

**Vehicle Research and Test Center
2006 Honda Ridgeline into the
Front of a 2002 Ford Focus SE
TRC Inc. Test Number: 060324**

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**Final Report
March - April 2006**

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Section 1.0

Purpose and Test Procedure

Purpose

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

The test mode was defined as the bullet vehicle moving at 48.8 km/h to impact the target vehicle moving at 71.8 km/h at an impact angle of 0 degrees. The purpose of this test was to evaluate the aggressiveness of the bullet vehicle, a 2006 Honda Ridgeline truck, and the vehicle and occupant response of the target vehicle, a 2002 Ford Focus SE 4-door, in this vehicle-to-vehicle impact mode.

Test Procedure

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

The target vehicle, a 2002 Ford Focus SE 4-door, was instrumented with eighteen (18) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver's and passenger's airbag signals were monitored with inductive pickups, and the lap and shoulder belts were monitored for pay-in and pay-out. The vehicle's specified impact velocity range was 70.7 to 72.9 km/h.

The bullet vehicle, a 2006 Honda Ridgeline Truck, was instrumented with eighteen (18) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver's and passenger's airbag signals were monitored with inductive pickups, and the lap and shoulder belts were monitored for pay-in and pay-out. The vehicle's specified impact velocity range was 47.6 to 49.9 km/h.

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

One (1) 50th percentile adult male Hybrid III dummy and one (1) 5th percentile adult female dummy were placed in the target vehicle's left front and right front designated seating positions, respectively. The Hybrid III 50th dummy was positioned according to the draft mid track based seating procedure while the Hybrid III 5th dummy was positioned according to 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) 50th percentile adult male Hybrid III dummy and one (1) 5th percentile adult female dummy were placed in the bullet vehicle's left front and right front designated seating positions, respectively. The Hybrid III 50th dummy was positioned according to the draft mid track based seating procedure while the Hybrid III 5th dummy was positioned according to NHTSA Laboratory Test Procedure TP-208-12. The driver dummy and passenger dummy were both belted and were restrained with front dual stage airbags.

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

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

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

Section 2.0

Full Frontal Collinear Test Summary

Test Results Summary

This 121.2 km/h 0° full frontal collinear vehicle-to-vehicle impact test was conducted by TRC Inc. on March 24, 2006.

The target test vehicle, a 2002 Ford Focus SE 4-door, was equipped 2-liter transverse engine, automatic transmission, power steering, and power brakes, and dual stage front airbags. The target vehicle's test weight was 1552.8 kg. The target vehicle's impact speed was 71.9 km/h. The target vehicle sustained 750 mm of static crush during the impact (measured without bumper fascia).

The bullet test vehicle, a 2006 Honda Ridgeline truck, was equipped with a 3.5-liter transverse engine, automatic transmission, power steering, power brakes, and dual stage front airbags. The bullet vehicle's test weight was 2273.0 kg. The bullet vehicle's impact speed was 49.3 km/h. The bullet vehicle sustained 488 mm of static crush during the impact (measured without bumper fascia).

Injury Criteria Data Summary						
	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
HIC (15 ms)	700	700	3448	3480	80	107
HIC (36 ms)	1000	---	3478	4159	149	188
Chest 3 ms (g)	60	60	105.9	79.3	32.4	30.9
Chest Deflection (mm)	63	52	57	36	31	19
Upper Neck						
NTF	1.0	1.0	0.49	0.14	0.17	0.19
NTE	1.0	1.0	0.85	2.83	0.14	0.27
NCF	1.0	1.0	0.13	0.58	0.01	0.19
NCE	1.0	1.0	0.15	0.53	0.09	0.46

Test Results Summary, Continued

Injury Criteria Data Summary, Continued						
	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
Neck Tension (N)	4170	2620	4767	3872	660	492
Neck Compression (N)	4000	2520	484	2204	69	446
Left Femur (N)	10000	6805	4114	8225	3562	2033
Right Femur (N)	10000	6805	6343	4265	1436	2254
Maximum Left Upper TI (SAE)	0.91	0.91	0.75	1.67	0.33	N/A
Maximum Right Upper TI (SAE)	0.91	0.91	1.09	0.88	0.52	N/A
Maximum Left Lower TI (SAE)	0.91	0.91	1.18	1.95	0.31	N/A
Maximum Right Lower TI (SAE)	0.91	0.91	1.66	1.31	0.60	N/A

Data Acquisition Explanations

The target vehicle passenger's left knee displacement data channel, 23KNSLLE00HFDSXA, recorded no useful data throughout the test.

The target vehicle passenger's right foot Z-axis acceleration data channel, 23FOOTRIFXHFACZA, recorded no useful data throughout the test. The resultant was also affected.

The target vehicle's top of engine X-axis acceleration data channel, 22ENGNTF0000ACXA, exceeded full scale at approximately 25 milliseconds and recorded no useful data after that.

The target vehicle's bottom of engine X-axis acceleration data channel, 22ENGNB0000ACXA, exceeded full scale at approximately 62 milliseconds and recorded no useful data after that.

The target vehicle's left front brake caliper X-axis acceleration data channel, 21VEHCLE0000ACXA, exceeded full scale at approximately 51 milliseconds and recorded no useful data after that.

The target vehicle's rear tunnel center X-axis acceleration data channel, 25TUNNCY0000ACXA, recorded questionable data after approximately 45 milliseconds.

The target vehicle's right front passenger shoulder belt spool and retraction data channel, 23SEBA0000B3DS0A, did not record any data after approximately 79 milliseconds.

The bullet vehicle's top of engine X-axis acceleration data channel, 12ENGNTF0000ACXA, exceeded full scale at approximately 46 milliseconds and recorded no useful data after that.

The bullet vehicle's right front brake caliper X-axis acceleration data channel, 13VEHCRI0000ACXA, exceeded full scale at approximately 63 milliseconds and recorded no useful data after that.

Table 1 Crash Test Summary

Test mode:	Full Frontal Collinear	
Test date:	03/24/06	
Test time:	15:49	
Ambient temperature:	25.1° C	
Target vehicle year/make/ model/body style:	2002/Ford/Focus SE/4-door	
Target vehicle test weight:	1552.8 kg	
Bullet vehicle year/make/ model/body style:	2006/Honda/Ridgeline/Pickup truck	
Bullet vehicle test weight:	2273.0 kg	
Impact angle ¹ :	0°	
Impact velocity ² :	Target vehicle = 71.9 km/h Bullet vehicle = 49.3 km/h	
Total number of data channels:	288	
Number of cameras:		
High-speed:	19	
Real-time:	1	
<u>Target vehicle dummies:</u>	<u>Driver #110</u>	<u>Passenger #416</u>
Type:	Hybrid III 50th	Hybrid III 5th
Location:	Left front	Right front
Restraint:	3 pt. seat belt, dual stage airbag	3 pt. seat belt, dual stage airbag
<u>Bullet vehicle dummies:</u>	<u>Driver #090</u>	<u>Passenger #070</u>
Type:	Hybrid III 50th	Hybrid III 5th
Location:	Left front	Right front
Restraint:	3 pt. seat belt, dual stage airbag	3 pt. seat belt, dual stage airbag

¹ With respect to tow track centerline.

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

Table 1 Crash Test Summary, Continued

Target vehicle seat track positions for test:

Driver:	Middle; detent #9 of 17
Passenger:	Full forward

Target vehicle seat back positions for test:

Driver:	15.3°; measured at head restraint support post
Passenger:	12.4°; measured at head restraint support post

Target vehicle head restraint positions for test:

Driver:	Full up
Passenger:	Full down

Target vehicle steering column

<u>position for test:</u>	25.2°; middle of geometric range of travel
---------------------------	--

Target vehicle D-ring positions for test:

Driver:	Full up
Passenger:	Full down

Bullet vehicle seat track positions for test:

Driver:	Middle; 120 mm out of 240 mm full travel
Passenger:	2 detents rear of full forward

Bullet vehicle seat back positions for test:

Driver:	15.8°; measured at head restraint support post
Passenger:	11.7°; measured at head restraint support post

Bullet vehicle head restraint positions for test:

Driver:	Full up
Passenger:	Full down

Bullet vehicle steering column

<u>position for test:</u>	27.0°; middle of geometric range of travel
---------------------------	--

Bullet vehicle D-ring positions for test:

Driver:	Full up
Passenger:	Full down

Table 2 Target Vehicle General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2002/Ford/Focus SE/4-door
VIN:	1FAFP343X2W234356
Model year:	2002
Body style:	4-door
Color:	Blue
Engine data:	
Cylinders:	4
Displacement	2 liters
Type:	Straight
Placement:	Transverse
Transmission data:	<u> 3 </u> speed, <u> </u> manual, <u> X </u> automatic, <u> X </u> overdrive
Final drive:	<u> X </u> FWD, <u> </u> RWD, <u> </u> 4WD
Date vehicle received:	03/20/06
Odometer reading:	35,430 miles
Dealer's name and address:	Vehicle supplied by VRTC

Accessories:

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

Certification data from vehicle's label:

Vehicle manufactured by:	Ford Motor Co.
Date of manufacture:	03/02
VIN:	1FAFP343X2W234356
GVWR:	1651 kg (3640 lbs.)
GAWR: Front:	895 kg (1975 lbs.)
Rear:	791 kg (1745 lbs.)

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

Tires on vehicle (mfr., line, size): Goodyear, Eagle RS-A, 195/60R15

Tire pressure with maximum capacity vehicle load:

Front: 32 psi (220 kPa)

Rear: 32 psi (220 kPa)

Spare tire (mfr., line, size): Hankook, Temporary, 125/80D15

Type of seats:

Front Bucket

Rear Bench

Maximum width: 1700 mm

Wheelbase: 2620 mm

Location of "Recommended Tire Pressure" label:

Driver B-pillar

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

Recommended tire size: P195/60R15

Recommended cold tire pressure: Front: 32 psi (220 kPa)

Front: 32 psi (220 kPa)

Seating capacity: Front: 2

Rear: 3

Total: 5

Vehicle capacity weight: 375 kg (827 lbs.)

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

Test vehicle attitude:

Pre-test attitude: LF 629 mm; RF 634 mm; LR 619 mm; RR 621 mm

Post-test attitude: LF 697 mm; RF 687 mm; LR 645 mm; RR 631 mm

Table 2 Target Vehicle General Test and Vehicle Parameter Data Continued

Weight of test vehicle with required dummies and cargo weight:

Right front	415.0 kg	Right rear	366.6 kg
Left front	420.0 kg	Left rear	351.2 kg
Total front weight	835.0 kg	(53.8% of total vehicle weight)	
Total rear weight	717.8 kg	(46.2% of total vehicle weight)	
Total test weight	1552.8 kg		

Weight of ballast secured in vehicle: 24 kg of plate in rear cargo area

Components removed to meet target test weight: None

Location of Vehicle's CG: 1211 mm rearward of front wheel centerline

Fuel System Data:

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

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

Table 3 Bullet Vehicle General Test and Vehicle Parameter Data

Vehicle year/make/ model/body style:	2006/Honda/Ridgeline/Pickup truck		
VIN:	2HJYK16226H530434		
Model year:	2006		
Body style:	Pickup truck		
Color:	Black		
Engine data:			
Cylinders:	6		
Displacement	3.5 liters		
Type:	V		
Placement:	Transverse		
Transmission data:	<u> 5 </u> speed, <u> </u> manual, <u> X </u> automatic, <u> X </u> overdrive		
Final drive:	<u> </u> FWD, <u> </u> RWD, <u> X </u> 4WD		
Date vehicle received:	3/20/2006		
Odometer reading:	107 miles		
Dealer's name and address:	Vehicle provided by VRTC		
<u>Accessories:</u>			
Power steering	Yes	Automatic transmission	Yes
Power brakes	Yes	Automatic speed control	Yes
Power seats	No	Tilting steering wheel	Yes
Power windows	Yes	Telescoping steering wheel	No
Tinted glass	Yes	Air conditioning	Yes
Radio	Yes	Anti-skid brake	Yes
Clock	Yes	Rear window defroster	No
Other	None	Power door locks	Yes
<u>Certification data from vehicle's label:</u>			
Vehicle manufactured by:	Honda of Canada Mfg.		
Date of manufacture:	07/05		
VIN:	2HJYK16226H530434		
GVWR:	2745 kg (8050 lbs.)		
GAWR: Front:	1410 kg (3105 lbs.)		
Rear:	1475 kg (3245 lbs.)		

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

Tires on vehicle (mfr., line, size): Michelin, LTX, 245/65R17

Tire pressure with maximum capacity vehicle load:

Front: Not recorded

Rear: Not recorded

Spare tire (mfr., line, size): Continental, Temporary, 165/90R17

Type of seats:

Front Bucket

Rear Bench

Maximum width: 1970 mm

Wheelbase: 3100 mm

Location of "Recommended Tire Pressure" label:

Driver B-pillar

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

Recommended tire size: P245/65R17

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

Rear: 32 psi (221 kPa)

Seating capacity: Front: 2

Rear: 3

Total: 5

Vehicle capacity weight: 690 kg (1530 lbs.)

Rated cargo/luggage weight: 350 kg (772 lbs.)

Test vehicle attitude:

Delivered attitude: LF 850 mm; RF 851 mm; LR 873 mm; RR 873 mm

Fully loaded attitude:LF 832 mm; RF 835 mm; LR 844 mm; RR 844 mm

Pre-test attitude: LF 825 mm; RF 828 mm; LR 838 mm; RR 845 mm

Post-test attitude: LF 821 mm; RF 833 mm; LR 849 mm; RR 840 mm

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

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

Right front	562.0 kg	Right rear	430.0 kg
Left front	602.0 kg	Left rear	434.0 kg
Total front weight	1164.0 kg	(57.4 % of total vehicle weight)	
Total rear weight	864.0 kg	(42.6 % of total vehicle weight)	
Total delivered weight	2028.0 kg		

Weight of test vehicle with required dummies and cargo weight:

Right front	585.2 kg	Right rear	531.4 kg
Left front	637.4 kg	Left rear	519.0 kg
Total front weight	1222.6 kg	(53.8% of total vehicle weight)	
Total rear weight	1050.4 kg	(46.2% of total vehicle weight)	
Total test weight	2273.0 kg		

Weight of ballast secured in vehicle: 10.9 kg of plate in the rear cargo well

Components removed to meet target test weight: Spare tire, jack assembly, and spare tire storage tray.

Location of Vehicle's CG: 1433 mm rearward of front wheel centerline

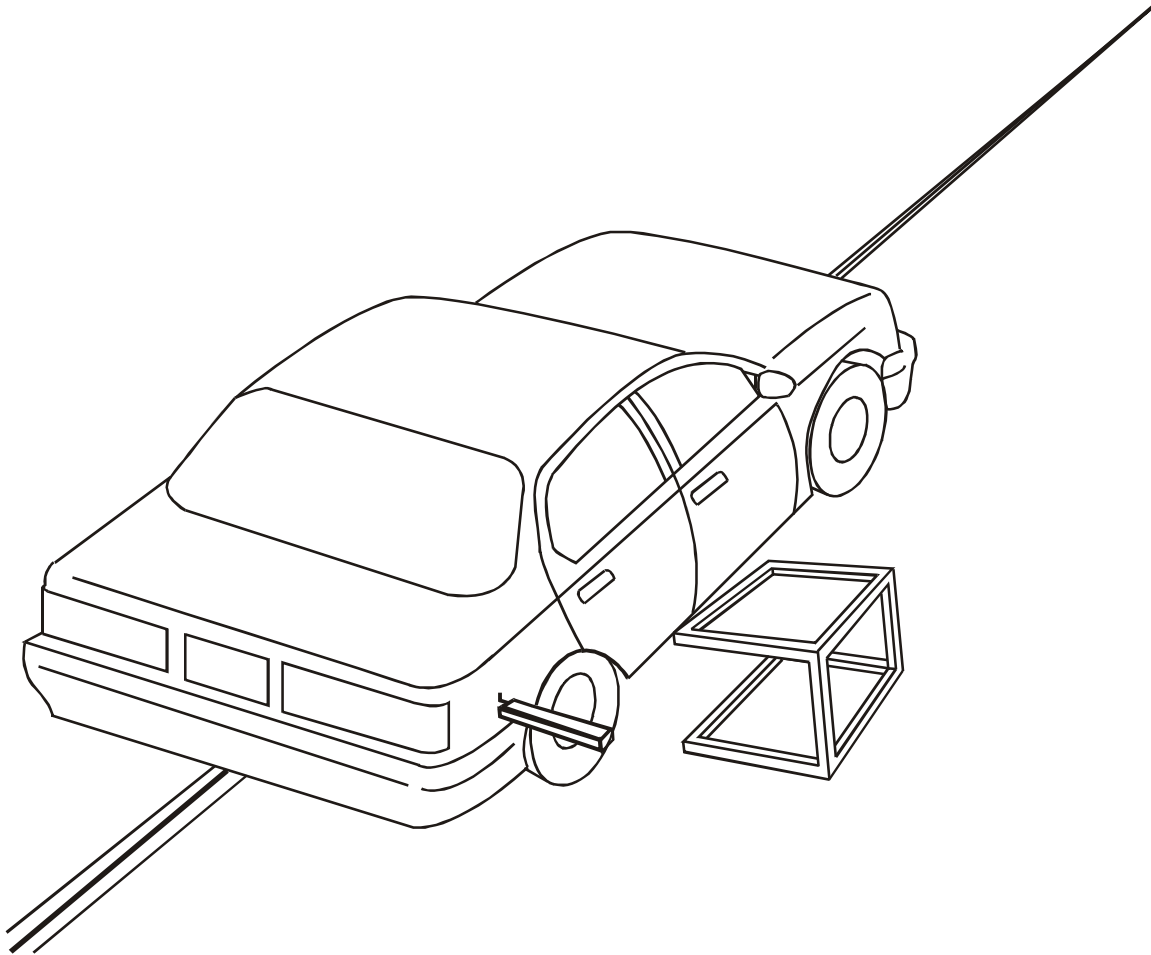
Fuel System Data:

Usable fuel system capacity	75.7 liters (from owner's manual)
Actual test volume:	70.4 liters (93% of usable)

Table 4 Post-Impact Data

Test number:	060324
Test date:	03/24/06
Test time:	15:49
Test type:	Car to Car
Impact angle:	0°
Ambient temperature at impact area: 25° C	
Impact velocity:	
Target vehicle:	71.9 km/h
Bullet vehicle:	49.3 km/h
Required impact velocity range:	
Target vehicle:	70.7 to 72.9 km/h
Bullet vehicle:	47.6 to 49.9 km/h
Distance from each vehicle to intended impact point:	
Entering velocity trap:	660 mm
Exiting velocity trap:	50 mm, approximately
Impact point:	0 mm offset from intended impact point (referenced to target vehicle coordinate system)

Figure 1 Impact Velocity Measurement System



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

The emitter/receiver pairs have 610 millimeter spacing.

Table 5 Target Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction		Negative Direction	
			Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	Left Rear Seat Cross-member	X	2.4	166.4	39.0	61.1
2	Right Rear Seat Cross-member	X	1.4	177.4	36.9	62.1
3	Top of Engine ¹	X	---	---	---	---
4	Bottom of Engine ¹	X	---	---	---	---
5	Right Front Brake Caliper	X	67.0	63.5	133.8	43.5
6	Left Front Brake Caliper ¹	X	---	---	---	---
7	Toe Pan Accelerator	X	7.6	77.0	83.4	53.8
		Z	88.2	42.2	73.4	52.6
8	Toe Pan Footrest	X	12.7	77.4	90.2	50.6
		Z	59.9	31.7	78.2	52.7
9	Rear Tunnel Center ¹	X	---	---	---	---
10	Vehicle Center of Gravity	X	45.1	64.2	141.4	56.8
		Y	26.4	84.3	25.3	102.2
		Z	50.6	30.7	84.6	65.4
	Resultant		142.9	56.7		
11	Vehicle Rear Deck	X	17.2	92.7	60.5	64.3
		Y	5.8	65.9	3.2	70.5
		Z	21.1	102.9	22.7	27.5
	Resultant		60.8	64.3		
12	Dash Panel Center	X	50.2	65.4	114.6	51.7

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

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

¹ See Data Acquisition Explanations.

Table 6 Bullet Vehicle Accelerometer Data Summary

Accel. No.	Location		Positive Direction		Negative Direction	
			Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	Left Rear Seat Cross-member	X	1.3	128.5	29.0	65.7
2	Right Rear Seat Cross-member	X	2.2	129.8	27.4	40.7
3	Top of Engine ¹	X	---	---	---	---
4	Bottom of Engine	X	38.3	36.7	131.4	30.0
5	Right Front Brake Caliper ¹	X	---	---	---	---
6	Left Front Brake Caliper	X	40.1	69.8	85.7	41.7
7	Toe Pan Accelerator	X	21.6	30.8	55.9	55.8
		Z	30.7	58.6	108.9	19.4
8	Toe Pan Footrest	X	23.9	17.7	30.9	50.0
		Z	12.5	23.4	77.9	18.0
9	Rear Tunnel Center	X	2.1	309.9	33.4	54.1
10	Vehicle Center of Gravity	X	2.0	129.8	29.3	54.2
		Y	10.5	42.1	6.8	51.0
		Z	26.1	56.2	25.3	64.0
	Resultant		36.2	56		
11	Vehicle Rear Deck	X	14.5	135.0	41.4	68.2
		Y	6.7	72.6	7.1	94.2
		Z	11.5	57.4	14.9	42.6
	Resultant		41.7	68.32		
12	Dash Panel Center	X	2.8	162.7	48.9	50.7

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

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

¹ See Data Acquisition Explanations.

Section 3.0

Summary of Data

Table 7 Dummy Injury Criteria Data

	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
HIC (15 ms) ¹	700	700	3448	3480	80	107
Start time (ms)			71.6	69.6	73.0	56.7
End time (ms)			86.6	84.6	88.0	71.8
HIC (36 ms) ¹	1000	---	3478	4159	149	188
Start time (ms)			70.8	65.8	59.4	54.2
End time (ms)			87.4	92.4	95.4	90.2
Chest 3 ms (g) ²	60	60	105.9	79.3	32.4	30.9
Start time (ms)			73.6	81.6	77.7	81.6
End time (ms)			76.6	84.6	80.7	85.2
Chest Deflection (mm)	63	52	57	36	31	19
Upper Neck						
NTF	1.0	1.0	0.49	0.14	0.17	0.19
NTE	1.0	1.0	0.85	2.83	0.14	0.27
NCF	1.0	1.0	0.13	0.58	0.01	0.19
NCE	1.0	1.0	0.15	0.53	0.09	0.46
Neck Tension (N)	4170	2620	4767	3872	660	492
Neck Compression (N)	4000	2520	484	2204	69	446
Left Femur (N)	10000	6805	4114	8225	3562	2033
Right Femur (N)	10000	6805	6343	4265	1436	2254
Maximum Left Upper TI (SAE)	0.91	0.91	0.75	1.67	0.33	N/A
Maximum Right Upper TI (SAE)	0.91	0.91	1.09	0.88	0.52	N/A
Maximum Left Lower TI (SAE)	0.91	0.91	1.18	1.95	0.31	N/A
Maximum Right Lower TI (SAE)	0.91	0.91	1.66	1.31	0.60	N/A

¹ As defined in FMVSS No. 208.

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

Table 8 Target Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Airbag, head restraint, seat back	Airbag, head restraint
Chest	Airbag, steering wheel	Airbag
Abdomen	None	None
Left knee	Knee bolster	Glove box
Right knee	Knee bolster	Glove box

Door opening:

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

Seat movement:

	<u>Seat back failure</u>	<u>Seat shift</u>
Left Front	None	None
Right Front	None	None
Left Rear	Not applicable	Not applicable
Right Rear	Not applicable	Not applicable

Glazing damage:

Windshield broken

Other notable impact effects:

None

Table 9 Bullet Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Airbag, 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:

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

Seat movement:

	<u>Seat back failure</u>	<u>Seat shift</u>
Left Front	None	None
Right Front	None	None
Left Rear	Not applicable	Not applicable
Right Rear	Not applicable	Not applicable

Glazing damage: Windshield broken

Other notable impact effects: None

Section 4.0

Occupant, Camera, and Vehicle Information

Figure 2 Vehicle Dummy Measurement Locations for Front Seat Occupants

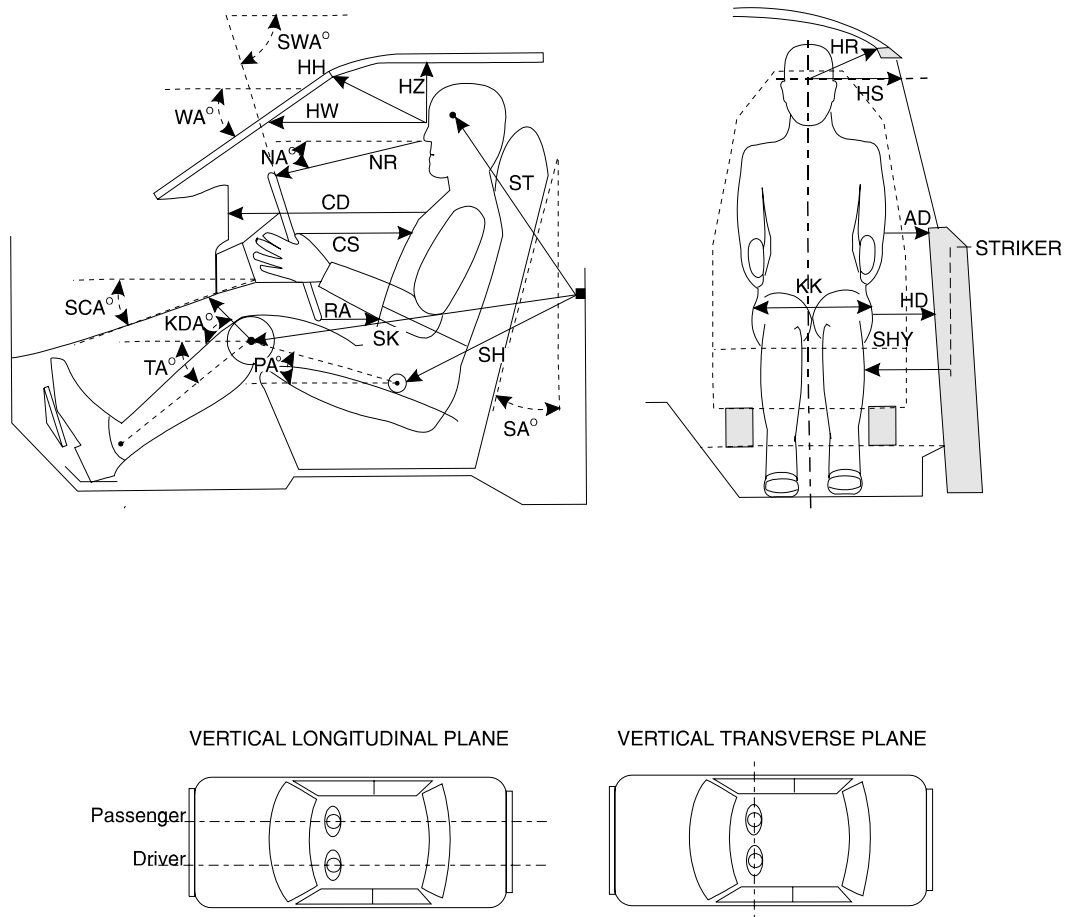


Table 10 Target Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial #110)	Passenger (Serial #416)
WA	Windshield angle	27.7°	27.7°
SWA	Steering wheel angle	64.5°	N/A
SCA	Steering column angle	25.5°	N/A
SA	Seat back angle	15.9°	11.4°
HZ	Head to roof	214 mm	193 mm
HH	Head to header	379 mm	259 mm
HW	Head to windshield	657 mm	601 mm
HR	Head to side header	245 mm	223 mm
NR	Nose to rim	427 mm	N/A
NA	Nose to rim angle	7.1°	N/A
CD	Chest to dash	571 mm	387 mm
CS	Steering wheel to chest	327 mm	N/A
RA	Rim to abdomen	233 mm	N/A
KDL	Left knee to dash	150 mm	60 mm
KDR	Right knee to dash	155 mm	64 mm
KDA	Outboard knee to dash angle	42.7°	13.9°
PA	Pelvic angle	N/A ²	N/A ²
TA	Tibia angle	41.7°	55.9°
KK	Knee to knee	377 mm	166 mm
ST ¹	Striker to head	526 mm	511 mm
	Striker to head angle	-85.3°	-69.2°
SK ¹	Striker to knee	543 mm	690 mm
	Striker to knee angle	-0.8°	1.4°
SH ¹	Striker to H-point	222 mm	318 mm
	Striker to H-point angle	39.2°	16.7°
SHY	Striker to H-point (Y dir.)	104 mm	131 mm
HS	Head to side window	304 mm	317 mm
HD	H-point to door	16 mm	24 mm
AD	Arm to door	242 mm	140 mm

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

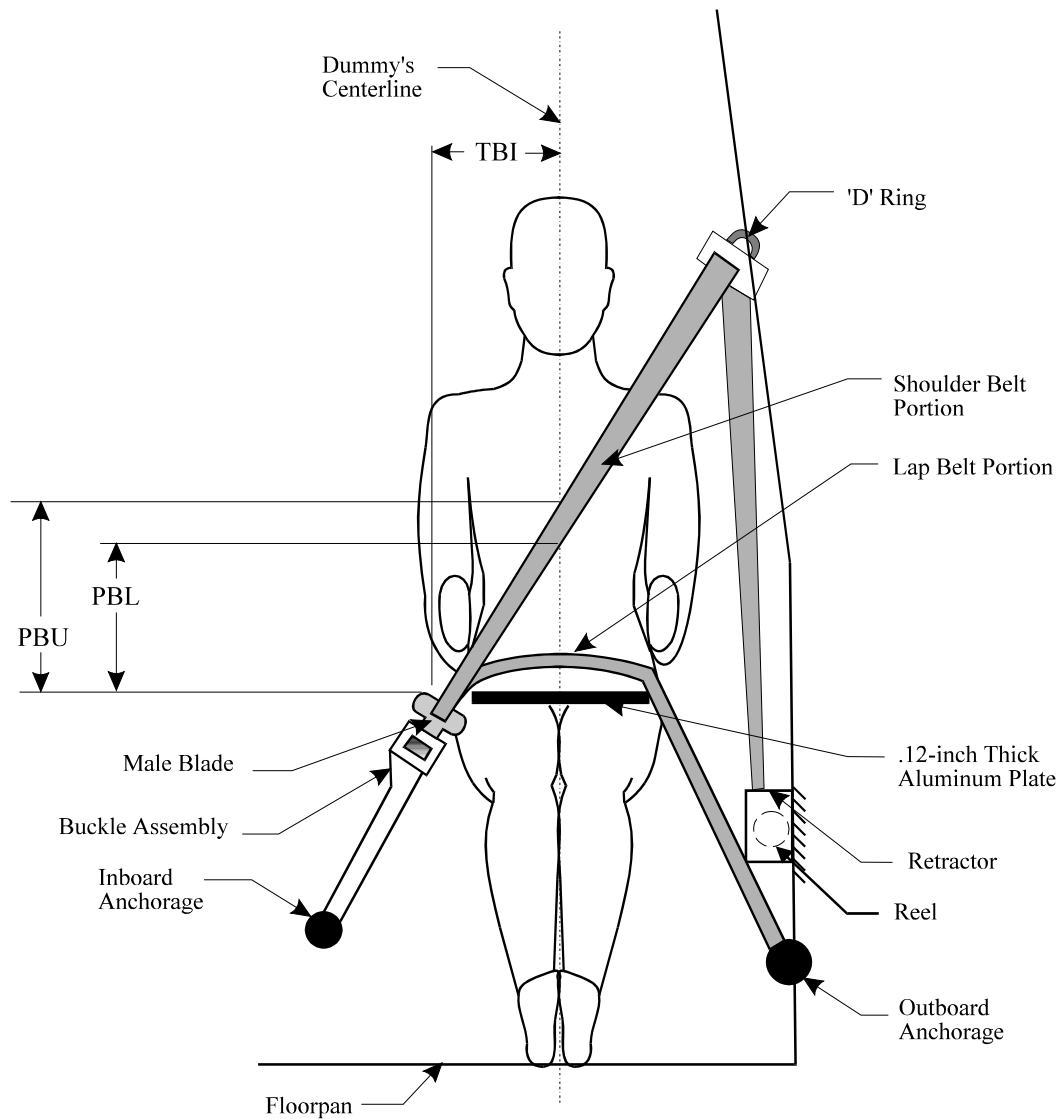
¹ A negative angle indicates the measurement point was above the striker.

² Measurement was not recorded.

Table 11 Target Vehicle Driver Dummy THOR LX Ankle Position Angles

Dummy #110		After Positioning	Pre-Launch
Right Leg			
	X	5.21°	4.80°
	Y	-3.38°	-3.30°
	Z	40.16°	40.18°
Left Leg			
	X	-0.82°	-0.77°
	Y	-5.23°	-5.20°
	Z	0.47°	0.50°

Figure 3 Target Vehicle Seat Belt Positioning Data



	Driver Dummy	Passenger Dummy
PBU - Top surface of aluminum plate to belt upper edge	375 mm	270 mm
PBL - Top surface of aluminum plate to belt lower edge	290 mm	190 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	220 mm	195 mm
Total belt length	2450 mm	2540 mm
Lap belt length	825 mm	850 mm
Shoulder belt length	785 mm	870 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	29.7°	29.7°
SWA	Steering wheel angle	62.6°	N/A
SCA	Steering column angle	27.4°	N/A
SA	Seat back angle	16.2°	10.9°
HZ	Head to roof	245 mm	288 mm
HH	Head to header	446 mm	377 mm
HW	Head to windshield	709 mm	684 mm
HR	Head to side header	257 mm	305 mm
NR	Nose to rim	441 mm	N/A
NA	Nose to rim angle	10.1°	N/A
CD	Chest to dash	628 mm	467 mm
CS	Steering wheel to chest	308 mm	N/A
RA	Rim to abdomen	185 mm	N/A
KDL	Left knee to dash	110 mm	32 mm
KDR	Right knee to dash	101 mm	39 mm
KDA	Outboard knee to dash angle	23.4°	28.7°
PA	Pelvic angle	N/A ²	N/A ²
TA	Tibia angle	50.2°	65.0°
KK	Knee to knee	392 mm	171 mm
ST ¹	Striker to head	558 mm	529 mm
	Striker to head angle	-81.7°	-66.5°
SK ¹	Striker to knee	604 mm	721 mm
	Striker to knee angle	-3.9°	-1.1°
SH ¹	Striker to H-point	260 mm	353 mm
	Striker to H-point angle	23.8°	11.6°
SHY	Striker to H-point (Y dir.)	173 mm	173 mm
HS	Head to side window	383 mm	402 mm
HD	H-point to door	130 mm	107 mm
AD	Arm to door	160 mm	203 mm

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

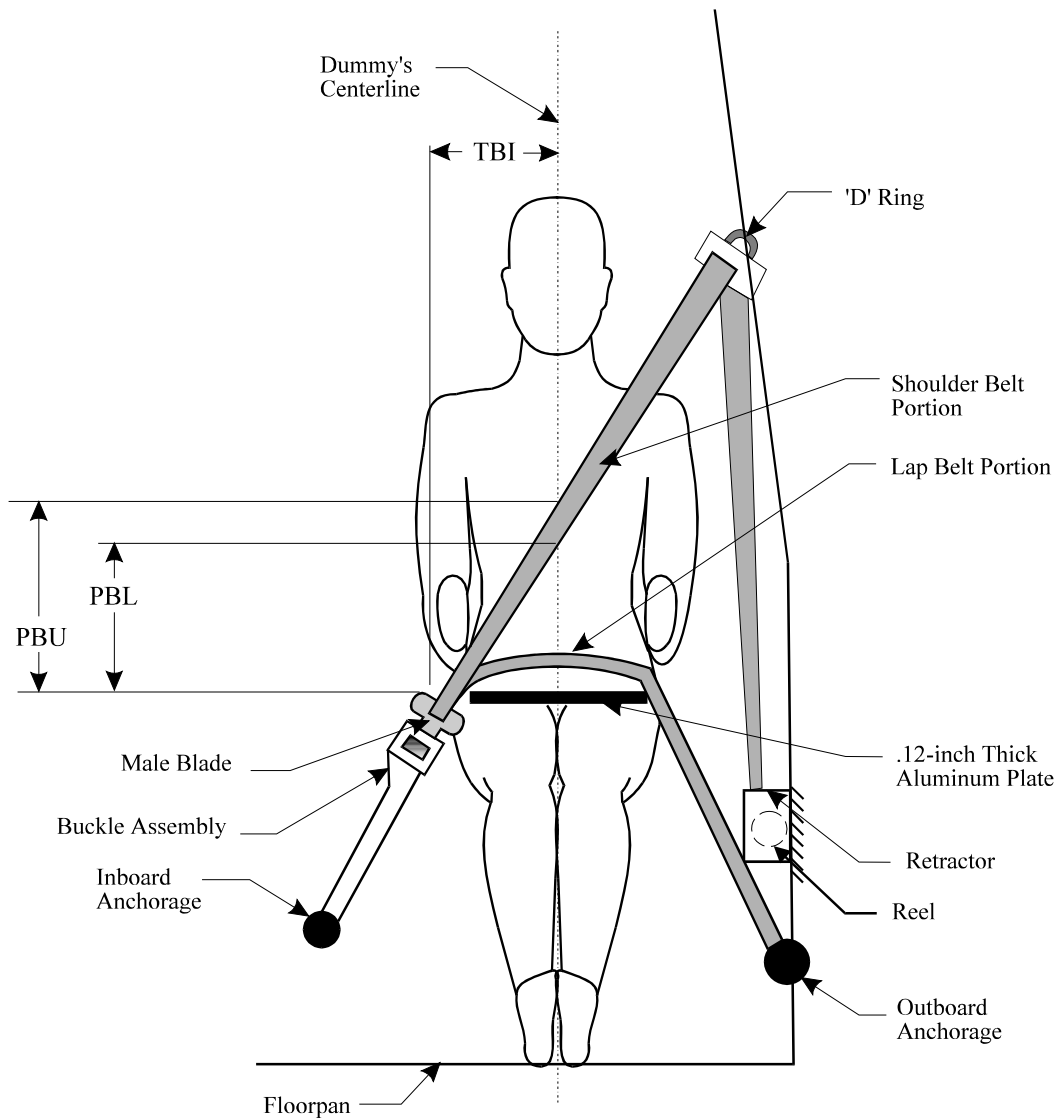
¹ A negative angle indicates the measurement point was above the striker.

² Measurement was not recorded.

Table 13 Bullet Vehicle Driver Dummy THOR LX Ankle Position Angles

Dummy #90		After Positioning	Pre-Launch
Right Leg			
	X	-0.34°	-0.21°
	Y	-0.45°	-0.73°
	Z	40.11°	40.65°
Left Leg			
	X	-7.84°	-4.47°
	Y	---	---
	Z	160.06°	160.05°

Figure 4 Bullet Vehicle Seat Belt Positioning Data



	Driver Dummy	Passenger Dummy
PBU - Top surface of aluminum plate to belt upper edge	325 mm	280 mm
PBL - Top surface of aluminum plate to belt lower edge	240 mm	190 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	170 mm	190 mm
Total belt length	2600 mm	2600 mm
Lap belt length	770 mm	830 mm
Shoulder belt length	860 mm	690 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:

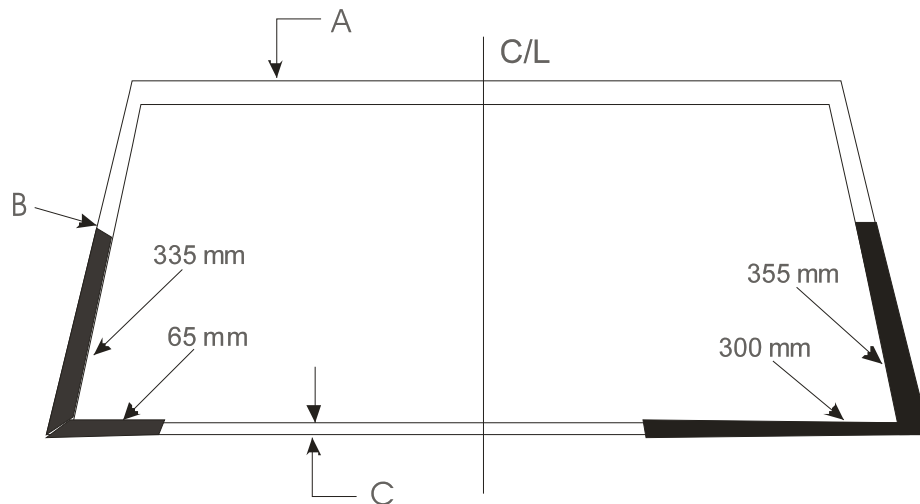
	<u>Pre-test</u>	<u>Post-test</u>	<u>Percent retention</u>
Right side	2125 mm	1470 mm	69.2 %
Left side	2125 mm	1725 mm	81.2 %
Total	4250 mm	3195 mm	75.2 %

Pre-test windshield mounting material temperature: N/A

A = 12 mm

B = 12 mm

C = 12 mm



Front view of windshield

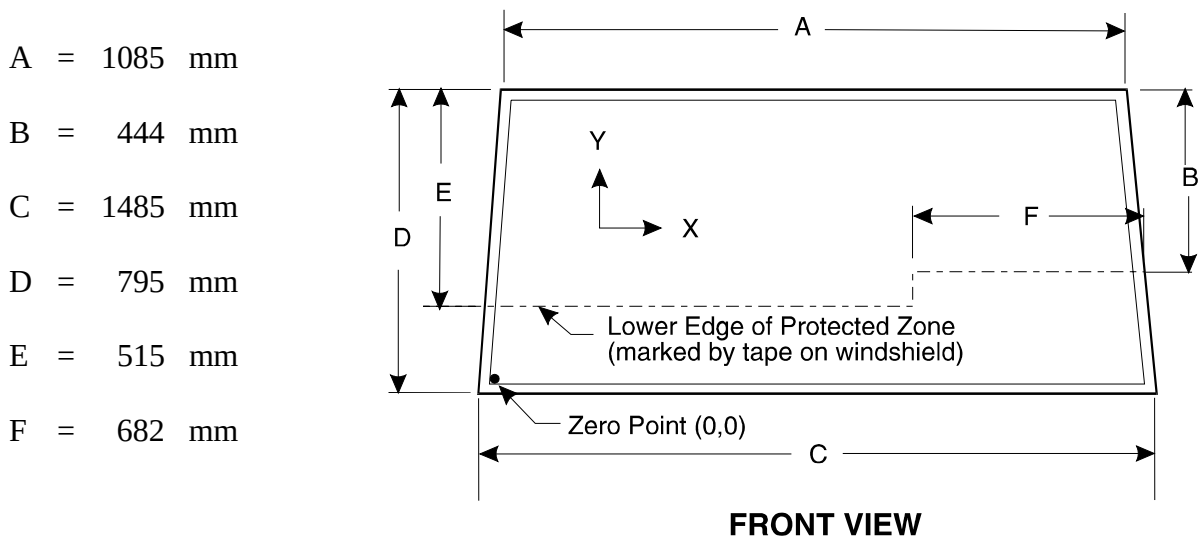
Loss of windshield retention lengths: 355 mm on the lower left side. 300 mm from the left bottom corner towards windshield centerline. 335 mm on the lower right side, and 65 mm from the right bottom corner towards windshield centerline.

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:



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

Areas of windshield template penetration greater than 6 mm: N/A

	Coordinates, mm	
	X	Y
1.		
2.		
3.		

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

- 1.
- 2.
- 3.

Figure 7 Bullet 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:

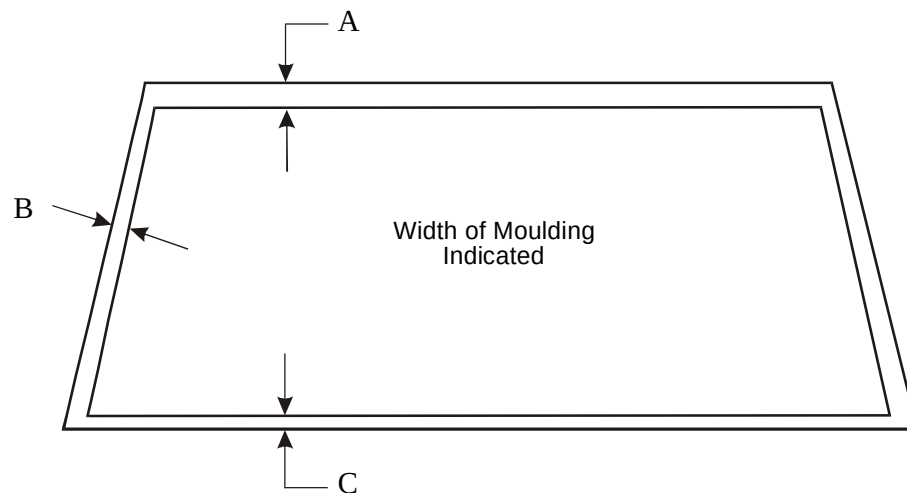
	<u>Pre-test</u>	<u>Post-test</u>	<u>Percent retention</u>
Right side	2315 mm	2315 mm	100 %
Left side	2315 mm	2315 mm	100 %
Total	4630 mm	4630 mm	100 %

Pre-test windshield mounting material temperature: N/A

A = 15 mm

B = 20 mm

C = 15 mm



Front view of windshield

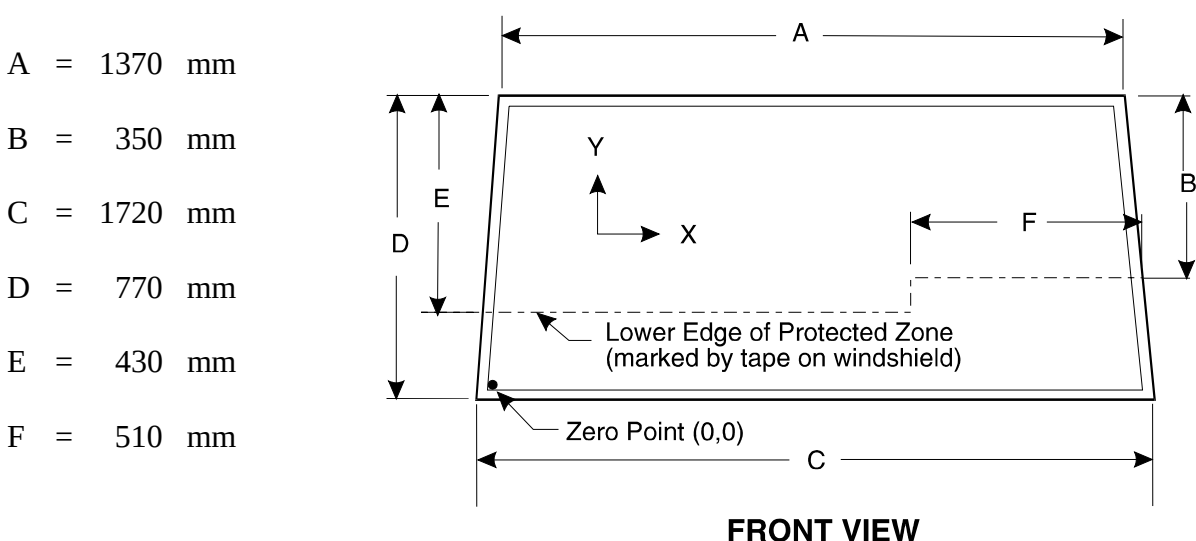
Loss of windshield retention lengths: None

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:



Method of adhering protected zone template to windshield:

Areas of windshield template penetration greater than 6 mm:

Coordinates, mm	
X	Y
1.	
2.	
3.	

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

- 1.
- 2.
- 3.

Table 14 Target Vehicle Structural Measurements¹

	Elements	Pre-Test
1	Total Length	4310
2	Total Width	1698
3	Bumper Top Height	527
4	Bumper Bottom Height	3872
5	Longitudinal Member Top Height	510
6	Longitudinal Member Bottom Height	402
7	Distance Between Longitudinal Members	1085
7'	Longitudinal Member Width	85
8	Engine Top Height	766
9	Engine Bottom Height	185
10	Engine and Gearbox Width	850
11	Front Bumper - Engine Distance	461
12	Front Shock Absorber Fixing Height	801
13	Bonnet Leading Edge Height	667
14	Front Shock Absorber Fixing Width	405
15	Front Bumper - Front Axle Distance	766
16	Front Axle - A Pillar Distance	460
17	A Pillar - B Pillar Distance	1030
18	B Pillar - Rear Axle Distance	1080
19	B Pillar - C Pillar Distance	860
20	Roof Sill Bottom Height	1331
21	Roof Sill Top Height	1371
22	Floor Sill Bottom Height	290
23	Floor Sill Top Height	301

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

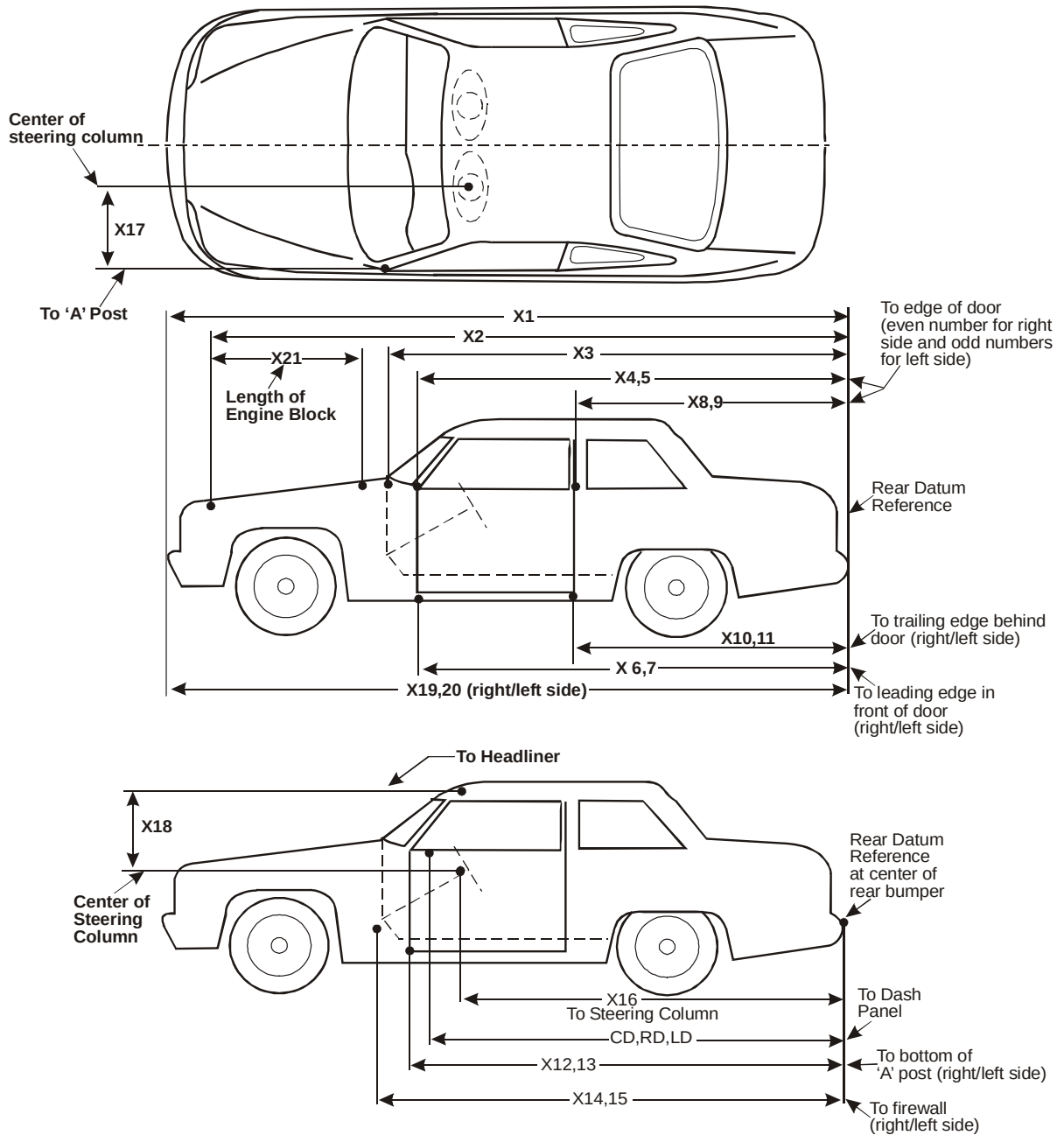


Table 15 Target Vehicle Impacted Measurements

Test number: 060324

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

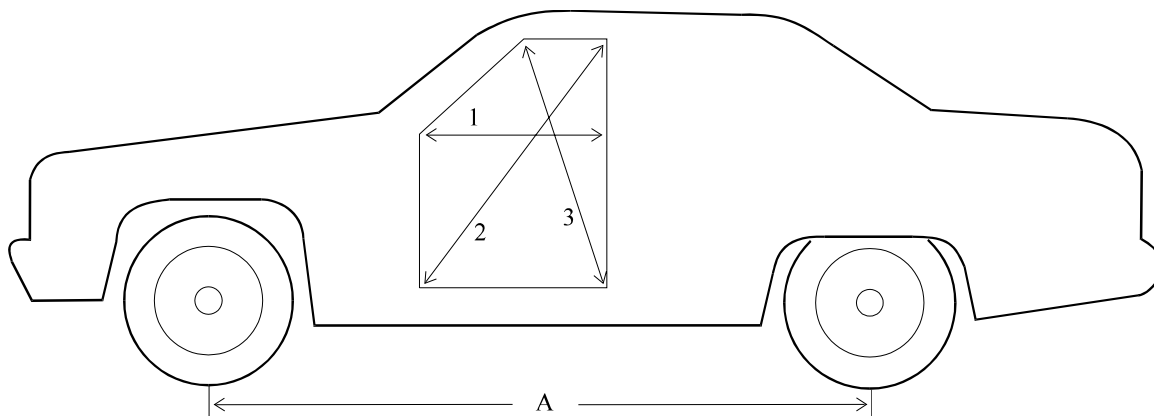
No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4310	N/A ¹	N/A ¹
X2	Rear Surface of Vehicle to Front of Engine Block	3859	3399	460
X3	Rear Surface of Vehicle to Firewall	3450	N/A ¹	N/A ¹
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3070	2967	103
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3066	2903	163
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3027	2943	84
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3026	2919	107
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2055	1966	89
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2055	1955	100
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2050	1964	86
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2049	1936	113
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	2995	2900	95
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	2998	2859	139
X14	Rear Surface of Vehicle to Firewall - Right Side	3465	3010	455
X15	Rear Surface of Vehicle to Firewall - Left Side	3450	2990	460
X16	Rear Surface of Vehicle to Steering Wheel Center	2611	2399	212
X17	Center of Steering Column to " A " Post	285	170	115
X18	Center of Steering Column to Headliner	425	565	-140
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4305	N/A ¹	N/A ¹
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4310	N/A ¹	N/A ¹
X21	Length of Engine Block	470	470	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2840	2626	214
CD	Rear Surface of Vehicle to Center of Dash Panel	2927	2629	298
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2847	2627	220

All distance measurements are in millimeters.

¹ Measurement point could not be located post-test.

Figure 10 Target Vehicle Intrusion Measurements

Door Opening Width

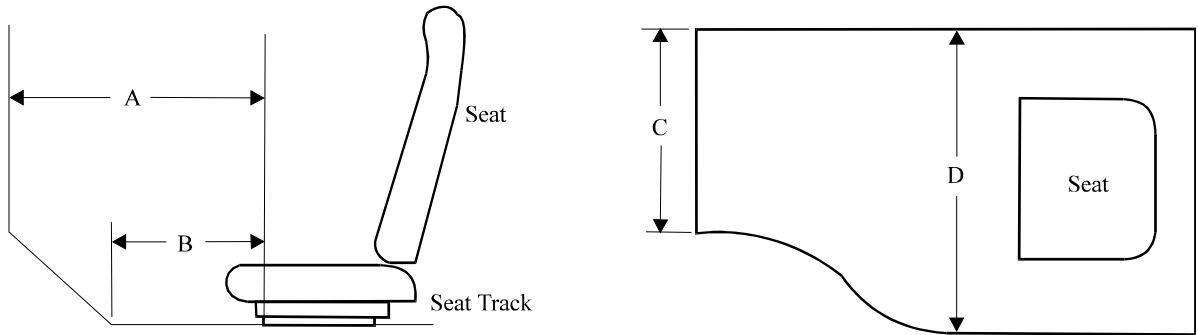


Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	885 mm	1385 mm	990 mm	897 mm	1390 mm	1005 mm
Post-Test	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Difference	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	2620 mm	2620 mm
Post-Test	2432 mm	2440 mm
Difference	188 mm	180 mm

¹ Measurement point could not be located post-test.

Figure 11 Target Vehicle Intrusion Measurements
Static Footwell Deformation



Driver's Side

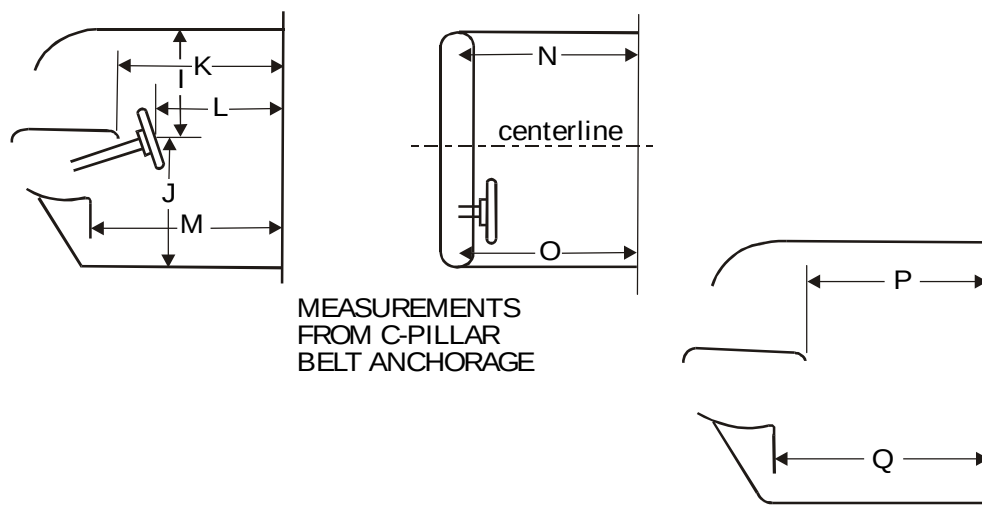
Measurement	Pre-Test	Post-Test	Difference
A	625 mm	N/A ¹	N/A ¹
B	502 mm	N/A ¹	N/A ¹
C	435 mm	N/A ¹	N/A ¹
D	455 mm	N/A ¹	N/A ¹

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	630 mm	N/A ¹	N/A ¹
B	570 mm	N/A ¹	N/A ¹
C	438 mm	N/A ¹	N/A ¹
D	444 mm	N/A ¹	N/A ¹

¹ Measurement point could not be located post-test.

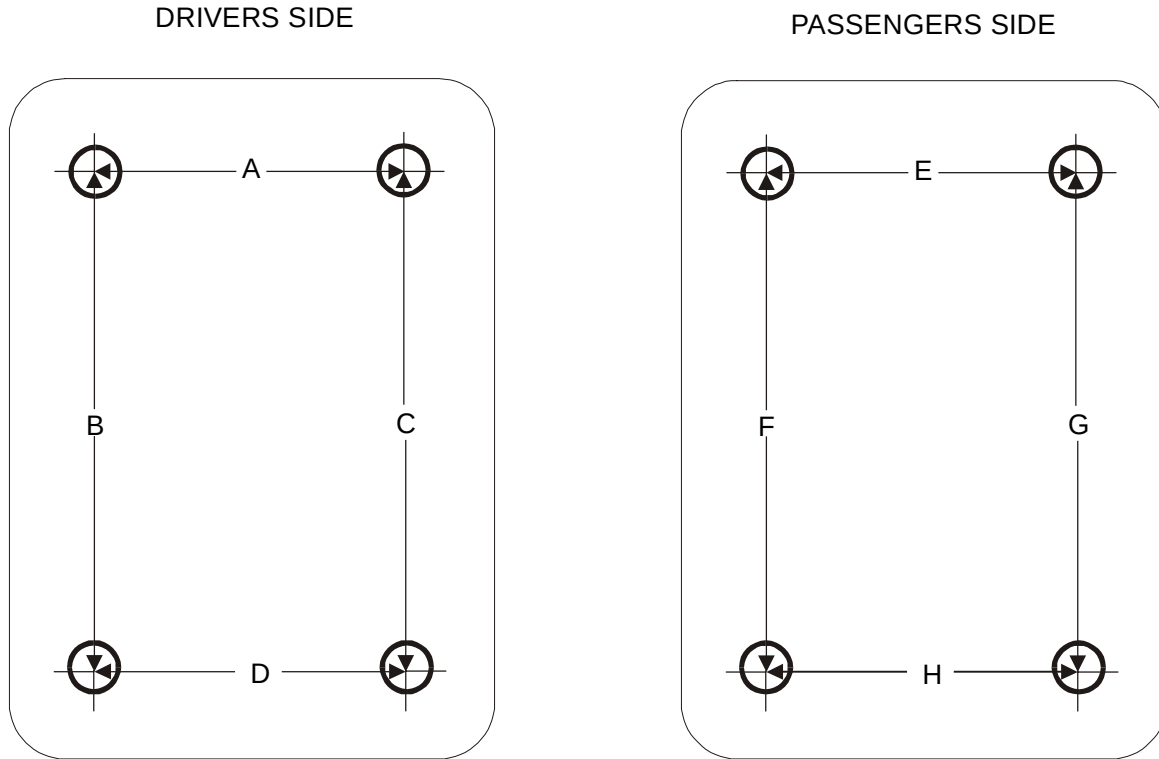
Figure 12 Target Vehicle Intrusion Measurements
Static Passenger Compartment Intrusion



Measurement	Pre-Test	Post-Test	Difference
I	425 mm	N/A ¹	N/A ¹
J	730 mm	N/A ¹	N/A ¹
K (driver's side)	1880 mm	N/A ¹	N/A ¹
L	1670 mm	N/A ¹	N/A ¹
M (driver's side)	1980 mm	N/A ¹	N/A ¹
N (passenger's side)	1932 mm	N/A ¹	N/A ¹
O (driver's side)	1880 mm	N/A ¹	N/A ¹
P (passenger's side)	1888 mm	N/A ¹	N/A ¹
Q (passenger's side)	1981 mm	N/A ¹	N/A ¹

¹ Measurement point could not be located post-test.

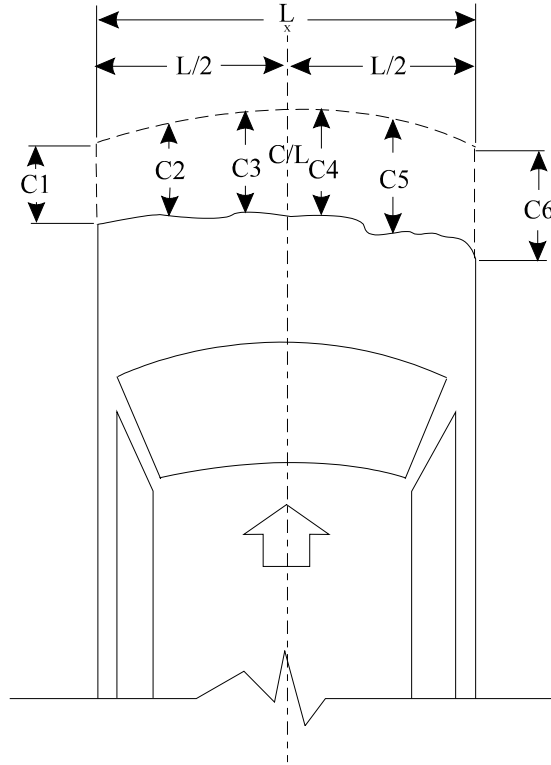
Figure 13 Target Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	435 mm	N/A ¹	N/A ¹
B	390 mm	N/A ¹	N/A ¹
C	395 mm	N/A ¹	N/A ¹
D	455 mm	N/A ¹	N/A ¹
E	438 mm	N/A ¹	N/A ¹
F	395 mm	N/A ¹	N/A ¹
G	410 mm	N/A ¹	N/A ¹
H	444 mm	N/A ¹	N/A ¹

¹ Measurement point could not be located post-test.

Figure 14 Target Vehicle Crush



Notes: L is pre-test length of contact surface.
C1 through C6 are spaced equally apart.
CL is vehicle centerline.

Vehicle: 2002 Ford Focus SE

Measured to bumper beam without bumper fascia:

Location	Pre-test	Post-test	Difference
L	1234 mm		
C1	4310 mm	N/A ¹	N/A ¹
C2	4325 mm	N/A ¹	N/A ¹
C3	4315 mm	N/A ¹	N/A ¹
C4	4330 mm	N/A ¹	N/A ¹
C5	4335 mm	N/A ¹	N/A ¹
C6	4305 mm	N/A ¹	N/A ¹
CL	4325 mm	N/A ¹	N/A ¹

¹ Measurement point could not be located post-test.

Table 16 Target Vehicle Frontal Profile Measurements

Bottom of Front Bumper

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	4310	-615	-376	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
2	4325	-366	-380	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
3	4315	-120	-380	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
4	4330	120	-381	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
5	4335	370	-385	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
6	4305	615	-380	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	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	4310	-615	-530	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
2	4325	-366	-530	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
3	4315	-120	-530	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
4	4330	123	-534	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
5	4335	370	-538	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
6	4305	615	-530	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	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	4225	-621	-614	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
2	4315	-365	-594	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
3	4335	-120	-593	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
4	4330	123	-593	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
5	4315	370	-595	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
6	4230	625	-642	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 ²		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	4026	-615	-757	3559	-609	-790	-467	6	-33
2	4298	-365	-641	3603	-354	-527	-695	11	114
3	4305	-120	-655	3593	-115	-546	-712	5	109
4	4305	120	-654	3579	115	-570	-726	-5	84
5	4305	370	-642	3555	376	-580	-750	6	62
6	4025	620	-766	3533	543	-901	-492	-77	-135

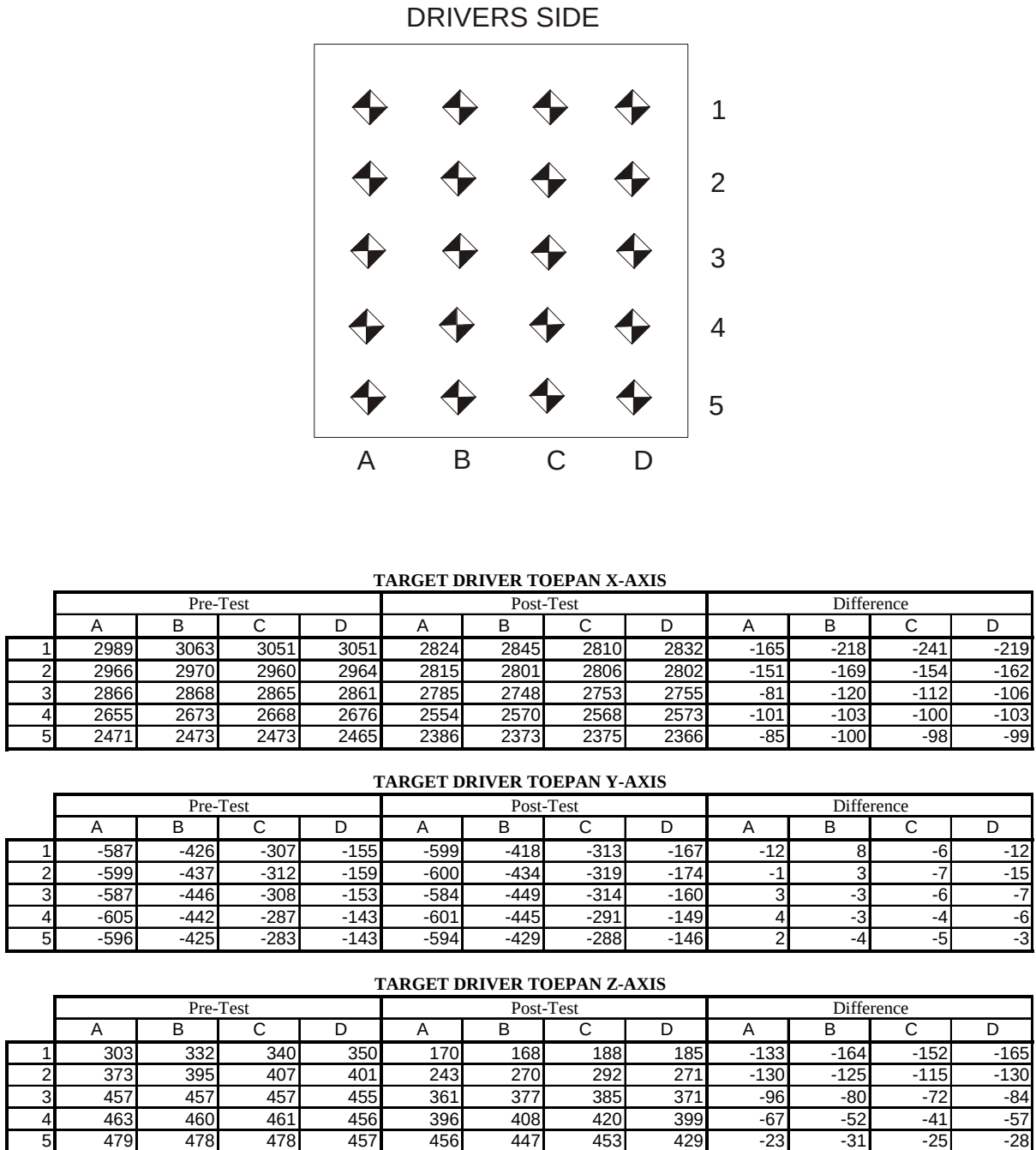
Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.

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

¹ Measurement point could not be located post-test.

² Measurements 1-6, Front of Hood, are included in the NHTSA Entrée database submission as Damage Profile Distances 1-6.

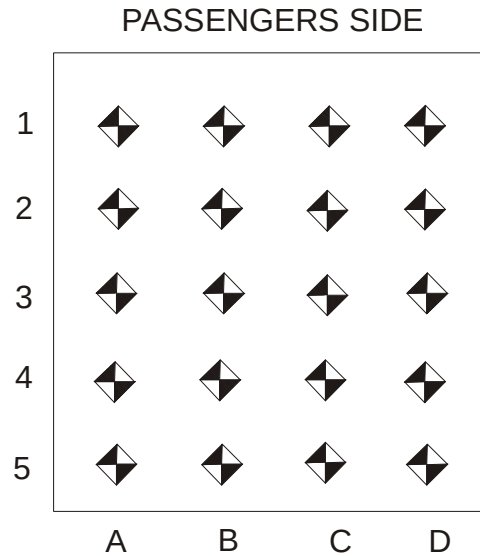
Figure 15 Target Vehicle Toeboard Measurements



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

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

Figure 15 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	3081	3099	3102	3015	2812	2833	2830	2801	-269	-266	-272	-214
2	2997	3002	3008	2985	2843	2821	2824	2817	-154	-181	-184	-168
3	2860	2866	2869	2883	2746	2756	2754	2801	-114	-110	-115	-82
4	2668	2671	2662	2668	2556	2563	2562	2579	-112	-108	-100	-89
5	2463	2471	2469	2474	2354	2363	2367	2396	-109	-108	-102	-78

TARGET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	228	334	452	580	204	302	415	565	-24	-32	-37	-15
2	170	306	452	587	158	280	422	561	-12	-26	-30	-26
3	165	312	465	603	150	294	446	568	-15	-18	-19	-35
4	155	290	471	614	145	281	459	595	-10	-9	-12	-19
5	154	288	458	597	151	286	453	579	-3	-2	-5	-18

TARGET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	287	290	285	261	174	142	132	155	-113	-148	-153	-106
2	374	370	365	349	273	267	250	230	-101	-103	-115	-119
3	452	452	452	450	393	407	400	363	-59	-45	-52	-87
4	454	457	458	456	413	424	401	388	-41	-33	-57	-68
5	455	474	474	477	434	442	413	398	-21	-32	-61	-79

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

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

Table 17 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	2427	-343	-247	2225	-408	-297	-202	-65	-50
2	Driver's Lower Left Instrument Panel	2674	-492	-9	2554	-527	-107	-120	-35	-98
3	Driver's Lower Right Instrument Panel	2665	-193	-10	2527	-232	-113	-138	-39	-103
4	Brake Pedal Center	2905	-326	251	2599	-371	136	-306	-45	-115
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3116	-478	249	2827	-461	73	-289	17	-176
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3124	-326	250	2813	-326	76	-311	0	-174
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3014	-574	251	2807	-591	115	-207	-17	-136
9	Left Front Driver's Seat Mounting Bolt	2400	-591	388	2375	-583	380	-25	8	-8
10	Right Front Driver's Seat Mounting Bolt	2393	-140	365	2326	-141	339	-67	-1	-26
11	Left Rear Driver's Seat Mounting Bolt	2012	-626	407	1998	-631	401	-14	-5	-6
12	Right Rear Driver's Seat Mounting Bolt	1964	-102	402	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
17	Exterior A-Pillar at Height of Bottom of Front Window	2830	-702	-258	2661	-757	-339	-169	-55	-81
18	Exterior B-pillar at Height of A-Pillar Measurement Location	1856	-737	-258	1853	-724	-253	-3	13	5

¹ Measurement point could not be located post-test.

Table 18 Target Vehicle Bumper Measurements

TARGET BUMPER PROFILE									
Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4134	-609	206	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
2	4157	-492	204	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
3	4158	-369	203	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
4	4158	-242	201	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
5	4157	-120	201	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
6	4157	3	201	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
7	4157	124	201	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
8	4157	248	200	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
9	4158	371	199	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
10	4157	493	198	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
11	4134	611	198	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹

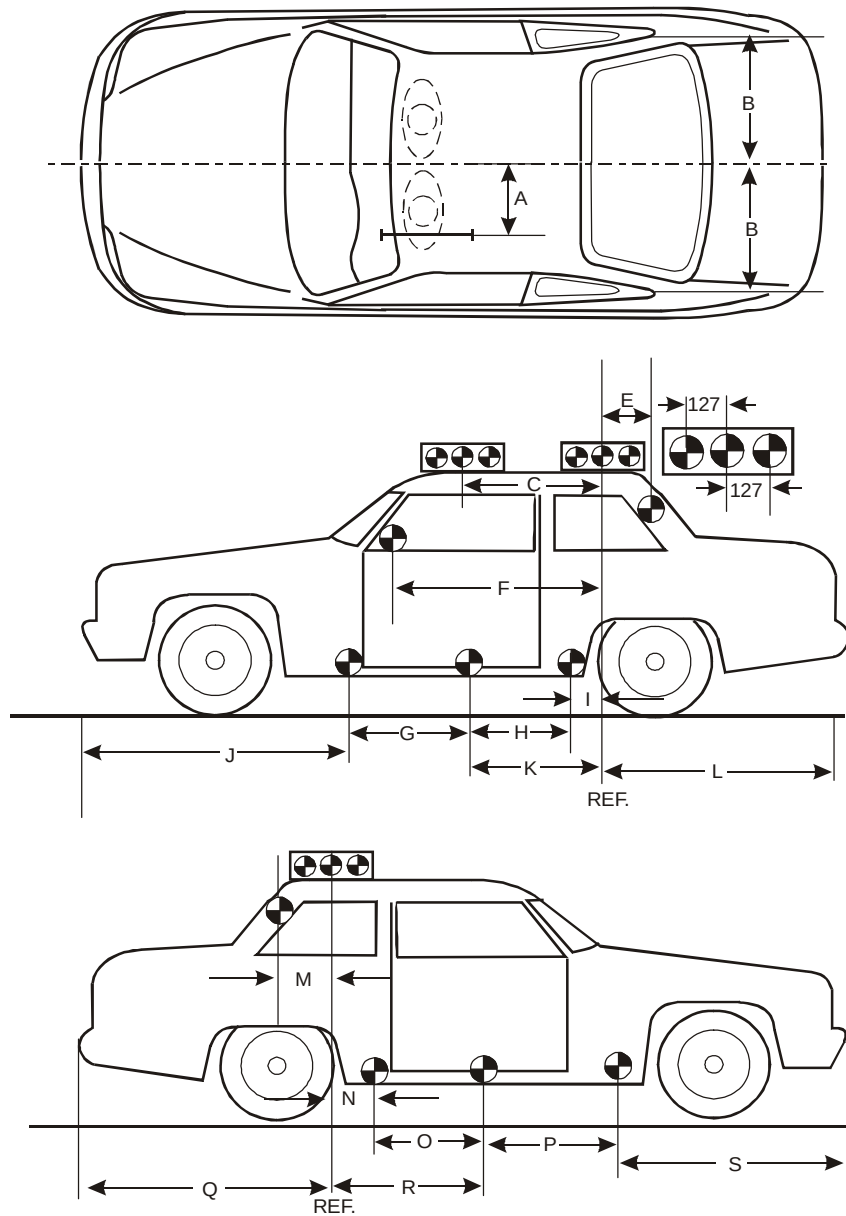
Pre-test and post-test measurement references: +X, forward of rear bumper; +Y, rightward from vehicle centerline; +Z, downward from ground level.

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

Measurements taken to bumper beam.

¹ Measurement point could not be located post-test.

Figure 16 Target Vehicle Reference Photo Target Locations



Measurement	Pre-Test	Measurement	Pre-Test	Measurement	Pre-Test
A	Left 350 mm Right 350 mm	F	1140 mm	M	507 mm
B	Left 605 mm Right 605 mm	G	870 mm	N	-262 mm
C	Left 610 mm Right 610 mm	H	895 mm	O	895 mm
E	560 mm	I	-305 mm	P	870 mm
		J	1195 mm	Q	1612 mm
		K	590 mm	R	633 mm
		L	1655 mm	S	1190 mm

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

Table 19 Bullet Vehicle Structural Measurements¹

	Elements	Pre-Test
1	Total Length	5198
2	Total Width	1970
3	Bumper Top Height	572
4	Bumper Bottom Height	481
5	Longitudinal Member Top Height	471
6	Longitudinal Member Bottom Height	479
7	Distance Between Longitudinal Members	1105
7'	Longitudinal Member Width	70
8	Engine Top Height	958
9	Engine Bottom Height	242
10	Engine and Gearbox Width	800
11	Front Bumper - Engine Distance	420
12	Front Shock Absorber Fixing Height	1004
13	Bonnet Leading Edge Height	979
14	Front Shock Absorber Fixing Width	1360
15	Front Bumper - Front Axle Distance	905
16	Front Axle - A Pillar Distance	515
17	A Pillar - B Pillar Distance	1050
18	B Pillar - Rear Axle Distance	1535
19	B Pillar - C Pillar Distance	945
20	Roof Sill Bottom Height	1589
21	Roof Sill Top Height	1649
22	Floor Sill Bottom Height	404
23	Floor Sill Top Height	499

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 17 Bullet Pre-Test And Post-Test Measurement Points

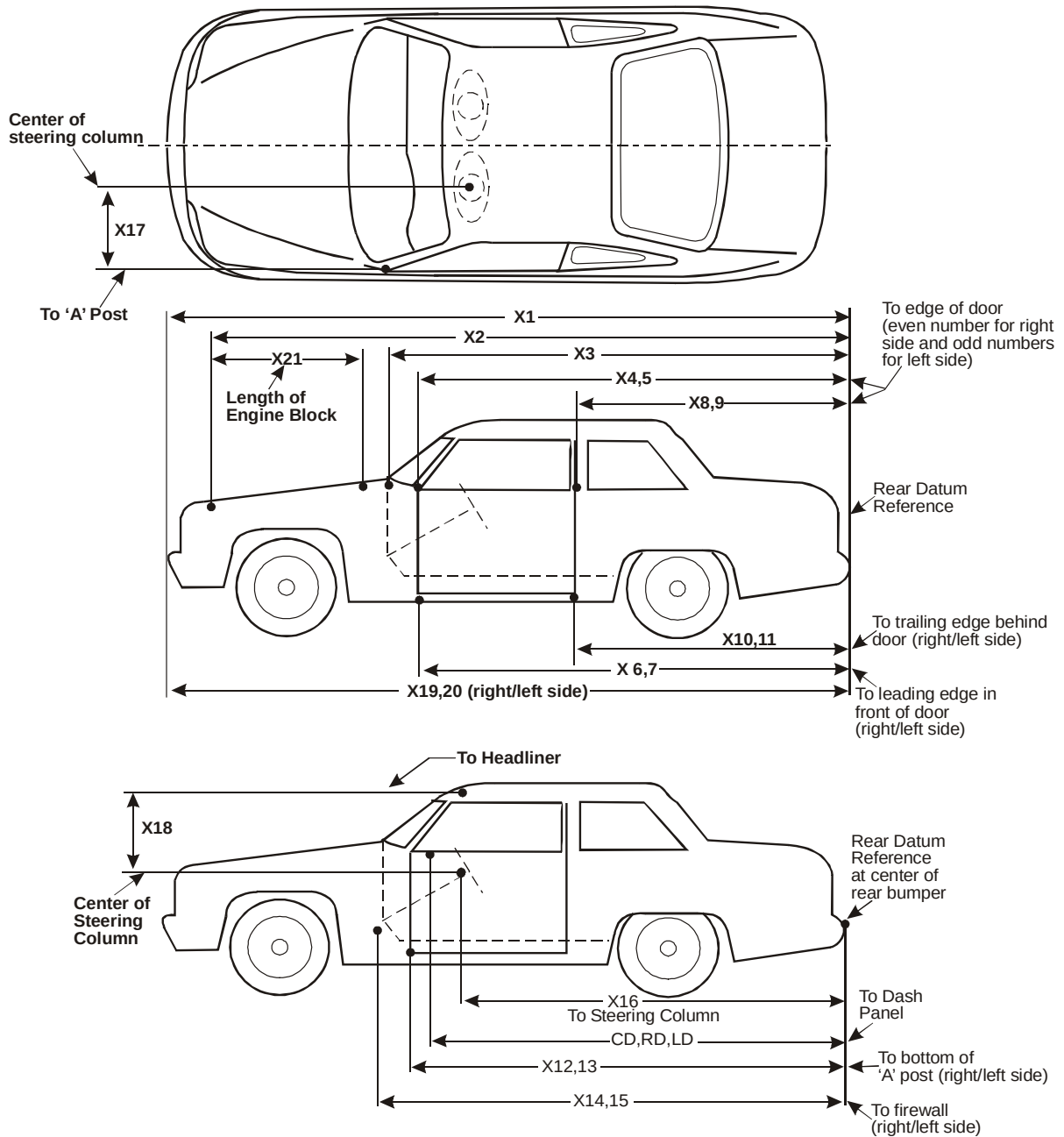


Table 20 Bullet Vehicle Impacted Measurements

Test number: 060324

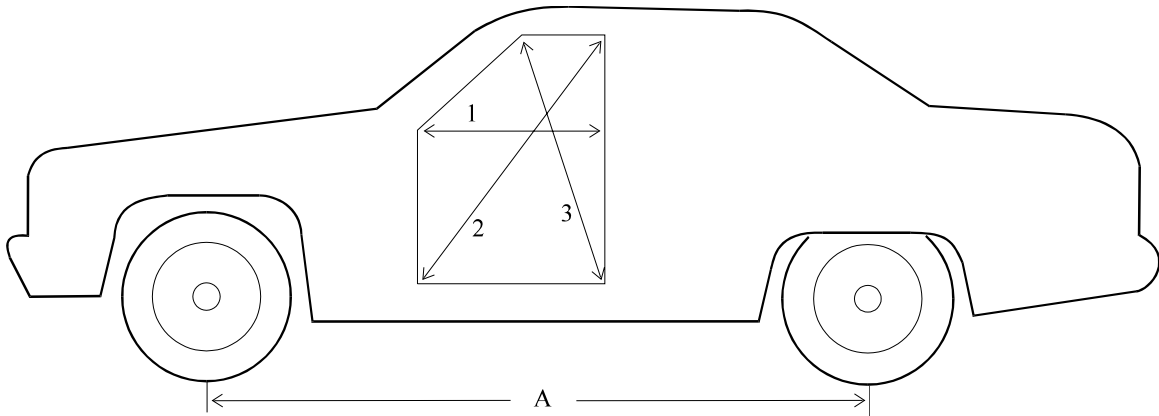
Vehicle year/make/model/body style: 2006/Honda/Ridgeline/Truck

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5198	4777	421
X2	Rear Surface of Vehicle to Front of Engine Block	4667	4468	199
X3	Rear Surface of Vehicle to Firewall	4298	4316	-18
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3788	3783	5
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3787	3777	10
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3718	3720	-2
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3703	3793	-90
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2775	2775	0
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2775	2766	9
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2806	2804	2
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2803	2807	-4
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3765	3762	3
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3768	3755	13
X14	Rear Surface of Vehicle to Firewall - Right Side	4338	4381	-43
X15	Rear Surface of Vehicle to Firewall - Left Side	4341	4387	-46
X16	Rear Surface of Vehicle to Steering Wheel Center	3381	3263	118
X17	Center of Steering Column to " A " Post	355	380	-25
X18	Center of Steering Column to Headliner	490	435	55
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5108	4958	150
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5106	4892	214
X21	Length of Engine Block	460	460	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3683	3671	12
CD	Rear Surface of Vehicle to Center of Dash Panel	3633	3623	10
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3643	3629	14

All distance measurements are in millimeters.

Figure 18 Bullet Vehicle Intrusion Measurements

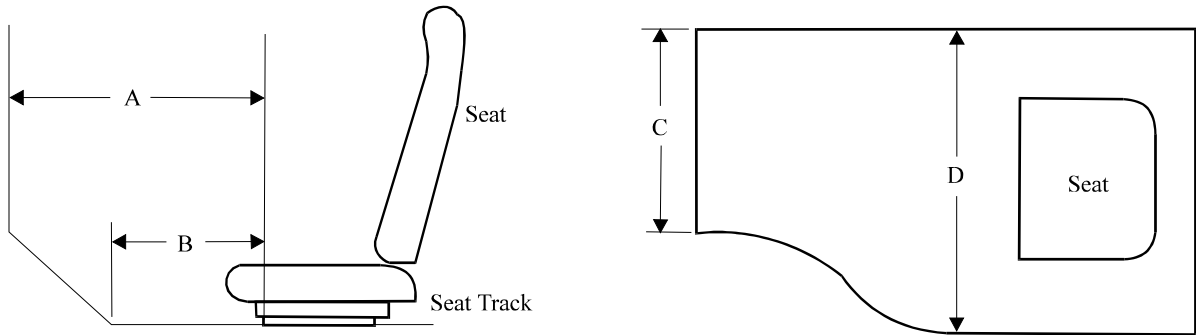
Door Opening Width



Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	952 mm	1475 mm	1150 mm	955 mm	1475 mm	1150 mm
Post-Test	954 mm	1470 mm	1154 mm	954 mm	1472 mm	1155 mm
Difference	-2 mm	5 mm	-4 mm	1 mm	3 mm	-5 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	3100 mm	3100 mm
Post-Test	3014 mm	3022 mm
Difference	86 mm	78 mm

Figure 19 Bullet Vehicle Intrusion Measurements
Static Footwell Deformation



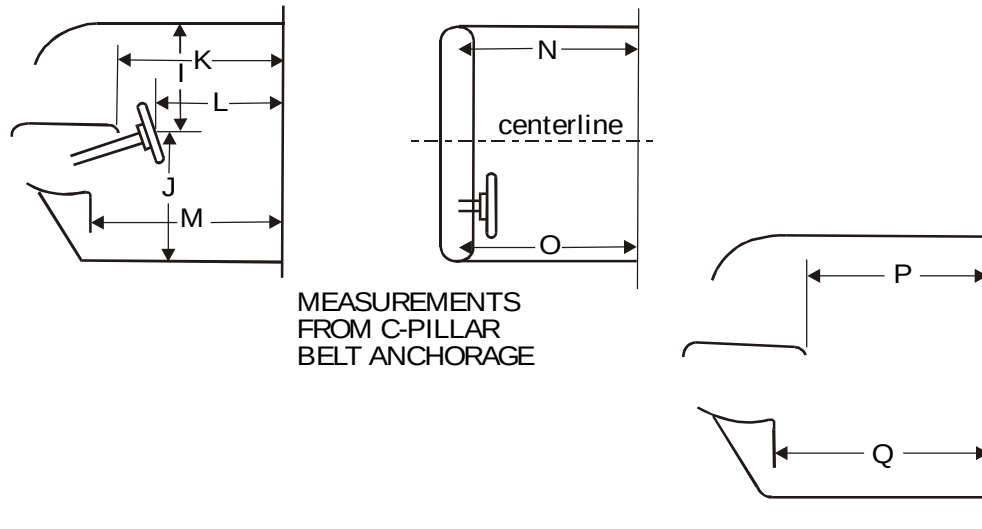
Driver's Side

Measurement	Pre-Test	Post-Test	Difference
A	662 mm	617 mm	45 mm
B	545 mm	543 mm	2 mm
C	435 mm	432 mm	3 mm
D	425 mm	425 mm	0 mm

Passenger's Side

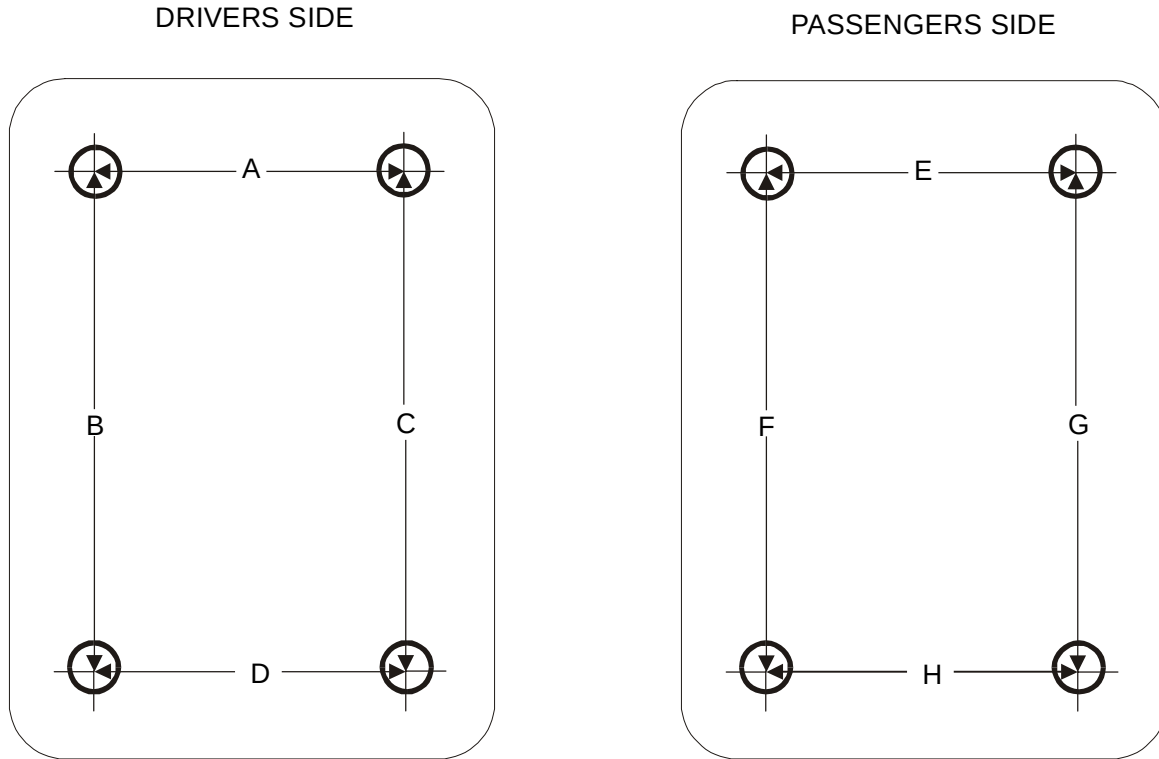
Measurement	Pre-Test	Post-Test	Difference
A	650 mm	602 mm	48 mm
B	545 mm	530 mm	15 mm
C	445 mm	447 mm	-2 mm
D	458 mm	456 mm	2 mm

Figure 20 Bullet Vehicle Intrusion Measurements
Static Passenger Compartment Intrusion



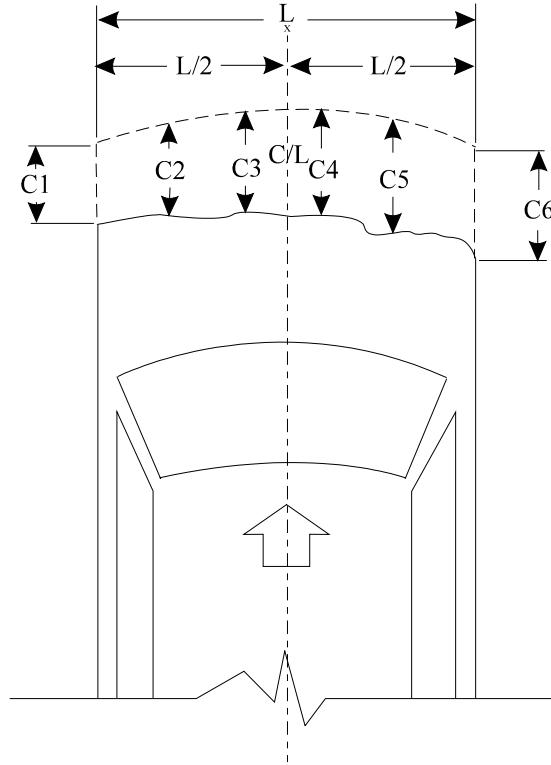
Measurement	Pre-Test	Post-Test	Difference
I	490 mm	435 mm	55 mm
J	700 mm	763 mm	-63 mm
K (driver's side)	1855 mm	1855 mm	0 mm
L	1630 mm	1623 mm	7 mm
M (driver's side)	1910 mm	1908 mm	2 mm
N (passenger's side)	1925 mm	1920 mm	5 mm
O (driver's side)	1880 mm	1885 mm	-5 mm
P (passenger's side)	1915 mm	1912 mm	3 mm
Q (passenger's side)	1922 mm	1900 mm	22 mm

Figure 21 Bullet Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	435 mm	447 mm	-12 mm
B	520 mm	524 mm	-4 mm
C	500 mm	466 mm	34 mm
D	425 mm	425 mm	0 mm
E	445 mm	447 mm	-2 mm
F	460 mm	437 mm	23 mm
G	470 mm	464 mm	6 mm
H	458 mm	456 mm	2 mm

Figure 22 Bullet Vehicle Crush



Notes: L is pre-test length of contact surface.
C1 through C6 are spaced equally apart.
CL is vehicle centerline.

Vehicle: 2006 Honda Ridgeline Truck
Measured without bumper fascia:

Location	Pre-test	Post-test	Difference
L	1245 mm		
C1	5106 mm	4892 mm	214 mm
C2	5165 mm	4763 mm	402 mm
C3	5193 mm	4736 mm	457 mm
C4	5193 mm	4783 mm	410 mm
C5	5165 mm	4881 mm	284 mm
C6	5108 mm	4958 mm	150 mm
CL	5198 mm	4777 mm	421 mm

Table 21 Bullet Vehicle Frontal Profile Measurements

Bottom of Front Bumper

Pre-Test				Post-Test			Difference ¹		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	5106	-624	-477	4830	-592	-480	276	32	-3
2	5165	-372	-480	4748	-355	-450	417	17	30
3	5193	-122	-482	4705	-119	-442	488	3	40
4	5193	122	-480	4764	124	-440	429	-2	40
5	5165	372	-475	4812	375	-458	353	-3	17
6	5108	624	-478	4883	618	-486	225	6	-8

Top of Front Bumper

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	5106	-624	-560	4892	-549	-541	214	75	19
2	5165	-372	-560	4763	-344	-500	402	28	60
3	5193	-122	-560	4736	-106	-511	457	16	49
4	5193	122	-560	4783	104	-510	410	18	50
5	5165	372	-560	4881	362	-505	284	10	55
6	5108	624	-559	4958	612	-525	150	12	34

Center of Grill

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	5043	-608	-770	4751	-586	-773	88	22	-3
2	5003	-360	-717	4703	-346	-791	106	14	-74
3	4996	-125	-740	4700	-112	-789	110	13	-49
4	4996	120	-730	4729	115	-779	99	5	-49
5	5032	370	-708	4744	372	-833	89	-2	-125
6	5043	625	-774	4809	606	-817	55	19	-43

Front of Hood

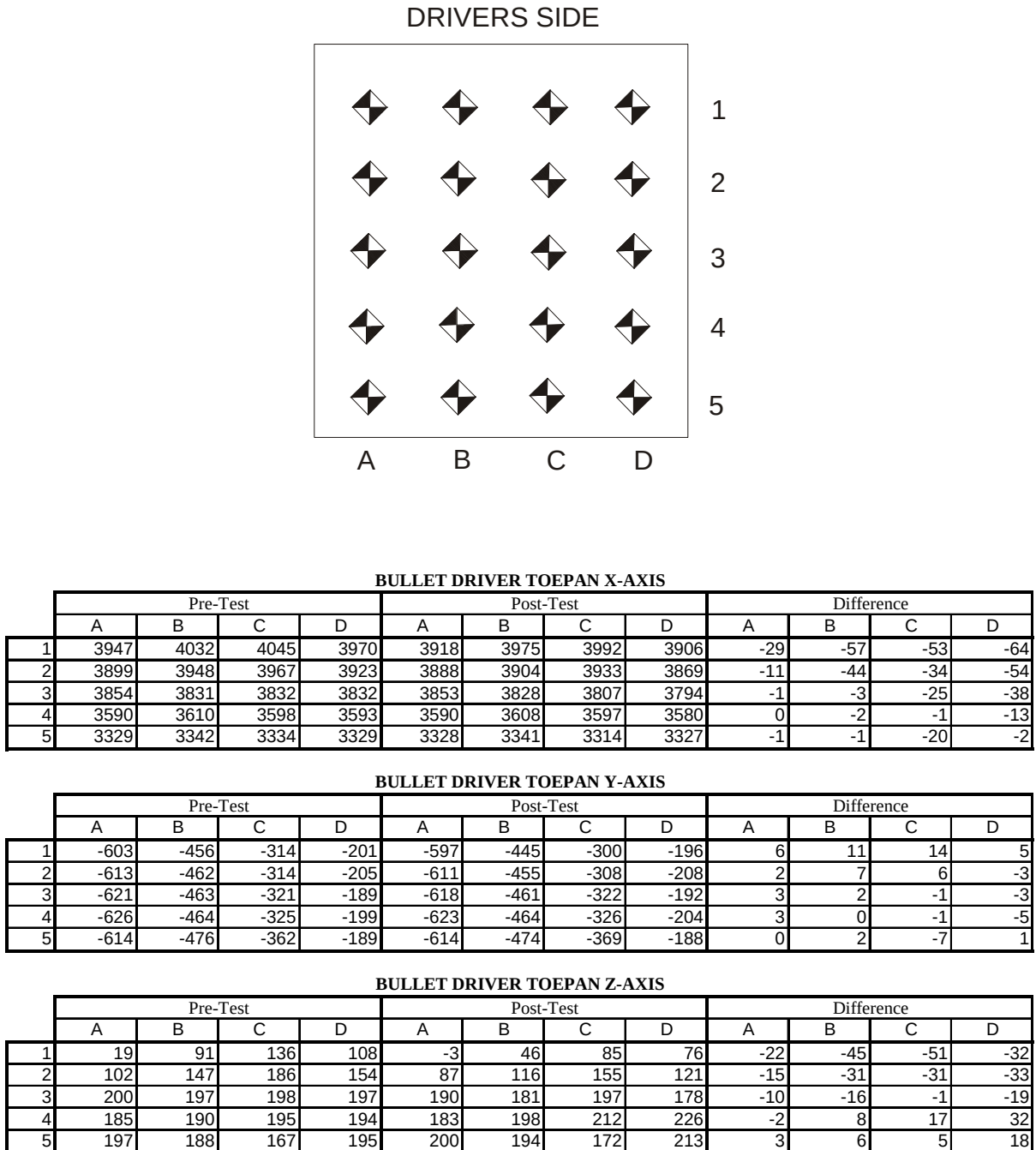
Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	5018	-648	-980	4930	-609	-1070	88	39	-90
2	5138	-368	-978	5032	-383	-974	106	-15	4
3	5153	-120	-982	5043	-134	-958	110	-14	24
4	5153	122	-975	5054	111	-955	99	11	20
5	5138	372	-975	5049	359	-966	89	13	9
6	5023	640	-983	4968	617	-1044	55	23	-61

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

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

¹ Measurements 1-6, Bottom of Front Bumper, are included in the NHTSA Entrée database submission as Damage Profile Distances 1-6.

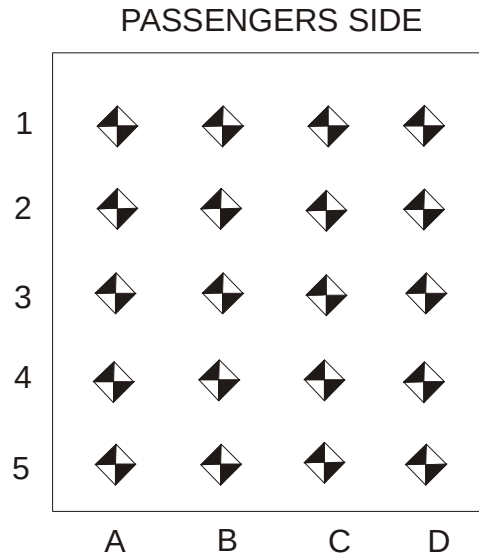
Figure 23 Bullet Vehicle Toeboard Measurements



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

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

Figure 23 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	4077	4060	4064	3938	3943	3999	3982	3907	-134	-61	-82	-31
2	4010	3976	3982	3905	3958	3934	3937	3878	-52	-42	-45	-27
3	3840	3841	3856	3850	3809	3820	3835	3838	-31	-21	-21	-12
4	3624	3625	3611	3608	3604	3608	3597	3602	-20	-17	-14	-6
5	3379	3377	3365	3375	3377	3381	3366	3372	-2	4	1	-3

BULLET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	191	378	516	628	186	353	484	618	-5	-25	-32	-10
2	180	370	499	632	164	353	477	623	-16	-17	-22	-9
3	193	343	487	639	186	335	476	629	-7	-8	-11	-10
4	195	313	479	631	193	308	474	624	-2	-5	-5	-7
5	185	332	492	638	181	339	491	638	-4	7	-1	0

BULLET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	80	62	56	20	18	13	-5	-9	-62	-49	-61	-29
2	158	130	126	87	121	99	85	61	-37	-31	-41	-26
3	168	199	200	197	161	189	186	174	-7	-10	-14	-23
4	178	201	186	189	183	209	191	184	5	8	5	-5
5	193	169	185	184	209	167	202	181	16	-2	17	-3

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

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

Table 22 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	3386	-402	-519	3391	-408	-550	5	-6	-31
2	Driver's Lower Left Instrument Panel	3609	-551	-291	3589	-536	-316	-20	15	-25
3	Driver's Lower Right Instrument Panel	3604	-251	-290	3593	-253	-305	-11	-2	-15
4	Brake Pedal Center	3859	-393	8	3839	-403	-18	-20	-10	-26
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	4020	-543	7	3971	-523	-27	-49	20	-34
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	4084	-392	-11	3990	-375	-58	-94	17	-47
7	Center Right Toeboard 150 mm Right of the Brake Pedal Center at Height of Brake Pedal Center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	Foot Rest 250 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3936	-638	-9	3917	-637	-26	-19	1	-17
9	Left Front Driver's Seat Mounting Bolt	3307	-615	180	3306	-615	184	-1	0	4
10	Right Front Driver's Seat Mounting Bolt	3307	-186	179	3306	-185	196	-1	1	17
11	Left Rear Driver's Seat Mounting Bolt	2957	-616	154	2956	-616	153	-1	0	-1
12	Right Rear Driver's Seat Mounting Bolt	2958	-182	153	2959	-185	157	1	-3	4
17	Exterior A-Pillar at Height of Bottom of Front Window	3752	-816	-592	3749	-816	-600	-3	0	-8
18	Exterior B-pillar at Height of A-Pillar Measurement Location	2756	-861	-592	2755	-858	-595	-1	3	-3

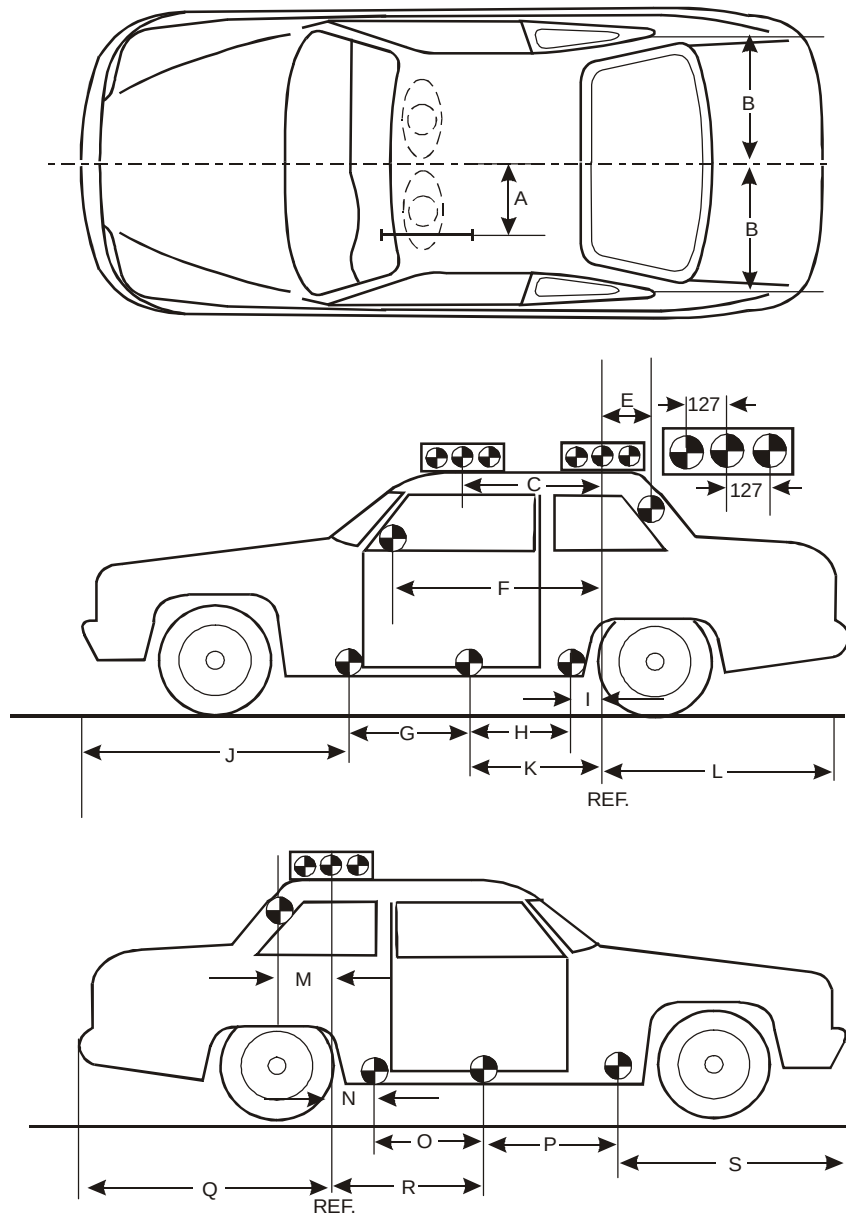
Table 23 Bullet Vehicle Bumper Measurements

BULLET BUMPER PROFILE									
Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	5121	-601	98	4852	-582	98	-269	19	0
2	5154	-484	99	4804	-473	120	-350	11	21
3	5179	-362	98	4728	-376	123	-451	-14	25
4	5197	-231	97	4707	-247	120	-490	-16	23
5	5207	-110	97	4695	-128	120	-512	-18	23
6	5210	14	96	4740	-14	131	-470	-28	35
7	5206	135	96	4761	101	127	-445	-34	31
8	5195	260	96	4789	220	116	-406	-40	20
9	5177	384	95	4832	337	111	-345	-47	16
10	5152	504	95	4869	454	104	-283	-50	9
11	5119	622	96	4908	570	100	-211	-52	4

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

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

Figure 24 Bullet Vehicle Reference Photo Target Locations



Measurement	Pre-Test	Measurement	Pre-Test	Measurement	Pre-Test
A	Left 455 mm Right 455 mm	F	1178 mm	M	543 mm
B	Left 690 mm Right 690 mm	G	1050 mm	N	-618 mm
C	Left 610 mm Right 610 mm	H	993 mm	O	993 mm
E	560 mm	I	-630 mm	P	1055 mm
		J	1333 mm	Q	2351 mm
		K	360 mm	R	377 mm
		L	2363 mm	S	1325 mm

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

Figure 25 Camera Positions

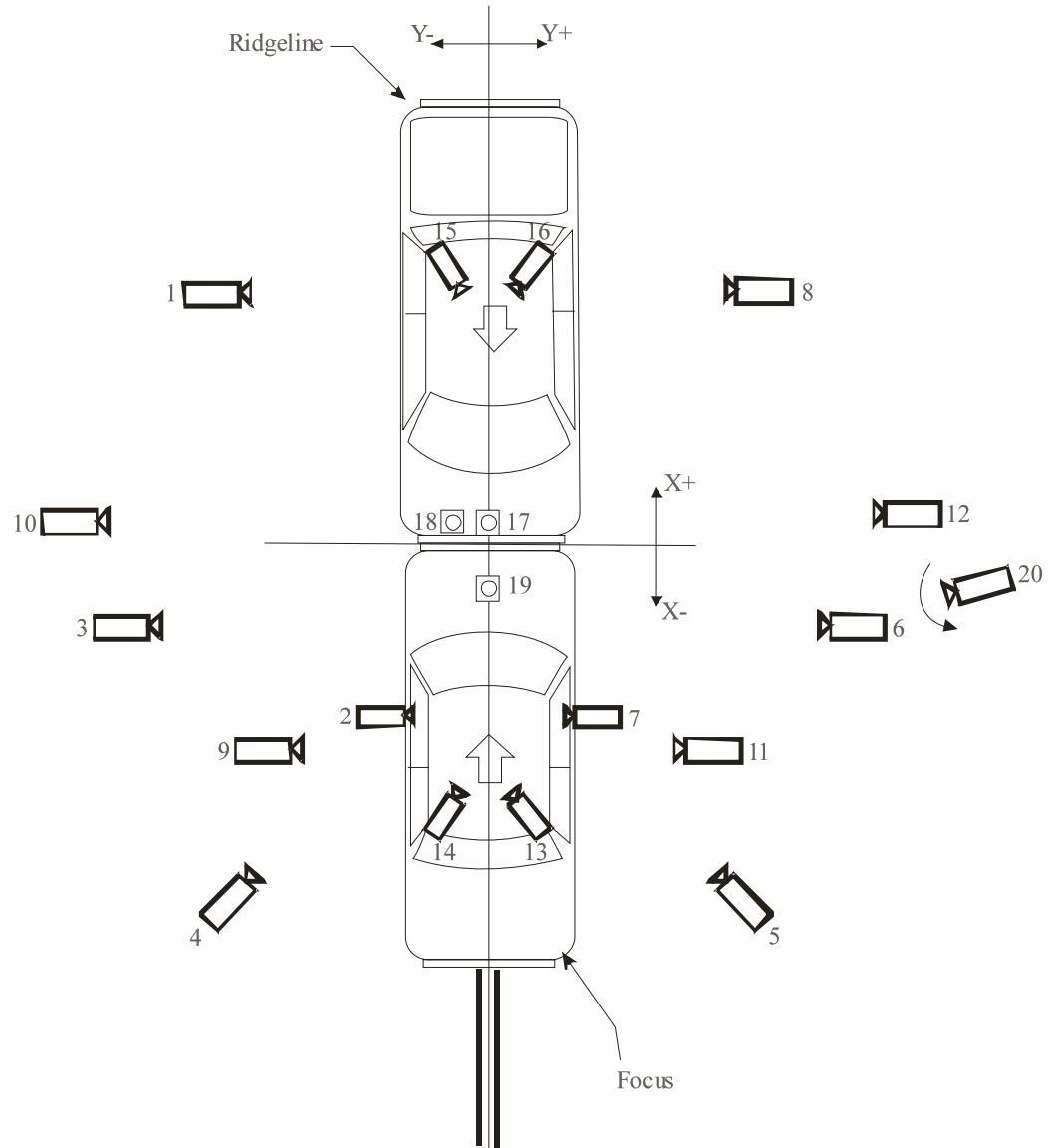


Table 24 Camera Information

Camera Number	Location	Location, mm			Angle (deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Bullet vehicle passenger side	1250	-14000	1040	0.5°	25	1000
2	Onboard target vehicle - driver	-1850	-810	1020	-4.5°	6.5	1000
3	Target vehicle left tight	-700	-10850	970	0.3°	50	1000
4	Target vehicle driver angled	-5000	-4300	1630	-8.6°	50	1000
5	Target vehicle passenger angled	-5000	4000	1645	-10.9°	50	1000
6	Target vehicle right tight	0	11600	1160	0.1°	50	1000
7	Onboard target vehicle - passenger	-1800	820	1050	-1.3°	6.5	1000
8	Bullet vehicle driver side	2050	13600	1025	-0.4°	25	1000
9	Target vehicle driver side wide	-1900	-11850	1025	-2.8°	25	1000
10	Left overall wide (reference to target vehicle)	0	-10350	1090	-0.3°	12.5	1000
11	Target vehicle passenger side wide	-1540	11554	985	-0.8°	25	1000
12	Right overall wide (reference to target vehicle)	890	11550	1165	-2.9°	12.5	1000
13	Onboard target vehicle - driver over shoulder	-2720	220	1100	-5.5°	12.5	1000
14	Onboard target vehicle - passenger over shoulder	-2720	-210	1100	-5.7°	12.5	1000
15	Onboard bullet vehicle - driver over shoulder	2800	-220	1440	-10.3°	13	1000
16	Onboard bullet vehicle - passenger over shoulder	2800	200	1440	-0.7°	13	1000
17	Overhead wide	0	250	10058	-90.0°	10	1000
18	Overhead tight	0	0	10058	-90.0°	50	1000
19	Underbody crush area of target vehicle	0	0	-3005	-90.0°	25	1000
20	Panning/documentary	N/A	N/A	N/A	N/A	Zoom	30

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

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

+Z: Downward from ground level

Appendix A

Photographs



Figure A-1 Pre-Test Overall - View 1



Figure A-2 Post-Test Overall - View 1



Figure A-3 Pre-Test Overall - View 2



Figure A-4 Post-Test Overall - View 2



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



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



Figure A-7 Pre-Test Overhead Wide View



Figure A-8 Post-Test Overhead Wide View



Figure A-9 Pre-Test Overhead Close-up View

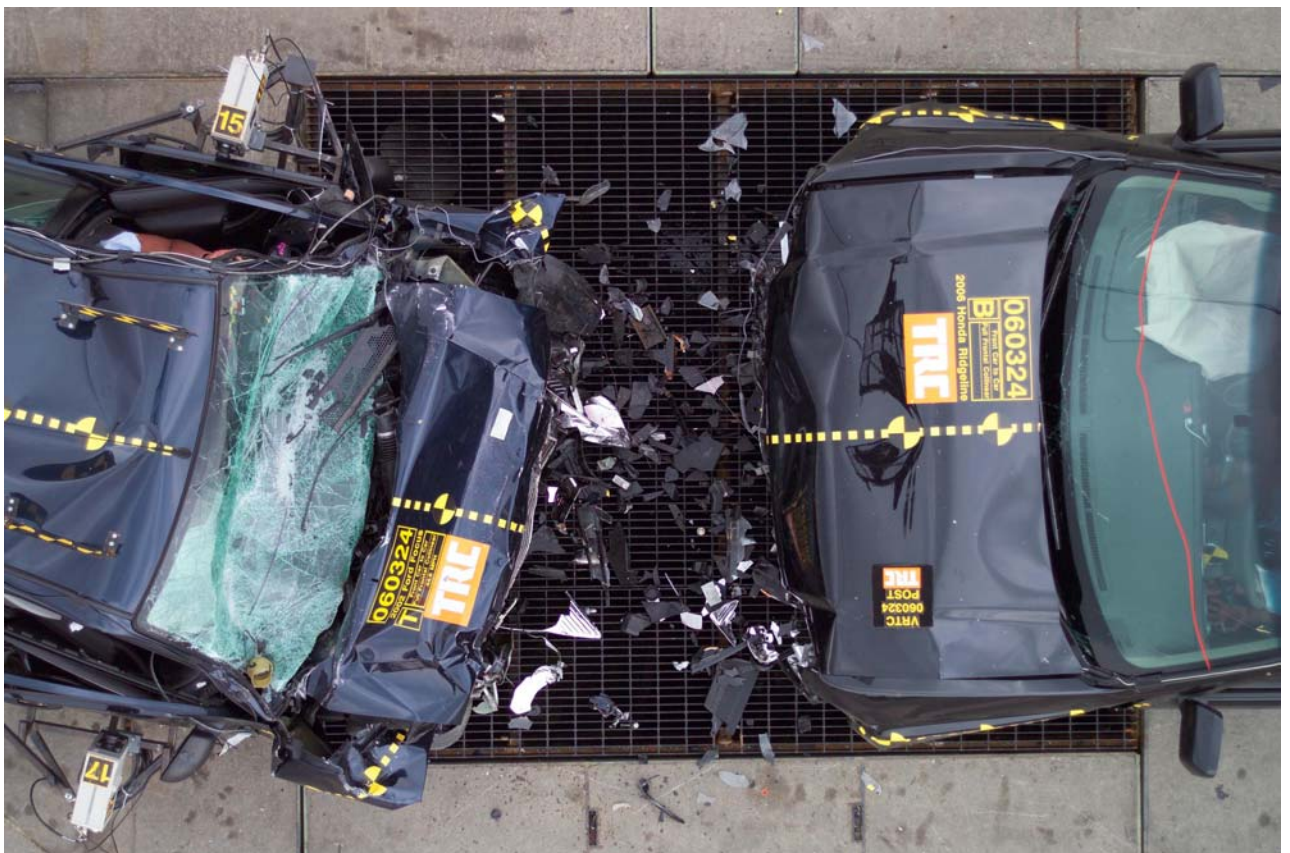


Figure A-10 Post-Test Overhead Close-up View



Figure A-11 Pre-Test Overhead Target Vehicle View

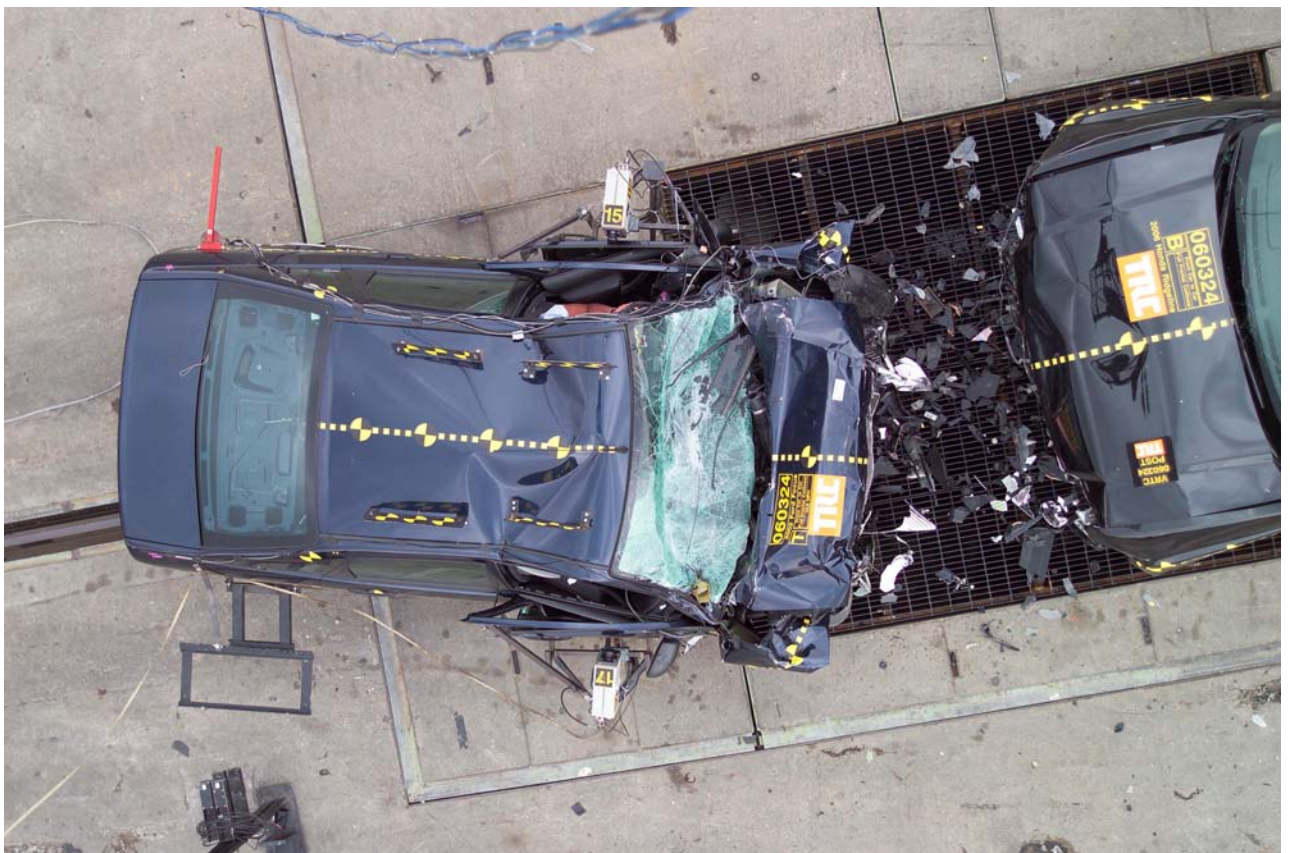


Figure A-12 Post-Test Overhead Target Vehicle View

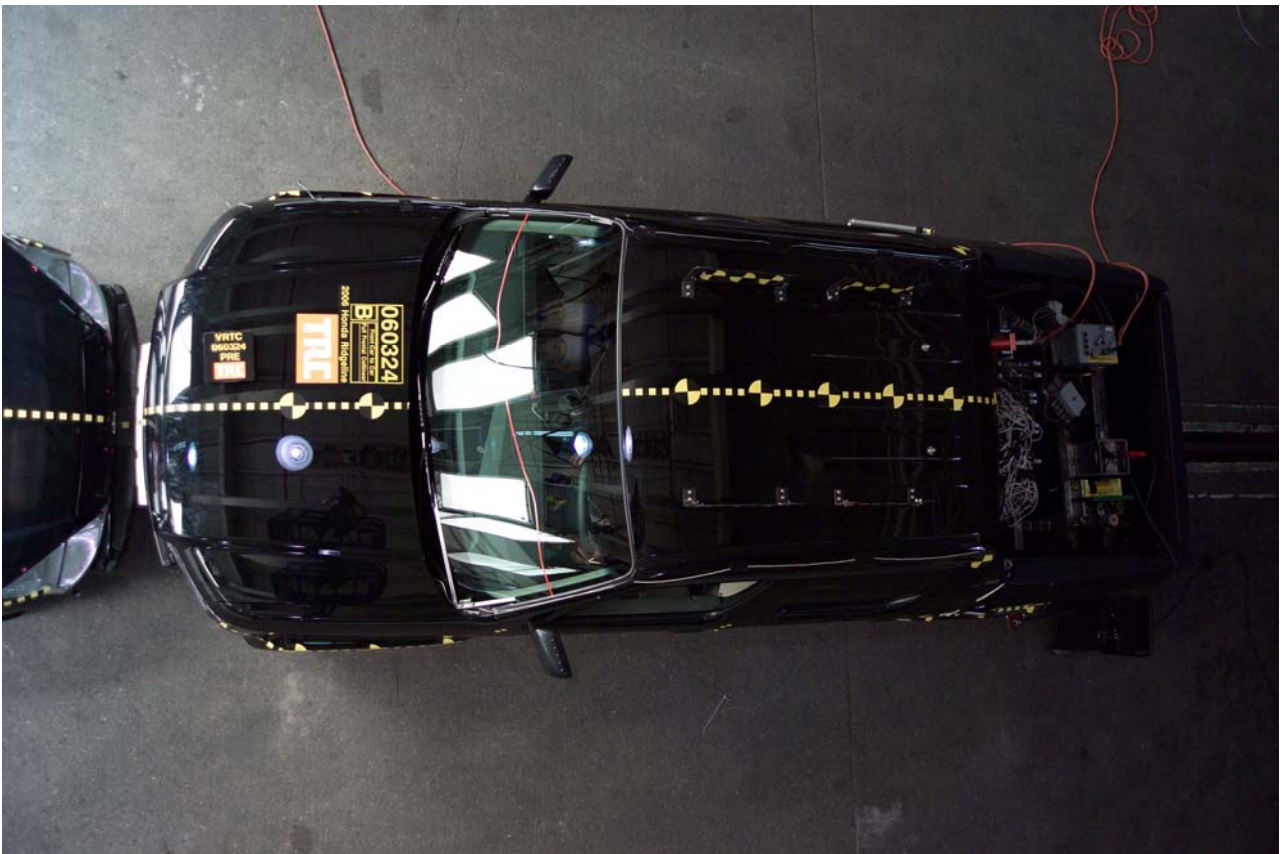


Figure A-13 Pre-Test Overhead Bullet Vehicle View



Figure A-14 Post-Test Overhead Bullet Vehicle View



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

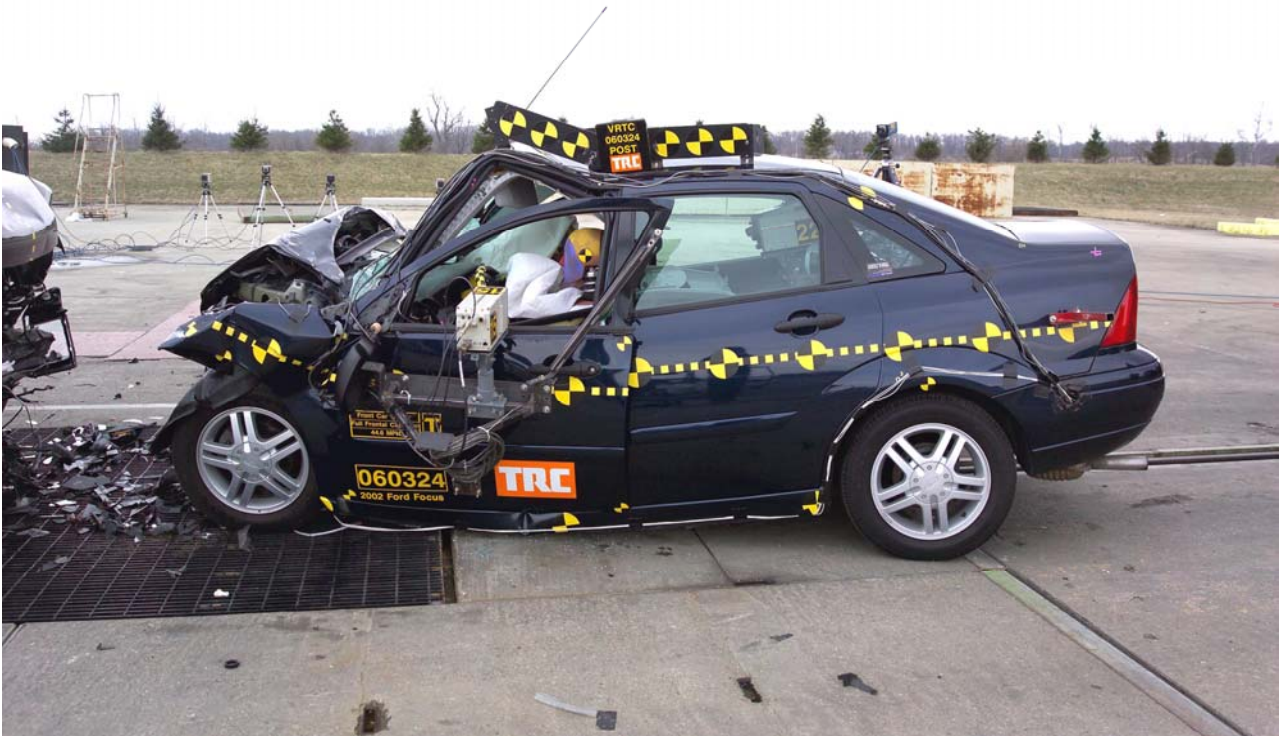


Figure A-20 Post-Test Target Vehicle Left Side View



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 Pre-Test Target Vehicle Right Rear View



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



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



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



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



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



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

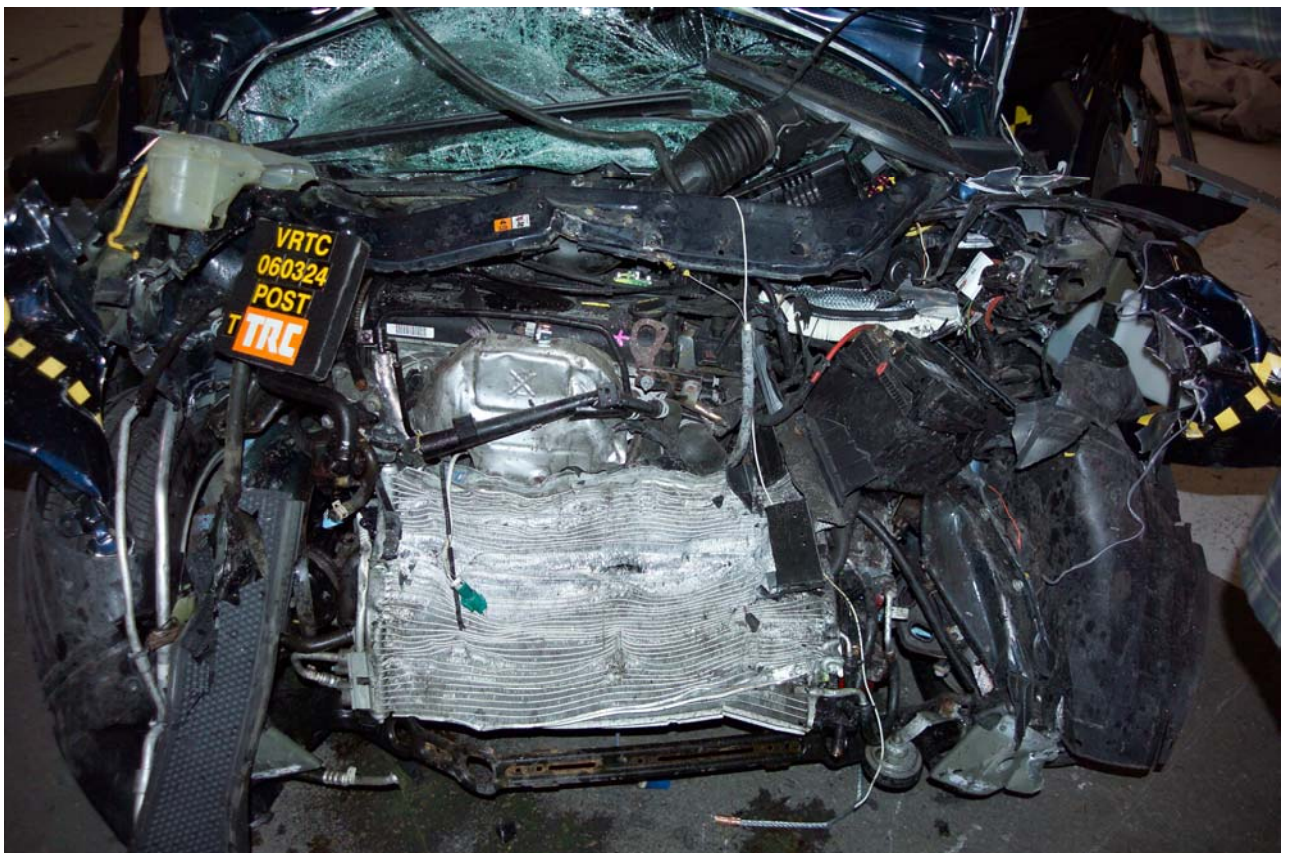


Figure A-32 Post-Test Target Vehicle Engine Compartment View



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

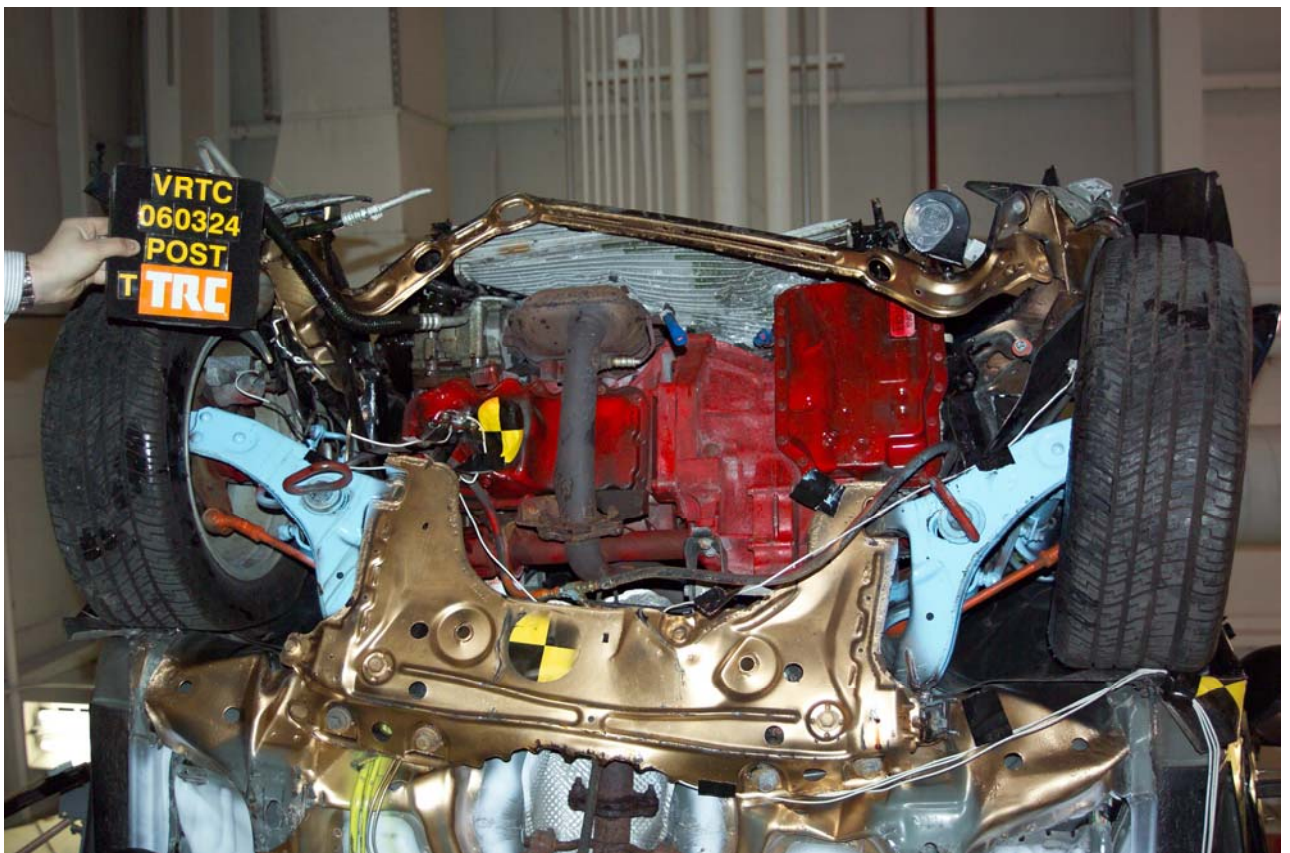


Figure A-34 Post-Test Target Vehicle Front Underbody View

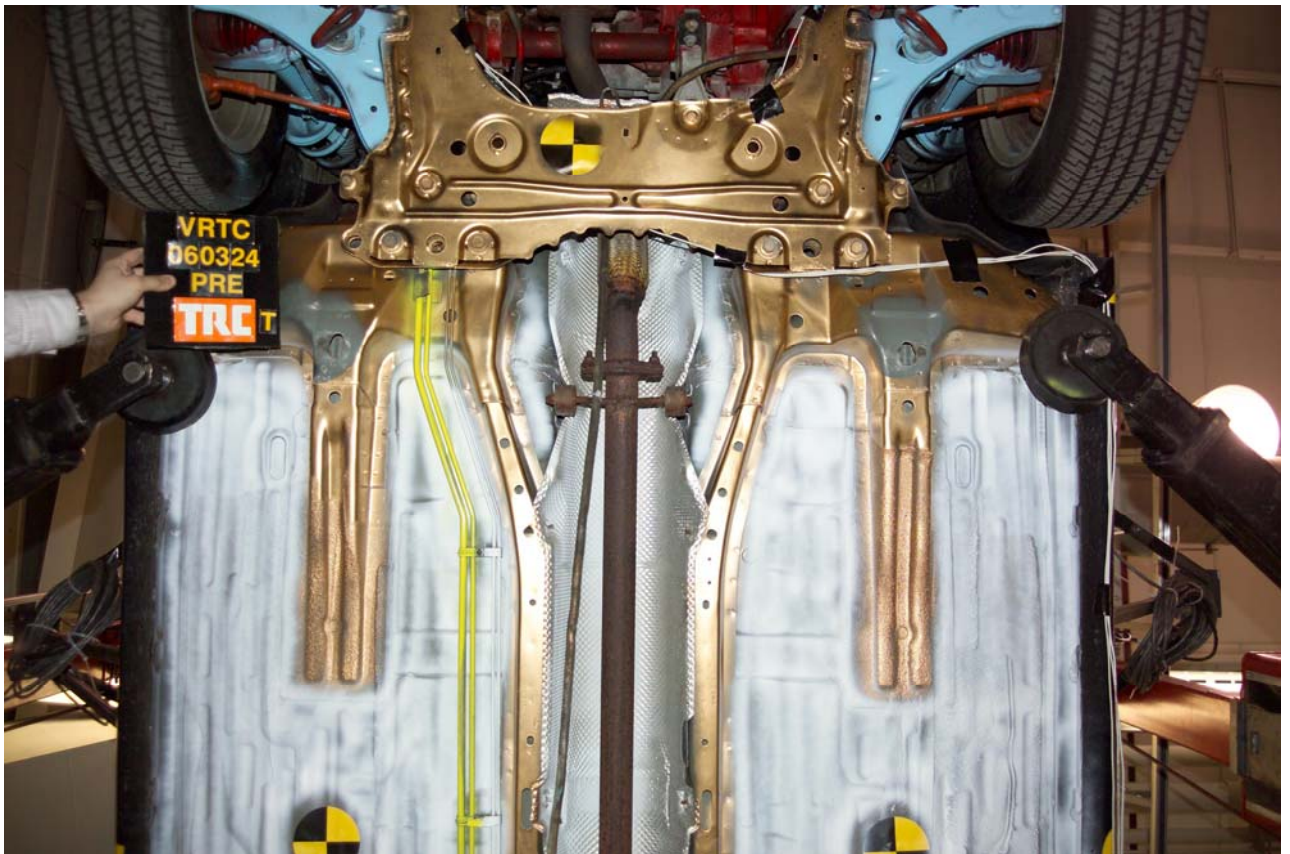


Figure A-35 Pre-Test Target Vehicle Front Mid Underbody View

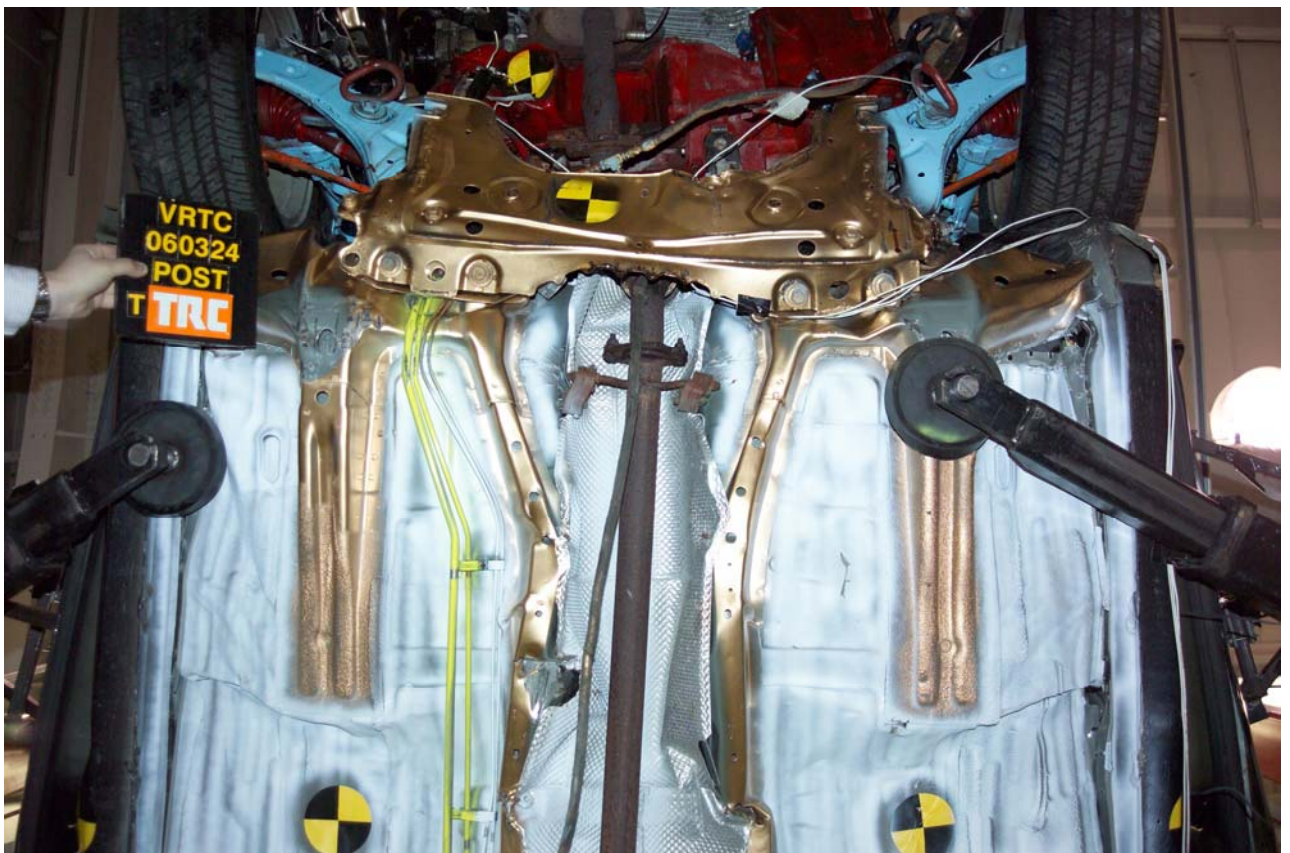


Figure A-36 Post-Test Target Vehicle Front Mid Underbody View

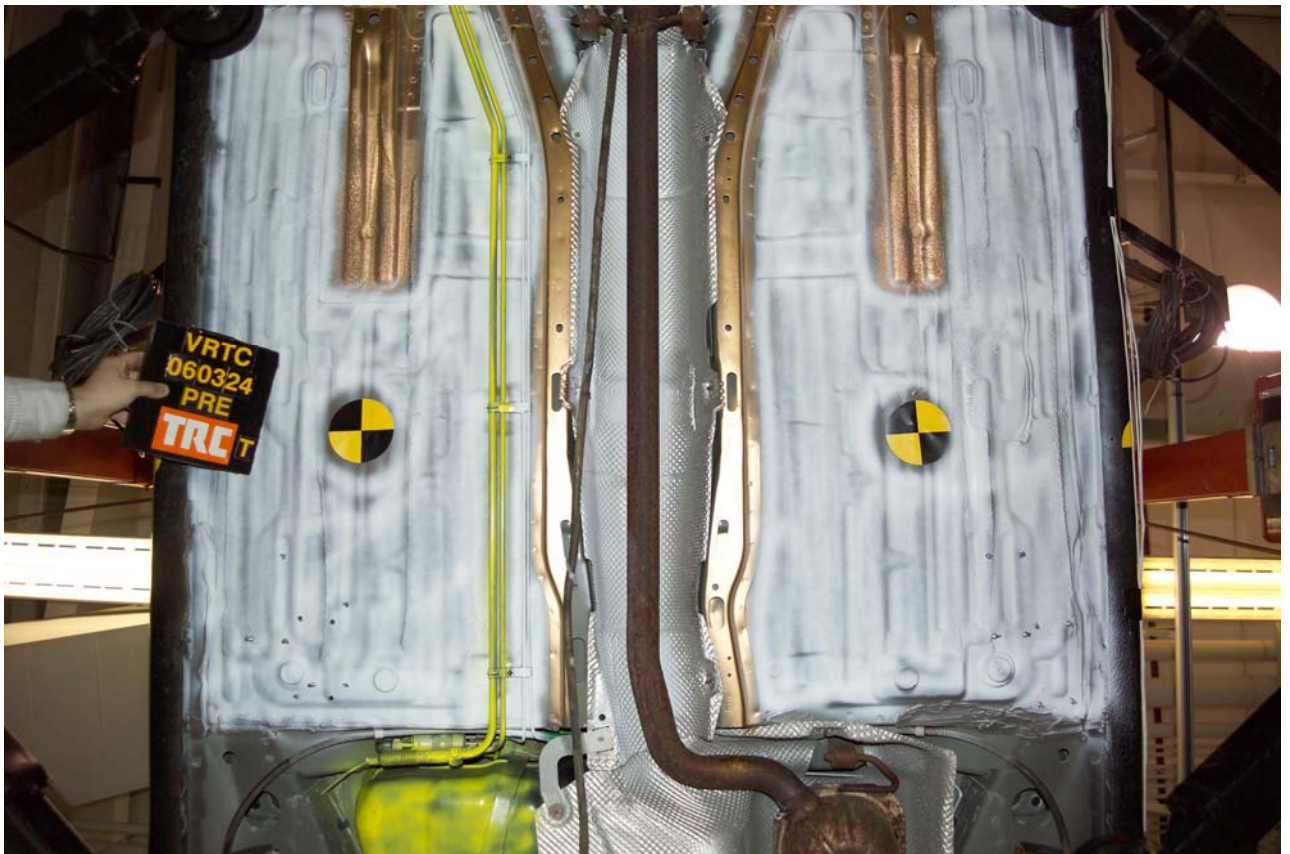


Figure A-37 Pre-Test Target Vehicle Mid Underbody View

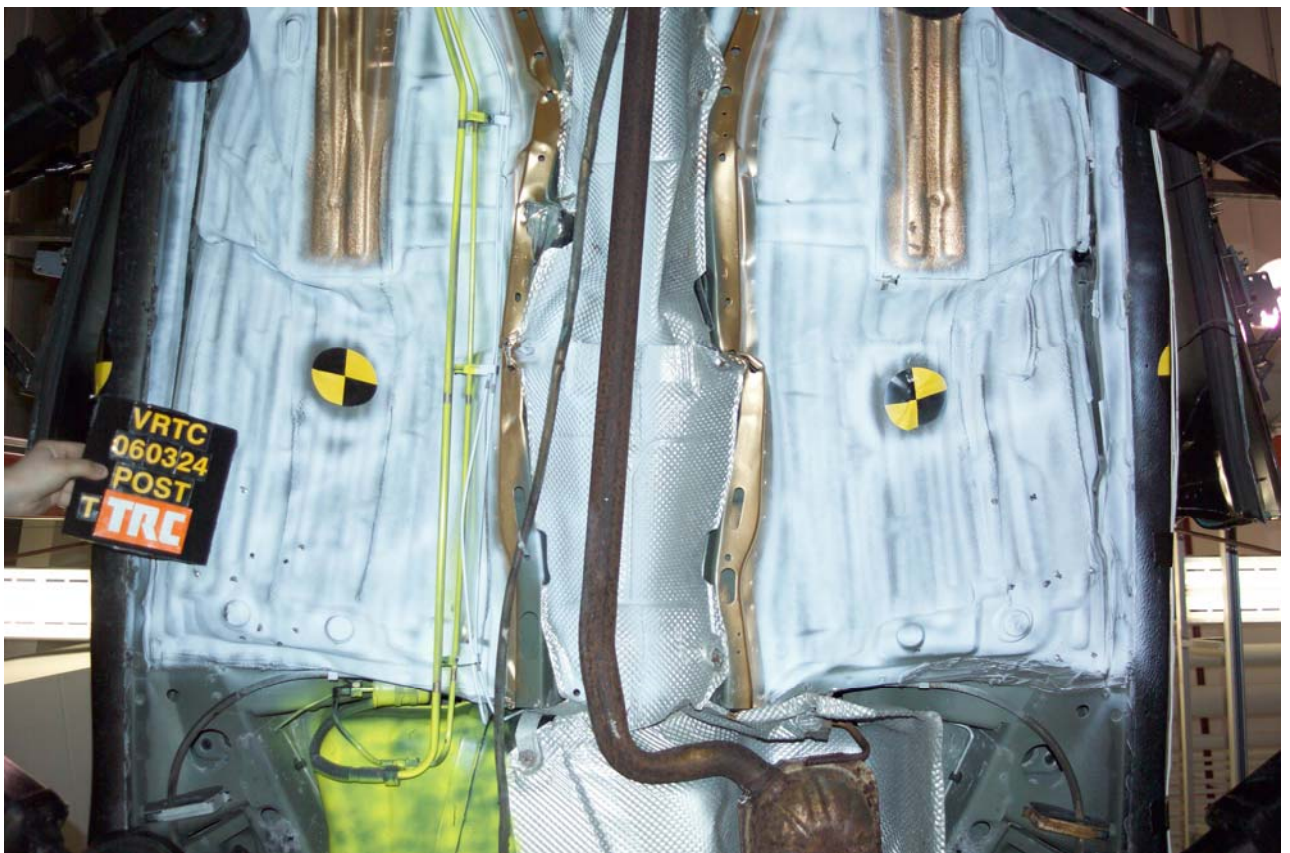


Figure A-38 Post-Test Target Vehicle Mid Underbody View

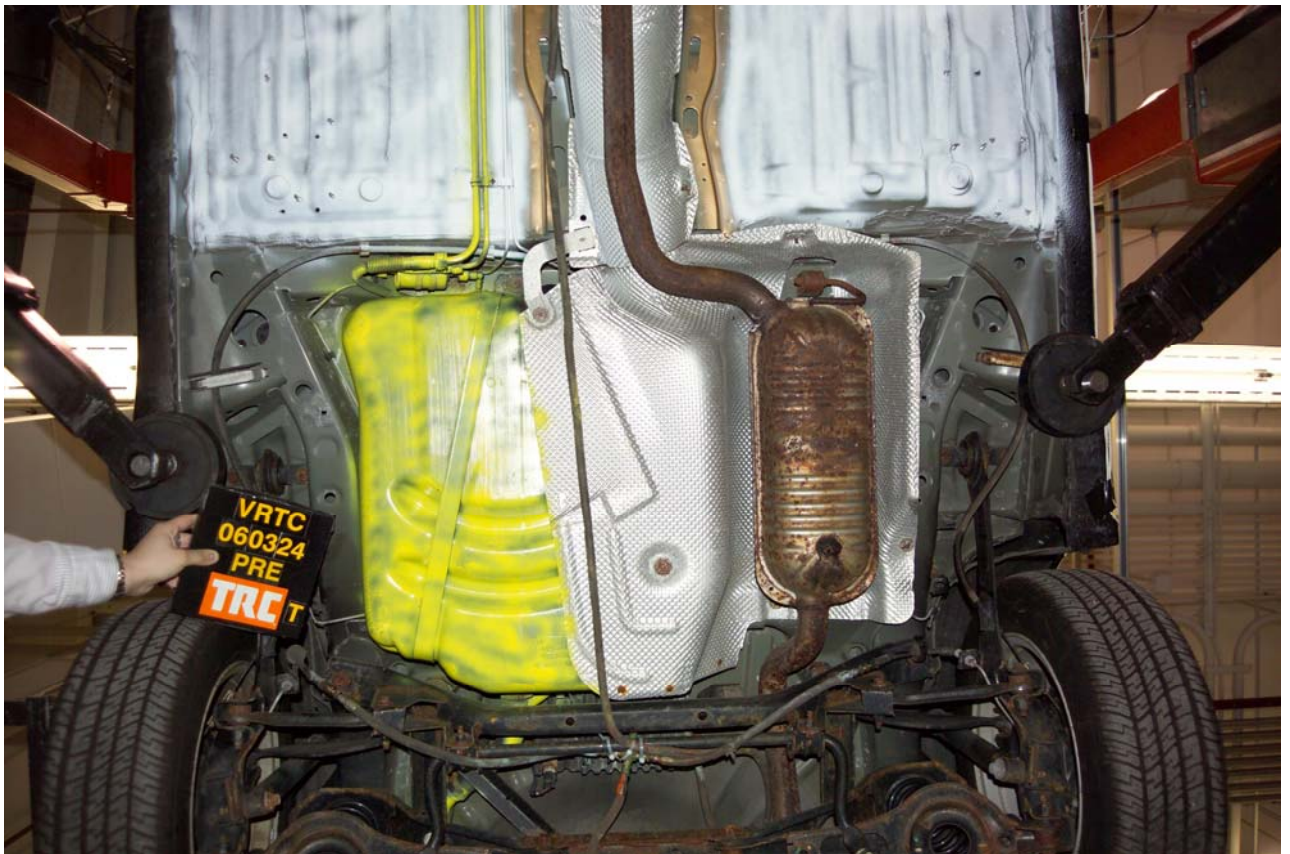


Figure A-39 Pre-Test Target Vehicle Rear Mid Underbody View



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

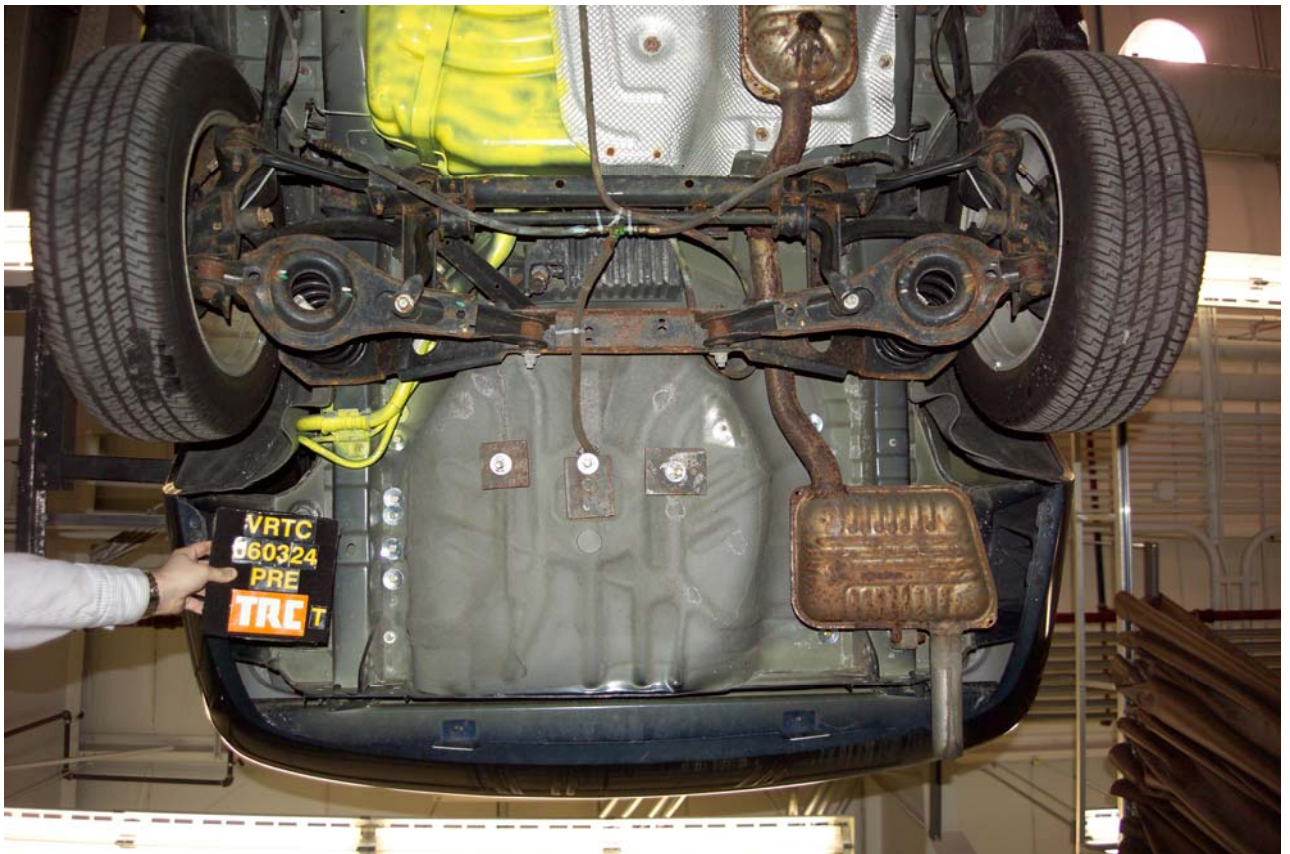


Figure A-41 Pre-Test Target Vehicle Rear Underbody View

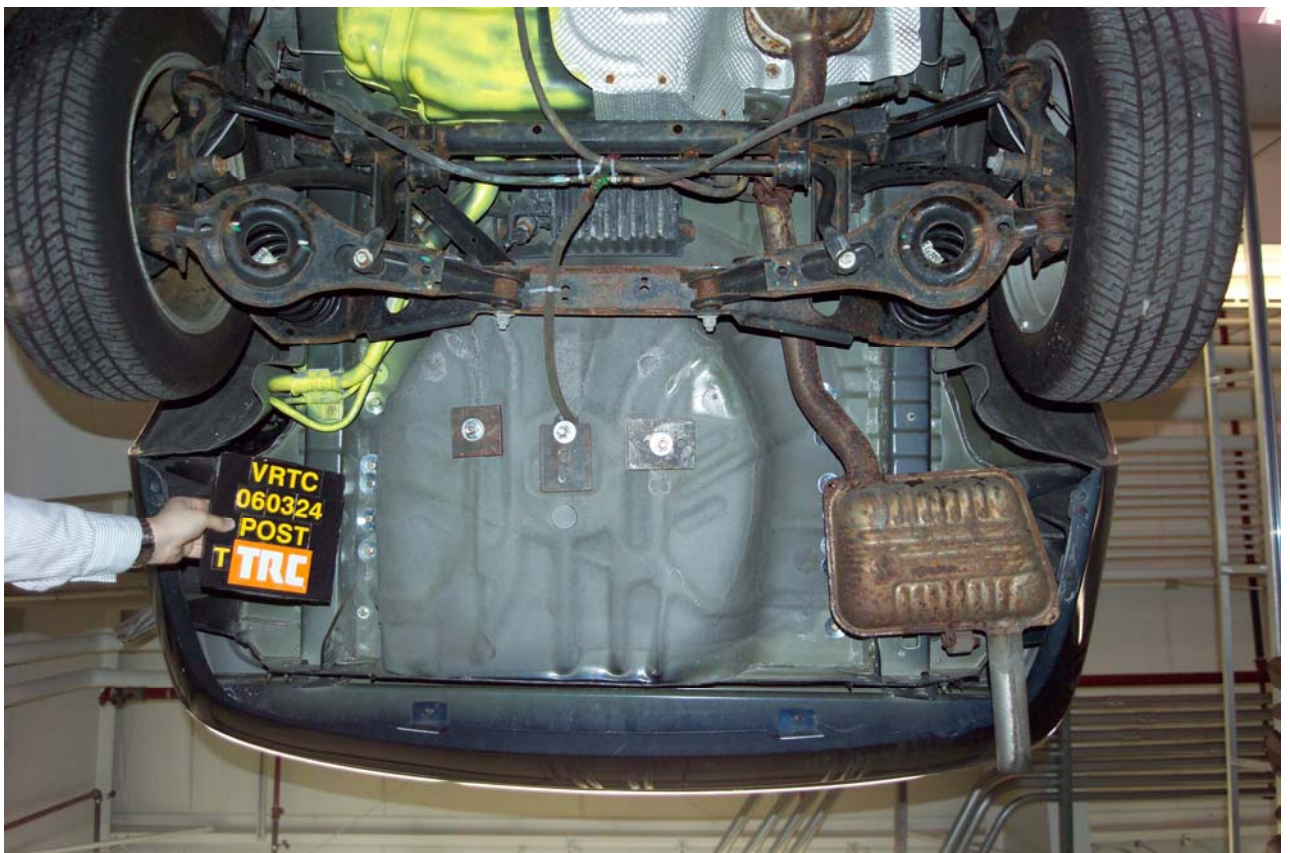


Figure A-42 Post-Test Target Vehicle Rear Underbody View

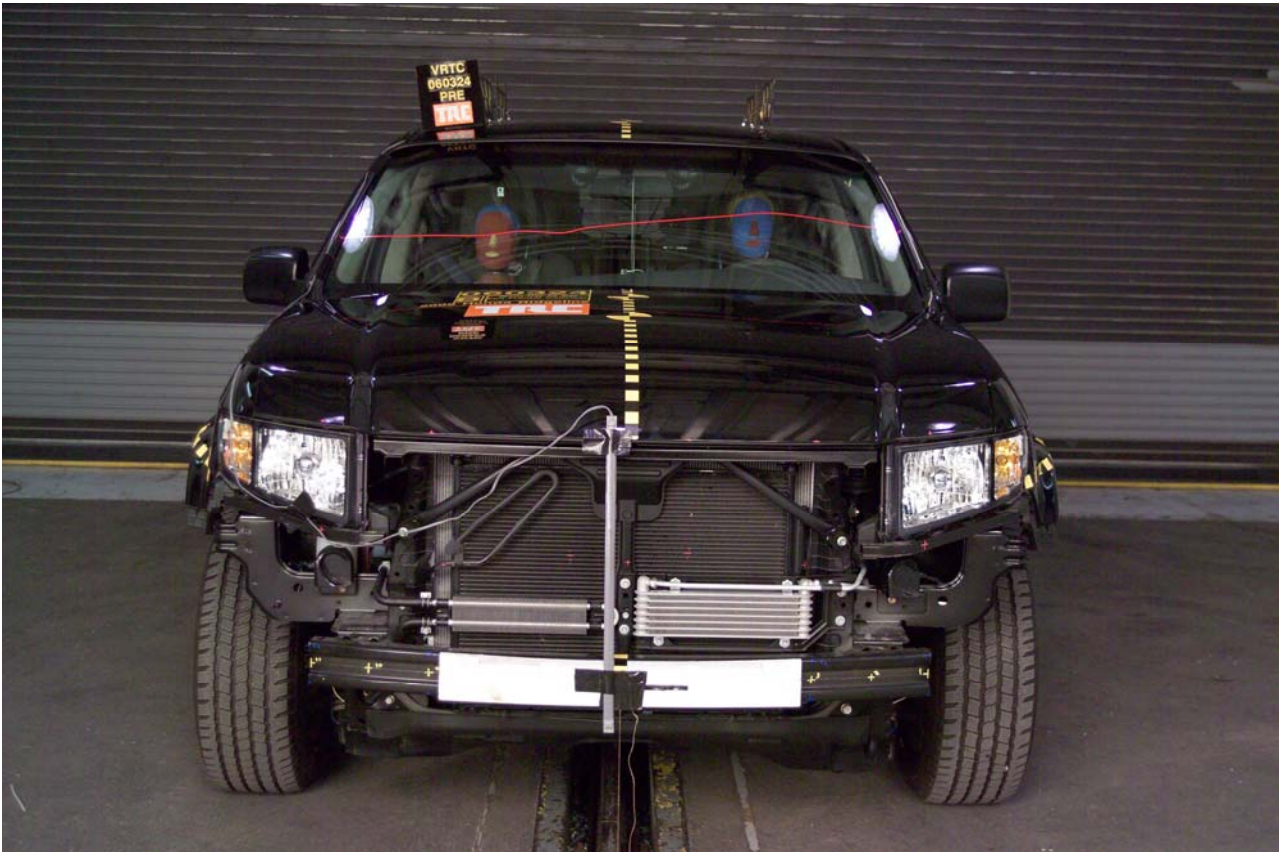


Figure A-43 Pre-Test Bullet Vehicle Front View



Figure A-44 Post-Test Bullet Vehicle Front View



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



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



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



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



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



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



Figure A-51 Pre-Test Bullet Vehicle Rear View



Figure A-52 Post-Test Bullet Vehicle Rear View



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



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



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



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



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



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



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



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

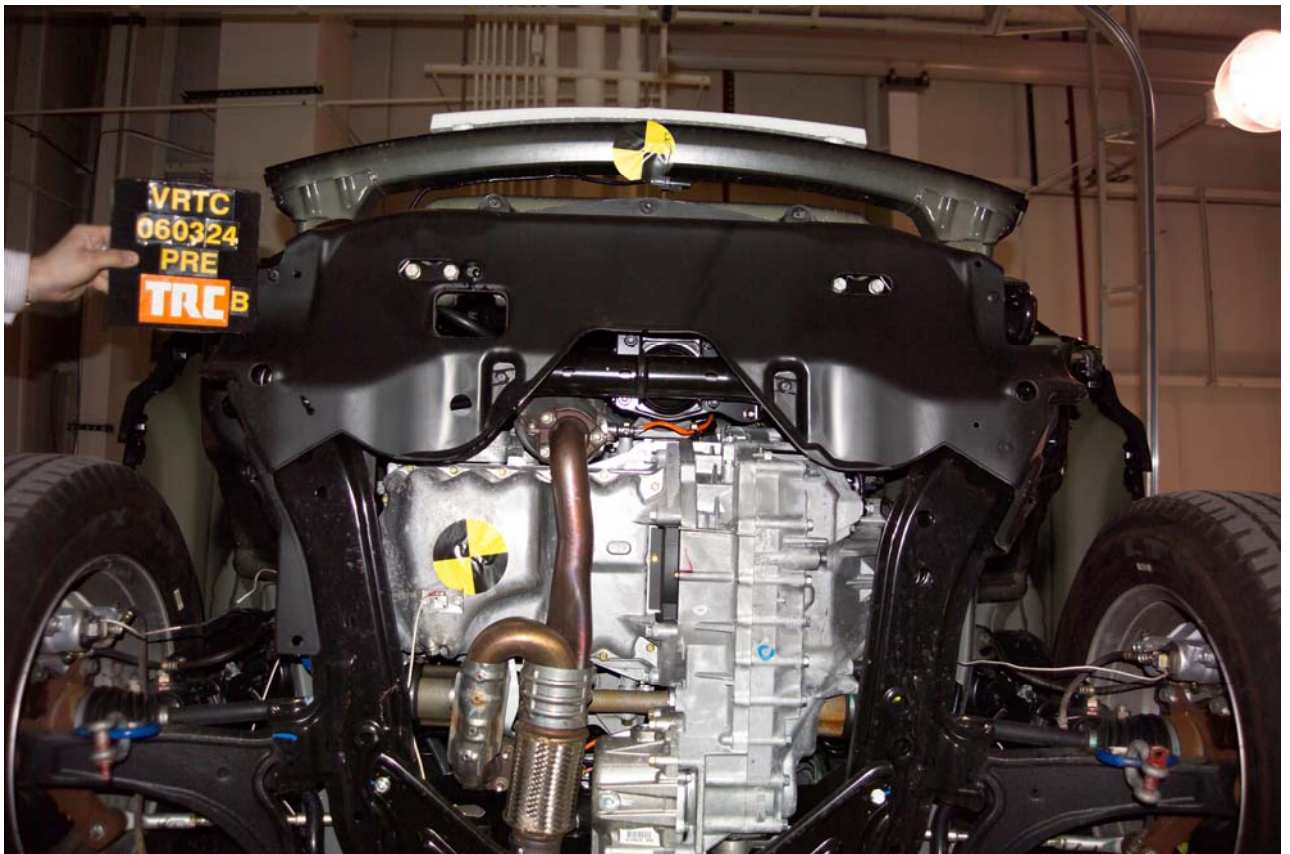


Figure A-61 Pre-Test Bullet Vehicle Front Underbody View

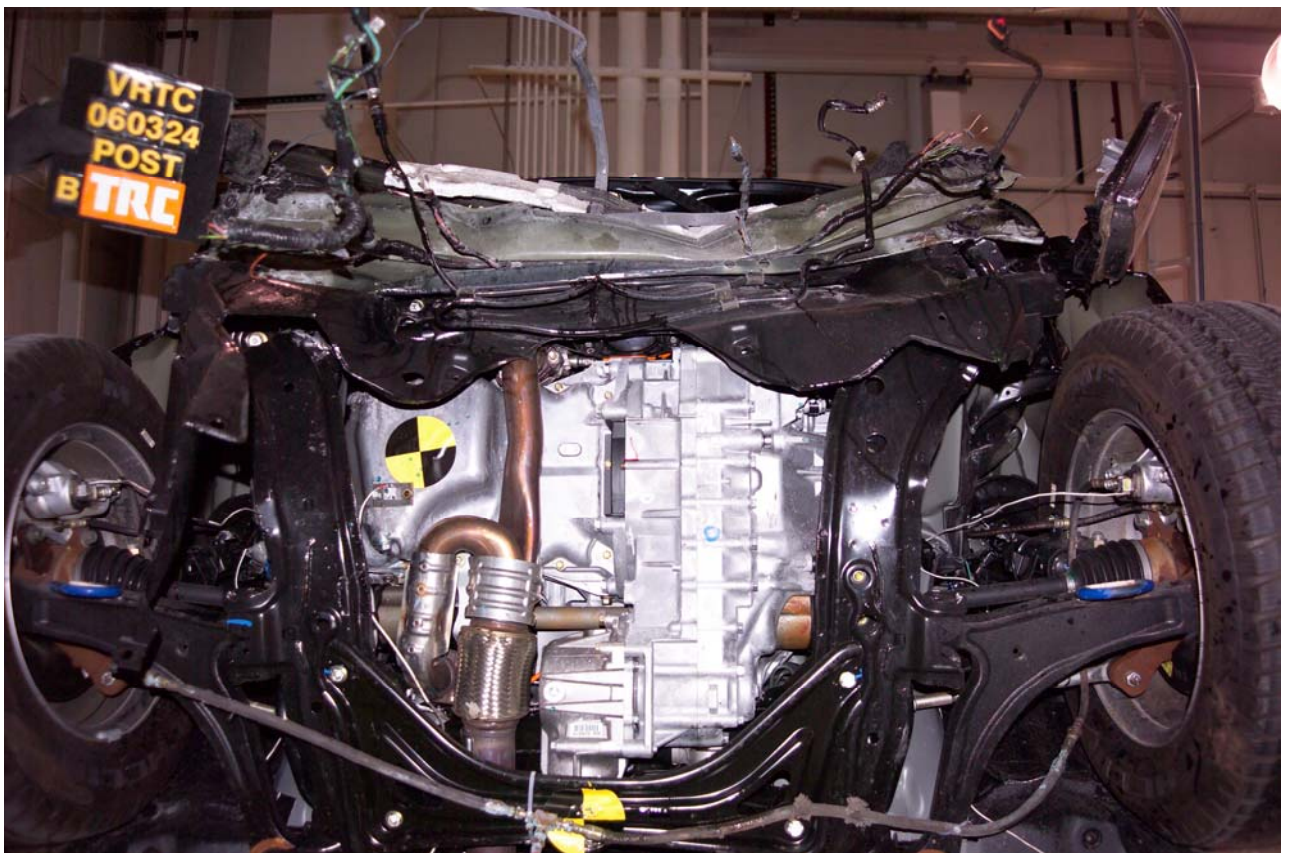


Figure A-62 Post-Test Bullet Vehicle Front Underbody View

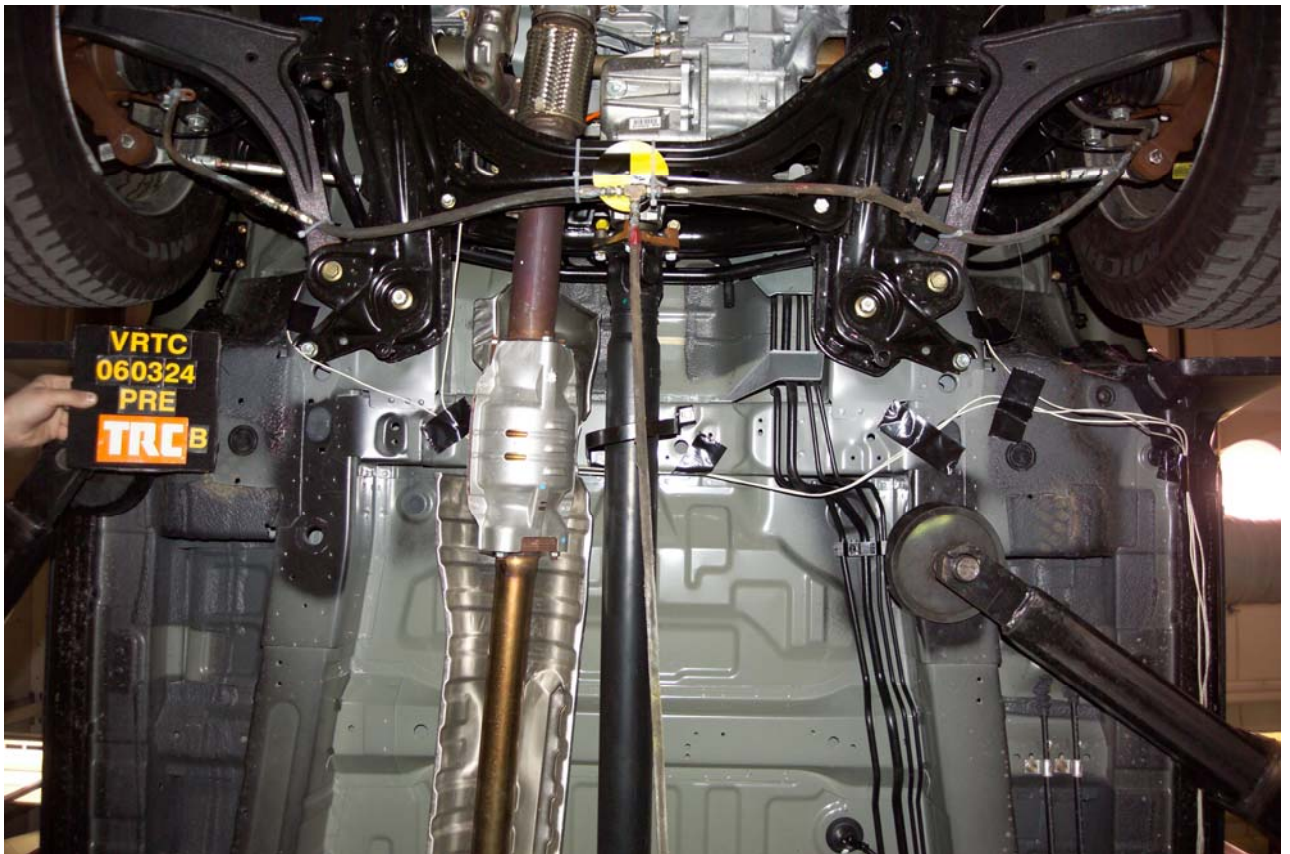


Figure A-63 Pre-Test Bullet Vehicle Front Mid Underbody View

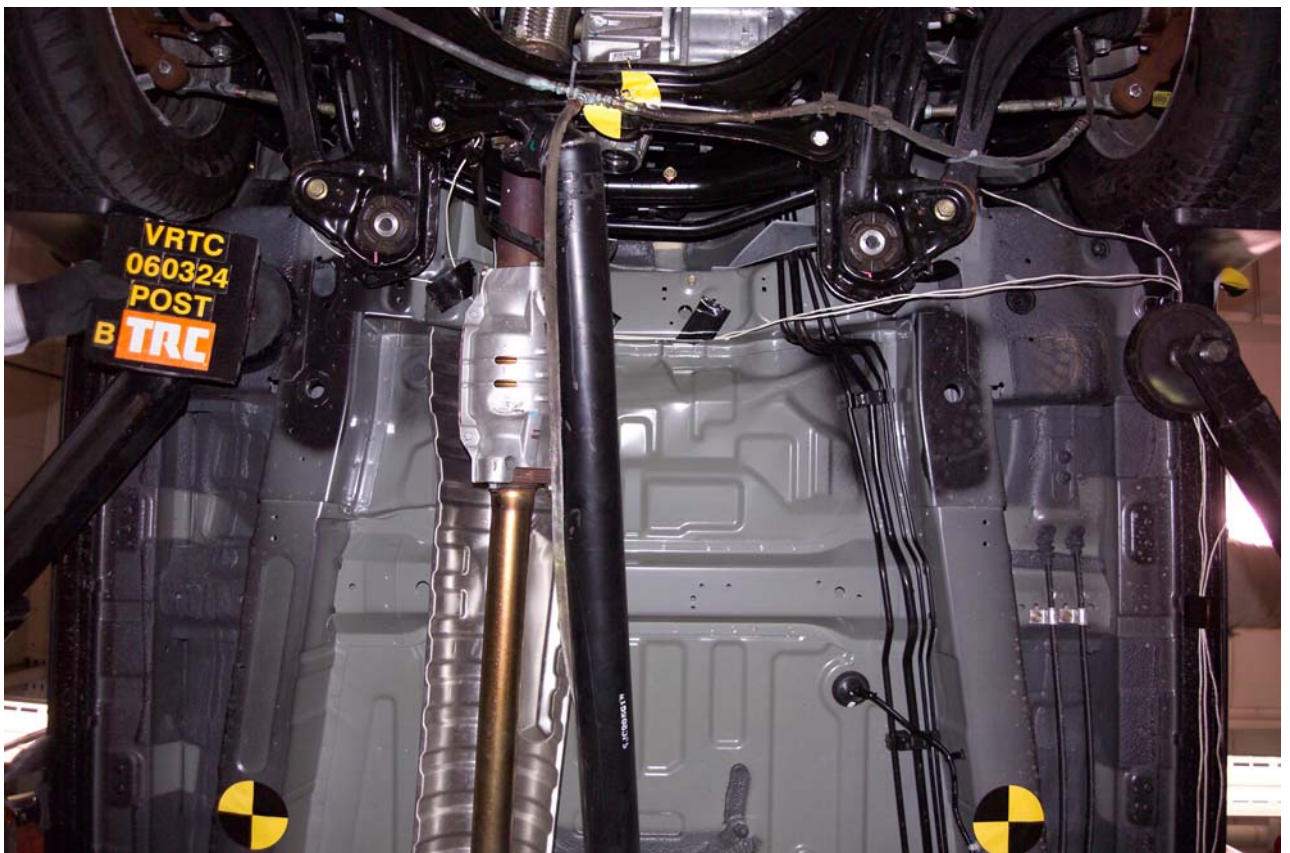


Figure A-64 Post-Test Bullet Vehicle Front Mid Underbody View

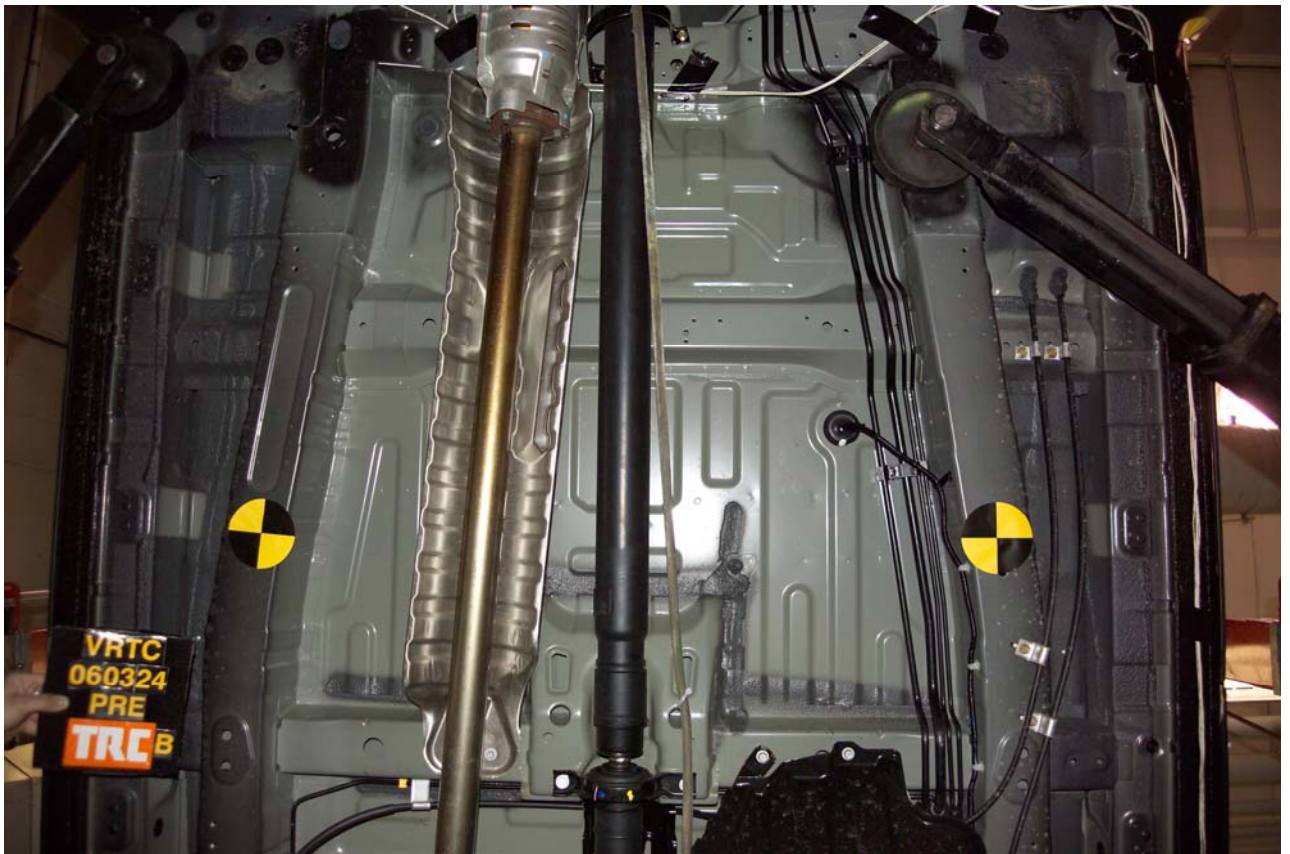


Figure A-65 Pre-Test Bullet Vehicle Mid Underbody - View 1

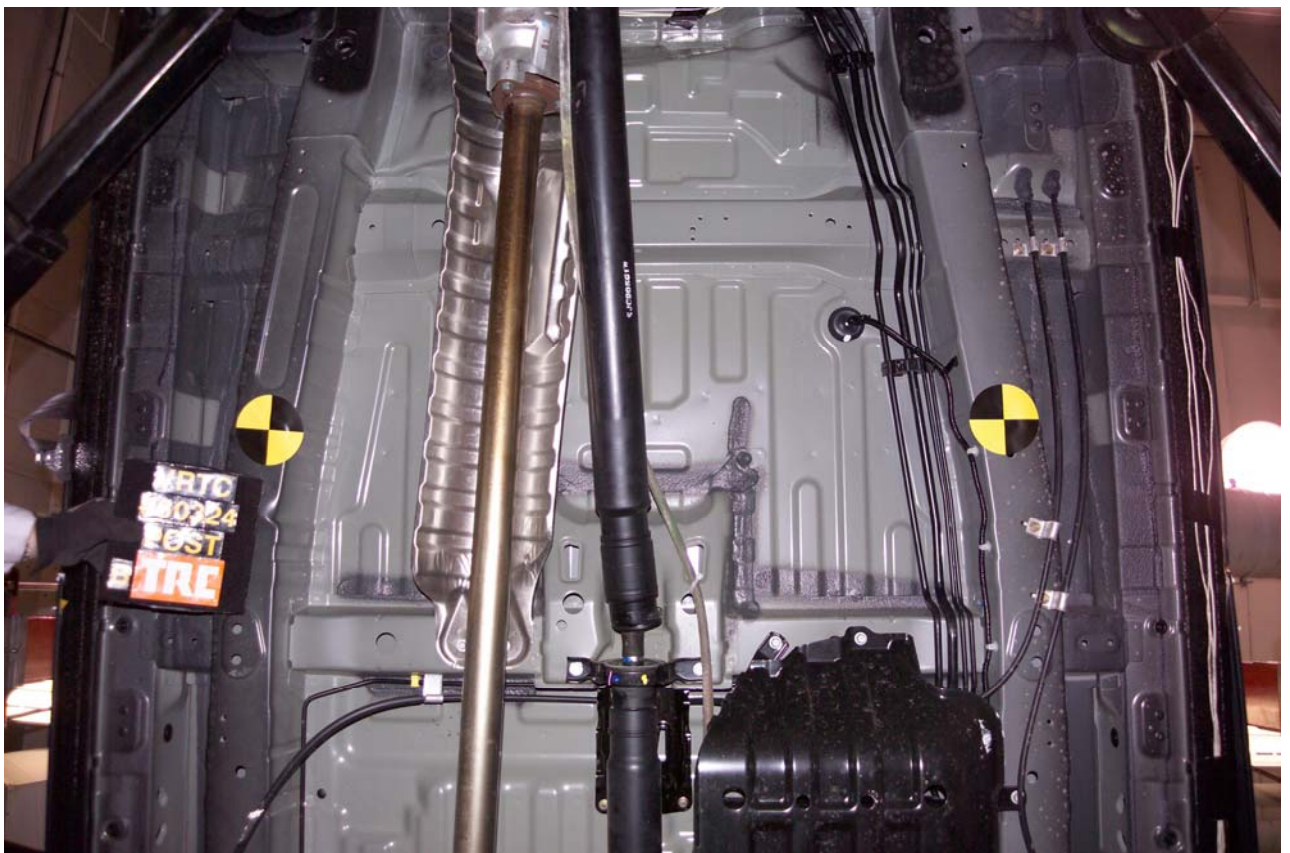


Figure A-66 Post-Test Bullet Vehicle Mid Underbody - View 1

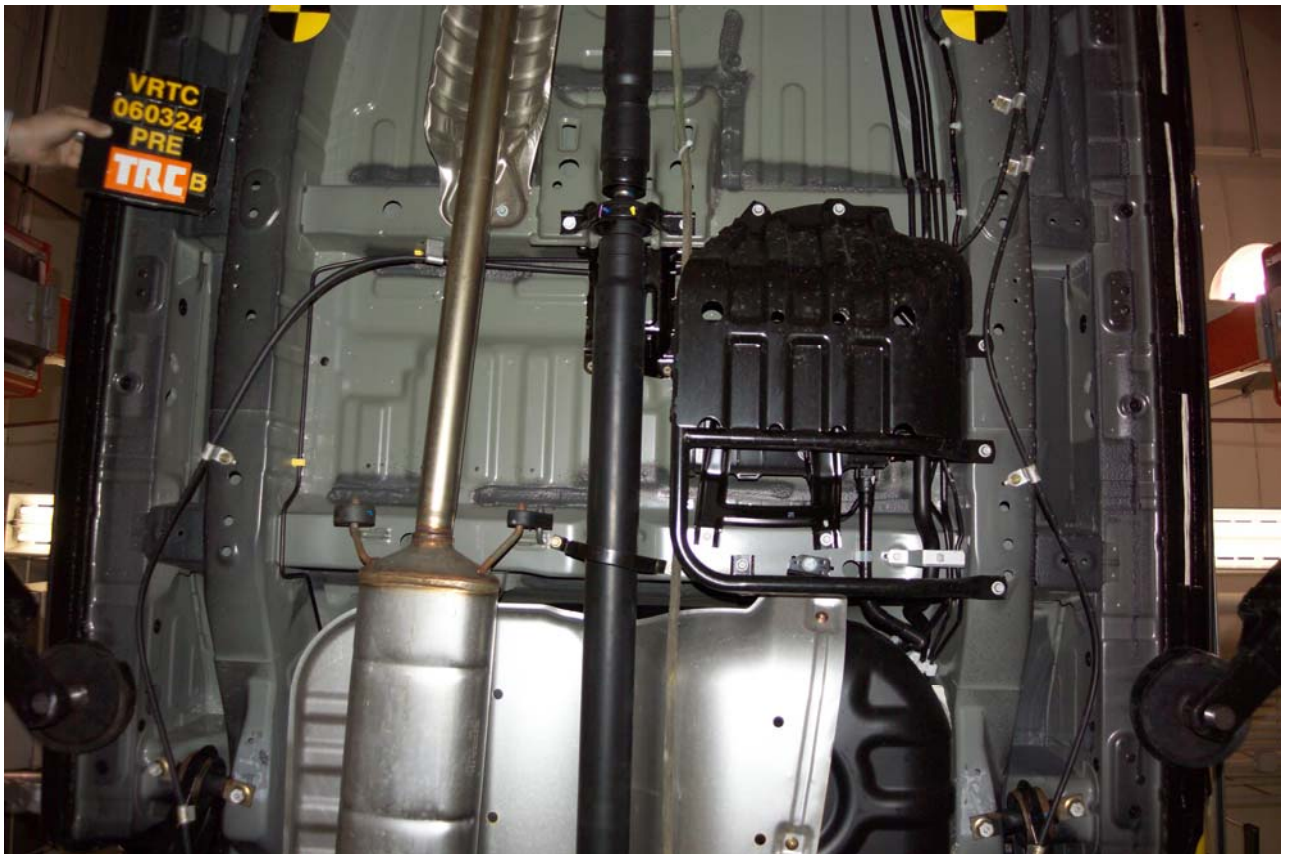


Figure A-67 Pre-Test Bullet Vehicle Mid Underbody - View 2

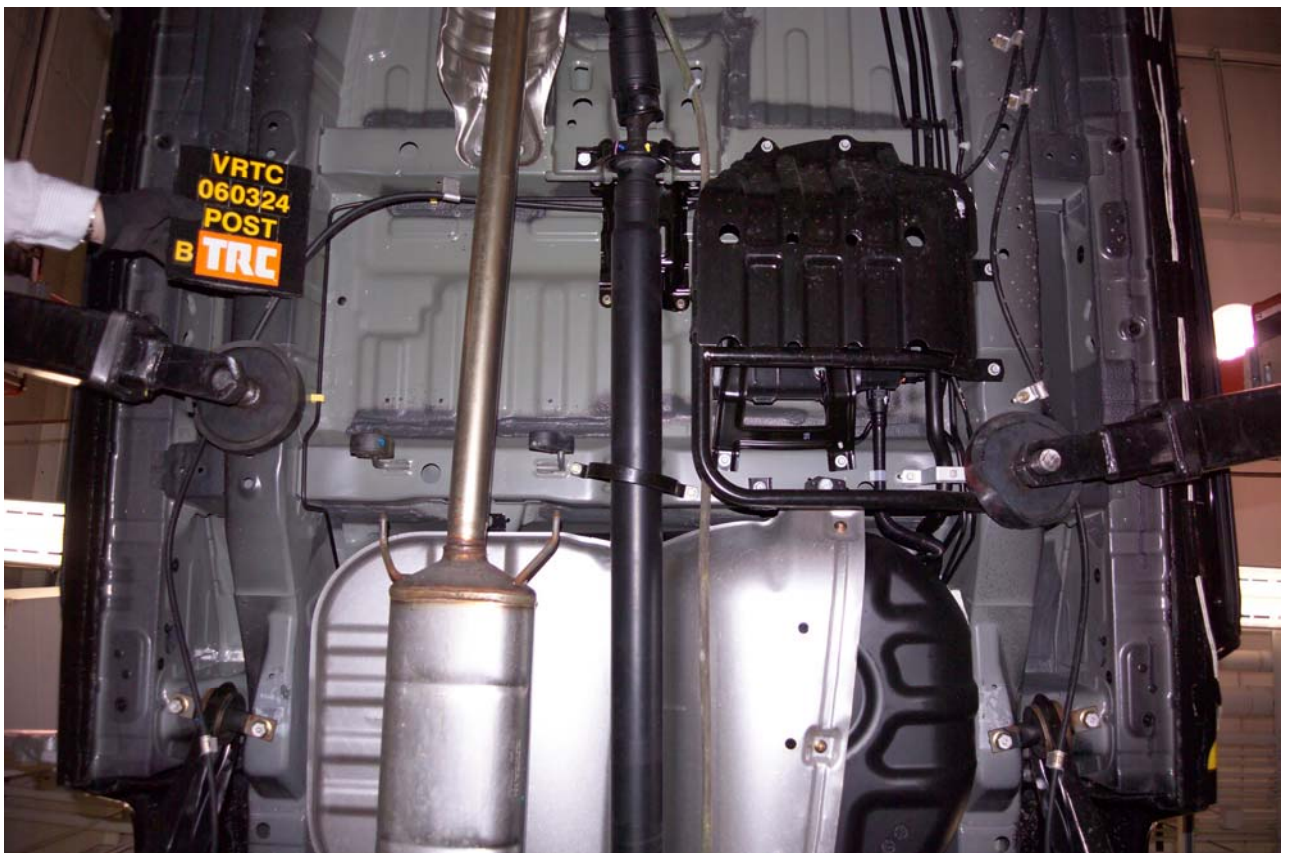


Figure A-68 Post-Test Bullet Vehicle Mid Underbody - View 2

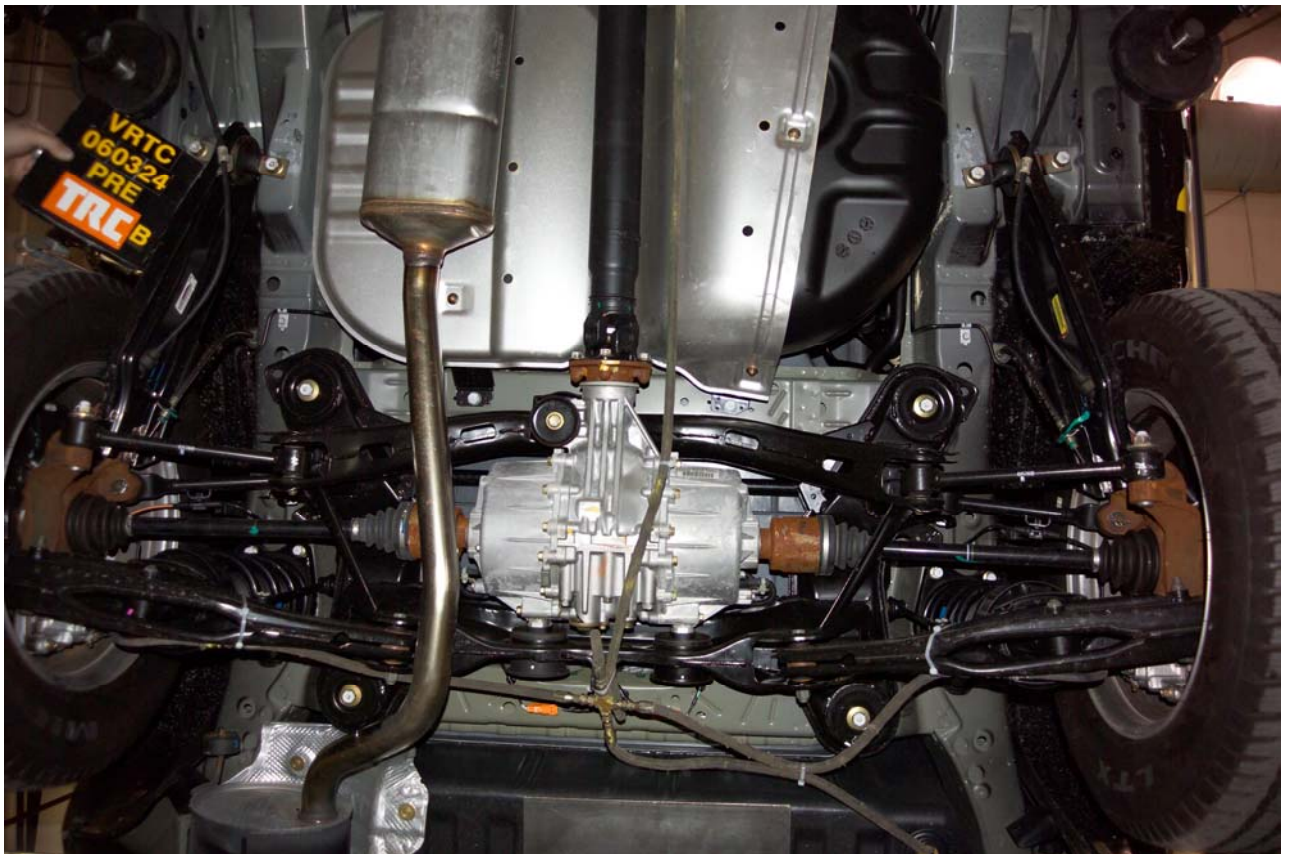


Figure A-69 Pre-Test Bullet Vehicle Rear Mid Underbody View

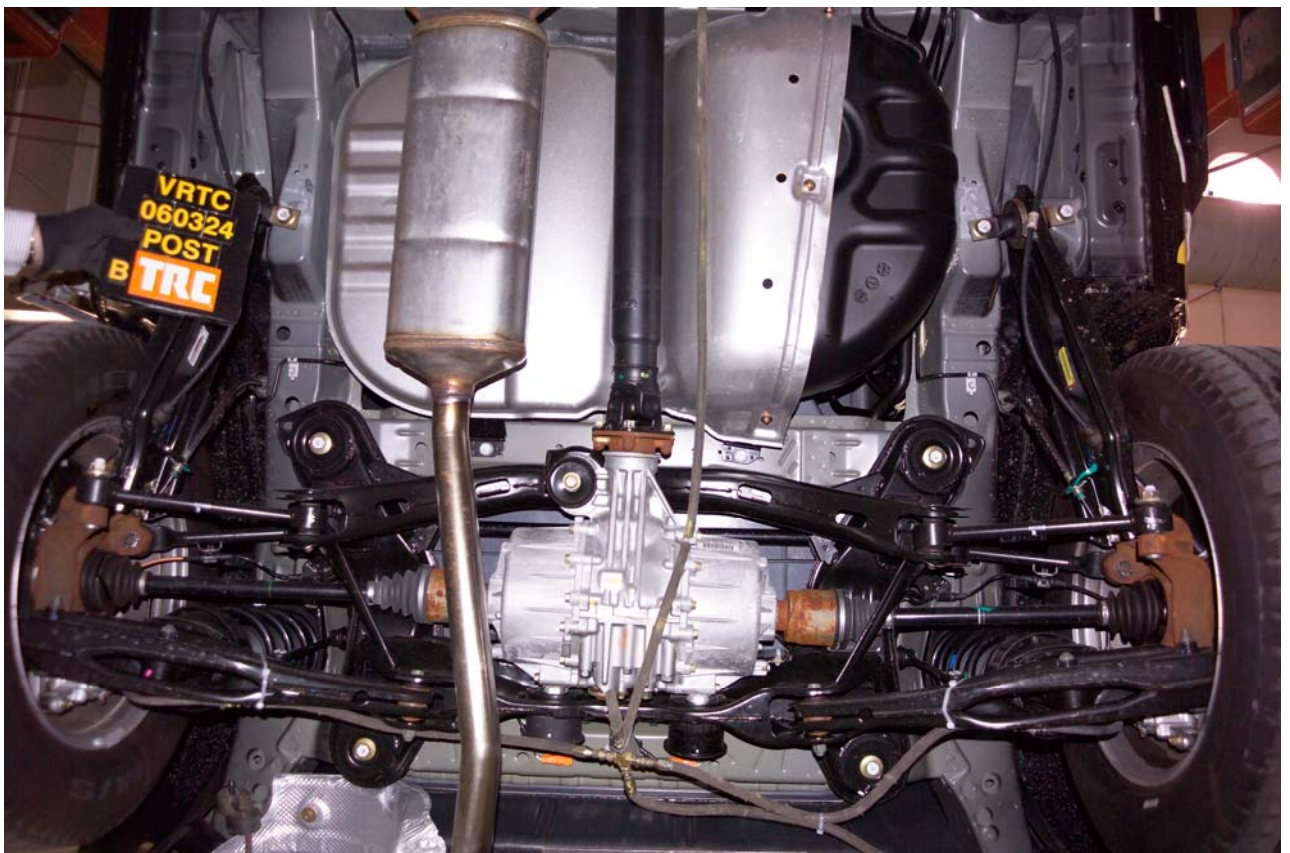


Figure A-70 Post-Test Bullet Vehicle Rear Mid Underbody View



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



Figure A-72 Post-Test Bullet Vehicle Rear Underbody View



Figure A-73 Pre-Test Target Vehicle Windshield View



Figure A-74 Post-Test Target Vehicle Windshield View



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



Figure A-76 Post-Test Target Vehicle Driver and Passenger Dummies through Windshield View

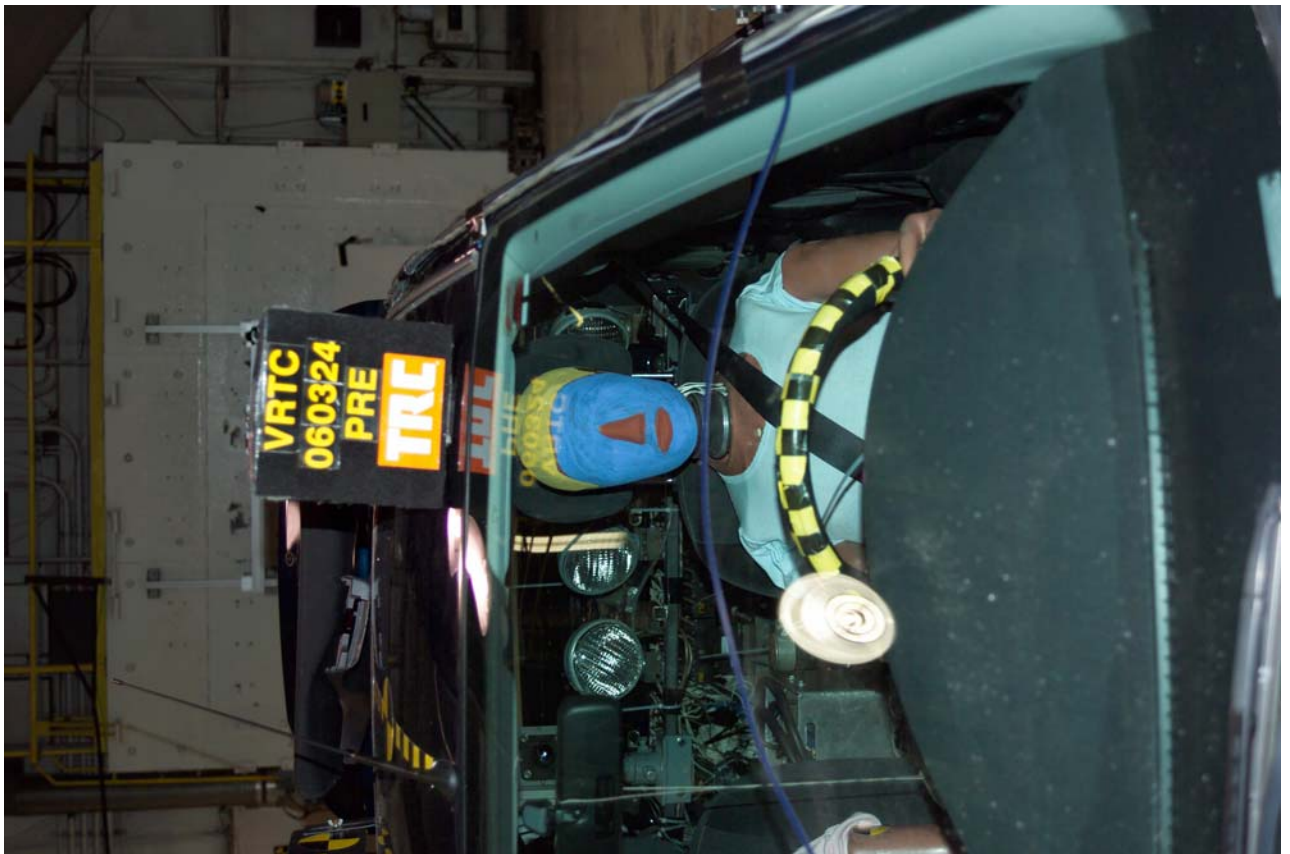


Figure A-77 Pre-Test Target Vehicle Driver Dummy - View 1

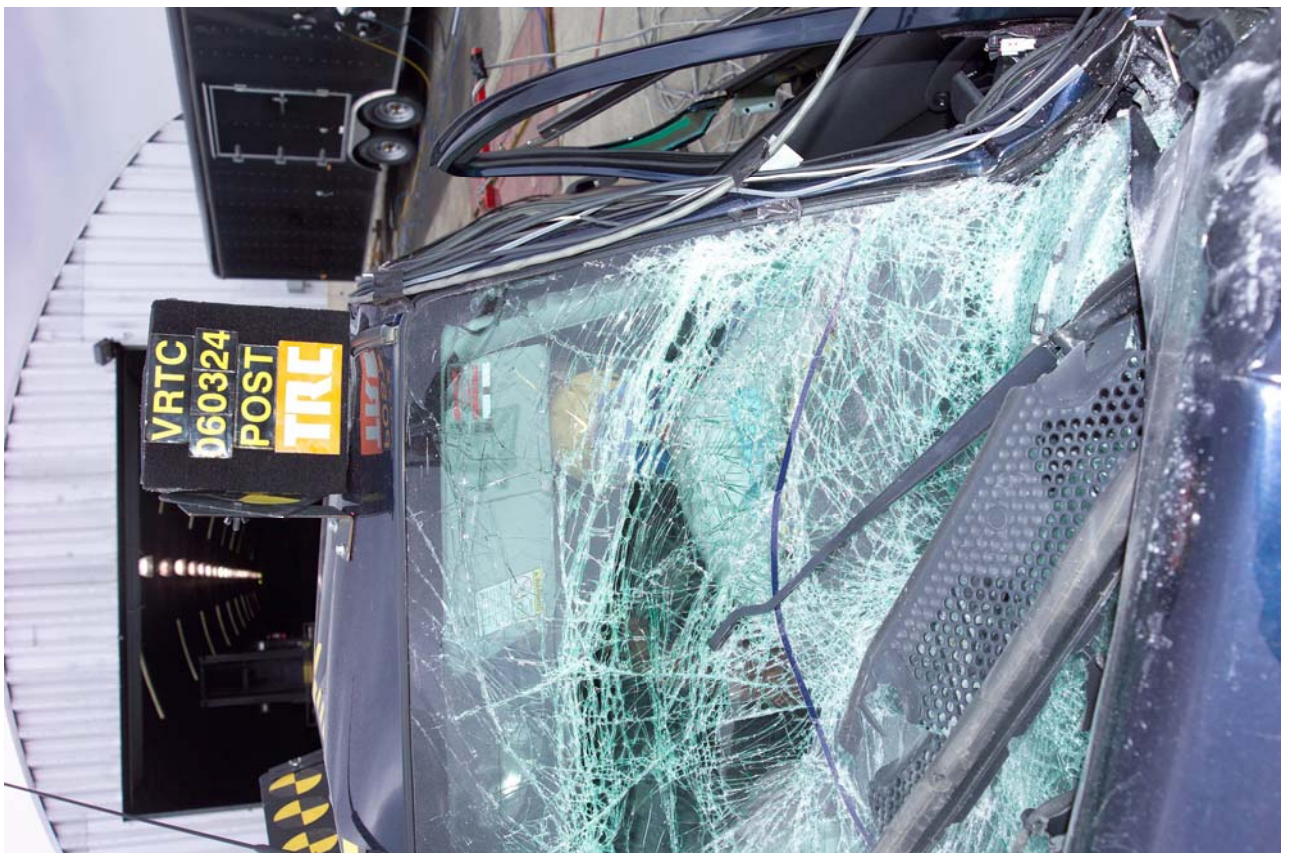


Figure A-78 Post-Test Target Vehicle Driver Dummy - View 1



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



Figure A-80 Post-Test Target Vehicle Driver Dummy - View 2



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



Figure A-82 Post-Test Target Vehicle Driver Dummy - View 3



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



Figure A-84 Post-Test Target Vehicle Driver Dummy - View 4



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



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

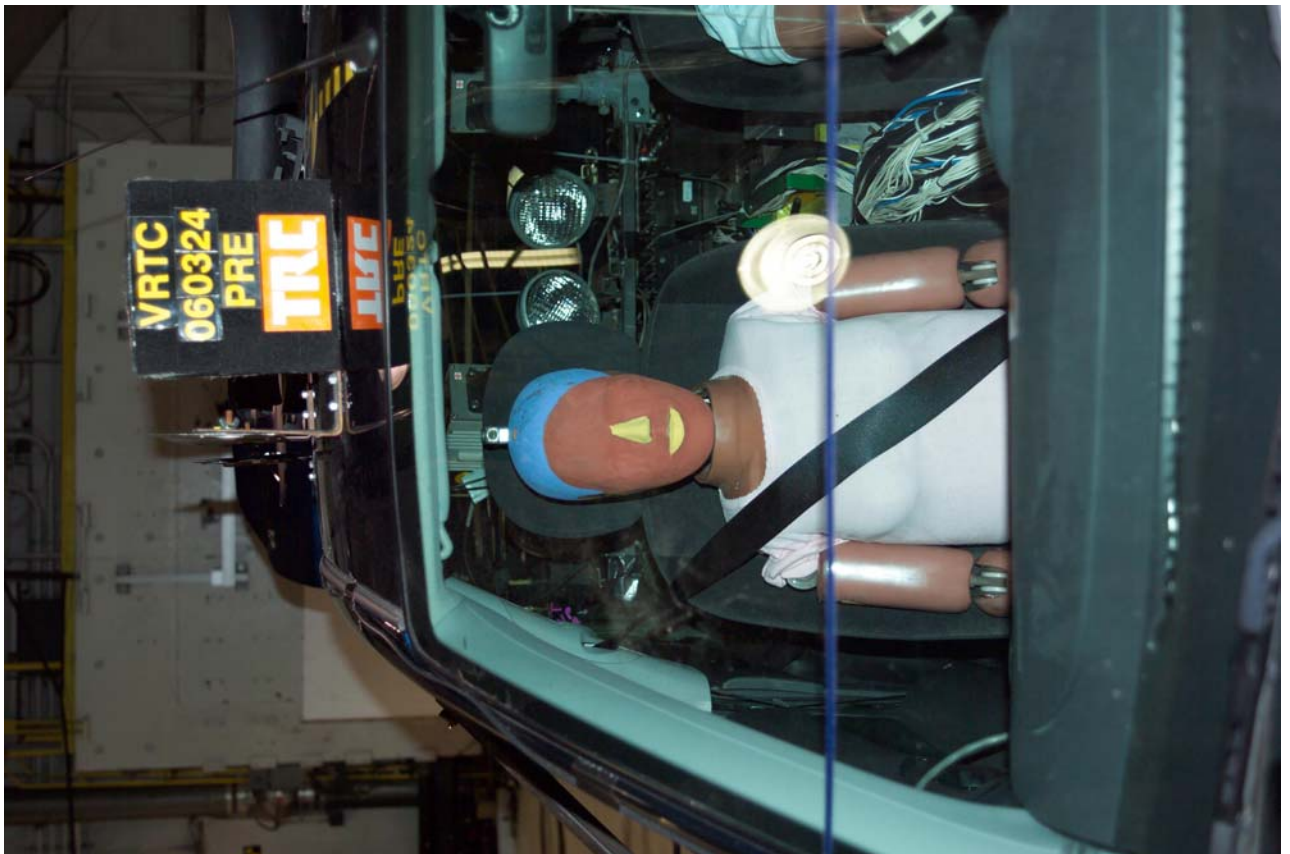


Figure A-87 Pre-Test Target Vehicle Passenger Dummy - View 1

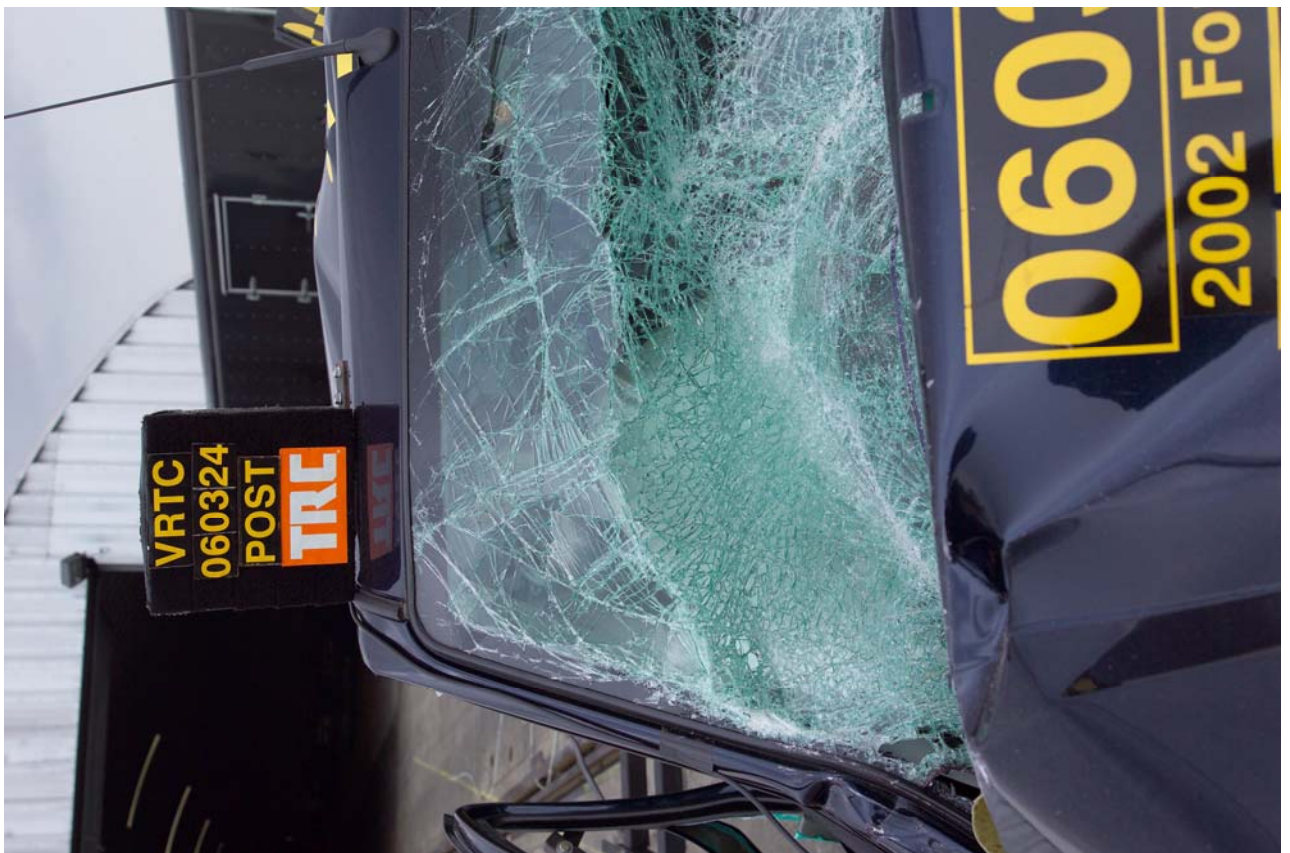


Figure A-88 Post-Test Target Vehicle Passenger Dummy - View 1



Figure A-89 Pre-Test Target Vehicle Passenger Dummy - View 2



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



Figure A-91 Pre-Test Target Vehicle Passenger Dummy - View 3



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



Figure A-93 Pre-Test Target Vehicle Passenger Dummy - View 4



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

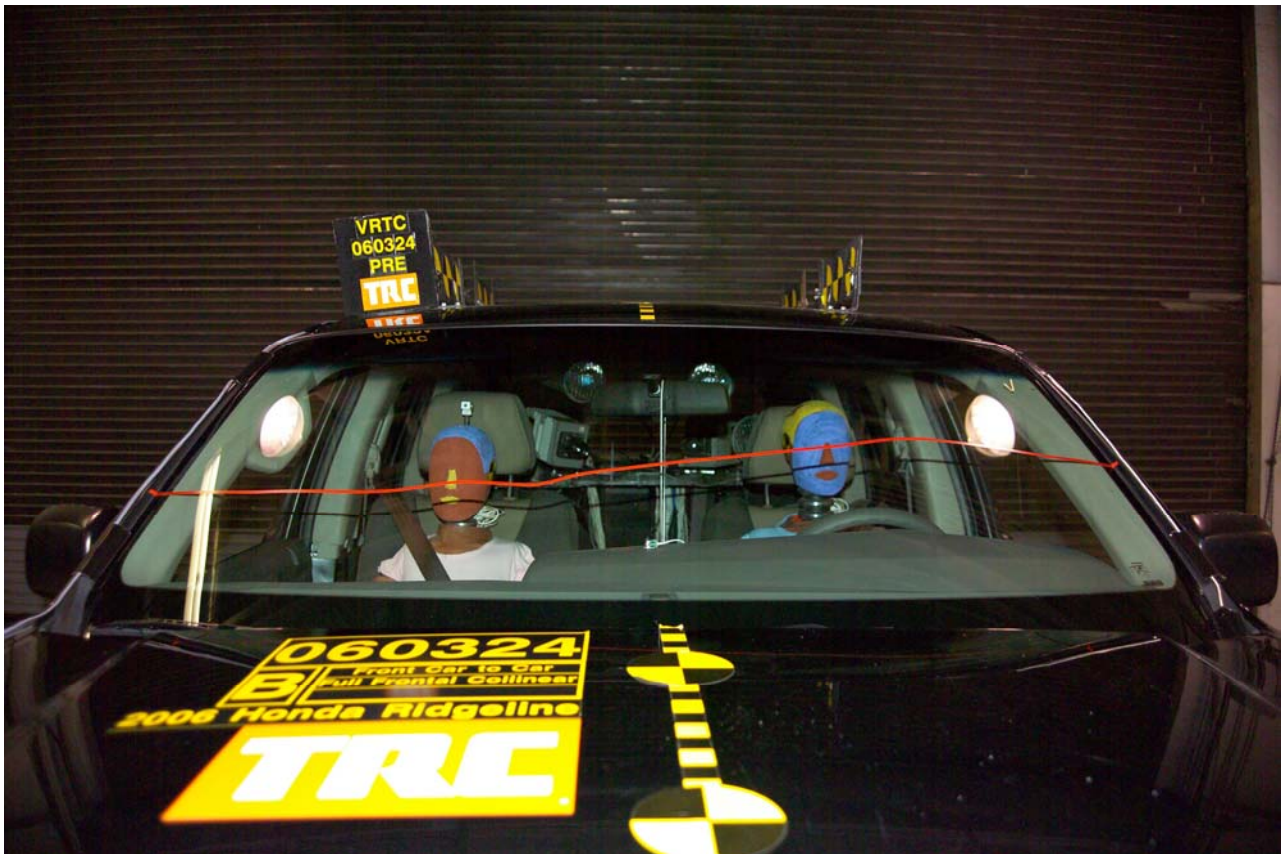


Figure A-95 Pre-Test Bullet Vehicle Windshield View



Figure A-96 Post-Test Bullet Vehicle Windshield View

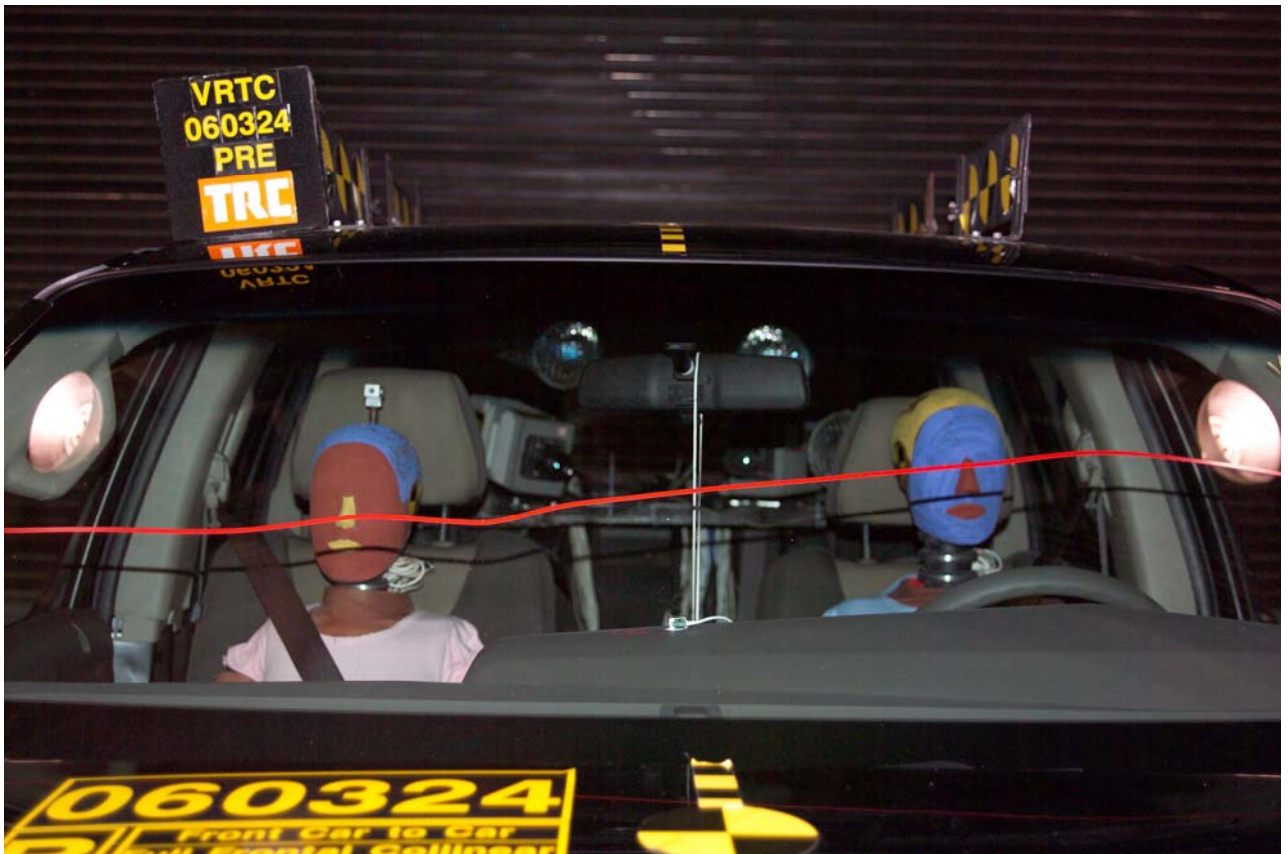


Figure A-97 Pre-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View



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

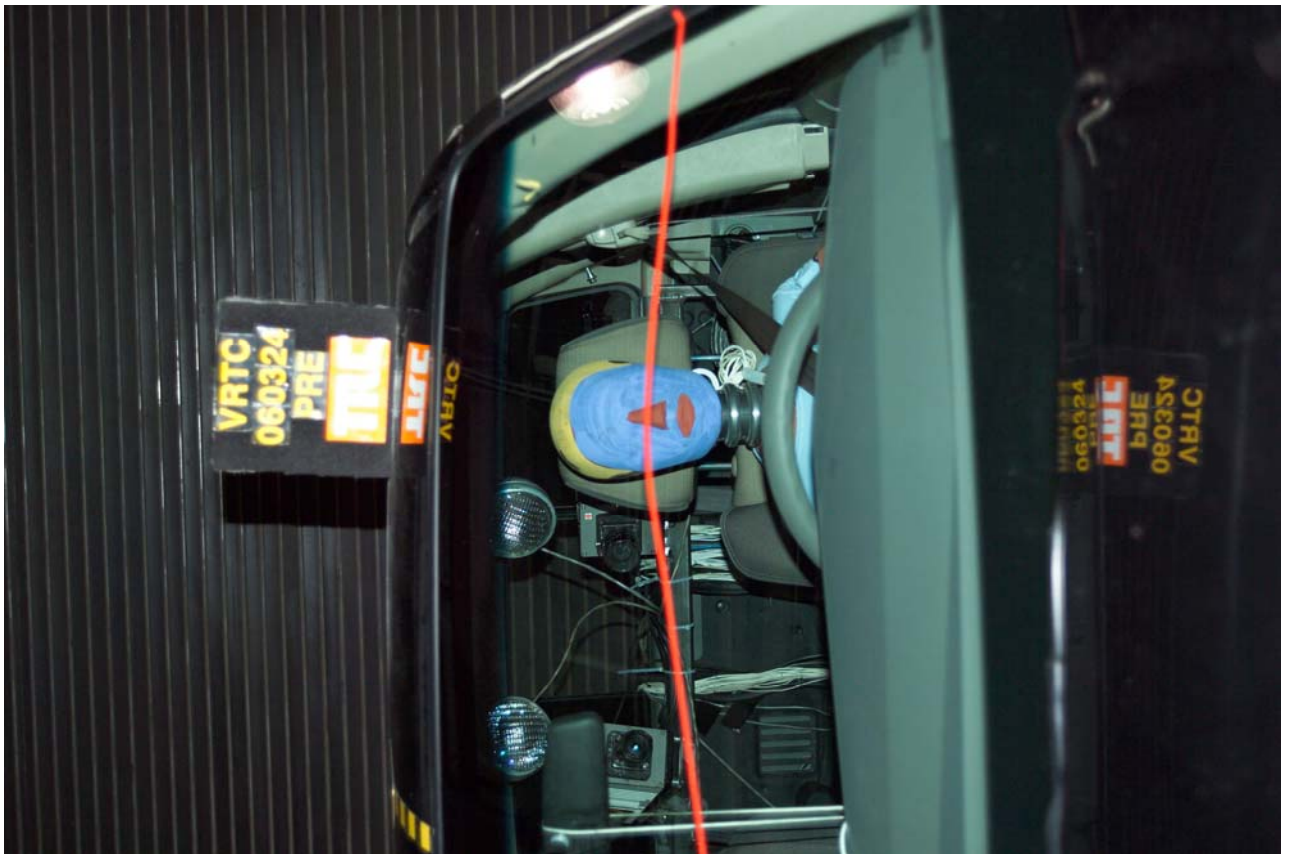


Figure A-99 Pre-Test Bullet Vehicle Driver Dummy - View 1



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



Figure A-101 Post-Test Bullet Vehicle Driver Dummy - View 2

Intentionally Left Blank



Figure A-102 Pre-Test Bullet Vehicle Driver Dummy - View 3



Figure A-103 Post-Test Bullet Vehicle Driver Dummy - View 3



Figure A-104 Pre-Test Bullet Vehicle Driver Dummy - View 4



Figure A-105 Post-Test Bullet Vehicle Driver Dummy - View 4



Figure A-106 Pre-Test Bullet Vehicle Driver Dummy Foot Position View



Figure A-107 Post-Test Bullet Vehicle Driver Dummy Foot Position View

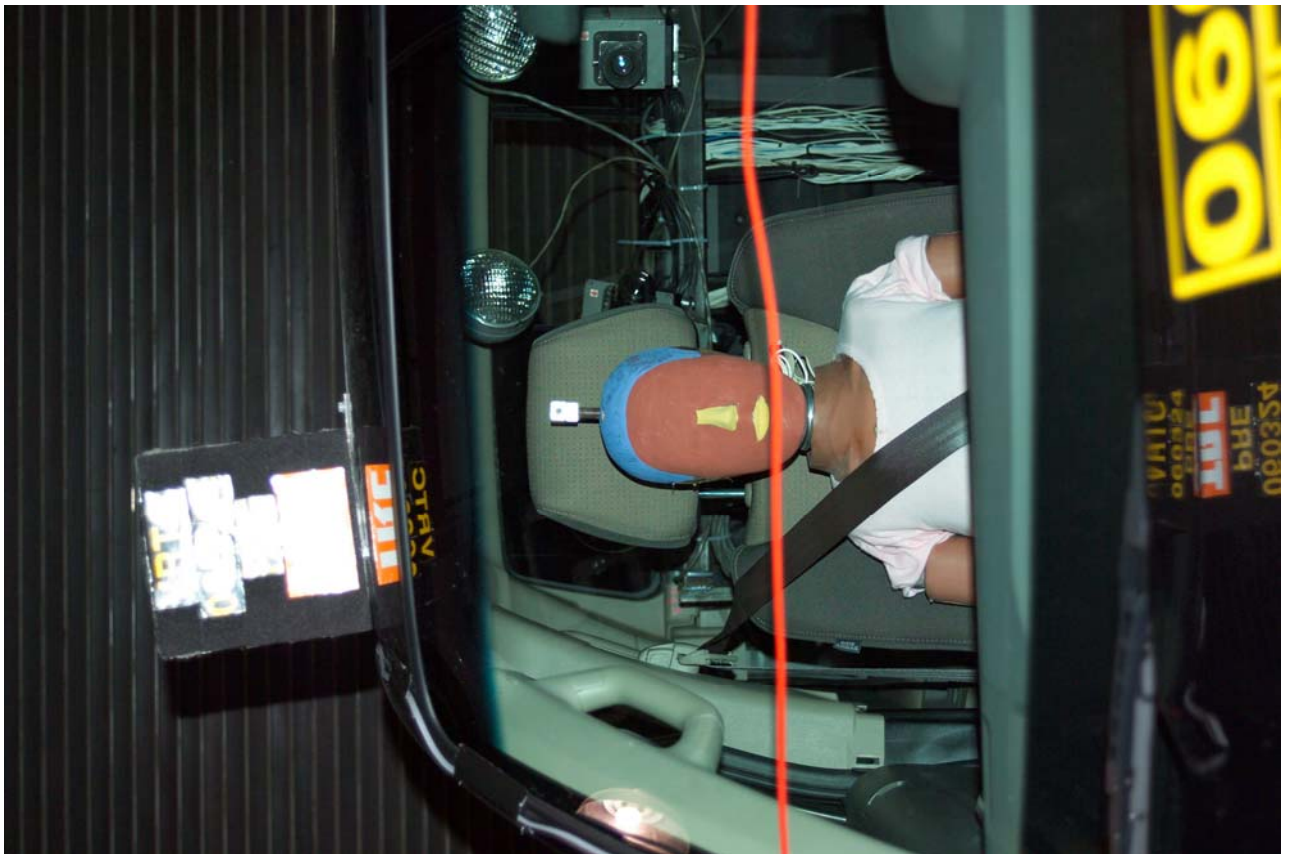


Figure A-108 Pre-Test Bullet Vehicle Passenger Dummy - View 1



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



Figure A-110 Pre-Test Bullet Vehicle Passenger Dummy - View 2



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



Figure A-112 Pre-Test Bullet Vehicle Passenger Dummy - View 3



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



Figure A-114 Pre-Test Bullet Vehicle Passenger Dummy - View 4



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



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



Figure A-117 Post-Test Target Vehicle Driver Dummy Head Contact - View 1



Figure A-118 Post-Test Target Vehicle Driver Dummy Head Contact - View 2



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



Figure A-120 Post-Test Target Vehicle Driver Dash Panel Deformation View



Figure A-121 Post-Test Target Vehicle Driver Console Deformation View



Figure A-122 Post-Test Target Vehicle Driver Floorboard Deformation View



Figure A-123 Post-Test Target Vehicle Driver Toeboard Deformation View



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



Figure A-125 Post-Test Target Vehicle Passenger Dummy Head Contact - View 1



Figure A-126 Post-Test Target Vehicle Passenger Dummy Head Contact - View 2



Figure A-127 Post-Test Target Vehicle Passenger Dummy Knee Contact View



Figure A-128 Post-Test Target Vehicle Passenger Dash Panel Deformation View

Intentionally Left Blank



Figure A-129 Post-Test Target Vehicle Passenger Floorboard Deformation View



Figure A-130 Post-Test Target Vehicle Passenger Toeboard Deformation View

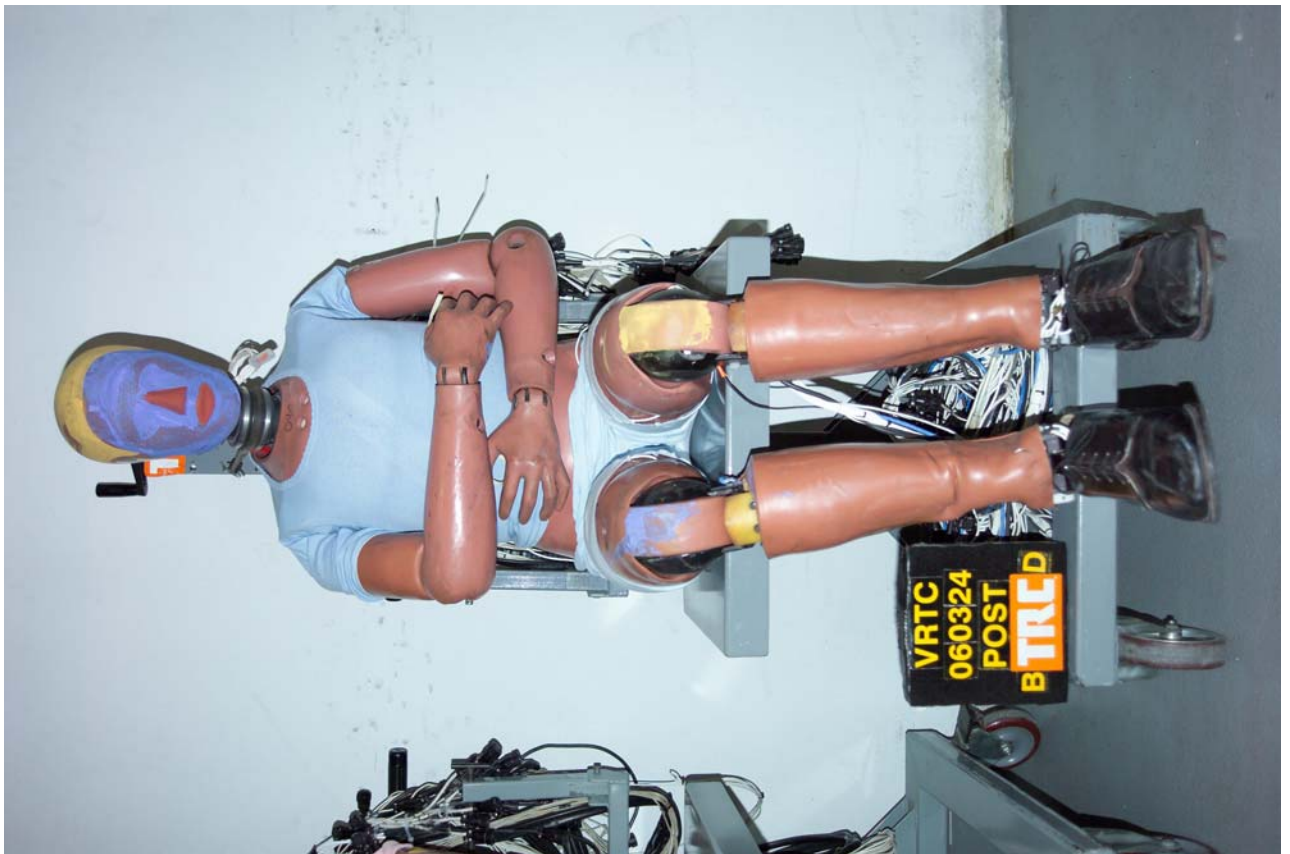


Figure A-131 Post-Test Bullet Vehicle Driver Dummy Overall Contact View



Figure A-132 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 1



Figure A-133 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 2



Figure A-134 Post-Test Bullet Vehicle Driver Dummy Knee Contact - View 1



Figure A-135 Post-Test Bullet Vehicle Driver Dummy Knee Contact - View 2

Intentionally Left Blank

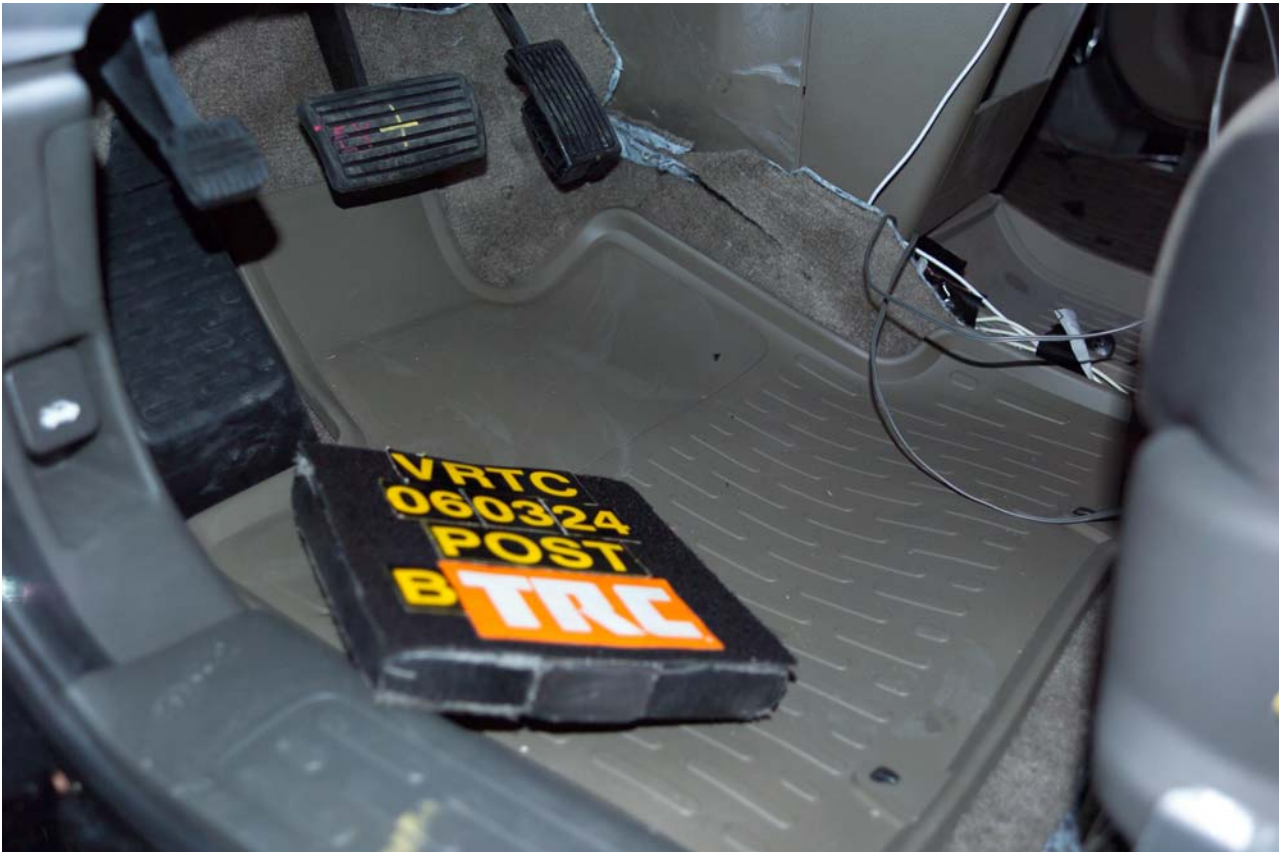


Figure A-136 Post-Test Bullet Vehicle Driver Floorboard Deformation View

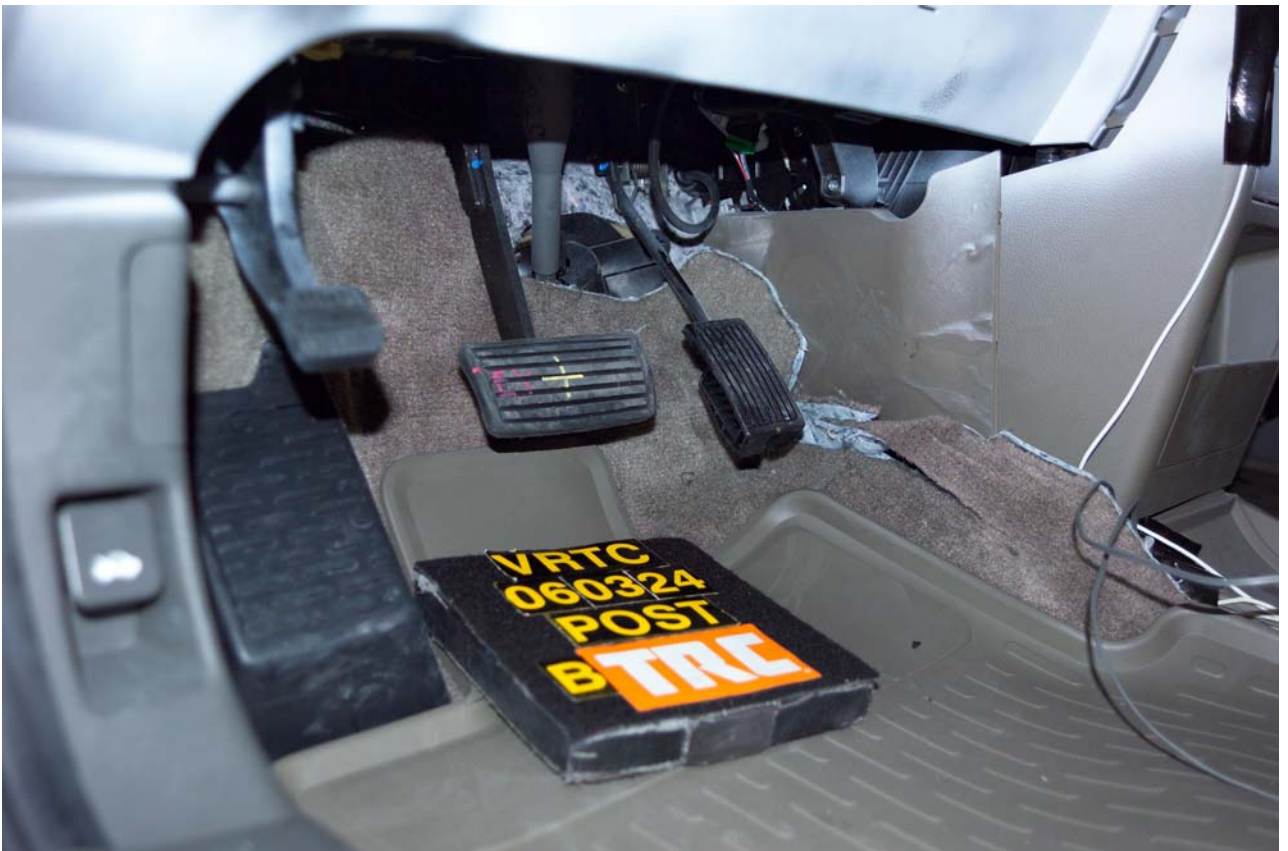


Figure A-137 Post-Test Bullet Vehicle Driver Toeboard Deformation View



Figure A-138 Post-Test Bullet Vehicle Passenger Dummy Overall Contact View



Figure A-139 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 1



Figure A-140 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 2



Figure A-141 Post-Test Bullet Vehicle Passenger Dummy Knee Contact View



Figure A-142 Post-Test Bullet Vehicle Passenger Dash Panel Deformation View

Intentionally Left Blank



Figure A-143 Post-Test Bullet Vehicle Passenger Floorboard Deformation View



Figure A-144 Post-Test Bullet Vehicle Passenger Toeboard Deformation View



Figure A-145 Target Vehicle Certification and Tire Information Label View

Intentionally Left Blank



Figure A-146 Bullet Vehicle Certification Label View



Figure A-147 Bullet Vehicle Tire Information Label View



Figure A-148 Pre-Test Target Vehicle Ballast View



Figure A-149 Pre-Test Bullet Vehicle Ballast View

Appendix B

Data Plots



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

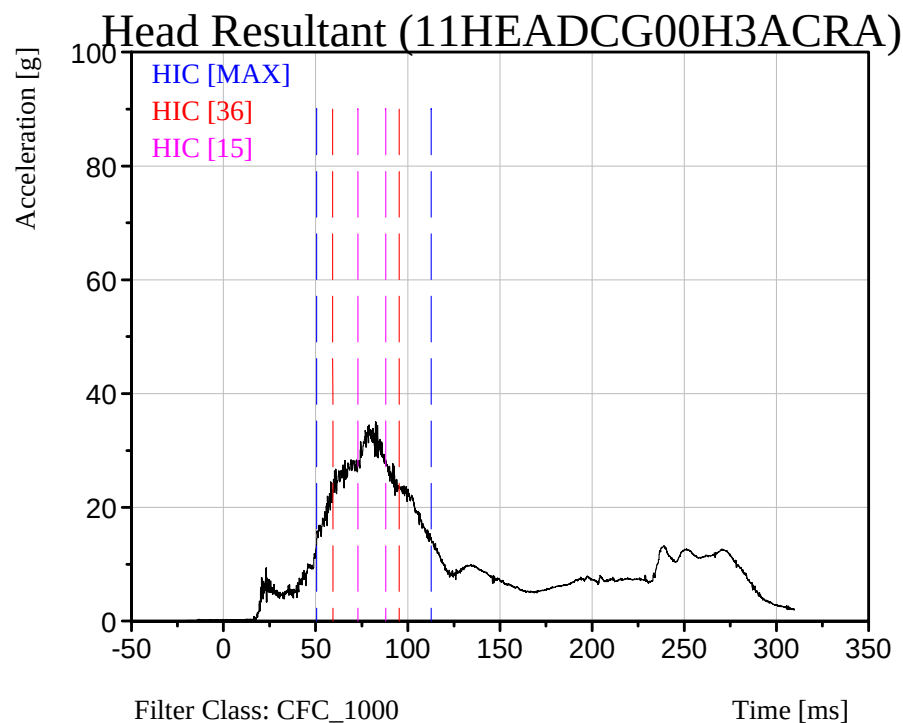
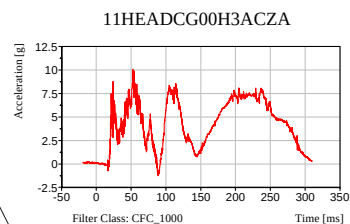
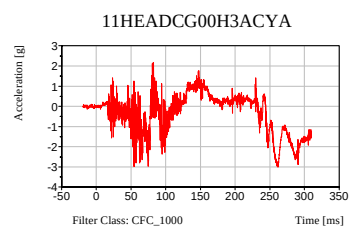
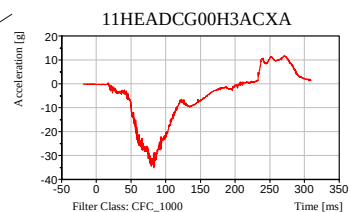
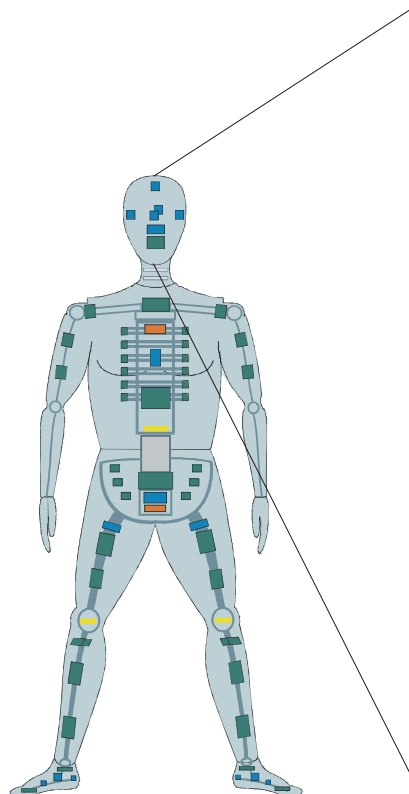
Time: 11:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



Dummy: HIII 50th Male
Seating Position:
Driver

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 180.97	50.56 ms	112.72 ms	24.29 g
HIC [36] = 149.42	59.36 ms	95.36 ms	28.00 g
HIC [15] = 80.17	72.96 ms	88.00 ms	30.94 g

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

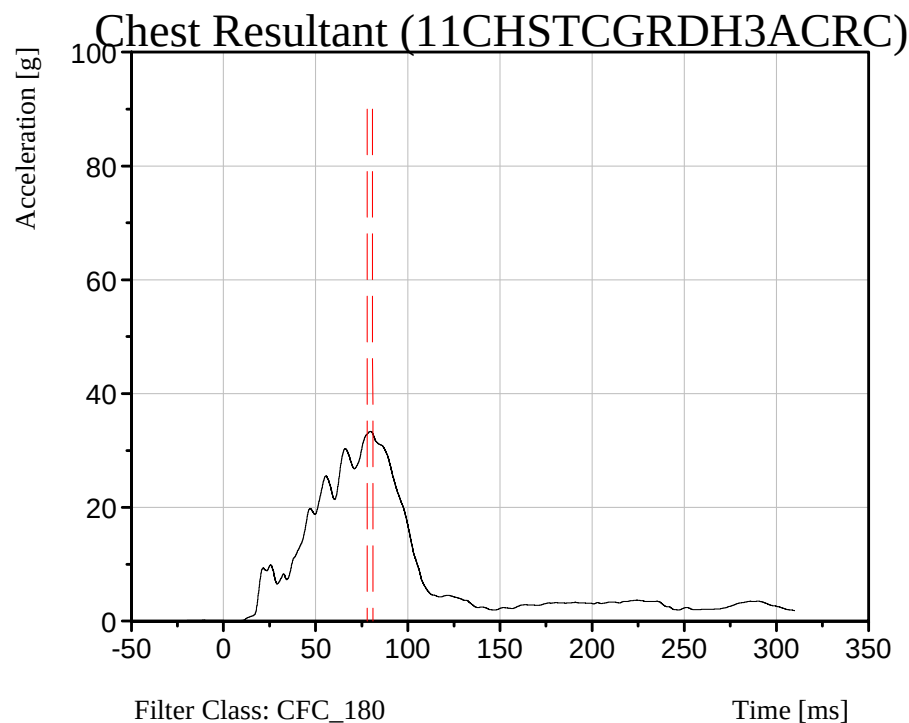
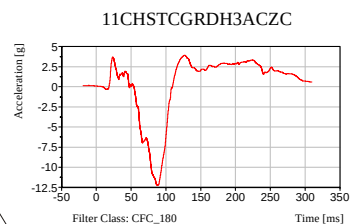
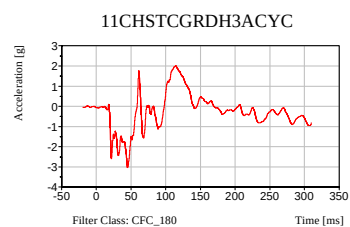
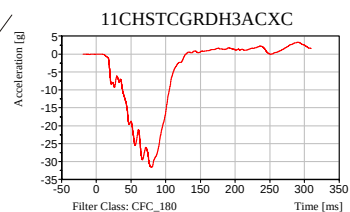
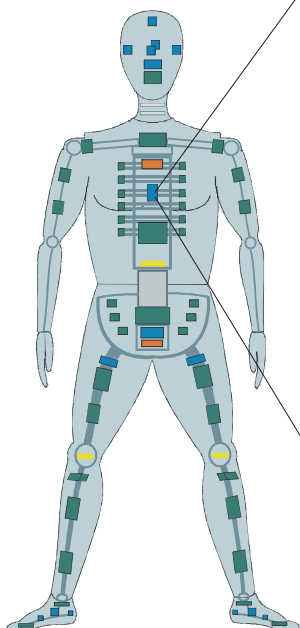
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 32.93 g
Chest Severity Index = 218.00

<u>T1</u> (Begin)	<u>T2</u> (End)
77.96 ms	80.96 ms

Dummy:HIII 50th Male
Seating Position:

Driver

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

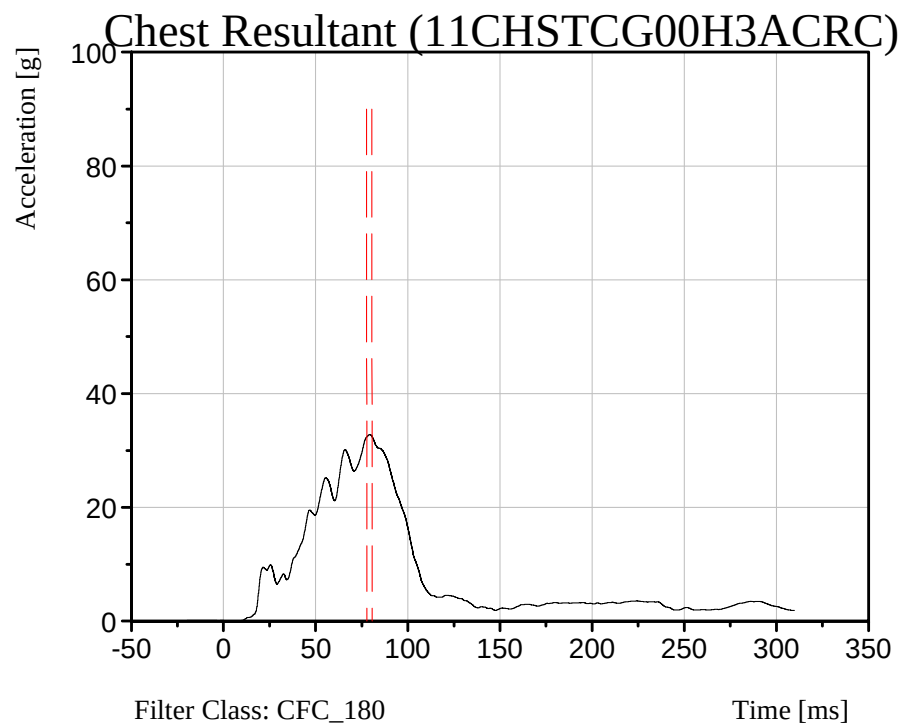
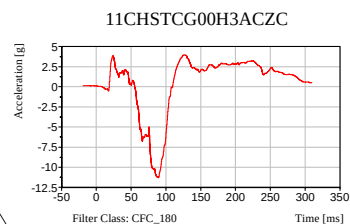
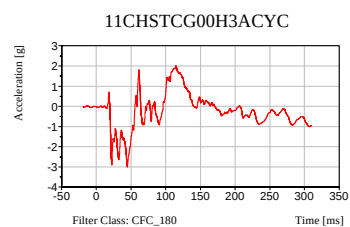
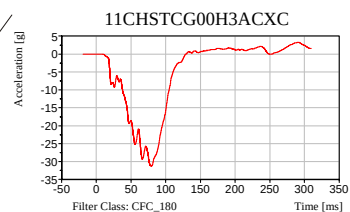
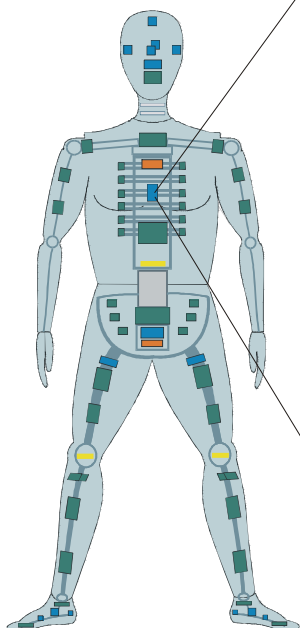
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 32.39 g
Chest Severity Index = 208.74

<u>T1</u> (Begin)	<u>T2</u> (End)
77.68 ms	80.68 ms

Dummy: HIII 50th Male
Seating Position:

Driver

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

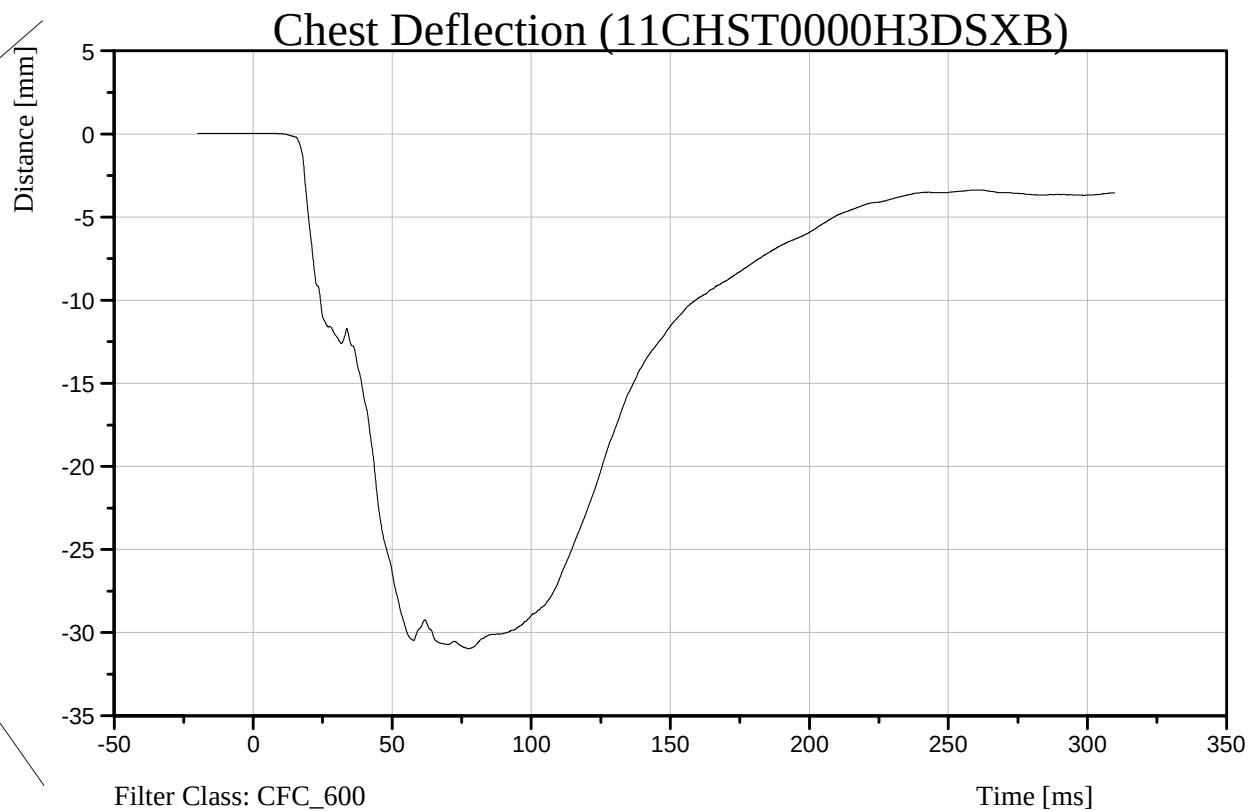
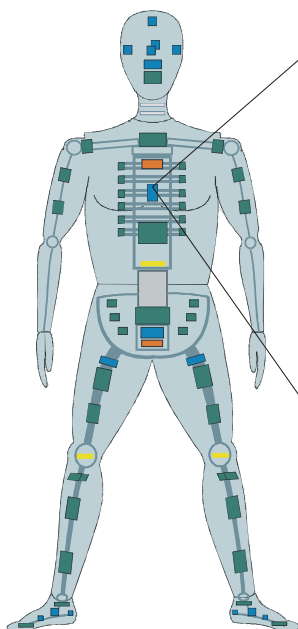
Chest Deflection

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal



Dummy: HIII 50th Male

Seating Position:

Driver

[Max.] 0.04 mm at -18.56 ms

[Min.] -30.95 mm at 77.28 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

Date: 03/27/2006
Time: 11:08

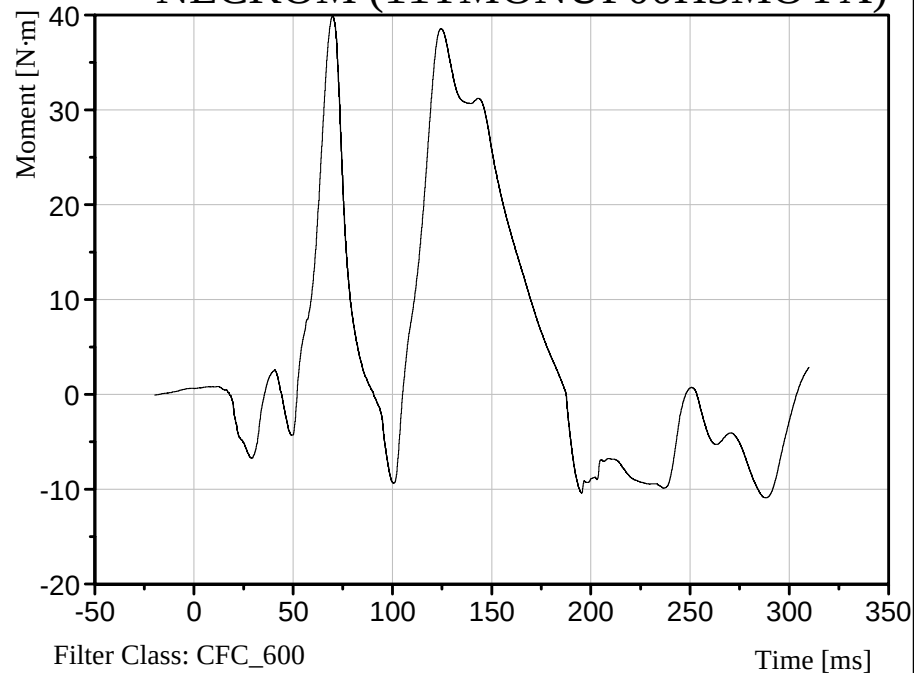
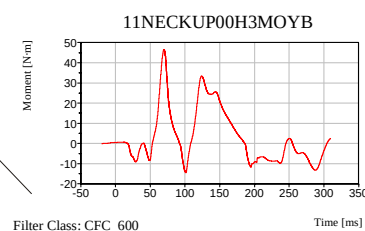
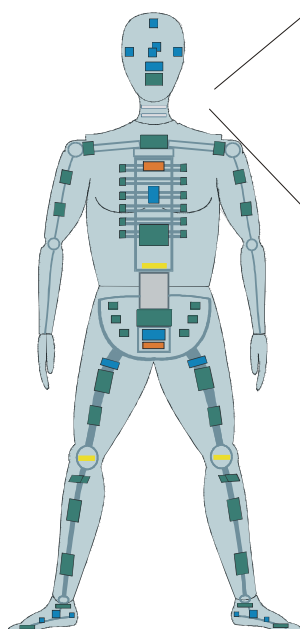
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal

NECKOM (11TMONUP00H3MOYX)



Dummy: HIII 50th Male
Seating Position:

Driver

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

[Max.] 39.89 N·m at 69.76 ms

[Min.] -10.89 N·m at 288.24 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/27/2006

Time: 11:08

Customer: VRTC

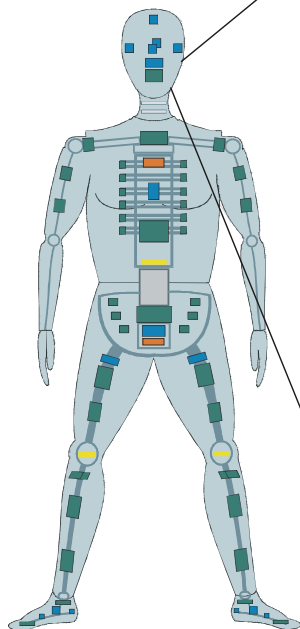
Test Orientation = Frontal

Fzc(Tension) = 6806

Fzc(Compression) = 6160

Myc(Extension) = 135

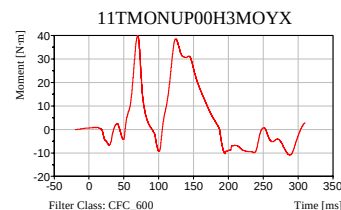
Myc(Flexion) = 310



Dummy: HIII 50th Male
Seating Position:

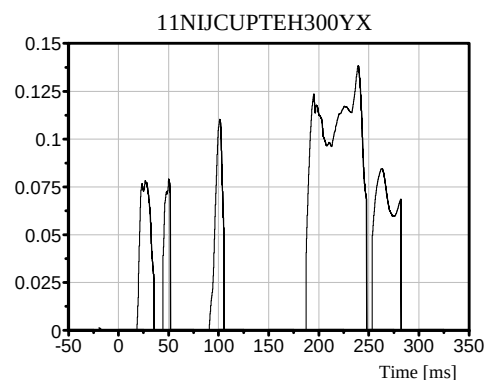
Driver

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

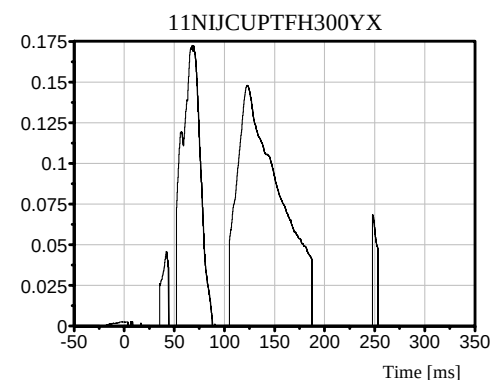


TRC Inc. Test Lab: CTF

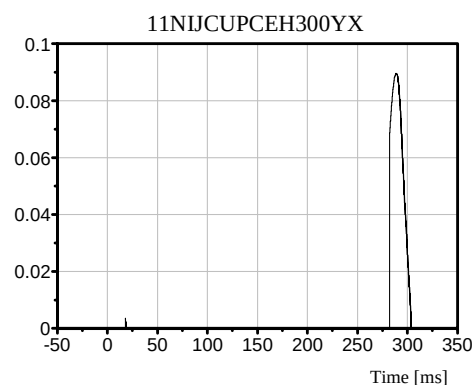
Test Number: 060324



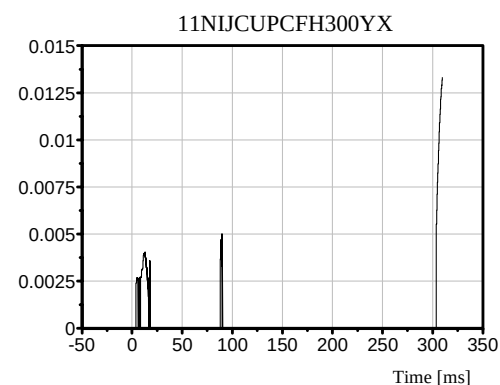
Max [NTE] 0.1384 at 239.52 ms



Max [NTF] 0.1725 at 67.68 ms



Max [NCE] 0.0896 at 288.64 ms



Max [NCF] 0.0133 at 309.84 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

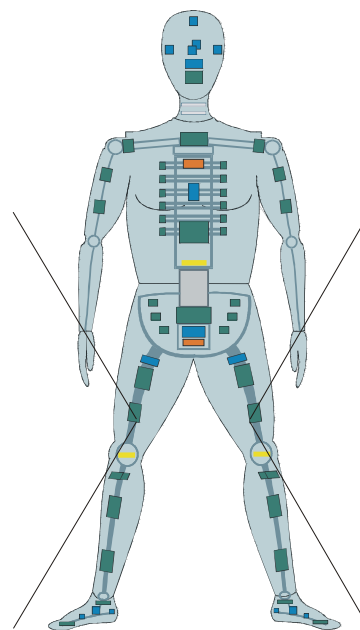
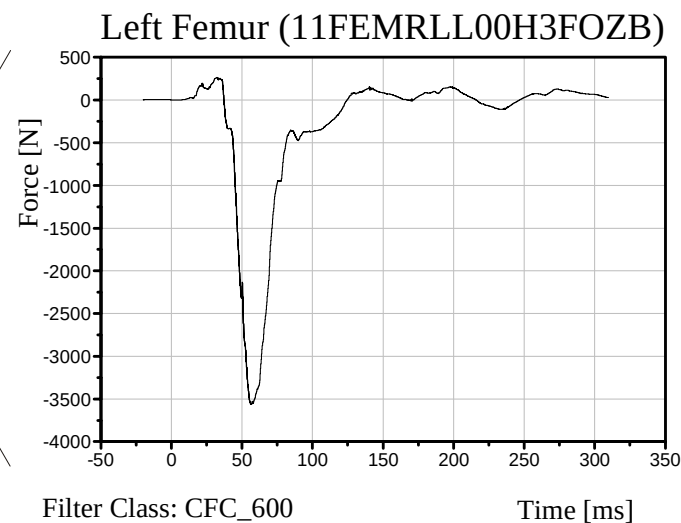
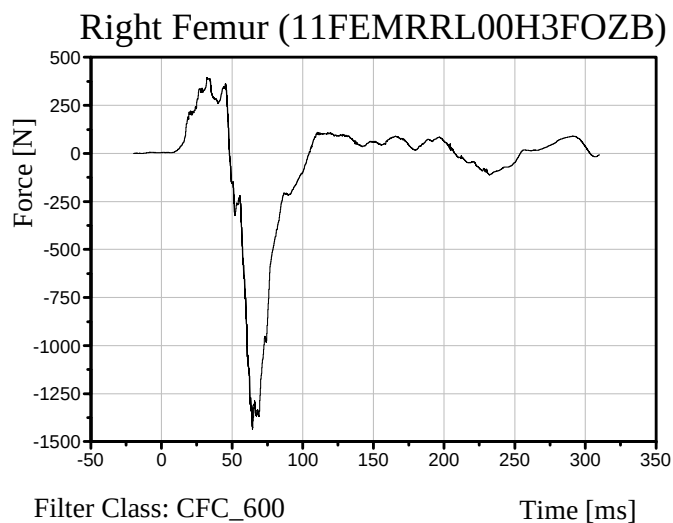
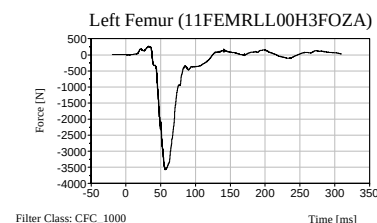
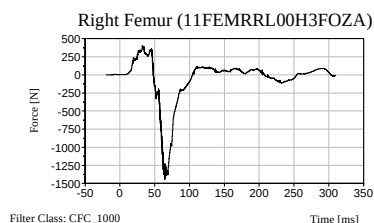
Time: 11:08

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



Max [Tension] 395.88 N at 32.16 ms
Min [Compression] -1,435.56 N at 64.40 ms

Dummy: HIII 50th Male
Seating Position:
Driver

Max [Tension] 265.85 N at 32.48 ms
Min [Compression] -3,562.13 N at 56.80 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

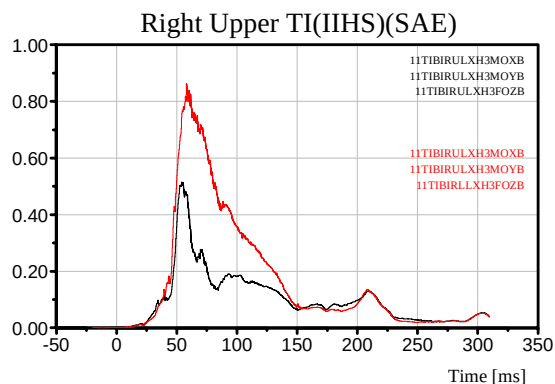
Tibia Index (TI)

Customer: VRTC

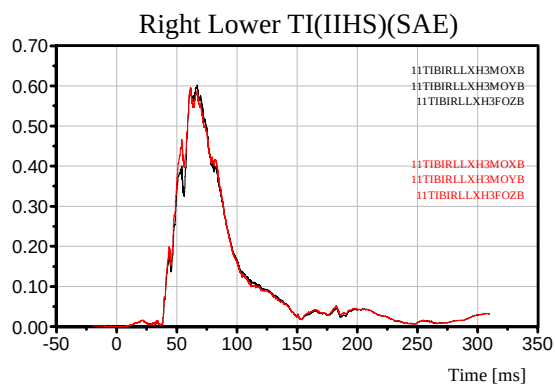
TRC Inc. Test Lab: CTF

Test Number: 060324

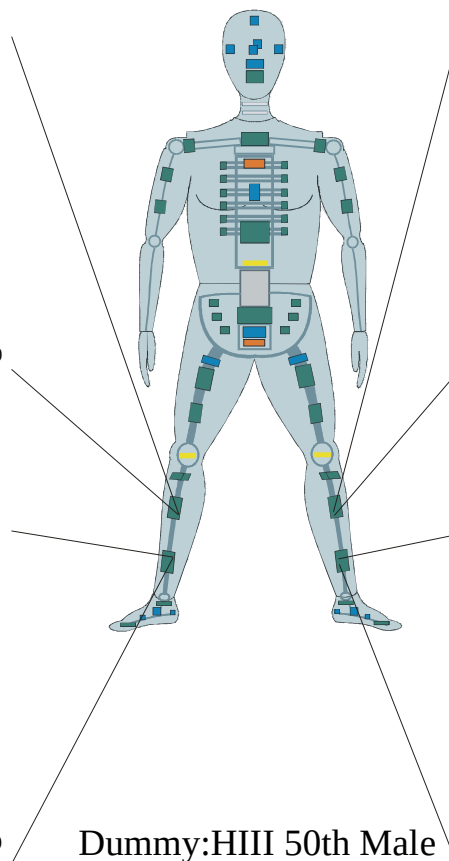
Critical Bending Moment = 240 N·m
Critical Compression Force = 12000 N



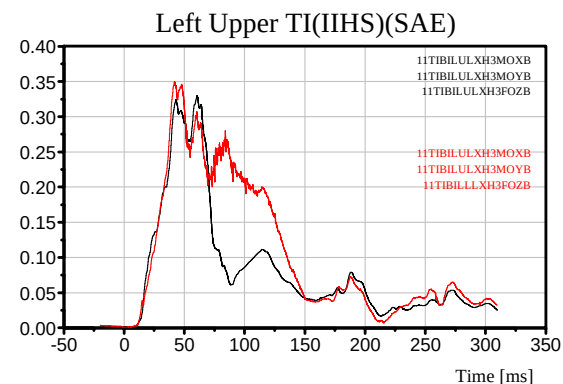
Max = 0.52 at 54.08 ms (SAE)
Max = 0.86 at 58.16 ms (IIHS)



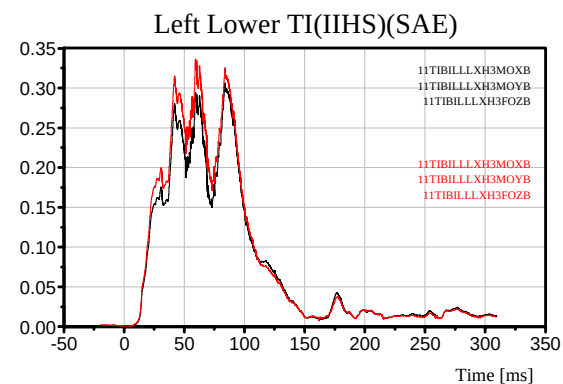
Max = 0.60 at 67.04 ms (SAE)
Max = 0.60 at 61.36 ms (IIHS)



Dummy: HIII 50th Male
Seating Position:
Driver



Max = 0.33 at 60.56 ms (SAE)
Max = 0.35 at 41.76 ms (IIHS)



Max = 0.31 at 83.92 ms (SAE)
Max = 0.34 at 59.20 ms (IIHS)

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

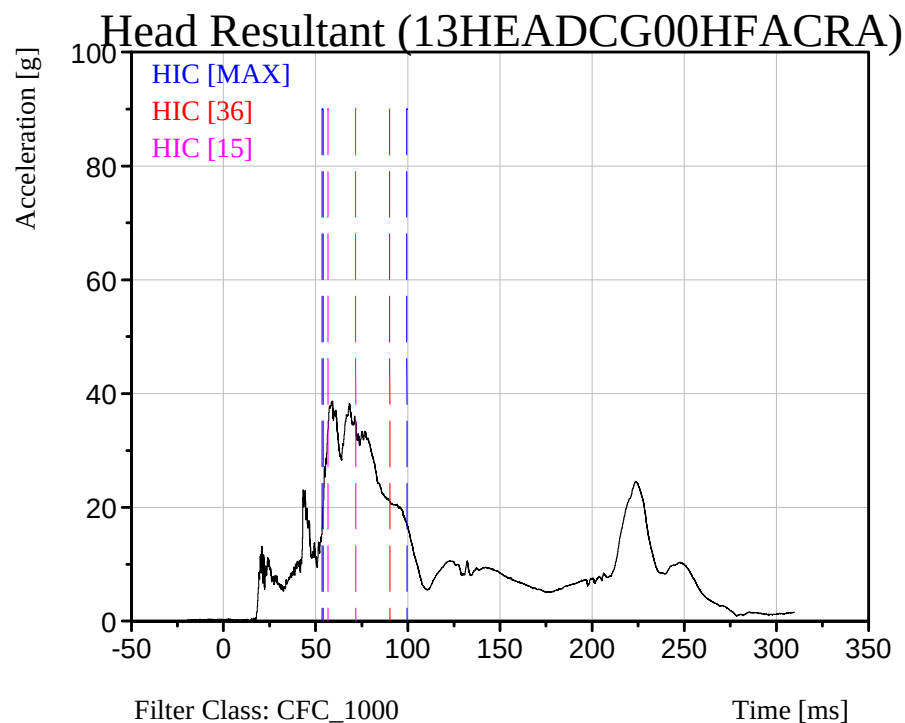
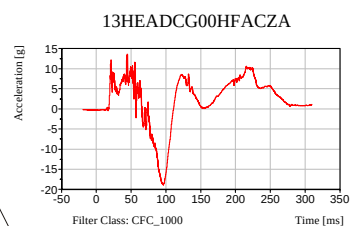
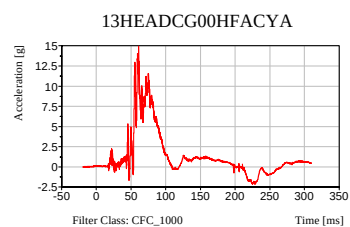
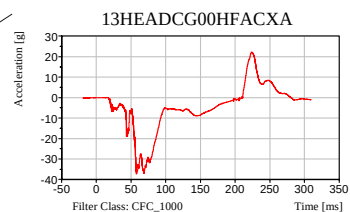
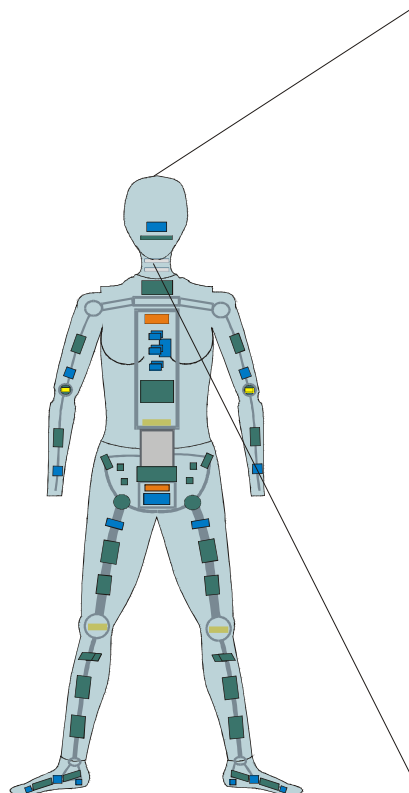
Time: 11:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



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

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

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 196.17	53.52 ms	99.52 ms	28.29 g
HIC [36] = 188.03	54.24 ms	90.24 ms	30.68 g
HIC [15] = 106.89	56.72 ms	71.76 ms	34.72 g



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

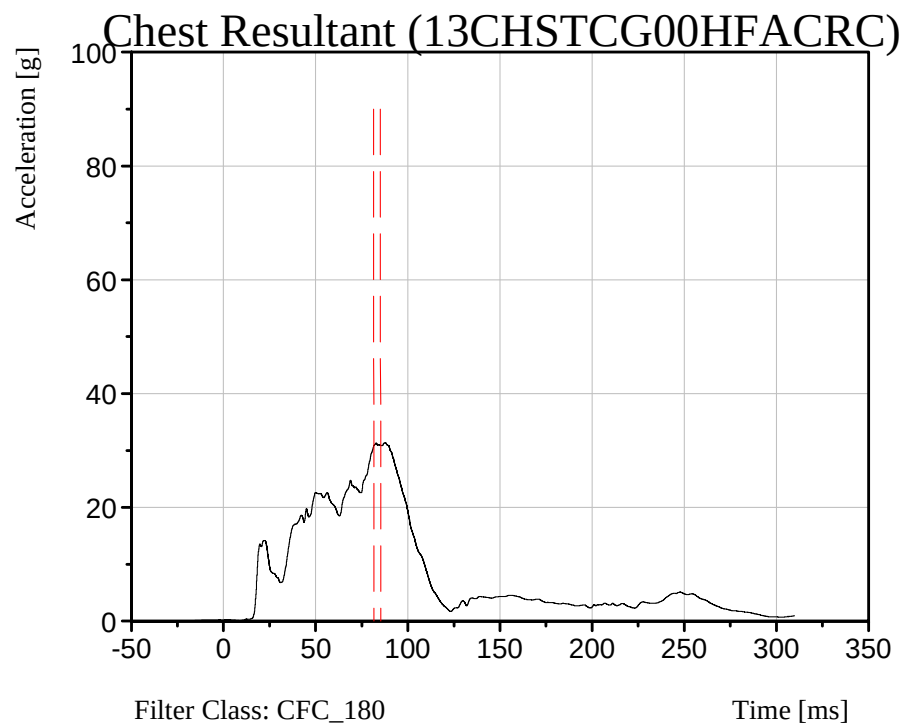
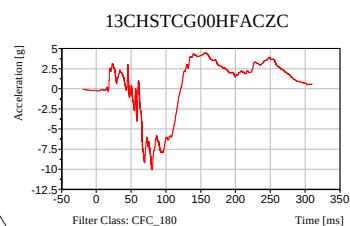
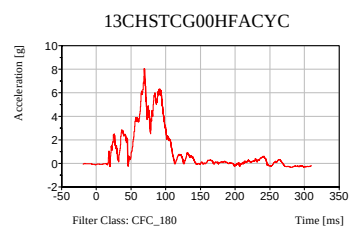
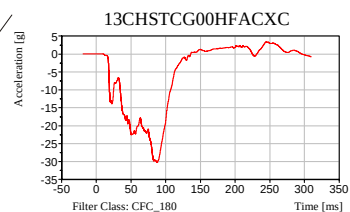
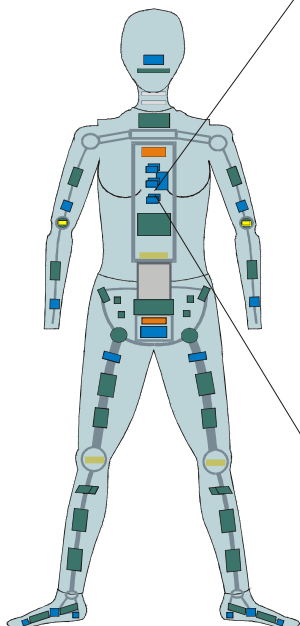
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 30.91 g
Chest Severity Index = 199.32

<u>T1</u> (Begin)	<u>T2</u> (End)
81.62 ms	85.25 ms

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

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

Chest Deflection

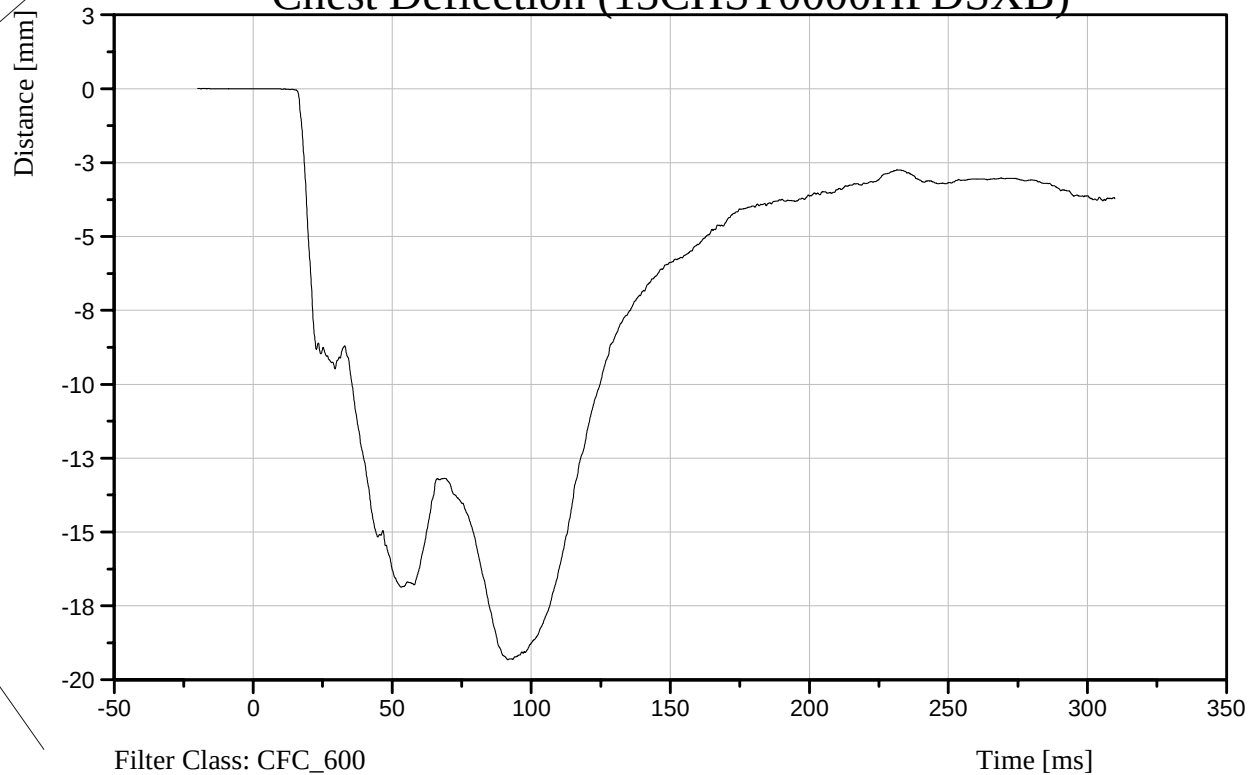
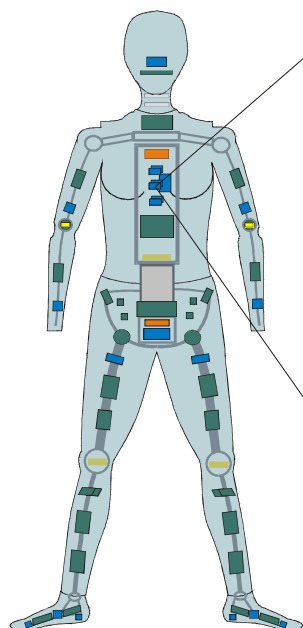
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal

Chest Deflection (13CHST0000HFDSXB)



Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

[Max.] 0.01 mm at -19.60 ms

[Min.] -19.32 mm at 91.52 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

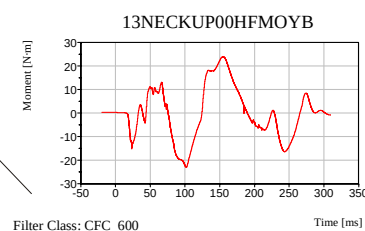
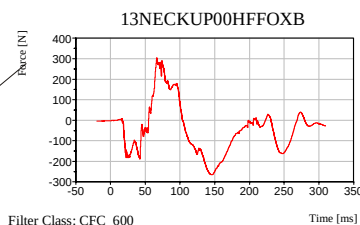
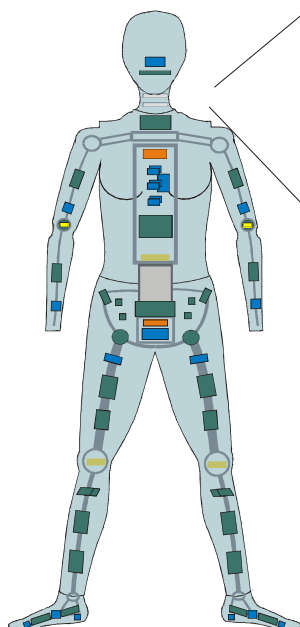
Date: 03/27/2006
Time: 11:08

Customer: VRTC

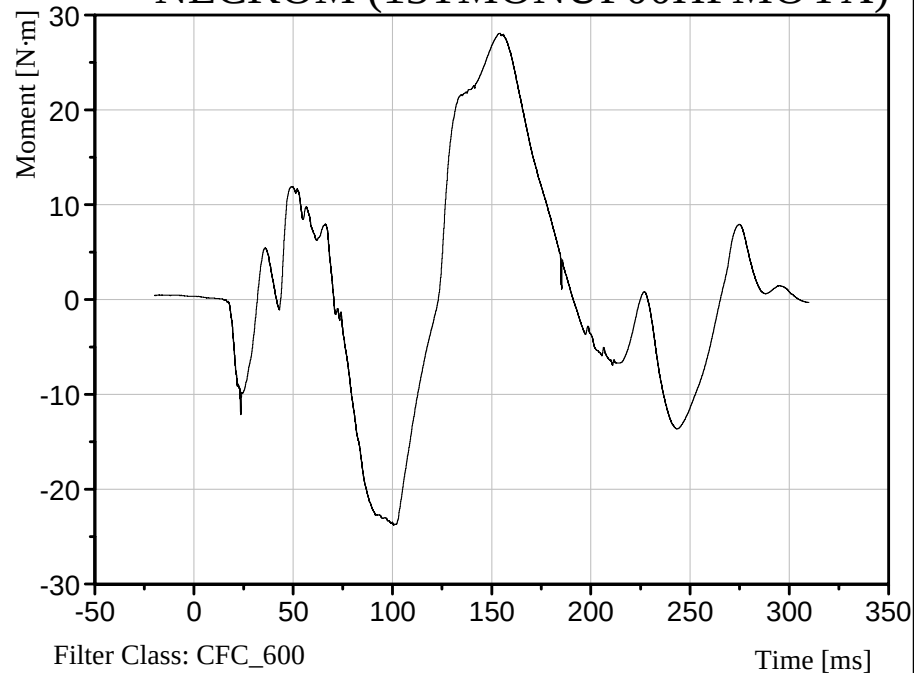
TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal



NECKOM (13TMONUP00HFM0YX)



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

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

[Max.] 28.10 N·m at 154.08 ms

[Min.] -23.79 N·m at 100.56 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/27/2006

Time: 11:08

Customer: VRTC

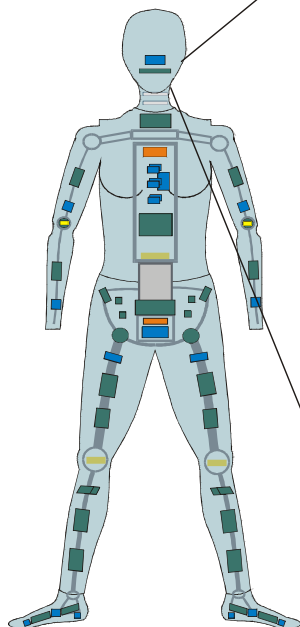
Test Orientation = Frontal

Fzc(Tension) = 4287

Fzc(Compression) = 3880

Myc(Extension) = 67

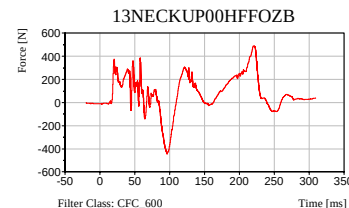
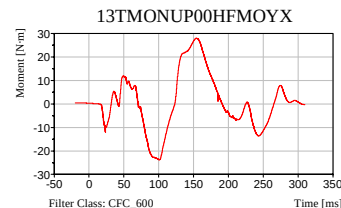
Myc(Flexion) = 155



Dummy: HIII 5th Female
Seating Position:

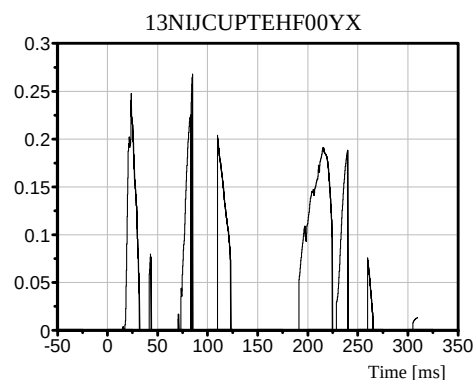
Right Front Passenger

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

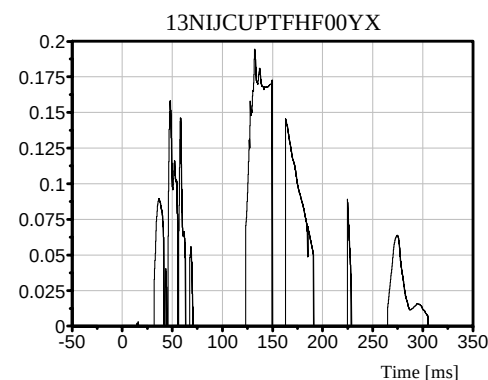


TRC Inc. Test Lab: CTF

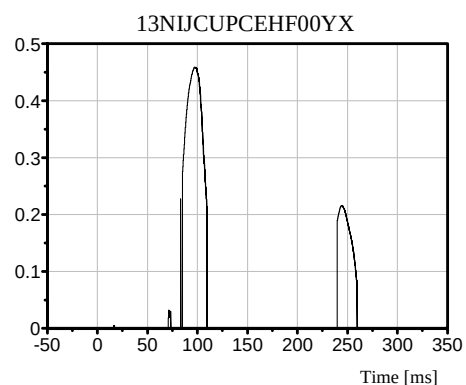
Test Number: 060324



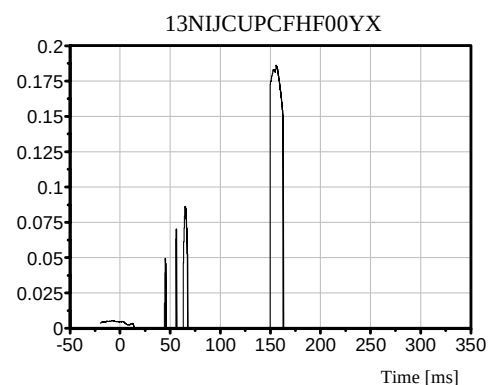
Max [NTE] 0.2681 at 84.88 ms



Max [NTF] 0.1946 at 132.24 ms



Max [NCE] 0.4591 at 97.36 ms



Max [NCF] 0.1863 at 155.76 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Femur Load

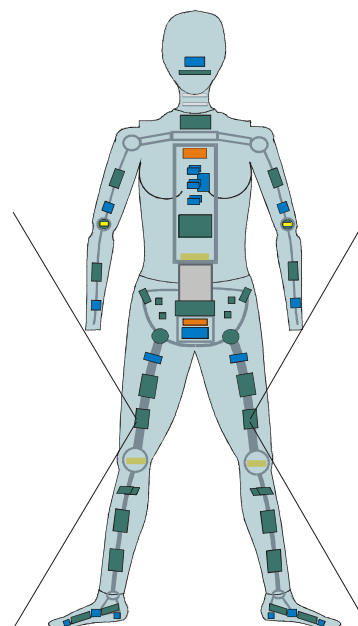
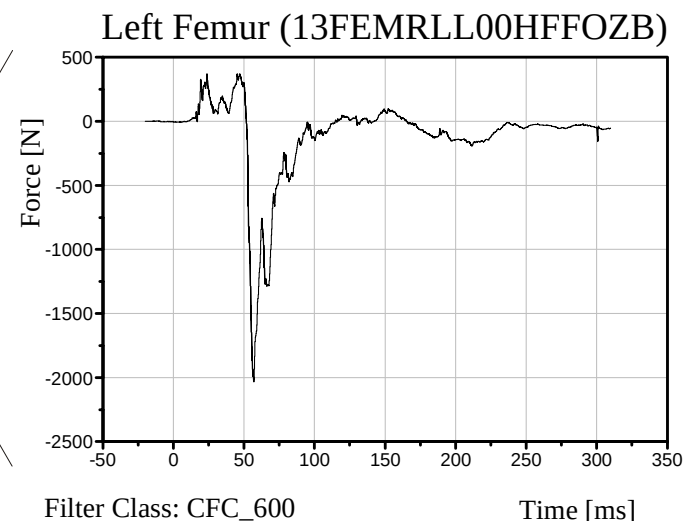
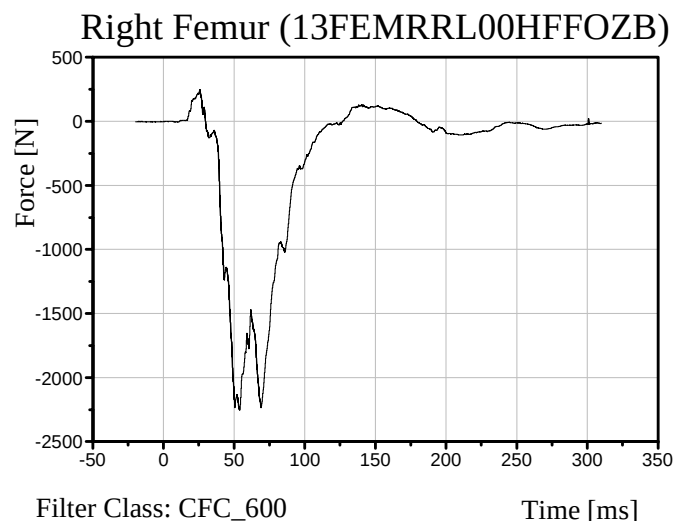
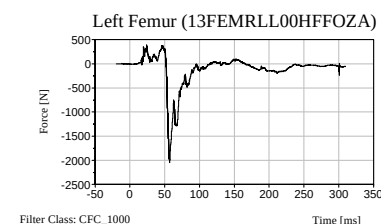
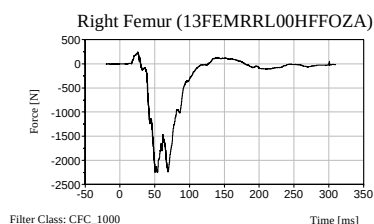
Date: 03/27/2006

Time: 11:08

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



Max [Tension] 247.97 N at 25.68 ms
Min [Compression] -2,253.51 N at 53.84 ms

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

Max [Tension] 371.70 N at 47.12 ms
Min [Compression] -2,032.80 N at 57.04 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

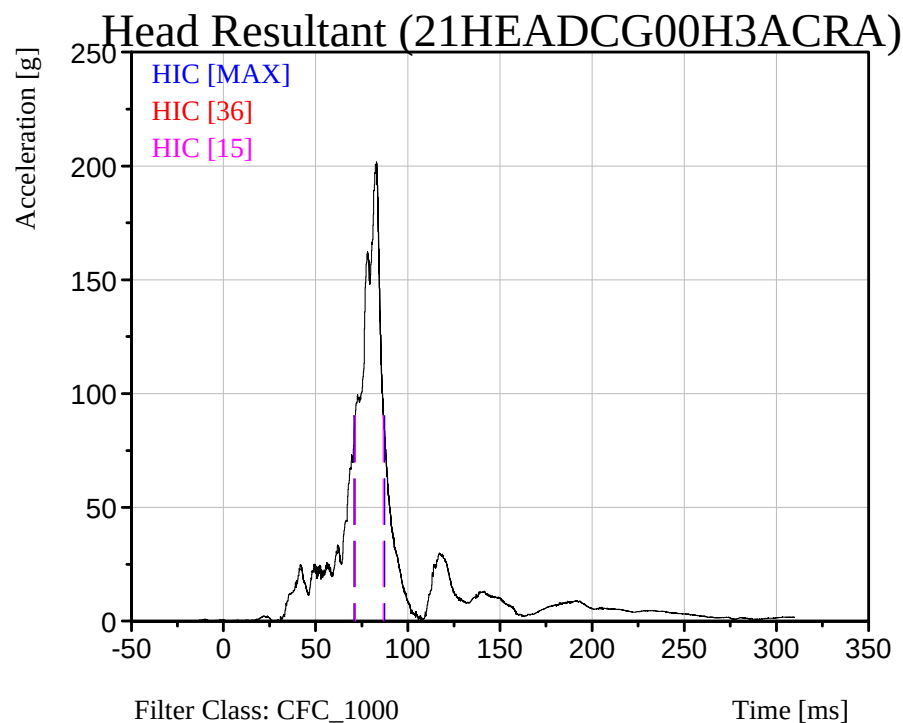
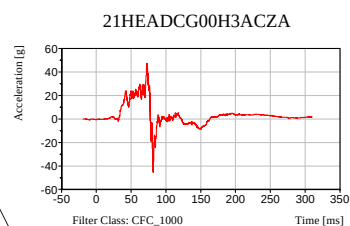
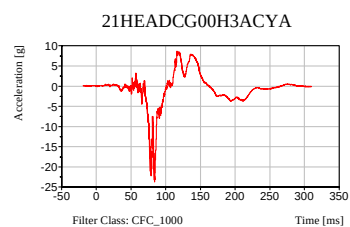
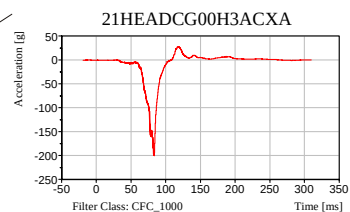
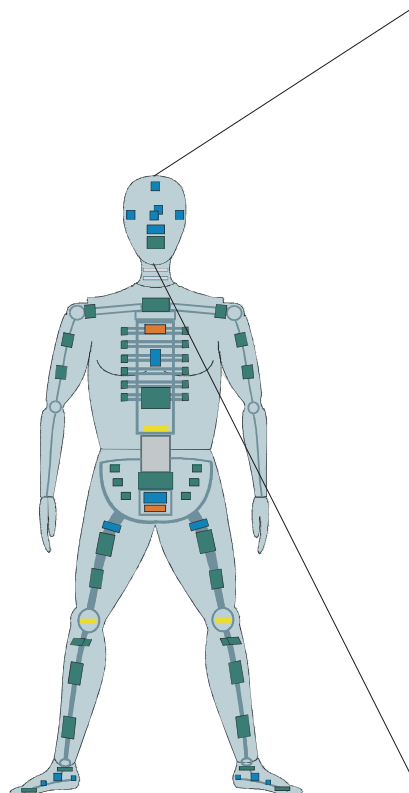
Time: 11:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



Dummy: HIII 50th Male
Seating Position:
Driver

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 3,478.34	70.80 ms	87.44 ms	134.05 g
HIC [36] = 3,478.34	70.80 ms	87.44 ms	134.05 g
HIC [15] = 3,448.38	71.60 ms	86.64 ms	139.11 g

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

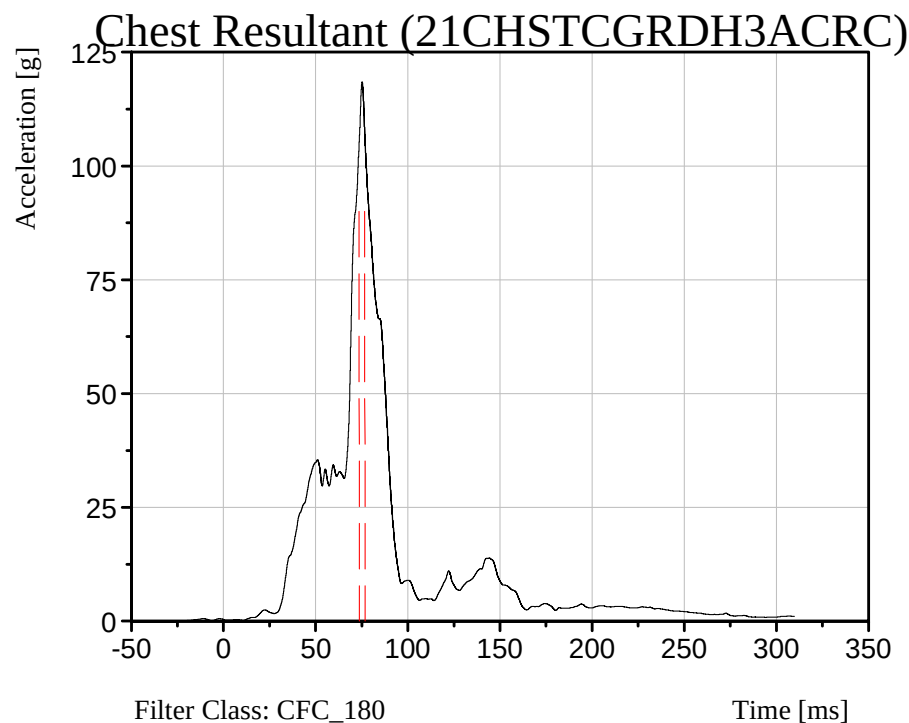
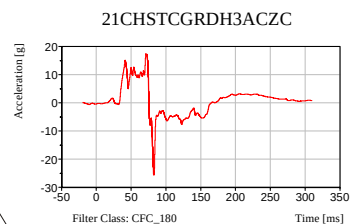
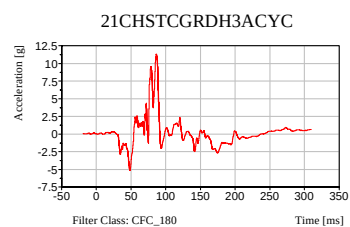
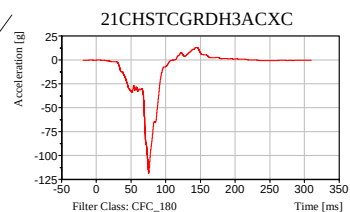
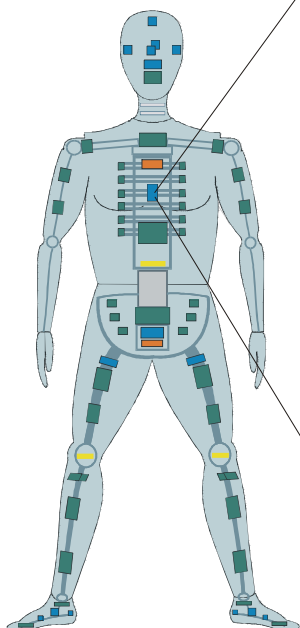
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 106.25 g
Chest Severity Index = 1,585.93

<u>T1</u> (Begin)	<u>T2</u> (End)
73.70 ms	76.70 ms

Dummy: HIII 50th Male
Seating Position:

Driver

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

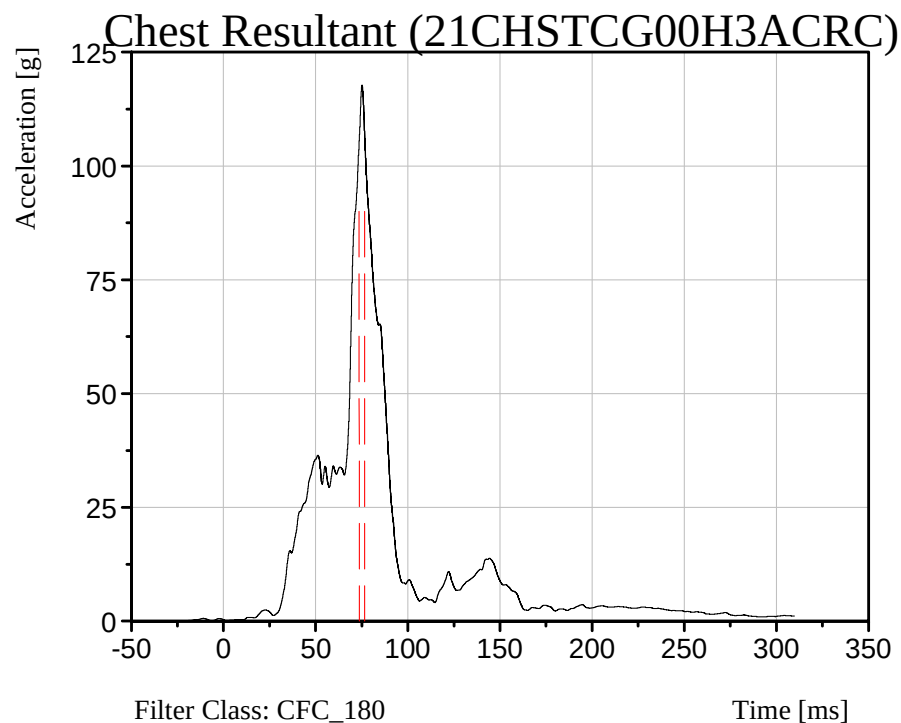
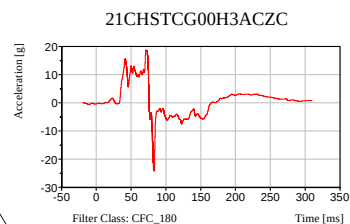
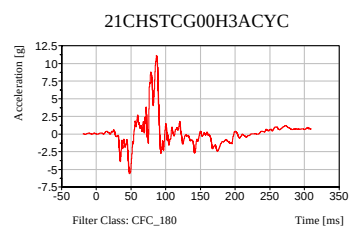
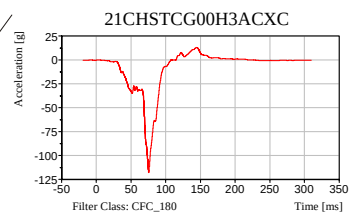
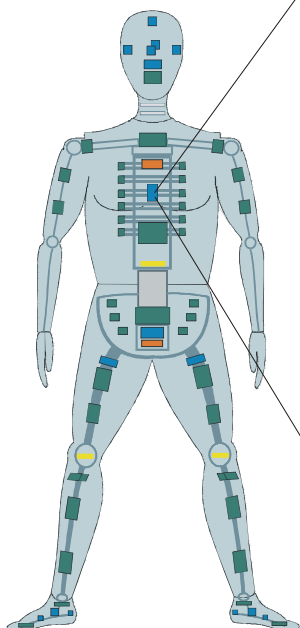
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 105.94 g
Chest Severity Index = 1,558.47

<u>T1</u> (Begin)	<u>T2</u> (End)
73.65 ms	76.65 ms

Dummy:HIII 50th Male
Seating Position:

Driver

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

Chest Deflection

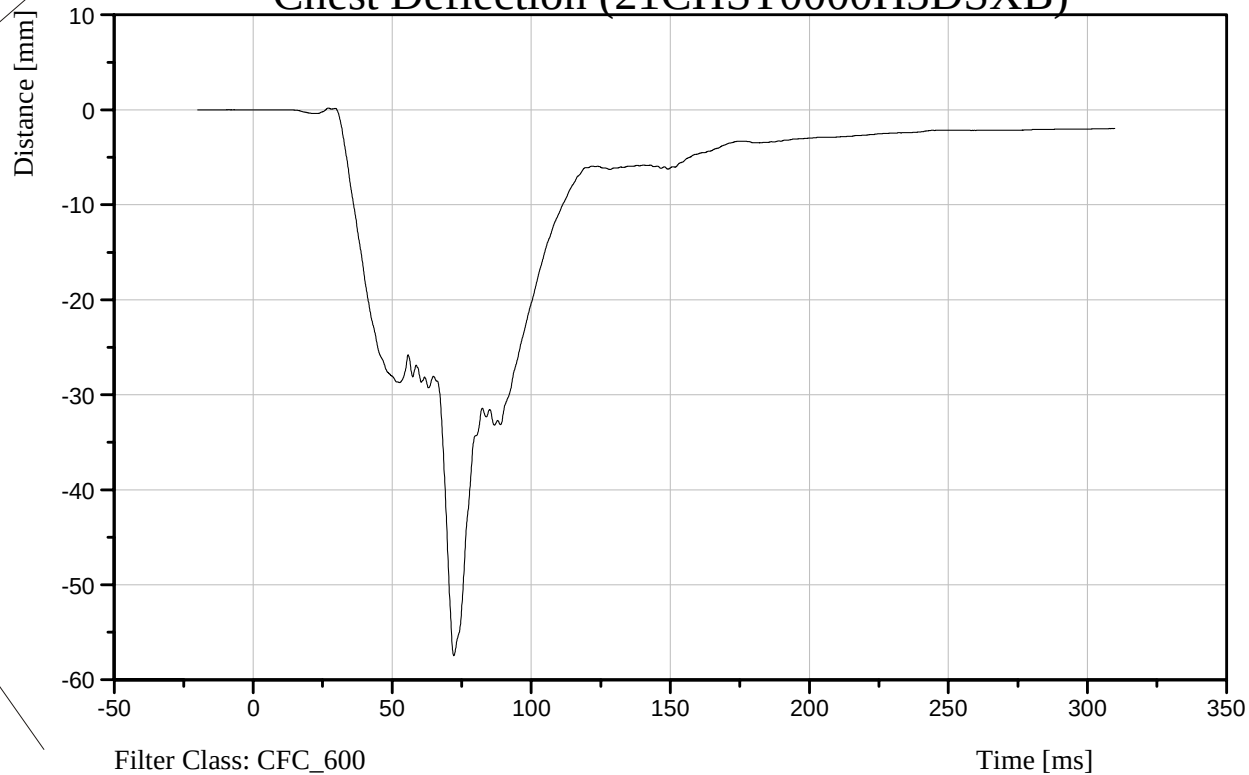
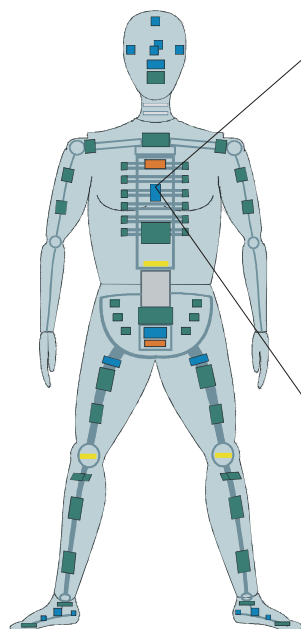
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal

Chest Deflection (21CHST0000H3DSXB)



Dummy: HIII 50th Male

Seating Position:

Driver

[Max.] 0.17 mm at 27.20 ms

[Min.] -57.47 mm at 72.16 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

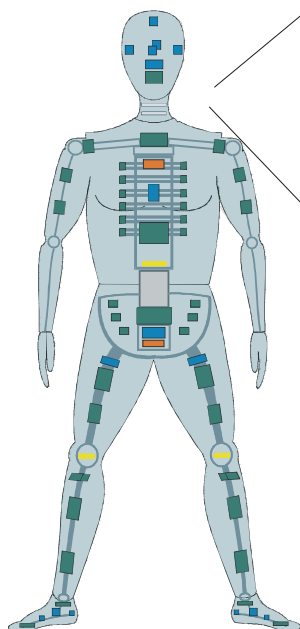
Date: 03/27/2006
Time: 11:08

Customer: VRTC

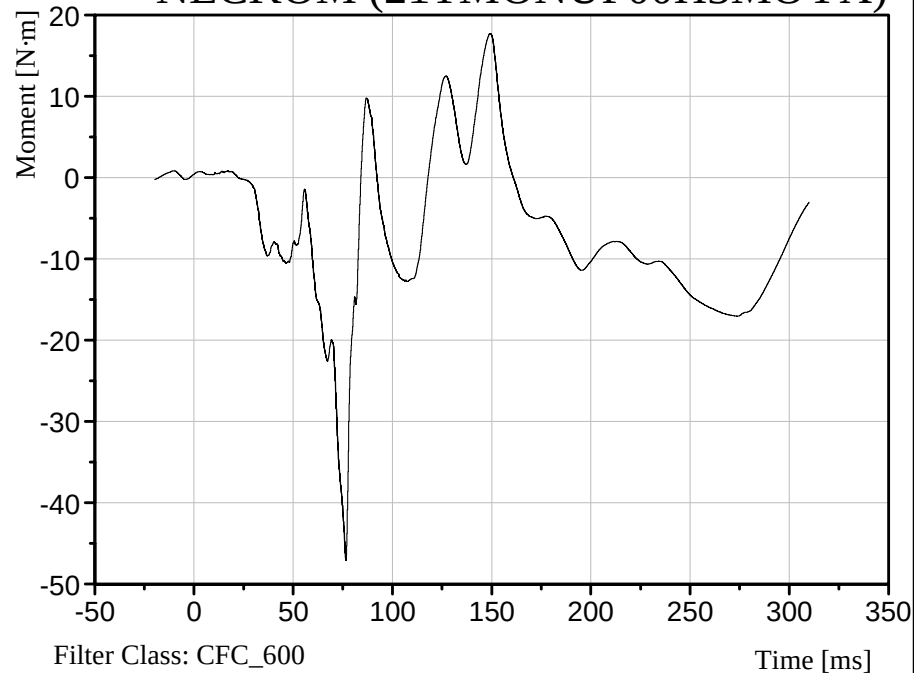
TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal



NECKOM (21TMONUP00H3MOYX)



Dummy: HIII 50th Male
Seating Position:

Driver

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

[Max.] 17.76 N·m at 149.20 ms

[Min.] -47.09 N·m at 76.48 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/27/2006

Time: 11:08

Customer: VRTC

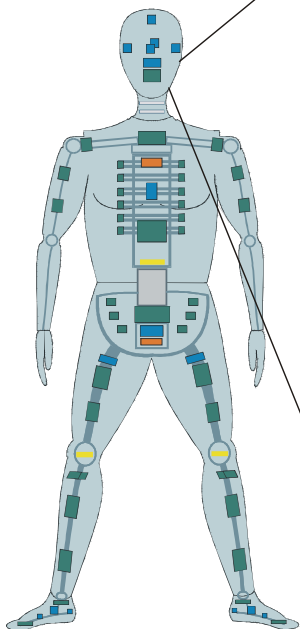
Test Orientation = Frontal

Fzc(Tension) = 6806

Fzc(Compression) = 6160

Myc(Extension) = 135

Myc(Flexion) = 310



Dummy: HIII 50th Male
Seating Position:

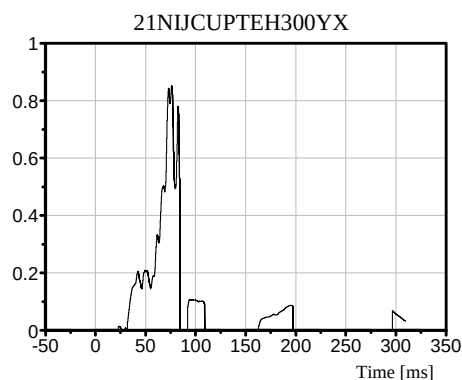
Driver

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

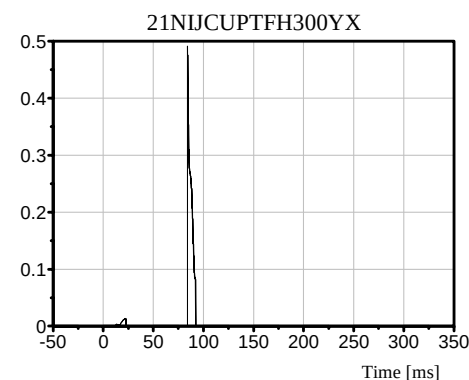


TRC Inc. Test Lab: CTF

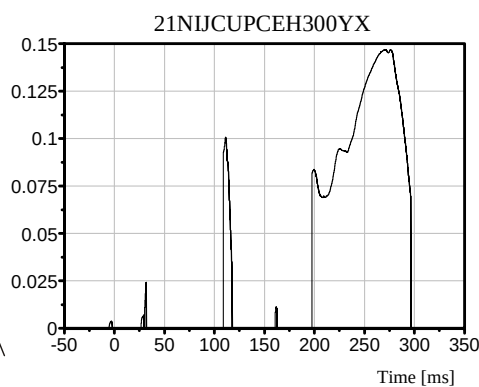
Test Number: 060324



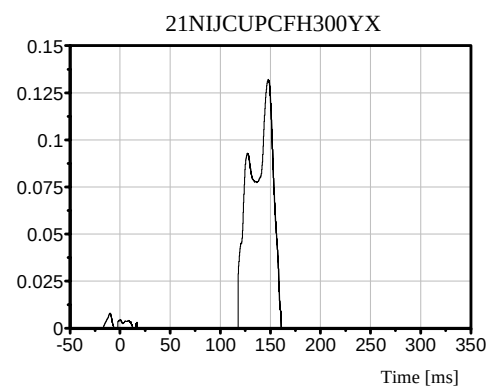
Max [NTE] 0.8533 at 75.92 ms



Max [NTF] 0.4915 at 84.08 ms



Max [NCE] 0.1470 at 270.16 ms



Max [NCF] 0.1320 at 147.92 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

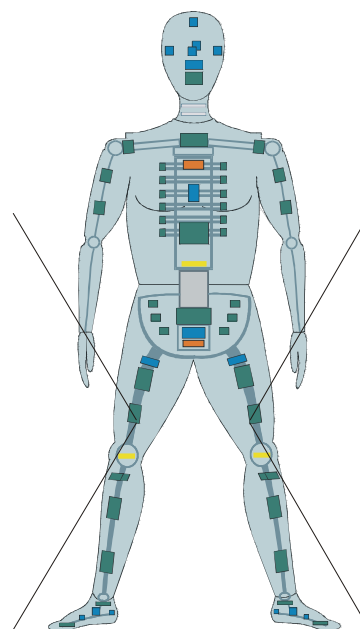
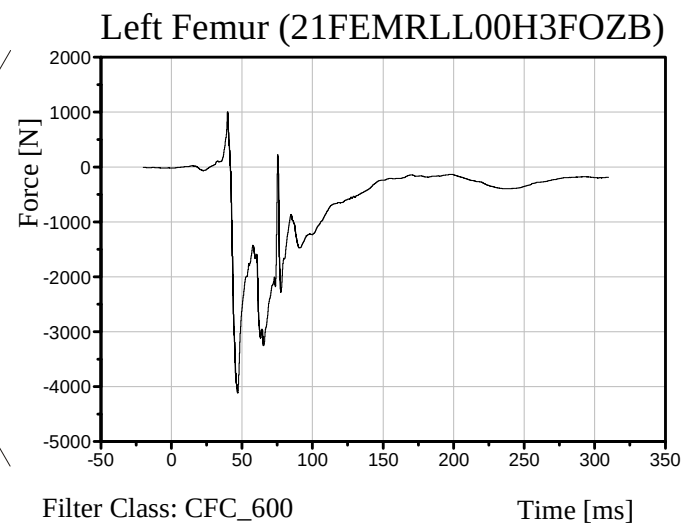
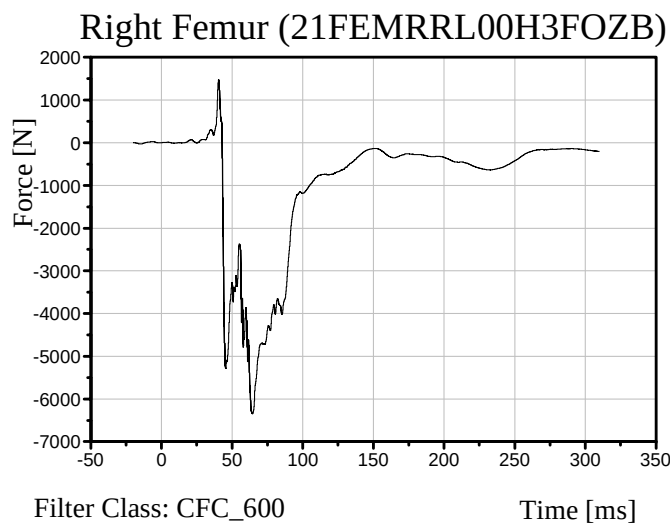
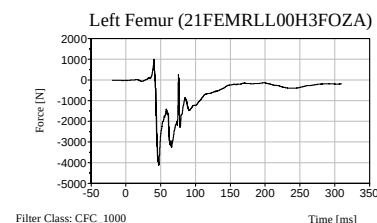
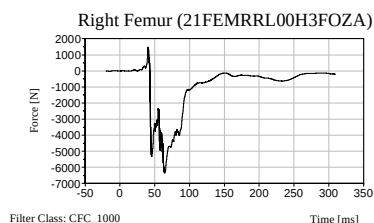
Time: 11:08

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



Max [Tension] 1,479.88 N at 40.40 ms
Min [Compression] -6,343.11 N at 64.48 ms

Dummy: HIII 50th Male
Seating Position:
Driver

Max [Tension] 1,009.59 N at 39.92 ms
Min [Compression] -4,113.98 N at 47.04 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Tibia Index (TI)

Date: 03/27/2006

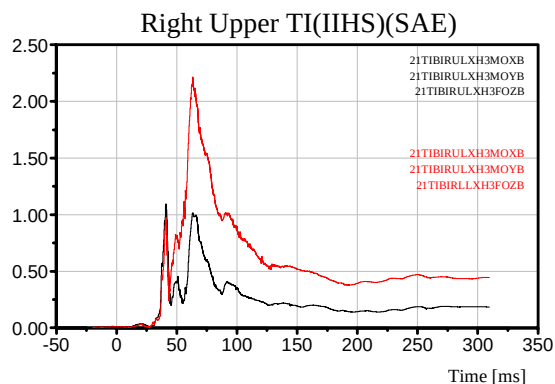
Time: 11:08

Customer: VRTC

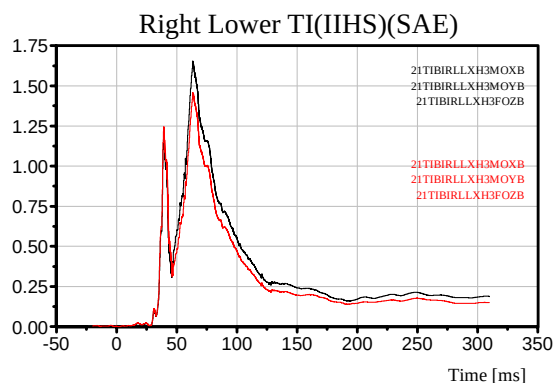
TRC Inc. Test Lab: CTF

Test Number: 060324

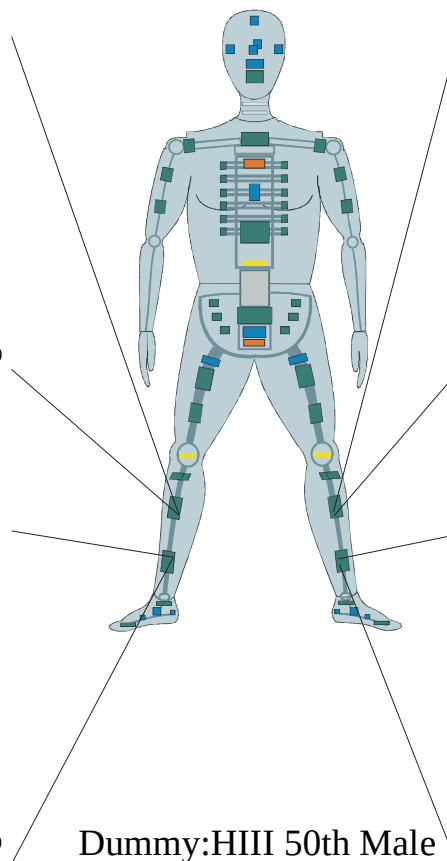
Critical Bending Moment = 240 N·m
Critical Compression Force = 12000 N



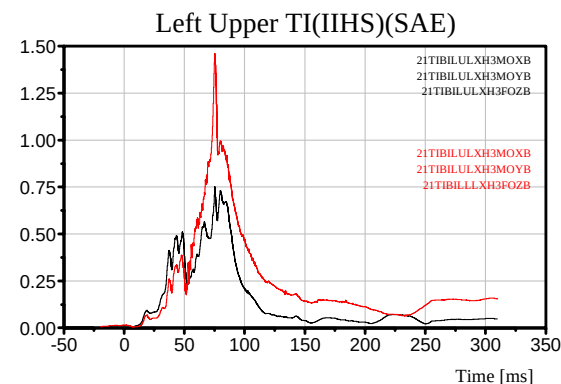
Max = 1.09 at 40.88 ms (SAE)
Max = 2.21 at 63.20 ms (IIHS)



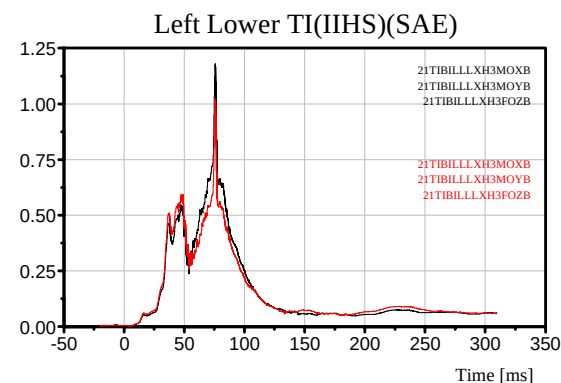
Max = 1.66 at 63.28 ms (SAE)
Max = 1.46 at 63.28 ms (IIHS)



Dummy: HIII 50th Male
Seating Position:
Driver



Max = 0.75 at 75.20 ms (SAE)
Max = 1.46 at 75.28 ms (IIHS)



Max = 1.18 at 75.76 ms (SAE)
Max = 1.02 at 75.76 ms (IIHS)

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

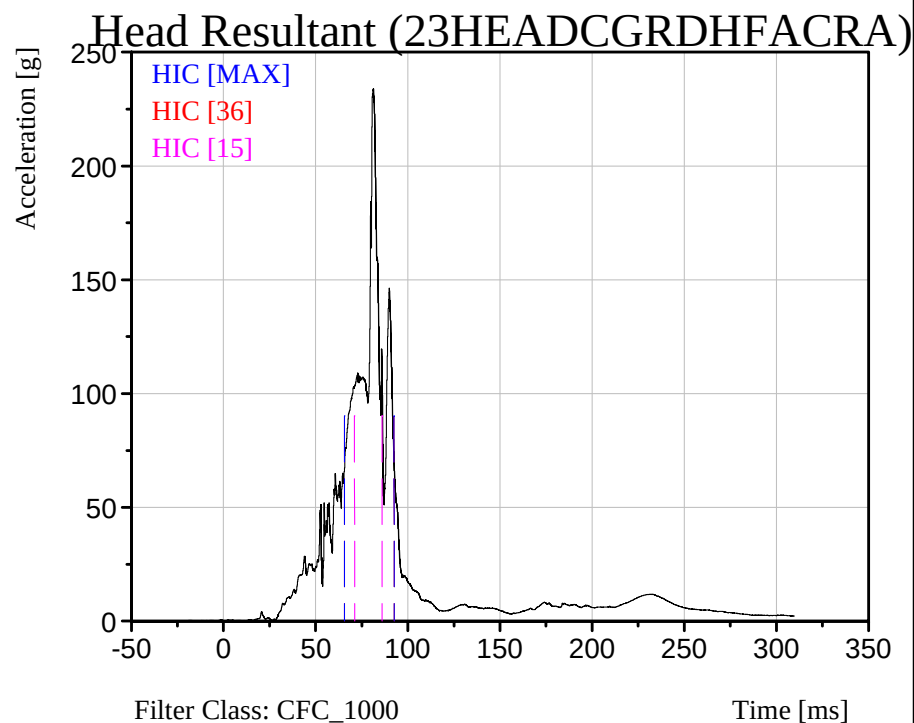
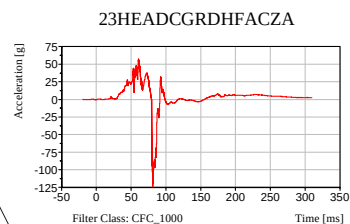
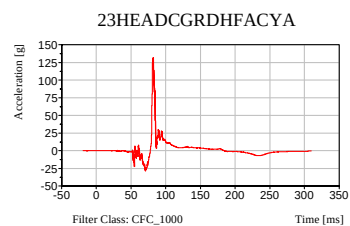
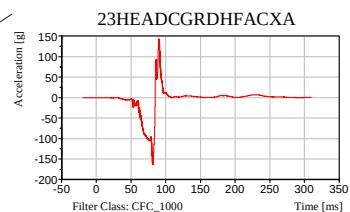
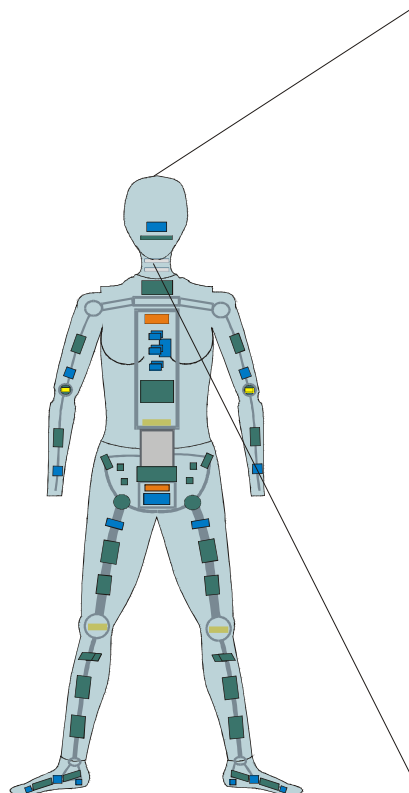
Time: 11:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



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

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

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 3,853.62	65.68 ms	92.56 ms	115.36 g
HIC [36] = 3,853.62	65.68 ms	92.56 ms	115.36 g
HIC [15] = 3,018.37	71.12 ms	86.16 ms	131.97 g



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

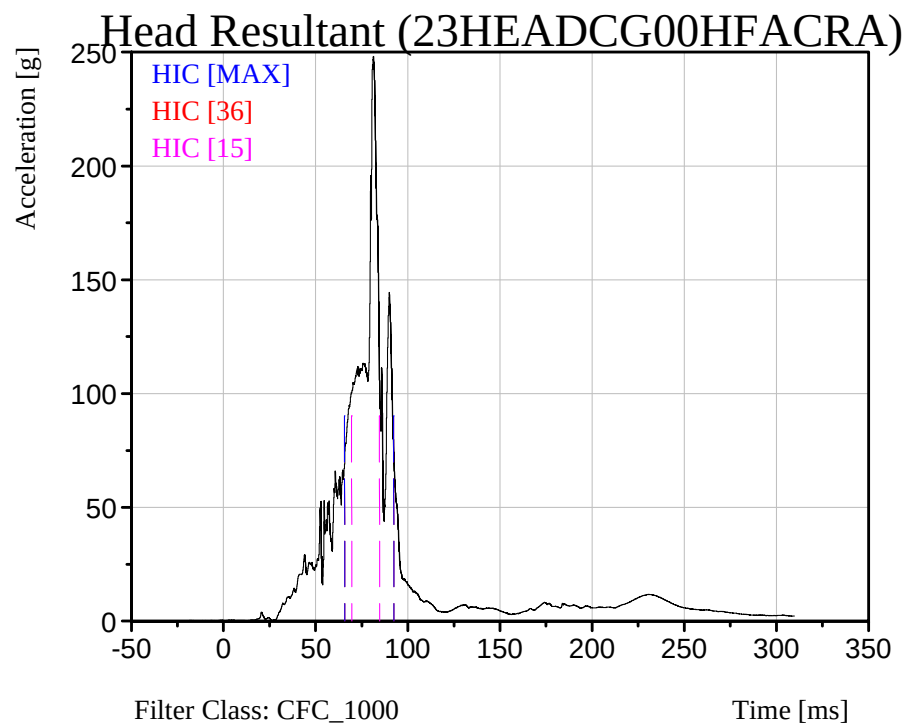
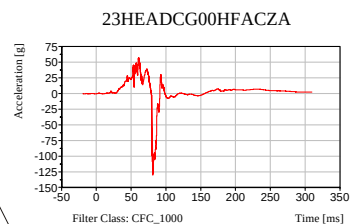
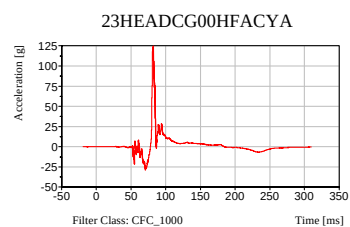
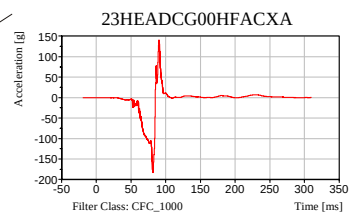
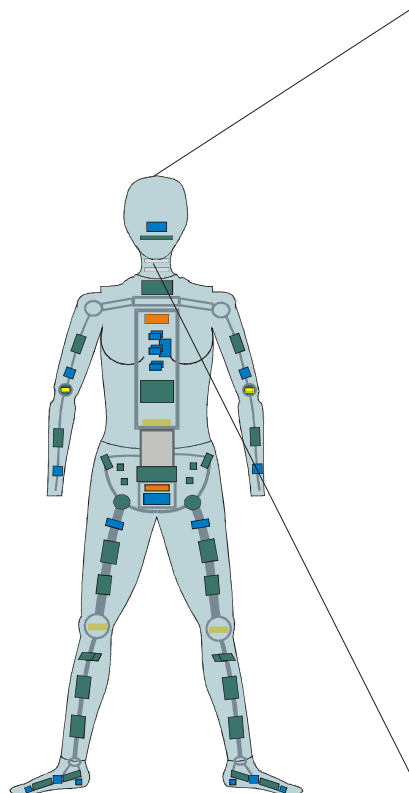
Time: 11:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



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

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

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 4,159.35	65.76 ms	92.40 ms	119.37 g
HIC [36] = 4,159.35	65.76 ms	92.40 ms	119.37 g
HIC [15] = 3,480.26	69.60 ms	84.64 ms	139.67 g



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

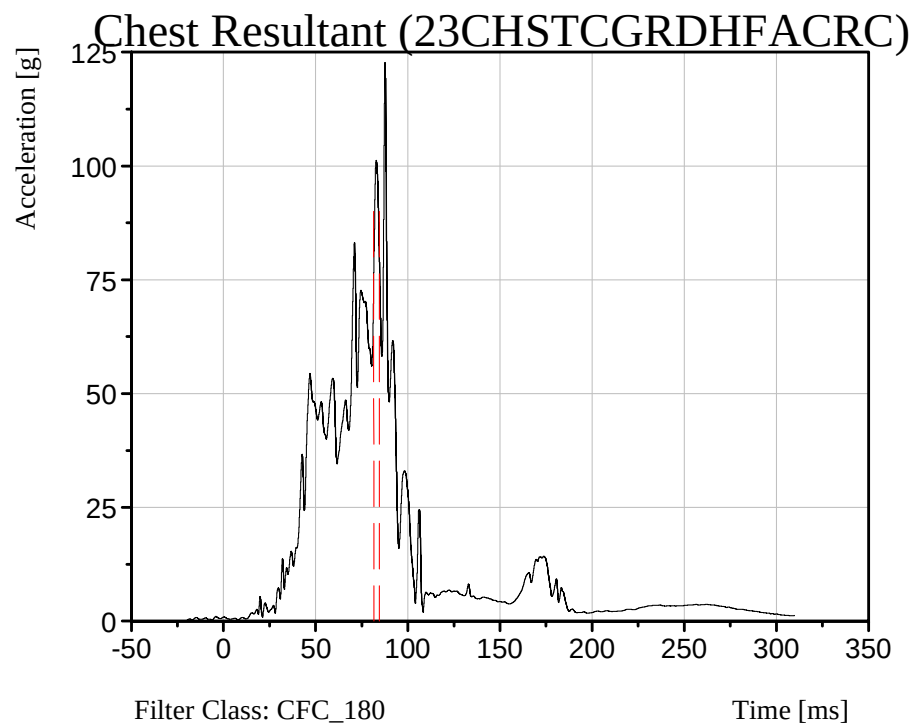
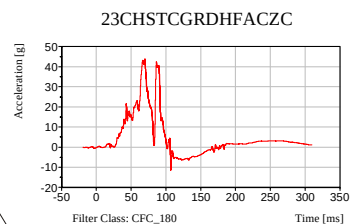
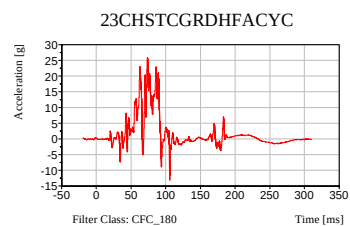
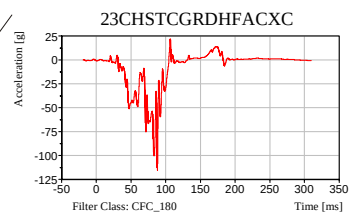
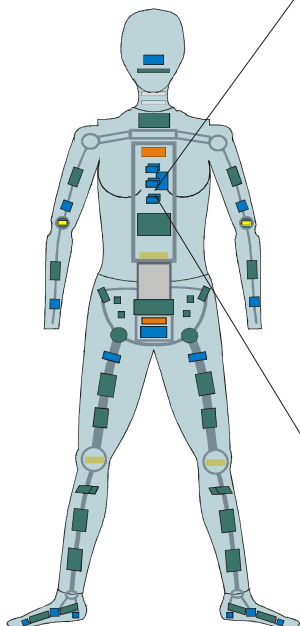
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 78.39 g
Chest Severity Index = 1,535.95

<u>T1</u> (Begin)	<u>T2</u> (End)
81.58 ms	84.58 ms

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

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

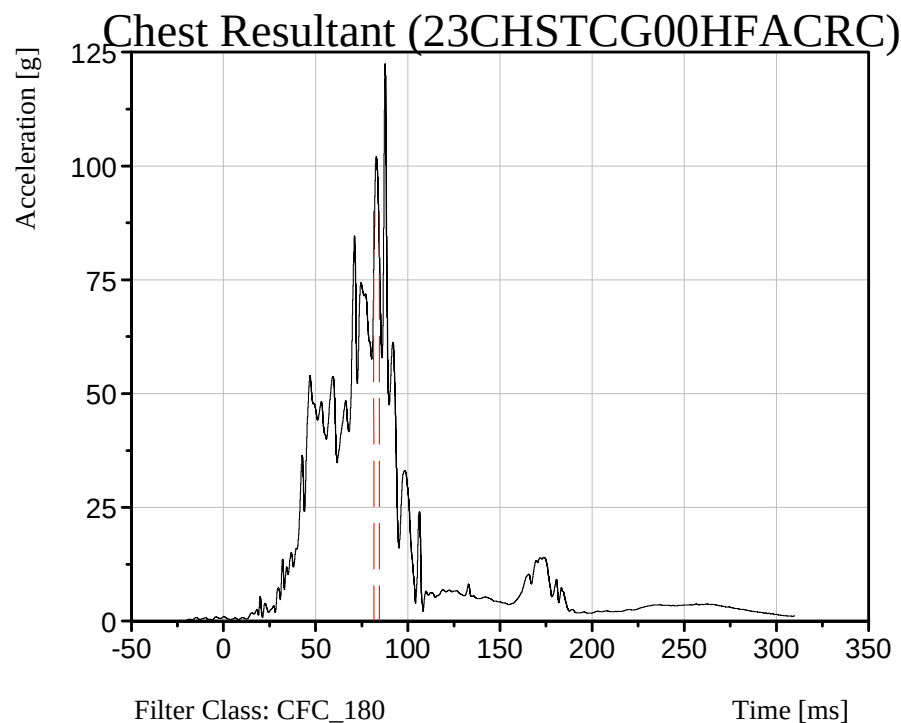
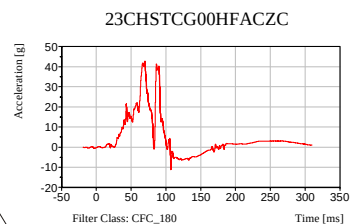
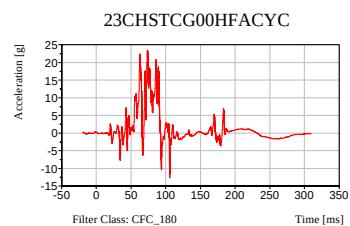
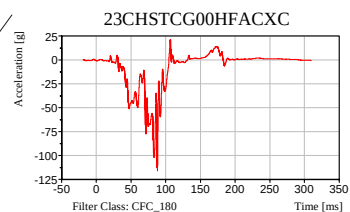
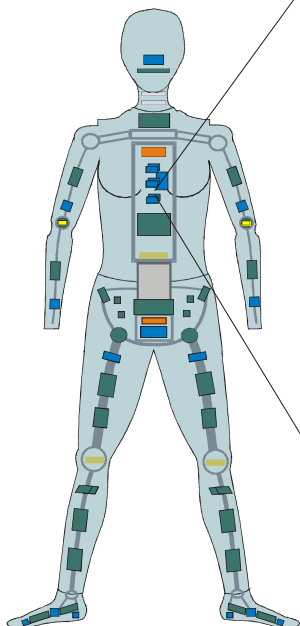
Time: 11:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



3 ms Duration Acceleration = 79.27 g
Chest Severity Index = 1,559.56

<u>T1</u> (Begin)	<u>T2</u> (End)
81.59 ms	84.59 ms

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

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

Chest Deflection

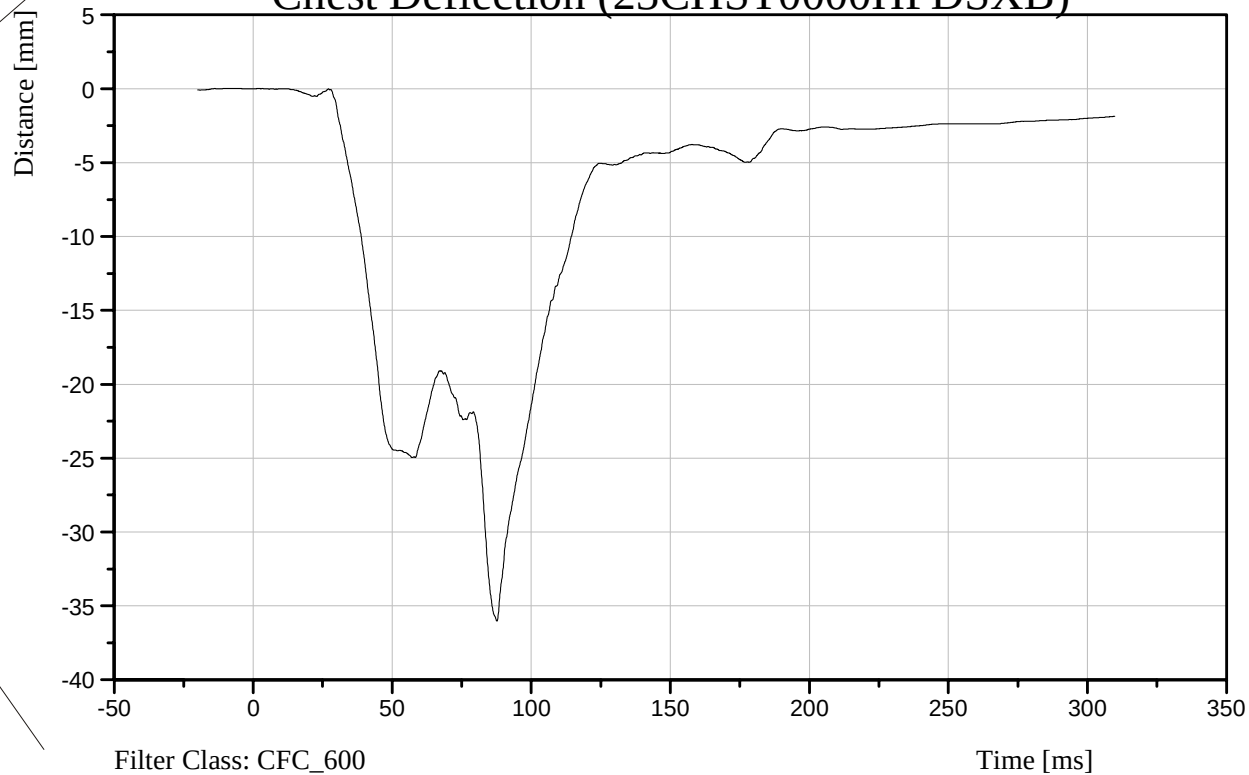
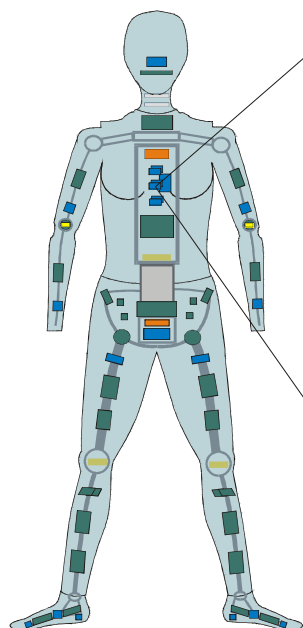
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal

Chest Deflection (23CHST0000HFDSXB)



Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

[Max.] 0.02 mm at -7.52 ms

[Min.] -36.04 mm at 87.68 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

Date: 03/27/2006
Time: 11:08

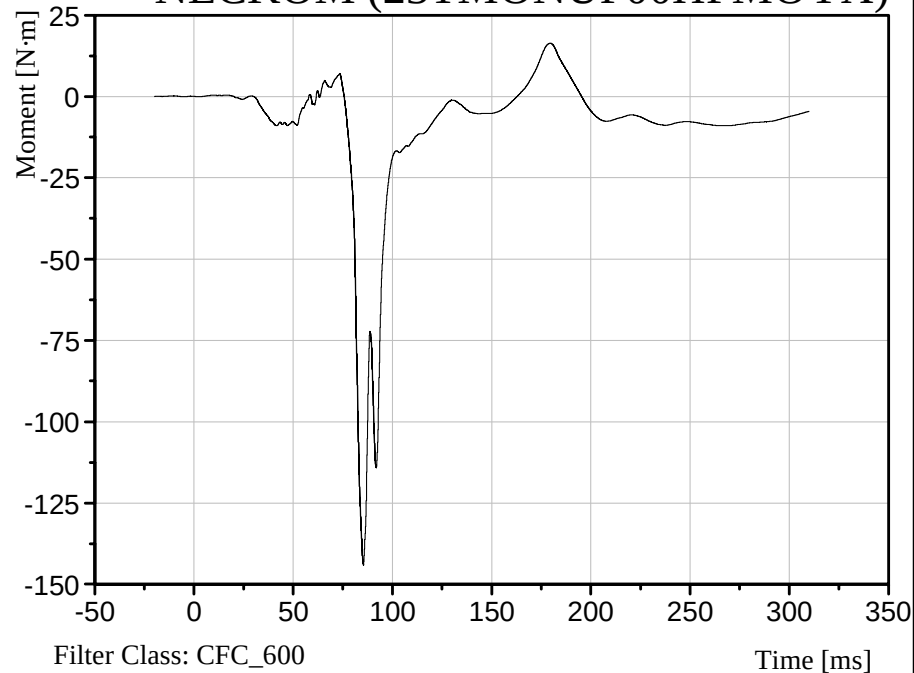
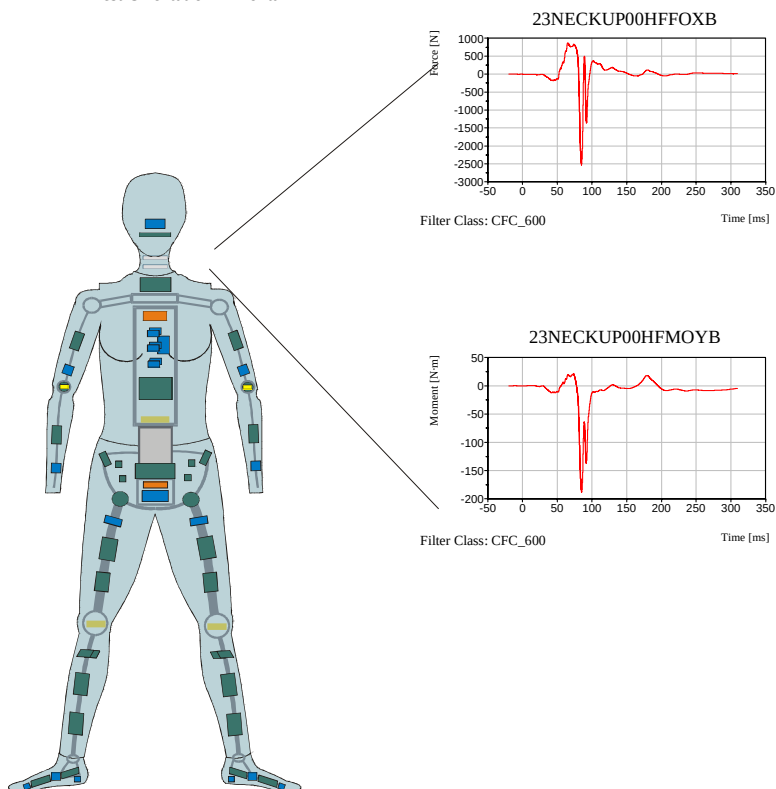
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324

Test Orientation = Frontal

NECKOM (23TMONUP00HFMOYX)



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

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

[Max.] 16.38 N·m at 179.52 ms

[Min.] -144.17 N·m at 85.28 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/27/2006

Time: 11:08

Customer: VRTC

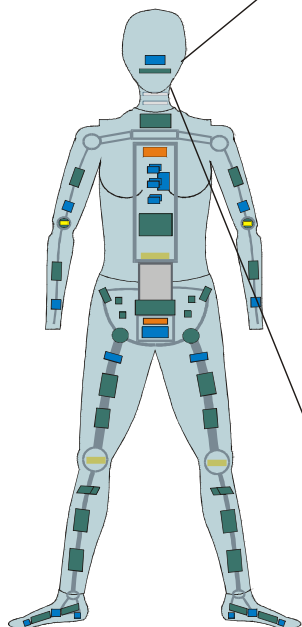
Test Orientation = Frontal

Fzc(Tension) = 4287

Fzc(Compression) = 3880

Myc(Extension) = 67

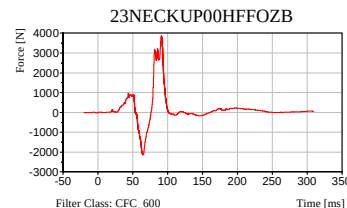
Myc(Flexion) = 155



Dummy: HIII 5th Female
Seating Position:

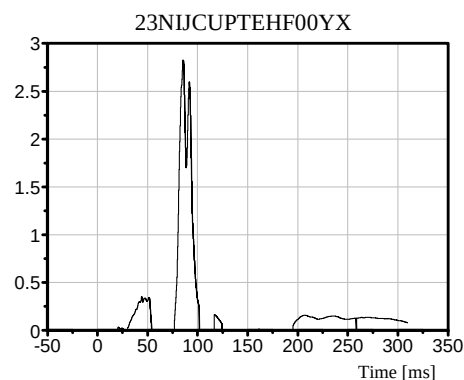
Right Front Passenger

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

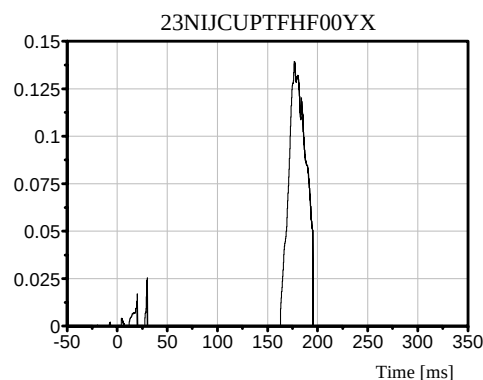


TRC Inc. Test Lab: CTF

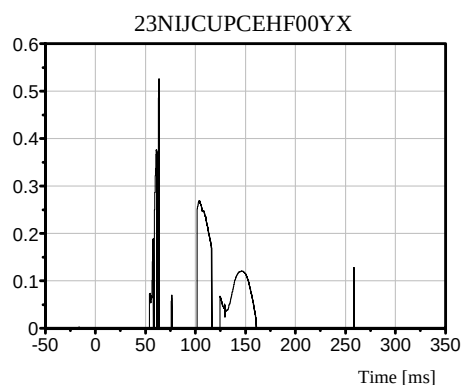
Test Number: 060324



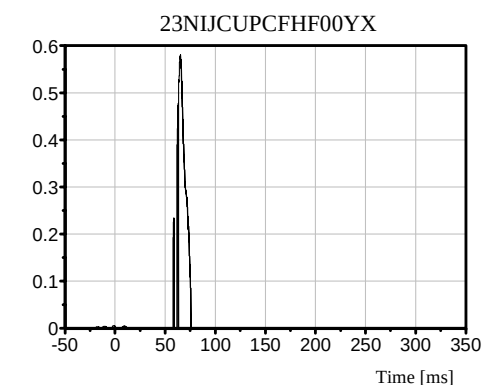
Max [NTE] 2.8277 at 85.28 ms



Max [NTF] 0.1394 at 176.80 ms



Max [NCE] 0.5269 at 63.44 ms



Max [NCF] 0.5807 at 65.04 ms



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Femur Load

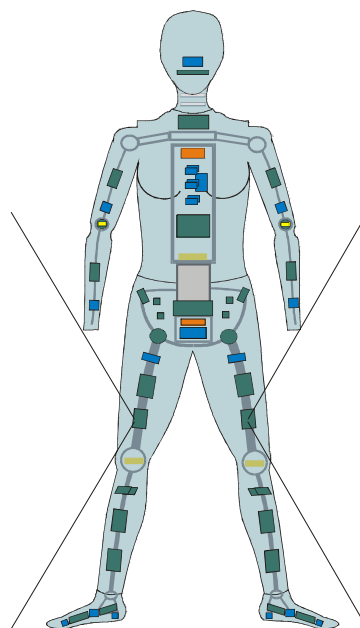
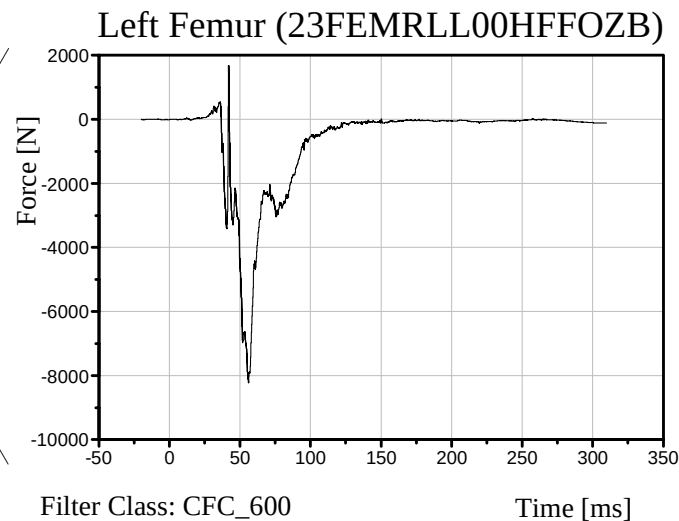
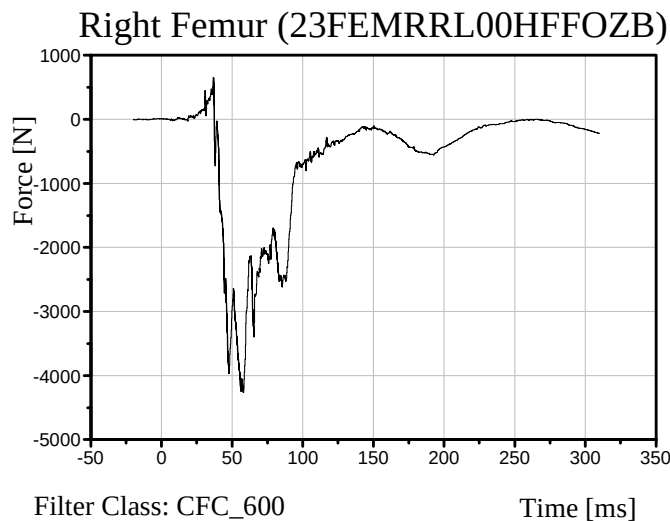
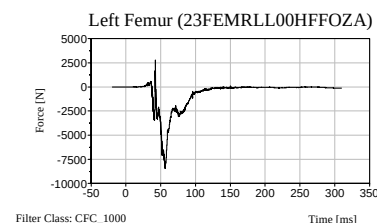
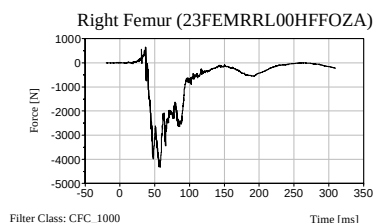
Date: 03/27/2006

Time: 11:08

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060324



Max [Tension] 651.09 N at 36.72 ms
Min [Compression] -4,264.90 N at 58.00 ms

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

Max [Tension] 1,679.20 N at 42.08 ms
Min [Compression] -8,225.40 N at 56.24 ms

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

Tibia Index (TI)

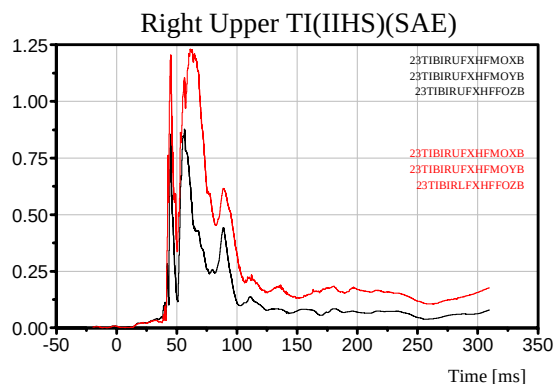
Customer: VRTC

TRC Inc. Test Lab: CTF

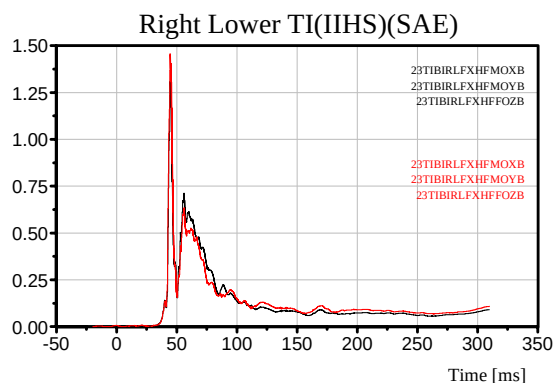
Test Number: 060324

Critical Bending Moment = 146 N·m

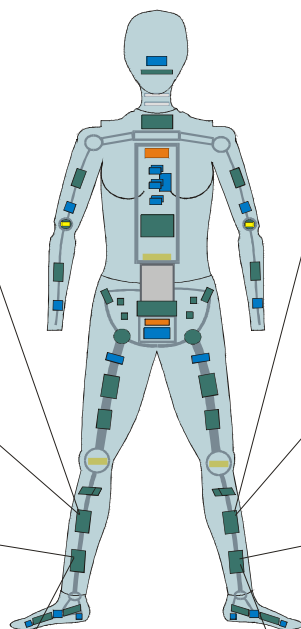
Critical Compression Force = 8600 N



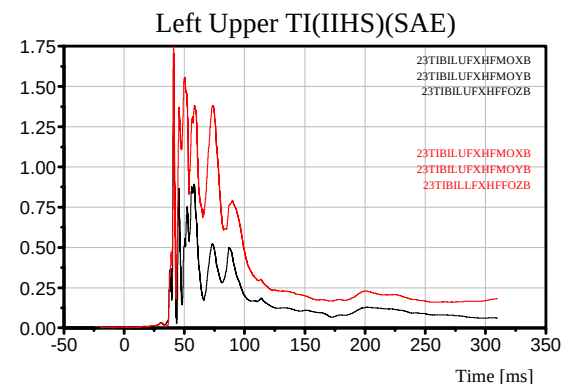
Max = 0.88 at 56.40 ms (SAE)
Max = 1.23 at 61.20 ms (IIHS)



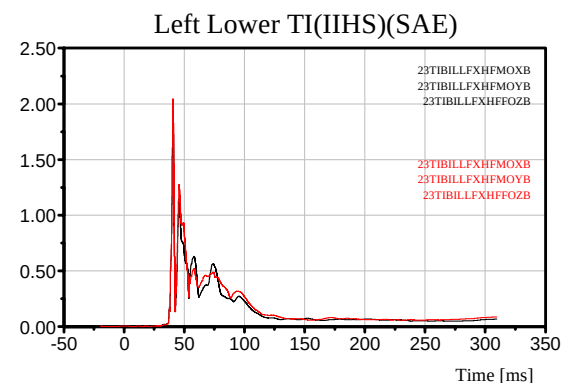
Max = 1.31 at 44.48 ms (SAE)
Max = 1.46 at 44.48 ms (IIHS)



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



Max = 1.67 at 41.12 ms (SAE)
Max = 1.75 at 41.12 ms (IIHS)



Max = 1.95 at 40.64 ms (SAE)
Max = 2.05 at 40.64 ms (IIHS)

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



2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

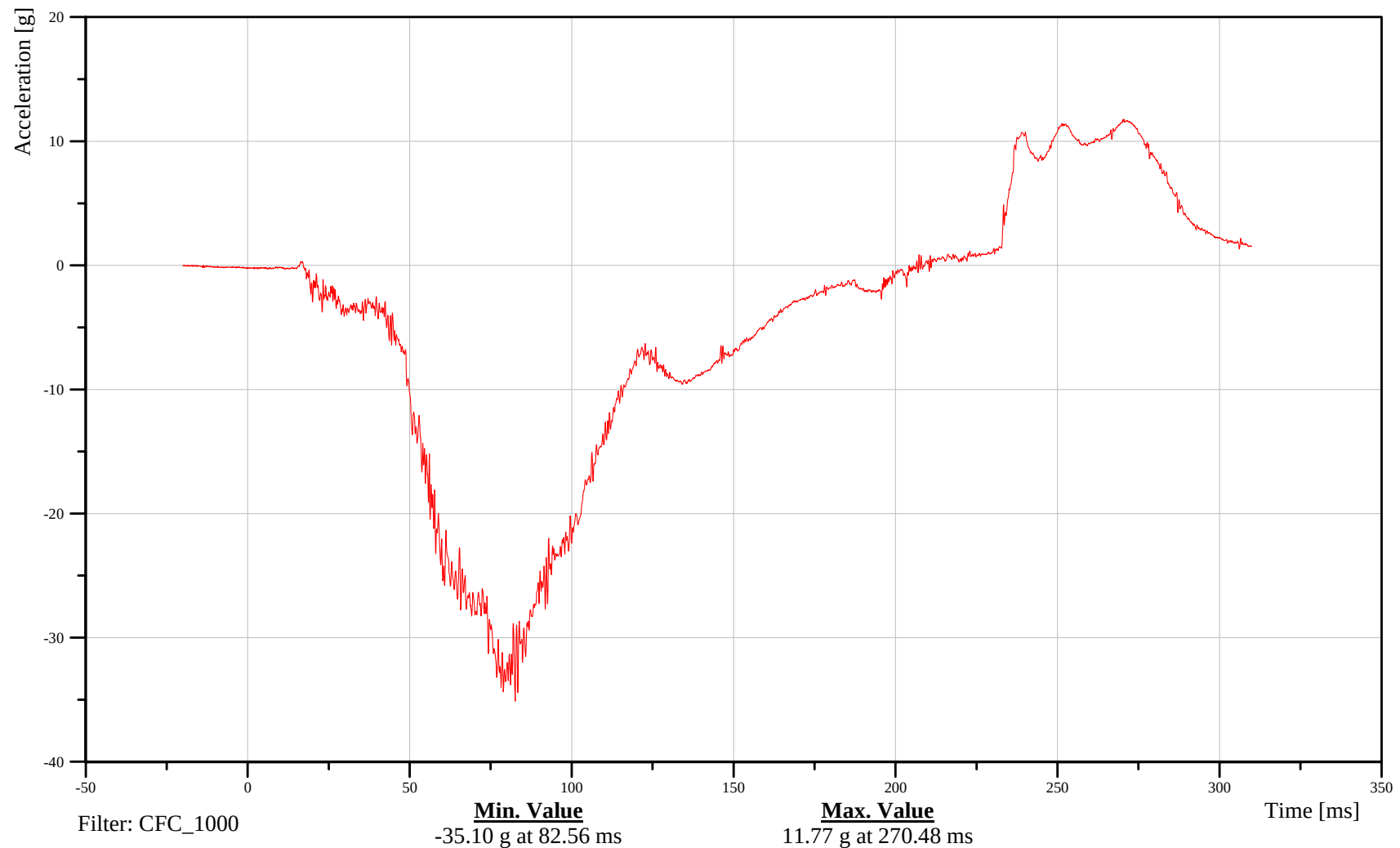
Bullet Driver Head X-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

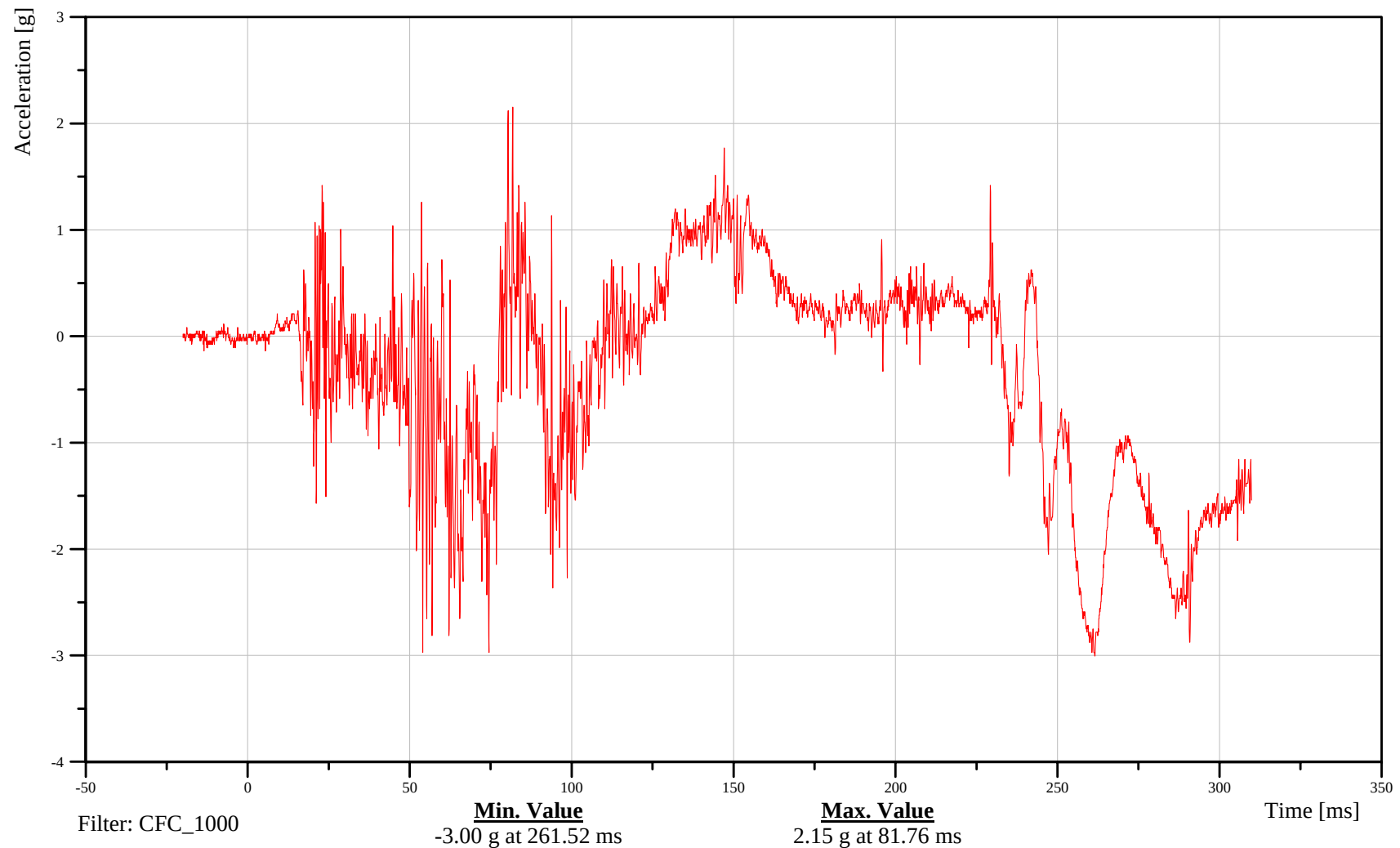
Bullet Driver Head Y-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Driver Head Z-Axis Acceleration

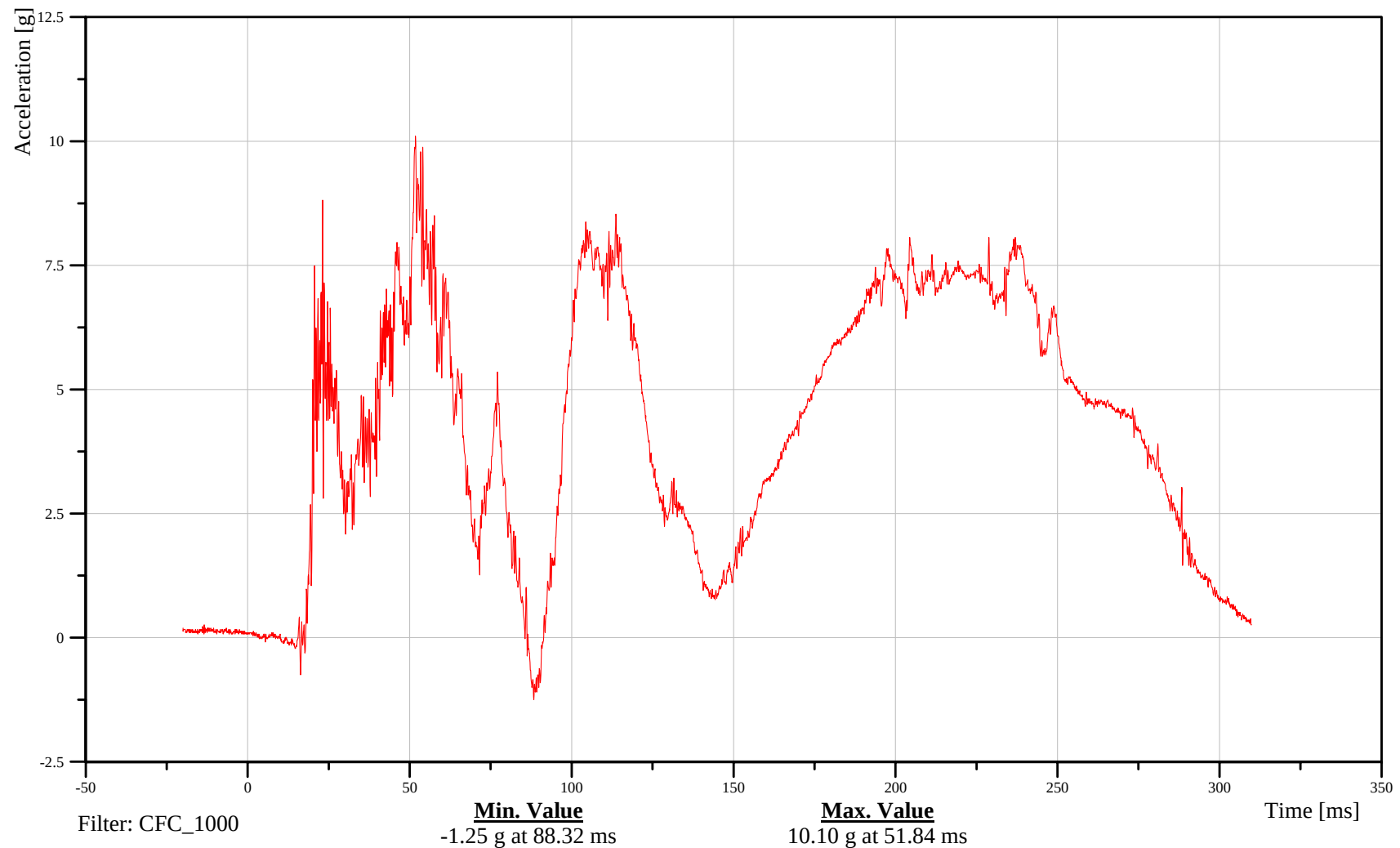
Time: 11:08

Customer: VRTC

11HEADCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

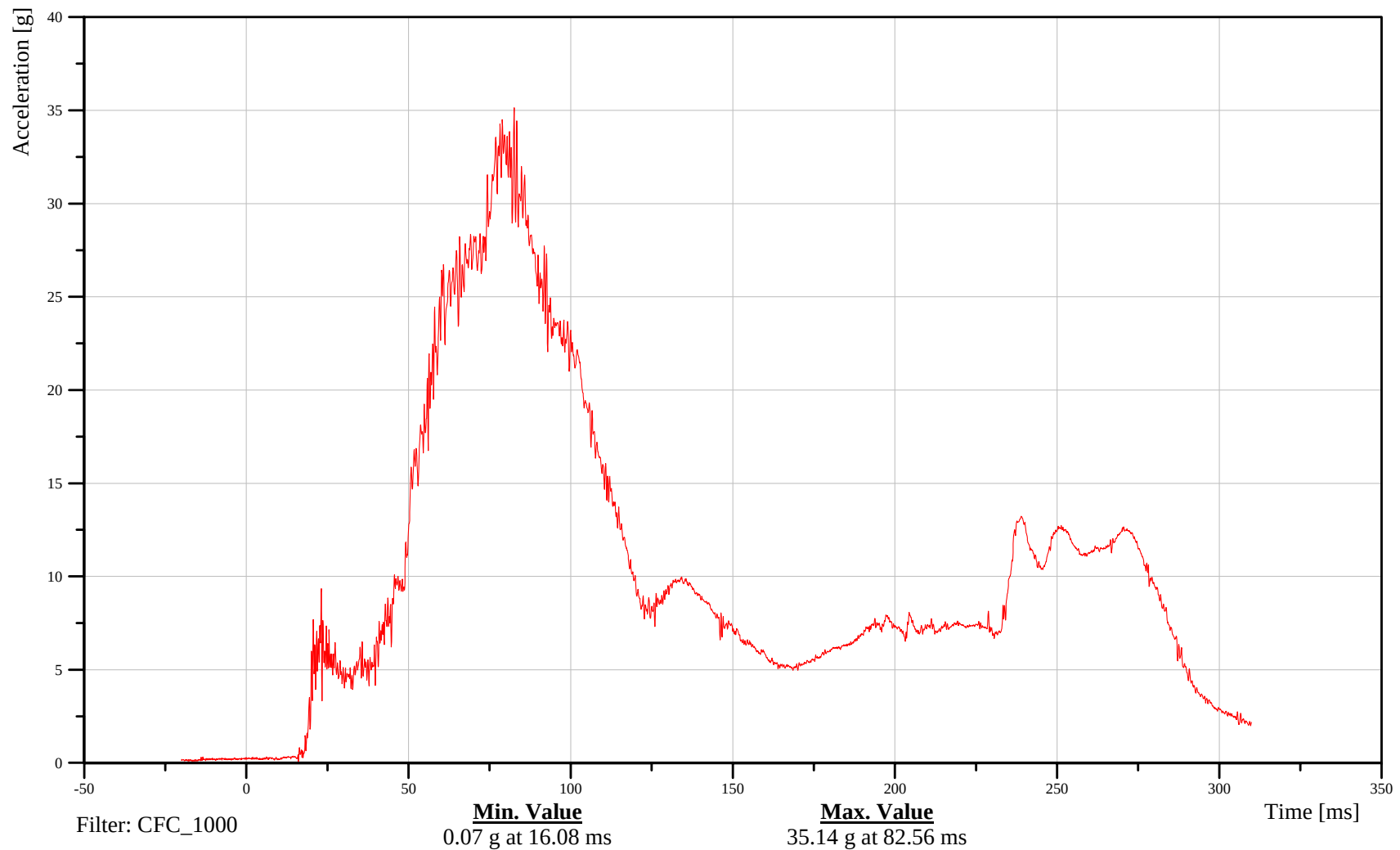
Bullet Driver Head Resultant Acceleration

Customer: VRTC

11HEADCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

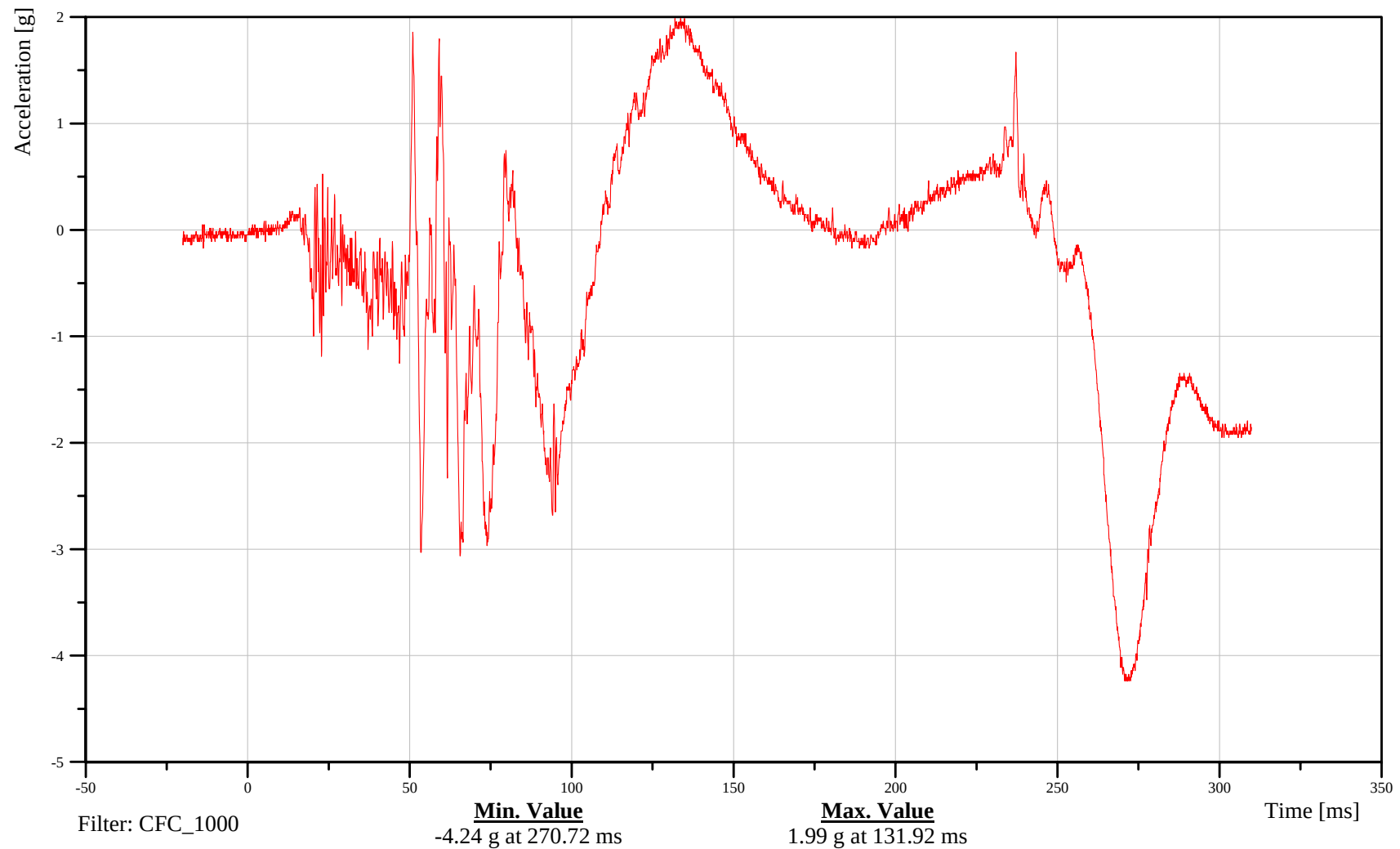
Bullet Driver Head Front Y-Axis Acceleration

Customer: VRTC

11HEADFR00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

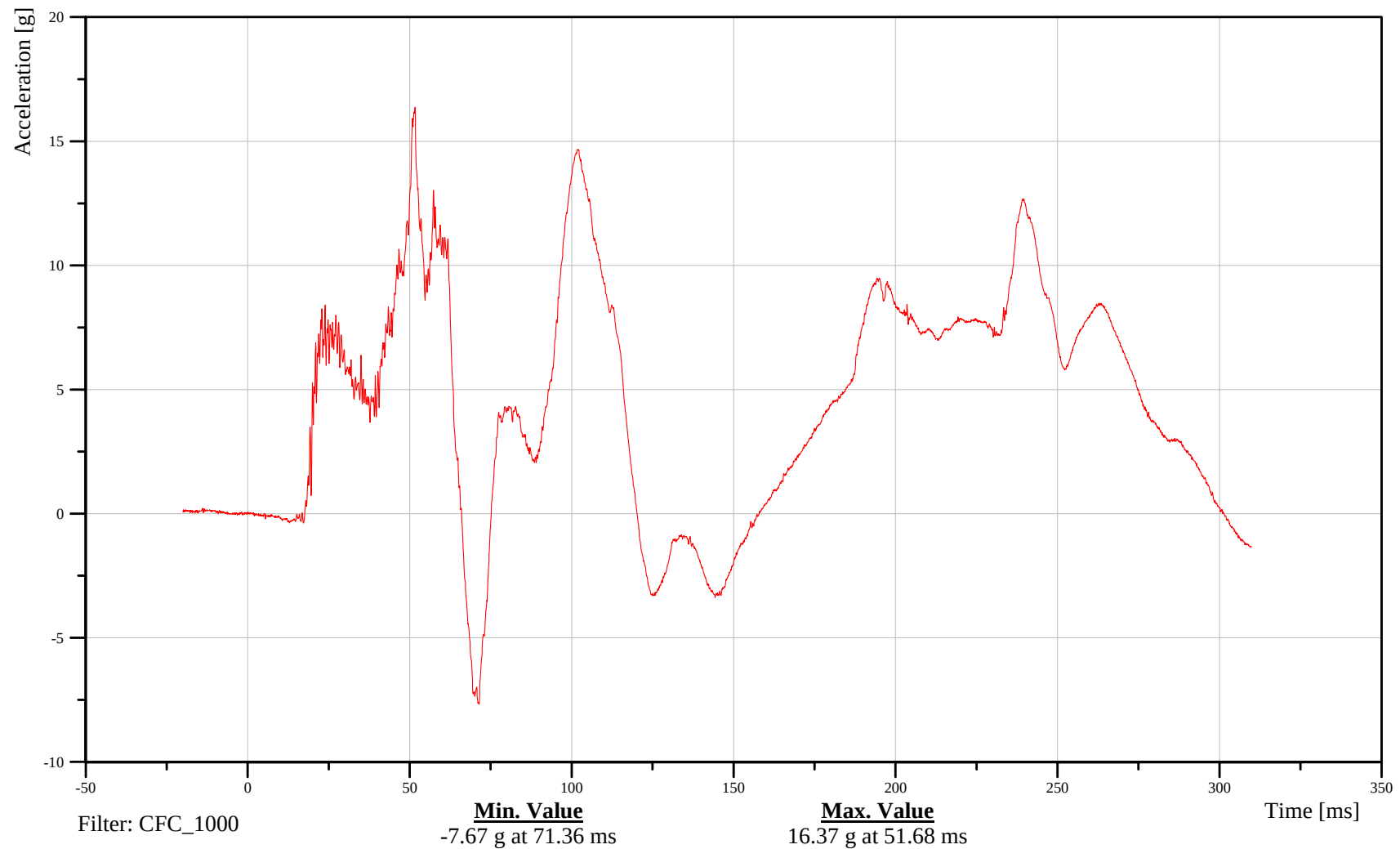
Bullet Driver Head Front Z-Axis Acceleration

Customer: VRTC

11HEADFR00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

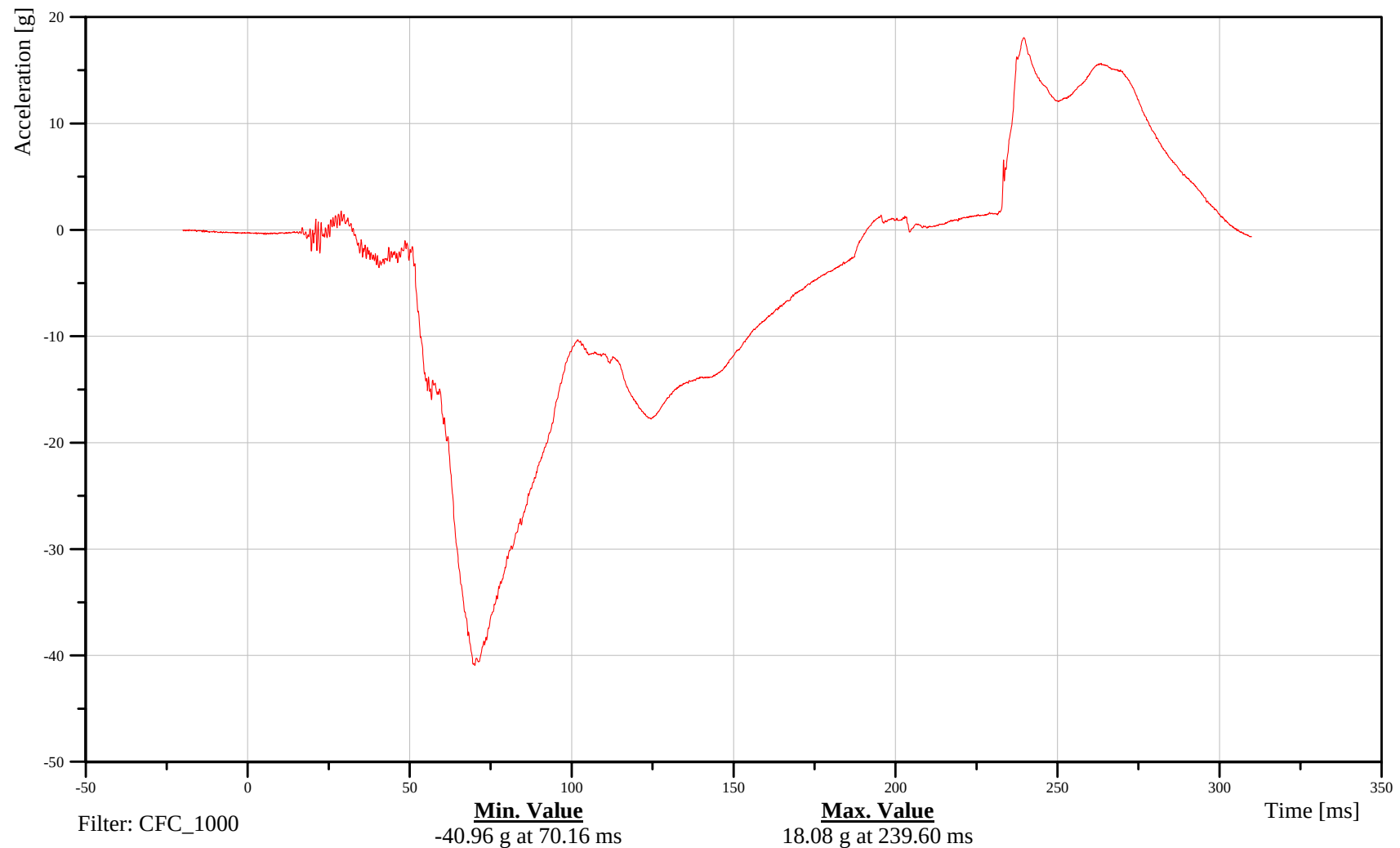
Bullet Driver Head Top X-Axis Acceleration

Customer: VRTC

11HEADUP00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

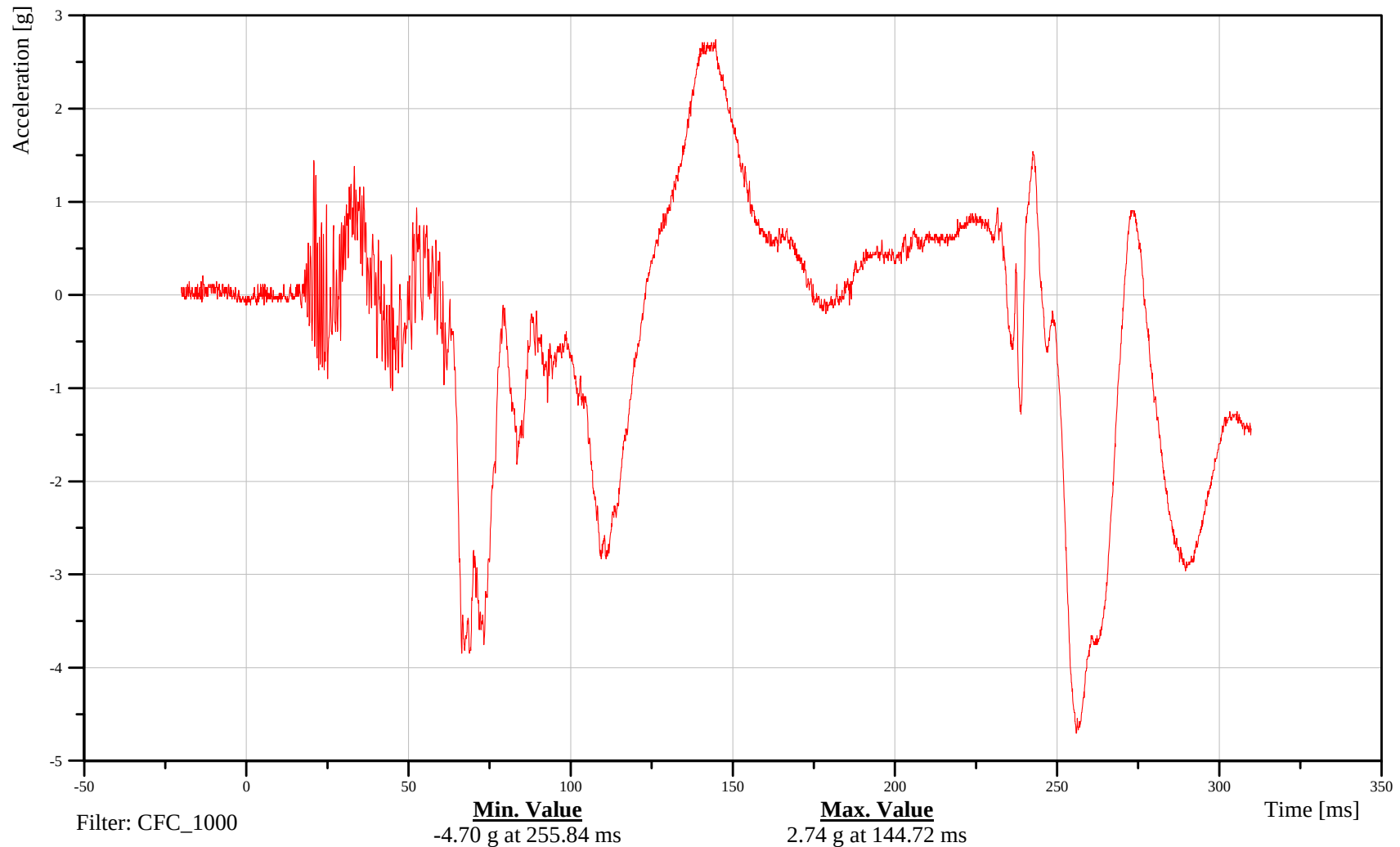
Bullet Driver Head Top Y-Axis Acceleration

Customer: VRTC

11HEADUP00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

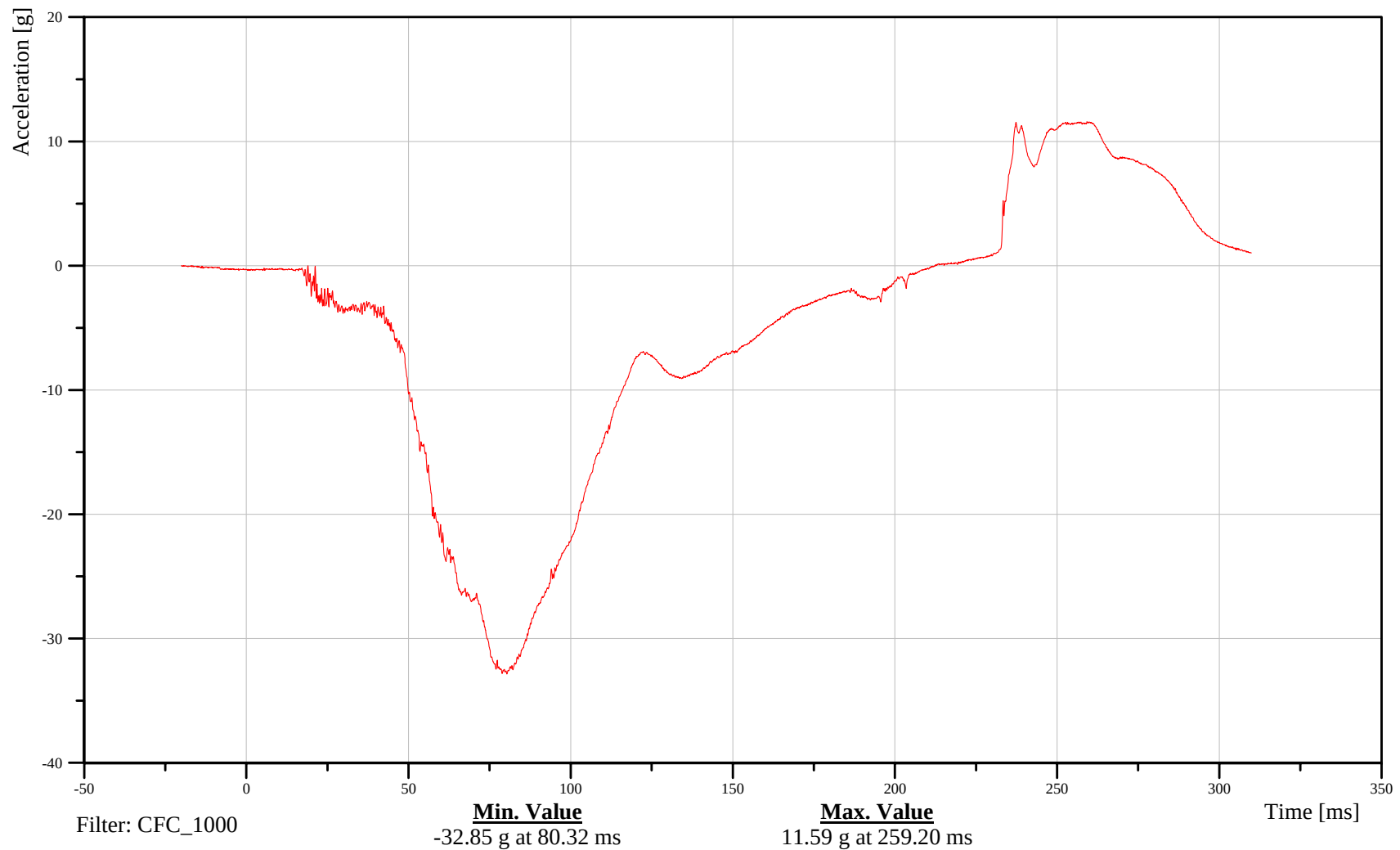
Bullet Driver Head Side X-Axis Acceleration

Customer: VRTC

11HEADLE00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

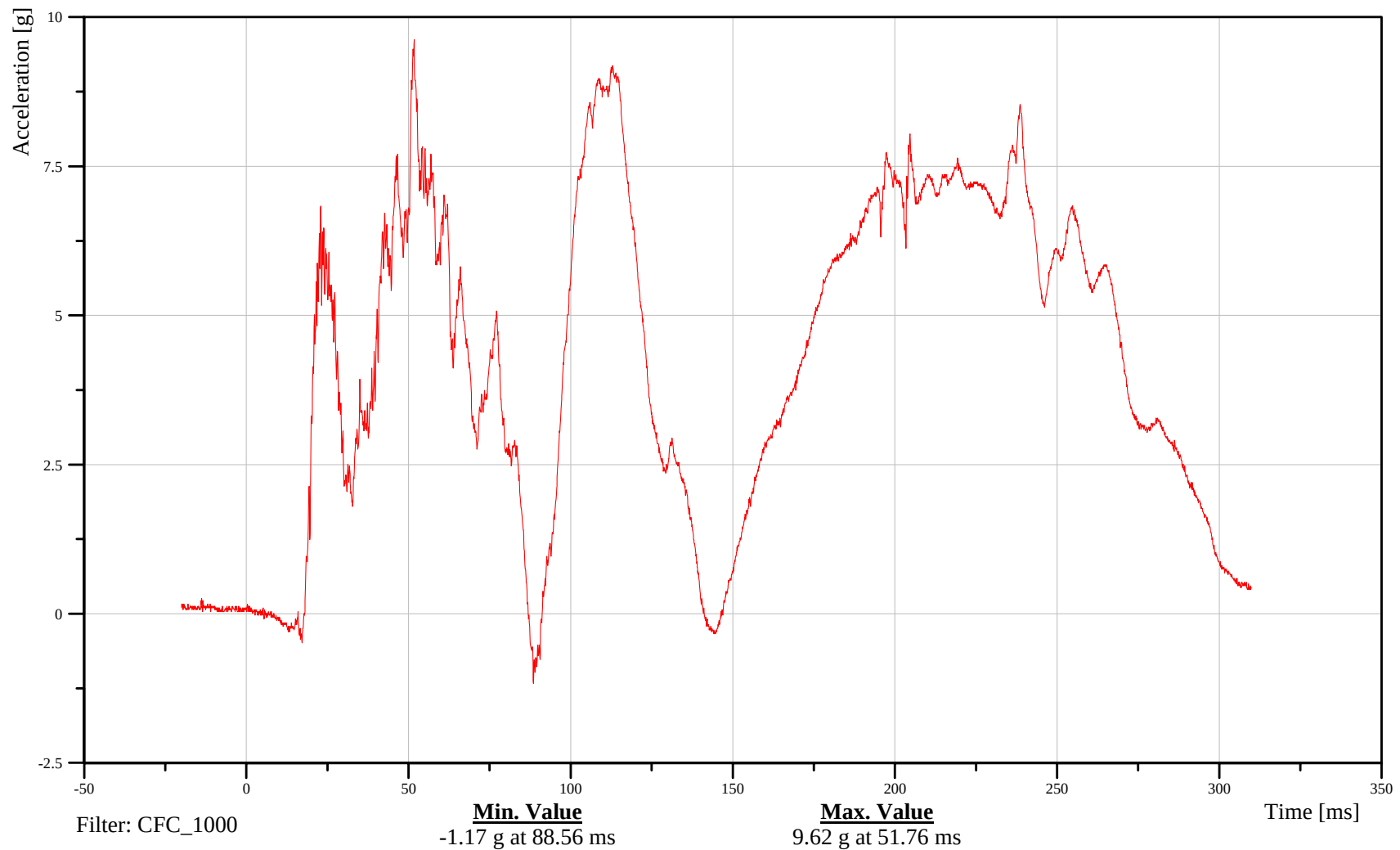
Bullet Driver Head Side Z-Axis Acceleration

Customer: VRTC

11HEADLE00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

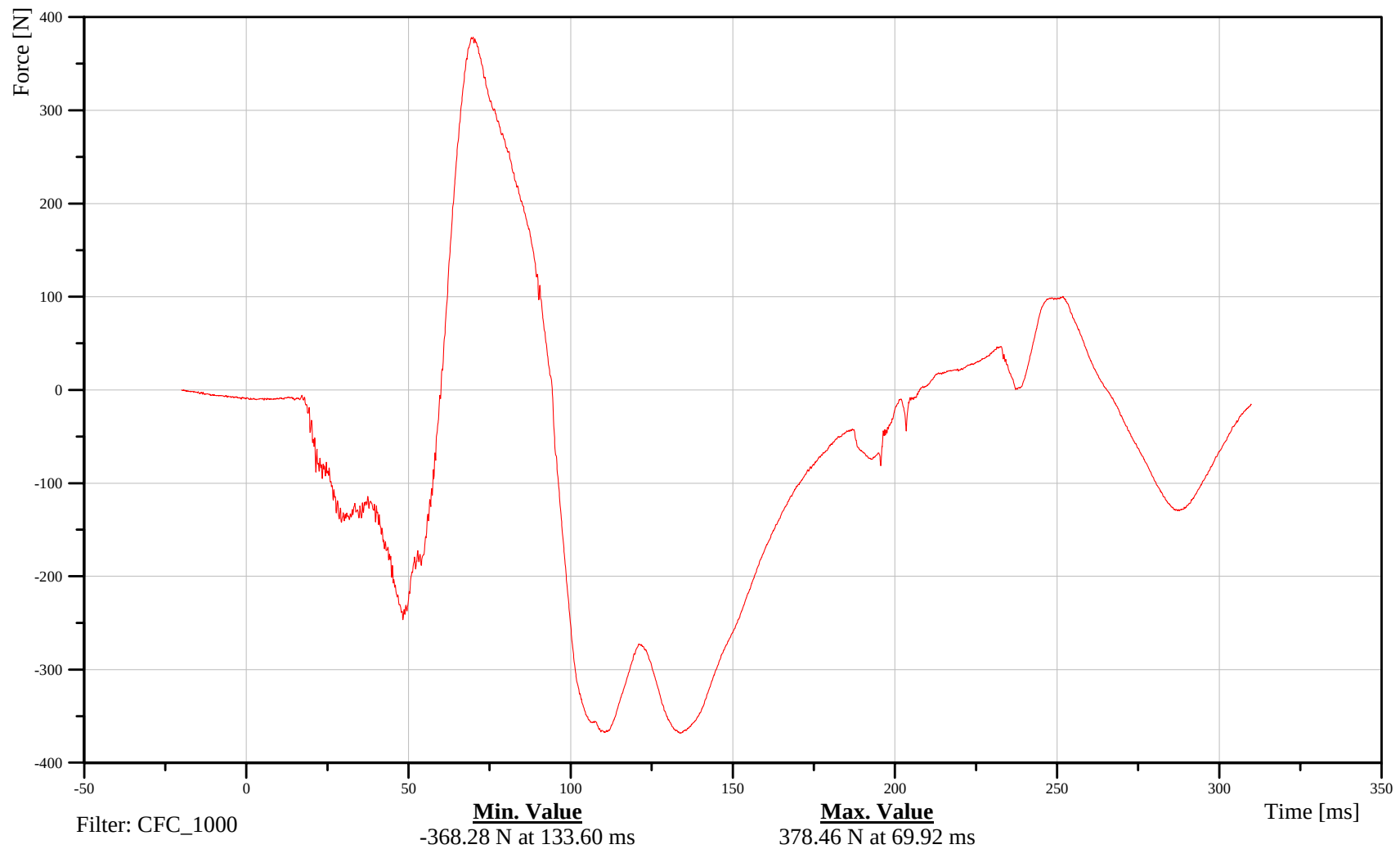
Bullet Driver Upper Neck X-Axis Force

Customer: VRTC

11NECKUP00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

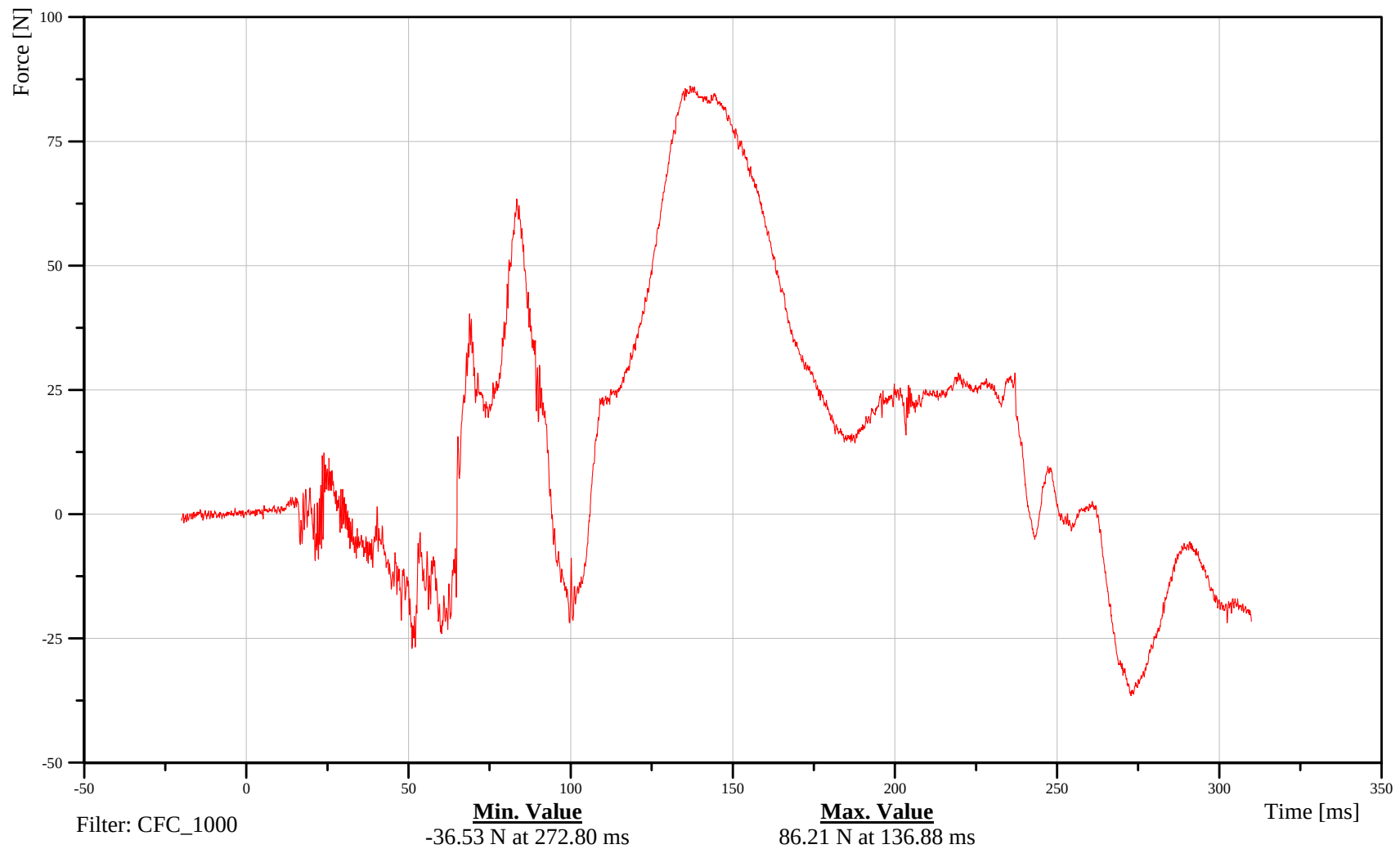
Bullet Driver Upper Neck Y-Axis Force

Customer: VRTC

11NECKUP00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

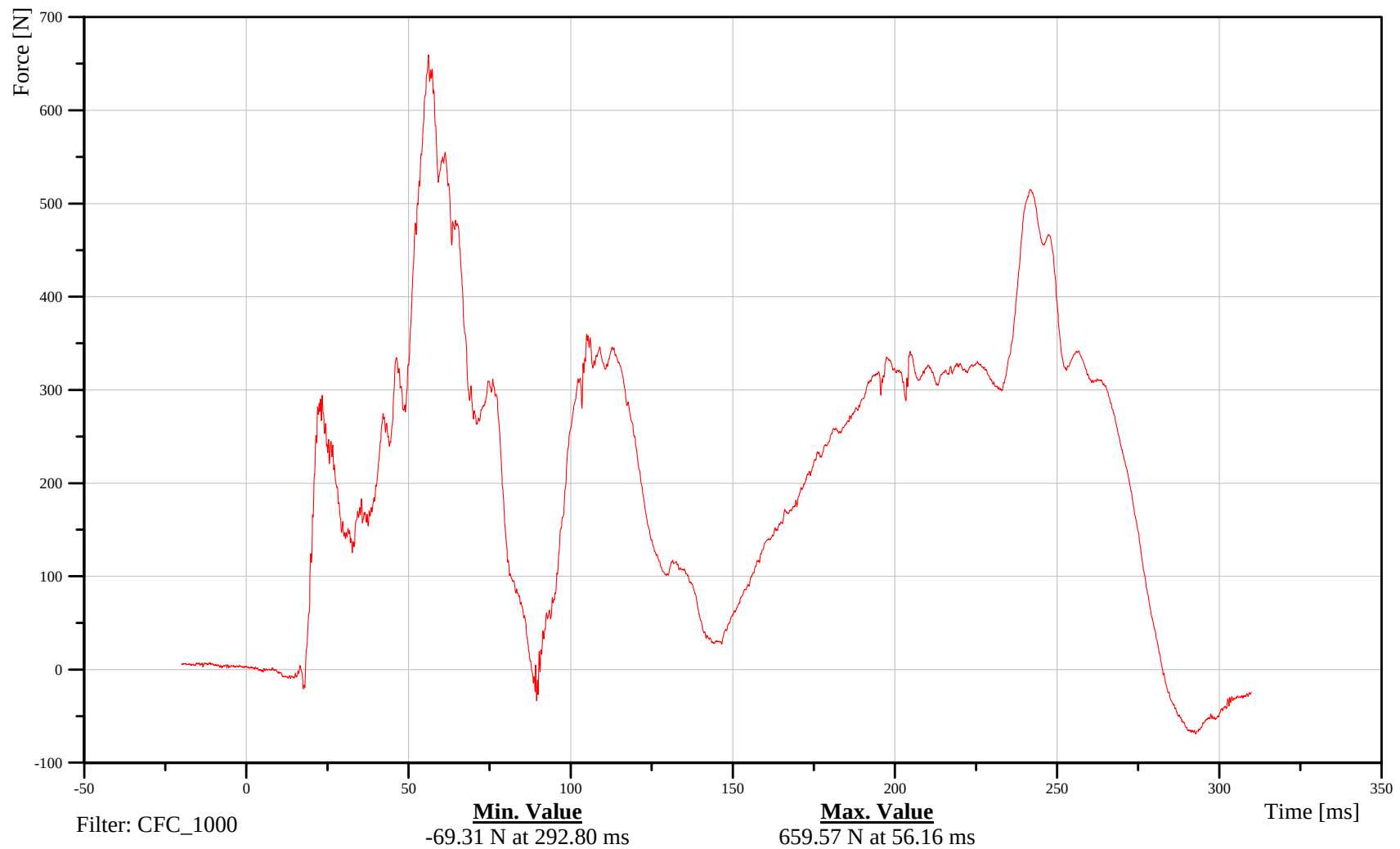
Bullet Driver Upper Neck Z-Axis Force

Customer: VRTC

11NECKUP00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

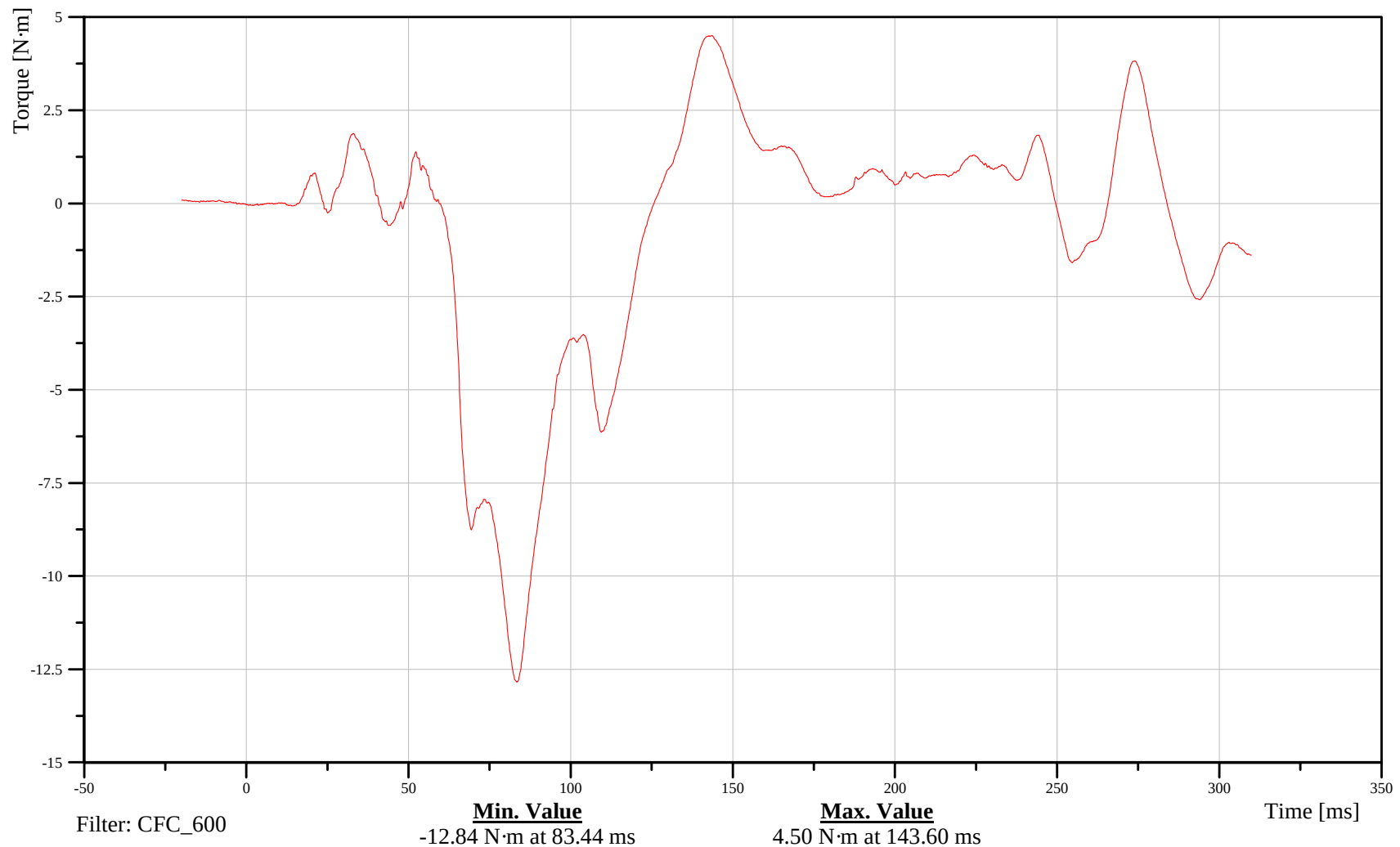
Bullet Driver Upper Neck Moment About X Axis

Customer: VRTC

11NECKUP00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

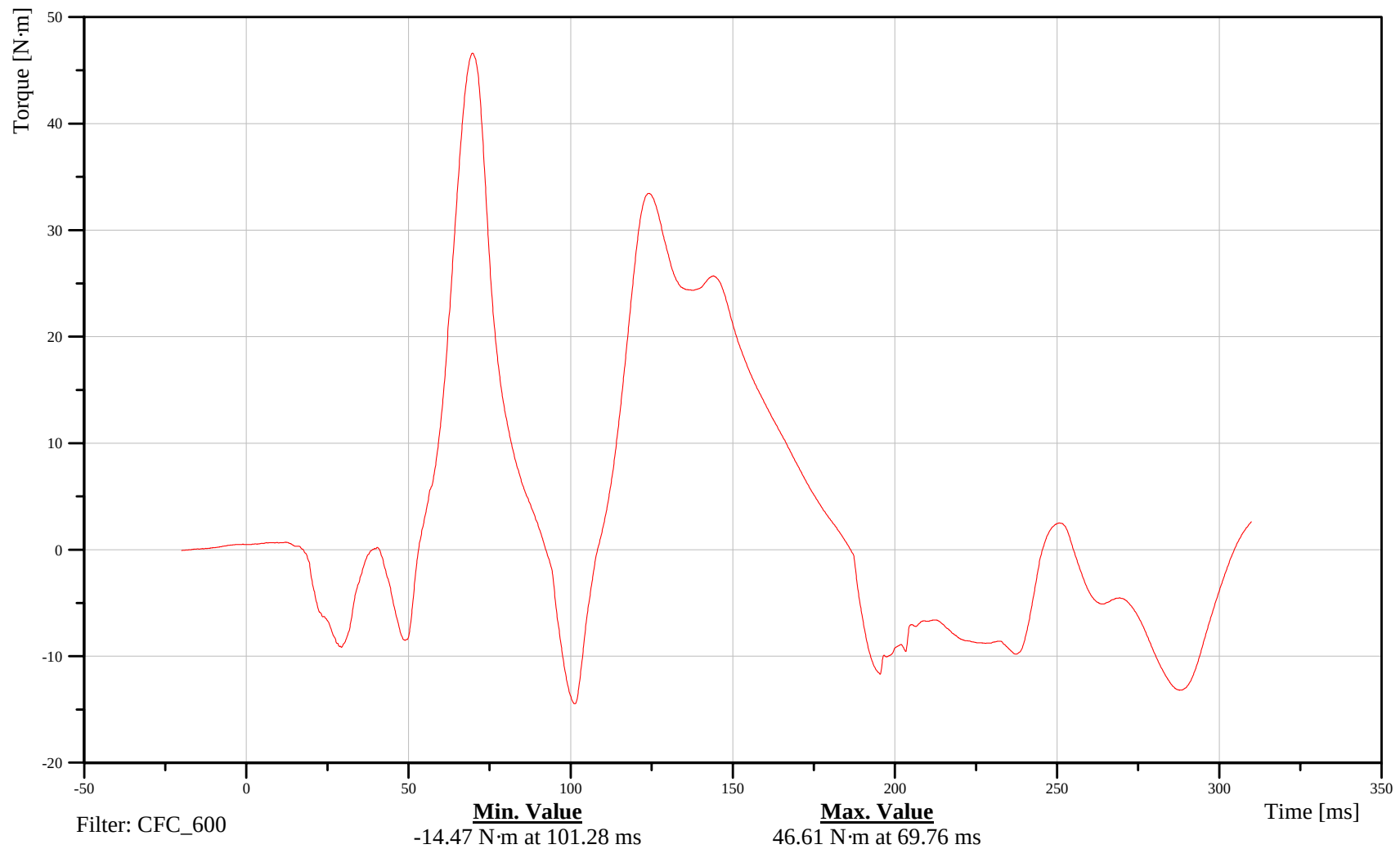
Bullet Driver Upper Neck Moment About Y Axis

Customer: VRTC

11NECKUP00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

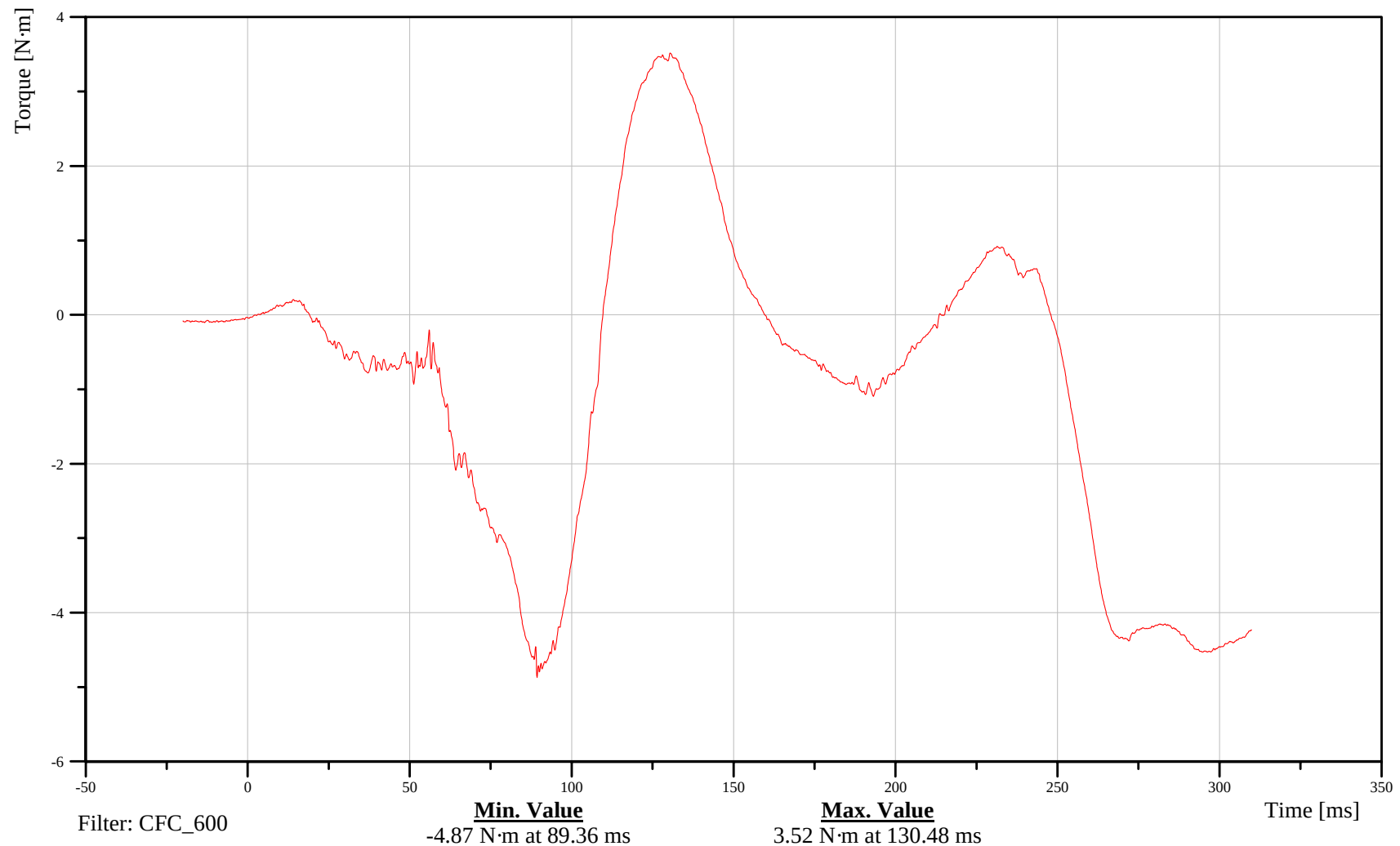
Bullet Driver Upper Neck Moment About Z Axis

Customer: VRTC

11NECKUP00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

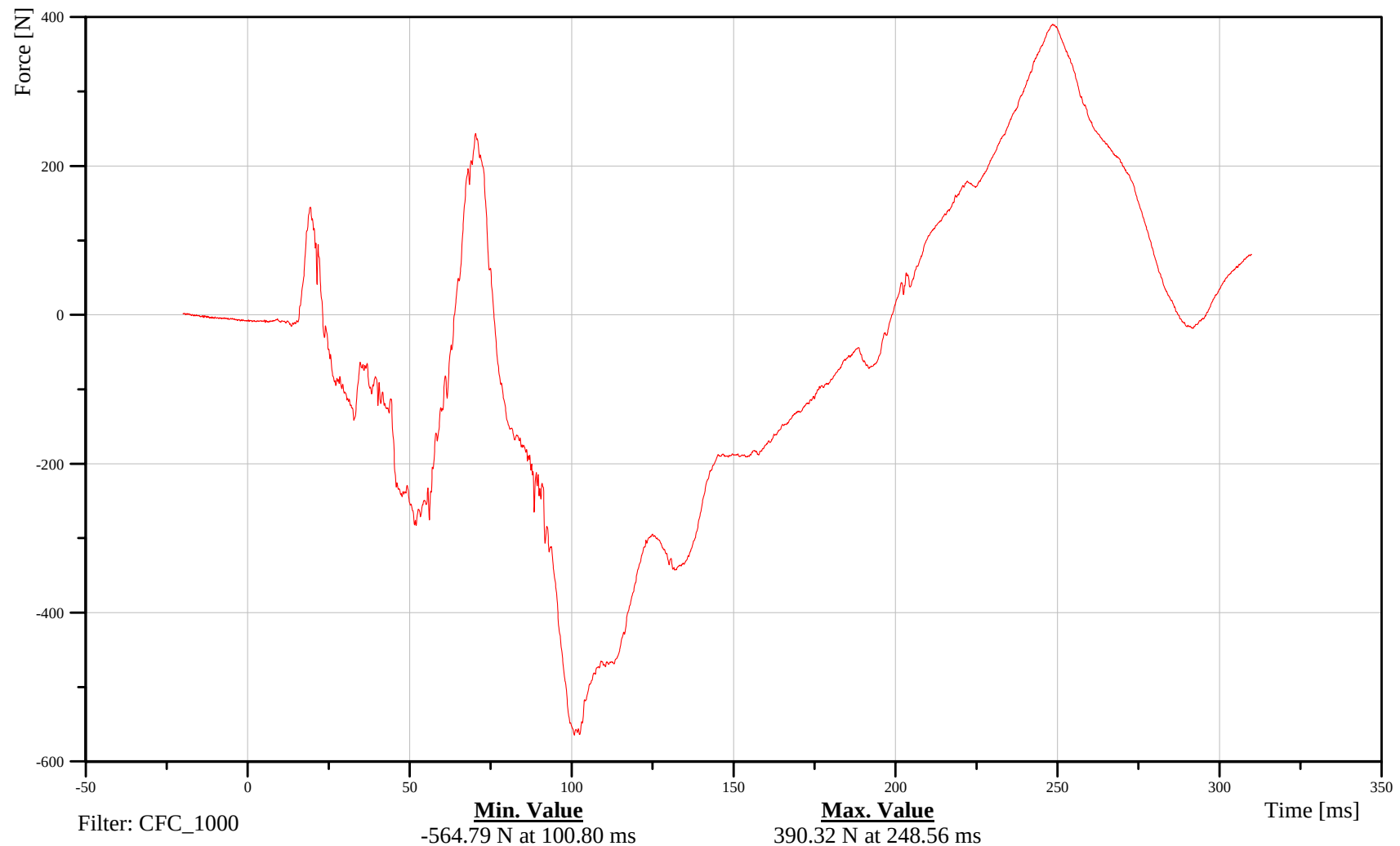
Bullet Driver Lower Neck X-Axis Force

Customer: VRTC

11NECKLO00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

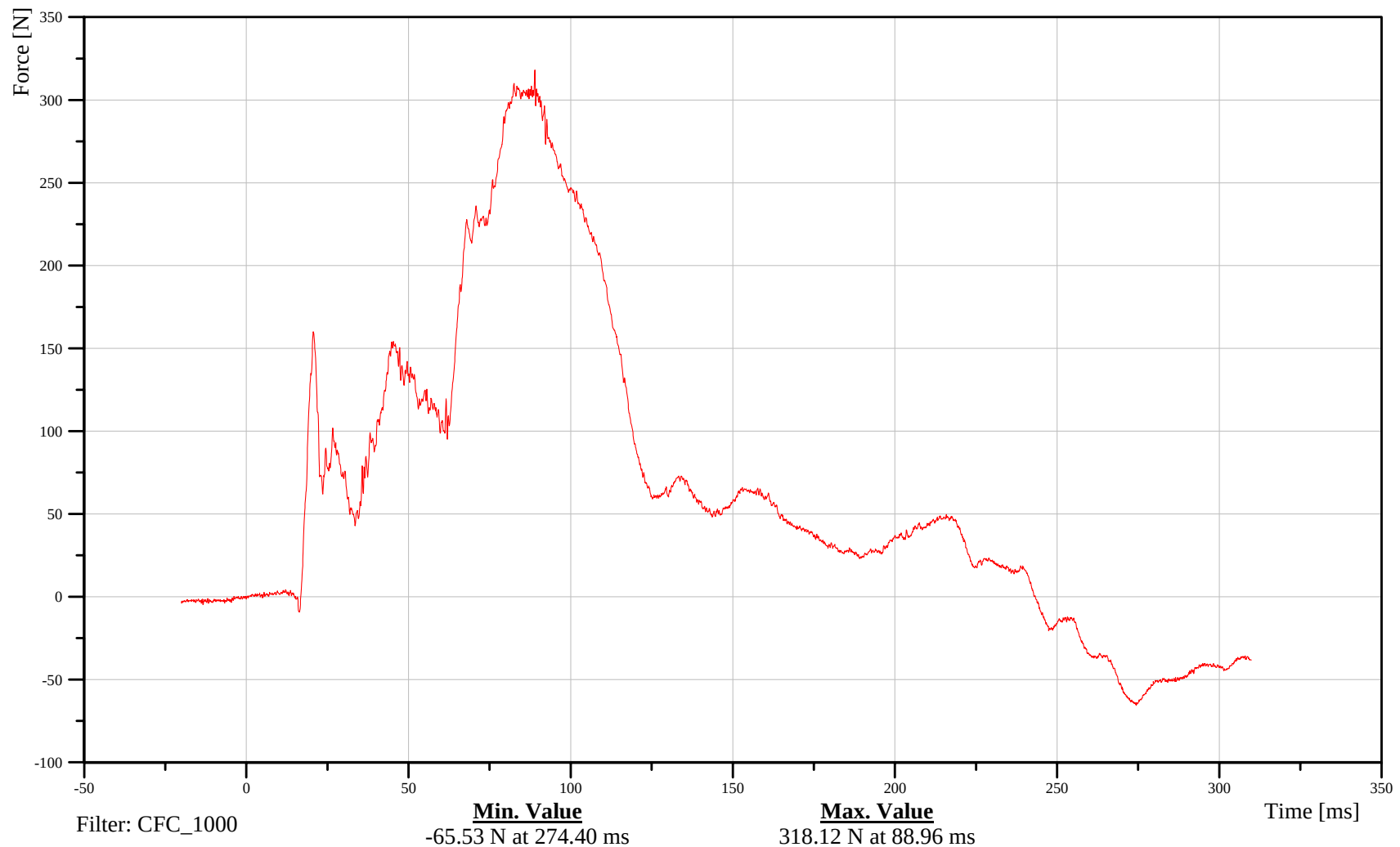
Bullet Driver Lower Neck Y-Axis Force

Customer: VRTC

11NECKLO00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

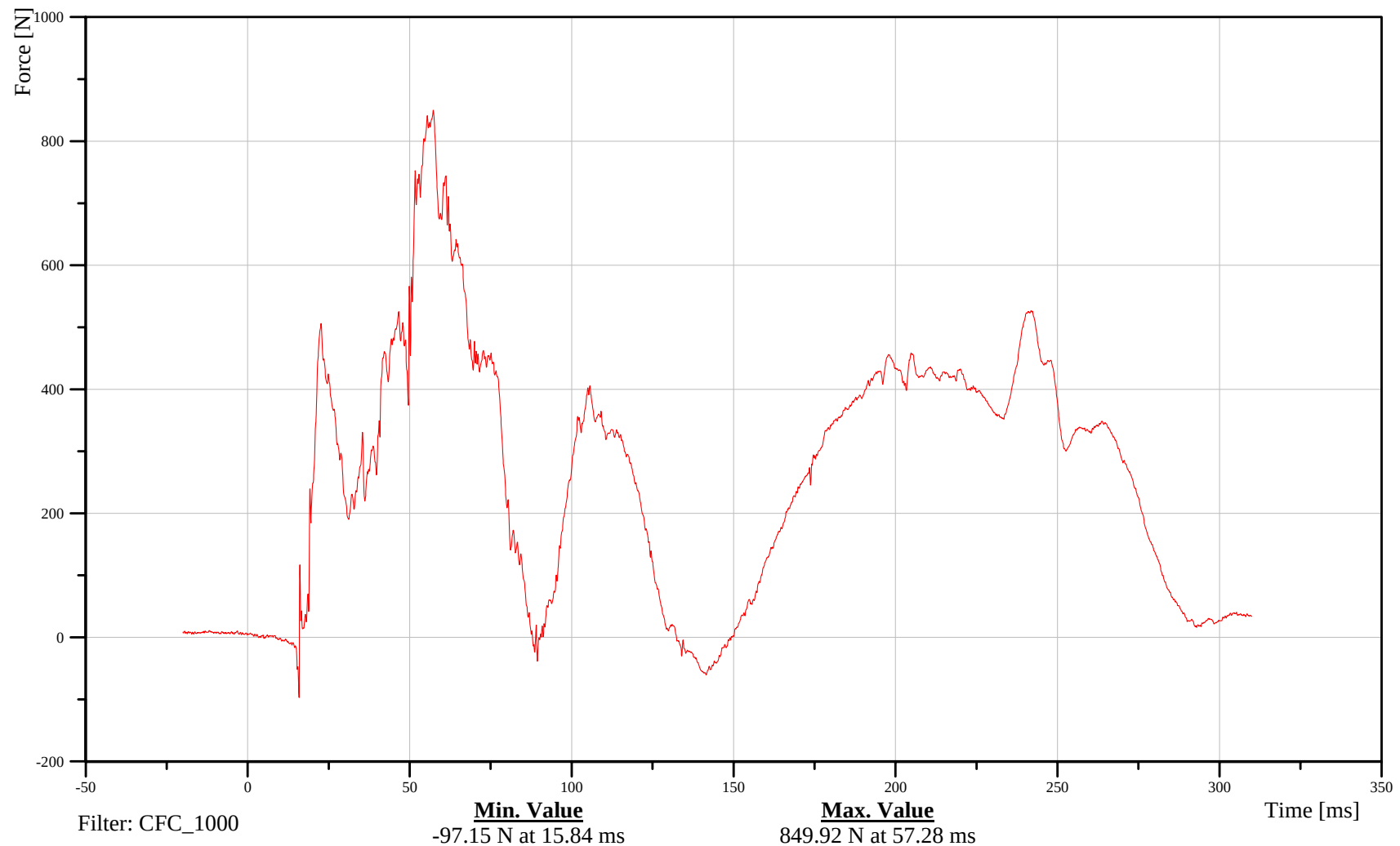
Bullet Driver Lower Neck Z-Axis Force

Customer: VRTC

11NECKLO00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

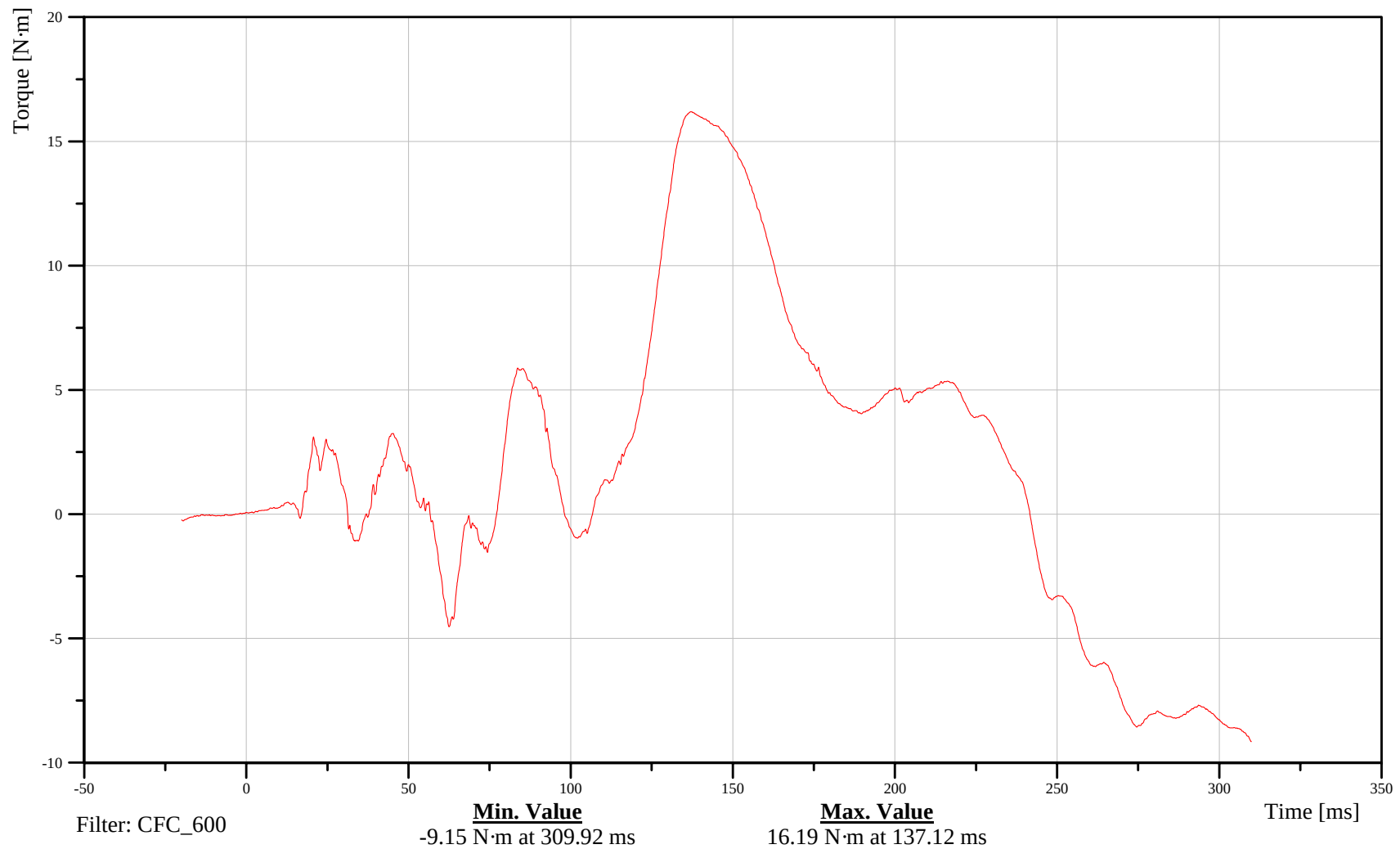
Bullet Driver Lower Neck Moment About X Axis

Customer: VRTC

11NECKLO00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

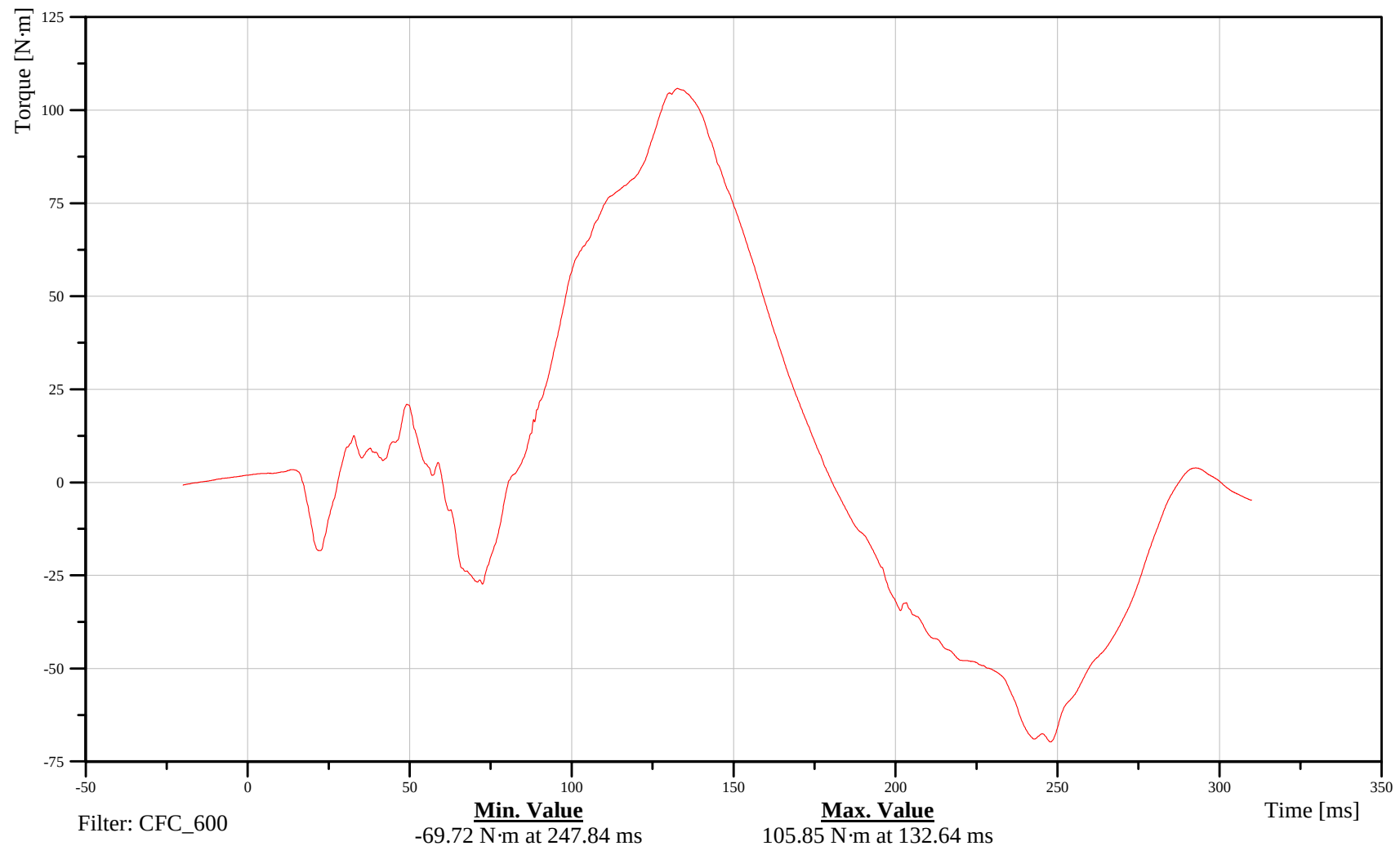
Bullet Driver Lower Neck Moment About Y Axis

Customer: VRTC

11NECKLO00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

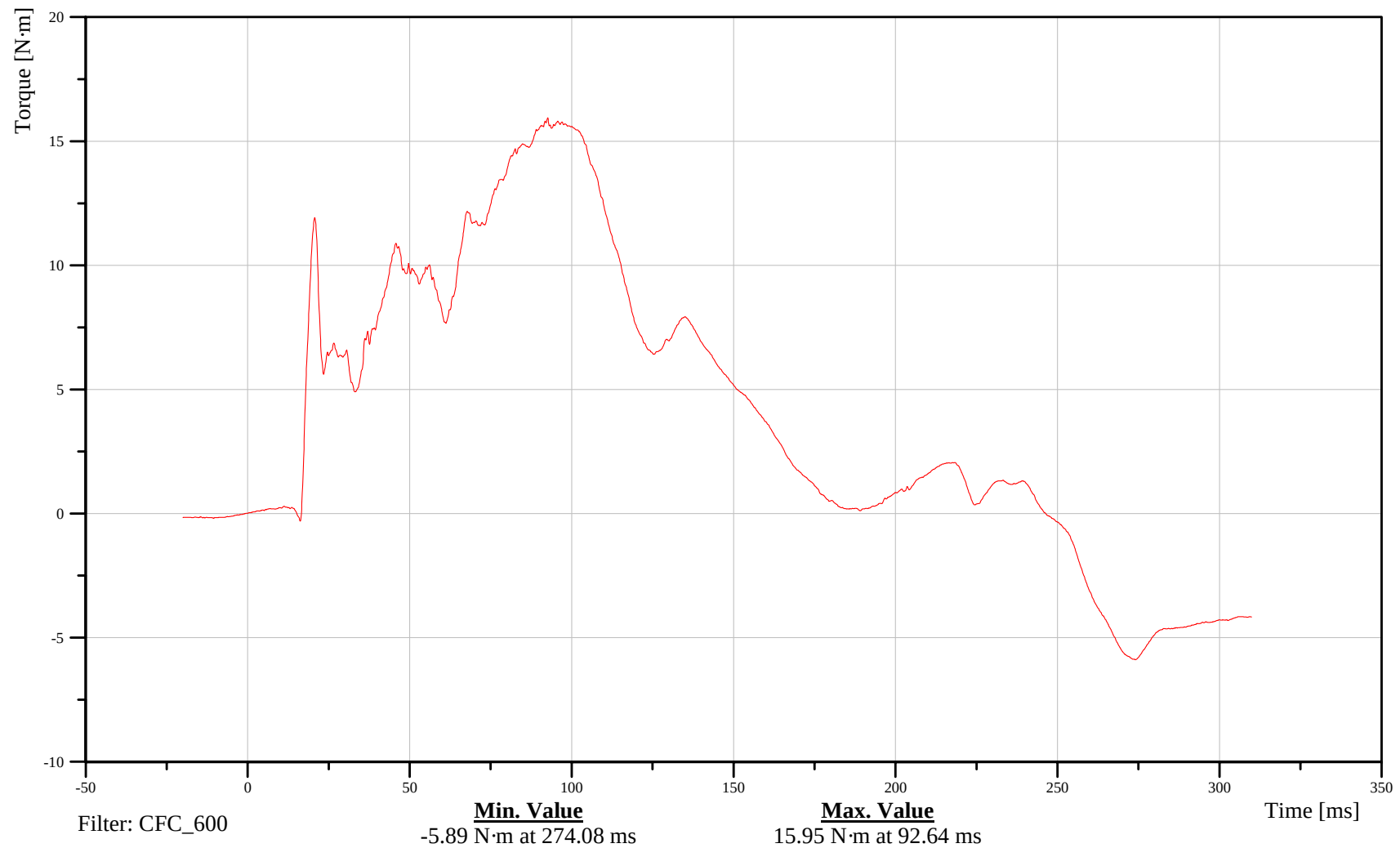
Bullet Driver Lower Neck Moment About Z Axis

Customer: VRTC

11NECKLO00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

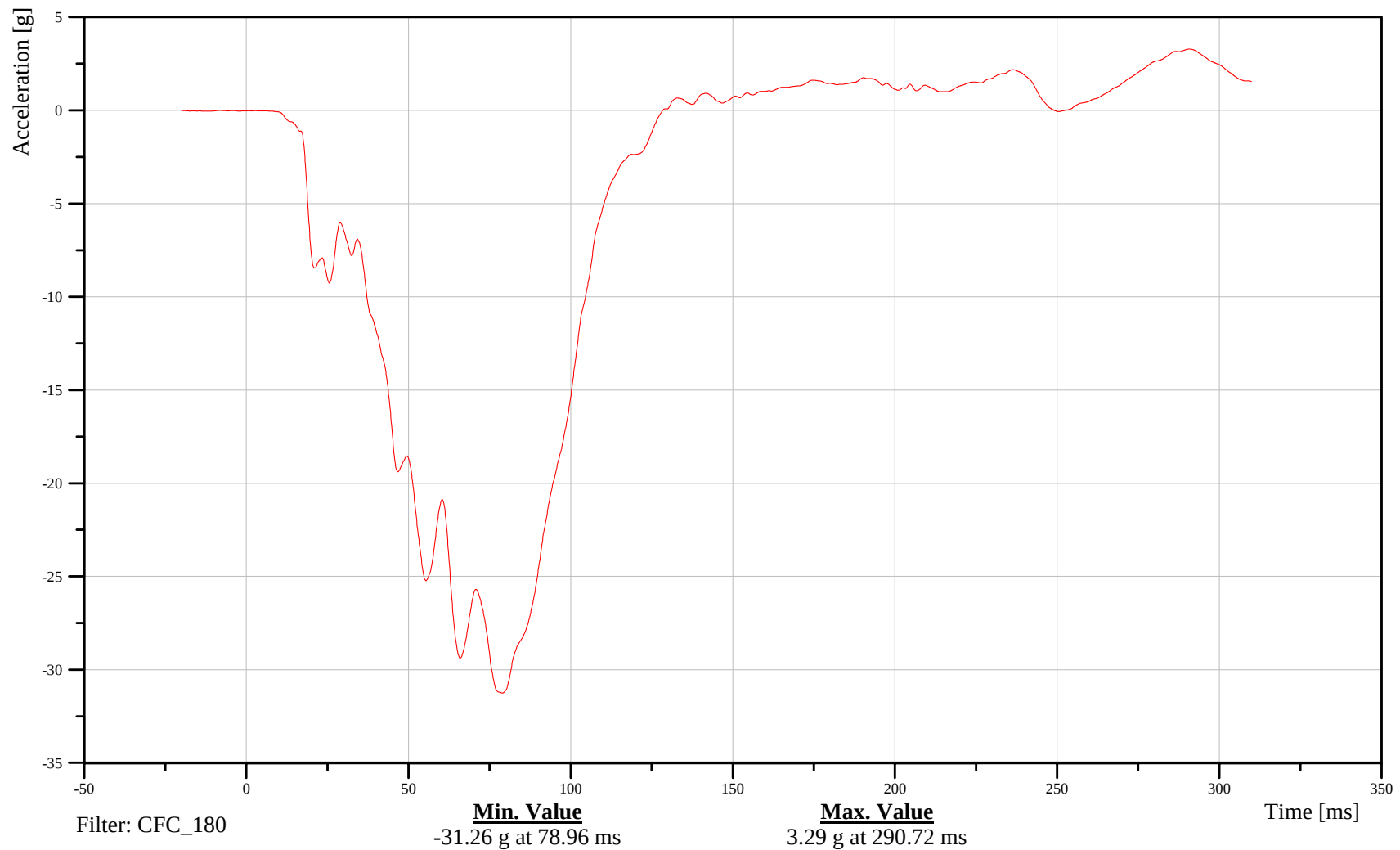
Bullet Driver Chest CG X-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

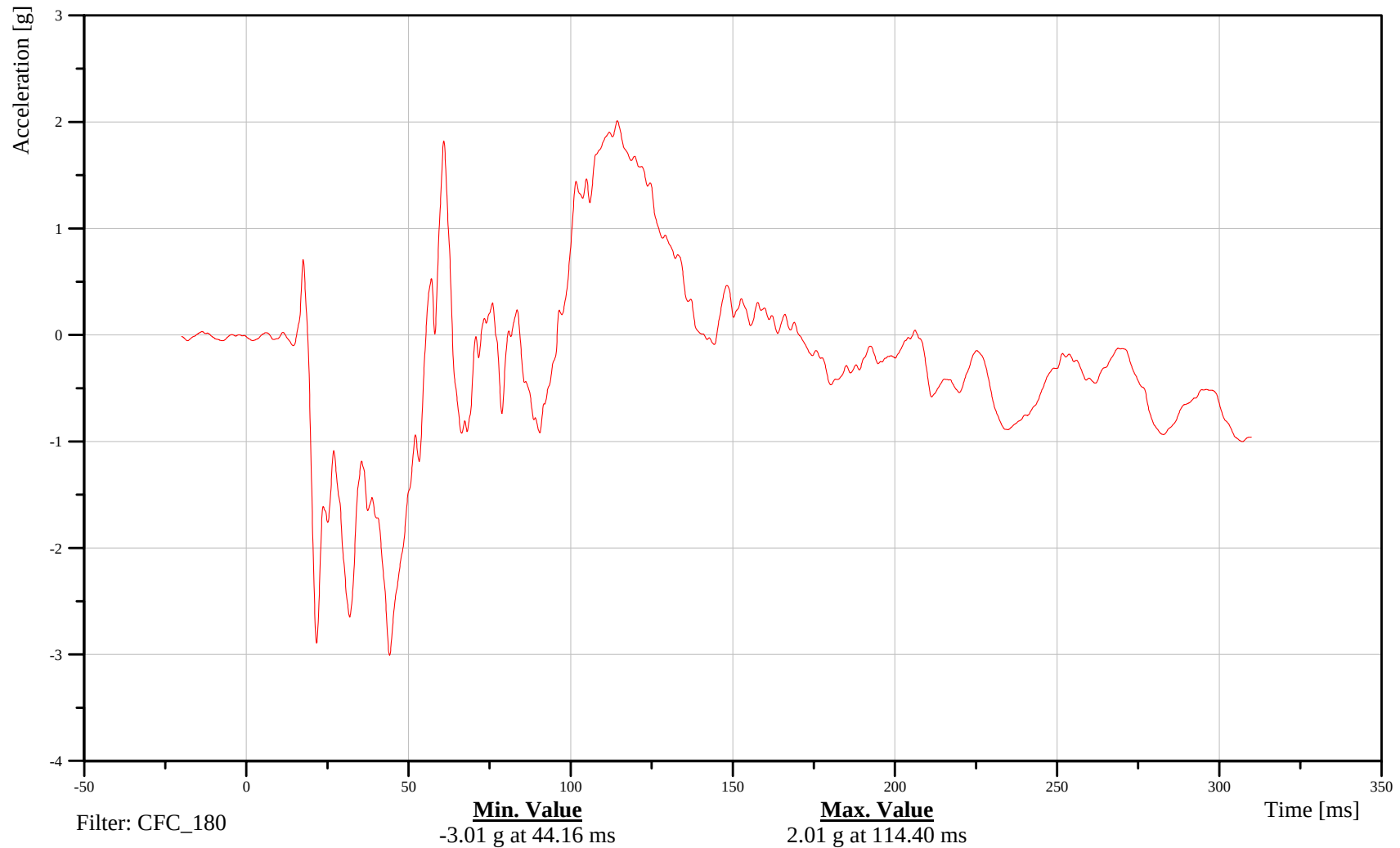
Bullet Driver Chest CG Y-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

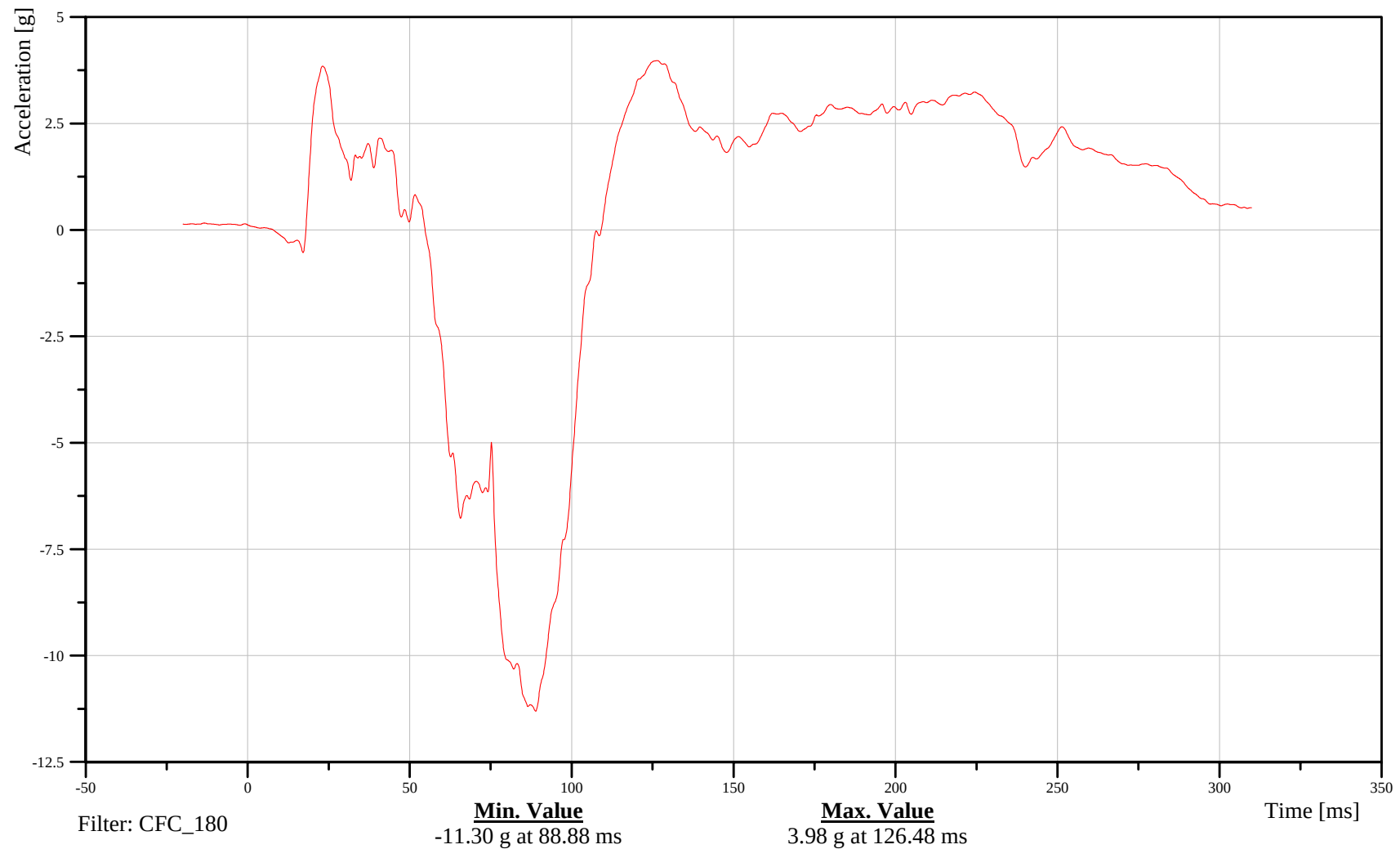
Bullet Driver Chest CG Z-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

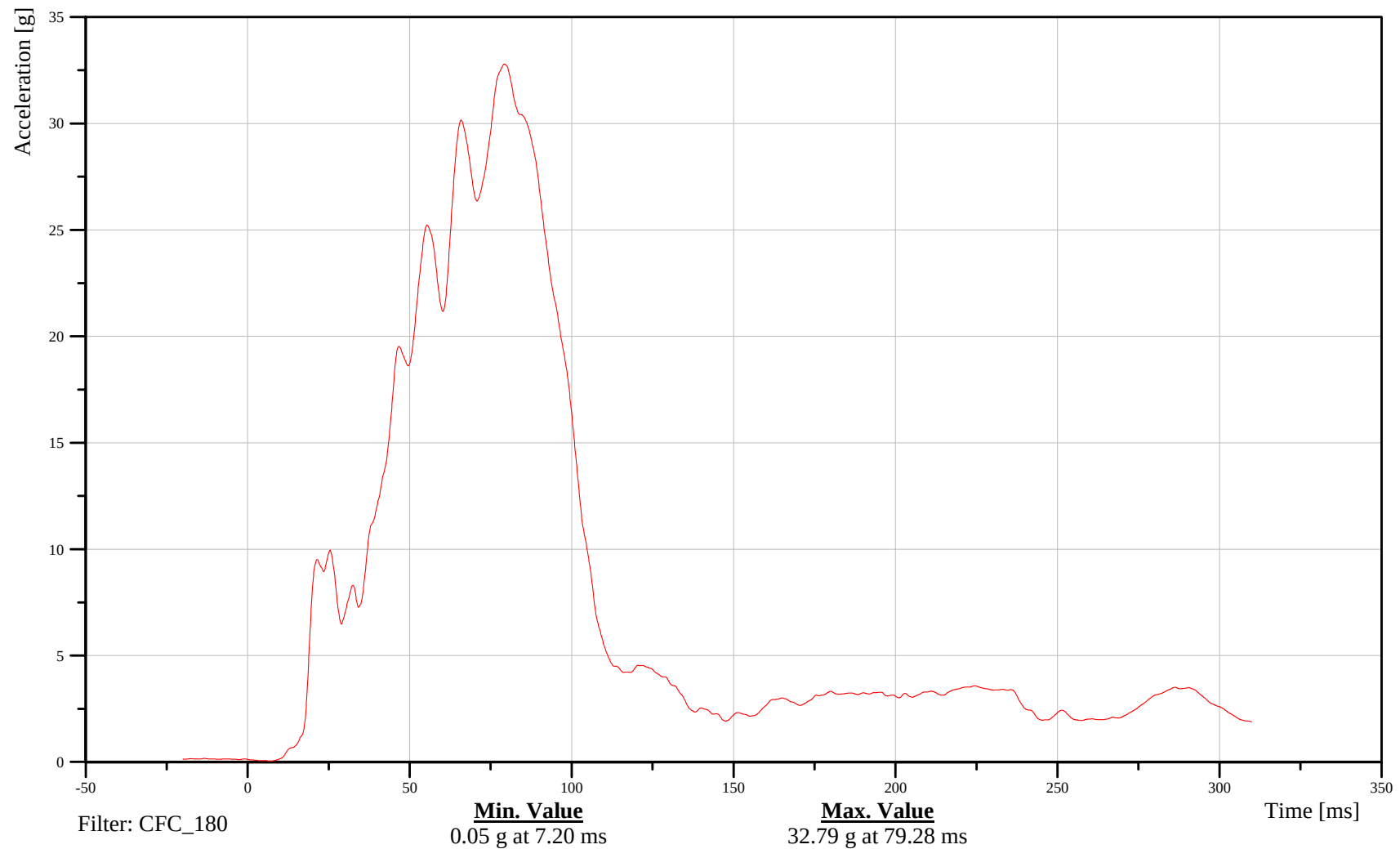
Bullet Driver Chest CG Resultant Acceleration

Customer: VRTC

11CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

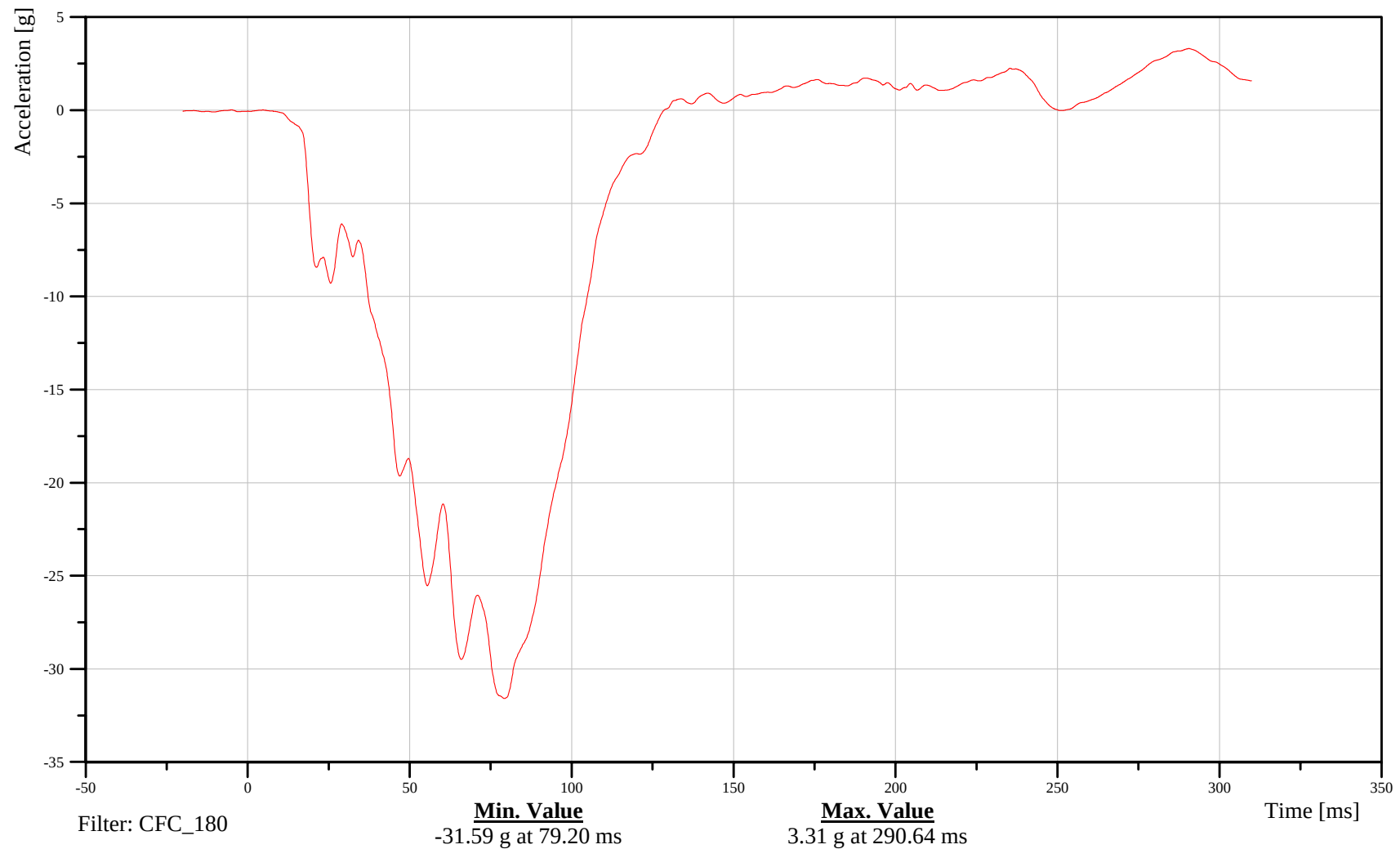
Bullet Driver Redundant Chest CG X-Axis Acceleration

Customer: VRTC

11CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

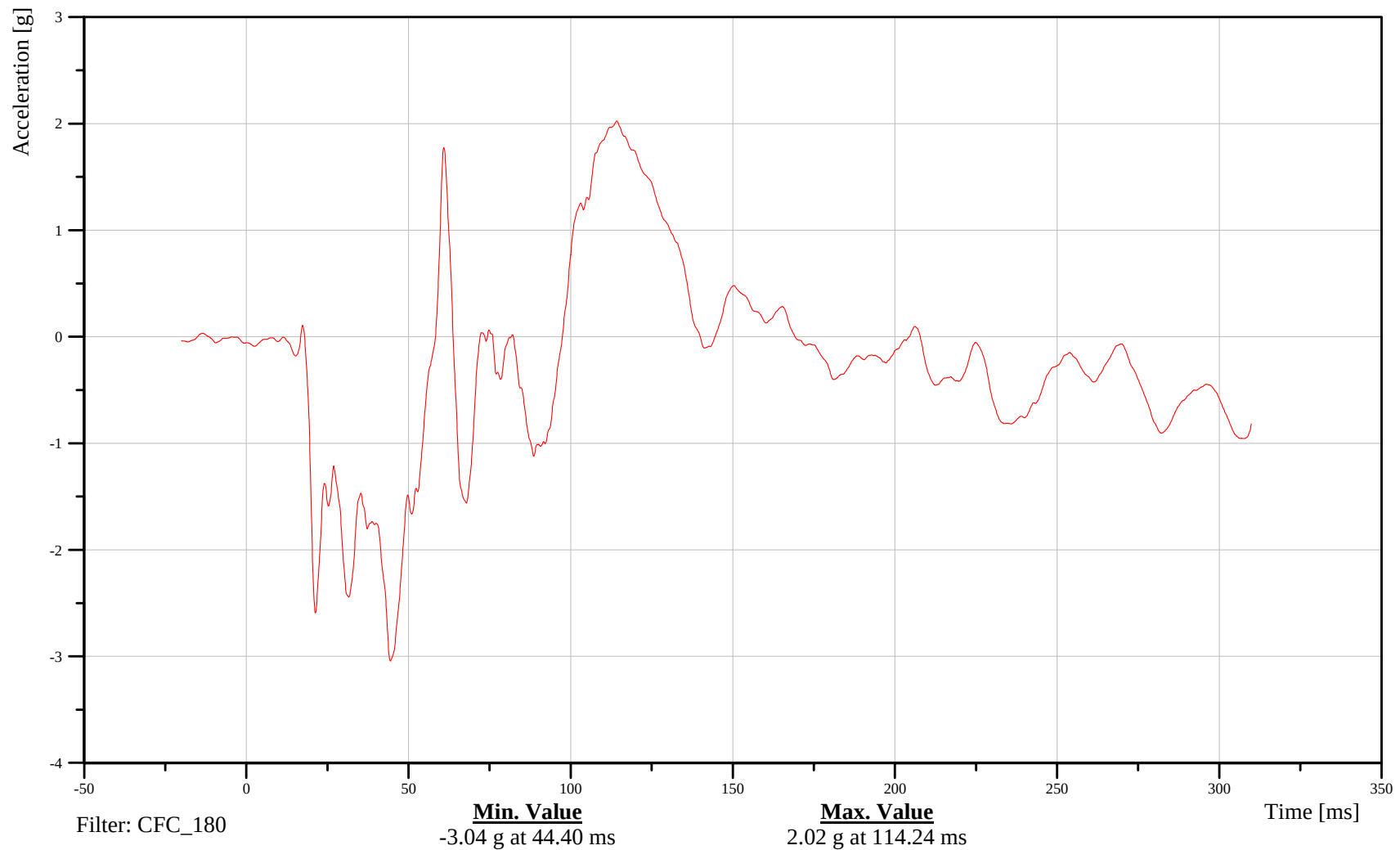
Bullet Driver Redundant Chest CG Y-Axis Acceleration

Customer: VRTC

11CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

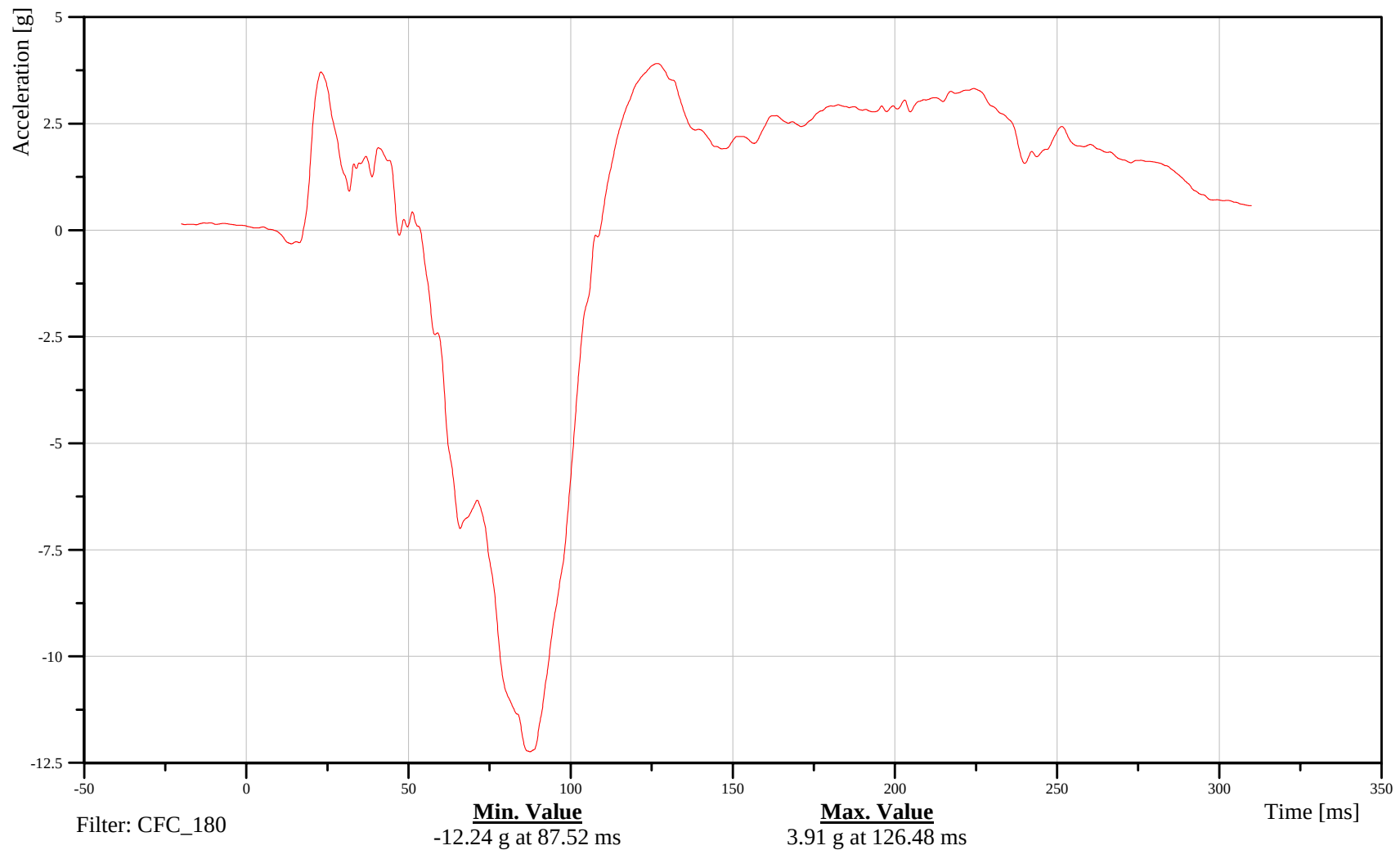
Bullet Driver Redundant Chest CG Z-Axis Acceleration

Customer: VRTC

11CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Driver Redundant Chest CG Resultant Acceleration

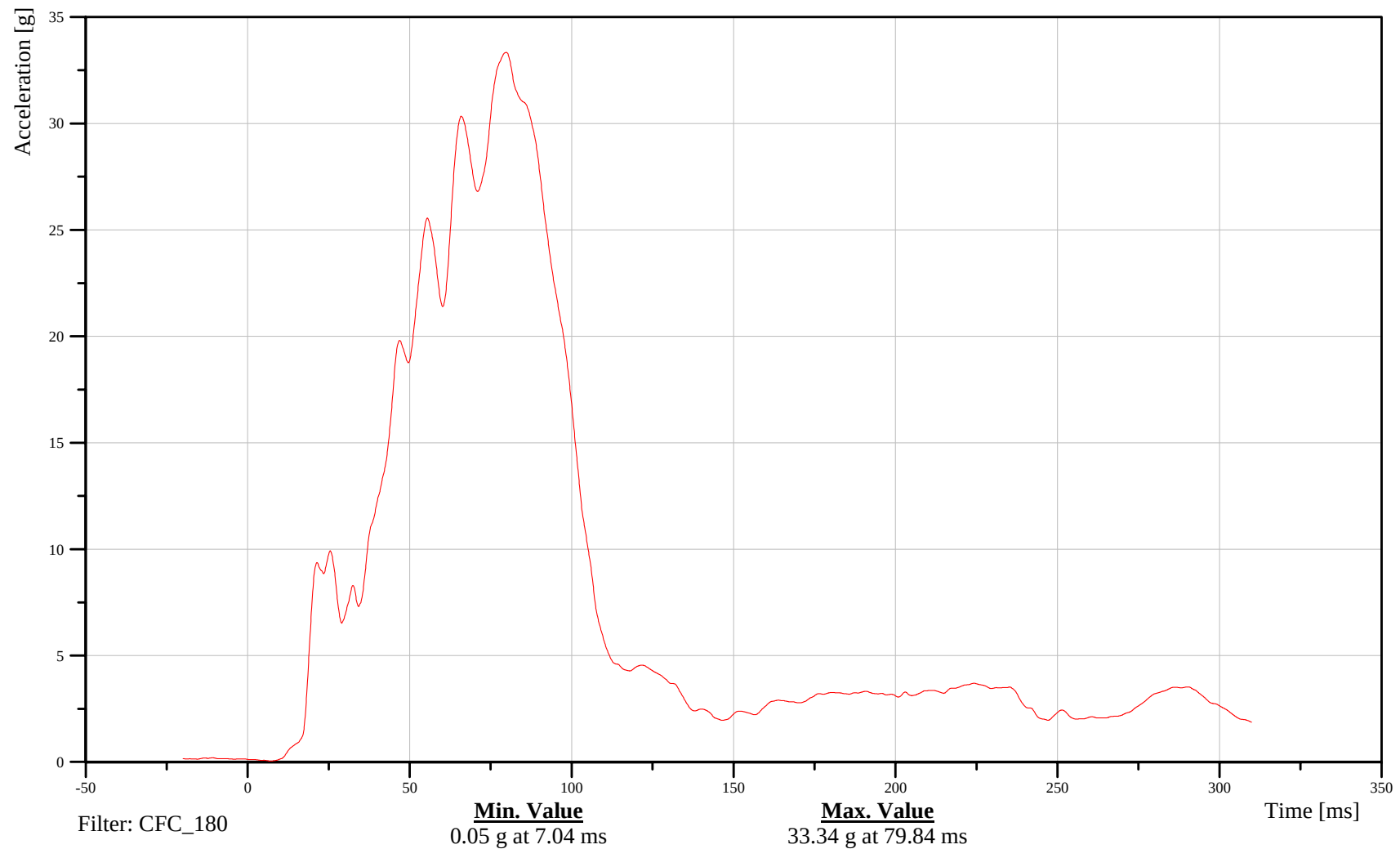
Time: 11:08

Customer: VRTC

11CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

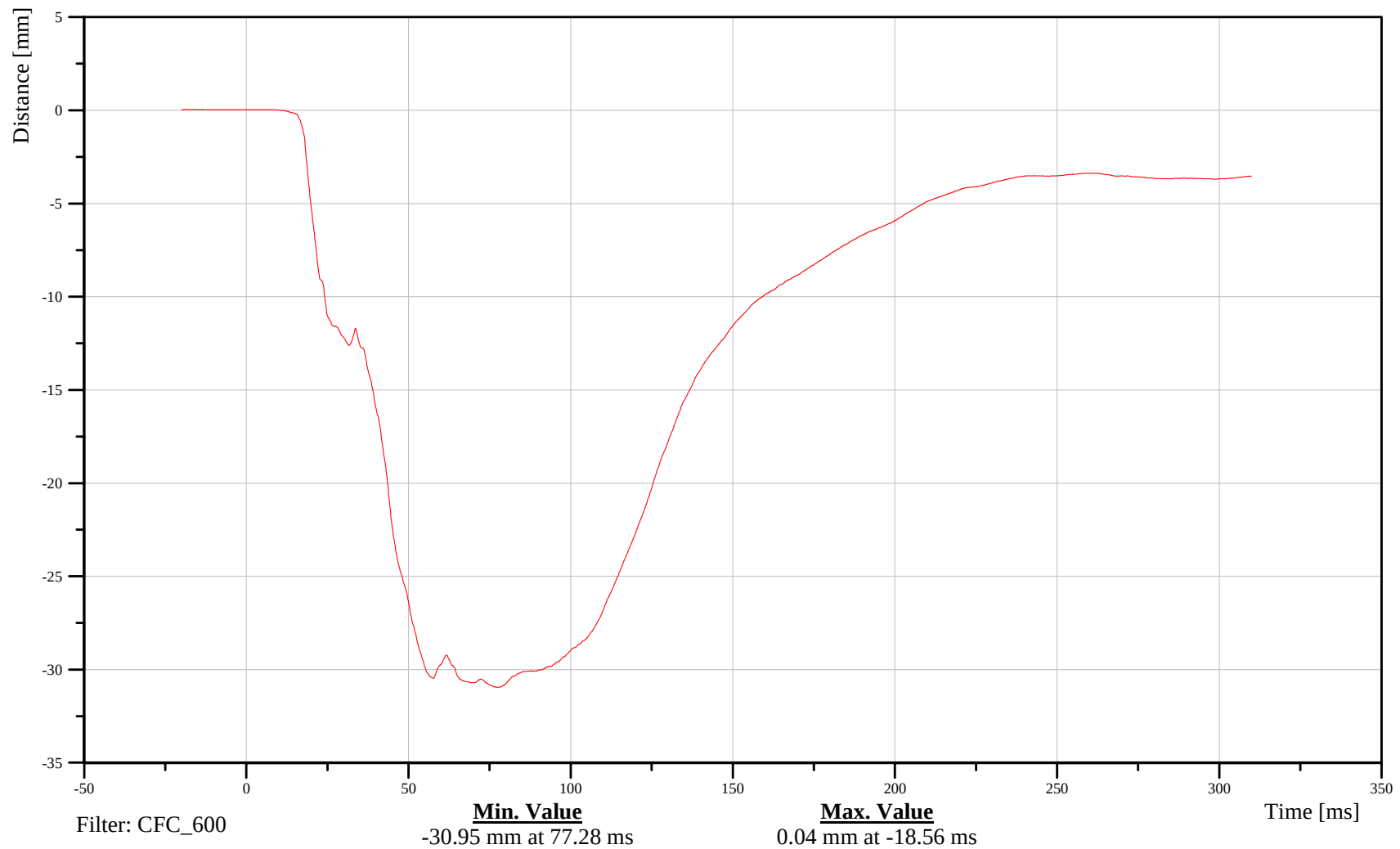
Bullet Driver Chest Displacement

Customer: VRTC

11CHST0000H3DSXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

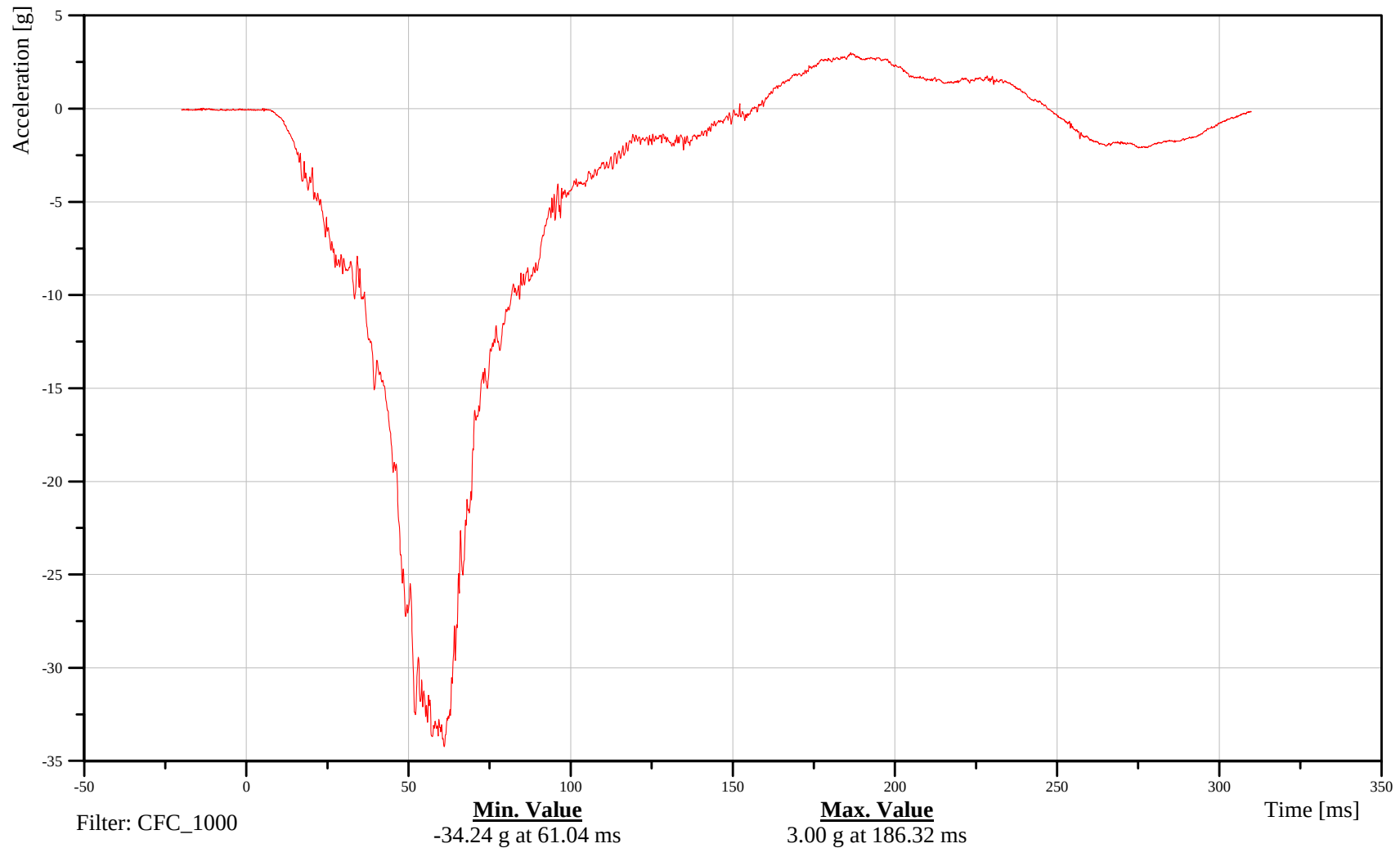
Bullet Driver Pelvis CG X-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

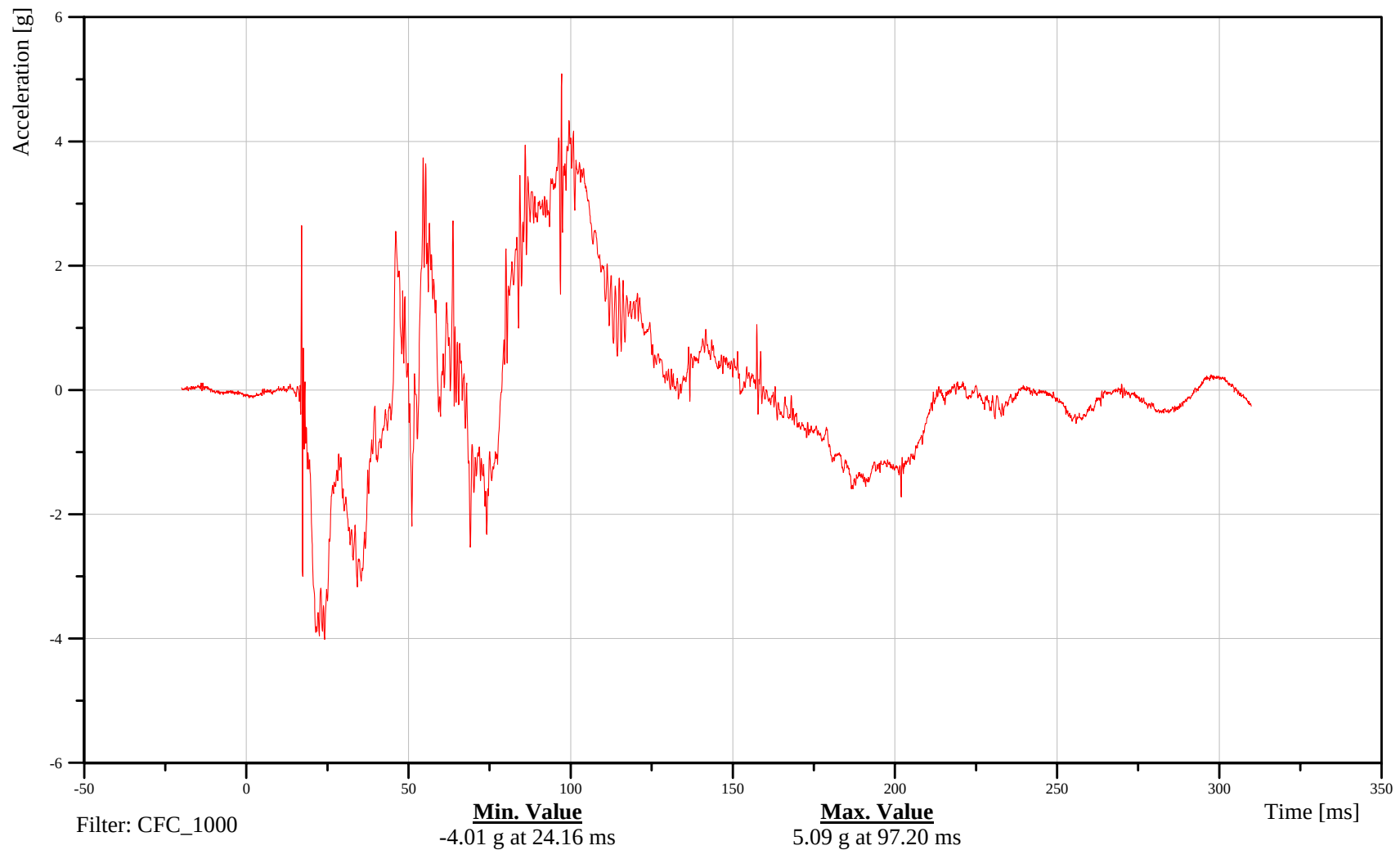
Bullet Driver Pelvis CG Y-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

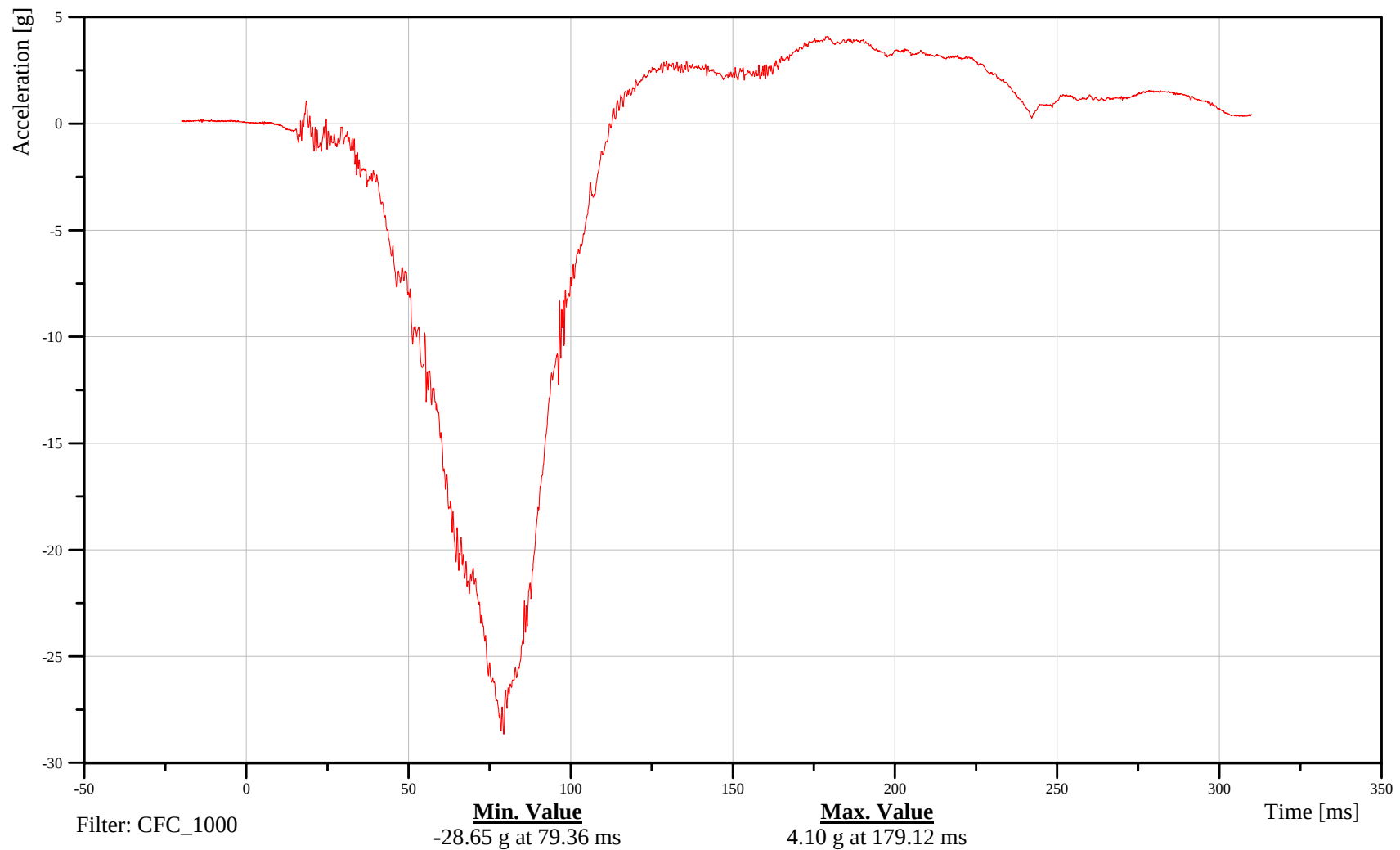
Bullet Driver Pelvis CG Z-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

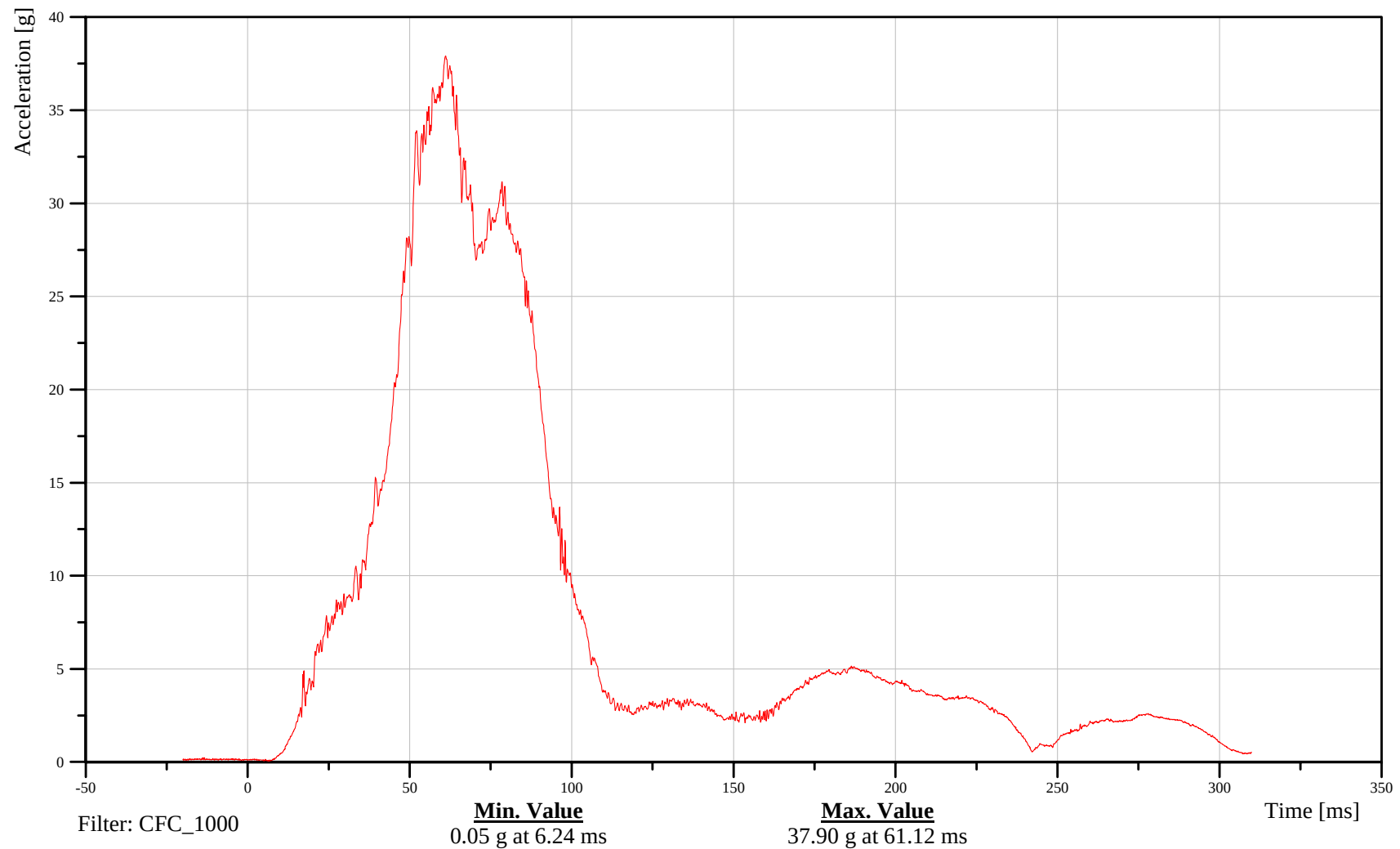
Bullet Driver Pelvis CG Resultant Acceleration

Customer: VRTC

11PELVCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

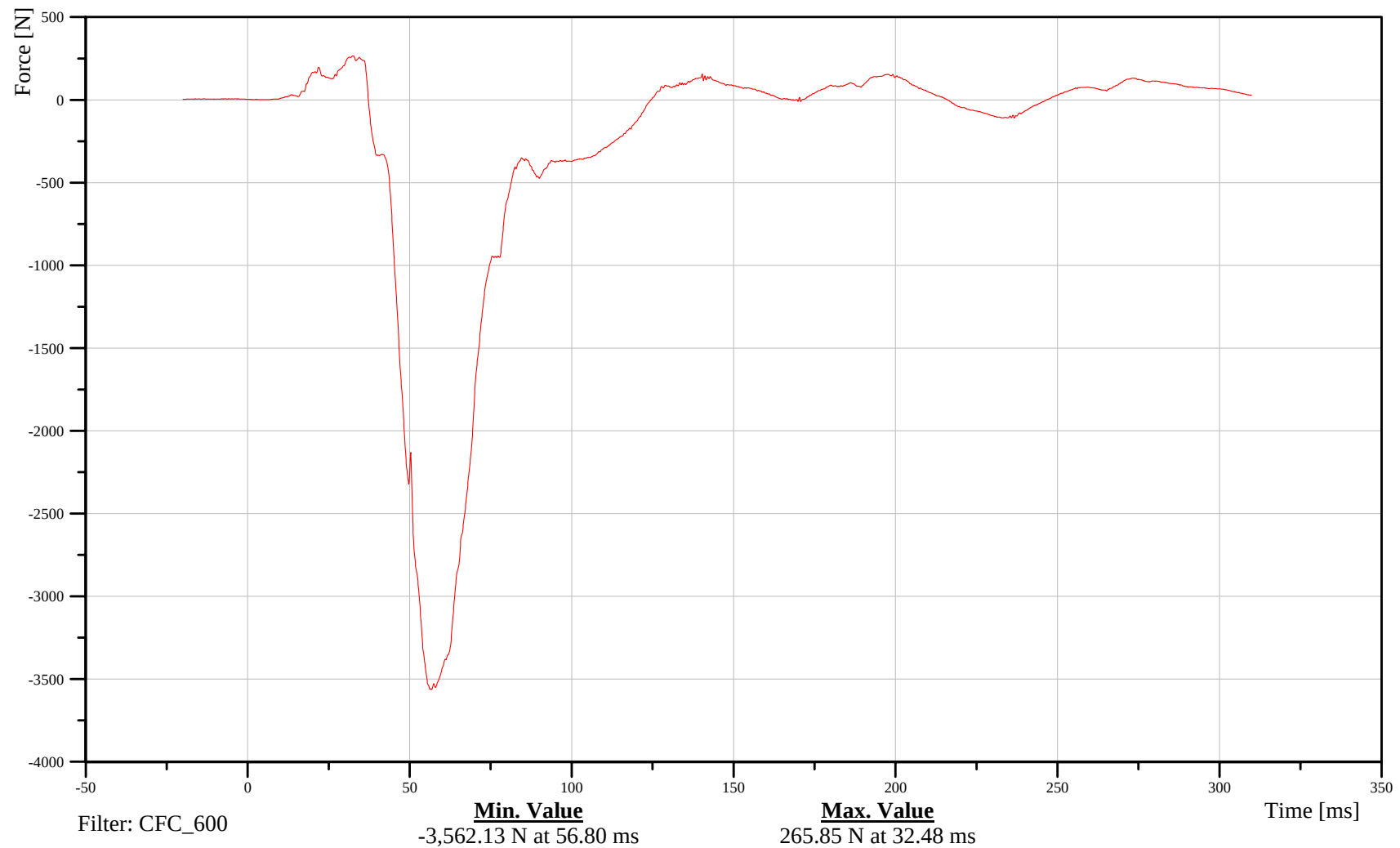
Bullet Driver Left Femur Z-Axis Force

Customer: VRTC

11FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

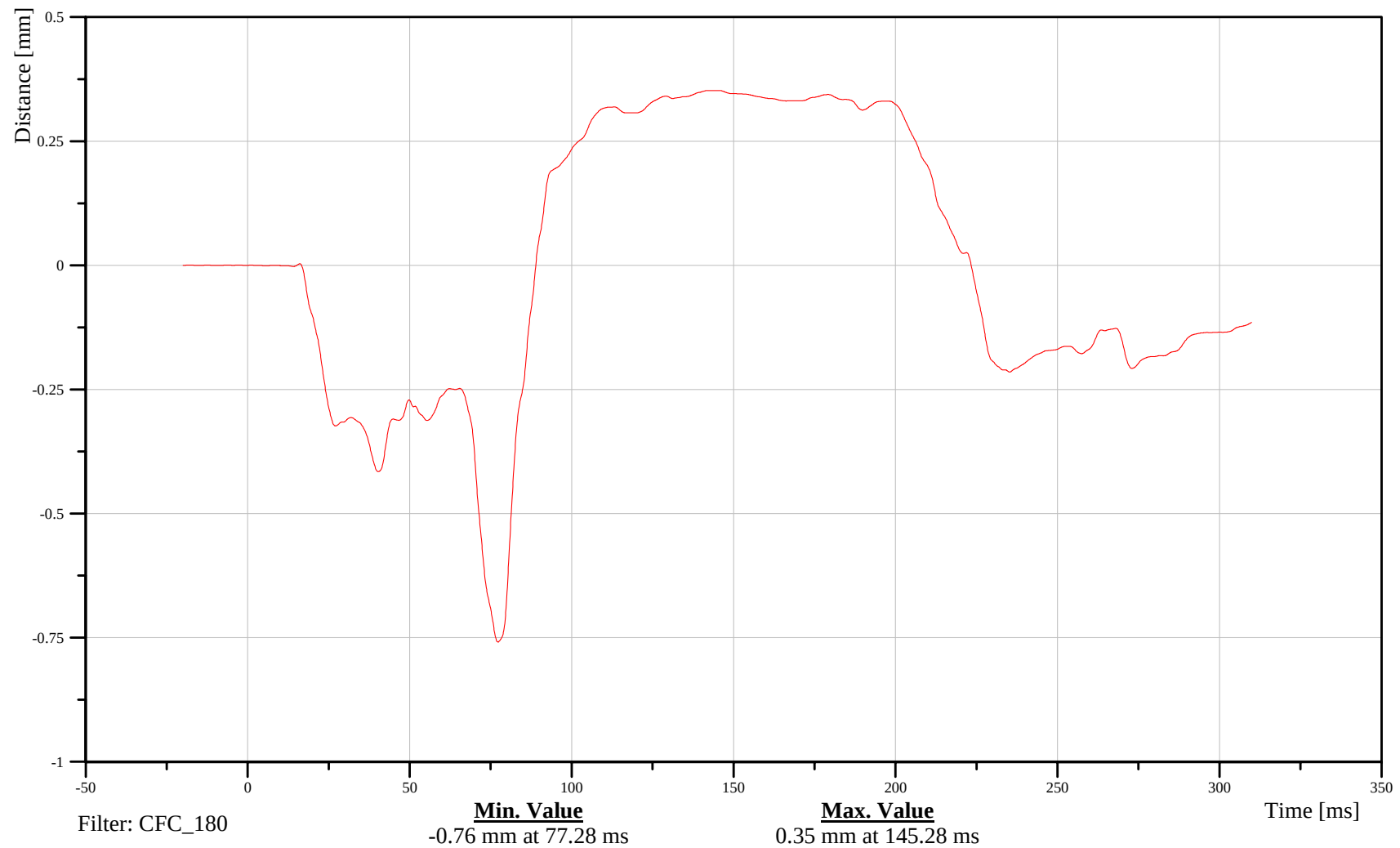
Bullet Driver Left Knee Displacement

Customer: VRTC

11KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

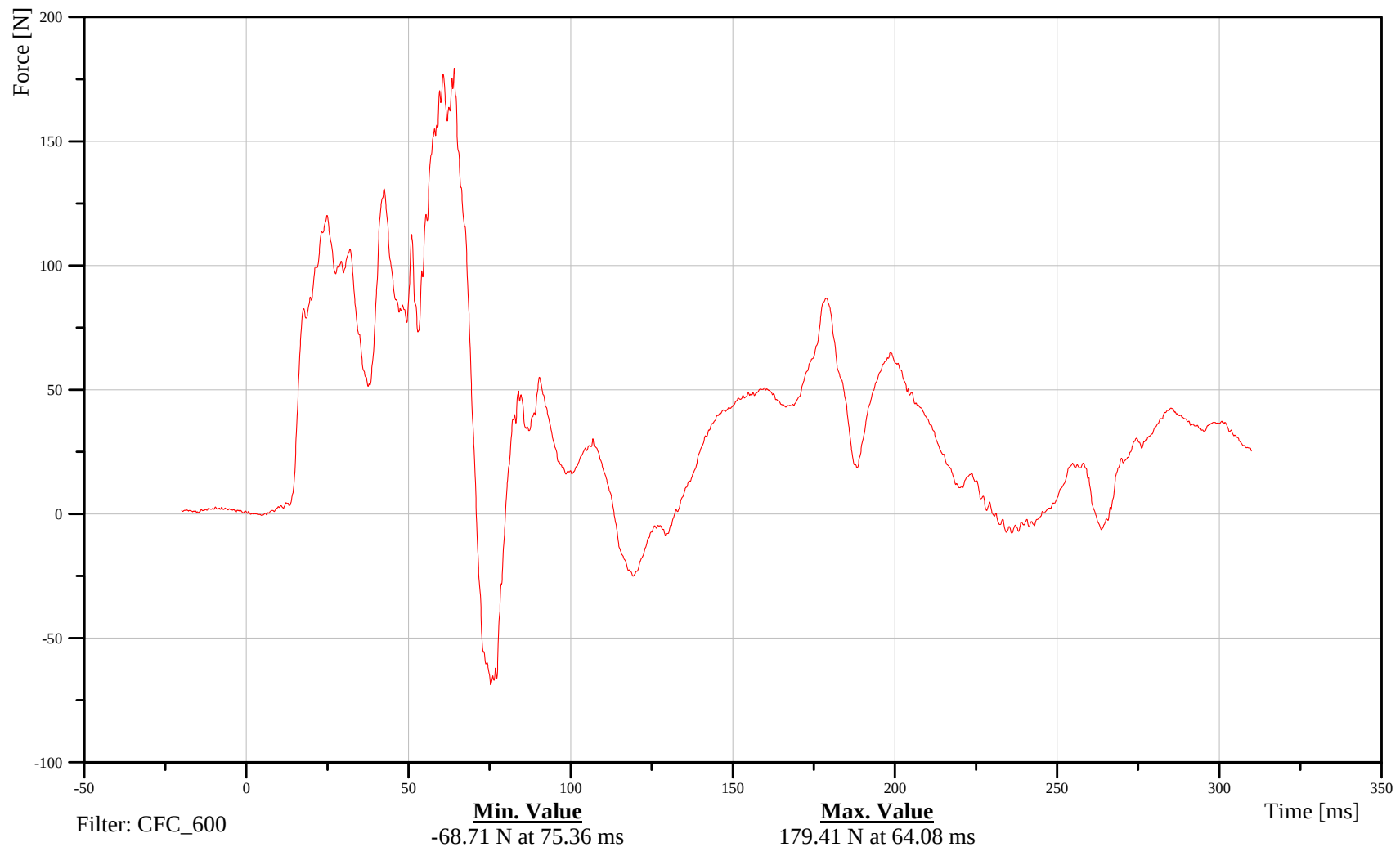
Bullet Driver Left Upper Tibia X-Axis Force

Customer: VRTC

11TIBILULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

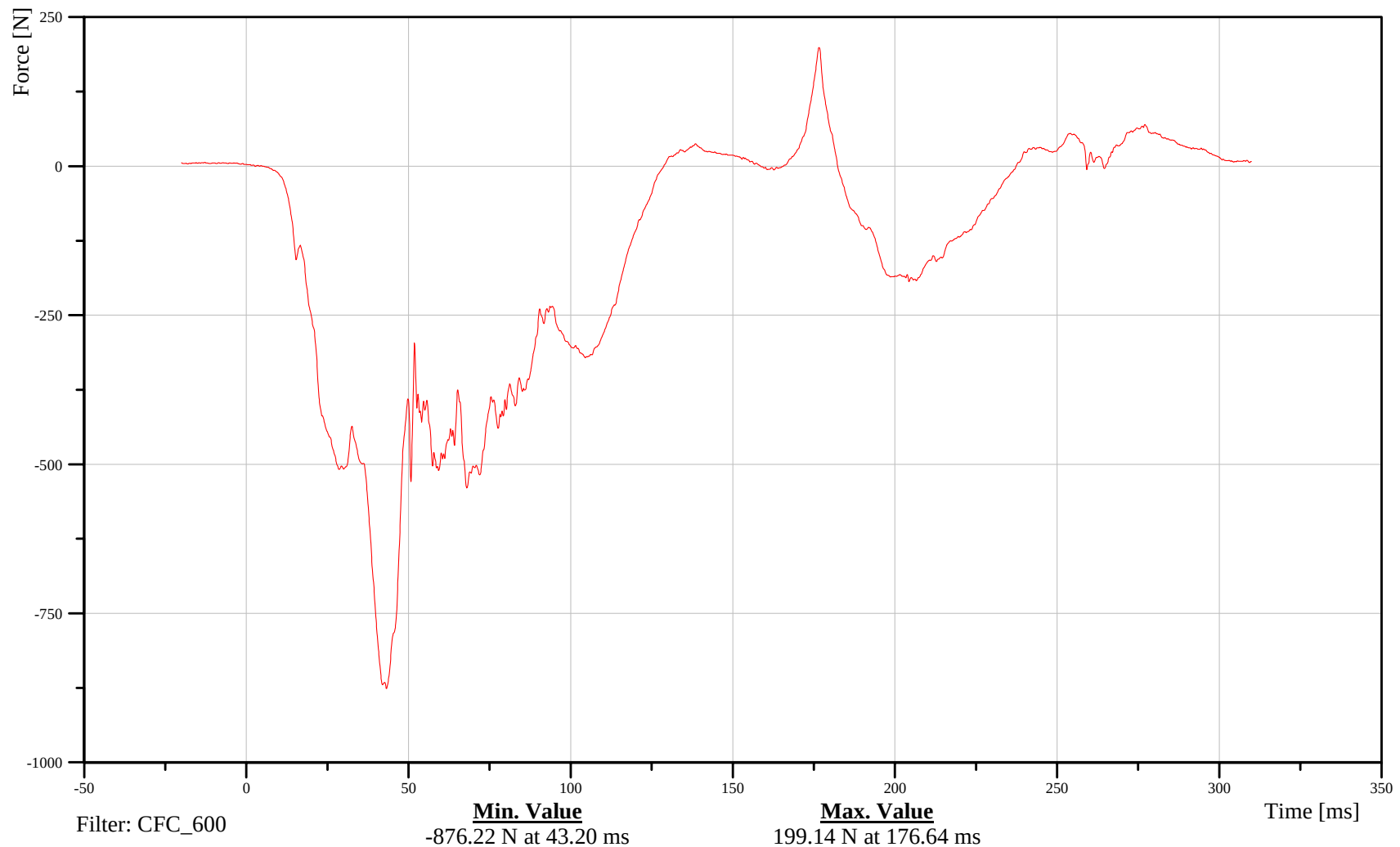
Bullet Driver Left Upper Tibia Z-Axis Force

Customer: VRTC

11TIBILULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

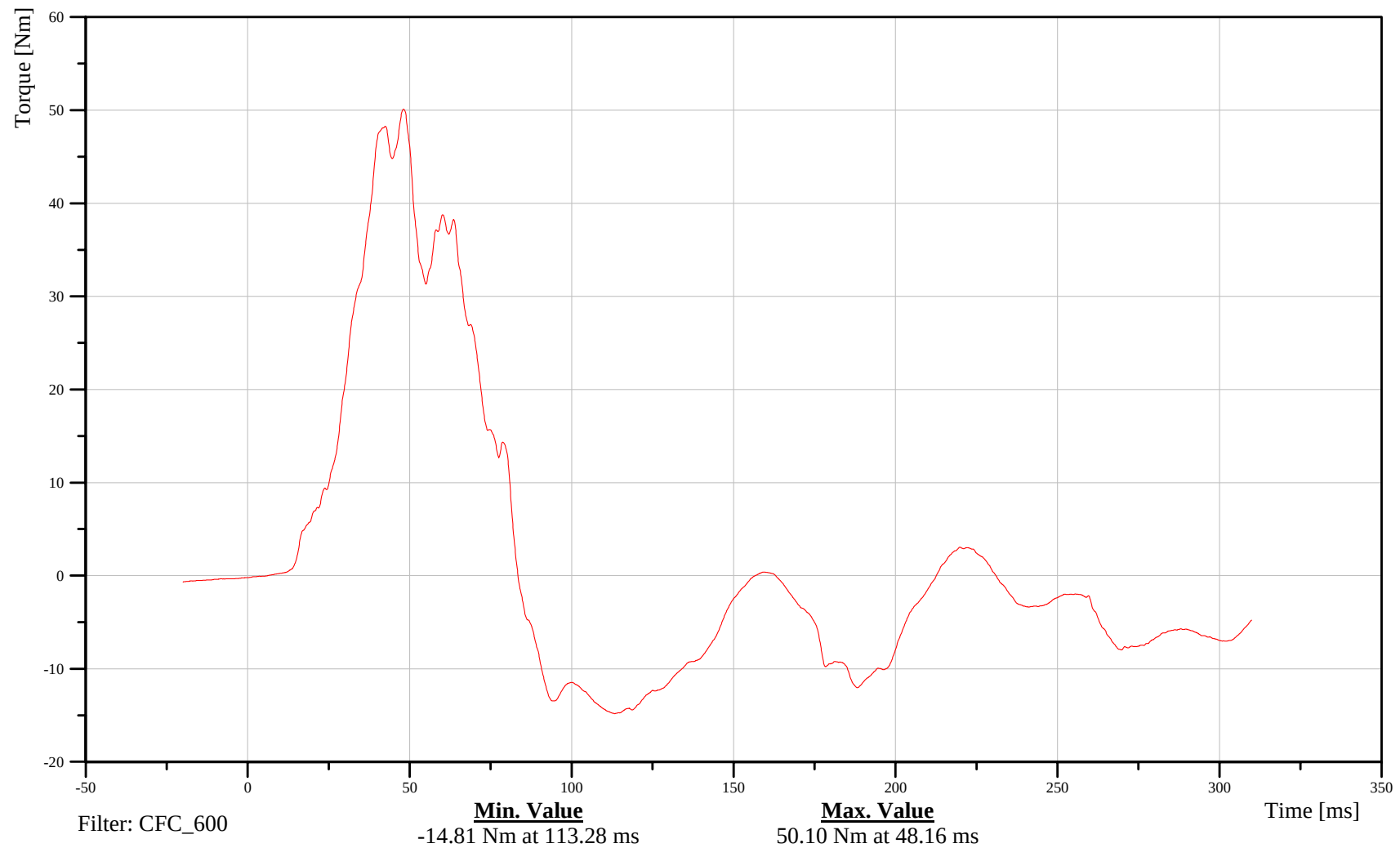
Bullet Driver Left Upper Tibia Moment About X Axis

Customer: VRTC

11TIBILULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

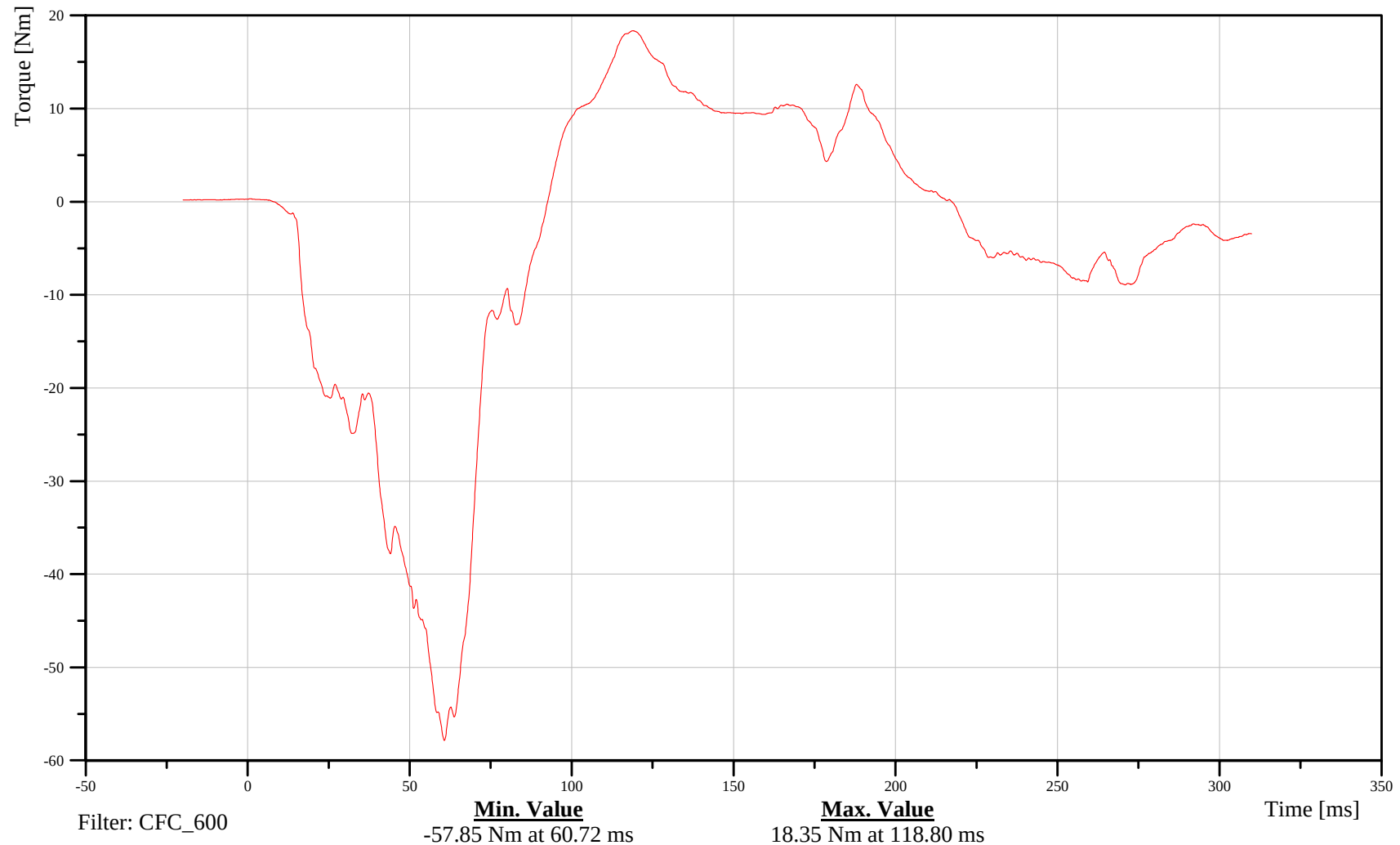
Bullet Driver Left Upper Tibia Moment About Y Axis

Customer: VRTC

11TIBILULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

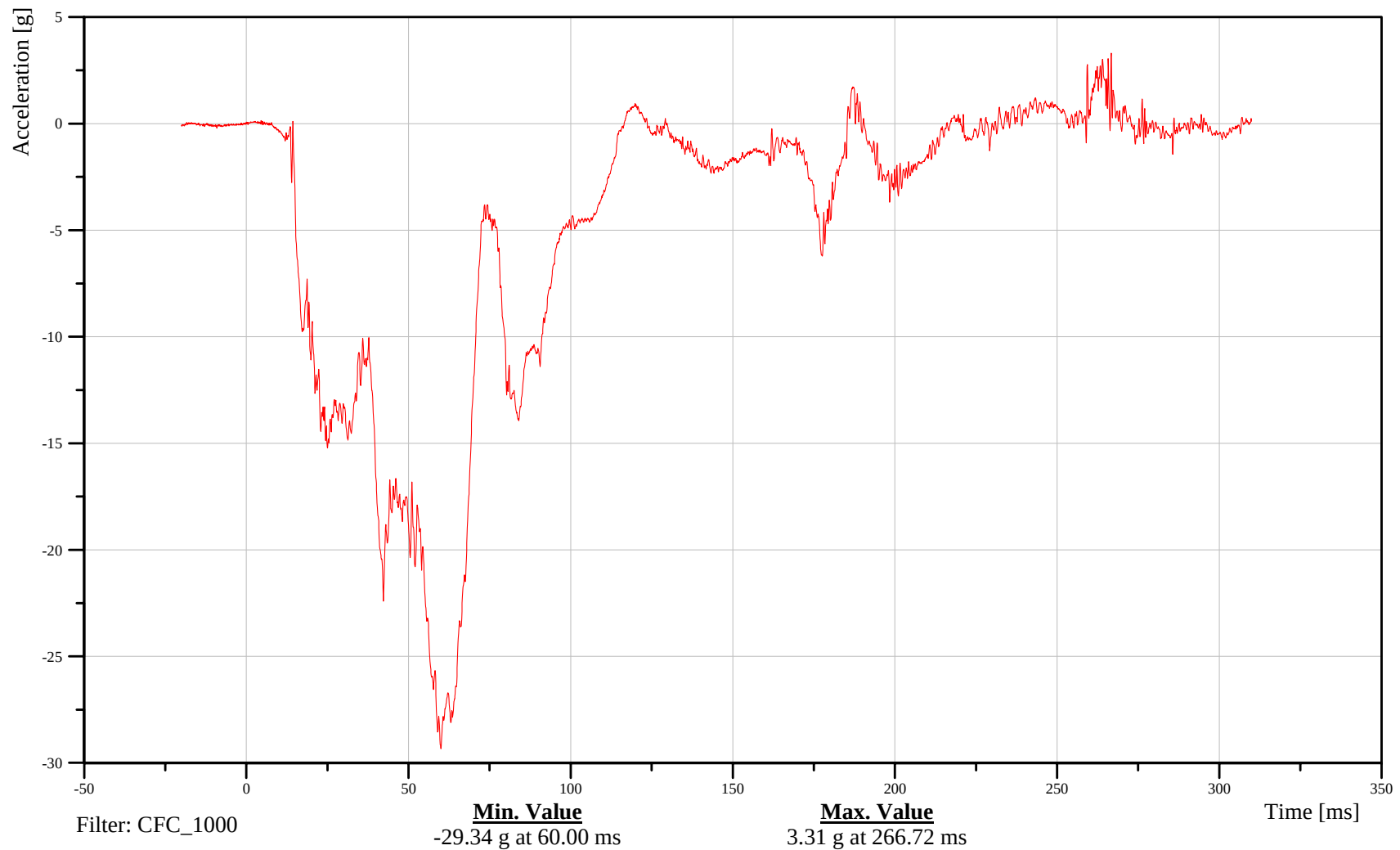
Bullet Driver Left Tibia X-Axis Acceleration

Customer: VRTC

11TIBILELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

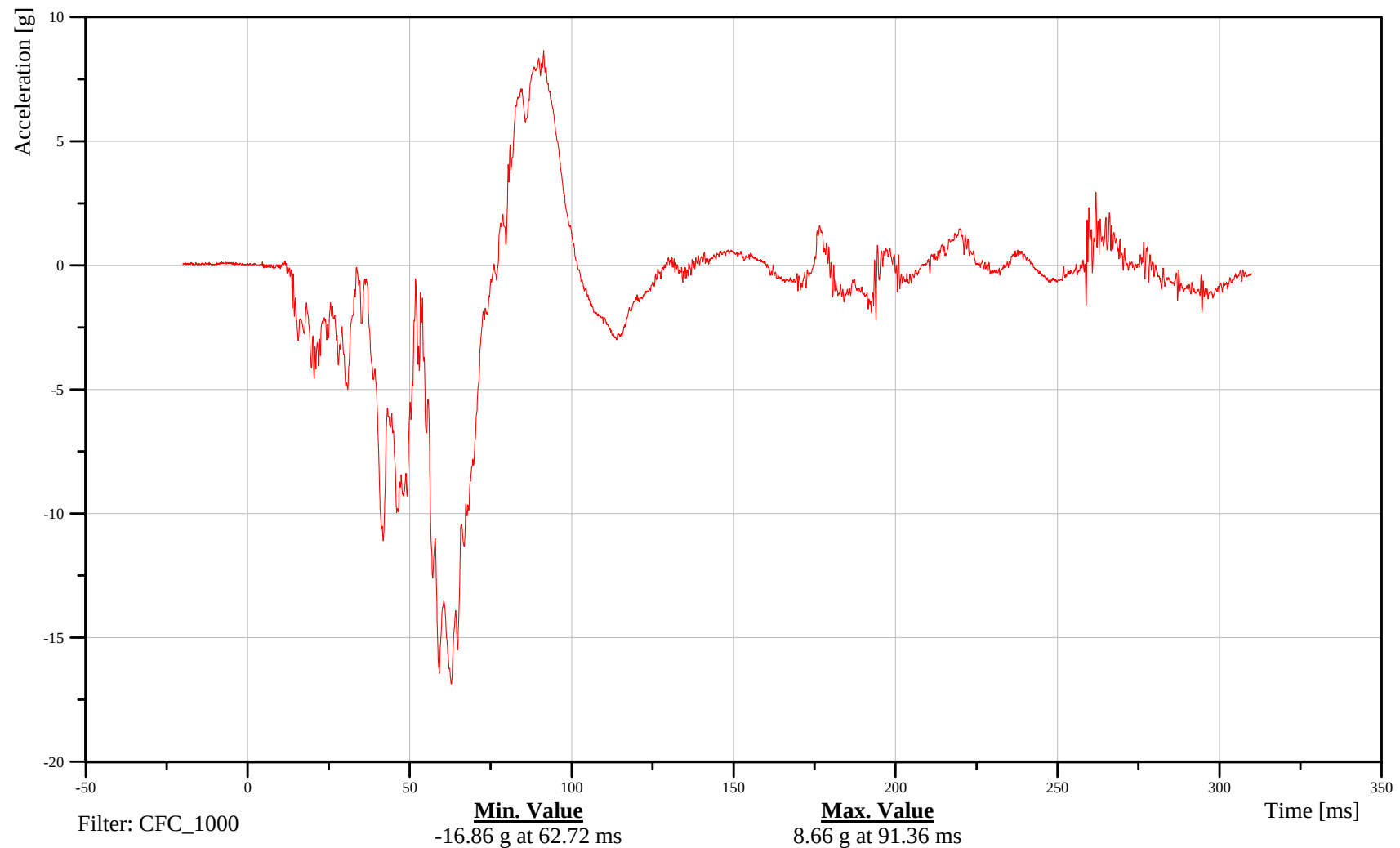
Bullet Driver Left Tibia Y-Axis Acceleration

Customer: VRTC

11TIBILELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

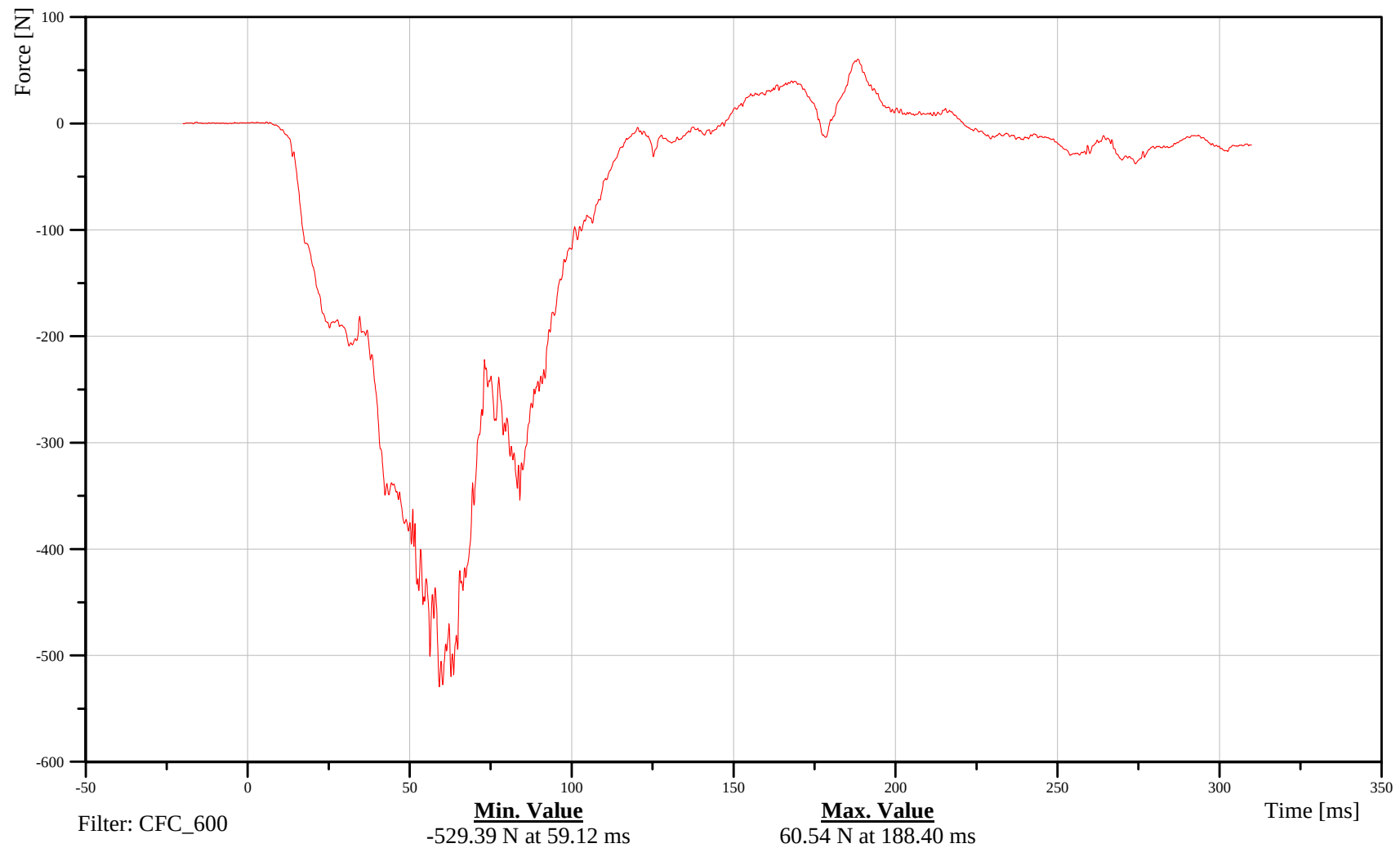
Bullet Driver Left Lower Tibia X-Axis Force

Customer: VRTC

11TIBILLXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

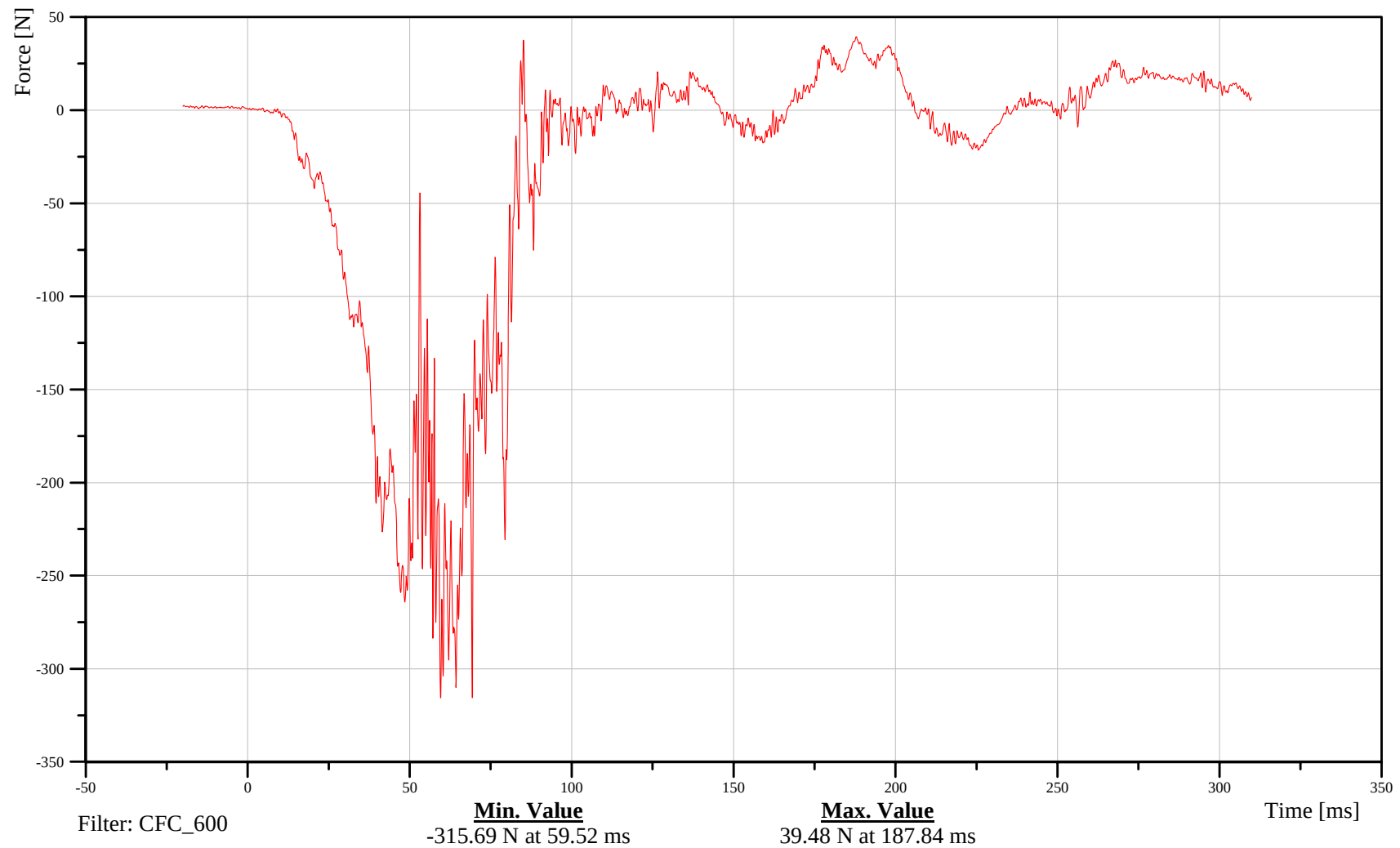
Bullet Driver Left Lower Tibia Y-Axis Force

Customer: VRTC

11TIBILLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

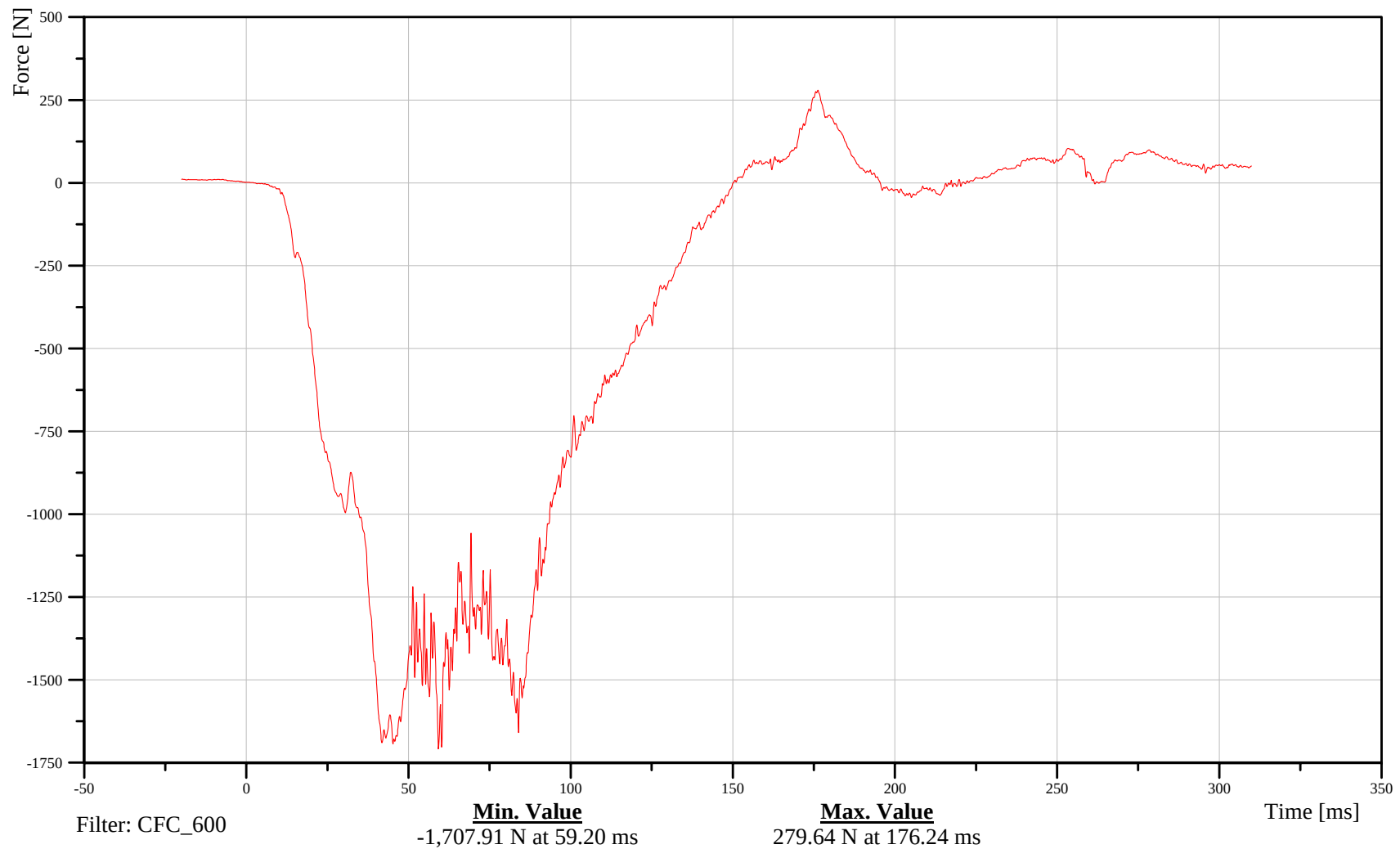
Bullet Driver Left Lower Tibia Z-Axis Force

Customer: VRTC

11TIBILLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

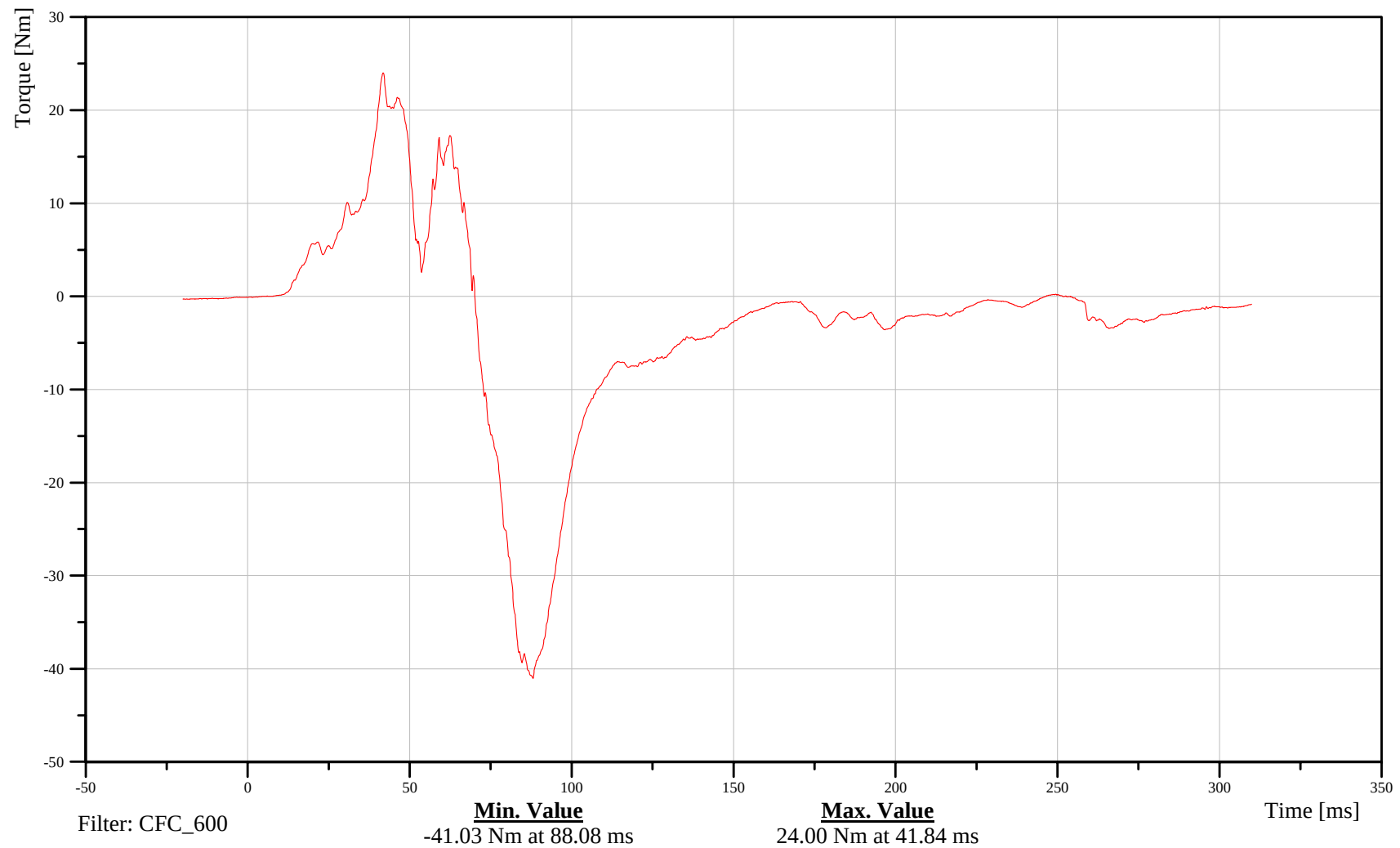
Bullet Driver Left Lower Tibia Moment About X Axis

Customer: VRTC

11TIBILLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

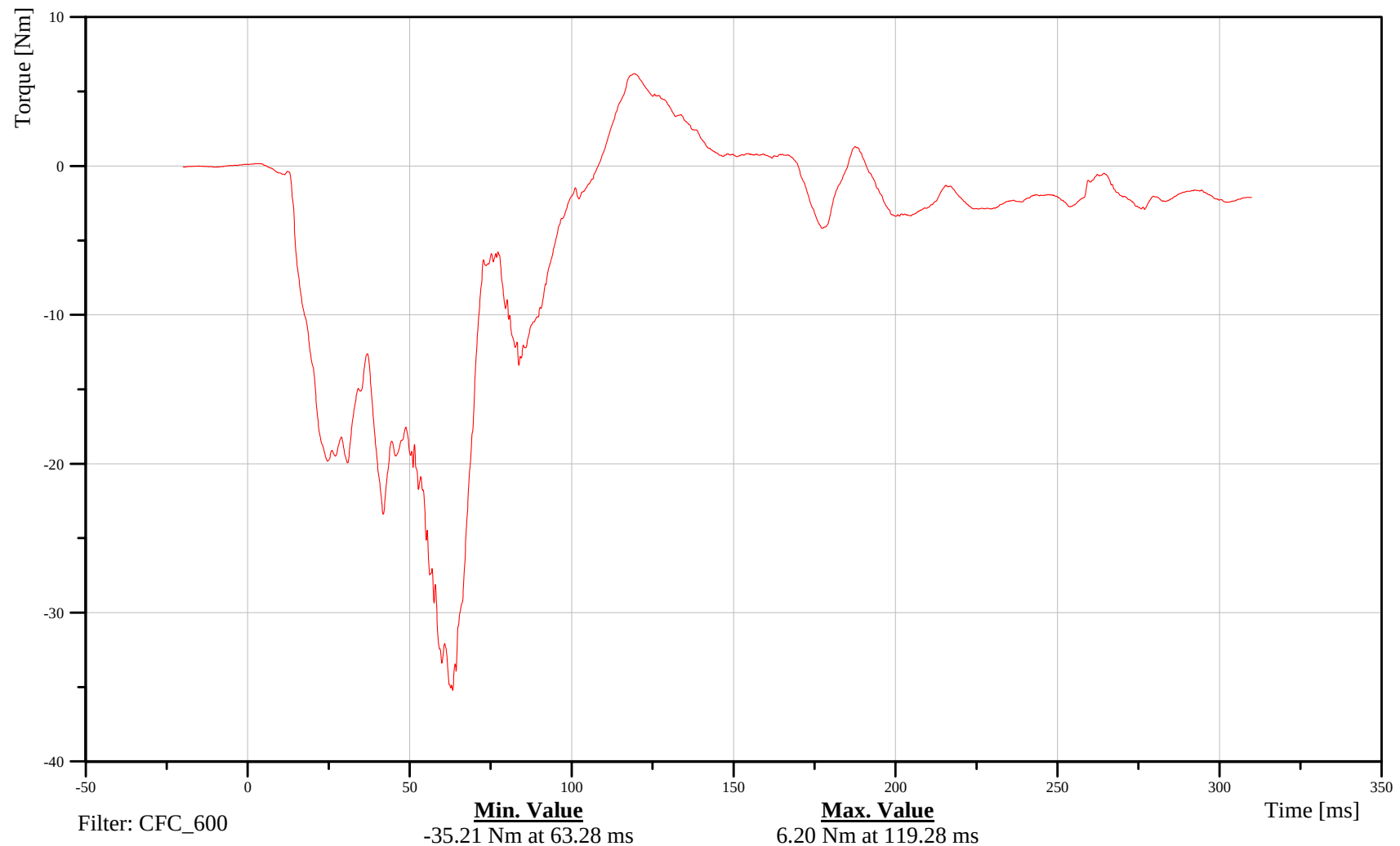
Bullet Driver Left Lower Tibia Moment About Y Axis

Customer: VRTC

11TIBILLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

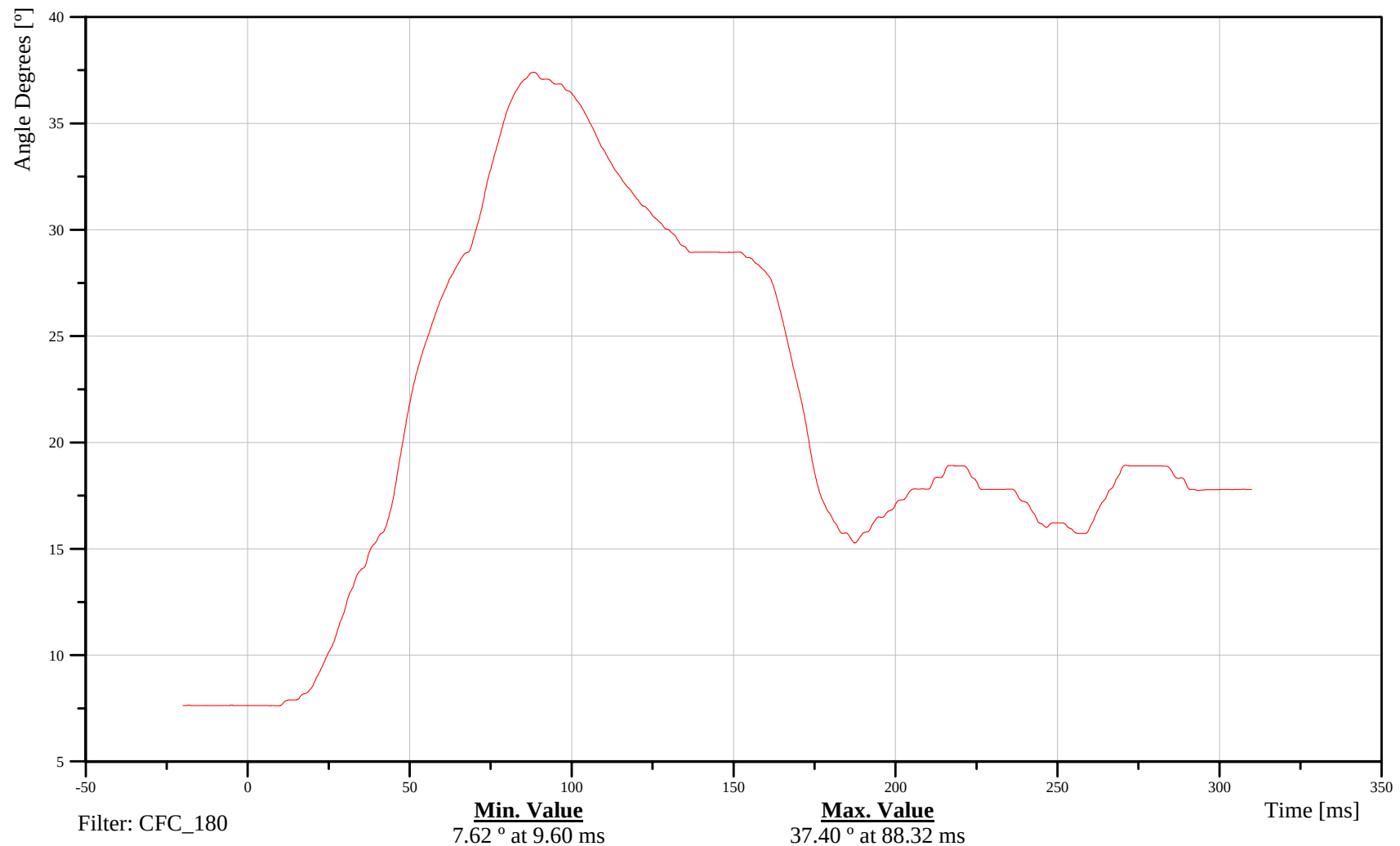
Bullet Driver Left Foot X-Axis Rotation

Customer: VRTC

11FOOTLELXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

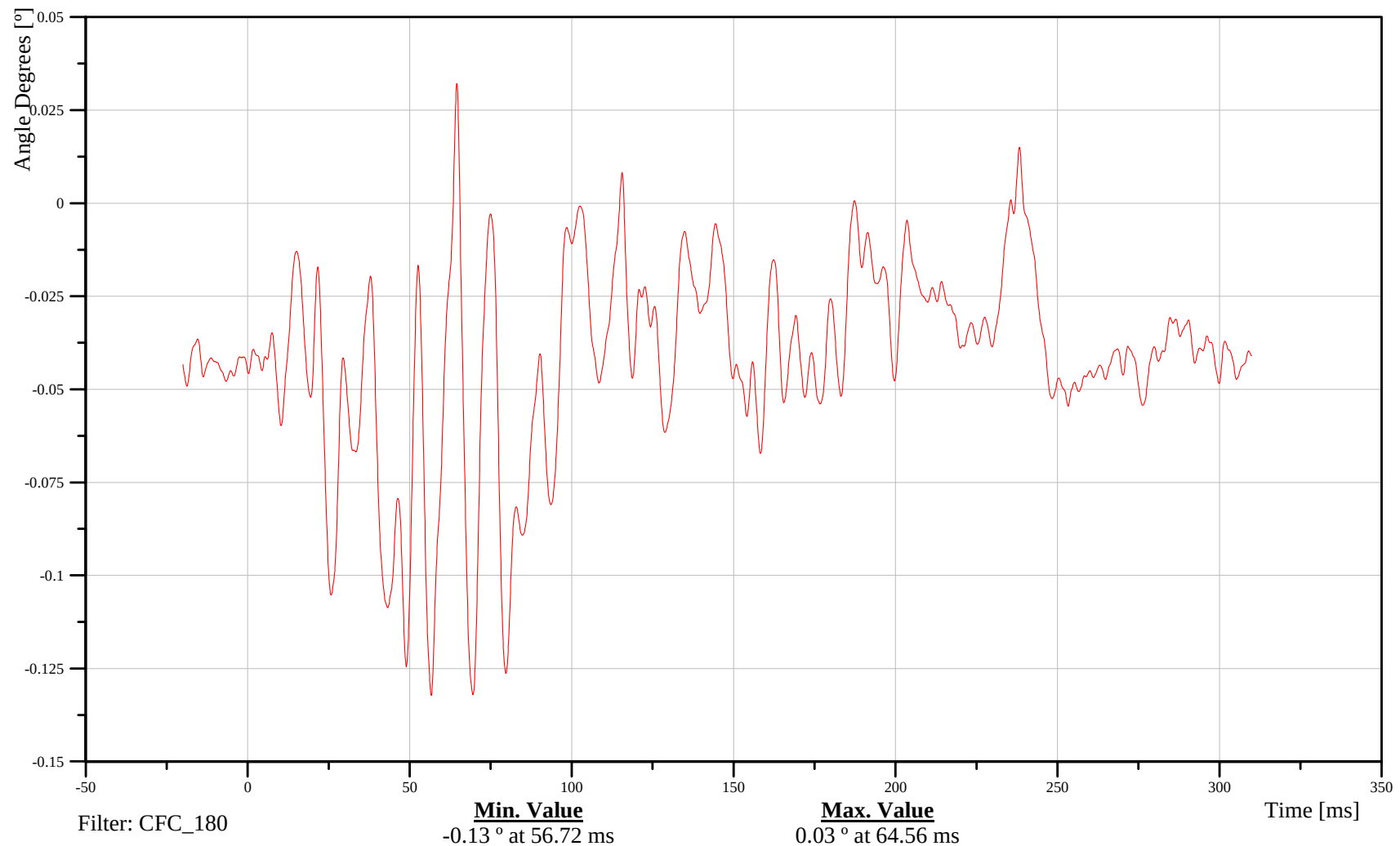
Bullet Driver Left Foot Y-Axis Rotation

Customer: VRTC

11FOOTLELXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

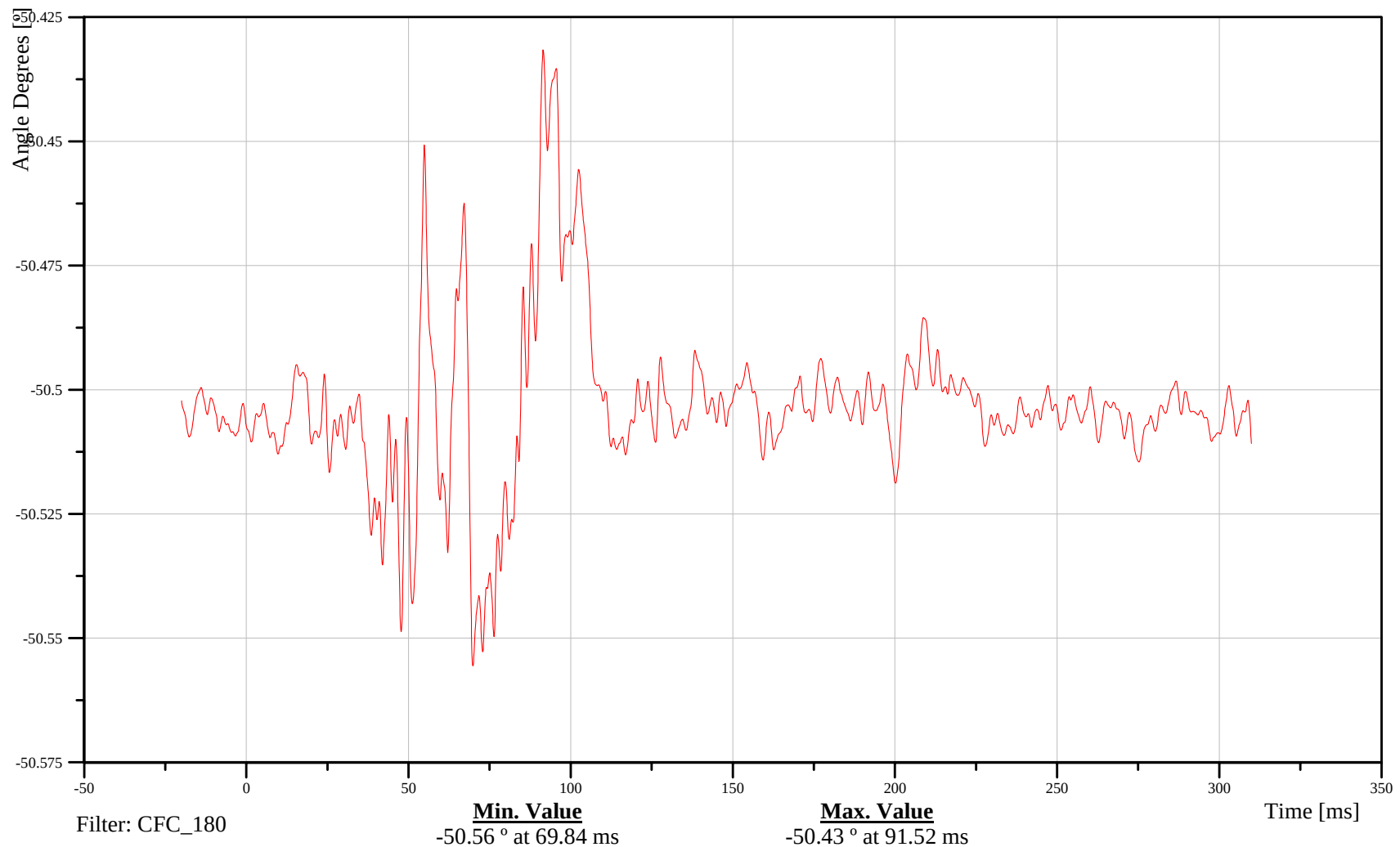
Bullet Driver Left Foot Z-Axis Rotation

Customer: VRTC

11FOOTLELXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

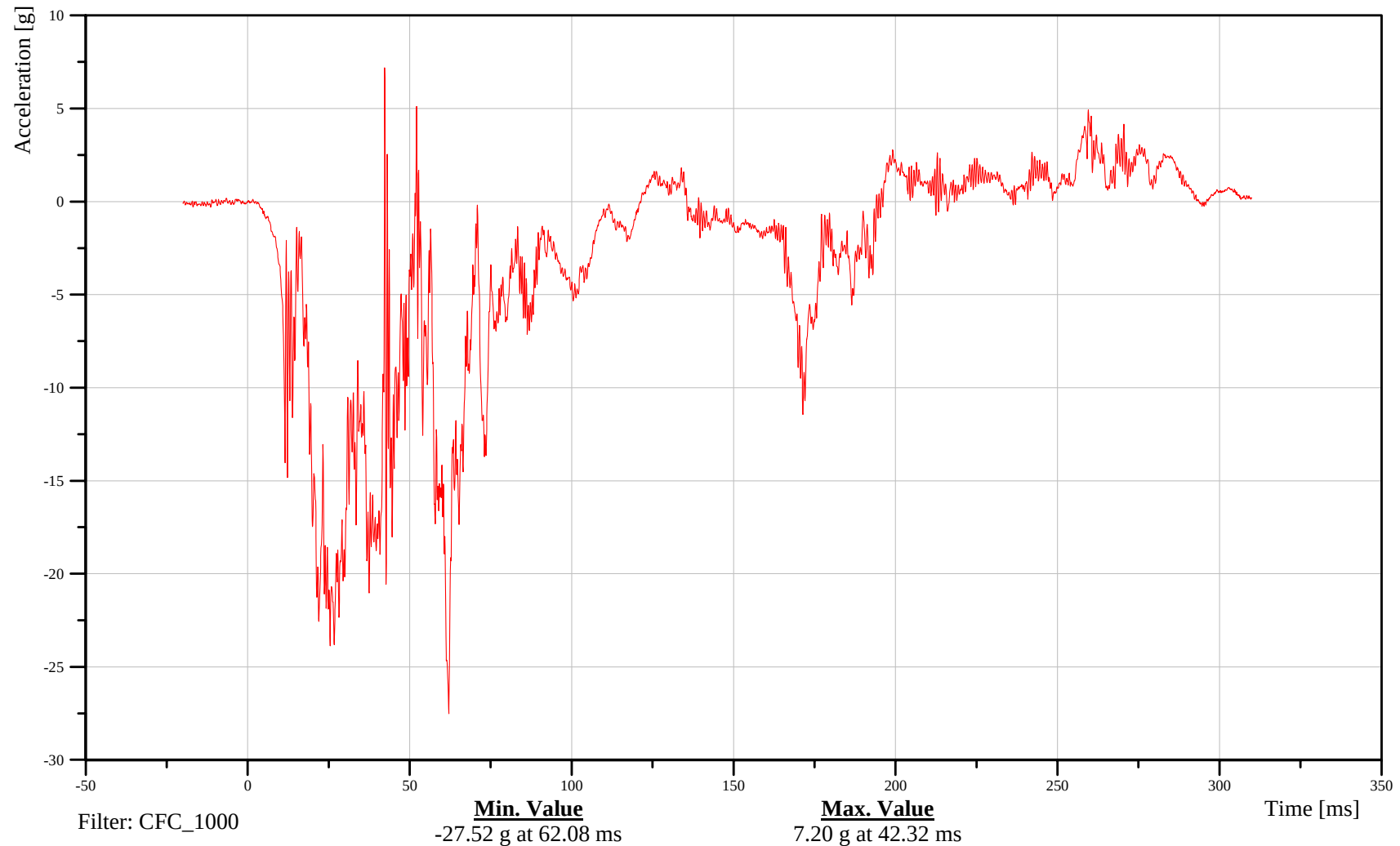
Bullet Driver Left Foot X-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

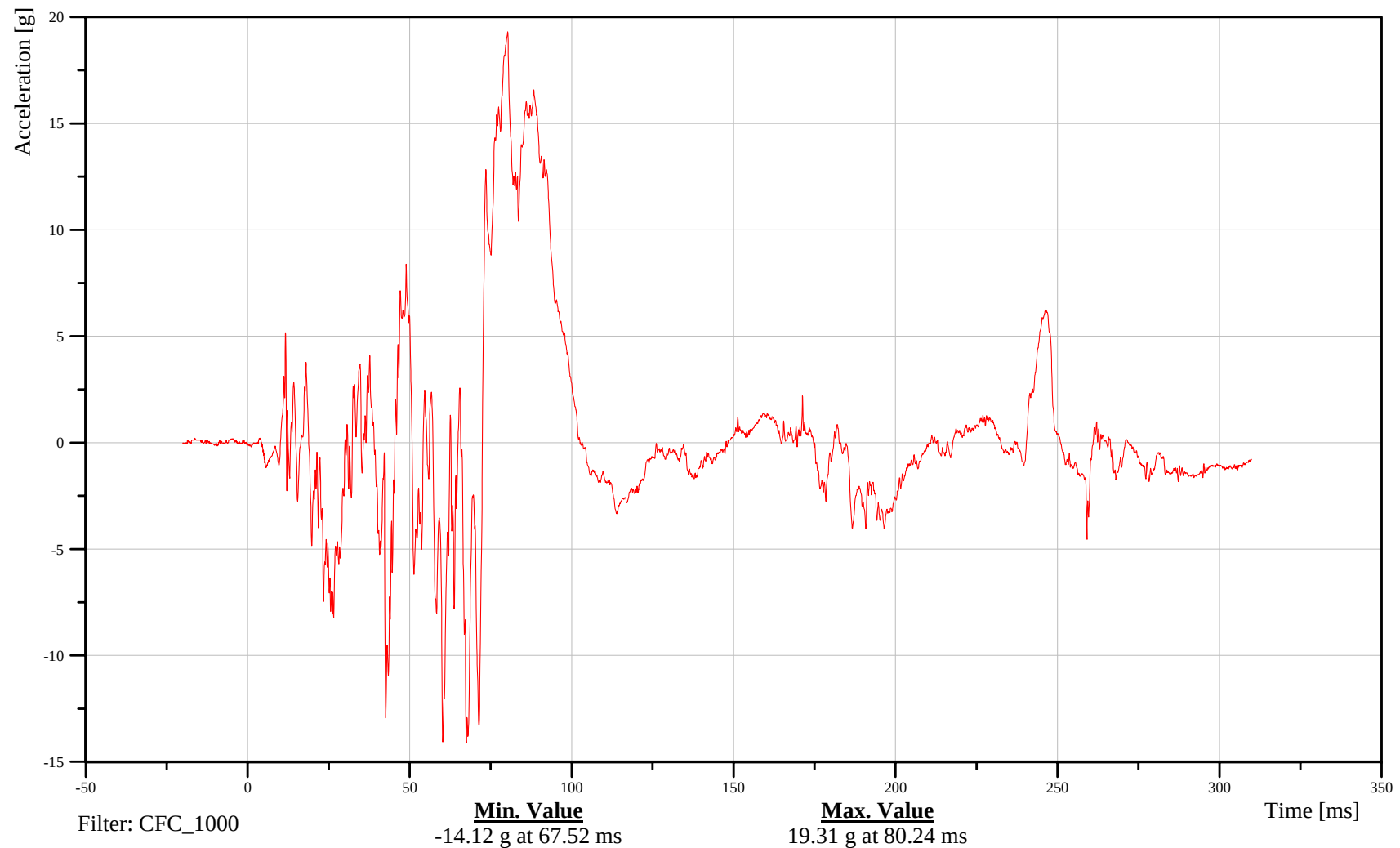
Bullet Driver Left Foot Y-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Driver Left Foot Z-Axis Acceleration

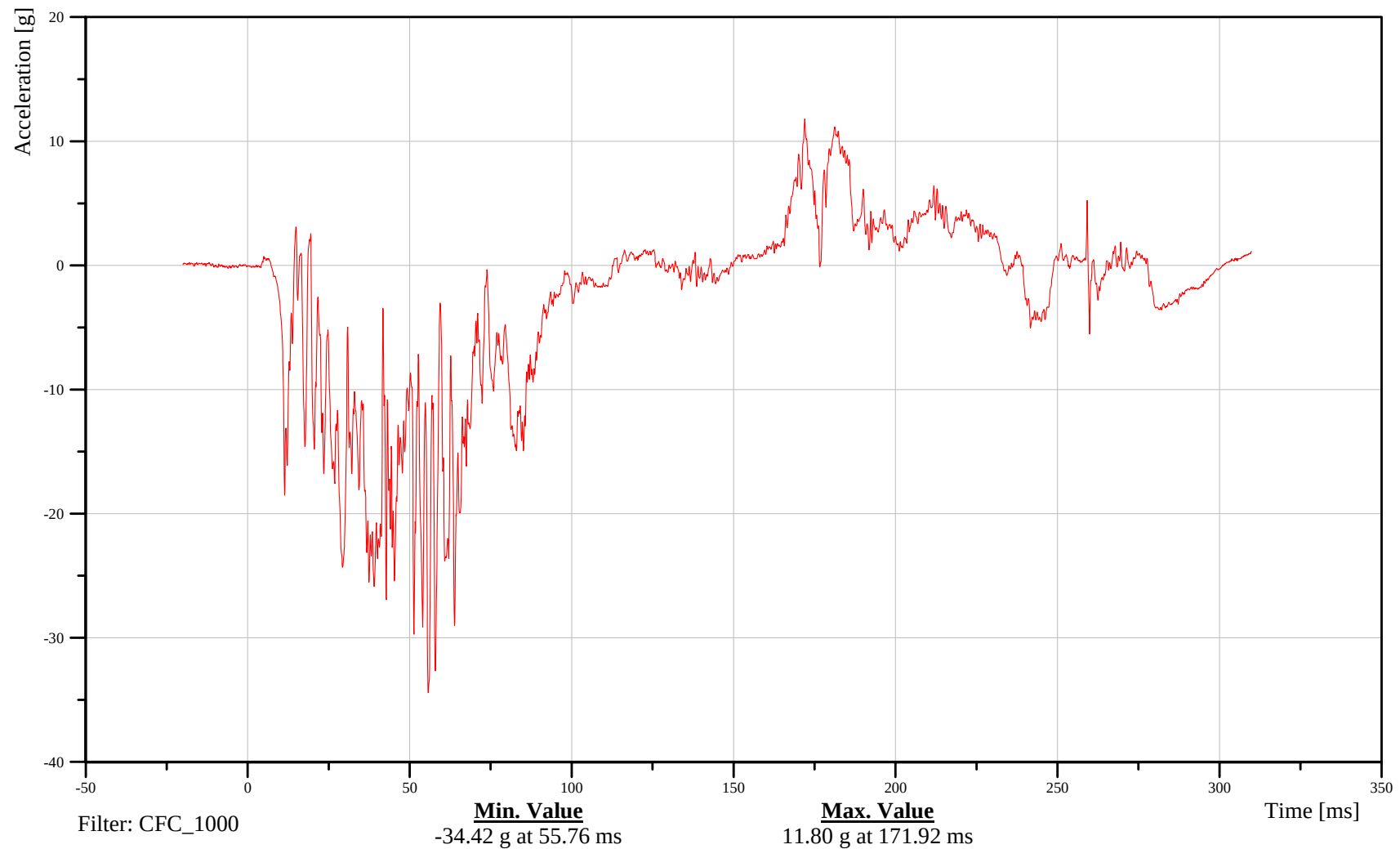
Time: 11:08

Customer: VRTC

11FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Driver Left Foot Resultant Acceleration

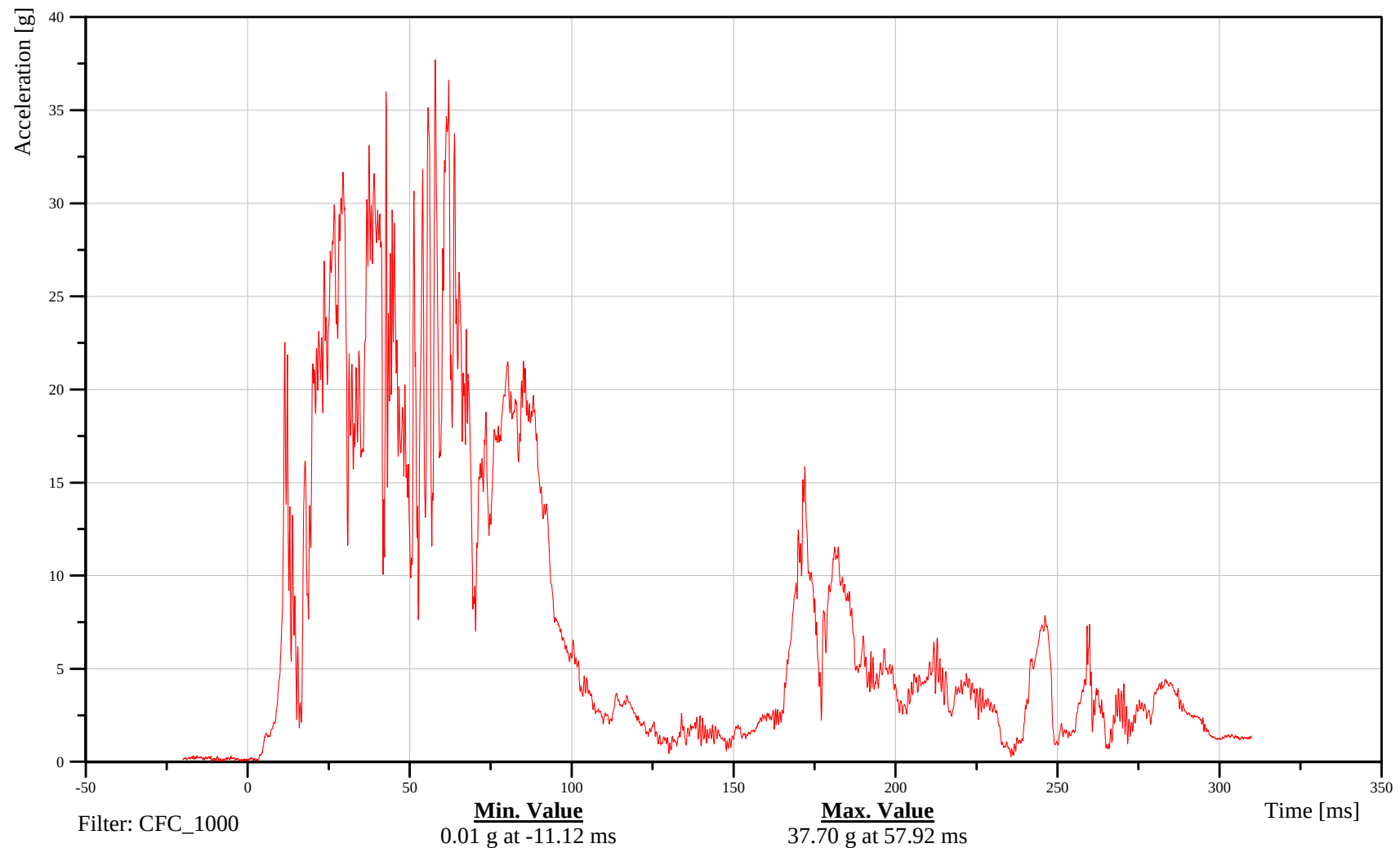
Time: 11:08

Customer: VRTC

11FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

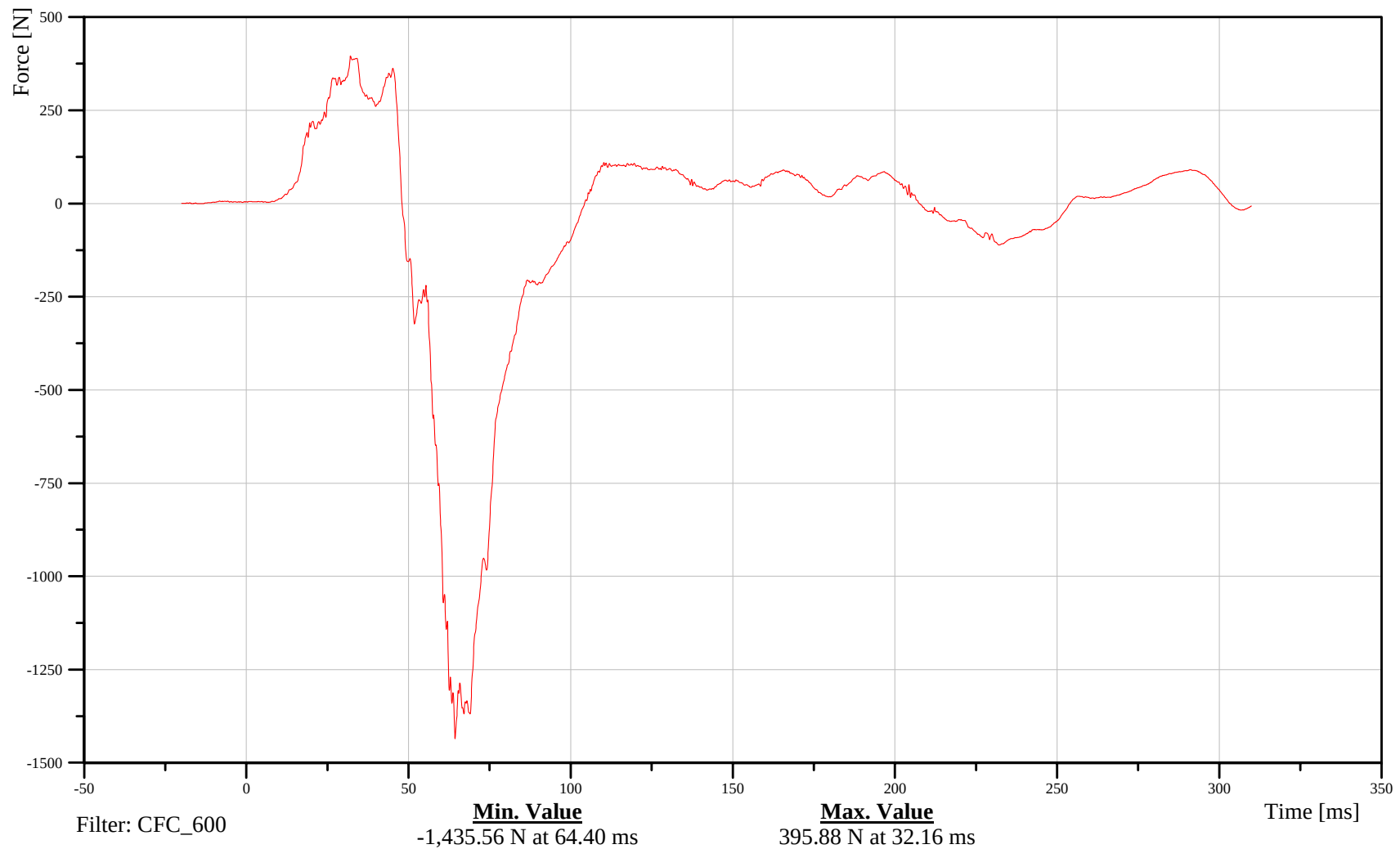
Bullet Driver Right Femur Z-Axis Force

Customer: VRTC

11FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

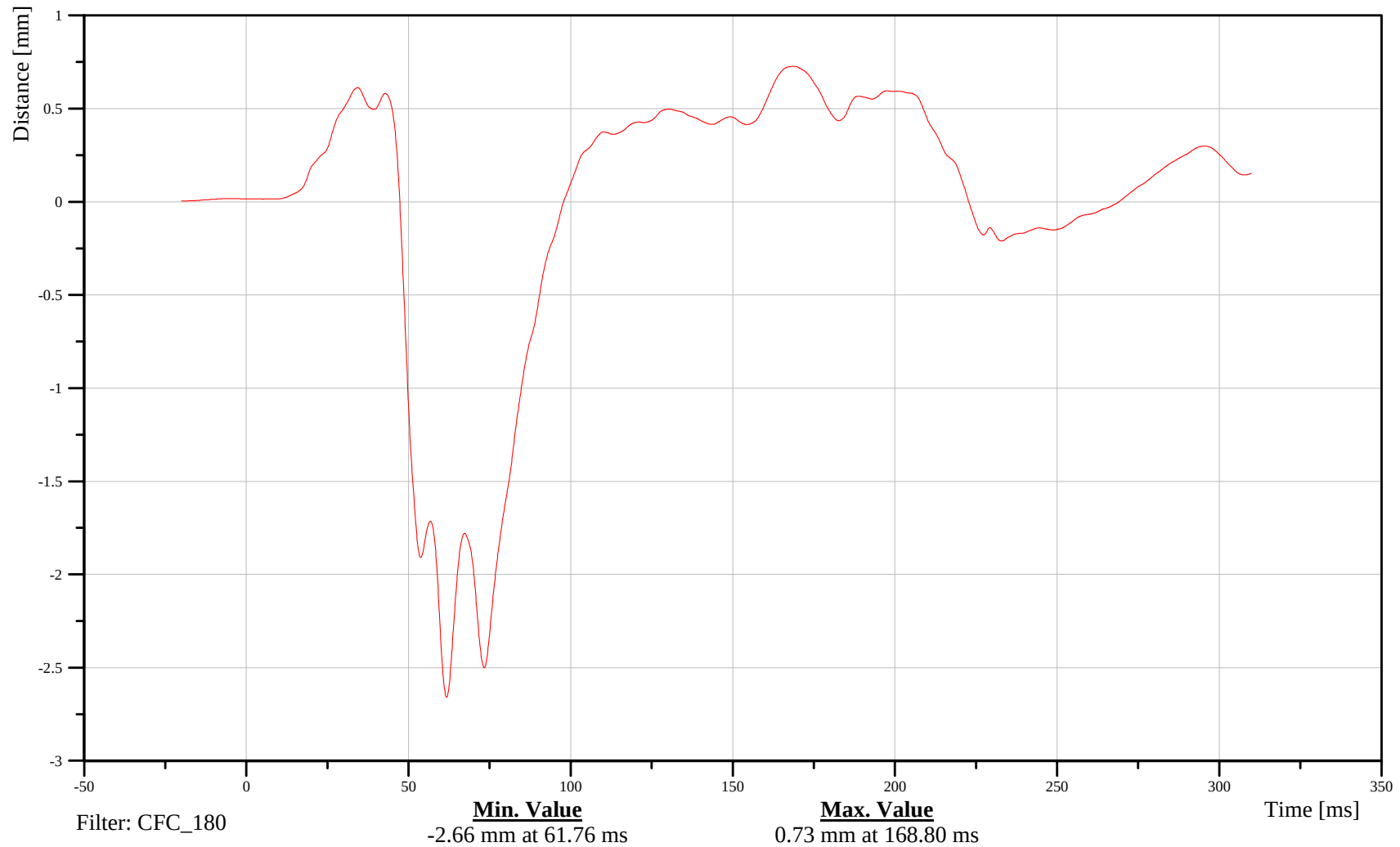
Bullet Driver Right Knee Displacement

Customer: VRTC

11KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

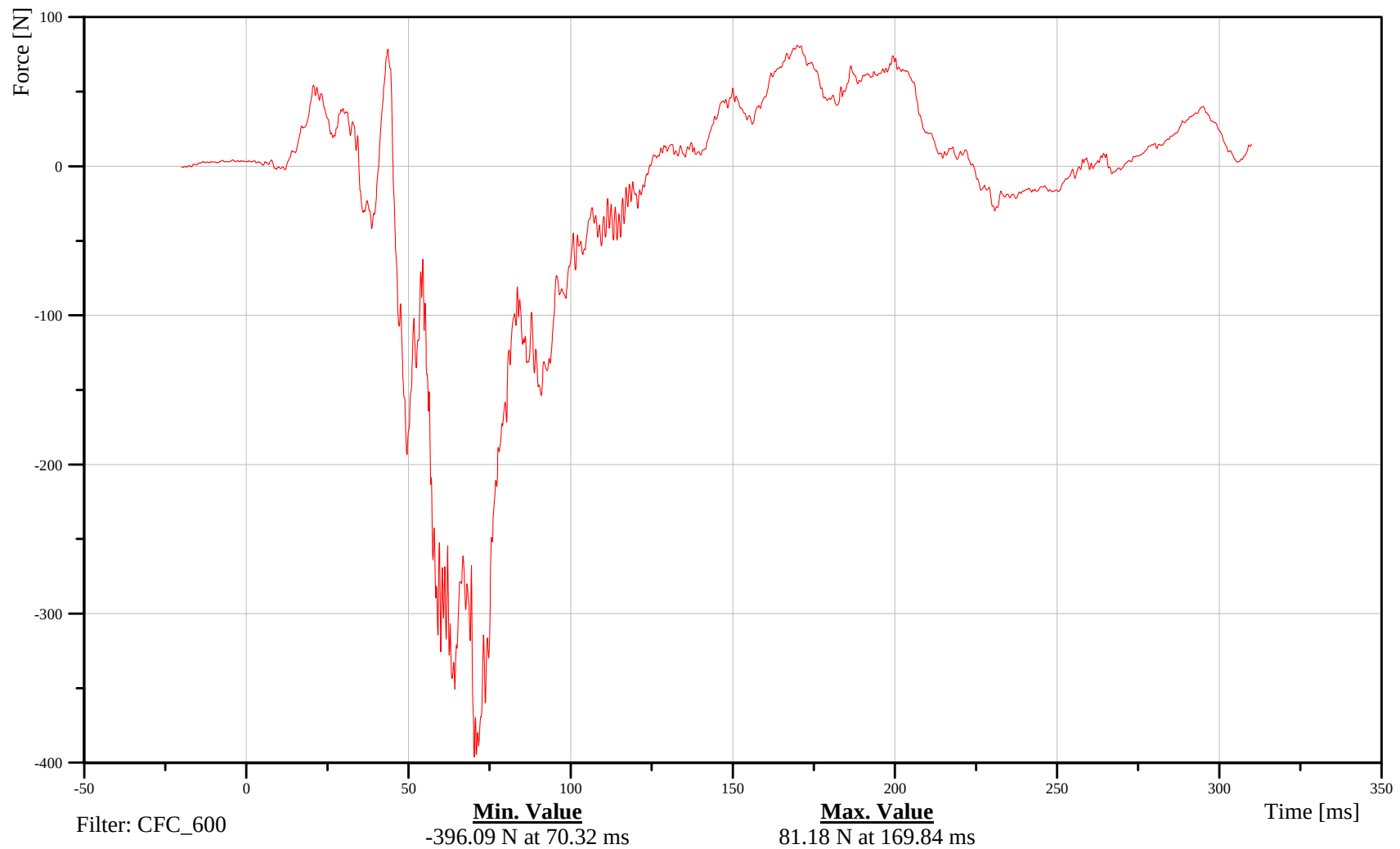
Bullet Driver Right Upper Tibia X-Axis Force

Customer: VRTC

11TIBIRULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

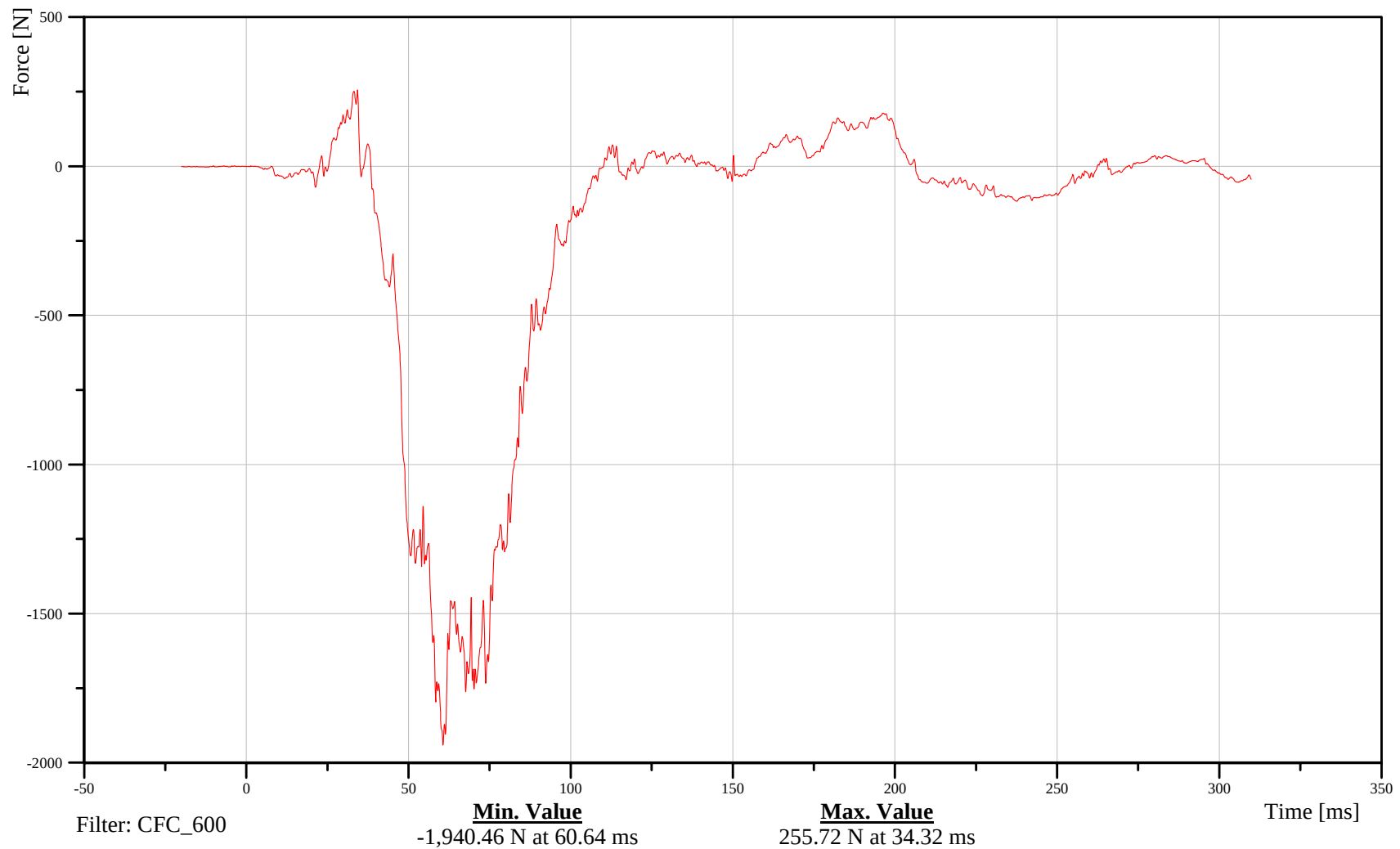
Bullet Driver Right Upper Tibia Z-Axis Force

Customer: VRTC

11TIBIRULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

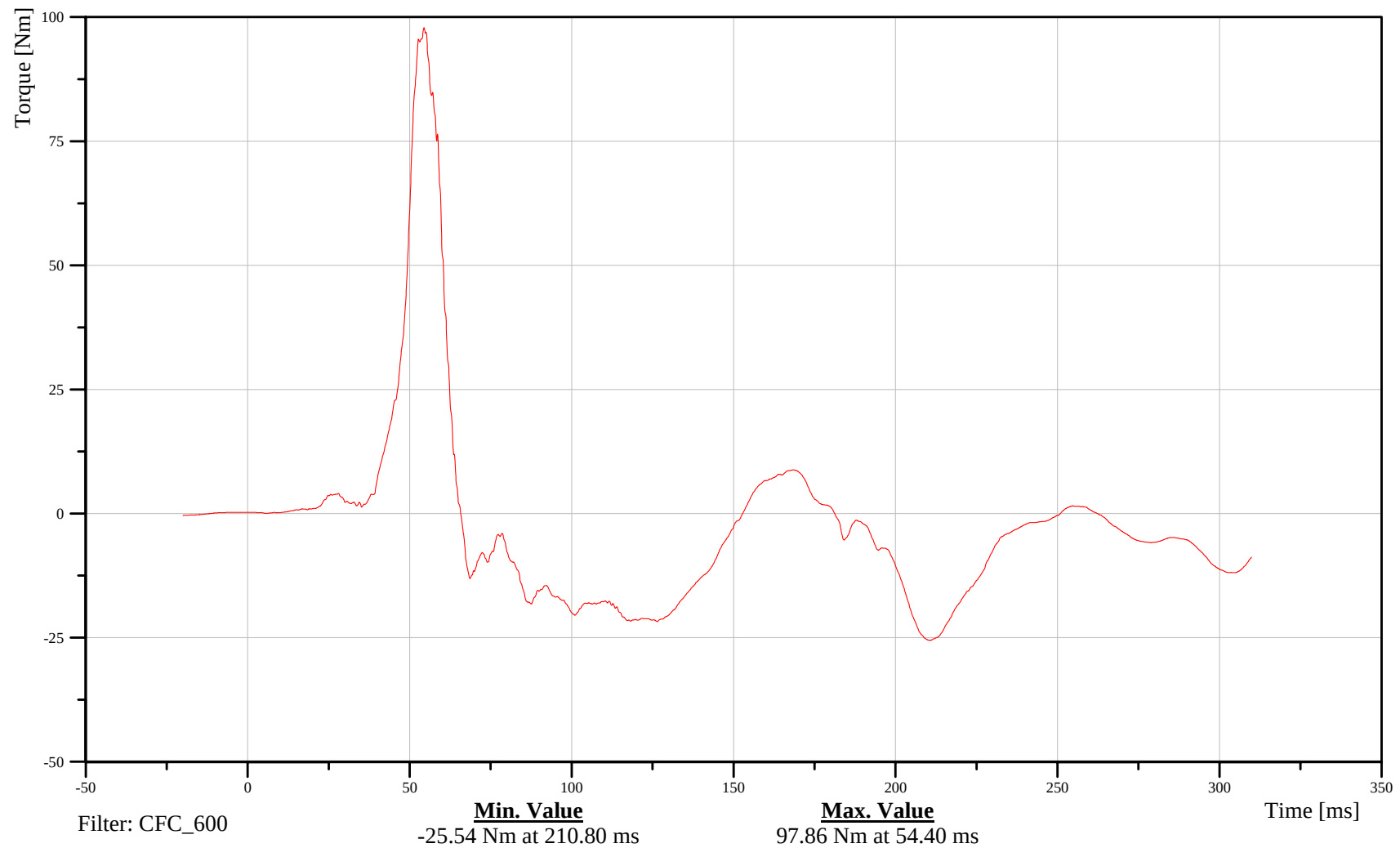
Bullet Driver Right Upper Tibia Moment About X Axis

Customer: VRTC

11TIBIRULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

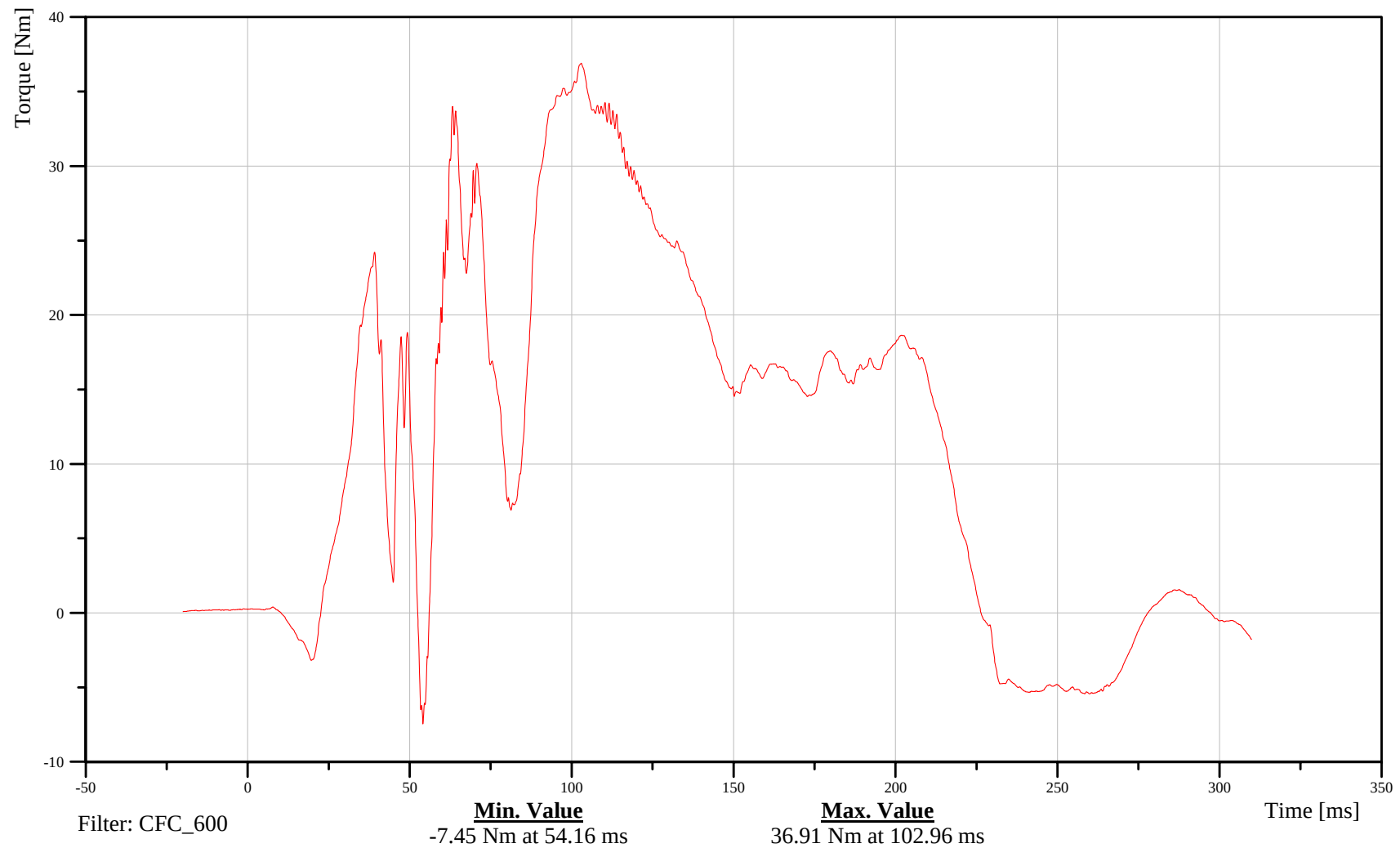
Bullet Driver Right Upper Tibia Moment About Y Axis

Customer: VRTC

11TIBIRULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

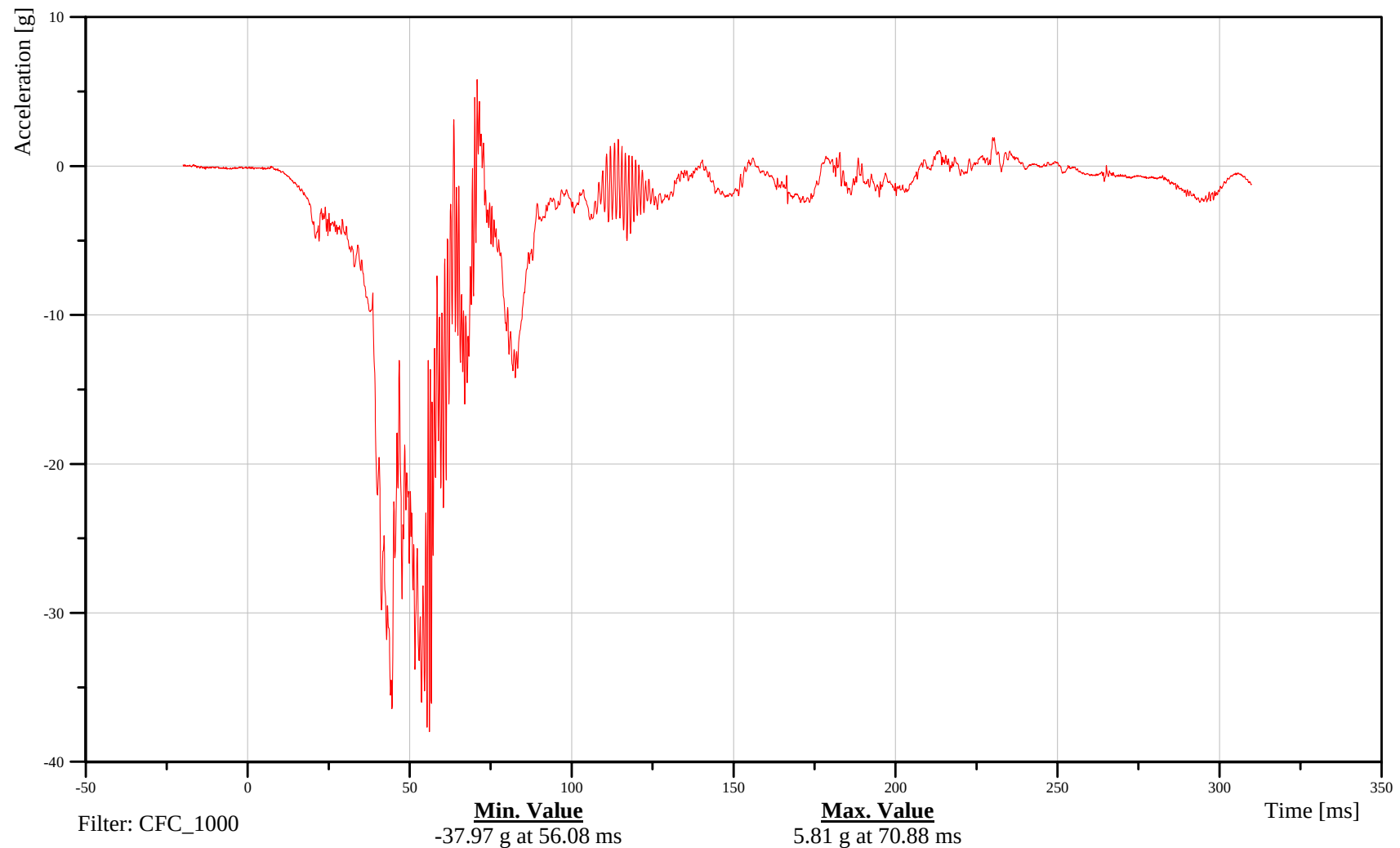
Bullet Driver Right Tibia X-Axis Acceleration

Customer: VRTC

11TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

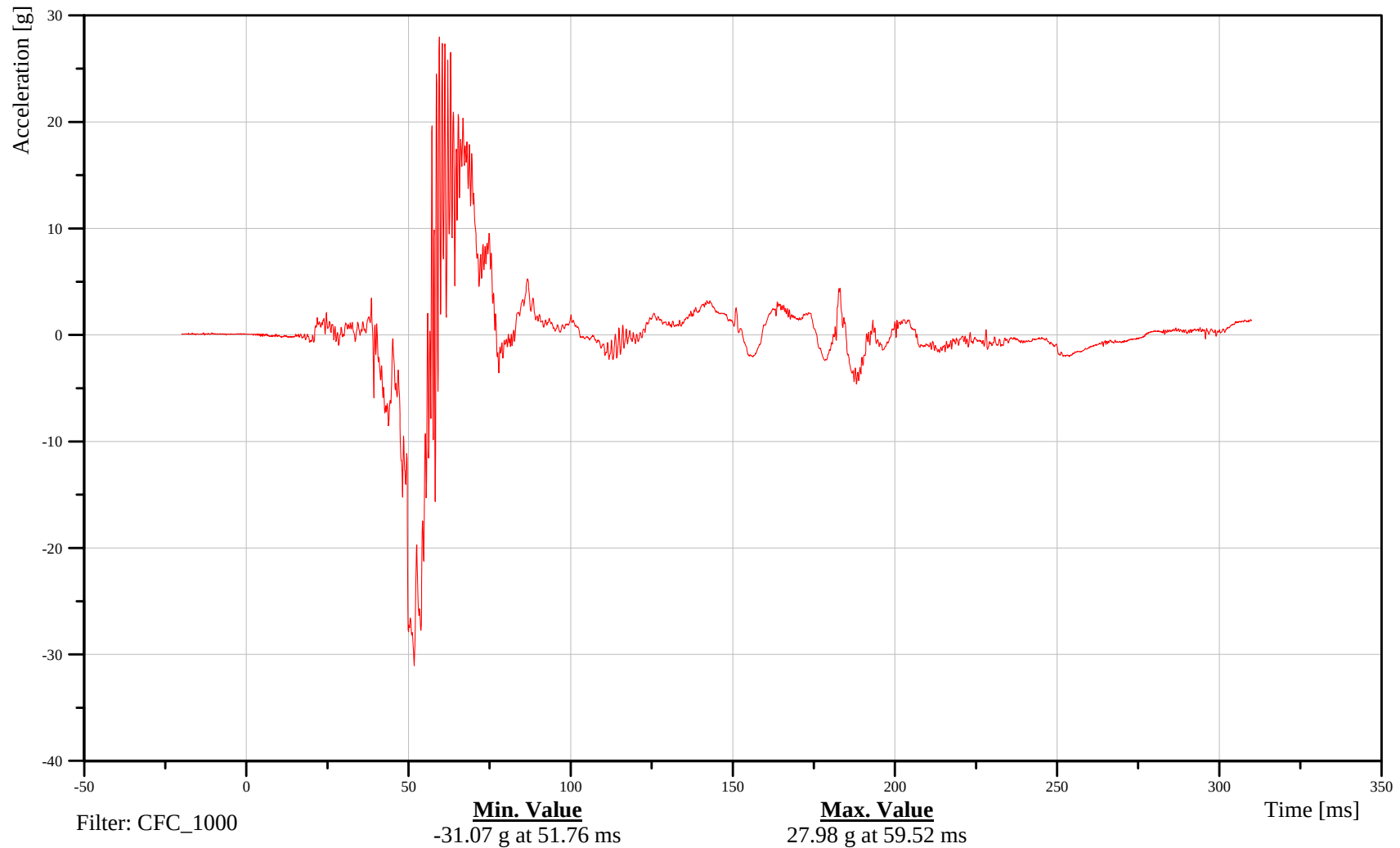
Bullet Driver Right Tibia Y-Axis Acceleration

Customer: VRTC

11TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

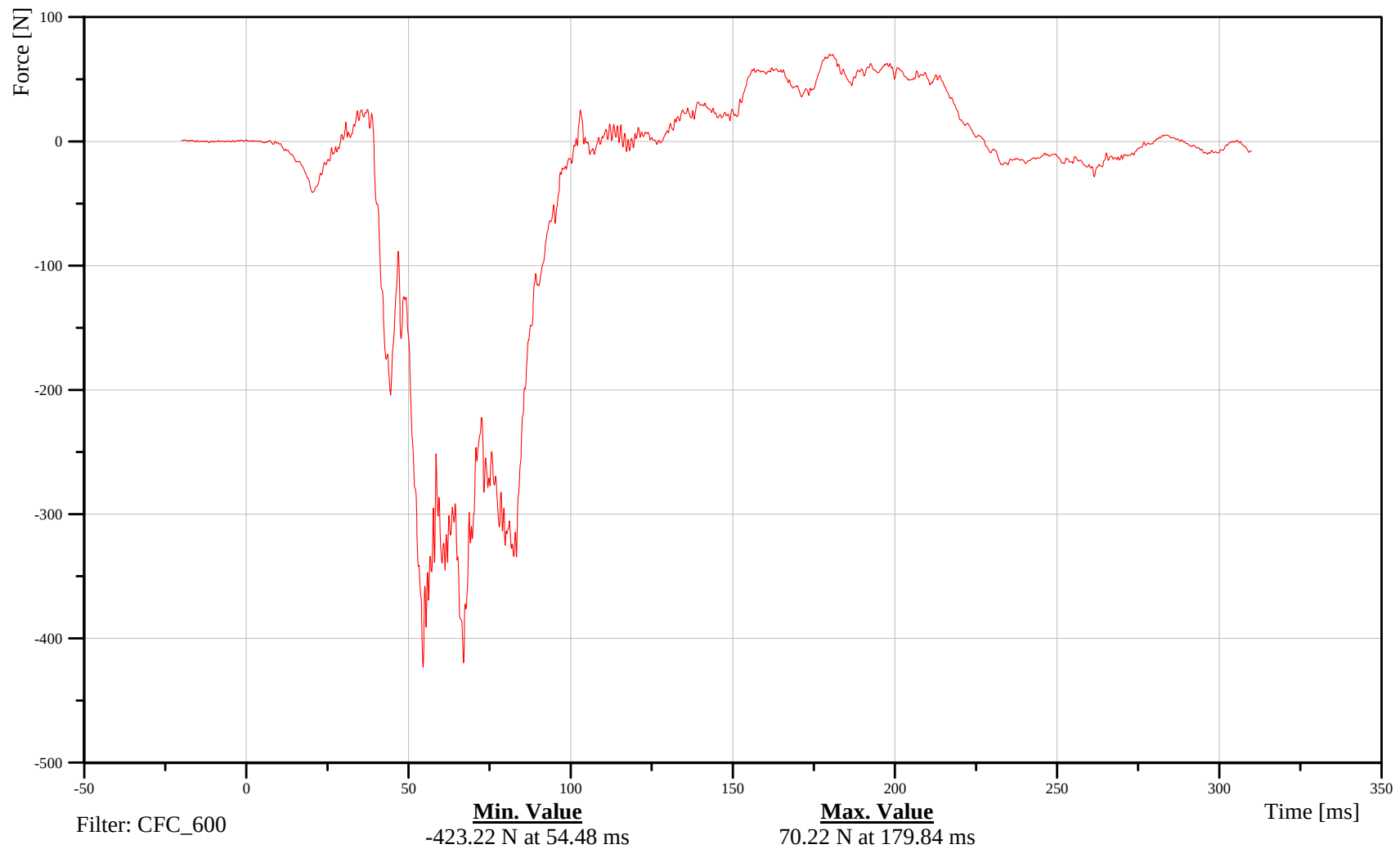
Bullet Driver Right Lower Tibia X-Axis Force

Customer: VRTC

11TIBIRLLXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

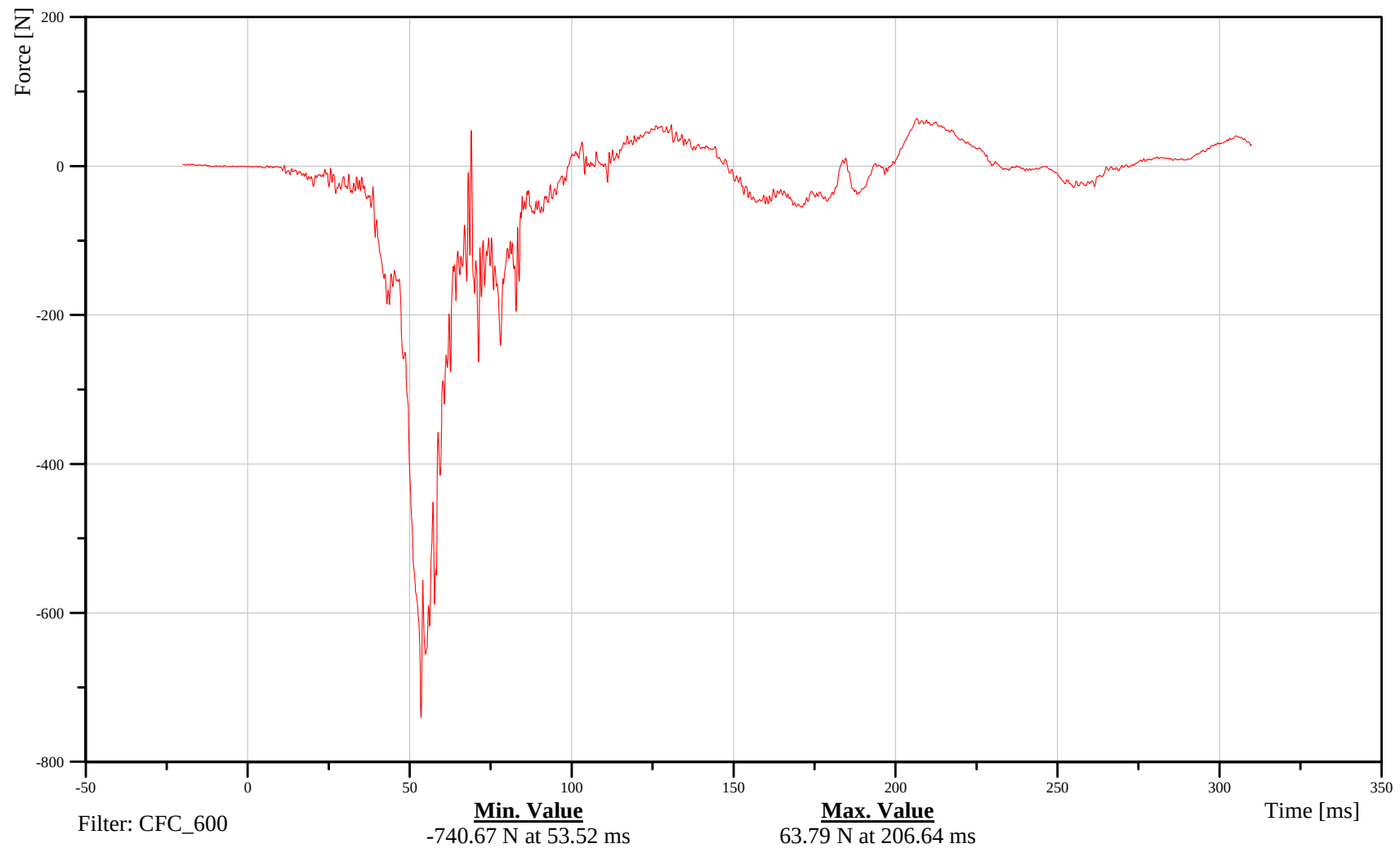
Bullet Driver Right Lower Tibia Y-Axis Force

Customer: VRTC

11TIBIRLLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

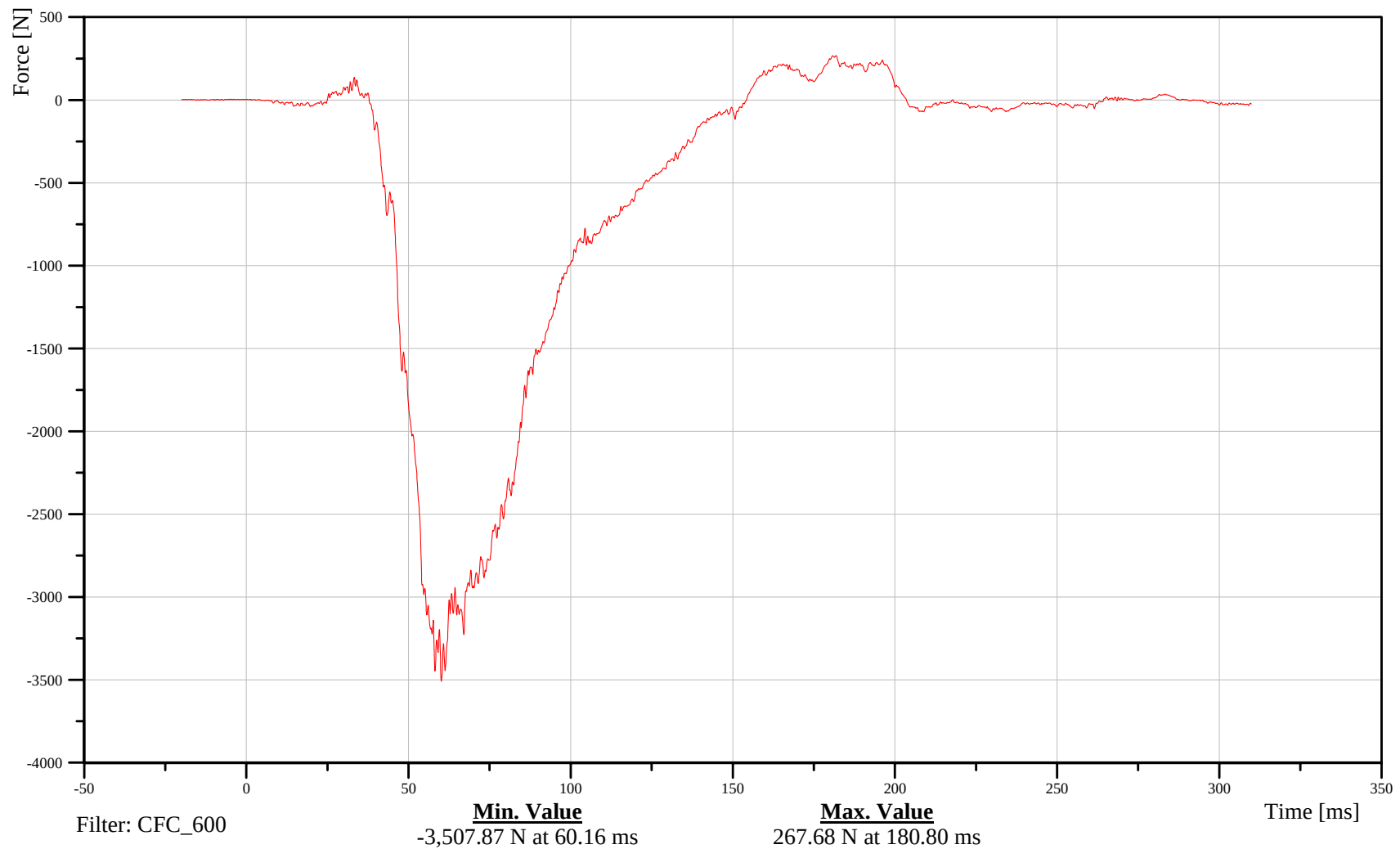
Bullet Driver Right Lower Tibia Z-Axis Force

Customer: VRTC

11TIBIRLLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

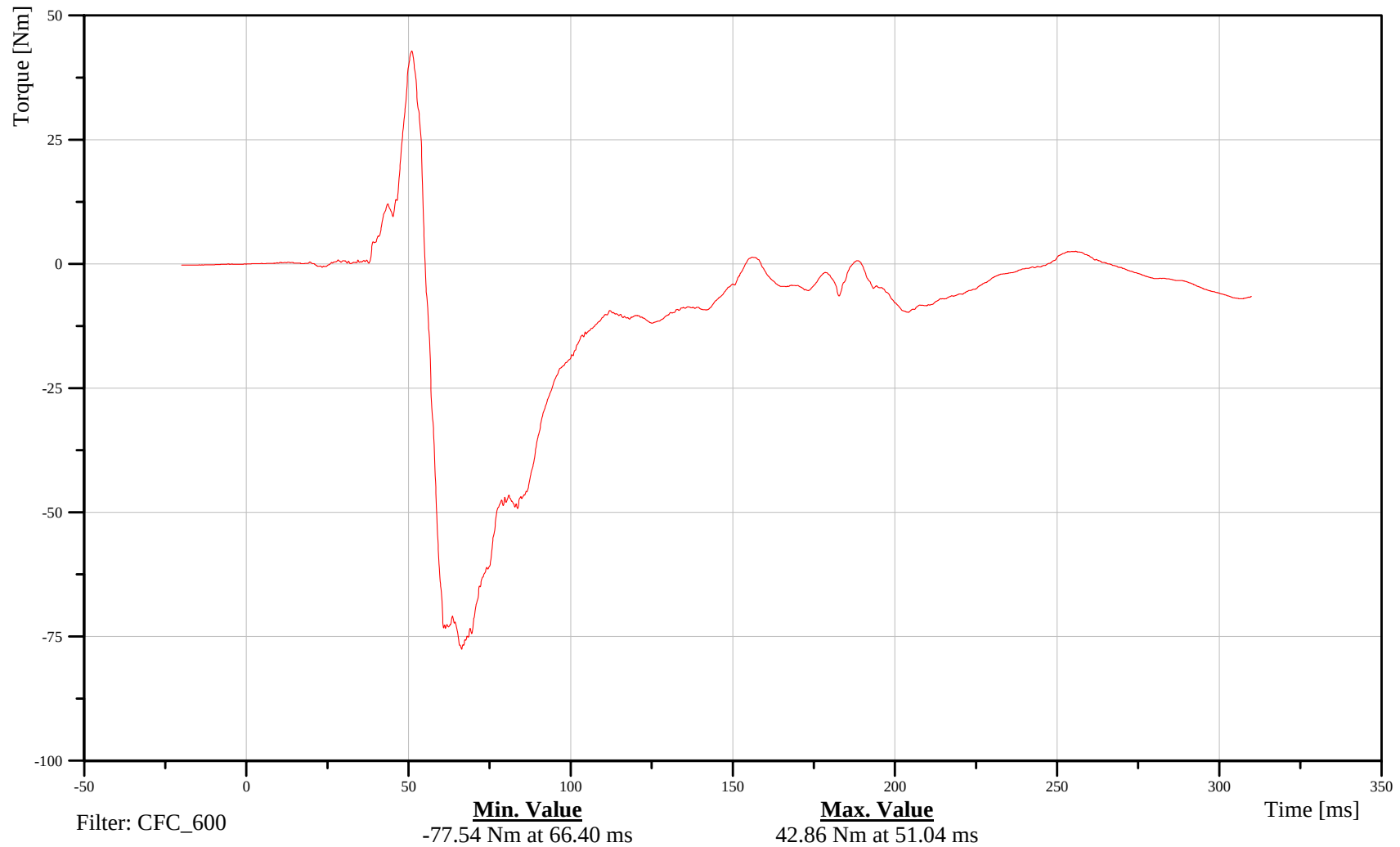
Bullet Driver Right Lower Tibia Moment About X Axis

Customer: VRTC

11TIBIRLLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

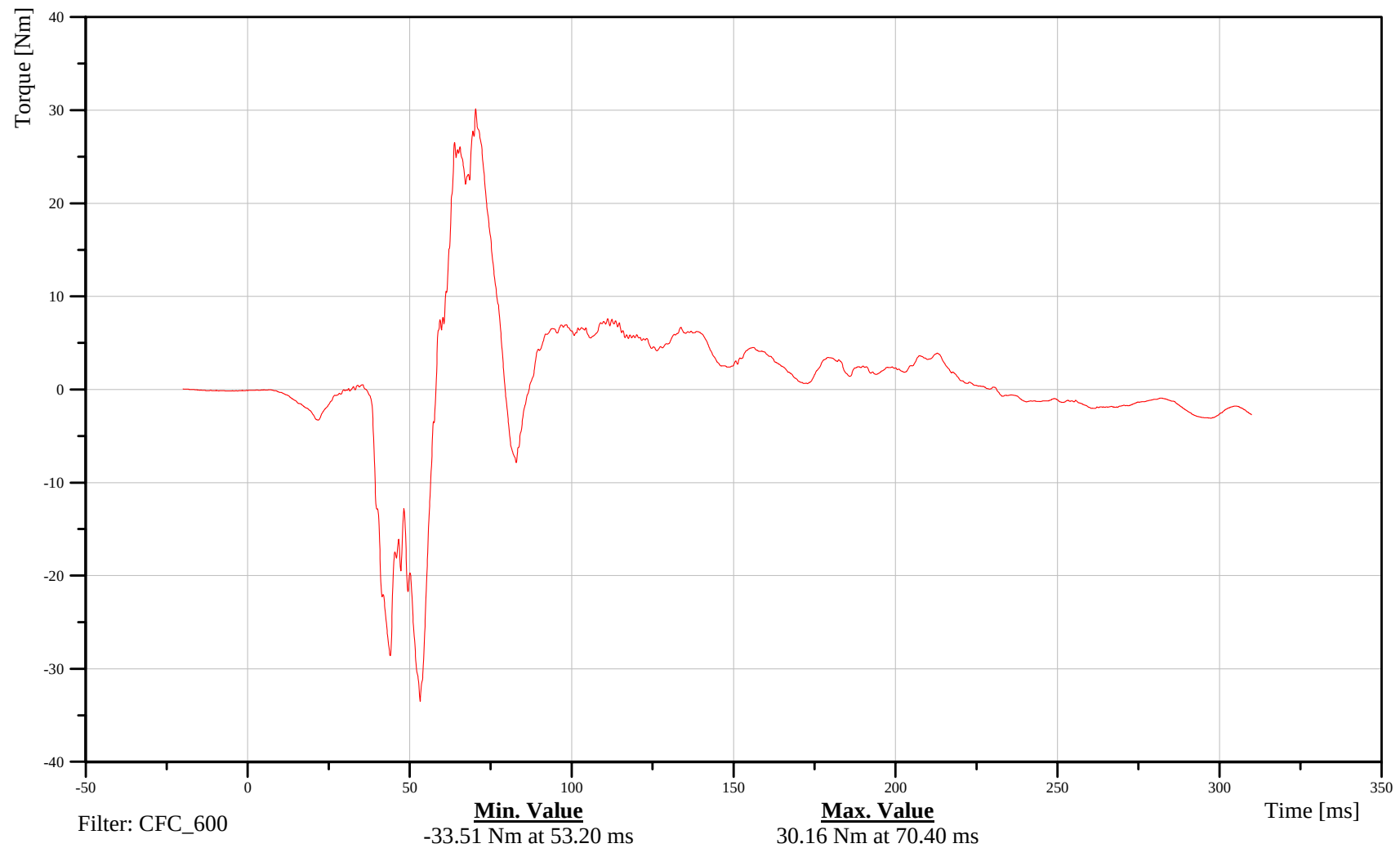
Bullet Driver Right Lower Tibia Moment About Y Axis

Customer: VRTC

11TIBIRLLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

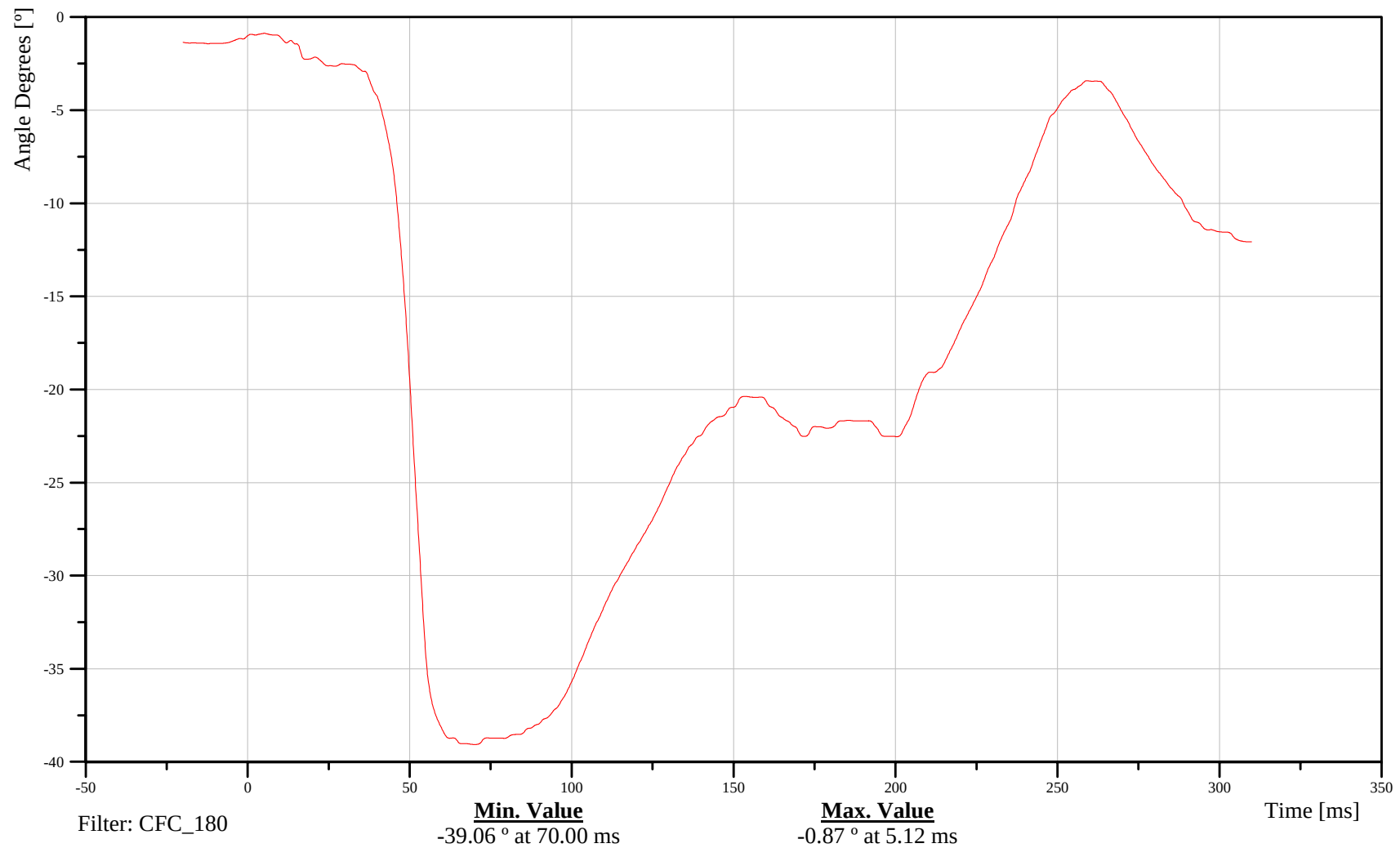
Bullet Driver Right Foot X-Axis Rotation

Customer: VRTC

11FOOTRILXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Driver Right Foot Y-Axis Rotation

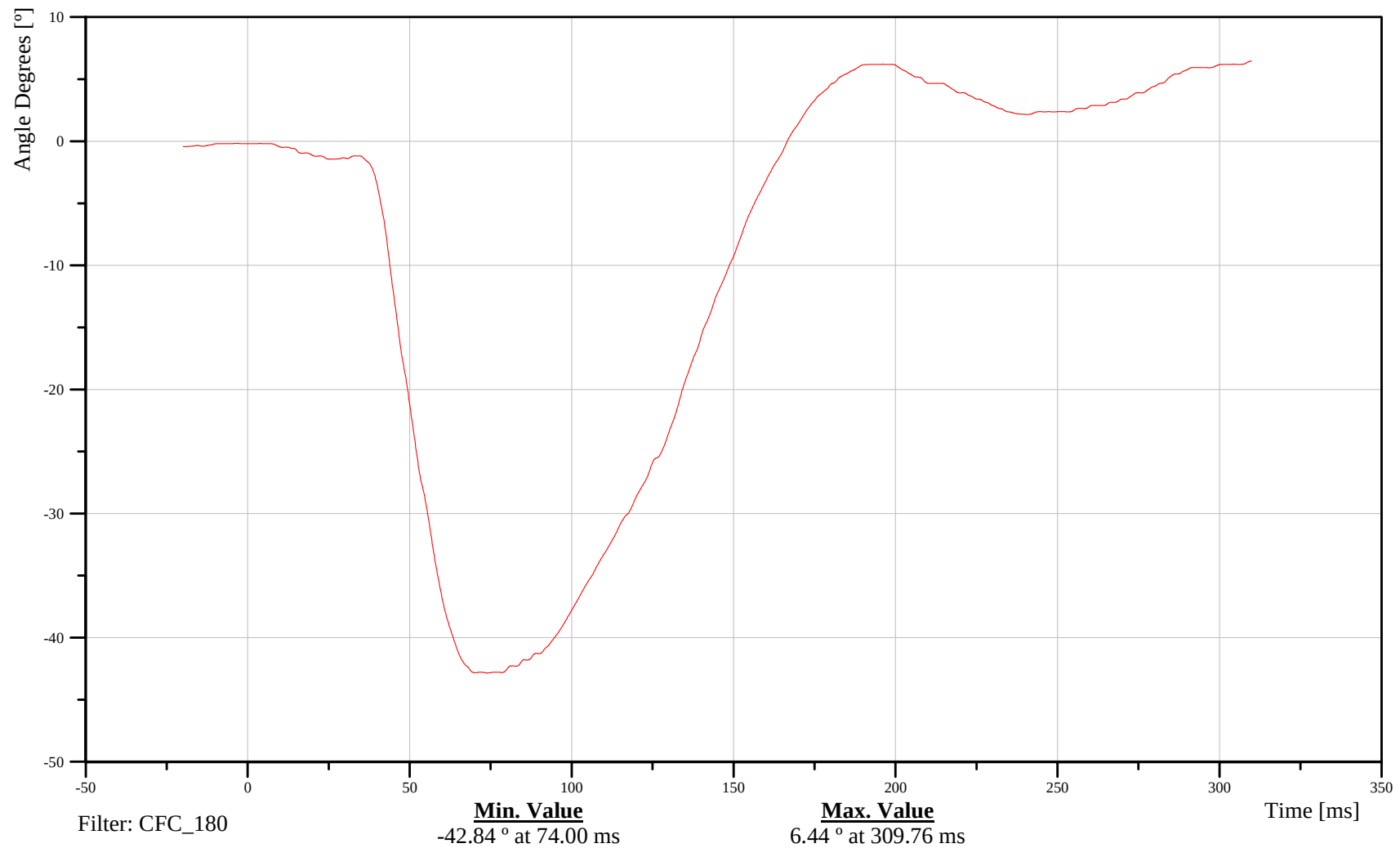
Time: 11:08

Customer: VRTC

11FOOTRILXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Driver Right Foot Z-Axis Rotation

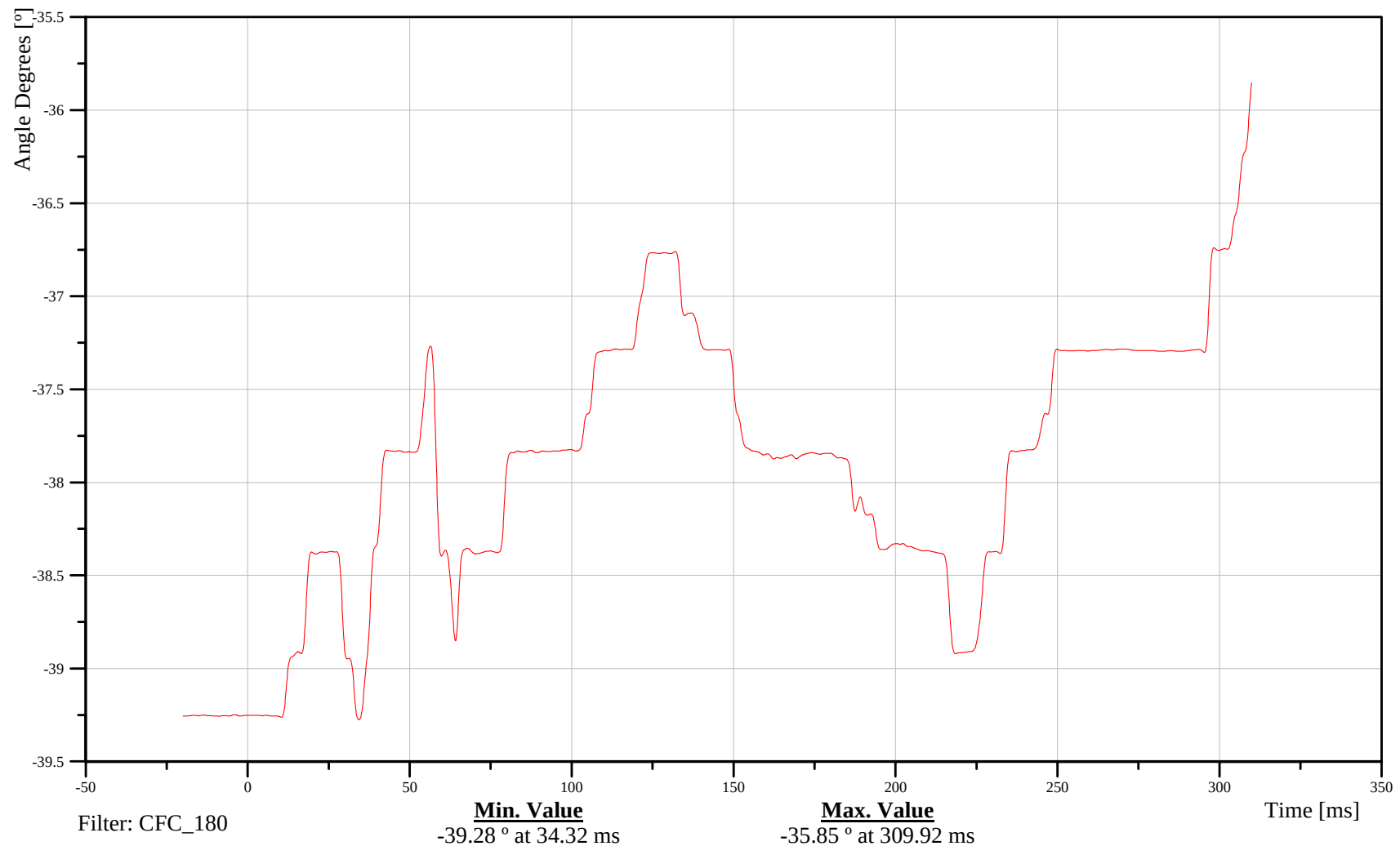
Time: 11:08

Customer: VRTC

11FOOTRILXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

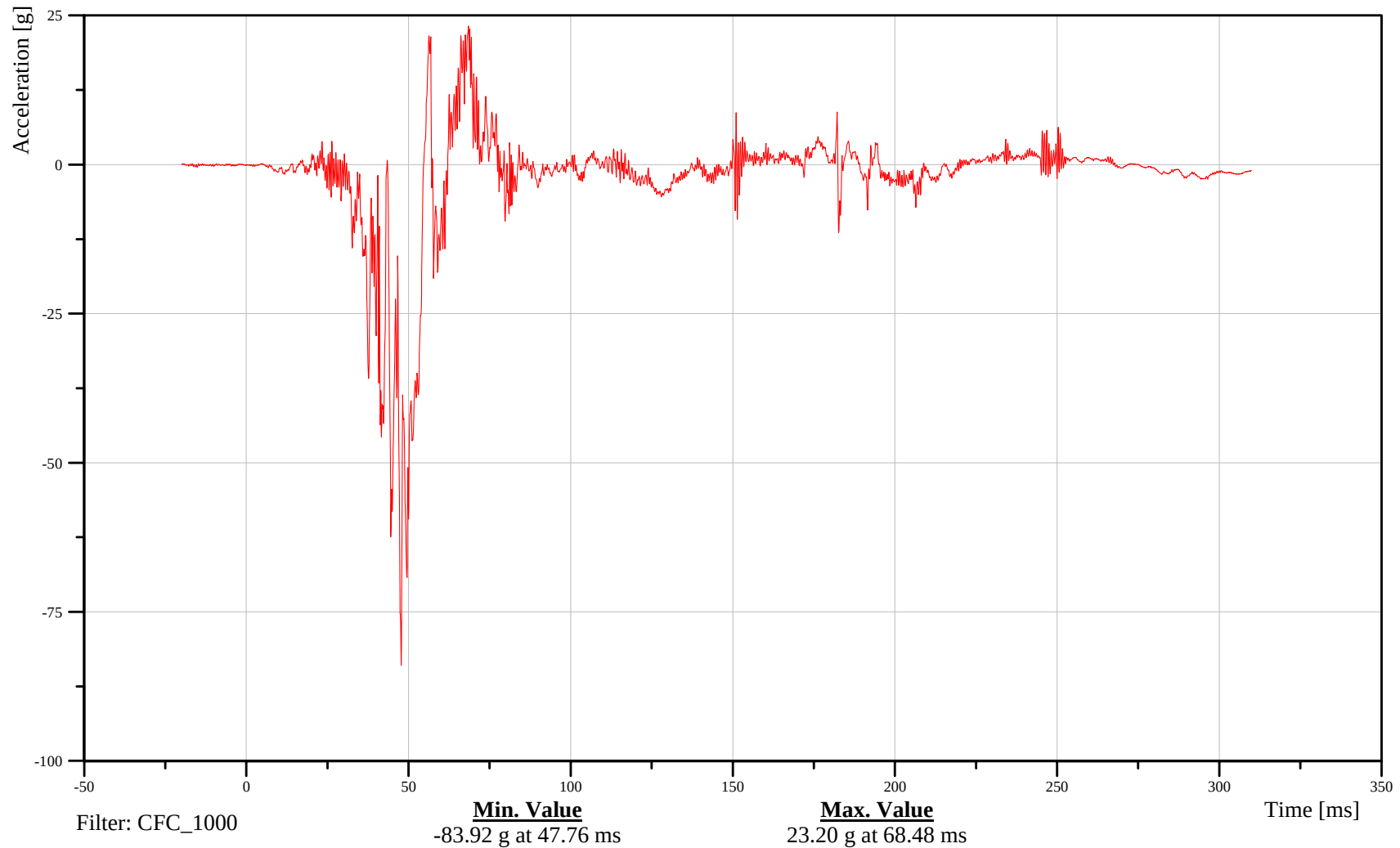
Bullet Driver Right Foot X-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

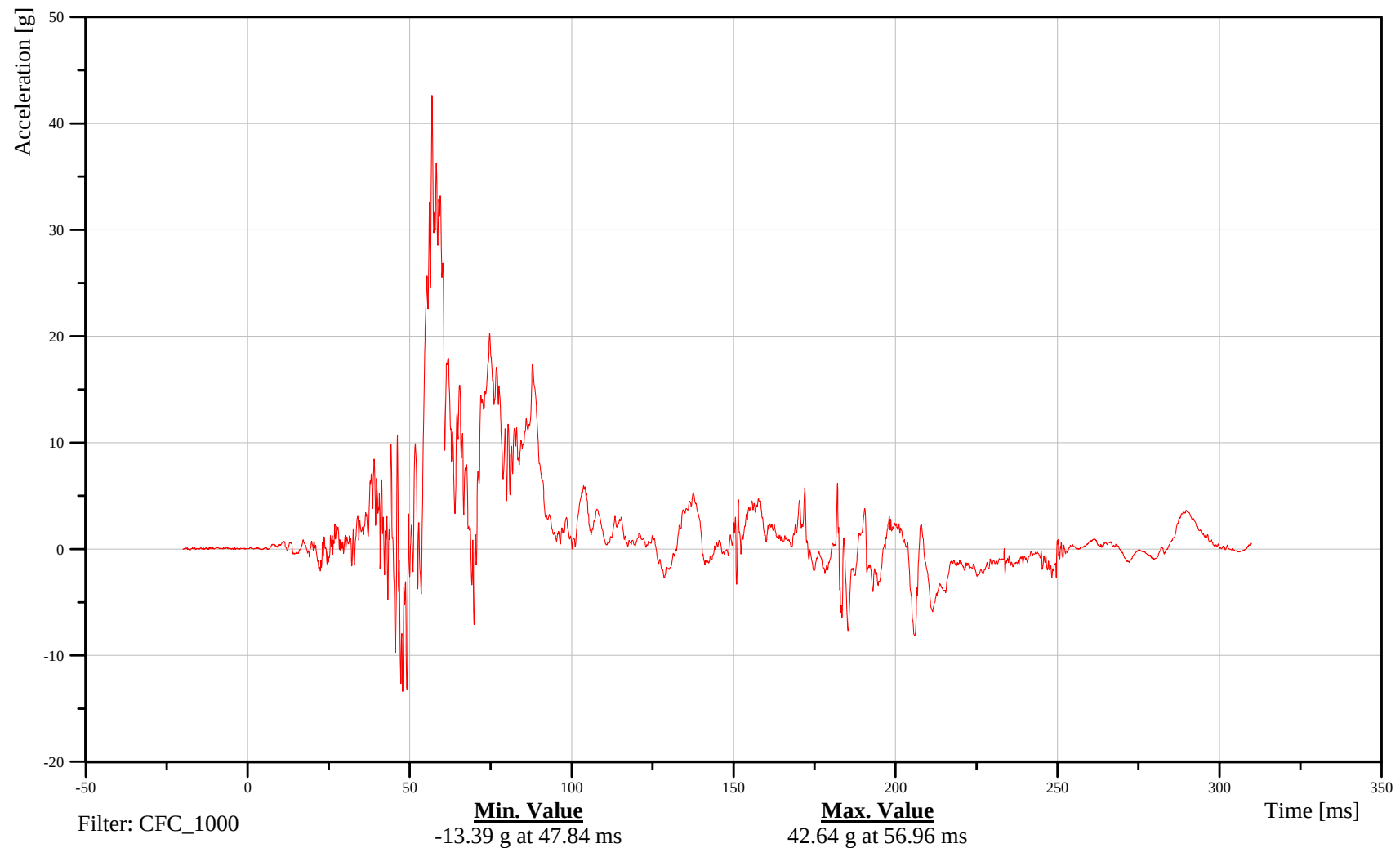
Bullet Driver Right Foot Y-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

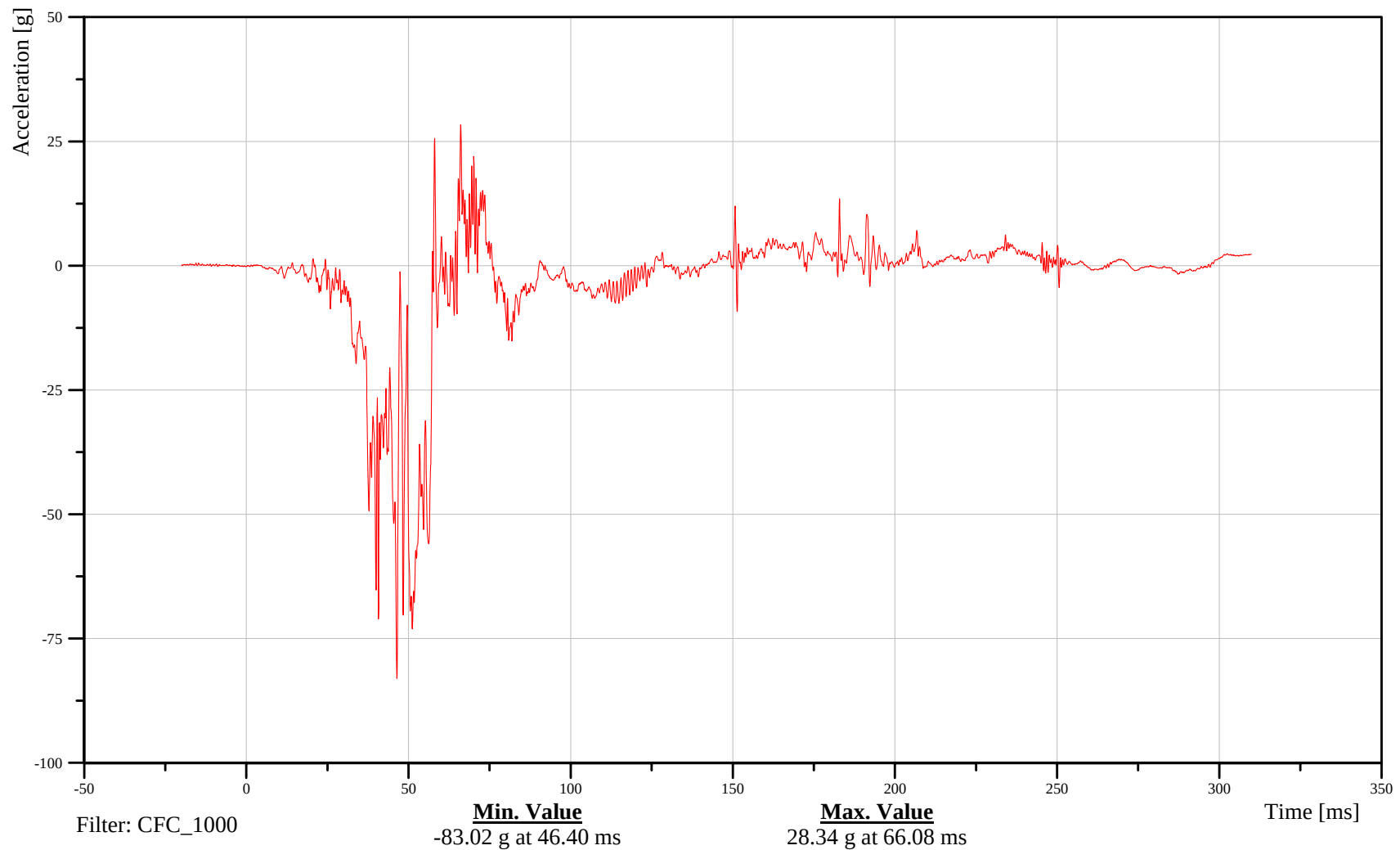
Bullet Driver Right Foot Z-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

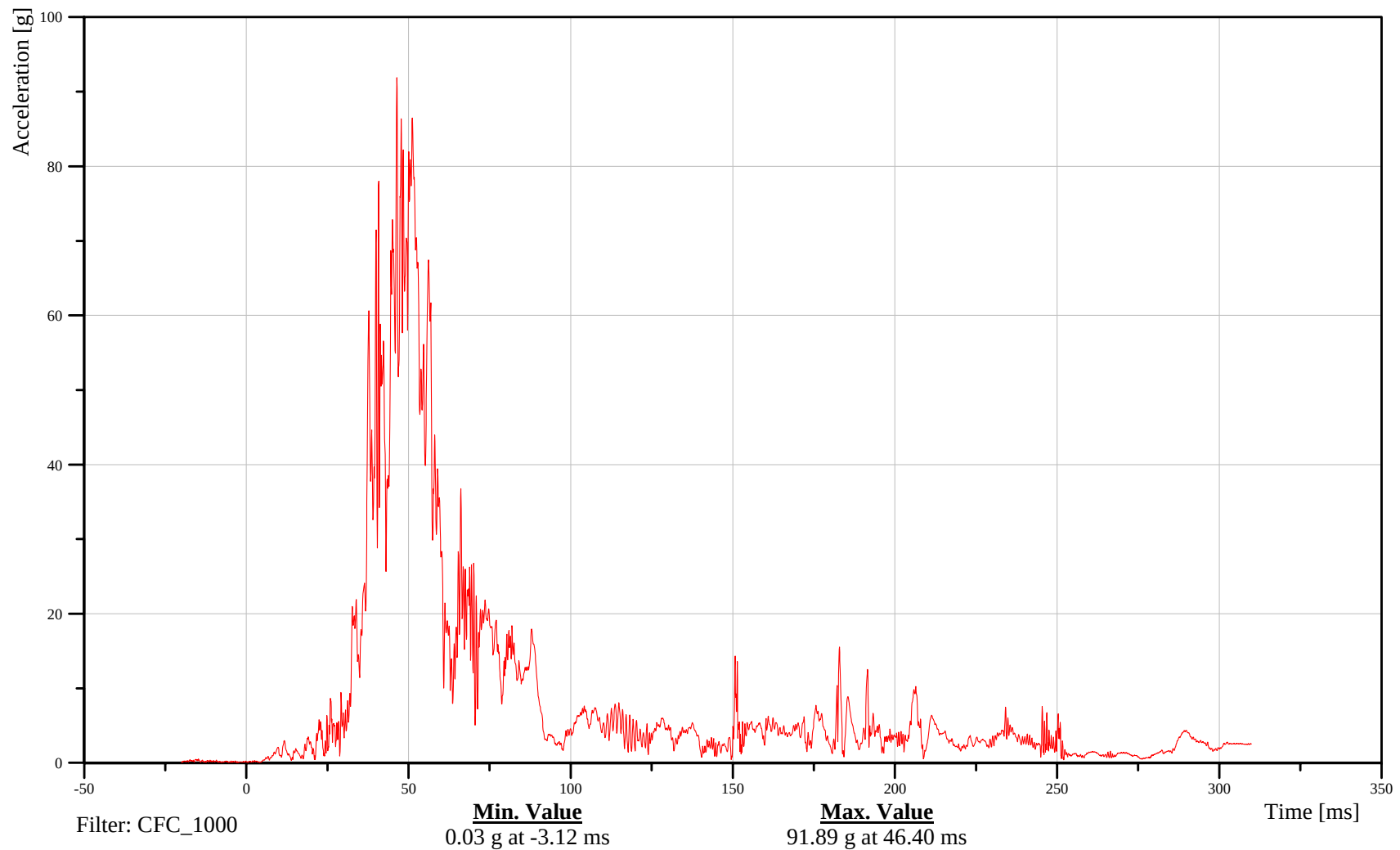
Bullet Driver Right Foot Resultant Acceleration

Customer: VRTC

11FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

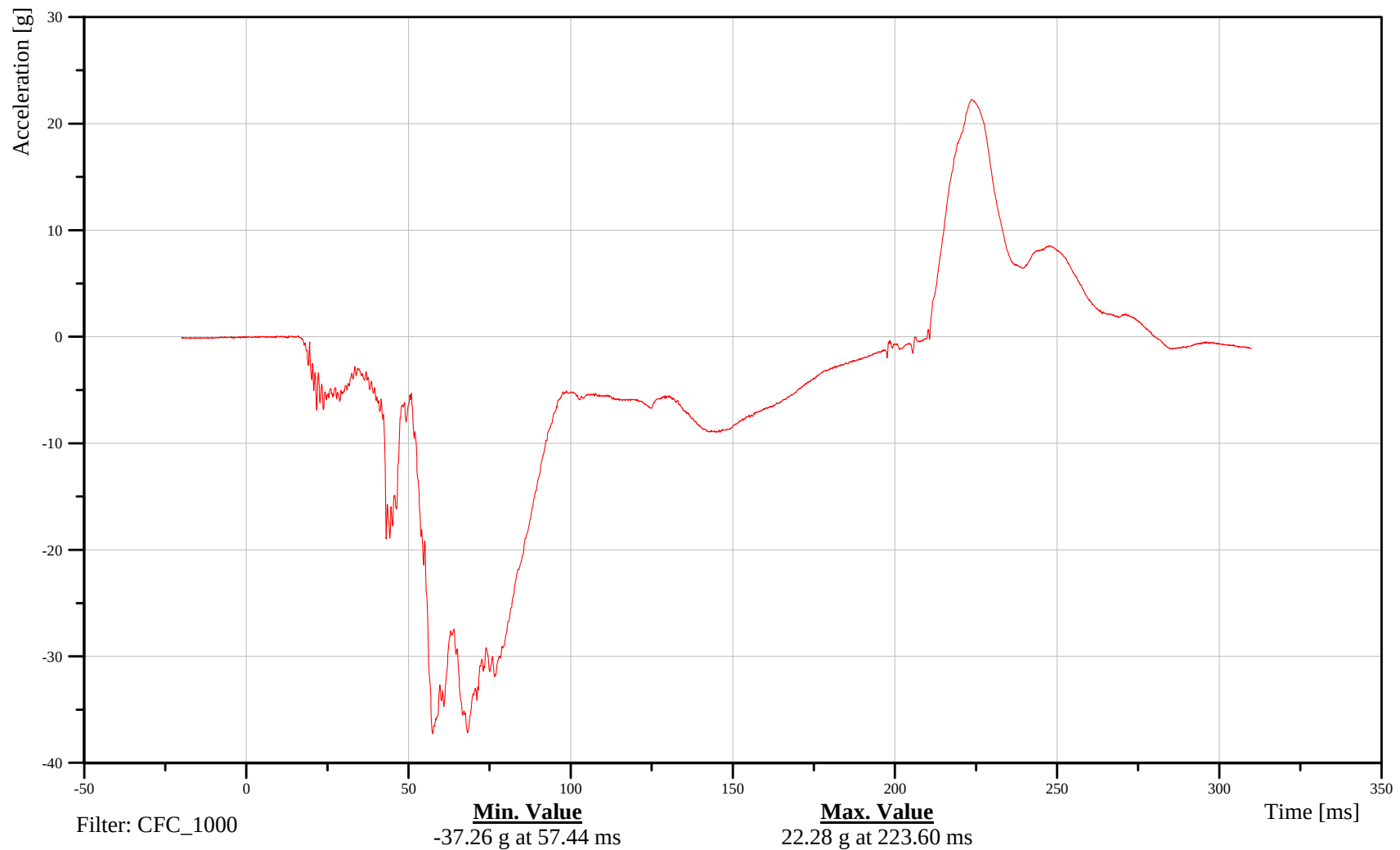
Bullet Passenger Head CG X-Axis Acceleration

Customer: VRTC

13HEADCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

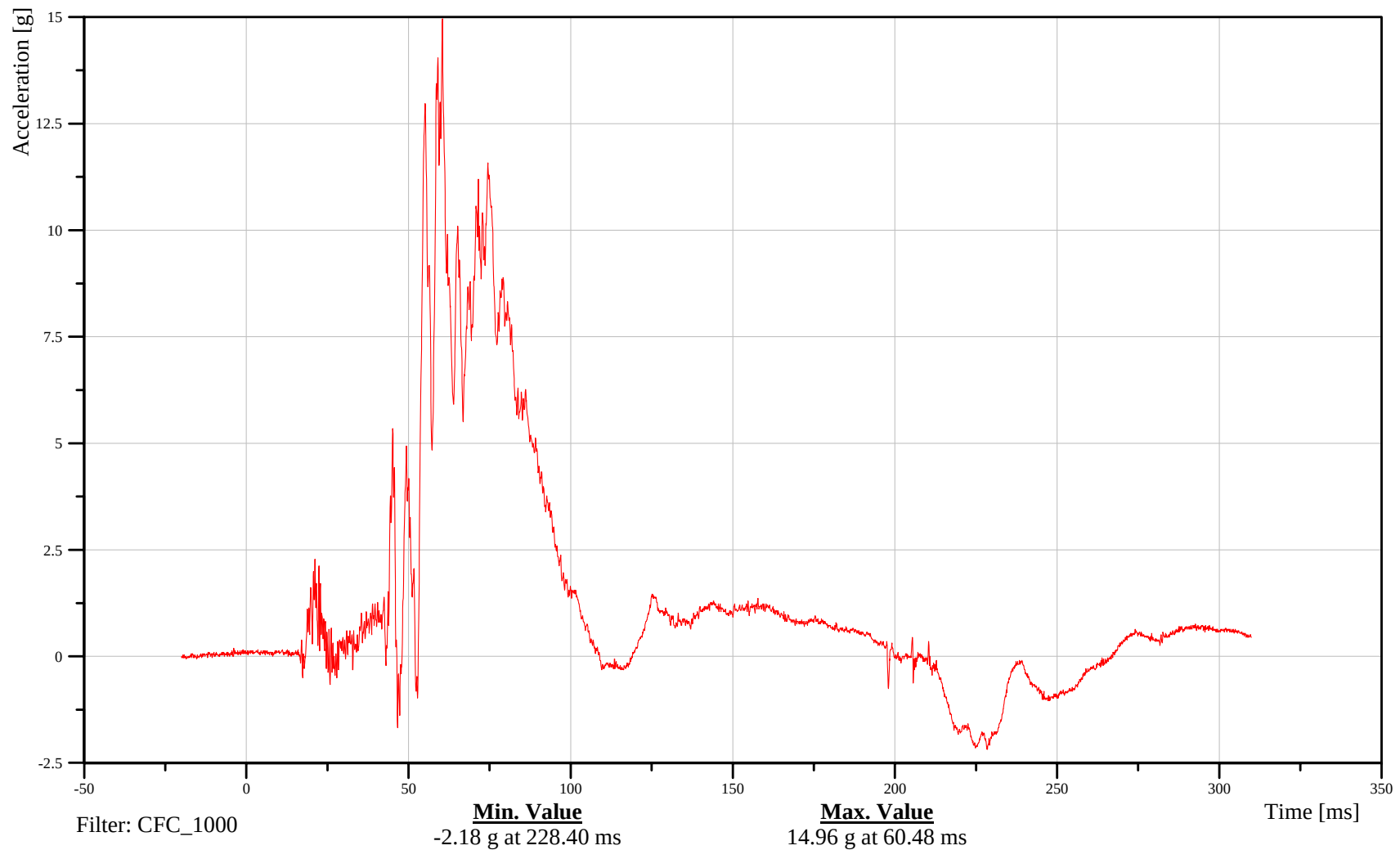
Bullet Passenger Head CG Y-Axis Acceleration

Customer: VRTC

13HEADCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

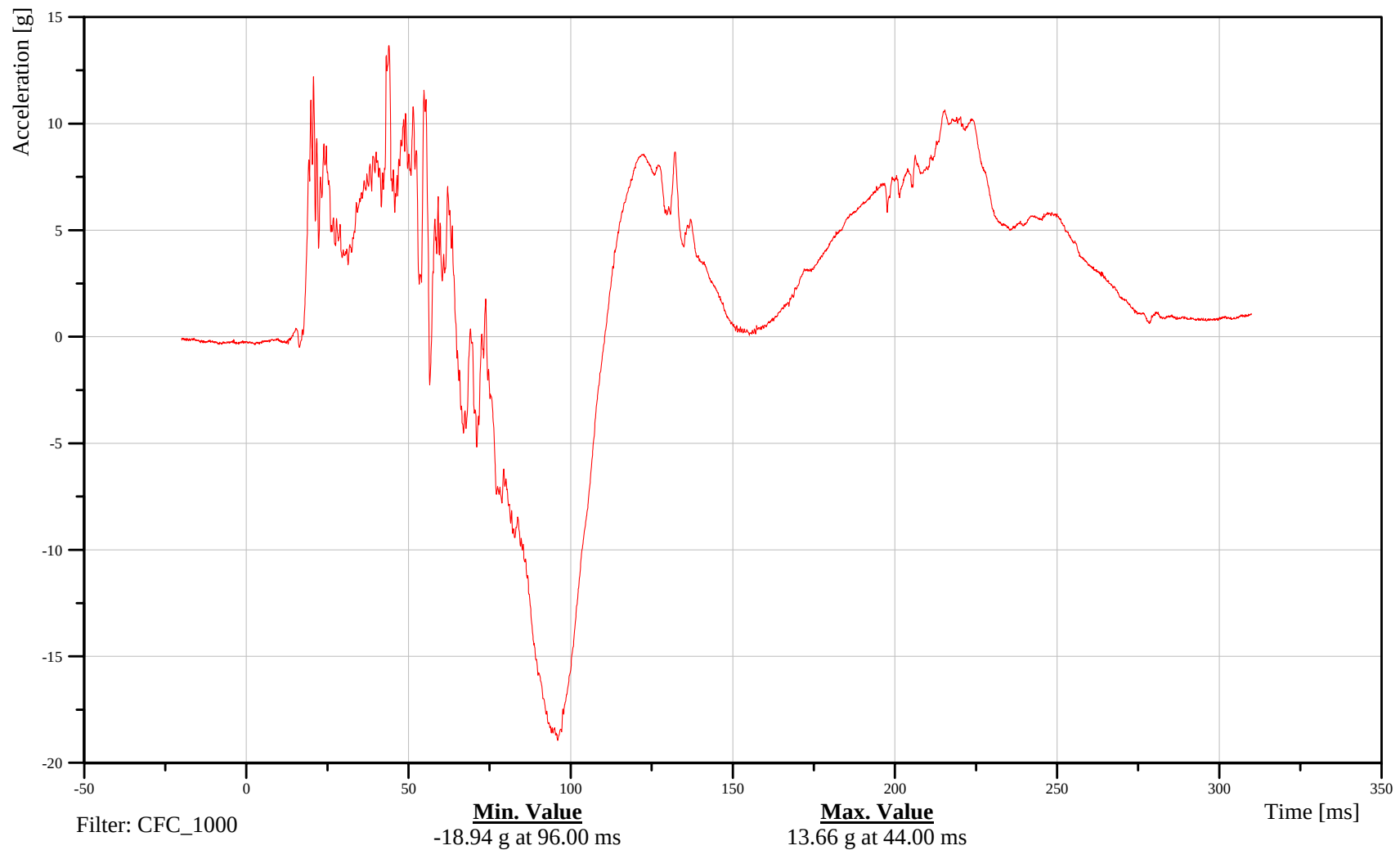
Bullet Passenger Head CG Z-Axis Acceleration

Customer: VRTC

13HEADCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

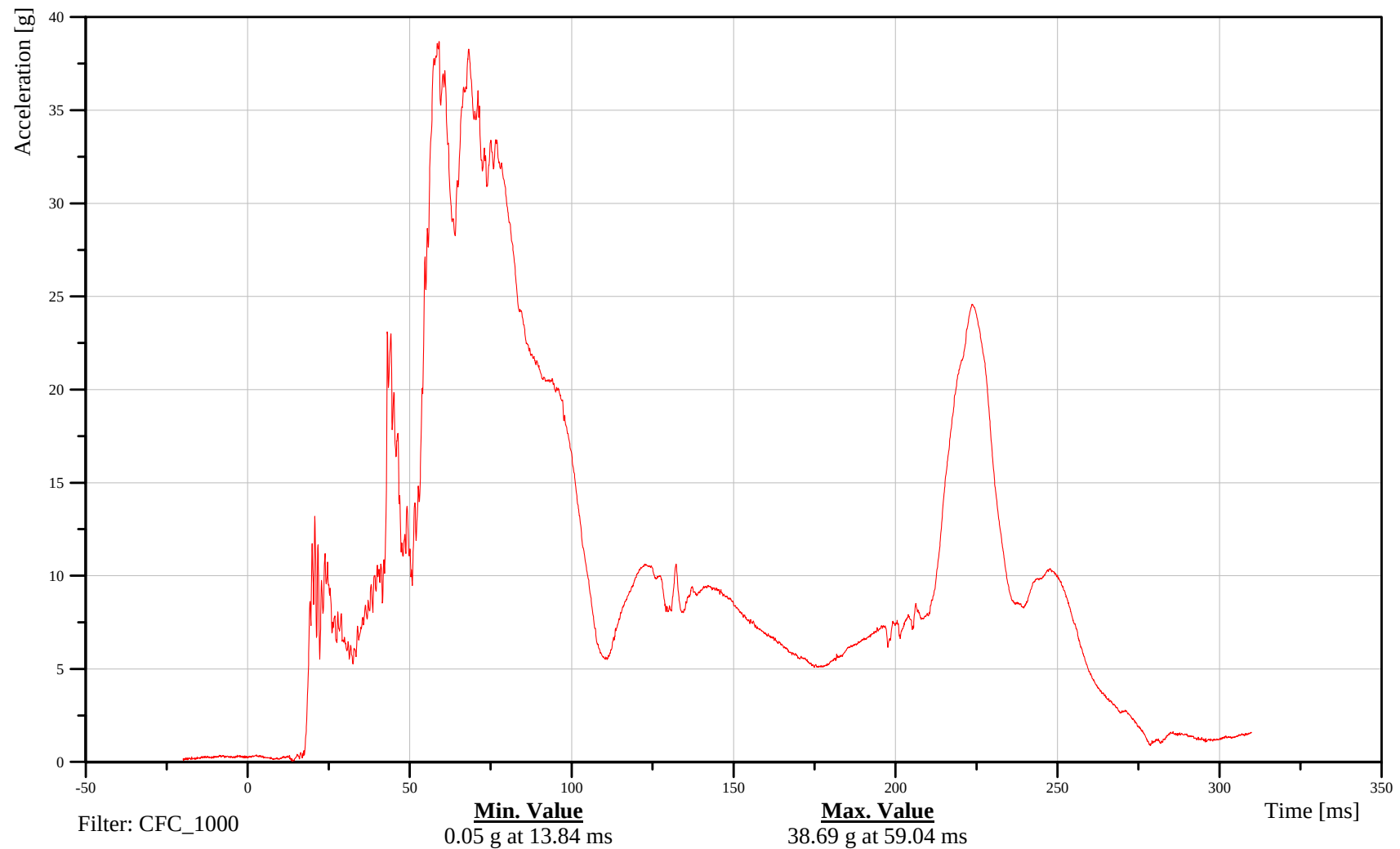
Bullet Passenger Head CG Resultant Acceleration

Customer: VRTC

13HEADCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Passenger Upper Neck X-Axis Force

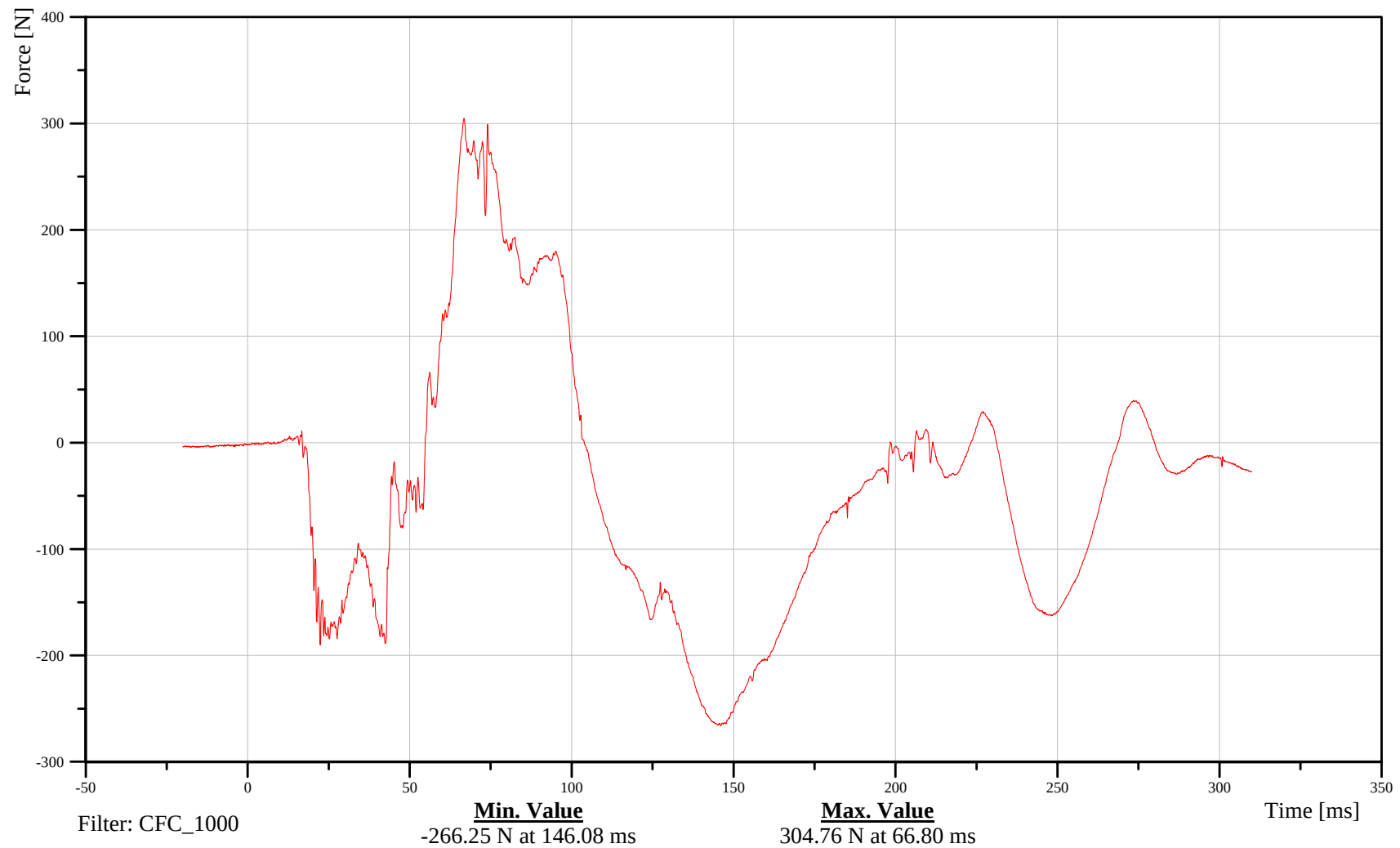
Time: 11:08

Customer: VRTC

13NECKUP00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Passenger Upper Neck Y-Axis Force

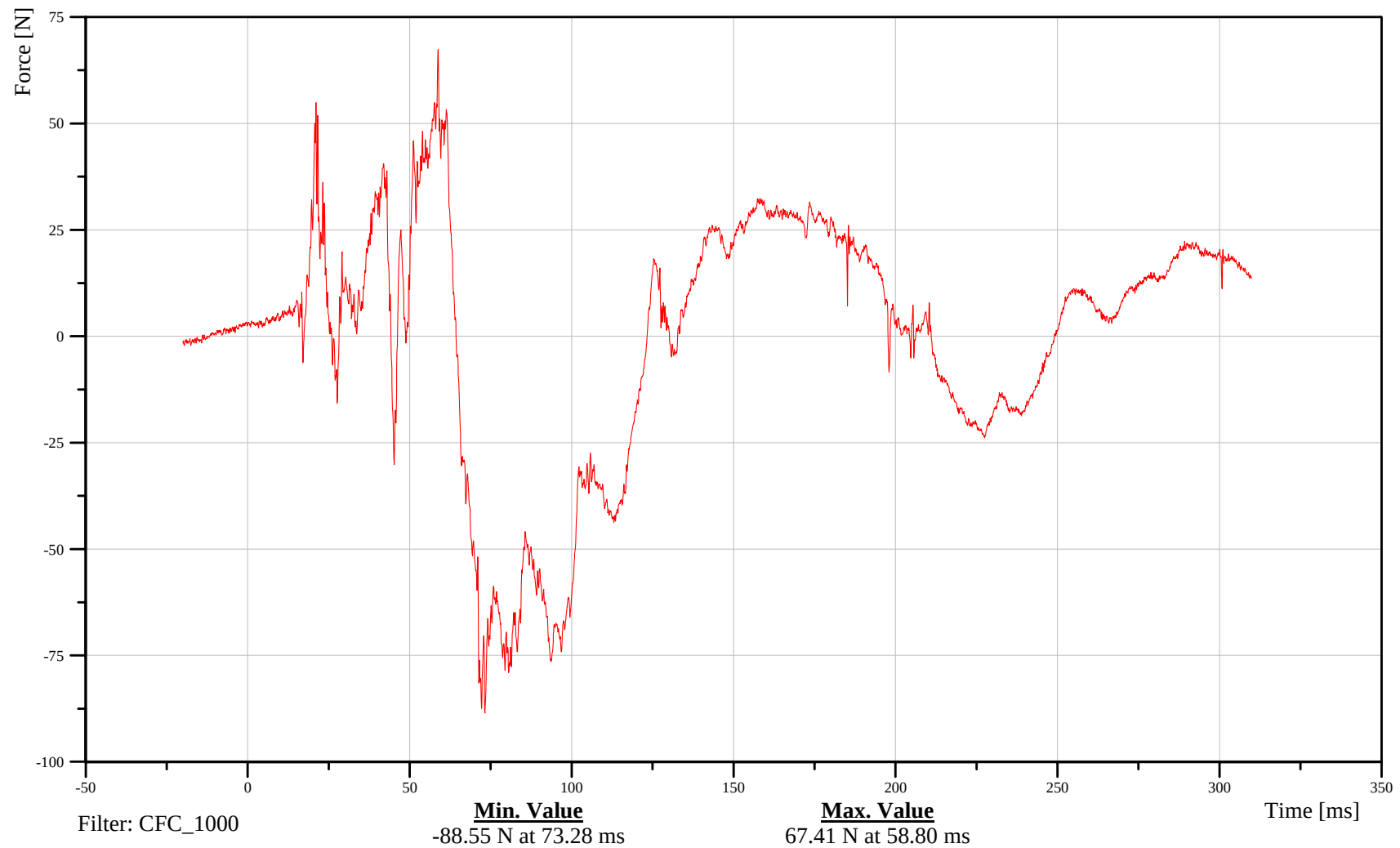
Time: 11:08

Customer: VRTC

13NECKUP00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

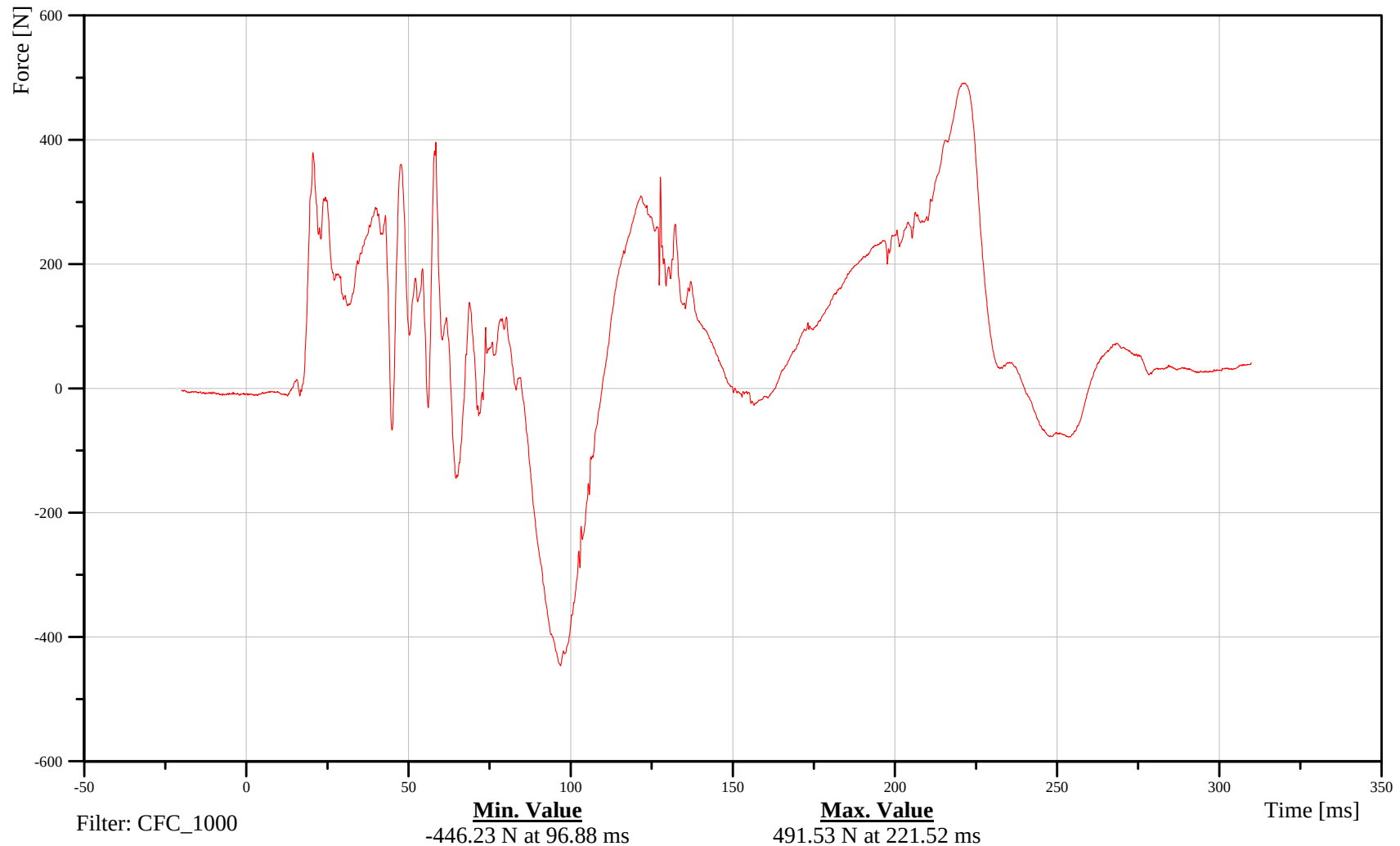
Bullet Passenger Upper Neck Z-Axis Force

Customer: VRTC

13NECKUP00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

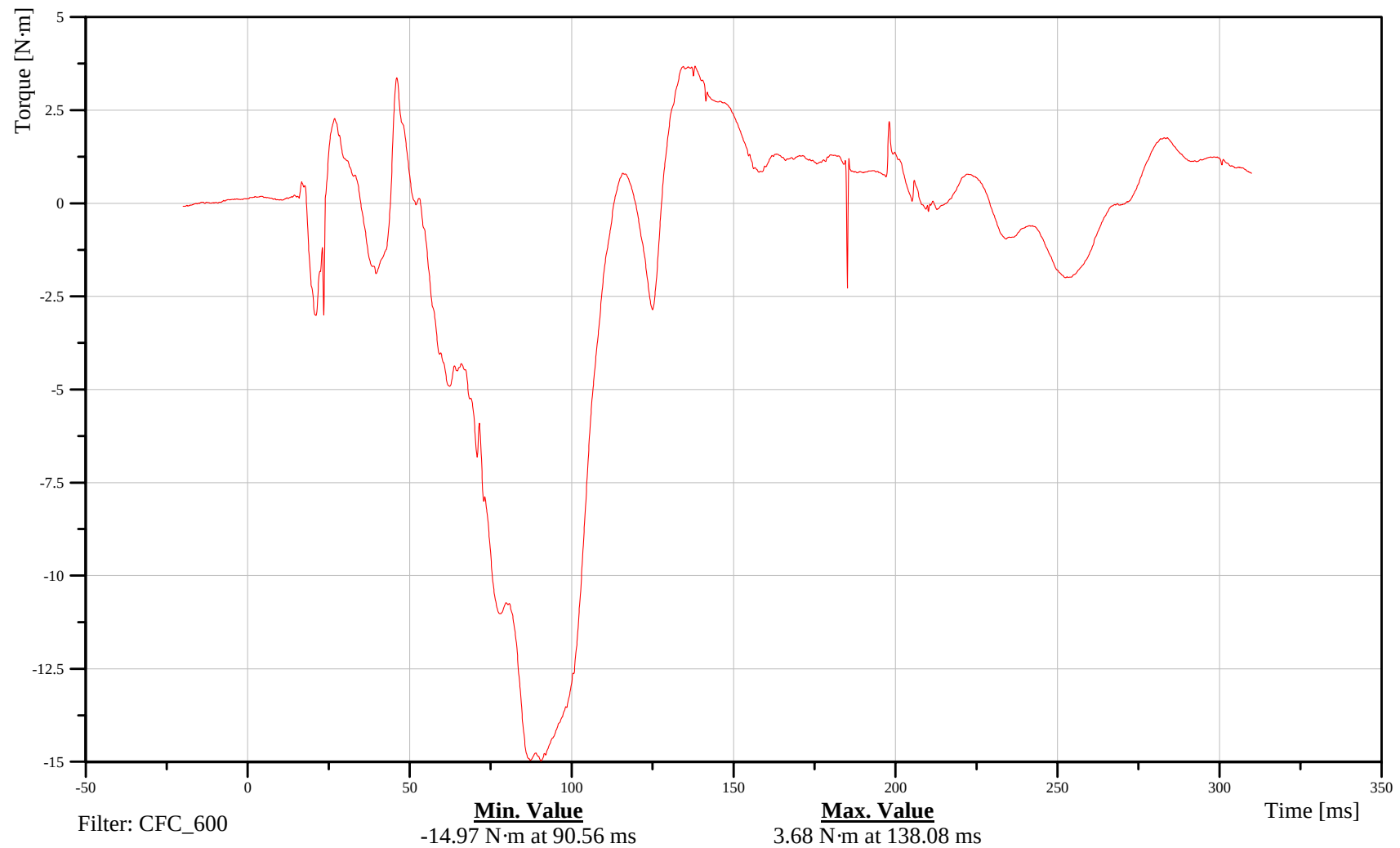
Bullet Passenger Upper Neck Moment About X Axis

Customer: VRTC

13NECKUP00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

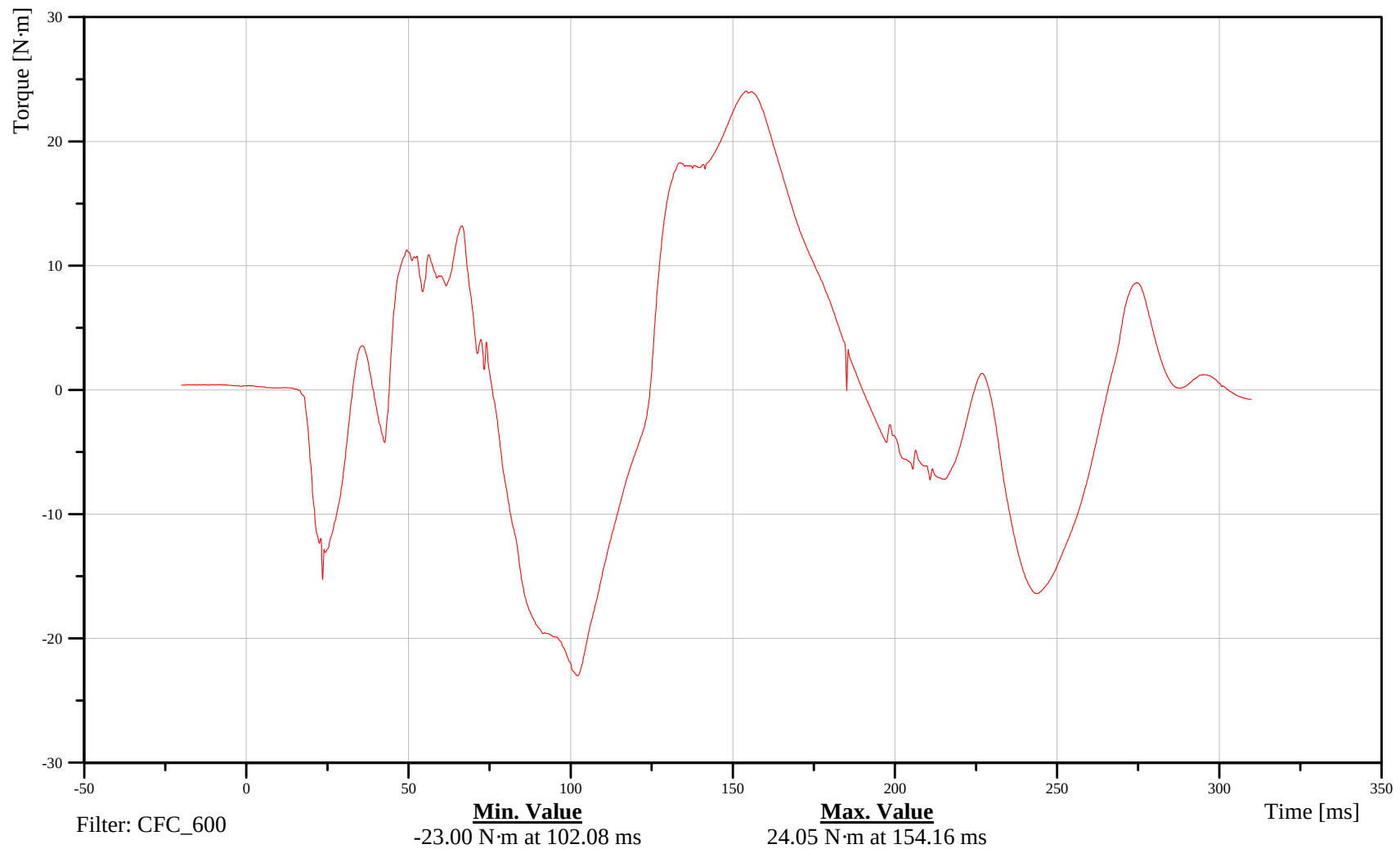
Bullet Passenger Upper Neck Moment About Y Axis

Customer: VRTC

13NECKUP00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

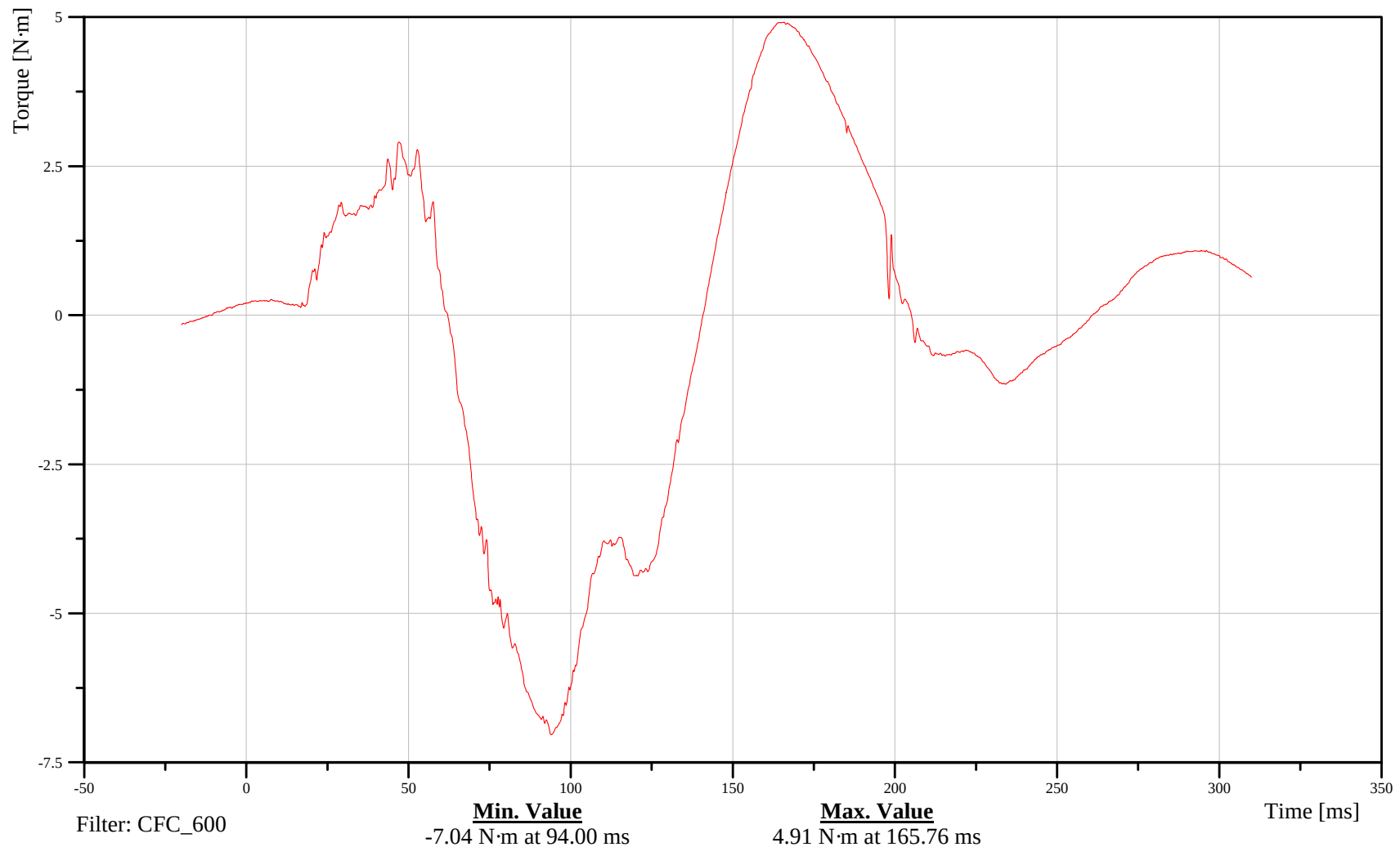
Bullet Passenger Upper Neck Moment About Z Axis

Customer: VRTC

13NECKUP00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Passenger Lower Neck X-Axis Force

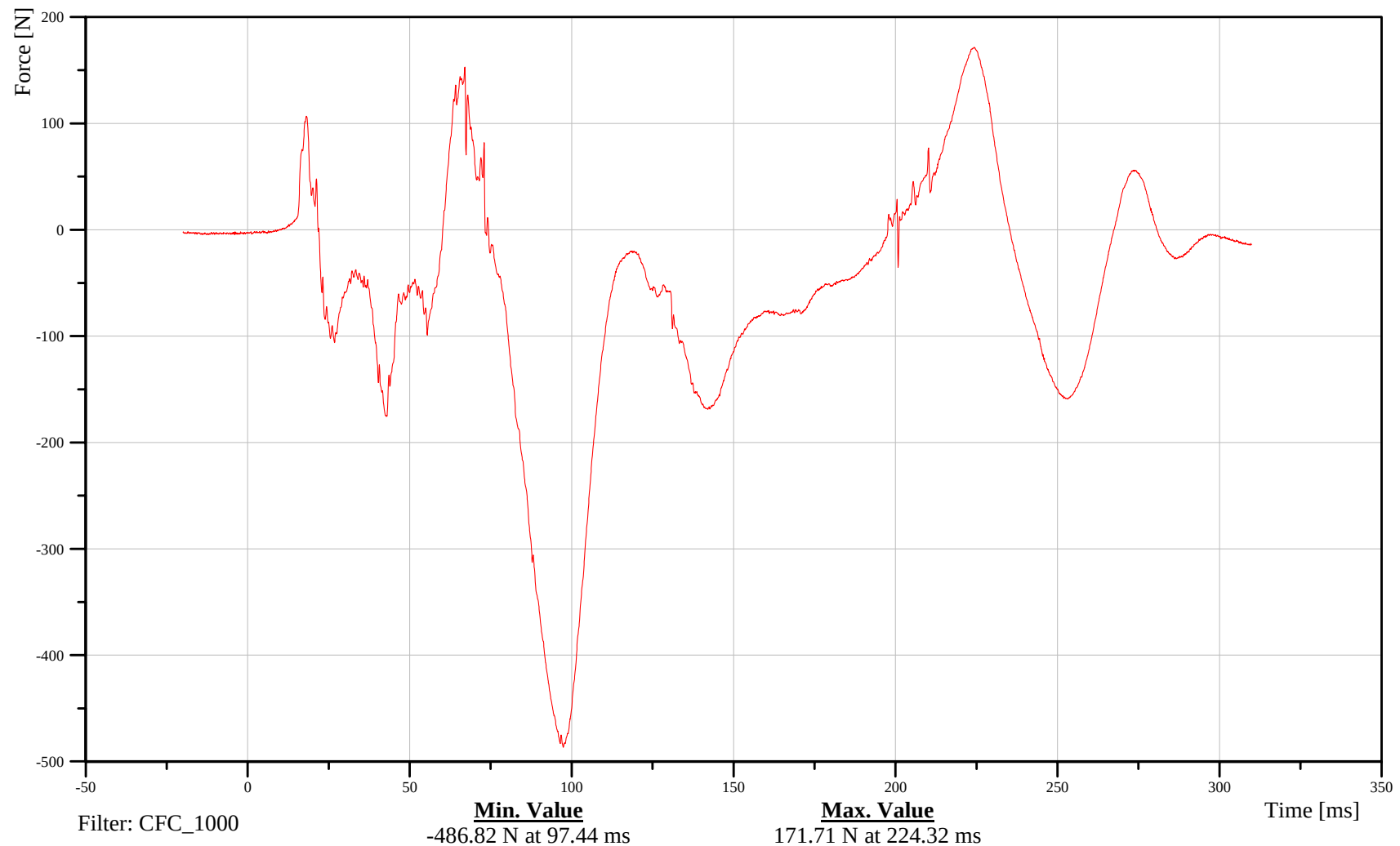
Time: 11:08

Customer: VRTC

13NECKLO00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

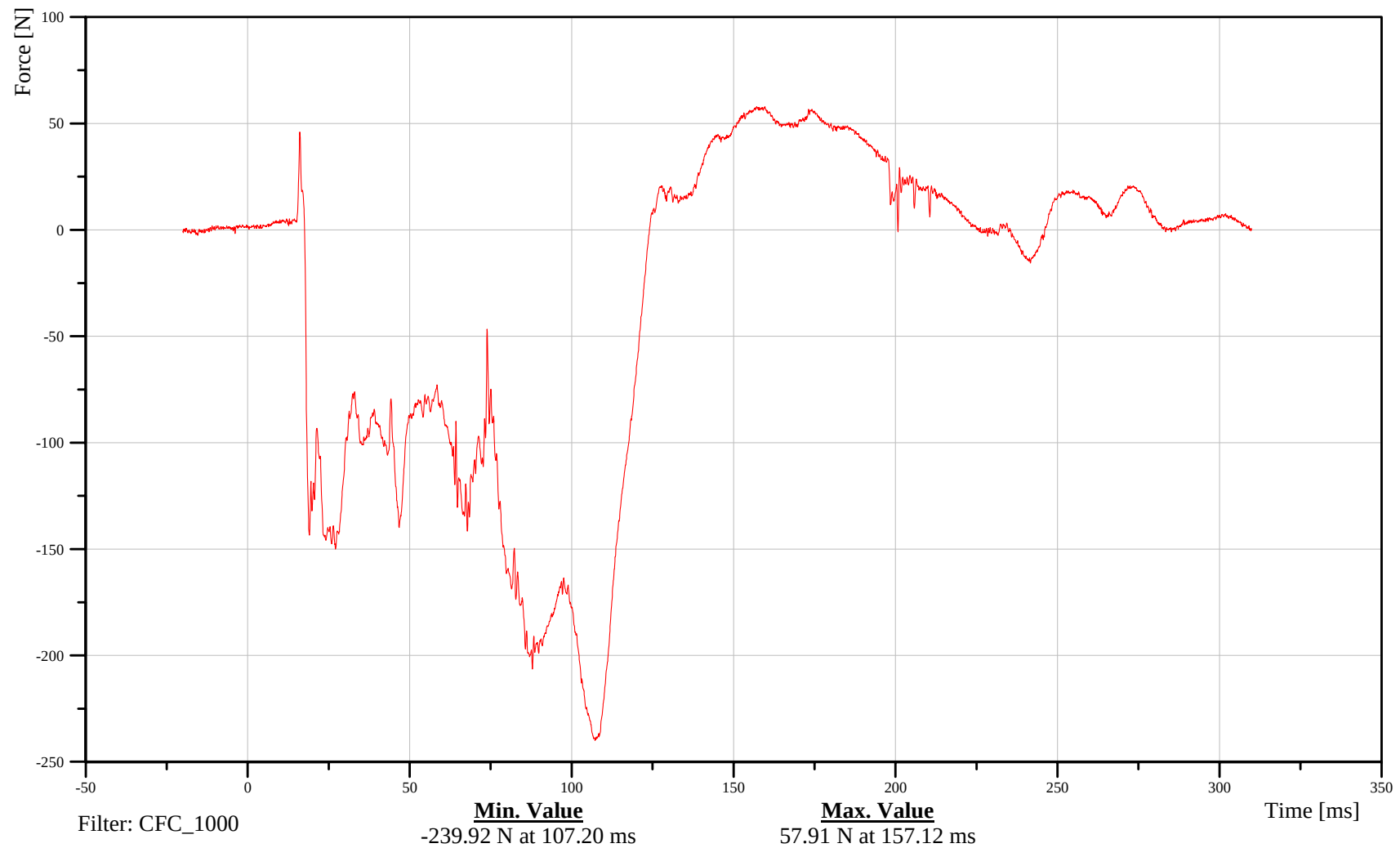
Bullet Passenger Lower Neck Y-Axis Force

Customer: VRTC

13NECKLO00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Passenger Lower Neck Z-Axis Force

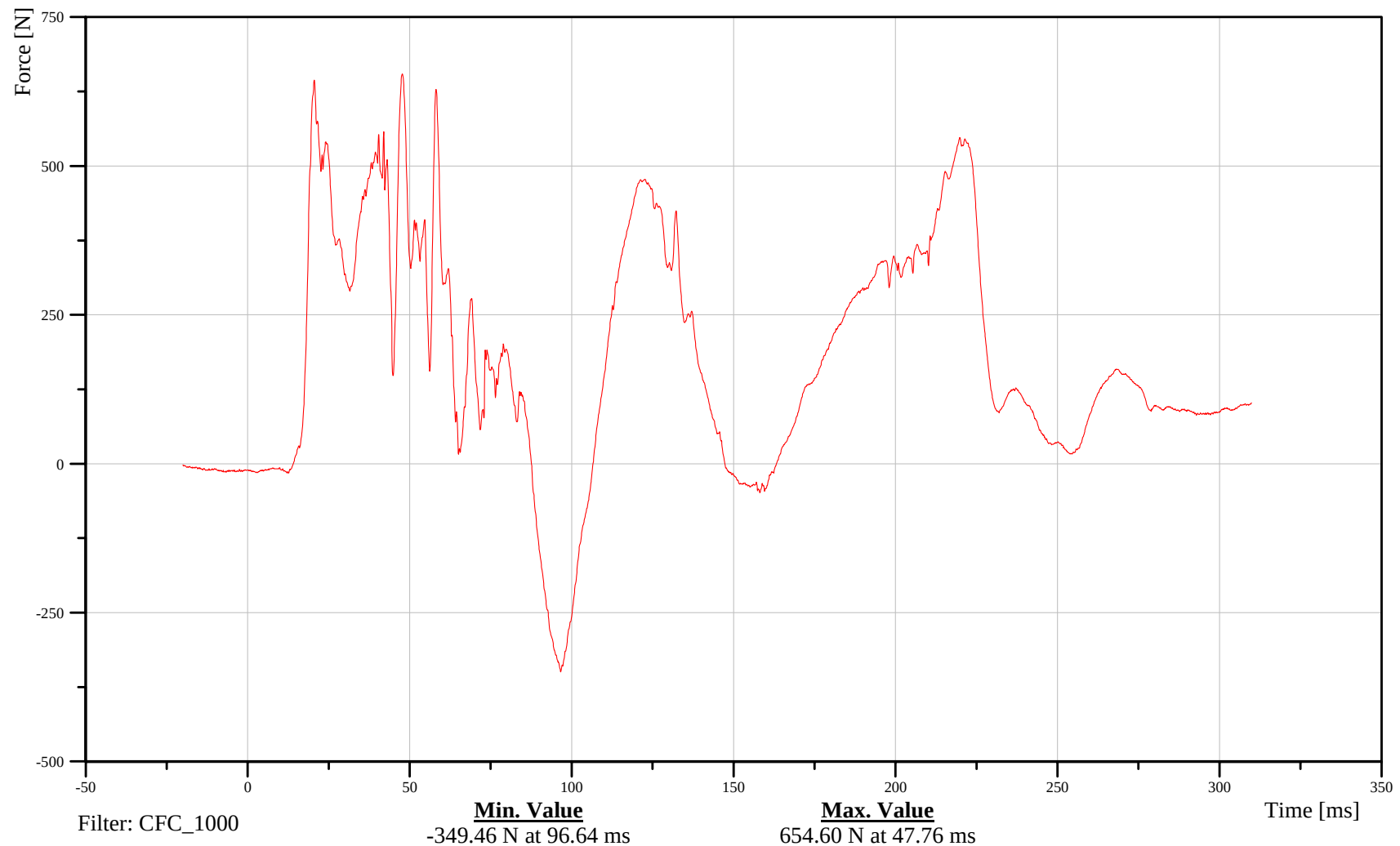
Time: 11:08

Customer: VRTC

13NECKLO00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

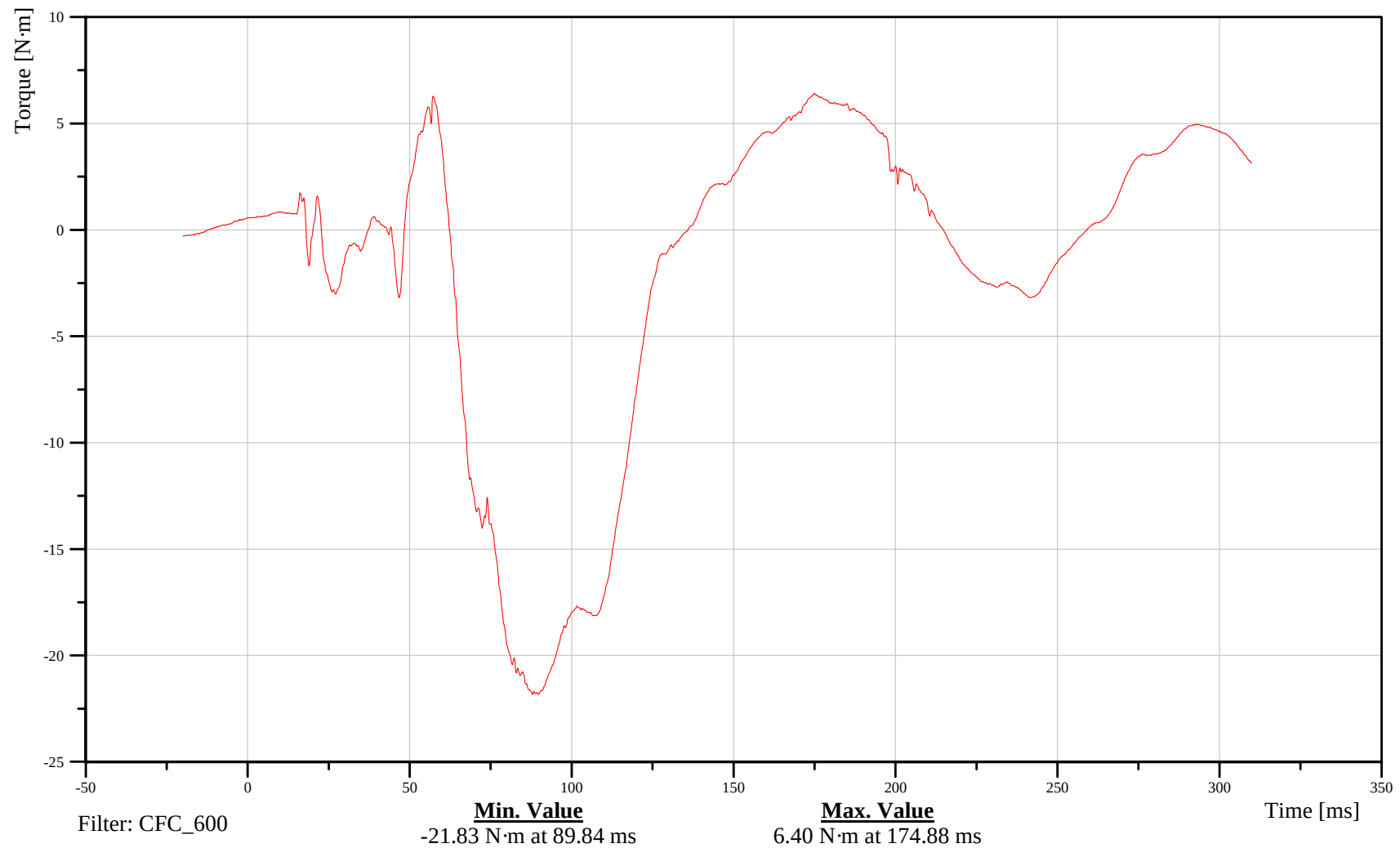
Bullet Passenger Lower Neck Moment About X Axis

Customer: VRTC

13NECKLO00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

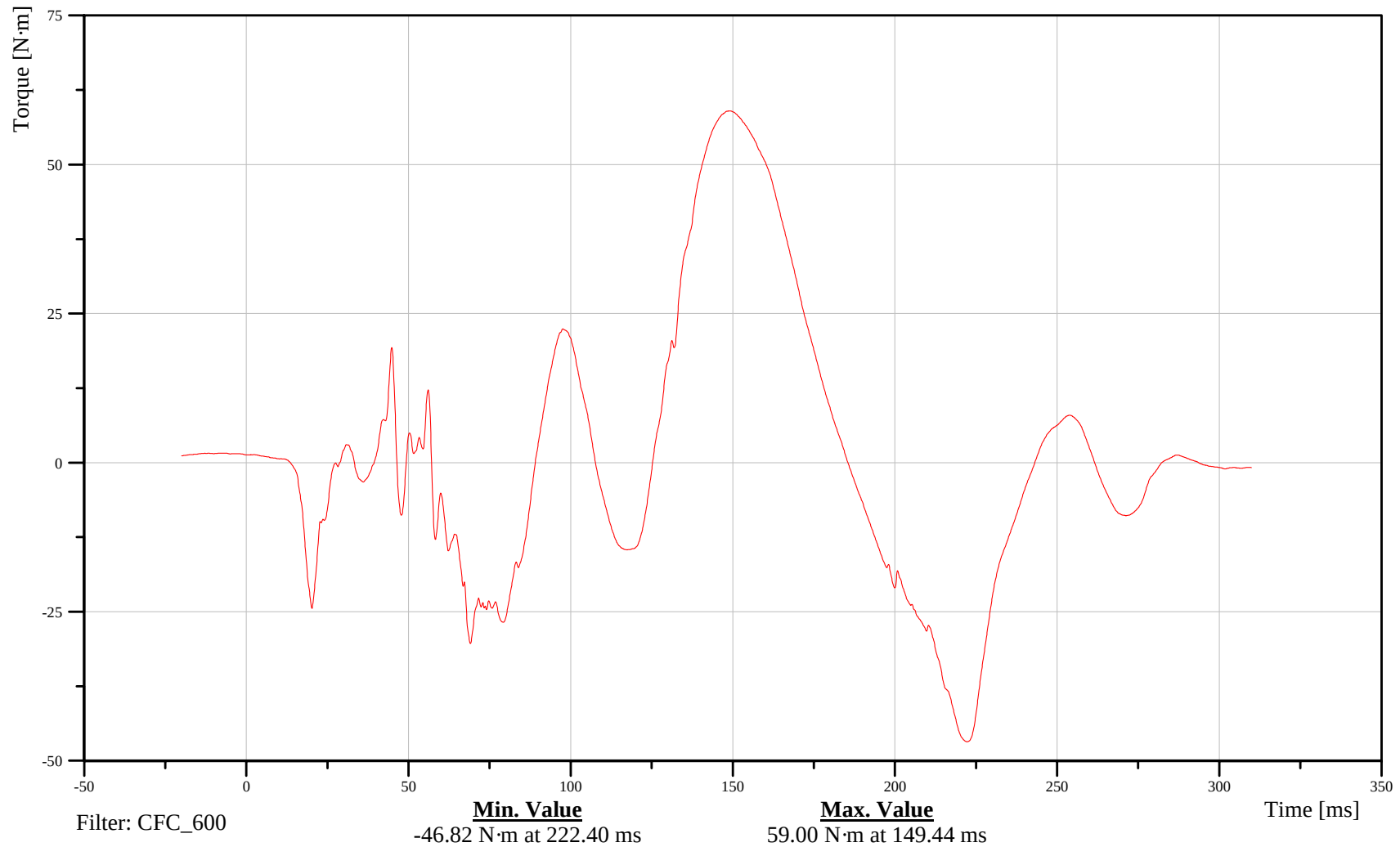
Bullet Passenger Lower Neck Moment About Y Axis

Customer: VRTC

13NECKLO00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

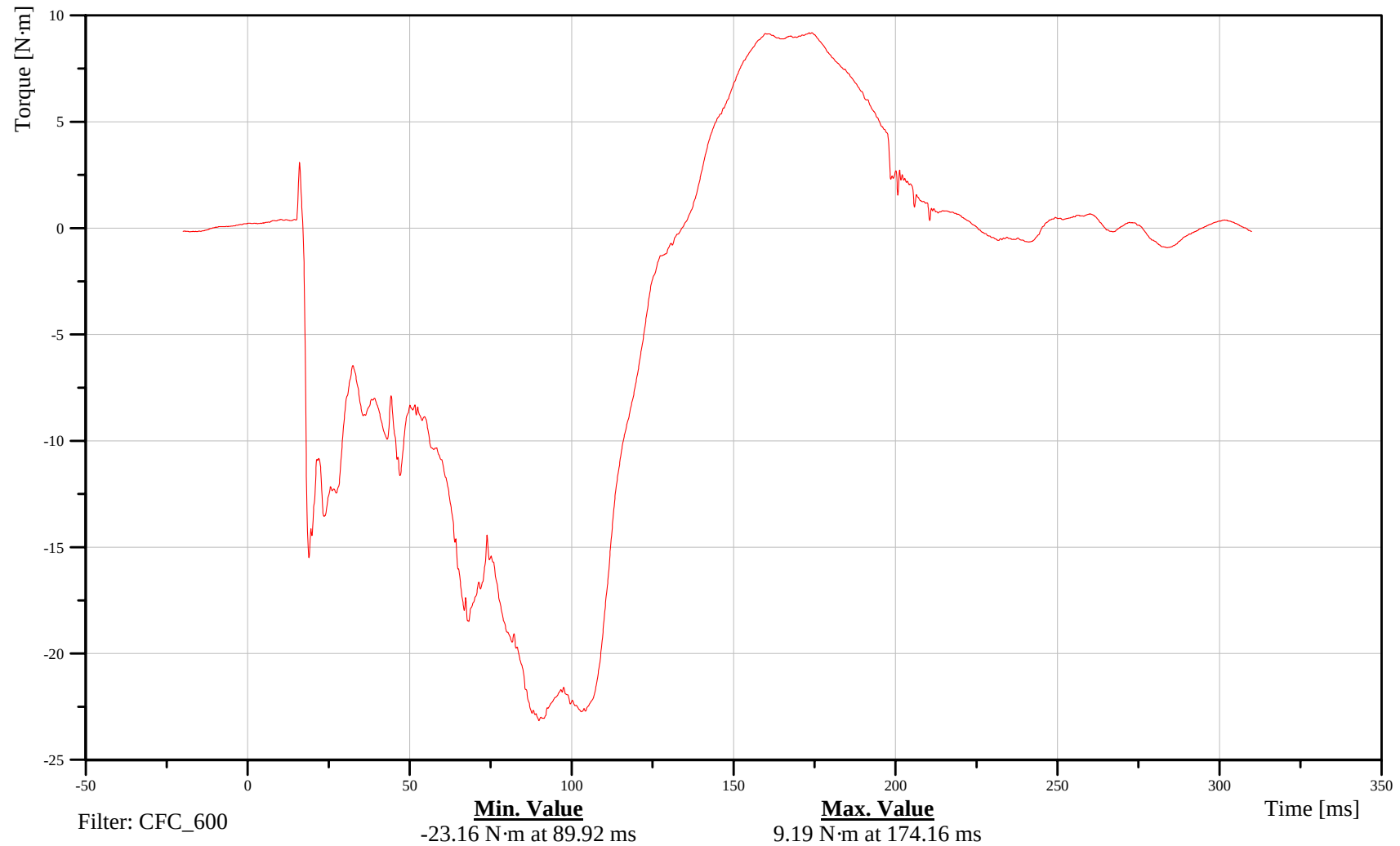
Bullet Passenger Lower Neck Moment About Z Axis

Customer: VRTC

13NECKLO00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

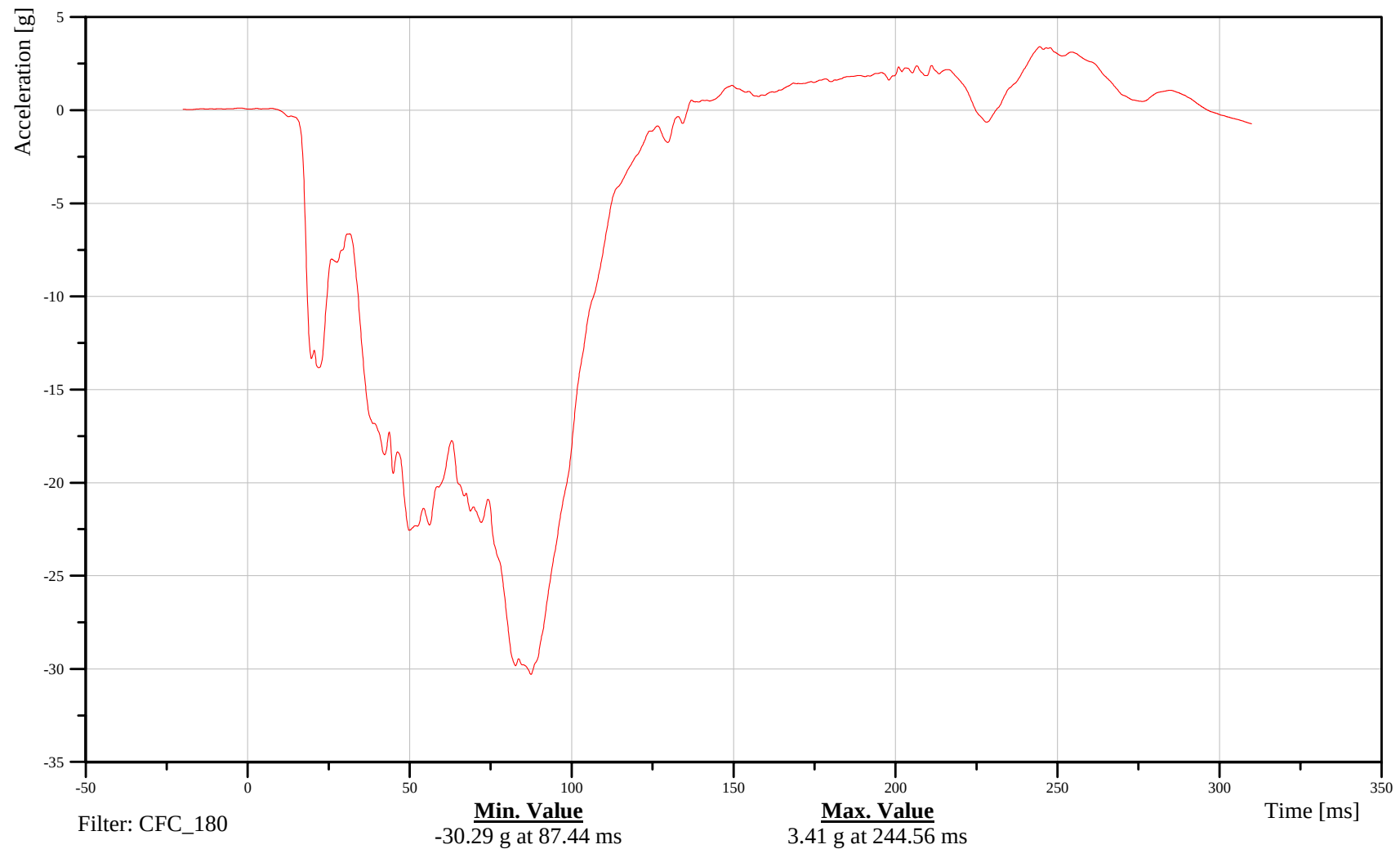
Bullet Passenger Chest CG X-Axis Acceleration

Customer: VRTC

13CHSTCG00HFACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

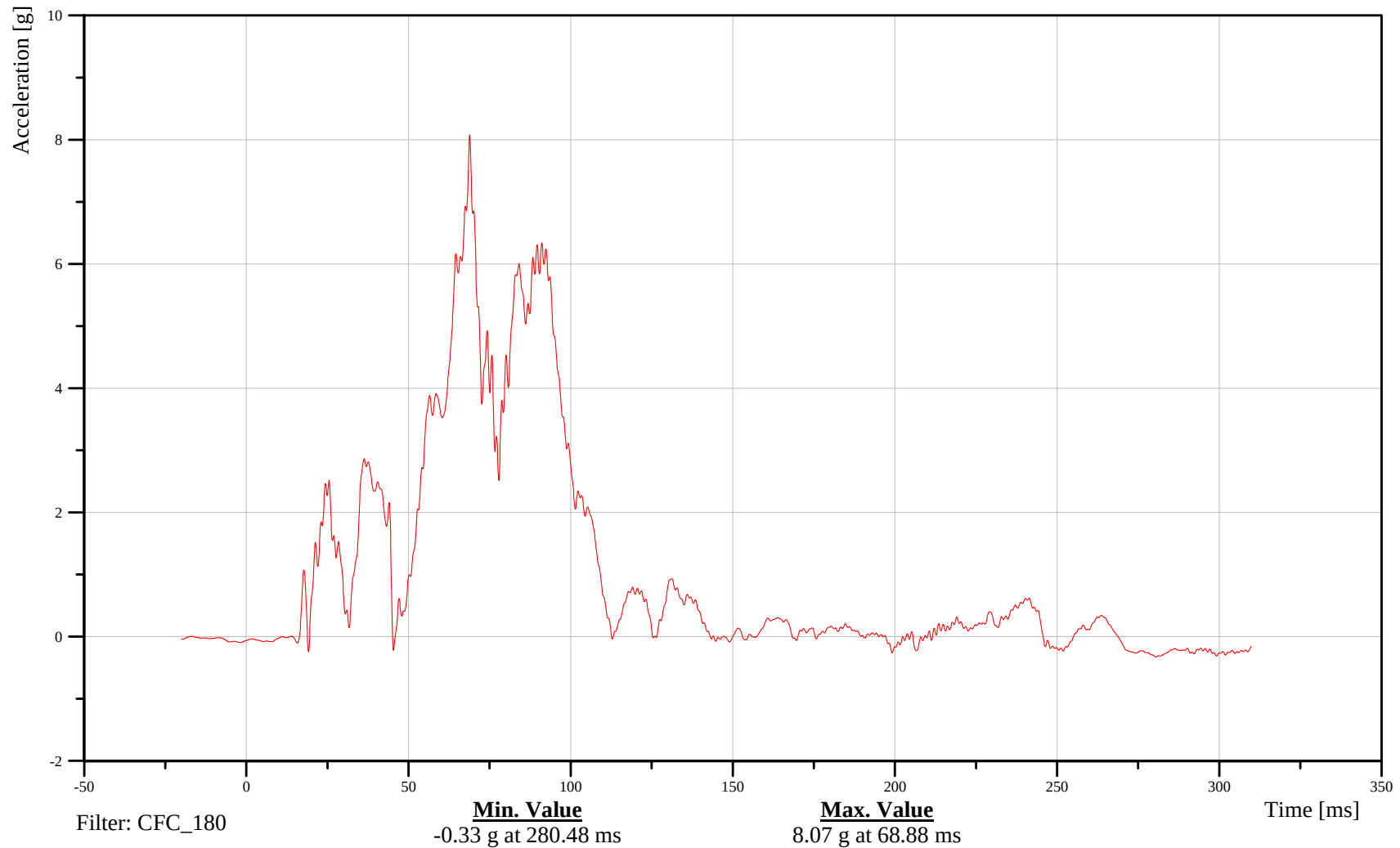
Bullet Passenger Chest CG Y-Axis Acceleration

Customer: VRTC

13CHSTCG00HFACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

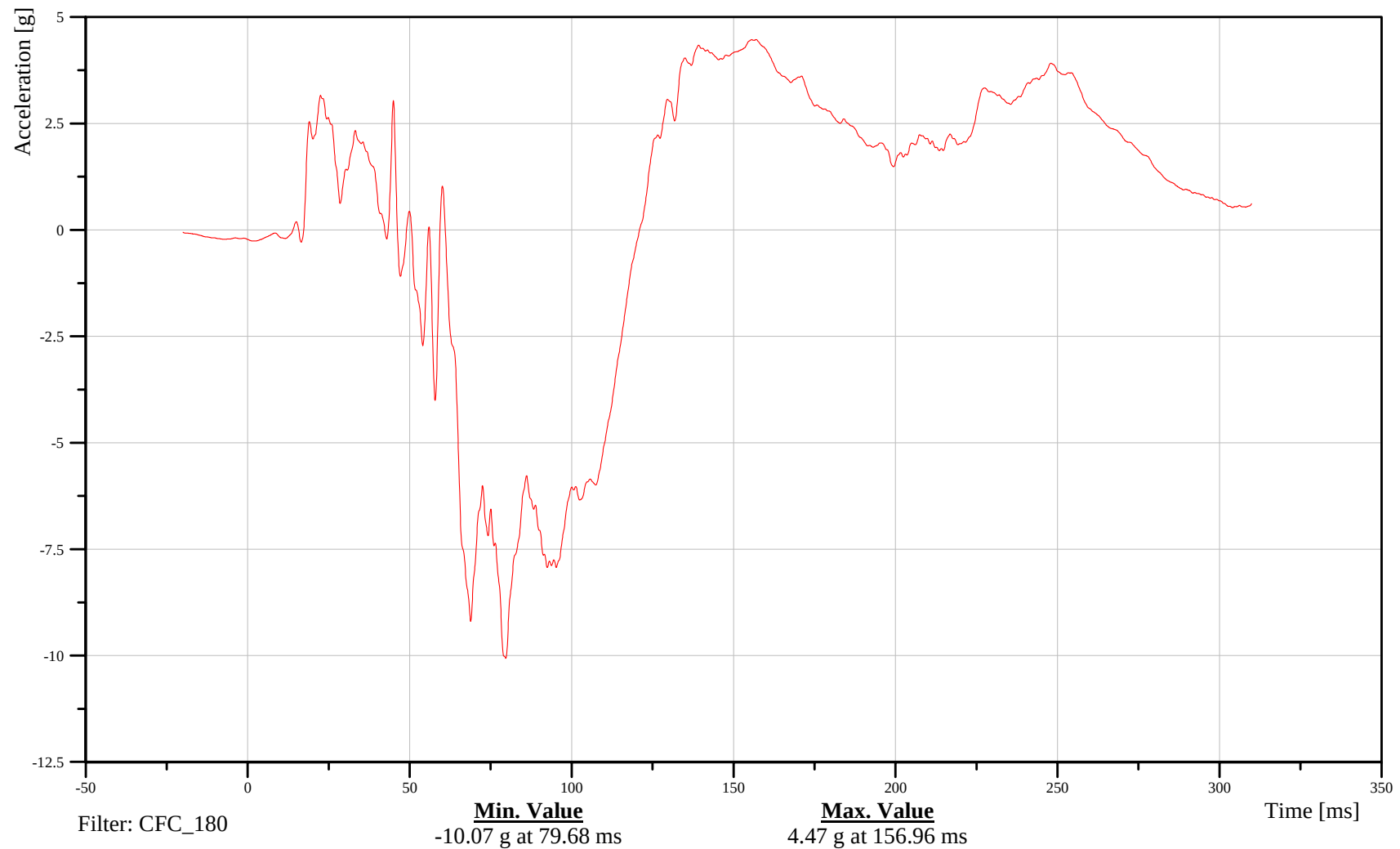
Bullet Passenger Chest CG Z-Axis Acceleration

Customer: VRTC

13CHSTCG00HFACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

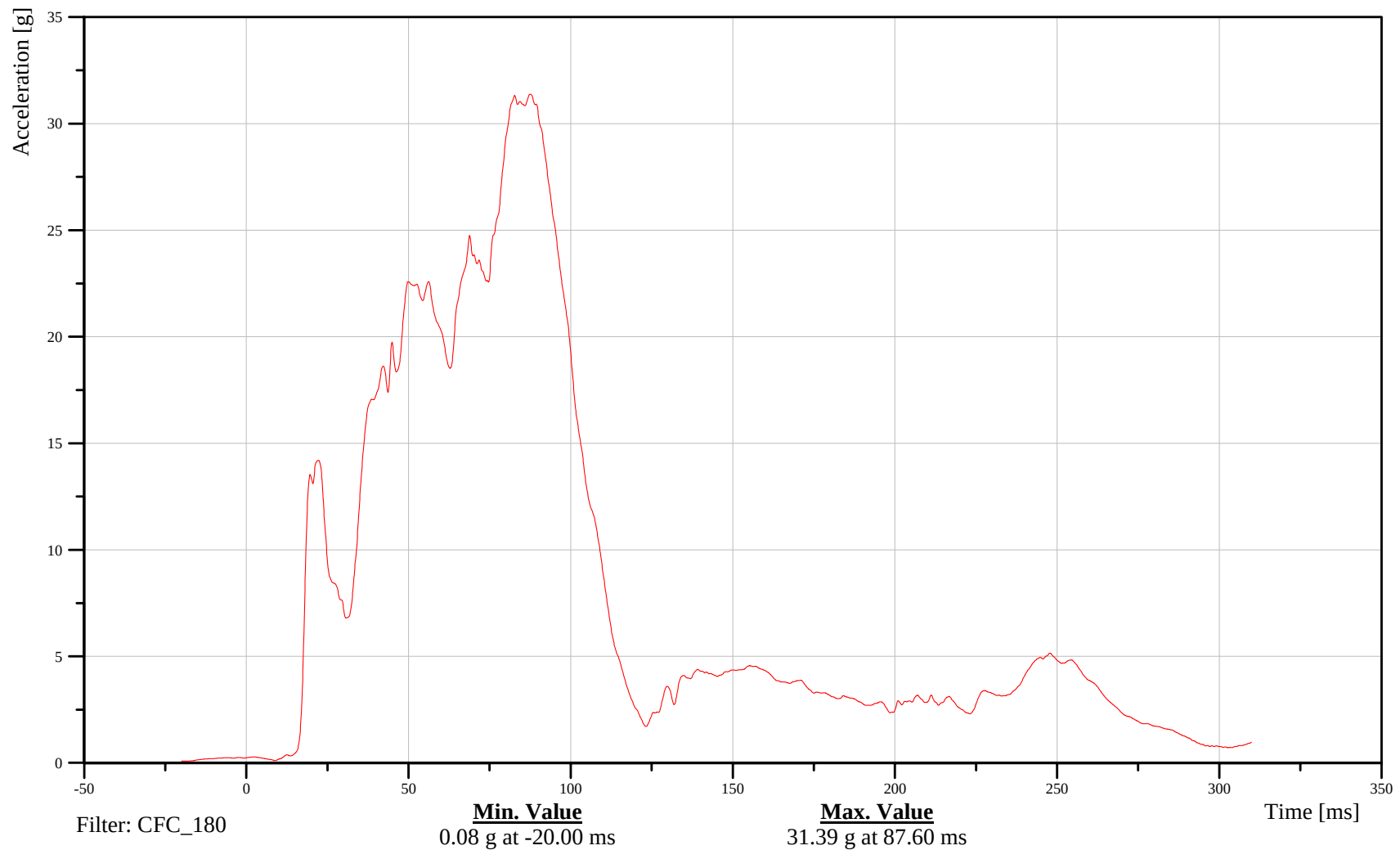
Bullet Passenger Chest CG Resultant Acceleration

Customer: VRTC

13CHSTCG00HFACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

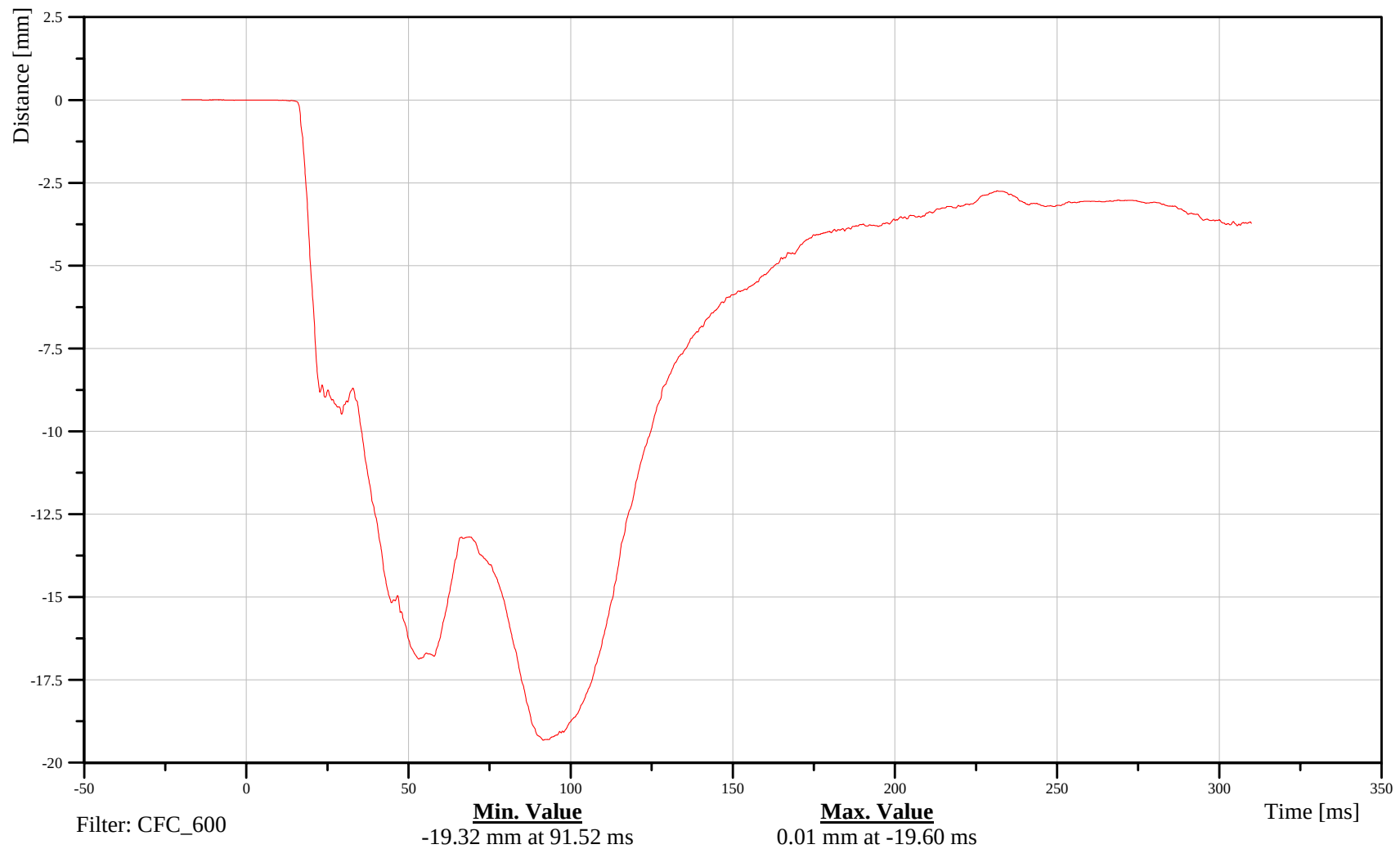
Bullet Passenger Chest Displacement

Customer: VRTC

13CHST0000HFDSXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

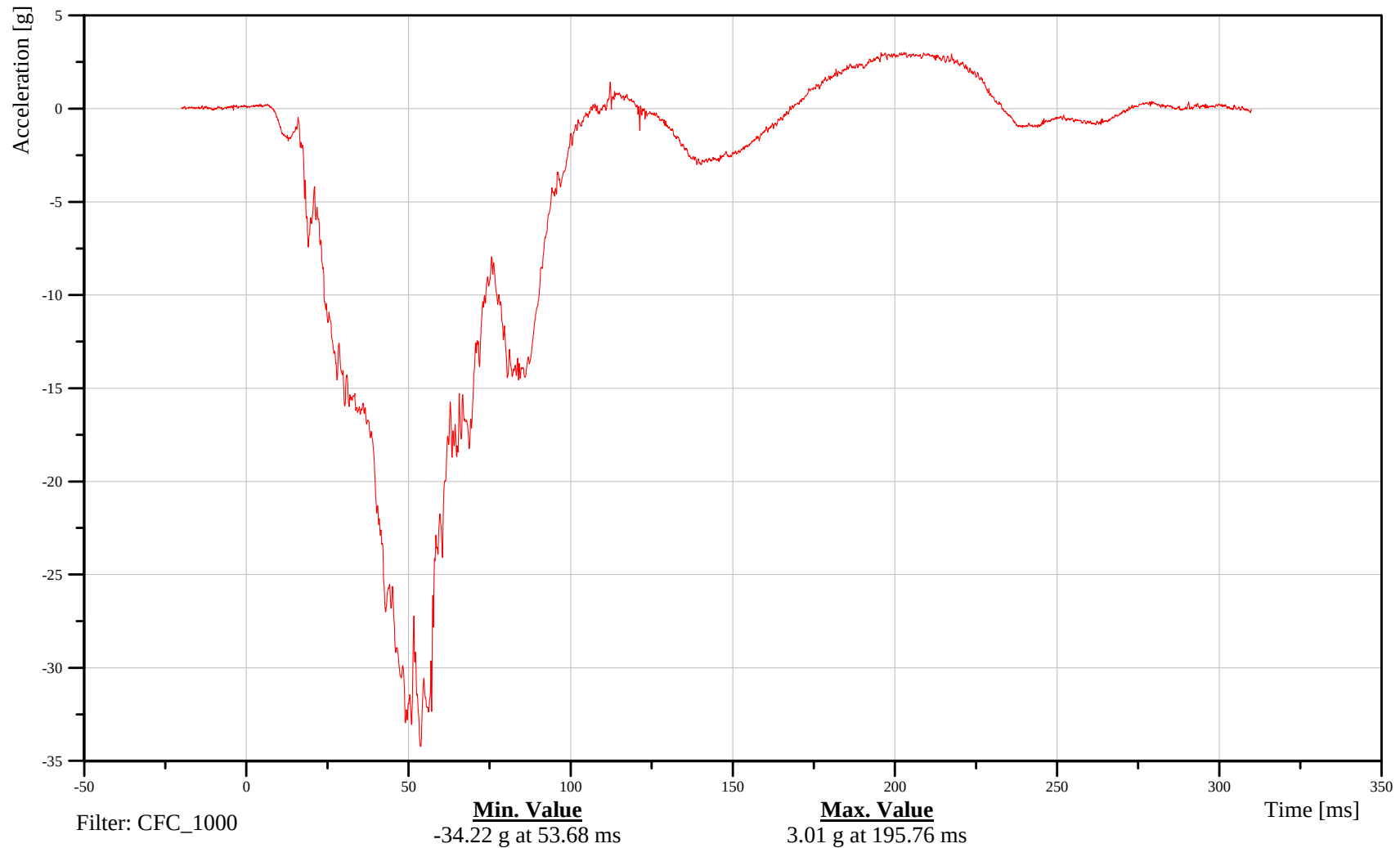
Bullet Passenger Pelvis CG X-Axis Acceleration

Customer: VRTC

13PELVCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

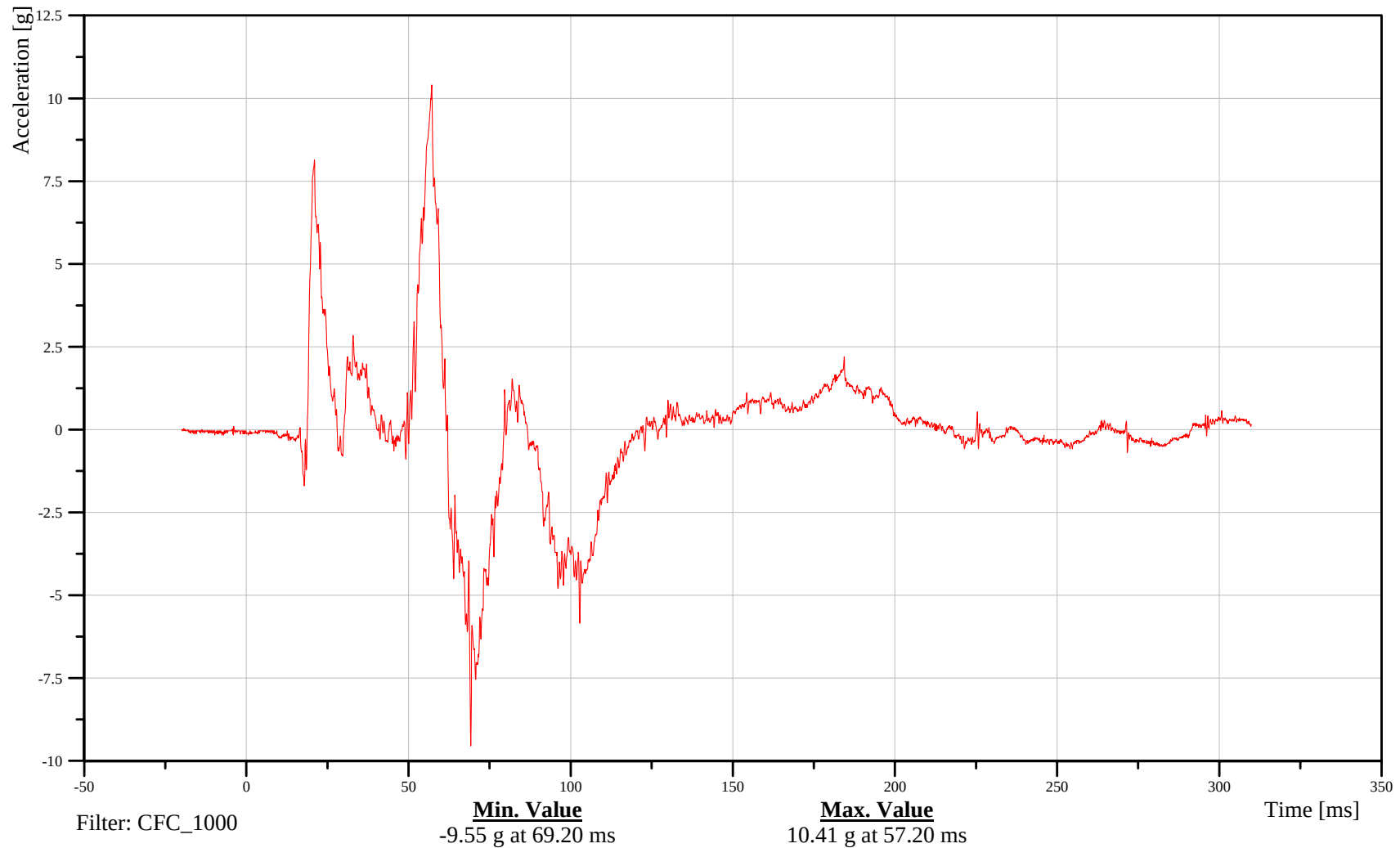
Bullet Passenger Pelvis CG Y-Axis Acceleration

Customer: VRTC

13PELVCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

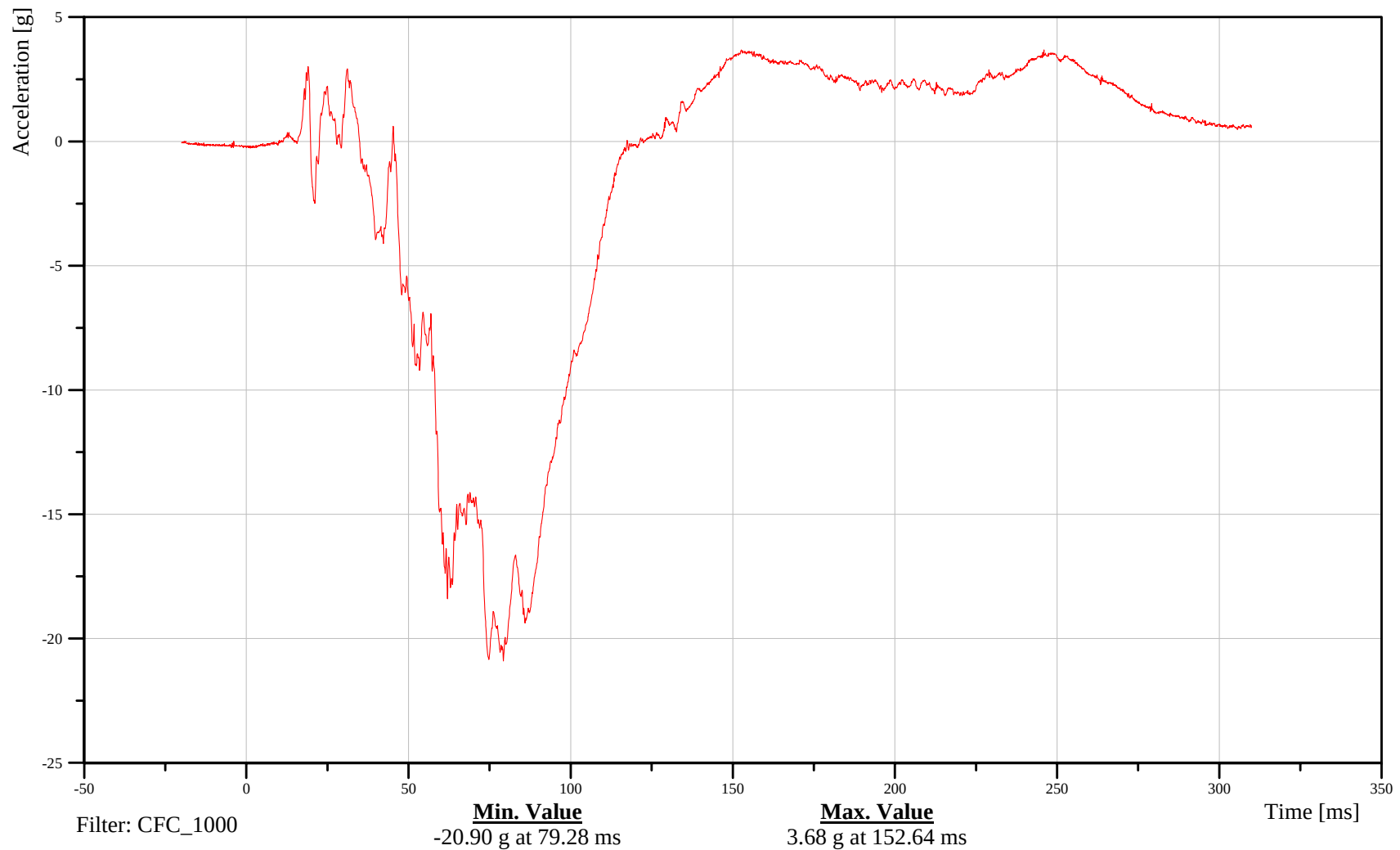
Bullet Passenger Pelvis CG Z-Axis Acceleration

Customer: VRTC

13PELVCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

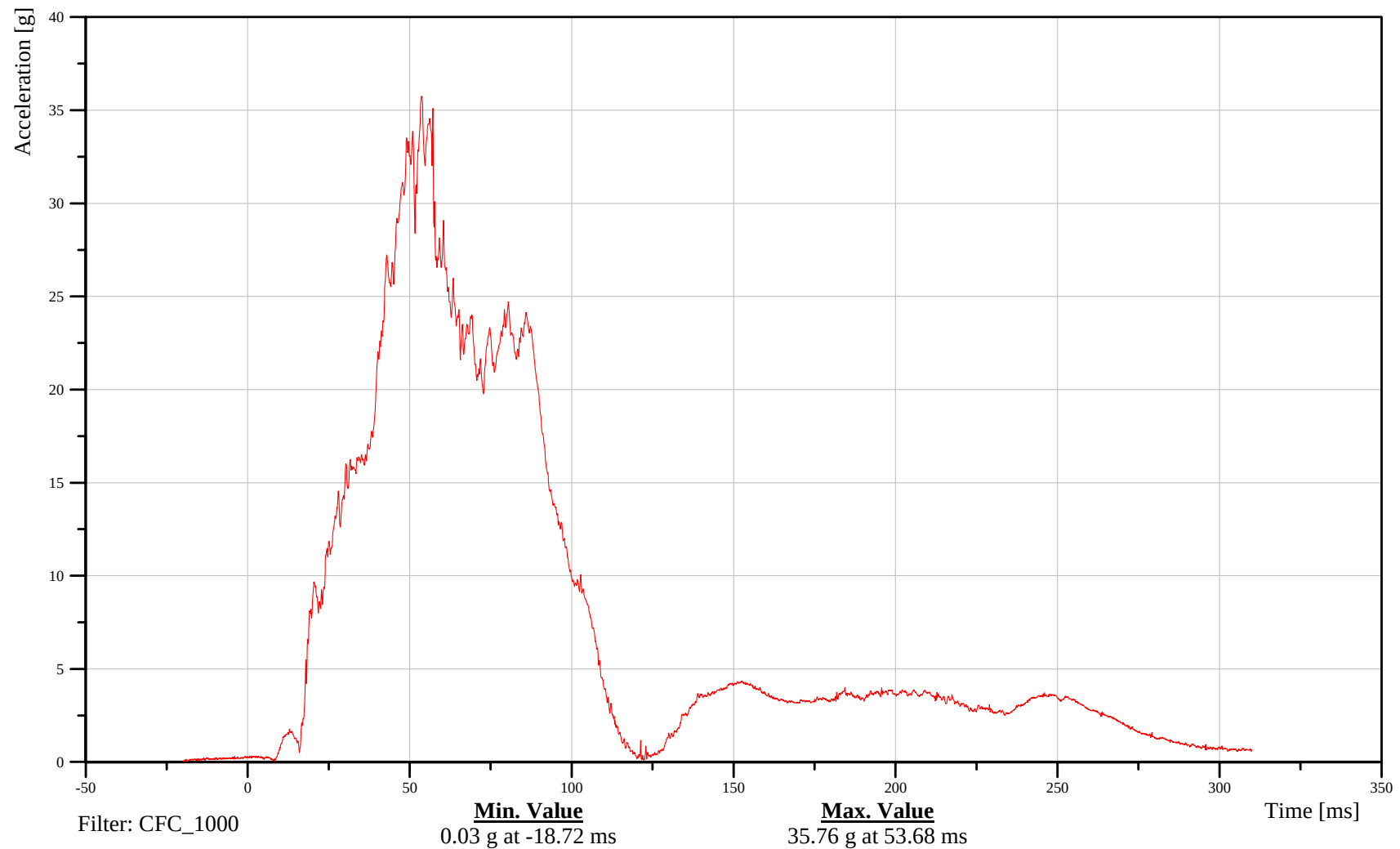
Bullet Passenger Pelvis CG Resultant Acceleration

Customer: VRTC

13PELVCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

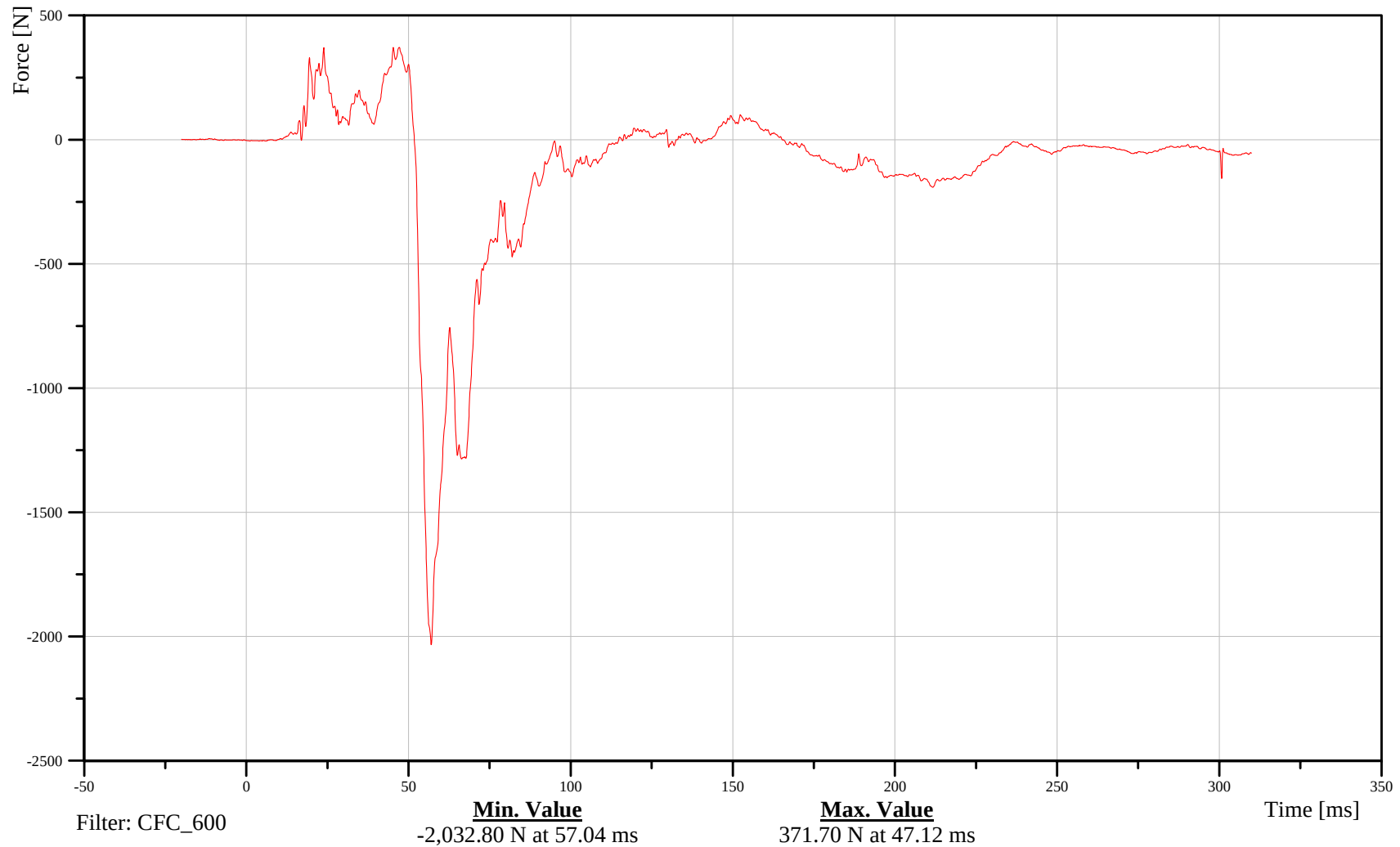
Bullet Passenger Left Femur Z-Axis Force

Customer: VRTC

13FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

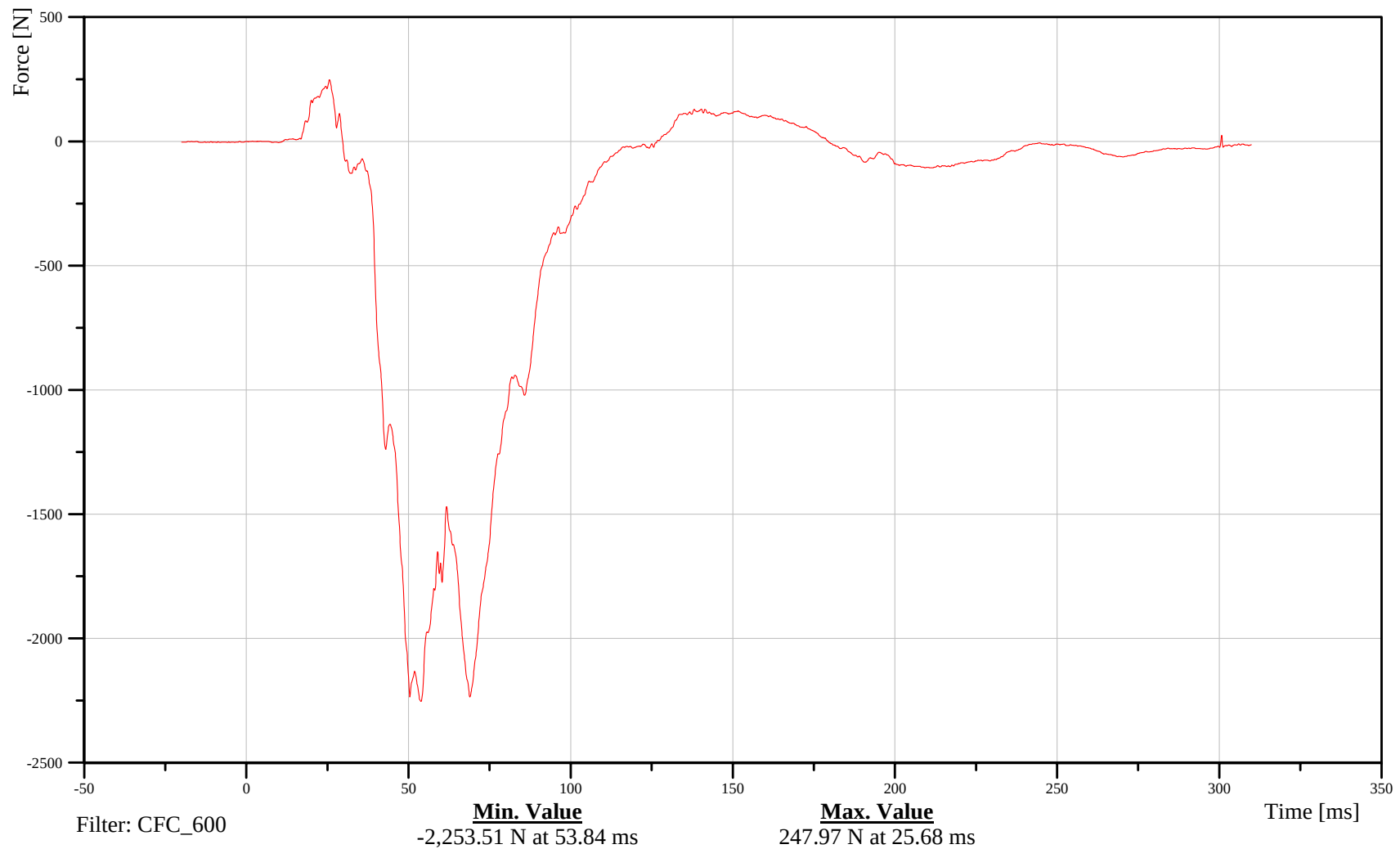
Bullet Passenger Right Femur Z-Axis Force

Customer: VRTC

13FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

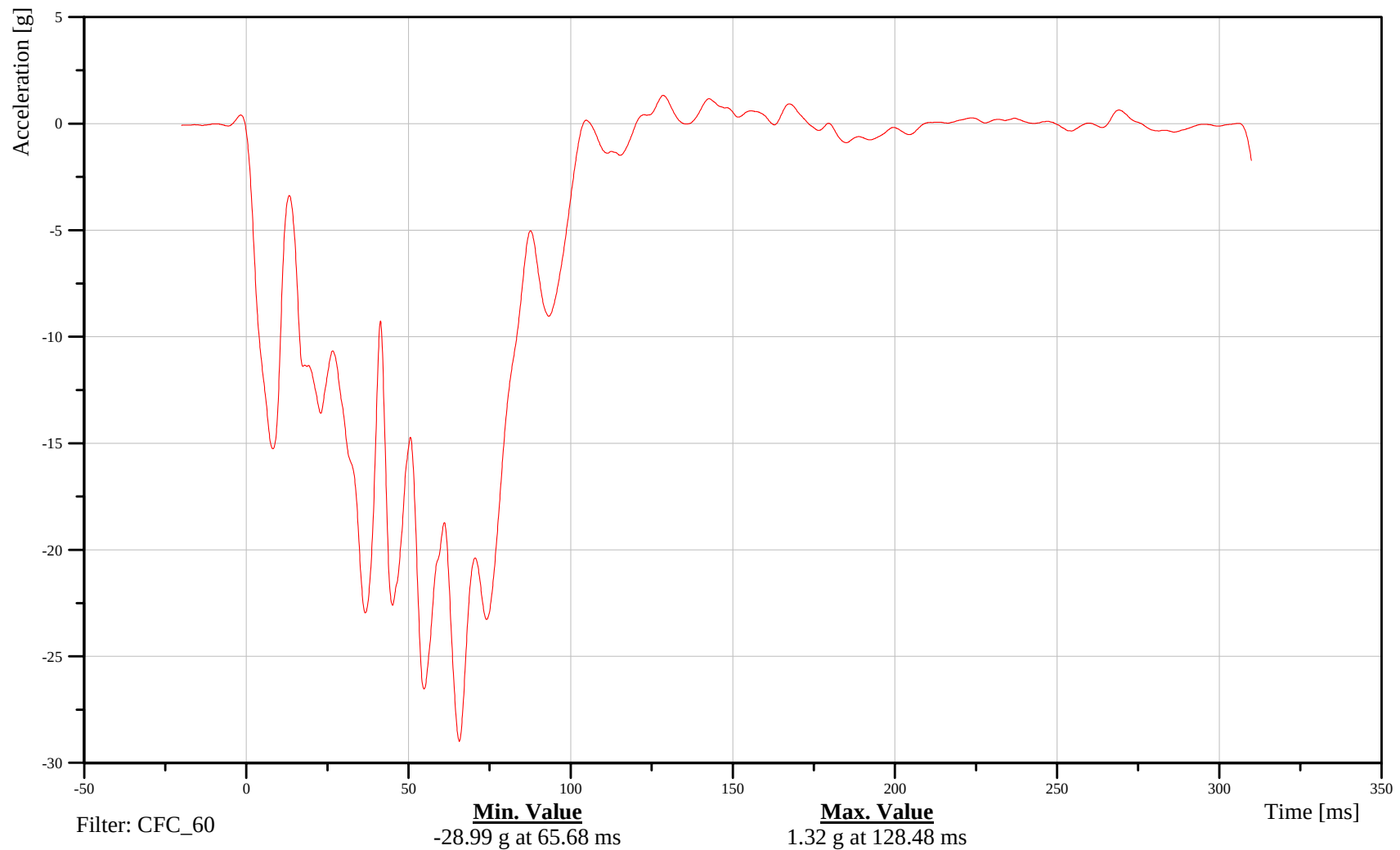
Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

14CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

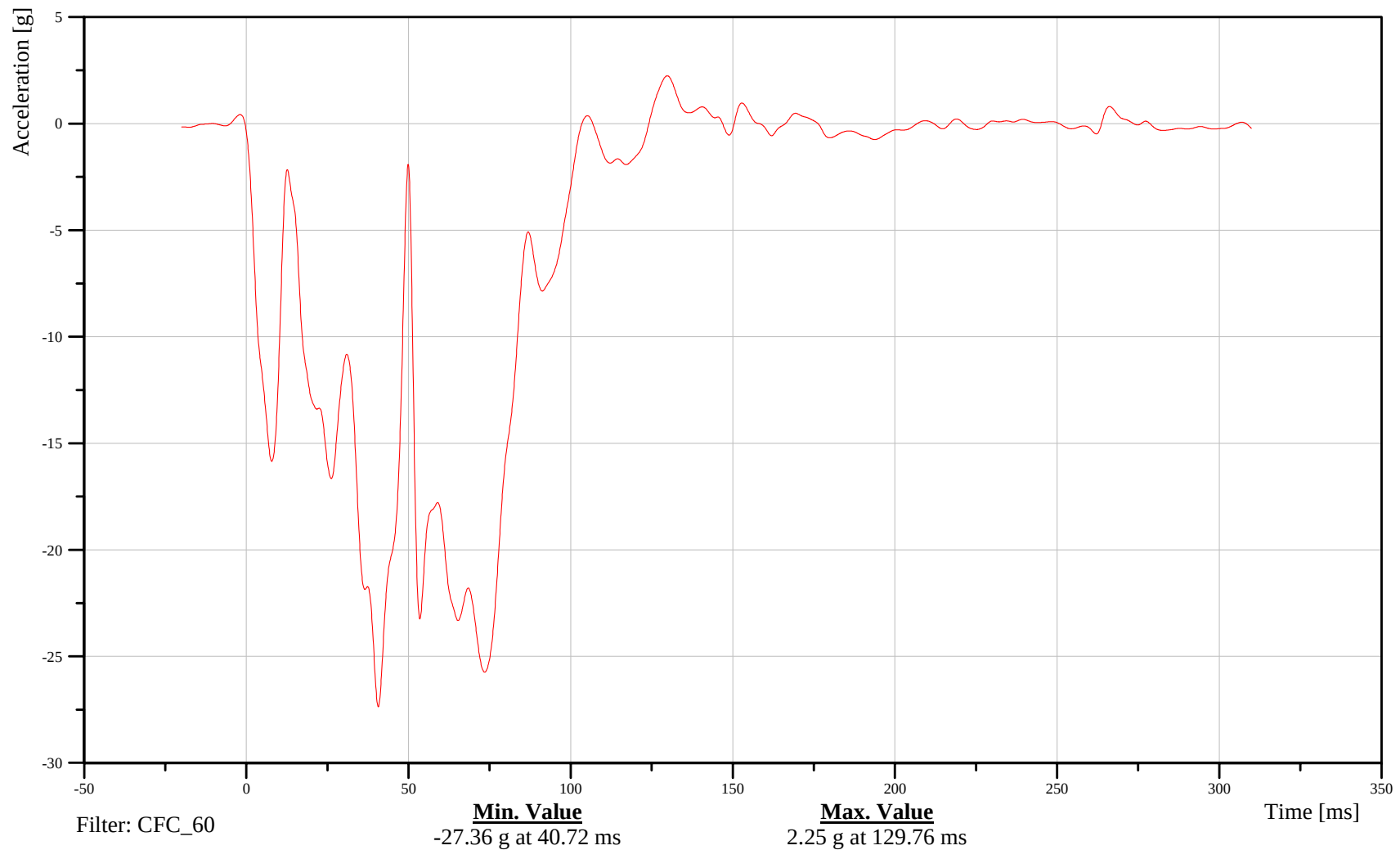
Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

16CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

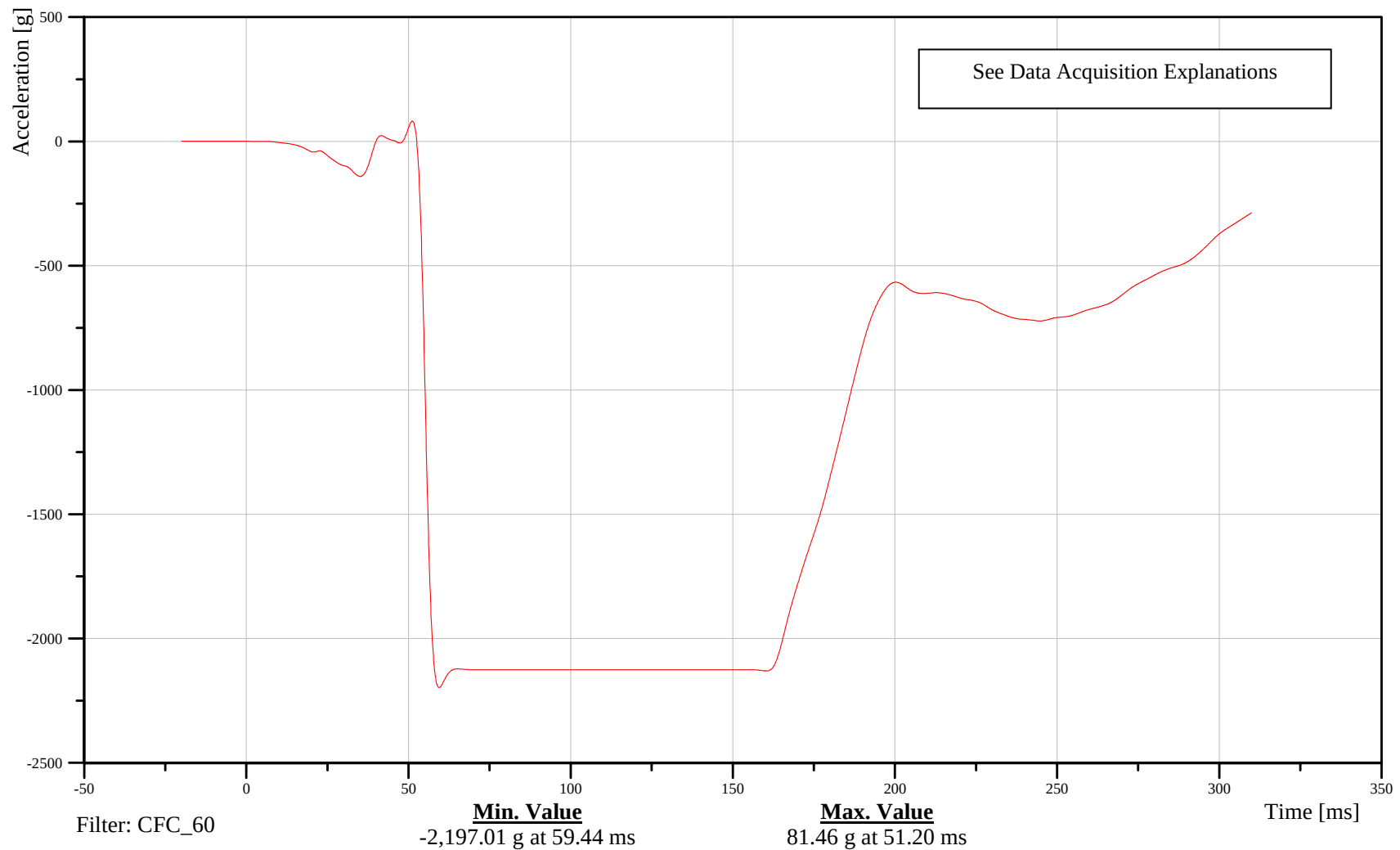
Bullet Vehicle Top of Engine X-Axis Acceleration

Customer: VRTC

12ENGNTTP0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

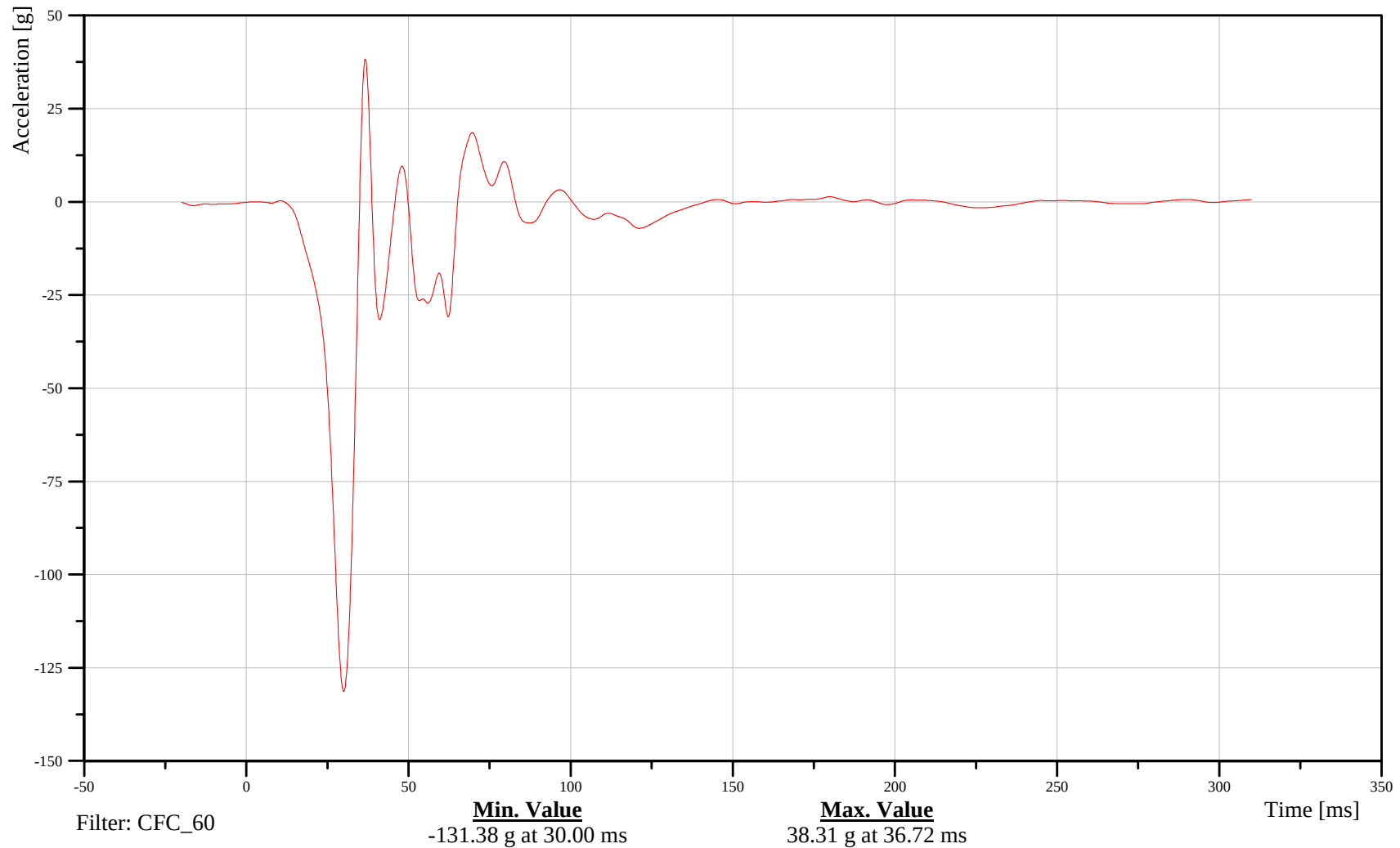
Bullet Vehicle Bottom of Engine X-Axis Acceleration

Customer: VRTC

12ENGNB00000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

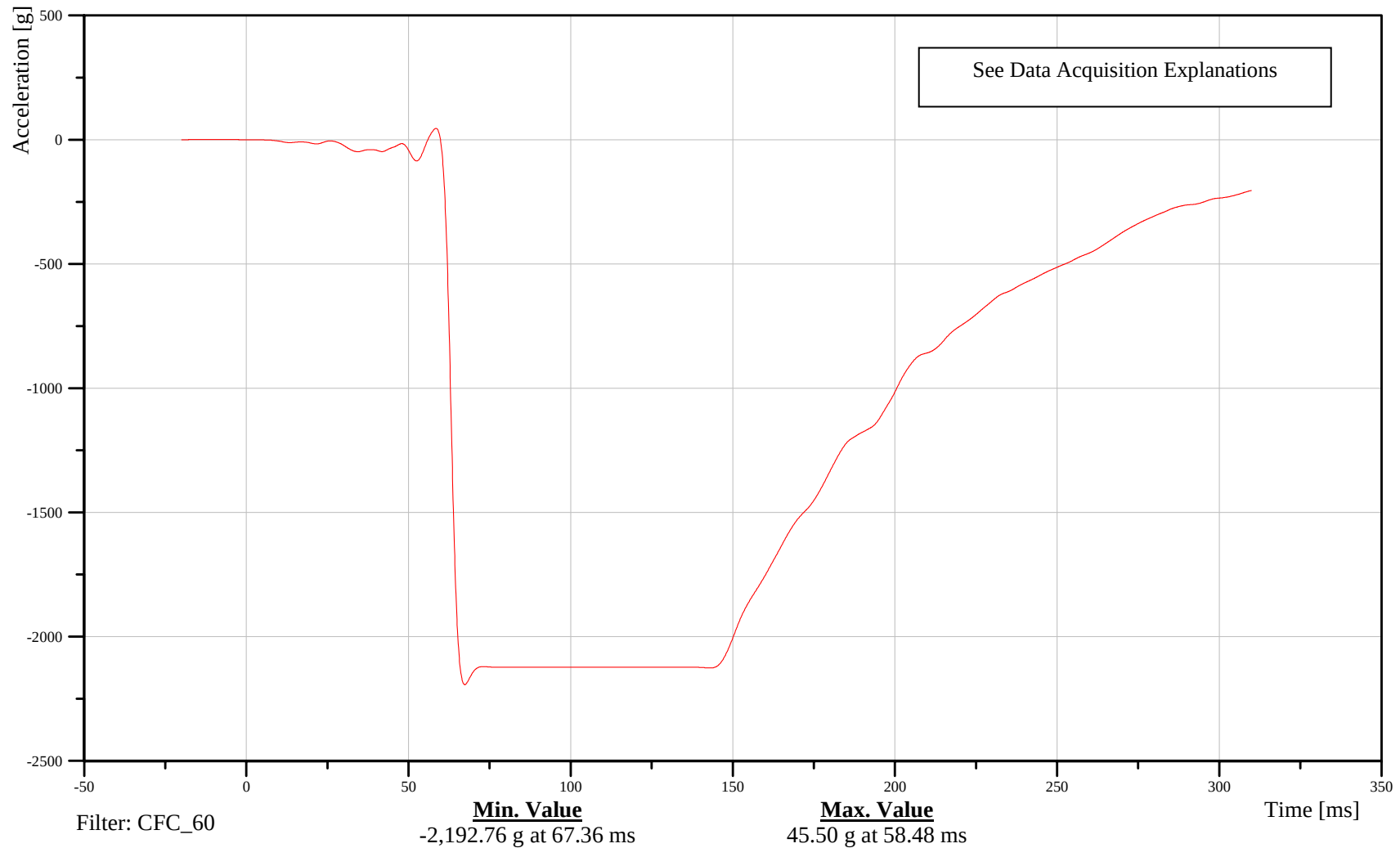
Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration

Customer: VRTC

13VEHCRI0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

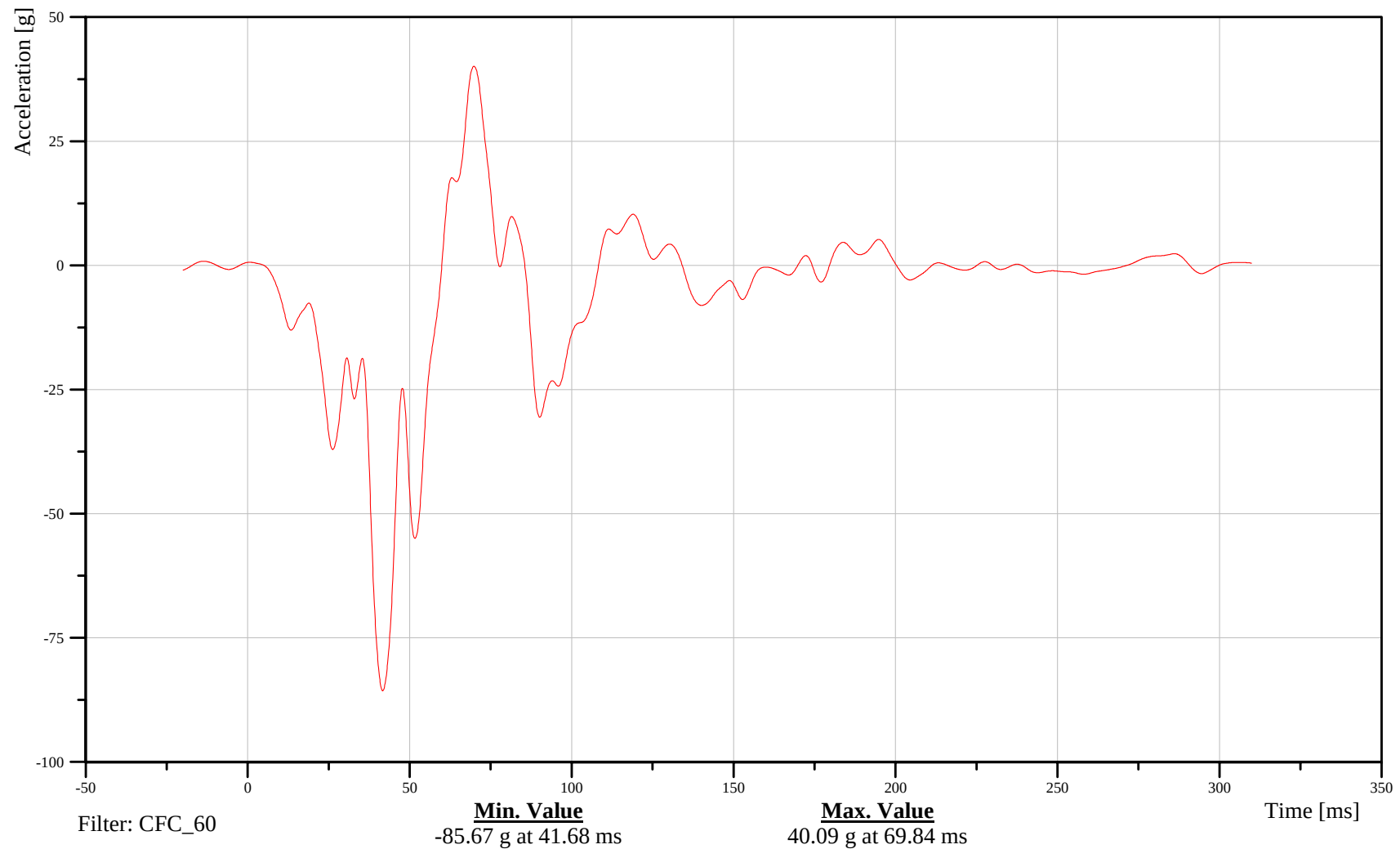
Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration

Customer: VRTC

11VEHICLE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

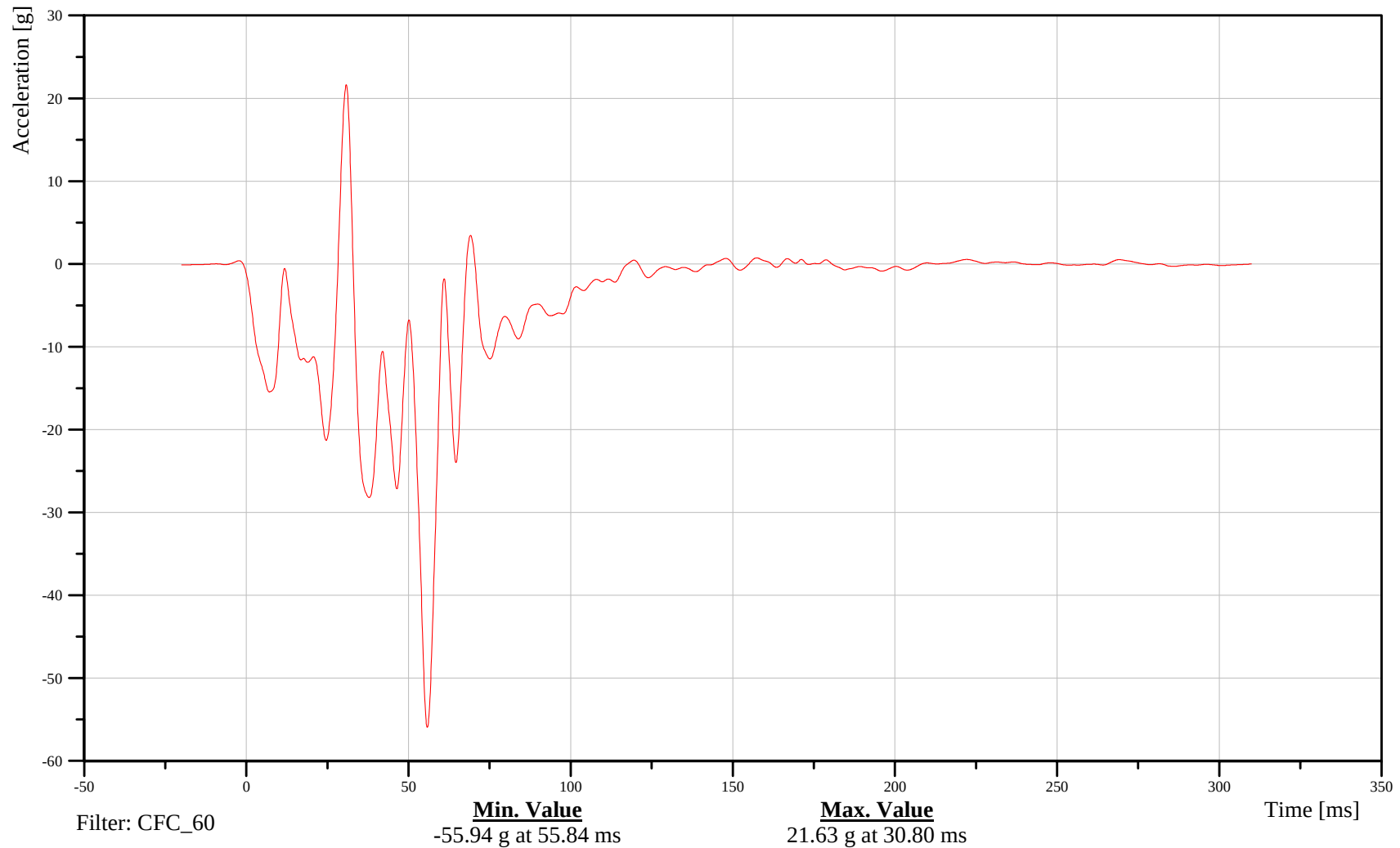
Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration

Customer: VRTC

11PEAC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

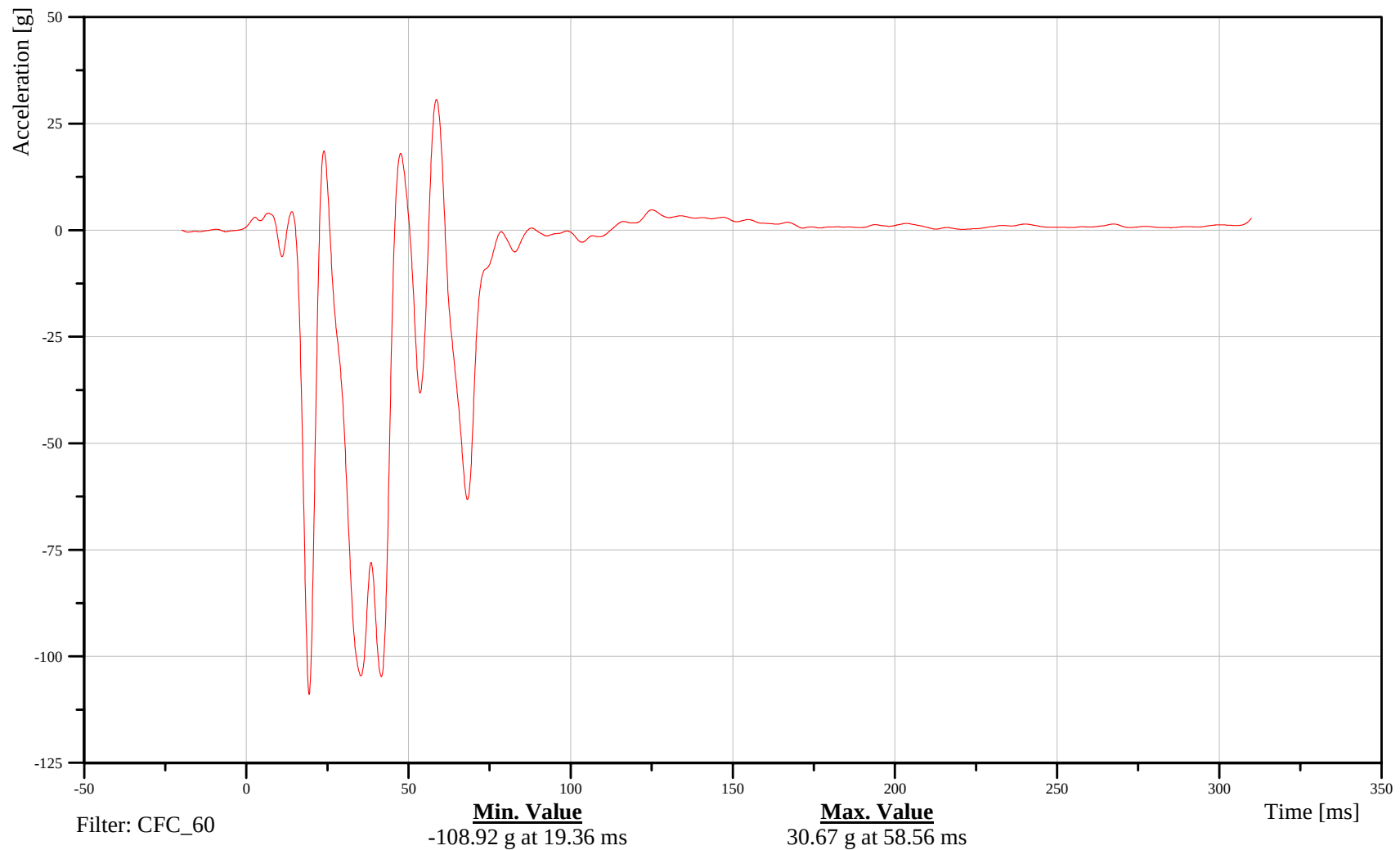
Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration

Customer: VRTC

11PEAC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

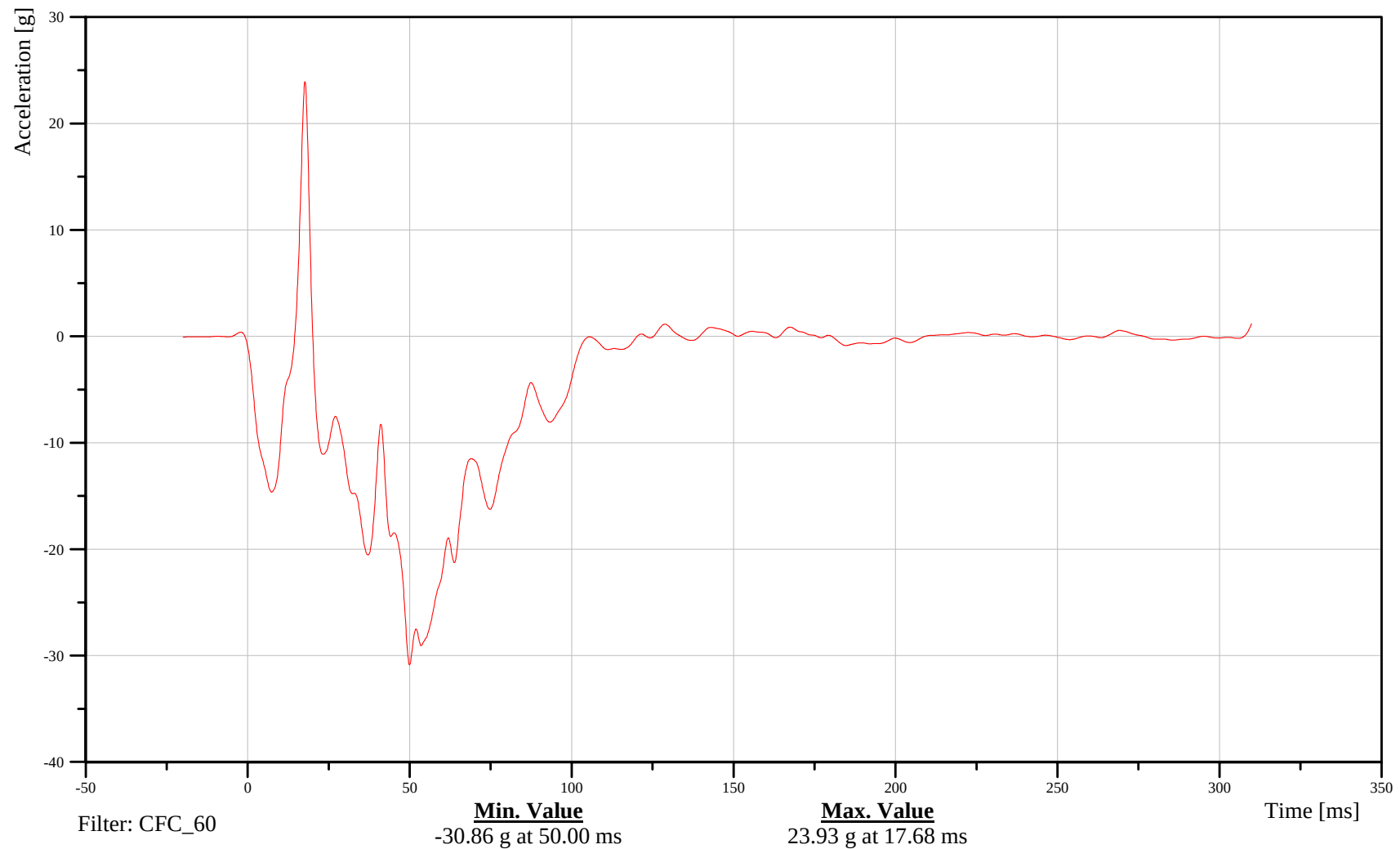
Bullet Vehicle Toe Pan Footrest X-Axis Acceleration

Customer: VRTC

11VEHC000001ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

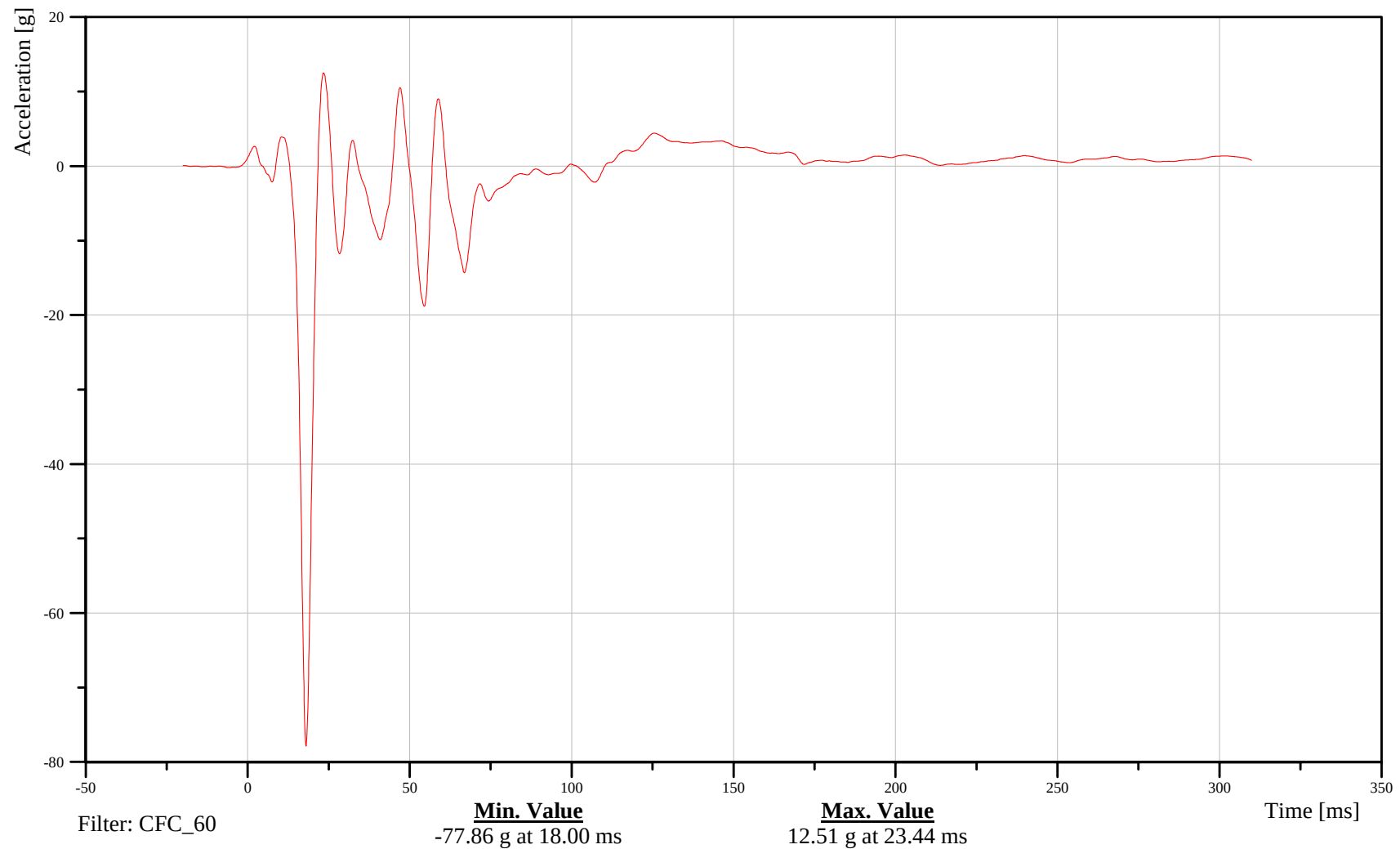
Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration

Customer: VRTC

11VEHC000001ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

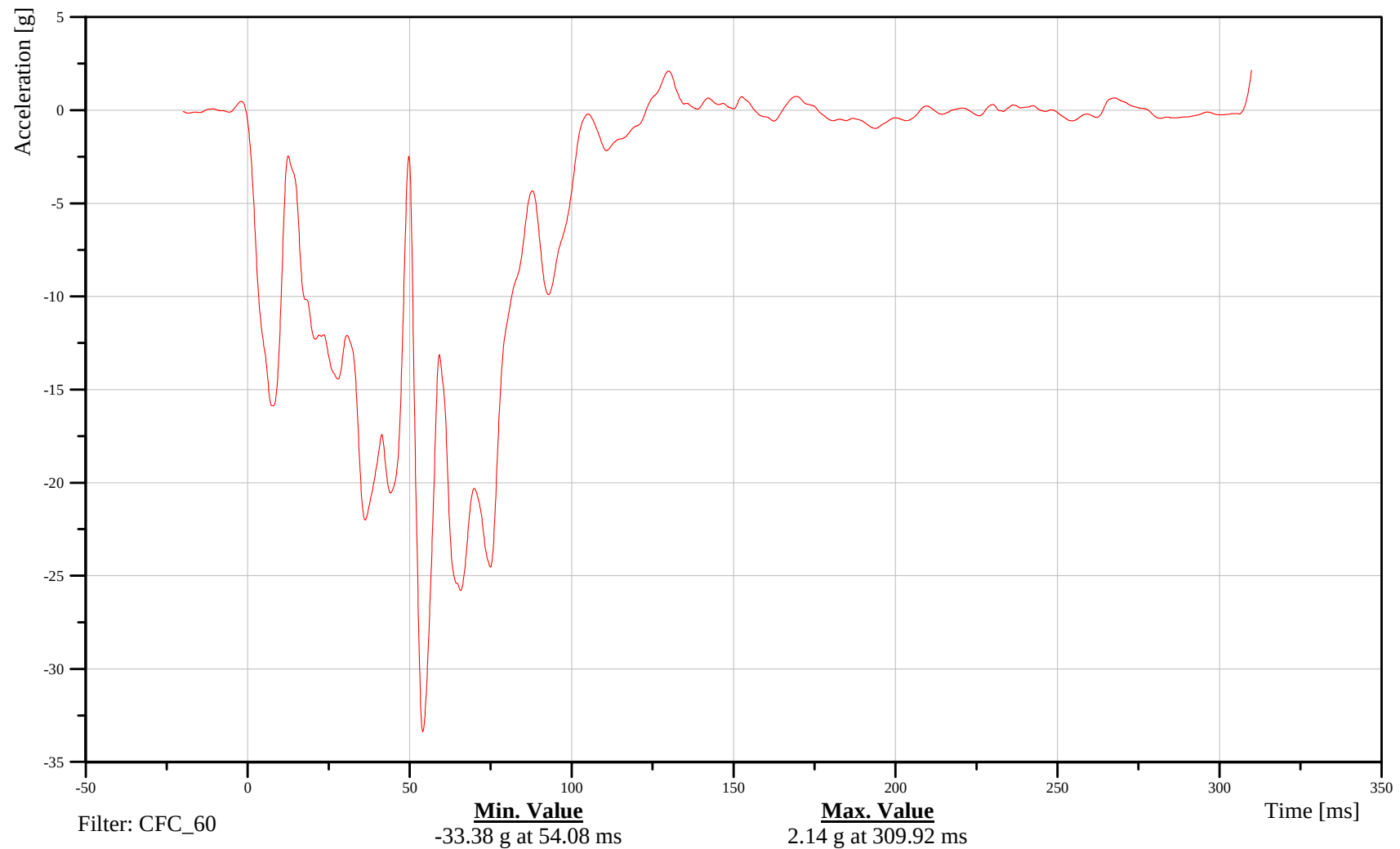
Bullet Vehicle Rear Tunnel Center X-Axis Acceleration

Customer: VRTC

15TUNNCY0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

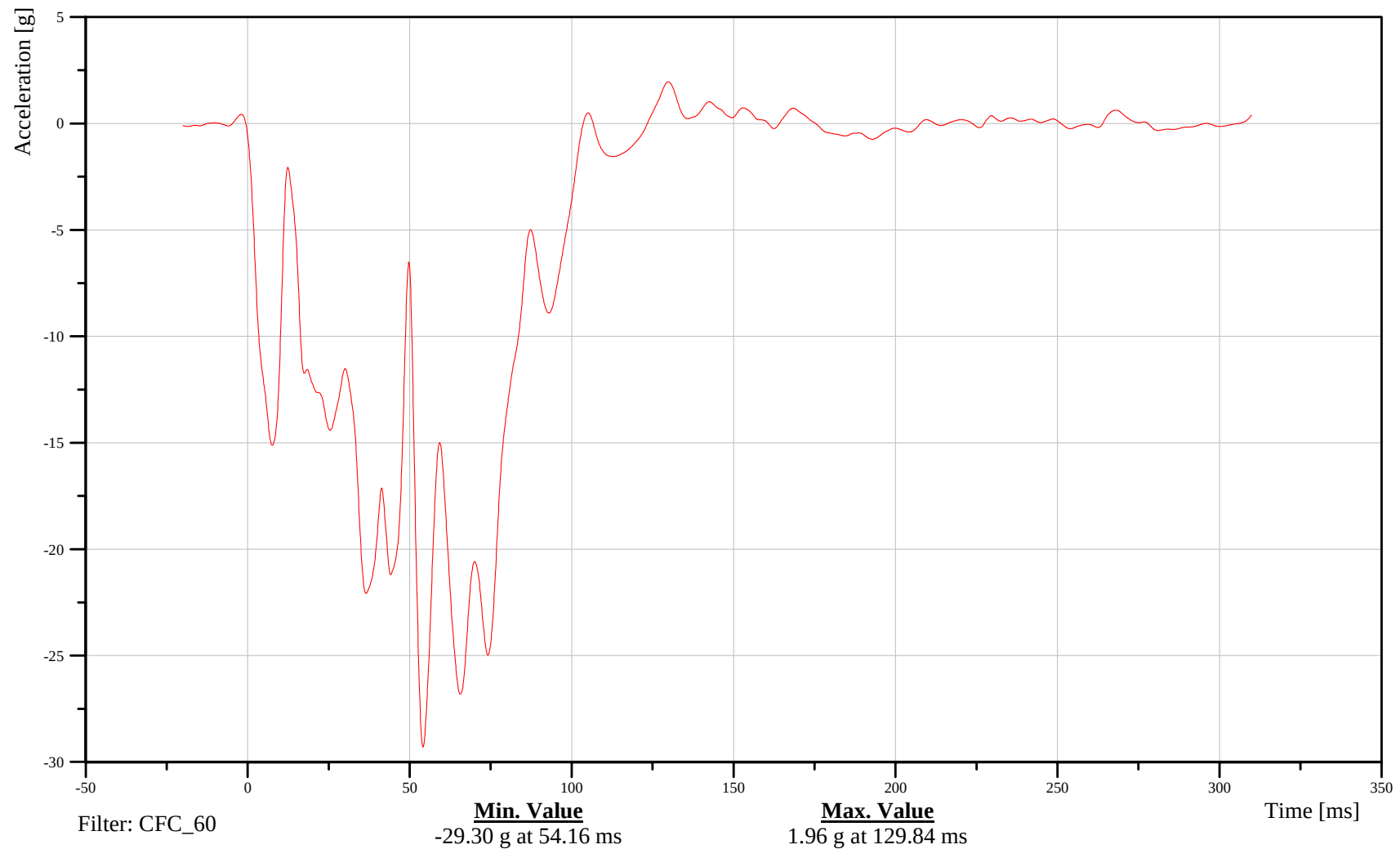
Bullet Vehicle CG X-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

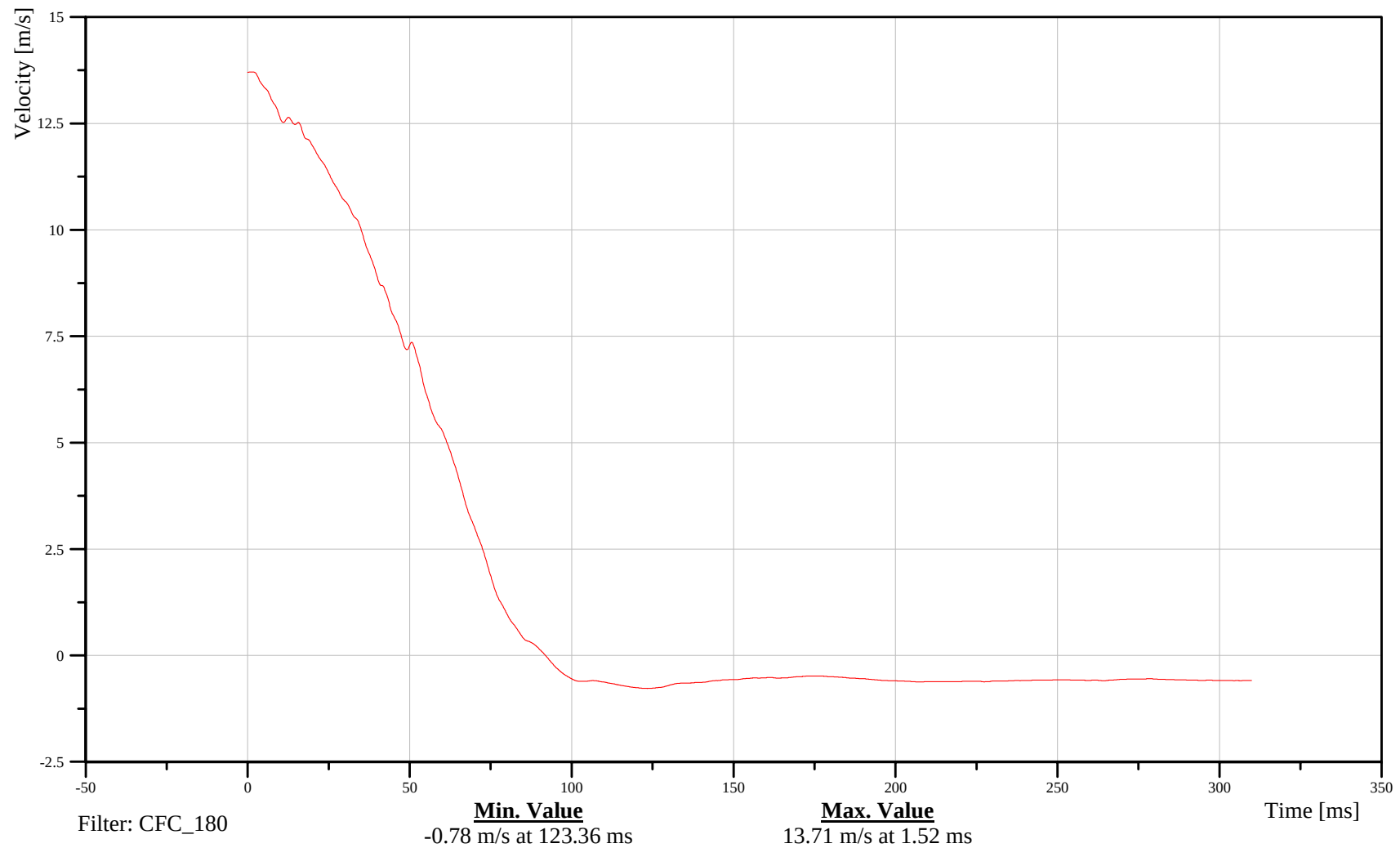
Bullet Vehicle CG X-Axis Velocity

Customer: VRTC

10VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

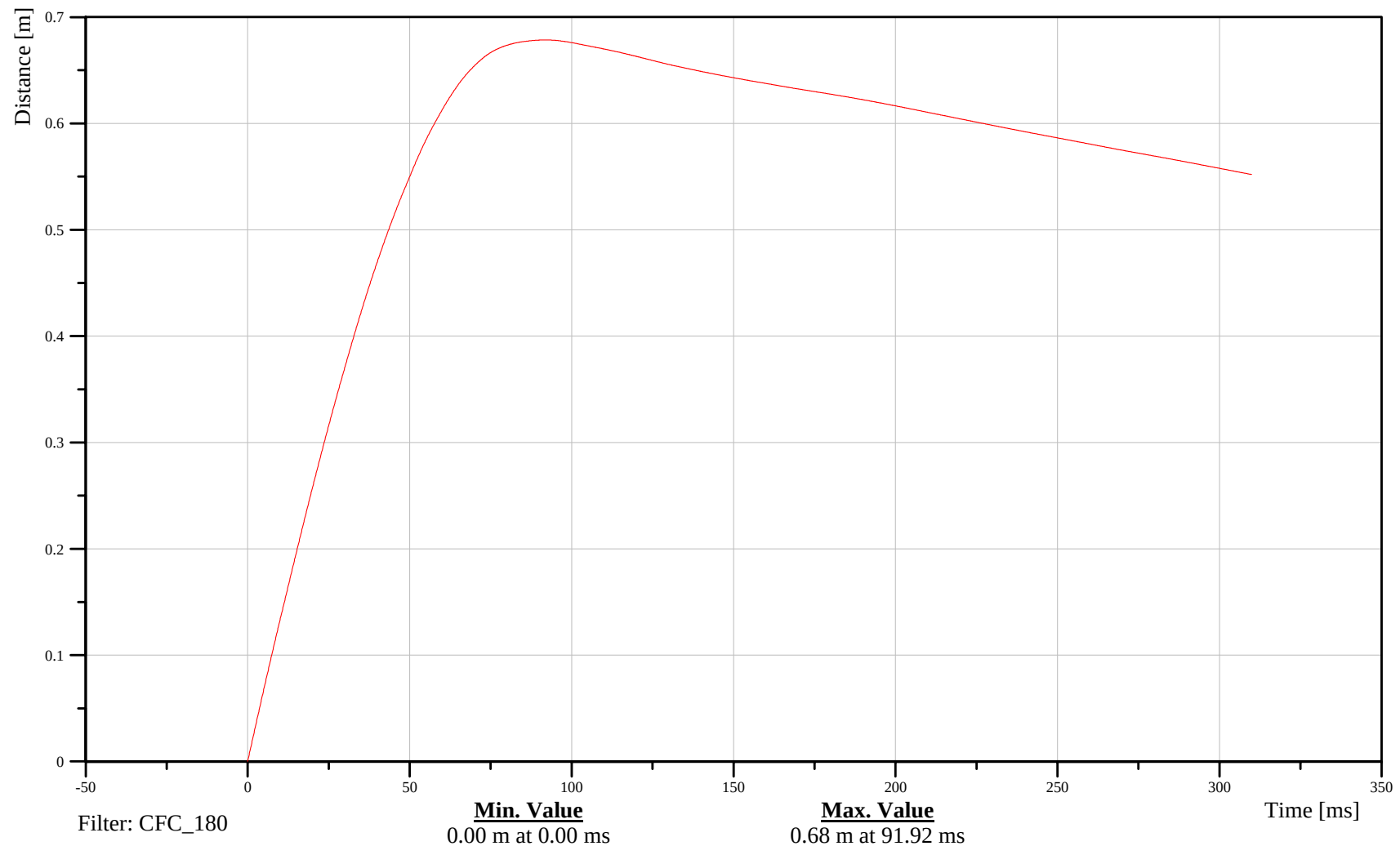
Bullet Vehicle CG X-Axis Displacement

Customer: VRTC

10VEHCCG0000DCXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

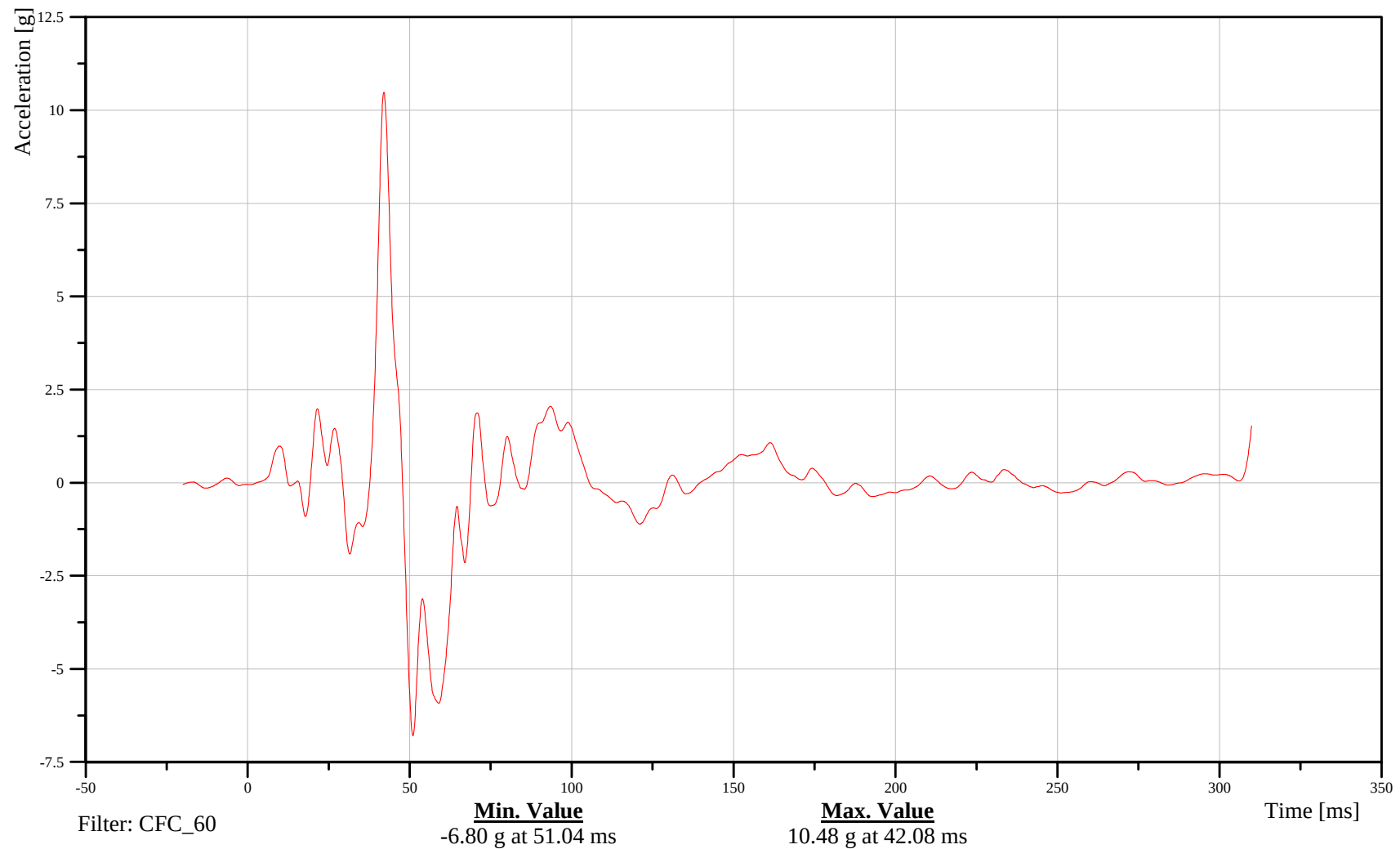
Bullet Vehicle CG Y-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

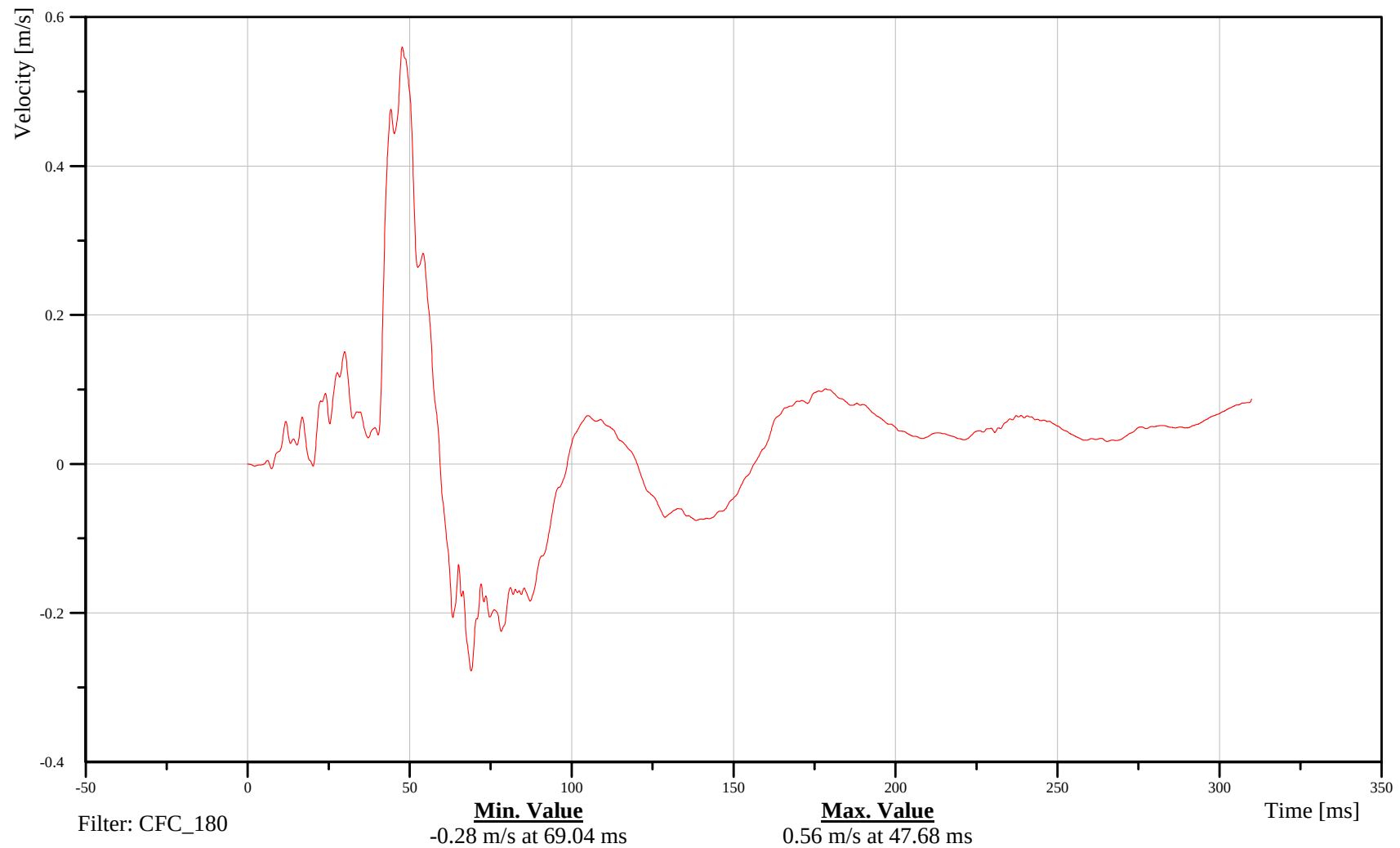
Bullet Vehicle CG Y-Axis Velocity

Customer: VRTC

10VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

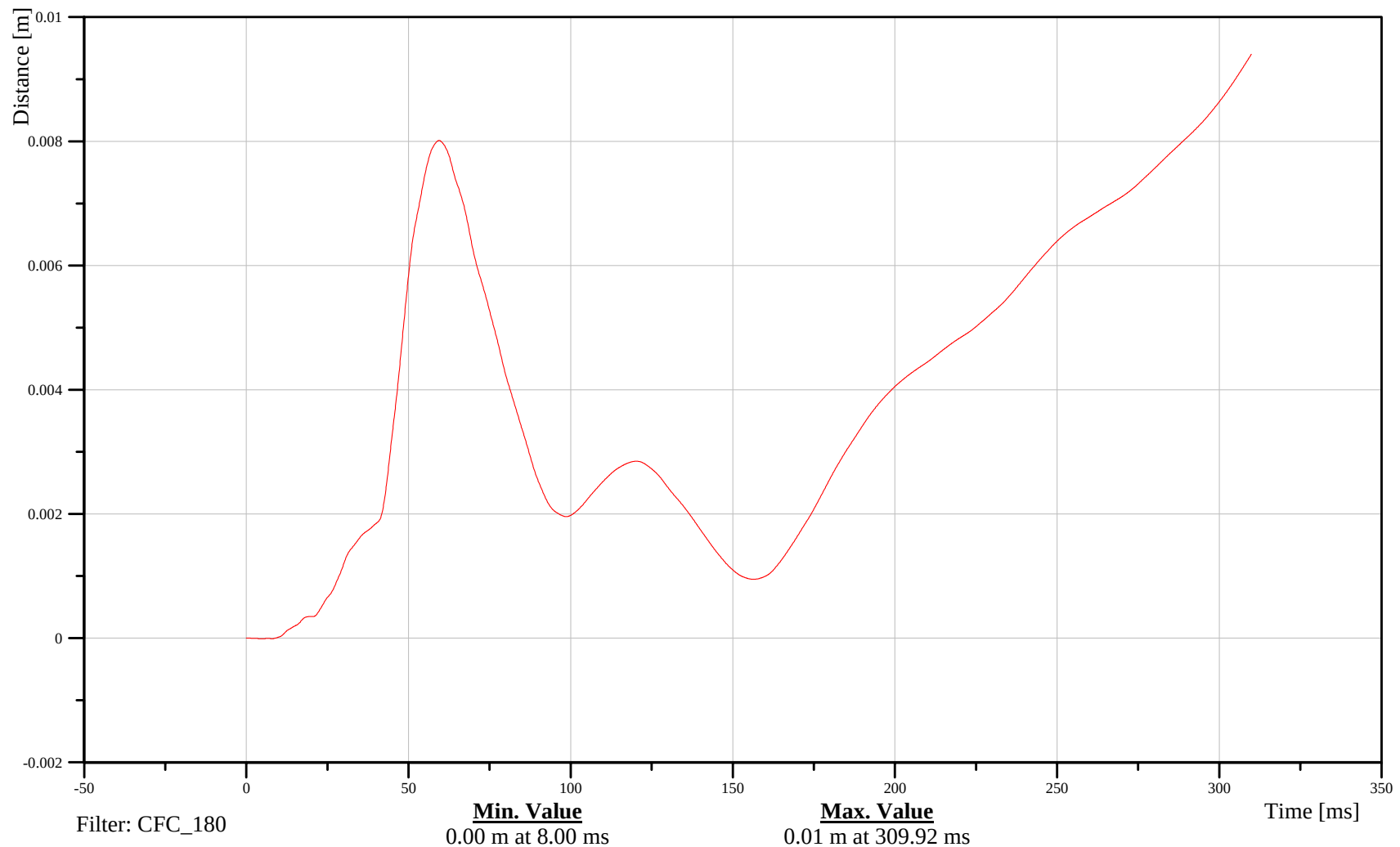
Bullet Vehicle CG Y-Axis Displacement

Customer: VRTC

10VEHCCG0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

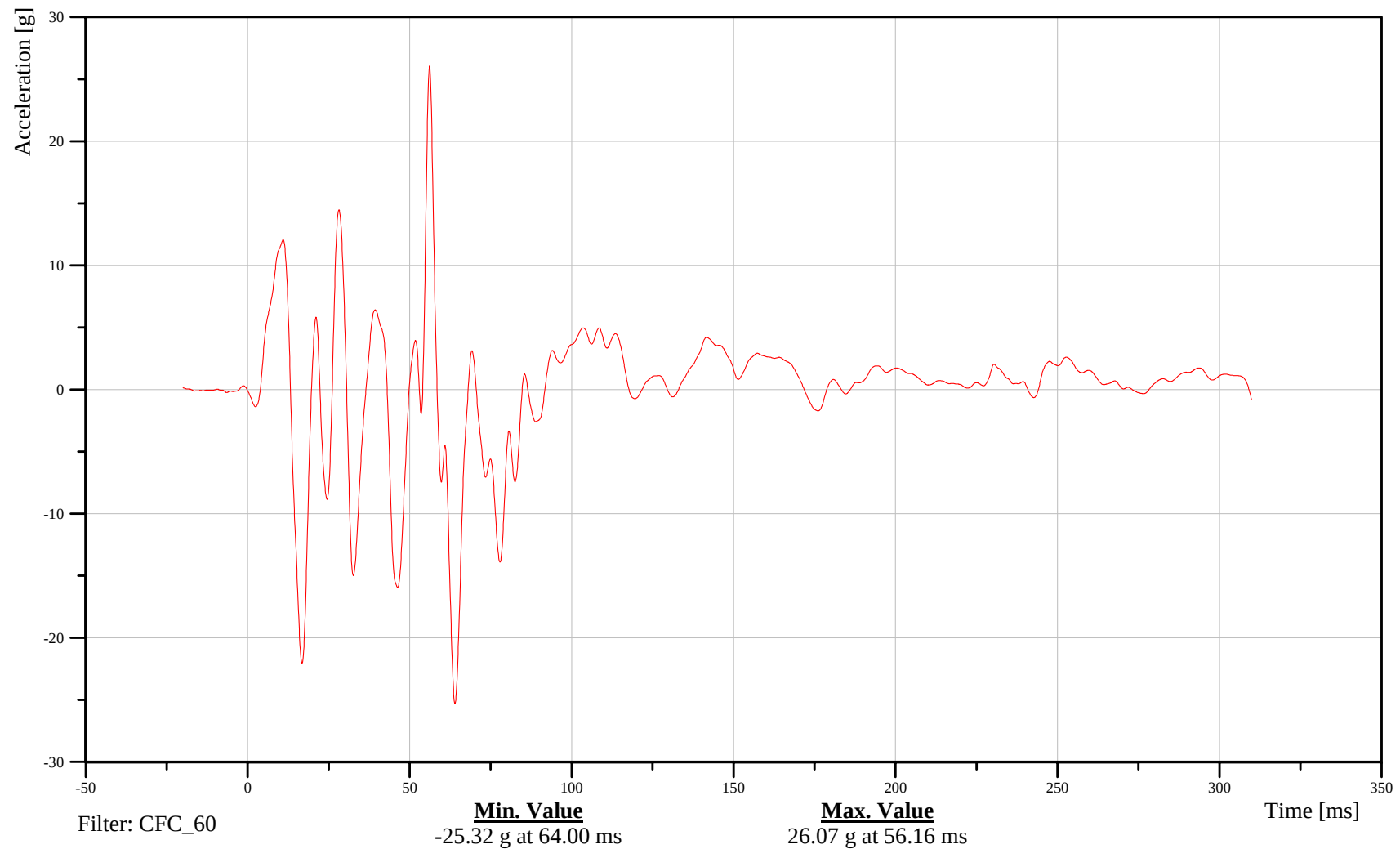
Bullet Vehicle CG Z-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

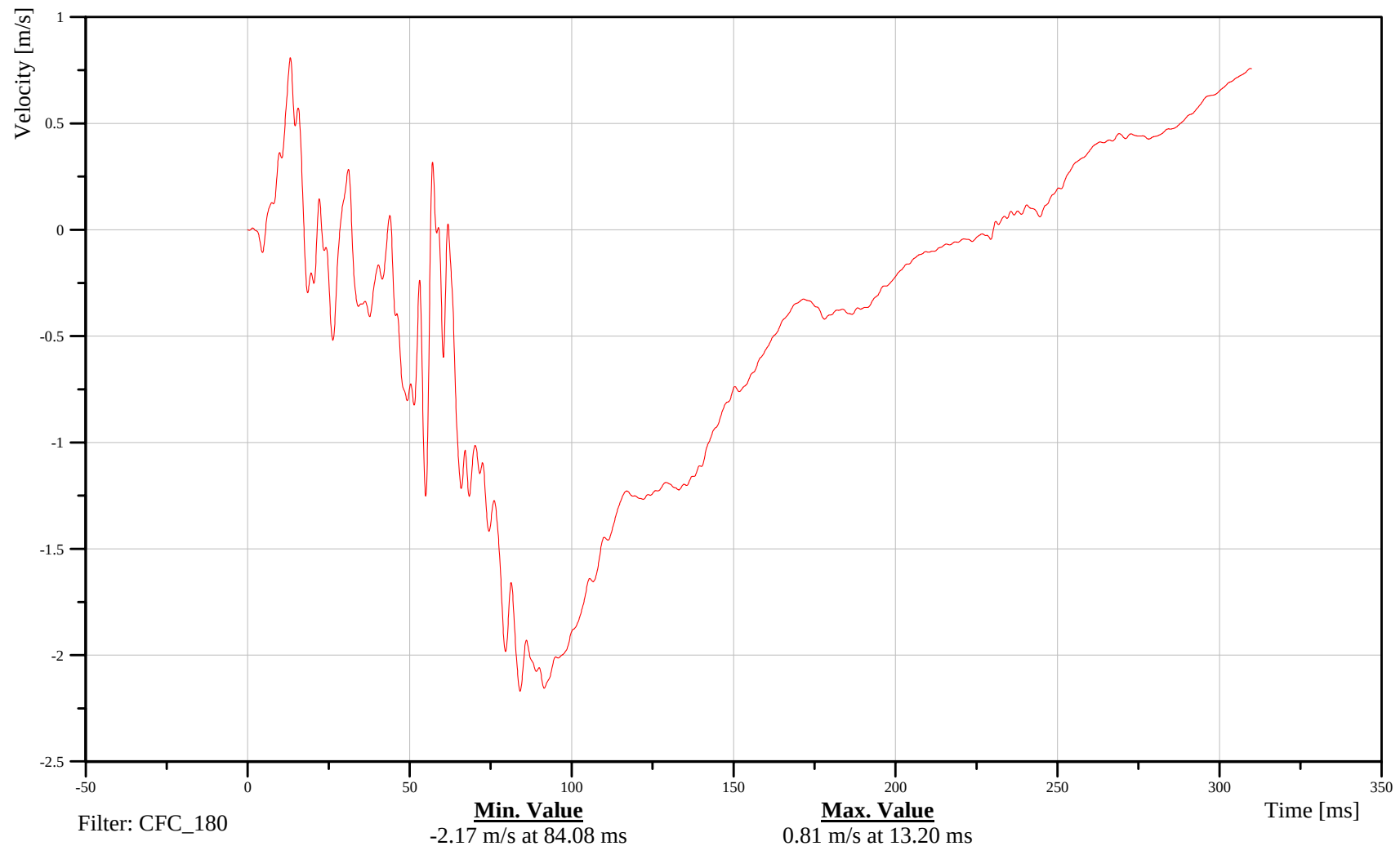
Bullet Vehicle CG Z-Axis Velocity

Customer: VRTC

10VEHCCG0000VEZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

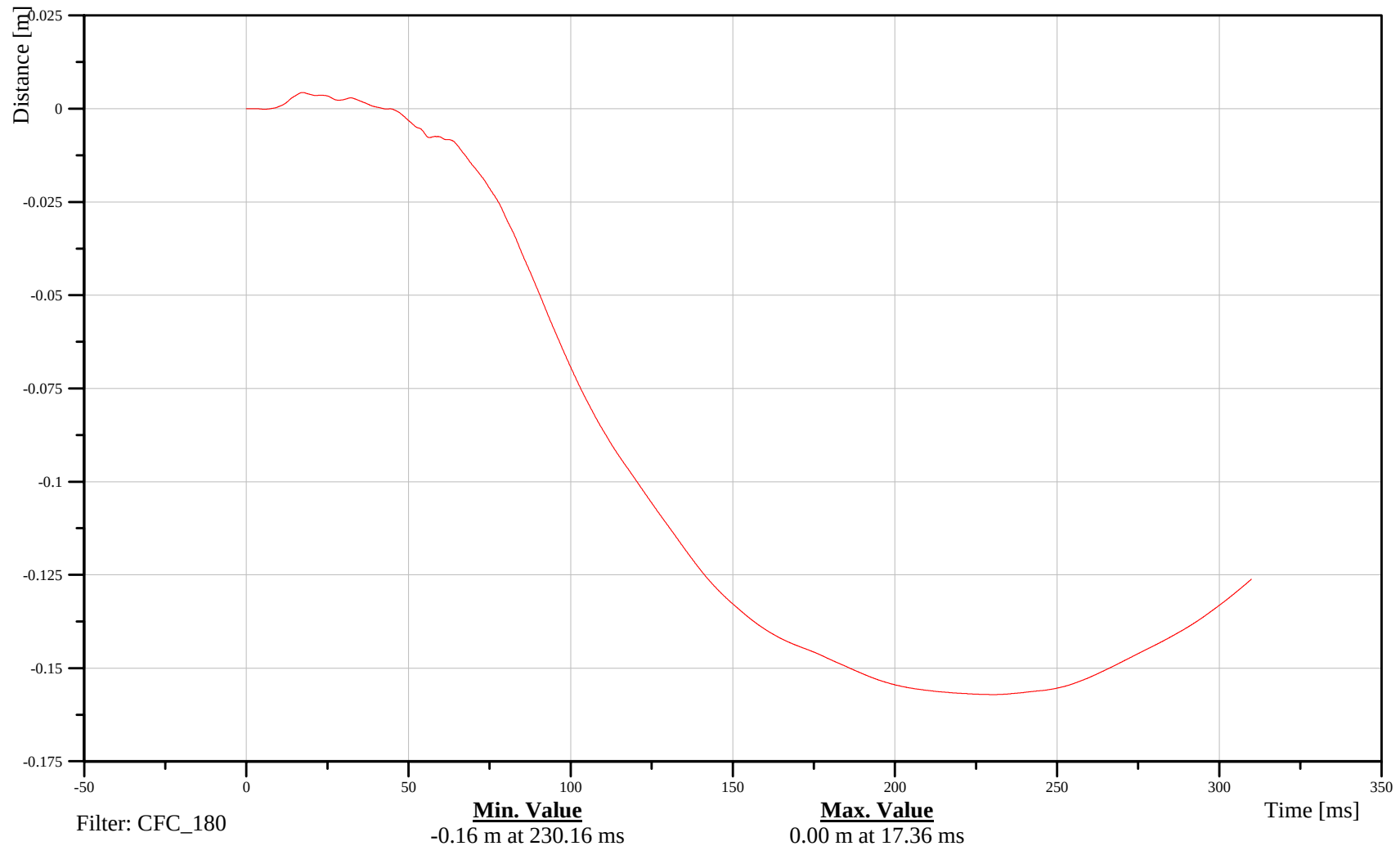
Bullet Vehicle CG Z-Axis Displacement

Customer: VRTC

10VEHCCG0000DCZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

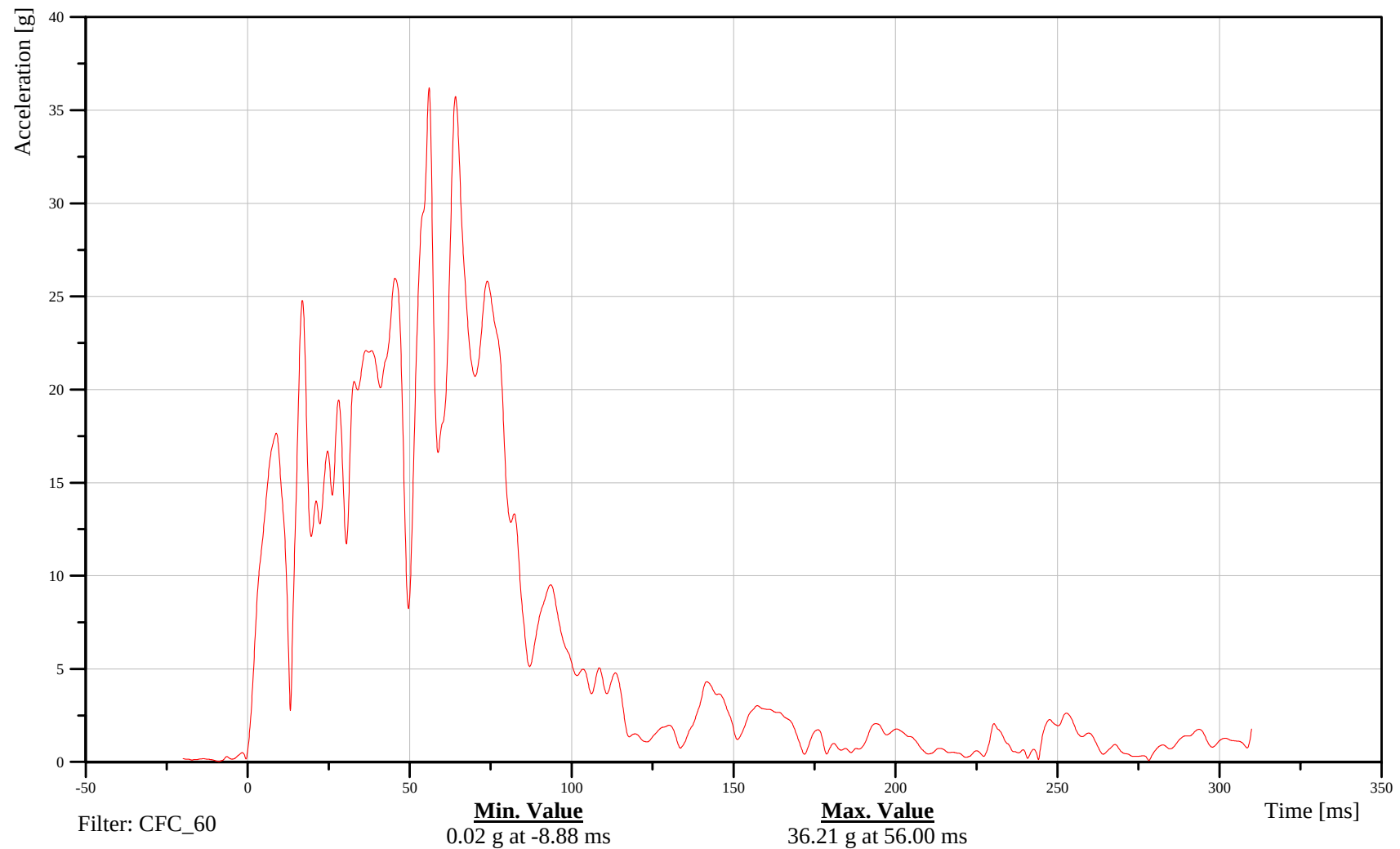
Bullet Vehicle CG Resultant Acceleration

Customer: VRTC

10VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

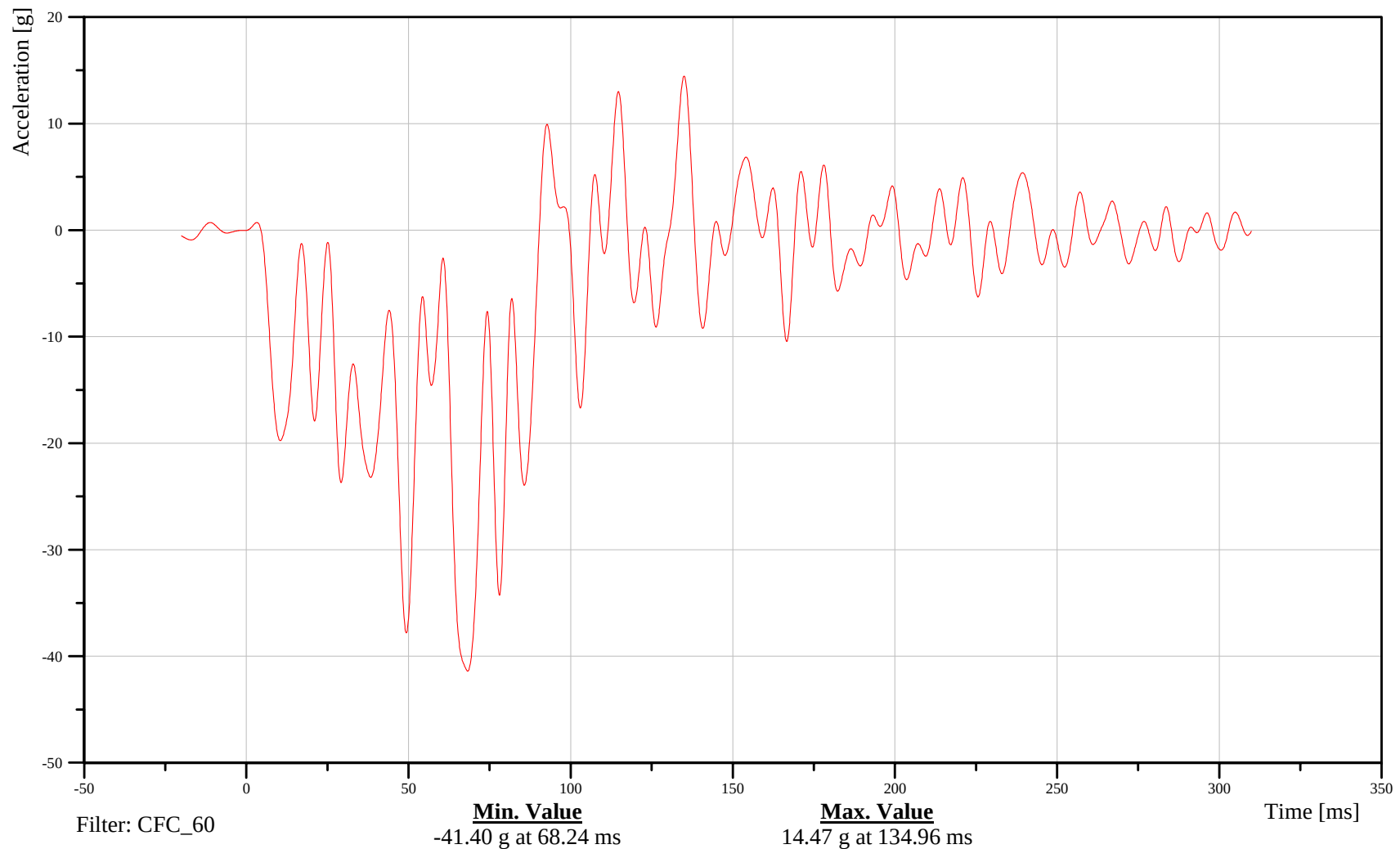
Bullet Vehicle Rear Deck X-Axis Acceleration

Customer: VRTC

18VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

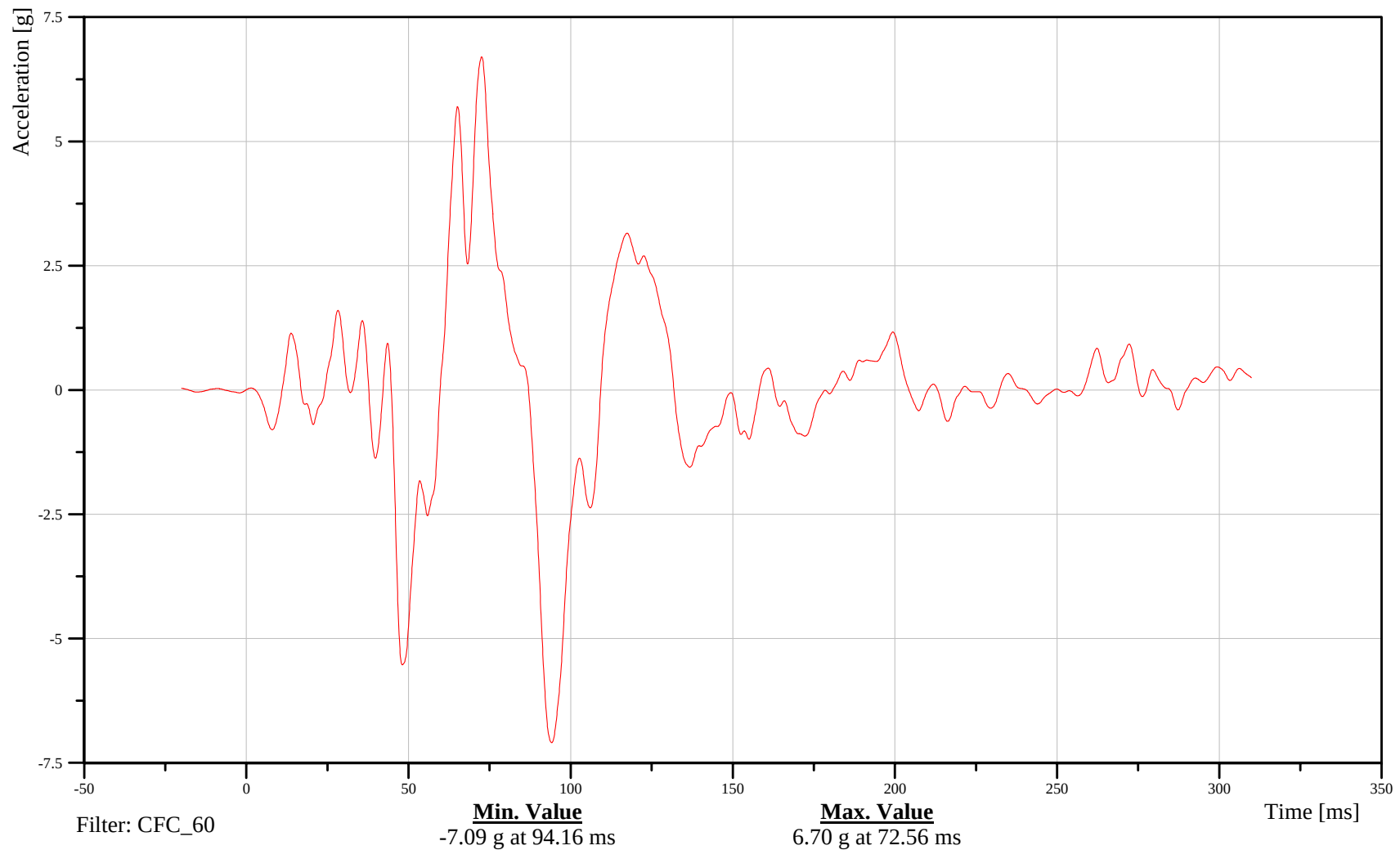
Bullet Vehicle Rear Deck Y-Axis Acceleration

Customer: VRTC

18VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

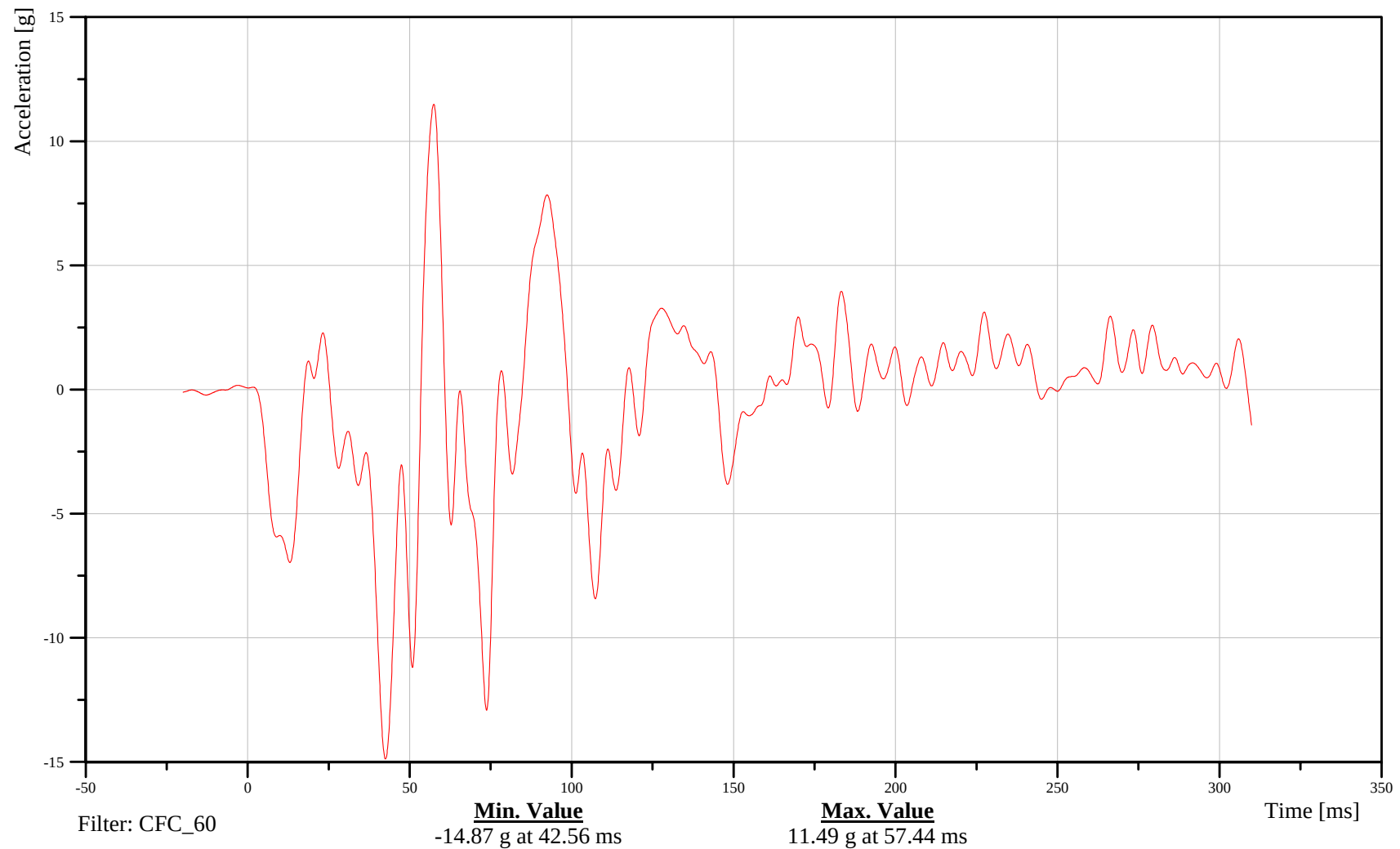
Bullet Vehicle Rear Deck Z-Axis Acceleration

Customer: VRTC

18VEHC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

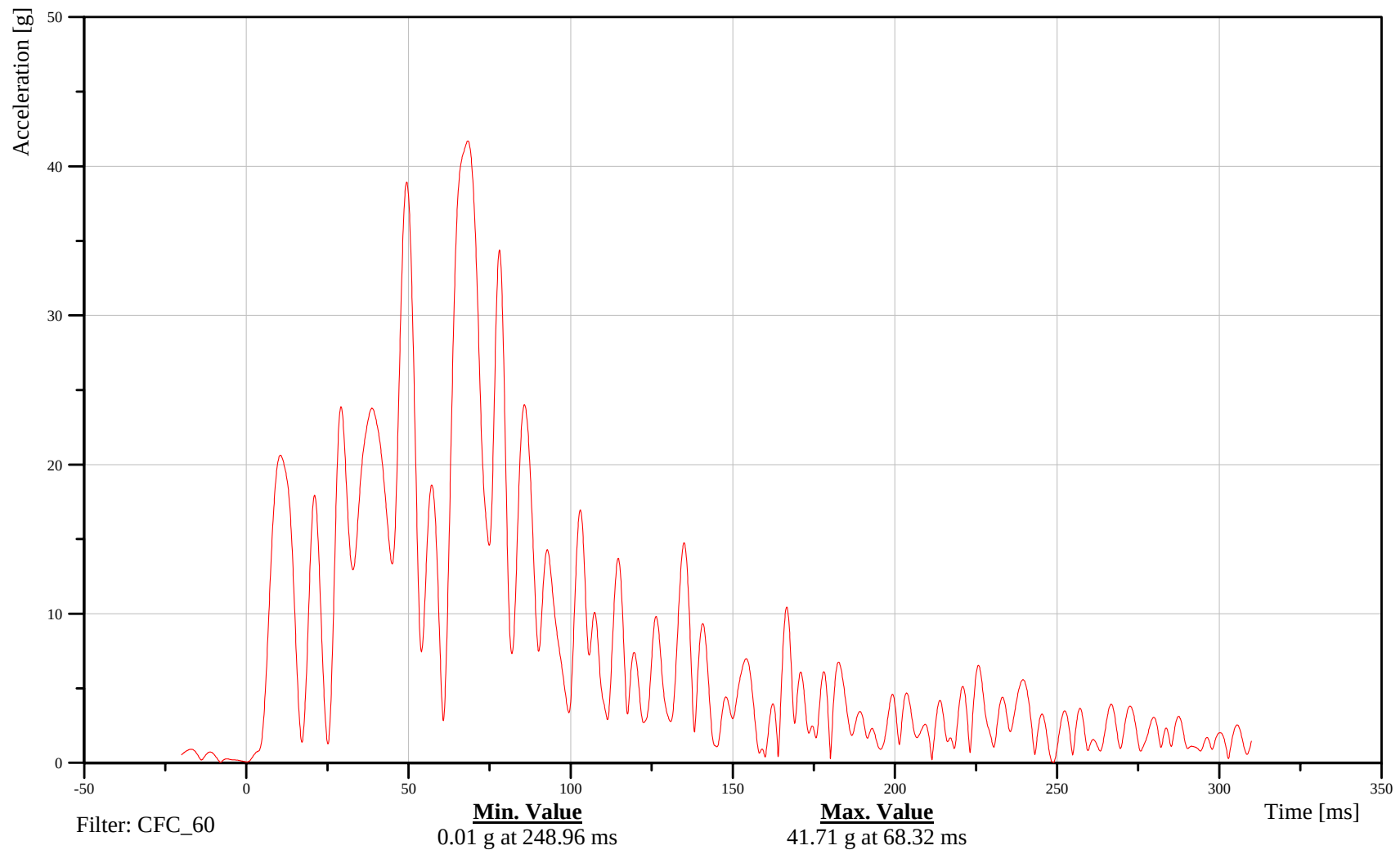
Bullet Vehicle Rear Deck Resultant Acceleration

Customer: VRTC

18VEHC000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

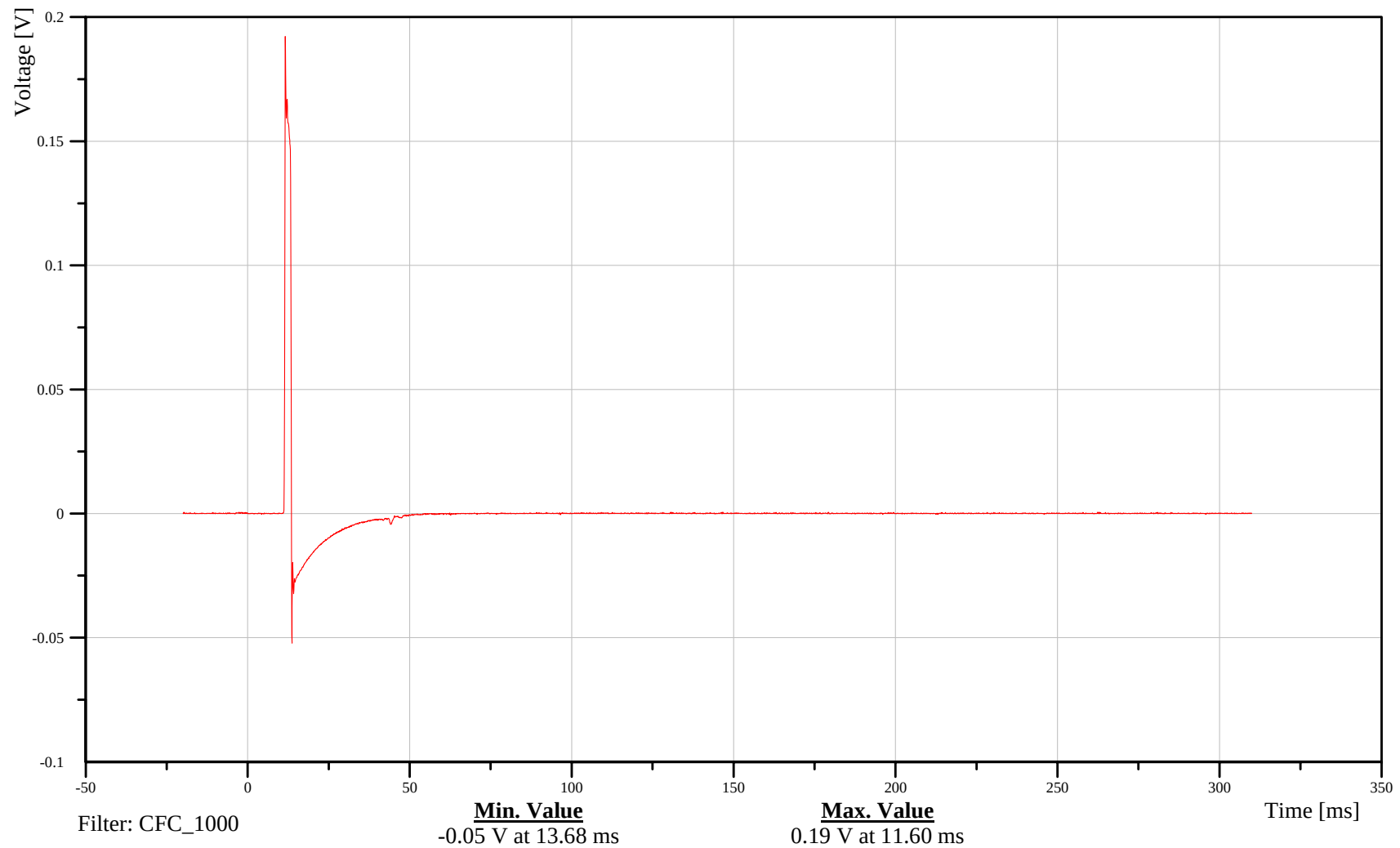
Bullet Vehicle Driver Airbag - Primary

Customer: VRTC

11AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

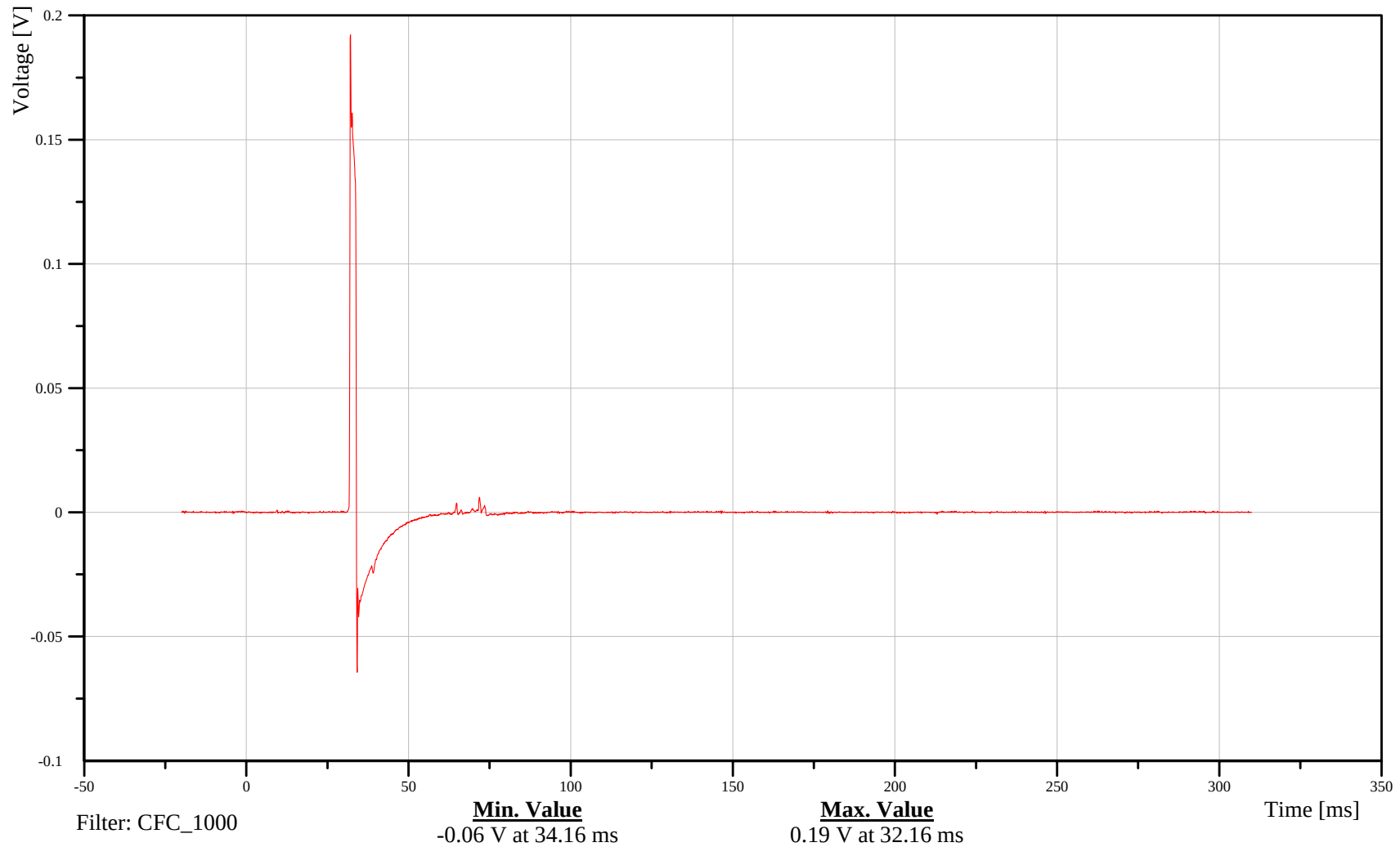
Bullet Vehicle Driver Airbag - Secondary

Customer: VRTC

11AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

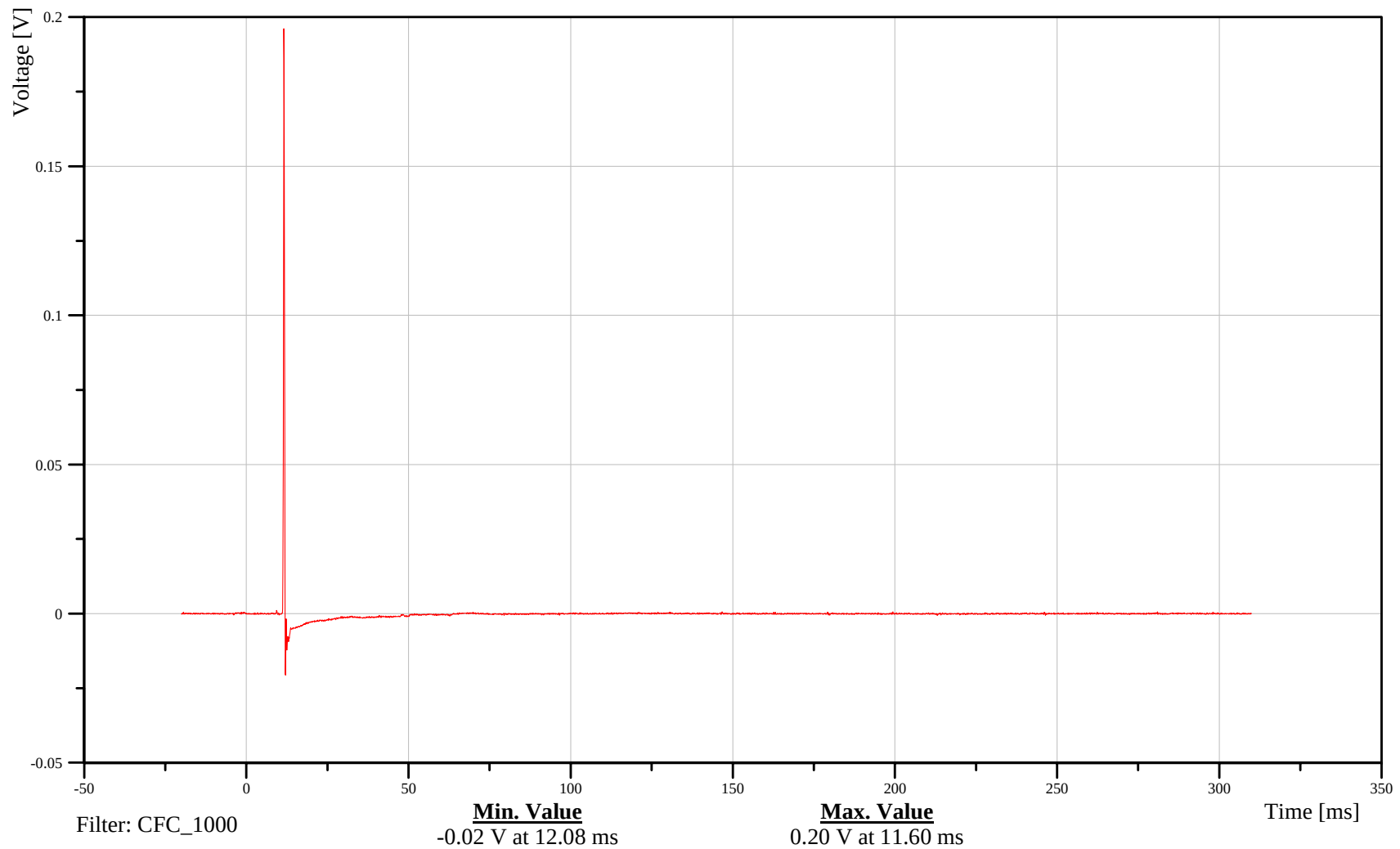
Bullet Vehicle Passenger Airbag - Primary

Customer: VRTC

13AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

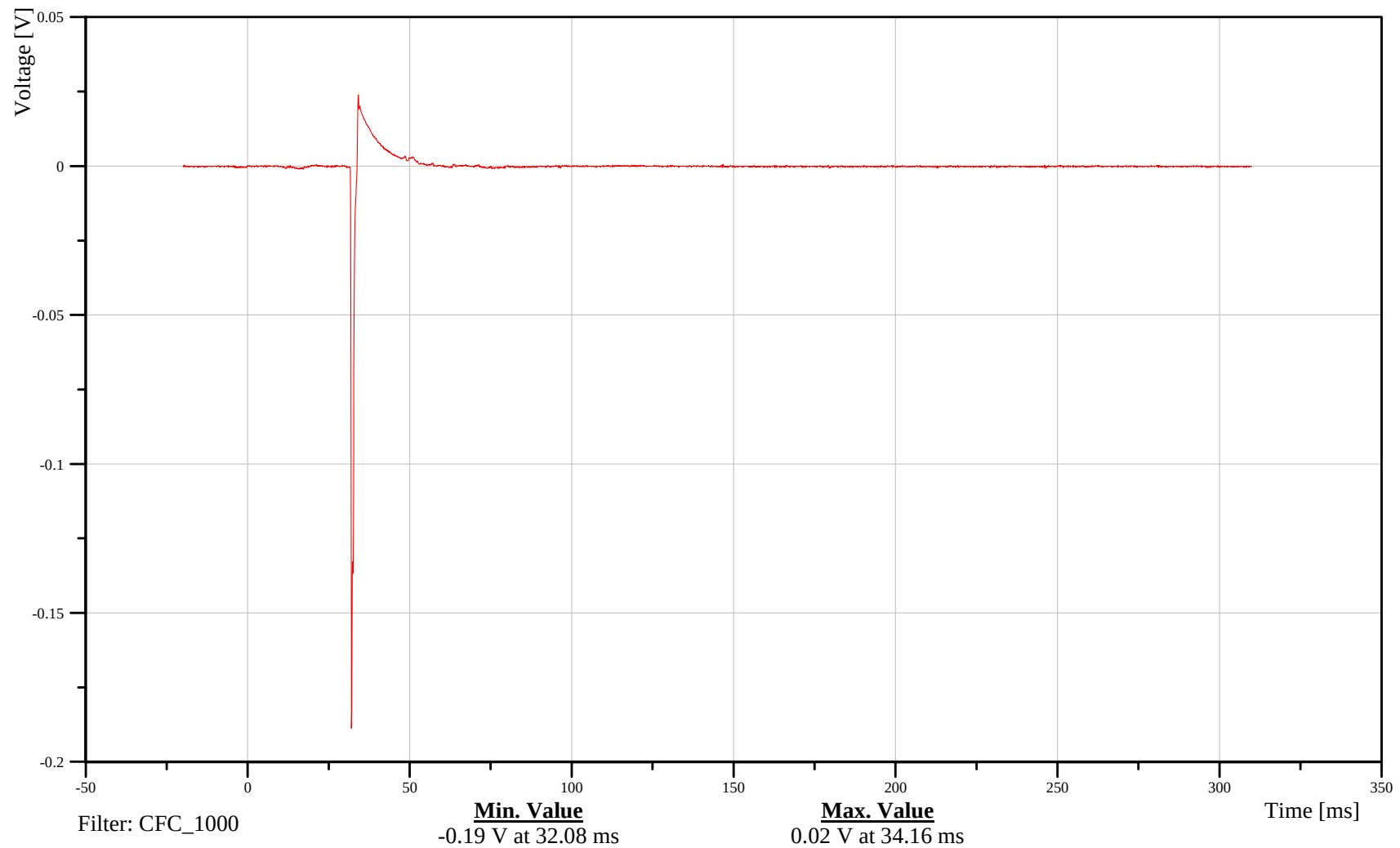
Bullet Vehicle Passenger Airbag - Secondary

Customer: VRTC

13AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

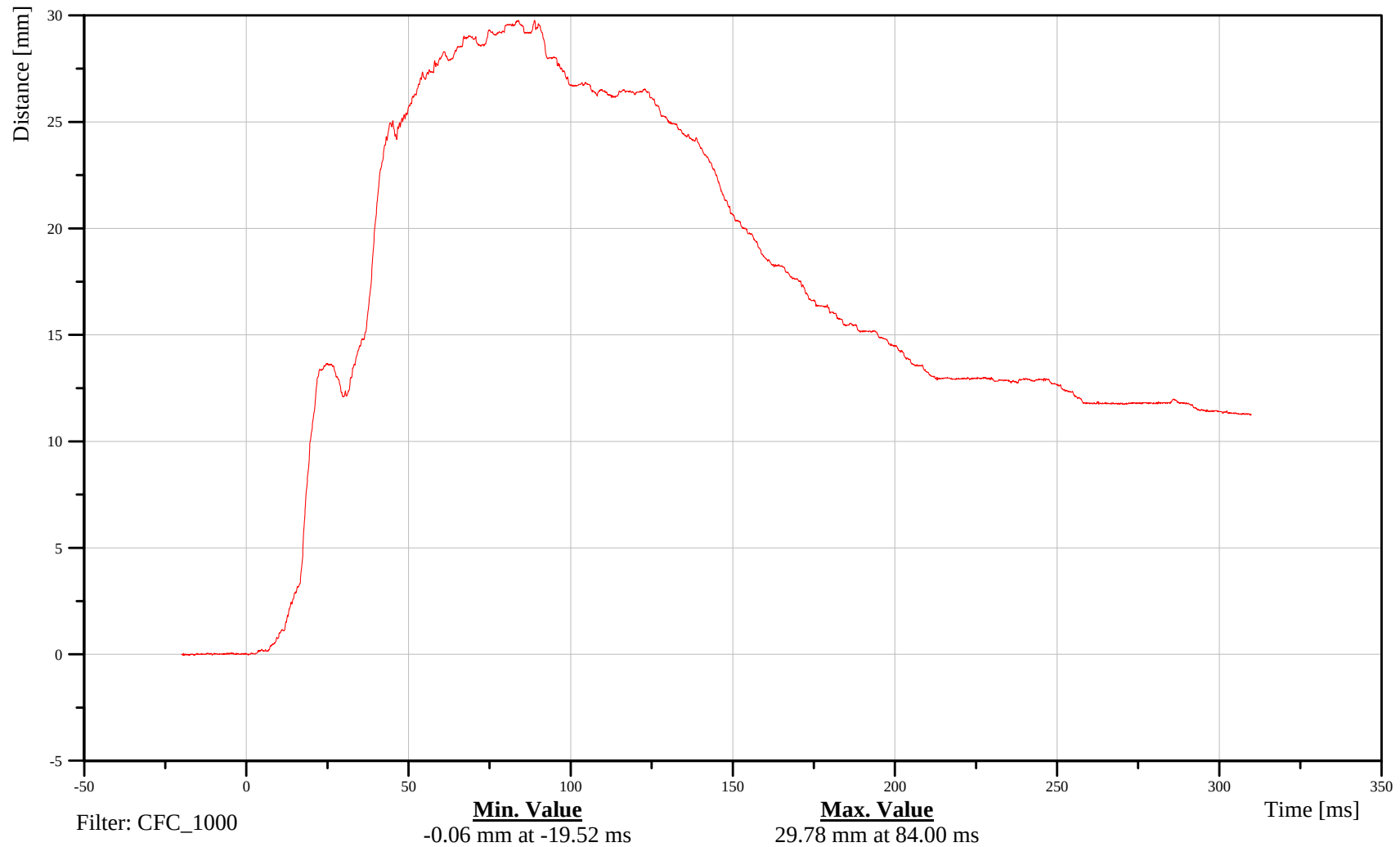
Bullet Vehicle Driver Shoulder Belt Spool and Retraction

Customer: VRTC

11SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

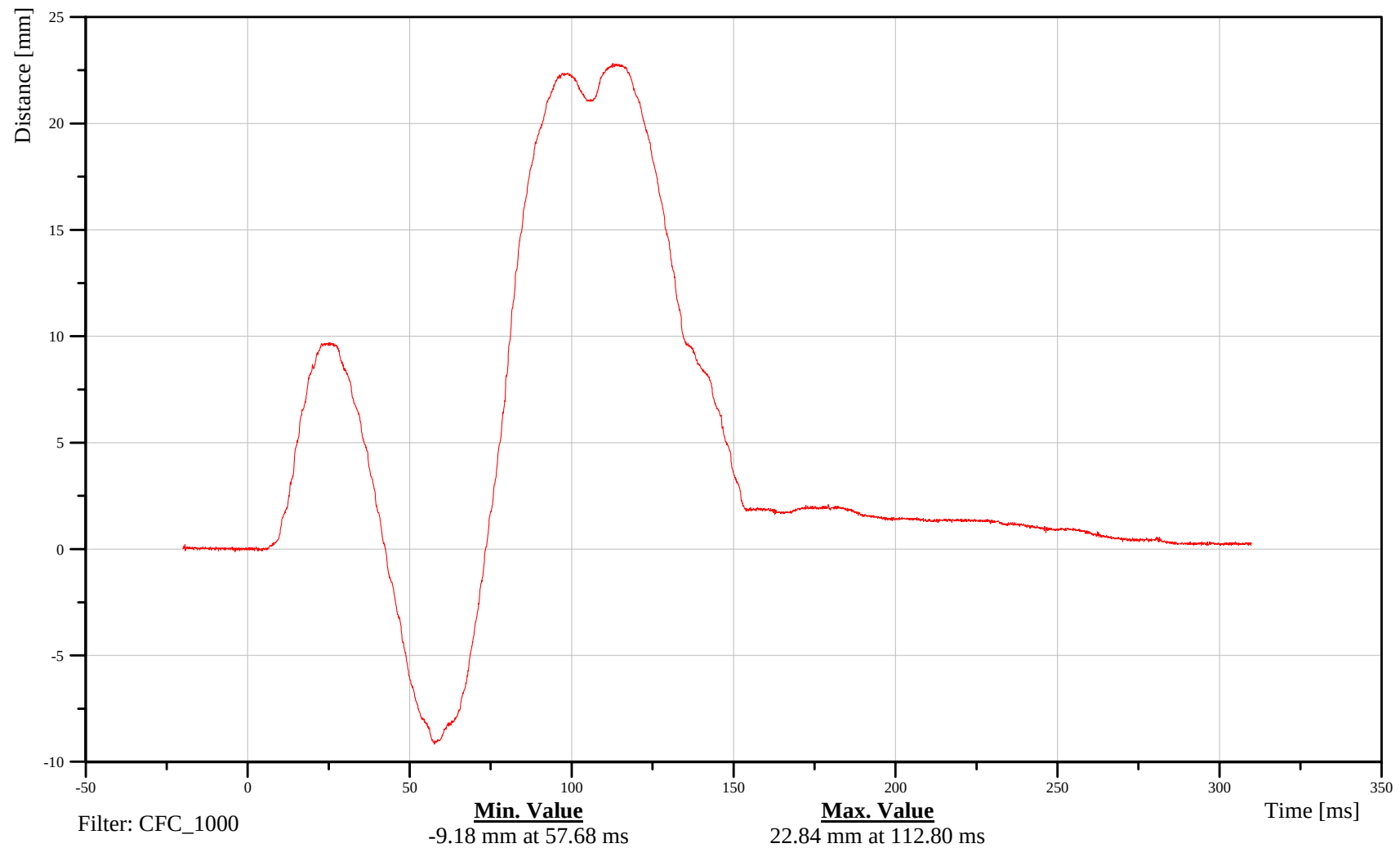
Bullet Vehicle RF Passenger Lap Belt Spool

Customer: VRTC

11SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Bullet Vehicle RF Passenger Shoulder Belt Spool and Retraction

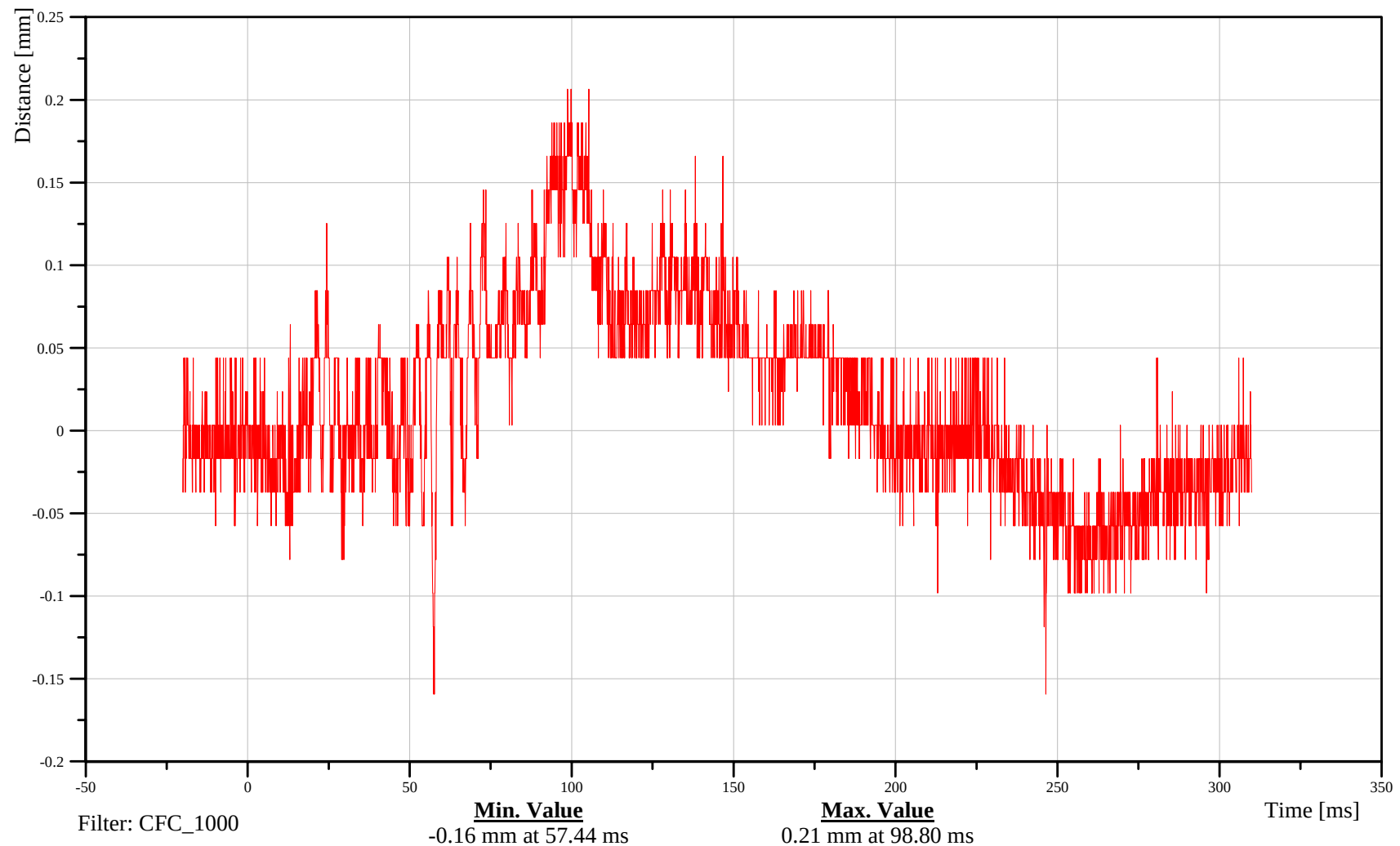
Time: 11:08

Customer: VRTC

13SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle IP Center

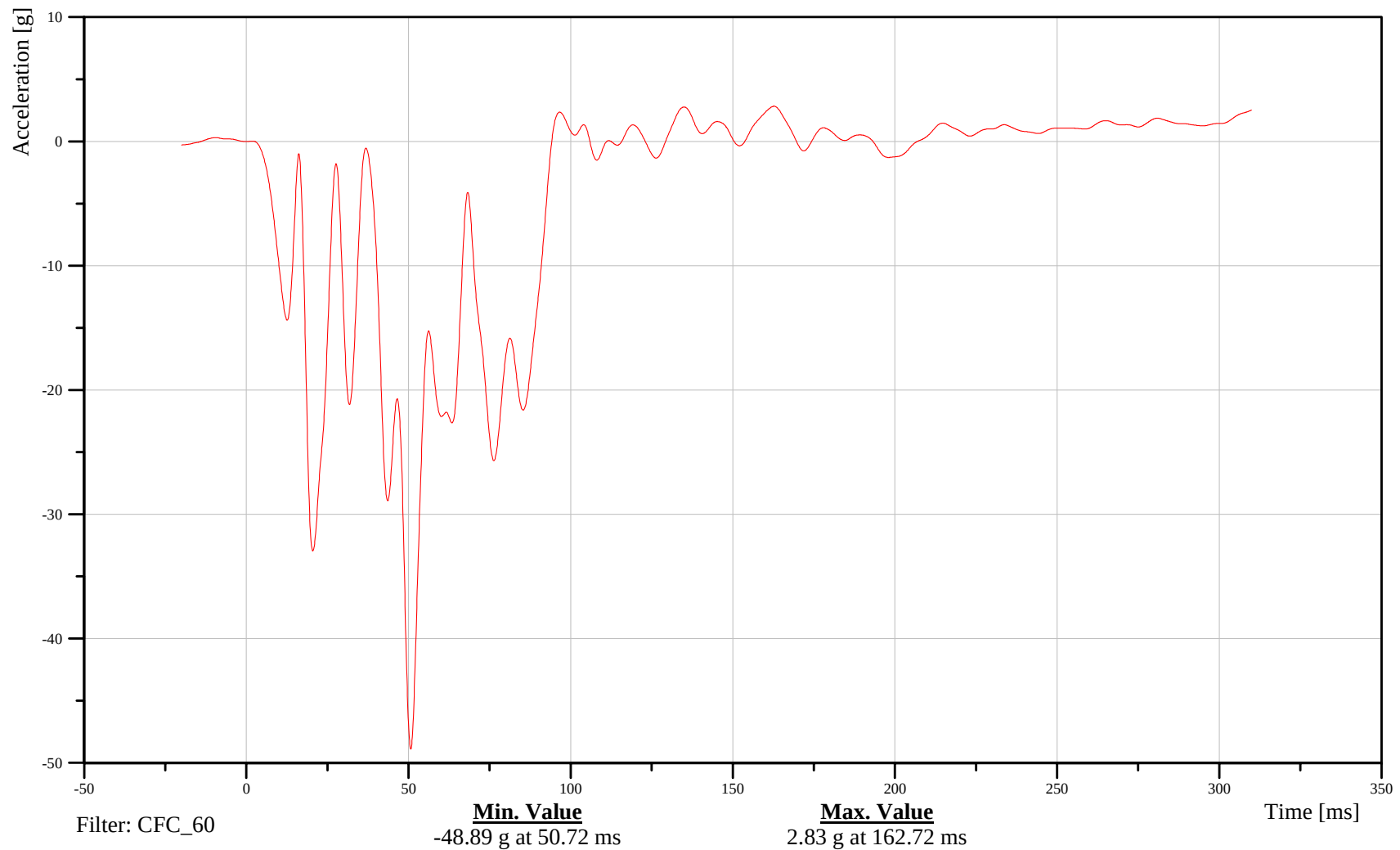
Date: 03/27/2006
Time: 11:08

Customer: VRTC

12DASH000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

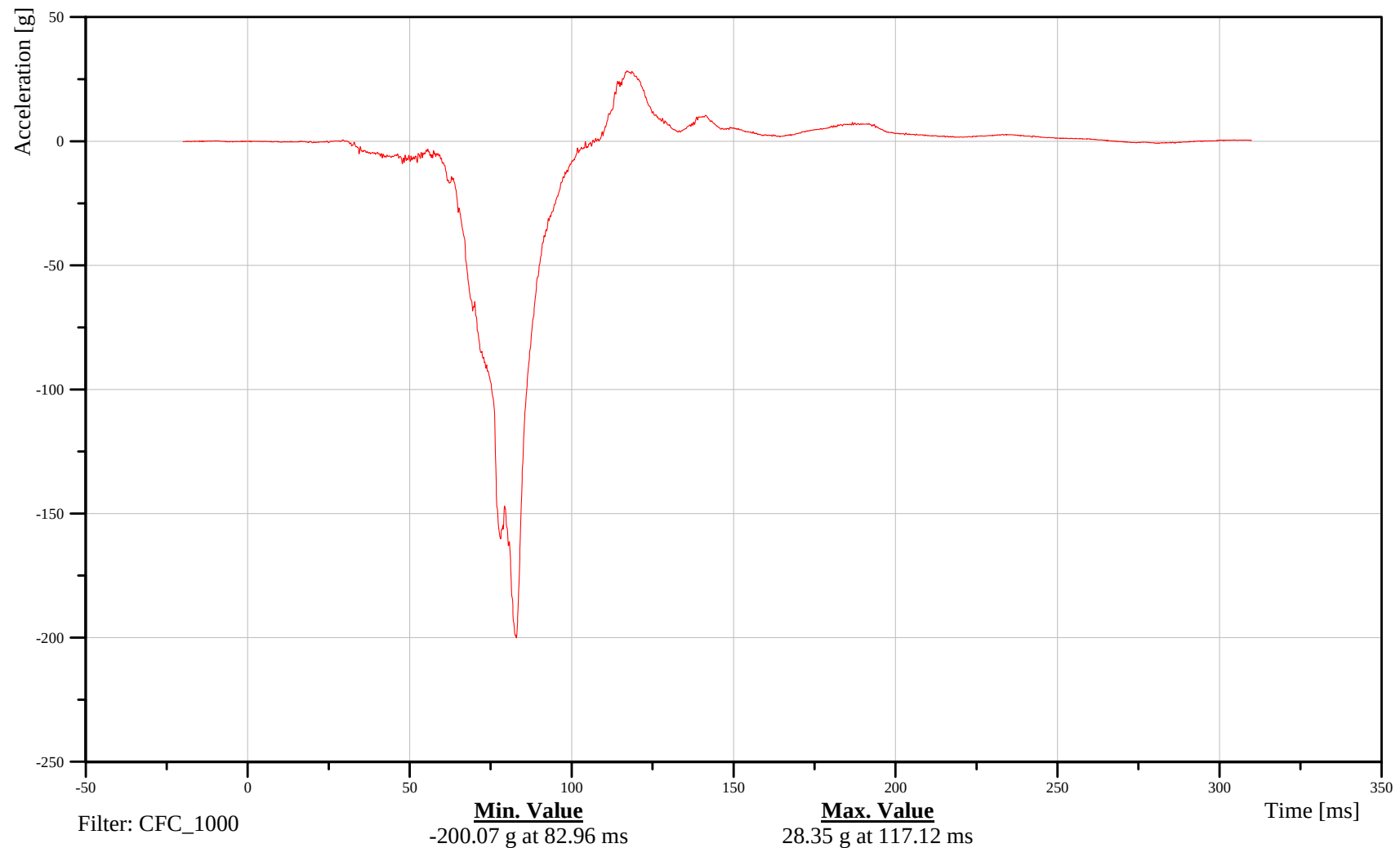
Target Driver Head X-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

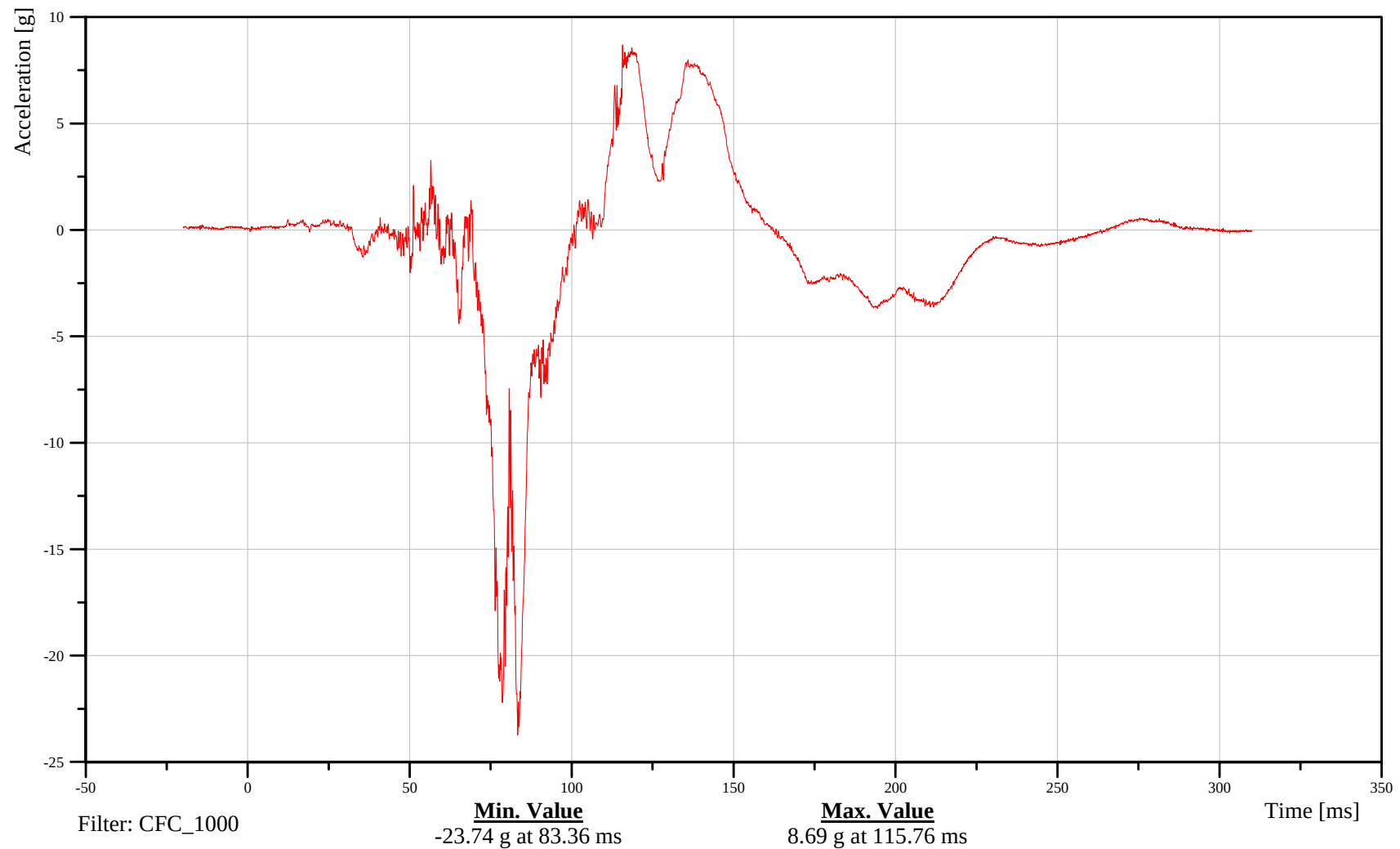
Target Driver Head Y-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

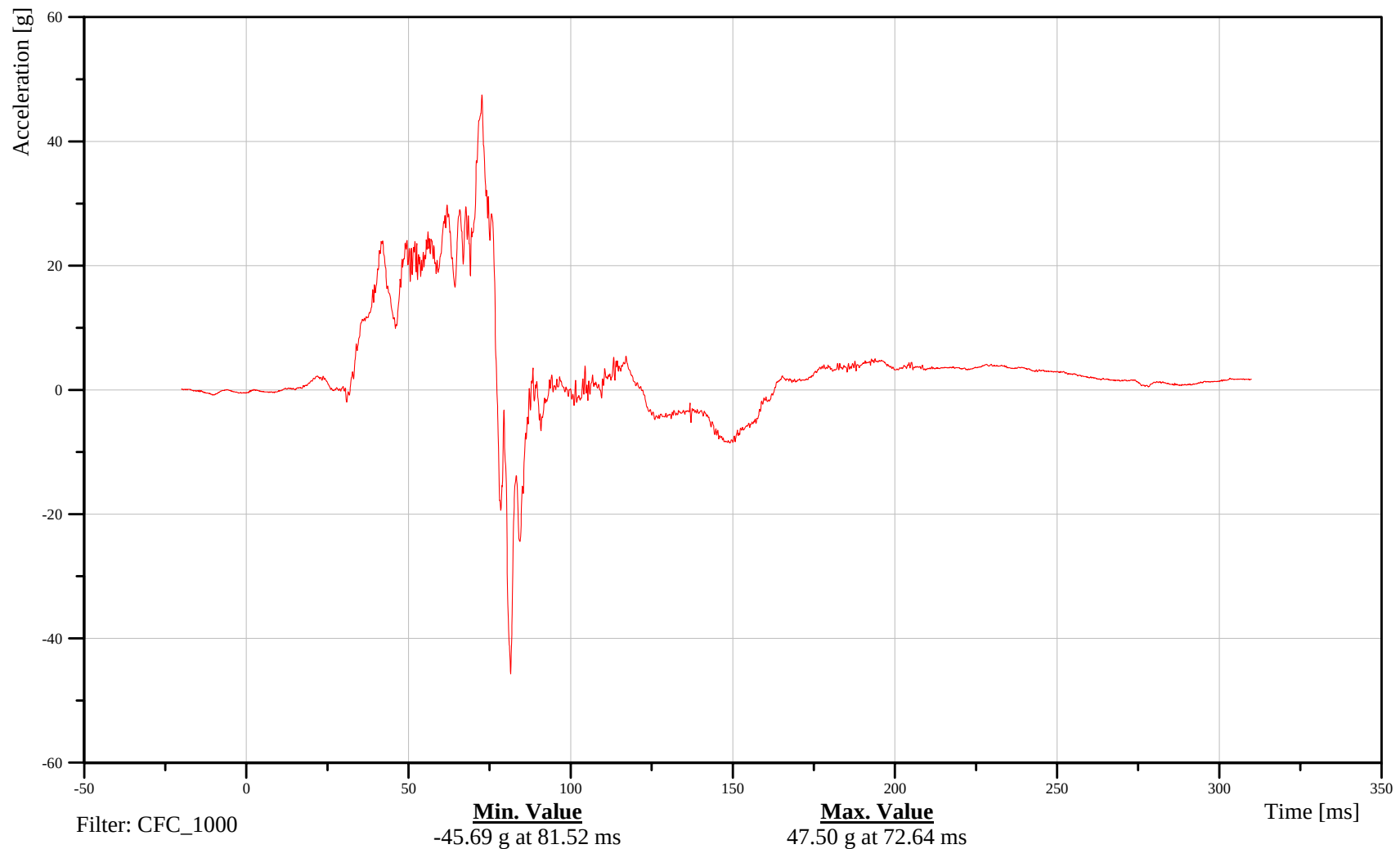
Target Driver Head Z-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

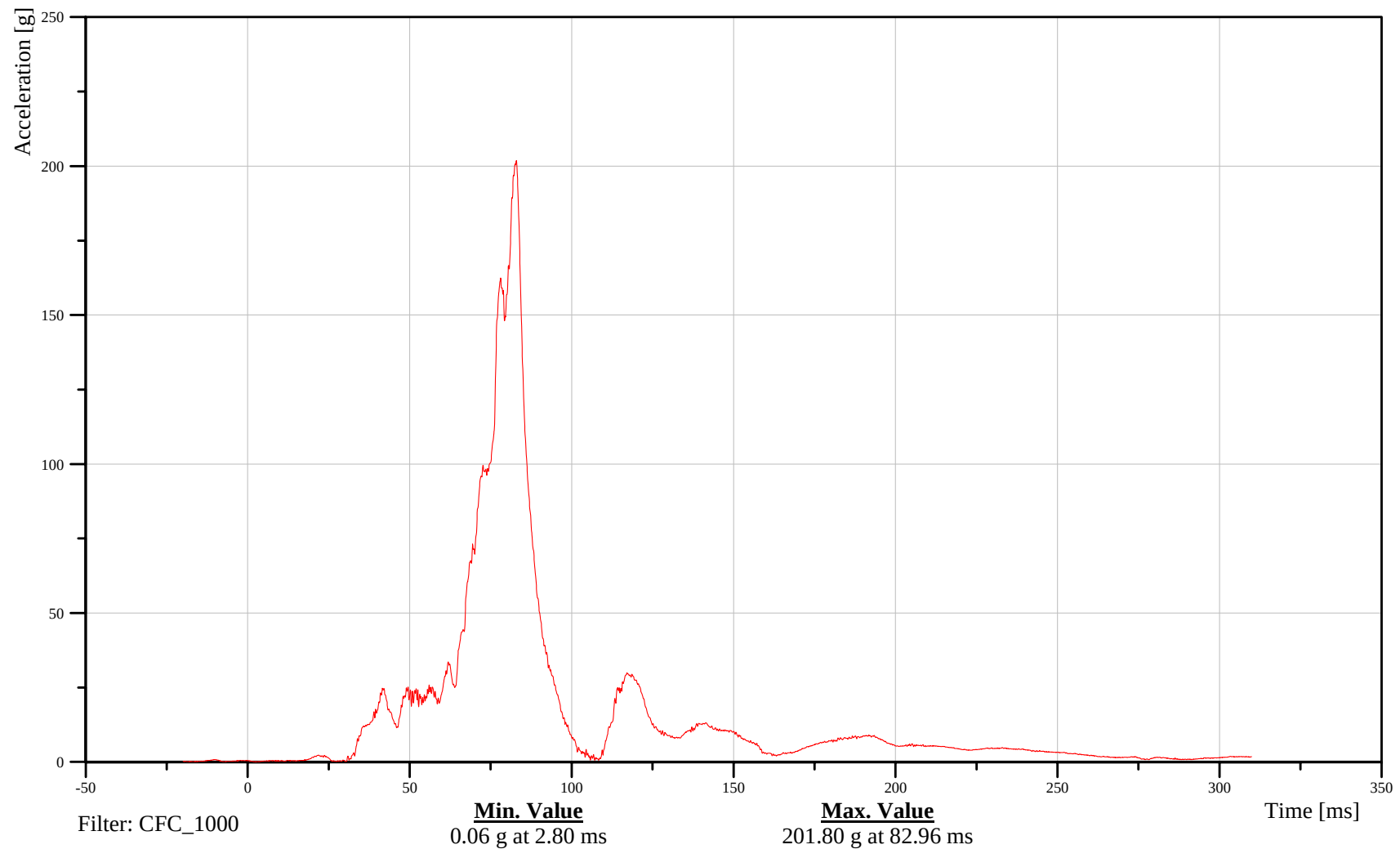
Target Driver Head Resultant Acceleration

Customer: VRTC

21HEADCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

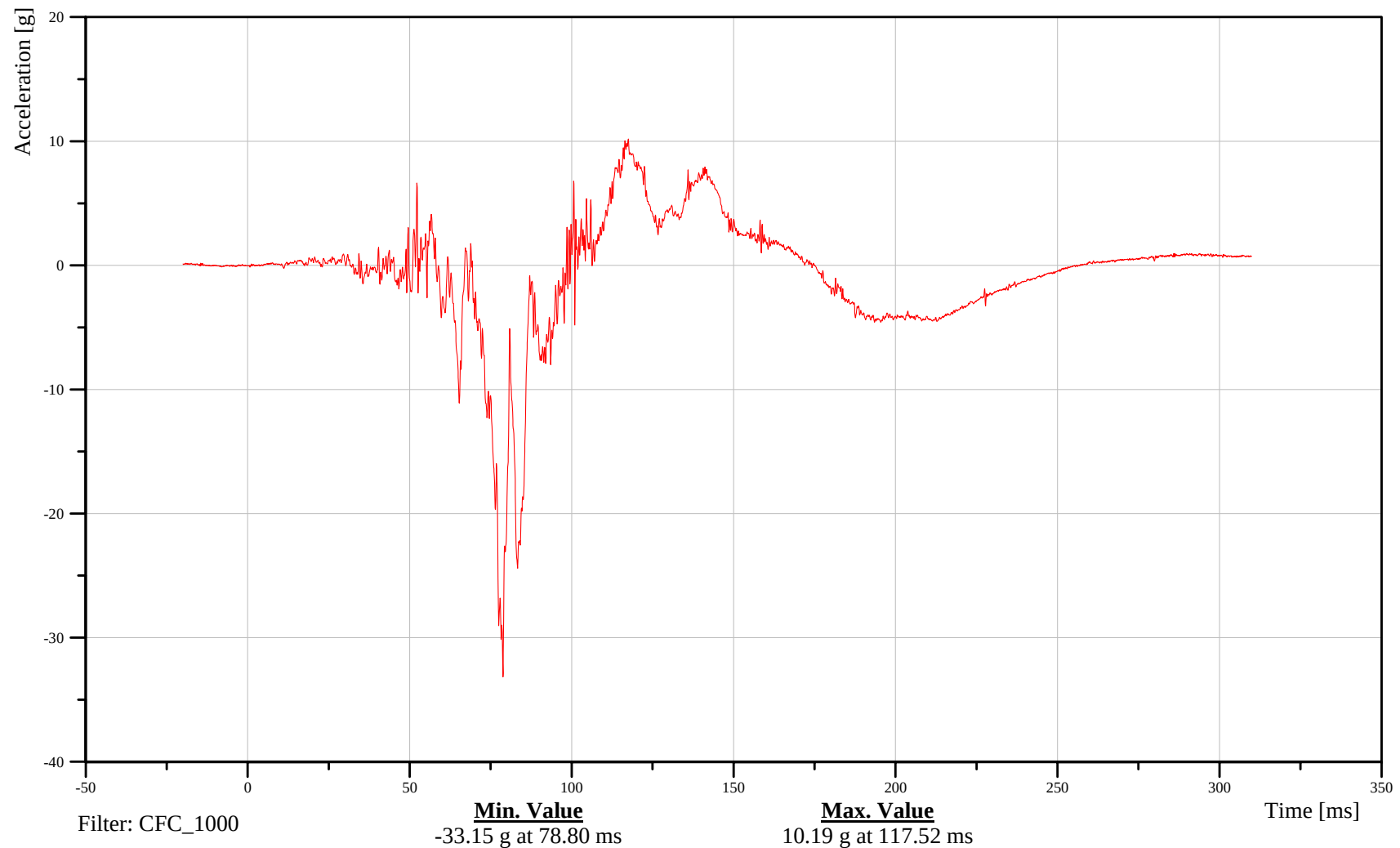
Target Driver Head Front Y-Axis Acceleration

Customer: VRTC

21HEADFR00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

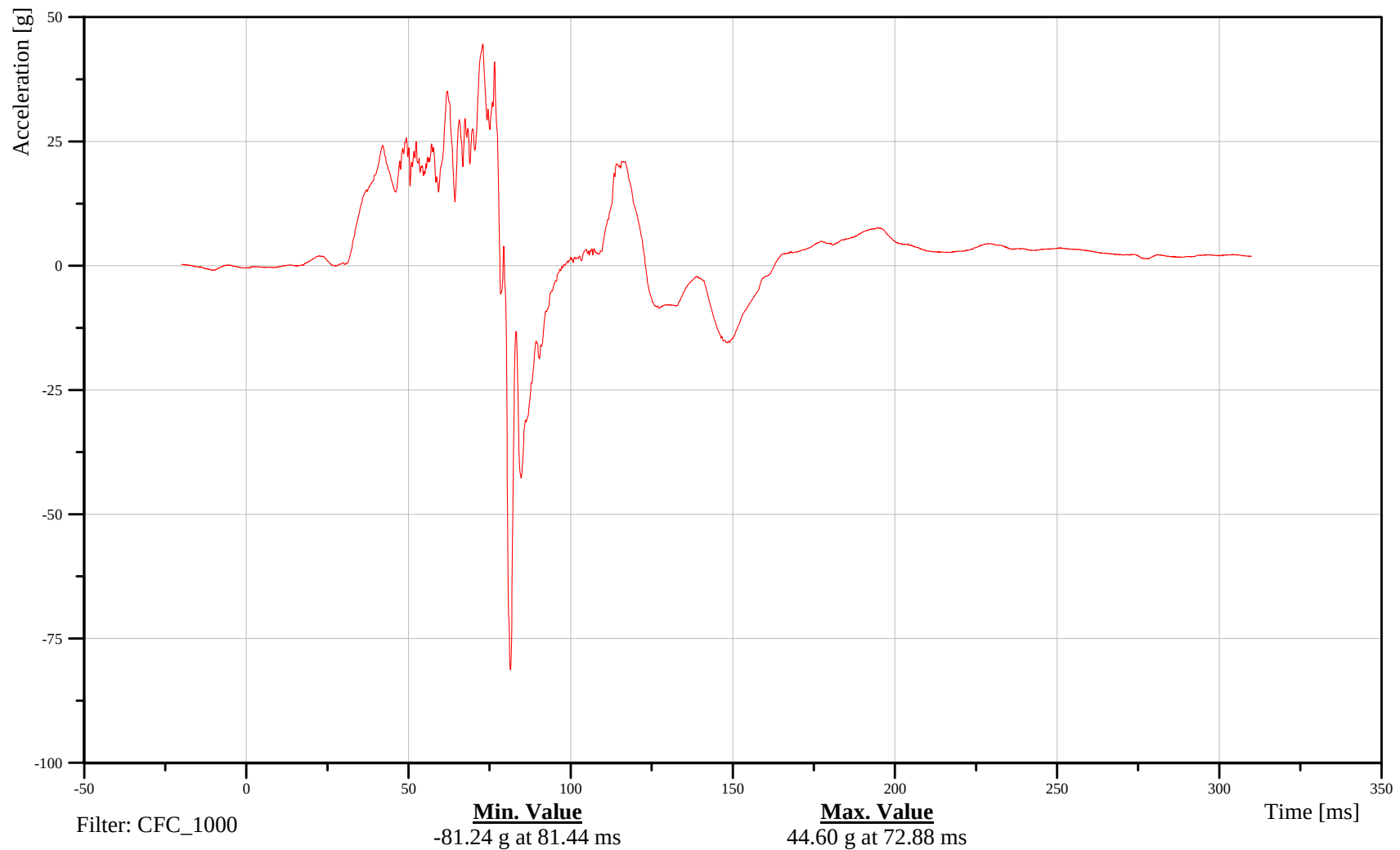
Target Driver Head Front Z-Axis Acceleration

Customer: VRTC

21HEADFR00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

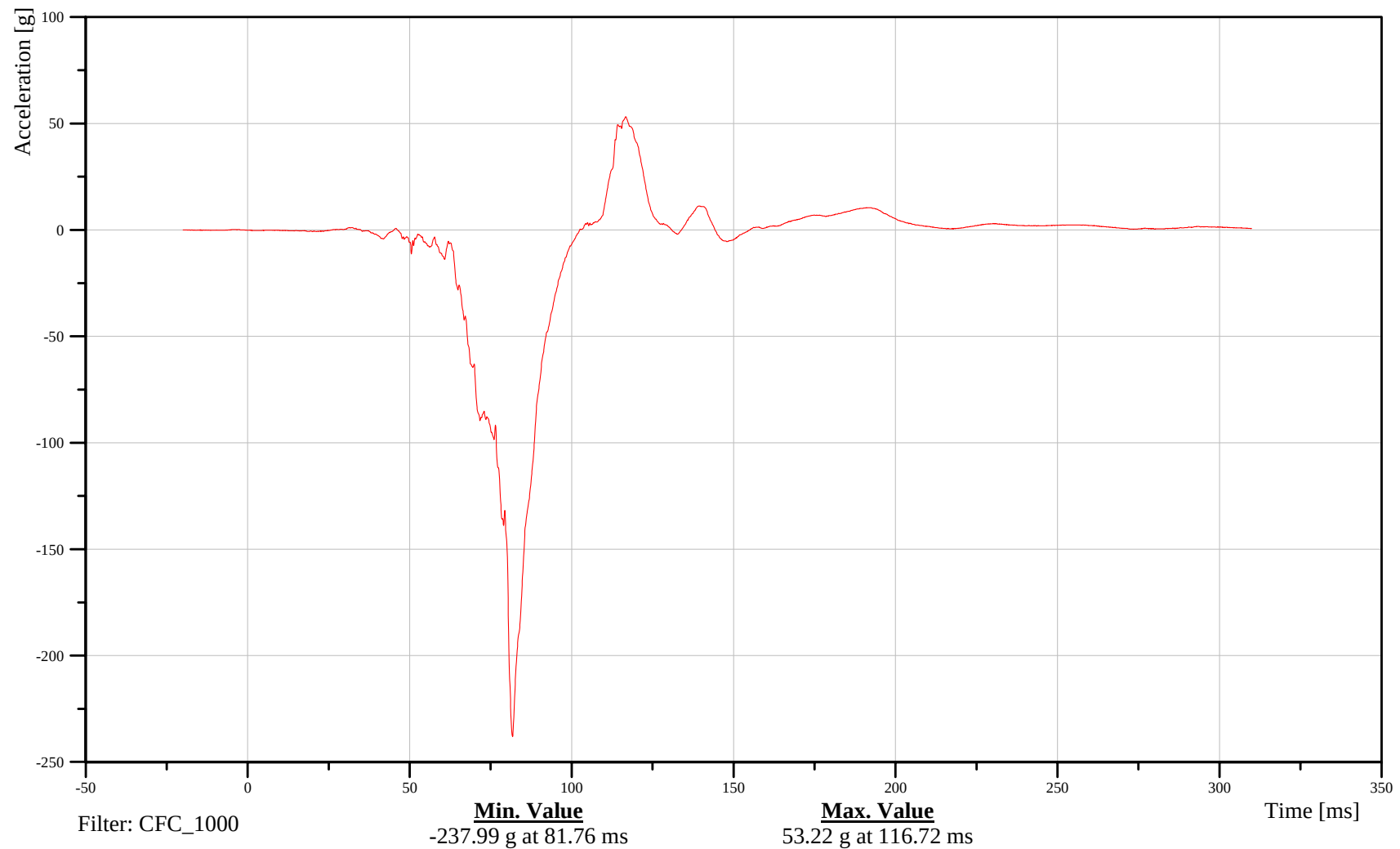
Target Driver Head Top X-Axis Acceleration

Customer: VRTC

21HEADUP00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

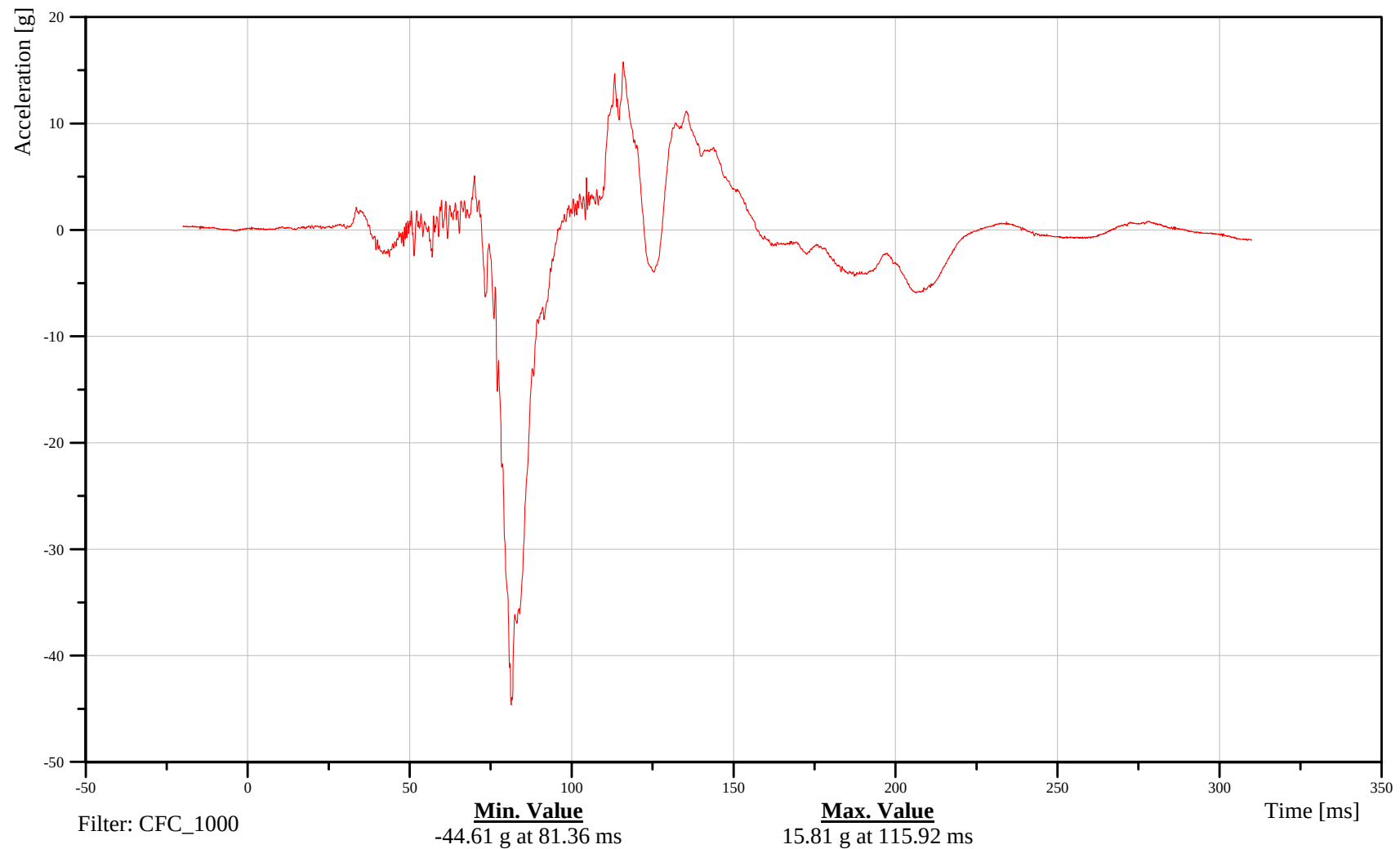
Target Driver Head Top Y-Axis Acceleration

Customer: VRTC

21HEADUP00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

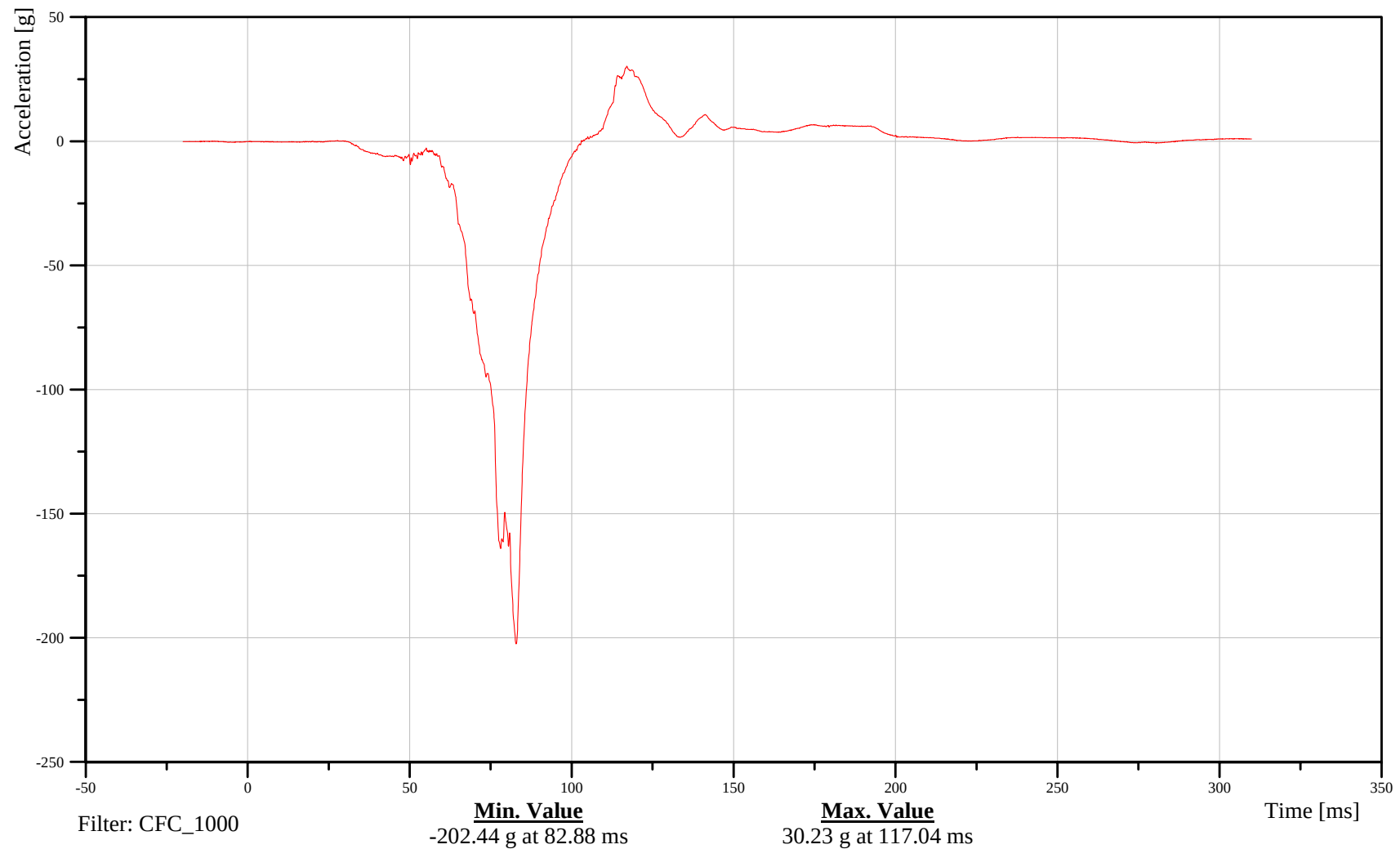
Target Driver Head Side X-Axis Acceleration

Customer: VRTC

21HEADLE00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

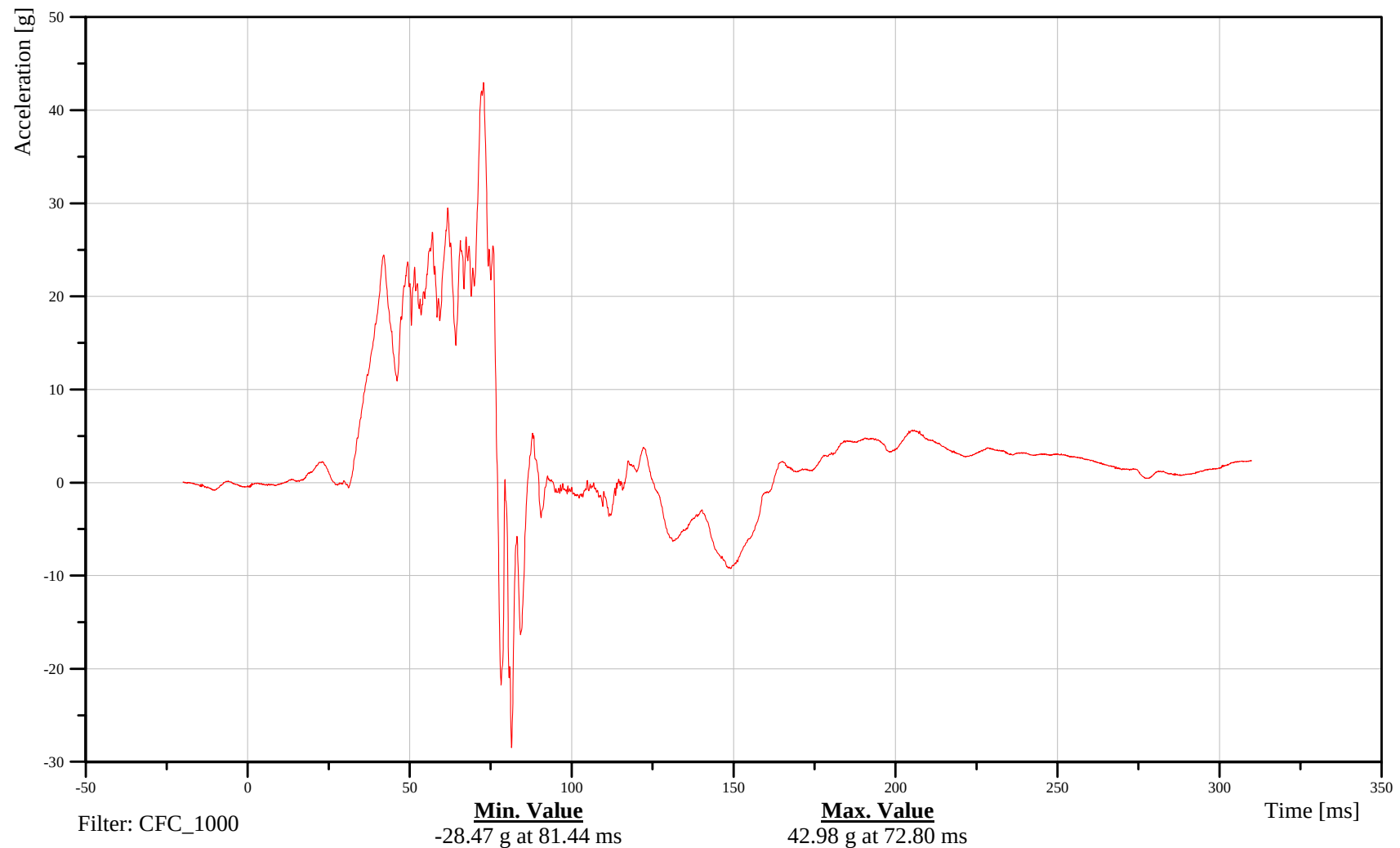
Target Driver Head Side Z-Axis Acceleration

Customer: VRTC

21HEADLE00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

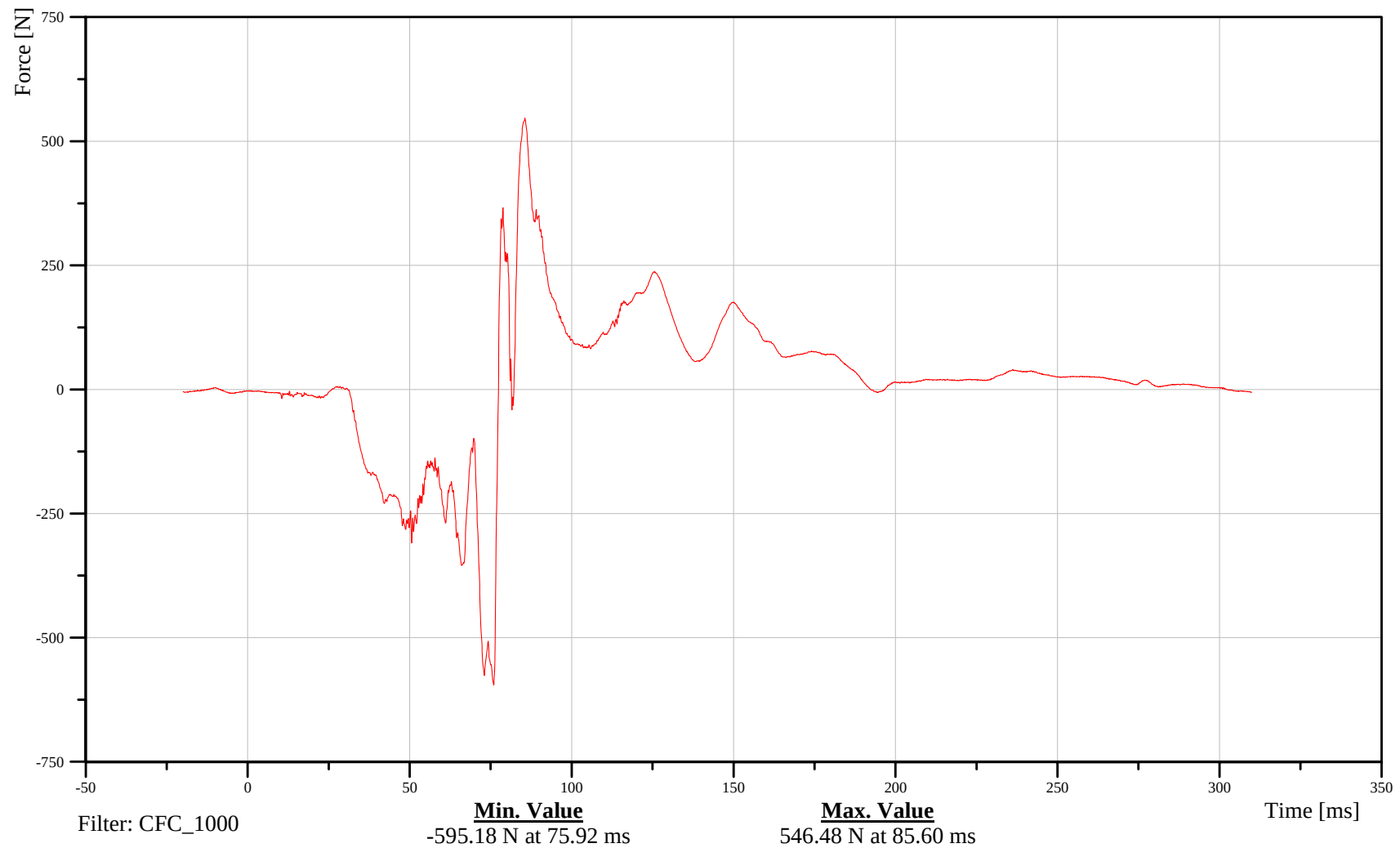
Target Driver Upper Neck X-Axis Force

Customer: VRTC

21NECKUP00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

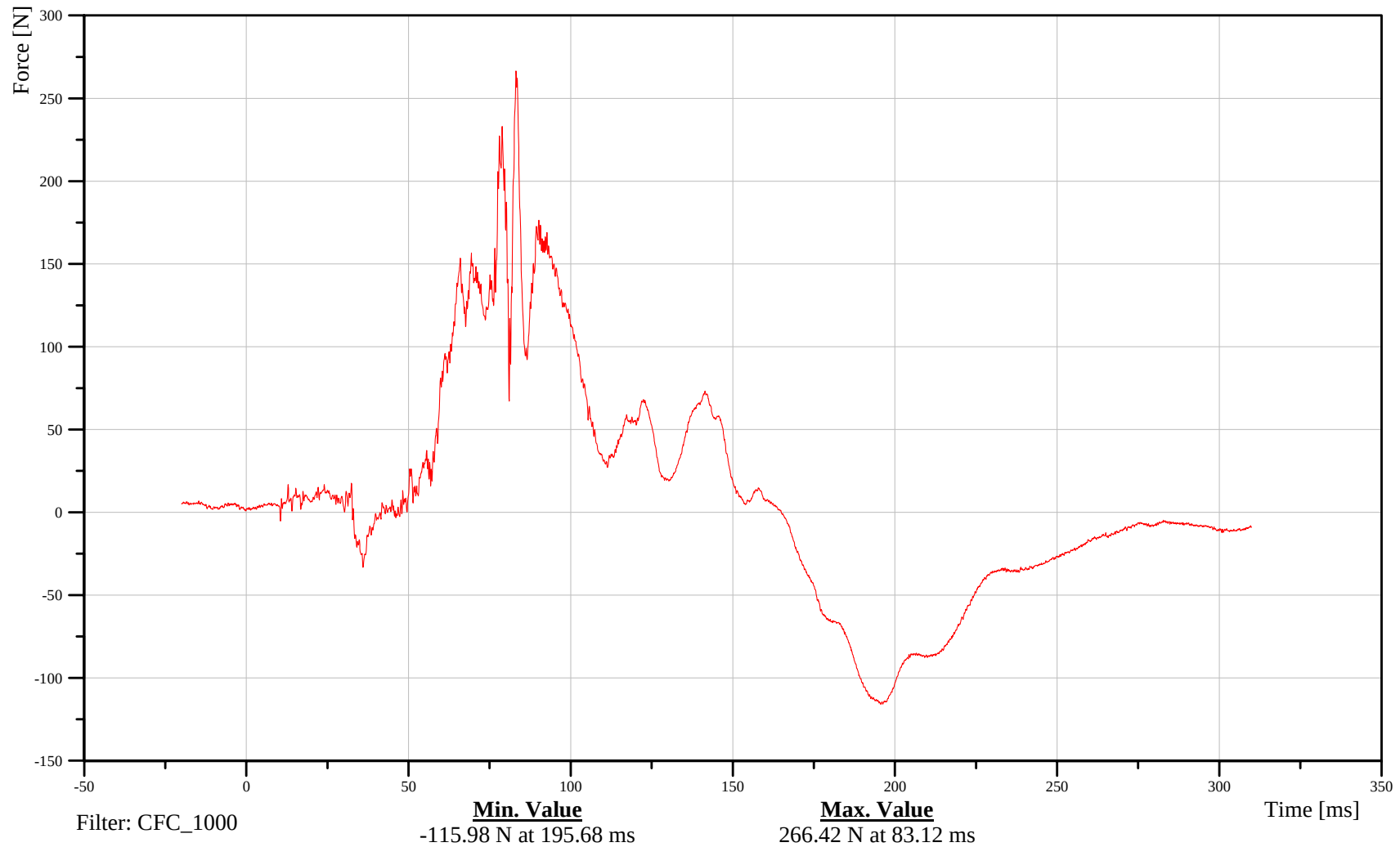
Target Driver Upper Neck Y-Axis Force

Customer: VRTC

21NECKUP00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

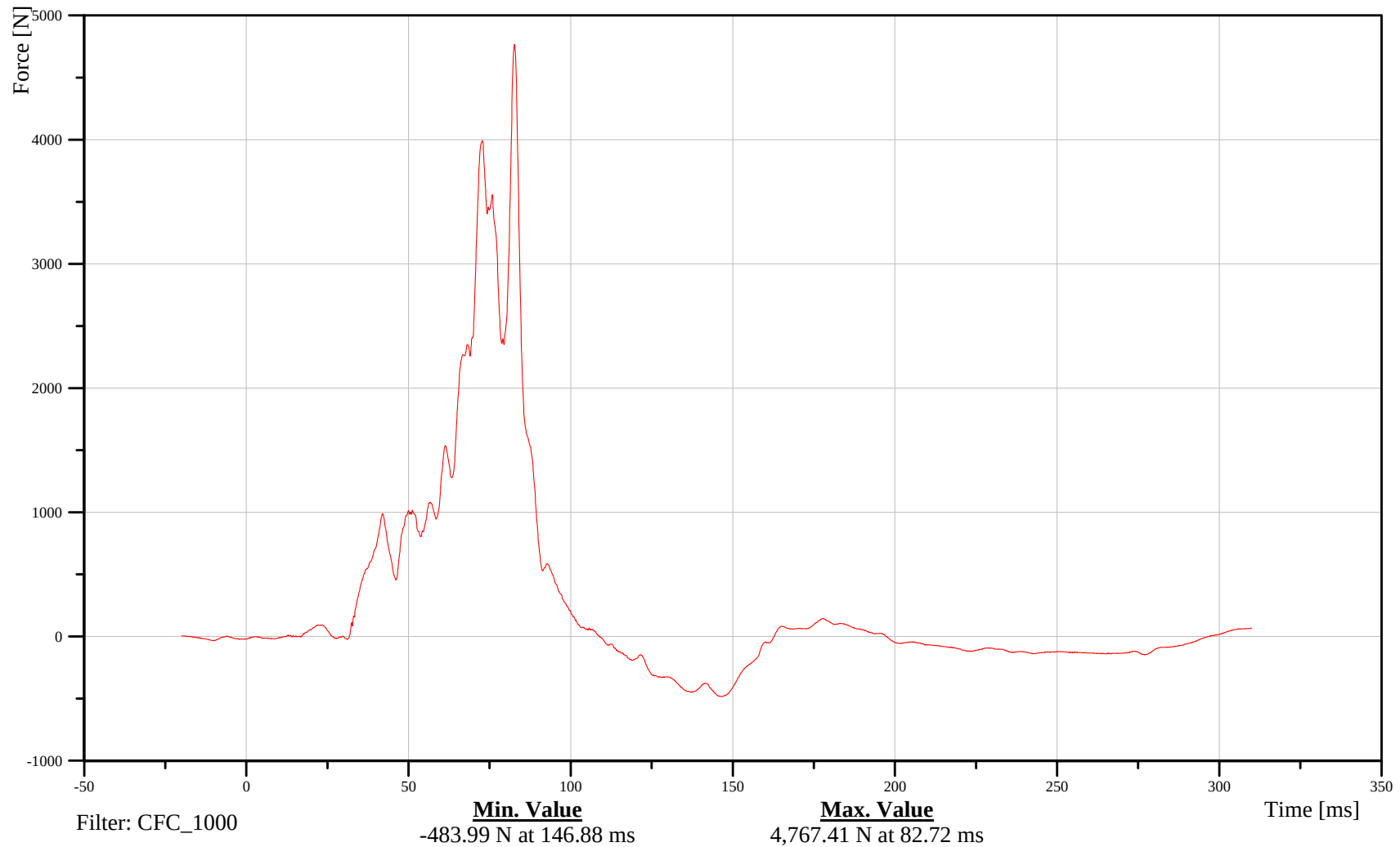
Target Driver Upper Neck Z-Axis Force

Customer: VRTC

21NECKUP00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

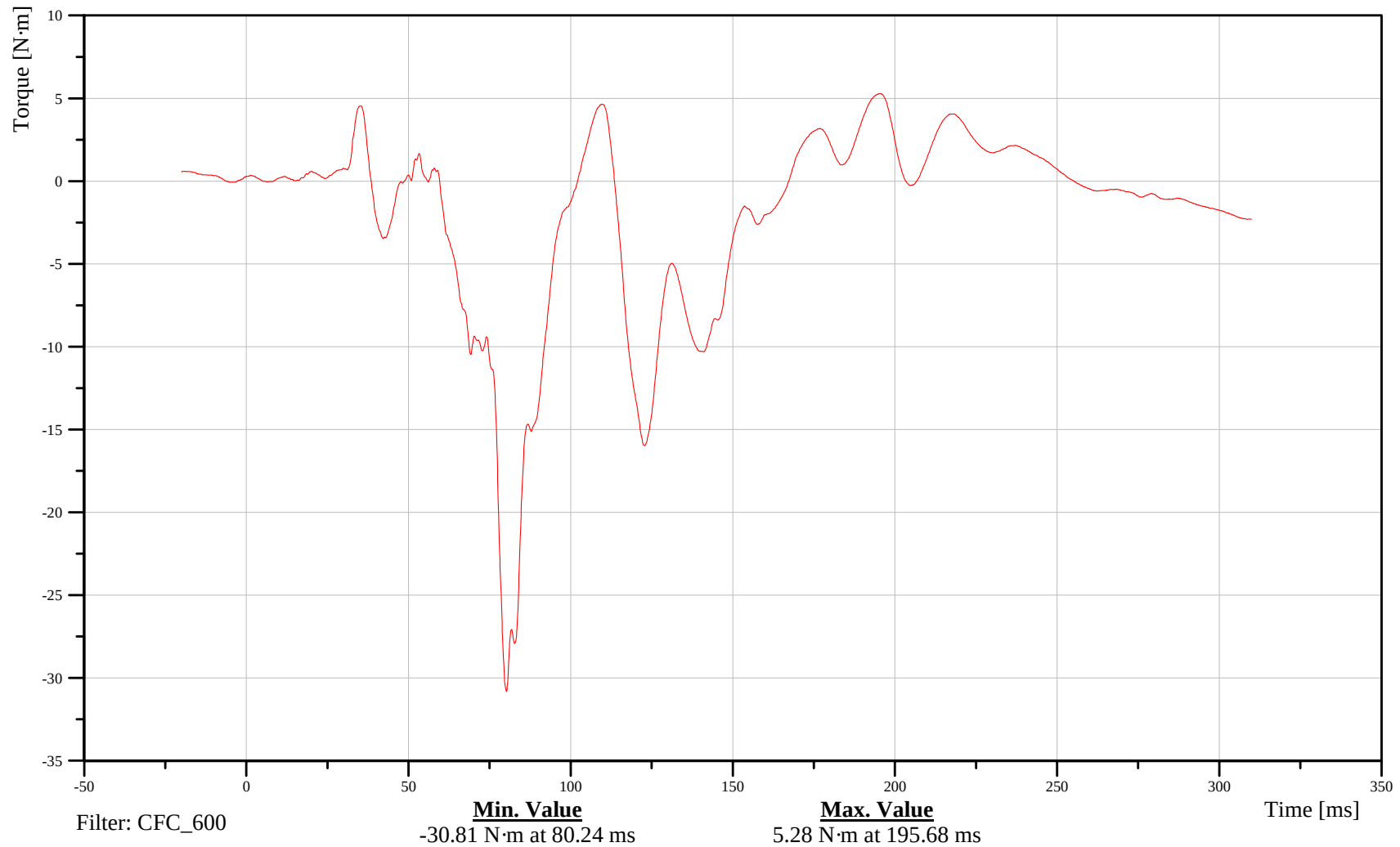
Target Driver Upper Neck Moment About X Axis

Customer: VRTC

21NECKUP00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

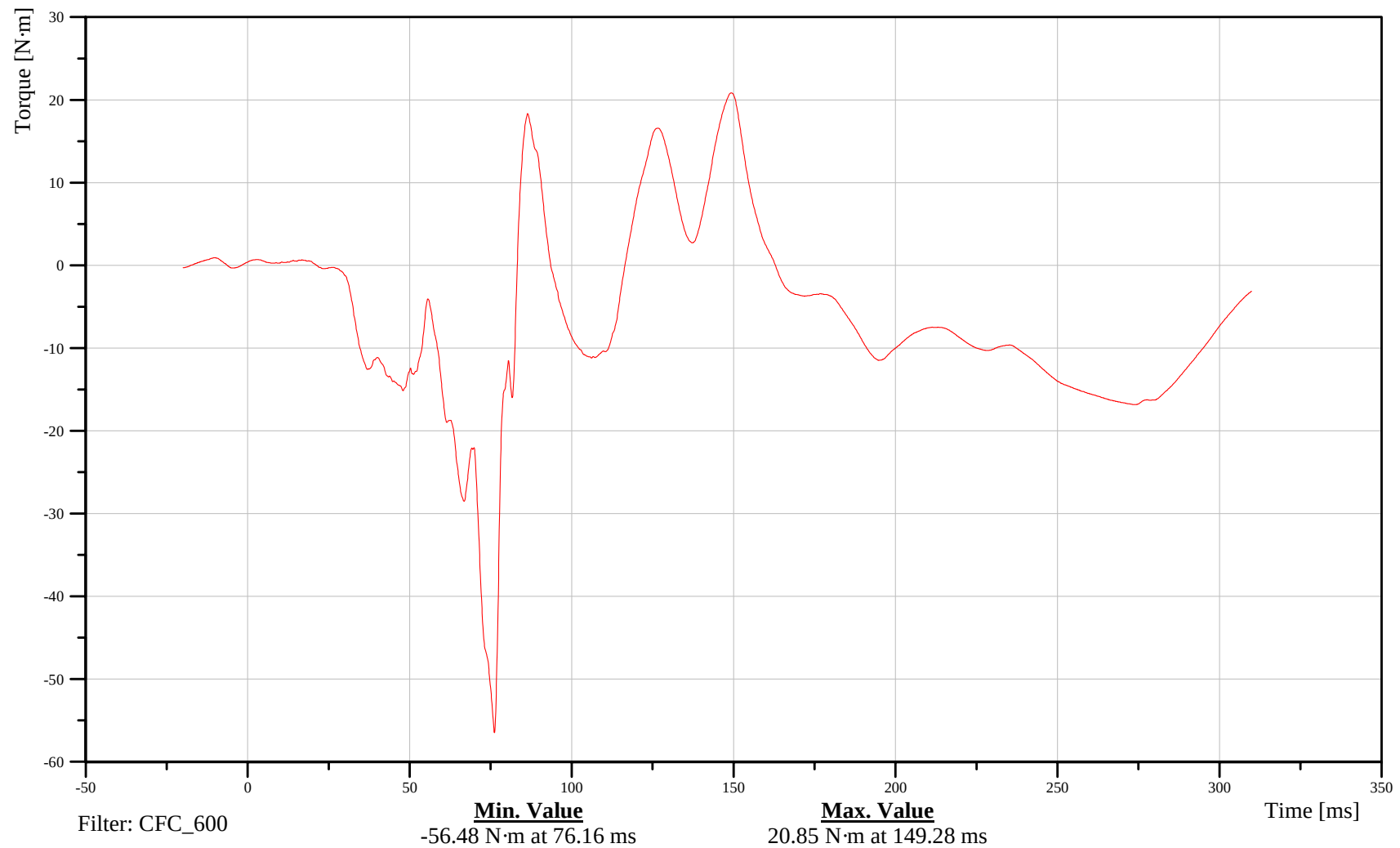
Target Driver Upper Neck Moment About Y Axis

Customer: VRTC

21NECKUP00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

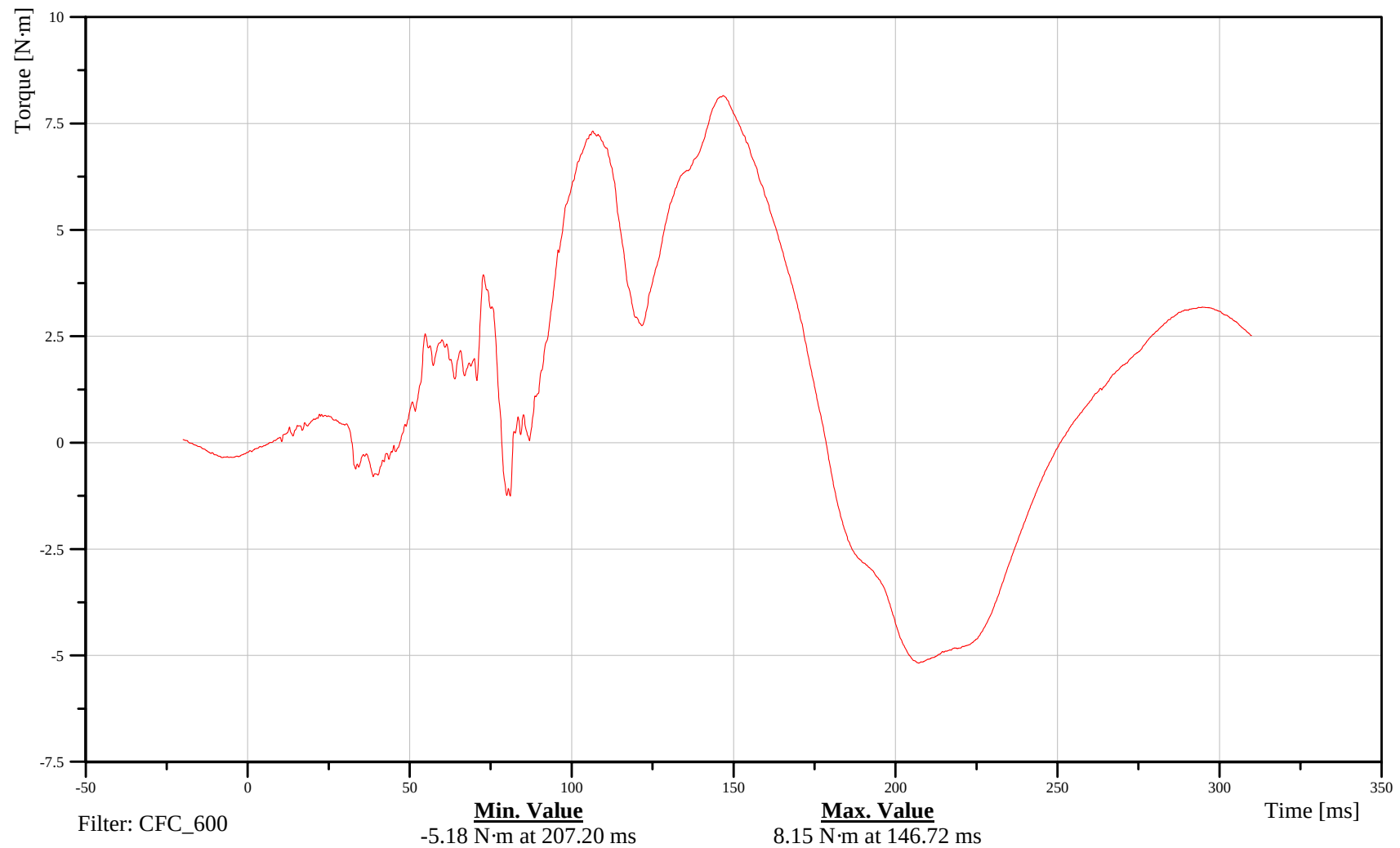
Target Driver Upper Neck Moment About Z Axis

Customer: VRTC

21NECKUP00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

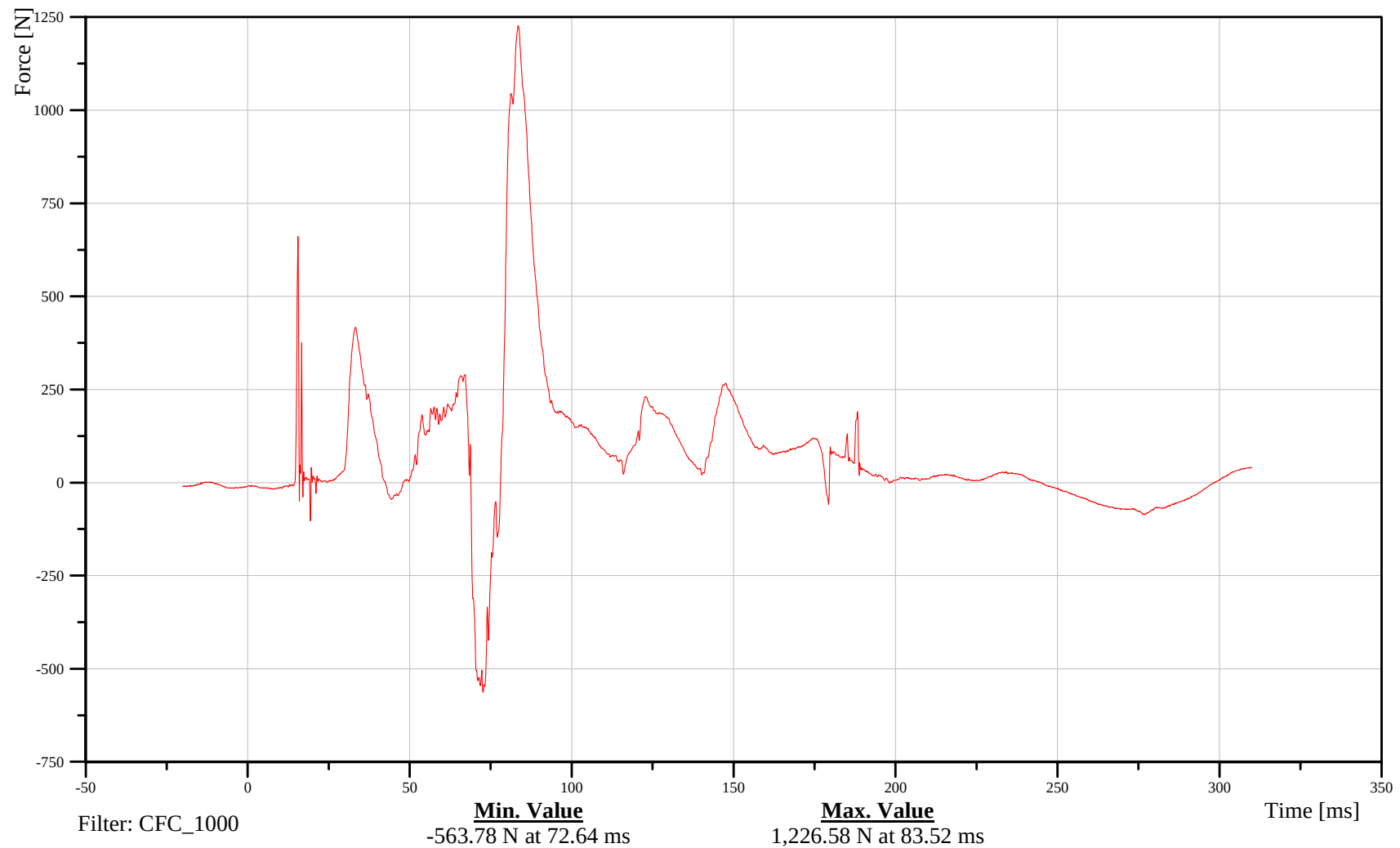
Target Driver Lower Neck X-Axis Force

Customer: VRTC

21NECKLO00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

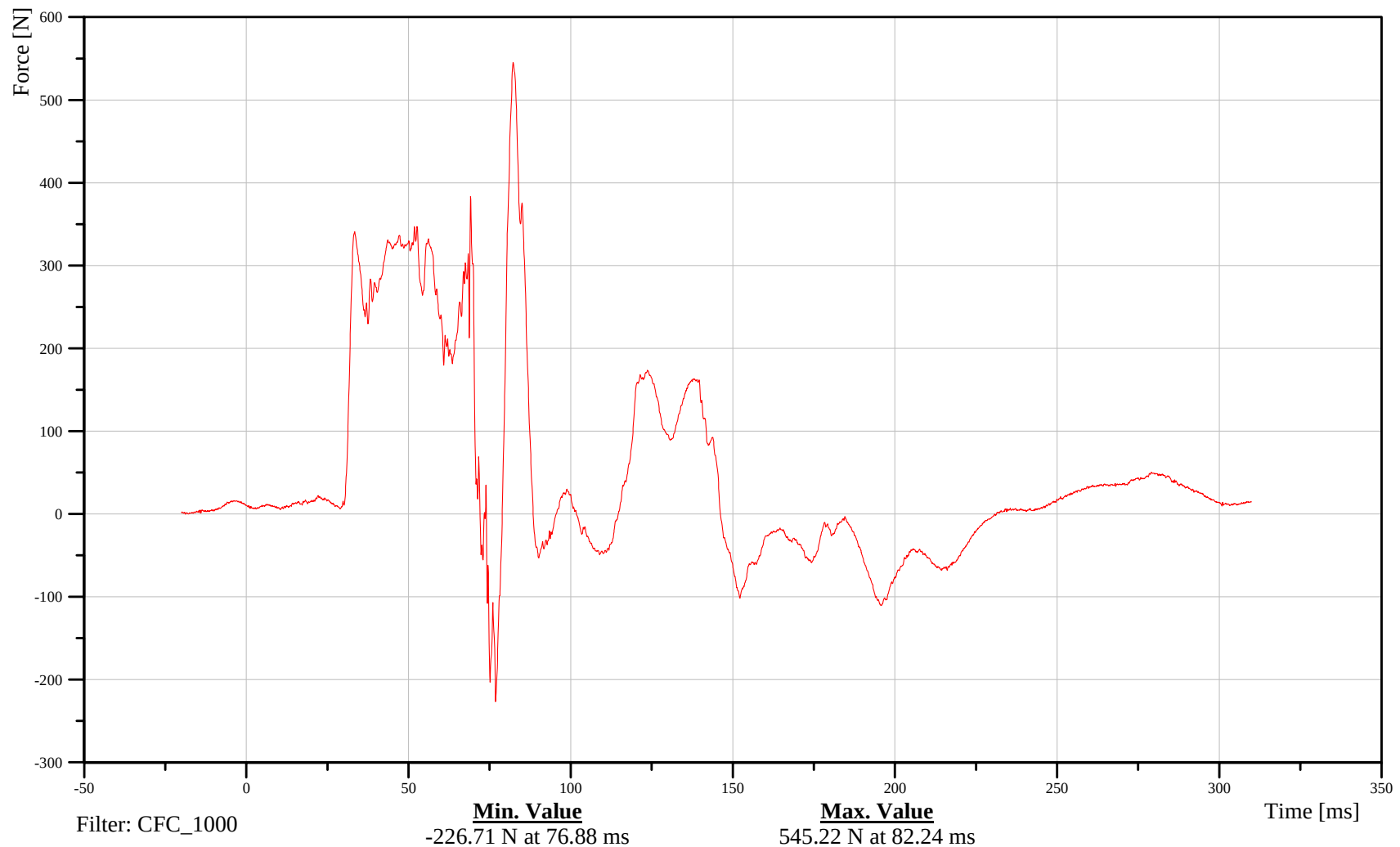
Target Driver Lower Neck Y-Axis Force

Customer: VRTC

21NECKLO00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

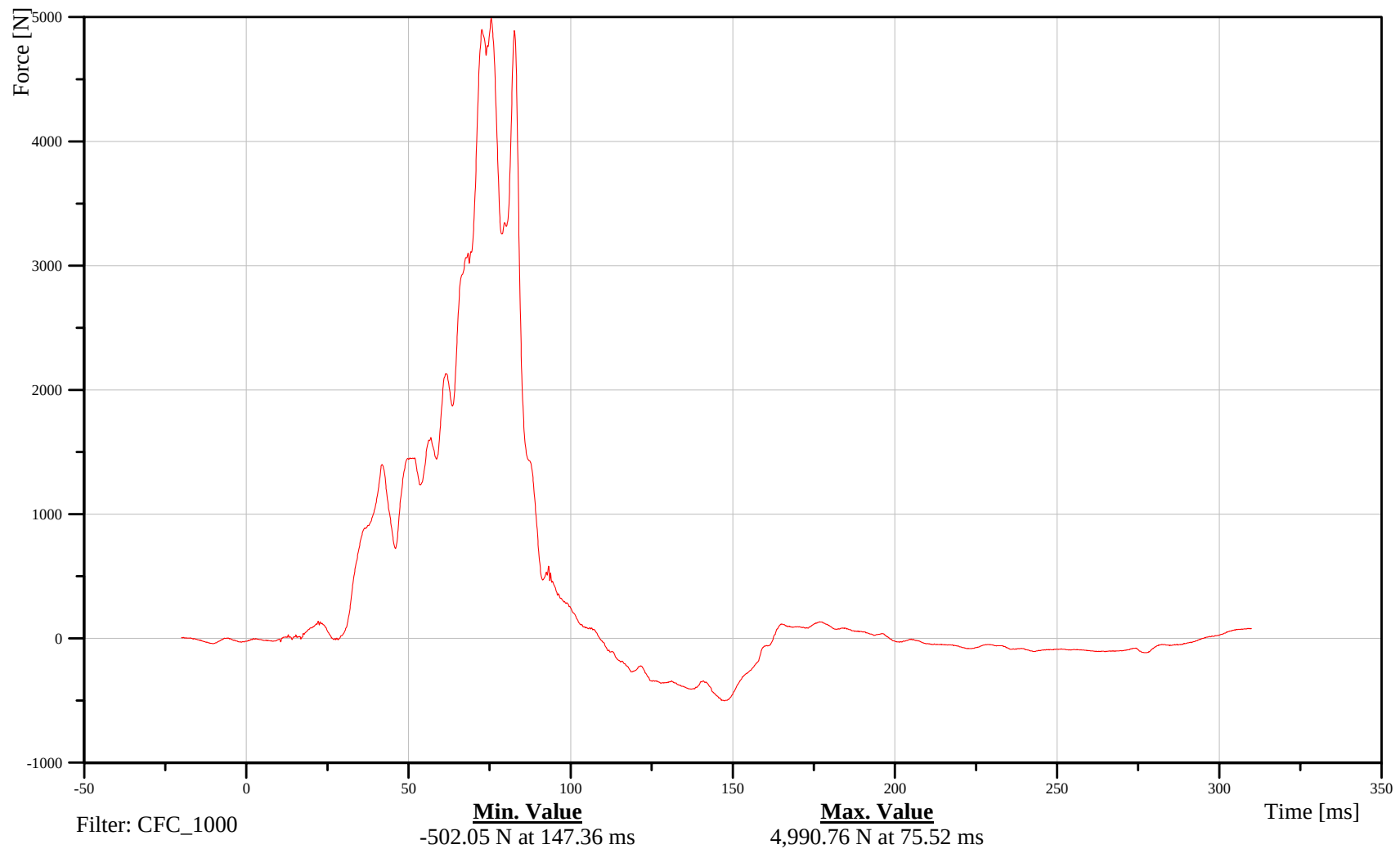
Target Driver Lower Neck Z-Axis Force

Customer: VRTC

21NECKLO00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

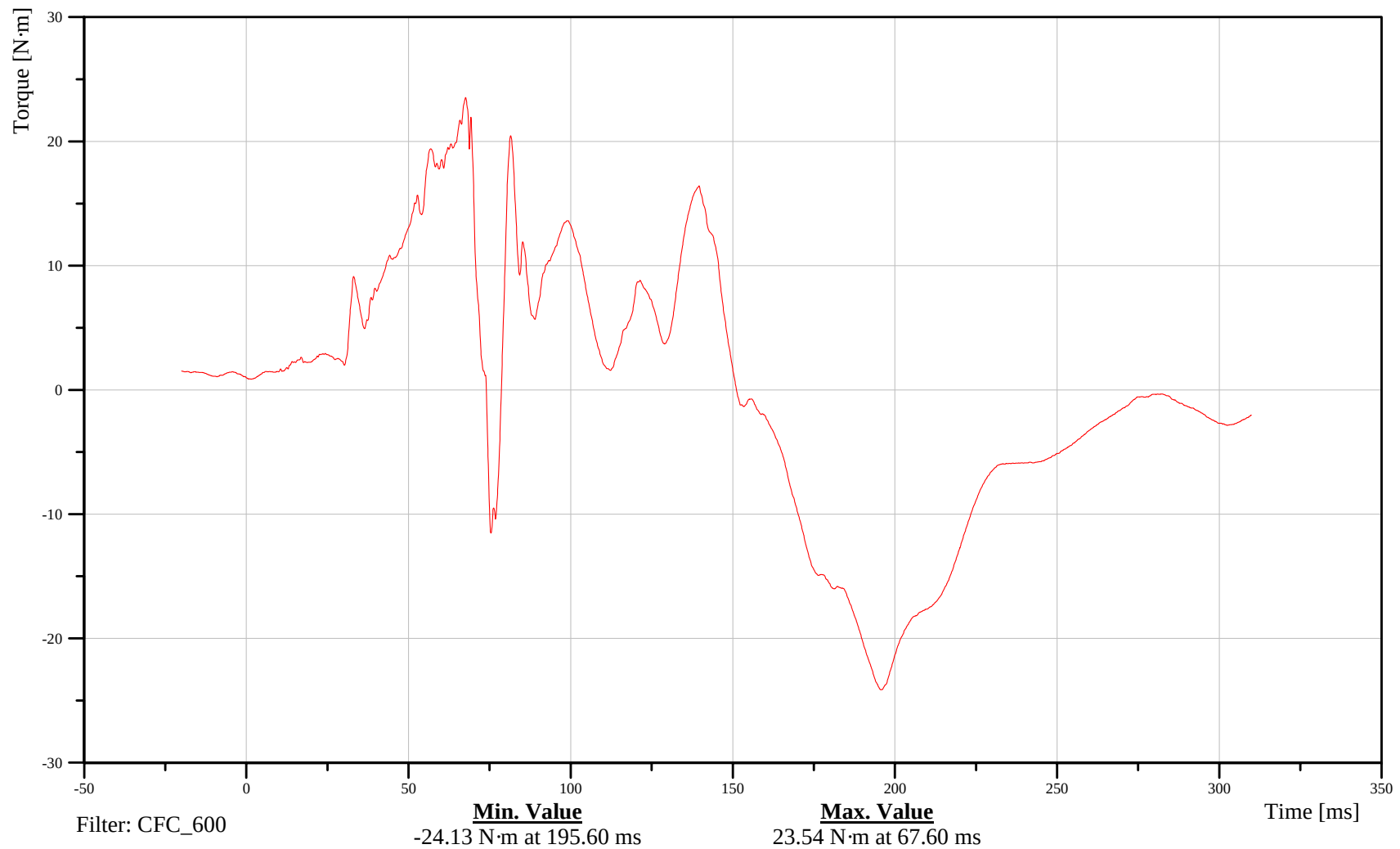
Target Driver Lower Neck Moment About X Axis

Customer: VRTC

21NECKLO00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

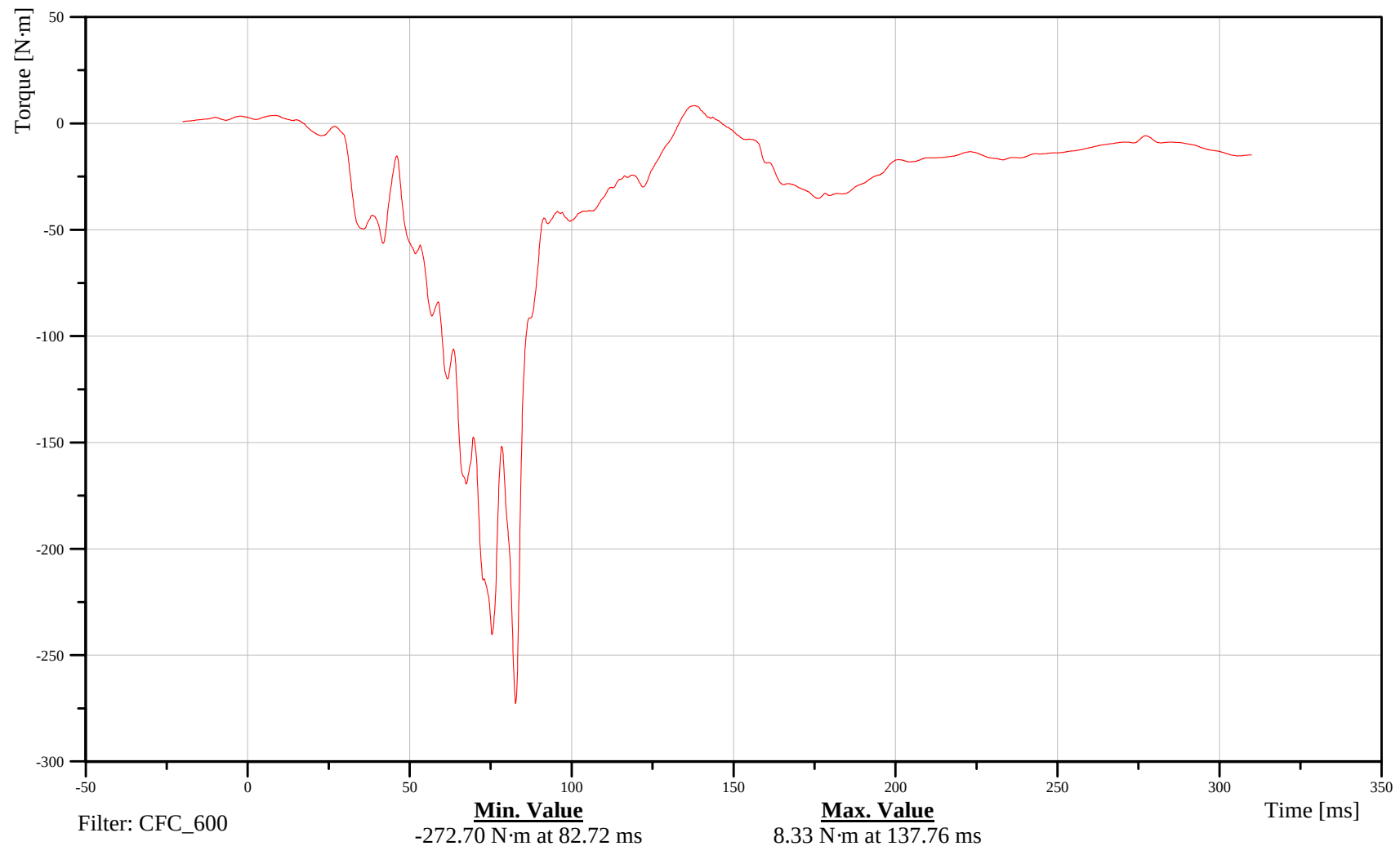
Target Driver Lower Neck Moment About Y Axis

Customer: VRTC

21NECKLO00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

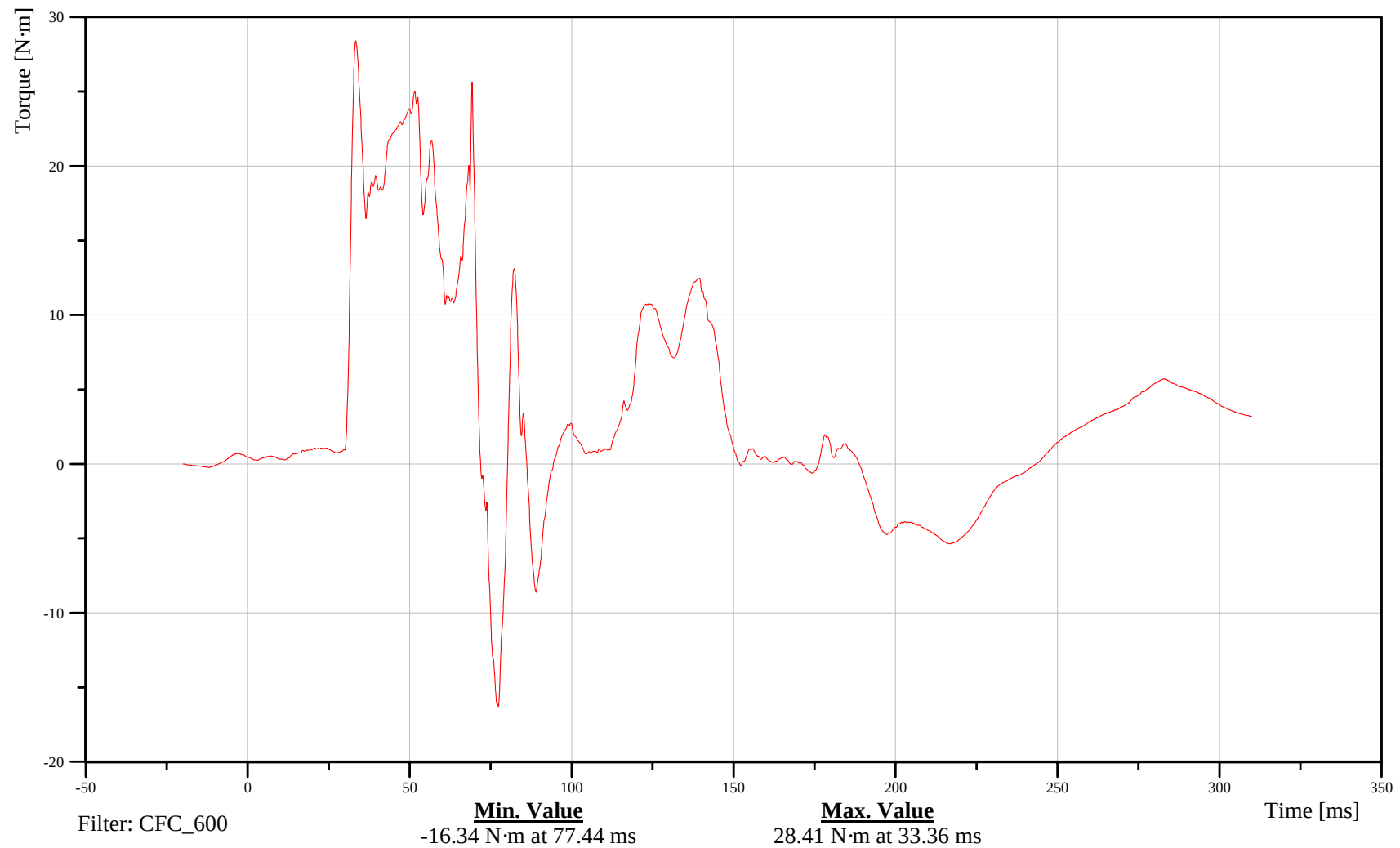
Target Driver Lower Neck Moment About Z Axis

Customer: VRTC

21NECKLO00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

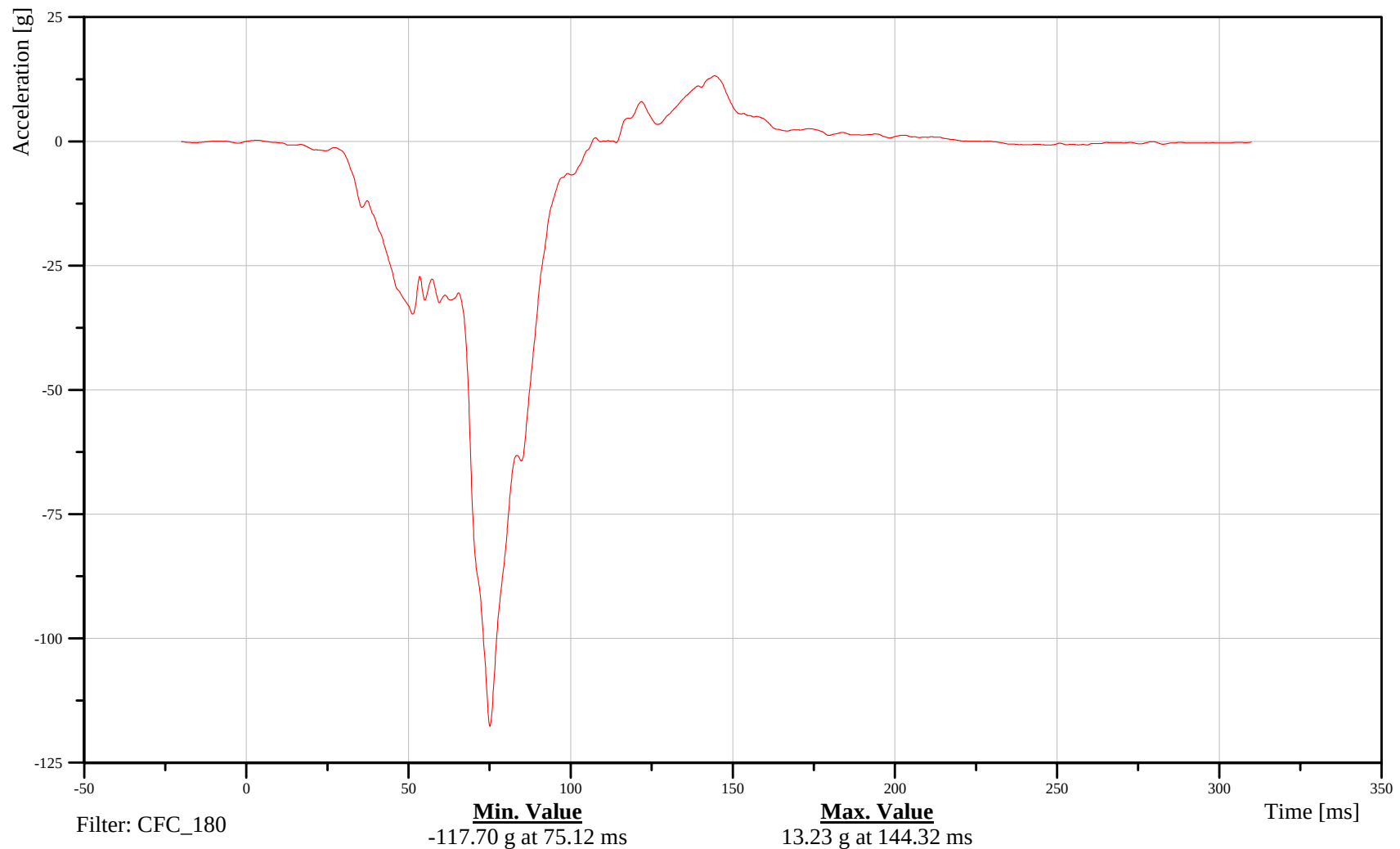
Target Driver Chest CG X-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

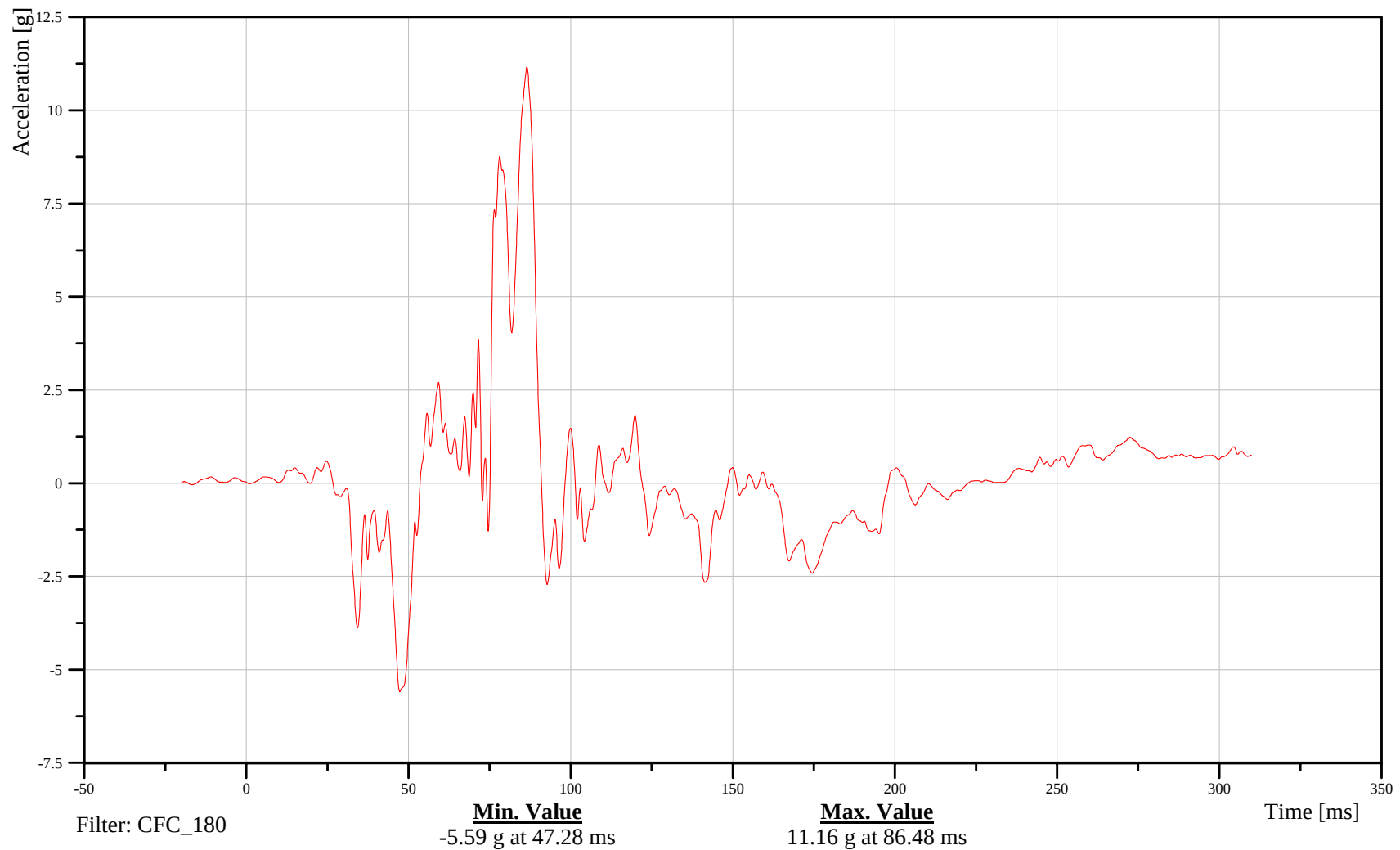
Target Driver Chest CG Y-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

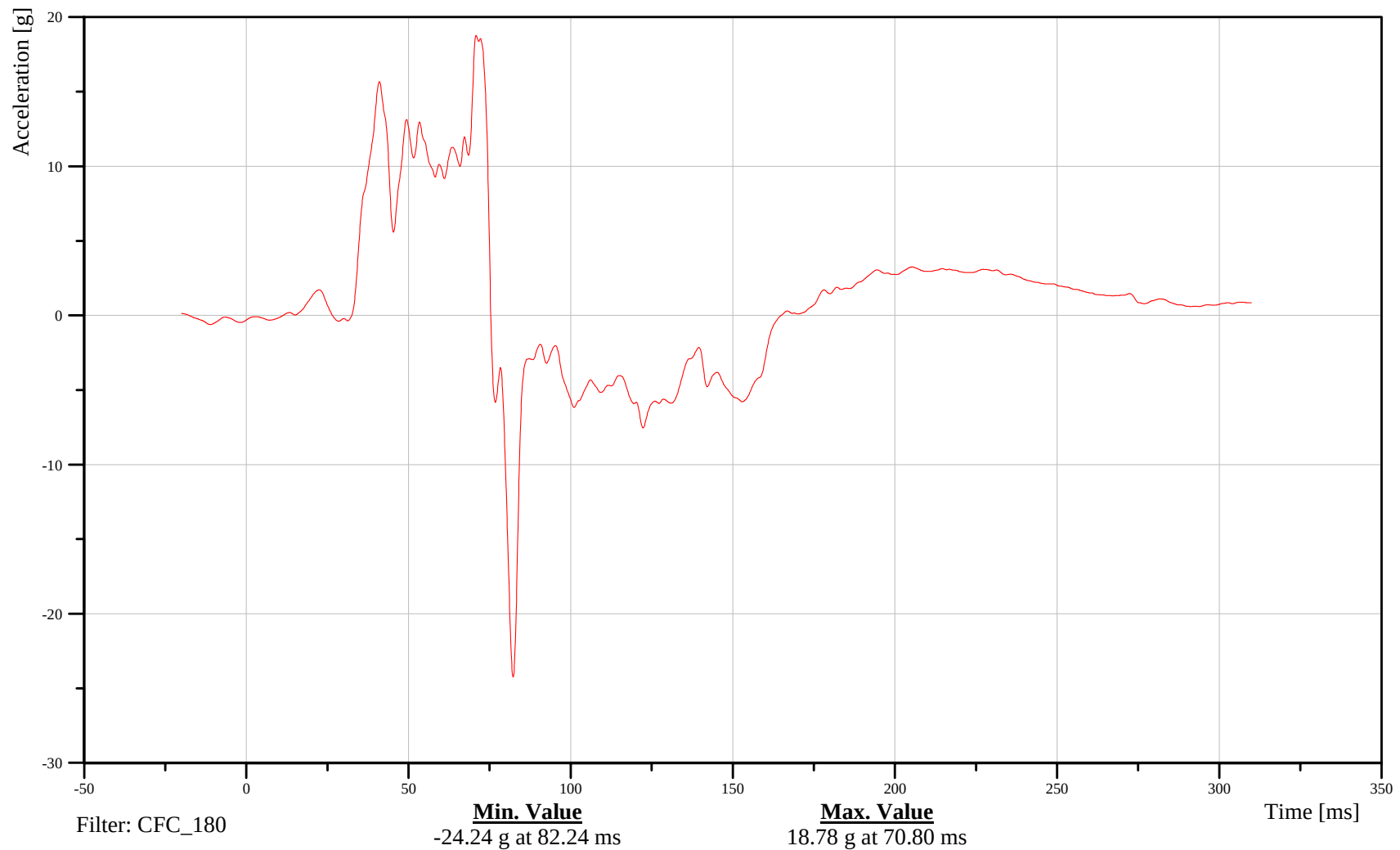
Target Driver Chest CG Z-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

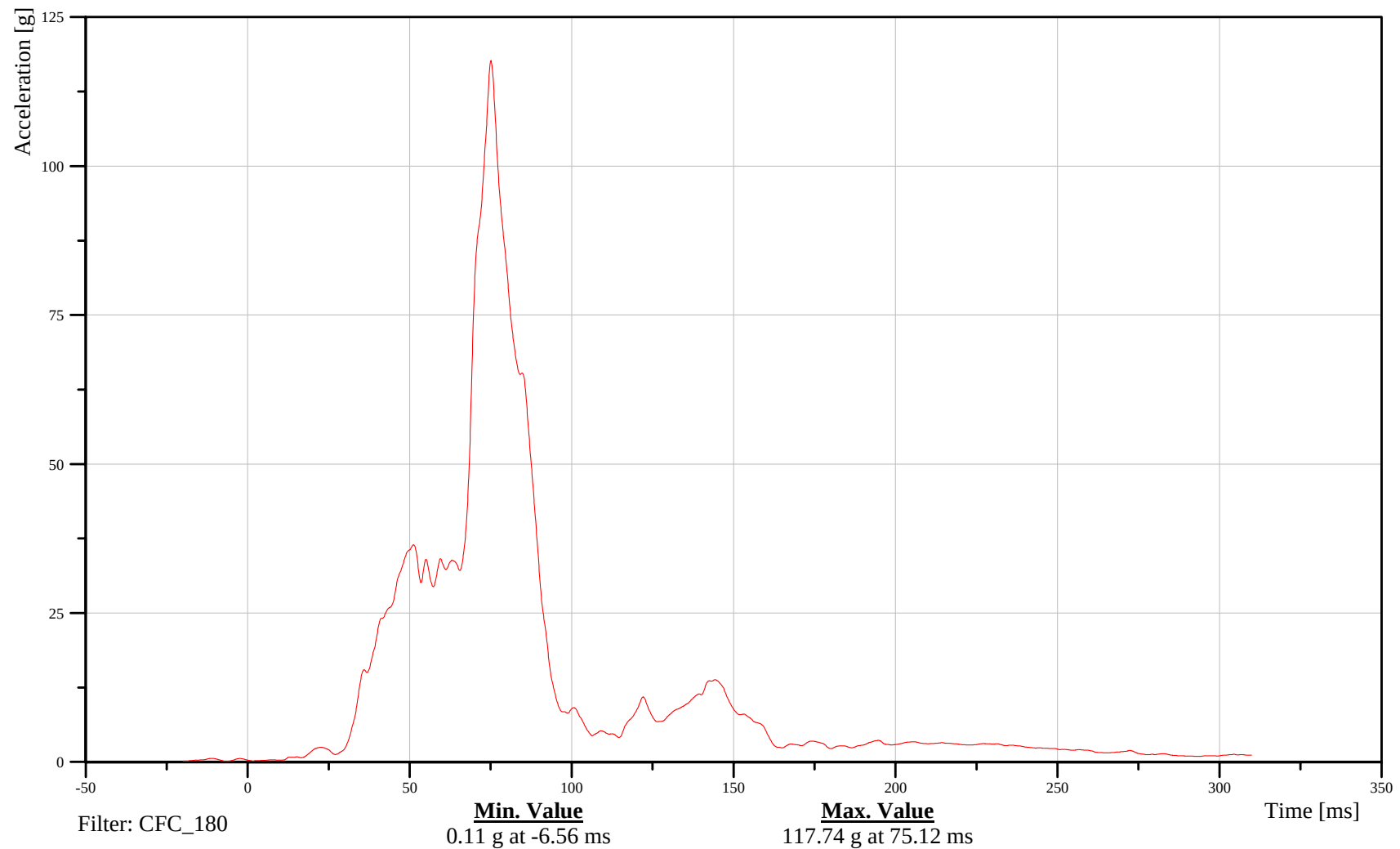
Target Driver Chest CG Resultant Acceleration

Customer: VRTC

21CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

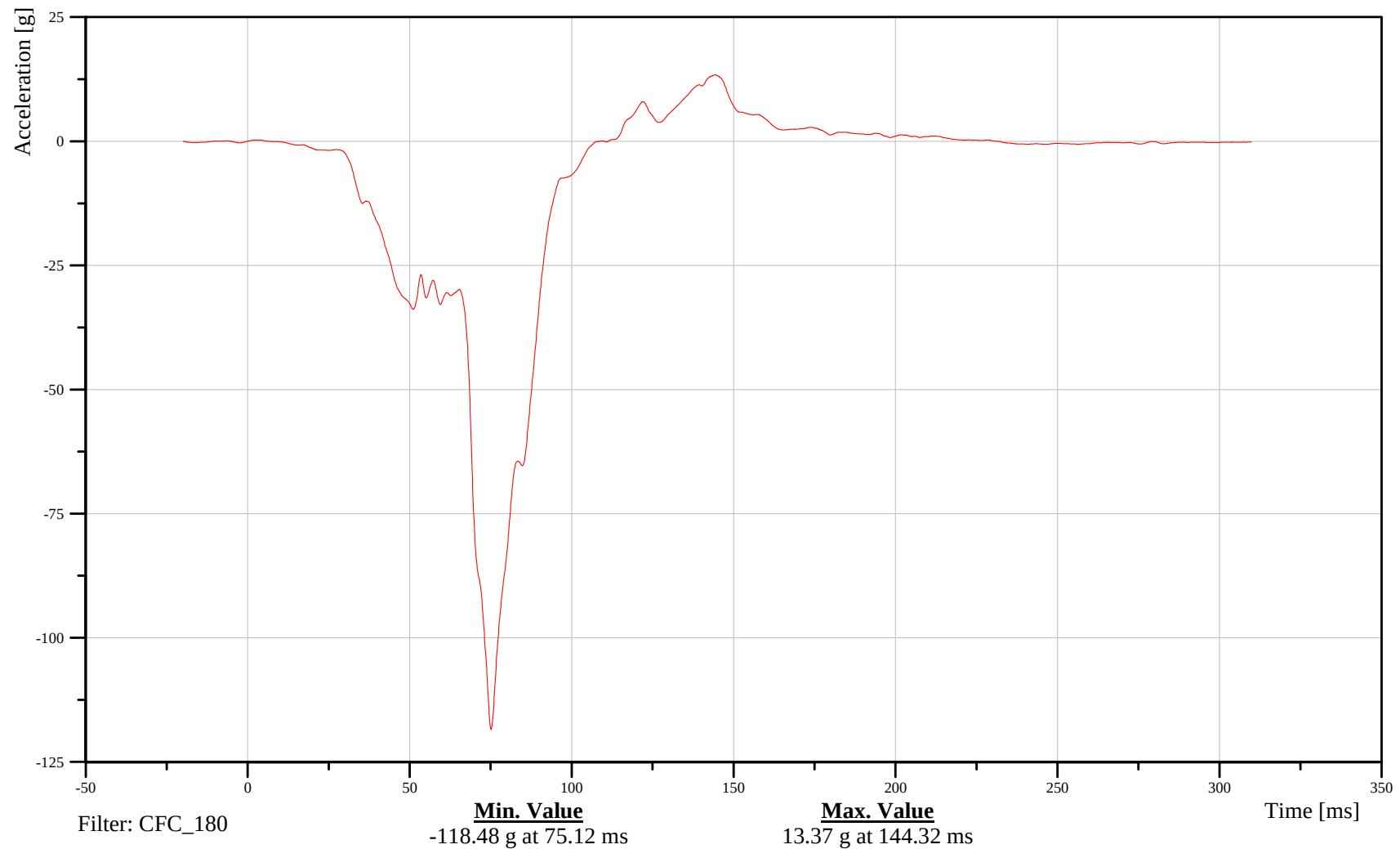
Target Driver Redundant Chest CG X-Axis Acceleration

Customer: VRTC

21CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

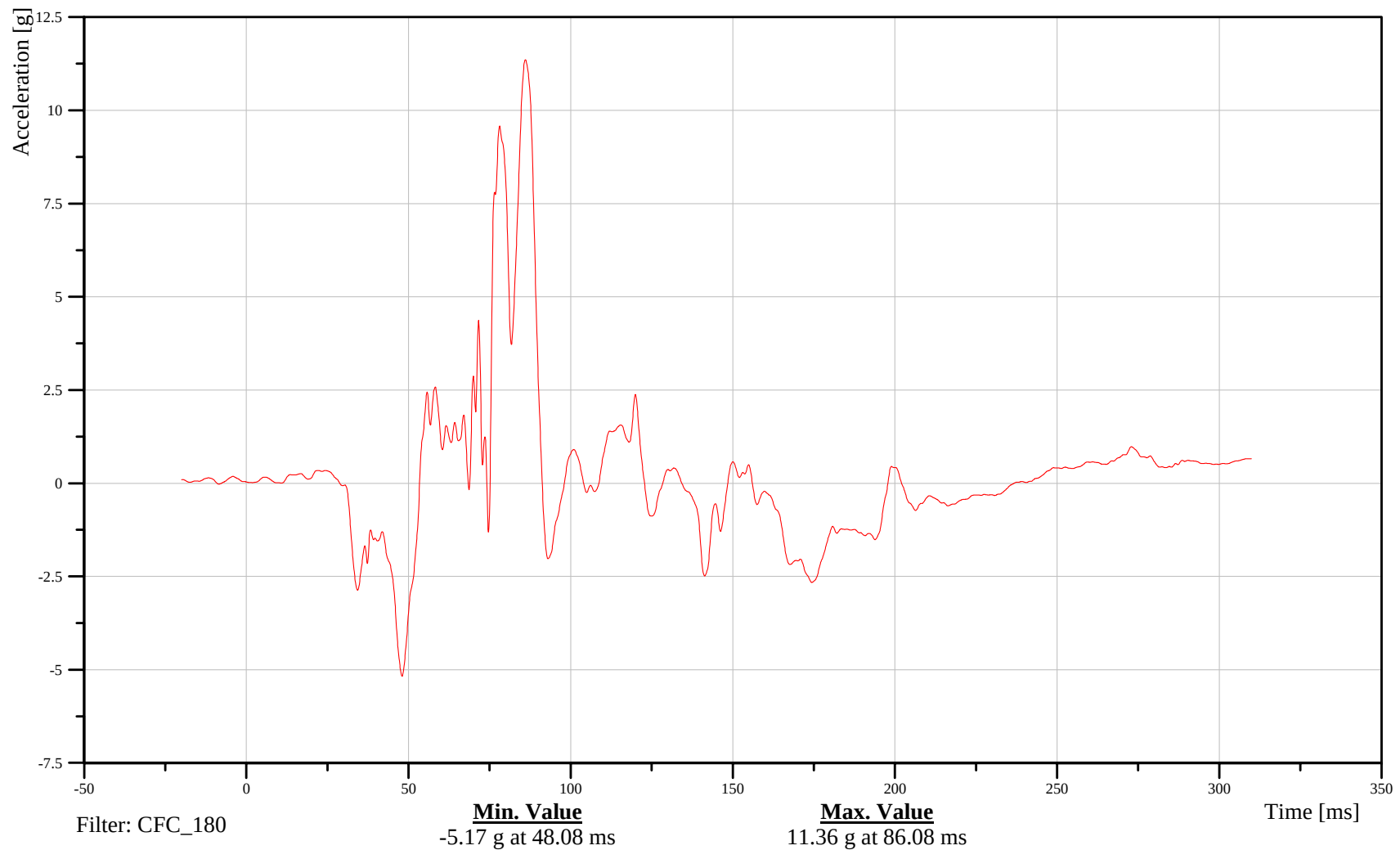
Target Driver Redundant Chest CG Y-Axis Acceleration

Customer: VRTC

21CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

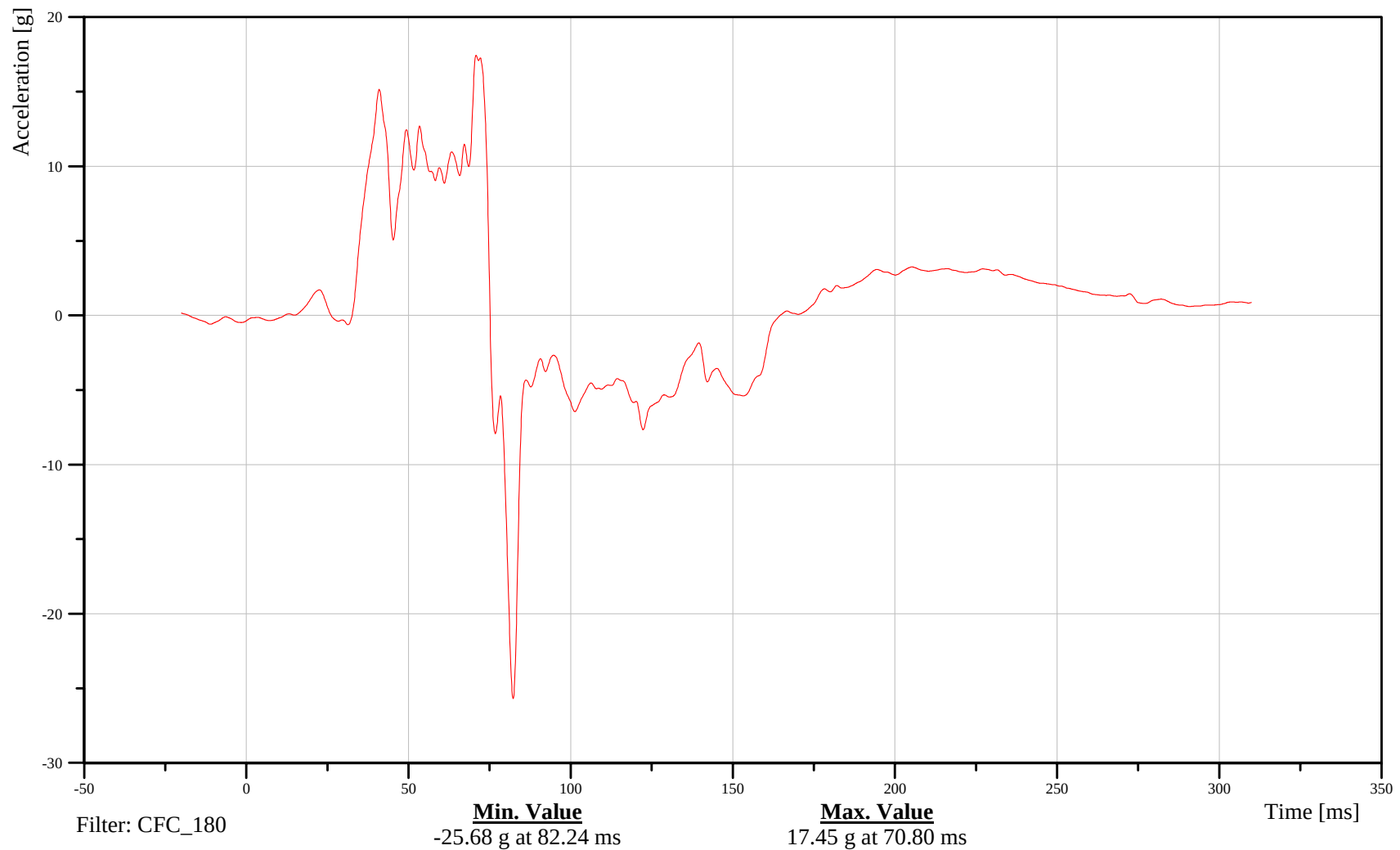
Target Driver Redundant Chest CG Z-Axis Acceleration

Customer: VRTC

21CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

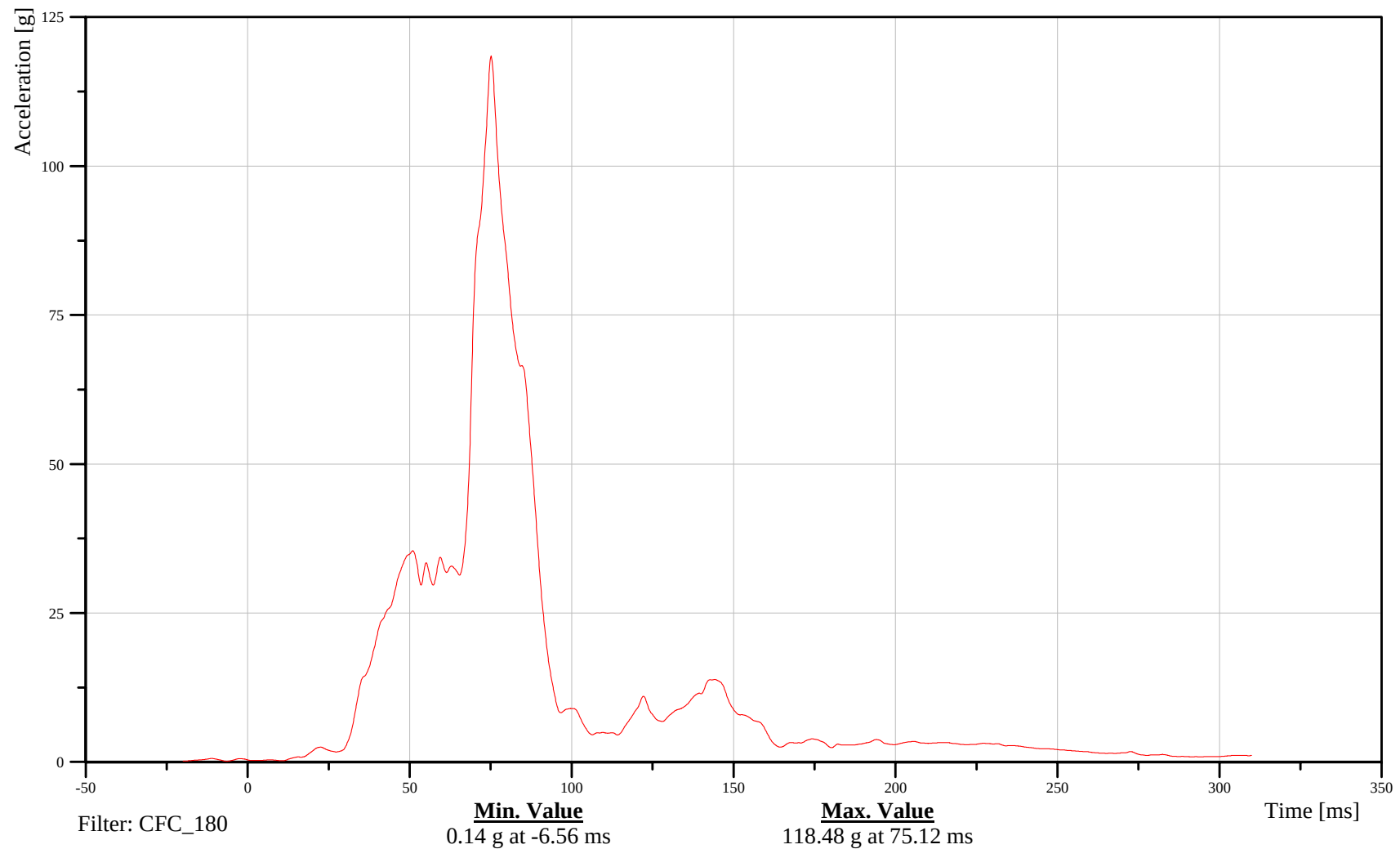
Target Driver Redundant Chest CG Resultant Acceleration

Customer: VRTC

21CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

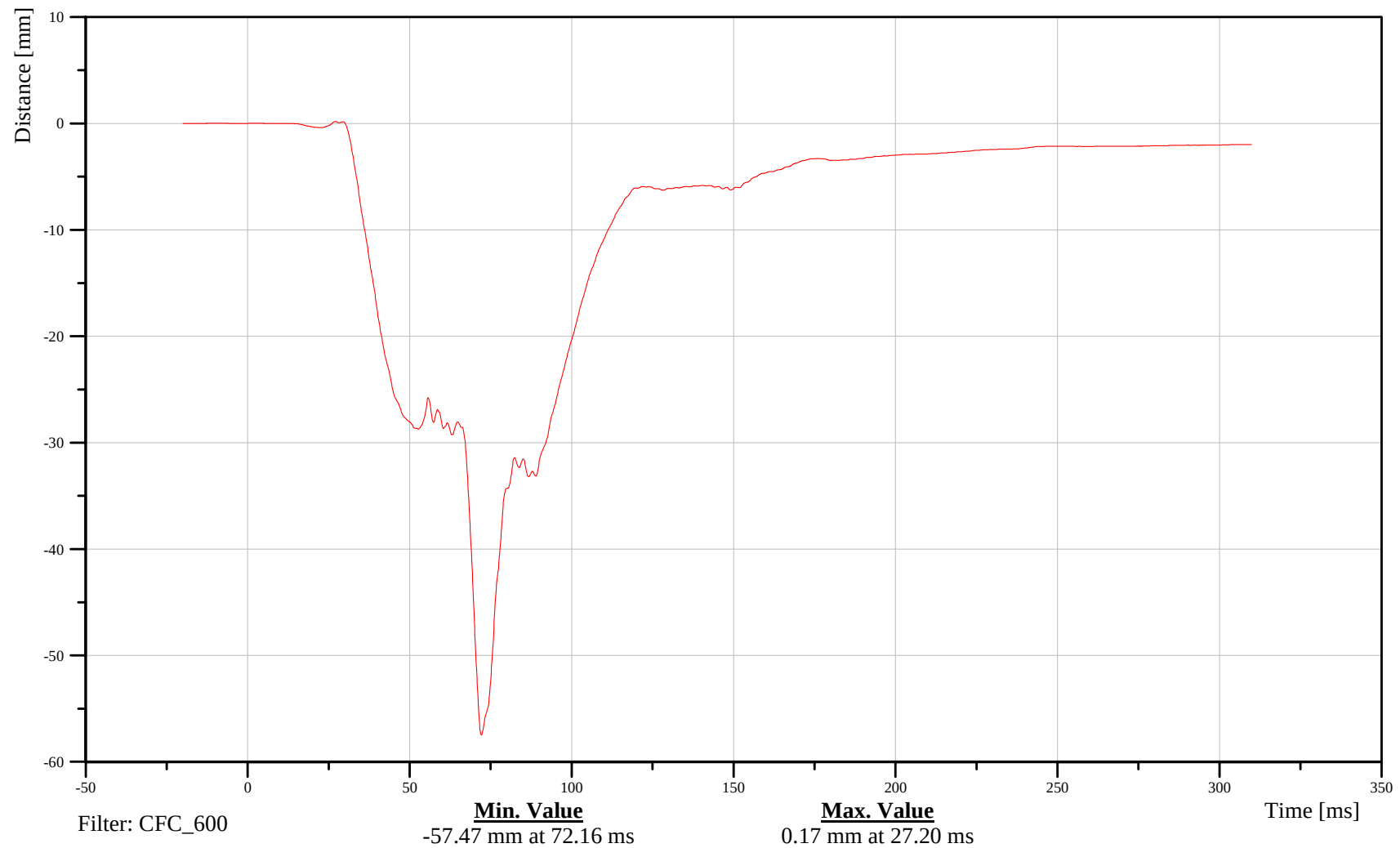
Target Driver Chest Displacement

Customer: VRTC

21CHST0000H3DSXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

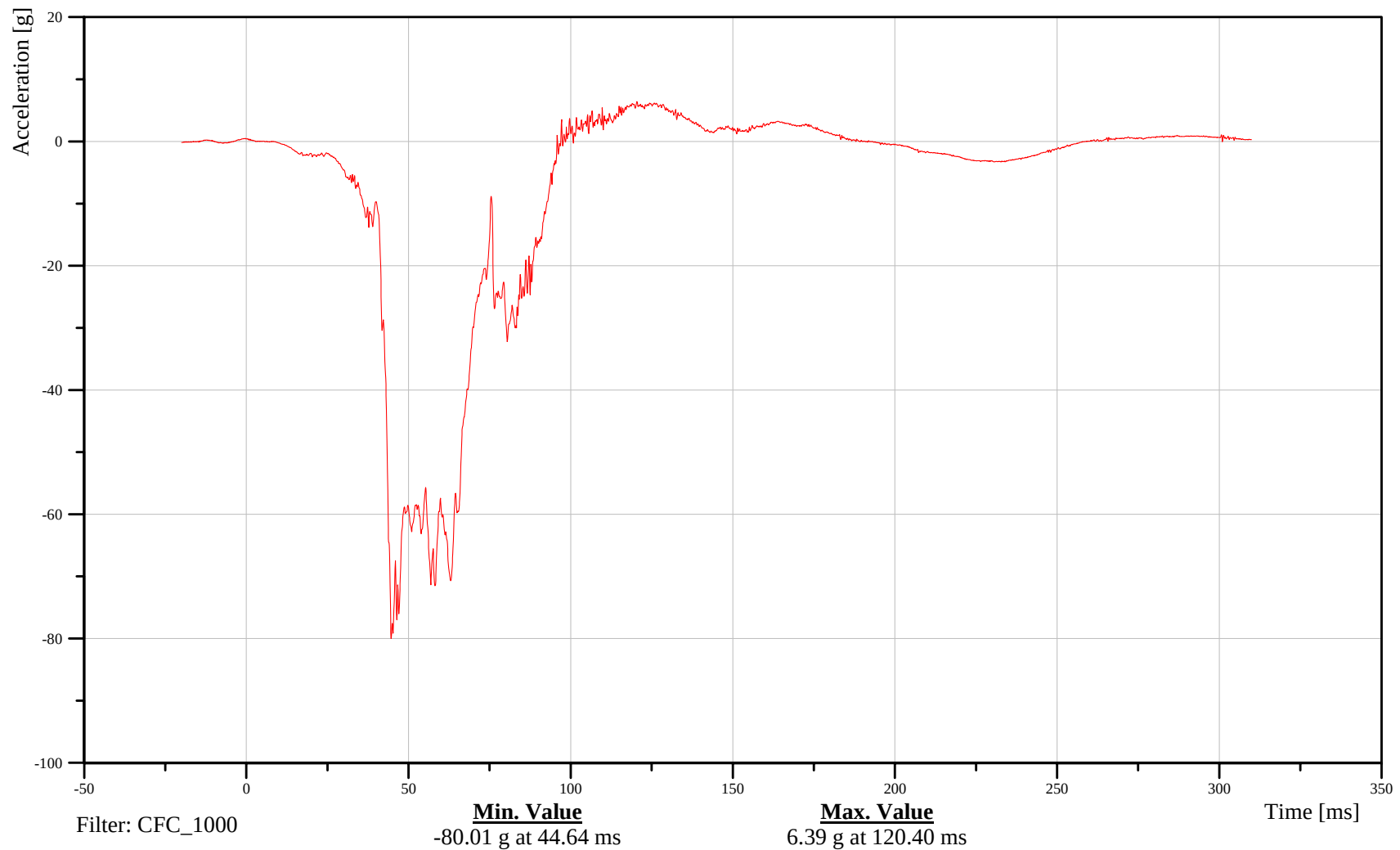
Target Driver Pelvis CG X-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

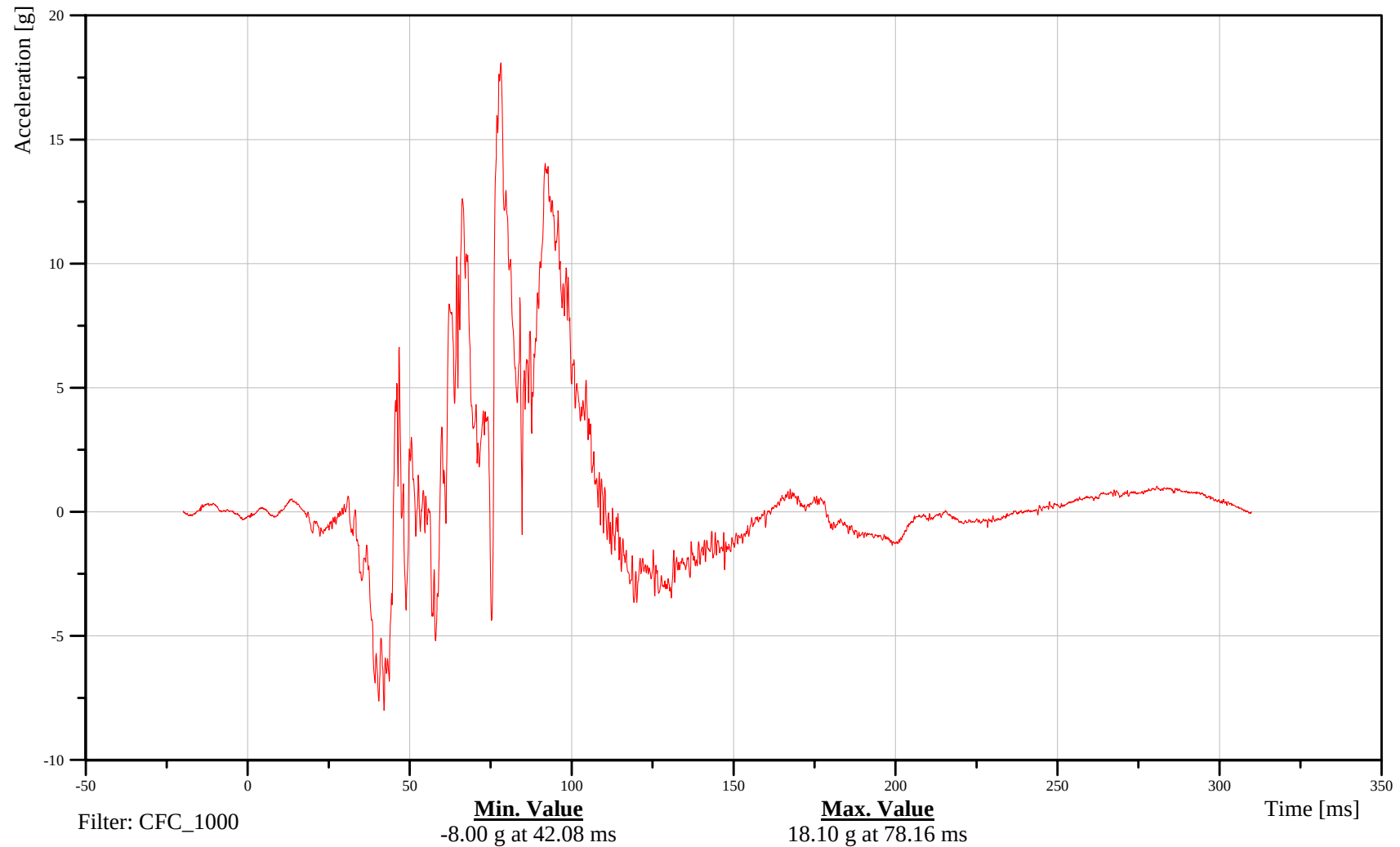
Target Driver Pelvis CG Y-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

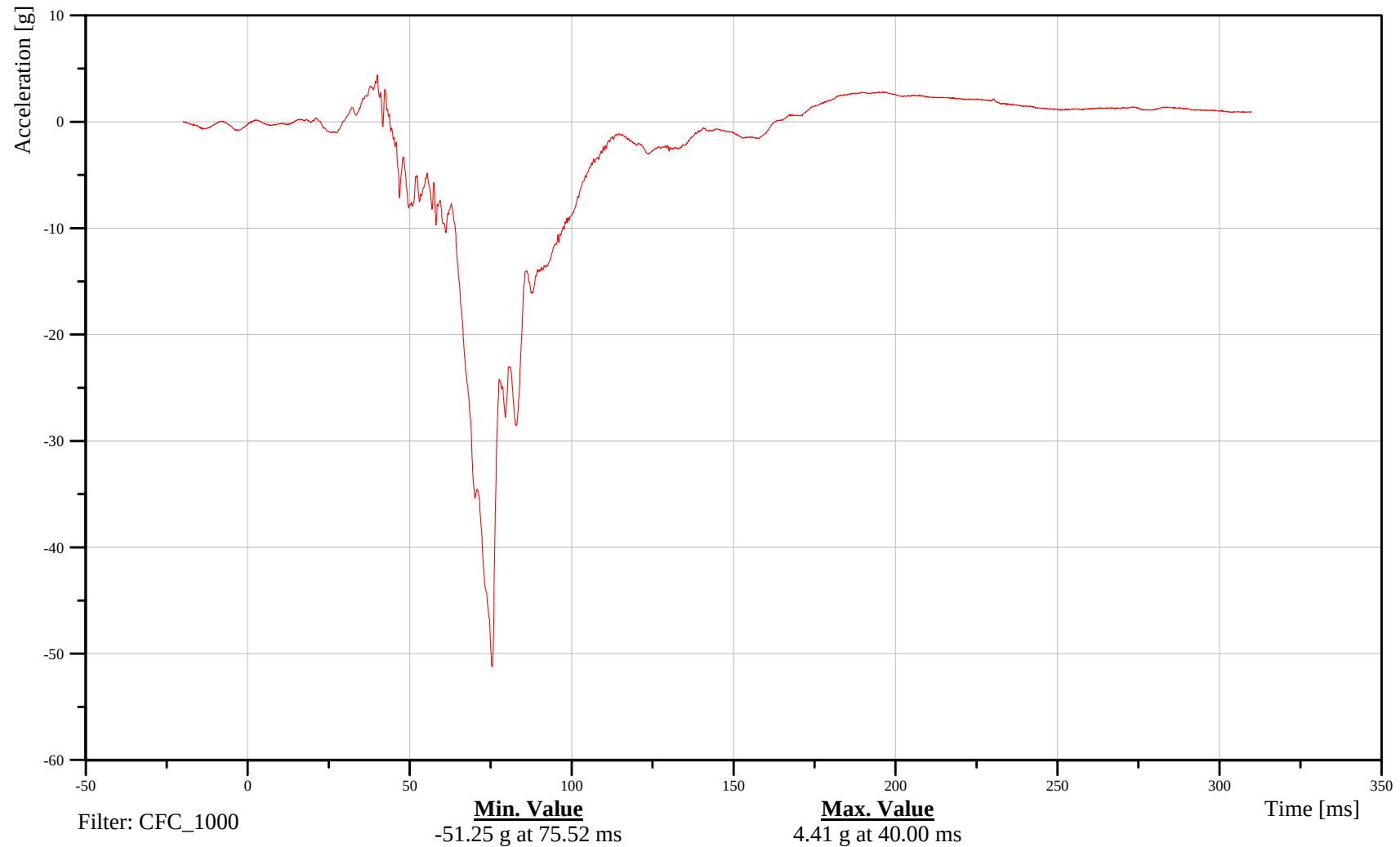
Target Driver Pelvis CG Z-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

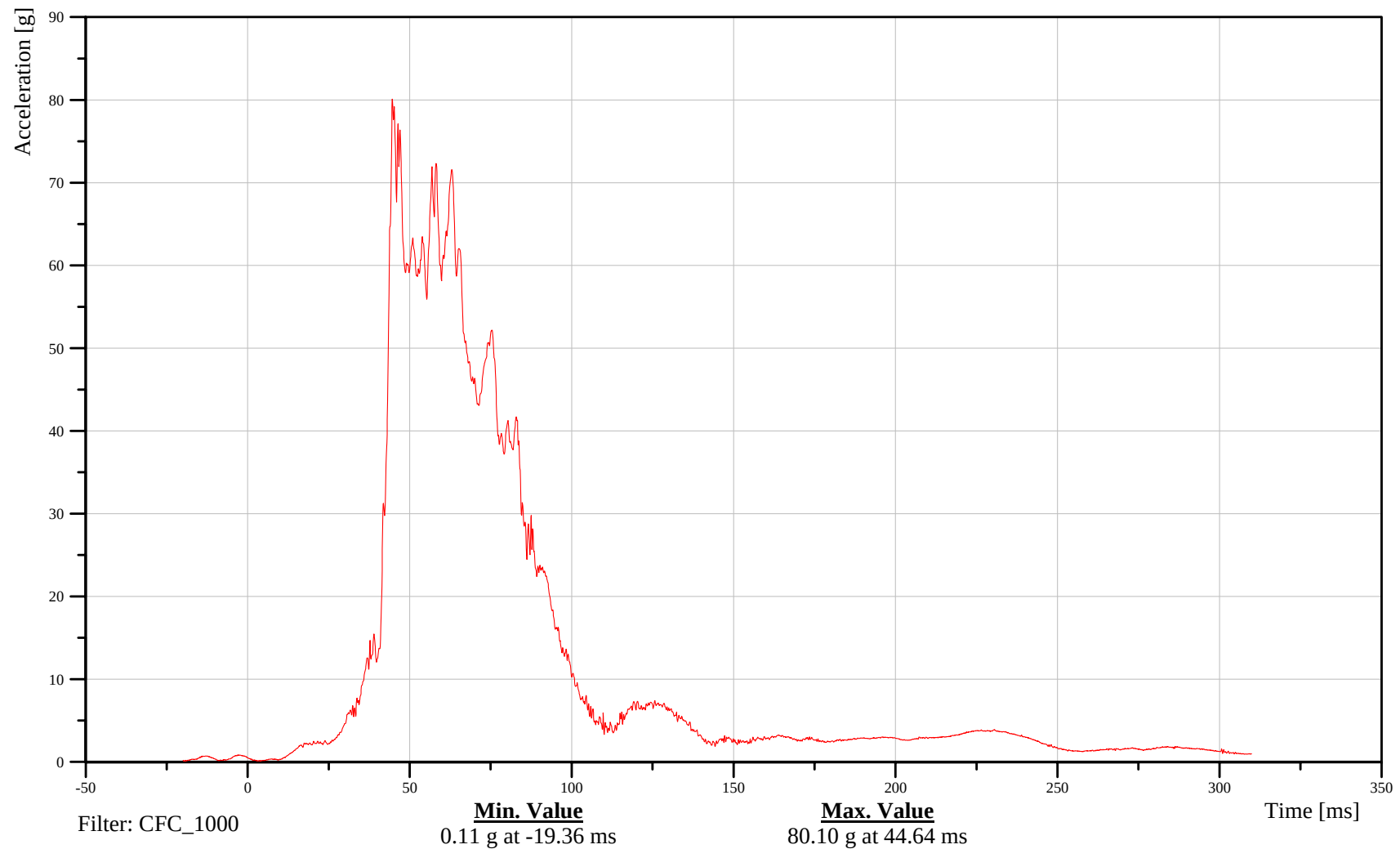
Target Driver Pelvis CG Resultant Acceleration

Customer: VRTC

21PELVCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

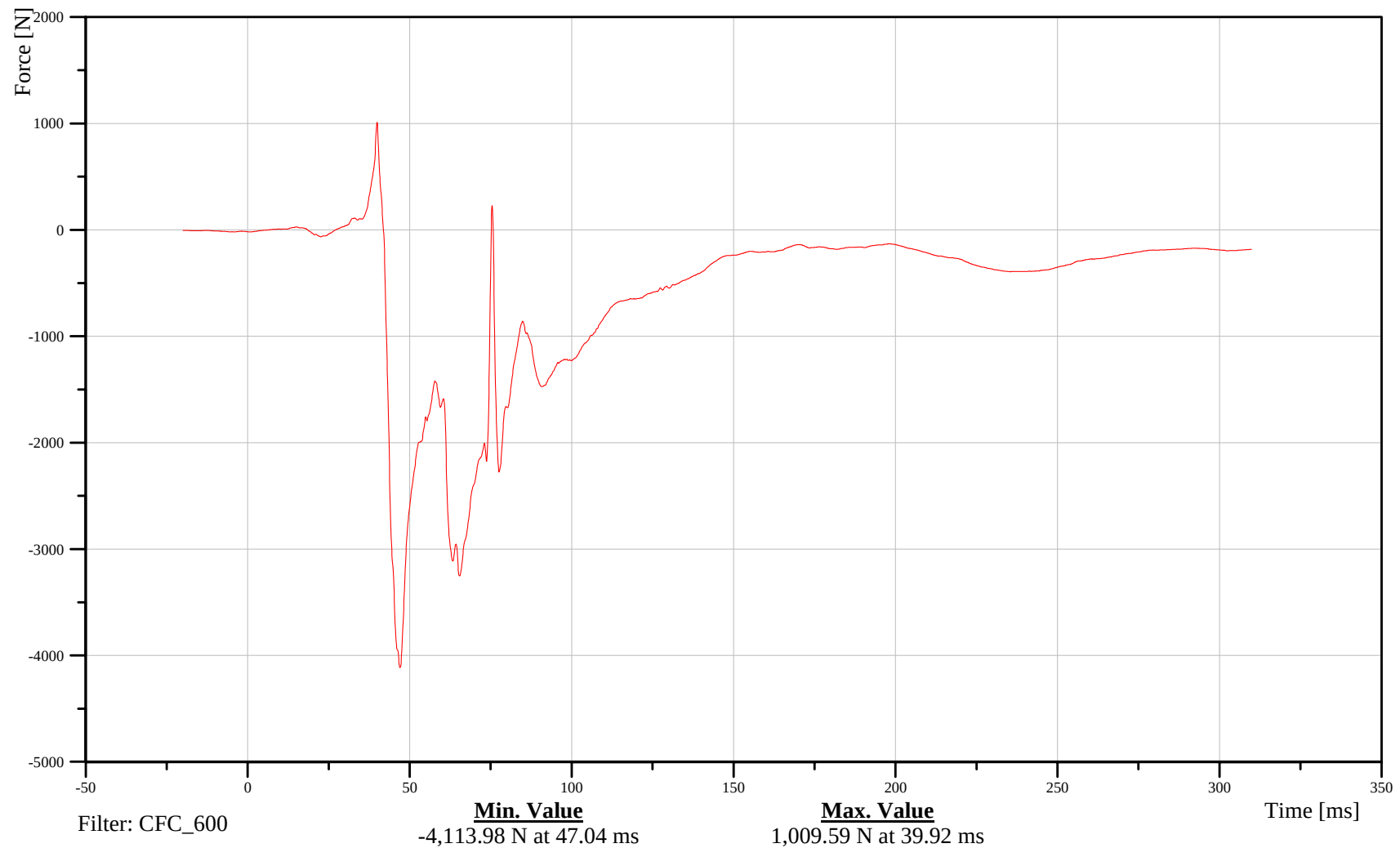
Target Driver Left Femur Z-Axis Force

Customer: VRTC

21FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

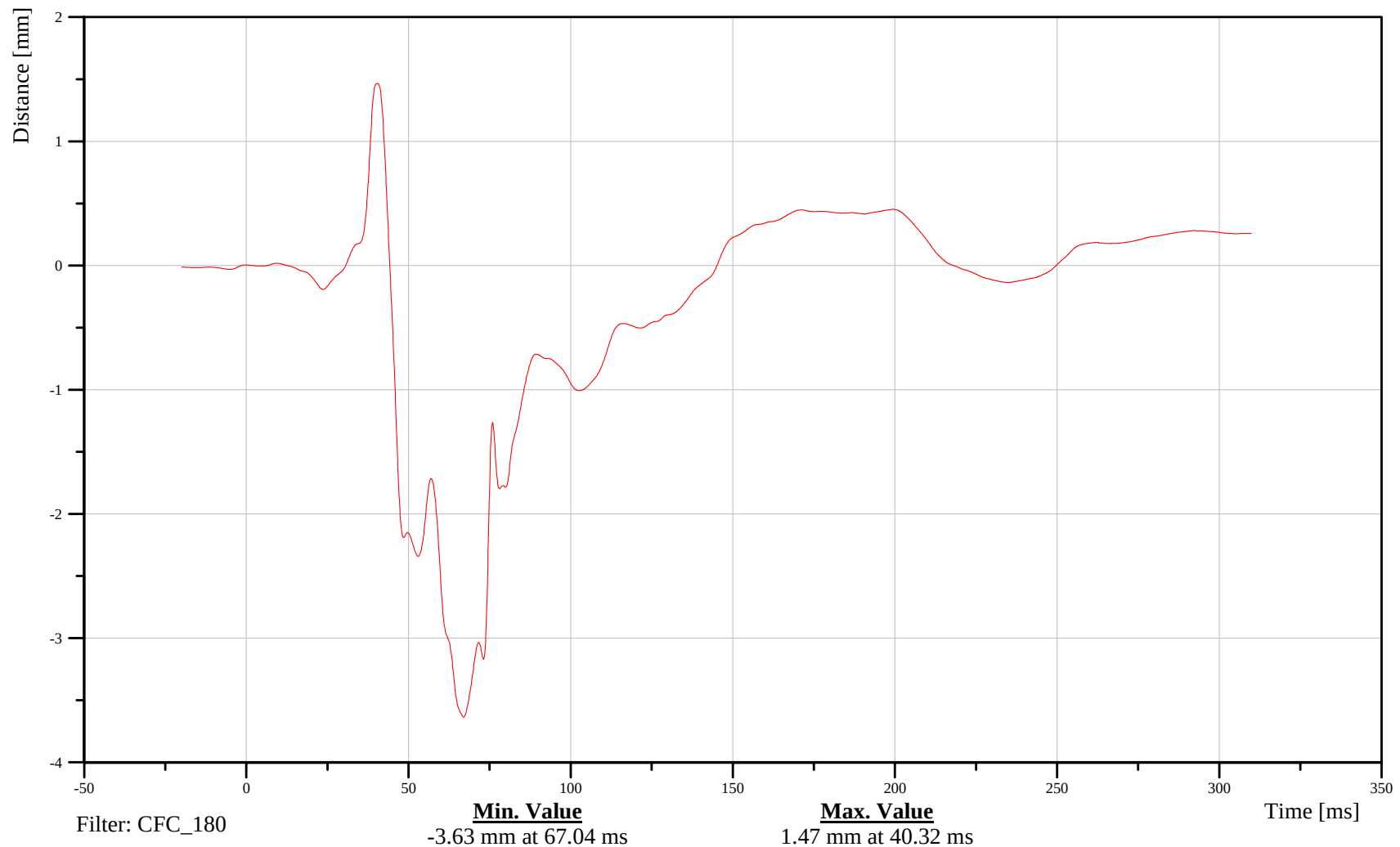
Target Driver Left Knee Displacement

Customer: VRTC

21KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

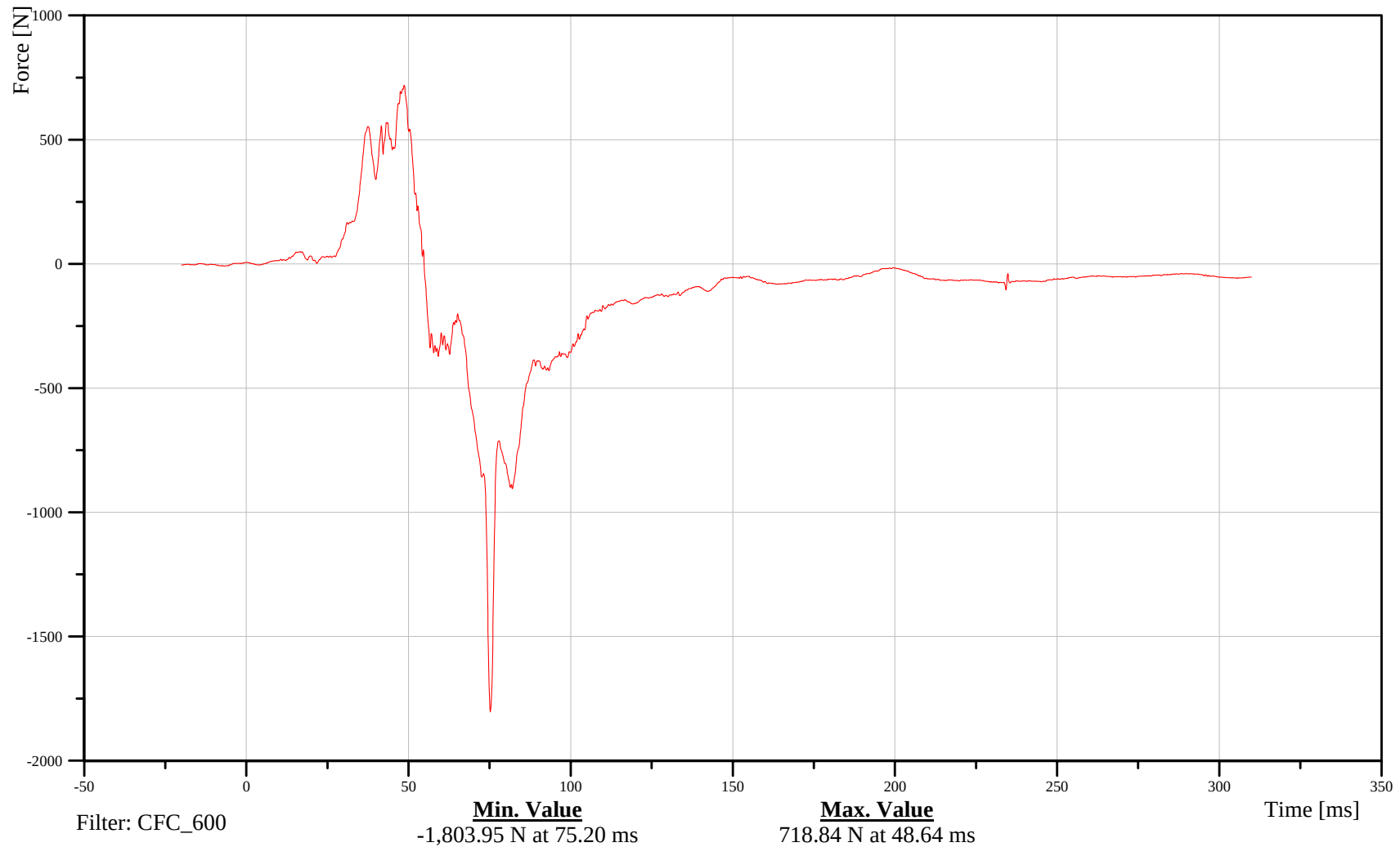
Target Driver Left Upper Tibia X-Axis Force

Customer: VRTC

21TIBILULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

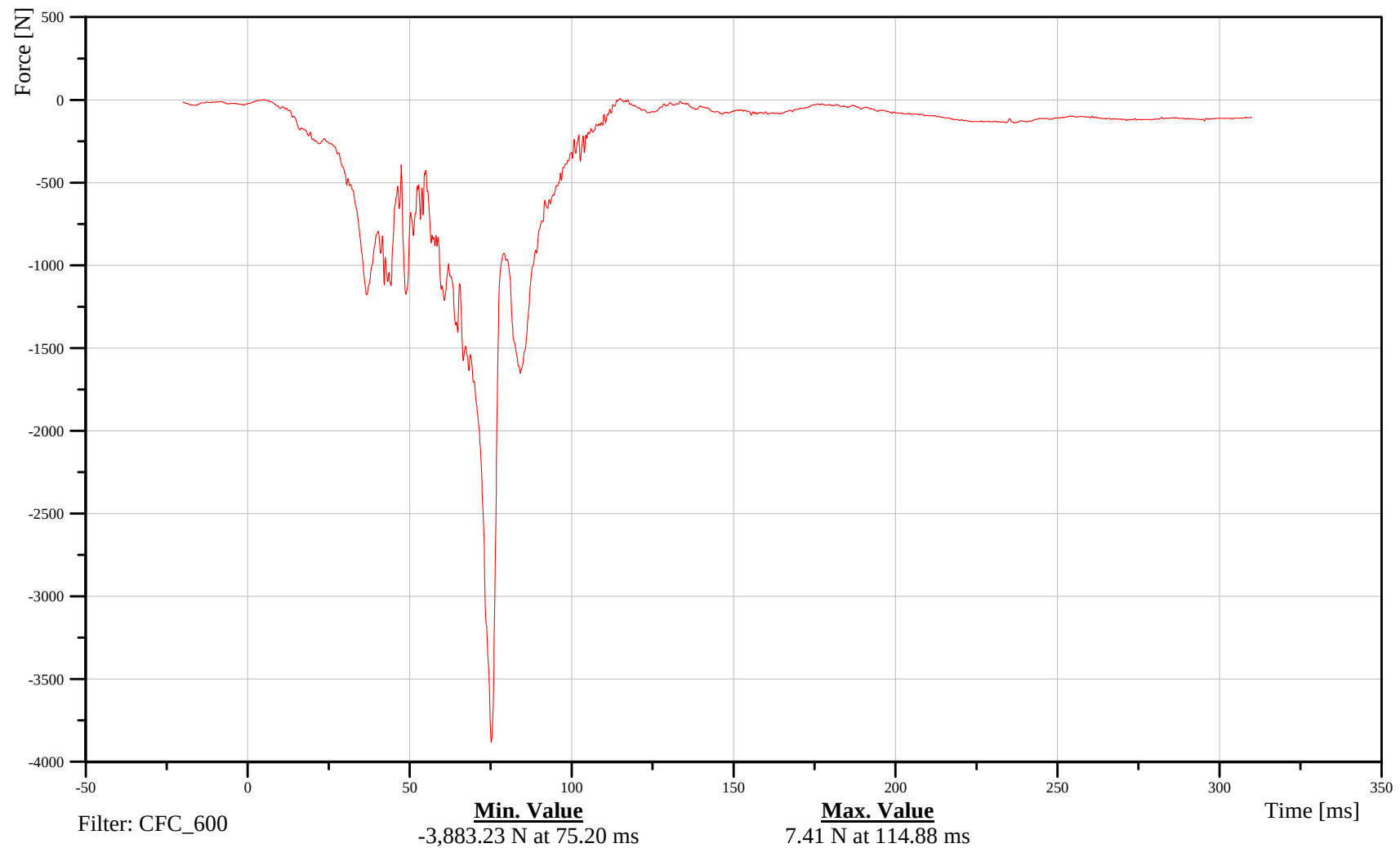
Target Driver Left Upper Tibia Z-Axis Force

Customer: VRTC

21TIBILULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

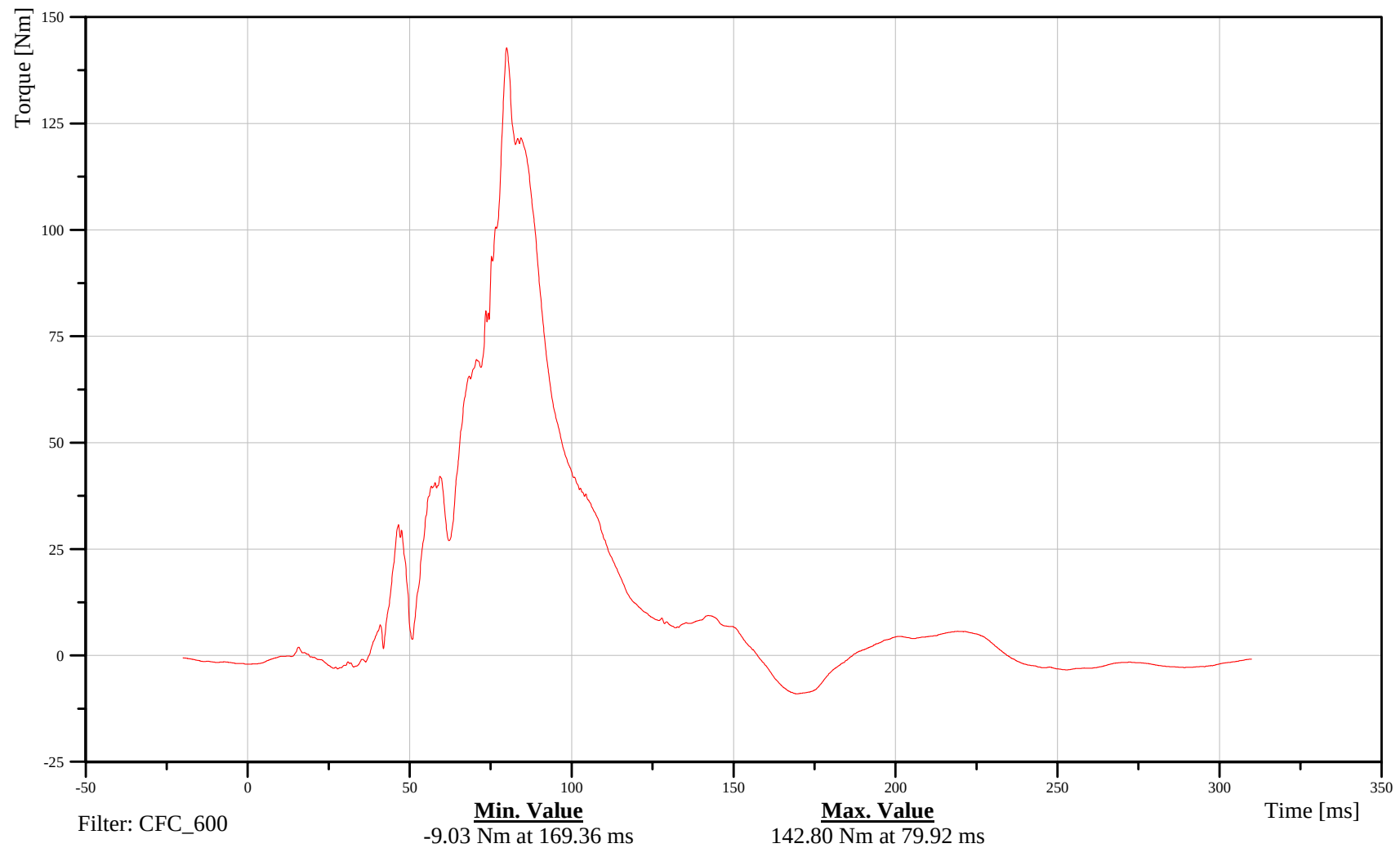
Target Driver Left Upper Tibia Moment About X Axis

Customer: VRTC

21TIBILULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

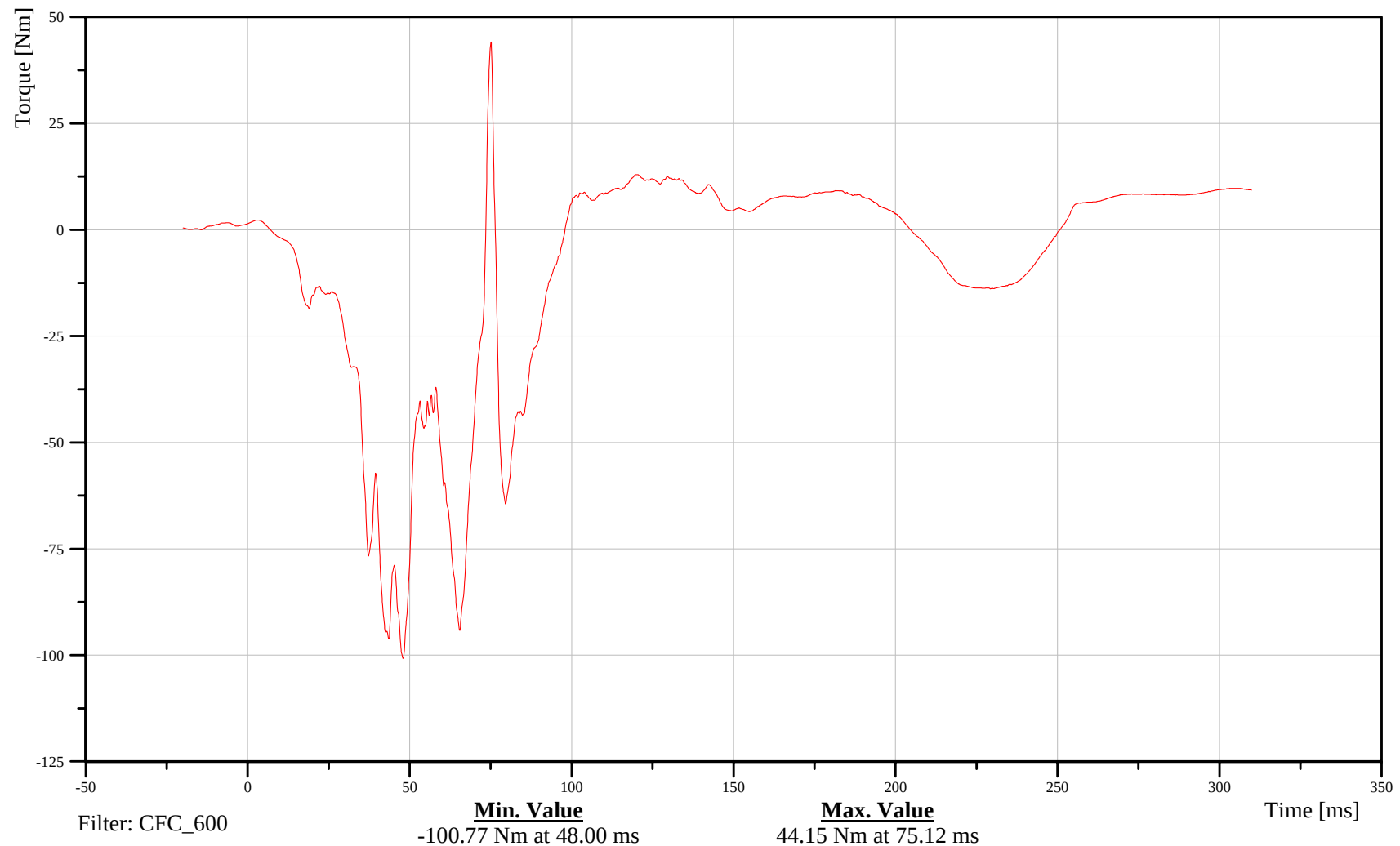
Target Driver Left Upper Tibia Moment About Y Axis

Customer: VRTC

21TIBILULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

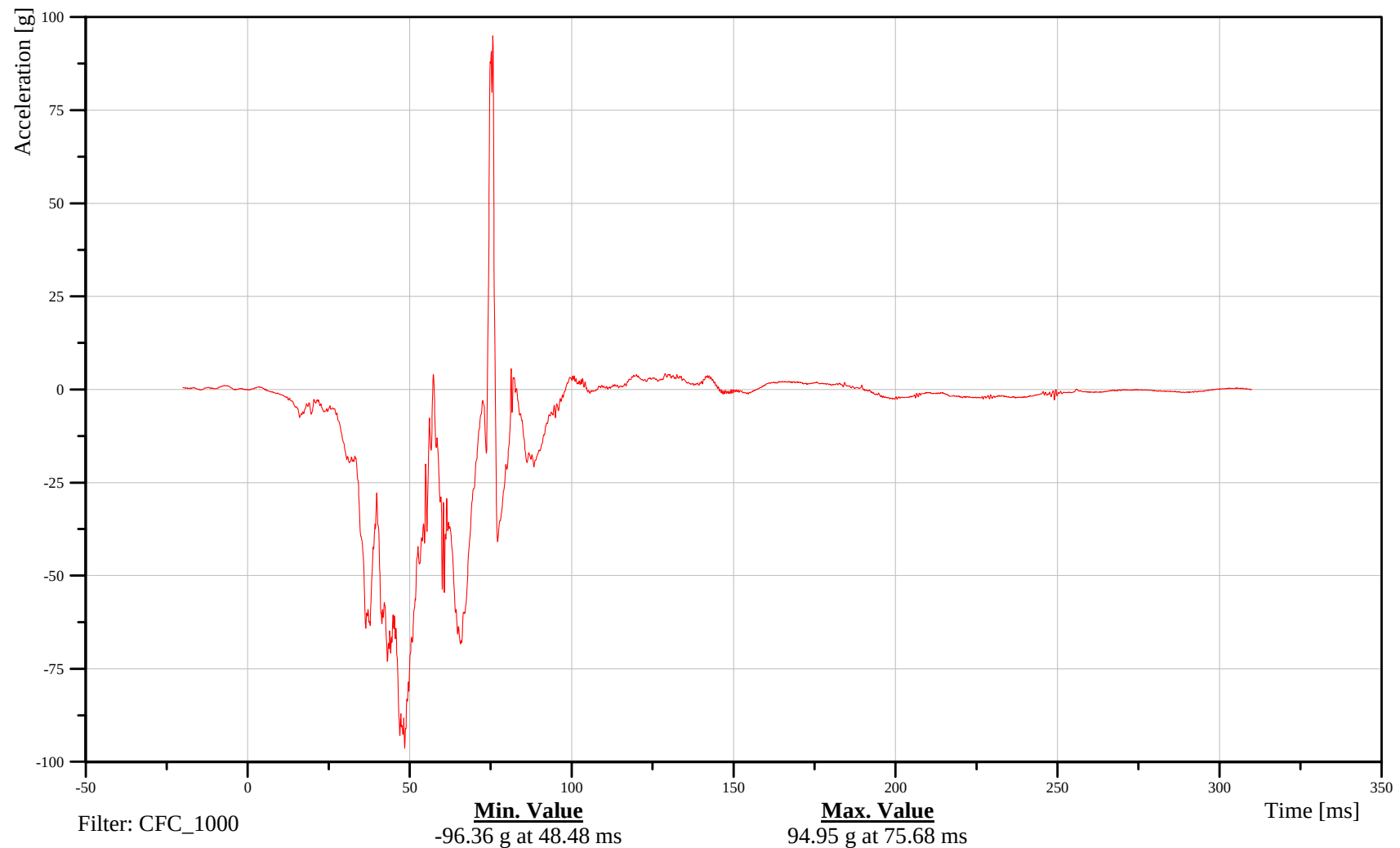
Target Driver Left Tibia X-Axis Acceleration

Customer: VRTC

21TIBILELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

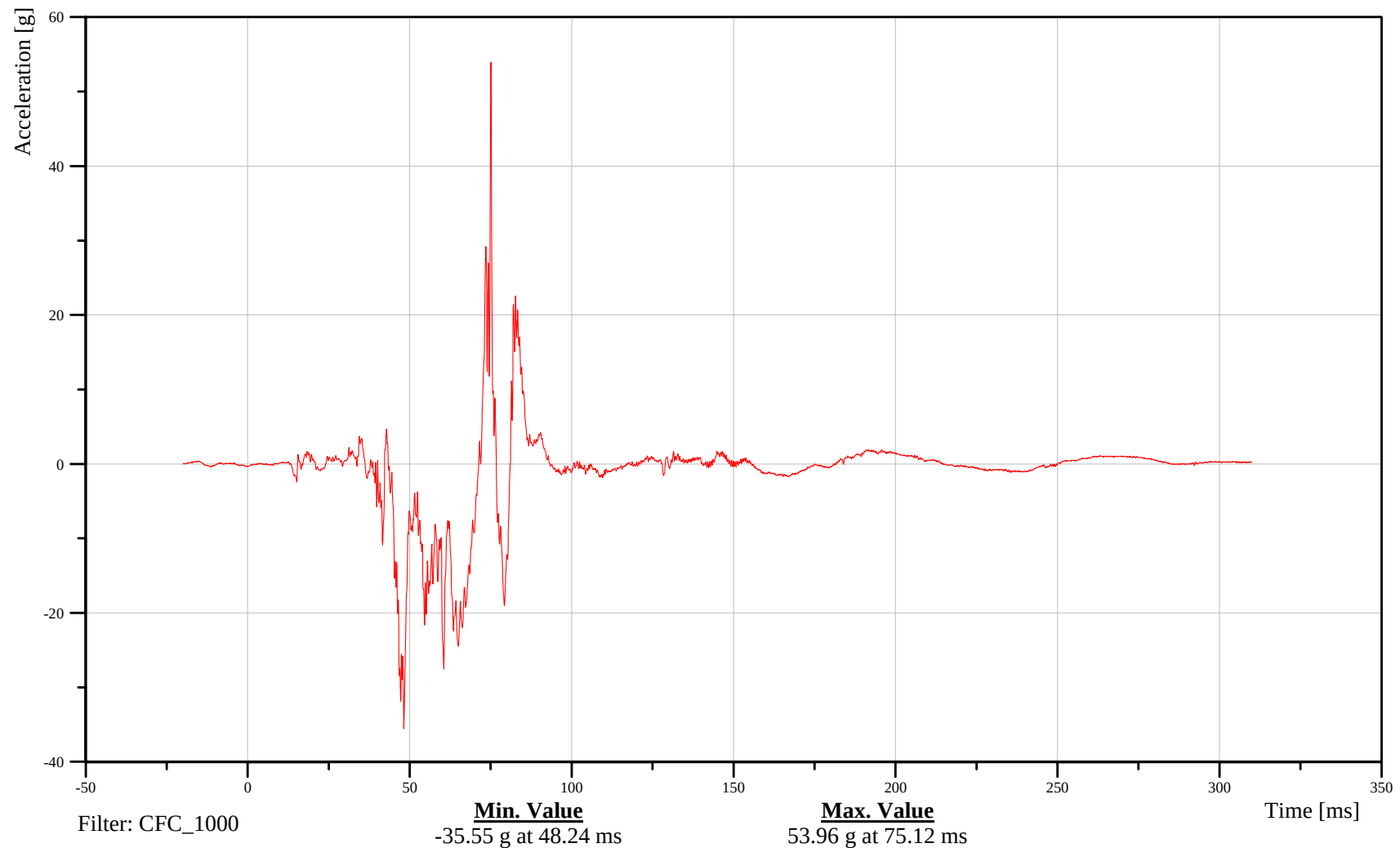
Target Driver Left Tibia Y-Axis Acceleration

Customer: VRTC

21TIBILELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

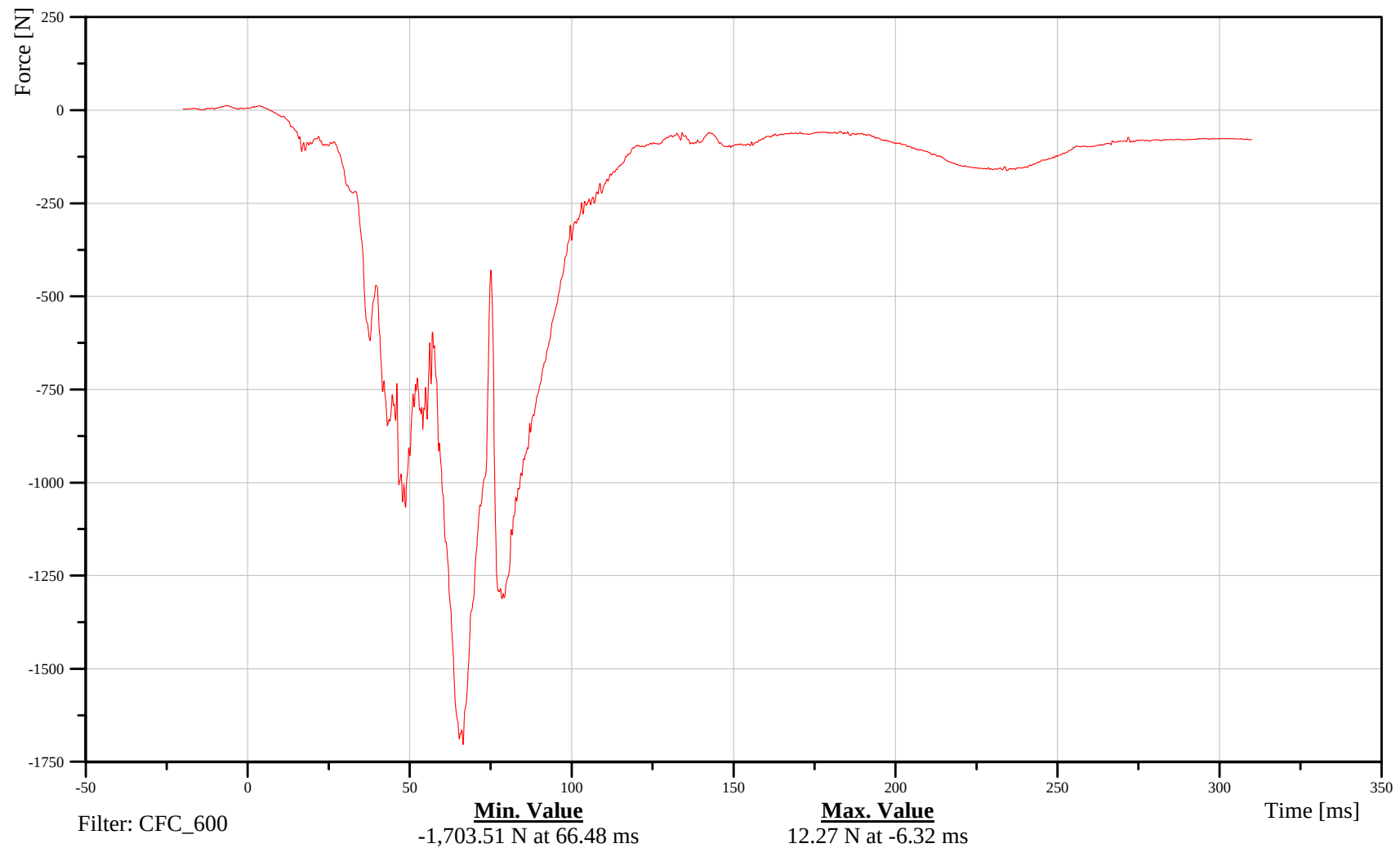
Target Driver Left Lower Tibia X-Axis Force

Customer: VRTC

21TIBILLXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

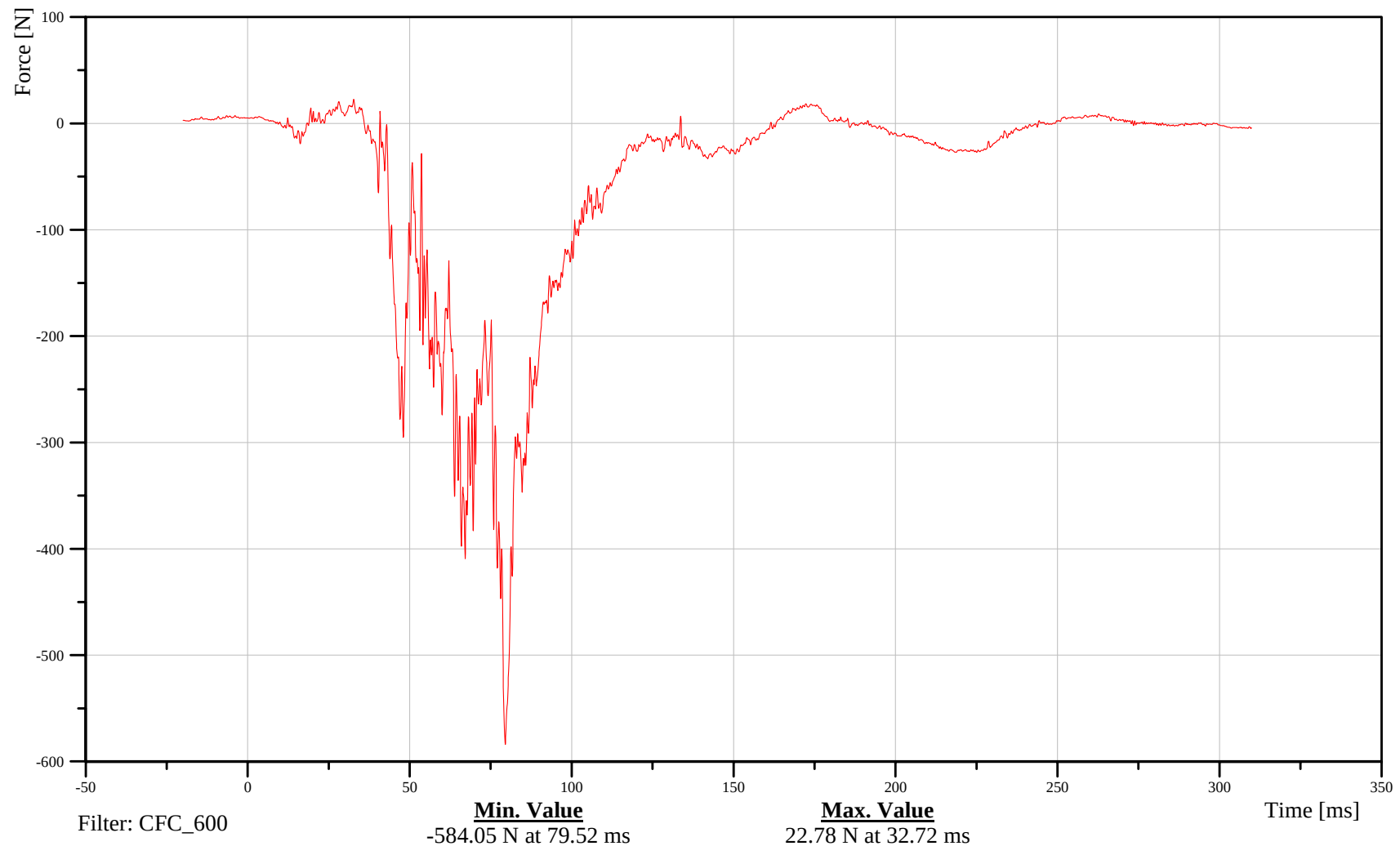
Target Driver Left Lower Tibia Y-Axis Force

Customer: VRTC

21TIBILLX3H3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

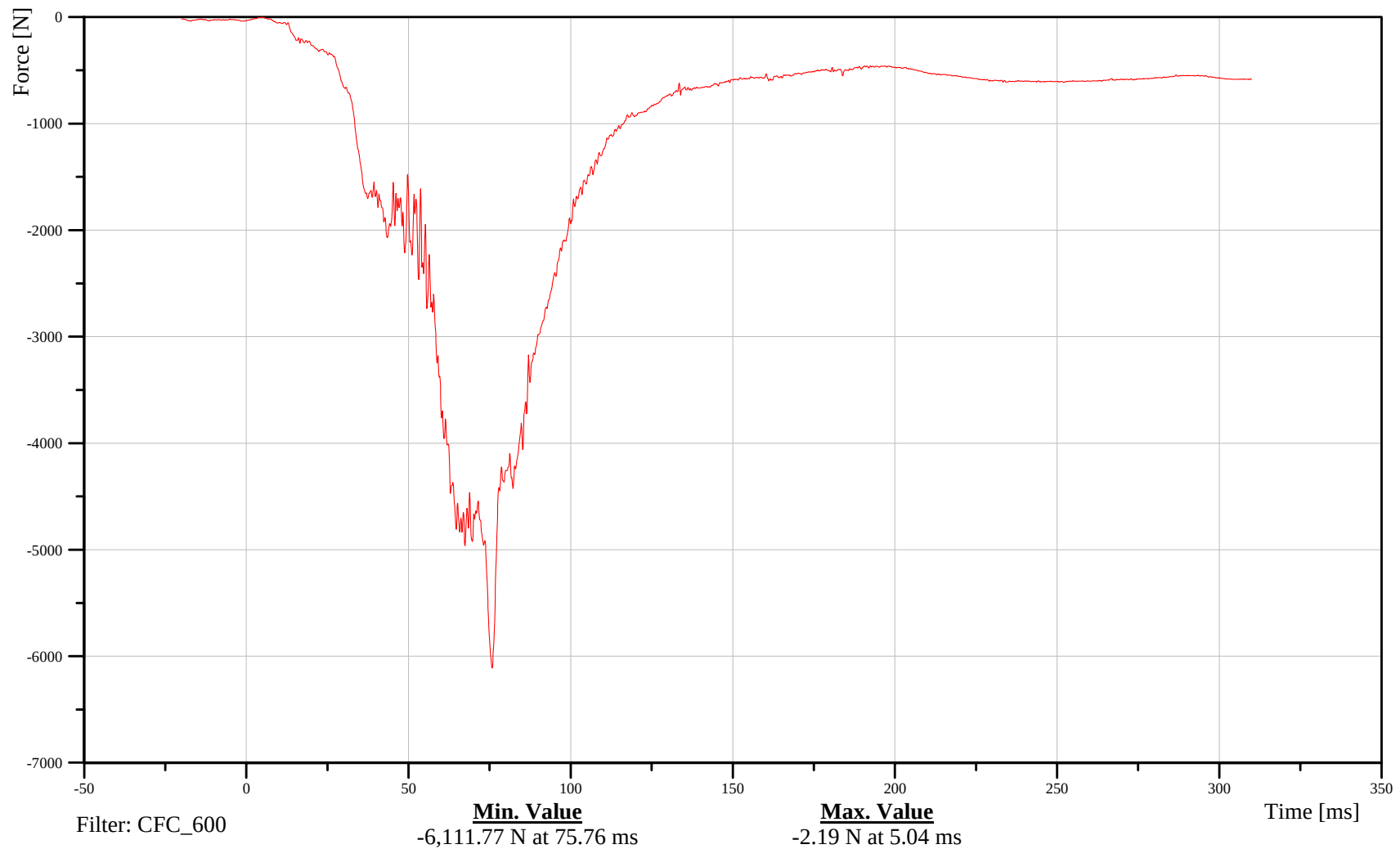
Target Driver Left Lower Tibia Z-Axis Force

Customer: VRTC

21TIBILLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

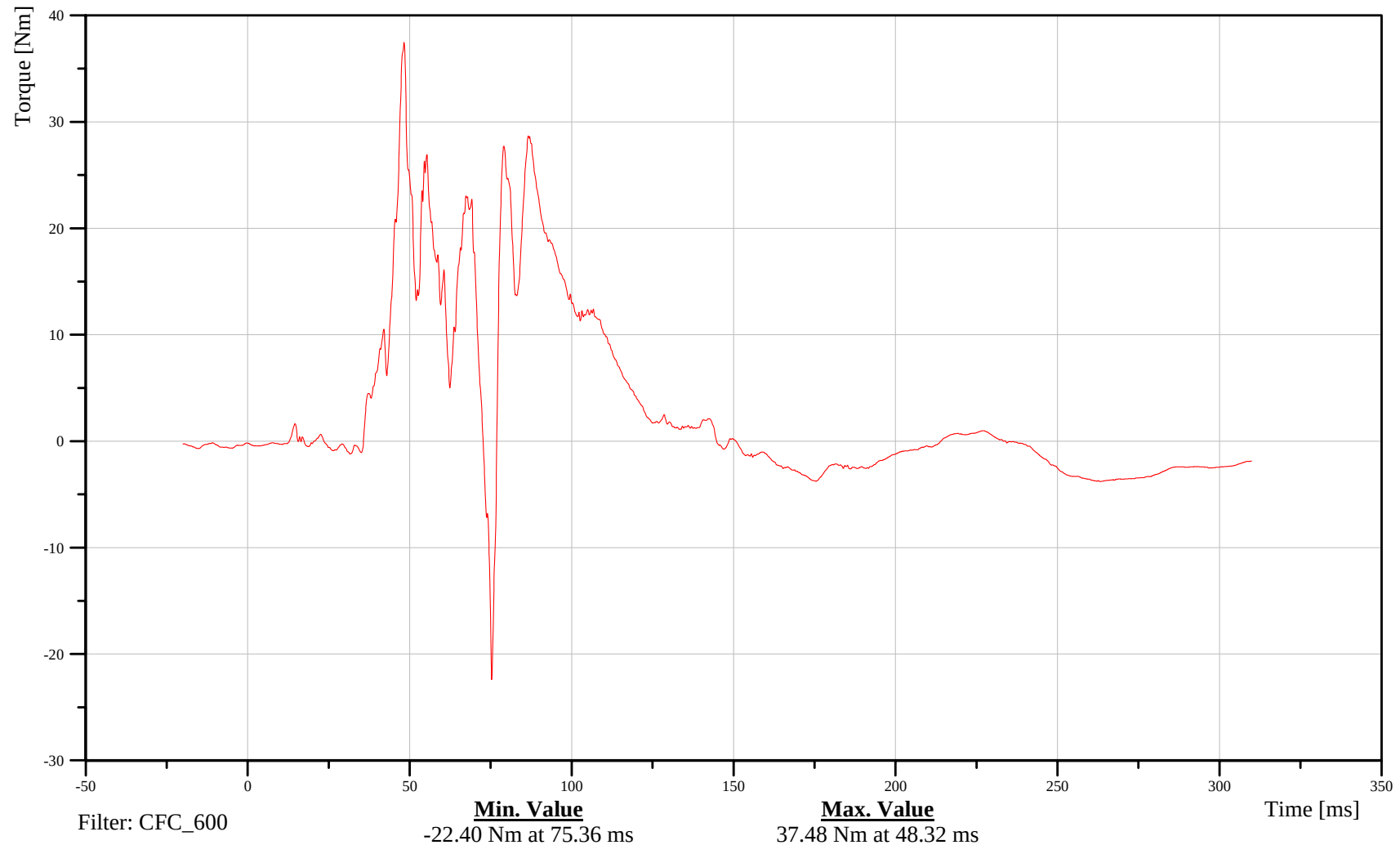
Target Driver Left Lower Tibia Moment About X Axis

Customer: VRTC

21TIBILLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

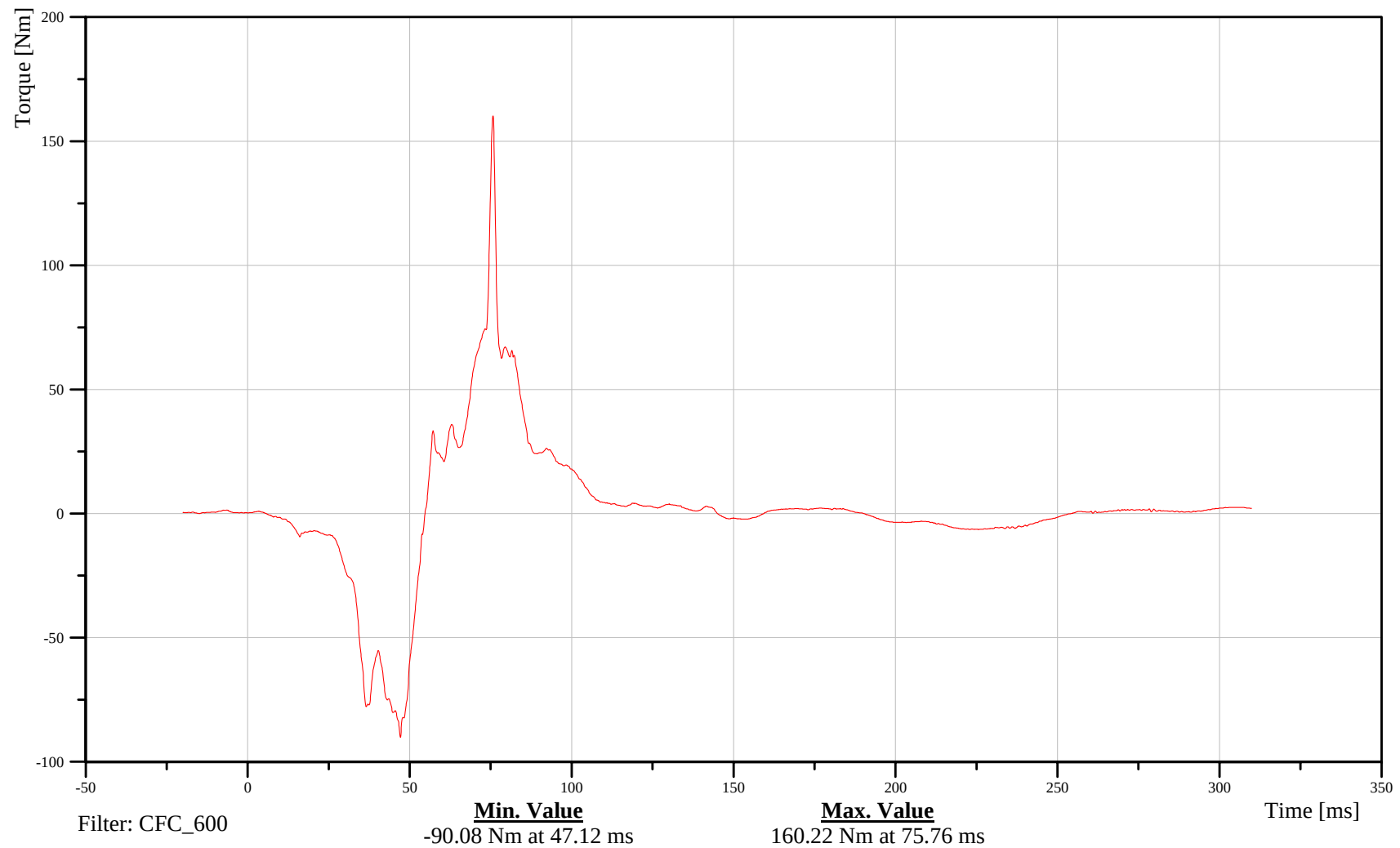
Target Driver Left Lower Tibia Moment About Y Axis

Customer: VRTC

21TIBILLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

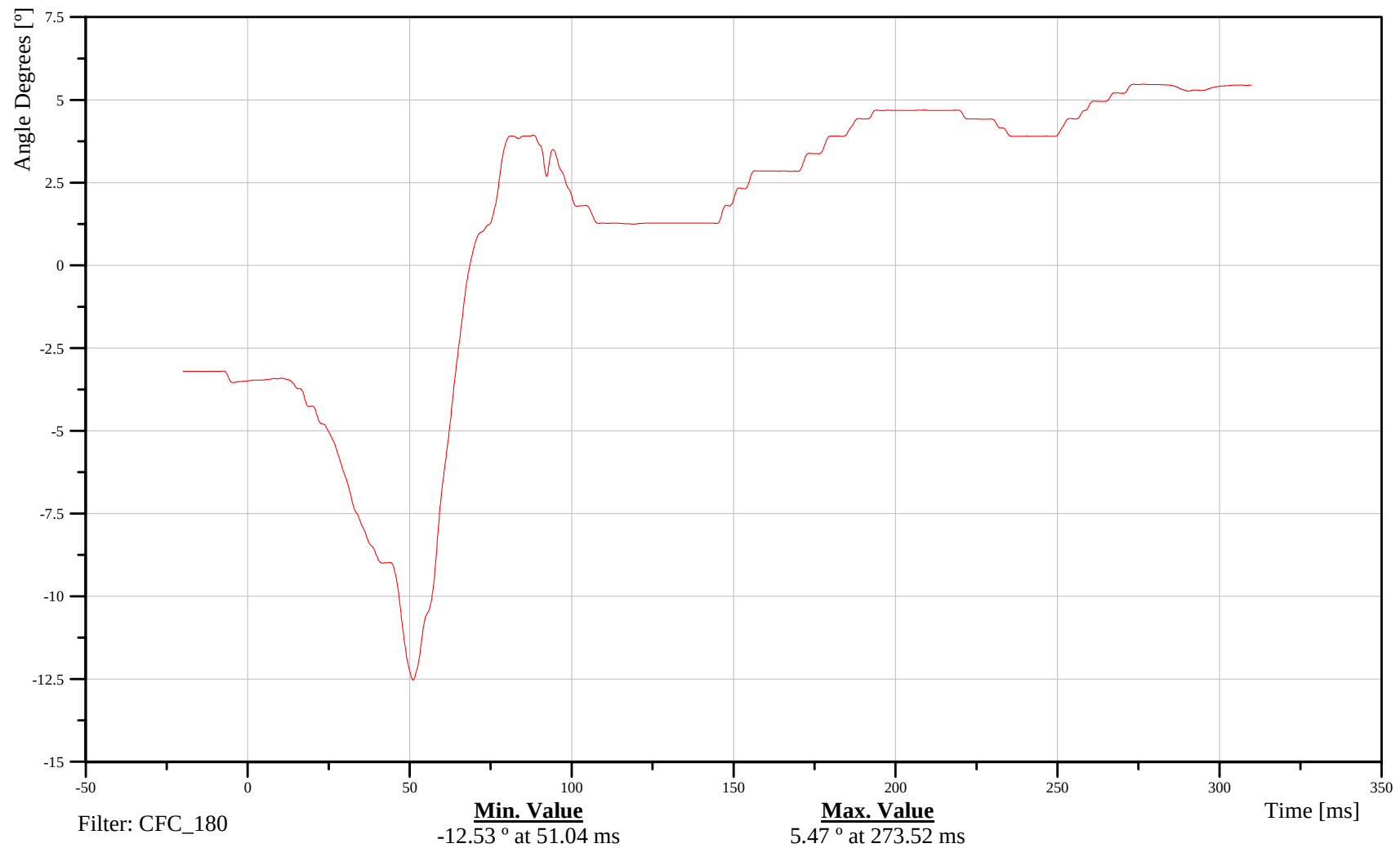
Target Driver Left Foot X-Axis Rotation

Customer: VRTC

21FOOTLELXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

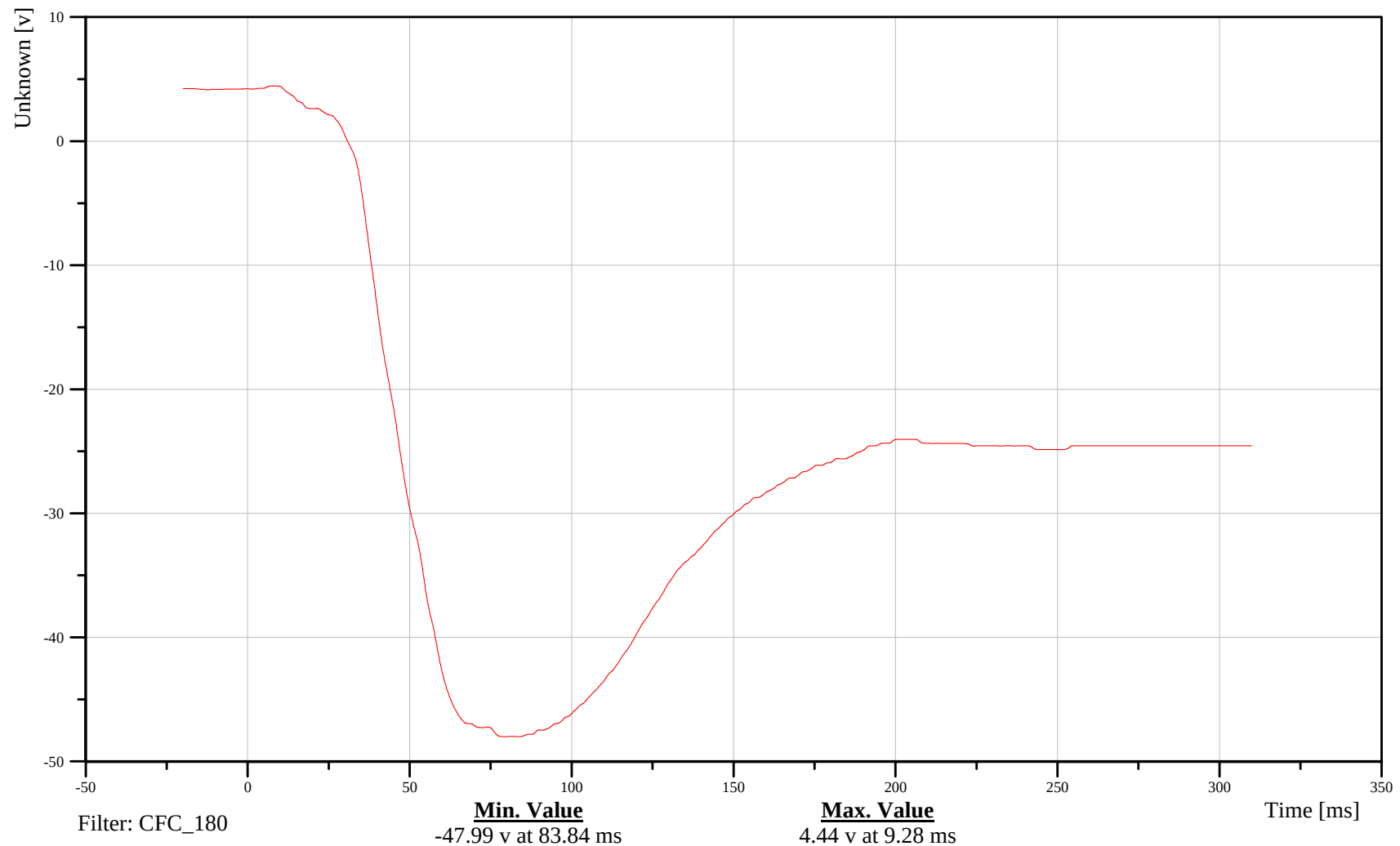
Target Driver Left Foot Y-Axis Rotation

Customer: VRTC

21FOOTLELXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

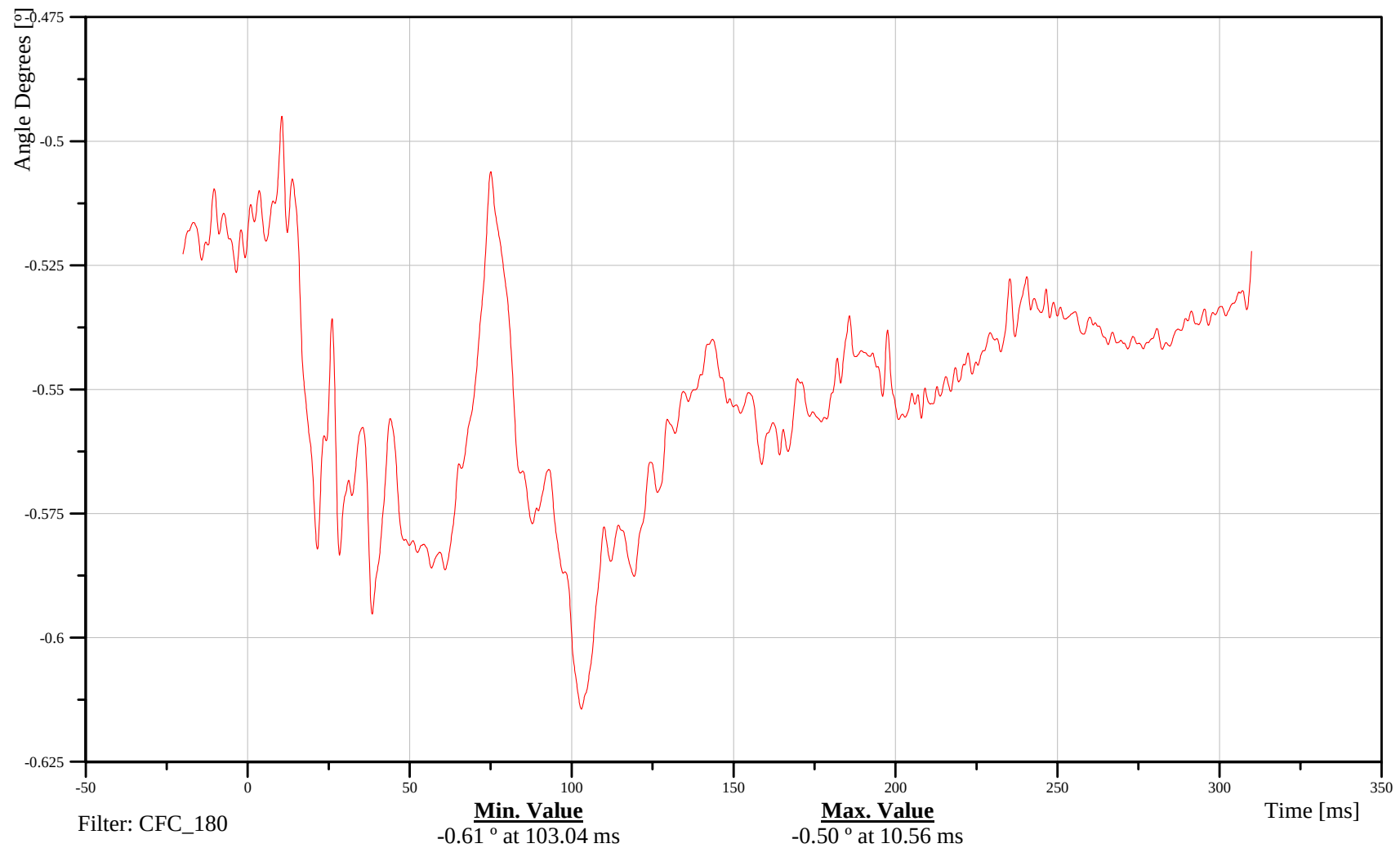
Target Driver Left Foot Z-Axis Rotation

Customer: VRTC

21FOOTLELXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

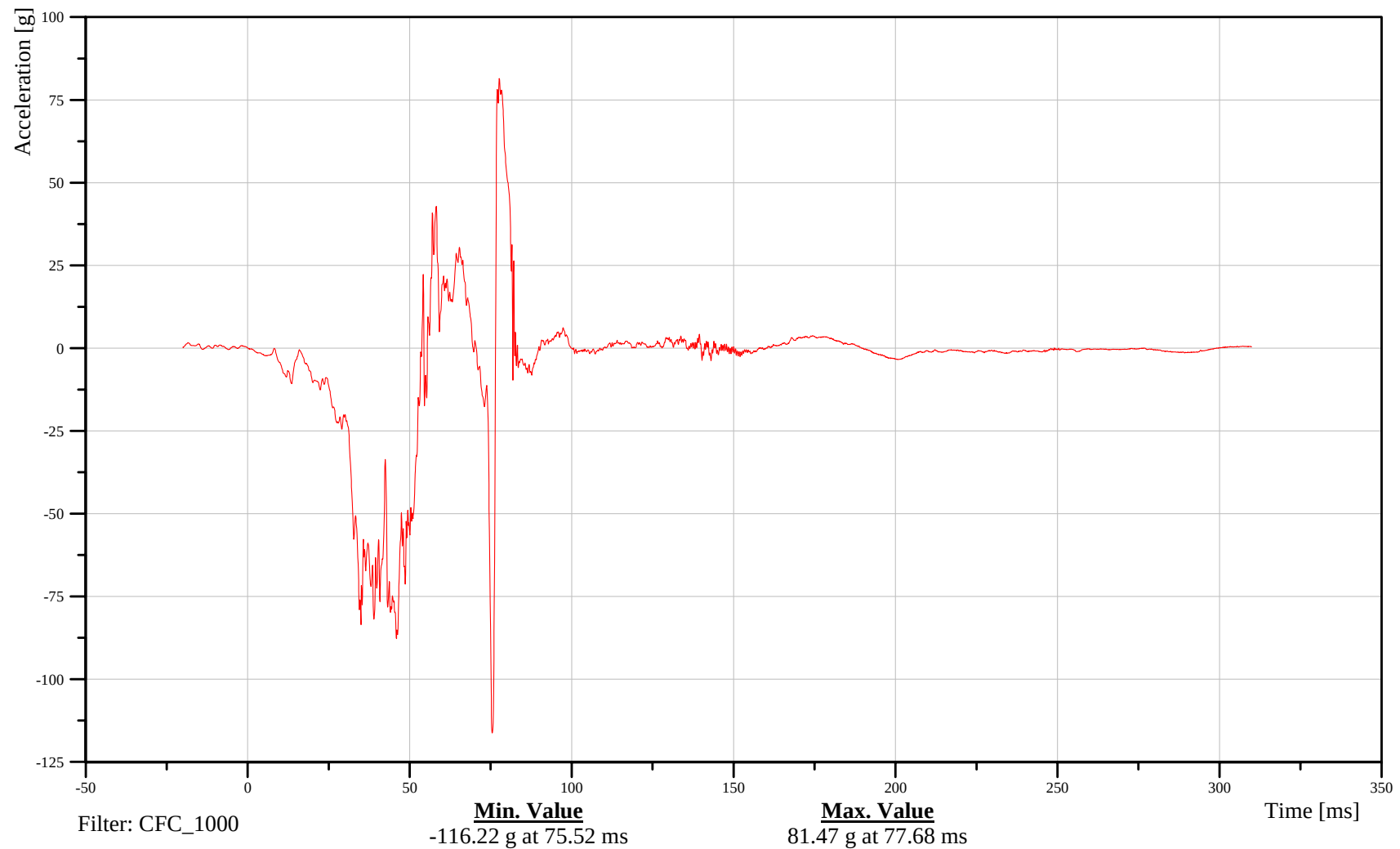
Target Driver Left Foot X-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

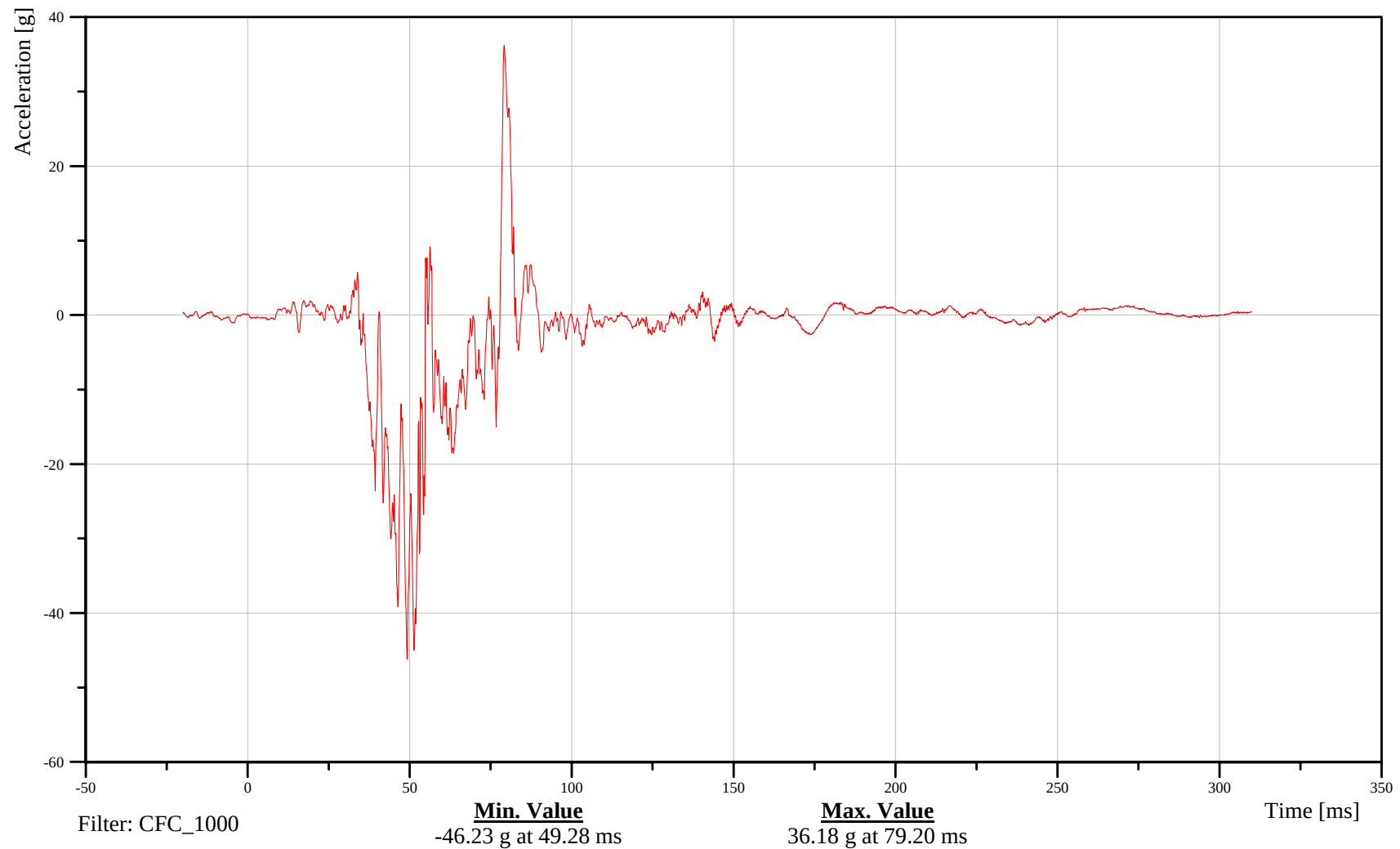
Target Driver Left Foot Y-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

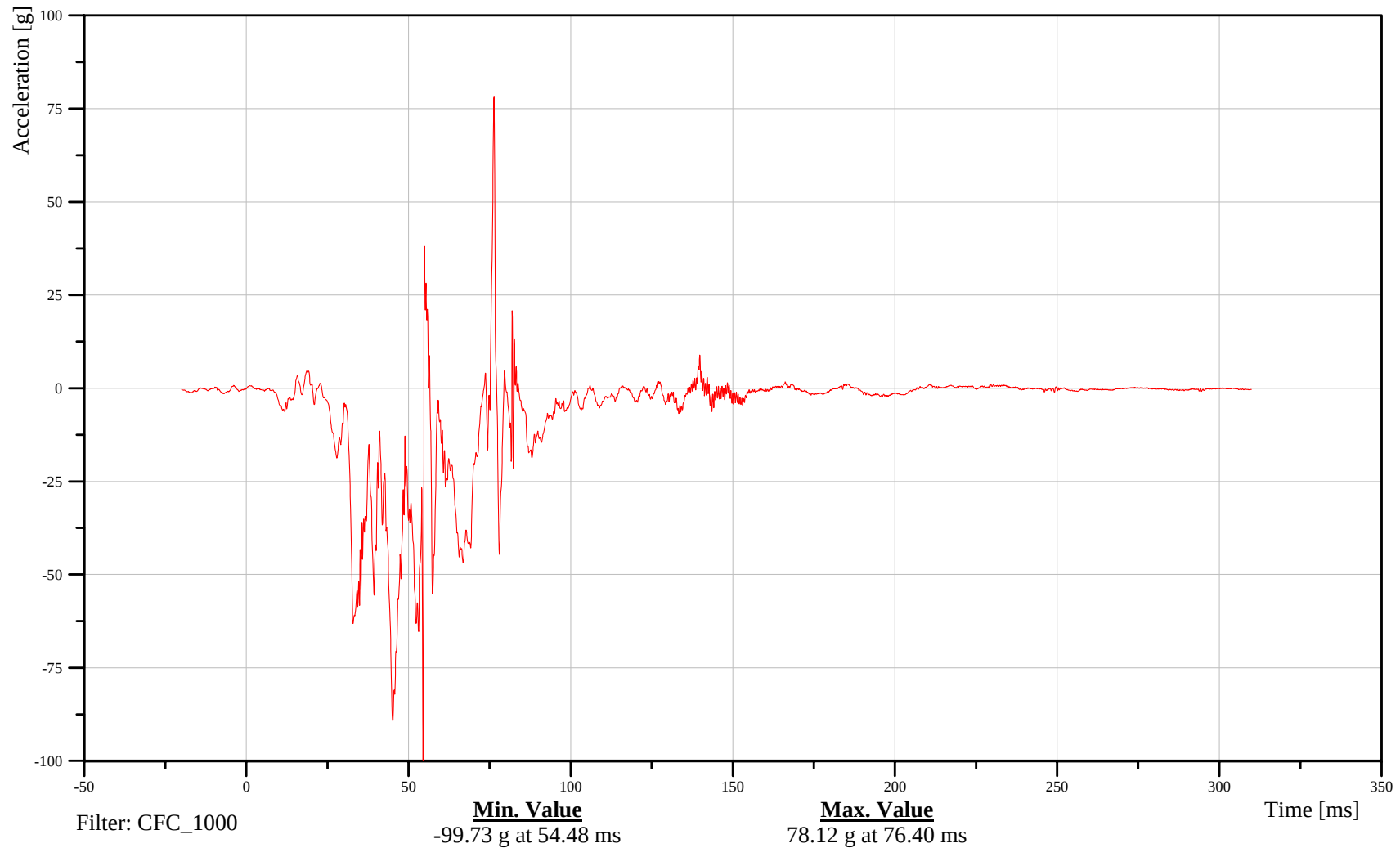
Target Driver Left Foot Z-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

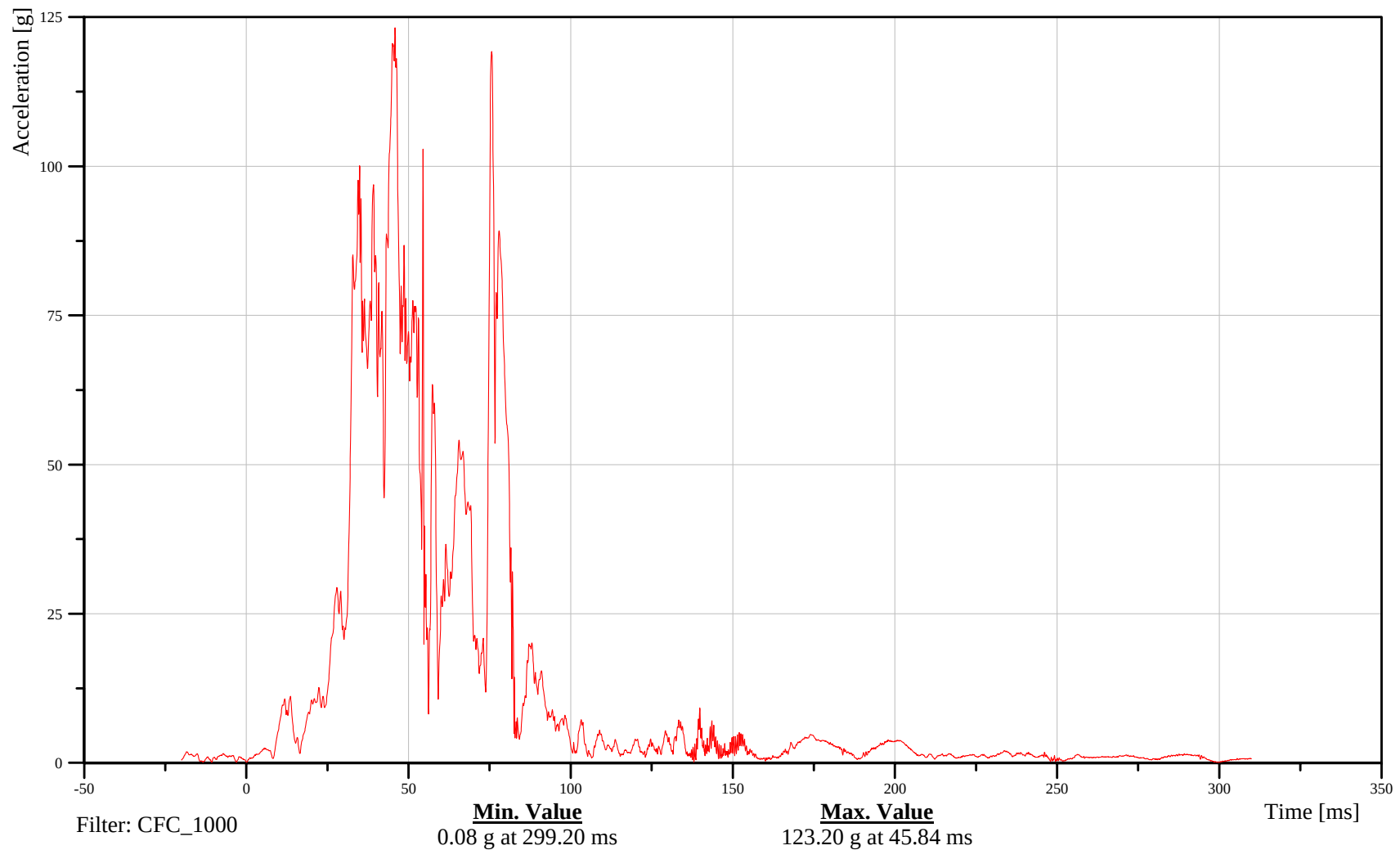
Target Driver Left Foot Resultant Acceleration

Customer: VRTC

21FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

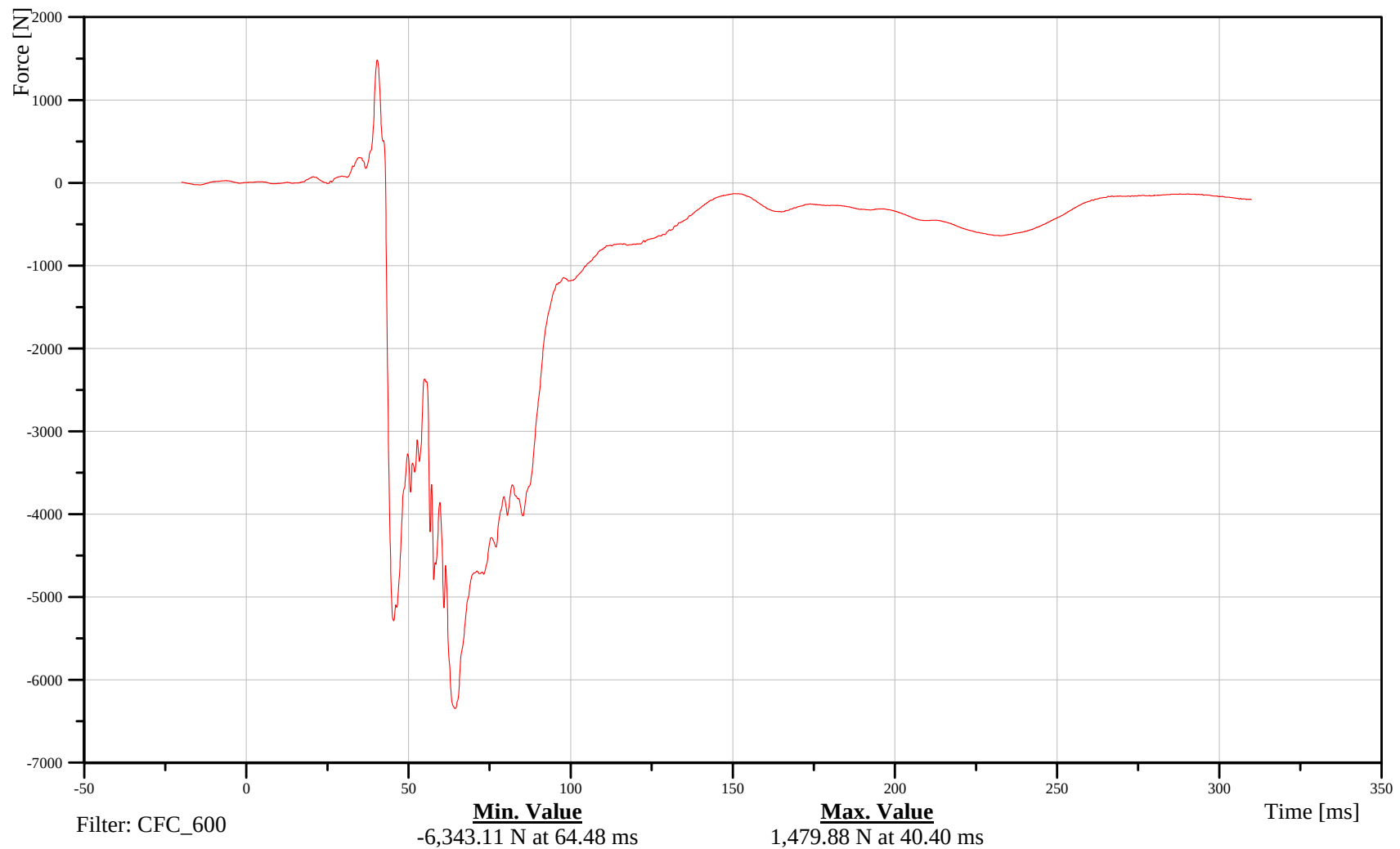
Target Driver Right Femur Z-Axis Force

Customer: VRTC

21FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

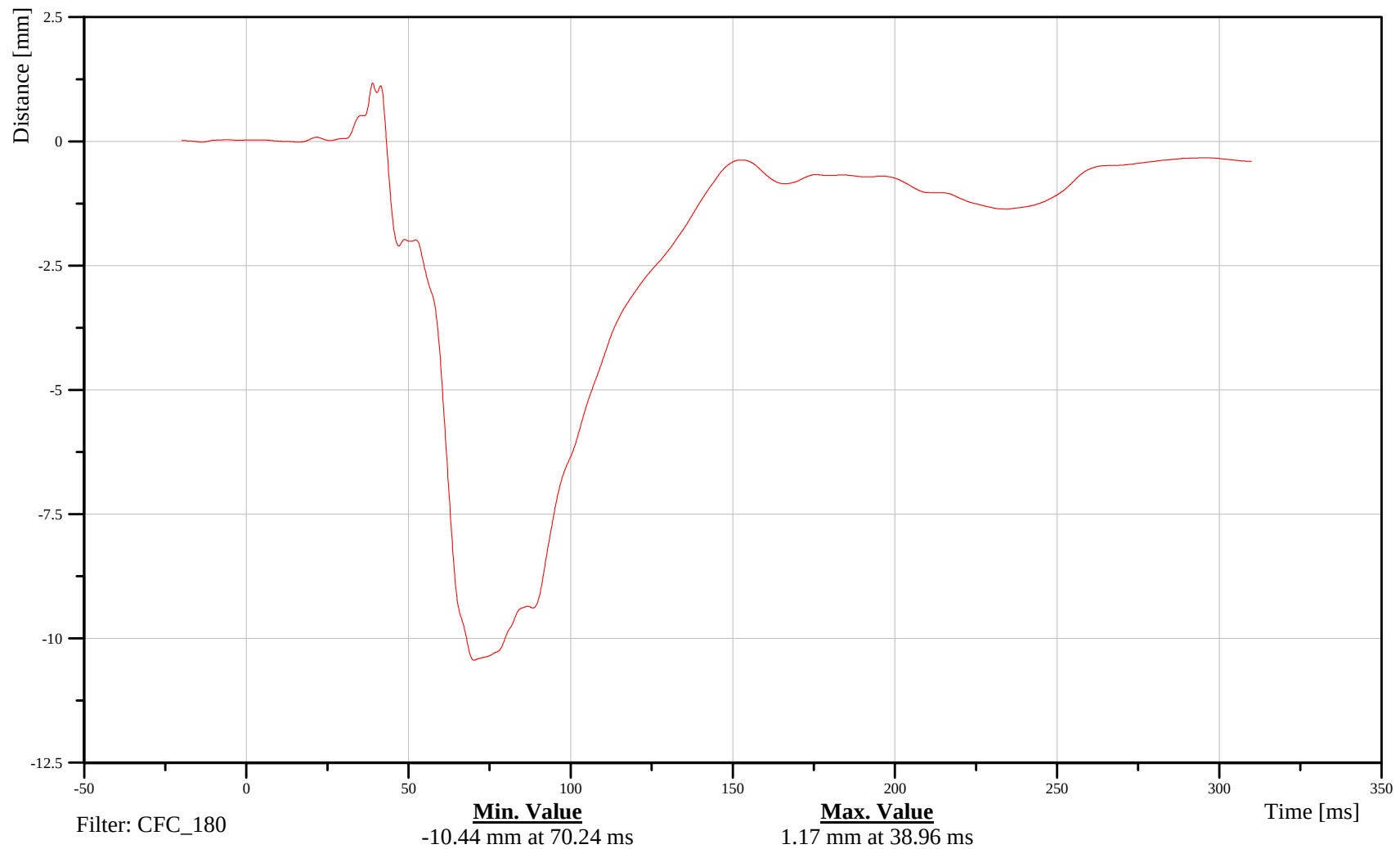
Target Driver Right Knee Displacement

Customer: VRTC

21KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

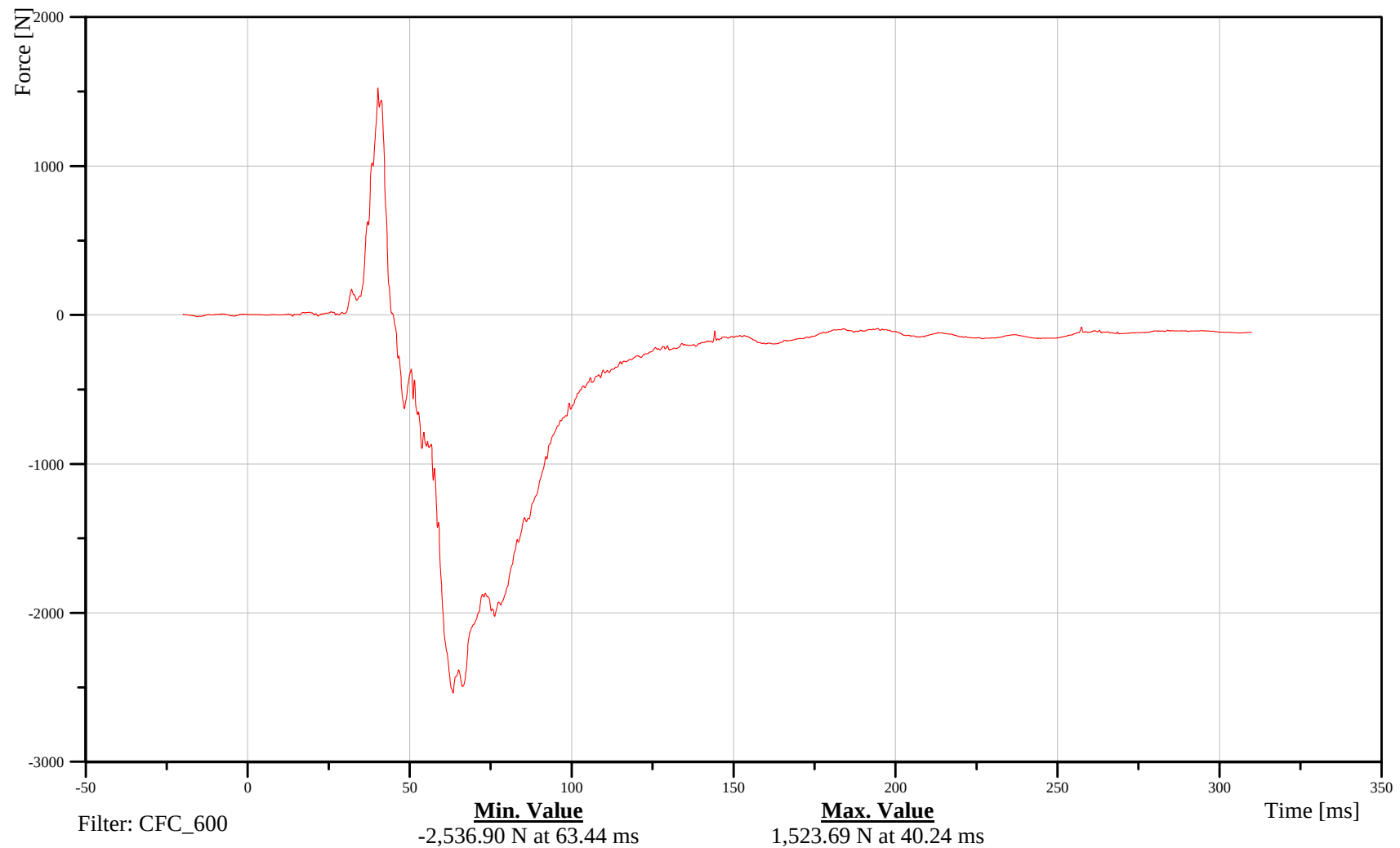
Target Driver Right Upper Tibia X-Axis Force

Customer: VRTC

21TIBIRULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

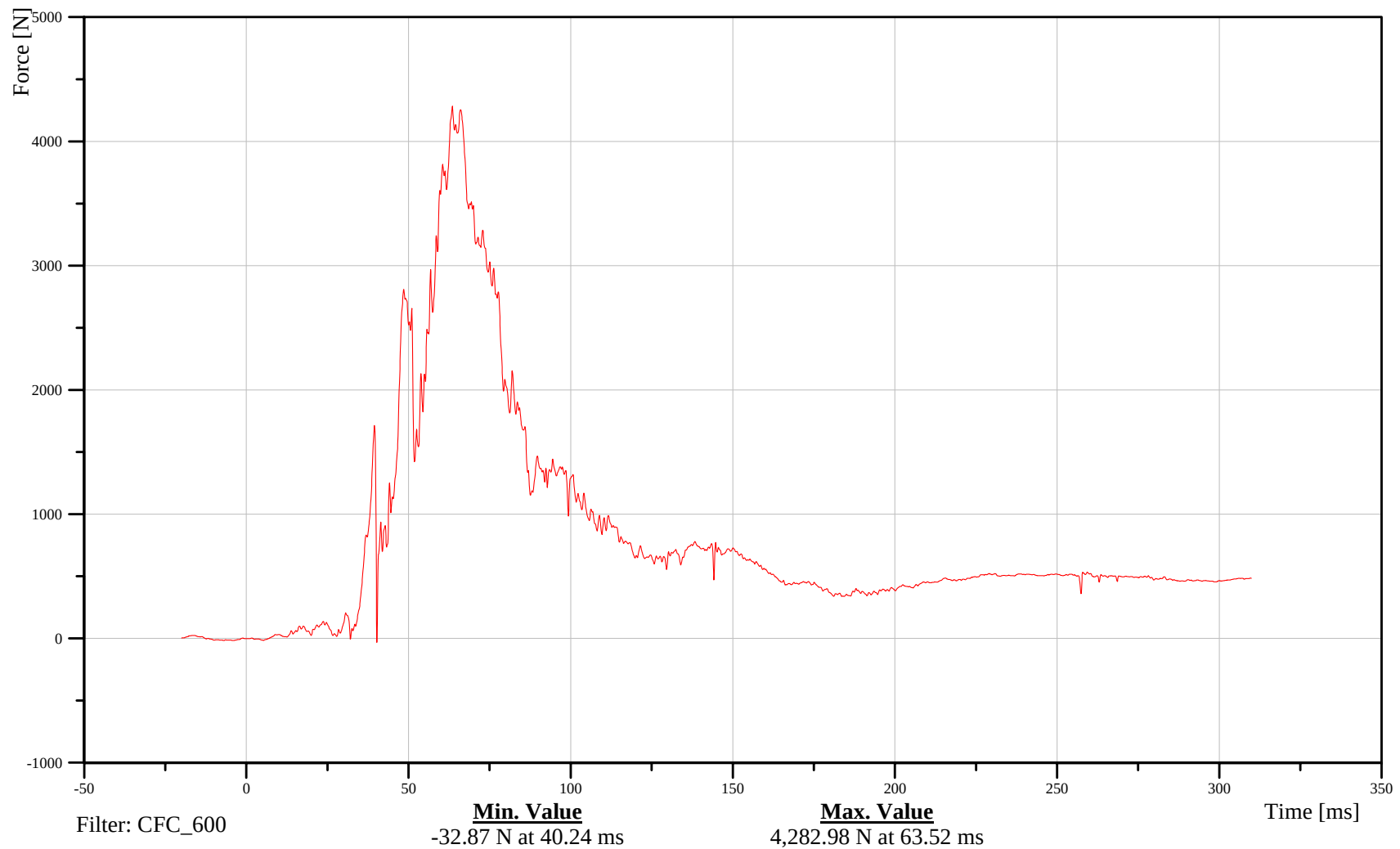
Target Driver Right Upper Tibia Z-Axis Force

Customer: VRTC

21TIBIRULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

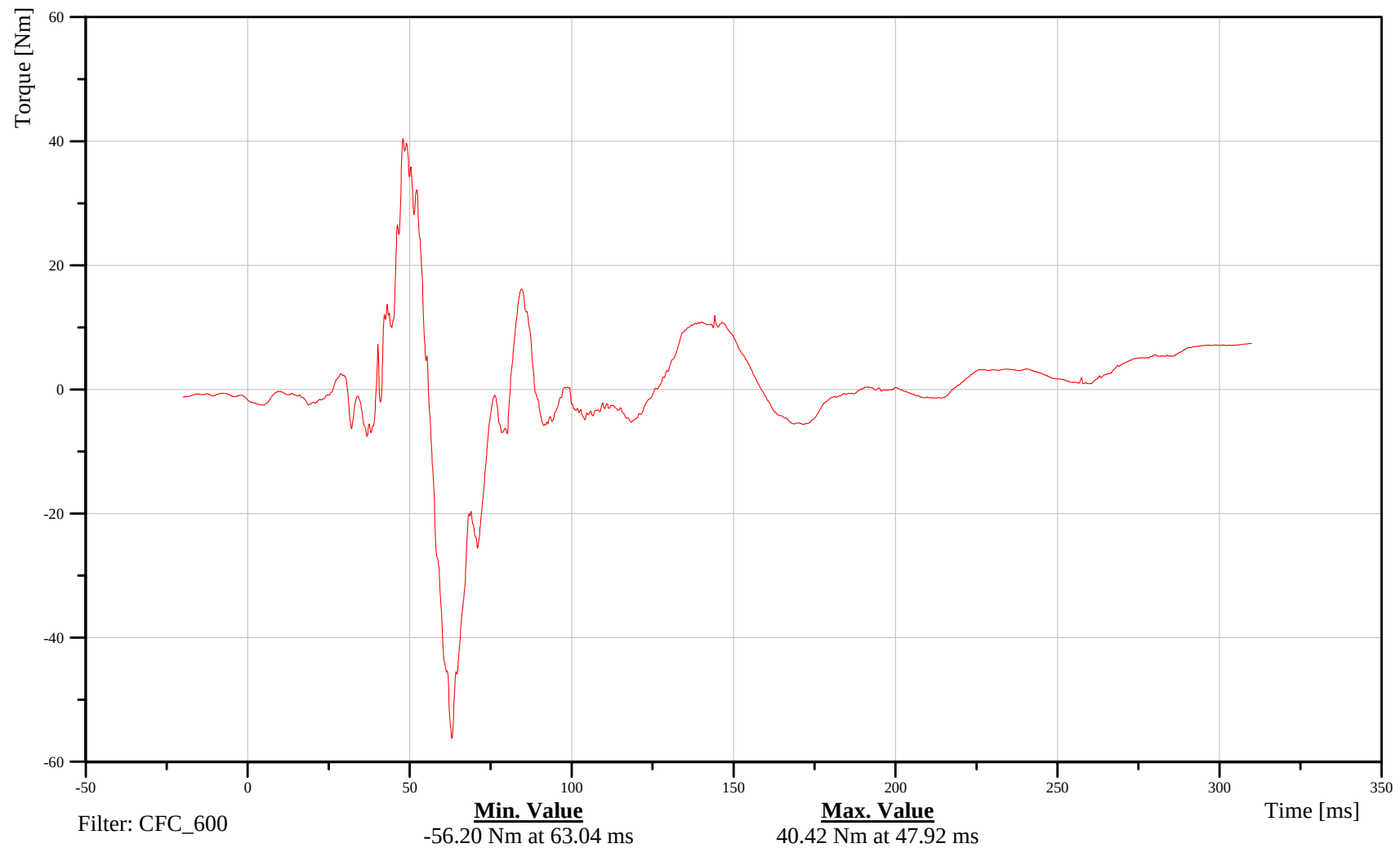
Target Driver Right Upper Tibia Moment About X Axis

Customer: VRTC

21TIBIRULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

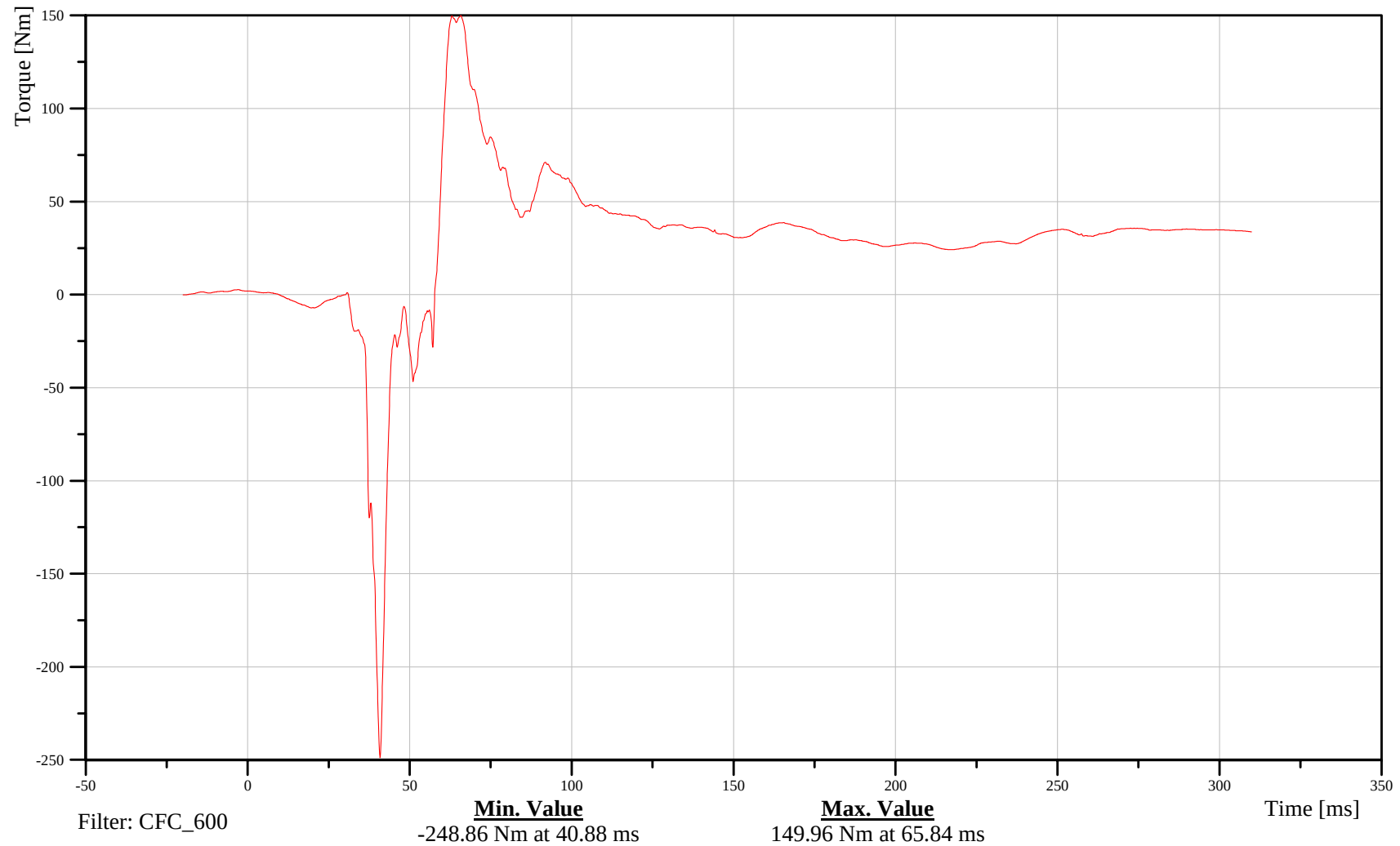
Target Driver Right Upper Tibia Moment About Y Axis

Customer: VRTC

21TIBIRULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

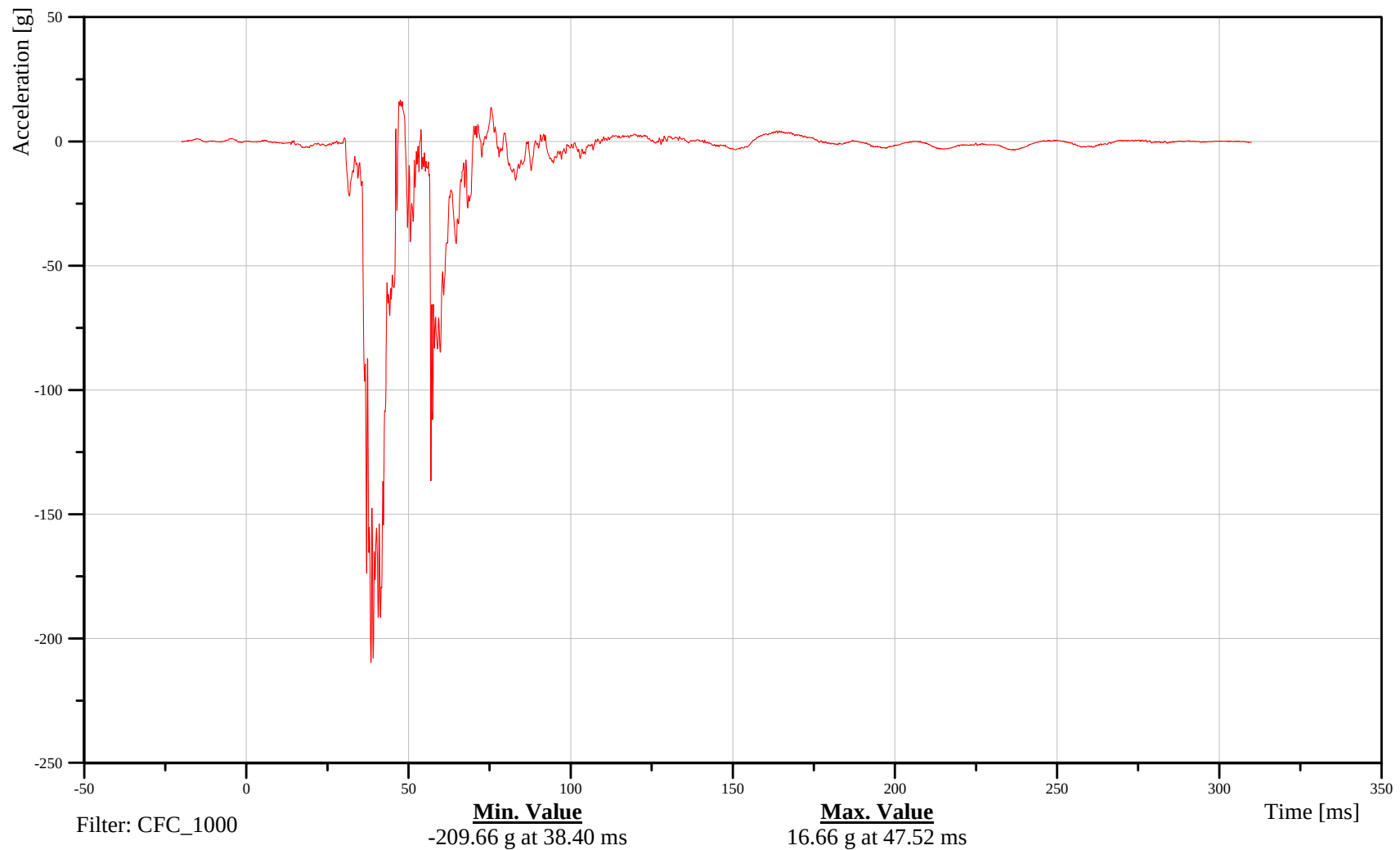
Target Driver Right Tibia X-Axis Acceleration

Customer: VRTC

21TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

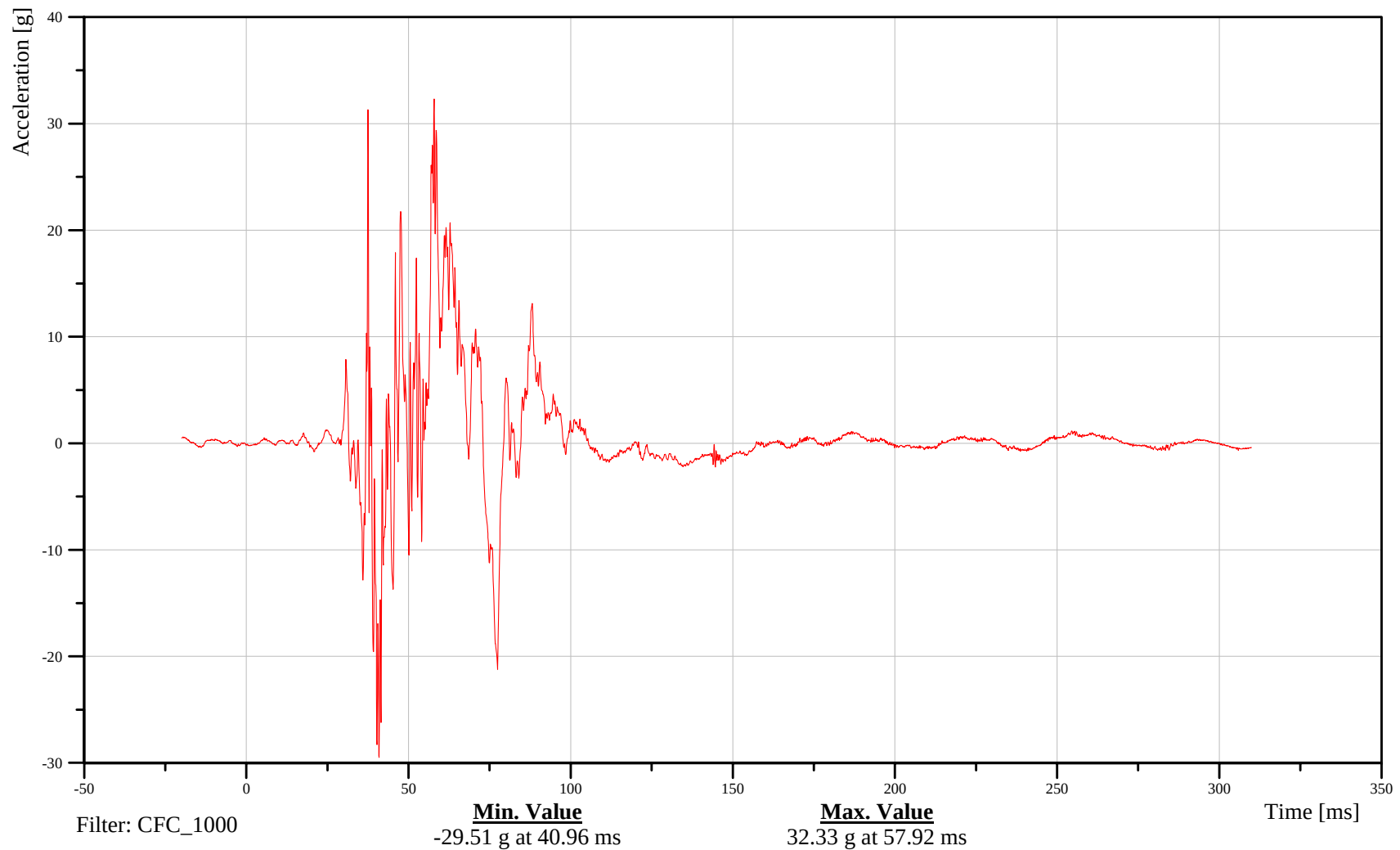
Target Driver Right Tibia Y-Axis Acceleration

Customer: VRTC

21TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

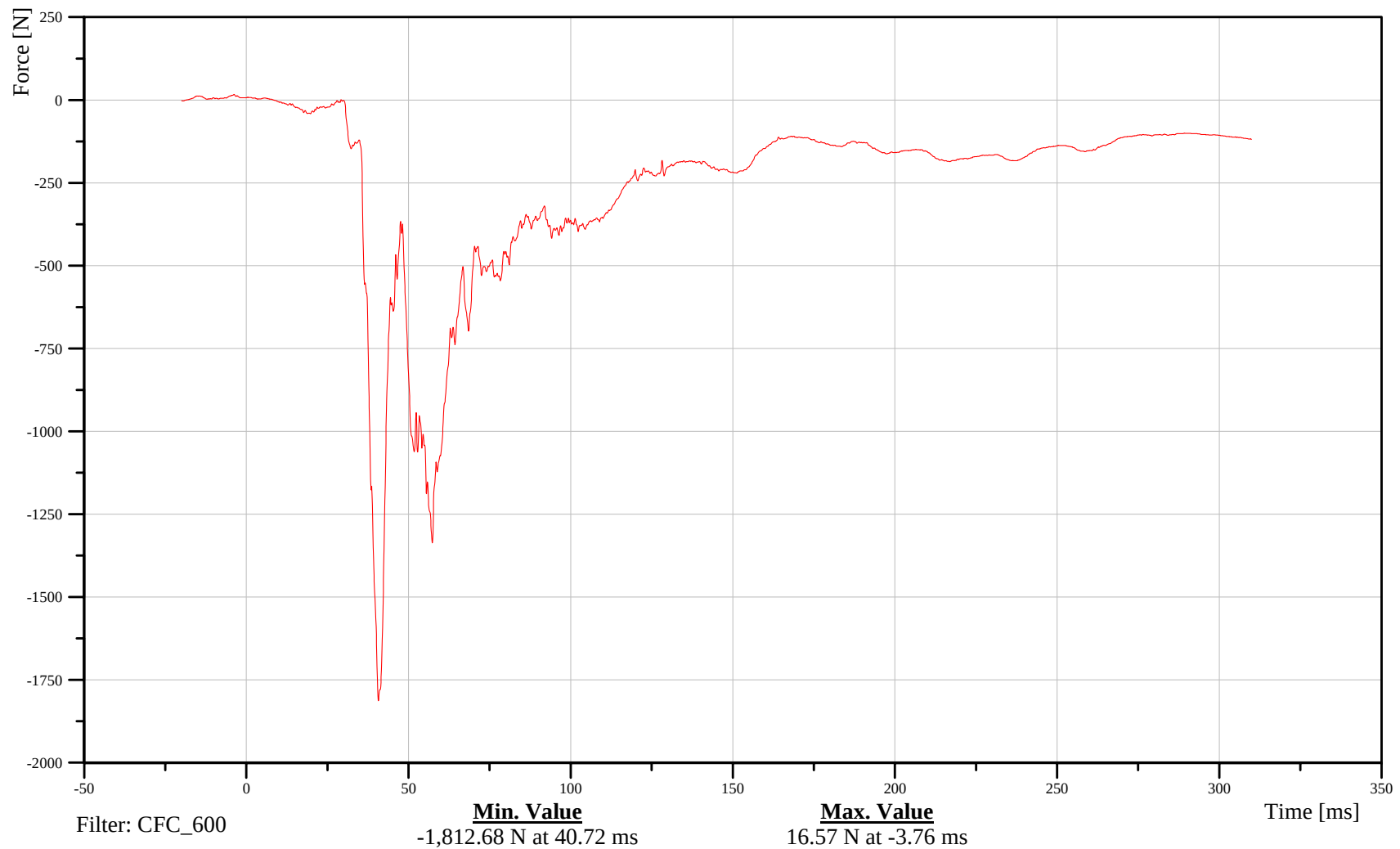
Target Driver Right Lower Tibia X-Axis Force

Customer: VRTC

21TIBIRLLXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

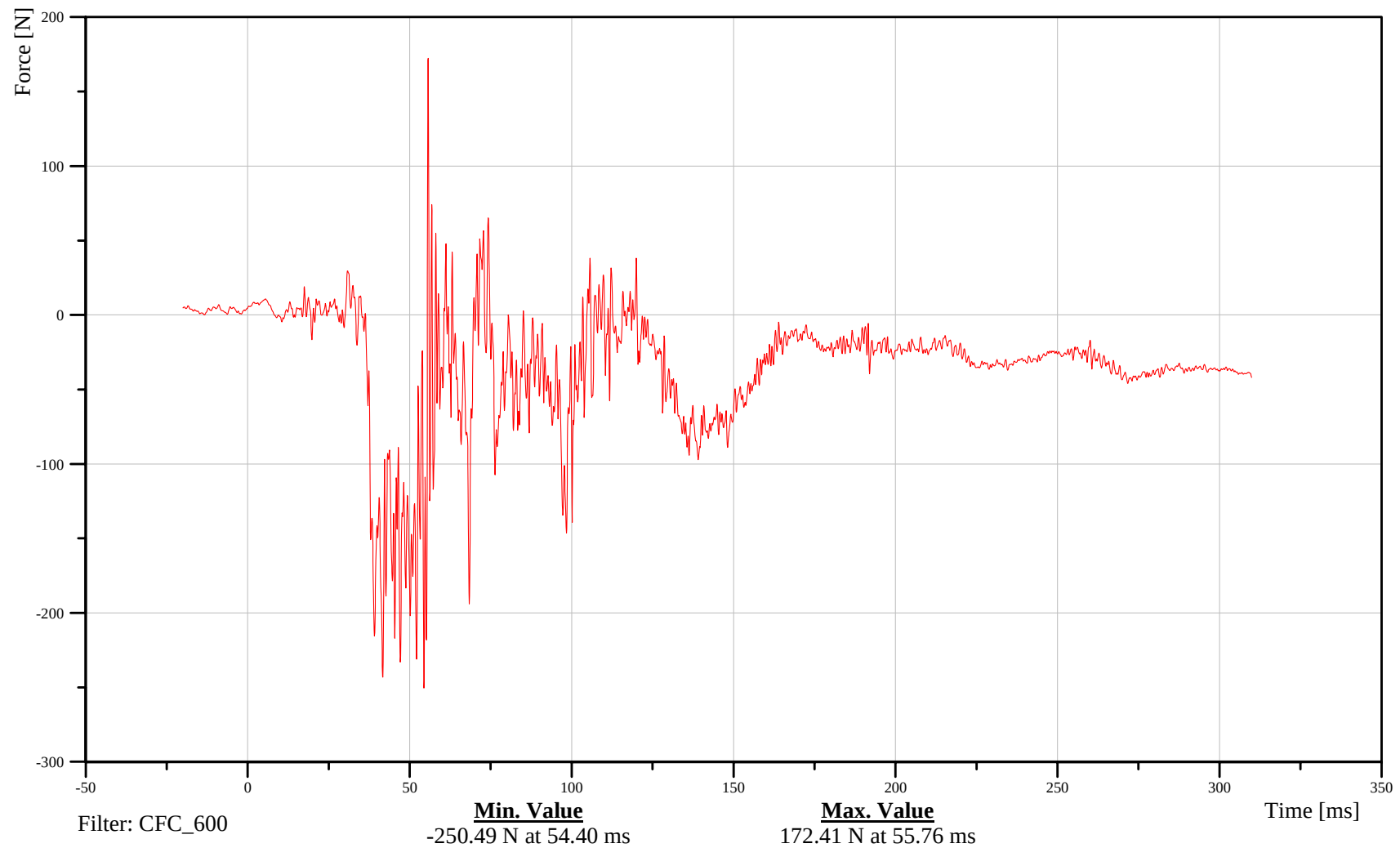
Target Driver Right Lower Tibia Y-Axis Force

Customer: VRTC

21TIBIRLLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

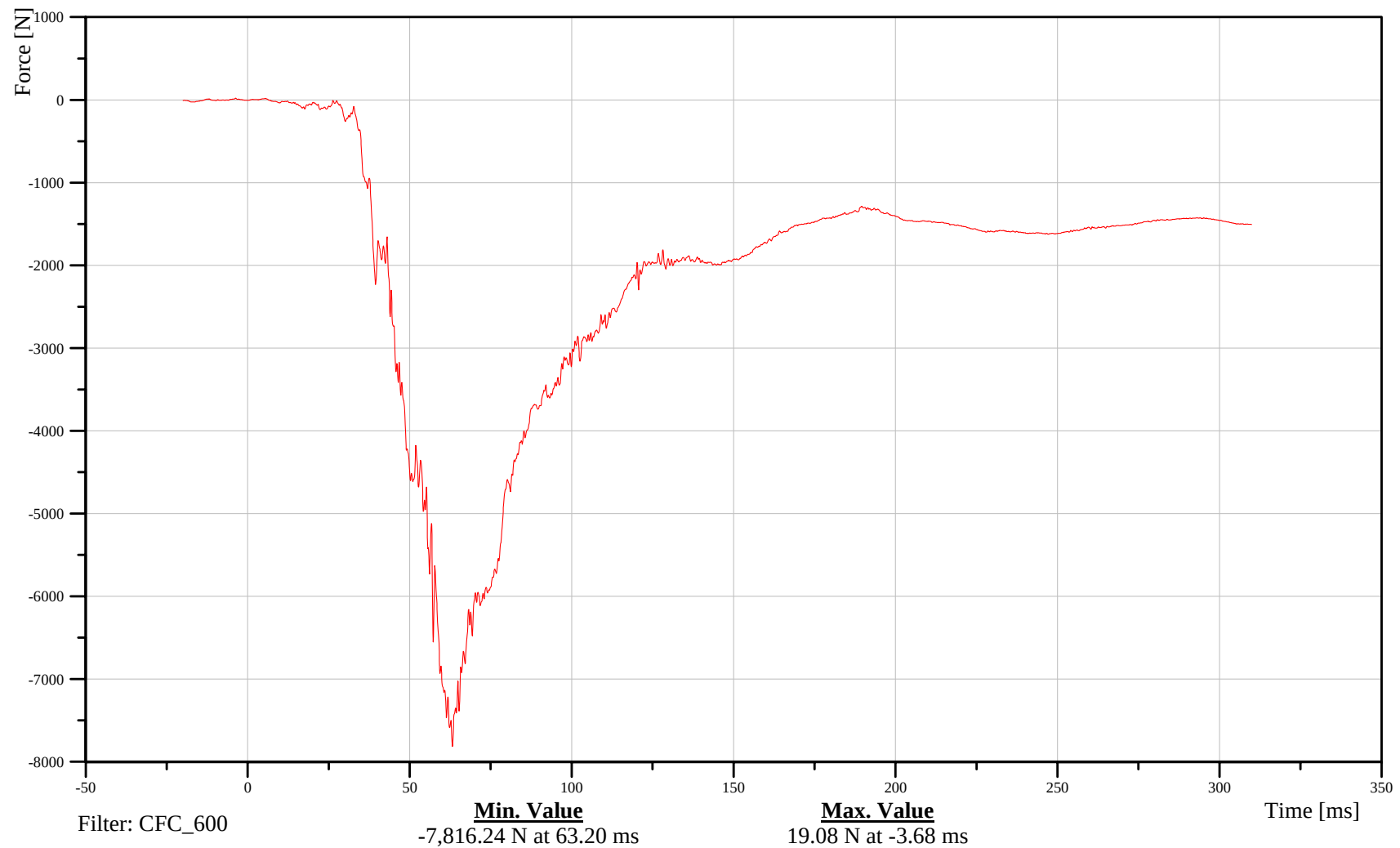
Target Driver Right Lower Tibia Z-Axis Force

Customer: VRTC

21TIBIRLLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

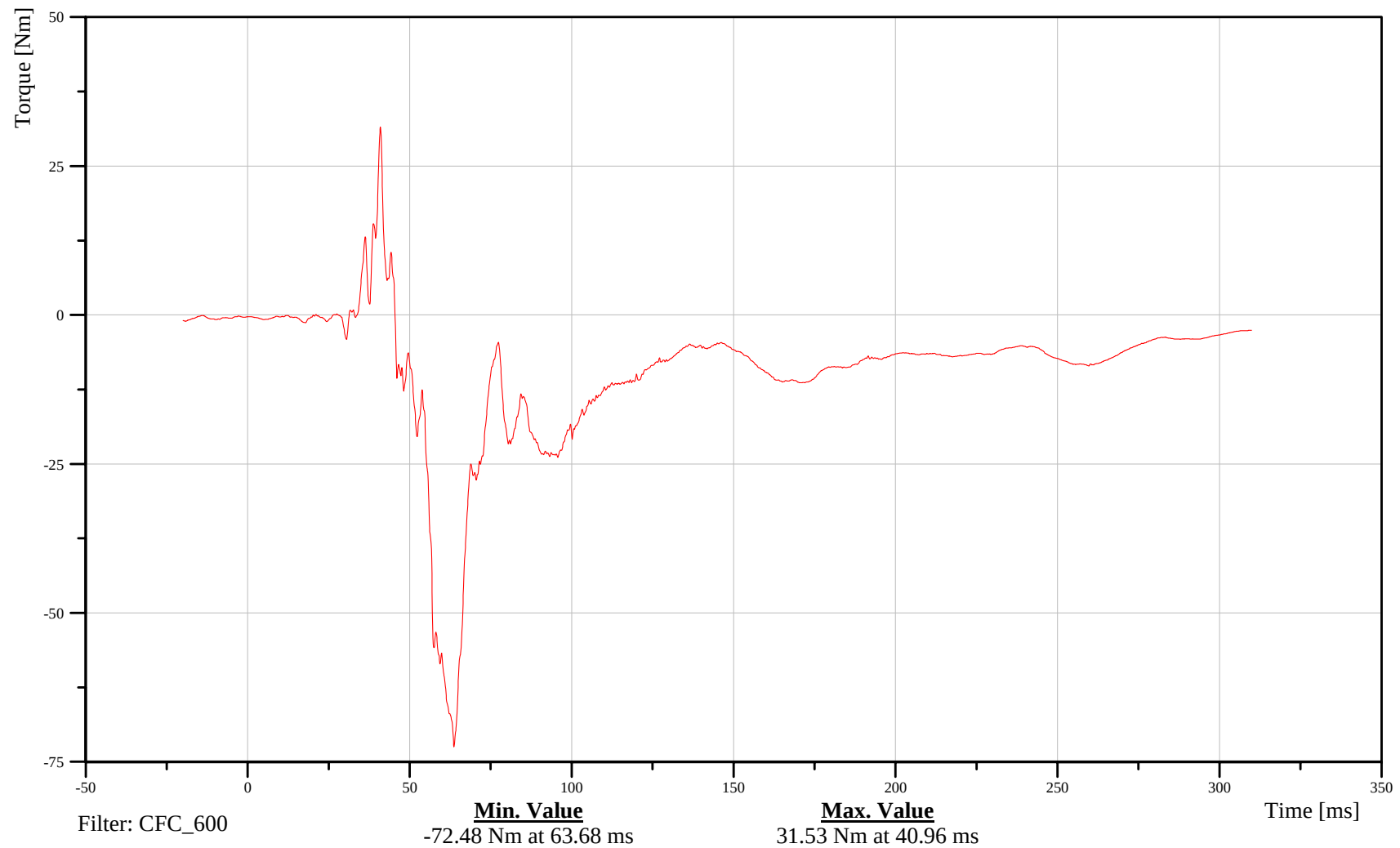
Target Driver Right Lower Tibia Moment About X Axis

Customer: VRTC

21TIBIRLLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

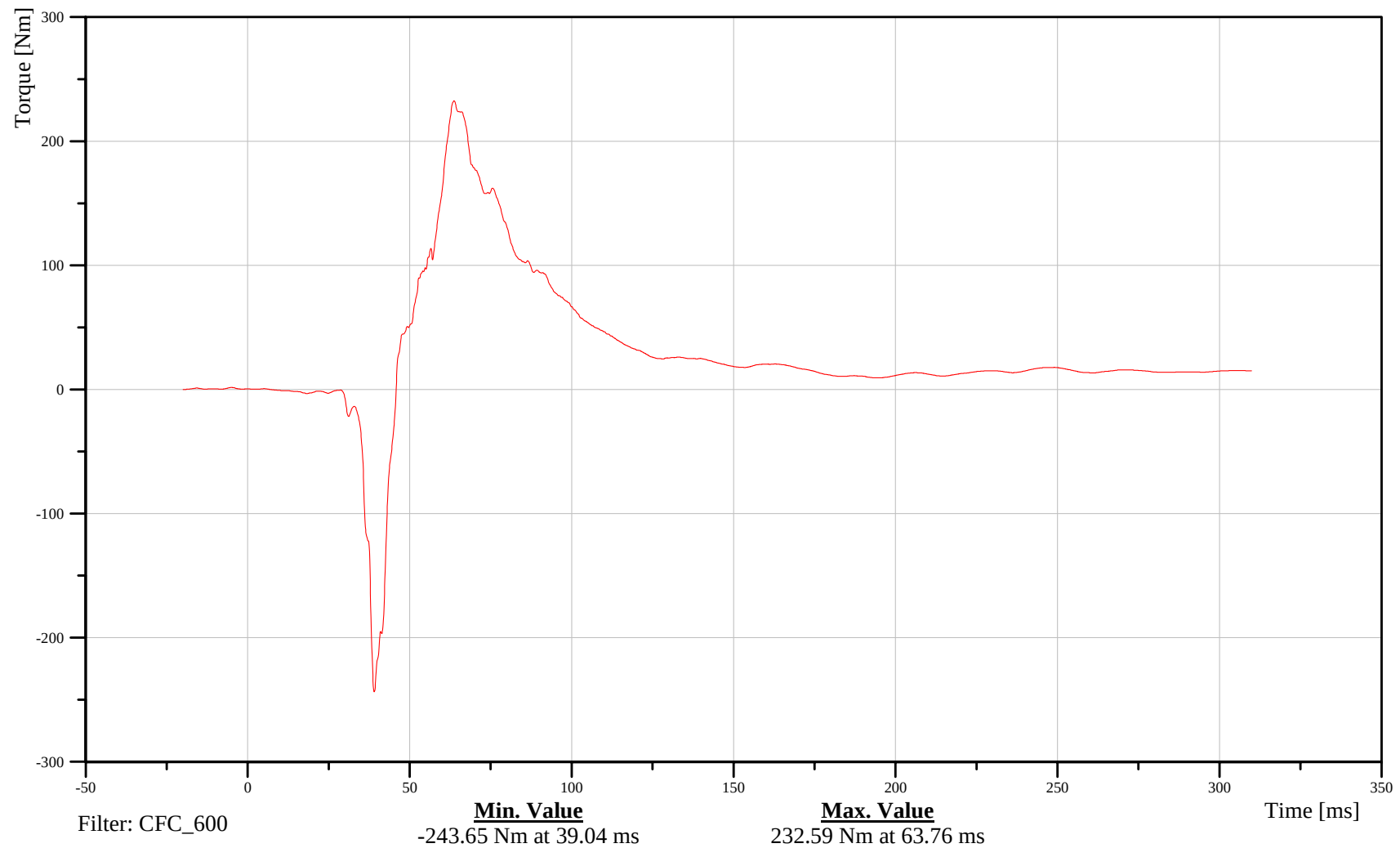
Target Driver Right Lower Tibia Moment About Y Axis

Customer: VRTC

21TIBIRLLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

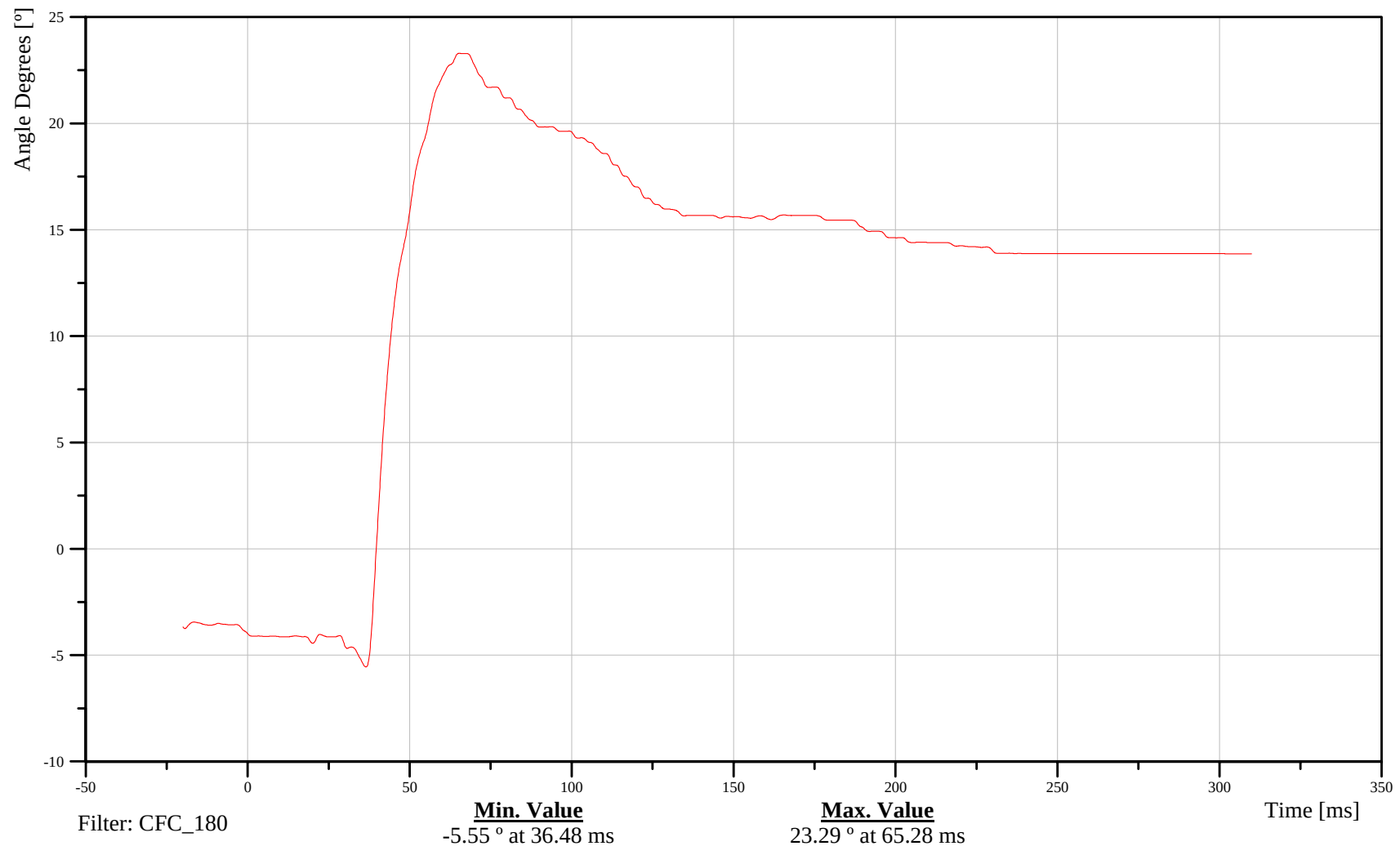
Target Driver Right Foot X-Axis Rotation

Customer: VRTC

21FOOTRILXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

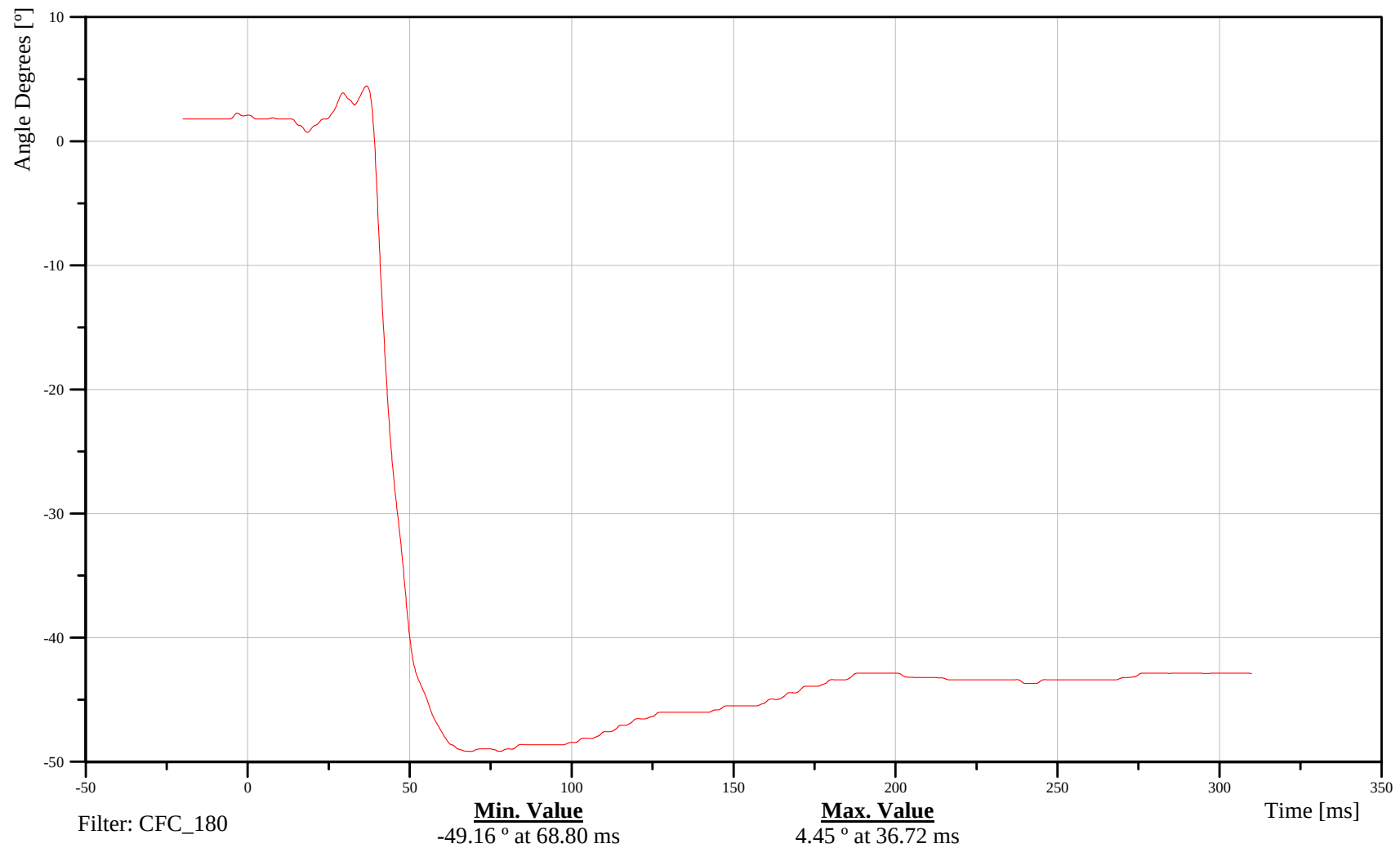
Target Driver Right Foot Y-Axis Rotation

Customer: VRTC

21FOOTRILXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

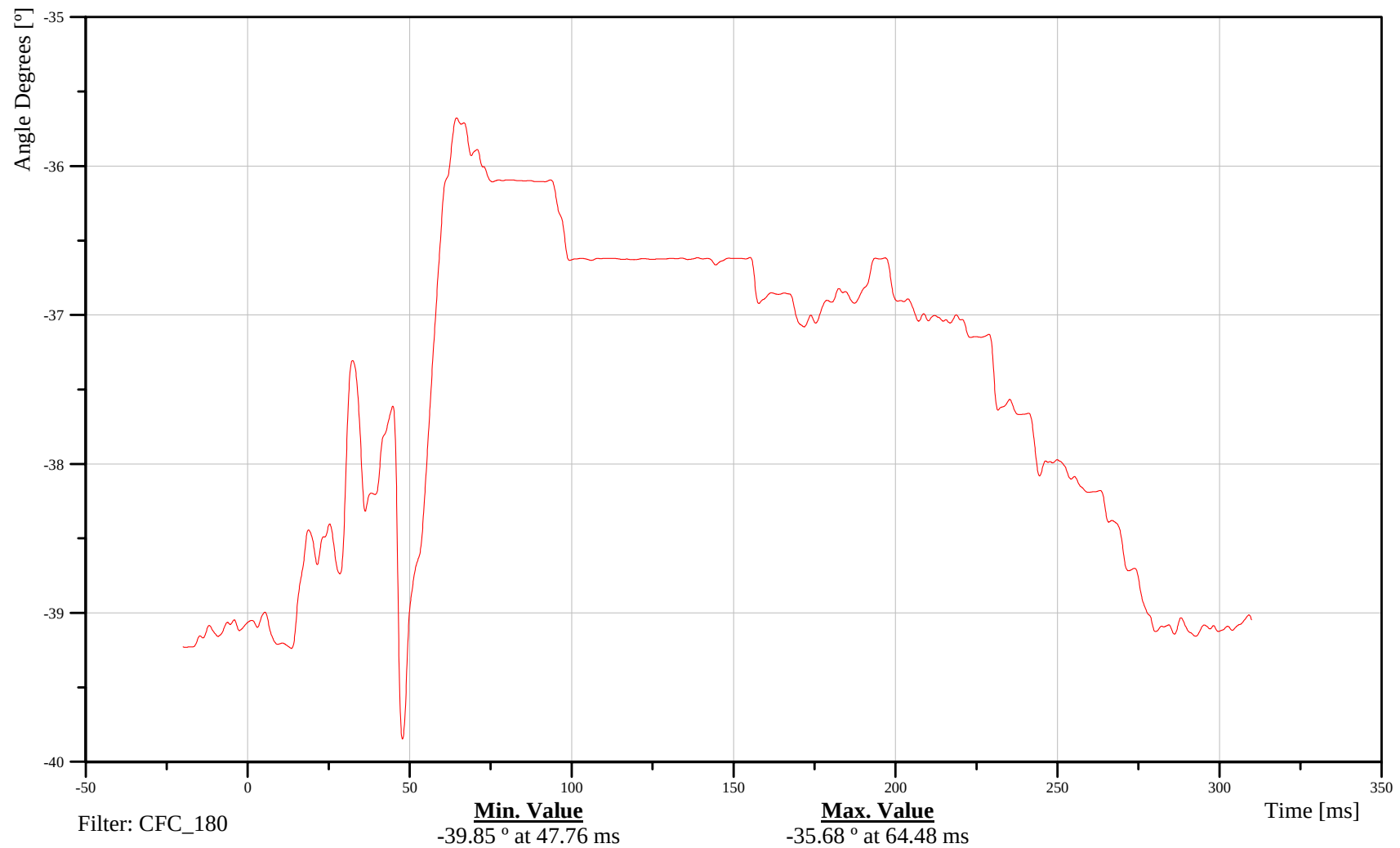
Target Driver Right Foot Z-Axis Rotation

Customer: VRTC

21FOOTRILXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

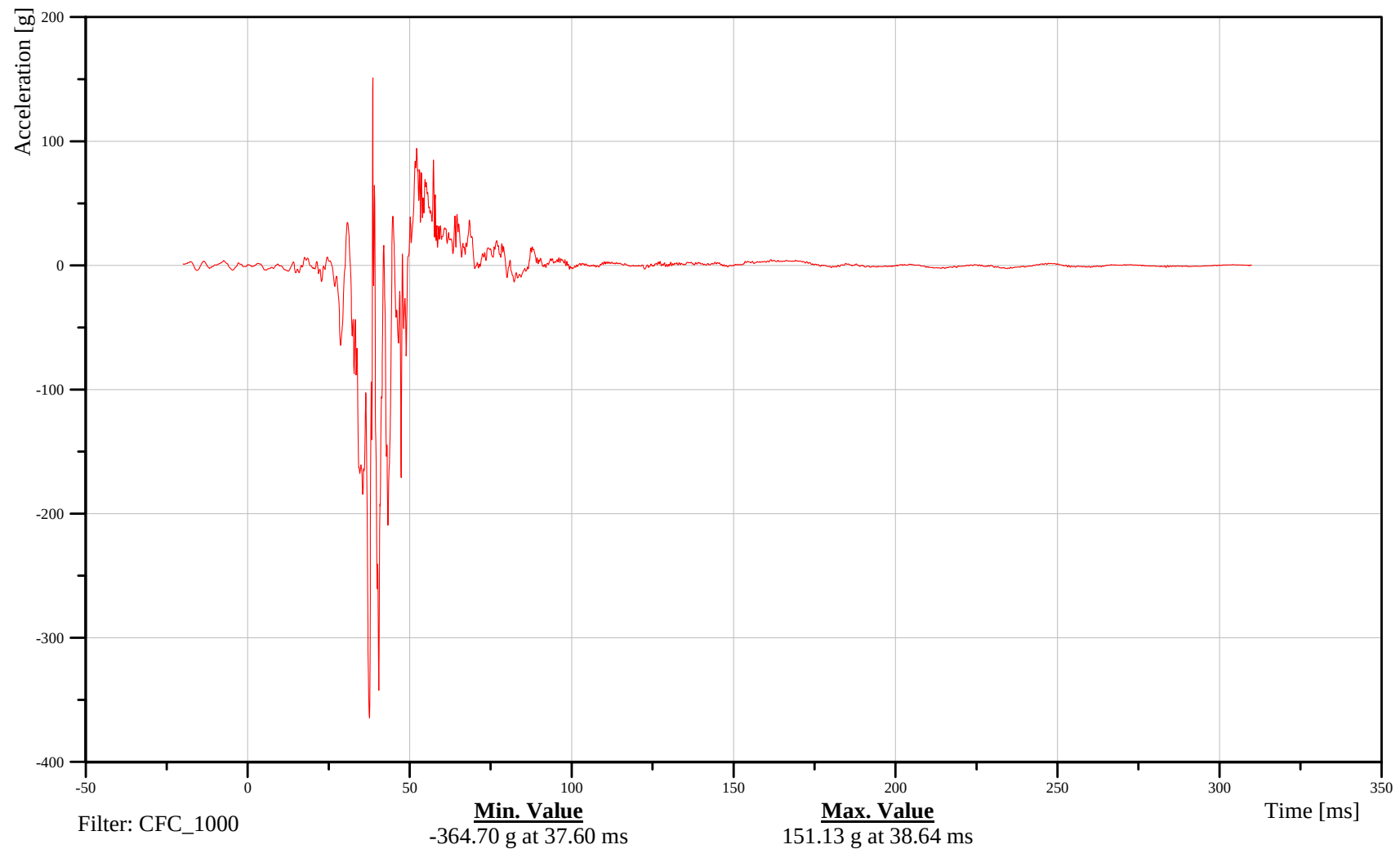
Target Driver Right Foot X-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

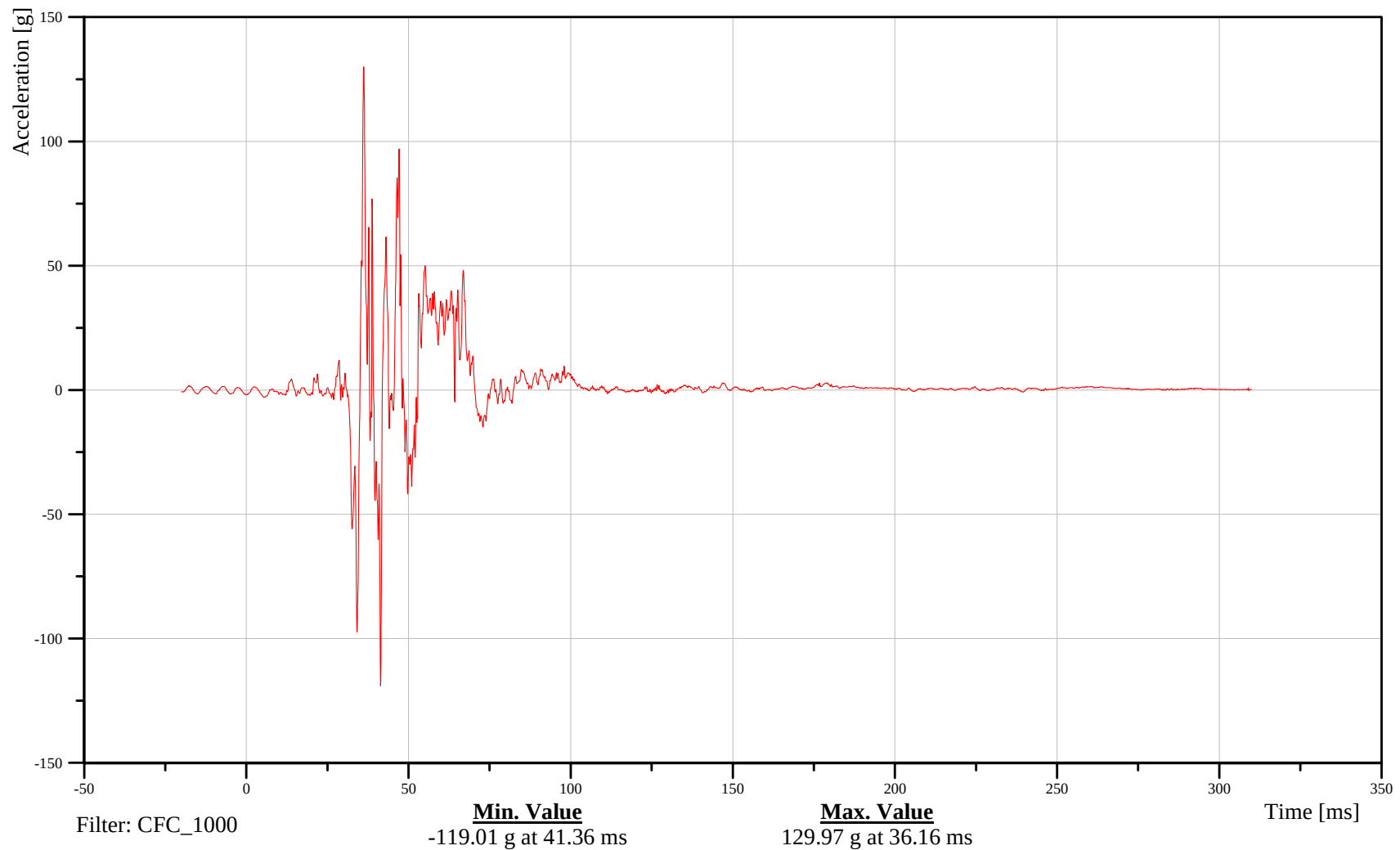
Target Driver Right Foot Y-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

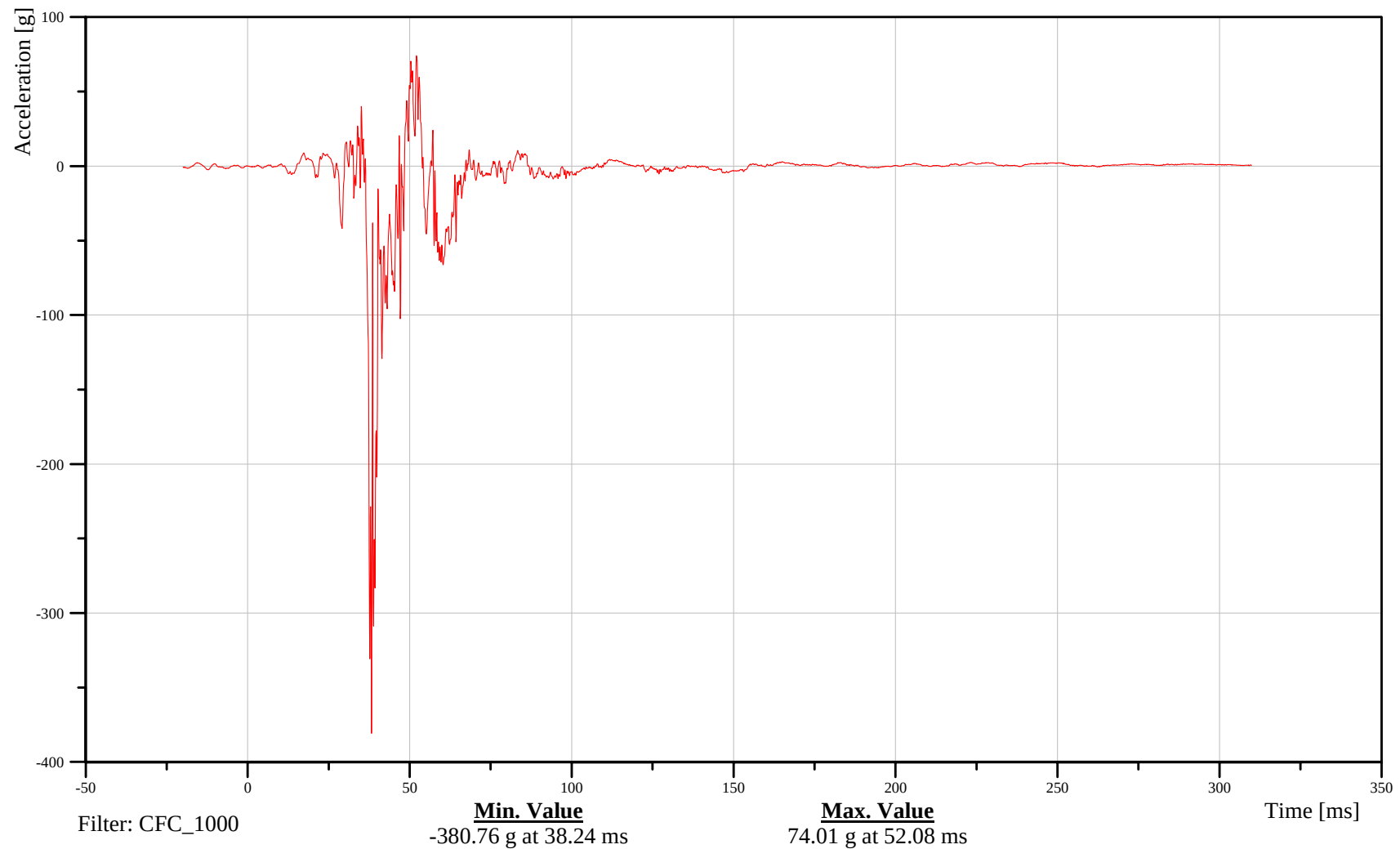
Target Driver Right Foot Z-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

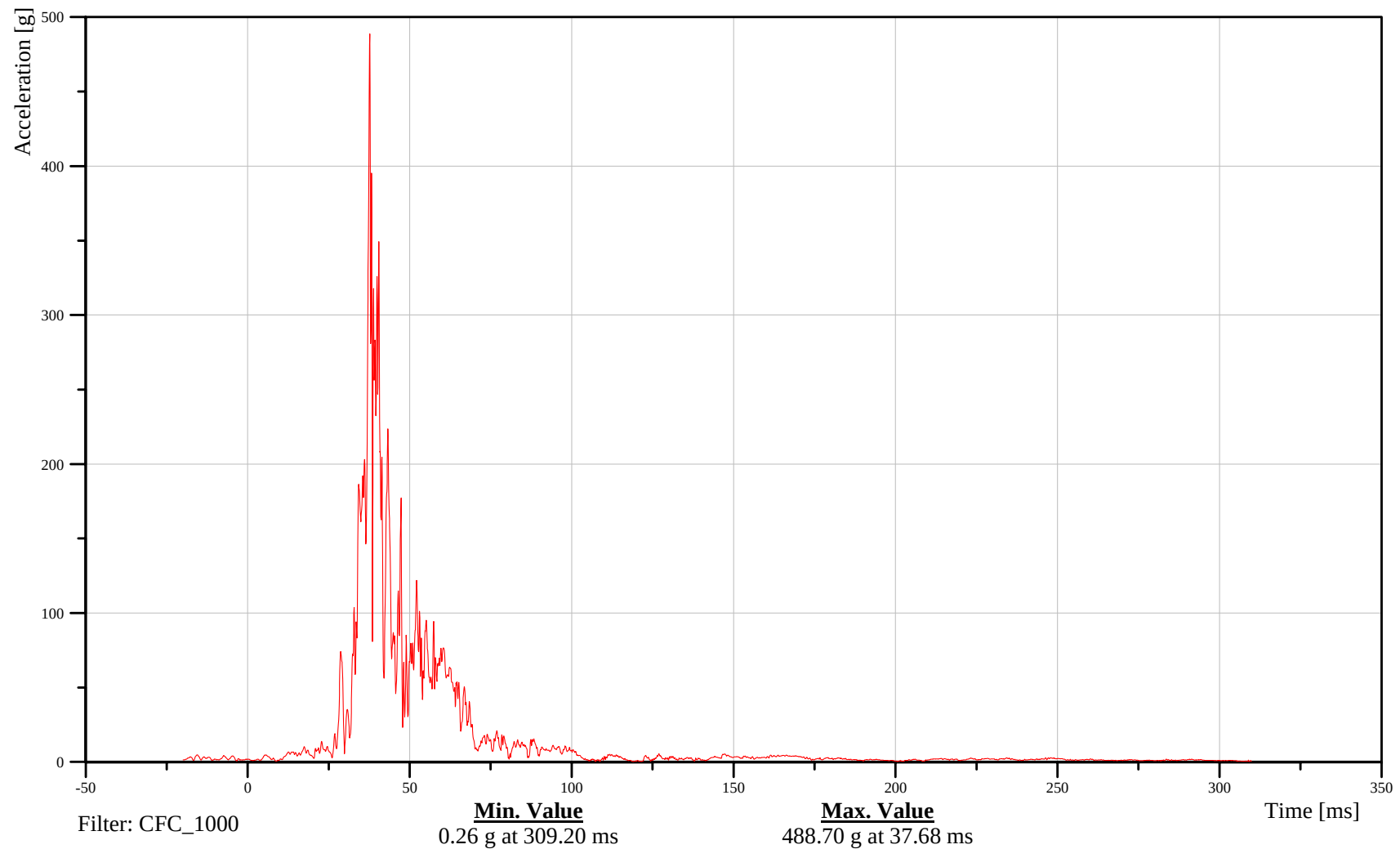
Target Driver Right Foot Resultant Acceleration

Customer: VRTC

21FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

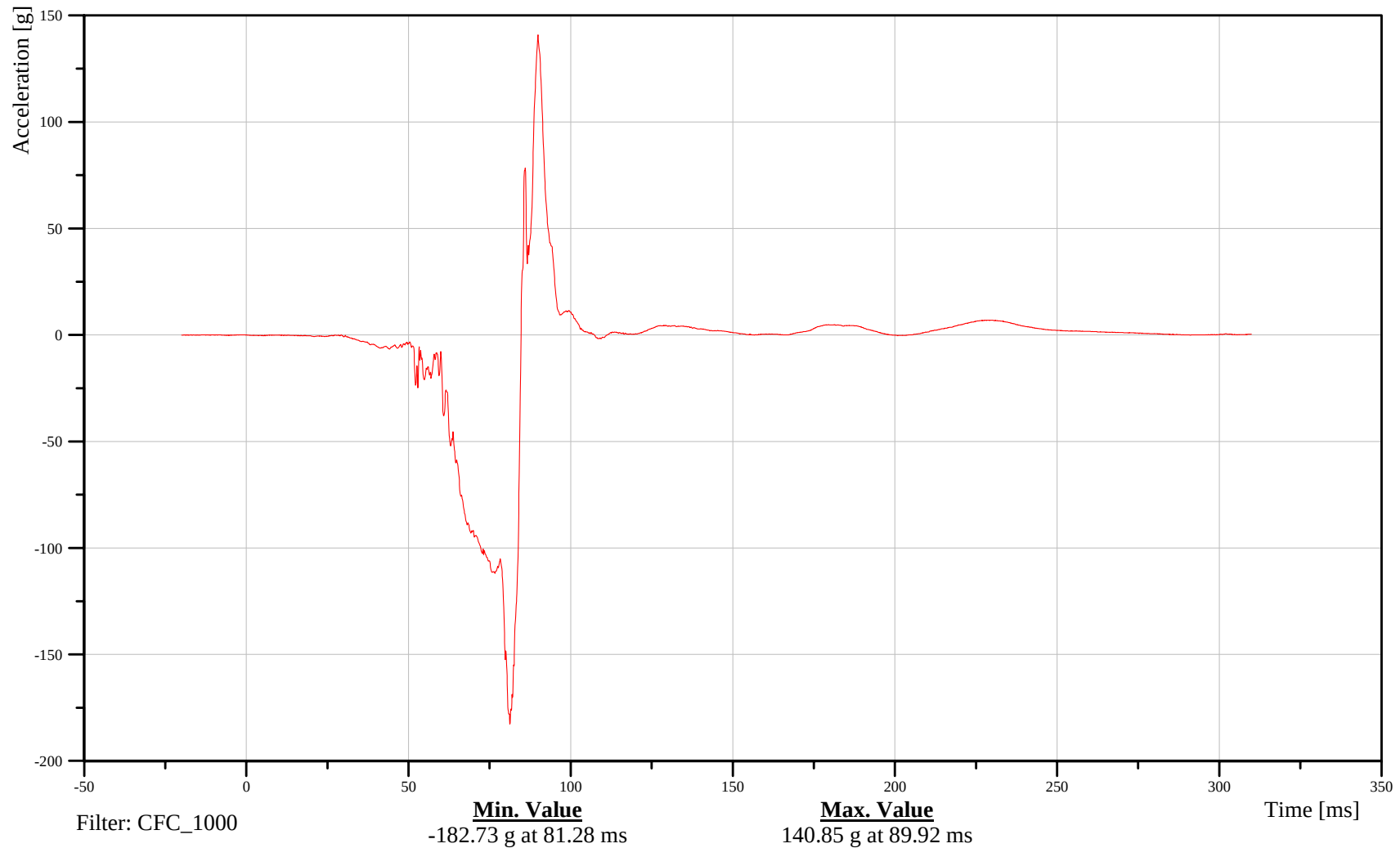
Target Passenger Head CG X-Axis Acceleration

Customer: VRTC

23HEADCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

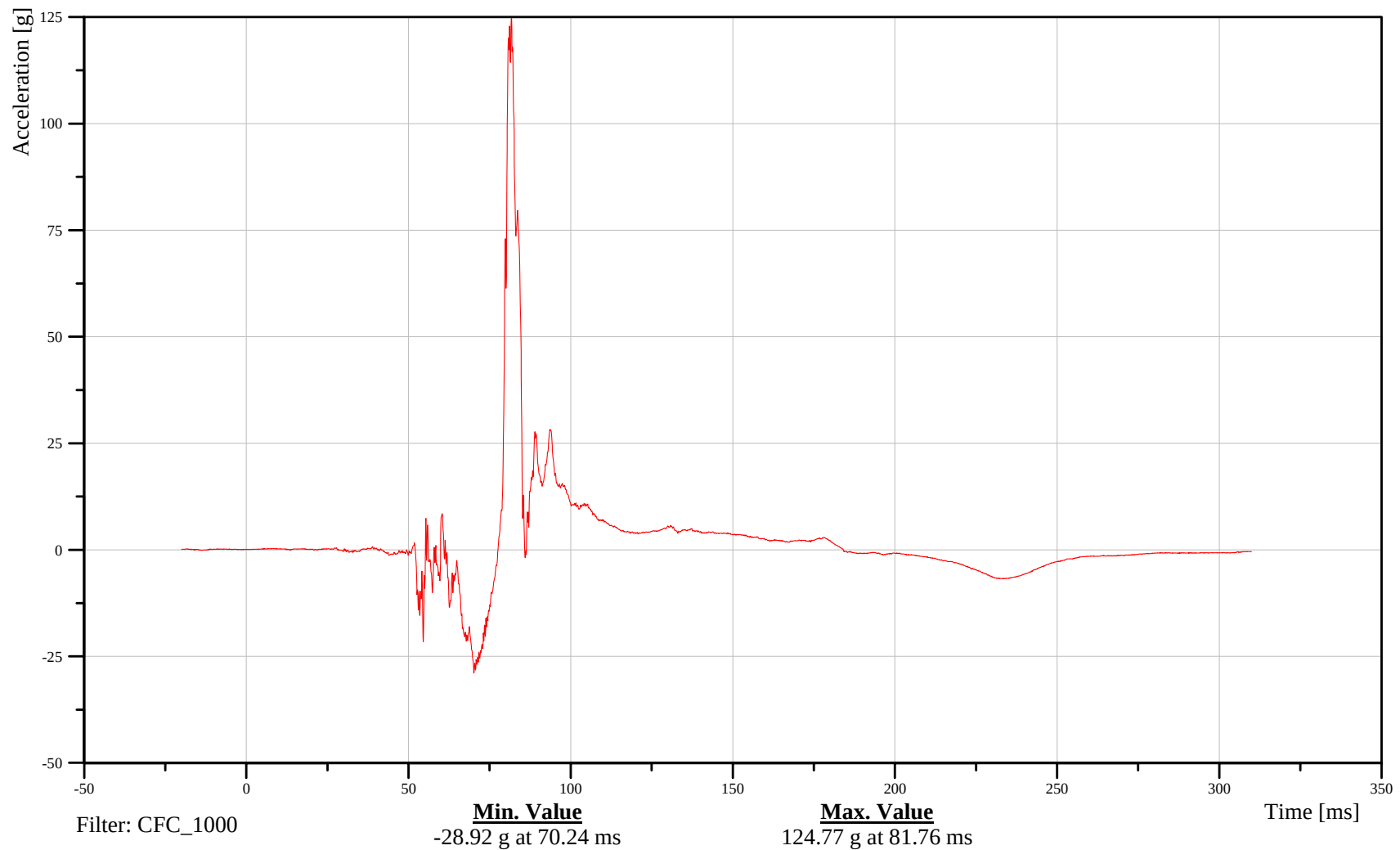
Target Passenger Head CG Y-Axis Acceleration

Customer: VRTC

23HEADCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

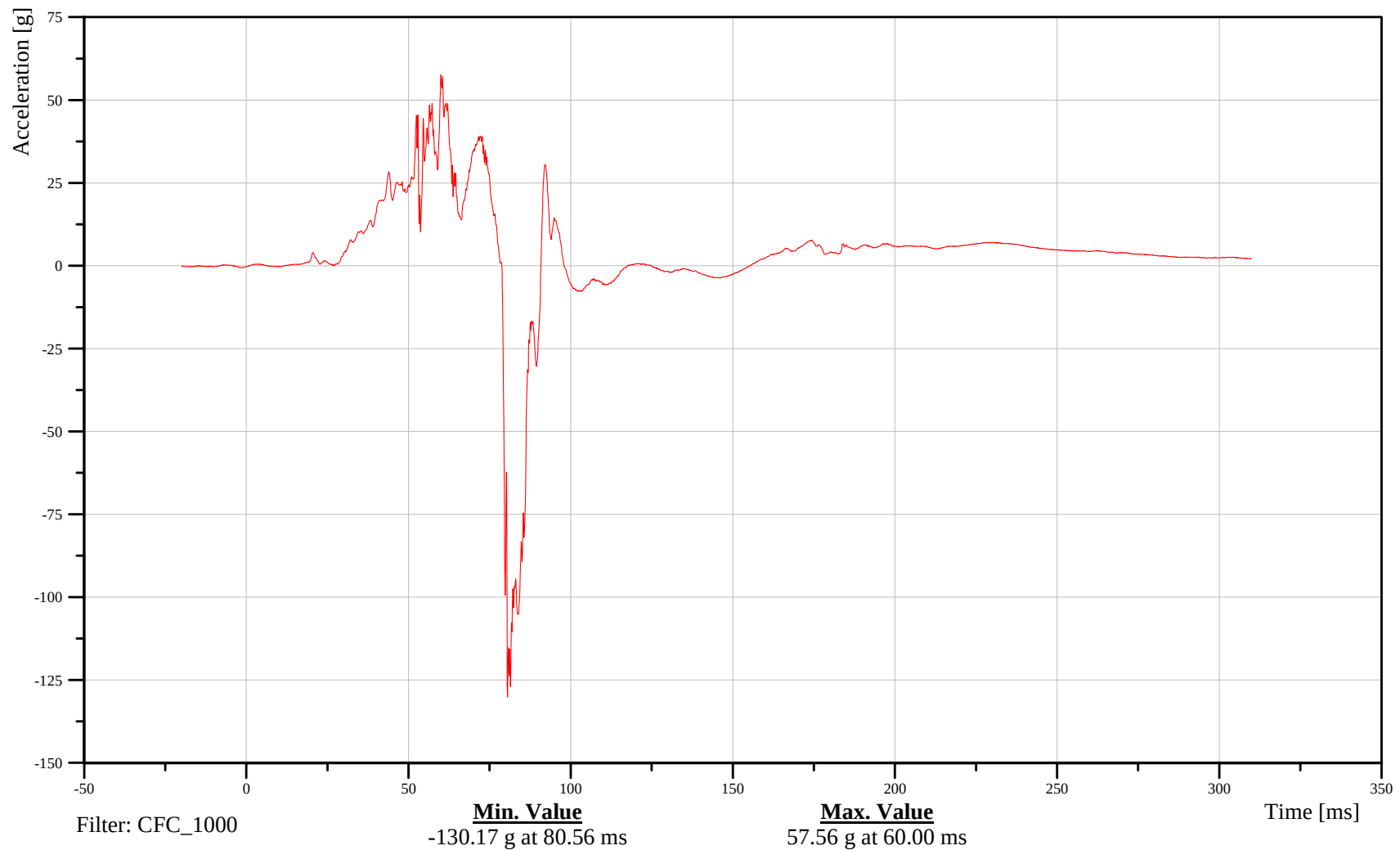
Target Passenger Head CG Z-Axis Acceleration

Customer: VRTC

23HEADCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

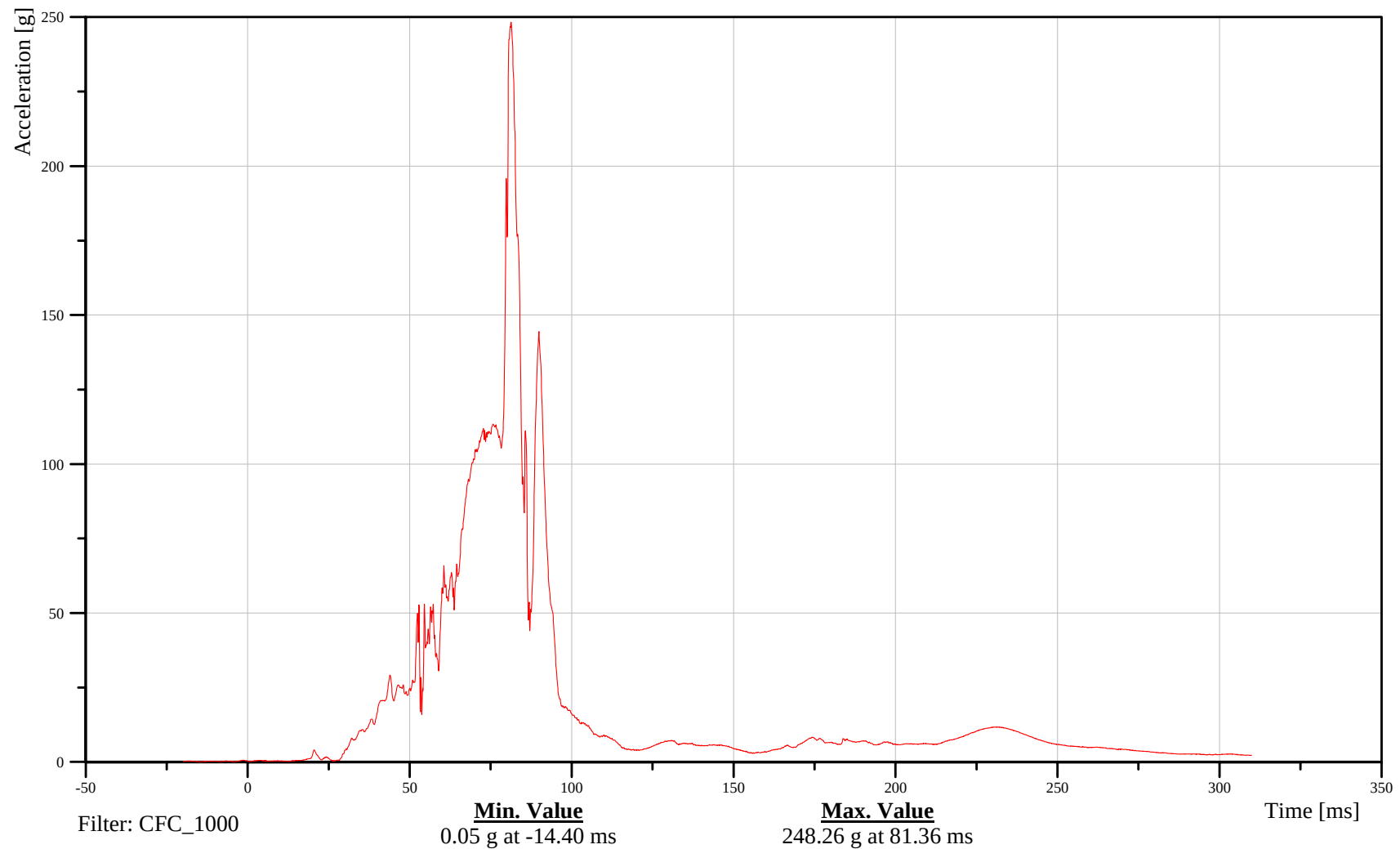
Target Passenger Head CG Resultant Acceleration

Customer: VRTC

23HEADCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

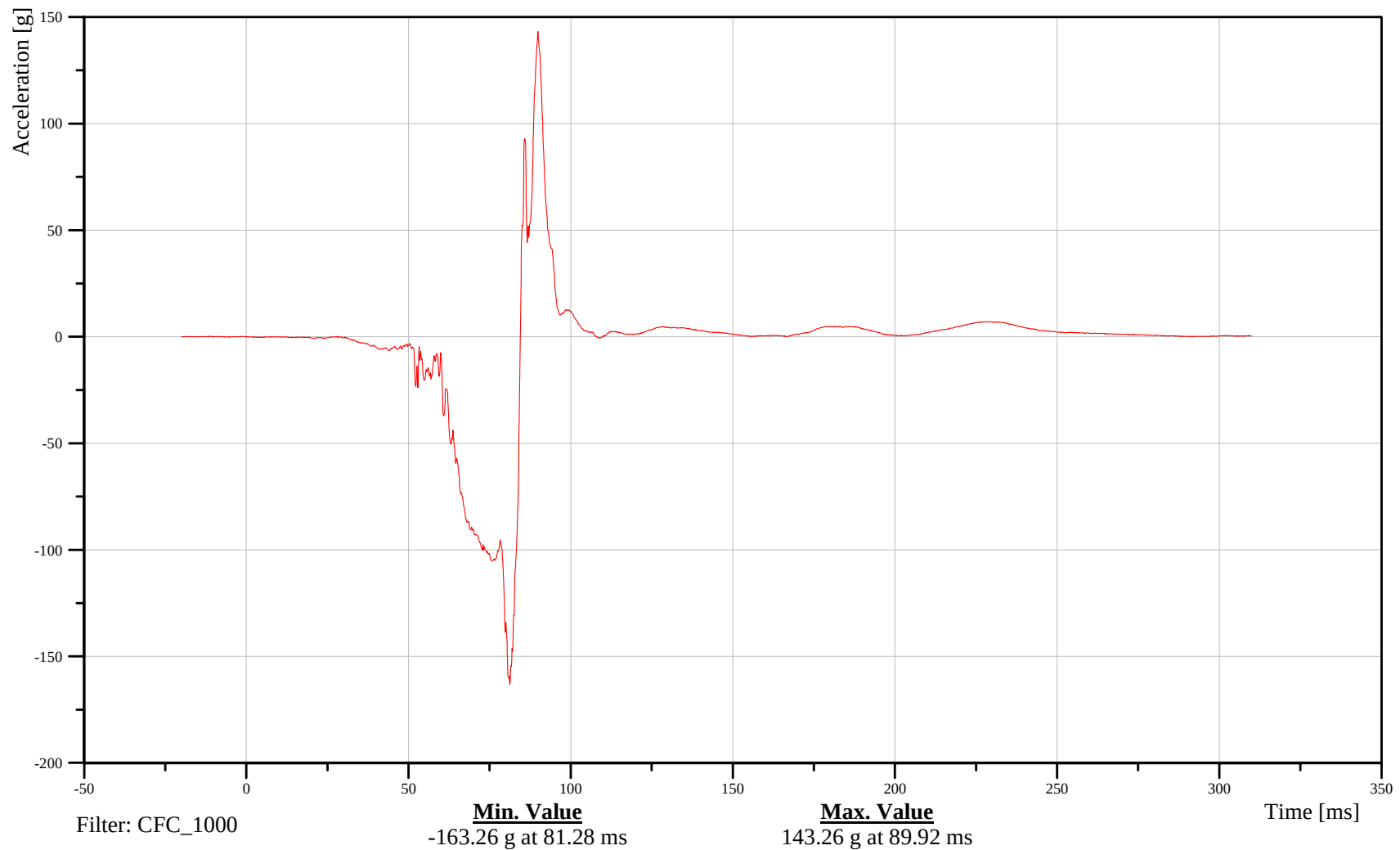
Target Passenger Redundant Head CG X-Axis Acceleration

Customer: VRTC

23HEADCGRDHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

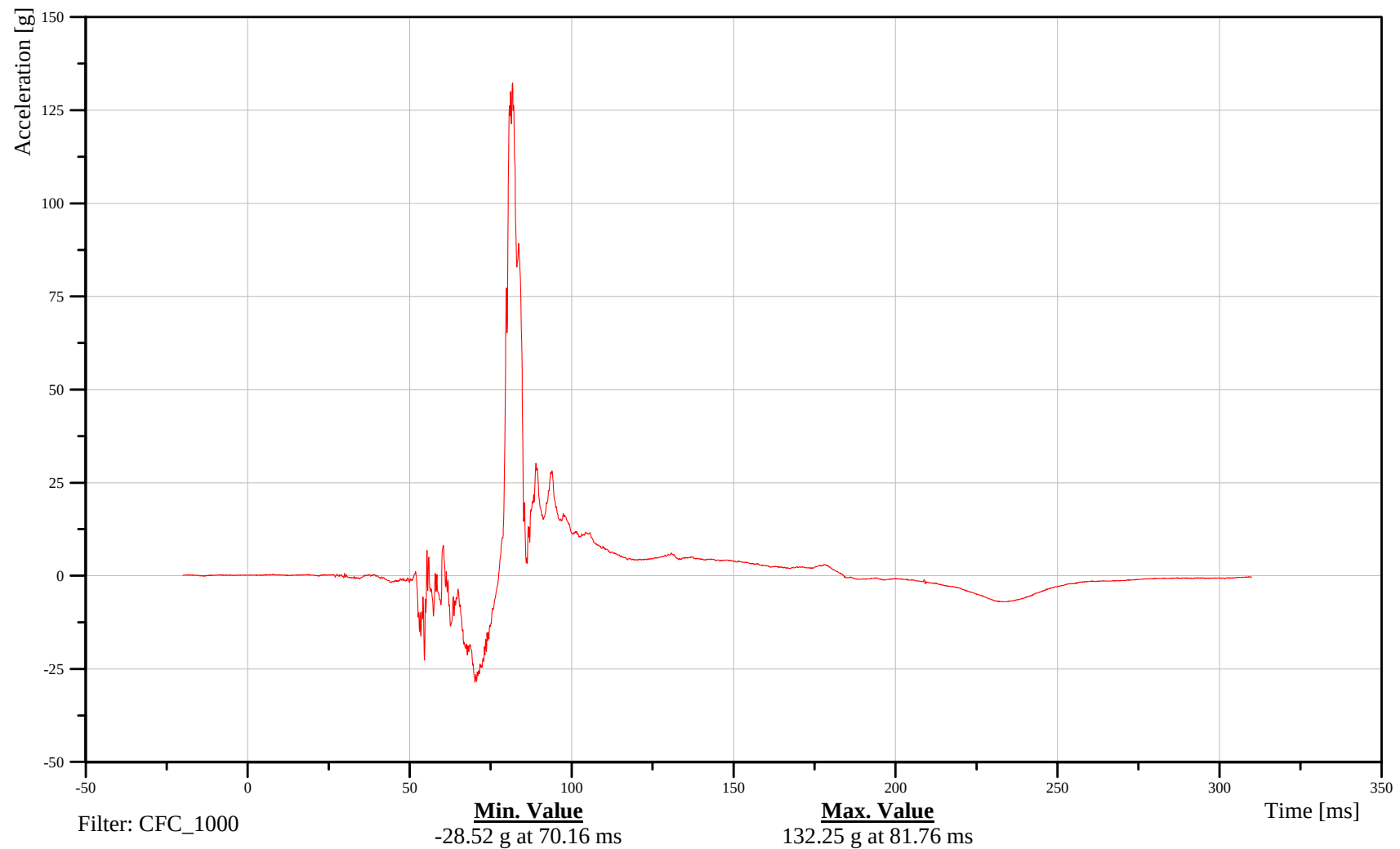
Target Passenger Redundant Head CG Y-Axis Acceleration

Customer: VRTC

23HEADCGRDHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

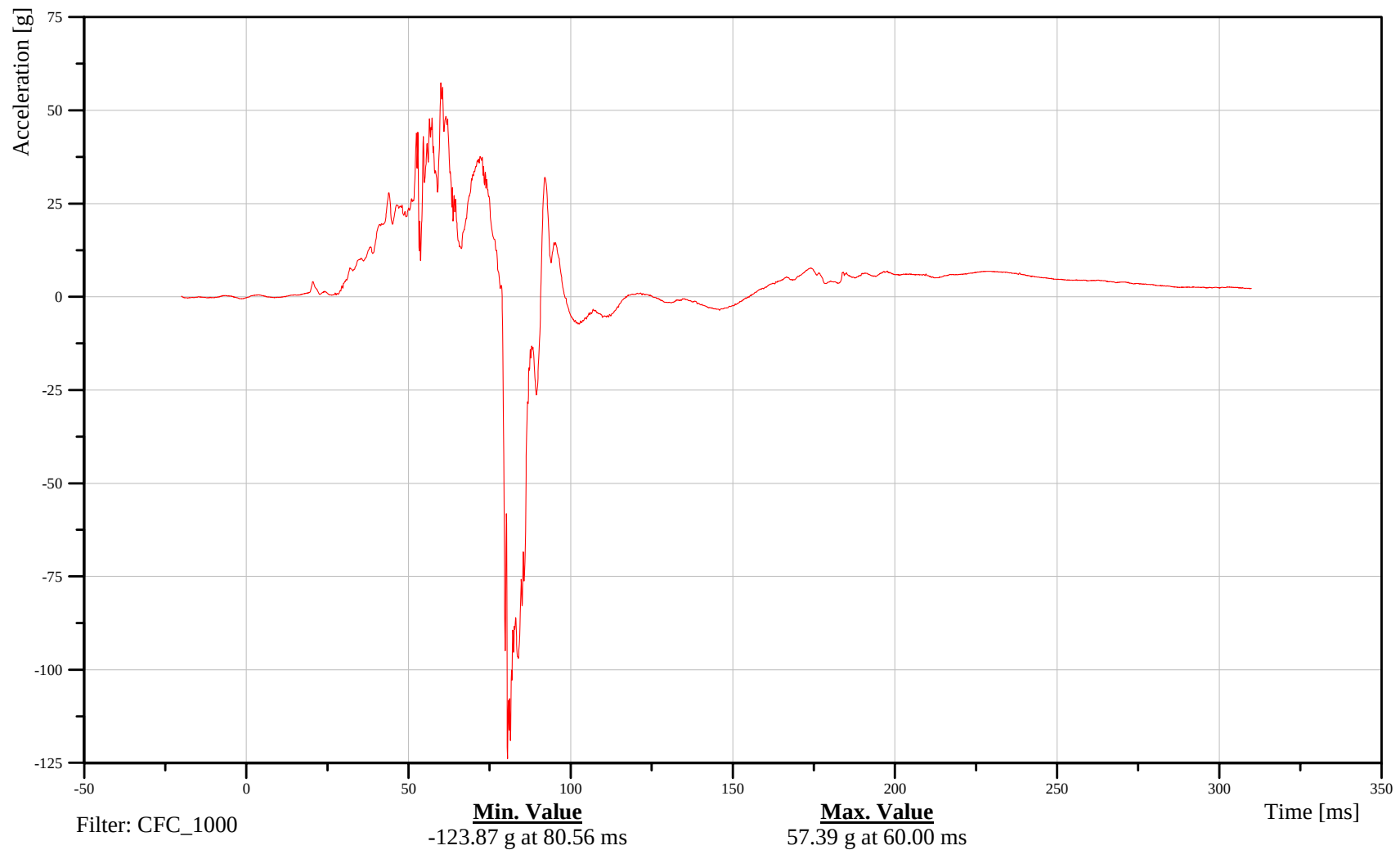
Target Passenger Redundant Head CG Z-Axis Acceleration

Customer: VRTC

23HEADCGRDHFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

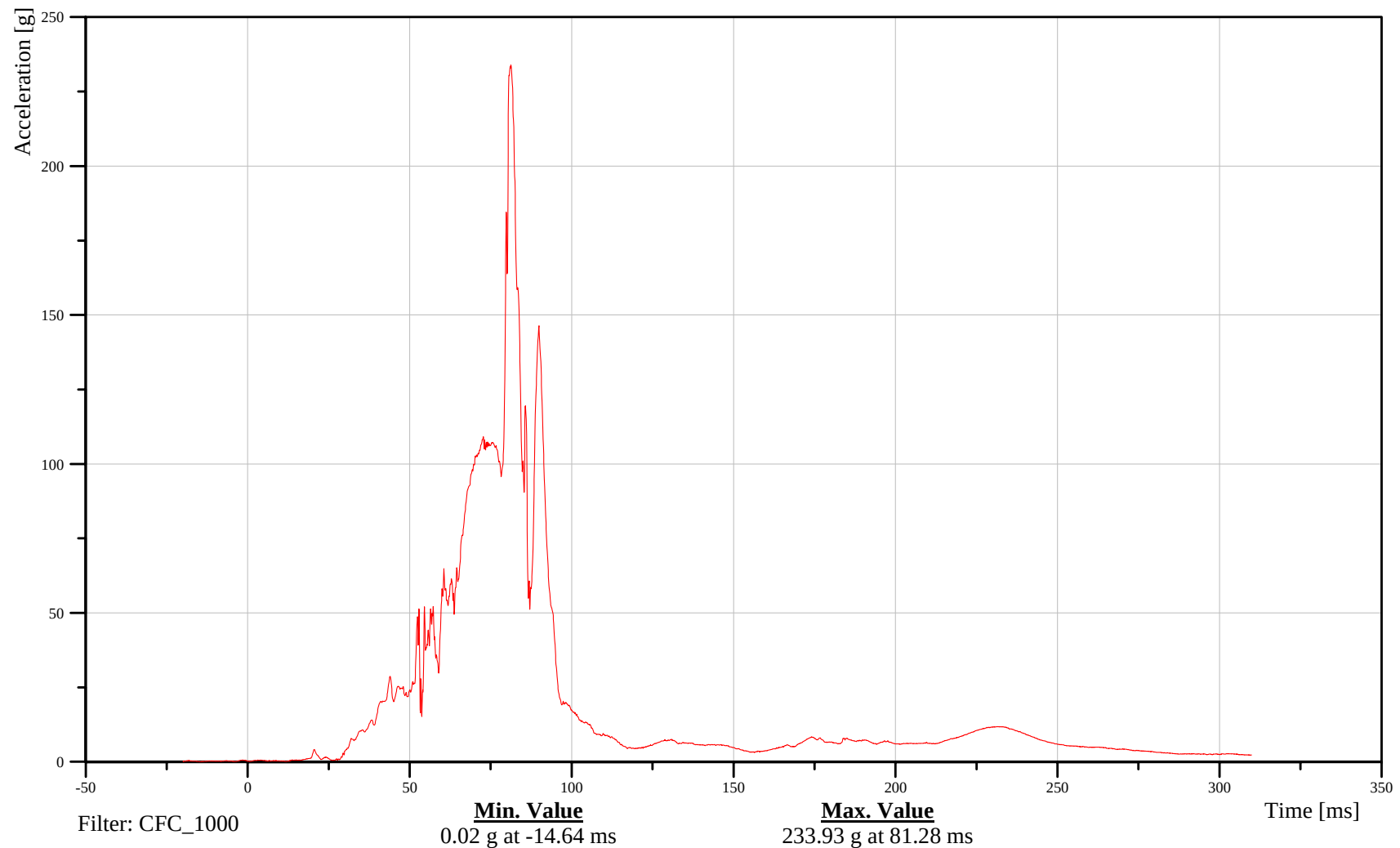
Target Passenger Redundant Head CG Resultant Acceleration

Customer: VRTC

23HEADCGRDHFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

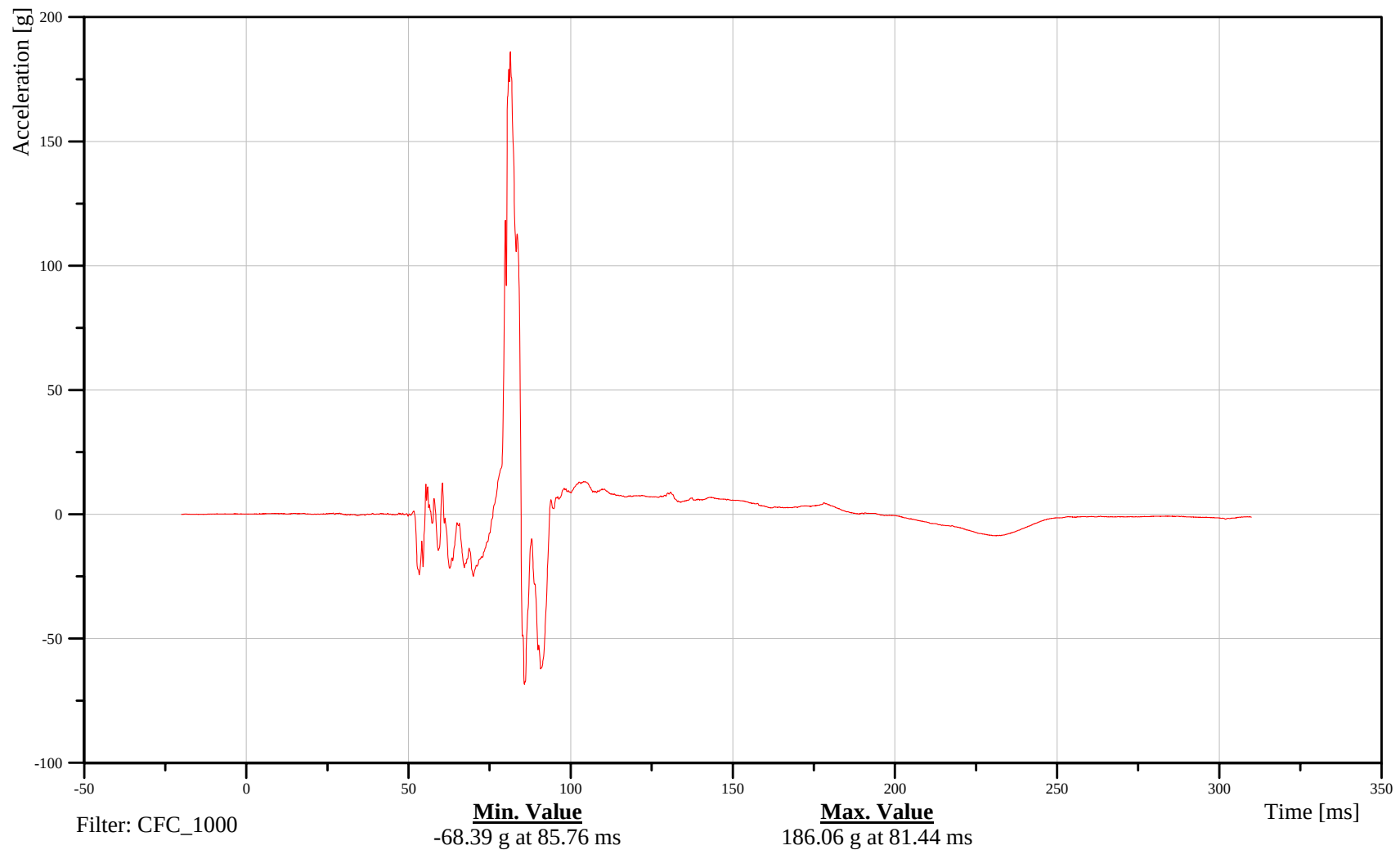
Target Passenger Head Front Y-Axis Acceleration

Customer: VRTC

23HEADFR00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

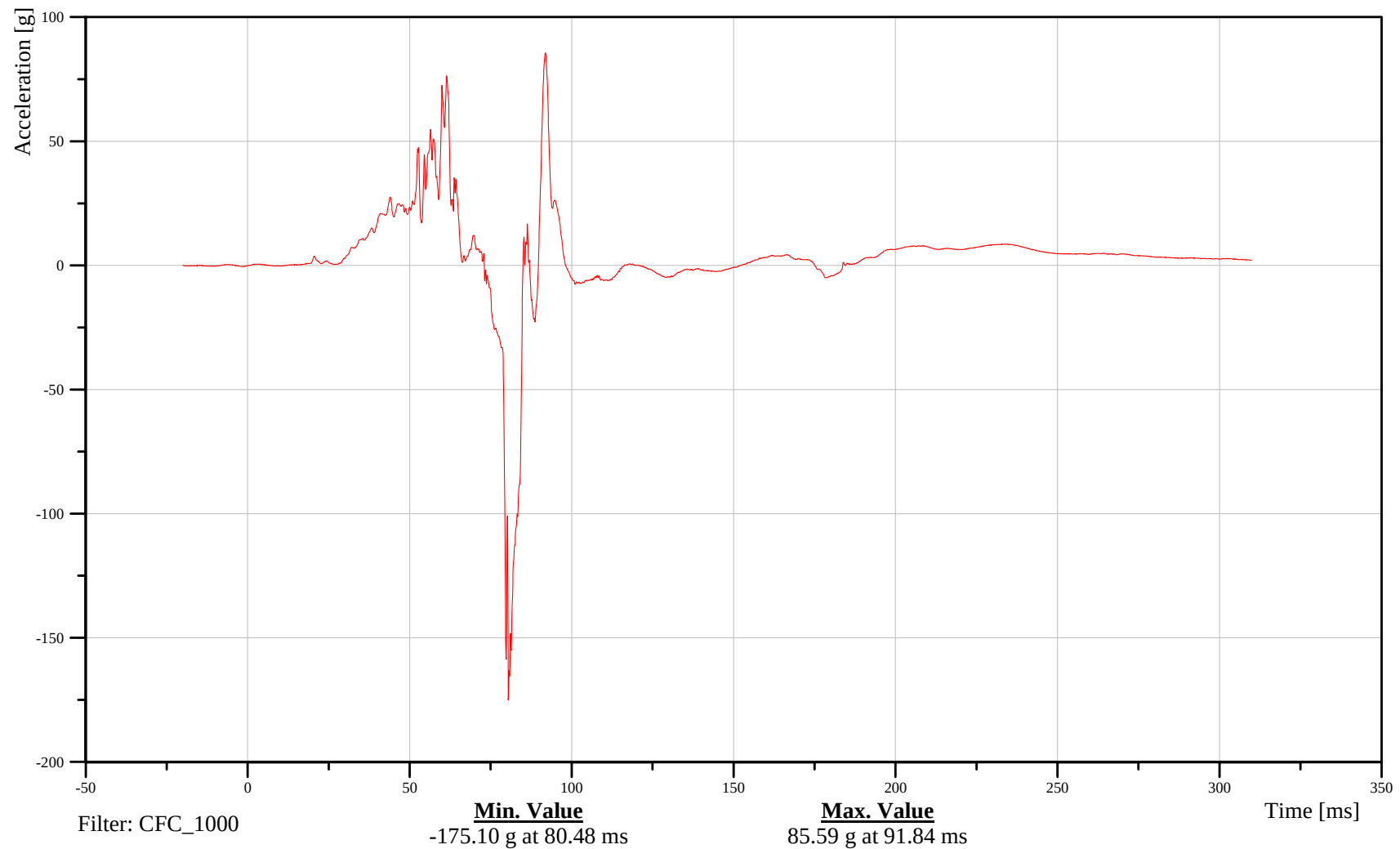
Target Passenger Head Front Z-Axis Acceleration

Customer: VRTC

23HEADFR00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

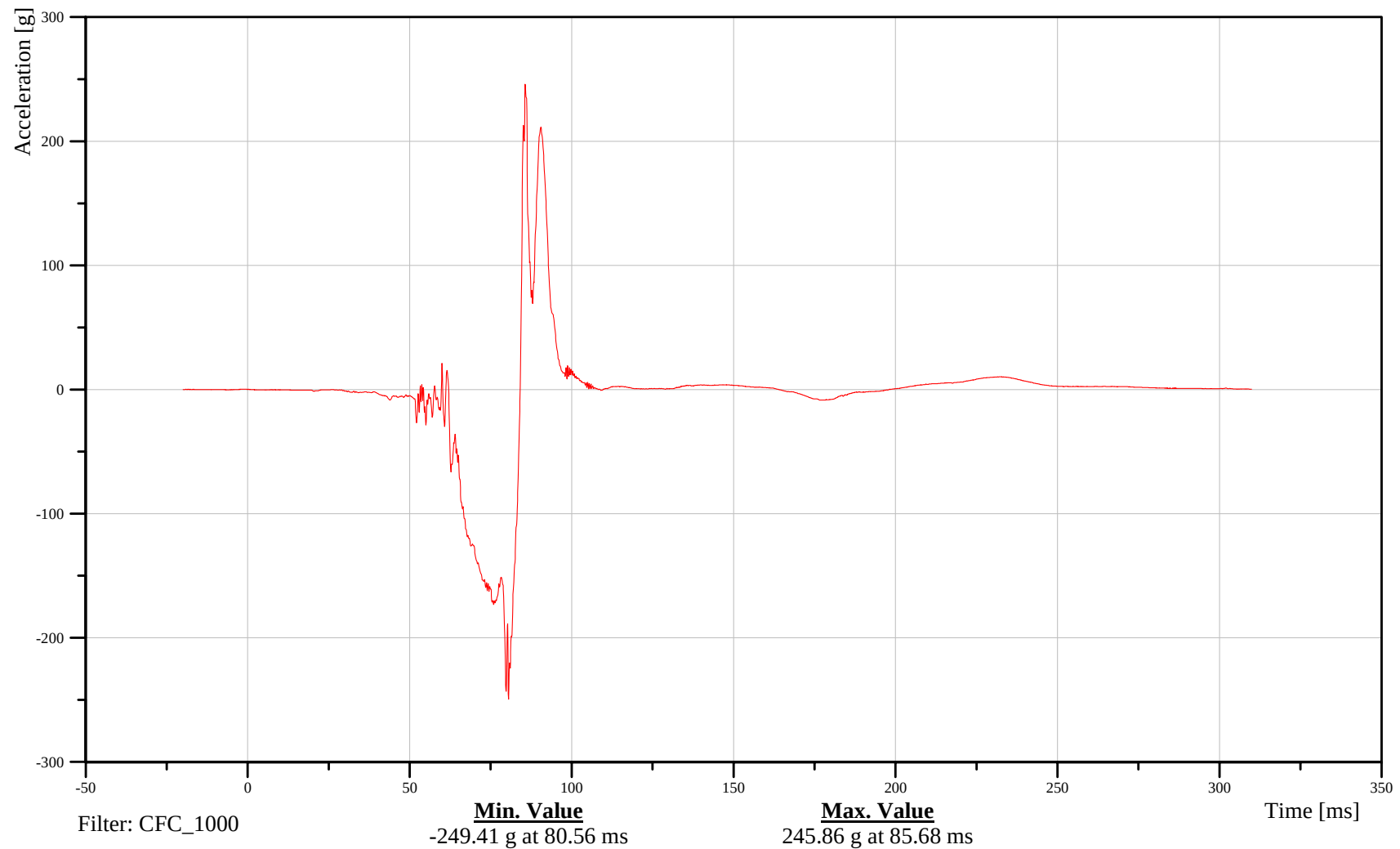
Target Passenger Head Top X-Axis Acceleration

Customer: VRTC

23HEADUP00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

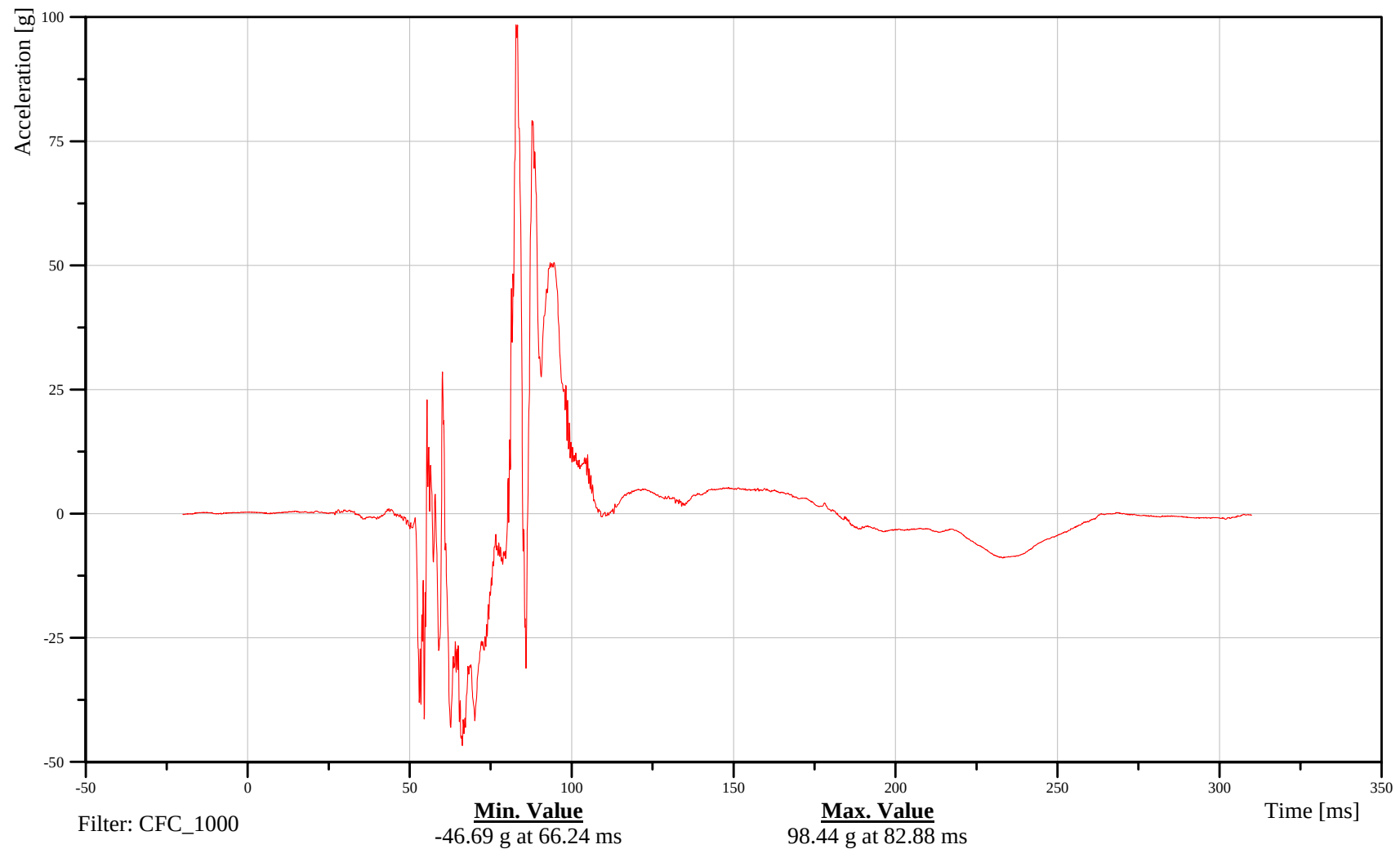
Target Passenger Head Top Y-Axis Acceleration

Customer: VRTC

23HEADUP00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

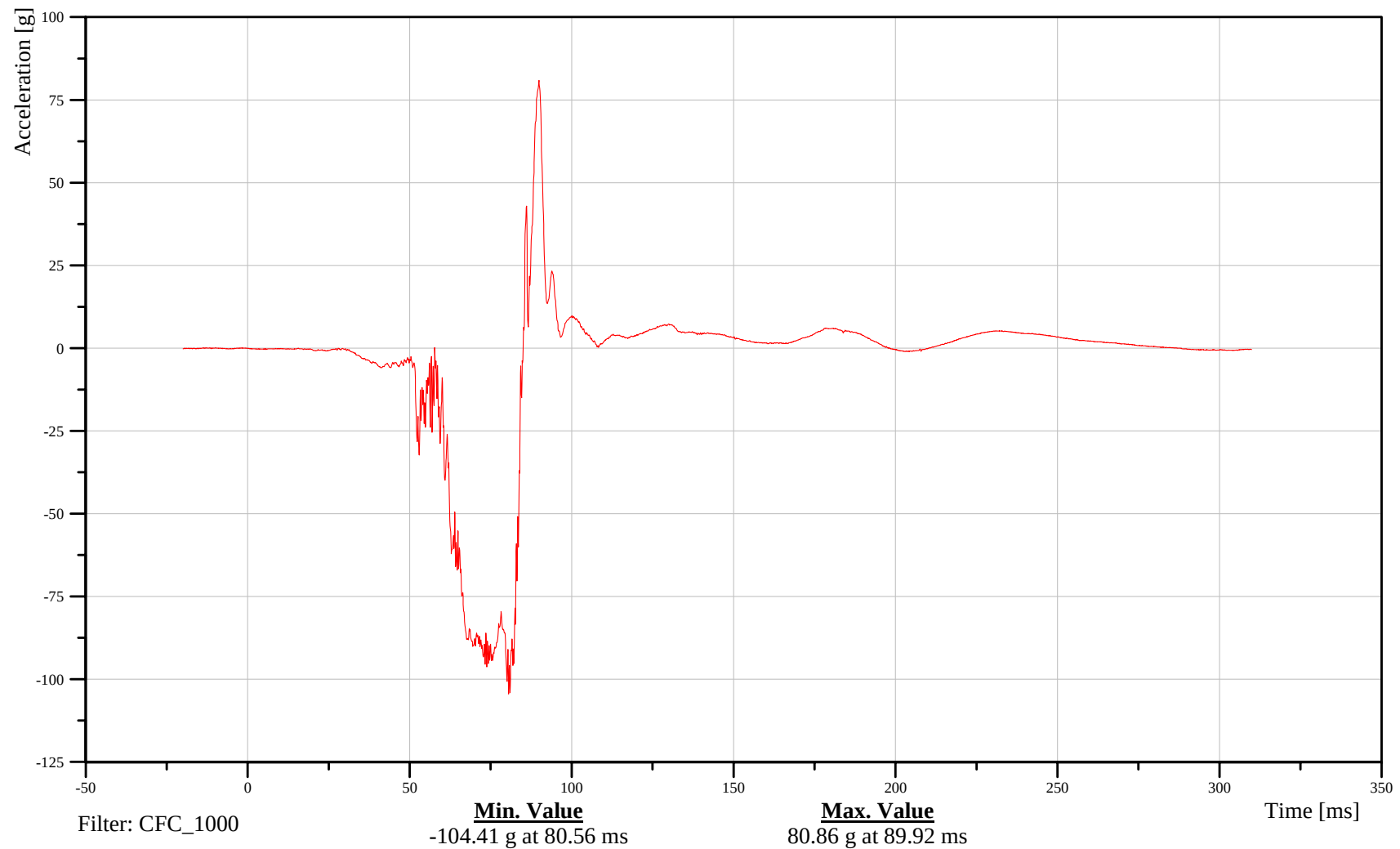
Target Passenger Head Side X-Axis Acceleration

Customer: VRTC

23HEADLE00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

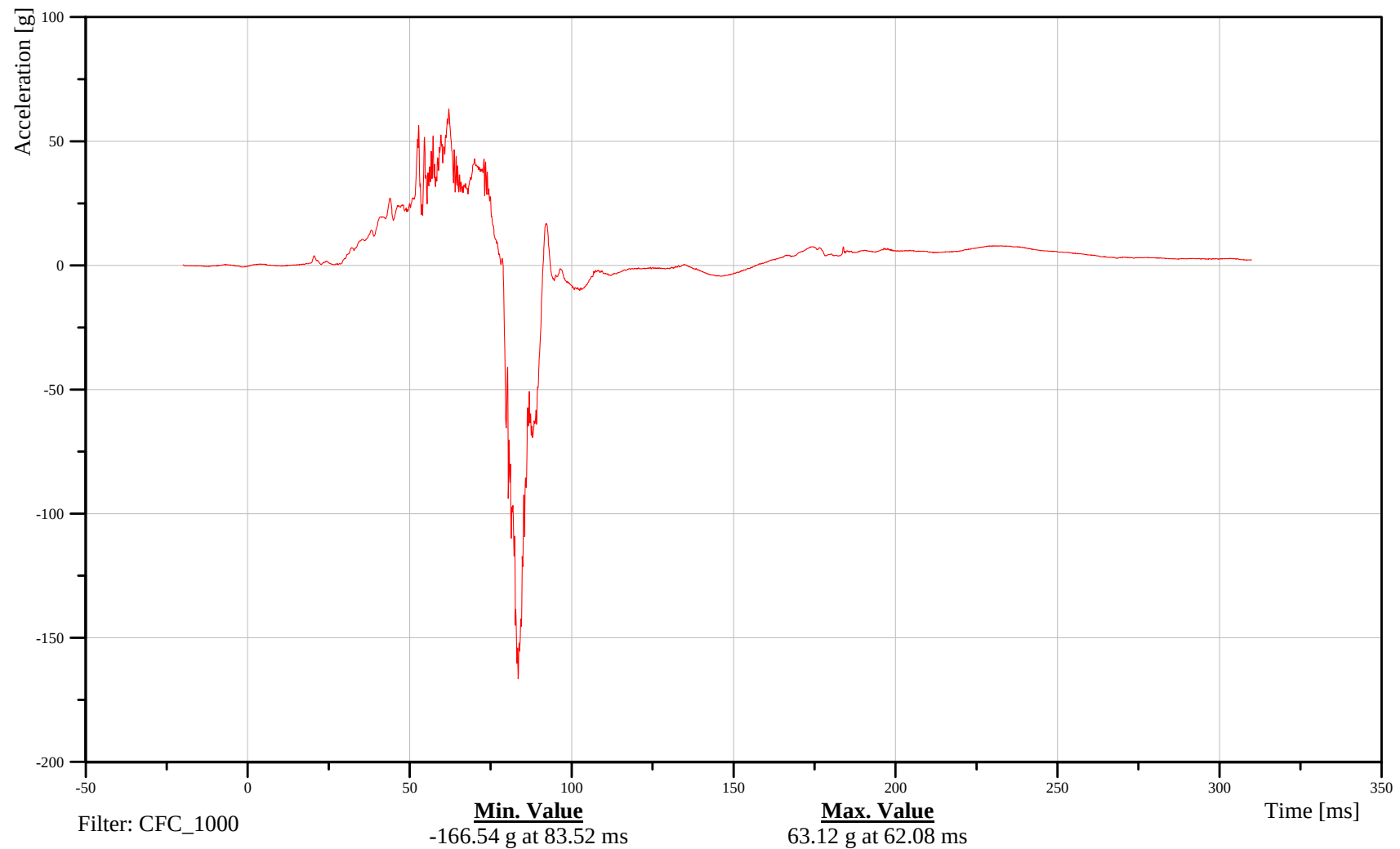
Target Passenger Head Side Z-Axis Acceleration

Customer: VRTC

23HEADLE00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

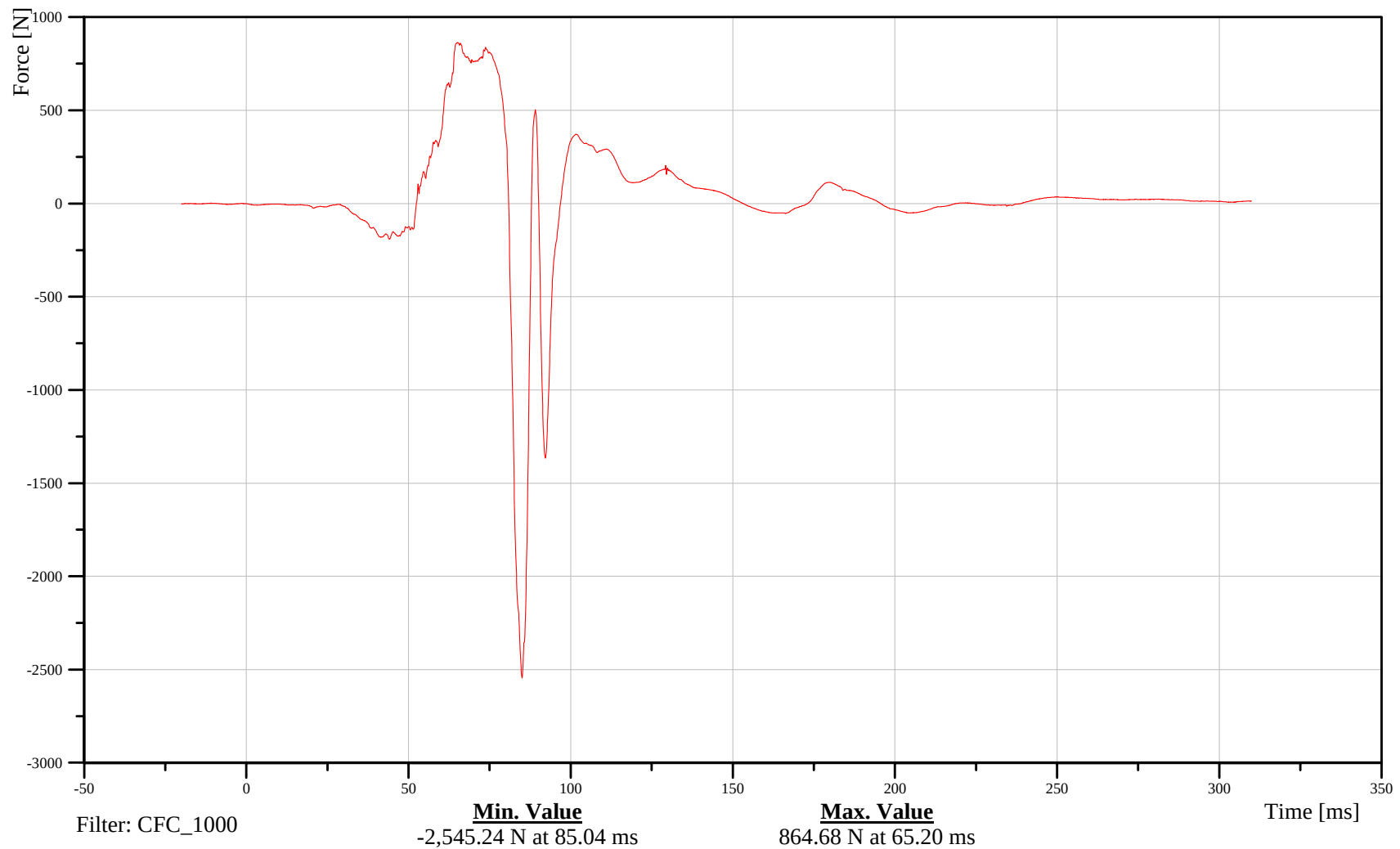
Target Passenger Upper Neck X-Axis Force

Customer: VRTC

23NECKUP00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

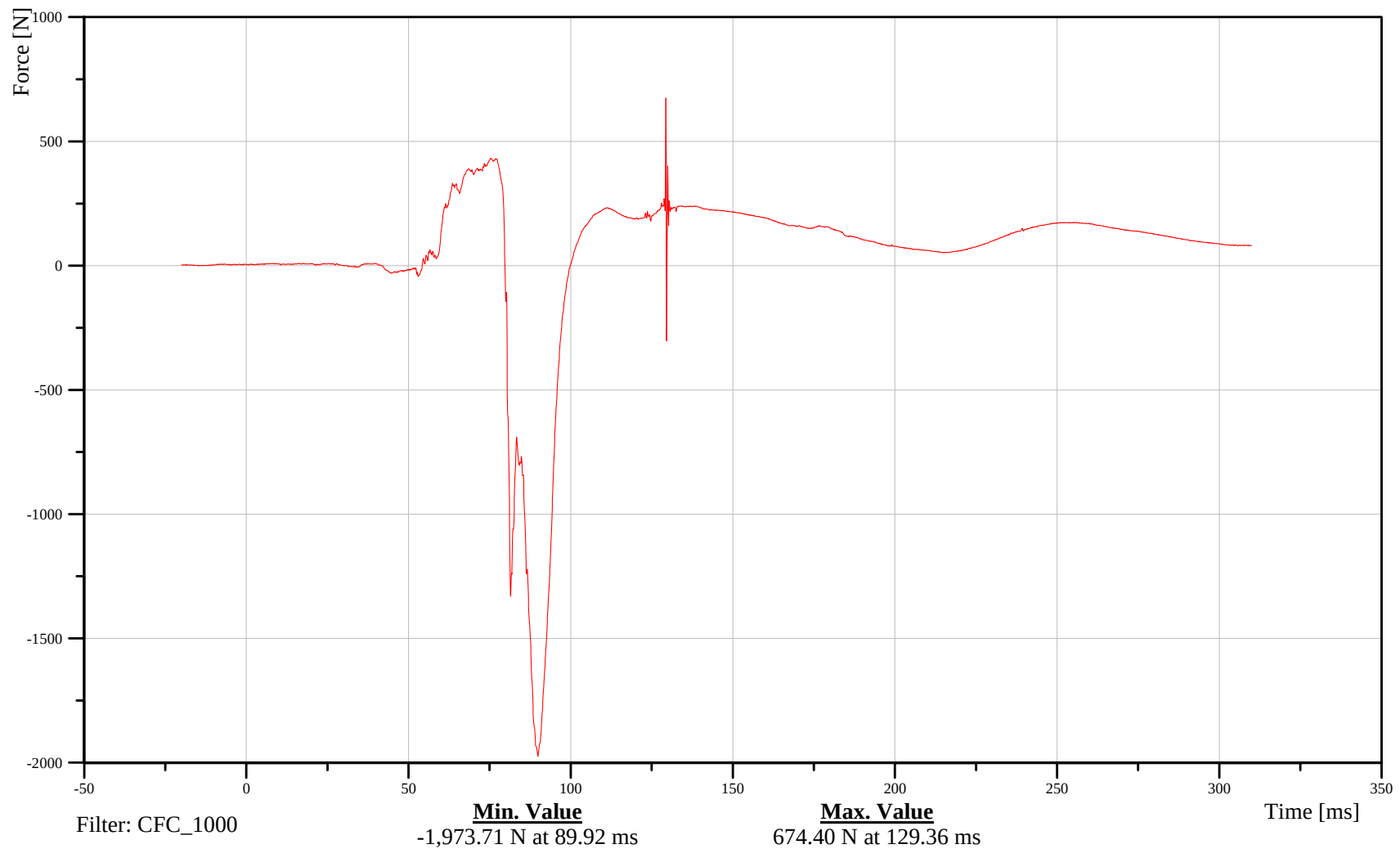
Target Passenger Upper Neck Y-Axis Force

Customer: VRTC

23NECKUP00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

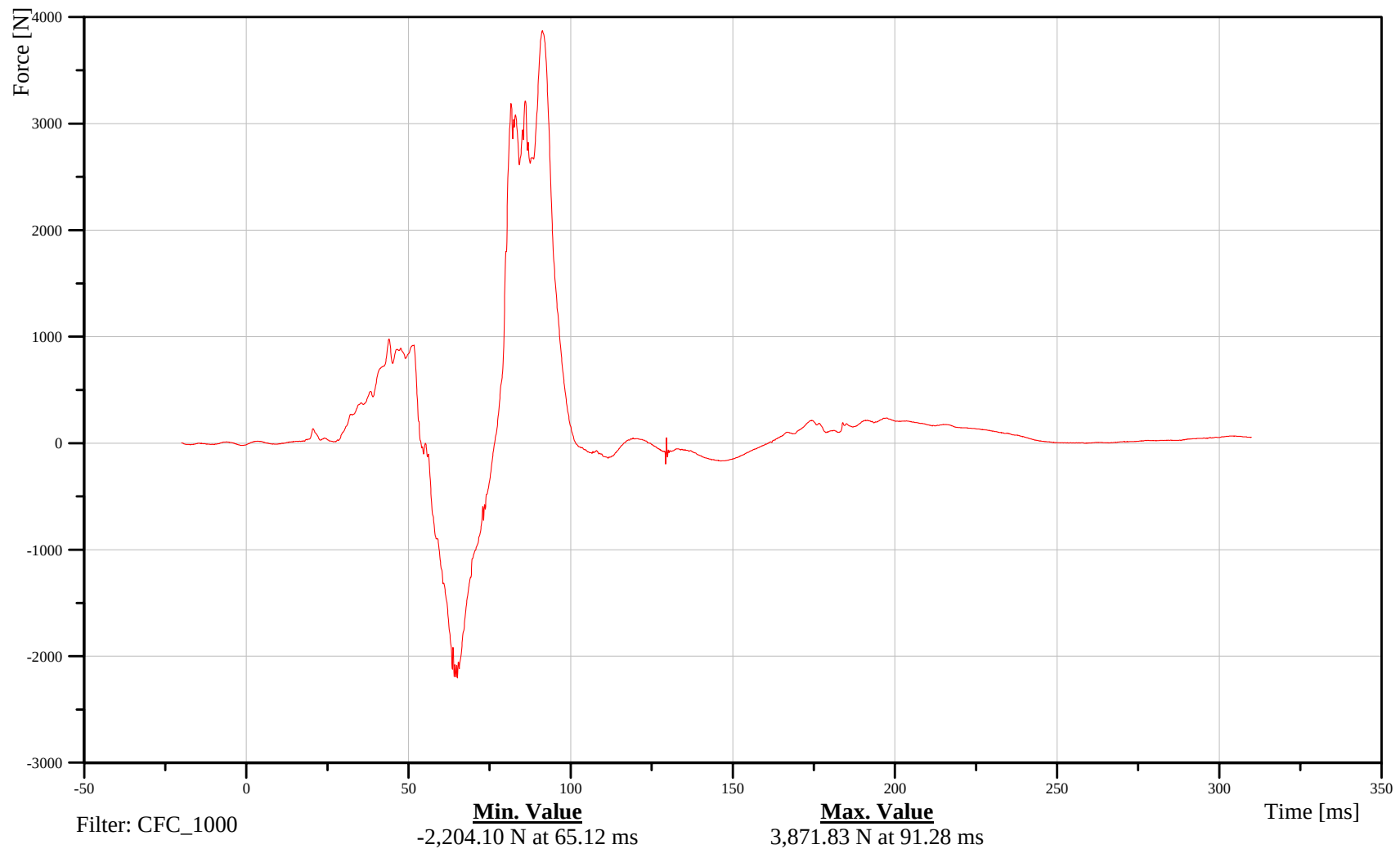
Target Passenger Upper Neck Z-Axis Force

Customer: VRTC

23NECKUP00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

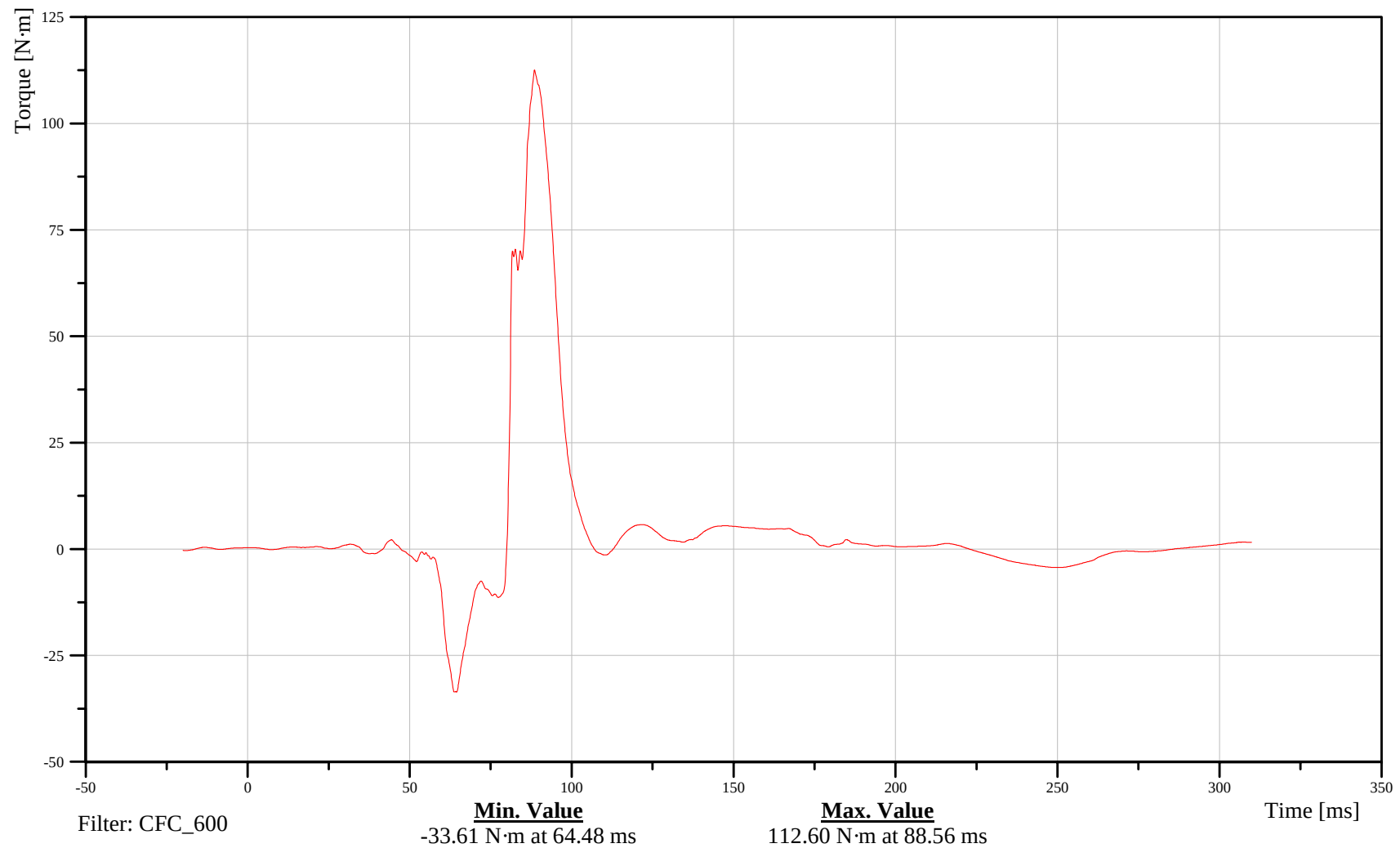
Target Passenger Upper Neck Moment About X Axis

Customer: VRTC

23NECKUP00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

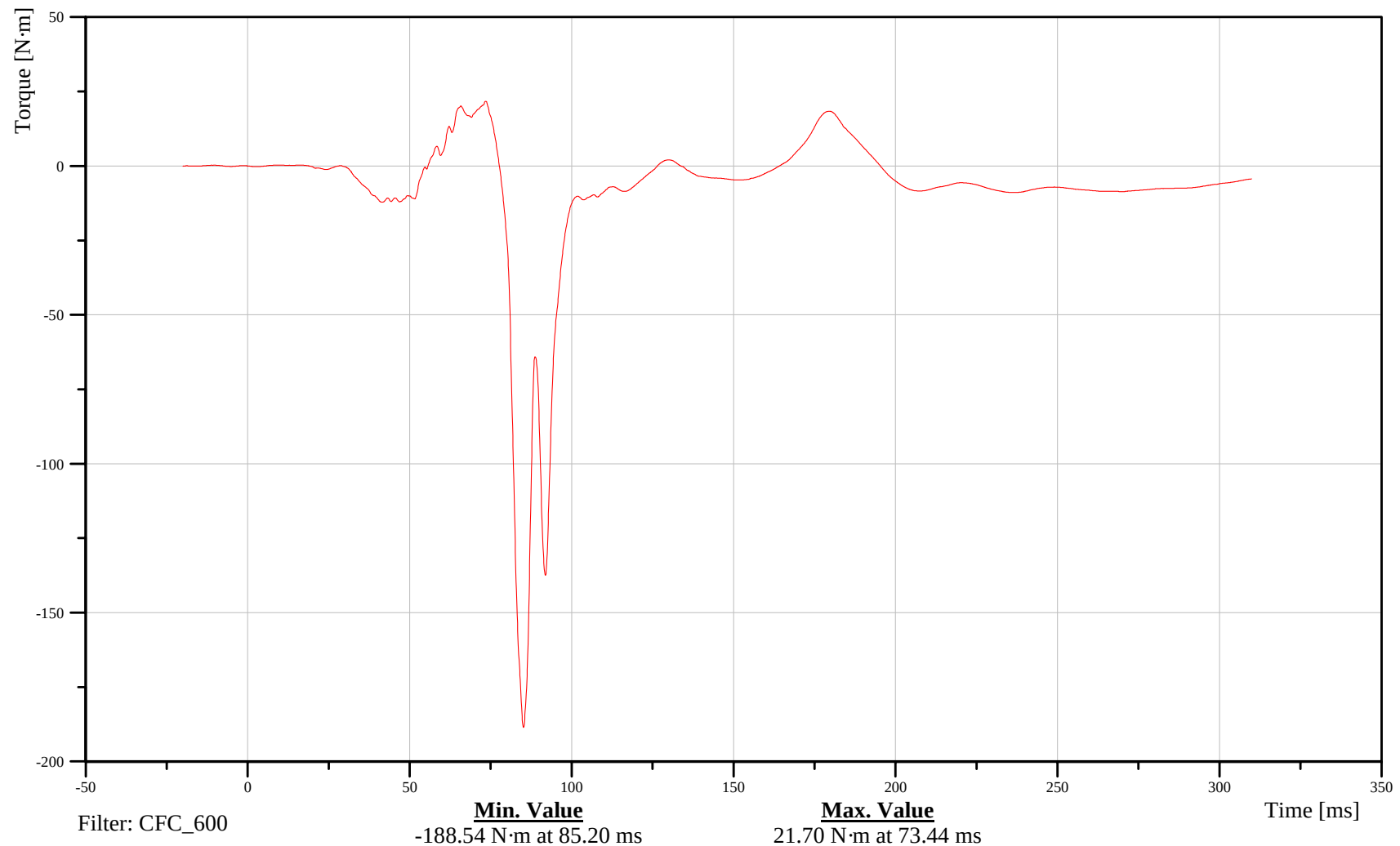
Target Passenger Upper Neck Moment About Y Axis

Customer: VRTC

23NECKUP00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

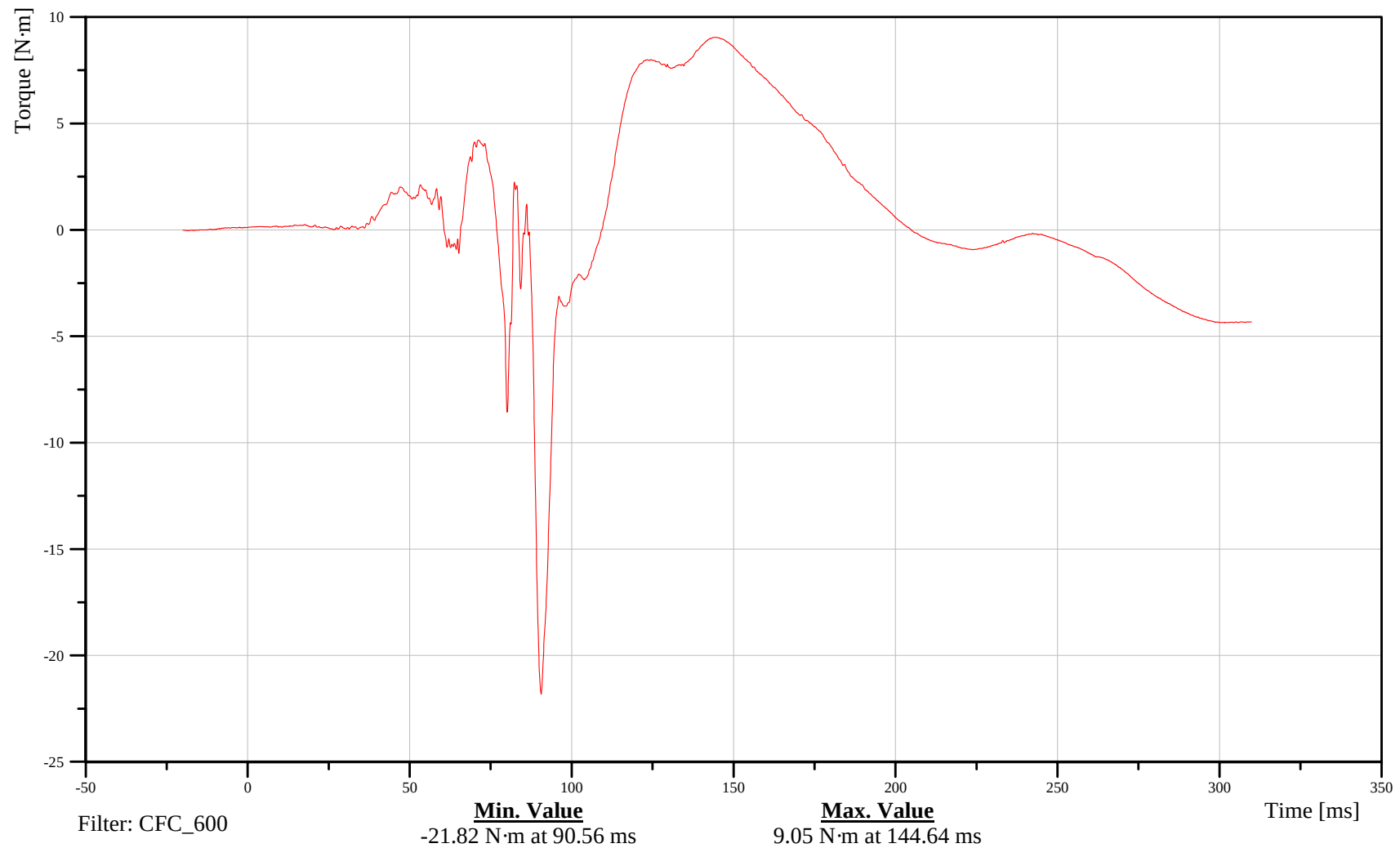
Target Passenger Upper Neck Moment About Z Axis

Customer: VRTC

23NECKUP00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

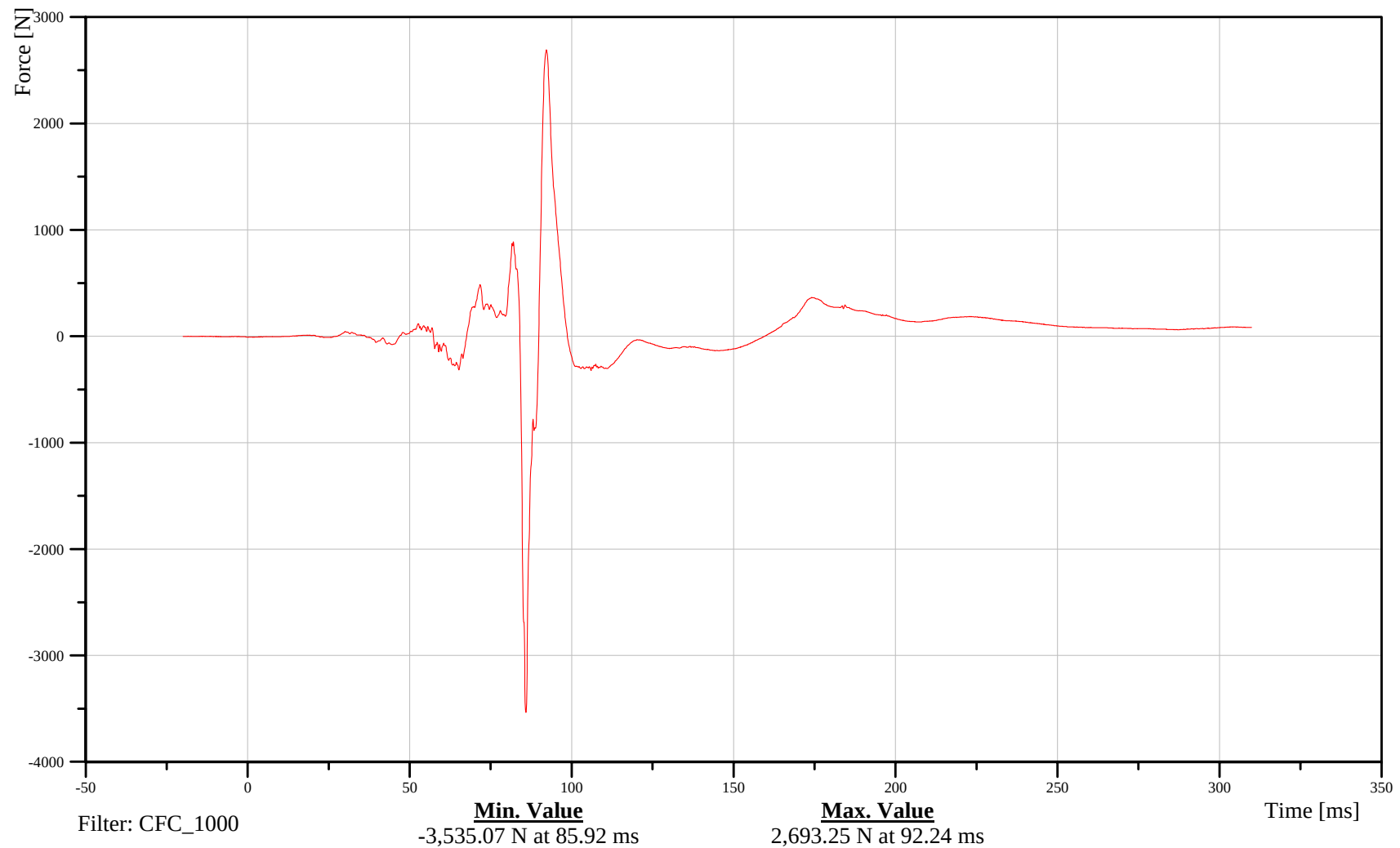
Target Passenger Lower Neck X-Axis Force

Customer: VRTC

23NECKLO00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

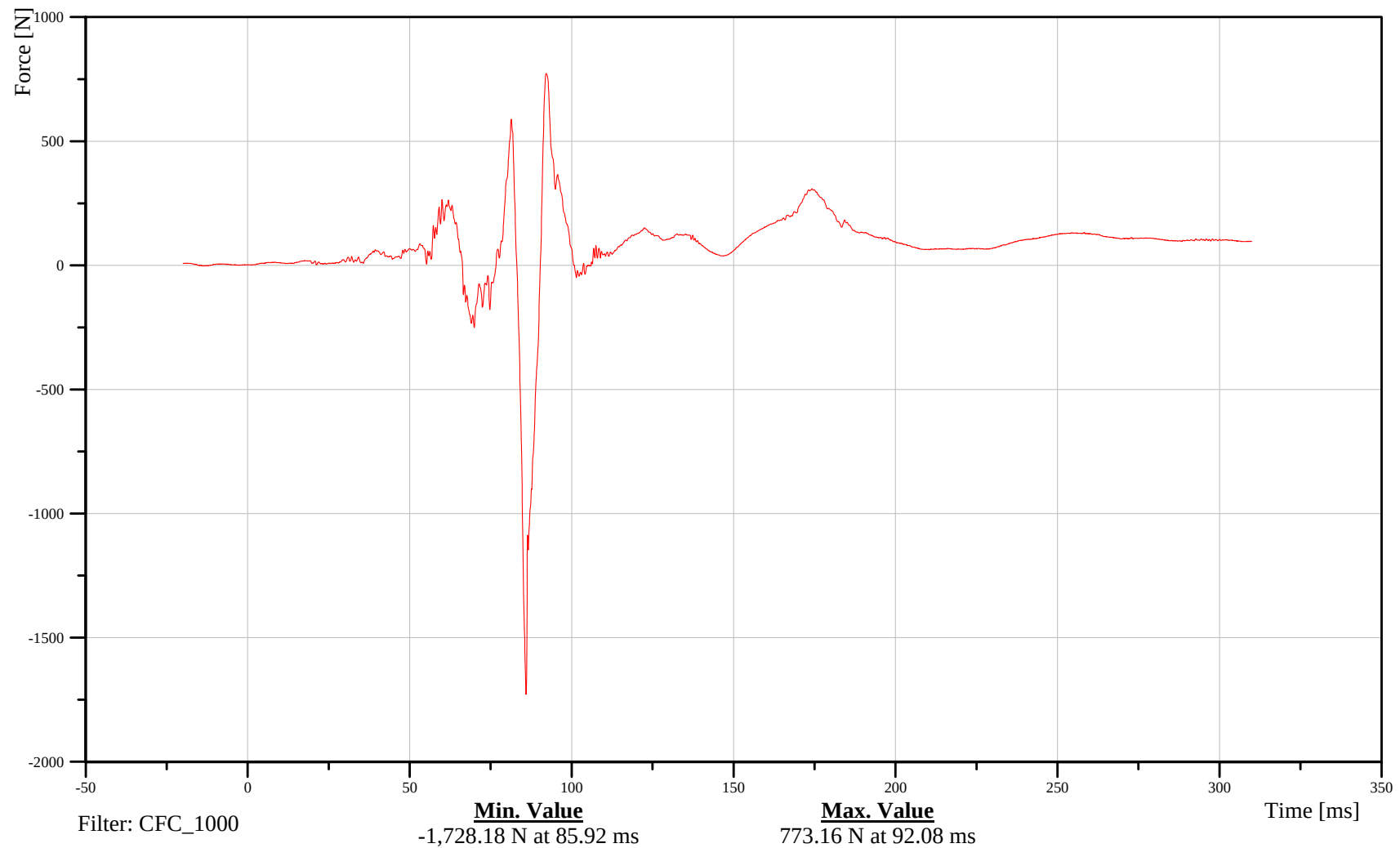
Target Passenger Lower Neck Y-Axis Force

Customer: VRTC

23NECKLO00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

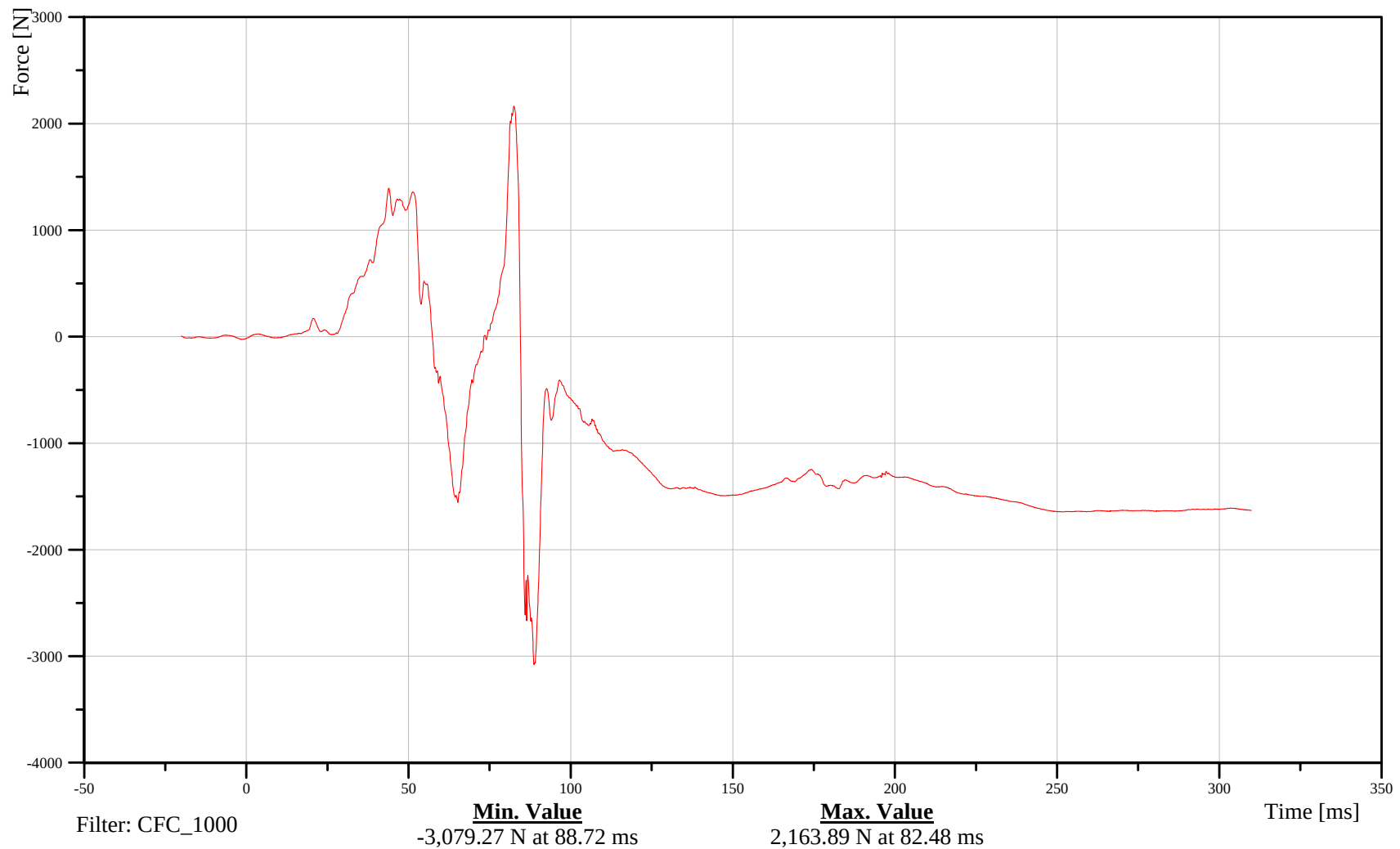
Target Passenger Lower Neck Z-Axis Force

Customer: VRTC

23NECKLO00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

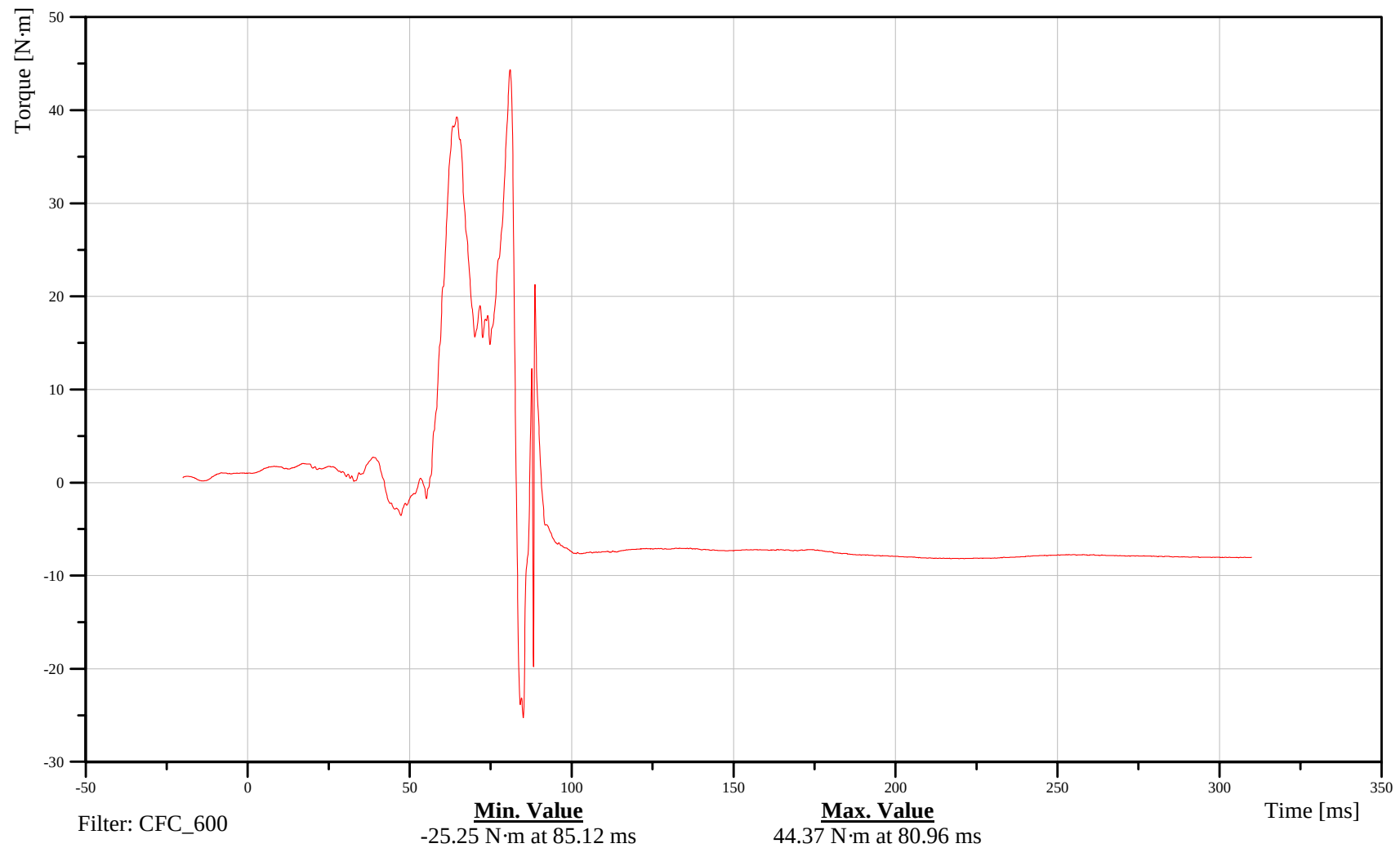
Target Passenger Lower Neck Moment About X Axis

Customer: VRTC

23NECKLO00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

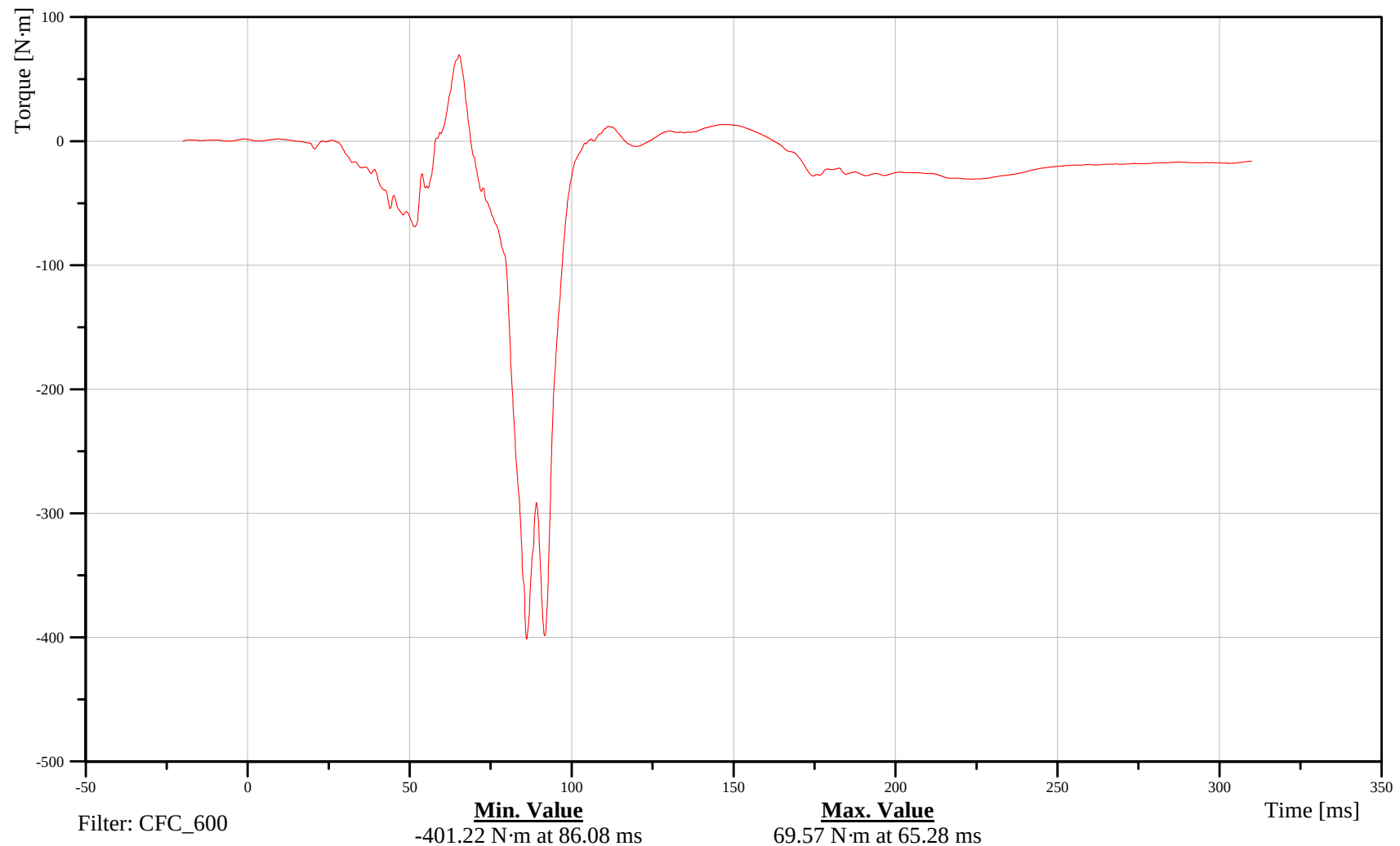
Target Passenger Lower Neck Moment About Y Axis

Customer: VRTC

23NECKLO00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

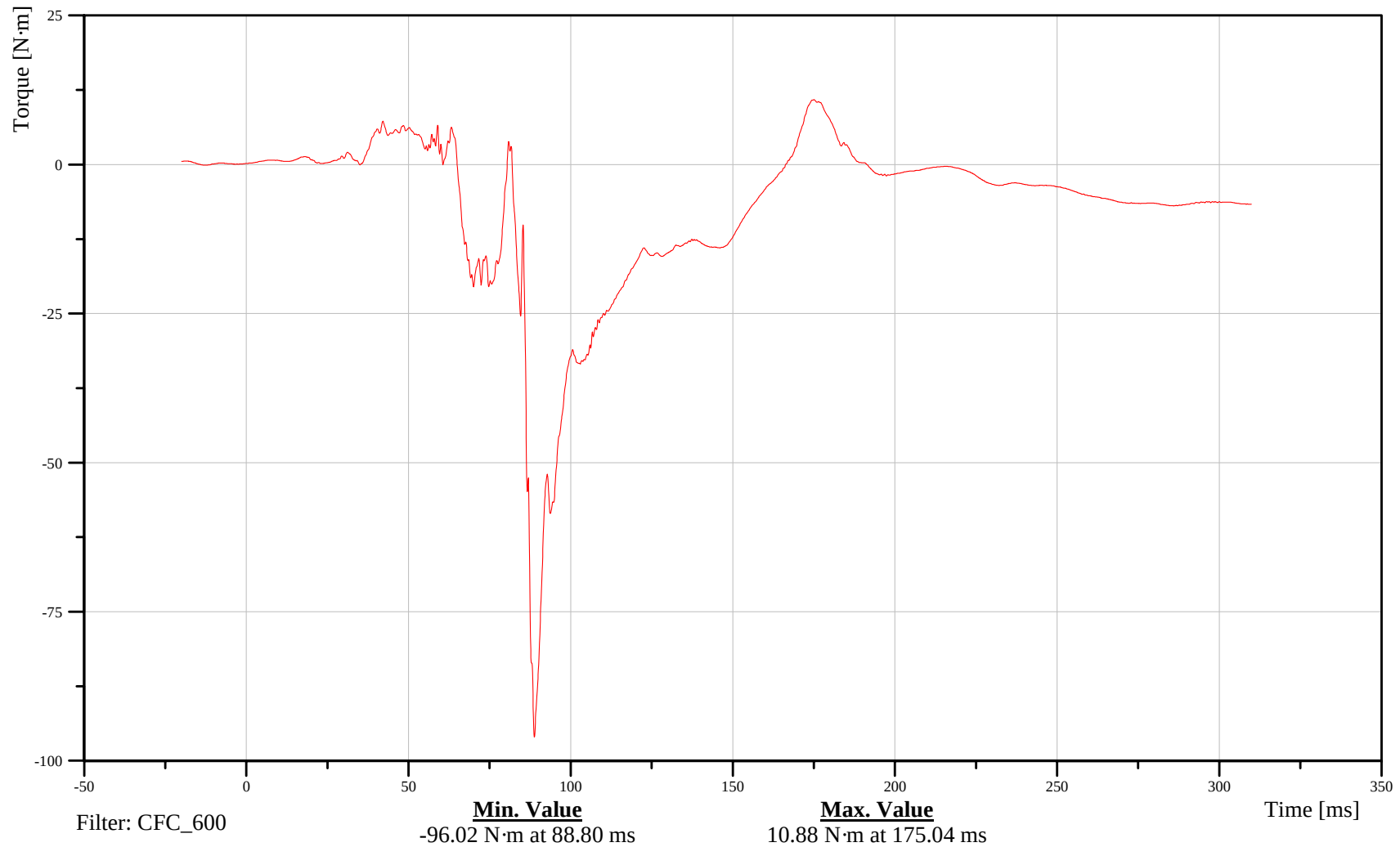
Target Passenger Lower Neck Moment About Z Axis

Customer: VRTC

23NECKLO00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

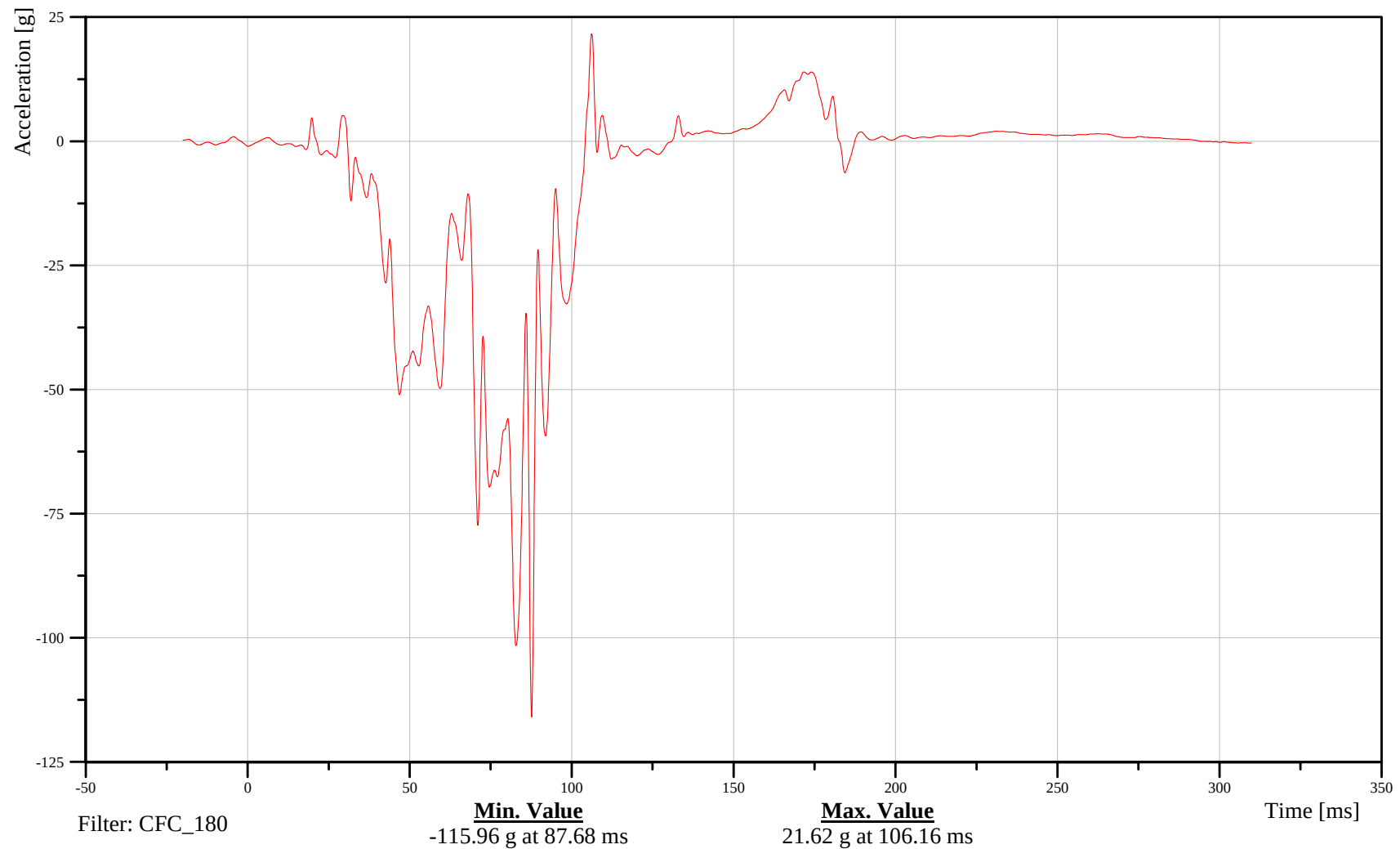
Target Passenger Chest CG X-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

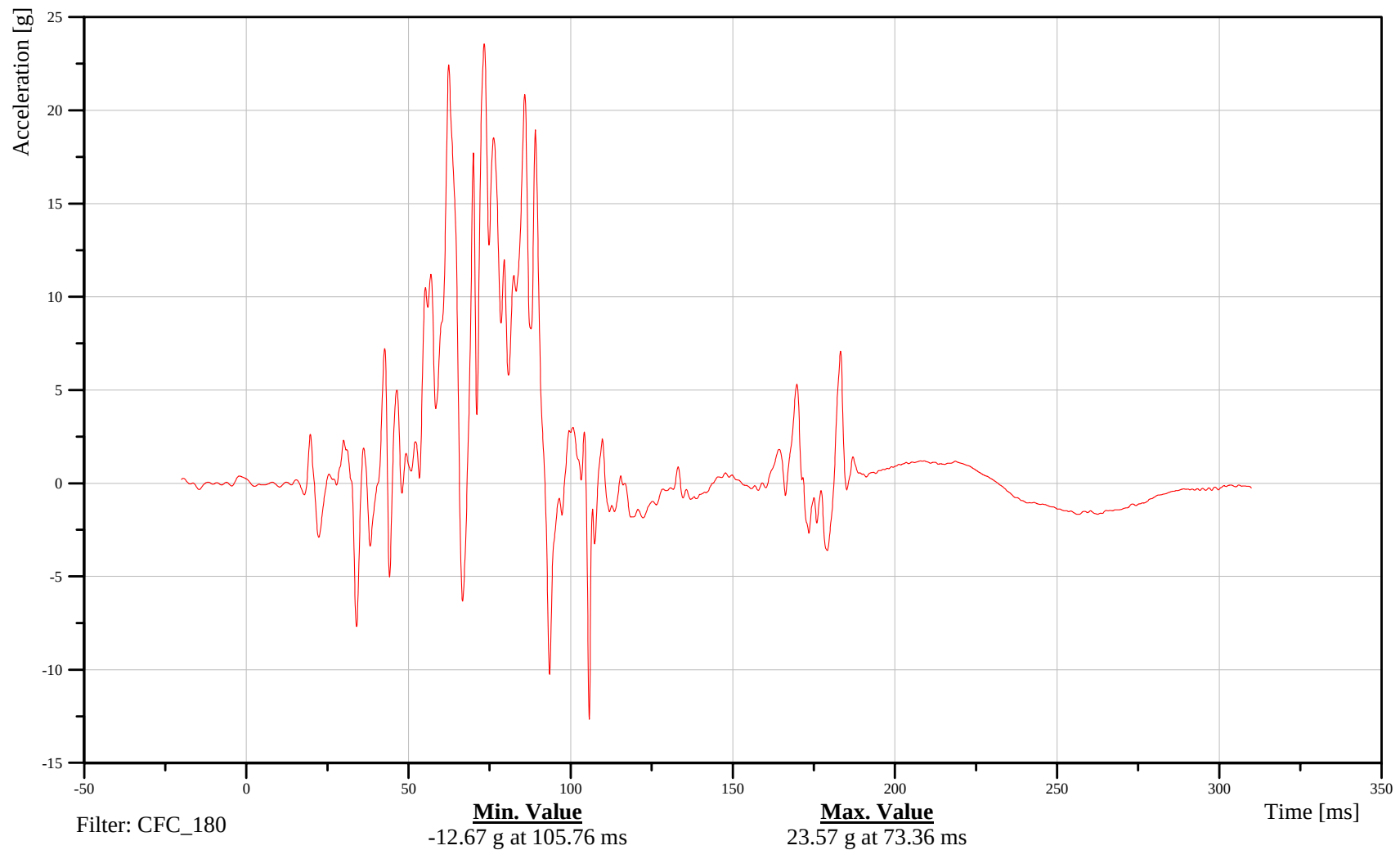
Target Passenger Chest CG Y-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

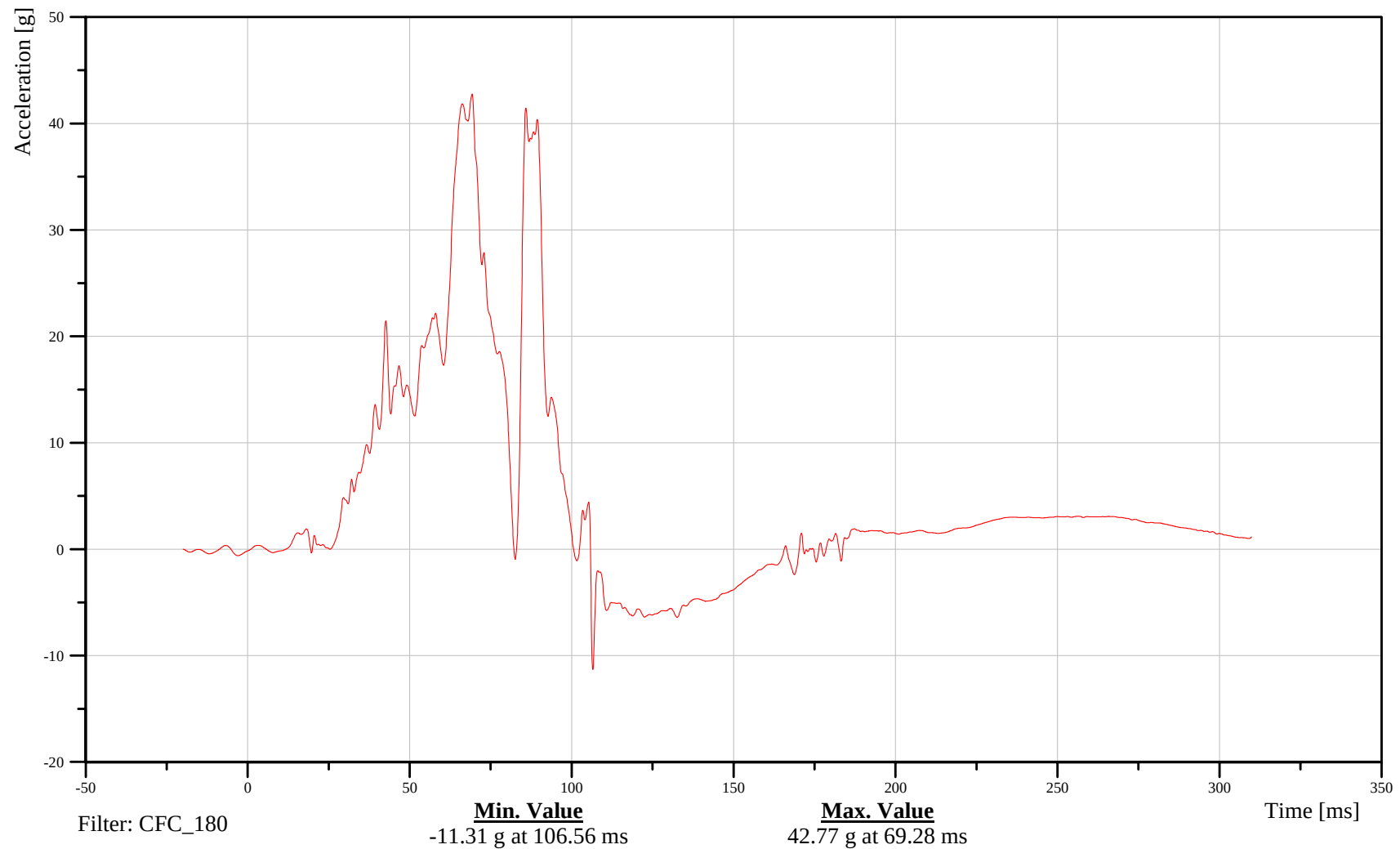
Target Passenger Chest CG Z-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

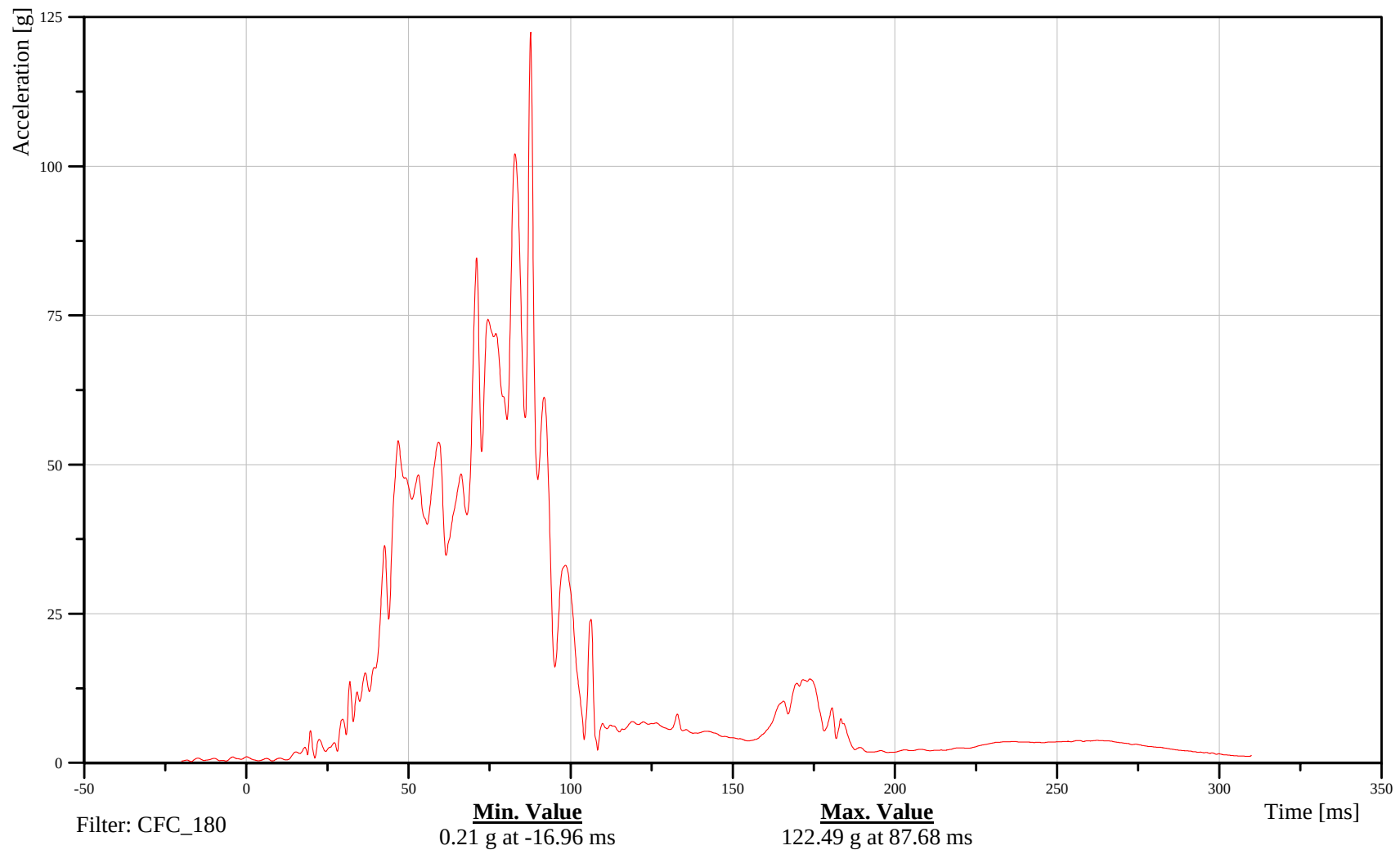
Target Passenger Chest CG Resultant Acceleration

Customer: VRTC

23CHSTCG00HFACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

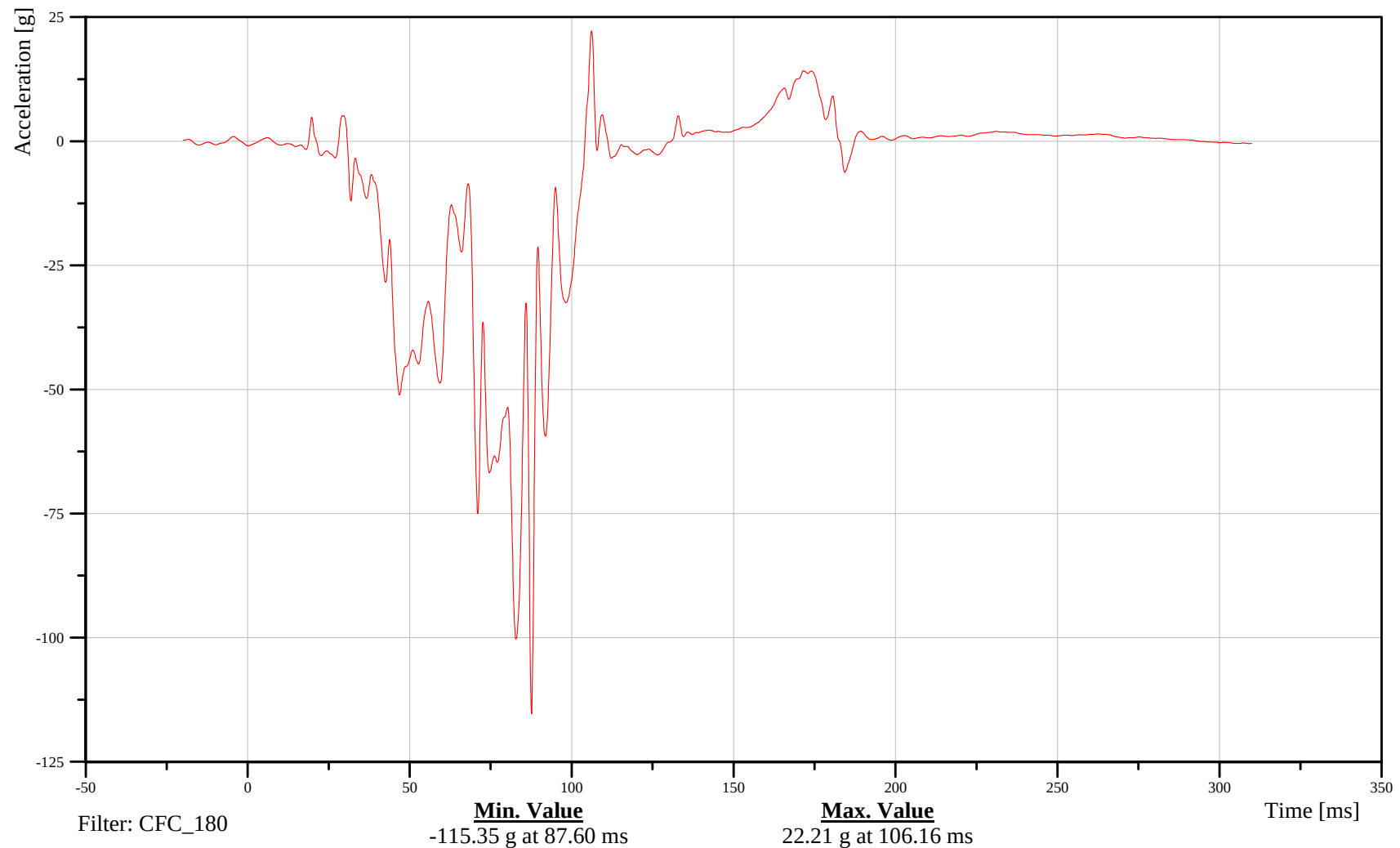
Target Passenger Redundant Chest CG X-Axis Acceleration

Customer: VRTC

23CHSTCGRDHFACXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

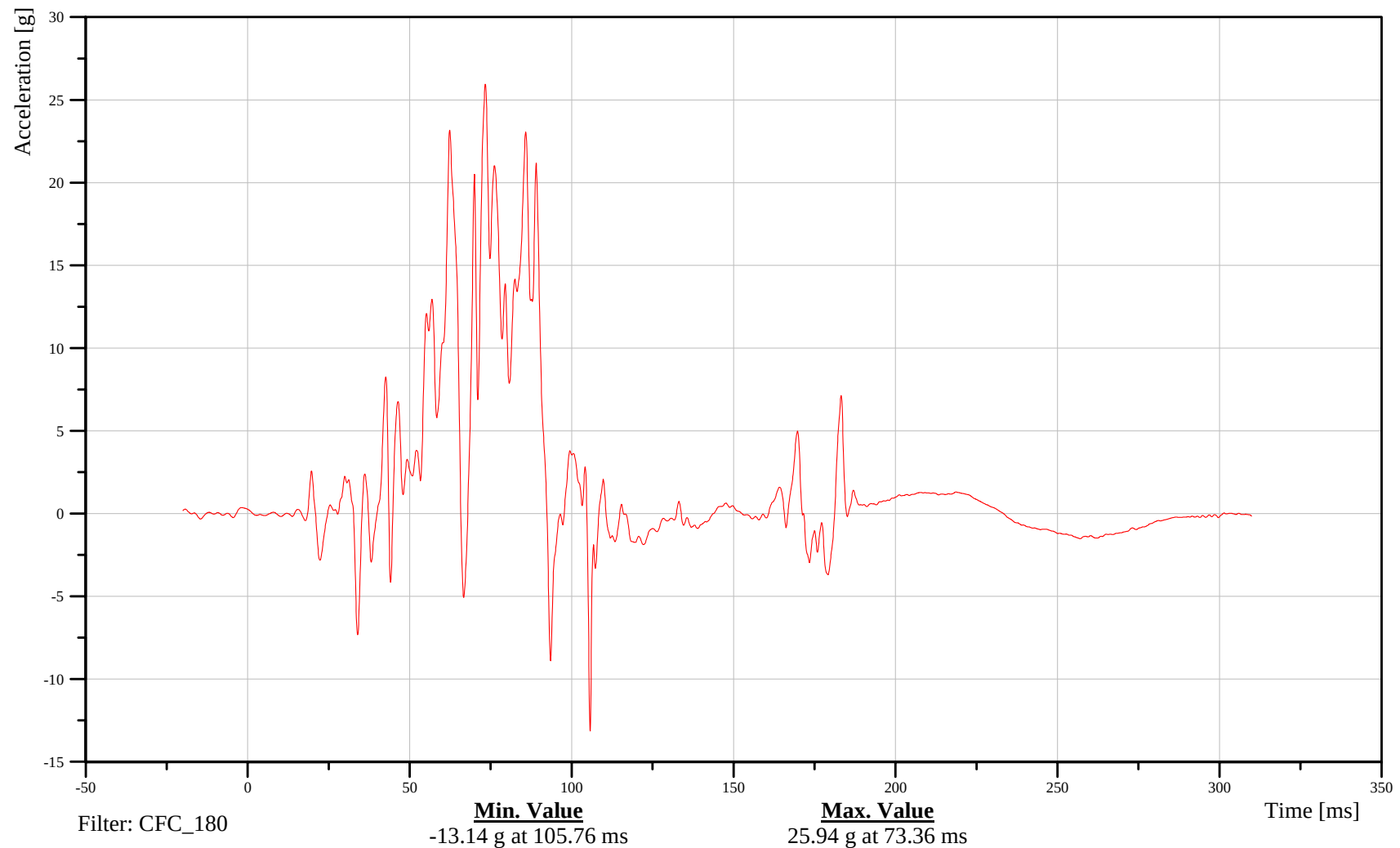
Target Passenger Redundant Chest CG Y-Axis Acceleration

Customer: VRTC

23CHSTCGRDHFACYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

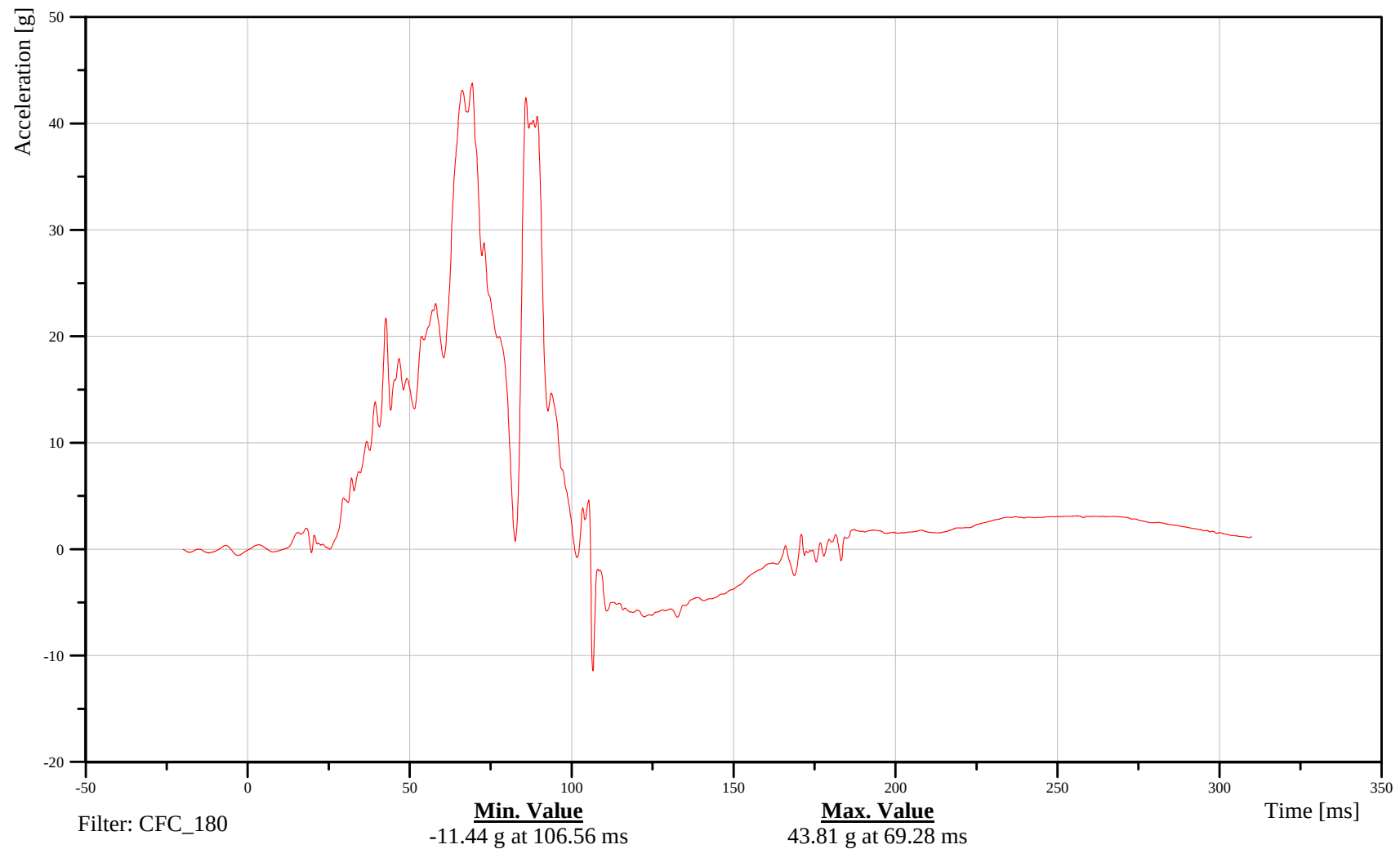
Target Passenger Redundant Chest CG Z-Axis Acceleration

Customer: VRTC

23CHSTCGRDHFACZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

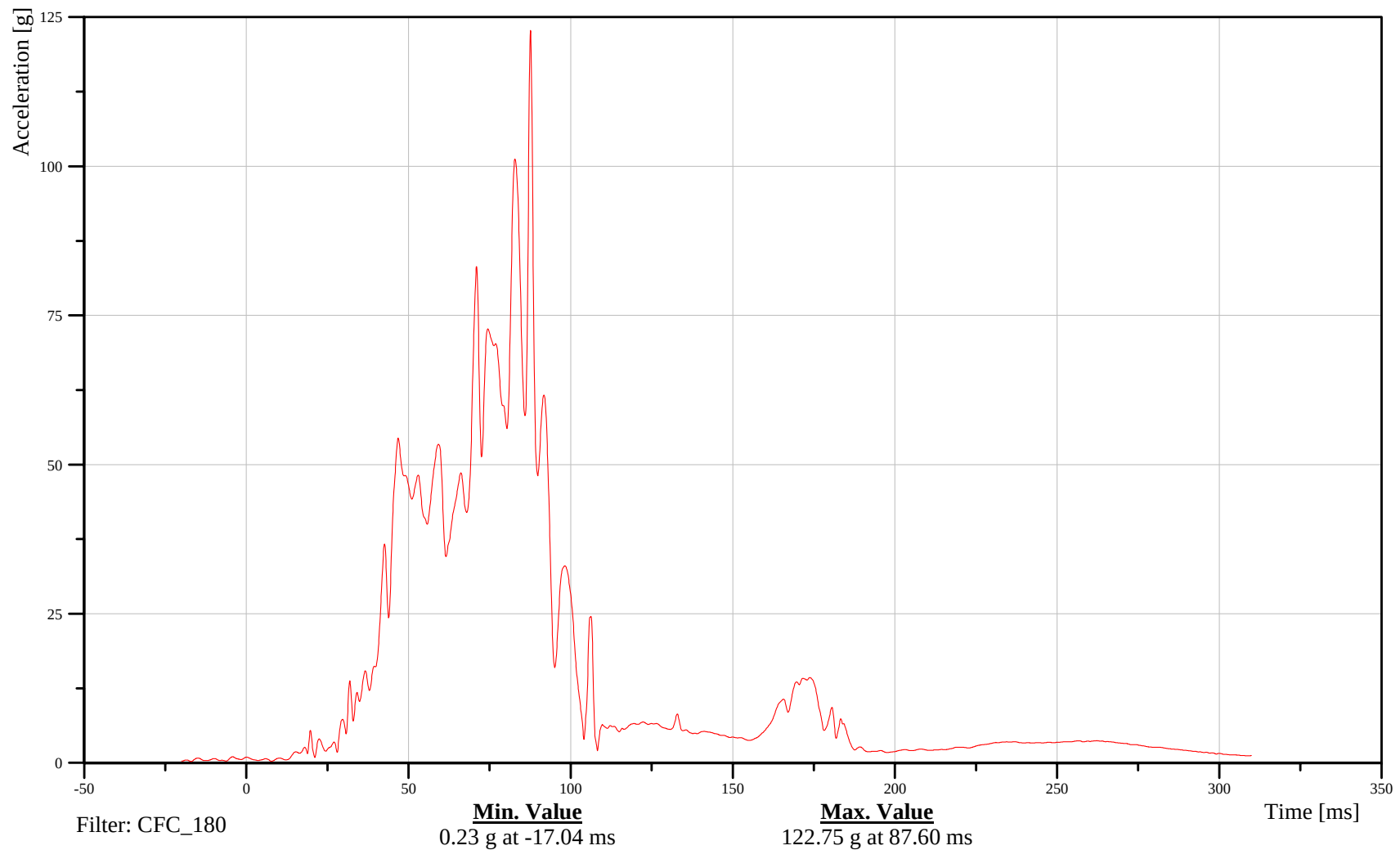
Target Passenger Redundant Chest CG Resultant Acceleration

Customer: VRTC

23CHSTCGRDHFACRC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

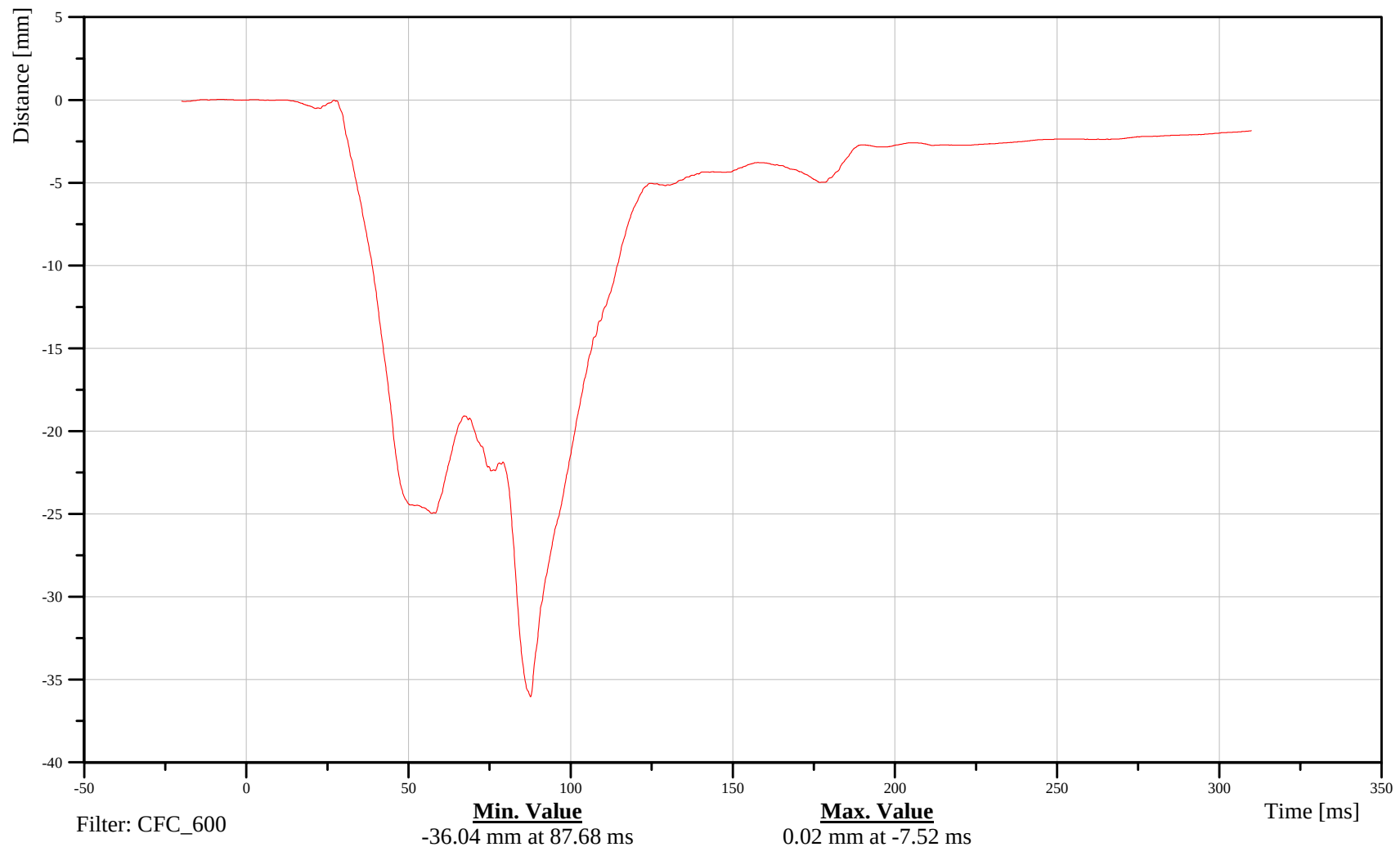
Target Passenger Chest Displacement

Customer: VRTC

23CHST0000HFDSXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

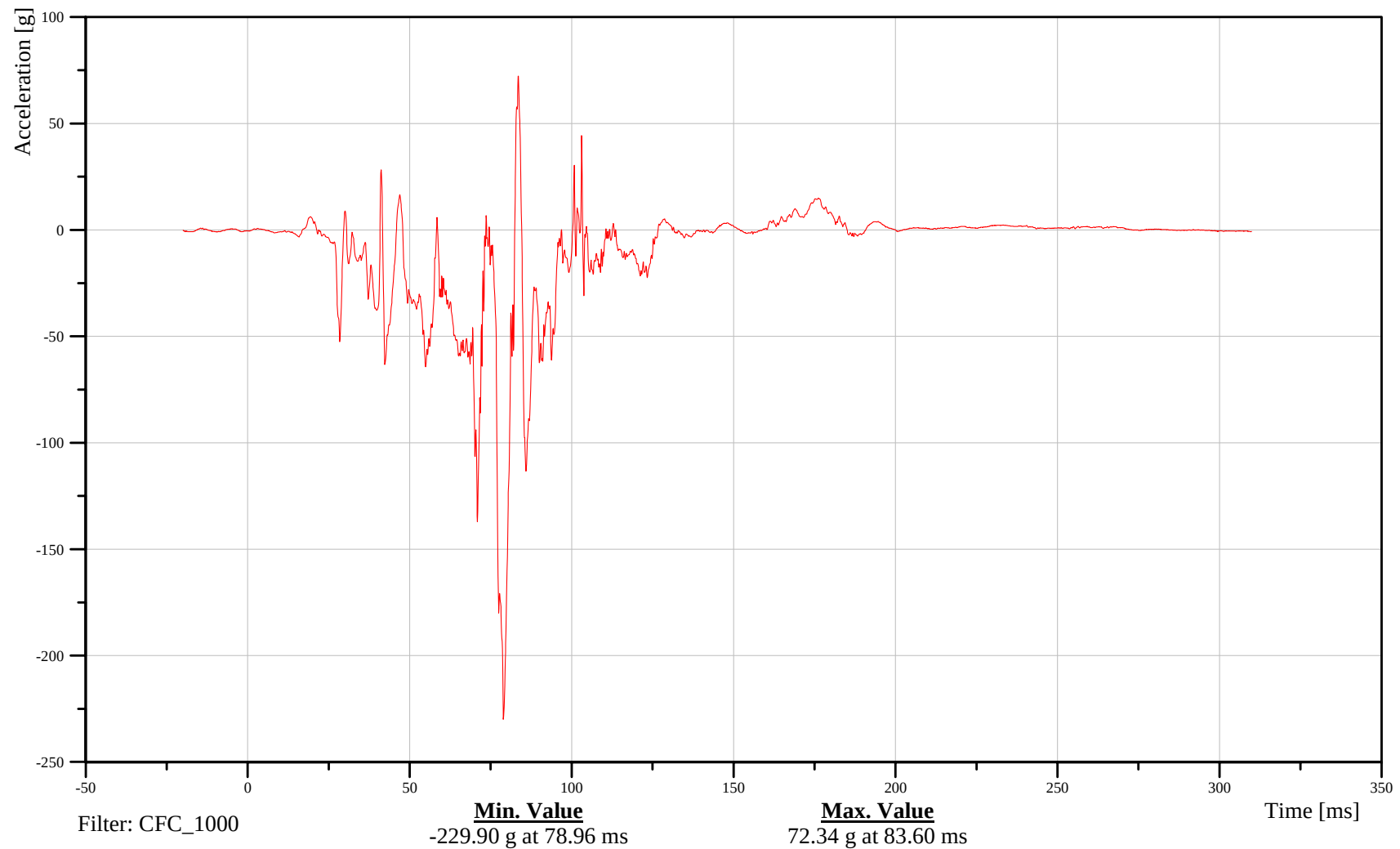
Target Passenger Sternum Upper X-Axis Acceleration

Customer: VRTC

23STRNUP00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

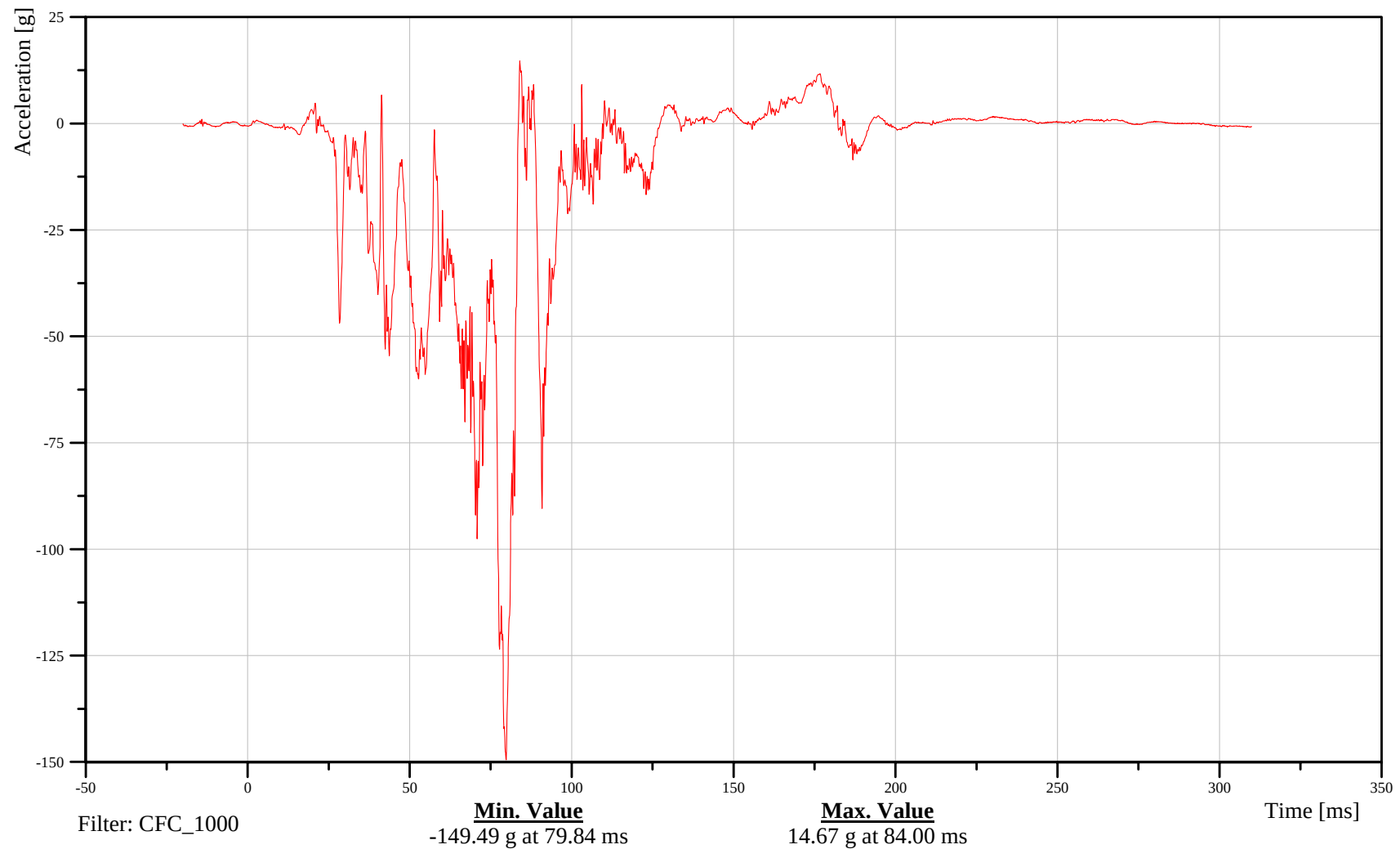
Target Passenger Sternum Mid X-Axis Acceleration

Customer: VRTC

23STRNMI00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

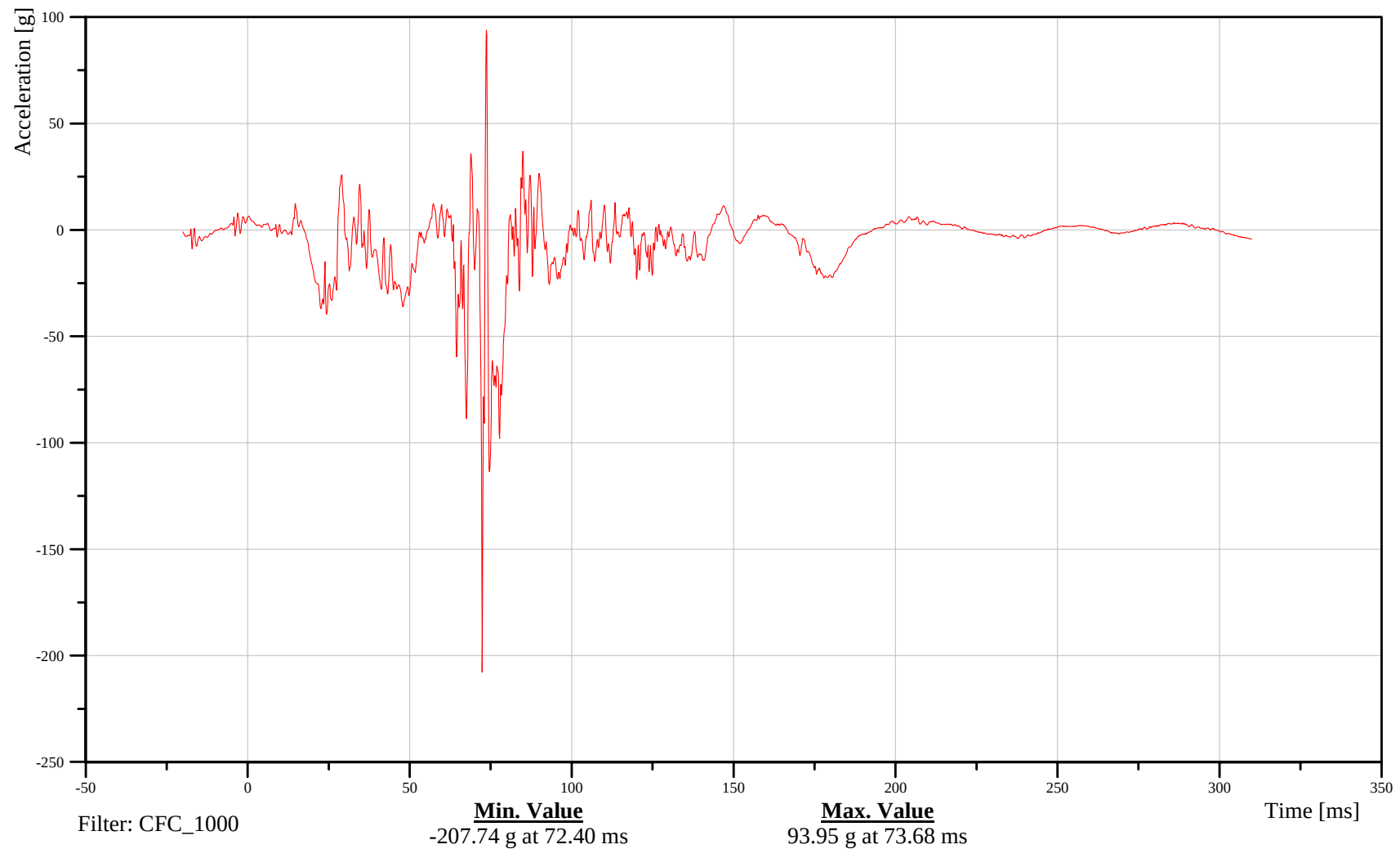
Target Passenger Sternum Lower X-Axis Acceleration

Customer: VRTC

23STRNLO00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

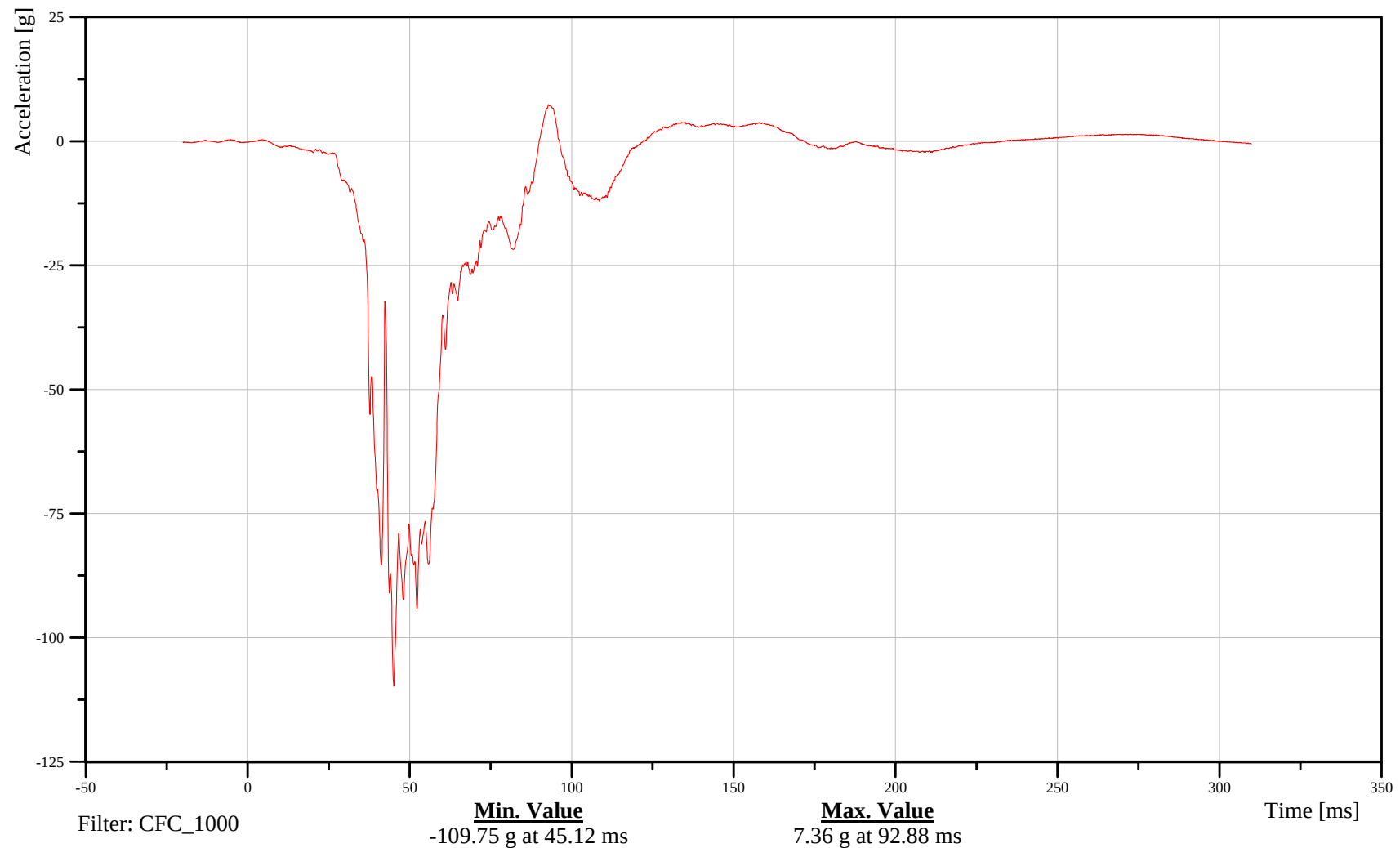
Target Passenger Pelvis CG X-Axis Acceleration

Customer: VRTC

23PELVCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

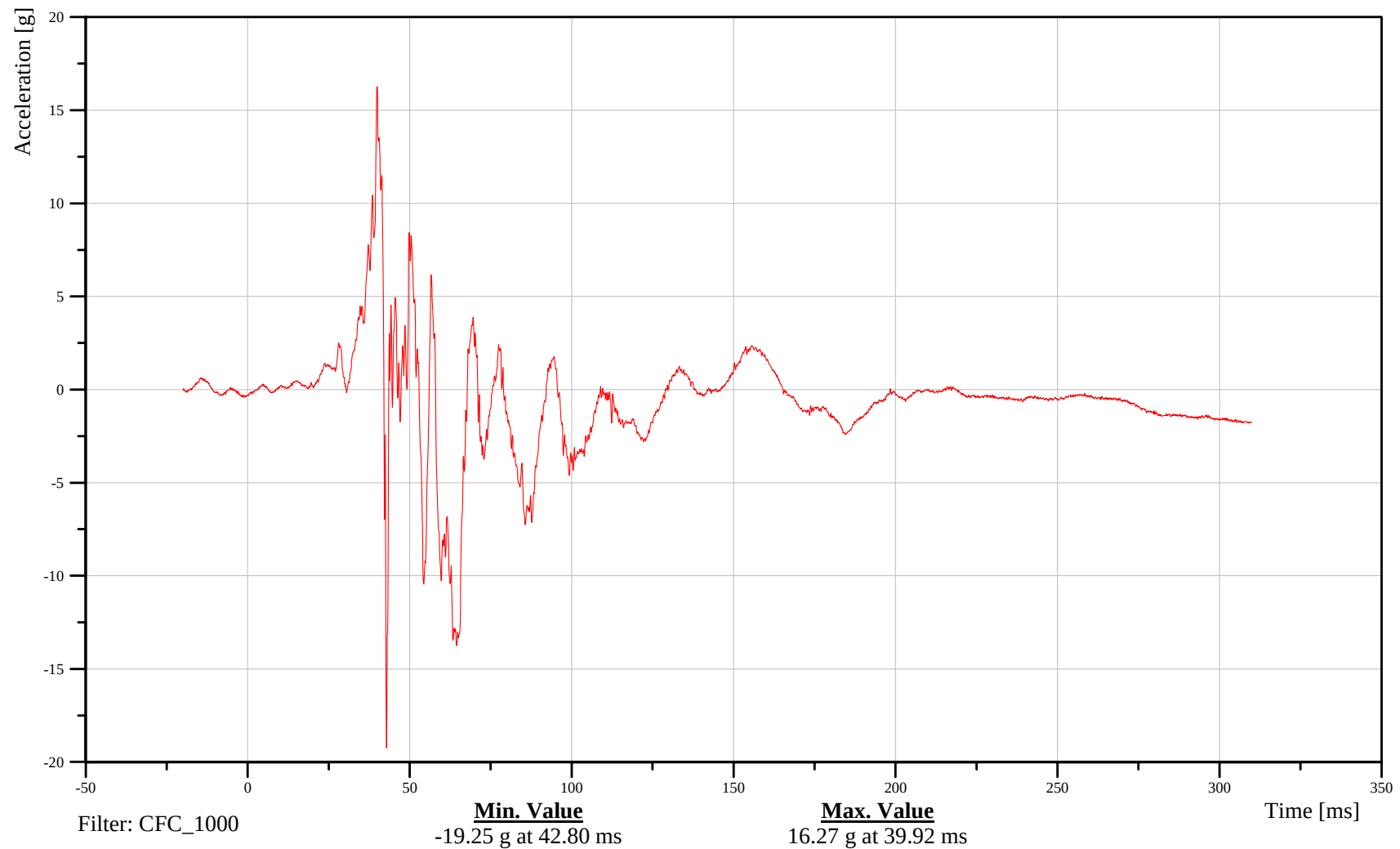
Target Passenger Pelvis CG Y-Axis Acceleration

Customer: VRTC

23PELVCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

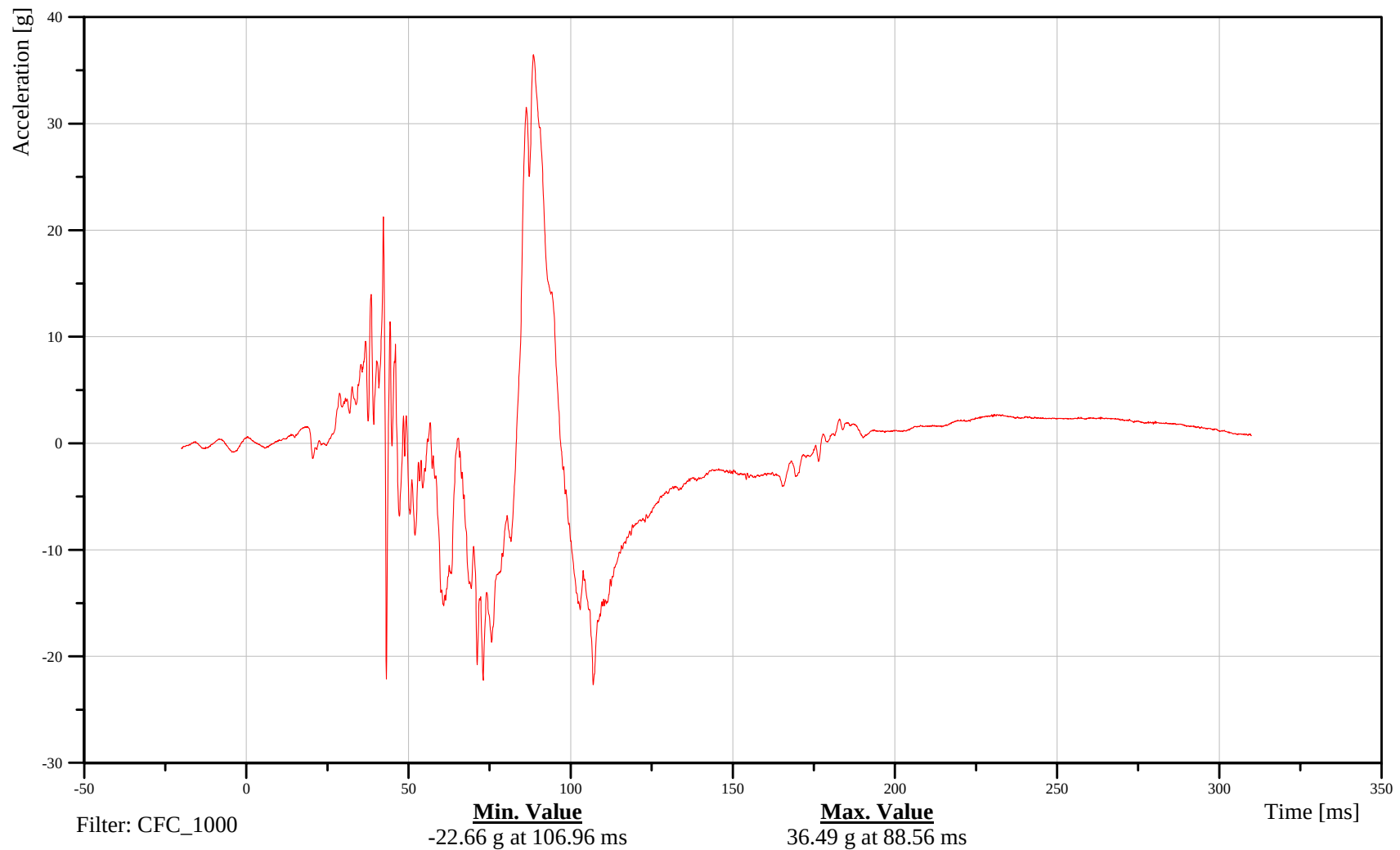
Target Passenger Pelvis CG Z-Axis Acceleration

Customer: VRTC

23PELVCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

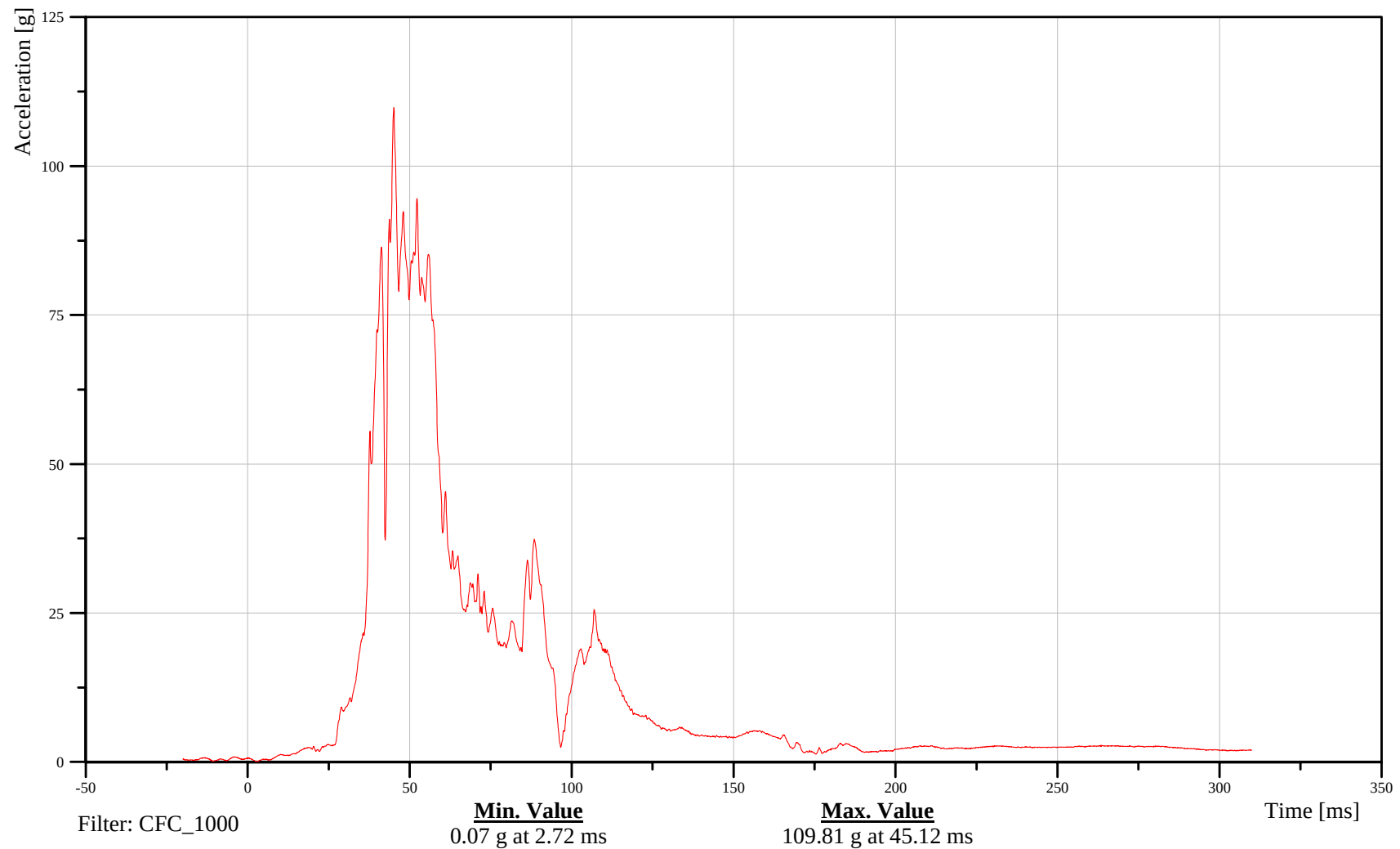
Target Passenger Pelvis CG Resultant Acceleration

Customer: VRTC

23PELVCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

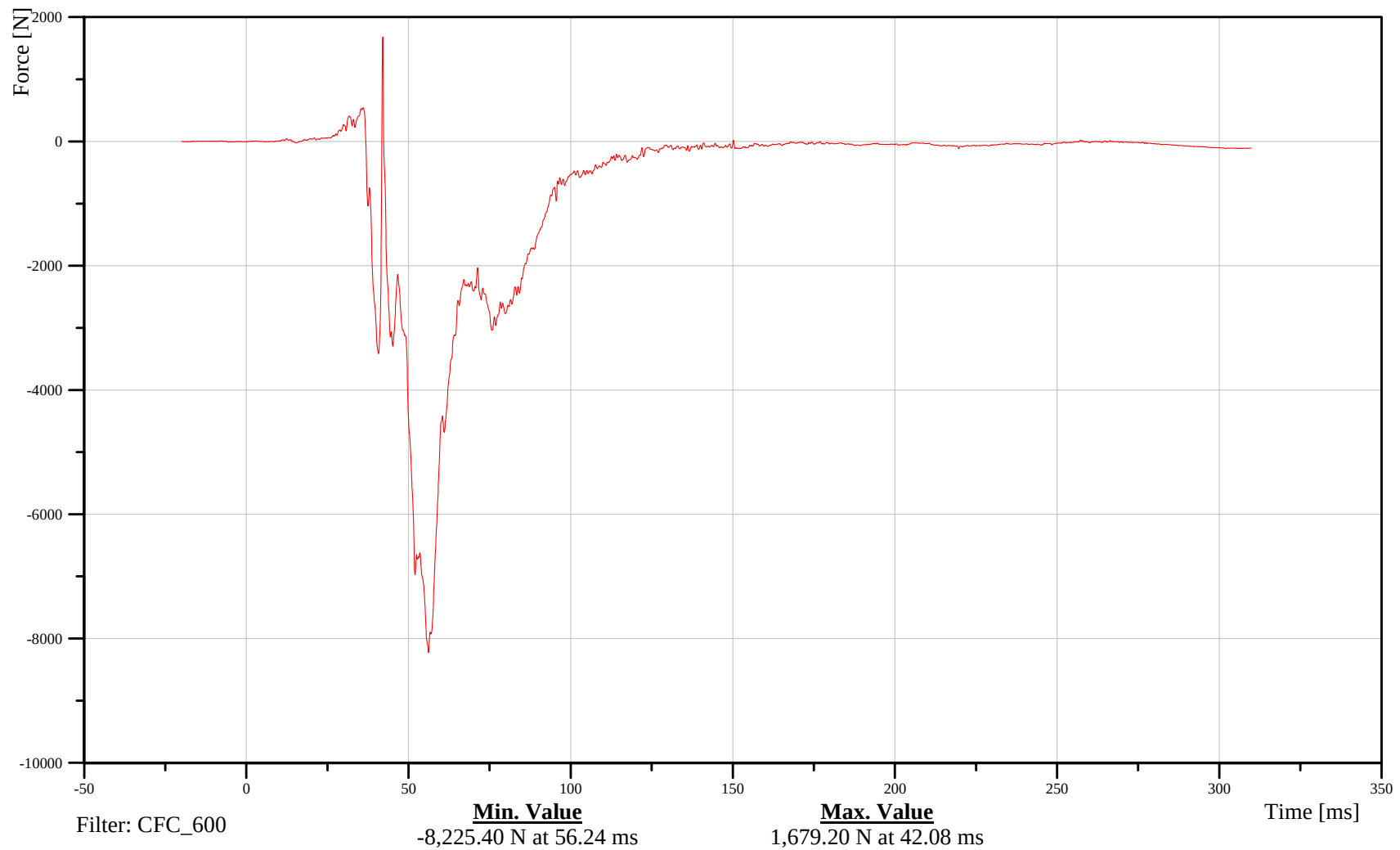
Target Passenger Left Femur Z-Axis Force

Customer: VRTC

23FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

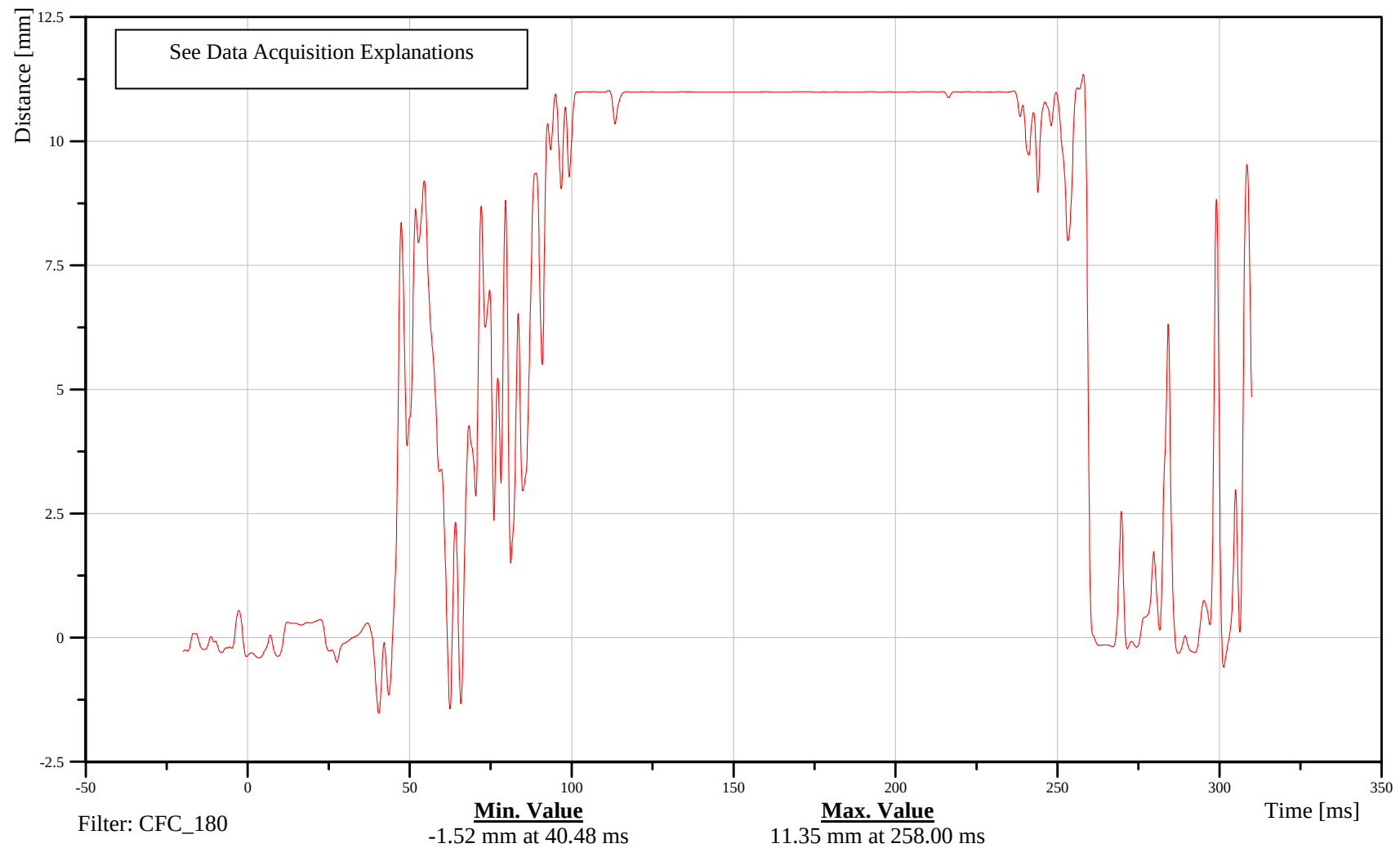
Target Passenger Left Knee Displacement

Customer: VRTC

23KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

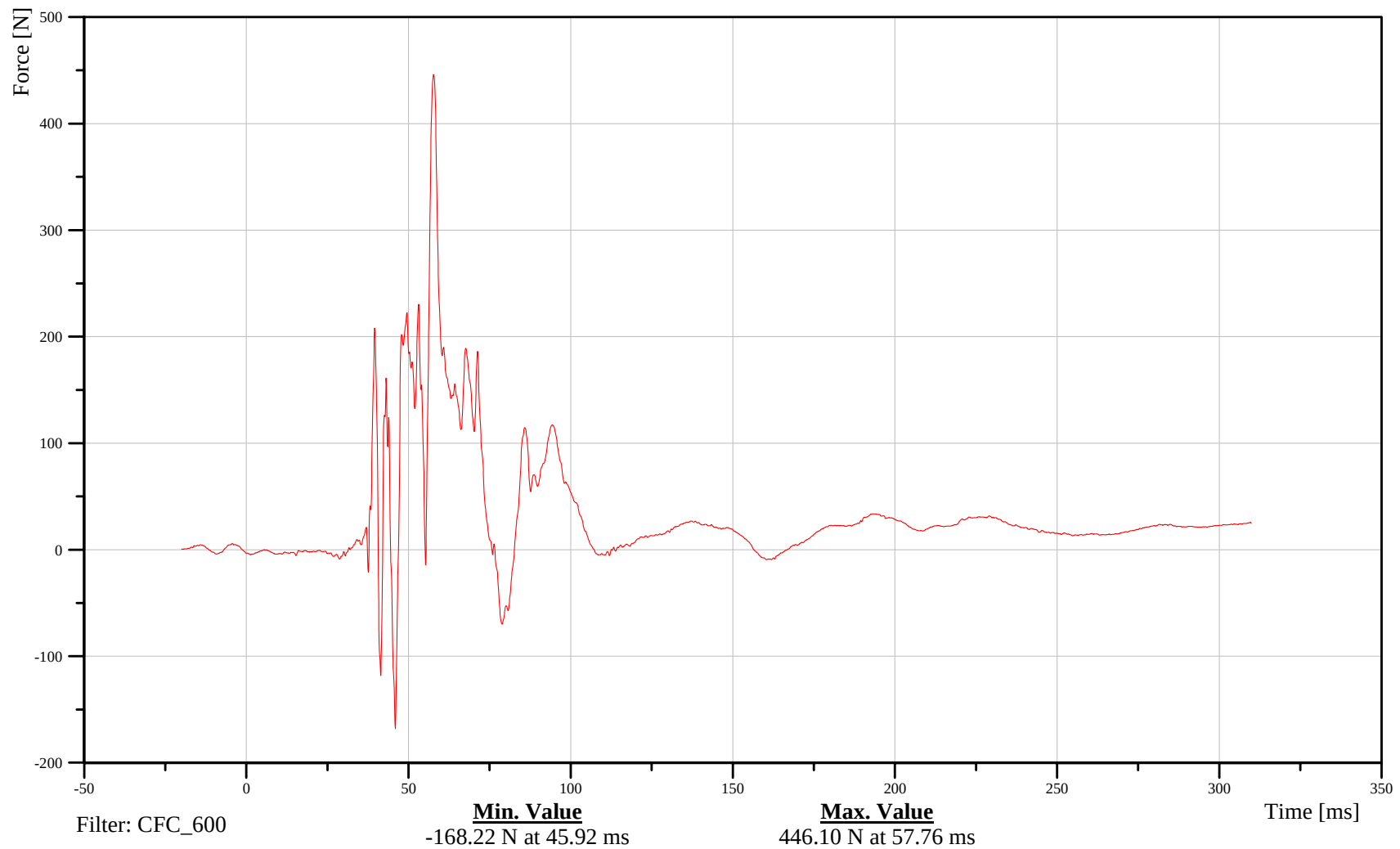
Target Passenger Left Upper Tibia X-Axis Force

Customer: VRTC

23TIBILUFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

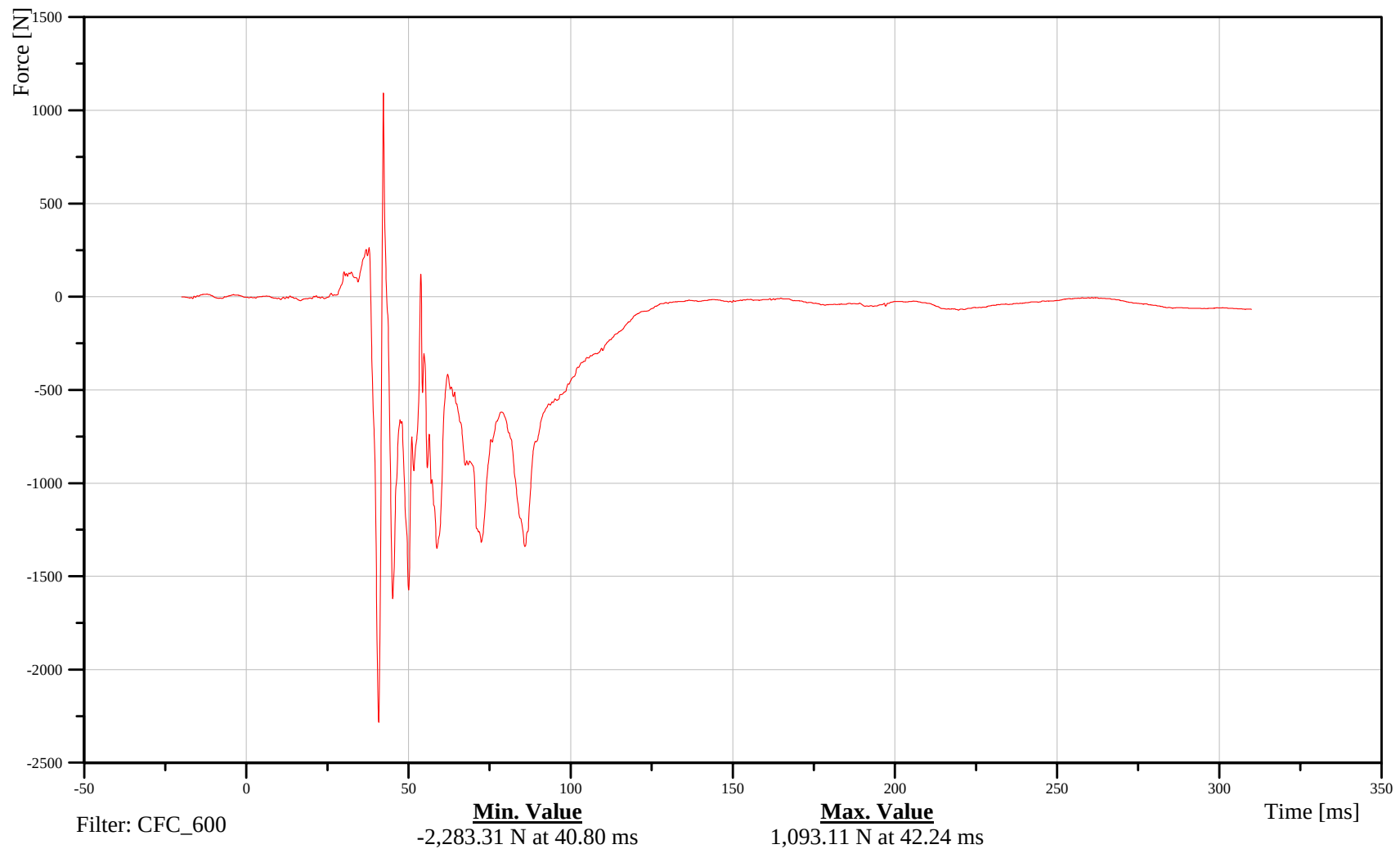
Target Passenger Left Upper Tibia Z-Axis Force

Customer: VRTC

23TIBILUFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

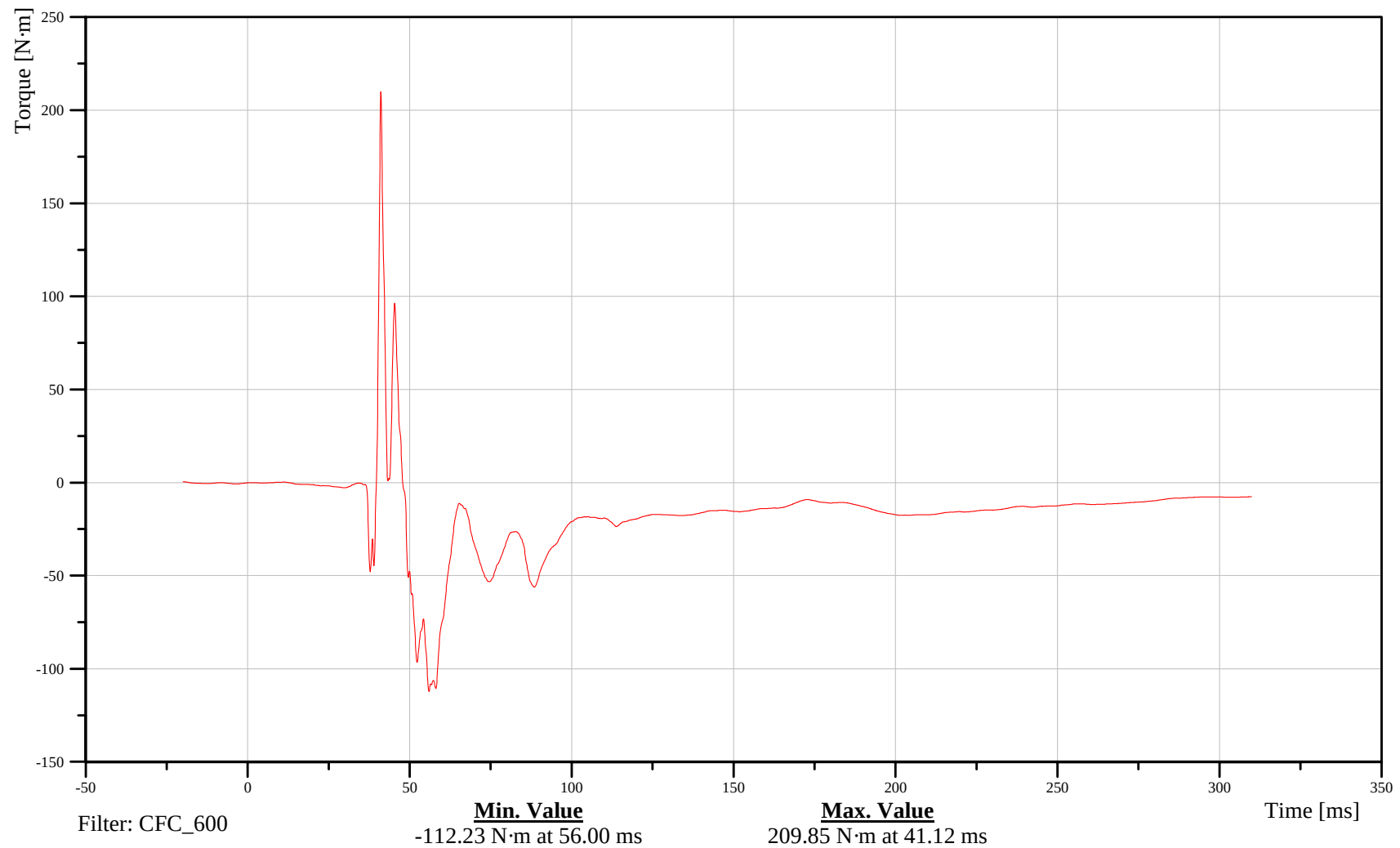
Target Passenger Left Upper Tibia Moment About X Axis

Customer: VRTC

23TIBILUFXHFM0XB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

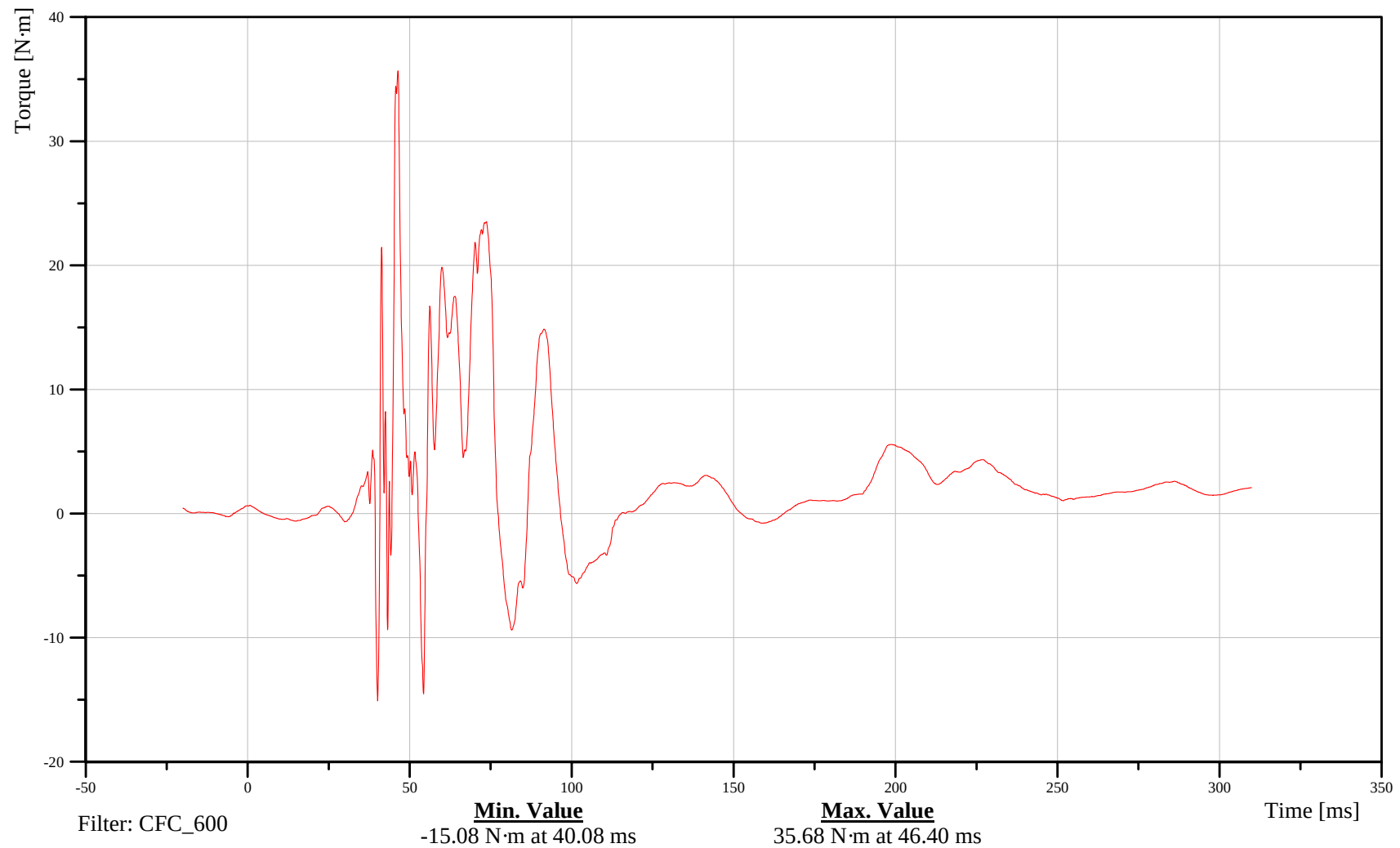
Target Passenger Left Upper Tibia Moment About Y Axis

Customer: VRTC

23TIBILUFXHFM0YB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

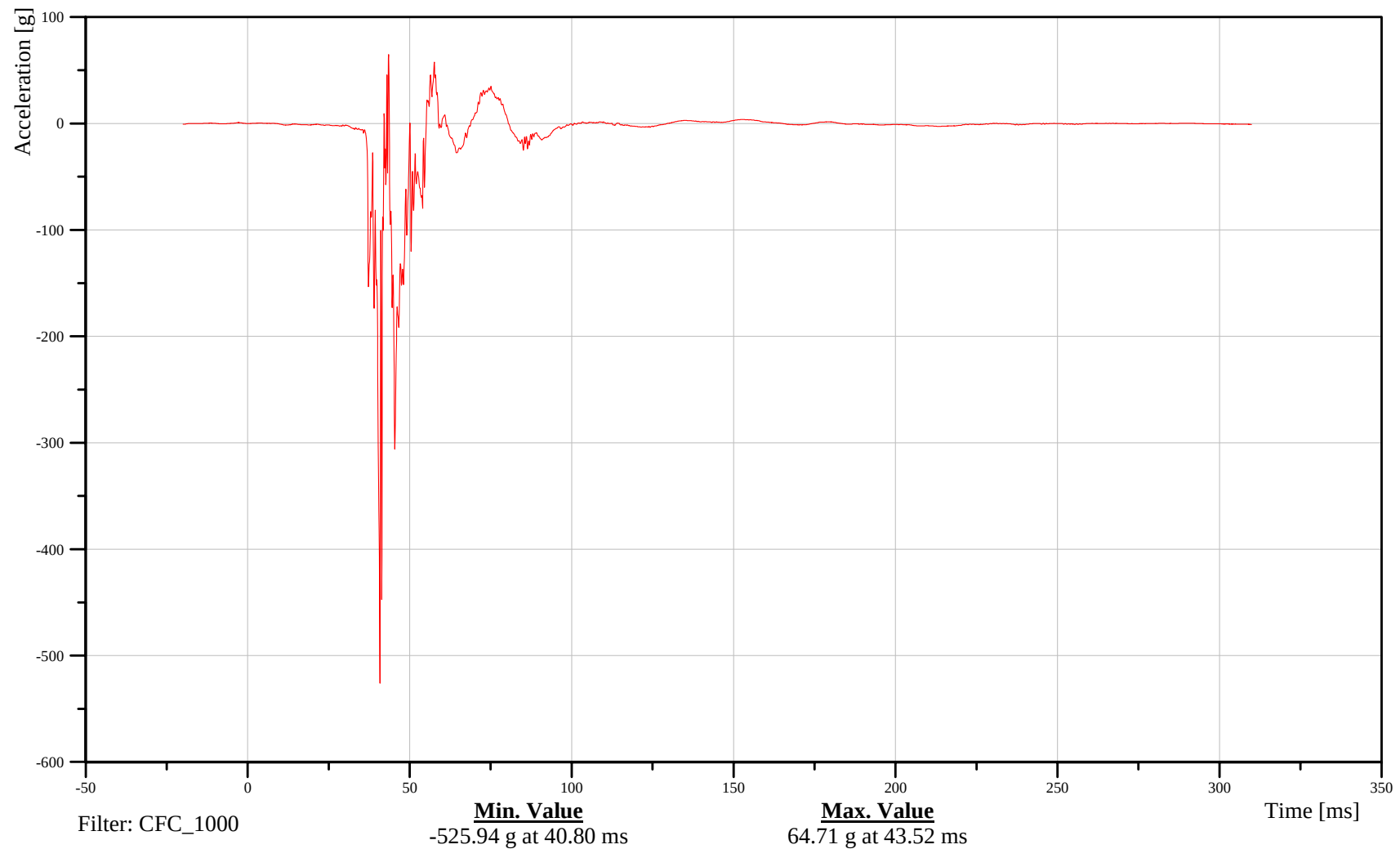
Target Passenger Left Tibia X-Axis Acceleration

Customer: VRTC

23TIBILEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

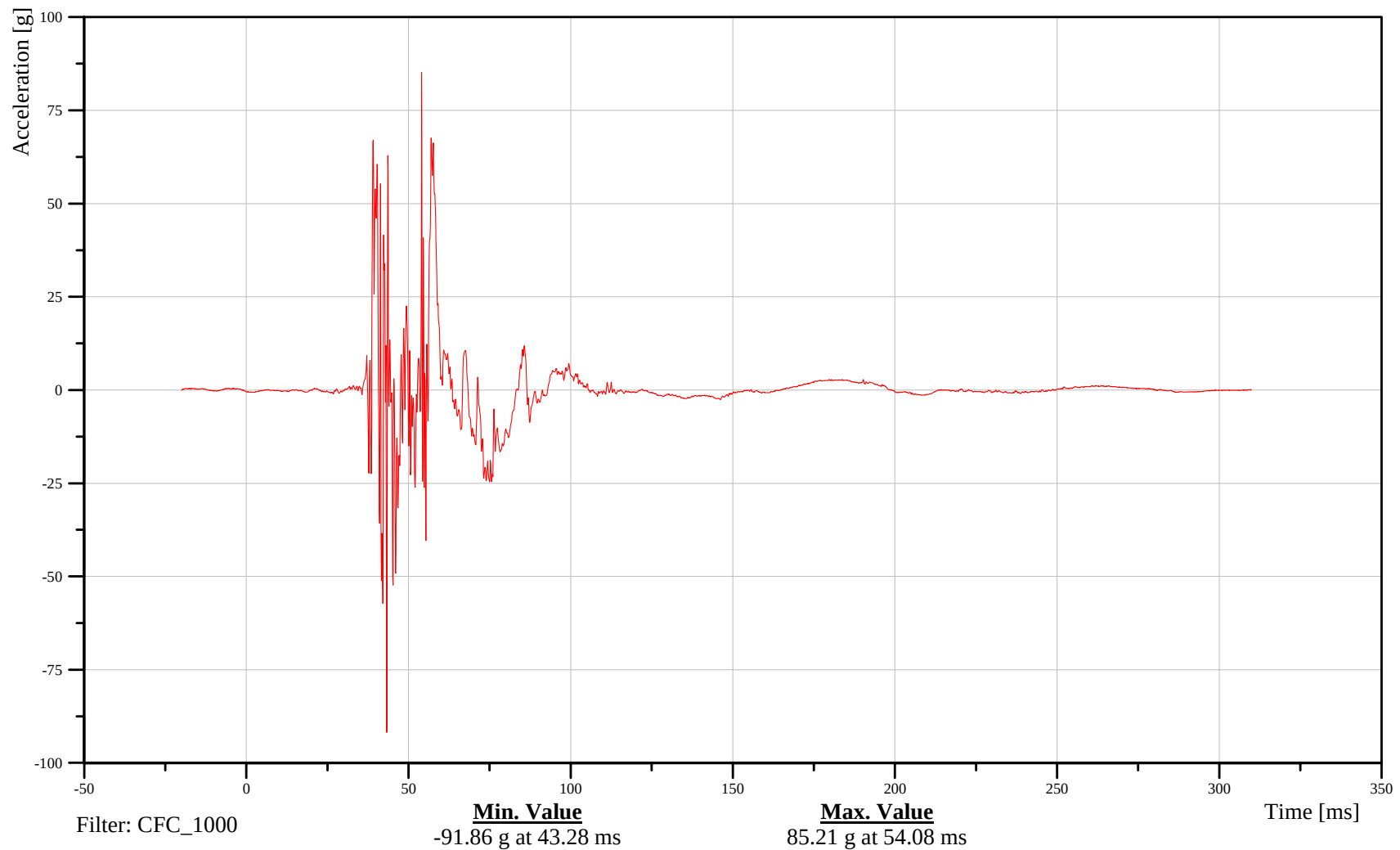
Target Passenger Left Tibia Y-Axis Acceleration

Customer: VRTC

23TIBILEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

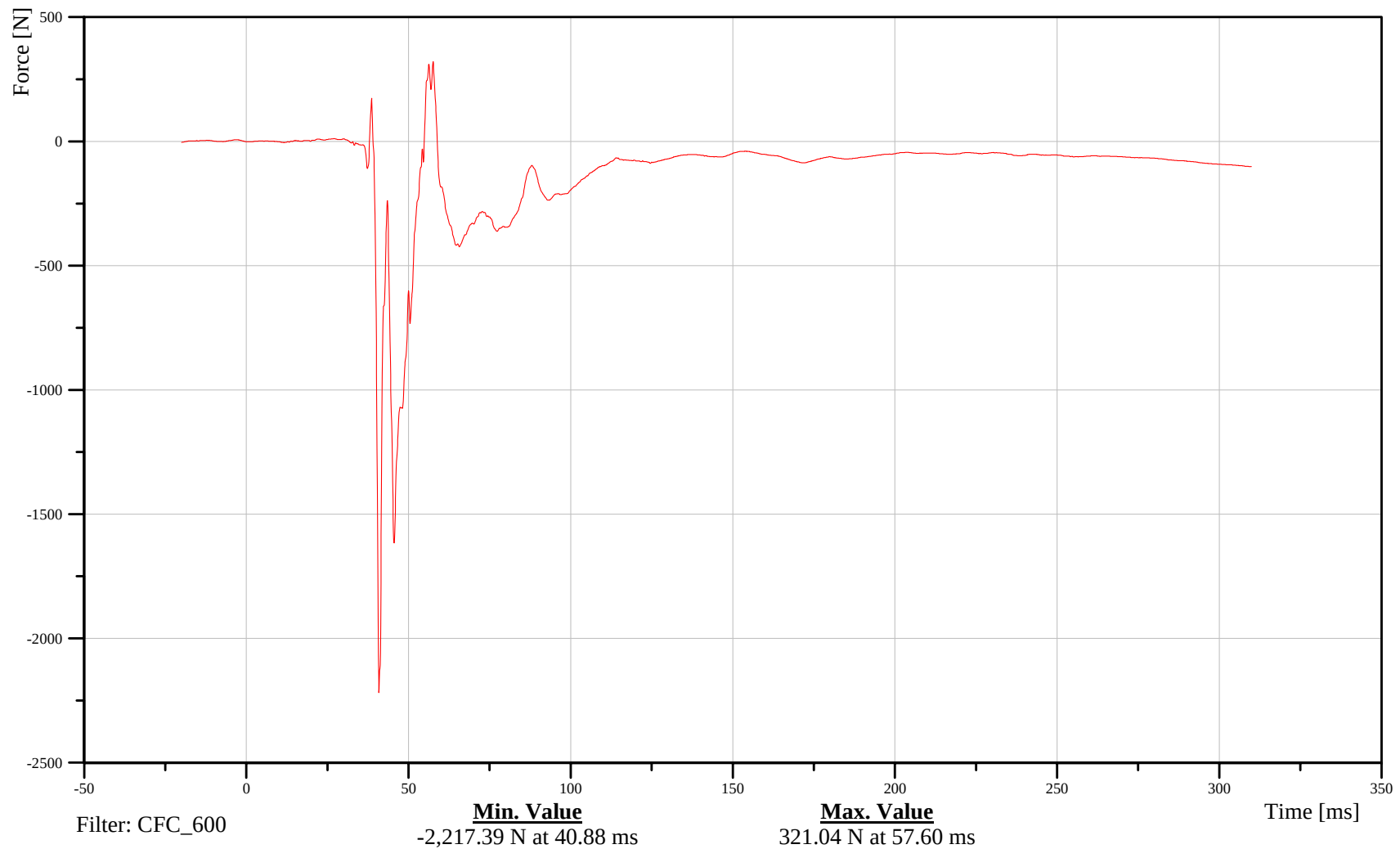
Target Passenger Left Lower Tibia X-Axis Force

Customer: VRTC

23TIBILLFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

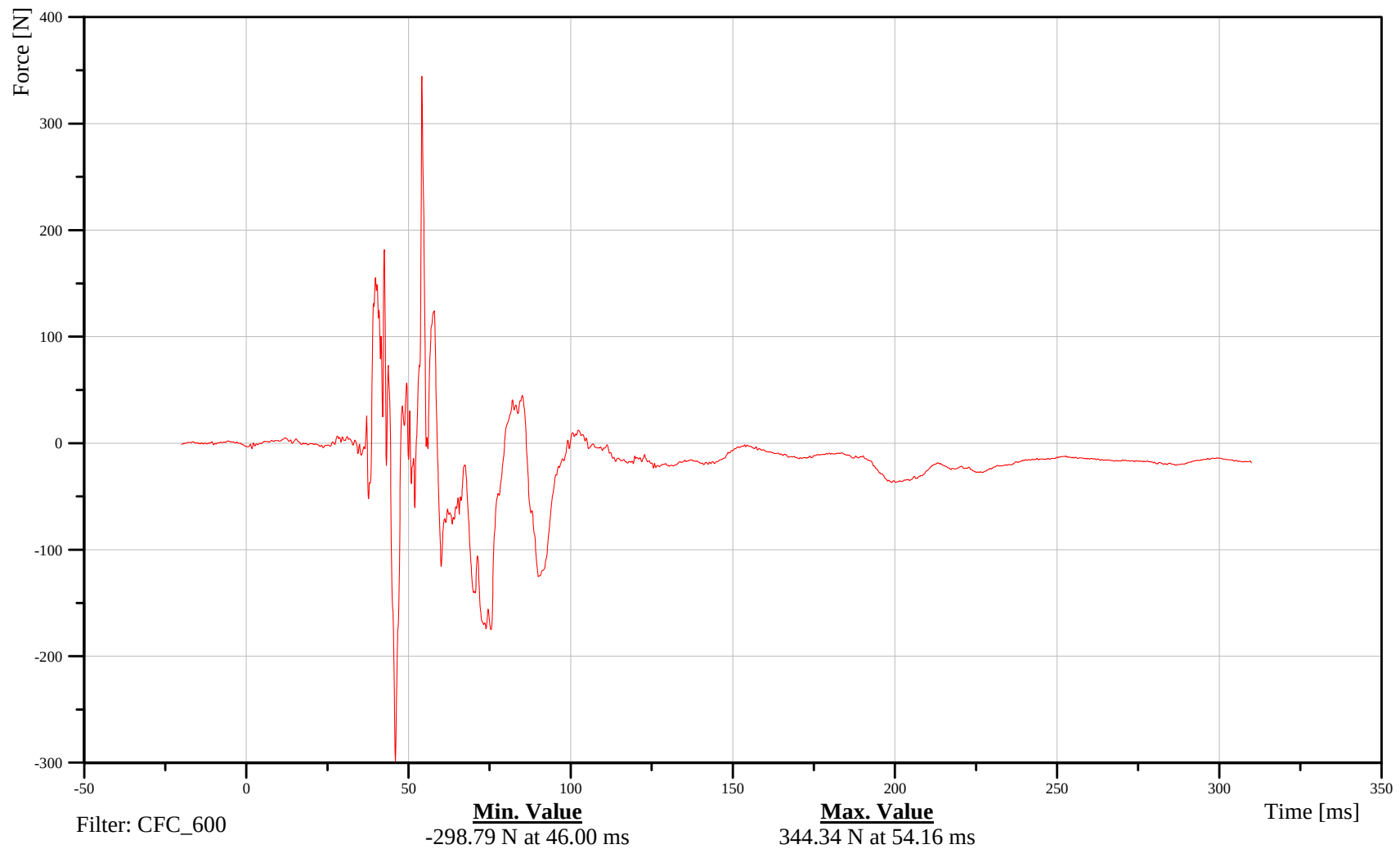
Target Passenger Left Lower Tibia Y-Axis Force

Customer: VRTC

23TIBILLFXHFFOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

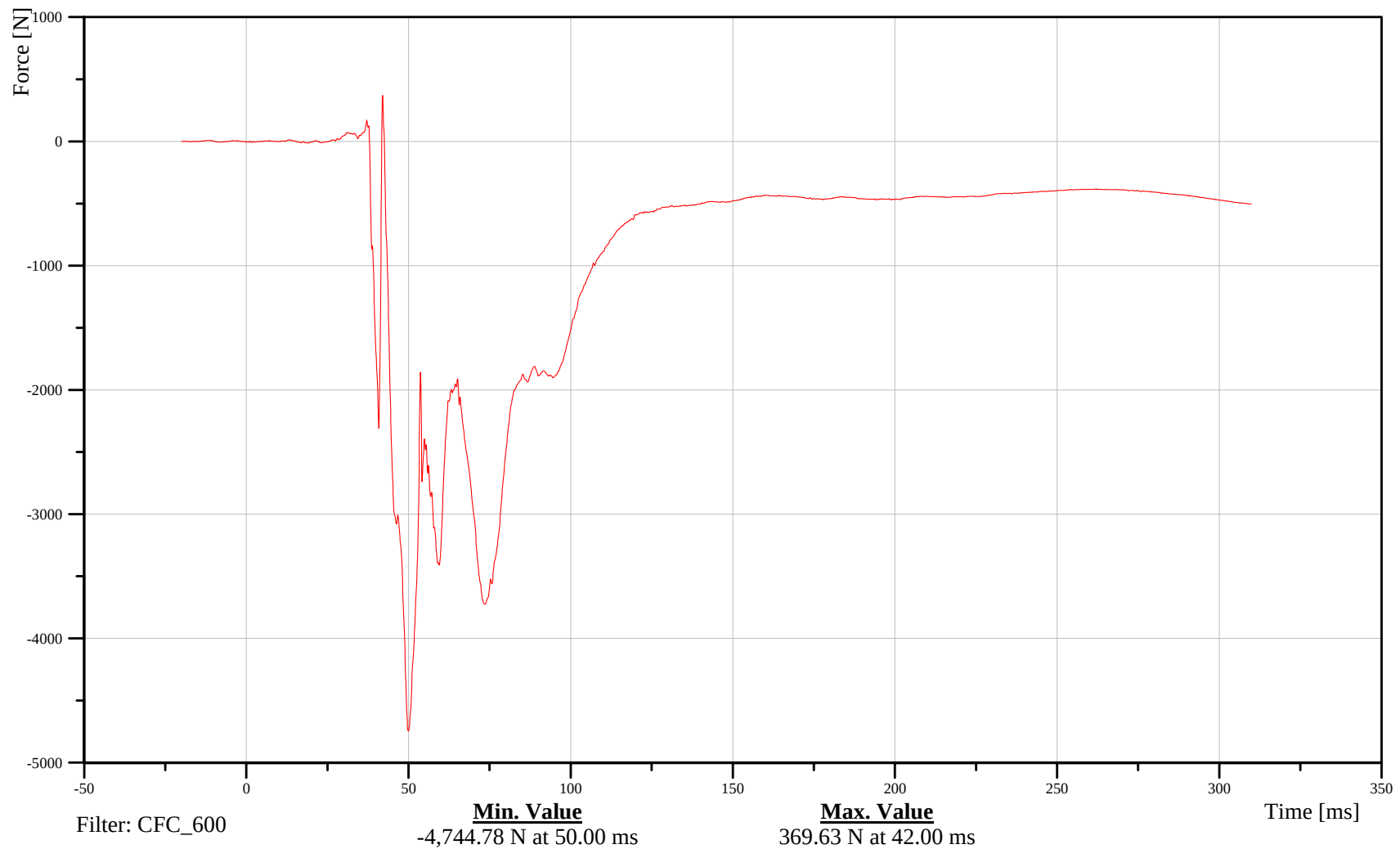
Target Passenger Left Lower Tibia Z-Axis Force

Customer: VRTC

23TIBILLFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

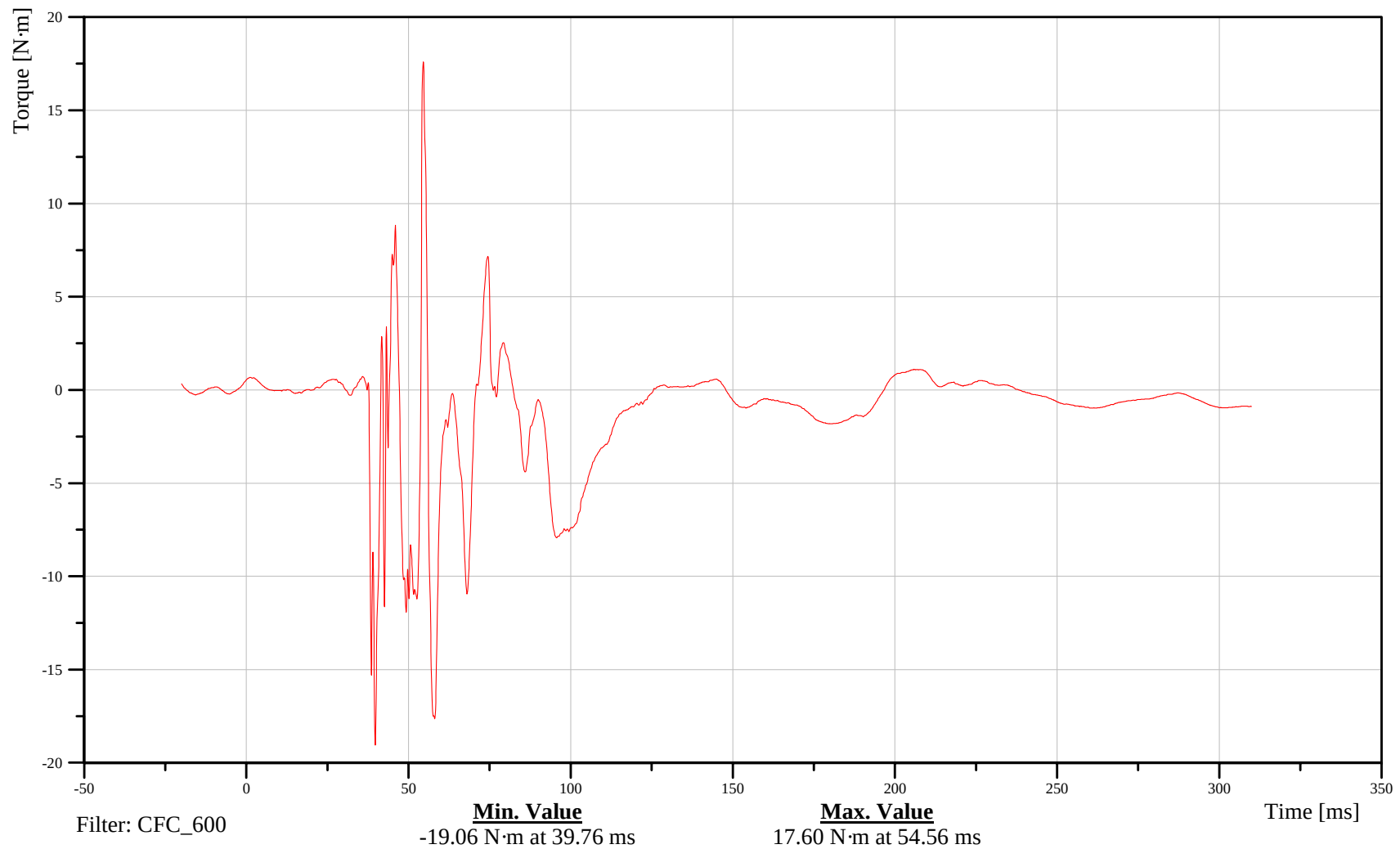
Target Passenger Left Lower Tibia Moment About X Axis

Customer: VRTC

23TIBILLFXHFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

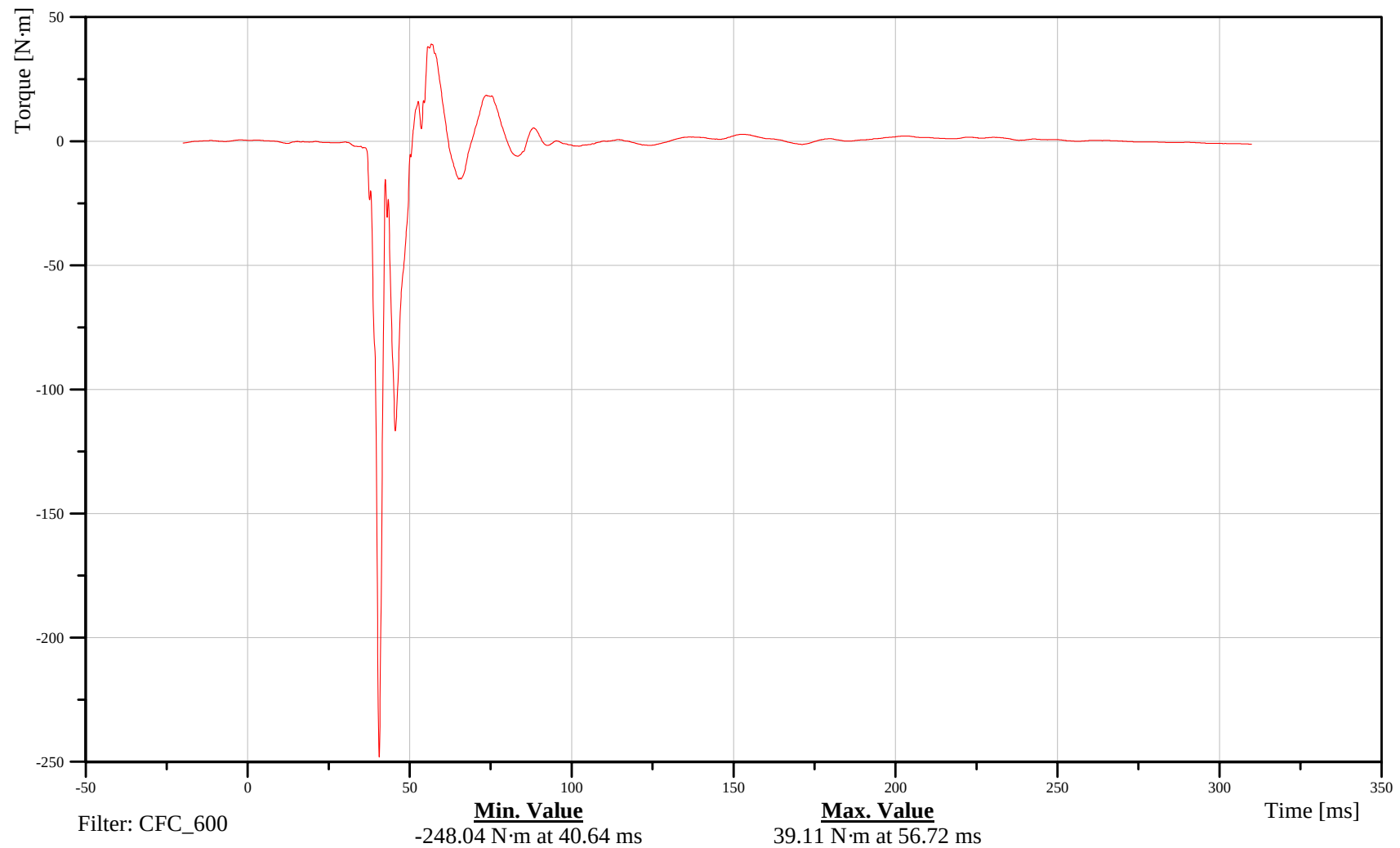
Target Passenger Left Lower Tibia Moment About Y Axis

Customer: VRTC

23TIBILLFXHFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

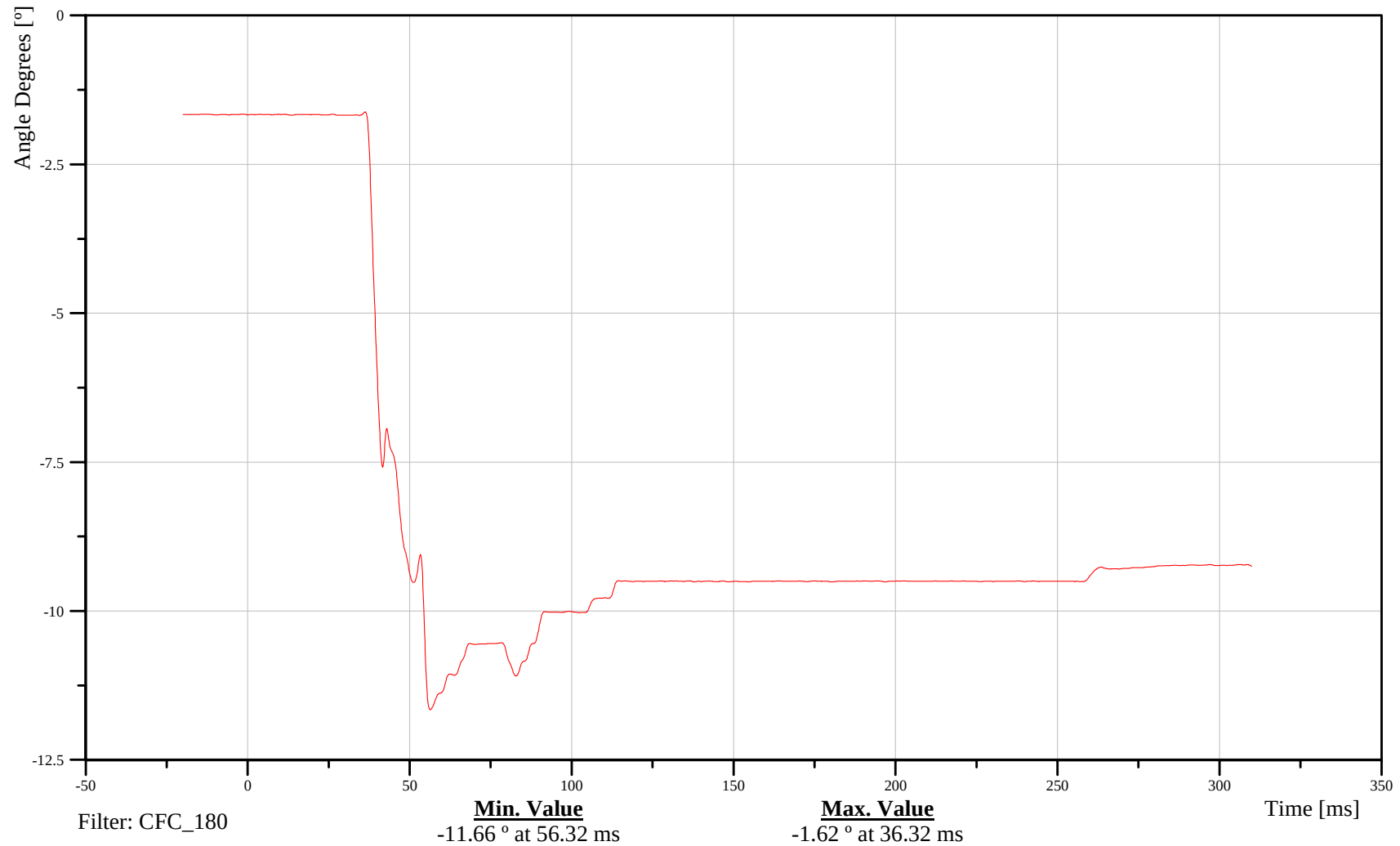
Target Passenger Left Foot X-Axis Rotation

Customer: VRTC

23FOOTLEFXHFANXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

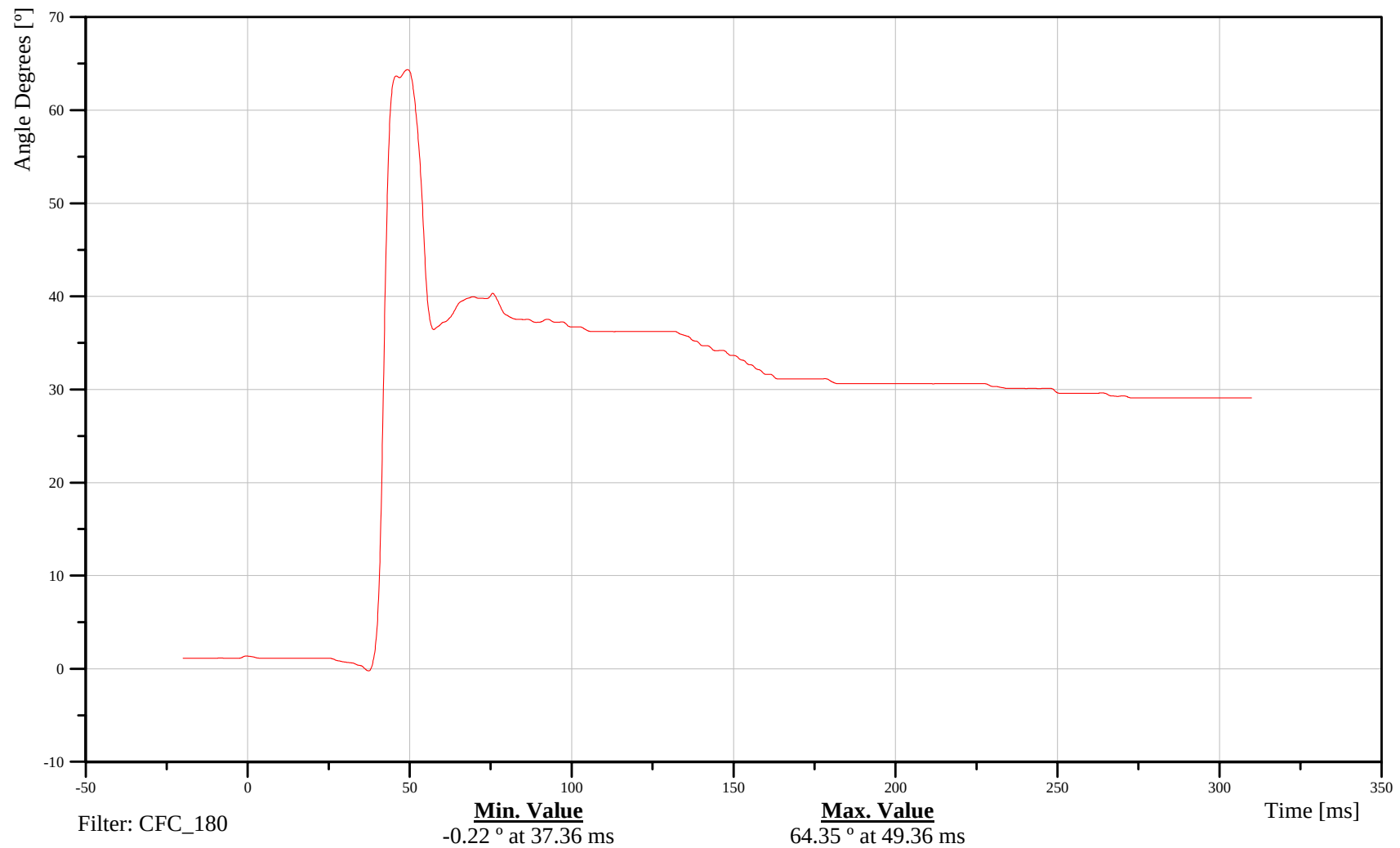
Target Passenger Left Foot Y-Axis Rotation

Customer: VRTC

23FOOTLEFXHFANYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

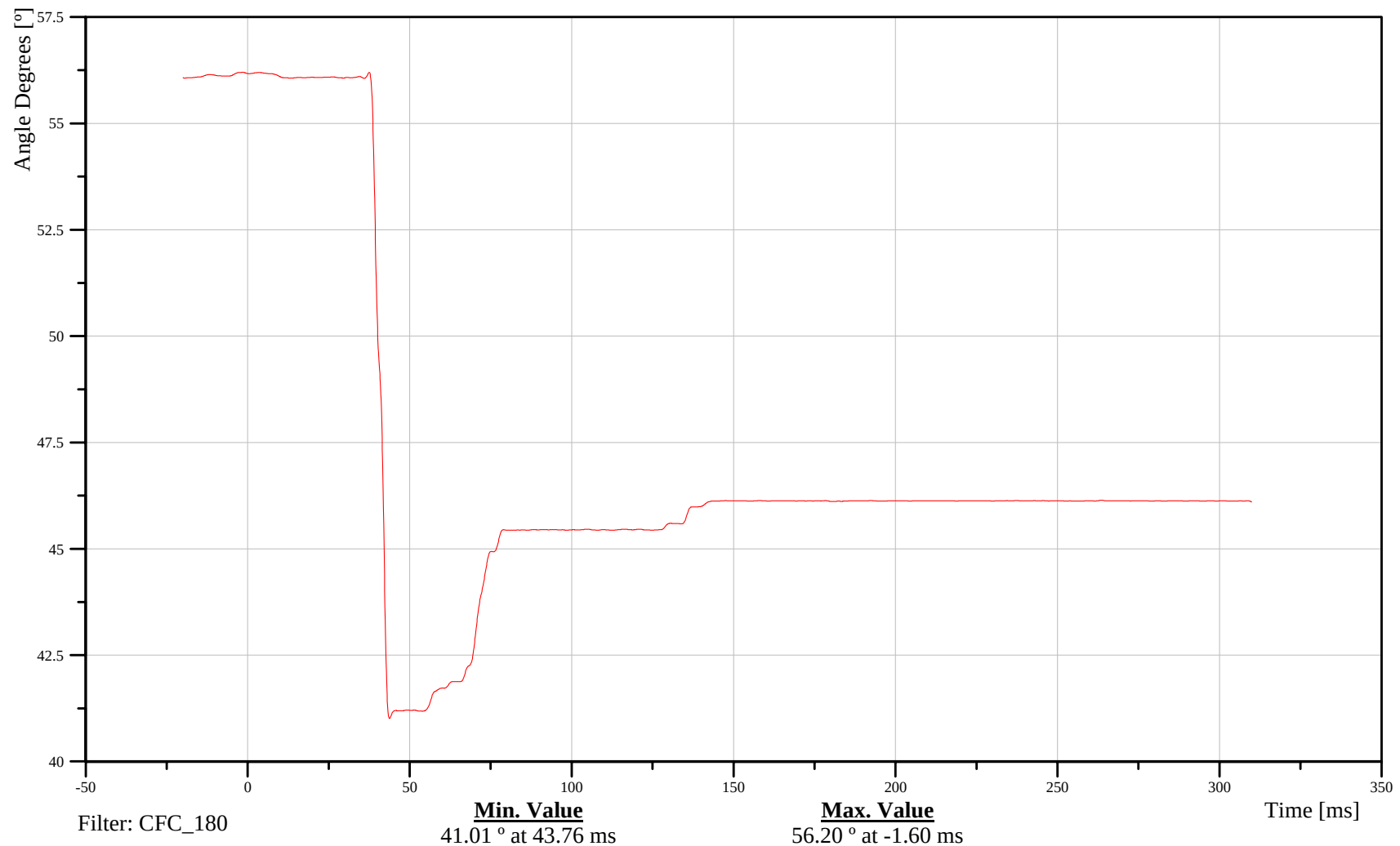
Target Passenger Left Foot Z-Axis Rotation

Customer: VRTC

23FOOTLEFXHFANZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

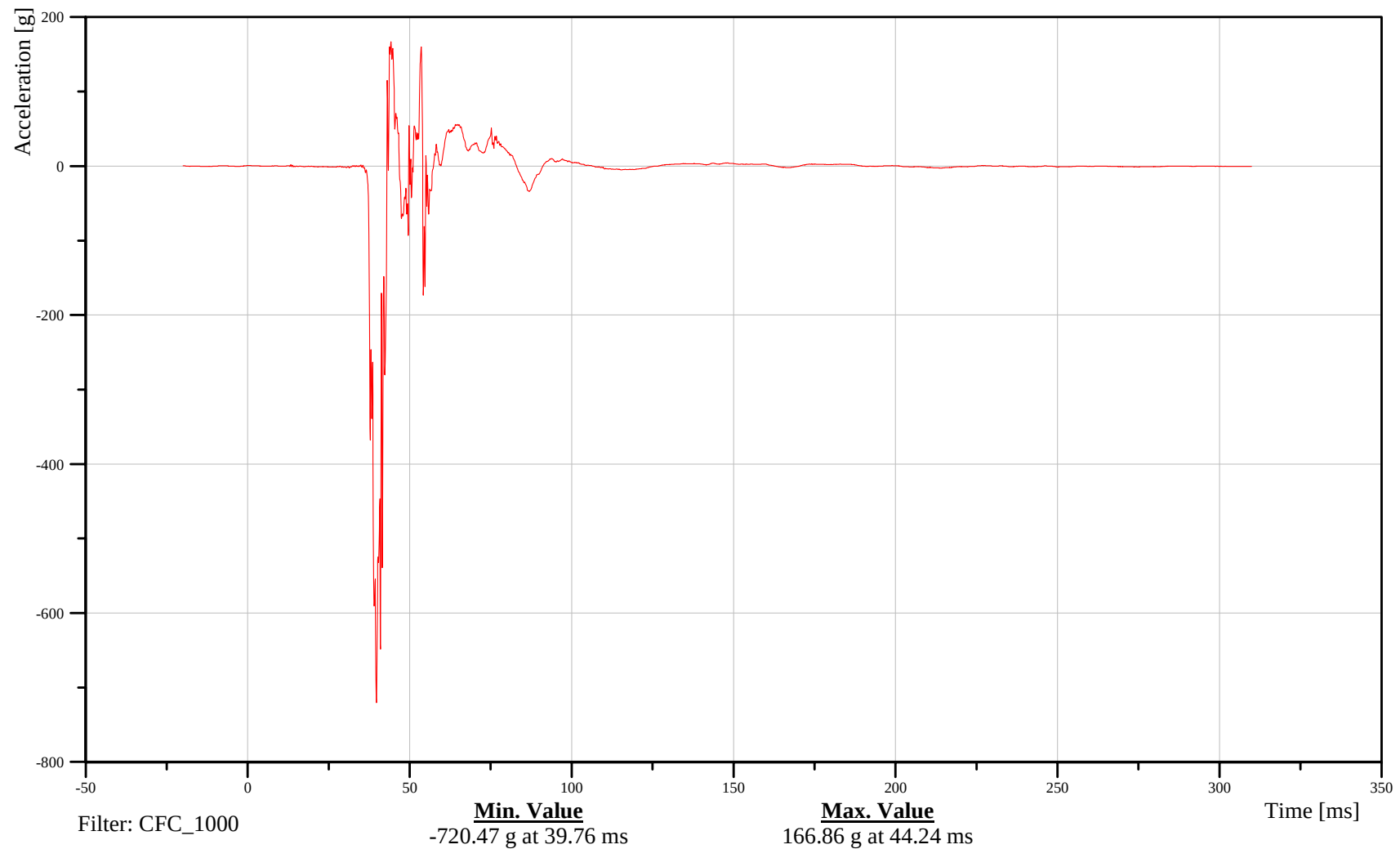
Target Passenger Left Foot X-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

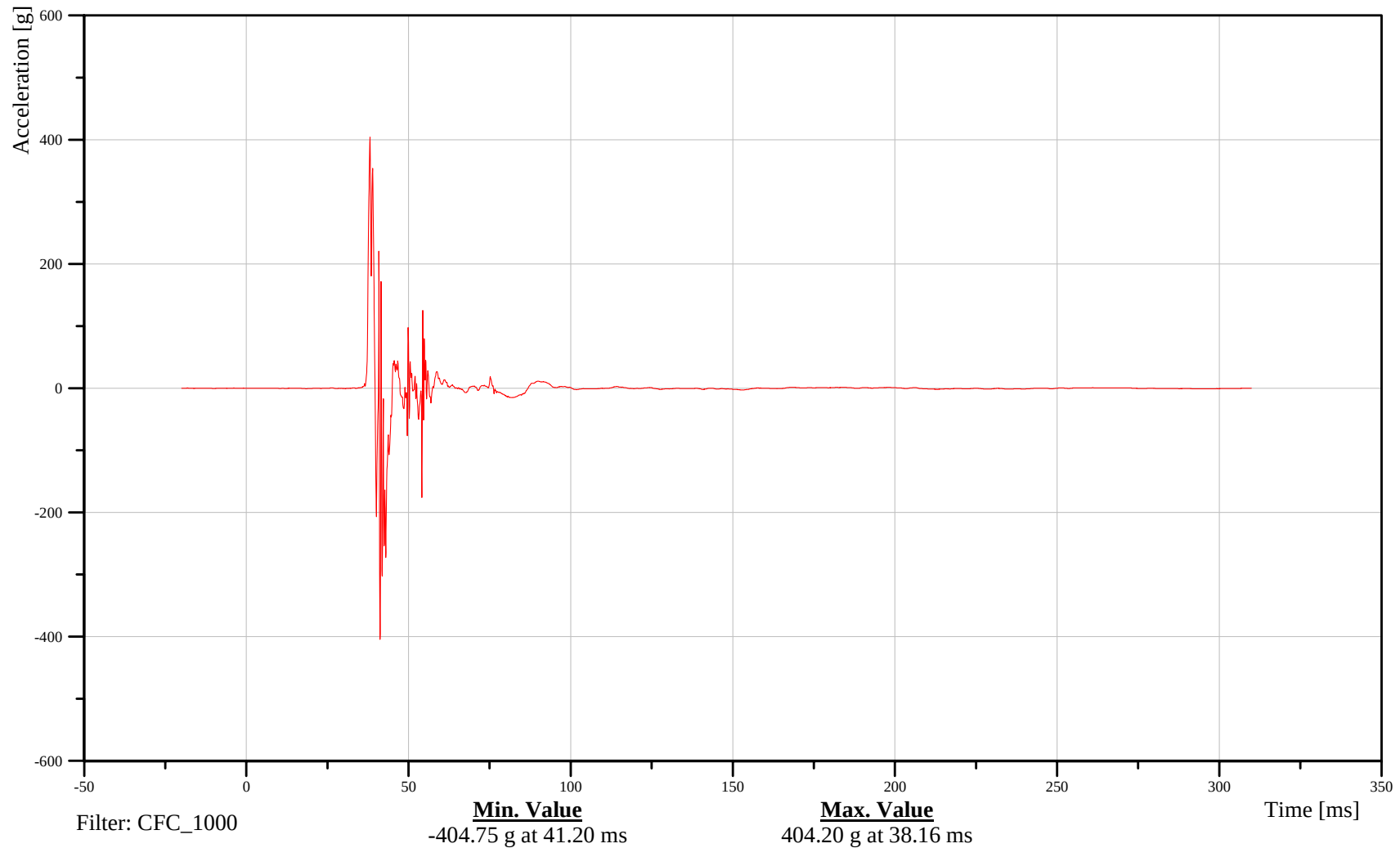
Target Passenger Left Foot Y-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

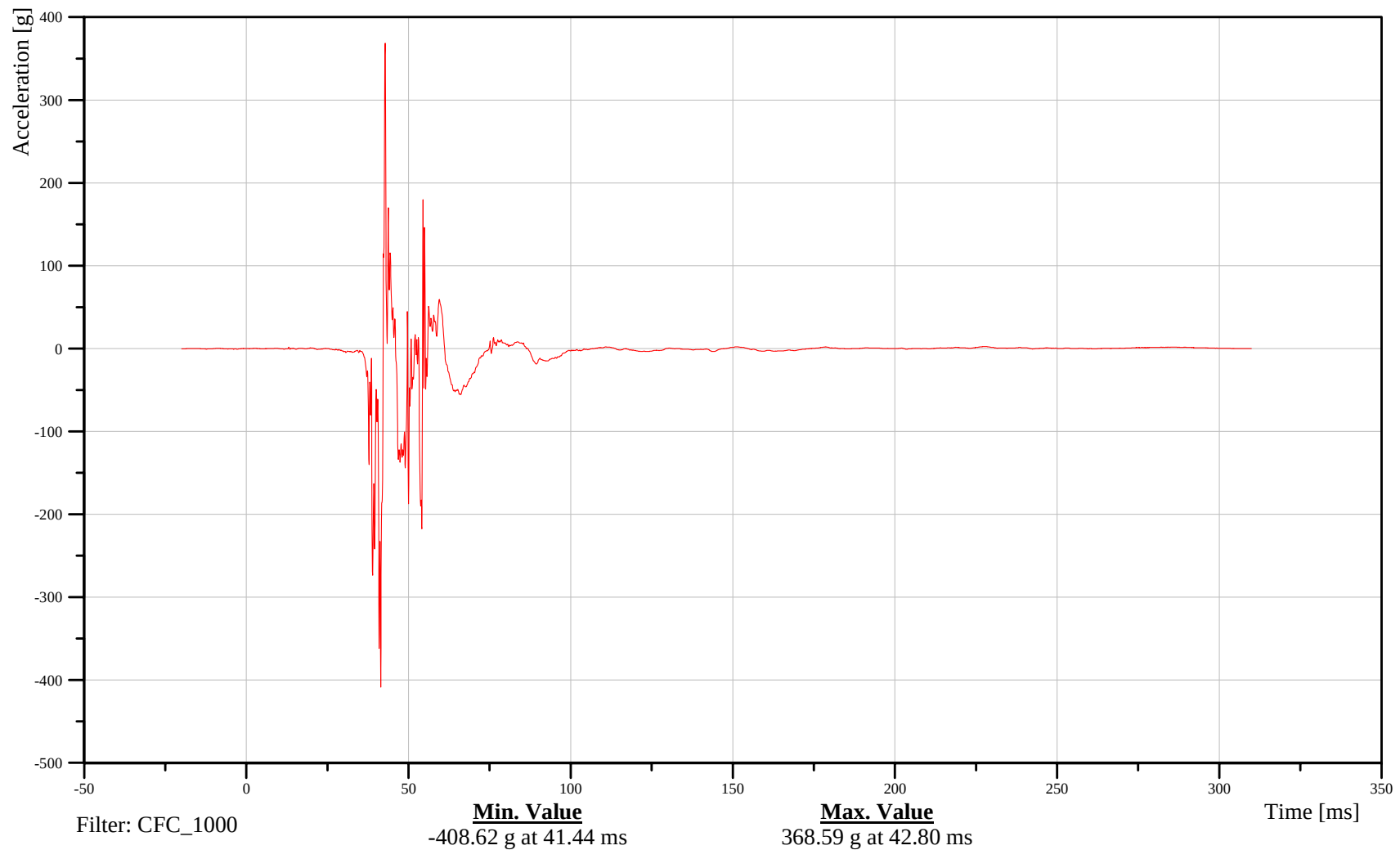
Target Passenger Left Foot Z-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

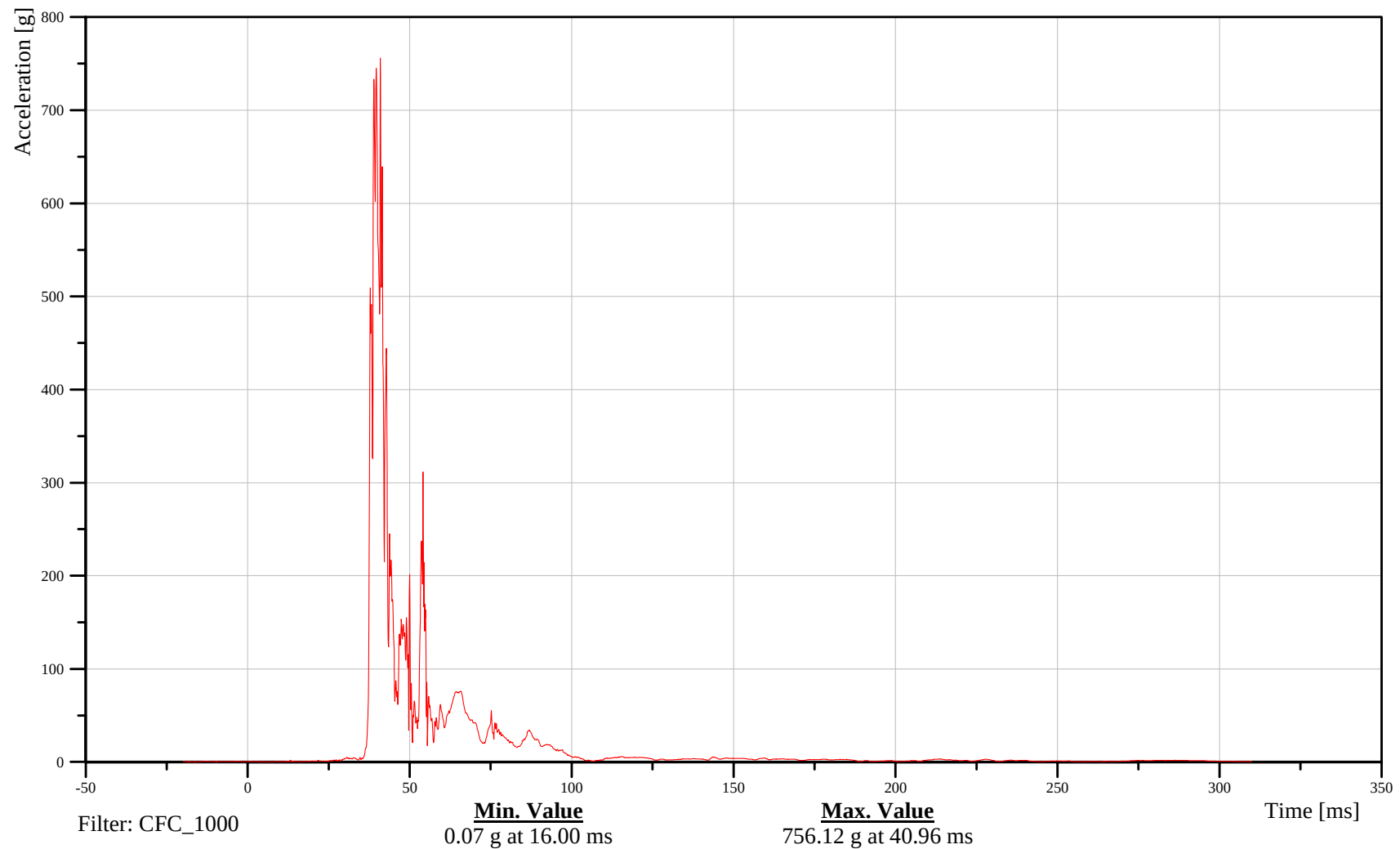
Target Passenger Left Foot Resultant Acceleration

Customer: VRTC

23FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

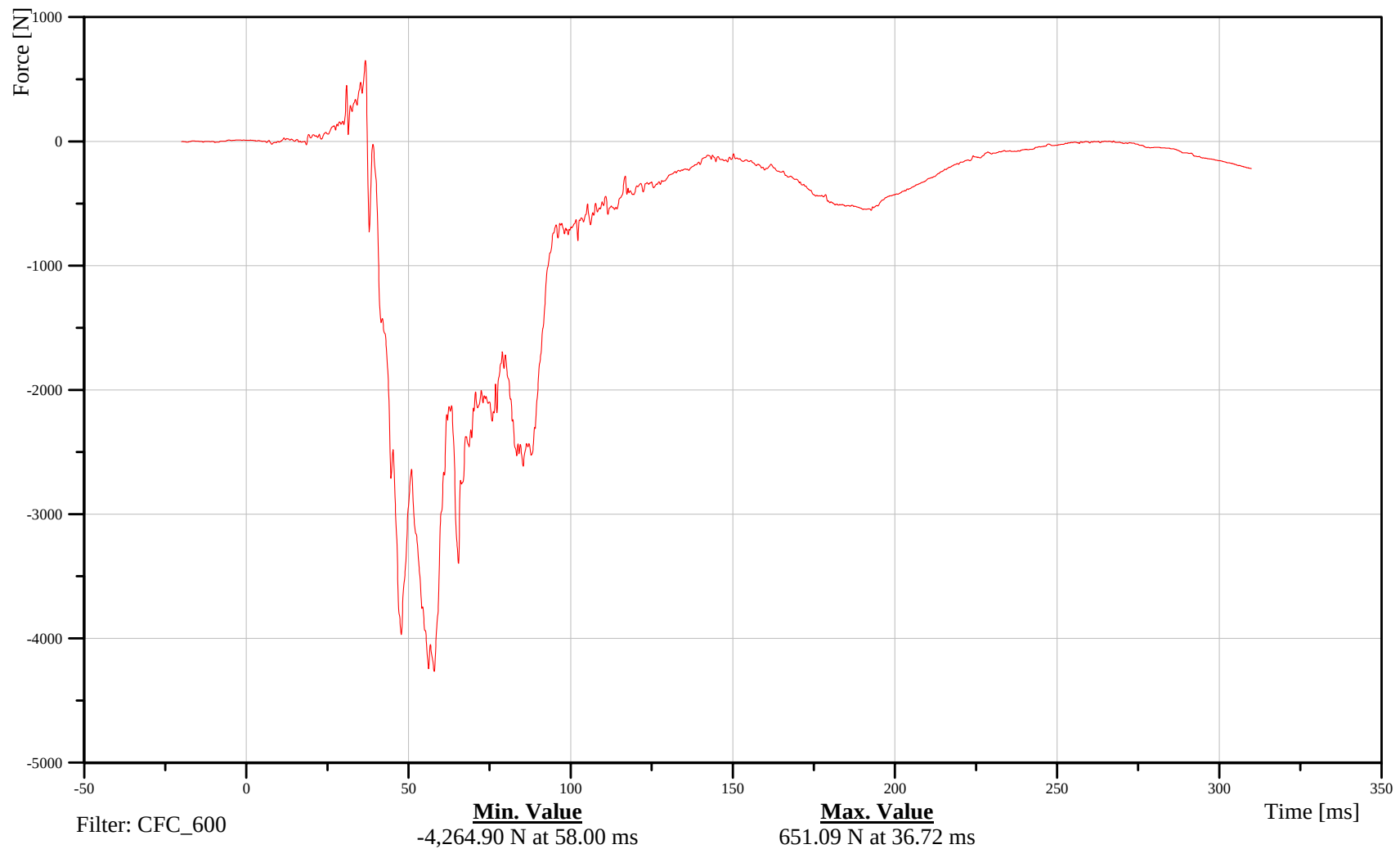
Target Passenger Right Femur Z-Axis Force

Customer: VRTC

23FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

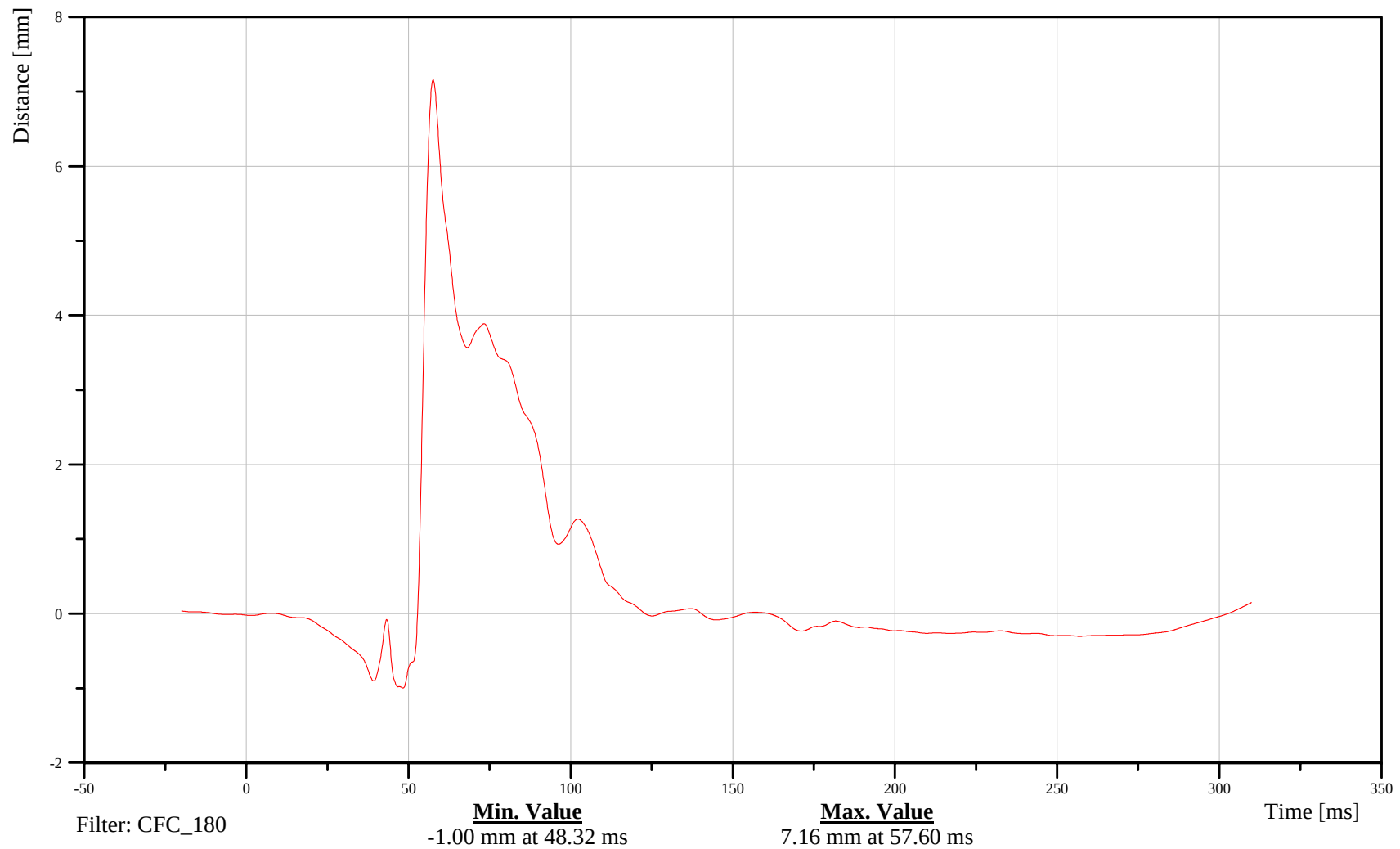
Target Passenger Right Knee Displacement

Customer: VRTC

23KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

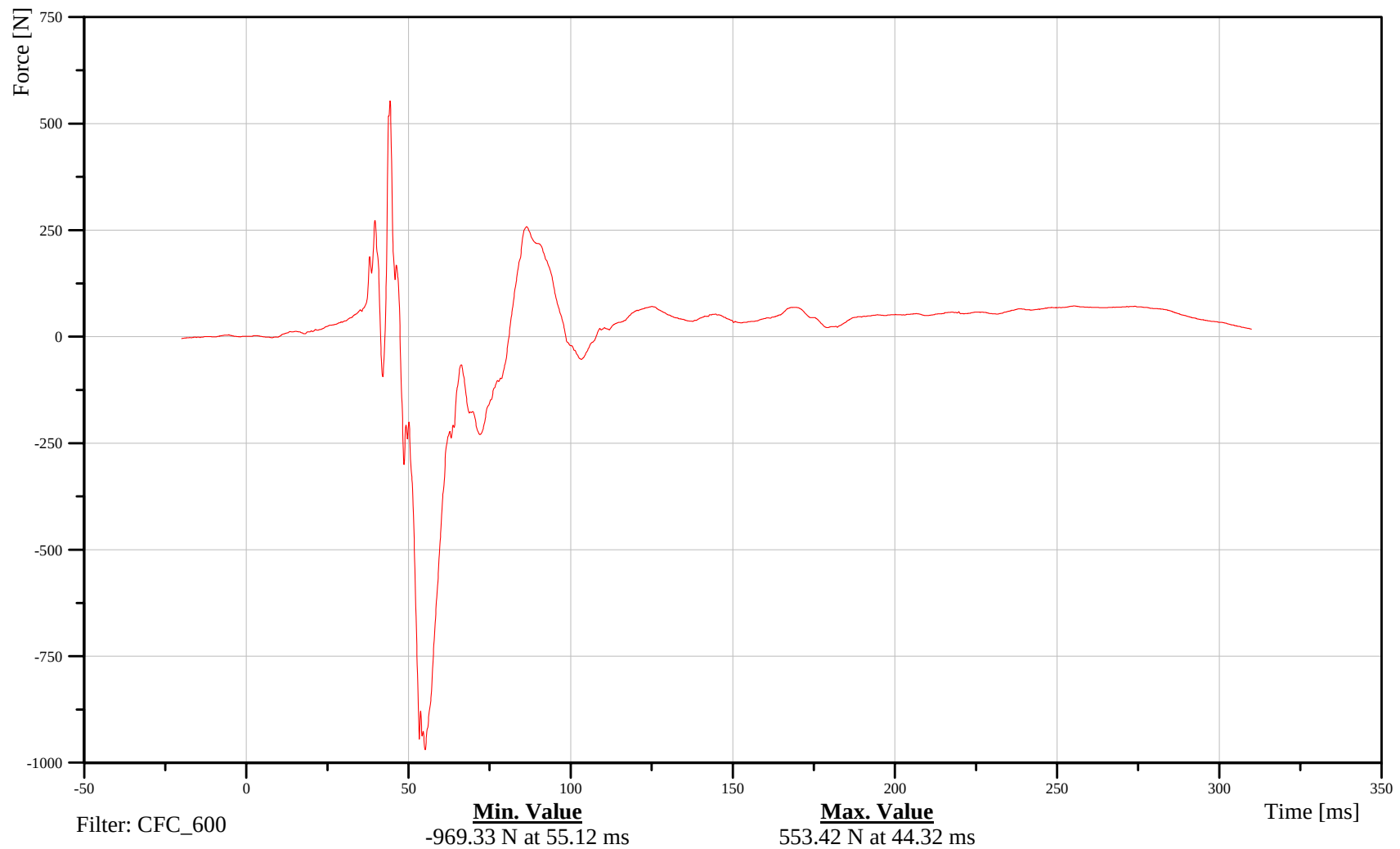
Target Passenger Right Upper Tibia X-Axis Force

Customer: VRTC

23TIBIRUFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

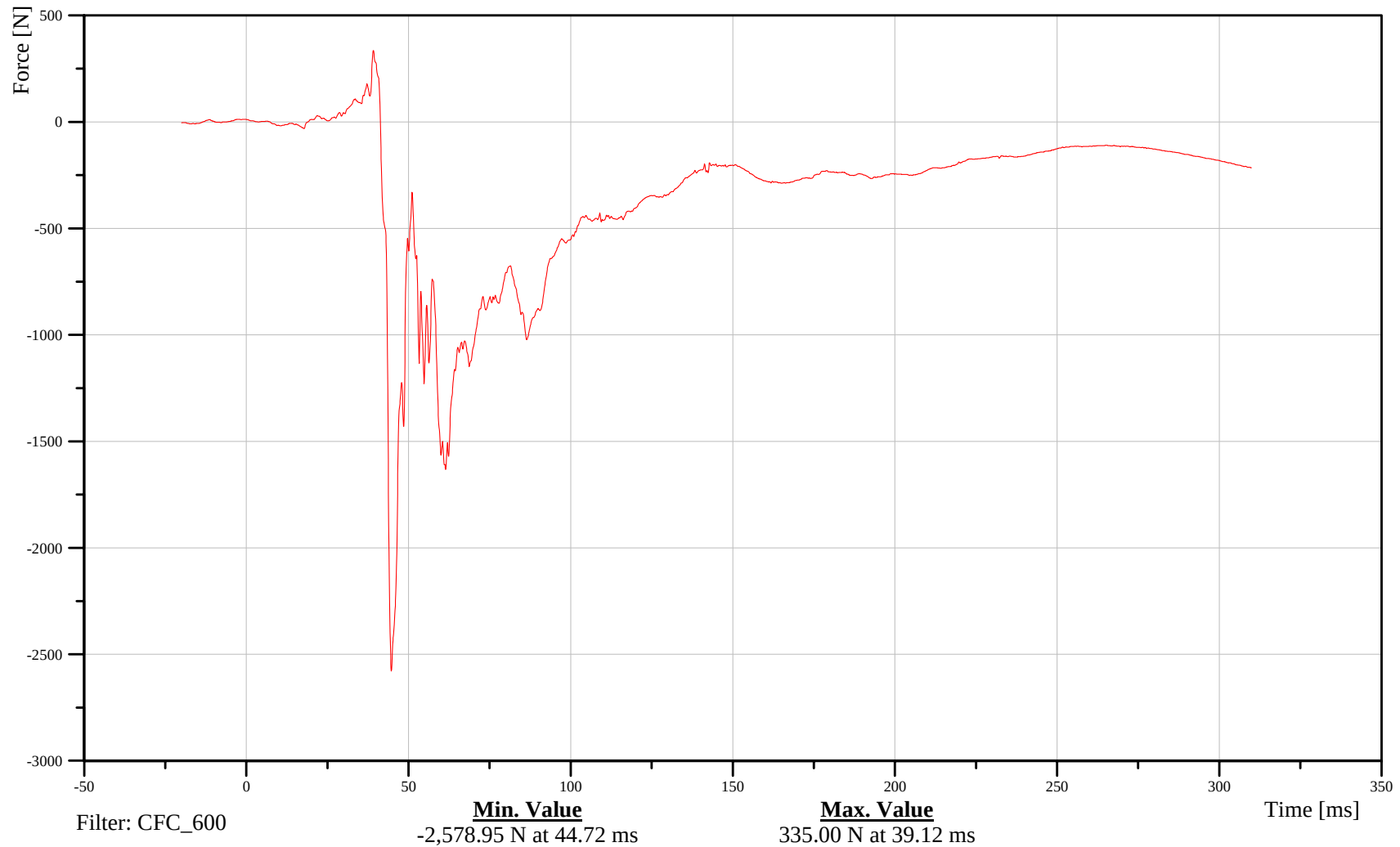
Target Passenger Right Upper Tibia Z-Axis Force

Customer: VRTC

23TIBIRUFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

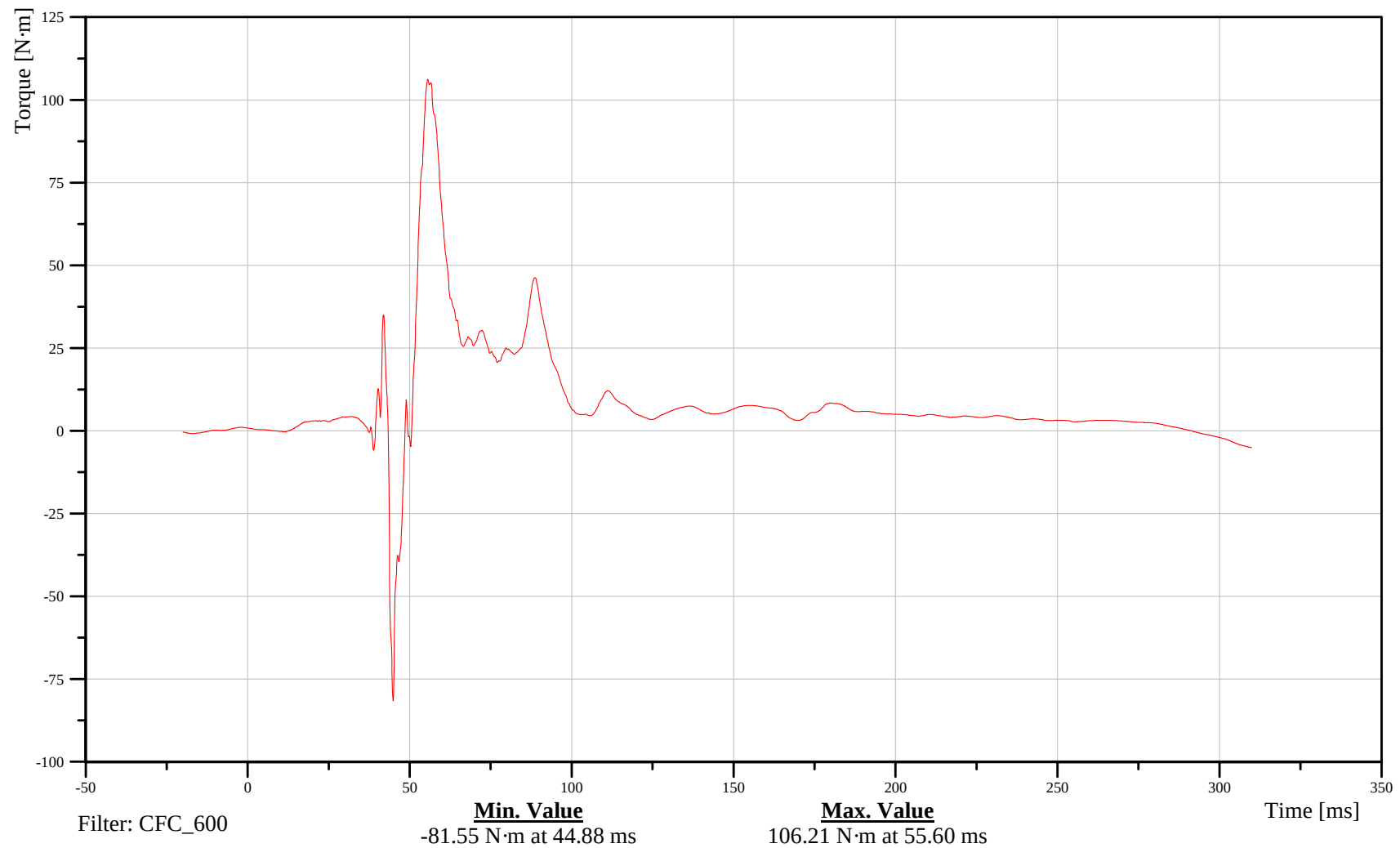
Target Passenger Right Upper Tibia Moment About X Axis

Customer: VRTC

23TIBIRUFXHFM0XB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

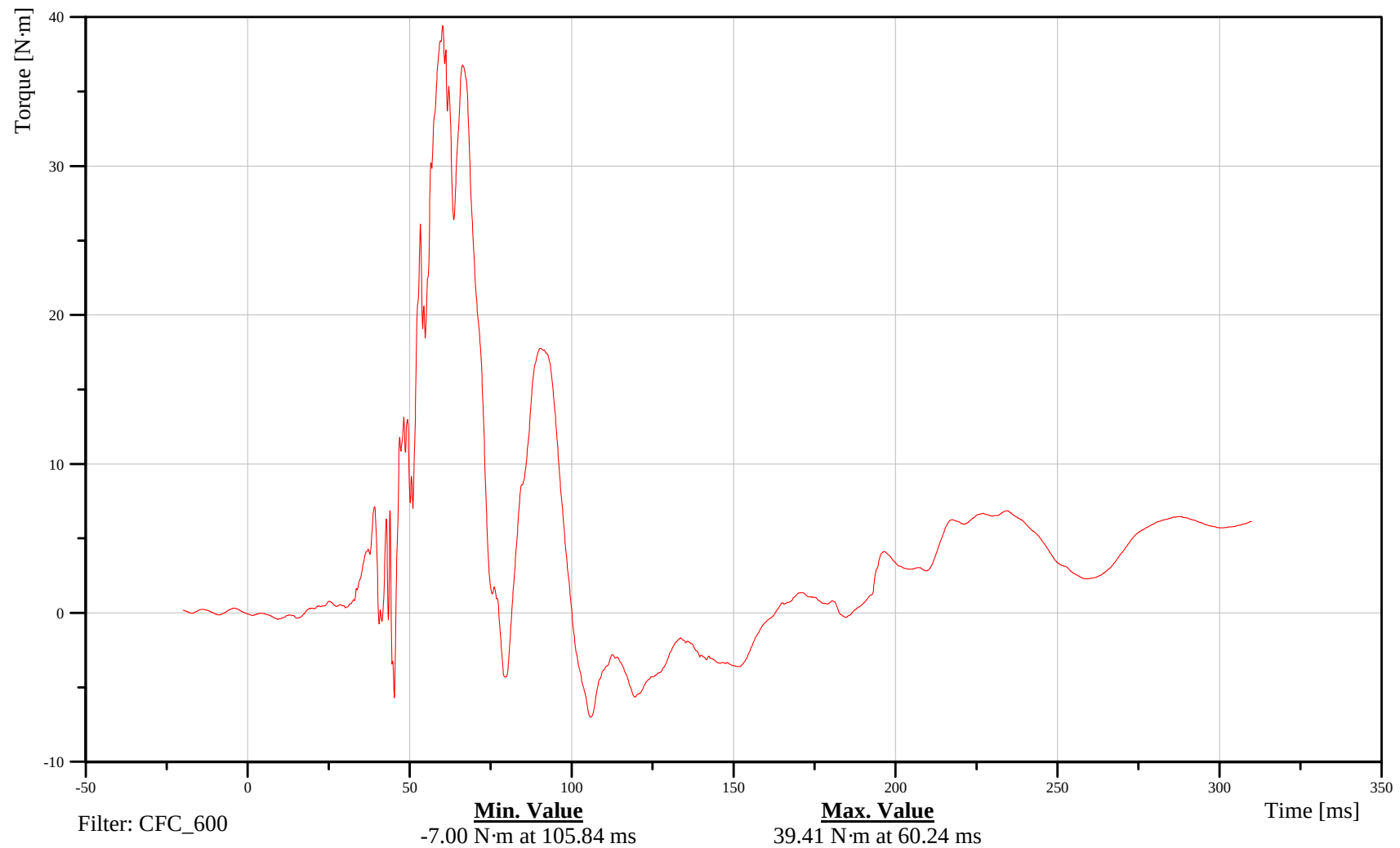
Target Passenger Right Upper Tibia Moment About Y Axis

Customer: VRTC

23TIBIRUFXHFM0YB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

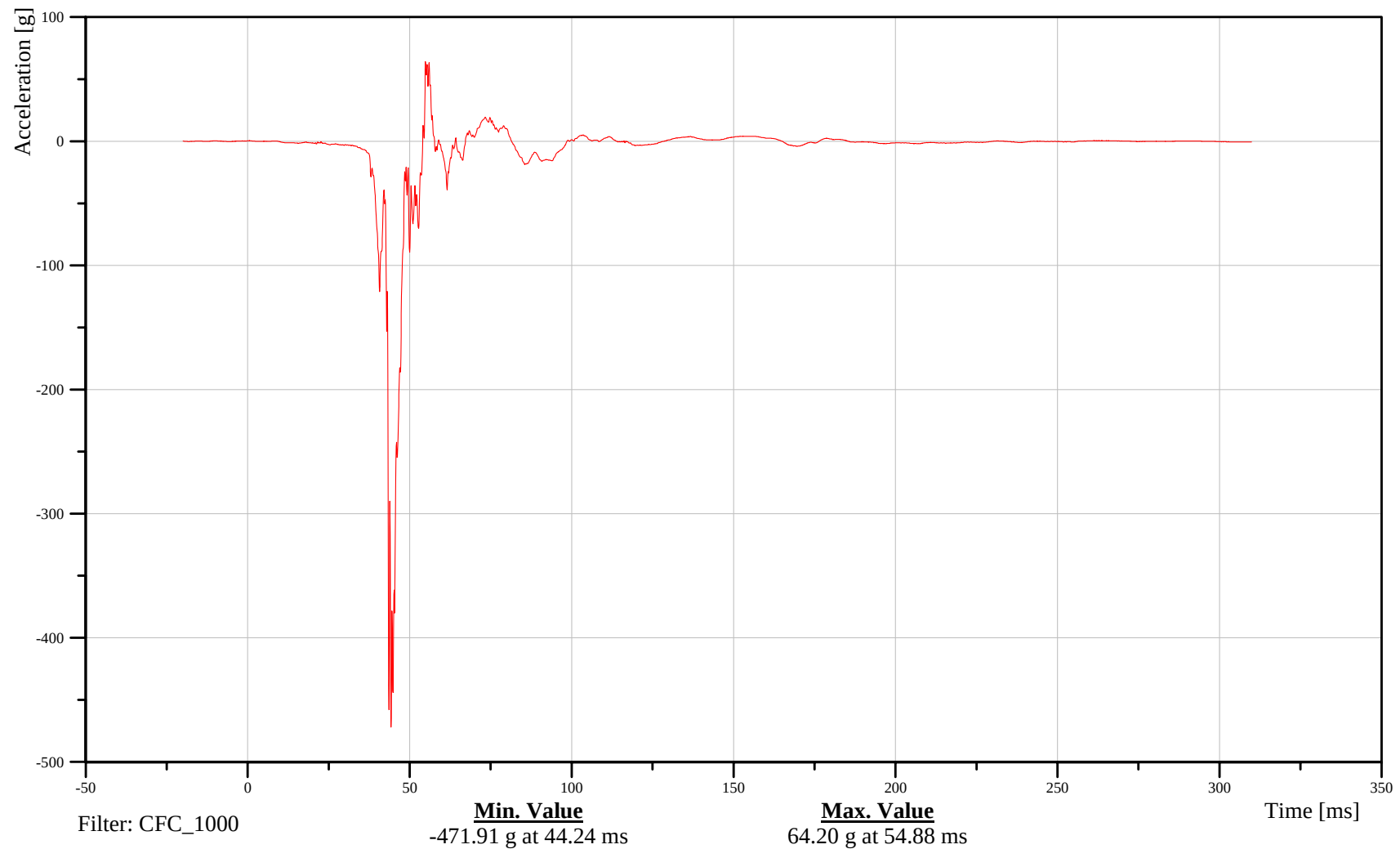
Target Passenger Right Tibia X-Axis Acceleration

Customer: VRTC

23TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

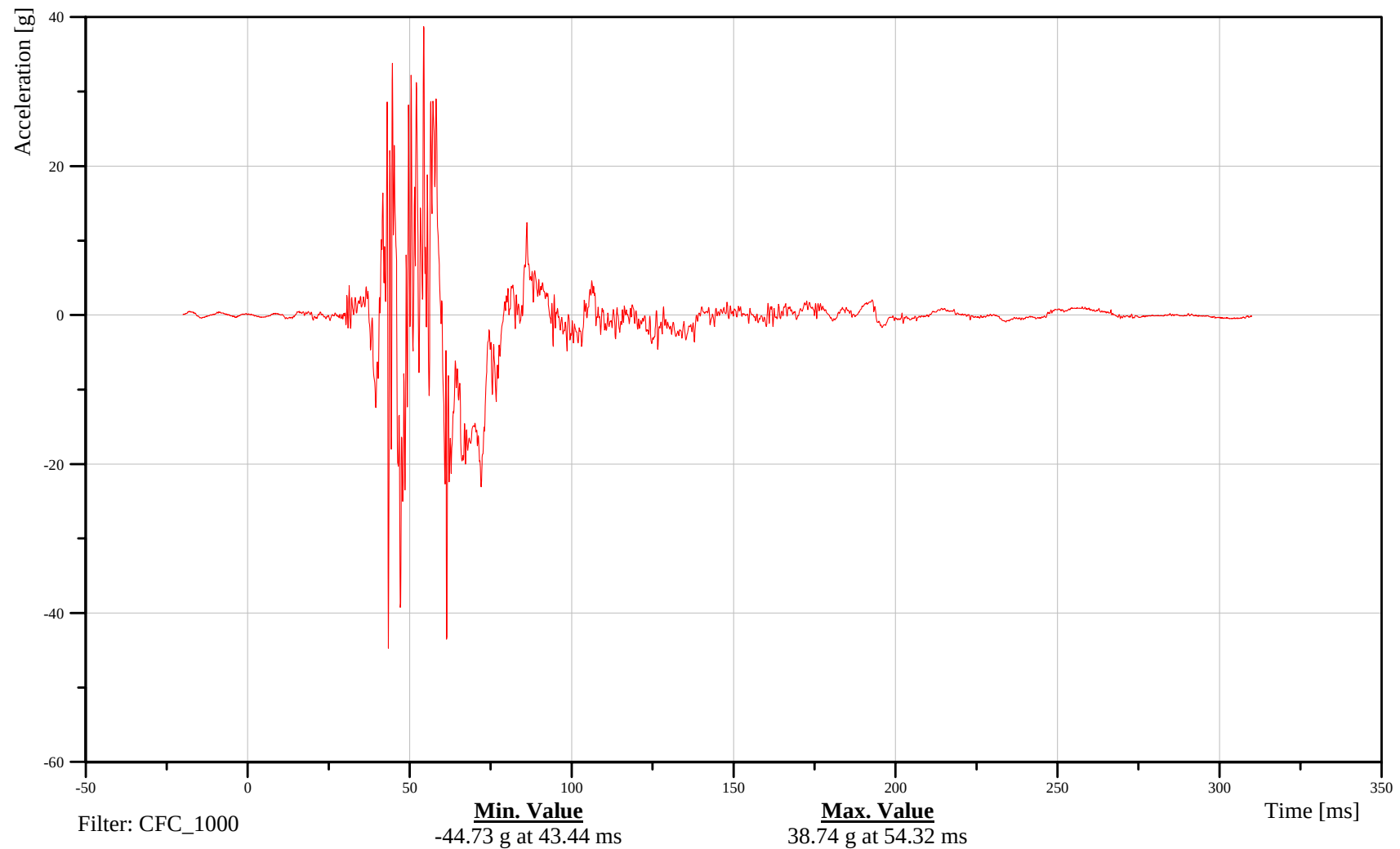
Target Passenger Right Tibia Y-Axis Acceleration

Customer: VRTC

23TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

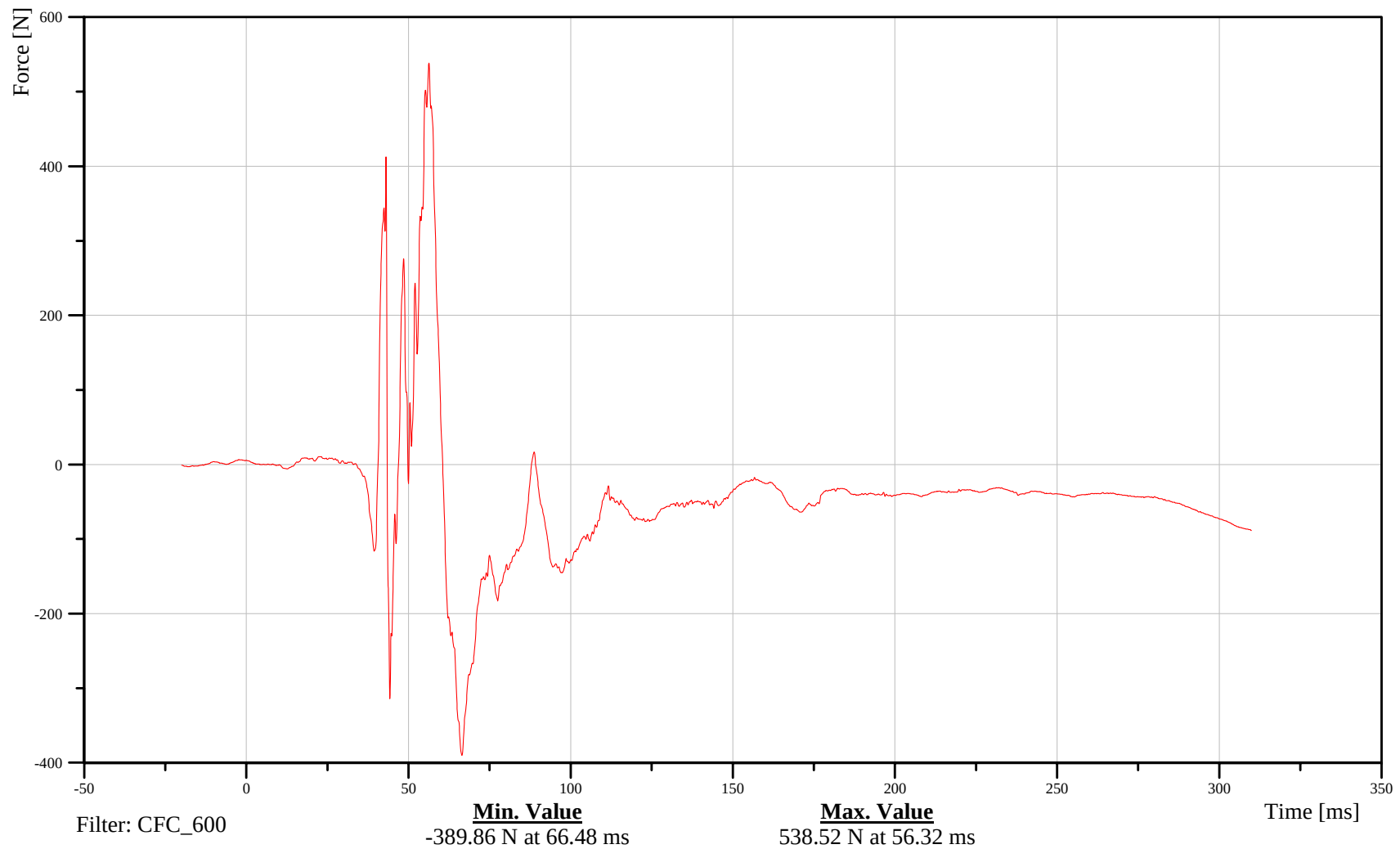
Target Passenger Right Lower Tibia X-Axis Force

Customer: VRTC

23TIBIRLFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

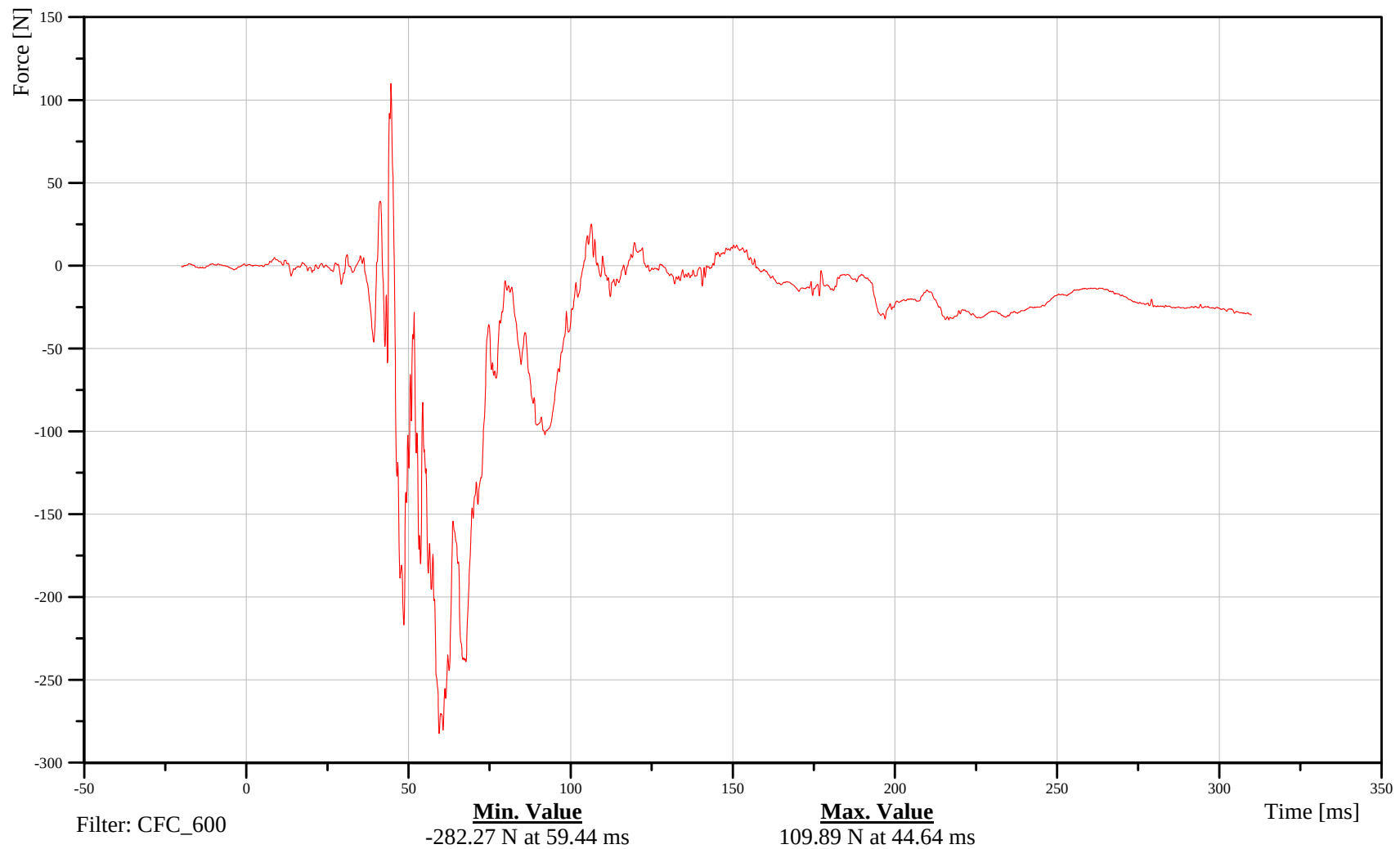
Target Passenger Right Lower Tibia Y-Axis Force

Customer: VRTC

23TIBIRLFXHFFOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

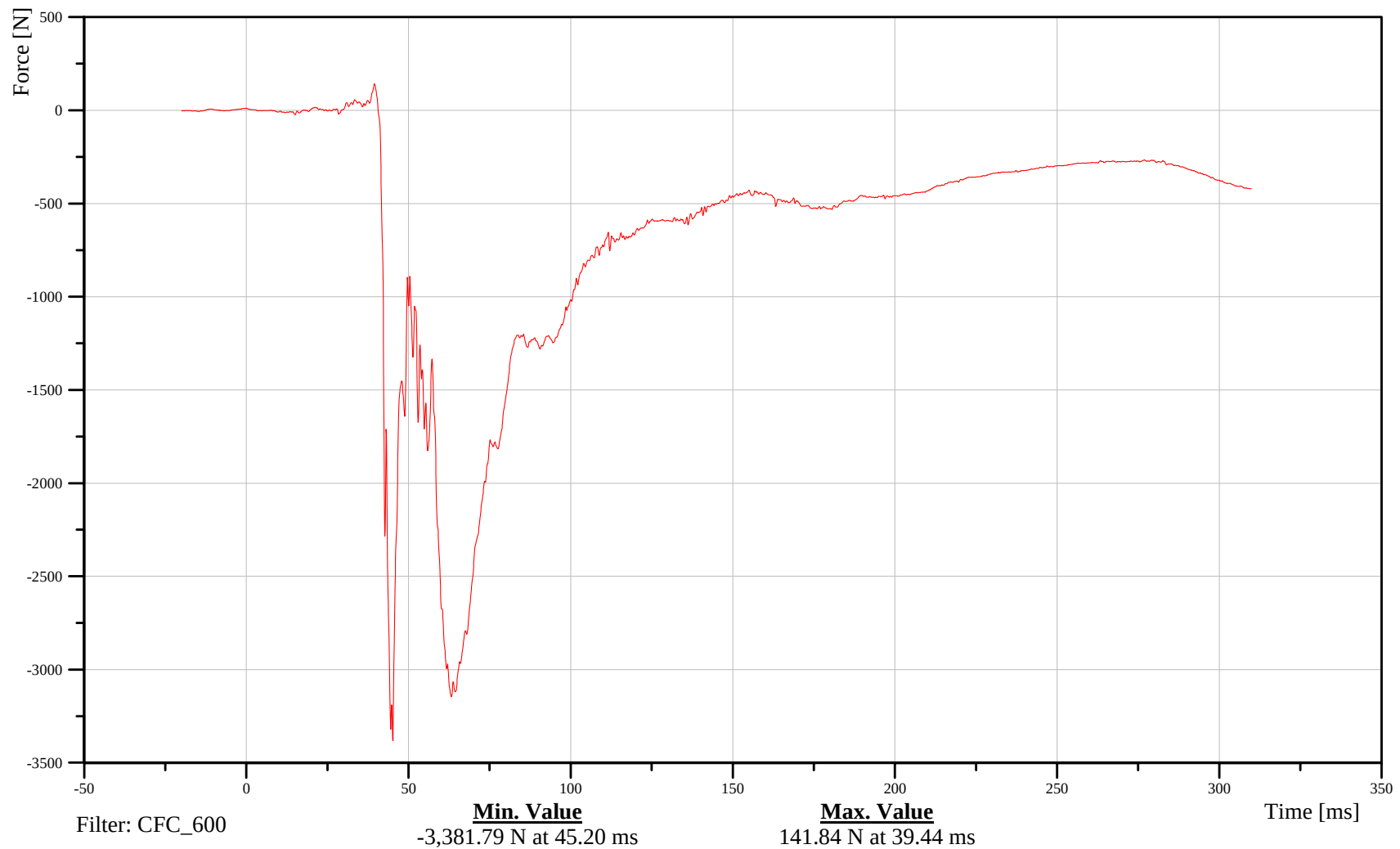
Target Passenger Right Lower Tibia Z-Axis Force

Customer: VRTC

23TIBIRLFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

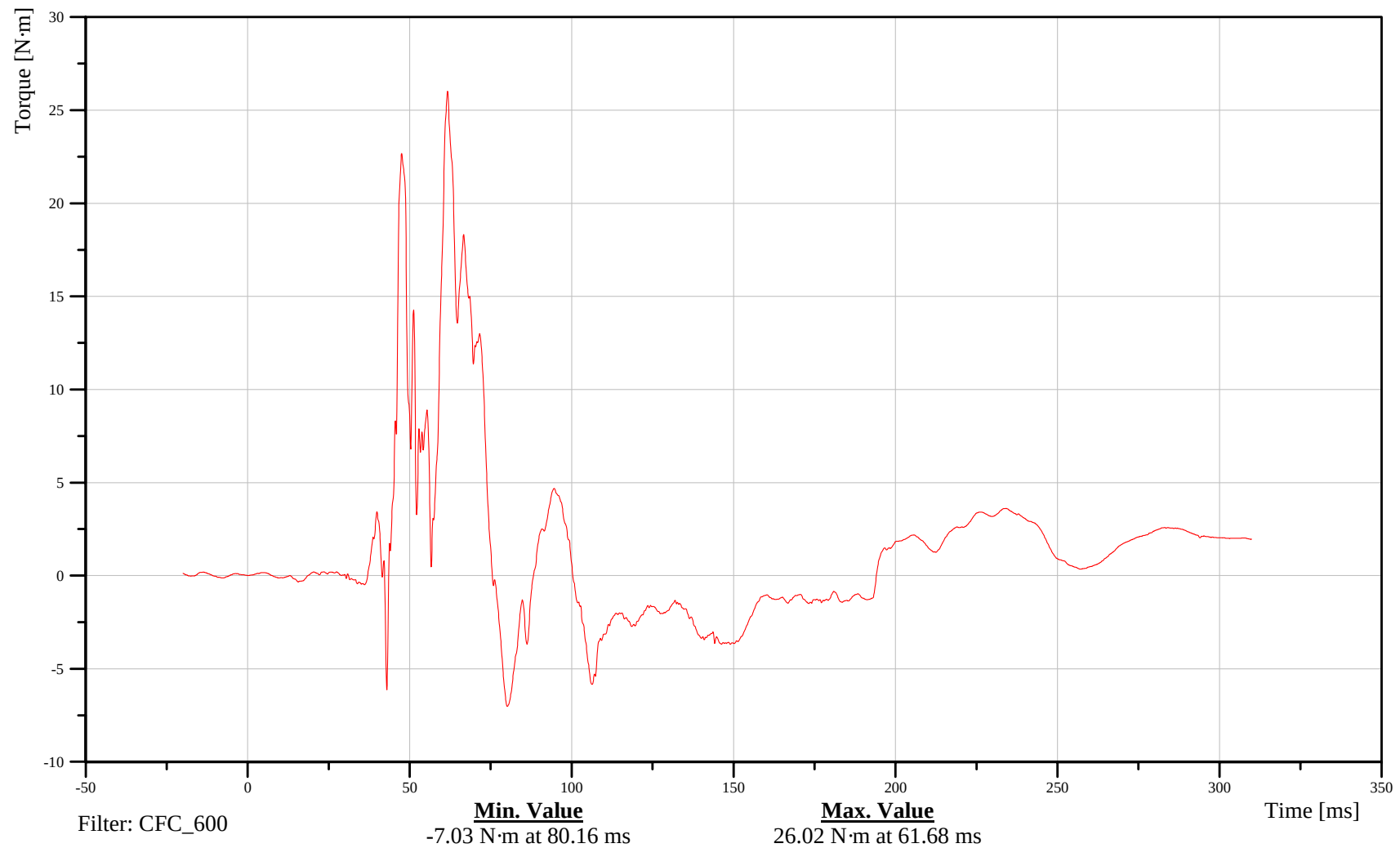
Target Passenger Right Lower Tibia Moment About X Axis

Customer: VRTC

23TIBIRLFXHFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

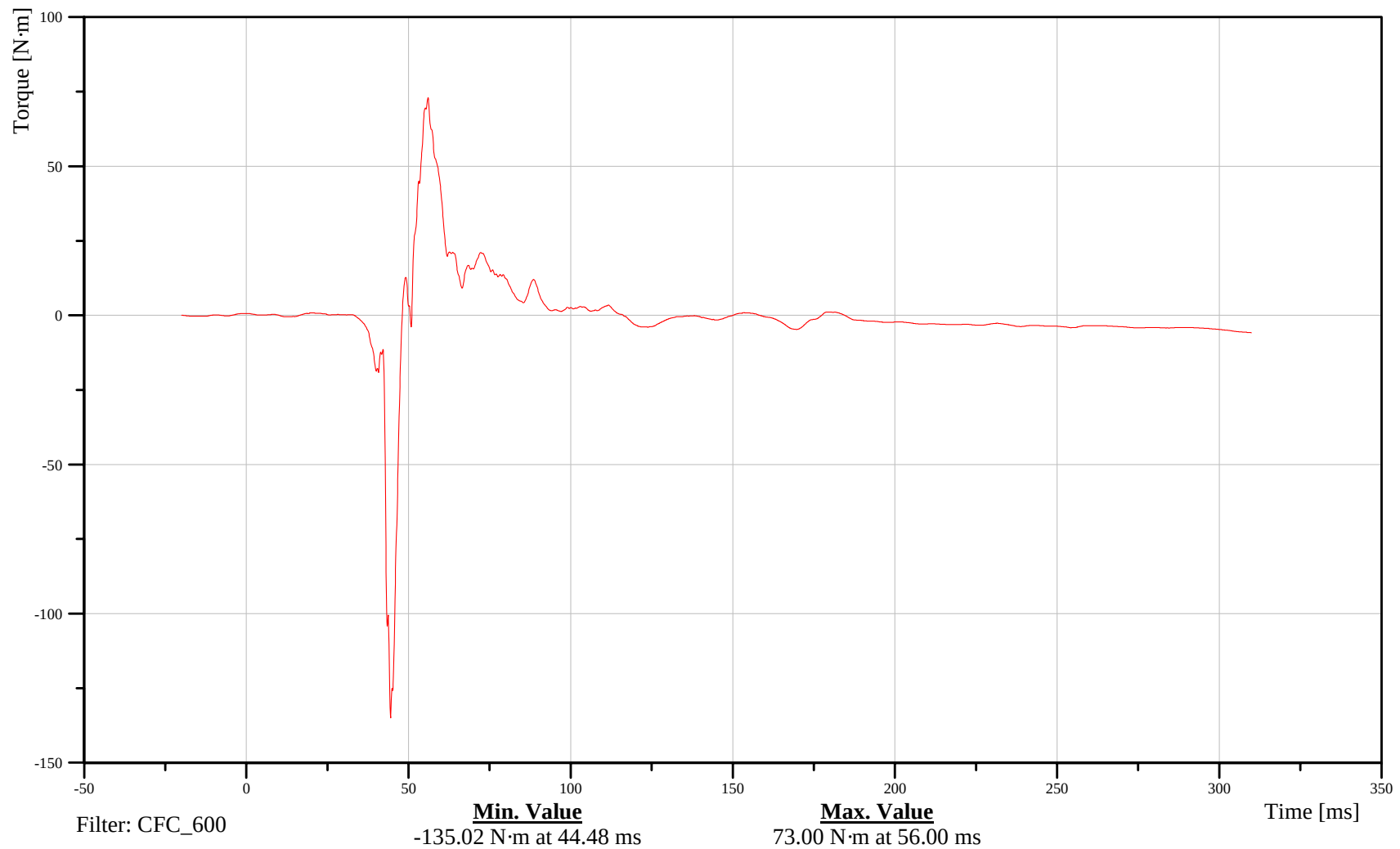
Target Passenger Right Lower Tibia Moment About Y Axis

Customer: VRTC

23TIBIRLFXHFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

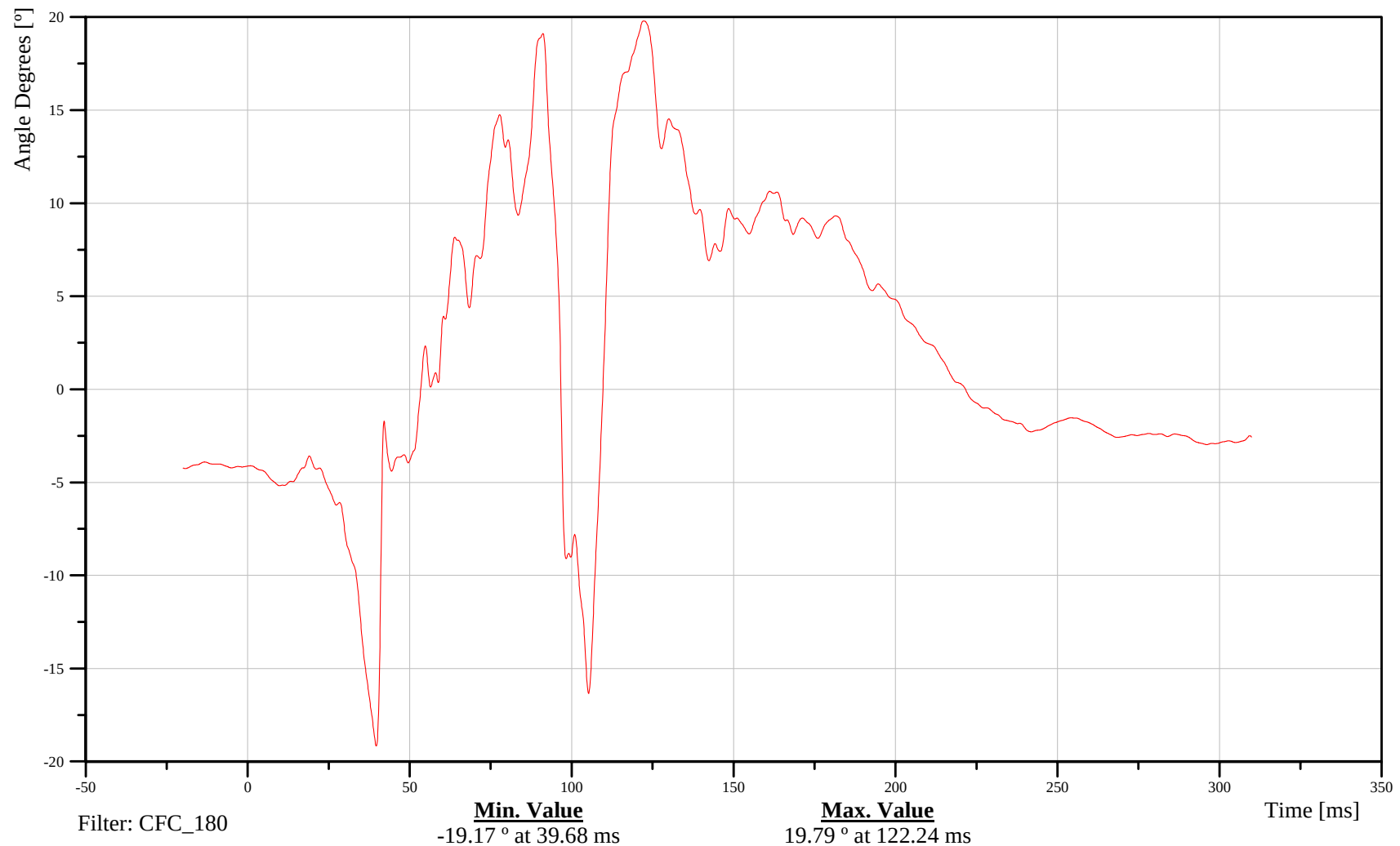
Target Passenger Right Foot X-Axis Rotation

Customer: VRTC

23FOOTRIFXHFANXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

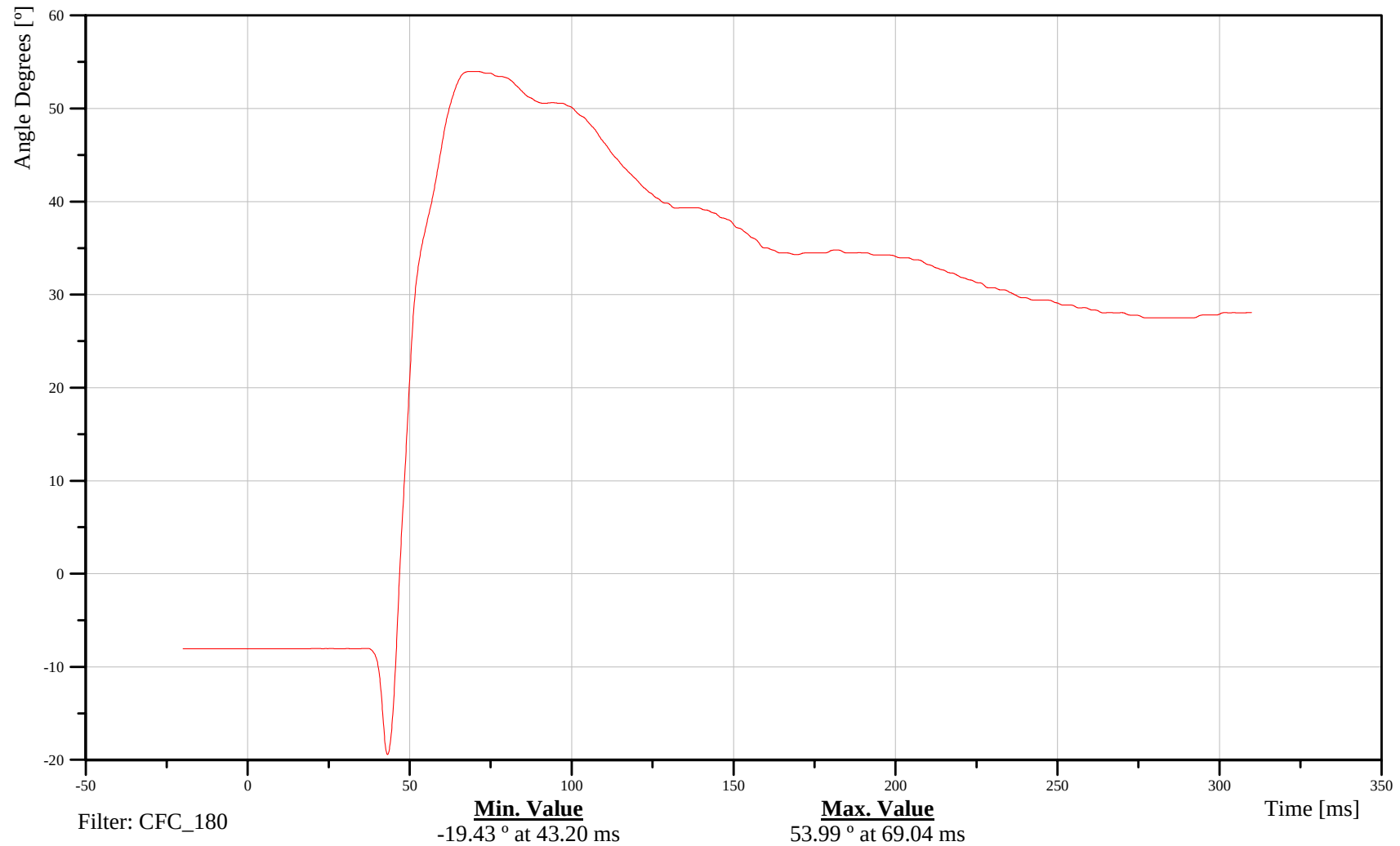
Target Passenger Right Foot Y-Axis Rotation

Customer: VRTC

23FOOTRIFXHFANYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

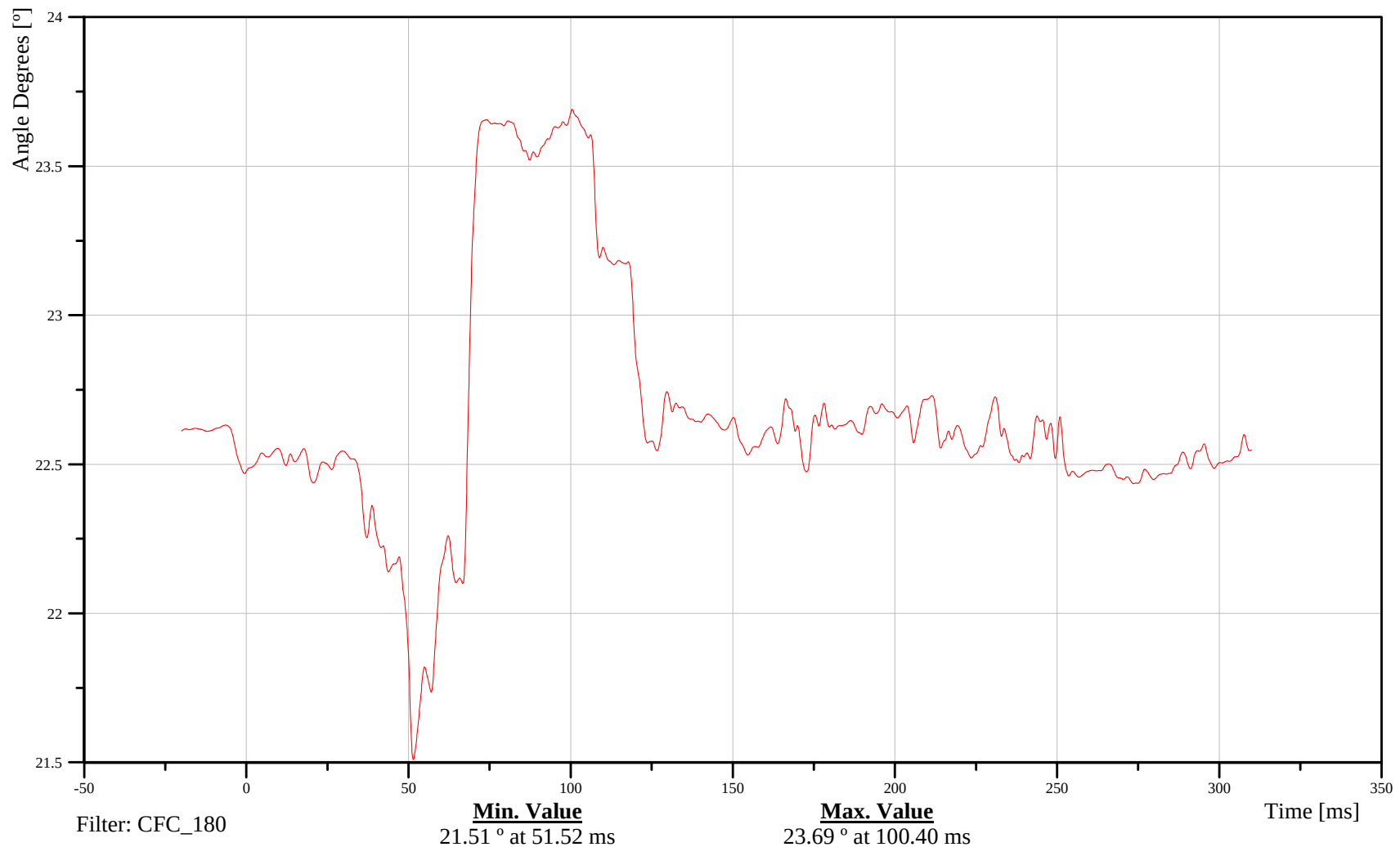
Target Passenger Right Foot Z-Axis Rotation

Customer: VRTC

23FOOTRIFXHFANZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

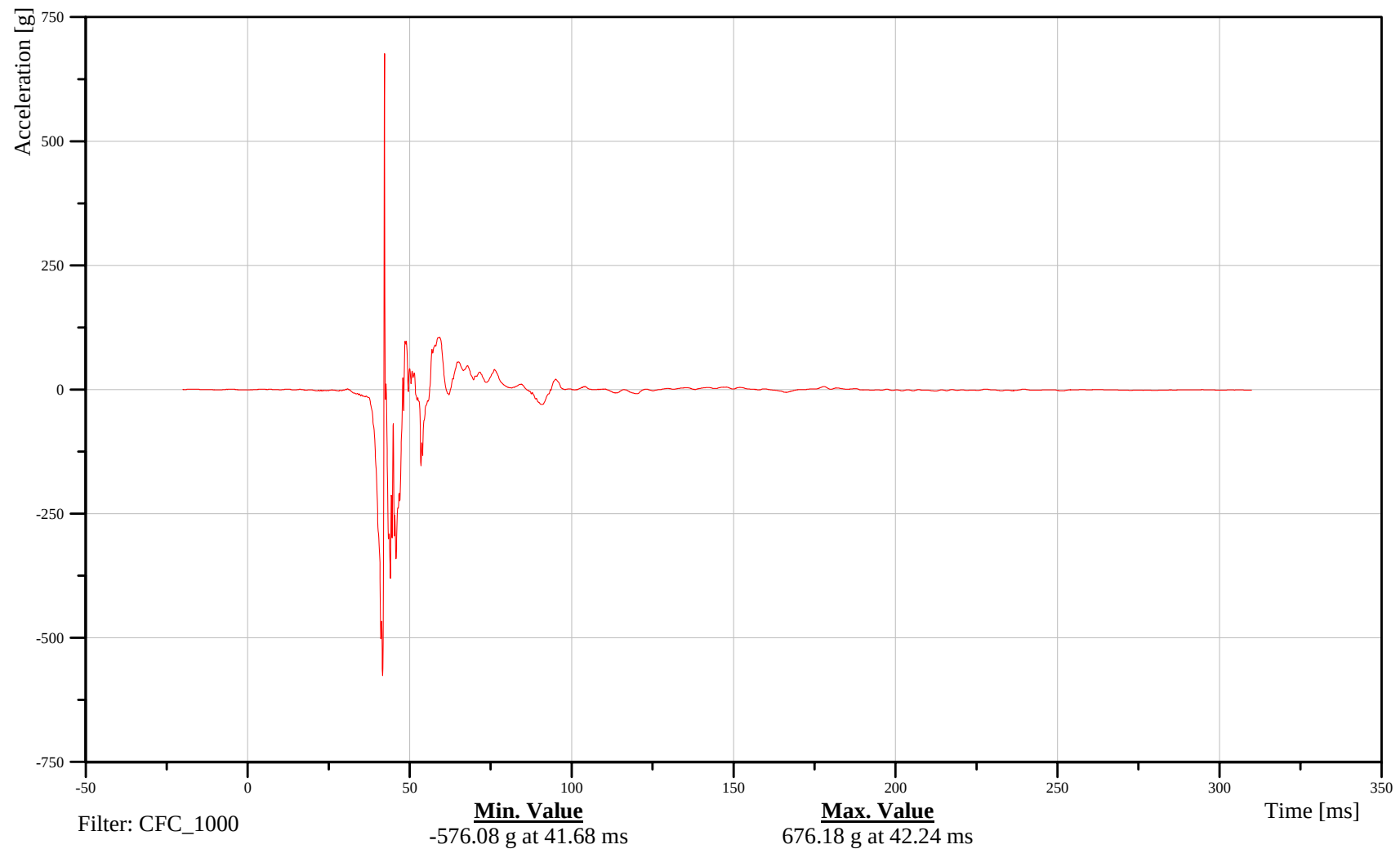
Target Passenger Right Foot X-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

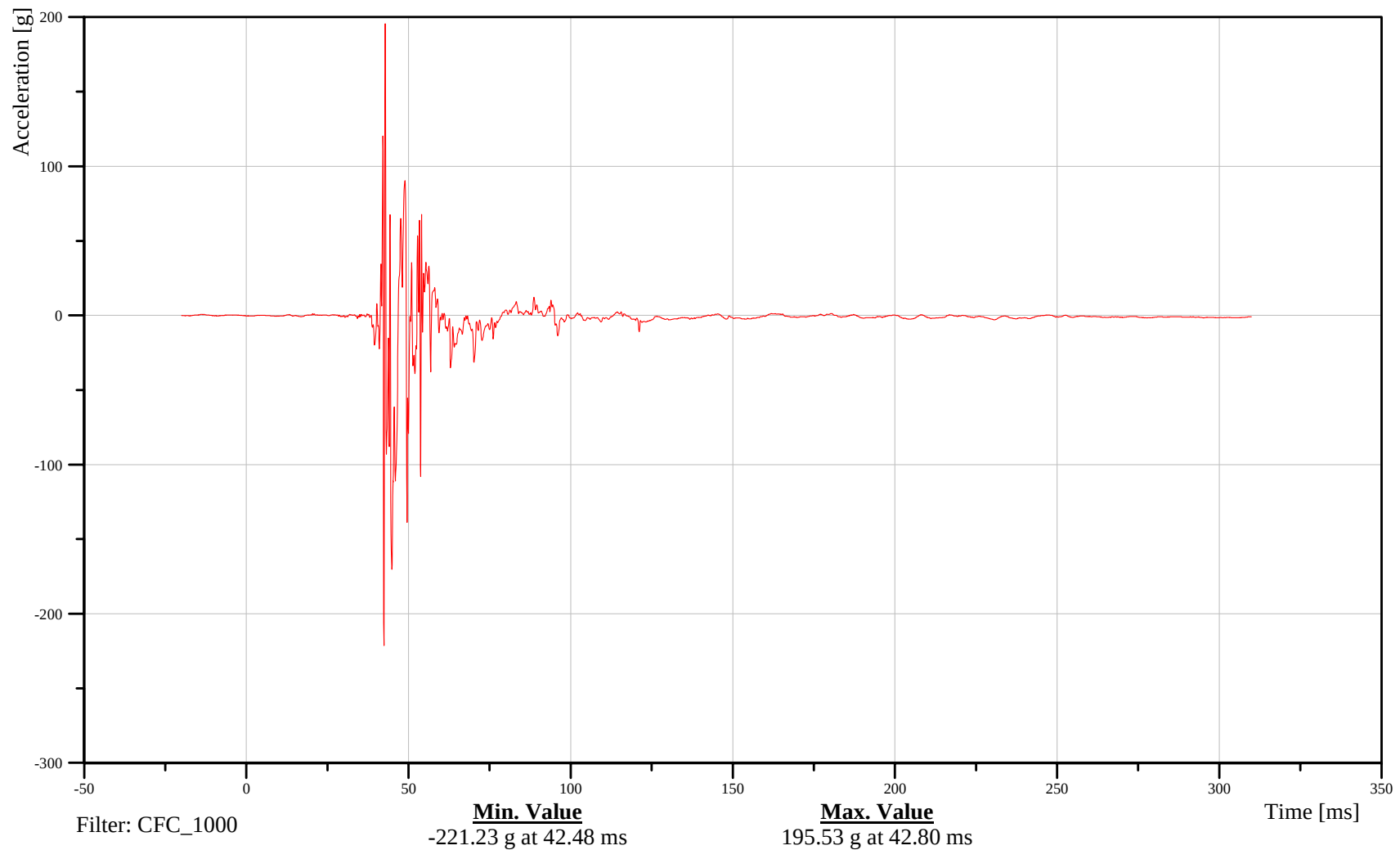
Target Passenger Right Foot Y-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

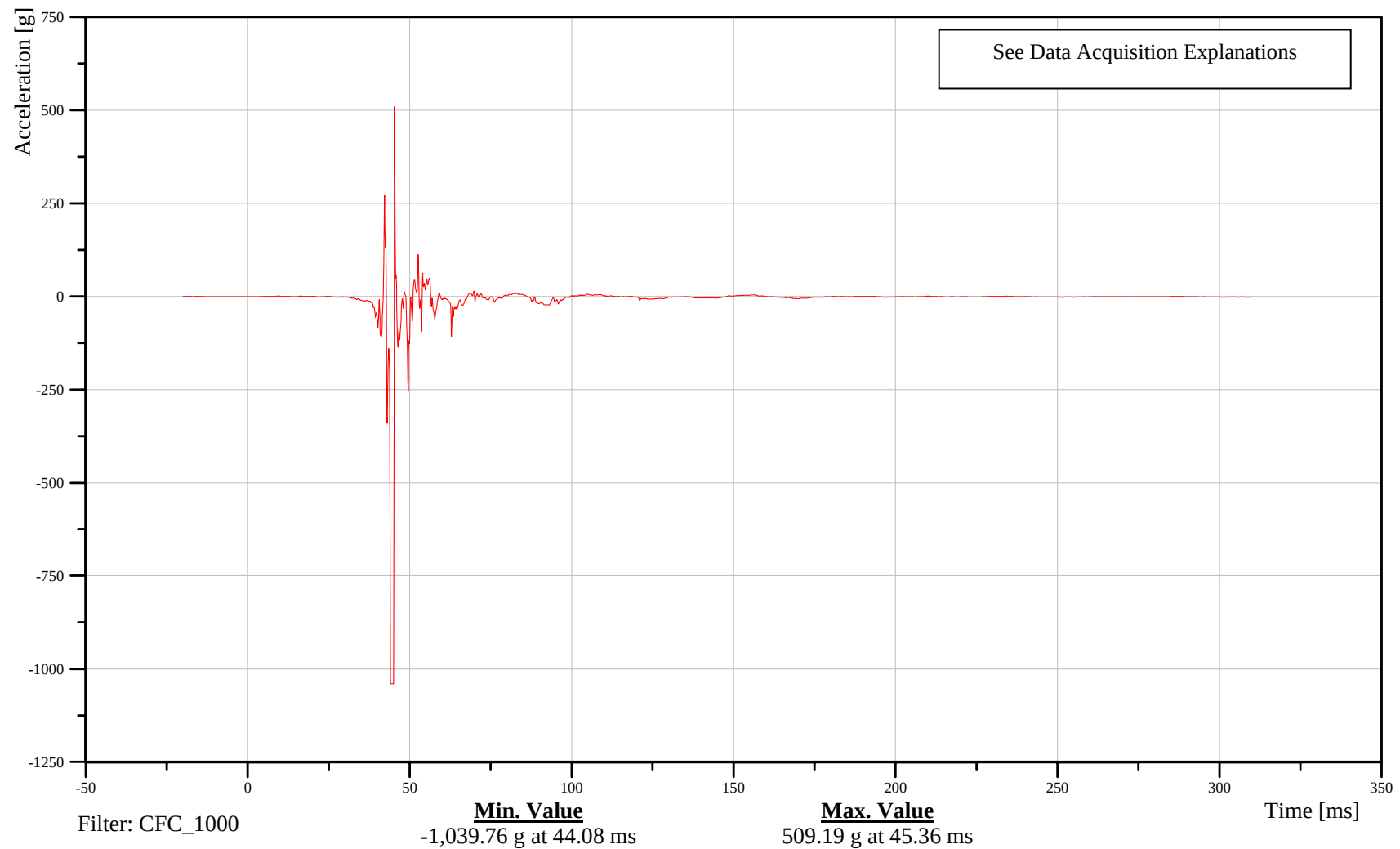
Target Passenger Right Foot Z-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

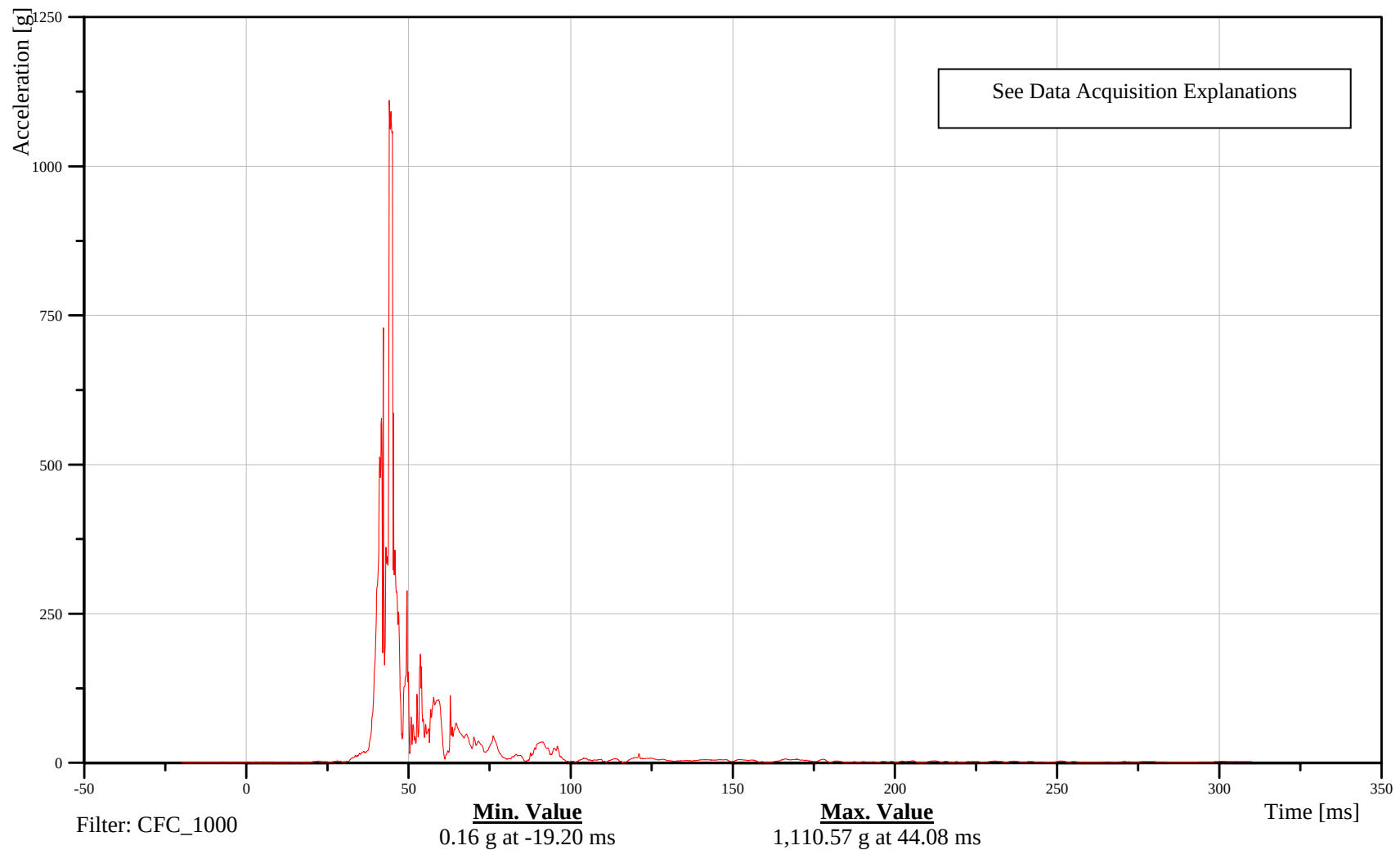
Target Passenger Right Foot Resultant Acceleration

Customer: VRTC

23FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

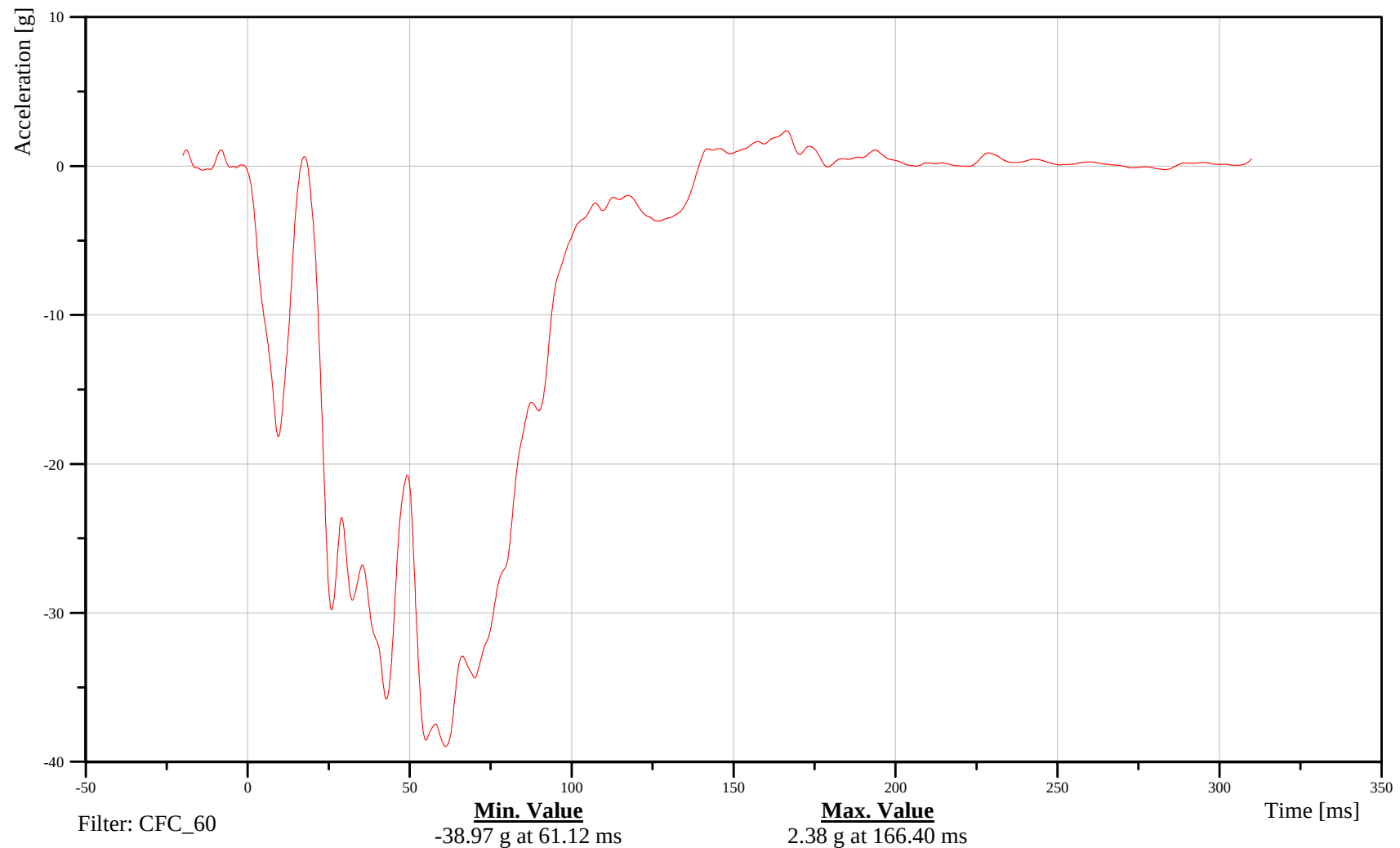
Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

24CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

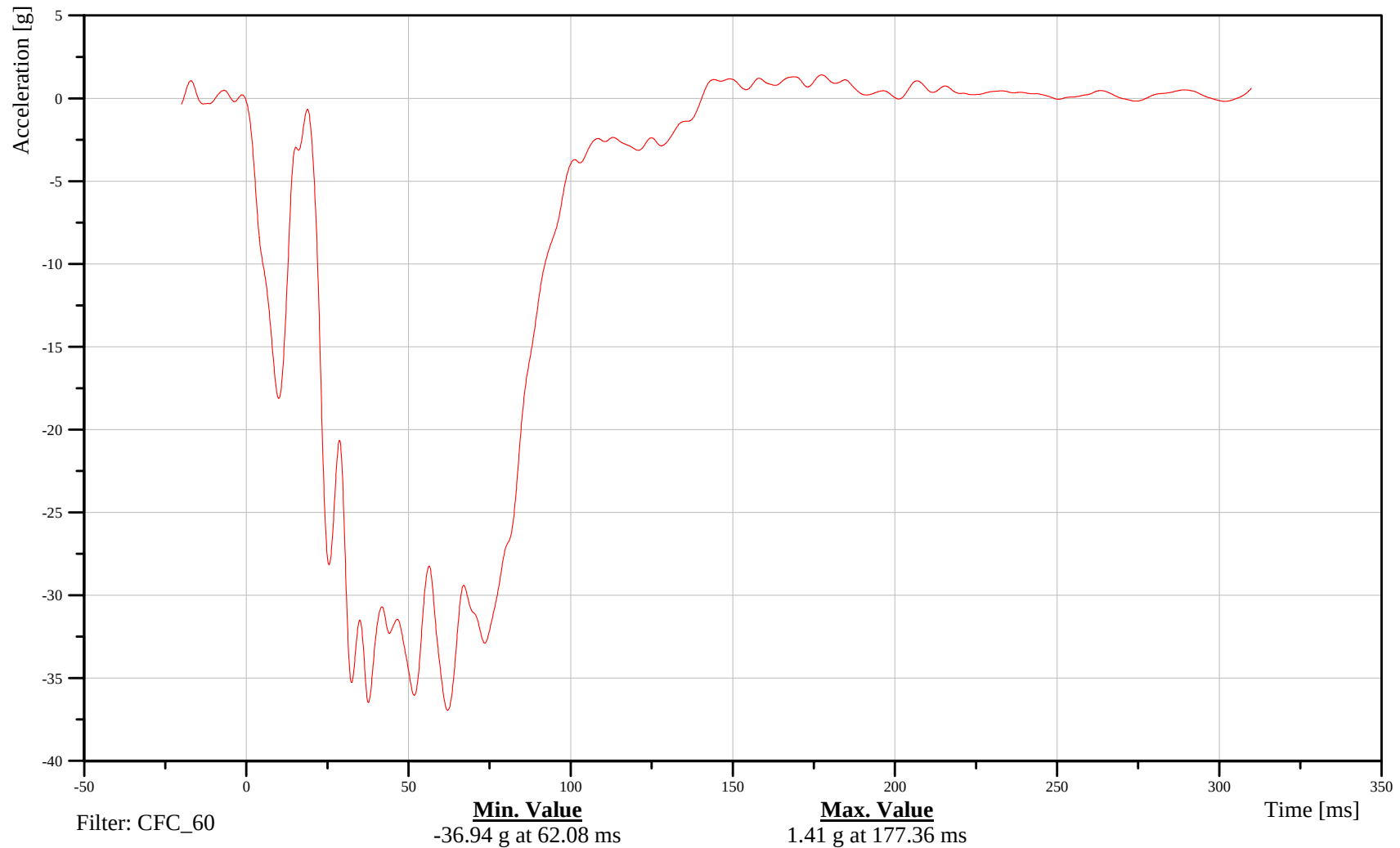
Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

26CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

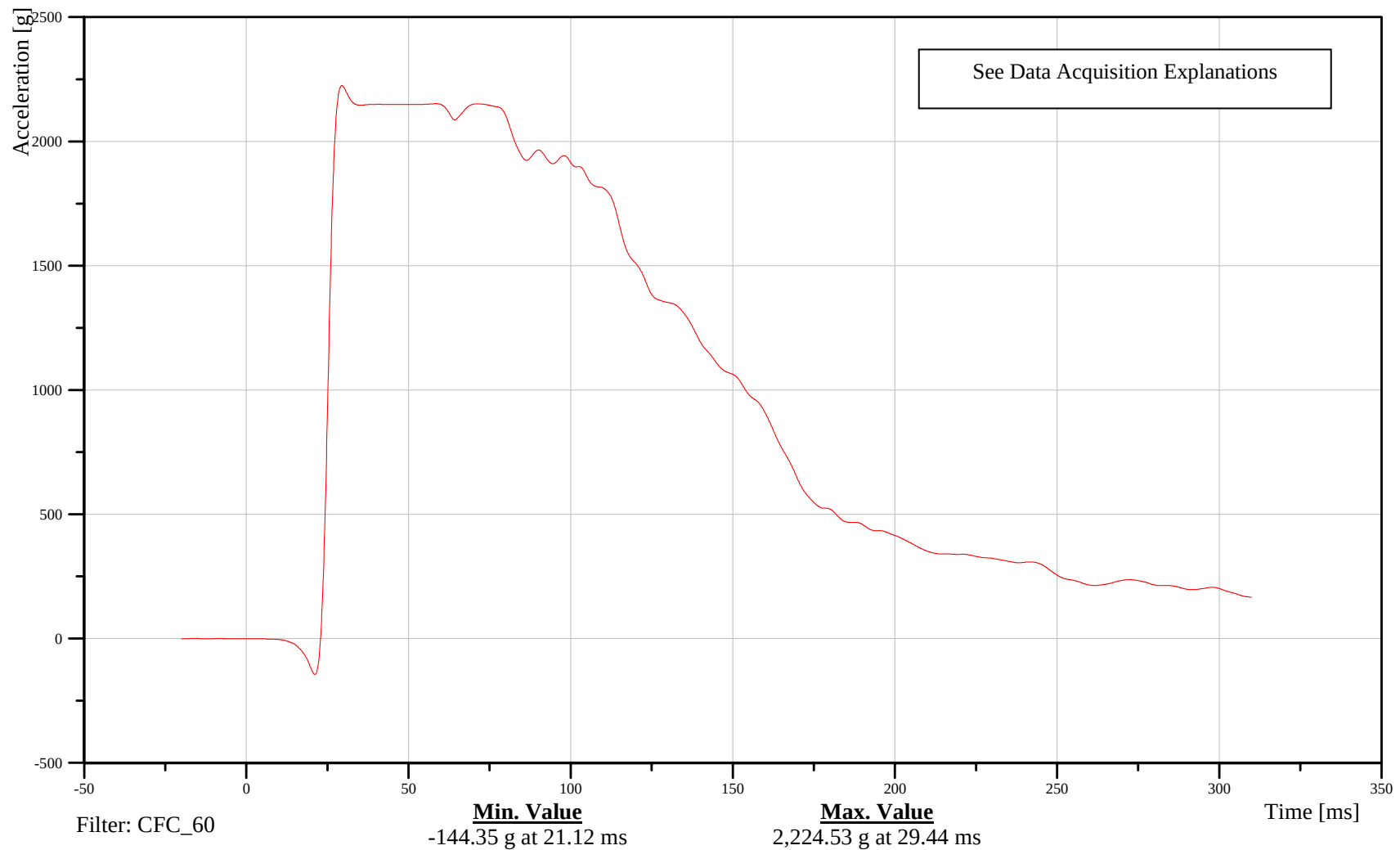
Target Vehicle Top of Engine X-Axis Acceleration

Customer: VRTC

22ENGNTTP0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

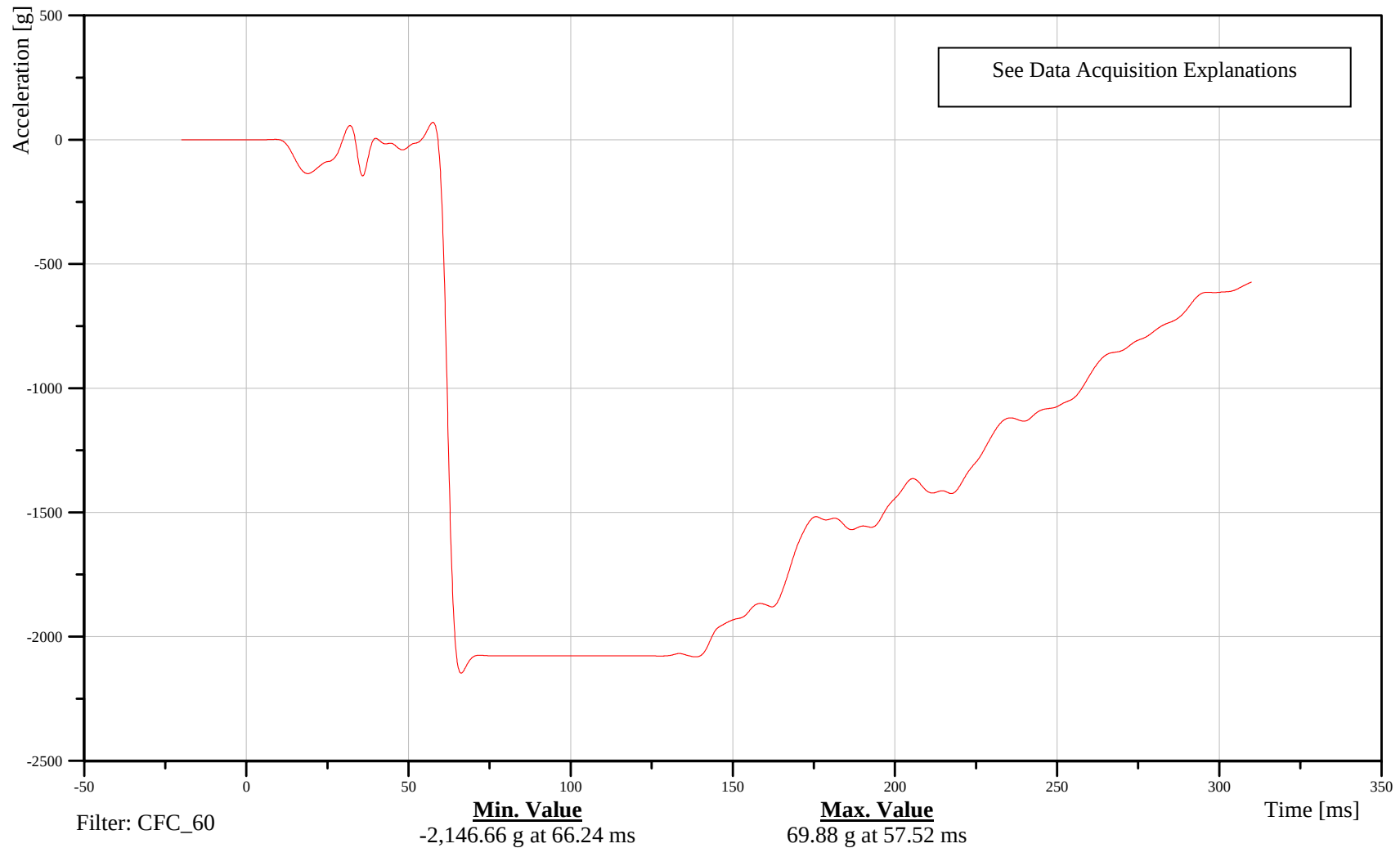
Target Vehicle Bottom of Engine X-Axis Acceleration

Customer: VRTC

22ENGNB00000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

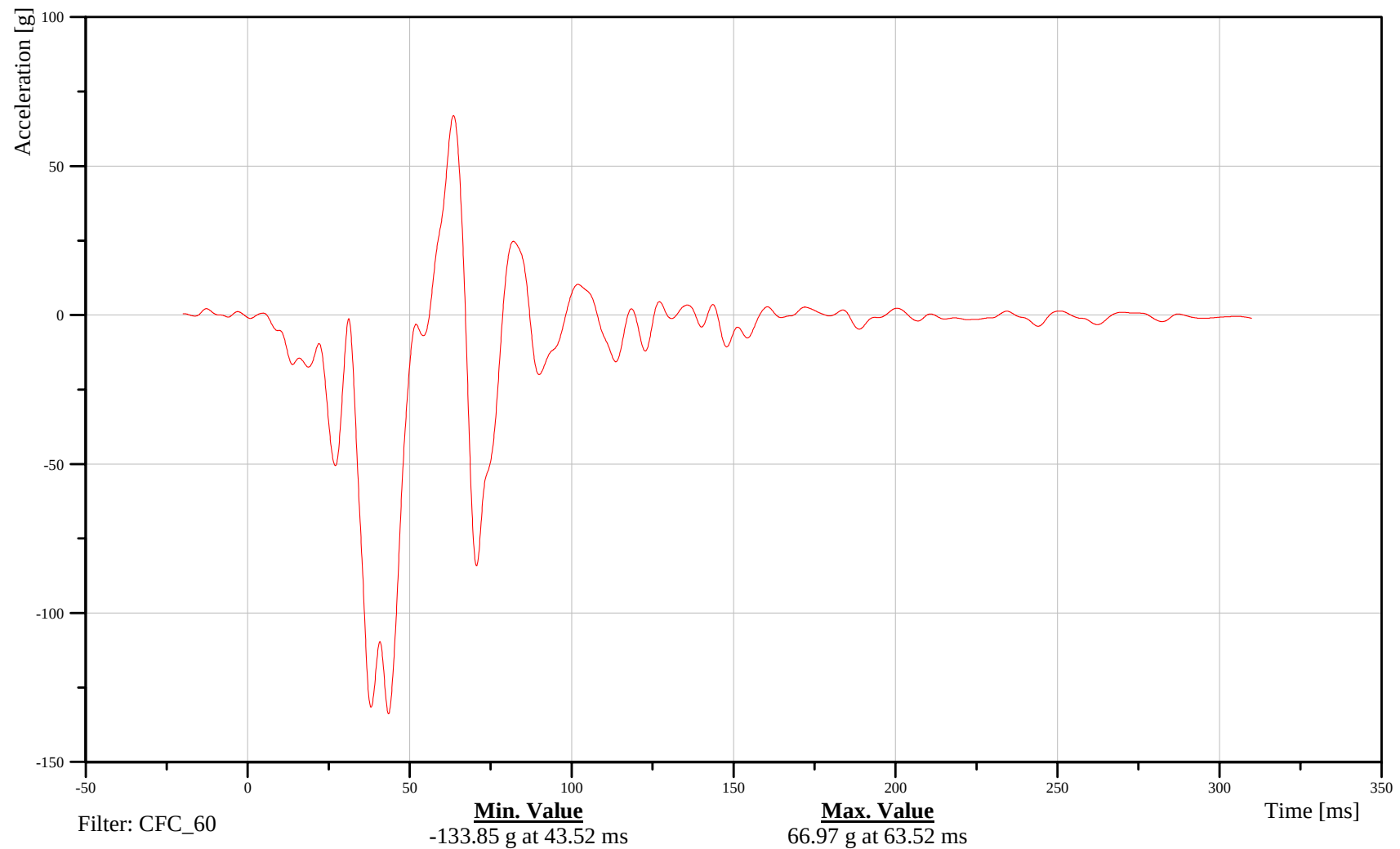
Target Vehicle Right Front Brake Caliper X-Axis Acceleration

Customer: VRTC

23VEHCRI0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

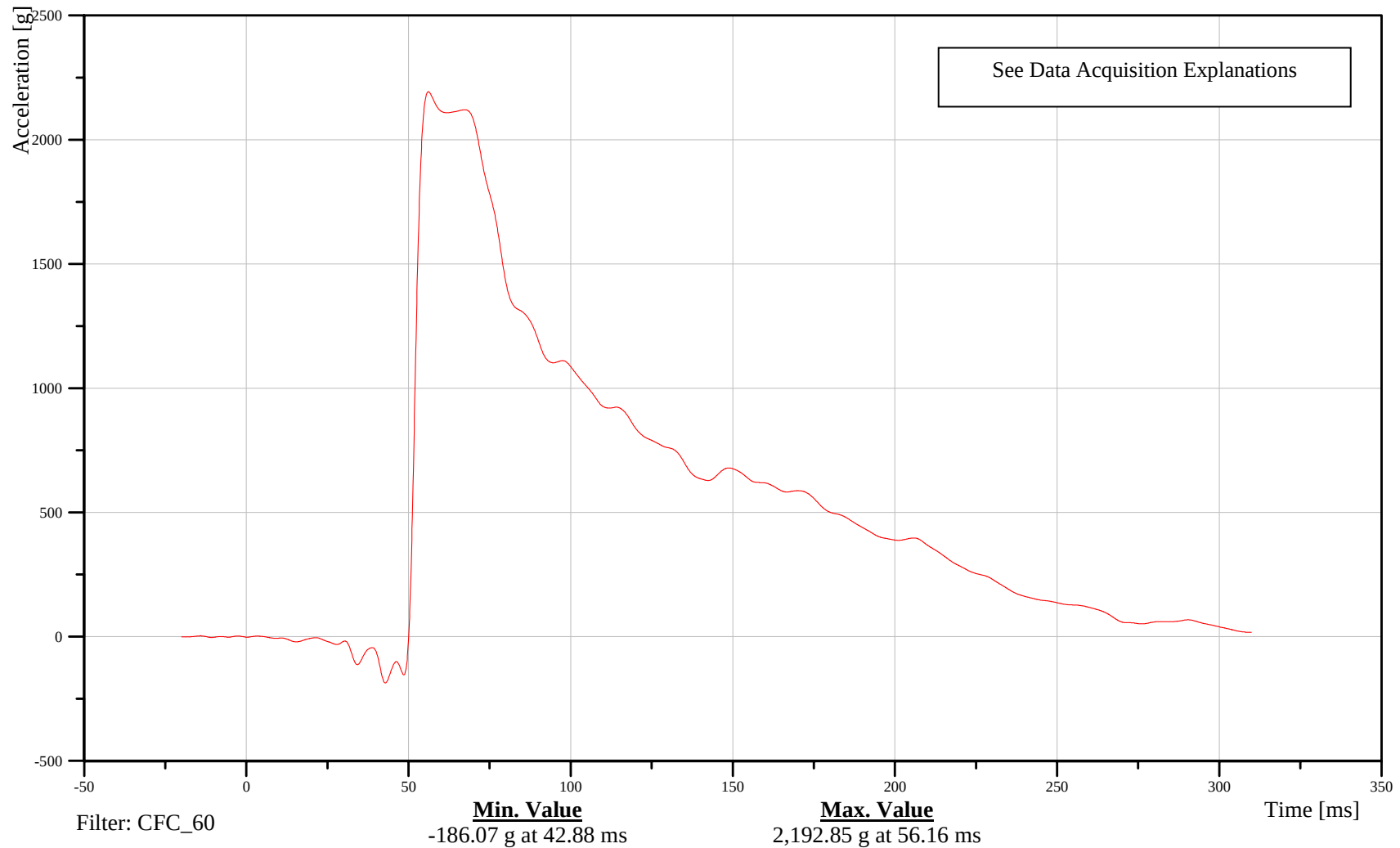
Target Vehicle Left Front Brake Caliper X-Axis Acceleration

Customer: VRTC

21VEHICLE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

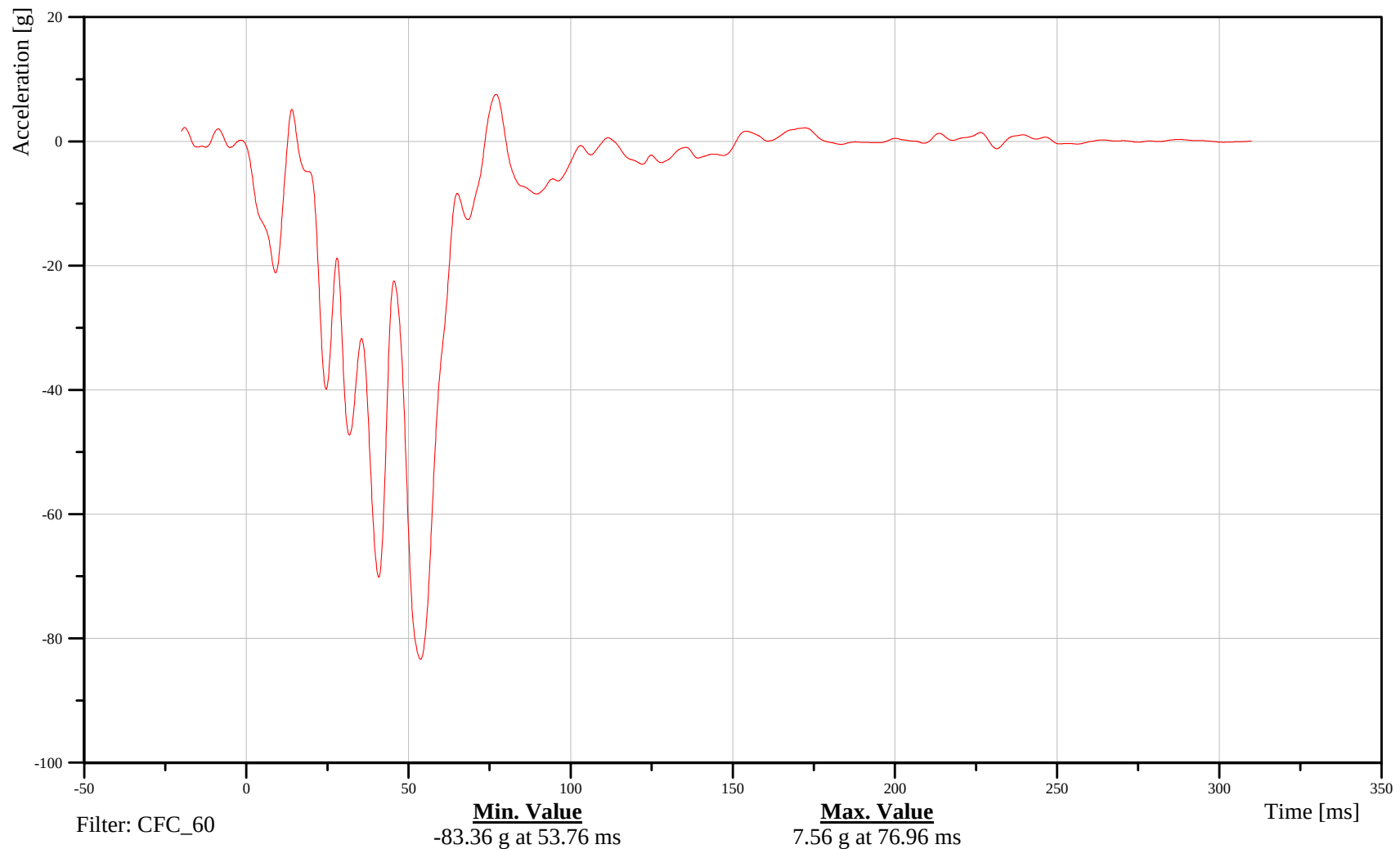
Target Vehicle Toe Pan Accelerator X-Axis Acceleration

Customer: VRTC

21PEAC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

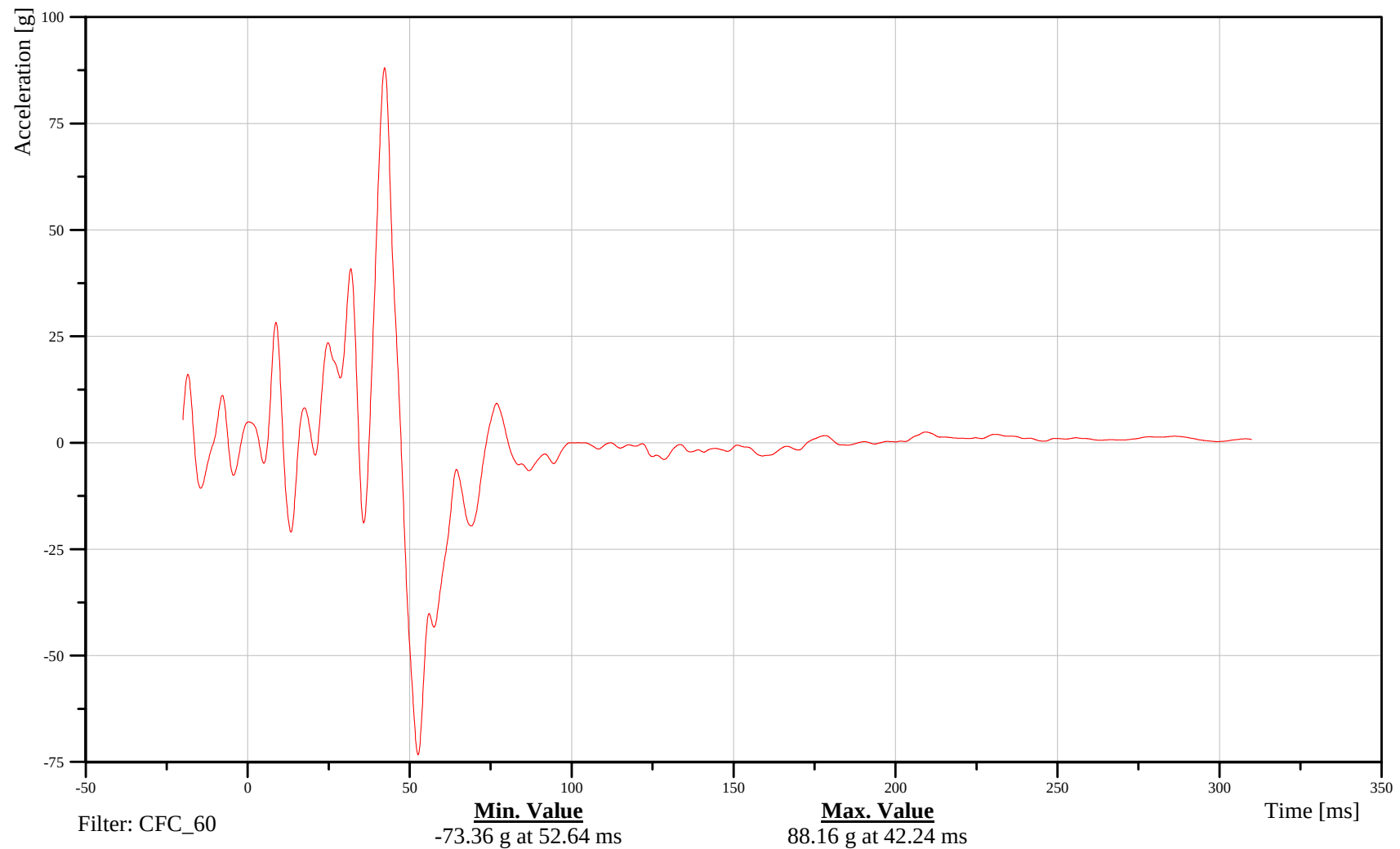
Target Vehicle Toe Pan Accelerator Z-Axis Acceleration

Customer: VRTC

21PEAC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

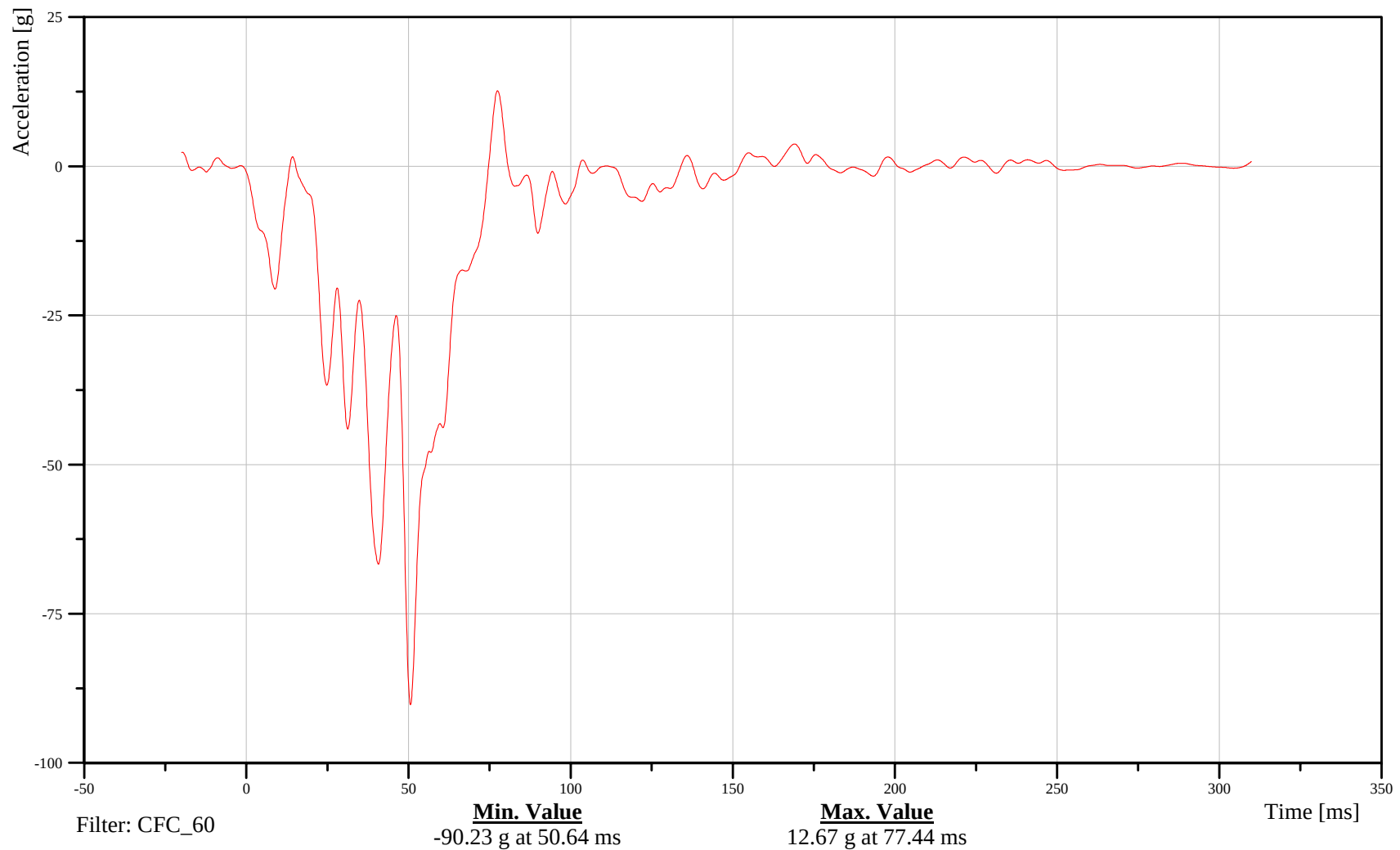
Target Vehicle Toe Pan Footrest X-Axis Acceleration

Customer: VRTC

21VEHC000001ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

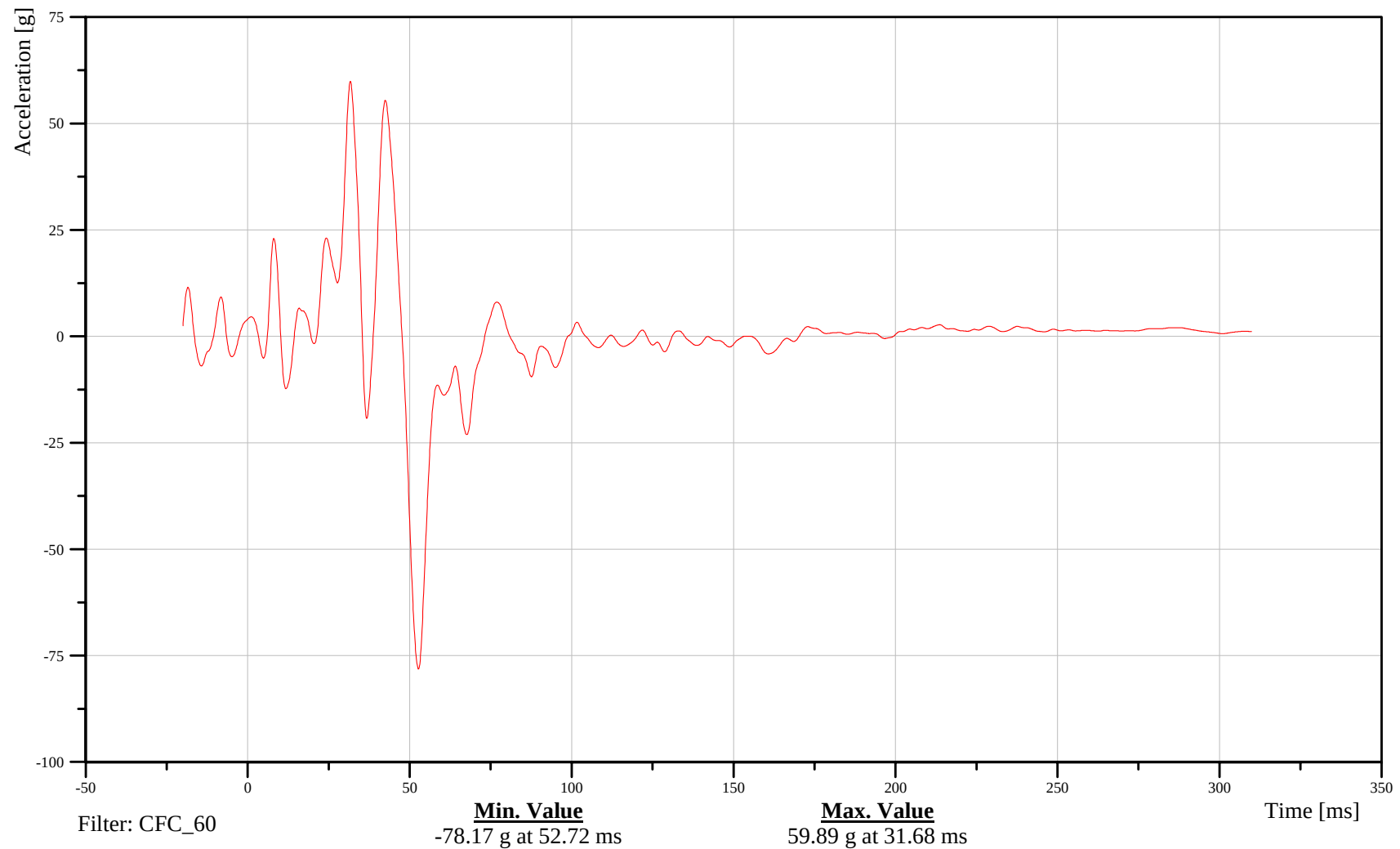
Target Vehicle Toe Pan Footrest Z-Axis Acceleration

Customer: VRTC

21VEHC000001ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

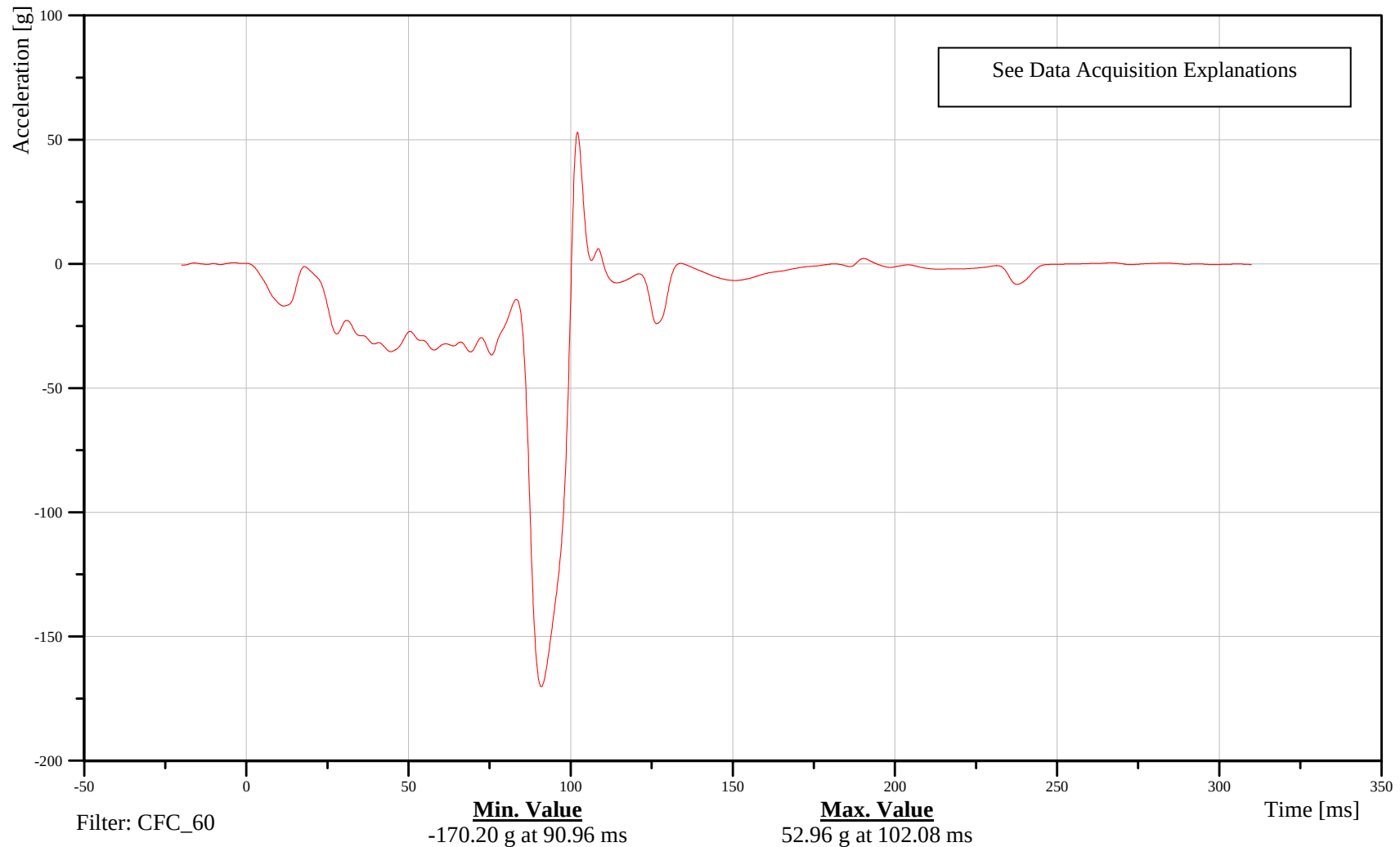
Target Vehicle Rear Tunnel Center X-Axis Acceleration

Customer: VRTC

25TUNNCY0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

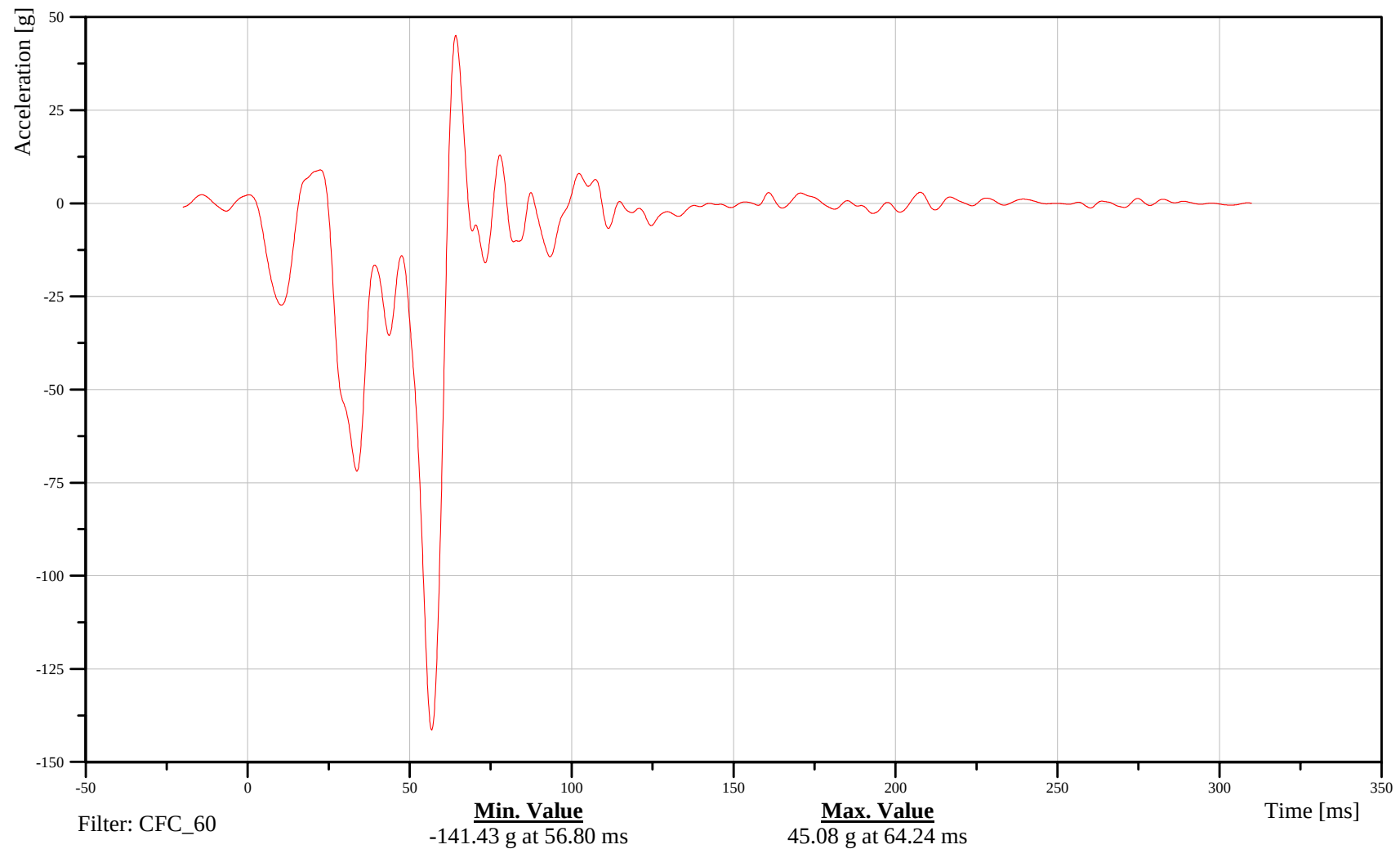
Target Vehicle CG X-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

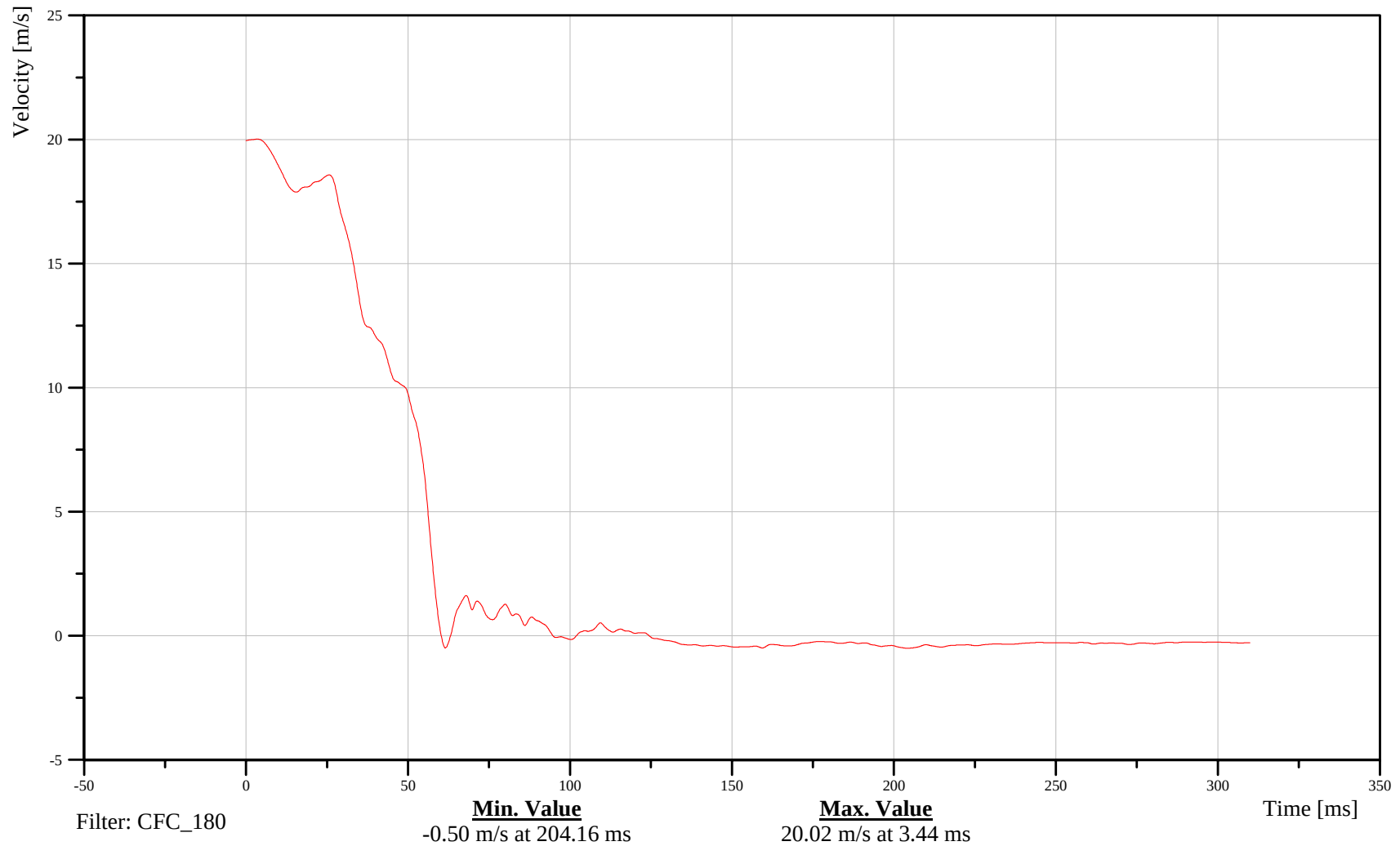
Target Vehicle CG X-Axis Velocity

Customer: VRTC

20VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

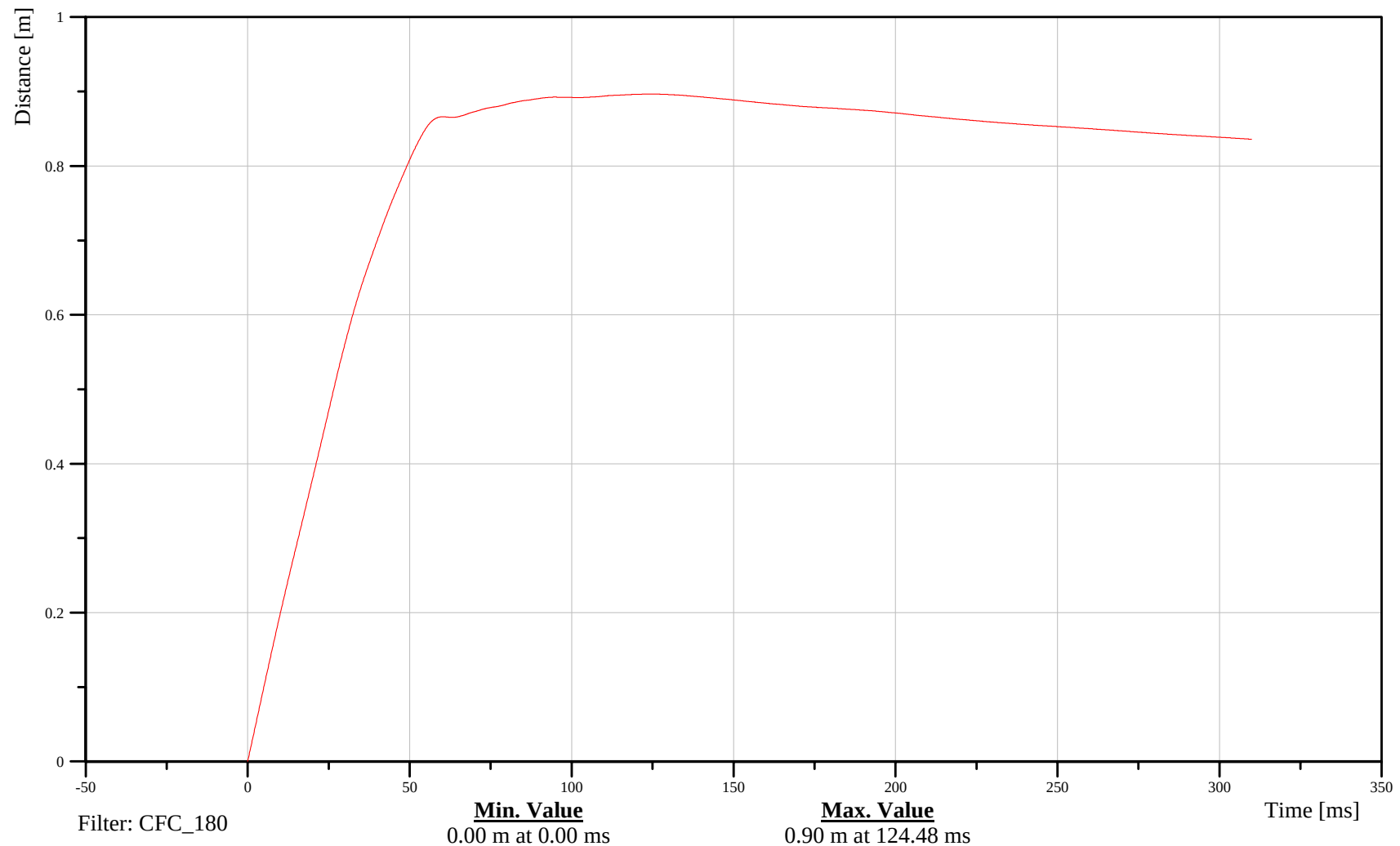
Target Vehicle CG X-Axis Displacement

Customer: VRTC

20VEHCCG0000DCXC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

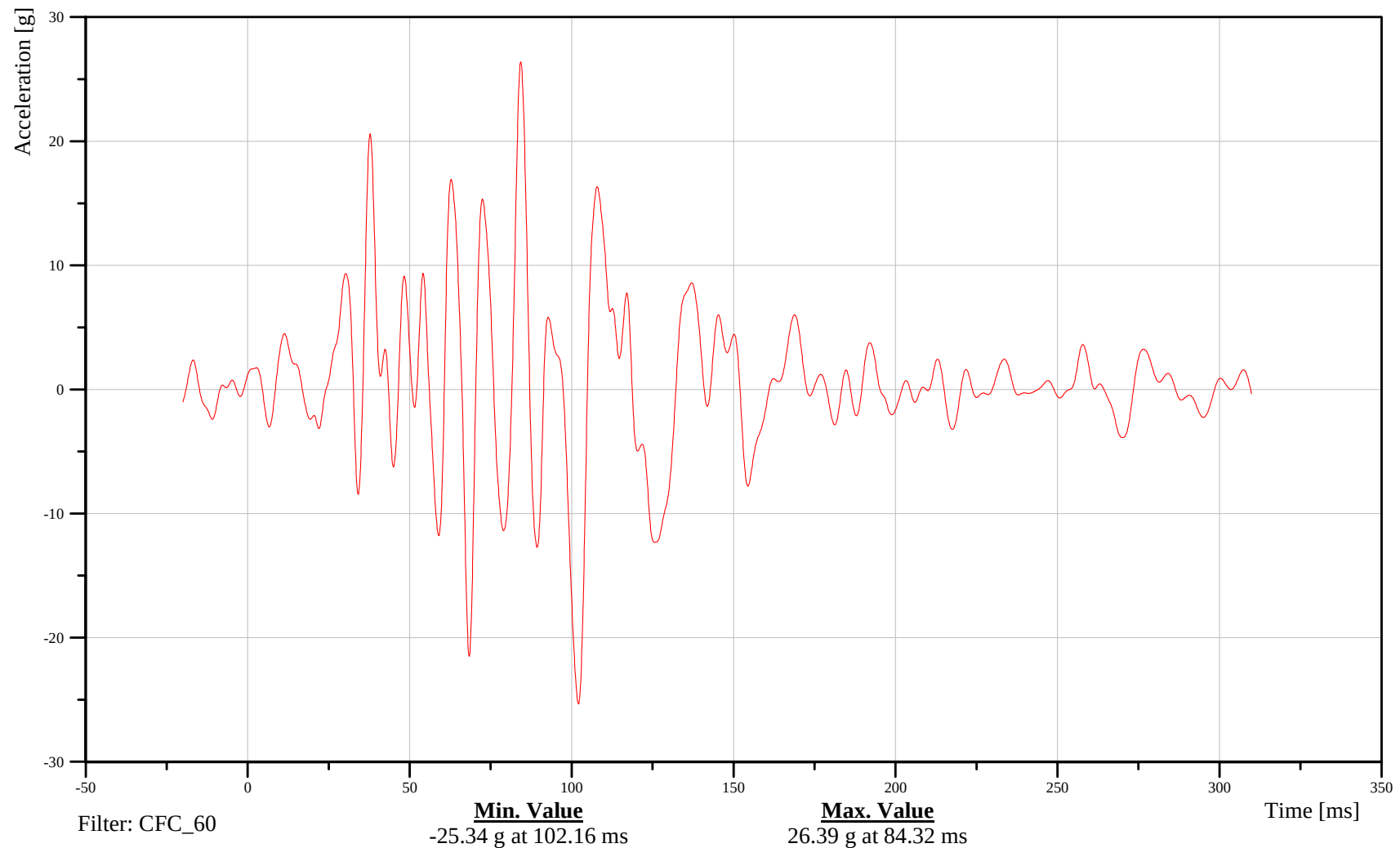
Target Vehicle CG Y-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

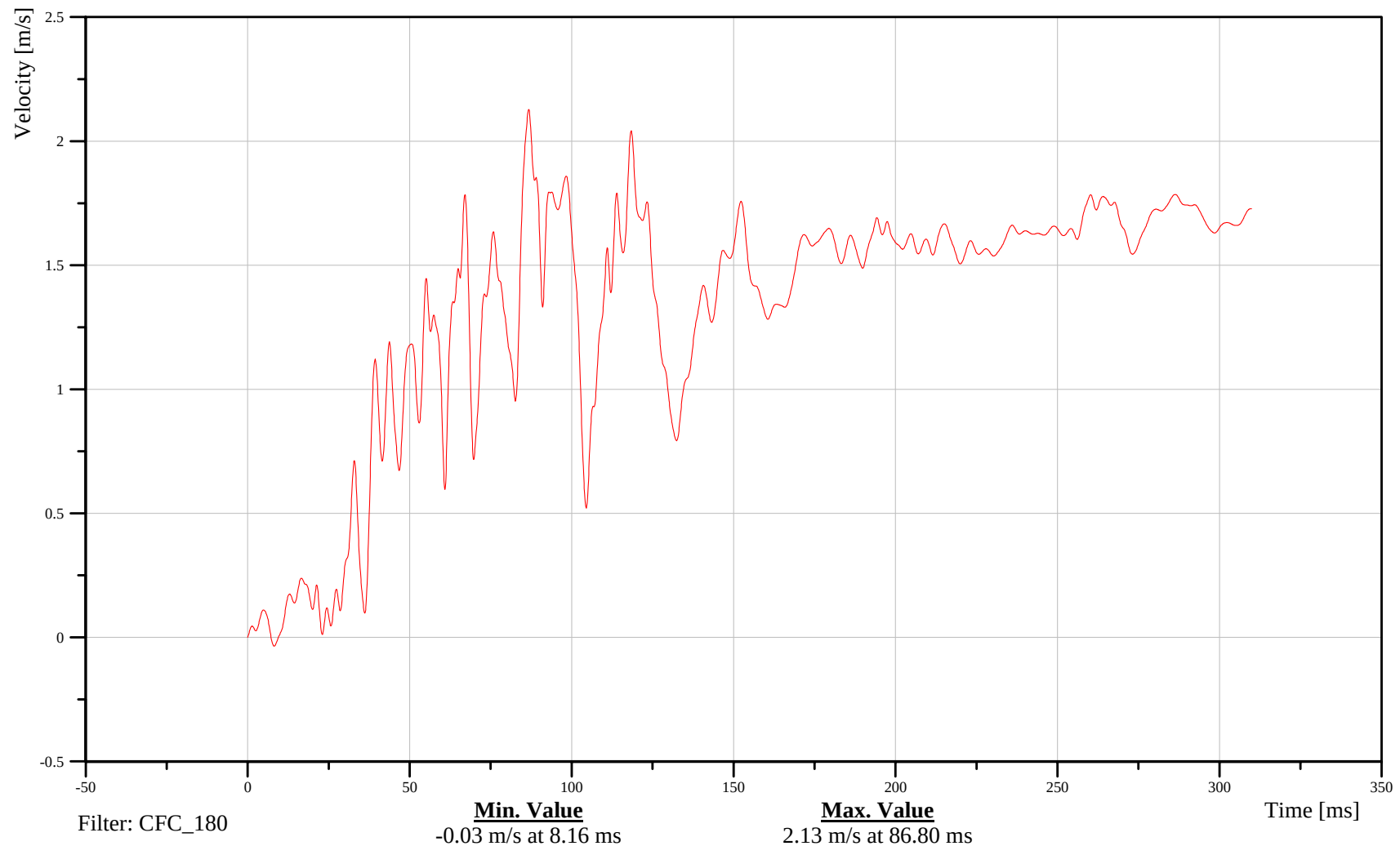
Target Vehicle CG Y-Axis Velocity

Customer: VRTC

20VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

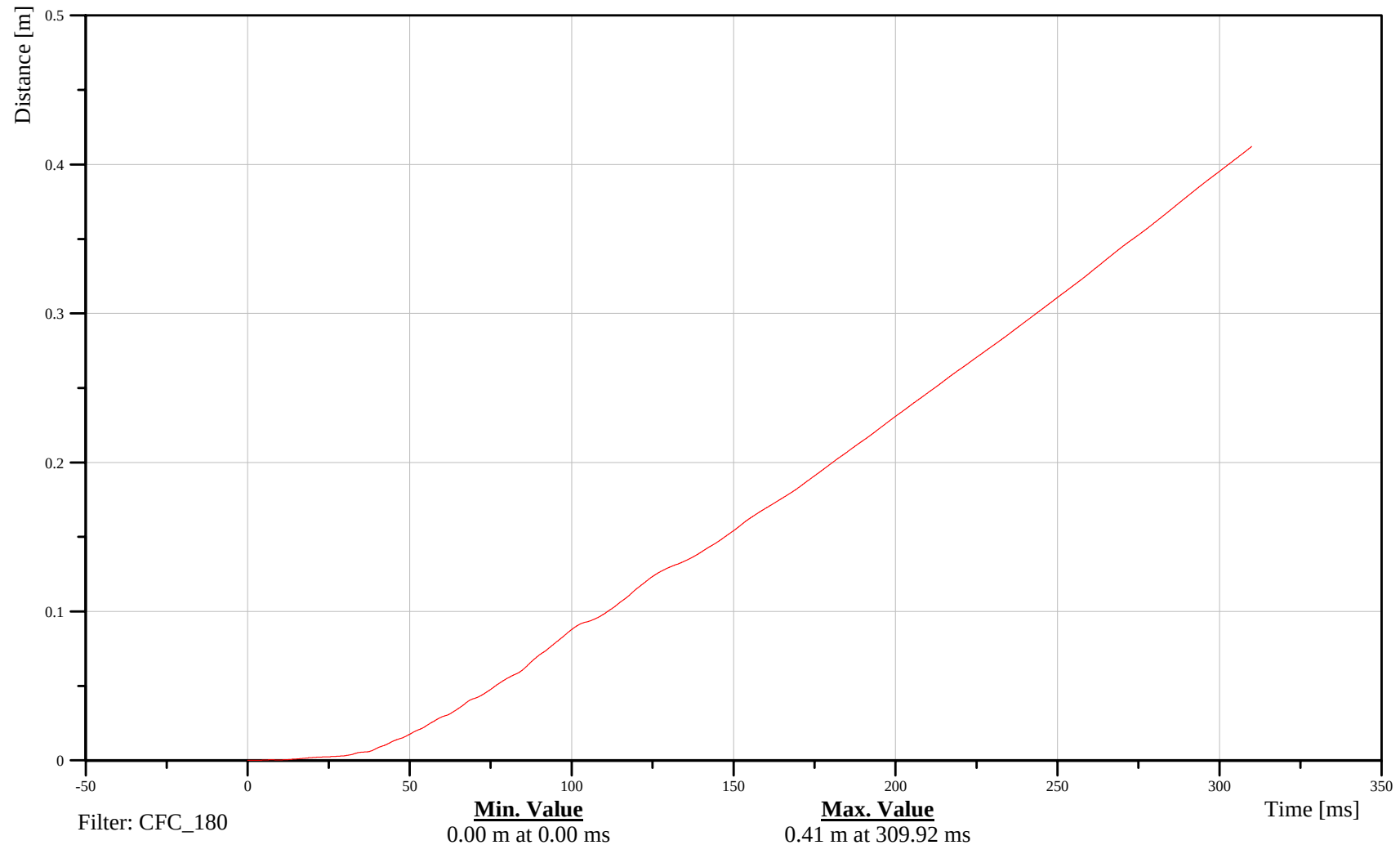
Target Vehicle CG Y-Axis Displacement

Customer: VRTC

20VEHCCG0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

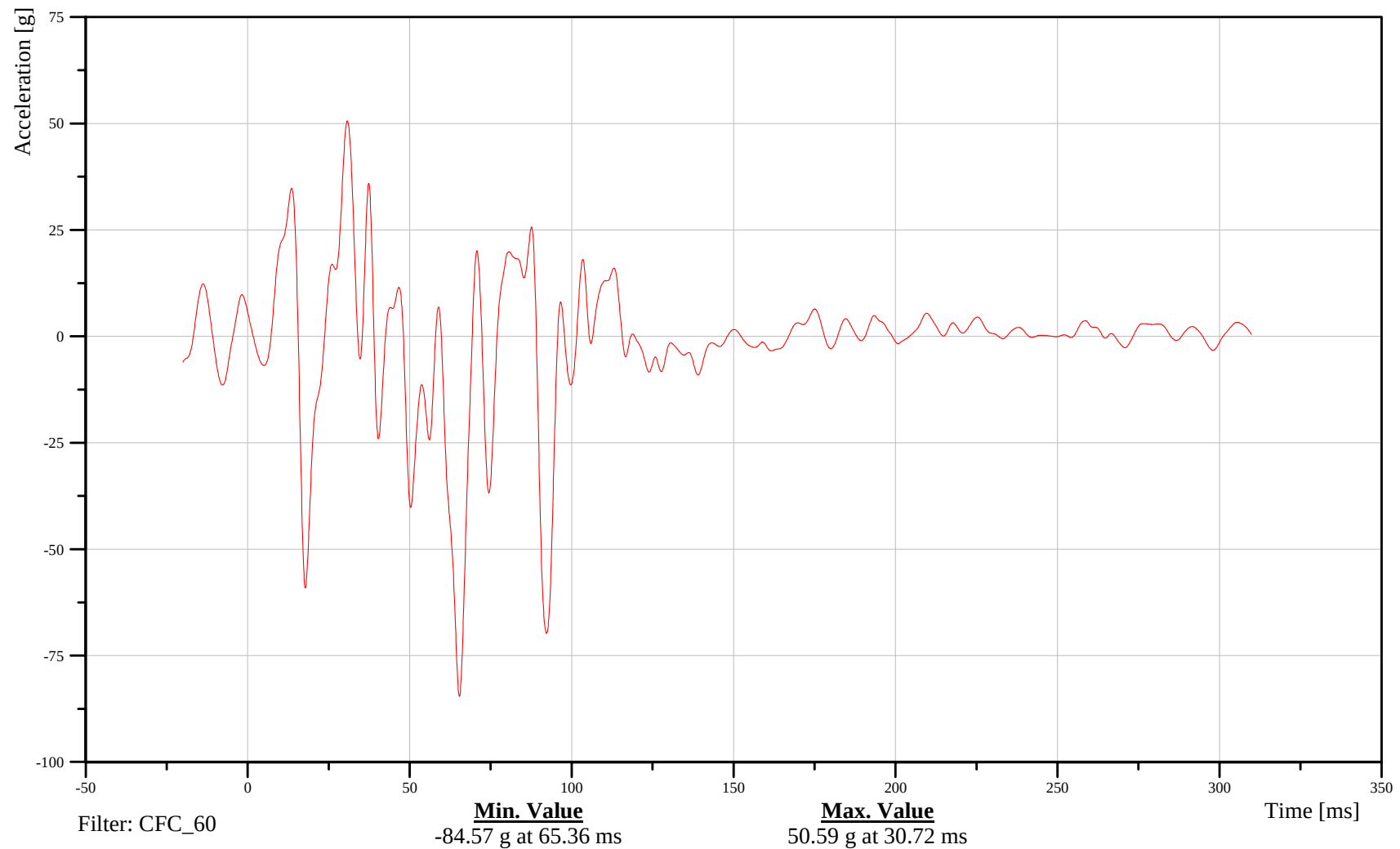
Target Vehicle CG Z-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

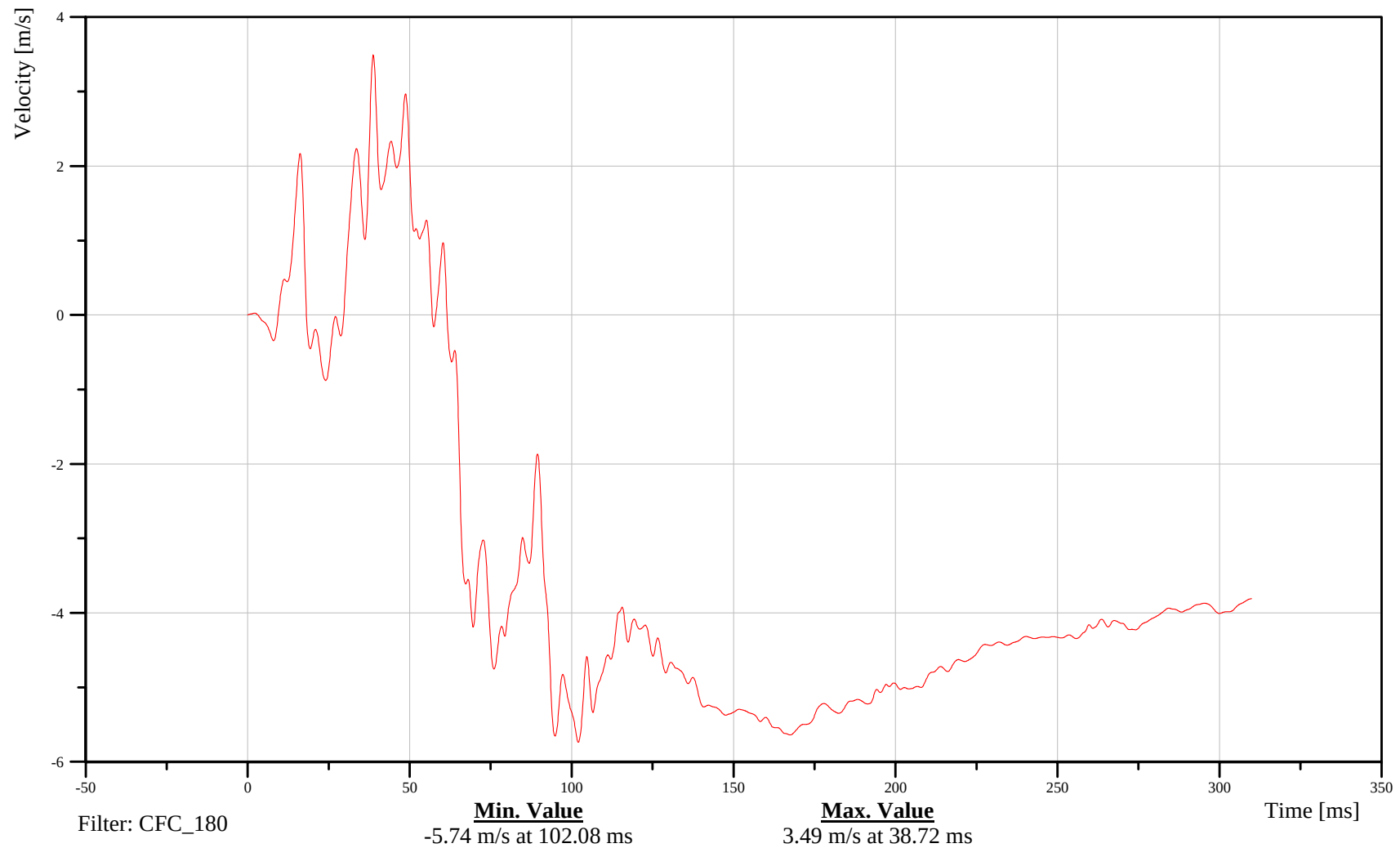
Target Vehicle CG Z-Axis Velocity

Customer: VRTC

20VEHCCG0000VEZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

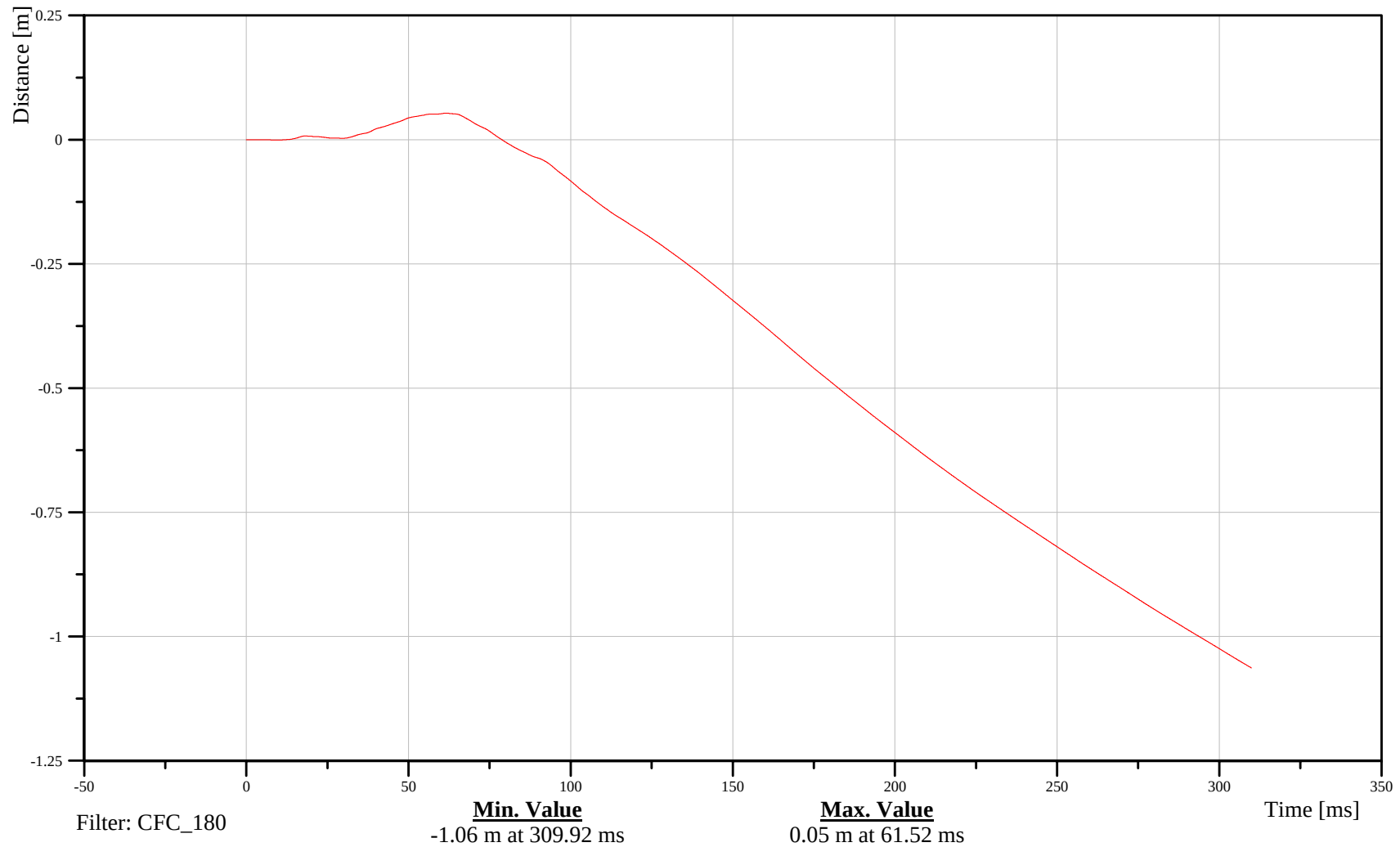
Target Vehicle CG Z-Axis Displacement

Customer: VRTC

20VEHCCG0000DCZC

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

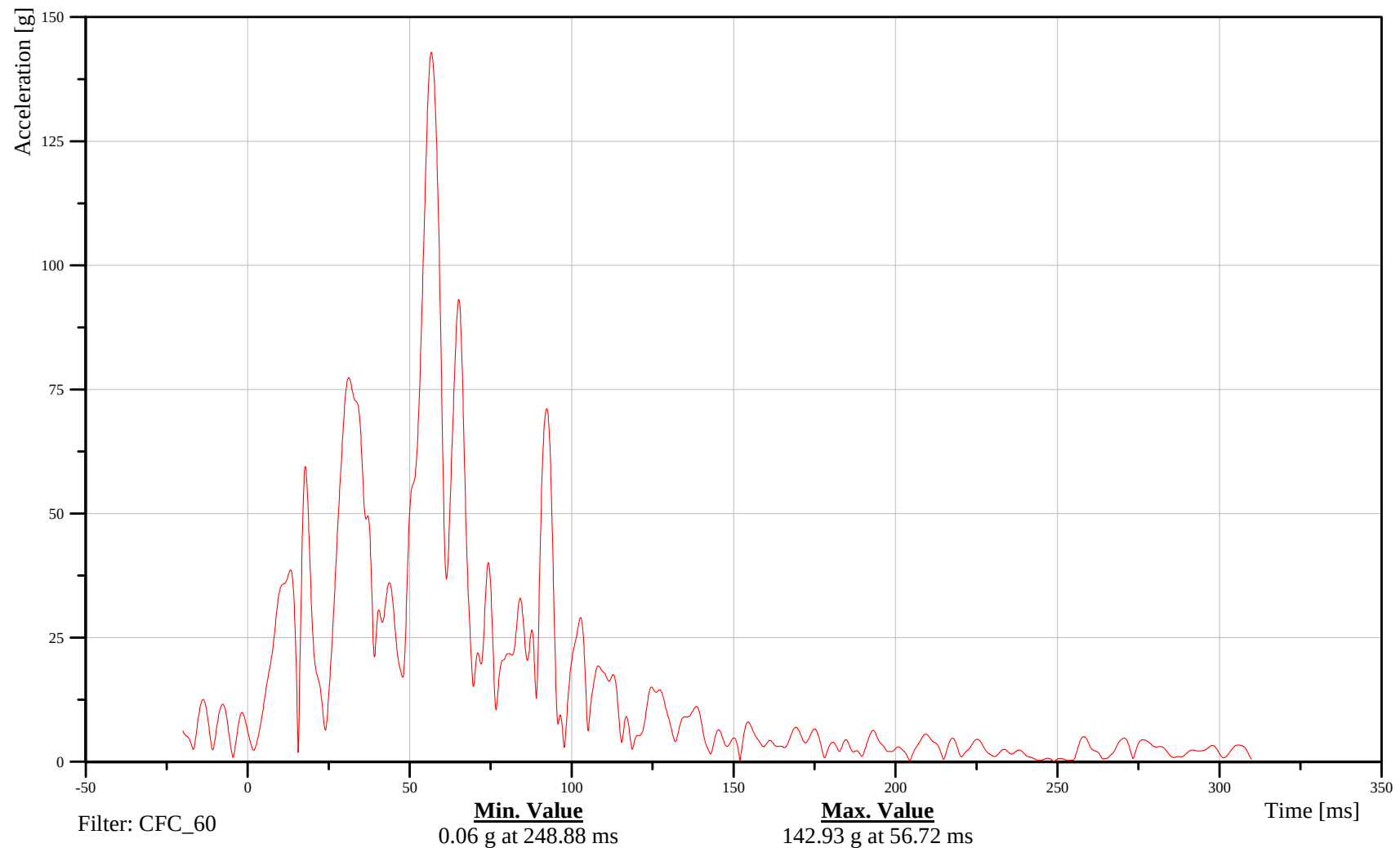
Target Vehicle CG Resultant Acceleration

Customer: VRTC

20VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

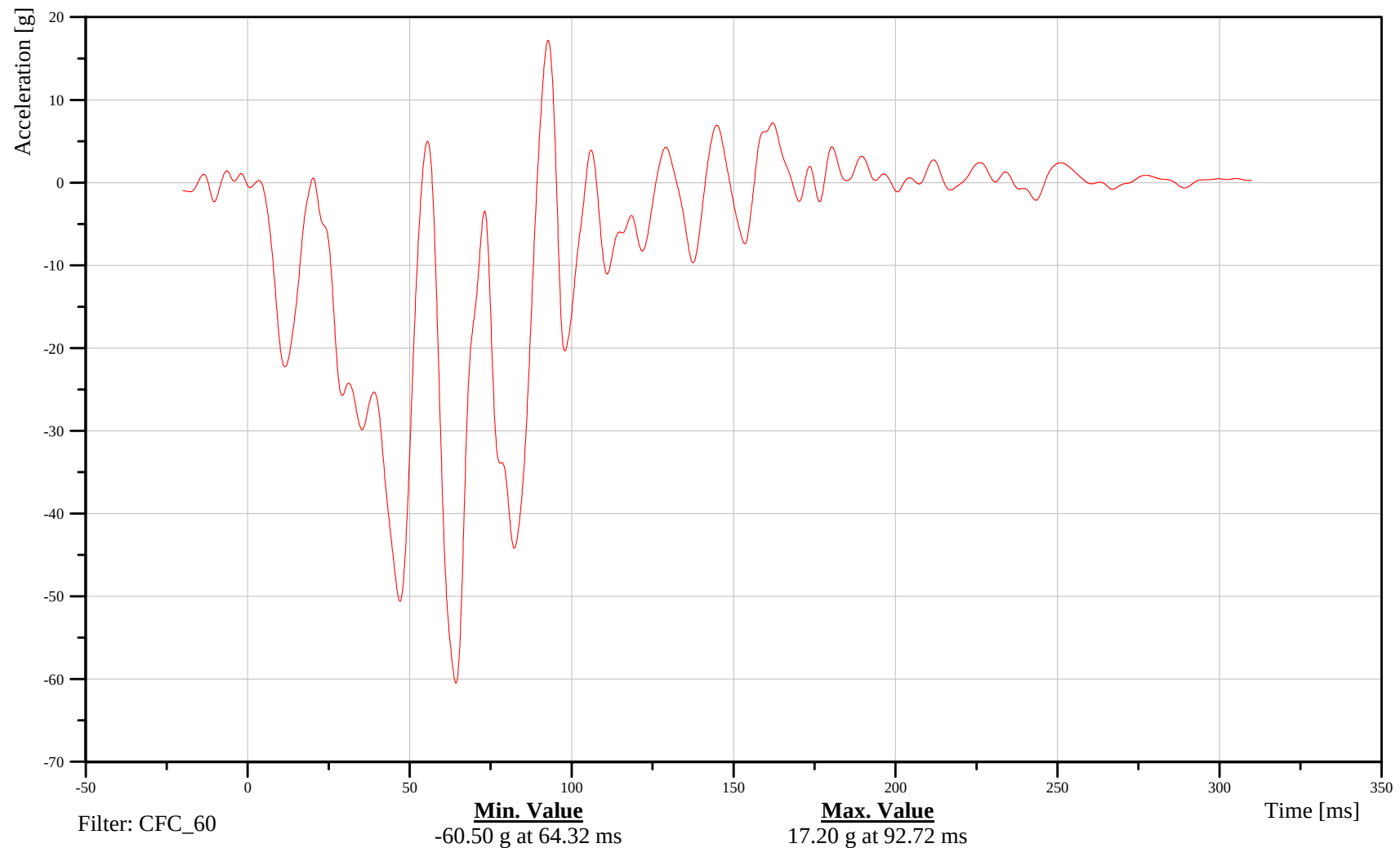
Target Vehicle Rear Deck X-Axis Acceleration

Customer: VRTC

28VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

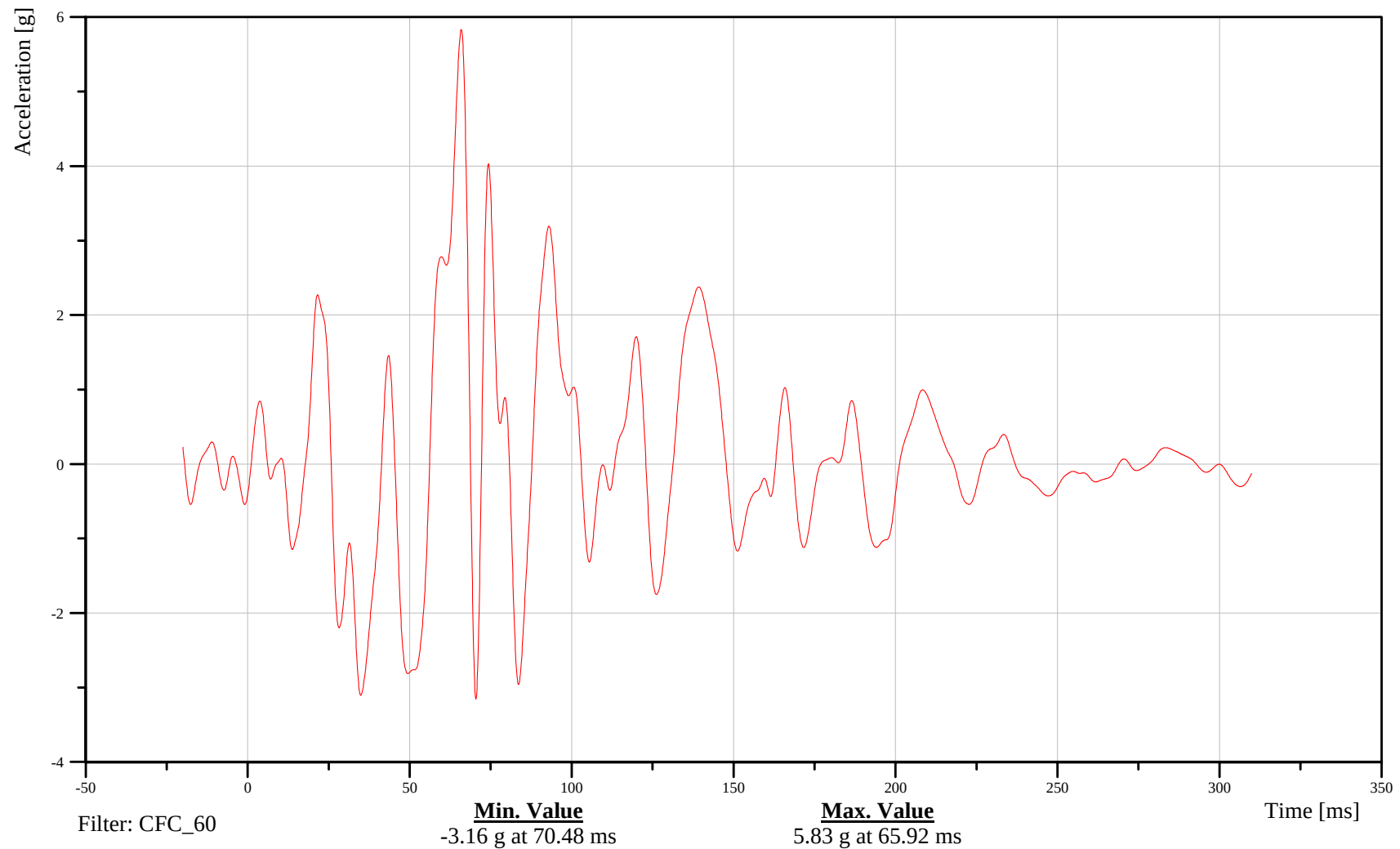
Target Vehicle Rear Deck Y-Axis Acceleration

Customer: VRTC

28VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

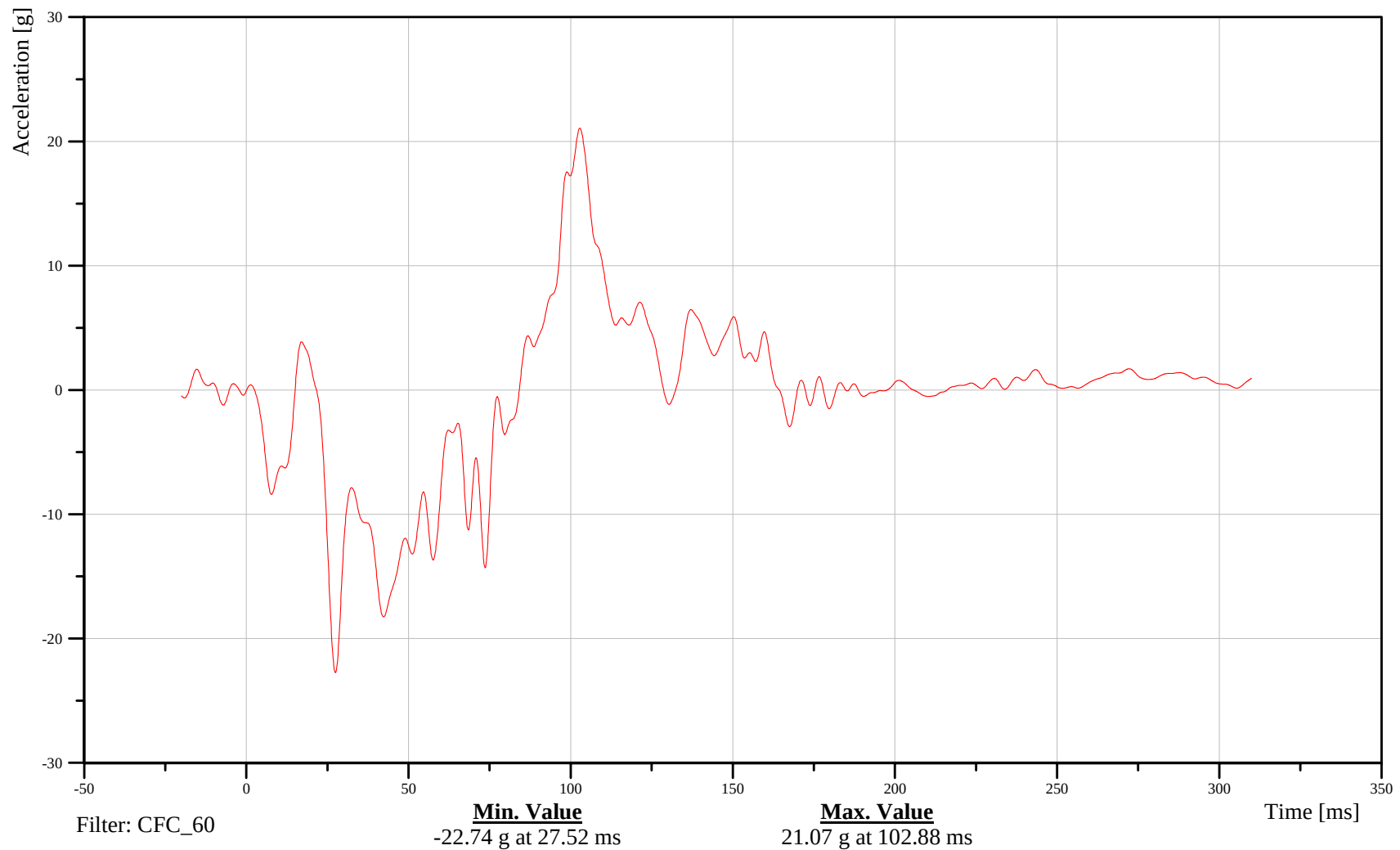
Target Vehicle Rear Deck Z-Axis Acceleration

Customer: VRTC

28VEHC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

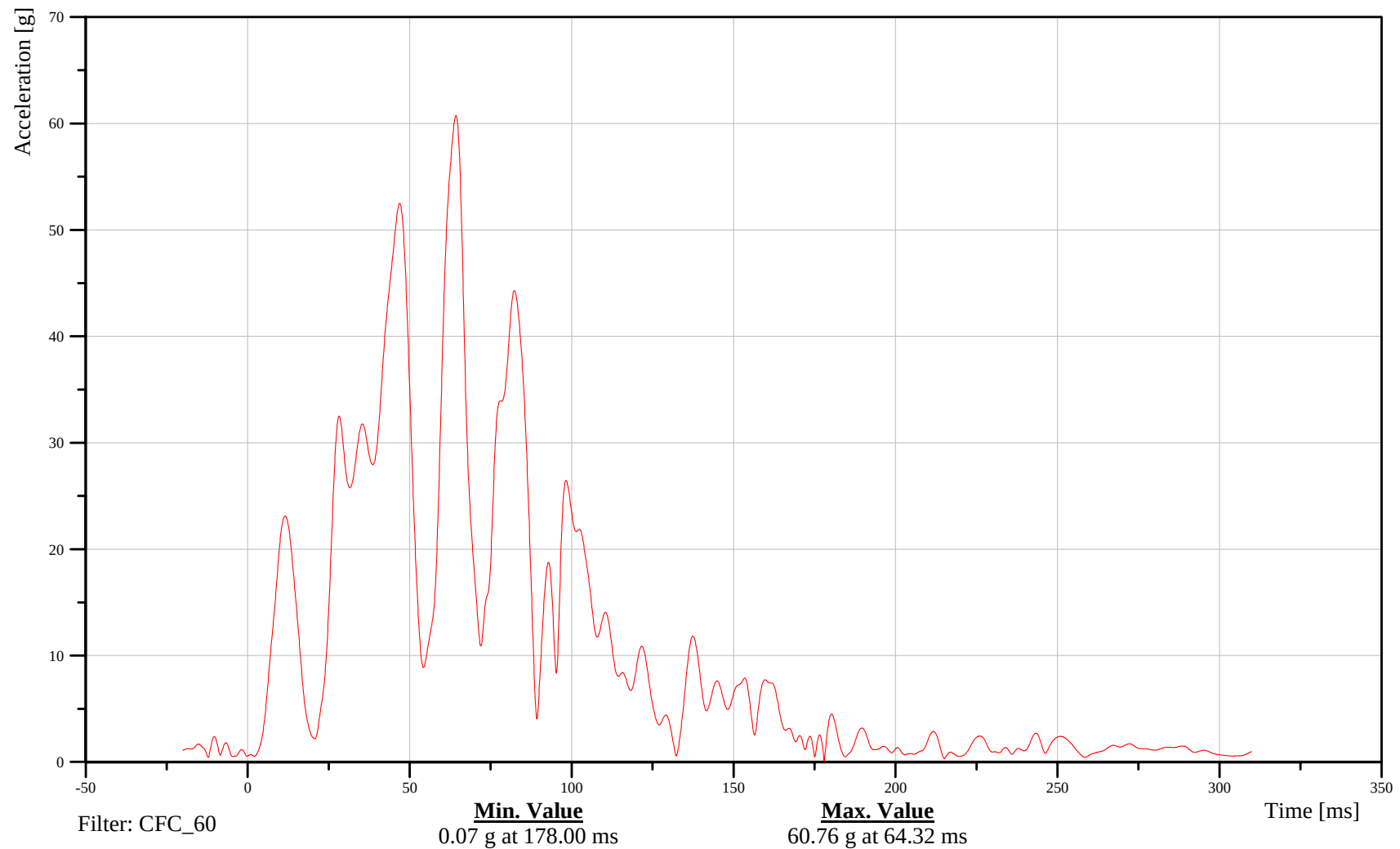
Target Vehicle Rear Deck Resultant Acceleration

Customer: VRTC

28VEHC000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

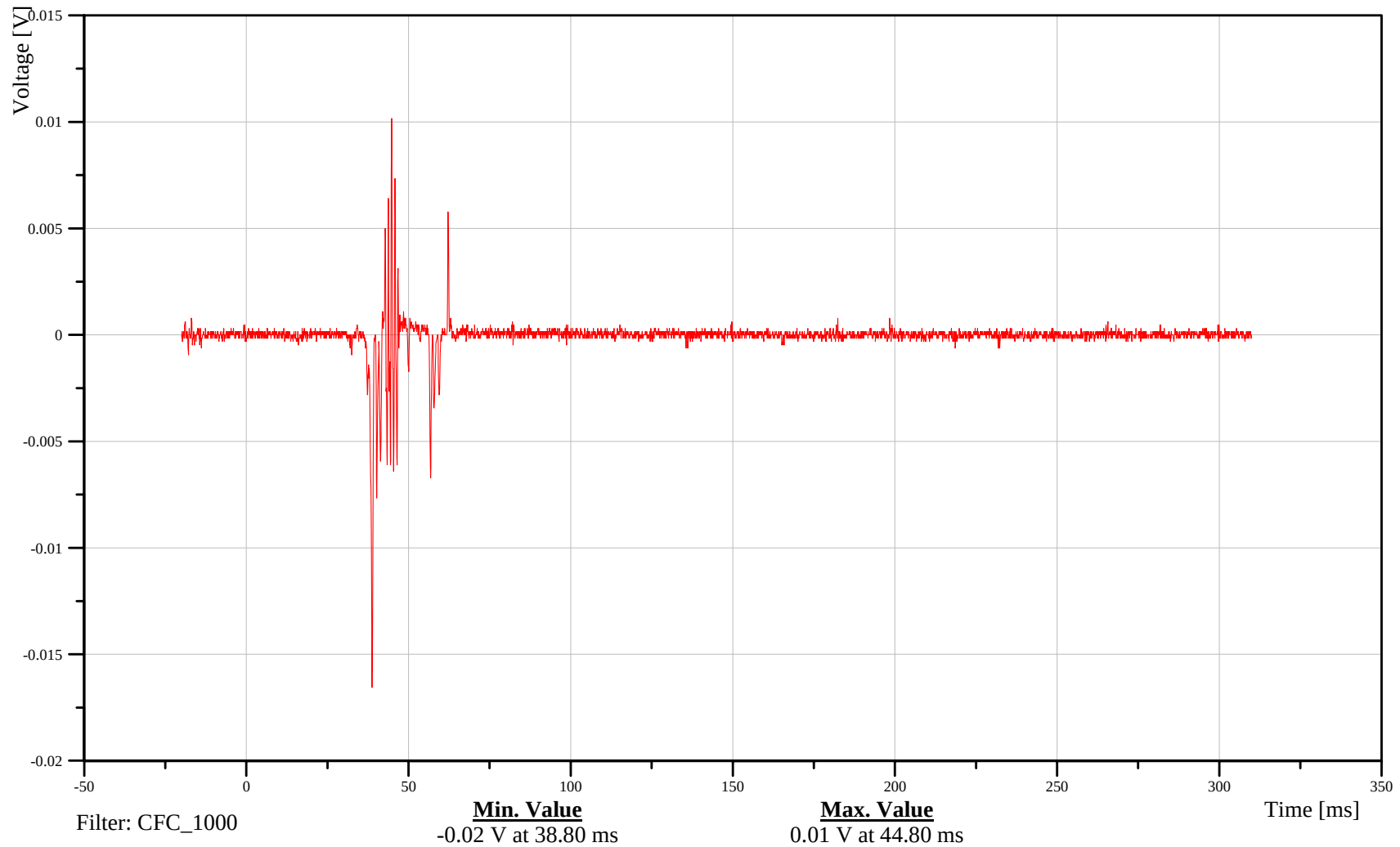
Target Vehicle Driver Airbag - Primary

Customer: VRTC

21AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

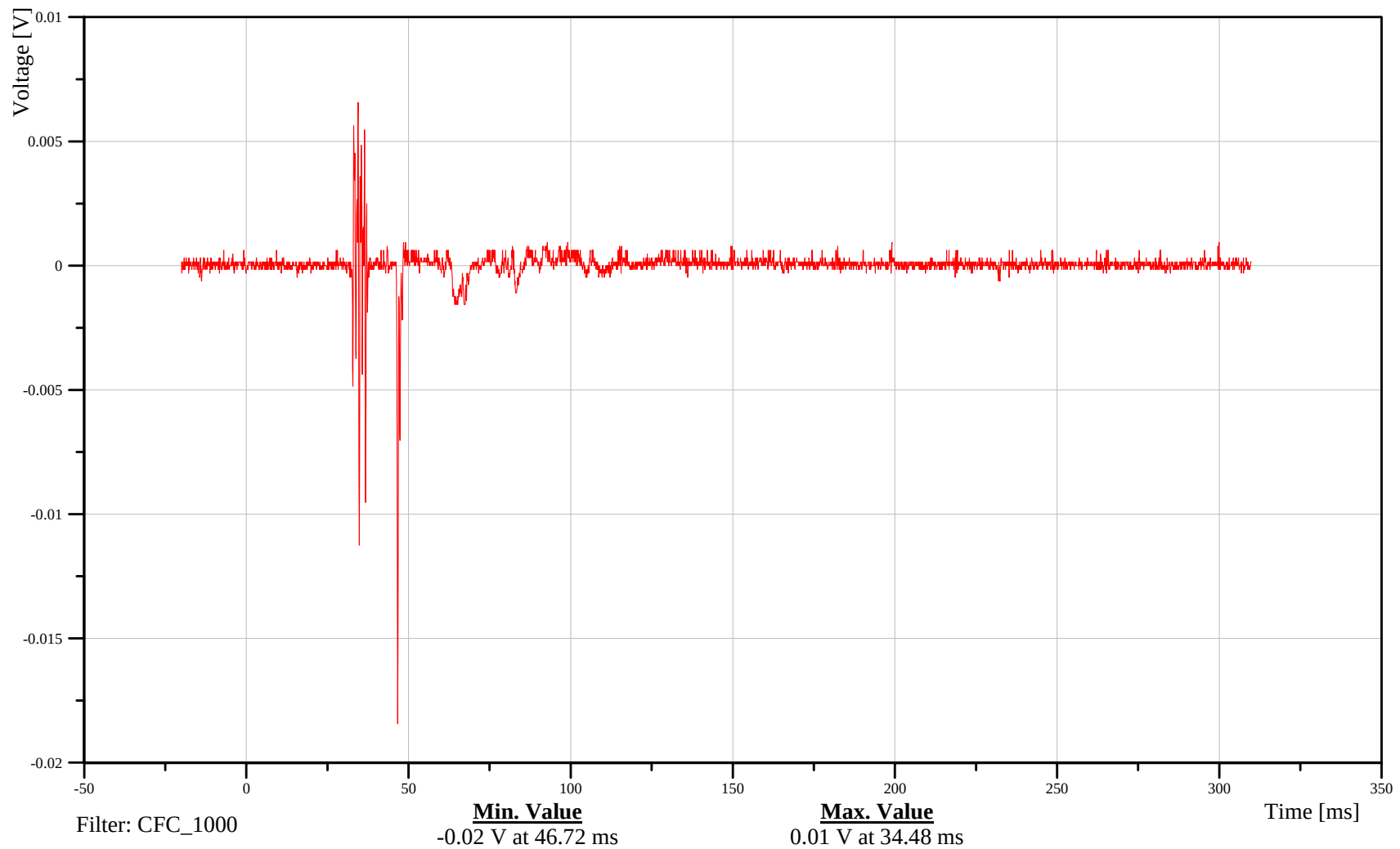
Target Vehicle Driver Airbag - Secondary

Customer: VRTC

21AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

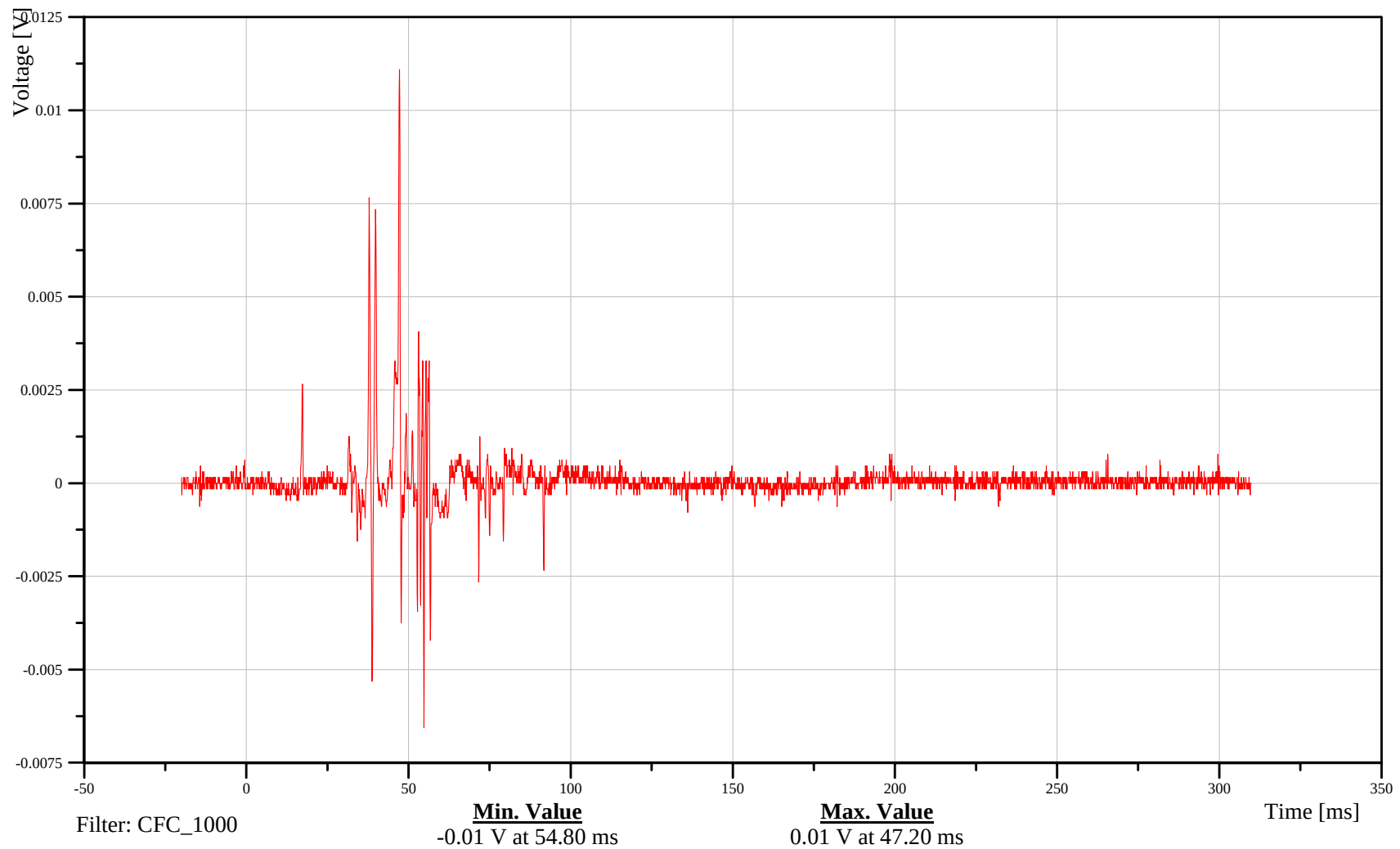
Target Vehicle Passenger Airbag - Primary

Customer: VRTC

23AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006
Time: 11:08

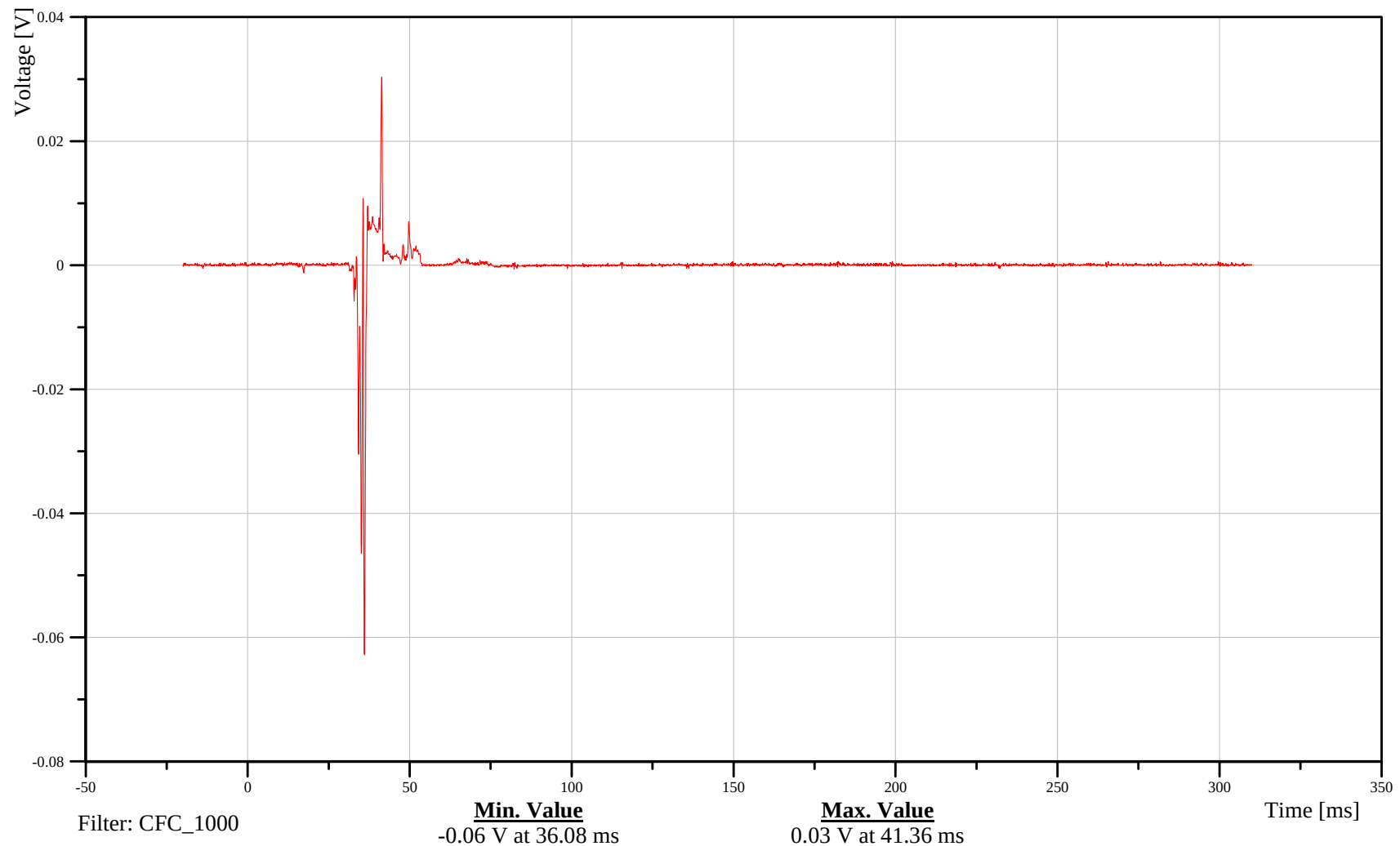
Target Vehicle Passenger Airbag - Secondary

Customer: VRTC

23AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

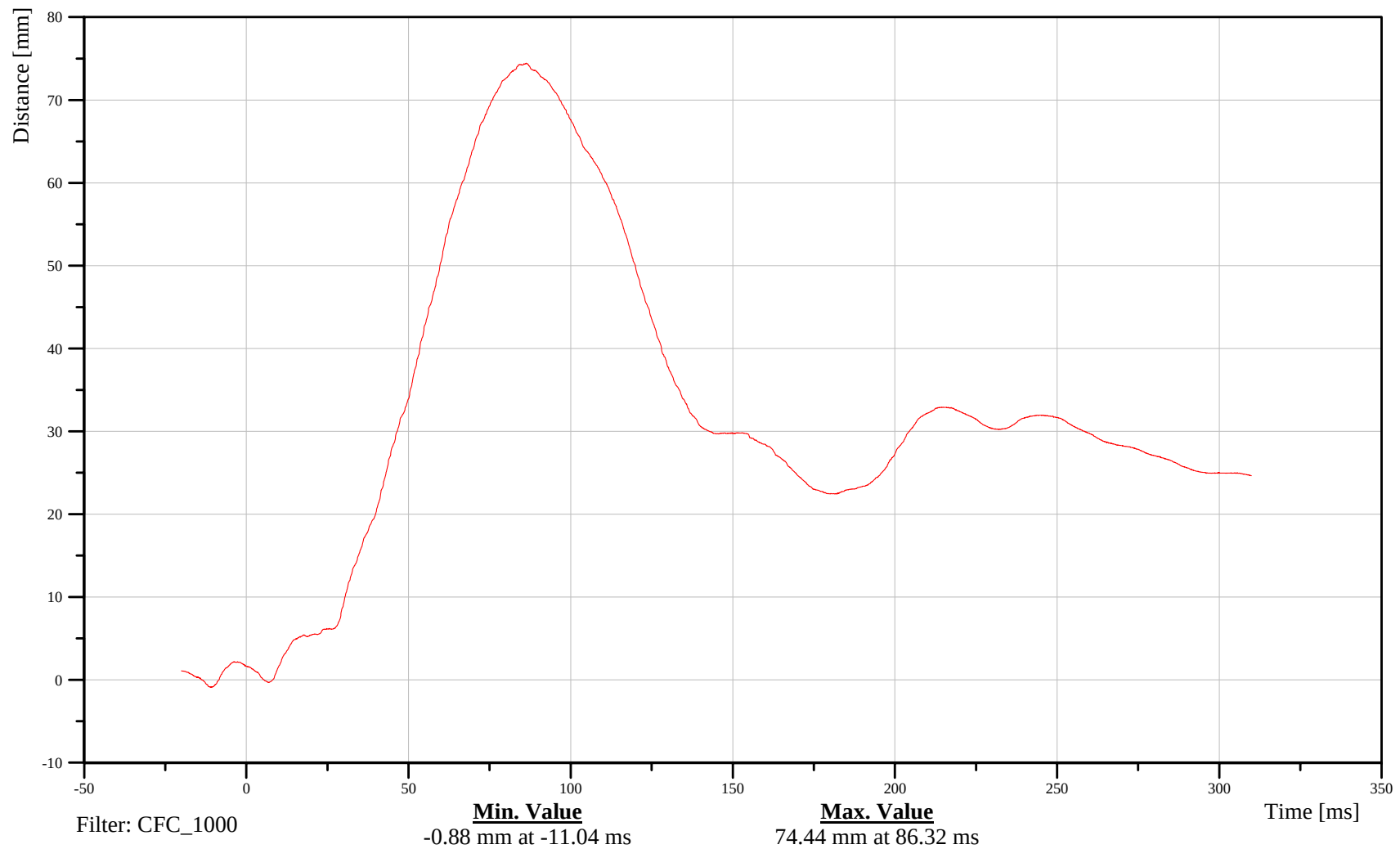
Target Vehicle Driver Lap Belt Spool

Customer: VRTC

21SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

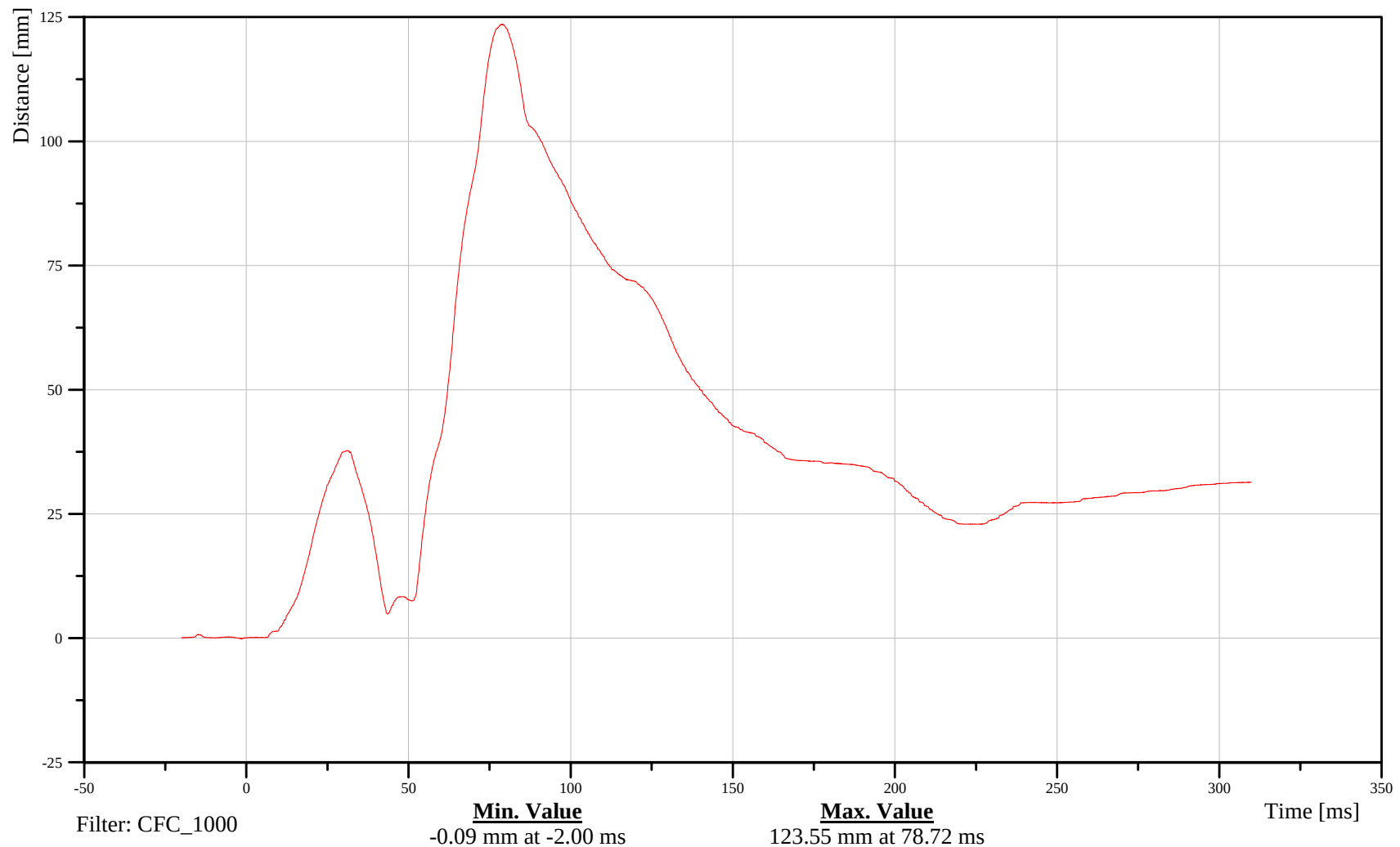
Target Vehicle Driver Shoulder Belt Spool and Retraction

Customer: VRTC

21SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

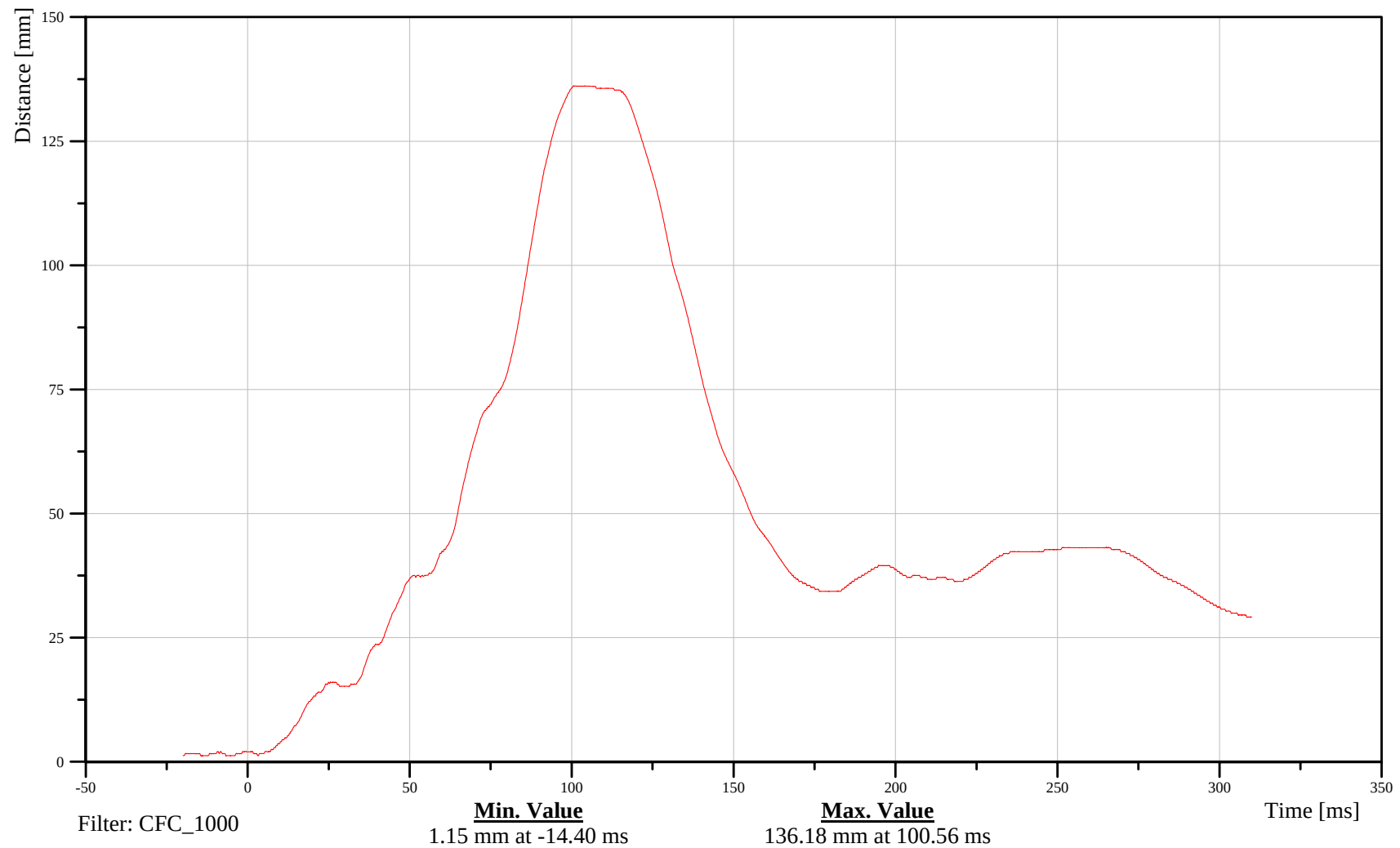
Target Vehicle RF Pass Lap Belt Spool

Customer: VRTC

23SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Date: 03/27/2006

Time: 11:08

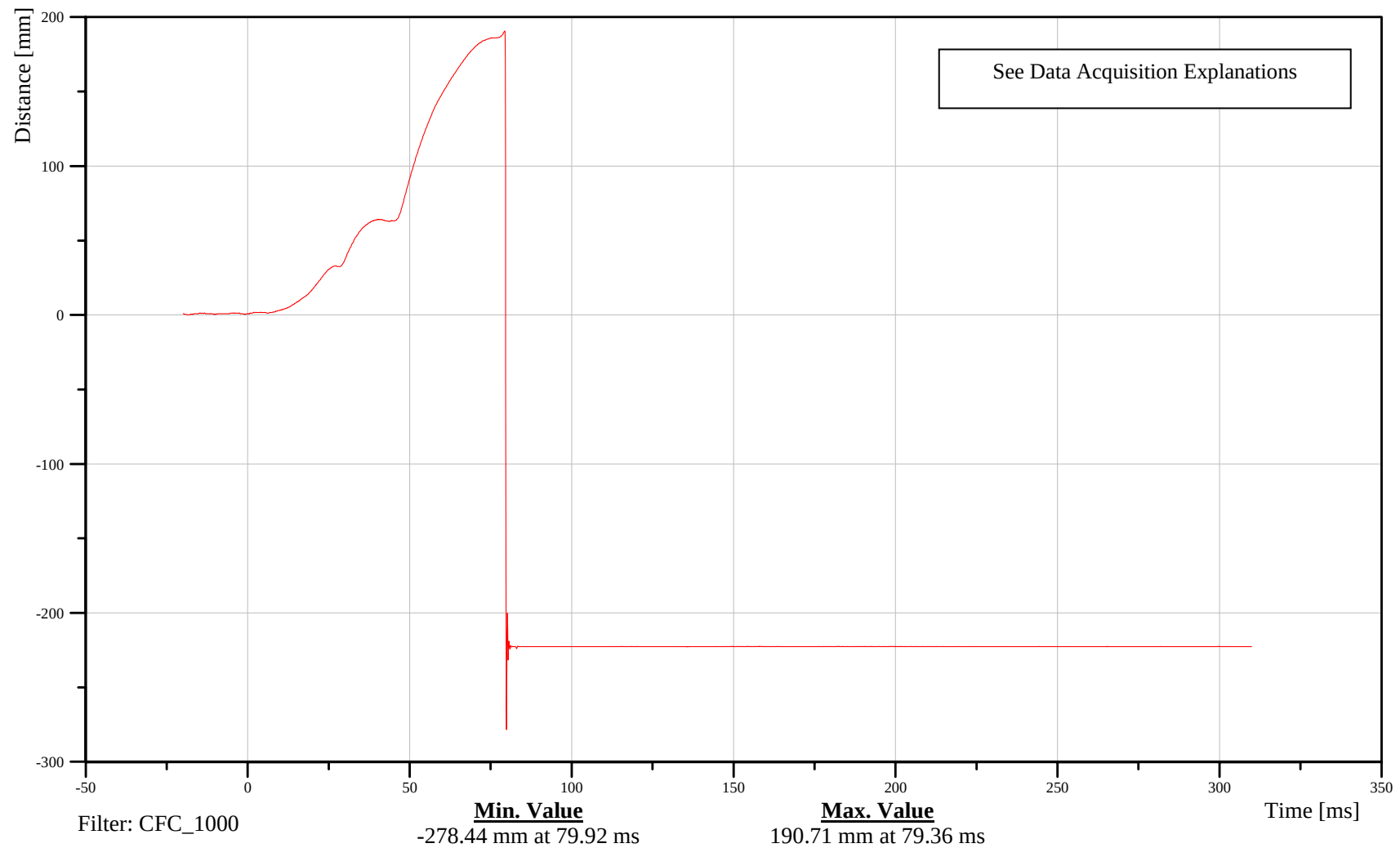
Target Vehicle RF Pass Shoulder Belt Spool and Retraction

Customer: VRTC

23SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060324





2006 Honda Ridgeline into 2002 Ford Focus Full Frontal Collinear

Target Vehicle IP Center

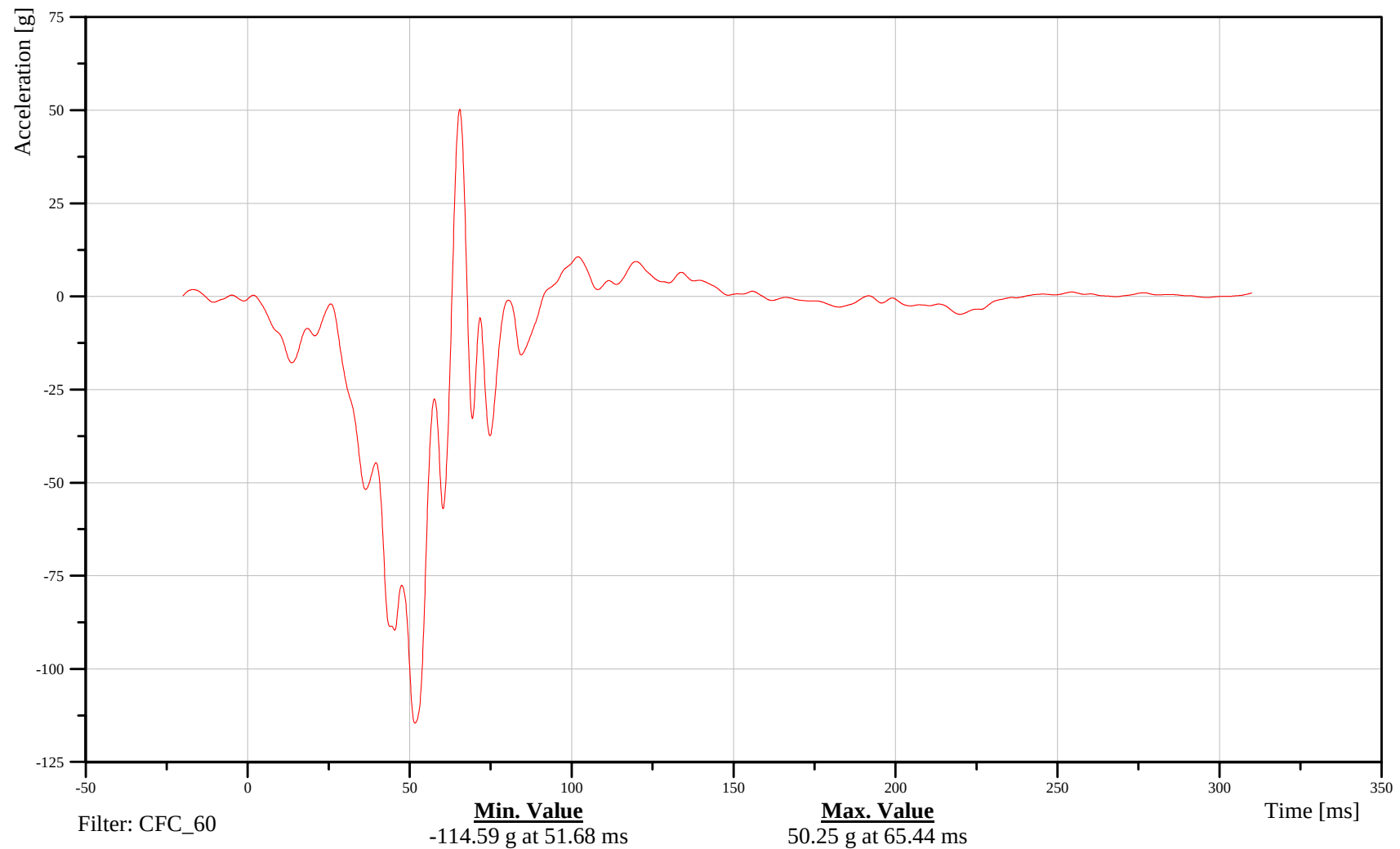
Date: 03/27/2006
Time: 11:08

Customer: VRTC

22DASH000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060324



Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

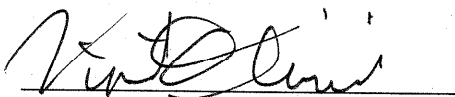
Target Vehicle Driver Dummy S/N: 110

Transportation Research Center Inc.
572E HIII 50th Male Dummy
External Dimensions
Serial No. 110 w/ THOR-LX Calibration No. 23

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	883	Yes
B	Shoulder Pivot Height	505.5 - 520.7	513	Yes
C	H-Point Height	83.8 - 88.9	86	Yes
D	H-Point From Seatback	134.6 - 139.7	137	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	92	Yes
F	Thigh Clearance	139.7 - 154.9	152	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	291	Yes
H	Skull Cap To Backline	40.6 - 45.7	43	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	340	Yes
J	Elbow Rest Height	190.5 - 210.8	208	Yes
K	Buttock Knee Length	579.1 - 604.5	601	Yes
L	Popliteal Height	429.3 - 454.7	440	Yes
M	Knee Pivot Height	485.1 - 500.4	498	Yes
N	Buttock Popliteal Length	452.1 - 477.5	471	Yes
O	Chest Depth	213.4 - 228.6	220	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	983	Yes
Z	Waist Circumference	835.7 - 866.1	860	Yes
AA	Location For Chest Circumference	429.3 - 434.3	432	Yes
BB	Location For Waist Circumference	226.1 - 231.1	228	Yes

* Partial Set

Technician



Approved



Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 110 Certification No. 24-1

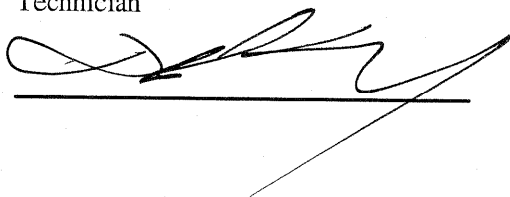
Test Date: 03/21/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	260.2 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	1.7 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved

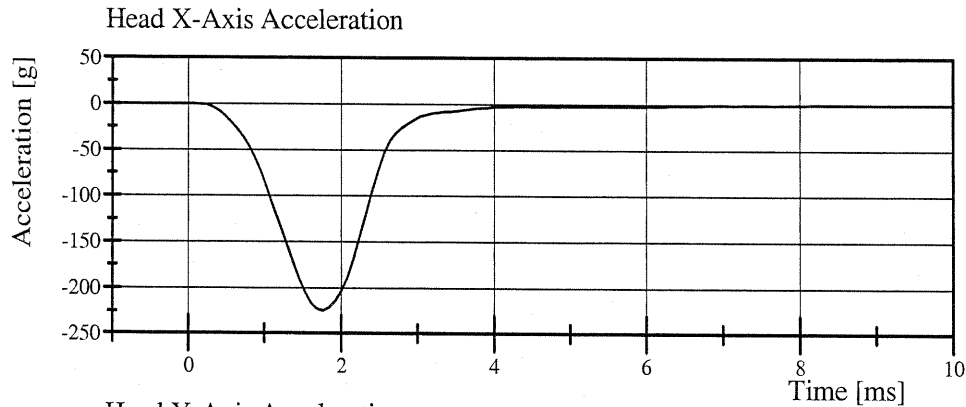


Transportation Research Center Inc.

Front Head Drop

HIH 50th Serial No. 110 Certification No. 24-1

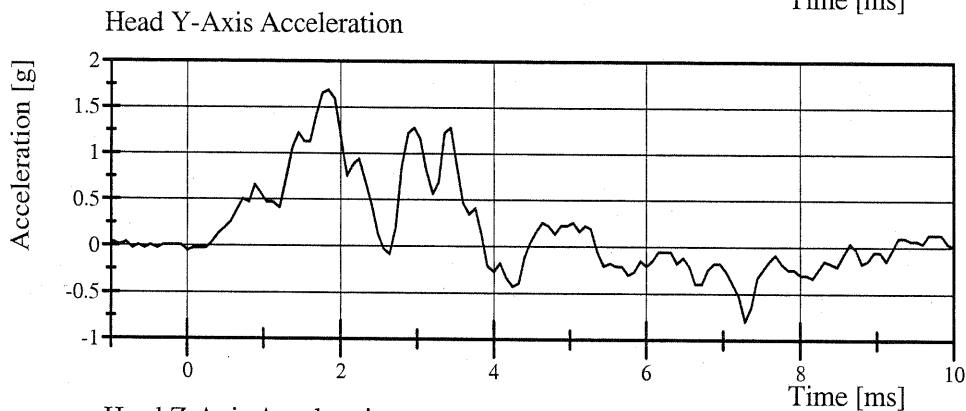
Test Date: 03/21/2006



Filter Class: CFC_1000

Max: 0.2 g at 9.1 ms

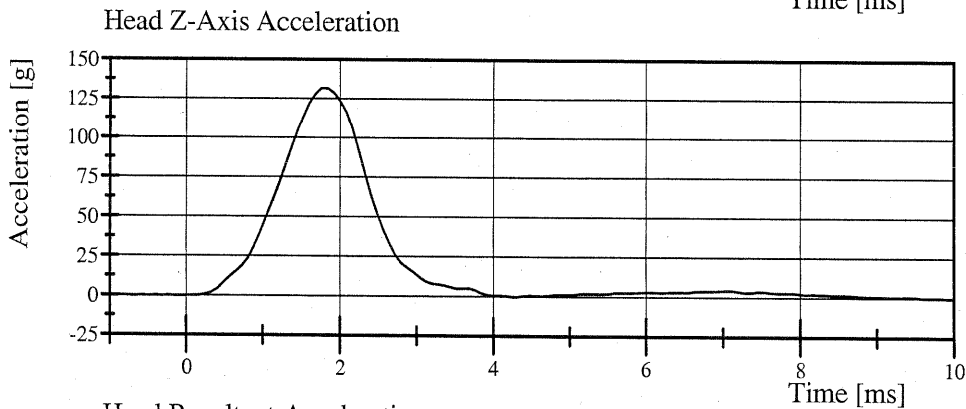
Min: -224.3 g at 1.8 ms



Filter Class: CFC_1000

Max: 1.7 g at 1.8 ms

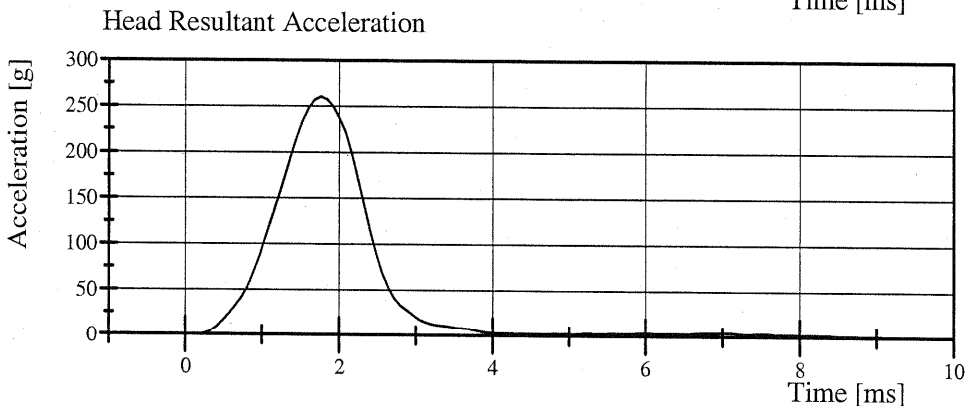
Min: -0.8 g at 7.3 ms



Filter Class: CFC_1000

Max: 131.9 g at 1.8 ms

Min: -0.2 g at 10.0 ms



Filter Class: CFC_1000

Max: 260.2 g at 1.8 ms

Min: 0.0 g at -0.6 ms

Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 110 Certification No. 23-1

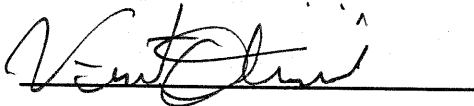
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.930 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	40.3 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-22.84 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-21.07 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-15.69 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-15.69 g	Yes
Total Head D-Plane Rotation Peak	(-64) - (-78) °	-68.2 °	Yes
Time of Peak	57 - 64 ms	60.5 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	122.2 ms	Yes
Total Neck Occipital Condyles Moment Peak	88 - 108 N·m	101.6 N·m	Yes
Time of Peak	47 - 58 ms	52.0 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	100.8 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



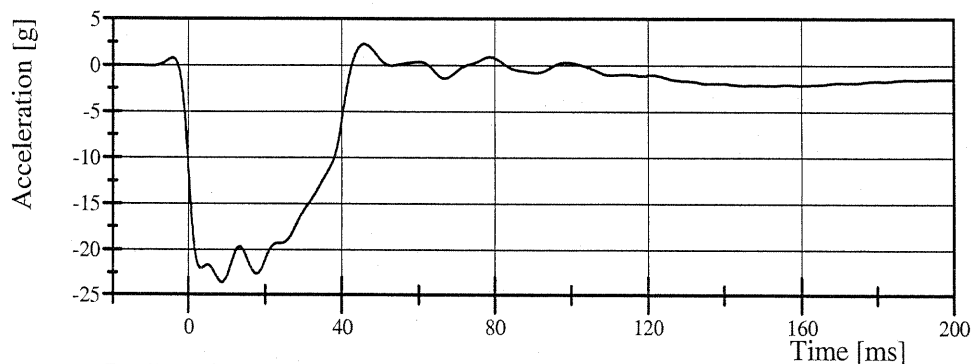
Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 110 Certification No. 23-1

Test Date: 03/16/2006

Pendulum Acceleration

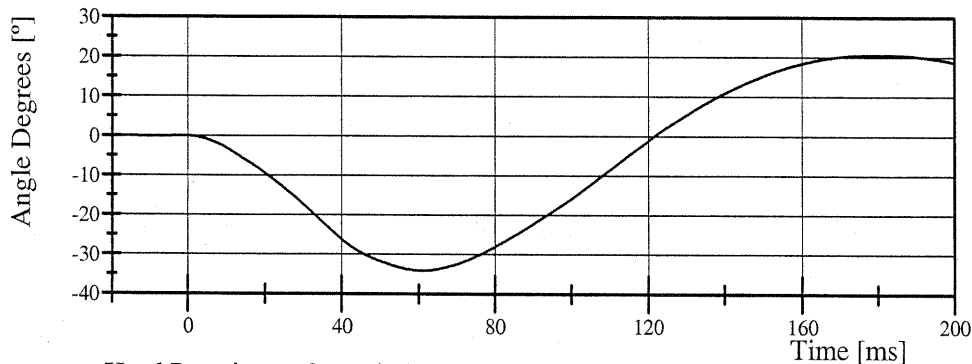


Filter Class: CFC_60

Max: 2.3 g at 45.8 ms

Min: -23.6 g at 8.6 ms

Pot Rotation at the Base of Neck

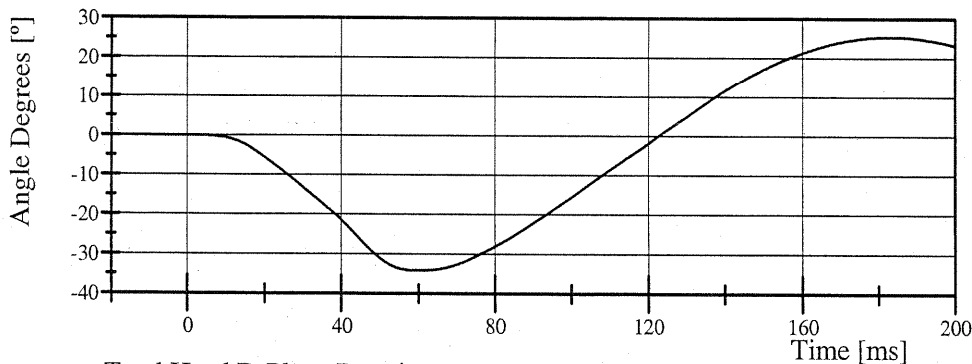


Filter Class: CFC_60

Max: 20.7 ° at 180.5 ms

Min: -34.0 ° at 60.9 ms

Head Rotation at Occypital Condyles

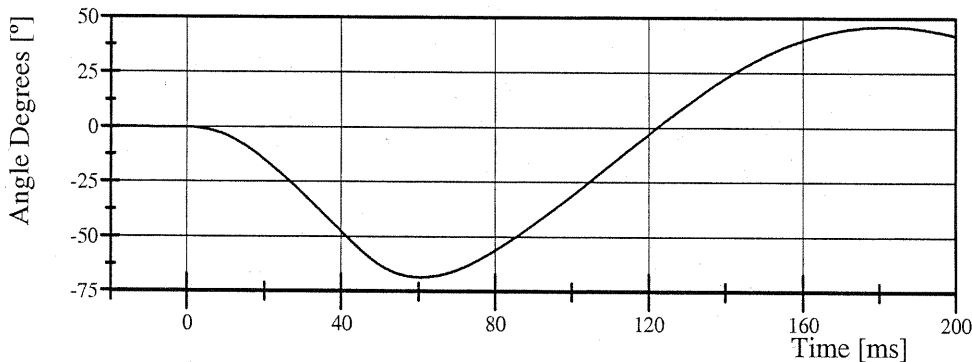


Filter Class: CFC_60

Max: 25.5 ° at 183.1 ms

Min: -34.2 ° at 59.7 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 46.2 ° at 182.2 ms

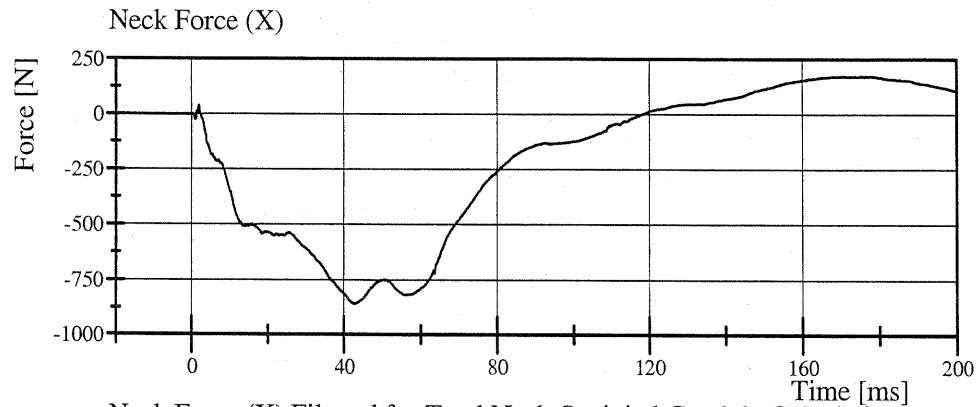
Min: -68.2 ° at 60.5 ms

Transportation Research Center Inc.

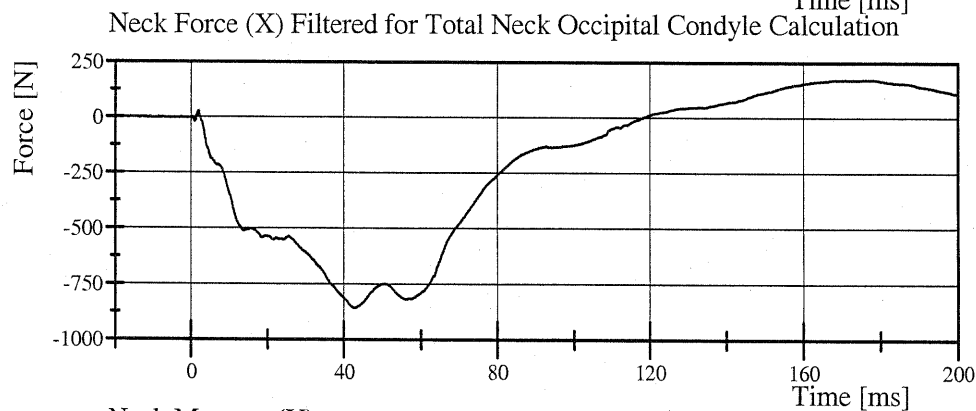
Neck Flexion

HIII 50th Serial No. 110 Certification No. 23-1

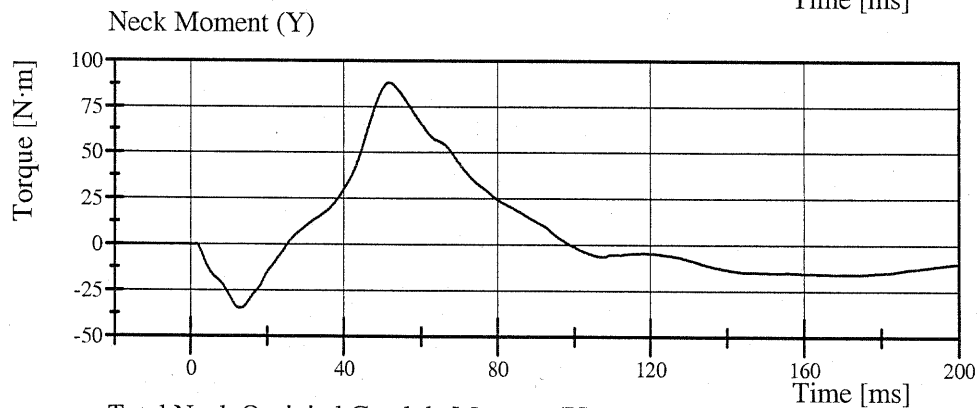
Test Date: 03/16/2006



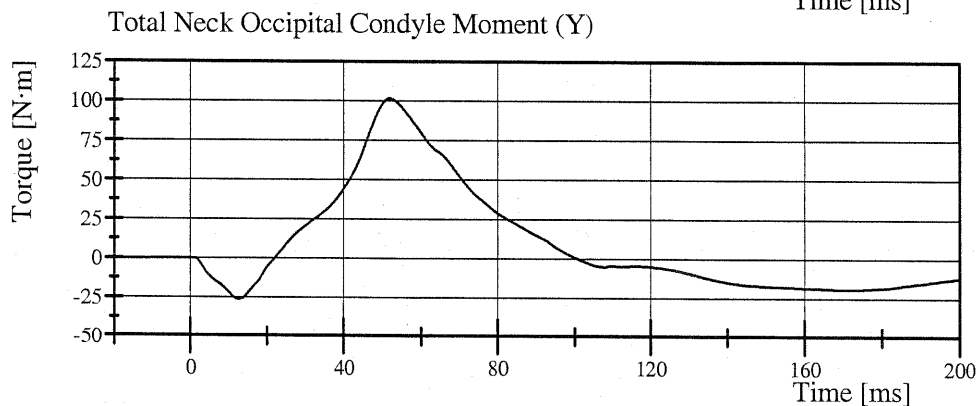
Filter Class: CFC_1000
Max: 173.9 N at 175.4 ms
Min: -856.6 N at 42.8 ms



Filter Class: CFC_600
Max: 173.8 N at 177.8 ms
Min: -856.3 N at 42.8 ms



Filter Class: CFC_600
Max: 88.2 N·m at 51.9 ms
Min: -34.7 N·m at 12.6 ms



Filter Class: CFC_600
Max: 101.6 N·m at 52.0 ms
Min: -26.1 N·m at 12.5 ms

Transportation Research Center Inc.

Neck Extension

HHH 50th Serial No. 110 Certification No. 23-1

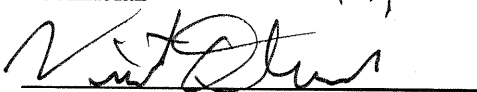
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.975 m/s	Yes
Pendulum Acceleration Decay			
Crossing 5g	38 - 46 ms	45.9 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	17.80 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	15.62 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	13.10 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	13.10 g	Yes
Total Head D-Plane Rotation			
Peak	81 - 106 °	90.1 °	Yes
Time of Peak	72 - 82 ms	78.3 ms	Yes
Total Head D-Plane Rotation			
Decay to 0°	147 - 174 ms	159.4 ms	Yes
Total Neck Occipital Condyles Moment			
Peak	(-53) - (-80) N·m	-65.1 N·m	Yes
Time of Peak	65 - 79 ms	73.1 ms	Yes
Total Neck Occipital Condyles Moment			
Decay to 0 N·m	120 - 148 ms	143.4 ms	Yes

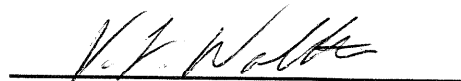
Test meets specifications.

Comments:

Technician



Approved

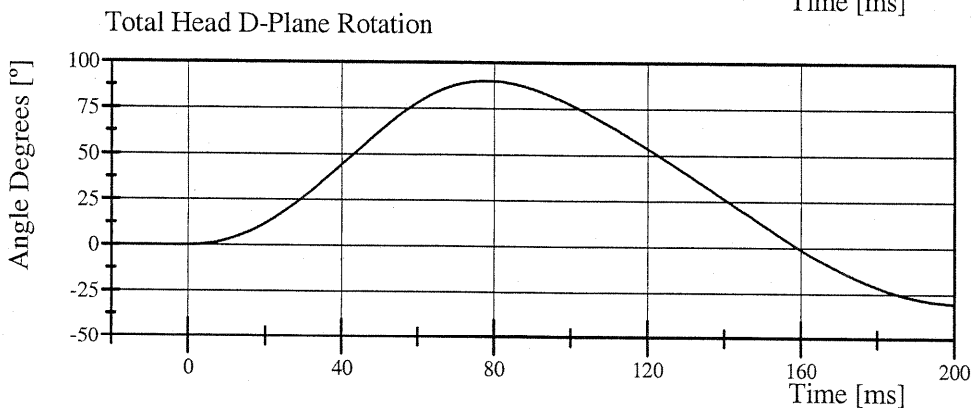
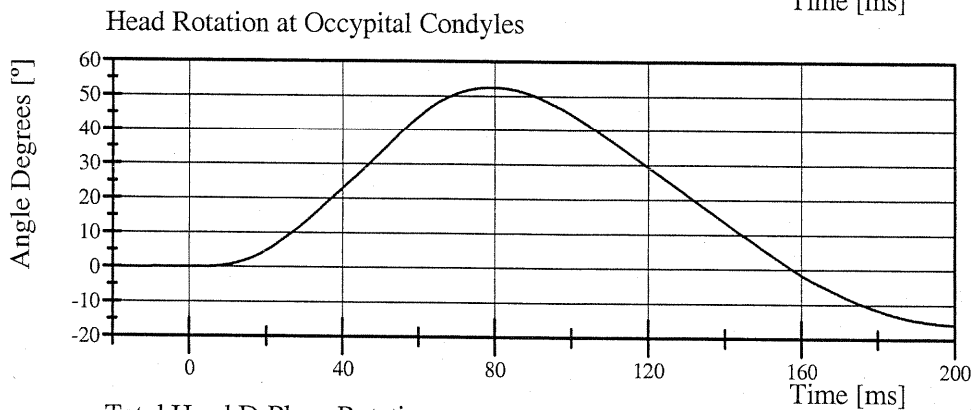
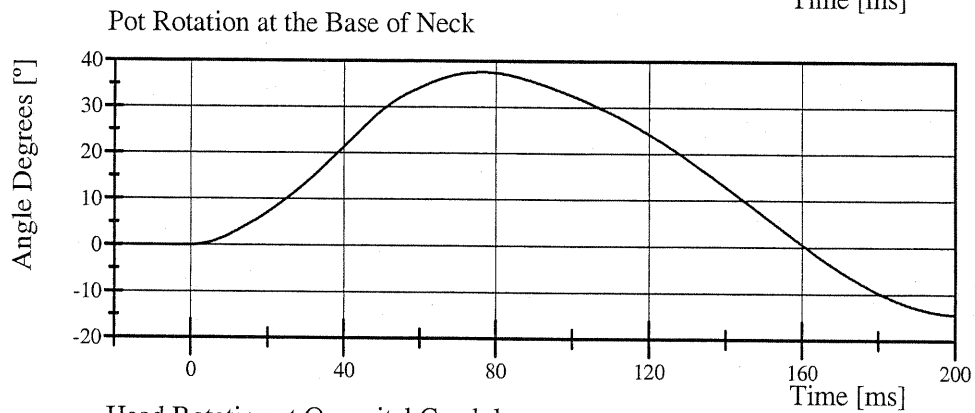
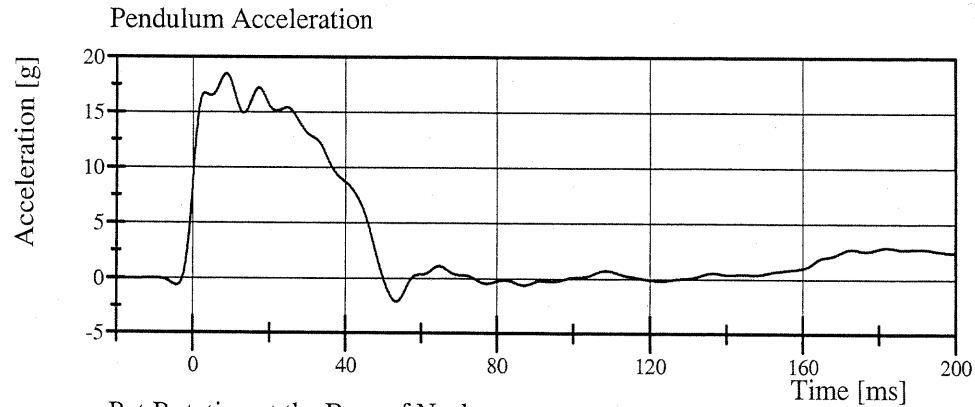


Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 110 Certification No. 23-1

Test Date: 03/16/2006

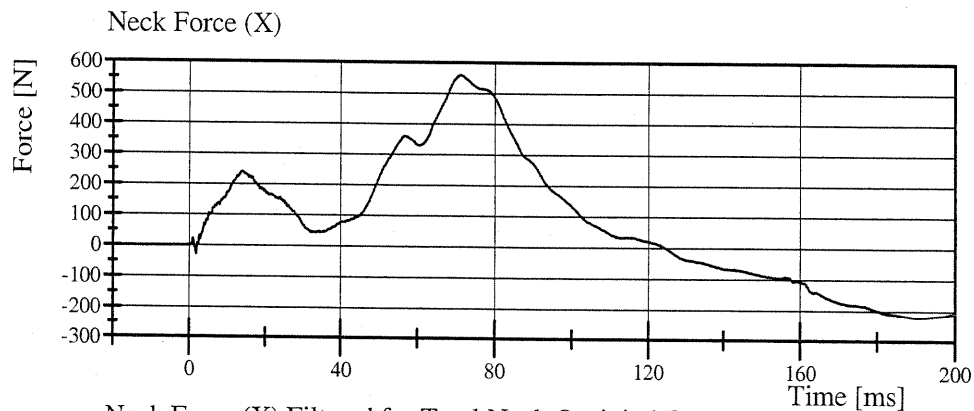


Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 110 Certification No. 23-1

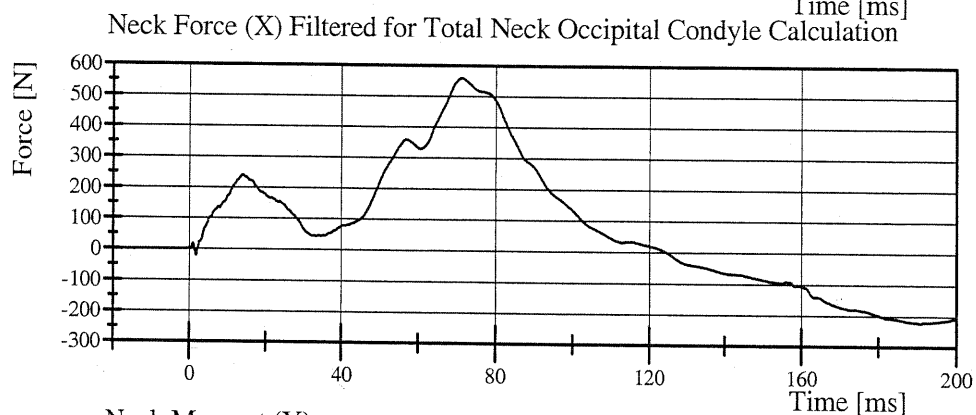
Test Date: 03/16/2006



Filter Class: CFC_1000

Max: 560.3 N at 71.4 ms

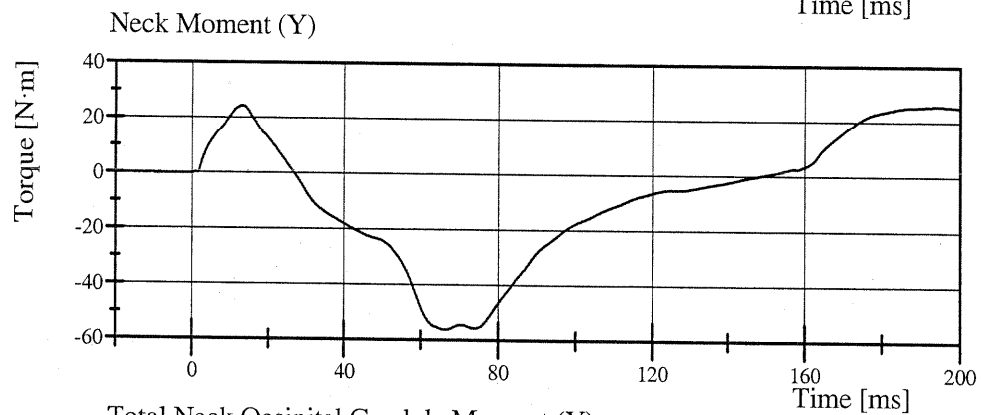
Min: -222.1 N at 190.3 ms



Filter Class: CFC_600

Max: 560.0 N at 71.4 ms

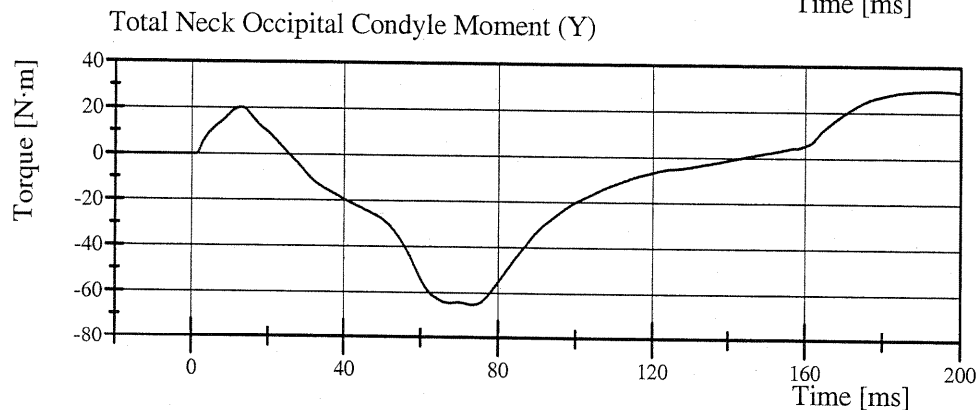
Min: -221.9 N at 190.9 ms



Filter Class: CFC_600

Max: 25.8 N·m at 194.0 ms

Min: -56.1 N·m at 65.8 ms



Filter Class: CFC_600

Max: 29.6 N·m at 193.8 ms

Min: -65.1 N·m at 73.1 ms

Transportation Research Center Inc.

Front Thorax

HIH 50th Serial No. 110 Certification No. 24-1

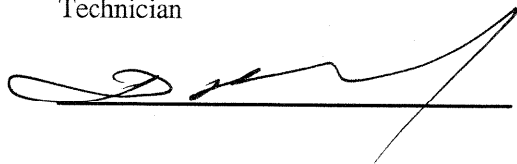
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	26 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.631 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,829.5 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-65.84 mm	Yes
Internal Hysteresis	65 - 85 %	73.0 %	Yes

Test meets specifications.

Comments:

Technician



Approved

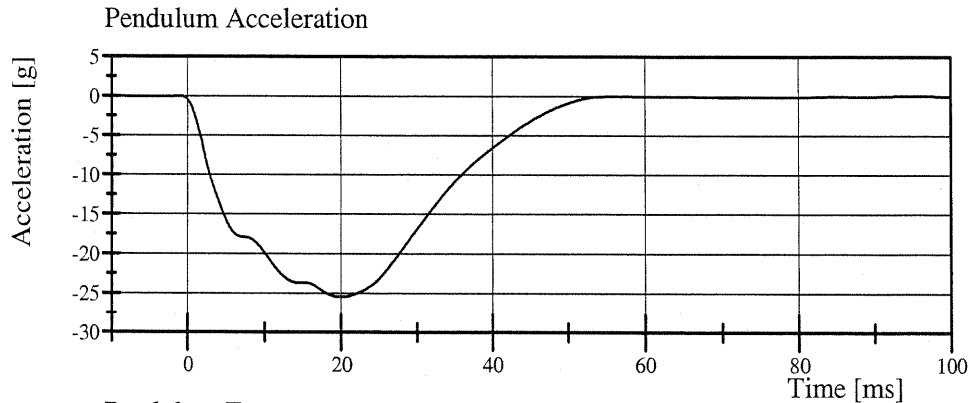


Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 110 Certification No. 24-1

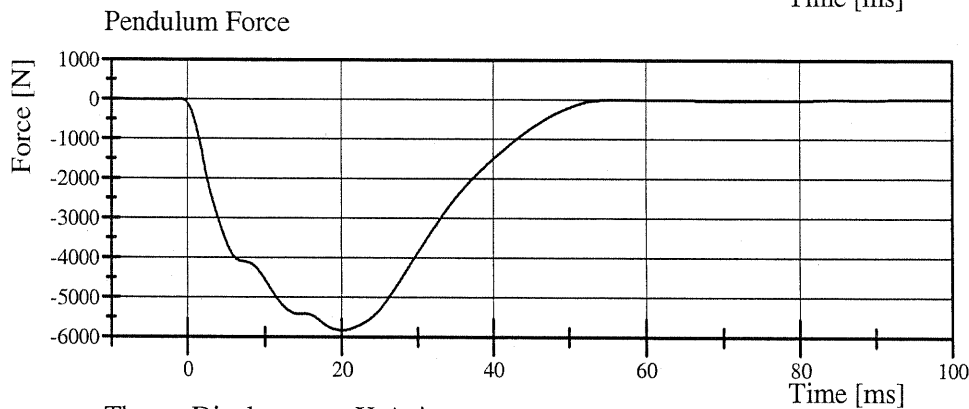
Test Date: 03/22/2006



Filter Class: CFC_180

Max: 0.1 g at 95.6 ms

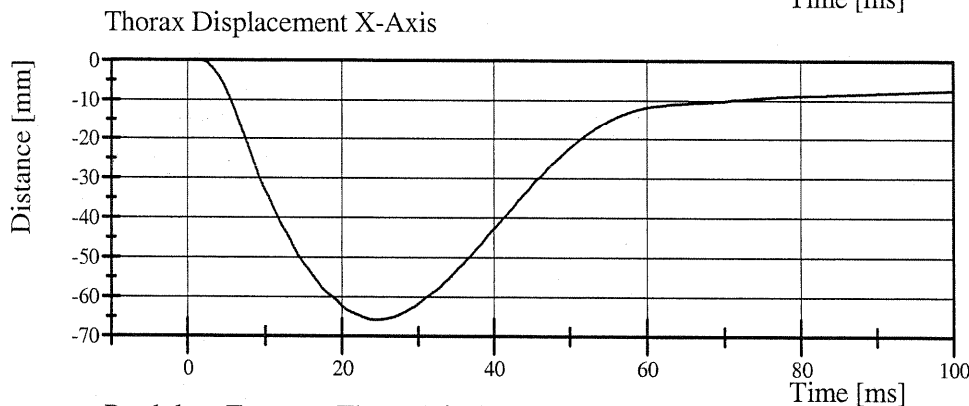
Min: -25.4 g at 20.1 ms



Filter Class: CFC_180

Max: 17.6 N at 95.6 ms

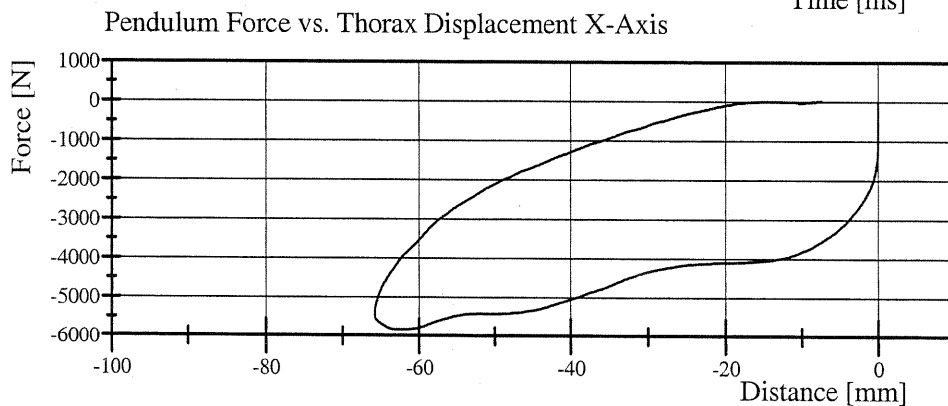
Min: -5,829.5 N at 20.1 ms



Filter Class: CFC_600

Max: 0.0 mm at -8.2 ms

Min: -65.8 mm at 24.4 ms



Filter Class: CFC_180

Max: 17.6 N at -7.8 mm

Min: -5,829.5 N at -62.5 mm

Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

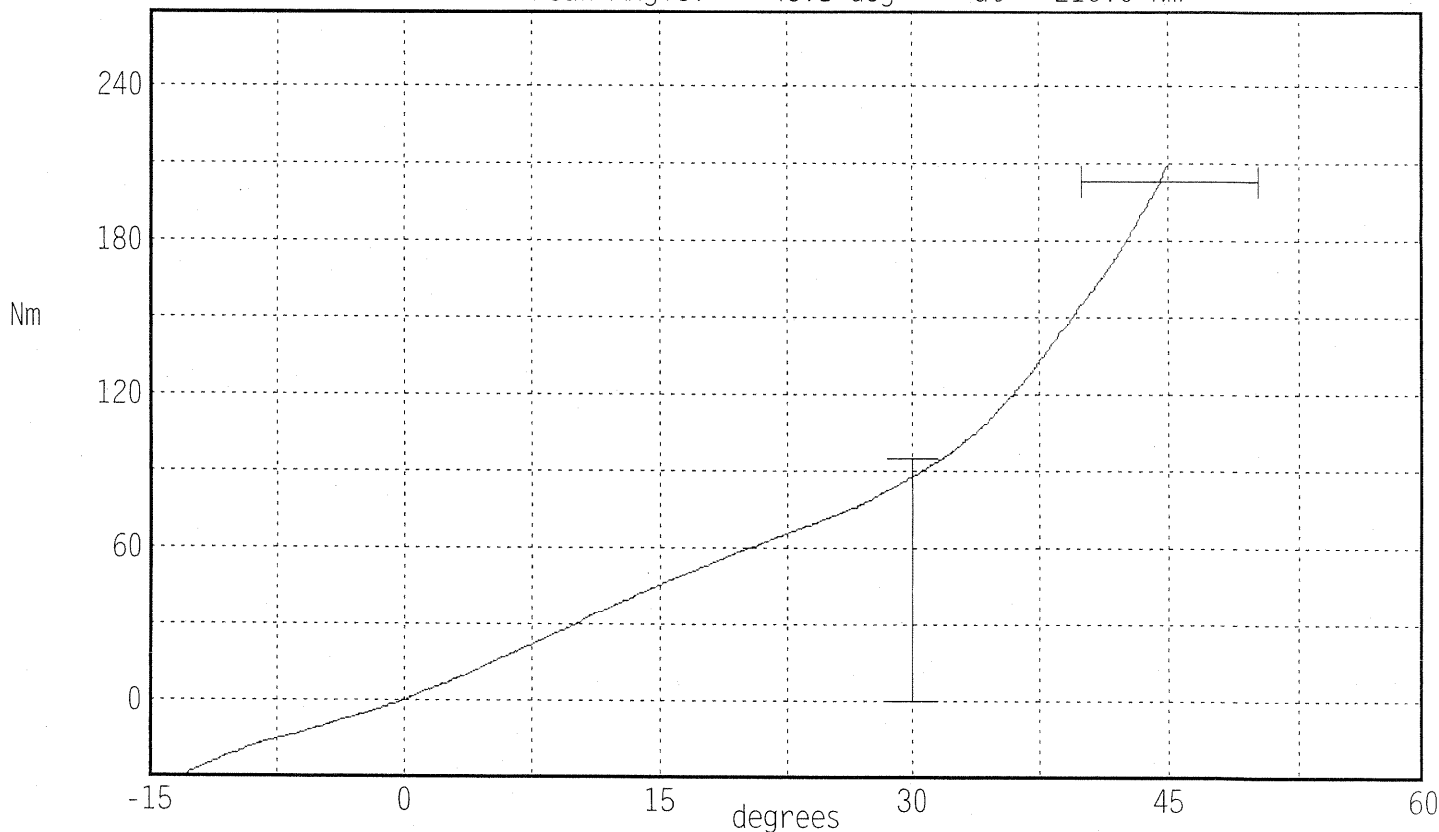
Serial Number: 110L
Test Number: 110C23
Comments:

Date: 03/15/2006
Time: 16:23

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.4 °C Pass
Humidity	10 - 70	31 % Pass
Moment at 30 deg	<= 94.9	88.0 Nm Pass
Angle at 203 Nm	40.0 - 50.0	44.5 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Peak Moment: 210.0 Nm at 45.1 deg
Peak Angle: 45.1 deg at 210.0 Nm

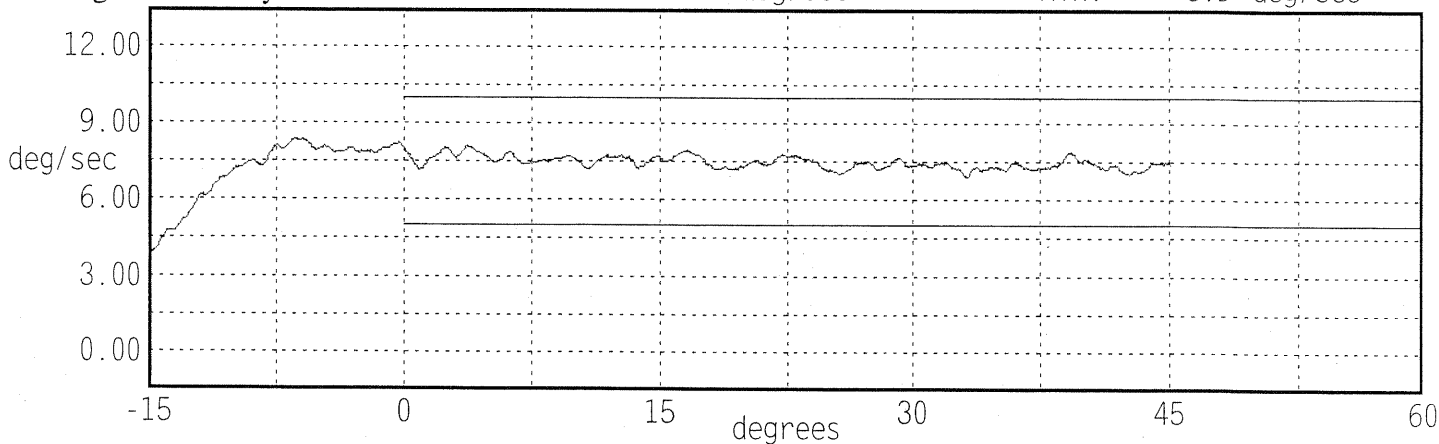
Moment About H-Point



Angular Velocity

Max: 8.1 deg/sec

Min: 6.9 deg/sec



Applied Safety Technologies Corp.

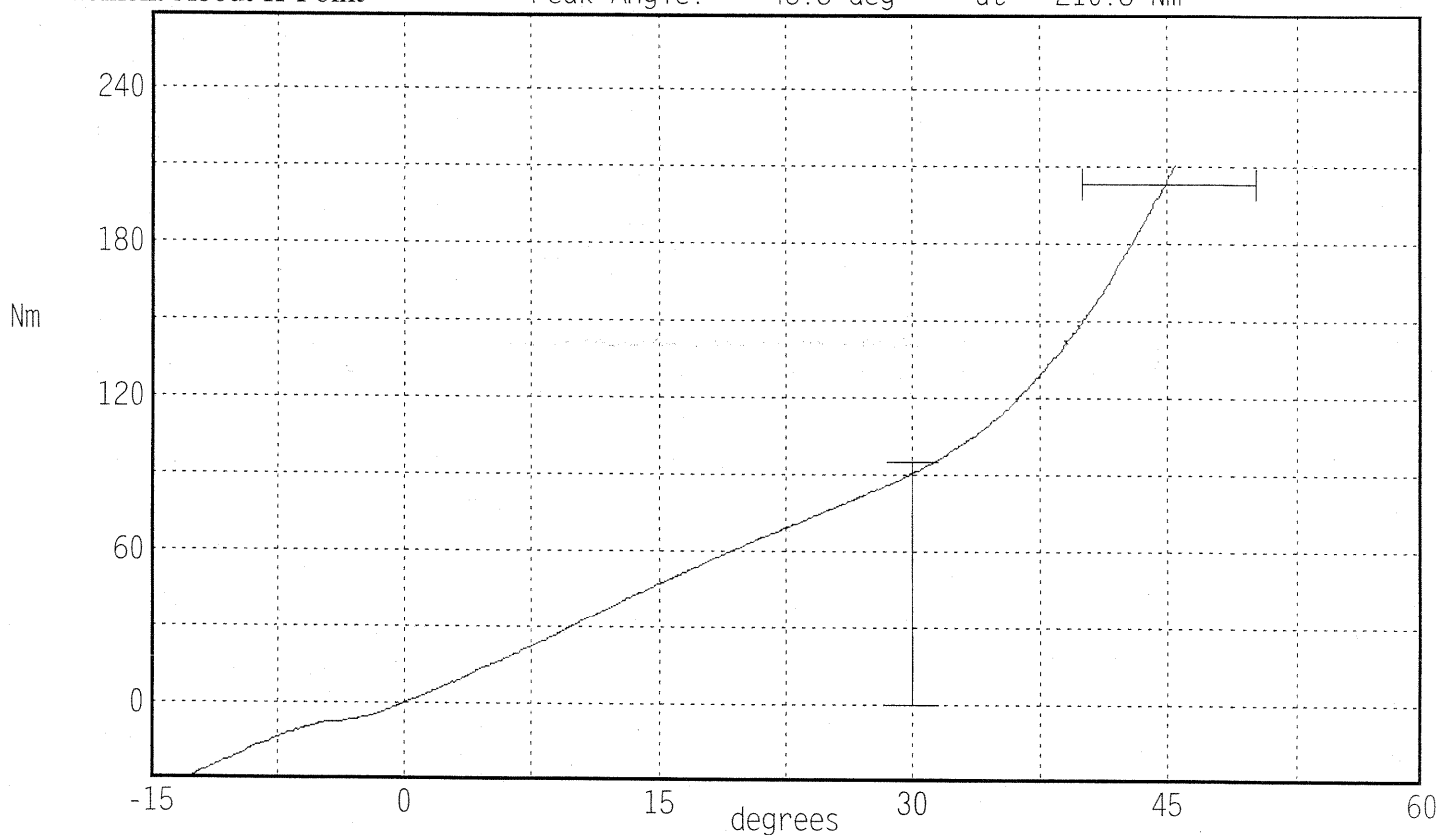
Hybrid III Hip Range of Motion

Serial Number: 110R
Test Number: 110C23
Comments:

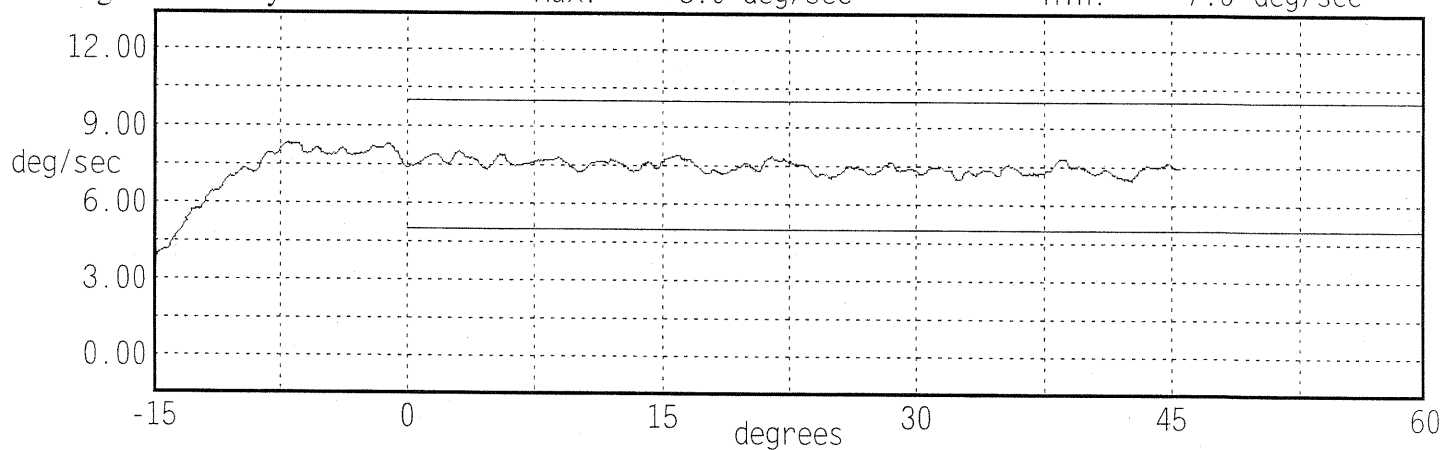
Date: 03/15/2006
Time: 16:29

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.5 °C Pass
Humidity	10 - 70	31 % Pass
Moment at 30 deg	<= 94.9	90.9 Nm Pass
Angle at 203 Nm	40.0 - 50.0	45.0 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment: 210.3 Nm at 45.5 deg
Peak Angle: 45.5 deg at 210.3 Nm



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



Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 6-1

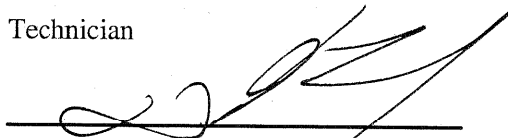
Test Date: 03/21/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.119 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,746.06 N	Yes

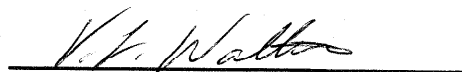
Test meets specifications.

Comments:

Technician



Approved

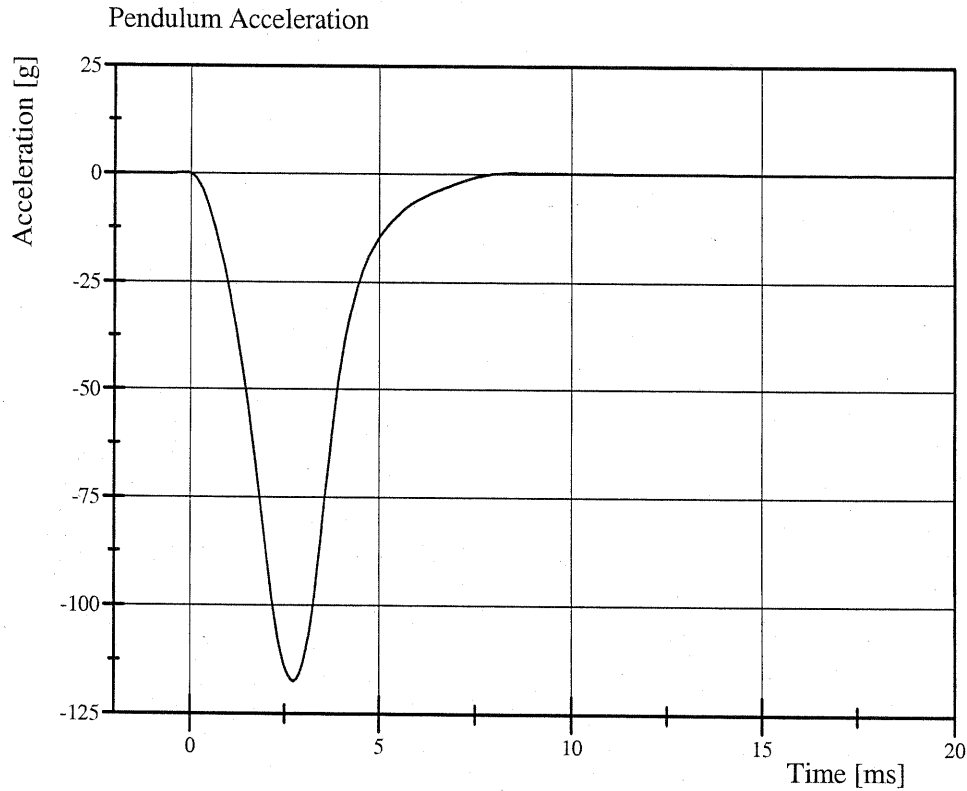


Transportation Research Center Inc.

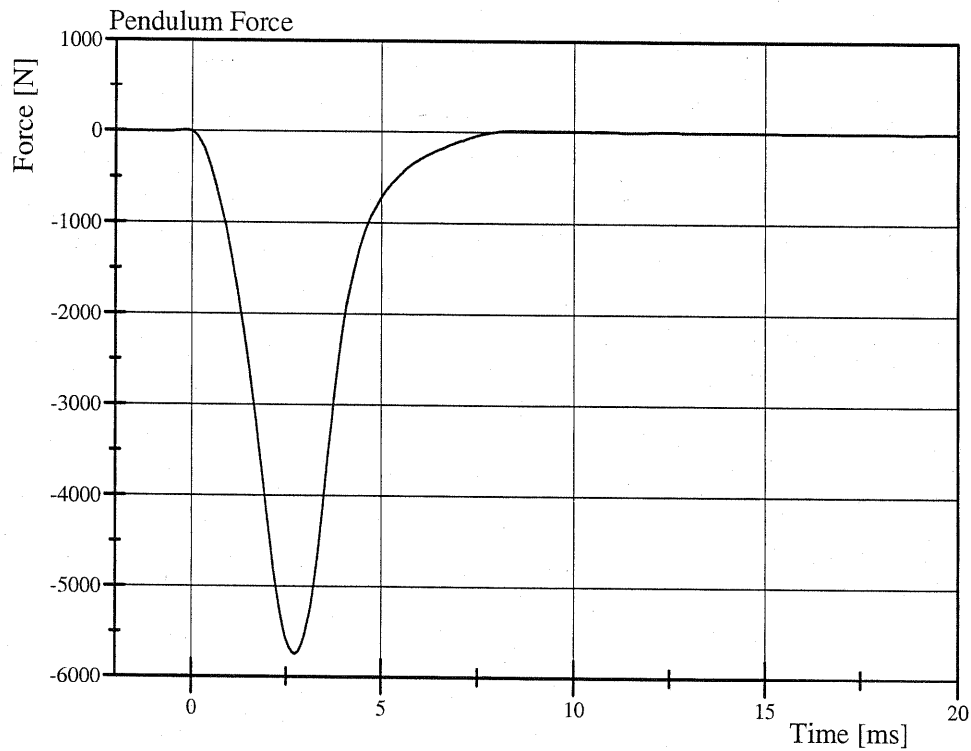
Left Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 6-1

Test Date: 03/21/2006



Filter Class: CFC_600
Max: 0.3 g at 8.5 ms
Min: -117.4 g at 2.7 ms



Filter Class: CFC_600
Max: 15.4 N at 8.5 ms
Min: -5,746.1 N at 2.7 ms

Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 6-1

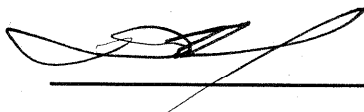
Test Date: 03/21/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.118 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,744.46 N	Yes

Test meets specifications.

Comments:

Technician



Approved

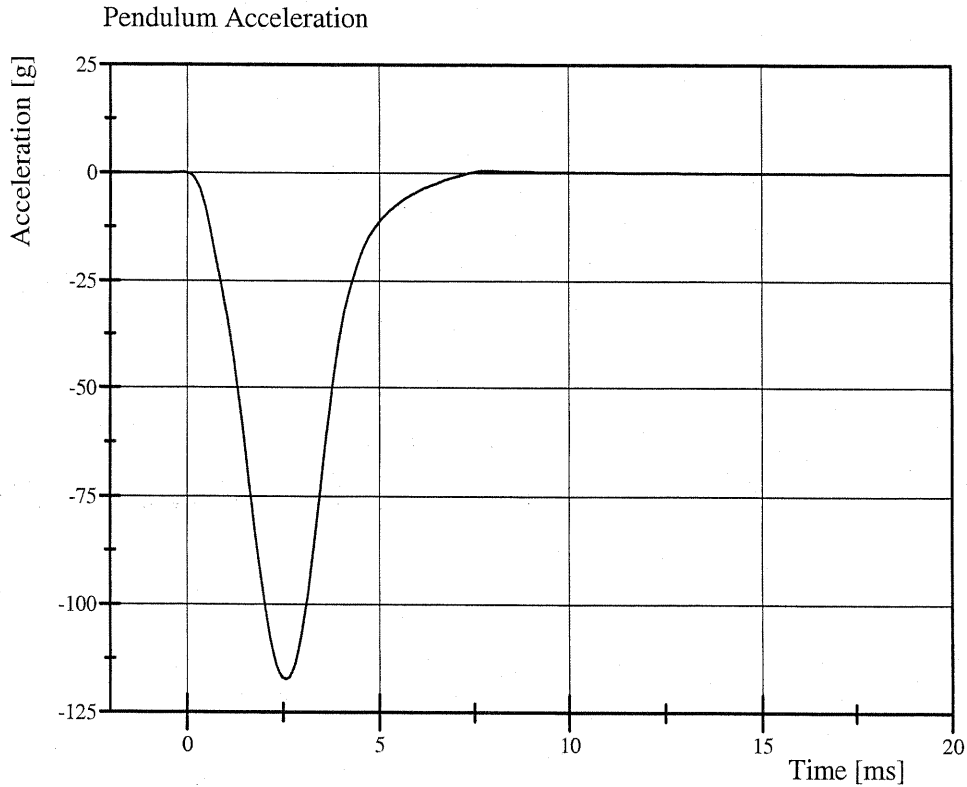


Transportation Research Center Inc.

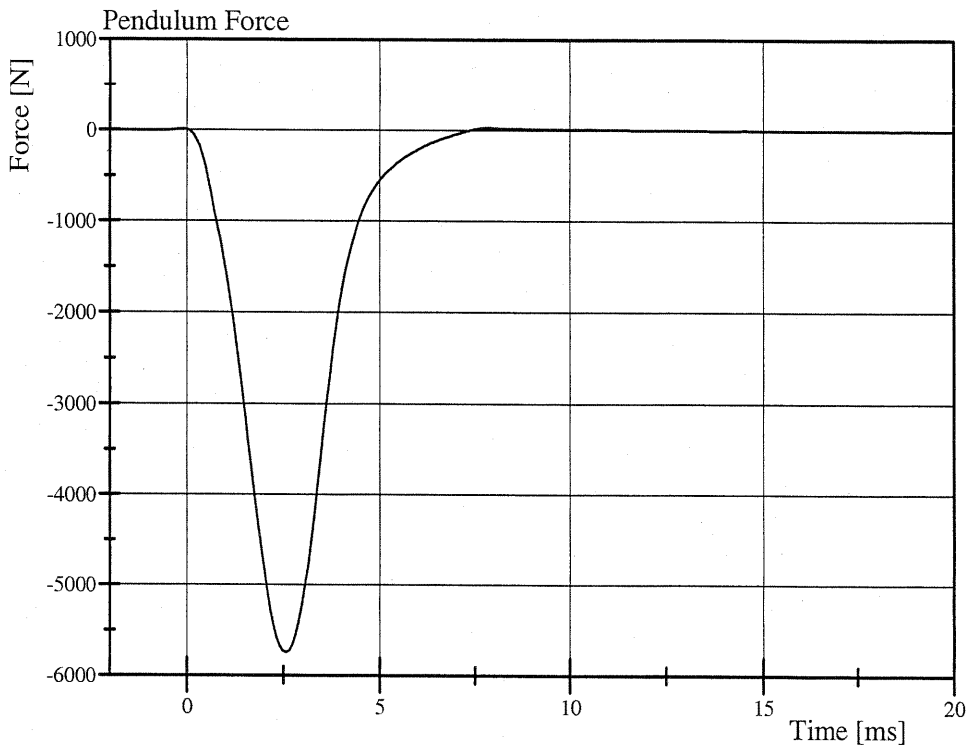
Right Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 6-1

Test Date: 03/21/2006



Filter Class: CFC_600
Max: 0.6 g at 7.8 ms
Min: -117.4 g at 2.6 ms



Filter Class: CFC_600
Max: 27.6 N at 7.8 ms
Min: -5,744.5 N at 2.6 ms

Transportation Research Center Inc.

Left Knee Slider

HIII 50th Serial No. LX116117 Certification No. 6-2

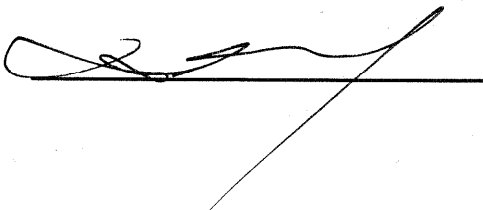
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.730 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,486.6 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,827.2 N	Yes

Test meets specifications.

Comments:

Technician



Approved



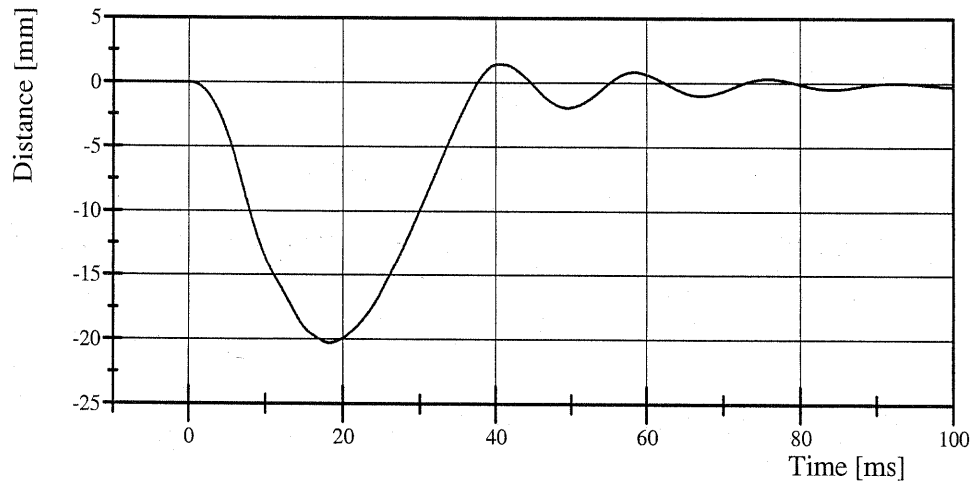
Transportation Research Center Inc.

Left Knee Slider

HIH 50th Serial No. LX116117 Certification No. 6-2

Test Date: 03/22/2006

Knee Slider Displacement

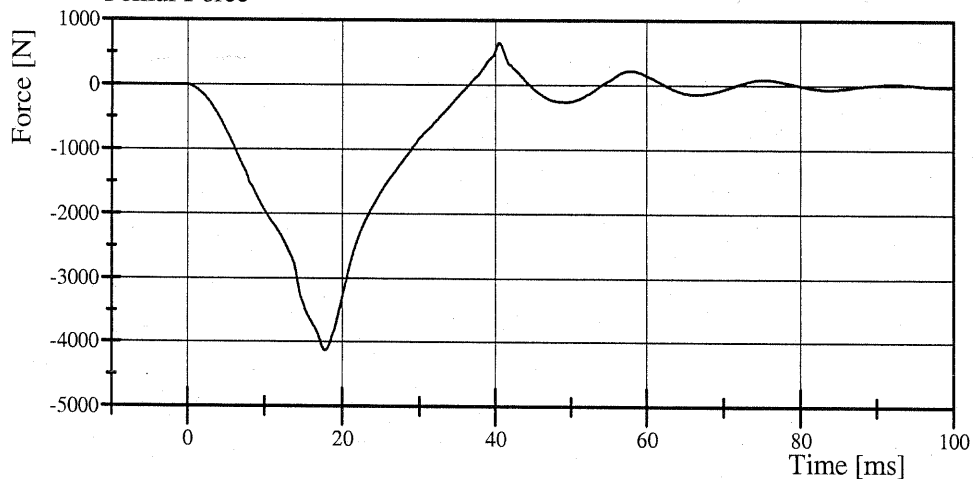


Filter Class: CFC_180

Max: 1.4 mm at 40.6 ms

Min: -20.3 mm at 18.3 ms

Femur Force

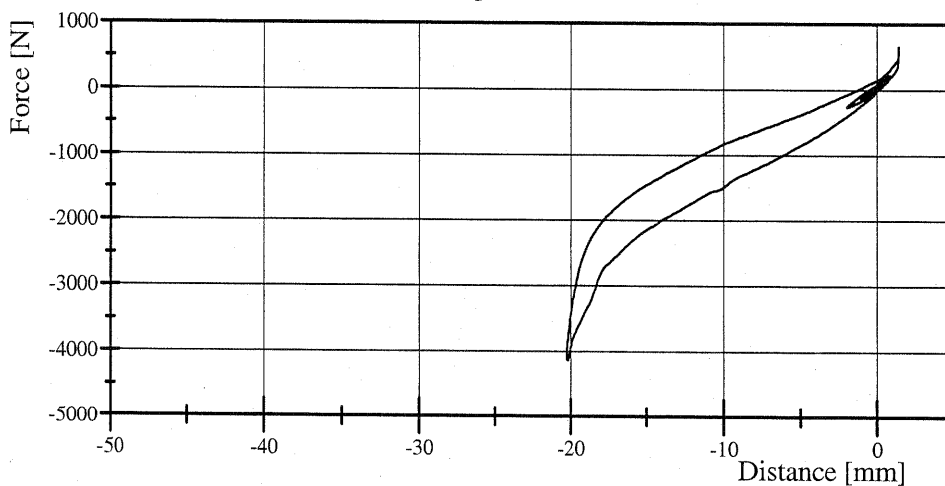


Filter Class: CFC_600

Max: 652.1 N at 40.5 ms

Min: -4,131.3 N at 17.8 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600

Max: 652.1 N at 1.4 mm

Min: -4,131.3 N at -20.2 mm

Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX116117 Certification No. 6-1

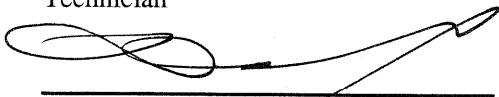
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.728 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,315.4 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,472.7 N	Yes

Test meets specifications.

Comments:

Technician



Approved



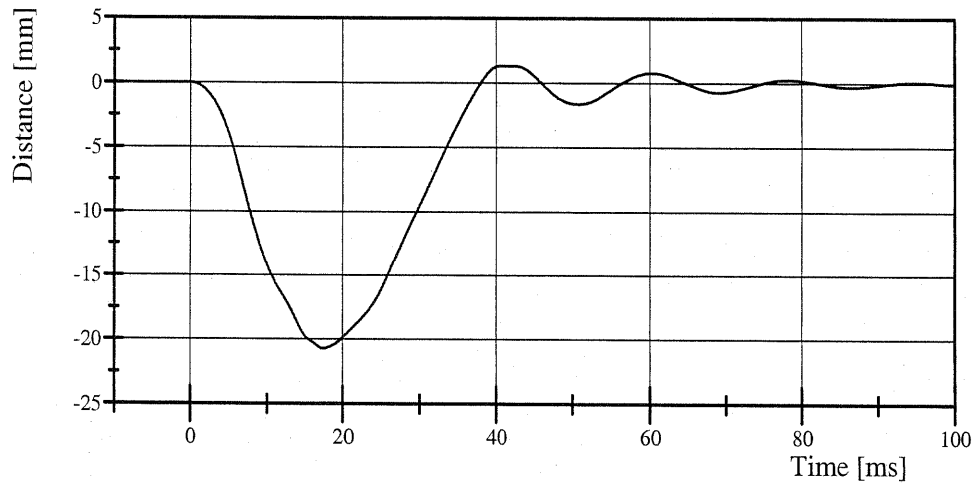
Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX116117 Certification No. 6-1

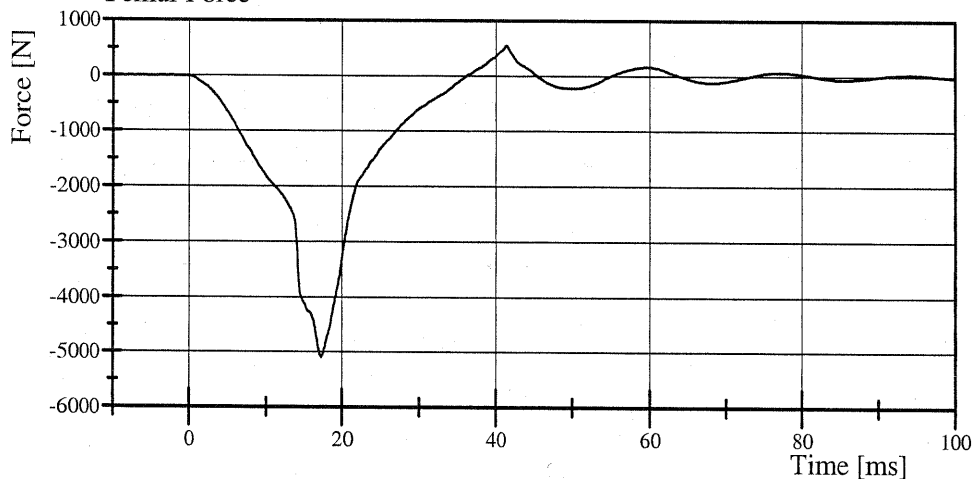
Test Date: 03/22/2006

Knee Slider Displacement



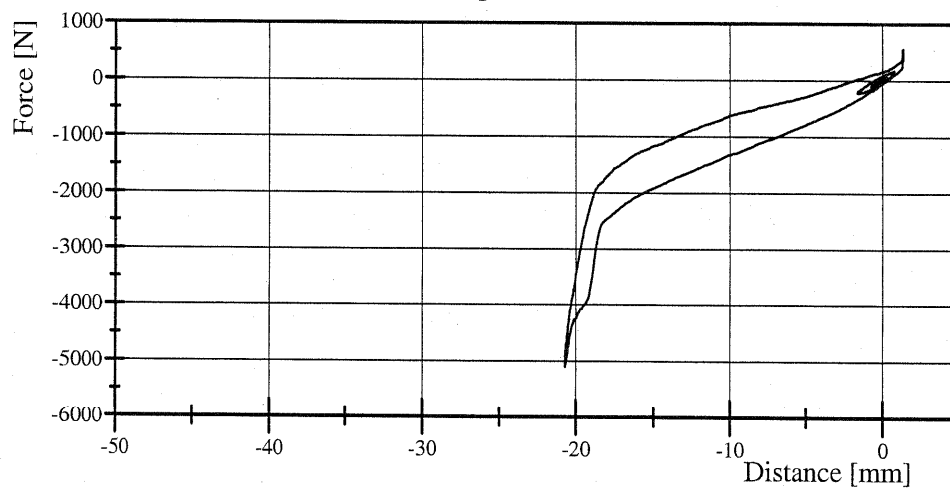
Filter Class: CFC_180
Max: 1.3 mm at 41.0 ms
Min: -20.7 mm at 17.4 ms

Femur Force



Filter Class: CFC_600
Max: 554.9 N at 41.4 ms
Min: -5,095.6 N at 17.2 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600
Max: 554.9 N at 1.3 mm
Min: -5,095.6 N at -20.7 mm



Post-Test Dummy Configuration and Performance Verification Data

Target Vehicle Driver Dummy S/N: 110

Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 110 Certification No. 25-1

Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	259.4 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-1.1 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved

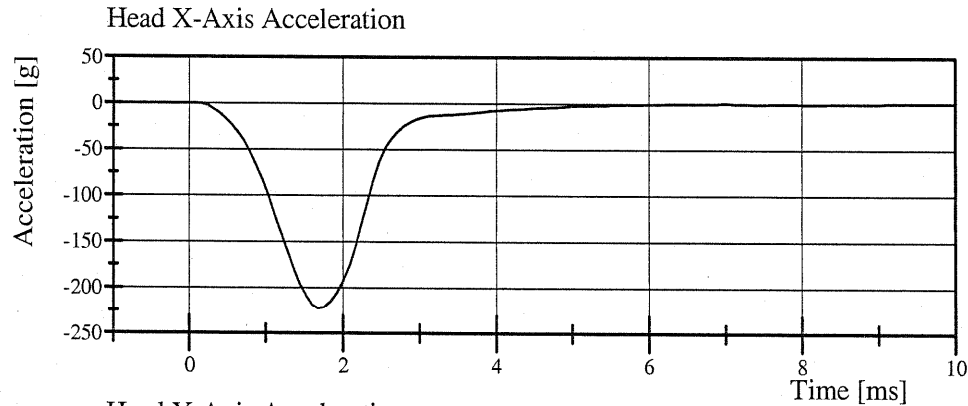


Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 110 Certification No. 25-1

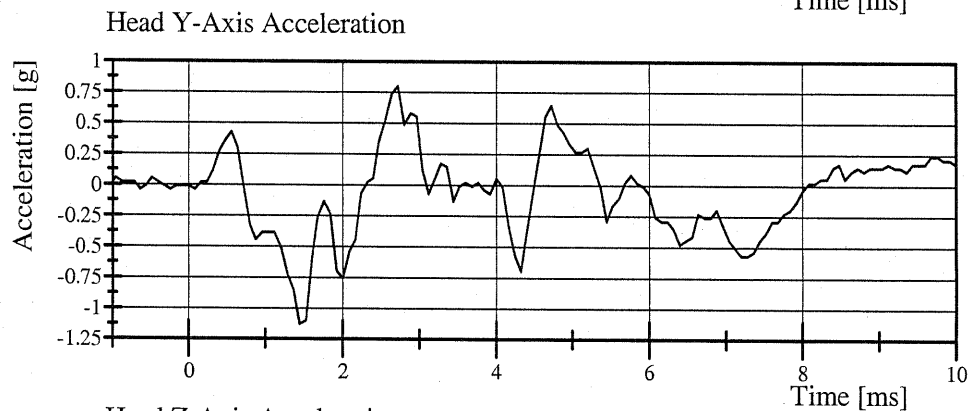
Test Date: 04/26/2006



Filter Class: CFC_1000

Max: 0.5 g at 10.0 ms

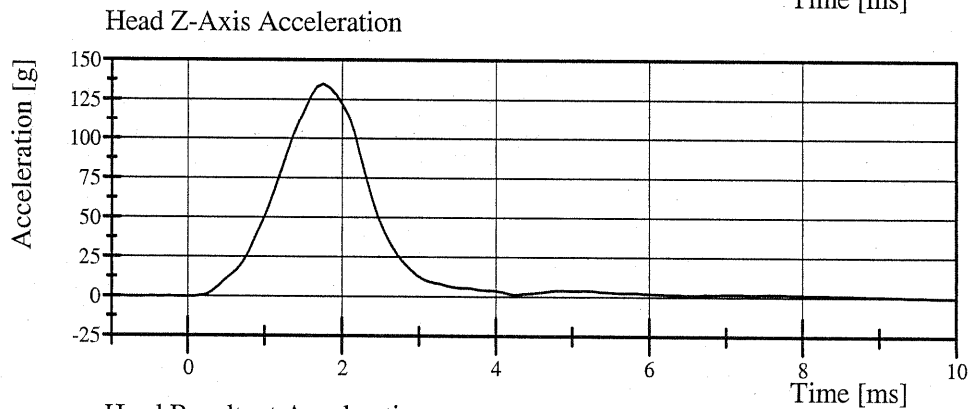
Min: -222.6 g at 1.7 ms



Filter Class: CFC_1000

Max: 0.8 g at 2.7 ms

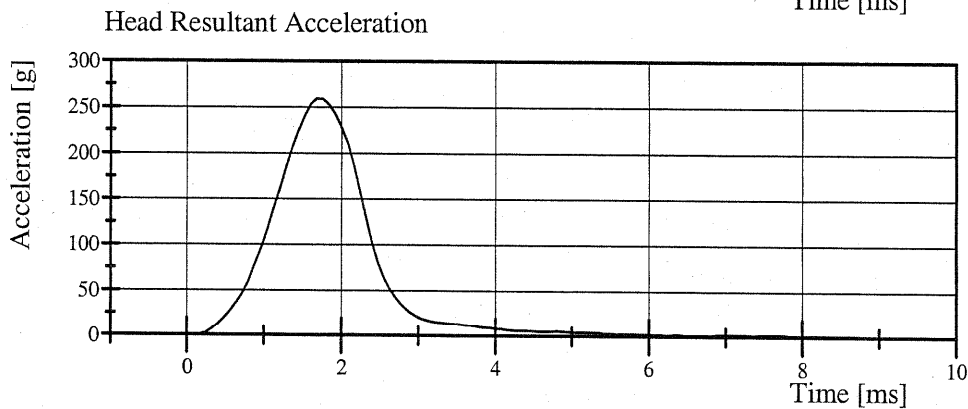
Min: -1.1 g at 1.4 ms



Filter Class: CFC_1000

Max: 134.8 g at 1.8 ms

Min: -0.3 g at 10.0 ms



Filter Class: CFC_1000

Max: 259.4 g at 1.7 ms

Min: 0.0 g at -0.8 ms

Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 110 Certification No. 25-1

Test Date: 05/03/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	52 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.632 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,697.6 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-66.11 mm	Yes
Internal Hysteresis	65 - 85 %	73.3 %	Yes

Test meets specifications.

Comments:

Technician



Approved

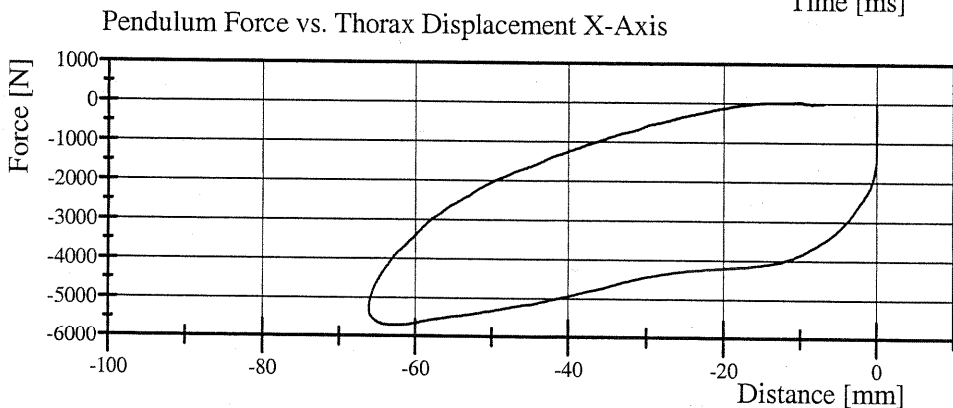
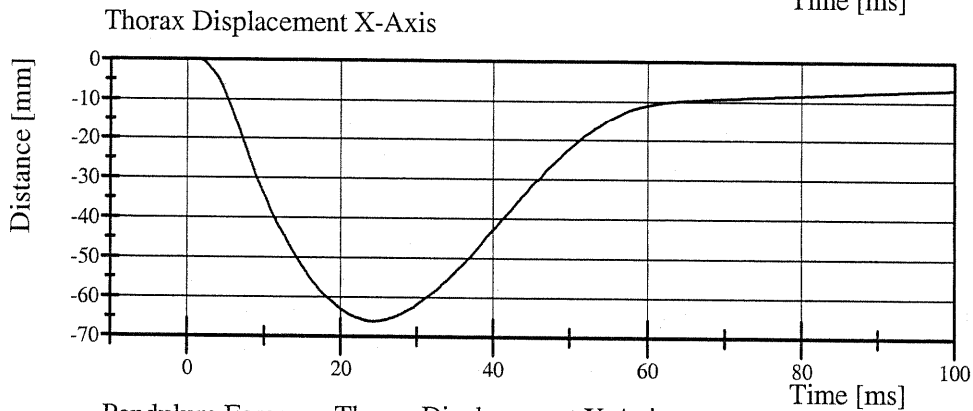
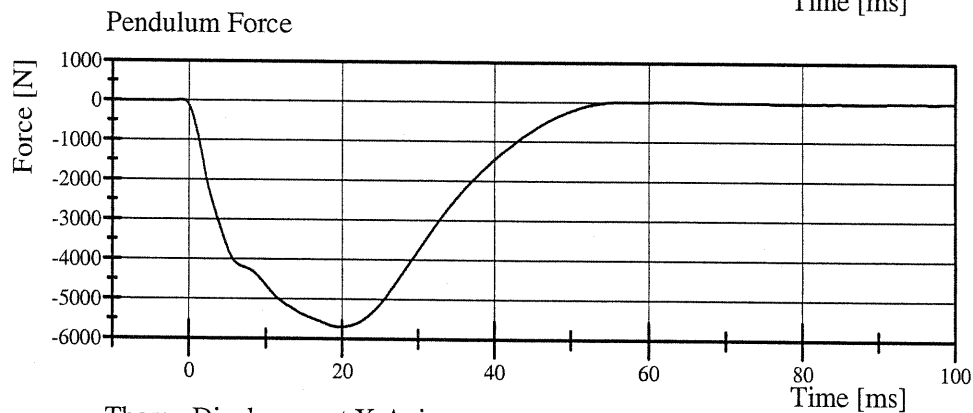
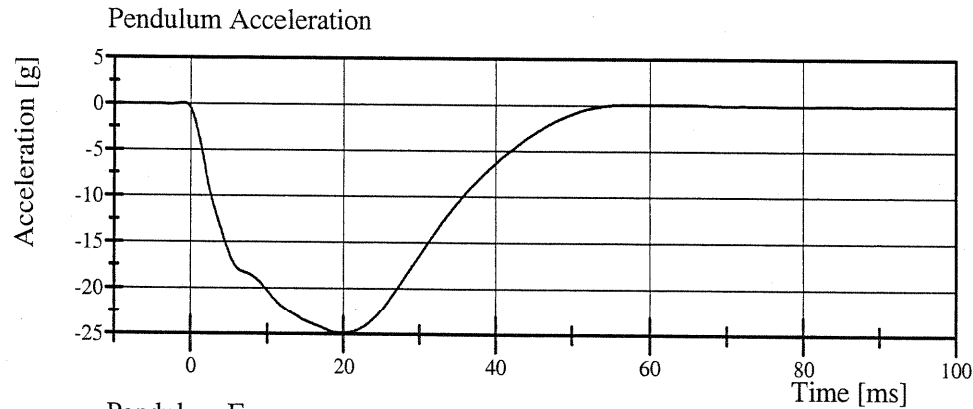


Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 110 Certification No. 25-1

Test Date: 05/03/2006



Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.088 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,565.47 N	Yes

Test meets specifications.

Comments:

Technician



Approved



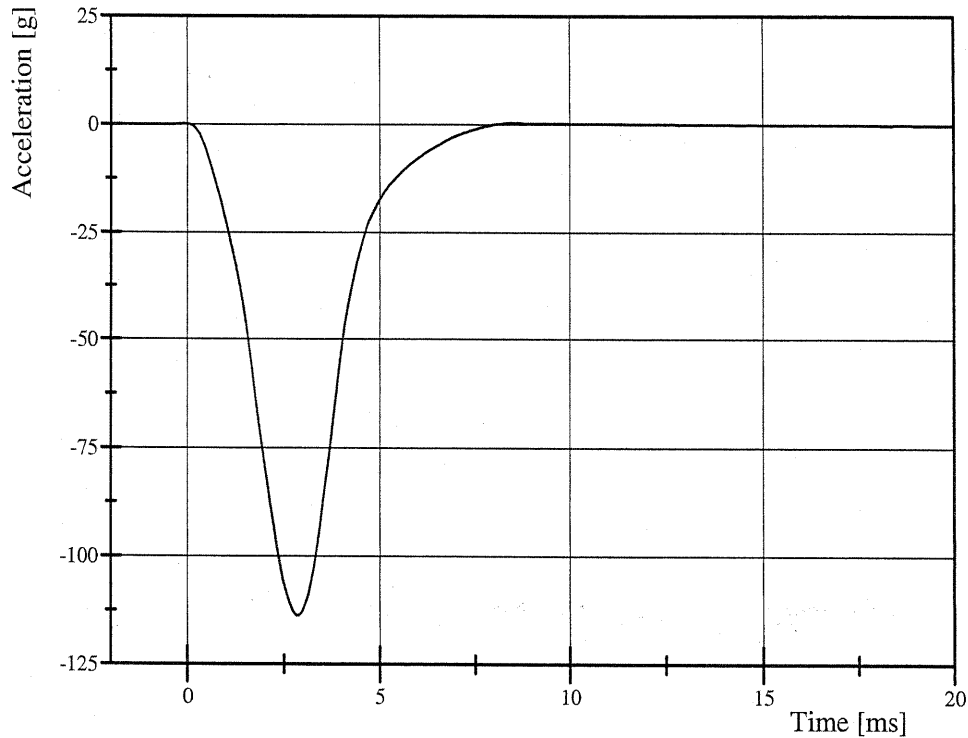
Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006

Pendulum Acceleration

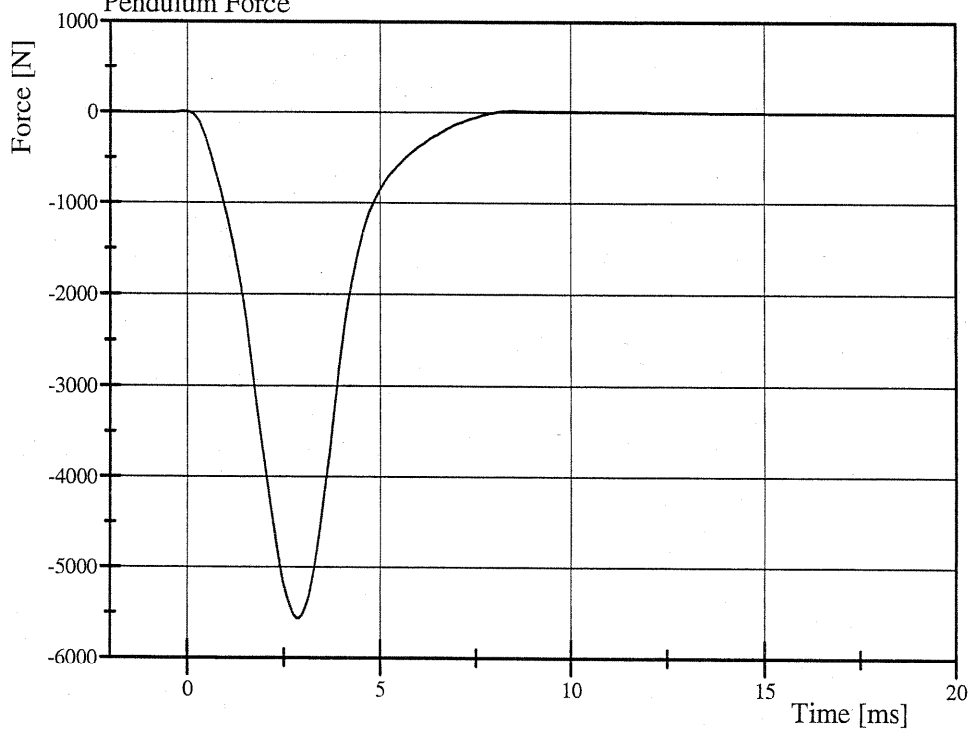


Filter Class: CFC_600

Max: 0.4 g at 8.5 ms

Min: -113.7 g at 2.9 ms

Pendulum Force



Filter Class: CFC_600

Max: 18.8 N at 8.5 ms

Min: -5,565.5 N at 2.9 ms

Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.086 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,372.91 N	Yes

Test meets specifications.

Comments:

Technician



Approved

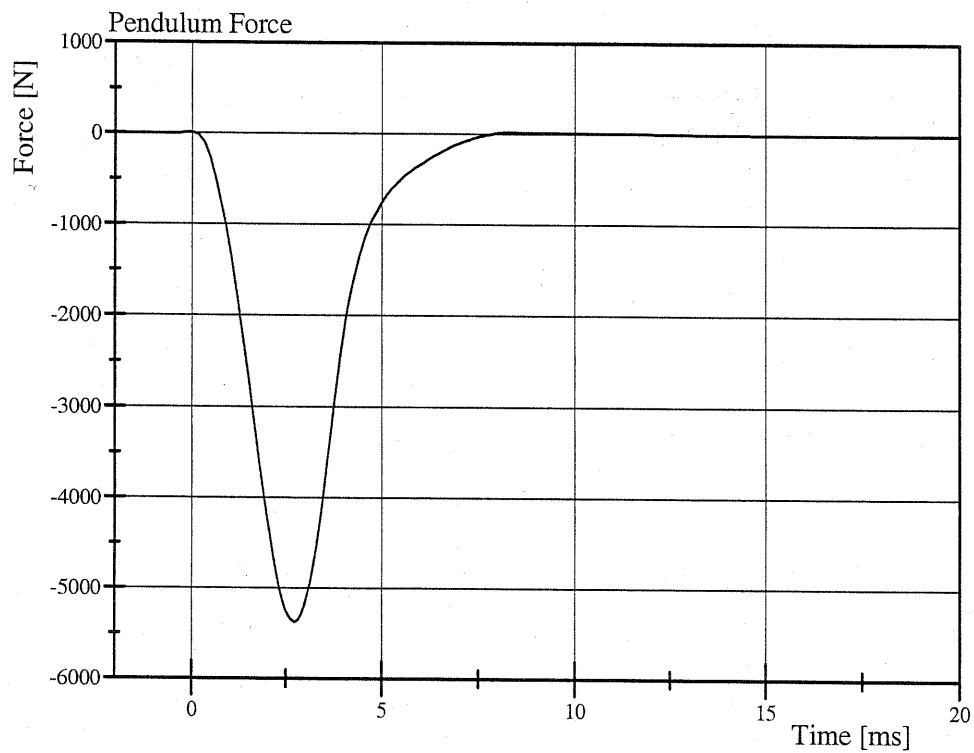
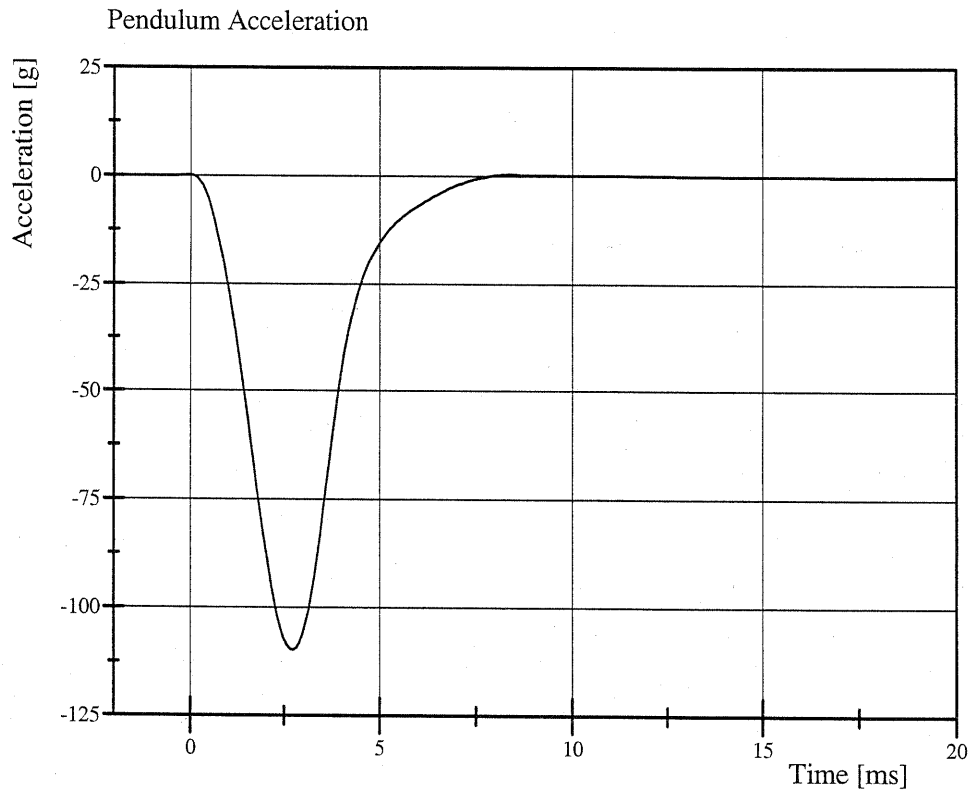


Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006



Transportation Research Center Inc.

Left Knee Slider

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.745 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,277.0 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,348.8 N	Yes

Test meets specifications.

Comments:

Technician



Approved



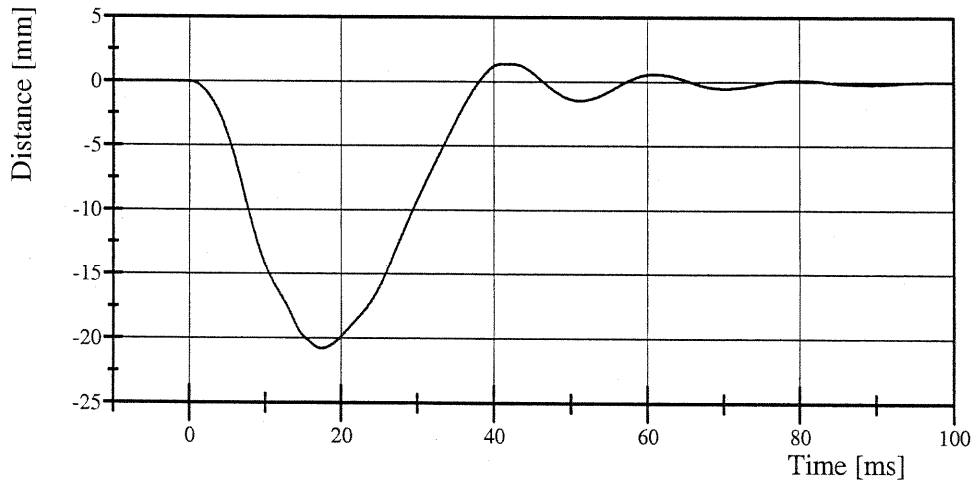
Transportation Research Center Inc.

Left Knee Slider

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006

Knee Slider Displacement

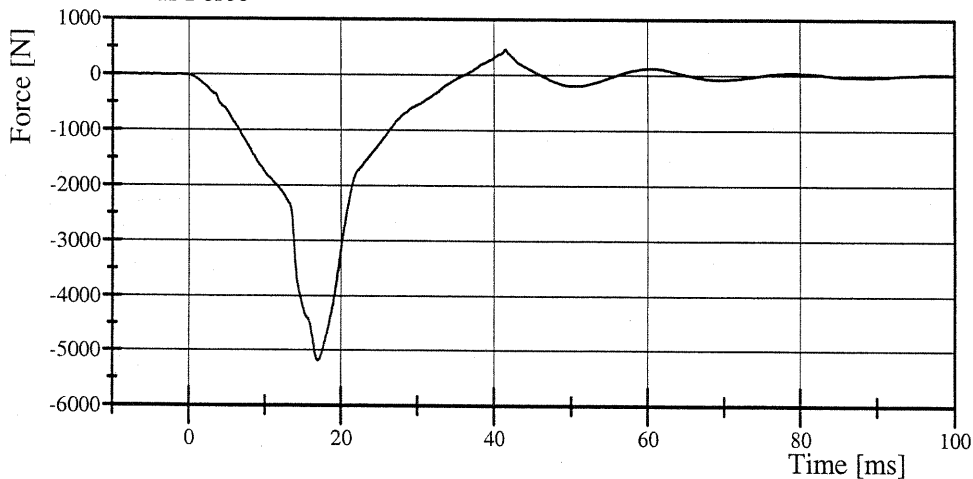


Filter Class: CFC_180

Max: 1.4 mm at 41.4 ms

Min: -20.8 mm at 17.4 ms

Femur Force

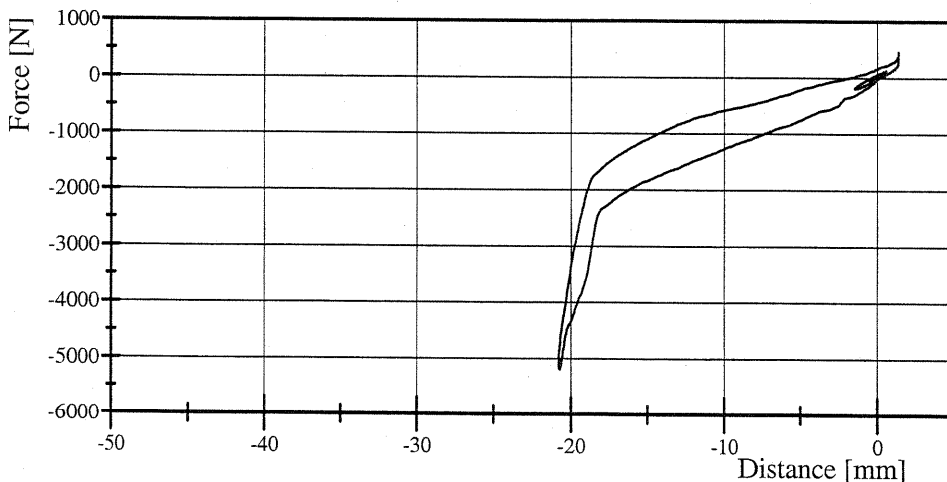


Filter Class: CFC_600

Max: 460.6 N at 41.5 ms

Min: -5,185.7 N at 17.0 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600

Max: 460.6 N at 1.4 mm

Min: -5,185.7 N at -20.7 mm

Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX116117 Certification No. 7-1

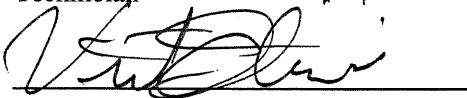
Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.745 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,407.3 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,708.7 N	Yes

Test meets specifications.

Comments:

Technician



Approved



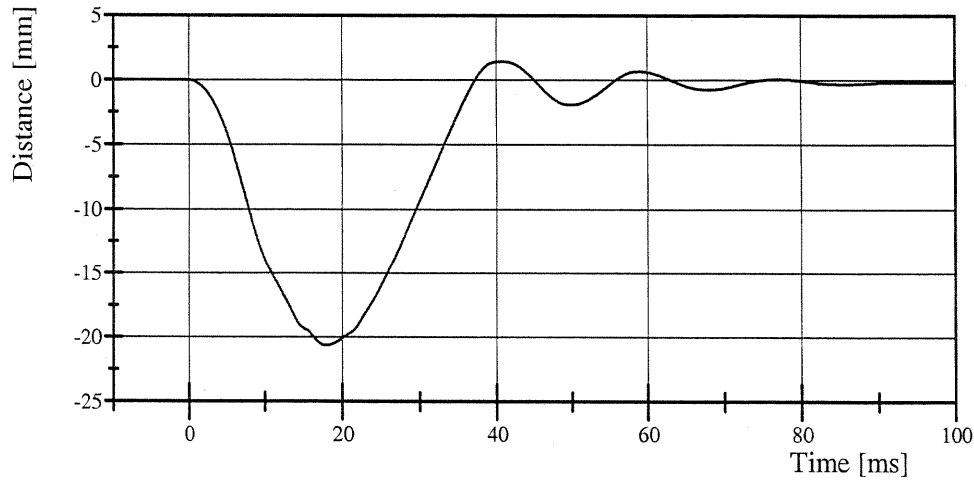
Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX116117 Certification No. 7-1

Test Date: 04/26/2006

Knee Slider Displacement

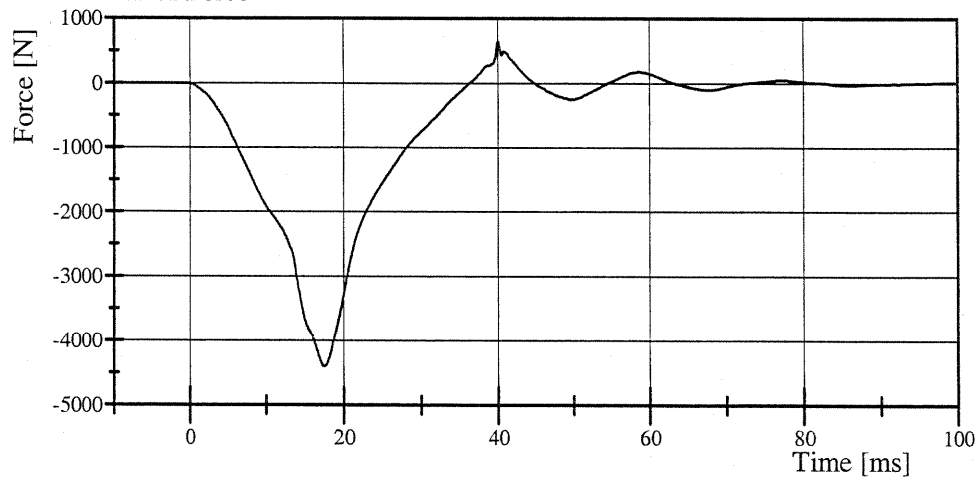


Filter Class: CFC_180

Max: 1.4 mm at 40.9 ms

Min: -20.6 mm at 18.0 ms

Femur Force

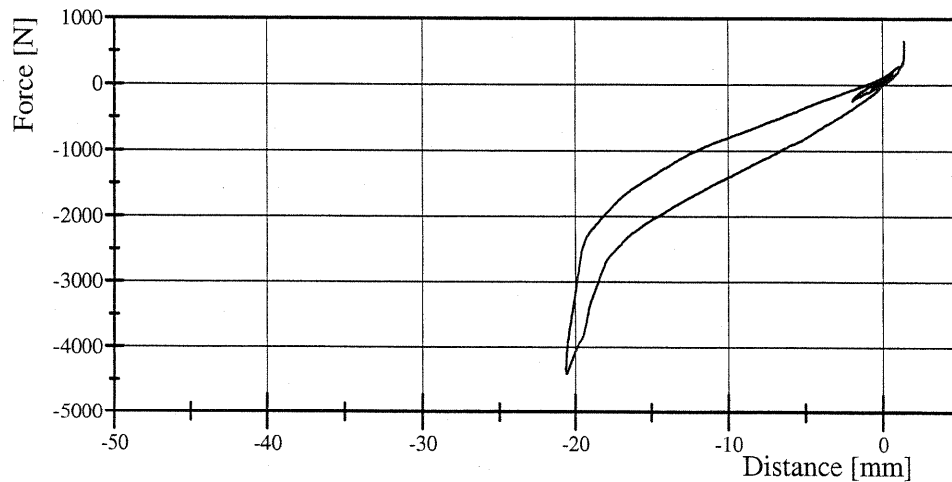


Filter Class: CFC_600

Max: 656.2 N at 40.0 ms

Min: -4,400.0 N at 17.5 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600

Max: 656.2 N at 1.4 mm

Min: -4,400.0 N at -20.6 mm

Pre-Test Dummy Configuration and Performance Verification Data

Target Vehicle Passenger Dummy S/N: 416

Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 416 Calibration No. 36
With Thor FLX Legs

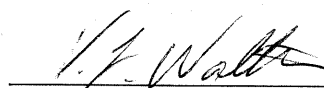
Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	782	Yes
B	Shoulder Pivot Height	431.8 - 457.2	451	Yes
C	Hip Pivot Height	81.3 - 86.3	85	Yes
D	Hip Pivot from Backline	144.8 - 149.8	147	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	78	Yes
F	Thigh Clearance	119.4 - 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	285	Yes
J	Elbow Rest Height	182.8 - 203.2	193	Yes
K	Buttock Knee Length	520.7 - 546.1	532	Yes
L	Popliteal Height	355.6 - 376.0	359	Yes
M	Knee Pivot Height	393.7 - 419.1	404	Yes
N	Buttock Popliteal Height	414.0 - 439.4	424	Yes
O	Chest Depth without Jacket	175.3 - 190.5	183	Yes
P	Foot Length	218.5 - 233.7	221	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	475	Yes
S	Head Breadth	137.1 - 147.3	143	Yes
T	Head Depth	177.8 - 188.0	182	Yes
U	Hip Breadth	299.7 - 314.9	305	Yes
V	Shoulder Breadth	350.5 - 365.7	362	Yes
W	Foot Breadth	78.8 - 94.0	88	Yes
X	Head Circumference	528.3 - 548.7	535	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	870	Yes
Z	Waist Circumference	759.5 - 789.9	771	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

* Partial Set

Technician



Approved





Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 37-1

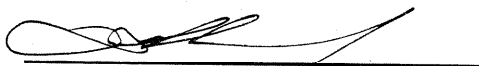
Test Date: 03/21/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	279.8 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-5.6 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved

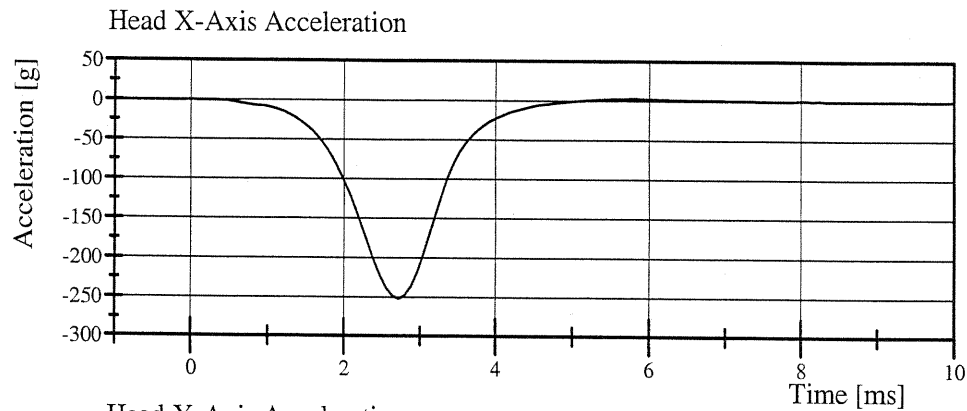


Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 37-1

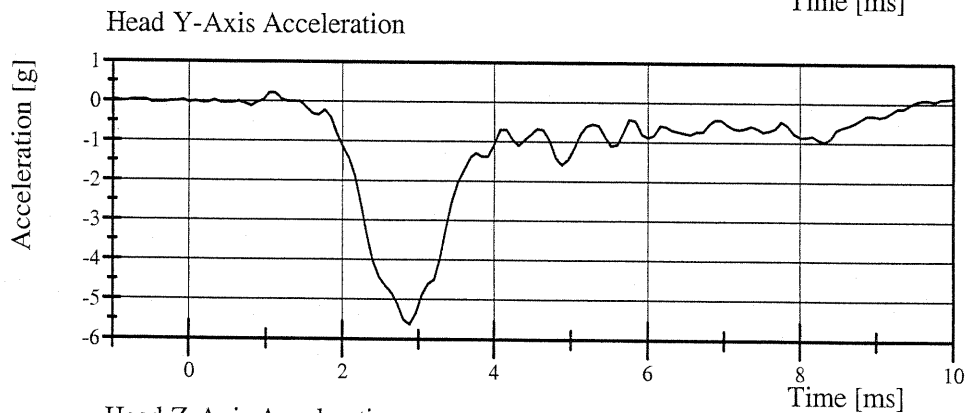
Test Date: 03/21/2006



Filter Class: CFC_1000

Max: 3.1 g at 5.8 ms

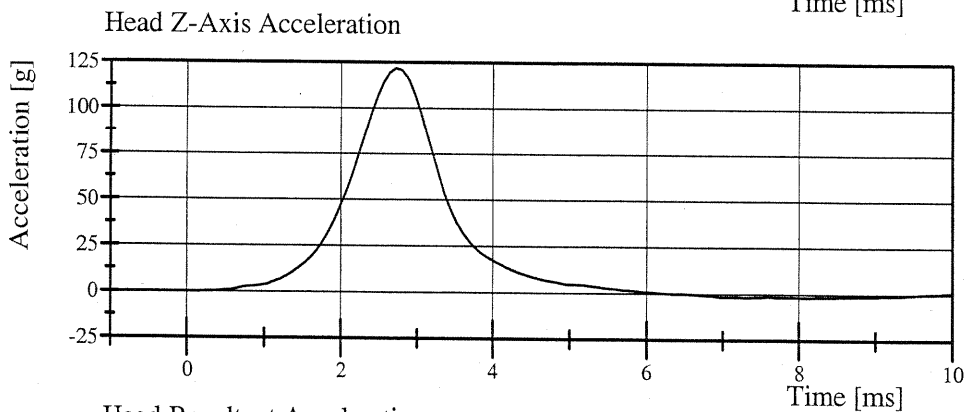
Min: -251.8 g at 2.7 ms



Filter Class: CFC_1000

Max: 0.2 g at 1.0 ms

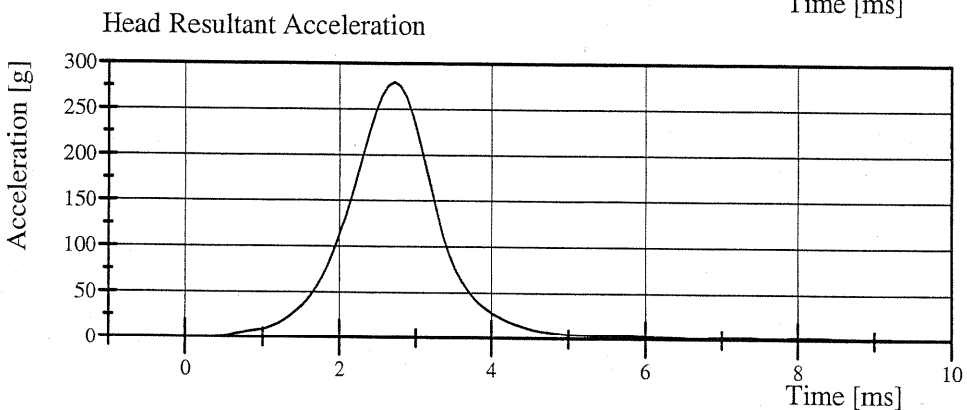
Min: -5.6 g at 2.9 ms



Filter Class: CFC_1000

Max: 121.9 g at 2.7 ms

Min: -1.7 g at 7.3 ms



Filter Class: CFC_1000

Max: 279.8 g at 2.7 ms

Min: 0.0 g at -0.2 ms

Transportation Research Center Inc.

Neck Flexion

HHH 5th Serial No. 416 Certification No. 37-5

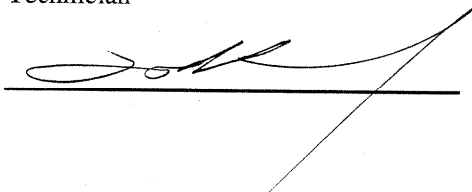
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.053 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	(-2.1) - (-2.5) m/s	-2.38 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	(-4.0) - (-5.0) m/s	-4.64 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.70 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-77.9 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	74.2 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	85.1 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



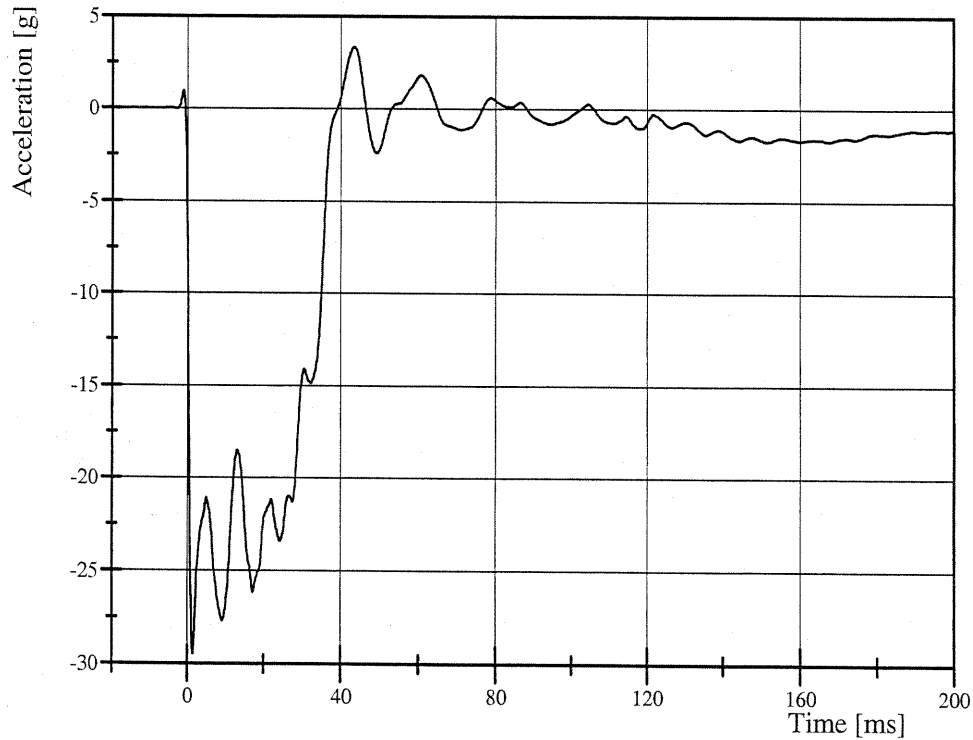
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 37-5

Test Date: 03/22/2006

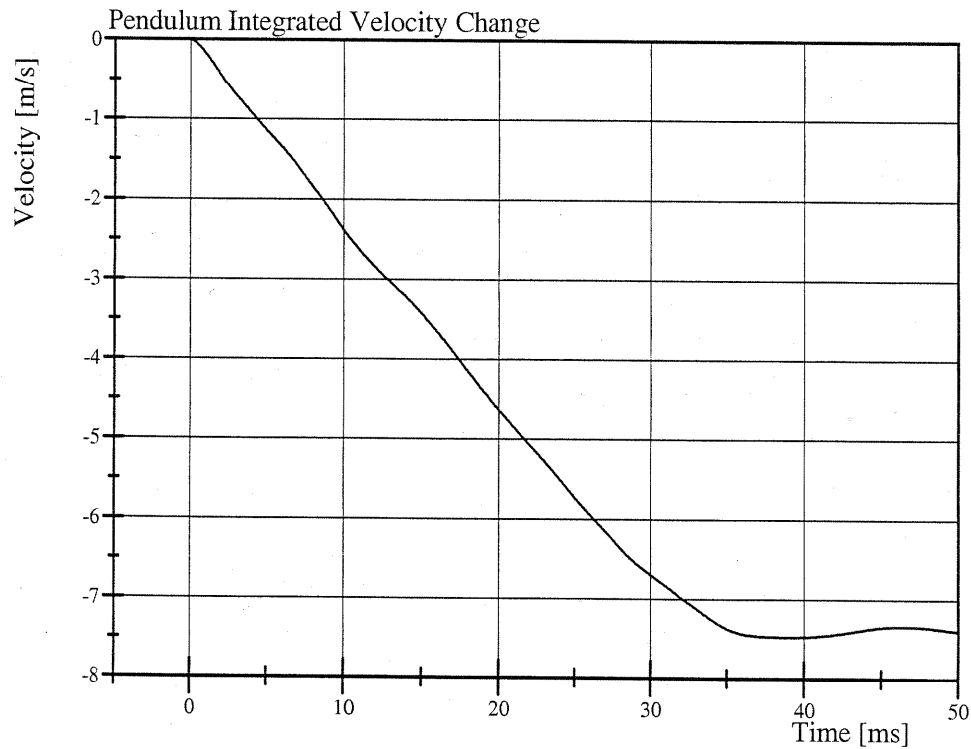
Pendulum Acceleration



Filter Class: CFC_180

Max: 3.3 g at 43.4 ms

Min: -29.5 g at 1.4 ms



Filter Class: CFC_180

Max: 0.0 m/s at 0.0 ms

Min: -7.5 m/s at 39.0 ms

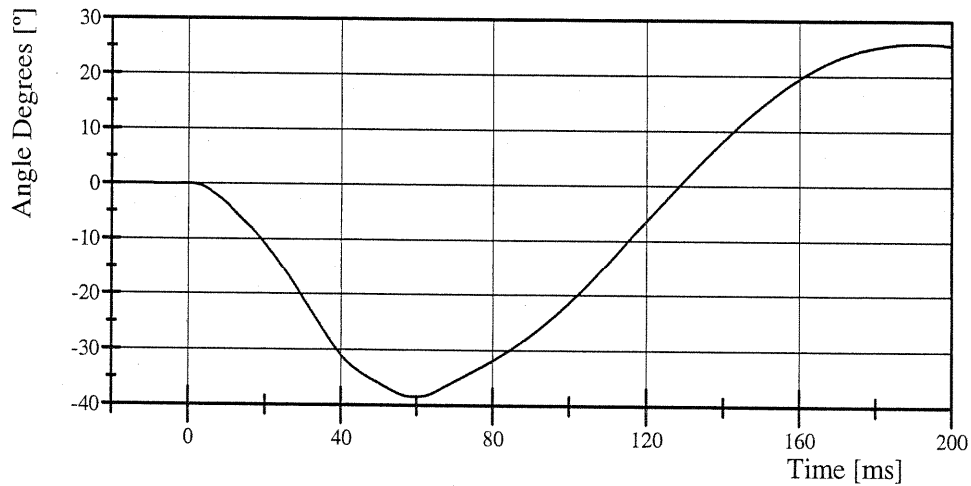
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 37-5

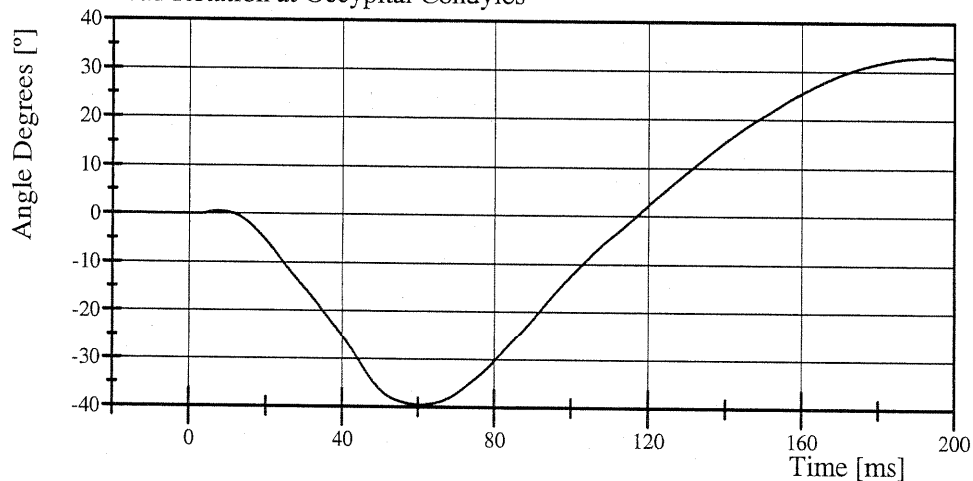
Test Date: 03/22/2006

Pot Rotation at the Base of Neck



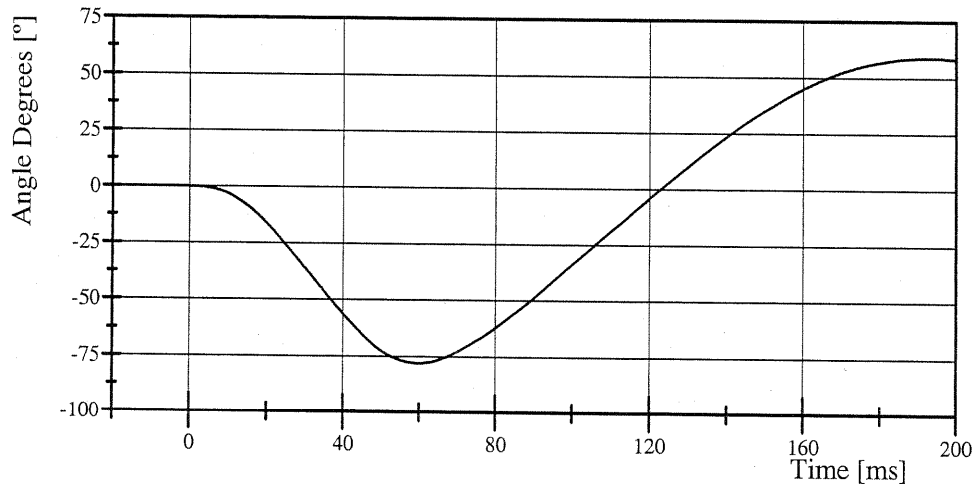
Filter Class: CFC_60
Max: 26.0 ° at 191.8 ms
Min: -38.4 ° at 59.7 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 33.0 ° at 194.1 ms
Min: -39.5 ° at 60.5 ms

Total Head D-Plane Rotation



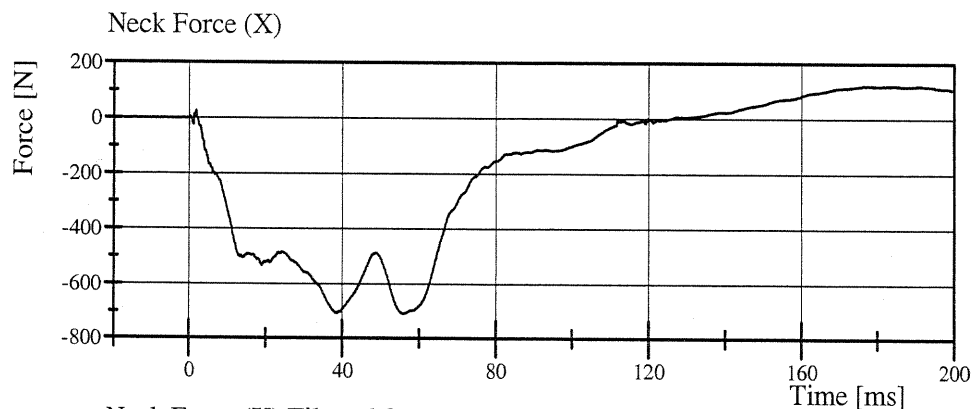
Filter Class: CFC_60
Max: 58.9 ° at 193.3 ms
Min: -77.9 ° at 60.1 ms

Transportation Research Center Inc.

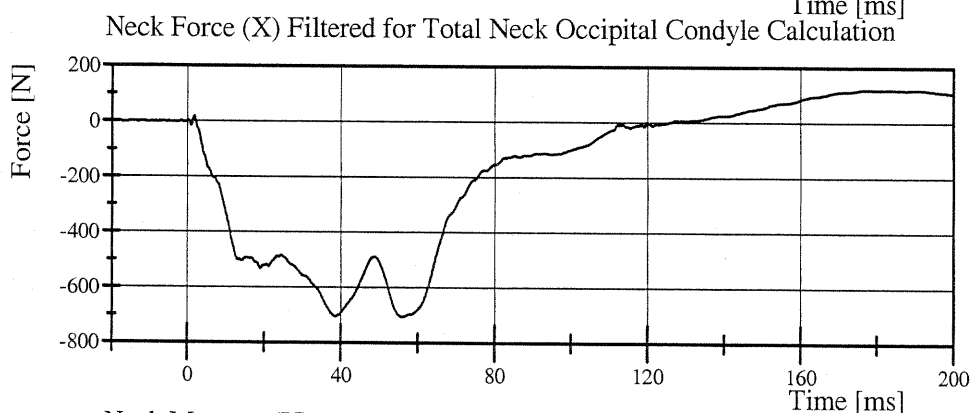
Neck Flexion

HHH 5th Serial No. 416 Certification No. 37-5

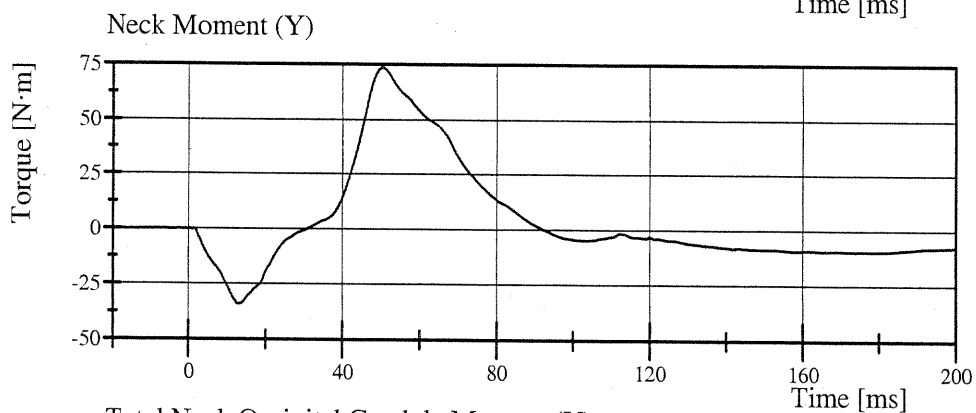
Test Date: 03/22/2006



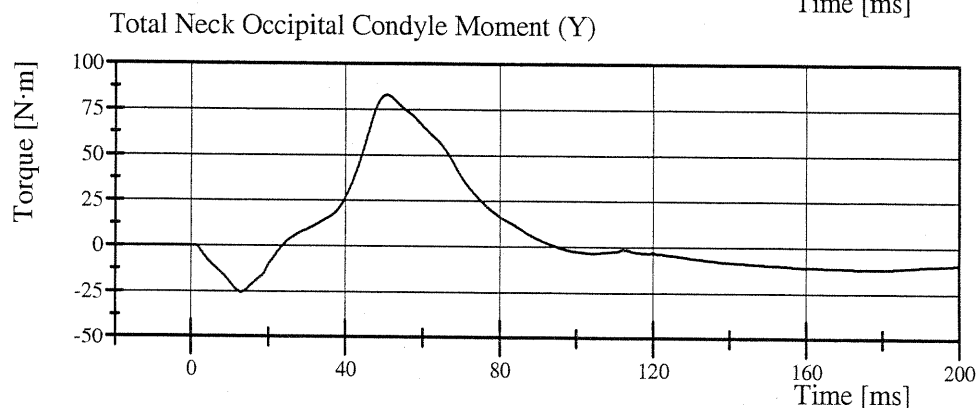
Filter Class: CFC_1000
Max: 121.3 N at 178.5 ms
Min: -706.8 N at 55.8 ms



Filter Class: CFC_600
Max: 120.8 N at 184.2 ms
Min: -706.4 N at 55.8 ms



Filter Class: CFC_600
Max: 73.6 N·m at 50.2 ms
Min: -34.1 N·m at 13.0 ms



Filter Class: CFC_600
Max: 82.9 N·m at 50.6 ms
Min: -25.2 N·m at 12.9 ms



Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 37-2

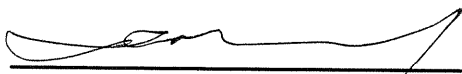
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-6.058 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.76 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.40 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	4.96 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	102.5 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-54.8 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	103.4 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



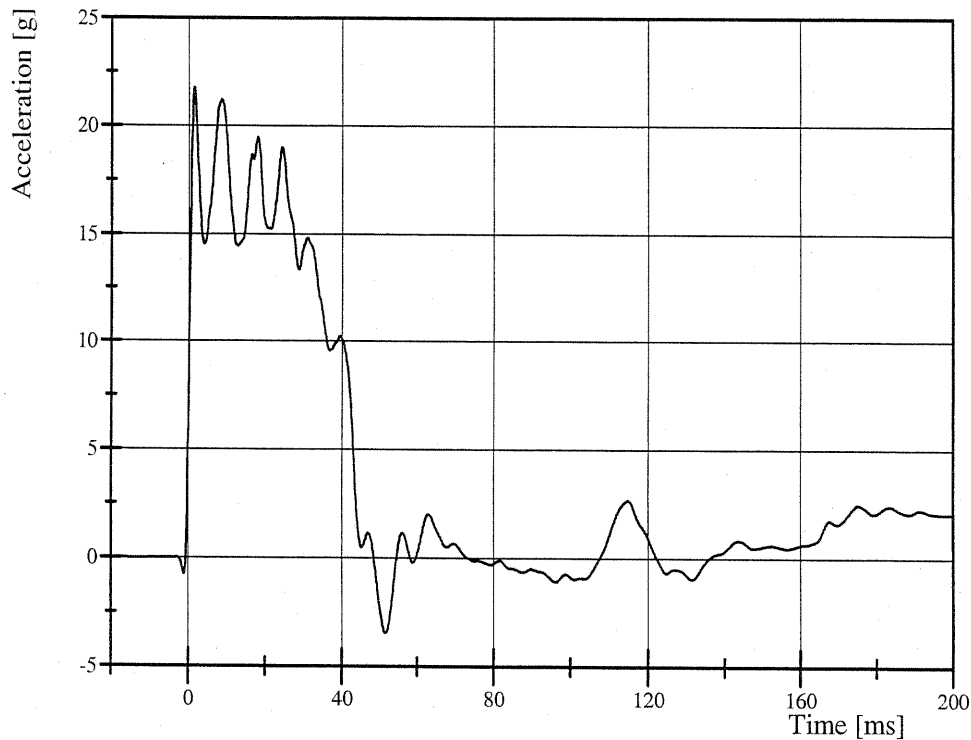
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 37-2

Test Date: 03/22/2006

Pendulum Acceleration

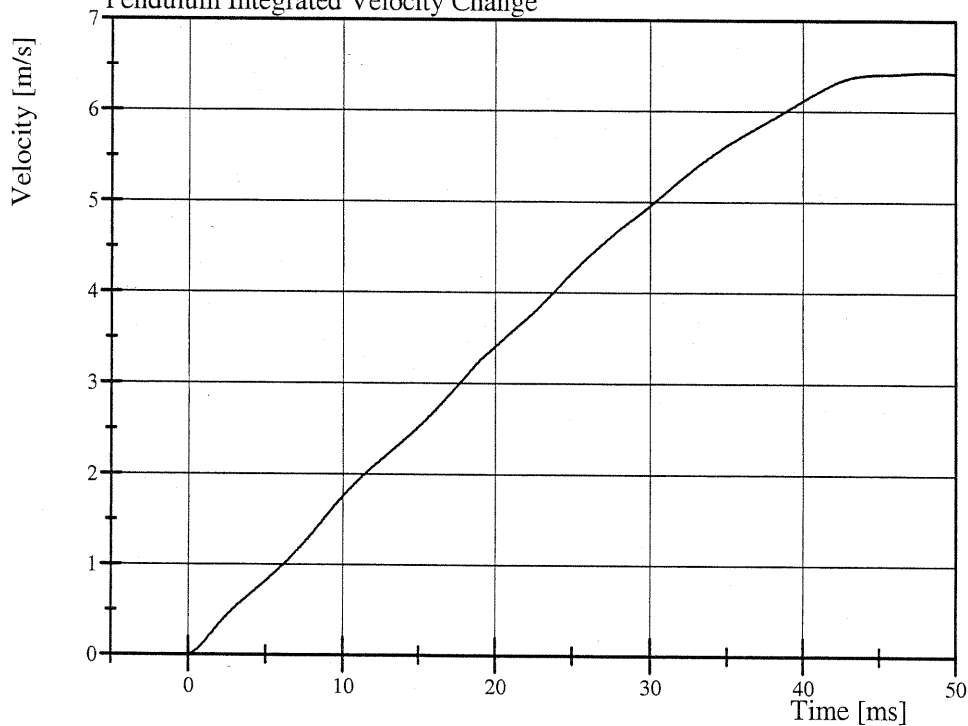


Filter Class: CFC_180

Max: 21.8 g at 1.4 ms

Min: -3.4 g at 51.5 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180

Max: 6.4 m/s at 48.5 ms

Min: 0.0 m/s at 0.0 ms

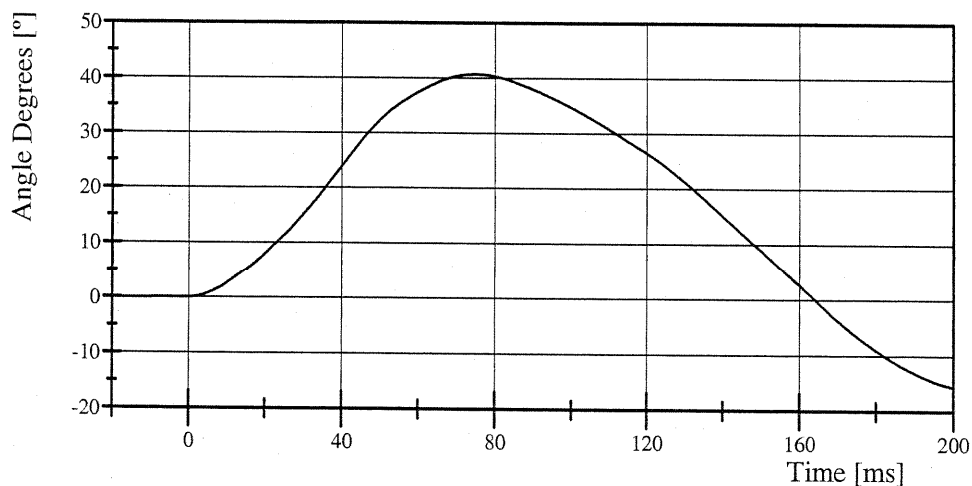
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 37-2

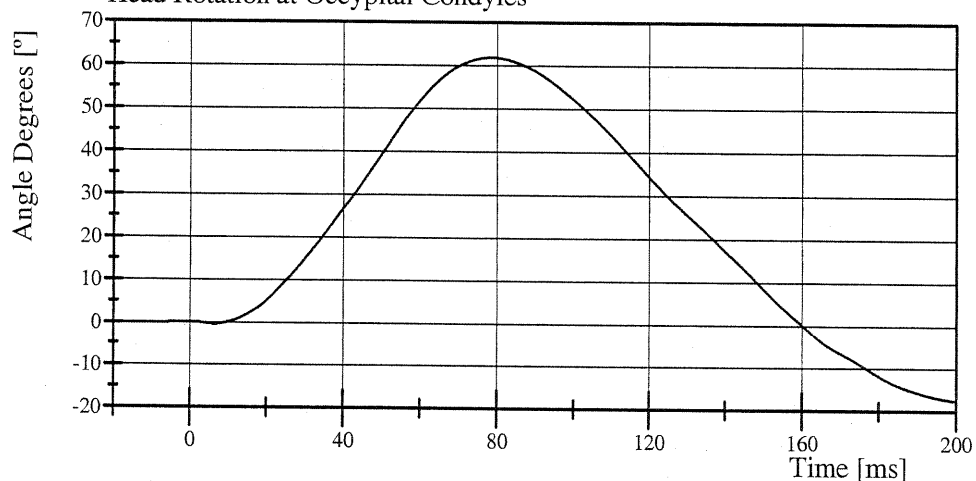
Test Date: 03/22/2006

Pot Rotation at the Base of Neck



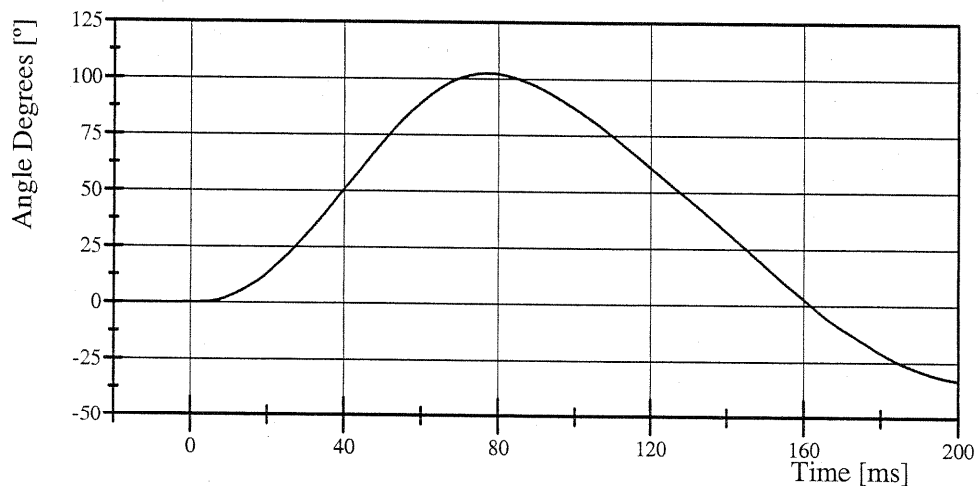
Filter Class: CFC_60
Max: 40.7 ° at 74.9 ms
Min: -15.6 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 61.9 ° at 78.6 ms
Min: -17.6 ° at 200.0 ms

Total Head D-Plane Rotation



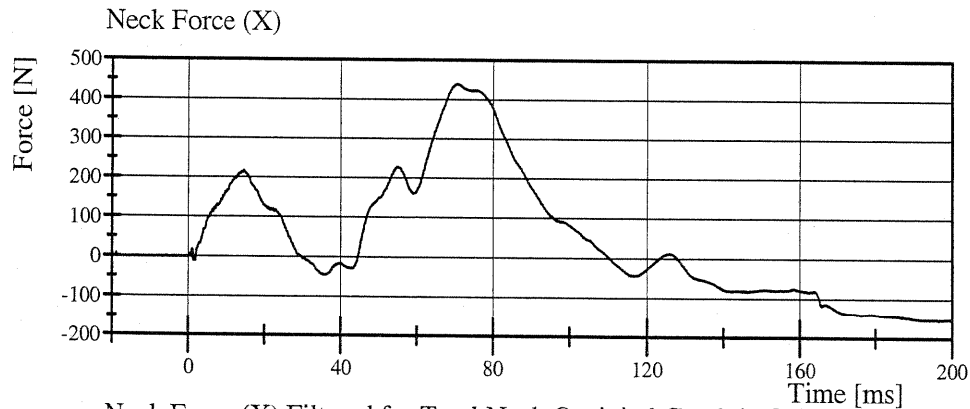
Filter Class: CFC_60
Max: 102.5 ° at 77.4 ms
Min: -33.2 ° at 200.0 ms

Transportation Research Center Inc.

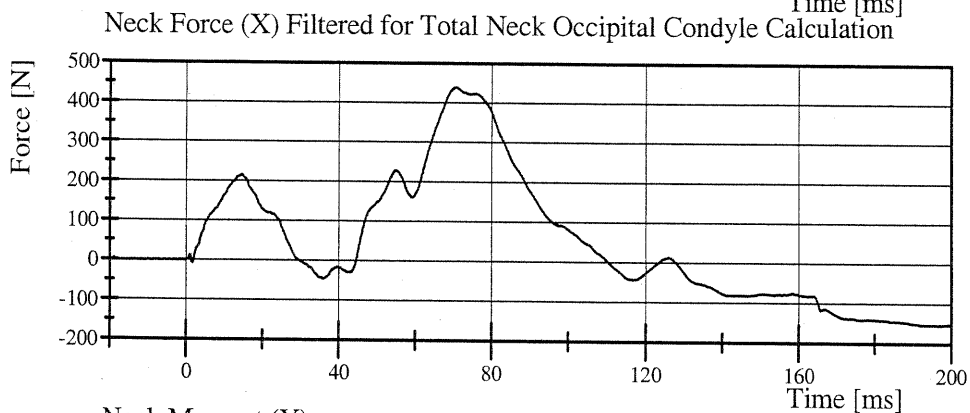
Neck Extension

HIII 5th Serial No. 416 Certification No. 37-2

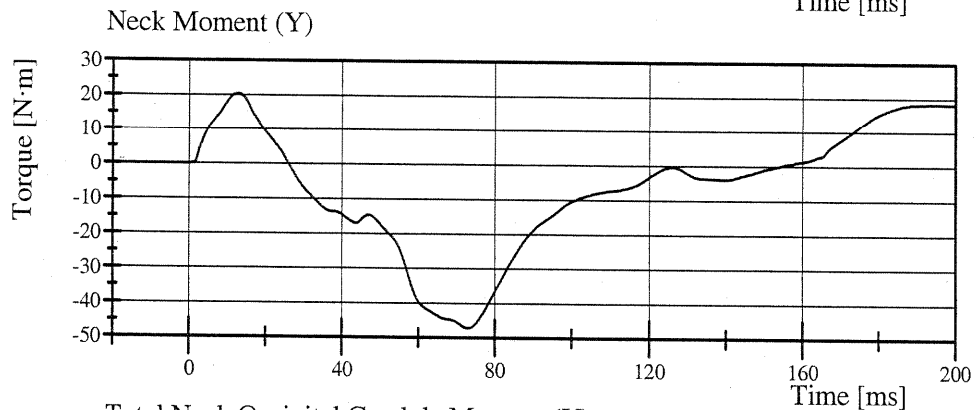
Test Date: 03/22/2006



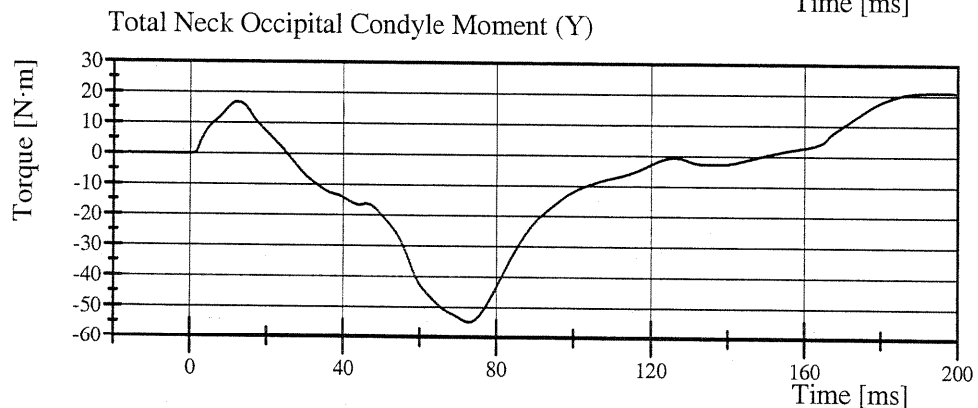
Filter Class: CFC_1000
Max: 440.2 N at 70.8 ms
Min: -154.2 N at 196.6 ms



Filter Class: CFC_600
Max: 439.9 N at 70.8 ms
Min: -153.4 N at 196.6 ms



Filter Class: CFC_600
Max: 20.4 N·m at 12.4 ms
Min: -47.2 N·m at 73.0 ms



Filter Class: CFC_600
Max: 21.1 N·m at 195.4 ms
Min: -54.8 N·m at 72.9 ms

Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 37-1

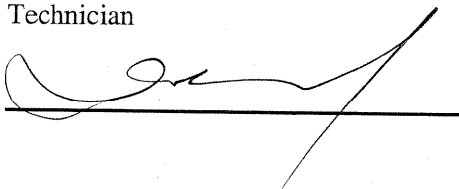
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.611 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,093.5 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	$\geq$ (-4,600) N	-4,027.7 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-56.7 mm	Yes
Internal Hysteresis	69 - 85 %	71.6 %	Yes

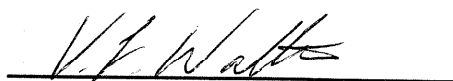
Test meets specifications.

Comments:

Technician



Approved

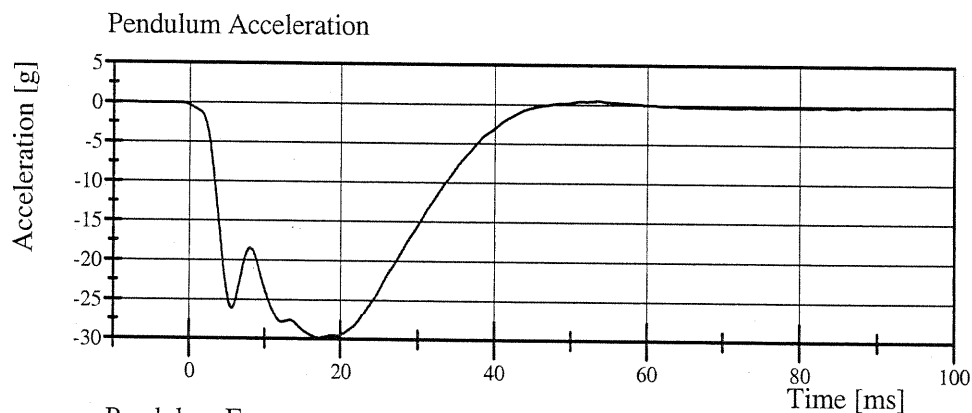


Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 37-1

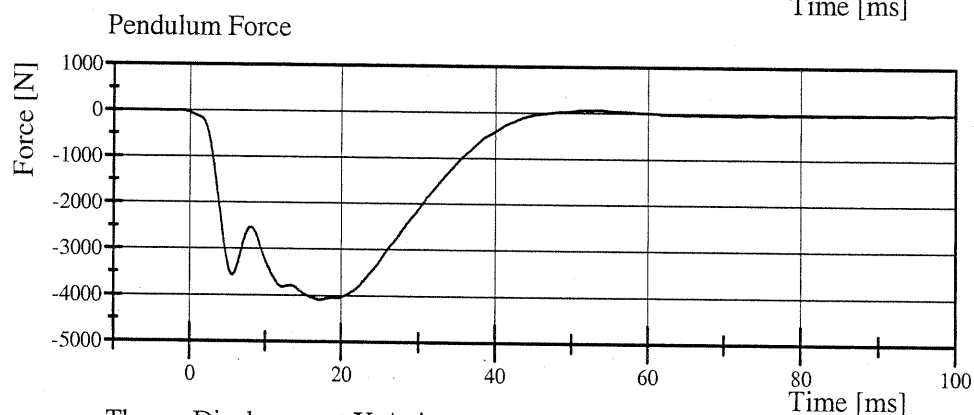
Test Date: 03/22/2006



Filter Class: CFC_180

Max: 0.5 g at 53.6 ms

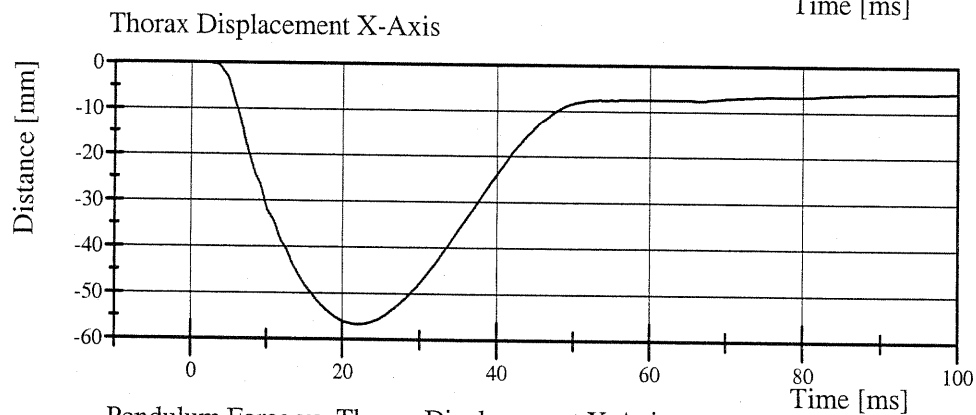
Min: -29.9 g at 17.0 ms



Filter Class: CFC_180

Max: 71.9 N at 53.6 ms

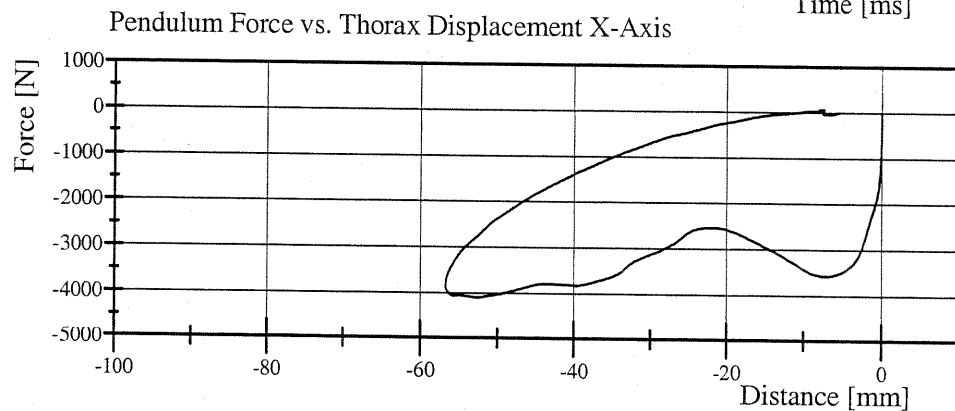
Min: -4,093.5 N at 17.0 ms



Filter Class: CFC_600

Max: 0.0 mm at -4.6 ms

Min: -56.7 mm at 22.0 ms



Filter Class: CFC_180

Max: 71.9 N at -7.5 mm

Min: -4,093.5 N at -52.4 mm



TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

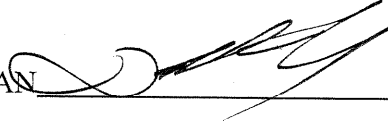
CAL DATE: 16-Mar-06

TRC, INC. TEST NO: 416C36TF1 572 O SN416 TORSO FLEX CAL 36

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.6° C
RELATIVE HUMIDITY	10 – 70 %	28 %
INITIAL ANGLE OF UNSUPPORTED DUMMY	<= 20° REFERENCED TO VERTICAL	17.6°
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	325.7 N
RETURN ANGLE		24.6°
DIFFERENCE BETWEEN RETURN ANGLE & INITIAL ANGLE	+/- 8 ° OF INITIAL ANGLE	7.0 °
RATE	0.5° - 1.5°/sec	0.99 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN 

Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 5th Serial No. 416 Certification No. 37-2

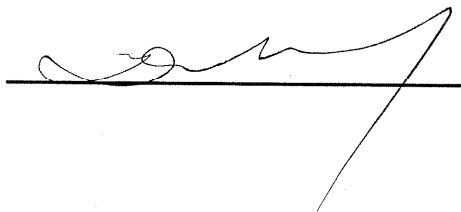
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.123 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,630.5 N	Yes

Test meets specifications.

Comments:

Technician

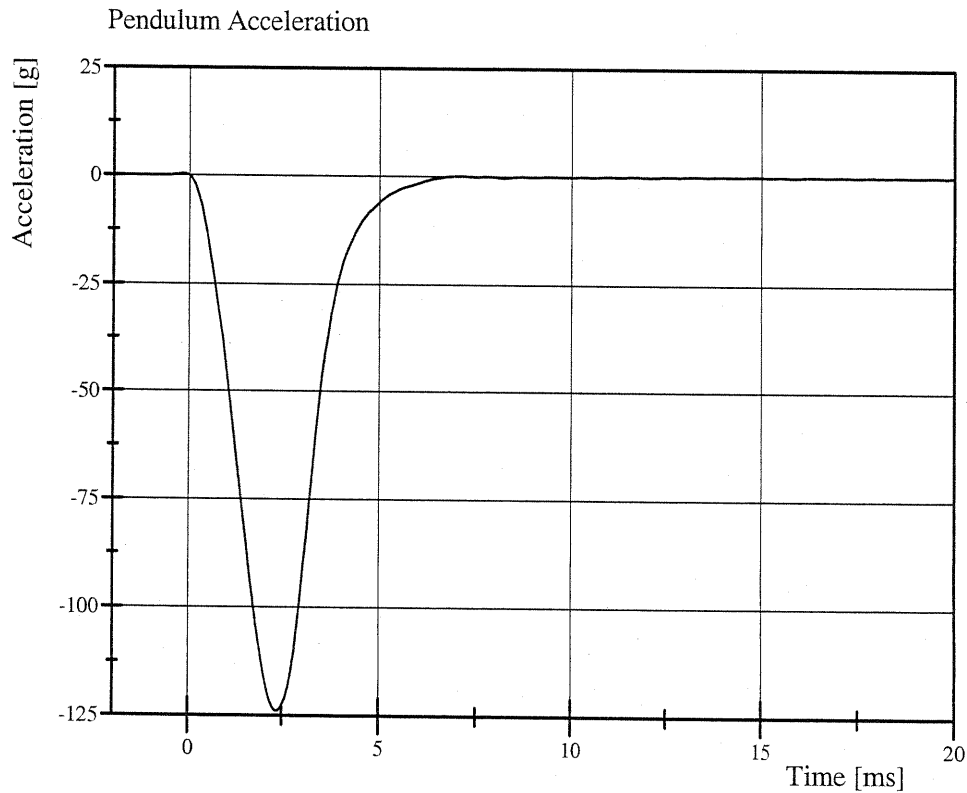


Approved

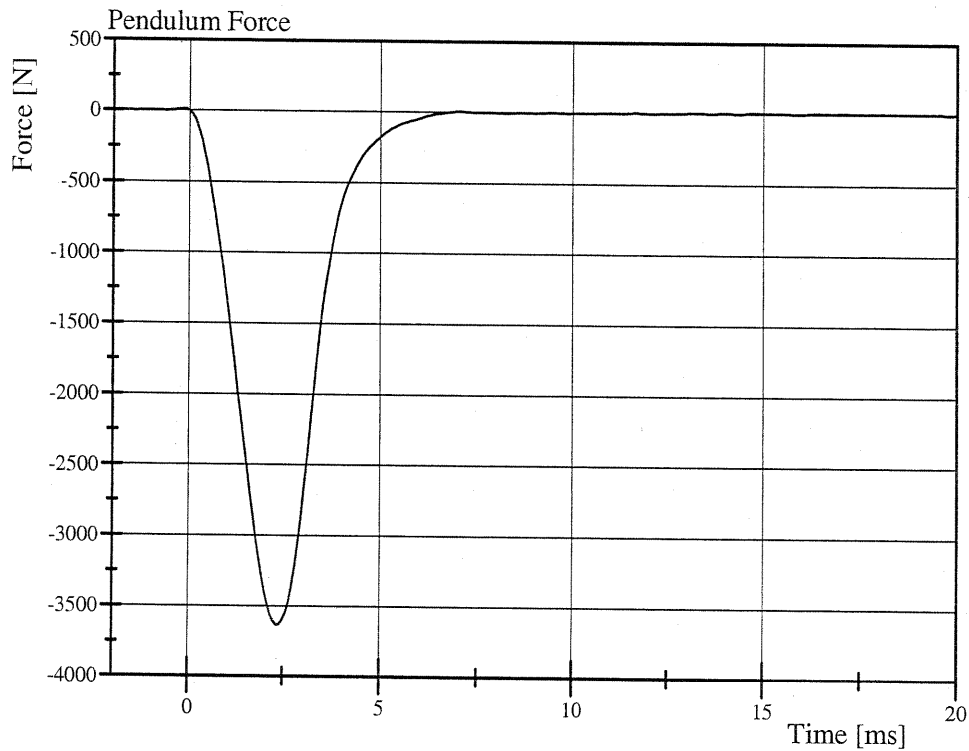


Transportation Research Center Inc.

Left Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 37-2
Test Date: 03/22/2006



Filter Class: CFC_600
Max: 0.3 g at -0.2 ms
Min: -123.8 g at 2.3 ms



Filter Class: CFC_600
Max: 9.7 N at -0.2 ms
Min: -3,630.5 N at 2.3 ms



Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 5th Serial No. 416 Certification No. 37-2

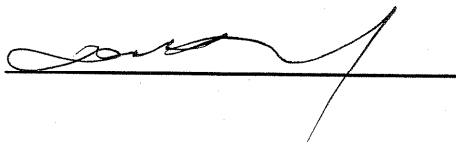
Test Date: 03/23/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.125 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,740.7 N	Yes

Test meets specifications.

Comments:

Technician



Approved

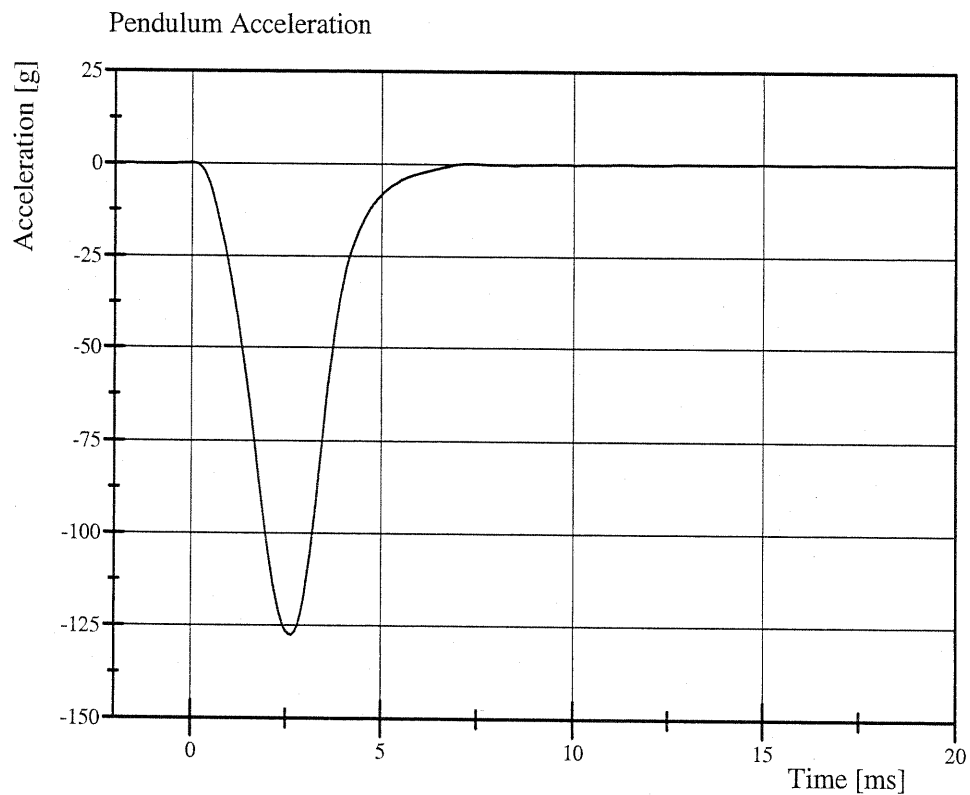


Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 5th Serial No. 416 Certification No. 37-2

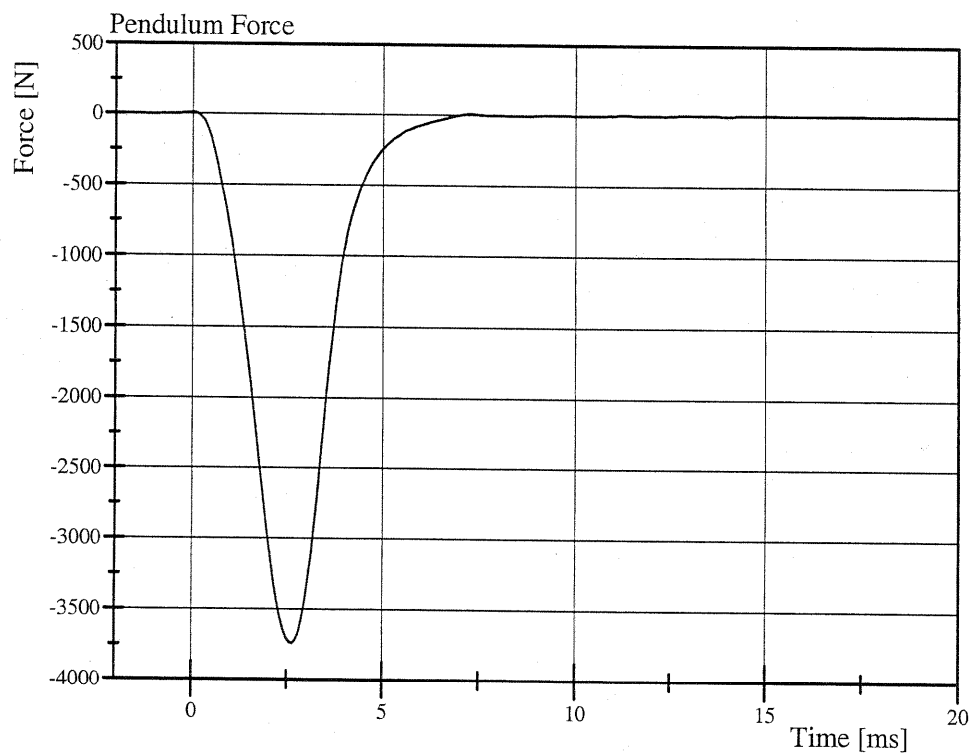
Test Date: 03/23/2006



Filter Class: CFC_600

Max: 0.3 g at 0.0 ms

Min: -127.6 g at 2.6 ms



Filter Class: CFC_600

Max: 7.9 N at 0.0 ms

Min: -3,740.7 N at 2.6 ms



Transportation Research Center Inc.

Left Knee Slider

HIII 5th Serial No. 416 Certification No. 37-2

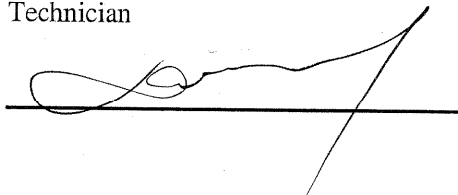
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.737 m/s	Yes
Peak Deflection	(-12.7) - (-15.5) mm	-12.89 mm	Yes

Test meets specifications.

Comments:

Technician



Approved

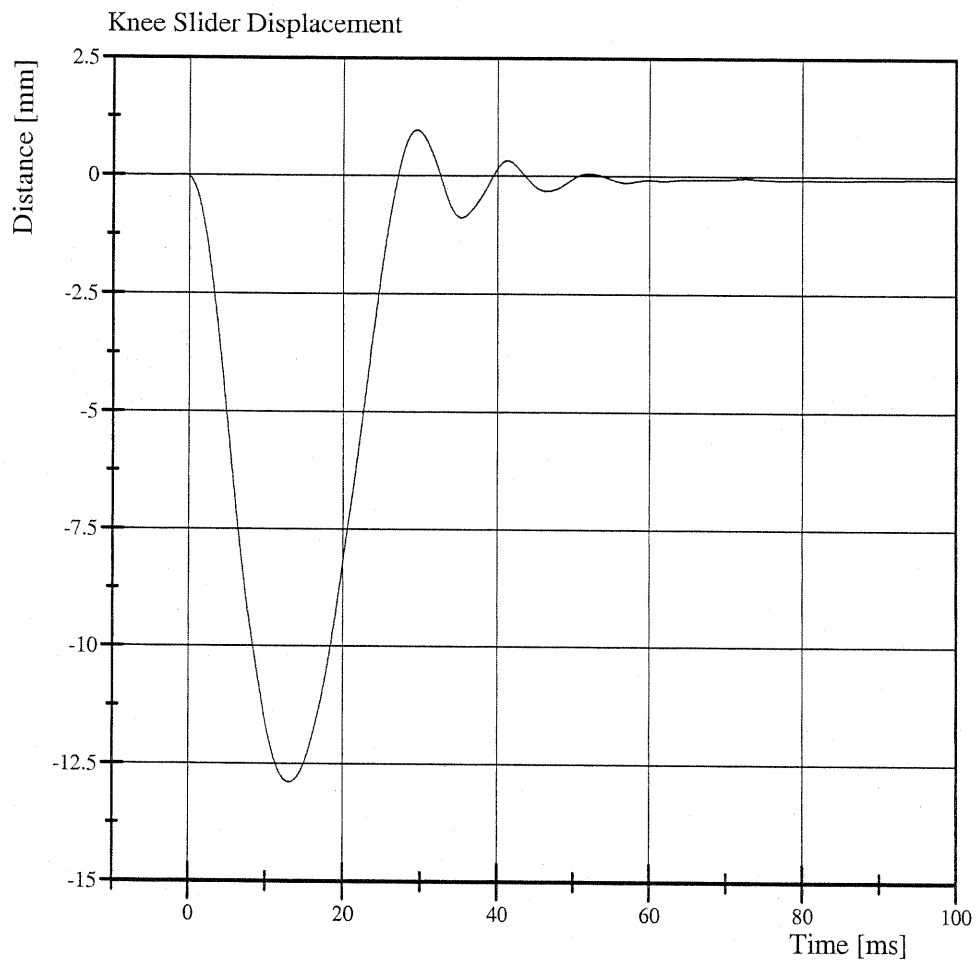


Transportation Research Center Inc.

Left Knee Slider

HIII 5th Serial No. 416 Certification No. 37-2

Test Date: 03/22/2006



Filter Class: CFC_180
Max: 1.0 mm at 29.5 ms
Min: -12.9 mm at 13.1 ms

Transportation Research Center Inc.

Right Knee Slider

HIII 5th Serial No. 416 Certification No. 37-1

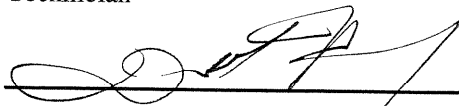
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.741 m/s	Yes
Peak Deflection	(-12.7) - (-15.5) mm	-12.91 mm	Yes

Test meets specifications.

Comments:

Technician



Approved

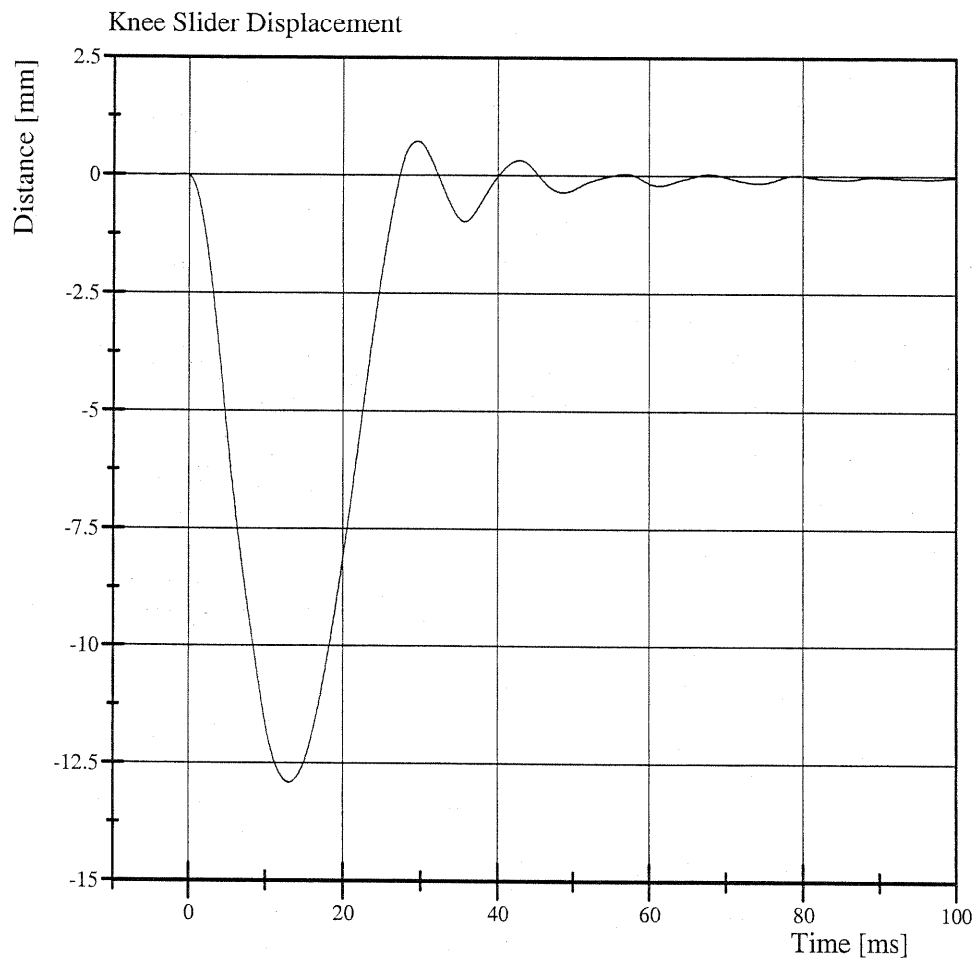


Transportation Research Center Inc.

Right Knee Slider

HIII 5th Serial No. 416 Certification No. 37-1

Test Date: 03/22/2006



Filter Class: CFC_180

Max: 0.7 mm at 29.5 ms

Min: -12.9 mm at 13.1 ms

Post-Test Dummy Configuration and Performance Verification Data

Target Vehicle Passenger Dummy S/N: 416

Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	276.5 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	2.1 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

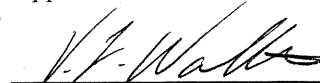
Test meets specifications.

Comments:

Technician



Approved

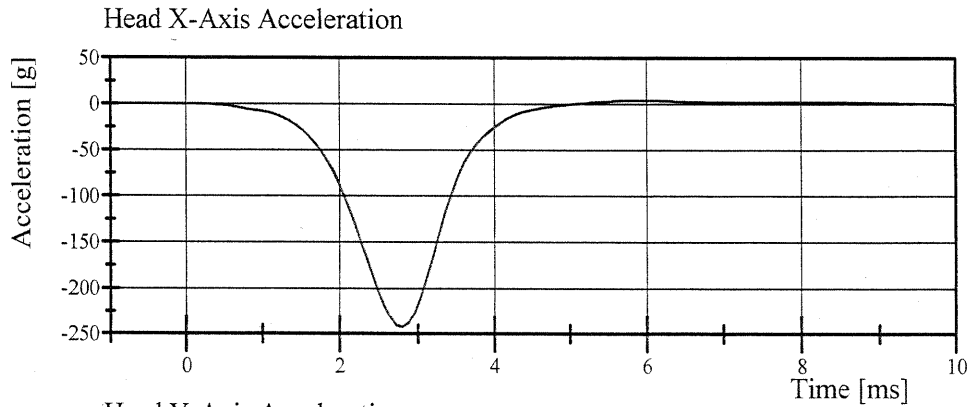


Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 38-1

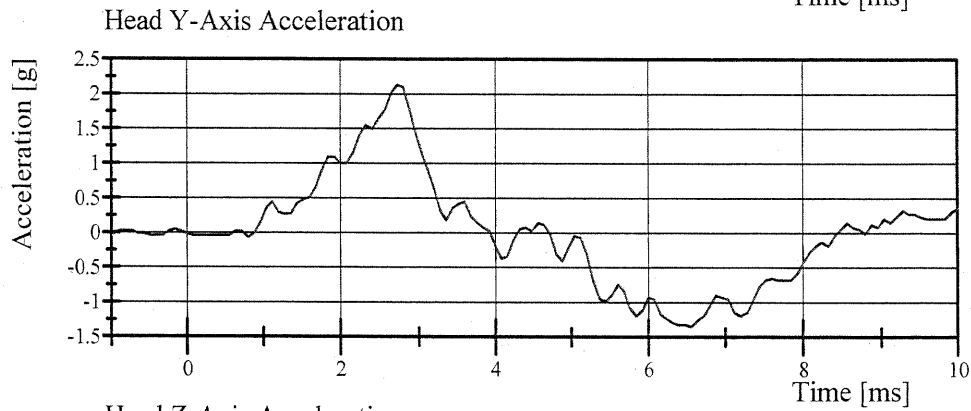
Test Date: 04/26/2006



Filter Class: CFC_1000

Max: 4.0 g at 5.8 ms

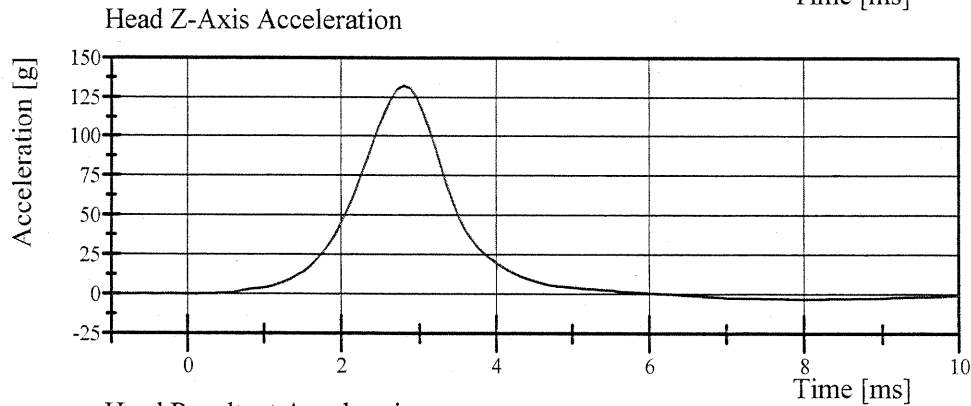
Min: -242.7 g at 2.8 ms



Filter Class: CFC_1000

Max: 2.1 g at 2.7 ms

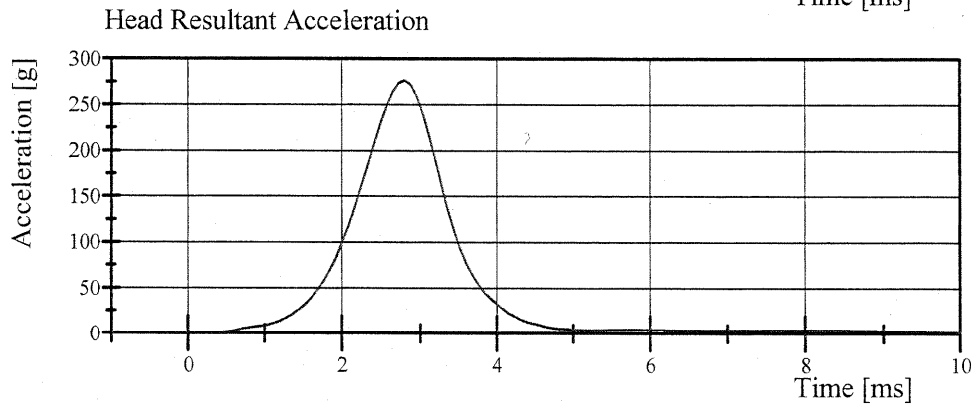
Min: -1.4 g at 6.6 ms



Filter Class: CFC_1000

Max: 132.5 g at 2.8 ms

Min: -3.1 g at 8.1 ms



Filter Class: CFC_1000

Max: 276.5 g at 2.8 ms

Min: 0.0 g at -1.0 ms

Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 04/30/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.038 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	(-2.1) - (-2.5) m/s	-2.35 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	(-4.0) - (-5.0) m/s	-4.46 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.33 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-79.1 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	75.0 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	86.6 ms	Yes

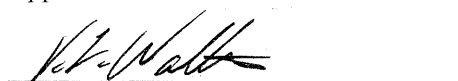
Test meets specifications.

Comments:

Technician



Approved

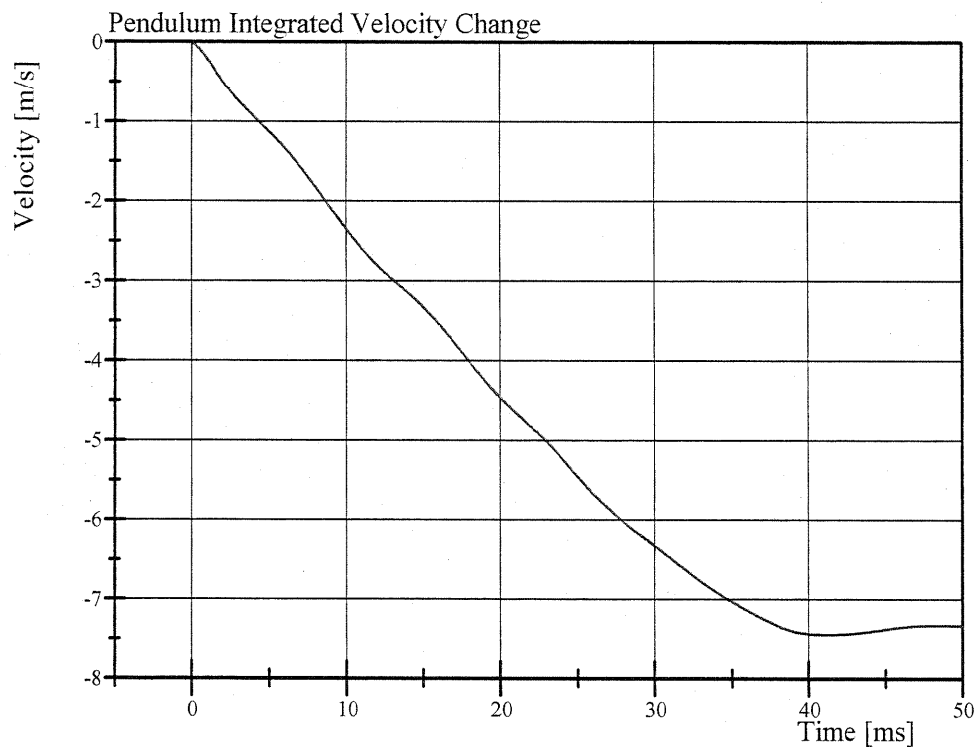
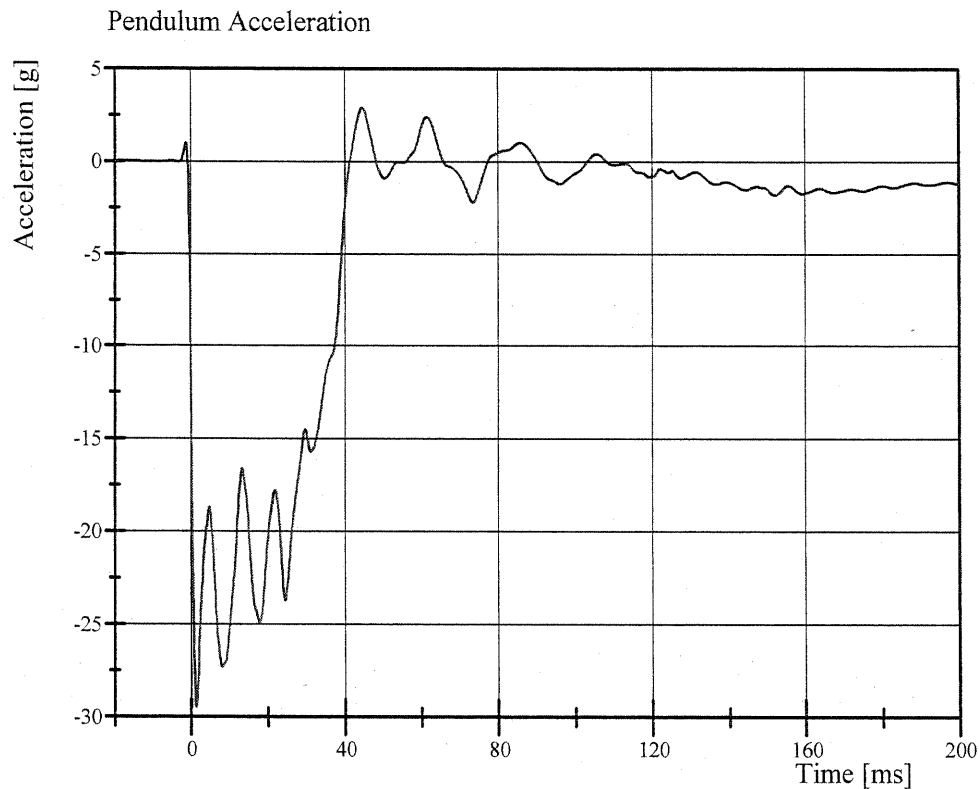


Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 04/30/2006



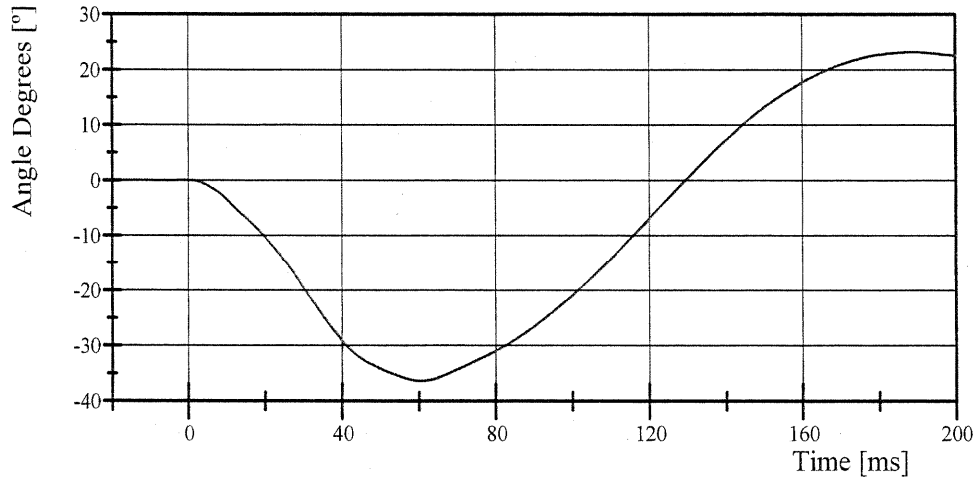
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 04/30/2006

Pot Rotation at the Base of Neck

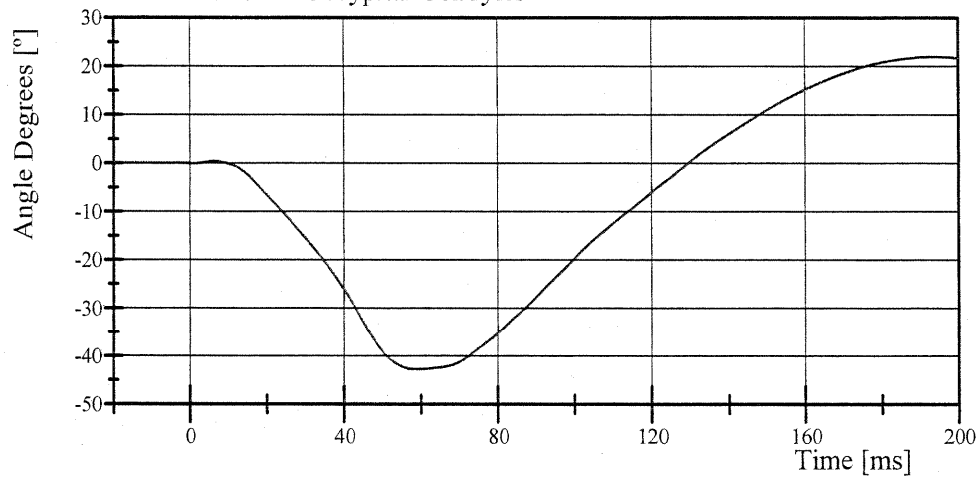


Filter Class: CFC_60

Max: 23.2 ° at 188.9 ms

Min: -36.4 ° at 60.7 ms

Head Rotation at Occypital Condyles

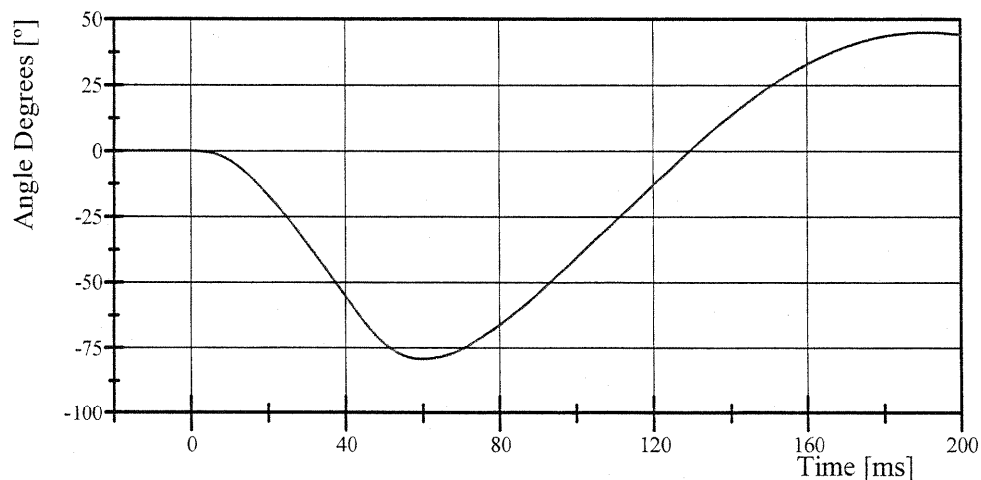


Filter Class: CFC_60

Max: 21.9 ° at 193.8 ms

Min: -42.8 ° at 58.9 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 45.0 ° at 191.2 ms

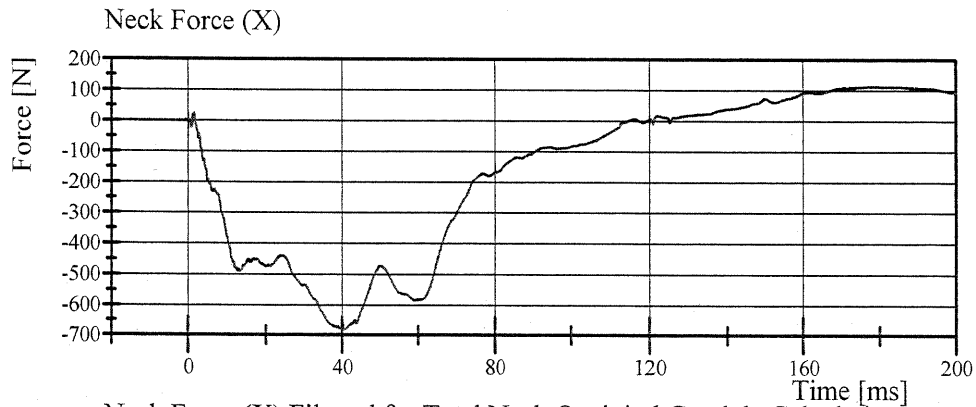
Min: -79.1 ° at 59.9 ms

Transportation Research Center Inc.

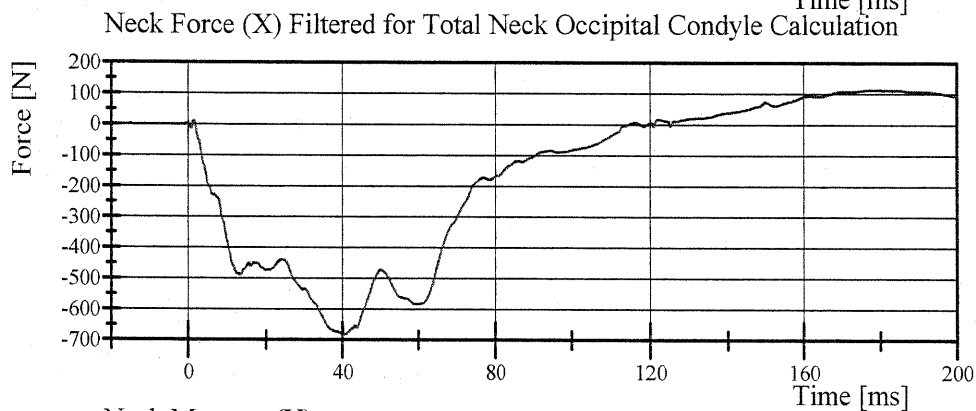
Neck Flexion

HIII 5th Serial No. 416 Certification No. 38-1

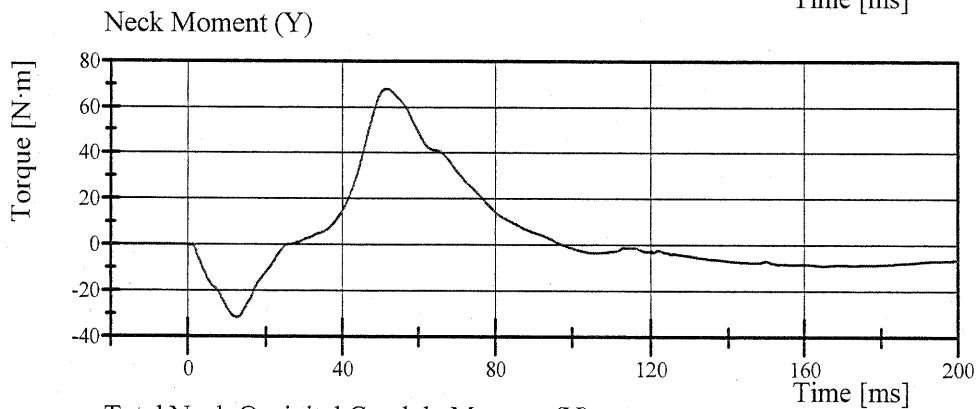
Test Date: 04/30/2006



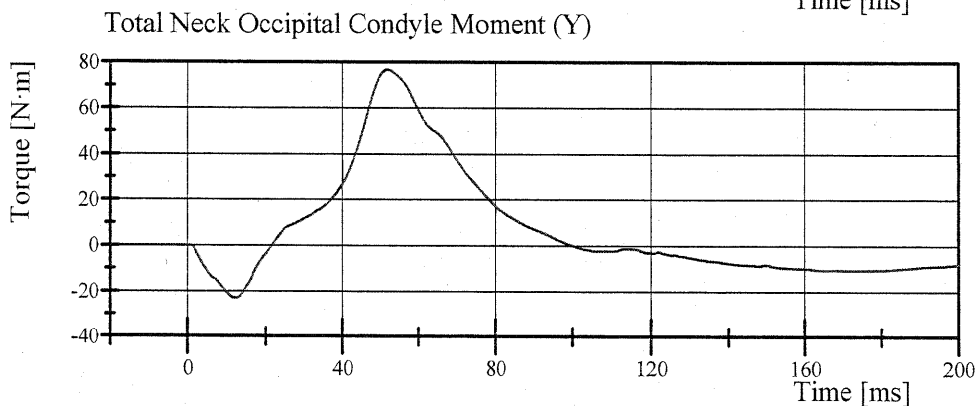
Filter Class: CFC_1000
Max: 113.6 N at 178.1 ms
Min: -684.2 N at 40.6 ms



Filter Class: CFC_600
Max: 113.4 N at 178.2 ms
Min: -683.5 N at 40.6 ms



Filter Class: CFC_600
Max: 68.0 N·m at 51.6 ms
Min: -31.7 N·m at 12.5 ms



Filter Class: CFC_600
Max: 76.7 N·m at 51.8 ms
Min: -23.1 N·m at 12.3 ms

Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 38-2

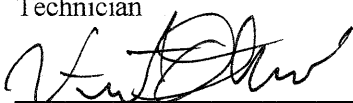
Test Date: 04/30/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-6.076 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.86 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.64 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	5.26 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	105.6 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-54.3 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	101.3 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



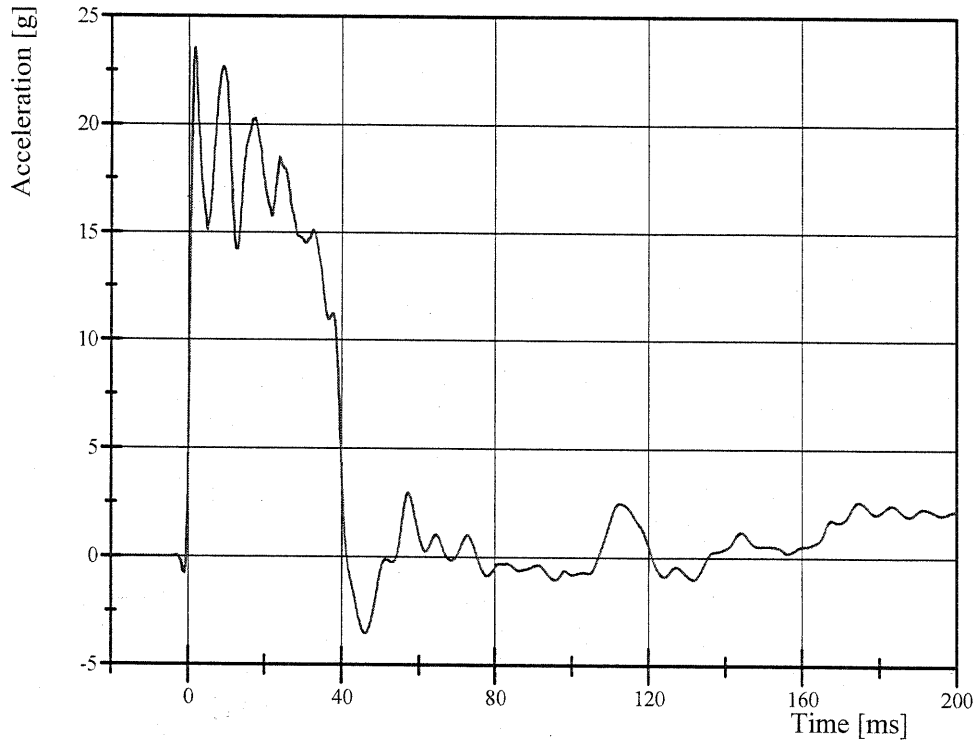
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 38-2

Test Date: 04/30/2006

Pendulum Acceleration

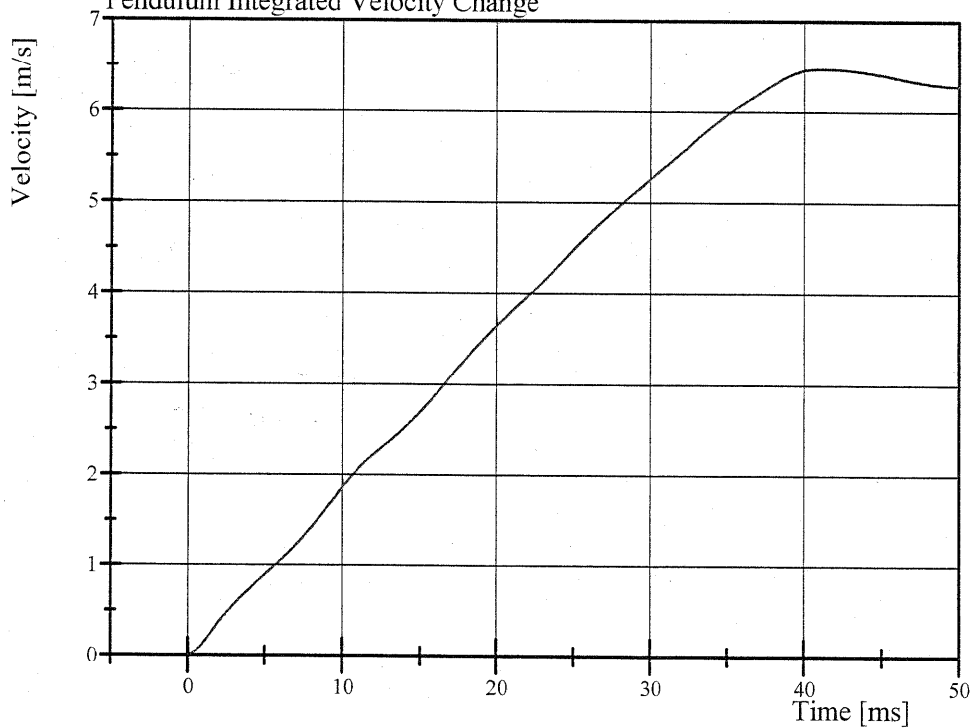


Filter Class: CFC_180

Max: 23.5 g at 1.5 ms

Min: -3.5 g at 46.2 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180

Max: 6.5 m/s at 41.3 ms

Min: 0.0 m/s at 0.0 ms

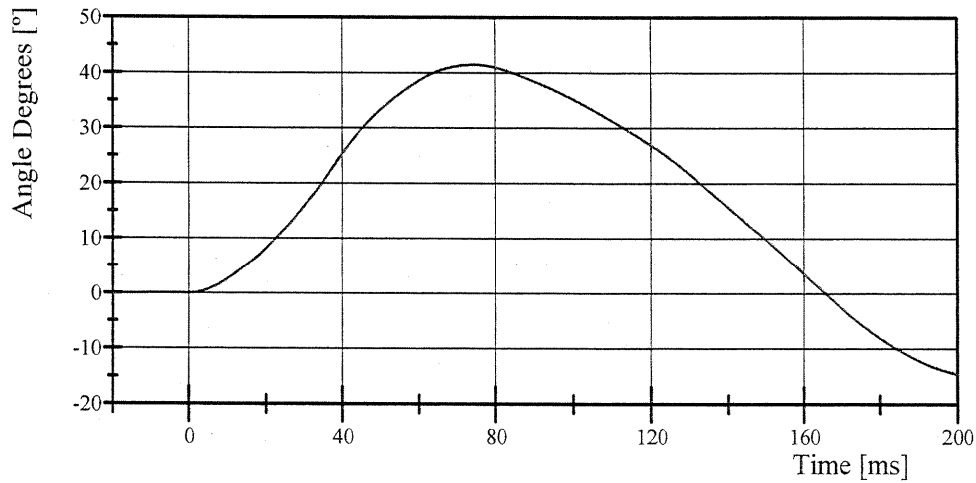
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 38-2

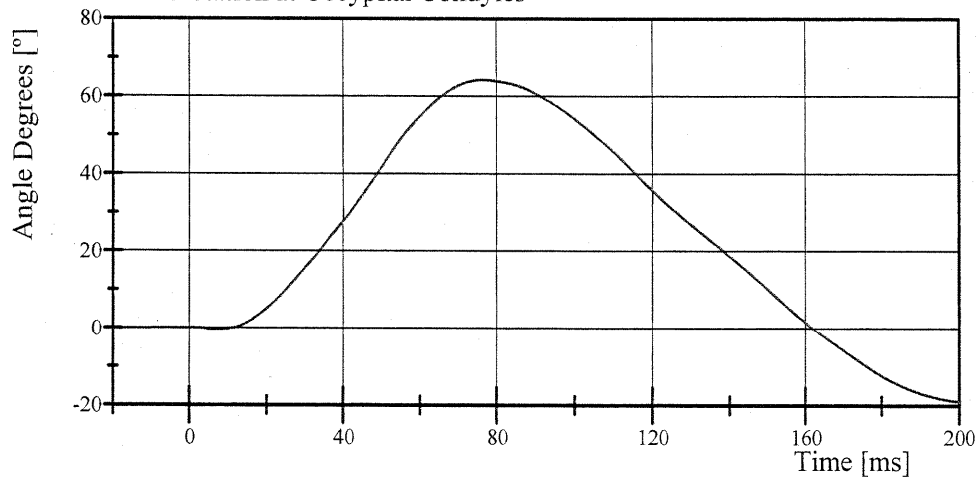
Test Date: 04/30/2006

Pot Rotation at the Base of Neck



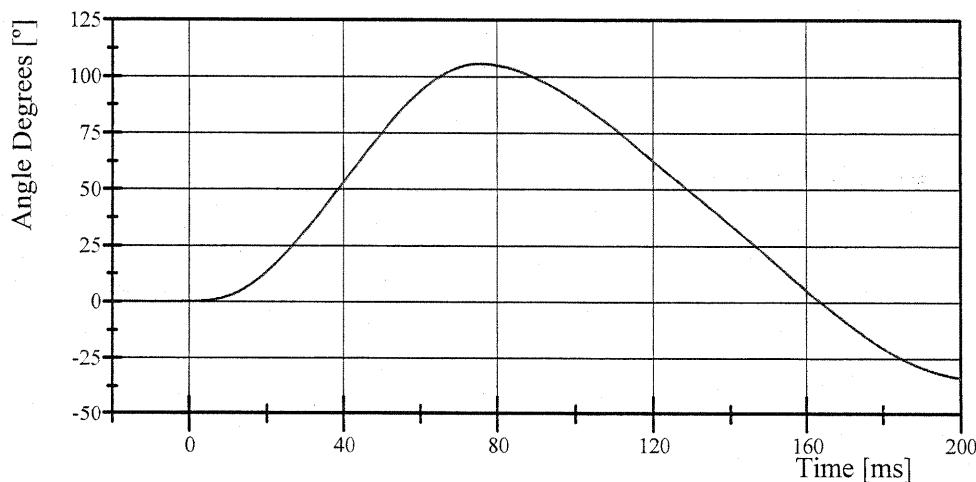
Filter Class: CFC_60
Max: 41.5 ° at 74.5 ms
Min: -14.6 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 64.2 ° at 76.6 ms
Min: -19.0 ° at 200.0 ms

Total Head D-Plane Rotation



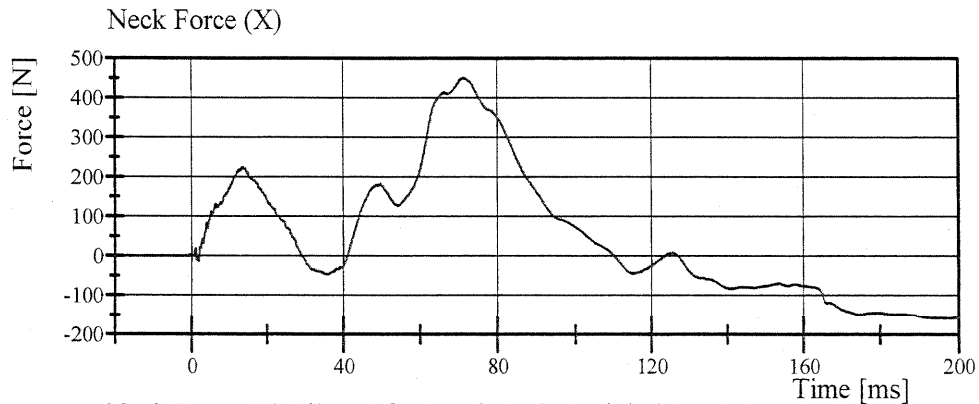
Filter Class: CFC_60
Max: 105.6 ° at 75.9 ms
Min: -33.6 ° at 200.0 ms

Transportation Research Center Inc.

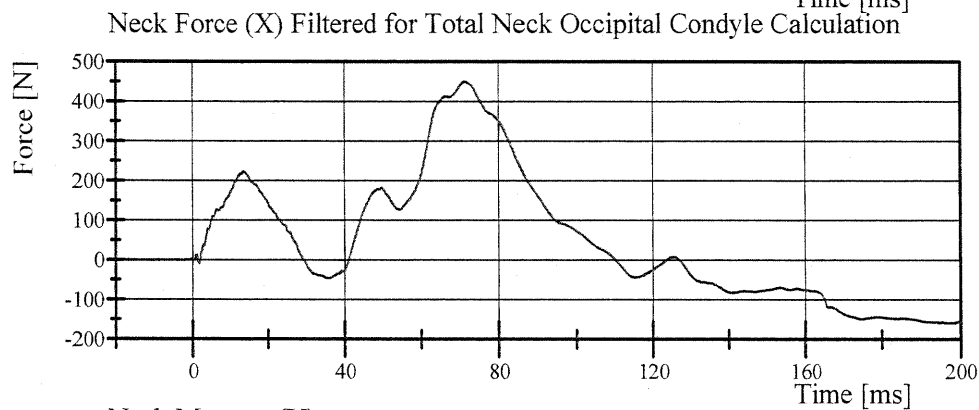
Neck Extension

HIII 5th Serial No. 416 Certification No. 38-2

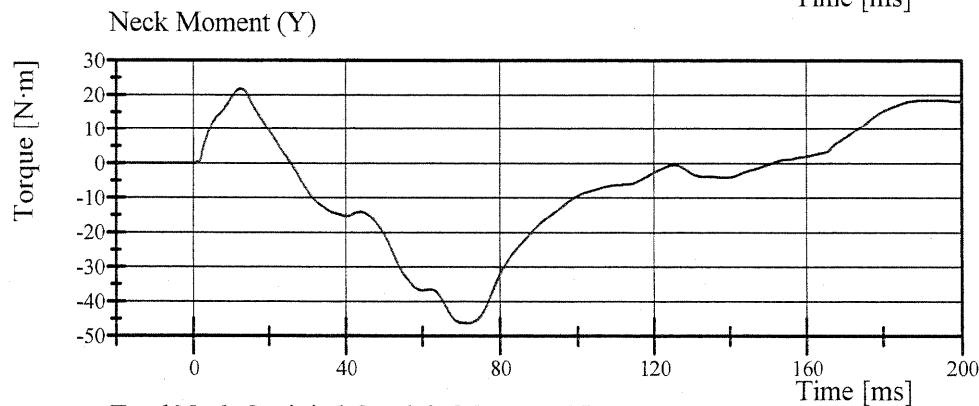
Test Date: 04/30/2006



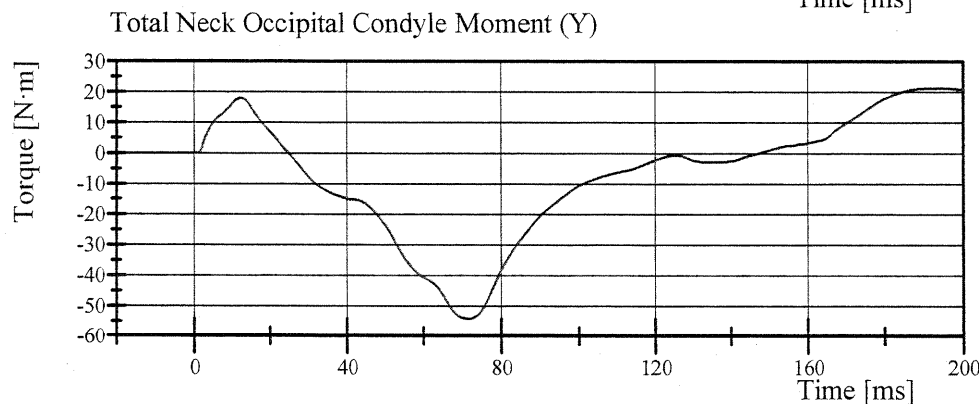
Filter Class: CFC_1000
Max: 450.4 N at 71.4 ms
Min: -159.0 N at 194.5 ms



Filter Class: CFC_600
Max: 450.0 N at 71.4 ms
Min: -158.7 N at 196.2 ms



Filter Class: CFC_600
Max: 21.8 N·m at 12.5 ms
Min: -46.3 N·m at 71.8 ms



Filter Class: CFC_600
Max: 21.3 N·m at 194.6 ms
Min: -54.3 N·m at 71.8 ms

Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 5/1/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.625 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,188.8 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	$\geq$ (-4,600) N	-3,958.3 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-56.8 mm	Yes
Internal Hysteresis	69 - 85 %	70.9 %	Yes

Test meets specifications.

Comments:

Technician



Approved

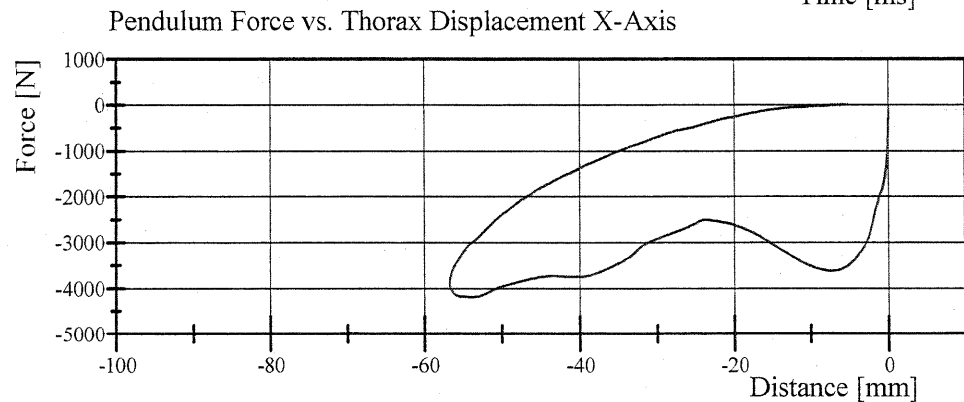
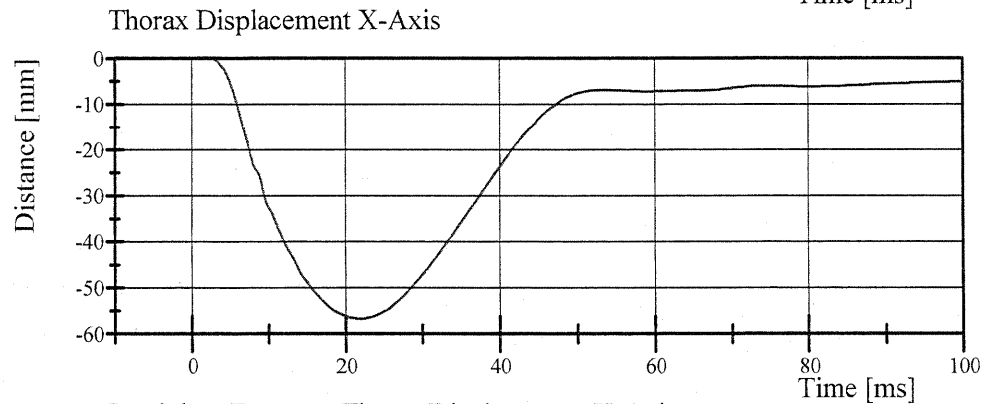
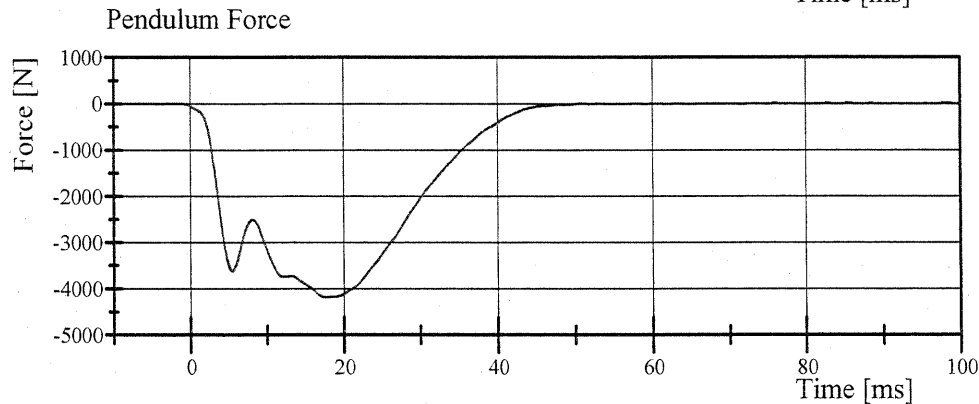
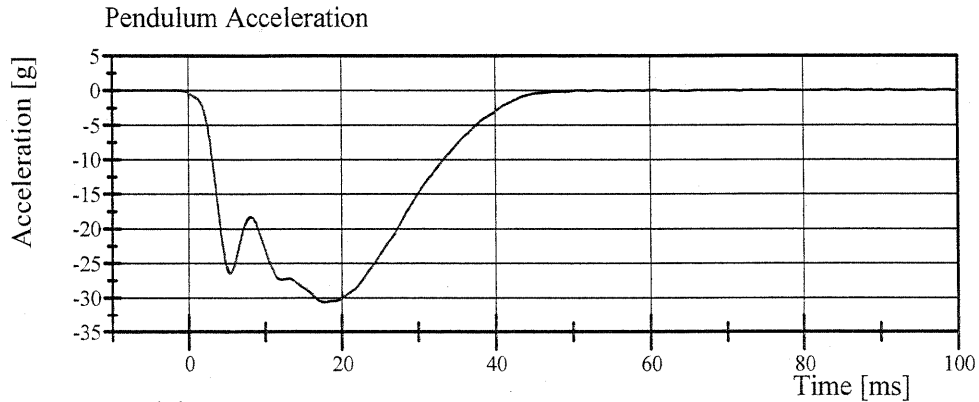


Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 5/1/2006



Transportation Research Center Inc.

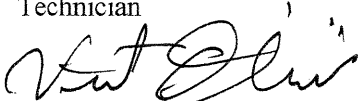
Left Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 38-1
Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.100 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,709.8 N	Yes

Test meets specifications.

Comments:

Technician

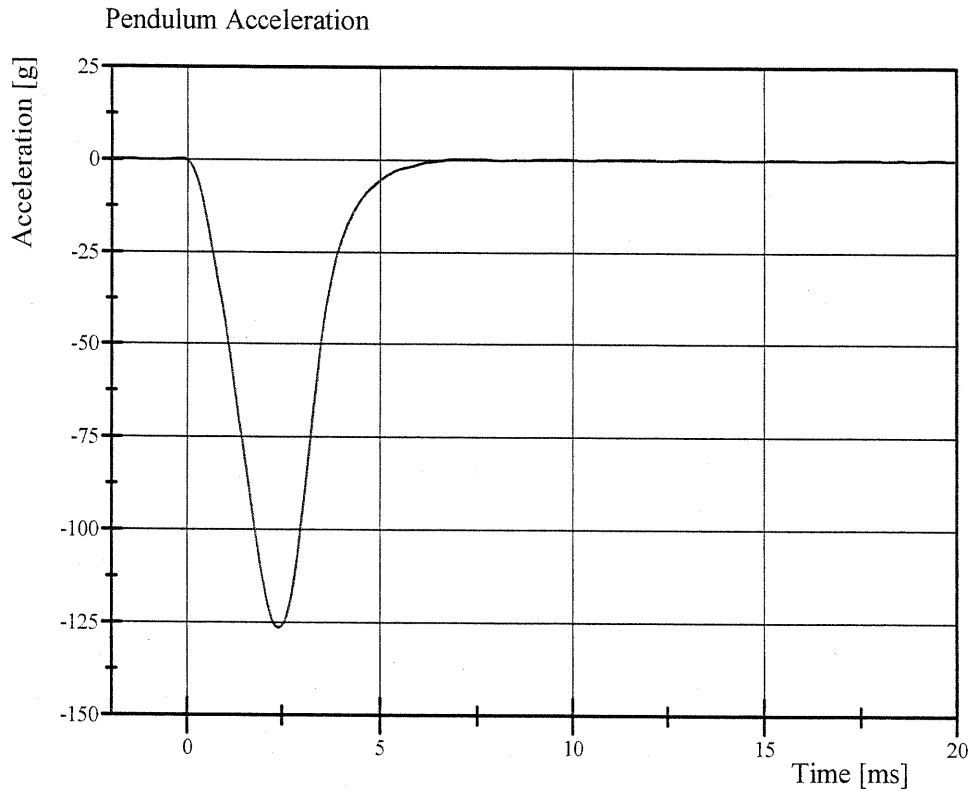


Approved

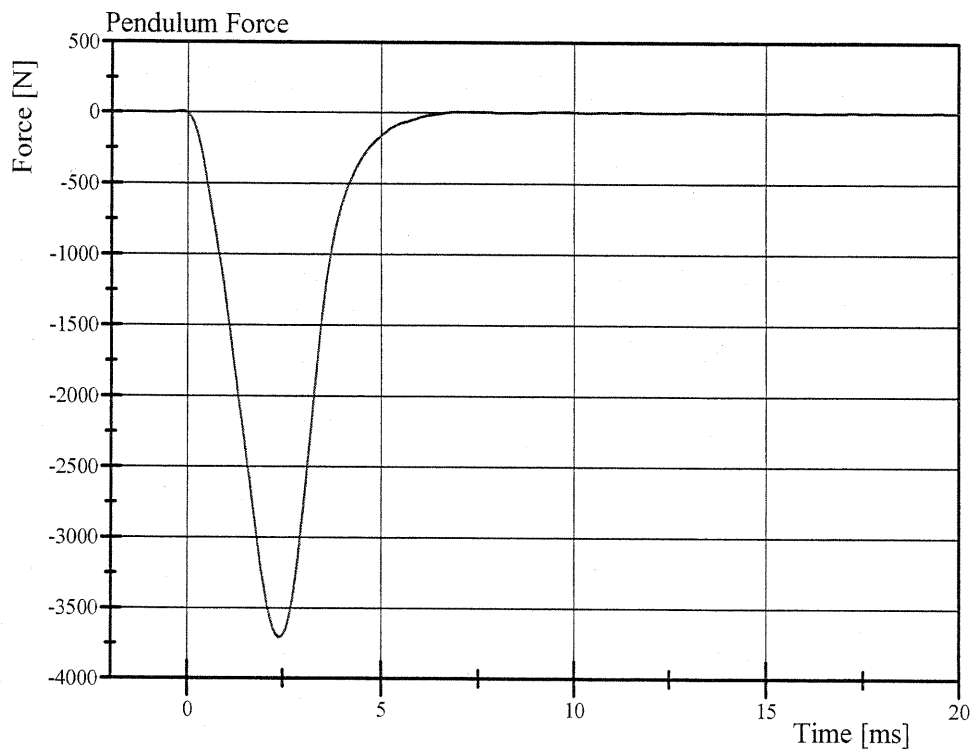


Transportation Research Center Inc.

Left Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 38-1
Test Date: 04/26/2006



Filter Class: CFC_600
Max: 0.3 g at -0.2 ms
Min: -126.5 g at 2.4 ms



Filter Class: CFC_600
Max: 8.3 N at -0.2 ms
Min: -3,709.8 N at 2.4 ms

Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 5th Serial No. 416 Certification No. 38-1

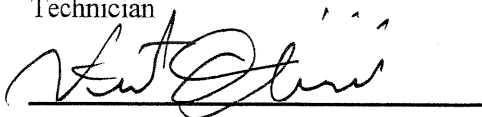
Test Date: 04/26/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.100 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,714.5 N	Yes

Test meets specifications.

Comments:

Technician

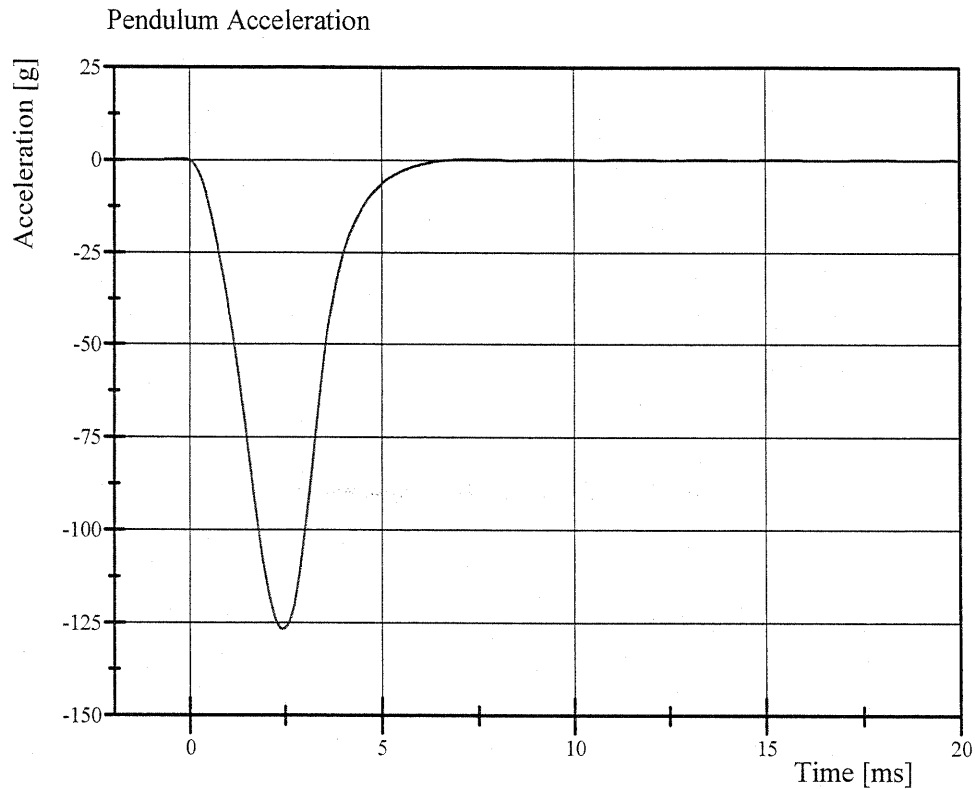


Approved

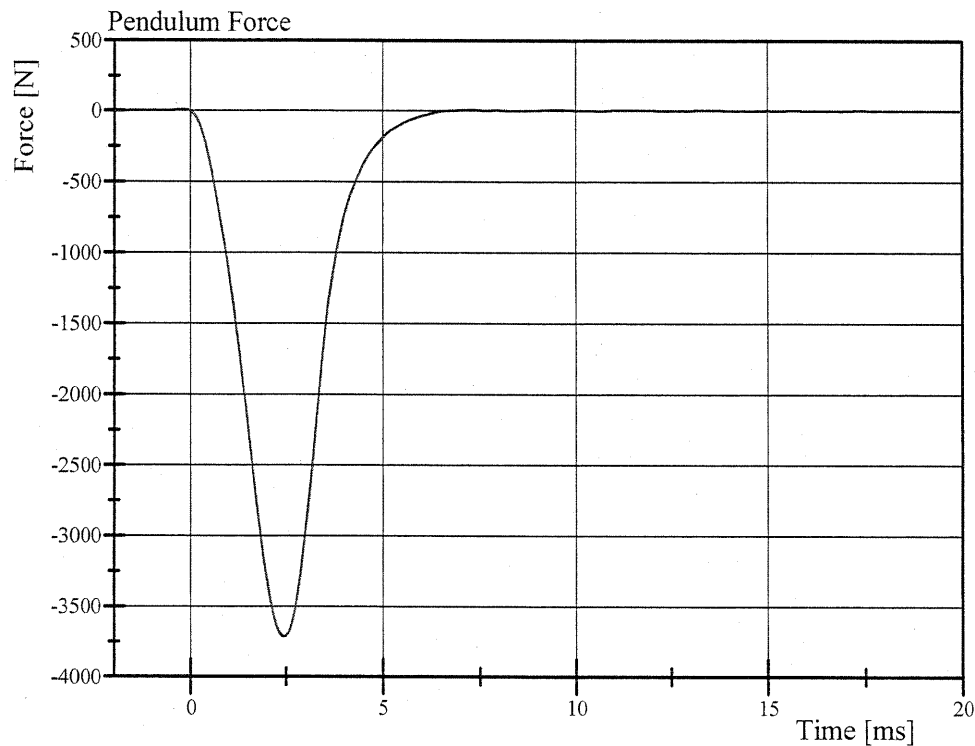


Transportation Research Center Inc.

Right Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 38-1
Test Date: 04/26/2006



Filter Class: CFC_600
Max: 0.3 g at -0.2 ms
Min: -126.7 g at 2.4 ms



Filter Class: CFC_600
Max: 8.3 N at -0.2 ms
Min: -3,714.5 N at 2.4 ms

Transportation Research Center Inc.

Left Knee Slider

HIII 5th Serial No. 416 Certification No. 38-1

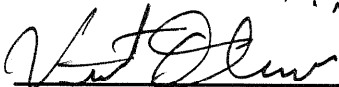
Test Date: 05/01/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	43 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.730 m/s	Yes
Peak Deflection	(-12.7) - (-15.5) mm	-12.90 mm	Yes

Test meets specifications.

Comments:

Technician



Approved

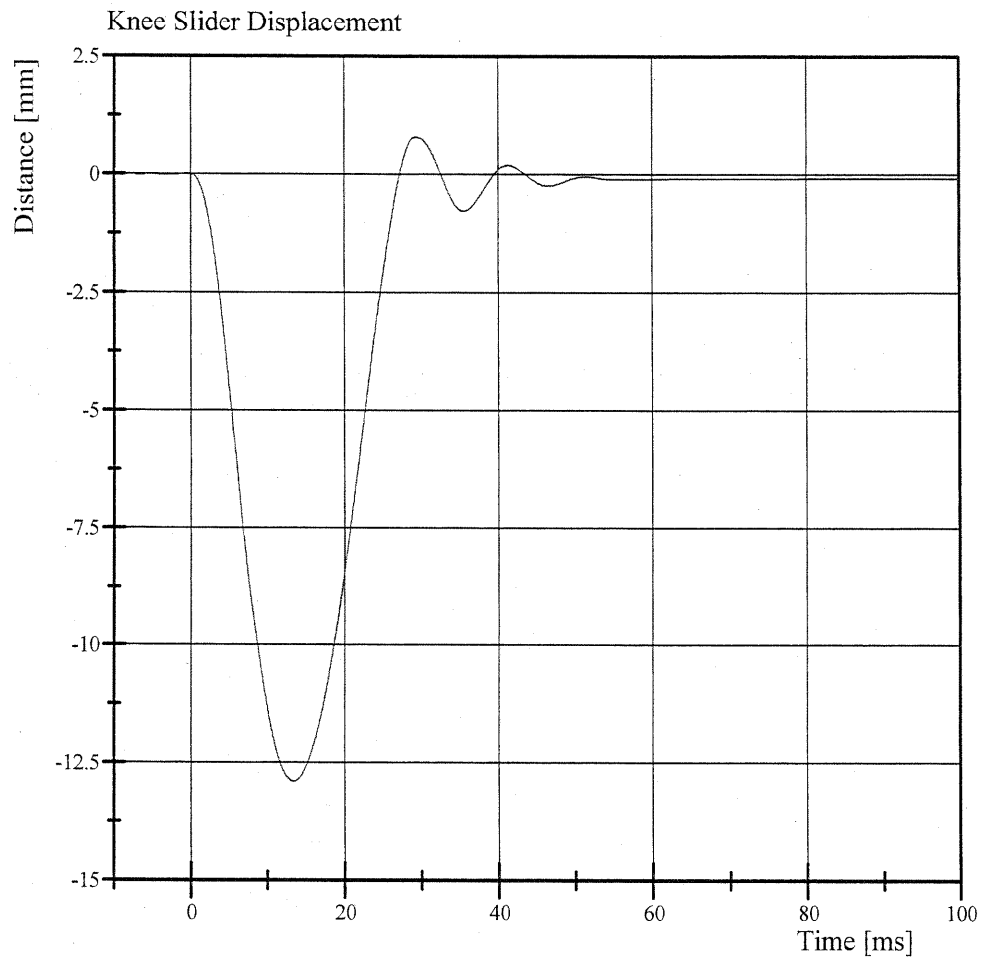


Transportation Research Center Inc.

Left Knee Slider

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 05/01/2006



Filter Class: CFC_180
Max: 0.8 mm at 29.4 ms
Min: -12.9 mm at 13.4 ms

Transportation Research Center Inc.

Right Knee Slider

HIII 5th Serial No. 416 Certification No. 38-1

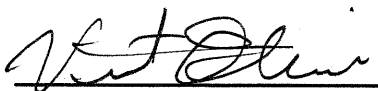
Test Date: 04/27/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.735 m/s	Yes
Peak Deflection	(-12.7) - (-15.5) mm	-12.99 mm	Yes

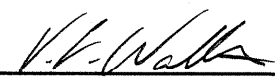
Test meets specifications.

Comments:

Technician



Approved



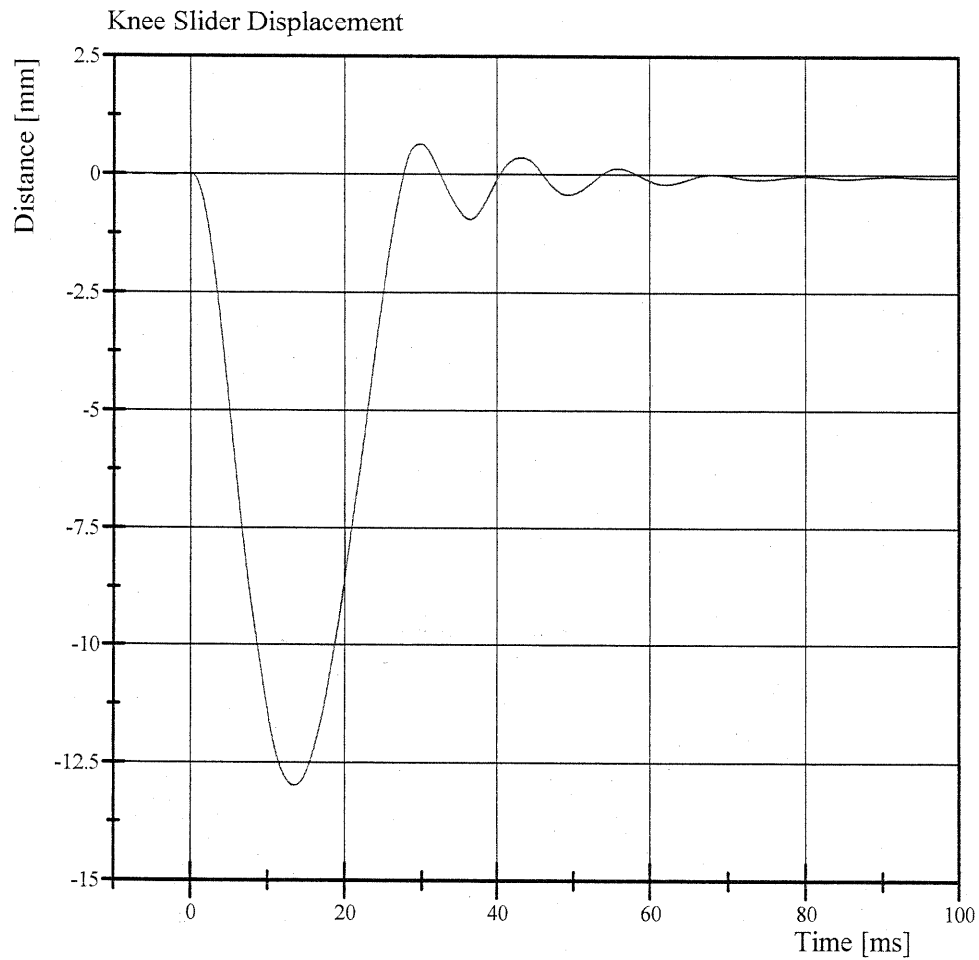


Transportation Research Center Inc.

Right Knee Slider

HIII 5th Serial No. 416 Certification No. 38-1

Test Date: 04/27/2006



Filter Class: CFC_180
Max: 0.6 mm at 29.8 ms
Min: -13.0 mm at 13.4 ms

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. 54

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	881	Yes
B	Shoulder Pivot Height	505.5 - 520.7	508	Yes
C	H-Point Height	83.8 - 88.9	86	Yes
D	H-Point From Seatback	134.6 - 139.7	137	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	89	Yes
F	Thigh Clearance	139.7 - 154.9	152	Yes
G	Back Of Elbow To Wrist Pivot	289.6 - 304.8	294	Yes
H	Skull Cap To Backline	40.6 - 45.7	43	Yes
I	Shoulder-Elbow Length	330.2 - 345.4	341	Yes
J	Elbow Rest Height	190.5 - 210.8	204	Yes
K	Buttock Knee Length	579.1 - 604.5	600	Yes
L	Popliteal Height	429.3 - 454.7	445	Yes
M	Knee Pivot Height	485.1 - 500.4	495	Yes
N	Buttock Popliteal Length	452.1 - 477.5	467	Yes
O	Chest Depth	213.4 - 228.6	222	Yes
P	Foot Length	251.5 - 266.7	253	Yes
V	Shoulder Breadth	421.6 - 436.9	430	Yes
W	Foot Breadth	91.4 - 106.7	98	Yes
Y	Chest Circumference	970.3 - 1000.8	991	Yes
Z	Waist Circumference	835.7 - 866.1	855	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.

Front Head Drop

HHH 50th Serial No. 090 Certification No. 54-1

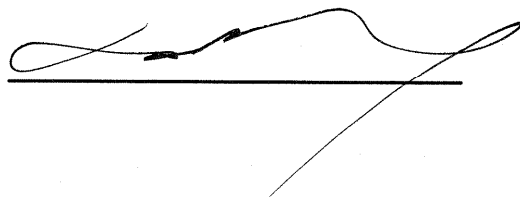
Test Date: 03/21/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	237.7 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-4.0 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved

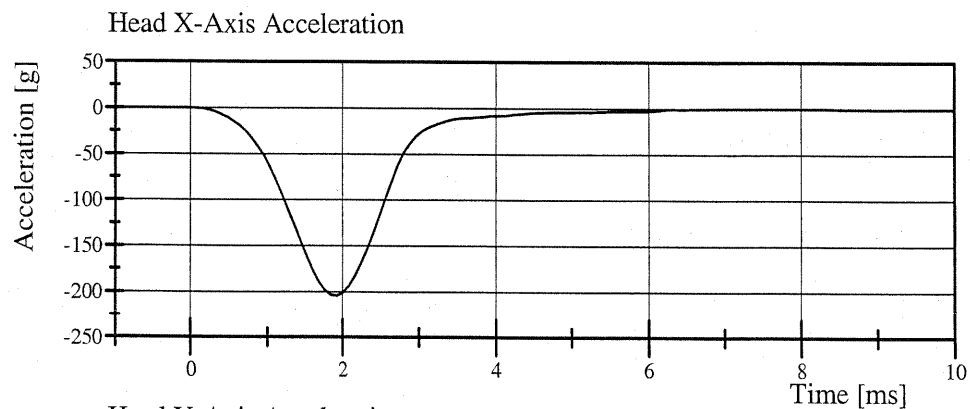


Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 090 Certification No. 54-1

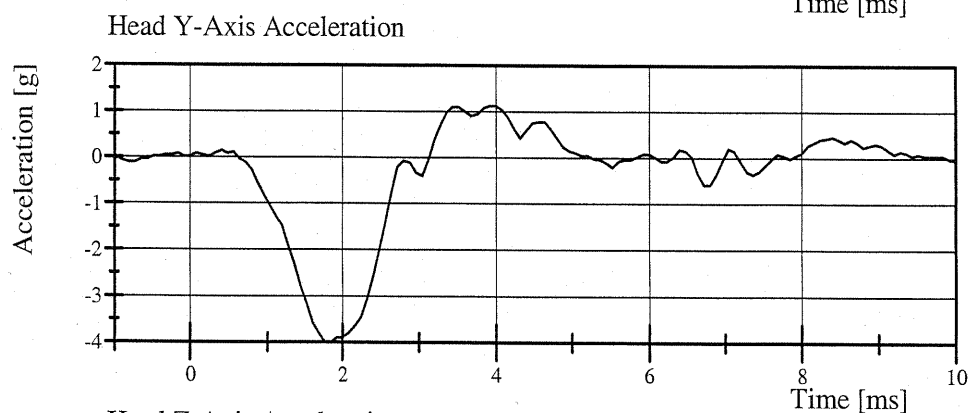
Test Date: 03/21/2006



Filter Class: CFC_1000

Max: 0.2 g at 8.1 ms

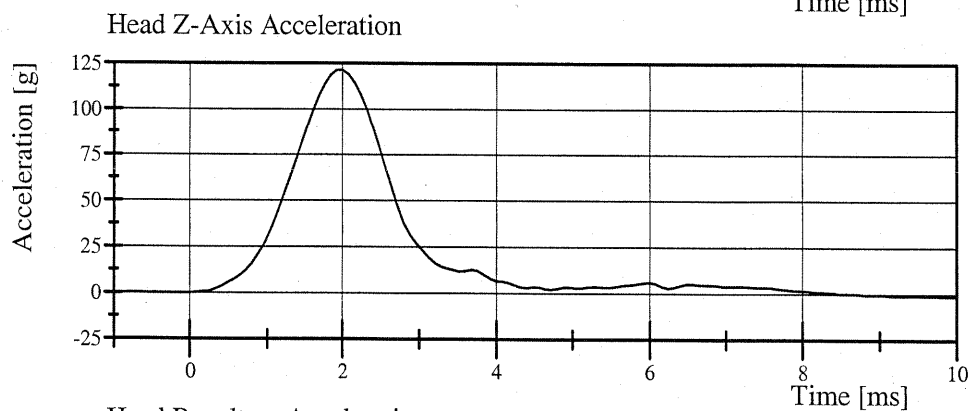
Min: -204.4 g at 1.9 ms



Filter Class: CFC_1000

Max: 1.1 g at 3.9 ms

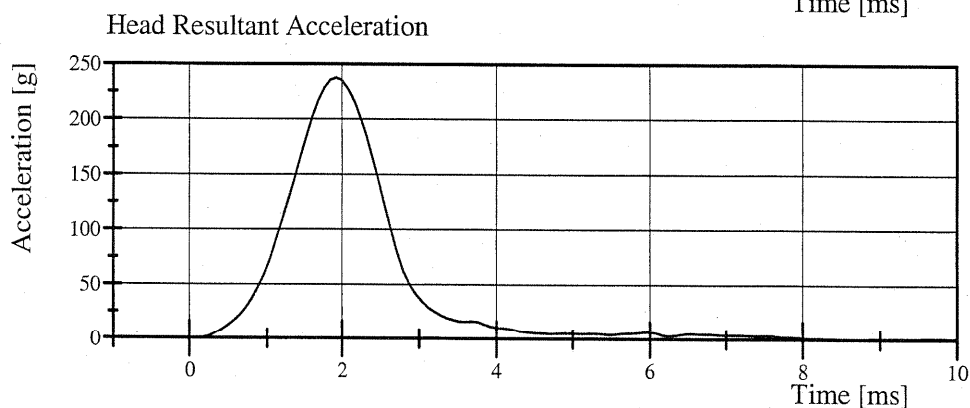
Min: -4.0 g at 1.8 ms



Filter Class: CFC_1000

Max: 121.5 g at 2.0 ms

Min: -1.1 g at 9.8 ms



Filter Class: CFC_1000

Max: 237.7 g at 1.9 ms

Min: 0.0 g at -0.1 ms

Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 090 Certification No. 54-1

Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.921 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	39.4 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-23.66 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-21.24 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-15.37 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-15.37 g	Yes
Total Head D-Plane Rotation Peak	(-64) - (-78) °	-73.3 °	Yes
Time of Peak	57 - 64 ms	60.2 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	121.1 ms	Yes
Total Neck Occipital Condyles Moment Peak	88 - 108 N·m	100.8 N·m	Yes
Time of Peak	47 - 58 ms	51.6 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	106.0 ms	Yes

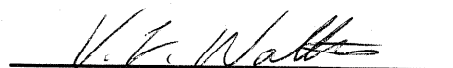
Test meets specifications.

Comments:

Technician



Approved

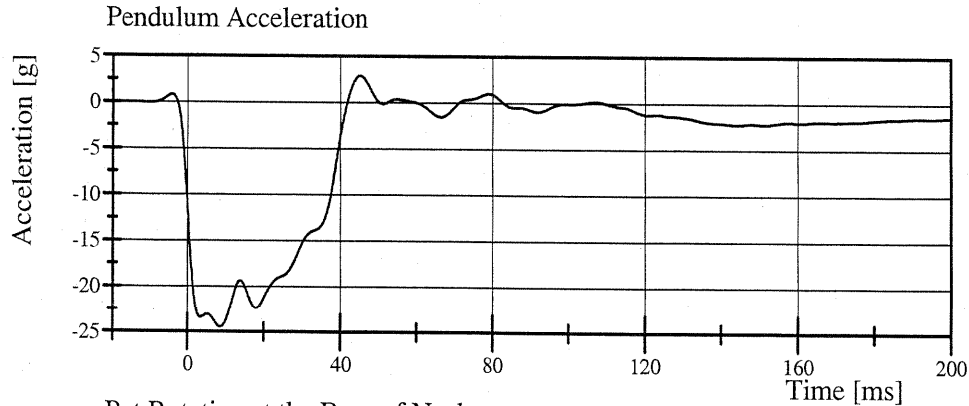


Transportation Research Center Inc.

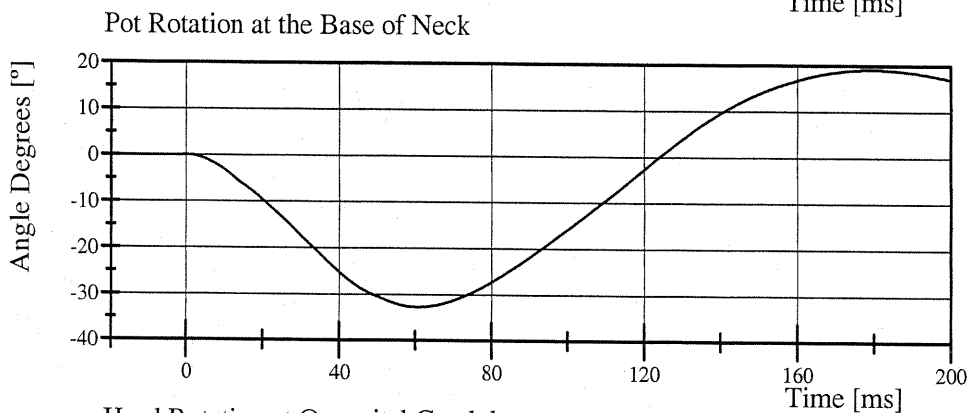
Neck Flexion

HIII 50th Serial No. 090 Certification No. 54-1

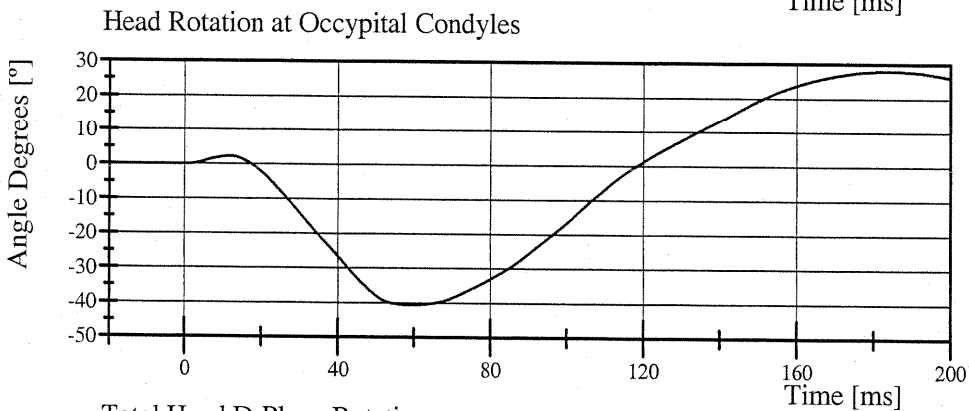
Test Date: 03/22/2006



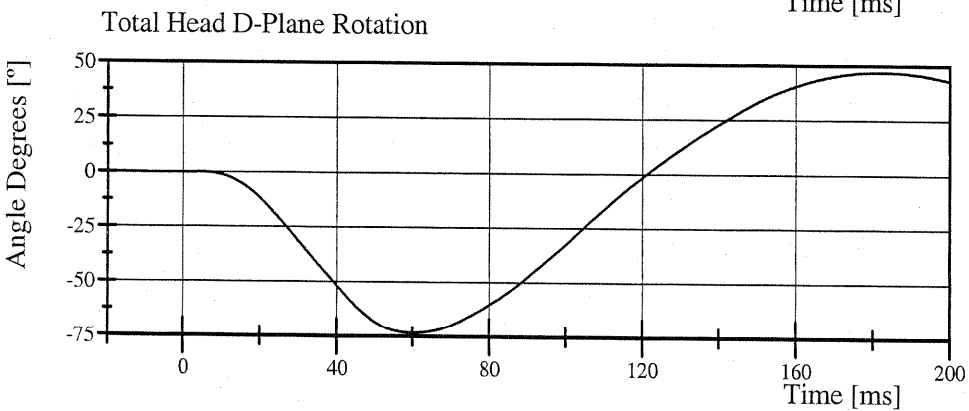
Filter Class: CFC_60
Max: 2.9 g at 45.2 ms
Min: -24.5 g at 8.5 ms



Filter Class: CFC_60
Max: 19.1 ° at 179.4 ms
Min: -32.7 ° at 60.7 ms



Filter Class: CFC_60
Max: 28.0 ° at 184.1 ms
Min: -40.6 ° at 59.5 ms



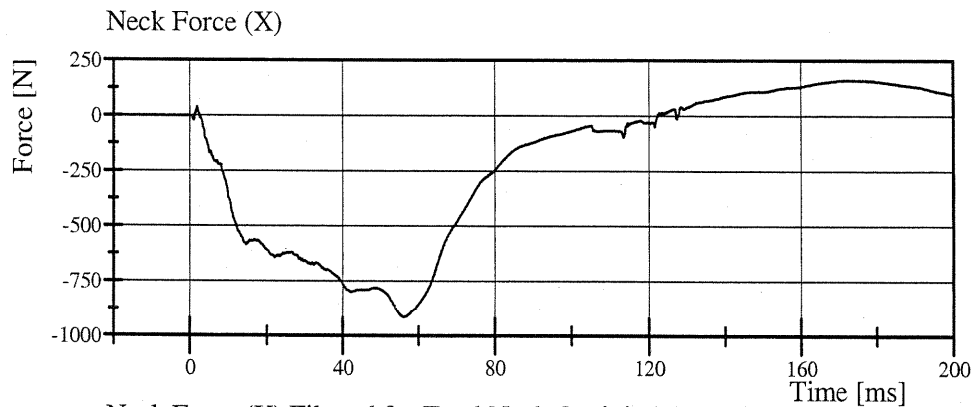
Filter Class: CFC_60
Max: 47.1 ° at 182.2 ms
Min: -73.3 ° at 60.2 ms

Transportation Research Center Inc.

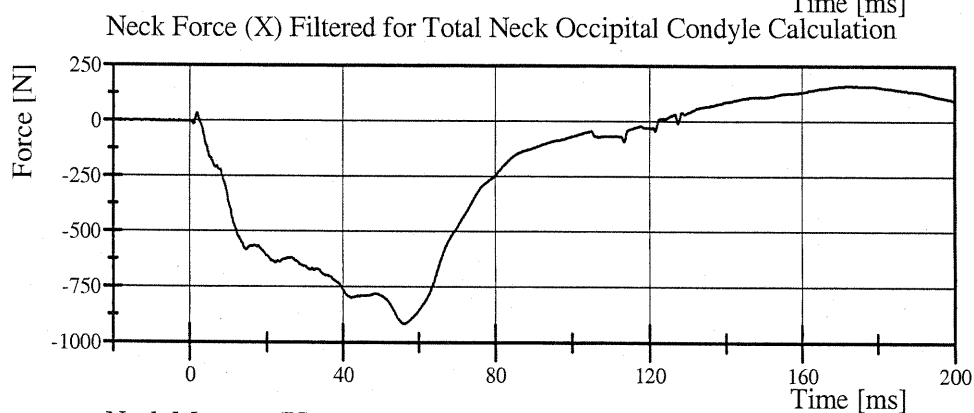
Neck Flexion

HHII 50th Serial No. 090 Certification No. 54-1

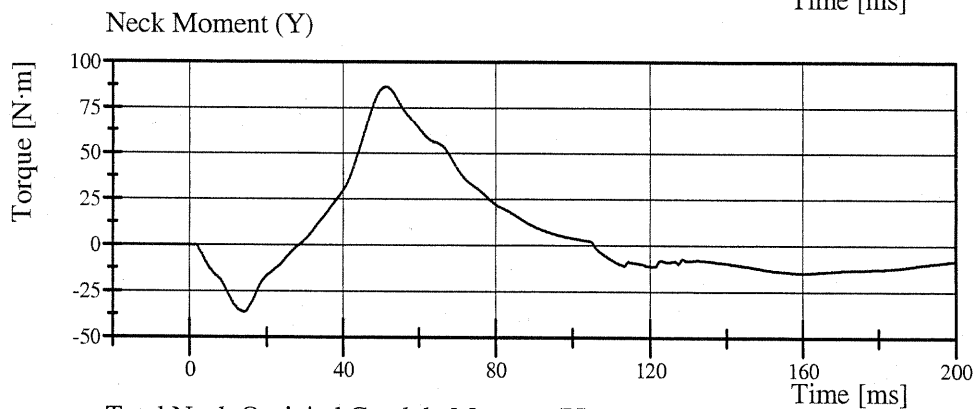
Test Date: 03/22/2006



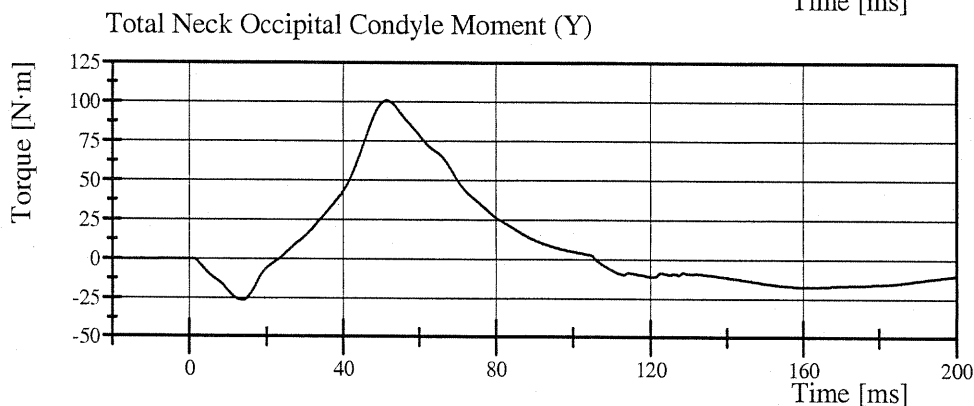
Filter Class: CFC_1000
Max: 162.2 N at 171.9 ms
Min: -916.0 N at 56.0 ms



Filter Class: CFC_600
Max: 161.7 N at 171.9 ms
Min: -915.5 N at 56.1 ms



Filter Class: CFC_600
Max: 86.6 N·m at 51.4 ms
Min: -36.4 N·m at 14.0 ms



Filter Class: CFC_600
Max: 100.8 N·m at 51.6 ms
Min: -26.3 N·m at 13.6 ms



Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 090 Certification No. 54-1

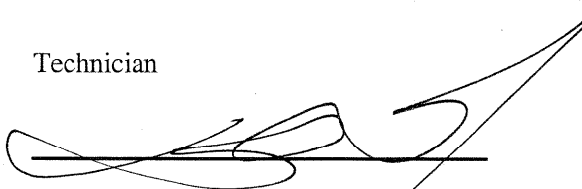
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.979 m/s	Yes
Pendulum Acceleration Decay			
Crossing 5g	38 - 46 ms	44.7 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	17.86 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	16.49 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	12.82 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	12.82 g	Yes
Total Head D-Plane Rotation			
Peak	81 - 106 °	94.6 °	Yes
Time of Peak	72 - 82 ms	79.6 ms	Yes
Total Head D-Plane Rotation			
Decay to 0°	147 - 174 ms	162.7 ms	Yes
Total Neck Occipital Condyles Moment			
Peak	(-53) - (-80) N·m	-63.6 N·m	Yes
Time of Peak	65 - 79 ms	74.3 ms	Yes
Total Neck Occipital Condyles Moment			
Decay to 0 N·m	120 - 148 ms	146.6 ms	Yes

Test meets specifications.

Comments:

Technician



Approved

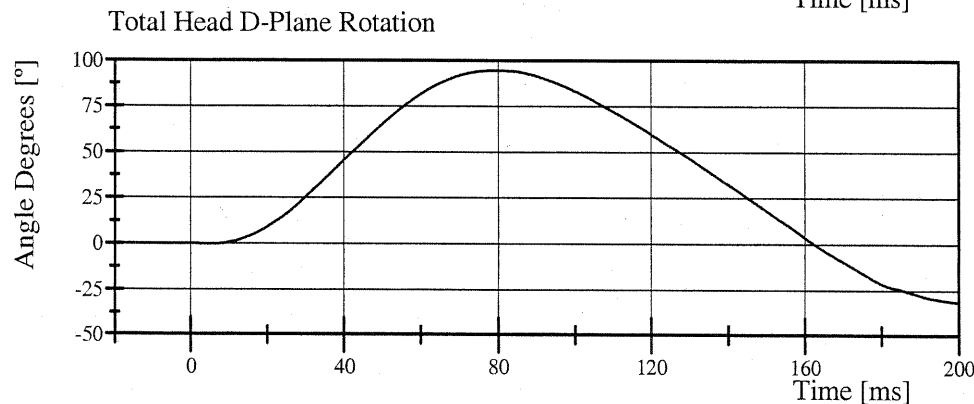
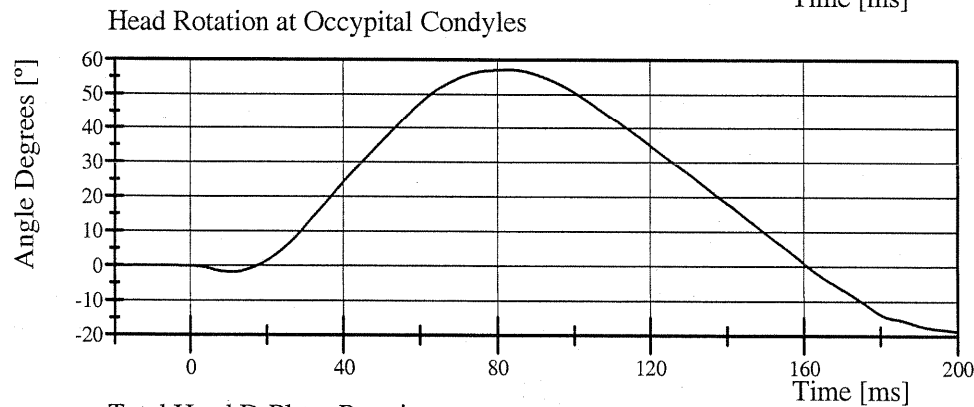
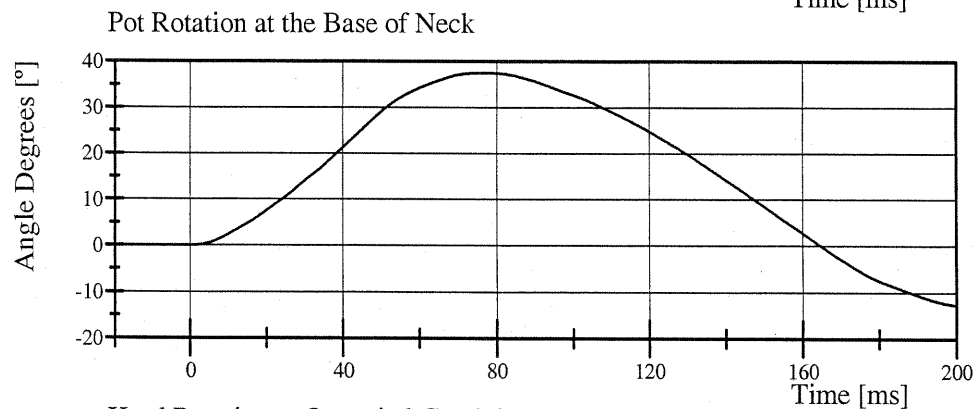
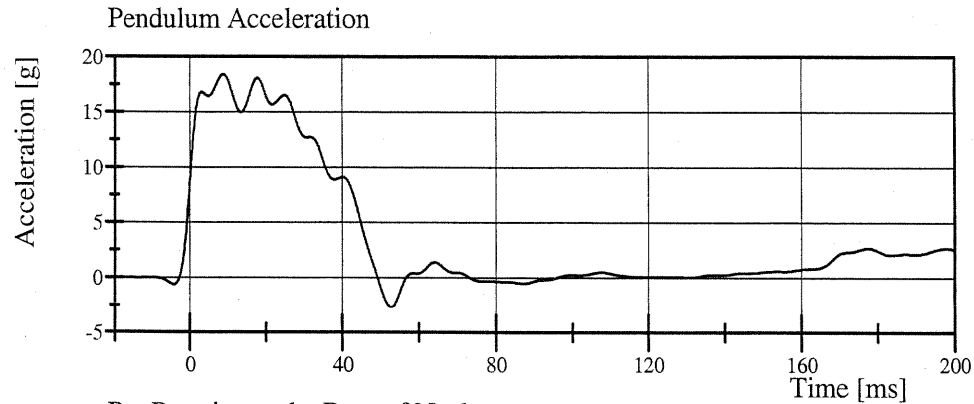


Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 090 Certification No. 54-1

Test Date: 03/22/2006

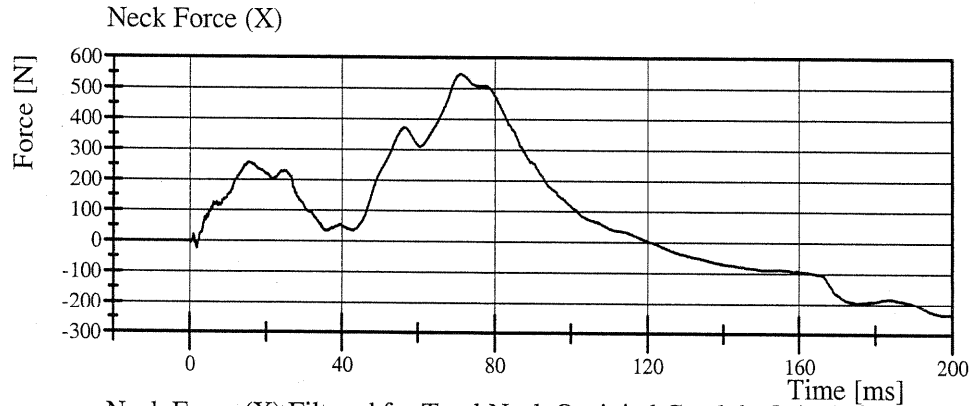


Transportation Research Center Inc.

Neck Extension

HIII 50th Serial No. 090 Certification No. 54-1

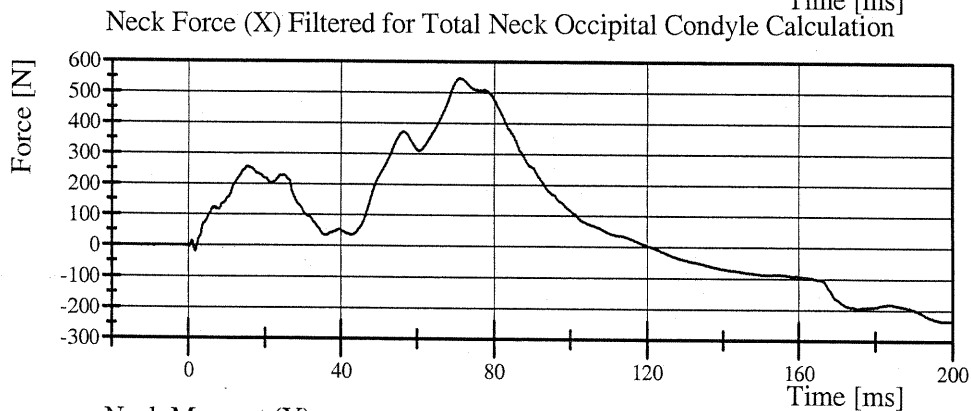
Test Date: 03/22/2006



Filter Class: CFC_1000

Max: 547.1 N at 71.0 ms

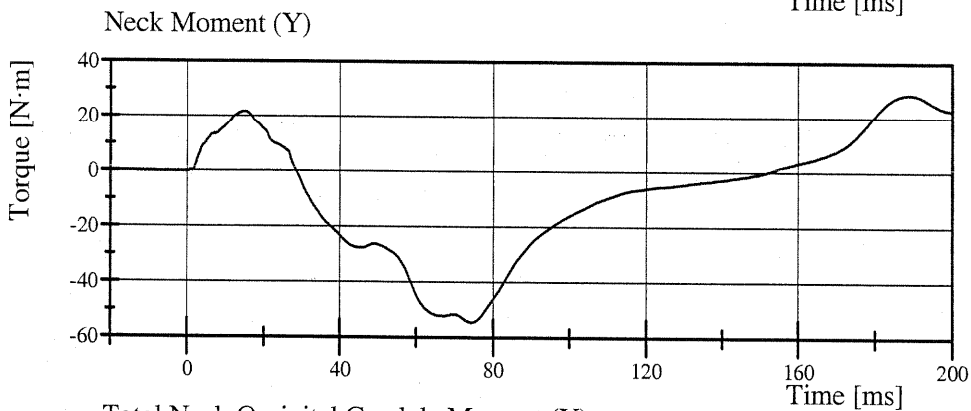
Min: -236.1 N at 198.5 ms



Filter Class: CFC_600

Max: 546.9 N at 71.1 ms

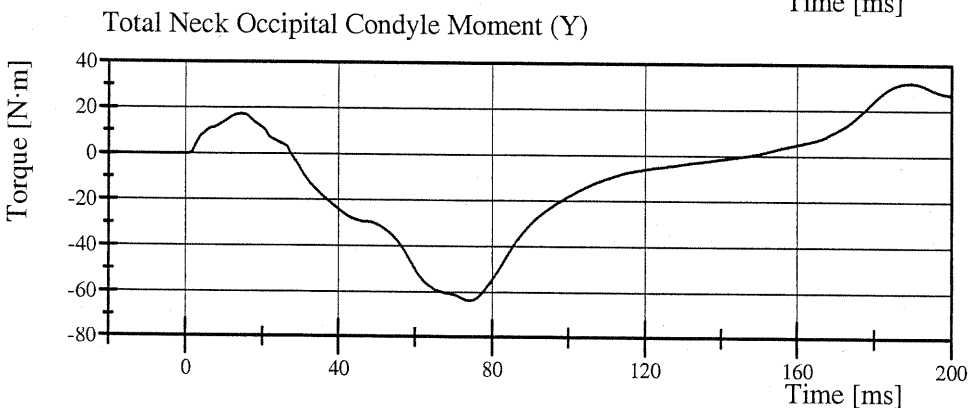
Min: -235.7 N at 198.4 ms



Filter Class: CFC_600

Max: 28.6 N·m at 188.6 ms

Min: -54.5 N·m at 74.5 ms



Filter Class: CFC_600

Max: 32.1 N·m at 189.4 ms

Min: -63.6 N·m at 74.3 ms

Transportation Research Center Inc.

Front Thorax

HHH 50th Serial No. 090 Certification No. 54-1

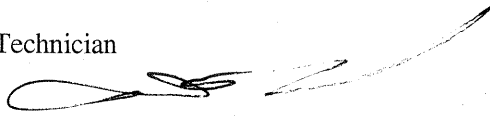
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.622 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,850.7 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-68.95 mm	Yes
Internal Hysteresis	65 - 85 %	74.3 %	Yes

Test meets specifications.

Comments:

Technician



Approved



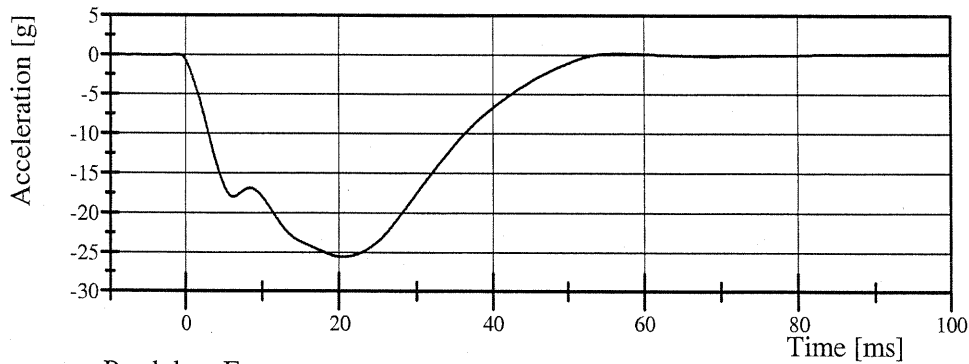
Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 090 Certification No. 54-1

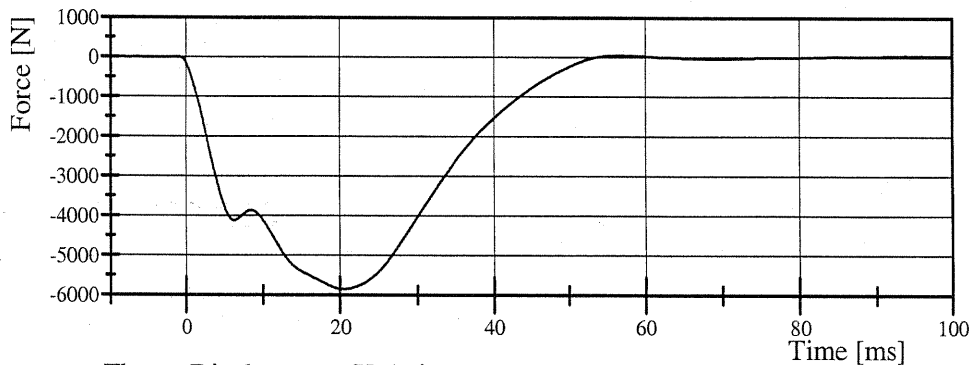
Test Date: 03/22/2006

Pendulum Acceleration



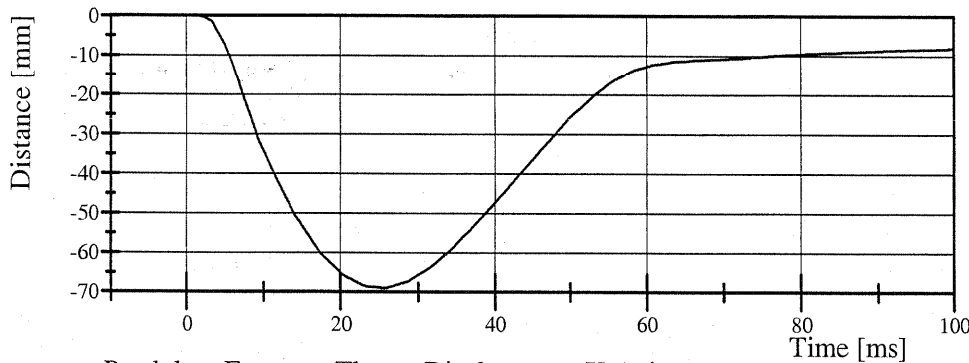
Filter Class: CFC_180
Max: 0.2 g at 56.7 ms
Min: -25.5 g at 20.6 ms

Pendulum Force



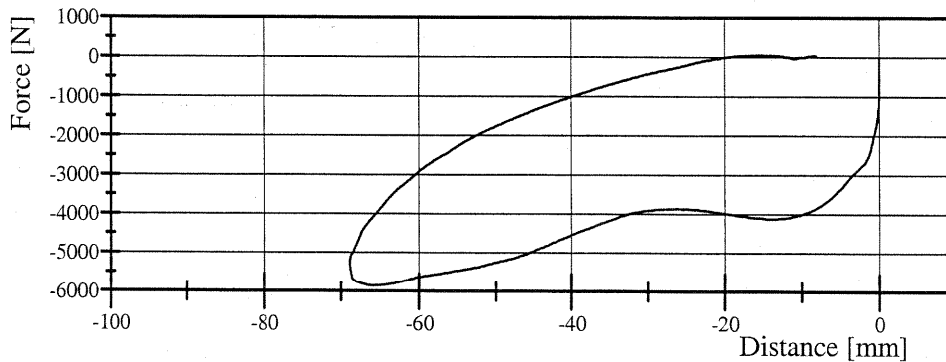
Filter Class: CFC_180
Max: 53.4 N at 56.7 ms
Min: -5,850.7 N at 20.6 ms

Thorax Displacement X-Axis



Filter Class: CFC_600
Max: 0.0 mm at -10.0 ms
Min: -68.9 mm at 25.7 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180
Max: 53.4 N at -15.4 mm
Min: -5,850.7 N at -66.0 mm

Applied Safety Technologies Corp.

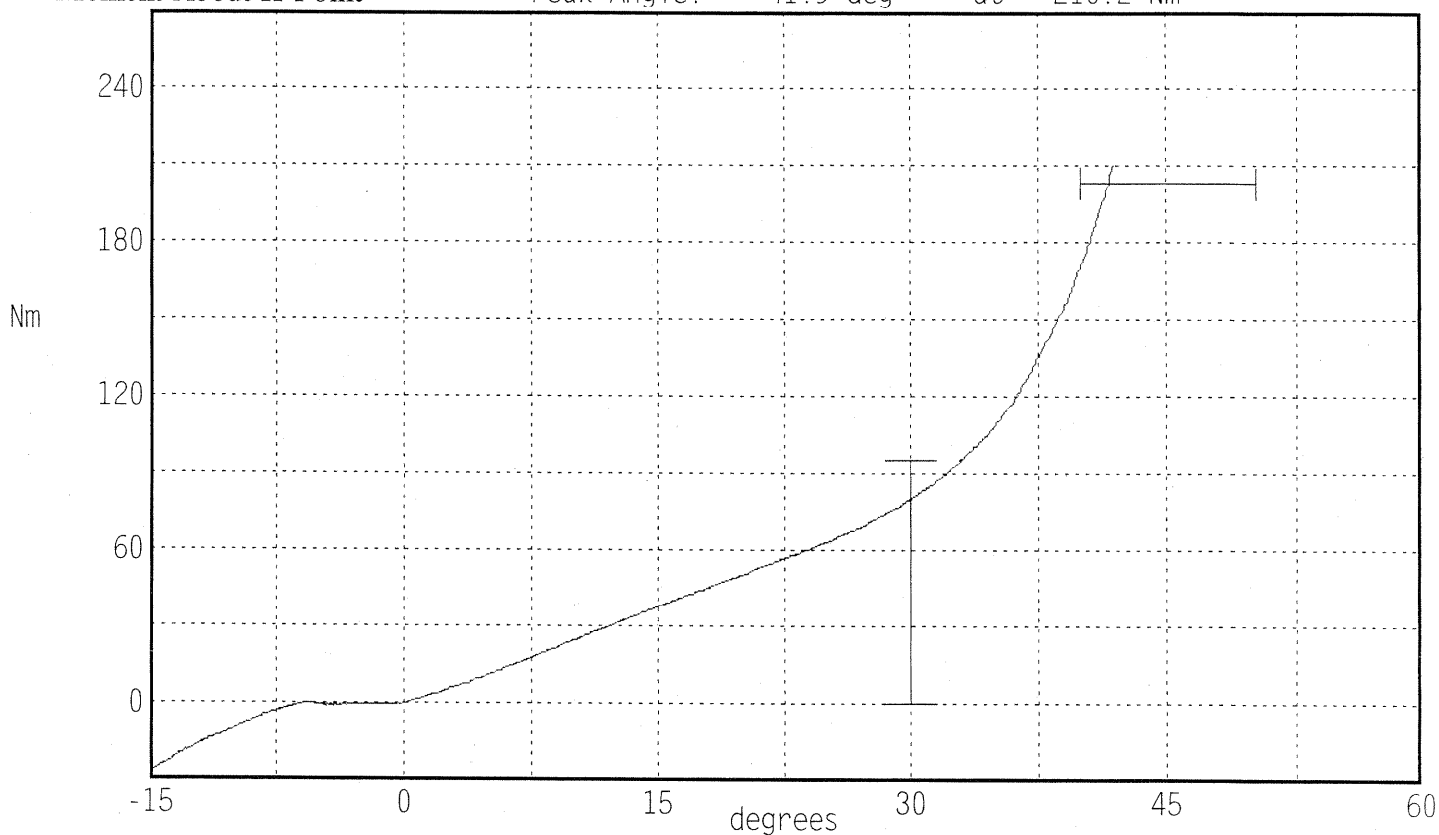
Hybrid III Hip Range of Motion

Serial Number: 090L
Test Number: 090C54
Comments:

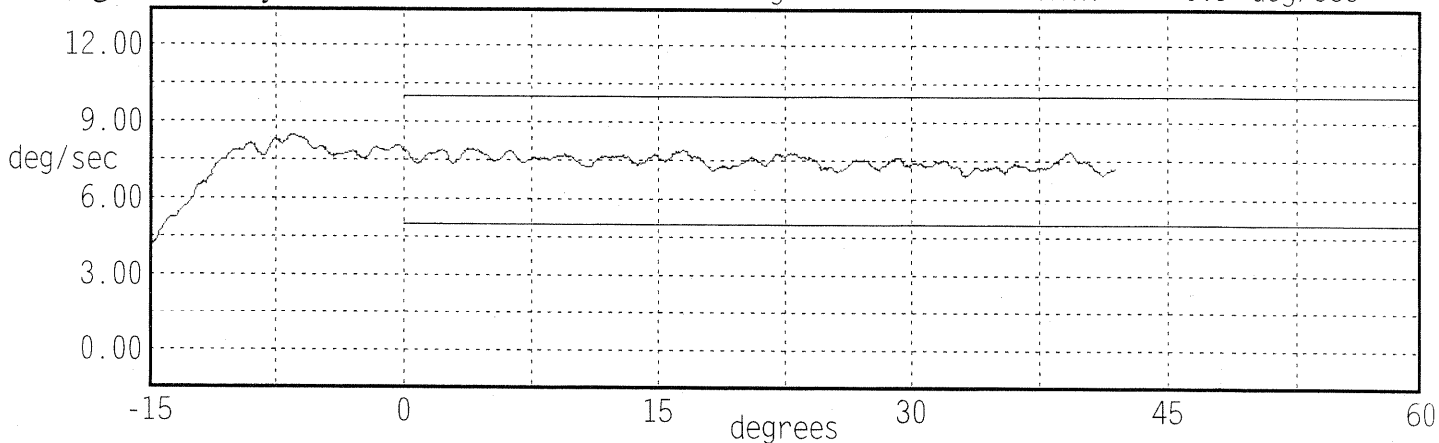
Date: 03/21/2006
Time: 13:19

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.6 °C Pass
Humidity	10 - 70	28 % Pass
Moment at 30 deg	<= 94.9	80.2 Nm Pass
Angle at 203 Nm	40.0 - 50.0	41.7 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point
Peak Moment: 210.2 Nm at 41.9 deg
Peak Angle: 41.9 deg at 210.2 Nm



Angular Velocity Max: 7.9 deg/sec Min: 6.9 deg/sec



Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

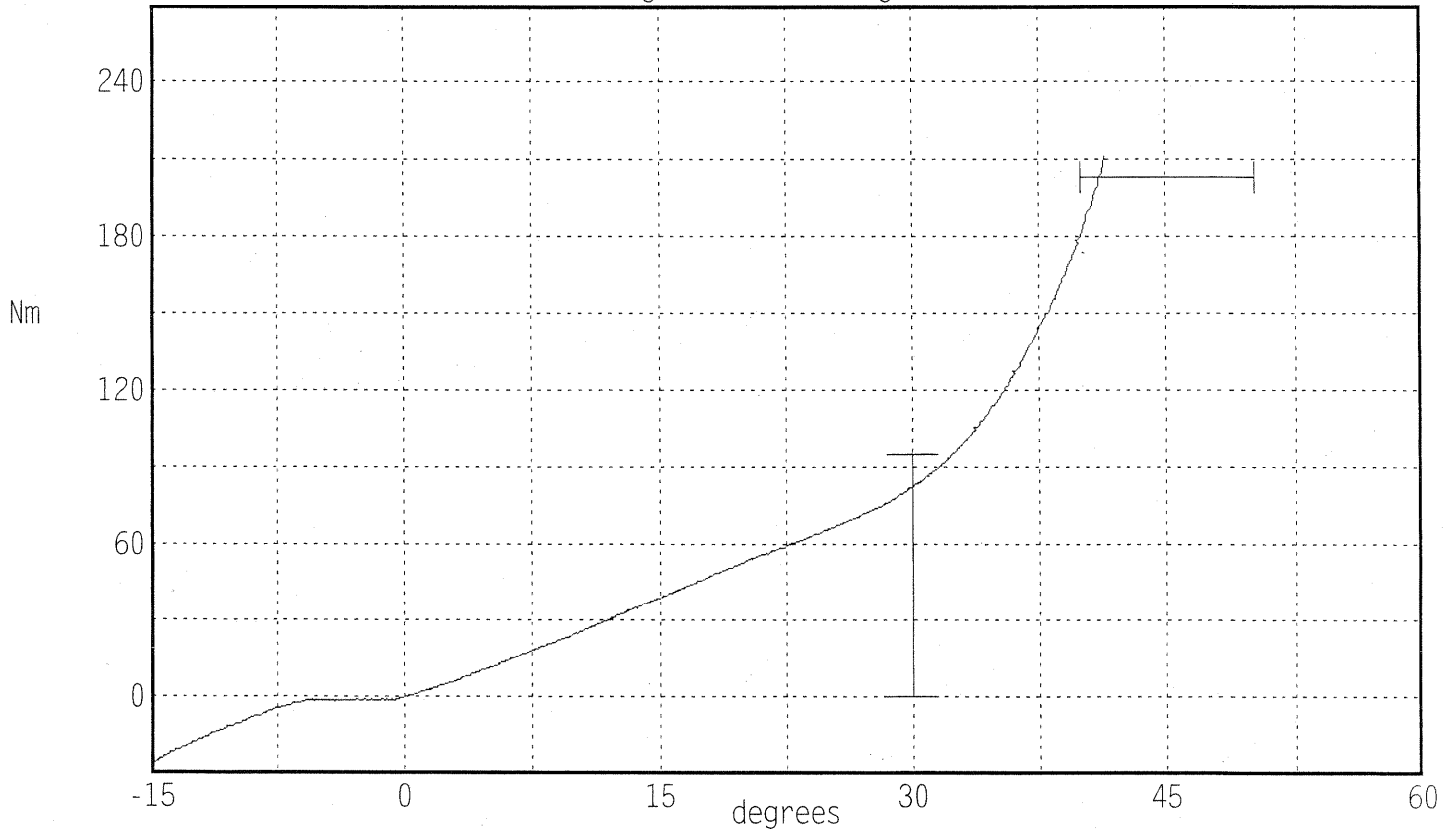
Serial Number: 090R
Test Number: 090C54
Comments:

Date: 03/21/2006
Time: 13:23

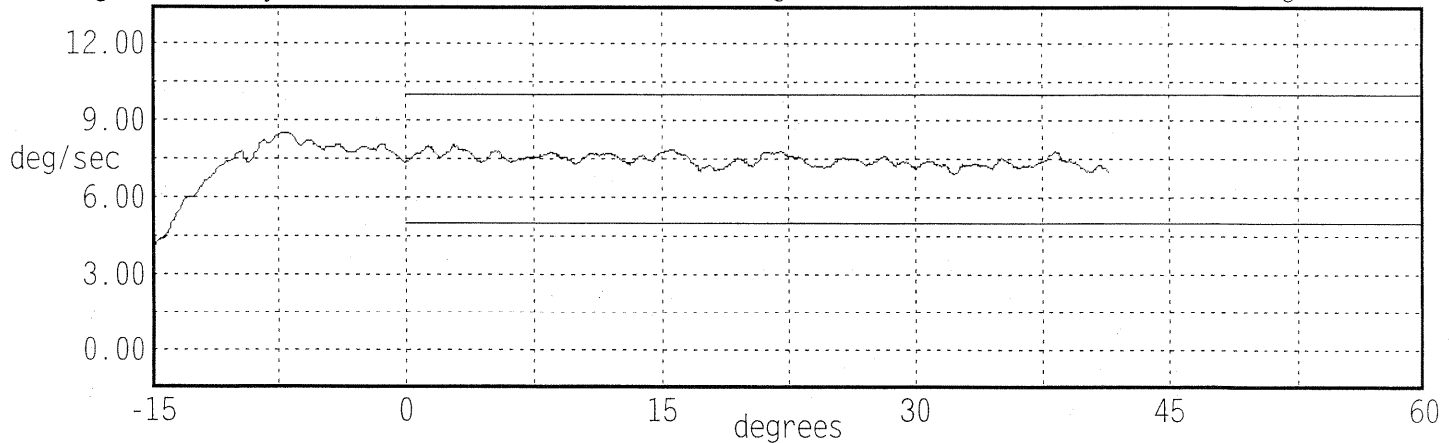
TEST PARAMETER	SPECIFICATION	TEST RESULTS	
Temperature	18.9 - 25.6	21.6 °C	Pass
Humidity	10 - 70	28 %	Pass
Moment at 30 deg	<= 94.9	82.7 Nm	Pass
Angle at 203 Nm	40.0 - 50.0	41.0 deg	Pass
Average Velocity	5.0 - 10.0	7.4 deg/sec	Pass

Peak Moment: 210.9 Nm at 41.4 deg
Peak Angle: 41.4 deg at 210.9 Nm

Moment About H-Point



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



Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 50th Serial No. LX103104 Certification No. 3-1

Test Date: 03/15/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.087 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,249.97 N	Yes

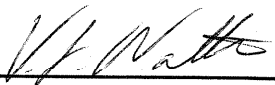
Test meets specifications.

Comments:

Technician



Approved

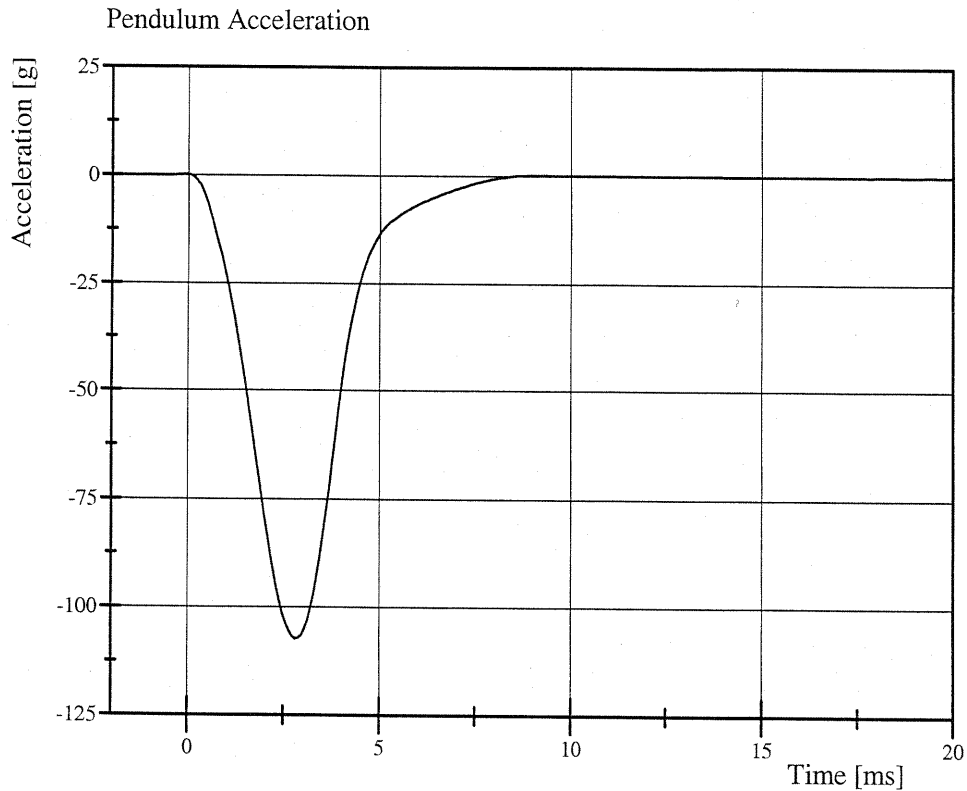


Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 50th Serial No. LX103104 Certification No. 3-1

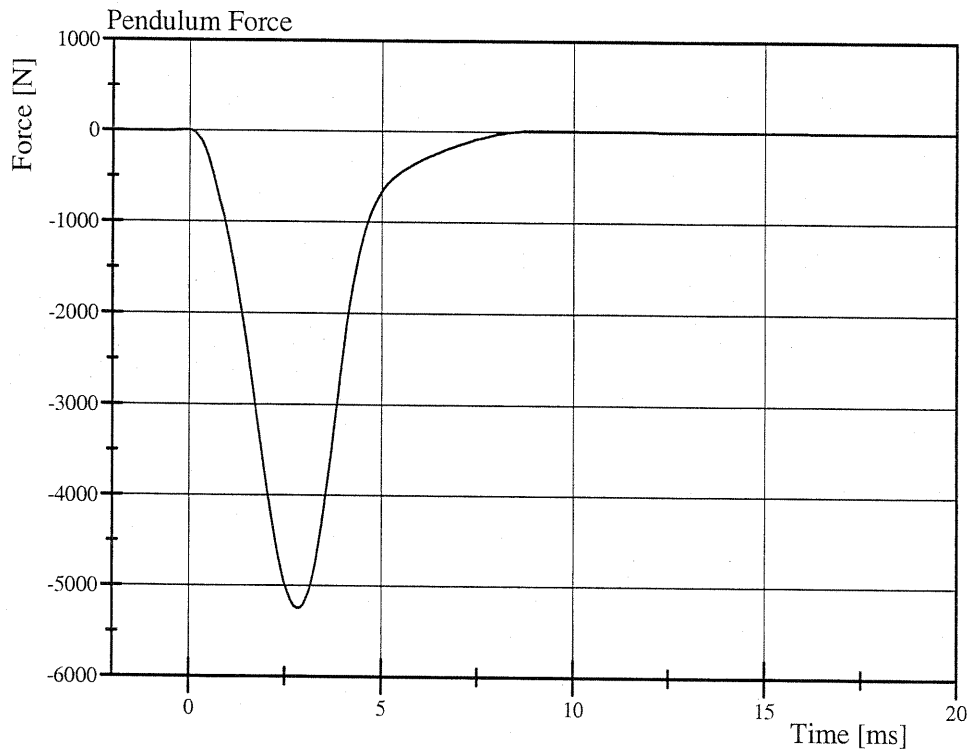
Test Date: 03/15/2006



Filter Class: CFC_600

Max: 0.3 g at 9.0 ms

Min: -107.3 g at 2.8 ms



Filter Class: CFC_600

Max: 12.7 N at 9.0 ms

Min: -5,250.0 N at 2.8 ms

Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX103104 Certification No. 3-2

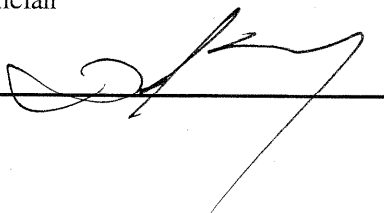
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.086 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,238.07 N	Yes

Test meets specifications.

Comments:

Technician



Approved

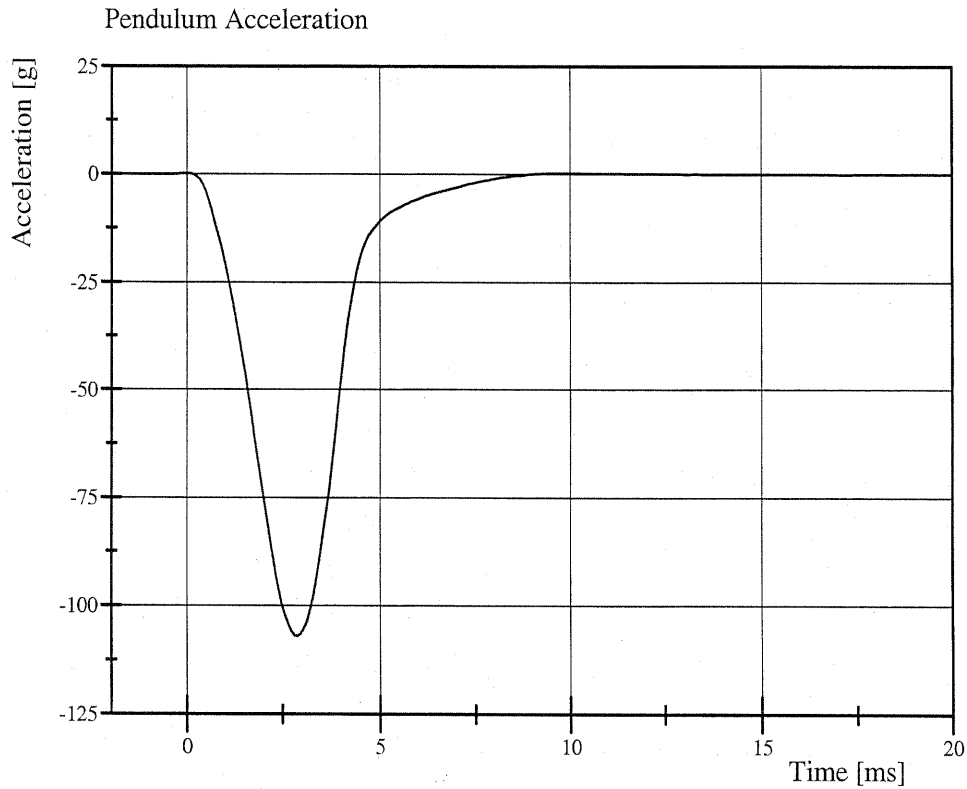


Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX103104 Certification No. 3-2

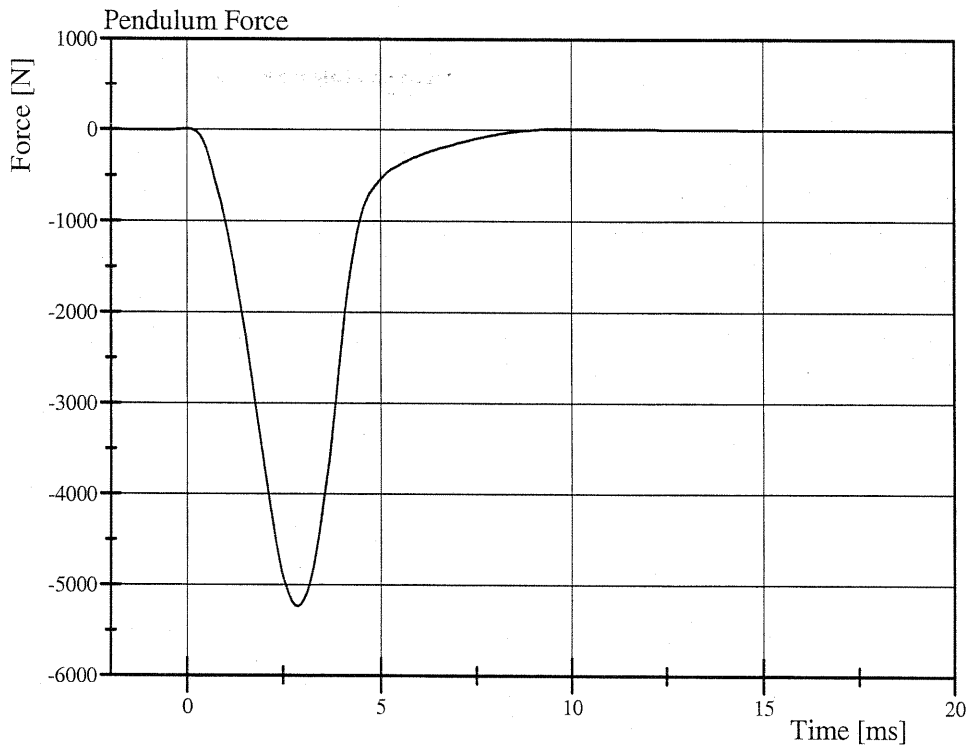
Test Date: 03/16/2006



Filter Class: CFC_600

Max: 0.3 g at 9.7 ms

Min: -107.1 g at 2.9 ms



Filter Class: CFC_600

Max: 13.4 N at 9.7 ms

Min: -5,238.1 N at 2.9 ms

Transportation Research Center Inc.

Left Knee Slider

HIII 50th Serial No. LX103104 Certification No. 3-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.730 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,451.4 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,653.0 N	Yes

Test meets specifications.

Comments:

Technician



Approved



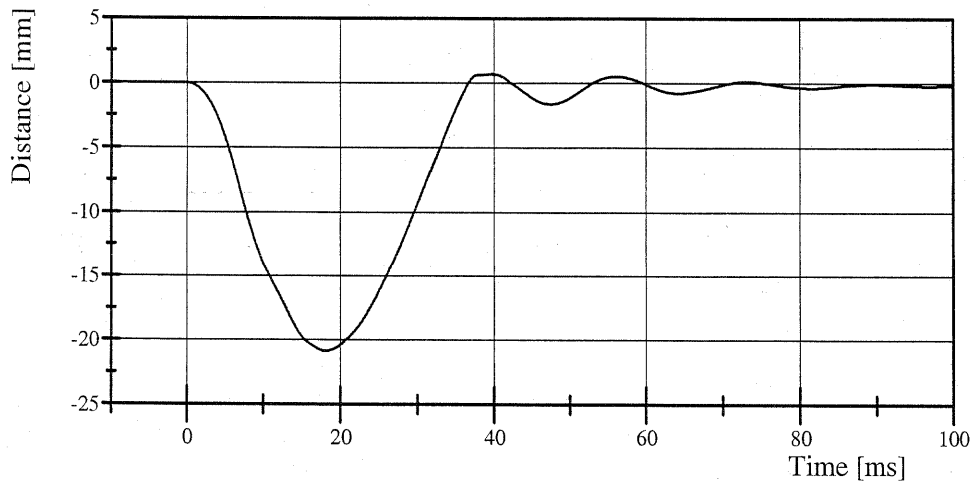
Transportation Research Center Inc.

Left Knee Slider

HIII 50th Serial No. LX103104 Certification No. 3-1

Test Date: 03/16/2006

Knee Slider Displacement

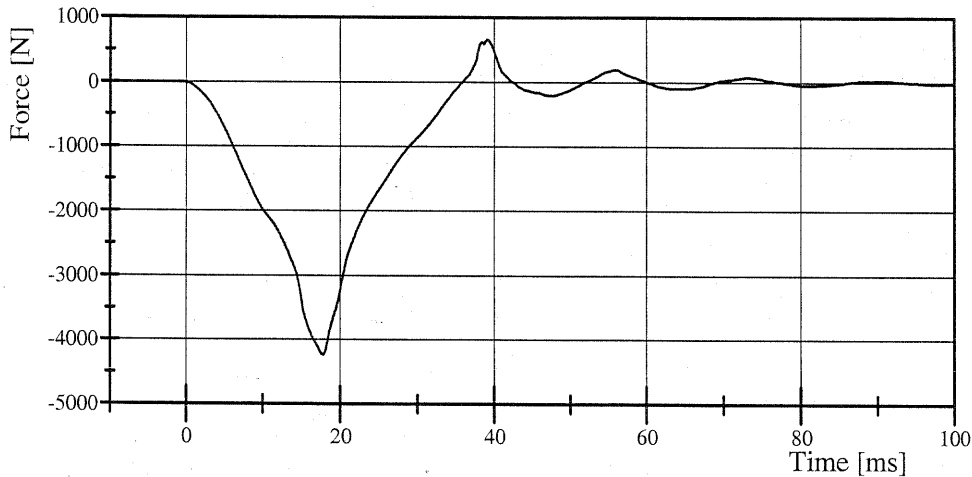


Filter Class: CFC_180

Max: 0.7 mm at 39.8 ms

Min: -20.9 mm at 18.1 ms

Femur Force

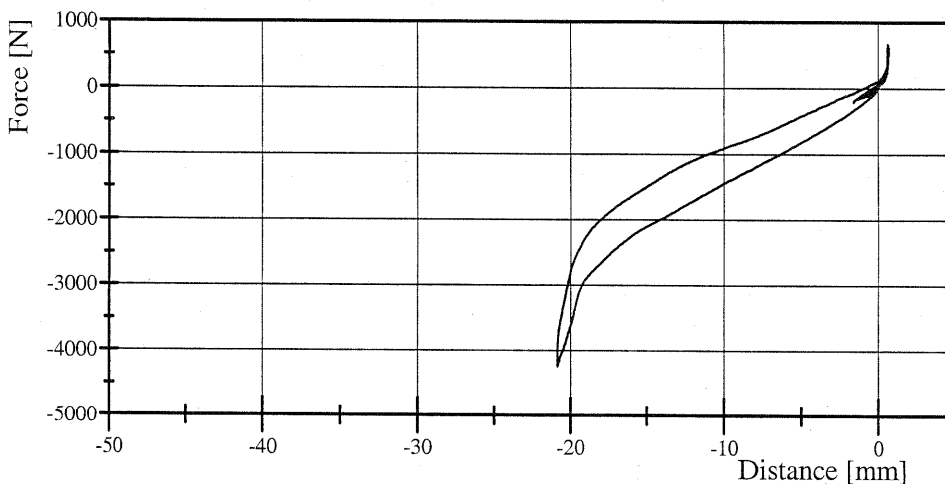


Filter Class: CFC_600

Max: 661.6 N at 39.1 ms

Min: -4,239.0 N at 17.8 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600

Max: 661.6 N at 0.7 mm

Min: -4,239.0 N at -20.8 mm

Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX103104 Certification No. 3-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.728 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,460.5 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,622.3 N	Yes

Test meets specifications.

Comments:

Technician



Approved



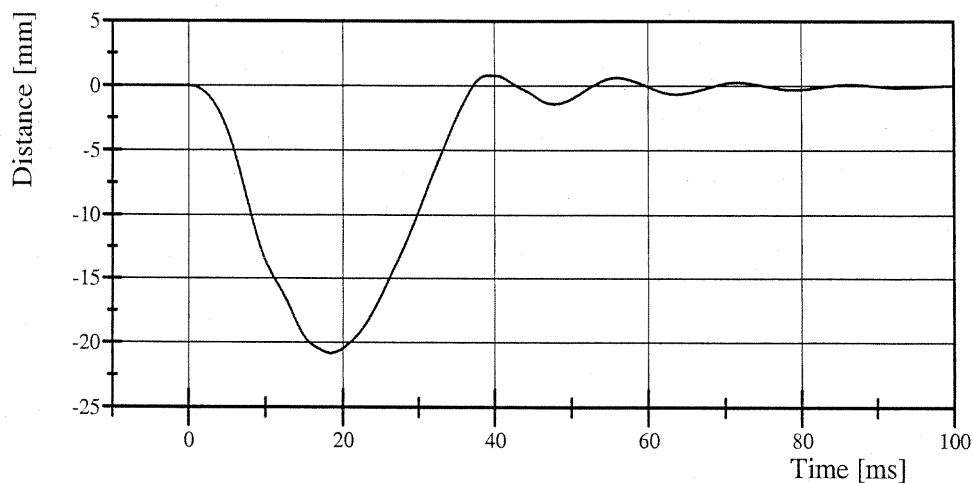
Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX103104 Certification No. 3-1

Test Date: 03/16/2006

Knee Slider Displacement

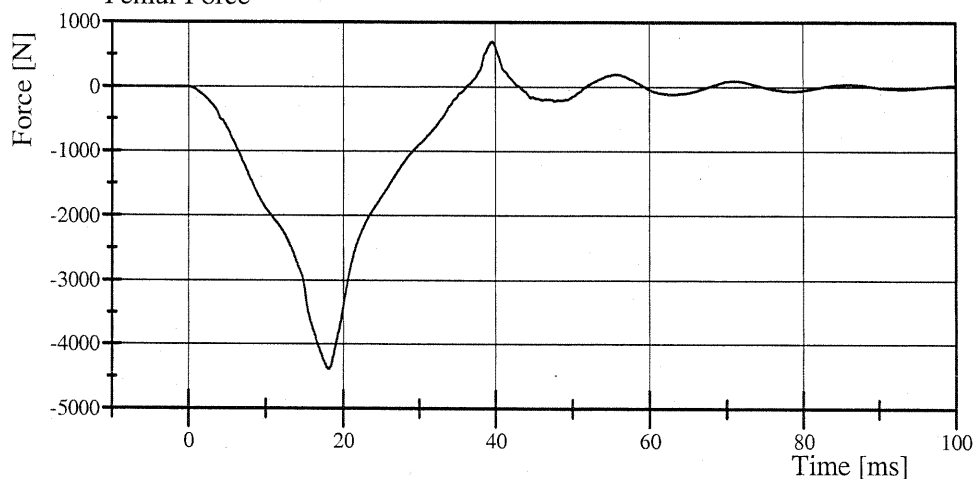


Filter Class: CFC_180

Max: 0.8 mm at 39.5 ms

Min: -20.8 mm at 18.4 ms

Femur Force

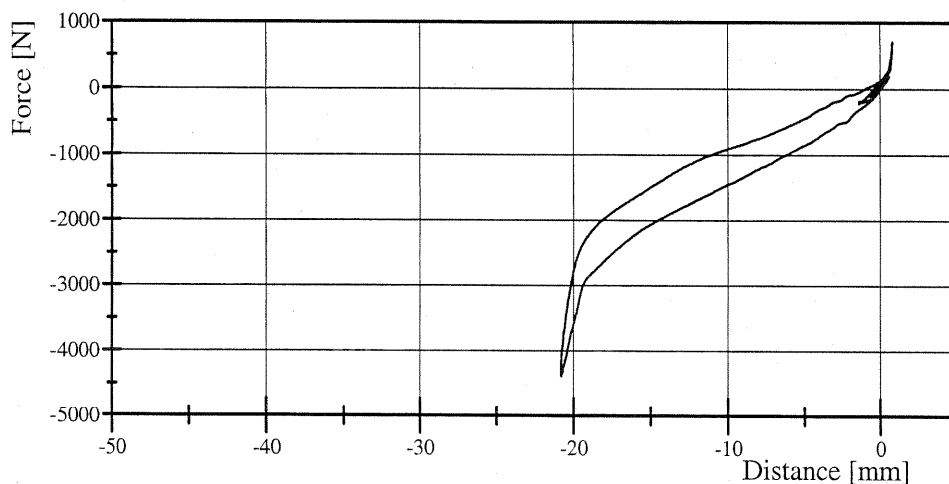


Filter Class: CFC_600

Max: 701.1 N at 39.6 ms

Min: -4,383.5 N at 18.1 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600

Max: 701.1 N at 0.8 mm

Min: -4,383.5 N at -20.8 mm

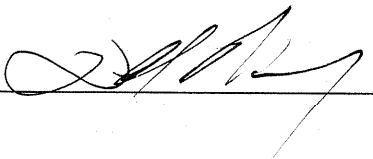
Pre-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Passenger Dummy S/N: 070

Transportation Research Center Inc.
5720 HIII 5th Female Dummy
External Dimensions
Serial No. 070 Calibration No. 14

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	785	Yes
B	Shoulder Pivot Height	431.8 - 457.2	449	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	128	Yes
G	Back of Elbow to Wrist Pivot	243.9 - 259.1	253	Yes
H	Head Back to Backline	43.2 - 48.2	44	Yes
I	Shoulder to Elbow Length	276.8 - 297.2	289	Yes
J	Elbow Rest Height	182.8 - 203.2	191	Yes
K	Buttock Knee Length	520.7 - 546.1	532	Yes
L	Popliteal Height	355.6 - 376.0	360	Yes
M	Knee Pivot Height	393.7 - 419.1	403	Yes
N	Buttock Popliteal Length	414.0 - 439.4	418	Yes
O	Chest Depth without Jacket	175.3 - 190.5	183	Yes
P	Foot Length	218.5 - 233.7	221	Yes
R	Buttock to Knee Pivot Length	457.2 - 482.6	475	Yes
S	Head Breadth	137.1 - 147.3	141	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	357	Yes
W	Foot Breadth	78.8 - 94.0	88	Yes
X	Head Circumference	528.3 - 548.7	539	Yes
Y	Chest Circumference with Jacket	850.9 - 881.3	872	Yes
Z	Waist Circumference	759.5 - 789.9	781	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



Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 070 Certification No. 14-1

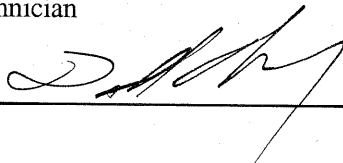
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	265.8 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	-7.0 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

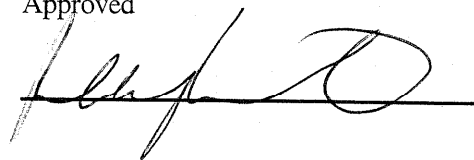
Test meets specifications.

Comments:

Technician



Approved

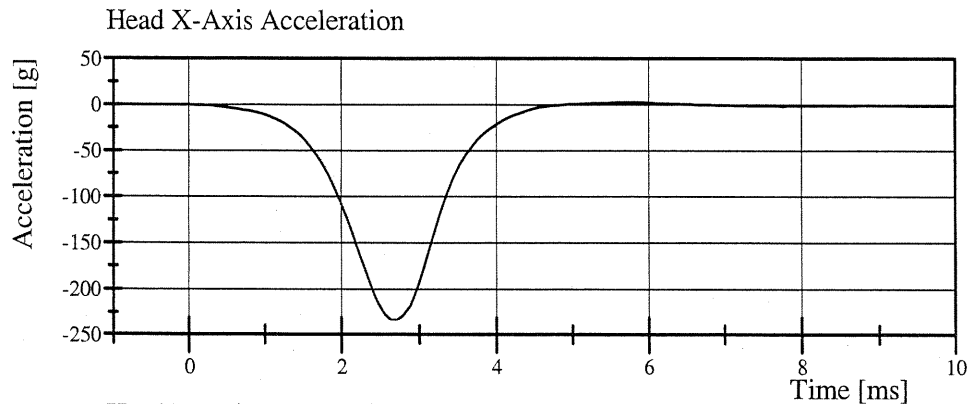


Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 070 Certification No. 14-1

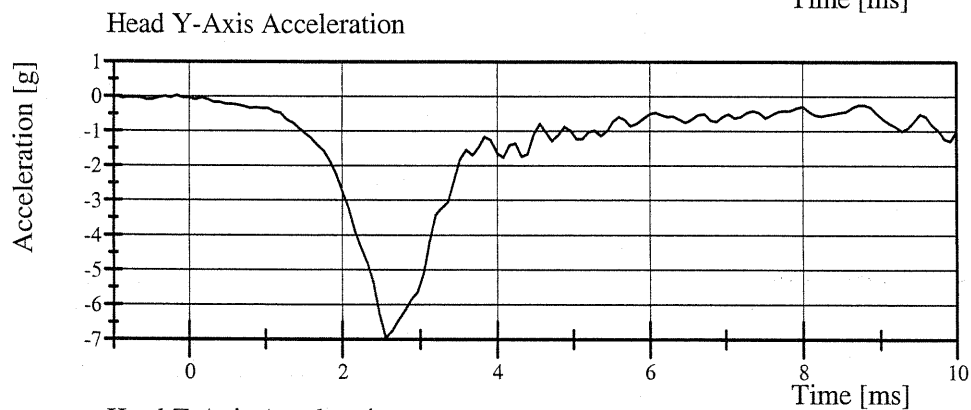
Test Date: 03/16/2006



Filter Class: CFC_1000

Max: 2.7 g at 5.7 ms

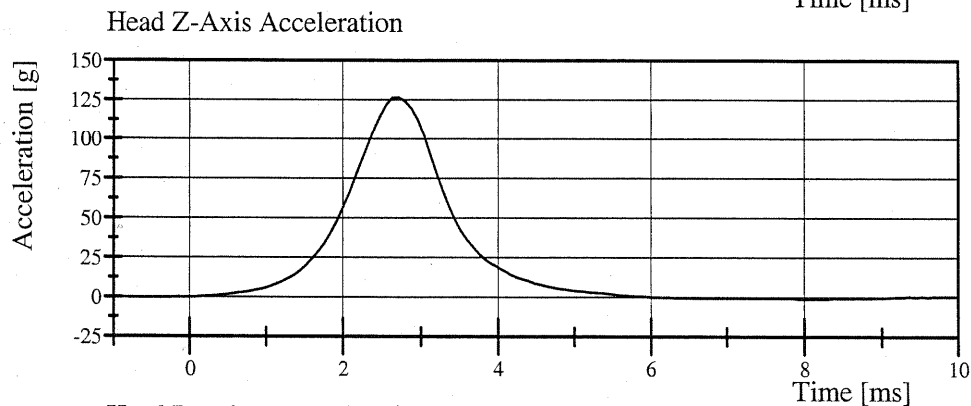
Min: -233.6 g at 2.7 ms



Filter Class: CFC_1000

Max: 0.0 g at -0.2 ms

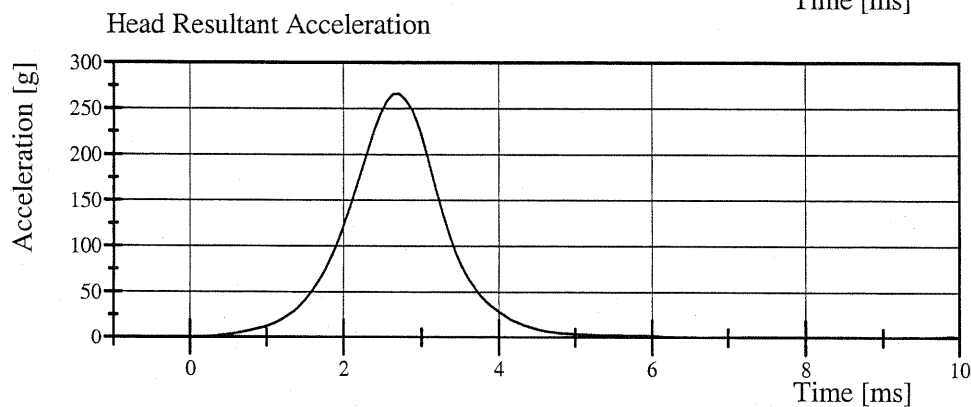
Min: -7.0 g at 2.6 ms



Filter Class: CFC_1000

Max: 126.7 g at 2.7 ms

Min: -0.8 g at 8.1 ms



Filter Class: CFC_1000

Max: 265.8 g at 2.7 ms

Min: 0.0 g at -0.1 ms

Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 070 Certification No. 14-2

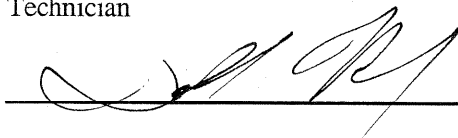
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	7.053 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	(-2.1) - (-2.5) m/s	-2.21 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	(-4.0) - (-5.0) m/s	-4.34 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.31 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-80.0 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	80.4 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	88.8 ms	Yes

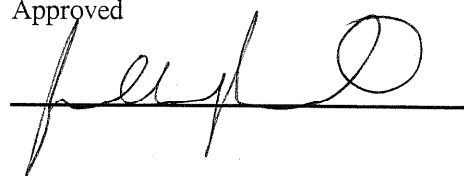
Test meets specifications.

Comments:

Technician



Approved



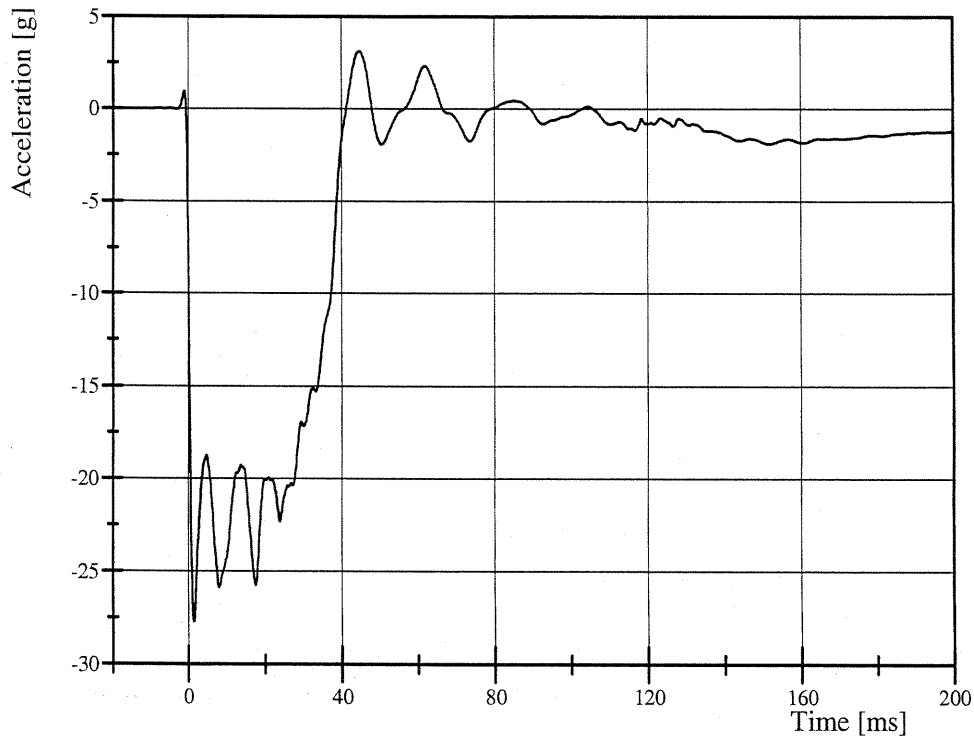
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 070 Certification No. 14-2

Test Date: 03/16/2006

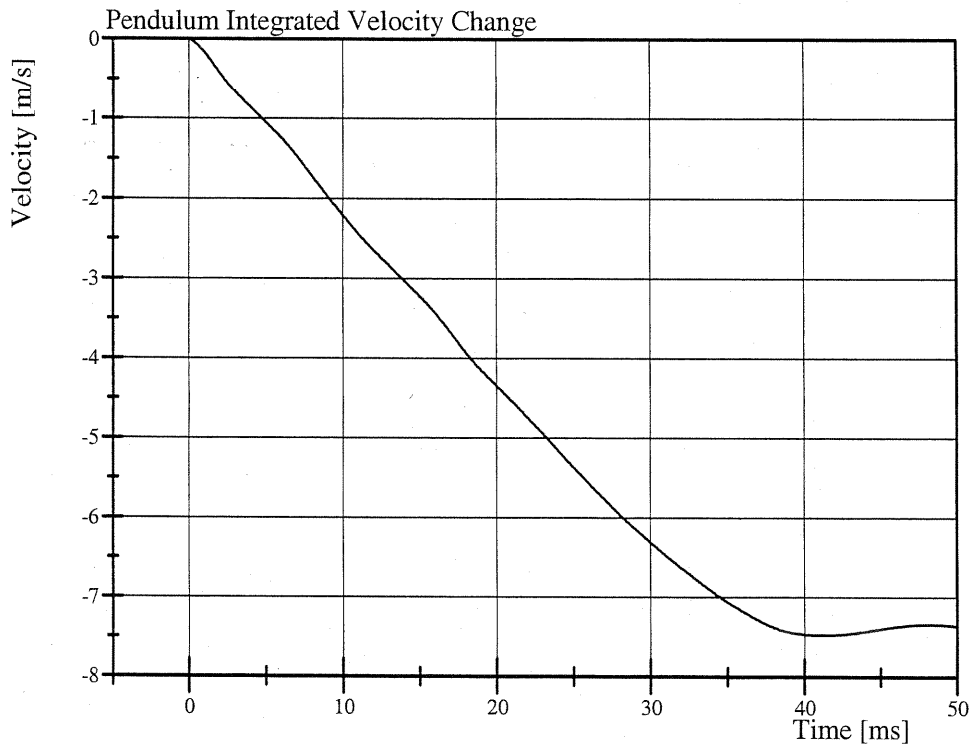
Pendulum Acceleration



Filter Class: CFC_180

Max: 3.1 g at 44.8 ms

Min: -27.7 g at 1.5 ms



Filter Class: CFC_180

Max: 0.0 m/s at 0.0 ms

Min: -7.5 m/s at 41.3 ms

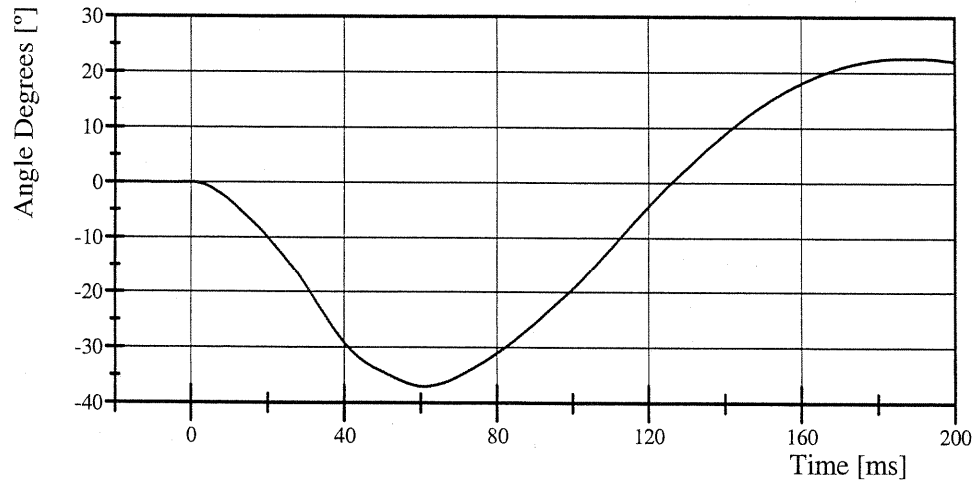
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 070 Certification No. 14-2

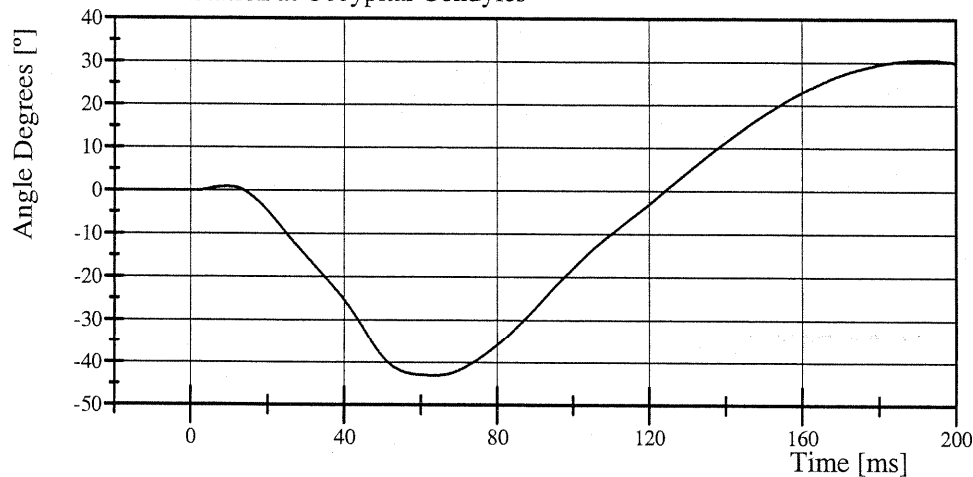
Test Date: 03/16/2006

Pot Rotation at the Base of Neck



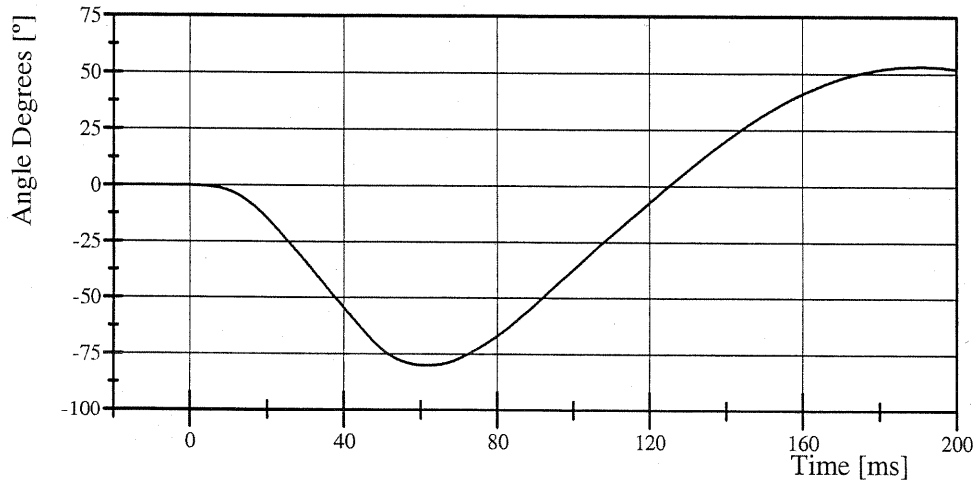
Filter Class: CFC_60
Max: 22.6 ° at 188.5 ms
Min: -37.0 ° at 61.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 30.6 ° at 191.8 ms
Min: -43.1 ° at 63.7 ms

Total Head D-Plane Rotation



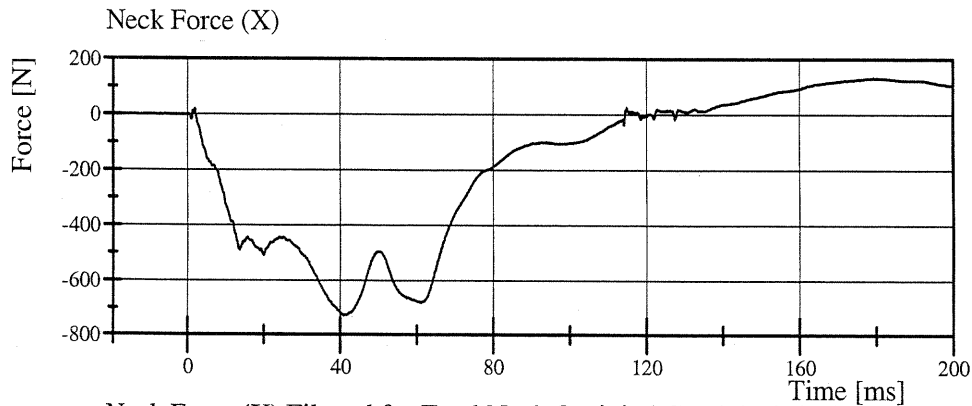
Filter Class: CFC_60
Max: 53.2 ° at 190.9 ms
Min: -80.0 ° at 61.5 ms

Transportation Research Center Inc.

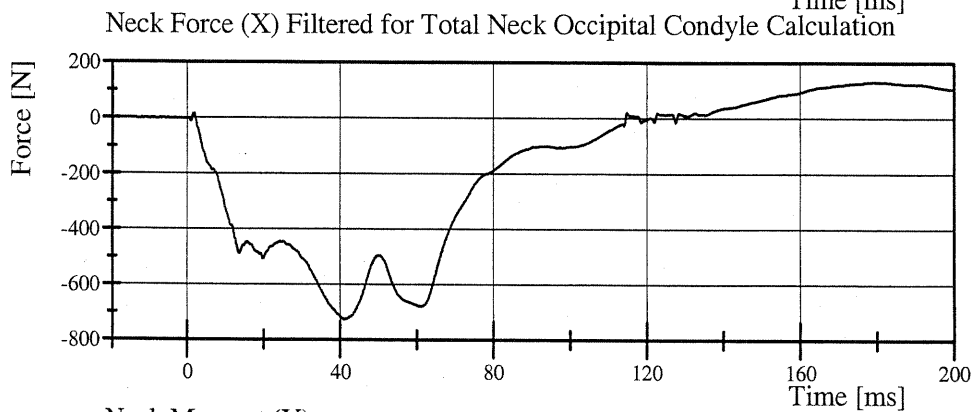
Neck Flexion

HIII 5th Serial No. 070 Certification No. 14-2

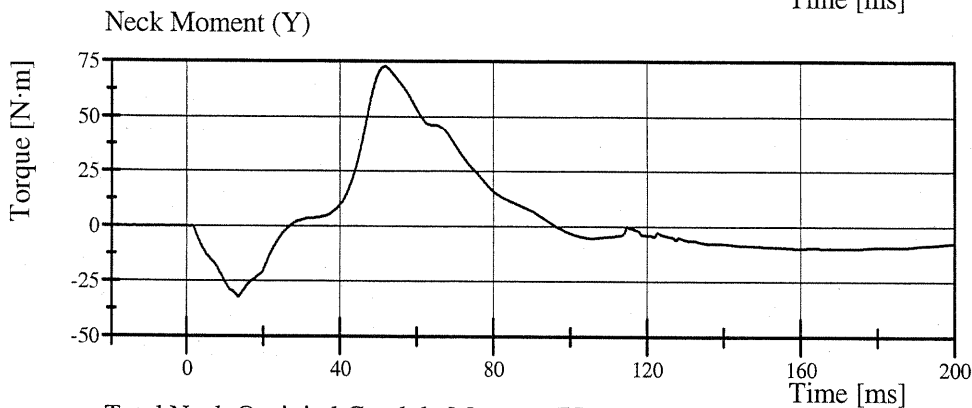
Test Date: 03/16/2006



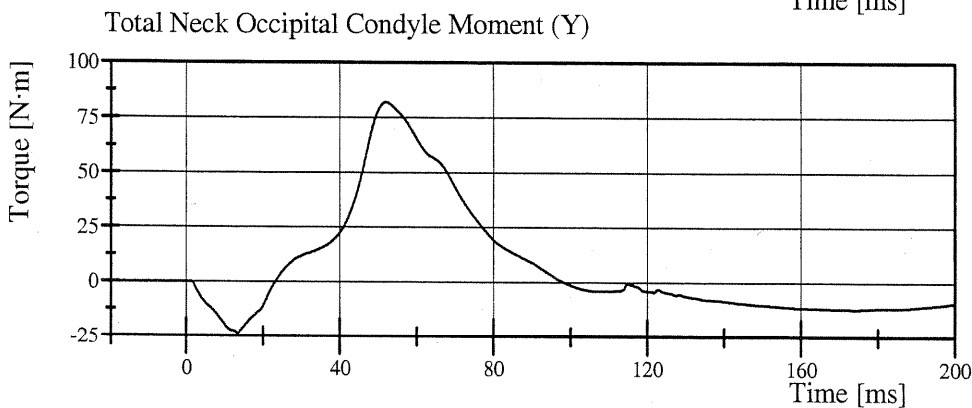
Filter Class: CFC_1000
Max: 132.9 N at 179.2 ms
Min: -726.9 N at 41.0 ms



Filter Class: CFC_600
Max: 132.6 N at 179.2 ms
Min: -726.2 N at 41.0 ms



Filter Class: CFC_600
Max: 72.7 N·m at 51.8 ms
Min: -32.1 N·m at 13.5 ms



Filter Class: CFC_600
Max: 82.0 N·m at 52.0 ms
Min: -23.4 N·m at 13.4 ms

Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 070 Certification No. 14-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-6.067 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.87 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.58 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	5.26 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	107.6 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-54.6 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	104.1 ms	Yes

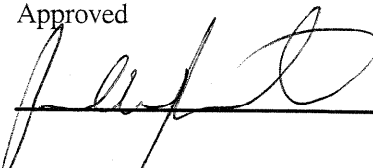
Test meets specifications.

Comments:

Technician



Approved



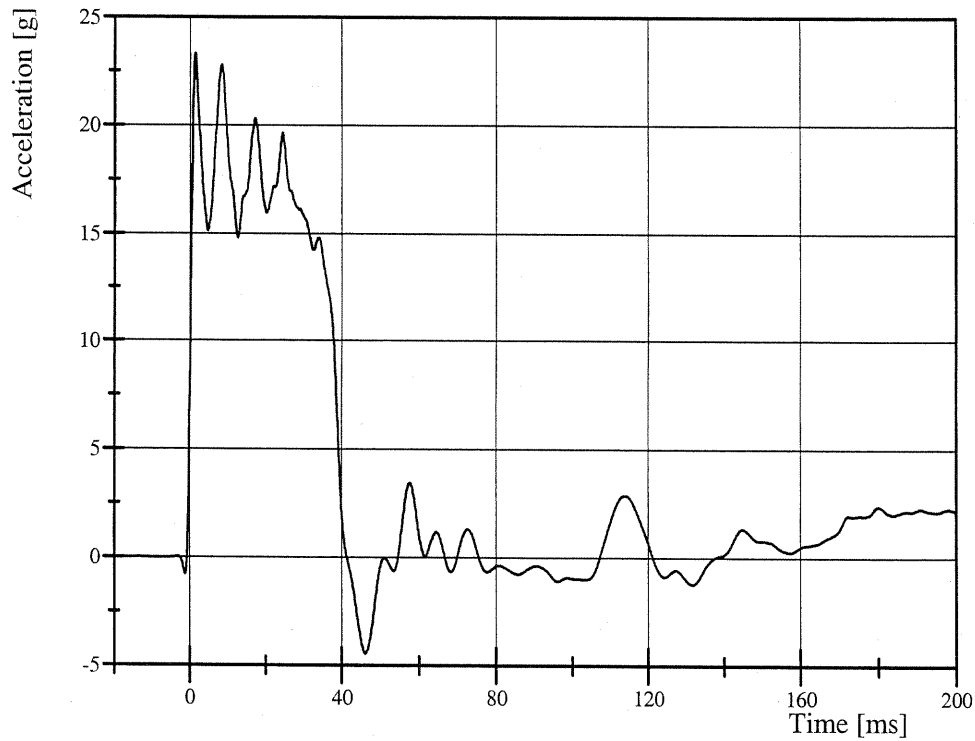
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 070 Certification No. 14-1

Test Date: 03/16/2006

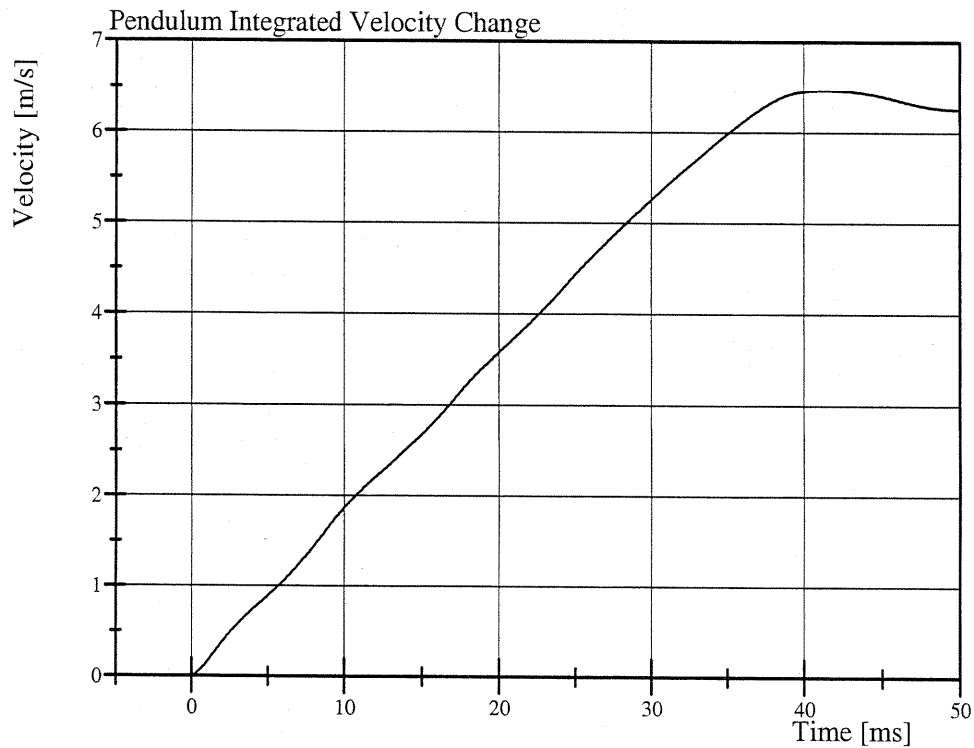
Pendulum Acceleration



Filter Class: CFC_180

Max: 23.3 g at 1.4 ms

Min: -4.4 g at 46.1 ms



Filter Class: CFC_180

Max: 6.5 m/s at 41.4 ms

Min: 0.0 m/s at 0.0 ms

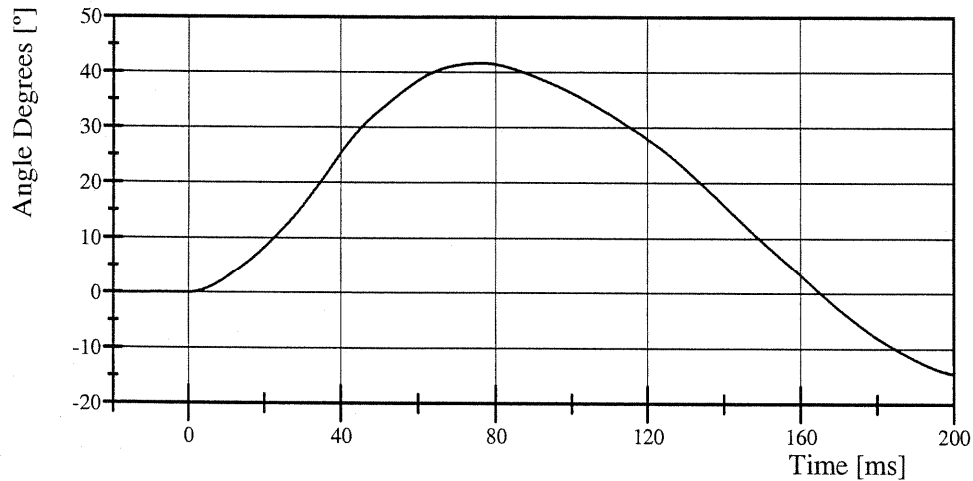
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 070 Certification No. 14-1

Test Date: 03/16/2006

Pot Rotation at the Base of Neck

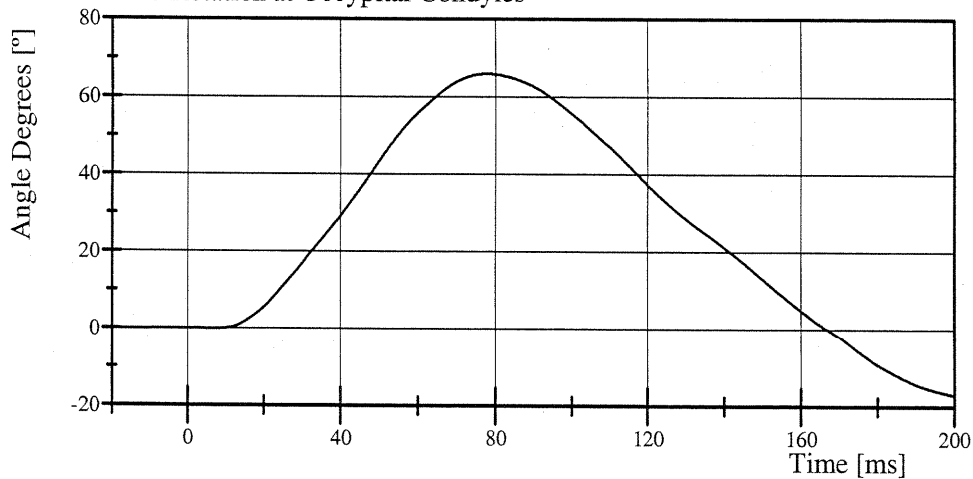


Filter Class: CFC_60

Max: 41.7 ° at 76.4 ms

Min: -14.5 ° at 200.0 ms

Head Rotation at Occypital Condyles

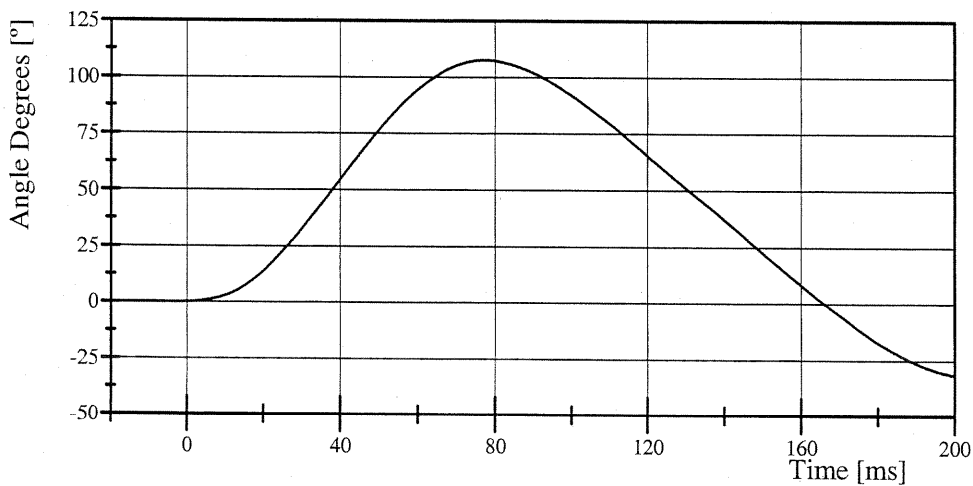


Filter Class: CFC_60

Max: 66.0 ° at 77.8 ms

Min: -17.0 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 107.6 ° at 77.3 ms

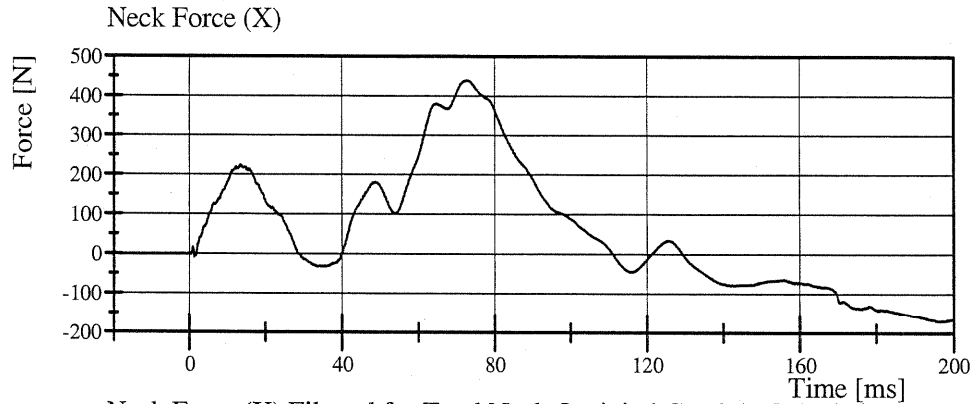
Min: -31.5 ° at 200.0 ms

Transportation Research Center Inc.

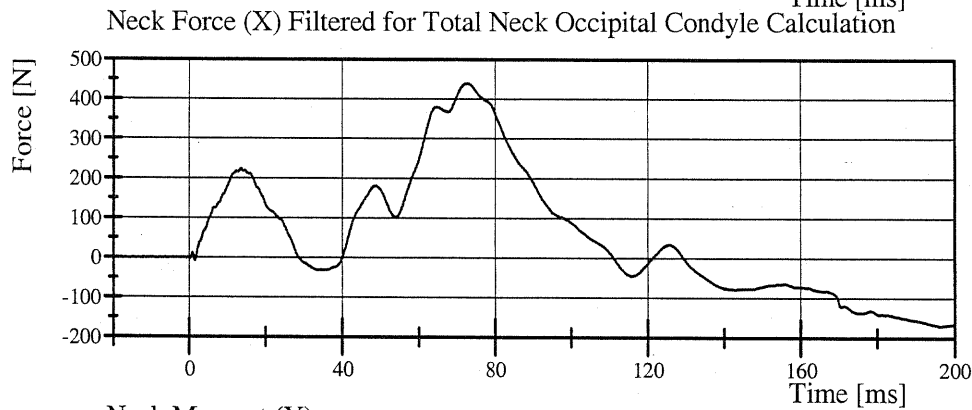
Neck Extension

HIII 5th Serial No. 070 Certification No. 14-1

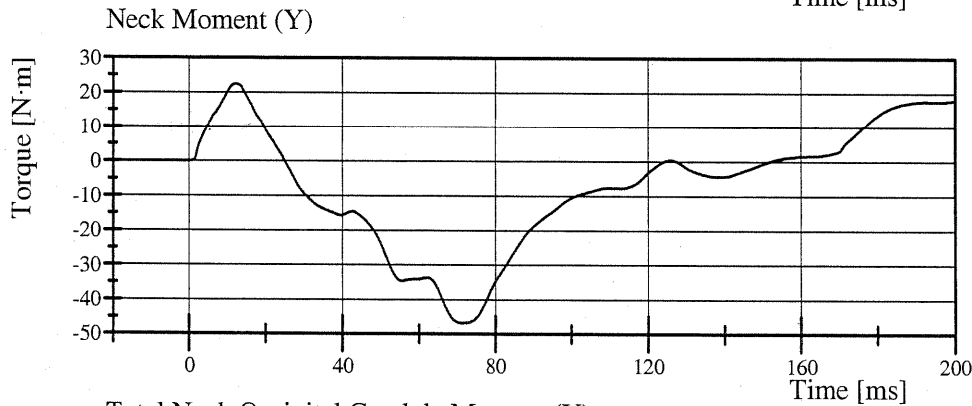
Test Date: 03/16/2006



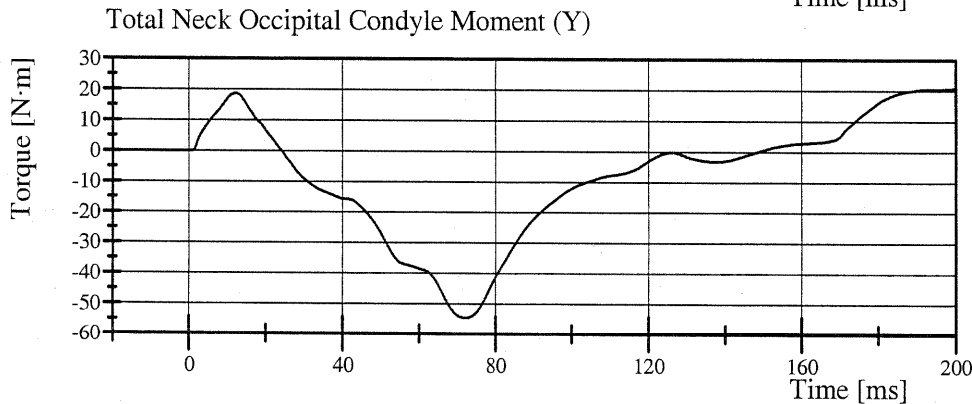
Filter Class: CFC_1000
Max: 439.8 N at 72.6 ms
Min: -169.8 N at 196.1 ms



Filter Class: CFC_600
Max: 439.7 N at 72.8 ms
Min: -169.6 N at 196.2 ms



Filter Class: CFC_600
Max: 22.5 N·m at 12.2 ms
Min: -46.8 N·m at 71.4 ms



Filter Class: CFC_600
Max: 20.8 N·m at 200.0 ms
Min: -54.6 N·m at 72.2 ms

Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 070 Certification No. 14-1

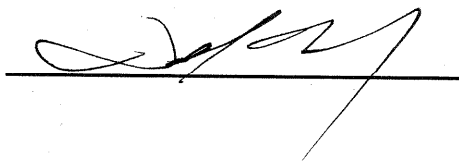
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.654 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,300.7 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	$\geq$ (-4,600) N	-4,301.4 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-52.6 mm	Yes
Internal Hysteresis	69 - 85 %	73.5 %	Yes

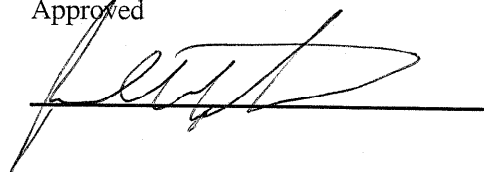
Test meets specifications.

Comments:

Technician



Approved

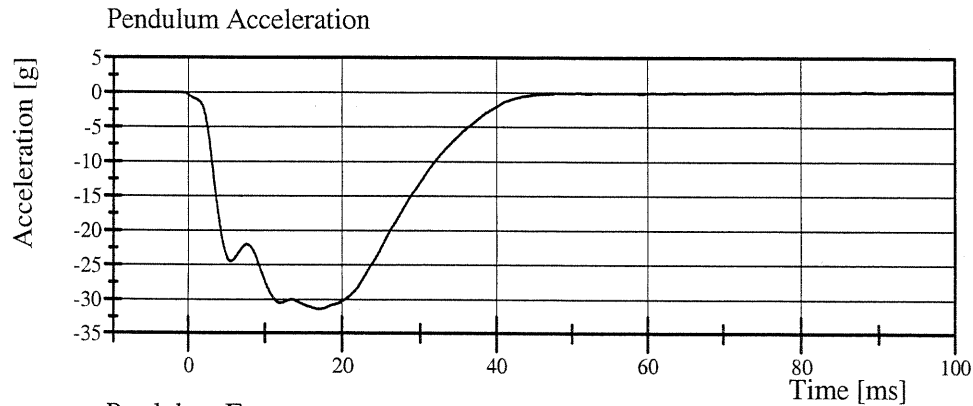


Transportation Research Center Inc.

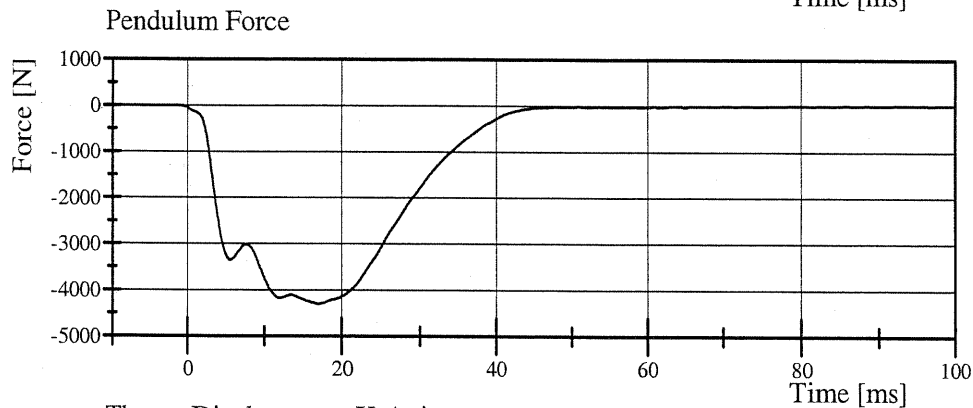
Front Thorax

HIII 5th Serial No. 070 Certification No. 14-1

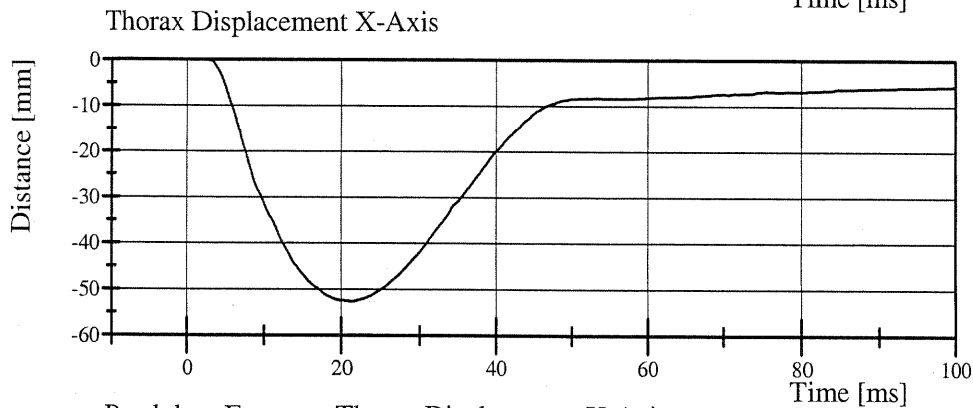
Test Date: 03/16/2006



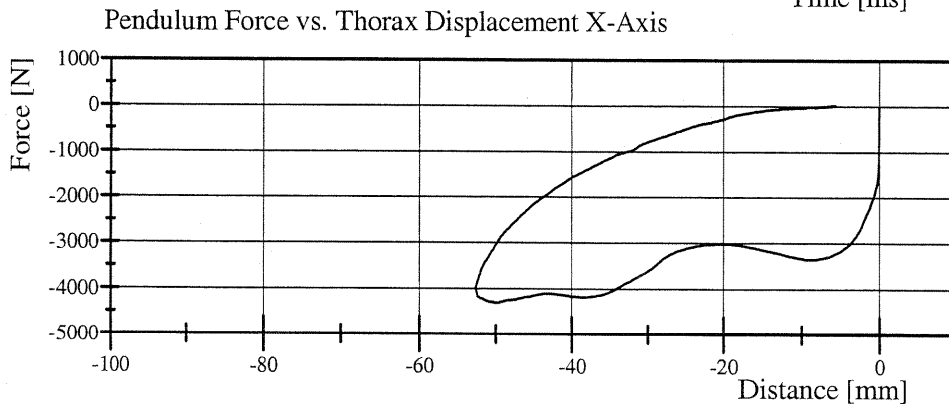
Filter Class: CFC_180
Max: 0.2 g at 95.4 ms
Min: -31.4 g at 17.0 ms



Filter Class: CFC_180
Max: 21.7 N at 95.4 ms
Min: -4,301.4 N at 17.0 ms



Filter Class: CFC_600
Max: 0.0 mm at -3.5 ms
Min: -52.6 mm at 21.3 ms



Filter Class: CFC_180
Max: 21.7 N at -5.8 mm
Min: -4,301.4 N at -49.8 mm

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

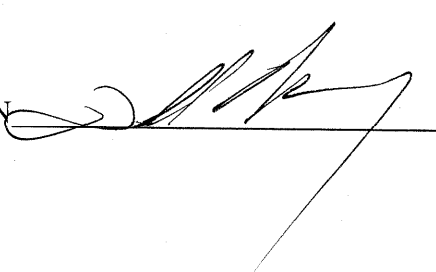
CAL DATE: 16-Mar-06

TRC, INC. TEST NO: 070C14TF1 572 O SN070 TORSO FLEX CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.4° C
RELATIVE HUMIDITY	10 – 70 %	28 %
INITIAL ANGLE OF UNSUPPORTED DUMMY	<= 20° REFERENCED TO VERTICAL	18.0 °
MAXIMUM FORCE AT 45 DEG. DURING 10 SECOND PERIOD	320 – 390 N	351.4 N
RETURN ANGLE		22.9 °
DIFFERENCE BETWEEN RETURN ANGLE & INTIAL ANGLE	+/- 8 ° OF INTIAL ANGLE	4.9 °
RATE	0.5° - 1.5°/sec	0.99 °/sec

TEST MEETS SPECIFICATIONS

Comments:

TECHNICIAN 

Transportation Research Center Inc.

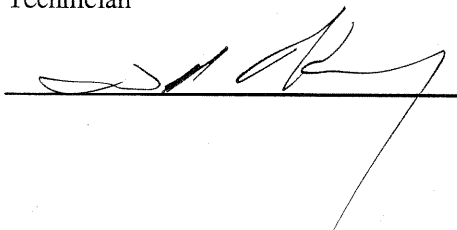
Left Knee Femur Response Test
HIII 5th Serial No. 070 Certification No. 14-1
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.105 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,748.6 N	Yes

Test meets specifications.

Comments:

Technician

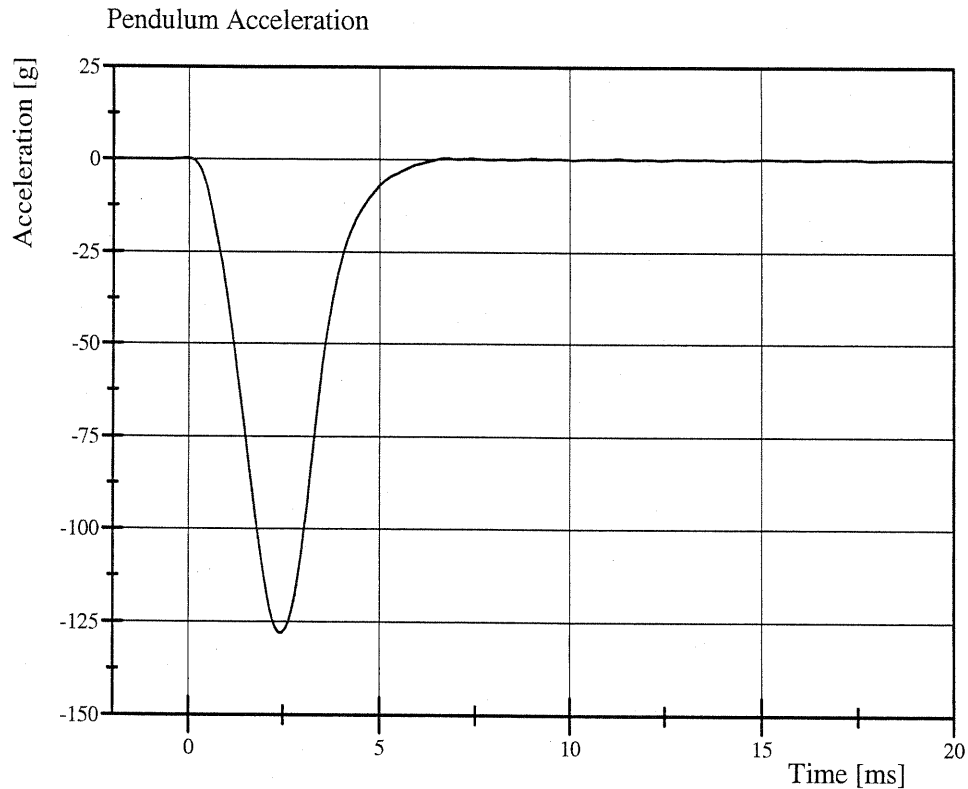


Approved

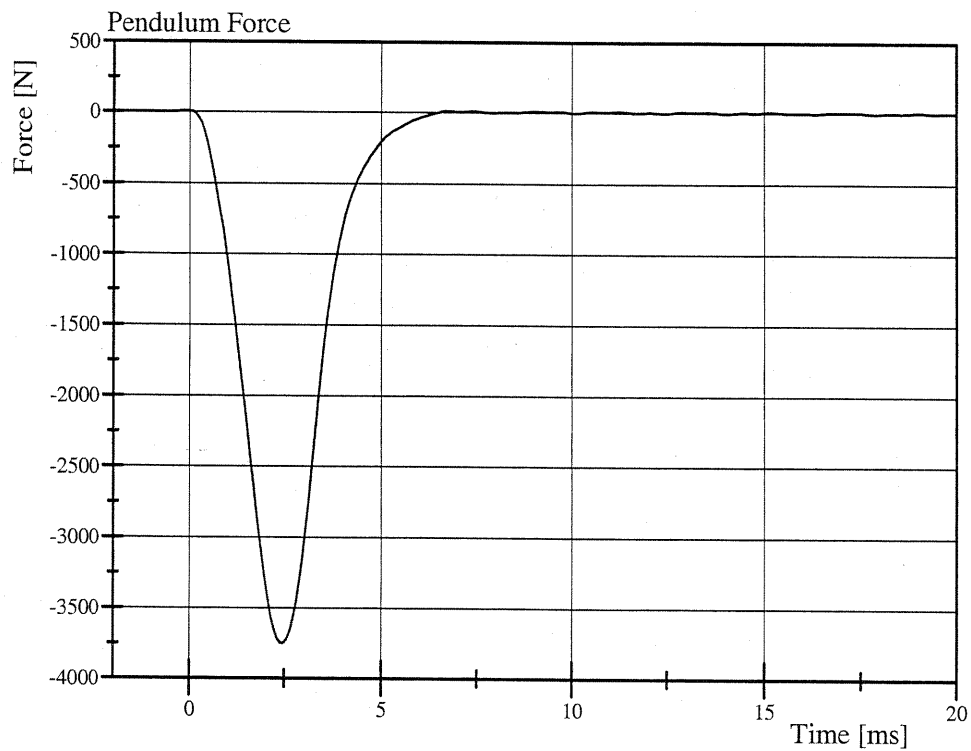


Transportation Research Center Inc.

Left Knee Femur Response Test
HIII 5th Serial No. 070 Certification No. 14-1
Test Date: 03/16/2006



Filter Class: CFC_600
Max: 0.3 g at 9.0 ms
Min: -127.8 g at 2.5 ms



Filter Class: CFC_600
Max: 9.2 N at 9.0 ms
Min: -3,748.6 N at 2.5 ms

Transportation Research Center Inc.

Right Knee Femur Response Test
HIII 5th Serial No. 070 Certification No. 14-1
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.105 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,708.9 N	Yes

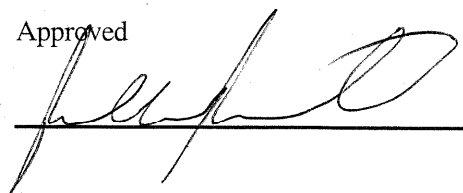
Test meets specifications.

Comments:

Technician

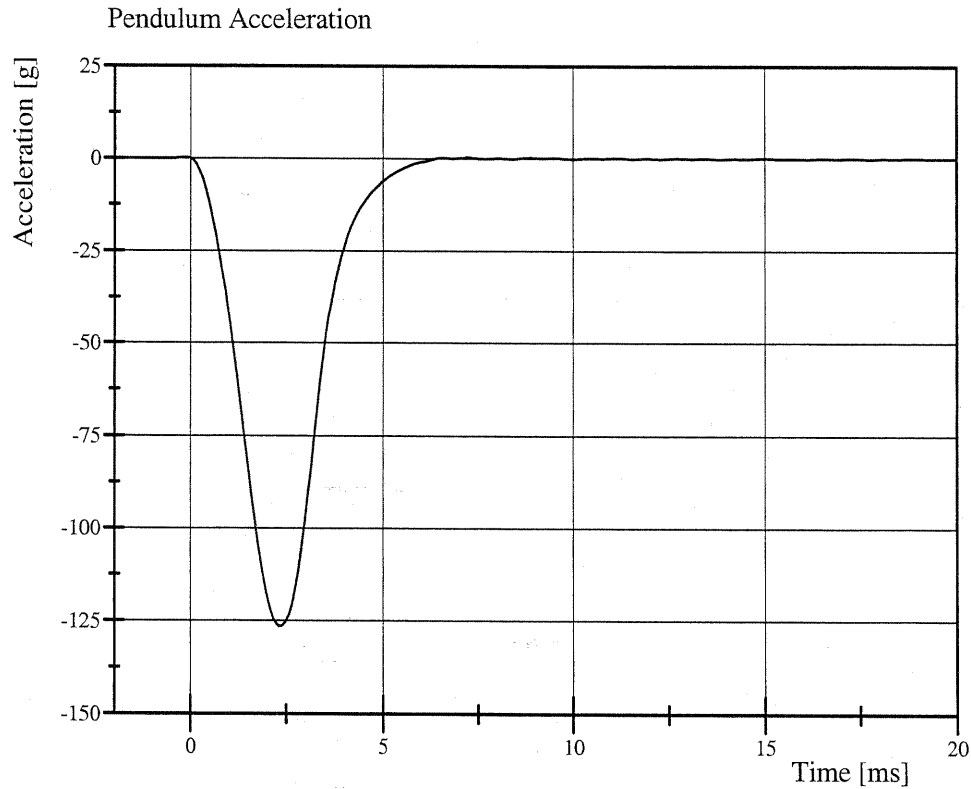


Approved

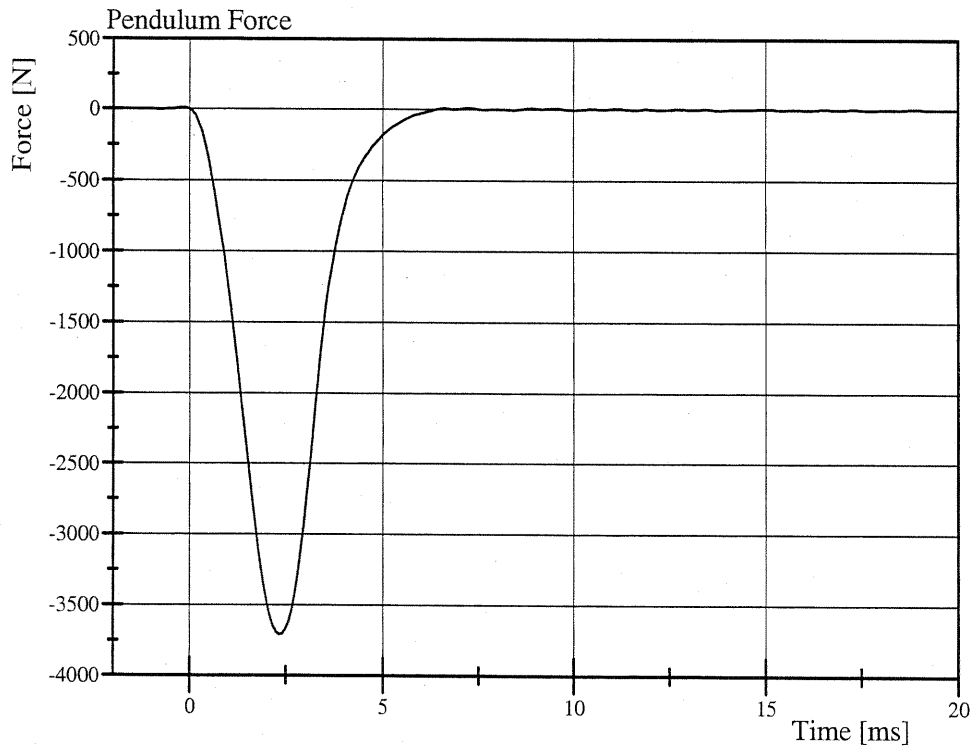


Transportation Research Center Inc.

Right Knee Femur Response Test
HIII 5th Serial No. 070 Certification No. 14-1
Test Date: 03/16/2006



Filter Class: CFC_600
Max: 0.3 g at 7.2 ms
Min: -126.5 g at 2.3 ms



Filter Class: CFC_600
Max: 8.1 N at 7.2 ms
Min: -3,708.9 N at 2.3 ms

Appendix D

Test Equipment and Instrumentation Calibration Information

Sign Convention
SAE J211 MAR95

Accelerometers:

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

Potentiometers:

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

Rotation potentiometers:

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

Load cells:

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

Neck load cells:

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

Tibia load cells:

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

Frequency Response Classes
SAE J211 MAR95

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

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

Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
1	J36743	21HEADCG00H3ACXA	Head Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.001
2	99102-F15	21HEADCG00H3ACYA	Head Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.002
3	J19227	21HEADCG00H3ACZA	Head Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.003
4	J27490	21HEADFR00H3ACYA	Head (FT) Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.004
5	03E03E21-M21	21HEADFR00H3ACZA	Head (FT) Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.005
6	00L13-F14	21HEADUP00H3ACXA	Head (TP) Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.006
7	99H12-F08	21HEADUP00H3ACYA	Head (TP) Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.007
8	03E03E20-N01	21HEADLE00H3ACXA	Head (LT) Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.008
9	03D03D16-F14	21HEADLE00H3ACZA	Head (LT) Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.009
10	1716A-1039-FX	21NECKUP00H3FOXA	Neck Force X	8896.4	N	-	Head forward, chest rearward	1-110 HIII 50th FTSS.010
11	1716A-1039-FY	21NECKUP00H3FOYA	Neck Force Y	8896.4	N	+	Head leftward, chest rightward	1-110 HIII 50th FTSS.011
12	1716A-1039-FZ	21NECKUP00H3FOZA	Neck Force Z	13344	N	+	Head upward, chest downward	1-110 HIII 50th FTSS.012
13	1716A-1039-MX	21NECKUP00H3MOXA	Neck Moment X	282	N-m	-	Right ear toward right shoulder	1-110 HIII 50th FTSS.013
14	1716A-1039-MY	21NECKUP00H3MOYA	Neck Moment Y	282	N-m	+	Chin toward sternum	1-110 HIII 50th FTSS.014
15	1716A-1039-MZ	21NECKUP00H3MOZA	Neck Moment Z	282	N-m	+	Chin toward left shoulder	1-110 HIII 50th FTSS.015
16	1794A-215-FX	21NECKLO00H3FOXA	Neck Lower Force X	13344	N	-	Head forward, chest rearward	1-110 HIII 50th FTSS.016
17	1794A-215-FY	21NECKLO00H3FOYA	Neck Lower Force Y	13344	N	+	Head leftward, chest rightward	1-110 HIII 50th FTSS.017
18	1794A-215-FZ	21NECKLO00H3FOZA	Neck Lower Force Z	13344	N	+	Head upward, chest downward	1-110 HIII 50th FTSS.018
19	1794A-215-MX	21NECKLO00H3MOXA	Neck Lower Moment X	452	N-m	-	Right ear toward right shoulder	1-110 HIII 50th FTSS.019
20	1794A-215-MY	21NECKLO00H3MOYA	Neck Lower Moment Y	452	N-m	+	Chin toward sternum	1-110 HIII 50th FTSS.020
21	1794A-215-MZ	21NECKLO00H3MOZA	Neck Lower Moment Z	452	N-m	+	Chin toward left shoulder	1-110 HIII 50th FTSS.021
22	AJ534	21CHSTCG00H3ACXA	Chest Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.022
23	J17976	21CHSTCG00H3ACYA	Chest Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.023
24	J32884	21CHSTCG00H3ACZA	Chest Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.024
25	02I02I10-N15	21CHSTCGRDH3ACXA	Chest Accel X Red.	1000	g	-	Rearward	1-110 HIII 50th FTSS.025
26	02D02C21-N02	21CHSTCGRDH3ACYA	Chest Accel Y Red.	1000	g	-	Leftward	1-110 HIII 50th FTSS.026
27	98H10-F18	21CHSTCGRDH3ACZA	Chest Accel Z Red.	1000	g	-	Upward	1-110 HIII 50th FTSS.027

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060324

Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
28	CST110	21CHST0000H3DSXA	Chest Deflection X	100	mm	-	Rearward	1-110 HIII 50th FTSS.028
29	J23803	21PELVCG00H3ACXA	Pelvis Accel X	600	g	-	Rearward	1-110 HIII 50th FTSS.029
30	J32180	21PELVCG00H3ACYA	Pelvis Accel Y	600	g	-	Leftward	1-110 HIII 50th FTSS.030
31	J20556	21PELVCG00H3ACZA	Pelvis Accel Z	600	g	-	Upward	1-110 HIII 50th FTSS.031
32	2121A-1396	21FEMRLL00H3FOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-110 HIII 50th FTSS.032
33	2121A-1397	21FEMRRL00H3FOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-110 HIII 50th FTSS.033
34	150-0121VL-14696	21KNSLLE00H3DSXA	Left Knee Displacement X	21.8	mm	-	Hold femur in place, tibia rearward	1-LX116-117.001
35	4353J-97-FX	21TIBILULXH3FOXA	Left Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX116-117.002
36	4353J-97-FZ	21TIBILULXH3FOZA	Left Upper Tibia Force Z	11120	N	+	Tibia downward, femur upward	1-LX116-117.003
37	4353J-97-MX	21TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.004
38	4353J-97-MY	21TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.005
39	02102110-N28	21TIBILELXH3ACXA	Left Tibia Accel X	1000	g	+	Tibia forward	1-LX116-117.006
40	01G25-N01	21TIBILELXH3ACYA	Left Tibia Accel Y	1000	g	+	Tibia right	1-LX116-117.007
41	4929J-80-FX	21TIBILLLXH3FOXA	Left Lower Tibia Force X	11120	N	+	Ankle forward, knee rearward	1-LX116-117.008
42	4929J-80-FY	21TIBILLLXH3FOYA	Left Lower Tibia Force Y	11120	N	+	Ankle rightward, knee leftward	1-LX116-117.009
43	4929J-80-FZ	21TIBILLLXH3FOZA	Left Lower Tibia Force Z	11120	N	+	Ankle downward, knee upward	1-LX116-117.010
44	4929J-80-MX	21TIBILLLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.011
45	4929J-80-MY	21TIBILLLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.012
46	PD210-4B-60	21FOOTLELXH3ANXA	Left Foot Angular Dis. X LX117X	166	°	+	Eversion	1-LX116-117.013
47	PD210-4B-61	21FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX117Y	165	°	+	Dorsiflexion	1-LX116-117.014
48	PD210-4B-62	21FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX117Z	165	°	+	Internal rotation	1-LX116-117.015
49	02102105-F07	21FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX116-117.016

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Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
50	02I02I10-N22	21FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX116-117.017
51	03E03E20-N04	21FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX116-117.018
52	150-0121VL-14672	21KNSLRI00H3DSXA	Right Knee Displacement X	21.8	mm	-	Hold femur in place, tibia rearward	1-LX116-117.019
53	4353J-79-FX	21TIBIRULXH3FOXA	Right Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX116-117.020
54	4353J-79-FZ	21TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120	N	+	Tibia downward, femur upward	1-LX116-117.021
55	4353J-79-MX	21TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.022
56	4353J-79-MY	21TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.023
57	J32157	21TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX116-117.024
58	P16171	21TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX116-117.025
59	4929J-79-FX	21TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120	N	+	Ankle forward, knee rearward	1-LX116-117.026
60	4929J-79-FY	21TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120	N	+	Ankle rightward, knee leftward	1-LX116-117.027
61	4929J-79-FZ	21TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120	N	+	Ankle downward, knee upward	1-LX116-117.028
62	4929J-79-MX	21TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.029
63	4929J-79-MY	21TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.030
64	PD210-4B-338	21FOOTRILXH3ANXA	Right Foot Angular Dis. X LX116X	164	°	+	Inversion	1-LX116-117.031
65	PD210-4B-58	21FOOTRILXH3ANYA	Right Foot Angular Dis. Y LX116Y	166	°	+	Dorsiflexion	1-LX116-117.032
66	PD210-4B-339	21FOOTRILXH3ANZA	Right Foot Angular Dis. Z LX116Z	165	°	+	External rotation	1-LX116-117.033
67	04J04J07-M01	21FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Bipolar	1-LX116-117.034
68	02I02I16-A20	21FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Bipolar	1-LX116-117.035
69	P49870	21FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Bipolar	1-LX116-117.036
70	03E03E20-N20	23HEADCG00HFACXA	Head Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.001
71	02A18-N10	23HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.002
72	02A09-F15	23HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.003
73	01L26-F02	23HEADCGRDHFACXA	Head Accel Red X	1000	g	-	Rearward	3-416 HIII 5th FTSS.004

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Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
74	02A09-F13	23HEADCGRDHFACYA	Head Accel Red Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.005
75	02A16-A06	23HEADCGRDHFACZA	Head Accel Red Z	1000	g	-	Upward	3-416 HIII 5th FTSS.006
76	02A18-N04	23HEADFR00HFACYA	Head (FT) Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.007
77	02A18-N20	23HEADFR00HFACZA	Head (FT) Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.008
78	03F03F09-N05	23HEADUP00HFACXA	Head (TP) Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.009
79	98H14-K10	23HEADUP00HFACYA	Head (TP) Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.010
80	02A16-A19	23HEADLE00HFACXA	Head (LT) Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.011
81	02A16-A22	23HEADLE00HFACZA	Head (LT) Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.012
82	IF-205-161-FX	23NECKUP00HFFOXA	Neck Force X	8896	N	-	Head forward, chest rearward	3-416 HIII 5th FTSS.013
83	IF-205-161-FY	23NECKUP00HFFOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	3-416 HIII 5th FTSS.014
84	IF-205-161-FZ	23NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-416 HIII 5th FTSS.015
85	IF-205-161-MX	23NECKUP00HFMOXA	Neck Moment X	282	N-m	-	Right ear toward right shoulder	3-416 HIII 5th FTSS.016
86	IF-205-161-MY	23NECKUP00HFMOYA	Neck Moment Y	282	N-m	+	Chin toward sternum	3-416 HIII 5th FTSS.017
87	IF-205-161-MZ	23NECKUP00HFMOZA	Neck Moment Z	282	N-m	+	Chin toward left shoulder	3-416 HIII 5th FTSS.018
88	3251-108-FX	23NECKLO00HFFOXA	Neck Lower Force X	13344	N	-	Head forward, chest rearward	3-416 HIII 5th FTSS.019
89	3251-108-FY	23NECKLO00HFFOYA	Neck Lower Force Y	13344	N	+	Head leftward, chest rightward	3-416 HIII 5th FTSS.020
90	3251-108-FZ	23NECKLO00HFFOZA	Neck Lower Force Z	13344	N	+	Head upward, chest downward	3-416 HIII 5th FTSS.021
91	3251-108-MX	23NECKLO00HFMOXA	Neck Lower Moment X	452	N-m	-	Right ear toward right shoulder	3-416 HIII 5th FTSS.022
92	3251-108-MY	23NECKLO00HFMOYA	Neck Lower Moment Y	452	N-m	+	Chin toward sternum	3-416 HIII 5th FTSS.023
93	3251-108-MZ	23NECKLO00HFMOZA	Neck Lower Moment Z	338.95	N-m	+	Chin toward left shoulder	3-416 HIII 5th FTSS.024
94	02A16-A04	23CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.025
95	C02B19-F02	23CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.026
96	C02B19-F06	23CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.027
97	B02A25-N08	23CHSTCGRDHFACXA	Chest Accel Red X	1000	g	-	Rearward	3-416 HIII 5th FTSS.028
98	03E03E19-N02	23CHSTCGRDHFACYA	Chest Accel Red Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.029
99	C02B19-F04	23CHSTCGRDHFACZA	Chest Accel Red Z	1000	g	-	Upward	3-416 HIII 5th FTSS.030
100	B02A09-F08	23STRNUP00HFACXA	Sternum Upper Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.031

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060324

Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
101	02A16-A05	23STRNMI00HFACXA	Sternum Mid Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.032
102	03F03F09-N18	23STRNLO00HFACXA	Sternum Lower Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.033
103	14CB1-2897-416	23CHST0000HFDSXA	Chest Deflection X 516	100	mm	+	Forward	3-416 HIII 5th FTSS.034
104	C02B19-F03	23PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-416 HIII 5th FTSS.035
105	02A16-A27	23PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.036
106	C02B19-F01	23PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.037
107	2430-736	23FEMRLL00HFFOZA	Left Femur Force Z #8	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.038
108	2430-742	23FEMRRL00HFFOZA	Right Femur Force Z 507	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.057
109	150-0121VR-22653	23KNSLLE00HFDSXA	Left Knee Displacement	40	mm	-	Hold femur in place, tibia rearward	3-416 HIII 5th FTSS.039
110	4825J-91-FX	23TIBILUFXHFFOXA	Left Upper Tibia Force X	8896.4	N	+	Tibia forward, knee rearward	3-416 HIII 5th FTSS.040
111	4825J-91-FZ	23TIBILUFXHFFOZA	Left Upper Tibia Force Z	8896.4	N	+	Tibia downward, femur upward	3-416 HIII 5th FTSS.041
D-9 112	4825J-91-MX	23TIBILUFXHFMOMA	Left Upper Tibia Moment X	282.4	N·m	+	Ankle leftward, hold knee in place	3-416 HIII 5th FTSS.042
113	4825J-91-MY	23TIBILUFXHFMOMA	Left Upper Tibia Moment Y	282.4	N·m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.043
114	99H30-Z01	23TIBILEFXHFACXA	Left Tibia Accel X	1000	g	+	Tibia forward	3-416 HIII 5th FTSS.044
115	99108-F26	23TIBILEFXHFACYA	Left Tibia Accel Y	1000	g	+	Tibia right	3-416 HIII 5th FTSS.045
116	4826J-92-FX	23TIBILLFXHFFOXA	Left Lower Tibia Force X	8896.4	N	+	Ankle forward, knee rearward	3-416 HIII 5th FTSS.046
117	4826J-92-FY	23TIBILLFXHFFOYA	Left Lower Tibia Force Y	8896.4	N	+	Ankle rightward, knee leftward	3-416 HIII 5th FTSS.047
118	4826J-92-FZ	23TIBILLFXHFFOZA	Left Lower Tibia Force Z	8896.4	N	+	Ankle downward, knee upward	3-416 HIII 5th FTSS.048
119	4826J-92-MX	23TIBILLFXHFMOMA	Left Lower Tibia Moment X	282.4	N·m	+	Ankle leftward, hold knee in place	3-416 HIII 5th FTSS.049
120	4826J-92-MY	23TIBILLFXHFMOMA	Left Lower Tibia Moment Y	282.4	N·m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.050
060324 121	PD210-4B-AK-044	23FOOTLEFXHFANXA	Left Foot Disp. X FLX102X	318	°	-	Inversion	3-416 HIII 5th FTSS.051
122	PD210-4B-AK-043	23FOOTLEFXHFANYA	Left Foot Disp. Y FLX102Y	318	°	-	Dorsiflexion	3-416 HIII 5th FTSS.052

Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
123	PD210-4B-265	23FOOTLEFXHFANZA	Left Foot Disp. Z FLX102Z	318	°	-	External rotation	3-416 HIII 5th FTSS.053
124	02I02I05-F13	23FOOTLEFXHFACXA	Left Foot Accel X	1000	g	+	Foot forward	3-416 HIII 5th FTSS.054
125	03E03E21-M10	23FOOTLEFXHFACYA	Left Foot Accel Y	1000	g	+	Foot rightward	3-416 HIII 5th FTSS.055
126	03F03E29-N16	23FOOTLEFXHFACZA	Left Foot Accel Z	1000	g	+	Foot down	3-416 HIII 5th FTSS.056
127	150-0121VL-030583	23KNSLRI00HFDSXA	Right Knee Displacement	22	mm	-	Hold femur in place, tibia rearward	3-416 HIII 5th FTSS.058
128	4825J-90-FX	23TIBIRUFXHFFOXA	Right Upper Tibia Force X	8896.4	N	+	Tibia forward, knee rearward	3-416 HIII 5th FTSS.059
129	4825J-90-FZ	23TIBIRUFXHFFOZA	Right Upper Tibia Force Z	8896.4	N	+	Tibia downward, femur upward	3-416 HIII 5th FTSS.060
130	4825J-90-MX	23TIBIRUFXHFMOMA	Right Upper Tibia Moment X	282.4	N-m	+	Ankle leftward, hold knee in place	3-416 HIII 5th FTSS.061
131	4825J-90-MY	23TIBIRUFXHFMOMA	Right Upper Tibia Moment Y	282.4	N-m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.062
132	98H10-F05	23TIBIRIFXHFFACXA	Right Tibia Accel X	1000	g	+	Tibia forward	3-416 HIII 5th FTSS.063
133	J35987	23TIBIRIFXHFFACYA	Right Tibia Accel Y	1000	g	+	Tibia right	3-416 HIII 5th FTSS.064
134	4826J-93-FX	23TIBIRLFXHFFOXA	Right Lower Tibia Force X	8896.4	N	+	Ankle forward, knee rearward	3-416 HIII 5th FTSS.065
135	4826J-93-FY	23TIBIRLFXHFFOYA	Right Lower Tibia Force Y	8896.4	N	+	Ankle rightward, knee leftward	3-416 HIII 5th FTSS.066
136	4826J-93-FZ	23TIBIRLFXHFFOZA	Right Lower Tibia Force Z	8896.4	N	+	Ankle downward, knee upward	3-416 HIII 5th FTSS.067
137	4826J-93-MX	23TIBIRLFXHFMOMA	Right Lower Tibia Moment X	282.4	N-m	+	Ankle leftward, hold knee in place	3-416 HIII 5th FTSS.068
138	4826J-93-MY	23TIBIRLFXHFMOMA	Right Lower Tibia Moment Y	282.4	N-m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.069
139	PD210-4B-AK-029	23FOOTRIFXHFFANXA	Right Foot Disp. X FLX101X	318	°	-	Eversion	3-416 HIII 5th FTSS.070
140	PD210-4B-AK-030	23FOOTRIFXHFFANYA	Right Foot Disp. Y FLX101Y	318	°	+	Dorsiflexion	3-416 HIII 5th FTSS.071
141	PD210-4B-345	23FOOTRIFXHFFANZA	Right Foot Disp. Z FLX101Z	318	°	-	Internal rotation	3-416 HIII 5th FTSS.072
142	02I02I10-N18	23FOOTRIFXHFFACXA	Right Foot Accel X	1000	g	+	Foot forward	3-416 HIII 5th FTSS.073
143	00L13-F29	23FOOTRIFXHFFACYA	Right Foot Accel Y	1000	g	+	Foot rightward	3-416 HIII 5th FTSS.074
144	01G25-N08	23FOOTRIFXHFFACZA	Right Foot Accel Z	1000	g	+	Foot down	3-416 HIII 5th FTSS.075
145	P50425	24CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
146	P49921	26CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	

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Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
147	P49889	22ENGNTPO000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
148	P49972	22ENGNB00000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	
149	P50005	23VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	-	Rearward	
150	P50423	21VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	-	Rearward	
151	P45970	22DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
152	P49923	21PEAC000000ACXA	Toe Pan Accelerator x-axis acceleration	2000	g	+	Forward	
153	P49744	21PEAC000000ACZA	Toe Pan Accelerator z-axis acceleration	2000	g	-	Upward	
154	P41306	21VEHC000001ACXA	Toe Pan footrest x-axis acceleration	2000	g	+	Forward	
155	P49743	21VEHC000001ACZA	Toe Pan footrest z-axis acceleration	2000	g	-	Upward	
156	P45620	25TUNNCY0000ACXA	Rear Tunnel center x-axis acceleration	1000	g	+	Forward	
157	P41703	20VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
158	P49746	20VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	-	Leftward	
159	P40391	20VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
160	P49579	28VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
161	P47498	28VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
162	P47477	28VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	+	Downward	
163	K1506281A	21SEBA0000B5DS0A	Driver lap belt spool D	635	mm	+	Bipolar	
164	14672	21SEBA0000B3DS0A	Driver shoulder belt spool and retraction SP14	635	mm	+	Bipolar	
165	A37490	23SEBA0000B5DS0A	RF Pass lap belt spool SP08	635	mm	+	Bipolar	
166	A60897	23SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction S3	1270	mm	+	Bipolar	
167	ABFire1	21AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND IP99	5	V	+	Bipolar	
168	ABFire2	21AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND IP30	5	V	+	Bipolar	
169	ABFire3	23AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND IP25	5	V	+	Bipolar	
170	ABFire4	23AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND IP26	5	V	+	Bipolar	

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Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
1	Trig D1	10ZERO000000EV00	Event		1 Logic	+	Bipolar	
2	J32101	11HEADCG00H3ACXA	Head Accel X	1000	g	+	Forward	1-090 HIII 50th Alderson.001
3	AJ4J6	11HEADCG00H3ACYA	Head Accel Y	1000	g	-	Leftward	1-090 HIII 50th Alderson.002
4	DW83J	11HEADCG00H3ACZA	Head Accel Z	1000	g	-	Upward	1-090 HIII 50th Alderson.003
5	98H14-K15	11HEADFR00H3ACYA	Head (FT) Accel Y	1000	g	-	Leftward	1-090 HIII 50th Alderson.004
6	03F03E29-N01	11HEADFR00H3ACZA	Head (FT) Accel Z	1000	g	-	Upward	1-090 HIII 50th Alderson.005
7	02I02I10-N04	11HEADUP00H3ACXA	Head (TP) Accel X	1000	g	+	Forward	1-090 HIII 50th Alderson.006
8	98H10-F02	11HEADUP00H3ACYA	Head (TP) Accel Y	1000	g	-	Leftward	1-090 HIII 50th Alderson.007
9	03G03F23-M09	11HEADLE00H3ACXA	Head (LT) Accel X	1000	g	+	Forward	1-090 HIII 50th Alderson.008
10	05G20-L24	11HEADLE00H3ACZA	Head (LT) Accel Z	1000	g	-	Upward	1-090 HIII 50th Alderson.009
11	1716A-810-FX	11NECKUP00H3FOXA	Neck Force X	8896.4	N	-	Head forward, chest rearward	1-090 HIII 50th Alderson.010
12	1716A-810-FY	11NECKUP00H3FOYA	Neck Force Y	8896.4	N	+	Head leftward, chest rightward	1-090 HIII 50th Alderson.011
13	1716A-810-FZ	11NECKUP00H3FOZA	Neck Force Z	13344	N	+	Head upward, chest downward	1-090 HIII 50th Alderson.012
14	1716A-810-MX	11NECKUP00H3MOXA	Neck Moment X	282	N-m	-	Right ear toward right shoulder	1-090 HIII 50th Alderson.013
15	1716A-810-MY	11NECKUP00H3MOYA	Neck Moment Y	282	N-m	+	Chin toward sternum	1-090 HIII 50th Alderson.014
16	1716A-810-MZ	11NECKUP00H3MOZA	Neck Moment Z	282	N-m	+	Chin toward left shoulder	1-090 HIII 50th Alderson.015
17	1794A-0121-FX	11NECKLO00H3FOXA	Neck Lower Force X	13344	N	-	Head forward, chest rearward	1-090 HIII 50th Alderson.016
18	1794A-0121-FY	11NECKLO00H3FOYA	Neck Lower Force Y	13344	N	+	Head leftward, chest rightward	1-090 HIII 50th Alderson.017
19	1794A-0121-FZ	11NECKLO00H3FOZA	Neck Lower Force Z	13344	N	+	Head upward, chest downward	1-090 HIII 50th Alderson.018
20	1794A-0121-MX	11NECKLO00H3MOXA	Neck Lower Moment X	452	N-m	-	Right ear toward right shoulder	1-090 HIII 50th Alderson.019
21	1794A-0121-MY	11NECKLO00H3MOYA	Neck Lower Moment Y	452	N-m	+	Chin toward sternum	1-090 HIII 50th Alderson.020
22	1794A-0121-MZ	11NECKLO00H3MOZA	Neck Lower Moment Z	452	N-m	+	Chin toward left shoulder	1-090 HIII 50th Alderson.021
23	P16155	11CHSTCG00H3ACXA	Chest Accel X	1000	g	+	Forward	1-090 HIII 50th Alderson.022
24	J27430	11CHSTCG00H3ACYA	Chest Accel Y	1000	g	-	Leftward	1-090 HIII 50th Alderson.023
25	J13739	11CHSTCG00H3ACZA	Chest Accel Z	1000	g	-	Upward	1-090 HIII 50th Alderson.024
26	B02A25-N09	11CHSTCGRDH3ACXA	Chest Accel X Red.	1000	g	-	Rearward	1-090 HIII 50th Alderson.025
27	03E03E20-N17	11CHSTCGRDH3ACYA	Chest Accel Y Red.	1000	g	-	Leftward	1-090 HIII 50th Alderson.026

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Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
28	00L13-F05	11CHSTCGRDH3ACZA	Chest Accel Z Red.	1000	g	-	Upward	1-090 HIII 50th Alderson.027
29	CST090	11CHST0000H3DSXA	Chest Deflection X	100	mm	+	Forward	1-090 HIII 50th Alderson.028
30	AGR67	11PELVCG00H3ACXA	Pelvis Accel X	600	g	-	Rearward	1-090 HIII 50th Alderson.029
31	J29023	11PELVCG00H3ACYA	Pelvis Accel Y	600	g	-	Leftward	1-090 HIII 50th Alderson.030
32	ACCT5	11PELVCG00H3ACZA	Pelvis Accel Z	600	g	-	Upward	1-090 HIII 50th Alderson.031
33	2121A-1420	11FEMRLL00H3FOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-090 HIII 50th Alderson.032
34	2121A-1421	11FEMRRL00H3FOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-090 HIII 50th Alderson.033
35	150-0121VR-13739	11KNSLLE00H3DSXA	Left Knee Displacement X	40	mm	-	Hone femur in place, tibia rearward	1-LX103-104.001
36	4353J-76-FX	11TIBILULXH3FOXA	Left Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX103-104.002
37	4353J-76-FZ	11TIBILULXH3FOZA	Left Upper Tibia Force Z	11120	N	+	Tibia downward, femur upward	1-LX103-104.003
38	4353J-76-MX	11TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX103-104.004
39	4353J-76-MY	11TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX103-104.005
40	05G20-L15	11TIBILELXH3ACXA	Left Tibia Accel X	1000	g	+	Tibia forward	1-LX103-104.006
41	05H31-Z06	11TIBILELXH3ACYA	Left Tibia Accel Y	1000	g	+	Tibia right	1-LX103-104.007
42	4929J-77-FX	11TIBILLLXH3FOXA	Left Lower Tibia Force X	11120	N	+	Ankle forward, knee rearward	1-LX103-104.008
43	4929J-77-FY	11TIBILLLXH3FOYA	Left Lower Tibia Force Y	11120	N	+	Ankle rightward, knee leftward	1-LX103-104.009
44	4929J-77-FZ	11TIBILLLXH3FOZA	Left Lower Tibia Force Z	11120	N	+	Ankle downward, knee upward	1-LX103-104.010
45	4929J-77-MX	11TIBILLLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX103-104.011
46	4929J-77-MY	11TIBILLLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX103-104.012
47	PD210-4B-118	11FOOTLELXH3ANXA	Left Foot Angular Dis. X	318	°	+	Eversion	1-LX103-104.013
48	PD210-4B-229	11FOOTLELXH3ANYA	Left Foot Angular Dis. Y	318	°	+	Dorsiflexion	1-LX103-104.014
49	PD210-4B-224	11FOOTLELXH3ANZA	Left Foot Angular Dis. Z	318	°	+	Internal rotation	1-LX103-104.015

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Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
50	05I07-Z32	11FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX103-104.016
51	05H31-Z09	11FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX103-104.017
52	98H10-F07	11FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX103-104.018
53	150-0121VL-13723	11KNSLRI00H3DSXA	Right Knee Displacement X	40	mm	-	Hold femur in place, tibia rearward	1-LX103-104.019
54	4353J-75-FX	11TIBIRULXH3FOXA	Right Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX103-104.020
55	4353J-75-FZ	11TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120	N	+	Tibia downward, femur upward	1-LX103-104.021
56	4353J-75-MX	11TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX103-104.022
57	4353J-75-MY	11TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX103-104.023
58	05H10-M16	11TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX103-104.024
59	05H31-Z02	11TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX103-104.025
60	4929J-76-FX	11TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120	N	+	Ankle forward, knee rearward	1-LX103-104.026
61	4929J-76-FY	11TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120	N	+	Ankle rightward, knee leftward	1-LX103-104.027
62	4929J-76-FZ	11TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120	N	+	Ankle downward, knee upward	1-LX103-104.028
63	4929J-76-MX	11TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX103-104.029
64	4929J-76-MY	11TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX103-104.030
65	PD210-4B-37	11FOOTRILXH3ANXA	Right Foot Angular Dis. X AK037X	165	°	+	Inversion	1-LX103-104.031
66	PD210-4B-225	11FOOTRILXH3ANYA	Right Foot Angular Dis. Y AK225Y	164	°	+	Dorsiflexion	1-LX103-104.032
67	PD210-4B-39	11FOOTRILXH3ANZA	Right Foot Angular Dis. Z AK039Z	165	°	+	External rotation	1-LX103-104.033
68	05I07-Z14	11FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Foot forward	1-LX103-104.034
69	05H25-L18	11FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Foot rightward	1-LX103-104.035
70	05I13-X01	11FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Foot down	1-LX103-104.036
71	98H13-F03	13HEADCG00HFACXA	Head Accel X	1000	g	+	Forward	3-070 HIII 5th Denton.001
72	03E03E21-M01	13HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-070 HIII 5th Denton.002
73	02I02I05-F15	13HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-070 HIII 5th Denton.003

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Channel Report Test Number 060324

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Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
74	1716AJ-1563-FX	13NECKUP00HFFOXA	Neck Force X	8896.4	N	+	Head rearward, chest forward	3-070 HIII 5th Denton.010
75	1716AJ-1563-FY	13NECKUP00HFFOYA	Neck Force Y	8896.4	N	+	Head leftward, chest rightward	3-070 HIII 5th Denton.011
76	1716AJ-1563-FZ	13NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-070 HIII 5th Denton.012
77	1716AJ-1563-MX	13NECKUP00HFMOXA	Neck Moment X	282	N·m	+	Left ear toward left shoulder	3-070 HIII 5th Denton.013
78	1716AJ-1563-MY	13NECKUP00HFMOYA	Neck Moment Y	282	N·m	+	Chin toward sternum	3-070 HIII 5th Denton.014
79	1716AJ-1563-MZ	13NECKUP00HFMOZA	Neck Moment Z	282	N·m	+	Chin toward left shoulder	3-070 HIII 5th Denton.015
80	3251-107-FX	13NECKLO00HFFOXA	Neck Lower Force X	13344	N	-	Head forward, chest rearward	3-070 HIII 5th Denton.016
81	3251-107-FY	13NECKLO00HFFOYA	Neck Lower Force Y	13344	N	+	Head leftward, chest rightward	3-070 HIII 5th Denton.017
82	3251-107-FZ	13NECKLO00HFFOZA	Neck Lower Force Z	13344	N	+	Head upward, chest downward	3-070 HIII 5th Denton.018
83	3251-107-MX	13NECKLO00HFMOXA	Neck Lower Moment X	452	N·m	-	Right ear toward right shoulder	3-070 HIII 5th Denton.019
84	3251-107-MY	13NECKLO00HFMOYA	Neck Lower Moment Y	452	N·m	+	Chin toward sternum	3-070 HIII 5th Denton.020
85	3251-107-MZ	13NECKLO00HFMOZA	Neck Lower Moment Z	339	N·m	+	Chin toward left shoulder	3-070 HIII 5th Denton.021
86	AAJY4	13CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-070 HIII 5th Denton.022
87	AKAA4	13CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-070 HIII 5th Denton.023
88	ACC63	13CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-070 HIII 5th Denton.024
89	14CB1-2897-070	13CHST0000HFDSXA	Chest Deflection X	100	mm	+	Forward	3-070 HIII 5th Denton.025
90	AGN83	13PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-070 HIII 5th Denton.026
91	J35770	13PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-070 HIII 5th Denton.027
92	J20014	13PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-070 HIII 5th Denton.028
93	IF-625-140-FZ	13FEMRLL00HFFOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	3-070 HIII 5th Denton.029
94	IF-625-141-FZ	13FEMRRL00HFFOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	3-070 HIII 5th Denton.030
95	P49647	14CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
96	P50289	16CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
97	P39852	12ENGNTPO0000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
98	P49958	12ENGNB00000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	

Channel Report Test Number 060324

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
99	P49745	13VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
100	P49733	11VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	-	Rearward	
101	P50308	12DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
102	P49674	11PEAC000000ACXA	Toe Pan Accelerator x-axis acceleration	2000	g	+	Forward	
103	P46498	11PEAC000000ACZA	Toe Pan Accelerator z-axis acceleration	2000	g	-	Upward	
104	P49711	11VEHC000001ACXA	Toe Pan footrest x-axis acceleration	2000	g	+	Forward	
105	P49356	11VEHC000001ACZA	Toe Pan footrest z-axis acceleration	2000	g	-	Upward	
106	P49766	15TUNNCY0000ACXA	Rear Tunnel center x-axis acceleration	1000	g	+	Forward	
107	P50302	10VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
108	P50279	10VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	-	Leftward	
109	P50300	10VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
110	P50417	18VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
111	P50328	18VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
112	P50281	18VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	+	Downward	
113	A23305	11SEBA0000B5DS0A	Driver lap belt spool 5S	635	mm	+	Bipolar	
114	K1506282A	11SEBA0000B3DS0A	Driver shoulder belt spool and retraction C	1270	mm	+	Bipolar	
115	A23306	13SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction	650	mm	+	Bipolar	
116	ABFire1	11AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND IP28	5	V	+	Bipolar	
117	ABFire2	11AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND IP15	5	V	+	Bipolar	
118	ABFire3	13AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND IP98	5	V	+	Bipolar	
119	ABFire4	13AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND 1018	5	V	+	Bipolar	

Command File Test Number 060324

Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
1 11HEADCG00H3ACXA	Bullet Driver Head X-Axis Acceleration	1000	+	yes	1000
2 11HEADCG00H3ACYA	Bullet Driver Head Y-Axis Acceleration	1000	+	yes	1000
3 11HEADCG00H3ACZA	Bullet Driver Head Z-Axis Acceleration	1000	+	yes	1000
3A 11HEADCG00H3ACRA	Bullet Driver Head Resultant Acceleration	1000			
4 11HEADFR00H3ACYA	Bullet Driver Head Front Y-Axis Acceleration	1000	+	yes	1000
5 11HEADFR00H3ACZA	Bullet Driver Head Front Z-Axis Acceleration	1000	+	yes	1000
6 11HEADUP00H3ACXA	Bullet Driver Head Top X-Axis Acceleration	1000	+	yes	1000
7 11HEADUP00H3ACYA	Bullet Driver Head Top Y-Axis Acceleration	1000	+	yes	1000
8 11HEADLE00H3ACXA	Bullet Driver Head Side X-Axis Acceleration	1000	+	yes	1000
9 11HEADLE00H3ACZA	Bullet Driver Head Side Z-Axis Acceleration	1000	+	yes	1000
10 11NECKUP00H3FOXA	Bullet Driver Upper Neck X-Axis Force	1000	+	yes	8896.4
11 11NECKUP00H3FOYA	Bullet Driver Upper Neck Y-Axis Force	1000	+	yes	8896.4
12 11NECKUP00H3FOZA	Bullet Driver Upper Neck Z-Axis Force	1000	+	yes	13344
13 11NECKUP00H3MOXA	Bullet Driver Upper Neck Moment About X Axis	600	+	yes	282
14 11NECKUP00H3MOYA	Bullet Driver Upper Neck Moment About Y Axis	600	+	yes	282
15 11NECKUP00H3MOZA	Bullet Driver Upper Neck Moment About Z Axis	600	+	yes	282
16 11NECKLO00H3FOXA	Bullet Driver Lower Neck X-Axis Force	1000	+	yes	13344
17 11NECKLO00H3FOYA	Bullet Driver Lower Neck Y-Axis Force	1000	+	yes	13344
18 11NECKLO00H3FOZA	Bullet Driver Lower Neck Z-Axis Force	1000	+	yes	13344
19 11NECKLO00H3MOXA	Bullet Driver Lower Neck Moment About X Axis	600	+	yes	452
20 11NECKLO00H3MOYA	Bullet Driver Lower Neck Moment About Y Axis	600	+	yes	452
21 11NECKLO00H3MOZA	Bullet Driver Lower Neck Moment About Z Axis	600	+	yes	452
22 11CHSTCG00H3ACXA	Bullet Driver Chest CG X-Axis Acceleration	180	+	yes	1000
23 11CHSTCG00H3ACYA	Bullet Driver Chest CG Y-Axis Acceleration	180	+	yes	1000
24 11CHSTCG00H3ACZA	Bullet Driver Chest CG Z-Axis Acceleration	180	+	yes	1000
24A 11CHSTCG00H3ACRA	Bullet Driver Chest CG Resultant Acceleration	180			
25 11CHSTCGRDH3ACXA	Bullet Driver Redundant Chest CG X-Axis Acceleration	180	+	yes	1000
26 11CHSTCGRDH3ACYA	Bullet Driver Redundant Chest CG Y-Axis Acceleration	180	+	yes	1000
27 11CHSTCGRDH3ACZA	Bullet Driver Redundant Chest CG Z-Axis Acceleration	180	+	yes	1000
27A 11CHSTCGRDH3ACRA	Bullet Driver Redundant Chest CG Resultant Acceleration	180			
28 11CHST0000H3DSXA	Bullet Driver Chest Displacement	600	+	yes	100

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Channel I Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
29 11PELVCG00H3ACXA	Bullet Driver Pelvis CG X-Axis Acceleration	1000	+	yes	600
30 11PELVCG00H3ACYA	Bullet Driver Pelvis CG Y-Axis Acceleration	1000	+	yes	600
31 11PELVCG00H3ACZA	Bullet Driver Pelvis CG Z-Axis Acceleration	1000	+	yes	600
31A 11PELVCG00H3ACRA	Bullet Driver Pelvis CG Resultant Acceleration	1000			
32 11FEMRL00H3FOZA	Bullet Driver Left Femur Z-Axis Force	600	+	yes	13344
33 11KNSLLE00H3DSXA	Bullet Driver Left Knee Displacement	180	+	yes	40
34 11TIBILULXH3FOXA	Bullet Driver Left Upper Tibia X-Axis Force	600	+	yes	11120
35 11TIBILULXH3FOZA	Bullet Driver Left Upper Tibia Z-Axis Force	600	+	yes	11120
36 11TIBILULXH3MOXA	Bullet Driver Left Upper Tibia Moment About X Axis	600	+	yes	395.4
37 11TIBILULXH3MOYA	Bullet Driver Left Upper Tibia Moment About Y Axis	600	+	yes	395.4
38 11TIBILELXH3ACXA	Bullet Driver Left Tibia X-Axis Acceleration	1000	+	yes	1000
39 11TIBILELXH3ACYA	Bullet Driver Left Tibia Y-Axis Acceleration	1000	+	yes	1000
40 11TIBILLXXH3FOXA	Bullet Driver Left Lower Tibia X-Axis Force	600	+	yes	11120
41 11TIBILLXXH3FOYA	Bullet Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120
42 11TIBILLXXH3FOZA	Bullet Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120
43 11TIBILLXXH3MOXA	Bullet Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
44 11TIBILLXXH3MOYA	Bullet Driver Left Lower Tibia Moment About Y Axis	600	+	yes	395.4
45 11FOOTLELXH3ANXA	Bullet Driver Left Foot X-Axis Rotation	180	+	no	318
46 11FOOTLELXH3ANYA	Bullet Driver Left Foot Y-Axis Rotation	180	+	no	318
47 11FOOTLELXH3ANZA	Bullet Driver Left Foot Z-Axis Rotation	180	+	no	318
48 11FOOTLELXH3ACXA	Bullet Driver Left Foot X-Axis Acceleration	1000	+	yes	1000
49 11FOOTLELXH3ACYA	Bullet Driver Left Foot Y-Axis Acceleration	1000	+	yes	1000
50 11FOOTLELXH3ACZA	Bullet Driver Left Foot Z-Axis Acceleration	1000	+	yes	1000
50A 11FOOTLELXH3ACRA	Bullet Driver Left Foot Resultant Acceleration	1000			
51 11FEMRRL00H3FOZA	Bullet Driver Right Femur Z-Axis Force	600	+	yes	13344
52 11KNSLR00H3DSXA	Bullet Driver Right Knee Displacement	180	+	yes	40
53 11TIBIRULXH3FOXA	Bullet Driver Right Upper Tibia X-Axis Force	600	+	yes	11120
54 11TIBIRULXH3FOZA	Bullet Driver Right Upper Tibia Z-Axis Force	600	+	yes	11120
55 11TIBIRULXH3MOXA	Bullet Driver Right Upper Tibia Moment About X Axis	600	+	yes	395.4
56 11TIBIRULXH3MOYA	Bullet Driver Right Upper Tibia Moment About Y Axis	600	+	yes	395.4
57 11TIBIRILXH3ACXA	Bullet Driver Right Tibia X-Axis Acceleration	1000	+	yes	1000

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Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
58 11TIBIRILXH3ACYA	Bullet Driver Right Tibia Y-Axis Acceleration	1000	+	yes	1000
59 11TIBIRLLXH3FOXA	Bullet Driver Right Lower Tibia X-Axis Force	600	+	yes	11120
60 11TIBIRLLXH3FOYA	Bullet Driver Right Lower Tibia Y-Axis Force	600	+	yes	11120
61 11TIBIRLLXH3FOZA	Bullet Driver Right Lower Tibia Z-Axis Force	600	+	yes	11120
62 11TIBIRLLXH3MOXA	Bullet Driver Right Lower Tibia Moment About X Axis	600	+	yes	395.4
63 11TIBIRLLXH3MOYA	Bullet Driver Right Lower Tibia Moment About Y Axis	600	+	yes	395.4
64 11FOOTRILXH3ANXA	Bullet Driver Right Foot X-Axis Rotation	180	+	no	165
65 11FOOTRILXH3ANYA	Bullet Driver Right Foot Y-Axis Rotation	180	+	no	164
66 11FOOTRILXH3ANZA	Bullet Driver Right Foot Z-Axis Rotation	180	+	no	165
67 11FOOTRILXH3ACXA	Bullet Driver Right Foot X-Axis Acceleration	1000	+	yes	1000
68 11FOOTRILXH3ACYA	Bullet Driver Right Foot Y-Axis Acceleration	1000	+	yes	1000
69 11FOOTRILXH3ACZA	Bullet Driver Right Foot Z-Axis Acceleration	1000	+	yes	1000
69A 11FOOTRILXH3ACRA	Bullet Driver Right Foot Resultant Acceleration	1000			
70 13HEADCG00HFACXA	Bullet Passenger Head CG X-Axis Acceleration	1000	+	yes	1000
71 13HEADCG00HFACYA	Bullet Passenger Head CG Y-Axis Acceleration	1000	+	yes	1000
72 13HEADCG00HFACZA	Bullet Passenger Head CG Z-Axis Acceleration	1000	+	yes	1000
72A 13HEADCG00HFACRA	Bullet Passenger Head CG Resultant Acceleration	1000			
73 13NECKUP00HFFOXA	Bullet Passenger Upper Neck X-Axis Force	1000	+	yes	8896.4
74 13NECKUP00HFFOYA	Bullet Passenger Upper Neck Y-Axis Force	1000	+	yes	8896.4
75 13NECKUP00HFFOZA	Bullet Passenger Upper Neck Z-Axis Force	1000	+	yes	13344
76 13NECKUP00HFMOXA	Bullet Passenger Upper Neck Moment About X Axis	600	+	yes	282
77 13NECKUP00HFMOYA	Bullet Passenger Upper Neck Moment About Y Axis	600	+	yes	282
78 13NECKUP00HFMOZA	Bullet Passenger Upper Neck Moment About Z Axis	600	+	yes	282
79 13NECKLO00HFFOXA	Bullet Passenger Lower Neck X-Axis Force	1000	+	yes	13344
80 13NECKLO00HFFOYA	Bullet Passenger Lower Neck Y-Axis Force	1000	+	yes	13344
81 13NECKLO00HFFOZA	Bullet Passenger Lower Neck Z-Axis Force	1000	+	yes	13344
82 13NECKLO00HFMOXA	Bullet Passenger Lower Neck Moment About X Axis	600	+	yes	452
83 13NECKLO00HFMOYA	Bullet Passenger Lower Neck Moment About Y Axis	600	+	yes	452
84 13NECKLO00HFMOZA	Bullet Passenger Lower Neck Moment About Z Axis	600	+	yes	339
85 13CHSTCG00HFACXA	Bullet Passenger Chest CG X-Axis Acceleration	180	+	yes	1000
86 13CHSTCG00HFACYA	Bullet Passenger Chest CG Y-Axis Acceleration	180	+	yes	1000

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Channel I Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
87 13CHSTCG00HFACZA	Bullet Passenger Chest CG Z-Axis Acceleration	180	+	yes	1000
87A 13CHSTCG00HFACRA	Bullet Passenger Chest CG Resultant Acceleration	180			
88 13CHST0000HFDSXA	Bullet Passenger Chest Displacement	600	+	yes	100
89 13PELVCG00HFACXA	Bullet Passenger Pelvis CG X-Axis Acceleration	1000	+	yes	1000
90 13PELVCG00HFACYA	Bullet Passenger Pelvis CG Y-Axis Acceleration	1000	+	yes	1000
91 13PELVCG00HFACZA	Bullet Passenger Pelvis CG Z-Axis Acceleration	1000	+	yes	1000
91A 13PELVCG00HFACRA	Bullet Passenger Pelvis CG Resultant Acceleration	1000			
92 13FEMRLL00HFFOZA	Bullet Passenger Left Femur Z-Axis Force	600	+	yes	13344
93 13FEMRRL00HFFOZA	Bullet Passenger Right Femur Z-Axis Force	600	+	yes	13344
94 14CRME000000ACXA	Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
95 16CRME000000ACXA	Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
96 12ENGNTPO0000ACXA	Bullet Vehicle Top of Engine X-Axis Acceleration	60	+	yes	2000
97 12ENGNB00000ACXA	Bullet Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000
98 13VEHCRI0000ACXA	Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
99 11VEHCLE0000ACXA	Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
100 11PEAC000000ACXA	Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration	60	+	yes	2000
101 11PEAC000000ACZA	Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration	60	+	yes	2000
102 11VEHC000001ACXA	Bullet Vehicle Toe Pan Footrest X-Axis Acceleration	60	+	yes	2000
103 11VEHC000001ACZA	Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration	60	+	yes	2000
104 15TUNNCY0000ACXA	Bullet Vehicle Rear Tunnel Center X-Axis Acceleration	60	+	yes	1000
105 10VEHCCG0000ACXA	Bullet Vehicle CG X-Axis Acceleration	60	+	yes	1500
105A 10VEHCCG0000VEXA	Bullet Vehicle CG X-Axis Velocity	180			
105B 10VEHCCG0000DCXA	Bullet Vehicle CG X-Axis Displacement	180			
106 10VEHCCG0000ACYA	Bullet Vehicle CG Y-Axis Acceleration	60	+	yes	1500
106A 10VEHCCG0000VEYA	Bullet Vehicle CG Y-Axis Velocity	180			
106B 10VEHCCG0000DCYA	Bullet Vehicle CG Y-Axis Displacement	180			
107 10VEHCCG0000ACZA	Bullet Vehicle CG Z-Axis Acceleration	60	+	yes	1500
107A 10VEHCCG0000VEZA	Bullet Vehicle CG Z-Axis Velocity	180			
107B 10VEHCCG0000DCZA	Bullet Vehicle CG Z-Axis Displacement	180			
107C 10VEHCCG0000ACRA	Bullet Vehicle CG Resultant Acceleration	60			
108 18VEHC000000ACXA	Bullet Vehicle Rear Deck X-Axis Acceleration	60	+	yes	1000

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Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
109 18VEHC000000ACYA	Bullet Vehicle Rear Deck Y-Axis Acceleration	60	+	yes	1000
110 18VEHC000000ACZA	Bullet Vehicle Rear Deck Z-Axis Acceleration	60	+	yes	1000
110A 18VEHC000000ACRA	Bullet Vehicle Rear Deck Resultant Acceleration	60			
111 11AIRBFR0100EV0A	Bullet Vehicle Driver Airbag - Primary	1000	+	no	5
112 11AIRBFR0200EV0A	Bullet Vehicle Driver Airbag - Secondary	1000	+	no	5
113 13AIRBFR0100EV0A	Bullet Vehicle Passenger Airbag - Primary	1000	+	no	5
114 13AIRBFR0200EV0A	Bullet Vehicle Passenger Airbag - Secondary	1000	+	no	5
115 11SEBA0000B5DS0A	Bullet Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	635
116 11SEBA0000B3DS0A	Bullet Vehicle RF Passenger Lap Belt Spool	1000	+	yes	1270
117 13SEBA0000B3DS0A	Bullet Vehicle RF Passenger Shoulder Belt Spool and Retraction	1000	+	yes	650
118 12DASH000000ACXA	Bullet Vehicle IP Center	60	+	yes	1500
119 21HEADCG00H3ACXA	Target Driver Head X-Axis Acceleration	1000	+	yes	1000
120 21HEADCG00H3ACYA	Target Driver Head Y-Axis Acceleration	1000	+	yes	1000
121 21HEADCG00H3ACZA	Target Driver Head Z-Axis Acceleration	1000	+	yes	1000
121A 21HEADCG00H3ACRA	Target Driver Head Resultant Acceleration	1000			
122 21HEADFR00H3ACYA	Target Driver Head Front Y-Axis Acceleration	1000	+	yes	1000
123 21HEADFR00H3ACZA	Target Driver Head Front Z-Axis Acceleration	1000	+	yes	1000
124 21HEADUP00H3ACXA	Target Driver Head Top X-Axis Acceleration	1000	+	yes	1000
125 21HEADUP00H3ACYA	Target Driver Head Top Y-Axis Acceleration	1000	+	yes	1000
126 21HEADLE00H3ACXA	Target Driver Head Side X-Axis Acceleration	1000	+	yes	1000
127 21HEADLE00H3ACZA	Target Driver Head Side Z-Axis Acceleration	1000	+	yes	1000
128 21NECKUP00H3FOXA	Target Driver Upper Neck X-Axis Force	1000	+	yes	8896.4
129 21NECKUP00H3FOYA	Target Driver Upper Neck Y-Axis Force	1000	+	yes	8896.4
130 21NECKUP00H3FOZA	Target Driver Upper Neck Z-Axis Force	1000	+	yes	13344
131 21NECKUP00H3MOXA	Target Driver Upper Neck Moment About X Axis	600	+	yes	282
132 21NECKUP00H3MOYA	Target Driver Upper Neck Moment About Y Axis	600	+	yes	282
133 21NECKUP00H3MOZA	Target Driver Upper Neck Moment About Z Axis	600	+	yes	282
134 21NECKLO00H3FOXA	Target Driver Lower Neck X-Axis Force	1000	+	yes	13344
135 21NECKLO00H3FOYA	Target Driver Lower Neck Y-Axis Force	1000	+	yes	13344
136 21NECKLO00H3FOZA	Target Driver Lower Neck Z-Axis Force	1000	+	yes	13344
137 21NECKLO00H3MOXA	Target Driver Lower Neck Moment About X Axis	600	+	yes	452

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Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
138 21NECKLO00H3MOYA	Target Driver Lower Neck Moment About Y Axis	600	+	yes	452
139 21NECKLO00H3MOZA	Target Driver Lower Neck Moment About Z Axis	600	+	yes	452
140 21CHSTCG00H3ACXA	Target Driver Chest CG X-Axis Acceleration	180	+	yes	1000
141 21CHSTCG00H3ACYA	Target Driver Chest CG Y-Axis Acceleration	180	+	yes	1000
142 21CHSTCG00H3ACZA	Target Driver Chest CG Z-Axis Acceleration	180	+	yes	1000
142A 21CHSTCG00H3ACRA	Target Driver Chest CG Resultant Acceleration	180			
143 21CHSTCGRDH3ACXA	Target Driver Redundant Chest CG X-Axis Acceleration	180	+	yes	1000
144 21CHSTCGRDH3ACYA	Target Driver Redundant Chest CG Y-Axis Acceleration	180	+	yes	1000
145 21CHSTCGRDH3ACZA	Target Driver Redundant Chest CG Z-Axis Acceleration	180	+	yes	1000
145A 21CHSTCGRDH3ACRA	Target Driver Redundant Chest CG Resultant Acceleration	180			
146 21CHST0000H3DSXA	Target Driver Chest Displacement	600	+	yes	100
147 21PELVCG00H3ACXA	Target Driver Pelvis CG X-Axis Acceleration	1000	+	yes	600
148 21PELVCG00H3ACYA	Target Driver Pelvis CG Y-Axis Acceleration	1000	+	yes	600
149 21PELVCG00H3ACZA	Target Driver Pelvis CG Z-Axis Acceleration	1000	+	yes	600
149A 21PELVCG00H3ACRA	Target Driver Pelvis CG Resultant Acceleration	1000			
150 21FEMRLLO0H3FOZA	Target Driver Left Femur Z-Axis Force	600	+	yes	13344
151 21KNSLLE00H3DSXA	Target Driver Left Knee Displacement	180	+	yes	21.1
152 21TIBILULXH3FOXA	Target Driver Left Upper Tibia X-Axis Force	600	+	yes	11120
153 21TIBILULXH3FOZA	Target Driver Left Upper Tibia Z-Axis Force	600	+	yes	11120
154 21TIBILULXH3MOXA	Target Driver Left Upper Tibia Moment About X Axis	600	+	yes	395.4
155 21TIBILULXH3MOYA	Target Driver Left Upper Tibia Moment About Y Axis	600	+	yes	395.4
156 21TIBILELXH3ACXA	Target Driver Left Tibia X-Axis Acceleration	1000	+	yes	1000
157 21TIBILELXH3ACYA	Target Driver Left Tibia Y-Axis Acceleration	1000	+	yes	1000
158 21TIBILLLXH3FOXA	Target Driver Left Lower Tibia X-Axis Force	600	+	yes	11120
159 21TIBILLLXH3FOYA	Target Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120
160 21TIBILLLXH3FOZA	Target Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120
161 21TIBILLLXH3MOXA	Target Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
162 21TIBILLLXH3MOYA	Target Driver Left Lower Tibia Moment About Y Axis	600	+	yes	395.4
163 21FOOTLELXH3ANXA	Target Driver Left Foot X-Axis Rotation	180	+	no	165
164 21FOOTLELXH3ANYA	Target Driver Left Foot Y-Axis Rotation	180	+	no	165
165 21FOOTLELXH3ANZA	Target Driver Left Foot Z-Axis Rotation	180	+	no	165

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Channel I Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
166 21FOOTLELXH3ACXA	Target Driver Left Foot X-Axis Acceleration	1000	+	yes	1000
167 21FOOTLELXH3ACYA	Target Driver Left Foot Y-Axis Acceleration	1000	+	yes	1000
168 21FOOTLELXH3ACZA	Target Driver Left Foot Z-Axis Acceleration	1000	+	yes	1000
168A 21FOOTLELXH3ACRA	Target Driver Left Foot Resultant Acceleration	1000			
169 21FEMRRRL00H3FOZA	Target Driver Right Femur Z-Axis Force	600	+	yes	13344
170 21KNSLRIO0H3DSXA	Target Driver Right Knee Displacement	180	+	yes	21.8
171 21TIBIRULXH3FOXA	Target Driver Right Upper Tibia X-Axis Force	600	+	yes	11120
172 21TIBIRULXH3FOZA	Target Driver Right Upper Tibia Z-Axis Force	600	+	yes	11120
173 21TIBIRULXH3MOXA	Target Driver Right Upper Tibia Moment About X Axis	600	+	yes	395.4
174 21TIBIRULXH3MOYA	Target Driver Right Upper Tibia Moment About Y Axis	600	+	yes	395.4
175 21TIBIRILXH3ACXA	Target Driver Right Tibia X-Axis Acceleration	1000	+	yes	1000
176 21TIBIRILXH3ACYA	Target Driver Right Tibia Y-Axis Acceleration	1000	+	yes	1000
177 21TIBIRLLXH3FOXA	Target Driver Right Lower Tibia X-Axis Force	600	+	yes	11120
178 21TIBIRLLXH3FOYA	Target Driver Right Lower Tibia Y-Axis Force	600	+	yes	11120
179 21TIBIRLLXH3FOZA	Target Driver Right Lower Tibia Z-Axis Force	600	+	yes	11120
180 21TIBIRLLXH3MOXA	Target Driver Right Lower Tibia Moment About X Axis	600	+	yes	395.4
181 21TIBIRLLXH3MOYA	Target Driver Right Lower Tibia Moment About Y Axis	600	+	yes	395.4
182 21FOOTRILXH3ANXA	Target Driver Right Foot X-Axis Rotation	180	+	no	164
183 21FOOTRILXH3ANYA	Target Driver Right Foot Y-Axis Rotation	180	+	no	165
184 21FOOTRILXH3ANZA	Target Driver Right Foot Z-Axis Rotation	180	+	no	165
185 21FOOTRILXH3ACXA	Target Driver Right Foot X-Axis Acceleration	1000	+	yes	1000
186 21FOOTRILXH3ACYA	Target Driver Right Foot Y-Axis Acceleration	1000	+	yes	1000
187 21FOOTRILXH3ACZA	Target Driver Right Foot Z-Axis Acceleration	1000	+	yes	1000
187A 21FOOTRILXH3ACRA	Target Driver Right Foot Resultant Acceleration	1000			
188 23HEADCG00HFACXA	Target Passenger Head CG X-Axis Acceleration	1000	+	yes	1000
189 23HEADCG00HFACYA	Target Passenger Head CG Y-Axis Acceleration	1000	+	yes	1000
190 23HEADCG00HFACZA	Target Passenger Head CG Z-Axis Acceleration	1000	+	yes	1000
190A 23HEADCG00HFACRA	Target Passenger Head CG Resultant Acceleration	1000			
191 23HEADCGRDHFACXA	Target Passenger Redundant Head CG X-Axis Acceleration	1000	+	yes	1000
192 23HEADCGRDHFACYA	Target Passenger Redundant Head CG Y-Axis Acceleration	1000	+	yes	1000
193 23HEADCGRDHFACZA	Target Passenger Redundant Head CG Z-Axis Acceleration	1000	+	yes	1000

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Channel I Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
193A 23HEADCGRDHFACRA	Target Passenger Redundant Head CG Resultant Acceleration	1000			
194 23HEADFR00HFACYA	Target Passenger Head Front Y-Axis Acceleration	1000	+	yes	1000
195 23HEADFR00HFACZA	Target Passenger Head Front Z-Axis Acceleration	1000	+	yes	1000
196 23HEADUP00HFACXA	Target Passenger Head Top X-Axis Acceleration	1000	+	yes	1000
197 23HEADUP00HFACYA	Target Passenger Head Top Y-Axis Acceleration	1000	+	yes	1000
198 23HEADLE00HFACXA	Target Passenger Head Side X-Axis Acceleration	1000	+	yes	1000
199 23HEADLE00HFACZA	Target Passenger Head Side Z-Axis Acceleration	1000	+	yes	1000
200 23NECKUP00HFFOXA	Target Passenger Upper Neck X-Axis Force	1000	+	yes	8896
201 23NECKUP00HFFOYA	Target Passenger Upper Neck Y-Axis Force	1000	+	yes	8896
202 23NECKUP00HFFOZA	Target Passenger Upper Neck Z-Axis Force	1000	+	yes	13344
203 23NECKUP00HFMOXA	Target Passenger Upper Neck Moment About X Axis	600	+	yes	282
204 23NECKUP00HFMOYA	Target Passenger Upper Neck Moment About Y Axis	600	+	yes	282
205 23NECKUP00HFMOZA	Target Passenger Upper Neck Moment About Z Axis	600	+	yes	282
206 23NECKLO00HFFOXA	Target Passenger Lower Neck X-Axis Force	1000	+	yes	13344
207 23NECKLO00HFFOYA	Target Passenger Lower Neck Y-Axis Force	1000	+	yes	13344
208 23NECKLO00HFFOZA	Target Passenger Lower Neck Z-Axis Force	1000	+	yes	13344
209 23NECKLO00HFMOXA	Target Passenger Lower Neck Moment About X Axis	600	+	yes	452
210 23NECKLO00HFMOYA	Target Passenger Lower Neck Moment About Y Axis	600	+	yes	452
211 23NECKLO00HFMOZA	Target Passenger Lower Neck Moment About Z Axis	600	+	yes	338.95
212 23CHSTCG00HFACXA	Target Passenger Chest CG X-Axis Acceleration	180	+	yes	1000
213 23CHSTCG00HFACYA	Target Passenger Chest CG Y-Axis Acceleration	180	+	yes	1000
214 23CHSTCG00HFACZA	Target Passenger Chest CG Z-Axis Acceleration	180	+	yes	1000
214A 23CHSTCG00HFACRA	Target Passenger Chest CG Resultant Acceleration	180			
215 23CHSTCGRDHFACXA	Target Passenger Redundant Chest CG X-Axis Acceleration	180	+	yes	1000
216 23CHSTCGRDHFACYA	Target Passenger Redundant Chest CG Y-Axis Acceleration	180	+	yes	1000
217 23CHSTCGRDHFACZA	Target Passenger Redundant Chest CG Z-Axis Acceleration	180	+	yes	1000
217A 23CHSTCGRDHFACRA	Target Passenger Redundant Chest CG Resultant Acceleration	180			
218 23CHST0000HFDSXA	Target Passenger Chest Displacement	600	+	yes	100
219 23STRNUP00HFACXA	Target Passenger Sternum Upper X-Axis Acceleration	1000	+	yes	1000
220 23STRNMI00HFACXA	Target Passenger Sternum Mid X-Axis Acceleration	1000	+	yes	1000
221 23STRNLO00HFACXA	Target Passenger Sternum Lower X-Axis Acceleration	1000	+	yes	1000

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Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
222 23PELVCG00HFACXA	Target Passenger Pelvis CG X-Axis Acceleration	1000	+	yes	1000
223 23PELVCG00HFACYA	Target Passenger Pelvis CG Y-Axis Acceleration	1000	+	yes	1000
224 23PELVCG00HFACZA	Target Passenger Pelvis CG Z-Axis Acceleration	1000	+	yes	1000
224A 23PELVCG00HFACRA	Target Passenger Pelvis CG Resultant Acceleration	1000			
225 23FEMRLL00HFFOZA	Target Passenger Left Femur Z-Axis Force	600	+	yes	13344
226 23KNSLLE00HFDSXA	Target Passenger Left Knee Displacement	180	+	yes	40
227 23TIBILUFXHFFOXA	Target Passenger Left Upper Tibia X-Axis Force	600	+	yes	8896
228 23TIBILUFXHFFOZA	Target Passenger Left Upper Tibia Z-Axis Force	600	+	yes	8896
229 23TIBILUFXHFMOXA	Target Passenger Left Upper Tibia Moment About X Axis	600	+	yes	282.4
230 23TIBILUFXHFMOYA	Target Passenger Left Upper Tibia Moment About Y Axis	600	+	yes	282.4
231 23TIBILEFXHFACXA	Target Passenger Left Tibia X-Axis Acceleration	1000	+	yes	1000
232 23TIBILEFXHFACYA	Target Passenger Left Tibia Y-Axis Acceleration	1000	+	yes	1000
233 23TIBILLFXHFFOXA	Target Passenger Left Lower Tibia X-Axis Force	600	+	yes	8896.4
234 23TIBILLFXHFFOYA	Target Passenger Left Lower Tibia Y-Axis Force	600	+	yes	8896.4
235 23TIBILLFXHFFOZA	Target Passenger Left Lower Tibia Z-Axis Force	600	+	yes	8896.4
236 23TIBILLFXHFMOXA	Target Passenger Left Lower Tibia Moment About X Axis	600	+	yes	282.4
237 23TIBILLFXHFMOYA	Target Passenger Left Lower Tibia Moment About Y Axis	600	+	yes	282.4
238 23FOOTLEFXHFANXA	Target Passenger Left Foot X-Axis Rotation	180	+	no	318
239 23FOOTLEFXHFANYA	Target Passenger Left Foot Y-Axis Rotation	180	+	no	318
240 23FOOTLEFXHFANZA	Target Passenger Left Foot Z-Axis Rotation	180	+	no	318
241 23FOOTLEFXHFACXA	Target Passenger Left Foot X-Axis Acceleration	1000	+	yes	1000
242 23FOOTLEFXHFACYA	Target Passenger Left Foot Y-Axis Acceleration	1000	+	yes	1000
243 23FOOTLEFXHFACZA	Target Passenger Left Foot Z-Axis Acceleration	1000	+	yes	1000
243A 23FOOTLEFXHFACRA	Target Passenger Left Foot Resultant Acceleration	1000			
244 23FEMRRL00HFFOZA	Target Passenger Right Femur Z-Axis Force	600	+	yes	13344
245 23KNSLRIO0HFDSXA	Target Passenger Right Knee Displacement	180	+	yes	22
246 23TIBIRUFXHFFOXA	Target Passenger Right Upper Tibia X-Axis Force	600	+	yes	8896.4
247 23TIBIRUFXHFFOZA	Target Passenger Right Upper Tibia Z-Axis Force	600	+	yes	8896.4
248 23TIBIRUFXHFMOXA	Target Passenger Right Upper Tibia Moment About X Axis	600	+	yes	282.4
249 23TIBIRUFXHFMOYA	Target Passenger Right Upper Tibia Moment About Y Axis	600	+	yes	282.4
250 23TIBIRIFXHACXA	Target Passenger Right Tibia X-Axis Acceleration	1000	+	yes	1000

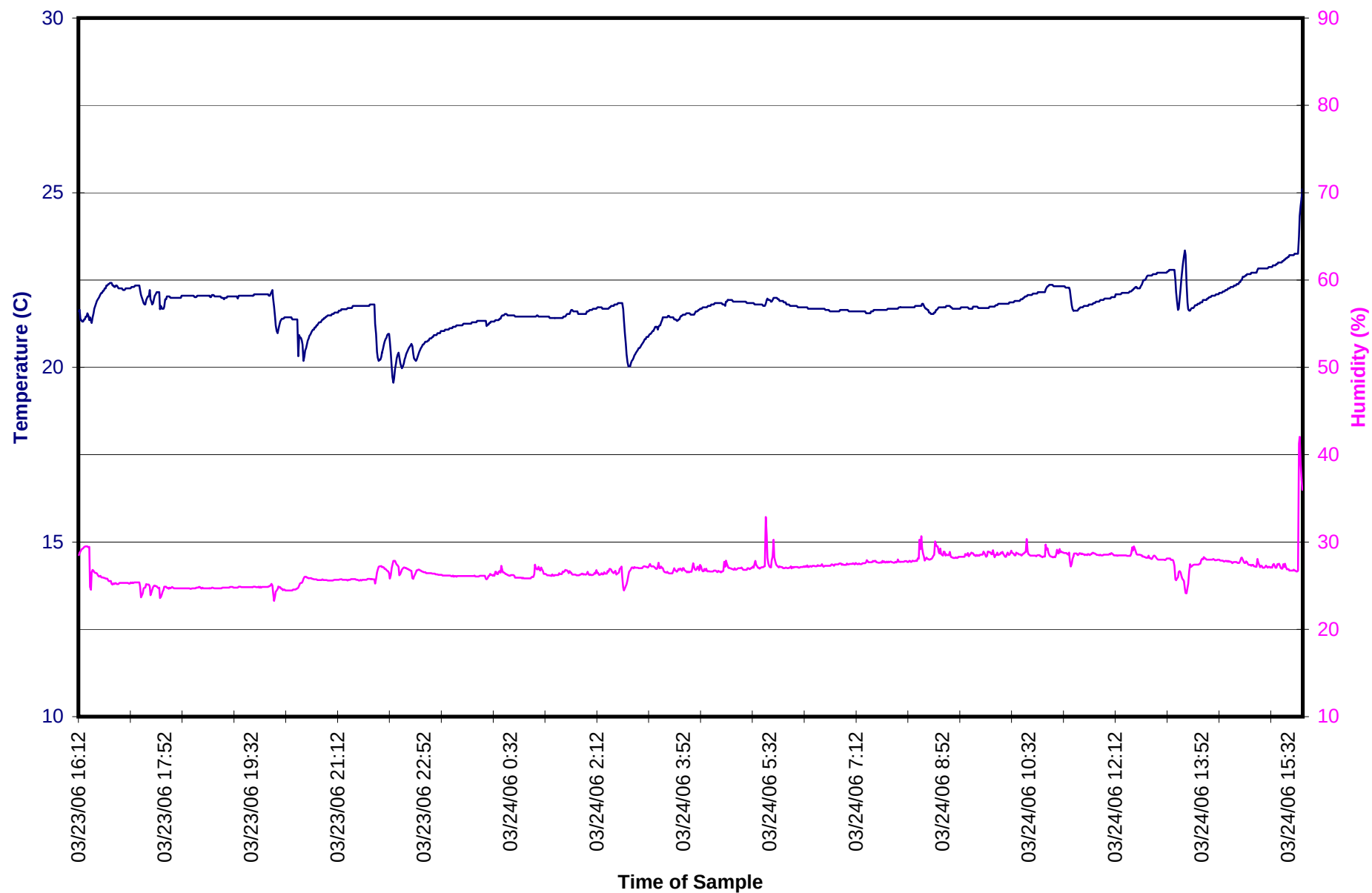
Command File Test Number 060324

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251 23TIBIRIFXHFACYA	Target Passenger Right Tibia Y-Axis Acceleration	1000	+	yes	1000
252 23TIBIRLFXHFFOXA	Target Passenger Right Lower Tibia X-Axis Force	600	+	yes	8896.4
253 23TIBIRLFXHFFOYA	Target Passenger Right Lower Tibia Y-Axis Force	600	+	yes	8896.4
254 23TIBIRLFXHFFOZA	Target Passenger Right Lower Tibia Z-Axis Force	600	+	yes	8896.4
255 23TIBIRLFXHFMOXA	Target Passenger Right Lower Tibia Moment About X Axis	600	+	yes	282.4
256 23TIBIRLFXHFMOYA	Target Passenger Right Lower Tibia Moment About Y Axis	600	+	yes	282.4
257 23FOOTRIFXHFANXA	Target Passenger Right Foot X-Axis Rotation	180	+	no	318
258 23FOOTRIFXHFANYA	Target Passenger Right Foot Y-Axis Rotation	180	+	no	318
259 23FOOTRIFXHFANZA	Target Passenger Right Foot Z-Axis Rotation	180	+	no	318
260 23FOOTRIFXHFACXA	Target Passenger Right Foot X-Axis Acceleration	1000	+	yes	1000
261 23FOOTRIFXHFACYA	Target Passenger Right Foot Y-Axis Acceleration	1000	+	yes	1000
262 23FOOTRIFXHFACZA	Target Passenger Right Foot Z-Axis Acceleration	1000	+	yes	1000
262A 23FOOTRIFXHFACRA	Target Passenger Right Foot Resultant Acceleration	1000			
263 24CRME000000ACXA	Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
264 26CRME000000ACXA	Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration	60	+	yes	1000
265 22ENGNTPO0000ACXA	Target Vehicle Top of Engine X-Axis Acceleration	60	+	yes	2000
266 22ENGNB00000ACXA	Target Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000
267 23VEHCRI0000ACXA	Target Vehicle Right Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
268 21VEHCLE0000ACXA	Target Vehicle Left Front Brake Caliper X-Axis Acceleration	60	+	yes	2000
269 21PEAC000000ACXA	Target Vehicle Toe Pan Accelerator X-Axis Acceleration	60	+	yes	2000
270 21PEAC000000ACZA	Target Vehicle Toe Pan Accelerator Z-Axis Acceleration	60	+	yes	2000
271 21VEHC000001ACXA	Target Vehicle Toe Pan Footrest X-Axis Acceleration	60	+	yes	2000
272 21VEHC000001ACZA	Target Vehicle Toe Pan Footrest Z-Axis Acceleration	60	+	yes	2000
273 25TUNNCY0000ACXA	Target Vehicle Rear Tunnel Center X-Axis Acceleration	60	+	yes	1000
274 20VEHCCG0000ACXA	Target Vehicle CG X-Axis Acceleration	60	+	yes	1500
274A 20VEHCCG0000VEXA	Target Vehicle CG X-Axis Velocity	180			
274B 20VEHCCG0000DCXA	Target Vehicle CG X-Axis Displacement	180			
275 20VEHCCG0000ACYA	Target Vehicle CG Y-Axis Acceleration	60	+	yes	1500
275A 20VEHCCG0000VEYA	Target Vehicle CG Y-Axis Velocity	180			
275B 20VEHCCG0000DCYA	Target Vehicle CG Y-Axis Displacement	180			
276 20VEHCCG0000ACZA	Target Vehicle CG Z-Axis Acceleration	60	+	yes	1500

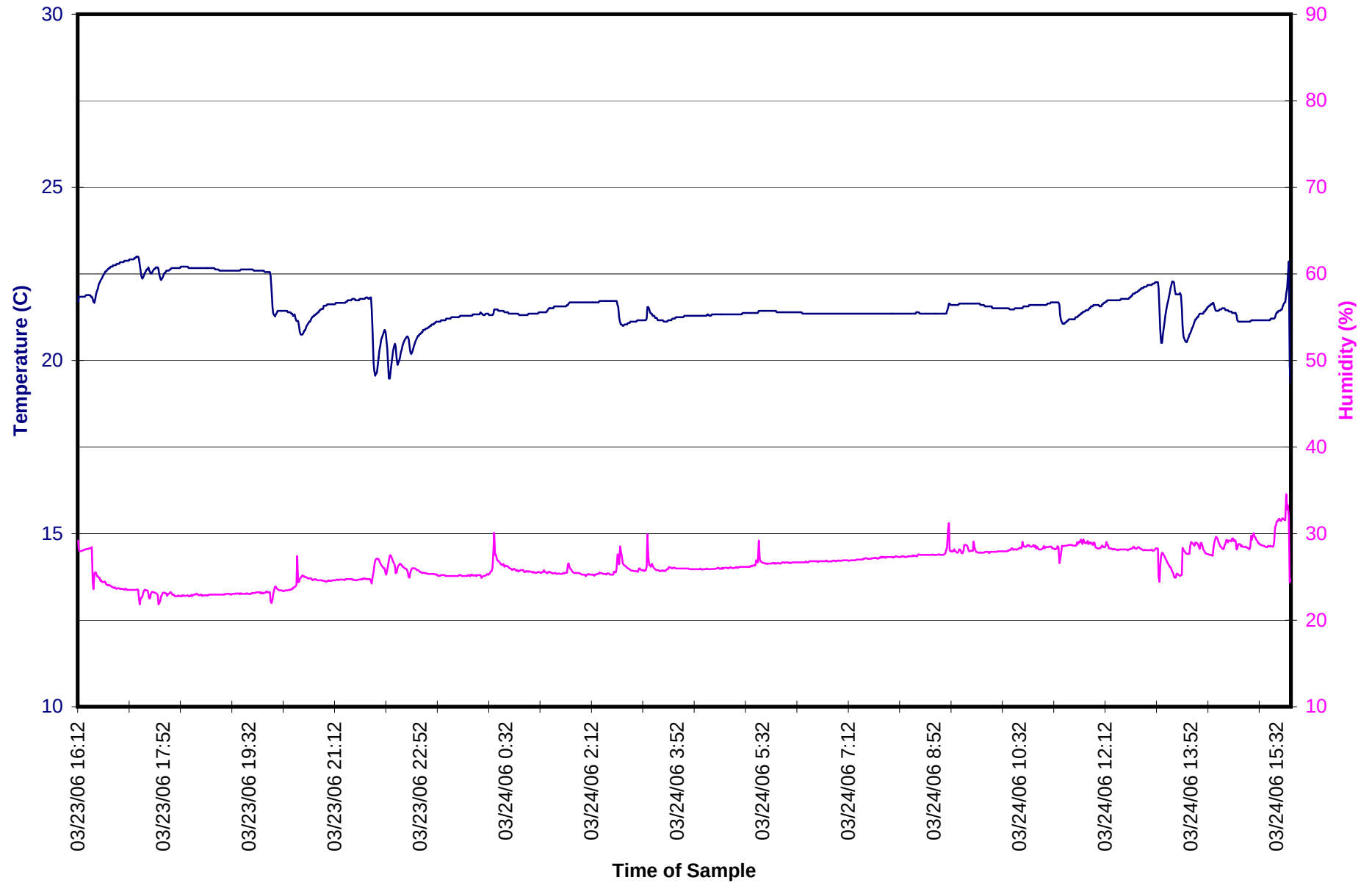
Command File Test Number 060324

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276A 20VEHCCG0000VEZA	Target Vehicle CG Z-Axis Velocity	180			
276B 20VEHCCG0000DCZA	Target Vehicle CG Z-Axis Displacement	180			
276C 20VEHCCG0000ACRA	Target Vehicle CG Resultant Acceleration	60			
277 28VEHC000000ACXA	Target Vehicle Rear Deck X-Axis Acceleration	60	+	yes	1000
278 28VEHC000000ACYA	Target Vehicle Rear Deck Y-Axis Acceleration	60	+	yes	1000
279 28VEHC000000ACZA	Target Vehicle Rear Deck Z-Axis Acceleration	60	+	yes	1000
279A 28VEHC000000ACRA	Target Vehicle Rear Deck Resultant Acceleration	60			
280 21AIRBFR0100EV0A	Target Vehicle Driver Airbag - Primary	1000	+	no	5
281 21AIRBFR0200EV0A	Target Vehicle Driver Airbag - Secondary	1000	+	no	5
282 23AIRBFR0100EV0A	Target Vehicle Passenger Airbag - Primary	1000	+	no	5
283 23AIRBFR0200EV0A	Target Vehicle Passenger Airbag - Secondary	1000	+	no	5
284 21SEBA0000B5DS0A	Target Vehicle Driver Lap Belt Spool	1000	+	yes	635
285 21SEBA0000B3DS0A	Target Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	635
286 23SEBA0000B5DS0A	Target Vehicle RF Pass Lap Belt Spool	1000	+	yes	635
287 23SEBA0000B3DS0A	Target Vehicle RF Pass Shoulder Belt Spool and Retraction	1000	+	yes	1270
288 22DASH000000ACXA	Target Vehicle IP Center	60	+	yes	1500

FULL FRONTAL COLLINEAR 2002 FORD FOCUS



FULL FRONTAL COLLINEAR 2006 HONDA RIDGELINE



Appendix E

INSIA Report on Structural Measurements



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

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March, 1999

REPORT DOCUMENTATION PAGE	
Title:	<i>STRUCTURAL SURVEY OF CARS. MEASUREMENT METHODOLOGY OF THE MAIN RESISTANT ELEMENTS IN THE CAR BODY</i>
Author(s):	Aparicio Izquierdo, Francisco Páez Ayuso, Francisco Javier
Performing Organisation name and address:	INSIA – University Institute for Automobile Research Carretera de Valencia, Km. 7 – Campus Sur de la Universidad Politécnica de Madrid 28031 – Madrid – Spain
Supplementary notes:	Under contract to: THE EUROPEAN COMMUNITY Project: “Improvement of Crash Compatibility between Cars” Contract N°: RO – 97 – SC.1064
Abstract:	The main aim of this working package -<i>Structural Survey of Cars</i>- is the reduction of incompatibilities, both structural and geometric, between passenger vehicles and their potential collision partners. The understanding of these incompatibilities needs a previous step for the knowledge of the existing car fleet. Firstly, it is necessary to select the main resistant elements in the car body. These elements have to be chosen from the point of view of the sort of collision that we want to study, that is to say, frontal and side impacts. Detailed measurements have been taken from exterior and interior elements, spread to a total number of 74 models selected from the main vehicle manufacturers at Spain. All of them are being sold this year. Using the information available from the previous measurements in vehicles, the geometric characteristics of the main resistant elements involved in the geometric compatibility between cars will be defined. This report shows the methodology followed to get these measurements.
Subject terms:	Crash compatibility, geometric compatibility, resistant elements, measure methodology
Date:	March, 1999

1.- METHODOLOGY.

Detailed measurements have been taken from exterior and interior elements. Using the information available from the previous measurements in vehicles, the geometric characteristics of the main resistant elements involved in the geometric compatibility between cars have been defined. These elements are presented in the following figures, and have been divided in two main groups according to the vehicle zones studied in this project.

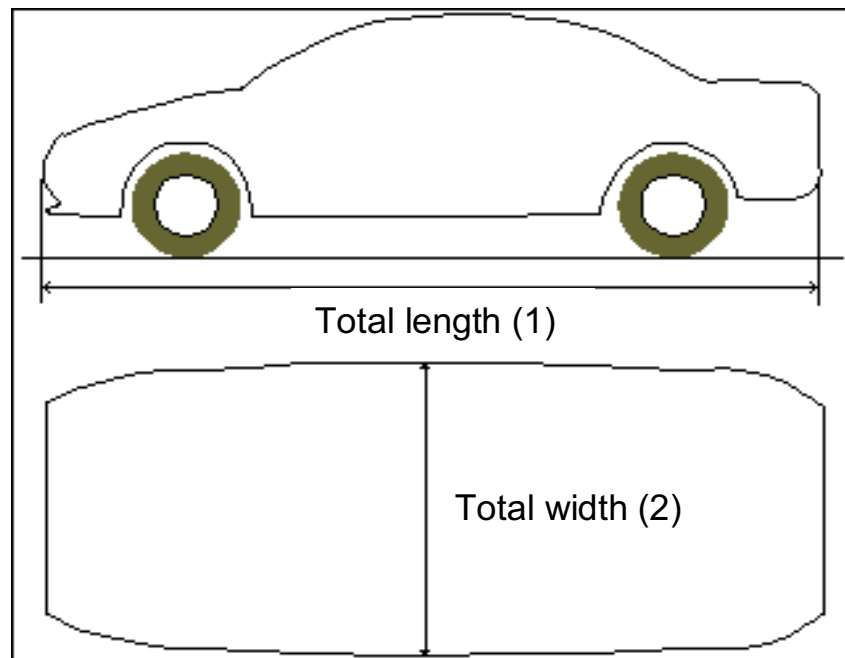


Figure 1.- Definition of the main resistant elements. General dimensions.

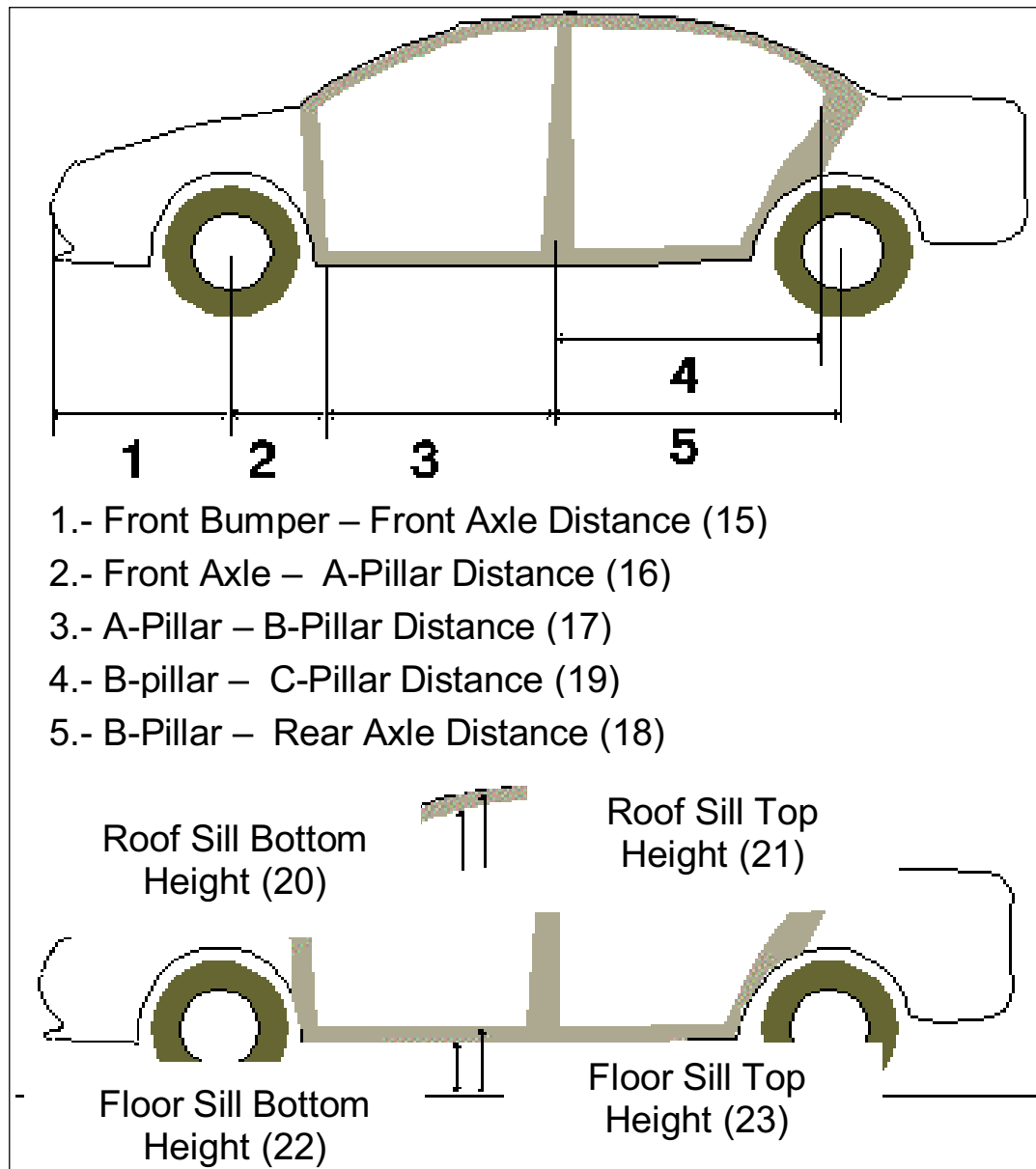


Figure 2.- Definition of the main resistant elements. Side elements.

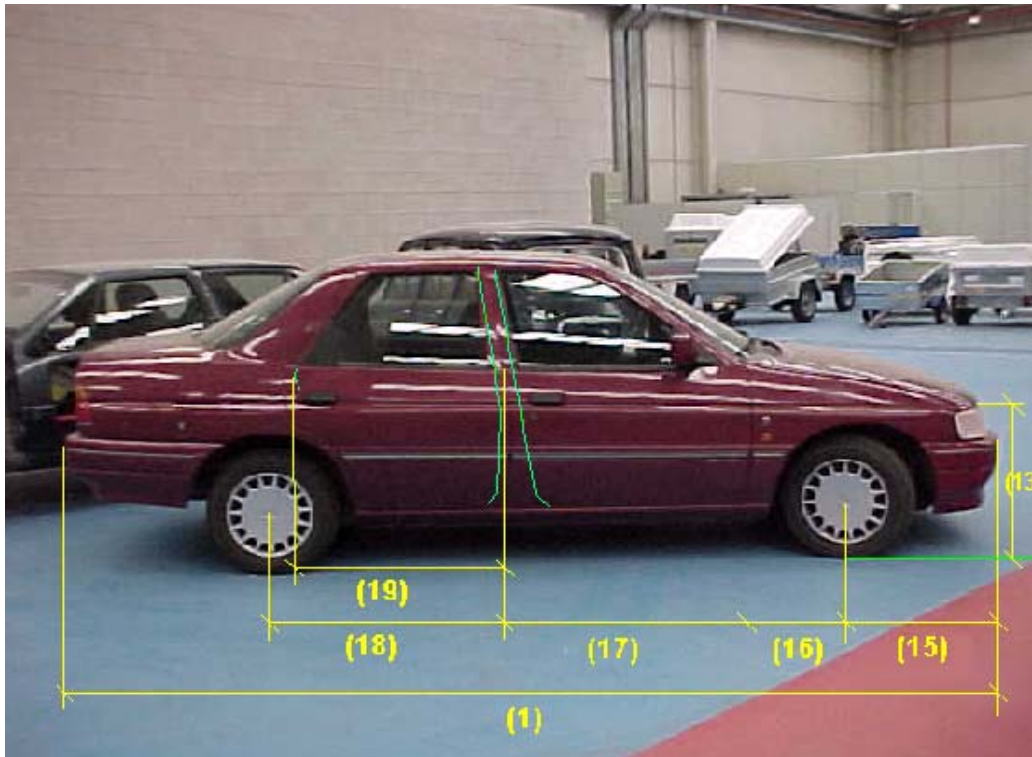


Figure 3.-
Measurements of
the side resistant
elements (outer).

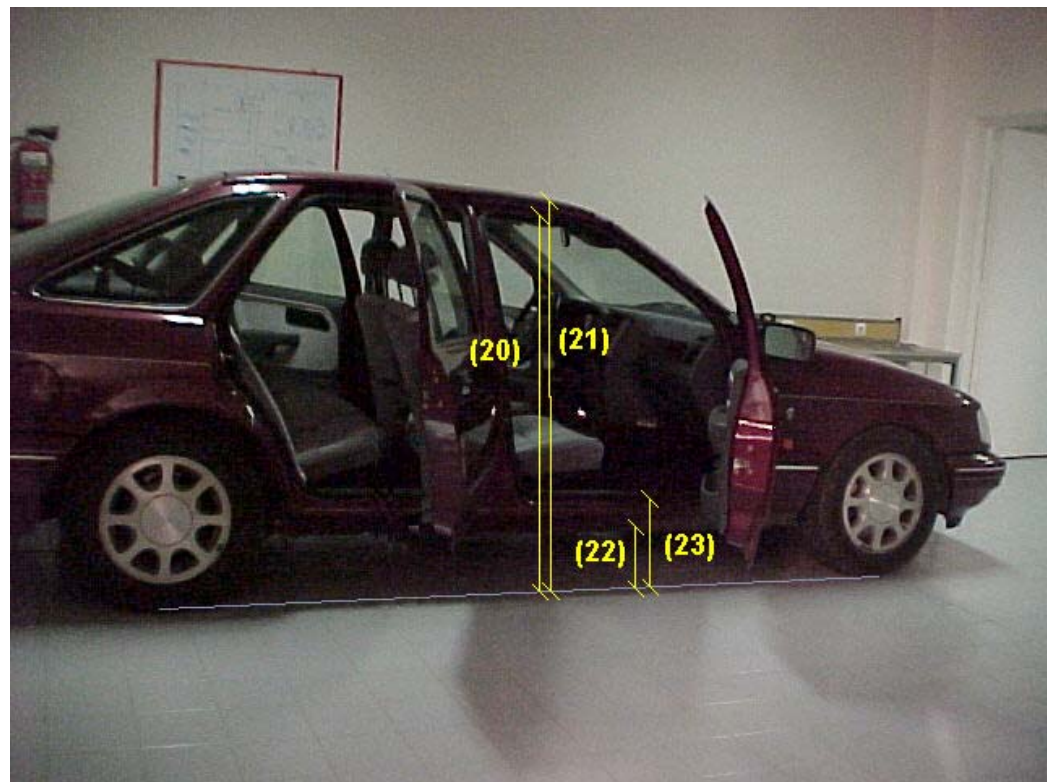


Figure 4.- Measurements
of the side resistant
elements (inner).

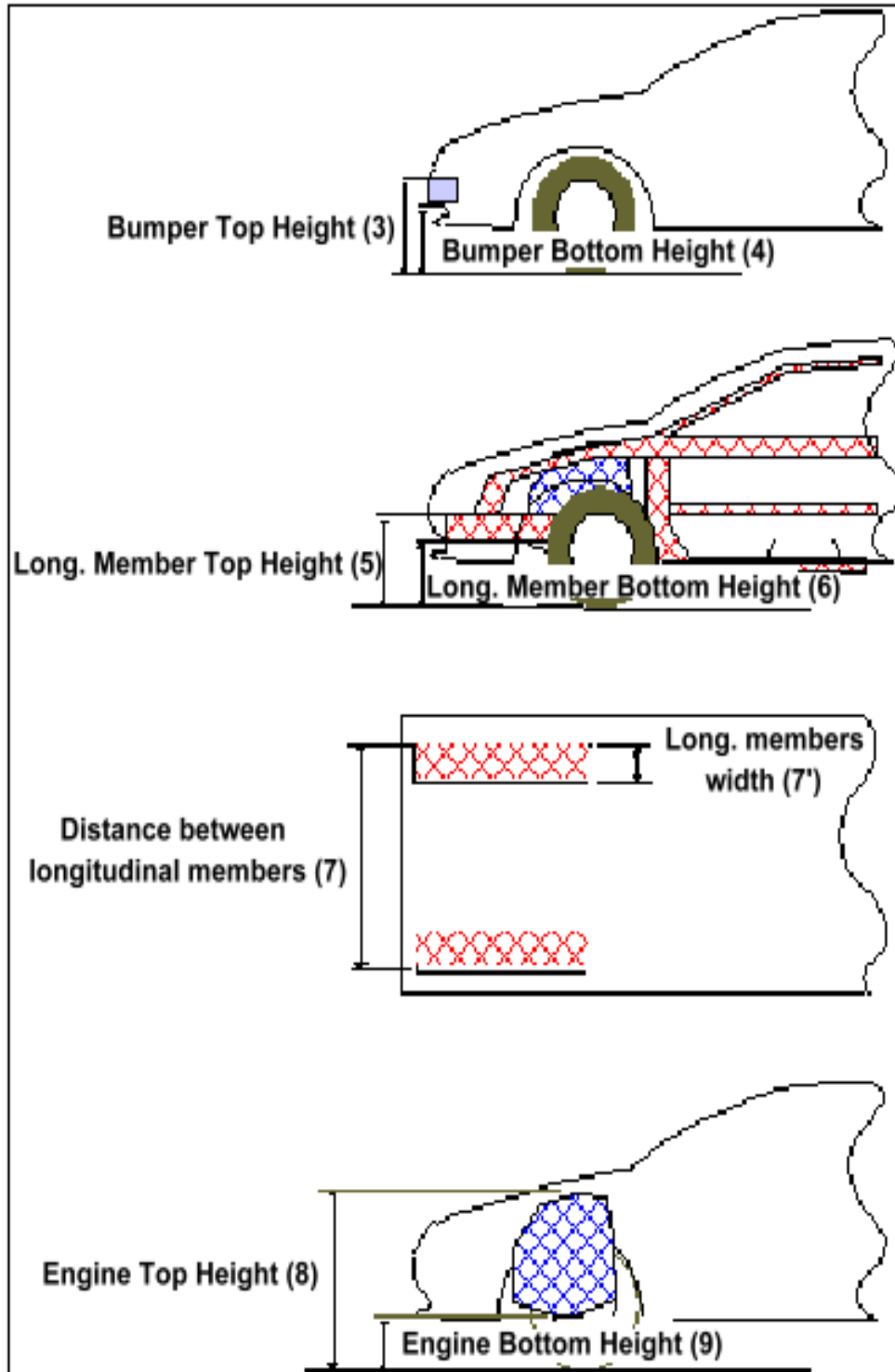


Figure 5.- Definition of the main resistant elements. Front elements.

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

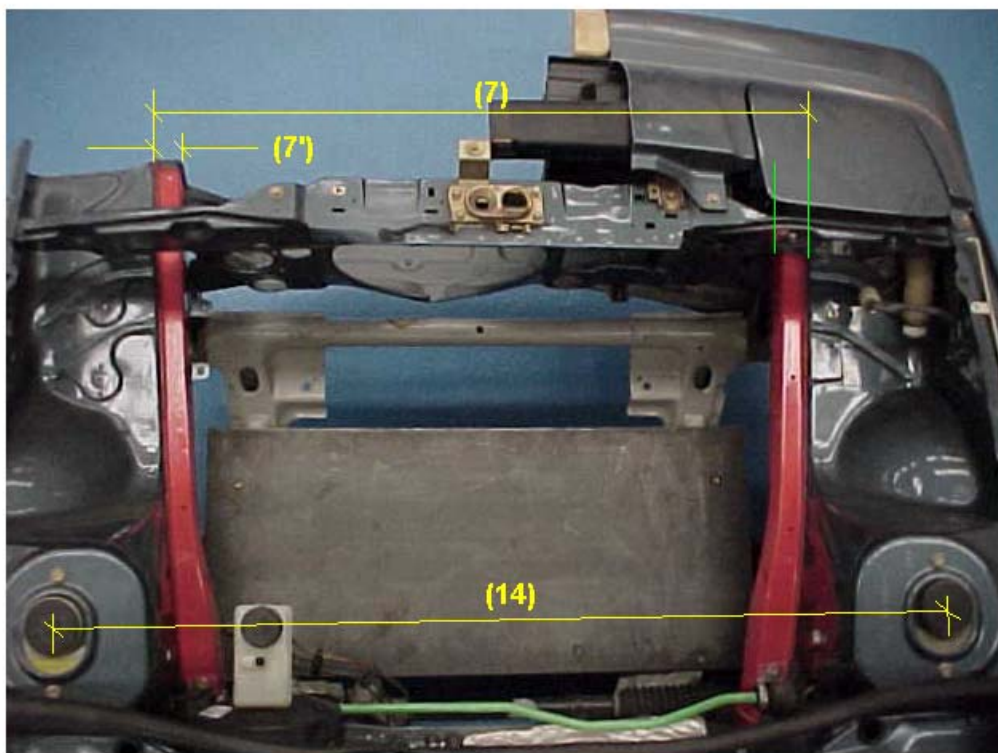
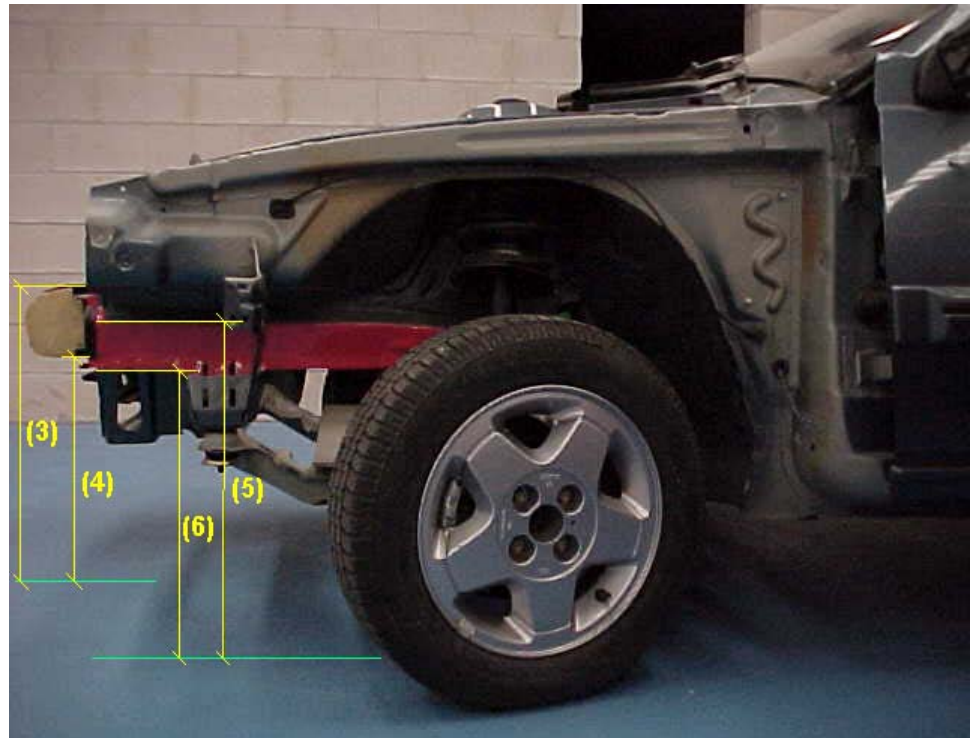


Figure 7.-
Measurements
of the main
resistant
elements. Front
elements 2.

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

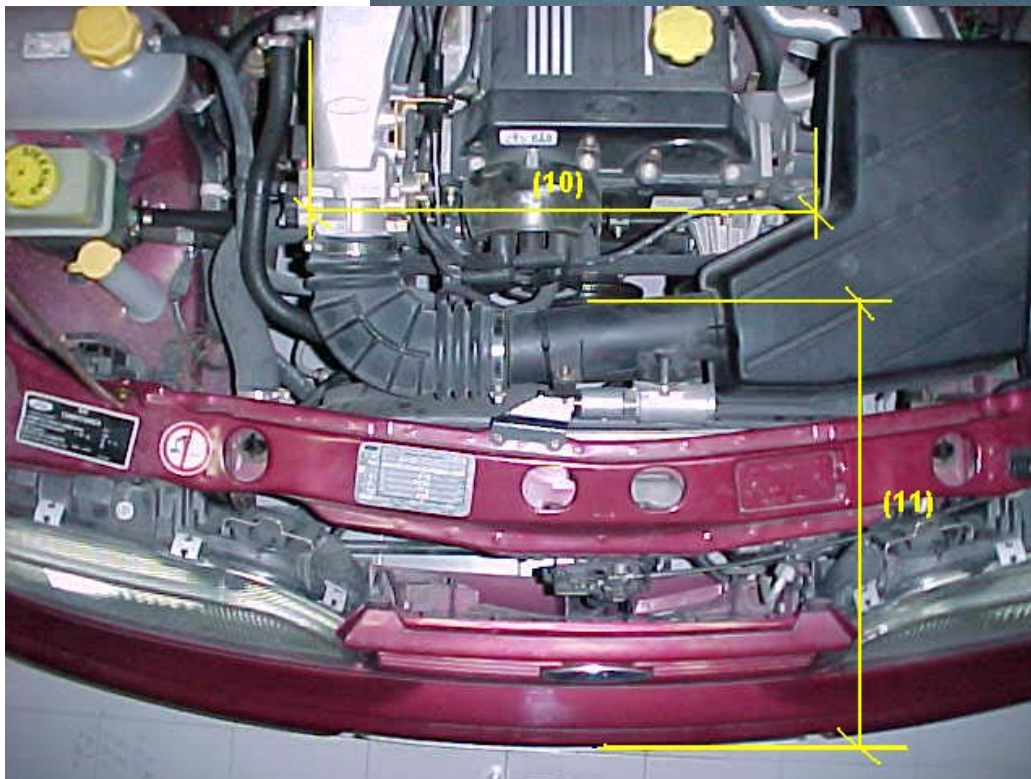
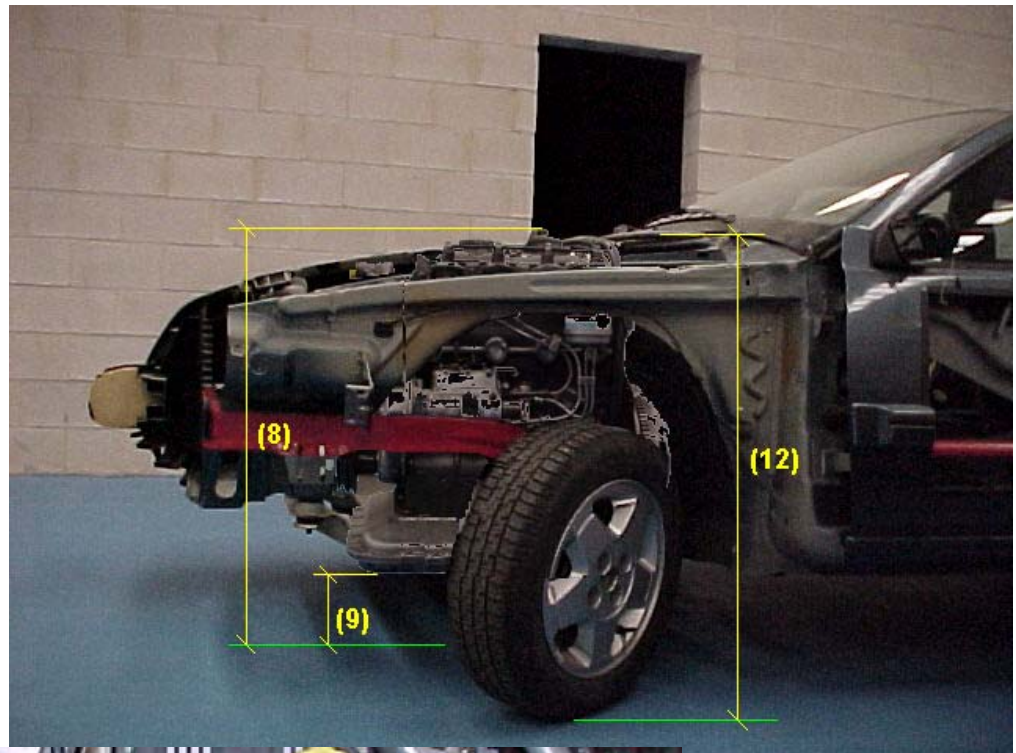


Figure 9.-
Definition of
the main
resistant
elements. Front
elements
(Longitudinal
engine).



The procedure considered to measure these elements is described as follows, where it is indicated the location of these ones in the Excel Sheet (SURVEY.XLS) into brackets:

FRONT ELEMENTS

- **Total Length –(1)- (Side & Front Sheets - C column):** distance between the point in the front bumper further on and the point in the rear bumper further back.
- **Weight (Side & Front Sheets - D column):** mass, including an average driver weight (70 kg), and the fuel tank mass (at half-capacity).
- **Total Width –(2)- (Side & Front Sheets - E column):** distance between the outer side points in a transverse plane of the vehicle (middle plane between the front and rear axles).
- **Bumper bottom height –(4)- (Front Sheet G column):** distance between the ground and the lowest point on the front bumper, being a resistant member (aerodynamic elements under the front bumper are not considered).
- **Bumper top height –(3)- (Front Sheet H column):** distance between the ground and the highest point on the front bumper, being a resistant member (aerodynamic elements are not considered).
- **Longitudinal member top height –(5)- (Front Sheet I column):** distance between the ground and the highest point on the longitudinal members, measured approximately in the front bumper-longitudinal member joint (when accessible).
- **Longitudinal member bottom height –(6)- (Front Sheet J column):** distance between the ground and the lowest point on the longitudinal members, measured approximately in the front bumper-longitudinal member joint.
- **Distance between longitudinal members (Front Sheet K column):** transverse distance between extreme points in longitudinal members, measured approximately in the front bumper-longitudinal member joint.

Depending on the accessibility of these members, the extreme points are the inner points (I) or the outer points (O).

- **Longitudinal member width -7'- (Front Sheet L column):** width of one of the longitudinal members, measured approximately in the front bumper-longitudinal member joint.

- **Engine top height (8) (Front Sheet N column):** distance between the ground and the highest point on the engine that can be a resistant member in case of accident (usually, the highest point on the head, or the highest point of the inlet or exhaust manifolds).
- **Engine bottom height (9) (Front Sheet M column):** distance between the ground and the lowest point on the engine (usually, the lowest point on the crankcase).
- **Engine and Gearbox width (10) (Front Sheet O & P columns):**
 - *Transverse configuration engine:* distance between extreme points in the gearbox-cylinder block unit or others resistant members attached to the cylinder block unit, i.e. fan belts (from a front point of view).
 - *Longitudinal configuration engine:* distance between extreme points in the cylinder block unit (from a front point of view).
- **Front bumper - Engine distance (11) (Front Sheet Q column):** distance between the point in the front bumper further on and the point in the engine further on that is a resistant element, i.e. the further on point of the exhaust manifold placed in the front of the engine.
- **Front shock absorber fixing width (14) (Front Sheet R column):** transverse distance between the front shock absorber - body car joints.
- **Front shock absorber fixing height (12) (Front Sheet S column):** distance between the ground and the front shock absorber-body car joint.
- **Bonnet leading edge height (Front Sheet T column):** distance between the ground and the bonnet edge further on.

SIDE ELEMENTS

- **Front bumper - Front axle distance (15) (Side Sheet G column):** distance between the point in the front bumper further on and the middle point in the front tyre-road contact patch.
- **Front axle - A Pillar distance (16) (Side Sheet H column):** distance between the middle point in the front tyre-road contact patch and the point in the A-pillar further back.
- **A Pillar - B Pillar distance (17) (Side Sheet I column):** distance between the point in the A-pillar further back and the middle point in the B-pillar.
- **B Pillar - C Pillar distance (19) (Side Sheet J column):** distance between the middle point in the B-pillar and the point in the C-pillar further back (only 4/5-door vehicles).
- **B Pillar - Rear axle distance (18) (Side Sheet K column):** distance between the middle point in the B-pillar and the middle point in the rear tyre-road contact patch.
- **Roof sill bottom height (20) (Side Sheet L column):** distance between the ground and the lowest point on the roof sill, measured in the front door middle point.
- **Roof sill top height (21) (Side Sheet M column):** distance between the ground and the highest point on the roof sill (usually located in the sill-roof joint), measured in the front door middle point.
- **Floor sill bottom height (22) (Side Sheet N column):** distance between the ground and the lowest point on the floor sill, measured in the front door middle point.
- **Floor sill top height (23) (Side Sheet O column):** distance between the ground and the highest point on the floor sill, measured in the front door middle point.

NOTE

- N/A: dimension not available.