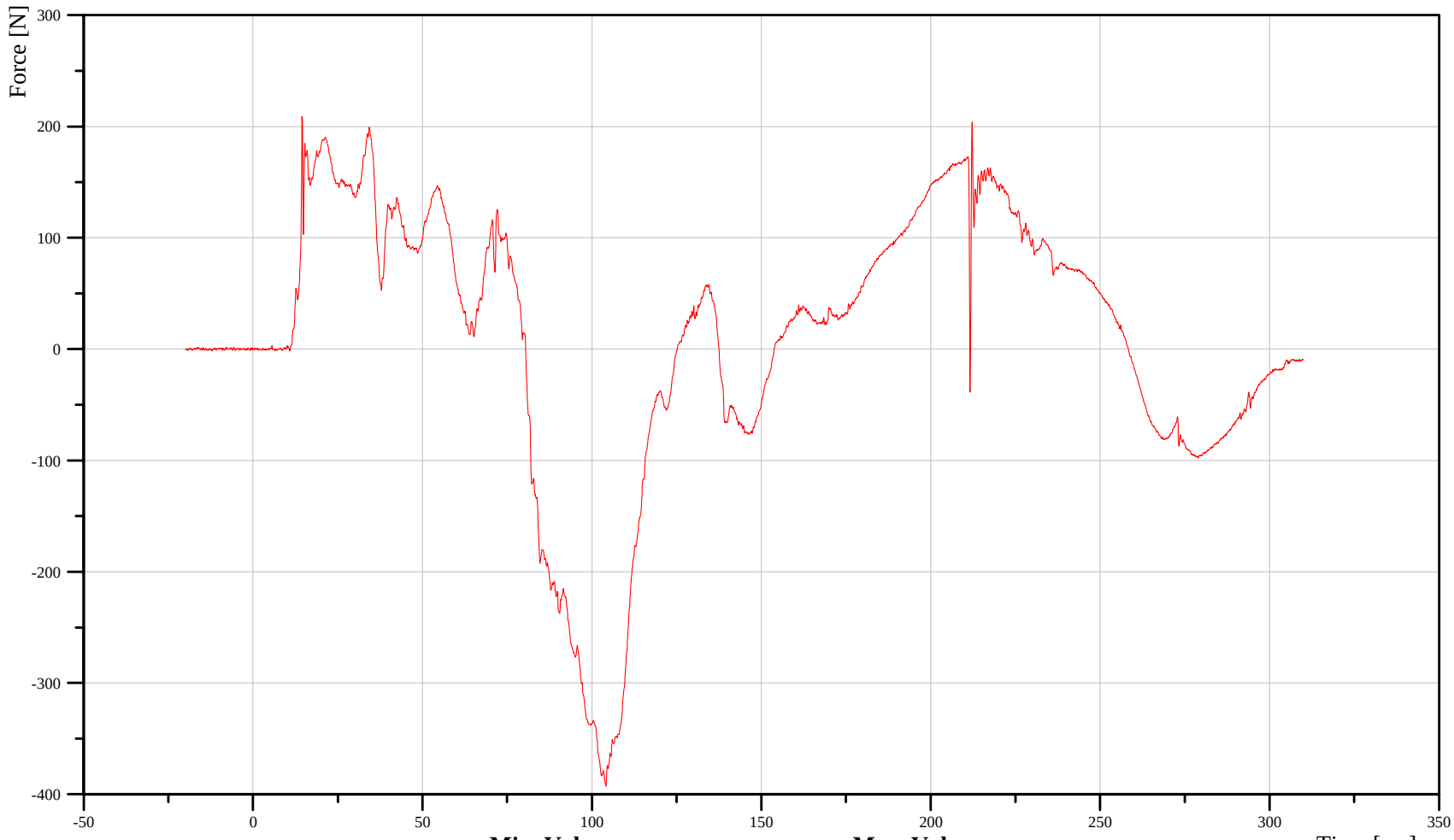
Neck Lower Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKLO00H3FOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-392.79 N at 104.16 ms

Max. Value
208.86 N at 14.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

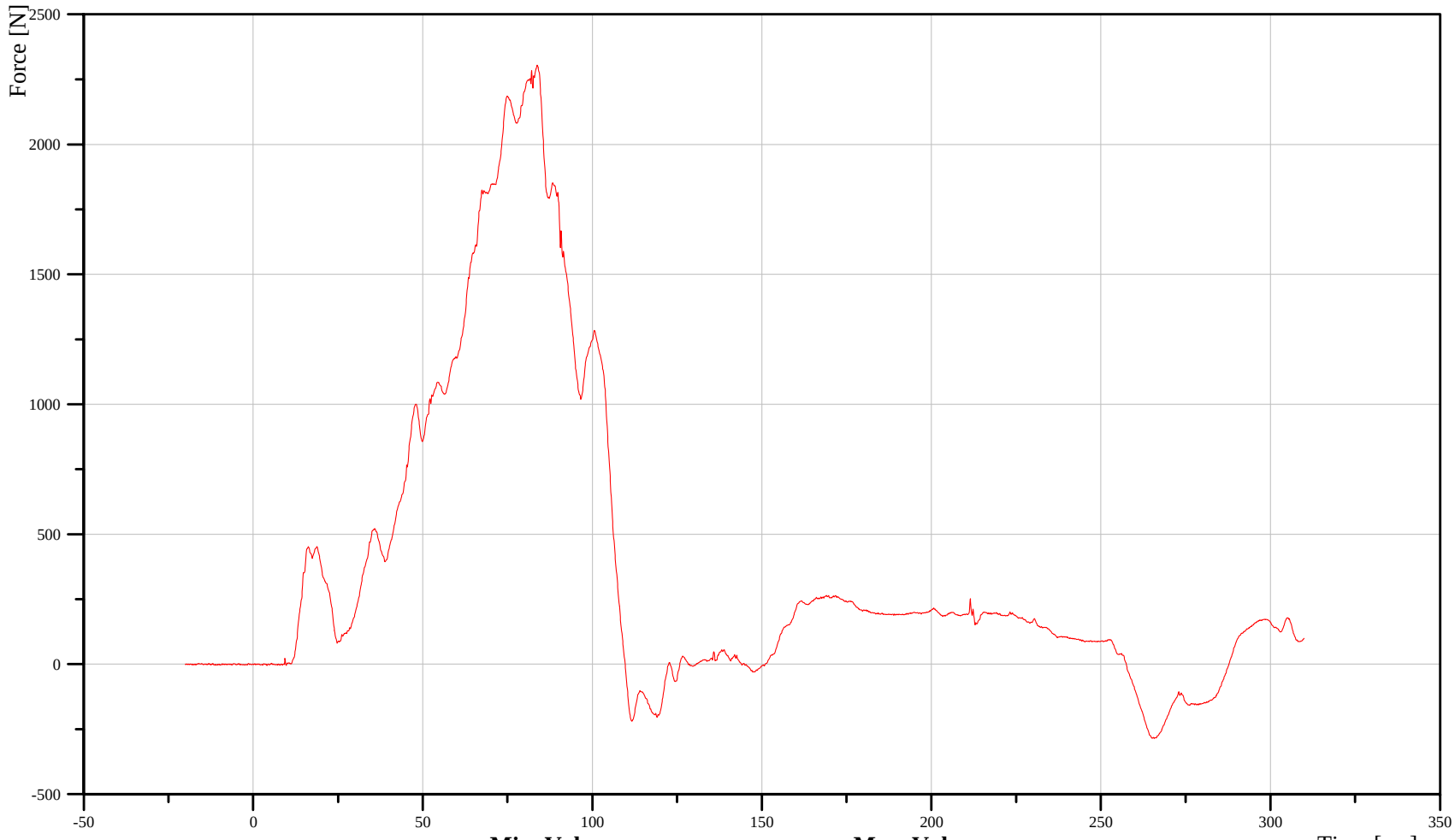
Neck Lower Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKLO00H3FOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-286.40 N at 265.76 ms

Max. Value
2,304.39 N at 83.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

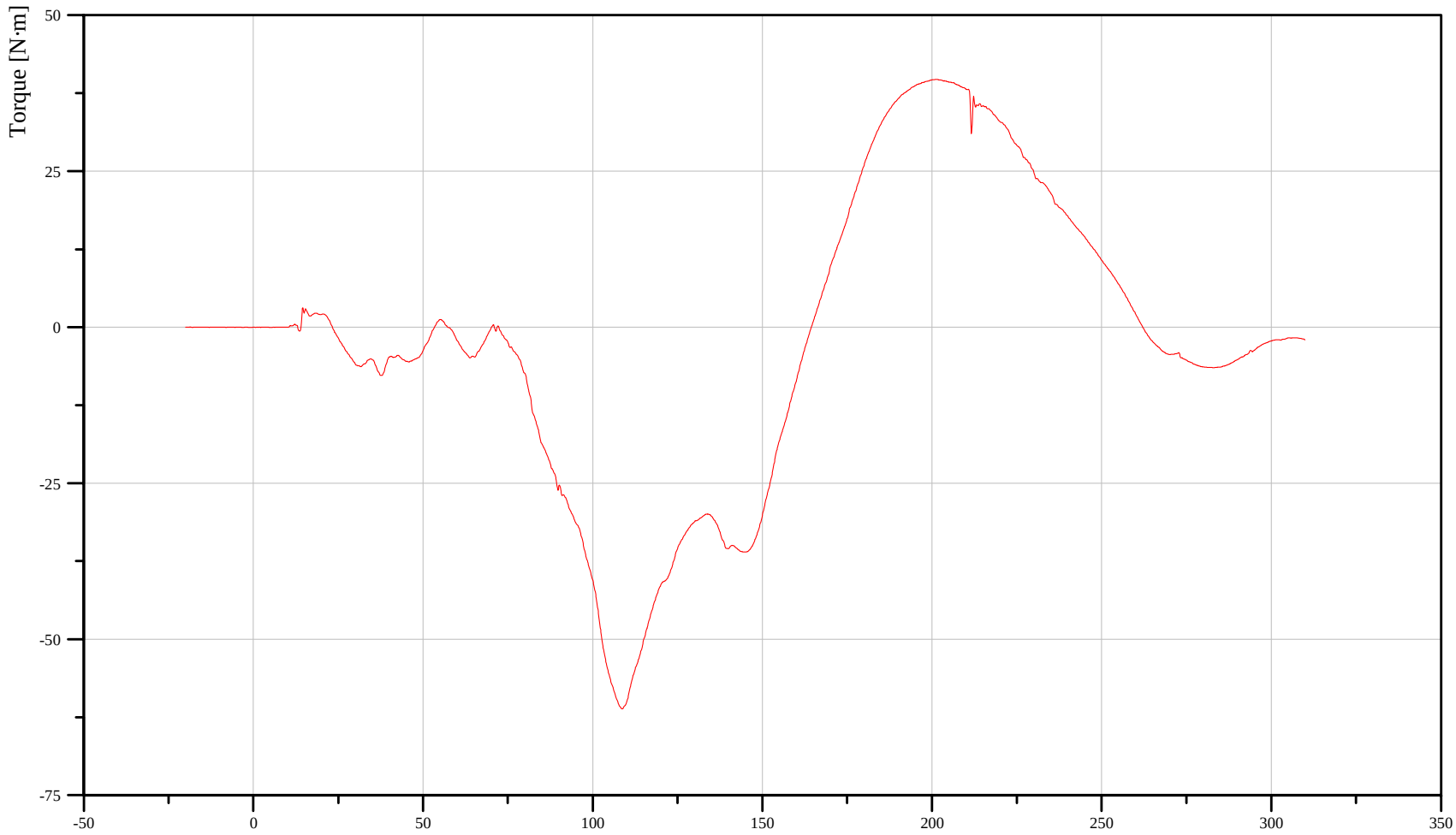
Neck Lower Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKLO00H3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-61.15 N·m at 108.64 ms

Max. Value
39.69 N·m at 201.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

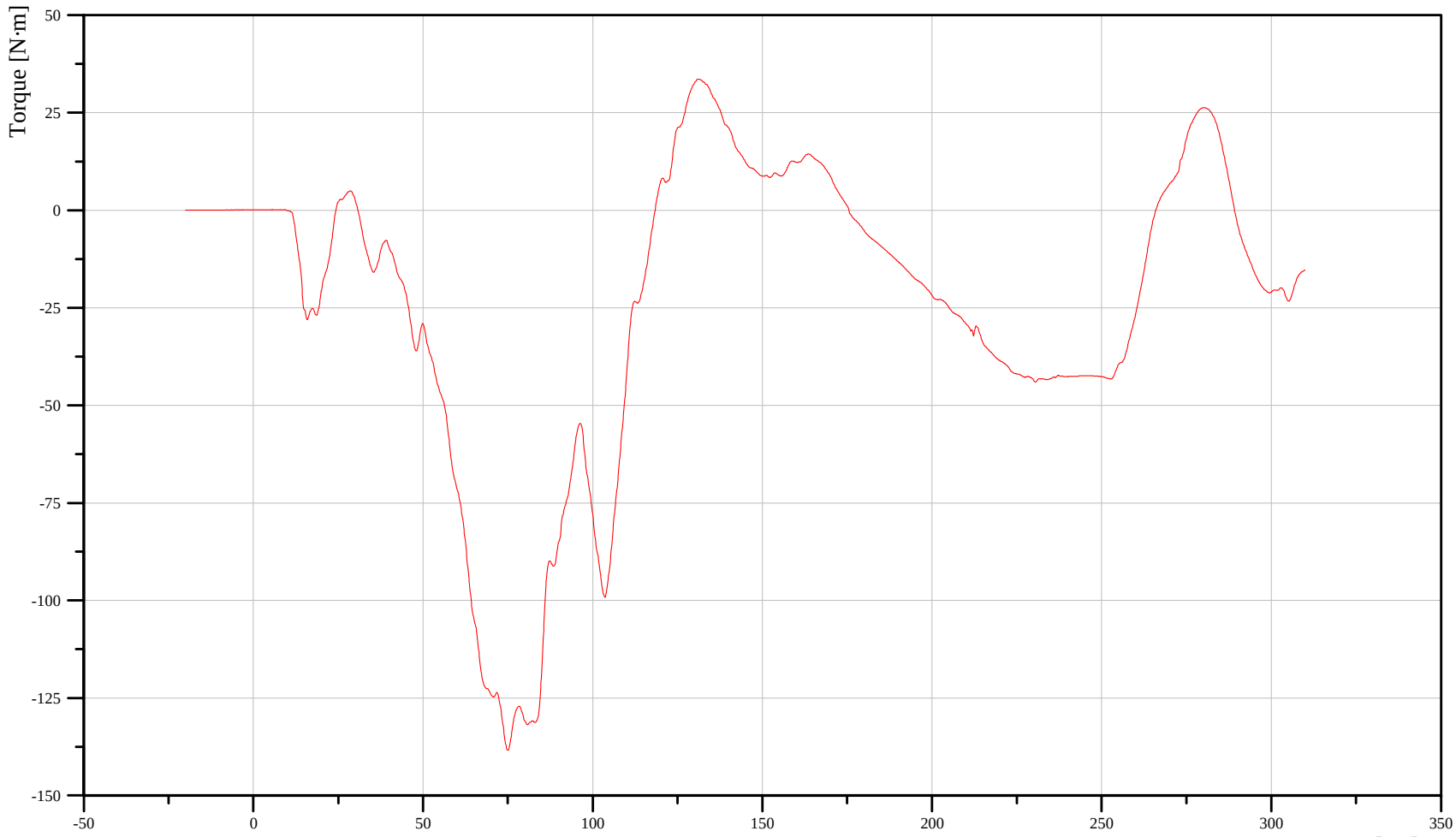
Neck Lower Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKLO00H3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-138.42 N·m at 74.96 ms

Max. Value
33.62 N·m at 131.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

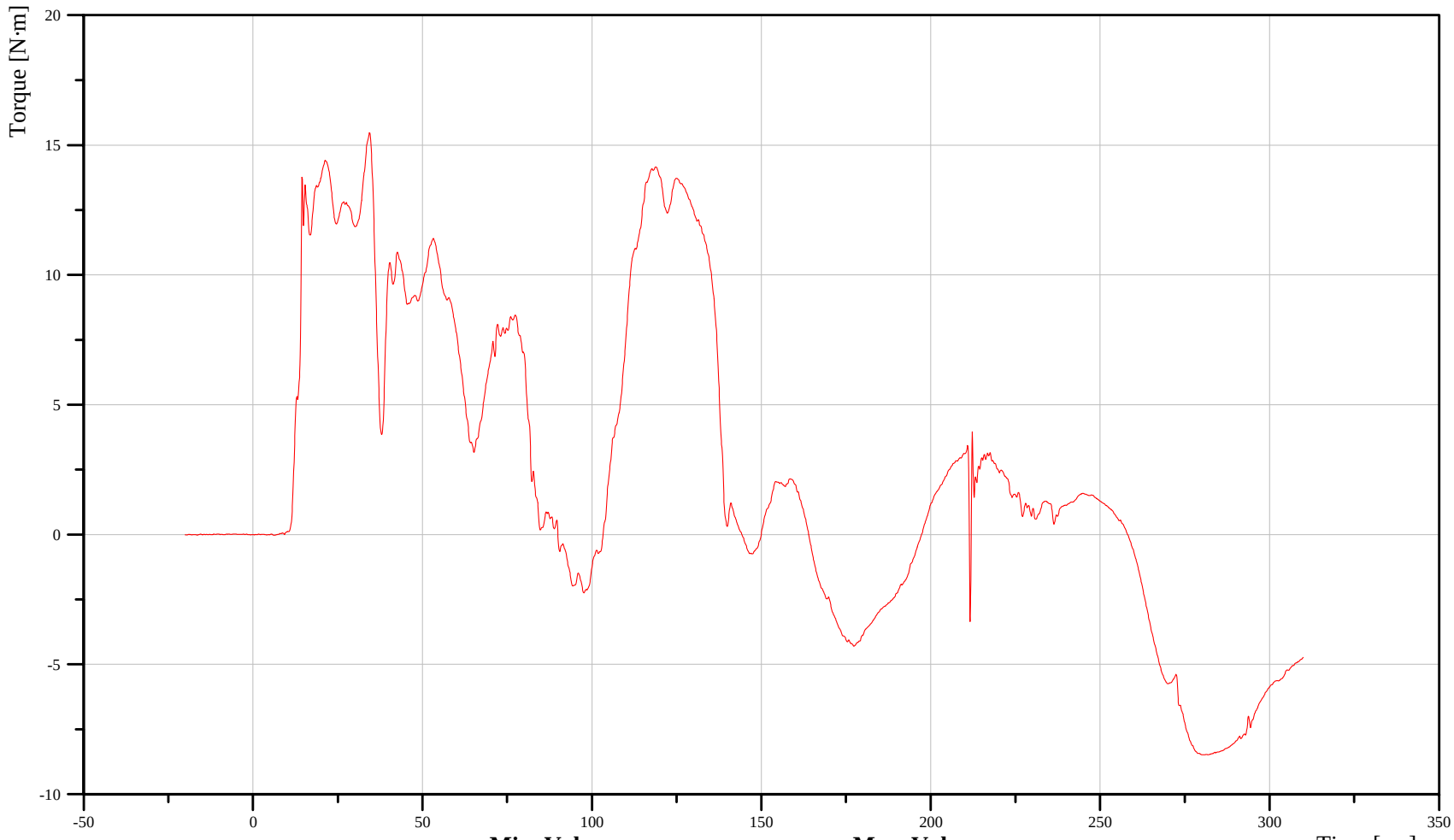
Neck Lower Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11NECKLO00H3MOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-8.49 N·m at 280.16 ms

Max. Value
15.47 N·m at 34.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

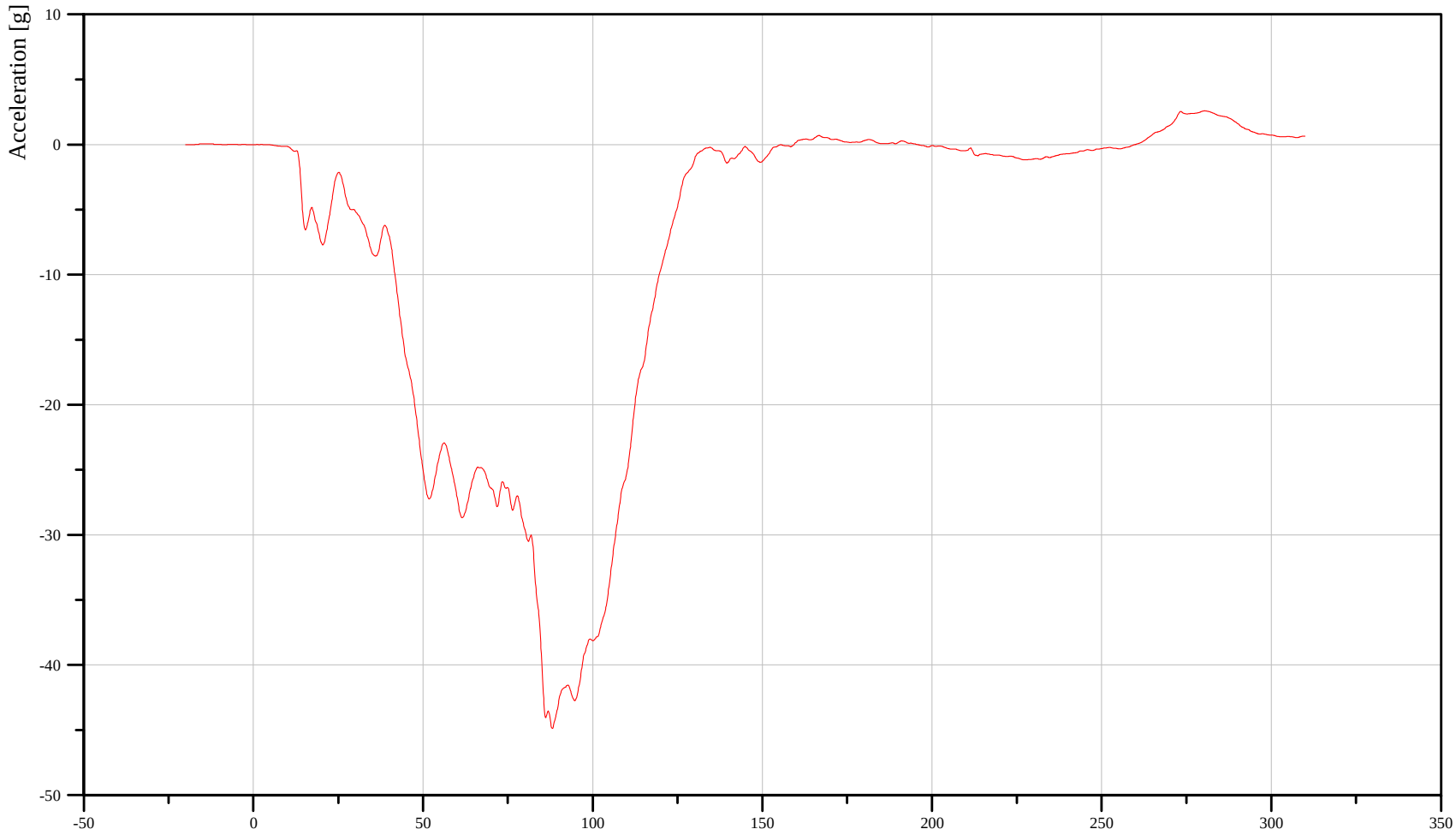
Chest Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-44.88 g at 88.08 ms

Max. Value
2.59 g at 280.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

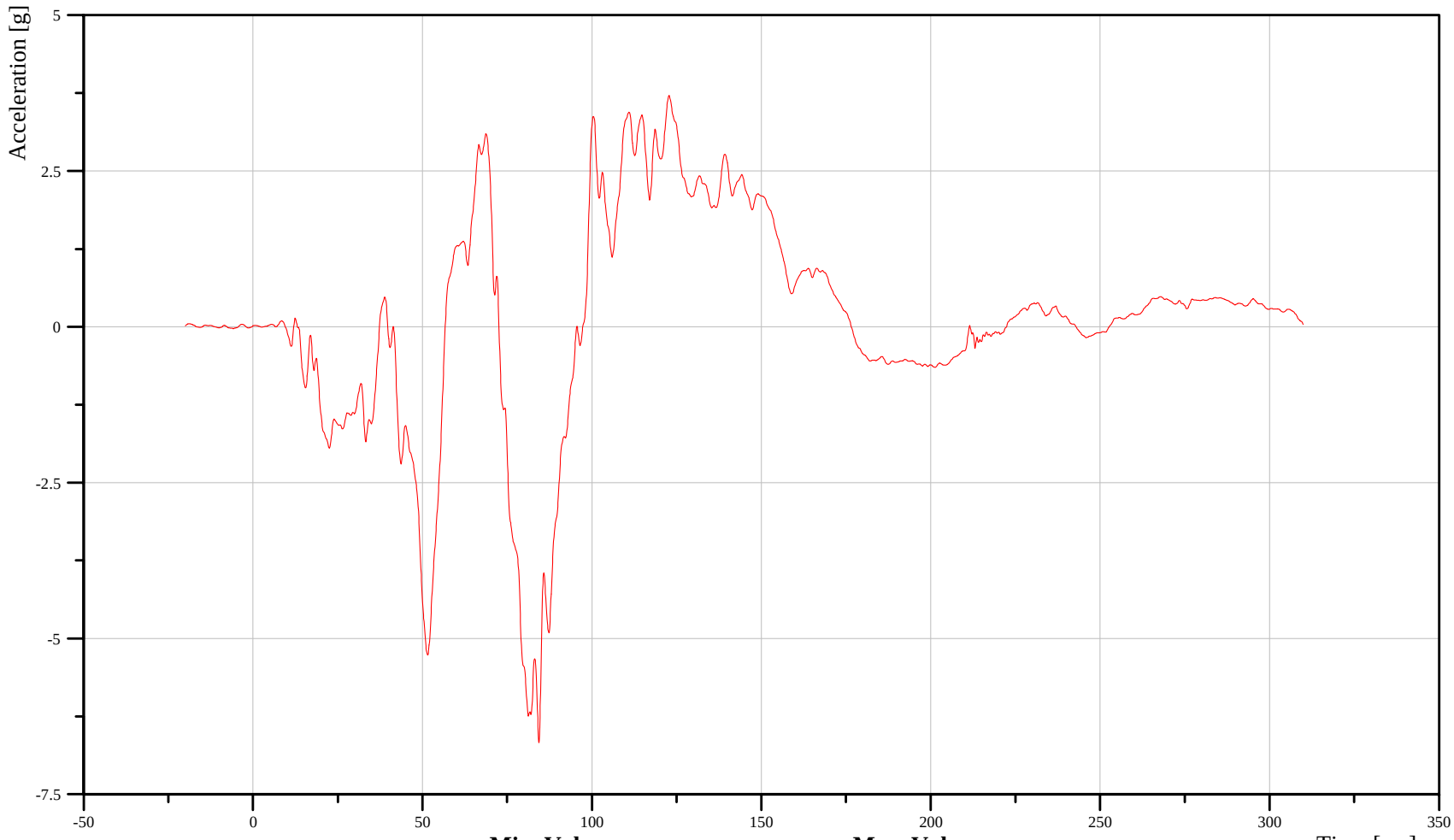
Chest Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-6.67 g at 84.40 ms

Max. Value
3.71 g at 122.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

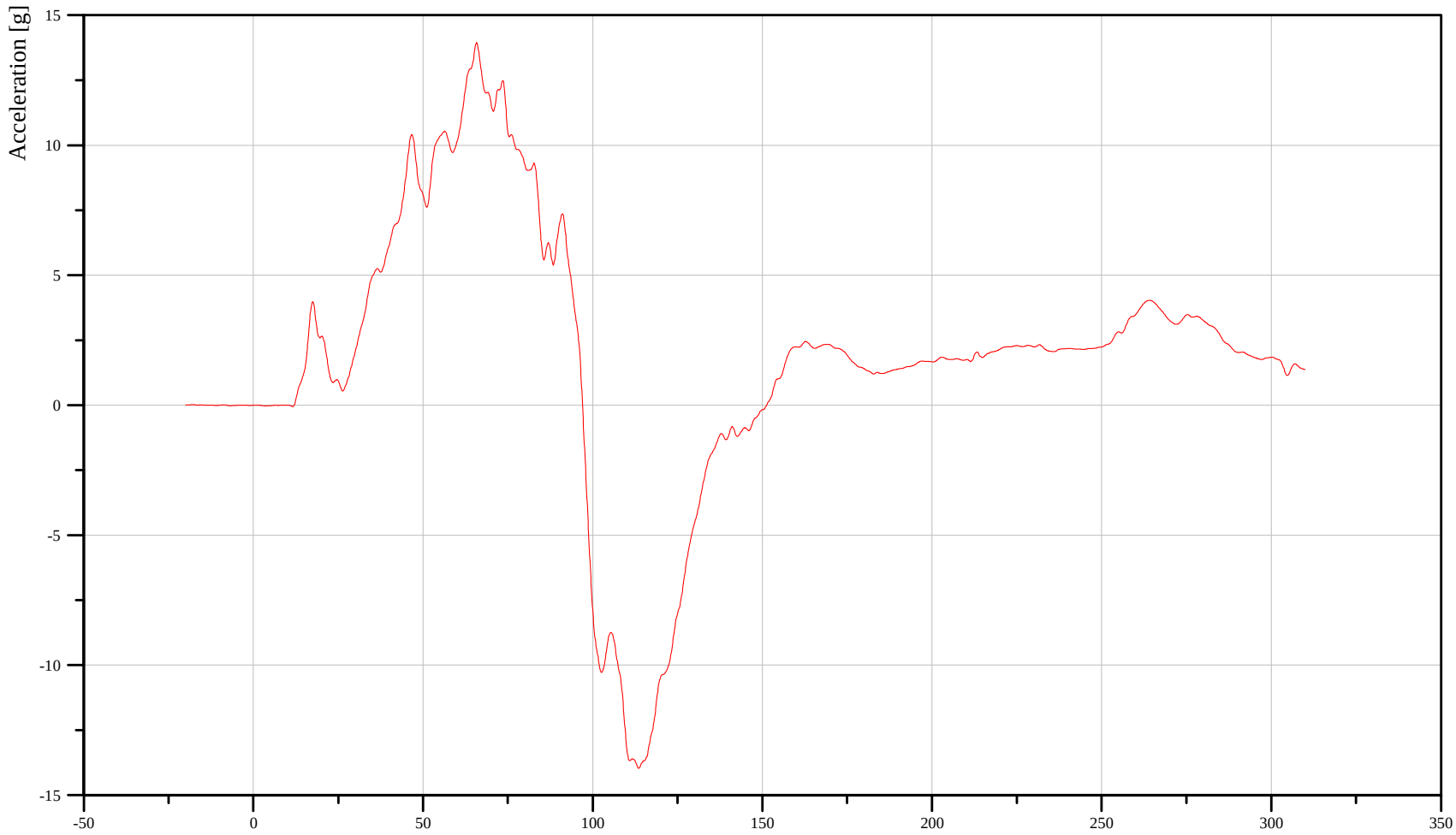
Chest Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-13.96 g at 113.60 ms

Max. Value
13.95 g at 65.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

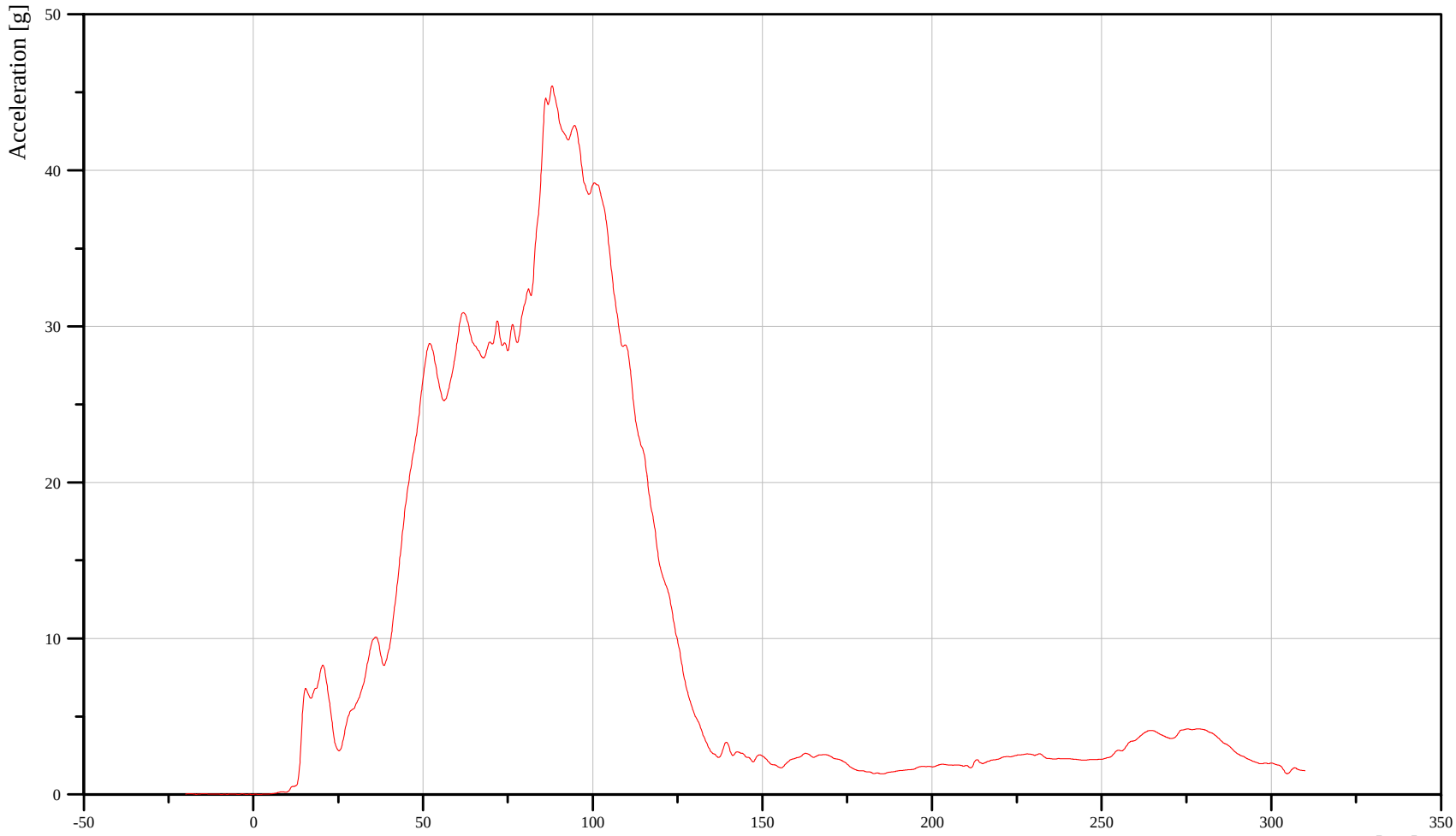
Chest Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.00 g at -2.00 ms

Max. Value
45.41 g at 88.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

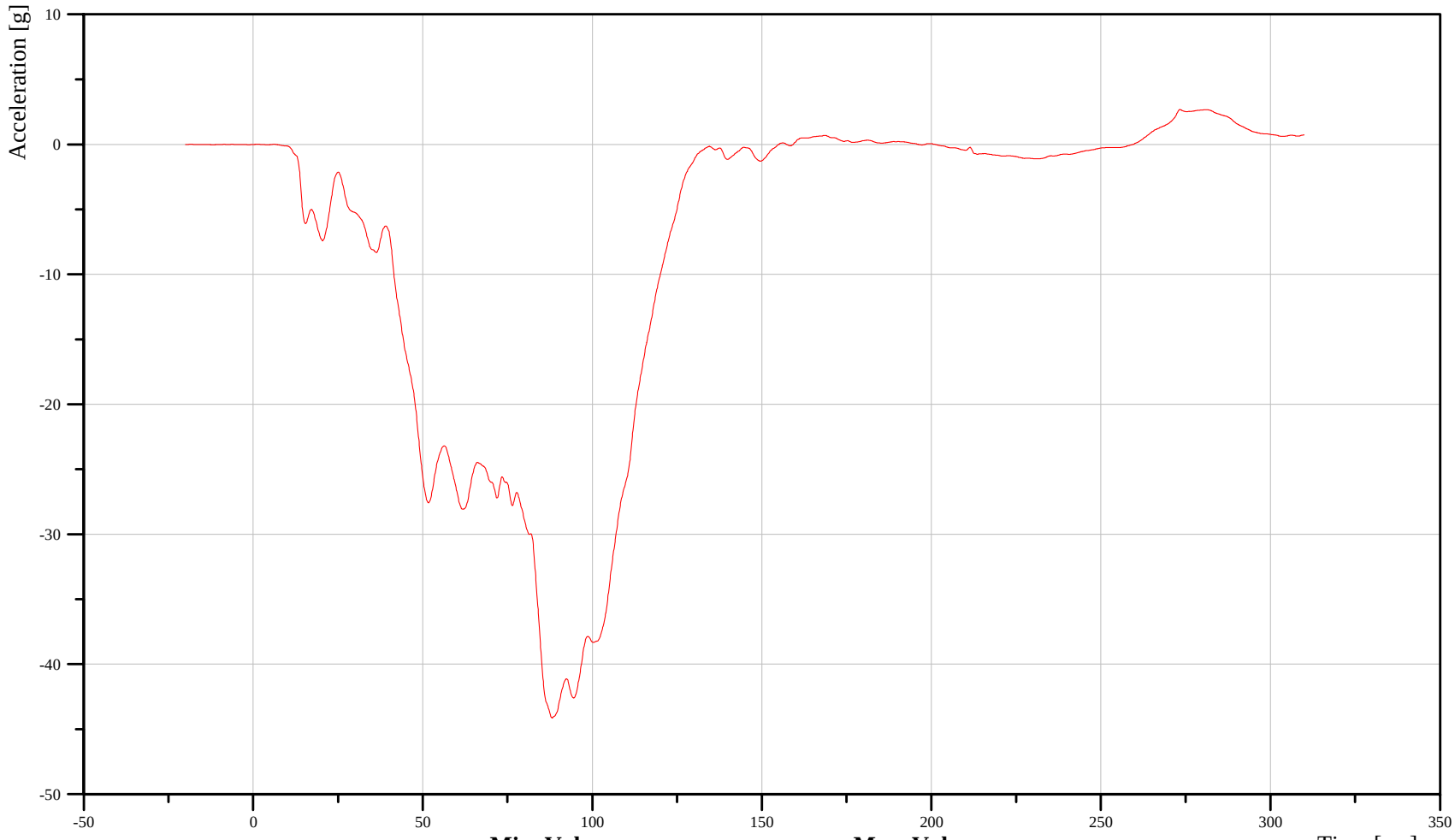
Chest Accel X Red.

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-44.12 g at 88.16 ms

Max. Value
2.68 g at 273.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

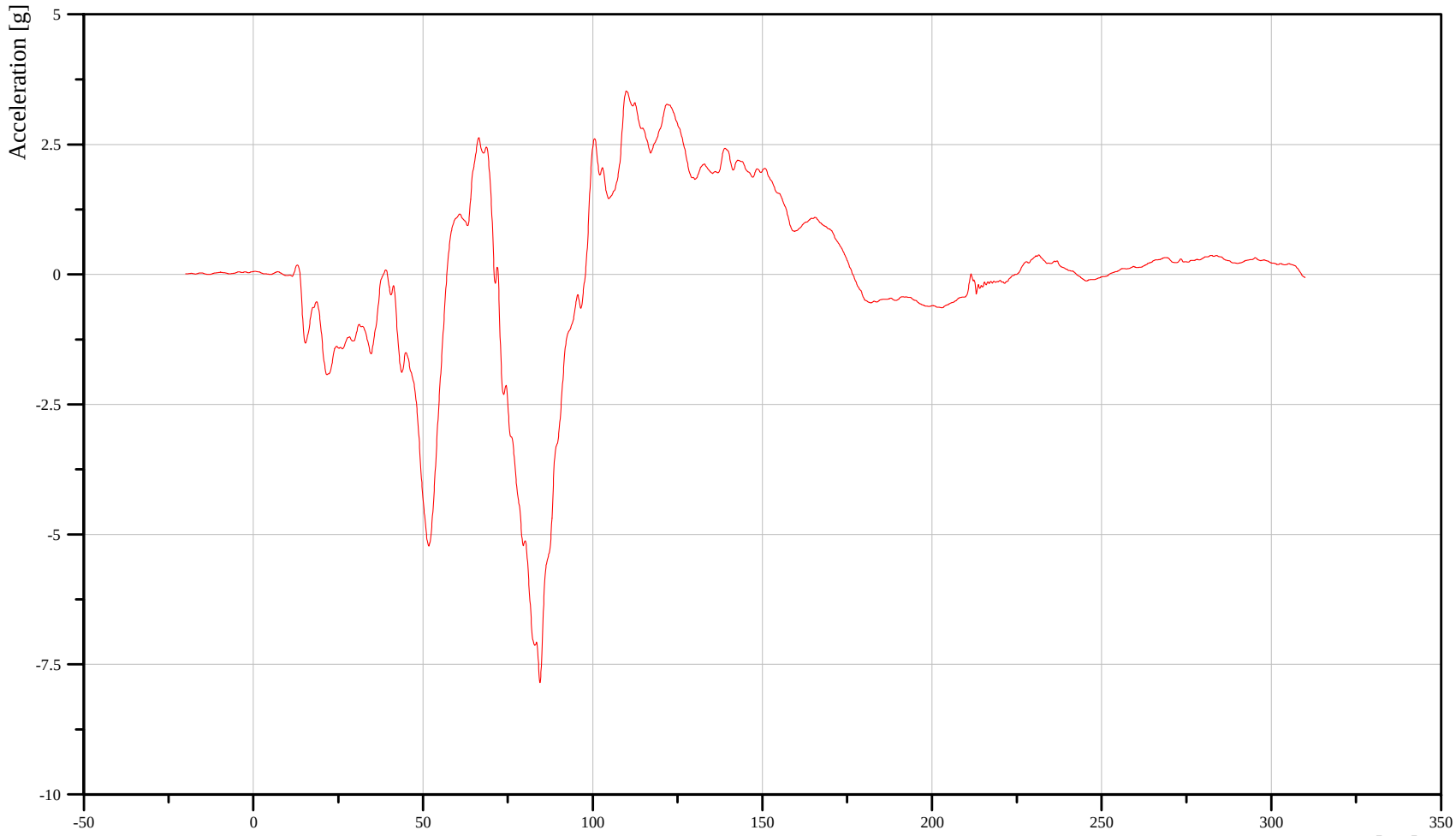
Chest Accel Y Red.

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-7.85 g at 84.48 ms

Max. Value
3.53 g at 109.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

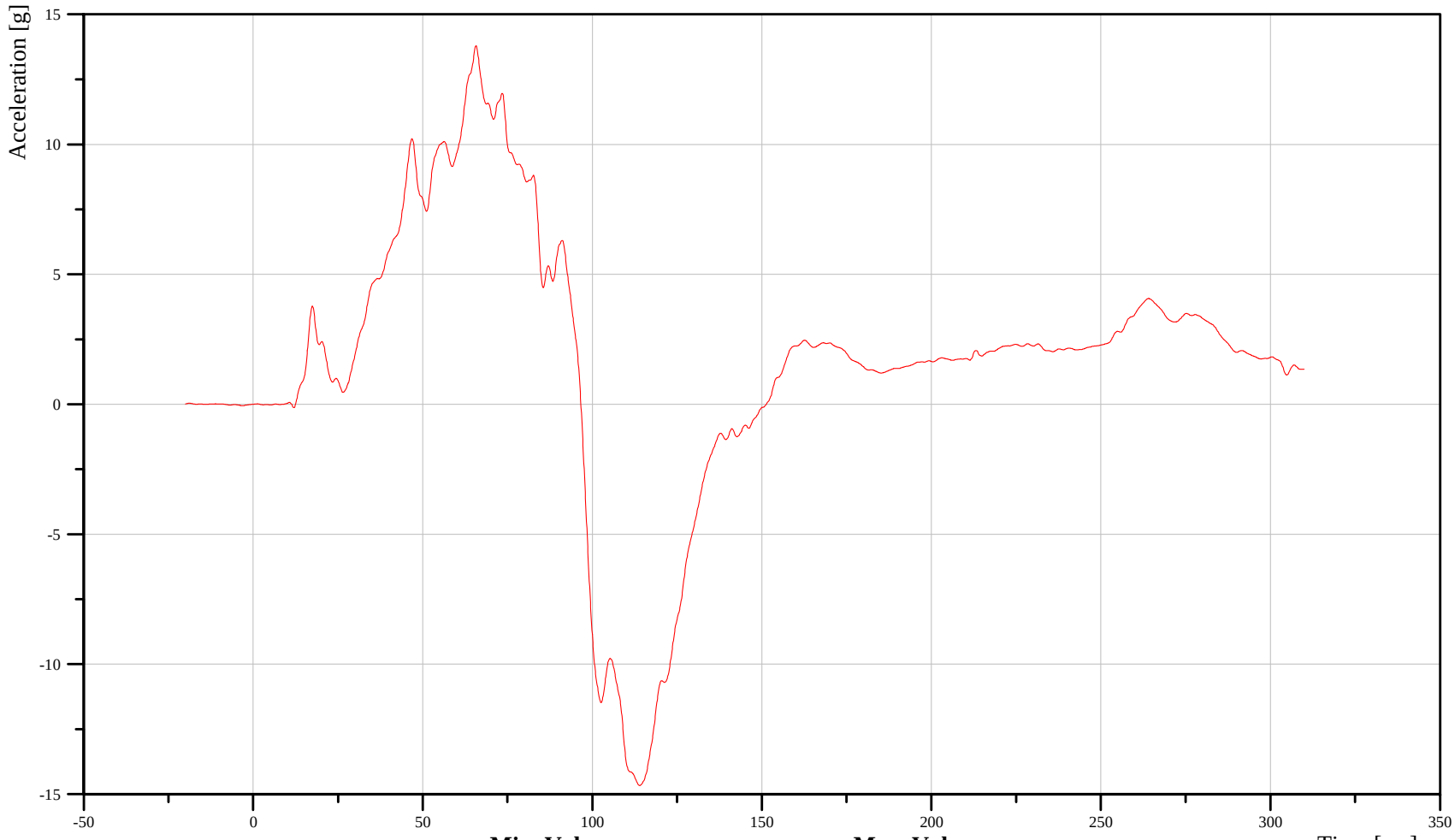
Chest Accel Z Red.

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-14.67 g at 114.00 ms

Max. Value
13.80 g at 65.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

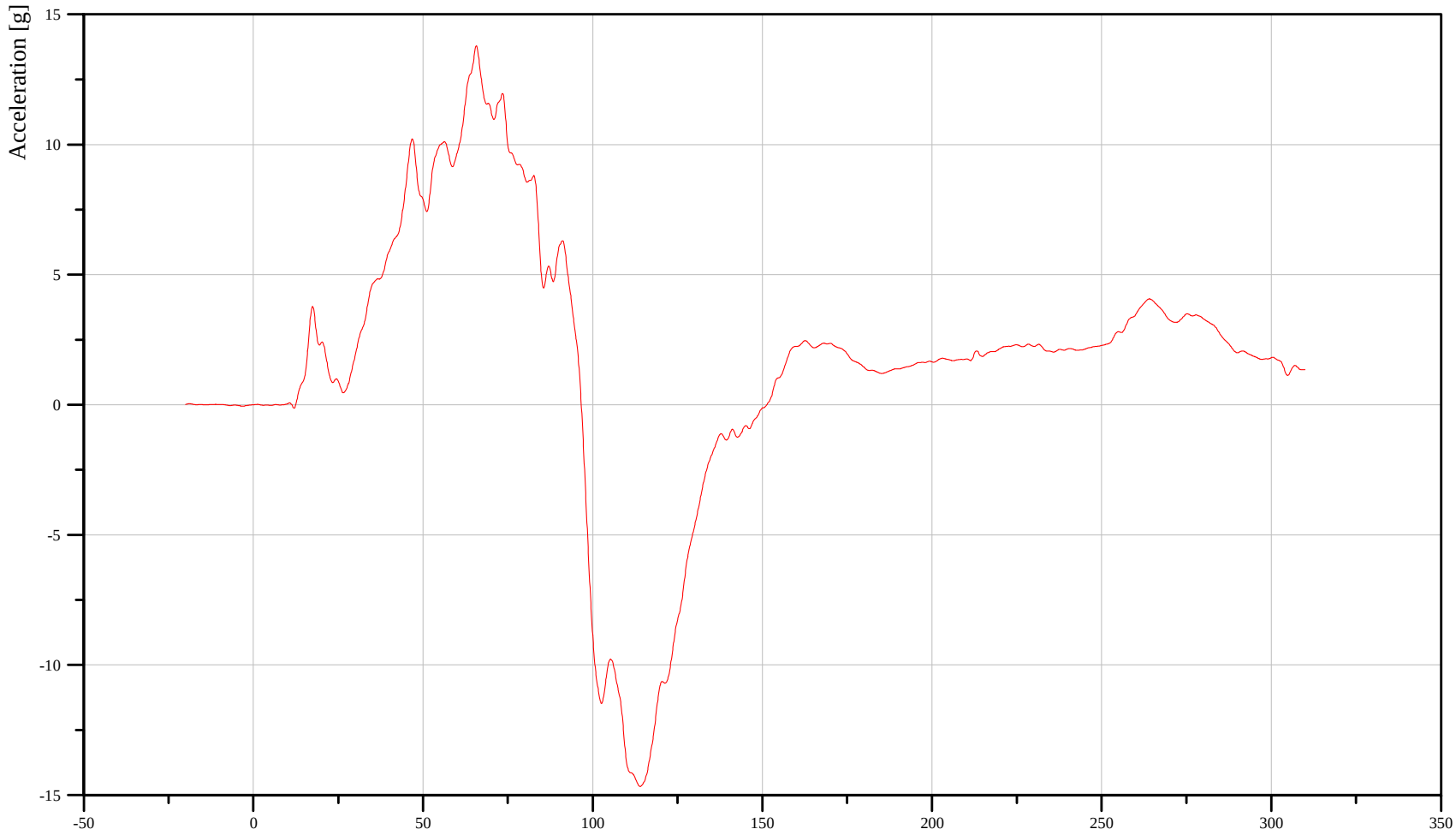
Chest Accel Red. Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-14.67 g at 114.00 ms

Max. Value
13.80 g at 65.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

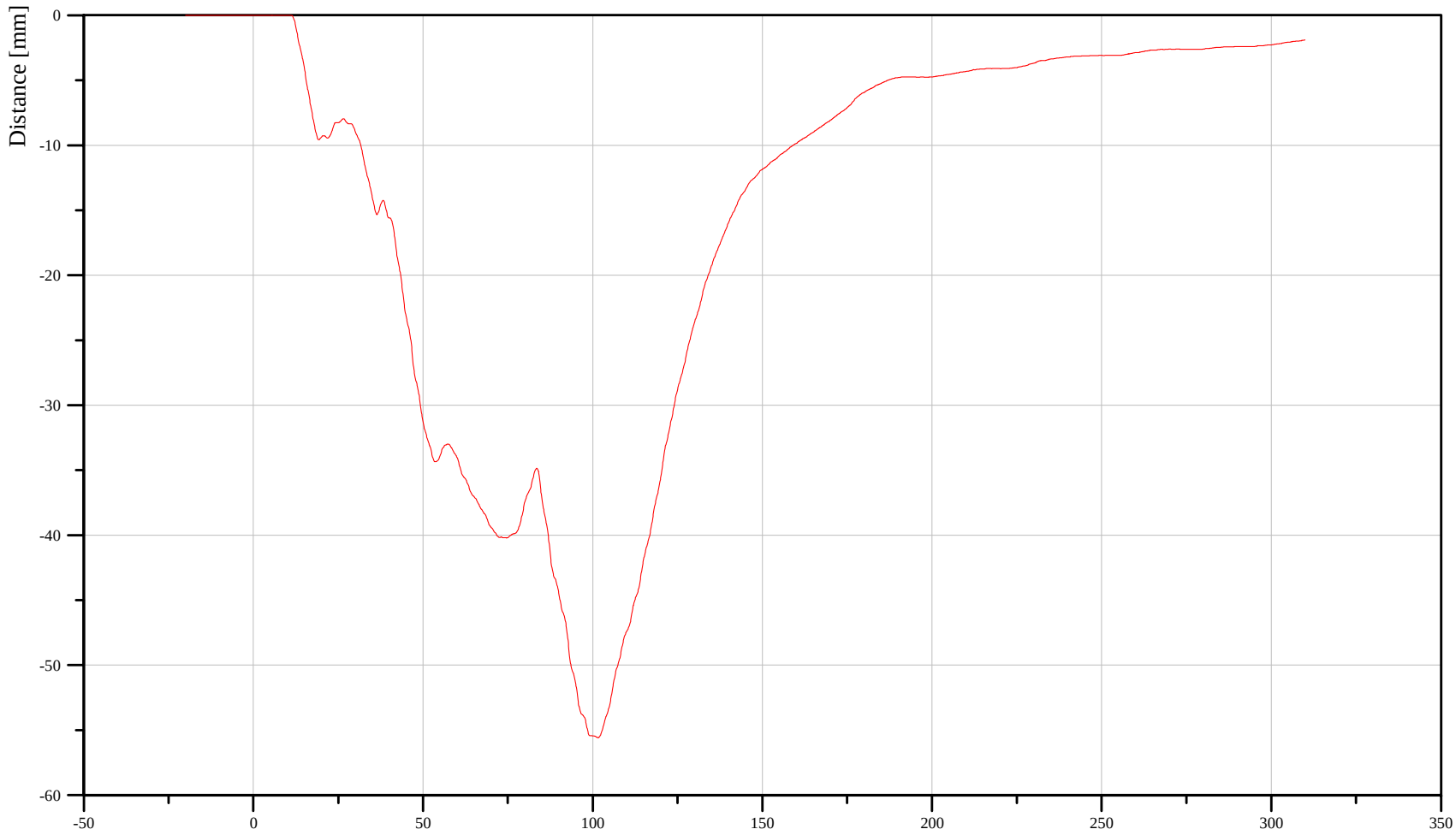
Chest Deflection X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11CHST0000H3DSXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-55.57 mm at 101.68 ms

Max. Value
0.00 mm at 5.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

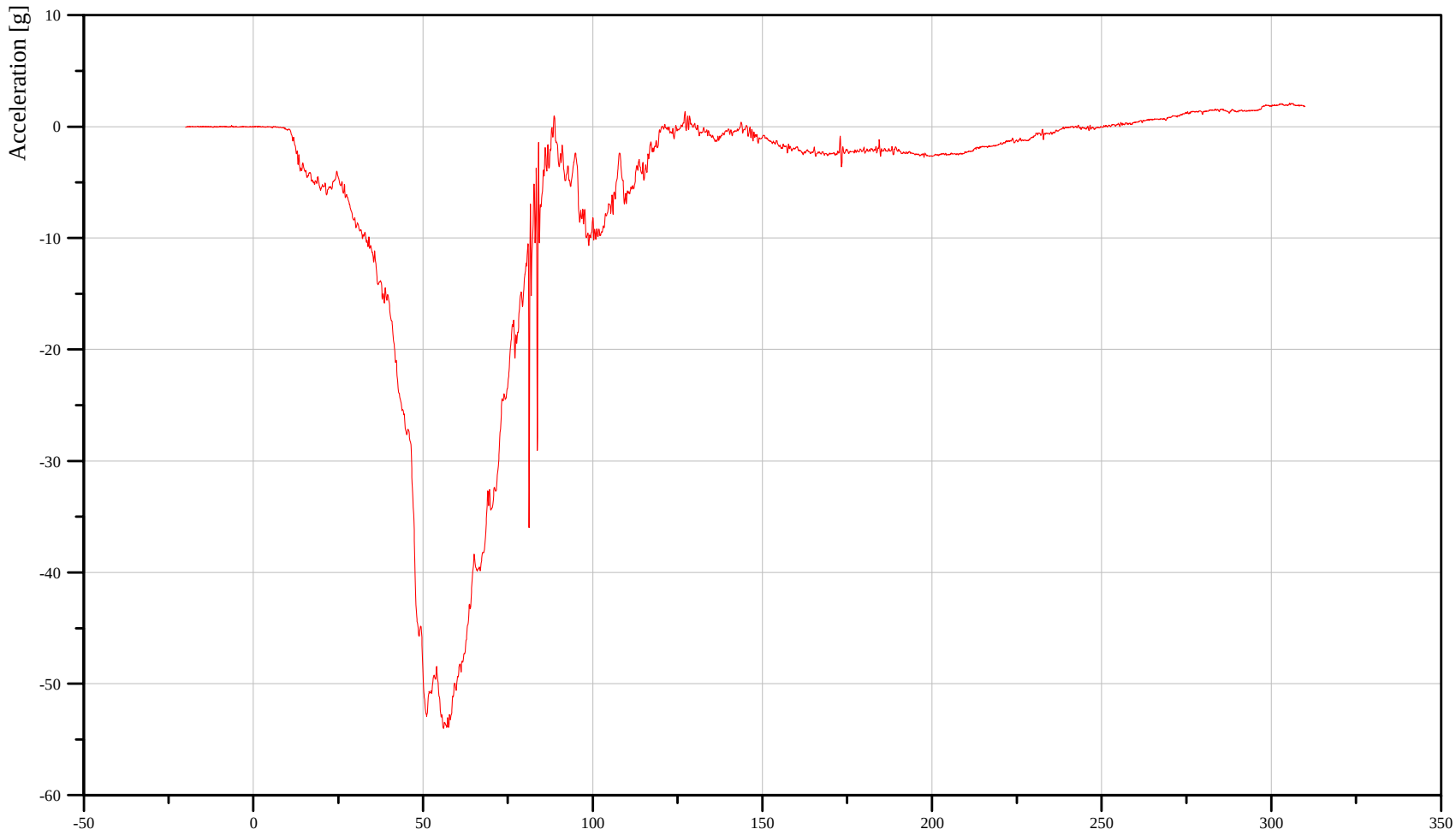
Pelvis Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11PELVCG00H3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-53.99 g at 56.00 ms

Max. Value
2.10 g at 305.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

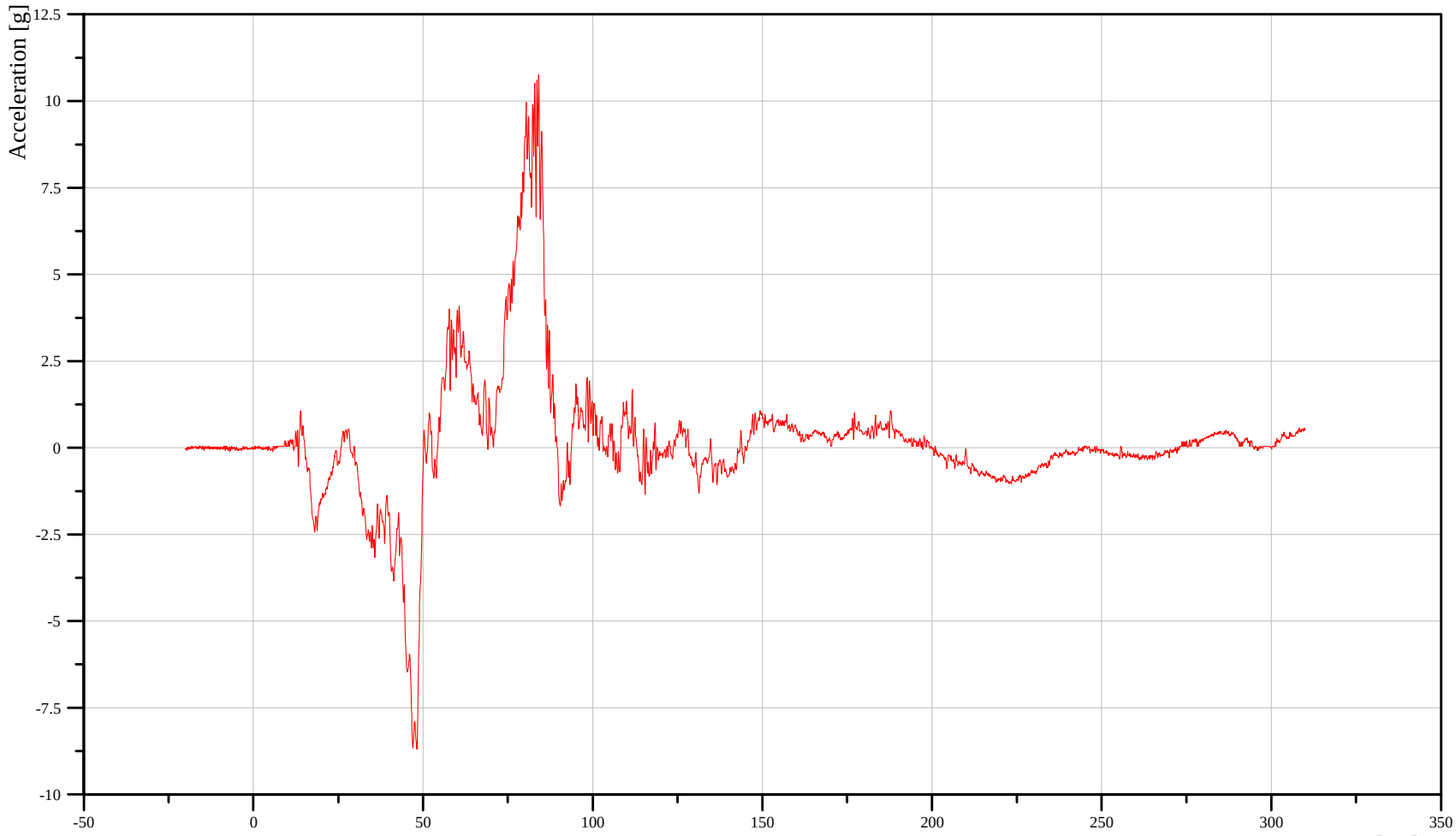
Pelvis Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11PELVCG00H3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-8.69 g at 48.08 ms

Max. Value
10.76 g at 84.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

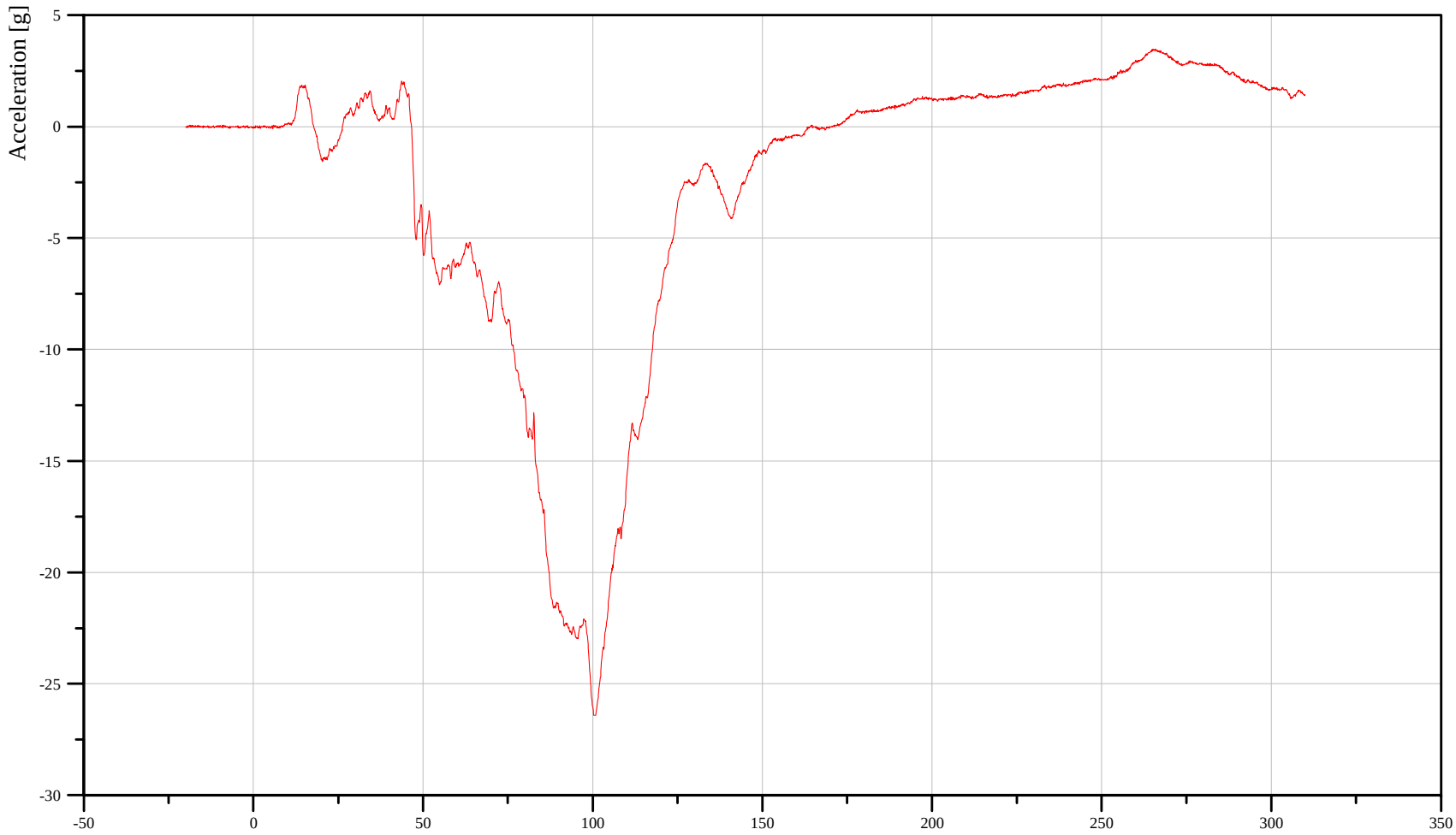
Pelvis Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11PELVCG00H3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-26.42 g at 100.32 ms

Max. Value
3.48 g at 265.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

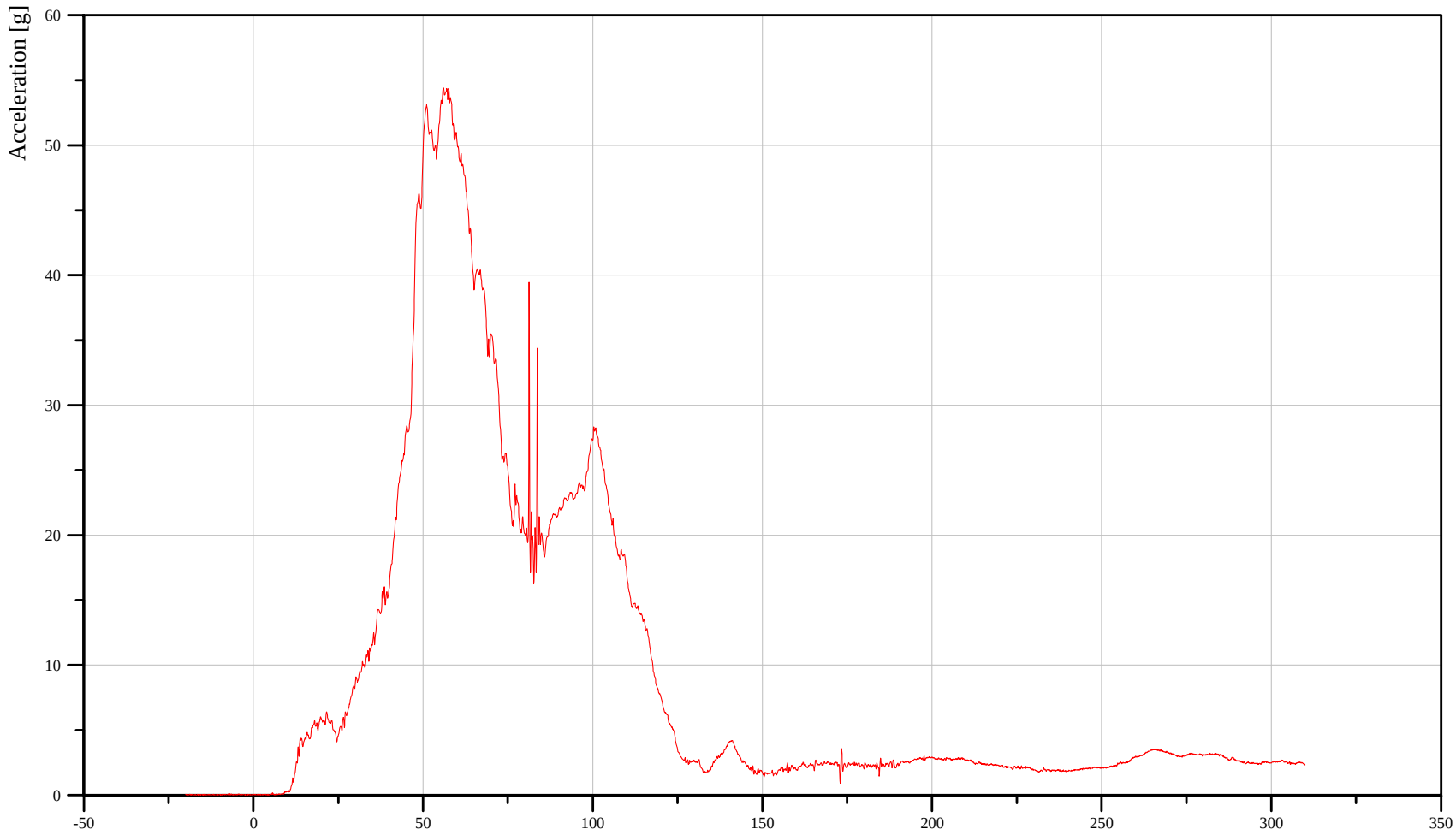
Pelvis Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11PELVCG00H3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.02 g at -19.12 ms

Max. Value
54.41 g at 56.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

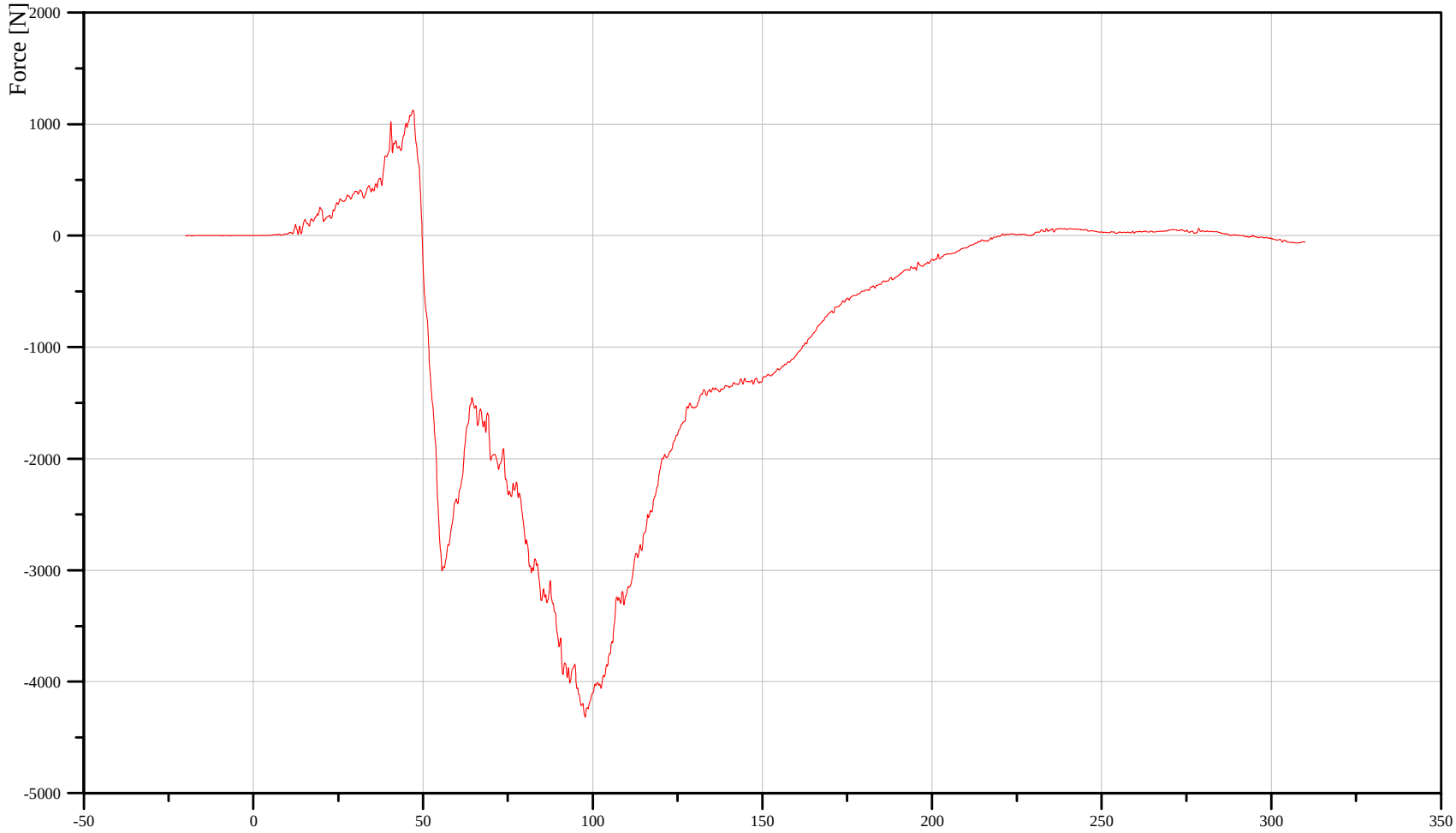
Left Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-4,317.51 N at 97.76 ms

Max. Value
1,124.00 N at 47.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

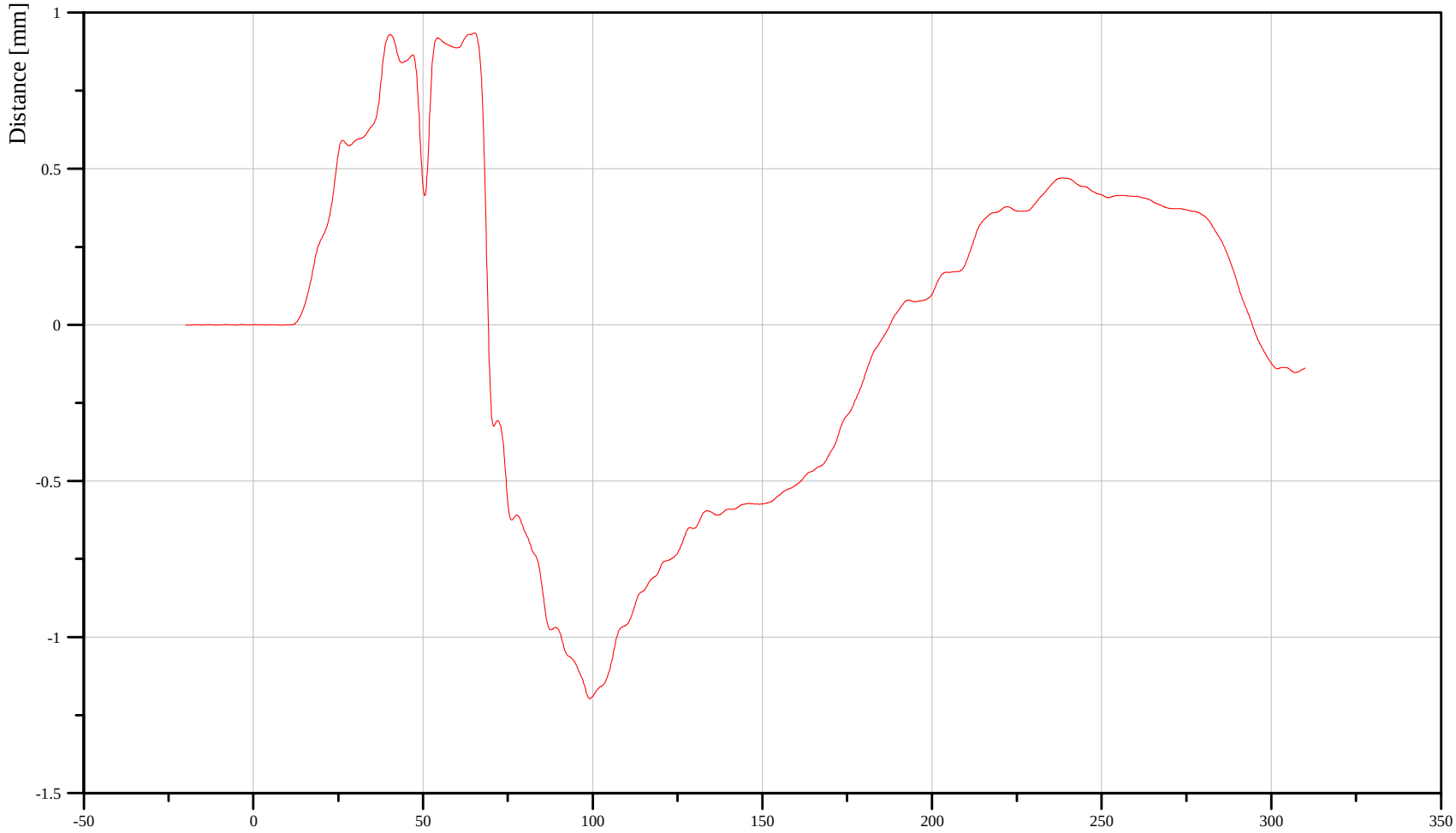
Left Knee Displacement X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-1.20 mm at 99.12 ms

Max. Value
0.94 mm at 65.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

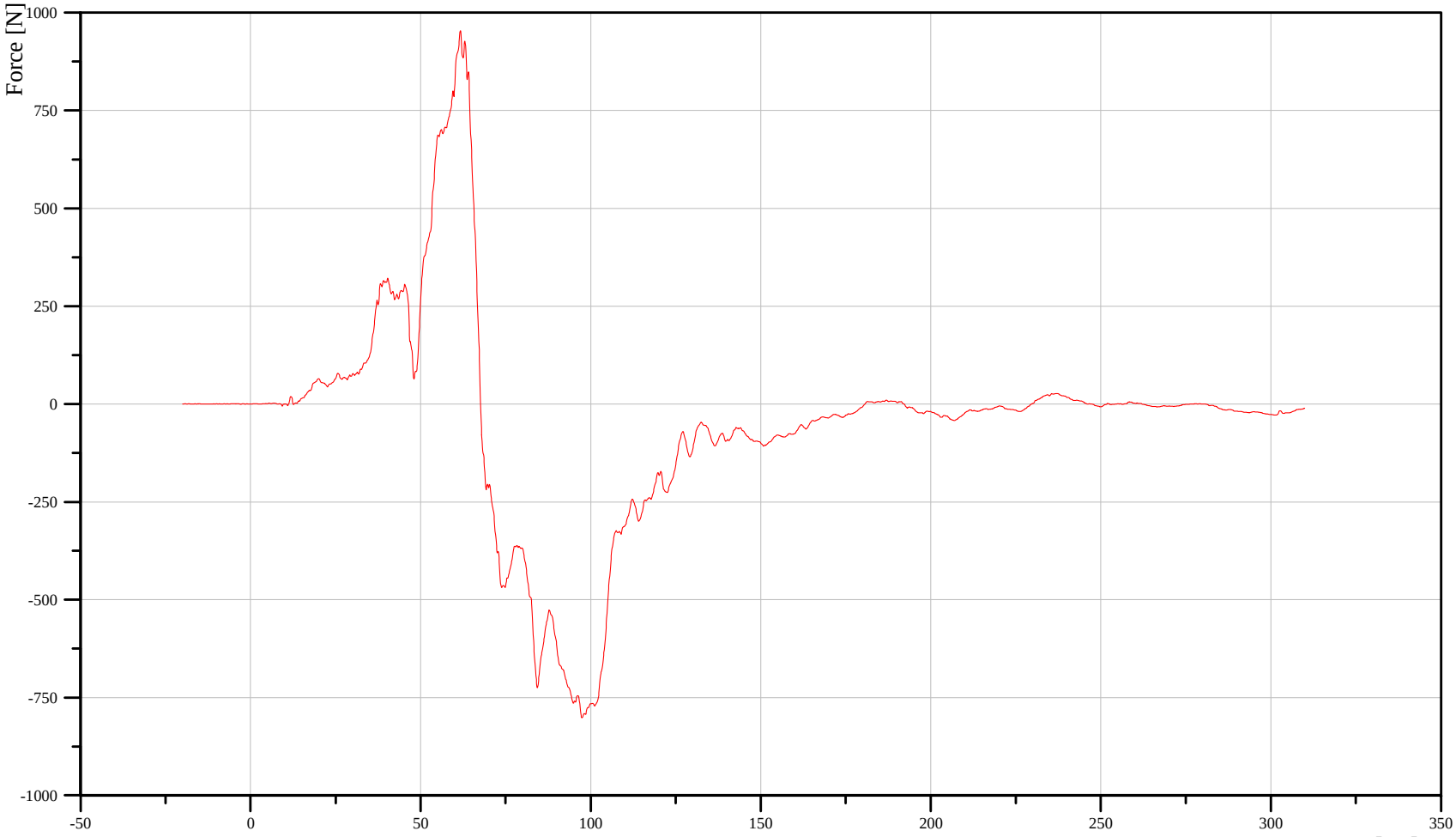
Left Upper Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILULXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-801.66 N at 97.44 ms

Max. Value
954.58 N at 61.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

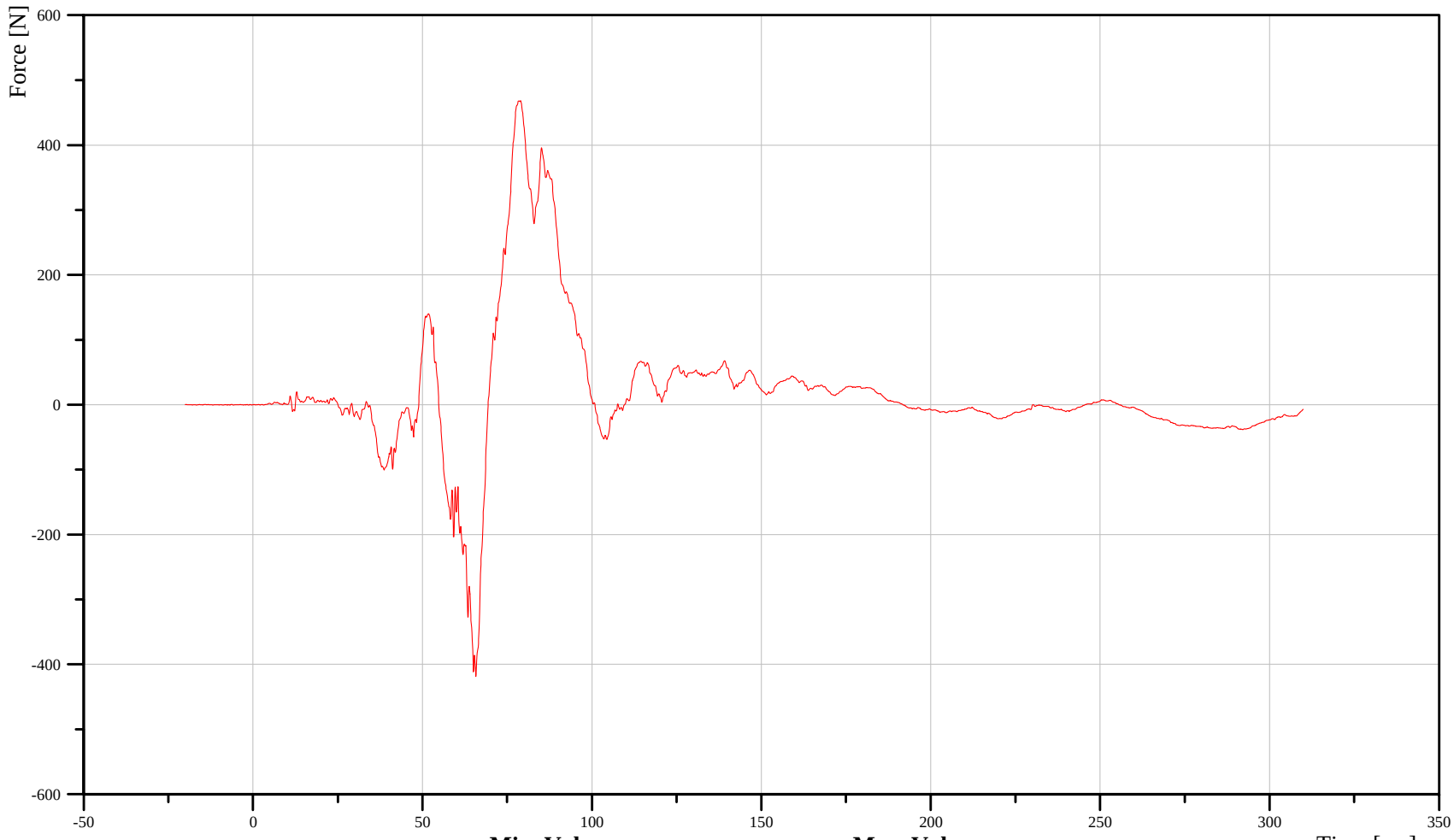
Left Upper Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILULXH3FOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-418.83 N at 65.76 ms

Max. Value
468.47 N at 78.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

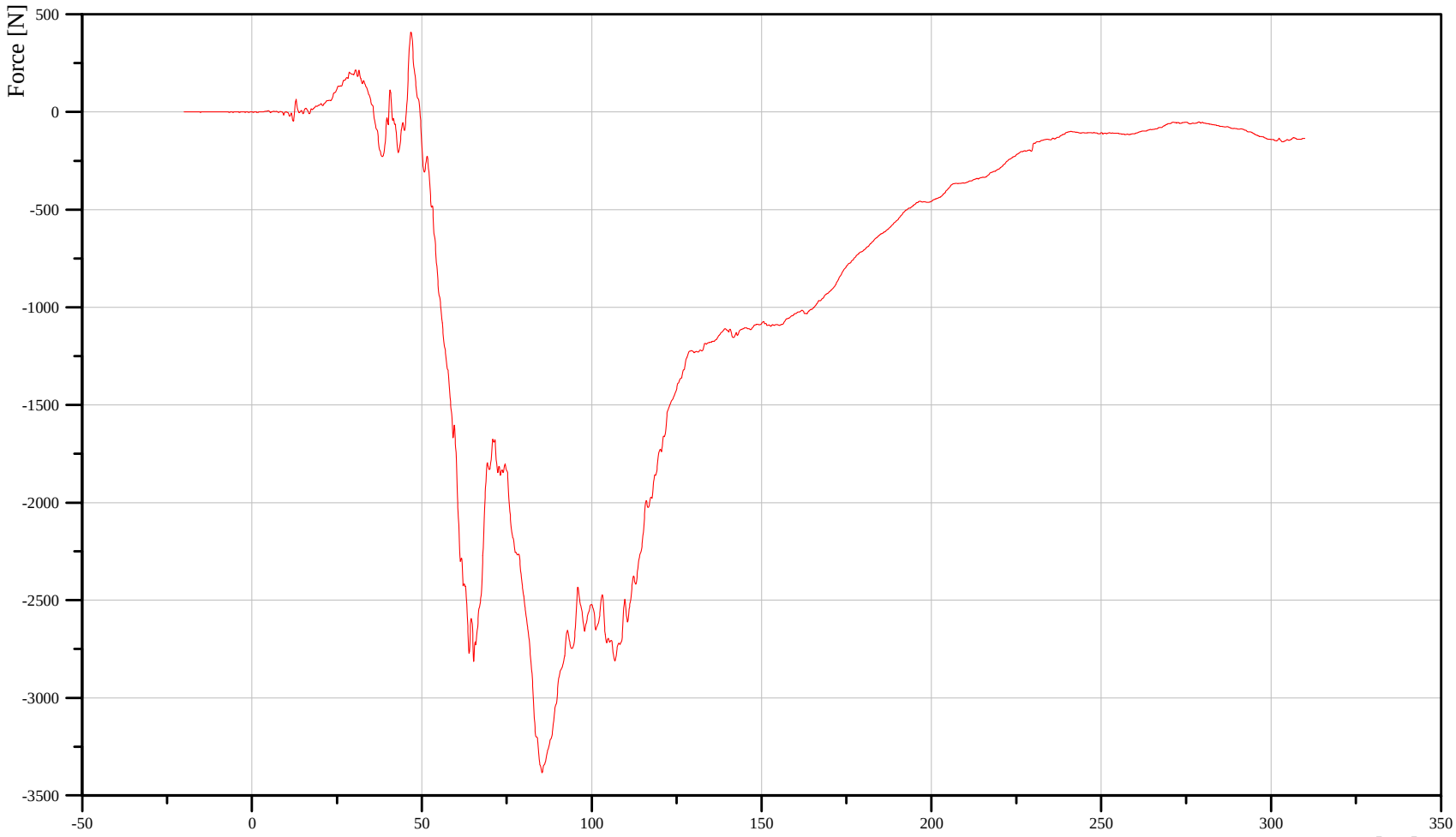
Left Upper Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILULXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,382.88 N at 85.36 ms

Max. Value
409.45 N at 46.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

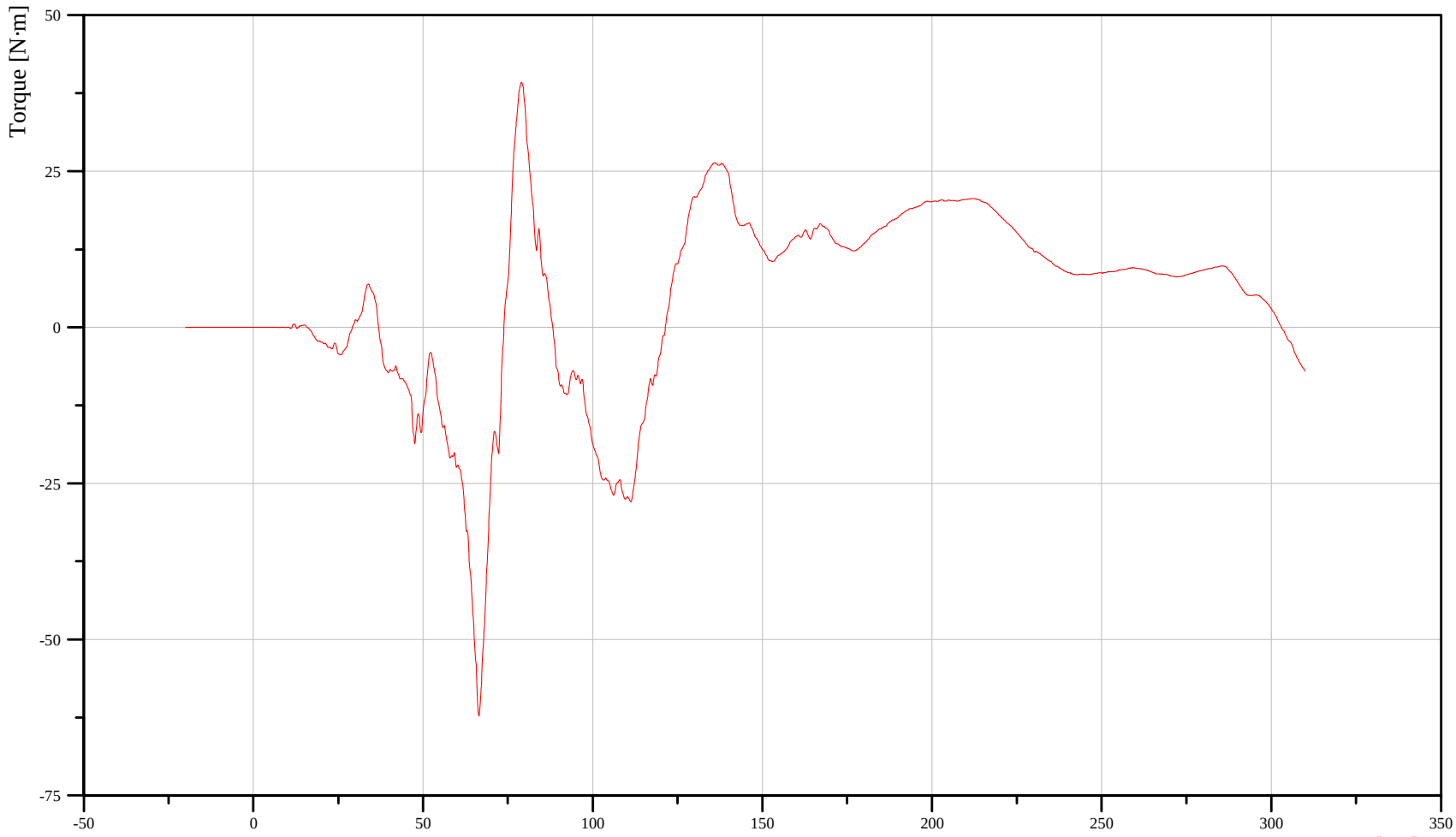
Left Upper Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILULXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-62.26 N·m at 66.48 ms

Max. Value
39.24 N·m at 78.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

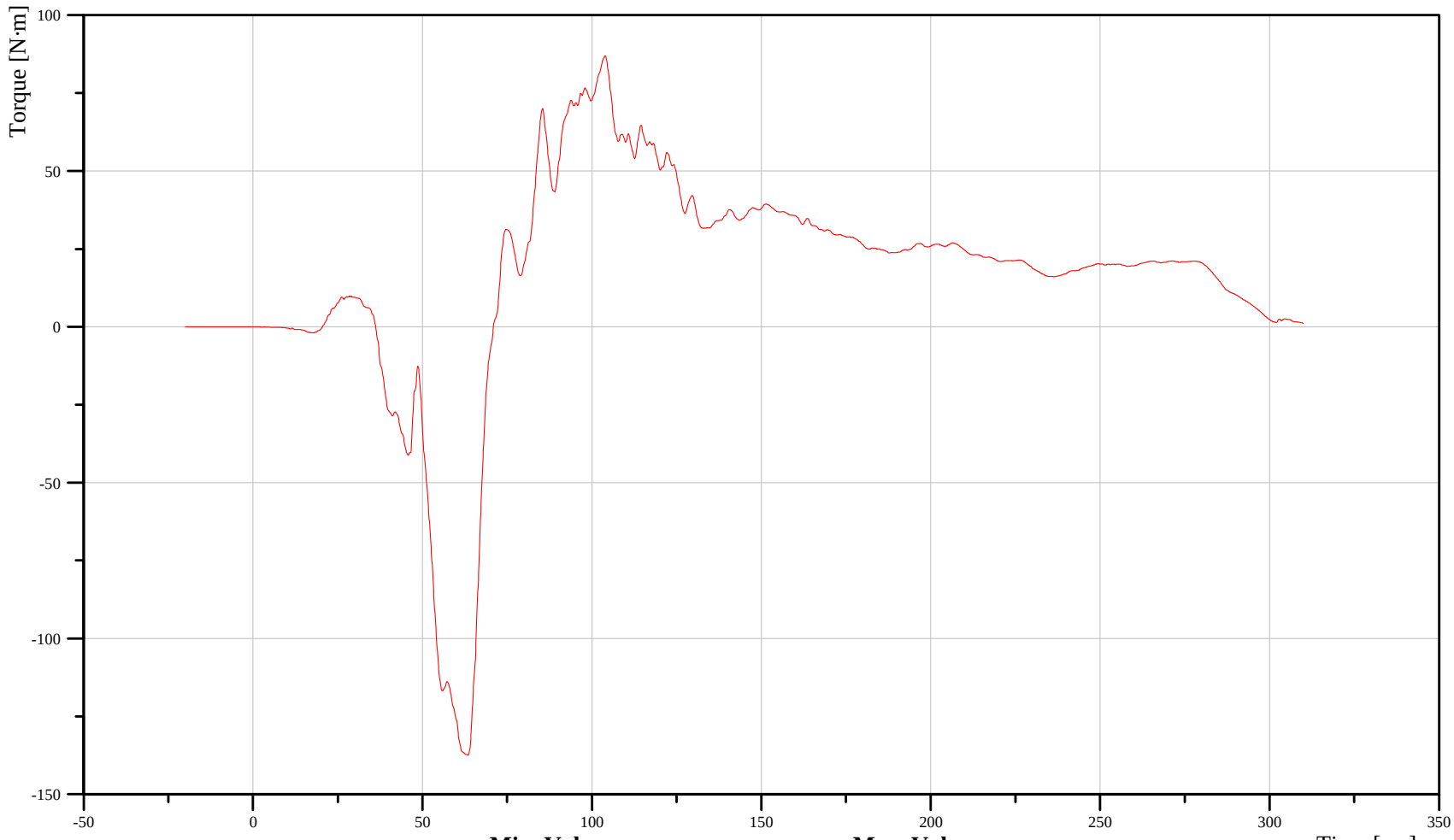
Left Upper Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILULXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-137.41 N·m at 63.36 ms

Max. Value
86.90 N·m at 103.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

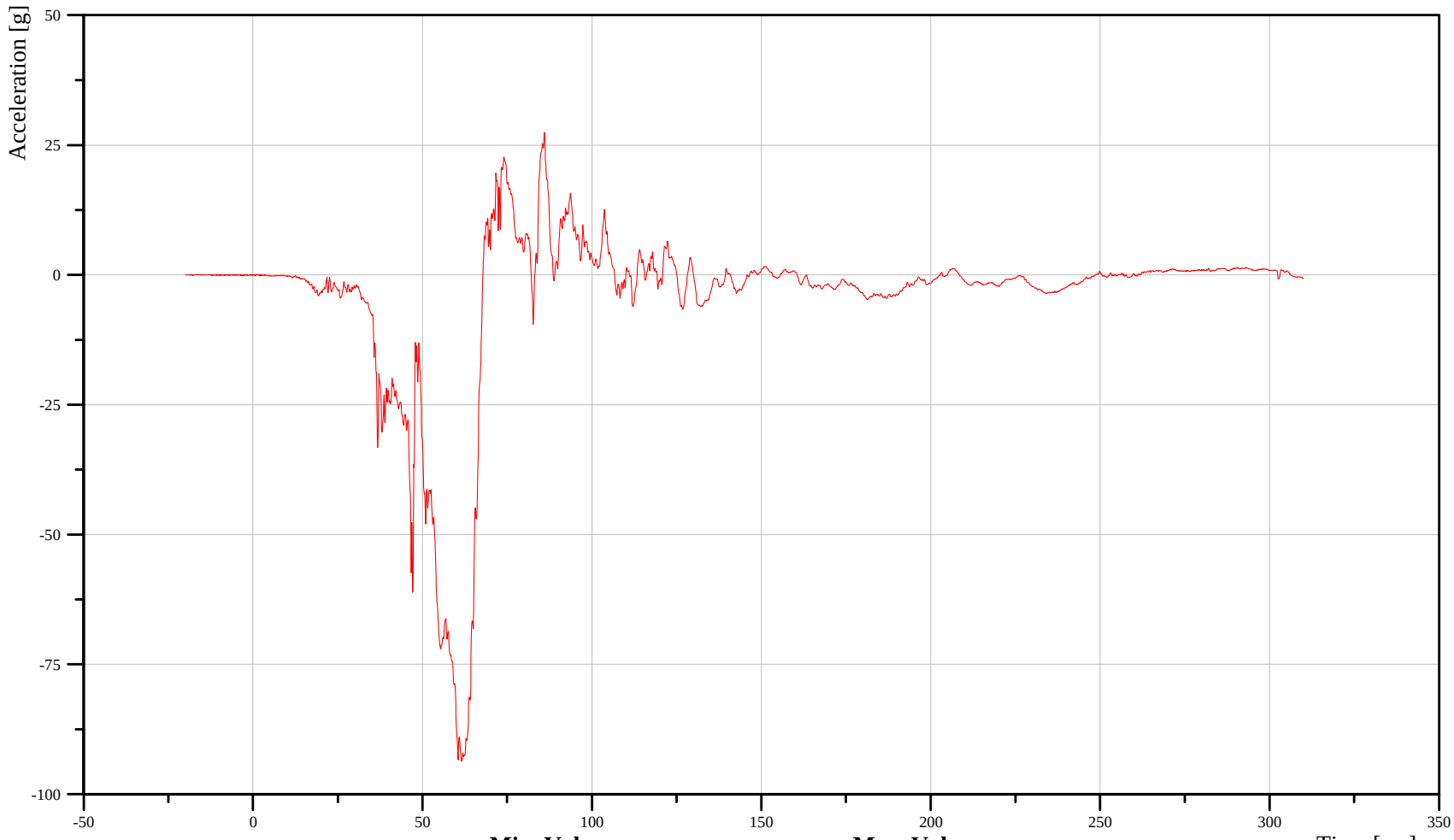
Left Tibia Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-93.66 g at 61.60 ms

Max. Value
27.47 g at 86.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

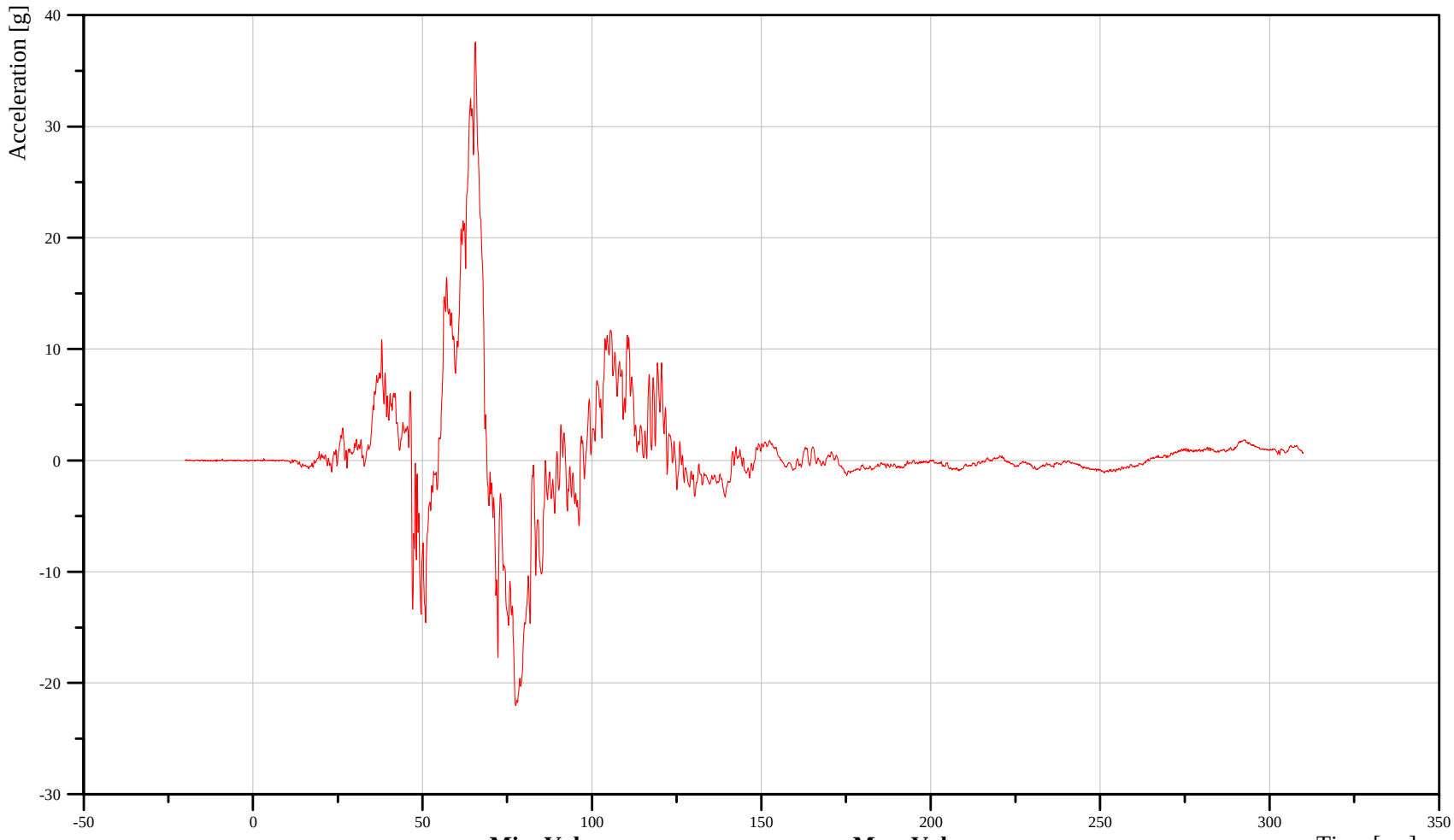
Left Tibia Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-22.01 g at 77.52 ms

Max. Value
37.61 g at 65.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

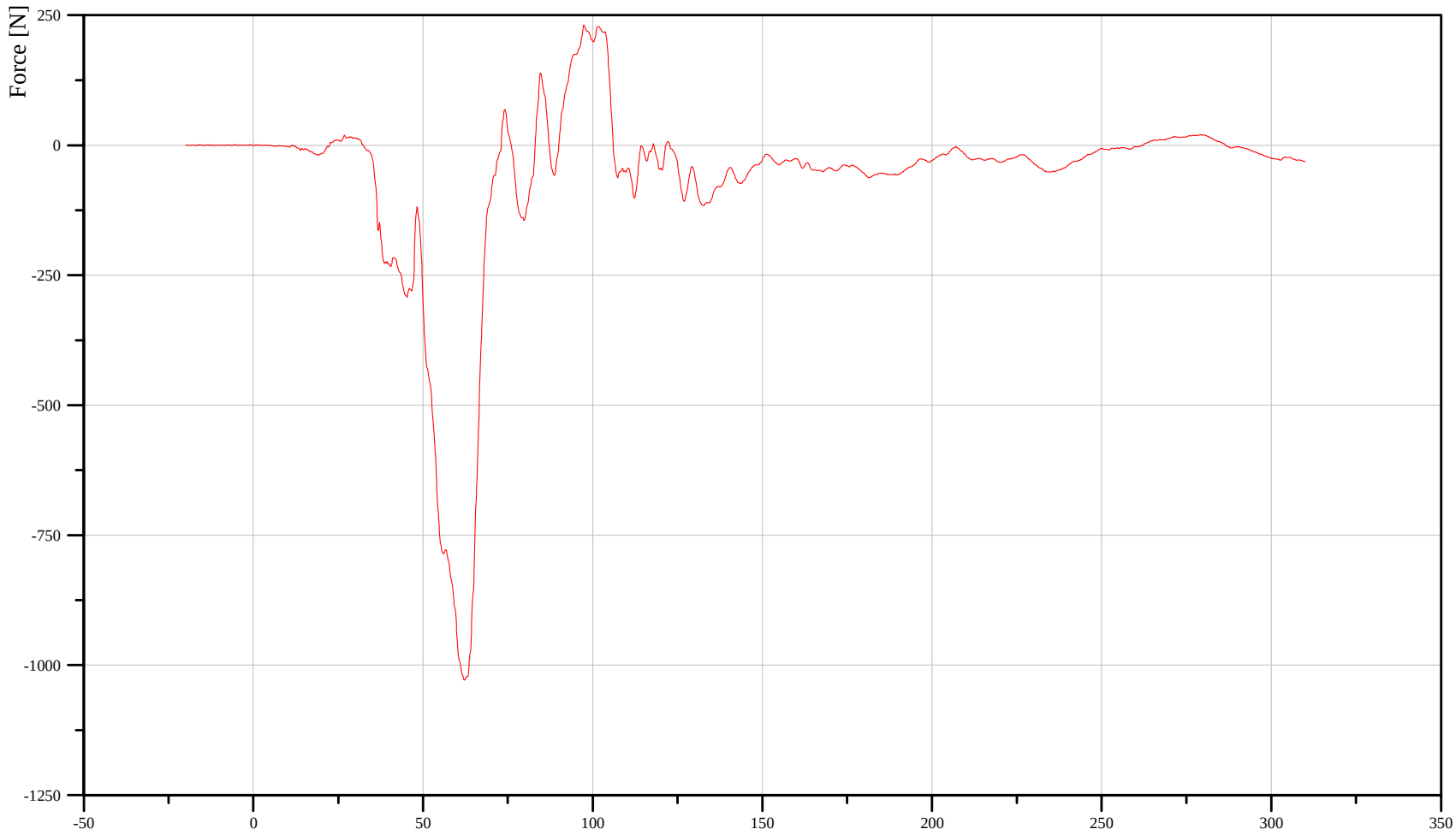
Left Lower Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILLLXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-1,028.79 N at 62.16 ms

Max. Value
230.96 N at 97.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

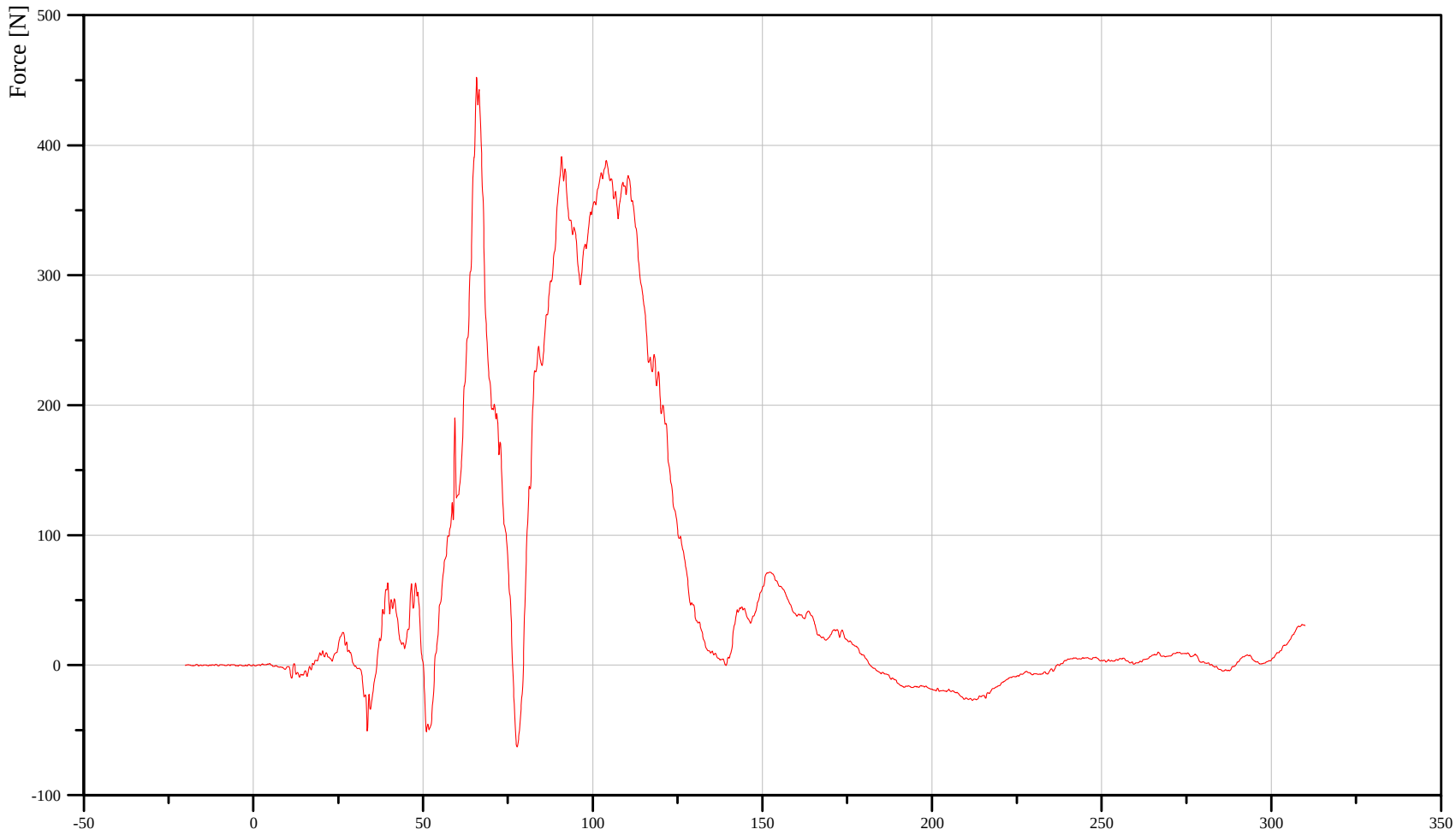
Left Lower Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILLLXH3FOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-62.91 N at 77.68 ms

Max. Value
452.30 N at 65.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

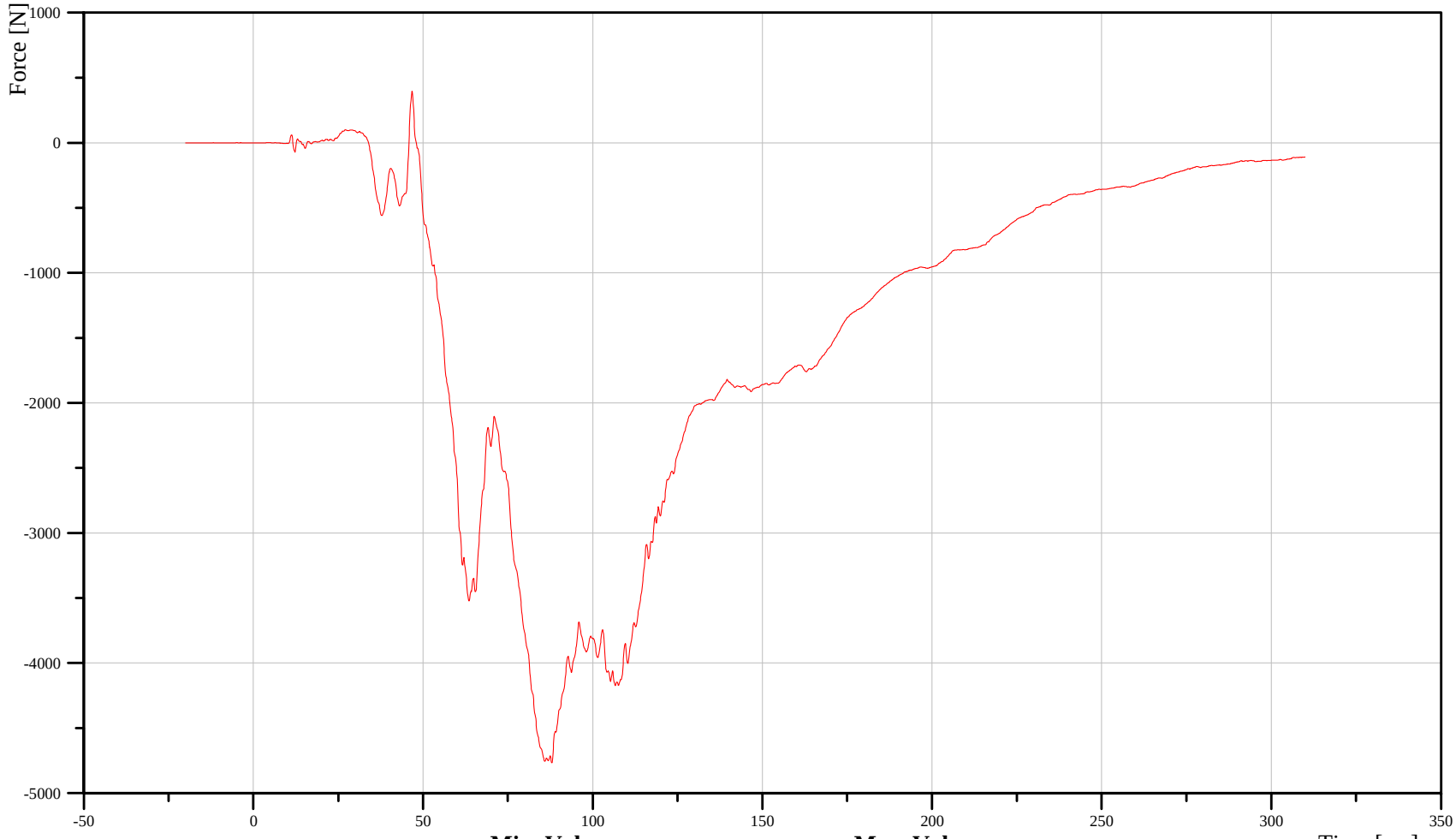
Left Lower Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILLLXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-4,764.18 N at 87.92 ms

Max. Value
395.29 N at 46.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

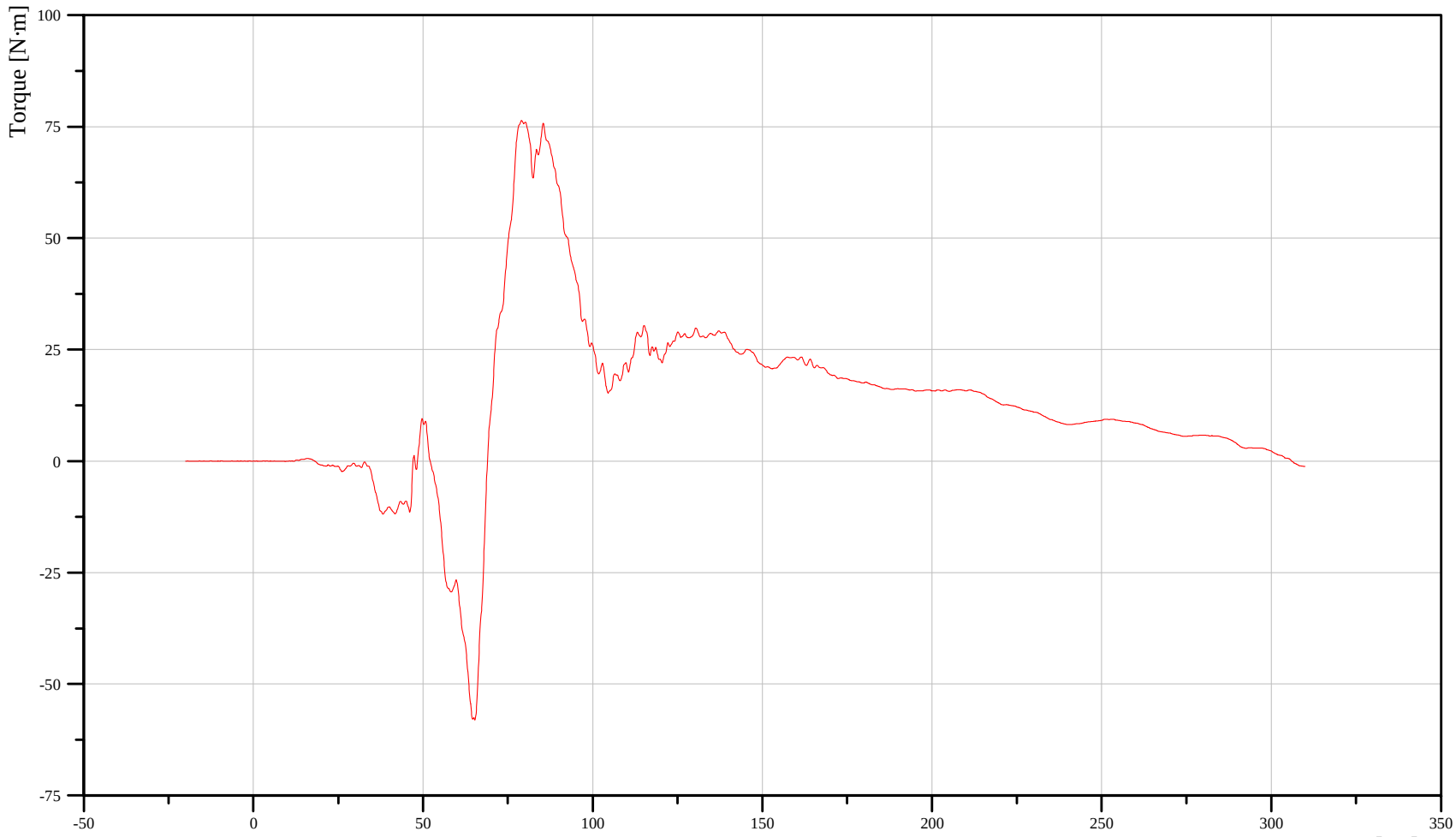
Left Lower Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILLLXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-58.07 N·m at 65.28 ms

Max. Value
76.37 N·m at 79.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

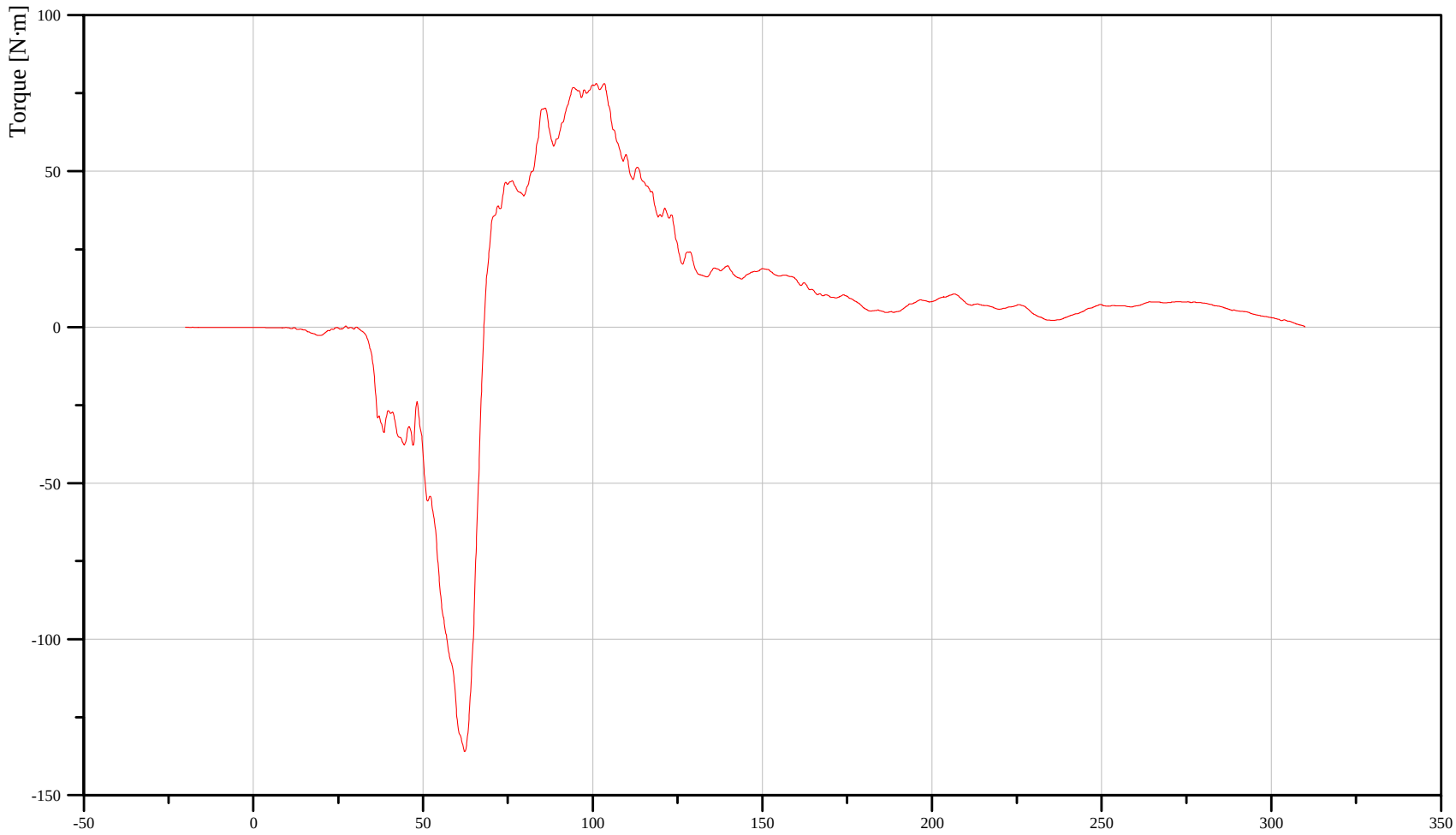
Left Lower Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBILLLXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-136.00 N·m at 62.24 ms

Max. Value
78.18 N·m at 101.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

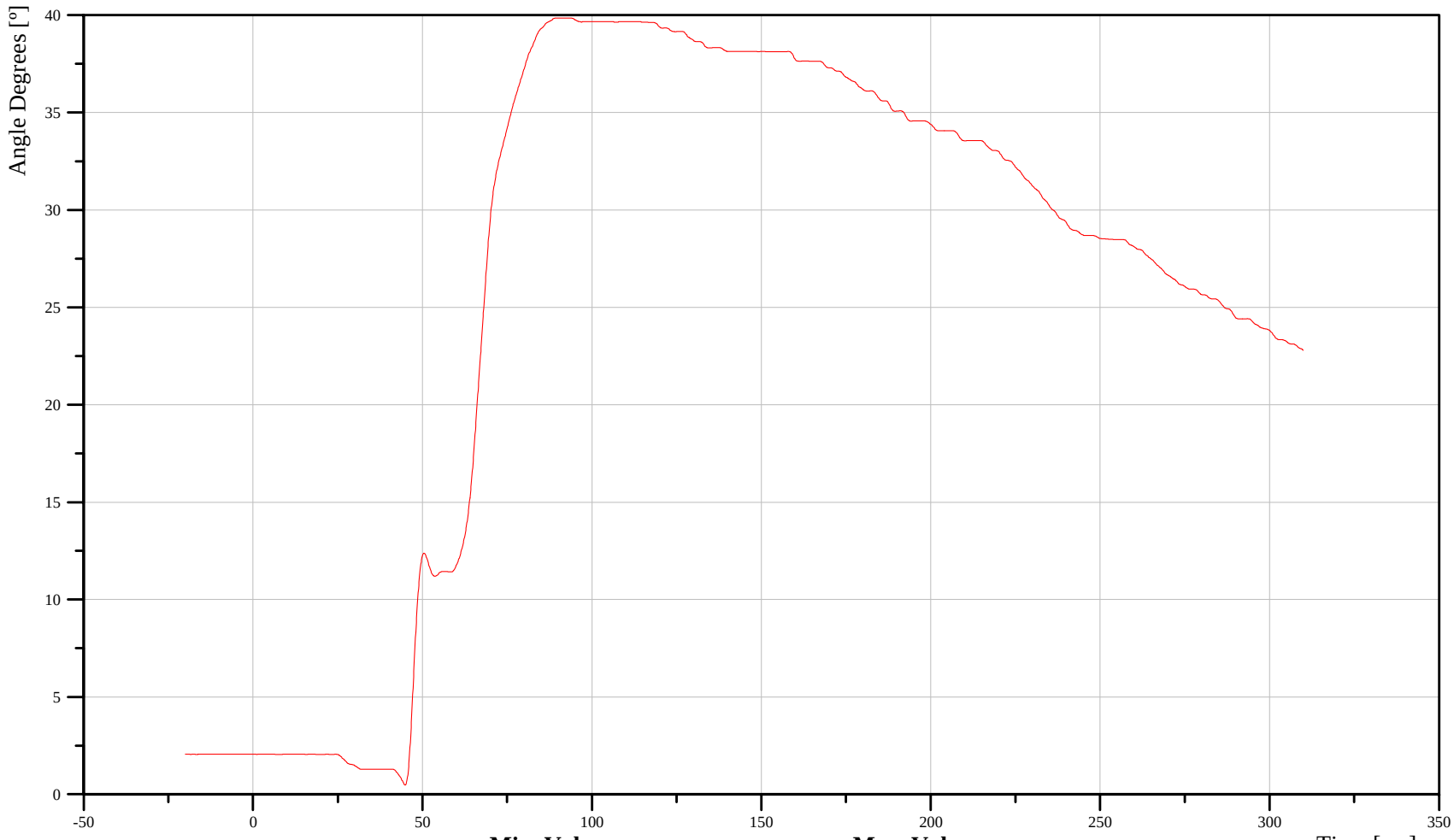
Left Foot Angular Dis. X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ANXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.48 ° at 44.88 ms

Max. Value
39.86 ° at 93.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

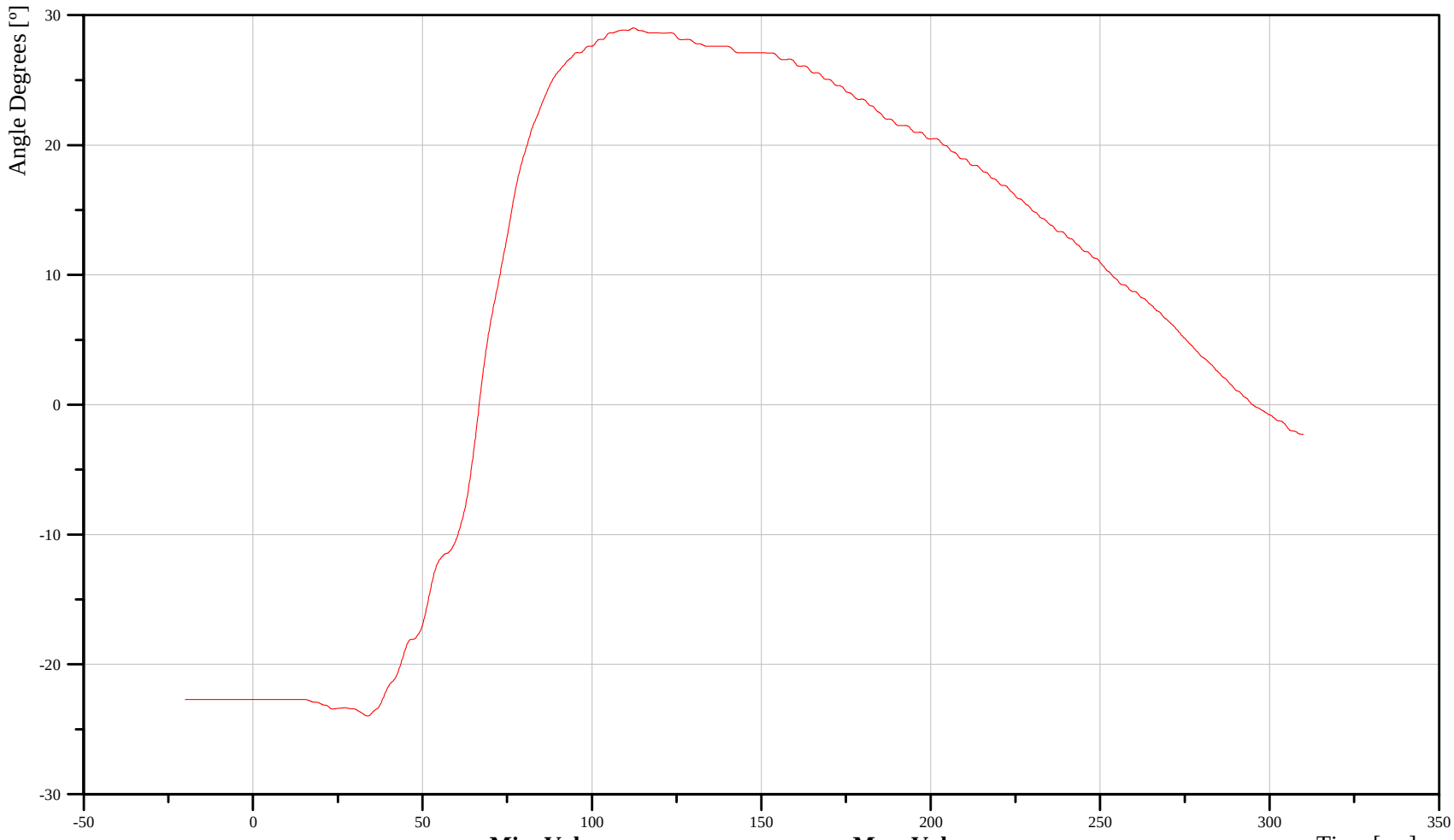
Left Foot Angular Dis. Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ANYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-23.97 ° at 33.76 ms

Max. Value
29.02 ° at 112.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

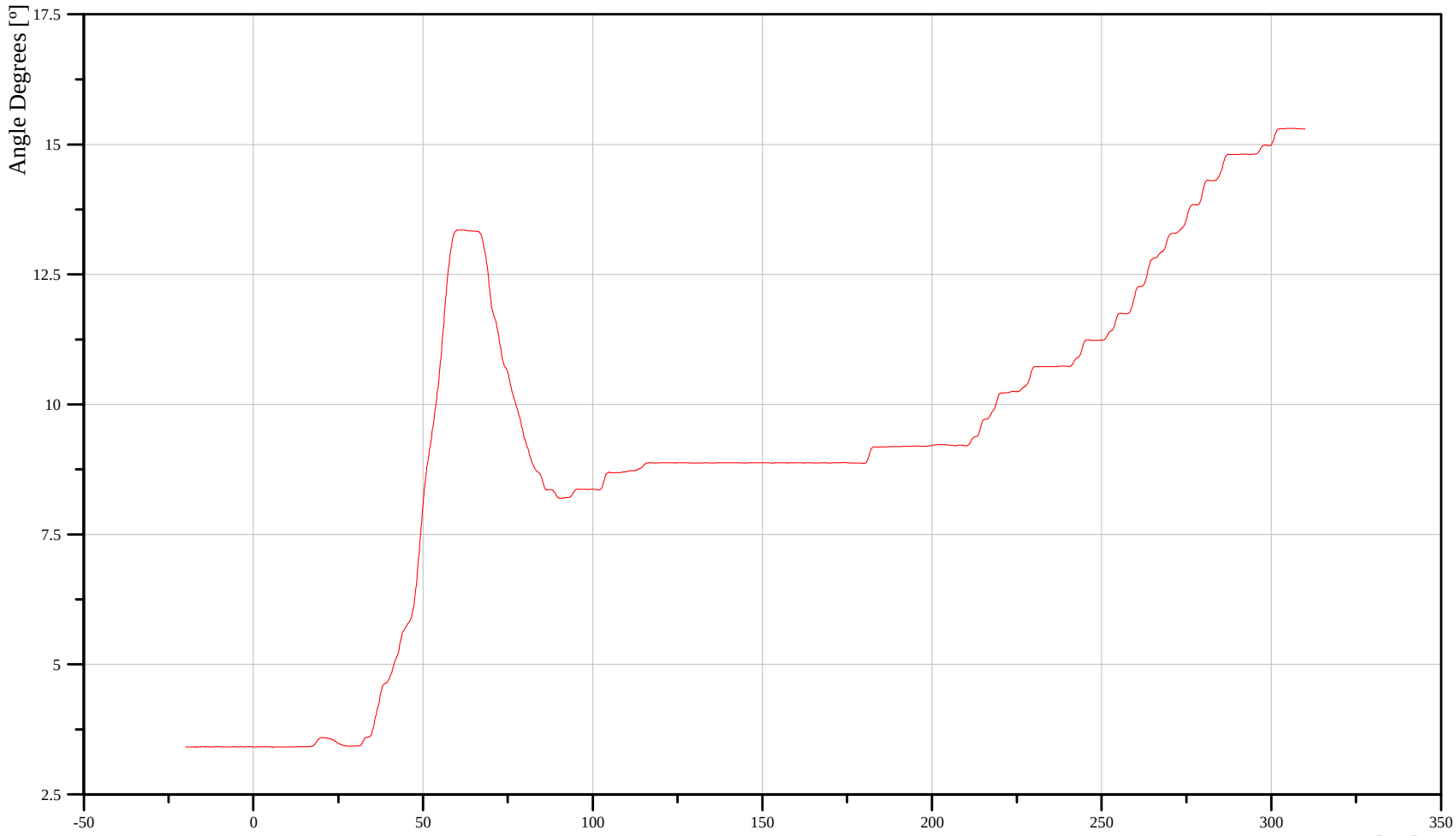
Left Foot Angular Dis. Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ANZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
3.41 ° at 5.76 ms

Max. Value
15.31 ° at 305.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

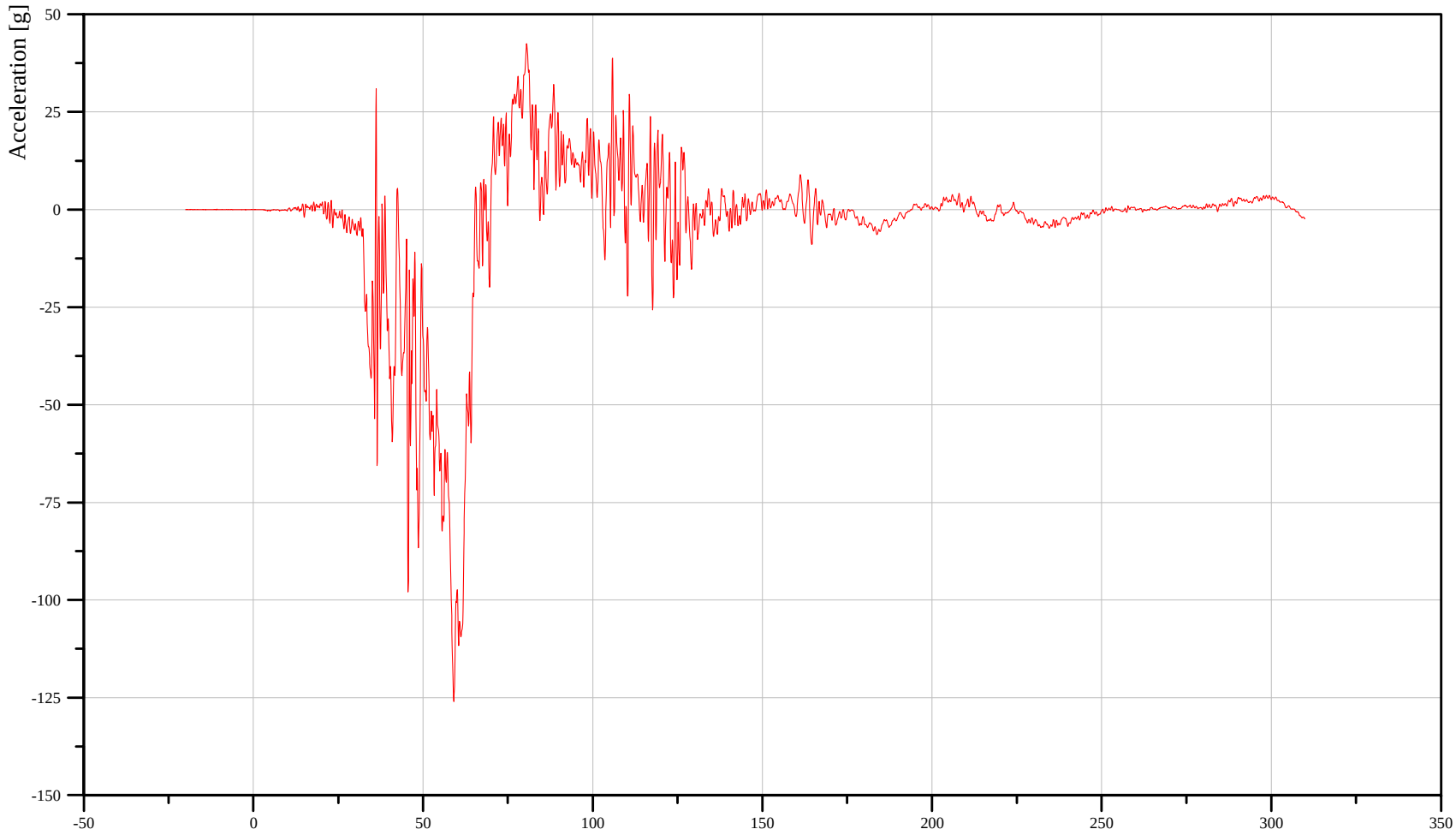
Left Foot Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-126.06 g at 59.04 ms

Max. Value
42.56 g at 80.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

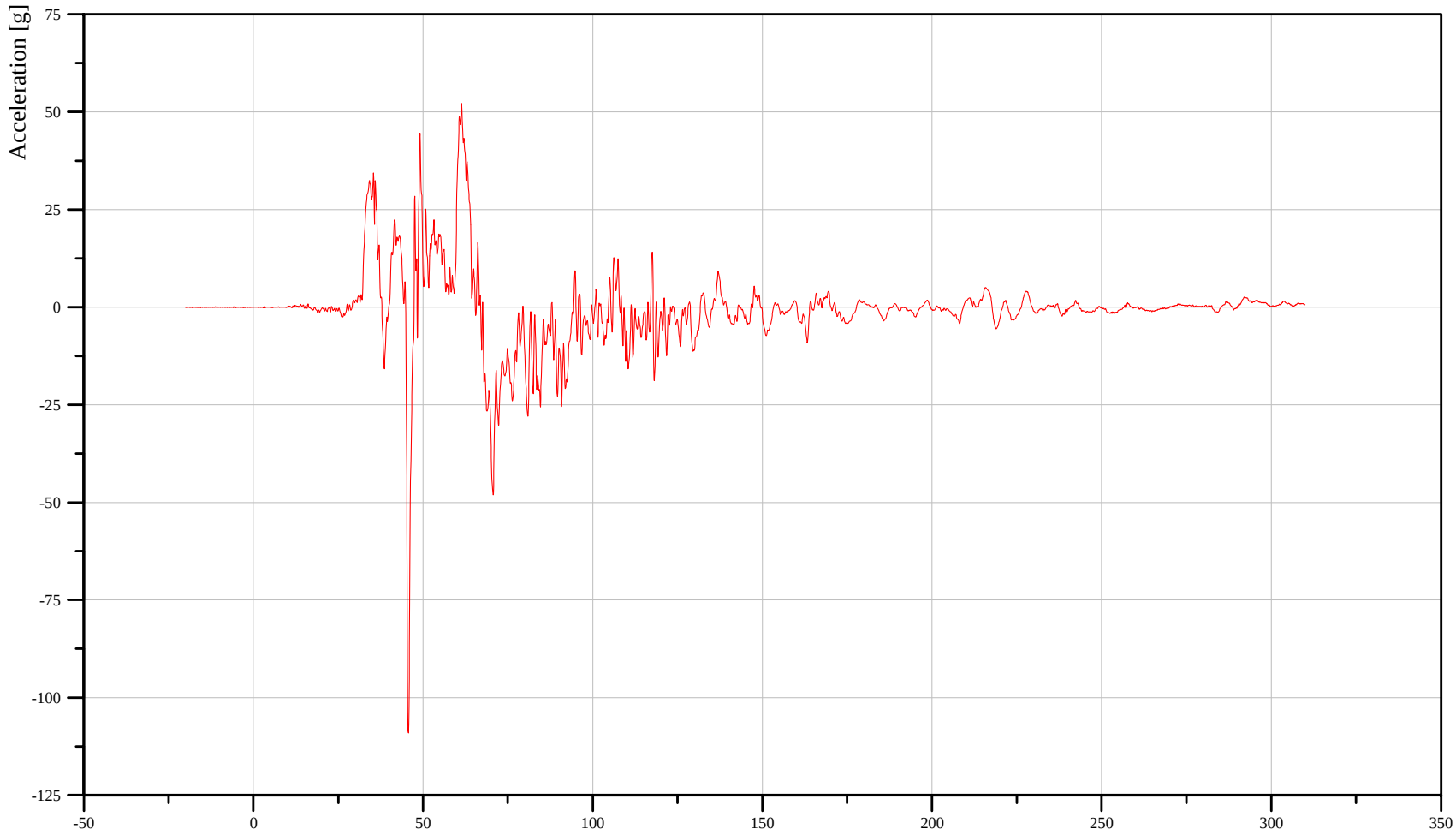
Left Foot Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-109.09 g at 45.68 ms

Max. Value
52.18 g at 61.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

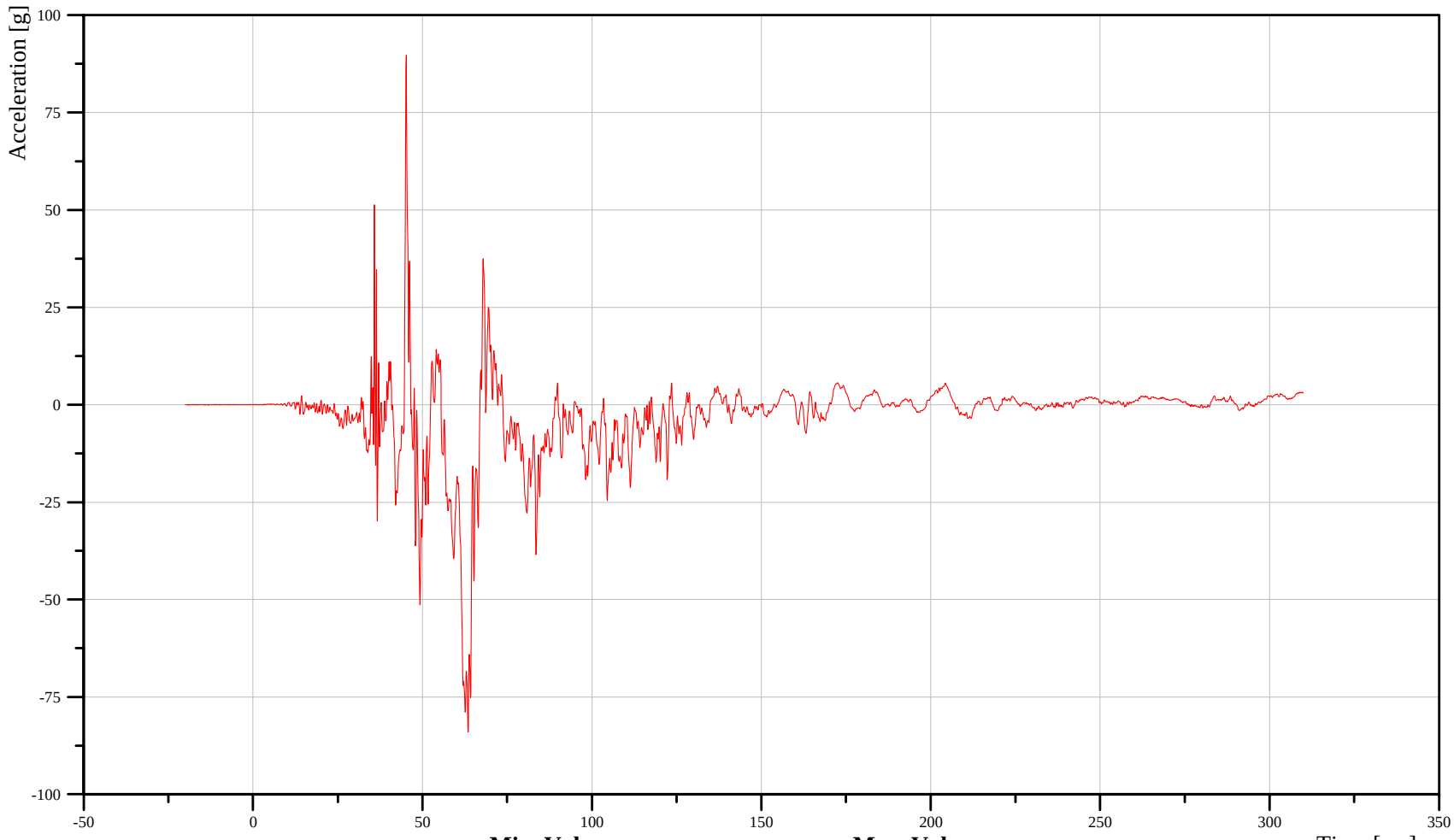
Left Foot Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-84.00 g at 63.44 ms

Max. Value
89.70 g at 45.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

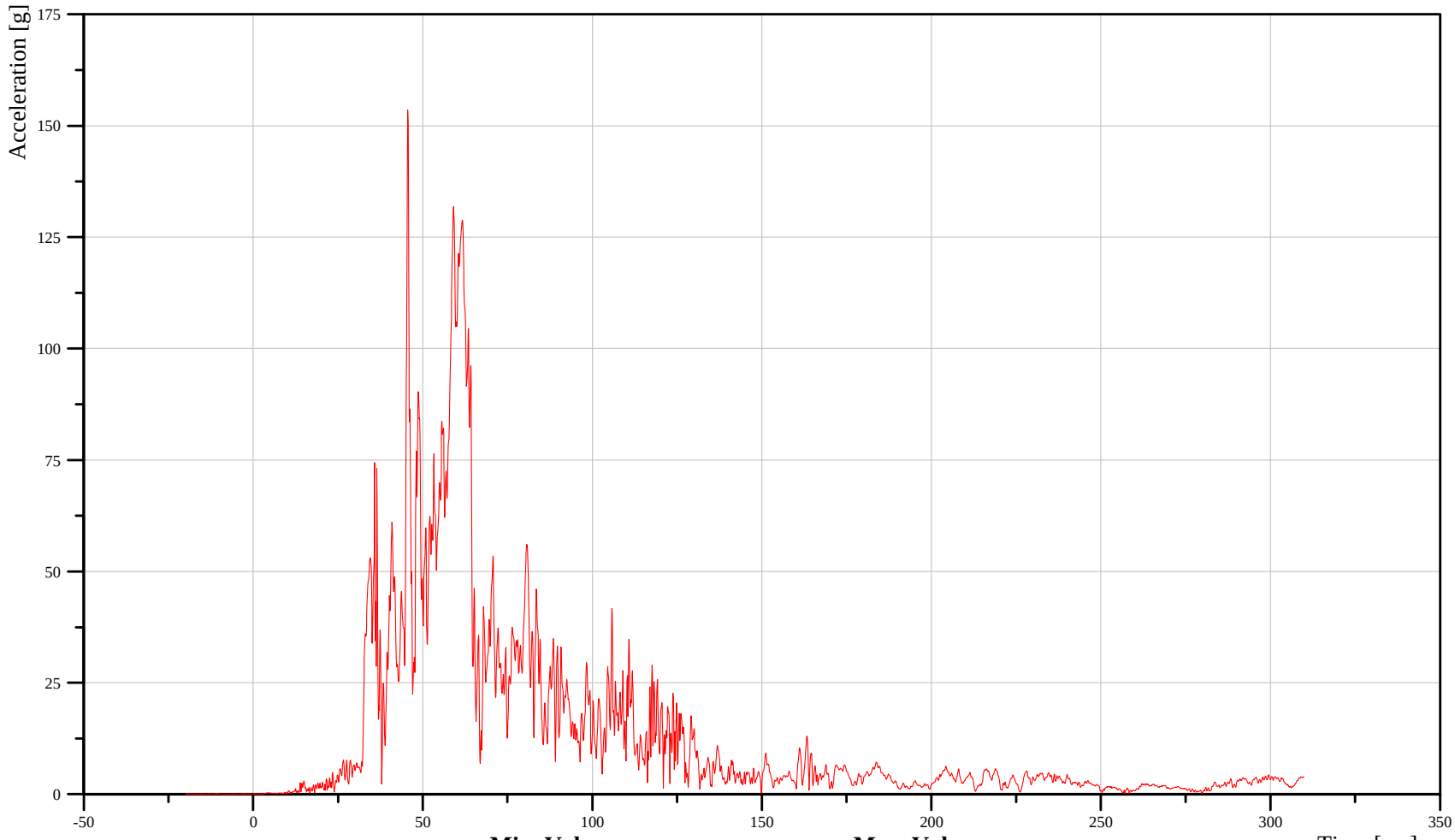
Left Foot Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.01 g at -19.04 ms

Max. Value
153.56 g at 45.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

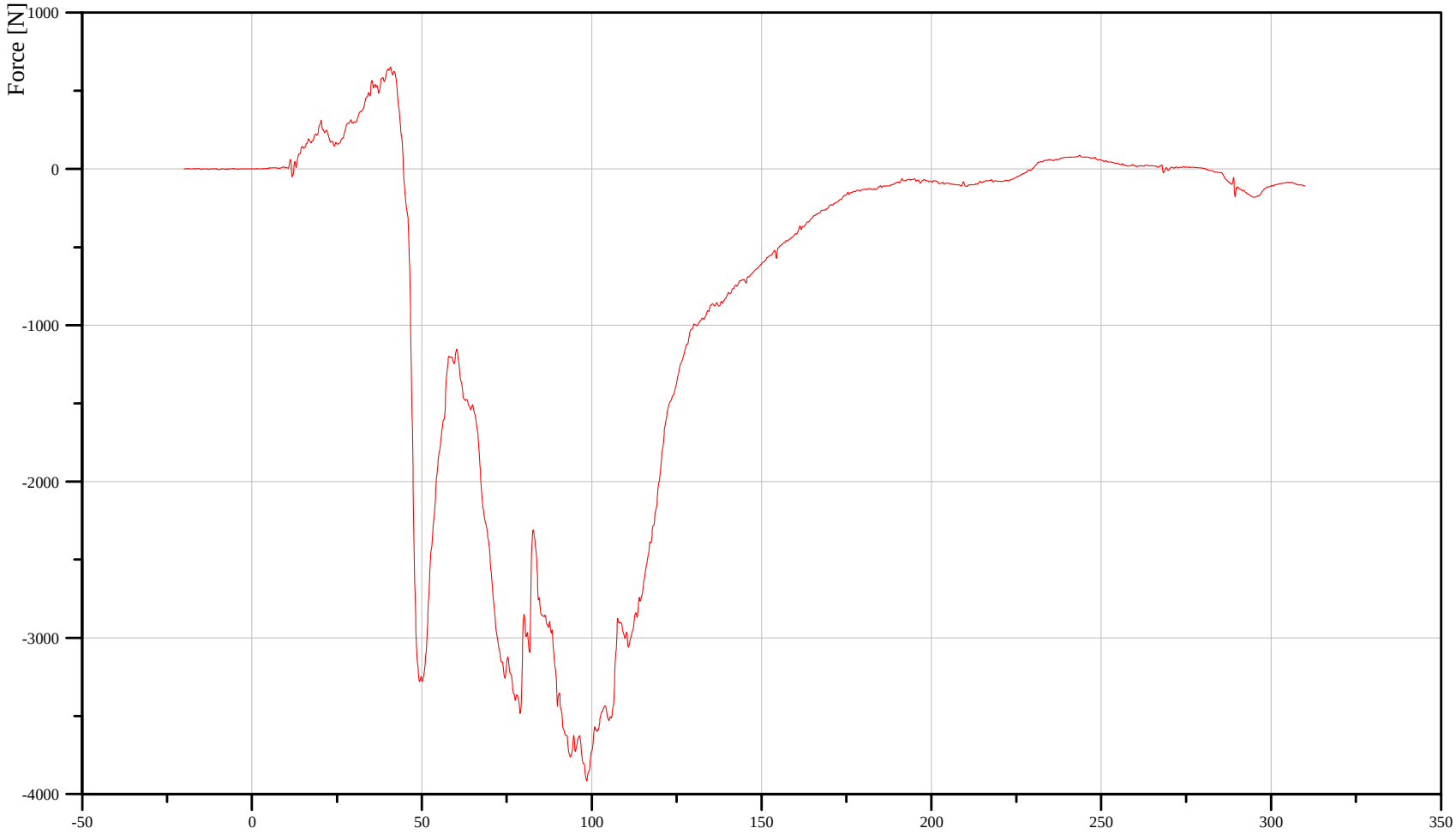
Right Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,915.86 N at 98.56 ms

Max. Value
651.35 N at 40.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

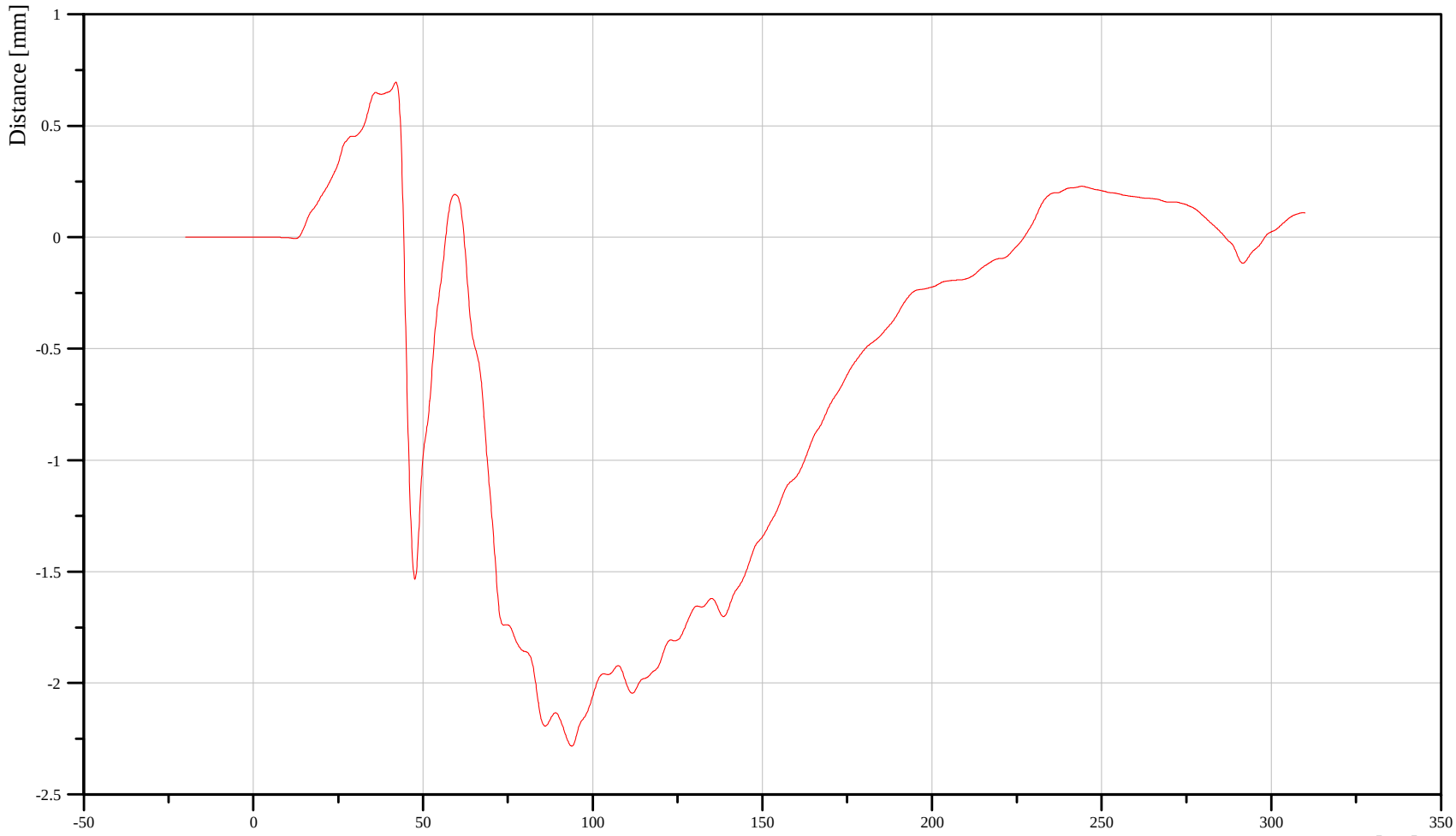
Right Knee Displacement X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-2.28 mm at 93.84 ms

Max. Value
0.70 mm at 42.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

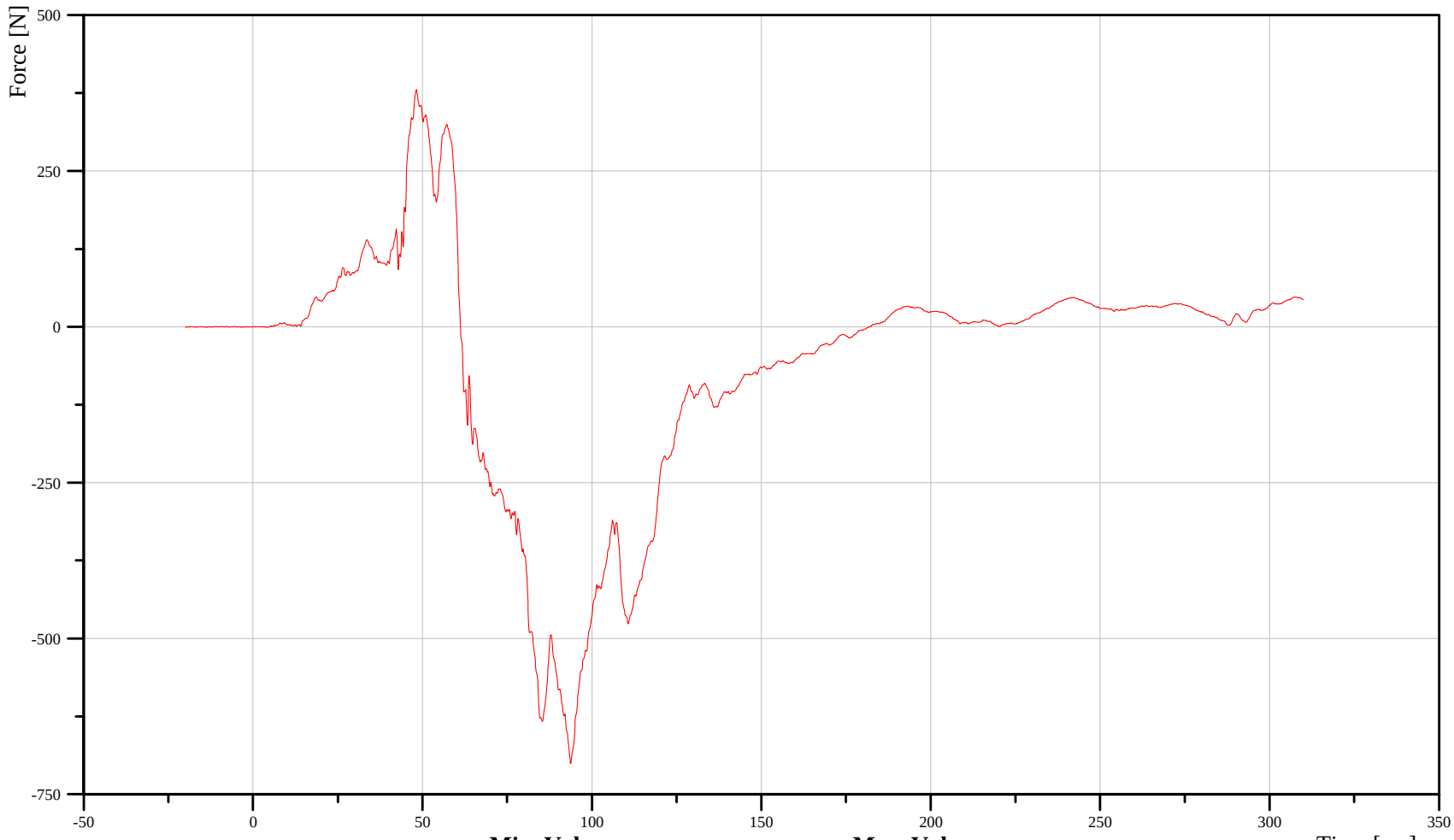
Right Upper Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRULXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-700.89 N at 93.76 ms

Max. Value
381.03 N at 48.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

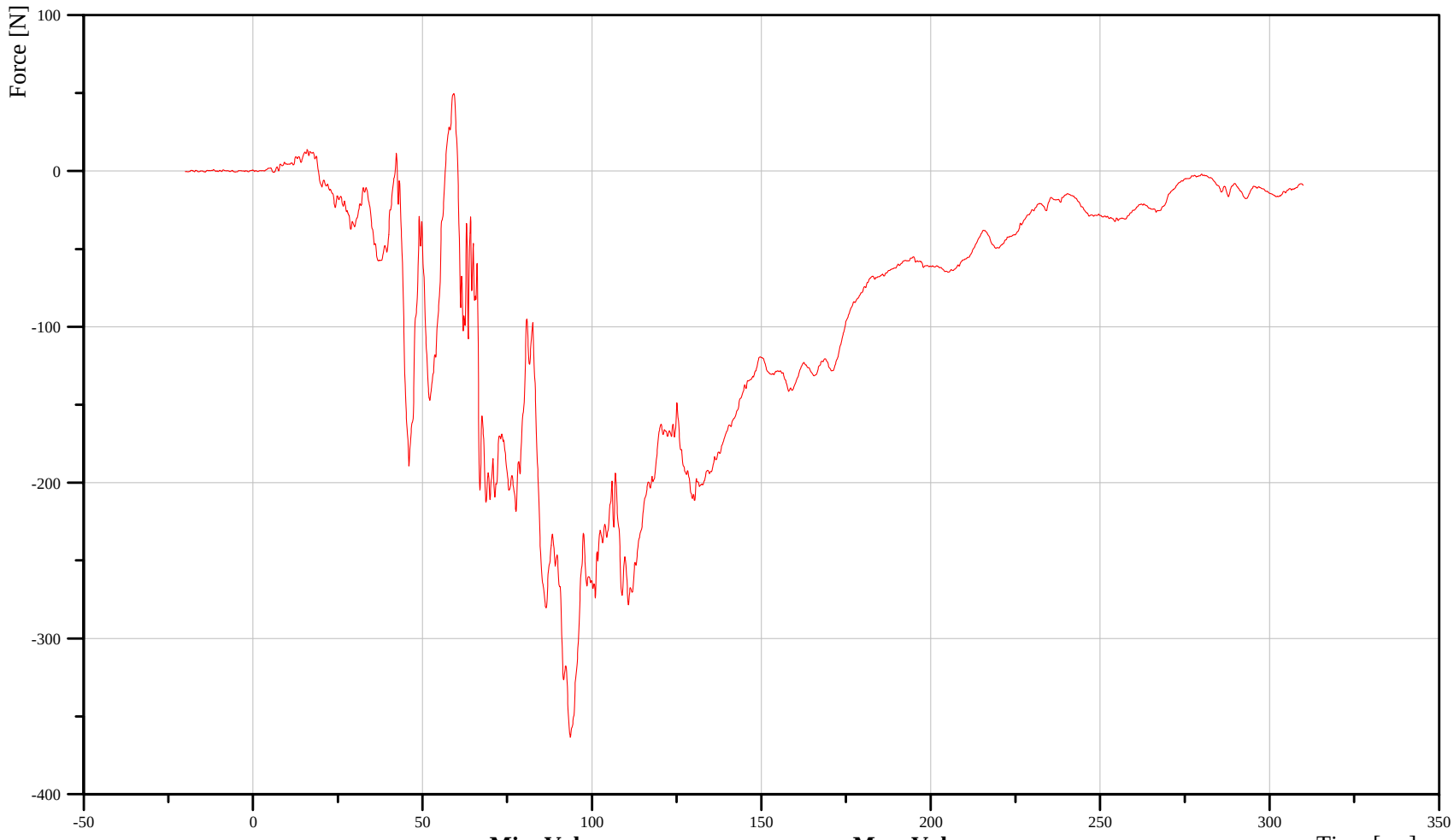
Right Upper Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRULXH3FOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-363.38 N at 93.60 ms

Max. Value
49.57 N at 59.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

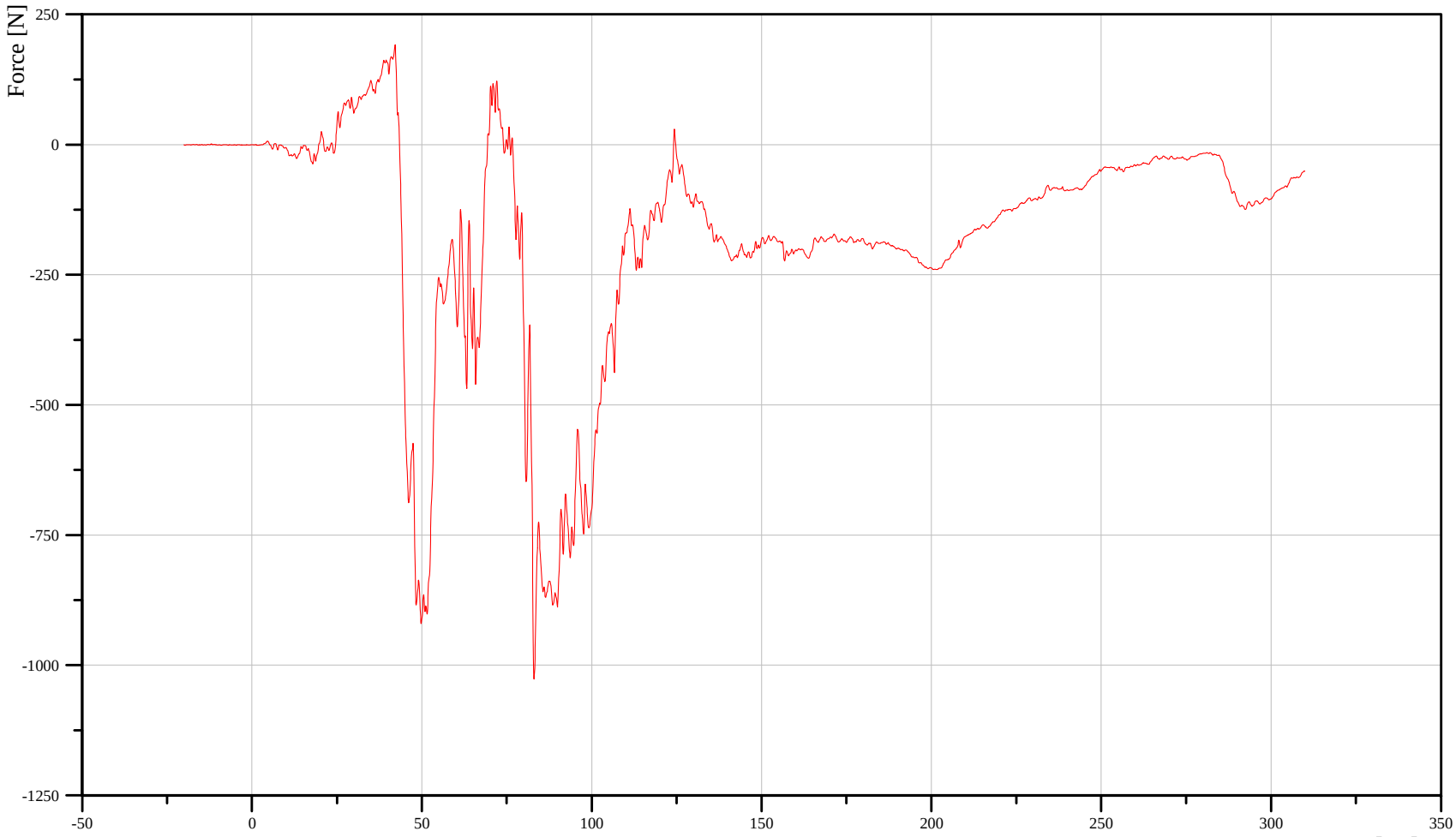
Right Upper Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRULXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-1,026.36 N at 83.04 ms

Max. Value
191.43 N at 42.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

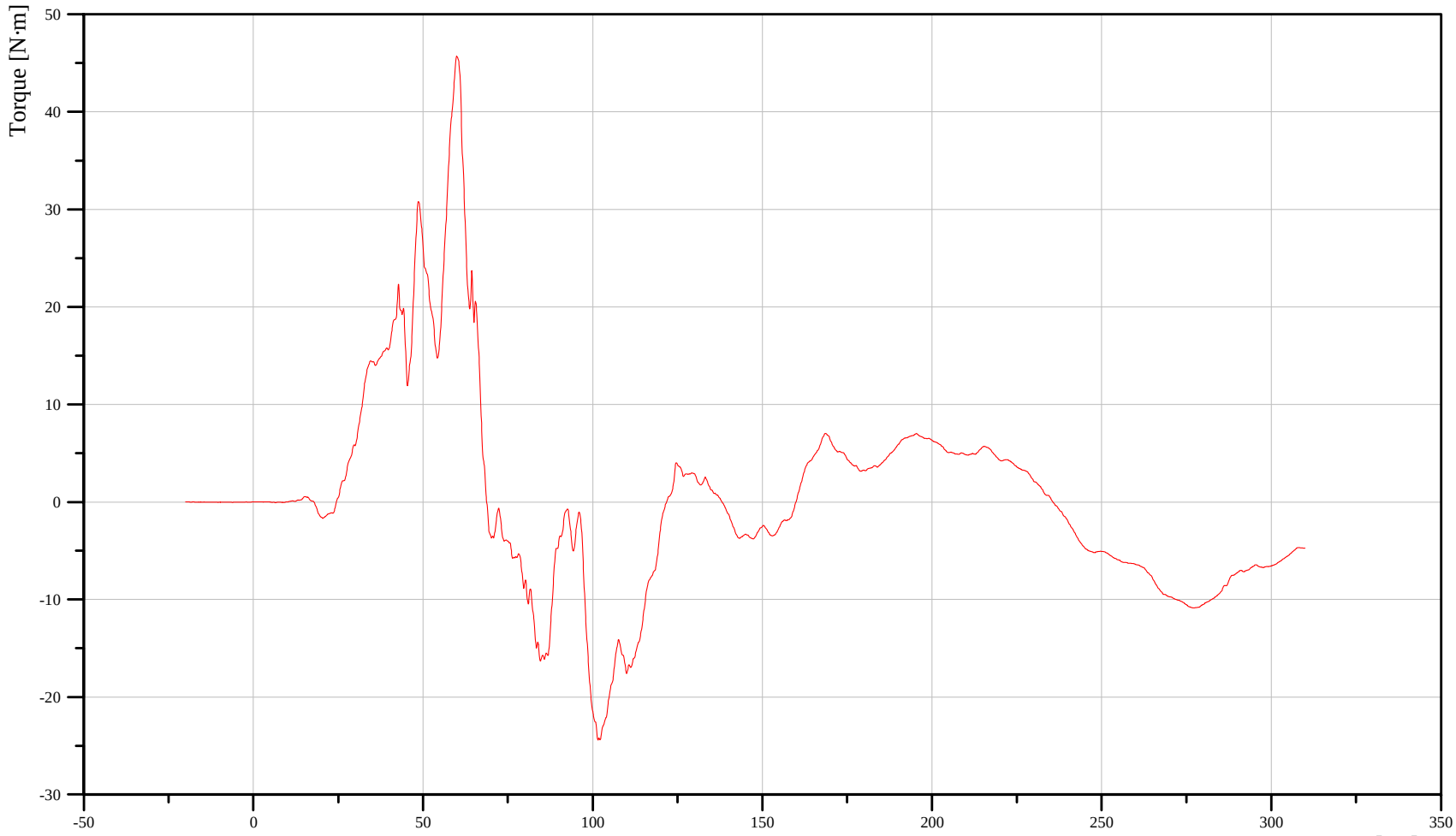
Right Upper Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRULXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-24.42 N·m at 101.52 ms

Max. Value
45.72 N·m at 59.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

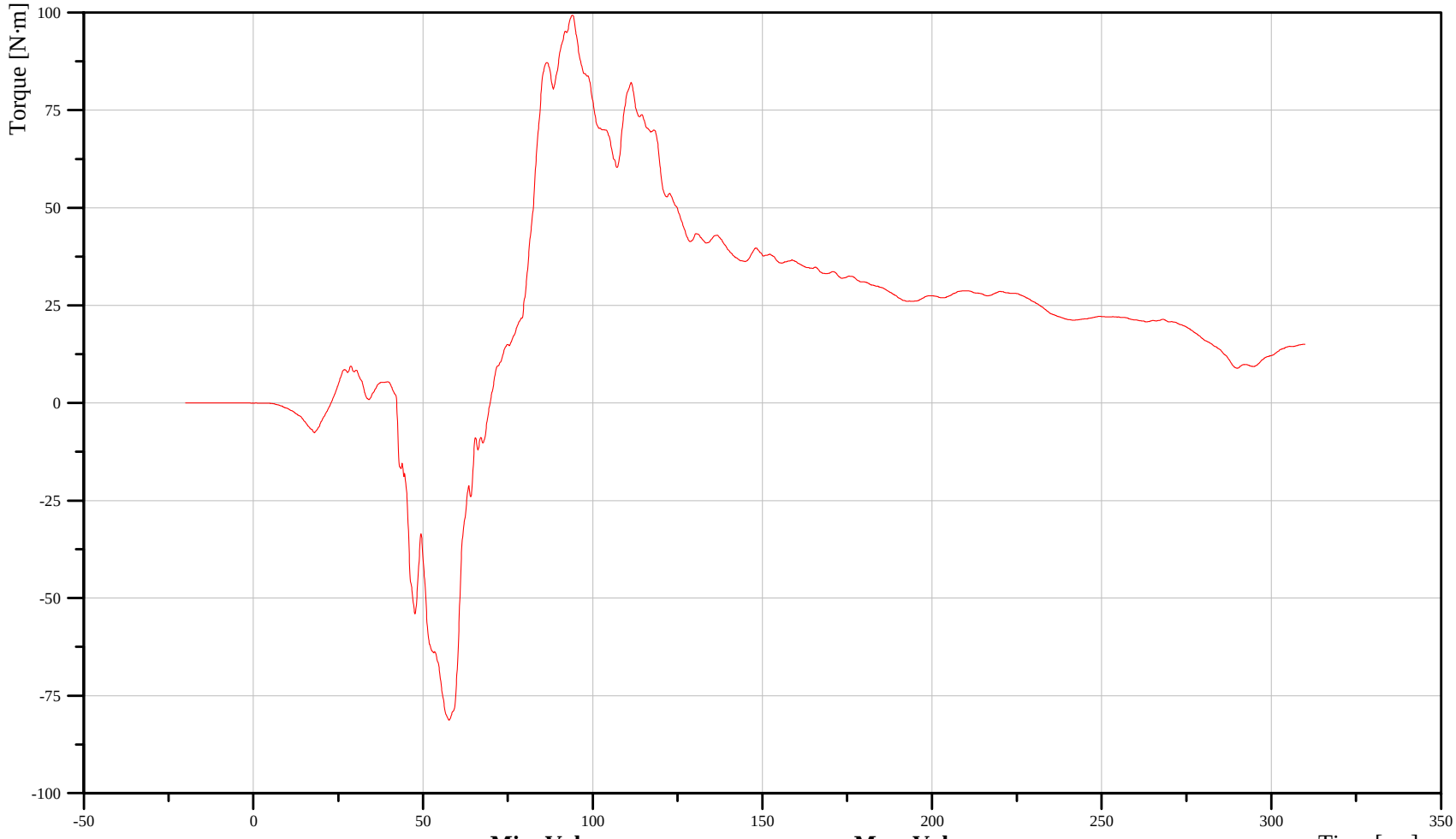
Right Upper Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRULXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-81.26 N·m at 57.68 ms

Max. Value
99.30 N·m at 94.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

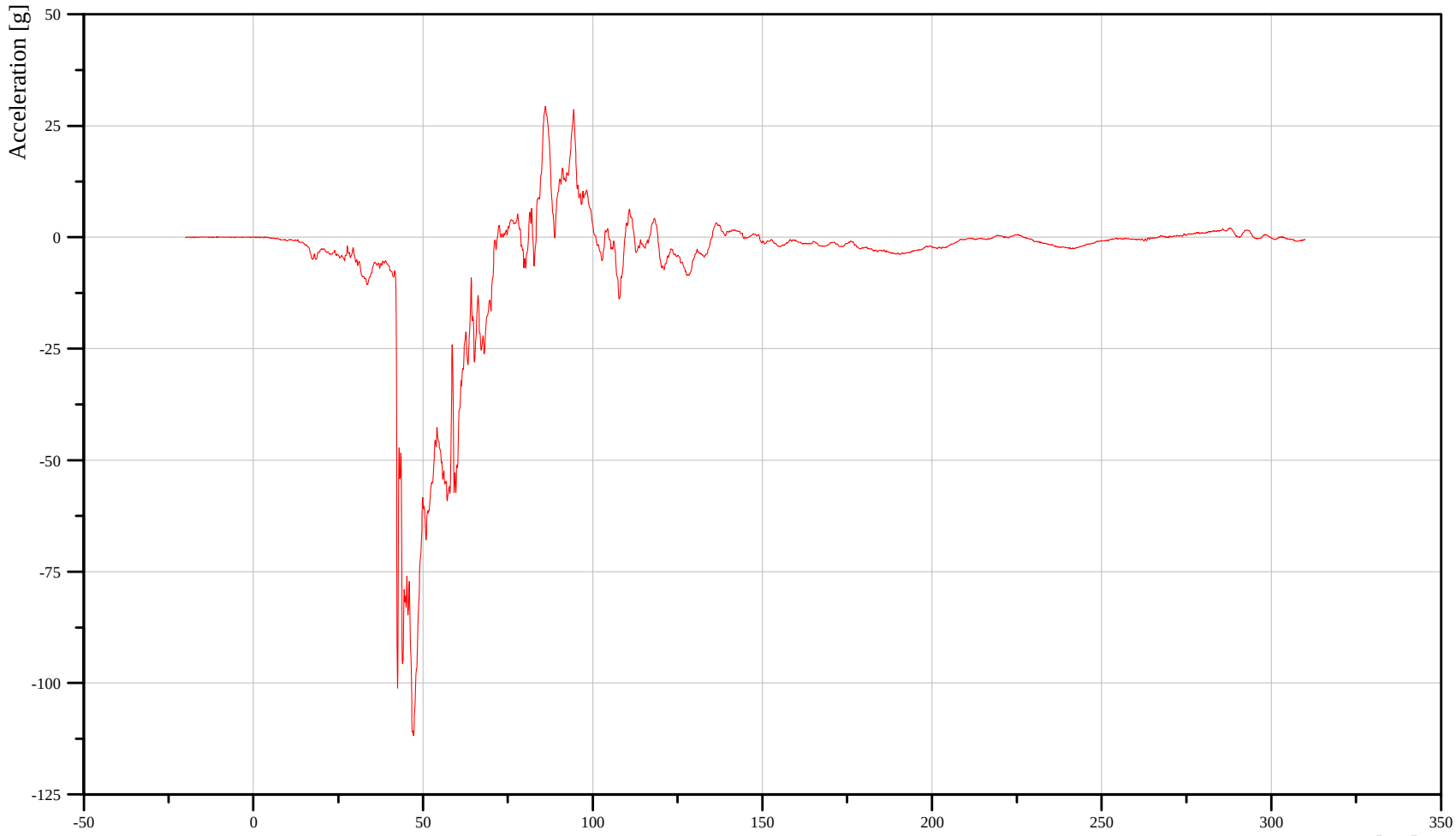
Right Tibia Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-111.84 g at 47.20 ms

Max. Value
29.36 g at 86.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

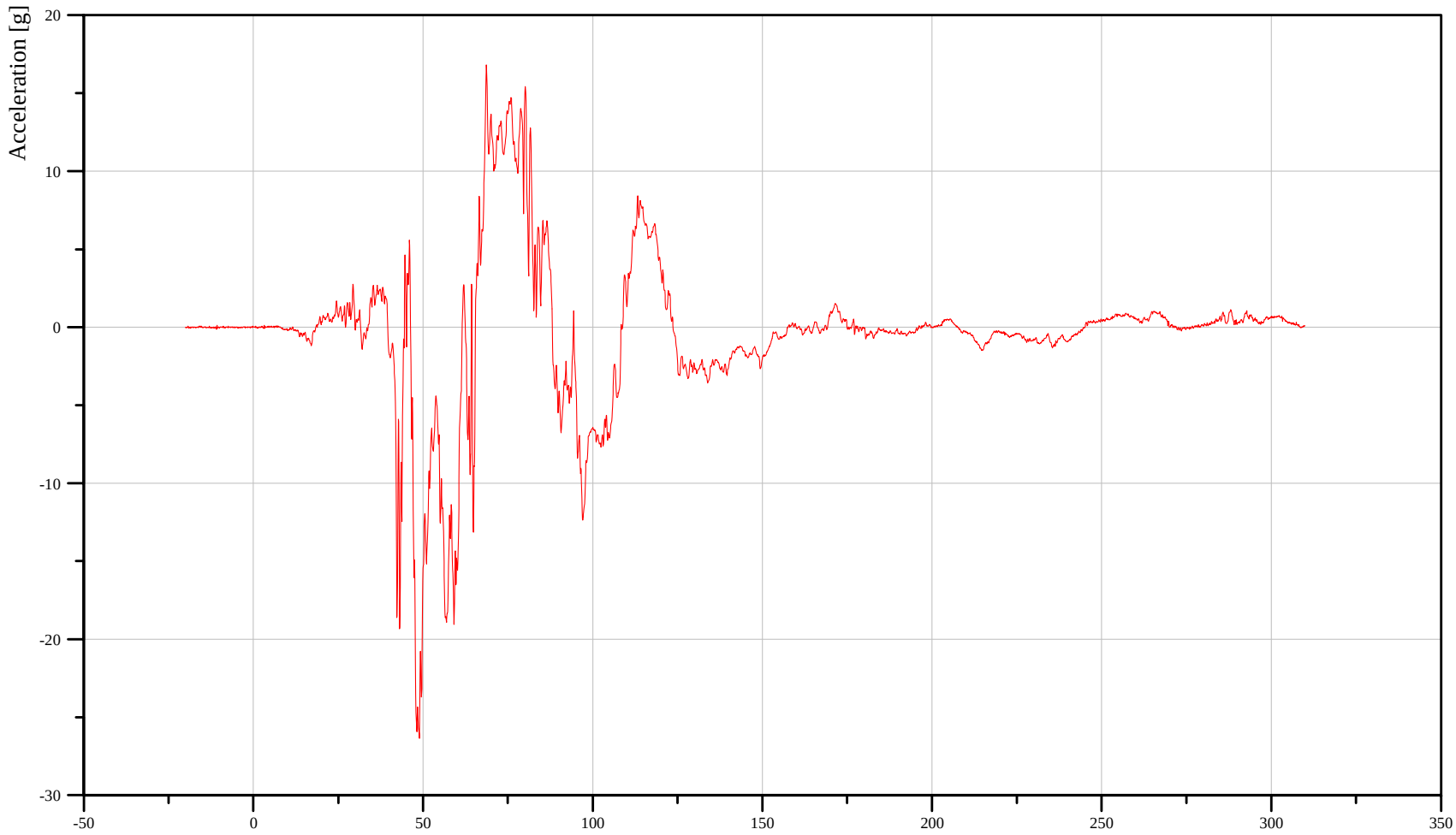
Right Tibia Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-26.35 g at 48.88 ms

Max. Value
16.82 g at 68.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

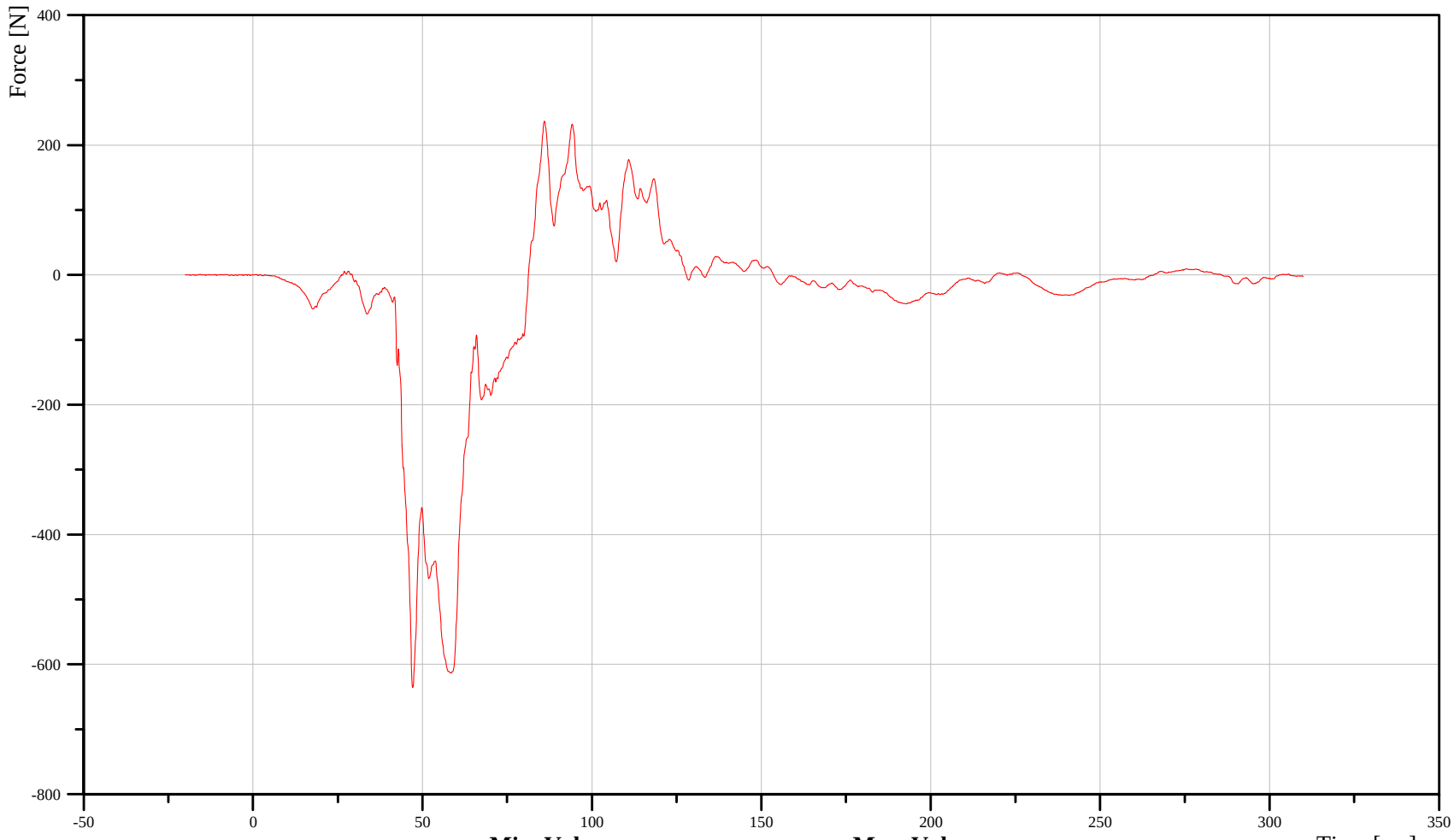
Right Lower Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRLLXH3FOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-635.59 N at 47.12 ms

Max. Value
236.96 N at 86.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

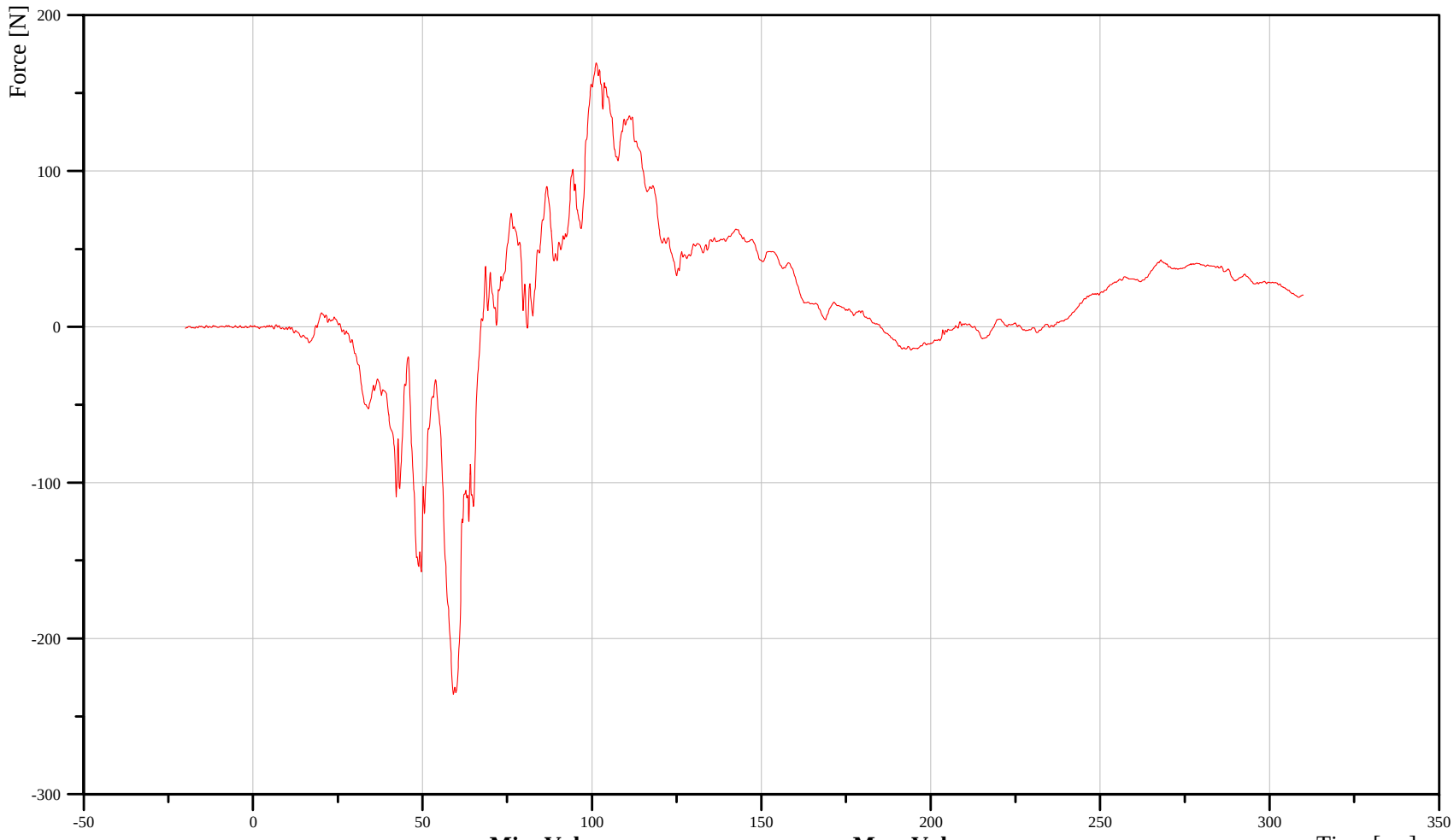
Right Lower Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRLLXH3FOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-235.67 N at 59.12 ms

Max. Value
169.40 N at 101.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

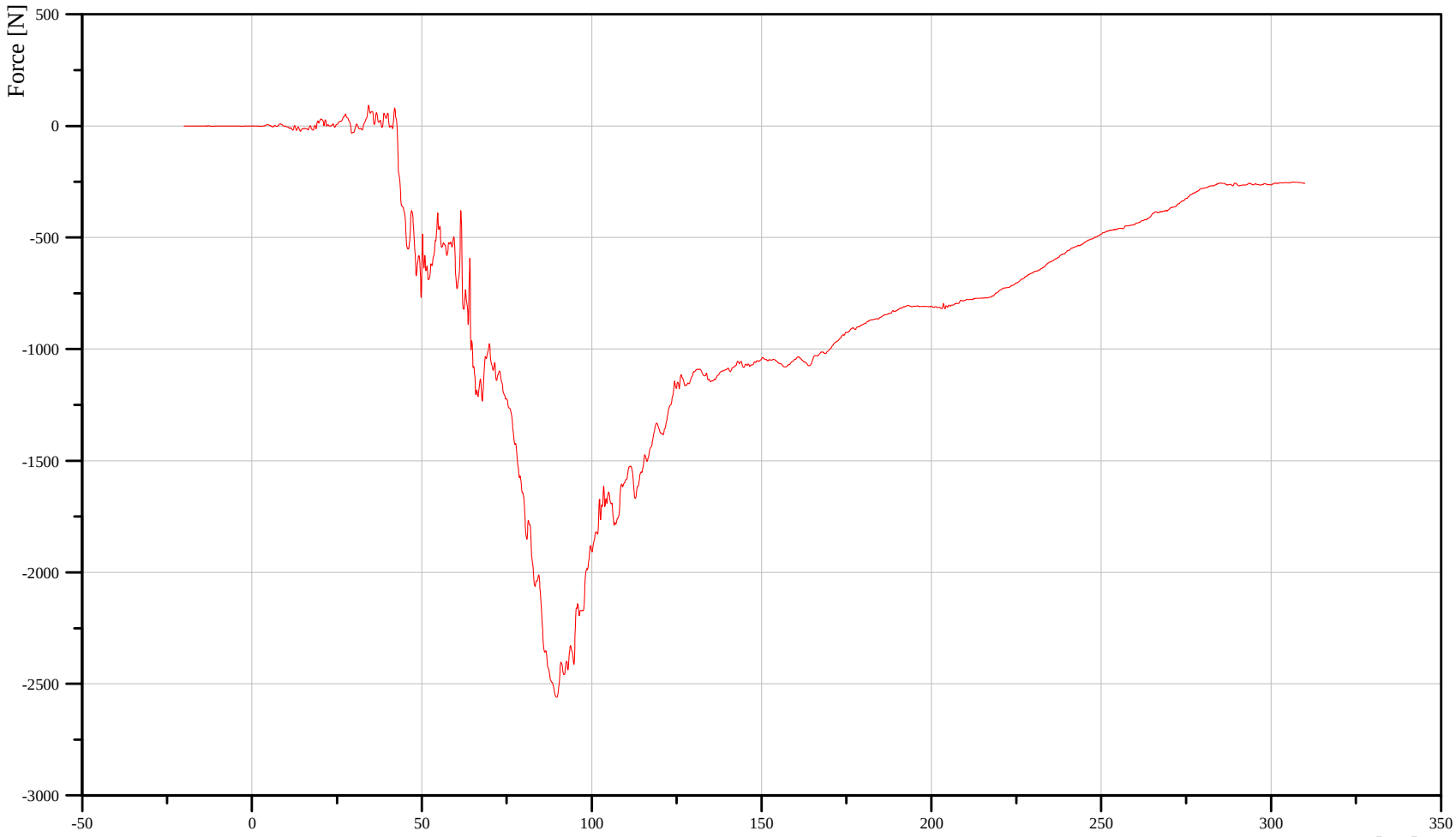
Right Lower Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRLLXH3FOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2,560.15 N at 89.68 ms

Max. Value
92.76 N at 34.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

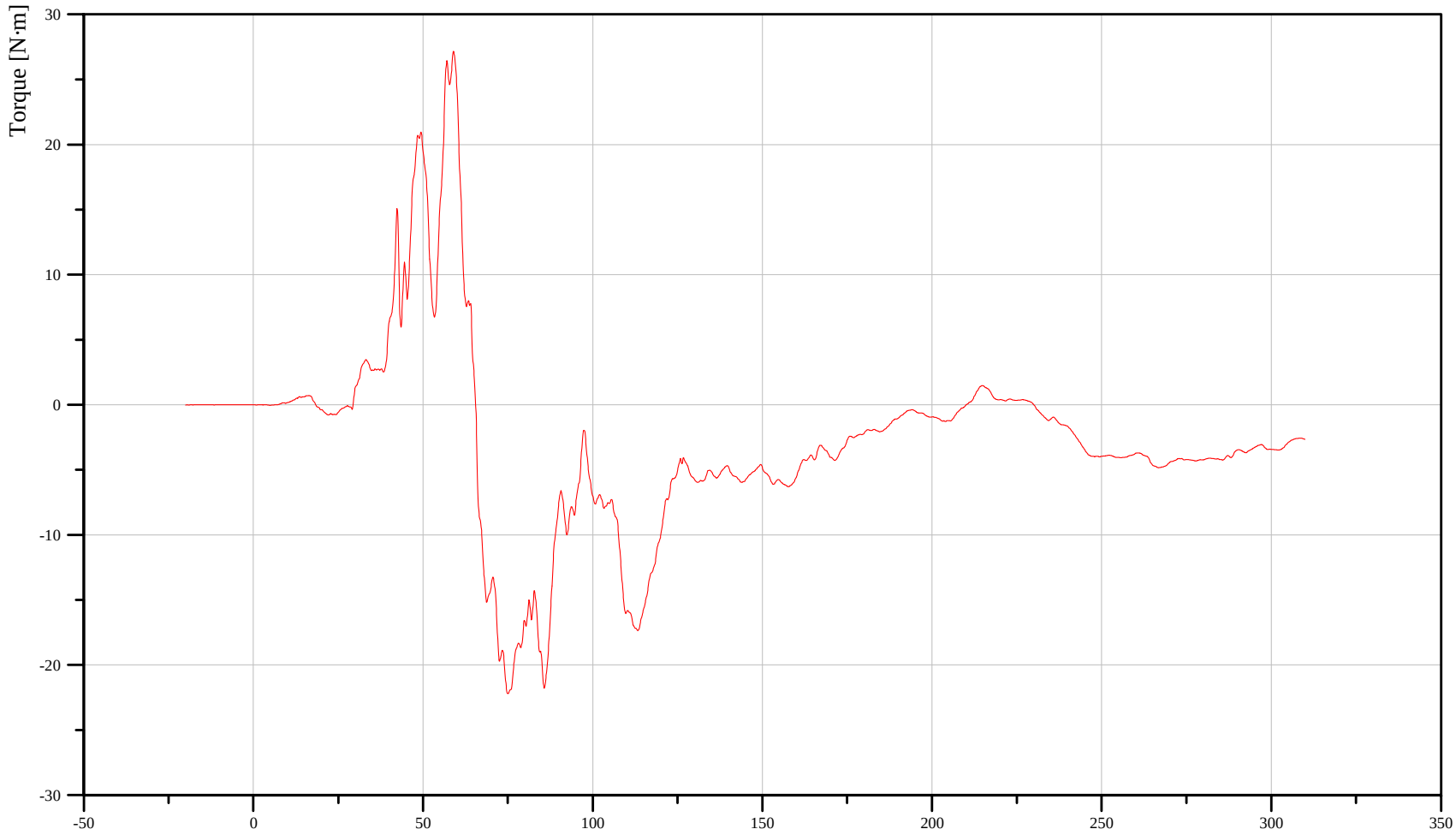
Right Lower Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRLLXH3MOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-22.20 N·m at 74.96 ms

Max. Value
27.17 N·m at 58.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

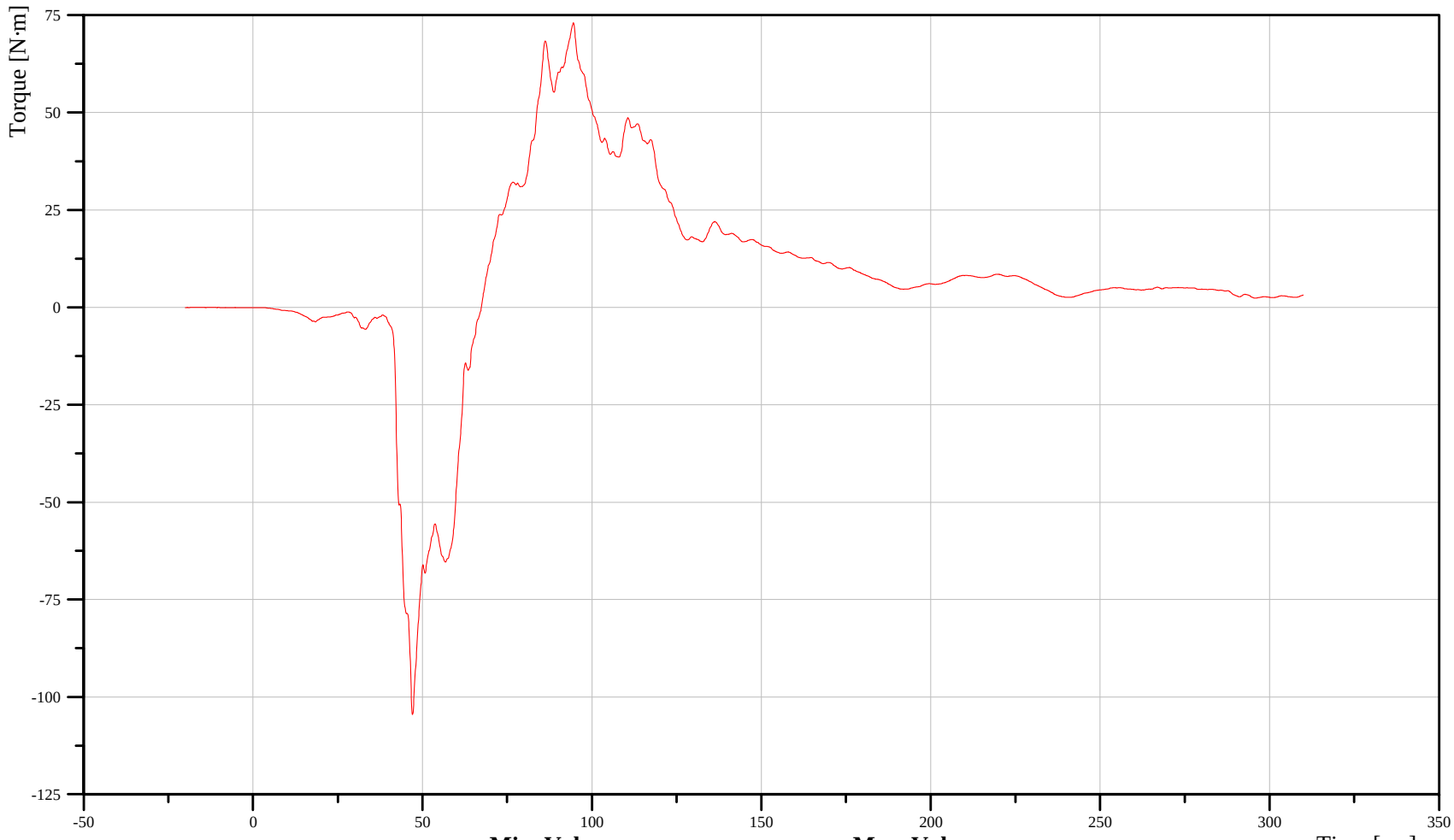
Right Lower Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11TIBIRLLXH3MOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-104.55 N·m at 47.04 ms

Max. Value
73.05 N·m at 94.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

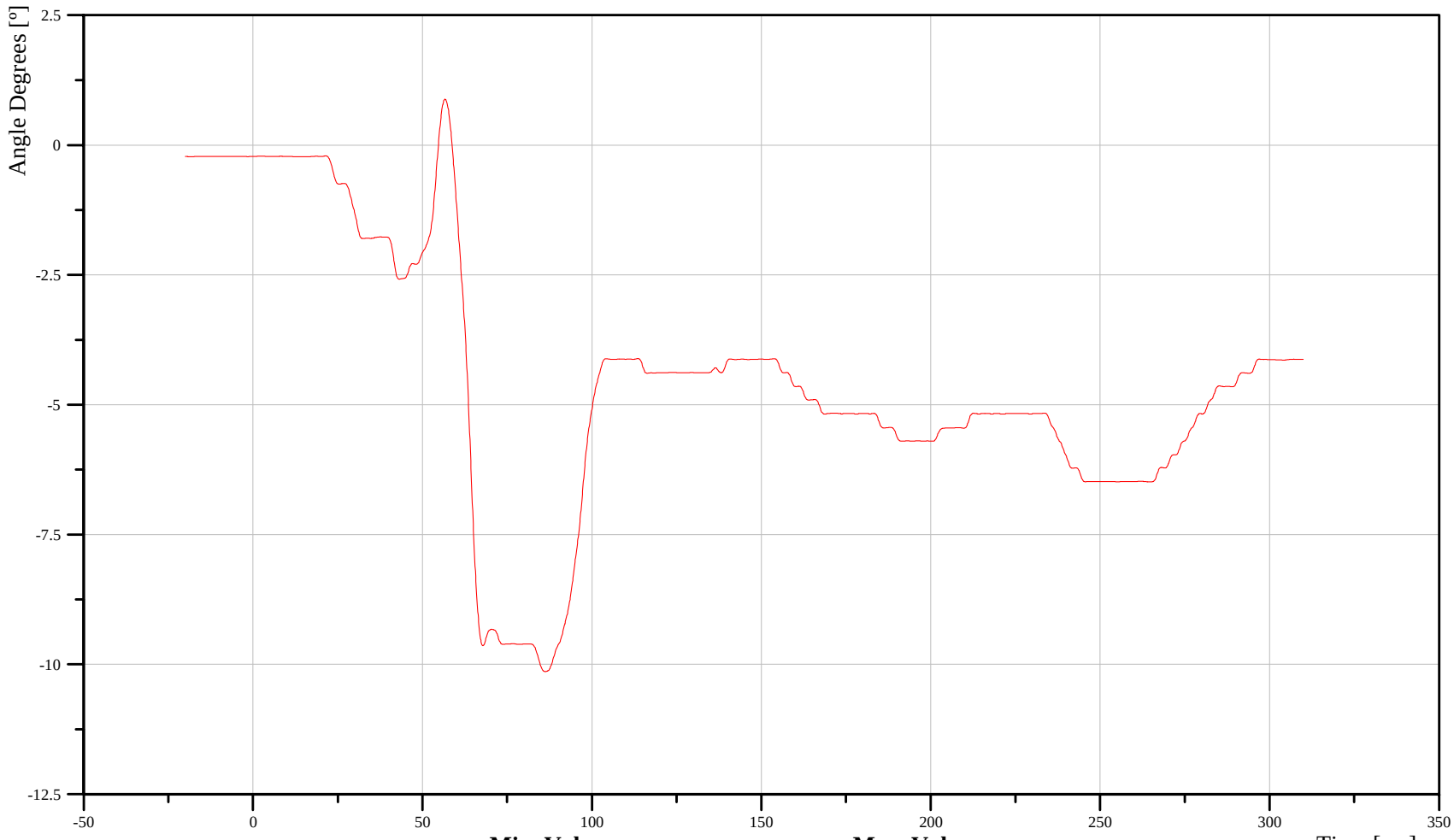
Right Foot Angular Dis. X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ANXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-10.14 ° at 86.24 ms

Max. Value
0.88 ° at 56.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

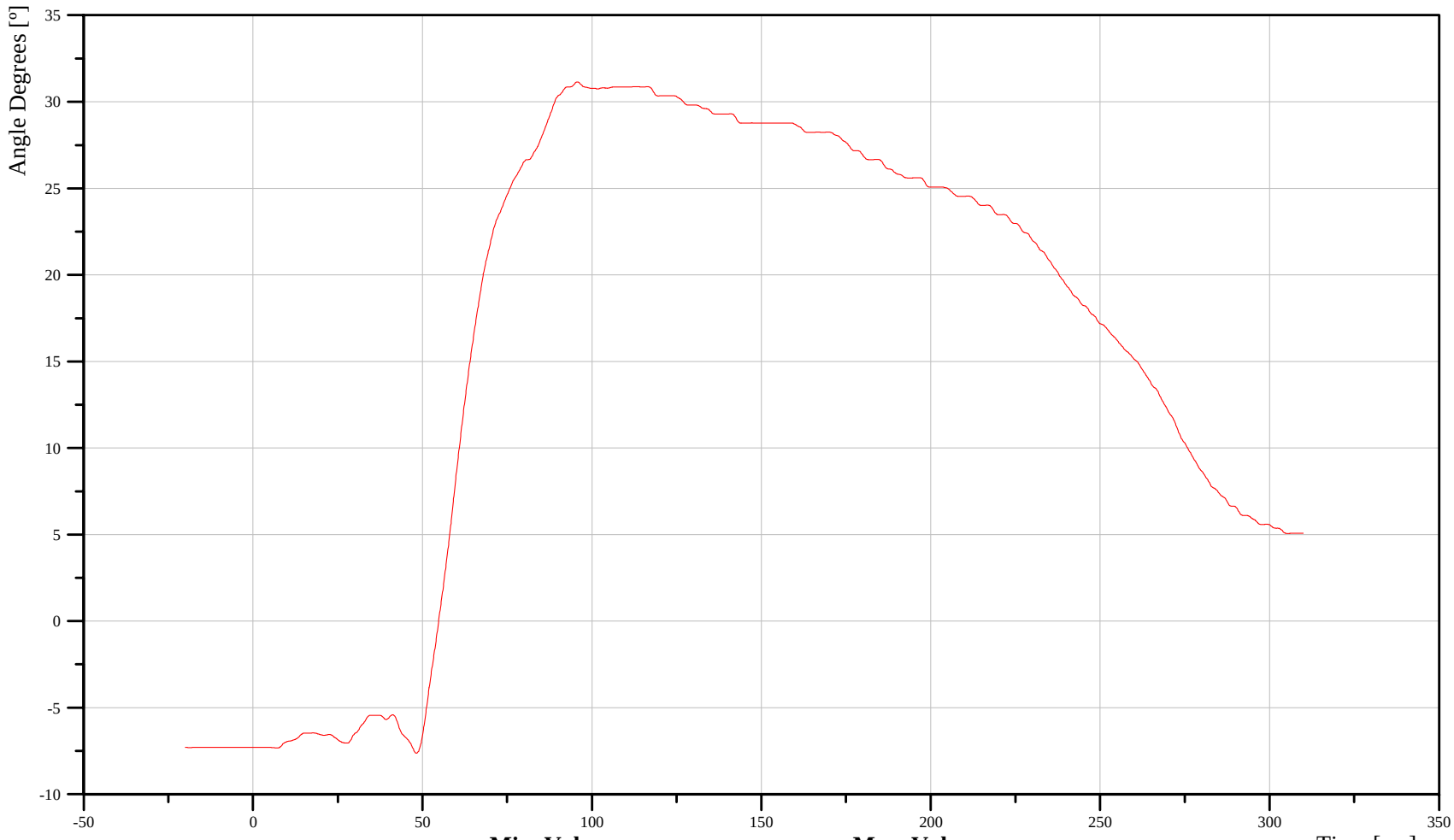
Right Foot Angular Dis. Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ANYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-7.62 ° at 48.24 ms

Max. Value
31.15 ° at 95.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

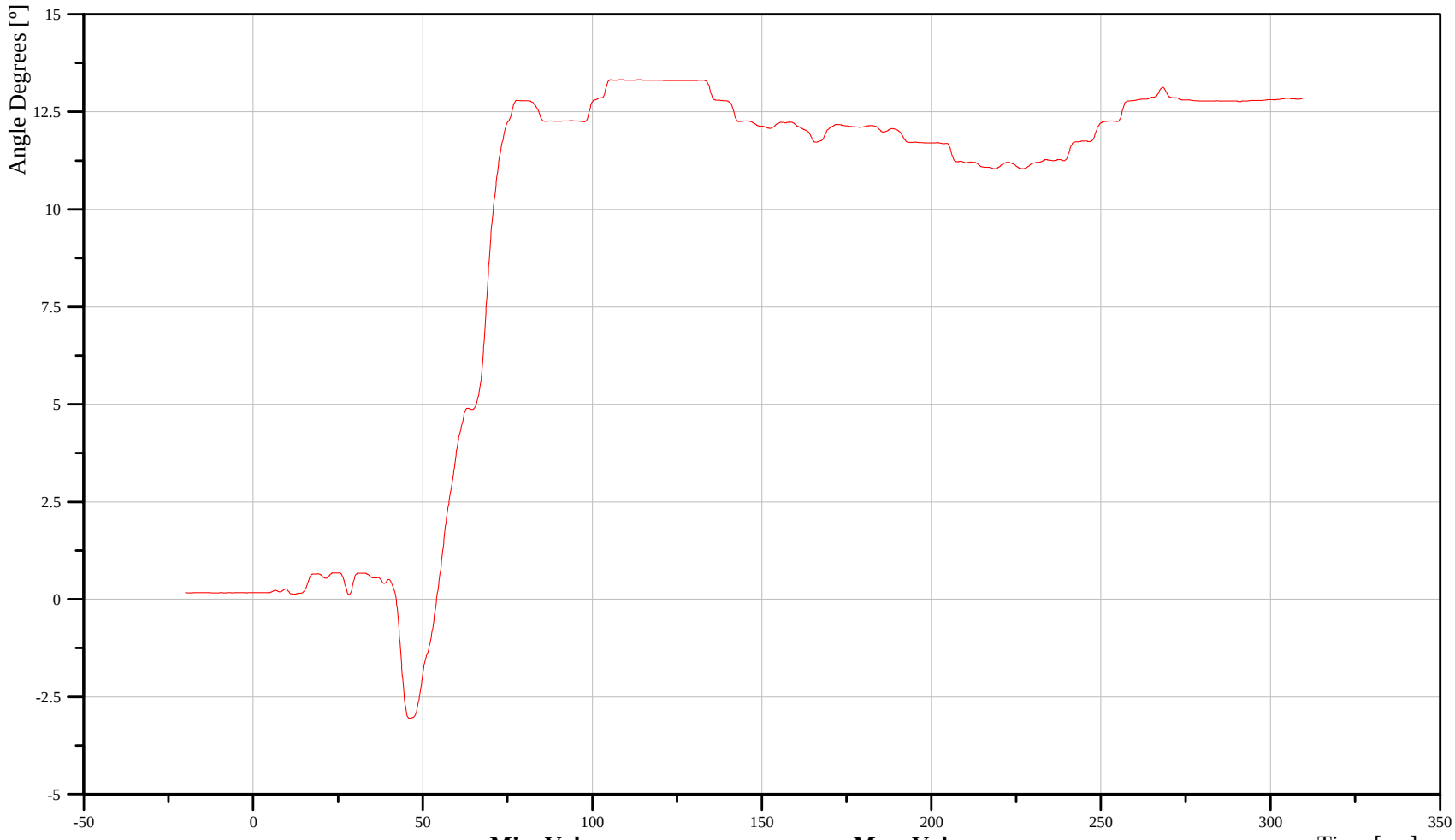
Right Foot Angular Dis. Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ANZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-3.05 ° at 46.08 ms

Max. Value
13.32 ° at 108.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

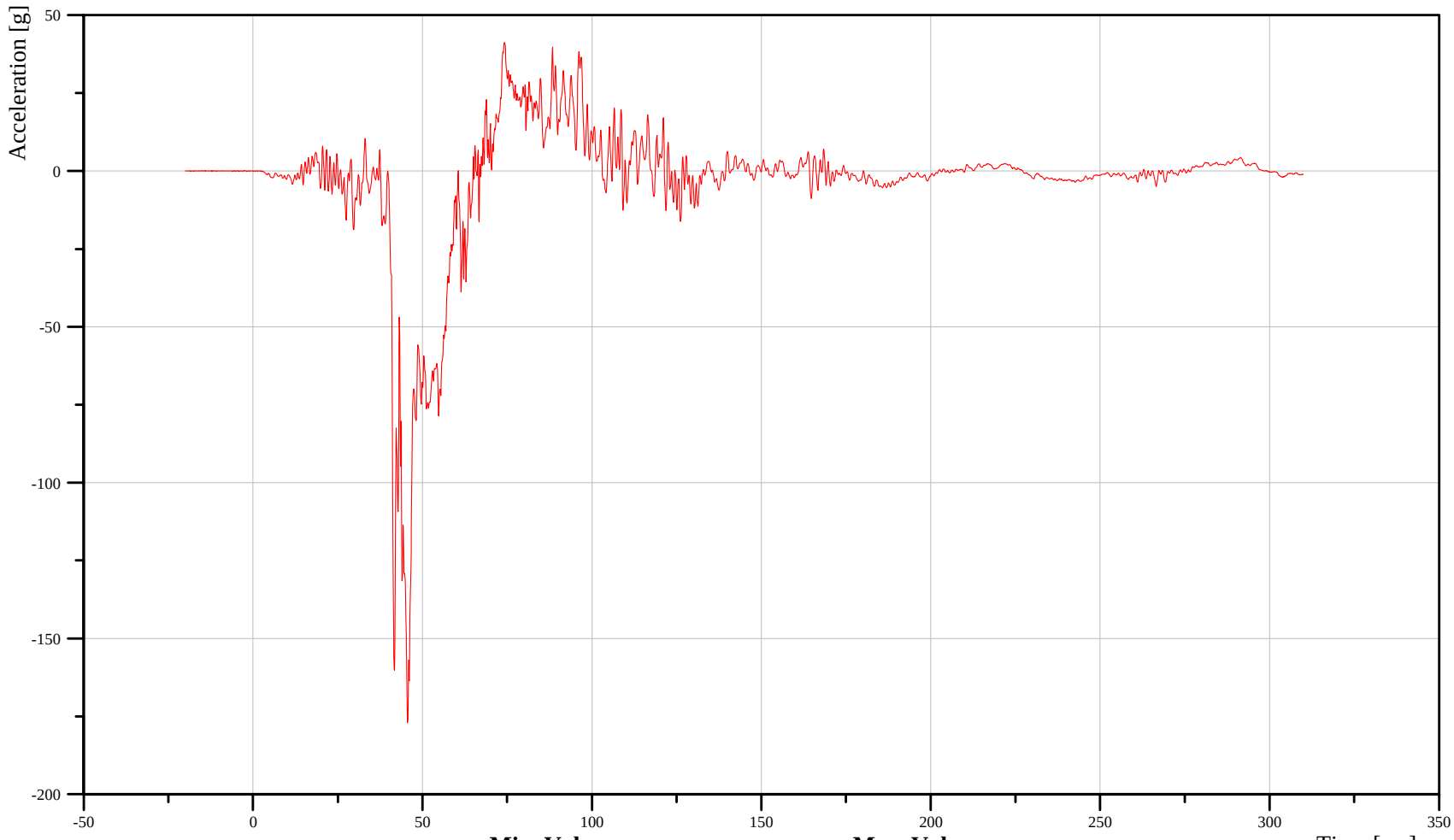
Right Foot Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-177.03 g at 45.60 ms

Max. Value
41.25 g at 74.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

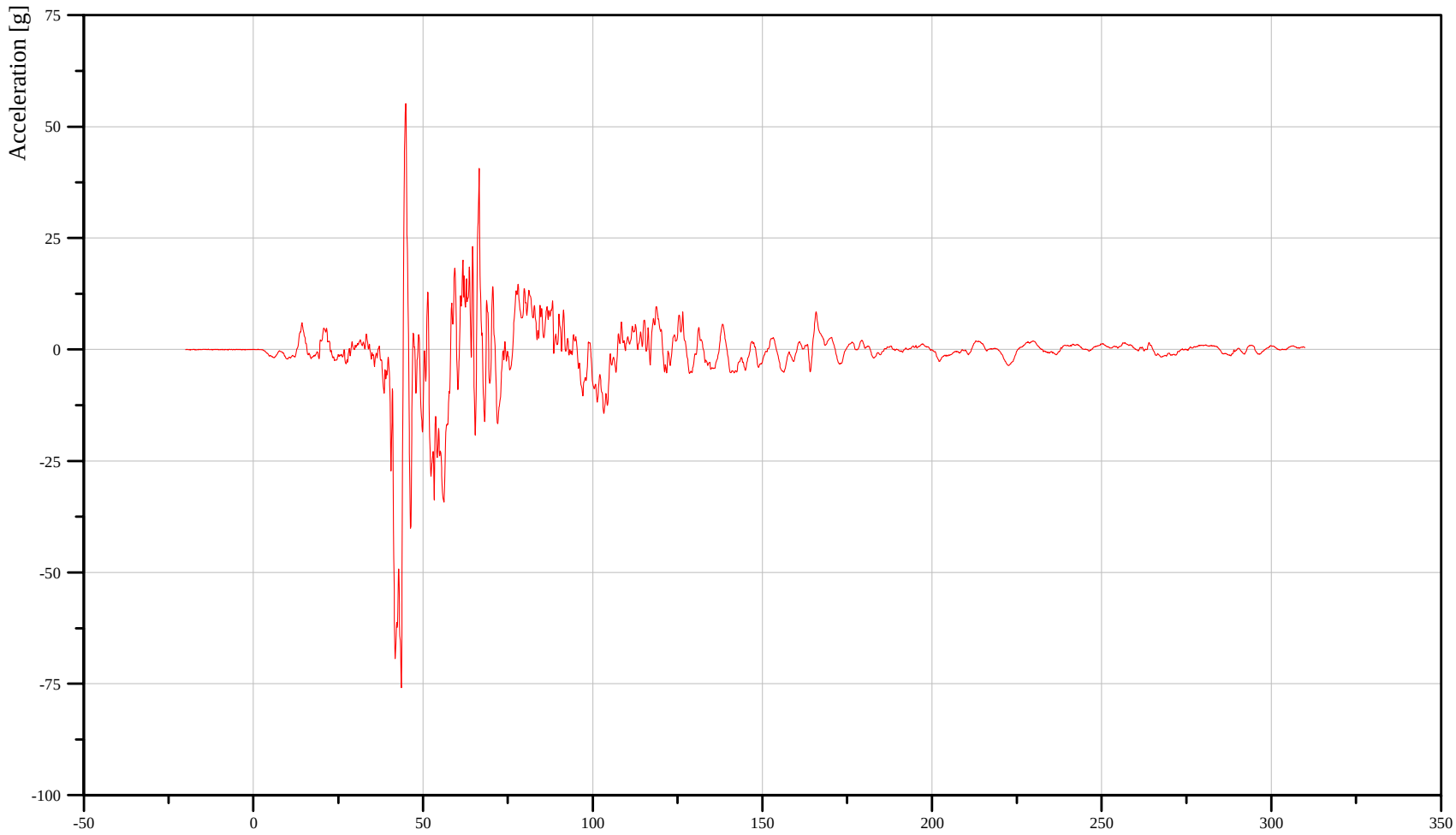
Right Foot Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-75.86 g at 43.60 ms

Max. Value
55.17 g at 44.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

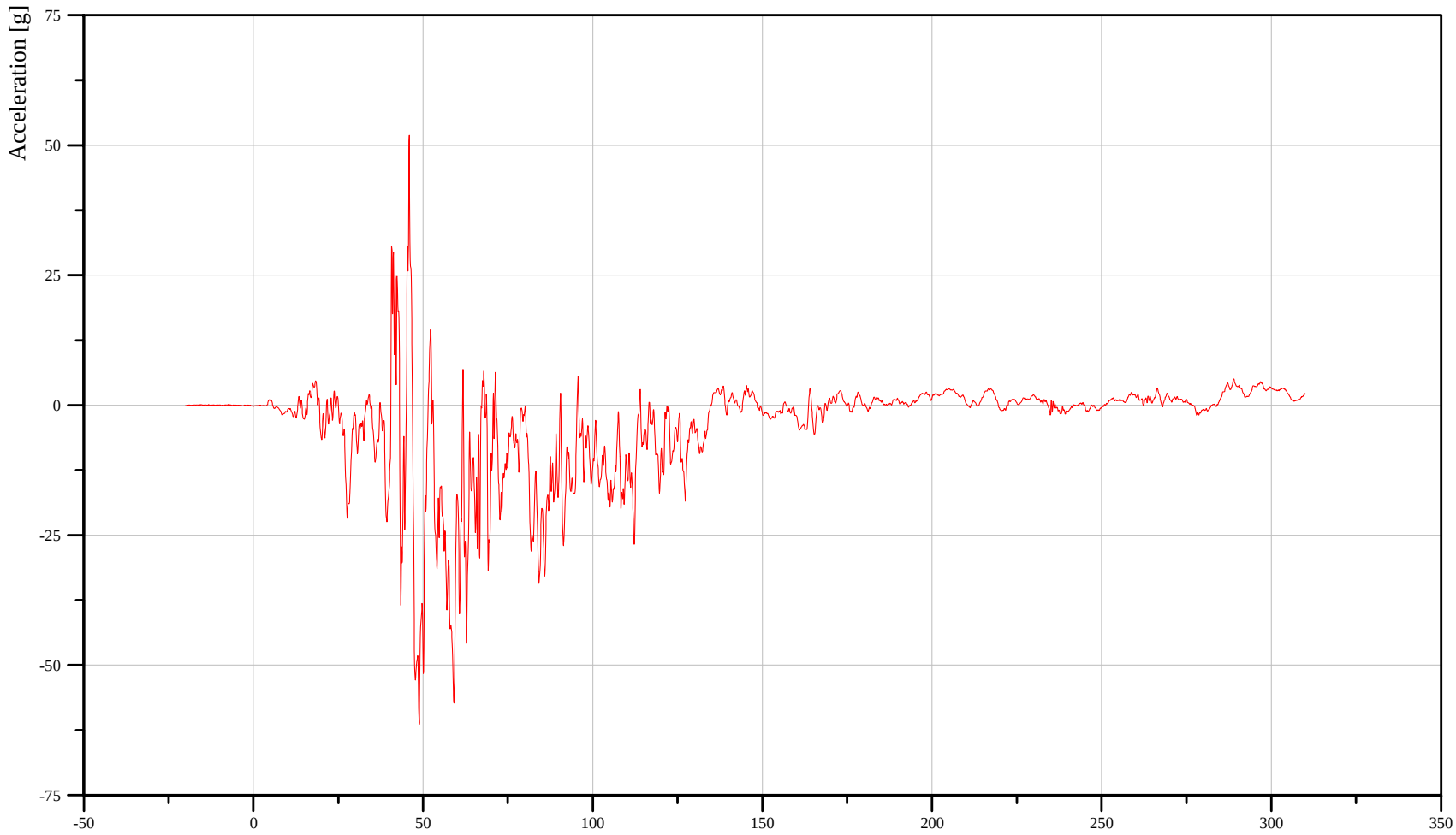
Right Foot Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-61.34 g at 48.80 ms

Max. Value
51.94 g at 45.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

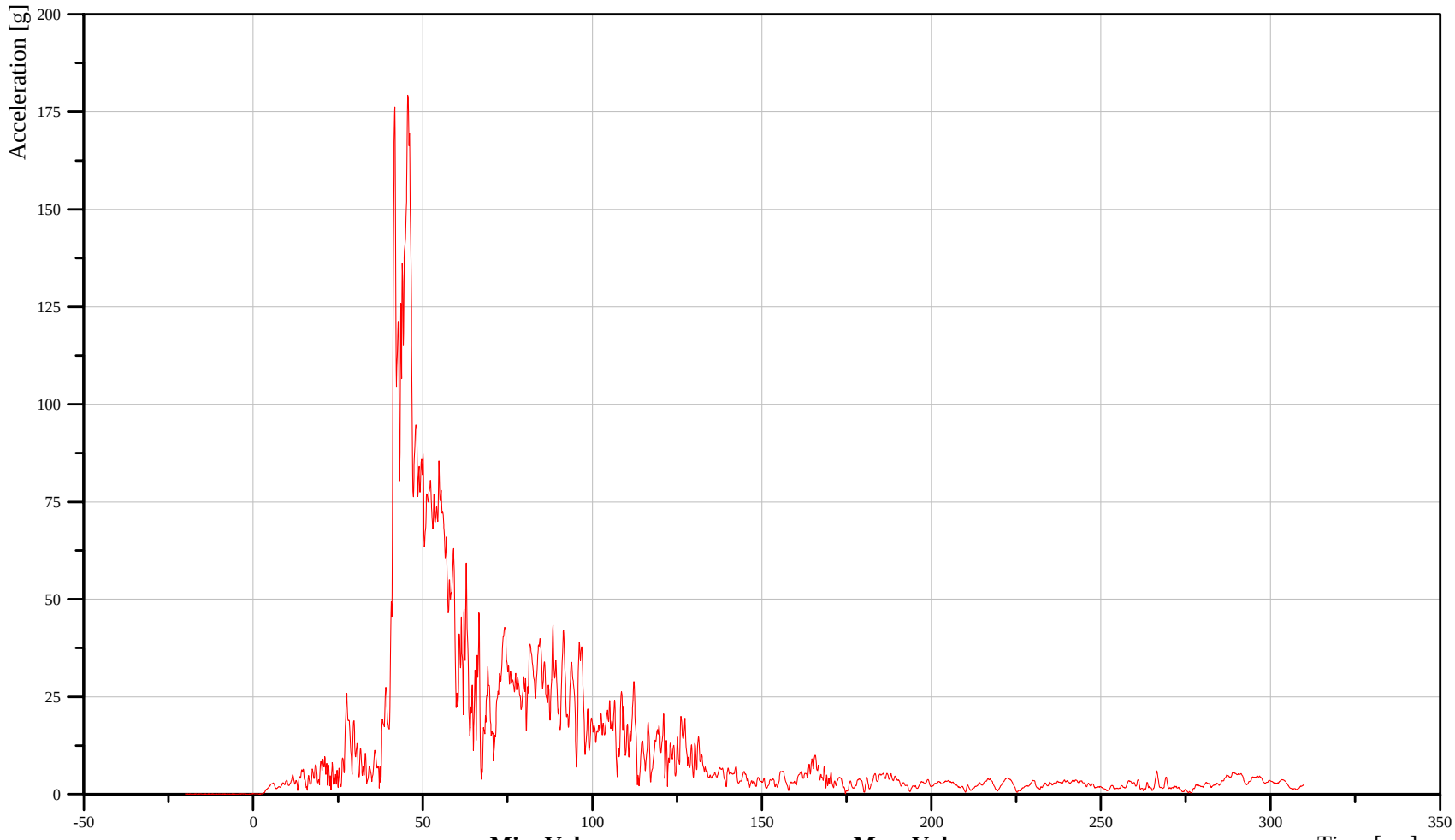
Right Foot Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.00 g at -14.72 ms

Max. Value
179.21 g at 45.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

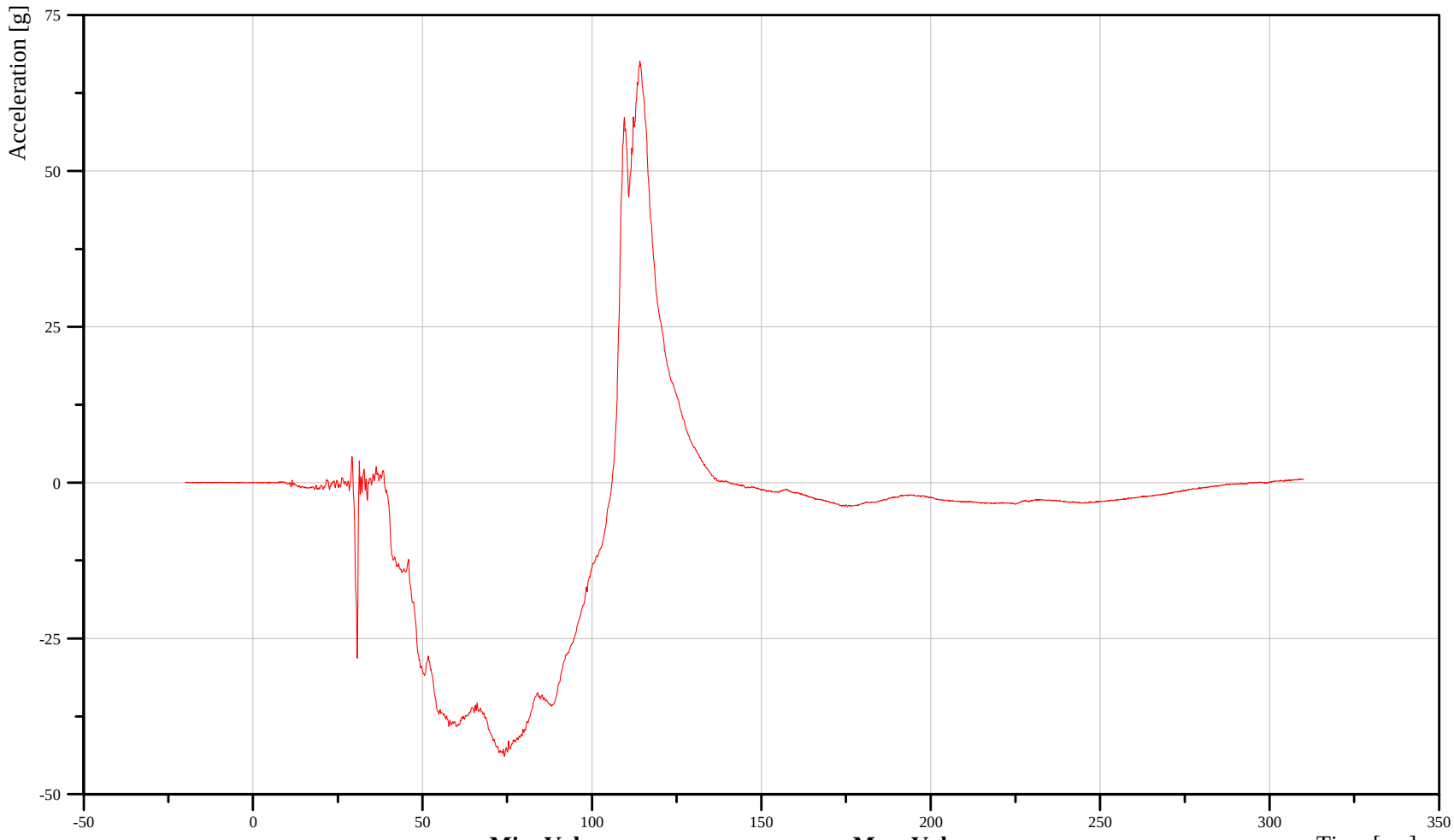
Head Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-43.92 g at 74.16 ms

Max. Value
67.63 g at 114.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

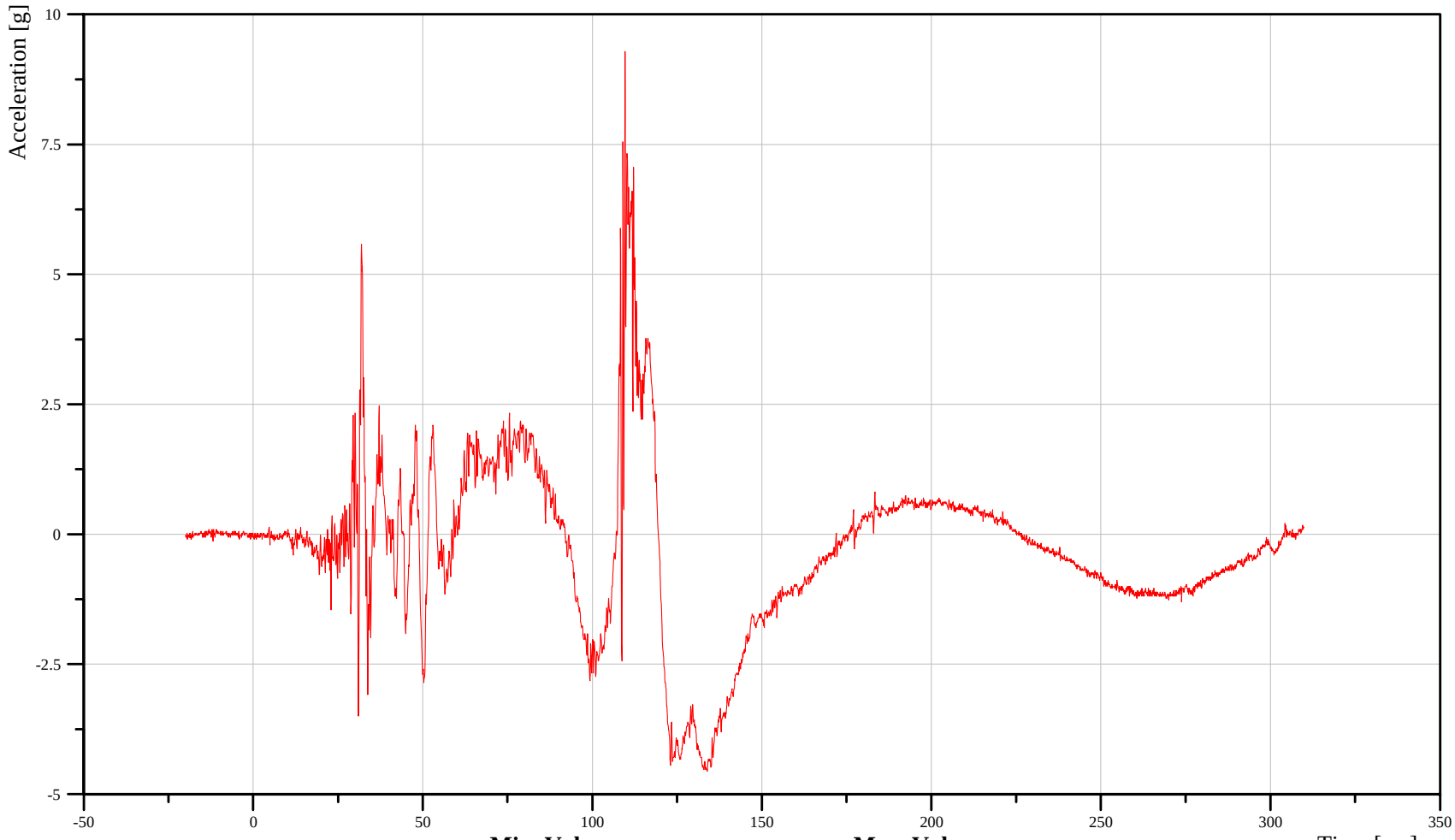
Head Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-4.56 g at 133.92 ms

Max. Value
9.29 g at 109.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

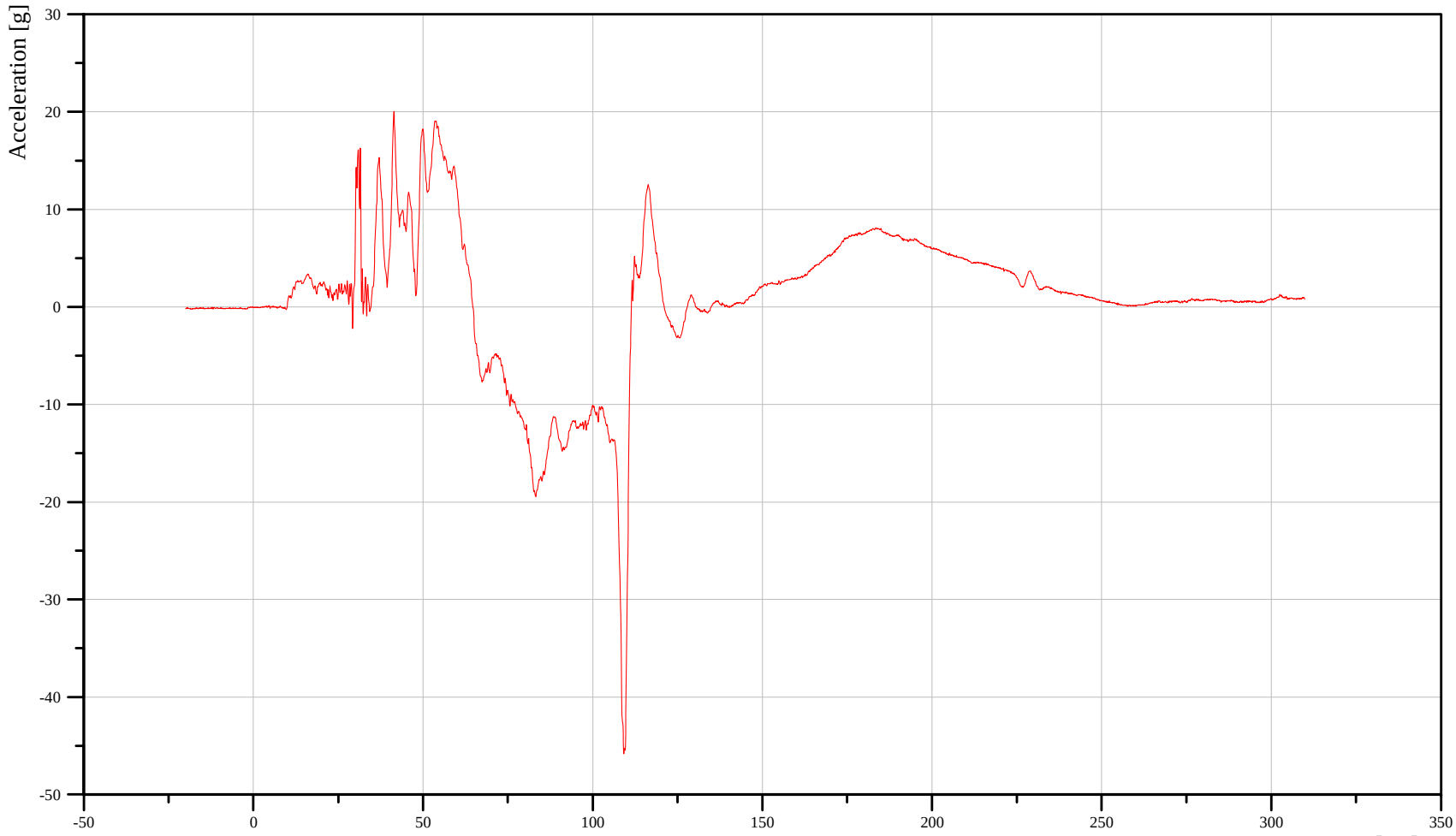
Head Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-45.82 g at 109.20 ms

Max. Value
20.02 g at 41.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

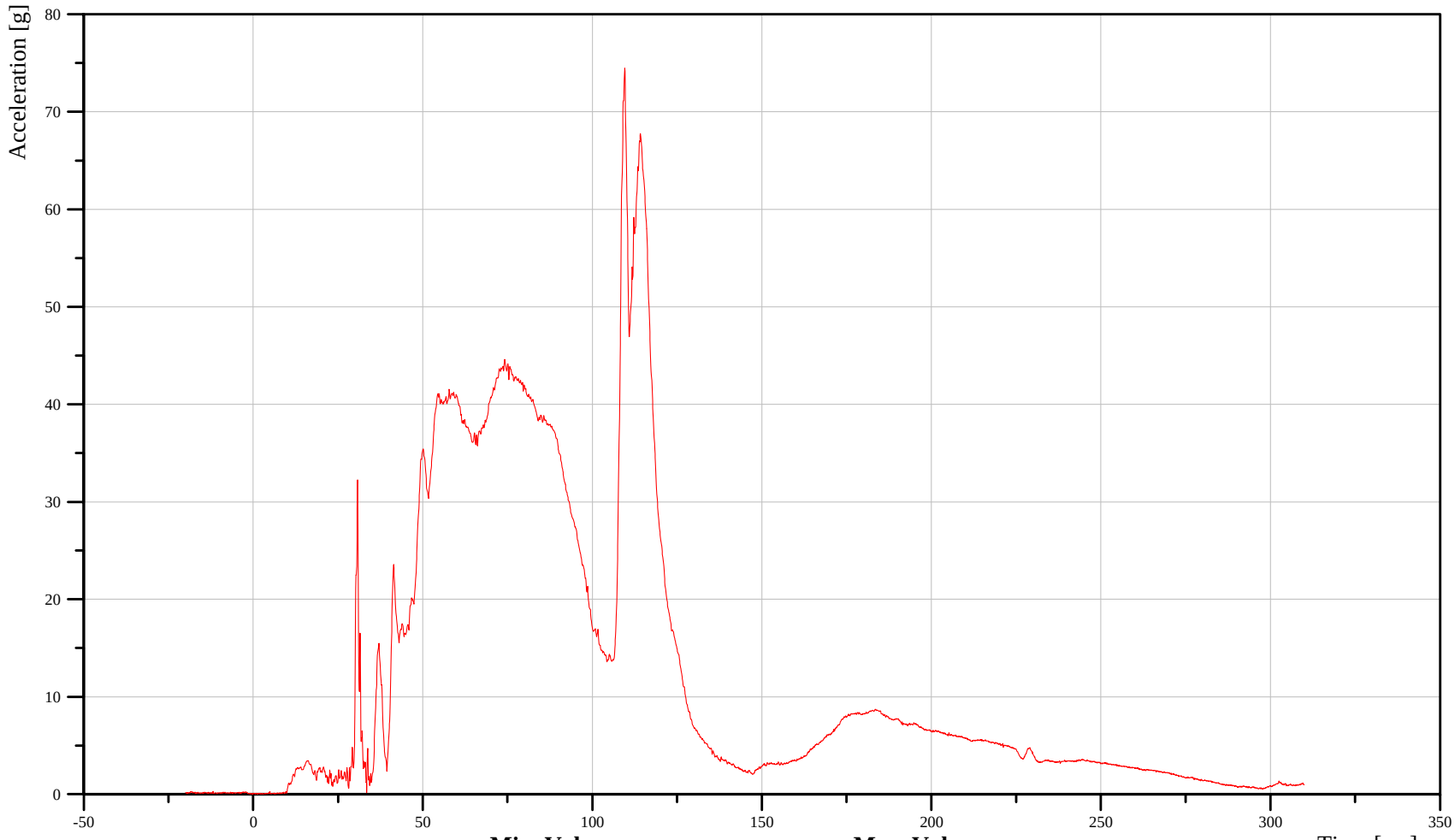
Head Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.02 g at -0.48 ms

Max. Value
74.48 g at 109.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

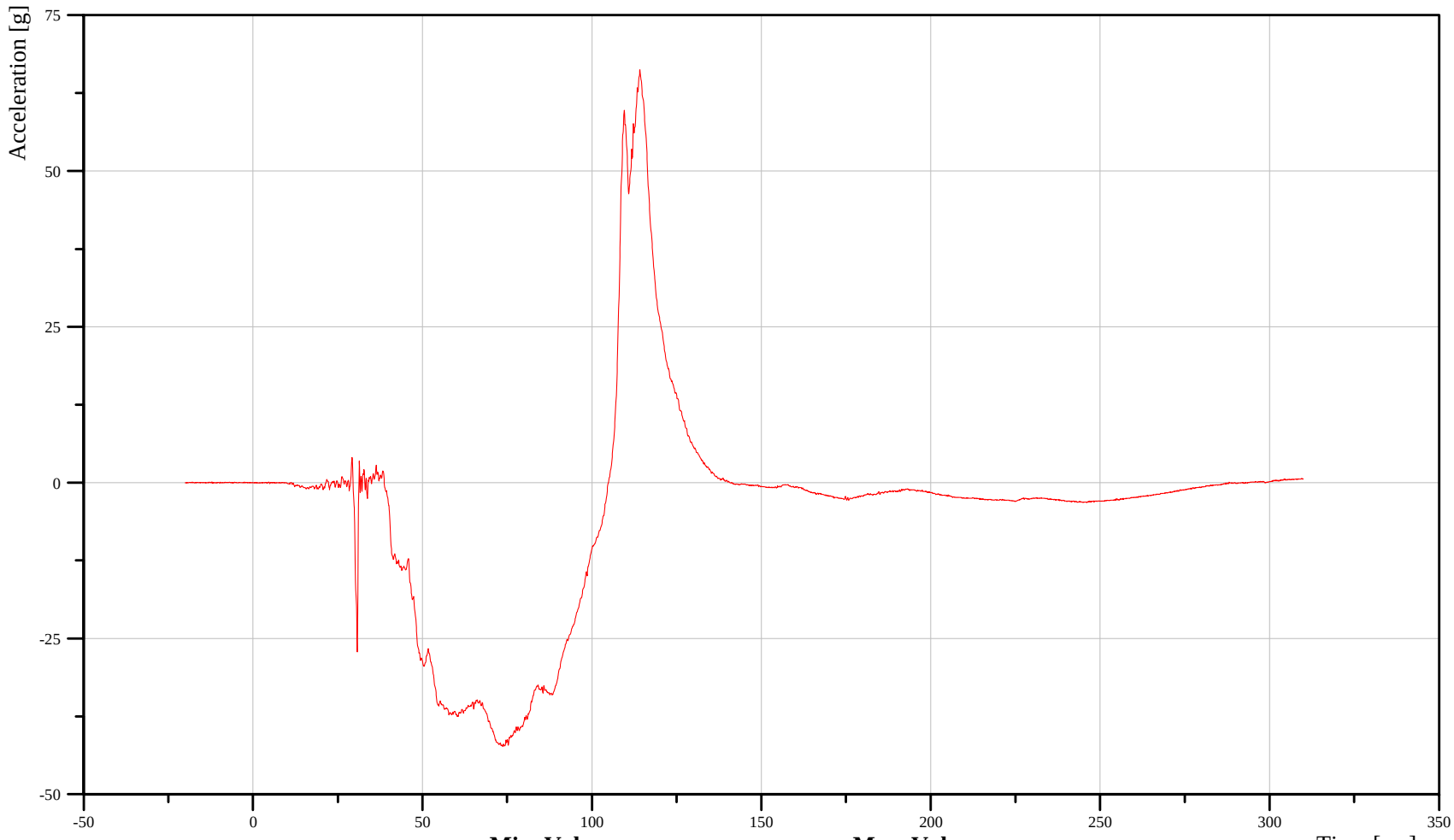
Head Accel Red X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCGRDHFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-42.37 g at 73.68 ms

Max. Value
66.22 g at 114.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

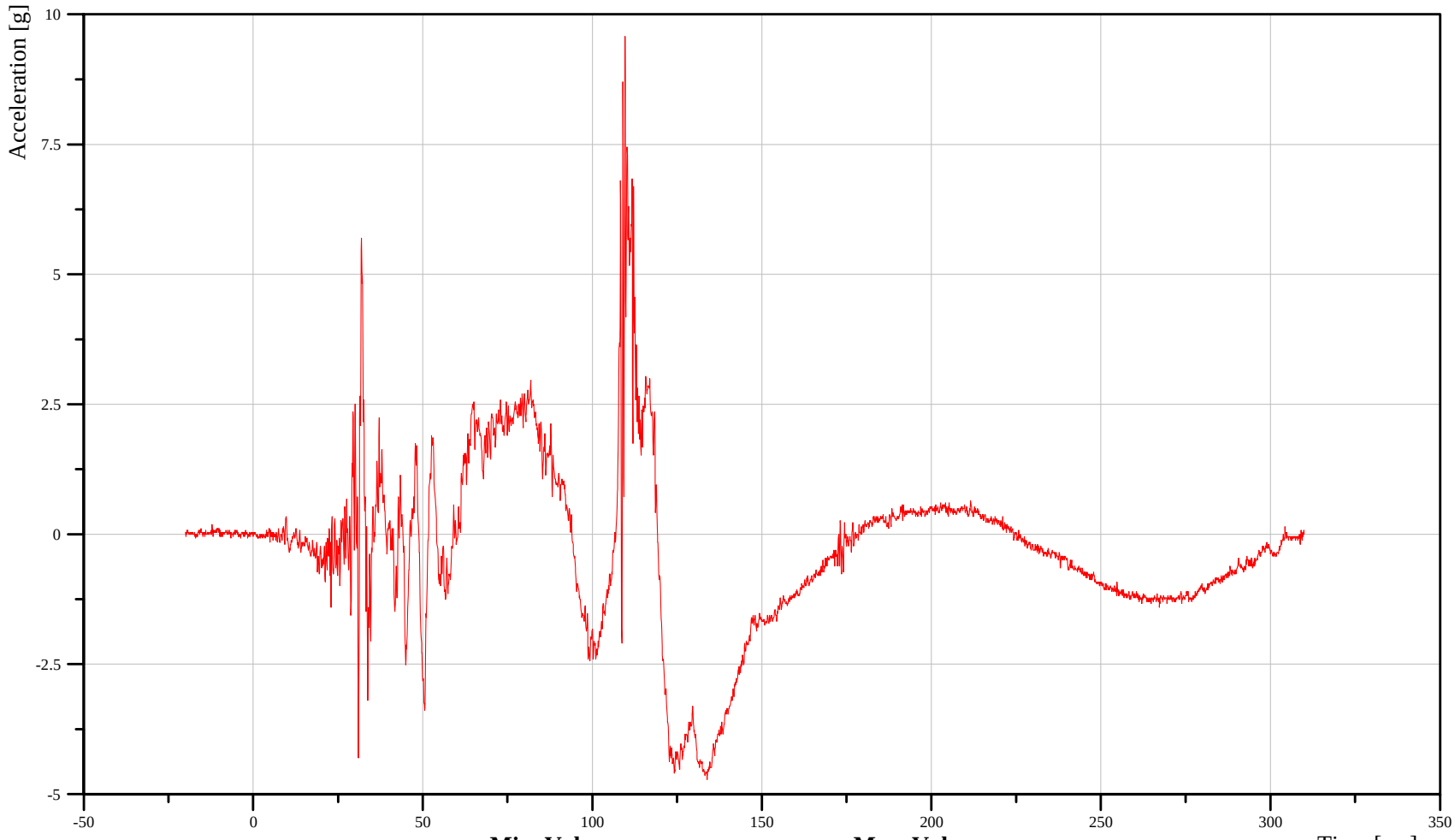
Head Accel Red Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCGRDHFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-4.71 g at 133.84 ms

Max. Value
9.58 g at 109.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

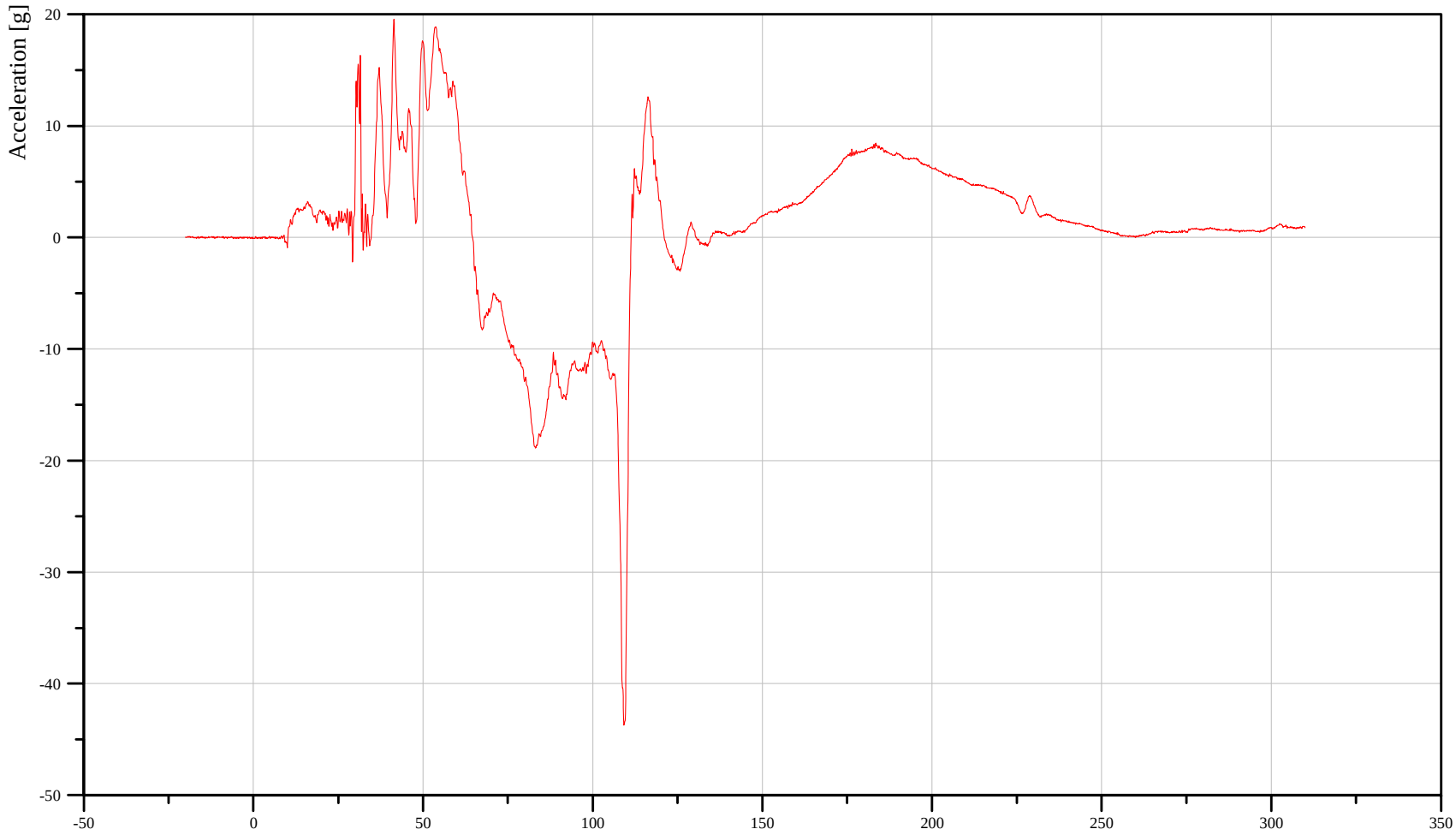
Head Accel Red Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCGRDHFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-43.70 g at 109.20 ms

Max. Value
19.58 g at 41.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

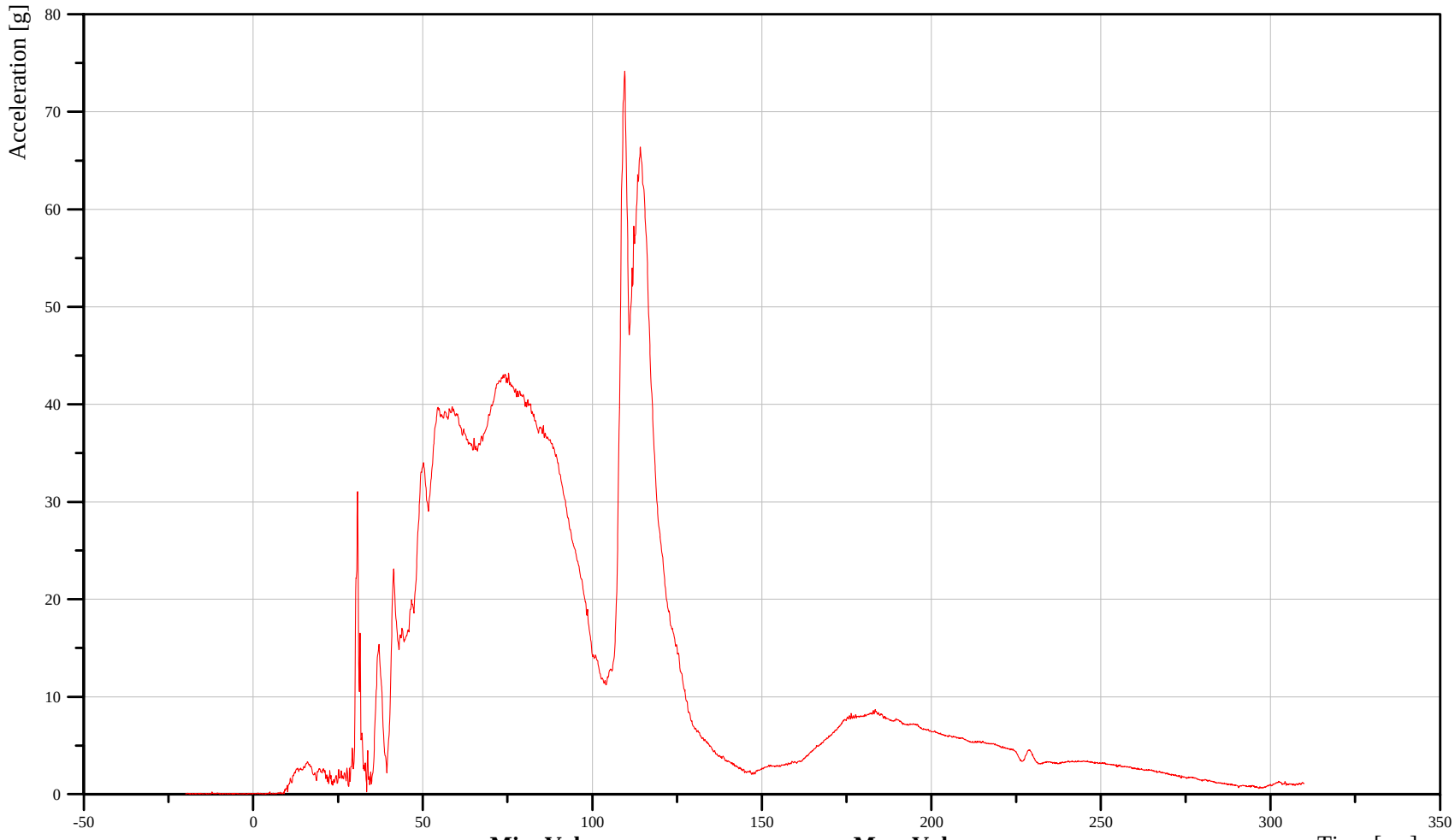
Head Accel Red Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13HEADCGRDHFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.01 g at -19.68 ms

Max. Value
74.16 g at 109.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

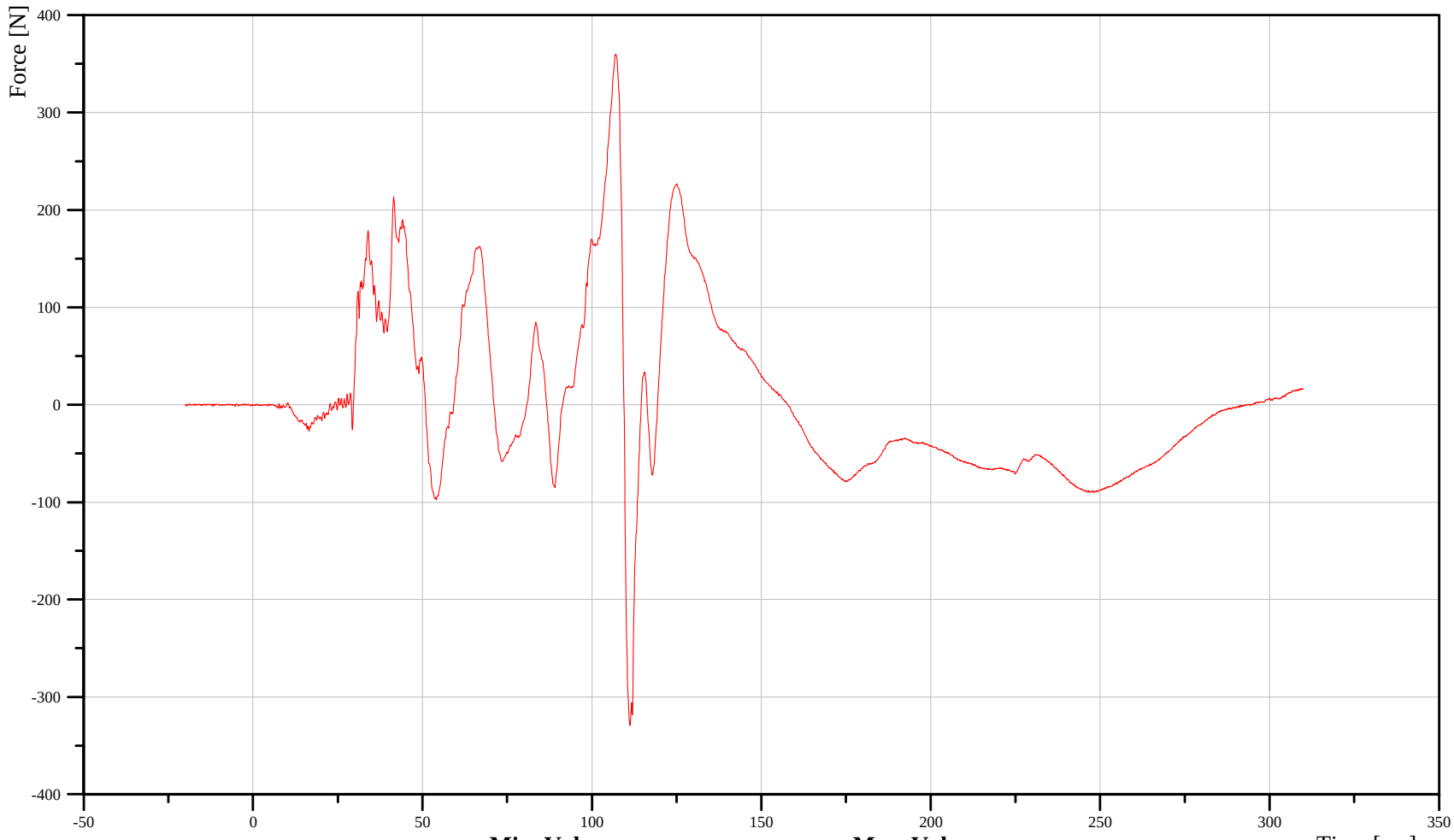
Neck Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKUP00HFFOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-329.55 N at 111.20 ms

Max. Value
359.90 N at 106.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

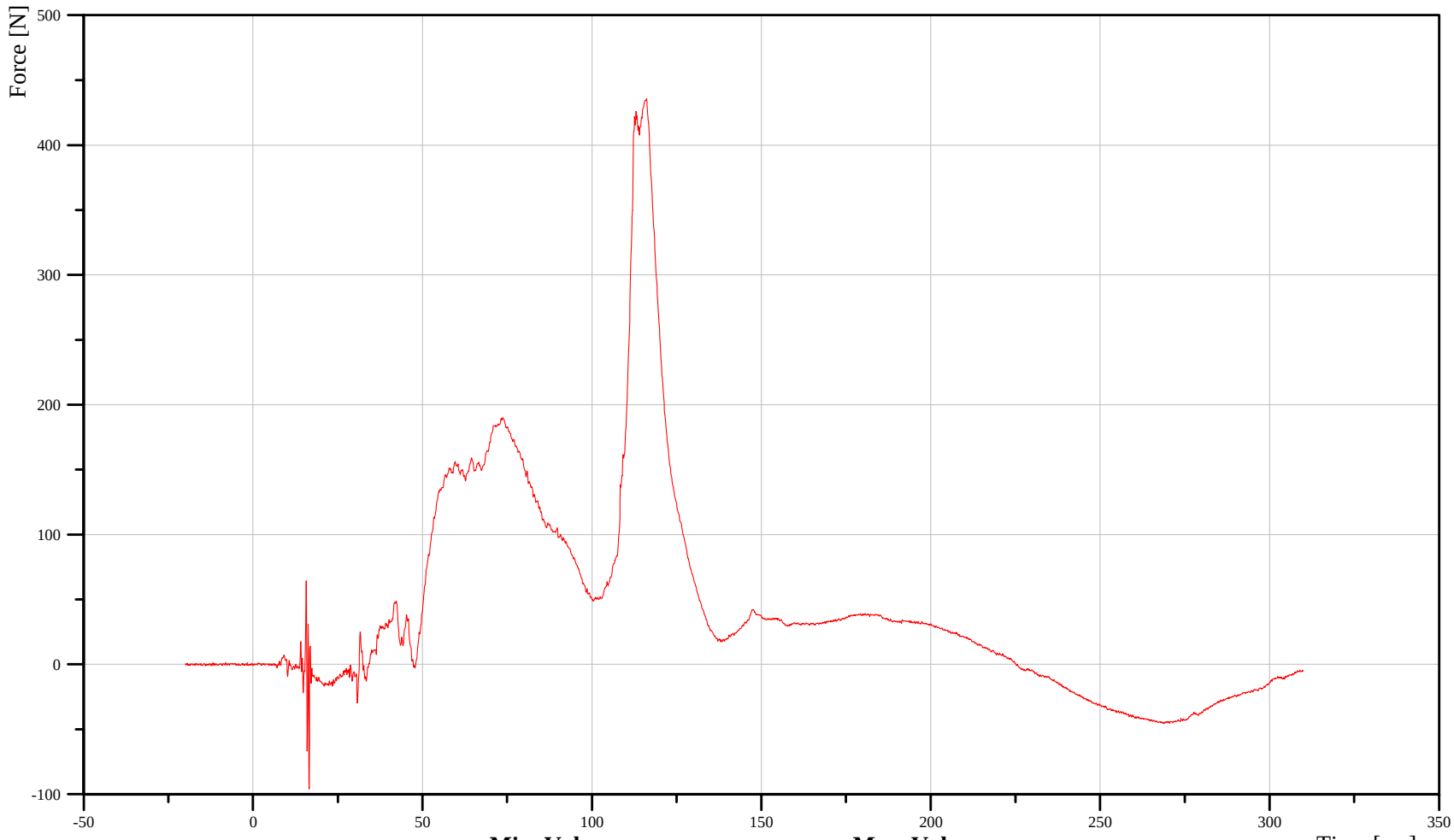
Neck Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKUP00HFFOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-95.78 N at 16.56 ms

Max. Value
435.47 N at 116.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

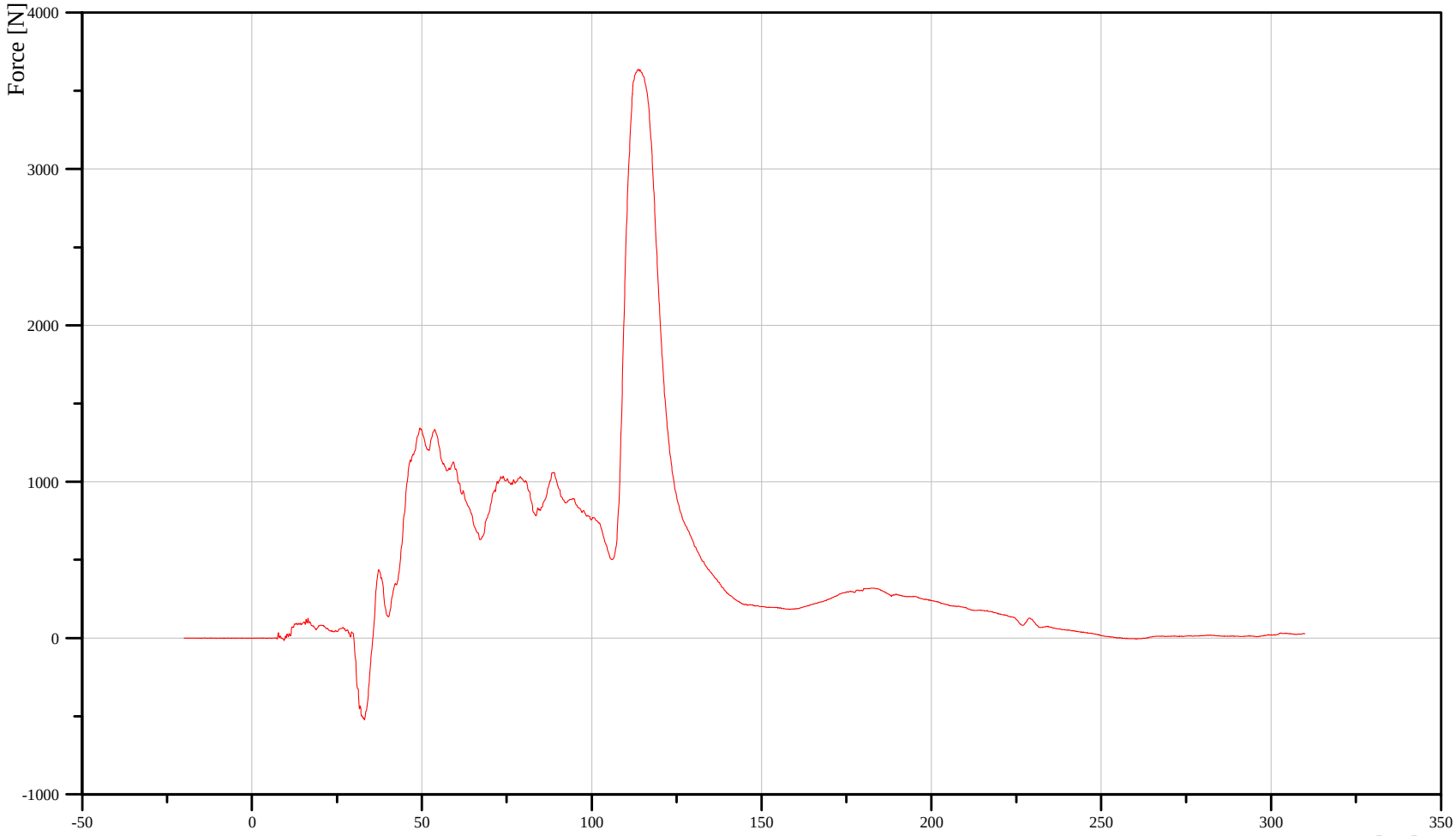
Neck Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKUP00HFFOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-522.93 N at 33.12 ms

Max. Value
3,638.21 N at 113.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

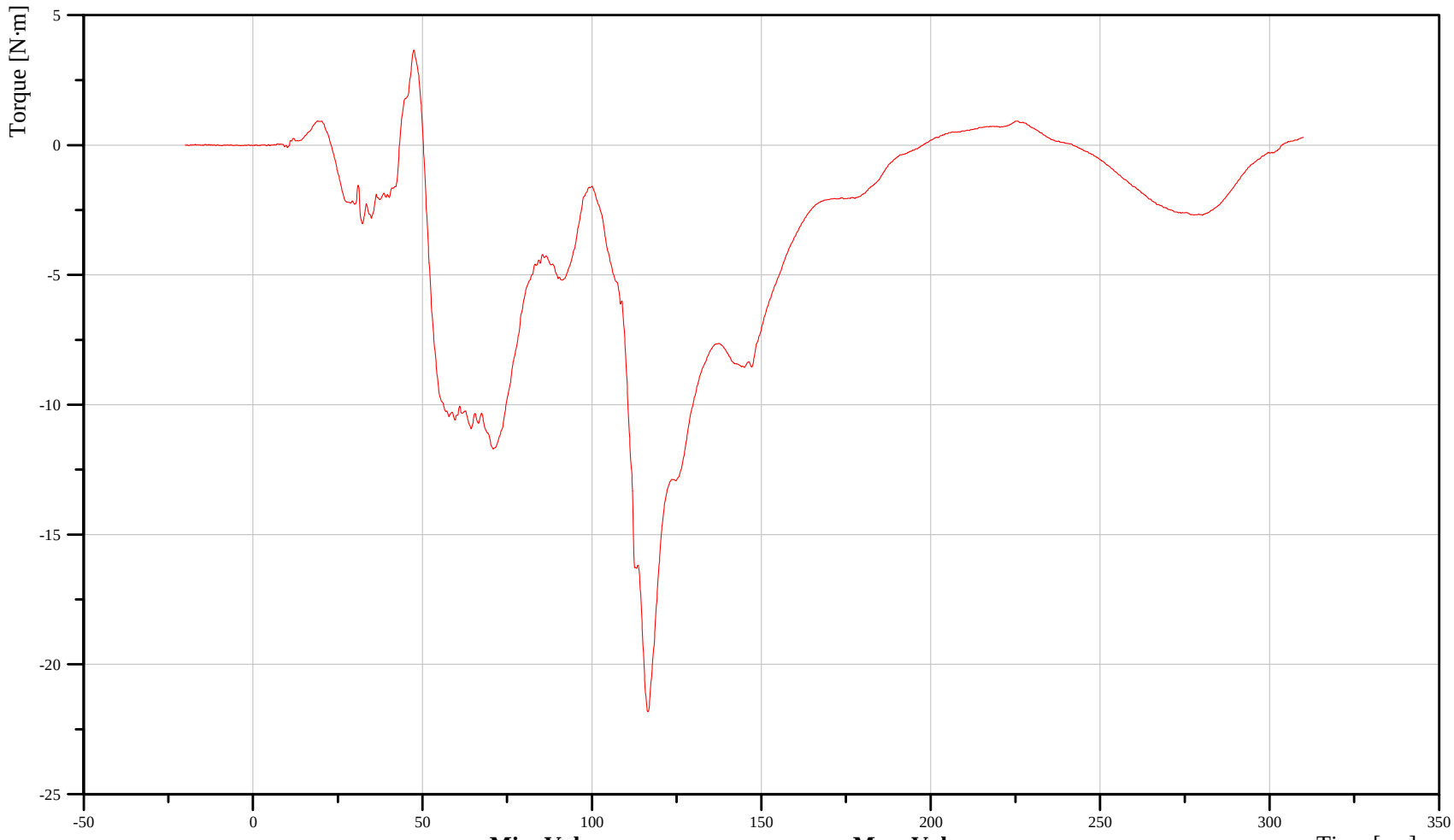
Neck Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKUP00HFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-21.82 N·m at 116.56 ms

Max. Value
3.66 N·m at 47.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

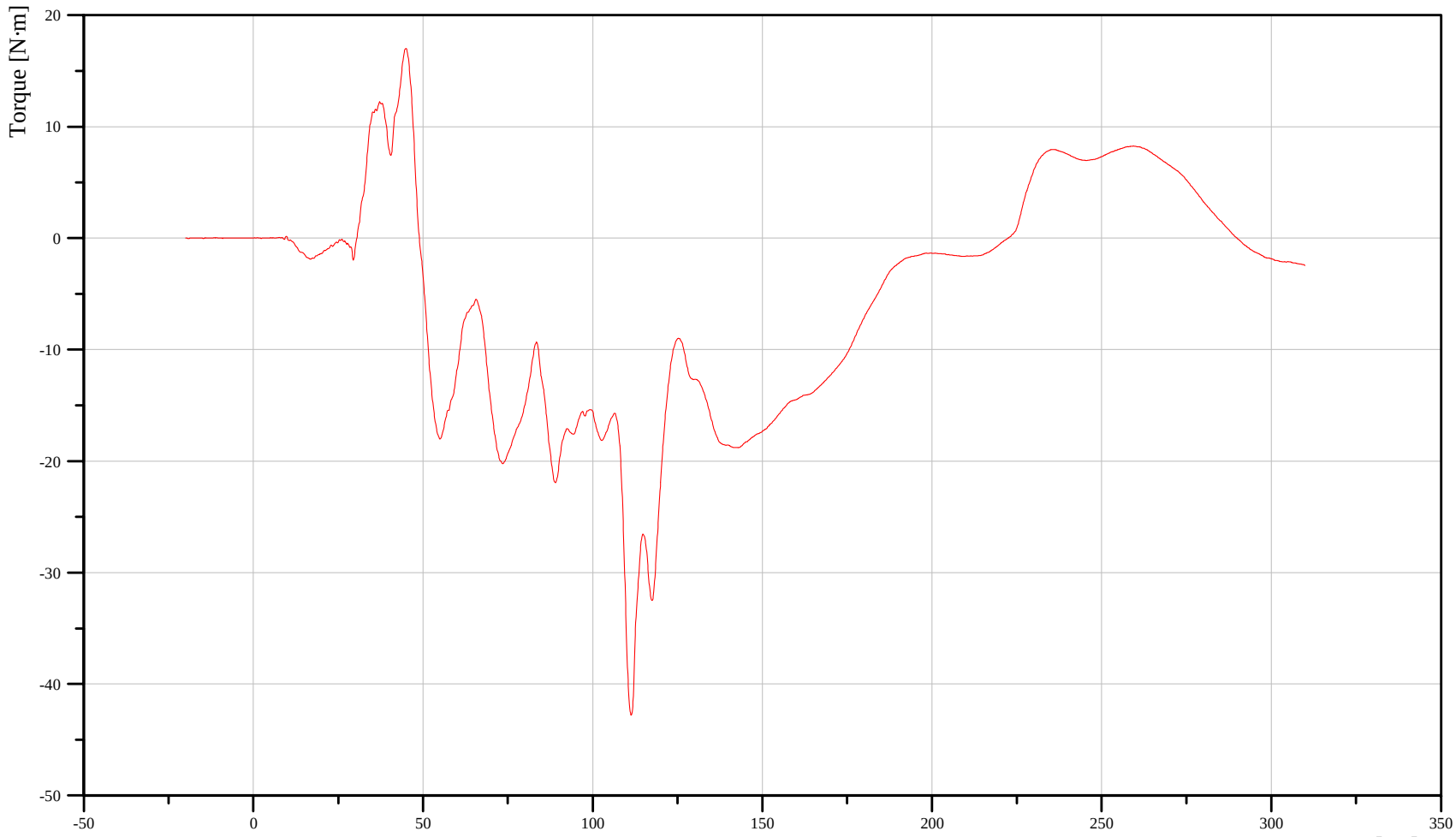
Neck Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKUP00HFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-42.80 N·m at 111.36 ms

Max. Value
17.01 N·m at 44.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

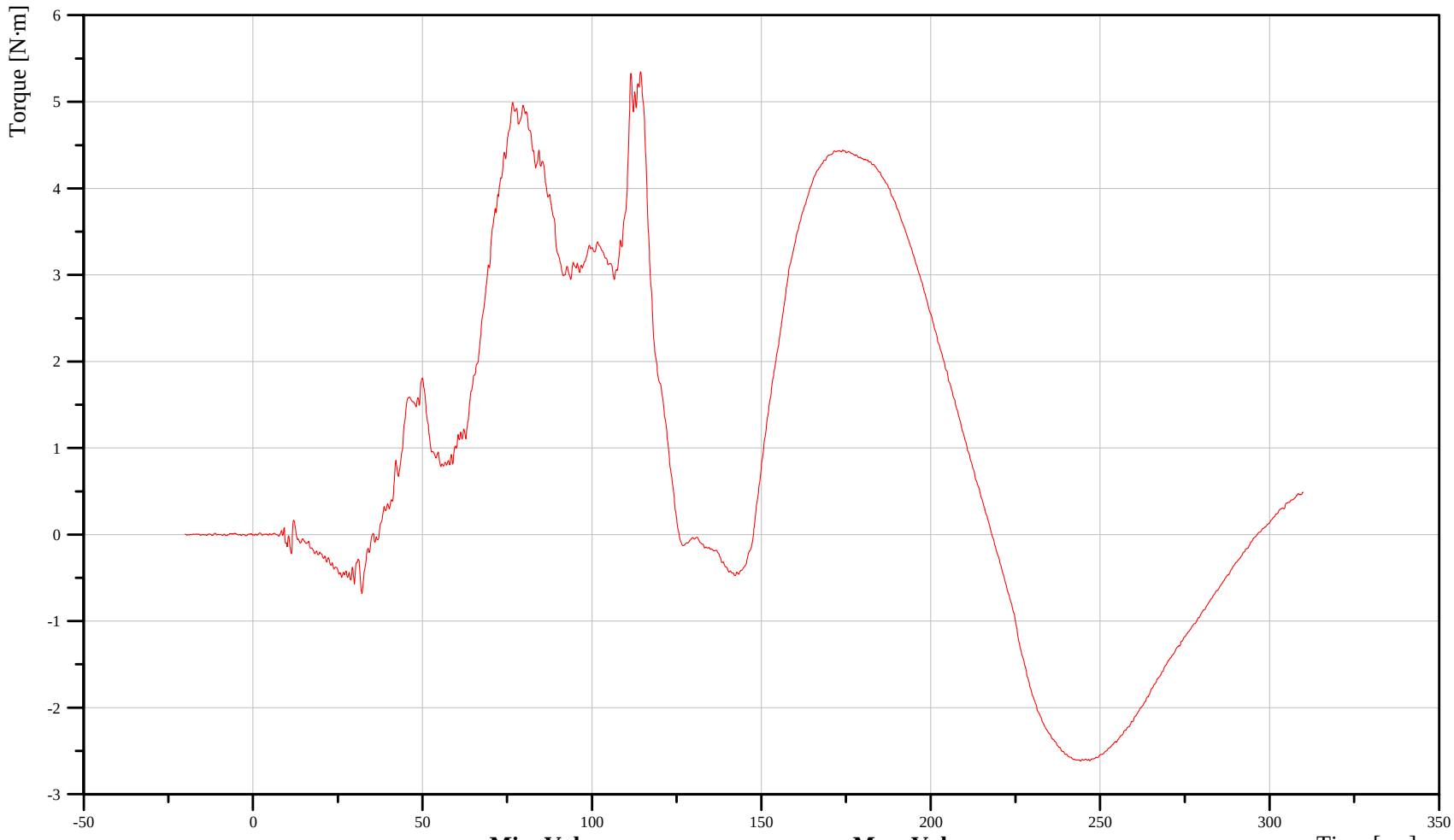
Neck Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKUP00HFMOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2.61 N·m at 244.24 ms

Max. Value
5.35 N·m at 114.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

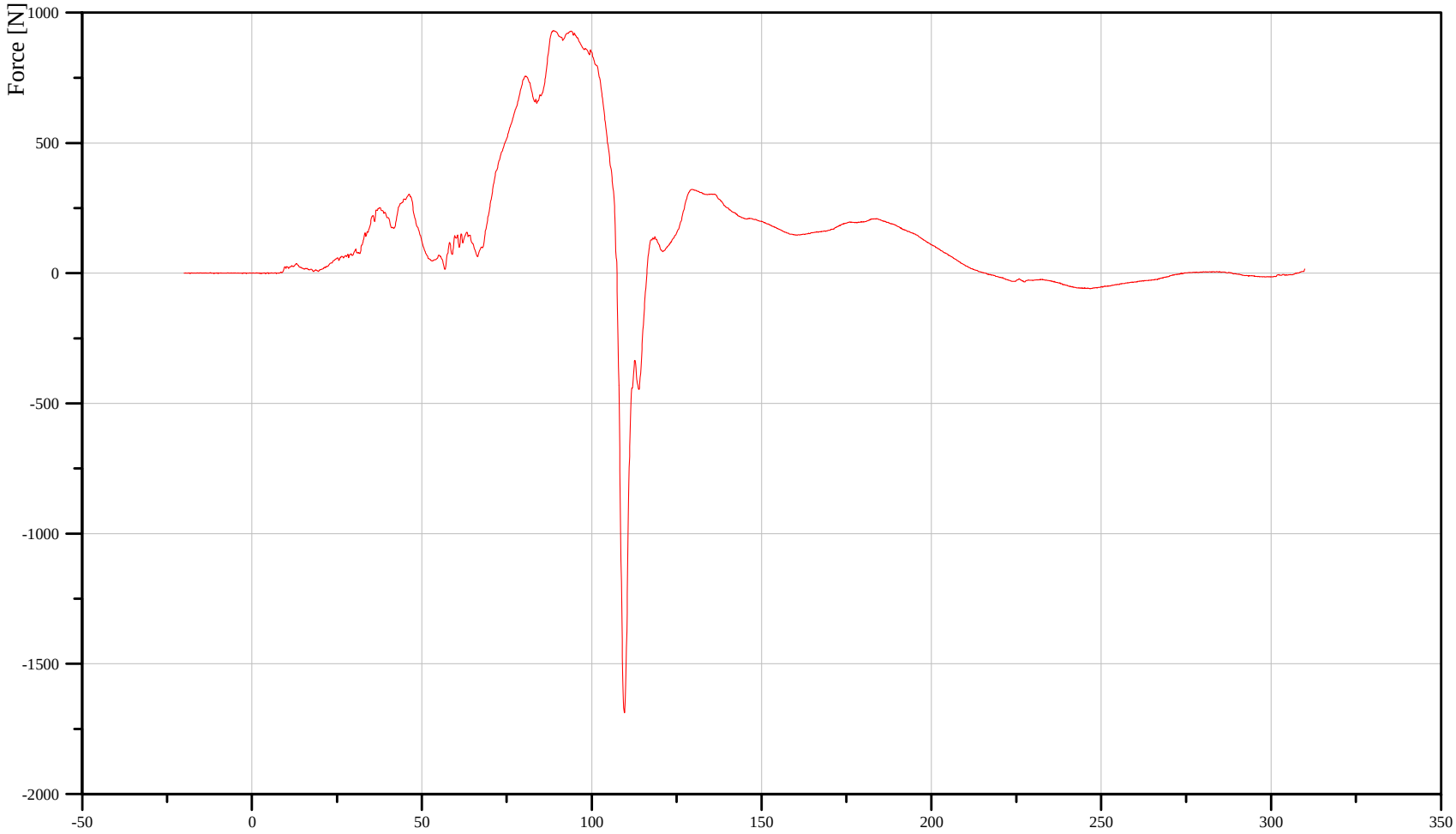
Neck Lower Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKLO00HFFOXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-1,687.65 N at 109.60 ms

Max. Value
931.43 N at 88.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

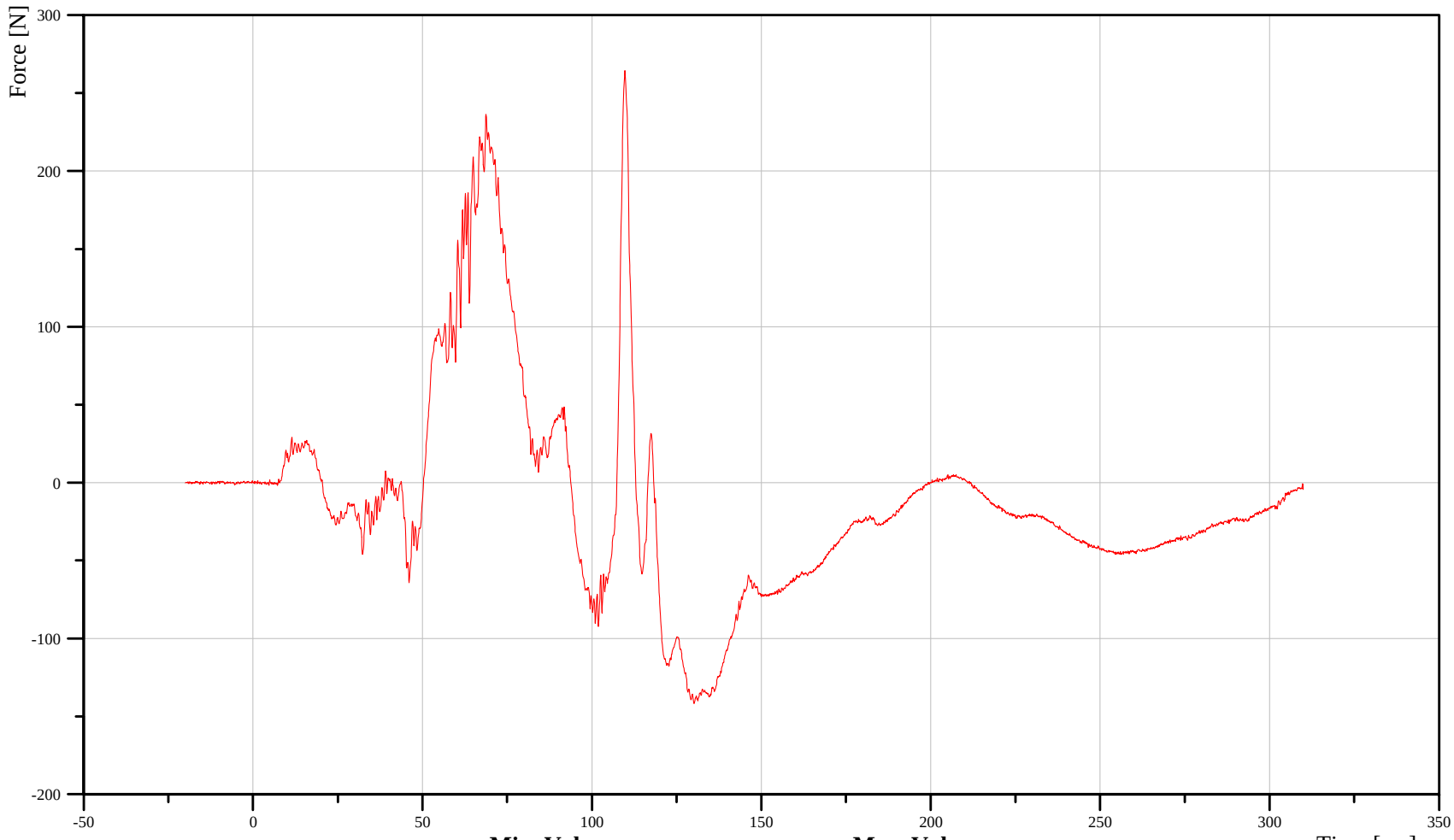
Neck Lower Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKLO00HFFOYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-141.77 N at 130.16 ms

Max. Value
264.44 N at 109.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

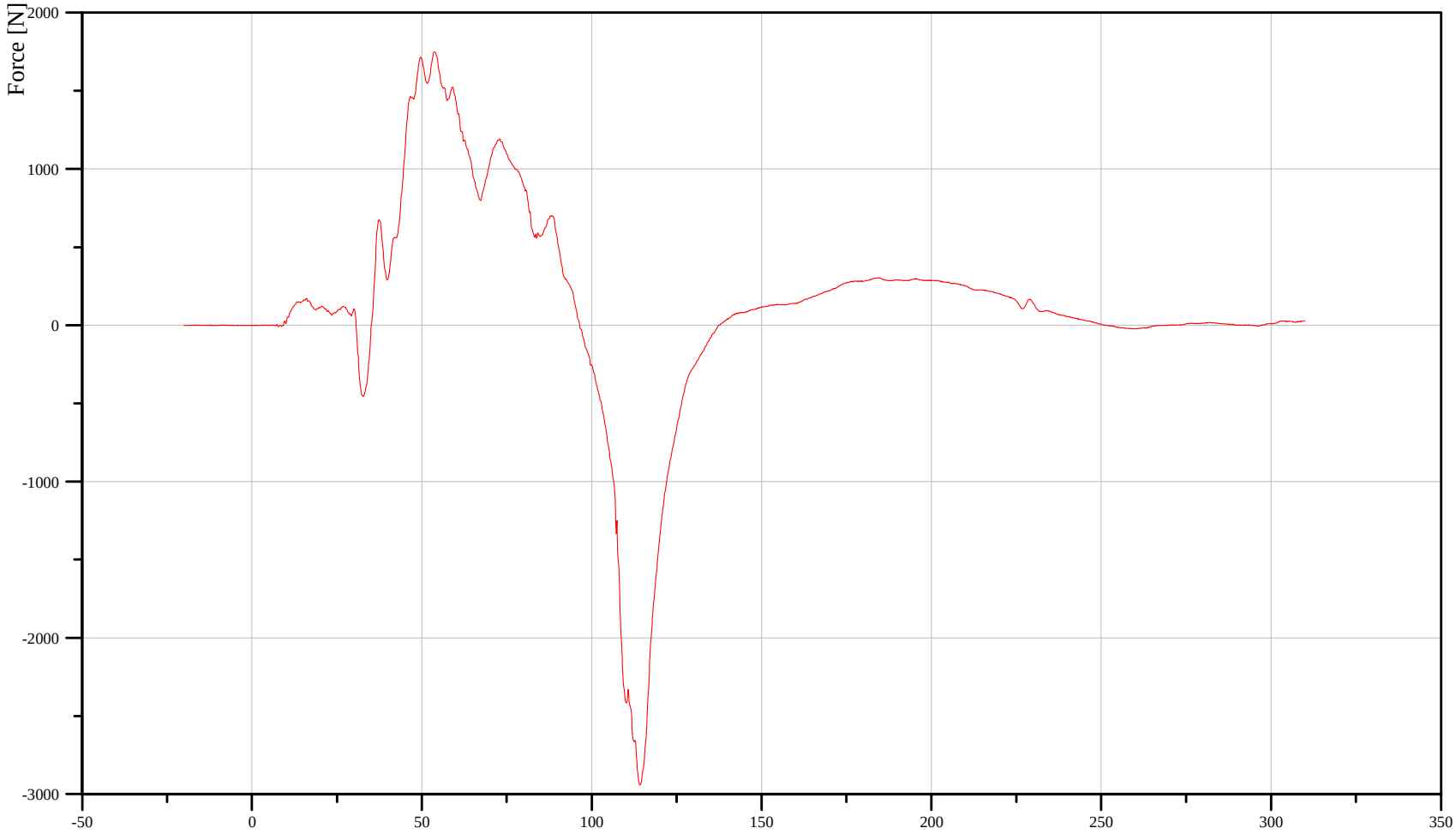
Neck Lower Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKLO00HFFOZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-2,940.97 N at 114.24 ms

Max. Value
1,747.84 N at 53.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

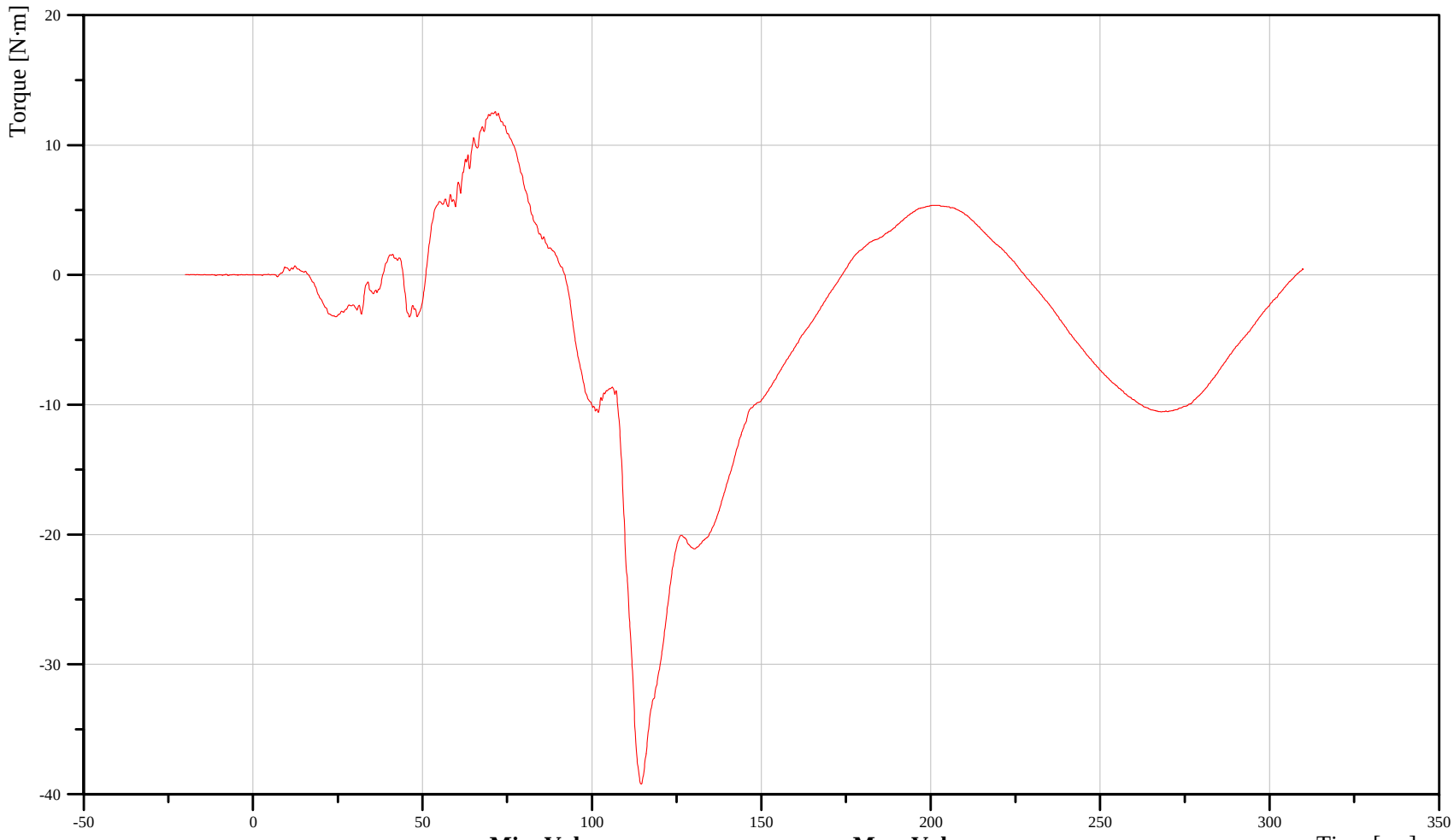
Neck Lower Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKLO00HFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-39.22 N·m at 114.56 ms

Max. Value
12.57 N·m at 71.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

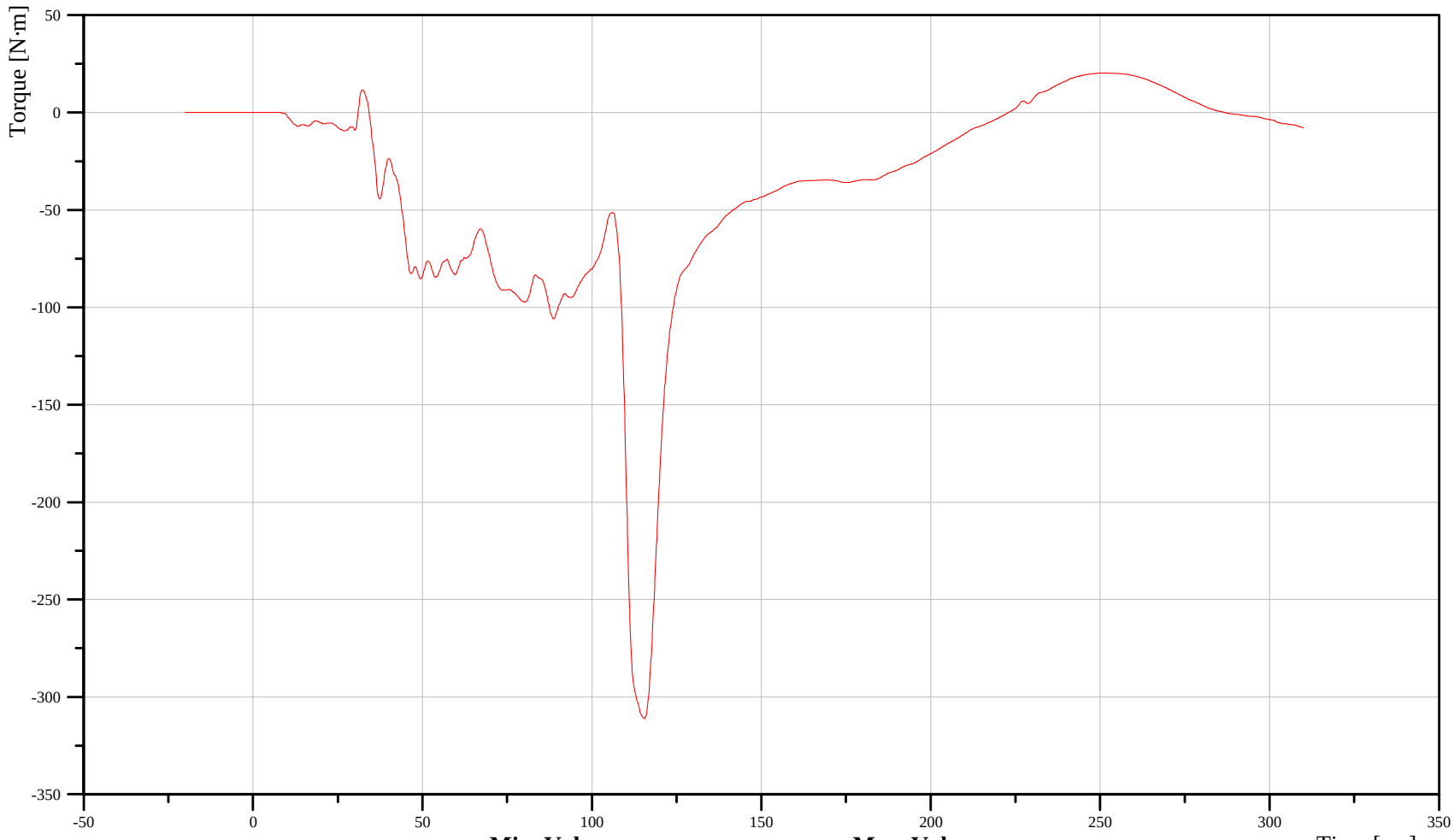
Neck Lower Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKLO00HFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-311.06 N·m at 115.52 ms

Max. Value
20.40 N·m at 250.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

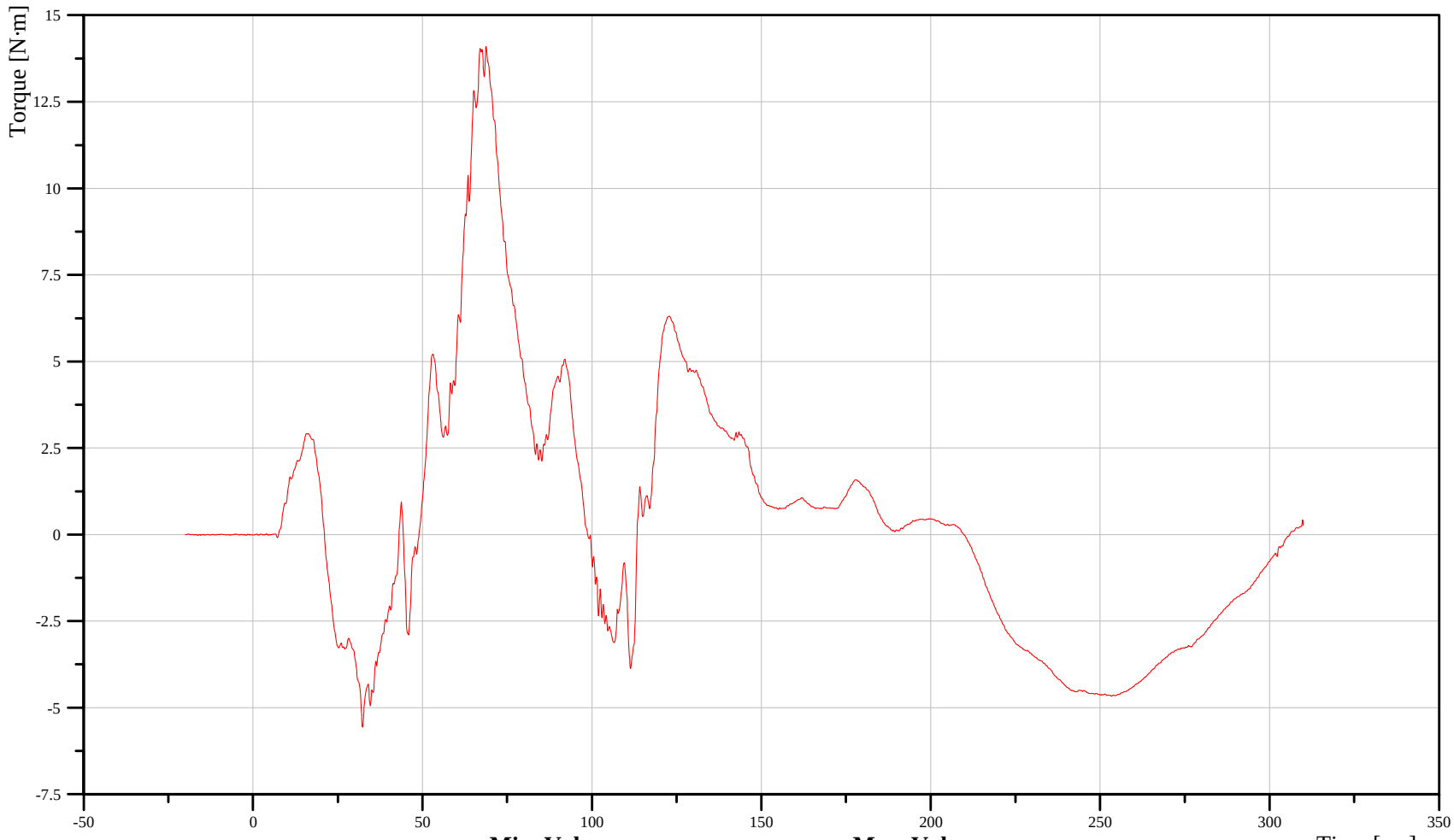
Neck Lower Moment Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13NECKLO00HFMOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-5.56 N·m at 32.32 ms

Max. Value
14.10 N·m at 68.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

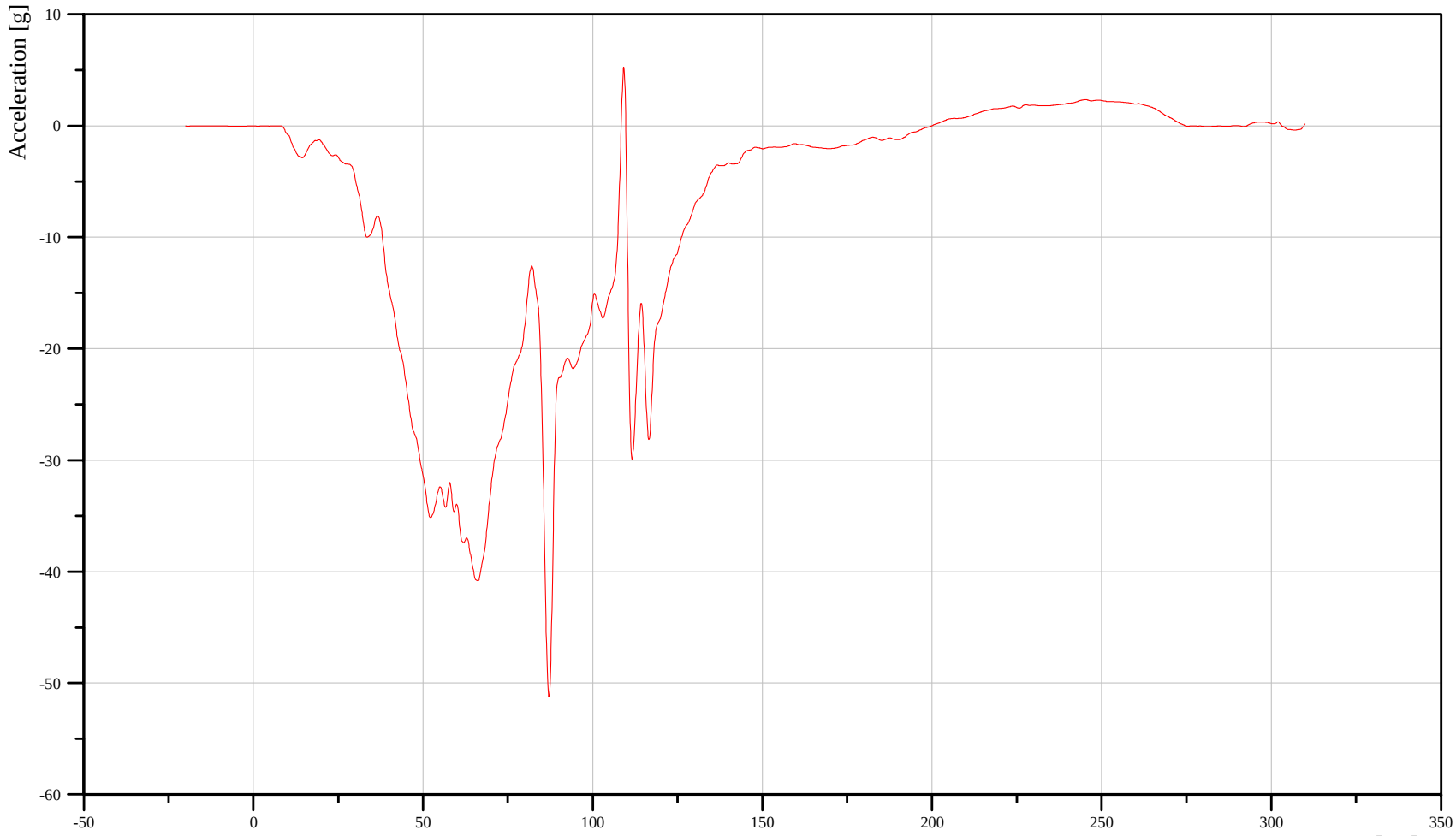
Chest Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCG00HFACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-51.23 g at 87.12 ms

Max. Value
5.27 g at 109.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

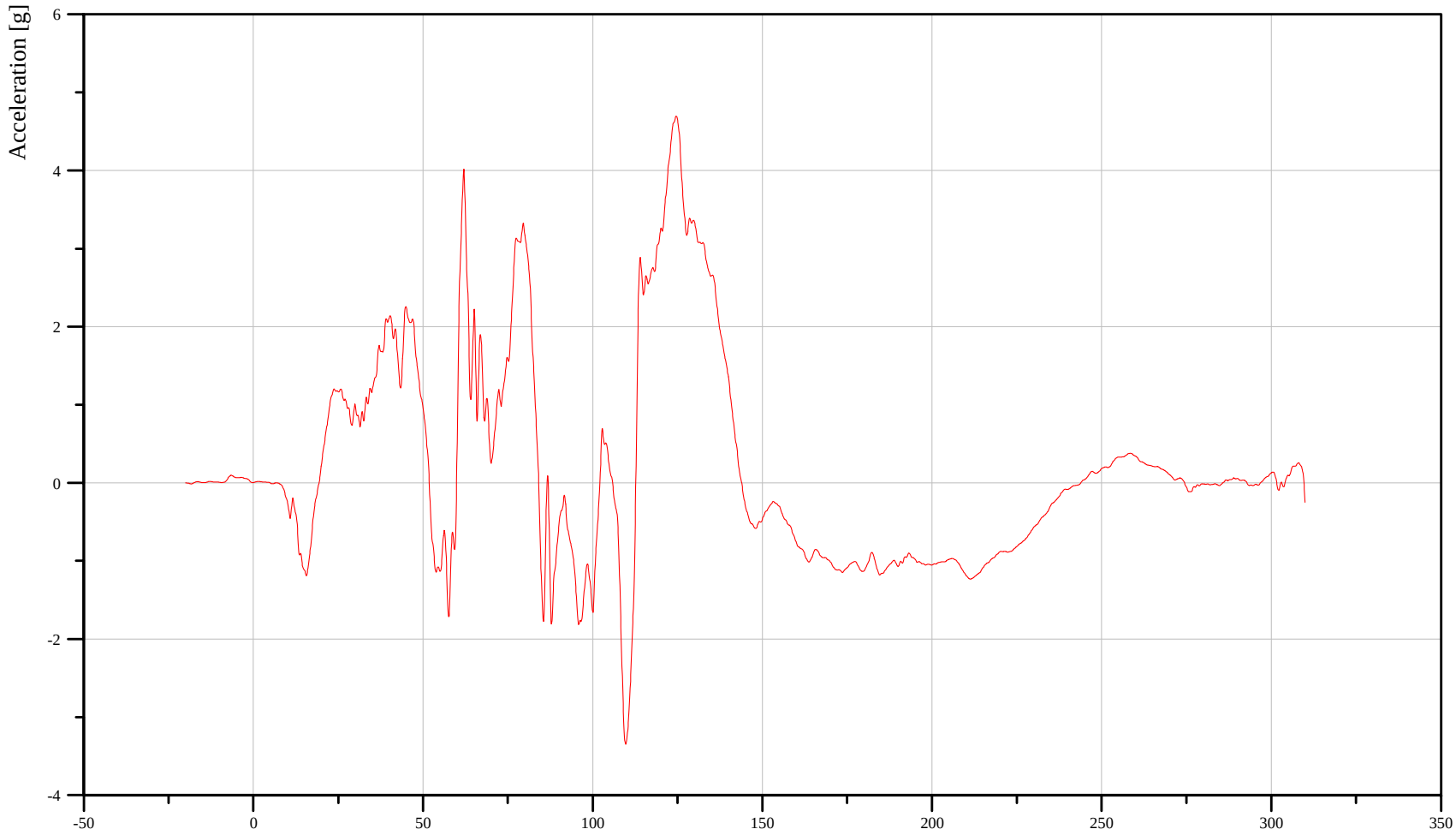
Chest Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCG00HFACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-3.35 g at 109.68 ms

Max. Value
4.69 g at 124.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

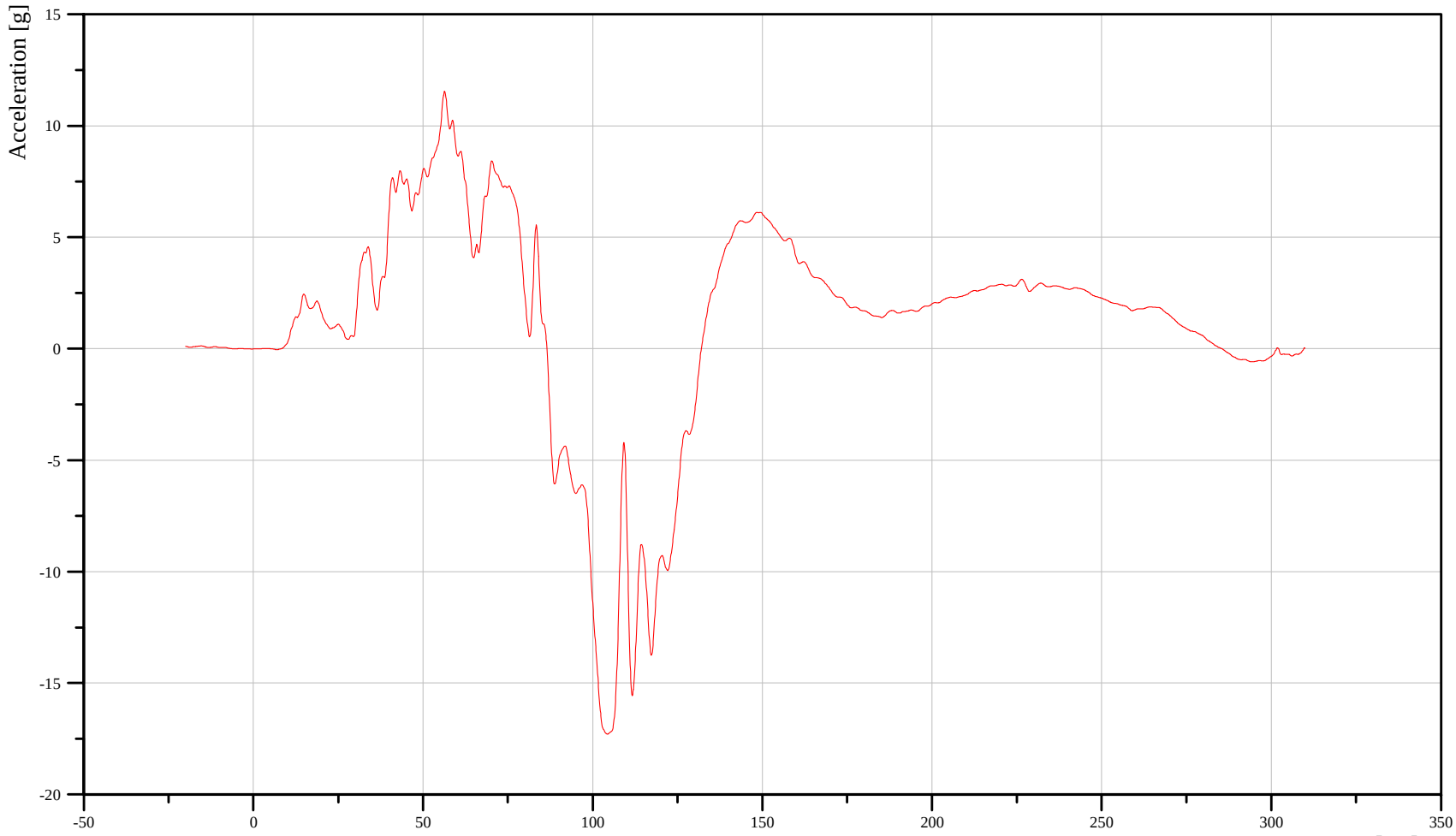
Chest Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCG00HFACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-17.29 g at 104.40 ms

Max. Value
11.55 g at 56.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

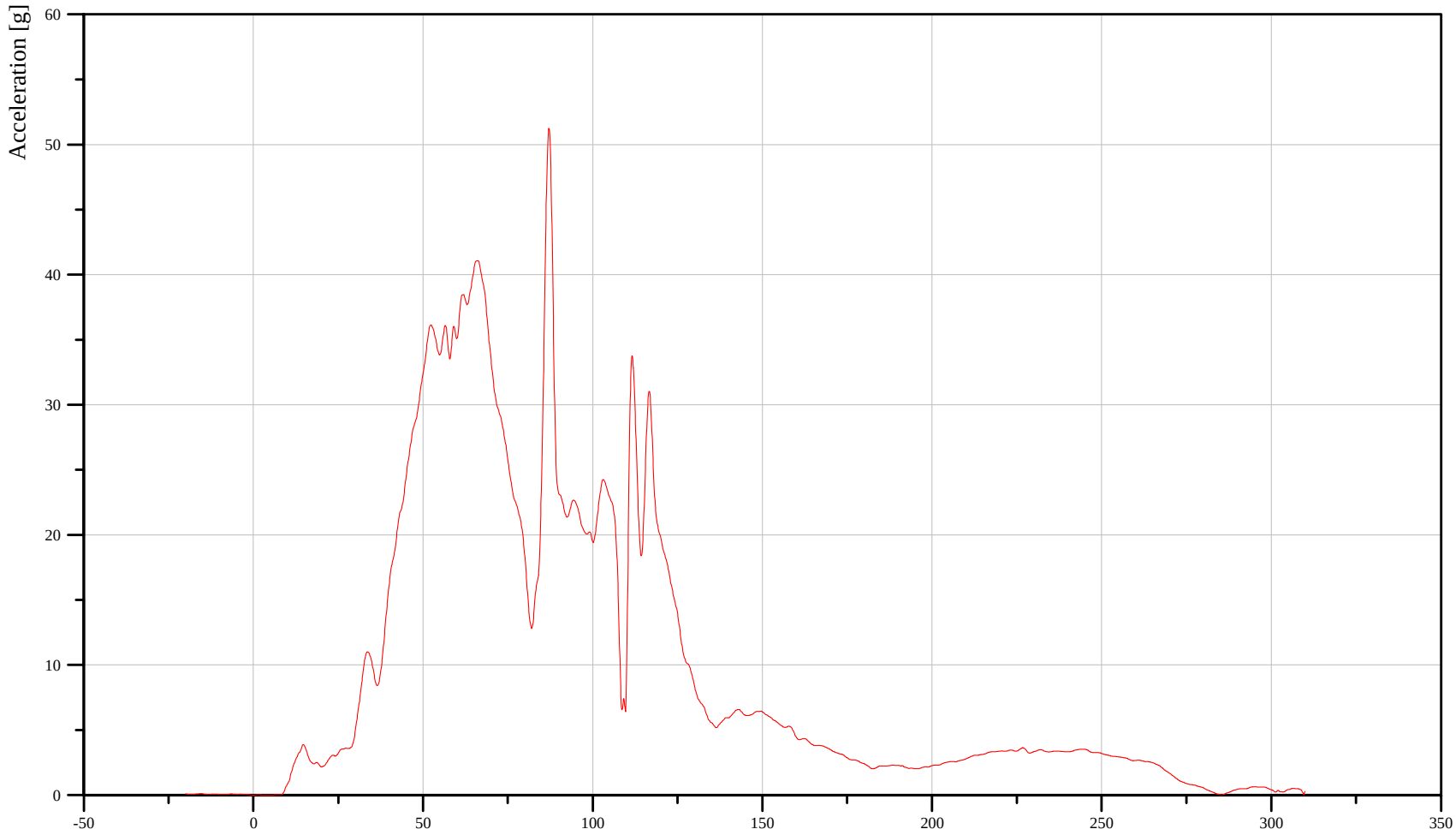
Chest Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCG00HFACRC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.01 g at 3.76 ms

Max. Value
51.27 g at 87.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

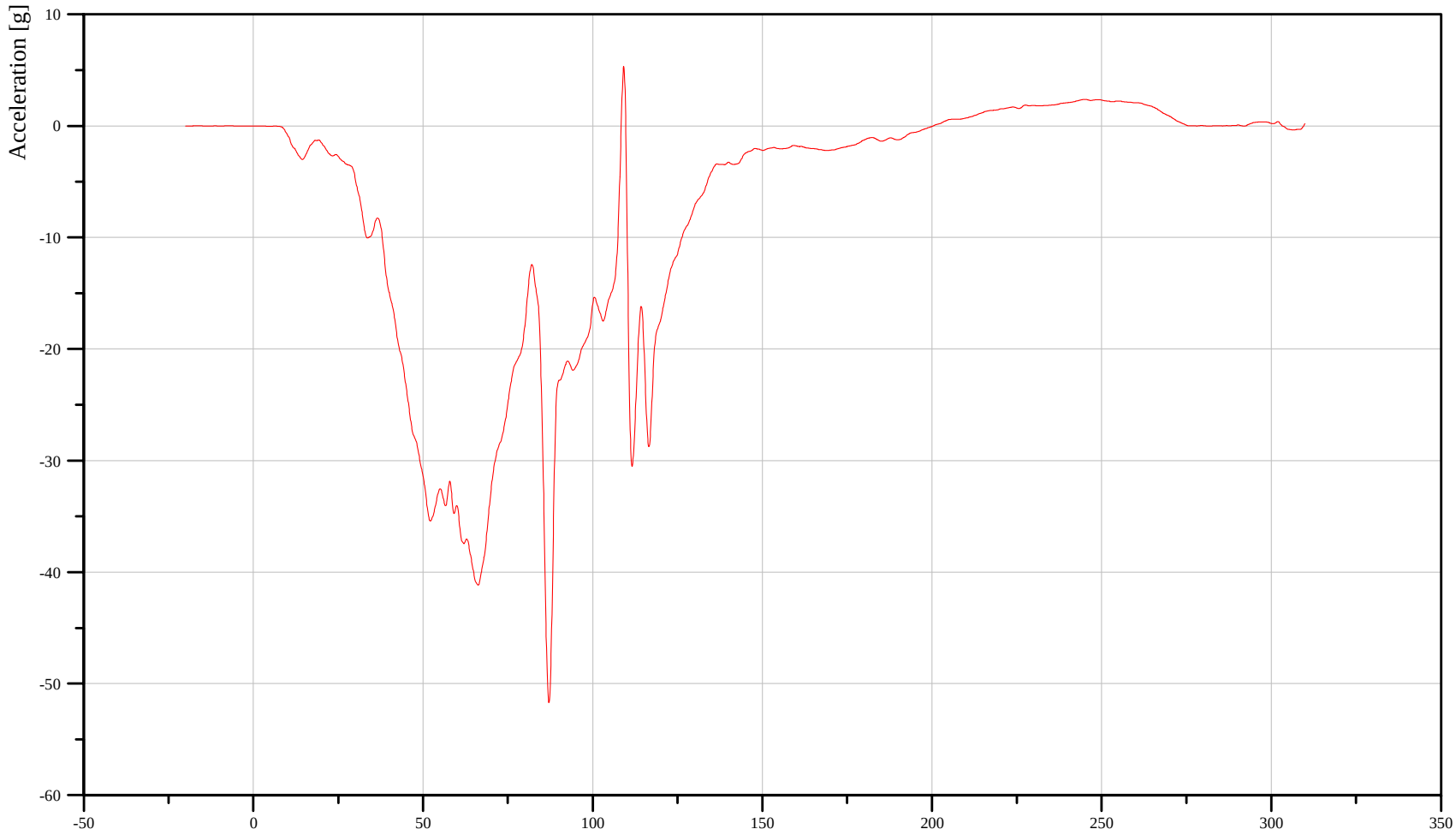
Chest Accel Red X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCGRDHFACXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-51.69 g at 87.12 ms

Max. Value
5.33 g at 109.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

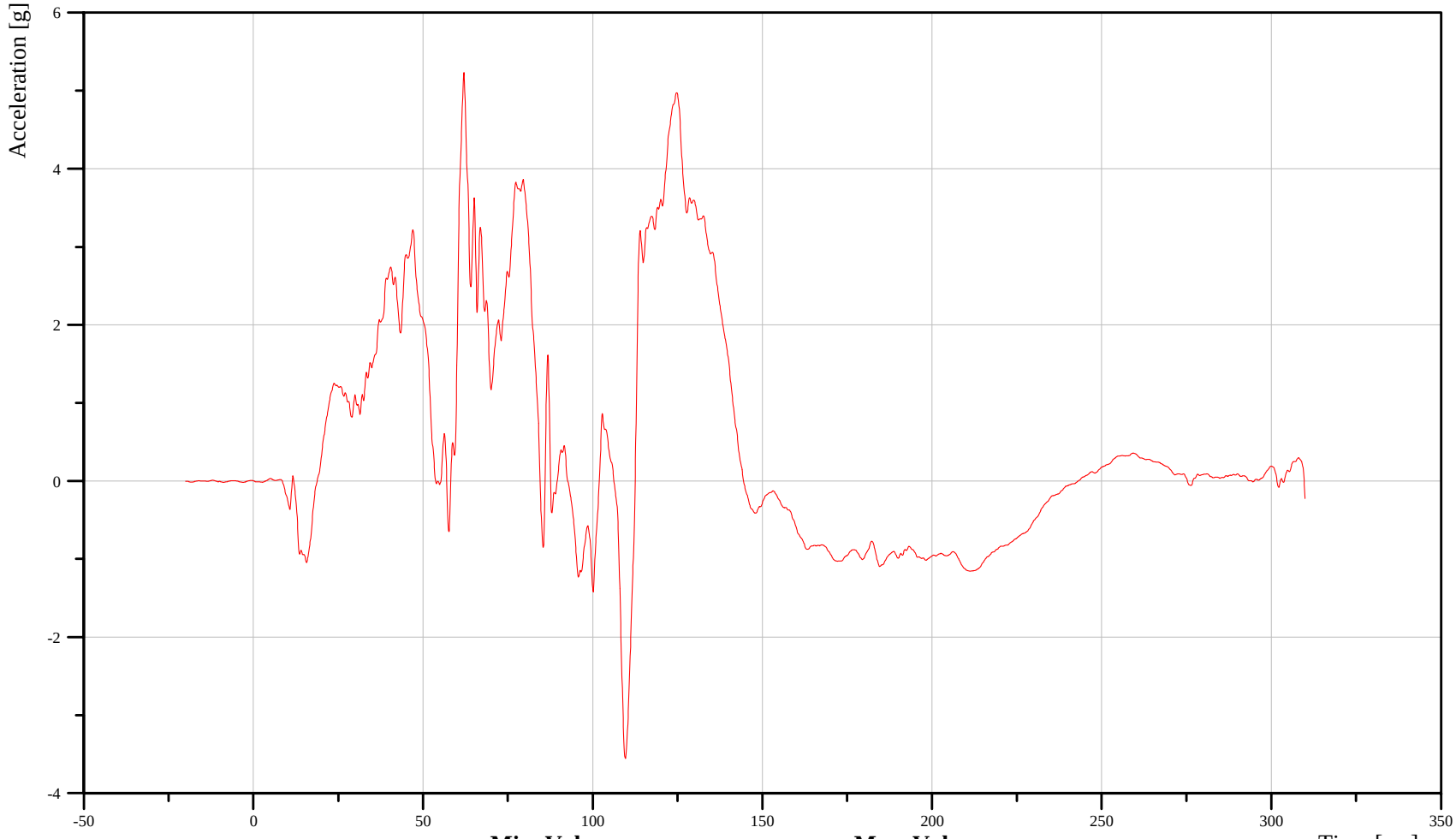
Chest Accel Red Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCGRDHFACYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-3.56 g at 109.60 ms

Max. Value
5.23 g at 62.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

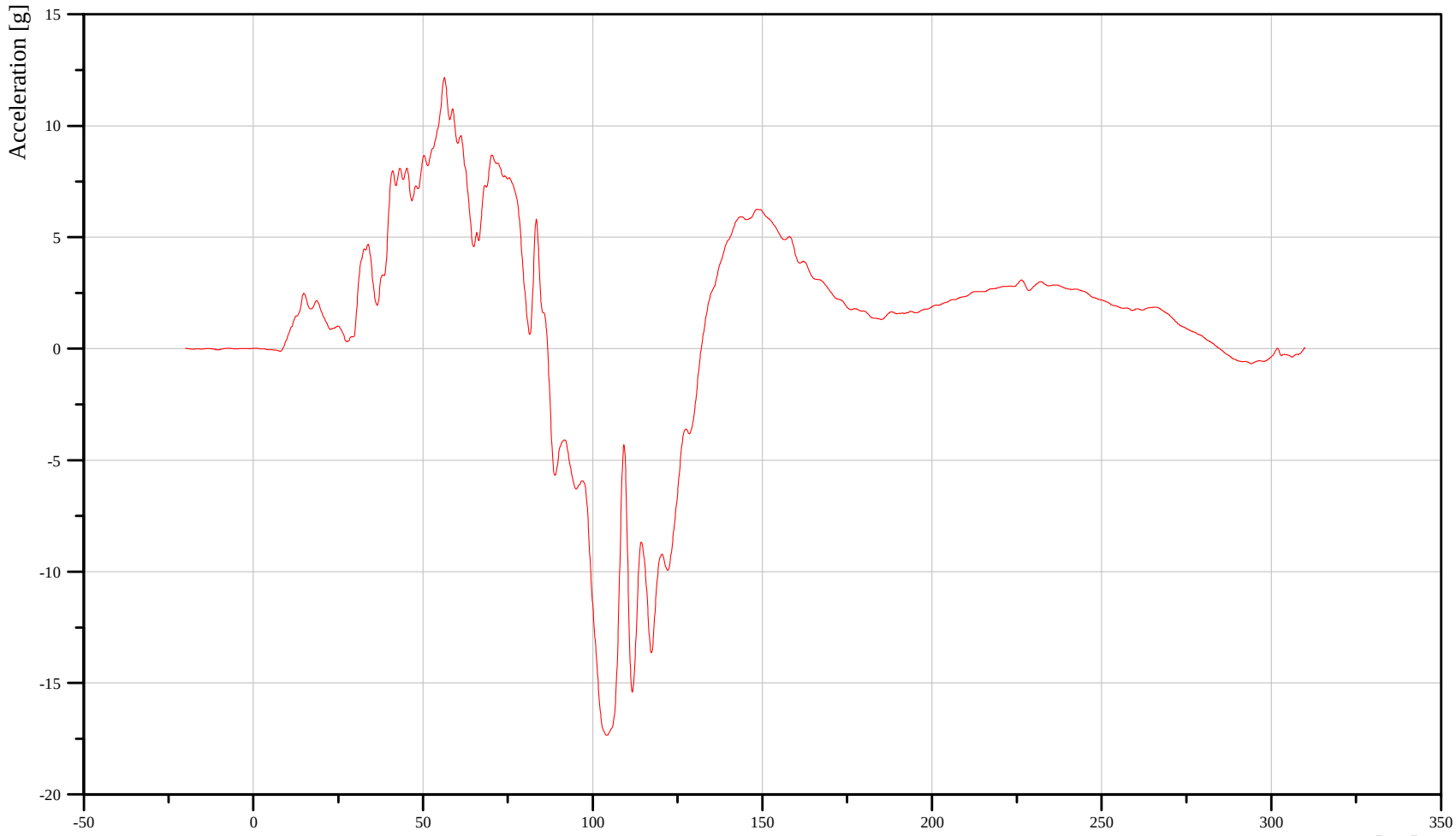
Chest Accel Red Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCGRDHFACZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-17.34 g at 104.24 ms

Max. Value
12.17 g at 56.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

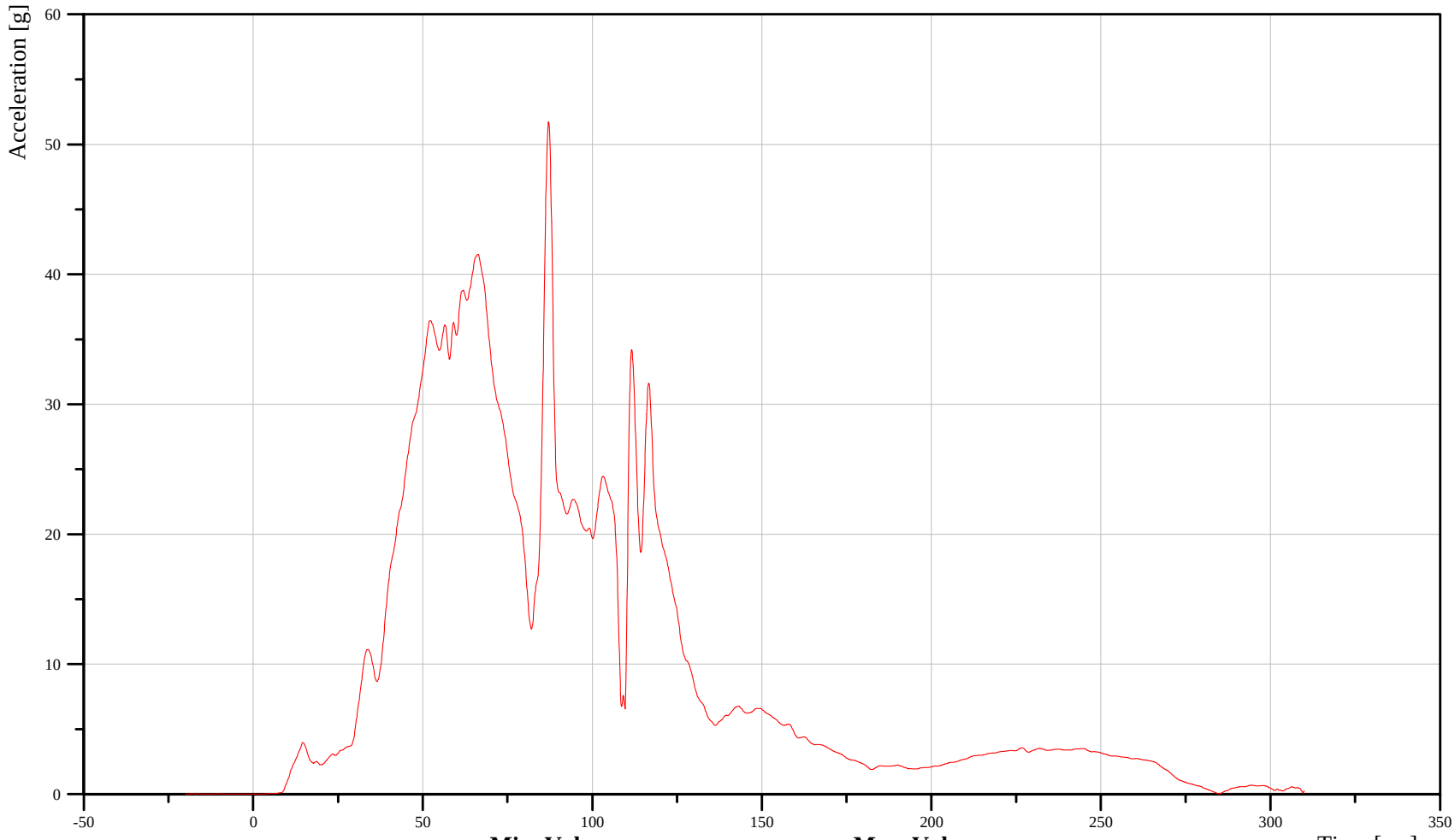
Chest Accel Red Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHSTCGRDHFACRC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.00 g at -1.60 ms

Max. Value
51.72 g at 87.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

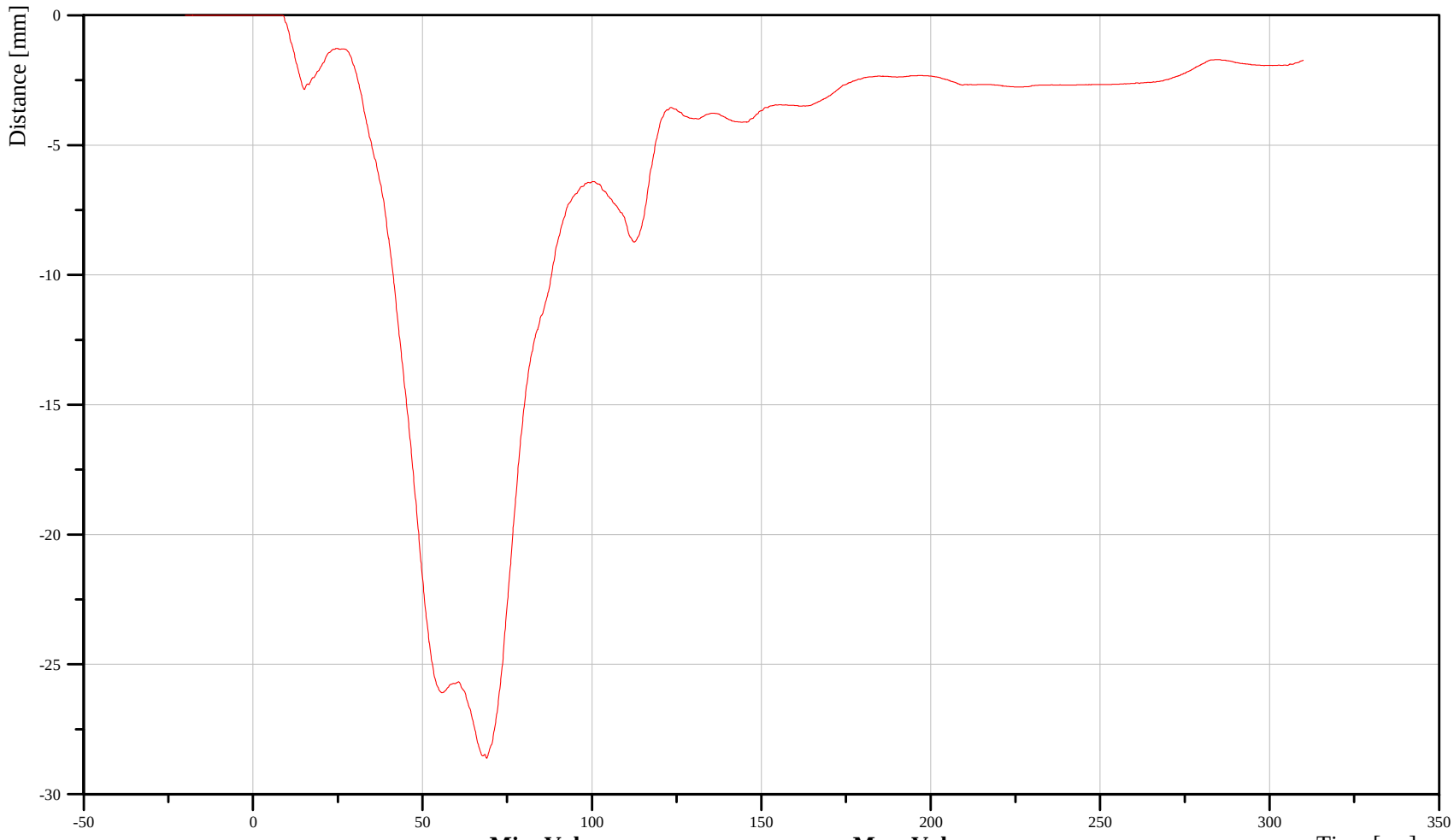
Chest Deflection X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13CHST0000HFDSXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-28.60 mm at 68.96 ms

Max. Value
0.00 mm at -17.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

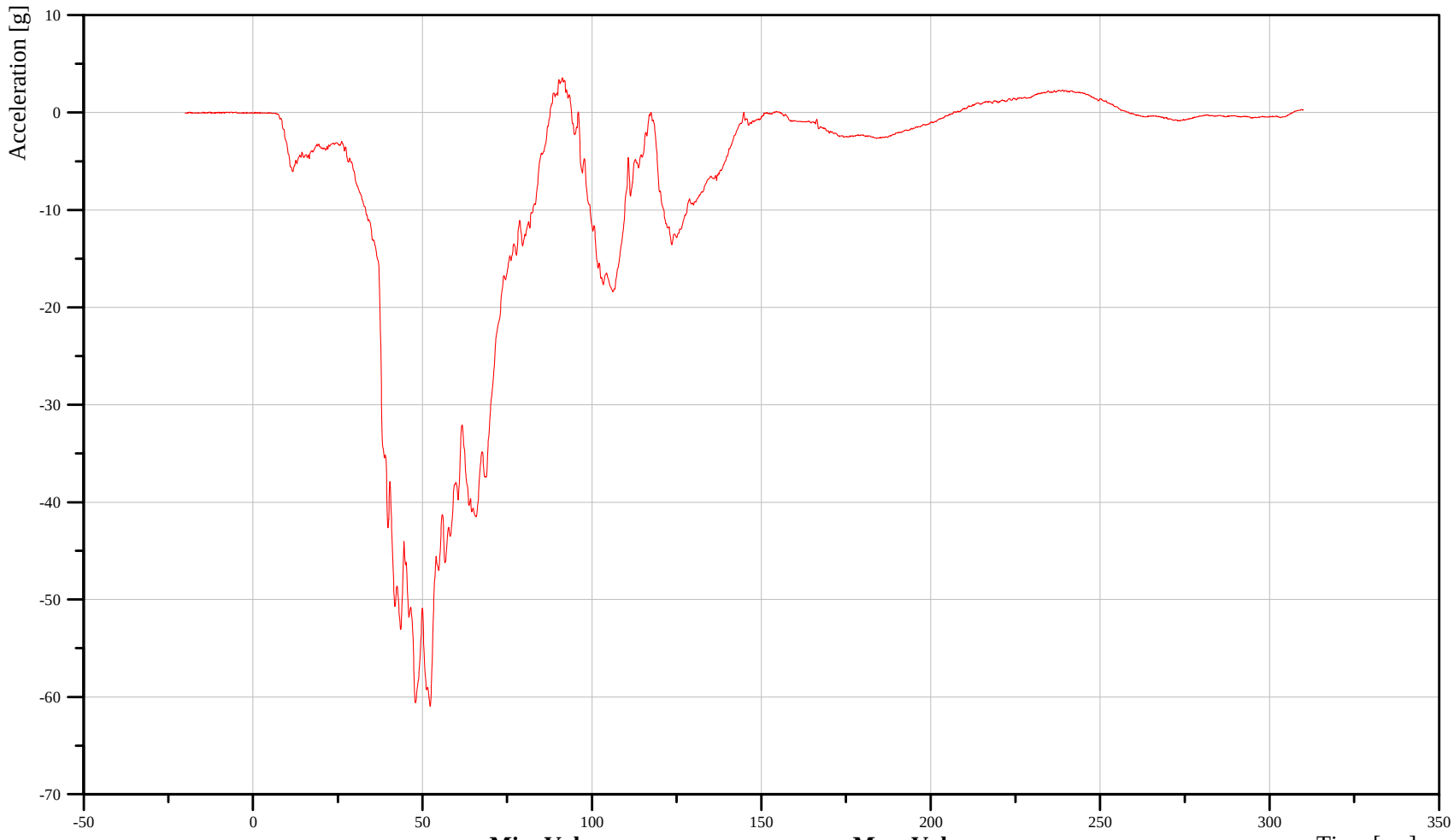
Pelvis Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13PELVCG00HFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-60.96 g at 52.24 ms

Max. Value
3.57 g at 91.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

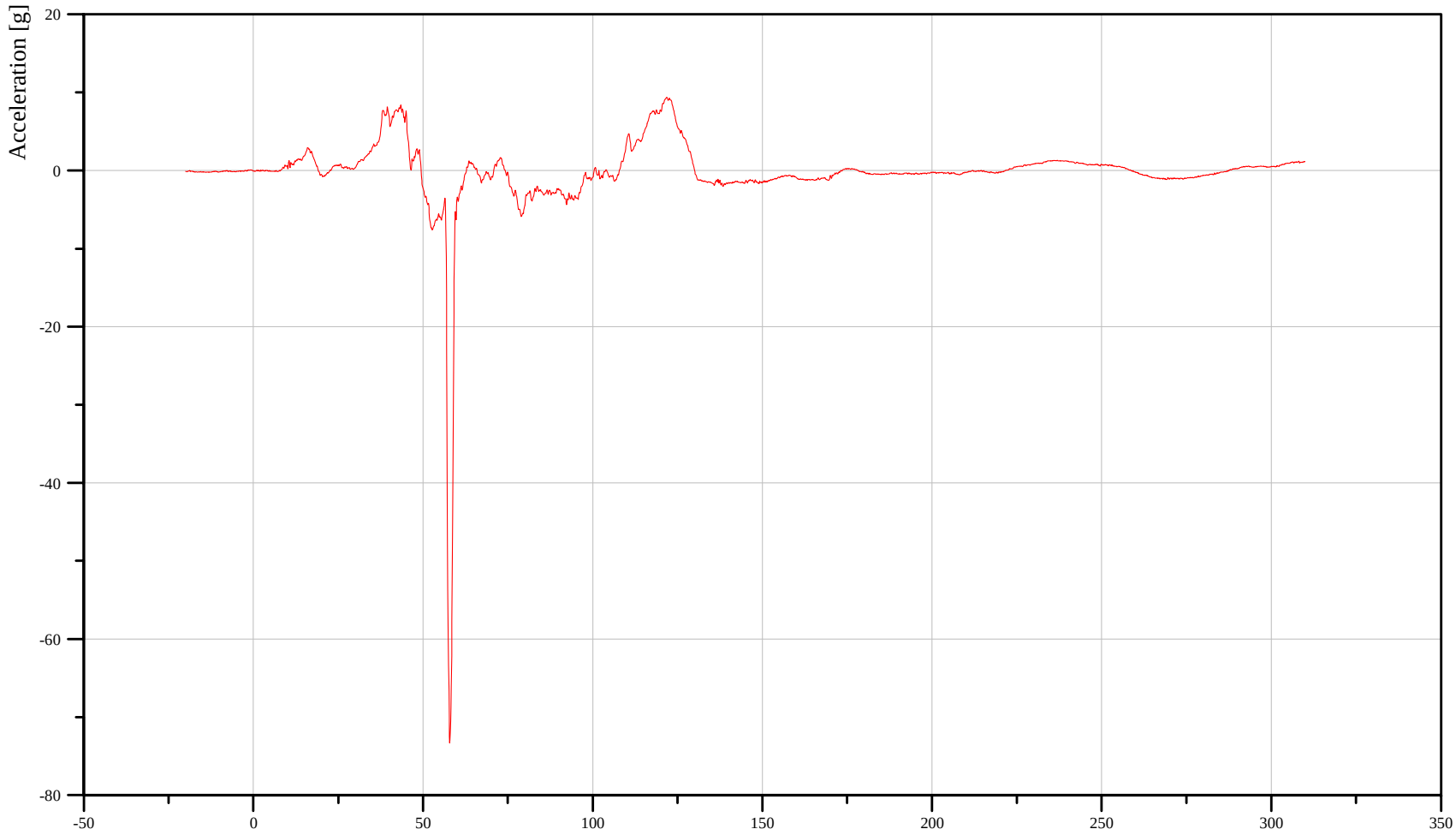
Pelvis Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13PELVCG00HFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-73.29 g at 57.84 ms

Max. Value
9.40 g at 121.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

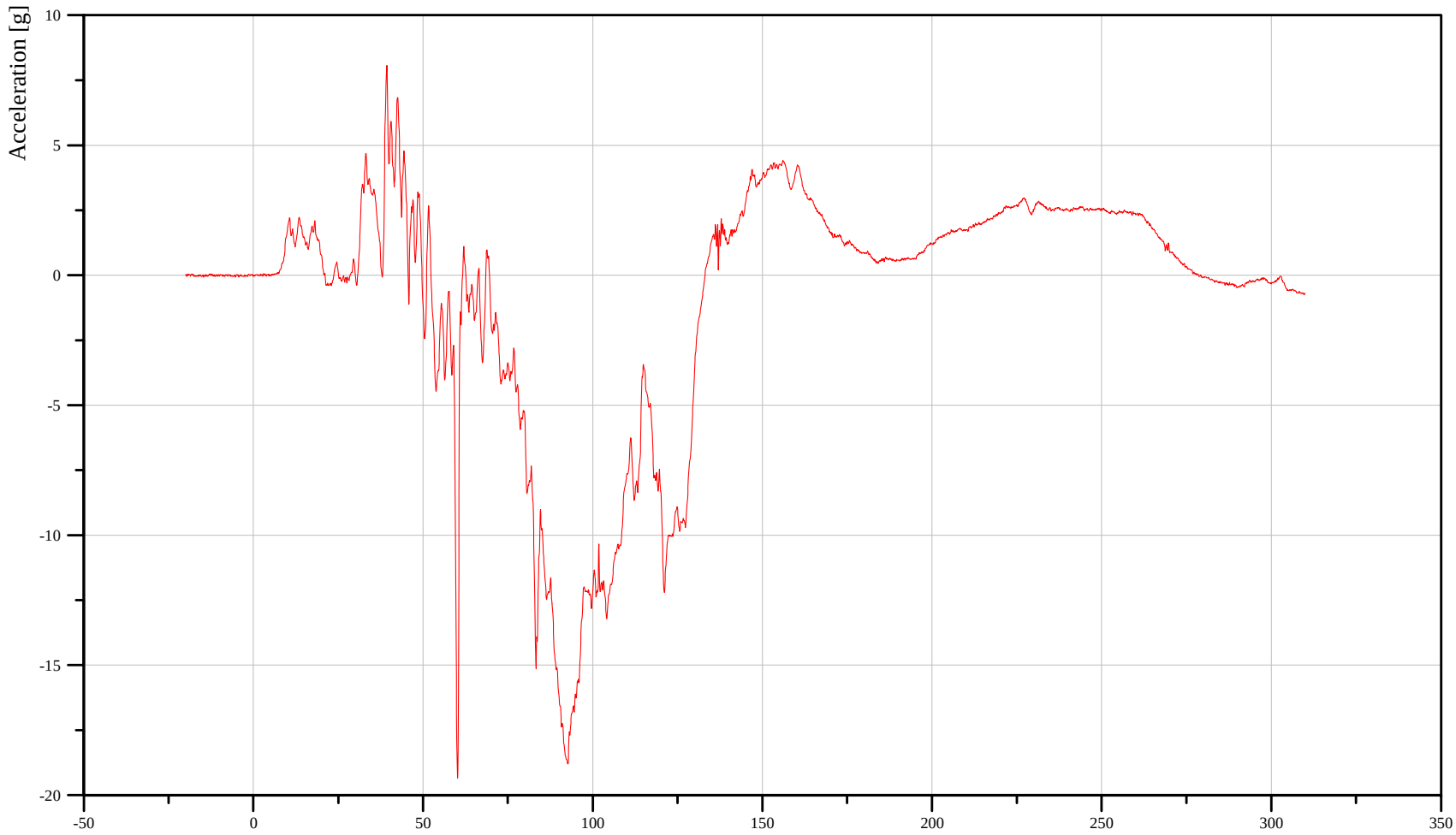
Pelvis Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13PELVCG00HFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-19.34 g at 60.16 ms

Max. Value
8.07 g at 39.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

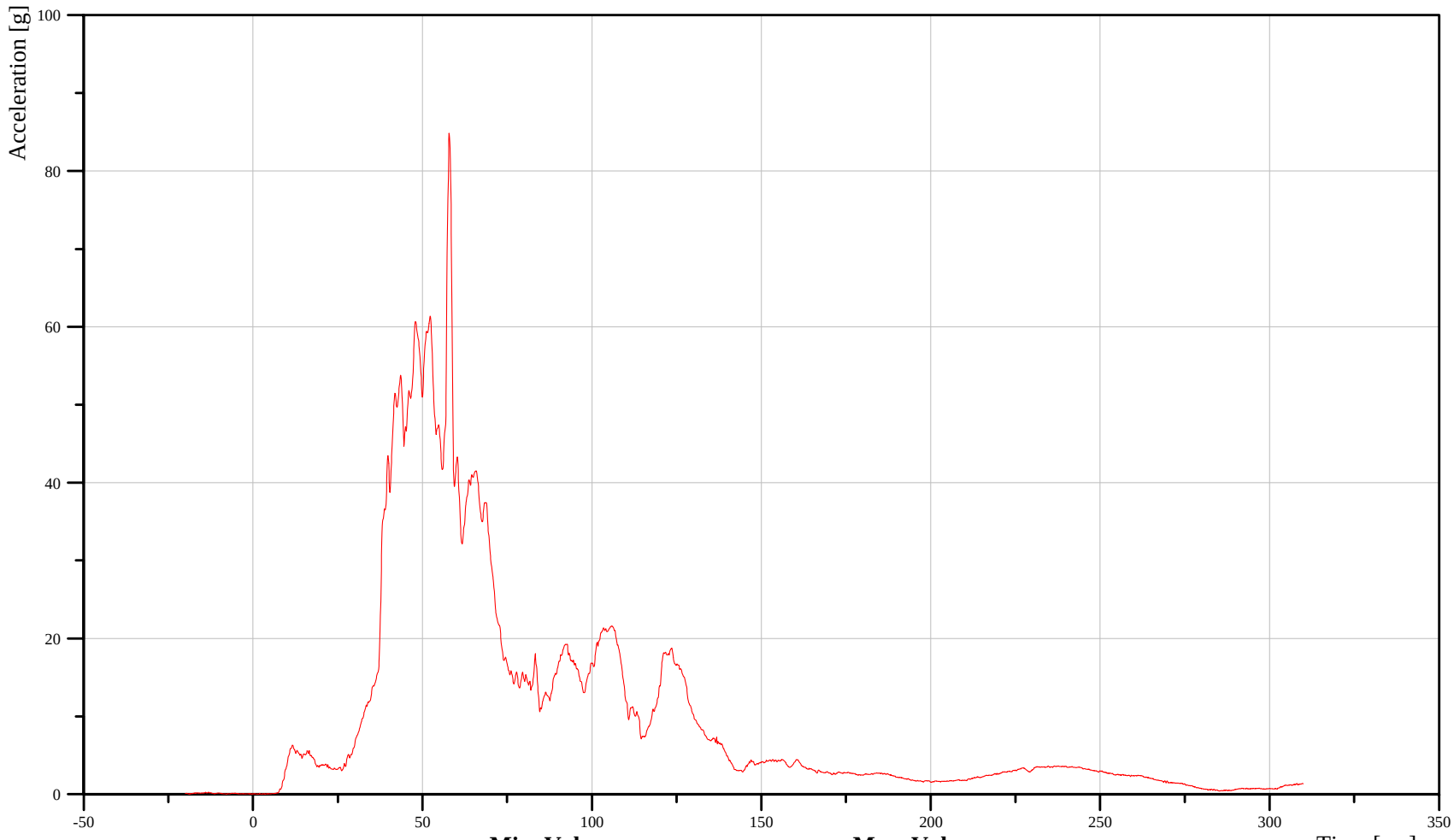
Pelvis Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13PELVCG00HFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.01 g at 1.44 ms

Max. Value
84.84 g at 57.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

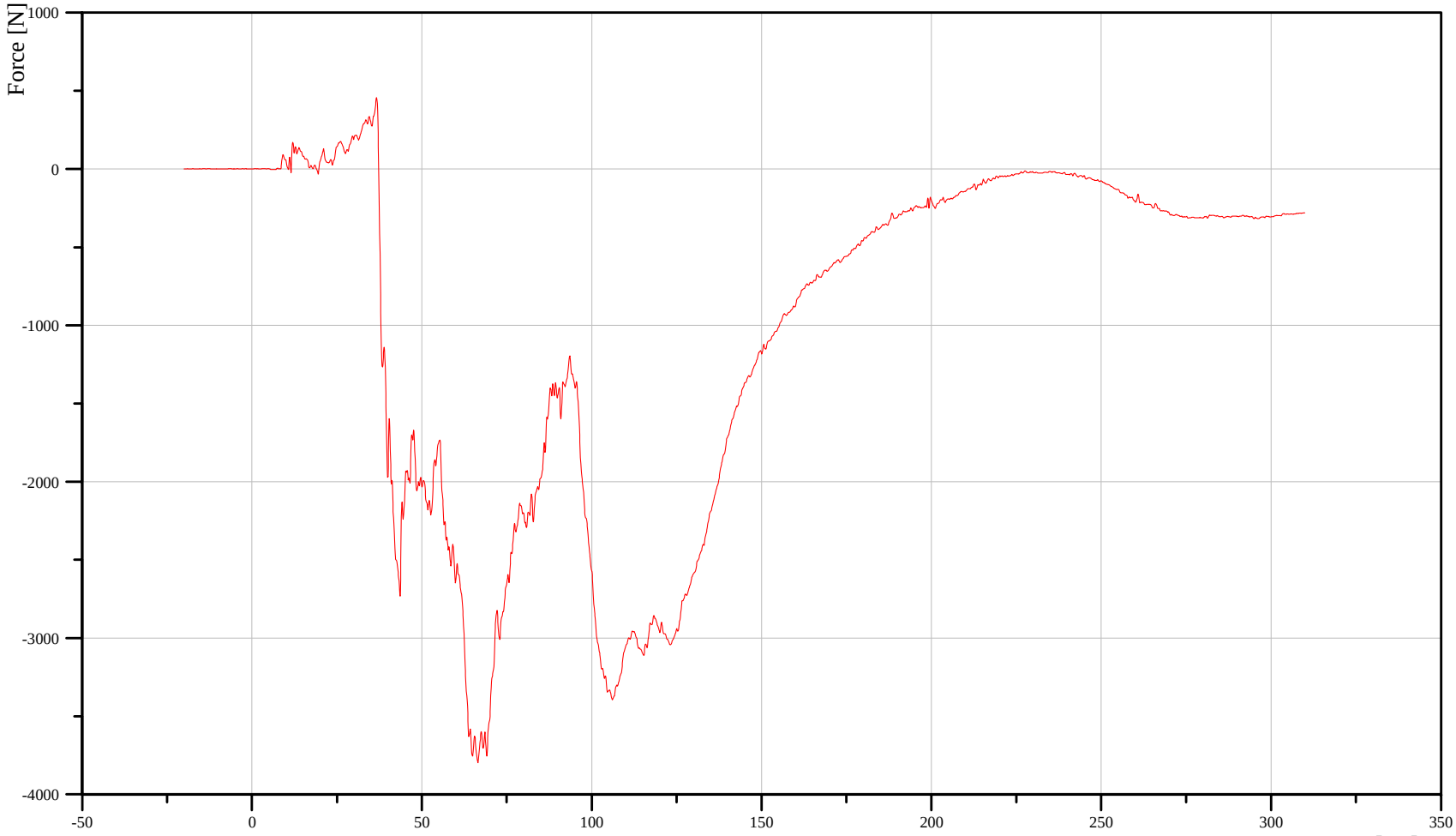
Left Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,796.81 N at 66.48 ms

Max. Value
457.33 N at 36.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

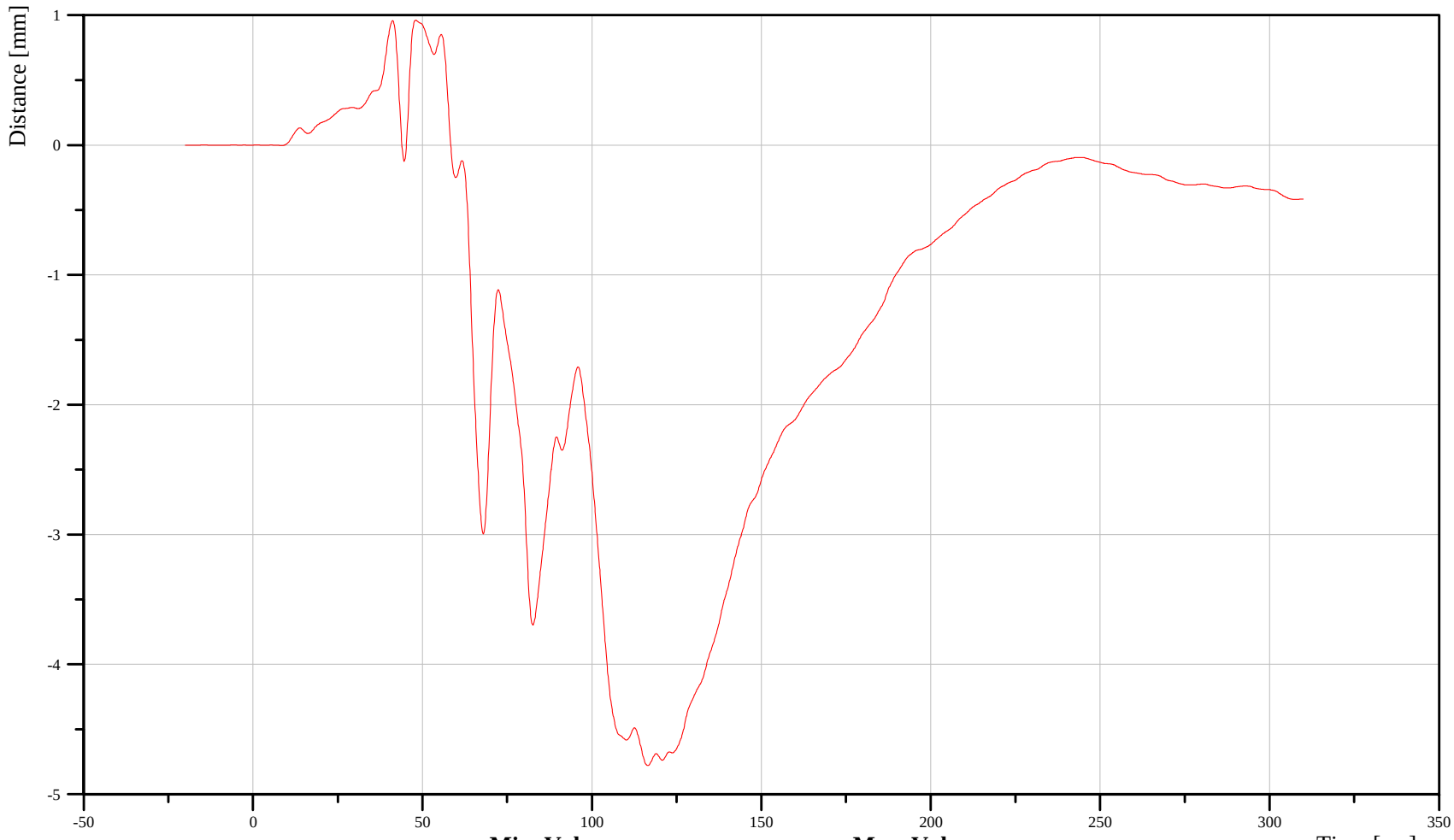
Left Knee Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-4.78 mm at 116.48 ms

Max. Value
0.96 mm at 48.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

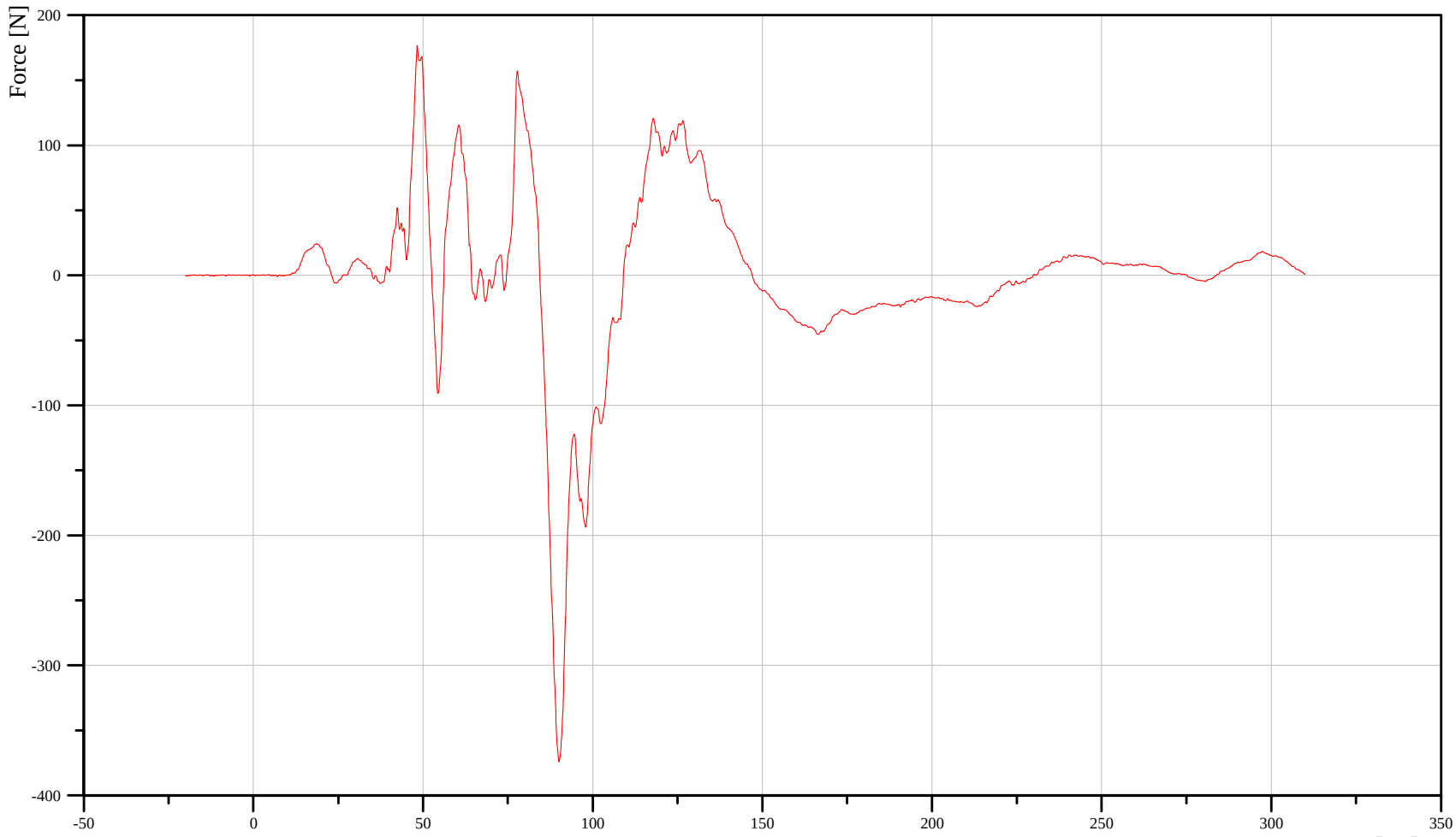
Left Upper Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILUFXHFFOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-374.05 N at 90.08 ms

Max. Value
176.65 N at 48.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

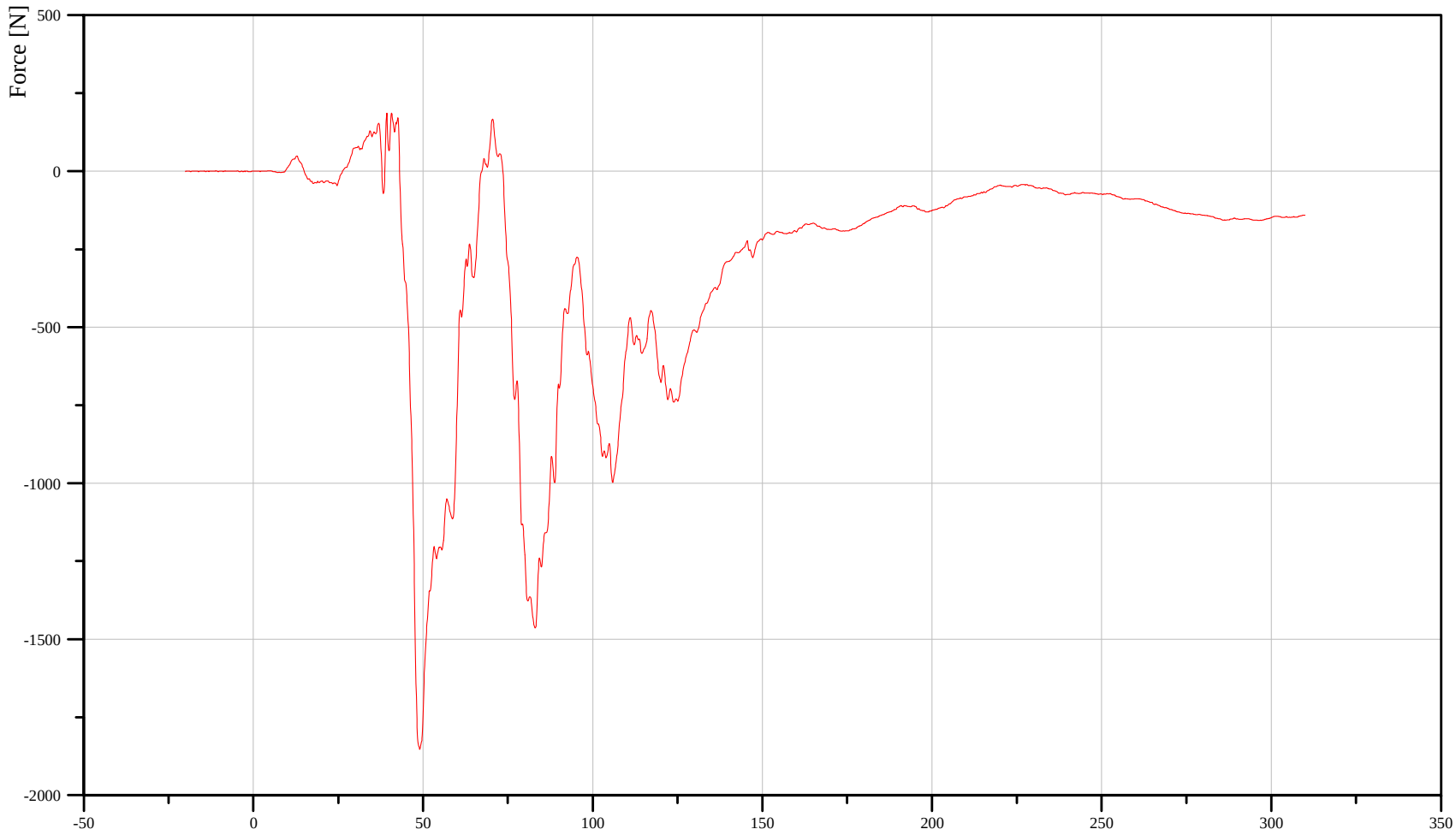
Left Upper Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILUFXHFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-1,853.09 N at 49.04 ms

Max. Value
186.47 N at 39.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

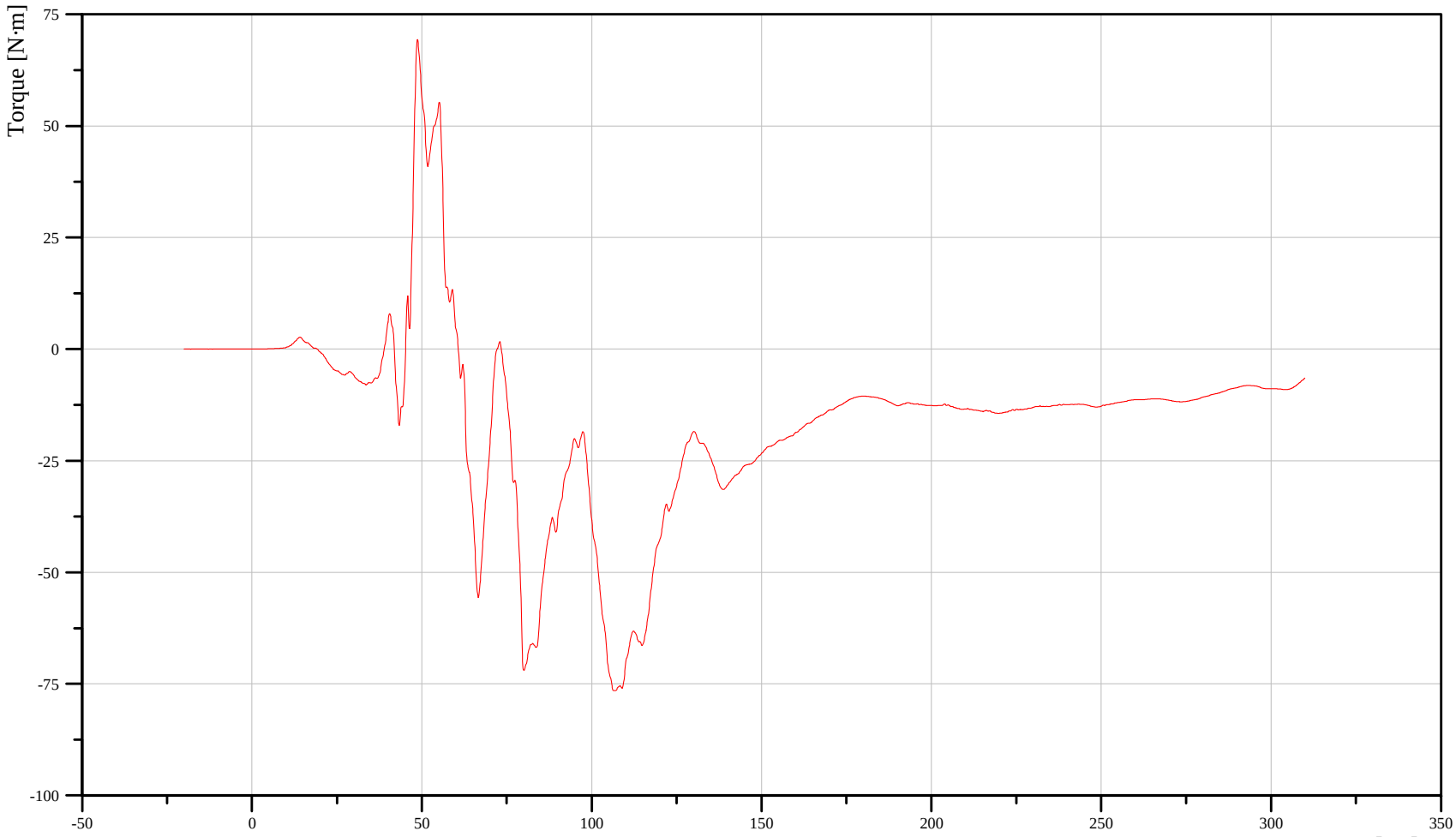
Left Upper Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILUFXHFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-76.51 N·m at 106.48 ms

Max. Value
69.32 N·m at 48.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

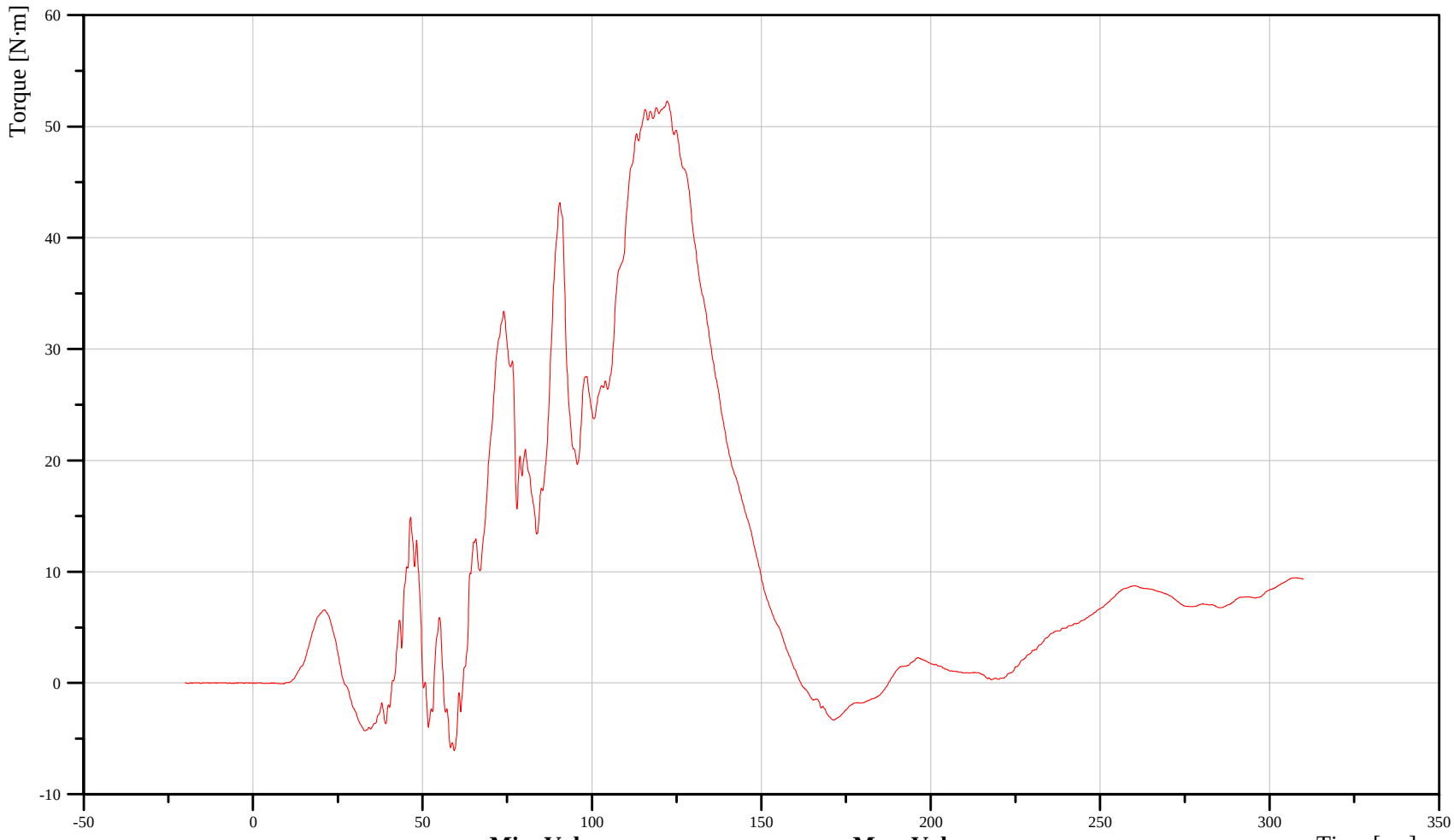
Left Upper Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILUFXHFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-6.08 N·m at 59.36 ms

Max. Value
52.29 N·m at 122.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

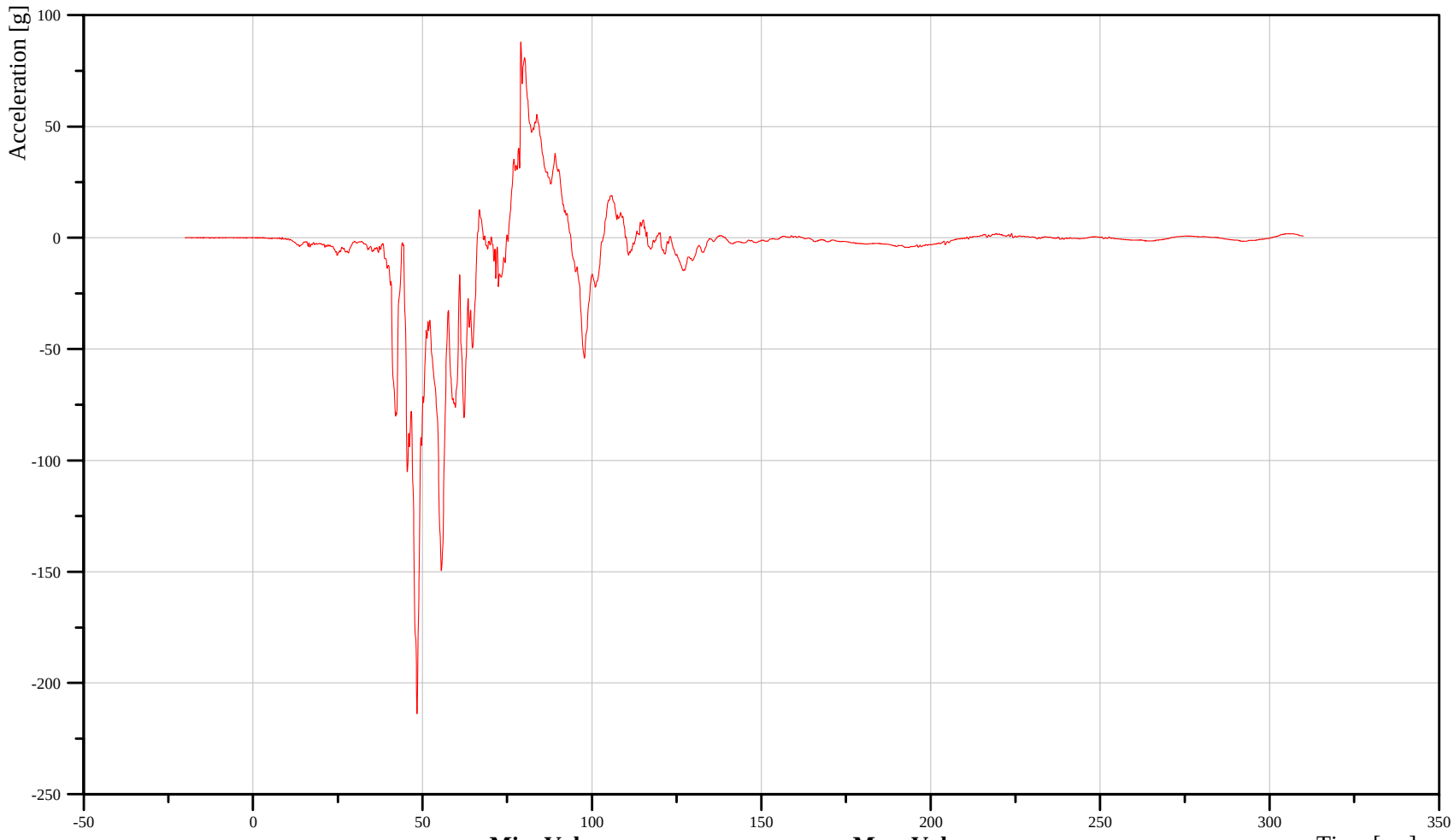
Left Tibia Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILEFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-213.83 g at 48.40 ms

Max. Value
88.02 g at 79.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

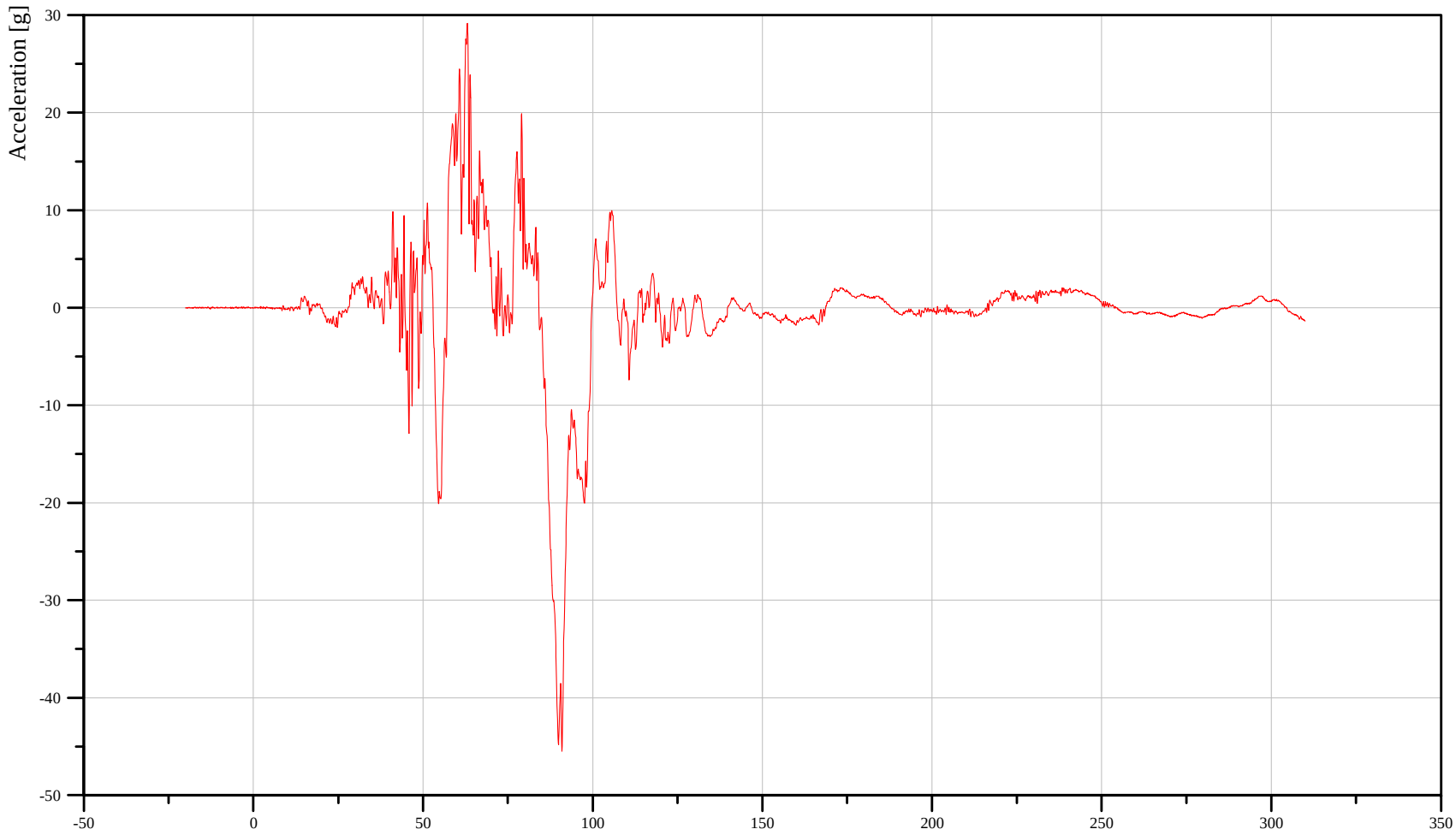
Left Tibia Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILEFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-45.48 g at 90.96 ms

Max. Value
29.18 g at 63.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

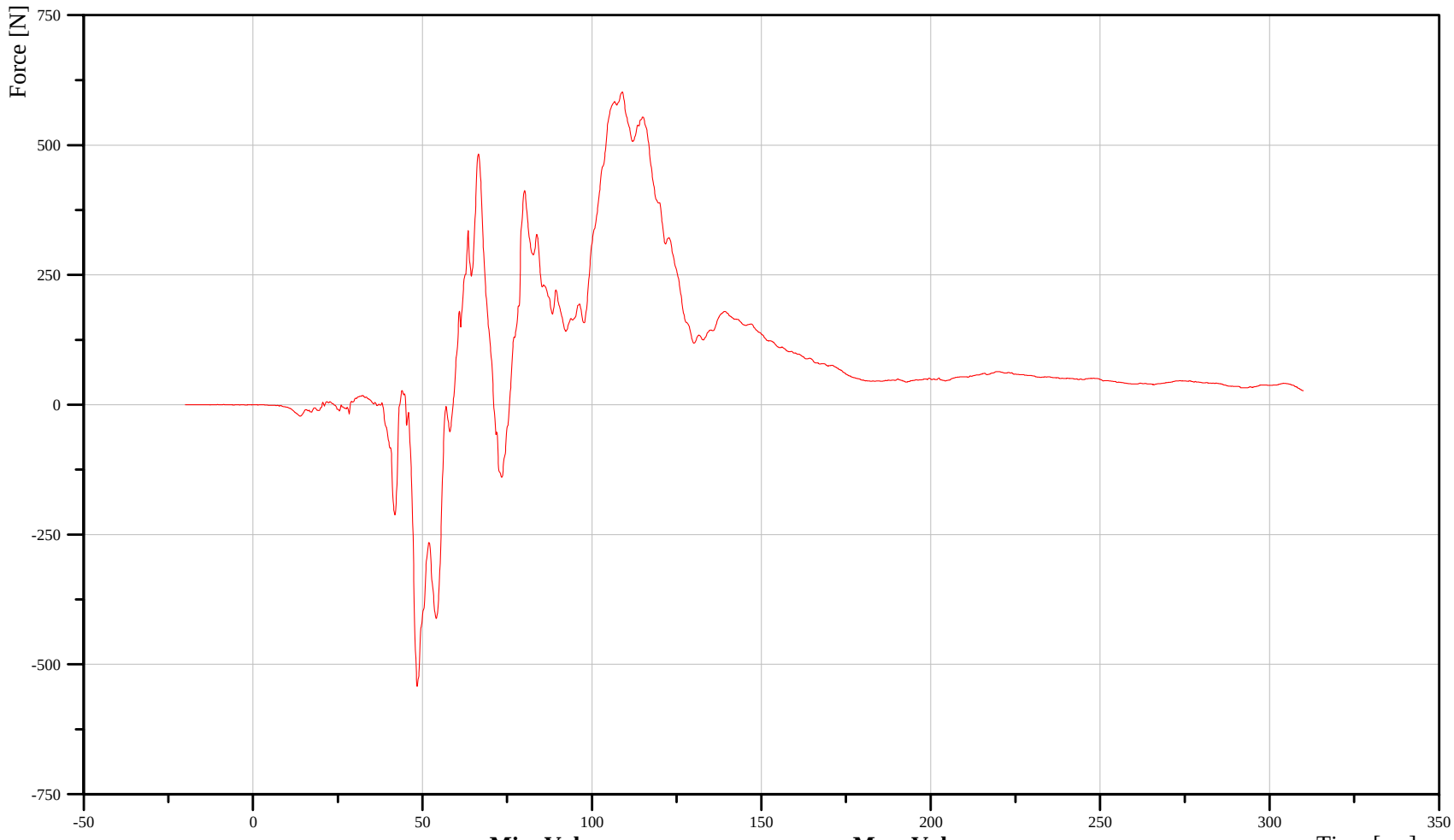
Left Lower Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILLFXHFFOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-542.08 N at 48.40 ms

Max. Value
602.41 N at 108.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

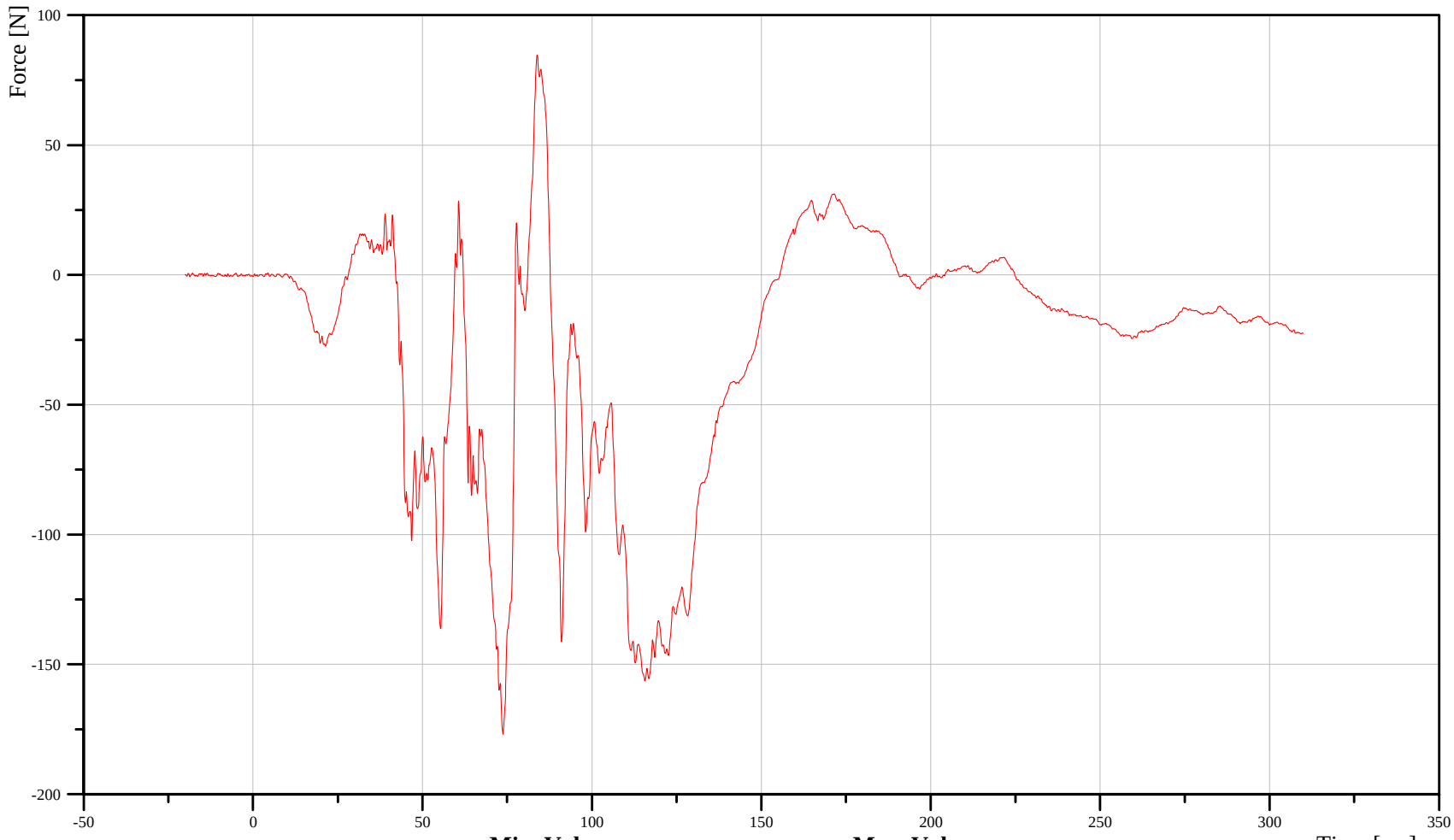
Left Lower Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILLFXHFFOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-176.78 N at 73.76 ms

Max. Value
84.73 N at 83.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

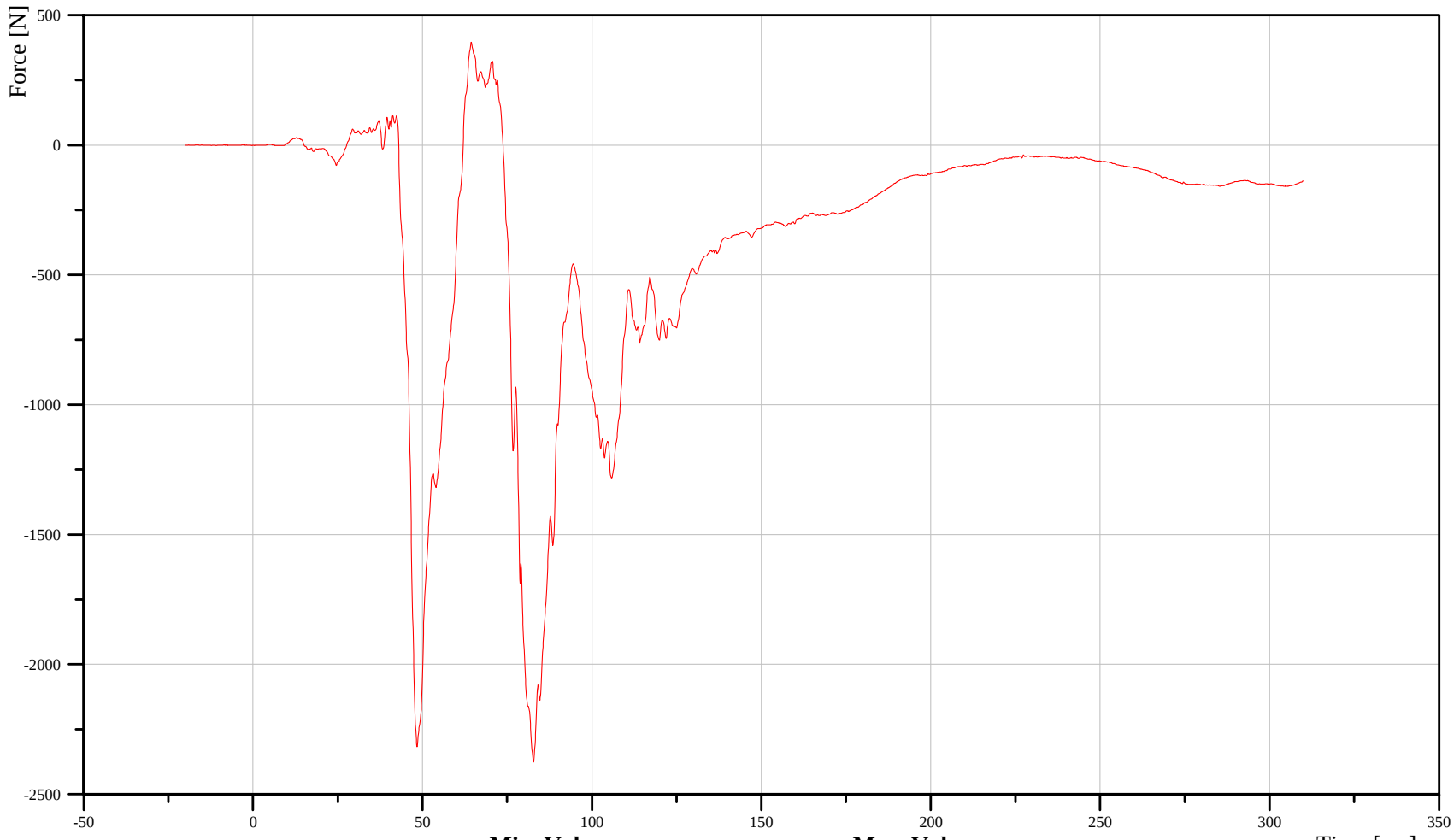
Left Lower Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILLFXHFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2,376.45 N at 82.80 ms

Max. Value
396.27 N at 64.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

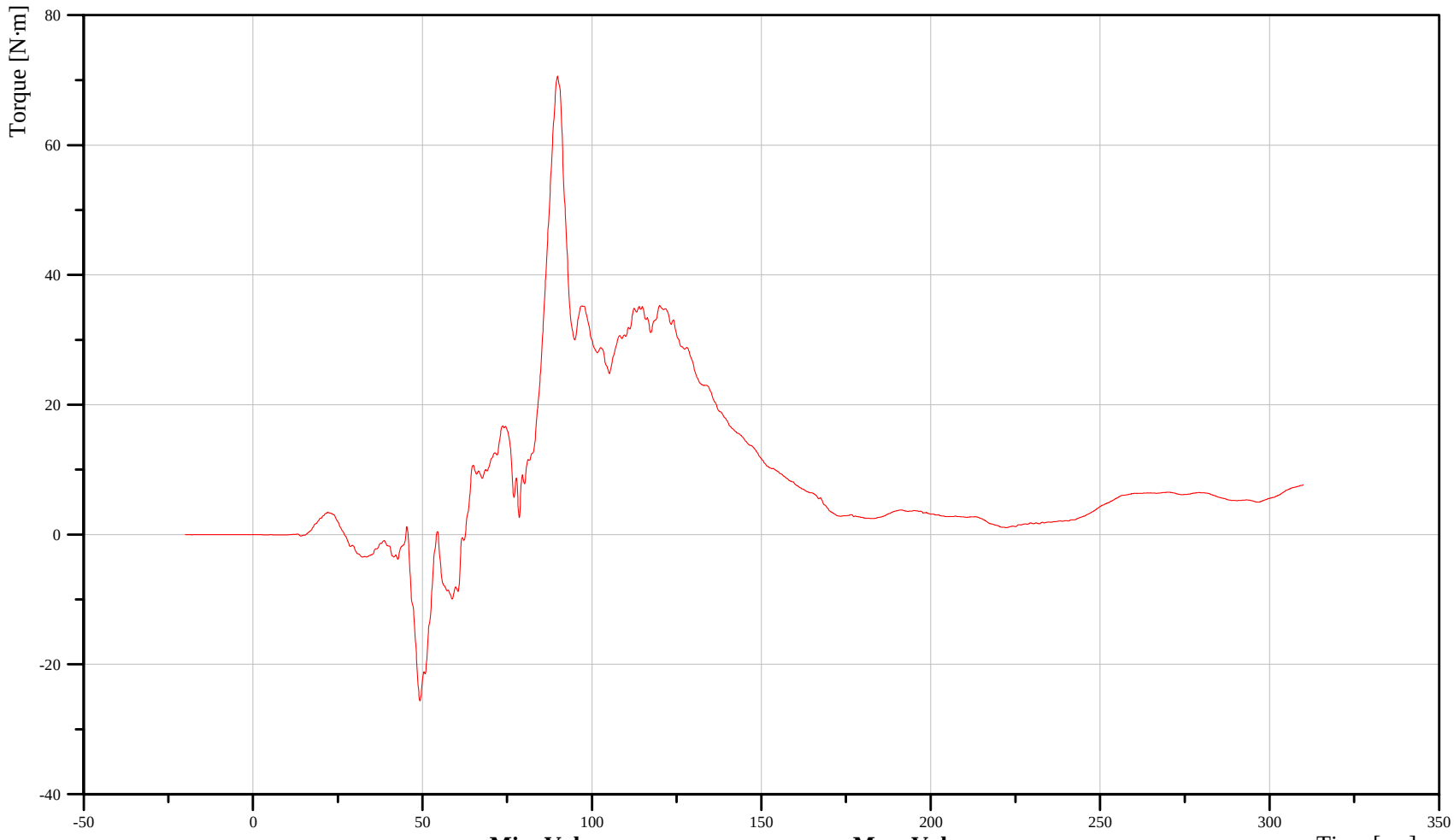
Left Lower Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILLFXHFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-25.61 N·m at 49.28 ms

Max. Value
70.63 N·m at 89.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

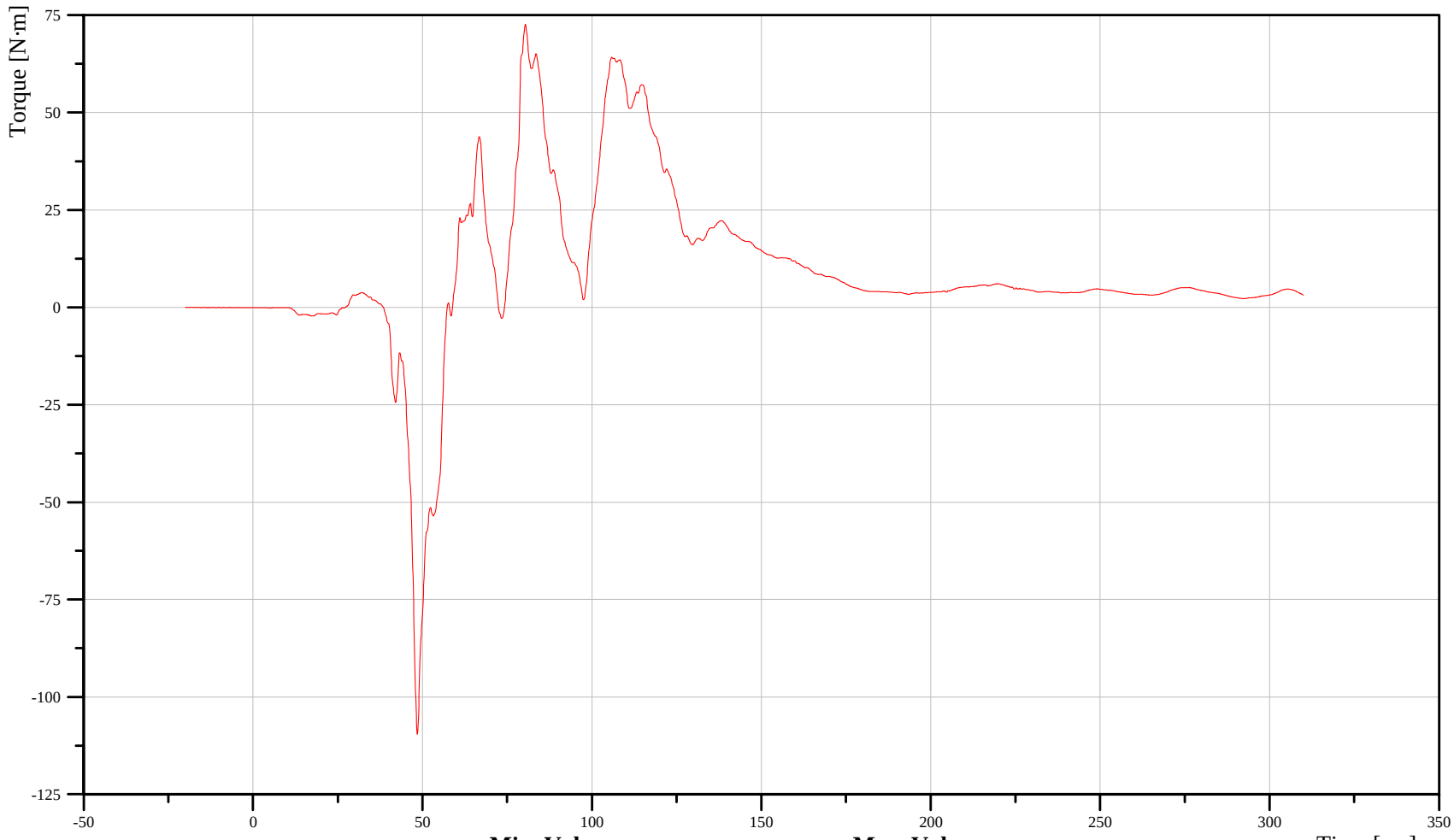
Left Lower Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBILLFXHFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-109.54 N·m at 48.48 ms

Max. Value
72.64 N·m at 80.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

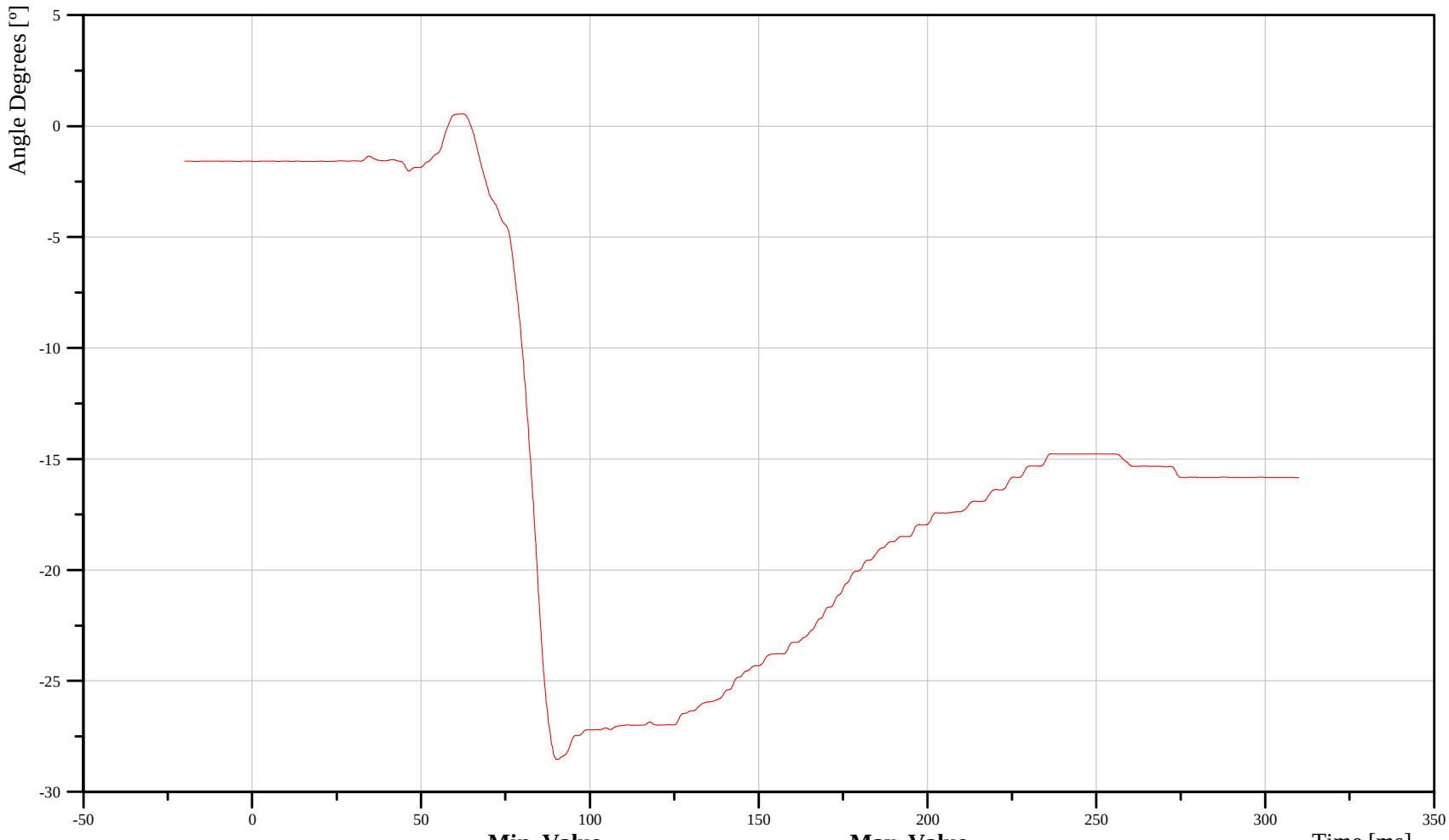
Left Foot Disp. X FLX102X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFANXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-28.54 ° at 90.32 ms

Max. Value
0.54 ° at 62.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

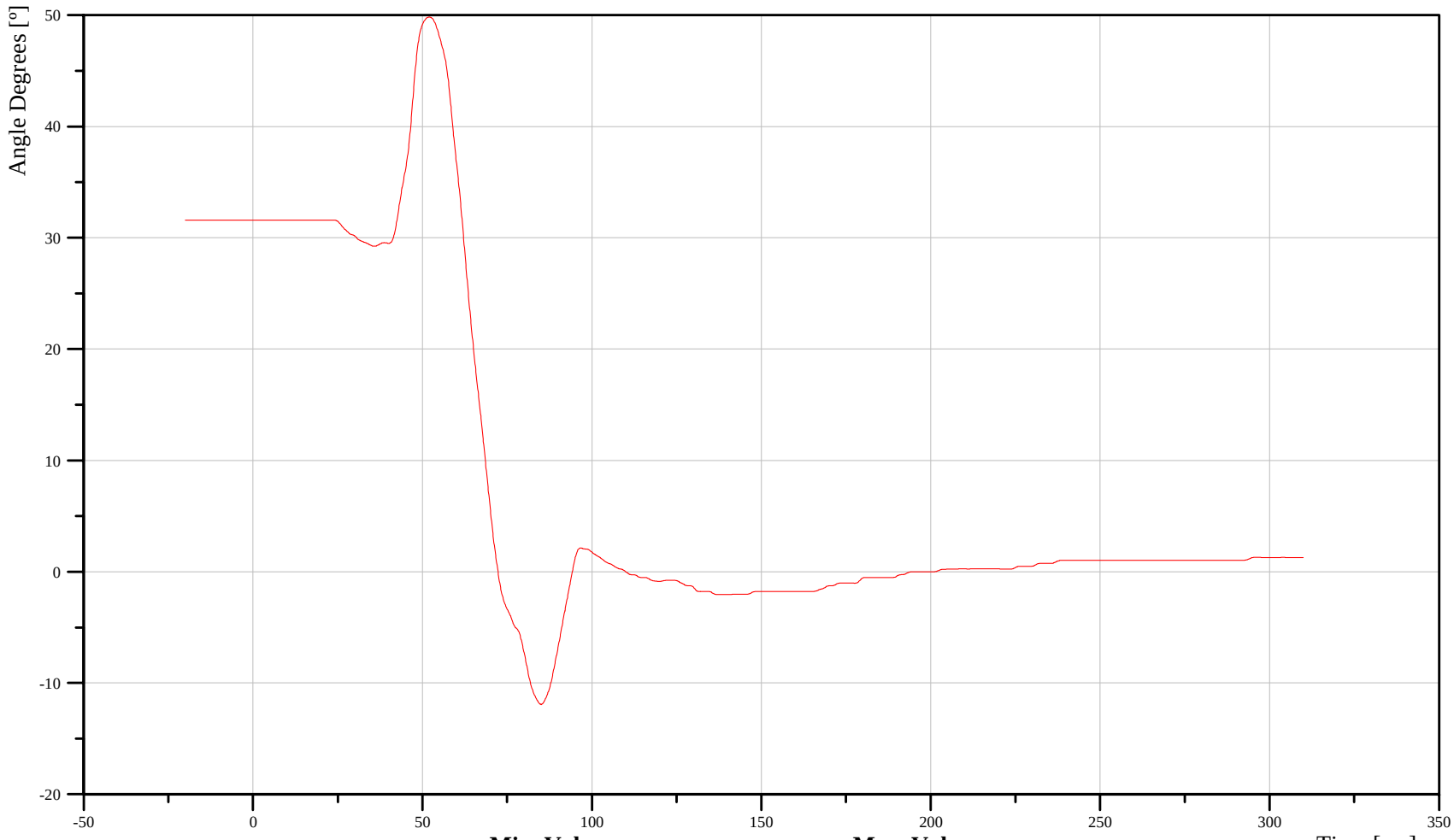
Left Foot Disp. Y FLX102Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFANYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-11.93 ° at 85.04 ms

Max. Value
49.84 ° at 52.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

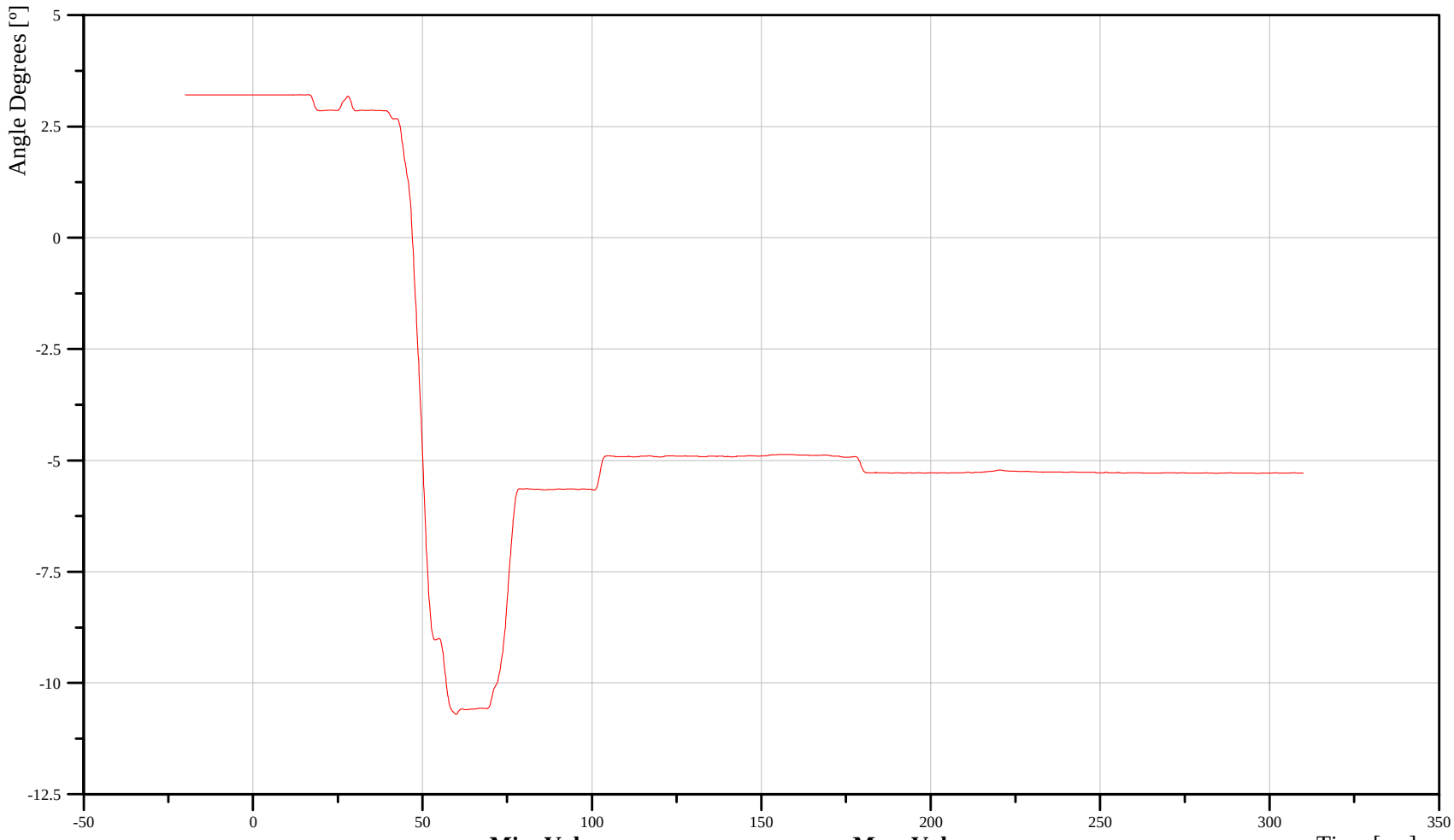
Left Foot Disp. Z FLX102Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFANZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-10.70 ° at 59.92 ms

Max. Value
3.22 ° at 16.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

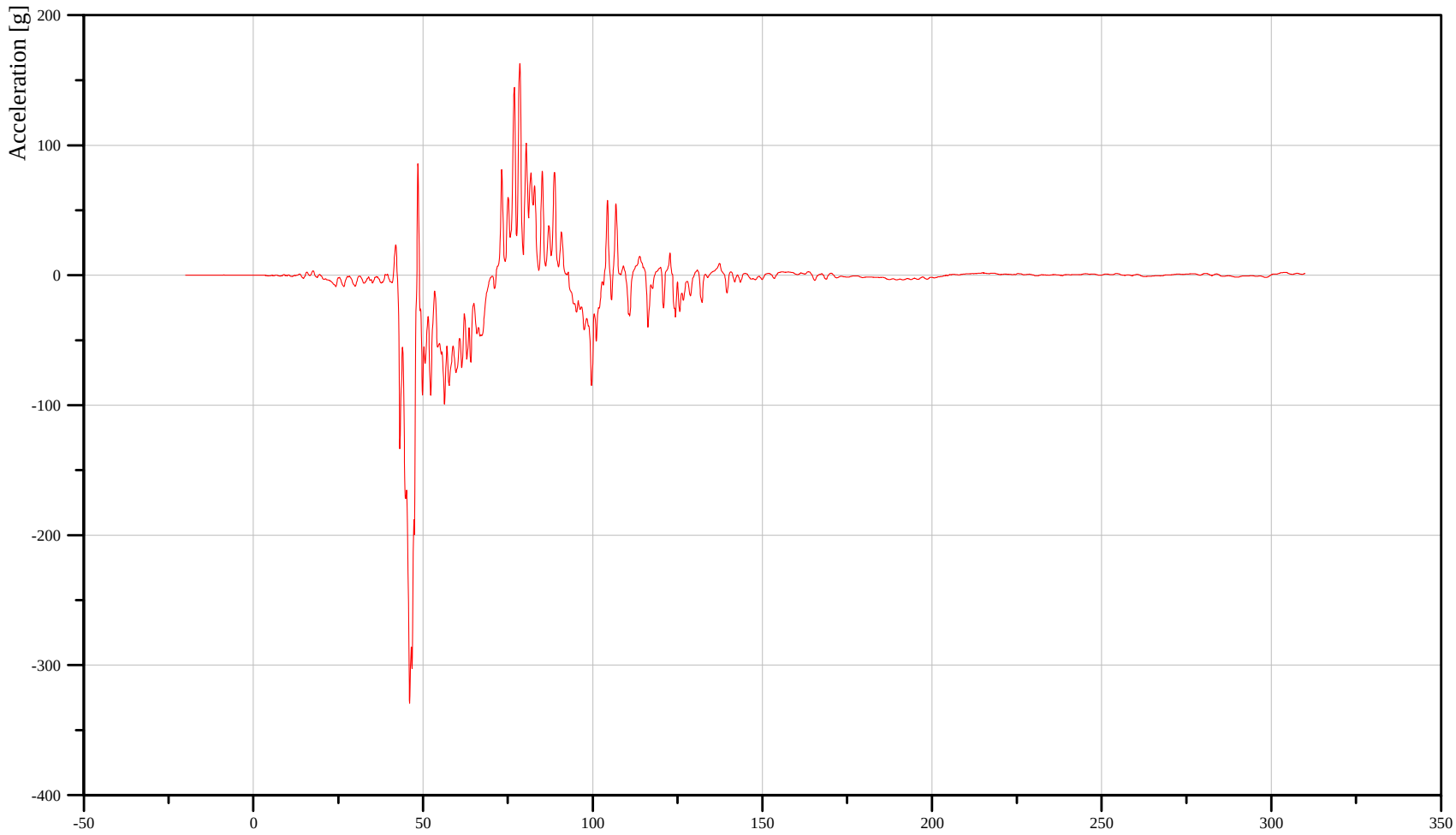
Left Foot Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-329.18 g at 46.08 ms

Max. Value
162.86 g at 78.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

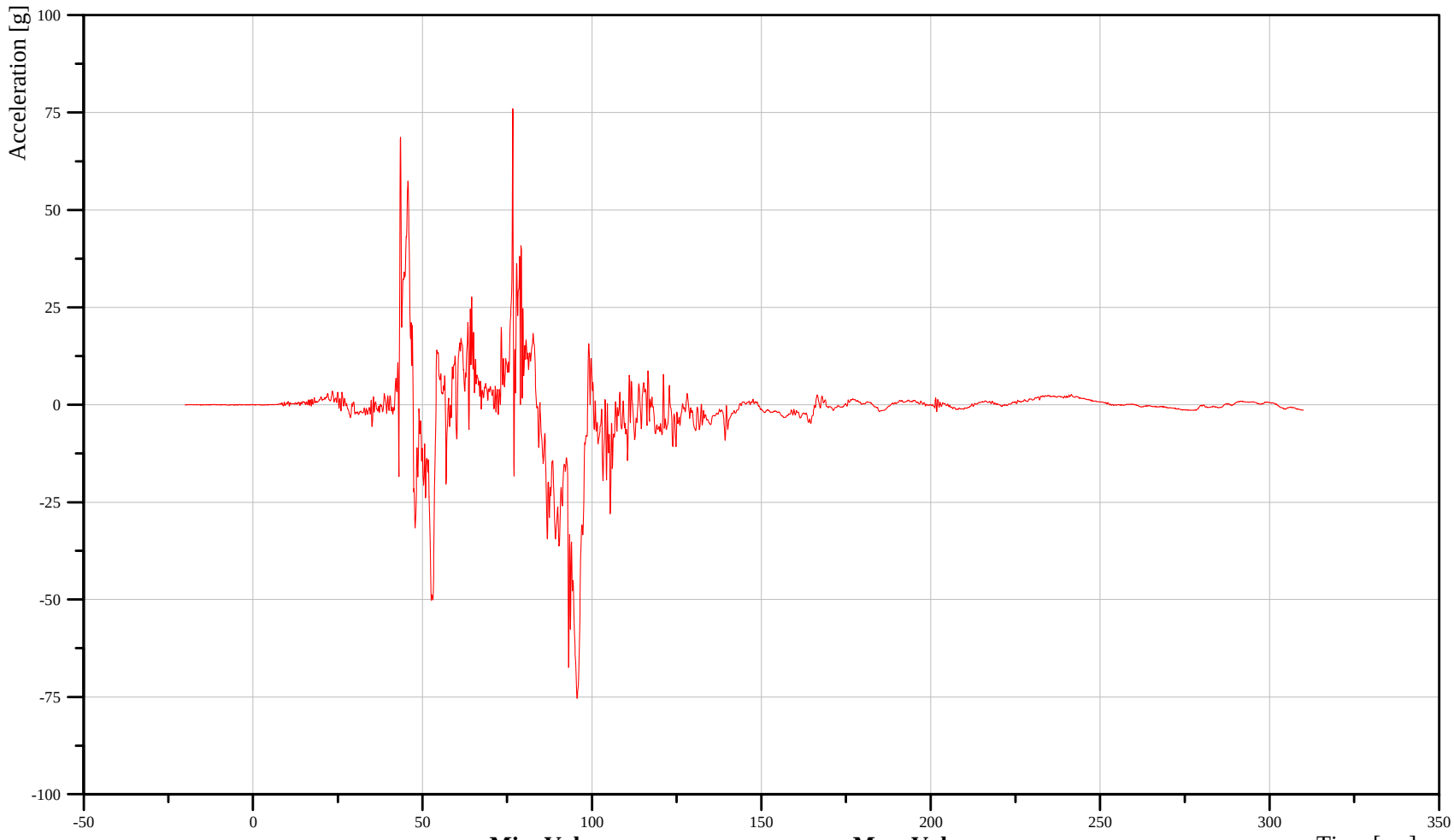
Left Foot Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-75.40 g at 95.60 ms

Max. Value
76.02 g at 76.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

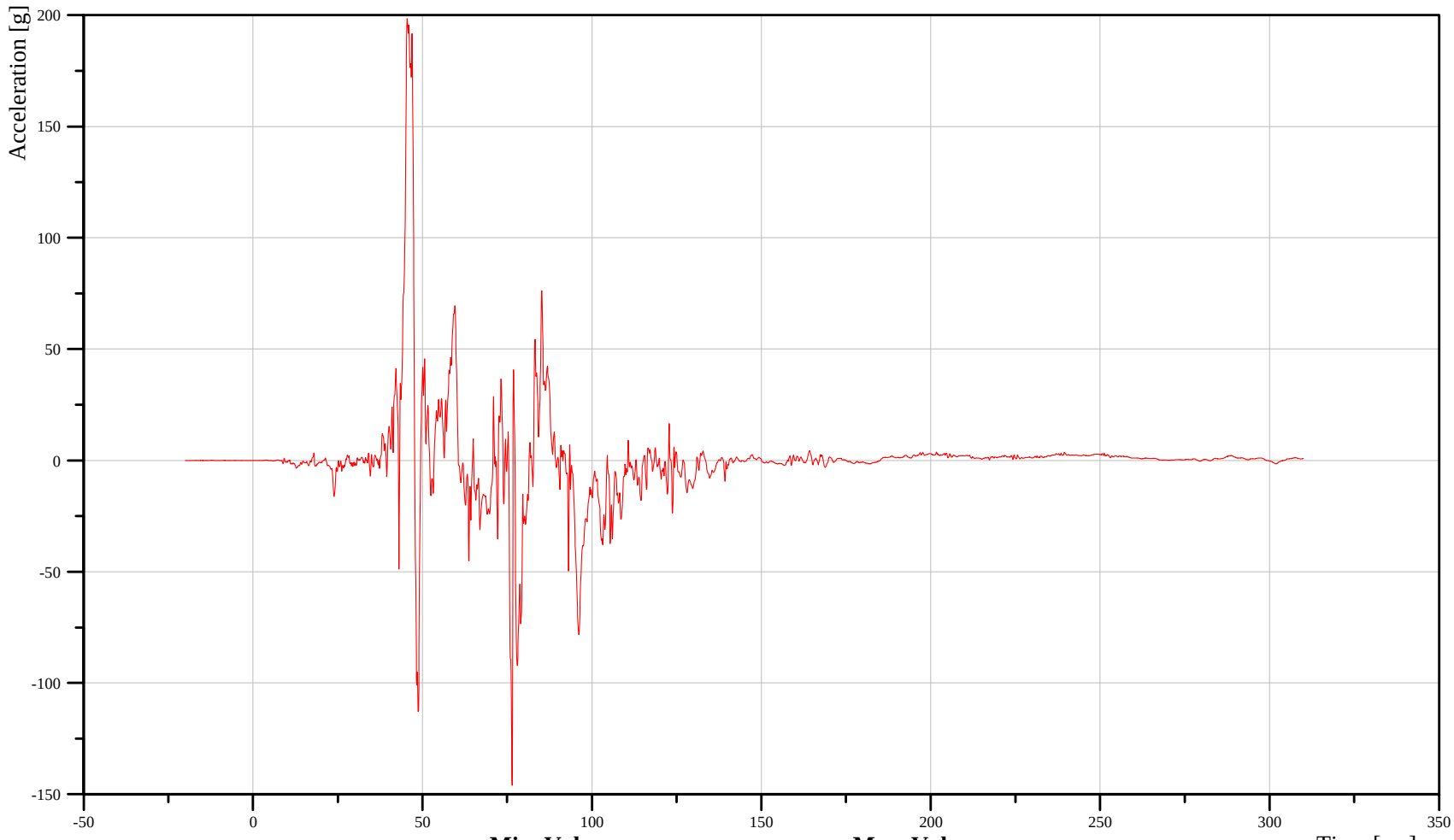
Left Foot Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-145.96 g at 76.48 ms

Max. Value
198.44 g at 45.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

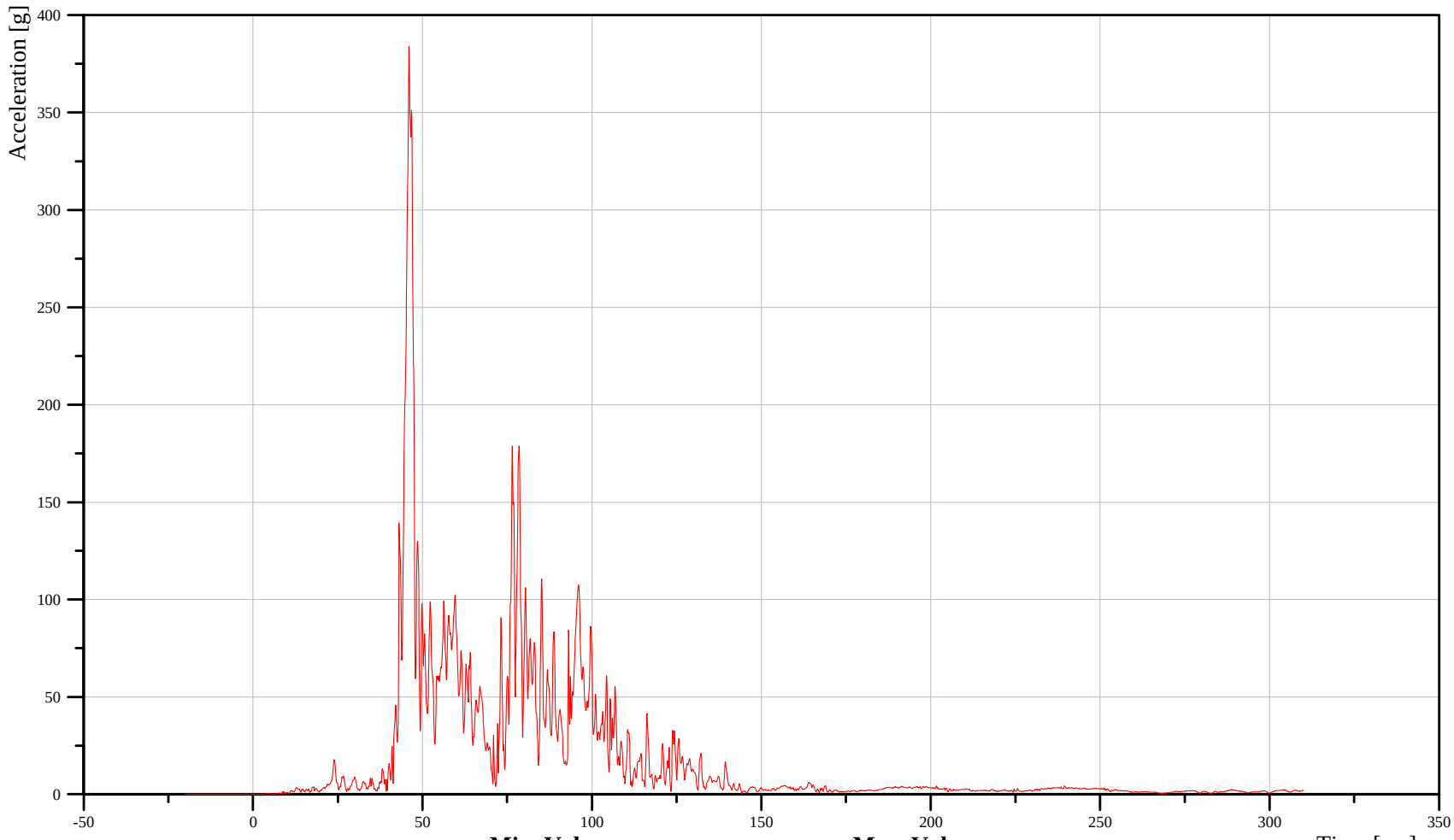
Left Foot Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.02 g at -19.52 ms

Max. Value
384.03 g at 46.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

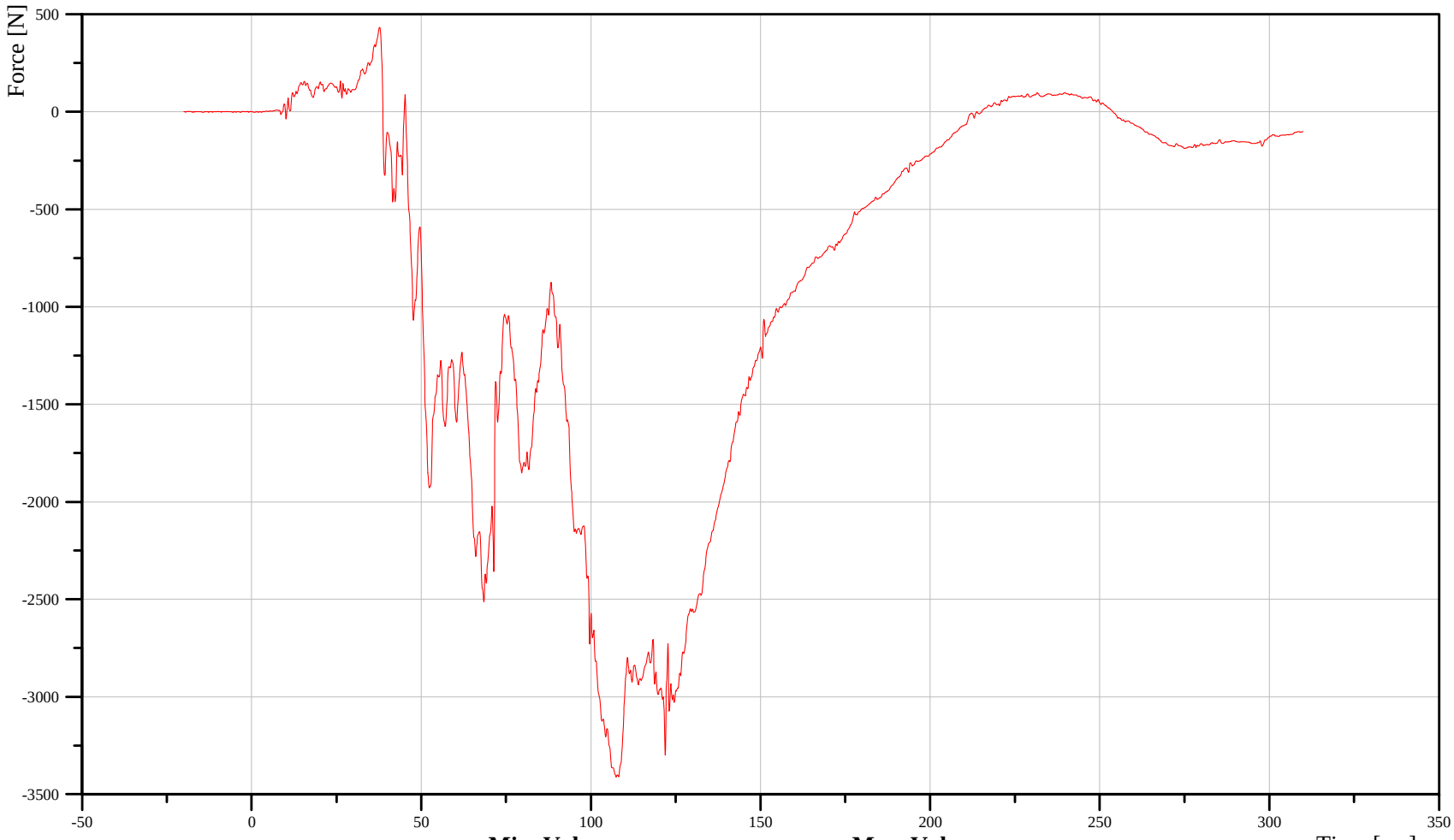
Right Femur Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-3,411.80 N at 107.44 ms

Max. Value
433.02 N at 37.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

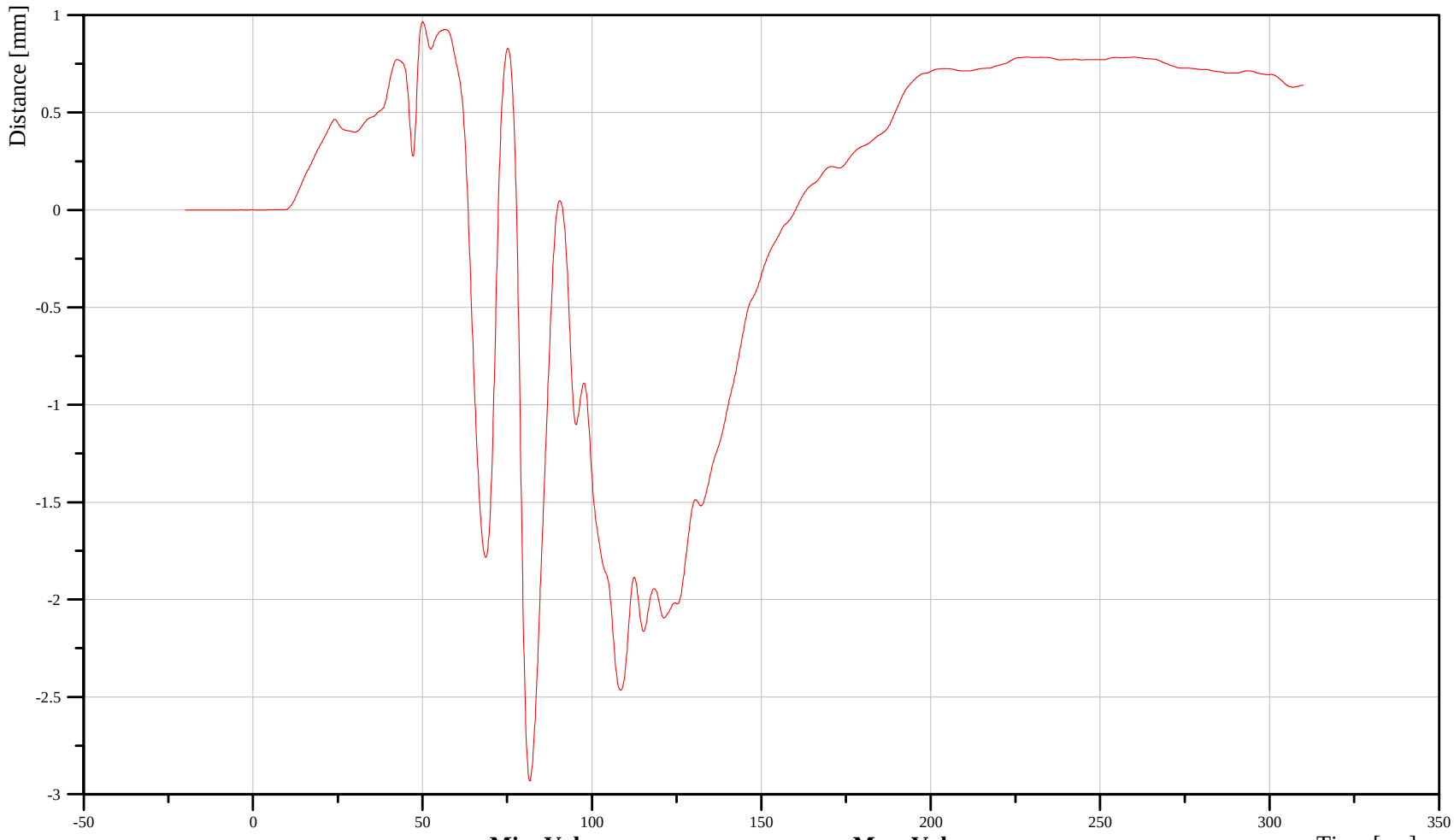
Right Knee Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-2.93 mm at 81.68 ms

Max. Value
0.97 mm at 50.08 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

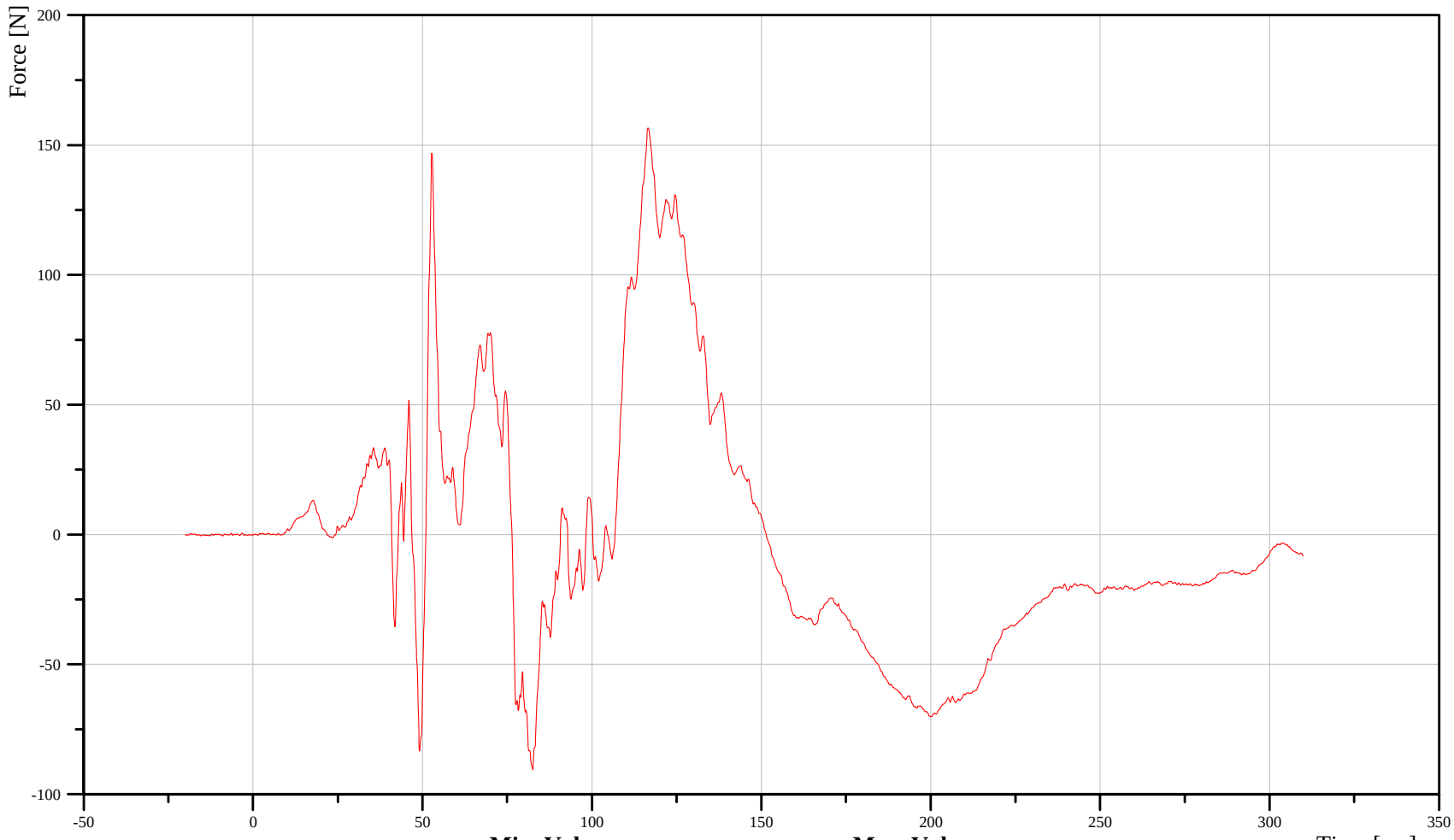
Right Upper Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRUFXHFFOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-90.52 N at 82.56 ms

Max. Value
156.58 N at 116.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

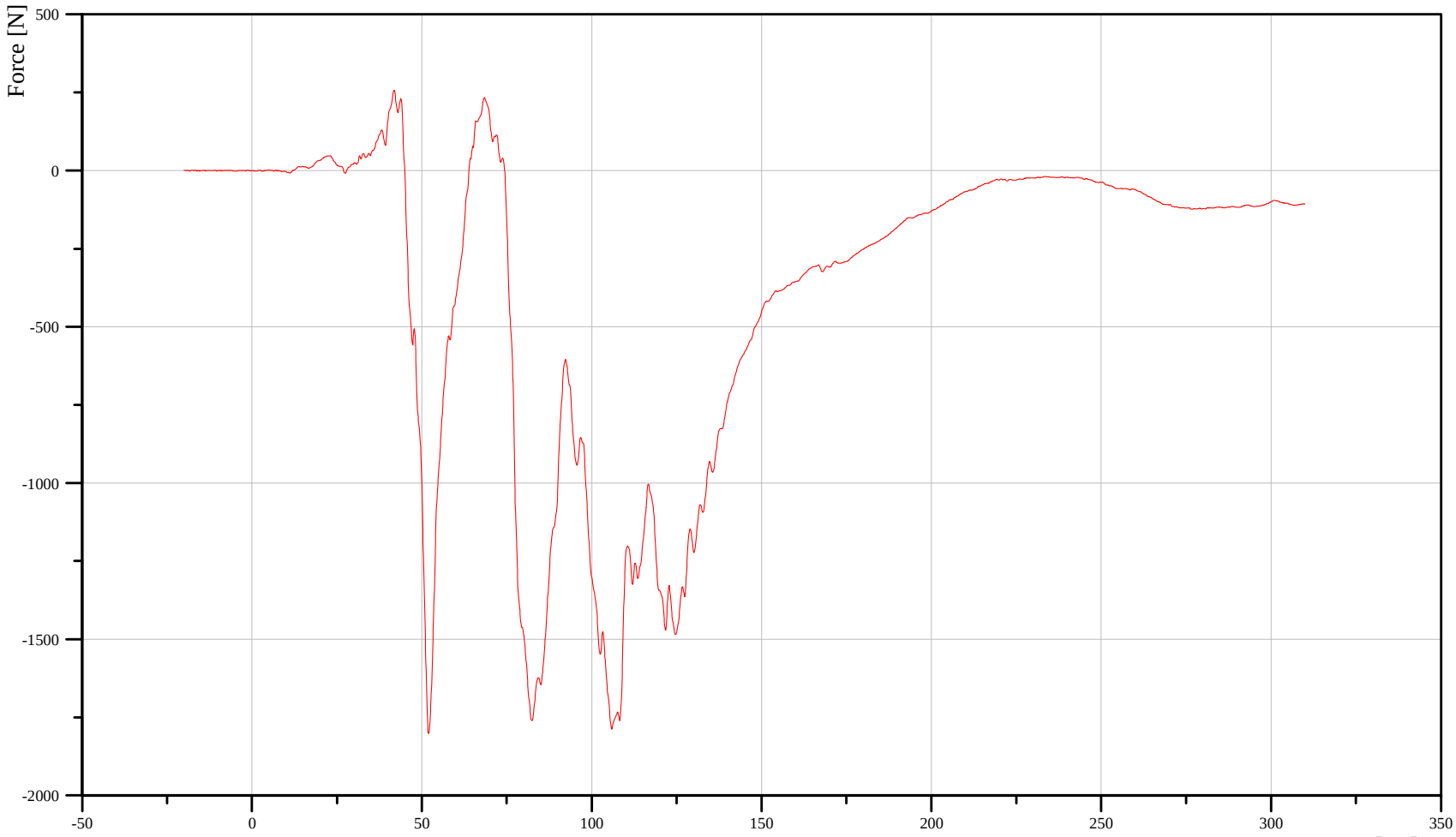
Right Upper Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRUFXHFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-1,802.35 N at 52.00 ms

Max. Value
257.17 N at 41.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

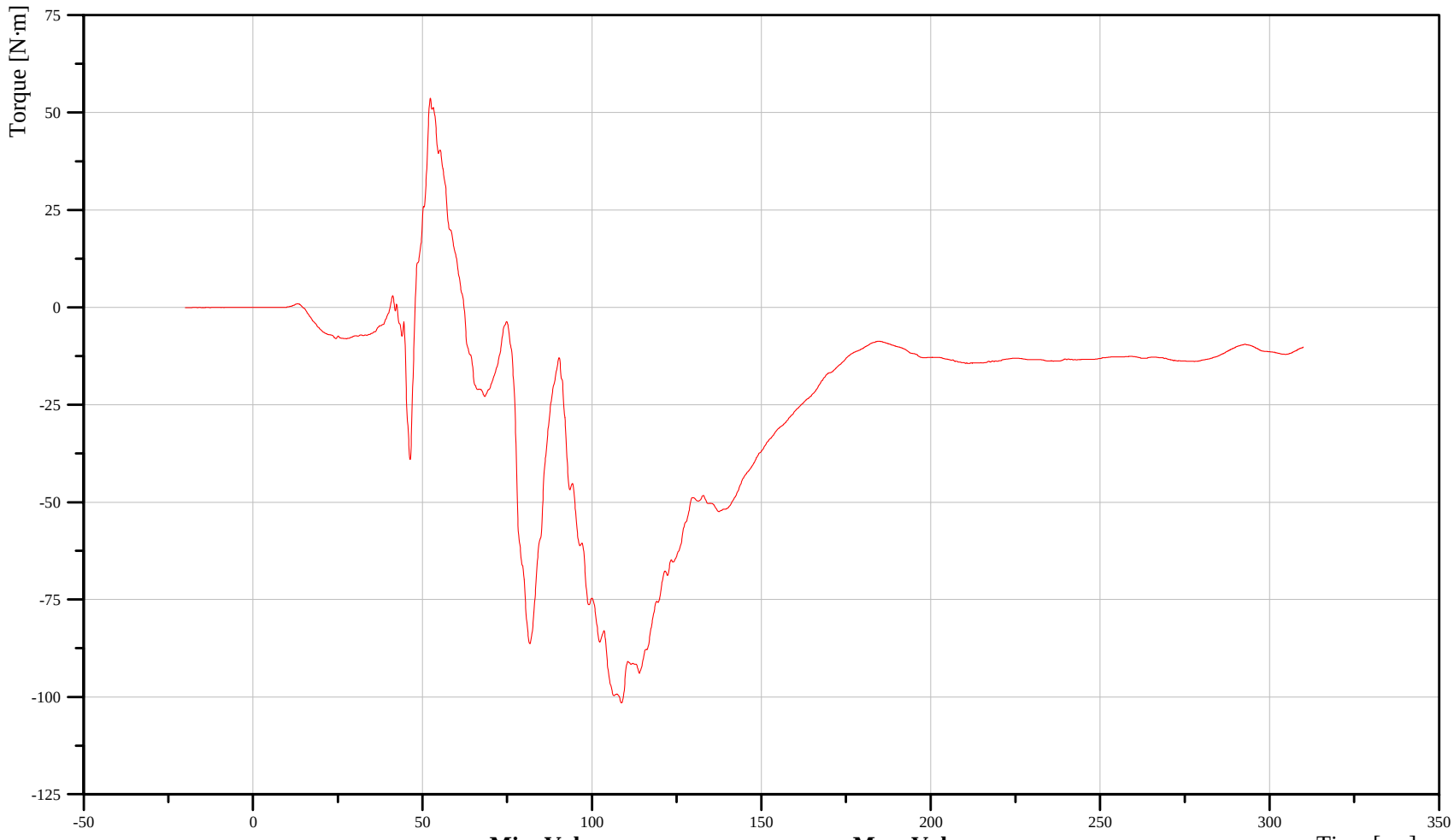
Right Upper Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRUFXHFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-101.50 N·m at 108.72 ms

Max. Value
53.70 N·m at 52.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

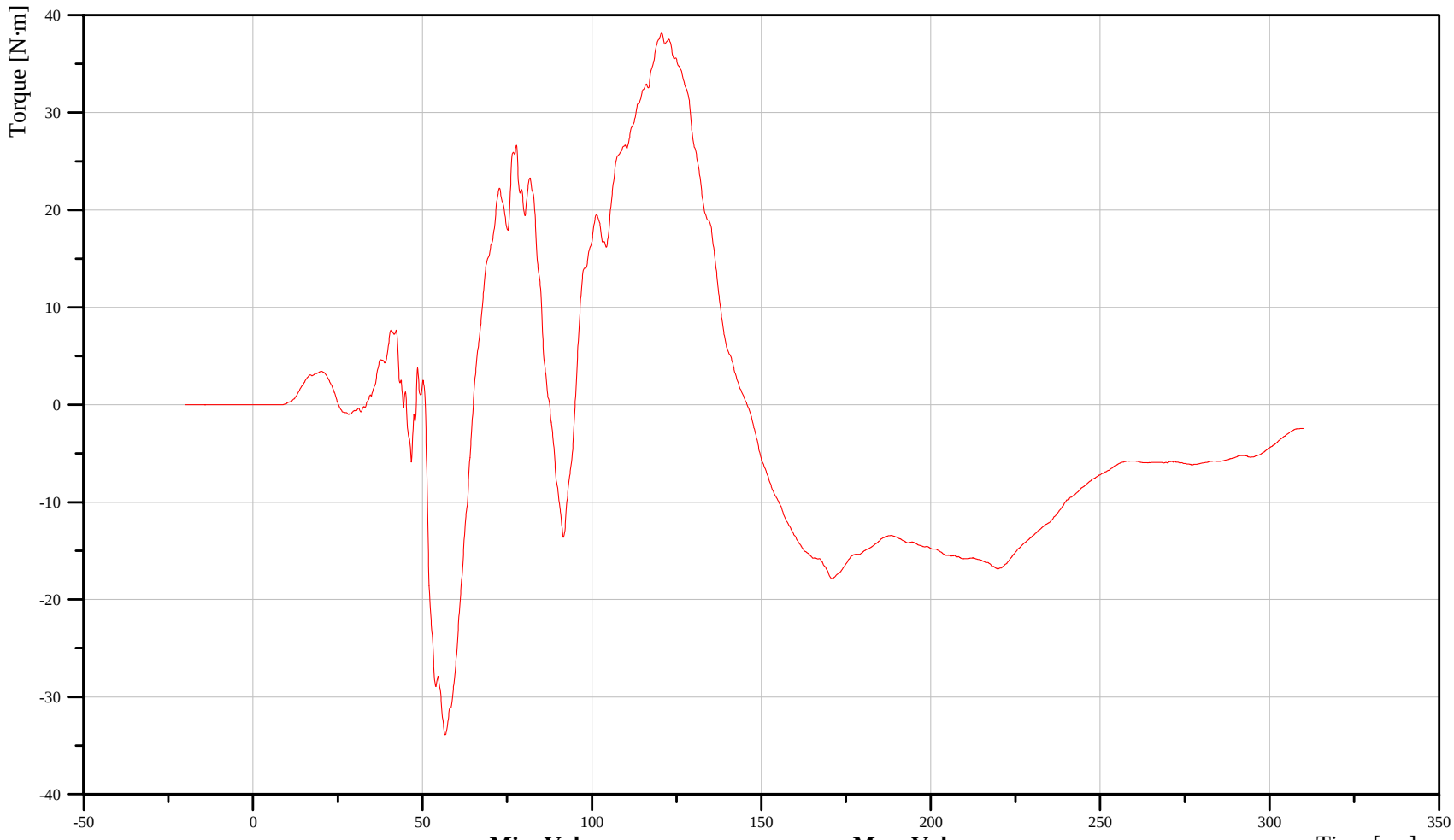
Right Upper Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRUFXHFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-33.89 N·m at 56.72 ms

Max. Value
38.18 N·m at 120.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

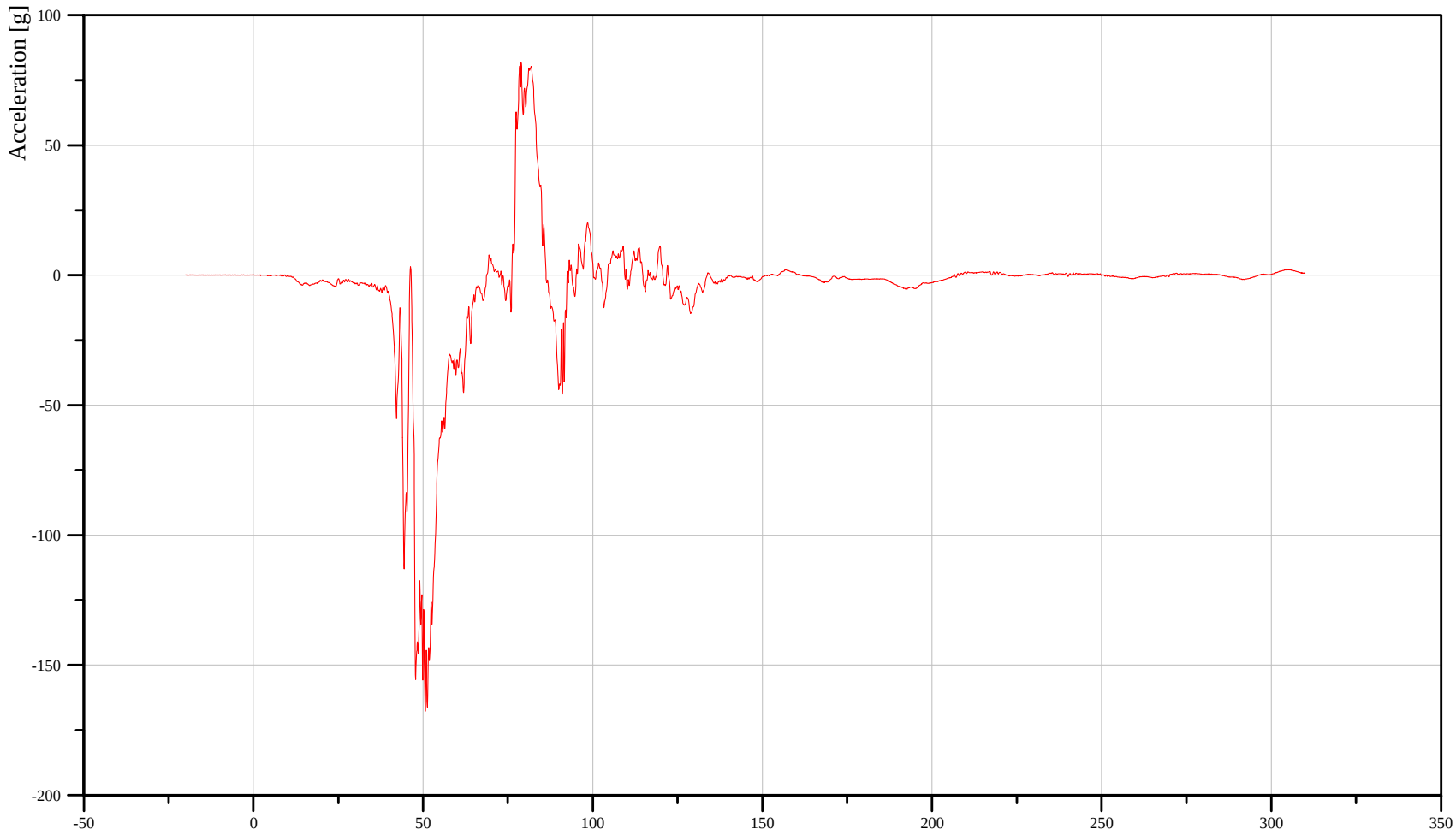
Right Tibia Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-167.65 g at 50.64 ms

Max. Value
81.75 g at 78.96 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

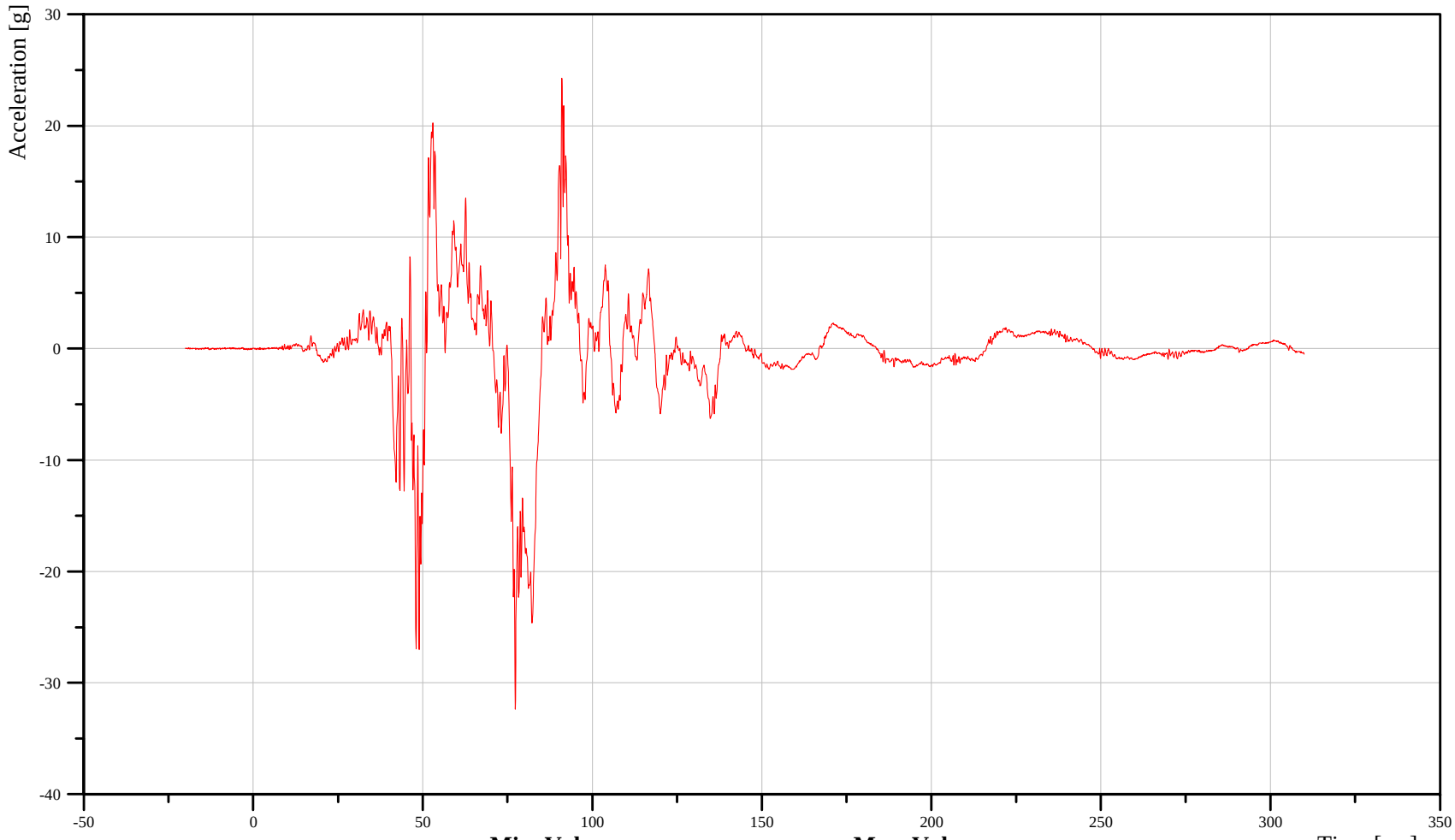
Right Tibia Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-32.37 g at 77.28 ms

Max. Value
24.26 g at 91.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

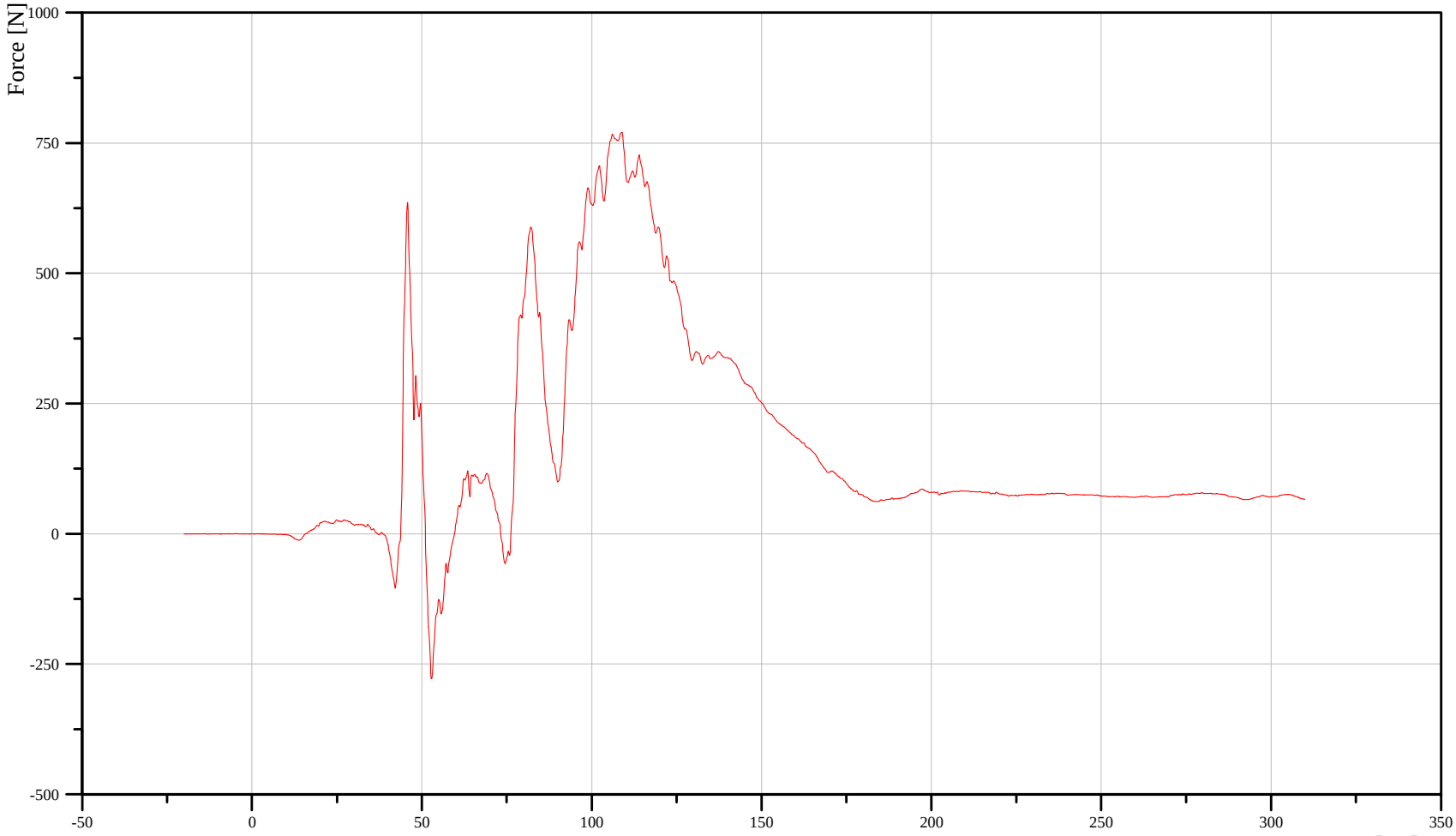
Right Lower Tibia Force X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRLFXHFFOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-278.19 N at 52.88 ms

Max. Value
770.73 N at 108.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

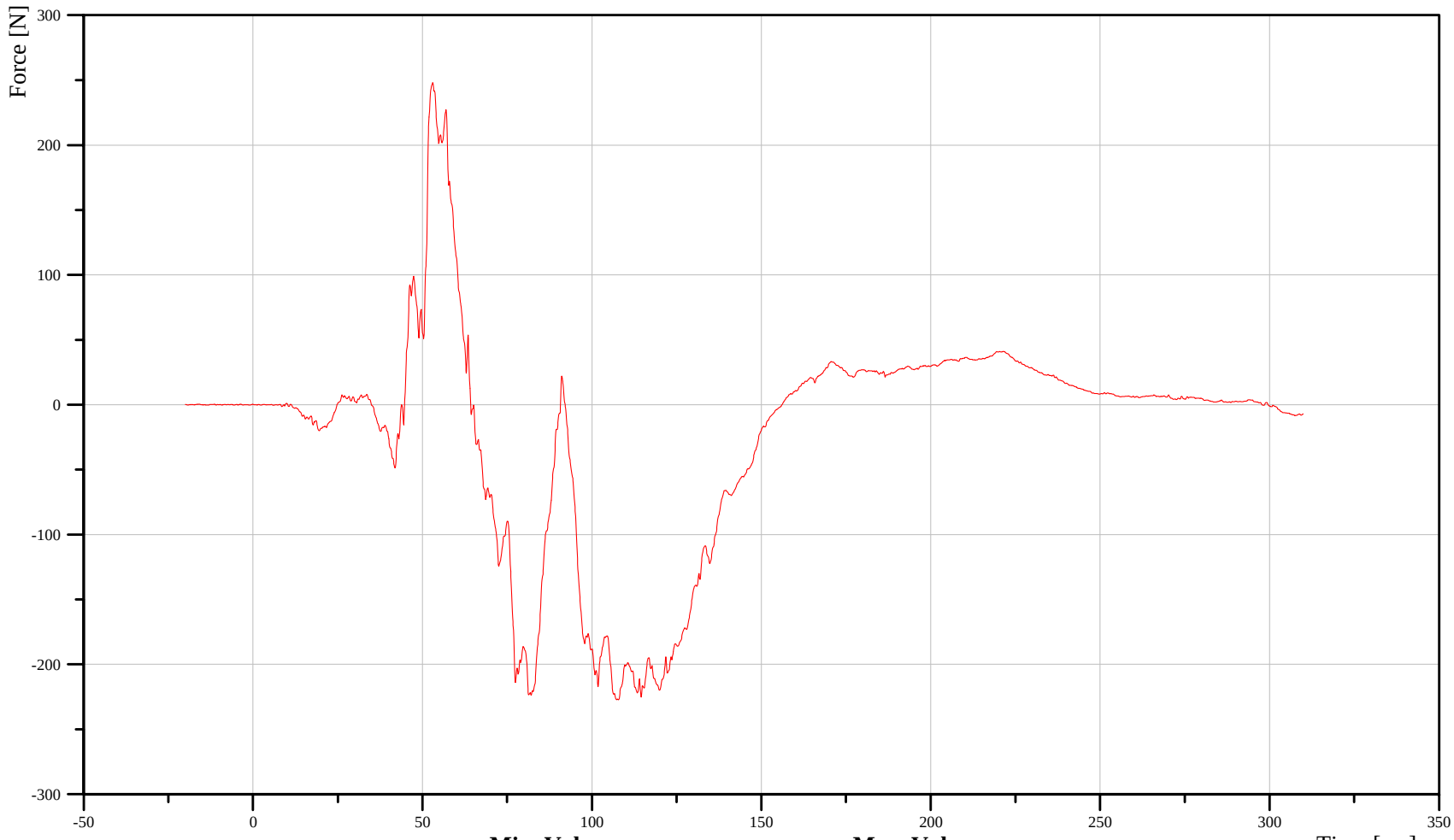
Right Lower Tibia Force Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRLFXHFFOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-227.13 N at 107.84 ms

Max. Value
248.05 N at 53.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

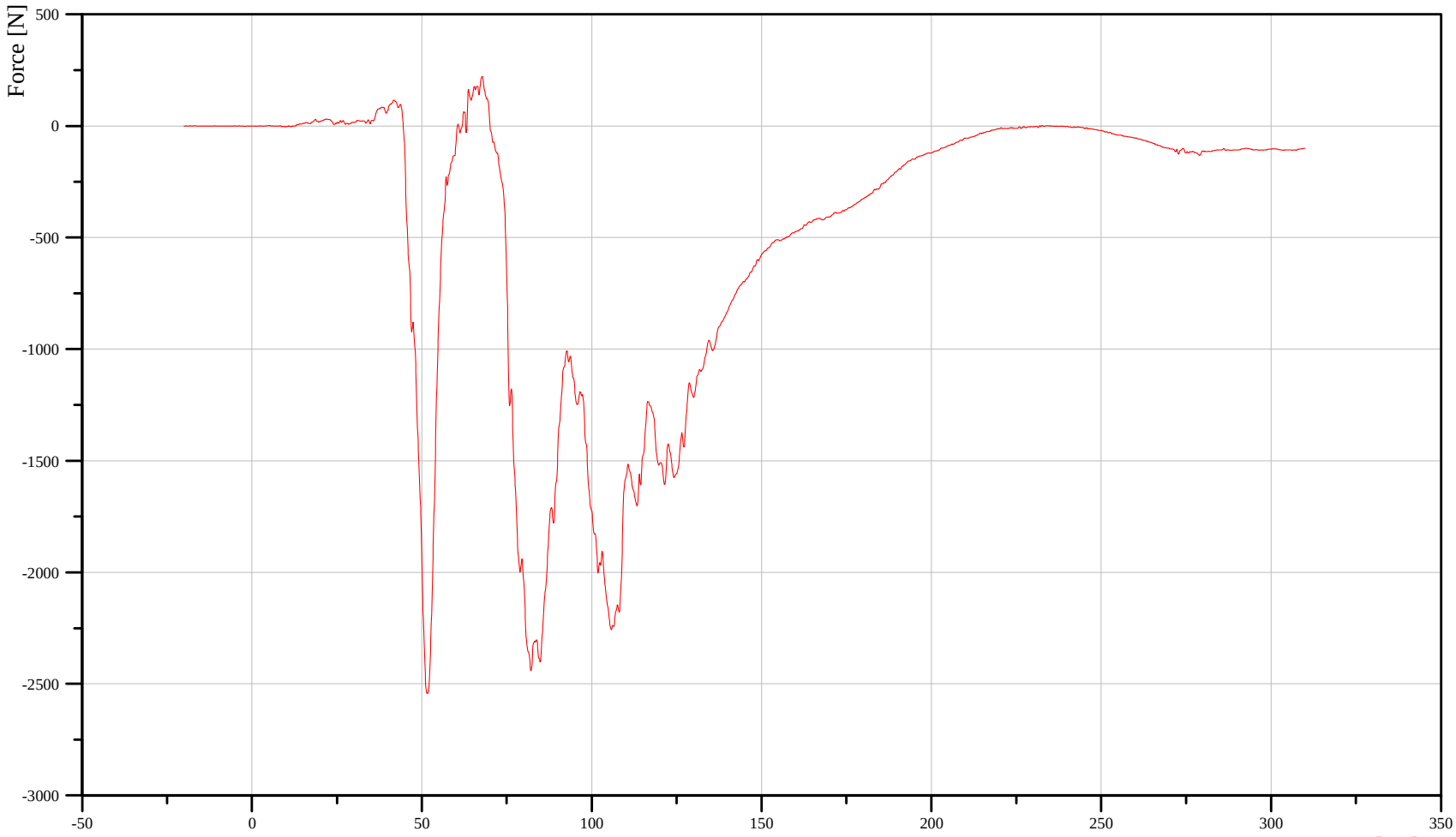
Right Lower Tibia Force Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRLFXHFFOZB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-2,542.65 N at 51.44 ms

Max. Value
221.96 N at 67.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

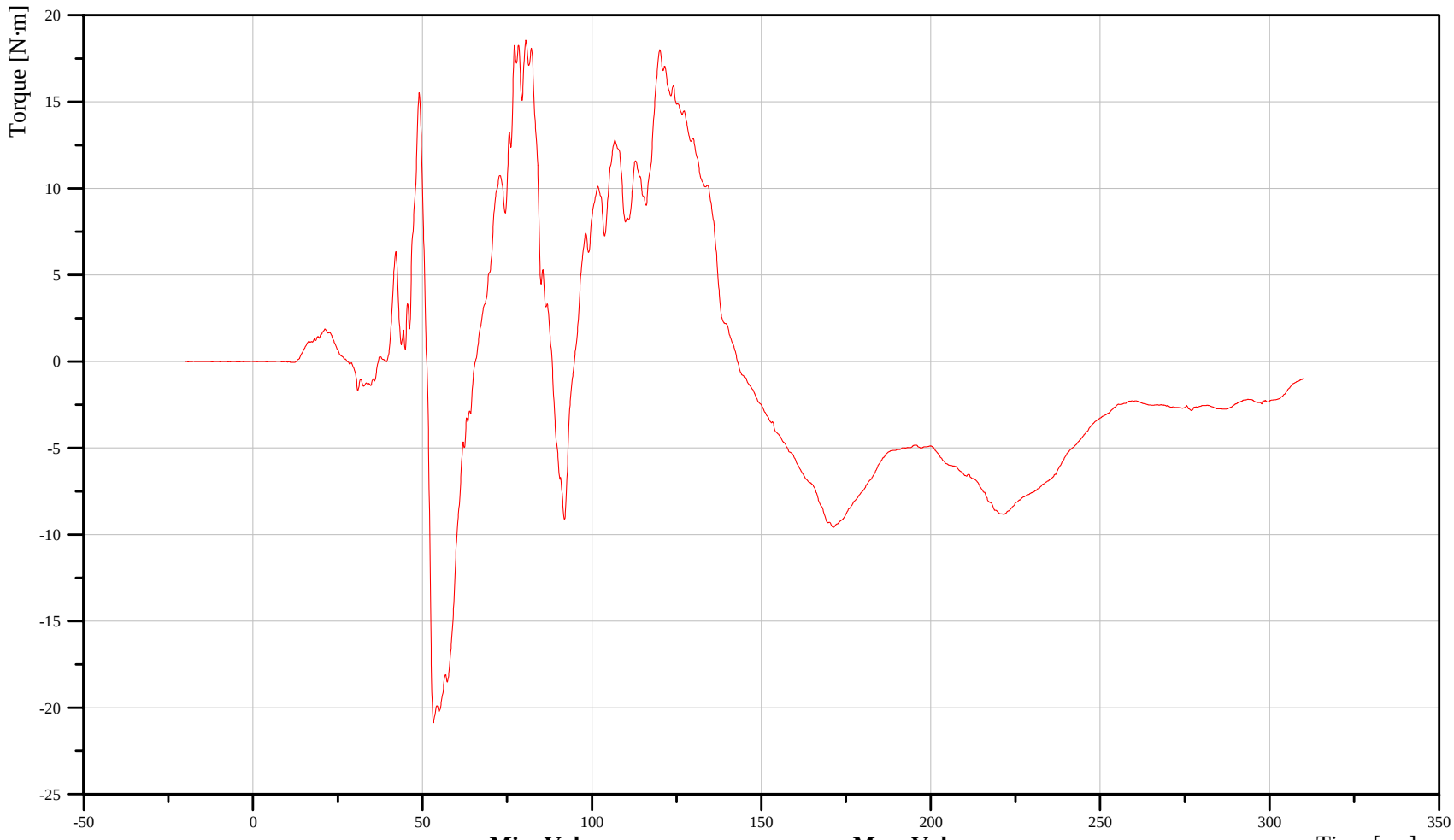
Right Lower Tibia Moment X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRLFXHFMOXB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-20.86 N·m at 53.20 ms

Max. Value
18.56 N·m at 80.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

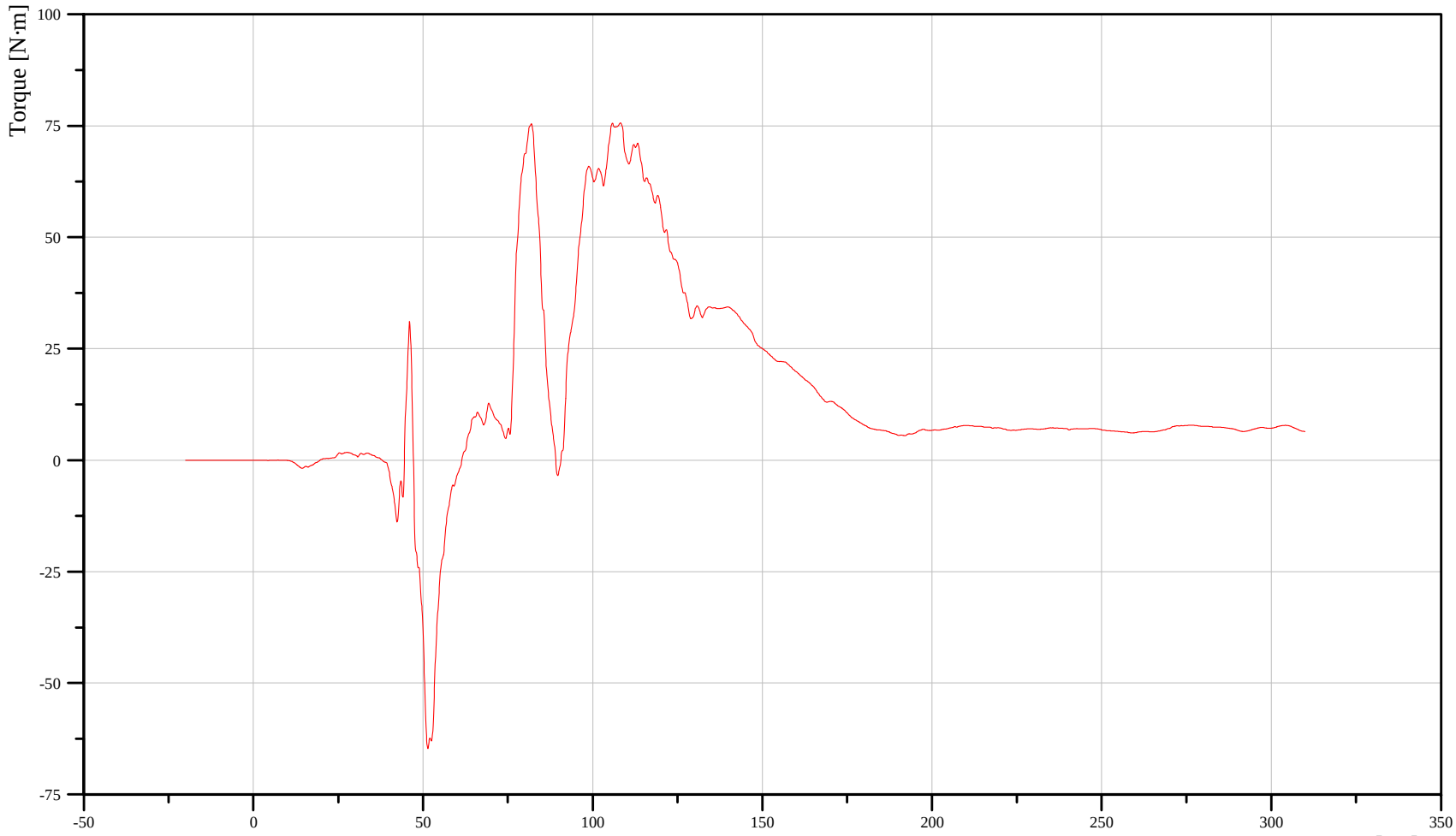
Right Lower Tibia Moment Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13TIBIRLFXHFMOYB

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_600

Min. Value
-64.69 N·m at 51.44 ms

Max. Value
75.70 N·m at 108.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

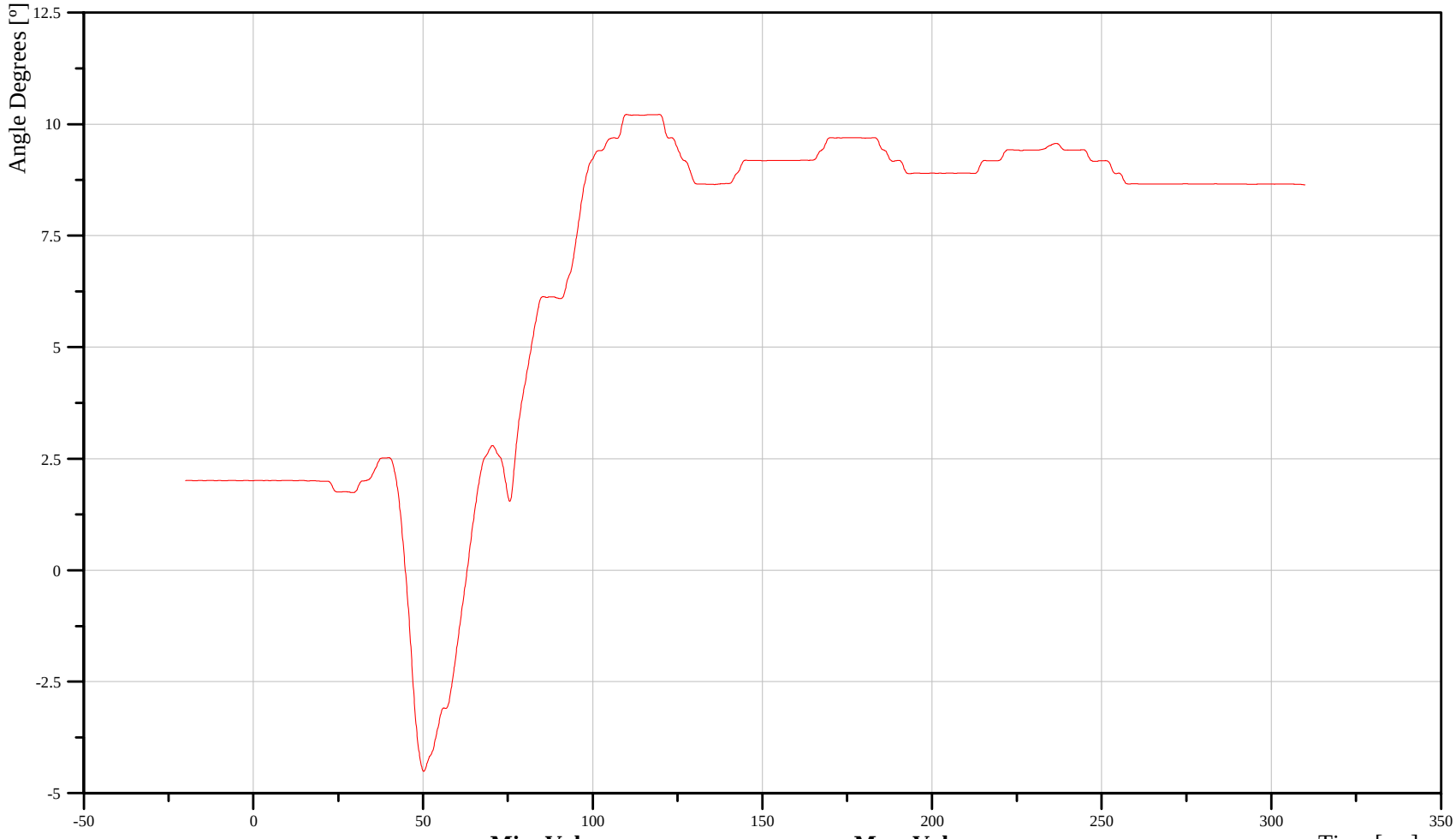
Right Foot Disp. X FLX101X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFANXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-4.51 ° at 50.16 ms

Max. Value
10.22 ° at 110.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

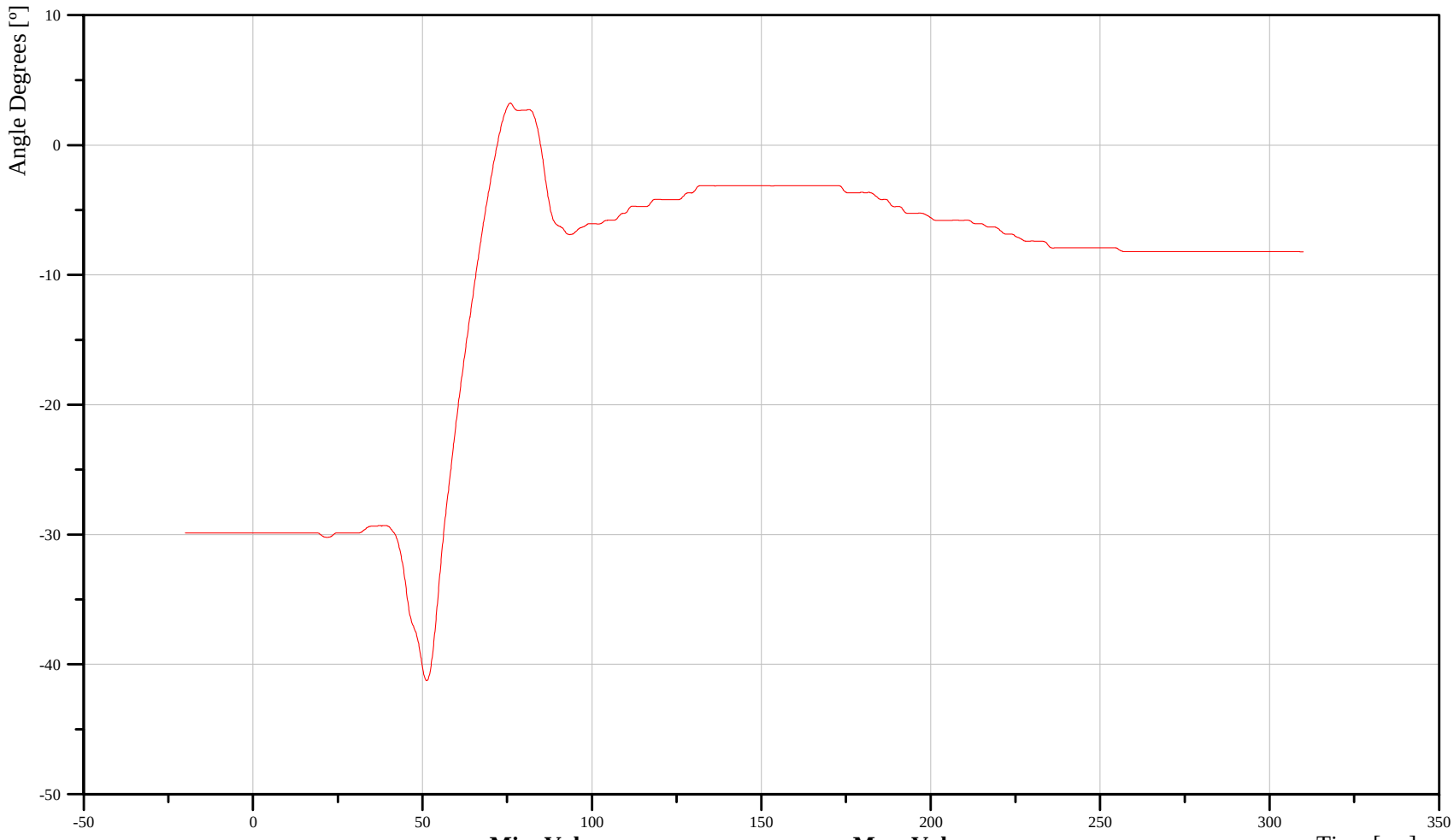
Right Foot Disp. Y FLX101Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFANYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-41.24 ° at 51.28 ms

Max. Value
3.22 ° at 75.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

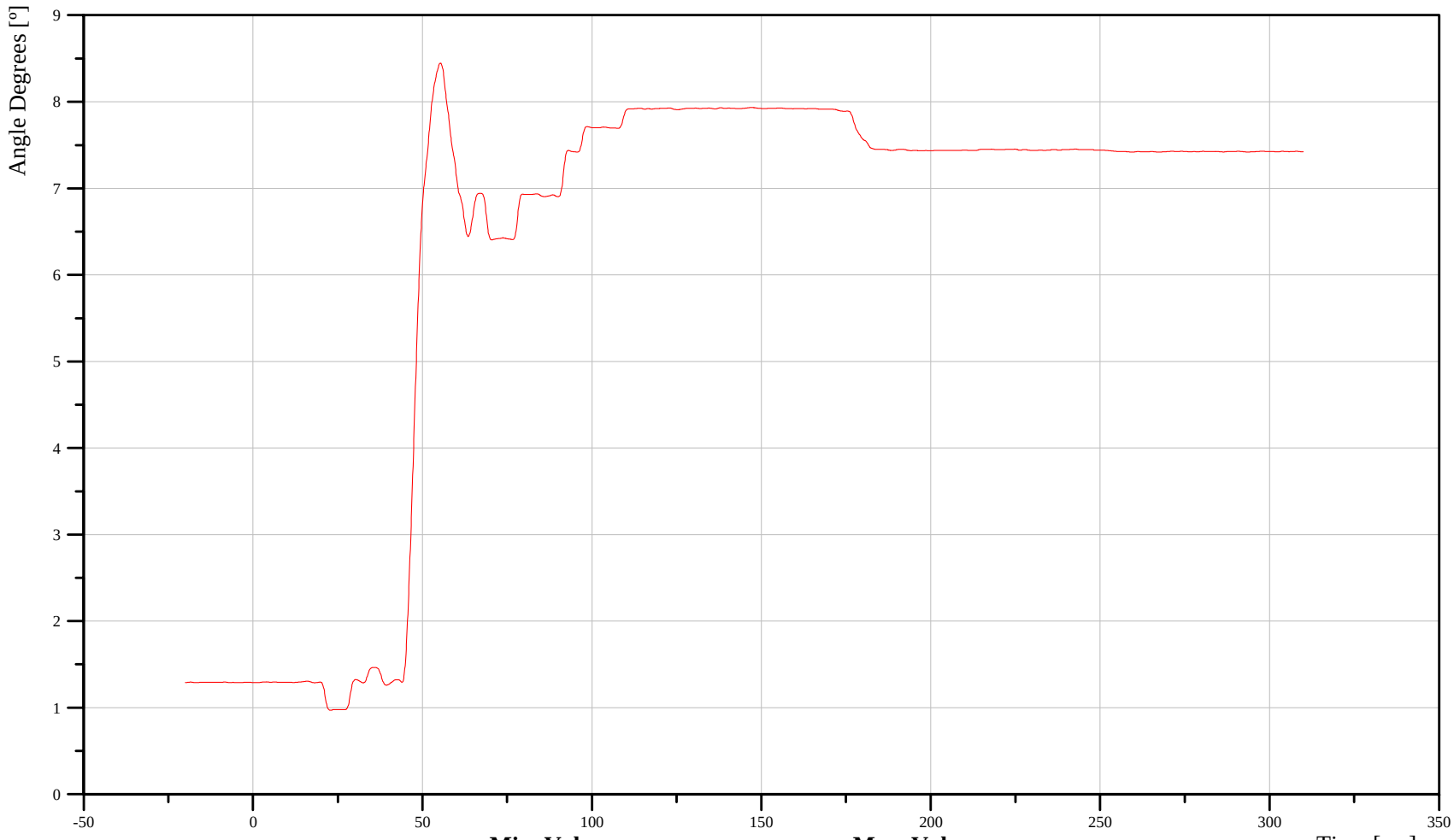
Right Foot Disp. Z FLX101Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFANZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
0.97 ° at 22.80 ms

Max. Value
8.45 ° at 55.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

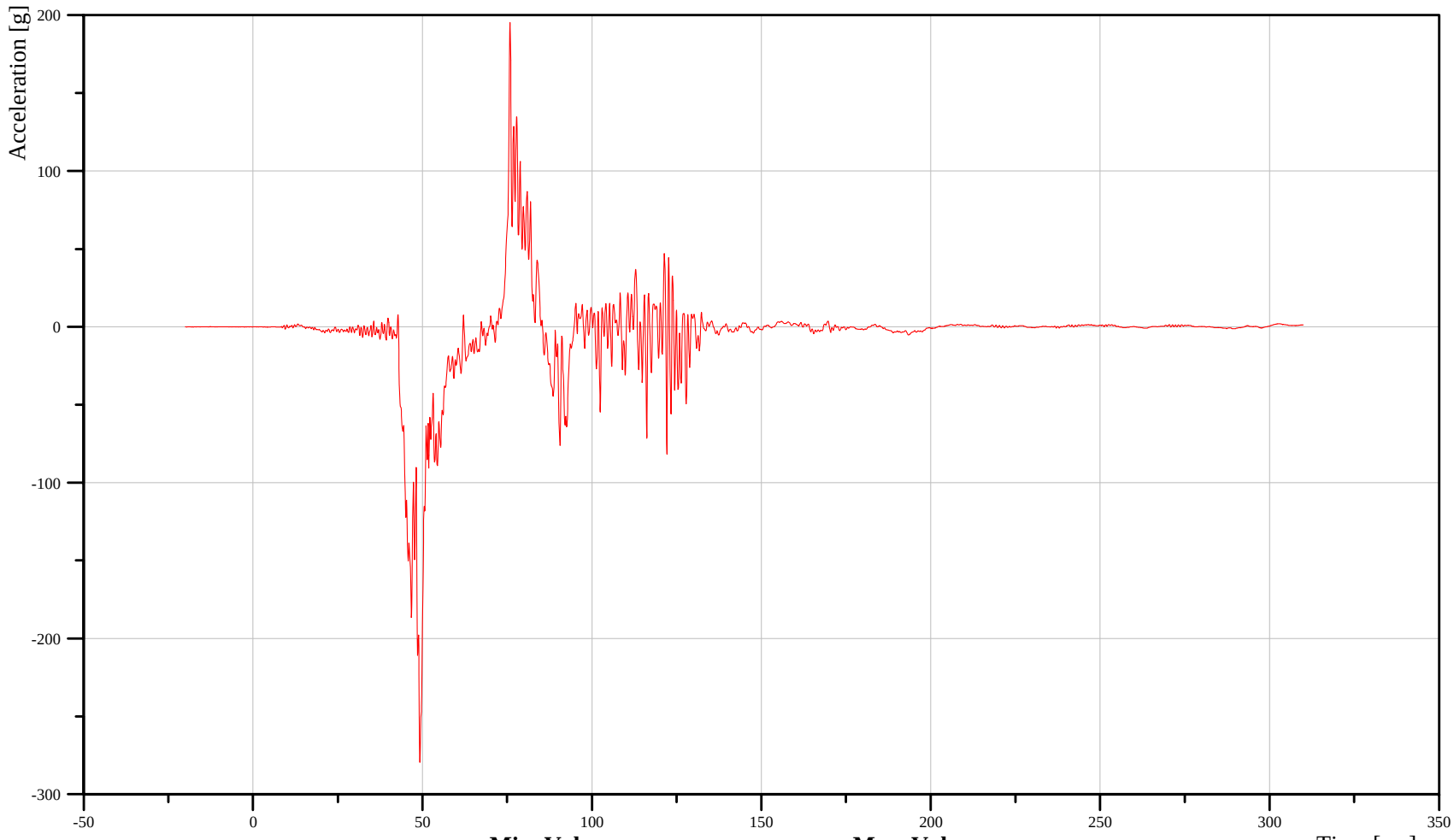
Right Foot Accel X

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-279.64 g at 49.20 ms

Max. Value
195.31 g at 75.84 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

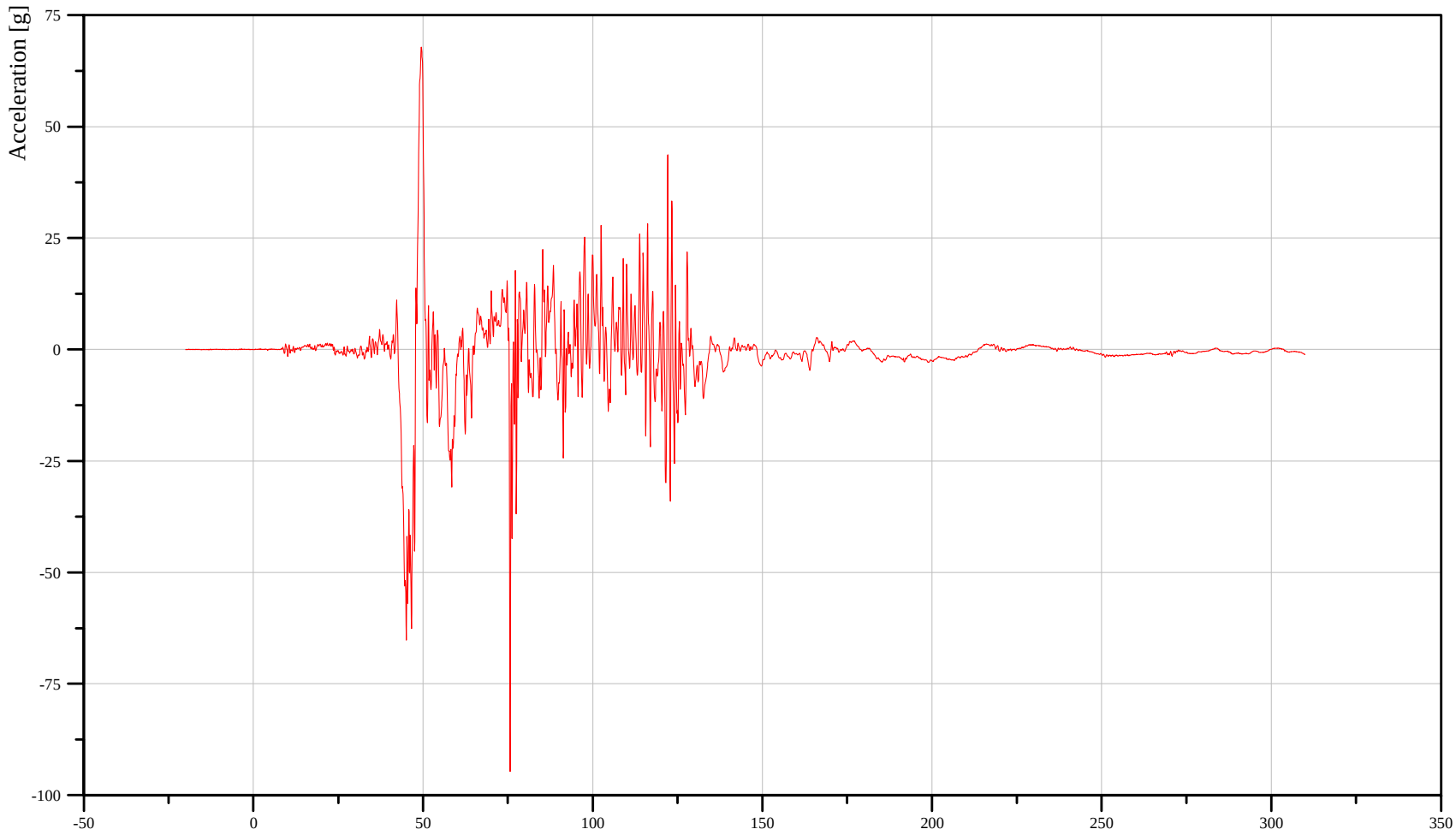
Right Foot Accel Y

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-94.71 g at 75.68 ms

Max. Value
67.84 g at 49.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

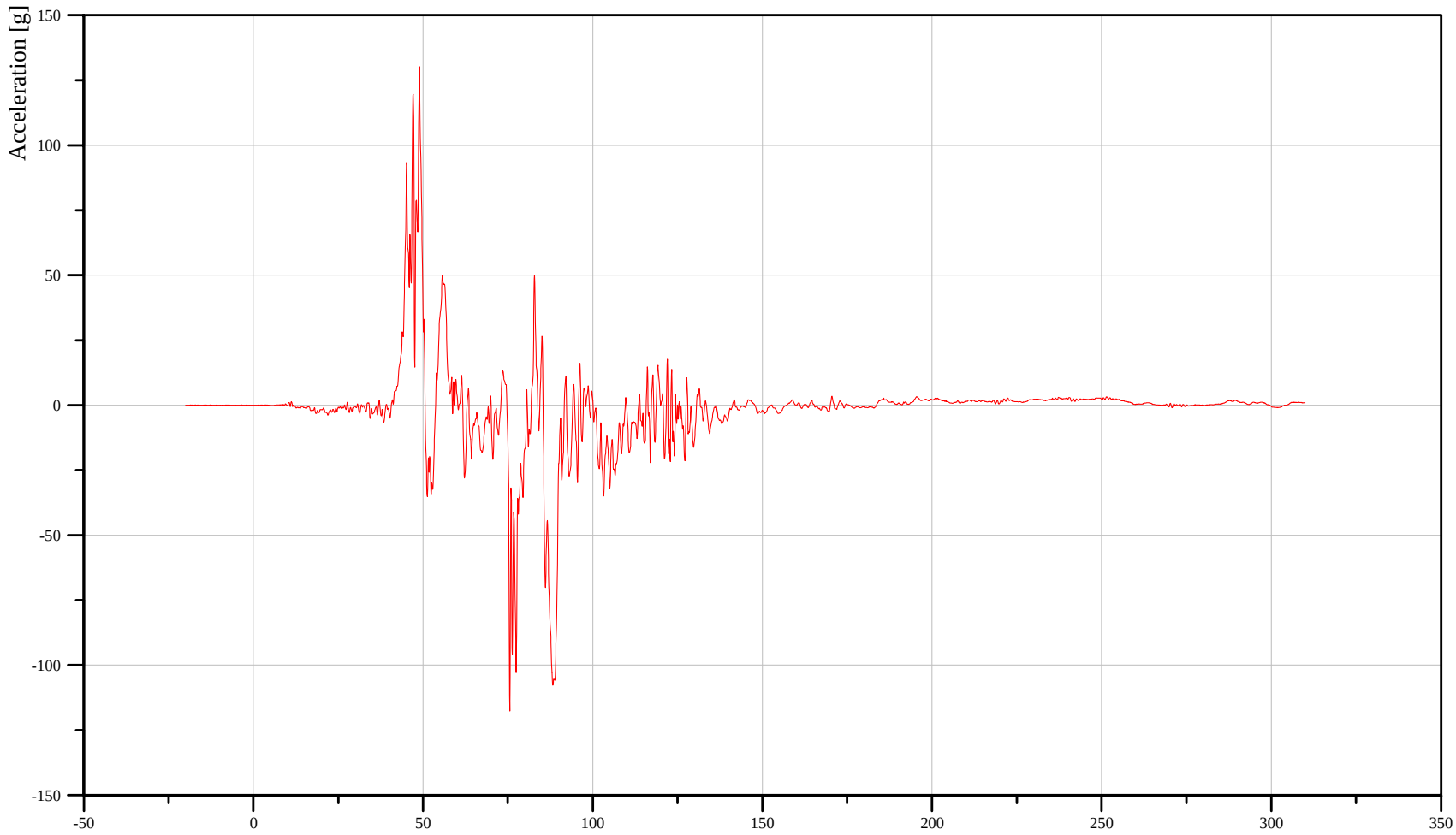
Right Foot Accel Z

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-117.54 g at 75.60 ms

Max. Value
130.21 g at 48.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

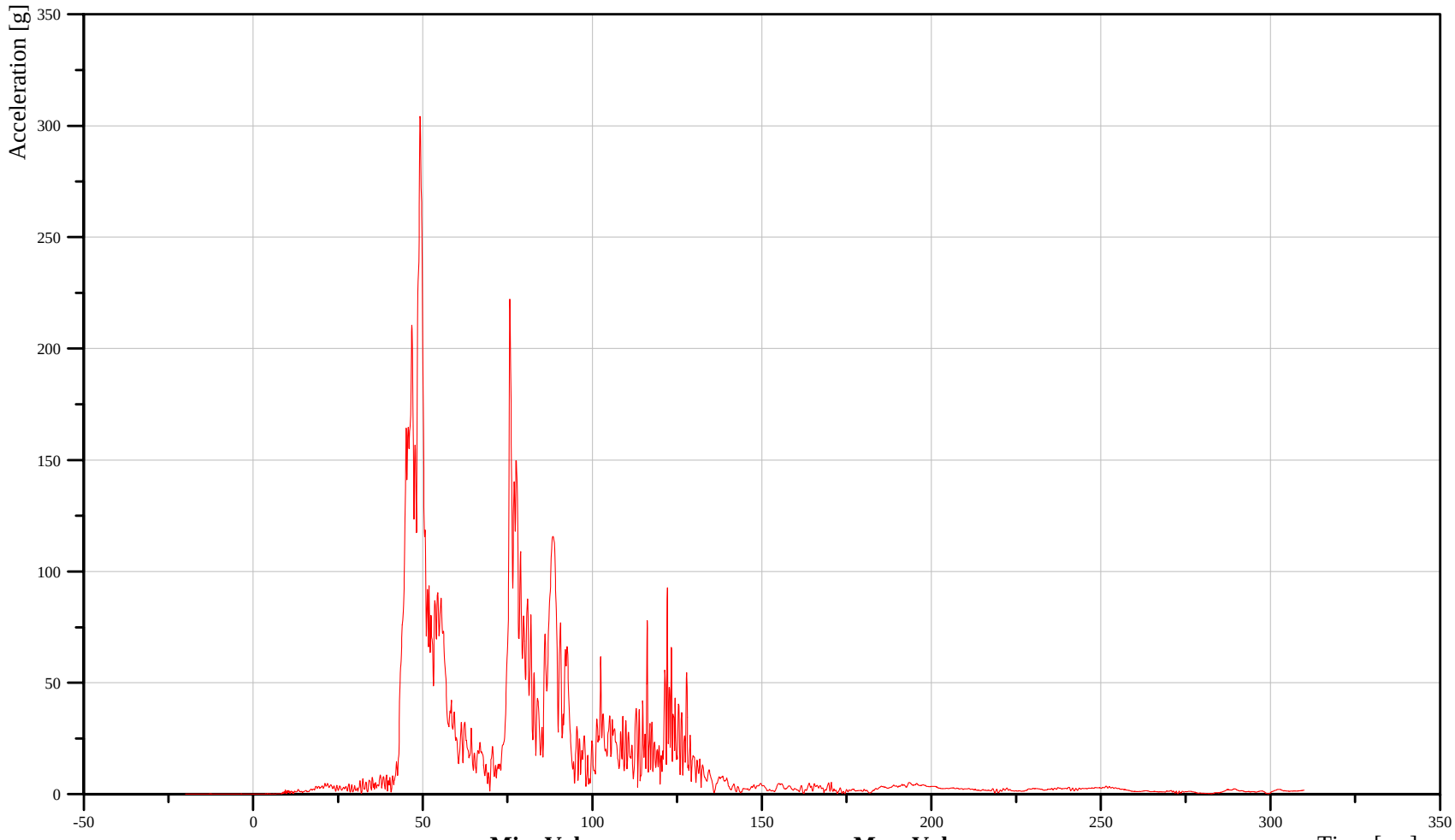
Right Foot Accel Resultant

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
0.01 g at -12.00 ms

Max. Value
304.17 g at 49.20 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

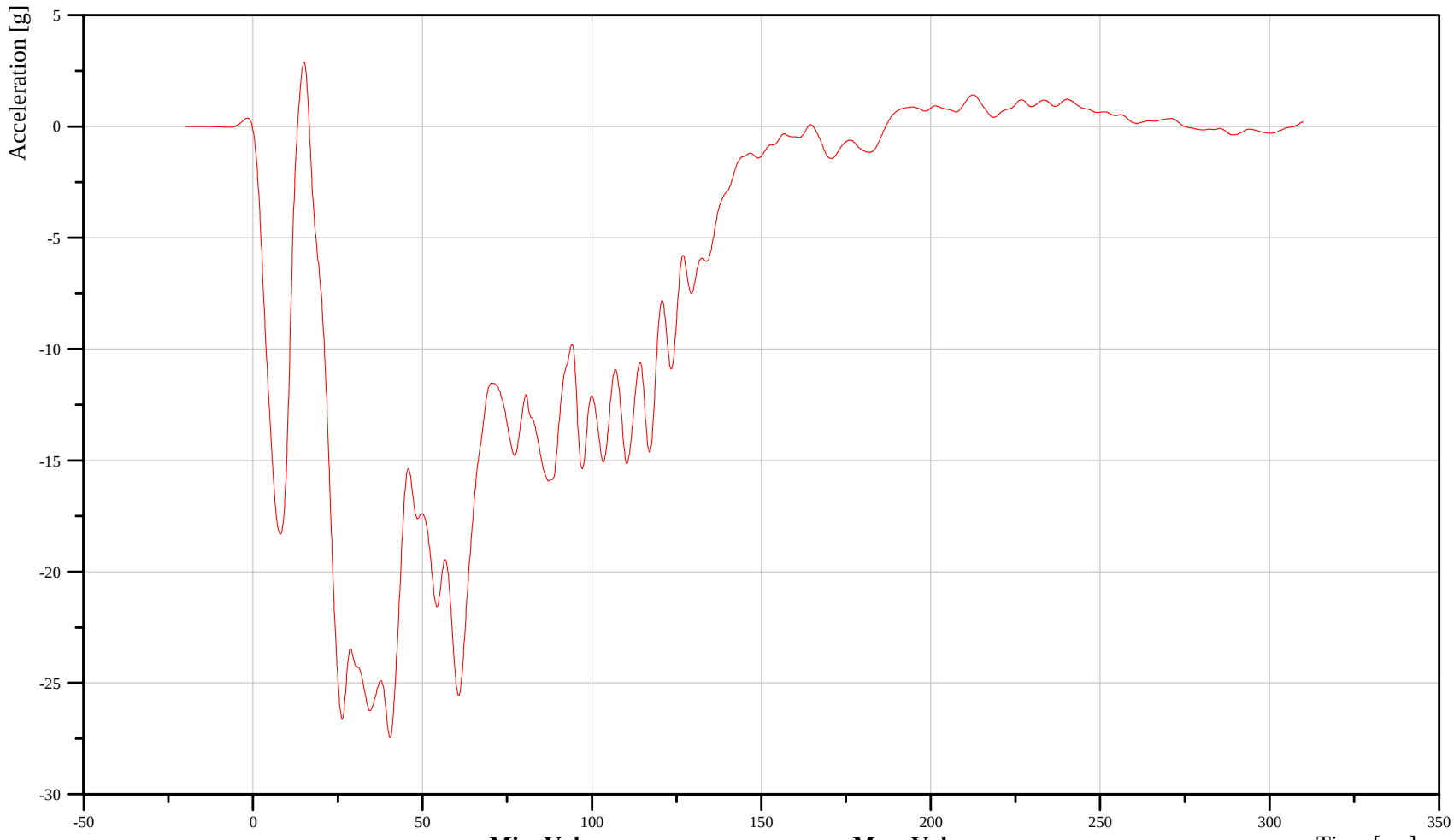
Left Rear Seat Cross-member X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

14CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-27.45 g at 40.40 ms

Max. Value
2.91 g at 15.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

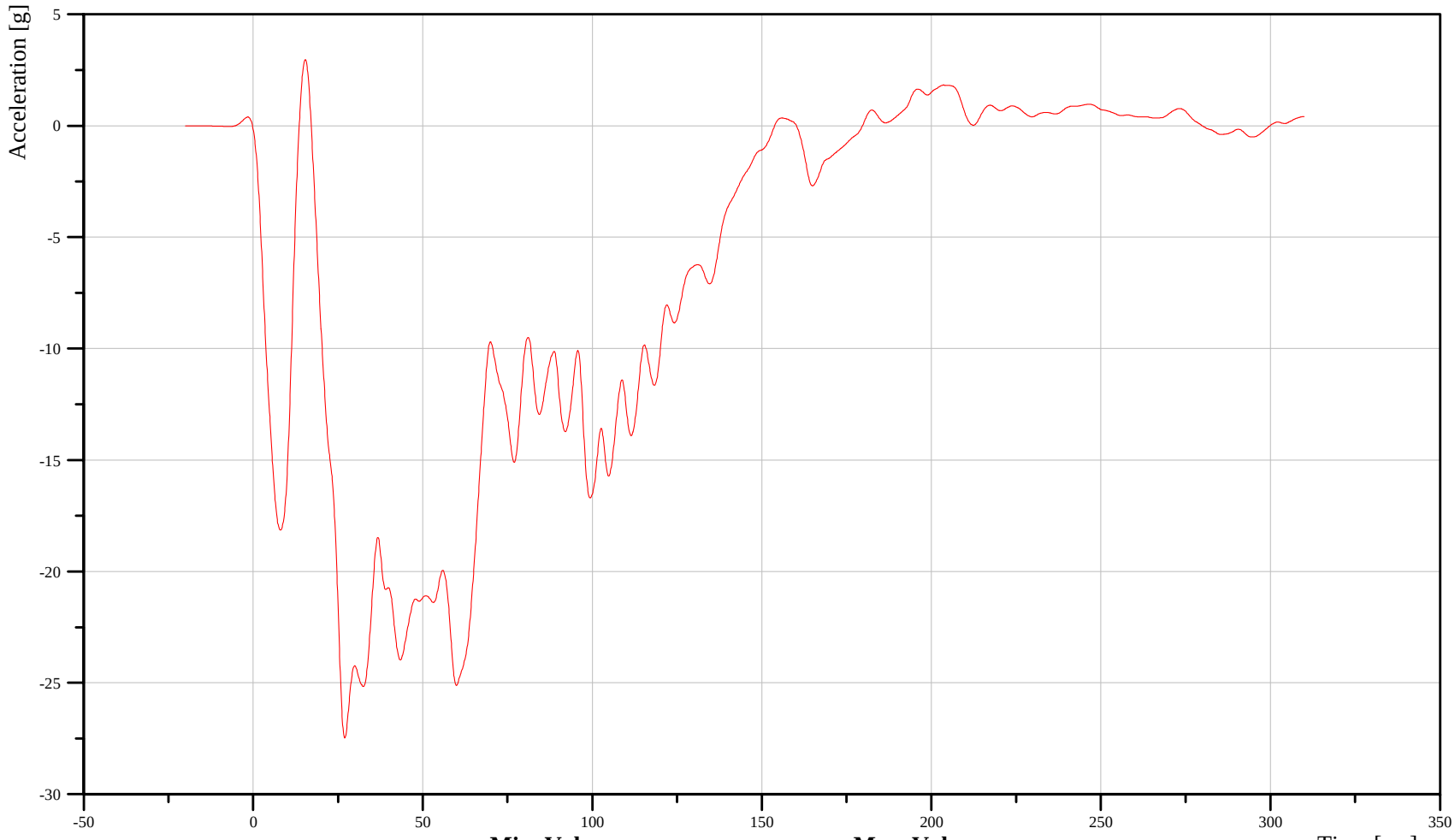
Right Rear Seat Cross-member X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

16CRME000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-27.48 g at 26.96 ms

Max. Value
2.97 g at 15.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

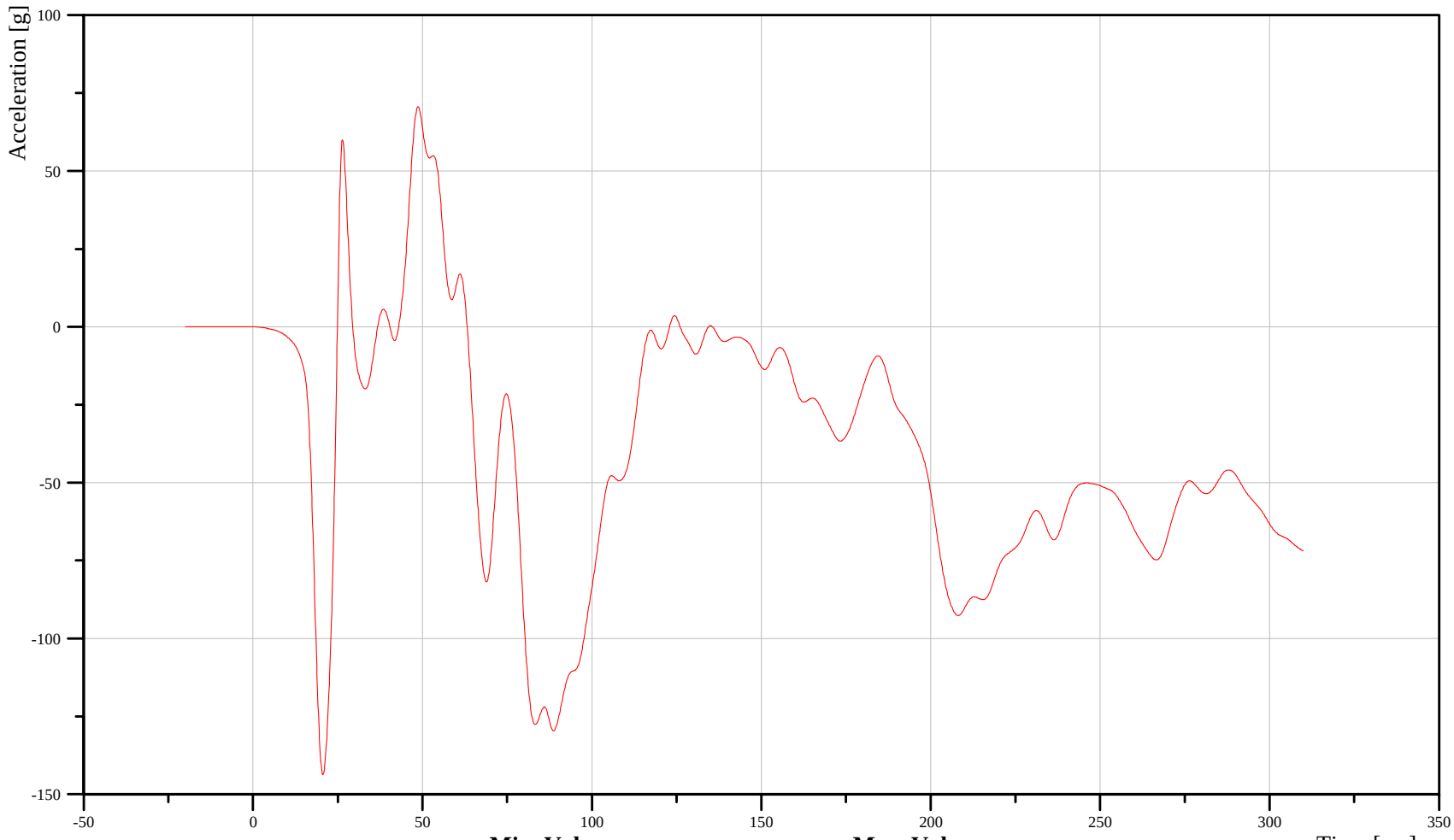
Top of Engine X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

12ENGNTP0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-143.67 g at 20.64 ms

Max. Value
70.63 g at 48.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

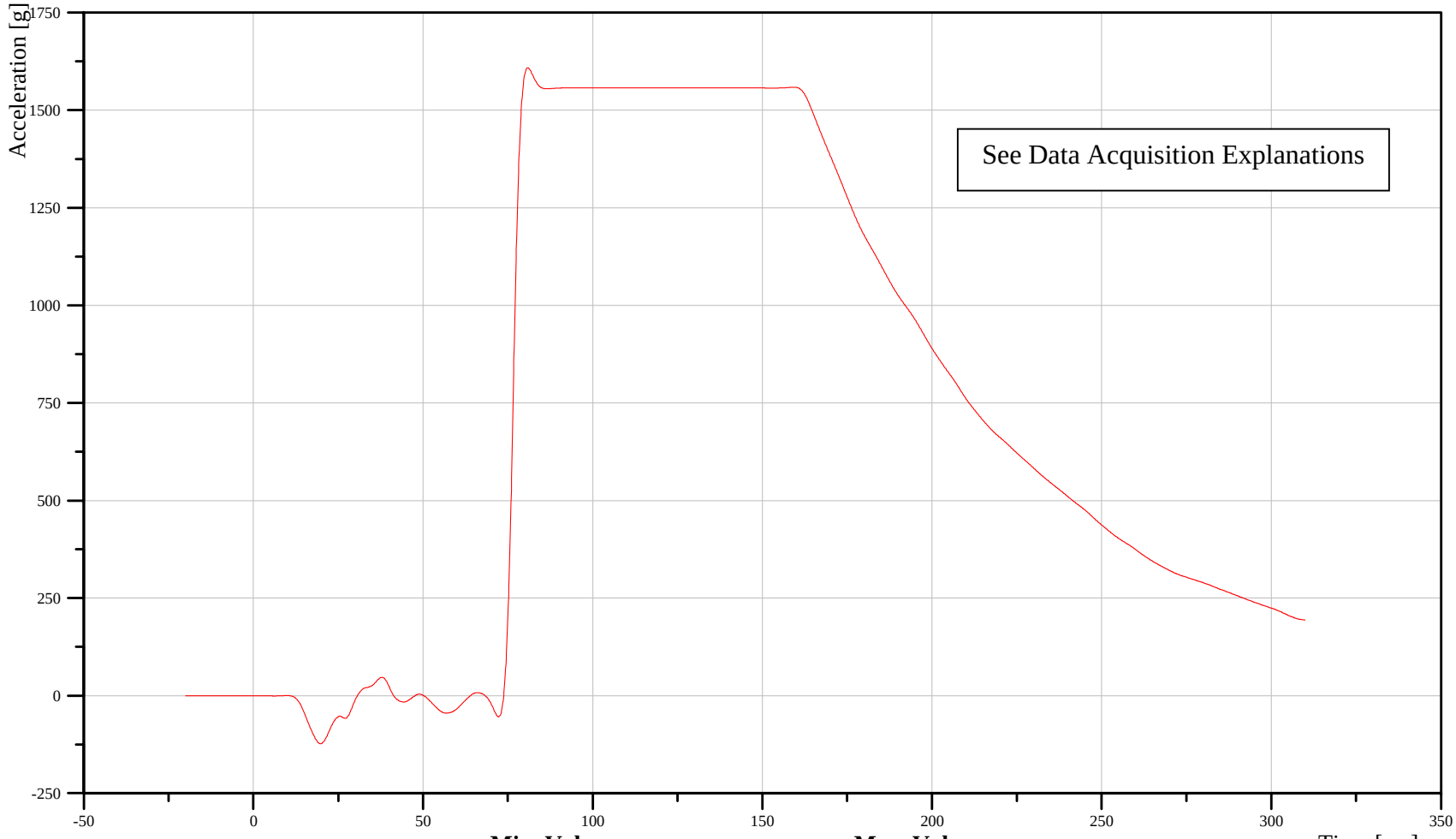
Bottom of Engine X-axis Acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

12ENGNBO0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-123.06 g at 19.76 ms

Max. Value
1,608.98 g at 80.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

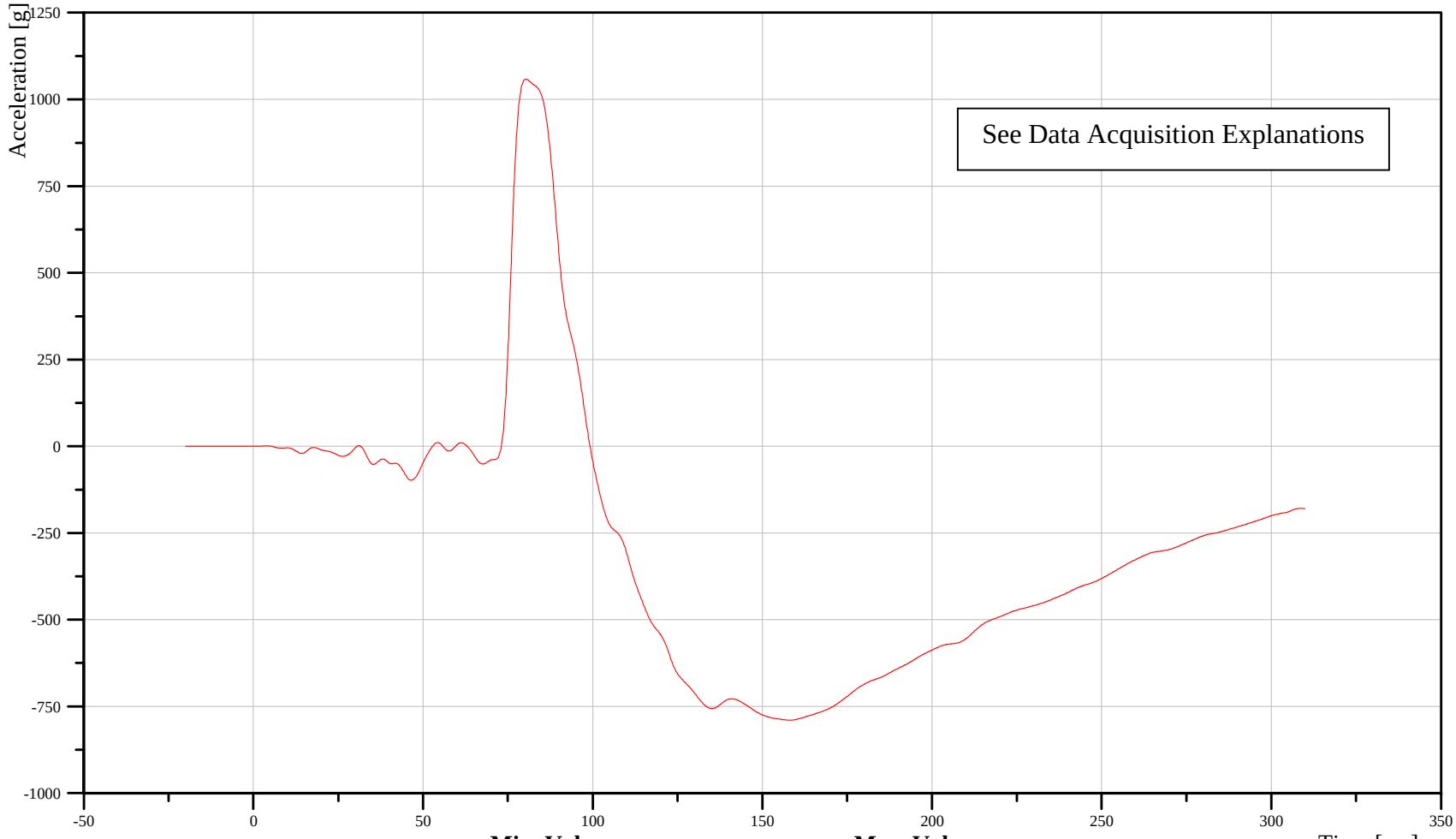
Right Front Brake Caliper X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13VEHCRI0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-789.29 g at 158.24 ms

Max. Value
1,058.20 g at 80.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

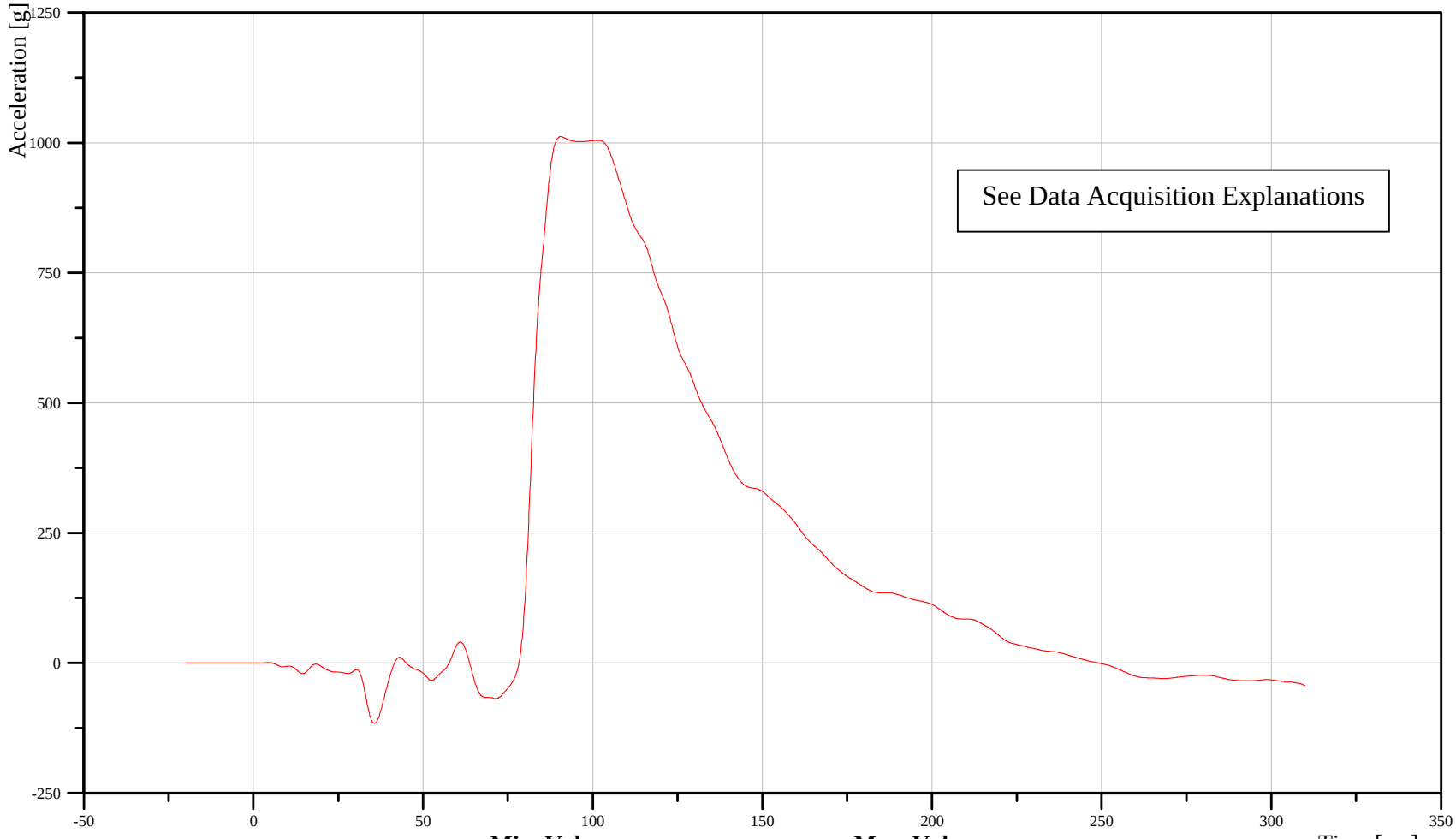
Left Front Brake Caliper X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11VEHCLE0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-115.14 g at 35.68 ms

Max. Value
1,011.73 g at 90.56 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

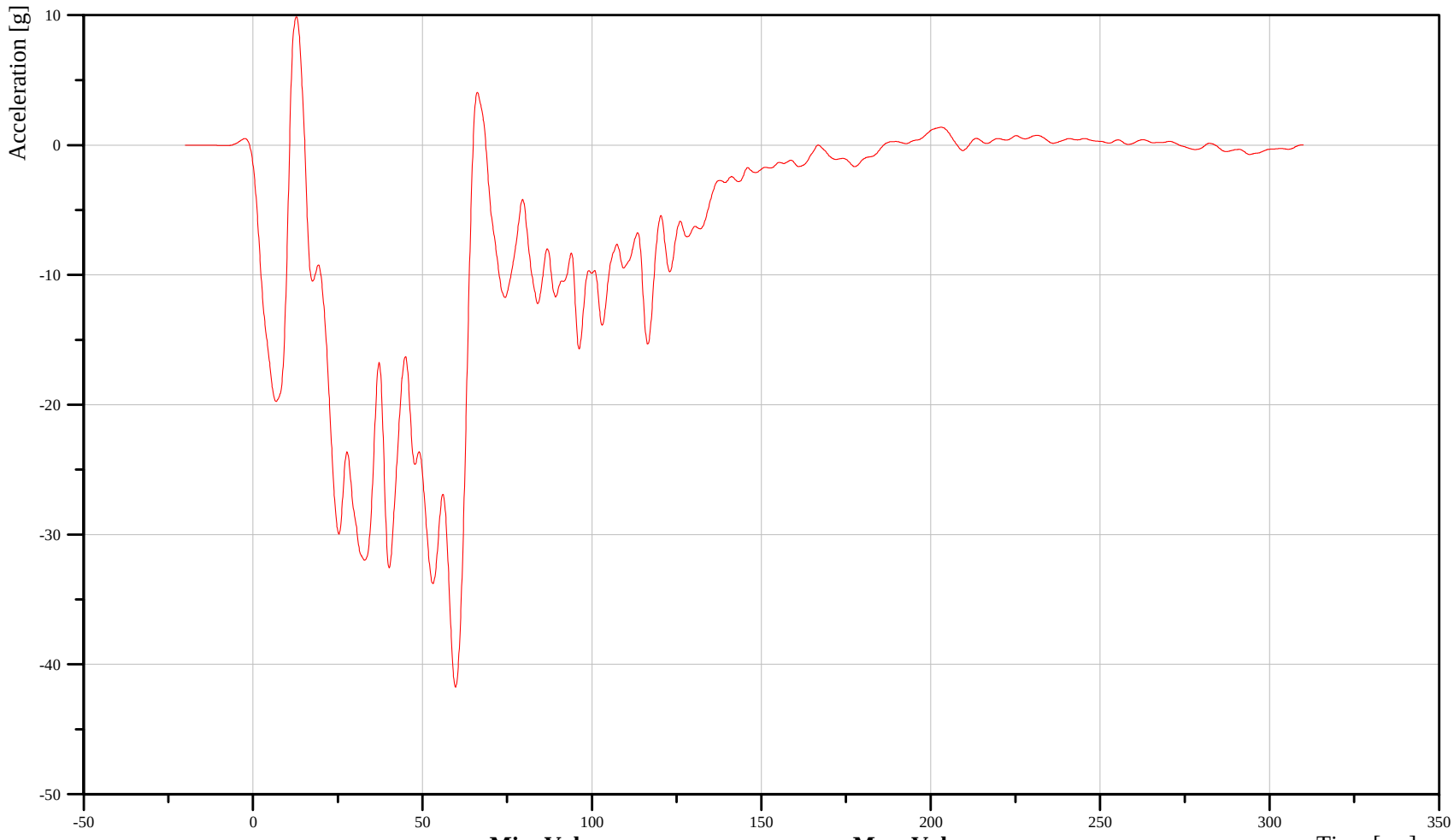
Toe Pan Accelerator x-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11PEAC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-41.76 g at 59.76 ms

Max. Value
9.88 g at 12.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

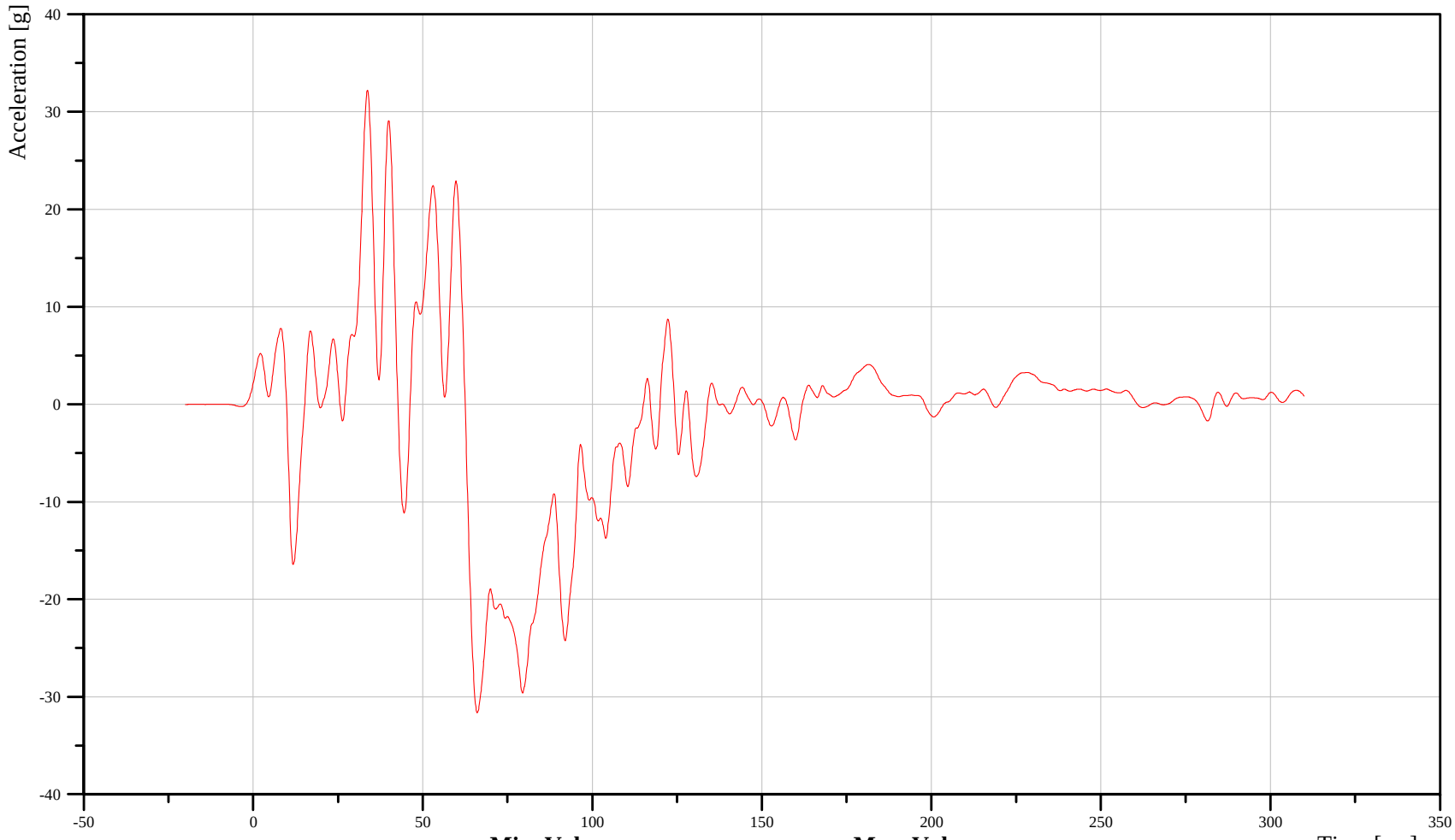
Toe Pan Accelerator z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11PEAC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-31.64 g at 66.08 ms

Max. Value
32.20 g at 33.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

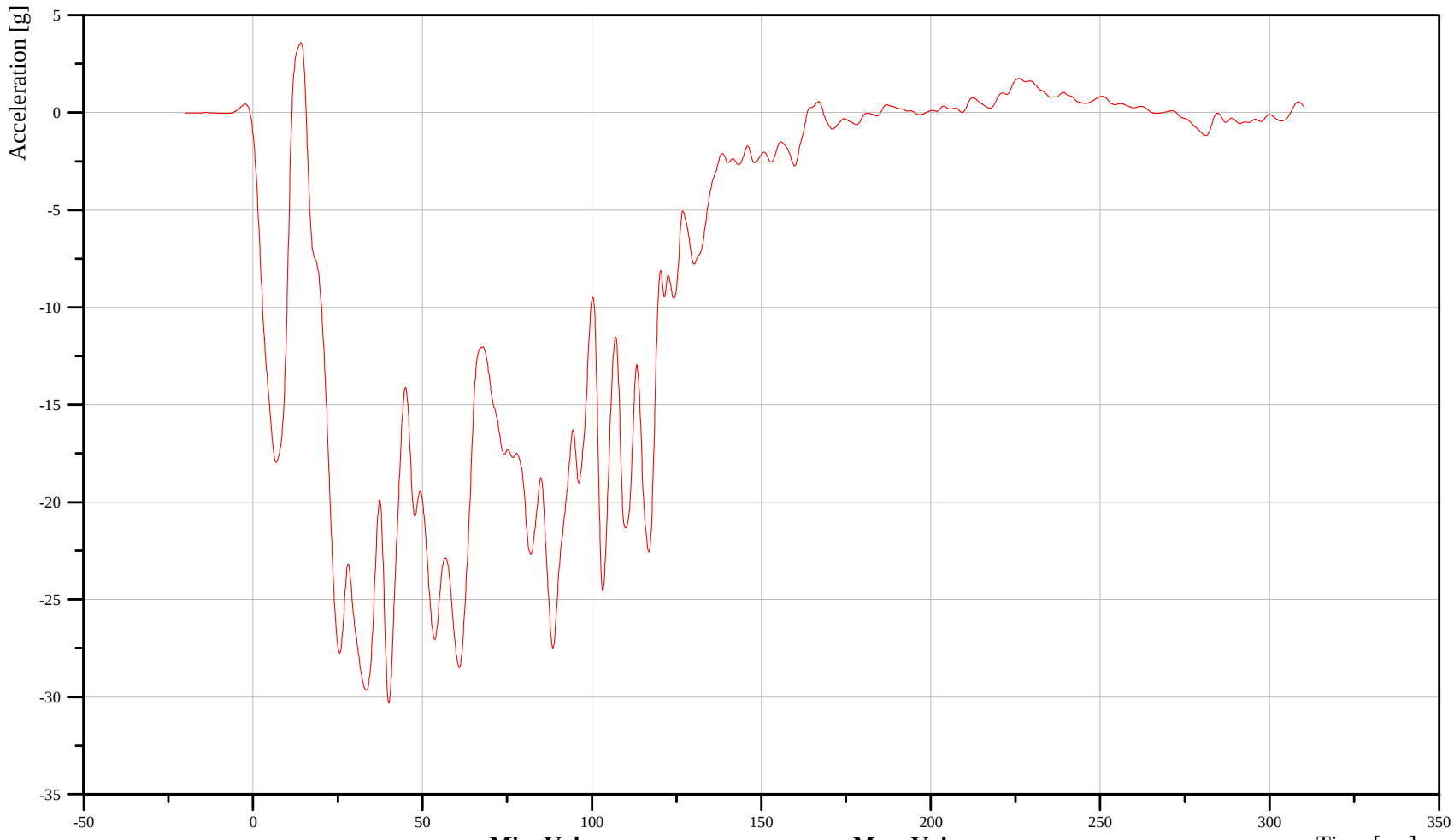
Toe Pan footrest x-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11VEHC000001ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-30.31 g at 40.08 ms

Max. Value
3.58 g at 14.16 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

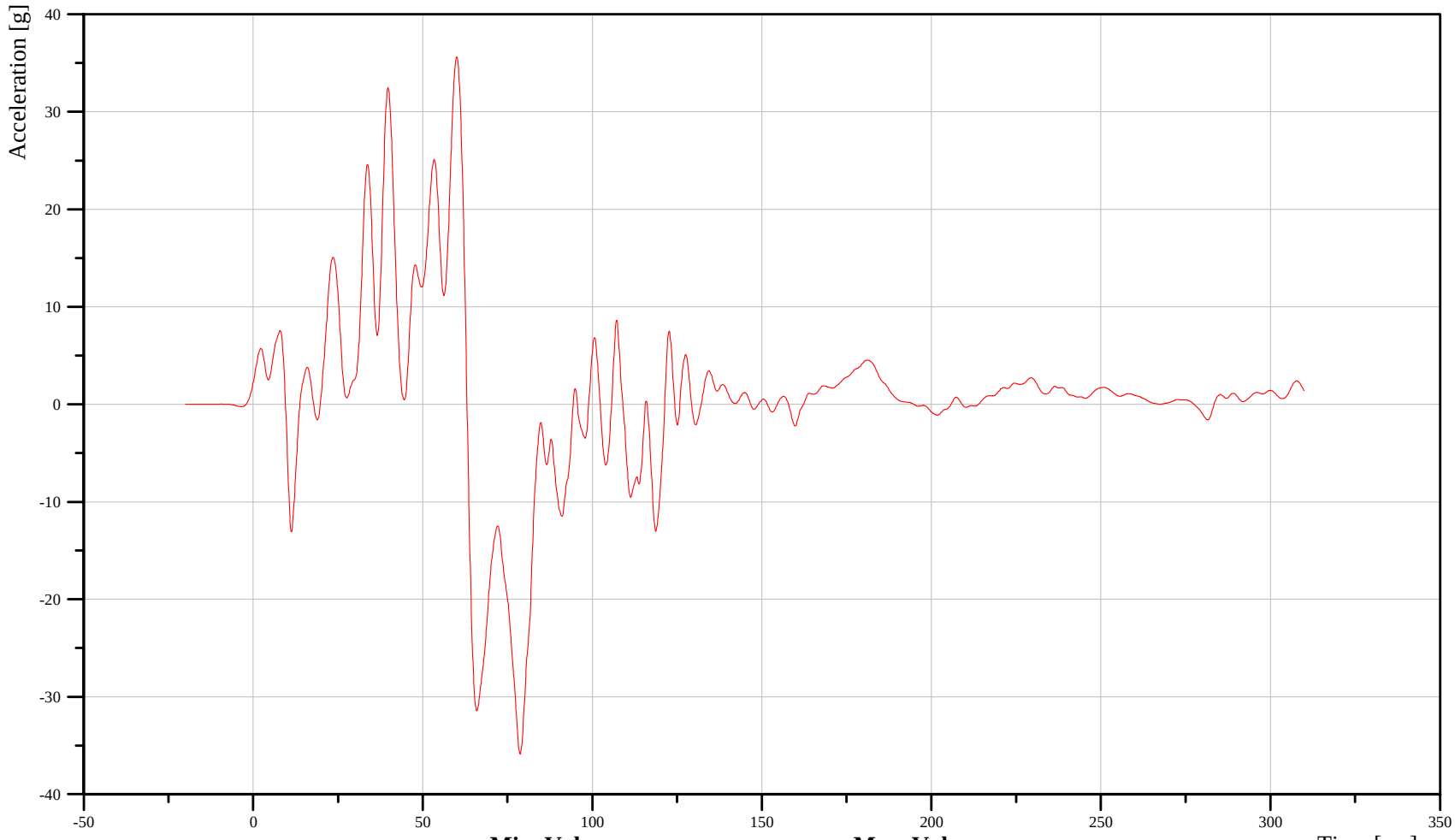
Toe Pan footrest z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11VEHC000001ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-35.89 g at 78.72 ms

Max. Value
35.62 g at 60.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

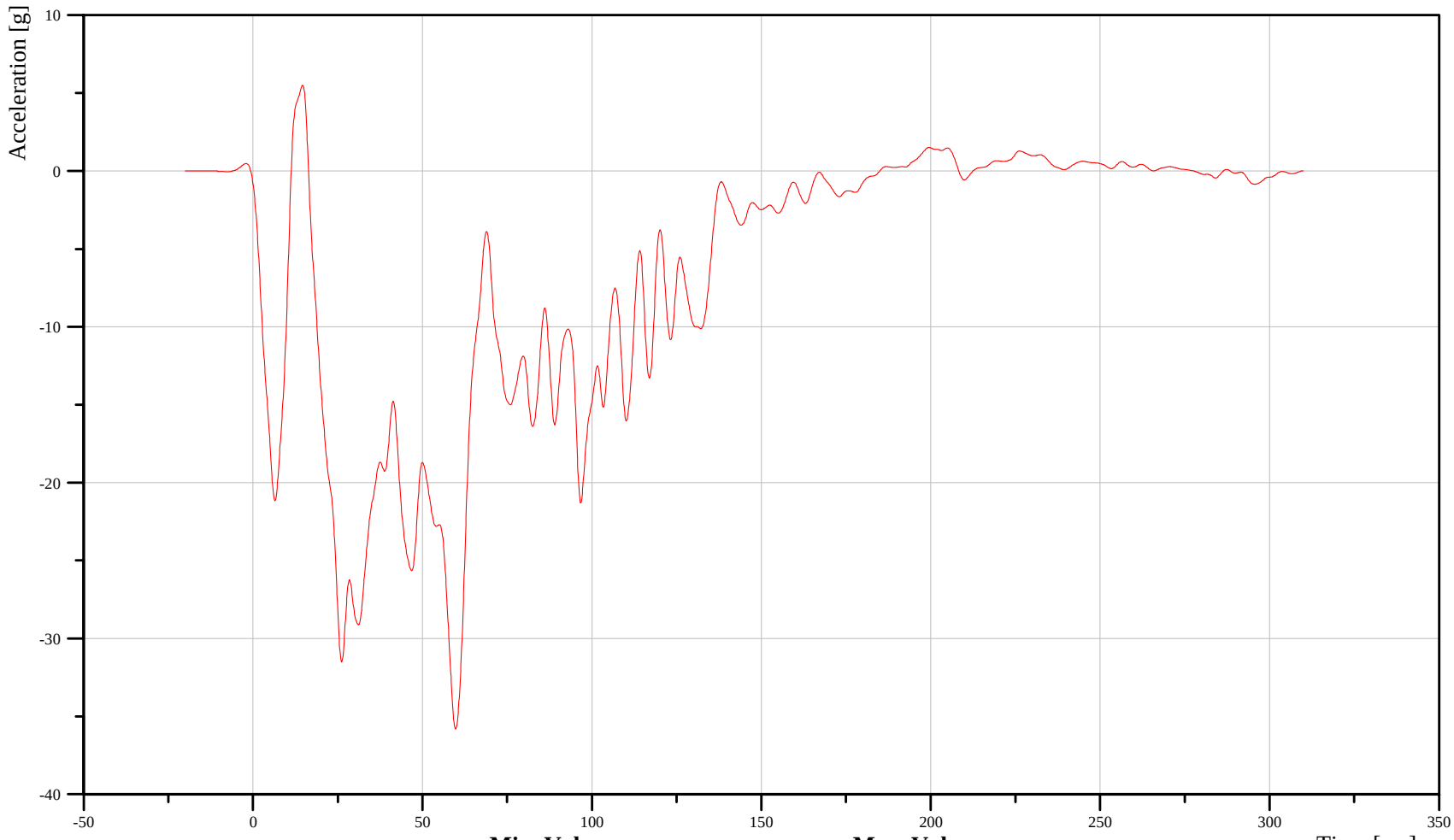
Rear Tunnel center x-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

15TUNNCY0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-35.81 g at 59.76 ms

Max. Value
5.50 g at 14.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

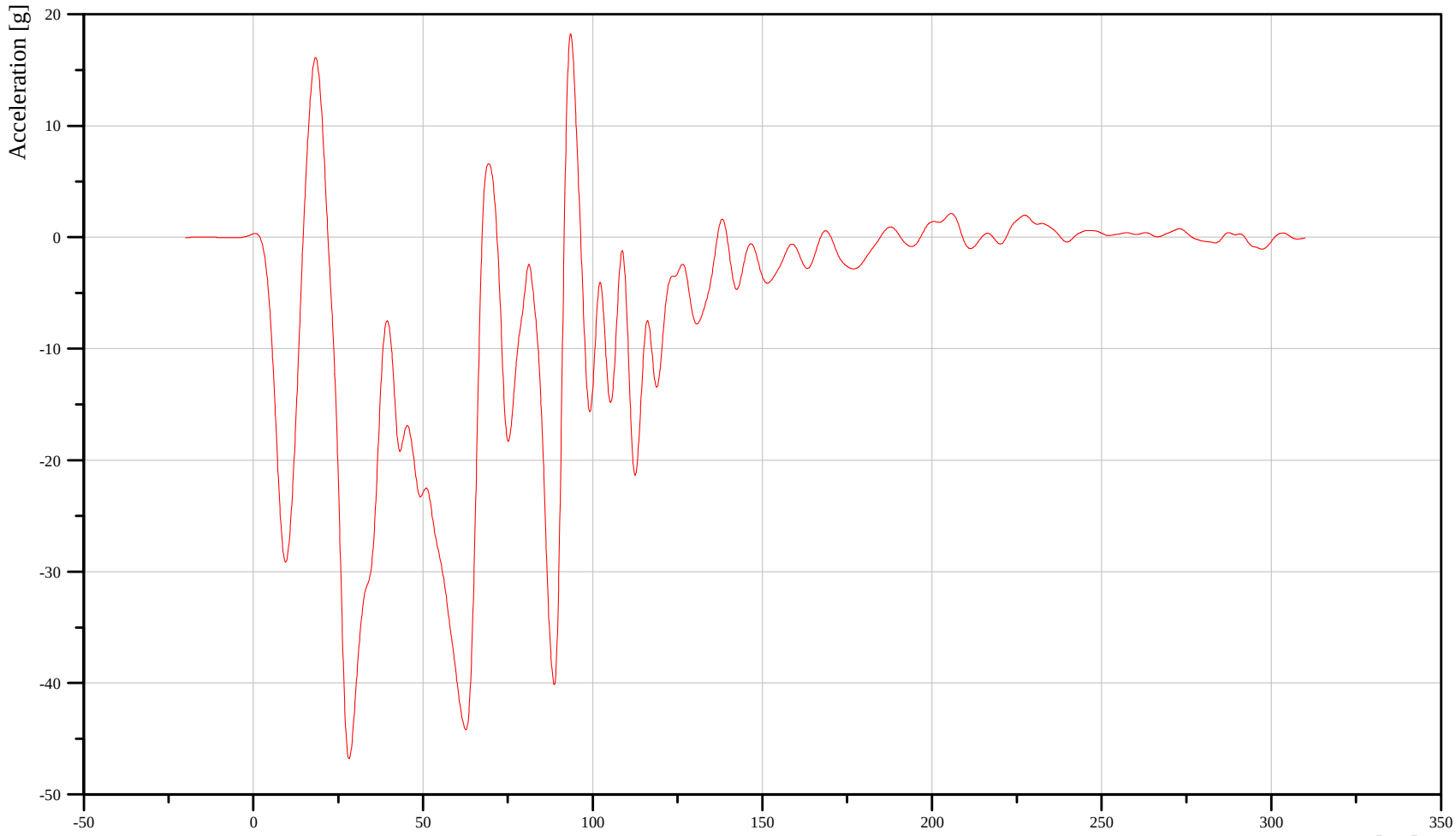
Vehicle CG X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-46.79 g at 28.16 ms

Max. Value
18.25 g at 93.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

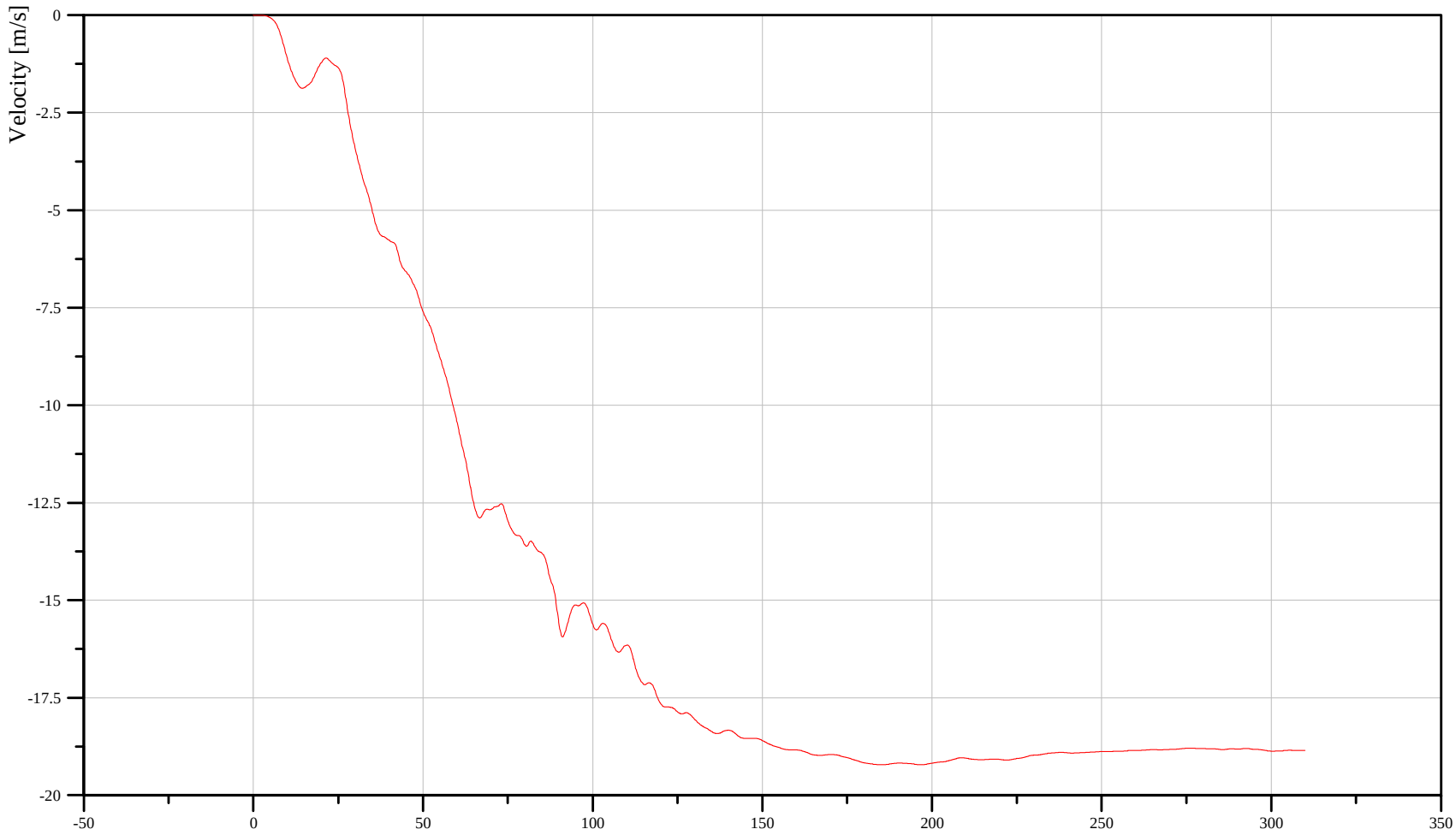
Vehicle CG X-axis Velocity

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000VEXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-19.22 m/s at 184.88 ms

Max. Value
0.00 m/s at 0.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

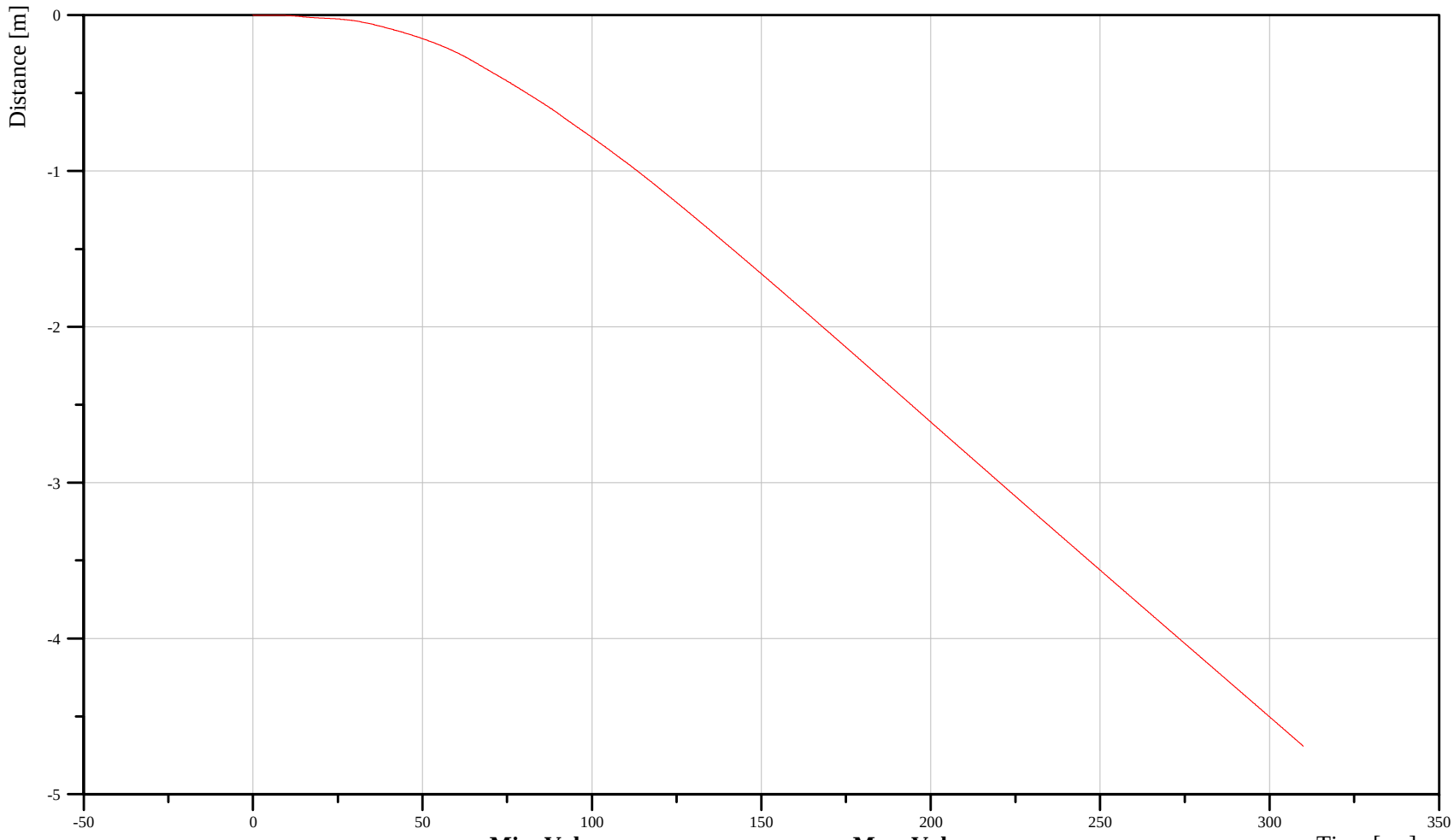
Vehicle CG X-axis Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000DCXC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-4.69 m at 310.00 ms

Max. Value
0.00 m at 0.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

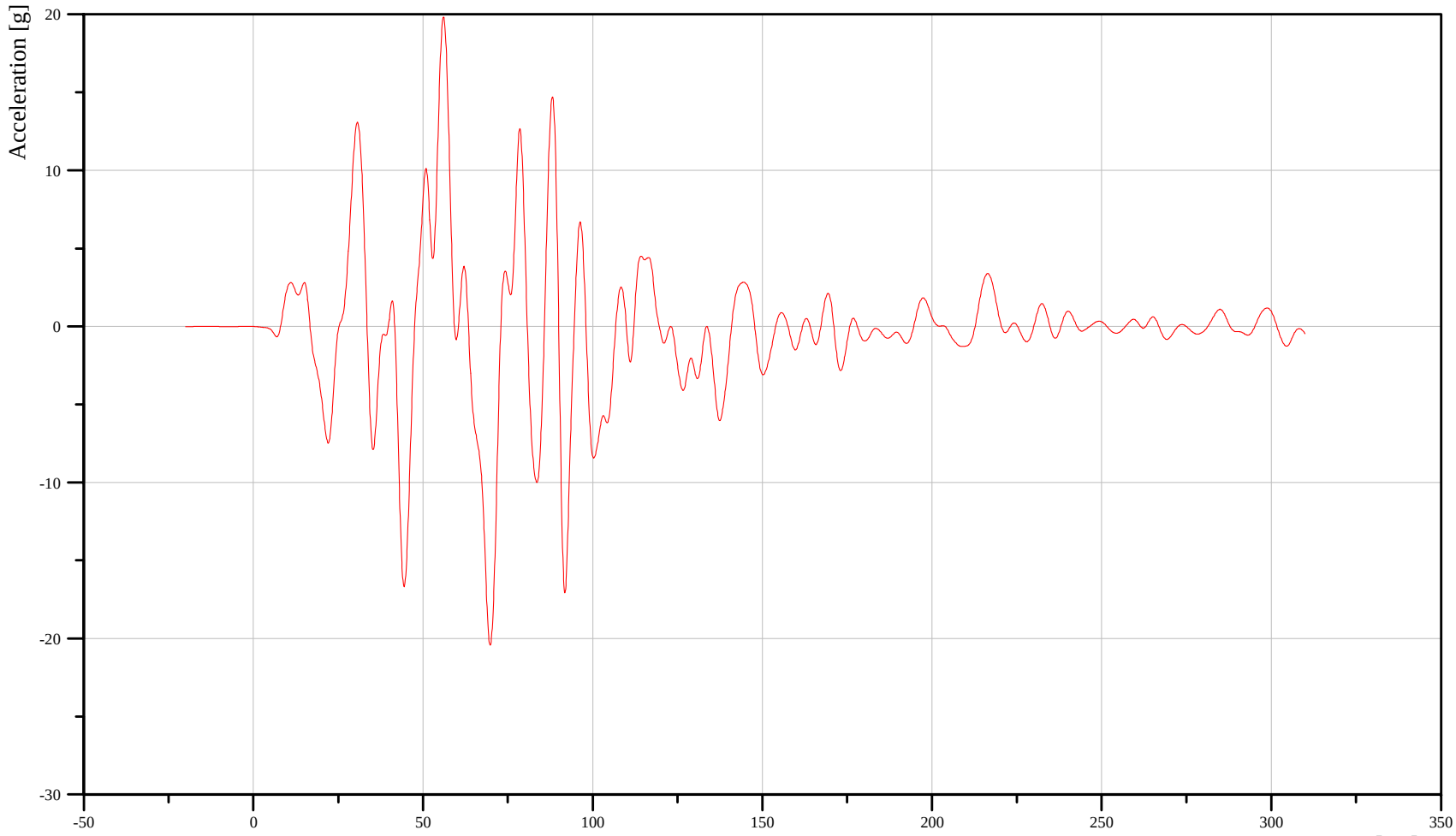
Vehicle CG Y-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000ACYD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-20.43 g at 69.76 ms

Max. Value
19.83 g at 56.00 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

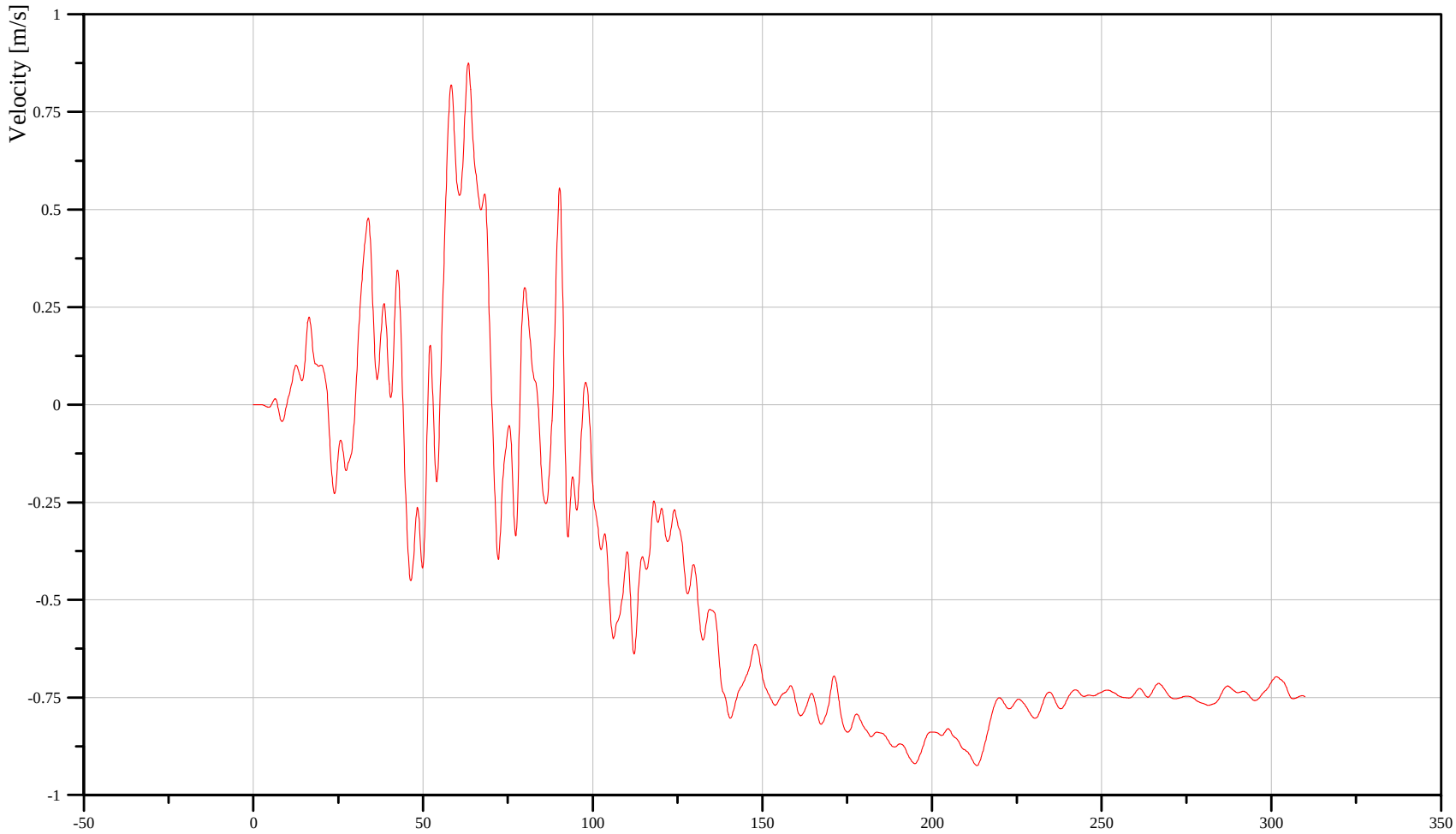
Vehicle CG Y-axis Velocity

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000VEYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.92 m/s at 213.20 ms

Max. Value
0.88 m/s at 63.36 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

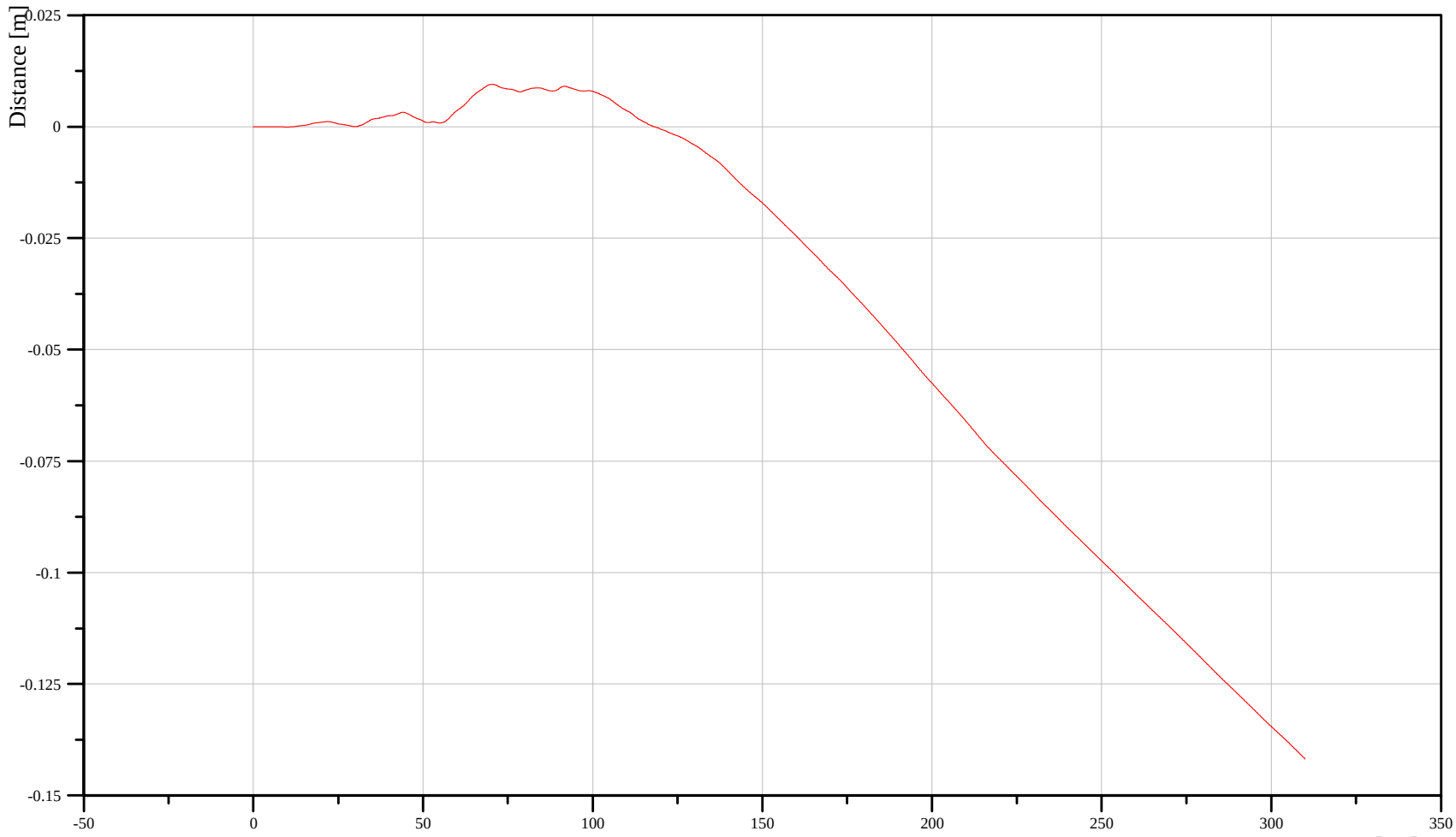
Vehicle CG Y-axis Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000DCYC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.14 m at 310.00 ms

Max. Value
0.01 m at 70.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

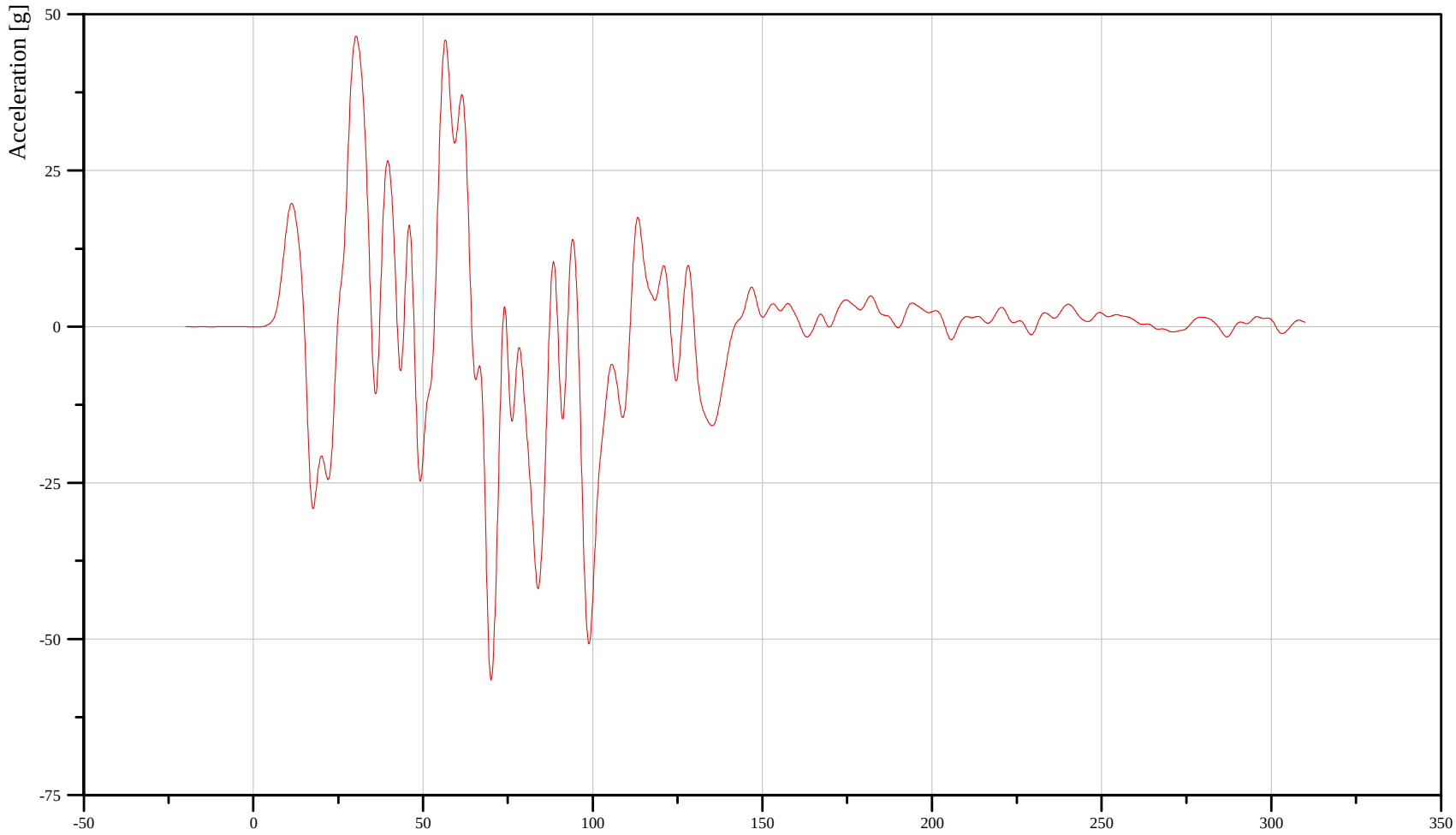
Vehicle CG Z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-56.60 g at 70.08 ms

Max. Value
46.52 g at 30.24 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

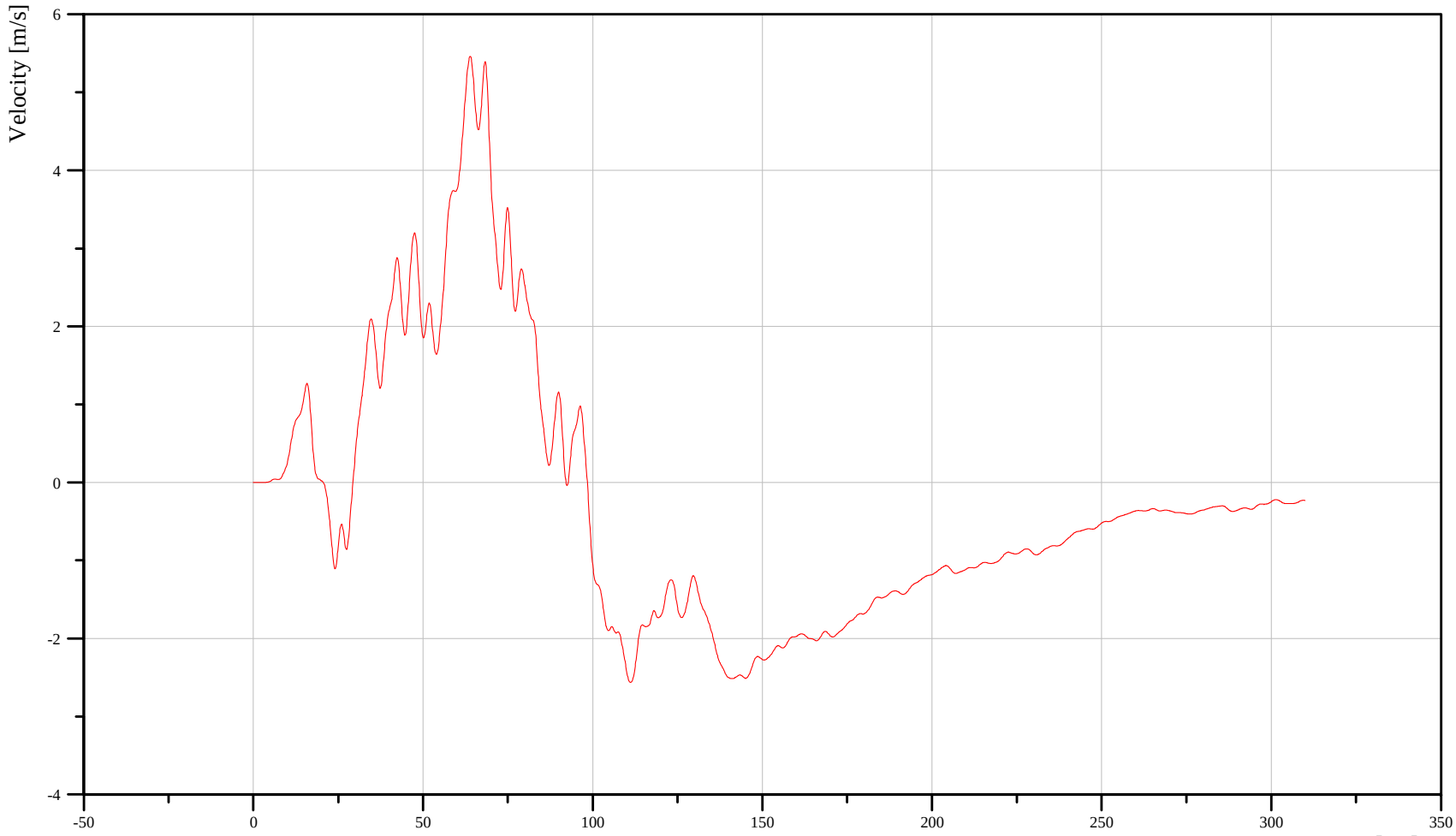
Vehicle CG Z-axis Velocity

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000VEZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-2.56 m/s at 111.20 ms

Max. Value
5.46 m/s at 63.92 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

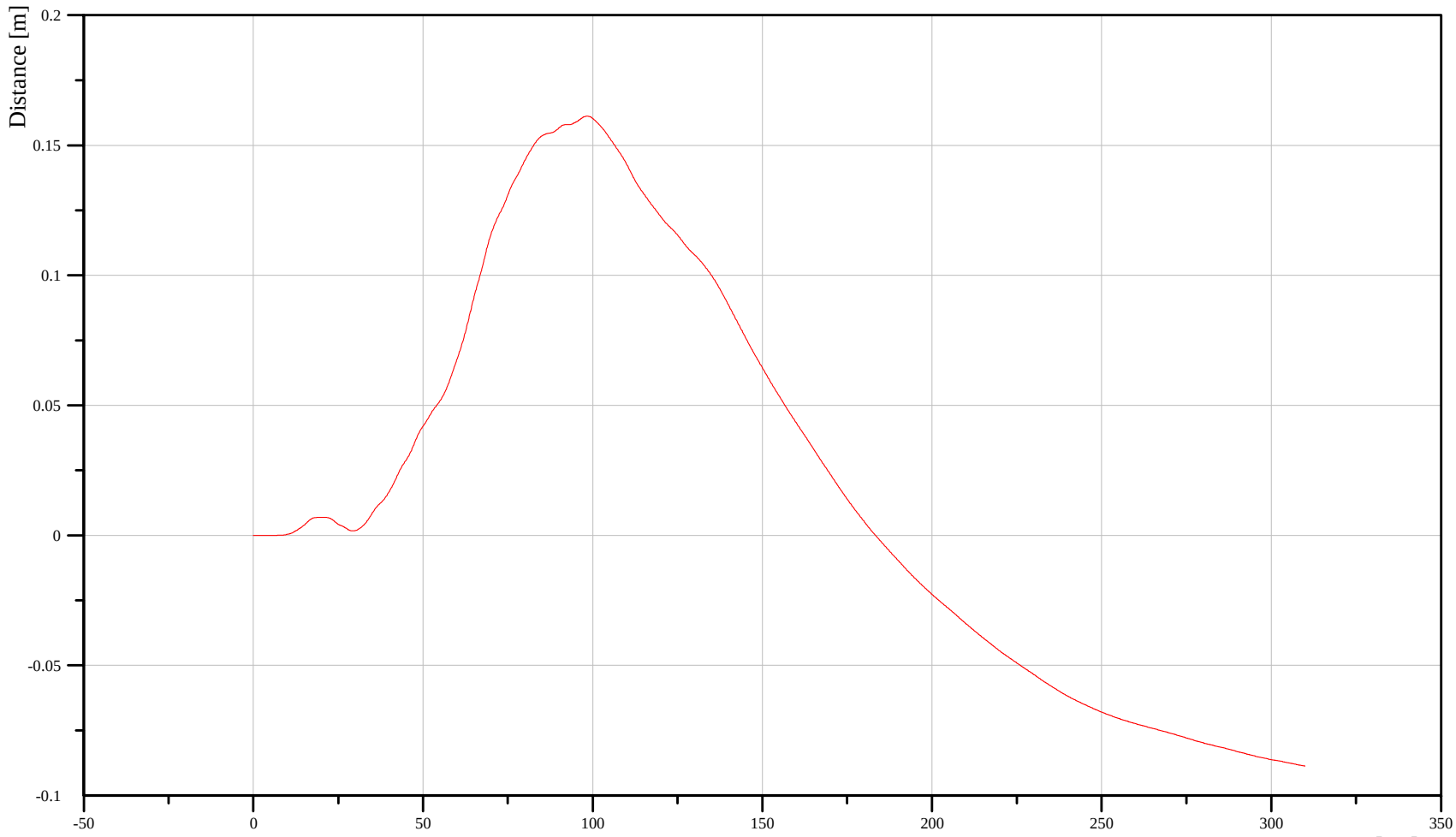
Vehicle CG Z-axis Displacement

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000DCZC

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_180

Min. Value
-0.09 m at 310.00 ms

Max. Value
0.16 m at 98.40 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

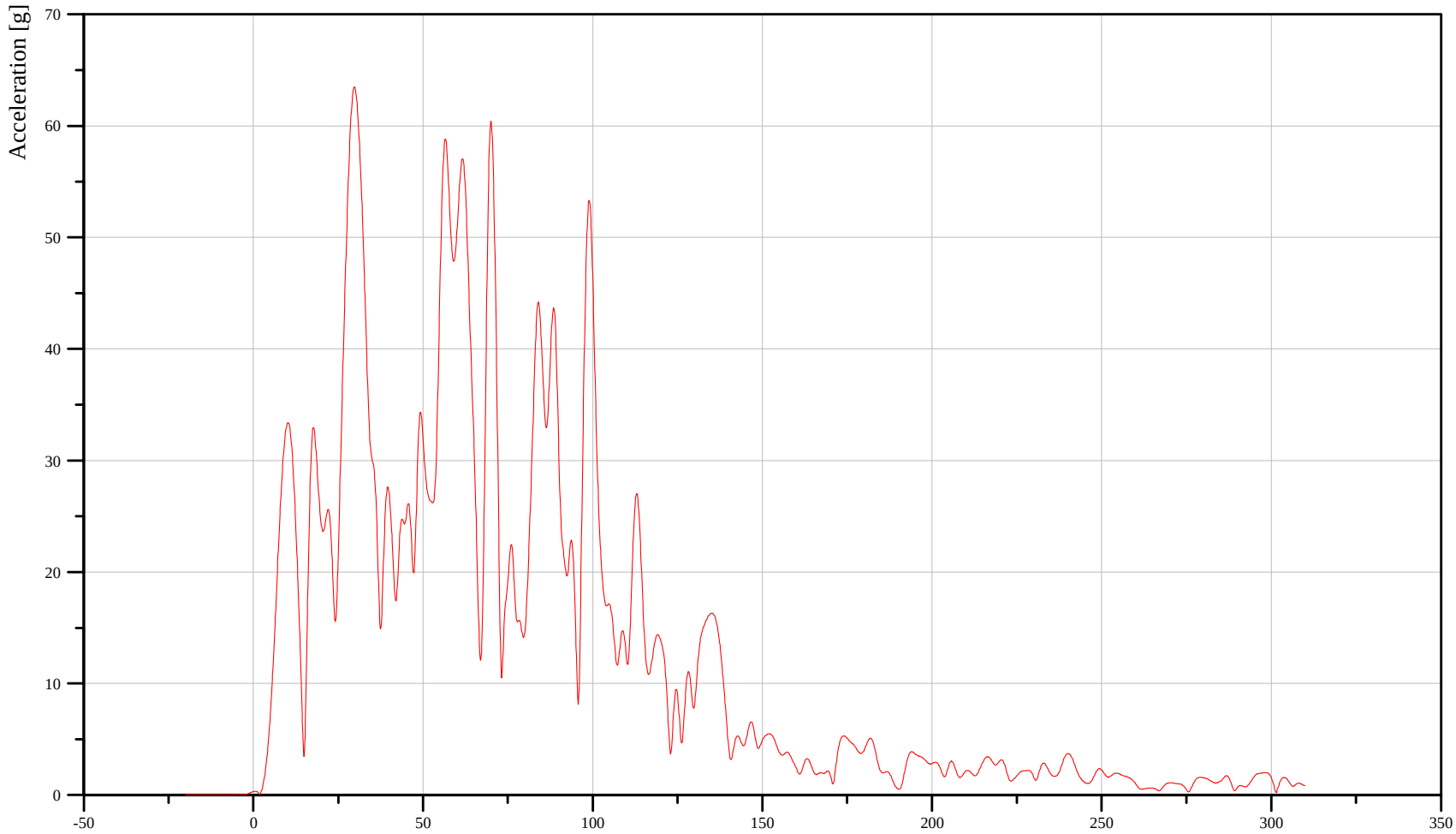
Vehicle CG Resultant acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

10VEHCCG0000ACRD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
0.01 g at -16.56 ms

Max. Value
63.50 g at 29.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

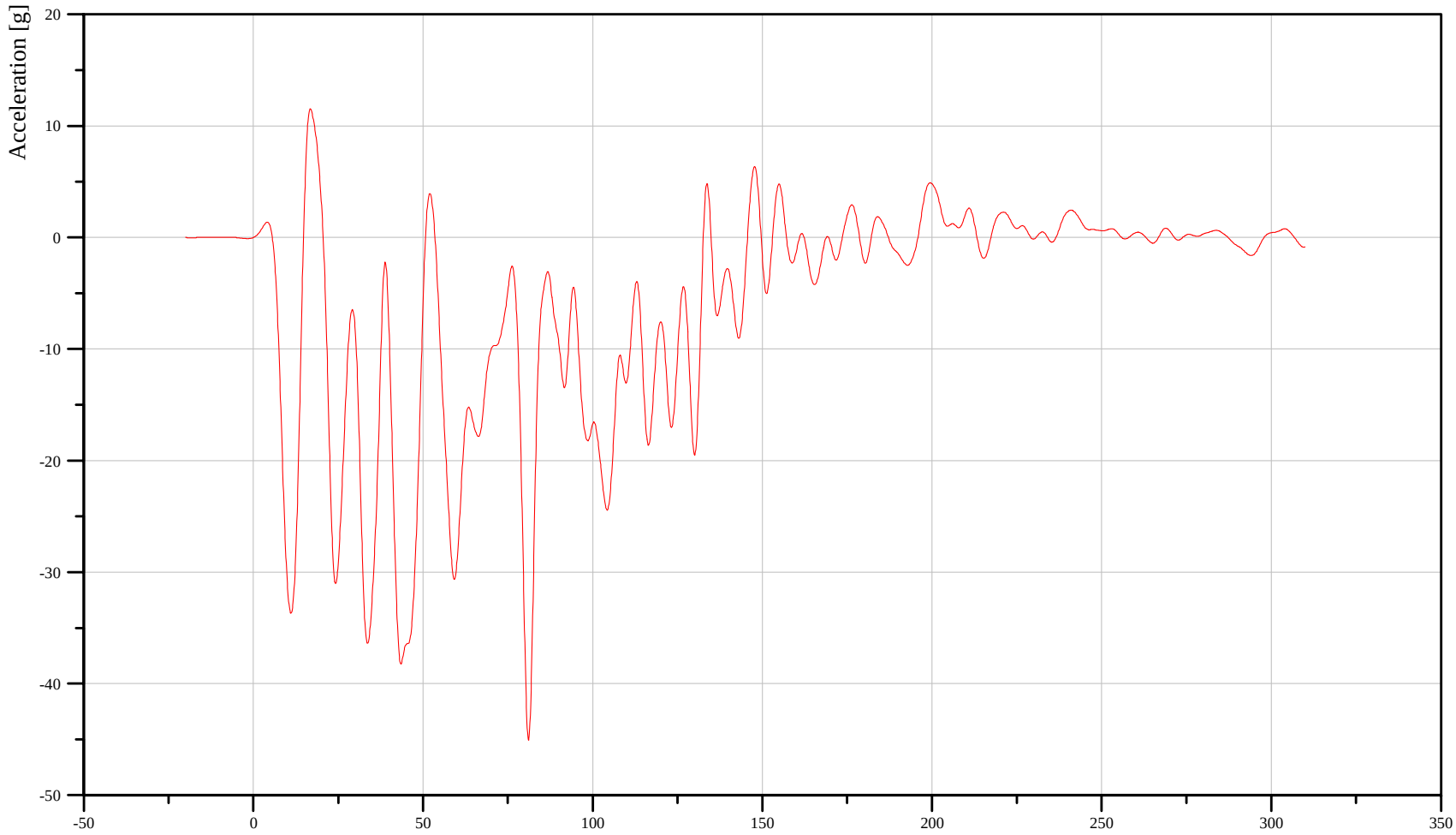
Vehicle rear deck X-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

18VEHC000000ACXD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-45.07 g at 81.04 ms

Max. Value
11.53 g at 16.80 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

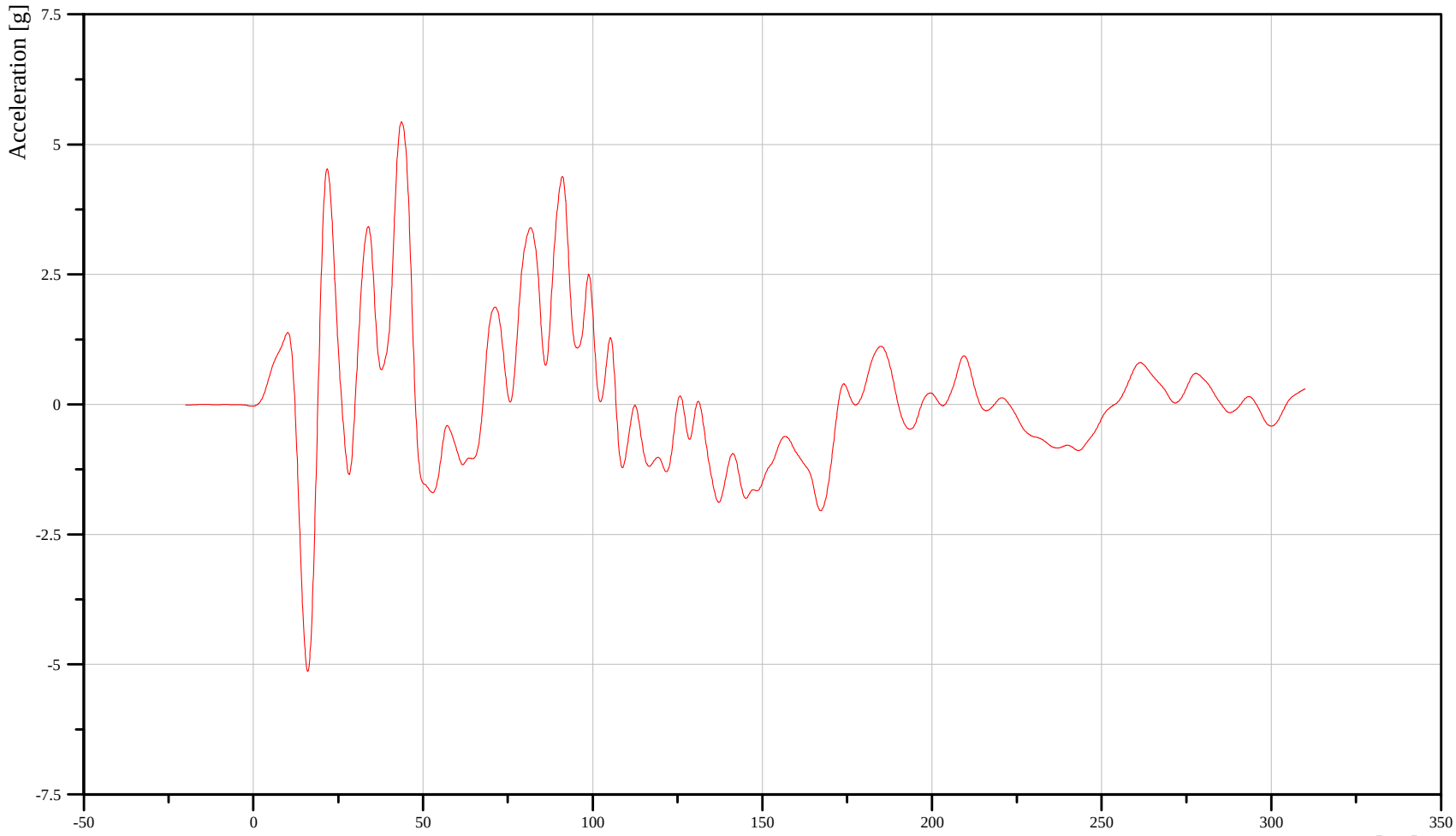
Vehicle rear deck Y-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

18VEHC000000ACYD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-5.13 g at 16.00 ms

Max. Value
5.43 g at 43.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

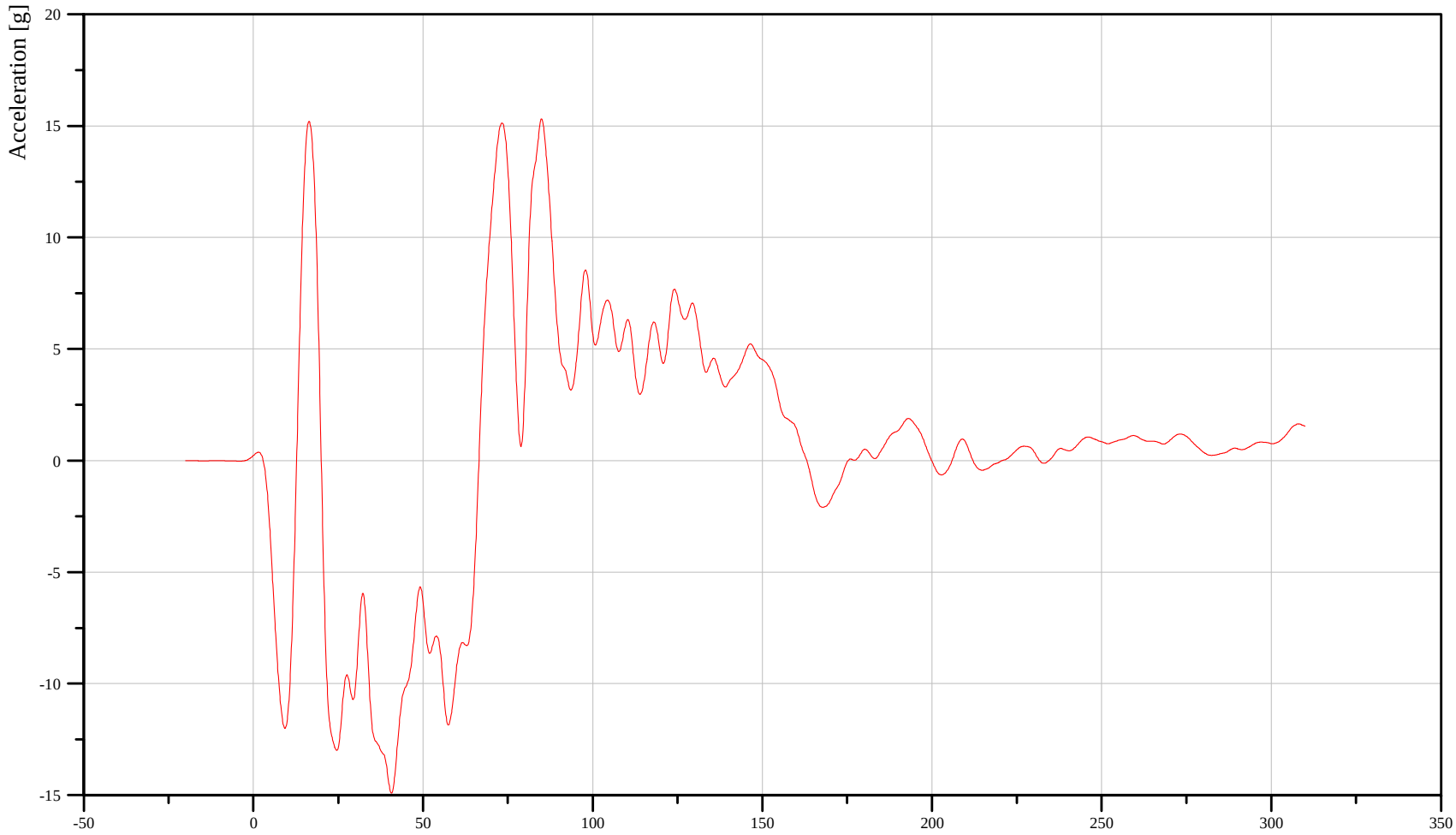
Vehicle rear deck Z-axis acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

18VEHC000000ACZD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-14.91 g at 40.72 ms

Max. Value
15.32 g at 84.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

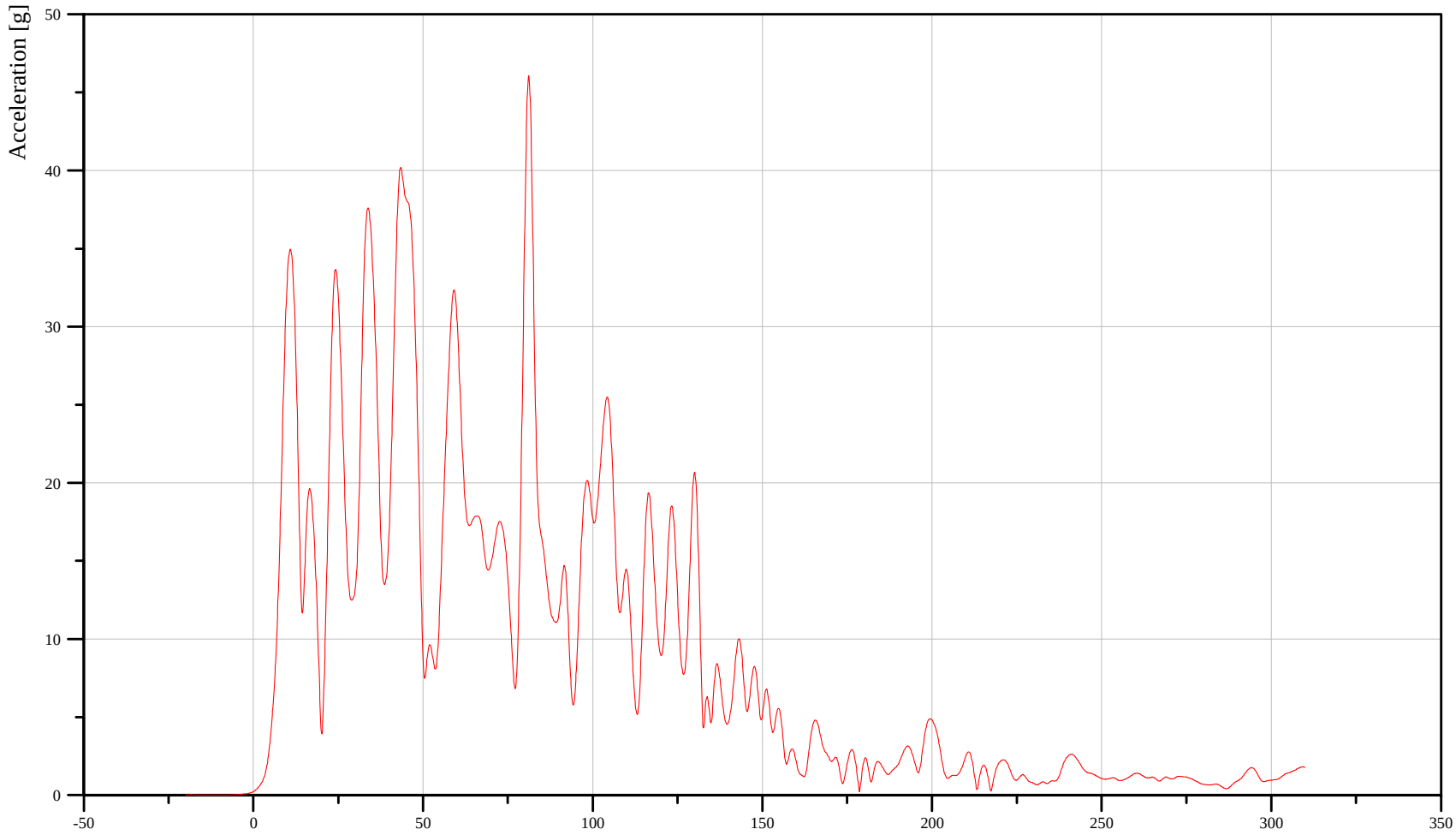
Vehicle rear deck Resultant acceleration

Date: 06/28/2005
Time: 09:05

Customer: VRTC

18VEHC000000ACRD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
0.01 g at -12.16 ms

Max. Value
46.09 g at 81.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

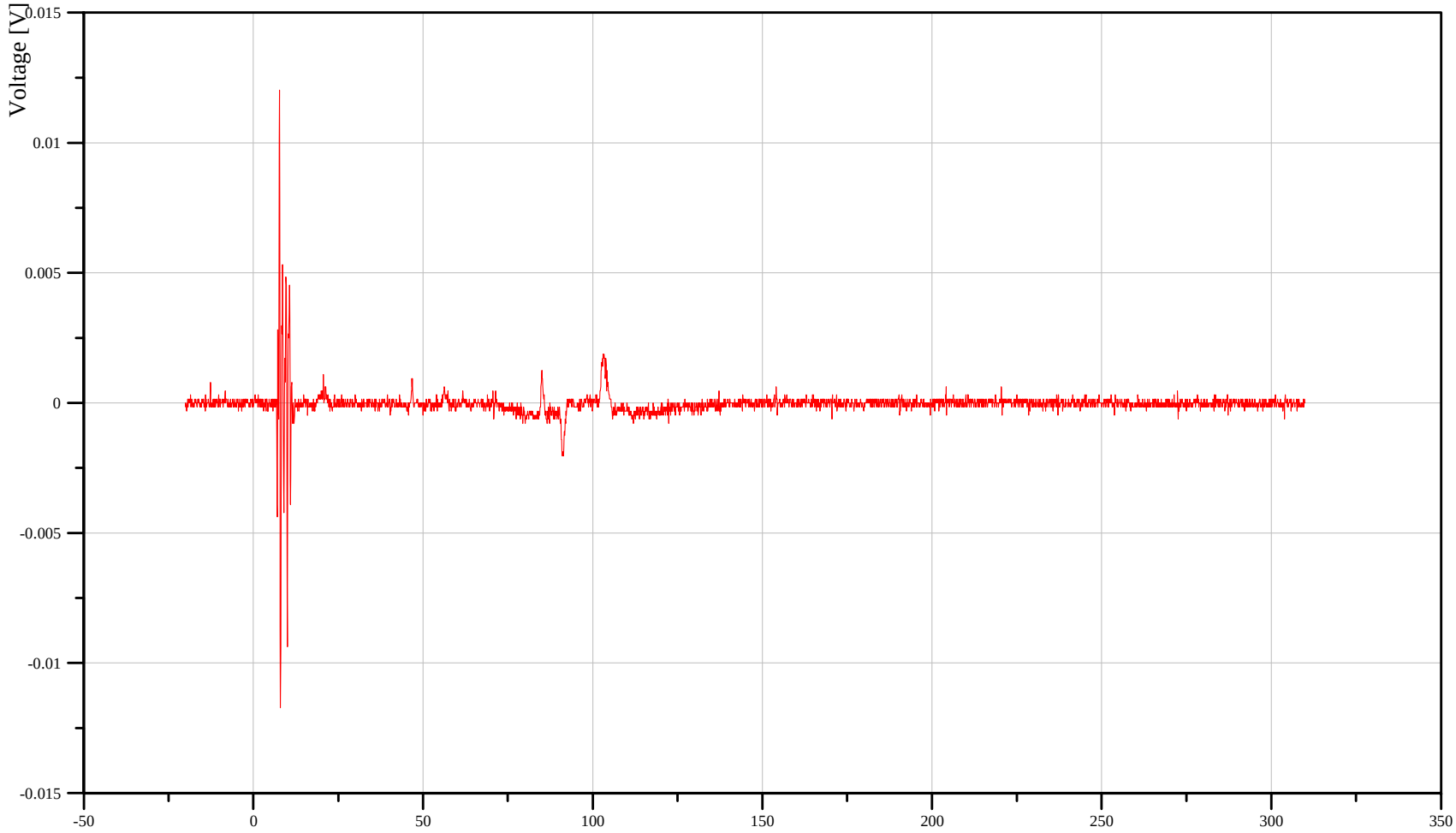
Driver airbag - primary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11SENS000001VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.01 V at 8.00 ms

Max. Value
0.01 V at 7.68 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

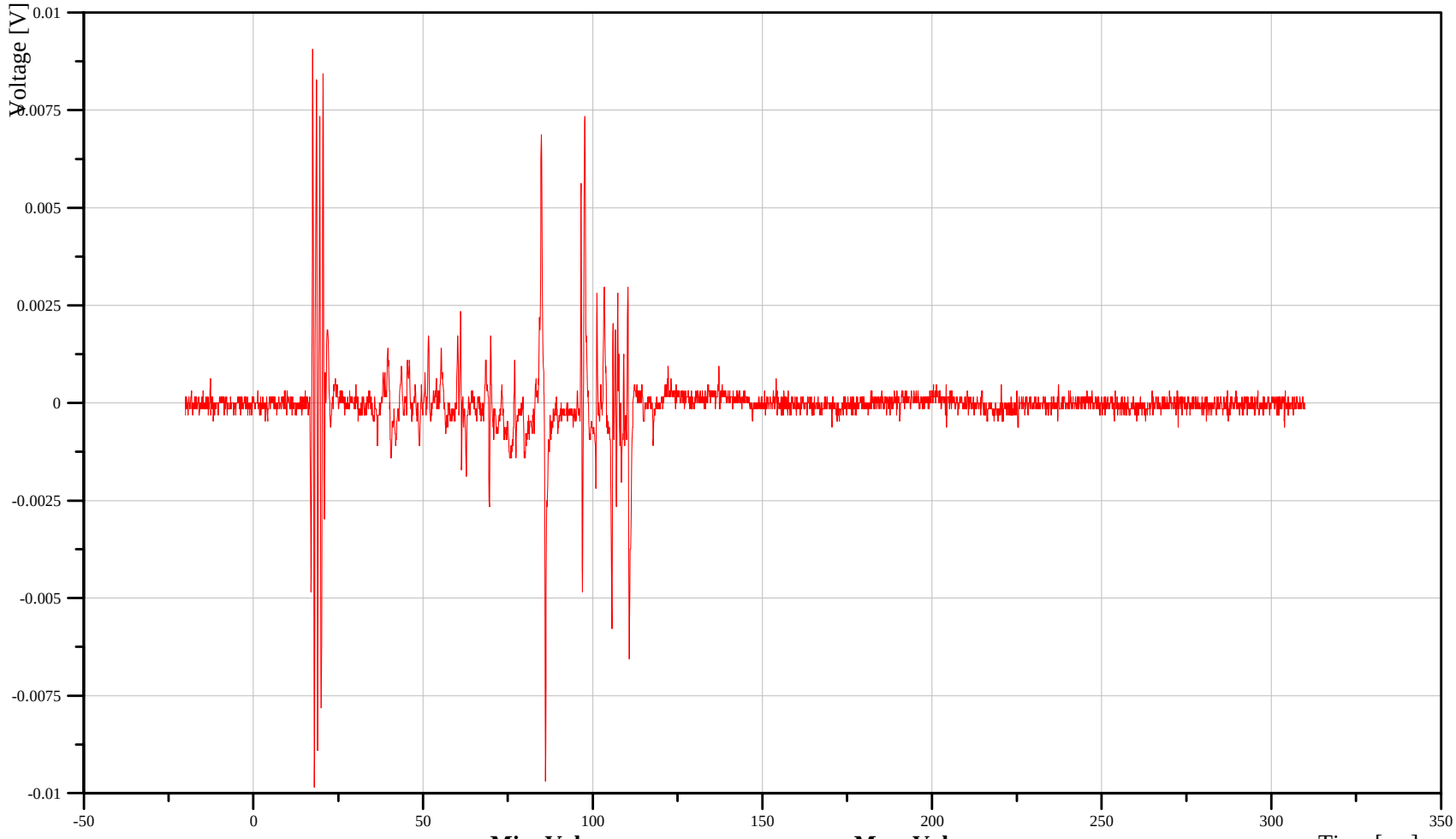
Driver airbag - secondary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11SENS000002VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.01 V at 17.92 ms

Max. Value
0.01 V at 17.52 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

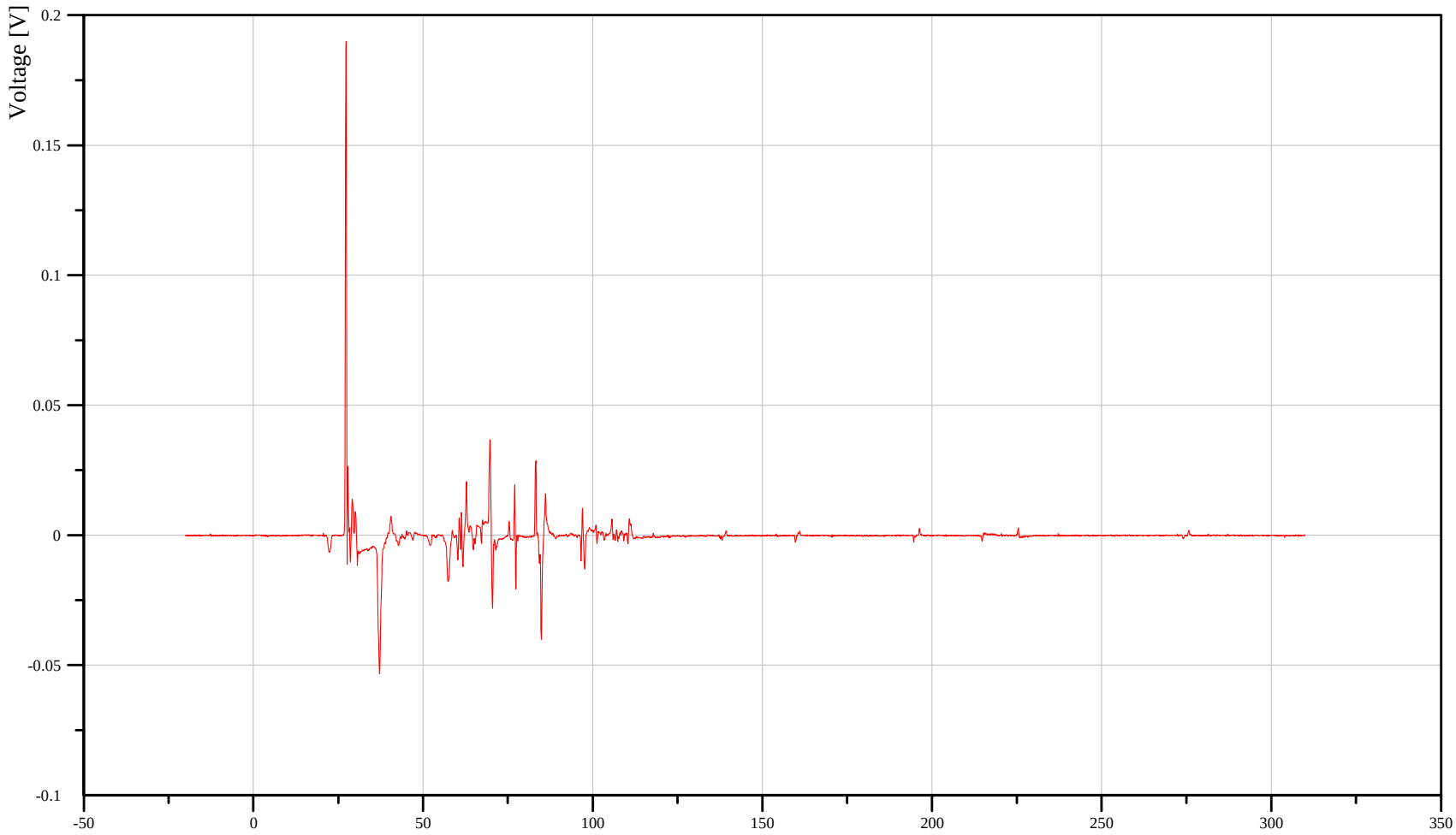
Passenger airbag - primary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13SENS000001VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.05 V at 37.20 ms

Max. Value
0.19 V at 27.28 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

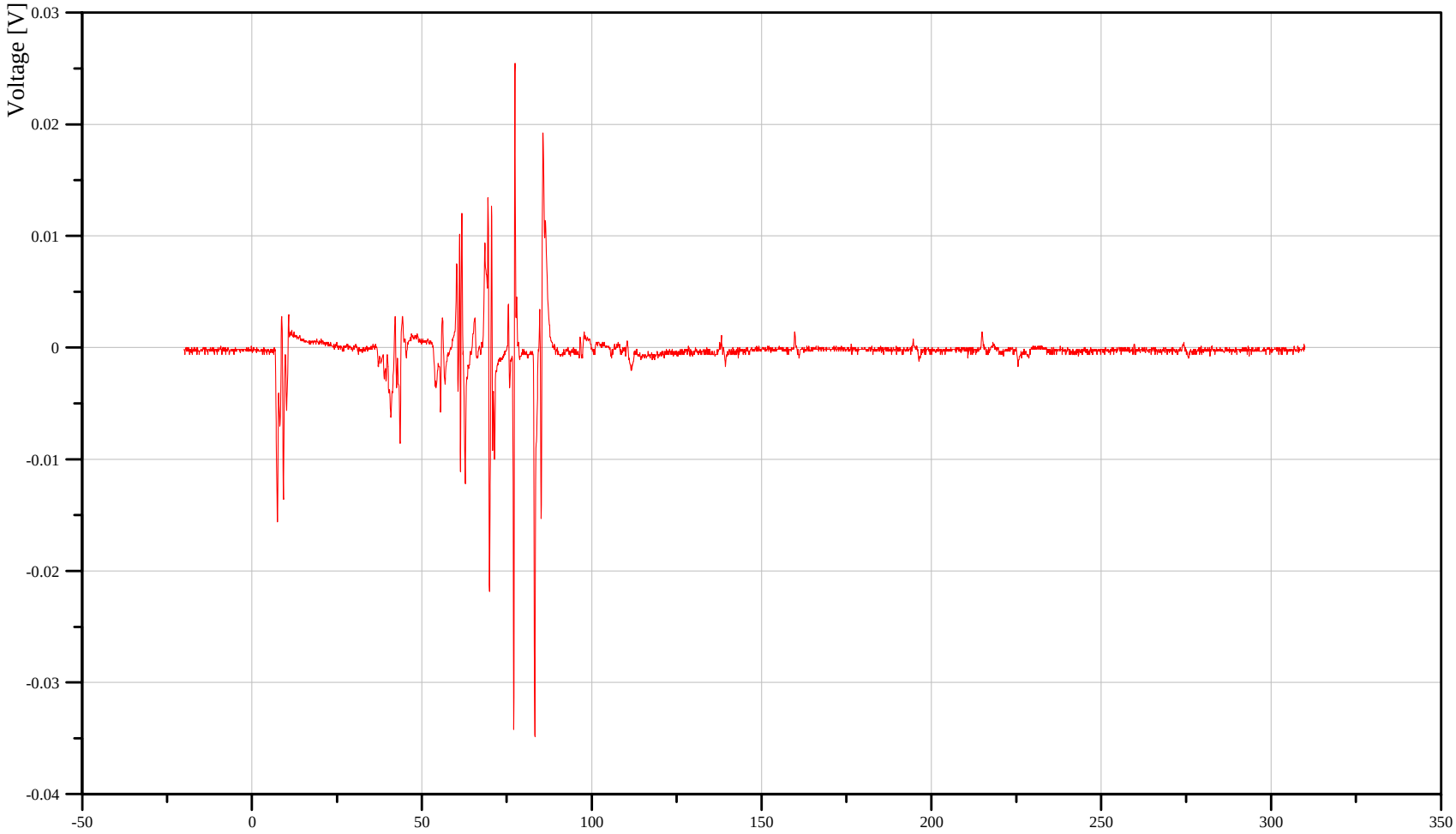
Passenger airbag - secondary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13SENS000002VO0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.03 V at 83.28 ms

Max. Value
0.03 V at 77.44 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

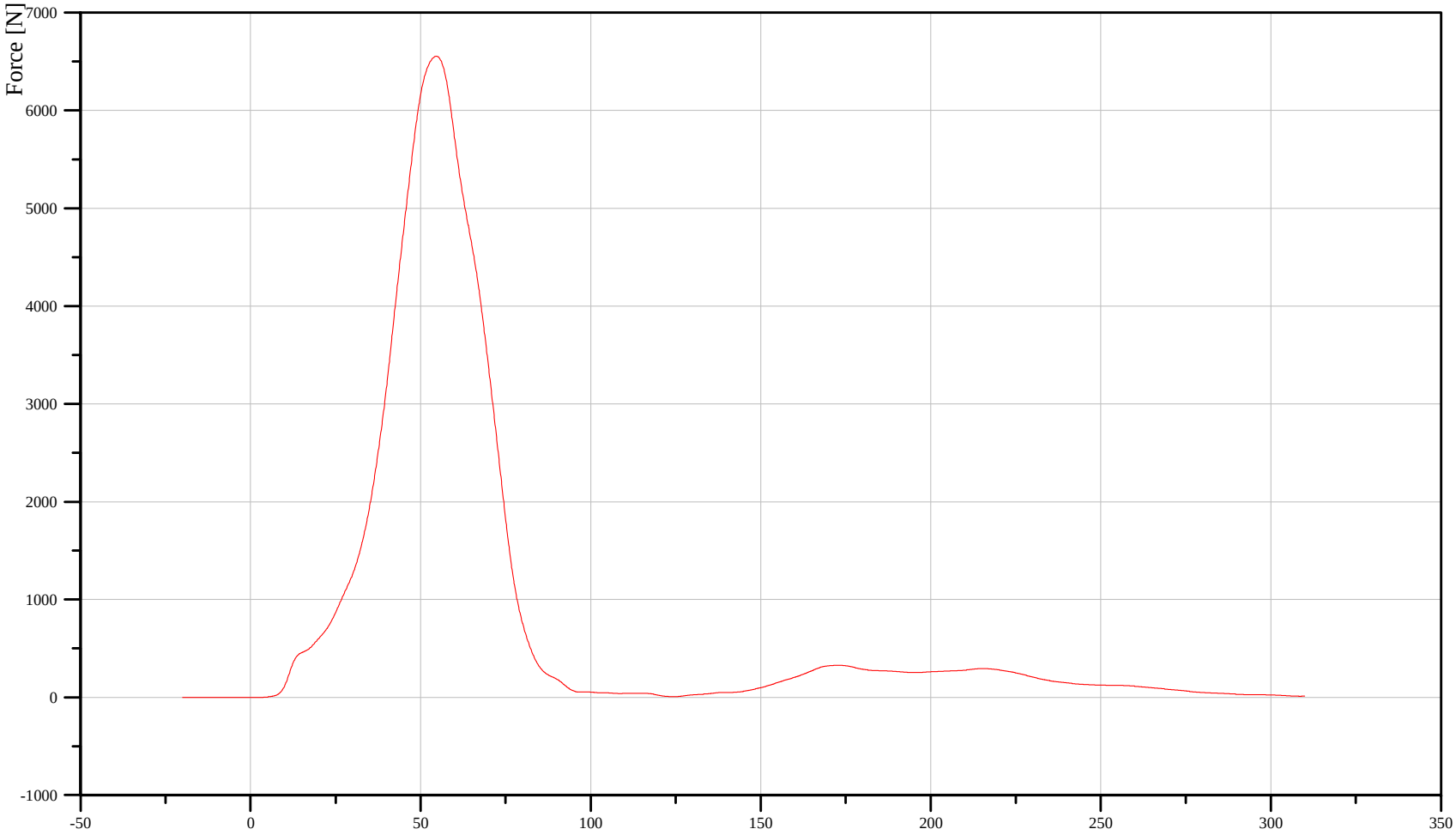
Driver lap belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11SEBE0000B5FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-0.37 N at -6.80 ms

Max. Value
6,554.06 N at 54.64 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

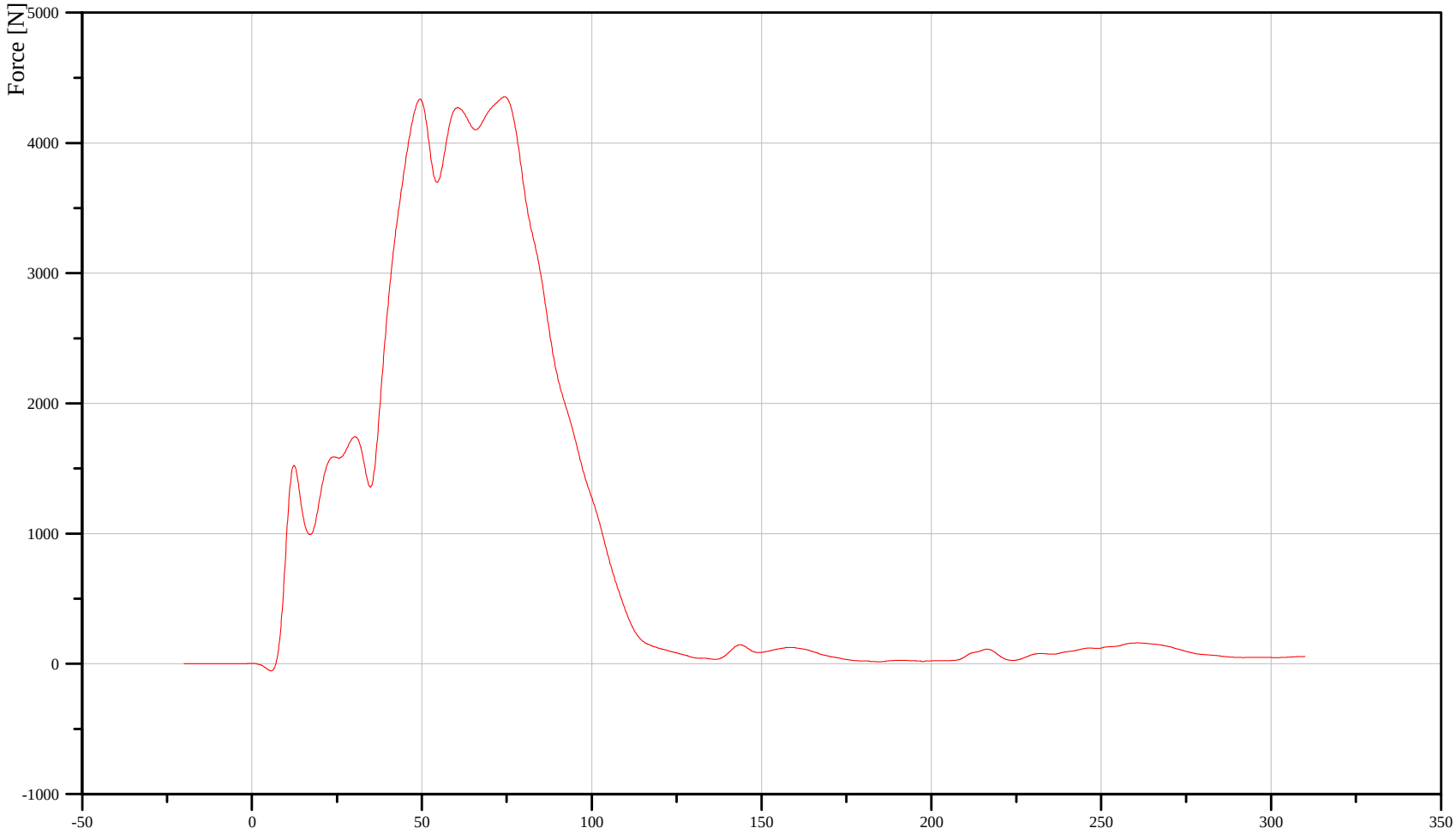
Driver shoulder belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11SEBE0000B3FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-52.65 N at 5.60 ms

Max. Value
4,353.80 N at 74.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

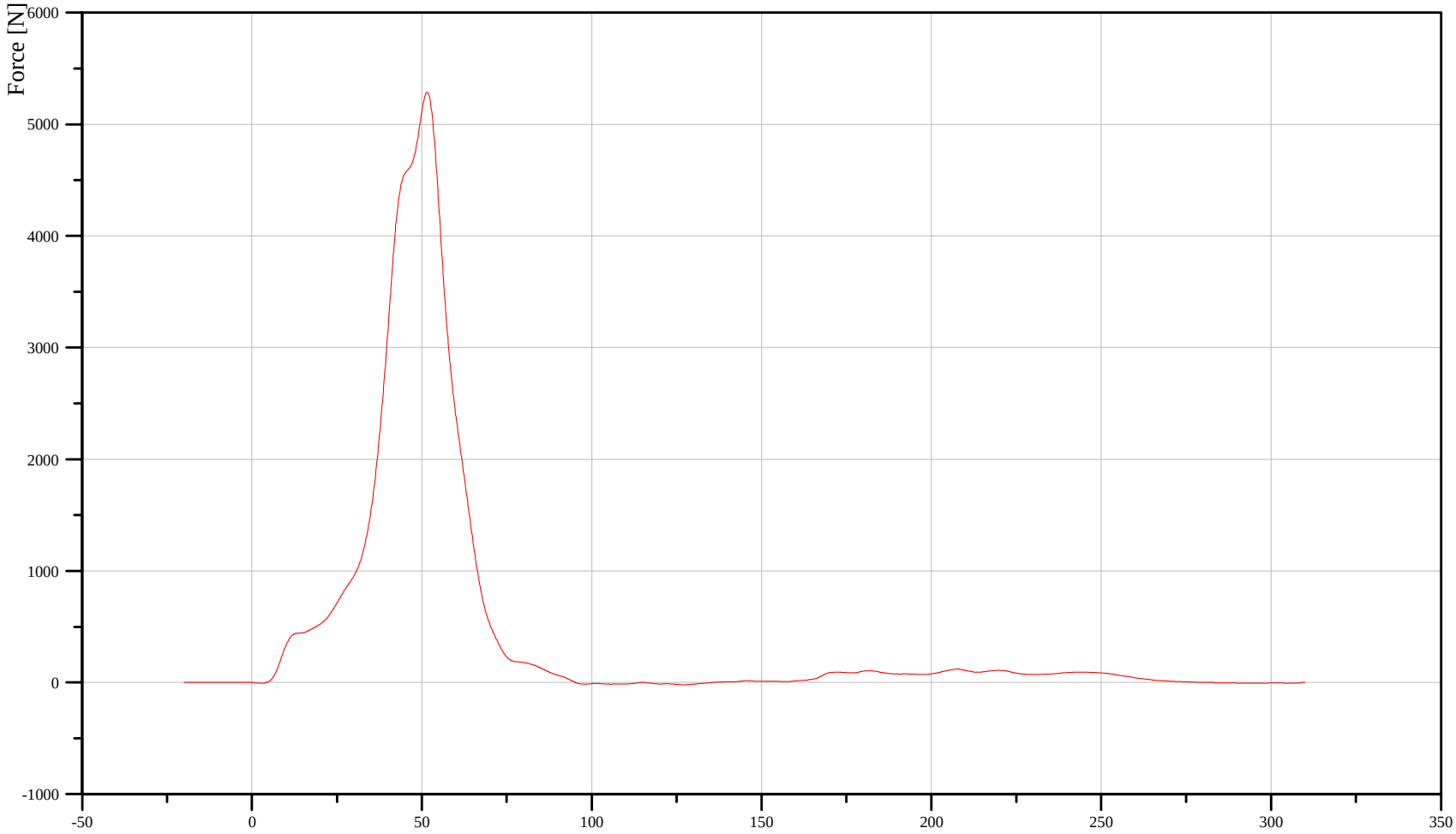
RF Pass lap belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13SEBE0000B5FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-20.60 N at 127.04 ms

Max. Value
5,286.67 N at 51.60 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

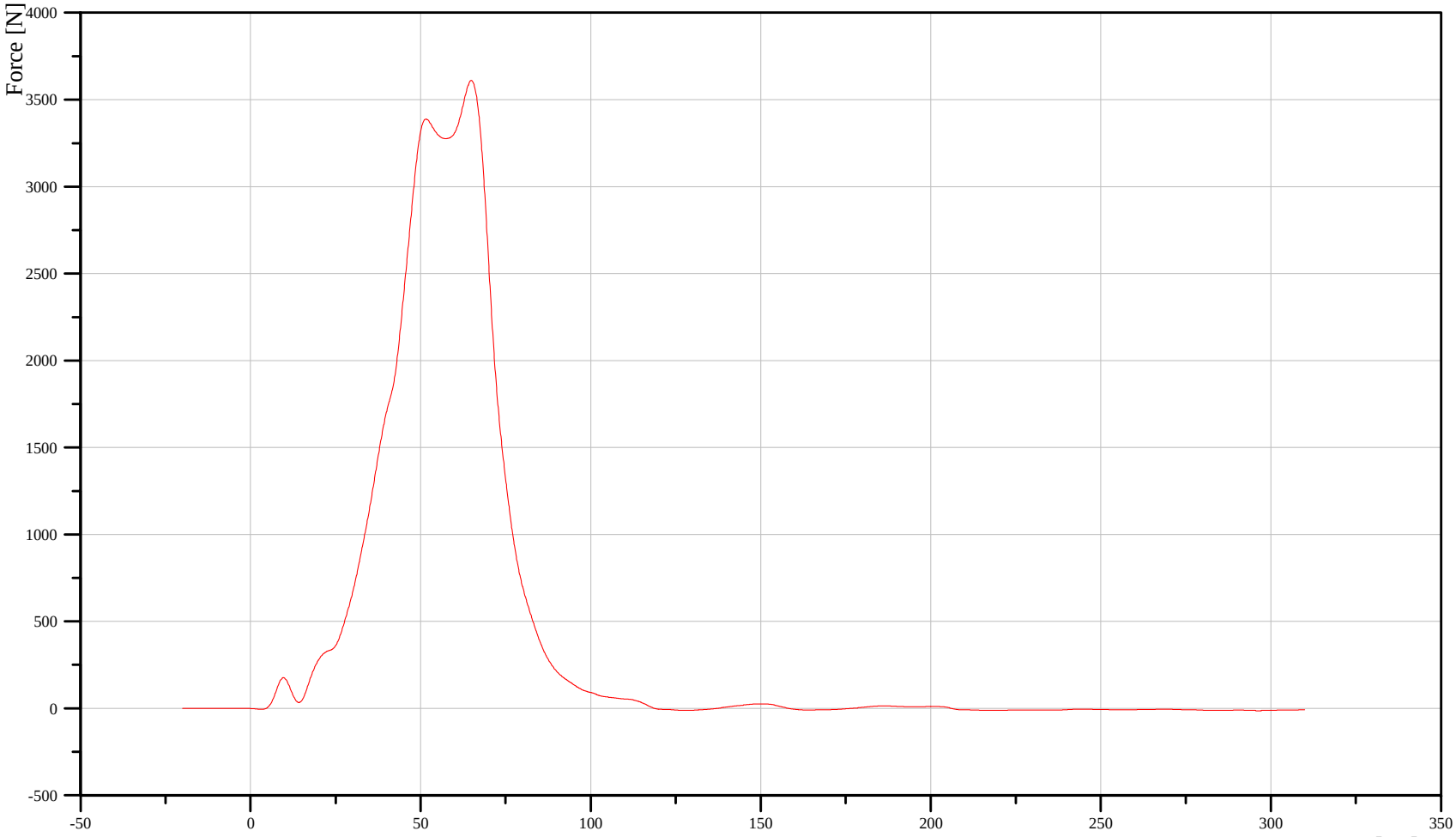
RF Pass shoulder belt

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13SEBE0000B3FOOD

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_60

Min. Value
-12.61 N at 296.32 ms

Max. Value
3,610.32 N at 64.88 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

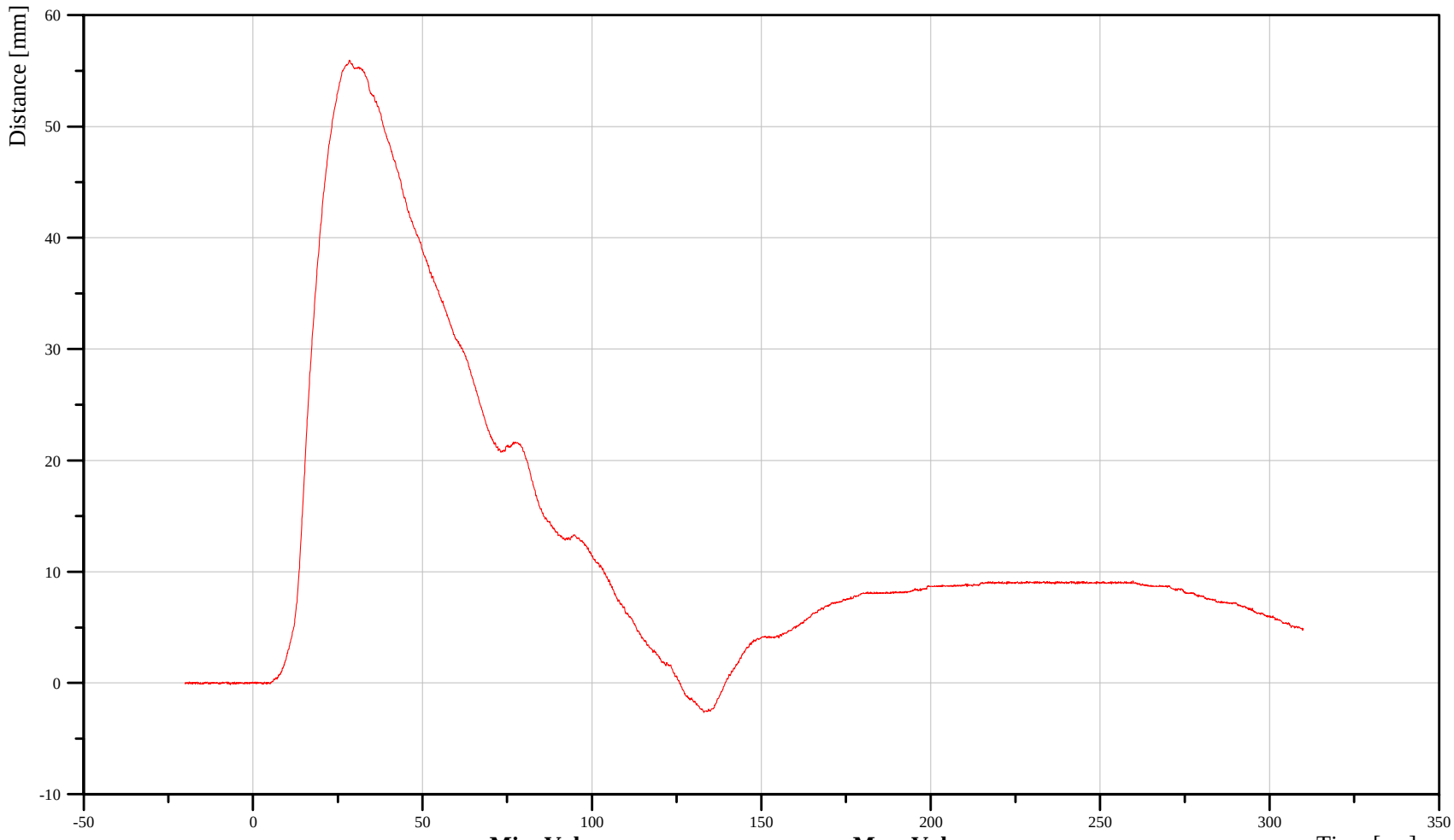
Driver lap belt spool

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11SEBA0000B5DS0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-2.65 mm at 133.04 ms

Max. Value
55.92 mm at 28.32 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

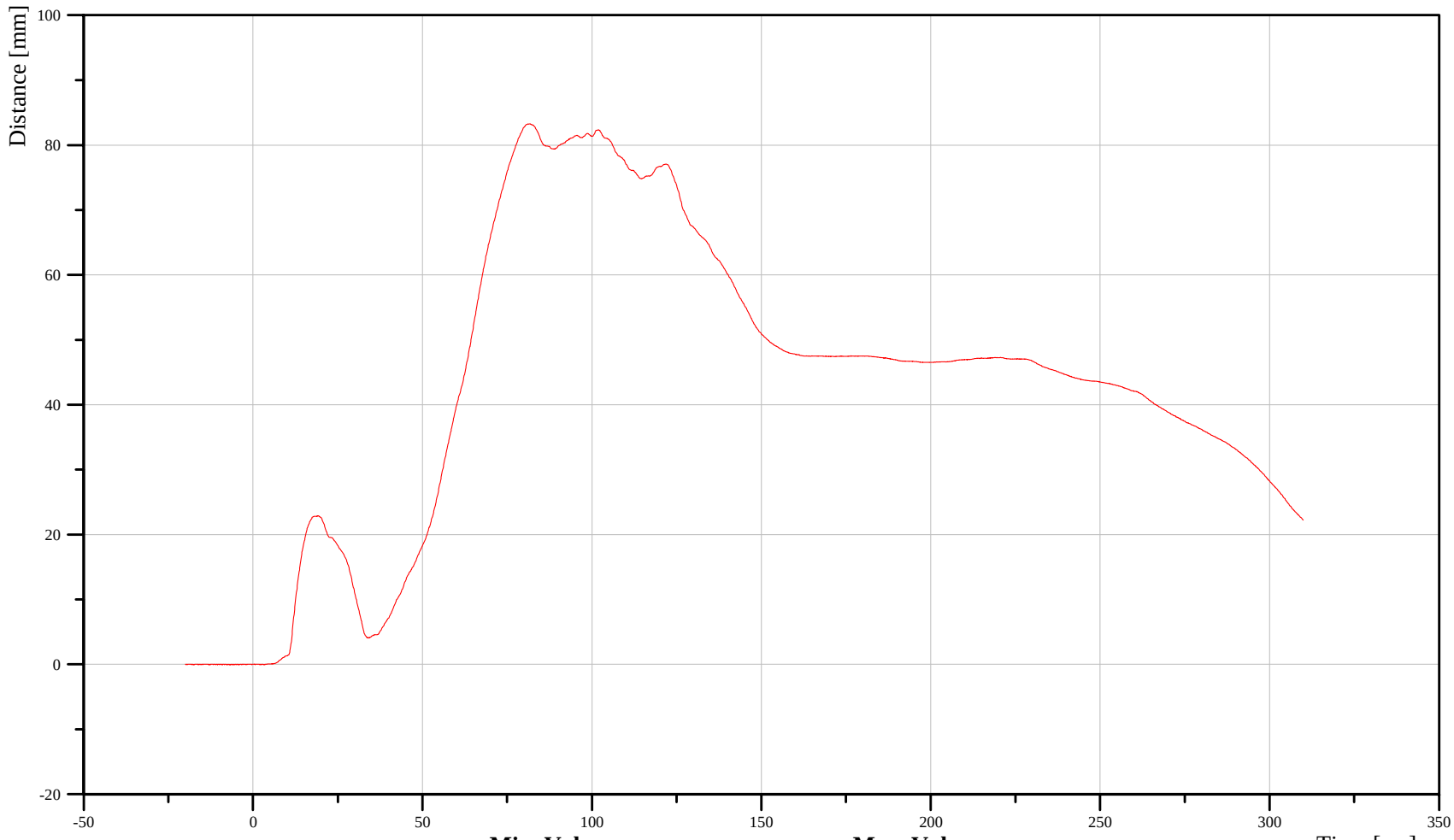
Driver shoulder belt spool and retraction

Date: 06/28/2005
Time: 09:05

Customer: VRTC

11SEBA0000B3DS0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.05 mm at -6.64 ms

Max. Value
83.28 mm at 81.12 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

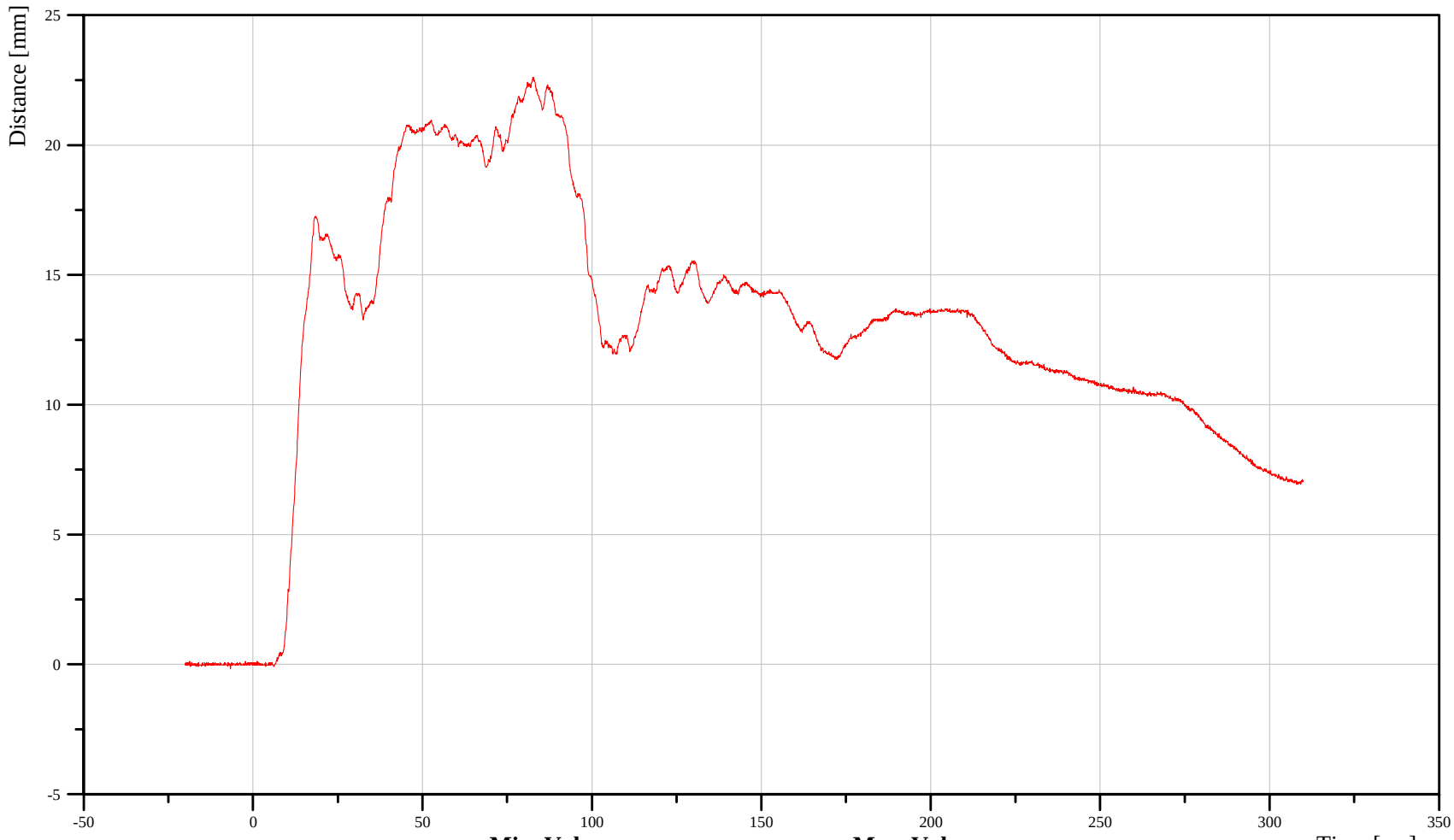
RF Pass lap belt spool

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13SEBA0000B5DS0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.17 mm at -6.64 ms

Max. Value
22.61 mm at 82.48 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

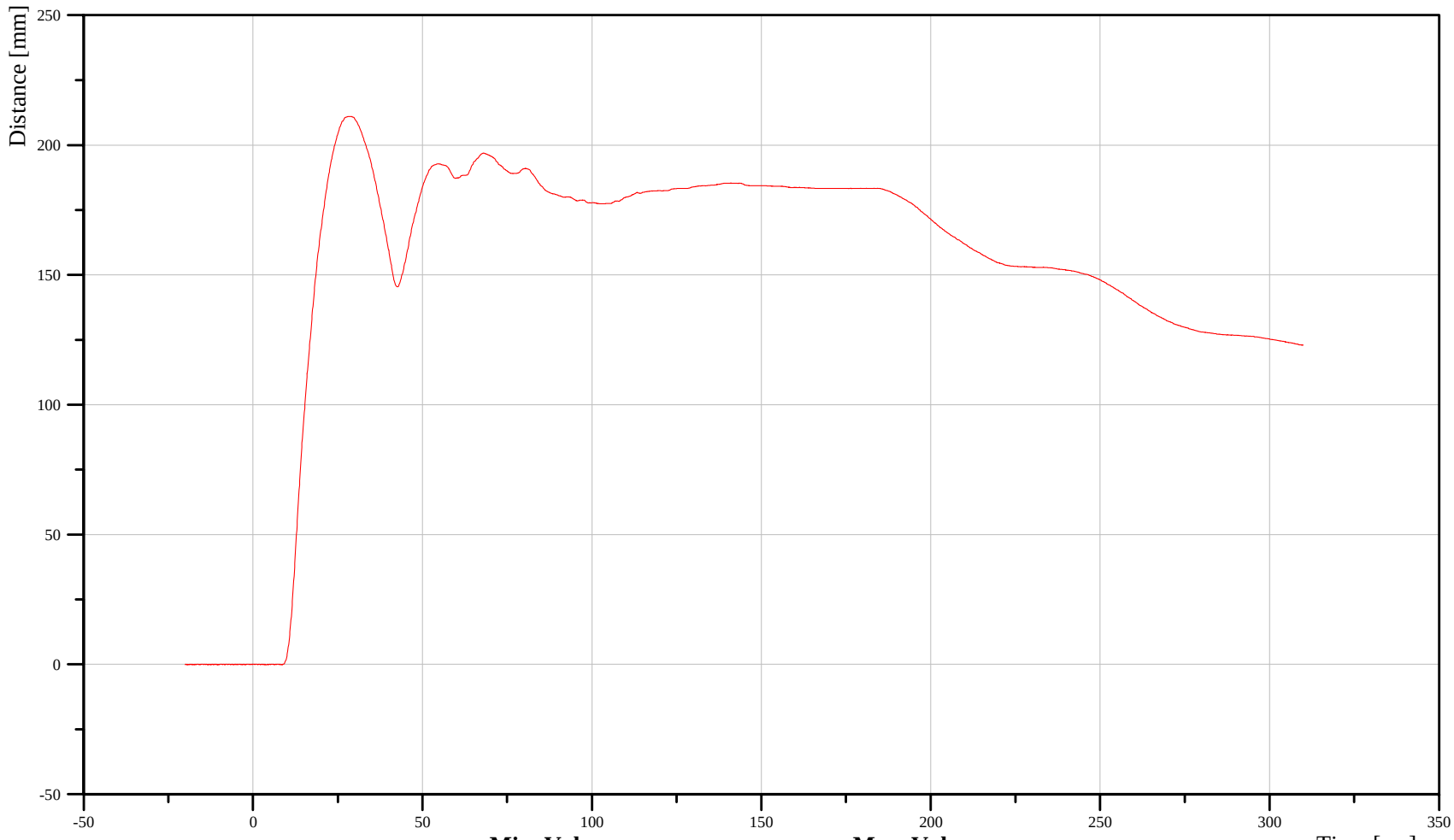
RF Pass shoulder belt spool and retraction

Date: 06/28/2005
Time: 09:05

Customer: VRTC

13SEBA0000B3DS0A

TRC Inc. Test Lab: CTF
Test Number: 050627



Filter: CFC_1000

Min. Value
-0.12 mm at -6.64 ms

Max. Value
211.02 mm at 28.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

Injury Criteria Summary

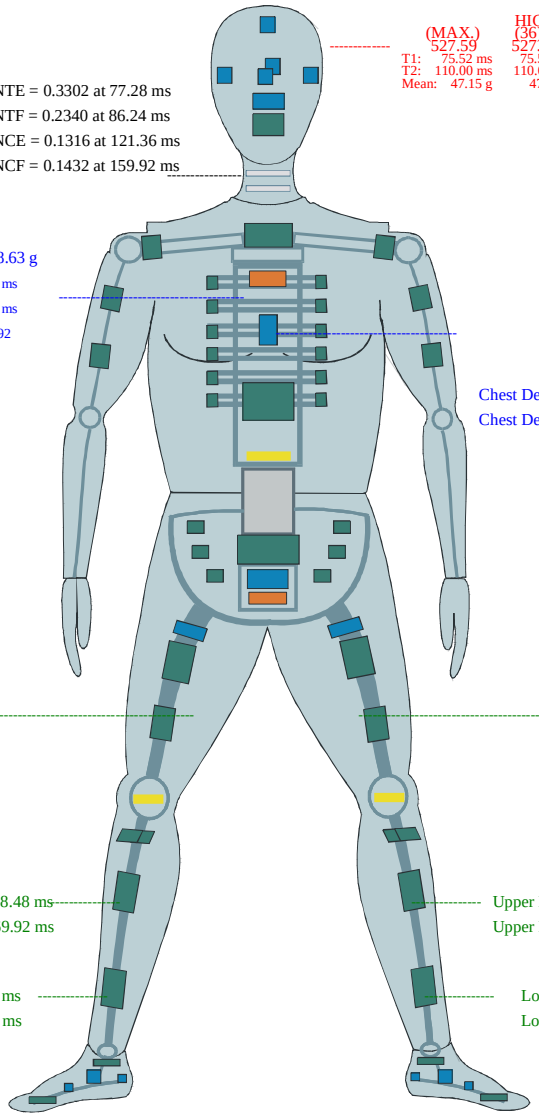
Date: 06/28/2005
Time: 09:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 050627

Dummy:HIII 50th Male

Seating Position:
Driver



HIC (MAX.) 527.59

	HIC (36)	(15)
T1: 75.52 ms	75.52 ms	86.96 ms
T2: 110.00 ms	110.00 ms	102.00 ms
Mean: 47.15 g	47.15 g	55.74 g

NTE = 0.3302 at 77.28 ms
NTF = 0.2340 at 86.24 ms
NCE = 0.1316 at 121.36 ms
NCF = 0.1432 at 159.92 ms

Chest 3ms Duration (CLIP) = 38.63 g
T1:85.51 ms
T2:88.51 ms
CSI:319.92

Chest Deflection Outward = 0.01 mm at -18.72 ms
Chest Deflection Inward = -35.54 mm at 82.96 ms

Right Lower Femur Tension = 315.22 N 51.12 ms
Right Lower Femur Compression = -4,746.91 N 67.84 ms

Left Lower Femur Tension = 393.21 N 51.36 ms
Left Lower Femur Compression = -3,580.33 N 59.76 ms

Upper Right TI (SAE) = 0.37 at 68.48 ms
Upper Right TI (IIHS) = 0.60 at 69.92 ms

Upper Left TI (SAE) = 0.43 at 58.24 ms
Upper Left TI (IIHS) = 0.69 at 68.96 ms

Lower Right TI (SAE) = 0.44 at 72.48 ms
Lower Right TI (IIHS) = 0.71 at 69.92 ms

Lower Left TI (SAE) = 0.37 at 70.16 ms
Lower Left TI (IIHS) = 0.79 at 69.04 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

Injury Criteria Summary

Date: 06/28/2005
Time: 09:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 050627

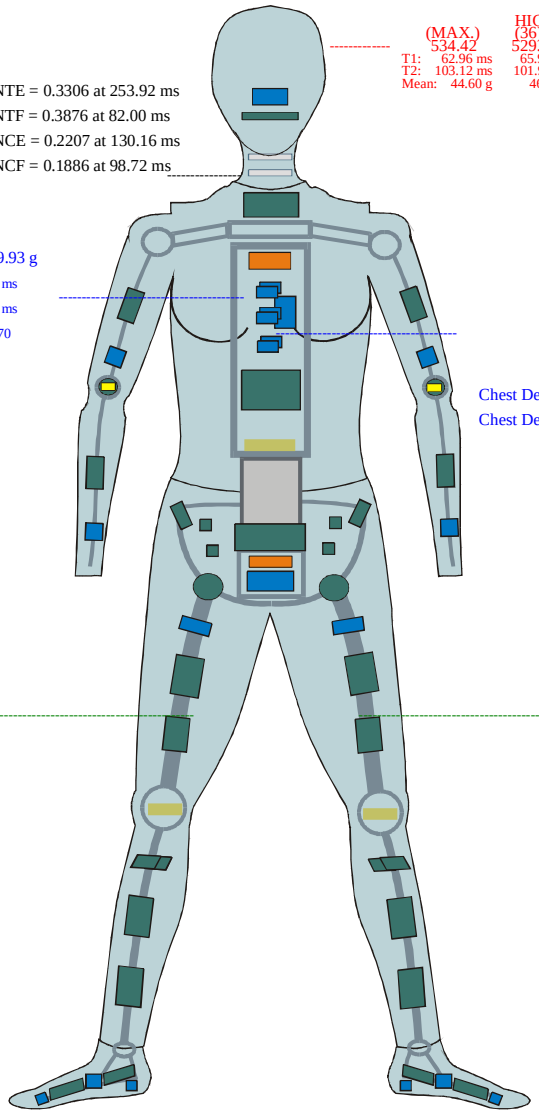
Dummy:HIII 5th Female

Seating Position:
Right Front Passenger

	HIC (MAX.)	HIC (36)	(15)
	534.42	529.05	348.12
T1:	62.96 ms	65.92 ms	78.72 ms
T2:	103.12 ms	101.92 ms	93.76 ms
Mean:	44.60 g	46.40 g	55.67 g

NTE = 0.3306 at 253.92 ms
NTF = 0.3876 at 82.00 ms
NCE = 0.2207 at 130.16 ms
NCF = 0.1886 at 98.72 ms

Chest 3ms Duration (CLIP) = 39.93 g
T1:78.09 ms
T2:81.09 ms
CSI:590.70



Chest Deflection Outward = 0.02 mm at 19.68 ms
Chest Deflection Inward = -19.77 mm at 76.88 ms

Right Lower Femur Tension = 248.28 N 135.92 ms
Right Lower Femur Compression = -3,247.56 N 75.20 ms

Left Lower Femur Tension = 210.14 N 33.76 ms
Left Lower Femur Compression = -3,501.14 N 52.72 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

Injury Criteria Summary

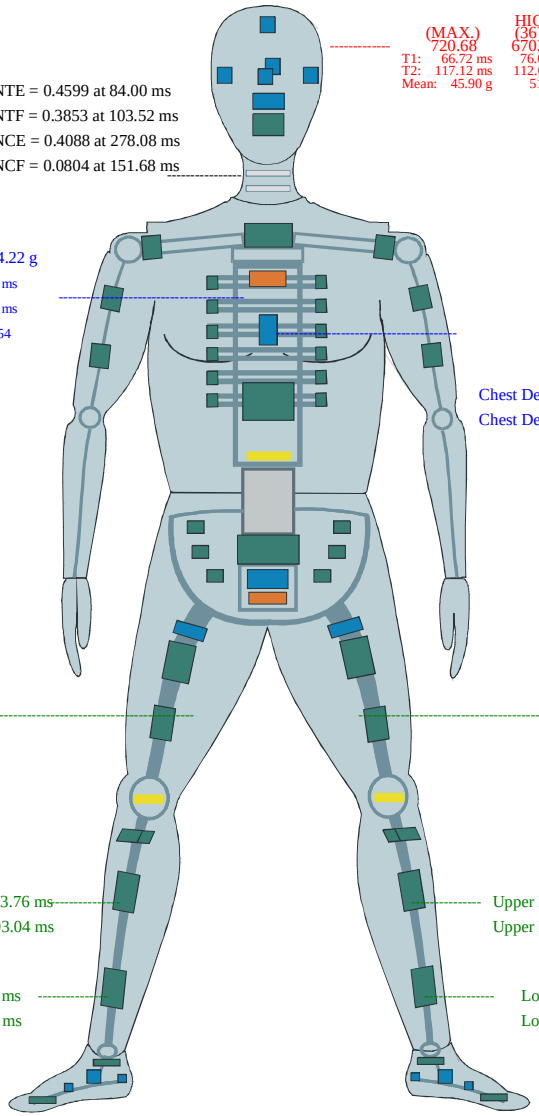
Date: 06/28/2005
Time: 09:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 050627

Dummy:HIII 50th Male

Seating Position:
Driver



HIC (MAX.) 720.68

	HIC (36)	(15)
T1: 66.72 ms	670.92	398.81
T2: 117.12 ms	76.64 ms	91.76 ms
Mean: 45.90 g	112.64 ms	106.80 ms
	51.04 g	58.75 g

NTE = 0.4599 at 84.00 ms
NTF = 0.3853 at 103.52 ms
NCE = 0.4088 at 278.08 ms
NCF = 0.0804 at 151.68 ms

Chest 3ms Duration (CLIP) = 44.22 g
T1:85.83 ms
T2:89.39 ms
CSI:460.54

Chest Deflection Outward = 0.00 mm at 5.52 ms
Chest Deflection Inward = -55.57 mm at 101.68 ms

Right Lower Femur Tension = 651.35 N 40.80 ms
Right Lower Femur Compression = -3,915.86 N 98.56 ms

Left Lower Femur Tension = 1,124.00 N 47.12 ms
Left Lower Femur Compression = -4,317.51 N 97.76 ms

Upper Right TI (SAE) = 0.48 at 93.76 ms
Upper Right TI (IIHS) = 0.90 at 93.04 ms

Upper Left TI (SAE) = 0.82 at 63.84 ms
Upper Left TI (IIHS) = 1.25 at 85.60 ms

Lower Right TI (SAE) = 0.51 at 94.64 ms
Lower Right TI (IIHS) = 0.79 at 94.72 ms

Lower Left TI (SAE) = 0.87 at 63.04 ms
Lower Left TI (IIHS) = 1.30 at 85.76 ms

2003 Chevrolet Silverado into 2002 Ford Focus Full Frontal Collinear

Injury Criteria Summary

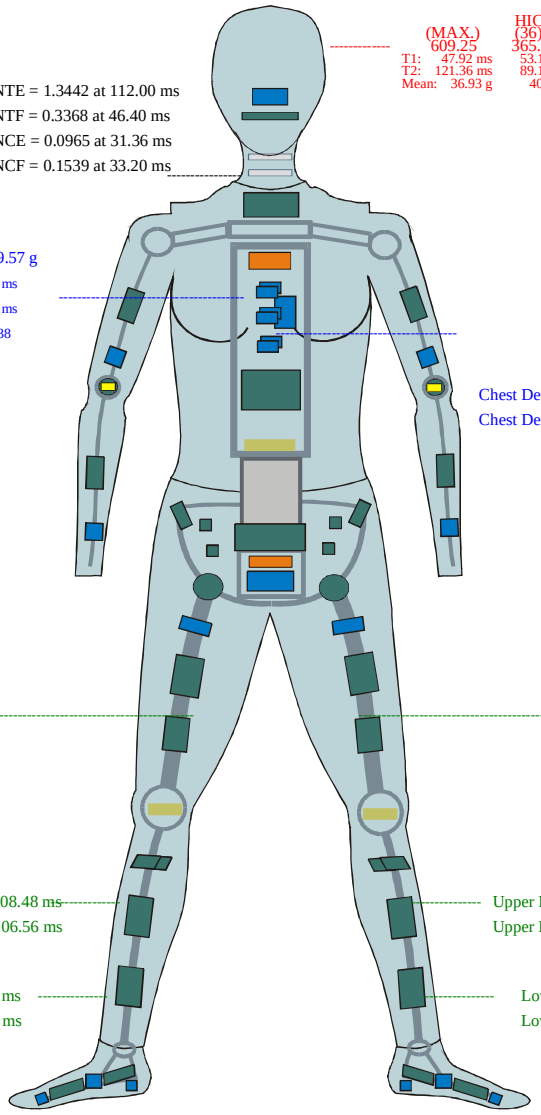
Date: 06/28/2005
Time: 09:05

Customer: VRTC

TRC Inc. Test Lab: CTF
Test Number: 050627

Dummy:HIII 5th Female

Seating Position:
Right Front Passenger



HIC (MAX.) 609.25
HIC (36) 365.03
HIC (15) 253.90
T1: 47.92 ms 53.12 ms 107.84 ms
T2: 121.36 ms 89.12 ms 118.72 ms
Mean: 36.93 g 40.03 g 55.71 g

NTE = 1.3442 at 112.00 ms
NTF = 0.3368 at 46.40 ms
NCE = 0.0965 at 31.36 ms
NCF = 0.1539 at 33.20 ms

Chest 3ms Duration (CLIP) = 39.57 g
T1:64.49 ms
T2:67.49 ms
CSI:374.38

Chest Deflection Outward = 0.00 mm at -17.84 ms
Chest Deflection Inward = -28.60 mm at 68.96 ms

Right Lower Femur Tension = 433.02 N 37.68 ms
Right Lower Femur Compression = -3,411.80 N 107.44 ms

Left Lower Femur Tension = 457.33 N 36.72 ms
Left Lower Femur Compression = -3,796.81 N 66.48 ms

Upper Right TI (SAE) = 0.92 at 108.48 ms
Upper Right TI (IIHS) = 1.17 at 106.56 ms

Upper Left TI (SAE) = 0.69 at 48.72 ms
Upper Left TI (IIHS) = 1.00 at 82.72 ms

Lower Right TI (SAE) = 0.81 at 82.08 ms
Lower Right TI (IIHS) = 1.28 at 82.08 ms

Lower Left TI (SAE) = 1.03 at 48.48 ms
Lower Left TI (IIHS) = 1.17 at 82.88 ms

Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

Target Vehicle Driver Dummy S/N: 110

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 110 w/ THOR-LX Calibration No. 14

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	888	Yes
B	Shoulder Pivot Height	505.5 - 520.7	515	Yes
C	H-Point Height	83.8 - 88.9	91	No
D	H-Point From Seatback	134.6 - 139.7	137	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	94	Yes
F	Thigh Clearance	139.7 - 154.9	154	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	294	Yes
H	Skull Cap To Backline	40.6 - 45.7	44	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	341	Yes
J	Elbow Rest Height	190.5 - 210.8	209	Yes
K	Buttock Knee Length	579.1 - 604.5	603	Yes
L	Popliteal Height	429.3 - 454.7	439	Yes
M	Knee Pivot Height	485.1 - 500.4	499	Yes
N	Buttock Popliteal Length	452.1 - 477.5	470	Yes
O	Chest Depth	213.4 - 228.6	219	Yes
P	Foot Length	251.5 - 266.7	253	Yes
V	Shoulder Breadth	421.6 - 436.9	426	Yes
W	Foot Breadth	91.4 - 106.7	97	Yes
Y	Chest Circumference	970.3 - 1000.8	978	Yes
Z	Waist Circumference	835.7 - 866.1	853	Yes
AA	Location For Chest Circumference	429.3 - 434.3	432	Yes
BB	Location For Waist Circumference	226.1 - 231.1	228	Yes

Does not meet all specifications

Technician

Approved

050627

Revised 3/13/3003

Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 3

Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Peak Resultant Acceleration	225 - 275 g	267.0 g	Yes
Peak Lateral Acceleration	15 g Max	4.6 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

06.22.2005 11:33:21 614

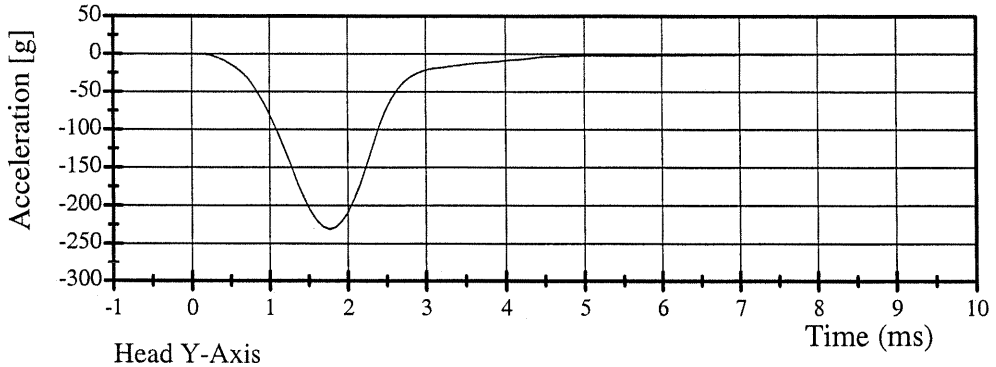
Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 3

Test Date 06/22/2005

Head X-Axis

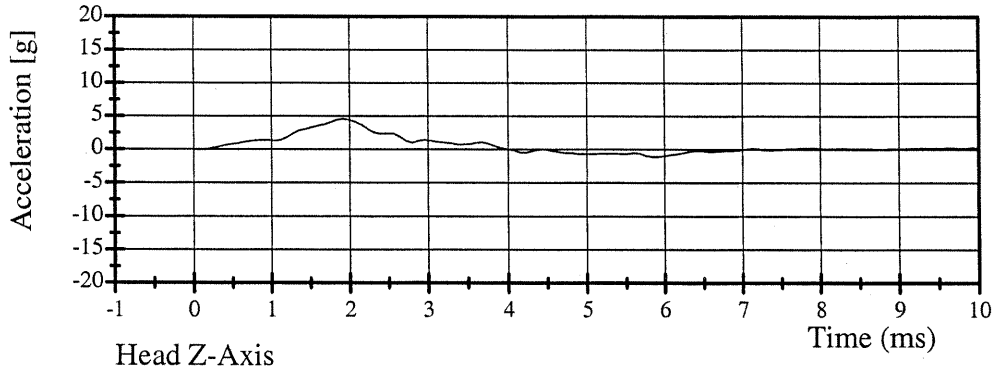


Filter Class: 1000

Max: 0.6 g at 9.3 ms

Min: -231.2 g at 1.8 ms

Head Y-Axis

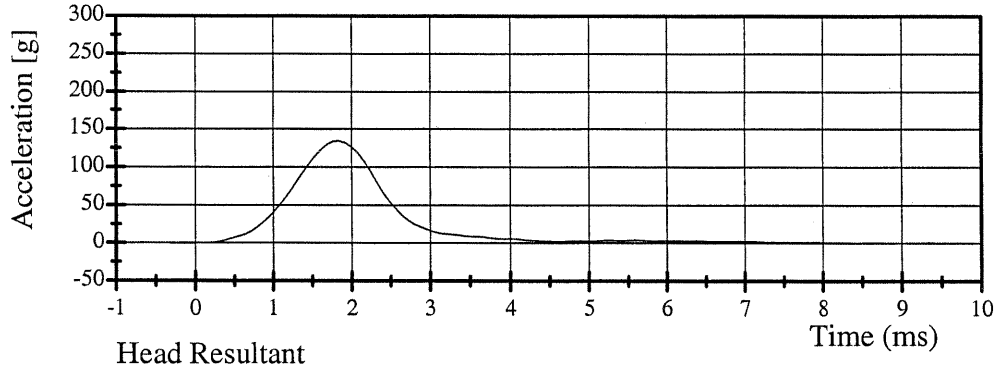


Filter Class: 1000

Max: 4.6 g at 1.9 ms

Min: -1.1 g at 5.8 ms

Head Z-Axis

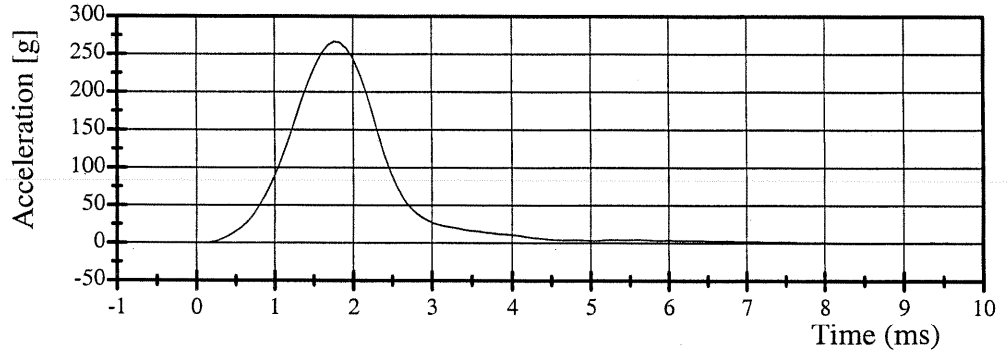


Filter Class: 1000

Max: 134.1 g at 1.8 ms

Min: -0.0 g at 0.0 ms

Head Resultant



Filter Class: 1000

Max: 267.0 g at 1.8 ms

Min: 0.0 g at 1.8 ms

06.22.2005 11:33:22 614

Transportation Research Center Inc.

572E Neck Flexion Test - 6 Channel Transducer

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/21/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Pendulum Deceleration			
10 ms	22.50 - 27.50 g	23.22 g	Yes
20 ms	17.60 - 22.60 g	21.44 g	Yes
30 ms	12.50 - 18.50 g	14.94 g	Yes
Max Pendulum Deceleration	29.00 g	24.42 g	Yes
Max Pendulum Deceleration After 30 ms	29.00 g	14.86 g	Yes
Deceleration-Time Curve Decay Time To 5g	34 - 42 ms	39.76 ms	Yes
D Plane Rotation			
Max	64 - 78 °	70.07 °	Yes
Time	57 - 64 ms	60.00 ms	Yes
Moment About Occipital Condyle			
Max	88.1 - 108.5 N·m	97.62 N·m	Yes
Time	47 - 58 ms	52.64 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	113 - 128 ms	122.24 ms	Yes
Positive Moment-Time Curve Decay Time To Zero	97 - 107 ms	100.72 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.21.2005 13:32:24 1137

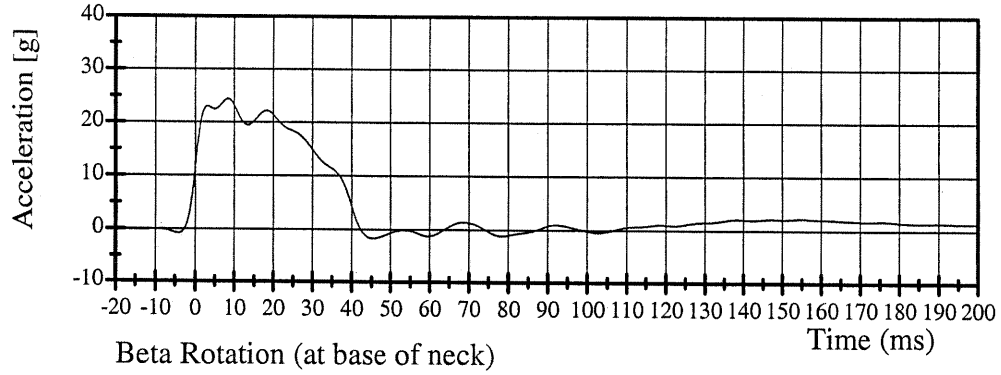
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/21/2005

Pendulum Deceleration

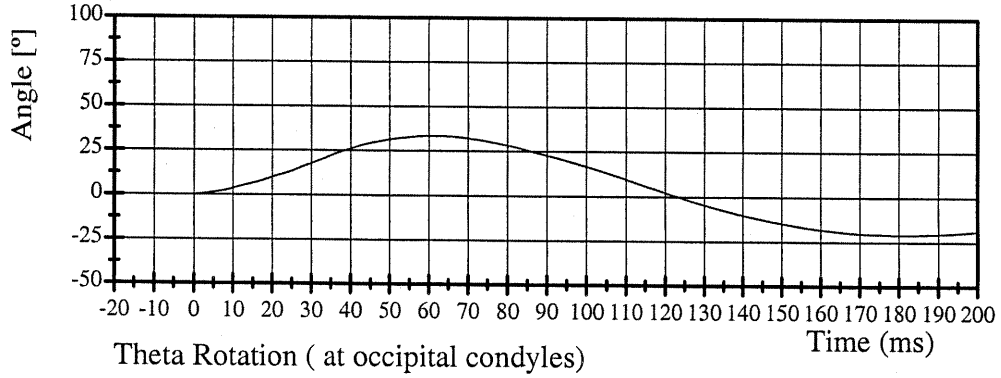


Filter Class: 60

Max: 24.4 g at 8.4 ms

Min: -1.6 g at 45.4 ms

Beta Rotation (at base of neck)

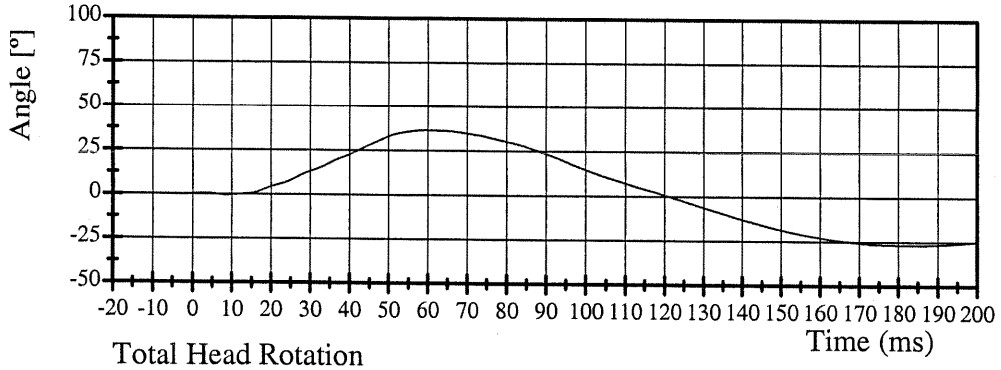


Filter Class: 60

Max: 33.5 ° at 61.0 ms

Min: -20.8 ° at 181.5 ms

Theta Rotation (at occipital condyles)

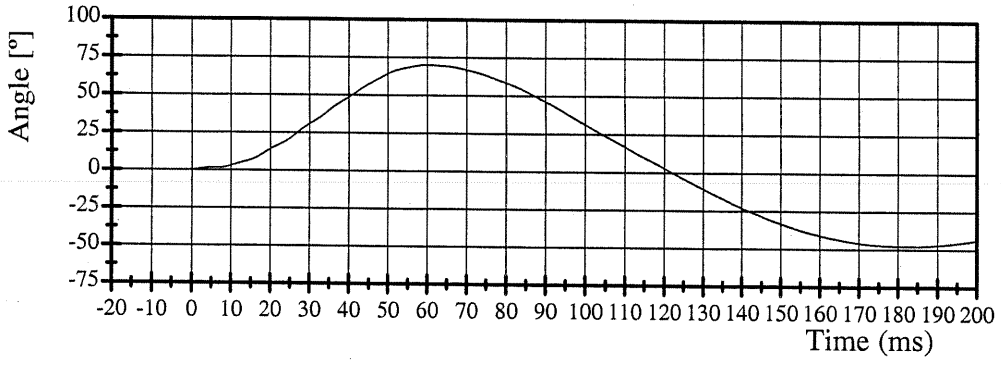


Filter Class: 60

Max: 36.6 ° at 59.5 ms

Min: -26.8 ° at 183.1 ms

Total Head Rotation



Filter Class: 60

Max: 70.1 ° at 60.0 ms

Min: -47.7 ° at 182.4 ms

06.21.2005 13:32:25 1137

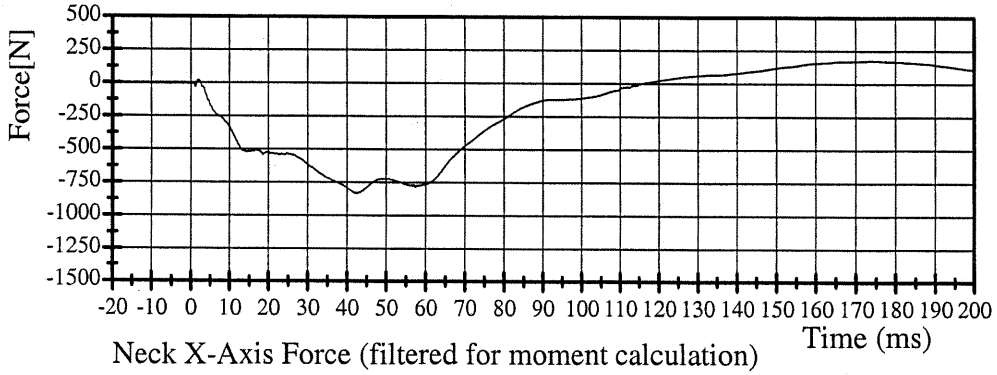
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/21/2005

Neck X-Axis Force

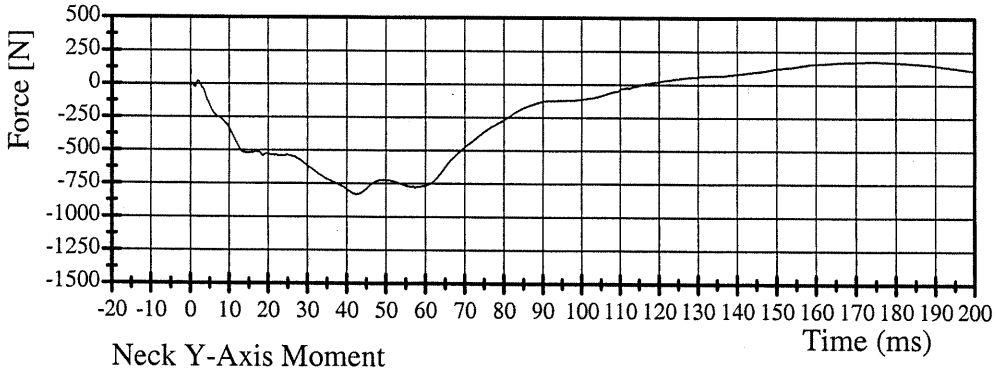


Filter Class: 1000

Max: 177.6 N at 173.4 ms

Min: -830.7 N at 42.5 ms

Neck X-Axis Force (filtered for moment calculation)

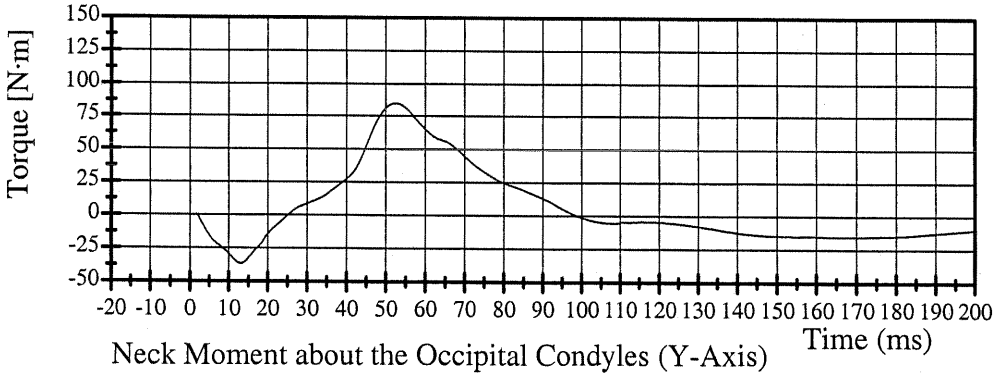


Filter Class: 600

Max: 177.4 N at 173.4 ms

Min: -830.5 N at 42.5 ms

Neck Y-Axis Moment

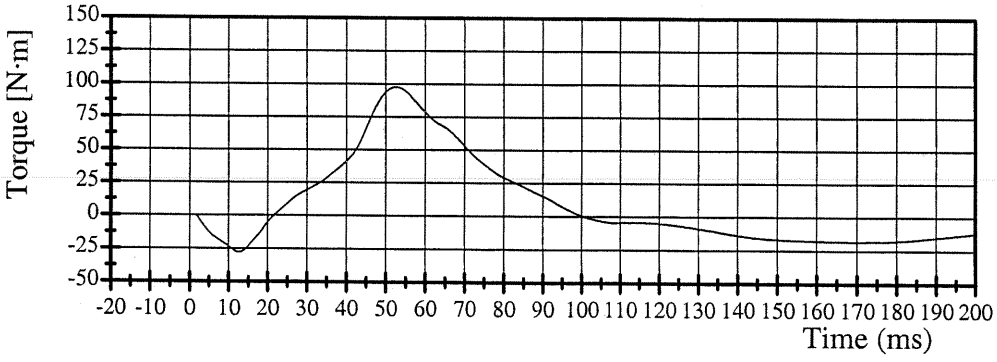


Filter Class: 600

Max: 84.6 N·m at 52.4 ms

Min: -36.6 N·m at 13.0 ms

Neck Moment about the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 97.6 N·m at 52.6 ms

Min: -27.7 N·m at 12.6 ms

06.21.2005 13:32:27 1137

Transportation Research Center Inc.

572E Neck Extension Test - 6 Channel Transducer

HIII 50th Male Serial No. 110 Calibration No. 14 - 3

Test Date 06/21/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	45 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.05 m/s	Yes
Pendulum Deceleration			
10 ms	17.20 - 21.20 g	17.97 g	Yes
20 ms	14.00 - 19.00 g	16.55 g	Yes
30 ms	11.00 - 16.00 g	13.04 g	Yes
Max Pendulum Deceleration	22.00 g	19.50 g	Yes
Max Pendulum Deceleration After 30 ms	22.00 g	13.01 g	Yes
Deceleration-Time Curve Decay Time To 5g	38 - 46 ms	42.64 ms	Yes
D Plane Rotation			
Max	81 - 106 °	96.88 °	Yes
Time	72 - 82 ms	74.80 ms	Yes
Moment About Occipital Condyle			
Min	-80.0 - (-52.9) N·m	-72.65 N·m	Yes
Time	65 - 79 ms	69.28 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	147 - 174 ms	160.32 ms	Yes
Negative Moment-Time Curve Decay Time To Zero	120 - 148 ms	145.68 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.21.2005 15:25:27 3100

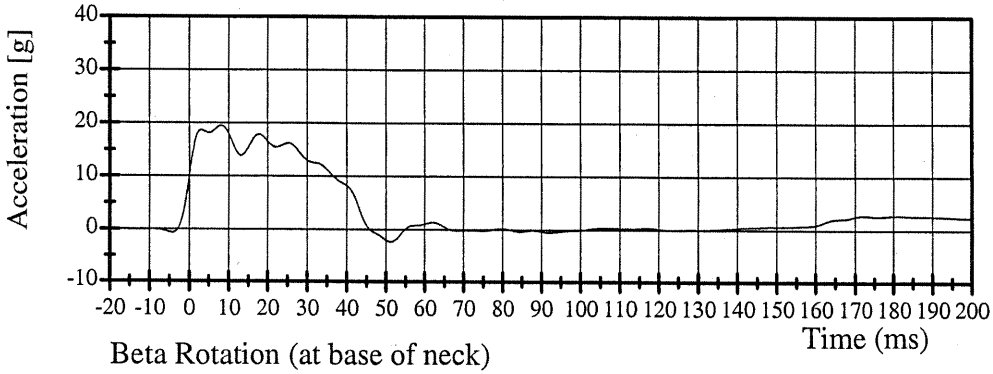
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 3

Test Date 06/21/2005

Pendulum Deceleration

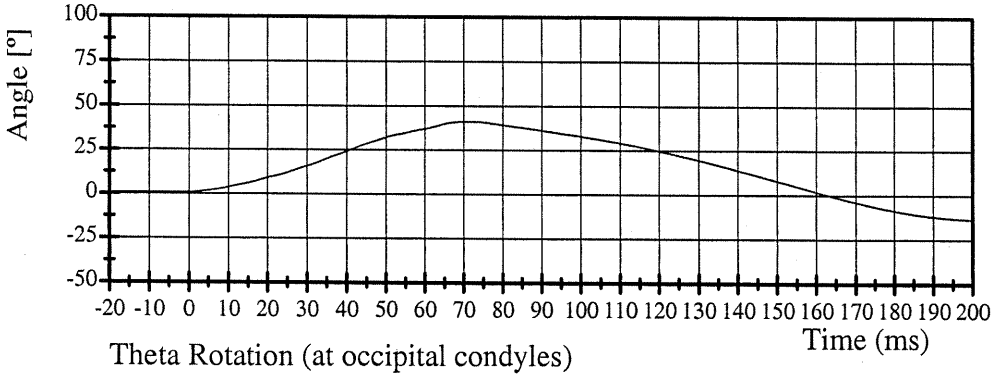


Filter Class: 60

Max: 19.5 g at 8.2 ms

Min: -2.3 g at 51.1 ms

Beta Rotation (at base of neck)

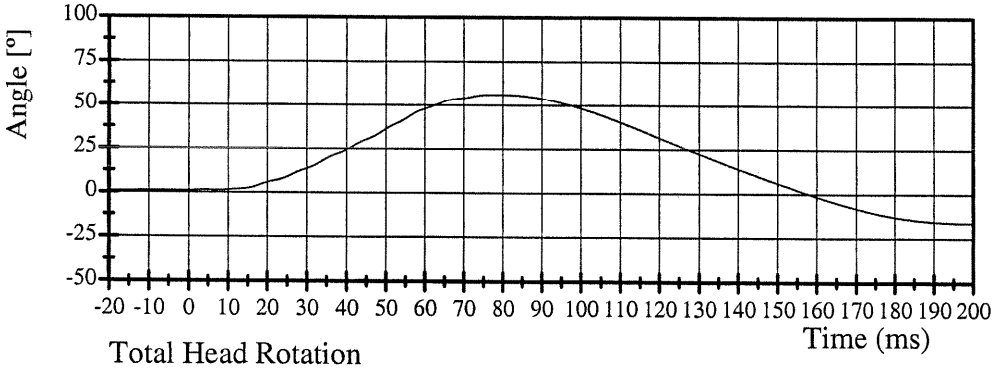


Filter Class: 60

Max: 41.1 ° at 72.2 ms

Min: -13.8 ° at 205.0 ms

Theta Rotation (at occipital condyles)

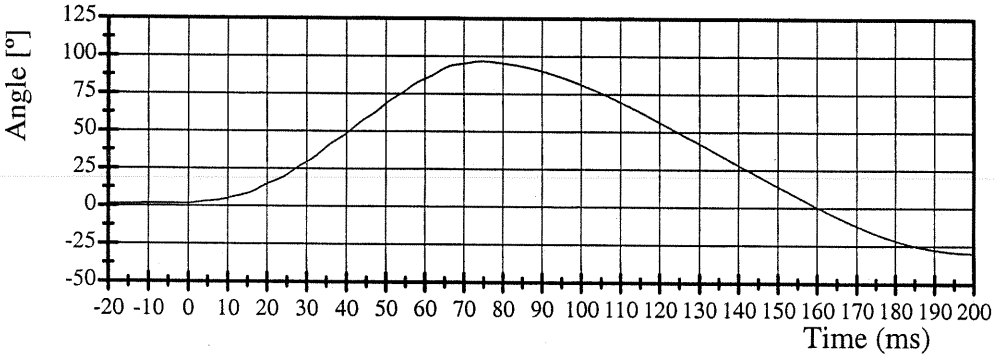


Filter Class: 60

Max: 56.2 ° at 77.0 ms

Min: -16.3 ° at 202.0 ms

Total Head Rotation



Filter Class: 60

Max: 96.9 ° at 74.8 ms

Min: -30.0 ° at 204.2 ms

06.21.2005 15:25:29 3100

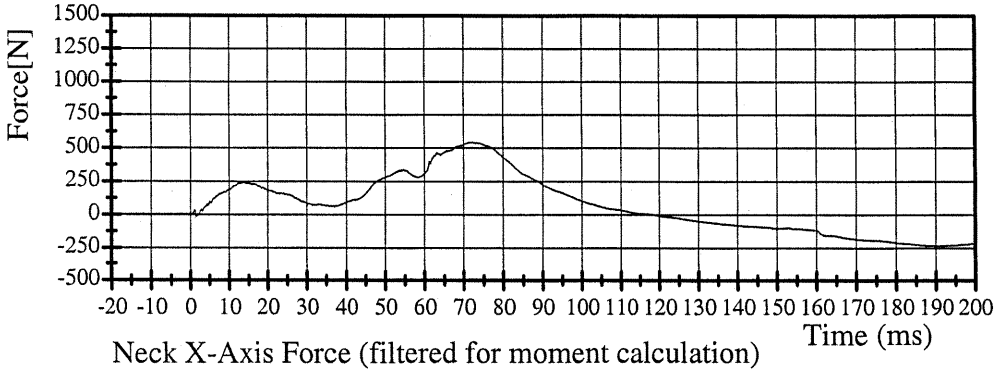
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 3

Test Date 06/21/2005

Neck X-Axis Force

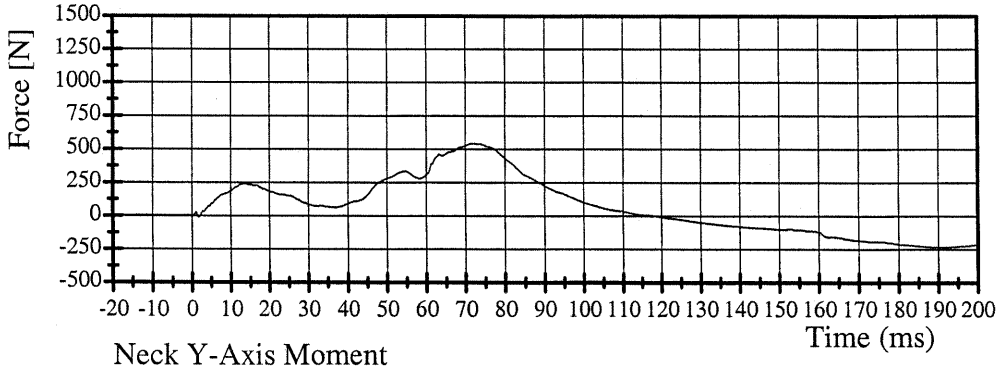


Filter Class: 1000

Max: 541.0 N at 71.8 ms

Min: -233.6 N at 190.1 ms

Neck X-Axis Force (filtered for moment calculation)

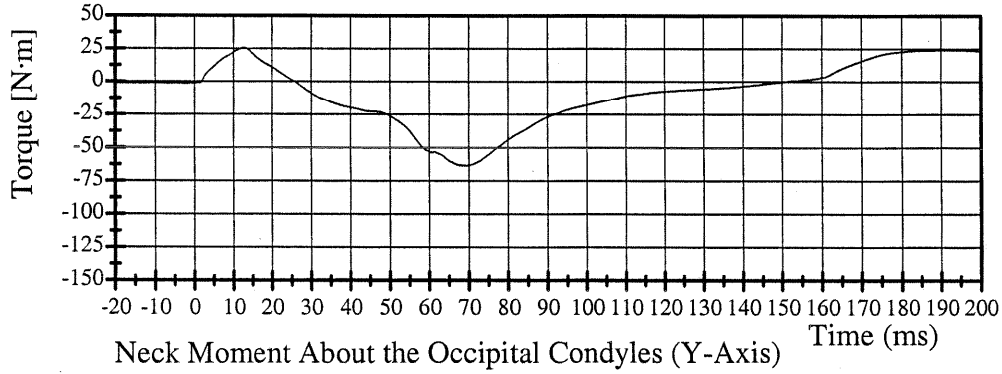


Filter Class: 600

Max: 540.7 N at 71.8 ms

Min: -233.4 N at 190.5 ms

Neck Y-Axis Moment

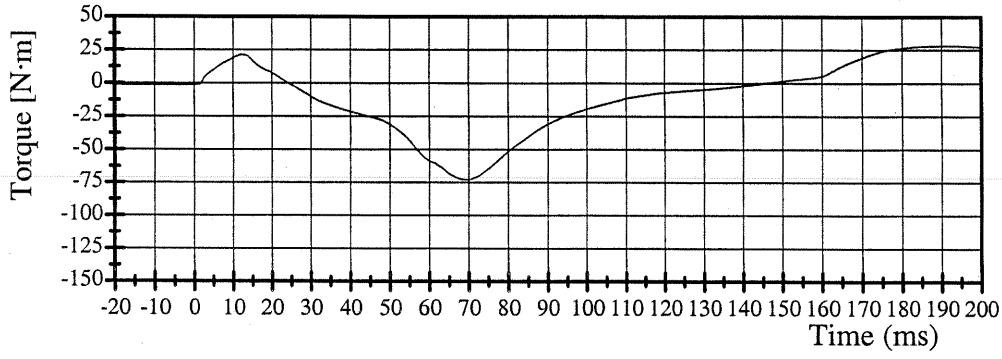


Filter Class: 600

Max: 25.6 N·m at 12.5 ms

Min: -63.5 N·m at 69.1 ms

Neck Moment About the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 28.2 N·m at 192.2 ms

Min: -72.7 N·m at 69.3 ms

06.21.2005 15:25:30 3100

Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.61 m/s	Yes
Maximum Chest Deflection	-72.6 - (-63.5) mm	-69.6 mm	Yes
Maximum Resistive Force	5160 - 5894 N	5662 N	Yes
Internal Hysteresis	69 - 85 %	70 %	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 11:40:05 1604

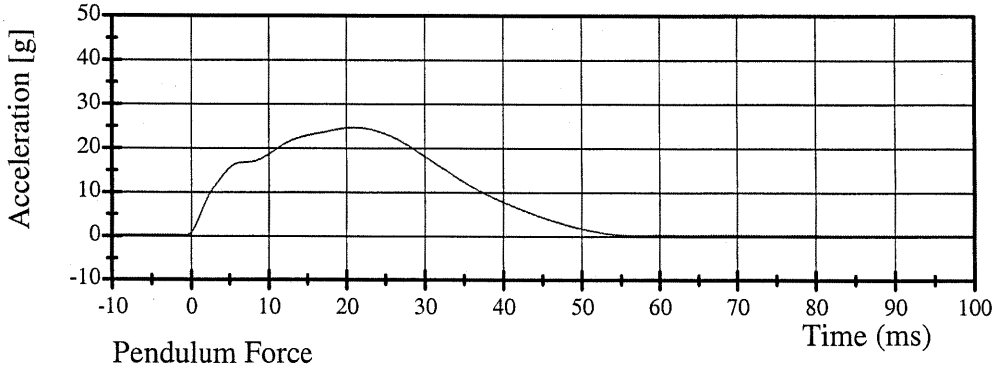
Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/24/2005

Pendulum Deceleration

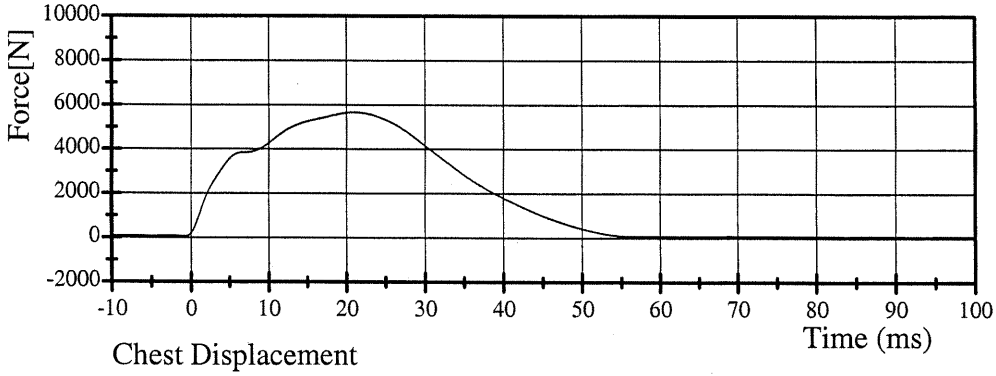


Filter Class: 180

Max: 24.7 g at 21.0 ms

Min: -0.0 g at -127.4 ms

Pendulum Force

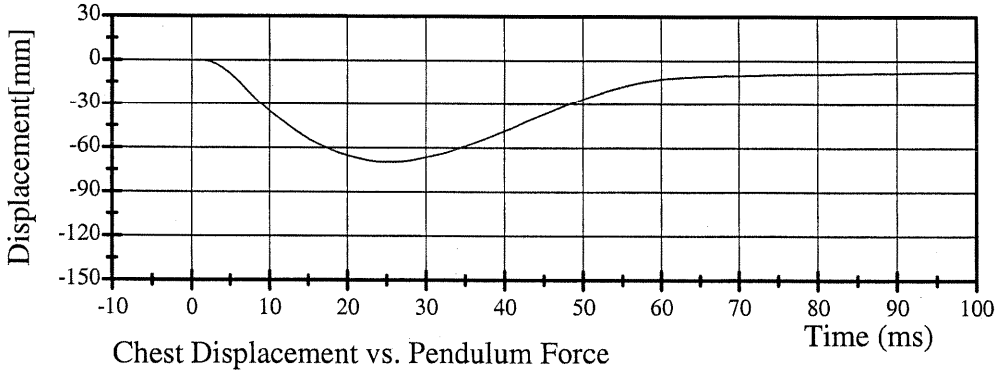


Filter Class: 180

Max: 5662.2 N at 21.0 ms

Min: -7.7 N at -127.4 ms

Chest Displacement

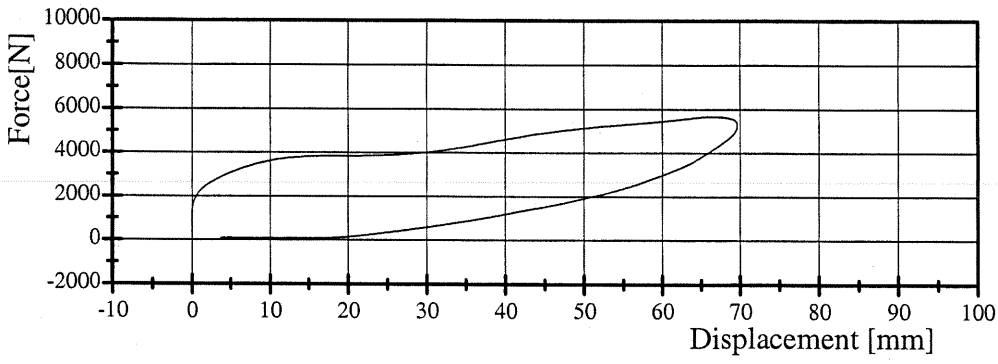


Filter Class: 180

Max: 0.1 mm at 0.9 ms

Min: -69.6 mm at 25.3 ms

Chest Displacement vs. Pendulum Force



06.24.2005 11:40:06 1604

Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

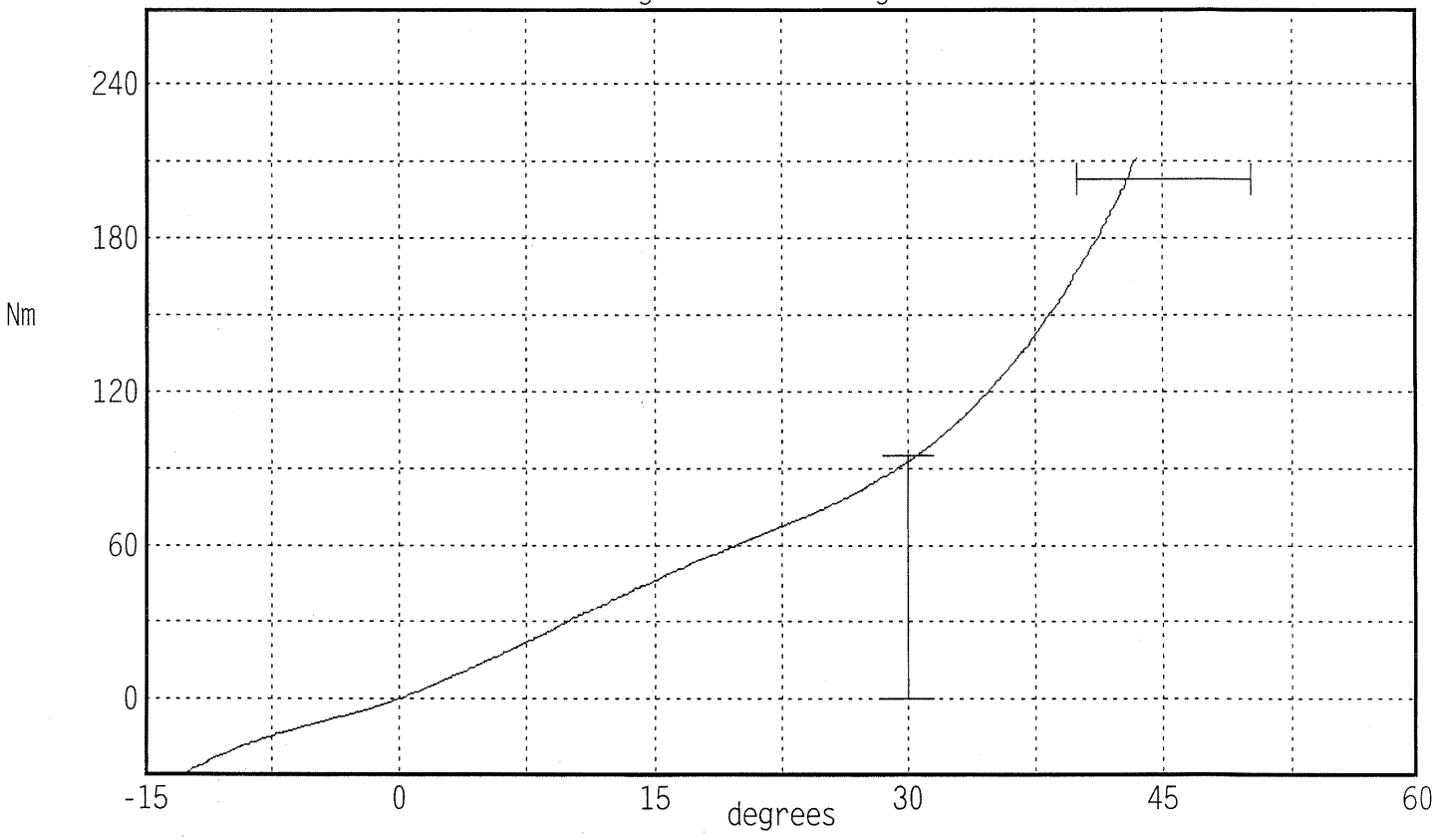
Serial Number: 110L
Test Number: 110C14
Comments:

Date: 06/20/2005
Time: 15:15

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.2	°C	Pass
Humidity	10 - 70	49	%	Pass
Moment at 30 deg	<= 94.9	93.0	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	43.0	deg	Pass
Average Velocity	5.0 - 10.0	7.5	deg/sec	Pass

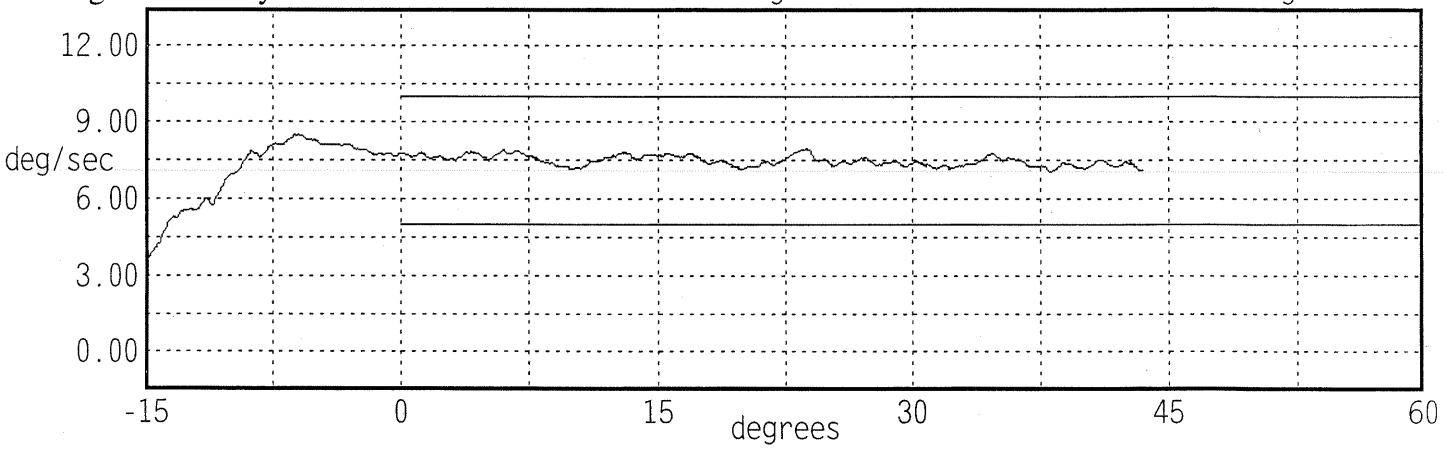
Moment About H-Point

Peak Moment: 210.8 Nm at 43.5 deg
Peak Angle: 43.5 deg at 210.8 Nm



Angular Velocity

Max: 7.9 deg/sec Min: 7.0 deg/sec



Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

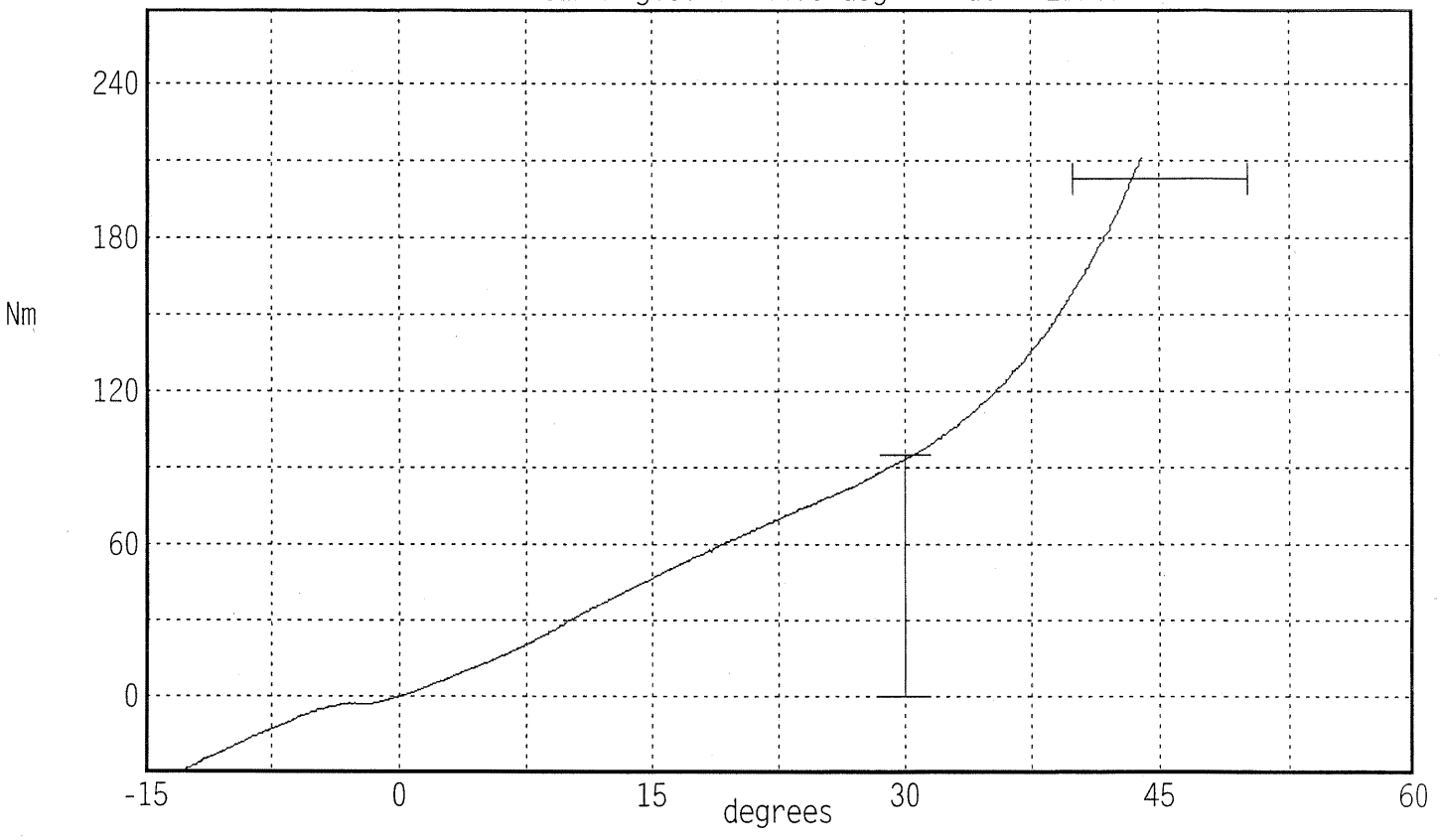
Serial Number: 110R
Test Number: 110C14
Comments:

Date: 06/20/2005
Time: 15:23

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.4	°C	Pass
Humidity	10 - 70	47	%	Pass
Moment at 30 deg	<= 94.9	93.6	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	43.5	deg	Pass
Average Velocity	5.0 - 10.0	7.5	deg/sec	Pass

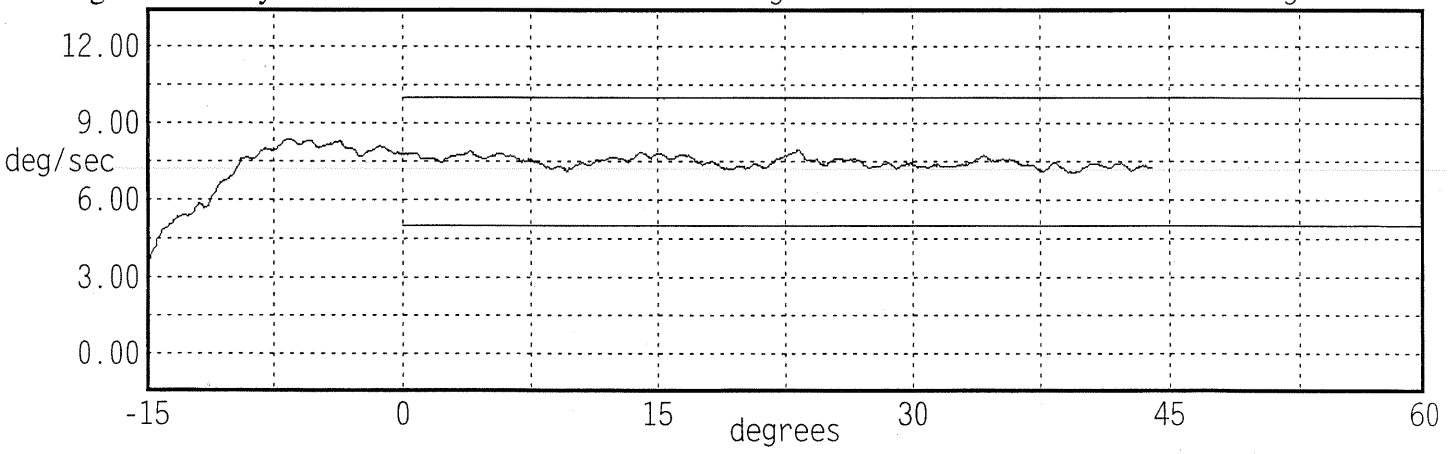
Moment About H-Point

Peak Moment: 211.1 Nm at 44.0 deg
Peak Angle: 44.0 deg at 211.1 Nm



Angular Velocity

Max: 7.9 deg/sec Min: 7.0 deg/sec



Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.13 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5662 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.22.2005 12:42:14 2079

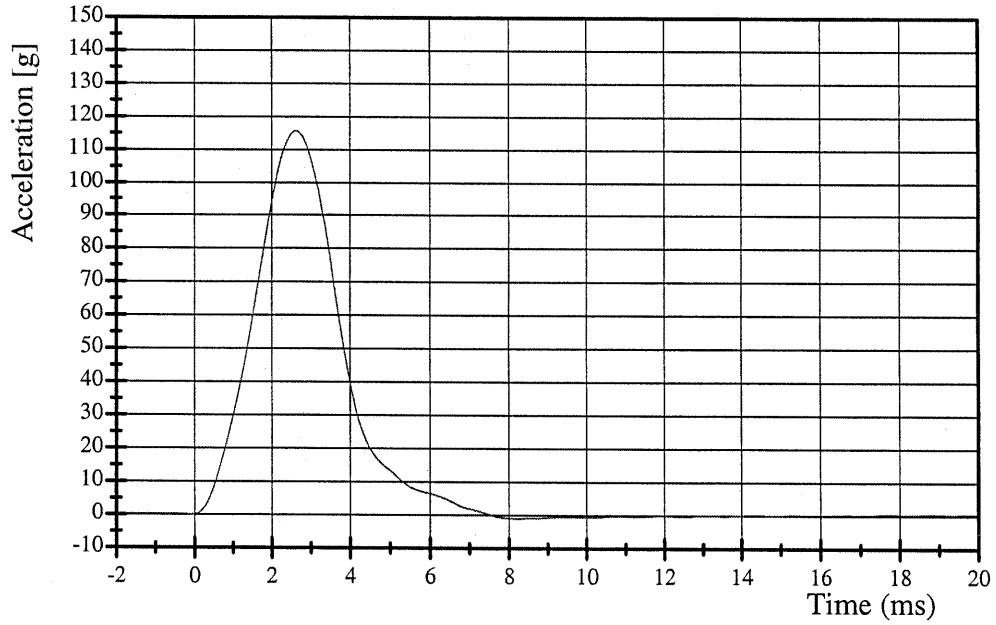
Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/22/2005

Pendulum Deceleration

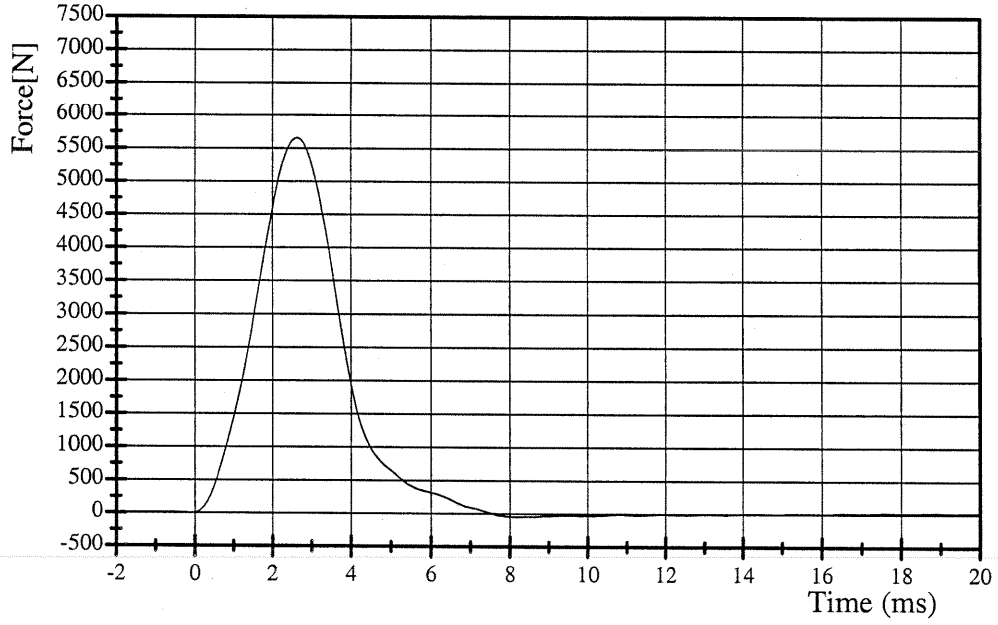


Filter Class: 600

Max: 115.7 g at 2.6 ms

Min: -1.0 g at 8.2 ms

Pendulum Force



Filter Class: 600

Max: 5662.4 N at 2.6 ms

Min: -50.1 N at 8.2 ms

06.22.2005 12:42:15 2079

Transportation Research Center Inc.

572E Left Slider Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/23/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.74 m/s	Yes
Force At 10 mm Displacement	-1259 - (-1721) N	-1459 N	Yes
Force At 18 mm Displacement	-2268 - (-3096) N	-2786 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.23.2005 08:01:38 1742

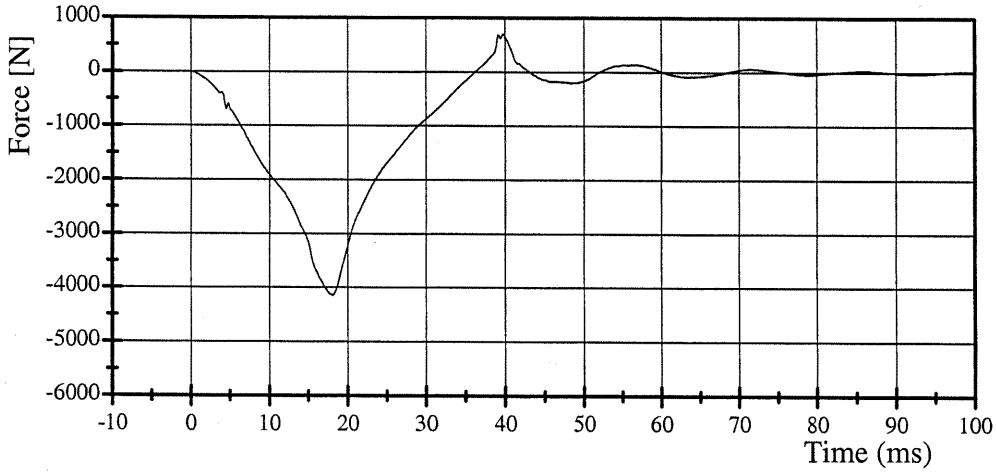
Transportation Research Center Inc.

572E Left Slider Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/23/2005

Femur Force

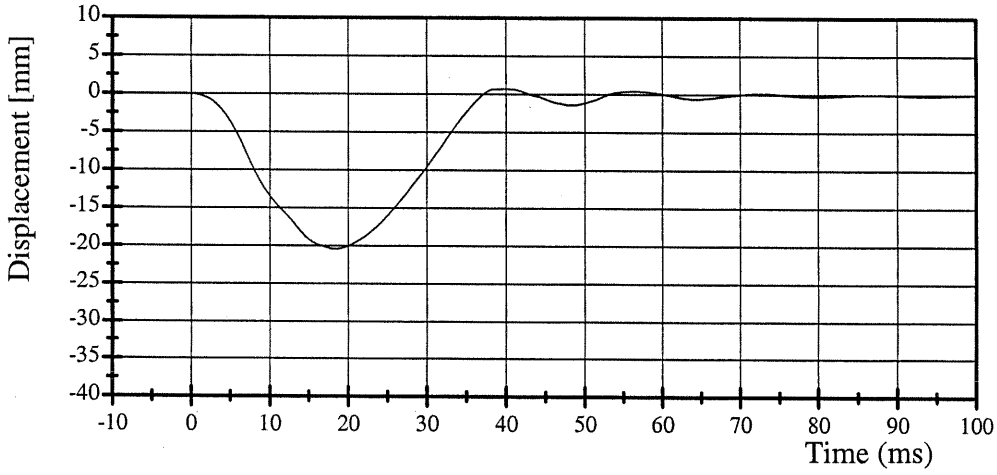


Filter Class: 600

Max: 695.6 N at 39.8 ms

Min: -4146.7 N at 18.1 ms

Tibia Displacement

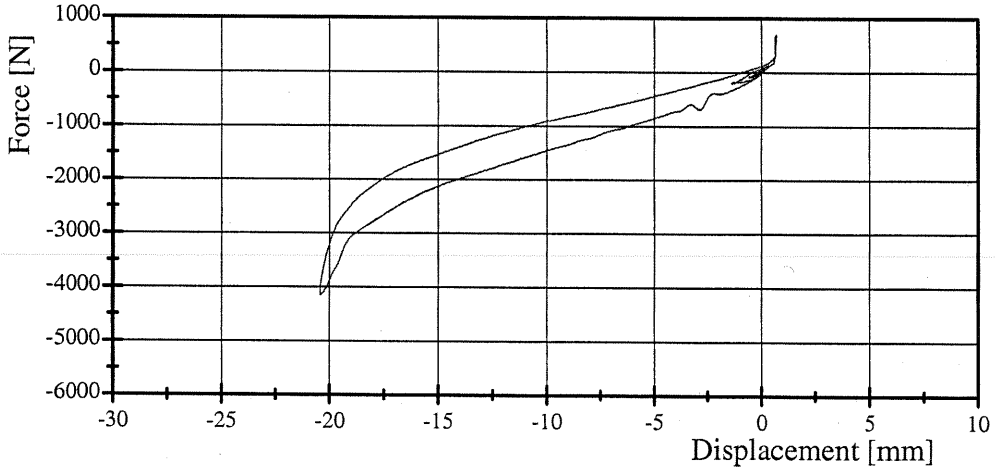


Filter Class: 600

Max: 0.7 mm at 40.2 ms

Min: -20.4 mm at 18.3 ms

Femur Force vs Tibia Displacement



06.23.2005 08:01:39 1742

Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 2

Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	47 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.12 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5539 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.22.2005 13:29:26 2138

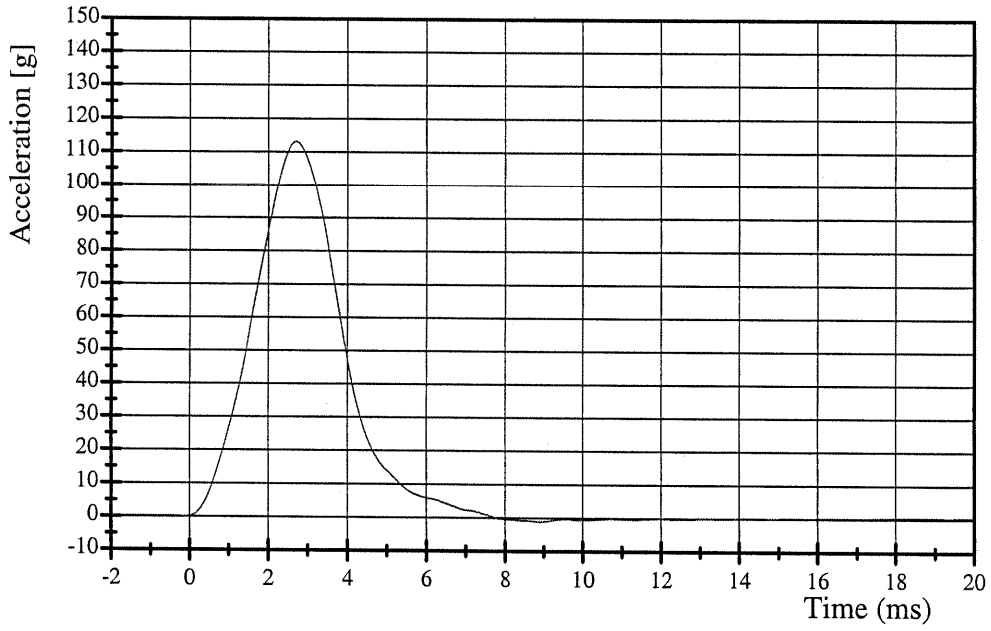
Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 2

Test Date 06/22/2005

Pendulum Deceleration

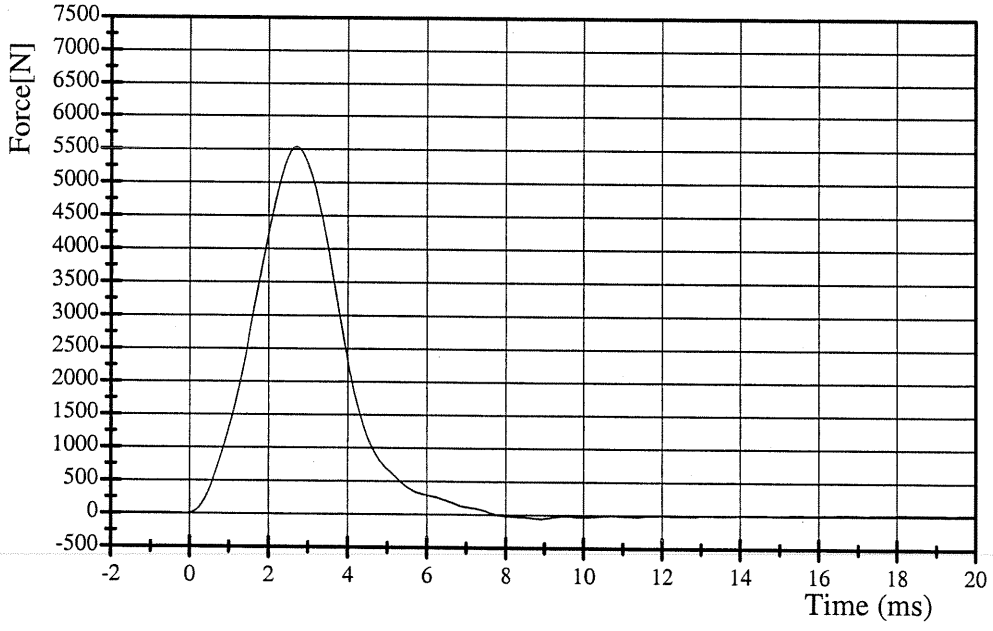


Filter Class: 600

Max: 113.2 g at 2.7 ms

Min: -1.1 g at 8.9 ms

Pendulum Force



Filter Class: 600

Max: 5538.8 N at 2.7 ms

Min: -56.2 N at 8.9 ms

06.22.2005 13:29:27 2138

Transportation Research Center Inc.

572E Right Slider Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.75 m/s	Yes
Force At 10 mm Displacement	-1259 - (-1721) N	-1515 N	Yes
Force At 18 mm Displacement	-2268 - (-3096) N	-2883 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.22.2005 15:22:27 1751

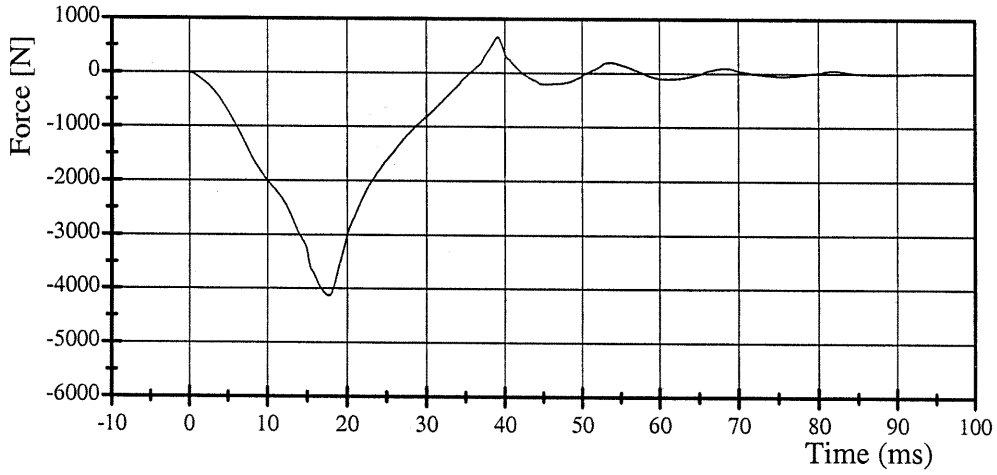
Transportation Research Center Inc.

572E Right Slider Test

HIII 50th Male Serial No. 110 Calibration No. 14 - 1

Test Date 06/22/2005

Femur Force

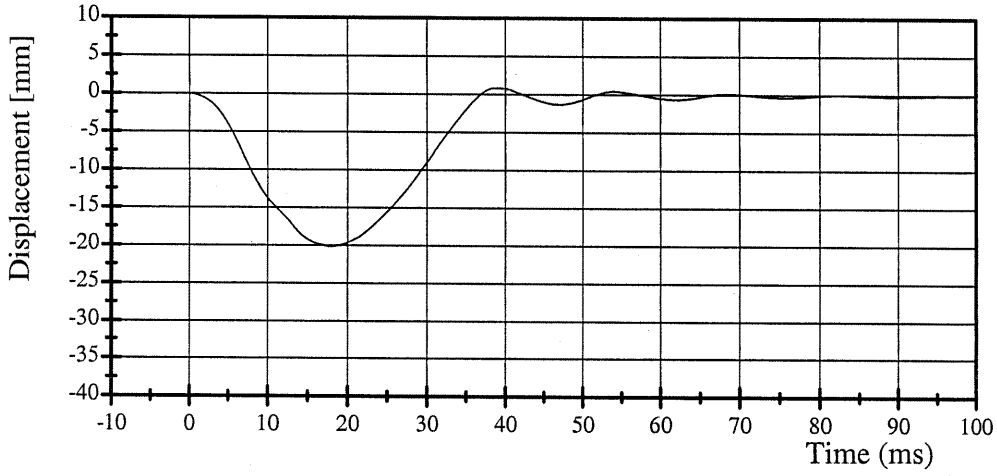


Filter Class: 600

Max: 662.6 N at 39.0 ms

Min: -4133.2 N at 17.8 ms

Tibia Displacement

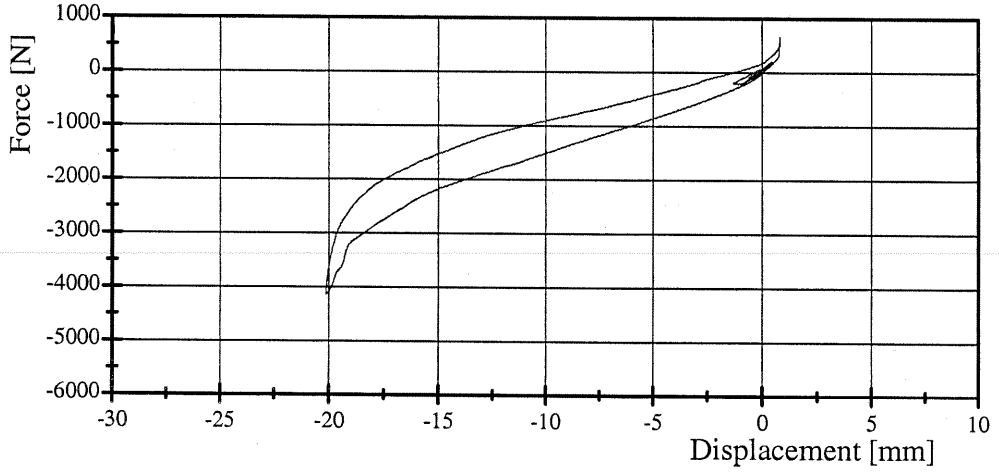


Filter Class: 600

Max: 0.8 mm at 38.6 ms

Min: -20.1 mm at 18.0 ms

Femur Force vs Tibia Displacement



06.22.2005 15:22:28 1751

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. 28
With Thor FLX Legs

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	780	Yes
B	Shoulder Pivot Height	431.8 - 457.2	454	Yes
C	Hip Pivot Height	81.3 - 86.3	85	Yes
D	Hip Pivot from Backline	144.8 - 149.8	146	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	78	Yes
F	Thigh Clearance	119.4 - 134.6	129	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	248	Yes
H	Head Back to Backline	43.2 - 48.2	44	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	286	Yes
J	Elbow Rest Height	182.8 - 203.2	196	Yes
K	Buttock Knee Length	520.7 - 546.1	530	Yes
L	Popliteal Height	355.6 - 376.0	358	Yes
M	Knee Pivot Height	393.7 - 419.1	403	Yes
N	Buttock Popliteal Height	414.0 - 439.4	422	Yes
O	Chest Depth without Jacket	175.3 - 190.5	186	Yes
P	Foot Length	218.5 - 233.7	220	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	182	Yes
U	Hip Breadth	299.7 - 314.9	302	Yes
V	Shoulder Breadth	350.5 - 365.7	358	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	772	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	340	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician

Approved

Revised 3/19/3003

050627

Transportation Research Center Inc.

572O Head Drop Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 1

Test Date 06/23/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	42 %	Yes
Peak Resultant Acceleration	250 - 300 g	275.2 g	Yes
Peak Lateral Acceleration	15 g Max	5.0 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

06.23.2005 14:40:59 608

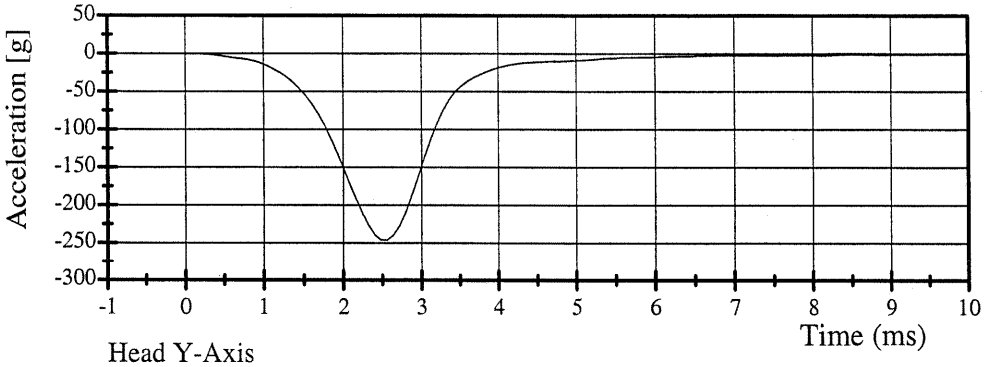
Transportation Research Center Inc.

572O Head Drop Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 1

Test Date 06/23/2005

Head X-Axis

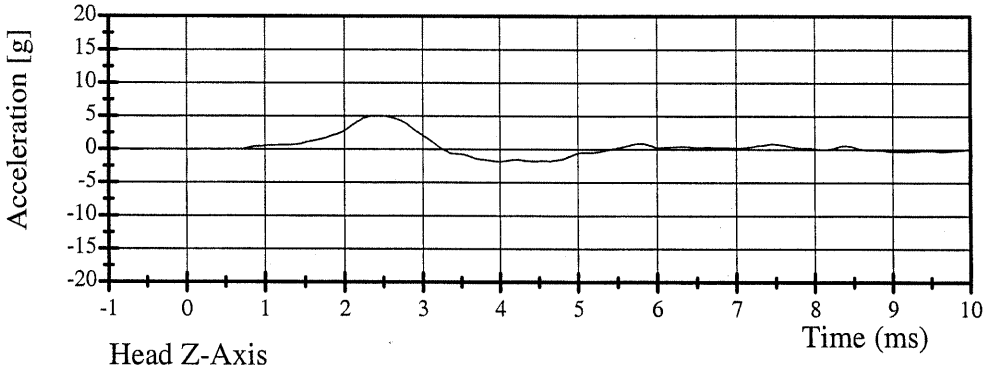


Filter Class: 1000

Max: -0.1 g at 0.0 ms

Min: -246.1 g at 2.6 ms

Head Y-Axis

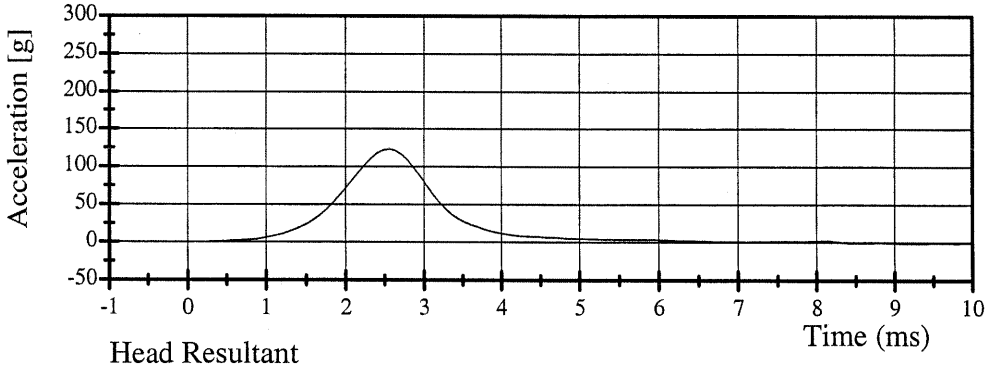


Filter Class: 1000

Max: 5.0 g at 2.5 ms

Min: -1.8 g at 4.0 ms

Head Z-Axis

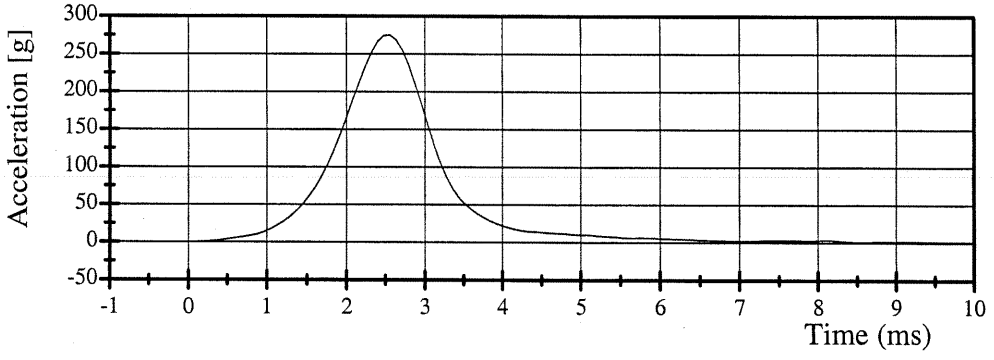


Filter Class: 1000

Max: 123.0 g at 2.6 ms

Min: -1.1 g at 9.1 ms

Head Resultant



Filter Class: 1000

Max: 275.2 g at 2.6 ms

Min: 0.0 g at 0.2 ms

06.23.2005 14:41:01 608

Transportation Research Center Inc.

572O Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 416 Calibration No. 28 - 6

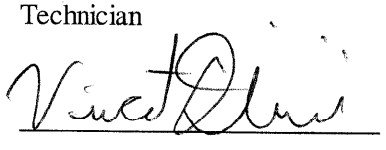
Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.10 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.45 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.70 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.81 m/s	Yes
Peak D Plane Rotation	77 - 91 °	82.1 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	70.81 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	88.08 ms	Yes

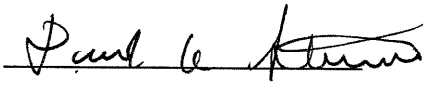
Test meets specifications.

Comments:

Technician



Approved



06.24.2005 17:19:22 3006

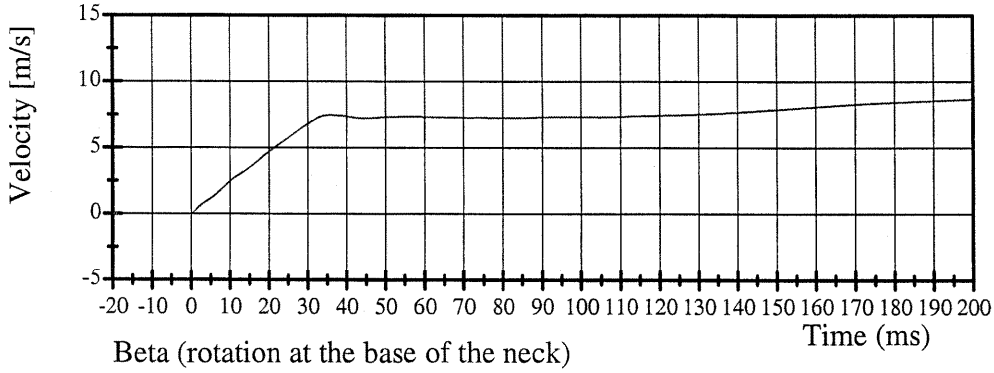
Transportation Research Center Inc.

572O Neck Flexion Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 6

Test Date 06/24/2005

Integrated Pendulum Velocity

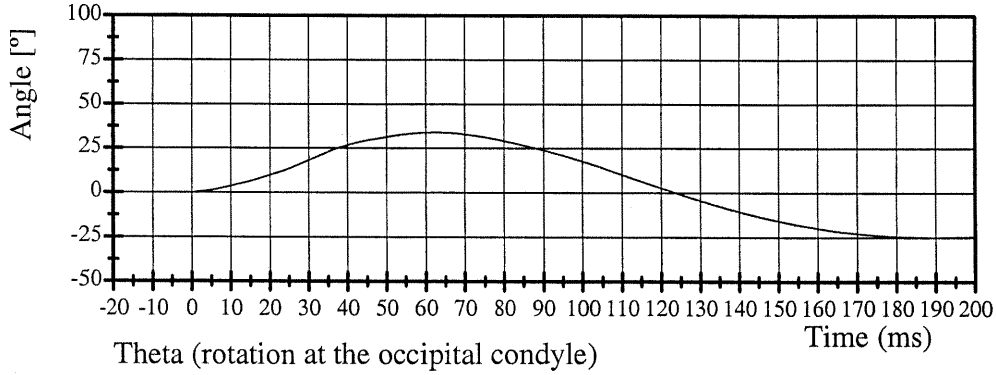


Filter Class: 180

Max: 9.4 m/s at 271.8 ms

Min: -0.0 m/s at -163.8 ms

Beta (rotation at the base of the neck)

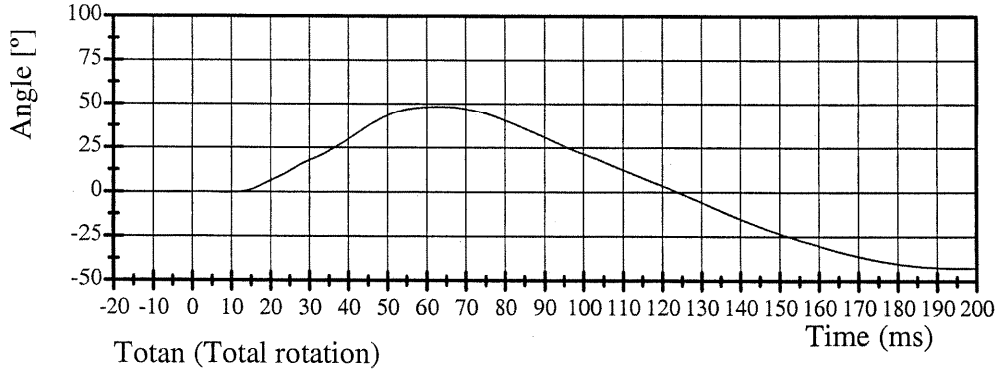


Filter Class: 60

Max: 33.9 ° at 62.5 ms

Min: -24.9 ° at 189.8 ms

Theta (rotation at the occipital condyle)

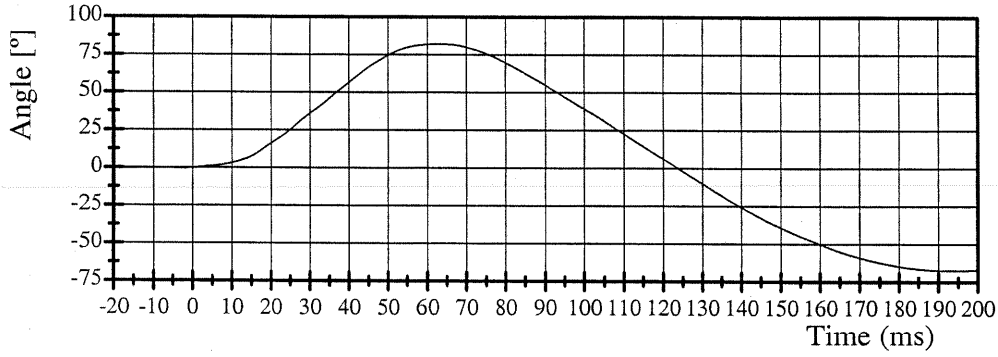


Filter Class: 60

Max: 48.2 ° at 63.4 ms

Min: -42.6 ° at 195.6 ms

Totan (Total rotation)



Filter Class: 60

Max: 82.1 ° at 62.8 ms

Min: -67.4 ° at 193.3 ms

06.24.2005 17:19:23 3006

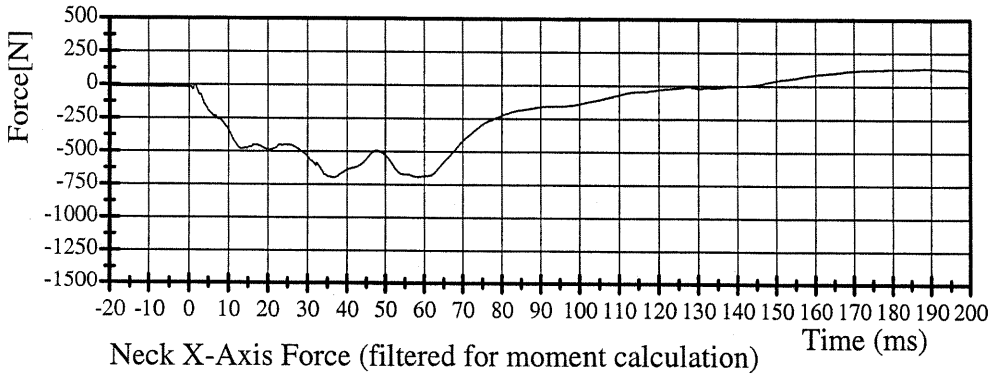
Transportation Research Center Inc.

572O Neck Flexion Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 6

Test Date 06/24/2005

Neck X-Axis Force

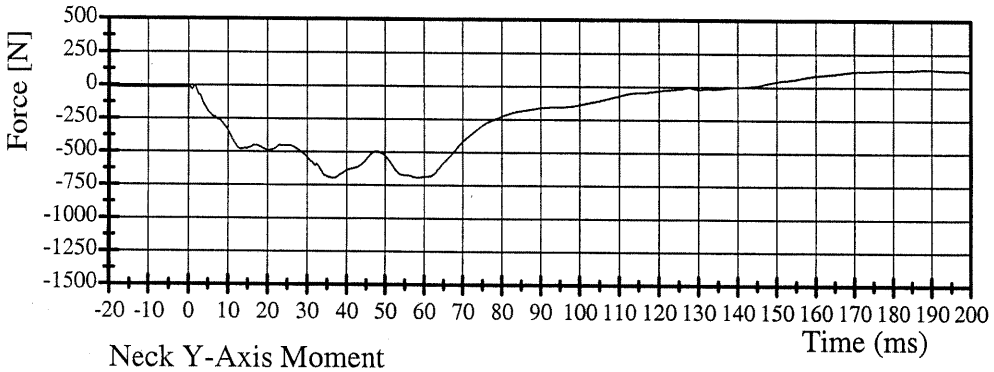


Filter Class: 1000

Max: 135.7 N at 189.4 ms

Min: -695.4 N at 36.3 ms

Neck X-Axis Force (filtered for moment calculation)

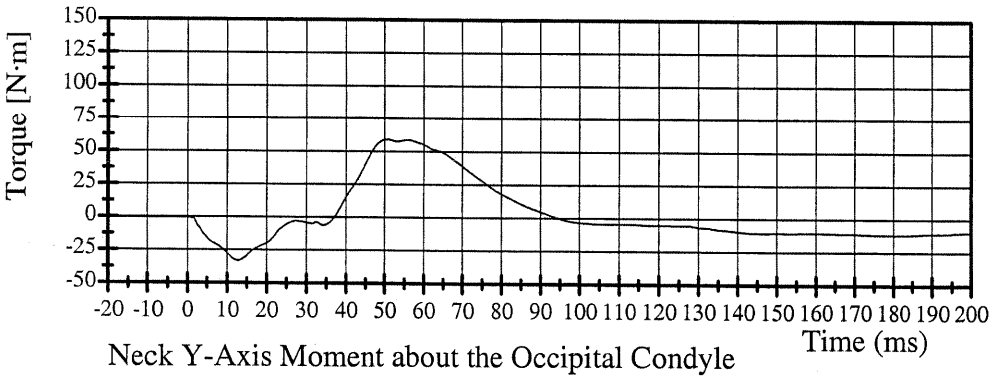


Filter Class: 600

Max: 135.4 N at 189.4 ms

Min: -695.0 N at 36.6 ms

Neck Y-Axis Moment

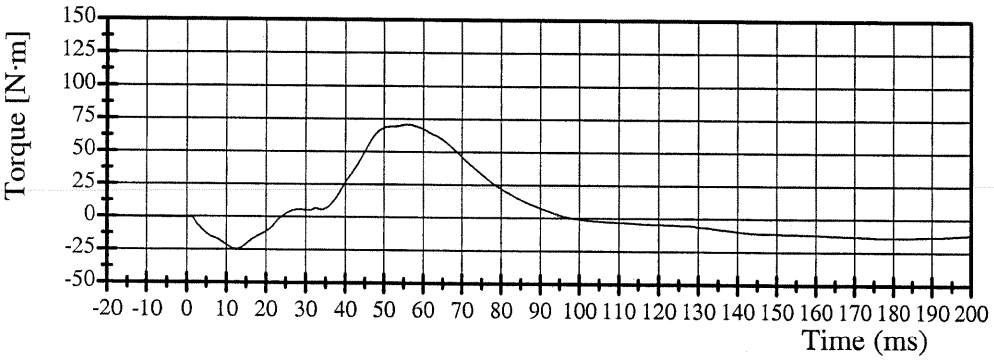


Filter Class: 600

Max: 59.1 N·m at 50.7 ms

Min: -33.0 N·m at 12.6 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 70.8 N·m at 55.9 ms

Min: -24.6 N·m at 12.4 ms

06.24.2005 17:19:24 3006

Transportation Research Center Inc.

572O Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 416 Calibration No. 28 - 7

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	43 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.05 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.59 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.14 m/s	Yes
30 ms	4.60 - 5.60 m/s	4.61 m/s	Yes
Peak D Plane Rotation	99 - 114 °	113.6 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-54.89 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	112.40 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 18:44:54 3099

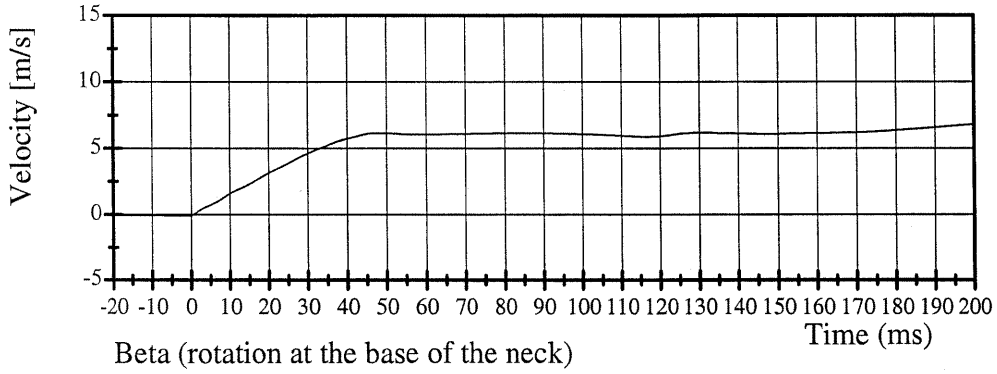
Transportation Research Center Inc.

572O Neck Extension Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 7

Test Date 06/24/2005

Integrated Pendulum Velocity

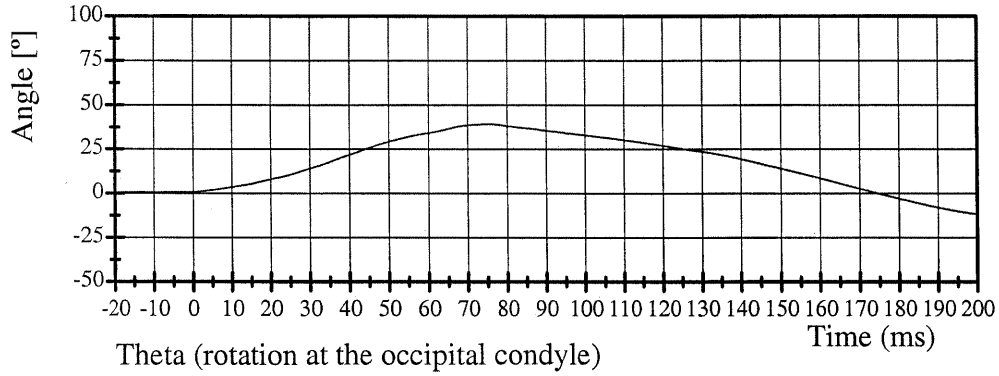


Filter Class: 180

Max: 7.7 m/s at 275.4 ms

Min: -0.1 m/s at -0.8 ms

Beta (rotation at the base of the neck)

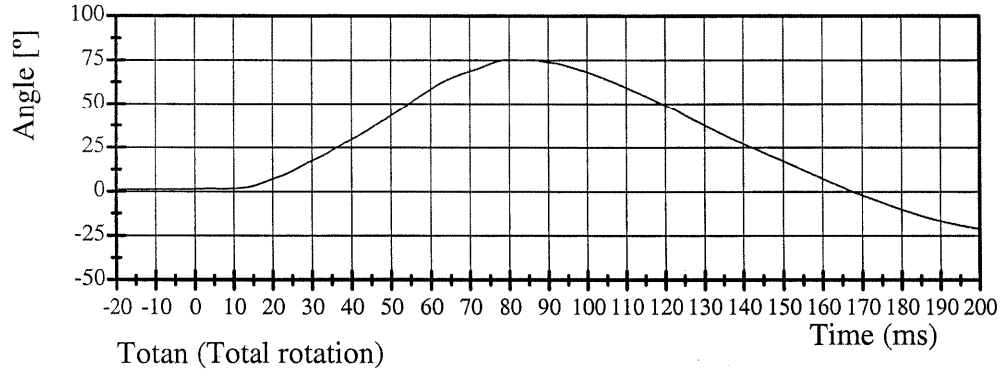


Filter Class: 60

Max: 39.3 ° at 75.2 ms

Min: -14.7 ° at 220.0 ms

Theta (rotation at the occipital condyle)

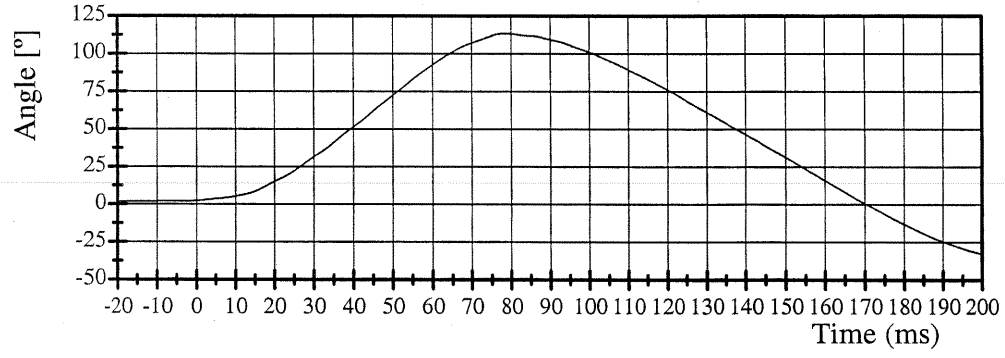


Filter Class: 60

Max: 75.2 ° at 80.3 ms

Min: -24.1 ° at 217.6 ms

Totan (Total rotation)



Filter Class: 60

Max: 113.6 ° at 78.4 ms

Min: -38.7 ° at 219.0 ms

06.24.2005 18:44:55 3099

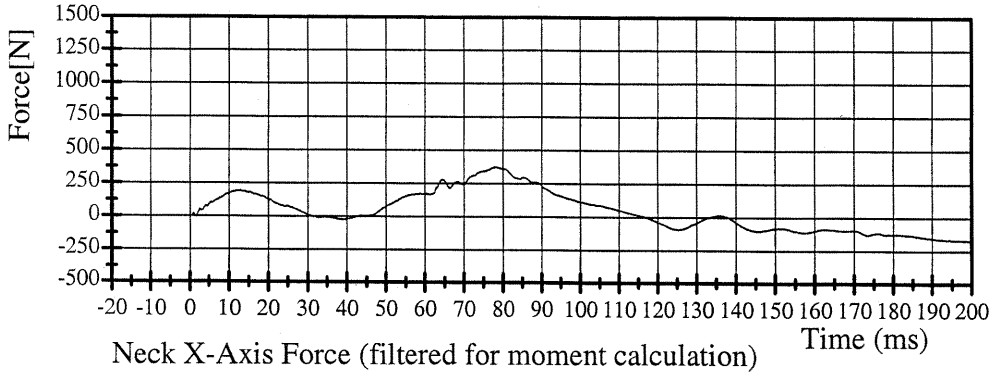
Transportation Research Center Inc.

572O Neck Extension Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 7

Test Date 06/24/2005

Neck X-Axis Force

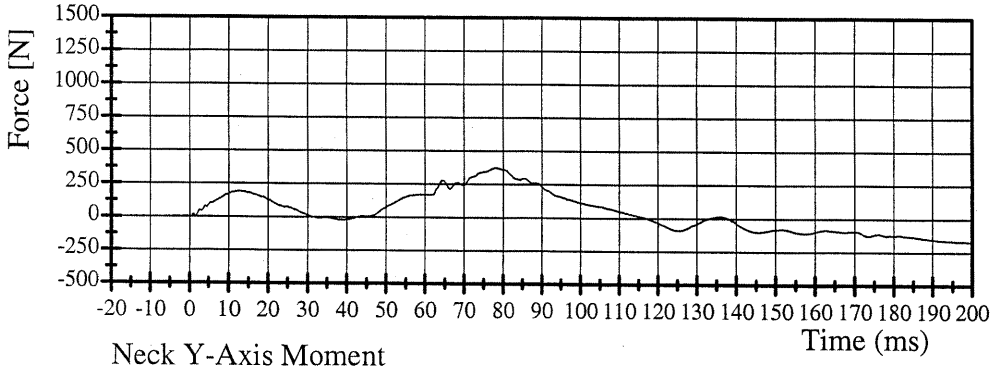


Filter Class: 1000

Max: 374.6 N at 78.1 ms

Min: -172.5 N at 202.5 ms

Neck X-Axis Force (filtered for moment calculation)

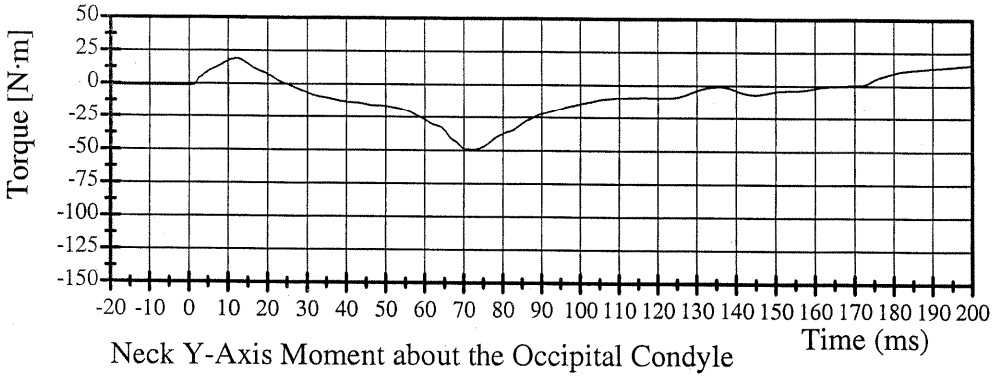


Filter Class: 600

Max: 374.4 N at 78.2 ms

Min: -171.9 N at 202.5 ms

Neck Y-Axis Moment

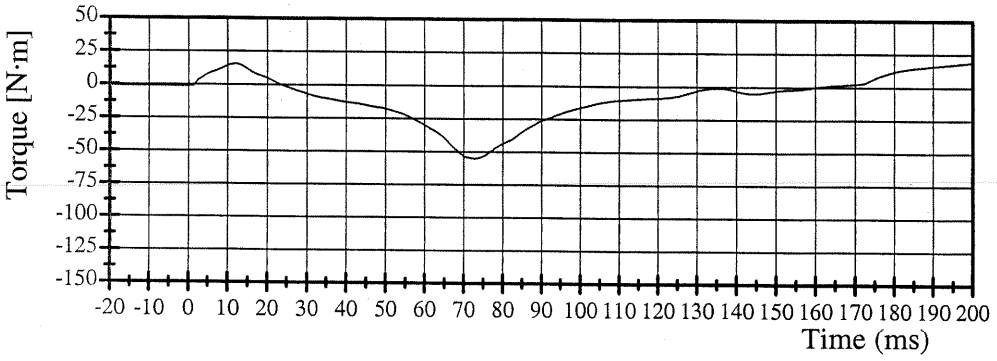


Filter Class: 600

Max: 19.0 N·m at 12.2 ms

Min: -49.4 N·m at 72.6 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 20.5 N·m at 210.2 ms

Min: -54.9 N·m at 72.6 ms

06.24.2005 18:44:56 3099

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

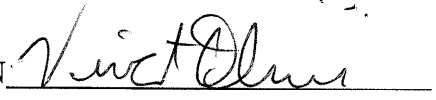
CAL DATE: 22-Jun-05

TRC, INC. **TEST NO: 416C28TF6** **572 O SN416 TORSO FLEX CAL 28**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.3° C
RELATIVE HUMIDITY	10 – 70 %	51 %
INITIAL ANGLE OF UNSUPPORRTED DUMMY	<= 20° REFERENCED TO VERTICAL	19.0°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	336.8 N
RETURN ANGLE		24.3°
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	5.3 °
RATE	0.5° - 1.5°/sec	0.98 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN 

Transportation Research Center Inc.

572O Thorax Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.60 m/s	Yes
Maximum Chest Deflection	-58.0 - (-50.0) mm	-55.0 mm	Yes
Peak Impact Probe Force Within Compression Corridor	3900 - 4400 N	4328 N	Yes
Peak Force Between 18 mm and 50 mm	4600 N	4148 N	Yes
Internal Hysteresis	69 - 85 %	72 %	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 20:38:16 1708

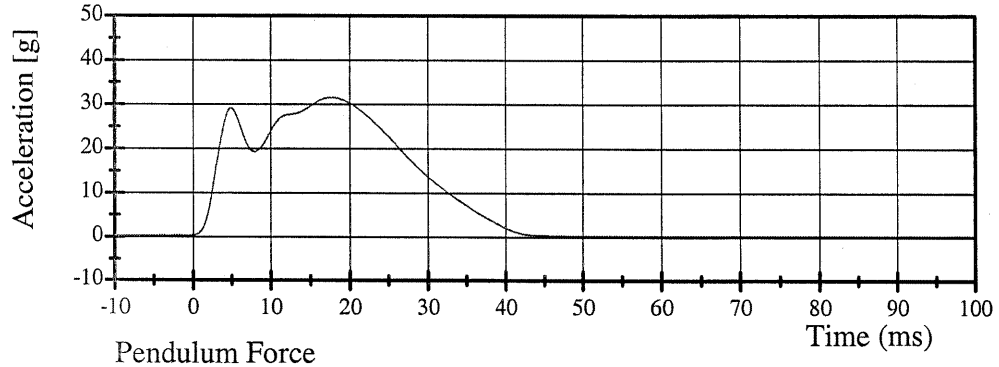
Transportation Research Center Inc.

572O Thorax Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Pendulum Deceleration

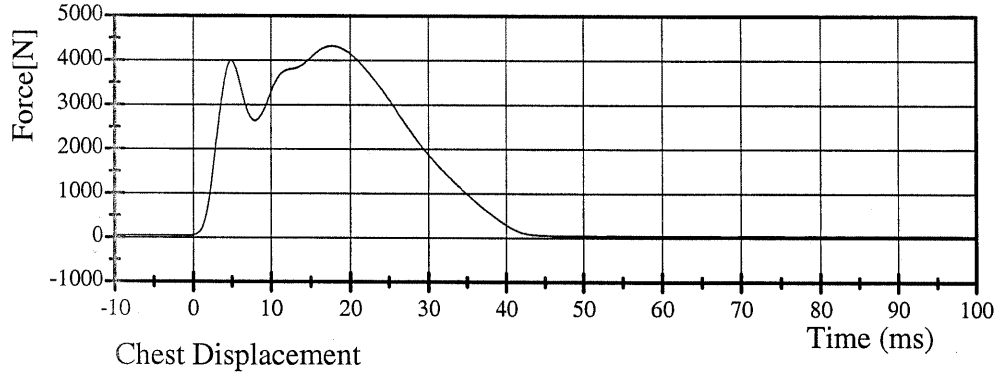


Filter Class: 180

Max: 31.6 g at 17.8 ms

Min: -0.4 g at 265.4 ms

Pendulum Force

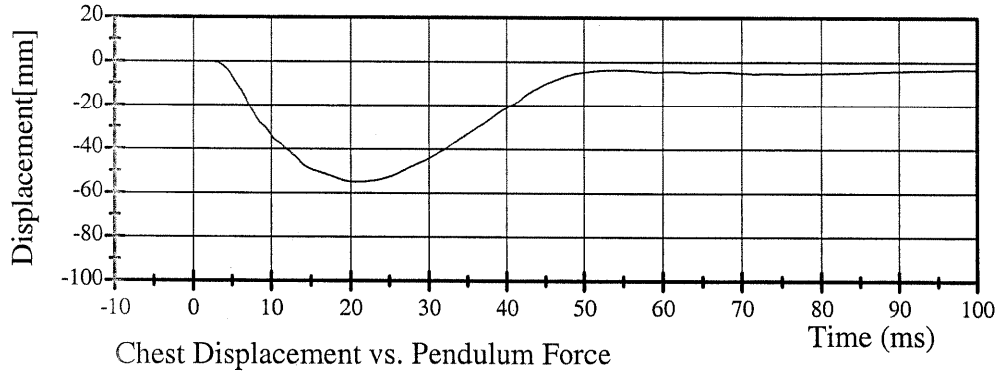


Filter Class: 180

Max: 4328.4 N at 17.8 ms

Min: -49.6 N at 265.4 ms

Chest Displacement

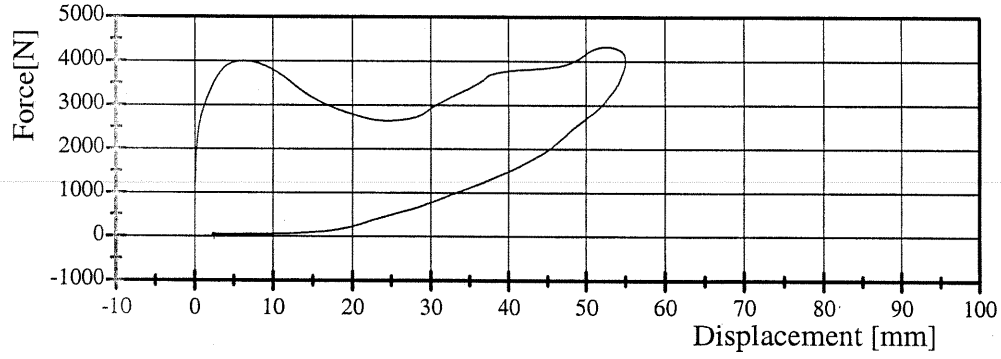


Filter Class: 600

Max: 0.0 mm at -69.4 ms

Min: -55.0 mm at 20.9 ms

Chest Displacement vs. Pendulum Force



06.24.2005 20:38:17 1708

Transportation Research Center Inc.

572O Left Knee Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.09 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3518 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 15:36:48 1783

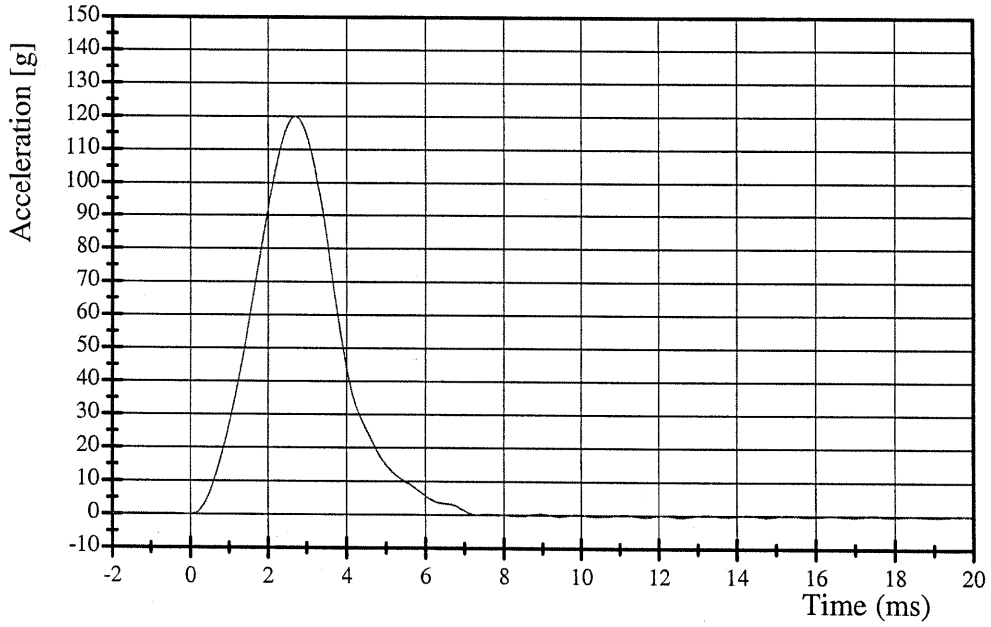
Transportation Research Center Inc.

572O Left Knee Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Pendulum Deceleration

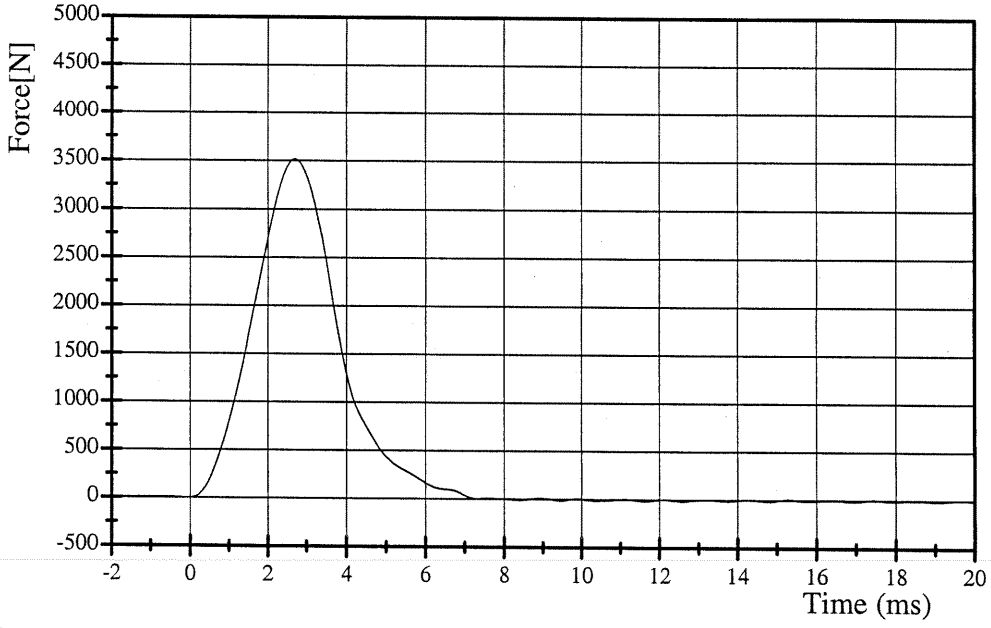


Filter Class: 600

Max: 120.0 g at 2.7 ms

Min: -1.2 g at 107.6 ms

Pendulum Force



Filter Class: 600

Max: 3518.1 N at 2.7 ms

Min: -35.8 N at 107.6 ms

06.24.2005 15:36:49 1783

Transportation Research Center Inc.

572O Left Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 3

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.78 m/s	Yes
Knee Displacement	-15.5 - (-12.7) mm	-13.7 mm	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 09:04:48 1853

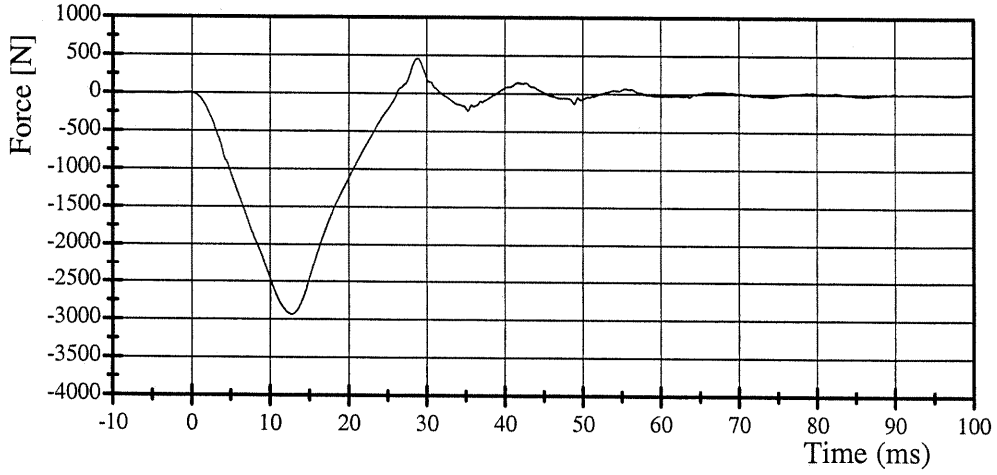
Transportation Research Center Inc.

572O Left Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 3

Test Date 06/24/2005

Femur Force

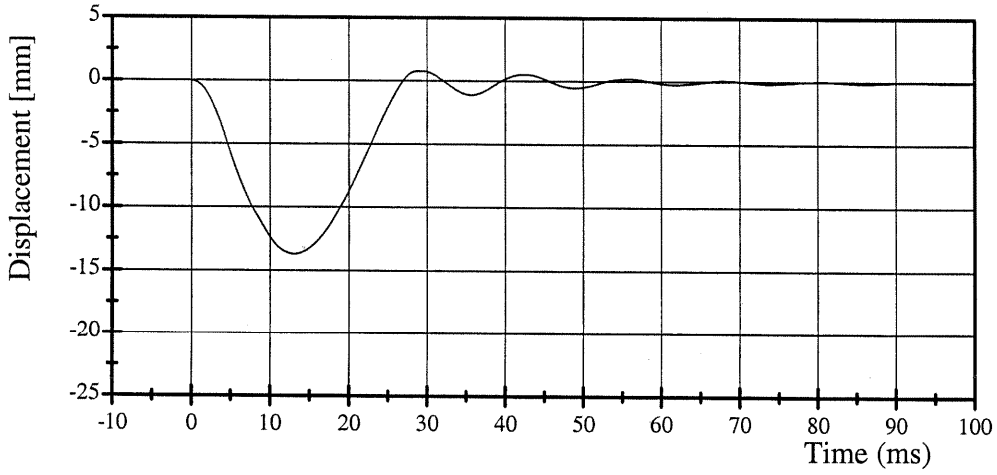


Filter Class: 600

Max: 456.1 N at 28.9 ms

Min: -2937.1 N at 12.7 ms

Tibia Displacement

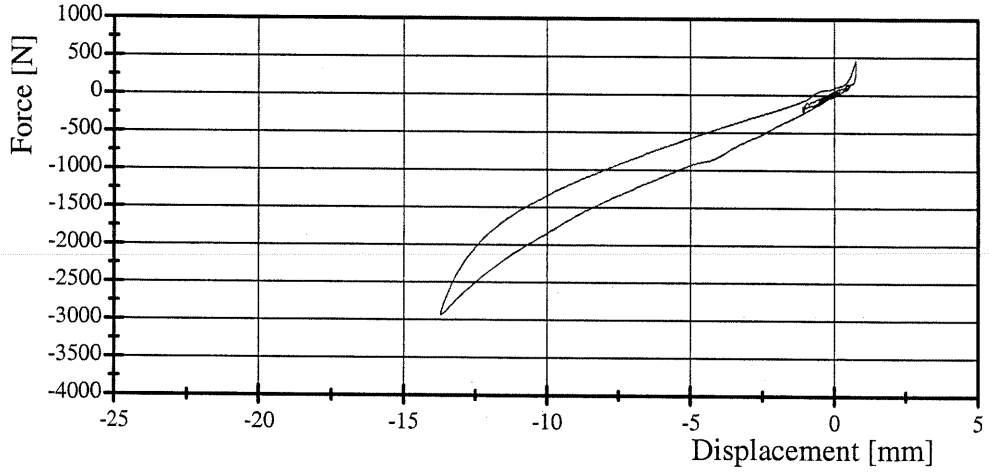


Filter Class: 180

Max: 0.8 mm at 29.2 ms

Min: -13.7 mm at 13.0 ms

Femur Force vs Tibia Displacement



06.24.2005 09:04:50 1853

Transportation Research Center Inc.

572O Right Knee Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3460 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 15:42:32 1788

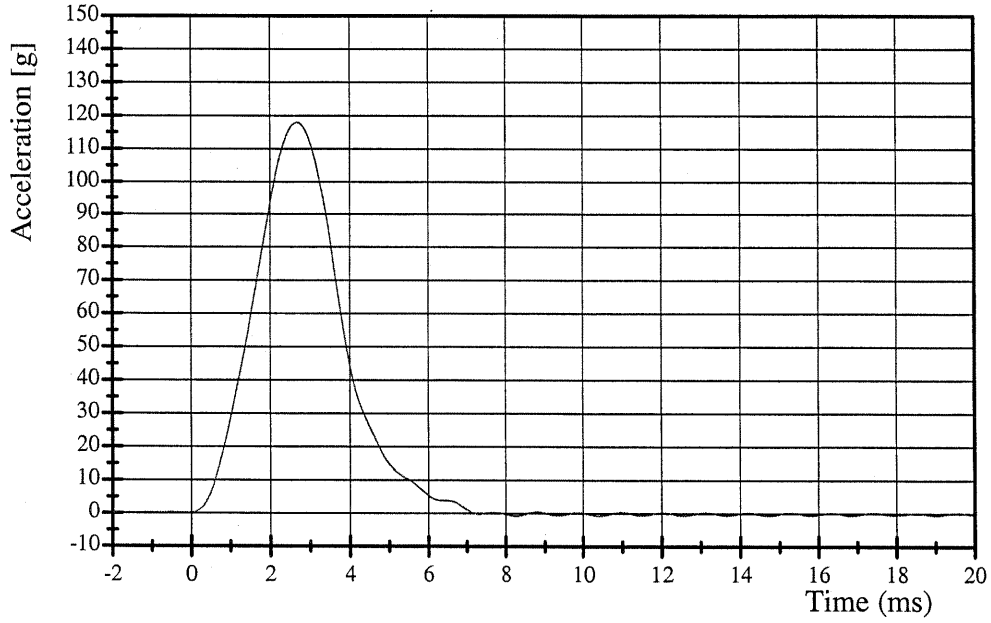
Transportation Research Center Inc.

572O Right Knee Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Pendulum Deceleration

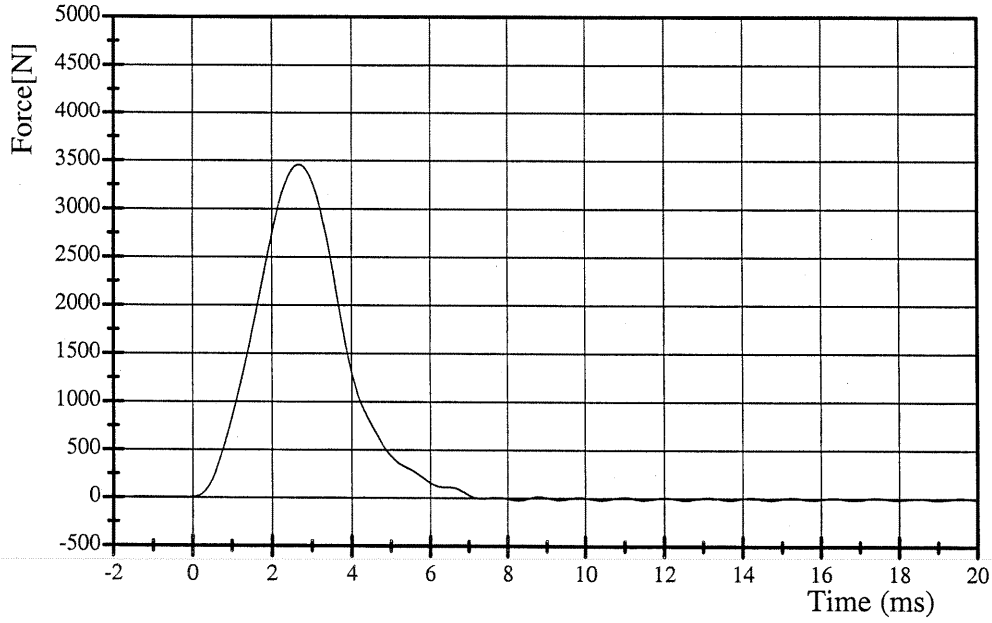


Filter Class: 600

Max: 118.0 g at 2.6 ms

Min: -0.8 g at 8.2 ms

Pendulum Force



Filter Class: 600

Max: 3459.8 N at 2.6 ms

Min: -23.1 N at 8.2 ms

06.24.2005 15:42:33 1788

Transportation Research Center Inc.

572O Right Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.78 m/s	Yes
Knee Displacement	-15.5 - (-12.7) mm	-13.2 mm	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 12:00:36 1851

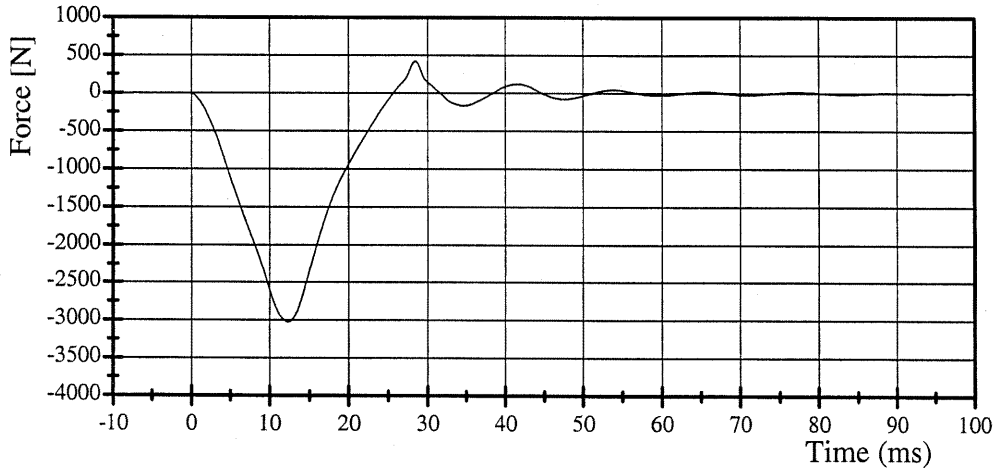
Transportation Research Center Inc.

572O Right Knee Slider Test

HIII 5th Female Serial No. 416 Calibration No. 28 - 2

Test Date 06/24/2005

Femur Force

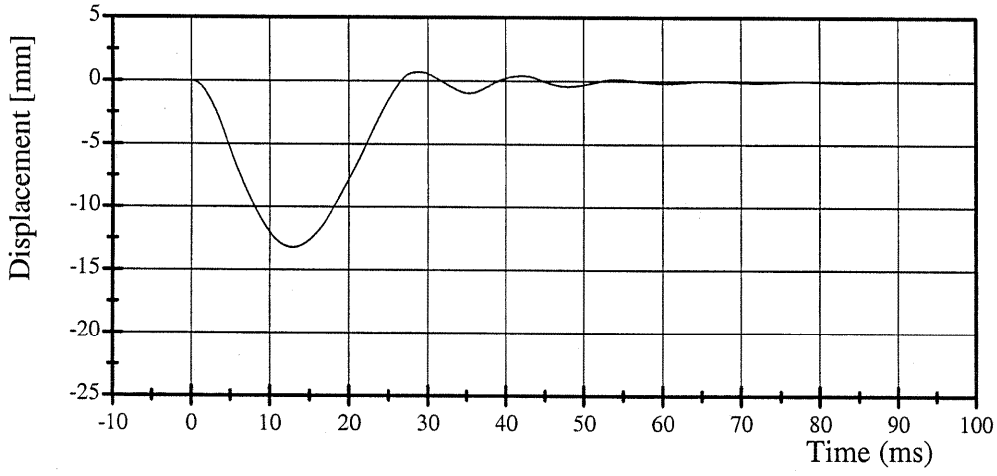


Filter Class: 600

Max: 421.2 N at 28.5 ms

Min: -3025.7 N at 12.3 ms

Tibia Displacement

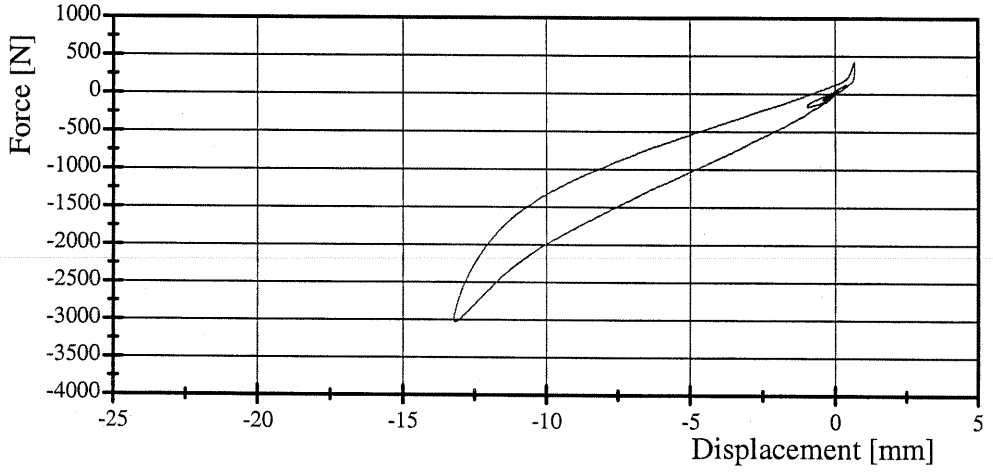


Filter Class: 180

Max: 0.7 mm at 28.9 ms

Min: -13.2 mm at 12.9 ms

Femur Force vs Tibia Displacement



06.24.2005 12:00:38 1851

Pre-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Driver Dummy S/N: 090

NHTSA/VRTC
572E HIII 50th Male Dummy
External Dimensions
Serial No. 090 w/ THOR-LX legs Calibration No. 47

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	510	Yes
C	H-Point Height	83.8 - 88.9	88	Yes
D	H-Point From Seatback	134.6 - 139.7	136	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	93	Yes
F	Thigh Clearance	139.7 - 154.9	154	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	298	Yes
H	Skull Cap To Backline	40.6 - 45.7	43	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	339	Yes
J	Elbow Rest Height	190.5 - 210.8	204	Yes
K	Buttock Knee Length	579.1 - 604.5	604	Yes
L	Popliteal Height	429.3 - 454.7	445	Yes
M	Knee Pivot Height	485.1 - 500.4	500	Yes
N	Buttock Popliteal Length	452.1 - 477.5	462	Yes
O	Chest Depth	213.4 - 228.6	217	Yes
P	Foot Length	251.5 - 266.7	253	Yes
V	Shoulder Breadth	421.6 - 436.9	425	Yes
W	Foot Breadth	91.4 - 106.7	97	Yes
Y	Chest Circumference	970.3 - 1000.8	996	Yes
Z	Waist Circumference	835.7 - 866.1	858	Yes
AA	Location For Chest Circumference	429.3 - 434.3	432	Yes
BB	Location For Waist Circumference	226.1 - 231.1	229	Yes

Technician

Approved

Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 2

Test Date 06/21/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	45 %	Yes
Peak Resultant Acceleration	225 - 275 g	268.8 g	Yes
Peak Lateral Acceleration	15 g Max	1.5 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

06.21.2005 15:57:49 614

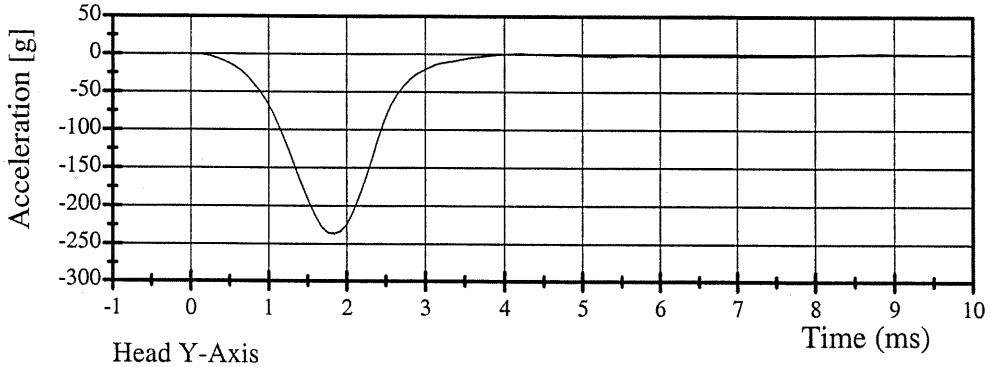
Transportation Research Center Inc.

572E Head Drop Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 2

Test Date 06/21/2005

Head X-Axis

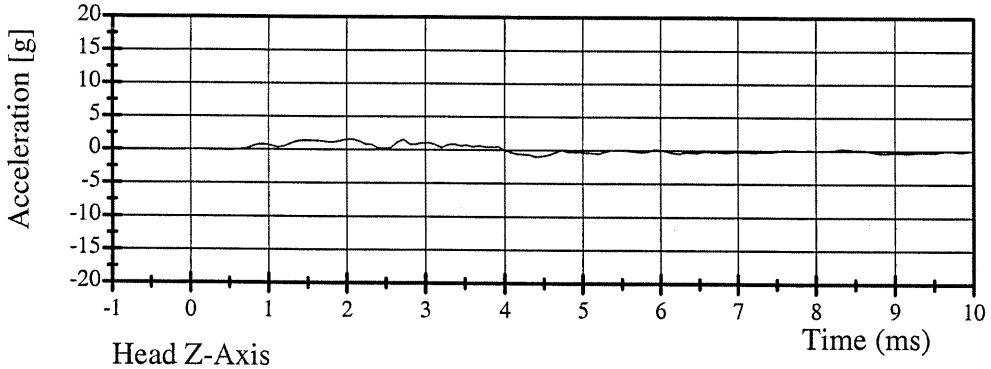


Filter Class: 1000

Max: 1.5 g at 8.9 ms

Min: -236.4 g at 1.8 ms

Head Y-Axis

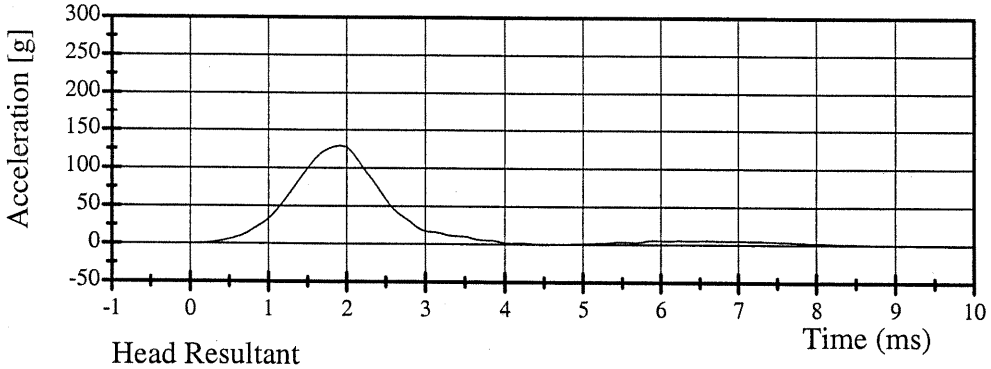


Filter Class: 1000

Max: 1.5 g at 2.0 ms

Min: -1.0 g at 4.4 ms

Head Z-Axis

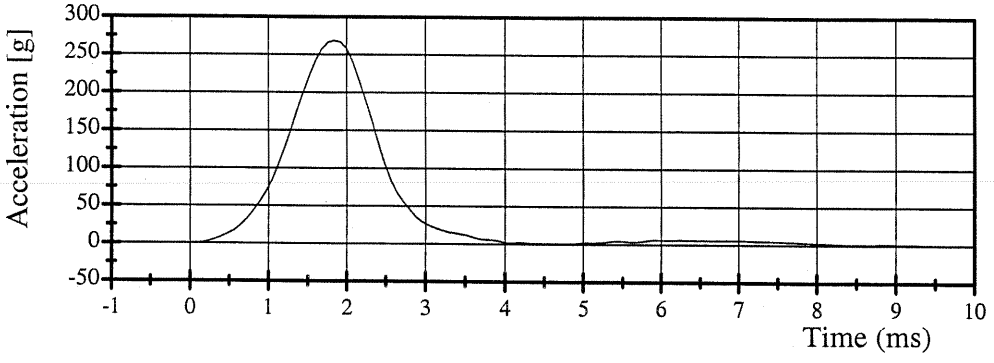


Filter Class: 1000

Max: 129.2 g at 1.9 ms

Min: -0.5 g at 10.0 ms

Head Resultant



Filter Class: 1000

Max: 268.8 g at 1.8 ms

Min: 0.0 g at 0.0 ms

06.21.2005 15:57:50 614

Transportation Research Center Inc.

572E Neck Flexion Test - 6 Channel Transducer

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

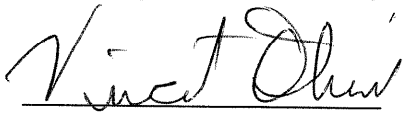
Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Pendulum Deceleration			
10 ms	22.50 - 27.50 g	25.82 g	Yes
20 ms	17.60 - 22.60 g	21.36 g	Yes
30 ms	12.50 - 18.50 g	16.52 g	Yes
Max Pendulum Deceleration	29.00 g	26.71 g	Yes
Max Pendulum Deceleration After 30 ms	29.00 g	16.48 g	Yes
Deceleration-Time Curve Decay Time To 5g	34 - 42 ms	35.92 ms	Yes
D Plane Rotation			
Max	64 - 78 °	74.75 °	Yes
Time	57 - 64 ms	59.52 ms	Yes
Moment About Occipital Condyle			
Max	88.1 - 108.5 N·m	101.43 N·m	Yes
Time	47 - 58 ms	48.80 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	113 - 128 ms	118.32 ms	Yes
Positive Moment-Time Curve Decay Time To Zero	97 - 107 ms	100.00 ms	Yes

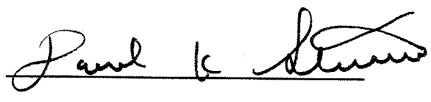
Test meets specifications.

Comments:

Technician



Approved



06.22.2005 10:28:20 1138

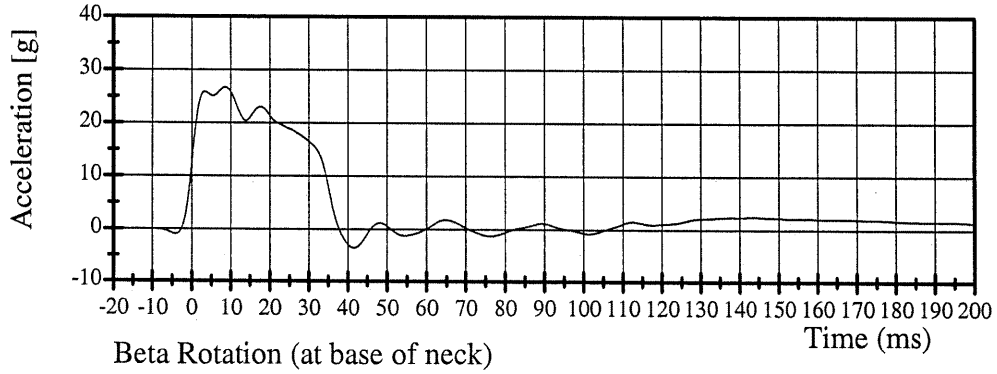
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Pendulum Deceleration

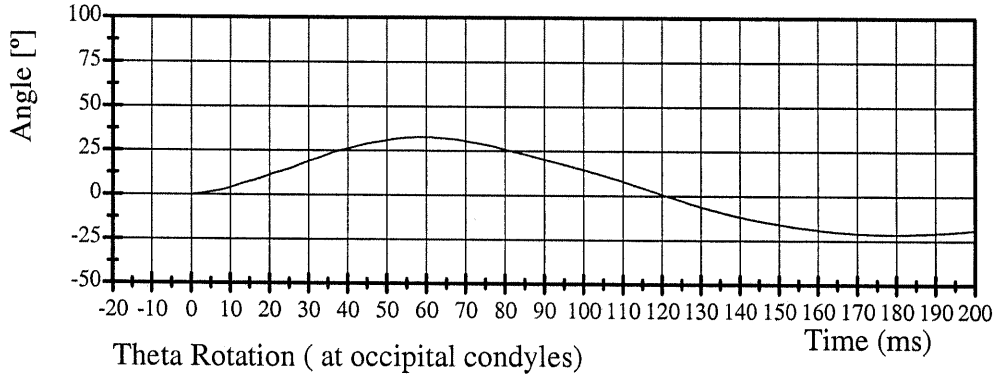


Filter Class: 60

Max: 26.7 g at 8.6 ms

Min: -3.6 g at 41.6 ms

Beta Rotation (at base of neck)

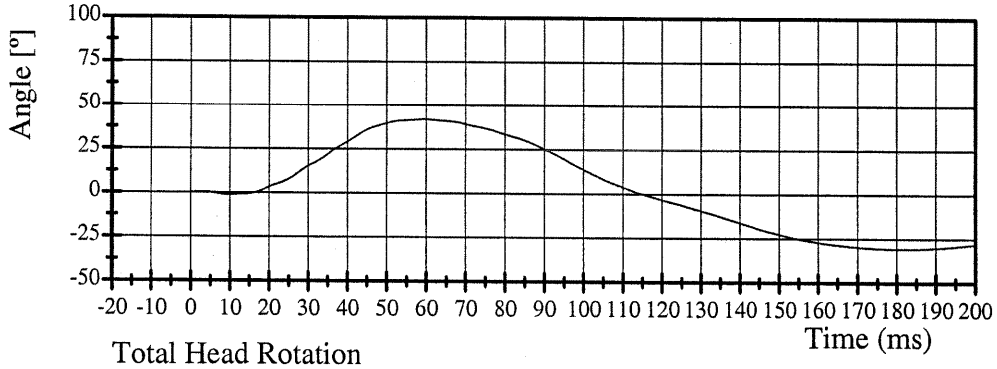


Filter Class: 60

Max: 32.8 ° at 59.4 ms

Min: -21.4 ° at 178.8 ms

Theta Rotation (at occipital condyles)

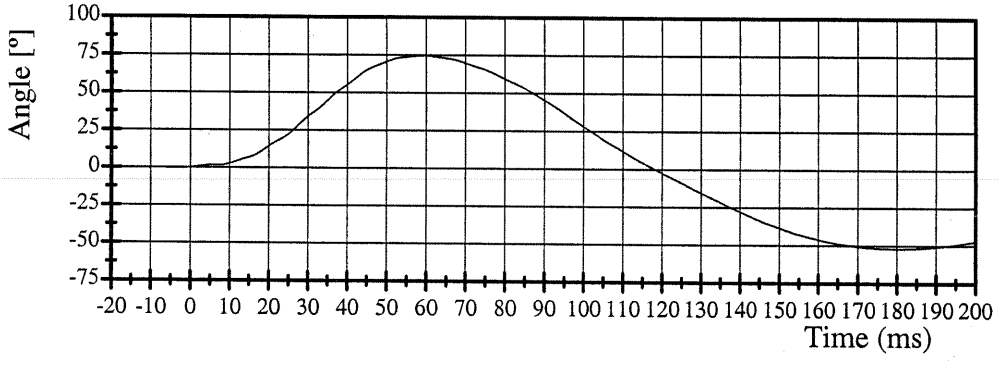


Filter Class: 60

Max: 42.0 ° at 59.6 ms

Min: -30.7 ° at 181.0 ms

Total Head Rotation



Filter Class: 60

Max: 74.8 ° at 59.5 ms

Min: -52.1 ° at 180.0 ms

06.22.2005 10:28:22 1138

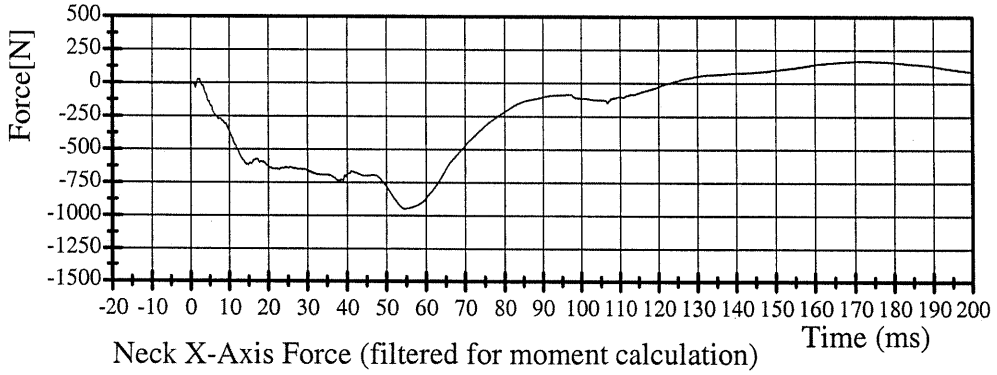
Transportation Research Center Inc.

572E Neck Flexion Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Neck X-Axis Force

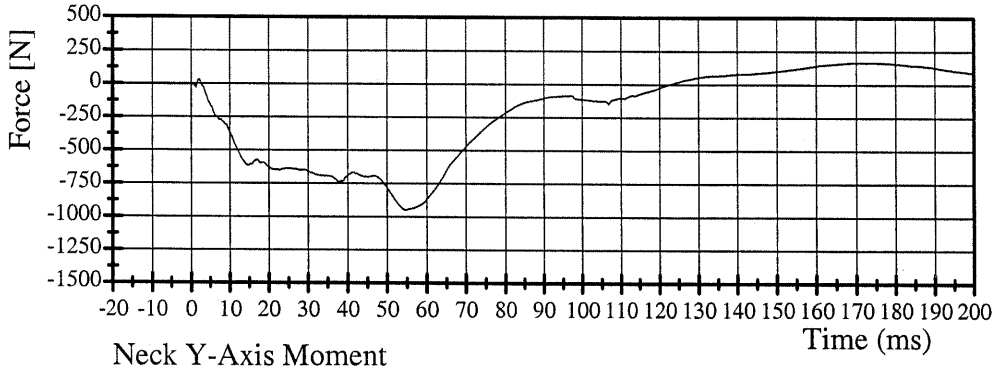


Filter Class: 1000

Max: 169.2 N at 171.5 ms

Min: -947.7 N at 54.6 ms

Neck X-Axis Force (filtered for moment calculation)

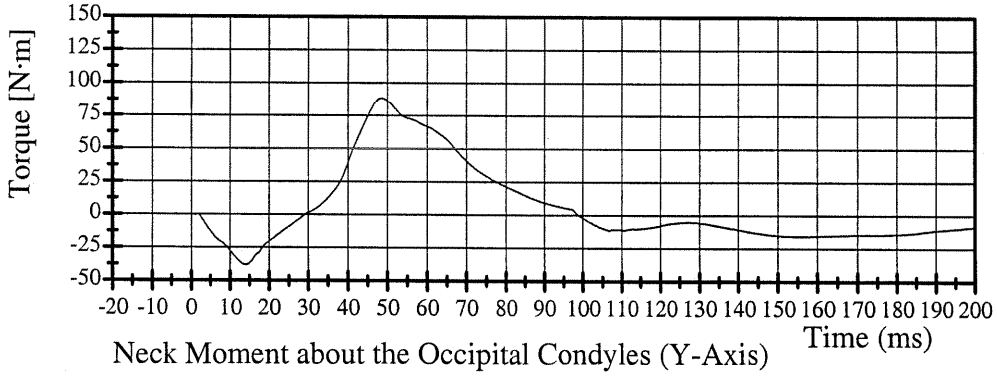


Filter Class: 600

Max: 168.4 N at 172.2 ms

Min: -947.5 N at 54.6 ms

Neck Y-Axis Moment

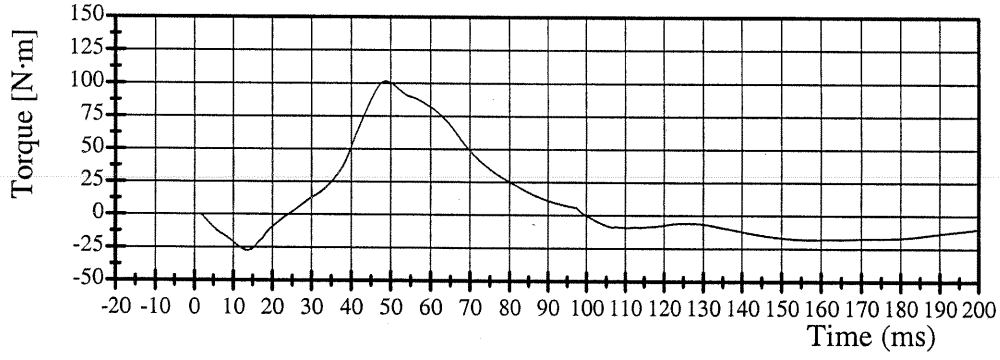


Filter Class: 600

Max: 88.6 N·m at 48.5 ms

Min: -38.0 N·m at 14.1 ms

Neck Moment about the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 101.4 N·m at 48.8 ms

Min: -27.4 N·m at 13.6 ms

06.22.2005 10:28:23 1138

Transportation Research Center Inc.

572E Neck Extension Test - 6 Channel Transducer

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

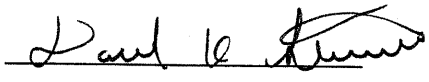
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.05 m/s	Yes
Pendulum Deceleration			
10 ms	17.20 - 21.20 g	18.65 g	Yes
20 ms	14.00 - 19.00 g	16.91 g	Yes
30 ms	11.00 - 16.00 g	13.12 g	Yes
Max Pendulum Deceleration	22.00 g	19.83 g	Yes
Max Pendulum Deceleration After 30 ms	22.00 g	13.07 g	Yes
Deceleration-Time Curve Decay Time To 5g	38 - 46 ms	41.92 ms	Yes
D Plane Rotation			
Max	81 - 106 °	97.51 °	Yes
Time	72 - 82 ms	75.68 ms	Yes
Moment About Occipital Condyle			
Min	-80.0 - (-52.9) N·m	-70.03 N·m	Yes
Time	65 - 79 ms	72.80 ms	Yes
Rotation Angle-Time Curve Decay Time To Zero	147 - 174 ms	163.12 ms	Yes
Negative Moment-Time Curve Decay Time To Zero	120 - 148 ms	143.92 ms	Yes

Test meets specifications.

Comments:

Technician

Approved



06.22.2005 11:07:10 1226

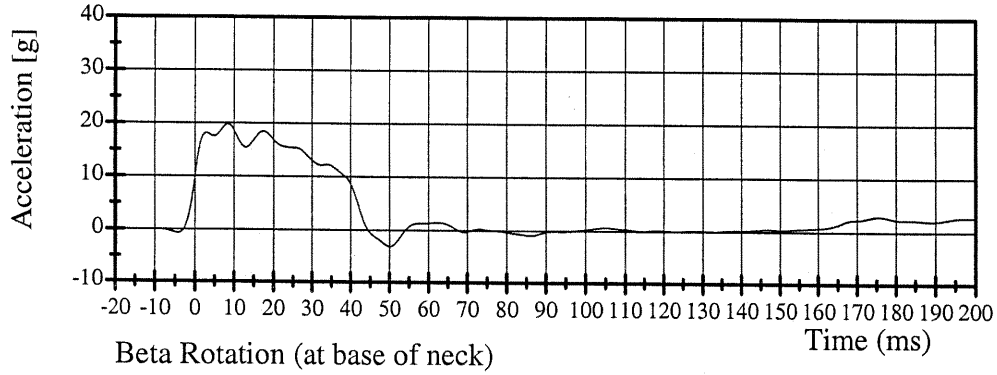
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Pendulum Deceleration

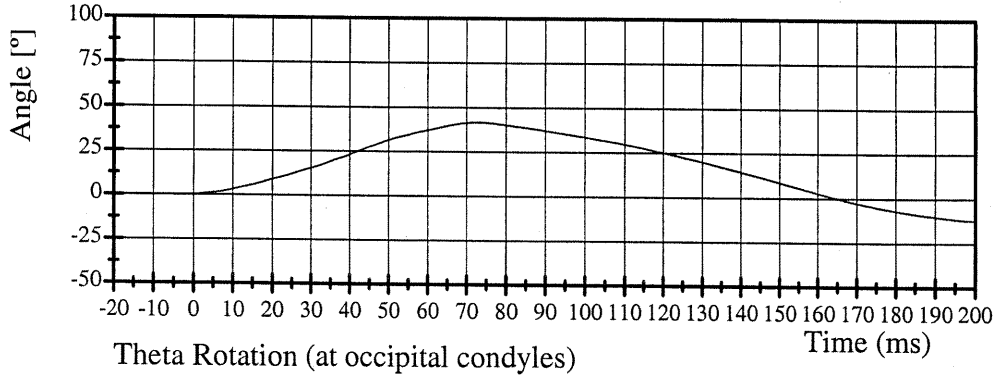


Filter Class: 60

Max: 19.8 g at 8.4 ms

Min: -3.1 g at 50.1 ms

Beta Rotation (at base of neck)

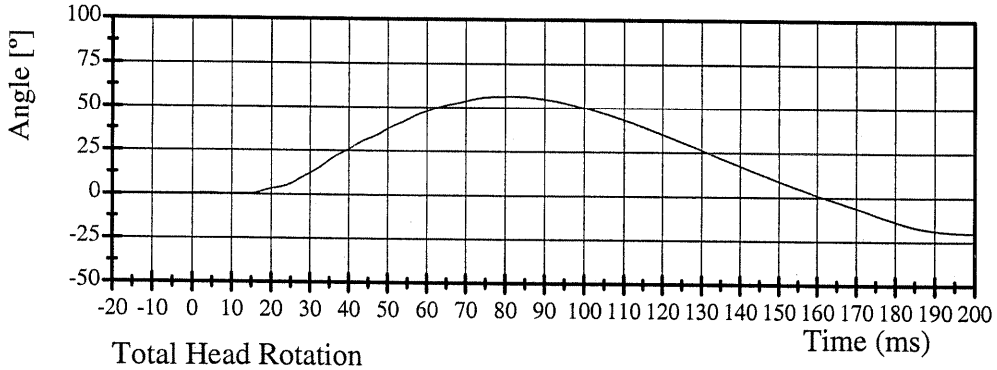


Filter Class: 60

Max: 41.6 ° at 72.9 ms

Min: -12.6 ° at 201.9 ms

Theta Rotation (at occipital condyles)

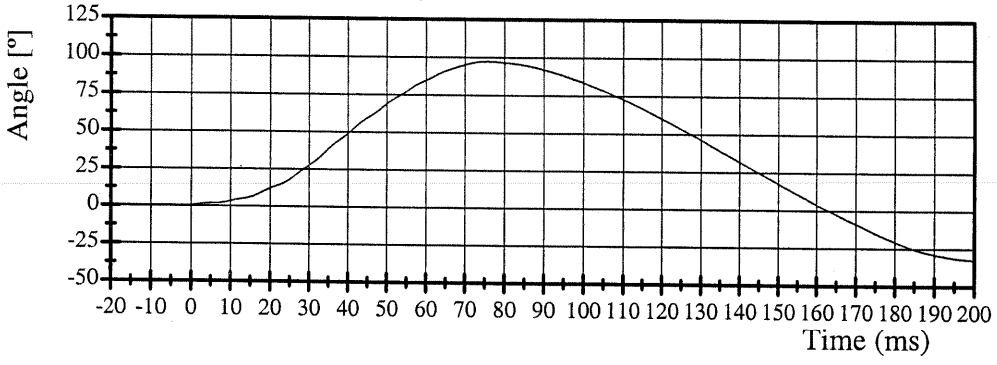


Filter Class: 60

Max: 56.5 ° at 81.9 ms

Min: -20.3 ° at 201.9 ms

Total Head Rotation



Filter Class: 60

Max: 97.5 ° at 75.7 ms

Min: -32.8 ° at 201.9 ms

06.22.2005 11:07:11 1226

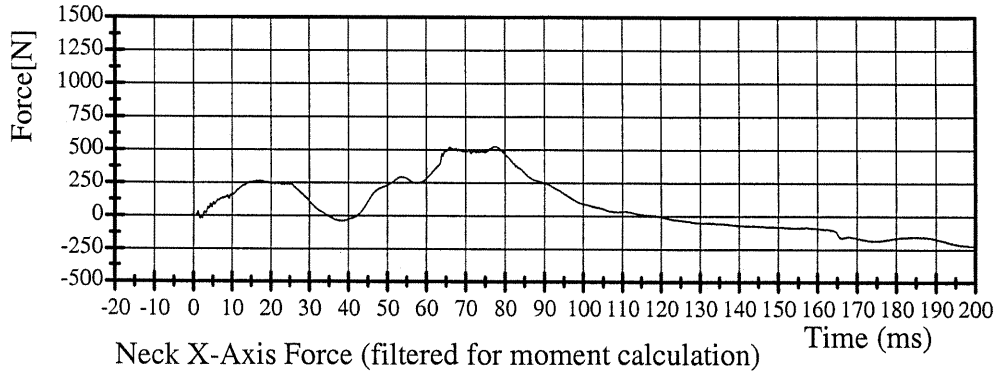
Transportation Research Center Inc.

572E Neck Extension Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Neck X-Axis Force

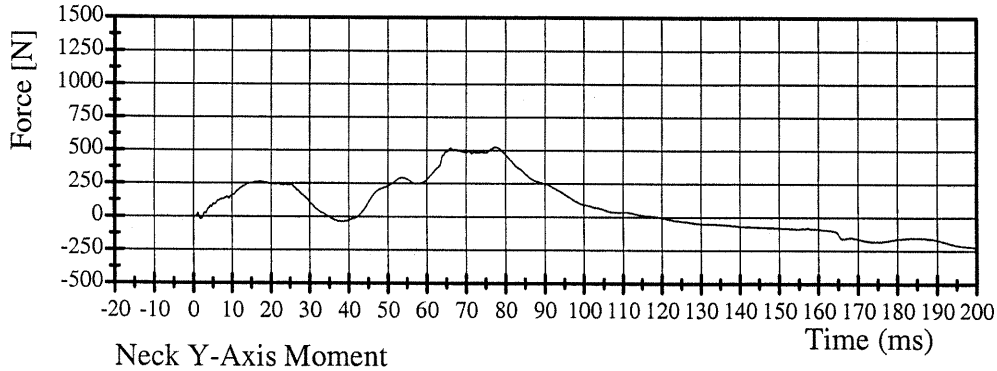


Filter Class: 1000

Max: 525.5 N at 77.5 ms

Min: -221.8 N at 199.4 ms

Neck X-Axis Force (filtered for moment calculation)

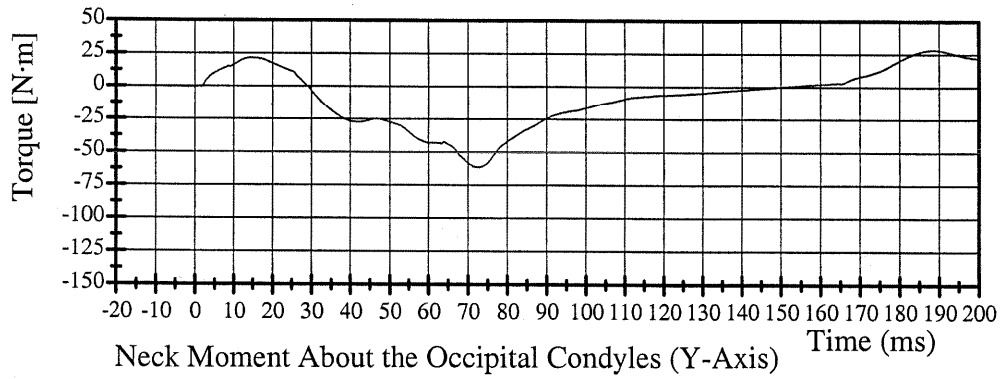


Filter Class: 600

Max: 525.2 N at 77.4 ms

Min: -221.5 N at 199.4 ms

Neck Y-Axis Moment

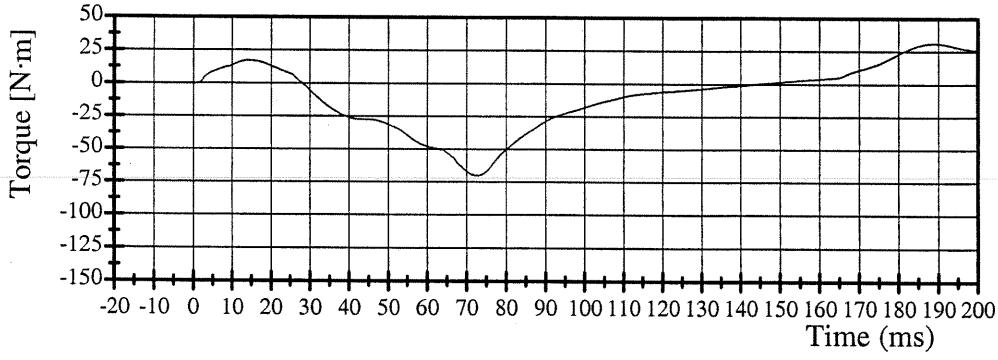


Filter Class: 600

Max: 28.4 N·m at 188.6 ms

Min: -61.5 N·m at 72.8 ms

Neck Moment About the Occipital Condyles (Y-Axis)



Filter Class: 600

Max: 31.2 N·m at 189.0 ms

Min: -70.0 N·m at 72.8 ms

06.22.2005 11:07:13 1226

Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.65 m/s	Yes
Maximum Chest Deflection	-72.6 - (-63.5) mm	-71.6 mm	Yes
Maximum Resistive Force	5160 - 5894 N	5744 N	Yes
Internal Hysteresis	69 - 85 %	71 %	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 08:57:35 1601

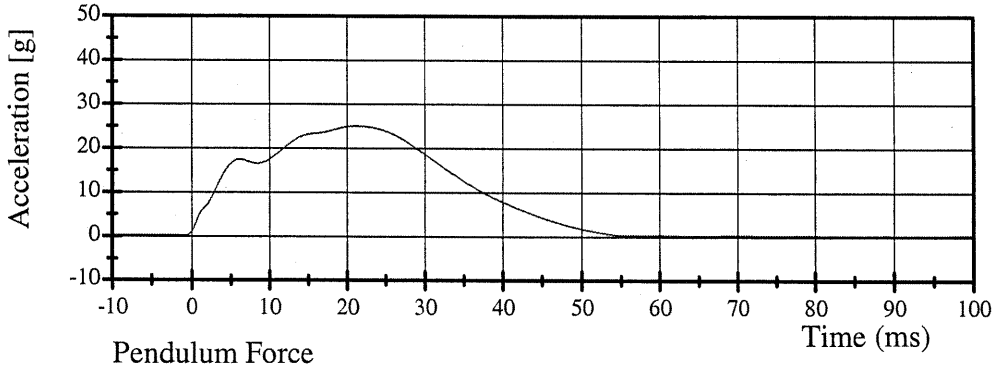
Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/24/2005

Pendulum Deceleration

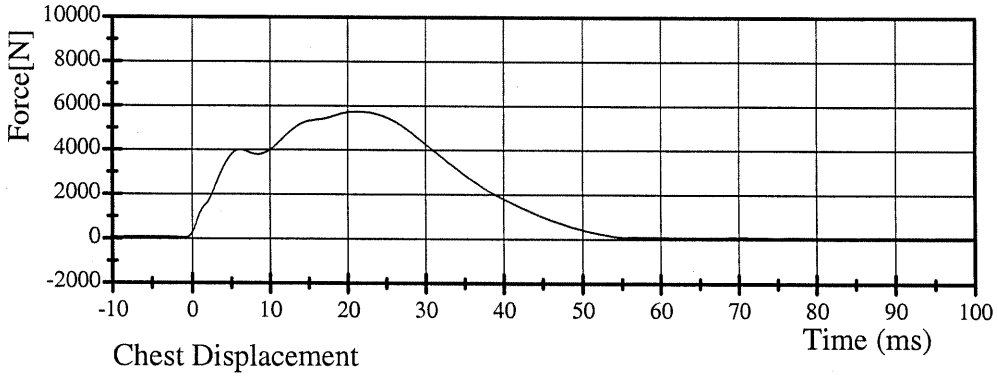


Filter Class: 180

Max: 25.1 g at 21.1 ms

Min: -0.0 g at -128.0 ms

Pendulum Force

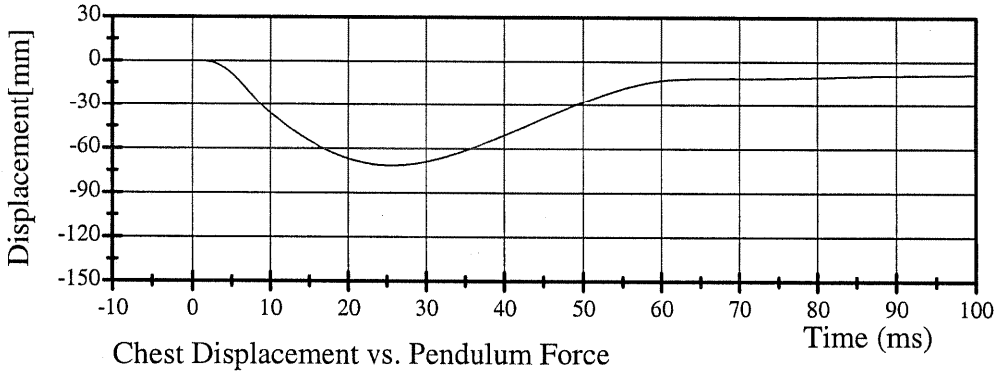


Filter Class: 180

Max: 5743.8 N at 21.1 ms

Min: -9.2 N at -128.0 ms

Chest Displacement

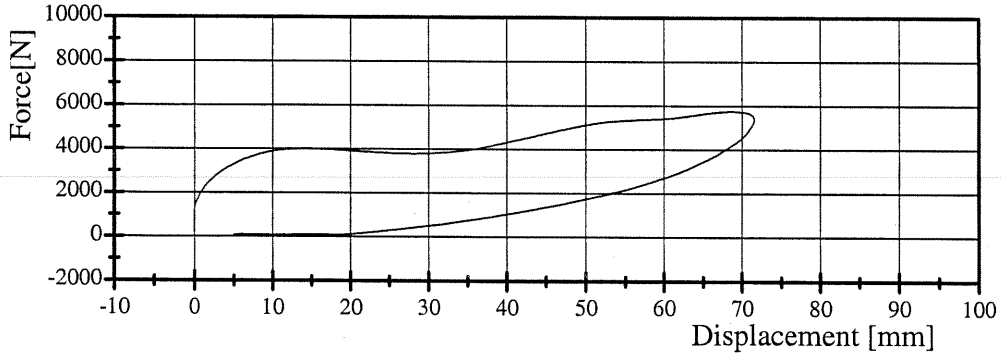


Filter Class: 180

Max: 0.0 mm at 0.6 ms

Min: -71.6 mm at 25.7 ms

Chest Displacement vs. Pendulum Force



06.24.2005 08:57:36 1601

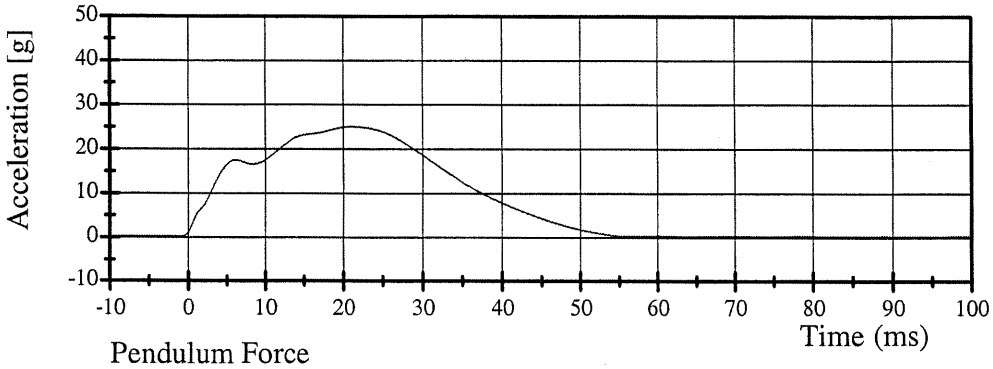
Transportation Research Center Inc.

572E Thorax Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/24/2005

Pendulum Deceleration

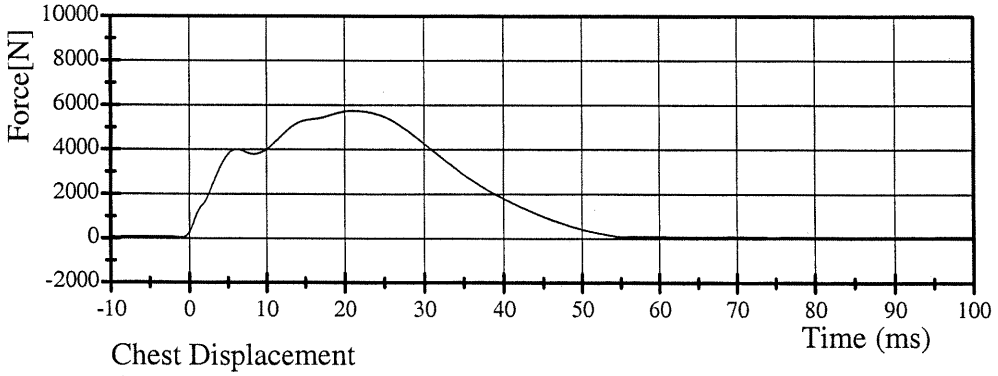


Filter Class: 180

Max: 25.1 g at 21.1 ms

Min: -0.0 g at -128.0 ms

Pendulum Force

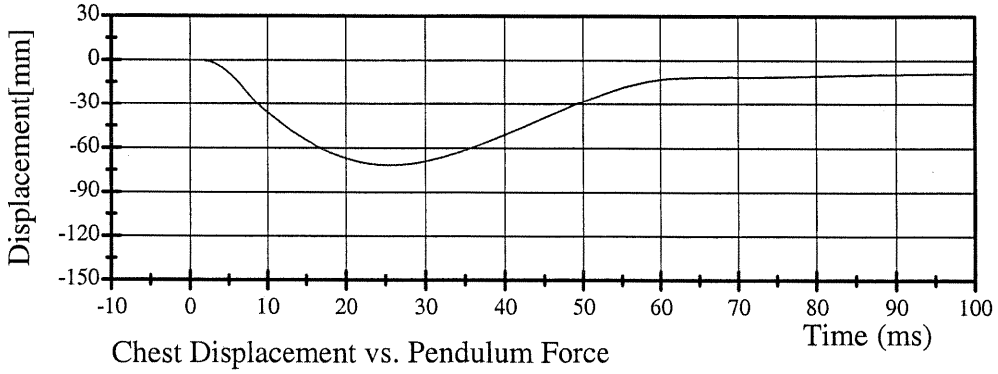


Filter Class: 180

Max: 5743.8 N at 21.1 ms

Min: -9.2 N at -128.0 ms

Chest Displacement

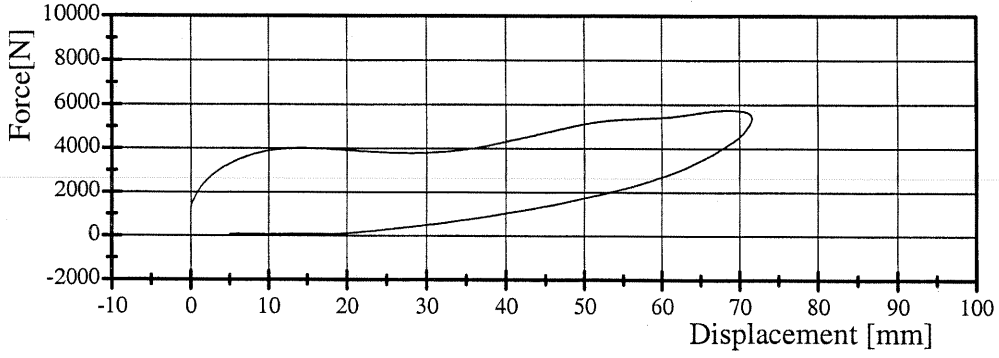


Filter Class: 180

Max: 0.0 mm at 0.6 ms

Min: -71.6 mm at 25.7 ms

Chest Displacement vs. Pendulum Force



06.24.2005 08:58:06 1601

Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

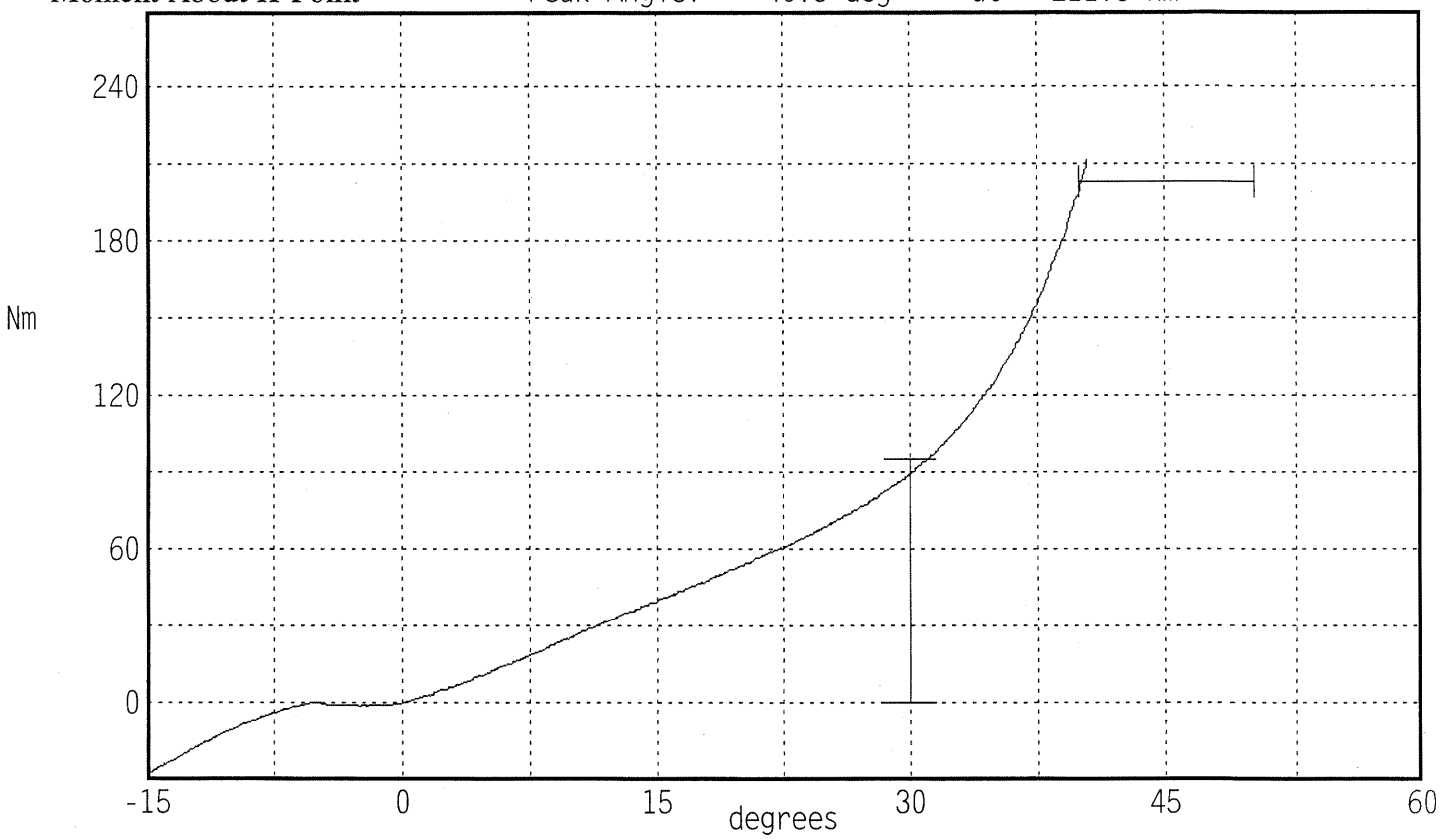
Serial Number: 090L
Test Number: 090C47
Comments:

Date: 06/21/2005
Time: 08:36

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.2	°C	Pass
Humidity	10 - 70	50	%	Pass
Moment at 30 deg	<= 94.9	89.3	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	40.1	deg	Pass
Average Velocity	5.0 - 10.0	7.5	deg/sec	Pass

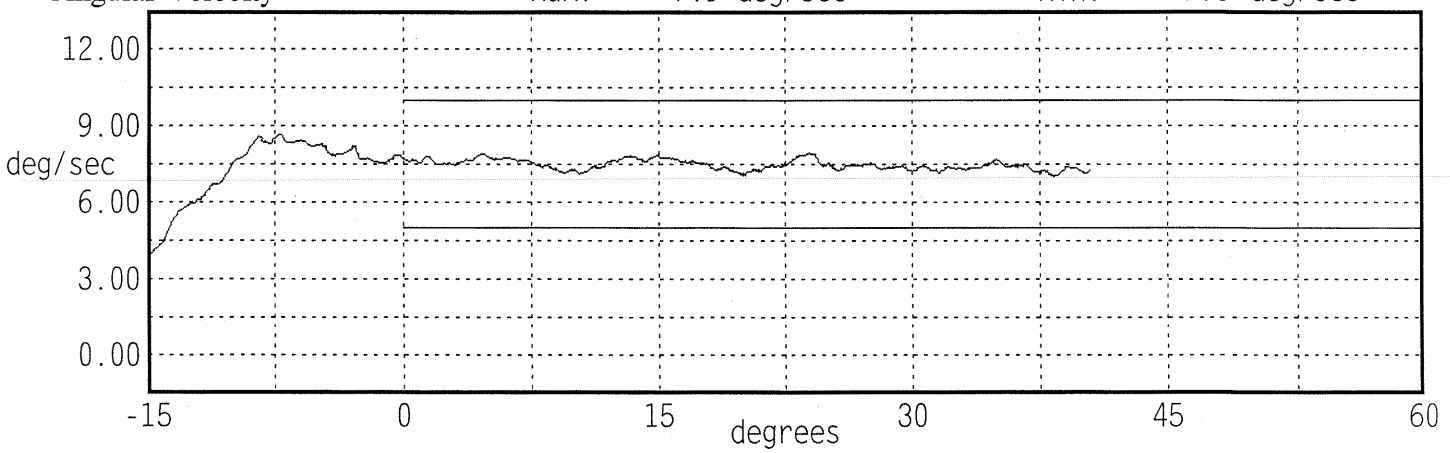
Moment About H-Point

Peak Moment: 211.3 Nm at 40.5 deg
Peak Angle: 40.5 deg at 211.3 Nm



Angular Velocity

Max: 7.9 deg/sec Min: 7.0 deg/sec



Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

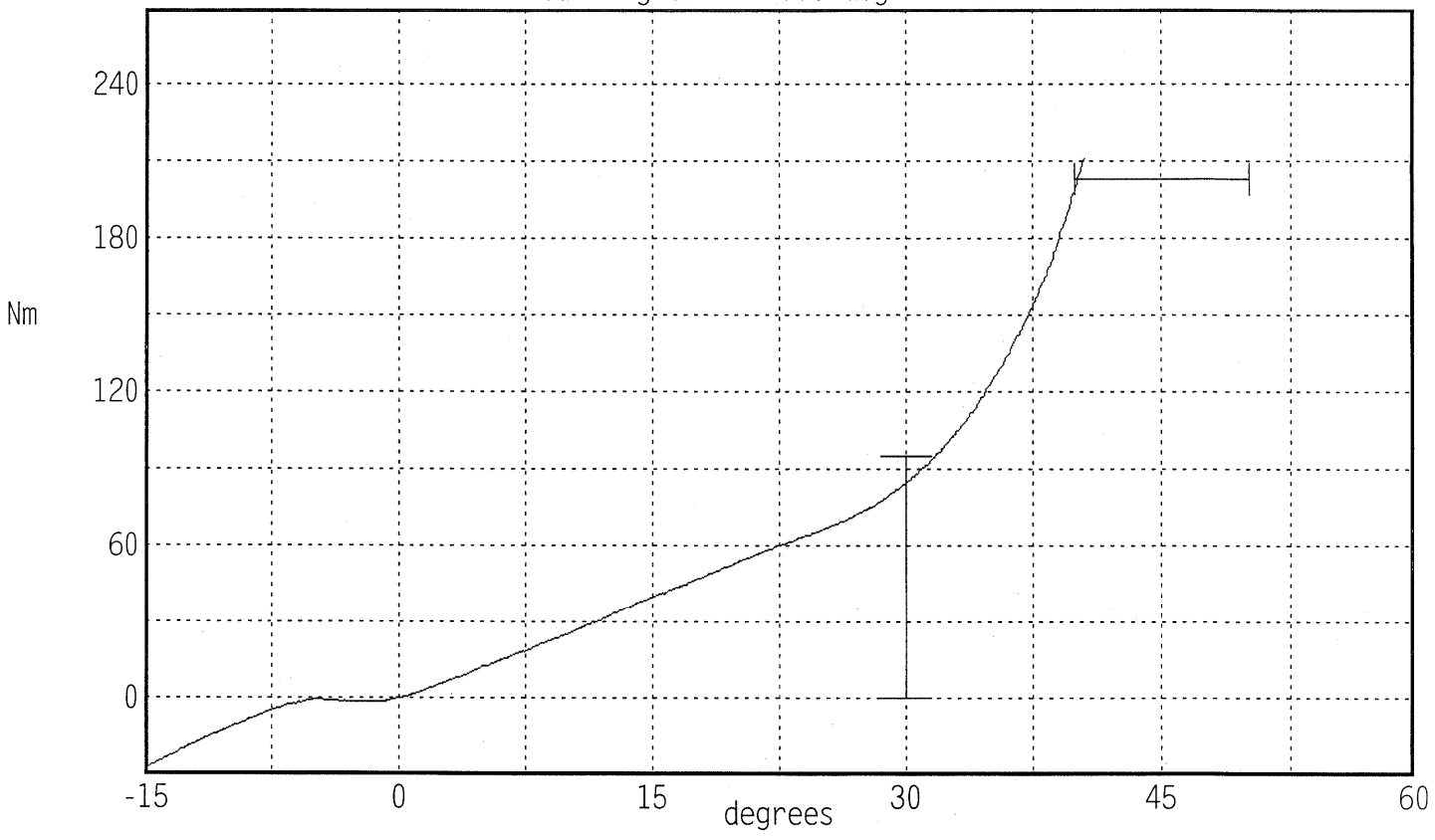
Serial Number: 090R
Test Number: 090C47
Comments:

Date: 06/21/2005
Time: 09:31

TEST PARAMETER	SPECIFICATION	TEST RESULTS		
Temperature	18.9 - 25.6	21.4	°C	Pass
Humidity	10 - 70	50	%	Pass
Moment at 30 deg	<= 94.9	84.8	Nm	Pass
Angle at 203 Nm	40.0 - 50.0	40.2	deg	Pass
Average Velocity	5.0 - 10.0	7.5	deg/sec	Pass

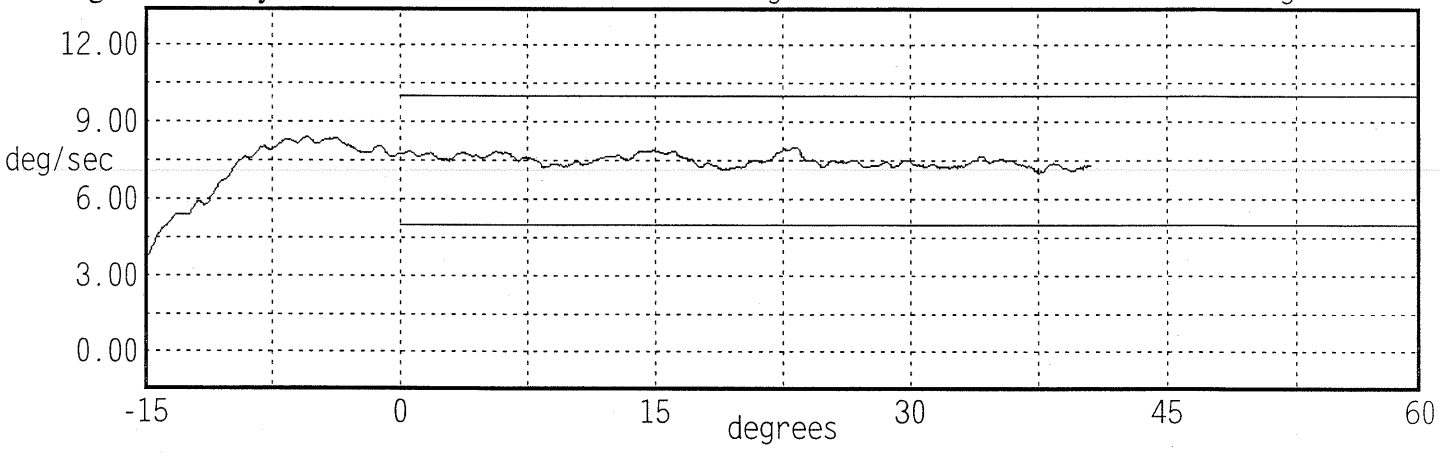
Moment About H-Point

Peak Moment: 211.1 Nm at 40.6 deg
Peak Angle: 40.6 deg at 211.1 Nm



Angular Velocity

Max: 8.0 deg/sec Min: 7.0 deg/sec



Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	45 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.12 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5479 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.22.2005 13:08:09 2133

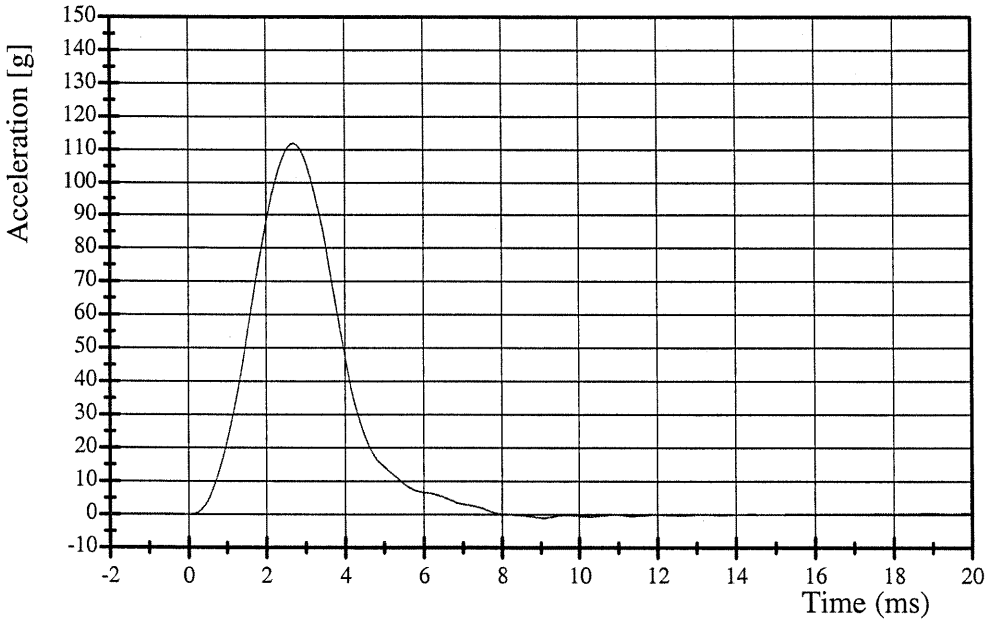
Transportation Research Center Inc.

572E Left Knee Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Pendulum Deceleration

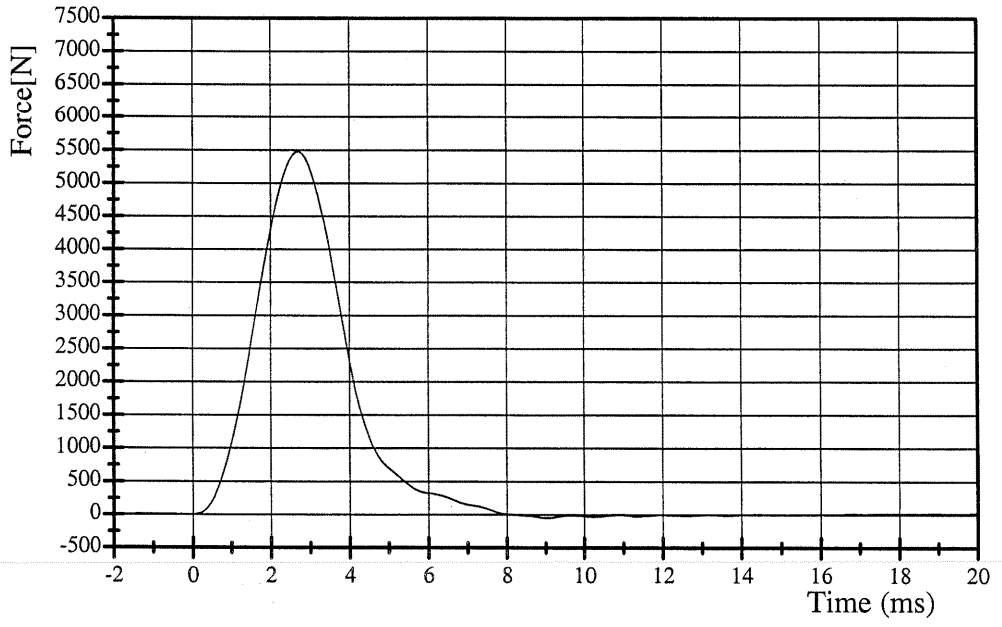


Filter Class: 600

Max: 112.0 g at 2.7 ms

Min: -1.0 g at 9.0 ms

Pendulum Force



Filter Class: 600

Max: 5479.5 N at 2.7 ms

Min: -48.9 N at 9.0 ms

06.22.2005 13:08:10 2133

Transportation Research Center Inc.

572E Left Slider Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/23/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.75 m/s	Yes
Force At 10 mm Displacement	-1259 - (-1721) N	-1364 N	Yes
Force At 18 mm Displacement	-2268 - (-3096) N	-2801 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.23.2005 10:27:32 1755

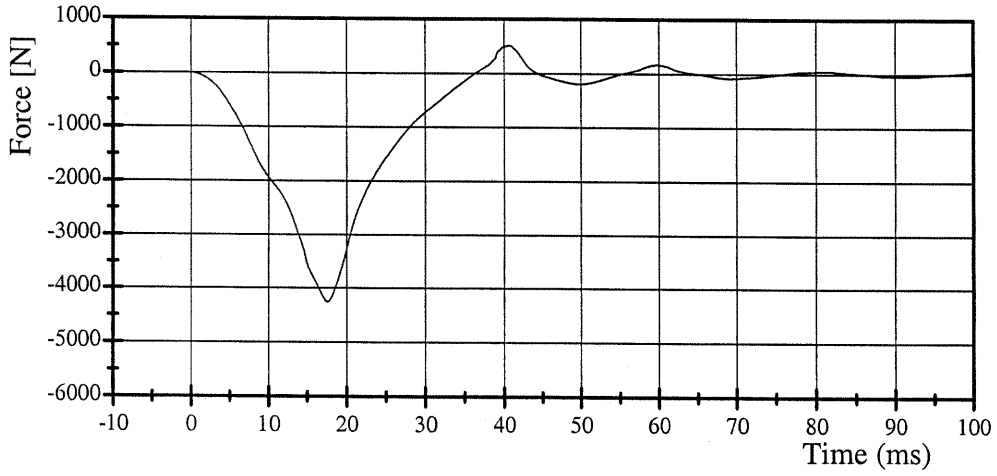
Transportation Research Center Inc.

572E Left Slider Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/23/2005

Femur Force

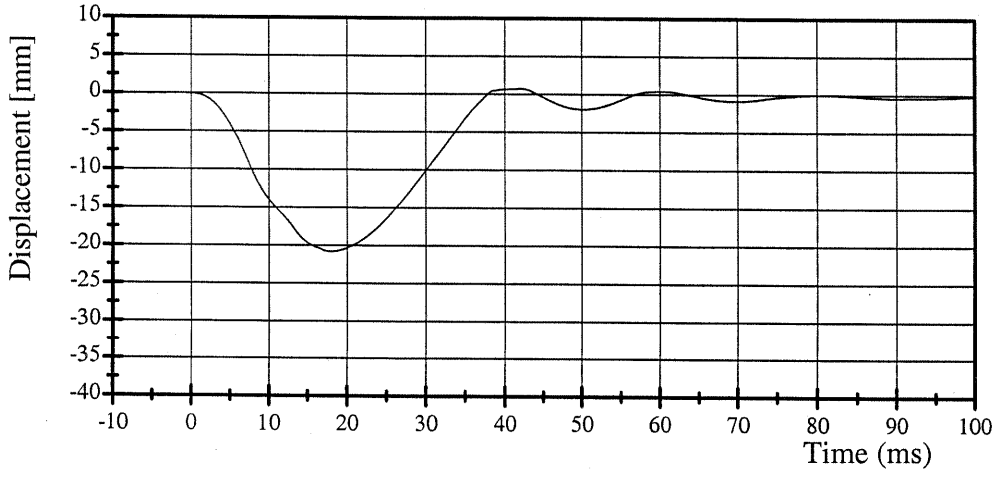


Filter Class: 600

Max: 514.5 N at 40.6 ms

Min: -4256.1 N at 17.6 ms

Tibia Displacement

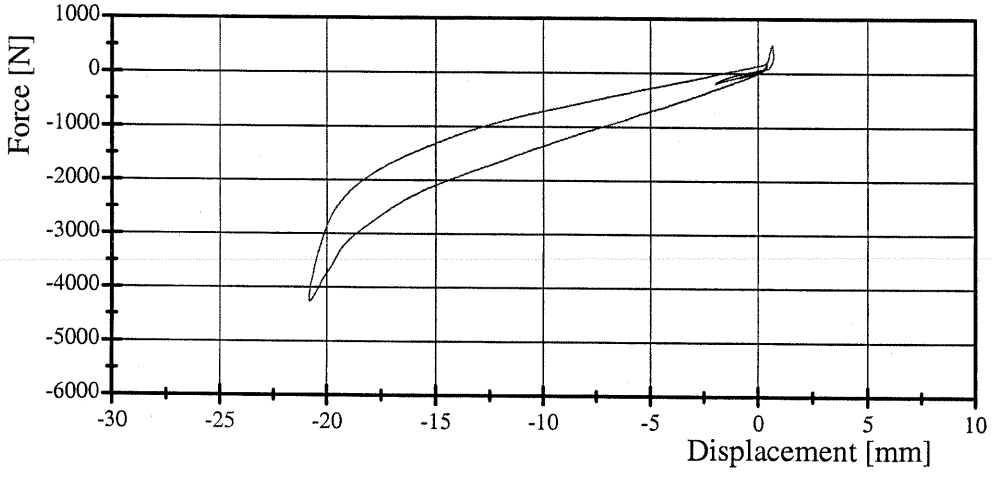


Filter Class: 600

Max: 0.7 mm at 42.1 ms

Min: -20.8 mm at 18.0 ms

Femur Force vs Tibia Displacement



06.23.2005 10:27:33 1755

Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.12 m/s	Yes
Maximum Pendulum Force	4715 - 5783 N	5605 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.22.2005 13:15:05 2143

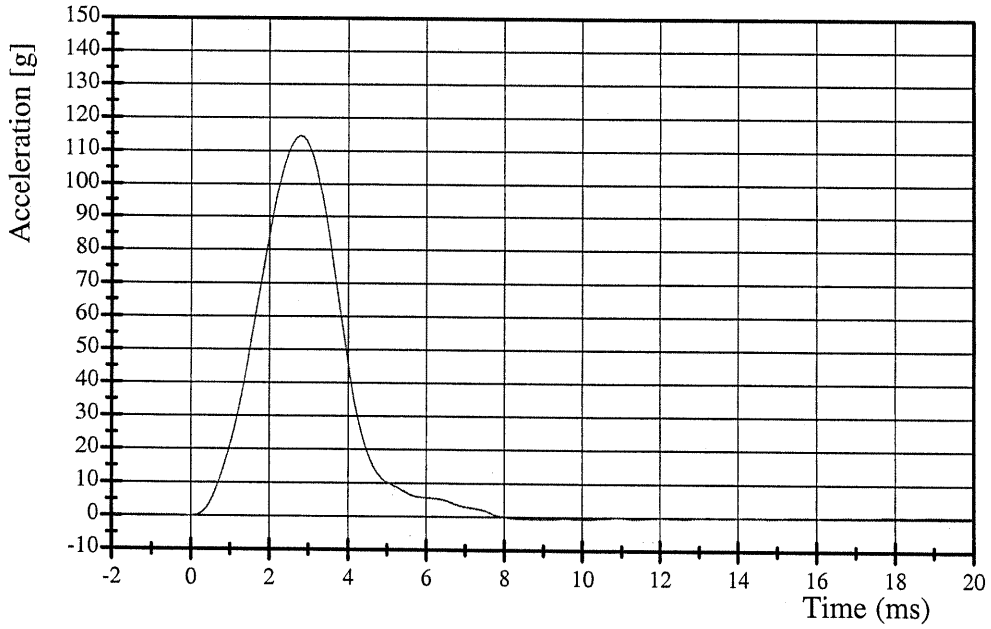
Transportation Research Center Inc.

572E Right Knee Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/22/2005

Pendulum Deceleration

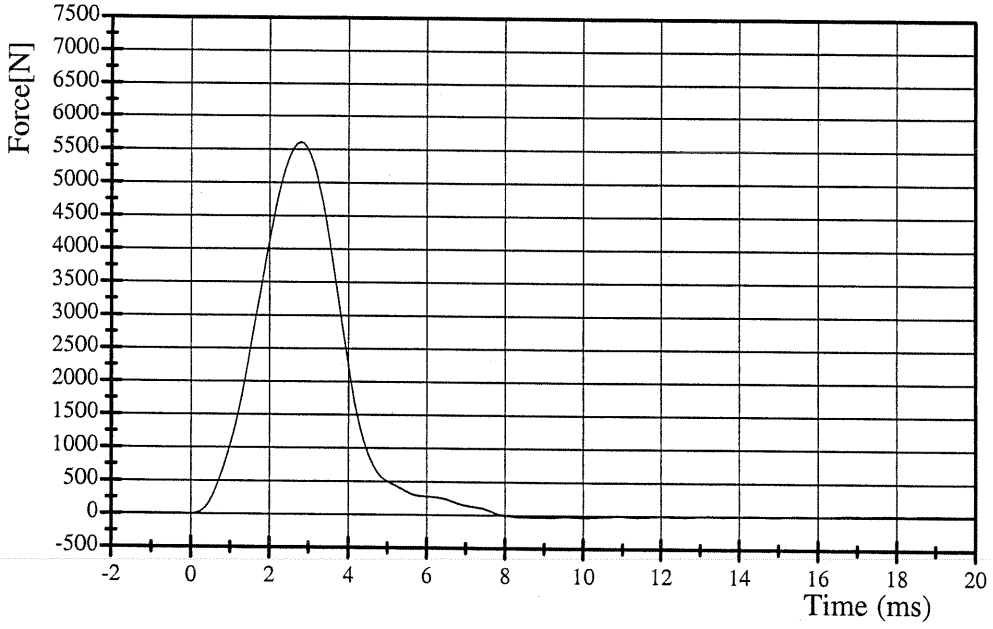


Filter Class: 600

Max: 114.6 g at 2.8 ms

Min: -0.6 g at 9.1 ms

Pendulum Force



Filter Class: 600

Max: 5605.1 N at 2.8 ms

Min: -29.7 N at 9.1 ms

06.22.2005 13:15:06 2143

Transportation Research Center Inc.

572E Right Slider Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/23/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Pendulum Velocity	2.70 - 2.80 m/s	2.75 m/s	Yes
Force At 10 mm Displacement	-1259 - (-1721) N	-1306 N	Yes
Force At 18 mm Displacement	-2268 - (-3096) N	-2627 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.23.2005 12:11:05 1750

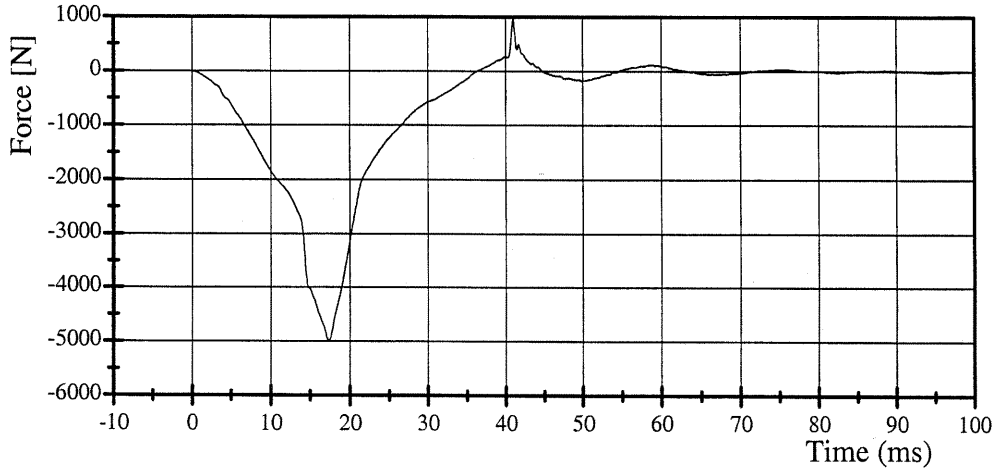
Transportation Research Center Inc.

572E Right Slider Test

HIII 50th Male Serial No. 090 Calibration No. 47 - 1

Test Date 06/23/2005

Femur Force

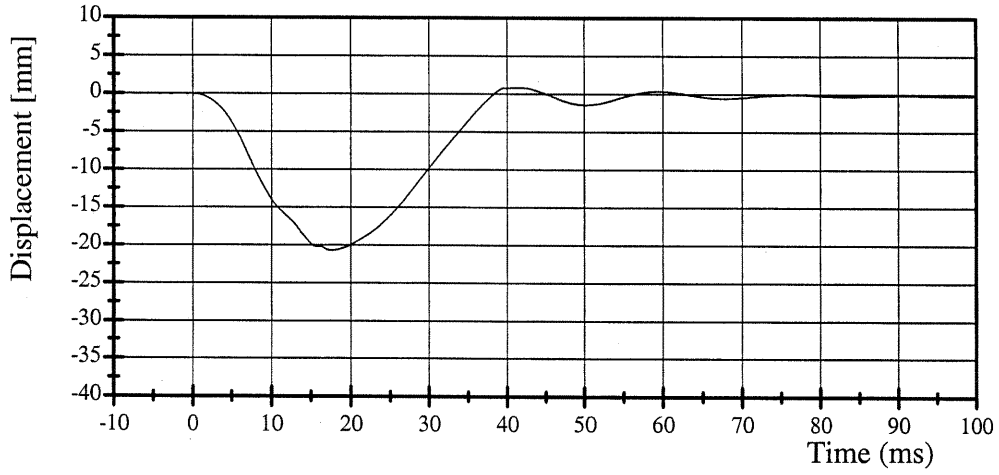


Filter Class: 600

Max: 989.8 N at 41.0 ms

Min: -4991.5 N at 17.4 ms

Tibia Displacement

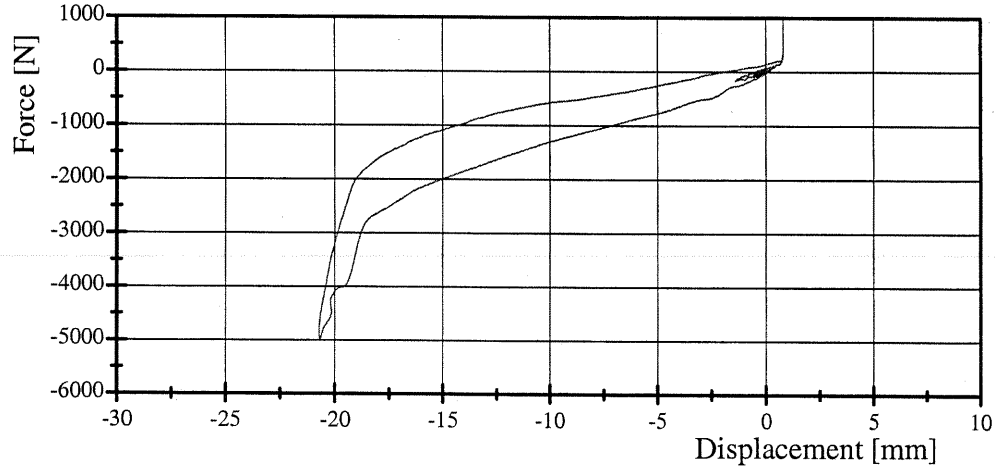


Filter Class: 600

Max: 0.8 mm at 41.6 ms

Min: -20.7 mm at 17.7 ms

Femur Force vs Tibia Displacement



06.23.2005 12:11:06 1750

Pre-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Passenger Dummy S/N: 070

Transportation Research Center Inc.
572O HIII 5th Female Dummy
External Dimensions
Serial No. 070 Calibration No. 09

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	784	Yes
B	Shoulder Pivot Height	431.8 - 457.2	447	Yes
C	Hip Pivot Height	81.3 - 86.3	85	Yes
D	Hip Pivot from Backline	144.8 - 149.8	147	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	75	Yes
F	Thigh Clearance	119.4 - 134.6	124	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	250	Yes
H	Head Back to Backline	43.2 - 48.2	44	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	290	Yes
J	Elbow Rest Height	182.8 - 203.2	187	Yes
K	Buttock Knee Length	520.7 - 546.1	535	Yes
L	Popliteal Height	355.6 - 376.0	356	Yes
M	Knee Pivot Height	393.7 - 419.1	402	Yes
N	Buttock Popliteal Length	414.0 - 439.4	420	Yes
O	Chest Depth without Jacket	175.3 - 190.5	185	Yes
P	Foot Length	218.5 - 233.7	221	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	479	Yes
S	Head Breadth	137.1 - 147.3	142	Yes
T	Head Depth	177.8 - 188.0	184	Yes
U	Hip Breadth	299.7 - 314.9	309	Yes
V	Shoulder Breadth	350.5 - 365.7	361	Yes
W	Foot Breadth	78.8 - 94.0	87	Yes
X	Head Circumference	528.3 - 548.7	540	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	866	Yes
Z	Waist Circumference	759.5 - 789.9	782	Yes
AA	Reference Location for Chest Circumference	332.7 - 358.1	350	Yes
BB	Reference Location for Waist Circumference	160.0 - 170.2	165	Yes

Technician

Approved

Revised 3/19/3003

050627

Transportation Research Center Inc.

572O Head Drop Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 3

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Peak Resultant Acceleration	250 - 300 g	265.9 g	Yes
Peak Lateral Acceleration	15 g Max	-2.7 g	Yes
Oscillations After Main Pulse	Less Than 10% of Peak Resultant Acceleration?	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 07:31:26 606

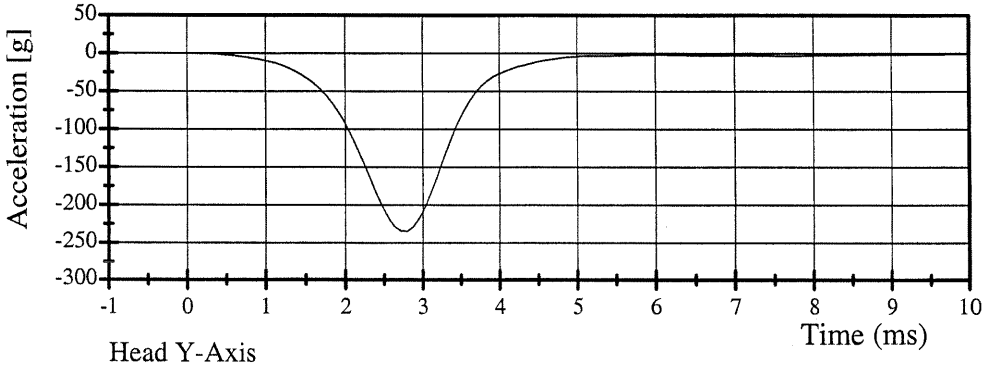
Transportation Research Center Inc.

572O Head Drop Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 3

Test Date 06/24/2005

Head X-Axis

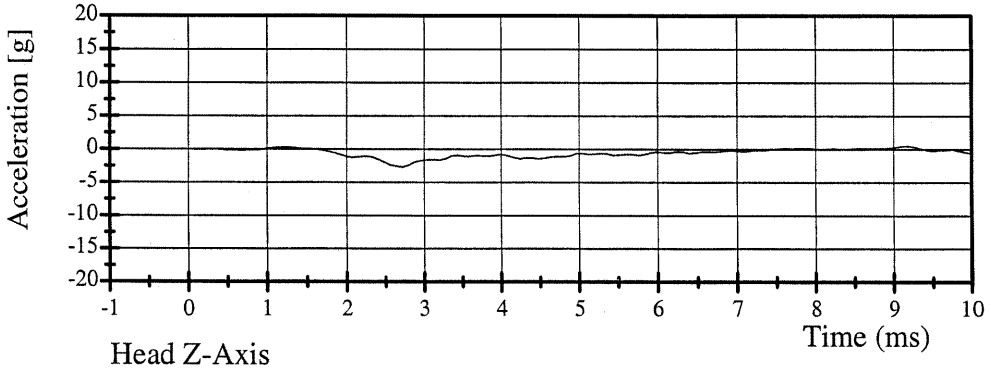


Filter Class: 1000

Max: 0.0 g at 0.0 ms

Min: -234.7 g at 2.8 ms

Head Y-Axis

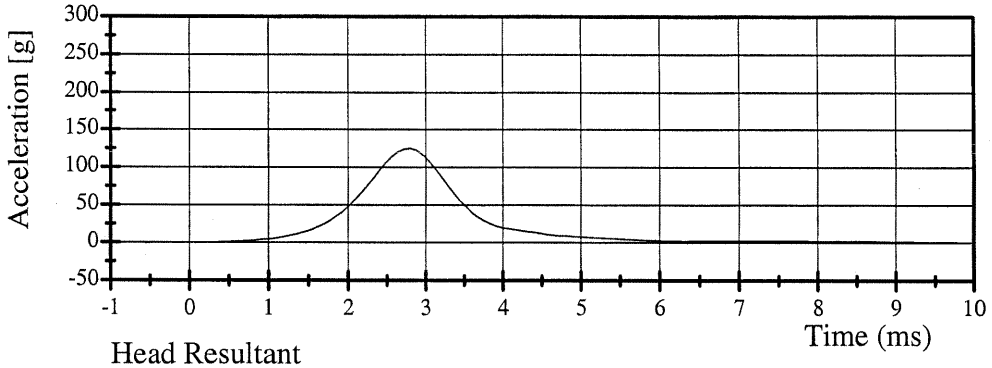


Filter Class: 1000

Max: 0.5 g at 9.1 ms

Min: -2.7 g at 2.7 ms

Head Z-Axis

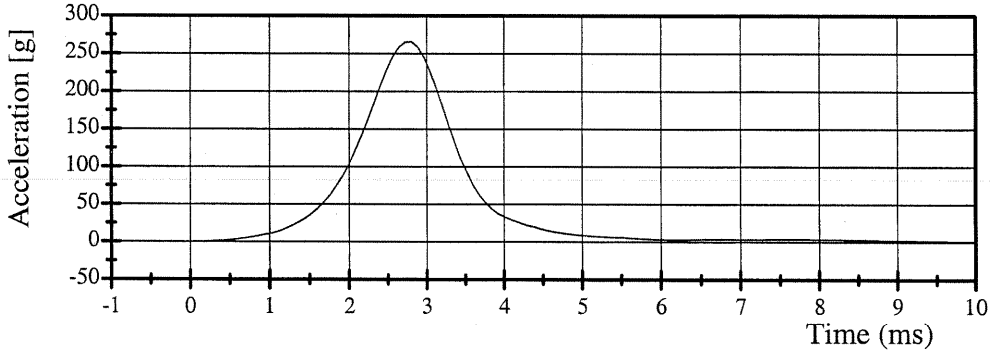


Filter Class: 1000

Max: 125.0 g at 2.8 ms

Min: -0.0 g at 0.1 ms

Head Resultant



Filter Class: 1000

Max: 265.9 g at 2.8 ms

Min: 0.0 g at 1.8 ms

06.24.2005 07:31:27 606

Transportation Research Center Inc.

572O Neck Flexion Test - 6 Channel Transducer

HIII 5th Female Serial No. 070 Calibration No. 09 - 2

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.10 m/s	Yes
Integrated Pendulum Velocity			
10 ms	2.10 - 2.50 m/s	2.42 m/s	Yes
20 ms	4.00 - 5.00 m/s	4.60 m/s	Yes
30 ms	5.80 - 7.00 m/s	6.59 m/s	Yes
Peak D Plane Rotation	77 - 91 °	77.4 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	69.0 - 83.0 N·m	73.54 N·m	Yes
Positive Moment Decay Time To 10 N·m	80 - 100 ms	86.64 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 20:43:03 1131

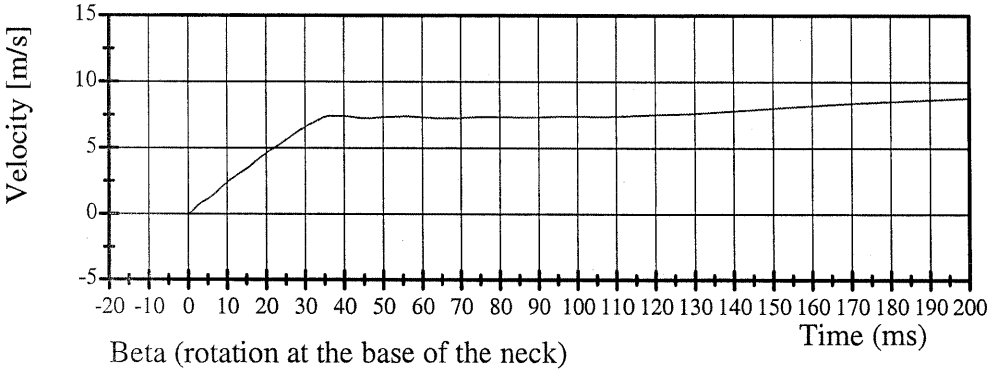
Transportation Research Center Inc.

572O Neck Flexion Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 2

Test Date 06/24/2005

Integrated Pendulum Velocity

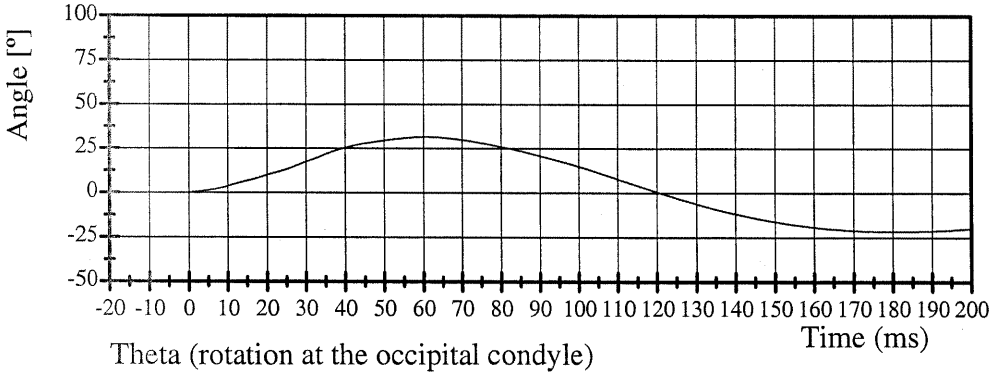


Filter Class: 180

Max: 9.3 m/s at 254.5 ms

Min: -0.0 m/s at -87.0 ms

Beta (rotation at the base of the neck)

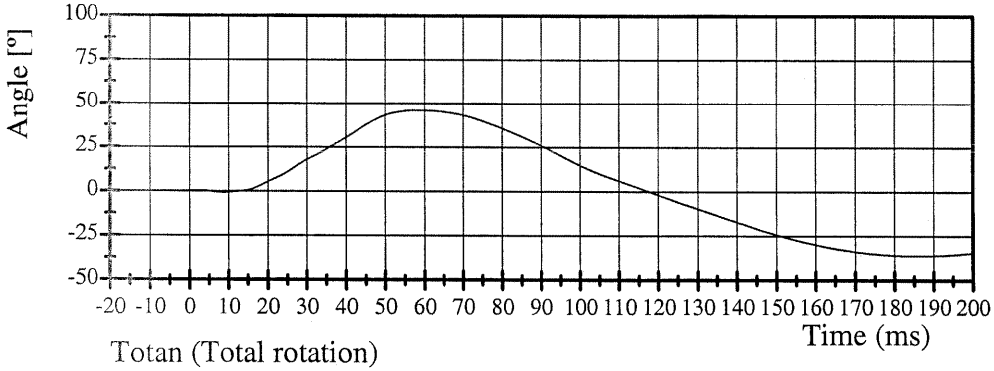


Filter Class: 60

Max: 31.6 ° at 60.5 ms

Min: -21.7 ° at 180.7 ms

Theta (rotation at the occipital condyle)

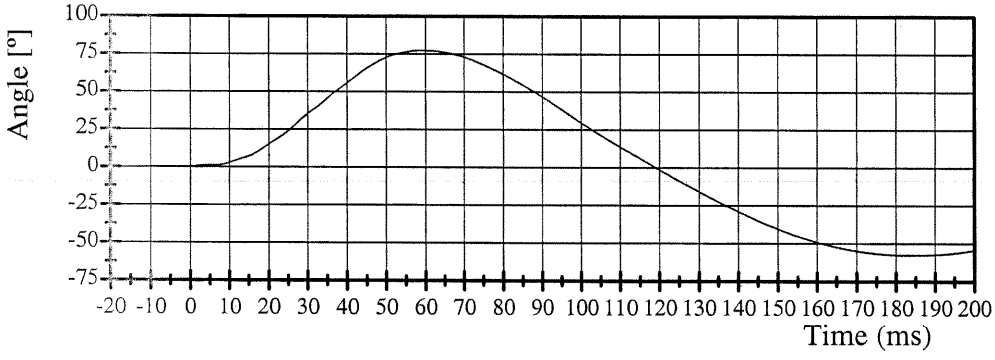


Filter Class: 60

Max: 46.0 ° at 58.1 ms

Min: -36.2 ° at 185.5 ms

Totan (Total rotation)



Filter Class: 60

Max: 77.4 ° at 59.0 ms

Min: -57.7 ° at 184.2 ms

06.24.2005 20:43:04 1131

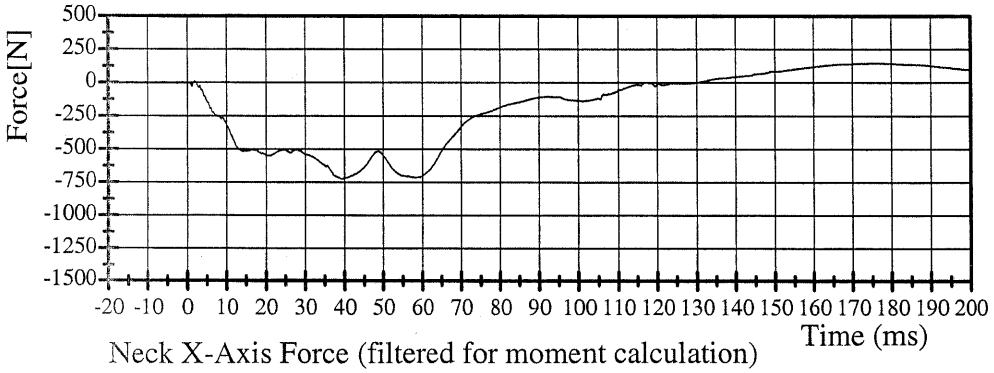
Transportation Research Center Inc.

572O Neck Flexion Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 2

Test Date 06/24/2005

Neck X-Axis Force

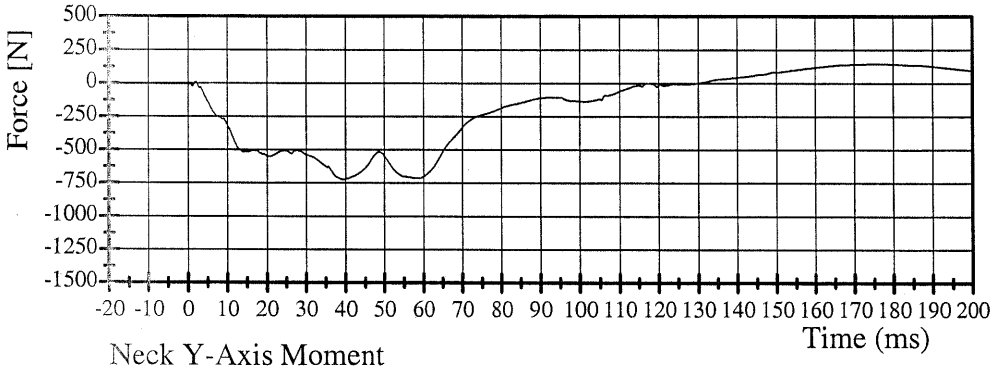


Filter Class: 1000

Max: 147.1 N at 174.4 ms

Min: -724.6 N at 39.4 ms

Neck X-Axis Force (filtered for moment calculation)

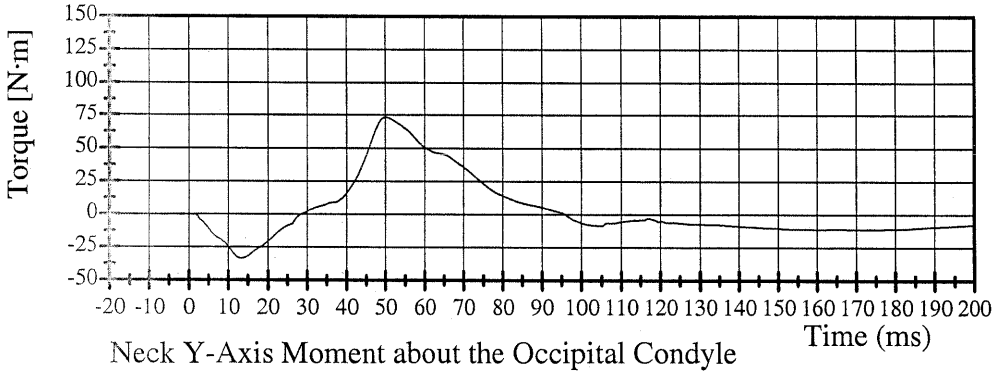


Filter Class: 600

Max: 146.9 N at 175.6 ms

Min: -724.1 N at 39.4 ms

Neck Y-Axis Moment

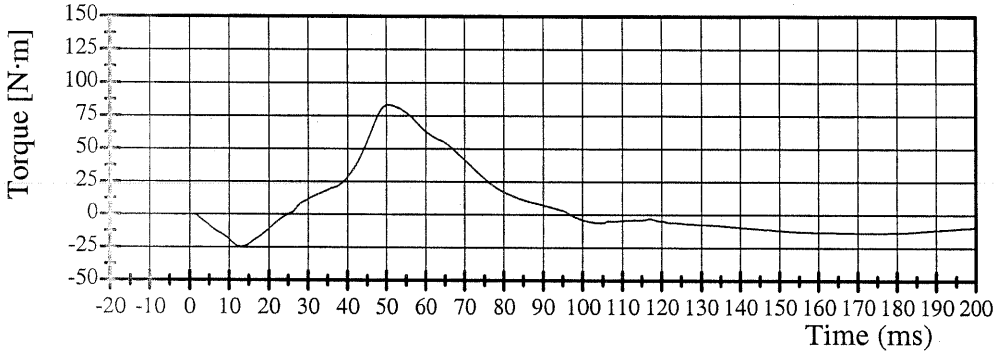


Filter Class: 600

Max: 73.3 N·m at 50.0 ms

Min: -33.4 N·m at 13.3 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 83.3 N·m at 50.6 ms

Min: -24.5 N·m at 13.0 ms

06.24.2005 20:43:05 1131

Transportation Research Center Inc.

572O Neck Extension Test - 6 Channel Transducer

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	44 %	Yes
Impact Velocity	5.95 - 6.19 m/s	6.15 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.50 - 1.90 m/s	1.83 m/s	Yes
20 ms	3.10 - 3.90 m/s	3.51 m/s	Yes
30 ms	4.60 - 5.60 m/s	4.94 m/s	Yes
Peak D Plane Rotation	99 - 114 °	103.3 °	Yes
Peak Moment About Occipital Condyles (During time interval rotation is within specified corridors)	-65.0 - (-53.0) N·m	-59.31 N·m	Yes
Negative Moment Decay Time To -10 N·m	94 - 114 ms	104.96 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 21:14:55 1219

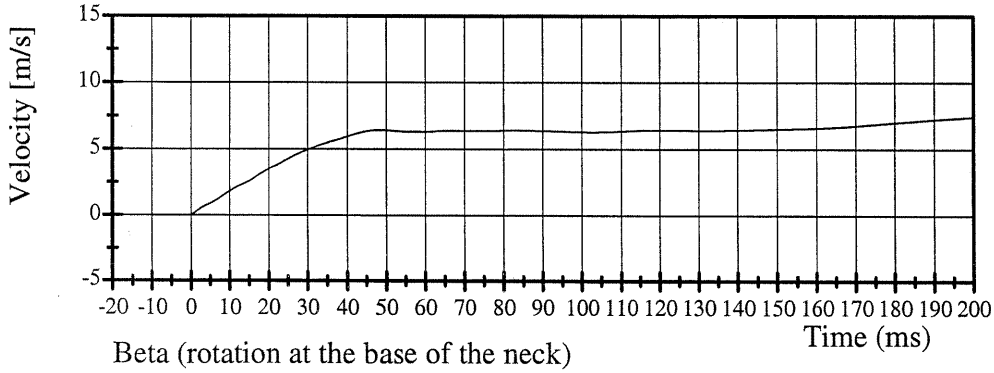
Transportation Research Center Inc.

572O Neck Extension Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Integrated Pendulum Velocity

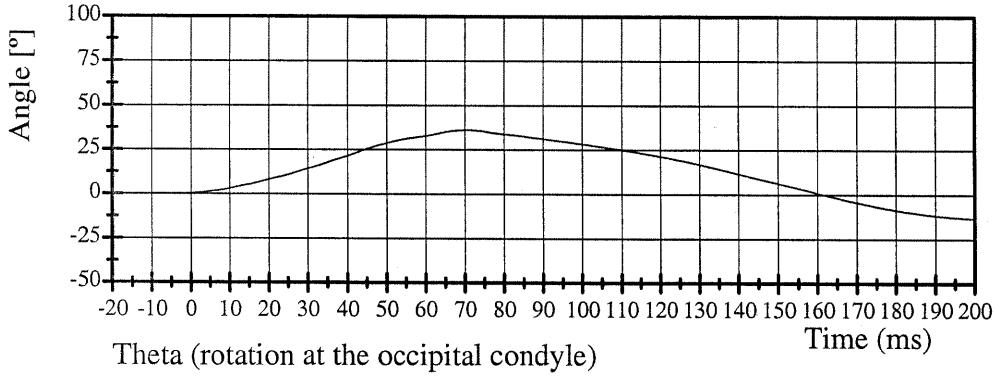


Filter Class: 180

Max: 8.1 m/s at 260.9 ms

Min: -0.0 m/s at -91.7 ms

Beta (rotation at the base of the neck)

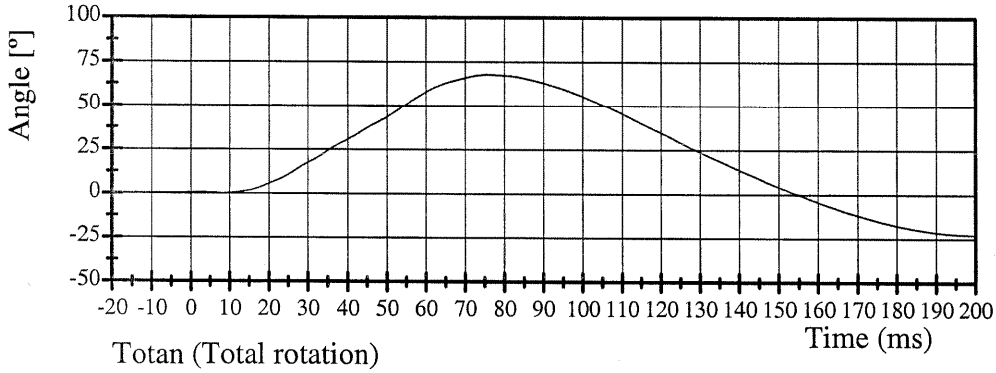


Filter Class: 60

Max: 36.2 ° at 70.6 ms

Min: -13.6 ° at 206.7 ms

Theta (rotation at the occipital condyle)

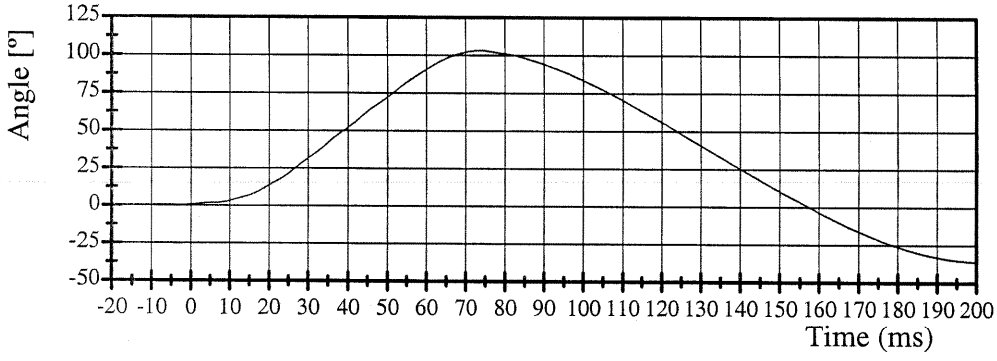


Filter Class: 60

Max: 67.8 ° at 75.8 ms

Min: -22.8 ° at 201.4 ms

Totan (Total rotation)



Filter Class: 60

Max: 103.3 ° at 73.6 ms

Min: -36.3 ° at 203.1 ms

06.24.2005 21:14:56 1219

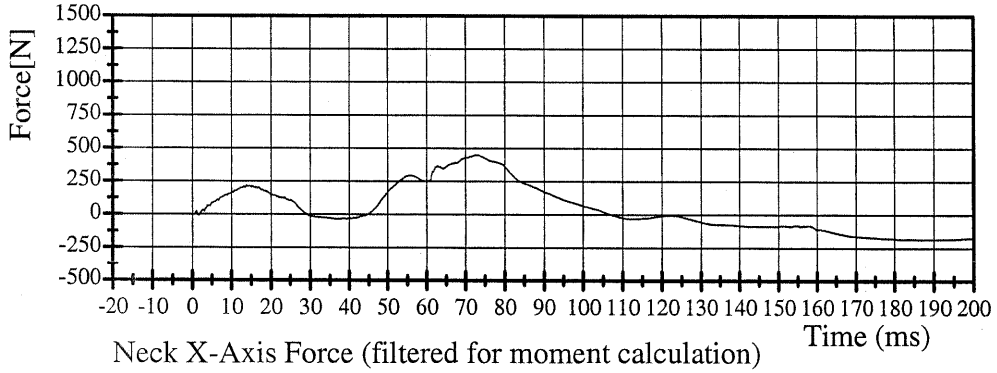
Transportation Research Center Inc.

572O Neck Extension Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Neck X-Axis Force

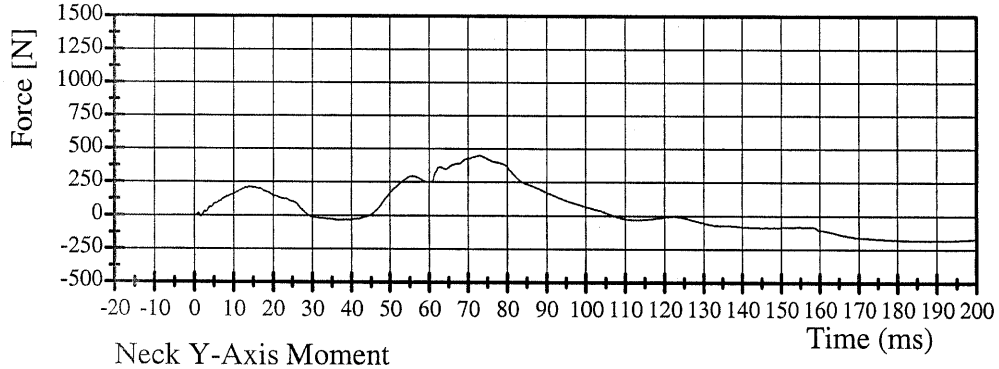


Filter Class: 1000

Max: 450.0 N at 73.0 ms

Min: -183.5 N at 185.8 ms

Neck X-Axis Force (filtered for moment calculation)

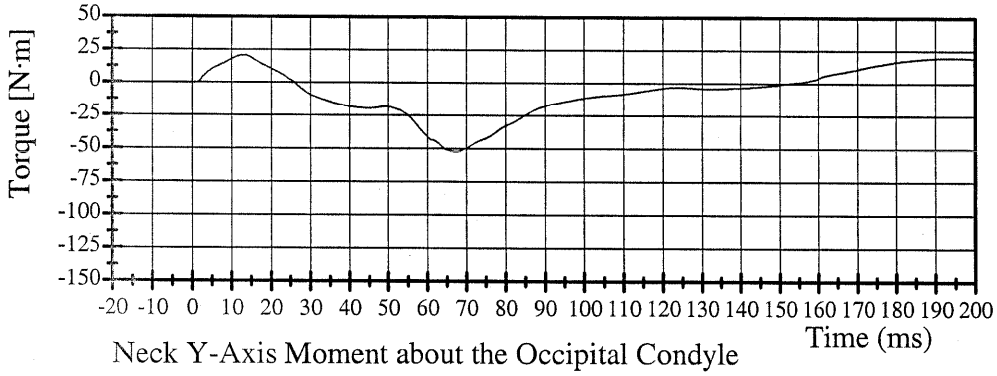


Filter Class: 600

Max: 449.5 N at 73.0 ms

Min: -183.0 N at 188.4 ms

Neck Y-Axis Moment

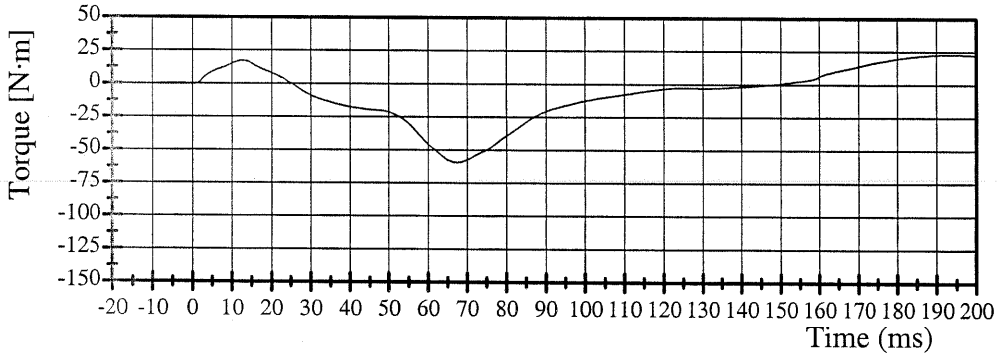


Filter Class: 600

Max: 20.8 N·m at 13.0 ms

Min: -52.4 N·m at 67.1 ms

Neck Y-Axis Moment about the Occipital Condyle



Filter Class: 600

Max: 23.0 N·m at 193.5 ms

Min: -59.3 N·m at 67.5 ms

06.24.2005 21:14:57 1219

Transportation Research Center Inc.

572O Thorax Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	43 %	Yes
Pendulum Velocity	6.59 - 6.83 m/s	6.74 m/s	Yes
Maximum Chest Deflection	-58.0 - (-50.0) mm	-54.3 mm	Yes
Peak Impact Probe Force Within Compression Corridor	3900 - 4400 N	4331 N	Yes
Peak Force Between 18 mm and 50 mm	4600 N	4292 N	Yes
Internal Hysteresis	69 - 85 %	73 %	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 18:56:26 1626

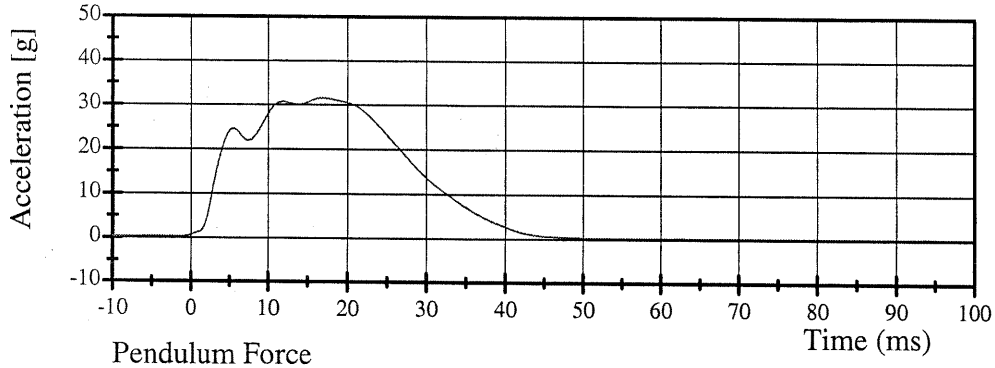
Transportation Research Center Inc.

572O Thorax Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Pendulum Deceleration

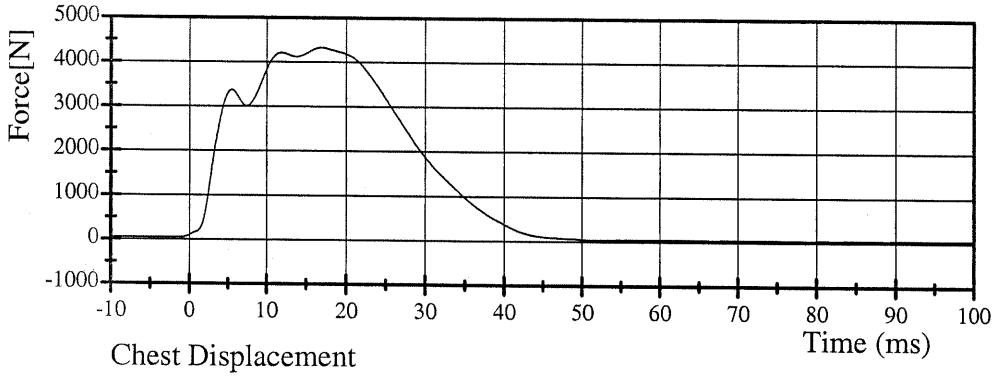


Filter Class: 180

Max: 31.6 g at 17.0 ms

Min: -0.0 g at -126.0 ms

Pendulum Force

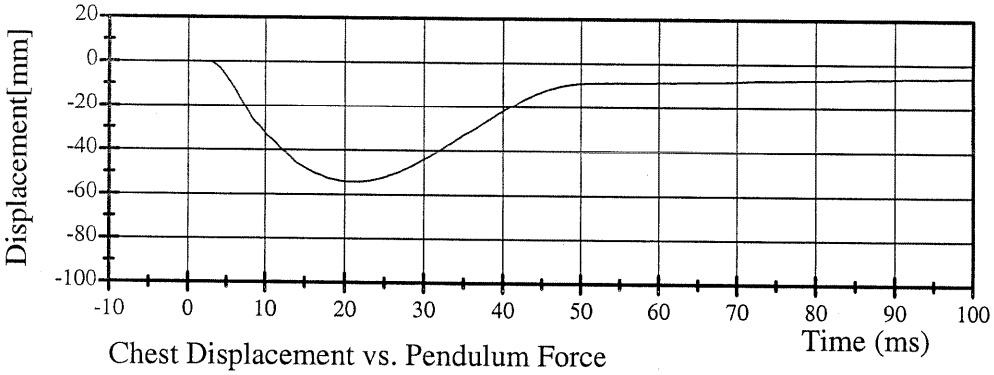


Filter Class: 180

Max: 4330.8 N at 17.0 ms

Min: -2.5 N at -126.0 ms

Chest Displacement

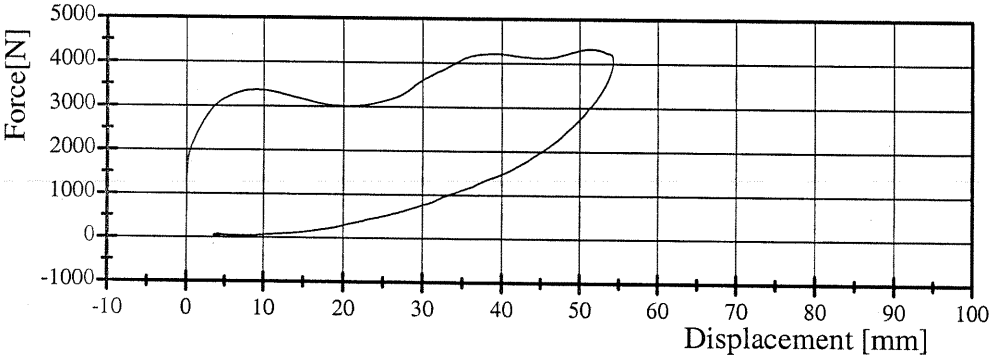


Filter Class: 600

Max: 0.0 mm at -83.7 ms

Min: -54.3 mm at 21.4 ms

Chest Displacement vs. Pendulum Force



06.24.2005 18:56:27 1626

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

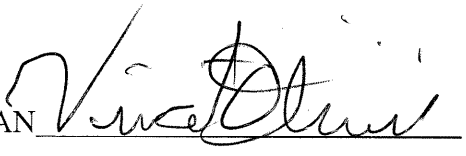
CAL DATE: 22-Jun-05

TRC, INC. **TEST NO: 070C09TF1** **572 O SN070 TORSO FLEX CAL 09**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.4° C
RELATIVE HUMIDITY	10 – 70 %	45 %
INITIAL ANGLE OF UNSUPPORRTED DUMMY	<= 20° REFERENCED TO VERTICAL	14.7 °
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	344.1 N
RETURN ANGLE		20.0 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	5.3 °
RATE	0.5° - 1.5°/sec	0.97 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN 

Transportation Research Center Inc.

572O Left Knee Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	45 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3635 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 15:07:09 1742

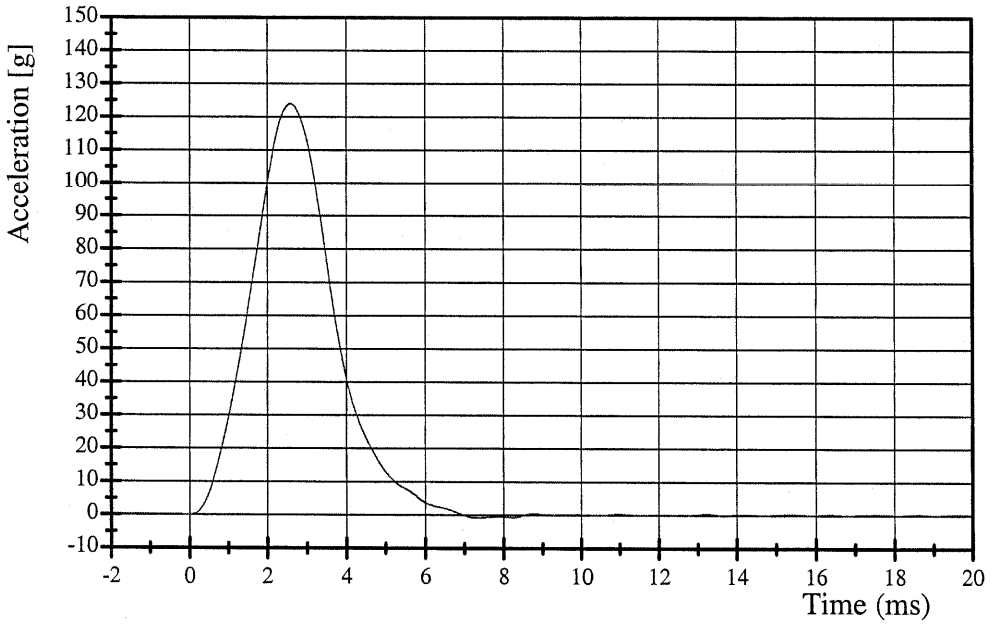
Transportation Research Center Inc.

572O Left Knee Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Pendulum Deceleration

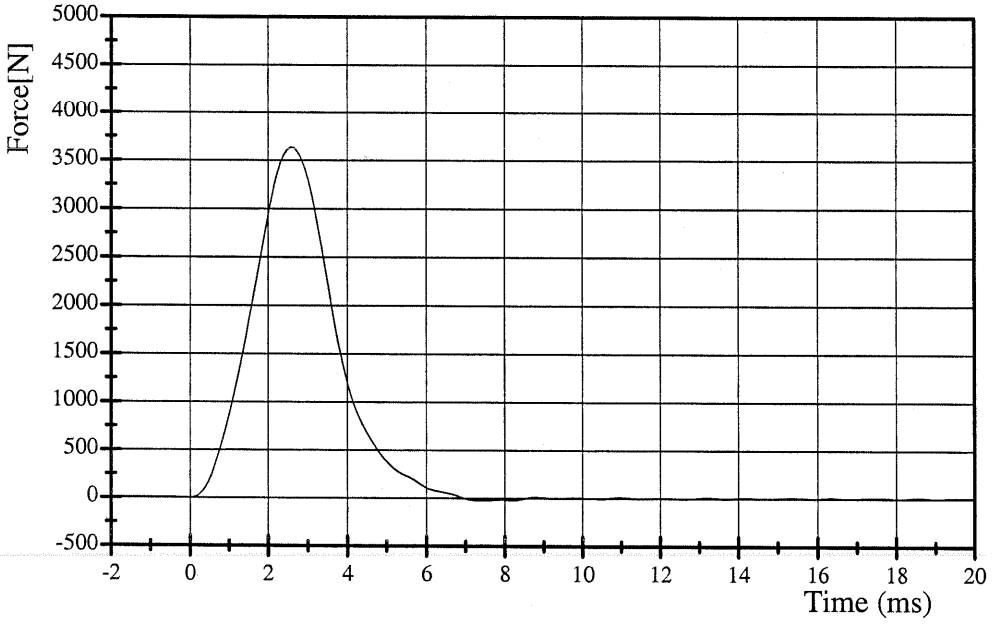


Filter Class: 600

Max: 124.0 g at 2.6 ms

Min: -0.8 g at 7.4 ms

Pendulum Force



Filter Class: 600

Max: 3634.6 N at 2.6 ms

Min: -23.6 N at 7.4 ms

06.24.2005 15:07:10 1742

Transportation Research Center Inc.

572O Right Knee Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	45 %	Yes
Pendulum Velocity	2.07 - 2.13 m/s	2.10 m/s	Yes
Maximum Pendulum Force	3450 - 4060 N	3679 N	Yes

Test meets specifications.

Comments:

Technician

Approved

06.24.2005 15:11:37 1735

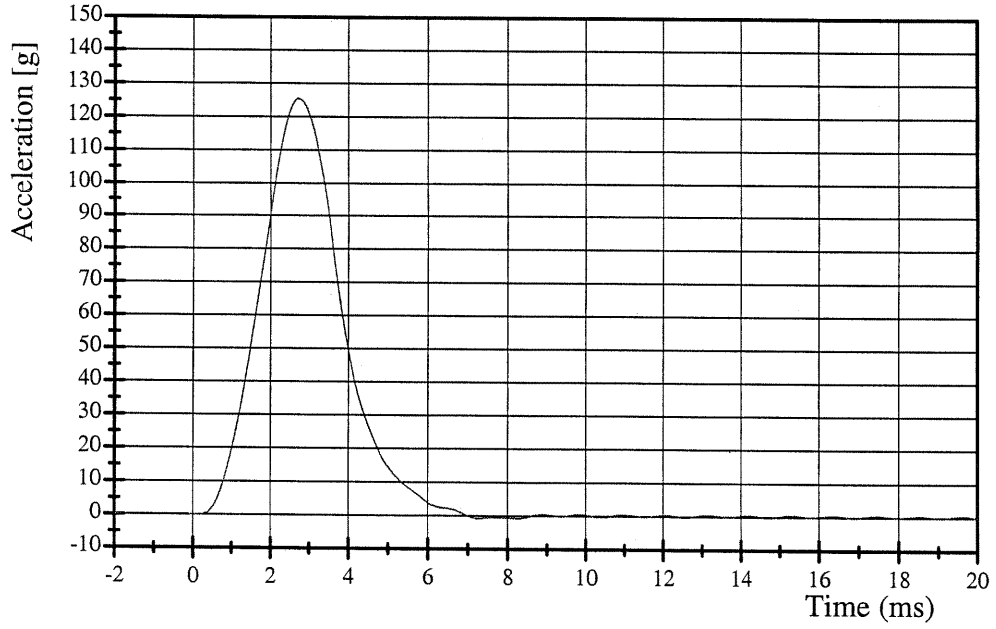
Transportation Research Center Inc.

572O Right Knee Test

HIII 5th Female Serial No. 070 Calibration No. 09 - 1

Test Date 06/24/2005

Pendulum Deceleration

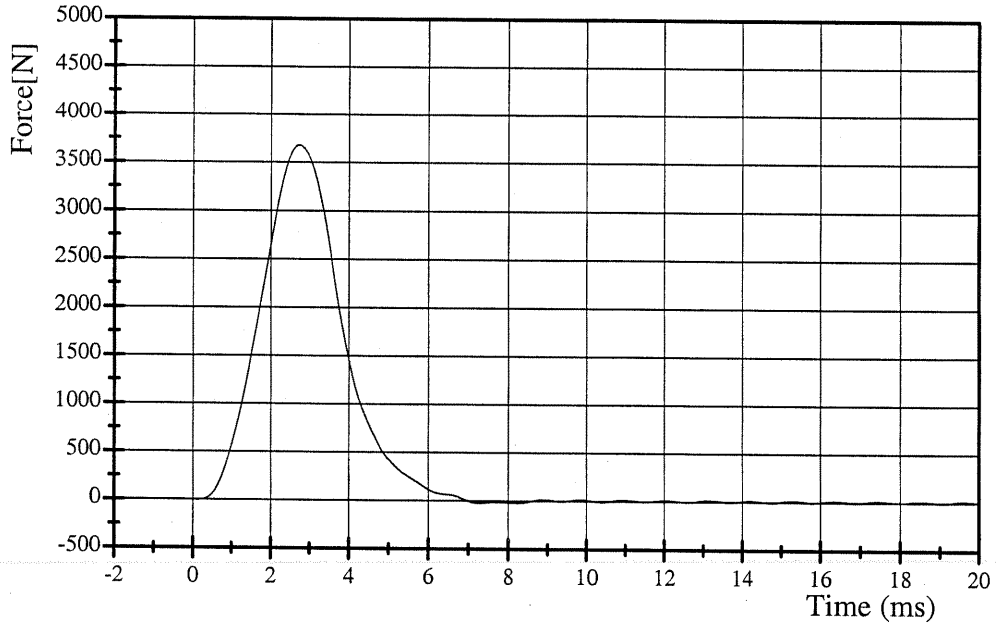


Filter Class: 600

Max: 125.5 g at 2.7 ms

Min: -0.8 g at 7.3 ms

Pendulum Force



Filter Class: 600

Max: 3679.3 N at 2.7 ms

Min: -22.4 N at 7.3 ms

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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.

Target Channel Report Test Number 050627

Ref	Channel Name	Transducer ID	ISO Signal Identifier	Description	Polarity	FScale	Units	Assembly
1	DAU3175.Trigger	Trig D1	10ZERO000000VO0A	EVENT	Bipolar	1	Logic	
2	DAU3175.01	J36743	11HEADCG00H3ACXA	Head Accel X	Bipolar	1000	g	1-110 HIII 50th FTSS.001
3	DAU3175.02	99102-F15	11HEADCG00H3ACYA	Head Accel Y	-Bipolar	1000	g	1-110 HIII 50th FTSS.002
4	DAU3175.03	J19227	11HEADCG00H3ACZA	Head Accel Z	-Bipolar	1000	g	1-110 HIII 50th FTSS.003
5	DAU3175.04	02A16-A25	11HEADFR00H3ACYA	Head (FT) Accel Y	-Bipolar	1000	g	1-110 HIII 50th FTSS.004
6	DAU3175.05	03E03E21-M21	11HEADFR00H3ACZA	Head (FT) Accel Z	-Bipolar	1000	g	1-110 HIII 50th FTSS.005
7	DAU3175.06	00L13-F14	11HEADUP00H3ACXA	Head (TP) Accel X	Bipolar	1000	g	
8	DAU3175.07	98H12-F08	11HEADUP00H3ACYA	Head (TP) Accel Y	-Bipolar	1000	g	1-110 HIII 50th FTSS.007
9	DAU3175.08	03E03E20-N01	11HEADLE00H3ACXA	Head (LT) Accel X	Bipolar	1000	g	
10	DAU3175.09	03D03D16-F14	11HEADLE00H3ACZA	Head (LT) Accel Z	-Bipolar	1000	g	1-110 HIII 50th FTSS.009
11	DAU3175.10	1716A-1039-FX	11NECKUP00H3FOXA	Neck Force X	-Bipolar	8896.4	N	1-110 HIII 50th FTSS.010
12	DAU3175.11	1716A-1039-FY	11NECKUP00H3FOYA	Neck Force Y	Bipolar	8896.4	N	1-110 HIII 50th FTSS.011
13	DAU3175.12	1716A-1039-FZ	11NECKUP00H3FOZA	Neck Force Z	Bipolar	13344.6	N	1-110 HIII 50th FTSS.012
14	DAU3175.13	1716A-1039-MX	11NECKUP00H3MOXA	Neck Moment X	-Bipolar	282.4	N·m	1-110 HIII 50th FTSS.013
15	DAU3175.14	1716A-1039-MY	11NECKUP00H3MOYA	Neck Moment Y	Bipolar	282.4	N·m	1-110 HIII 50th FTSS.014
16	DAU3175.15	1716A-1039-MZ	11NECKUP00H3MOZA	Neck Moment Z	Bipolar	282.4	N·m	1-110 HIII 50th FTSS.015
17	DAU3175.16	1794A-215-FX	11NECKLO00H3FOXA	Neck Lower Force X	-Bipolar	13344.6	N	1-110 HIII 50th FTSS.016
18	DAU3175.17	1794A-215-FY	11NECKLO00H3FOYA	Neck Lower Force Y	Bipolar	13344.6	N	1-110 HIII 50th FTSS.017
19	DAU3175.18	1794A-215-FZ	11NECKLO00H3FOZA	Neck Lower Force Z	Bipolar	13344.6	N	1-110 HIII 50th FTSS.018
20	DAU3175.19	1794A-215-MX	11NECKLO00H3MOXA	Neck Lower Moment X	-Bipolar	452	N·m	1-110 HIII 50th FTSS.019
21	DAU3175.20	1794A-215-MY	11NECKLO00H3MOYA	Neck Lower Moment Y	Bipolar	452	N·m	1-110 HIII 50th FTSS.020
22	DAU3175.21	1794A-215-MZ	11NECKLO00H3MOZA	Neck Lower Moment Z	Bipolar	452	N·m	1-110 HIII 50th FTSS.021
23	DAU3175.22	AJ534	11CHSTCG00H3ACXA	Chest Accel X	Bipolar	1000	g	1-110 HIII 50th FTSS.022
24	DAU3175.23	J17976	11CHSTCG00H3ACYA	Chest Accel Y	-Bipolar	1000	g	1-110 HIII 50th FTSS.023
25	DAU3175.24	J32884	11CHSTCG00H3ACZA	Chest Accel Z	-Bipolar	1000	g	1-110 HIII 50th FTSS.024
26	DAU3175.25	98H10-F18	11CHSTCGRDH3ACXA	Chest Accel X Red.	-Bipolar	1000	g	1-110 HIII 50th FTSS.025
27	DAU3175.26	02I02I10-N15	11CHSTCGRDH3ACYA	Chest Accel Y Red.	Bipolar	1000	g	1-110 HIII 50th FTSS.026
28	DAU3175.27	02D02C21-N02	11CHSTCGRDH3ACZA	Chest Accel Z Red.	Bipolar	1000	g	1-110 HIII 50th FTSS.027
29	DAU3175.28	CST110	11CHST0000H3DSXA	Chest Deflection X	Bipolar	100	mm	1-110 HIII 50th FTSS.028
30	DAU3175.29	J23803	11PELVCG00H3ACXA	Pelvis Accel X	-Bipolar	1000	g	1-110 HIII 50th FTSS.029
31	DAU3175.30	J32180	11PELVCG00H3ACYA	Pelvis Accel Y	-Bipolar	1000	g	1-110 HIII 50th FTSS.030
32	DAU3175.31	J20556	11PELVCG00H3ACZA	Pelvis Accel Z	-Bipolar	1000	g	1-110 HIII 50th FTSS.031
33	DAU3175.32	2430-741	11FEMRLL00H3FOZA	Left Femur Force Z	Bipolar	13344	N	1-110 HIII 50th FTSS.032
34	DAU3179.01	150-0121VR-14691	11KNSLLE00H3DSXA	Left Knee Displacement X	-Bipolar	40	mm	1-110 HIII 50th FTSS.034
35	DAU3179.02	4509J-90-FX	11TIBILULXH3FOXA	Left Upper Tibia Force X	Bipolar	11120	N	1-110 HIII 50th FTSS.035
36	DAU3179.03	4509J-90-FY	11TIBILULXH3FOYA	Left Upper Tibia Force Y	Bipolar	11120	N	1-110 HIII 50th FTSS.036
37	DAU3179.04	4509J-90-FZ	11TIBILULXH3FOZA	Left Upper Tibia Force Z	Bipolar	11120	N	1-110 HIII 50th FTSS.037
38	DAU3179.05	4509J-90-MX	11TIBILULXH3MOXA	Left Upper Tibia Moment X	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.038
39	DAU3179.06	4509J-90-MY	11TIBILULXH3MOYA	Left Upper Tibia Moment Y	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.039
40	DAU3179.07	P16171	11TIBILELXH3ACXA	Left Tibia Accel X	Bipolar	1000	g	1-110 HIII 50th FTSS.040
41	DAU3179.08	P15591	11TIBILELXH3ACYA	Left Tibia Accel Y	Bipolar	1000	g	1-110 HIII 50th FTSS.041

42	DAU3179.09	4929J-120-FX	11TIBILLLXH3FOXA	Left Lower Tibia Force X	Bipolar	11120.5	N	1-110 HIII 50th FTSS.042
43	DAU3179.10	4929J-120-FY	11TIBILLLXH3FOYA	Left Lower Tibia Force Y	Bipolar	11120.5	N	1-110 HIII 50th FTSS.043
44	DAU3179.11	4929J-120-FZ	11TIBILLLXH3FOZA	Left Lower Tibia Force Z	Bipolar	11120.5	N	1-110 HIII 50th FTSS.044
45	DAU3179.12	4929J-120-MX	11TIBILLLXH3MOXA	Left Lower Tibia Moment X	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.045
46	DAU3179.13	4929J-120-MY	11TIBILLLXH3MOYA	Left Lower Tibia Moment Y	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.046
47	DAU3179.14	PD210-4B-AK-0326	11FOOTLELXH3ANXA	Left Foot Angular Dis. X	Bipolar	318	°	1-110 HIII 50th FTSS.047
48	DAU3179.15	PD210-4B-AK-0327	11FOOTLELXH3ANYA	Left Foot Angular Dis. Y	Bipolar	318	°	1-110 HIII 50th FTSS.048
49	DAU3179.16	PD210-4B-AK-0259	11FOOTLELXH3ANZA	Left Foot Angular Dis. Z	Bipolar	318	°	1-110 HIII 50th FTSS.049
50	DAU3179.17	P17833	11FOOTLELXH3ACXA	Left Foot Accel X	Bipolar	1000	g	1-110 HIII 50th FTSS.050
51	DAU3179.18	P15321	11FOOTLELXH3ACYA	Left Foot Accel Y	Bipolar	1000	g	1-110 HIII 50th FTSS.051
52	DAU3179.19	P16945	11FOOTLELXH3ACZA	Left Foot Accel Z	Bipolar	1000	g	1-110 HIII 50th FTSS.052
53	DAU3179.20	2430-96661	11FEMRRL00H3FOZA	Right Femur Force Z	Bipolar	13344	N	1-110 HIII 50th FTSS.033
54	DAU3179.21	150-0121VL-14239	11KNSLRI00H3DSXA	Right Knee Displacement X	-Bipolar	40	mm	1-110 HIII 50th FTSS.053
55	DAU3179.22	4509J-89-FX	11TIBIRULXH3FOXA	Right Upper Tibia Force X	Bipolar	11120	N	1-110 HIII 50th FTSS.054
56	DAU3179.23	4509J-89-FY	11TIBIRULXH3FOYA	Right Upper Tibia Force Y	Bipolar	11120	N	1-110 HIII 50th FTSS.055
57	DAU3179.24	4509J-89-FZ	11TIBIRULXH3FOZA	Right Upper Tibia Force Z	Bipolar	11120	N	1-110 HIII 50th FTSS.056
58	DAU3179.25	4509J-89-MX	11TIBIRULXH3MOXA	Right Upper Tibia Moment X	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.057
59	DAU3179.26	4509J-89-MY	11TIBIRULXH3MOYA	Right Upper Tibia Moment Y	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.058
60	DAU3179.27	P15334	11TIBIRILXH3ACXA	Right Tibia Accel X	Bipolar	1000	g	1-110 HIII 50th FTSS.059
61	DAU3179.28	J19625	11TIBIRILXH3ACYA	Right Tibia Accel Y	Bipolar	1000	g	1-110 HIII 50th FTSS.060
62	DAU3179.29	4929J-121-FX	11TIBIRLLXH3FOXA	Right Lower Tibia Force X	Bipolar	11120.5	N	1-110 HIII 50th FTSS.061
63	DAU3179.30	4929J-121-FY	11TIBIRLLXH3FOYA	Right Lower Tibia Force Y	Bipolar	11120.5	N	1-110 HIII 50th FTSS.062
64	DAU3179.31	4929J-121-FZ	11TIBIRLLXH3FOZA	Right Lower Tibia Force Z	Bipolar	11120.5	N	1-110 HIII 50th FTSS.063
65	DAU3179.32	4929J-121-MX	11TIBIRLLXH3MOXA	Right Lower Tibia Moment X	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.064
66	DAU3183.01	4929J-121-MY	11TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	Bipolar	395.4	N·m	1-110 HIII 50th FTSS.065
67	DAU3183.02	PD210-4B-AK-0254	11FOOTRILXH3ANXA	Right Foot Angular Dis. X	Bipolar	318	°	1-110 HIII 50th FTSS.066
68	DAU3183.03	PD210-4B-AK-0255	11FOOTRILXH3ANYA	Right Foot Angular Dis. Y	Bipolar	318	°	1-110 HIII 50th FTSS.067
69	DAU3183.04	PD210-4B-AK-0256	11FOOTRILXH3ANZA	Right Foot Angular Dis. Z	Bipolar	318	°	1-110 HIII 50th FTSS.068
70	DAU3183.05	AJ4L3	11FOOTRILXH3ACXA	Right Foot Accel X	Bipolar	1000	g	1-110 HIII 50th FTSS.069
71	DAU3183.06	J27464	11FOOTRILXH3ACYA	Right Foot Accel Y	Bipolar	1000	g	1-110 HIII 50th FTSS.070
72	DAU3183.07	J23998	11FOOTRILXH3ACZA	Right Foot Accel Z	Bipolar	1000	g	1-110 HIII 50th FTSS.071
73	DAU3183.08	03E03E20-N20	13HEADCG00HFACXA	Head Accel X	Bipolar	1200	g	3-416 HIII 5th FTSS.001
74	DAU3183.09	02A18-N10	13HEADCG00HFACYA	Head Accel Y	-Bipolar	1200	g	3-416 HIII 5th FTSS.002
75	DAU3183.10	02A09-F15	13HEADCG00HFACZA	Head Accel Z	-Bipolar	1200	g	3-416 HIII 5th FTSS.003
76	DAU3183.11	01L26-F02	13HEADCGRDHFACXA	Head Accel Red X	-Bipolar	1200	g	3-416 HIII 5th FTSS.004
77	DAU3183.12	02A09-F13	13HEADCGRDHFACYA	Head Accel Red Y	-Bipolar	1200	g	3-416 HIII 5th FTSS.005
78	DAU3183.13	02A16-A06	13HEADCGRDHFACZA	Head Accel Red Z	-Bipolar	1200	g	3-416 HIII 5th FTSS.006
79	DAU3183.14	IF-205-161-FX	13NECKUP00HFFOXA	Neck Force X	-Bipolar	8896	N	3-416 HIII 5th FTSS.013
80	DAU3183.15	IF-205-161-FY	13NECKUP00HFFOYA	Neck Force Y	Bipolar	8896	N	3-416 HIII 5th FTSS.014
81	DAU3183.16	IF-205-161-FZ	13NECKUP00HFFOZA	Neck Force Z	Bipolar	13344	N	3-416 HIII 5th FTSS.015
82	DAU3183.17	IF-205-161-MX	13NECKUP00HFMOXA	Neck Moment X	-Bipolar	282.5	N·m	3-416 HIII 5th FTSS.016
83	DAU3183.18	IF-205-161-MY	13NECKUP00HFMOYA	Neck Moment Y	Bipolar	282.5	N·m	3-416 HIII 5th FTSS.017
84	DAU3183.19	IF-205-161-MZ	13NECKUP00HFMOZA	Neck Moment Z	Bipolar	282.5	N·m	3-416 HIII 5th FTSS.018

85	DAU3183.20	3251-108-FX	13NECKLO00HFFOXA	Neck Lower Force X	-Bipolar	13344	N	3-416 HIII 5th FTSS.019
86	DAU3183.21	3251-108-FY	13NECKLO00HFFOYA	Neck Lower Force Y	Bipolar	13344	N	3-416 HIII 5th FTSS.020
87	DAU3183.22	3251-108-FZ	13NECKLO00HFFOZA	Neck Lower Force Z	Bipolar	13344.6	N	3-416 HIII 5th FTSS.021
88	DAU3183.23	3251-108-MX	13NECKLO00HFMOXA	Neck Lower Moment X	-Bipolar	424	N·m	3-416 HIII 5th FTSS.022
89	DAU3183.24	3251-108-MY	13NECKLO00HFMOYA	Neck Lower Moment Y	Bipolar	424	N·m	3-416 HIII 5th FTSS.023
90	DAU3183.25	3251-108-MZ	13NECKLO00HFMOZA	Neck Lower Moment Z	Bipolar	338.95	N·m	3-416 HIII 5th FTSS.024
91	DAU3183.26	02A16-A04	13CHSTCG00HFACXA	Chest Accel X	Bipolar	600	g	3-416 HIII 5th FTSS.025
92	DAU3183.27	C02B19-F02	13CHSTCG00HFACYA	Chest Accel Y	-Bipolar	600	g	3-416 HIII 5th FTSS.026
93	DAU3183.28	C02B19-F06	13CHSTCG00HFACZA	Chest Accel Z	-Bipolar	600	g	3-416 HIII 5th FTSS.027
94	DAU3183.29	B02A25-N08	13CHSTCGRDHFACXA	Chest Accel Red X	-Bipolar	600	g	3-416 HIII 5th FTSS.028
95	DAU3183.30	03E03E19-N02	13CHSTCGRDHFACYA	Chest Accel Red Y	-Bipolar	600	g	3-416 HIII 5th FTSS.029
96	DAU3183.31	C02B19-F04	13CHSTCGRDHFACZA	Chest Accel Red Z	-Bipolar	600	g	3-416 HIII 5th FTSS.030
97	DAU3183.32	14CB1-2897-416	13CHST0000HFDSXA	Chest Deflection X 516	Bipolar	100	mm	3-416 HIII 5th FTSS.034
98	DAU3173.01	C02B19-F03	13PELVCG00HFACXA	Pelvis Accel X	-Bipolar	600	g	3-416 HIII 5th FTSS.040
99	DAU3173.02	02A16-A27	13PELVCG00HFACYA	Pelvis Accel Y	-Bipolar	600	g	3-416 HIII 5th FTSS.041
100	DAU3173.03	C02B19-F01	13PELVCG00HFACZA	Pelvis Accel Z	-Bipolar	600	g	3-416 HIII 5th FTSS.042
101	DAU3173.04	2430-736	13FEMRLL00HFFOZA	Left Femur Force Z #8	Bipolar	13344	N	3-416 HIII 5th FTSS.043
102	DAU3173.05	150-0121VR-22653	13KNSLLE00HFDSXA	Left Knee Displacement	Bipolar	40	mm	3-416 HIII 5th FTSS.045
103	DAU3173.06	4825J-91-FX	13TIBILUFXHFFOXA	Left Upper Tibia Force X	Bipolar	8896	N	3-416 HIII 5th FTSS.046
104	DAU3173.07	4825J-91-FZ	13TIBILUFXHFFOZA	Left Upper Tibia Force Z	Bipolar	8896	N	3-416 HIII 5th FTSS.047
105	DAU3173.09	4825J-91-MX	13TIBILUFXHFMOXA	Left Upper Tibia Moment X	Bipolar	282	N·m	3-416 HIII 5th FTSS.048
106	DAU3173.10	4825J-91-MY	13TIBILUFXHFMOYA	Left Upper Tibia Moment Y	Bipolar	282	N·m	3-416 HIII 5th FTSS.049
107	DAU3173.11	99H30-Z01	13TIBILEFXHFACXA	Left Tibia Accel X	Bipolar	1200	g	3-416 HIII 5th FTSS.050
108	DAU3173.12	99108-F26	13TIBILEFXHFACYA	Left Tibia Accel Y	Bipolar	1200	g	3-416 HIII 5th FTSS.051
109	DAU3173.13	4826J-92-FX	13TIBILLFXHFFOXA	Left Lower Tibia Force X	Bipolar	8896	N	3-416 HIII 5th FTSS.052
110	DAU3173.14	4826J-92-FY	13TIBILLFXHFFOYA	Left Lower Tibia Force Y	Bipolar	8896	N	3-416 HIII 5th FTSS.053
111	DAU3173.15	4826J-92-FZ	13TIBILLFXHFFOZA	Left Lower Tibia Force Z	Bipolar	8896	N	3-416 HIII 5th FTSS.054
112	DAU3173.16	4826J-92-MX	13TIBILLFXHFMOXA	Left Lower Tibia Moment X	Bipolar	282	N·m	3-416 HIII 5th FTSS.055
113	DAU3173.17	4826J-92-MY	13TIBILLFXHFMOYA	Left Lower Tibia Moment Y	Bipolar	282	N·m	3-416 HIII 5th FTSS.056
114	DAU3173.18	PD210-4B-AK-044	13FOOTLEFXHFDSXA	Left Foot Disp. X FLX102X	-Bipolar	318	°	3-416 HIII 5th FTSS.057
115	DAU3173.19	PD210-4B-AK-043	13FOOTLEFXHFDSYA	Left Foot Disp. Y FLX102Y	Bipolar	318	°	3-416 HIII 5th FTSS.058
116	DAU3173.20	PD210-4B-265	13FOOTLEFXHFDSZA	Left Foot Disp. Z FLX102Z	-Bipolar	318	°	3-416 HIII 5th FTSS.059
117	DAU3173.21	02I02I05-F18	13FOOTLEFXHFACXA	Left Foot Accel X	Bipolar	1200	g	3-416 HIII 5th FTSS.060
118	DAU3173.22	00L13-F72	13FOOTLEFXHFACYA	Left Foot Accel Y	Bipolar	1200	g	3-416 HIII 5th FTSS.061
119	DAU3173.23	02I02I05-F03	13FOOTLEFXHFACZA	Left Foot Accel Z	Bipolar	1200	g	3-416 HIII 5th FTSS.062
120	DAU3173.24	2430-742	13FEMRRL00HFFOZA	Right Femur Force Z 507	Bipolar	13344	N	3-416 HIII 5th FTSS.044
121	DAU3173.25	150-0121VL-20590	13KNSLRI00HFDSXA	Right Knee Displacement	Bipolar	40	mm	3-416 HIII 5th FTSS.063
122	DAU3173.26	4825J-90-FX	13TIBIRUFXHFFOXA	Right Upper Tibia Force X	Bipolar	8896	N	3-416 HIII 5th FTSS.064
123	DAU3173.27	4825J-90-FZ	13TIBIRUFXHFFOZA	Right Upper Tibia Force Z	Bipolar	8896	N	3-416 HIII 5th FTSS.065
124	DAU3173.28	4825J-90-MX	13TIBIRUFXHFMOXA	Right Upper Tibia Moment X	Bipolar	282	N·m	3-416 HIII 5th FTSS.066
125	DAU3173.29	4825J-90-MY	13TIBIRUFXHFMOYA	Right Upper Tibia Moment Y	Bipolar	282	N·m	3-416 HIII 5th FTSS.067
126	DAU3173.30	98H10-F05	13TIBIRIFXHFACXA	Right Tibia Accel X	Bipolar	1200	g	3-416 HIII 5th FTSS.068
127	DAU3173.31	J35987	13TIBIRIFXHFACYA	Right Tibia Accel Y	Bipolar	1200	g	3-416 HIII 5th FTSS.069

128	DAU3173.32	4826J-93-FX		13TIBIRLFXHFFOXA	Right Lower Tibia Force X	Bipolar	8896 N	3-416 HIII 5th FTSS.070
129	DAU3184.01	4826J-93-FY		13TIBIRLFXHFFOYA	Right Lower Tibia Force Y	Bipolar	8896 N	3-416 HIII 5th FTSS.071
130	DAU3184.03	4826J-93-FZ		13TIBIRLFXHFFOZA	Right Lower Tibia Force Z	Bipolar	8896 N	3-416 HIII 5th FTSS.072
131	DAU3184.04	4826J-93-MX		13TIBIRLFXHFMOXA	Right Lower Tibia Moment X	Bipolar	282 N·m	3-416 HIII 5th FTSS.073
132	DAU3184.05	4826J-93-MY		13TIBIRLFXHFMOYA	Right Lower Tibia Moment Y	Bipolar	282 N·m	3-416 HIII 5th FTSS.074
133	DAU3184.06	PD210-4B-AK-029		13FOOTRIFXHFDSXA	Right Foot Disp. X FLX101X	-Bipolar	318 °	3-416 HIII 5th FTSS.075
134	DAU3184.07	PD210-4B-AK-030		13FOOTRIFXHFDSYA	Right Foot Disp. Y FLX101Y	Bipolar	318 °	3-416 HIII 5th FTSS.076
135	DAU3184.08	PD210-4B-345		13FOOTRIFXHFDSZA	Right Foot Disp. Z FLX101Z	-Bipolar	318 °	3-416 HIII 5th FTSS.077
136	DAU3184.09	02I02I10-N18		13FOOTRIFXHFACXA	Right Foot Accel X	Bipolar	1200 g	3-416 HIII 5th FTSS.078
137	DAU3184.10	00L13-F29		13FOOTRIFXHFACYA	Right Foot Accel Y	Bipolar	1200 g	3-416 HIII 5th FTSS.079
138	DAU3184.11	01G25-N08		13FOOTRIFXHFACZA	Right Foot Accel Z	Bipolar	1200 g	3-416 HIII 5th FTSS.080
139	DAU3184.12	P42222		14CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	Bipolar	1000 g	
140	DAU3184.13	P44289		16CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	Bipolar	1000 g	
141	DAU3184.14	P29195		12ENGNTP0000ACXA	Top of Engine X-axis Acceleration	Bipolar	1500 g	
142	DAU3184.15	P46019		12ENGNBO0000ACXA	Bottom of Engine X-axis Acceleration	Bipolar	1500 g	
143	DAU3184.16	P46025		13VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	-Bipolar	1000 g	
144	DAU3184.17	P46020		11VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	Bipolar	1000 g	
145	DAU3184.18	P42135		11PEAC000000ACXA	Toe Pan Accelerator x-axis acceleration	Bipolar	1000 g	
146	DAU3184.19	P40056		11PEAC000000ACZA	Toe Pan Accelerator z-axis acceleration	-Bipolar	1000 g	
147	DAU3184.20	P39845		11VEHC000001ACXA	Toe Pan footrest x-axis acceleration	Bipolar	1000 g	
148	DAU3184.21	P39982		11VEHC000001ACZA	Toe Pan footrest z-axis acceleration	-Bipolar	1000 g	
149	DAU3184.22	P45999		15TUNNCY0000ACXA	Rear Tunnel center x-axis acceleration	Bipolar	1000 g	
150	DAU3184.23	P41703		10VEHCCG0000ACXA	Vehicle CG X-axis acceleration	Bipolar	1000 g	
151	DAU3184.24	P33531		10VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	Bipolar	1000 g	
152	DAU3184.25	P39852		10VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	-Bipolar	1000 g	
153	DAU3184.27	P45763		18VEHC000000ACXA	Vehicle rear deck X-axis acceleration	Bipolar	1000 g	
154	DAU3184.28	P45735		18VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	Bipolar	1000 g	
155	DAU3184.29	P46013		18VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	-Bipolar	1000 g	
156	DAU3184.30	ABFire1		11SENS000001VO0A	Driver airbag - primary	Bipolar	5 V	
157	DAU3184.31	ABFire2		11SENS000002VO0A	Driver airbag - secondary	Bipolar	5 V	
158	DAU3184.32	ABFire3		13SENS000001VO0A	Passenger airbag - primary	Bipolar	5 V	
159	DAU3189.01	ABFire4		13SENS000002VO0A	Passenger airbag - secondary	Bipolar	5 V	
160	DAU3189.02	3419-606		11SEBE0000B5FOOA	Driver lap belt	Bipolar	13344.7 N	
161	DAU3189.03	3419-807		11SEBE0000B3FOOA	Driver shoulder belt	Bipolar	15568 N	
162	DAU3189.04	3419-830		13SEBE0000B5FOOA	RF Pass lap belt	Bipolar	13344.7 N	
163	DAU3189.05	3419-833		13SEBE0000B3FOOA	RF Pass shoulder belt	Bipolar	13344.7 N	
164	DAU3189.06	A23305		11SEBA0000B5DC0A	Driver lap belt spool	Bipolar	1524 mm	
165	DAU3189.07		14673	11SEBA0000B3DC0A	Driver shoulder belt spool and retraction	Bipolar	500 mm	
166	DAU3189.08	A23306		13SEBA0000B5DC0A	RF Pass lap belt spool	Bipolar	1524 mm	
167	DAU3189.09		14669	13SEBA0000B3DC0A	RF Pass shoulder belt spool and retraction	Bipolar	750 mm	

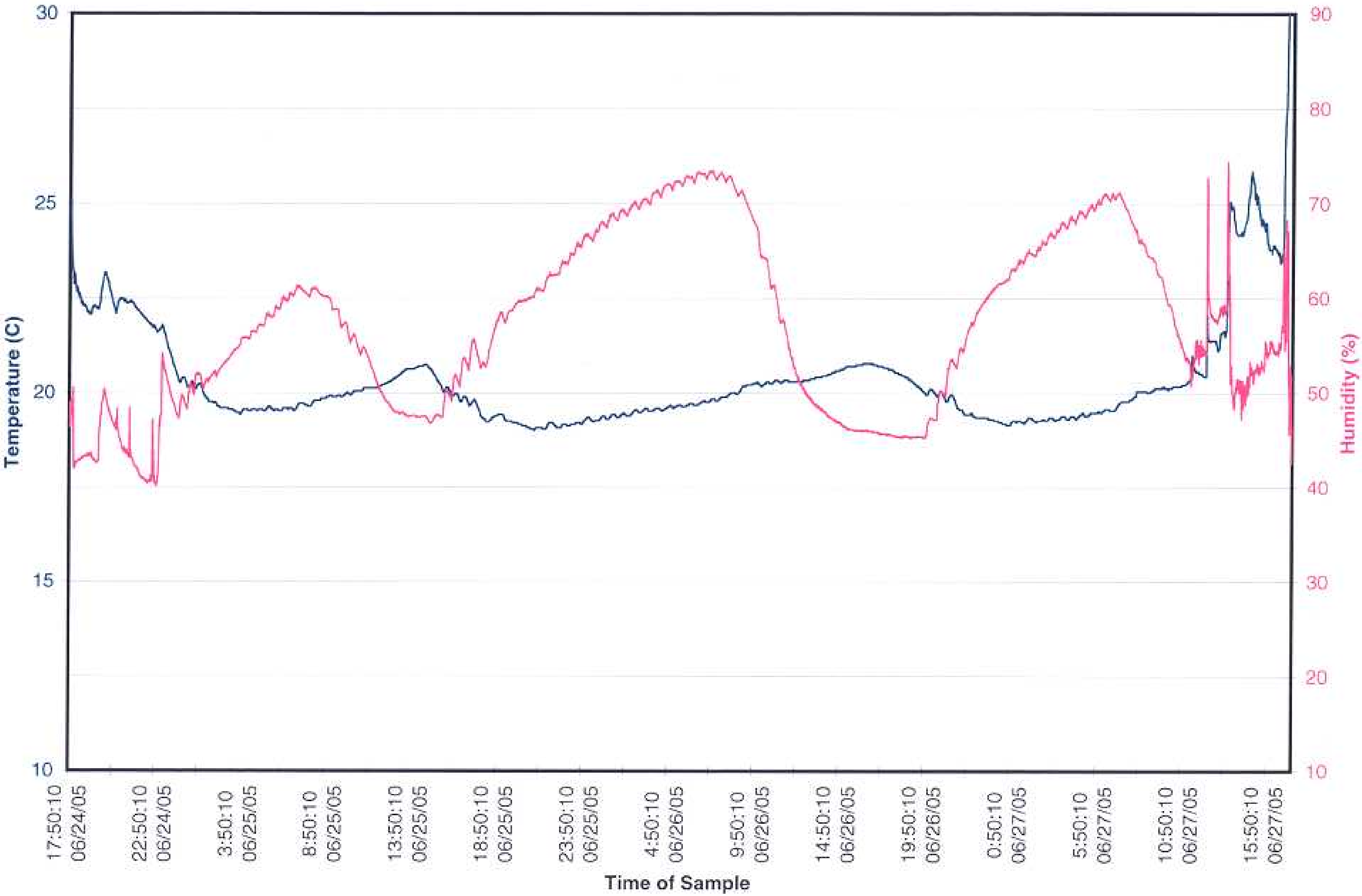
Bullet Channel Report Test Number 050627

Ref	Channel Name	Transducer ID	ISO Signal Identifier	Description	Polarity	FScale	Units	Assembly
1	DAU202.Trigger	Trig D1	20ZERO000000VO0A	EVENT	Bipolar	1	Logic	
2	DAU202.01	J32101	21HEADCG00H3ACXA	Head Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.001
3	DAU202.02	AJ4J6	21HEADCG00H3ACYA	Head Accel Y	-Bipolar	1000	g	1-090 HIII 50th Alderson.002
4	DAU202.03	DW83J	21HEADCG00H3ACZA	Head Accel Z	-Bipolar	1000	g	1-090 HIII 50th Alderson.003
5	DAU202.04	03E03E18-F08	21HEADFR00H3ACYA	Head (FT) Accel Y	-Bipolar	1000	g	1-090 HIII 50th Alderson.004
6	DAU202.05	03F03E29-N01	21HEADFR00H3ACZA	Head (FT) Accel Z	-Bipolar	1000	g	1-090 HIII 50th Alderson.005
7	DAU202.06	02I02I10-N04	21HEADUP00H3ACXA	Head (TP) Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.006
8	DAU202.07	98H10-F02	21HEADUP00H3ACYA	Head (TP) Accel Y	-Bipolar	1000	g	1-090 HIII 50th Alderson.007
9	DAU202.08	03G03F23-M09	21HEADLE00H3ACXA	Head (LT) Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.008
10	DAU202.09	B02A18-N13	21HEADLE00H3ACZA	Head (LT) Accel Z	-Bipolar	1000	g	1-090 HIII 50th Alderson.009
11	DAU202.10	1716A-810-FX	21NECKUP00H3FOXA	Neck Force X	-Bipolar	8896.4	N	1-090 HIII 50th Alderson.010
12	DAU202.11	1716A-810-FY	21NECKUP00H3FOYA	Neck Force Y	Bipolar	8896.4	N	1-090 HIII 50th Alderson.011
13	DAU202.12	1716A-810-FZ	21NECKUP00H3FOZA	Neck Force Z	Bipolar	13344.6	N	1-090 HIII 50th Alderson.012
14	DAU202.13	1716A-810-MX	21NECKUP00H3MOXA	Neck Moment X	-Bipolar	282.4	N·m	1-090 HIII 50th Alderson.013
15	DAU202.14	1716A-810-MY	21NECKUP00H3MOYA	Neck Moment Y	Bipolar	282.4	N·m	1-090 HIII 50th Alderson.014
16	DAU202.15	1716A-810-MZ	21NECKUP00H3MOZA	Neck Moment Z	Bipolar	282.4	N·m	1-090 HIII 50th Alderson.015
17	DAU202.16	1794A-0121-FX	21NECKLO00H3FOXA	Neck Lower Force X	-Bipolar	13344.6	N	1-090 HIII 50th Alderson.016
18	DAU202.17	1794A-0121-FY	21NECKLO00H3FOYA	Neck Lower Force Y	Bipolar	13344.6	N	1-090 HIII 50th Alderson.017
19	DAU202.18	1794A-0121-FZ	21NECKLO00H3FOZA	Neck Lower Force Z	Bipolar	13344.6	N	1-090 HIII 50th Alderson.018
20	DAU202.19	1794A-0121-MX	21NECKLO00H3MOXA	Neck Lower Moment X	-Bipolar	452	N·m	1-090 HIII 50th Alderson.019
21	DAU202.20	1794A-0121-MY	21NECKLO00H3MOYA	Neck Lower Moment Y	Bipolar	452	N·m	1-090 HIII 50th Alderson.020
22	DAU202.21	1794A-0121-MZ	21NECKLO00H3MOZA	Neck Lower Moment Z	Bipolar	452	N·m	1-090 HIII 50th Alderson.021
23	DAU202.22	P16155	21CHSTCG00H3ACXA	Chest Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.022
24	DAU202.23	J27430	21CHSTCG00H3ACYA	Chest Accel Y	-Bipolar	1000	g	1-090 HIII 50th Alderson.023
25	DAU202.24	J13739	21CHSTCG00H3ACZA	Chest Accel Z	-Bipolar	1000	g	1-090 HIII 50th Alderson.024
26	DAU202.25	B02A25-N09	21CHSTCGRDH3ACXA	Chest Accel X Red.	-Bipolar	1000	g	
27	DAU202.26	03E03E20-N17	21CHSTCGRDH3ACYA	Chest Accel Y Red.	Bipolar	1000	g	1-090 HIII 50th Alderson.026
28	DAU202.27	00L13-F05	21CHSTCGRDH3ACZA	Chest Accel Z Red.	Bipolar	1000	g	1-090 HIII 50th Alderson.027
29	DAU202.28	CST090	21CHST0000H3DSXA	Chest Deflection X	Bipolar	100	mm	1-090 HIII 50th Alderson.028
30	DAU202.29	AGR67	21PELVCG00H3ACXA	Pelvis Accel X	-Bipolar	1000	g	1-090 HIII 50th Alderson.029
31	DAU202.30	J29023	21PELVCG00H3ACYA	Pelvis Accel Y	-Bipolar	1000	g	1-090 HIII 50th Alderson.030
32	DAU202.31	ACCT5	21PELVCG00H3ACZA	Pelvis Accel Z	-Bipolar	1000	g	1-090 HIII 50th Alderson.031
33	DAU202.32	2121A-1420	21FEMRLL00H3FOZA	Left Femur Force Z	Bipolar	13344.6	N	1-090 HIII 50th Alderson.032
34	DAU712.01	150-0121VR-13739	21KNSLLE00H3DSXA	Left Knee Displacement X	-Bipolar	40	mm	1-090 HIII 50th Alderson.033
35	DAU712.02	4353J-76-FX	21TIBILULXH3FOXA	Left Upper Tibia Force X	Bipolar	11120.5	N	1-090 HIII 50th Alderson.034
36	DAU712.03	4353J-76-FZ	21TIBILULXH3FOZA	Left Upper Tibia Force Z	Bipolar	11120.5	N	1-090 HIII 50th Alderson.035
37	DAU712.04	4353J-76-MX	21TIBILULXH3MOXA	Left Upper Tibia Moment X	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.036
38	DAU712.05	4353J-76-MY	21TIBILULXH3MOYA	Left Upper Tibia Moment Y	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.037
39	DAU712.06	J34330	21TIBILELXH3ACXA	Left Tibia Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.038
40	DAU712.07	J32099	21TIBILELXH3ACYA	Left Tibia Accel Y	Bipolar	1000	g	1-090 HIII 50th Alderson.039
41	DAU712.08	4929J-77-FX	21TIBILLLXH3FOXA	Left Lower Tibia Force X	Bipolar	11120.5	N	1-090 HIII 50th Alderson.040

42	DAU712.09	4929J-77-FY	21TIBILLLXH3FOYA	Left Lower Tibia Force Y	Bipolar	11120.5	N	1-090 HIII 50th Alderson.041
43	DAU712.10	4929J-77-FZ	21TIBILLLXH3FOZA	Left Lower Tibia Force Z	Bipolar	11120.5	N	1-090 HIII 50th Alderson.042
44	DAU712.11	4929J-77-MX	21TIBILLLXH3MOXA	Left Lower Tibia Moment X	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.043
45	DAU712.12	4929J-77-MY	21TIBILLLXH3MOYA	Left Lower Tibia Moment Y	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.044
46	DAU712.13	PD210-4B-118	21FOOTLELXH3ANXA	Left Foot Angular Dis. X X104X	Bipolar	318	°	1-090 HIII 50th Alderson.045
47	DAU712.14	PD210-4B-229	21FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX104Y	Bipolar	318	°	1-090 HIII 50th Alderson.046
48	DAU712.15	PD210-4B-224	21FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX104Z	Bipolar	318	°	1-090 HIII 50th Alderson.047
49	DAU712.16	J27387	21FOOTLELXH3ACXA	Left Foot Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.048
50	DAU712.17	J27040	21FOOTLELXH3ACYA	Left Foot Accel Y	Bipolar	1000	g	1-090 HIII 50th Alderson.049
51	DAU712.18	J27553	21FOOTLELXH3ACZA	Left Foot Accel Z	Bipolar	1000	g	1-090 HIII 50th Alderson.050
52	DAU712.19	2121A-1421	21FEMRRL00H3FOZA	Right Femur Force Z	Bipolar	13344.6	N	1-090 HIII 50th Alderson.051
53	DAU712.20	150-0121VL-13723	21KNSLRI00H3DSXA	Right Knee Displacement X	Bipolar	40	mm	1-090 HIII 50th Alderson.052
54	DAU712.21	4353J-75-FX	21TIBIRULXH3FOXA	Right Upper Tibia Force X	Bipolar	11120.5	N	1-090 HIII 50th Alderson.053
55	DAU712.22	4353J-75-FZ	21TIBIRULXH3FOZA	Right Upper Tibia Force Z	Bipolar	11120.5	N	1-090 HIII 50th Alderson.054
56	DAU712.24	4353J-75-MX	21TIBIRULXH3MOXA	Right Upper Tibia Moment X	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.055
57	DAU712.25	4353J-75-MY	21TIBIRULXH3MOYA	Right Upper Tibia Moment Y	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.056
58	DAU712.26	AALG2	21TIBIRILXH3ACXA	Right Tibia Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.057
59	DAU712.27	J26976	21TIBIRILXH3ACYA	Right Tibia Accel Y	Bipolar	1000	g	1-090 HIII 50th Alderson.058
60	DAU712.28	4929J-76-FX	21TIBIRLLXH3FOXA	Right Lower Tibia Force X	Bipolar	11120.5	N	1-090 HIII 50th Alderson.059
61	DAU712.29	4929J-76-FY	21TIBIRLLXH3FOYA	Right Lower Tibia Force Y	Bipolar	11120.5	N	1-090 HIII 50th Alderson.060
62	DAU712.30	4929J-76-FZ	21TIBIRLLXH3FOZA	Right Lower Tibia Force Z	Bipolar	11120.5	N	1-090 HIII 50th Alderson.061
63	DAU712.31	4929J-76-MX	21TIBIRLLXH3MOXA	Right Lower Tibia Moment X	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.062
64	DAU712.32	4929J-76-MY	21TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	Bipolar	395.4	N·m	1-090 HIII 50th Alderson.063
65	DAU732.01	PD210-4B-AK-037	21FOOTRILXH3ANXA	Right Foot Angular Dis. X AK037X	Bipolar	318	°	1-090 HIII 50th Alderson.064
66	DAU732.02	PD210-4B-AK-225	21FOOTRILXH3ANYA	Right Foot Angular Dis. Y AK225Y	Bipolar	318	°	1-090 HIII 50th Alderson.065
67	DAU732.03	PD210-4B-AK-039	21FOOTRILXH3ANZA	Right Foot Angular Dis. Z AK039Z	Bipolar	318	°	1-090 HIII 50th Alderson.066
68	DAU732.04	AC9P8	21FOOTRILXH3ACXA	Right Foot Accel X	Bipolar	1000	g	1-090 HIII 50th Alderson.067
69	DAU732.05	AAKB4	21FOOTRILXH3ACYA	Right Foot Accel Y	Bipolar	1000	g	1-090 HIII 50th Alderson.068
70	DAU732.06	AGWB1	21FOOTRILXH3ACZA	Right Foot Accel Z	Bipolar	1000	g	1-090 HIII 50th Alderson.069
71	DAU732.07	98H13-F03	23HEADCG00HFACXA	Head Accel X	Bipolar	1200	g	3-070 HIII 5th Denton.001
72	DAU732.08	03E03E21-M01	23HEADCG00HFACYA	Head Accel Y	-Bipolar	1200	g	3-070 HIII 5th Denton.002
73	DAU732.09	02I02I05-F15	23HEADCG00HFACZA	Head Accel Z	-Bipolar	1200	g	3-070 HIII 5th Denton.003
74	DAU732.10	1716AJ-1563-FX	23NECKUP00HFFOXA	Neck Force X	Bipolar	8896	N	3-070 HIII 5th Denton.010
75	DAU732.11	1716AJ-1563-FY	23NECKUP00HFFOYA	Neck Force Y	Bipolar	8896	N	3-070 HIII 5th Denton.011
76	DAU732.12	1716AJ-1563-FZ	23NECKUP00HFFOZA	Neck Force Z	Bipolar	13344	N	3-070 HIII 5th Denton.012
77	DAU732.13	1716AJ-1563-MX	23NECKUP00HFMOXA	Neck Moment X	Bipolar	282	N·m	3-070 HIII 5th Denton.013
78	DAU732.14	1716AJ-1563-MY	23NECKUP00HFMOYA	Neck Moment Y	Bipolar	282	N·m	3-070 HIII 5th Denton.014
79	DAU732.15	1716AJ-1563-MZ	23NECKUP00HFMOZA	Neck Moment Z	Bipolar	282	N·m	3-070 HIII 5th Denton.015
80	DAU732.16	3251-107-FX	23NECKLO00HFFOXA	Neck Lower Force X	-Bipolar	13344	N	3-070 HIII 5th Denton.016
81	DAU732.17	3251-107-FY	23NECKLO00HFFOYA	Neck Lower Force Y	Bipolar	13344	N	3-070 HIII 5th Denton.017
82	DAU732.18	3251-107-FZ	23NECKLO00HFFOZA	Neck Lower Force Z	Bipolar	13345	N	3-070 HIII 5th Denton.018
83	DAU732.19	3251-107-MX	23NECKLO00HFMOXA	Neck Lower Moment X	-Bipolar	424	N·m	3-070 HIII 5th Denton.019
84	DAU732.20	3251-107-MY	23NECKLO00HFMOYA	Neck Lower Moment Y	Bipolar	424	N·m	3-070 HIII 5th Denton.020

85	DAU732.21	3251-107-MZ	23NECKLO00HFMOZA	Neck Lower Moment Z	Bipolar	339	N·m	3-070 HIII 5th Denton.021
86	DAU732.22	AAJY4	23CHSTCG00HFACXA	Chest Accel X	Bipolar	600	g	3-070 HIII 5th Denton.022
87	DAU732.23	AKAA4	23CHSTCG00HFACYA	Chest Accel Y	-Bipolar	600	g	3-070 HIII 5th Denton.023
88	DAU732.24	ACC63	23CHSTCG00HFACZA	Chest Accel Z	-Bipolar	600	g	3-070 HIII 5th Denton.024
89	DAU732.25	14CB1-2897-070	23CHST0000HFDSXA	Chest Deflection X	Bipolar	100	mm	3-070 HIII 5th Denton.025
90	DAU732.26	AGN83	23PELVCG00HFACXA	Pelvis Accel X	-Bipolar	600	g	3-070 HIII 5th Denton.026
91	DAU732.27	J35770	23PELVCG00HFACYA	Pelvis Accel Y	-Bipolar	600	g	3-070 HIII 5th Denton.027
92	DAU732.28	J20014	23PELVCG00HFACZA	Pelvis Accel Z	-Bipolar	600	g	3-070 HIII 5th Denton.028
93	DAU732.29	IF-625-140-FZ	23FEMRLE00HFFOZA	Left Femur Force Z	Bipolar	13344	N	3-070 HIII 5th Denton.029
94	DAU732.30	IF-625-141-FZ	23FEMRRI00HFFOZA	Right Femur Force Z	Bipolar	13344	N	3-070 HIII 5th Denton.030
95	DAU732.31	P40227	24CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	-Bipolar	1000	g	
96	DAU732.32	P41556	26CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	-Bipolar	1000	g	
97	DAU3174.01	P41712	22ENGNTP0000ACXA	Top of Engine X-axis Acceleration	Bipolar	1500	g	
98	DAU3174.02	P38505	22ENGNBO0000ACXA	Bottom of Engine X-axis Acceleration	Bipolar	1500	g	
99	DAU3174.03	P46061	23VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	Bipolar	1000	g	
100	DAU3174.04	P40166	21VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	-Bipolar	1000	g	
101	DAU3174.05	P46065	21PEAC000000ACXA	Toe Pan Accelerator x-axis acceleration	Bipolar	1000	g	
102	DAU3174.06	P45730	21PEAC000000ACZA	Toe Pan Accelerator z-axis acceleration	-Bipolar	1000	g	
103	DAU3174.07	P42068	21VEHC000001ACXA	Toe Pan footrest x-axis acceleration	Bipolar	1000	g	
104	DAU3174.08	P33871	21VEHC000001ACZA	Toe Pan footrest z-axis acceleration	-Bipolar	1000	g	
105	DAU3174.09	P30446	25TUNNCY0000ACXA	Rear Tunnel center x-axis acceleration	-Bipolar	1000	g	
106	DAU3174.10	P46045	20VEHCCG0000ACXA	Vehicle CG X-axis acceleration	Bipolar	1000	g	
107	DAU3174.11	P46031	20VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	Bipolar	1000	g	
108	DAU3174.12	P46047	20VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	-Bipolar	1000	g	
109	DAU3174.13	P45717	28VEHC000000ACXA	Vehicle rear deck X-axis acceleration	-Bipolar	1000	g	
110	DAU3174.14	P45731	28VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	Bipolar	1000	g	
111	DAU3174.15	P45728	28VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	-Bipolar	1000	g	
112	DAU3174.16	ABFire1	21SENS000001VO0A	Driver airbag - primary	Bipolar	5	V	
113	DAU3174.17	ABFire2	21SENS000002VO0A	Driver airbag - secondary	Bipolar	5	V	
114	DAU3174.18	ABFire3	23SENS000001VO0A	Passenger airbag - primary	Bipolar	5	V	
115	DAU3174.19	ABFire4	23SENS000002VO0A	Passenger airbag - secondary	Bipolar	5	V	
116	DAU3174.20	3419-827	21SEBE0000B5FOOA	Driver lap belt	Bipolar	15568.7	N	
117	DAU3174.21	3419-829	21SEBE0000B3FOOA	Driver shoulder belt	Bipolar	15568.7	N	
118	DAU3174.22	3419-832	23SEBE0000B5FOOA	RF Pass lap belt	Bipolar	15568	N	
119	DAU3174.23	3419-828	23SEBE0000B3FOOA	RF Pass shoulder belt	Bipolar	15568.7	N	

FULL FRONTAL COLINEAR 2002 FORD FOCUS



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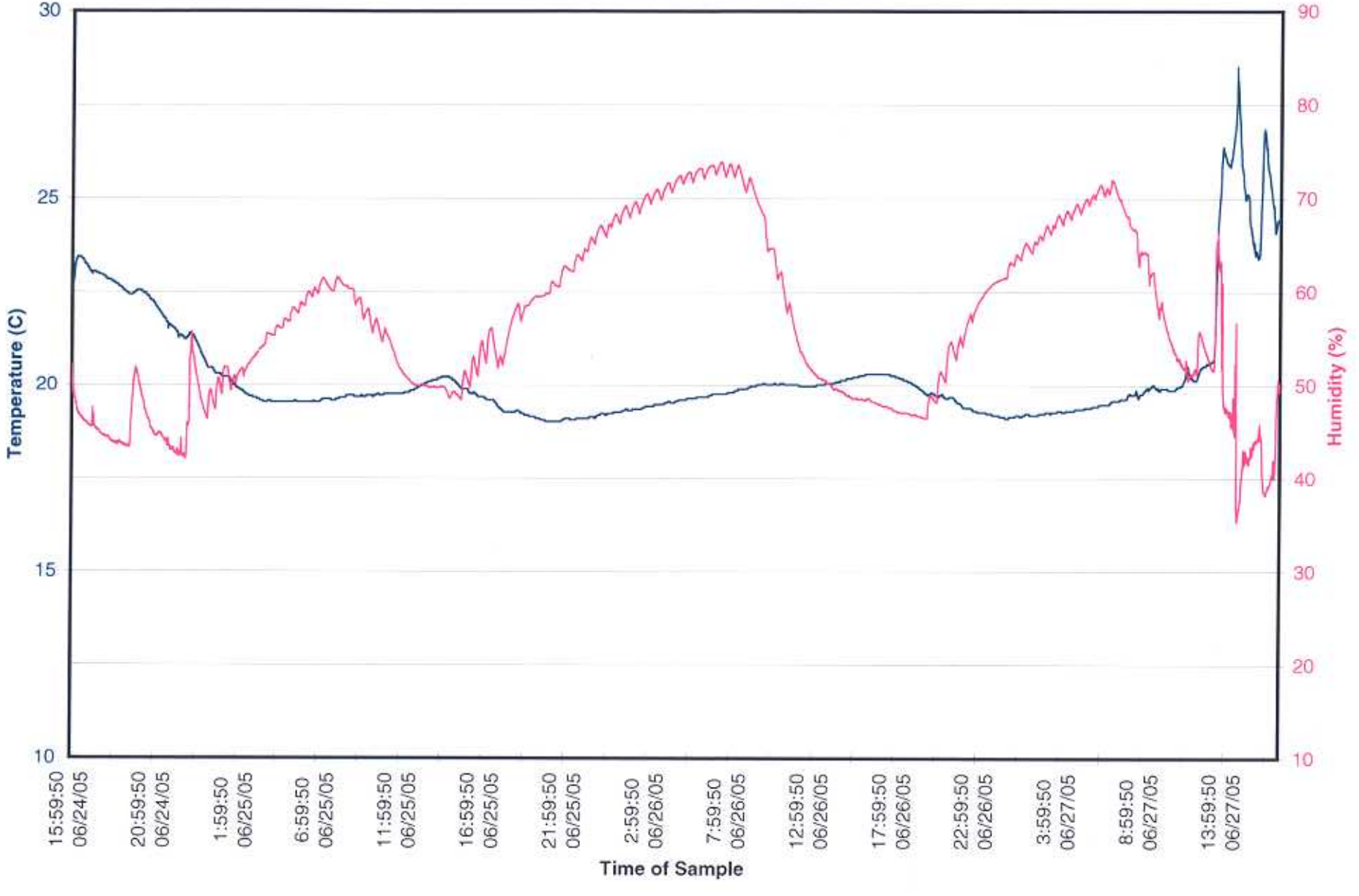
FULL FRONTAL COLINEAR 2003 CHEVROLET SILVERADO



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Appendix E

INSIA Report on Structural Measurements

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

APARICIO IZQUIERDO, FRANCISCO
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Title: *STRUCTURAL SURVEY OF CARS. MEASUREMENT METHODOLOGY OF THE MAIN RESISTANT ELEMENTS IN THE CAR BODY*
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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
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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.

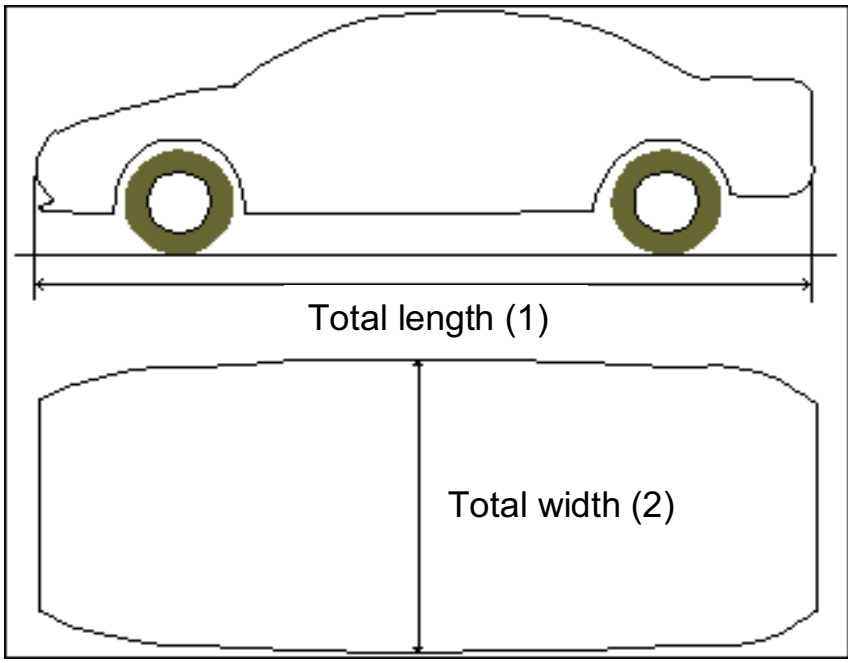

Figure 1.- Definition of the main resistant elements. General dimensions.

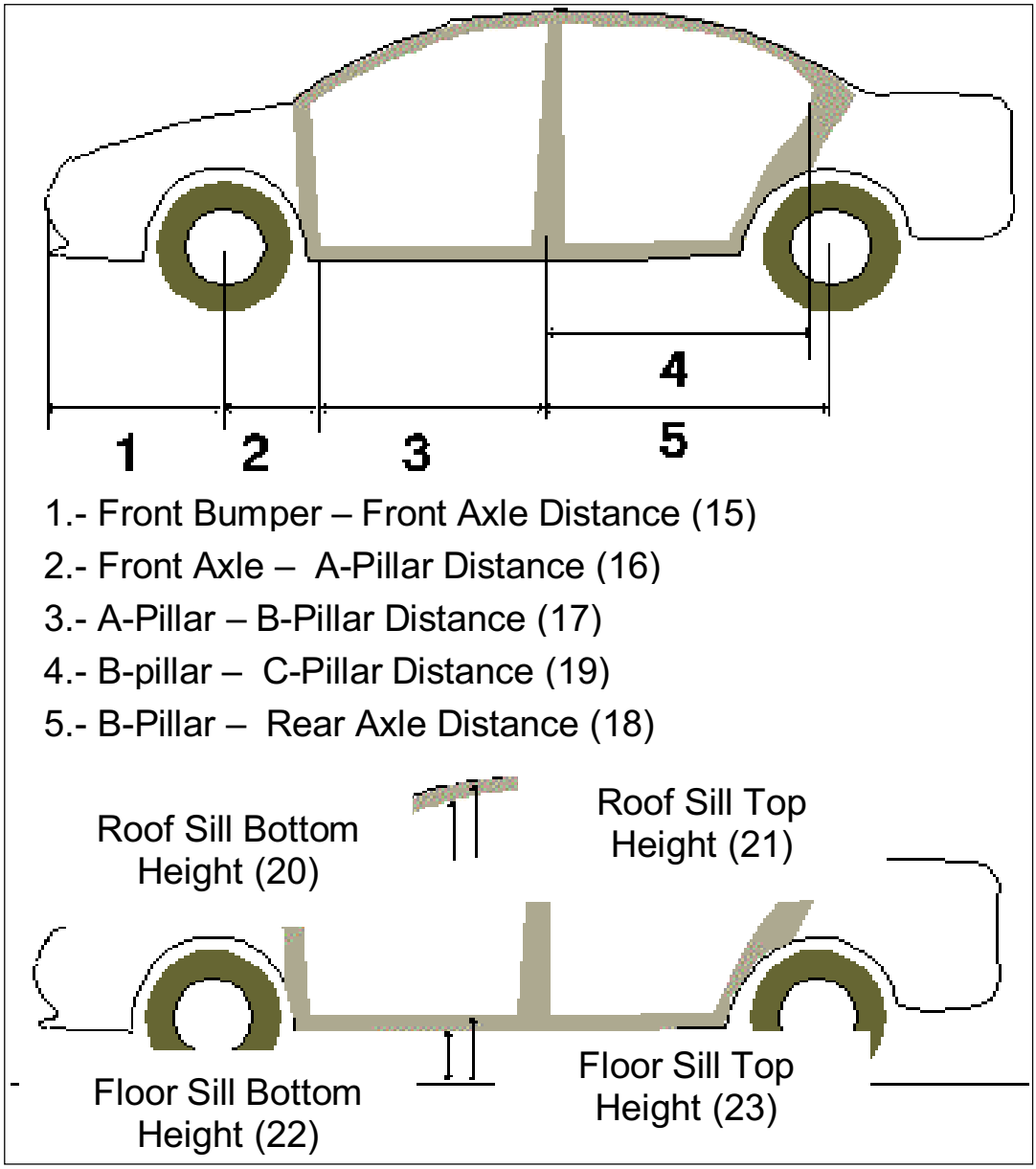

Figure 2.- Definition of the main resistant elements. Side elements.

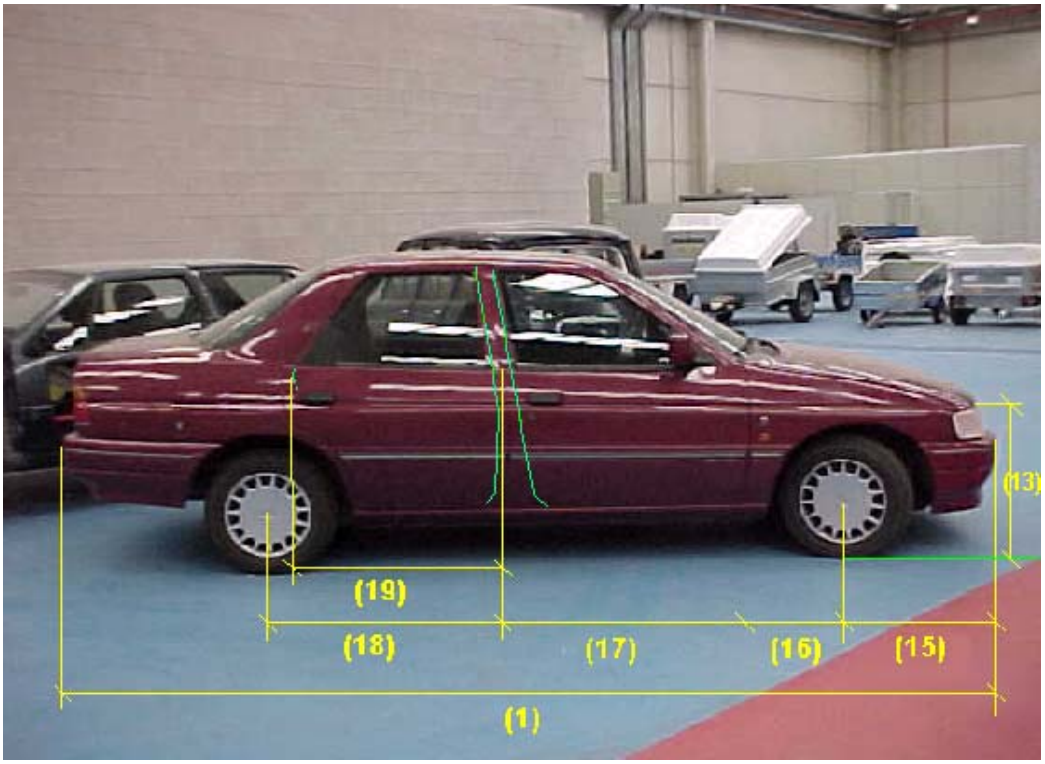

Figure 3.- Measurements of the side resistant elements (outer).

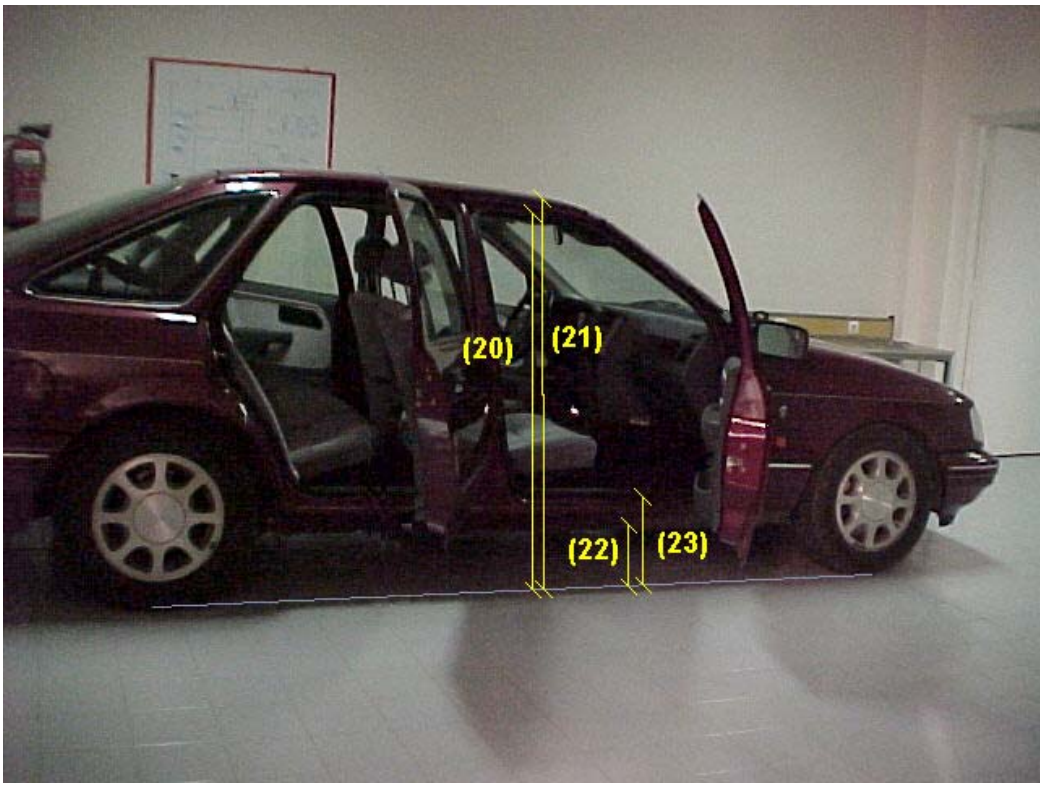

Figure 4.- Measurements of the side resistant elements (inner).

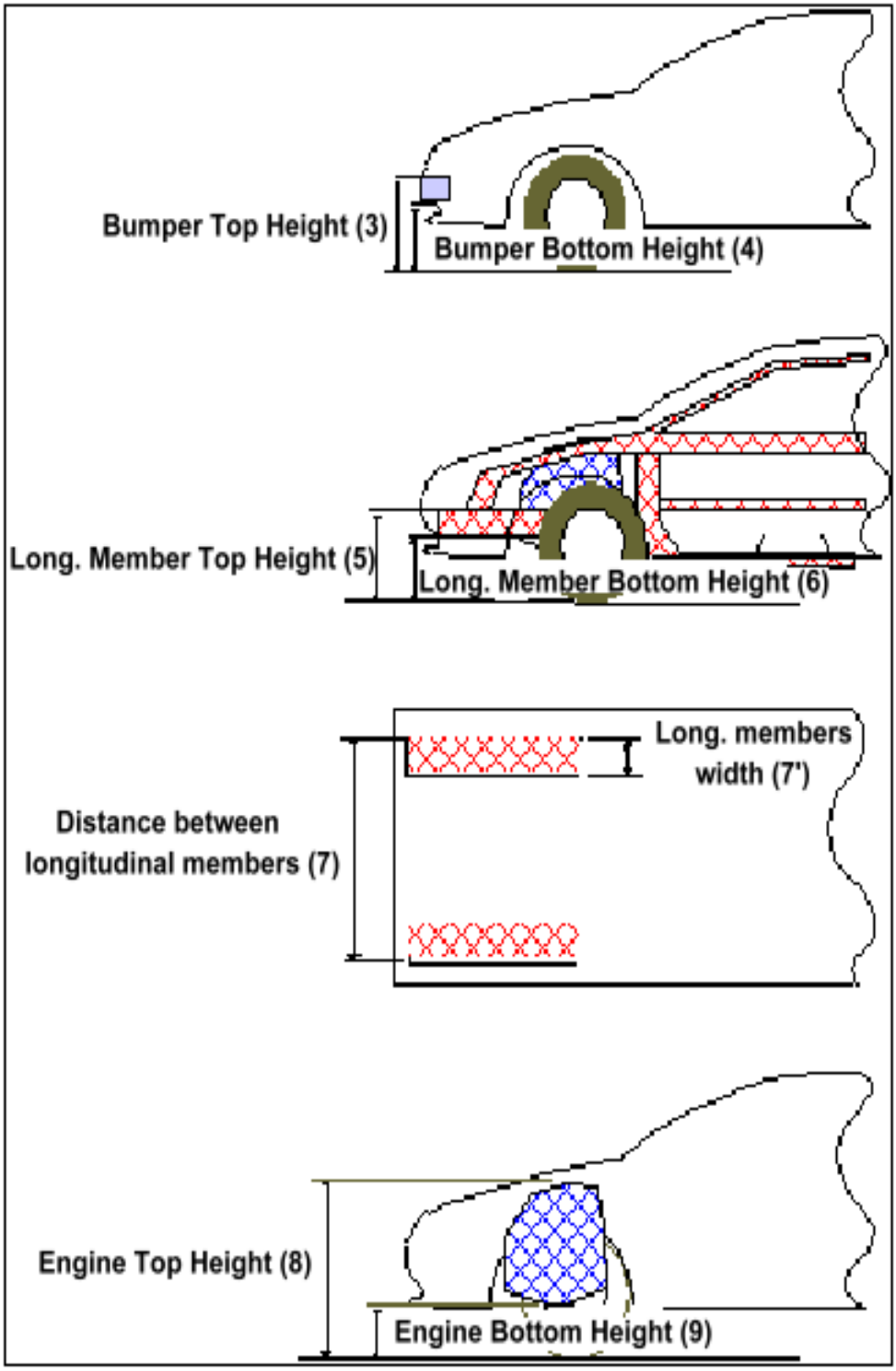

Figure 5.- Definition of the main resistant elements. Front elements.

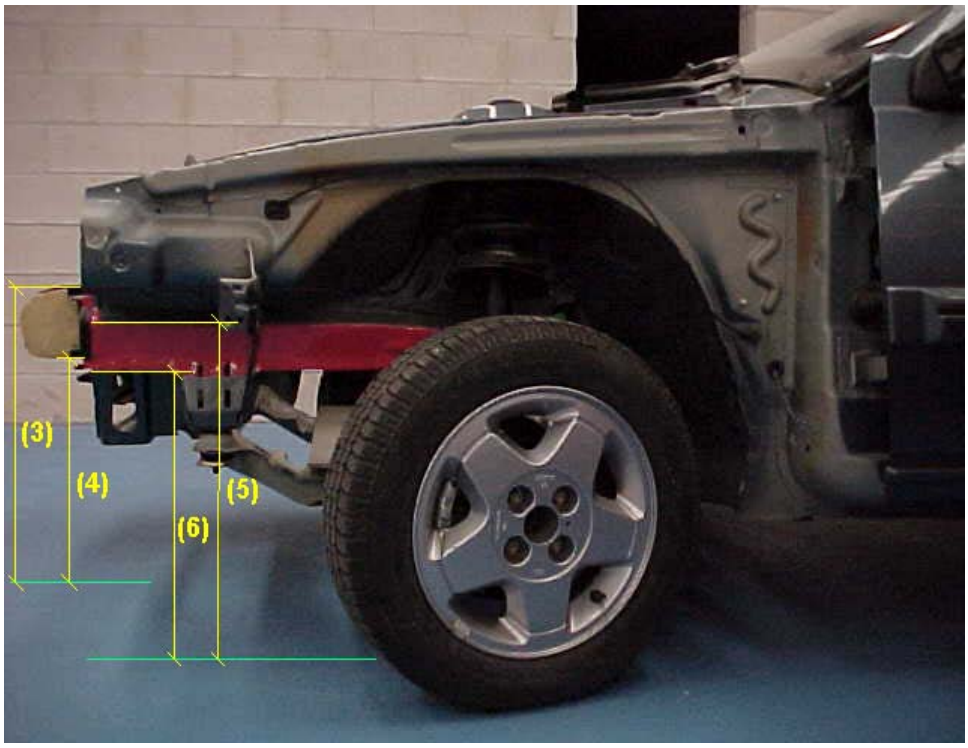

Figure 6.- Measurements of the main resistant elements. Front elements 1.

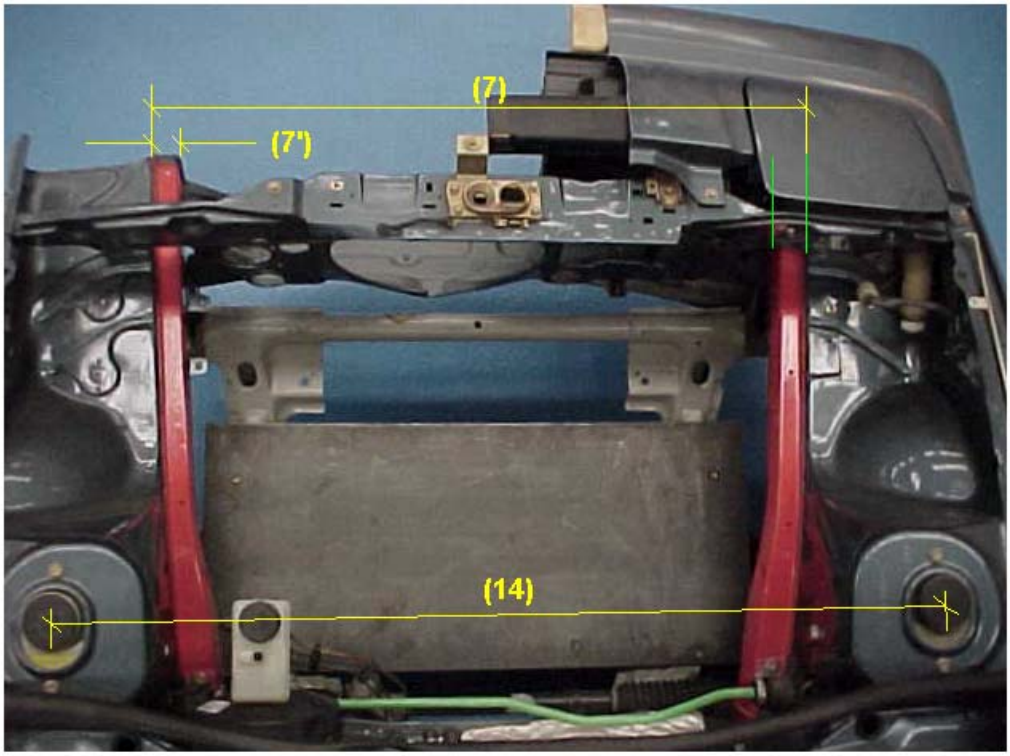

Figure 7.- Measurements of the main resistant elements. Front elements 2.

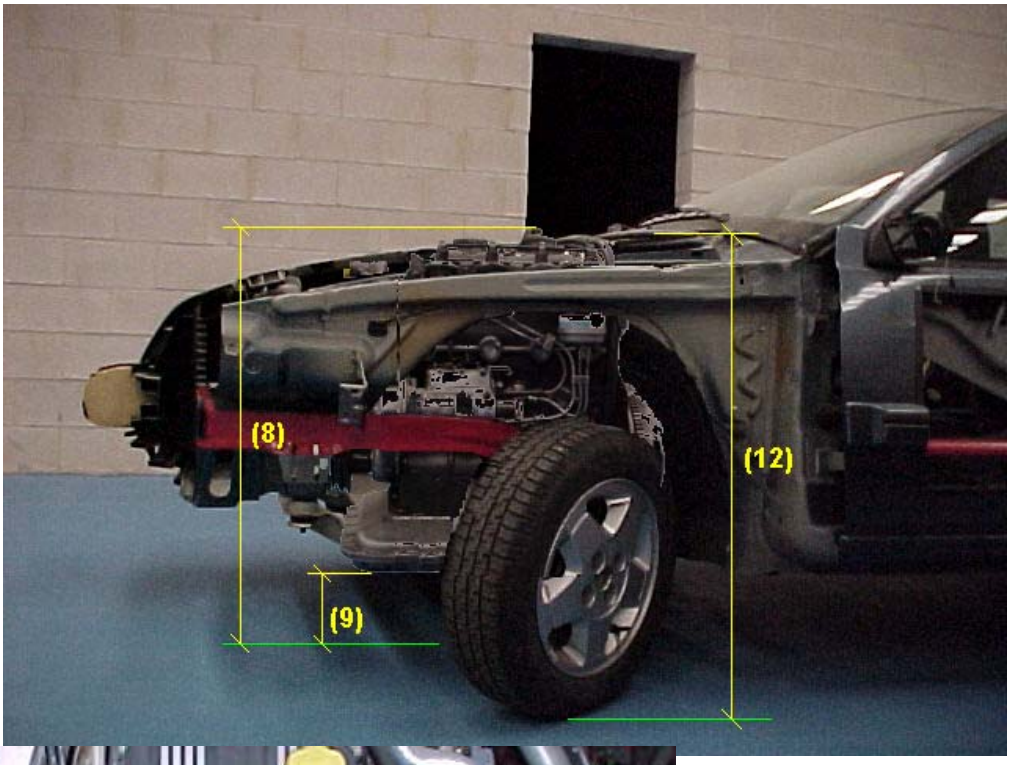

Figure 8.- Measurements of the main resistant elements. Front elements 3.

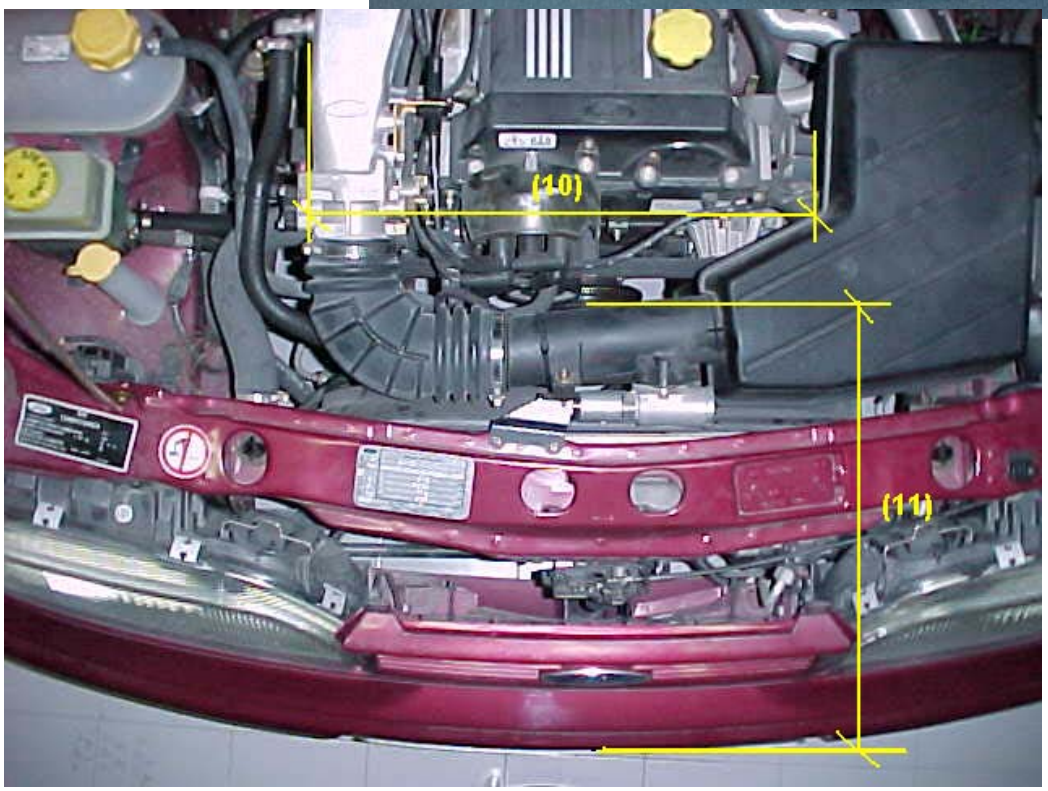

Figure 9.- Definition of the main resistant elements. Front elements (Longitudinal engine).

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.