

**Vehicle Research and Test Center
2005 Honda Odyssey into
Front of a 2002 Ford Focus SE
TRC Inc. Test Number: 060317**

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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 49.1 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 2005 Honda Odyssey MPV, and the vehicle and occupant response of the target vehicle, a 2002 Ford Focus SE 4-door, in this vehicle-to-vehicle impact mode.

Test Procedure

This test was conducted in accordance with VRTC instructions for a 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 2005 Honda Odyssey MPV, was instrumented with eighteen (18) accelerometers to measure longitudinal, lateral and vertical axis accelerations. The driver's and passenger's airbag signals were monitored with inductive pickups, and the lap and shoulder belts were monitored for pay-in and pay-out. The vehicle's specified impact velocity range was 48.0 to 50.2 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 288 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 121.5 km/h 0° full frontal collinear vehicle-to-vehicle impact test was conducted by TRC Inc. on March 17, 2006.

The target test vehicle, a 2002 Ford Focus SE 4-door, was equipped 2-liter transverse engine, automatic transmission, power steering, power brakes, and dual stage front airbags. The target vehicle's test weight was 1551.8 kg. The target vehicle's impact speed was 71.8 km/h. The target vehicle sustained 833 mm of static crush during the impact (measured without bumper fascia).

The bullet test vehicle, a 2005 Honda Odyssey MPV, was equipped with a 3.5-liter inline 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 49.7 km/h. The bullet vehicle sustained 559 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	1951	1192	108 ¹	68
HIC (36 ms)	1000	---	2032	1526	214 ¹	122
Chest 3 ms (g)	60	60	89.7	70.2	37.7	29.6
Chest Deflection (mm)	63	52	38	35	34	19
Upper Neck						
NTF	1.0	1.0	0.82	0.52	0.18	0.18
NTE	1.0	1.0	0.19	1.29	0.14	0.27
NCF	1.0	1.0	0.11	0.23	0.03	0.18
NCE	1.0	1.0	0.13	1.20	0.01	0.10

¹ See Data Acquisition Explanations.

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	4278	1825	1032	773
Neck Compression (N)	4000	2520	224	1325	68	156
Left Femur (N)	10000	6805	5340	3587	4167	2181
Right Femur (N)	10000	6805	5278	4114	2889	2504
Maximum Left Upper TI (SAE)	0.91	0.91	1.12	1.58	0.43	N/A
Maximum Right Upper TI (SAE)	0.91	0.91	1.10	1.82	0.51	N/A
Maximum Left Lower TI (SAE)	0.91	0.91	1.17	1.53	0.44	N/A
Maximum Right Lower TI (SAE)	0.91	0.91	1.61	1.92	0.70	N/A

Data Acquisition Explanations

The target vehicle driver's left foot X-, Y- and Z-axis acceleration data channels, 21FOOTLELXH3ACXA, 21FOOTLELXH3ACYA, and 21FOOTLELXH3ACZA, lost data after approximately 43 milliseconds. Post-test investigation found the wiring was cut and the left foot plate was broken during the impact event. The resultant was also affected.

The target vehicle driver's right upper tibia Z-axis force data channel, 21TIBIRULXH3FOZA, recorded momentary anomalous data spikes at approximately 161 milliseconds.

The target vehicle passenger's left lower tibia Z-axis force data channel, 23TIBILLFXHFFOZA, recorded no useful data throughout the test.

The target vehicle passenger's right foot X-, Y- and Z-axis acceleration data channels, 23FOOTRIFXHFACXA, 23FOOTRIFXHFACYA, and 23FOOTRIFXHFACZA, recorded questionable data throughout the test and failed to return to zero post-test. The resultant was also affected.

The target vehicle's left front brake caliper X-axis acceleration data channel, 21VEHCLE0000ACXA, recorded questionable data throughout the event.

The bullet vehicle driver's head Z-axis acceleration data channel, 11HEADCG00H3ACZA, recorded multiple anomalous data spikes during the test. Post-test investigation the found channel connector was damaged. The connector was replaced post-test. The resultant was affected. For the purpose of this report and the NHTSA Entrée database submission, the HIC values were calculated using the head side Z-axis acceleration channel, 11HEADLE00H3ACZA.

The bullet vehicle top of engine X-axis acceleration data channel, 12ENGNTF0000ACXA, exceeded full scale at approximately 57 milliseconds and recorded no useful data after that.

Table 1 Crash Test Summary

Test mode:	Full Frontal Collinear	
Test date:	03/17/06	
Test time:	15:04	
Ambient temperature:	2° C	
Target vehicle year/make/ model/body style:	2002/Ford/Focus SE/4-door	
Target vehicle test weight:	1551.8 kg	
Bullet vehicle year/make/ model/body style:	2005/Honda/Odyssey/MPV	
Bullet vehicle test weight:	2273.0 kg	
Impact angle ¹ :	0°	
Impact velocity ² :	Target vehicle = 71.8 km/h Bullet vehicle = 49.7 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 #8 of 17
Passenger:	Full forward

Target vehicle seat back positions for test:

Driver:	14.5°; measured at head restraint support post
Passenger:	8.3°; 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
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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:	1 detent rearward of full forward

Bullet vehicle seat back positions for test:

Driver:	17.6°; measured at head restraint support post
Passenger:	12.5°; 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>	25.7°; 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:	1FAFP34P02W295900
Model year:	2002
Body style:	4-door
Color:	Black
Engine data:	
Cylinders:	4
Displacement	2 liters
Type:	straight
Placement:	Yes
Transmission data:	<u> 3 </u> speed, <u> </u> manual, <u> </u> automatic, <u> </u> overdrive
Final drive:	<u> </u> FWD, <u> </u> RWD, <u> </u> 4WD
Date vehicle received:	3/14/2006
Odometer reading:	17,707 miles
Dealer's name and address:	Vehicle provided by VRTC

Accessories:

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

Certification data from vehicle's label:

Vehicle manufactured by:	Ford Motor Co.
Date of manufacture:	05/02
VIN:	1FAFP34P02W295900
GVWR:	1641 kg (3620 lbs.)
GAWR: Front:	891 kg (1965 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, 195/60R15

Tire pressure with maximum capacity vehicle load:

Front:	psi (kPa)
Rear:	psi (kPa)

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

Type of seats:

Front	Bucket
Rear	Split bench

Maximum width: 1698 mm

Wheelbase: 2620 mm

Location of "Recommended Tire Pressure" label:

Driver B-pillar

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

Recommended tire size:	P195/60R16
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:	375 kg (827 lbs.)
Rated cargo/luggage weight:	35 kg (77 lbs.)

Test vehicle attitude:

Pre-test attitude:	LF 628 mm;	RF 635 mm;	LR 622 mm;	RR 623 mm
Post-test attitude:	LF 723 mm;	RF 689 mm;	LR 679 mm;	RR 625 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	360.6 kg
Left front	415.0 kg	Left rear	361.2 kg
Total front weight	830.0 kg	(53.5% of total vehicle weight)	
Total rear weight	721.8 kg	(46.5% of total vehicle weight)	
Total test weight	1551.8 kg		

Weight of ballast secured in vehicle: 28.1 kg of plate in cargo area

Components removed to meet target test weight: None

Location of Vehicle's CG: 1219 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:	2005/Honda/Odyssey/MPV
VIN:	5FNRL38215B130707
Model year:	2005
Body style:	MPV
Color:	Red
Engine data:	
Cylinders:	6
Displacement	3.5 liters
Type:	V
Placement:	Yes
Transmission data:	<u> 3 </u> speed, <u> </u> manual, <u> </u> automatic, <u> </u> overdrive
Final drive:	<u> </u> FWD, <u> </u> RWD, <u> </u> 4WD
Date vehicle received:	3/9/2006
Odometer reading:	109 miles
Dealer's name and address:	Vehicle provided by VRTC

Accessories:

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

Certification data from vehicle's label:

Vehicle manufactured by:	Honda Mfg. of Alabama, LLC
Date of manufacture:	07/05
VIN:	5FNRL38215B130707
GVWR:	2700 kg (5952 lbs.)
GAWR: Front:	1285 kg (2833 lbs.)
Rear:	1450 kg (3917 lbs.)

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

Tires on vehicle (mfr., line, size): Bridgestone, Turanza, 235/65R16

Tire pressure with maximum capacity vehicle load:

Front: psi (kPa)

Rear: psi (kPa)

Spare tire (mfr., line, size): Goodyear, Temporary, 135/80D17

Type of seats:

Front Bucket

Rear Bucket

Maximum width: 1960 mm

Wheelbase: 3000 mm

Location of "Recommended Tire Pressure" label:

Driver B-pillar

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

Recommended tire size: P235/65R16

Recommended cold tire pressure: Front: 33 psi (230 kPa)
Rear: 35 psi (240 kPa)

Seating capacity: Front: 2
Mid: 2
Rear: 3
Total: 7

Vehicle capacity weight: 612 kg (1349 lbs.)

Rated cargo/luggage weight: 136 kg (300 lbs.)

Test vehicle attitude:

Pre-test attitude: LF 727 mm; RF 728 mm; LR 721 mm; RR 715 mm

Post-test attitude: LF 732 mm; RF 722 mm; LR 729 mm; RR 724 mm

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

Weight of test vehicle with required dummies and cargo weight:

Right front	582.8 kg	Right rear	564.4 kg
Left front	580.6 kg	Left rear	545.2 kg
Total front weight	1163.4 kg	(51.2% of total vehicle weight)	
Total rear weight	1109.6 kg	(48.8% of total vehicle weight)	
Total test weight	2273.0 kg		

Weight of ballast secured in vehicle: 90.7 kg plate in cargo area, and 90.7 kg plate weight on passenger side second row floorboard

Components removed to meet target test weight: None

Location of Vehicle's CG: 1464 mm rearward of front wheel centerline

Fuel System Data:

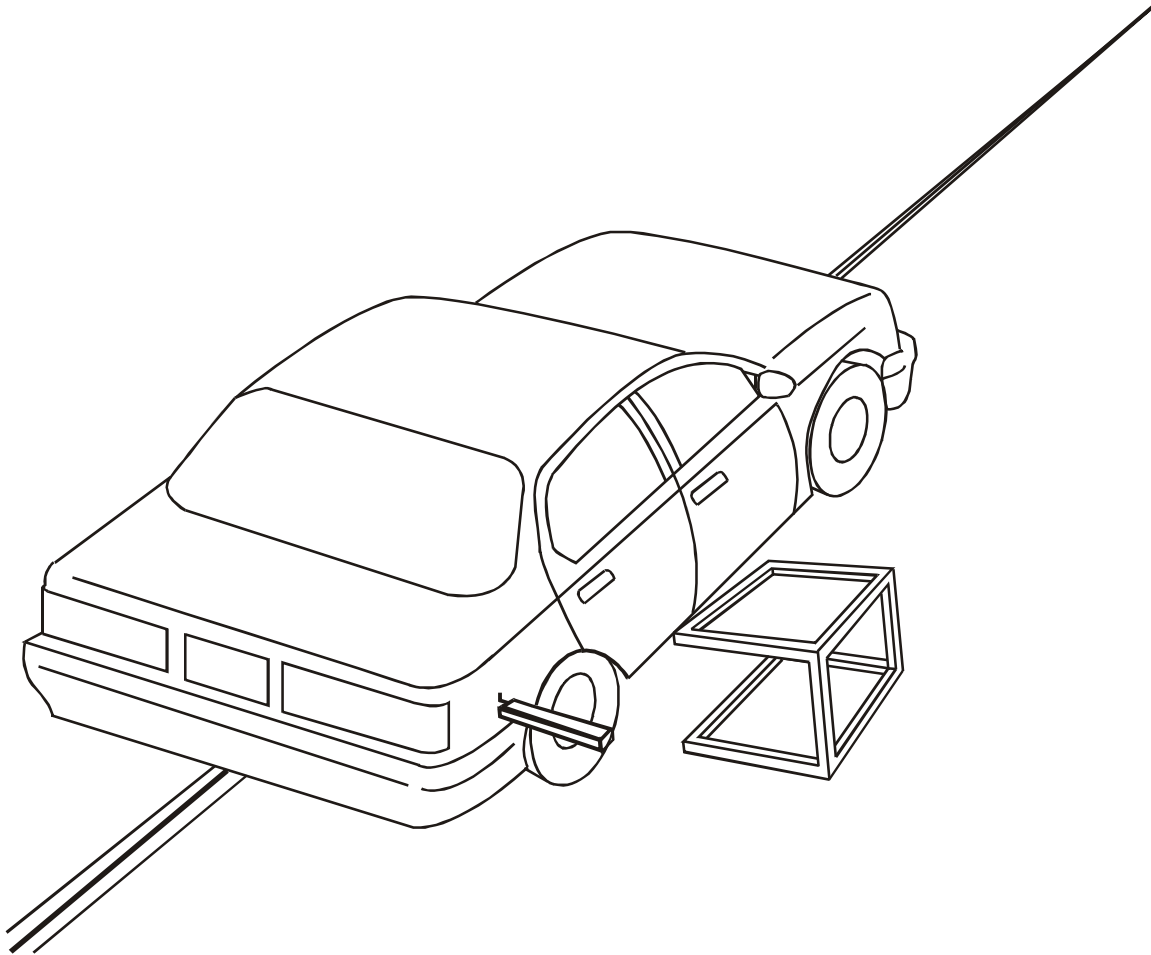
Usable fuel system capacity 75.7 liters (from owner's manual)

Actual test volume: 70.4 liters (93% of usable)

Table 4 Post-Impact Data

Test number:	060317
Test date:	03/17/06
Test time:	15:04
Test type:	Full frontal collinear
Impact angle:	0°
Ambient temperature at impact area: 2° C	
Impact velocity:	
Target vehicle:	71.8 km/h
Bullet vehicle:	49.7 km/h
Required impact velocity range:	
Target vehicle:	70.7 to 72.9 km/h
Bullet vehicle:	48.0 to 50.2 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	4.5	153.0	42.5	57.1
2	Right Rear Seat Cross-member	X	4.9	159.7	40.1	30.2
3	Top of Engine	X	68.4	40.2	178.2	28.0
4	Bottom of Engine	X	7.3	90.0	151.8	22.2
5	Right Front Brake Caliper	X	243.9	98.5	1370.9	43.1
6	Left Front Brake Caliper ¹	X	---	---	---	---
7	Dash Center	X	16.9	26.9	79.5	53.0
8	Toe Pan Accelerator	X	5.8	176.9	133.4	40.4
		Z	43.8	33.2	23.2	45.2
9	Toe Pan Footrest	X	8.4	177.5	118.7	40.3
		Z	30.5	32.5	25.4	48.6
10	Rear Tunnel Center	X	54.7	104.4	101.9	97.8
11	Vehicle Center of Gravity	X	15.2	71.4	82.0	33.4
		Y	55.3	67.7	53.7	71.4
		Z	59.9	37.1	93.7	52.1
	Resultant		113.5	52.3		
12	Vehicle Rear Deck	X	10.6	128.6	46.0	63.0
		Y	6.0	67.8	4.4	88.6
		Z	13.0	17.7	18.2	34.8
	Resultant		46.1	63.0		

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

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

¹ See Data Acquisition Explanations.

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	1.9	146.0	30.8	48.5
2	Right Rear Seat Cross-member	X	1.5	139.3	32.5	42.1
3	Top of Engine ¹	X	---	---	---	---
4	Bottom of Engine	X	24.3	35.8	99.9	26.3
5	Right Front Brake Caliper	X	79.7	76.2	84.4	51.4
6	Left Front Brake Caliper	X	25.6	69.7	65.8	41.8
7	Dash Center	X	3.3	26.0	37.6	55.4
8	Toe Pan Accelerator	X	2.1	146.7	50.1	55.0
		Z	31.4	48.1	18.1	54.4
9	Toe Pan Footrest	X	3.9	54.6	68.4	47.8
		Z	19.7	27.1	24.1	67.1
10	Rear Tunnel Center	X	5.5	94.2	33.5	61.0
11	Vehicle Center of Gravity	X	2.3	138.8	34.0	43.4
		Y	5.1	48.9	5.6	36.4
		Z	25.4	54.6	22.8	99.7
	Resultant		40.3	43.4		
12	Vehicle Rear Deck	X	10.3	14.8	36.1	51.4
		Y	4.8	40.2	3.7	49.7
		Z	8.7	101.6	12.3	15.2
	Resultant		36.9	51.4		

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

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

¹ See Data Acquisition Explanations.

Section 3.0

Summary of Data

Table 7 Dummy Injury Criteria Data

	Limits		Target Vehicle		Bullet Vehicle	
	Driver	Passenger	Driver	Passenger	Driver	Passenger
HIC (15 ms) ¹	700	700	1951	1192	108	68
Start time (ms)			66.7	58.4	83.8	71.7
End time (ms)			81.8	73.4	98.9	86.7
HIC (36 ms) ¹	1000	---	2032	1526	214	122
Start time (ms)			64.8	50.9	71.9	57.5
End time (ms)			82.7	81.8	107.9	93.5
Chest 3 ms (g) ²	60	60	89.7	70.2	37.7	29.6
Start time (ms)			70.3	75.3	88.6	84.0
End time (ms)			73.3	78.3	91.6	87.0
Chest Deflection (mm)	63	52	38	35	34	19
Upper Neck						
NTF	1.0	1.0	0.82	0.52	0.18	0.18
NTE	1.0	1.0	0.19	1.29	0.14	0.27
NCF	1.0	1.0	0.11	0.23	0.03	0.18
NCE	1.0	1.0	0.13	1.20	0.01	0.10
Neck Tension (N)	4170	2620	4278	1825	1032	773
Neck Compression (N)	4000	2520	224	1325	68	156
Left Femur (N)	10000	6805	5340	3587	4167	2181
Right Femur (N)	10000	6805	5278	4114	2889	2504
Maximum Left Upper TI (SAE)	0.91	0.91	1.12	1.58	0.43	N/A
Maximum Right Upper TI (SAE)	0.91	0.91	1.10	1.82	0.51	N/A
Maximum Left Lower TI (SAE)	0.91	0.91	1.17	1.53	0.44	N/A
Maximum Right Lower TI (SAE)	0.91	0.91	1.61	1.92	0.70	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	Airbag
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	Tools	Easy
Rear	Tools	Easy

Seat movement:

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

Glazing damage: Windshield broken

Other notable impact effects: None

Table 9 Bullet Vehicle Post-Impact Dummy/Vehicle Data

Visible Dummy Contact Points:

	<u>Driver</u>	<u>Passenger</u>
Head	Airbag, 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	None	None
Right Rear	None	None

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

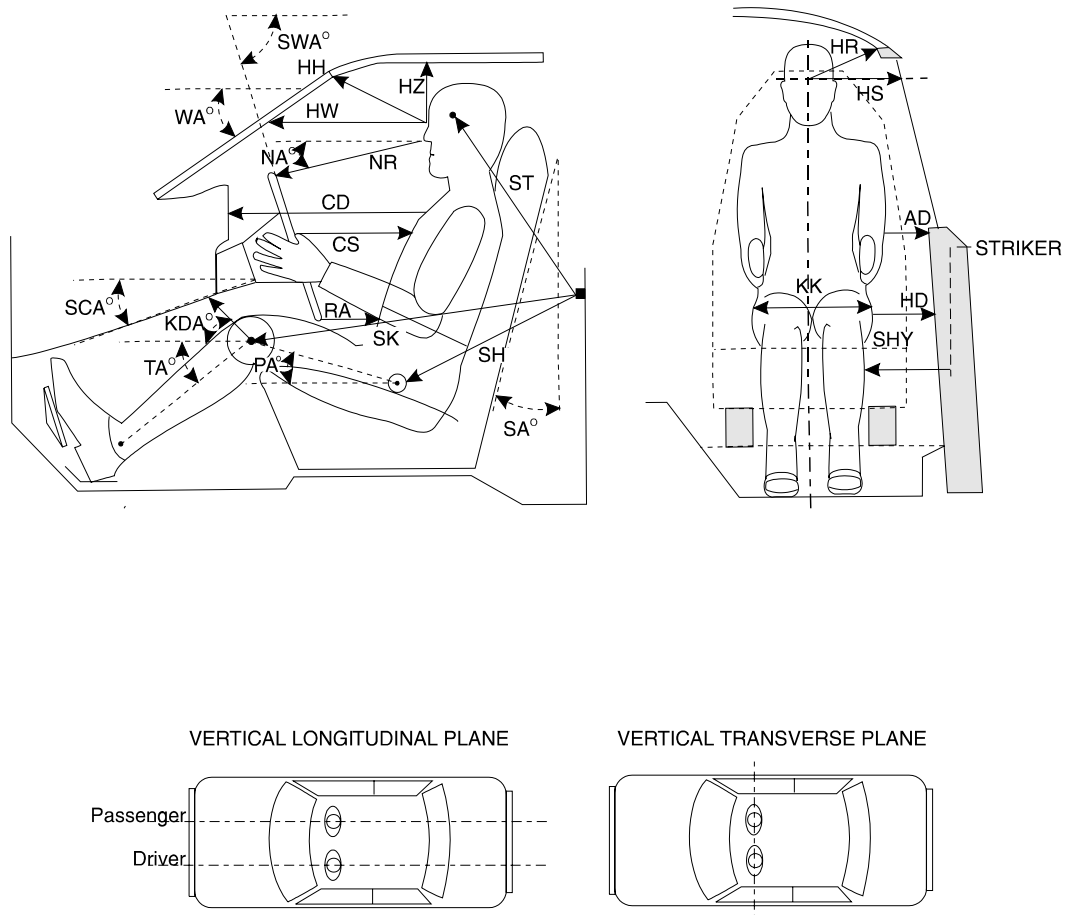


Table 10 Target Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial #110)	Passenger (Serial #416)
WA	Windshield angle	23.9°	23.9°
SWA	Steering wheel angle	64.8°	N/A
SCA	Steering column angle	25.2°	N/A
SA	Seat back angle	16.0°	7.3°
HZ	Head to roof	204 mm	206 mm
HH	Head to header	340 mm	257 mm
HW	Head to windshield	636 mm	599 mm
HR	Head to side header	211 mm	231 mm
NR	Nose to rim	415 mm	N/A
NA	Nose to rim angle	8.2°	N/A
CD	Chest to dash	559 mm	374 mm
CS	Steering wheel to chest	310 mm	N/A
RA	Rim to abdomen	213 mm	N/A
KDL	Left knee to dash	150 mm	44 mm
KDR	Right knee to dash	151 mm	53 mm
KDA	Outboard knee to dash angle	21.4°	12.9°
PA	Pelvic angle	N/A ²	N/A ²
TA	Tibia angle	39.2°	59.3°
KK	Knee to knee	345 mm	168 mm
ST ¹	Striker to head	528 mm	507 mm
	Striker to head angle	-84.7°	-67.7°
SK ¹	Striker to knee	574 mm	688 mm
	Striker to knee angle	-0.1°	0.2°
SH ¹	Striker to H-point	233 mm	320 mm
	Striker to H-point angle	33.4°	19.1°
SHY	Striker to H-point (Y dir.)	117 mm	132 mm
HS	Head to side window	309 mm	327 mm
HD	H-point to door	8 mm	33 mm
AD	Arm to door	94 mm	153 mm

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

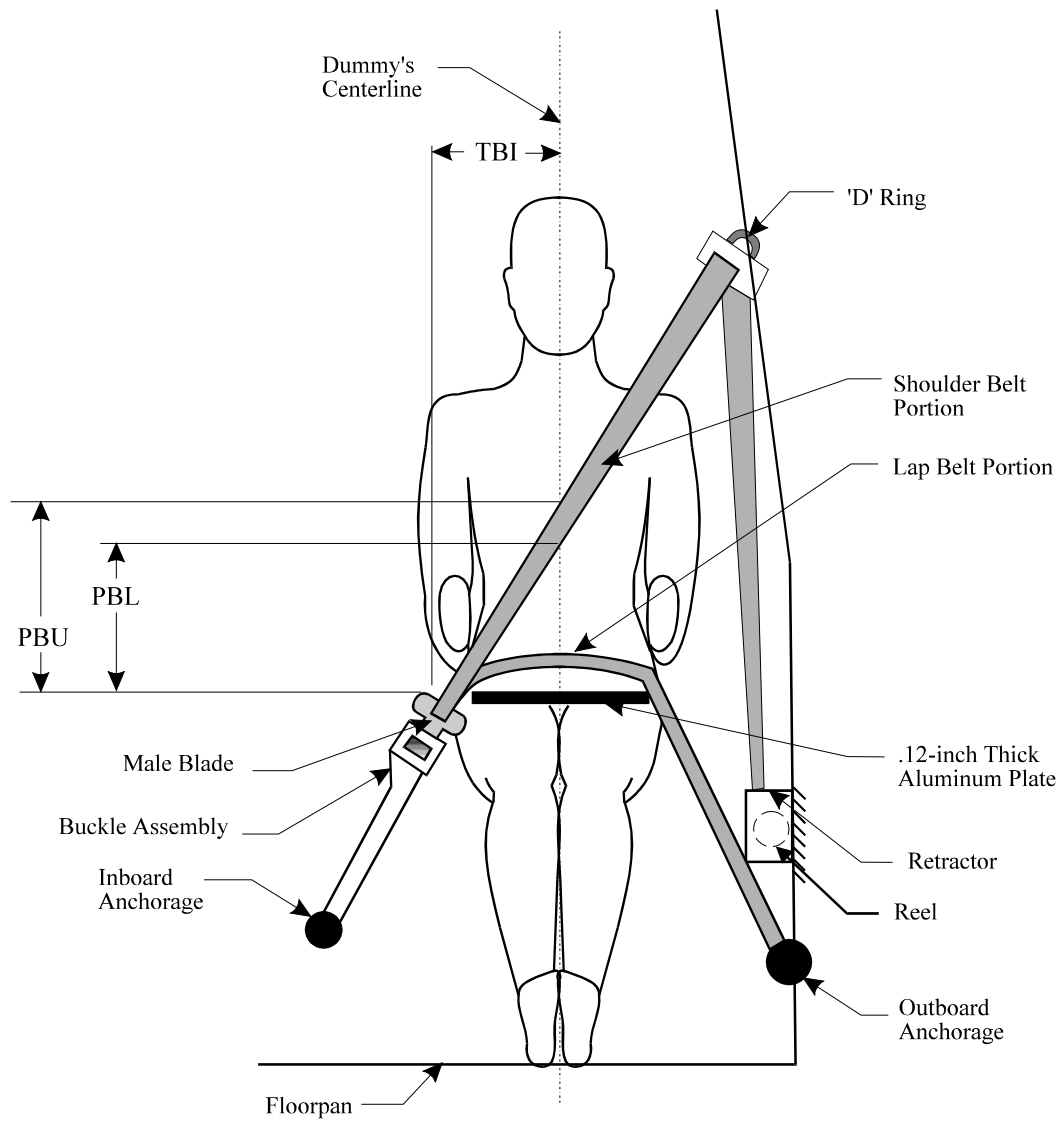
¹ A negative angle indicates the measurement point was above the striker.

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	3.16°	2.16°
	Y	-2.04°	-0.95°
	Z	39.07°	41.41°
Left Leg			
	X	3.44°	3.72°
	Y	-3.92°	-3.64°
	Z	0.48°	0.49°

Figure 3 Target Vehicle Seat Belt Positioning Data



	Driver Dummy	Passenger Dummy
PBU - Top surface of aluminum plate to belt upper edge	340 mm	270 mm
PBL - Top surface of aluminum plate to belt lower edge	260 mm	180 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	250 mm	210 mm

Table 12 Bullet Vehicle Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial # 90)	Passenger (Serial # 70)
WA	Windshield angle	24.9°	24.9°
SWA	Steering wheel angle	64.5°	N/A
SCA	Steering column angle	25.5°	N/A
SA	Seat back angle	19.0°	13.2°
HZ	Head to roof	238 mm	275 mm
HH	Head to header	438 mm	340 mm
HW	Head to windshield	720 mm	733 mm
HR	Head to side header	218 mm	279 mm
NR	Nose to rim	488 mm	N/A
NA	Nose to rim angle	12.3°	N/A
CD	Chest to dash	649 mm	412 mm
CS	Steering wheel to chest	367 mm	N/A
RA	Rim to abdomen	245 mm	N/A
KDL	Left knee to dash	160 mm	37 mm
KDR	Right knee to dash	159 mm	40 mm
KDA	Outboard knee to dash angle	13.8°	0.4°
PA	Pelvic angle	N/A ²	N/A ²
TA	Tibia angle	44.1°	73.0°
KK	Knee to knee	378 mm	165 mm
ST ¹	Striker to head	600 mm	562 mm
	Striker to head angle	-80.8°	-63.0°
SK ¹	Striker to knee	629 mm	770 mm
	Striker to knee angle	-2.6°	-2.9°
SH ¹	Striker to H-point	256 mm	399 mm
	Striker to H-point angle	15.0°	8.0°
SHY	Striker to H-point (Y dir.)	175 mm	188 mm
HS	Head to side window	335 mm	372 mm
HD	H-point to door	51 mm	68 mm
AD	Arm to door	150 mm	205 mm

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

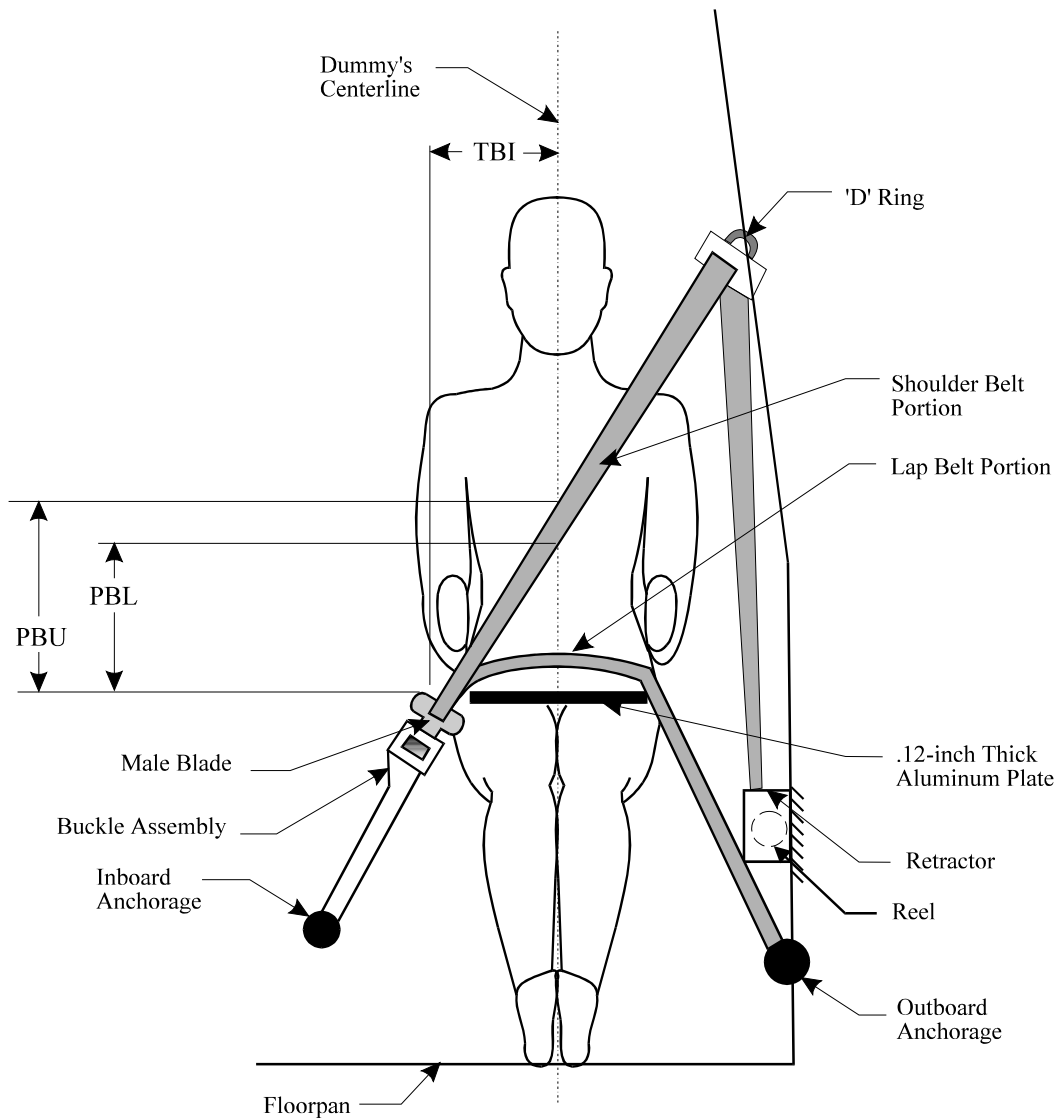
¹ A negative angle indicates the measurement point was above the striker.

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	1.31°	2.38°
	Y	0.38	-3.61
	Z	39.27°	39.84°
Left Leg			
	X	-7.60°	-6.14°
	Y		
	Z	50.44°	53.75°

Figure 4 Bullet Vehicle Seat Belt Positioning Data



	Driver Dummy	Passenger Dummy
PBU - Top surface of aluminum plate to belt upper edge	370 mm	280 mm
PBL - Top surface of aluminum plate to belt lower edge	290 mm	200 mm
TBI - Dummy centerline to intersection of upper torso belt and lap belt	220 mm	215 mm

Figure 5 Target Vehicle FMVSS 212 Test Data

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

Adhesive, plastic trim

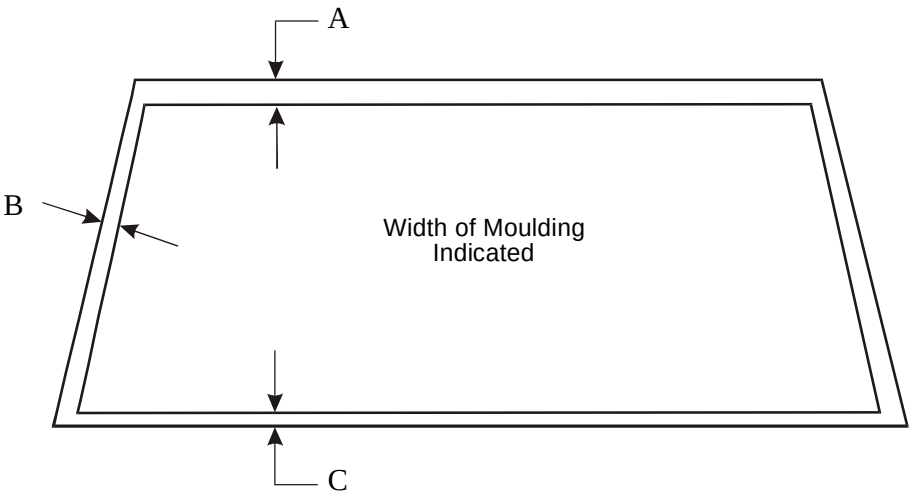
FMVSS 212 requirements: The post-test periphery retention amount must be at least 75% of the pre-test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of windshield for vehicles equipped with automatic restraint systems for front occupants.

Windshield periphery measurements:

	<u>Pre-test</u>	<u>Post-test</u>	<u>Percent retention</u>
Right side	2125 mm	N/A ¹	N/A ¹
Left side	2125 mm	N/A ¹	N/A ¹
Total	4250 mm	N/A ¹	N/A ¹

Pre-test windshield mounting material temperature: 2° C

A = 12 mm
B = 12 mm
C = 12 mm



Front view of windshield

Loss of windshield retention lengths:

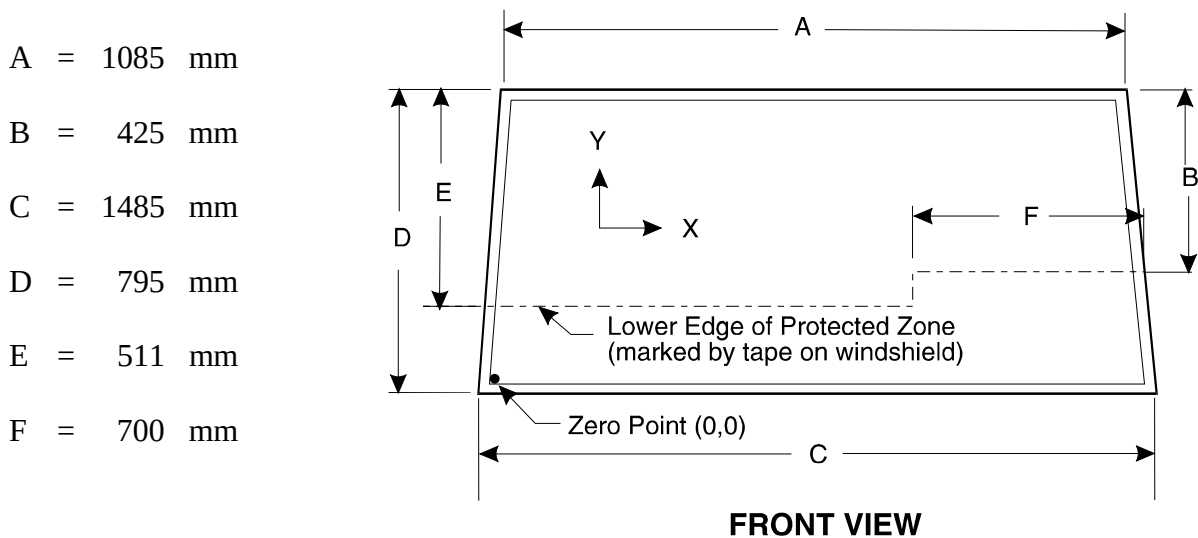
¹ Post-test measurements were not taken at the request of the customer.

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:

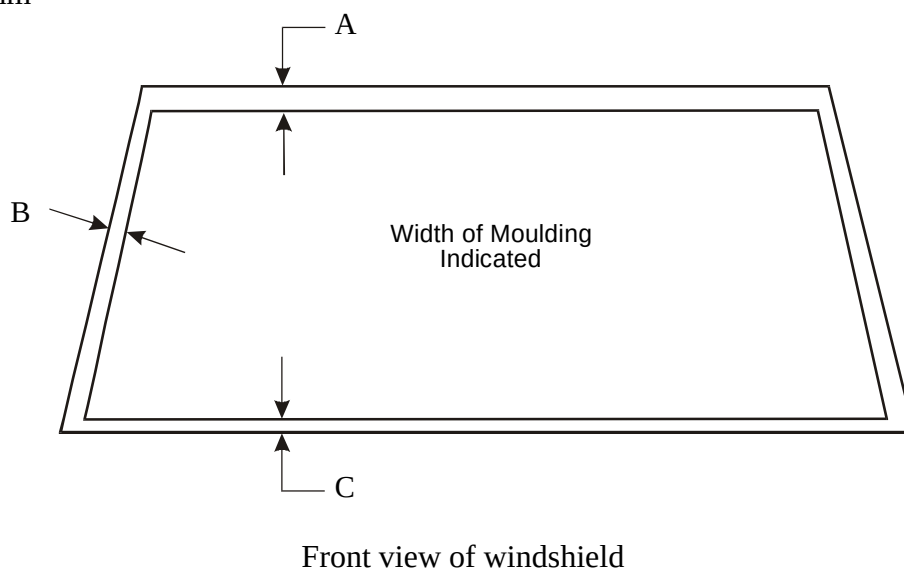
	<u>Pre-test</u>	<u>Post-test</u>	<u>Percent retention</u>
Right side	2435 mm	N/A ¹	N/A ¹
Left side	2435 mm	N/A ¹	N/A ¹
Total	4870 mm	N/A ¹	N/A ¹

Pre-test windshield mounting material temperature: 2° C

A = 17 mm

B = 30 mm

C = 10 mm



Loss of windshield retention lengths:

¹ Post-test measurements were not taken at the request of the customer.

Figure 8 Bullet Vehicle FMVSS 219 Test Data

Protected zone lower edge requirement:

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

Windshield measurements:

A = 1330 mm

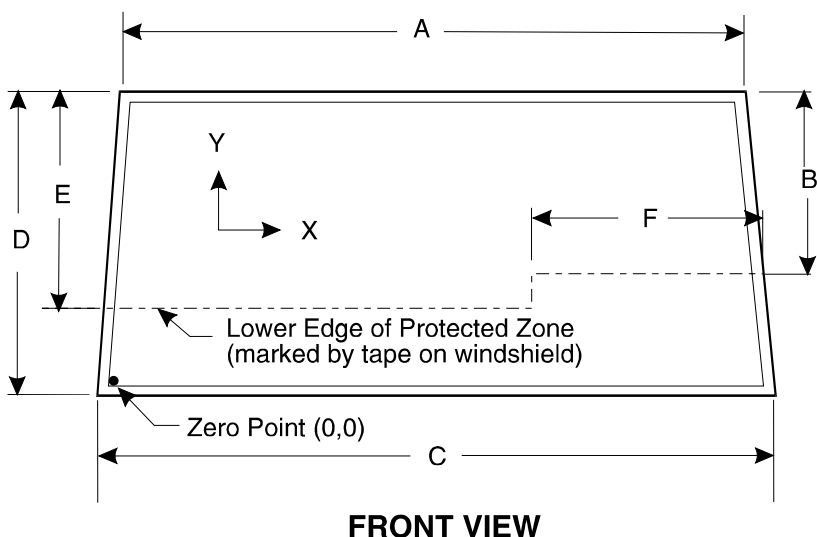
B = 540 mm

C = 1680 mm

D = 930 mm

E = 565 mm

F = 533 mm



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.

Table 14 Target Vehicle Structural Measurements¹

	Elements	Pre-Test
1	Total Length	4310
2	Total Width	1698
3	Bumper Top Height	529
4	Bumper Bottom Height	375
5	Longitudinal Member Top Height	509
6	Longitudinal Member Bottom Height	405
7	Distance Between Longitudinal Members	1085
7'	Longitudinal Member Width	85
8	Engine Top Height	803
9	Engine Bottom Height	205
10	Engine and Gearbox Width	850
11	Front Bumper - Engine Distance	475
12	Front Shock Absorber Fixing Height	823
13	Bonnet Leading Edge Height	649
14	Front Shock Absorber Fixing Width	1105
15	Front Bumper - Front Axle Distance	760
16	Front Axle - A Pillar Distance	516
17	A Pillar - B Pillar Distance	980
18	B Pillar - Rear Axle Distance	1095
19	B Pillar - C Pillar Distance	872
20	Roof Sill Bottom Height	1388
21	Roof Sill Top Height	1368
22	Floor Sill Bottom Height	308
23	Floor Sill Top Height	323

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

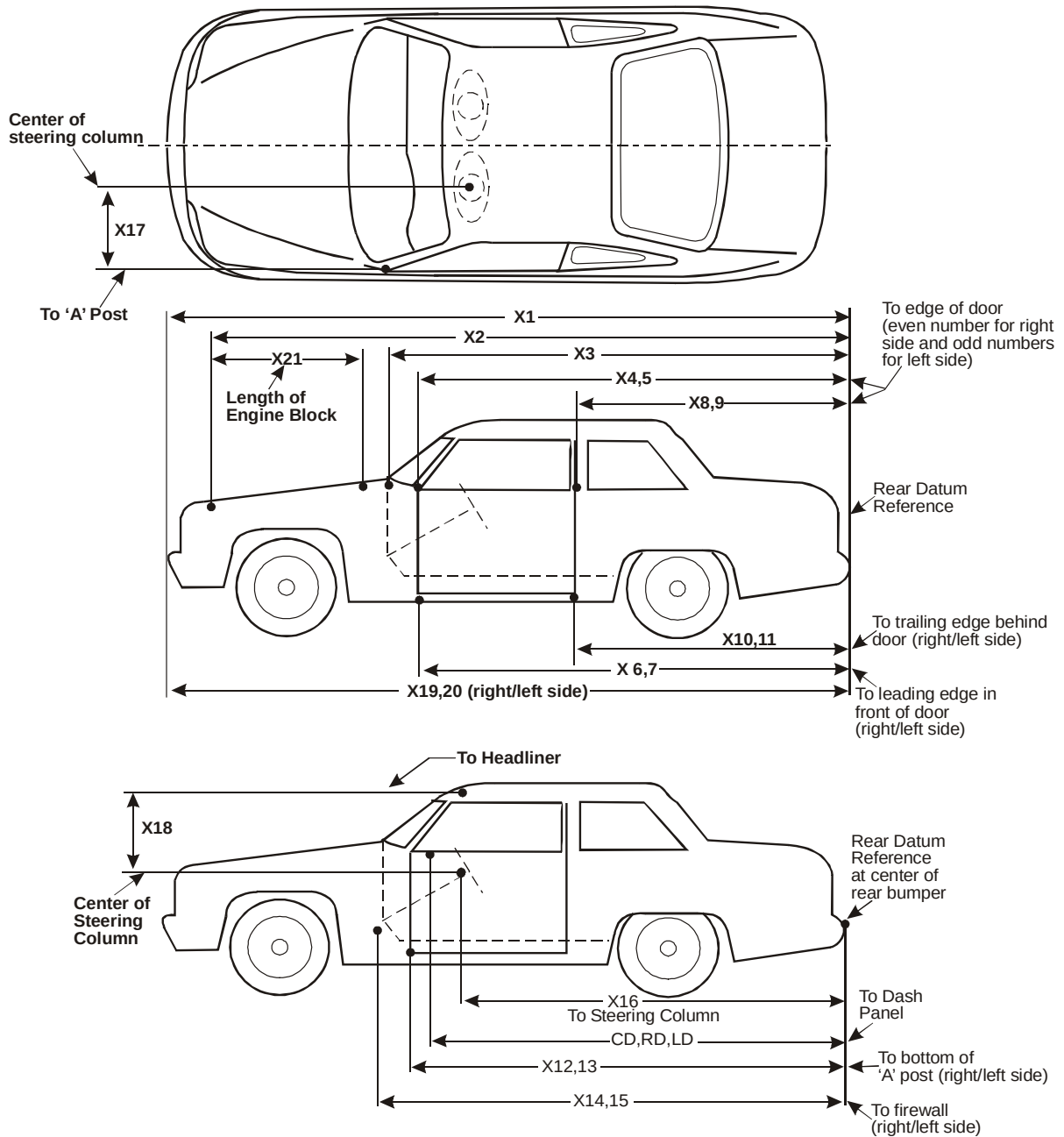


Table 15 Target Vehicle Impacted Measurements

Test number: 060317

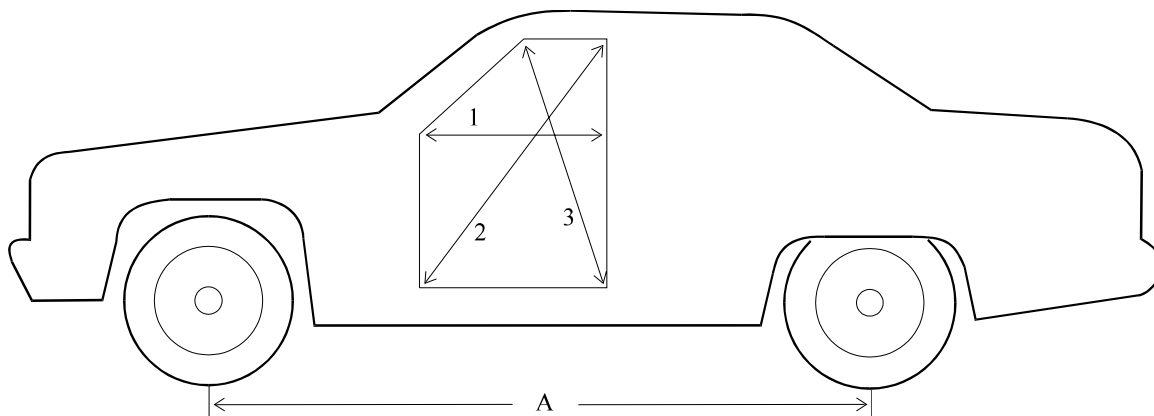
Vehicle year/make/model/body style: 2002/Ford/Focus SE/4-door

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4310	3571	739
X2	Rear Surface of Vehicle to Front of Engine Block	3825	3354	471
X3	Rear Surface of Vehicle to Firewall	3402	3166	236
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3072	2990	82
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3066	3010	56
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3034	2961	73
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3028	3089	-61
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2057	2012	45
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2050	1994	56
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2057	1992	65
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2050	2025	25
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3021	2918	103
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3008	2915	93
X14	Rear Surface of Vehicle to Firewall - Right Side	3456	3166	290
X15	Rear Surface of Vehicle to Firewall - Left Side	3465	3182	283
X16	Rear Surface of Vehicle to Steering Wheel Center	2620	2477	143
X17	Center of Steering Column to " A " Post	290	244	46
X18	Center of Steering Column to Headliner	425	501	-76
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4300	3808	492
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4300	3595	705
X21	Length of Engine Block	510	510	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2852	2692	160
CD	Rear Surface of Vehicle to Center of Dash Panel	2916	2731	185
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2855	2686	169

All distance measurements are in millimeters.

Figure 10 Target Vehicle Intrusion Measurements

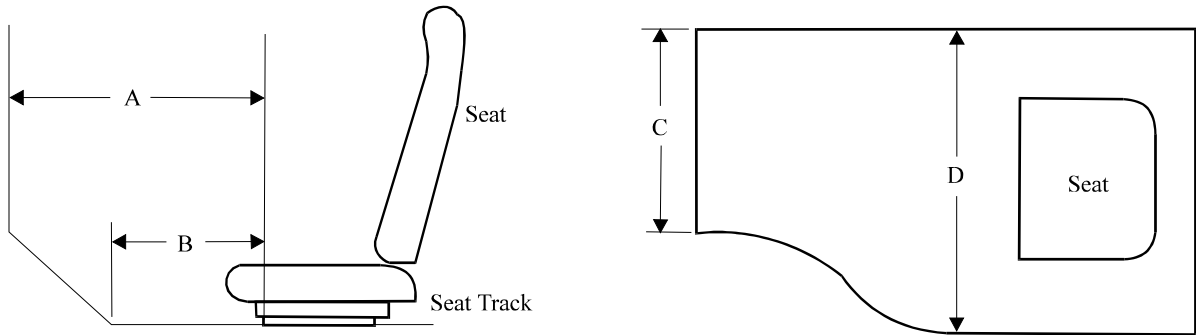
Door Opening Width



Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	900 mm	1396 mm	999 mm	903 mm	1393 mm	996 mm
Post-Test	808 mm	1338 mm	1118 mm	798 mm	1308 mm	1098 mm
Difference	92 mm	58 mm	-119 mm	105 mm	85 mm	-102 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	2620 mm	2620 mm
Post-Test	2409 mm	2363 mm
Difference	211 mm	257 mm

Figure 11 Target Vehicle Intrusion Measurements
Static Footwell Deformation



Driver's Side

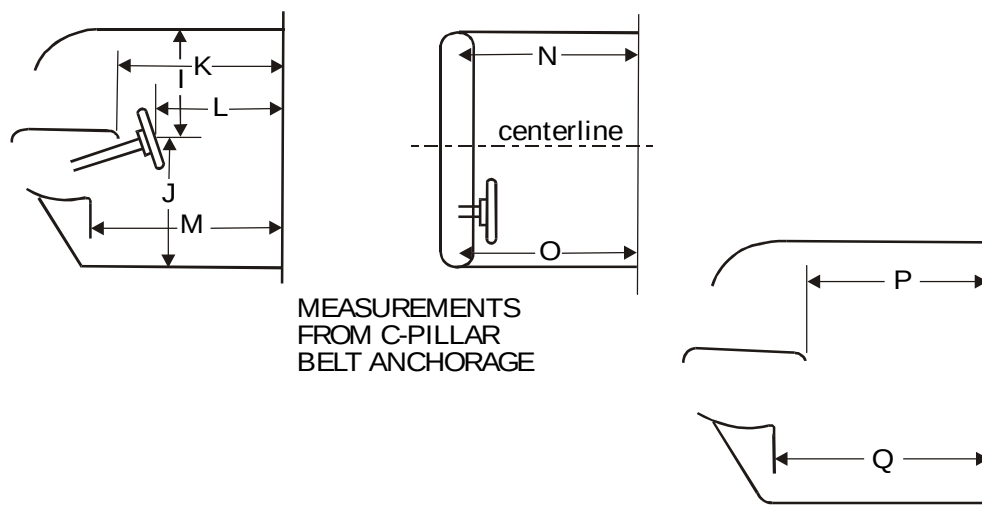
Measurement	Pre-Test	Post-Test	Difference
A	612 mm	535 mm	77 mm
B	469 mm	372 mm	97 mm
C	470 mm	461 mm	9 mm
D	475 mm	463 mm	12 mm

Passenger's Side

Measurement	Pre-Test	Post-Test	Difference
A	623 mm	550 mm	73 mm
B	460 mm	360 mm	100 mm
C	475 mm	475 mm	0 mm
D	475 mm	474 mm	1 mm

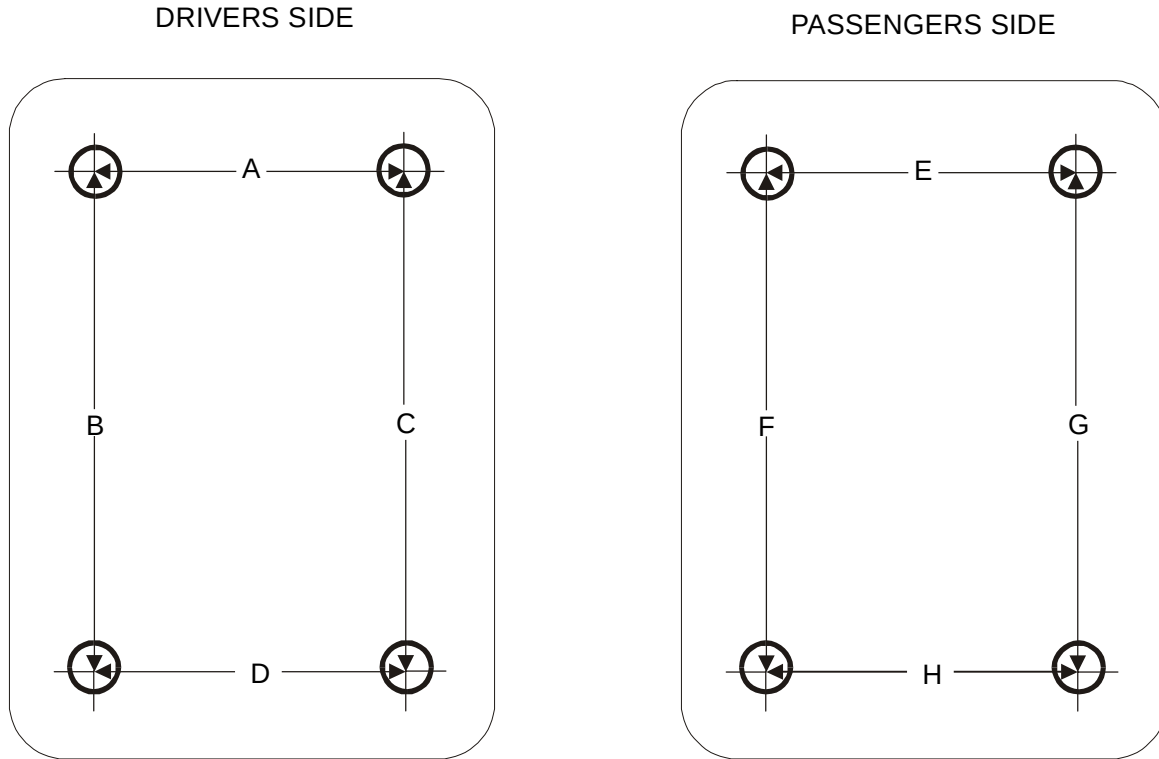
Figure 12 Target Vehicle Intrusion Measurements

Static Passenger Compartment Intrusion



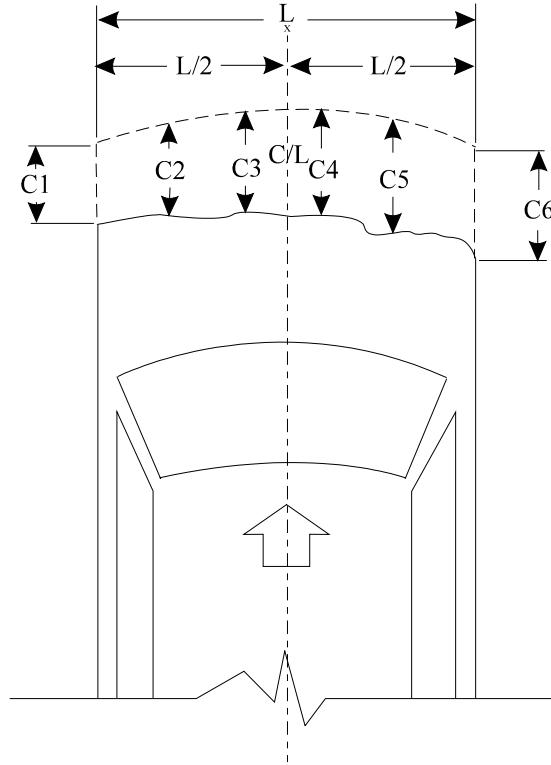
Measurement	Pre-Test	Post-Test	Difference
I	425 mm	501 mm	-76 mm
J	725 mm	812 mm	-87 mm
K (driver's side)	1874 mm	1718 mm	156 mm
L	1672 mm	1568 mm	104 mm
M (driver's side)	1990 mm	1840 mm	150 mm
N (passenger's side)	1940 mm	1765 mm	175 mm
O (driver's side)	1880 mm	1730 mm	150 mm
P (passenger's side)	1875 mm	1719 mm	156 mm
Q (passenger's side)	1994 mm	1800 mm	194 mm

Figure 13 Target Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	612 mm	461 mm	151 mm
B	401 mm	400 mm	1 mm
C	400 mm	400 mm	0 mm
D	475 mm	463 mm	12 mm
E	475 mm	475 mm	0 mm
F	375 mm	369 mm	6 mm
G	390 mm	405 mm	-15 mm
H	475 mm	474 mm	1 mm

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	1230 mm		
C1	4300 mm	3595 mm	705 mm
C2	4315 mm	3567 mm	748 mm
C3	4320 mm	3553 mm	767 mm
C4	4320 mm	3623 mm	697 mm
C5	4315 mm	3735 mm	580 mm
C6	4300 mm	3808 mm	492 mm
CL	4310 mm	3571 mm	739 mm

Table 16 Target 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	4300	-615	-380	3467	-610	-593	833	5	-213
2	4315	-373	-385	3490	-381	-576	825	-8	-191
3	4320	-124	-385	3516	-130	-555	804	-6	-170
4	4320	123	-385	3570	100	-530	750	23	-145
5	4315	370	-385	3648	350	-531	667	20	-146
6	4300	611	-387	3672	565	-626	628	46	-239

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	4300	-613	-532	3595	-595	-682	705	18	-150
2	4315	-372	-535	3567	-366	-664	748	6	-129
3	4320	-123	-535	3553	-120	-685	767	3	-150
4	4320	123	-537	3623	96	-669	697	27	-132
5	4315	370	-537	3735	307	-645	580	63	-108
6	4300	611	-540	3808	483	-660	492	128	-120

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	4255	-627	-610	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²
2	4330	-374	-594	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²
3	4320	-124	-597	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²
4	4330	124	-595	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²
5	4320	375	-595	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²
6	4255	622	-610	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²	N/A ²

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	4014	-625	-763	3686	-584	-1060	328	41	-297
2	4295	-373	-643	3684	-364	-742	611	9	-99
3	4305	-125	-660	3659	-114	-727	646	11	-67
4	4310	125	-660	3700	126	-722	610	-1	-62
5	4300	372	-645	3750	374	-714	550	-2	-69
6	4020	624	-770	3660	633	-987	360	-9	-217

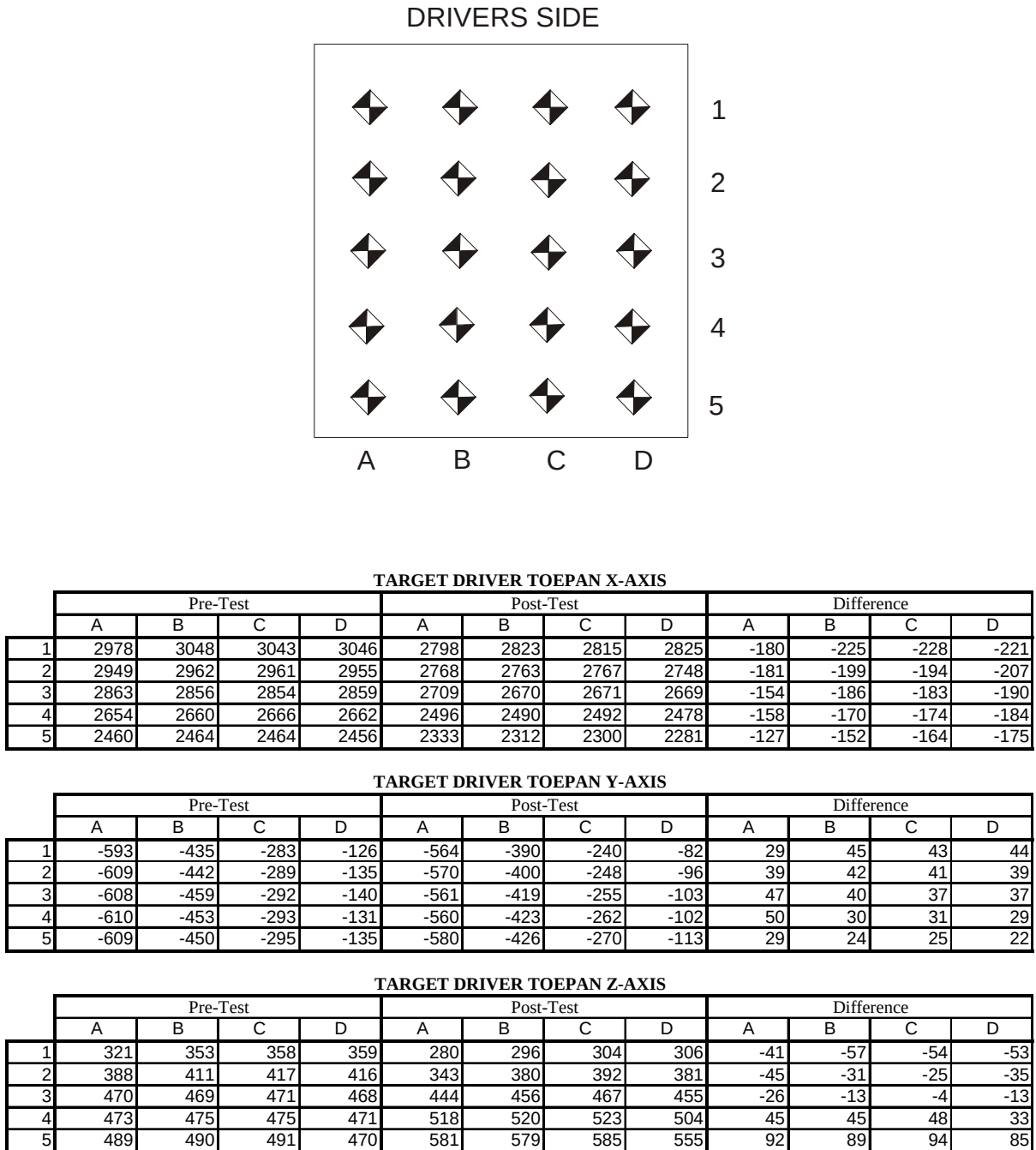
Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.

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.

² Measurement point could not be located post-test.

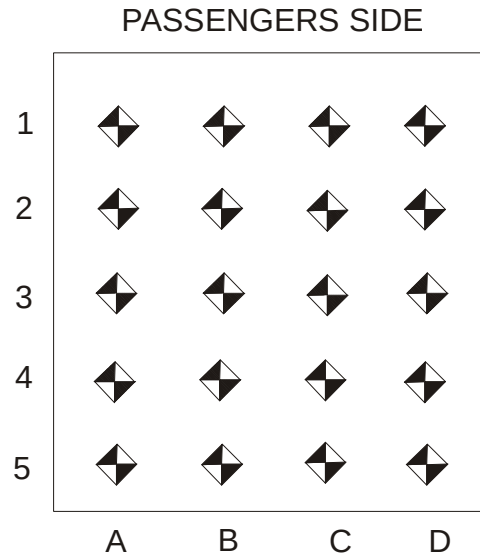
Figure 15 Target Vehicle Toeboard Measurements



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	3086	3111	3104	3003	3549	2828	2810	2749	463	-283	-294	-254
2	3015	3000	2990	2963	2778	2754	2745	2726	-237	-246	-245	-237
3	2830	2837	2840	2842	2623	2621	2615	2631	-207	-216	-225	-211
4	2643	2645	2648	2654	2440	2437	2431	2439	-203	-208	-217	-215
5	2455	2457	2455	2453	2267	2259	2247	2262	-188	-198	-208	-191

TARGET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	256	372	493	600	582	388	505	637	326	16	12	37
2	210	336	463	608	233	356	484	641	23	20	21	33
3	154	312	469	632	177	334	489	650	23	22	20	18
4	160	307	469	633	175	324	482	627	15	17	13	-6
5	148	300	464	622	153	304	472	629	5	4	8	7

TARGET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	286	276	266	257	-104	224	208	220	-390	-52	-58	-37
2	375	386	392	356	351	361	364	318	-24	-25	-28	-38
3	467	472	471	471	481	488	474	454	14	16	3	-17
4	467	475	476	471	527	540	530	519	60	65	54	48
5	471	491	491	490	574	595	591	588	103	104	100	98

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	2432	-336	-234	2320	-341	-265	-112	-5	-31
2	Driver's Lower Left Instrument Panel	2679	-486	15	2556	-477	-45	-123	9	-60
3	Driver's Lower Right Instrument Panel	2664	-185	15	2513	-180	-31	-151	5	-46
4	Brake Pedal Center	2903	-321	270	2624	-324	203	-279	-3	-67
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3111	-472	268	2850	-419	191	-261	53	-77
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3115	-321	270	2850	-272	195	-265	49	-75
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	3006	-570	271	2791	-544	223	-215	26	-48
9	Left Front Driver's Seat Mounting Bolt	2397	-590	399	2335	-537	476	-62	53	77
10	Right Front Driver's Seat Mounting Bolt	2387	-137	379	2250	-106	473	-137	31	94
11	Left Rear Driver's Seat Mounting Bolt	2010	-625	414	1972	-627	411	-38	-2	-3
12	Right Rear Driver's Seat Mounting Bolt	1959	-102	413	1825	-118	429	-134	-16	16
17	Exterior A-Pillar at Height of Bottom of Front Window	2815	-691	-247	2728	-684	-272	-87	7	-25
18	Exterior B-pillar at Height of A-Pillar Measurement Location	1855	-733	-247	1853	-726	-242	-2	7	5

Table 18 Target Vehicle Bumper Measurements

TARGET BUMPER PROFILE

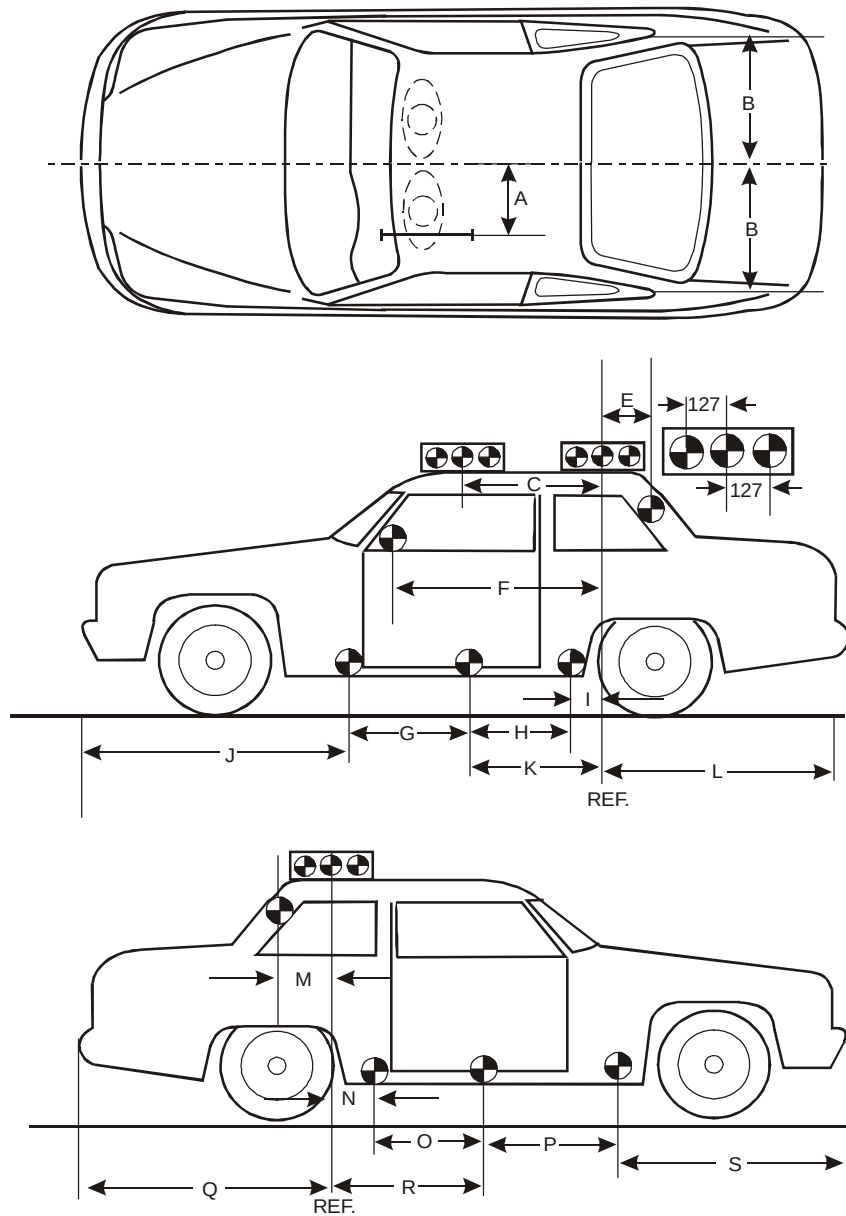
Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4128	-603	223	1972	-627	411	-2156	-24	188
2	4150	-487	223	3339	-569	-49	-811	-82	-272
3	4151	-364	223	3339	-449	-49	-812	-85	-272
4	4151	-235	224	3327	-327	-53	-824	-92	-277
5	4151	-116	224	3325	-198	-50	-826	-82	-274
6	4151	8	223	3337	-80	-44	-814	-88	-267
7	4151	131	223	3367	26	-37	-784	-105	-260
8	4151	254	223	3413	139	-31	-738	-115	-254
9	4152	377	223	3449	253	-30	-703	-124	-253
10	4150	501	222	3499	364	-37	-651	-137	-259
11	4128	617	223	3544	474	-53	-584	-143	-276

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

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

Measurements taken to bumper beam.

Figure 16 Target Vehicle Reference Photo Target Locations



Measurement	Pre-Test	Measurement	Pre-Test	Measurement	Pre-Test
A	Left 320 mm Right 320 mm	F	1149 mm	M	499 mm
B	Left 615 mm Right 615 mm	G	888 mm	N	-262 mm
C	Left 610 mm Right 610 mm	H	881 mm	O	884 mm
E	520 mm	I	-290 mm	P	895 mm
		J	1176 mm	Q	1620 mm
		K	594 mm	R	620 mm
		L	1642 mm	S	1165 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	5066
2	Total Width	1960
3	Bumper Top Height	488
4	Bumper Bottom Height	402
5	Longitudinal Member Top Height	490
6	Longitudinal Member Bottom Height	398
7	Distance Between Longitudinal Members	1257
7'	Longitudinal Member Width	140
8	Engine Top Height	844
9	Engine Bottom Height	171
10	Engine and Gearbox Width	900
11	Front Bumper - Engine Distance	400
12	Front Shock Absorber Fixing Height	942
13	Bonnet Leading Edge Height	805
14	Front Shock Absorber Fixing Width	1320
15	Front Bumper - Front Axle Distance	885
16	Front Axle - A Pillar Distance	470
17	A Pillar - B Pillar Distance	1080
18	B Pillar - Rear Axle Distance	1460
19	B Pillar - C Pillar Distance	1000
20	Roof Sill Bottom Height	1524
21	Roof Sill Top Height	1579
22	Floor Sill Bottom Height	316
23	Floor Sill Top Height	359

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

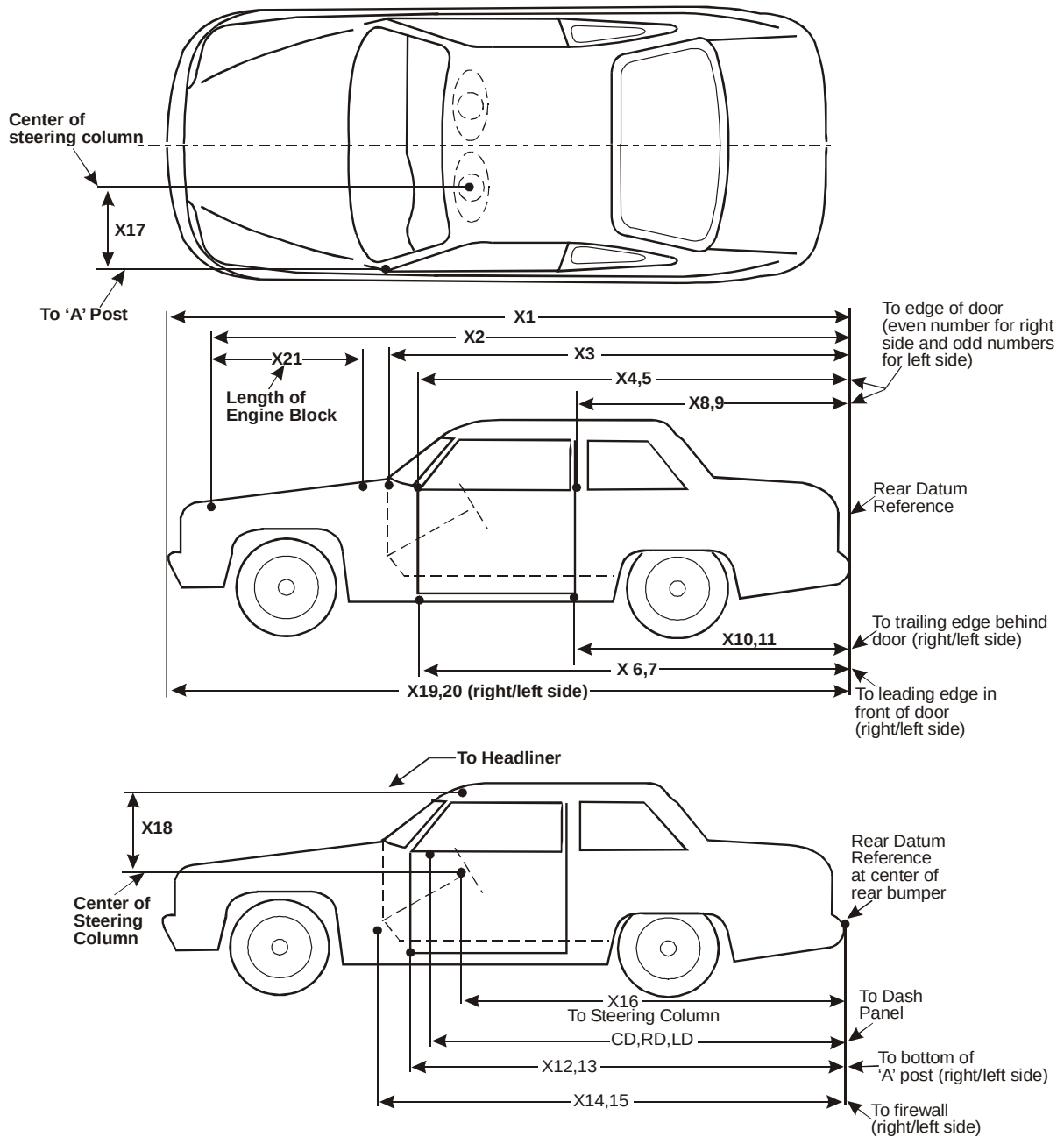


Table 20 Bullet Vehicle Impacted Measurements

Test number: 060317

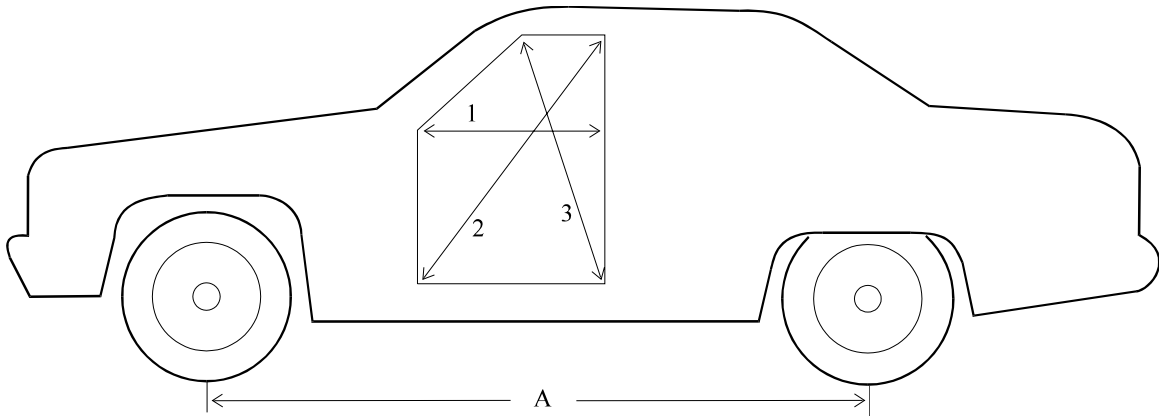
Vehicle year/make/model/body style: 2005/Honda/Odyssey/MPV

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5066	4548	518
X2	Rear Surface of Vehicle to Front of Engine Block	4571	4261	310
X3	Rear Surface of Vehicle to Firewall	4219	4184	35
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3666	3671	-5
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3671	3710	-39
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3634	3651	-17
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3641	3667	-26
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2646	2646	0
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2643	2682	-39
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2646	2661	-15
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2648	2676	-28
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3751	3669	82
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3666	3675	-9
X14	Rear Surface of Vehicle to Firewall - Right Side	4249	4232	17
X15	Rear Surface of Vehicle to Firewall - Left Side	4257	4246	11
X16	Rear Surface of Vehicle to Steering Wheel Center	3309	3272	37
X17	Center of Steering Column to " A " Post	310	334	-24
X18	Center of Steering Column to Headliner	440	448	-8
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4937	4770	167
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4937	4792	145
X21	Length of Engine Block	400	400	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3586	3579	7
CD	Rear Surface of Vehicle to Center of Dash Panel	3556	3501	55
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3591	3605	-14

All distance measurements are in millimeters.

Figure 18 Bullet Vehicle Intrusion Measurements

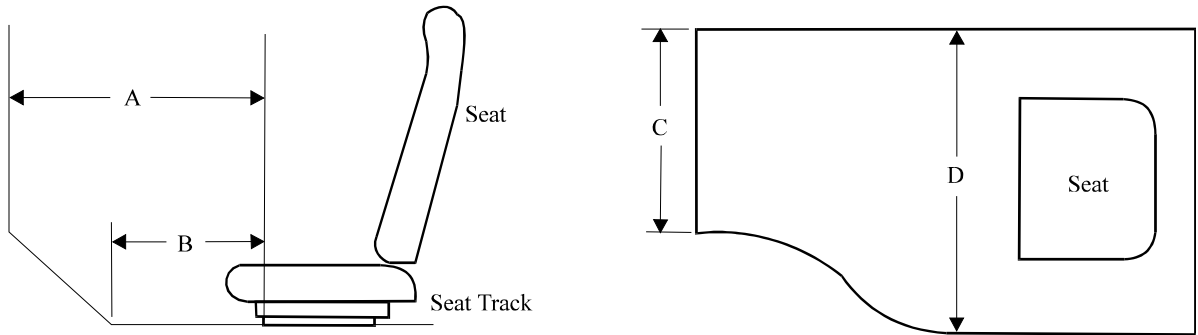
Door Opening Width



Units (mm)	Left			Right		
Measurement	1	2	3	1	2	3
Pre-Test	990 mm	1570 mm	1258 mm	990 mm	1575 mm	1250 mm
Post-Test	991 mm	1578 mm	1256 mm	992 mm	1578 mm	1254 mm
Difference	-1 mm	-8 mm	2 mm	-2 mm	-3 mm	-4 mm

Units (mm)	A = Wheelbase Left	A = Wheelbase Right
Pre-Test	3000 mm	3000 mm
Post-Test	2961 mm	2911 mm
Difference	39 mm	89 mm

Figure 19 Bullet Vehicle Intrusion Measurements
Static Footwell Deformation



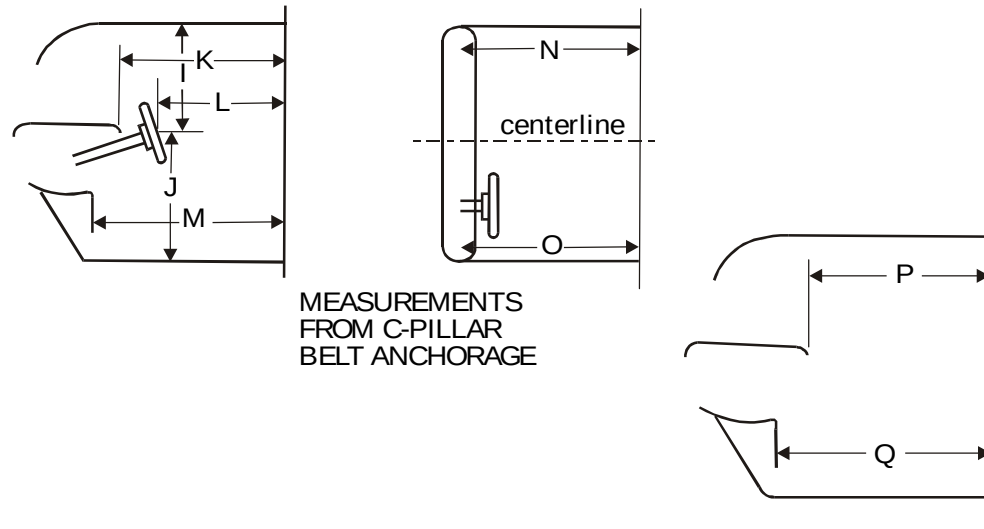
Driver's Side

Measurement	Pre-Test	Post-Test	Difference
A	630 mm	597 mm	33 mm
B	525 mm	522 mm	3 mm
C	480 mm	483 mm	-3 mm
D	430 mm	425 mm	5 mm

Passenger's Side

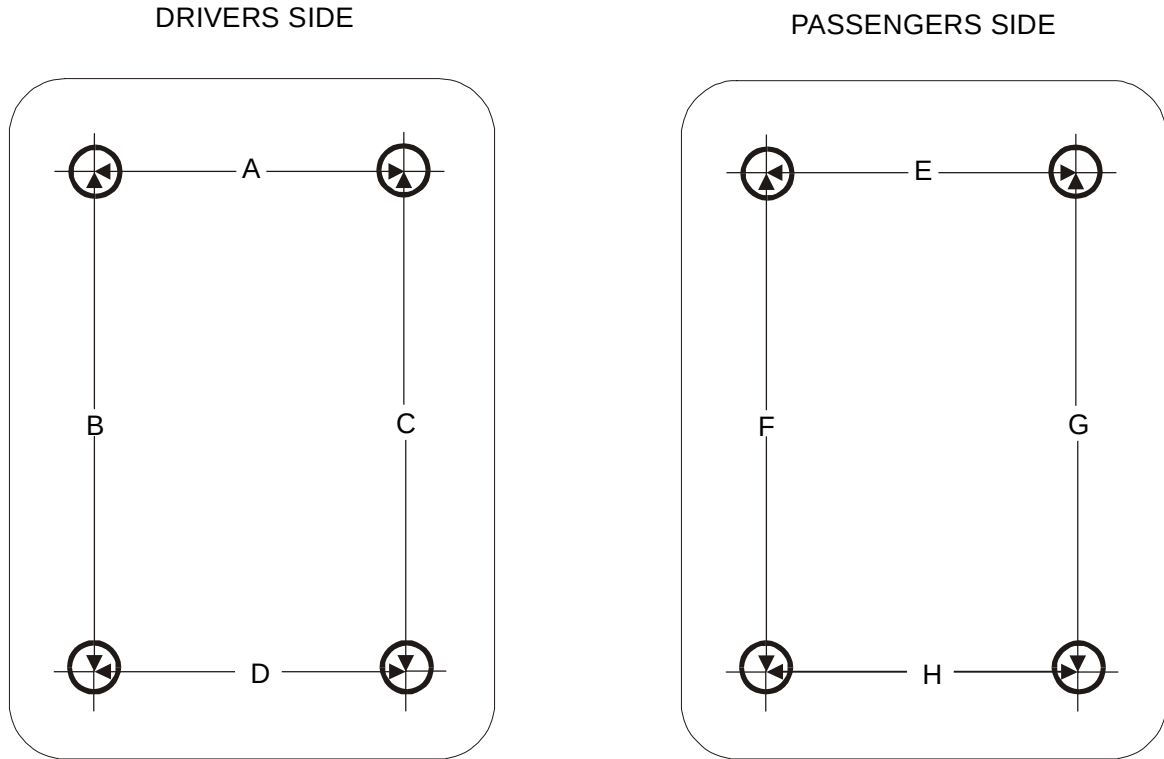
Measurement	Pre-Test	Post-Test	Difference
A	670 mm	630 mm	40 mm
B	530 mm	510 mm	20 mm
C	410 mm	409 mm	1 mm
D	435 mm	429 mm	6 mm

Figure 20 Bullet Vehicle Intrusion Measurements
Static Passenger Compartment Intrusion



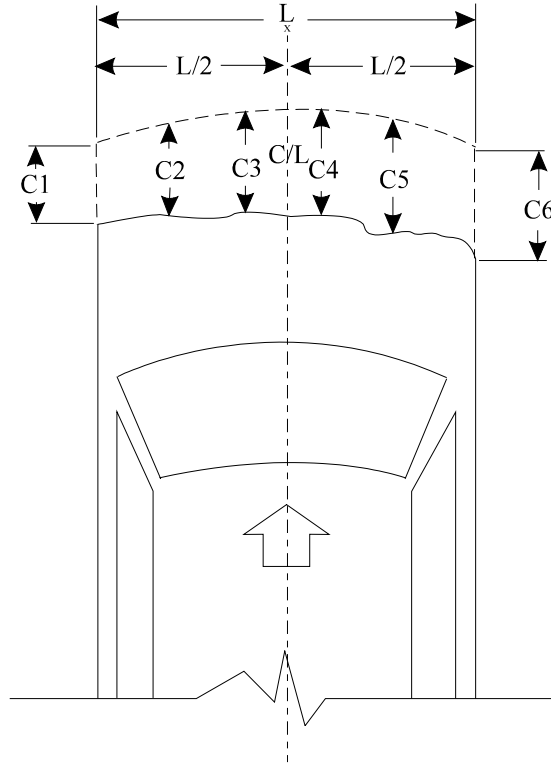
Measurement	Pre-Test	Post-Test	Difference
I	435 mm	426 mm	9 mm
J	740 mm	771 mm	-31 mm
K (driver's side)	1954 mm	1952 mm	2 mm
L	1715 mm	1710 mm	5 mm
M (driver's side)	1947 mm	1945 mm	2 mm
N (passenger's side)	1977 mm	1974 mm	3 mm
O (driver's side)	1950 mm	1939 mm	11 mm
P (passenger's side)	1952 mm	1943 mm	9 mm
Q (passenger's side)	1940 mm	1941 mm	-1 mm

Figure 21 Bullet Vehicle Floorboard Deformation



Measurement	Pre-Test	Post-Test	Difference
A	480 mm	483 mm	-3 mm
B	468 mm	457 mm	11 mm
C	486 mm	460 mm	26 mm
D	430 mm	425 mm	5 mm
E	410 mm	409 mm	1 mm
F	500 mm	469 mm	31 mm
G	495 mm	472 mm	23 mm
H	435 mm	429 mm	6 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: 2005 Honda Odyssey MPV
Measured without bumper fascia:

Location	Pre-test	Post-test	Difference
L	1340 mm		
C1	5581 mm	5436 mm	145 mm
C2	5642 mm	5131 mm	511 mm
C3	5717 mm	5158 mm	559 mm
C4	5715 mm	5207 mm	508 mm
C5	5643 mm	5197 mm	446 mm
C6	5573 mm	5414 mm	159 mm
CL	5710 mm	5192 mm	518 mm

Table 21 Bullet 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	4937	-668	-410	4823	-582	-320	114	86	90
2	4998	-400	-405	4530	-369	-516	468	31	-111
3	5073	-128	-410	4566	-126	-521	507	2	-111
4	5071	128	-405	4593	128	-564	478	0	-159
5	4999	398	-395	4598	390	-563	401	8	-168
6	4929	660	-405	4783	511	-429	146	149	-24

Top 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	4937	-665	-490	4792	-650	-395	145	15	95
2	4998	-400	-485	4487	-362	-628	511	38	-143
3	5073	-128	-495	4514	-121	-659	559	7	-164
4	5071	128	-495	4563	128	-630	508	0	-135
5	4999	397	-480	4553	395	-628	446	2	-148
6	4929	665	-485	4770	538	-460	159	127	25

Center of Grill

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	4879	-665	-612	4434	-525	-746	303	140	-134
2	4981	-355	-620	4344	-357	-664	423	-2	-44
3	5010	-125	-635	4541	-124	-757	410	1	-122
4	5031	125	-620	4539	130	-774	420	-5	-154
5	4976	355	-619	4462	377	-740	432	-22	-121
6	4881	675	-610	4420	599	-699	286	76	-89

Front of Hood

Pre-Test				Post-Test			Difference		
Index	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm	X, mm	Y, mm	Z, mm
1	4729	-650	-860	4426	-641	-1117	303	9	-257
2	4909	-697	-800	4486	-396	-981	423	301	-181
3	4951	-125	-810	4541	-125	-965	410	0	-155
4	4951	130	-802	4531	126	-973	420	4	-171
5	4914	390	-795	4482	386	-1000	432	4	-205
6	4729	663	-857	4443	665	-1160	286	-2	-303

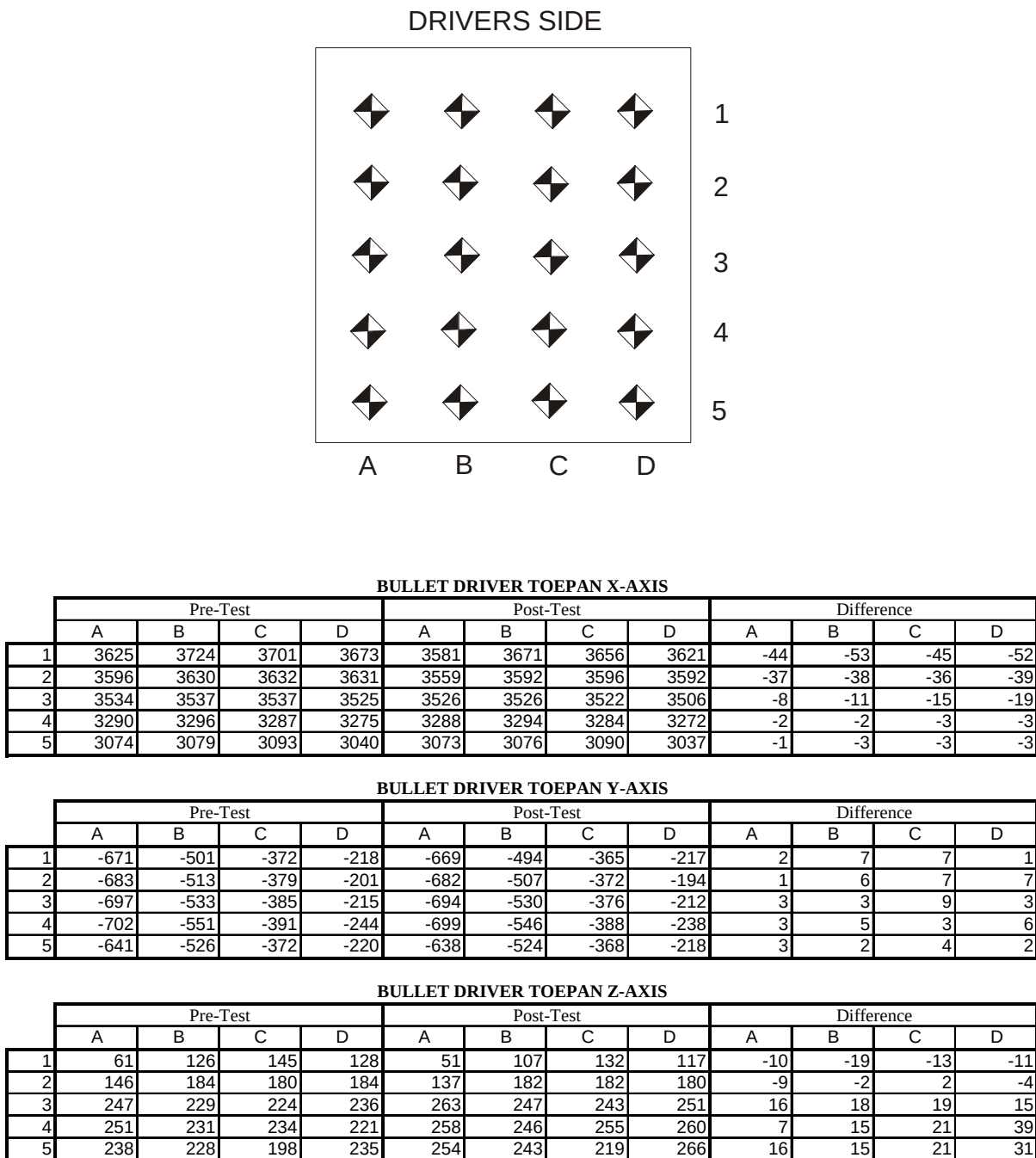
Pre-test and post-test measurement reference: +X forward; +Y right; +Z down.

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

¹ Measurements 2-5, Top of Front Bumper, are included in the NHTSA Entrée database submission as Damage Profile Distances 2-5.

² Measurement 1, 6, Center of Grill, is included in the NHTSA Entrée database submission as Damage Profile Distance 1, 6.

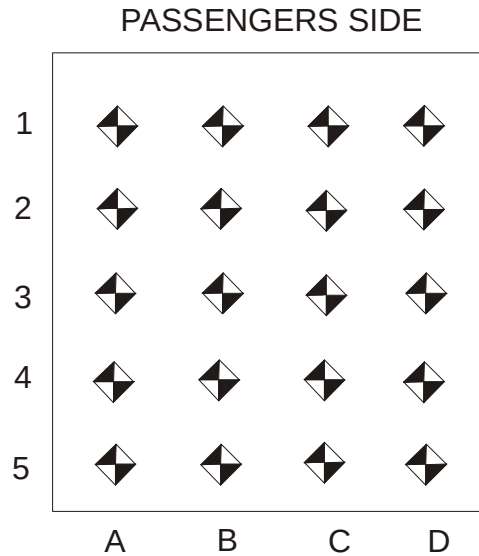
Figure 23 Bullet Vehicle Toeboard Measurements



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	3743	3763	3736	3650	3657	3665	3664	3598	-86	-98	-72	-52
2	3653	3651	3659	3616	3607	3612	3617	3573	-46	-39	-42	-43
3	3538	3533	3536	3538	3505	3507	3513	3520	-33	-26	-23	-18
4	3307	3307	3297	3280	3285	3286	3279	3274	-22	-21	-18	-6
5	3037	3053	3056	3049	3036	3041	3044	3045	-1	-12	-12	-4

BULLET PASSENGER TOEPAN Y-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	245	395	526	640	242	390	509	640	-3	-5	-17	0
2	236	384	501	641	231	379	495	640	-5	-5	-6	-1
3	230	384	503	637	230	381	502	636	0	-3	-1	-1
4	232	374	498	647	236	376	498	645	4	2	0	-2
5	209	427	518	637	211	424	519	640	2	-3	1	3

BULLET PASSENGER TOEPAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	95	91	78	46	54	57	39	24	-41	-34	-39	-22
2	171	172	171	138	160	163	155	118	-11	-9	-16	-20
3	237	225	226	242	245	216	225	247	8	-9	-1	5
4	234	234	227	244	247	239	223	251	13	5	-4	7
5	236	233	228	243	275	260	269	274	39	27	41	31

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	3127	-427	-507	3113	-431	-523	-14	-4	-16
2	Driver's Lower Left Instrument Panel	3313	-577	-251	3311	-579	-254	-2	-2	-3
3	Driver's Lower Right Instrument Panel	3308	-277	-251	3300	-279	-254	-8	-2	-3
4	Brake Pedal Center	3562	-414	49	3487	-460	25	-75	-46	-24
5	Center Left Toeboard 150 mm Left of the Brake Pedal Center at Height of Brake Pedal Center	3719	-563	39	3652	-550	15	-67	13	-24
6	Toeboard Behind the Center of the Brake Pedal at Height of Brake Pedal	3787	-414	49	3716	-408	18	-71	6	-31
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	3637	-663	45	3589	-660	34	-48	3	-11
9	Left Front Driver's Seat Mounting Bolt	3010	-640	217	3008	-641	234	-2	-1	17
10	Right Front Driver's Seat Mounting Bolt	3011	-212	218	3009	-210	250	-2	2	32
11	Left Rear Driver's Seat Mounting Bolt	2659	-642	193	2658	-640	202	-1	2	9
12	Right Rear Driver's Seat Mounting Bolt	2658	-210	195	2659	-210	209	1	0	14
17	Exterior A-Pillar at Height of Bottom of Front Window	3486	-835	-490	3483	-840	-486	-3	-5	4
18	Exterior B-pillar at Height of A-Pillar Measurement Location	2491	-843	-489	2491	-842	-485	0	1	4

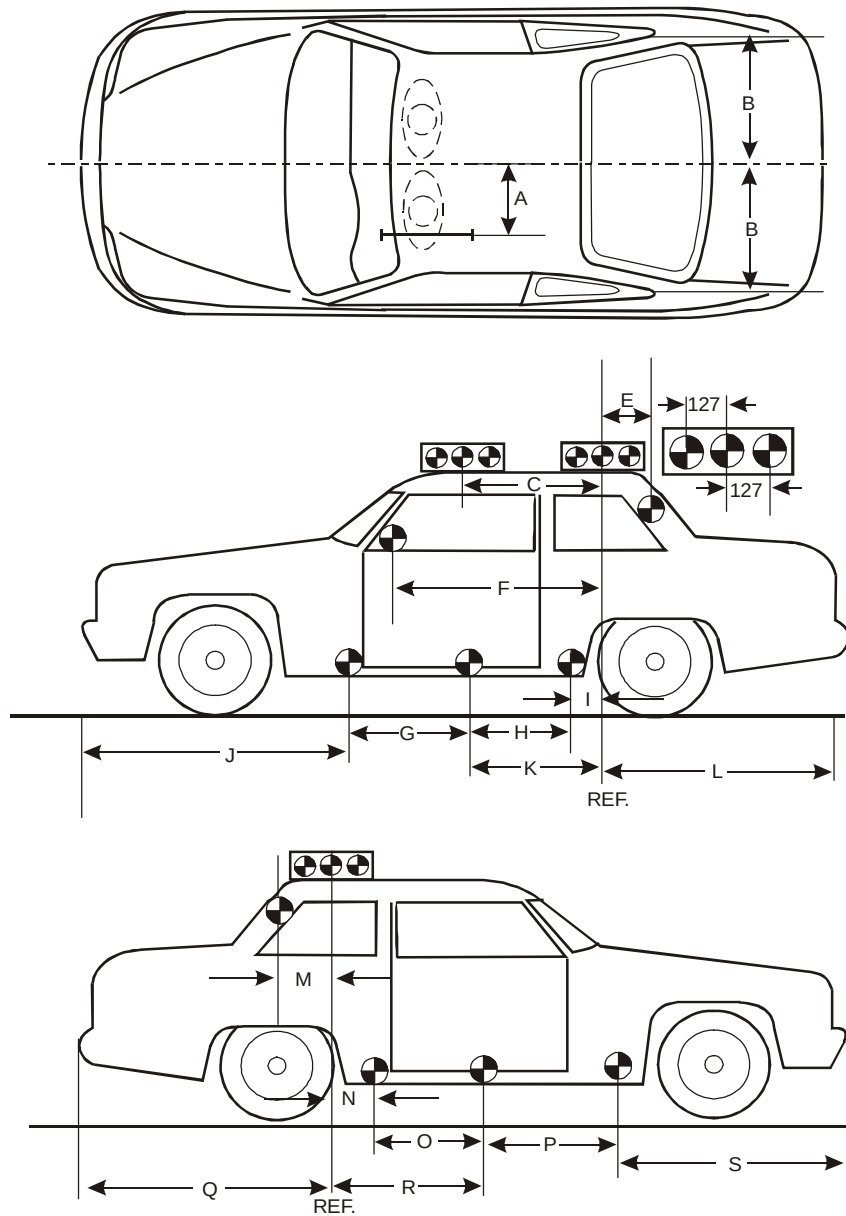
Table 23 Bullet Vehicle Bumper Measurements

BULLET BUMPER PROFILE									
Pre-Test				Post-Test			Difference		
Index	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm	Xmm	Ymm	Zmm
1	4764	-654	100	4589	-636	166	-175	18	66
2	4804	-526	102	4540	-515	161	-264	11	59
3	4837	-395	102	4292	-354	-16	-545	41	-118
4	4860	-260	101	4298	-217	-12	-562	43	-113
5	4900	-129	104	4319	-116	-43	-581	13	-147
6	4905	-3	104	4349	5	-62	-556	8	-166
7	4898	126	103	4368	132	-75	-530	6	-178
8	4858	256	100	4362	268	-71	-496	12	-171
9	4835	388	100	4360	401	-76	-475	13	-176
10	4802	519	99	4467	529	22	-335	10	-77
11	4763	645	98	4572	583	79	-191	-62	-19

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 445 mm Right 445 mm	F	1200 mm	M	768 mm
B	Left 635 mm Right 632 mm	G	1030 mm	N	-682 mm
C	Left 610 mm Right 610 mm	H	1045 mm	O	1040 mm
E	744 mm	I	-650 mm	P	1037 mm
		J	1231 mm	Q	2306 mm
		K	400 mm	R	360 mm
		L	2276 mm	S	1226 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

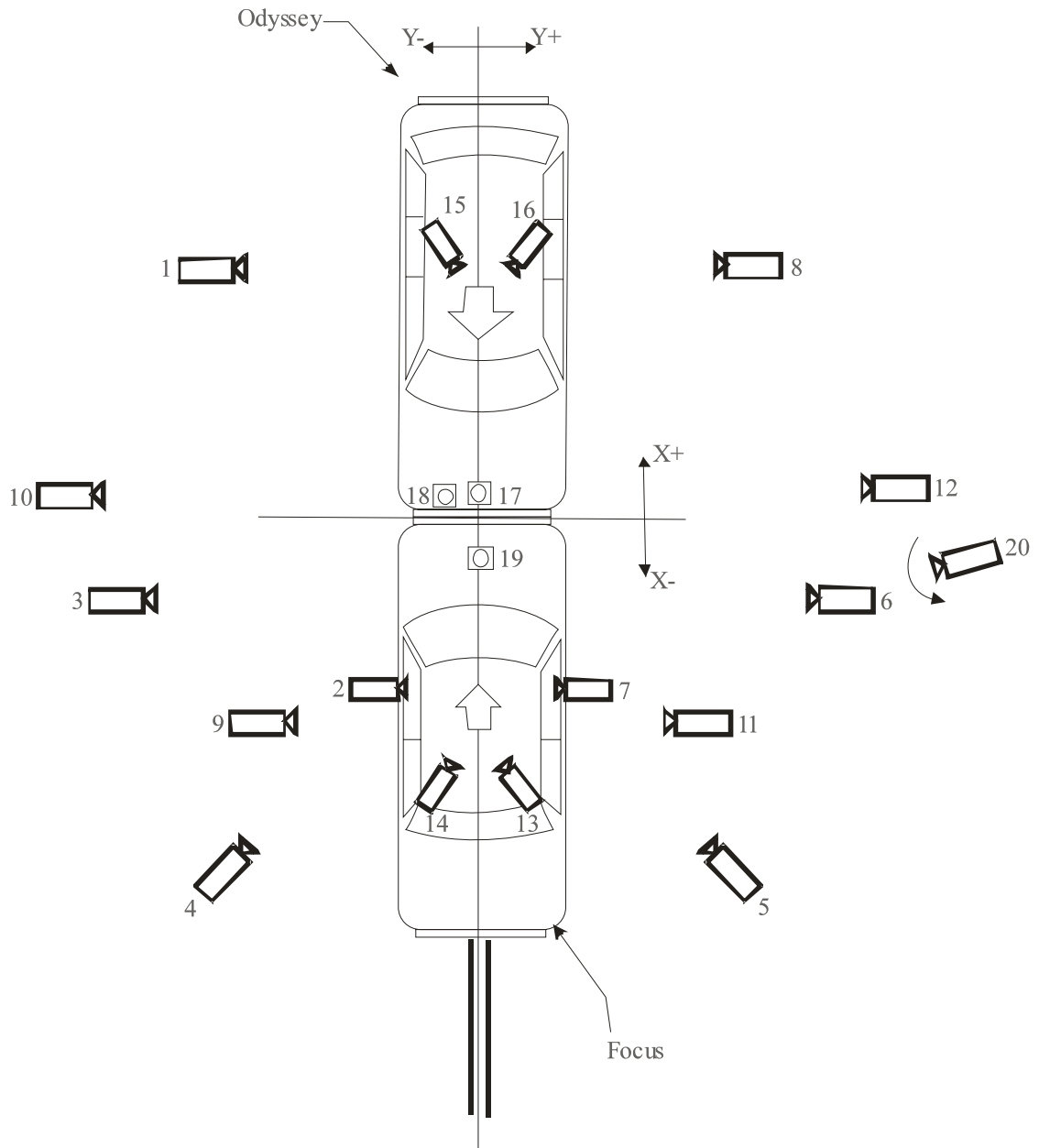


Table 24 Camera Information¹

Camera Number	Location	Location, mm			Angle (deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Bullet vehicle passenger side	2400	-10700	-1000	-1.2°	25	1000
2	Onboard target vehicle - driver	-800	-1800	-1100	-19.2°	6.5	1000
3	Target vehicle left tight	-300	-8000	-800	0.7°	50	1000
4	Target vehicle driver angled	-6200	-2400	-1700	-8.2°	50	1000
5	Target vehicle passenger angled	-5300	4200	-1700	-7.1°	50	1000
6	Target vehicle right tight	-400	8000	-900	-1.8°	50	1000
7	Onboard target vehicle - passenger	-750	1760	-1080	-9.4°	6.5	1000
8	Bullet vehicle driver side	1600	11400	-1000	-0.9°	25	1000
9	Target vehicle driver side wide	-200	-10500	-1030	-2.0°	25	1000
10	Left overall wide (reference to target vehicle)	0	-8900	-1400	1.8°	12.5	1000
11	Target vehicle passenger side wide	-900	9400	-1000	-3.2°	25	1000
12	Right overall wide (reference to target vehicle)	0	9100	-1100	-2.0°	12.5	1000
13	Onboard target vehicle - driver over shoulder	-3860	270	-1040	-7.0°	12.5	1000
14	Onboard target vehicle - passenger over shoulder	-2760	-300	-1000	-2.1°	12.5	1000
15	Onboard bullet vehicle - driver over shoulder	N/A	N/A	N/A	N/A	13	1000
16	Onboard bullet vehicle - passenger over shoulder	N/A	N/A	N/A	N/A	13	1000
17	Overhead wide	0	0	N/A	-90.0°	10	1000
18	Overhead tight	0	0	N/A	-90.0°	50	1000
19	Underbody crush area of target vehicle	0	0	N/A	-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

¹ Camera location measurements were not recorded prior to test. Reported locations were taken from a previous test performed March 10, 2006.

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

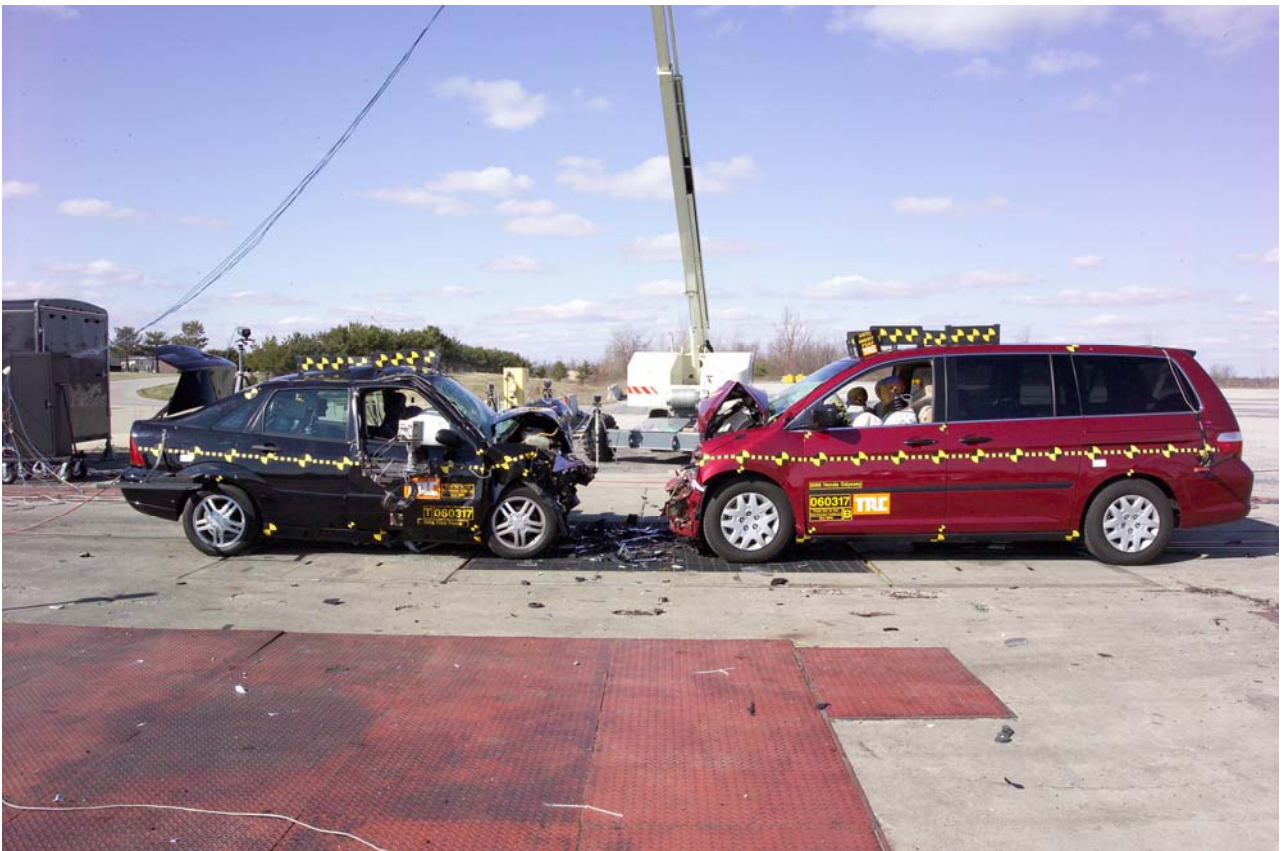


Figure A-4 Post-Test Overall - View 2



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



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

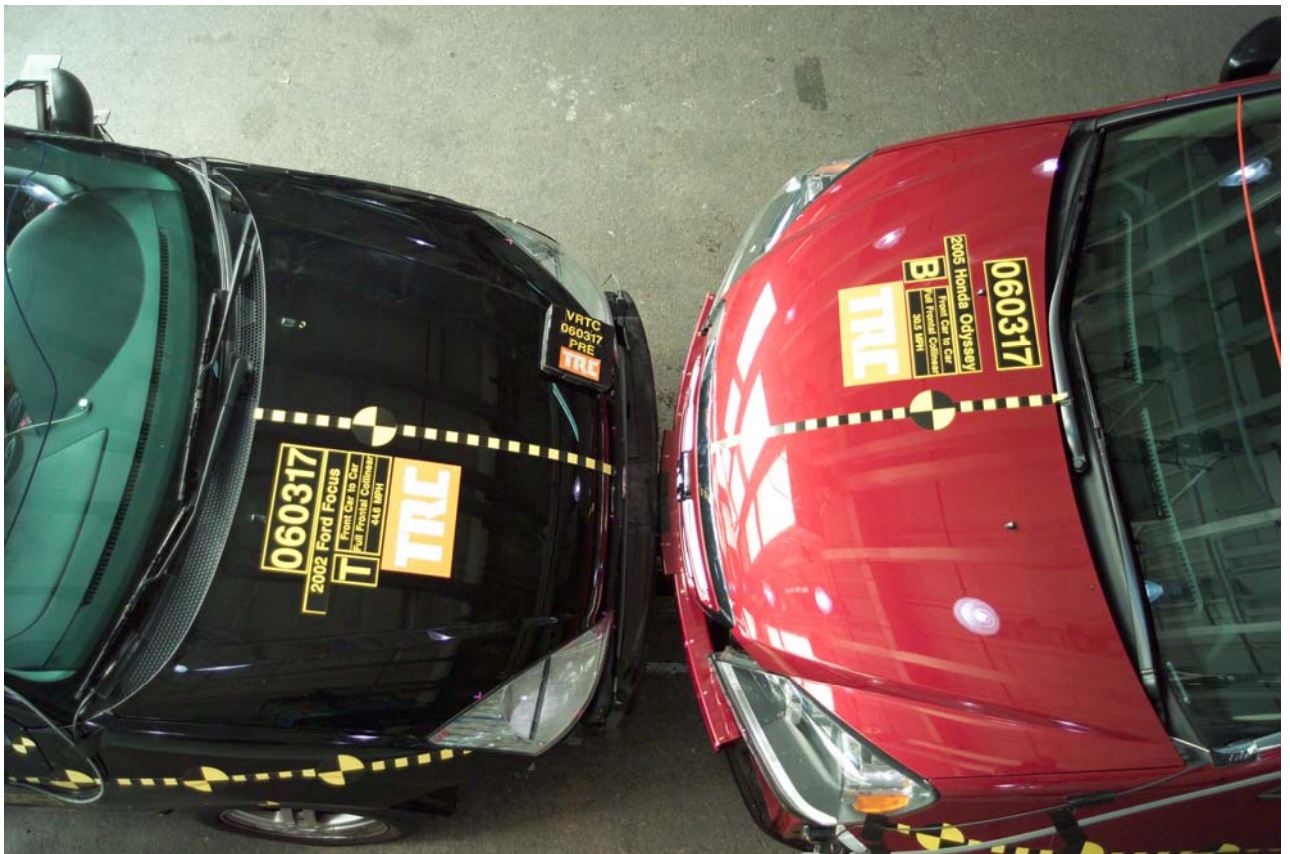


Figure A-7 Pre-Test Overhead Wide View



Figure A-8 Post-Test Overhead Wide View



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

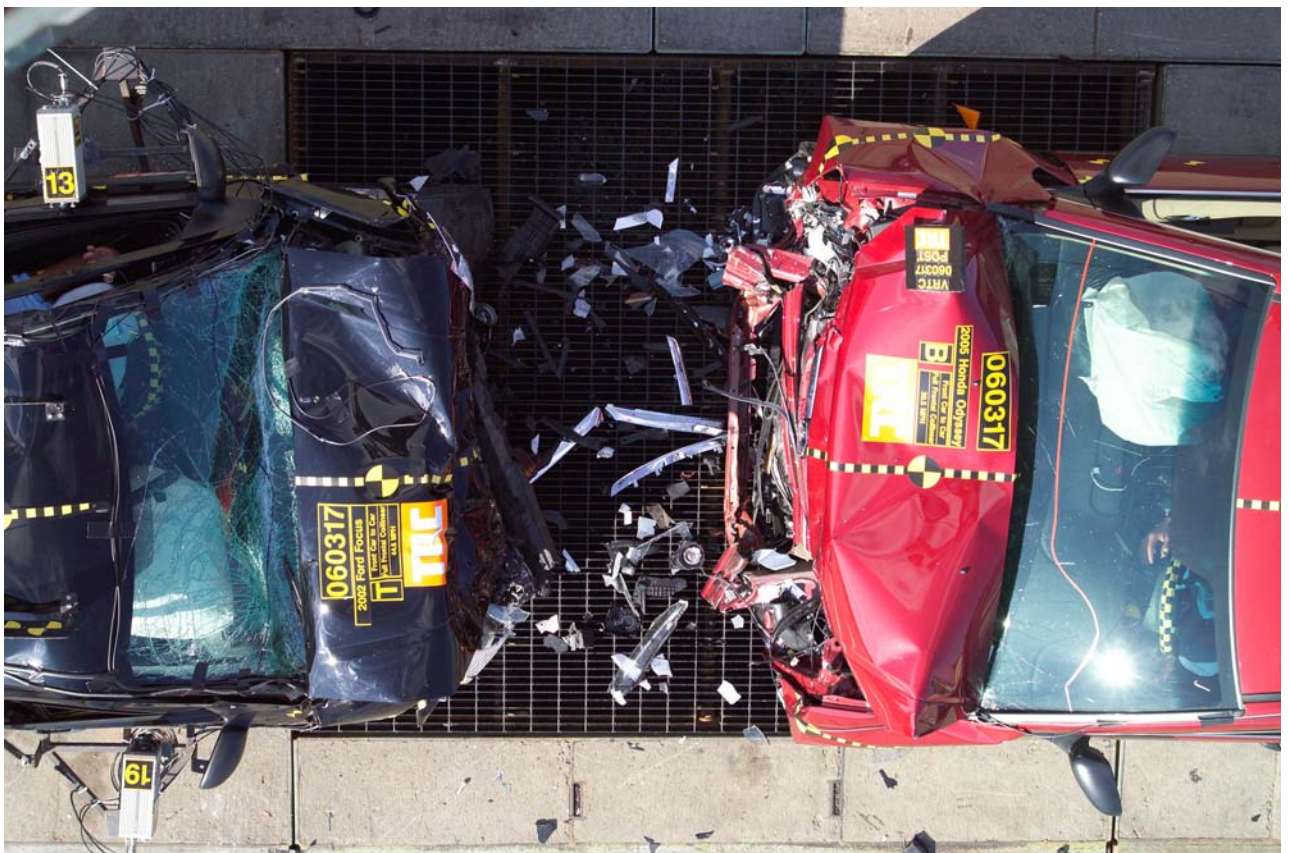


Figure A-10 Post-Test Overhead Close-up View



Figure A-11 Pre-Test Overhead Target Vehicle View



Figure A-12 Post-Test Overhead Target Vehicle View

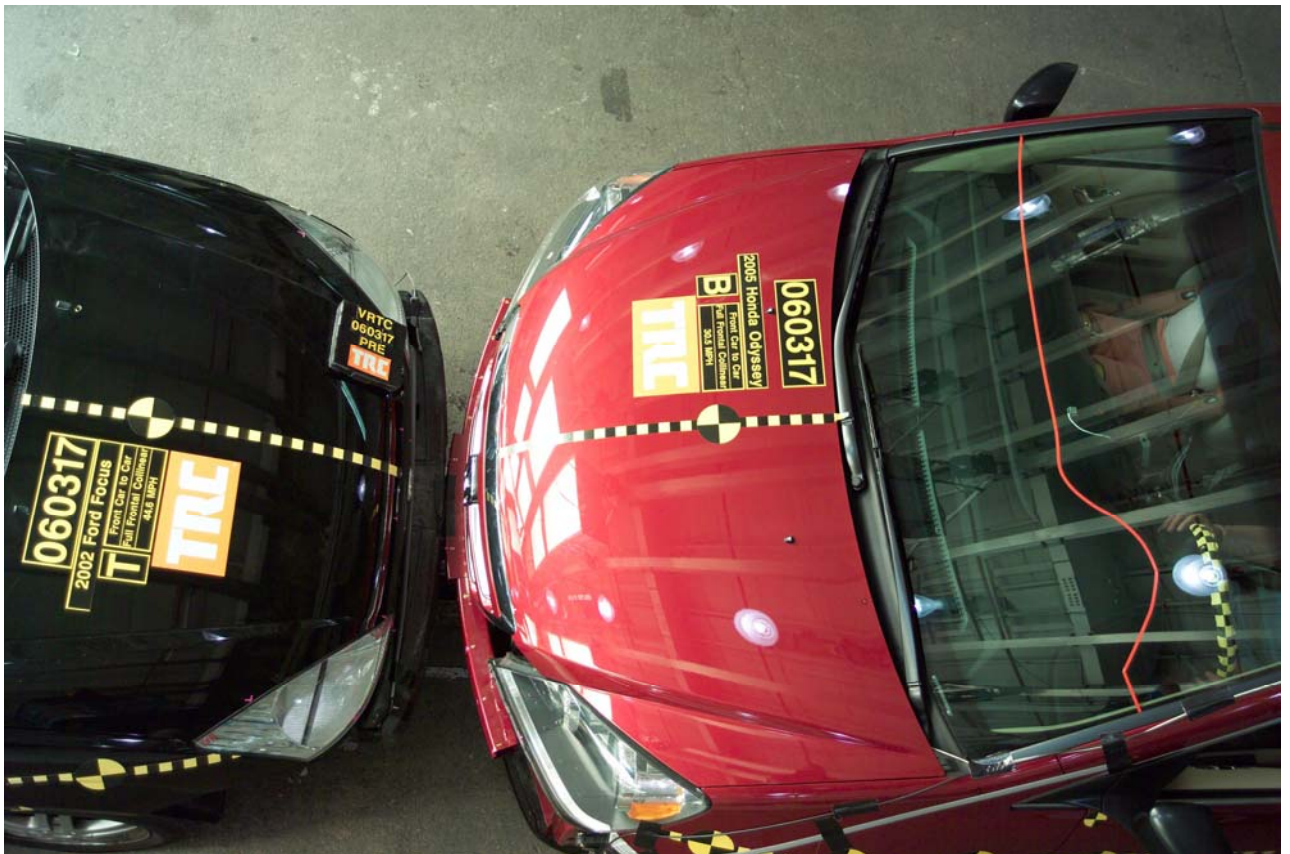


Figure A-13 Pre-Test Overhead Bullet Vehicle View



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

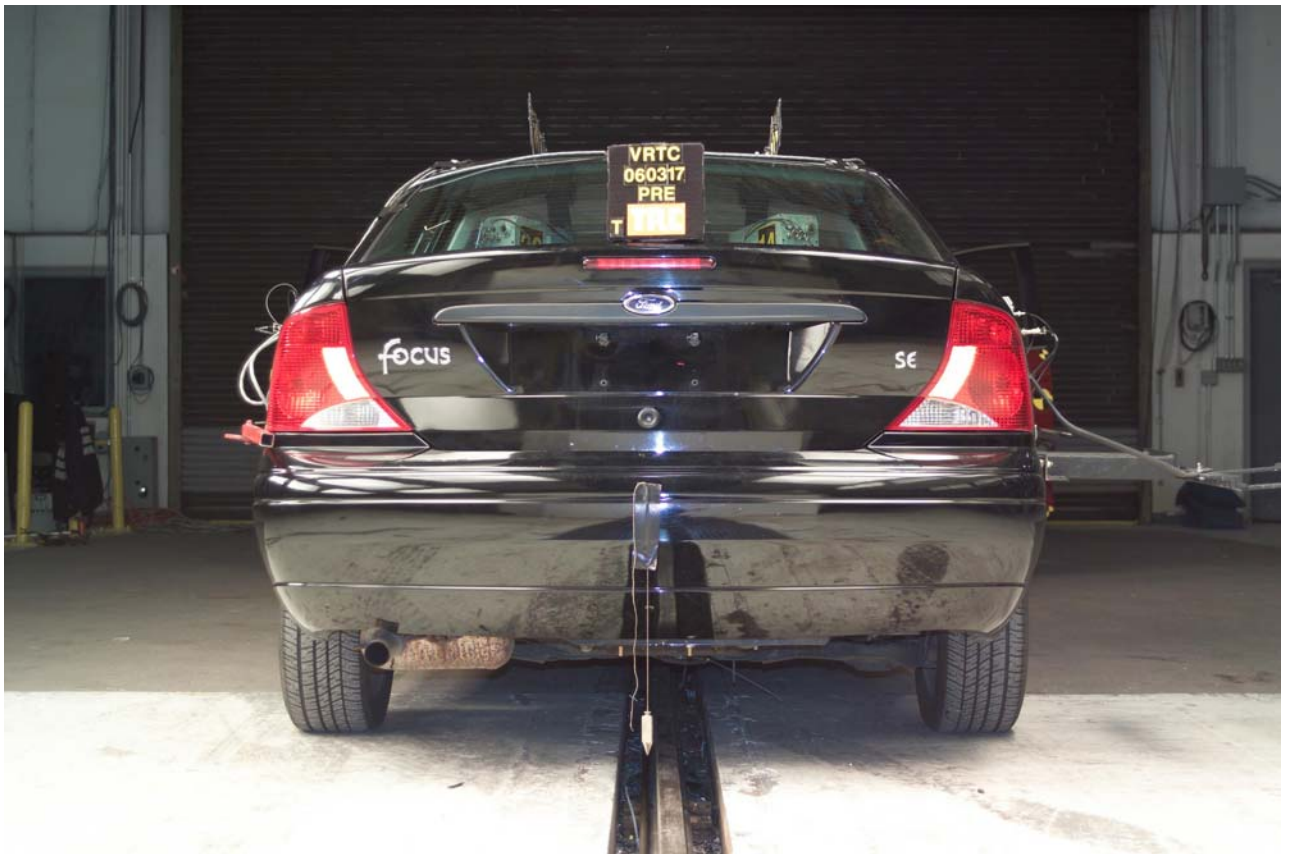


Figure A-23 Pre-Test Target Vehicle Rear View



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

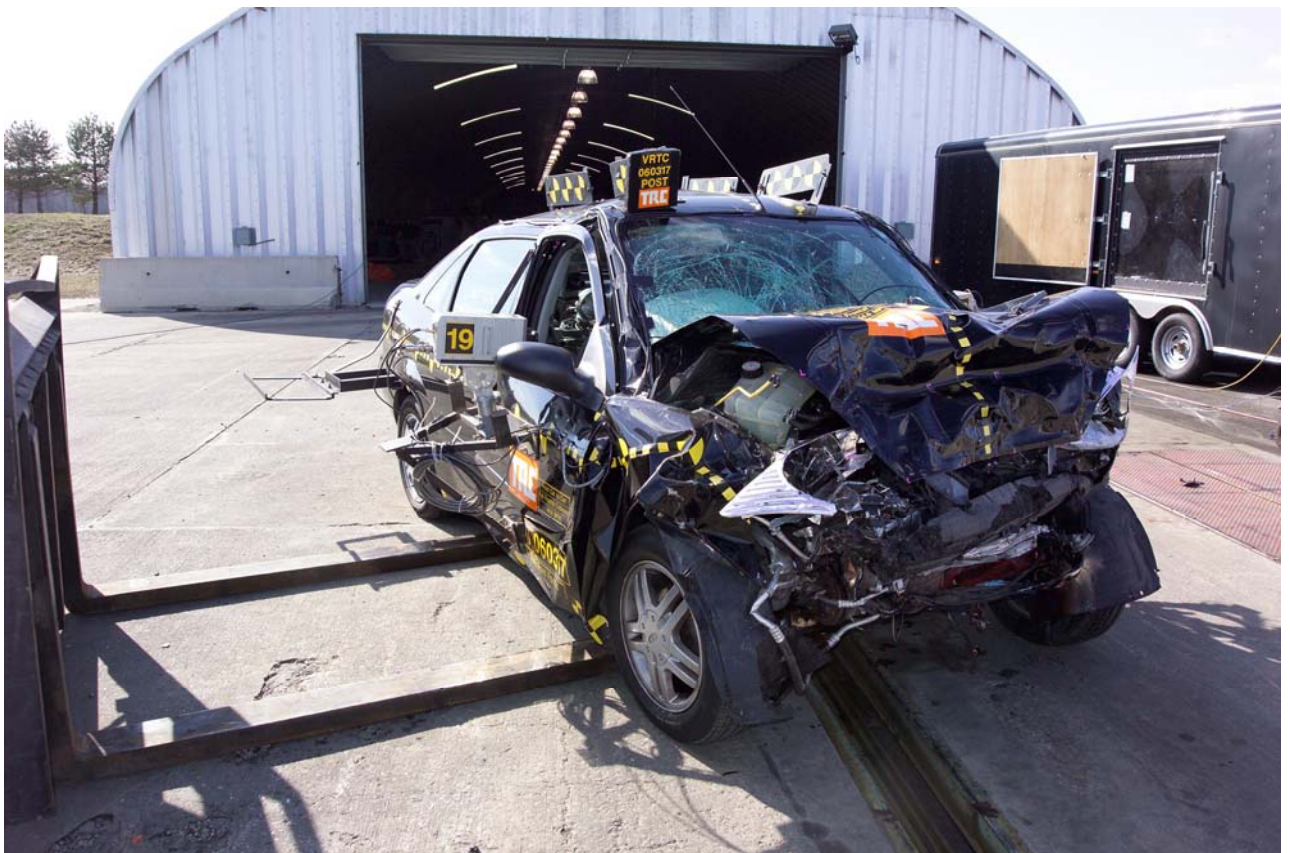


Figure A-30 Post-Test Target Vehicle Right Front View



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

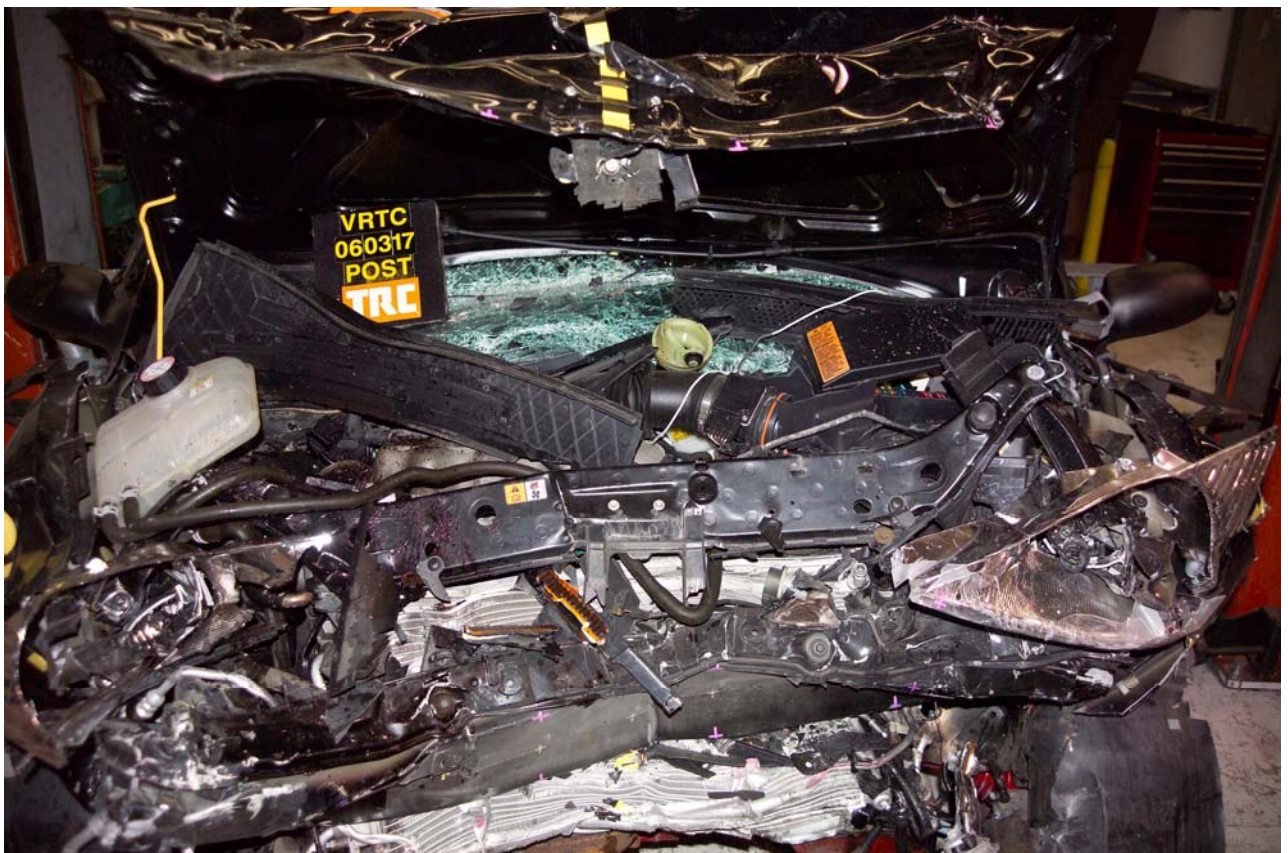


Figure A-32 Post-Test Target Vehicle Engine Compartment View

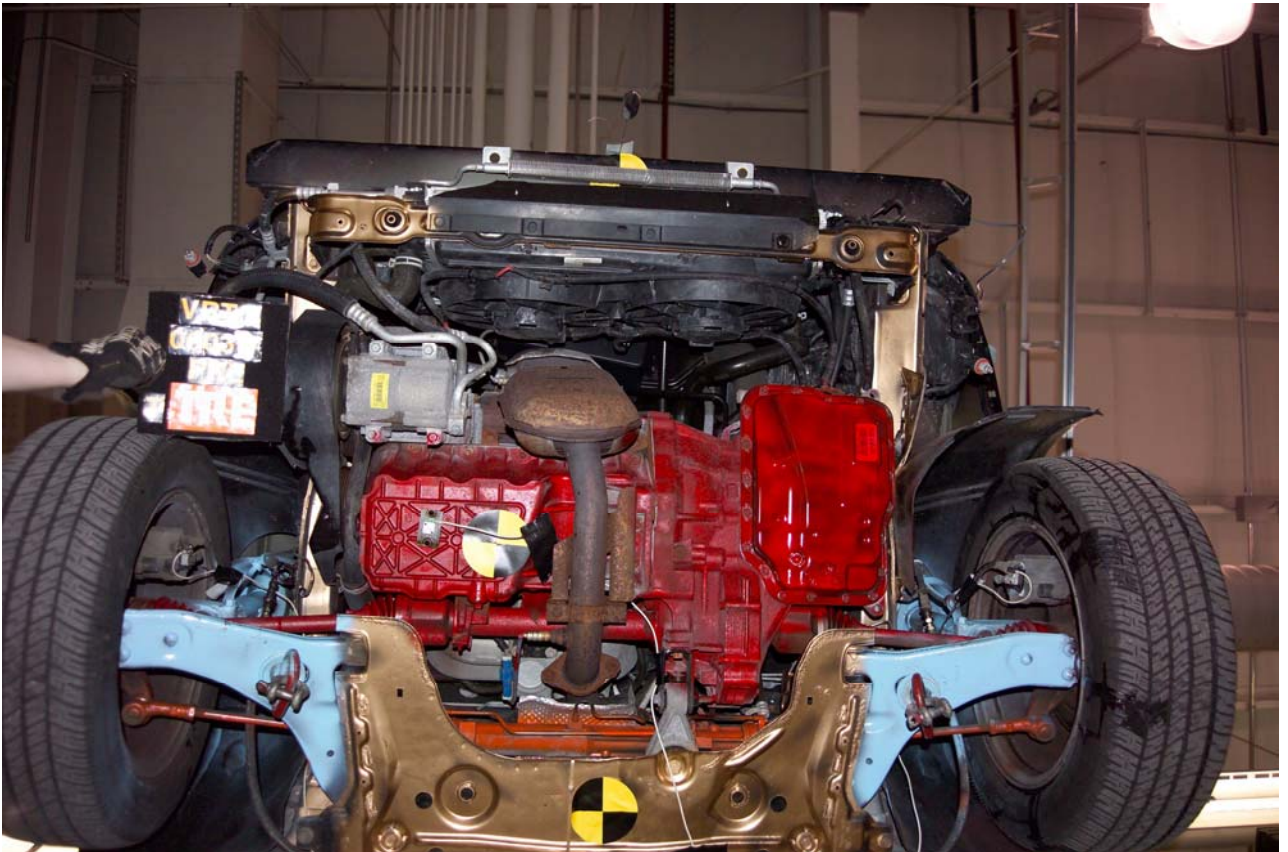


Figure A-33 Pre-Test Target Vehicle Front Underbody View

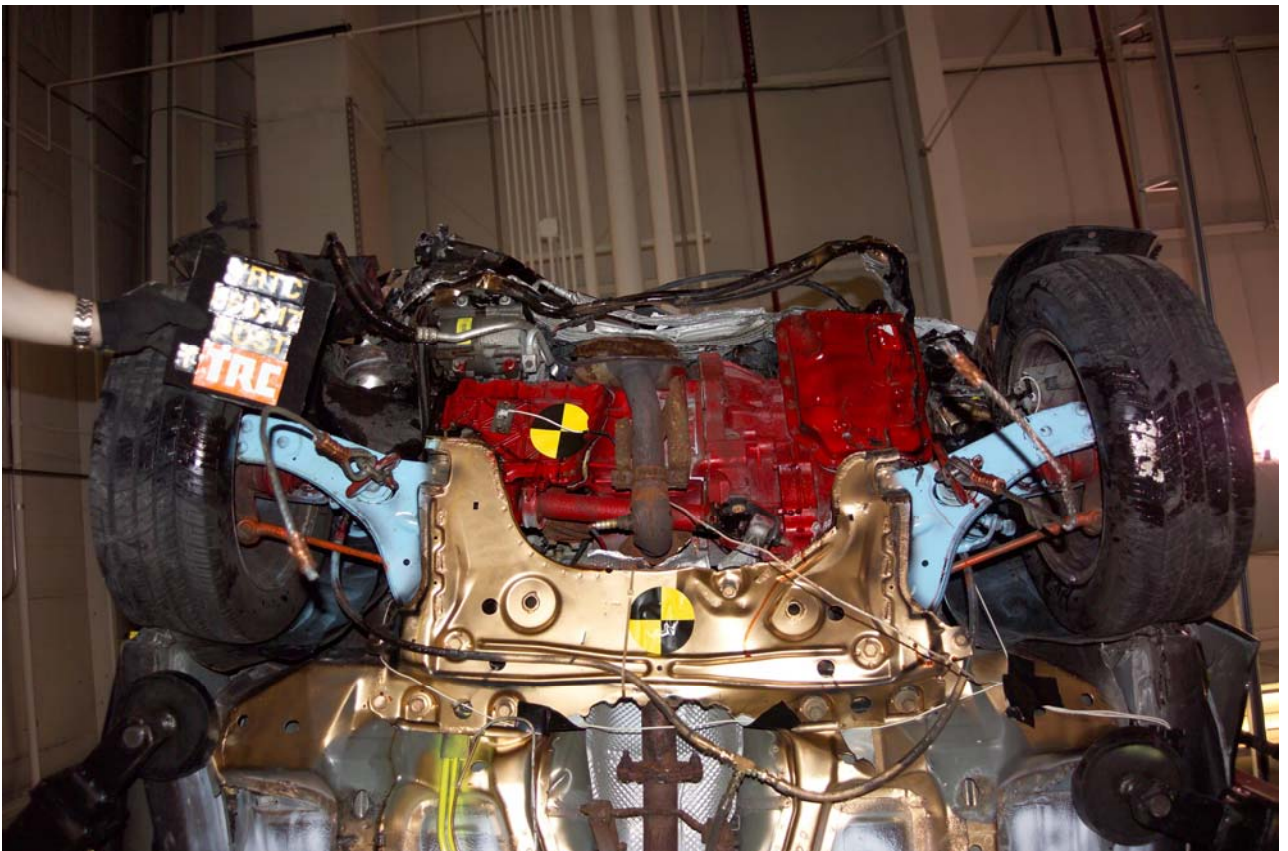


Figure A-34 Post-Test Target Vehicle Front Underbody View

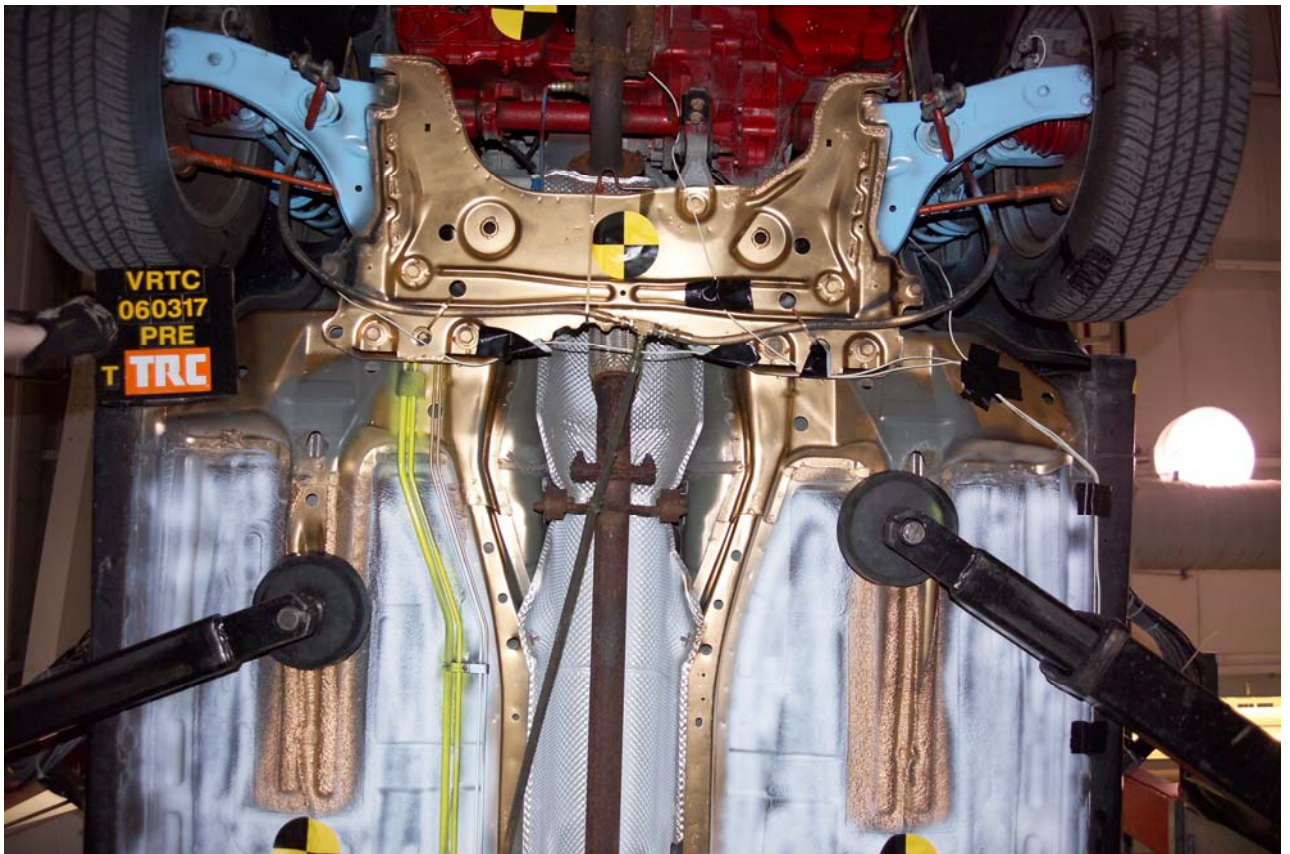


Figure A-35 Pre-Test Target Vehicle Front Mid Underbody View



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

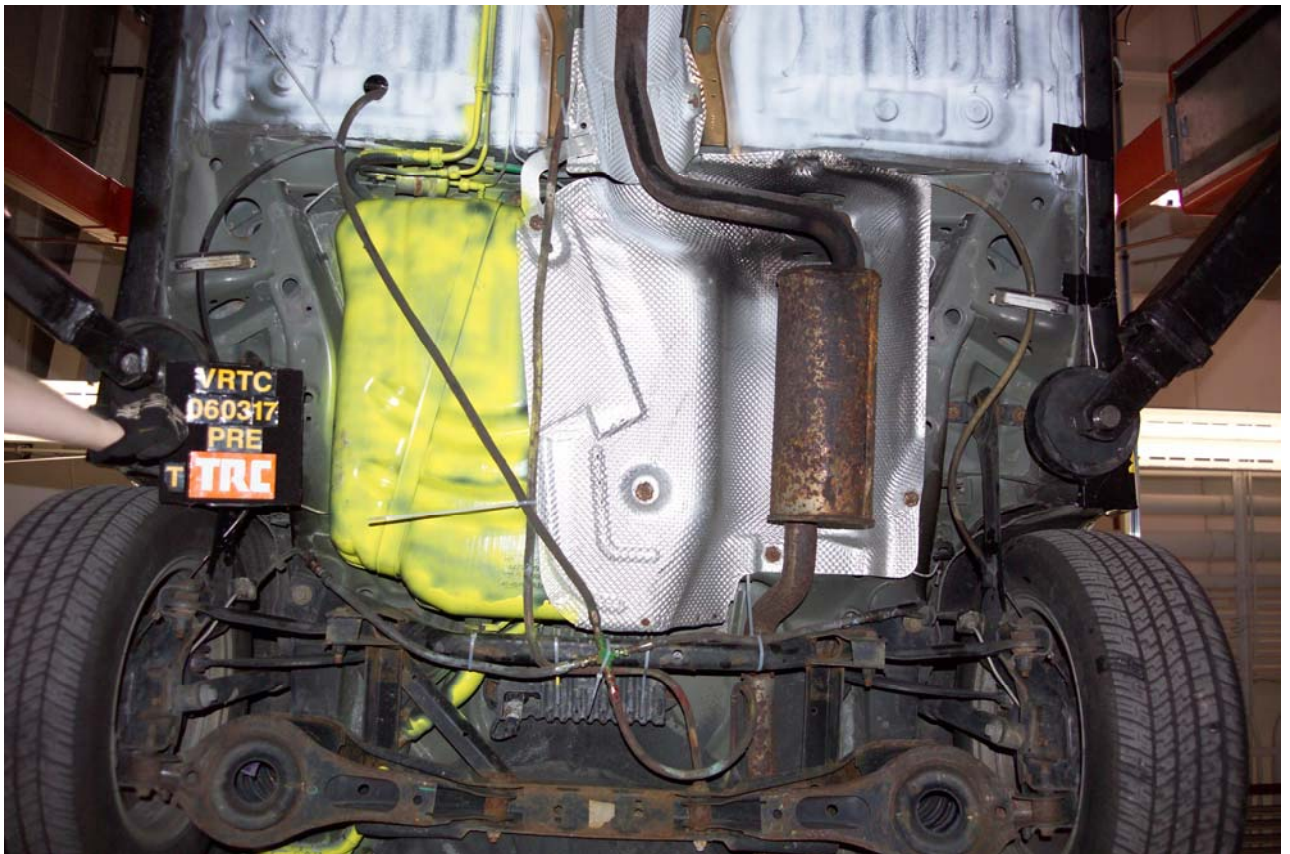


Figure A-39 Pre-Test Target Vehicle Rear Mid Underbody View

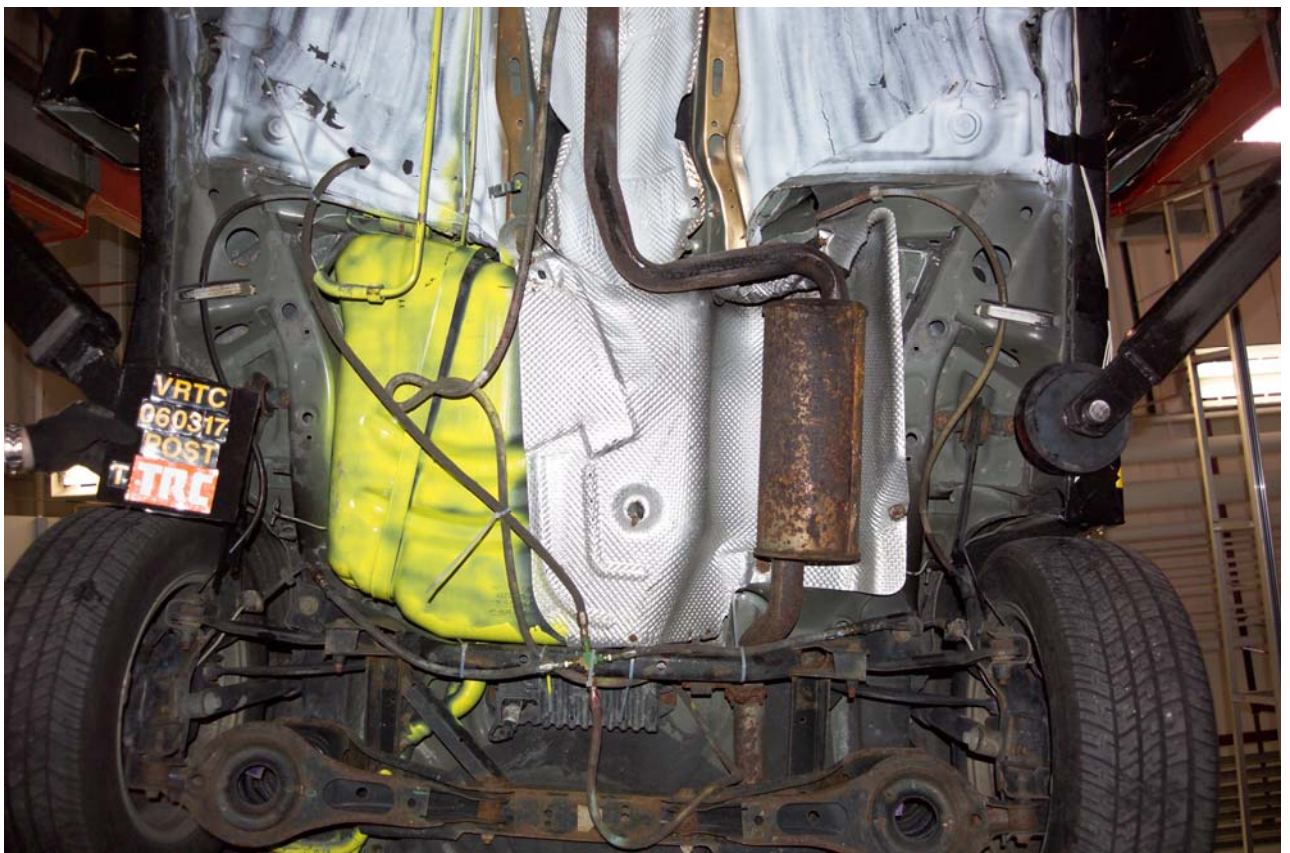


Figure A-40 Post-Test Target Vehicle Rear Mid Underbody View



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

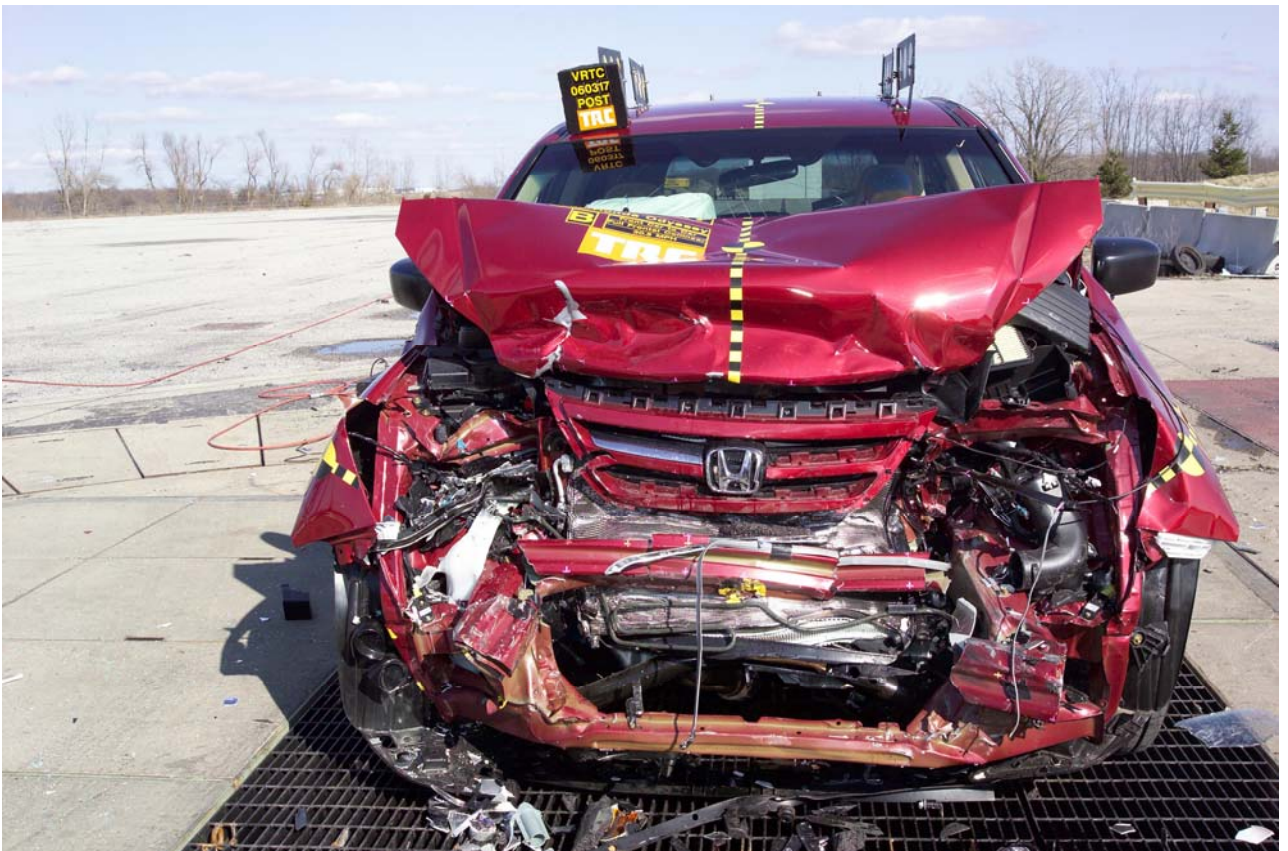


Figure A-44 Post-Test Bullet Vehicle Front View

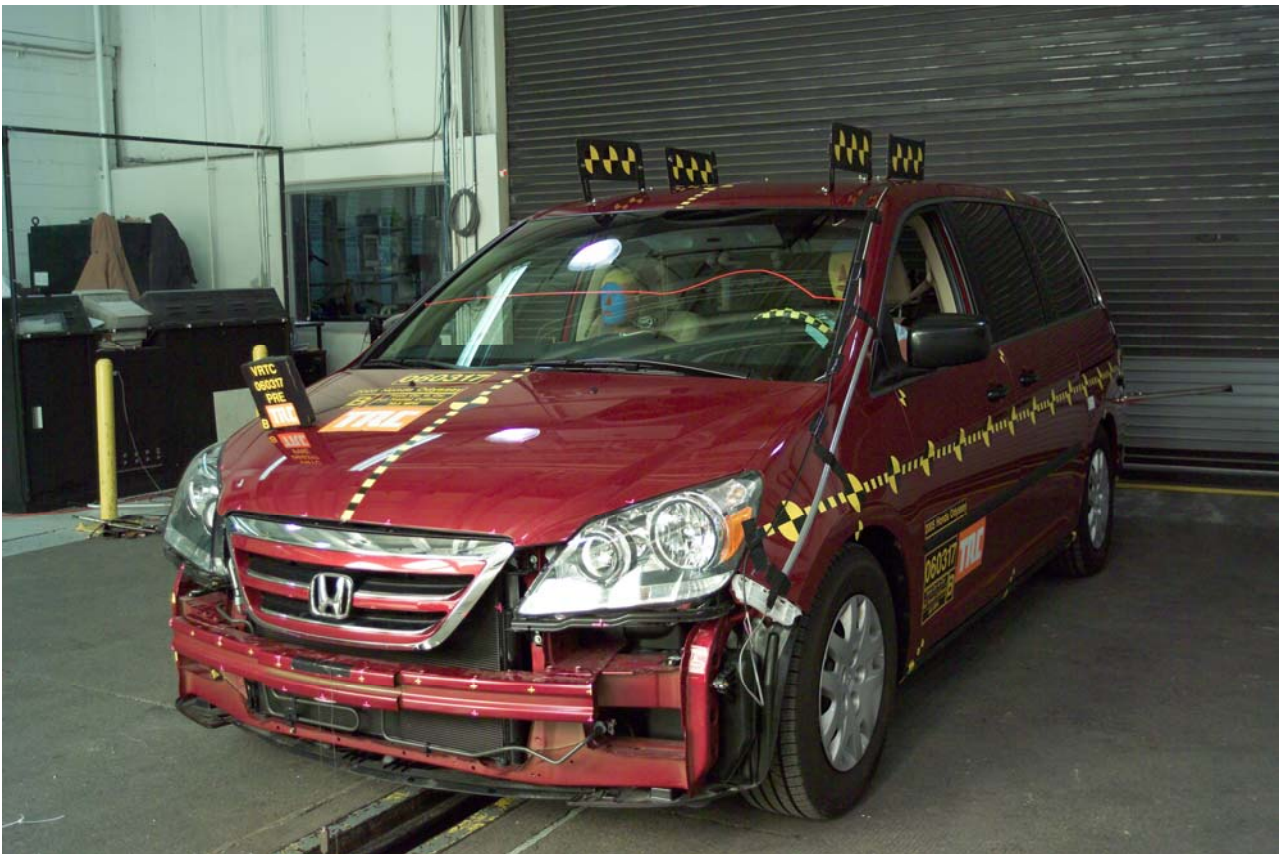


Figure A-45 Pre-Test Bullet Vehicle Left Front View



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

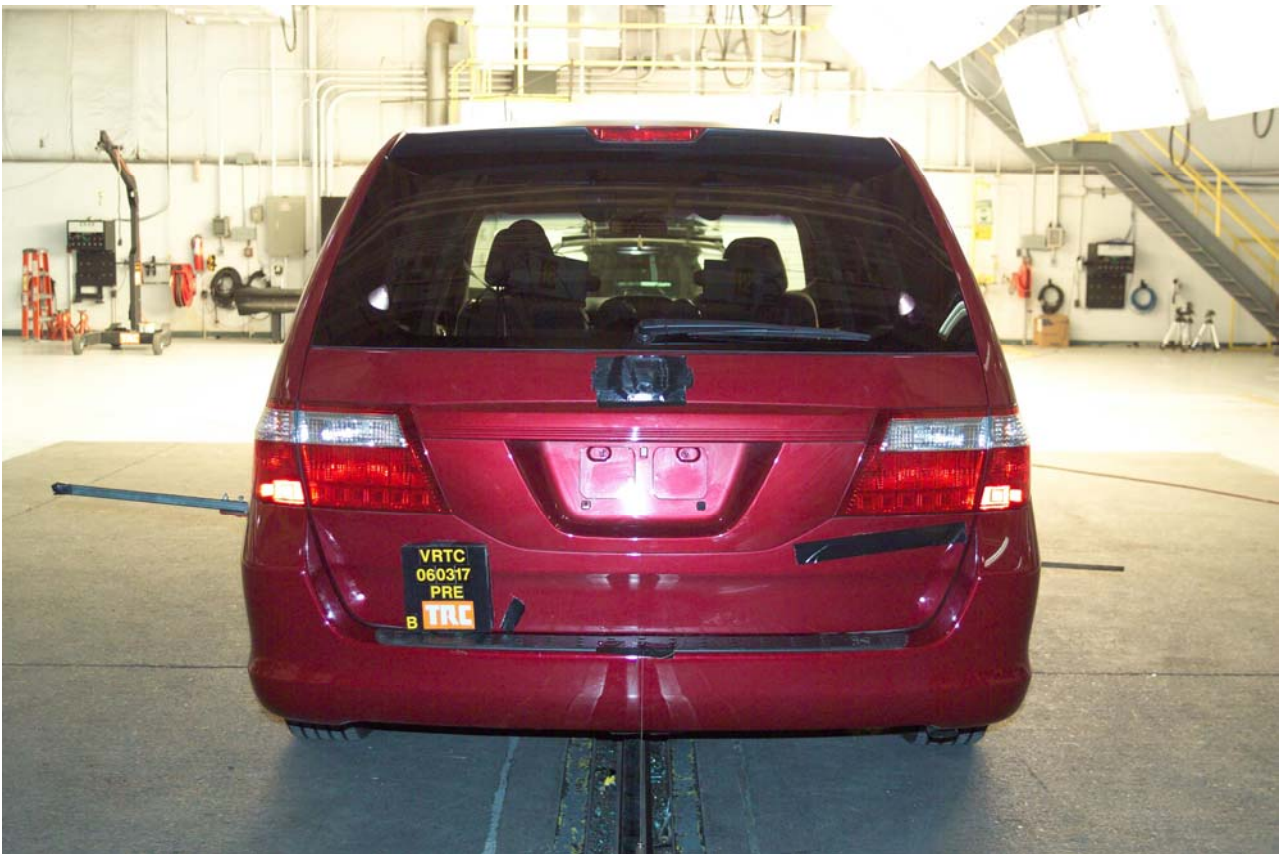


Figure A-51 Pre-Test Bullet Vehicle Rear View



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

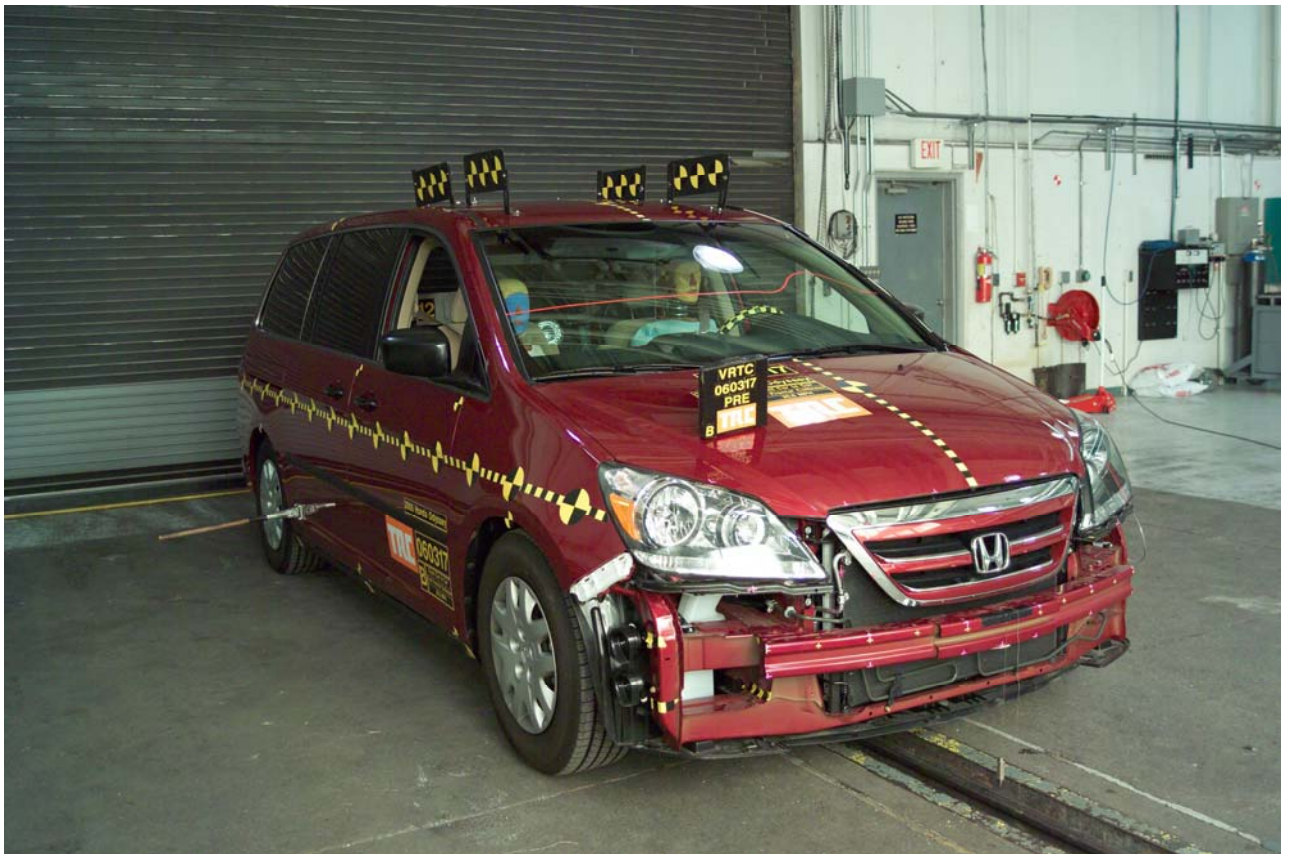


Figure A-57 Pre-Test Bullet Vehicle Right Front View



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



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

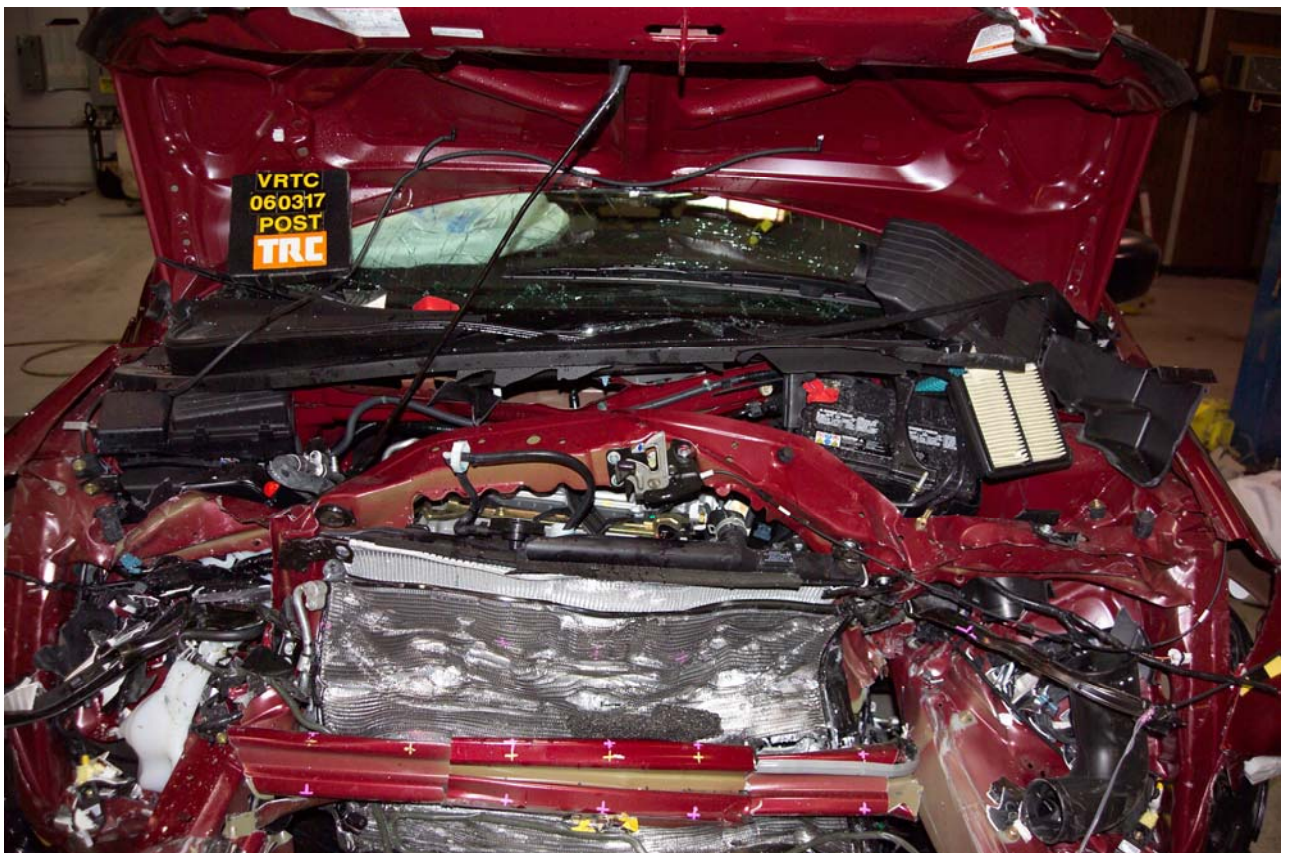


Figure A-60 Post-Test Bullet Vehicle Engine Compartment View

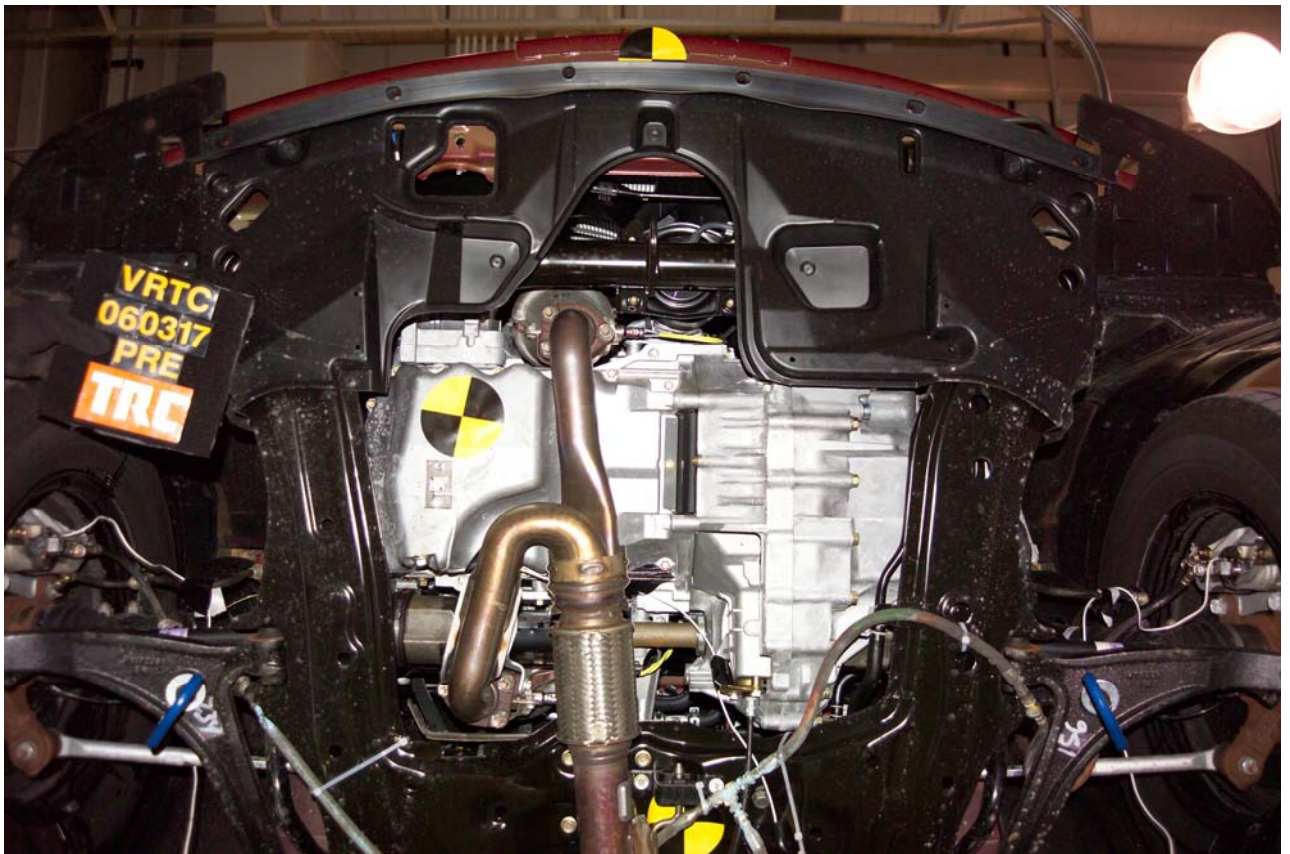


Figure A-61 Pre-Test Bullet Vehicle Front Underbody View

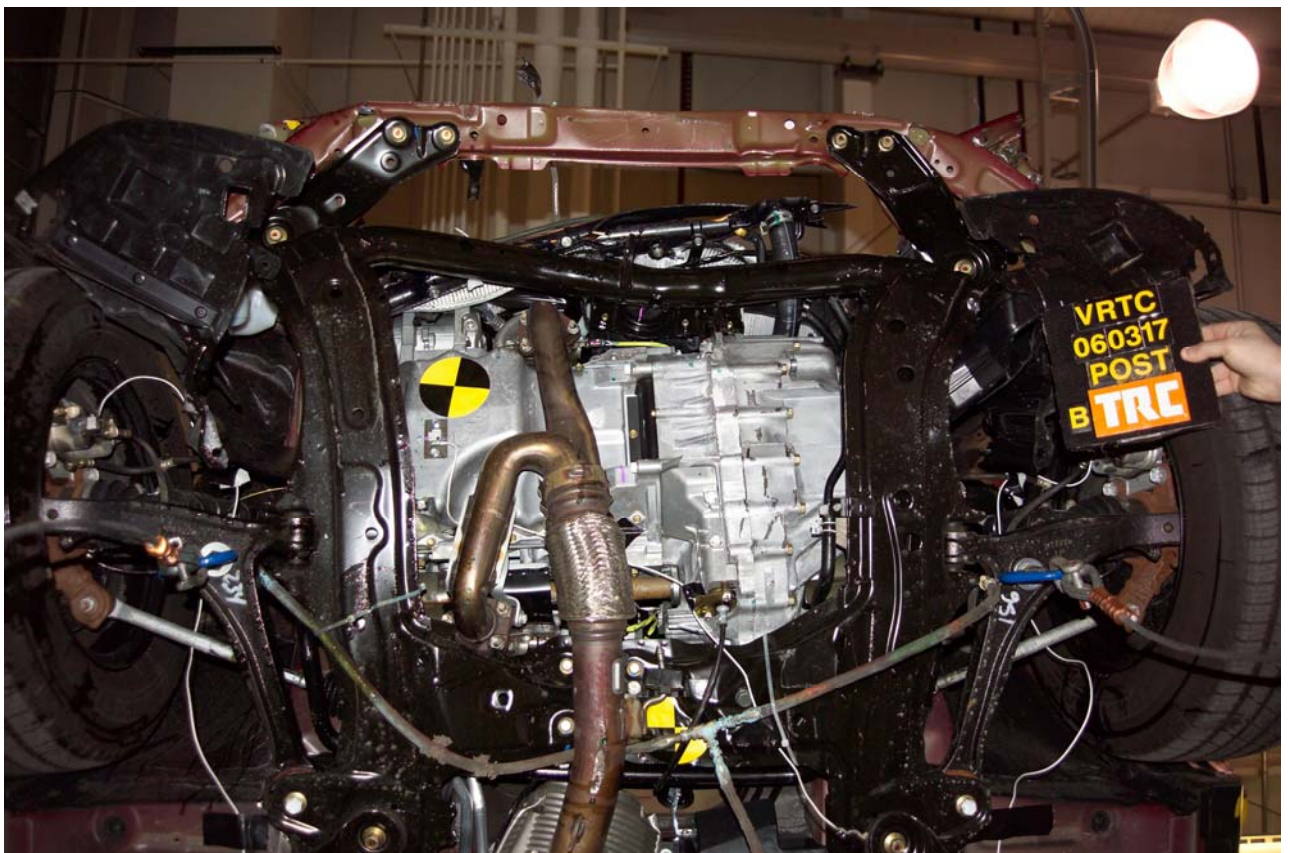


Figure A-62 Post-Test Bullet Vehicle Front Underbody View

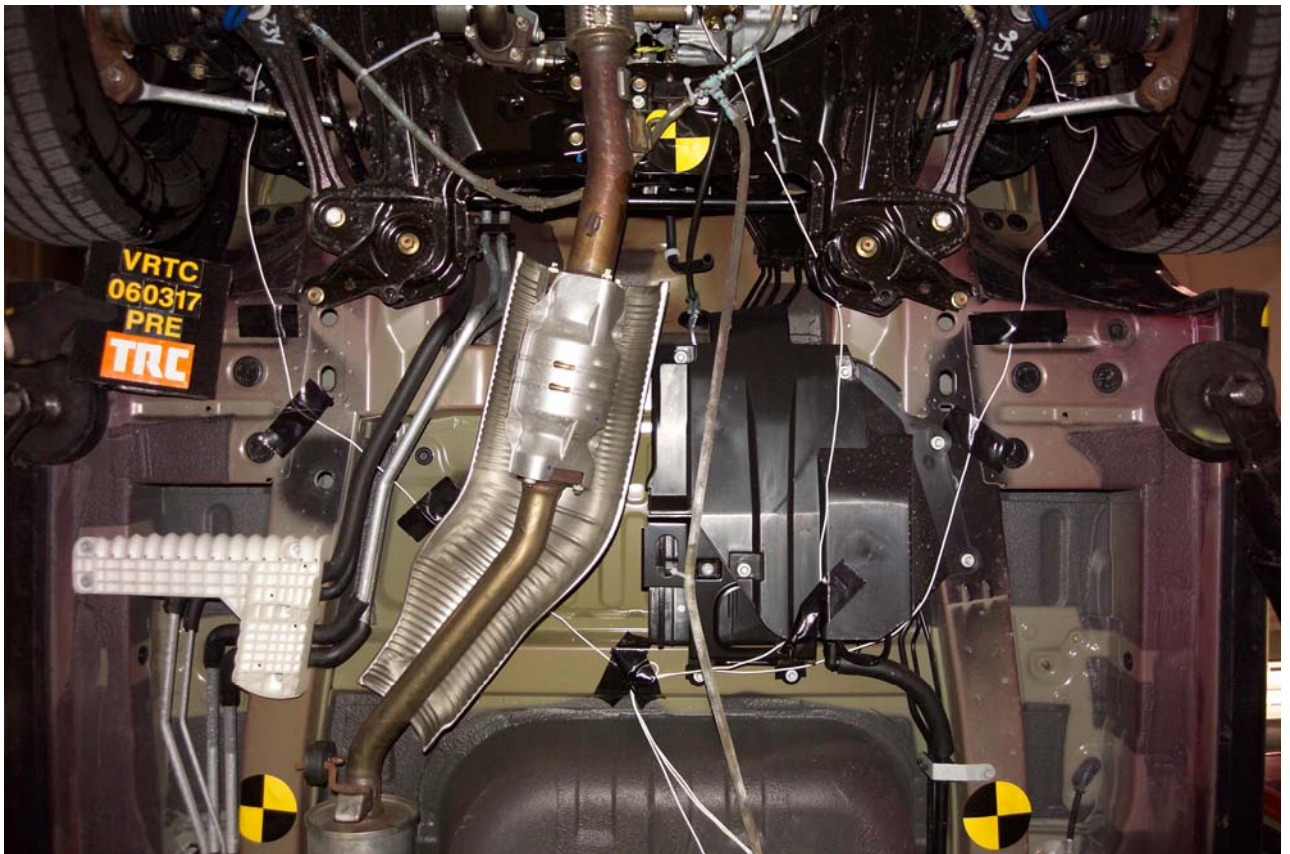


Figure A-63 Pre-Test Bullet Vehicle Front Mid Underbody View

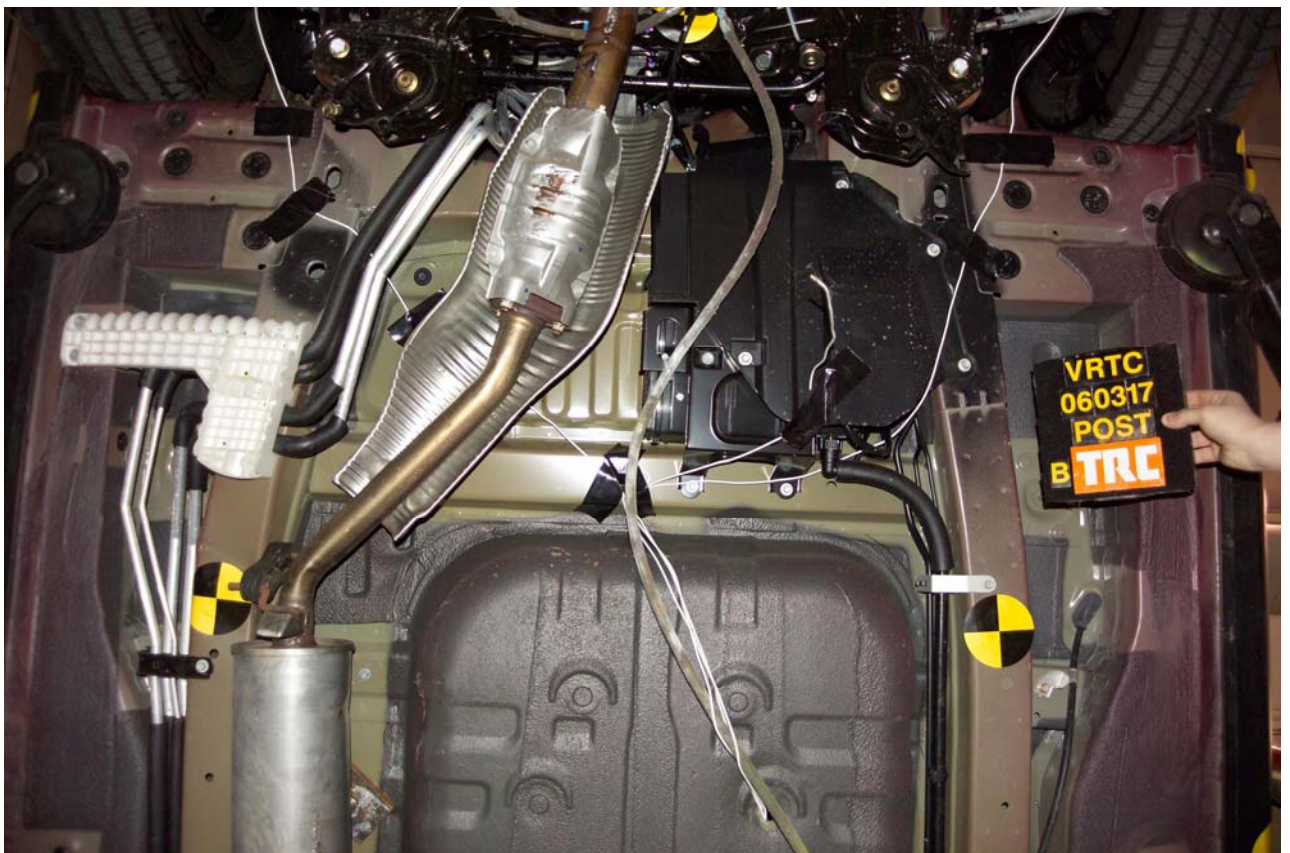


Figure A-64 Post-Test Bullet Vehicle Front Mid Underbody View

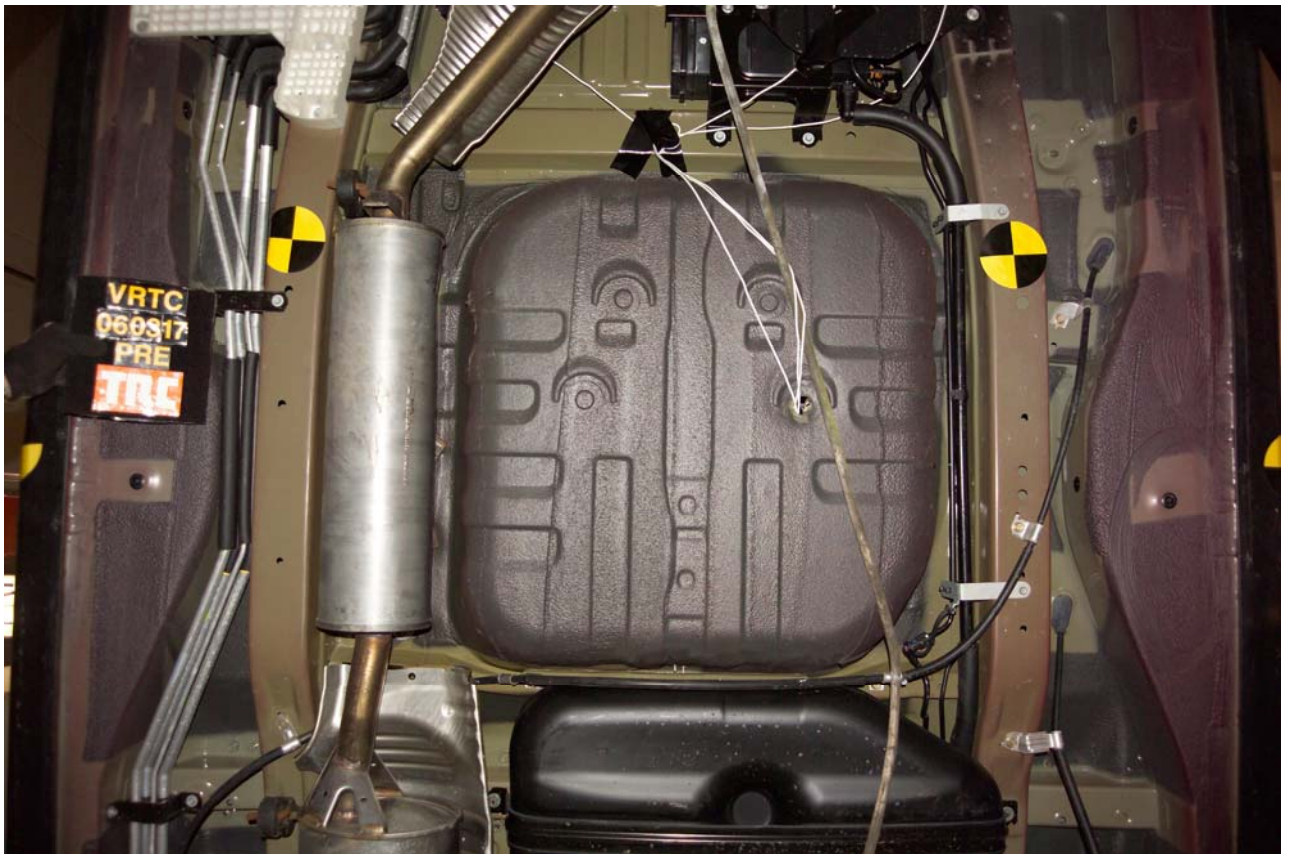


Figure A-65 Pre-Test Bullet Vehicle Mid Underbody View



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

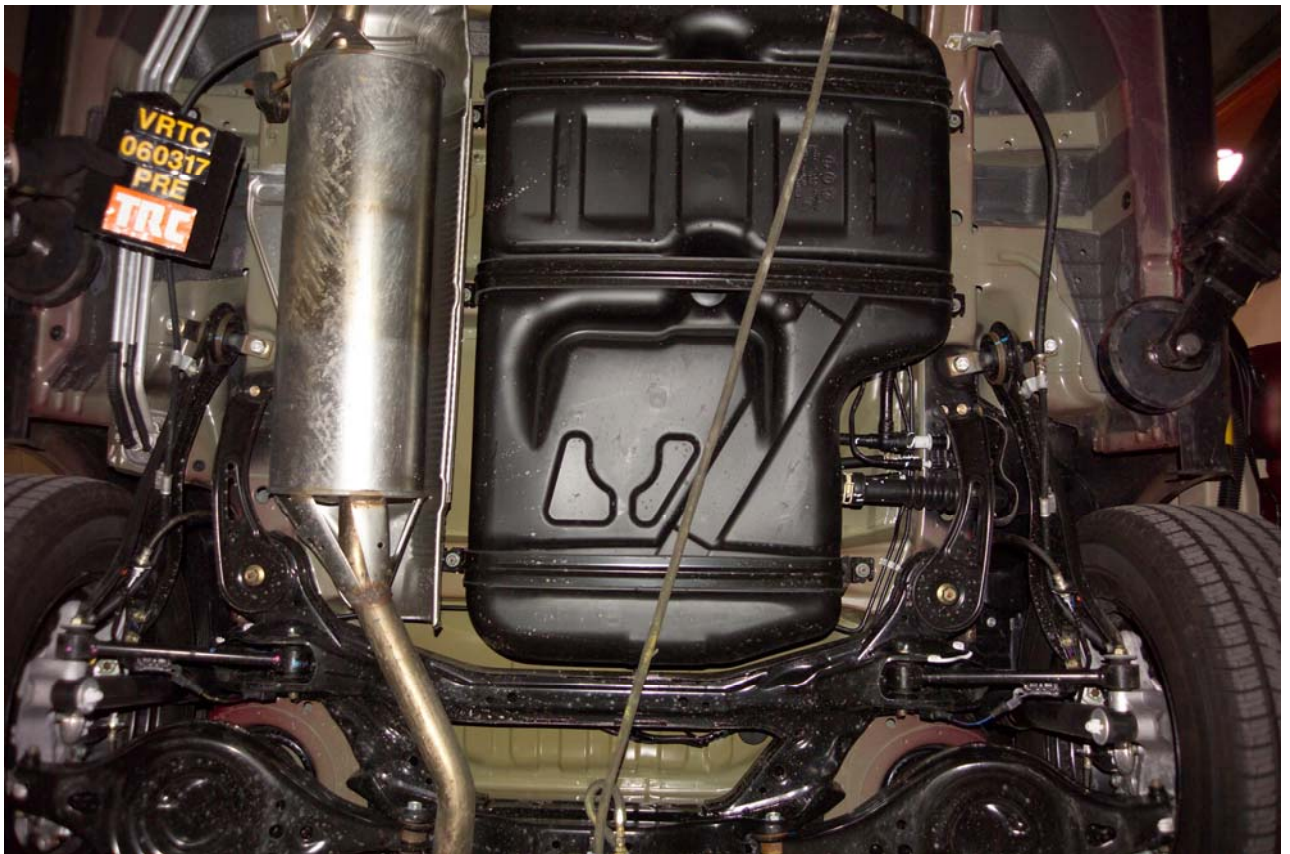


Figure A-67 Pre-Test Bullet Vehicle Rear Mid Underbody View

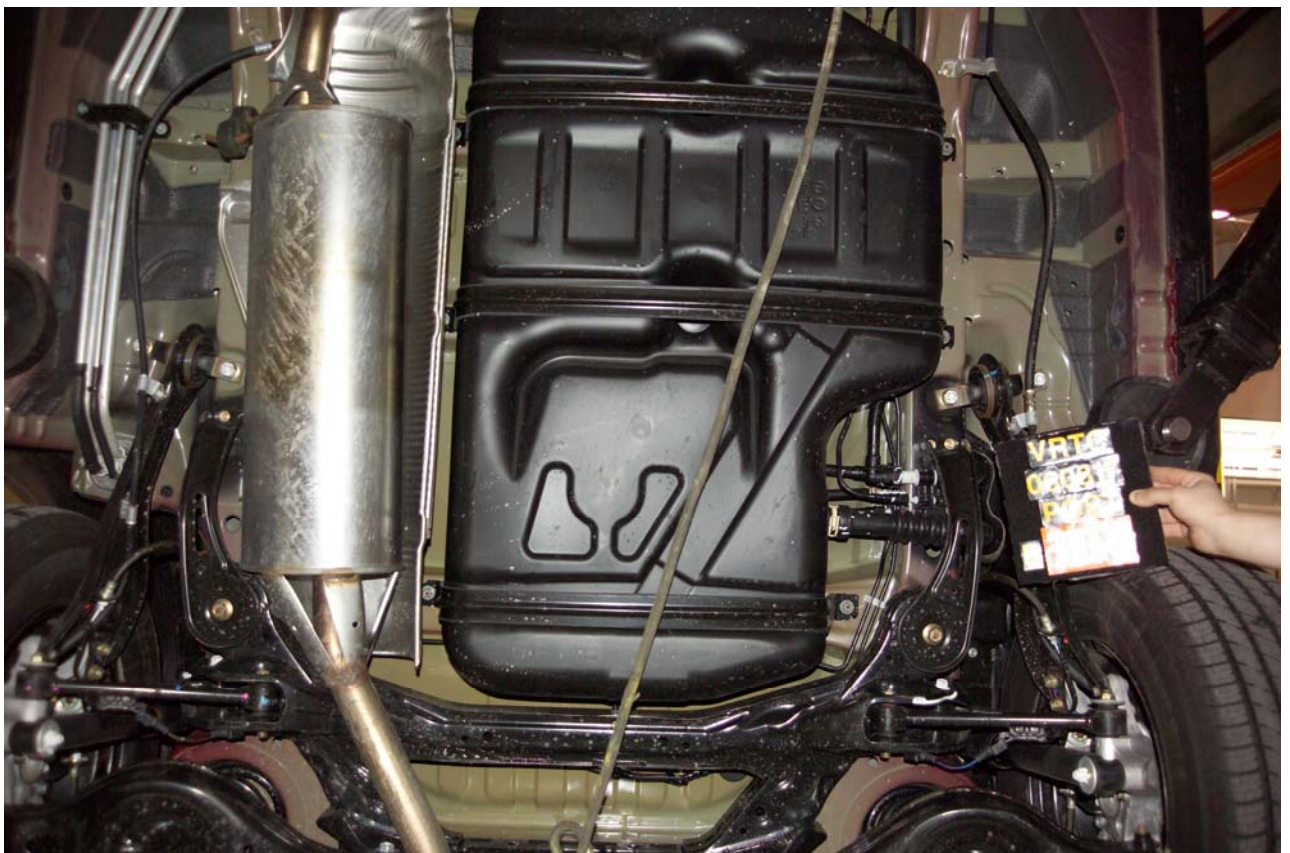


Figure A-68 Post-Test Bullet Vehicle Rear Mid Underbody View



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

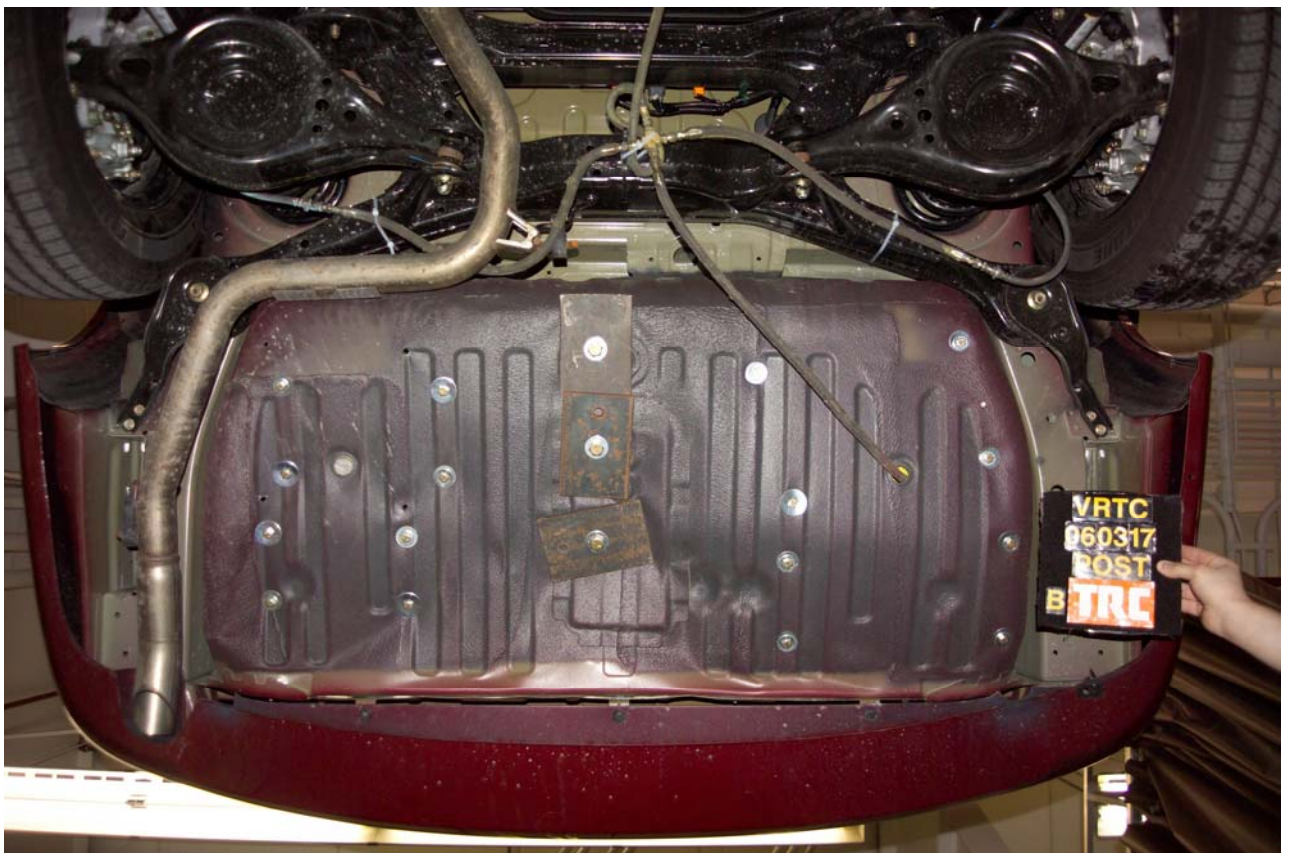


Figure A-70 Post-Test Bullet Vehicle Rear Underbody View



Figure A-71 Pre-Test Target Vehicle Windshield View



Figure A-72 Post-Test Target Vehicle Windshield View



Figure A-73 Pre-Test Target Vehicle Driver and Passenger Dummies through Windshield View

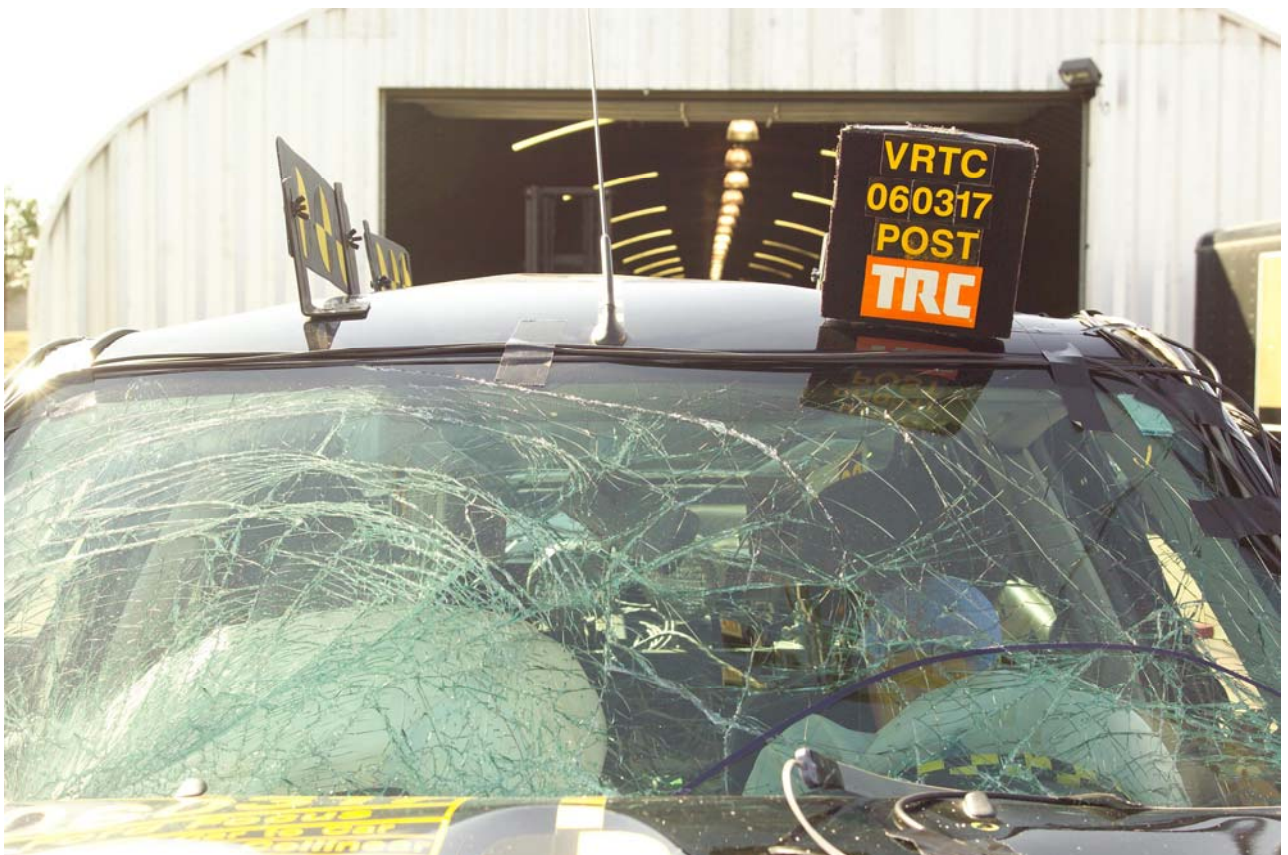


Figure A-74 Post-Test Target Vehicle Driver and Passenger Dummies through Windshield View

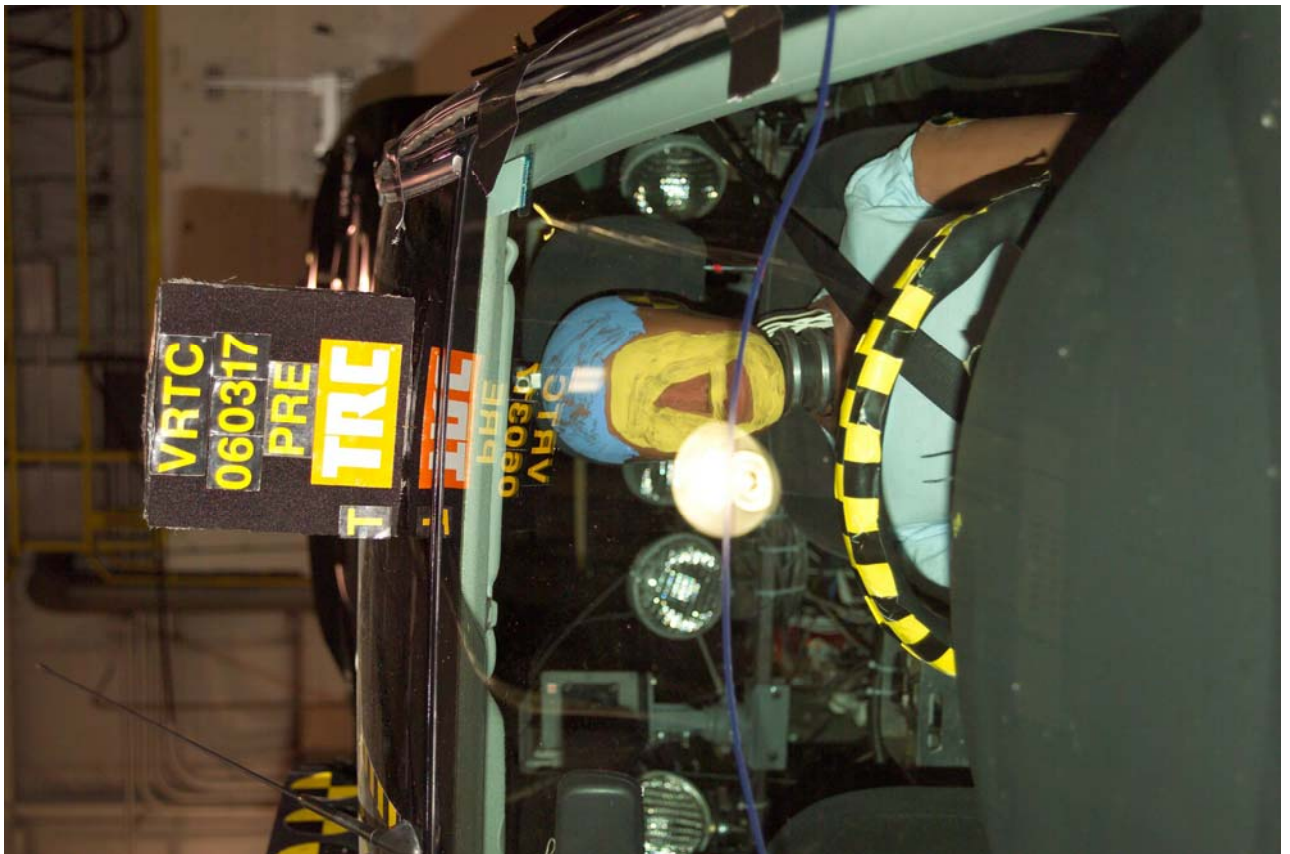


Figure A-75 Pre-Test Target Vehicle Driver Dummy - View 1

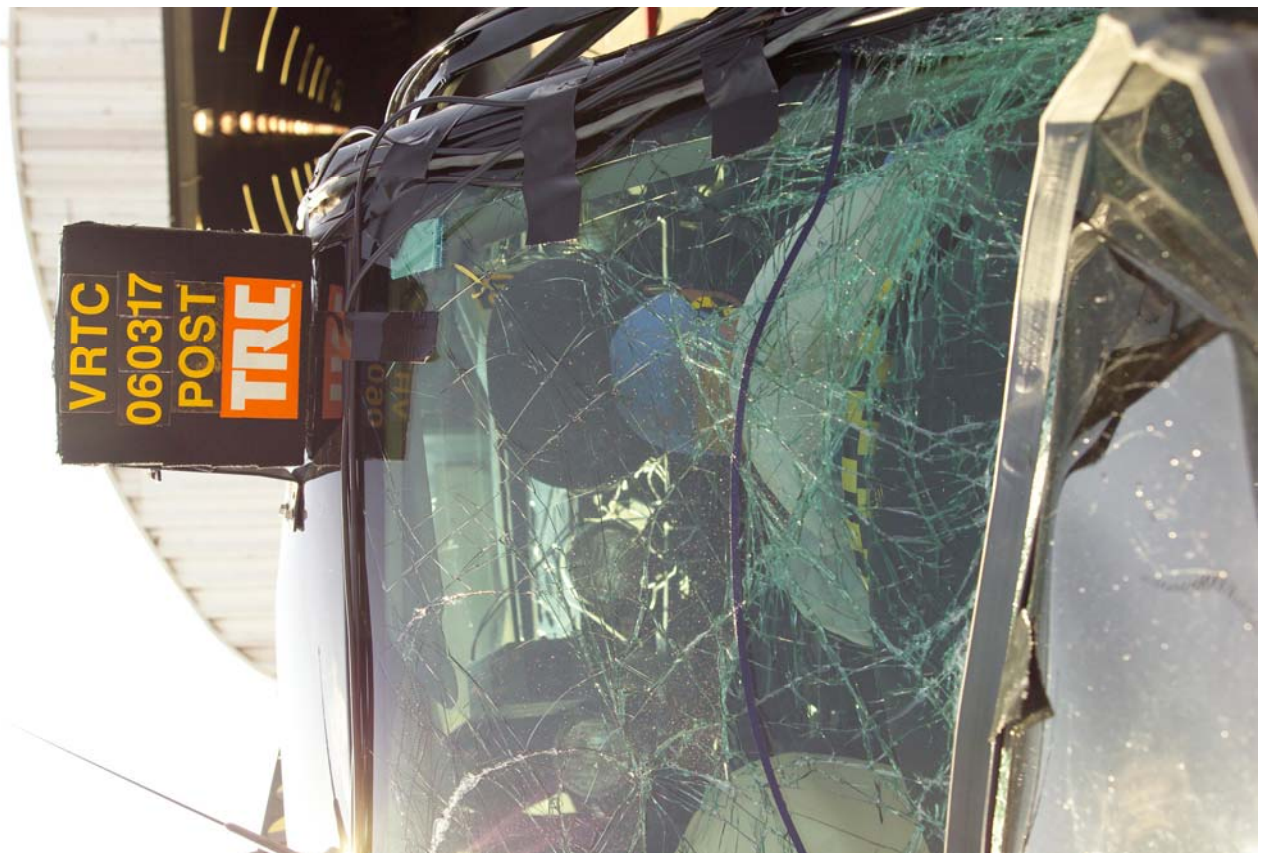


Figure A-76 Post-Test Target Vehicle Driver Dummy - View 1



Figure A-77 Pre-Test Target Vehicle Driver Dummy - View 2



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



Figure A-79 Pre-Test Target Vehicle Driver Dummy - View 3



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



Figure A-81 Pre-Test Target Vehicle Driver Dummy - View 4



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



Figure A-83 Pre-Test Target Vehicle Passenger Dummy - View 1



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



Figure A-85 Pre-Test Target Vehicle Passenger Dummy - View 2



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

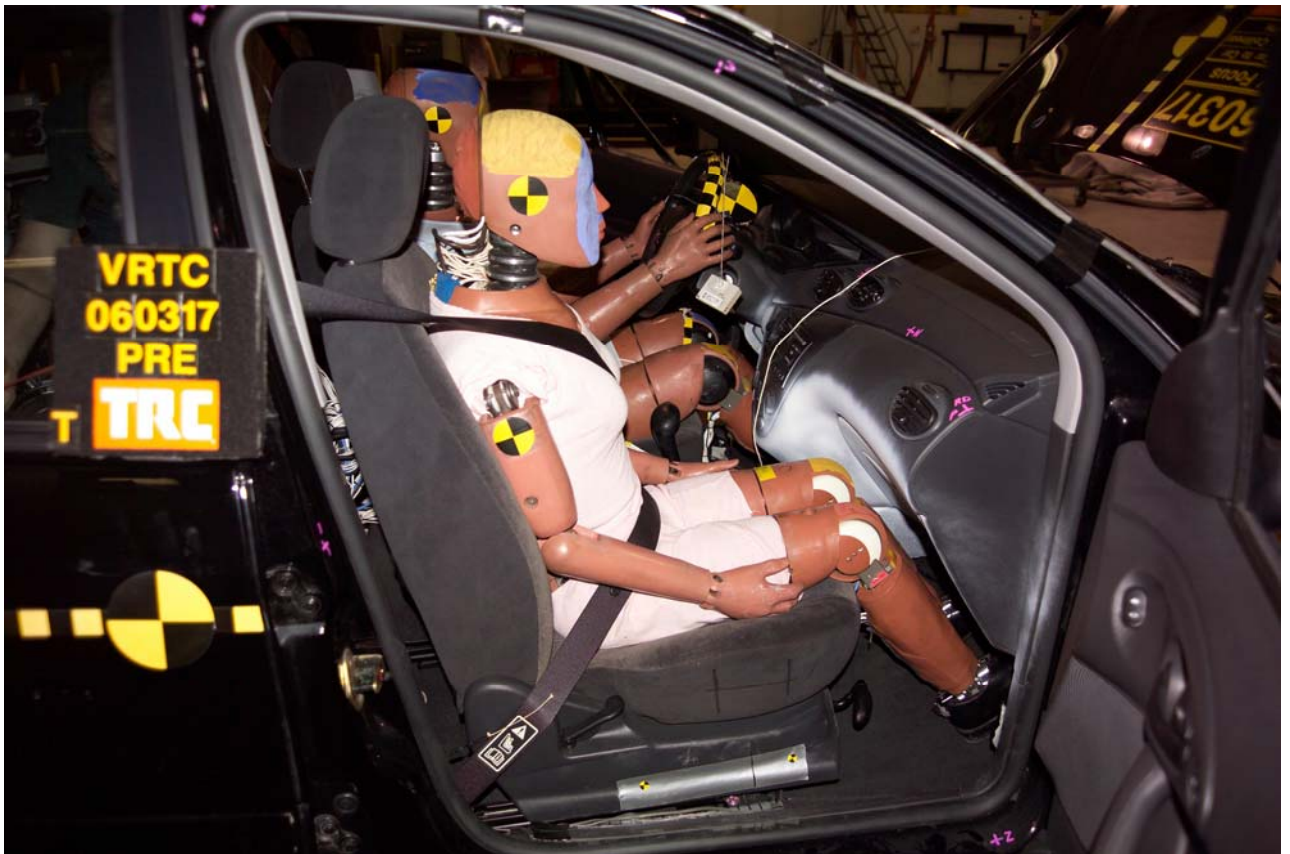


Figure A-87 Pre-Test Target Vehicle Passenger Dummy - View 3

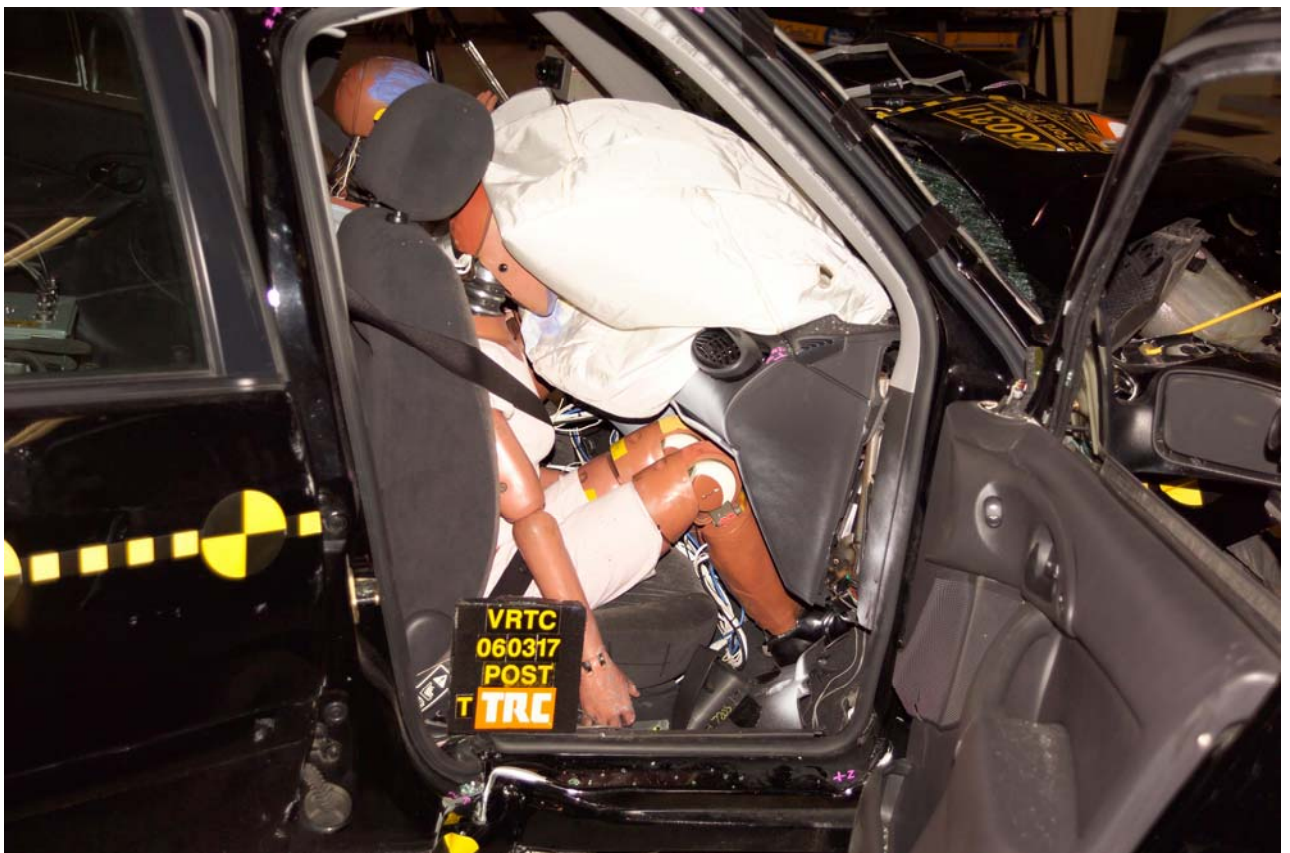


Figure A-88 Post-Test Target Vehicle Passenger Dummy - View 3



Figure A-89 Pre-Test Target Vehicle Passenger Dummy - View 4



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



Figure A-91 Pre-Test Bullet Vehicle Windshield View



Figure A-92 Post-Test Bullet Vehicle Windshield View

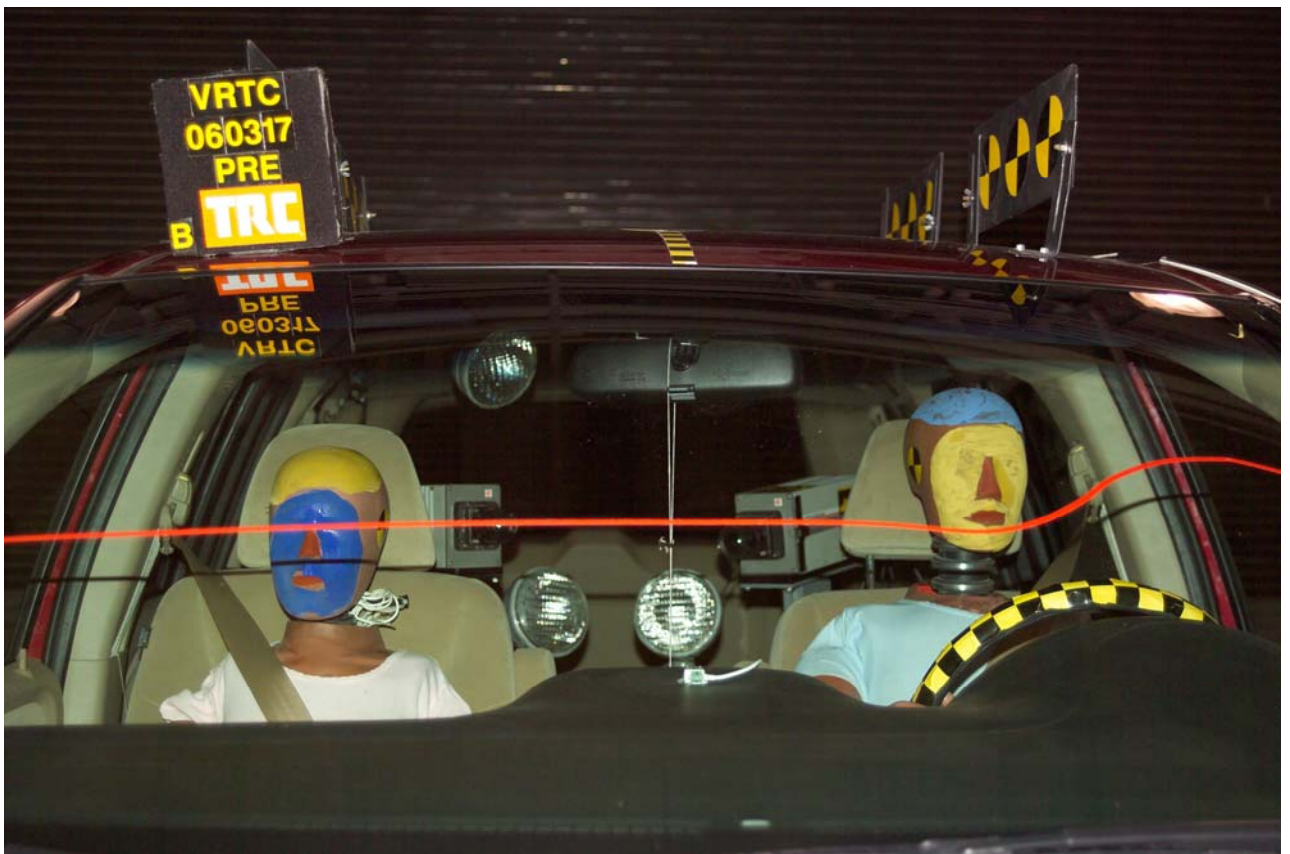


Figure A-93 Pre-Test Bullet Vehicle Driver and Passenger Dummies through Windshield View



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

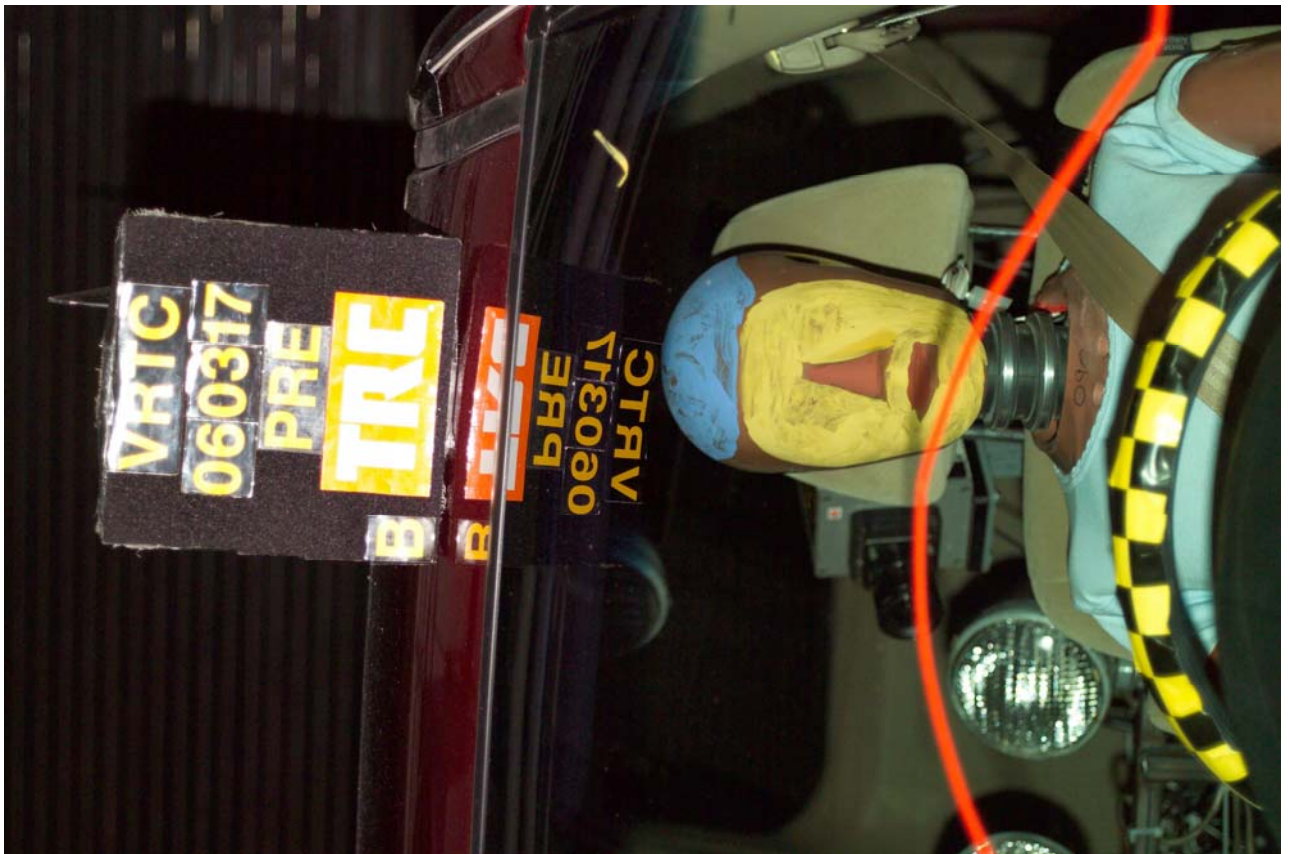


Figure A-95 Pre-Test Bullet Vehicle Driver Dummy - View 1

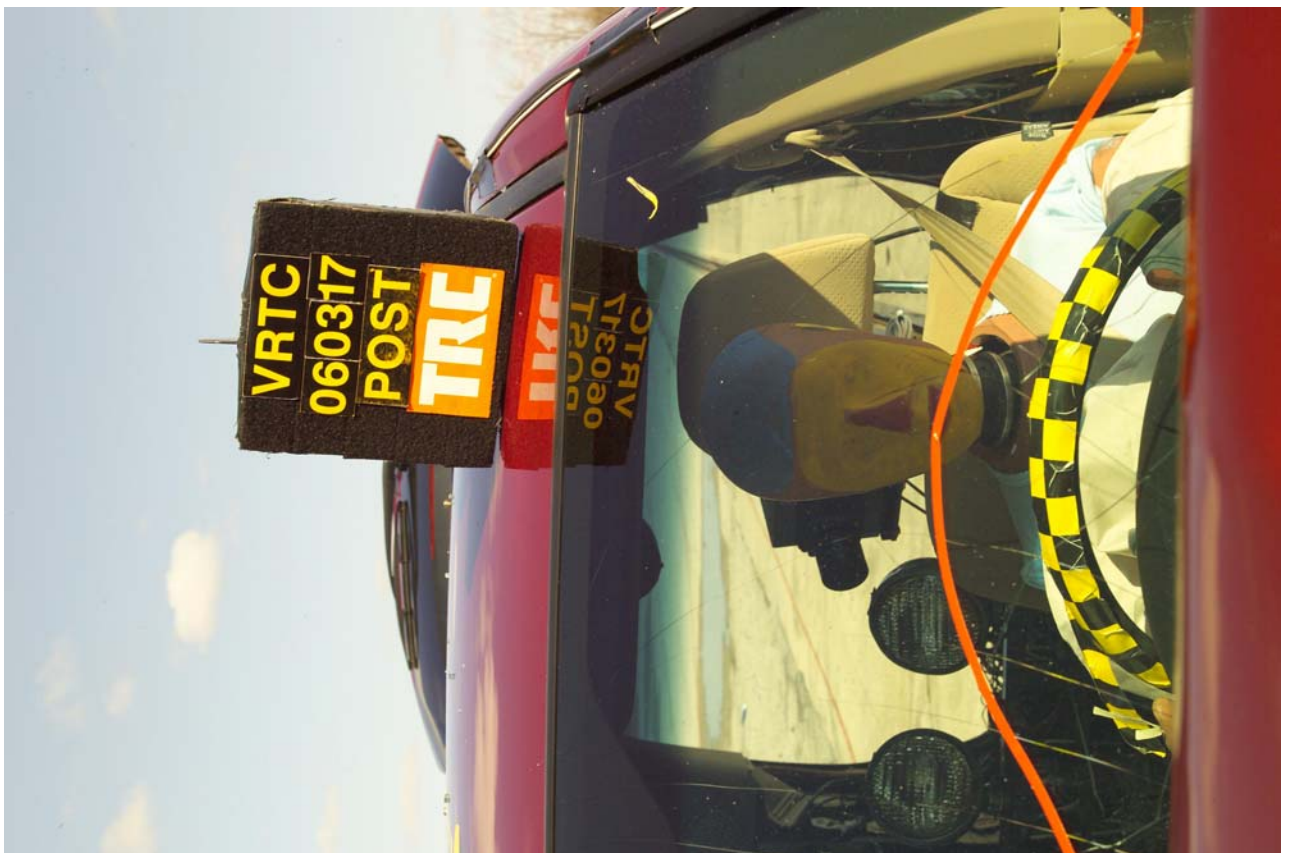


Figure A-96 Post-Test Bullet Vehicle Driver Dummy - View 1



Figure A-97 Pre-Test Bullet Vehicle Driver Dummy - View 2



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



Figure A-99 Pre-Test Bullet Vehicle Driver Dummy - View 3



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



Figure A-101 Pre-Test Bullet Vehicle Driver Dummy - View 4



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

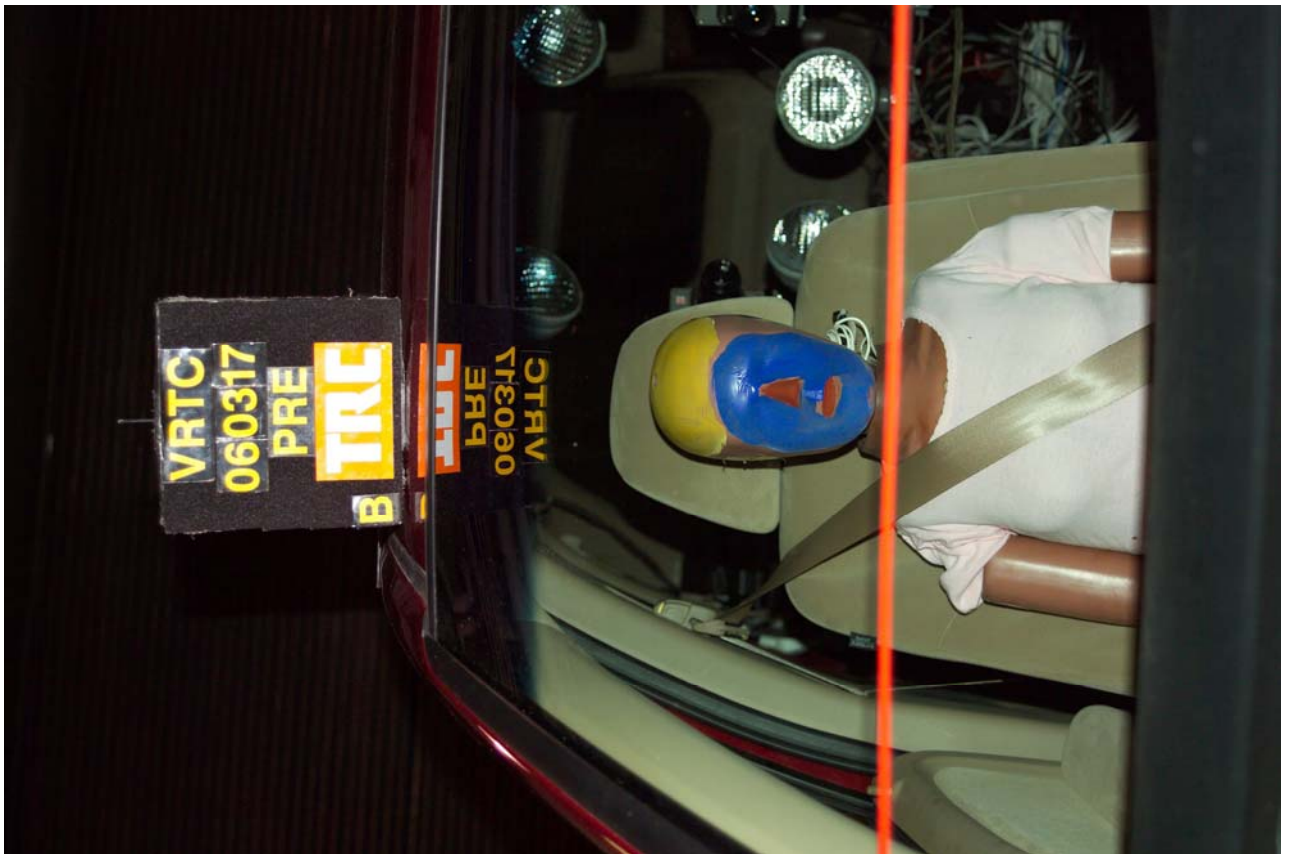


Figure A-103 Pre-Test Bullet Vehicle Passenger Dummy - View 1



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



Figure A-105 Pre-Test Bullet Vehicle Passenger Dummy - View 2



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



Figure A-107 Pre-Test Bullet Vehicle Passenger Dummy - View 3



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



Figure A-109 Pre-Test Bullet Vehicle Passenger Dummy - View 4

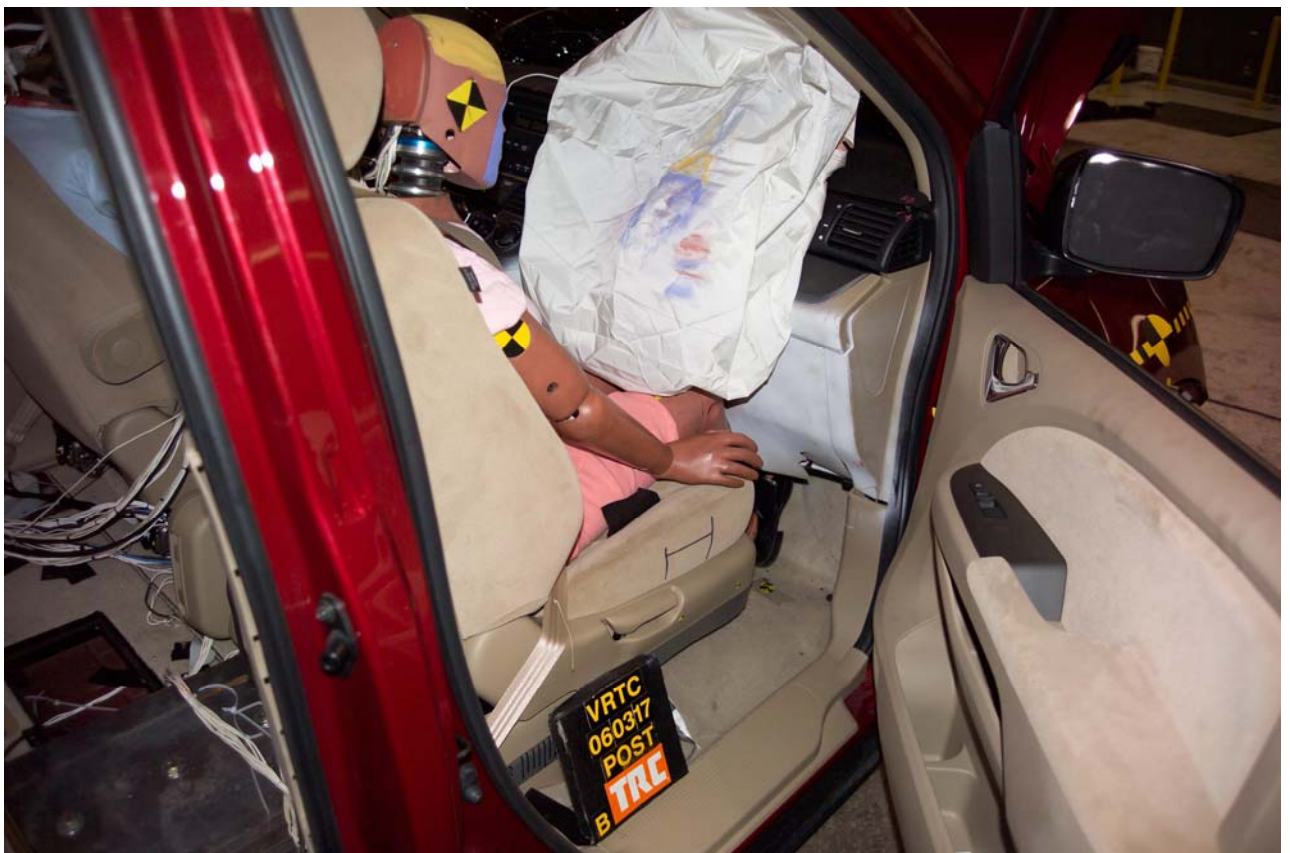


Figure A-110 Post-Test Bullet Vehicle Passenger Dummy - View 4

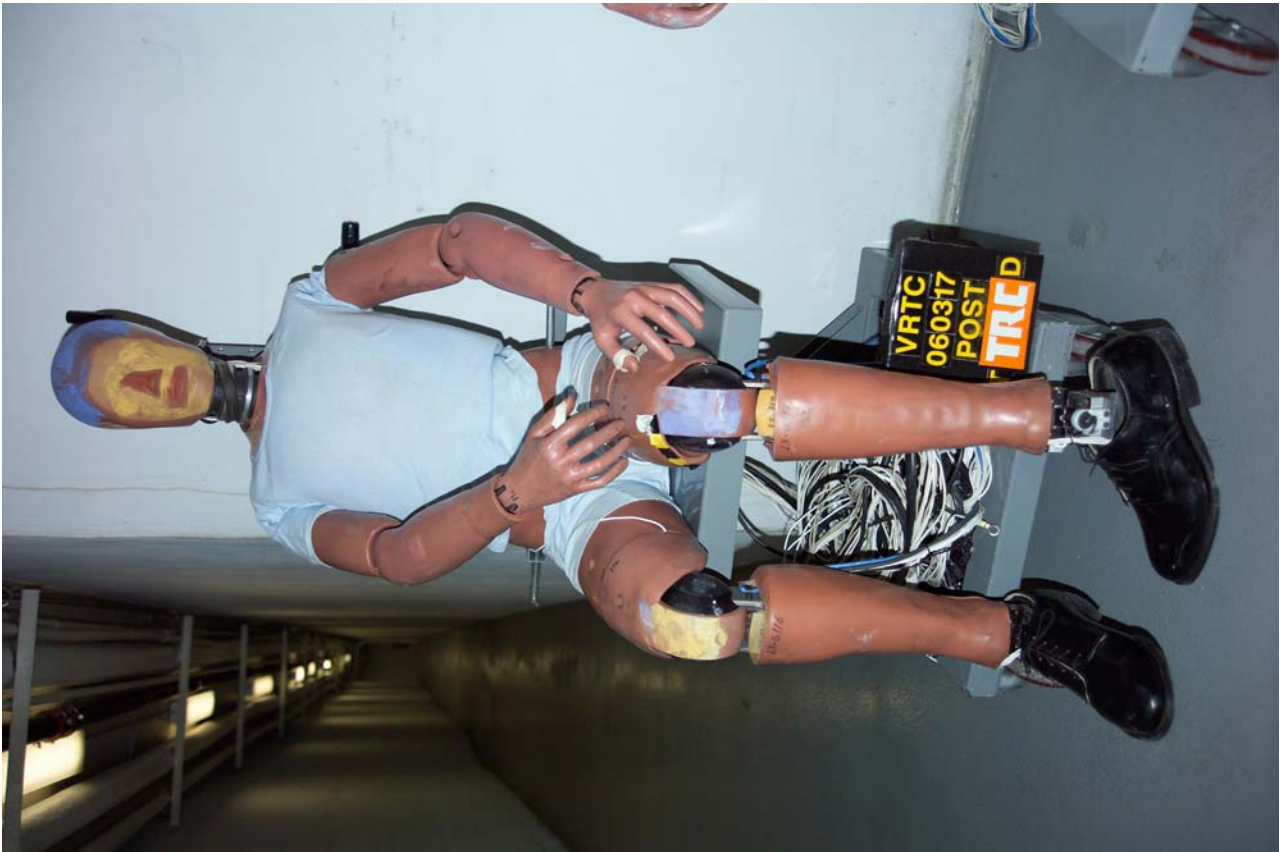


Figure A-111 Post-Test Target Vehicle Driver Dummy Overall Contact View



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



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

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Figure A-114 Post-Test Target Vehicle Driver Floorboard Deformation View



Figure A-115 Post-Test Target Vehicle Driver Toeboard Deformation View



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



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



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

Intentionally Left Blank



Figure A-119 Post-Test Target Vehicle Passenger Floorboard Deformation View



Figure A-120 Post-Test Target Vehicle Passenger Toeboard Deformation View



Figure A-121 Post-Test Target Vehicle Passenger Dash Panel Deformation View

Intentionally Left Blank



Figure A-122 Post-Test Bullet Vehicle Driver Dummy Overall Contact View



Figure A-123 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 1



Figure A-124 Post-Test Bullet Vehicle Driver Dummy Head Contact - View 2



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



Figure A-126 Post-Test Bullet Vehicle Driver Floorboard Deformation View



Figure A-127 Post-Test Bullet Vehicle Driver Toeboard Deformation View

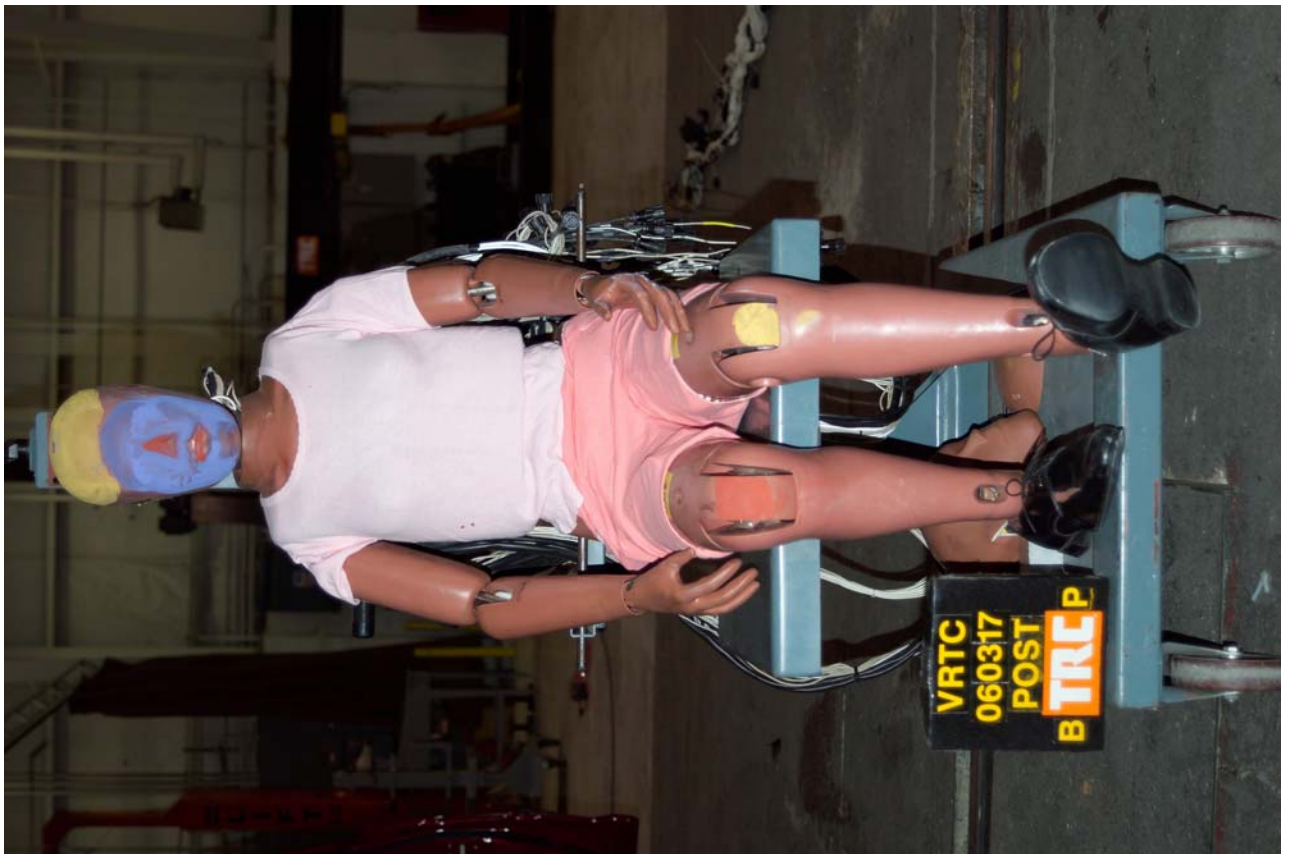


Figure A-128 Post-Test Bullet Vehicle Passenger Dummy Overall Contact View



Figure A-129 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 1



Figure A-130 Post-Test Bullet Vehicle Passenger Dummy Head Contact - View 2



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



Figure A-132 Post-Test Bullet Vehicle Passenger Floorboard Deformation View



Figure A-133 Post-Test Bullet Vehicle Passenger Toeboard Deformation View



Figure A-134 Target Vehicle Certification and Tire Information Label View

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Figure A-135 Bullet Vehicle Certification Label View



Figure A-136 Bullet Vehicle Tire Information Label View



Figure A-137 Pre-Test Target Vehicle Ballast View



Figure A-138 Pre-Test Bullet Vehicle Ballast View

Appendix B

Data Plots



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/29/2006

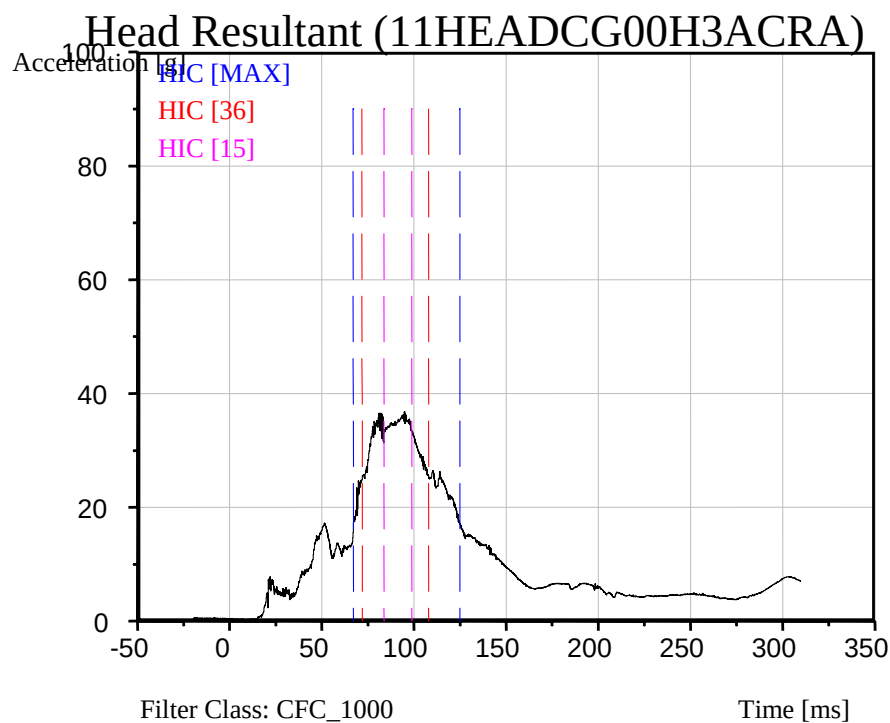
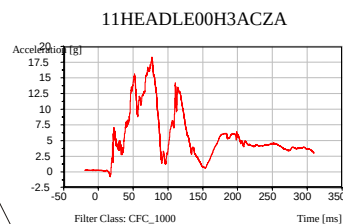
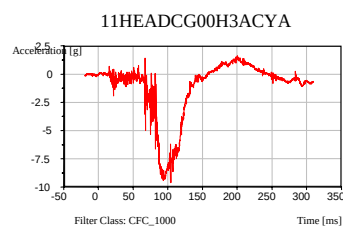
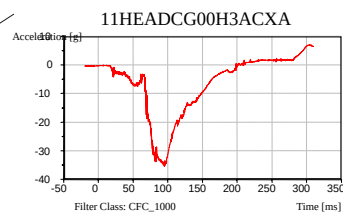
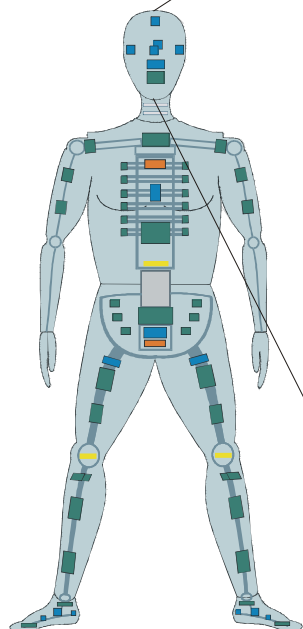
Time: 08:22

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



See Data Acquisition Explanations

Dummy: HIII 50th Male
Seating Position:
Driver

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.] = 253.81	67.12 ms	124.88 ms	28.64 g
HIC [36] = 213.67	71.92 ms	107.92 ms	32.30 g
HIC [15] = 107.81	83.84 ms	98.88 ms	34.84 g



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

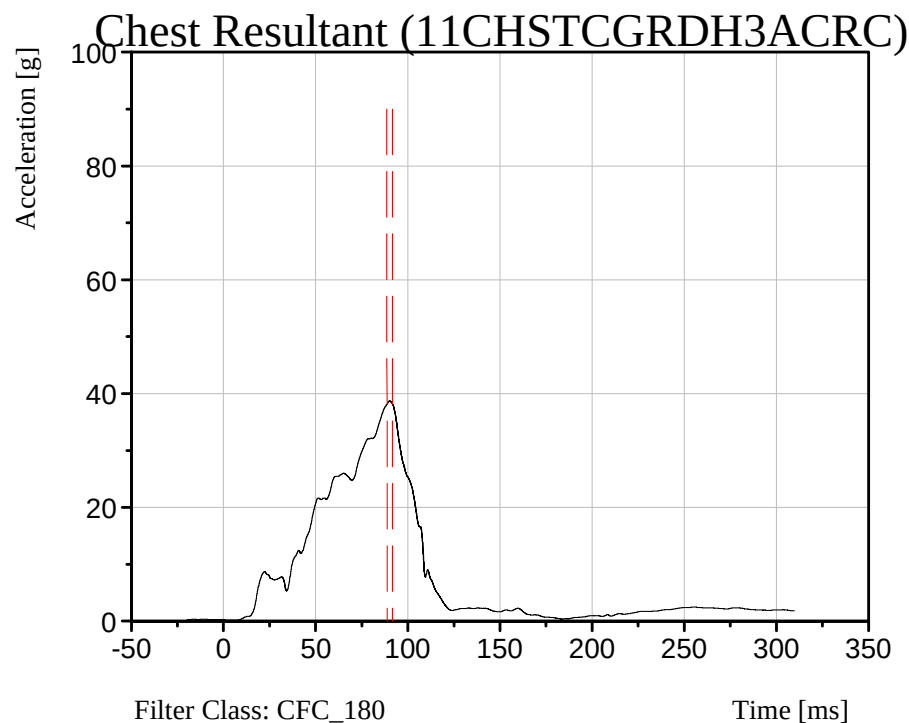
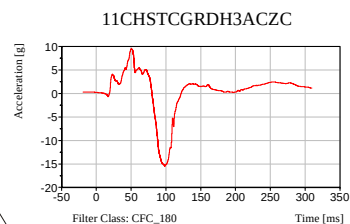
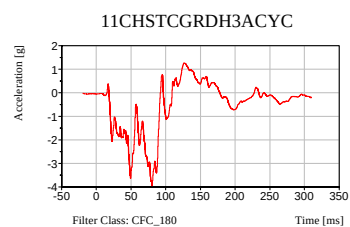
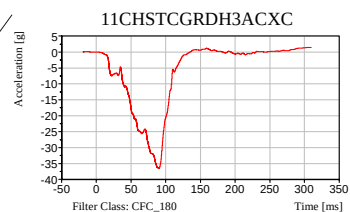
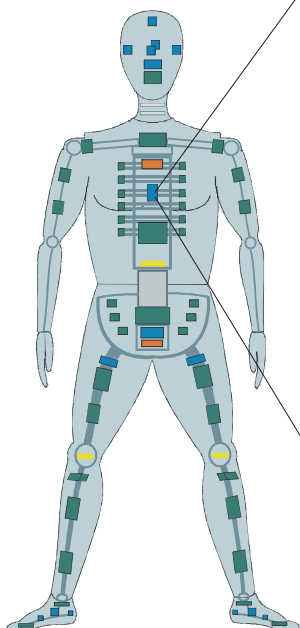
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 38.16 g
Chest Severity Index = 271.55

<u>T1</u> (Begin)	<u>T2</u> (End)
88.74 ms	91.74 ms

Dummy:HIII 50th Male
Seating Position:

Driver

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

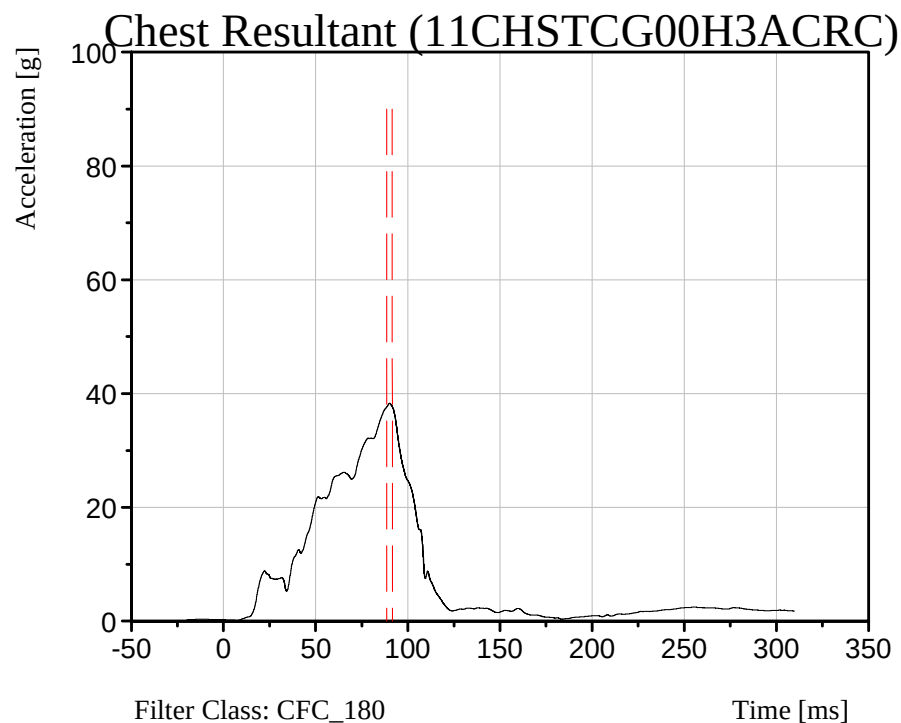
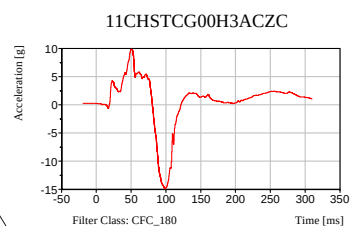
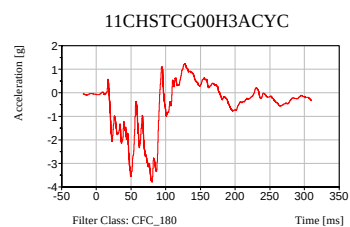
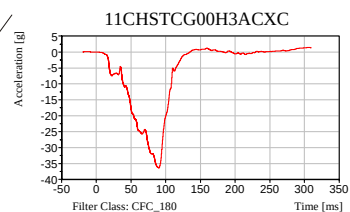
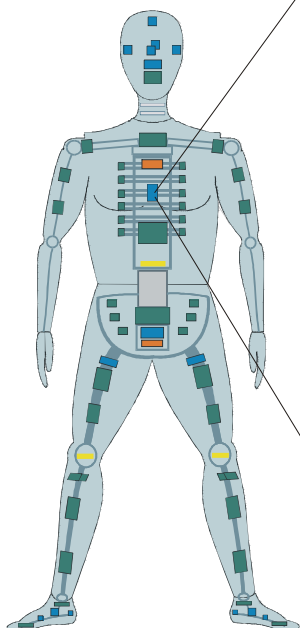
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 37.67 g
Chest Severity Index = 268.24

<u>T1</u> (Begin)	<u>T2</u> (End)
88.63 ms	91.63 ms

Dummy: HIII 50th Male
Seating Position:

Driver

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

Chest Deflection

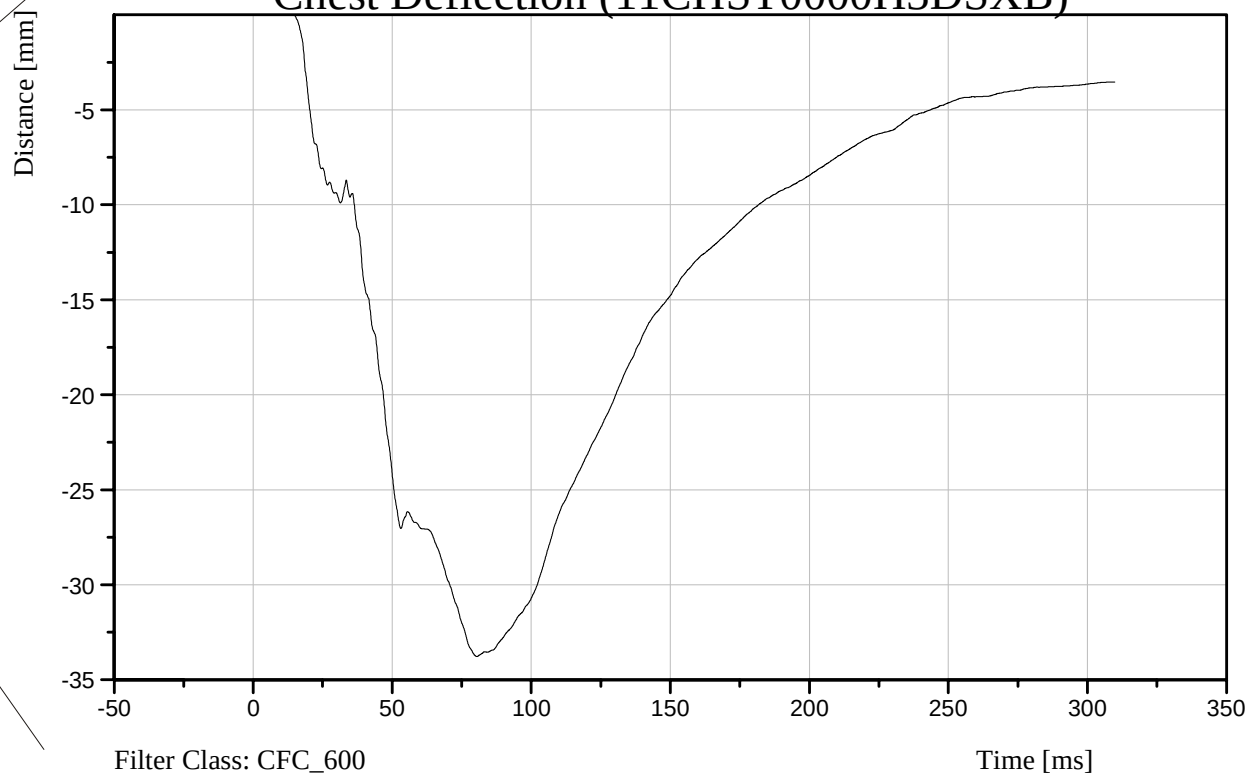
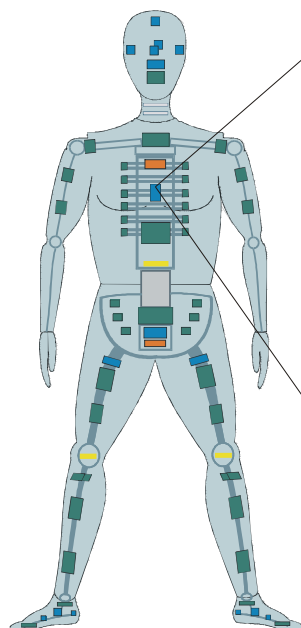
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

Chest Deflection (11CHST0000H3DSXB)



Dummy: HIII 50th Male

Seating Position:

Driver

[Max.] -0.00 mm at -6.48 ms

[Min.] -33.77 mm at 80.48 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

Date: 03/20/2006
Time: 08:08

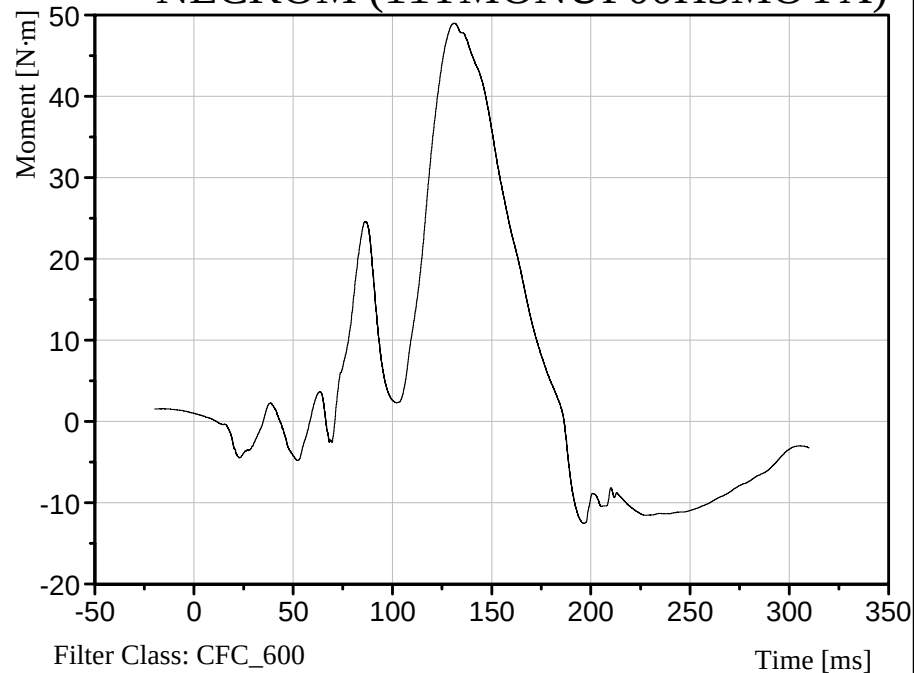
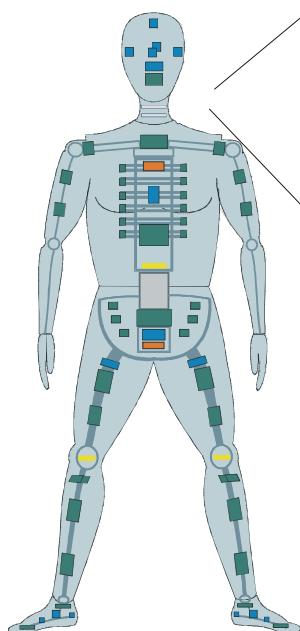
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

NECKOM (11TMONUP00H3MOYX)



Dummy: HIII 50th Male
Seating Position:

Driver

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

[Max.] 49.03 N·m at 131.20 ms

[Min.] -12.50 N·m at 196.40 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

Neck Injury Predictor (NIJ)

Customer: VRTC

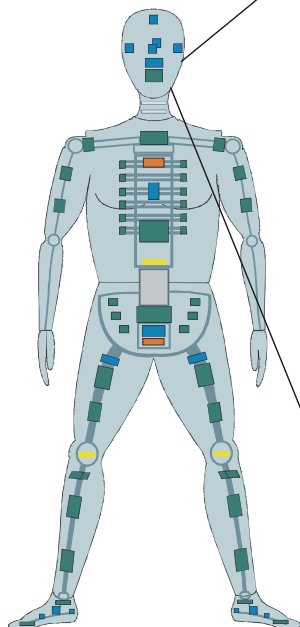
Test Orientation = Frontal

Fzc(Tension) = 6806

Fzc(Compression) = 6160

Myc(Extension) = 135

Myc(Flexion) = 310



Dummy: HIII 50th Male
Seating Position:

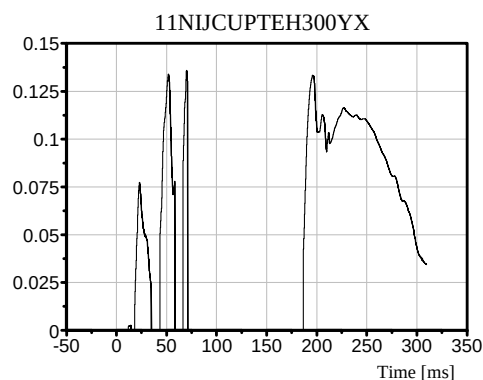
Driver

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

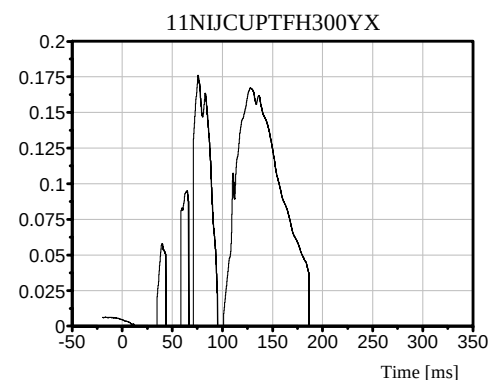


TRC Inc. Test Lab: CTF

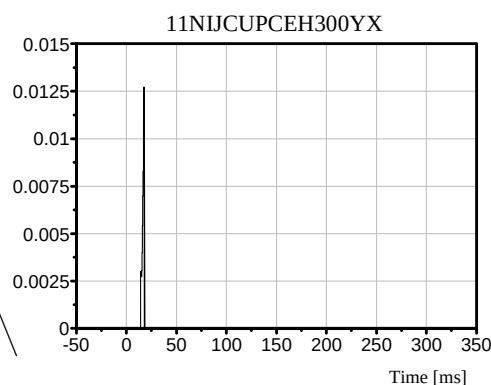
Test Number: 060317



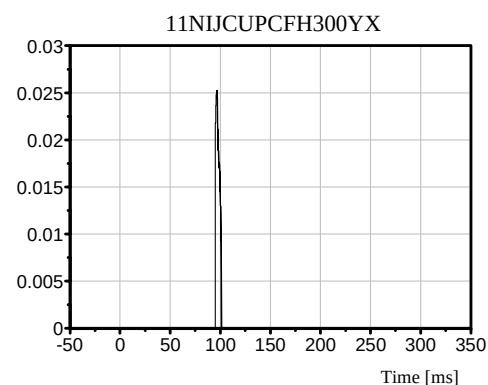
Max [NTE] 0.1359 at 69.84 ms



Max [NTF] 0.1762 at 75.68 ms



Max [NCE] 0.0127 at 17.44 ms



Max [NCF] 0.0253 at 96.64 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

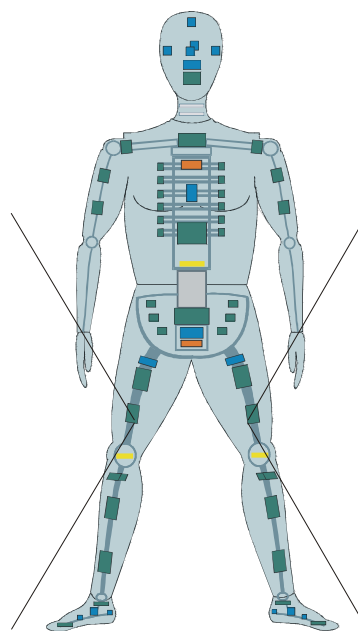
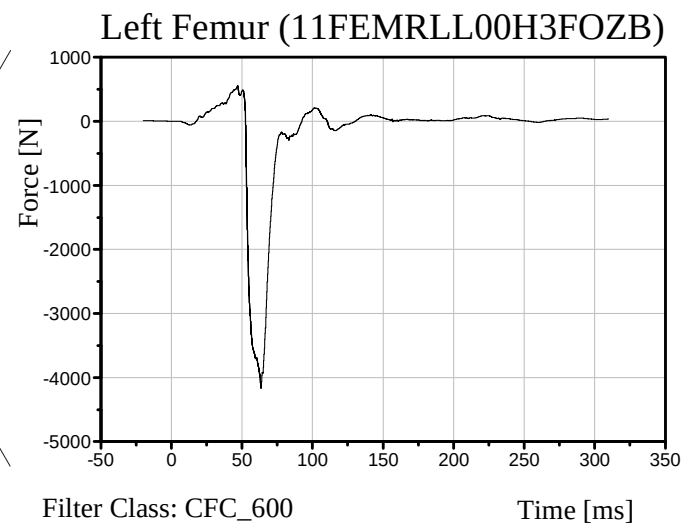
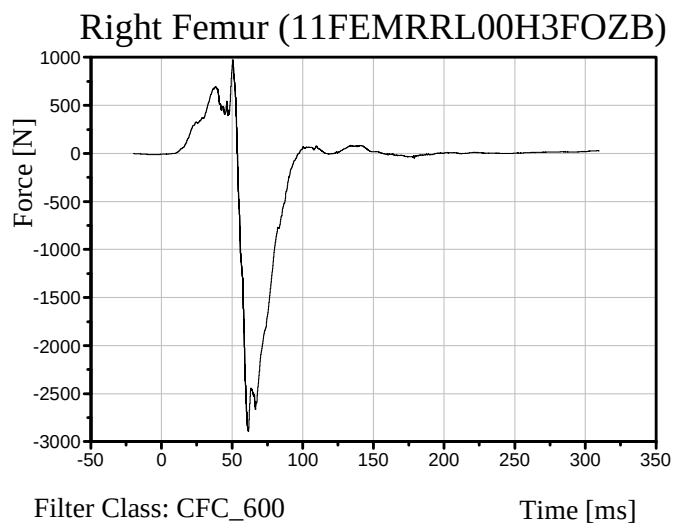
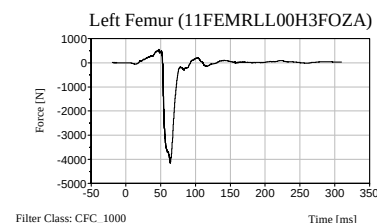
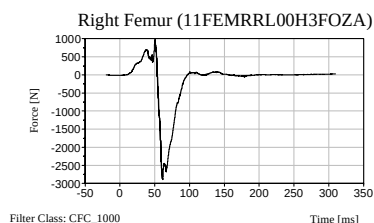
Time: 08:08

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



Max [Tension] 976.21 N at 50.40 ms
Min [Compression] -2,889.30 N at 61.44 ms

Dummy: HIII 50th Male
Seating Position:
Driver

Max [Tension] 558.23 N at 47.12 ms
Min [Compression] -4,166.79 N at 63.60 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Tibia Index (TI)

Date: 03/20/2006

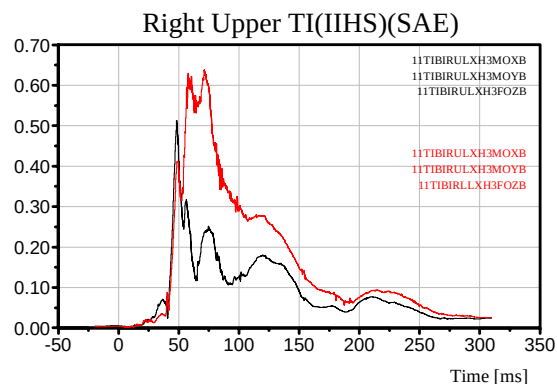
Time: 08:08

Customer: VRTC

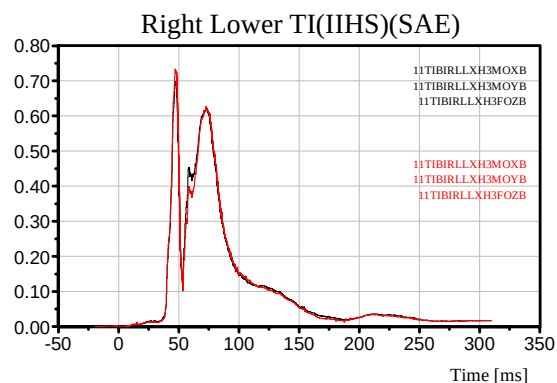
TRC Inc. Test Lab: CTF

Test Number: 060317

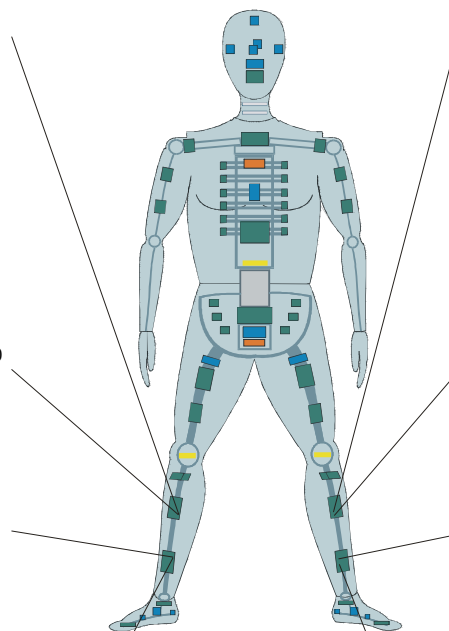
Critical Bending Moment = 240 N·m
Critical Compression Force = 12000 N



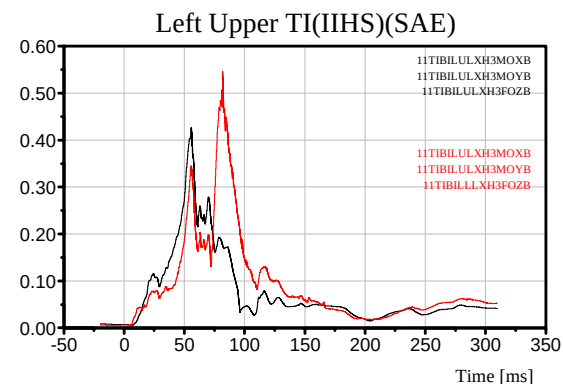
Max = 0.51 at 48.16 ms (SAE)
Max = 0.64 at 71.20 ms (IIHS)



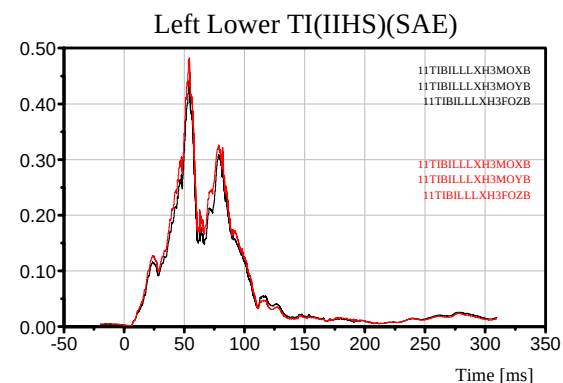
Max = 0.70 at 47.04 ms (SAE)
Max = 0.73 at 47.04 ms (IIHS)



Dummy: HIII 50th Male
Seating Position:
Driver



Max = 0.43 at 55.68 ms (SAE)
Max = 0.55 at 81.92 ms (IIHS)



Max = 0.44 at 54.16 ms (SAE)
Max = 0.48 at 54.16 ms (IIHS)

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

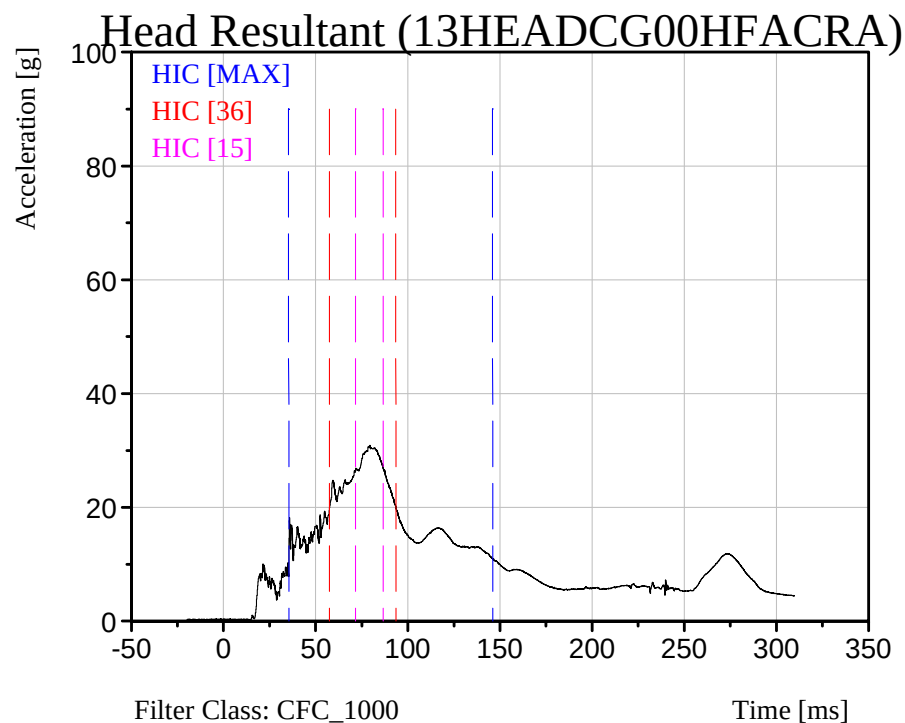
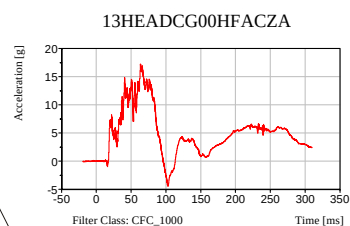
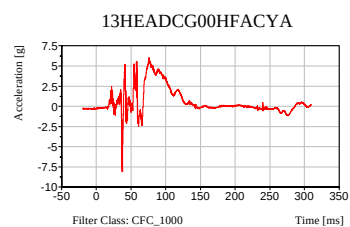
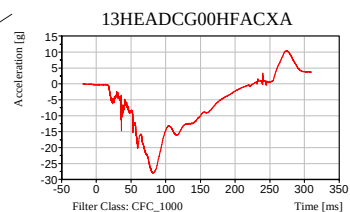
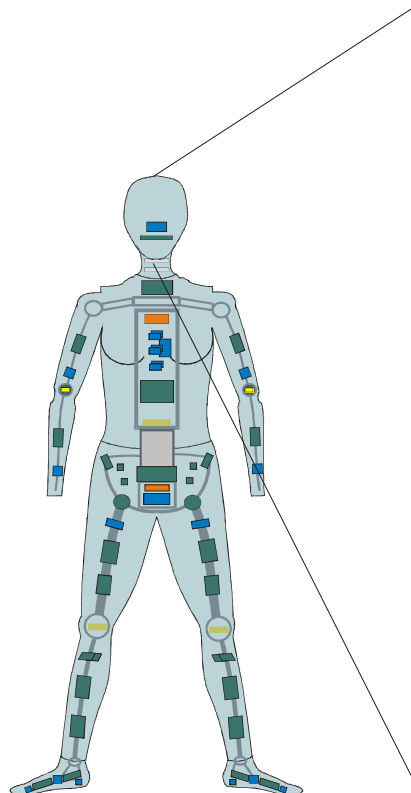
Time: 08:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



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.] = 157.80	35.44 ms	146.08 ms	18.26 g
HIC [36] = 122.35	57.52 ms	93.52 ms	25.84 g
HIC [15] = 68.10	71.68 ms	86.72 ms	28.99 g



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

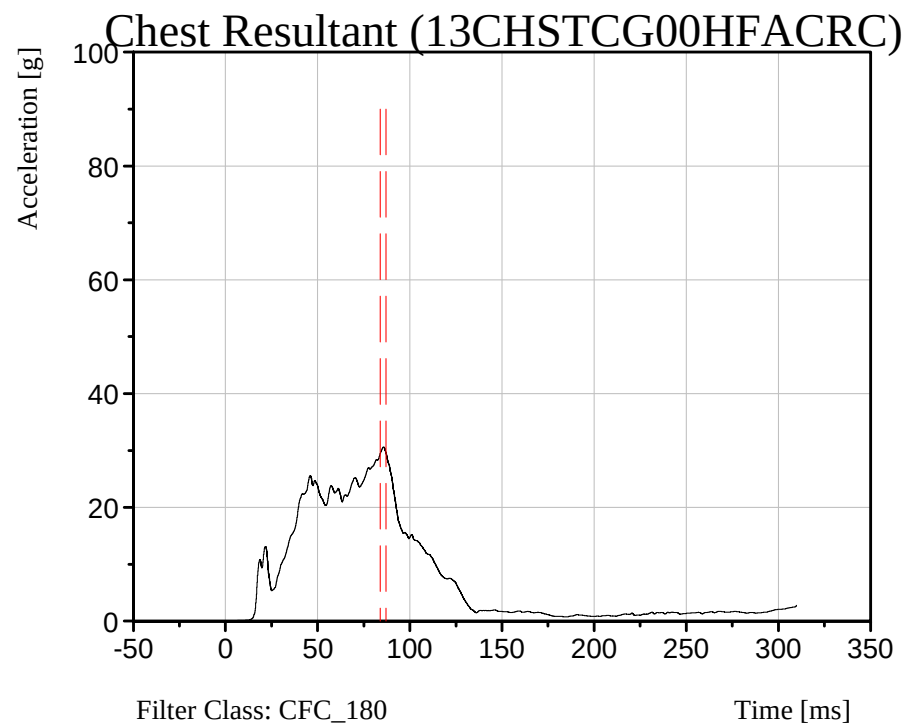
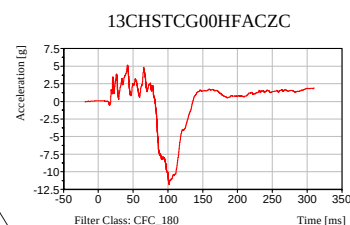
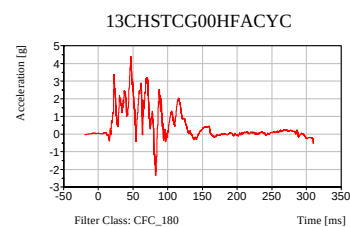
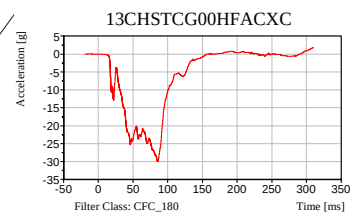
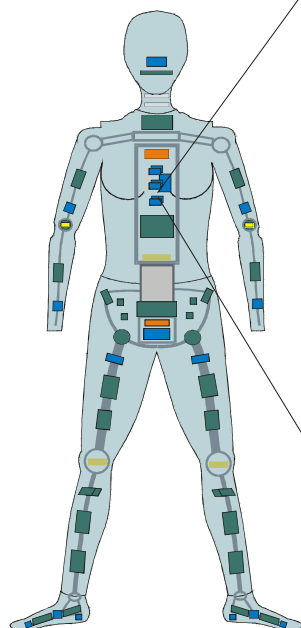
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 29.57 g
Chest Severity Index = 189.58

<u>T1</u> (Begin)	<u>T2</u> (End)
84.03 ms	87.03 ms

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

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

Chest Deflection

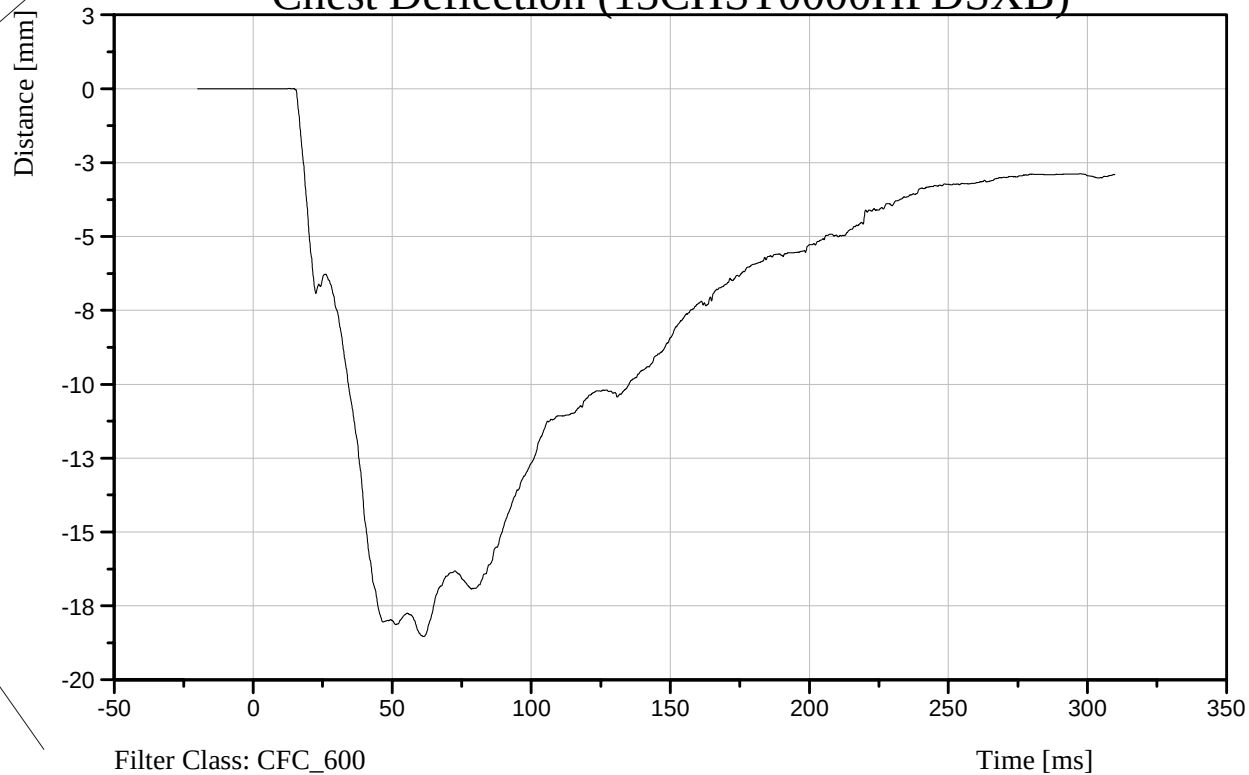
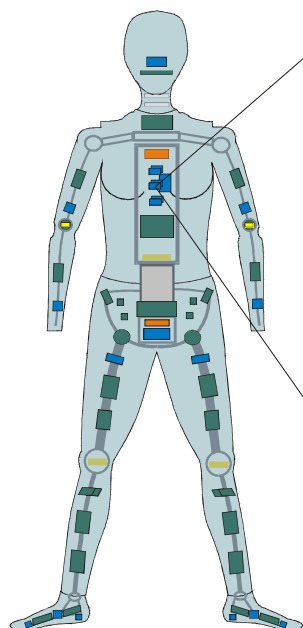
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

Chest Deflection (13CHST0000HFDSXB)



Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

[Max.] 0.01 mm at 13.04 ms

[Min.] -18.54 mm at 61.44 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

Date: 03/20/2006
Time: 08:08

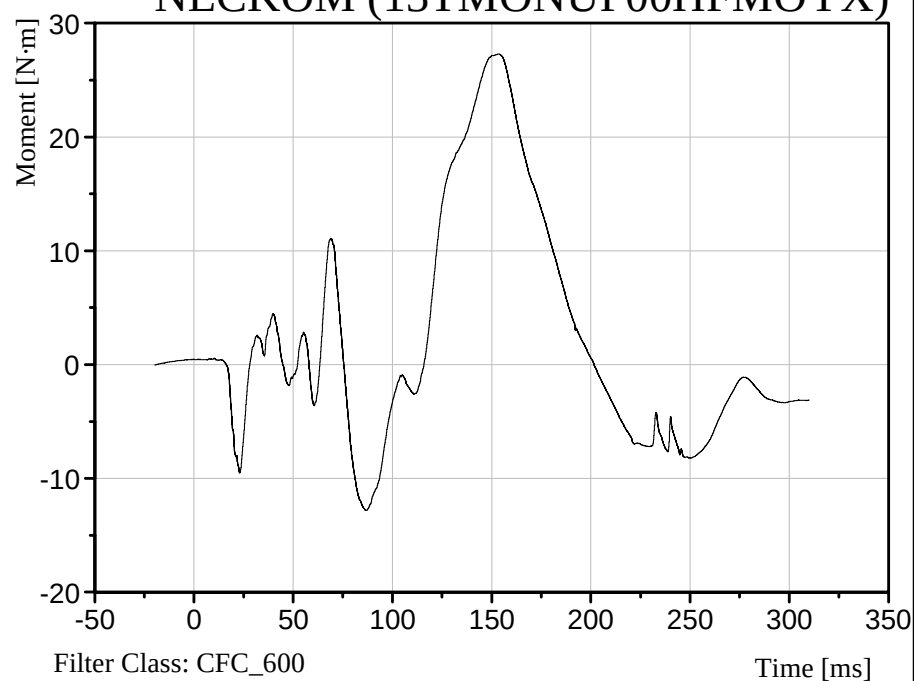
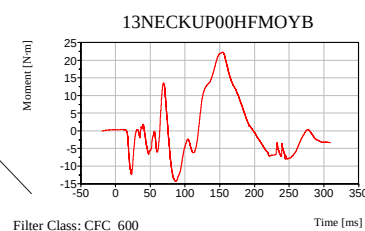
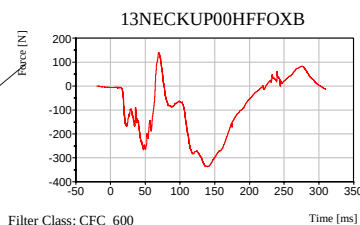
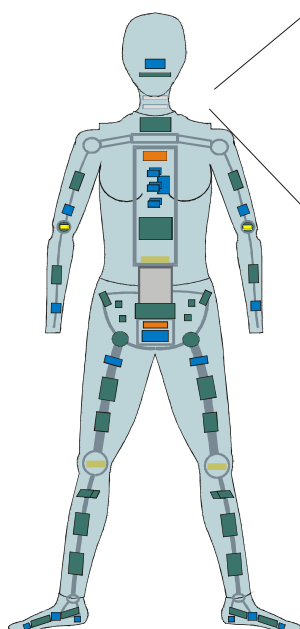
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

NECKOM (13TMONUP00HFM0YX)



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

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

[Max.] 27.29 N·m at 153.60 ms

[Min.] -12.81 N·m at 86.72 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/20/2006

Time: 08:08

Customer: VRTC

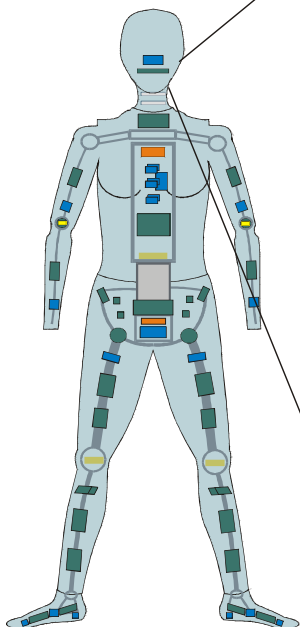
Test Orientation = Frontal

Fzc(Tension) = 4287

Fzc(Compression) = 3880

Myc(Extension) = 67

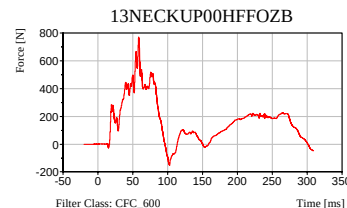
Myc(Flexion) = 155



Dummy: HIII 5th Female
Seating Position:

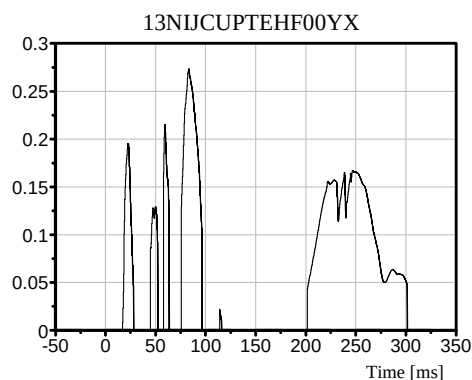
Right Front Passenger

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

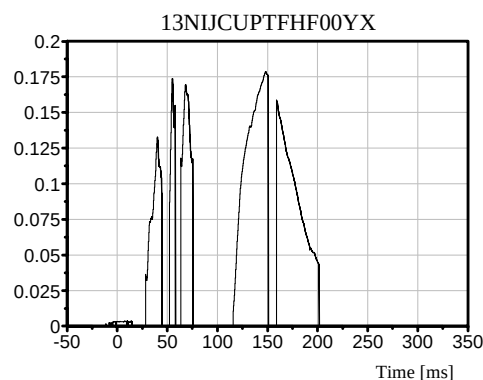


TRC Inc. Test Lab: CTF

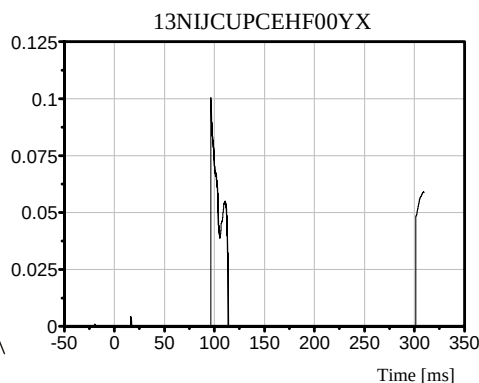
Test Number: 060317



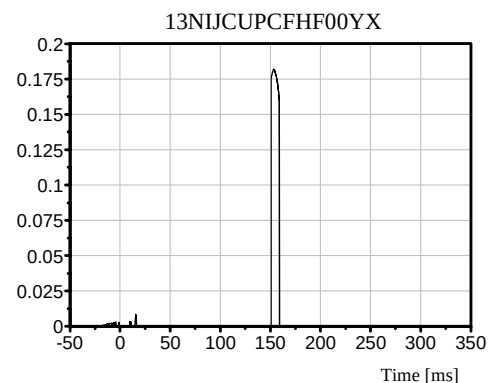
Max [NTE] 0.2735 at 83.20 ms



Max [NTF] 0.1786 at 148.08 ms



Max [NCE] 0.1006 at 96.32 ms



Max [NCF] 0.1821 at 153.12 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

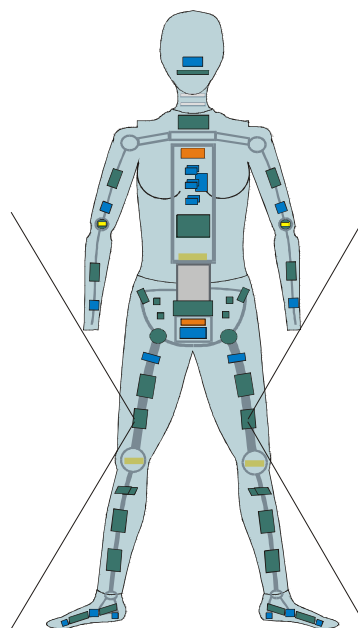
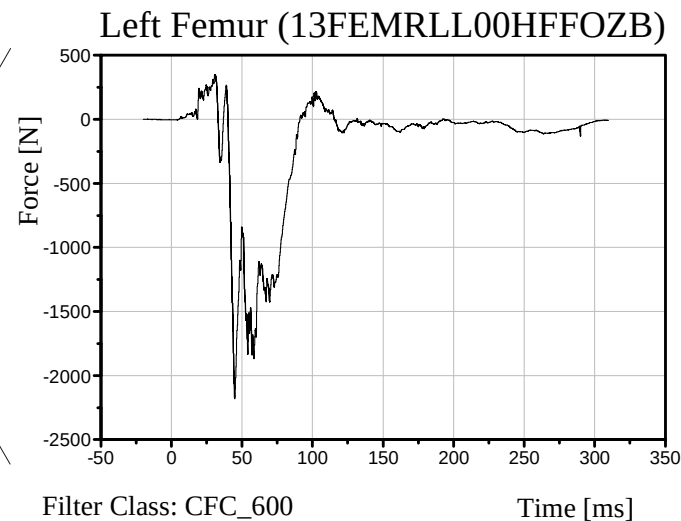
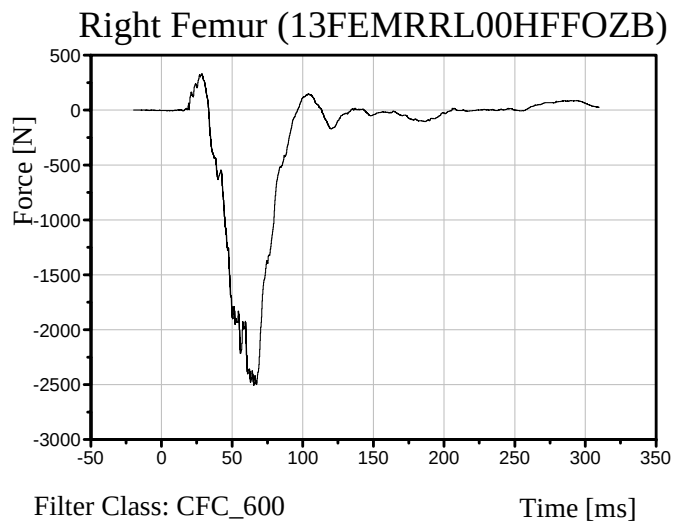
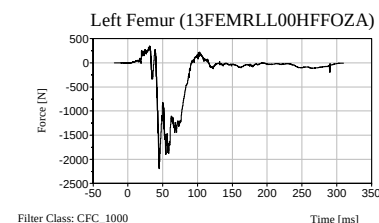
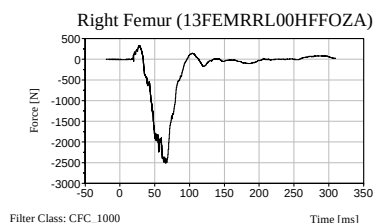
Time: 08:08

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



Max [Tension] 331.89 N at 28.48 ms
Min [Compression] -2,504.20 N at 65.28 ms

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

Max [Tension] 350.63 N at 30.96 ms
Min [Compression] -2,180.93 N at 44.96 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

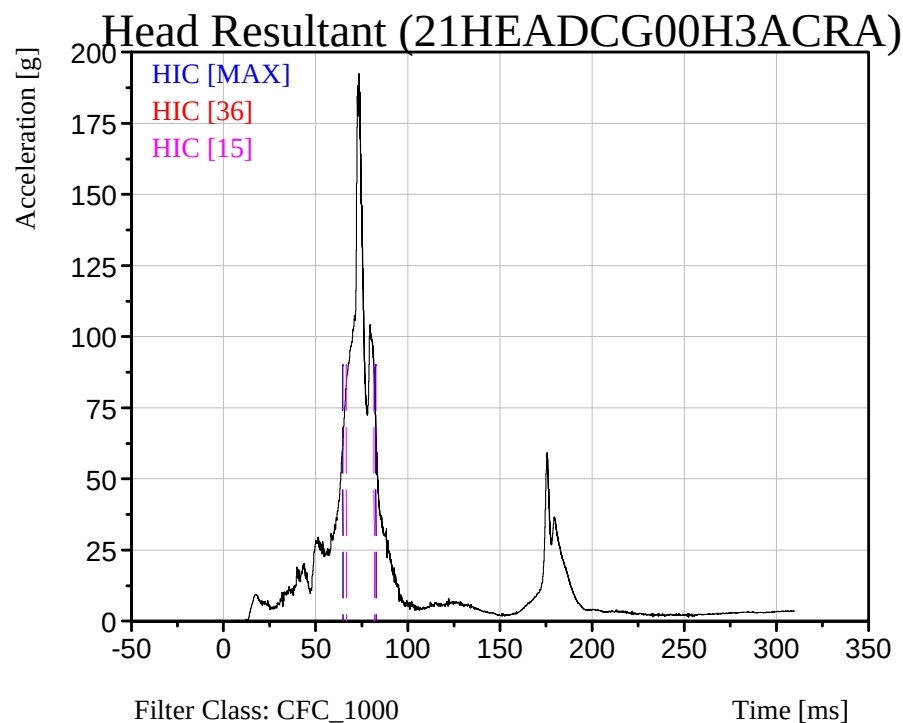
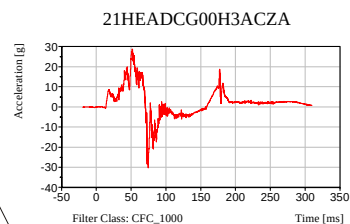
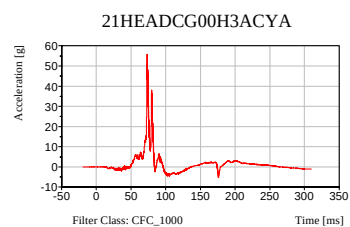
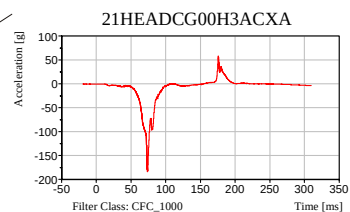
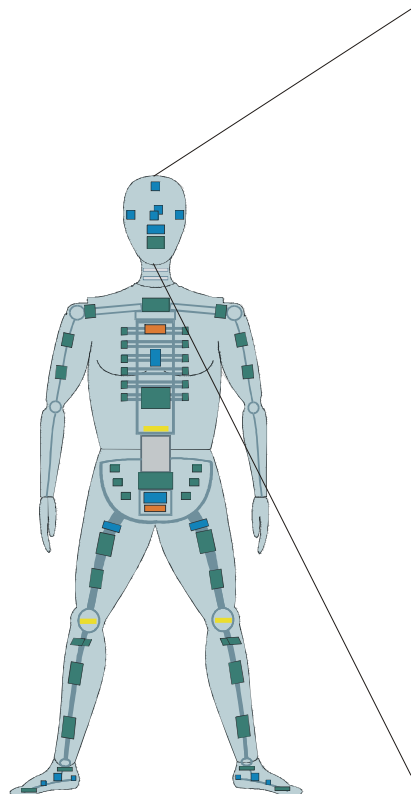
Time: 08:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



Dummy: HIII 50th Male
Seating Position:
Driver

	<u>T1</u> (Begin)	<u>T2</u> (End)	<u>Avg. g T1 to T2</u>
HIC [Max.] = 2,032.48	64.80 ms	82.72 ms	104.98 g
HIC [36] = 2,032.48	64.80 ms	82.72 ms	104.98 g
HIC [15] = 1,950.71	66.72 ms	81.76 ms	110.83 g

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

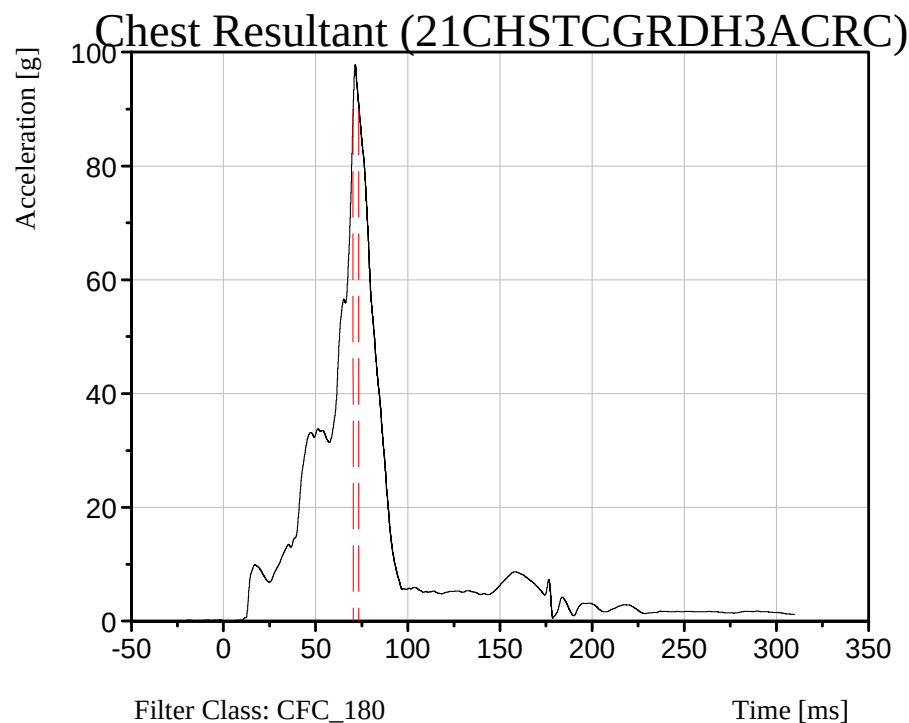
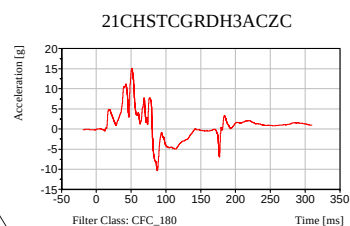
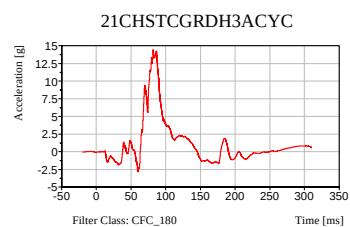
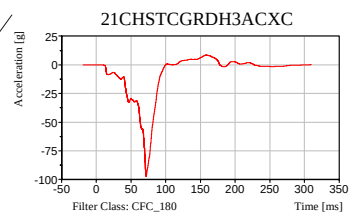
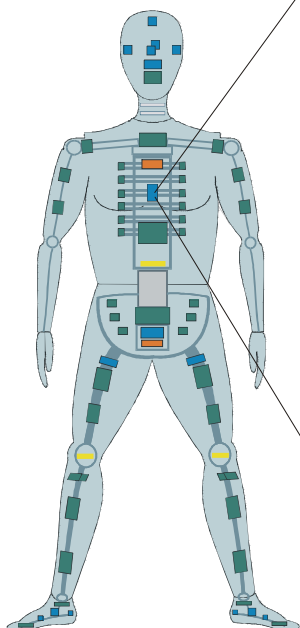
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 90.50 g
Chest Severity Index = 1,117.88

<u>T1</u> (Begin)	<u>T2</u> (End)
70.38 ms	73.38 ms

Dummy:HIII 50th Male
Seating Position:

Driver

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

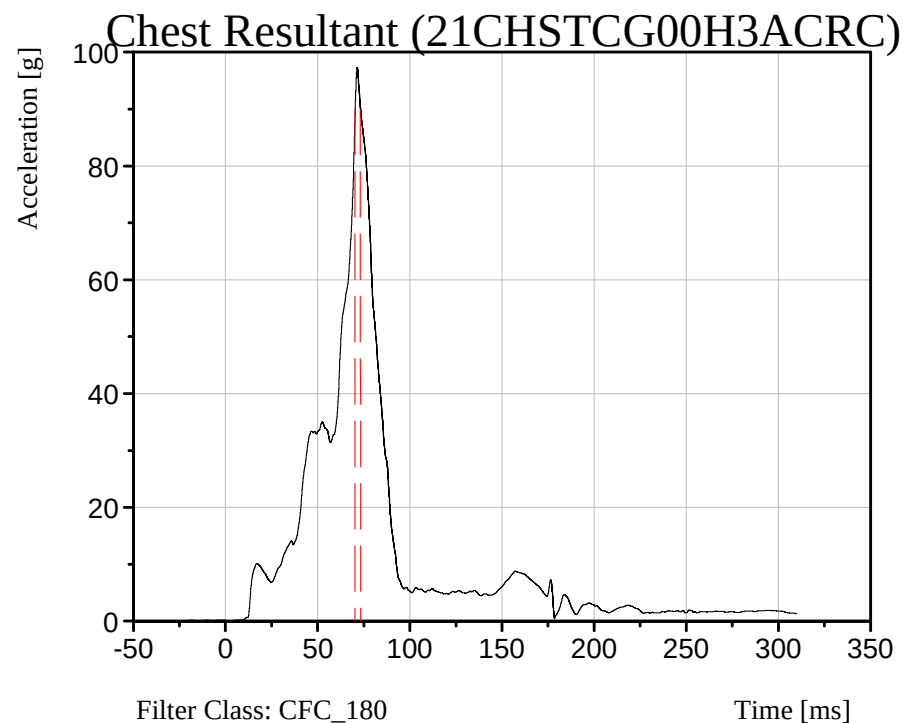
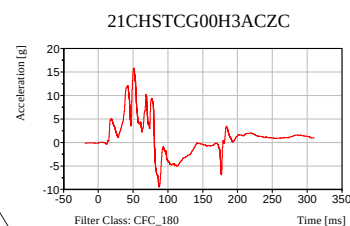
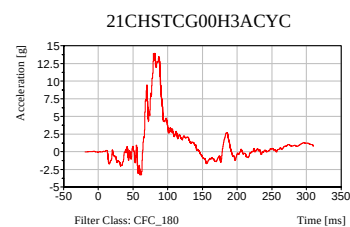
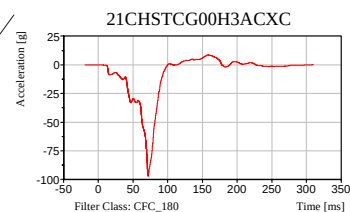
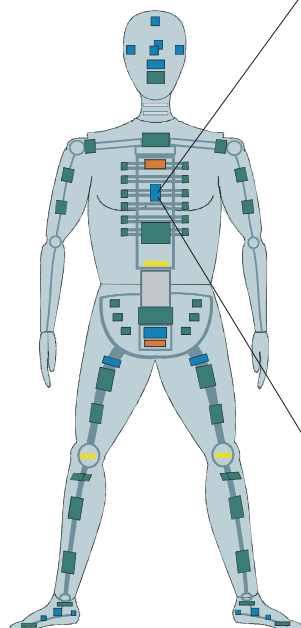
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 89.74 g
Chest Severity Index = 1,125.27

<u>T1</u> (Begin)	<u>T2</u> (End)
70.31 ms	73.31 ms

Dummy:HIII 50th Male
Seating Position:

Driver

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

Chest Deflection

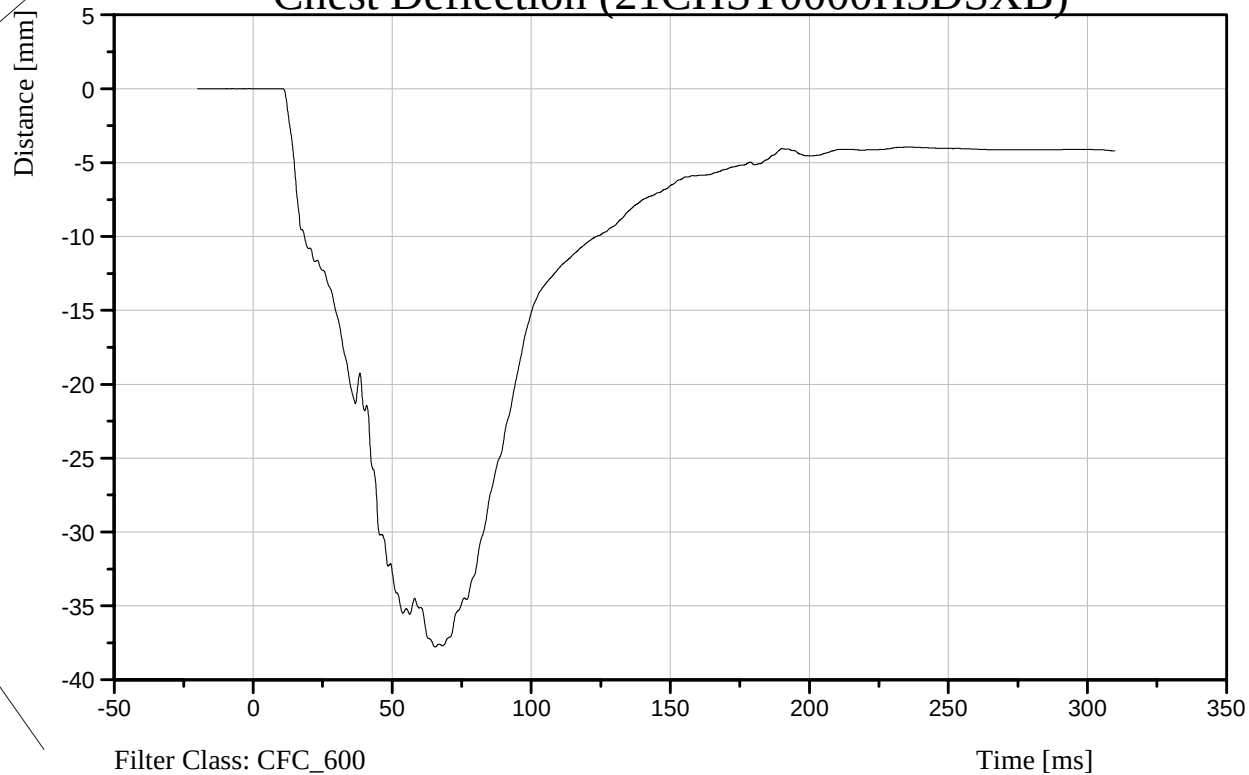
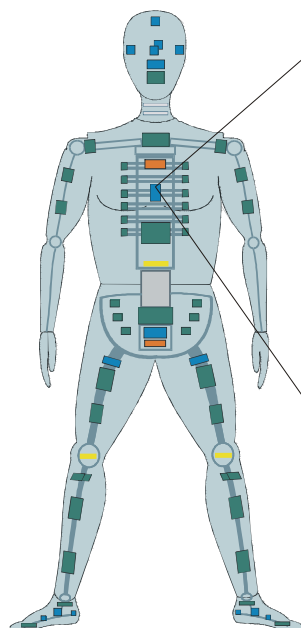
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

Chest Deflection (21CHST0000H3DSXB)



Dummy: HIII 50th Male

Seating Position:

Driver

[Max.] 0.01 mm at -1.60 ms

[Min.] -37.78 mm at 65.36 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

Date: 03/20/2006
Time: 08:08

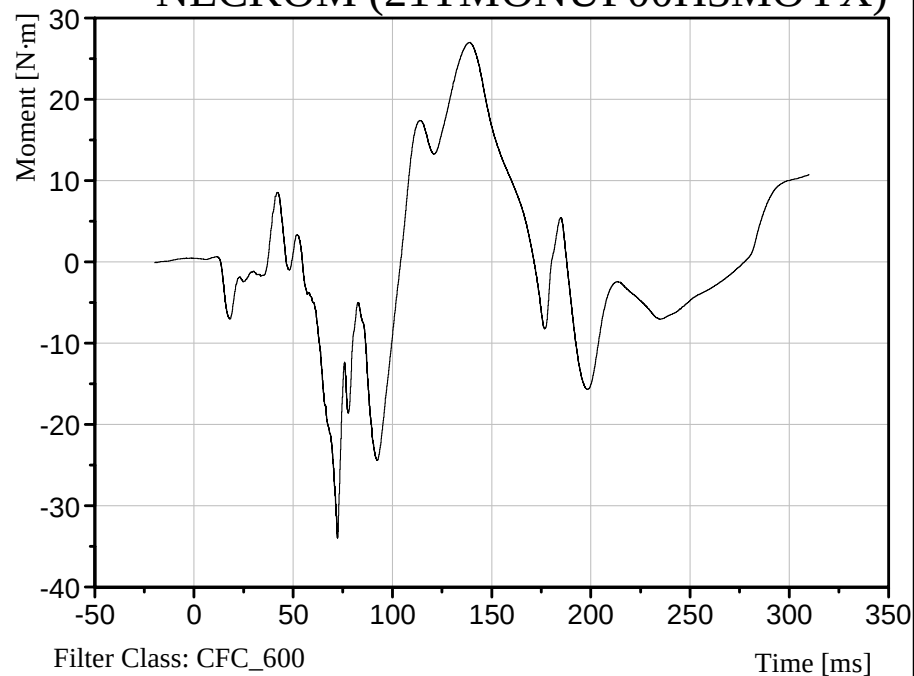
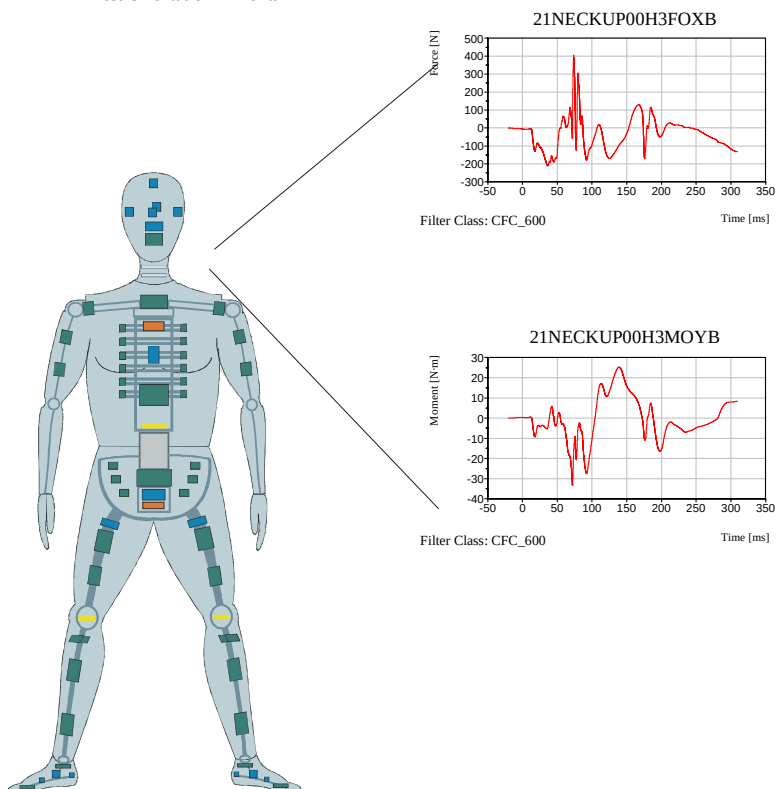
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

NECKOM (21TMONUP00H3MOYX)



Dummy: HIII 50th Male
Seating Position:

Driver

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

[Max.] 27.02 N·m at 139.04 ms

[Min.] -33.97 N·m at 72.32 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/20/2006

Time: 08:08

Customer: VRTC

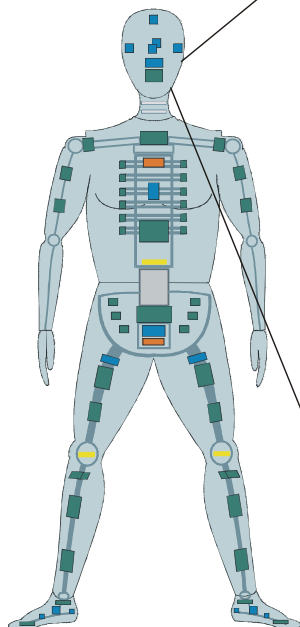
Test Orientation = Frontal

Fzc(Tension) = 6806

Fzc(Compression) = 6160

Myc(Extension) = 135

Myc(Flexion) = 310



Dummy: HIII 50th Male
Seating Position:

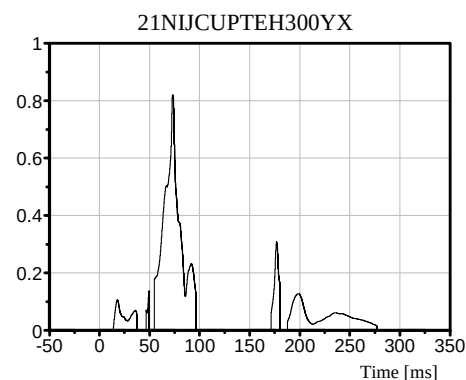
Driver

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

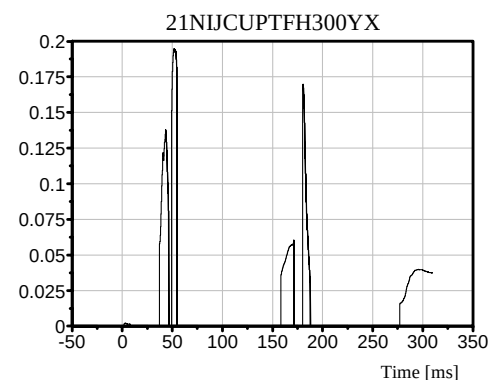


TRC Inc. Test Lab: CTF

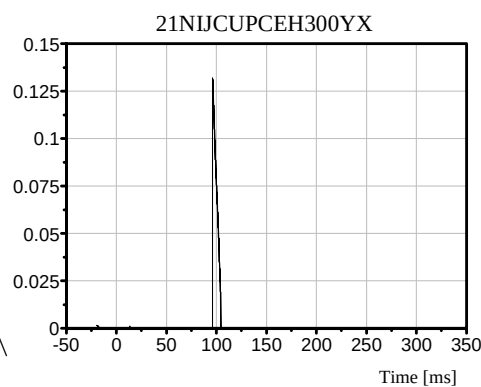
Test Number: 060317



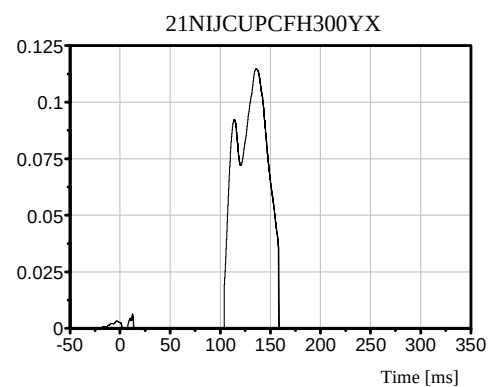
Max [NTE] 0.8202 at 73.04 ms



Max [NTF] 0.1948 at 51.84 ms



Max [NCE] 0.1321 at 96.08 ms



Max [NCF] 0.1149 at 135.76 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

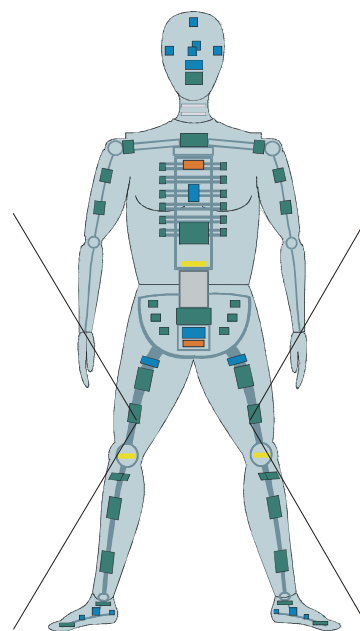
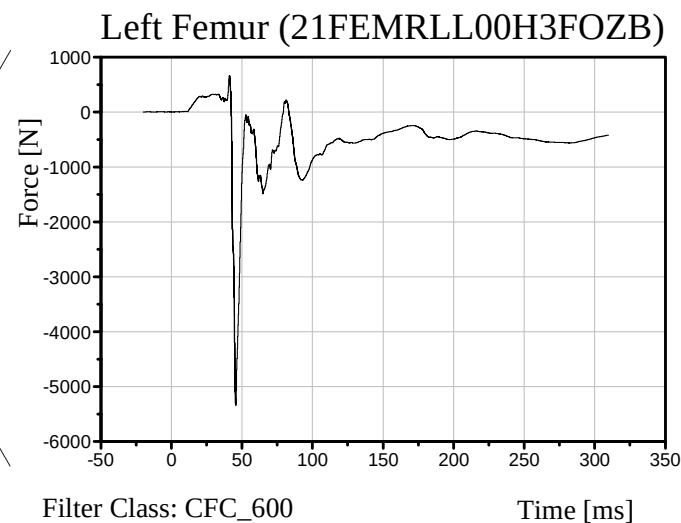
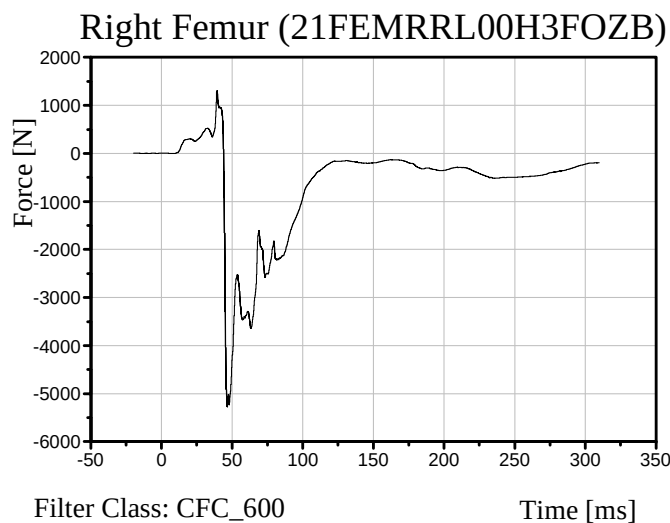
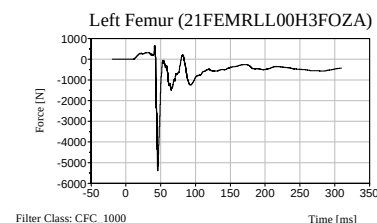
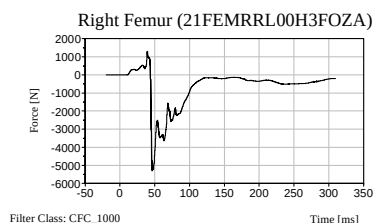
Time: 08:08

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



Max [Tension] 1,307.33 N at 39.28 ms
Min [Compression] -5,277.77 N at 46.48 ms

Dummy: HIII 50th Male
Seating Position:
Driver

Max [Tension] 666.98 N at 41.28 ms
Min [Compression] -5,340.24 N at 45.76 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Tibia Index (TI)

Date: 03/20/2006

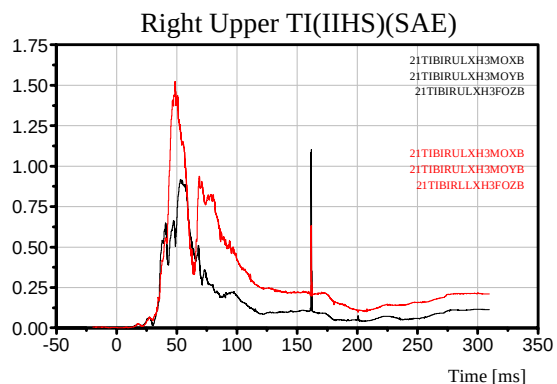
Time: 08:08

Customer: VRTC

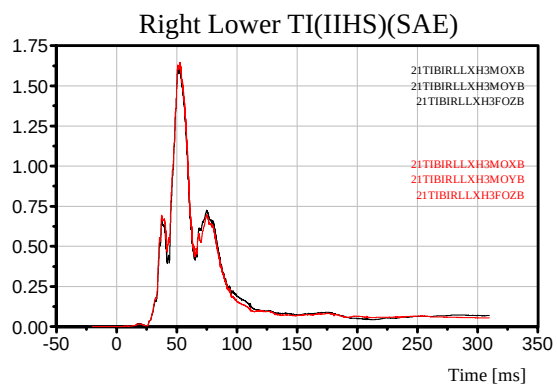
TRC Inc. Test Lab: CTF

Test Number: 060317

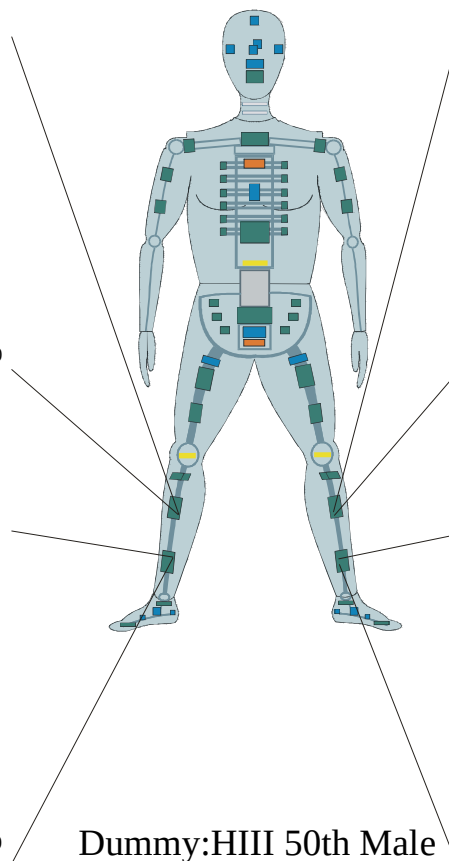
Critical Bending Moment = 240 N·m
Critical Compression Force = 12000 N



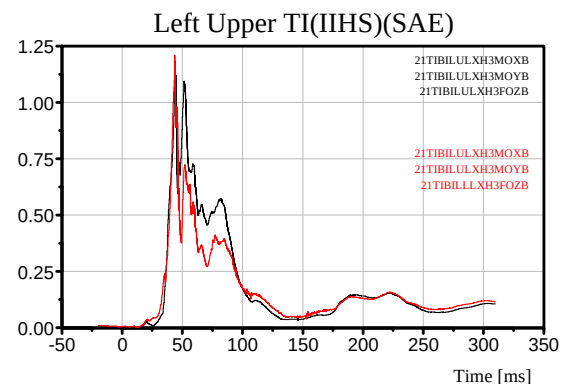
Max = 1.10 at 161.76 ms (SAE)
Max = 1.52 at 48.64 ms (IIHS)



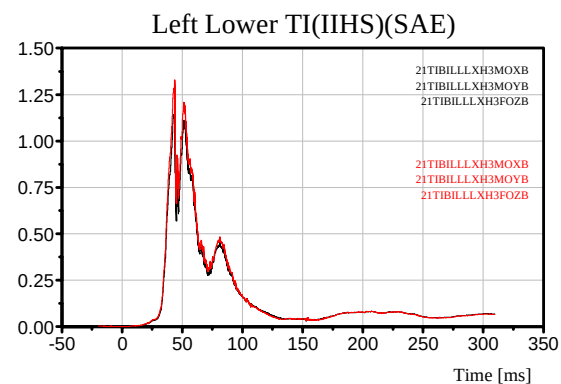
Max = 1.61 at 52.80 ms (SAE)
Max = 1.65 at 52.80 ms (IIHS)



Dummy: HIII 50th Male
Seating Position:
Driver



Max = 1.12 at 44.48 ms (SAE)
Max = 1.21 at 43.76 ms (IIHS)



Max = 1.17 at 43.76 ms (SAE)
Max = 1.33 at 43.76 ms (IIHS)

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

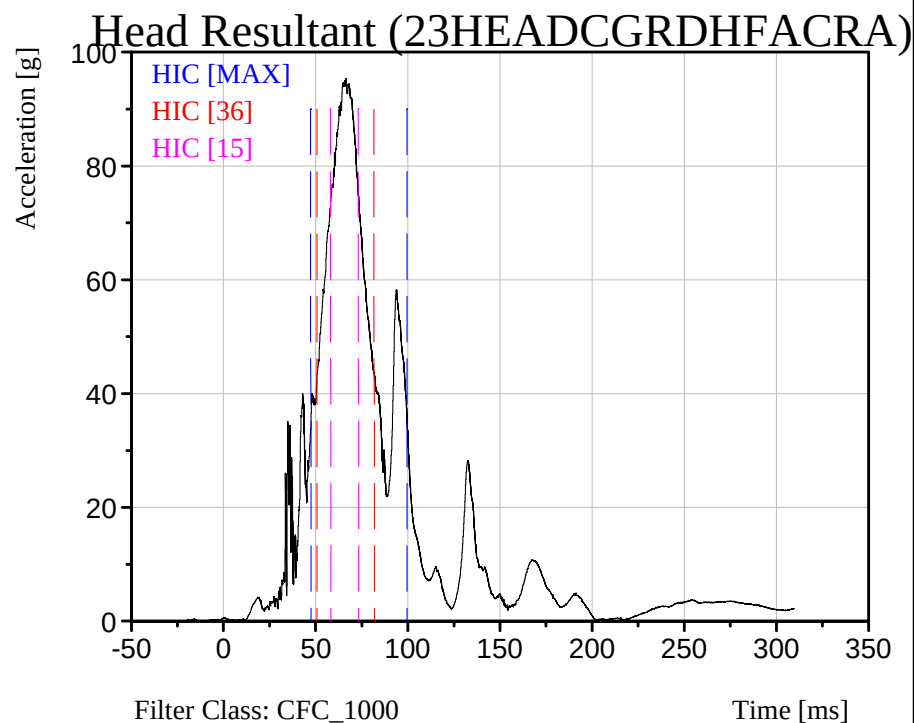
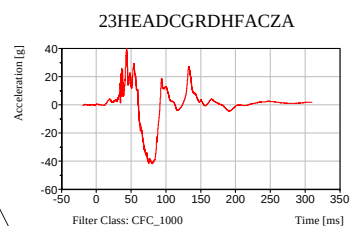
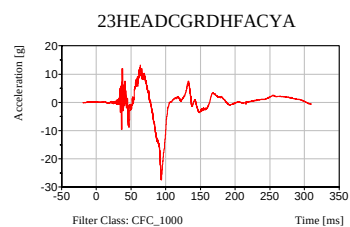
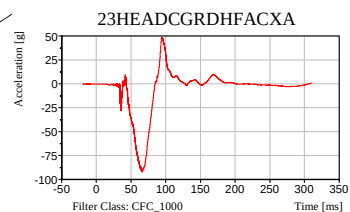
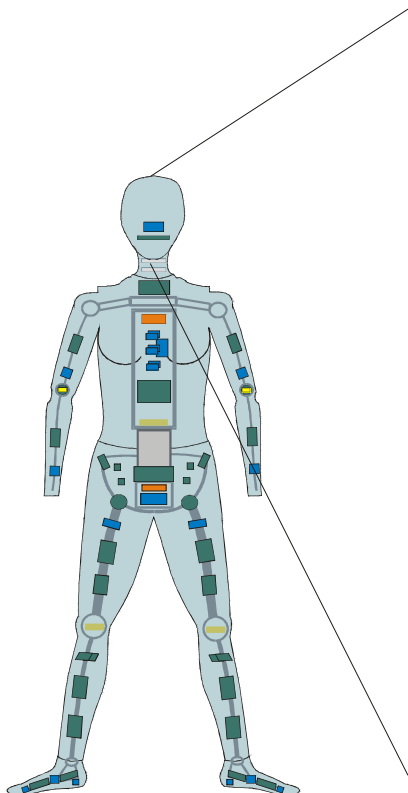
Time: 08:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



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.] = 1,377.07	47.36 ms	99.60 ms	58.63 g
HIC [36] = 1,368.14	50.80 ms	81.76 ms	72.06 g
HIC [15] = 1,065.34	58.24 ms	73.28 ms	87.05 g



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

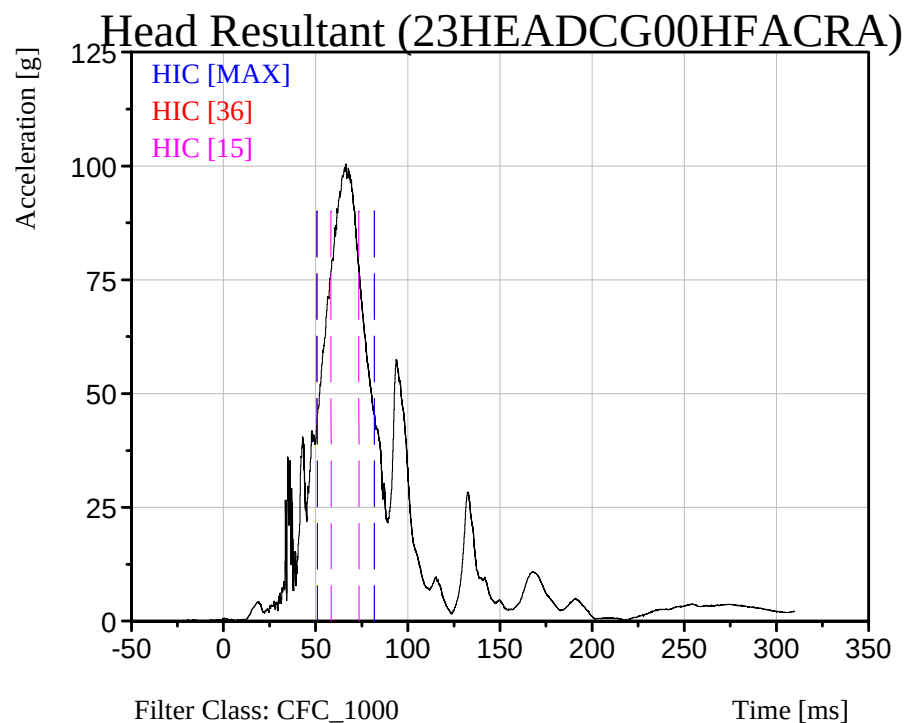
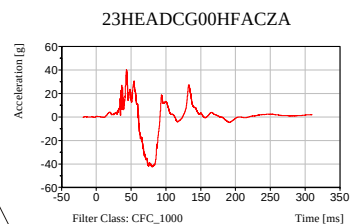
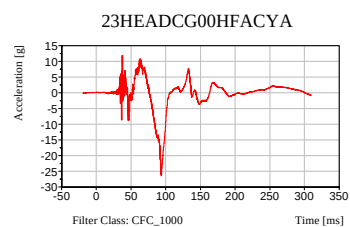
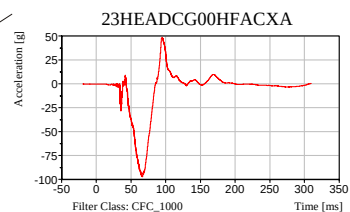
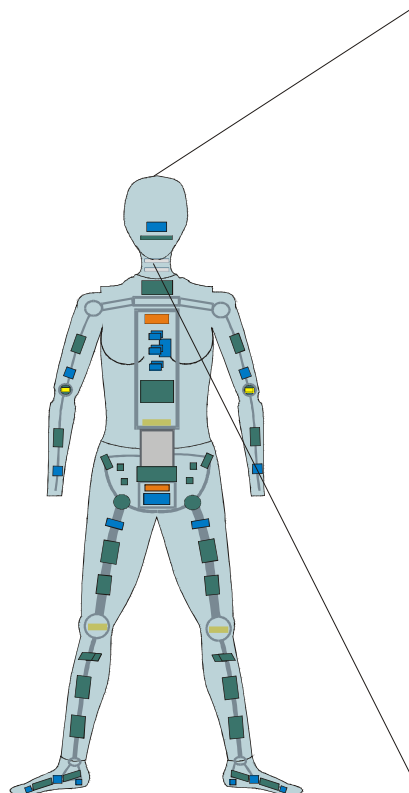
Time: 08:08

Head Injury Criterion (HIC)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



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.] = 1,526.06	50.88 ms	81.84 ms	75.28 g
HIC [36] = 1,526.06	50.88 ms	81.84 ms	75.28 g
HIC [15] = 1,192.50	58.40 ms	73.44 ms	91.06 g



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

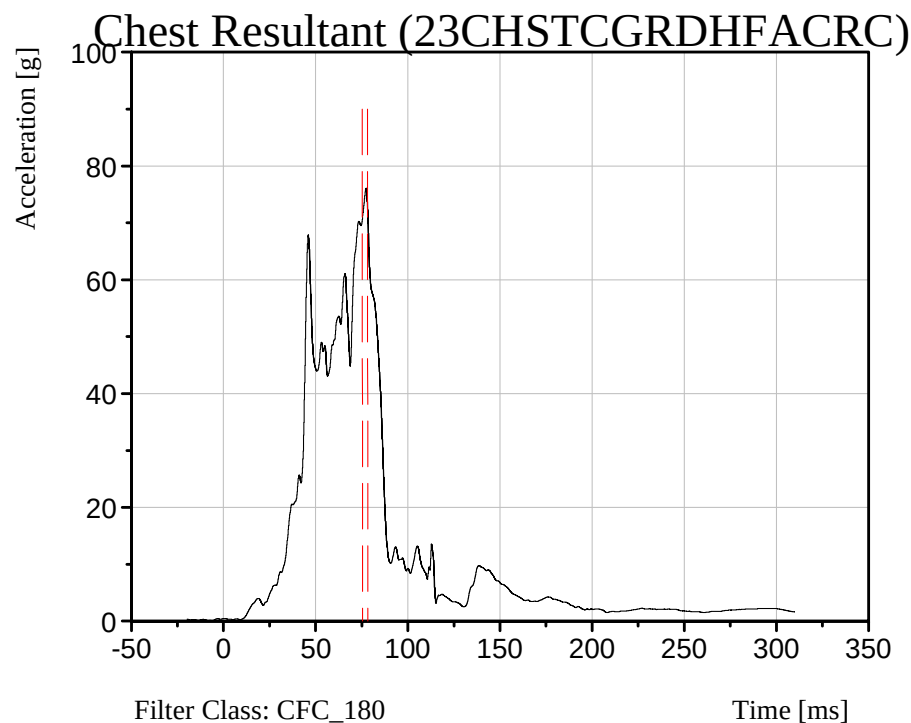
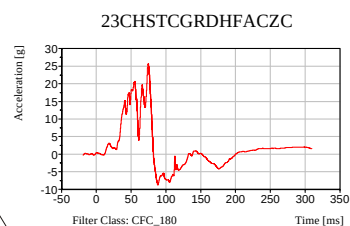
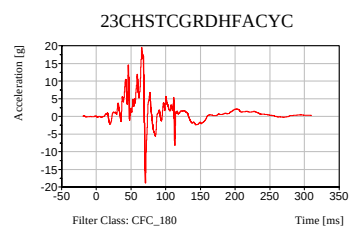
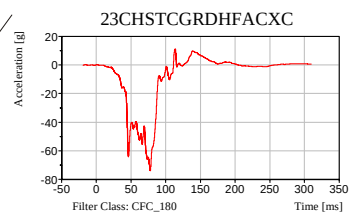
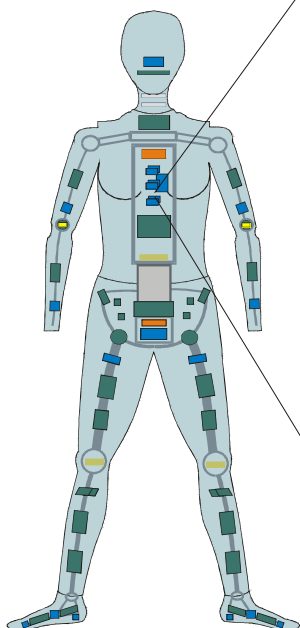
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 70.75 g
Chest Severity Index = 1,050.22

<u>T1</u> (Begin)	<u>T2</u> (End)
75.32 ms	78.32 ms

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

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

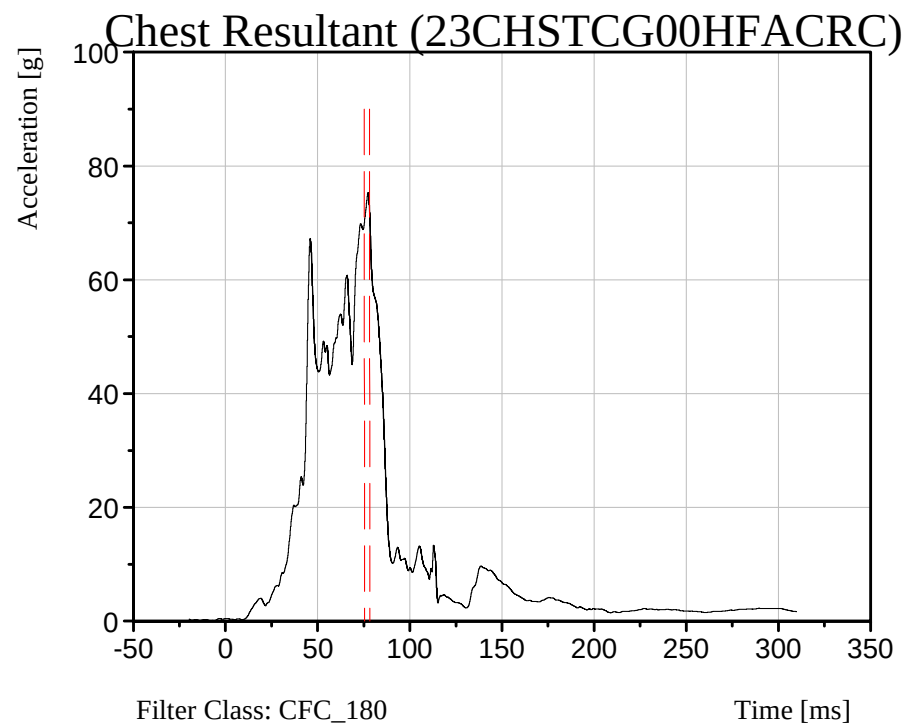
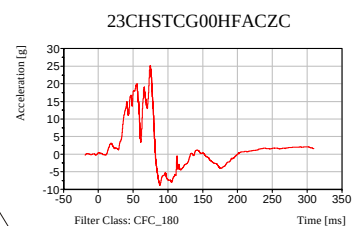
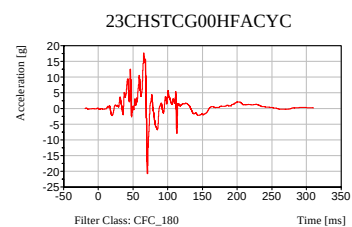
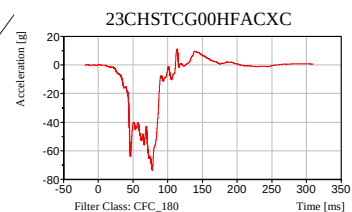
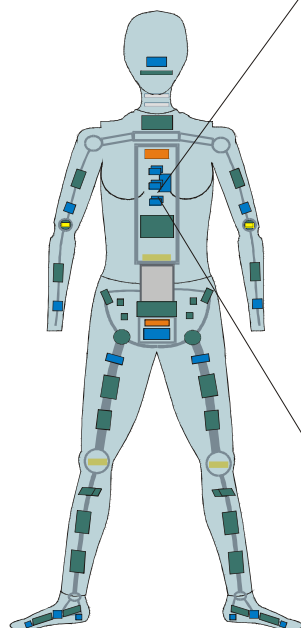
Time: 08:08

3 ms Duration Acceleration (Chest)

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



3 ms Duration Acceleration = 70.19 g
Chest Severity Index = 1,039.21

<u>T1</u> (Begin)	<u>T2</u> (End)
75.33 ms	78.33 ms

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

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

Chest Deflection

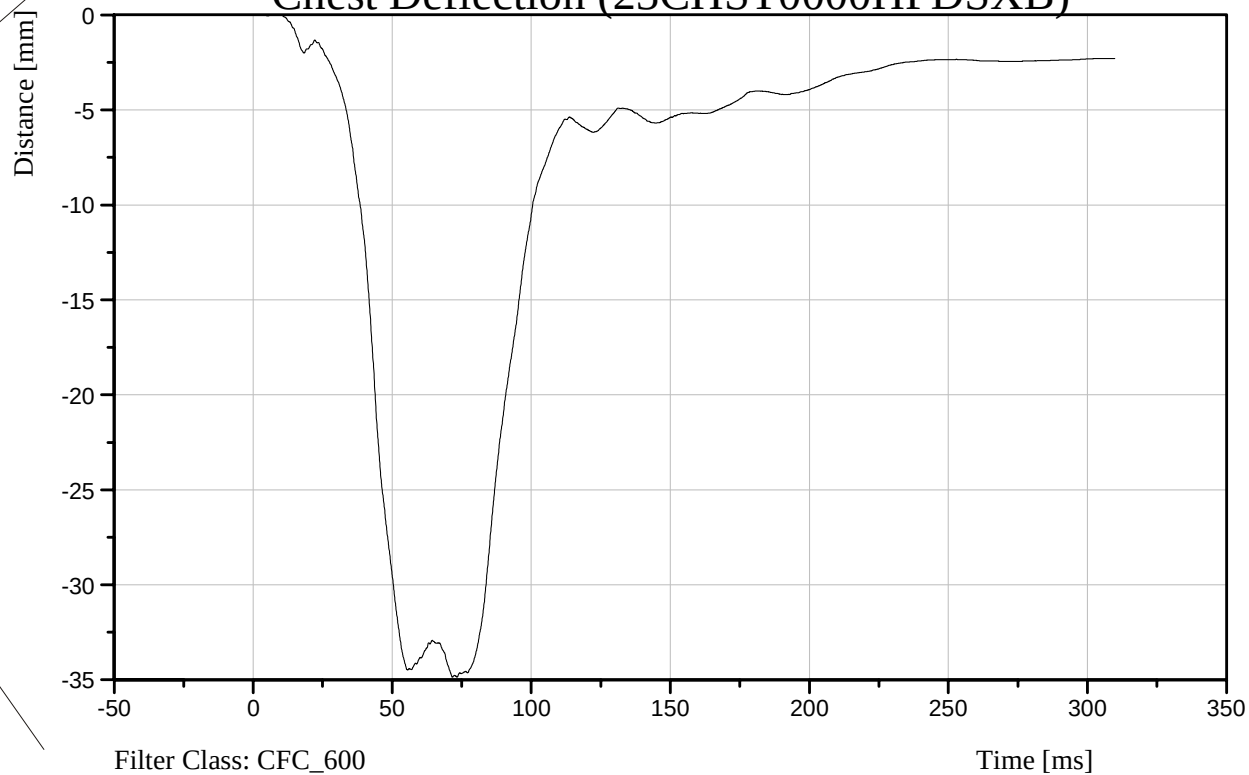
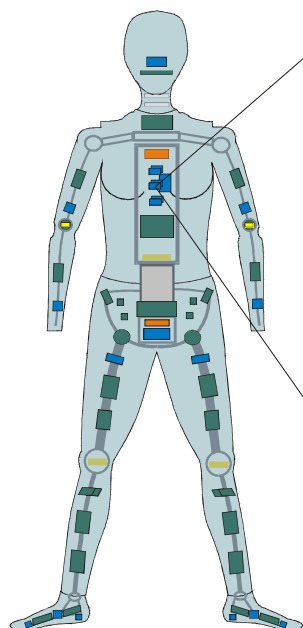
Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal

Chest Deflection (23CHST0000HFDSXB)



Dummy: HIII 5th Female

Seating Position:

Right Front Passenger

[Max.] 0.00 mm at -5.44 ms

[Min.] -34.86 mm at 71.60 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear Neck Moment about the Occipital Condyle (NECK OM)

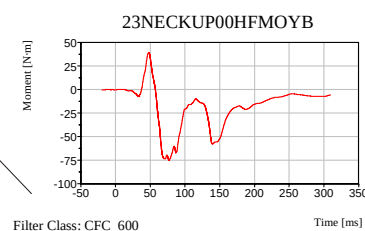
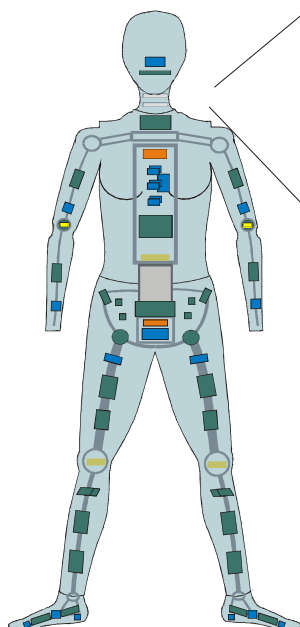
Date: 03/20/2006
Time: 08:08

Customer: VRTC

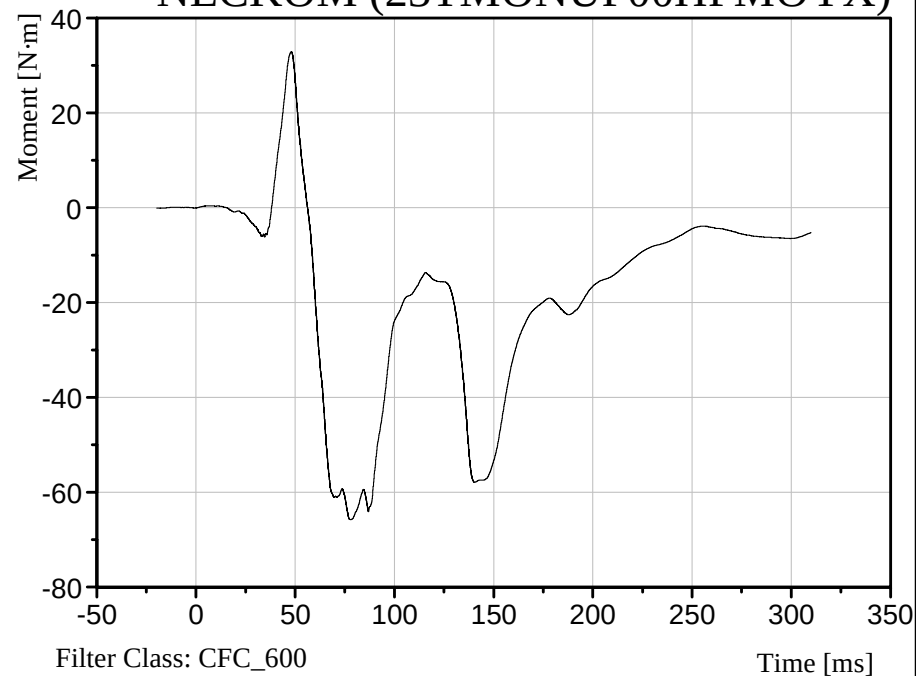
TRC Inc. Test Lab: CTF

Test Number: 060317

Test Orientation = Frontal



NECKOM (23TMONUP00HFM0YX)



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

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

[Max.] 32.94 N·m at 48.08 ms

[Min.] -65.77 N·m at 77.84 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Neck Injury Predictor (NIJ)

Date: 03/20/2006

Time: 08:08

Customer: VRTC

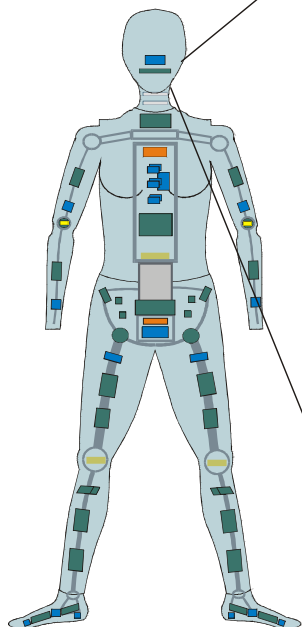
Test Orientation = Frontal

Fzc(Tension) = 4287

Fzc(Compression) = 3880

Myc(Extension) = 67

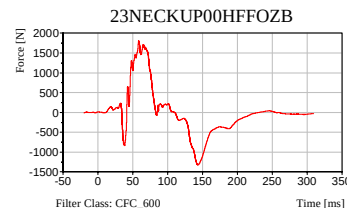
Myc(Flexion) = 155



Dummy: HIII 5th Female
Seating Position:

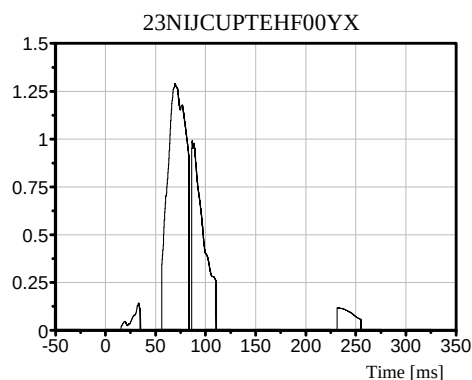
Right Front Passenger

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

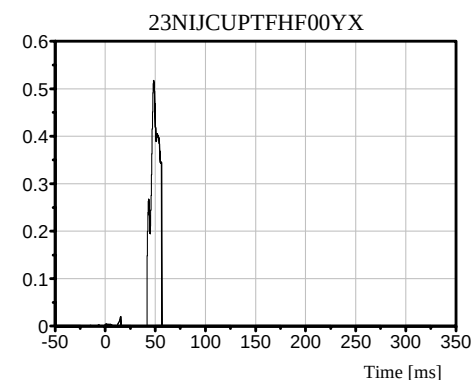


TRC Inc. Test Lab: CTF

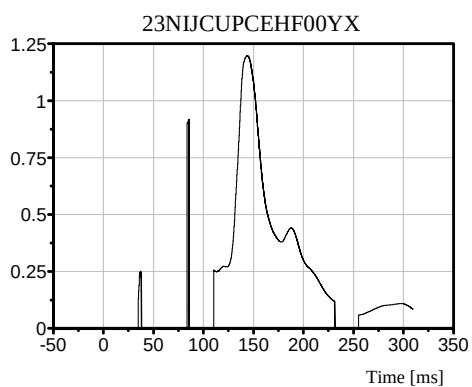
Test Number: 060317



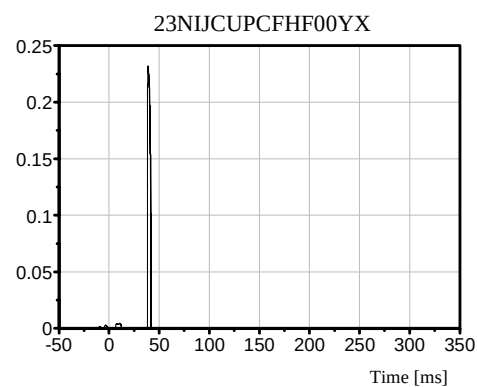
Max [NTE] 1.2898 at 69.36 ms



Max [NTF] 0.5176 at 48.32 ms



Max [NCE] 1.1984 at 143.60 ms



Max [NCF] 0.2323 at 38.80 ms



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

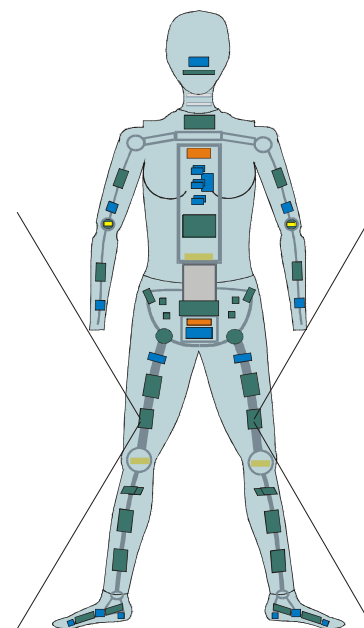
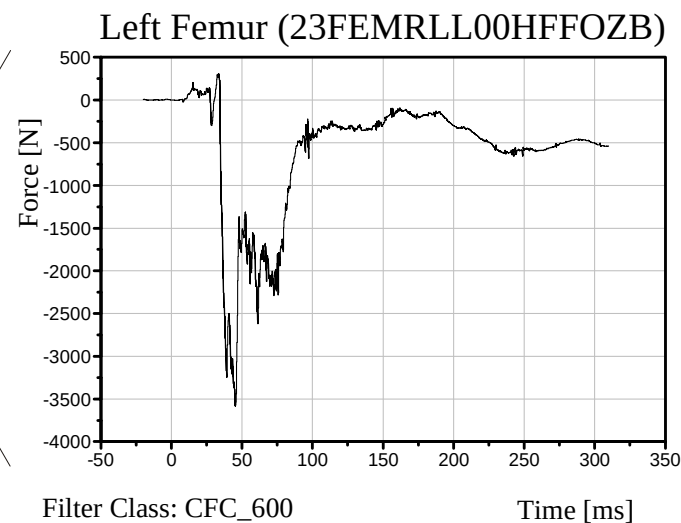
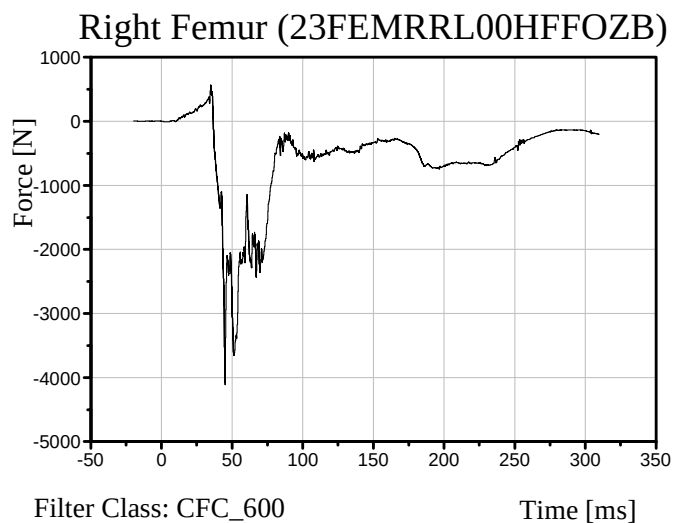
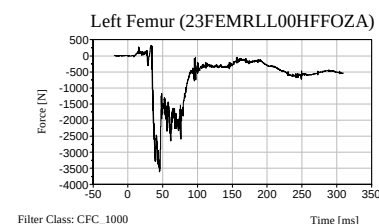
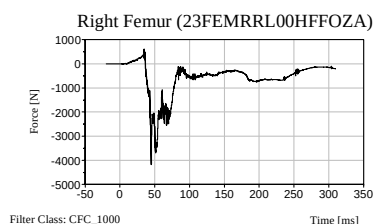
Time: 08:08

Femur Load

Customer: VRTC

TRC Inc. Test Lab: CTF

Test Number: 060317



Max [Tension] 566.32 N at 34.72 ms
Min [Compression] -4,113.59 N at 44.88 ms

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

Max [Tension] 308.34 N at 33.60 ms
Min [Compression] -3,586.71 N at 45.44 ms

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Tibia Index (TI)

Date: 03/20/2006

Time: 08:08

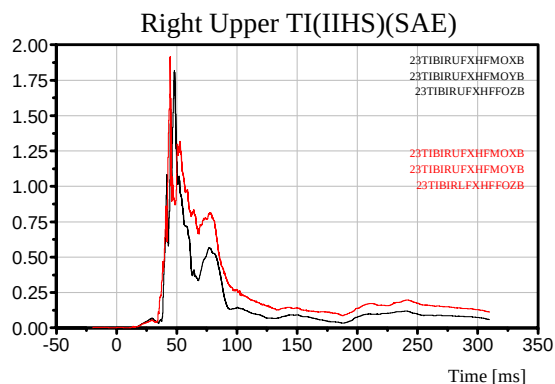
Customer: VRTC

TRC Inc. Test Lab: CTF

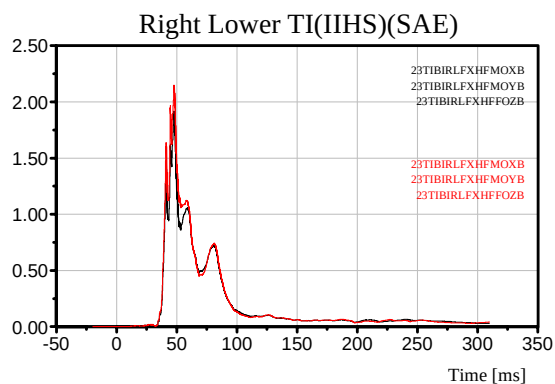
Test Number: 060317

Critical Bending Moment = 146 N·m

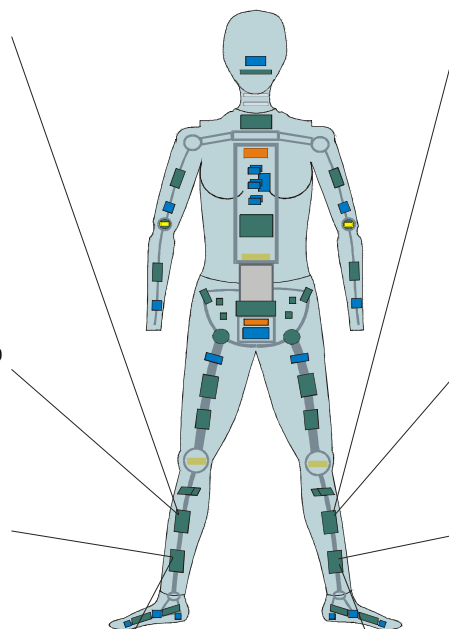
Critical Compression Force = 8600 N



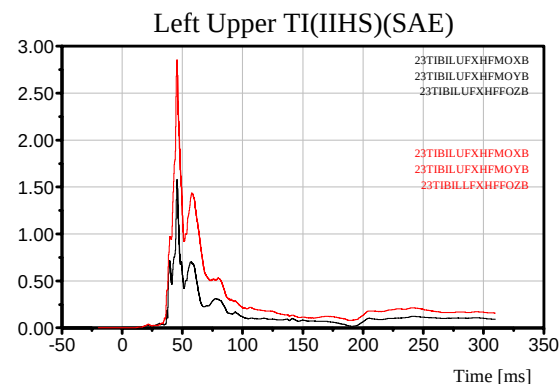
Max = 1.82 at 47.92 ms (SAE)
Max = 1.92 at 44.56 ms (IIHS)



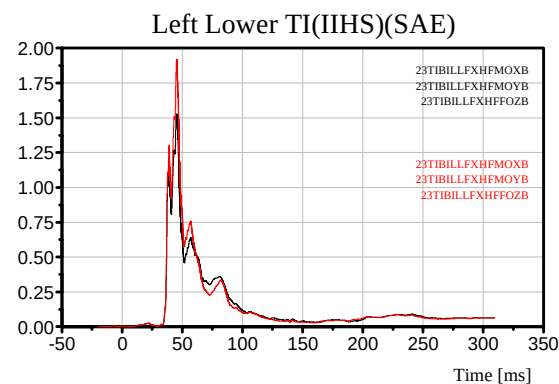
Max = 1.92 at 47.68 ms (SAE)
Max = 2.15 at 47.68 ms (IIHS)



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



Max = 1.58 at 45.52 ms (SAE)
Max = 2.86 at 45.52 ms (IIHS)



Max = 1.53 at 45.20 ms (SAE)
Max = 1.92 at 45.44 ms (IIHS)

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



2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

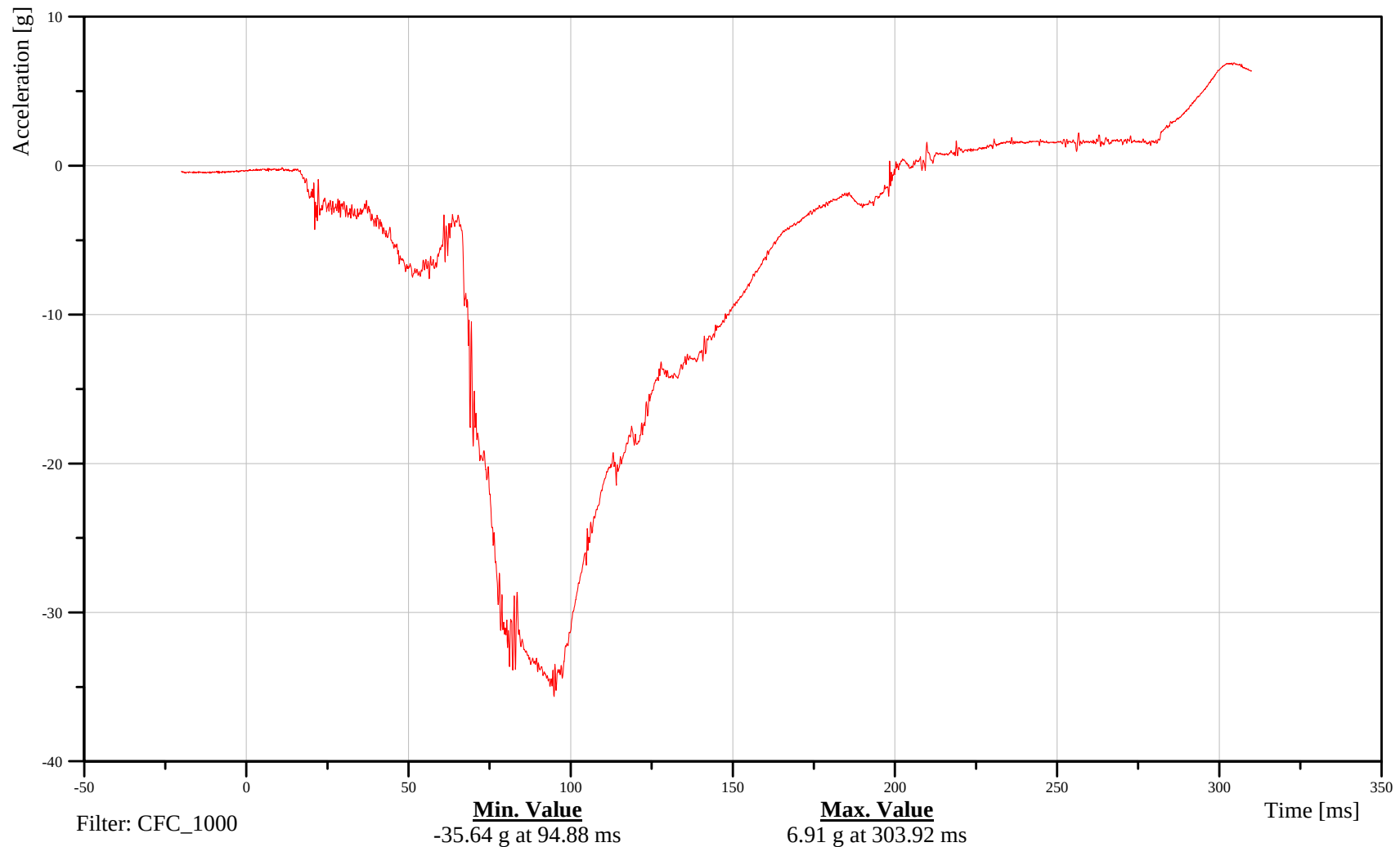
Bullet Driver Head X-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

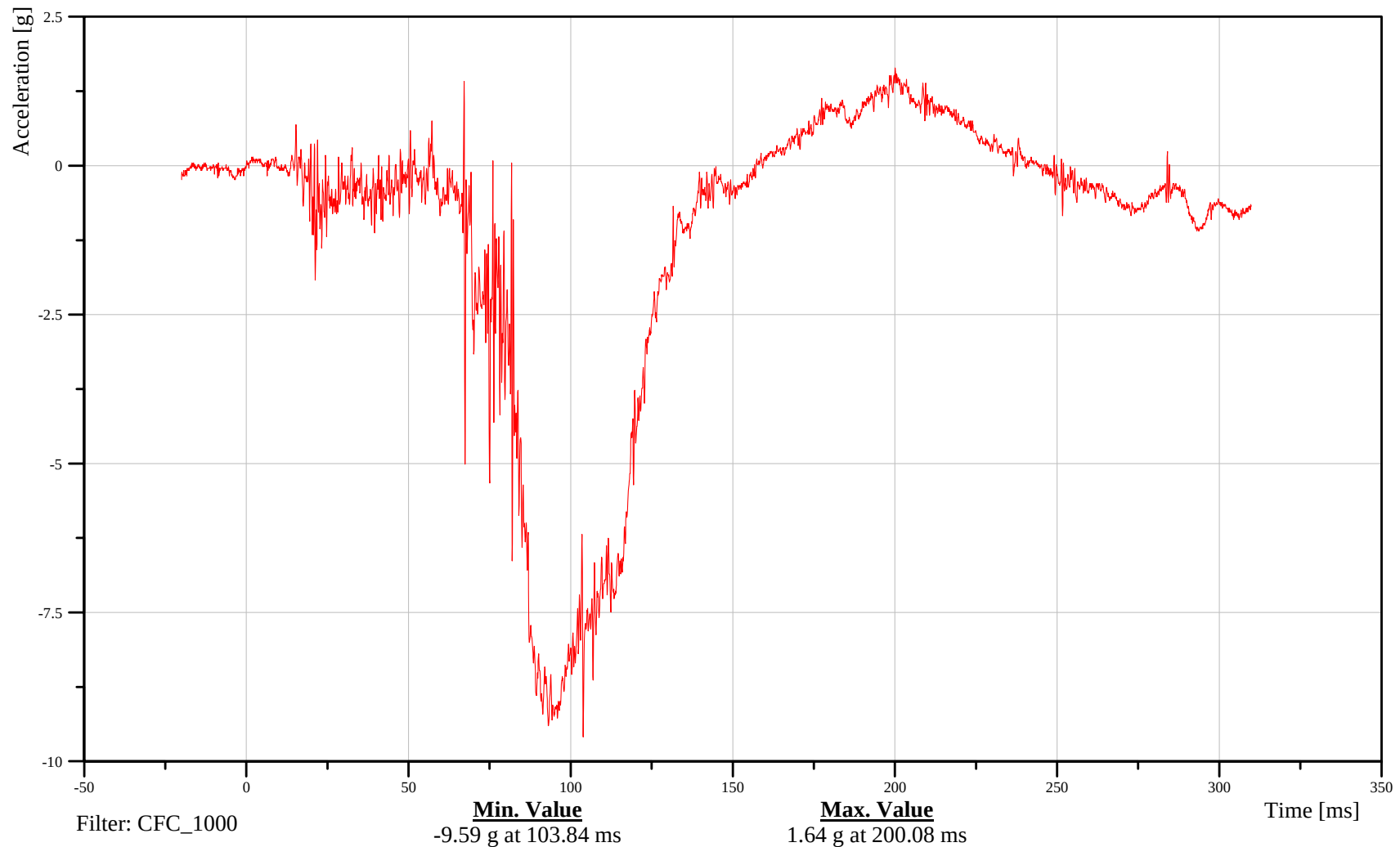
Bullet Driver Head Y-Axis Acceleration

Customer: VRTC

11HEADCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Head Z-Axis Acceleration

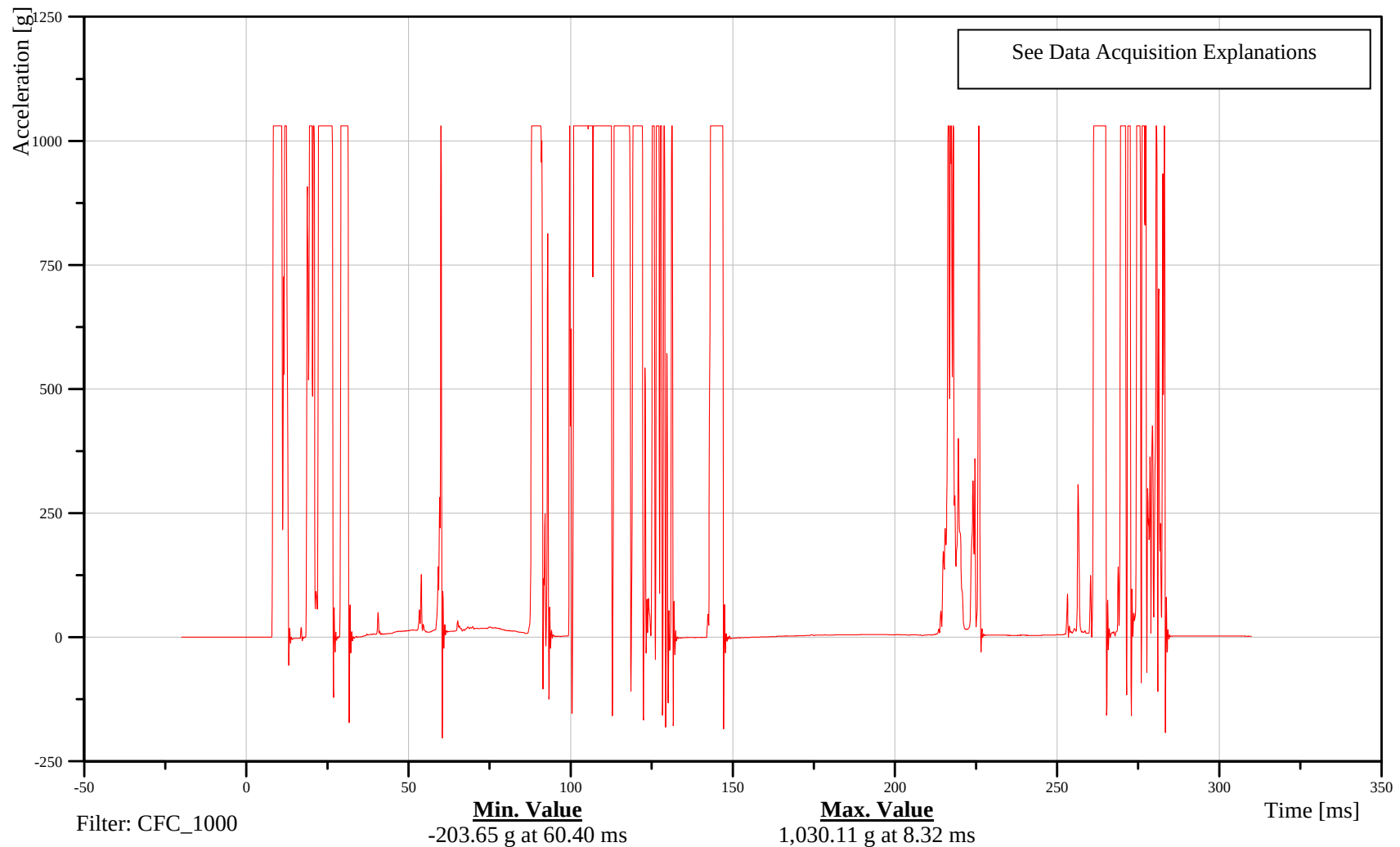
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11HEADCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

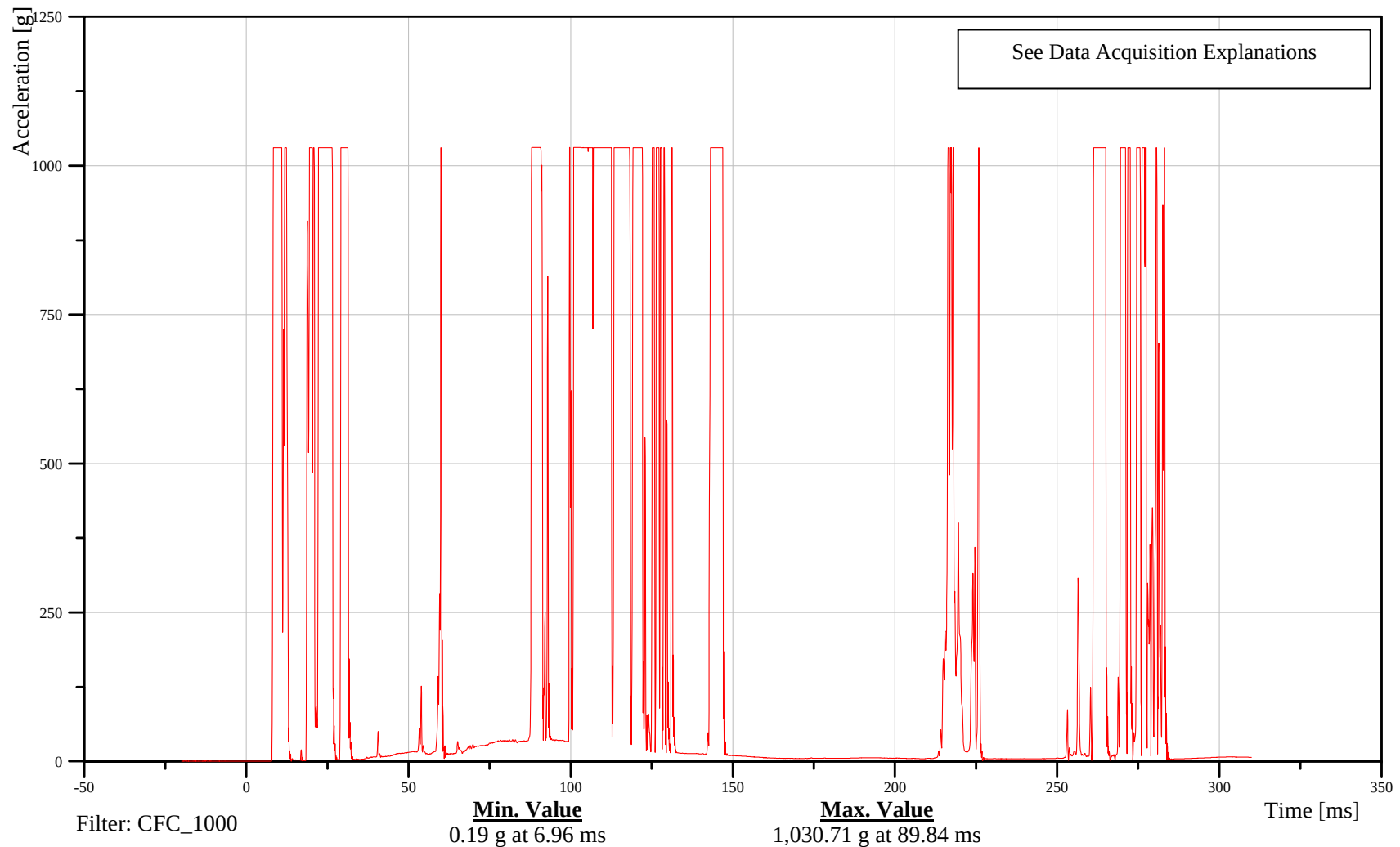
Bullet Driver Head Resultant Acceleration

Customer: VRTC

11HEADCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

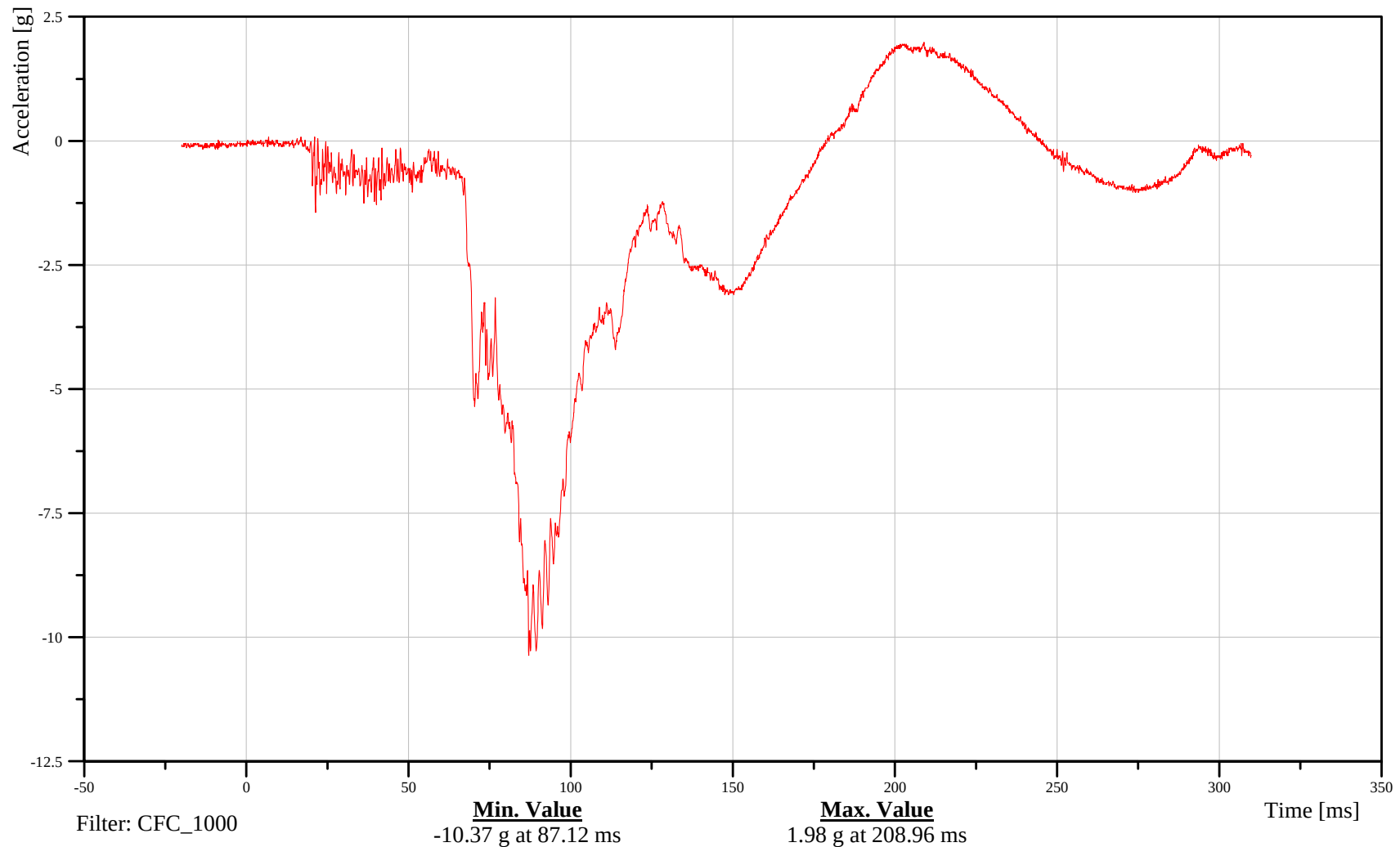
Bullet Driver Head Front Y-Axis Acceleration

Customer: VRTC

11HEADFR00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

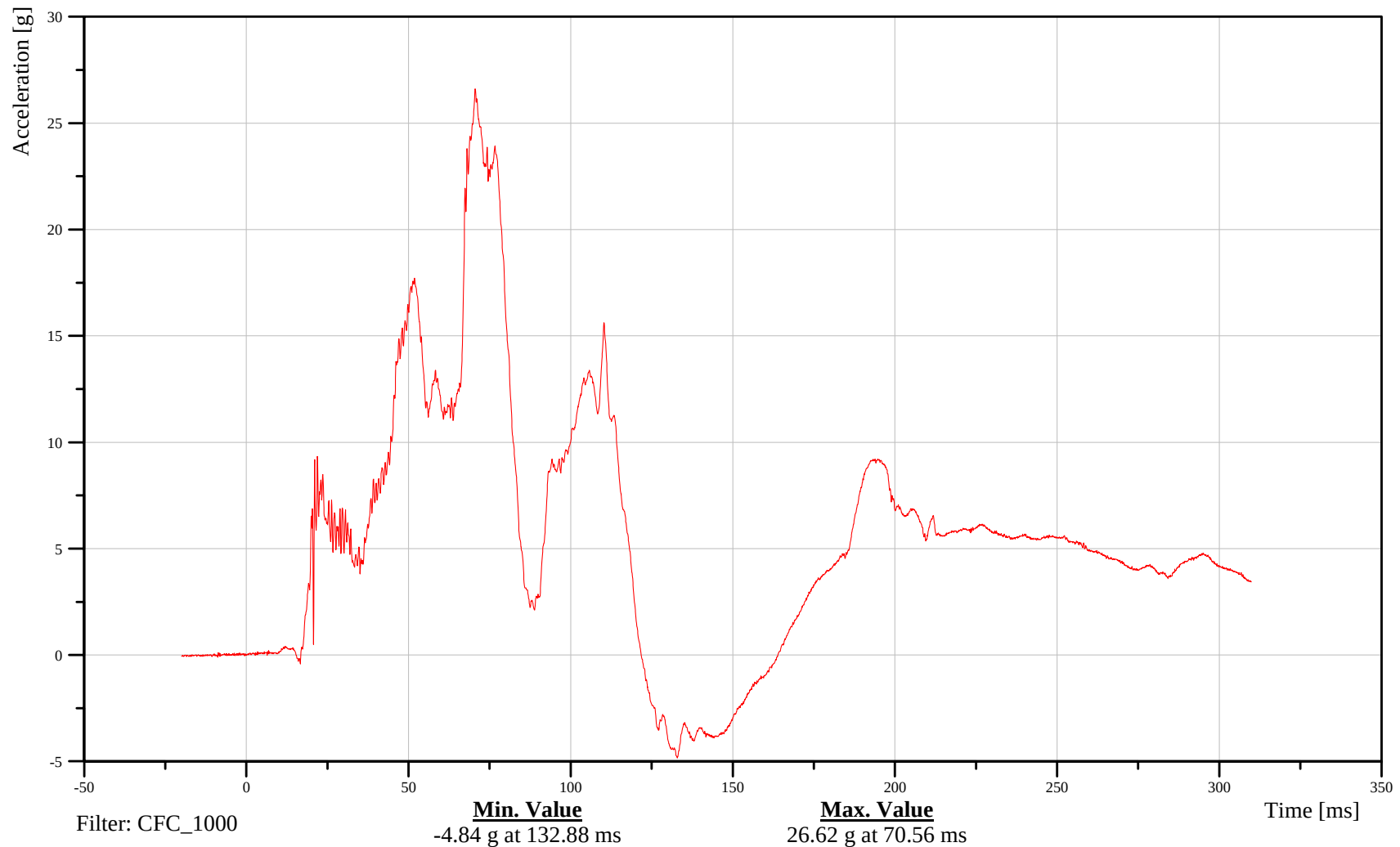
Bullet Driver Head Front Z-Axis Acceleration

Customer: VRTC

11HEADFR00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Head Top X-Axis Acceleration

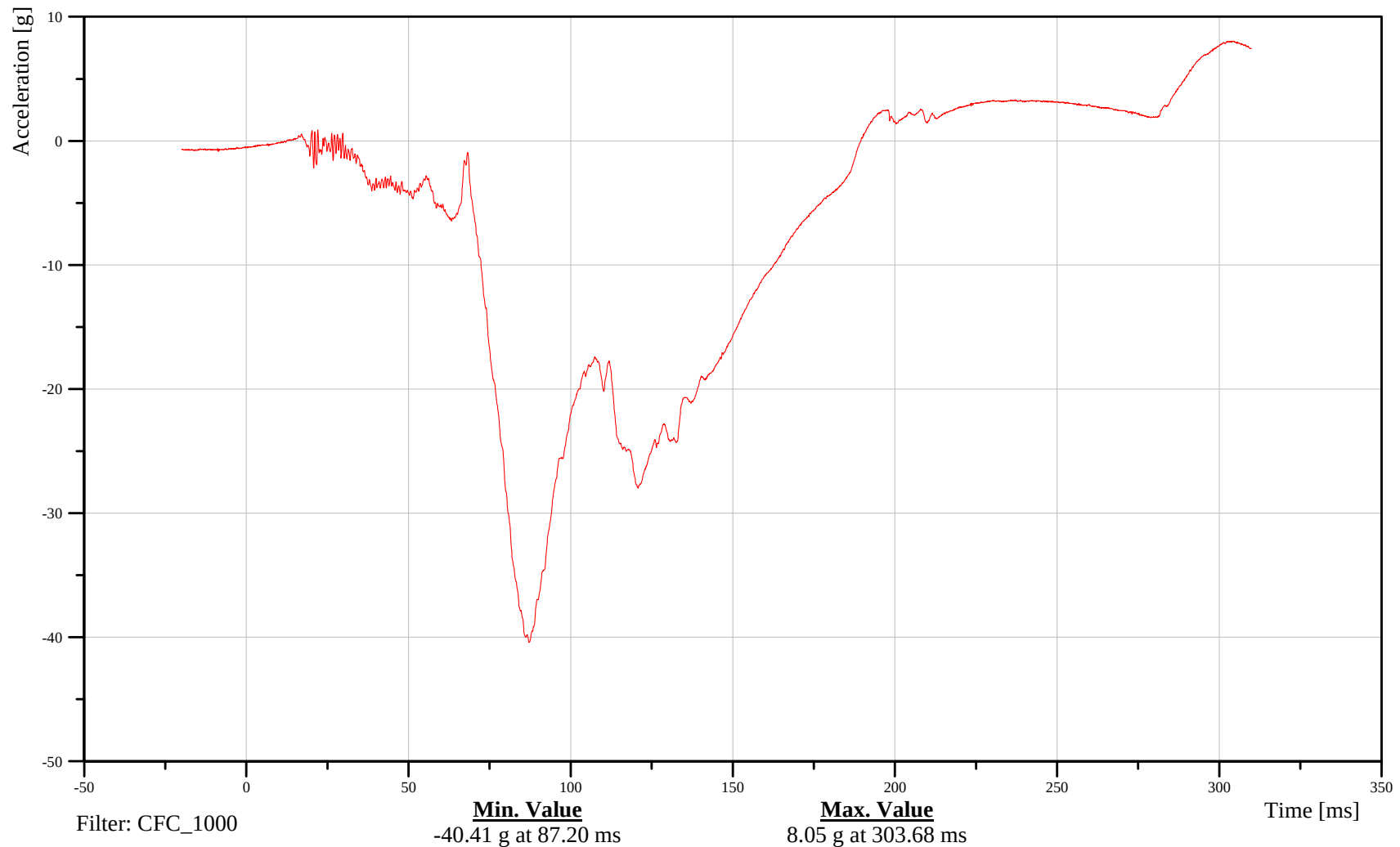
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11HEADUP00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Head Top Y-Axis Acceleration

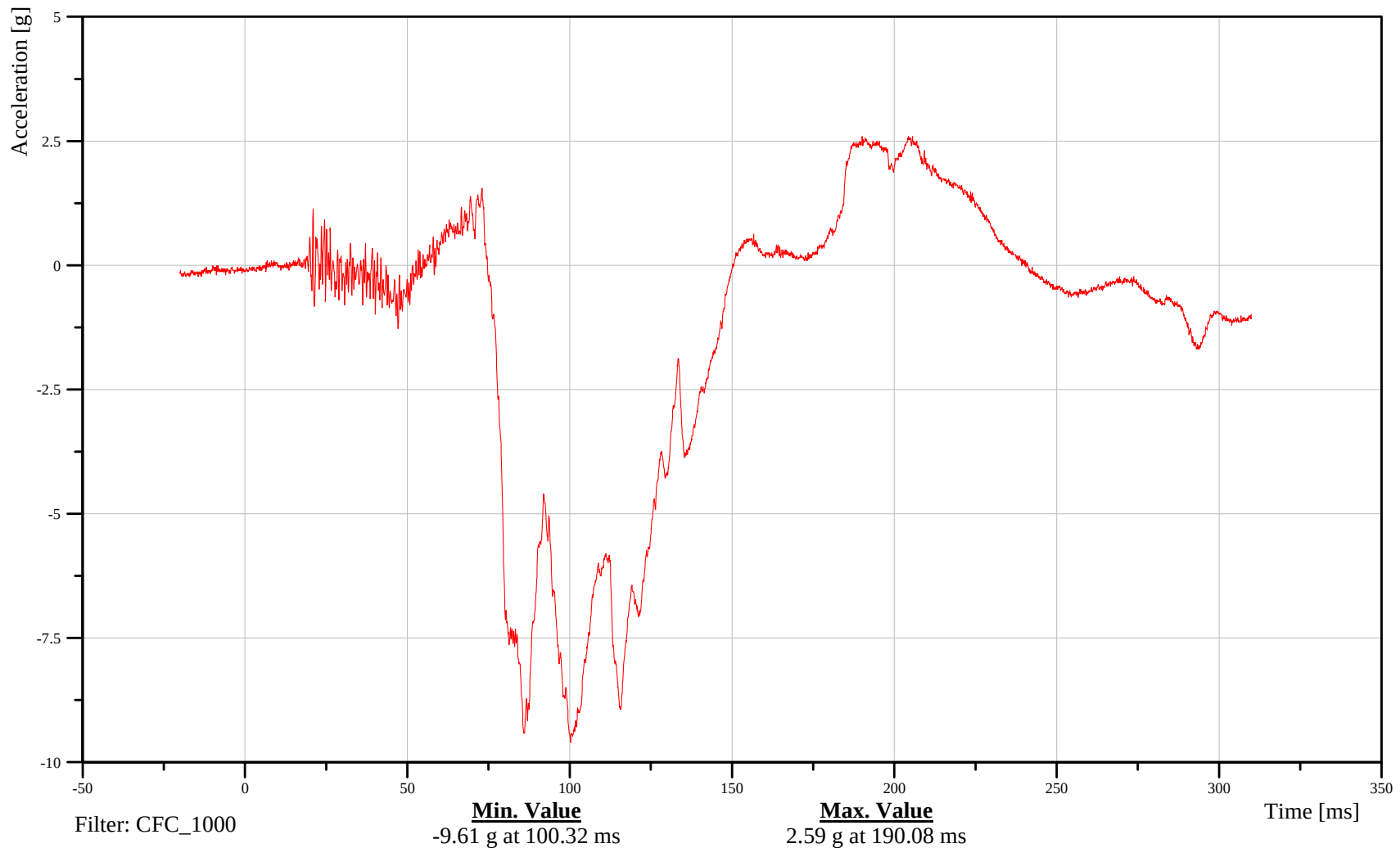
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11HEADUP00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Head Side X-Axis Acceleration

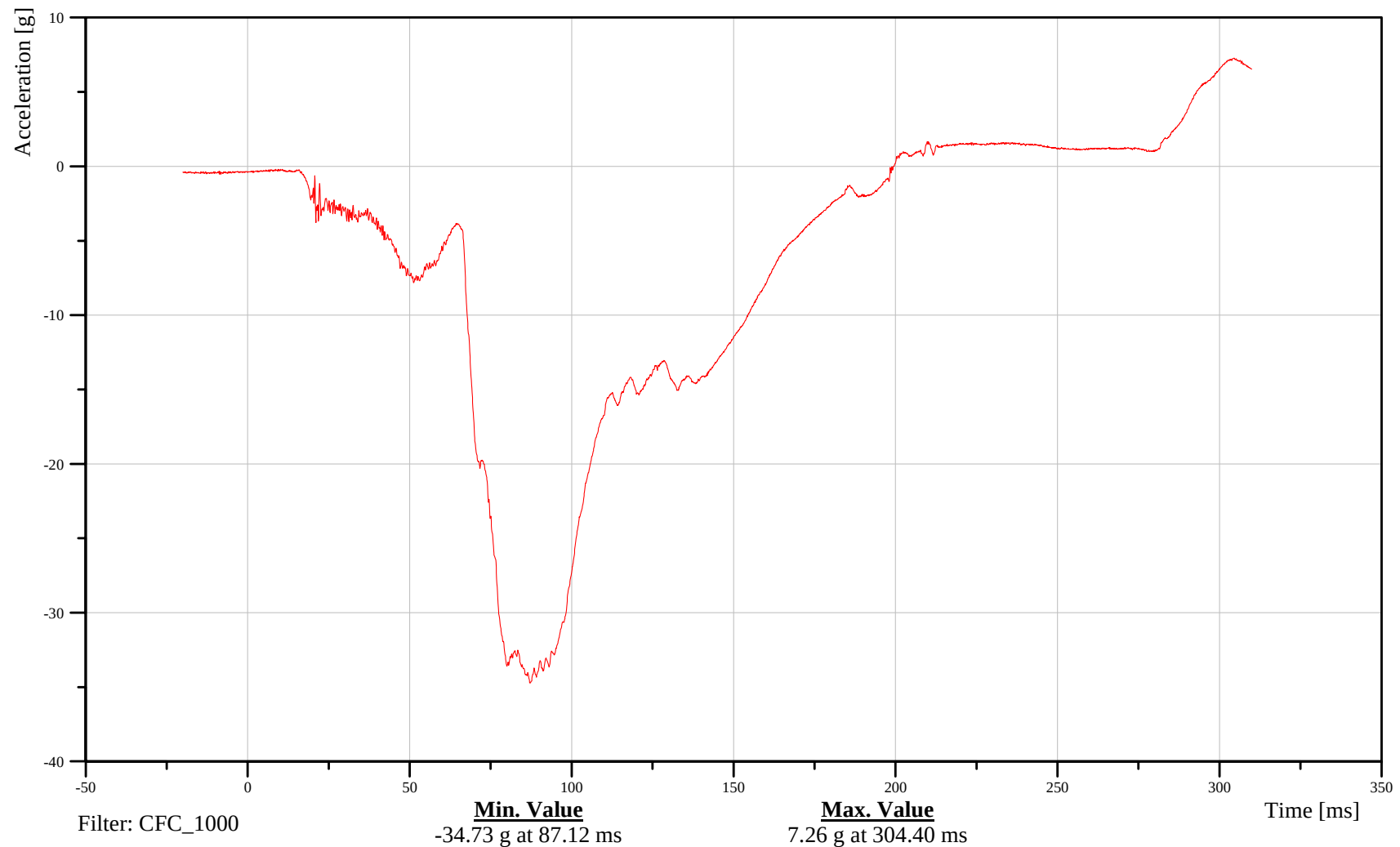
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11HEADLE00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

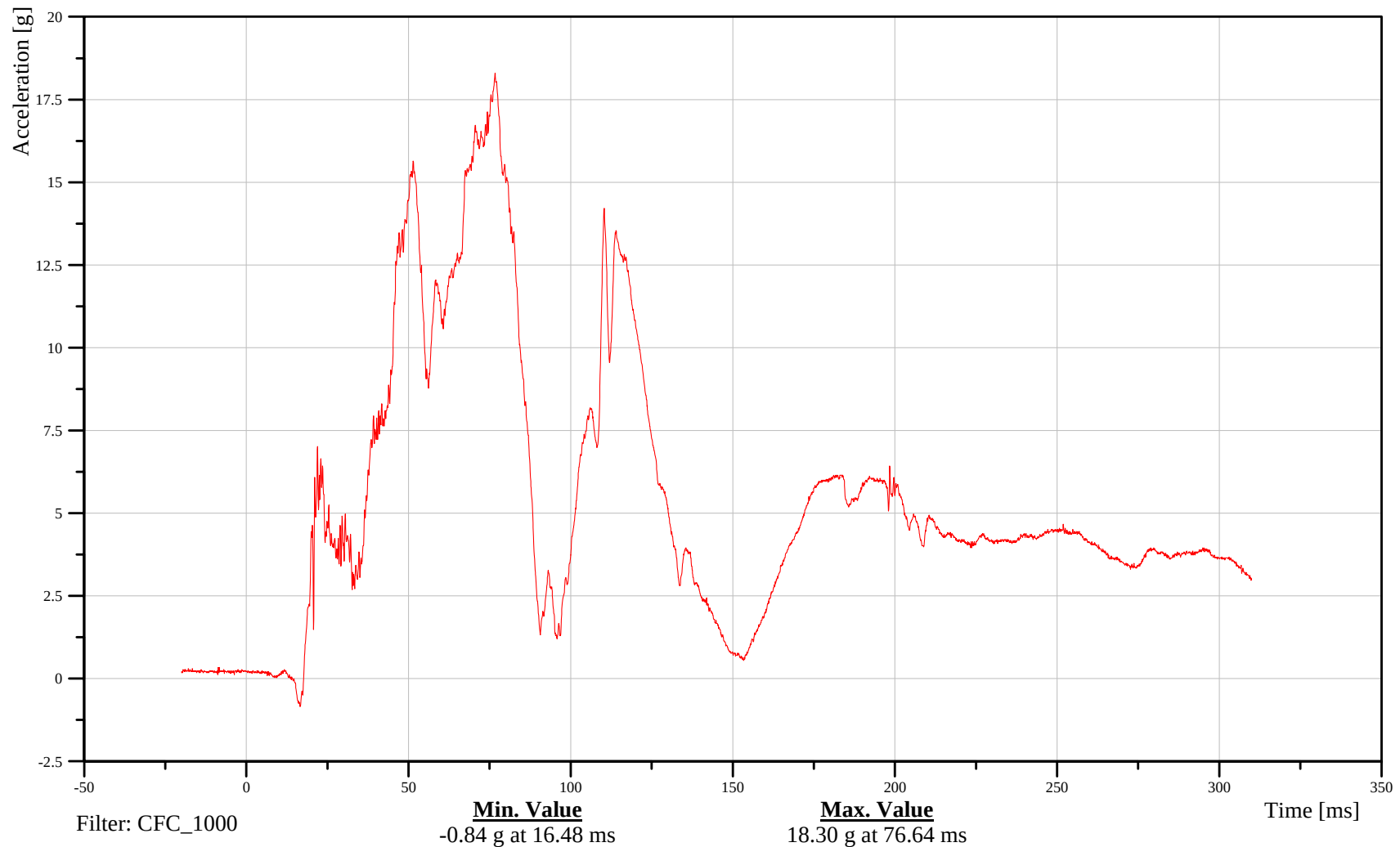
Bullet Driver Head Side Z-Axis Acceleration

Customer: VRTC

11HEADLE00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

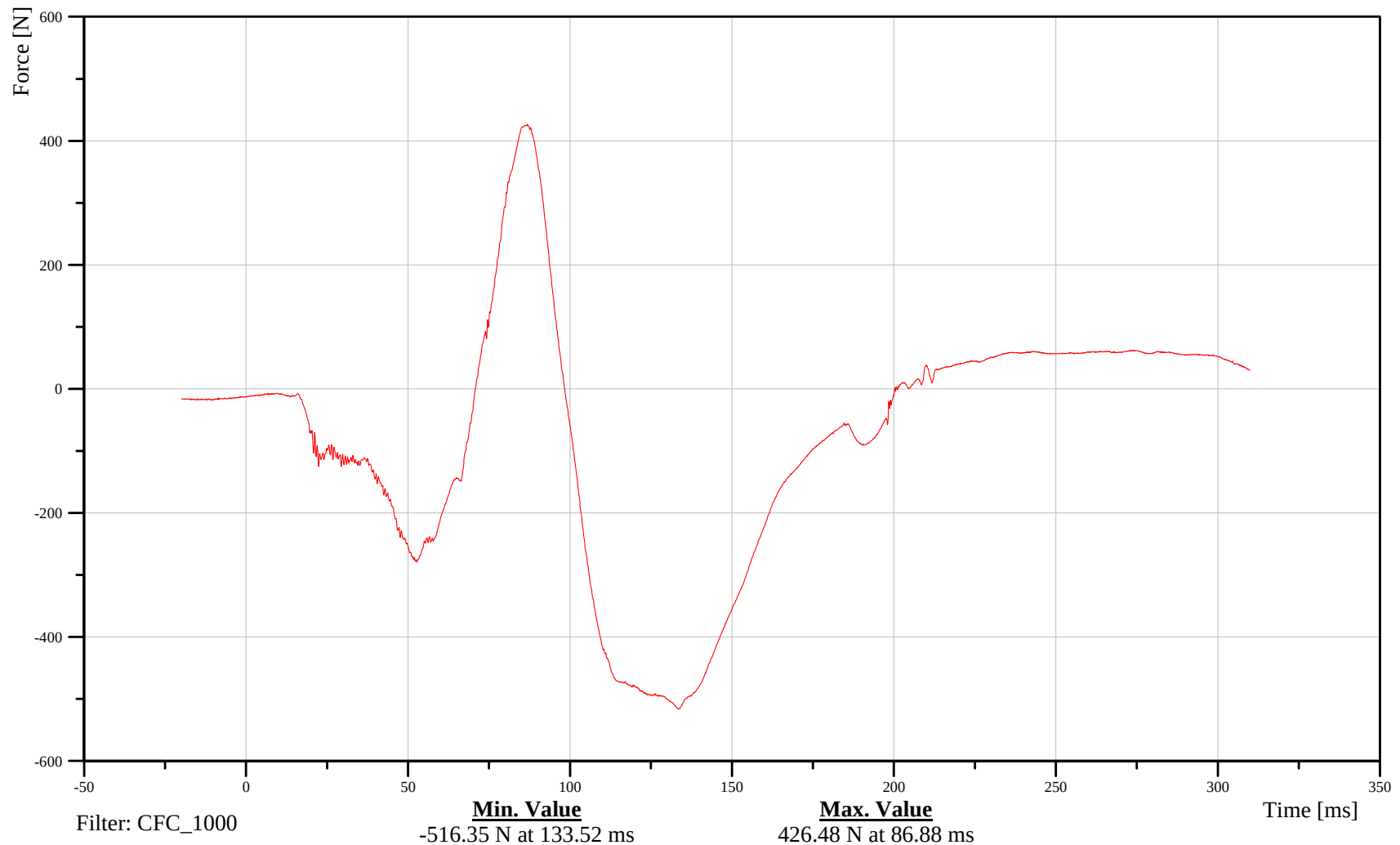
Bullet Driver Upper Neck X-Axis Force

Customer: VRTC

11NECKUP00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

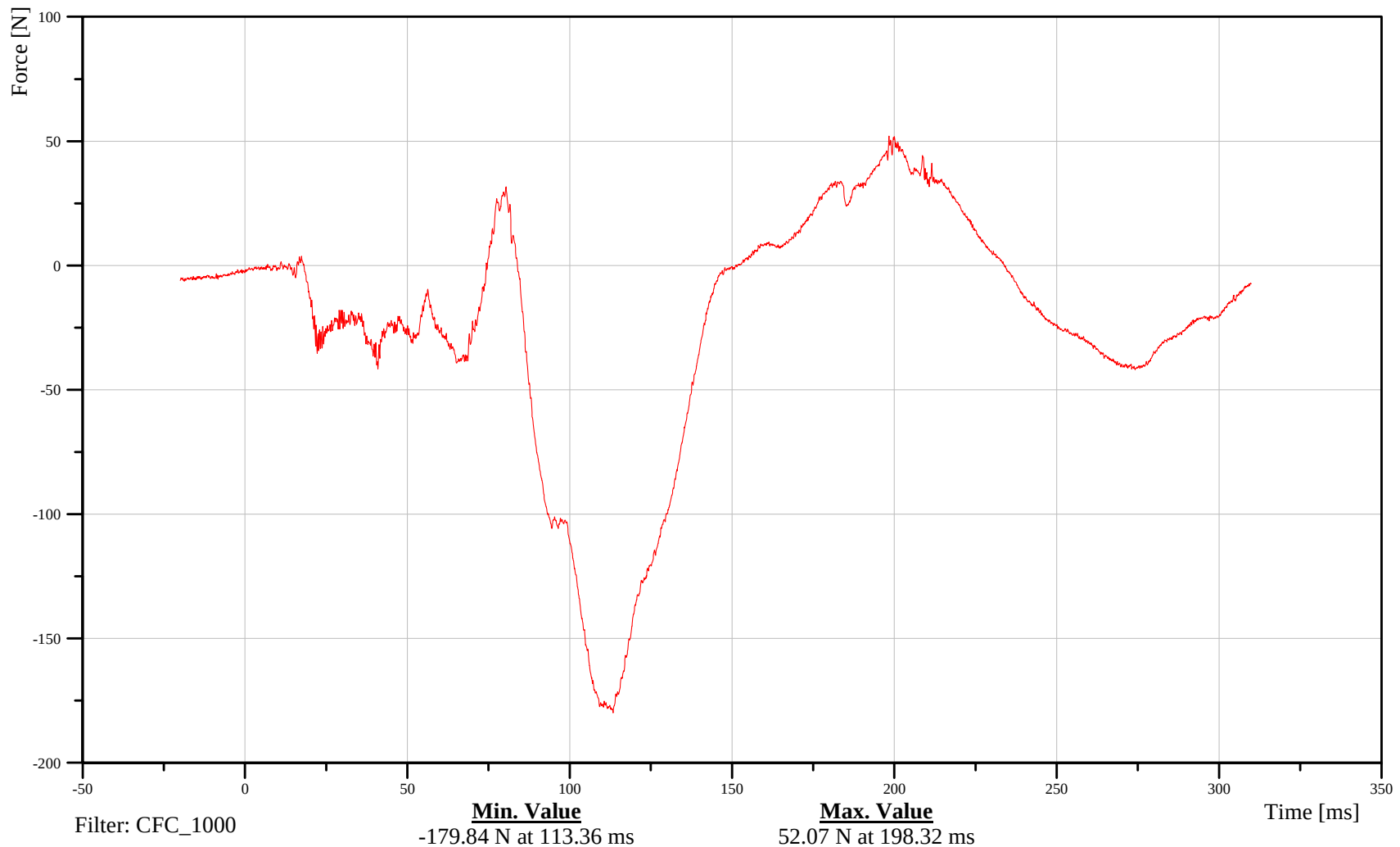
Bullet Driver Upper Neck Y-Axis Force

Customer: VRTC

11NECKUP00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Upper Neck Z-Axis Force

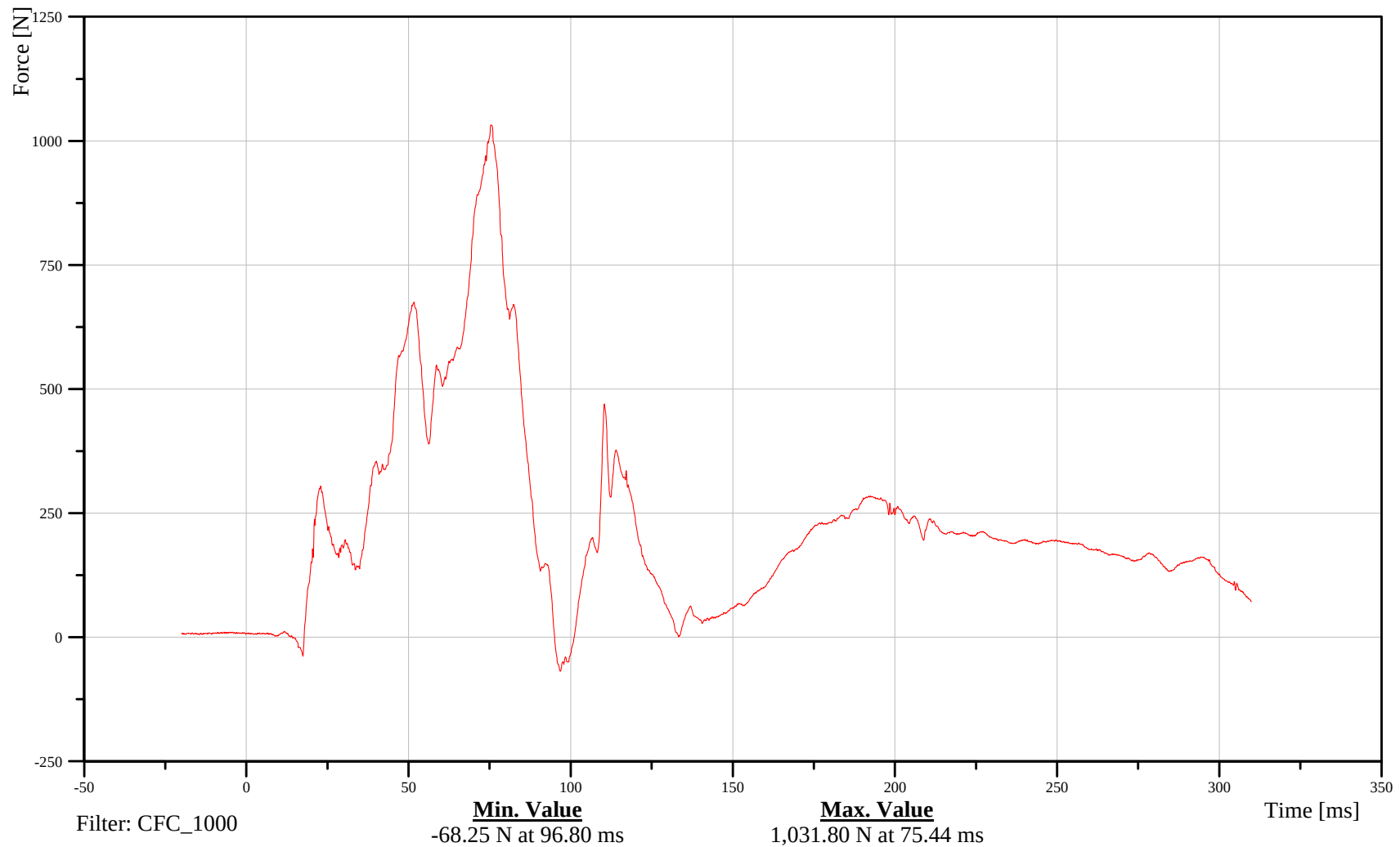
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKUP00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Driver Upper Neck Moment About X Axis

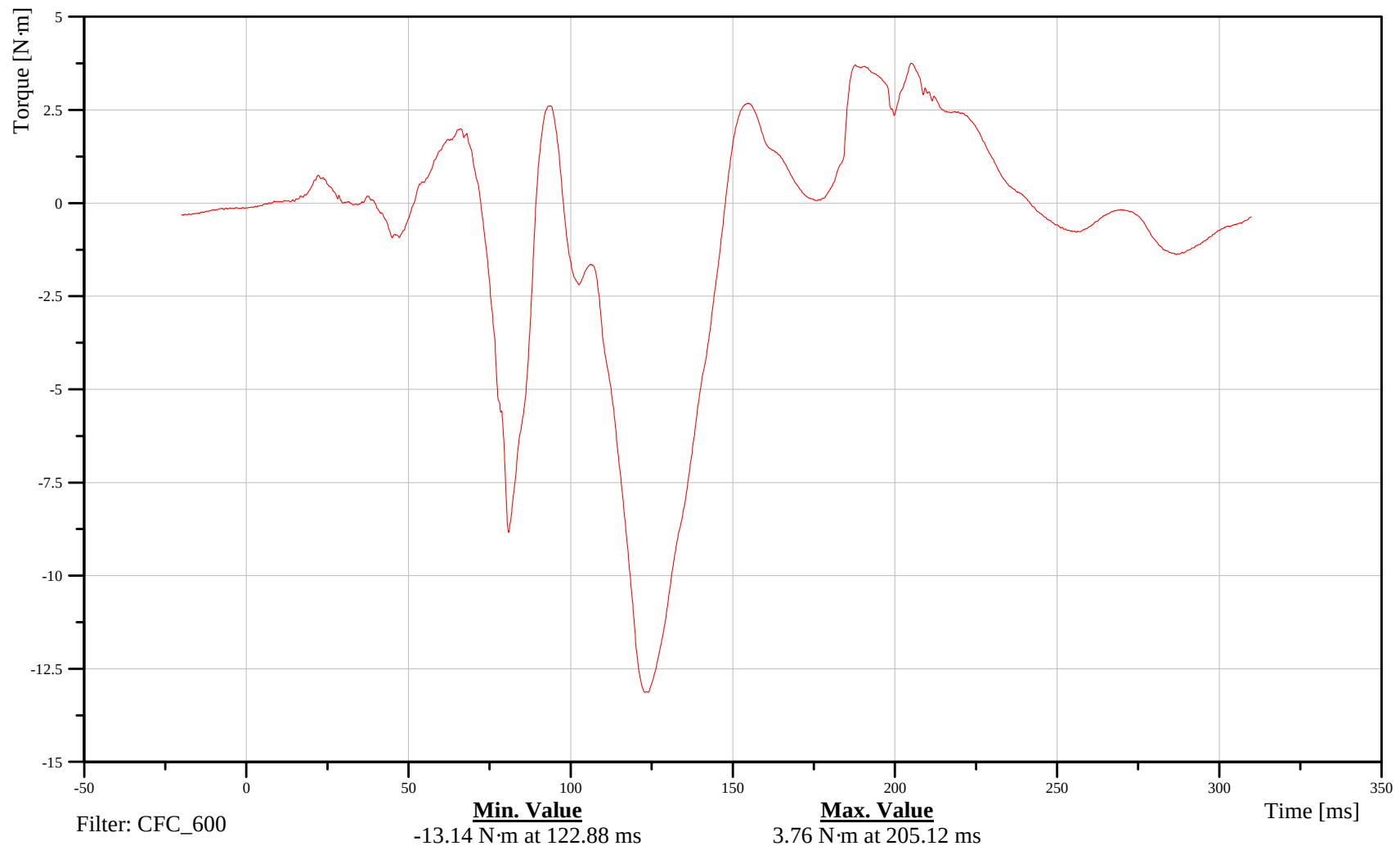
Time: 08:08

Customer: VRTC

11NECKUP00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Upper Neck Moment About Y Axis

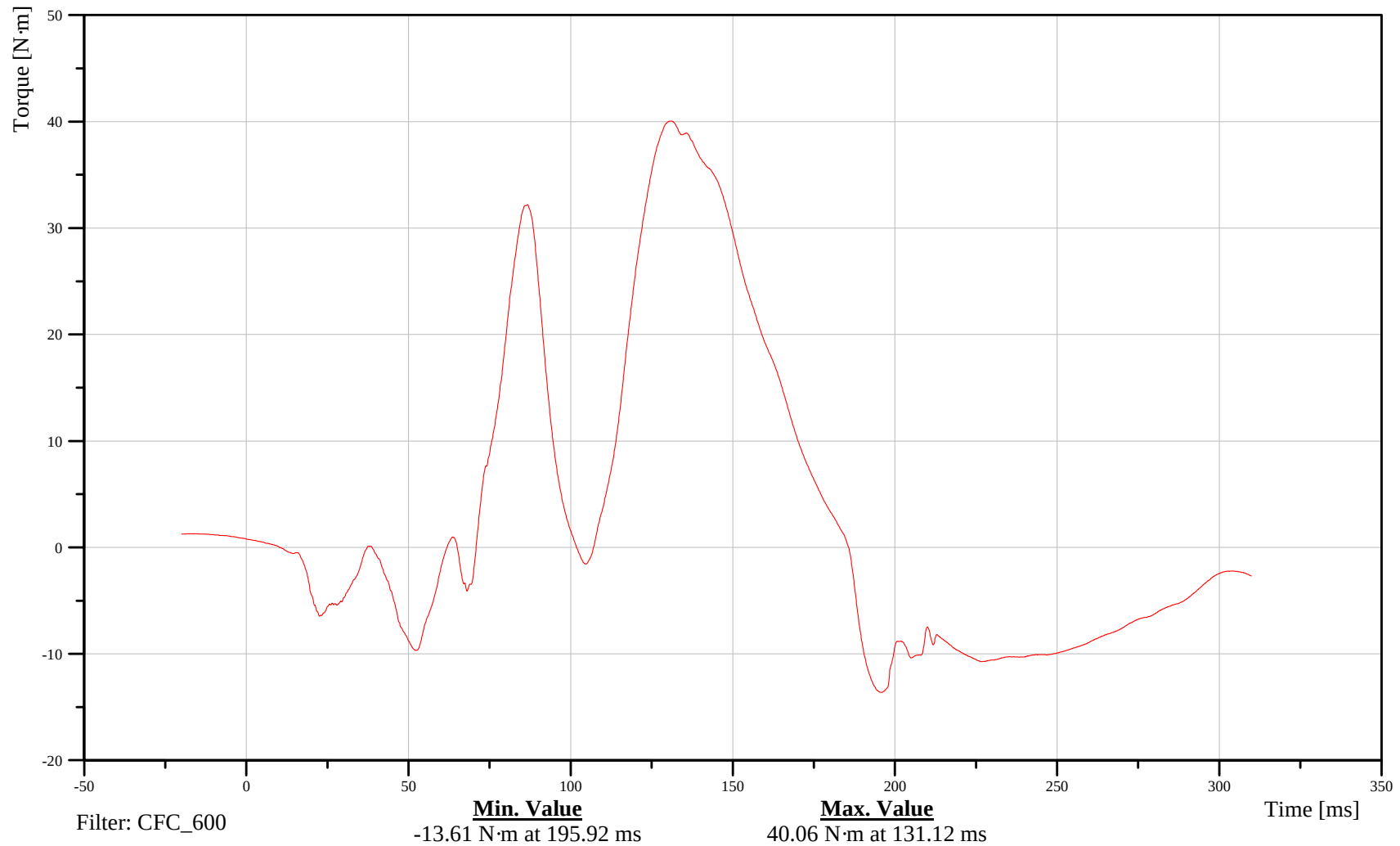
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKUP00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Upper Neck Moment About Z Axis

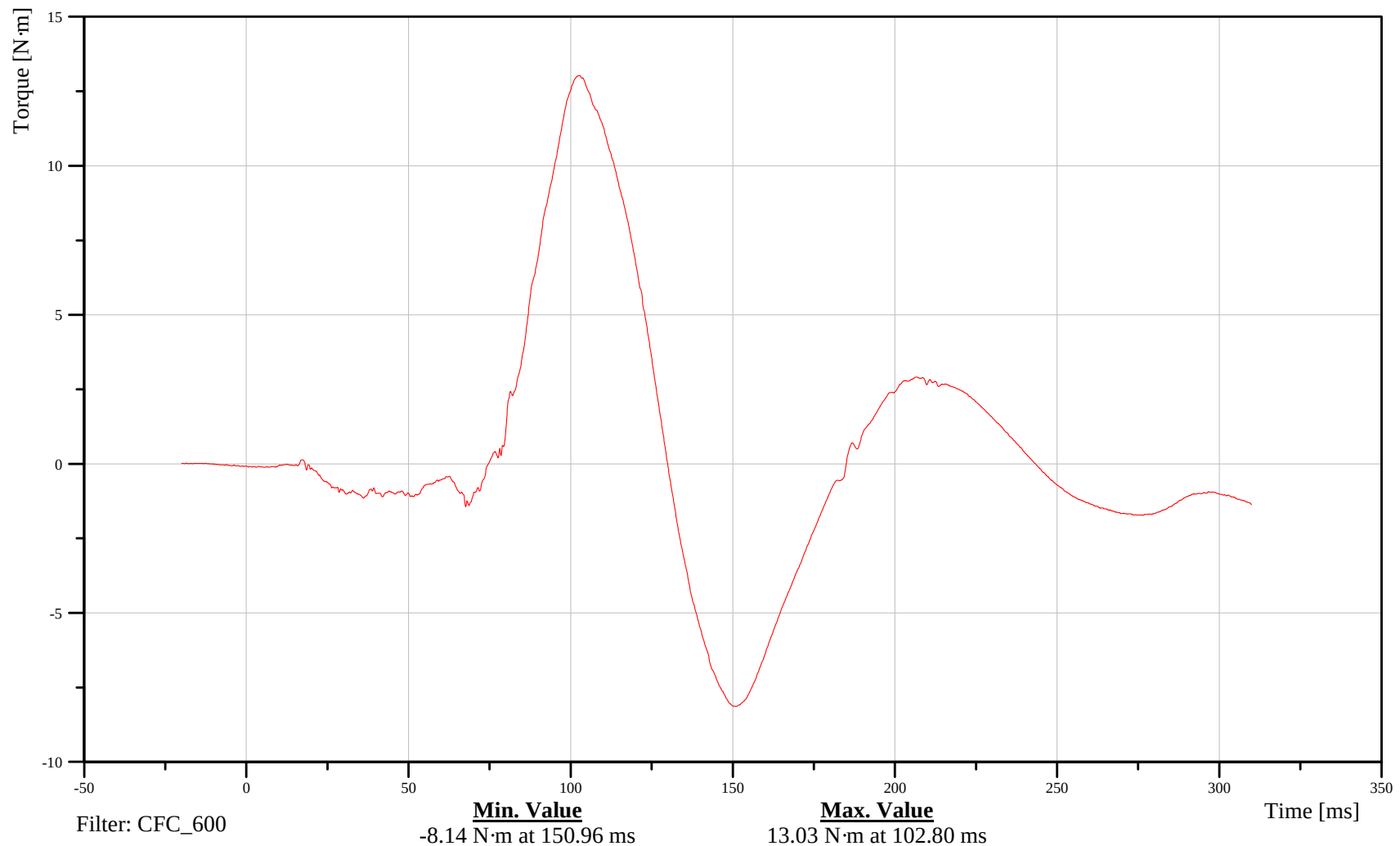
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKUP00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Lower Neck X-Axis Force

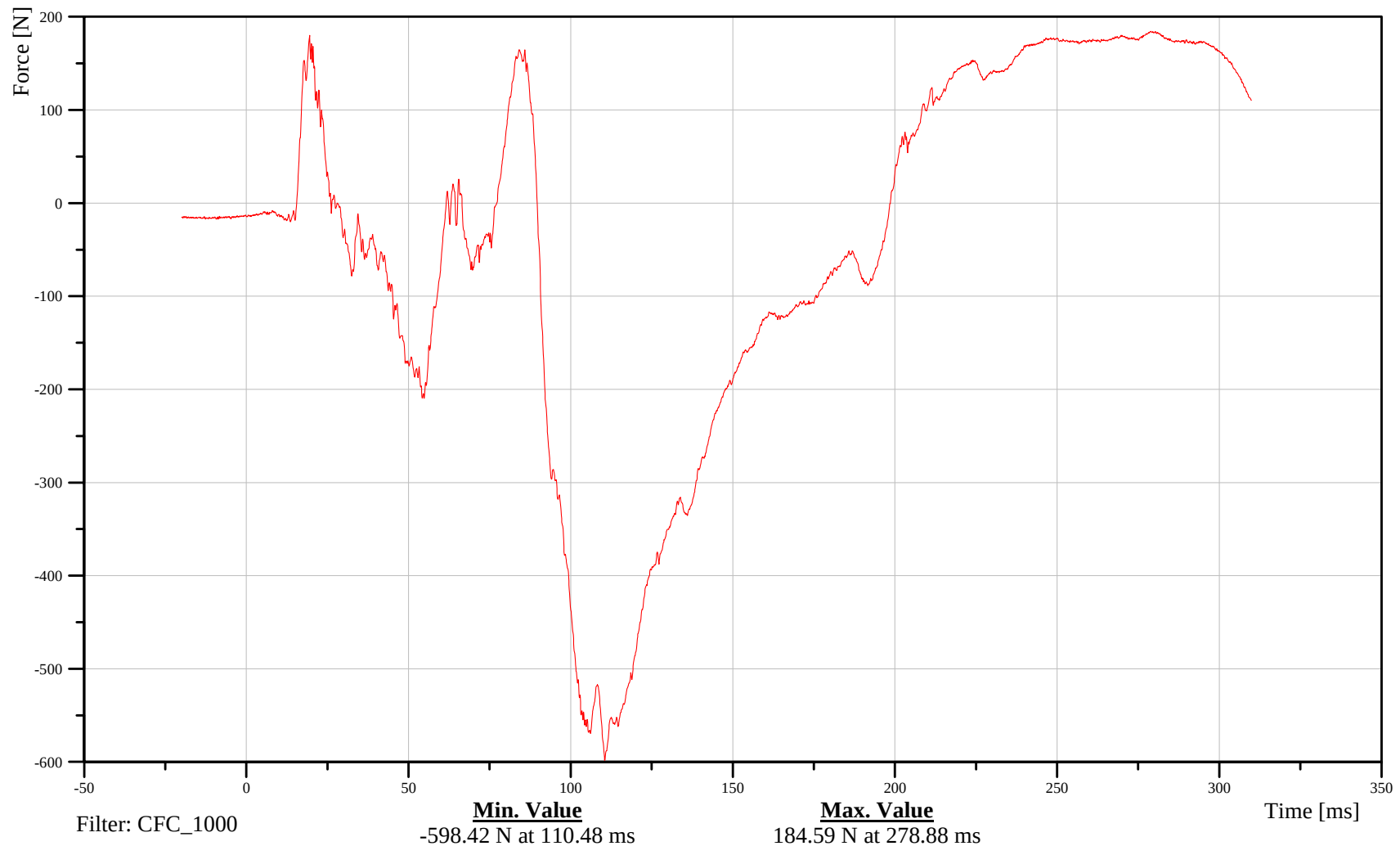
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKLO00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Lower Neck Y-Axis Force

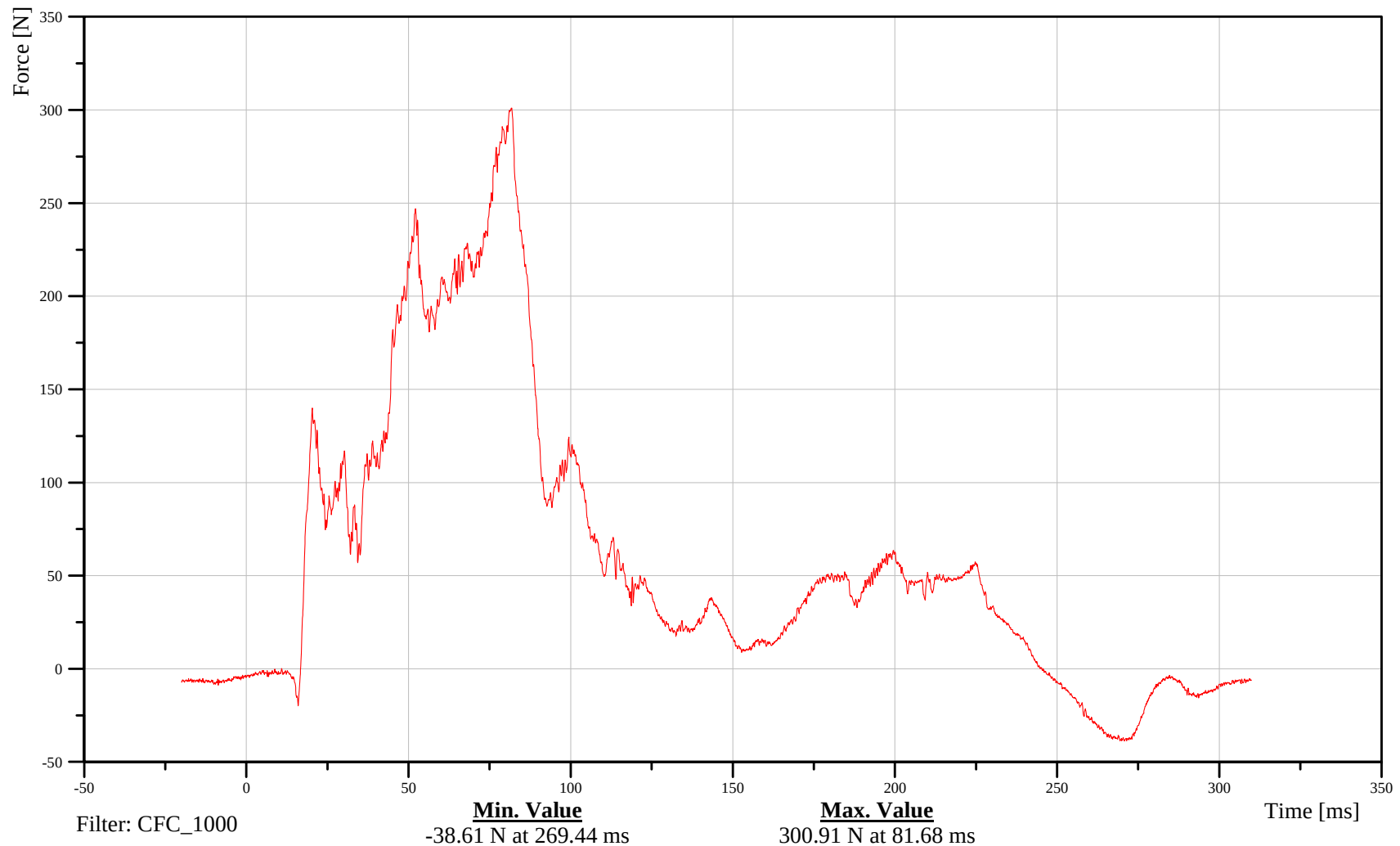
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKLO00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Lower Neck Z-Axis Force

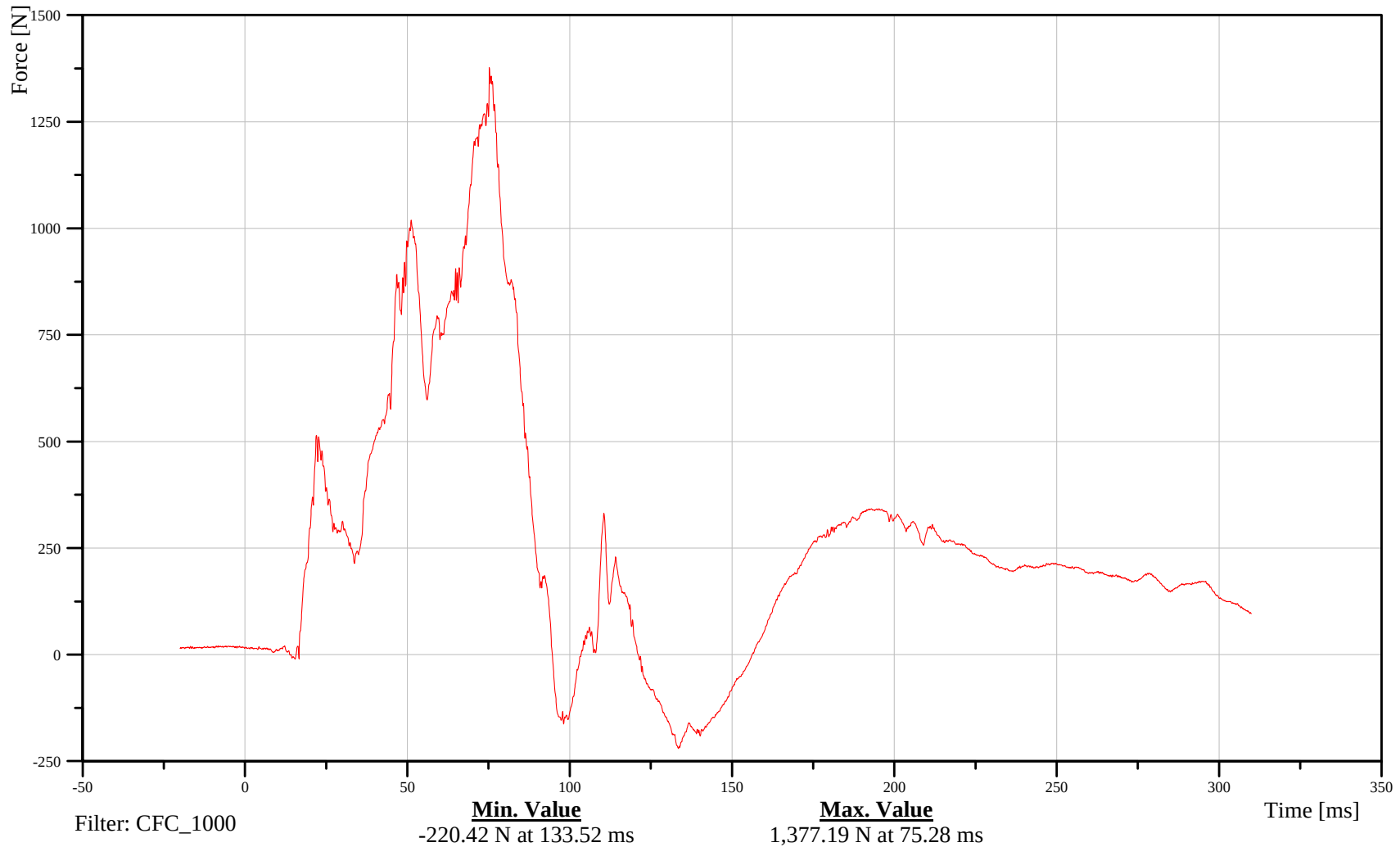
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKLO00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Lower Neck Moment About X Axis

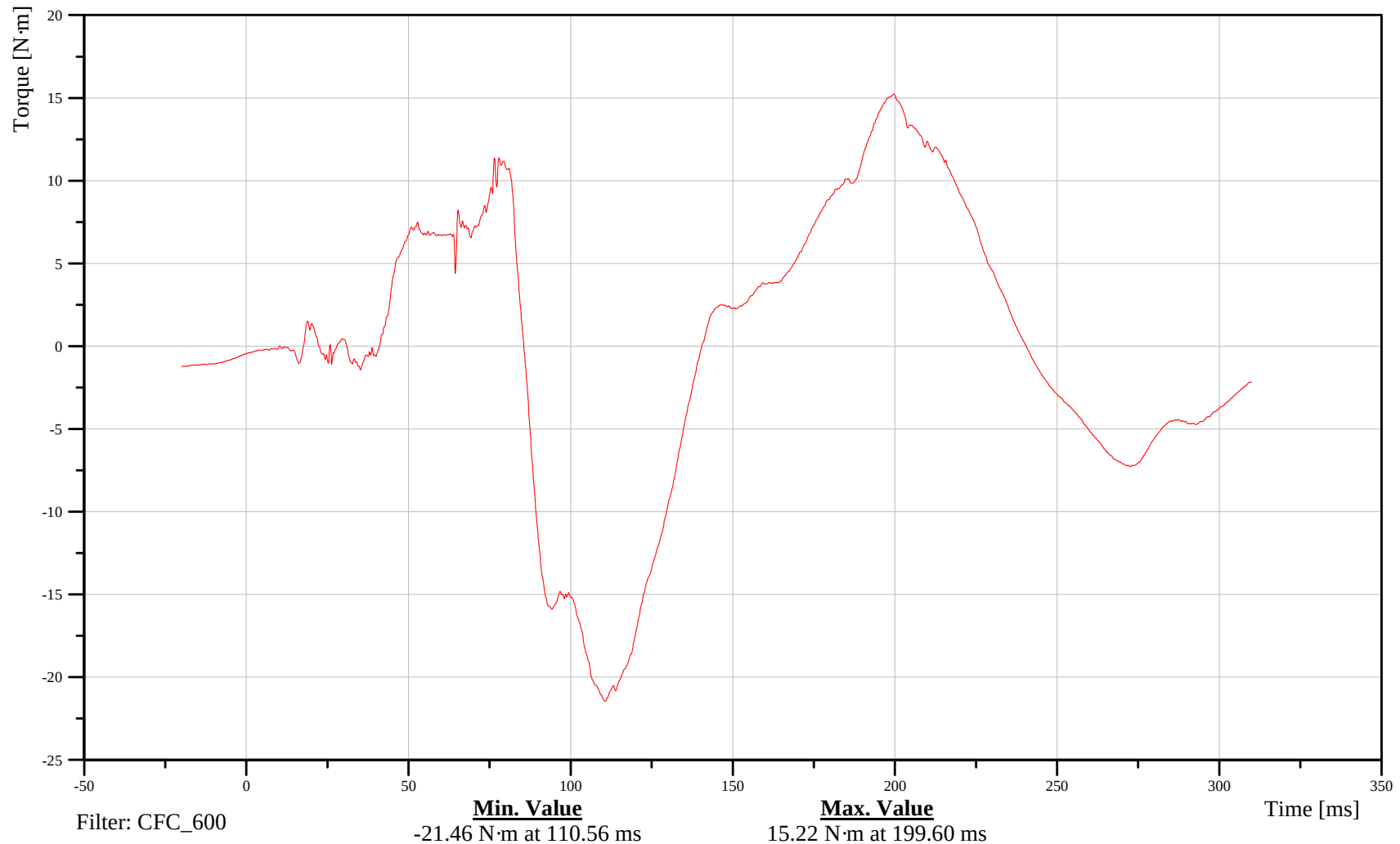
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKLO00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Lower Neck Moment About Y Axis

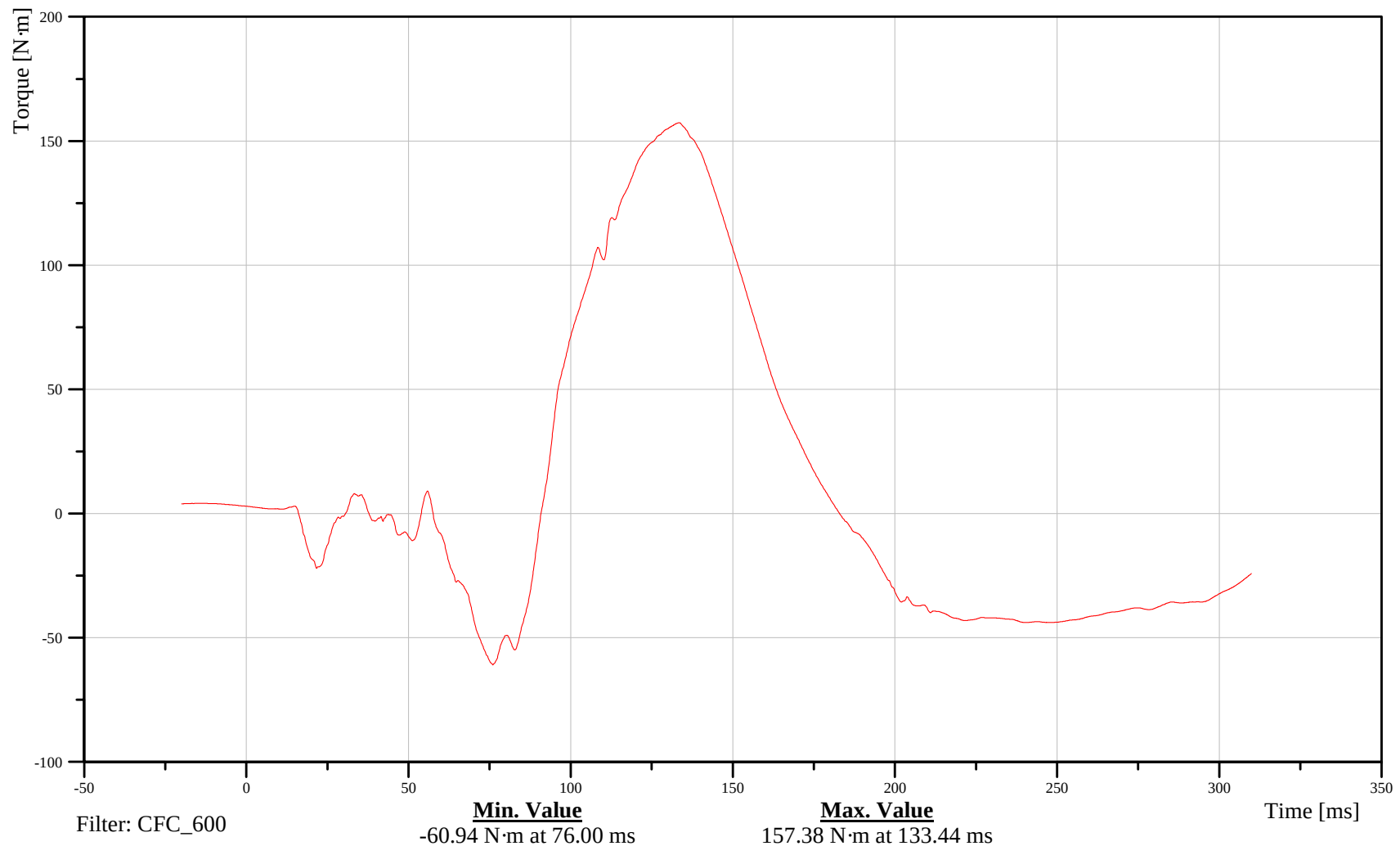
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11NECKLO00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

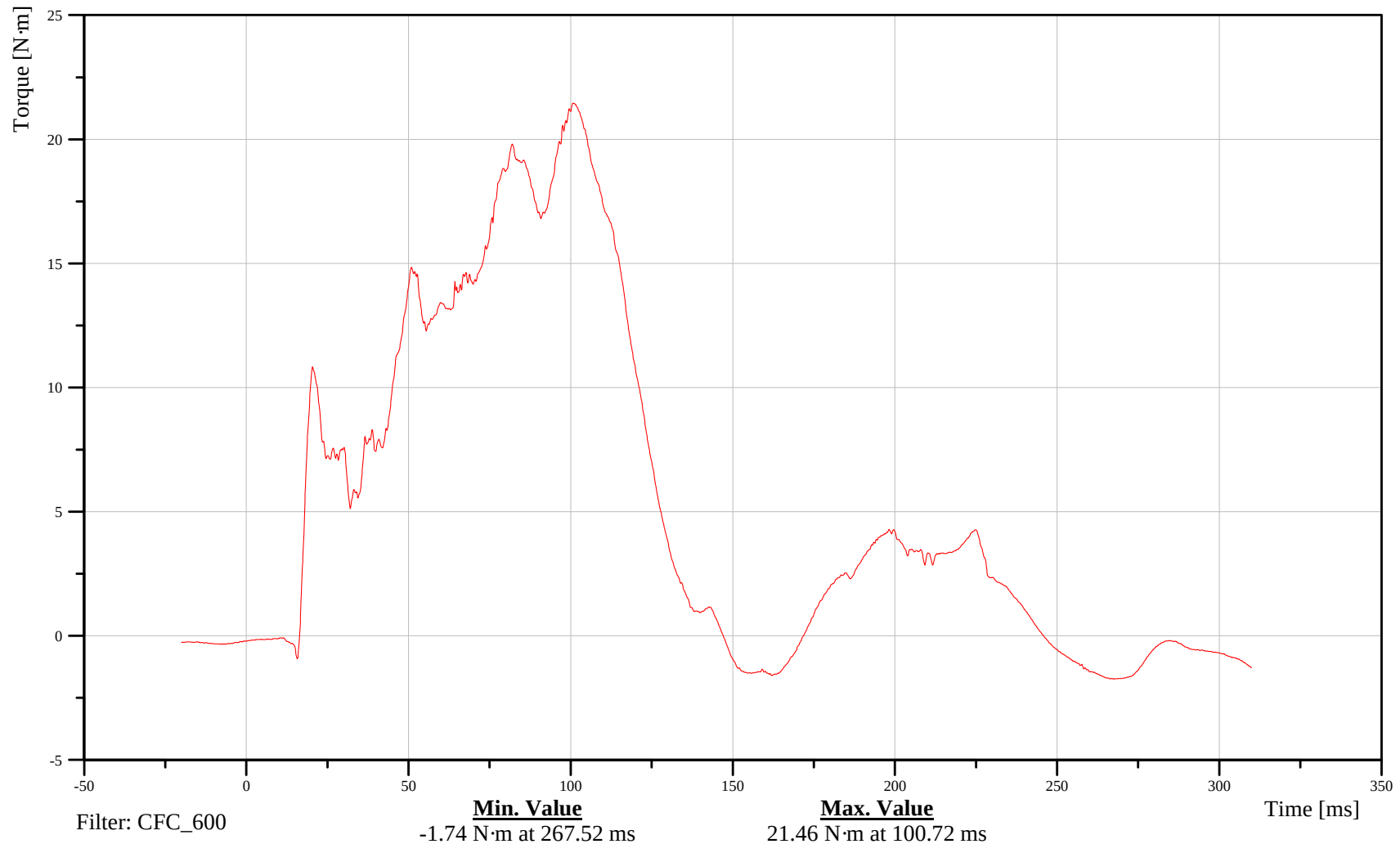
Bullet Driver Lower Neck Moment About Z Axis

Customer: VRTC

11NECKLO00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Chest CG X-Axis Acceleration

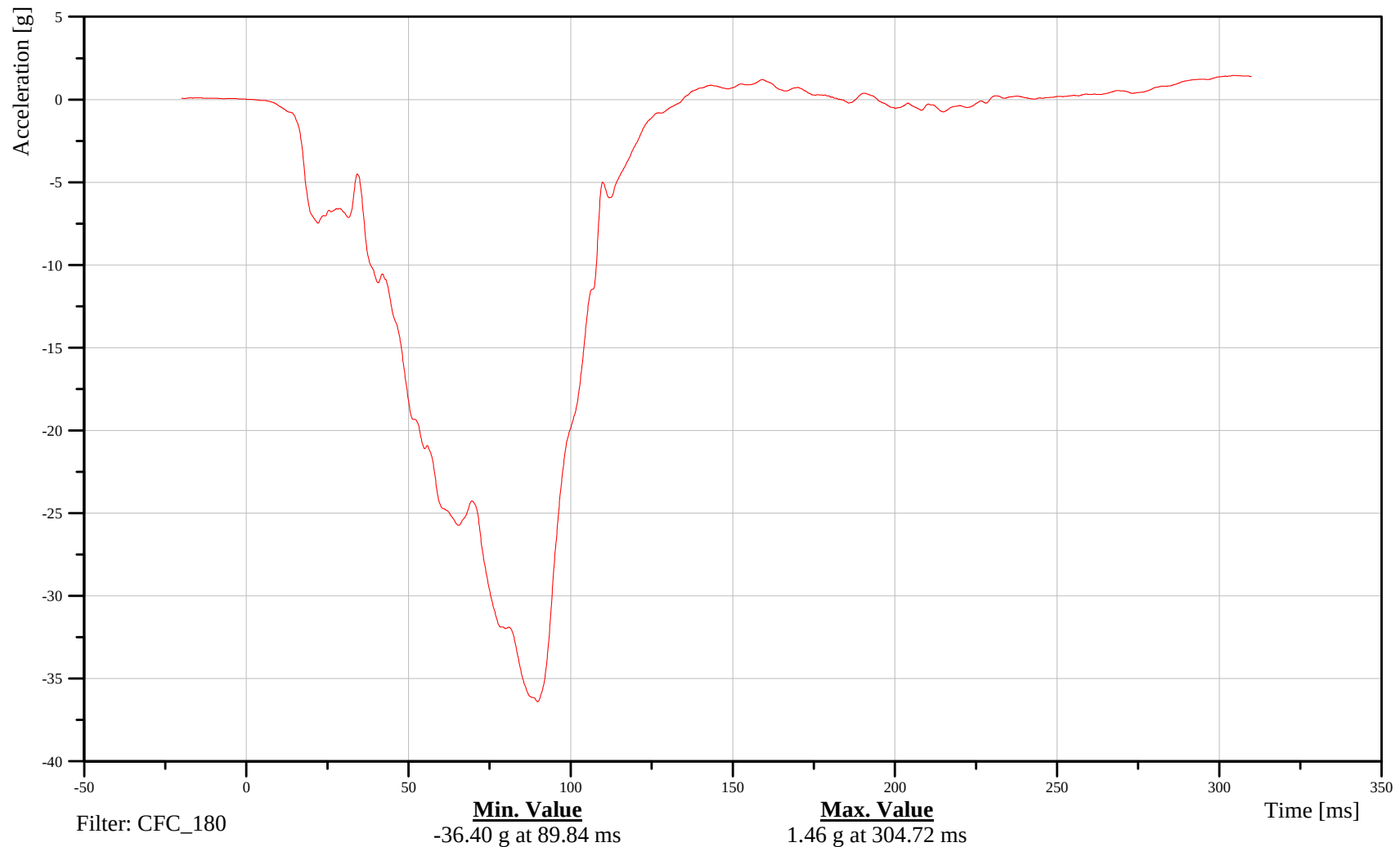
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

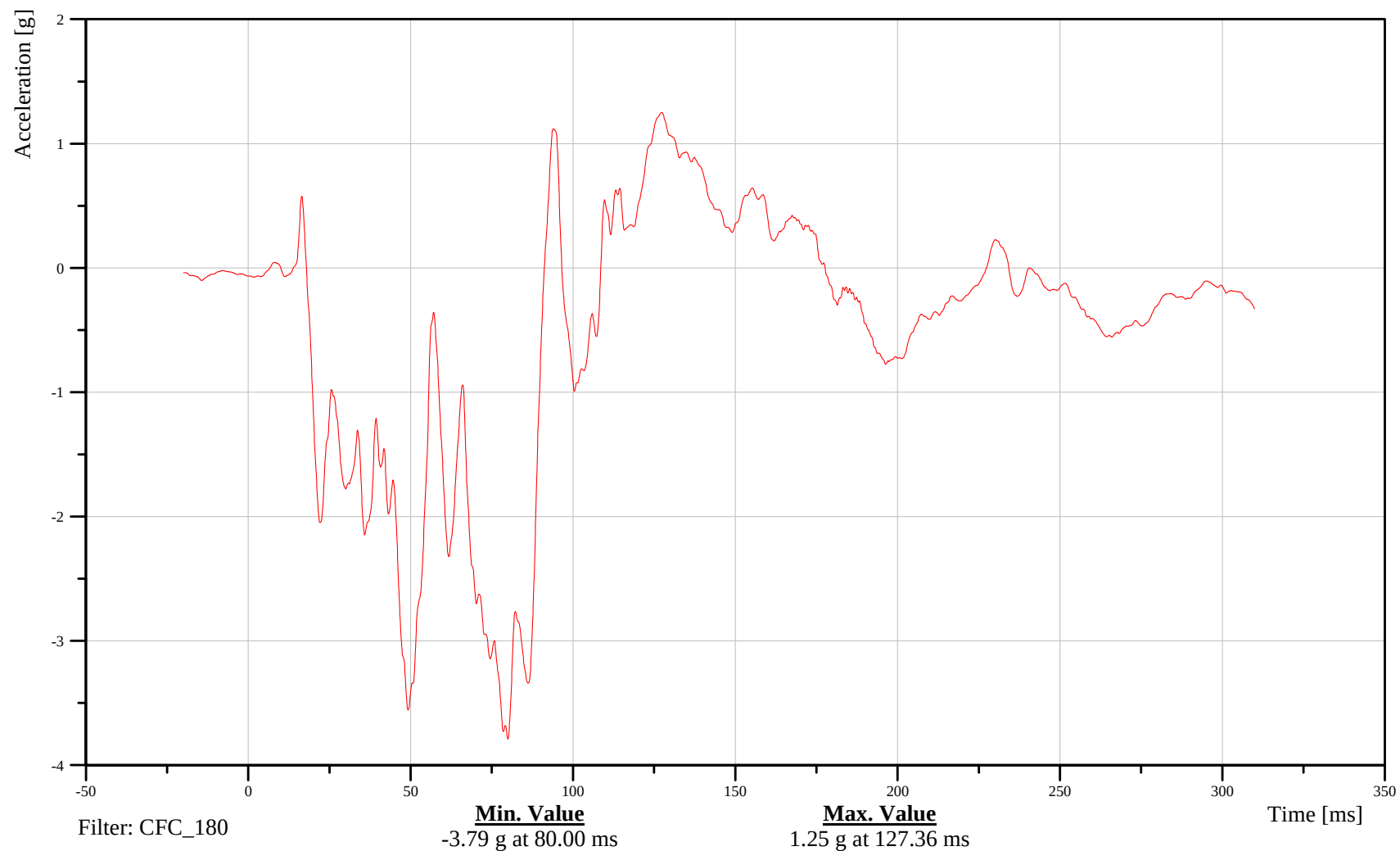
Bullet Driver Chest CG Y-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

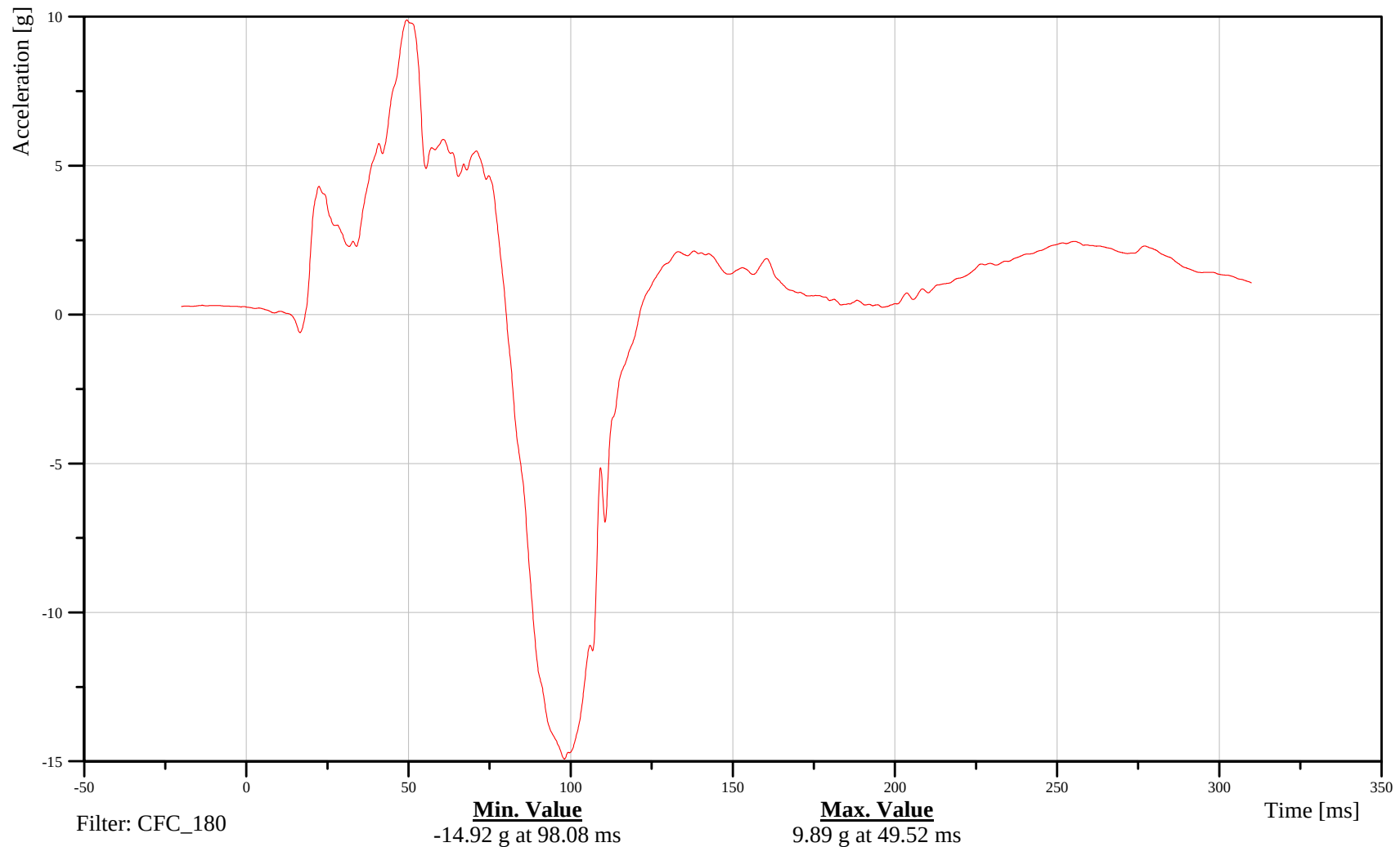
Bullet Driver Chest CG Z-Axis Acceleration

Customer: VRTC

11CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

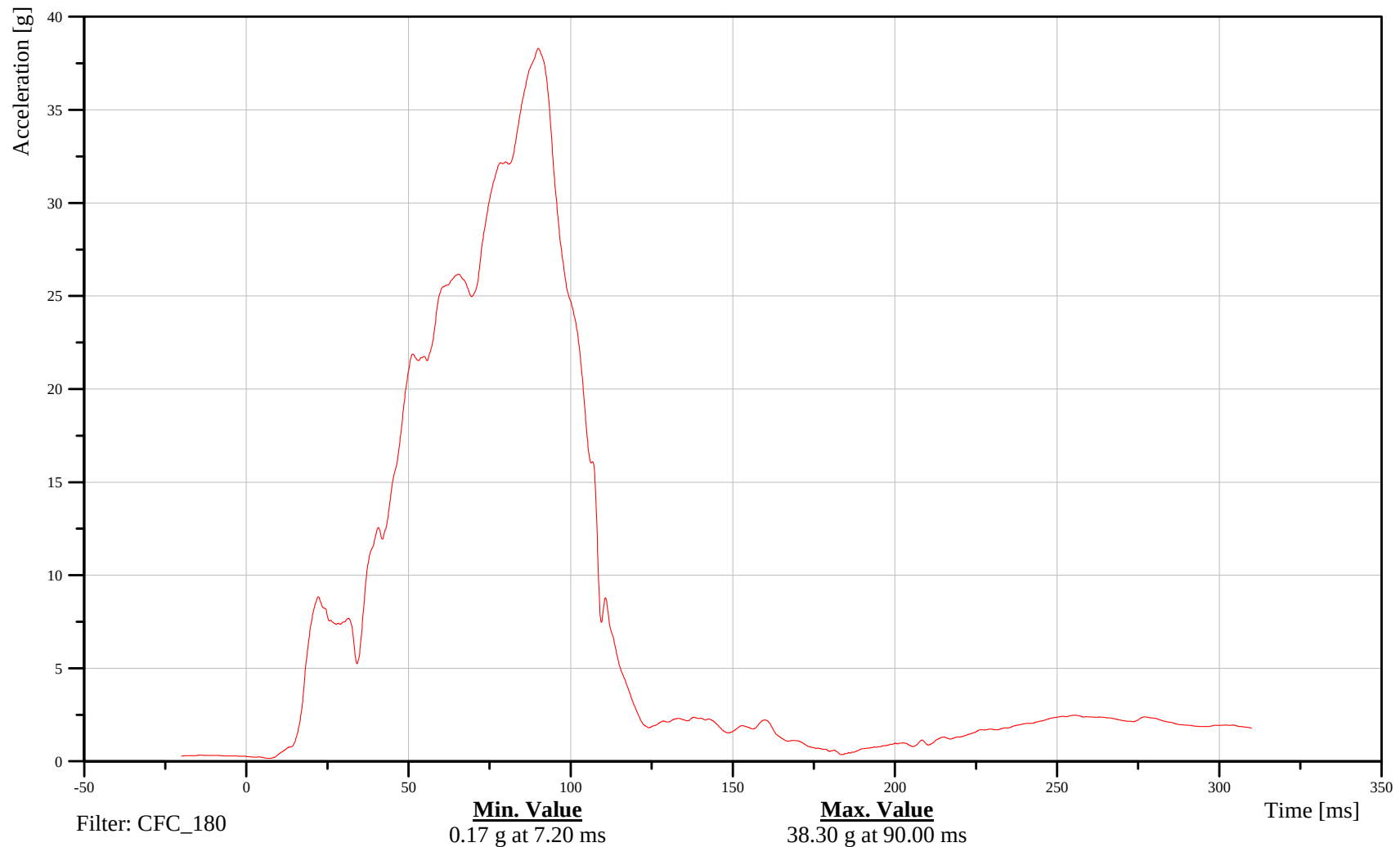
Bullet Driver Chest CG Resultant Acceleration

Customer: VRTC

11CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

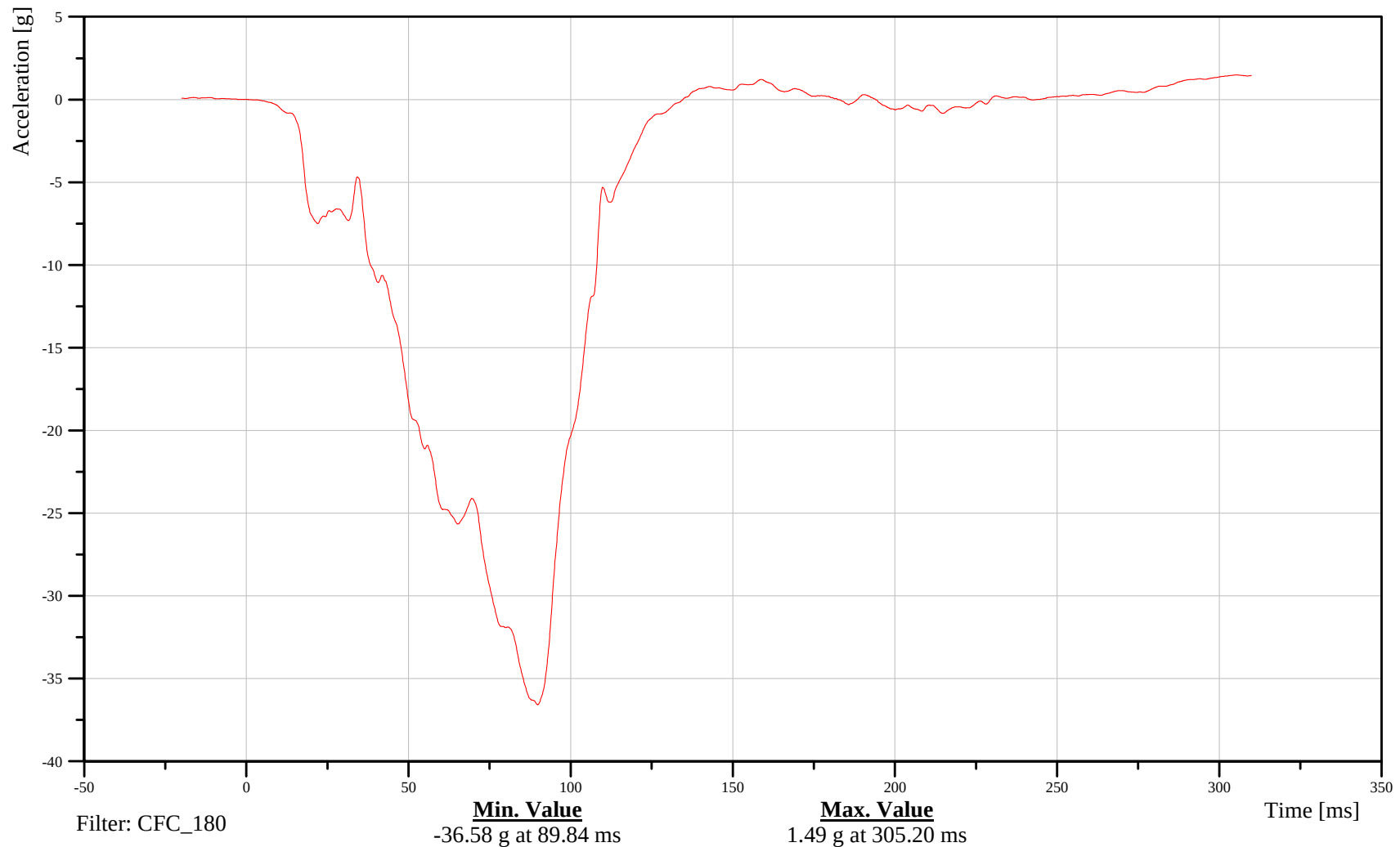
Bullet Driver Redundant Chest CG X-Axis Acceleration

Customer: VRTC

11CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

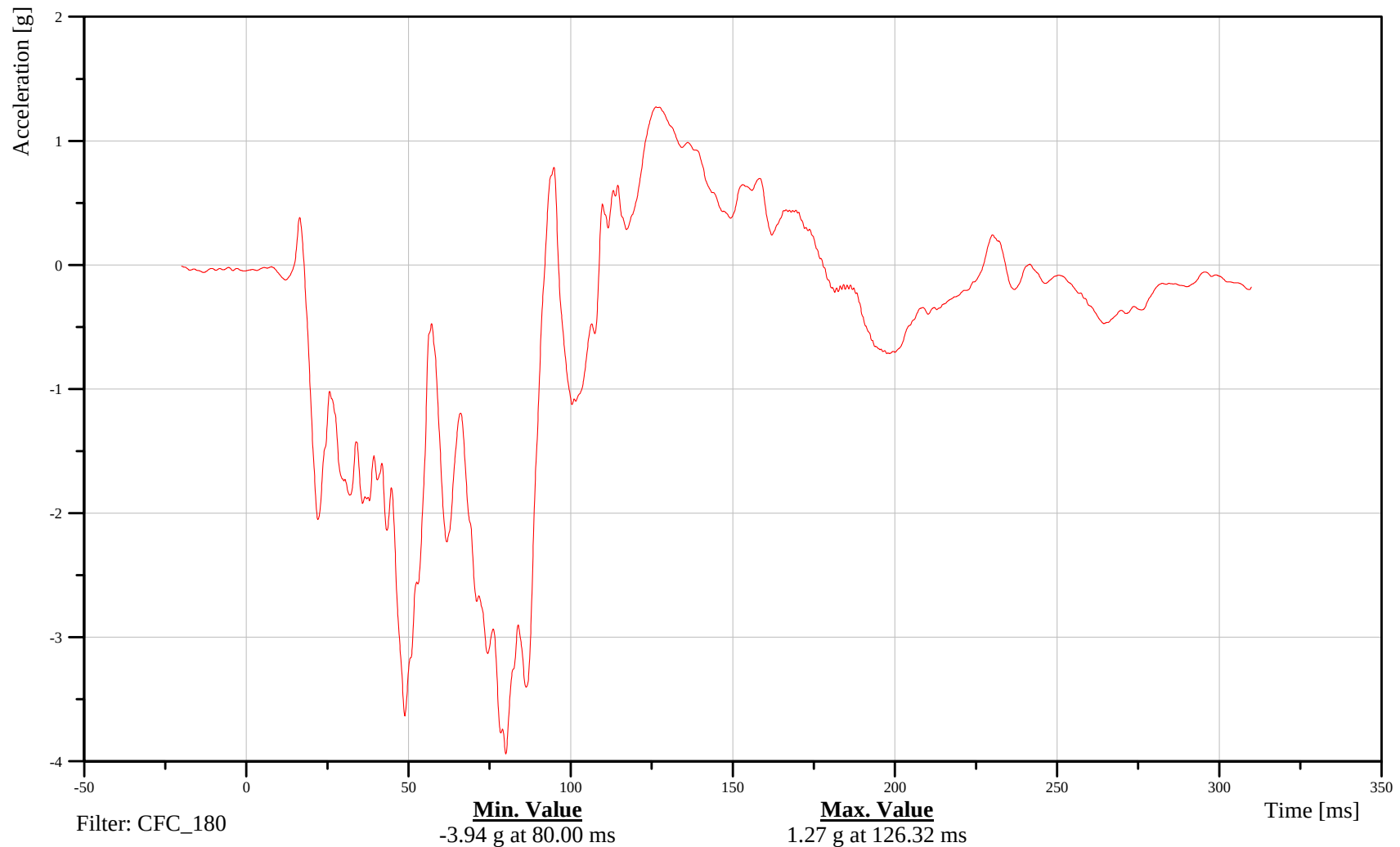
Bullet Driver Redundant Chest CG Y-Axis Acceleration

Customer: VRTC

11CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

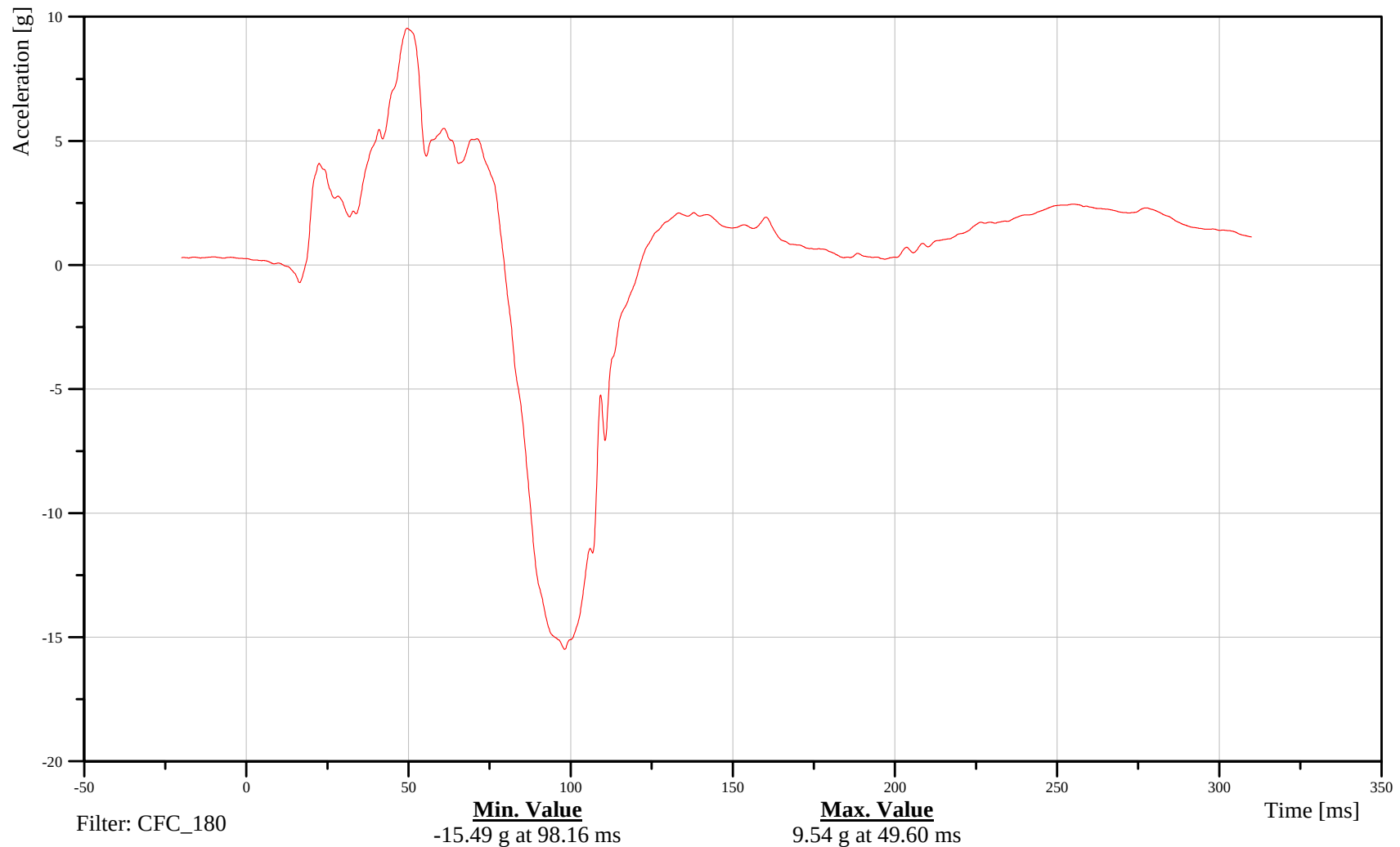
Bullet Driver Redundant Chest CG Z-Axis Acceleration

Customer: VRTC

11CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

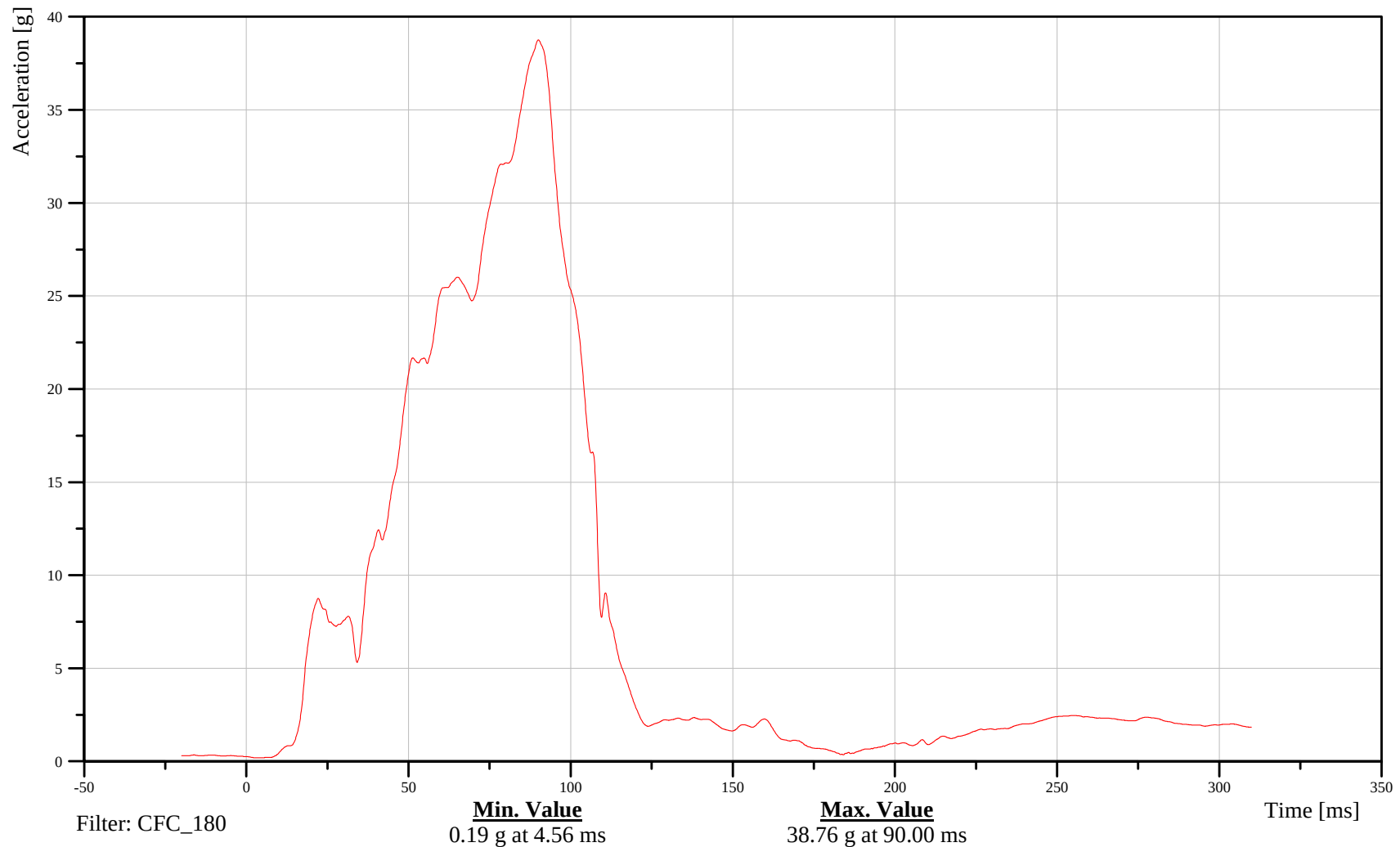
Bullet Driver Redundant Chest CG Resultant Acceleration

Customer: VRTC

11CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Chest Displacement

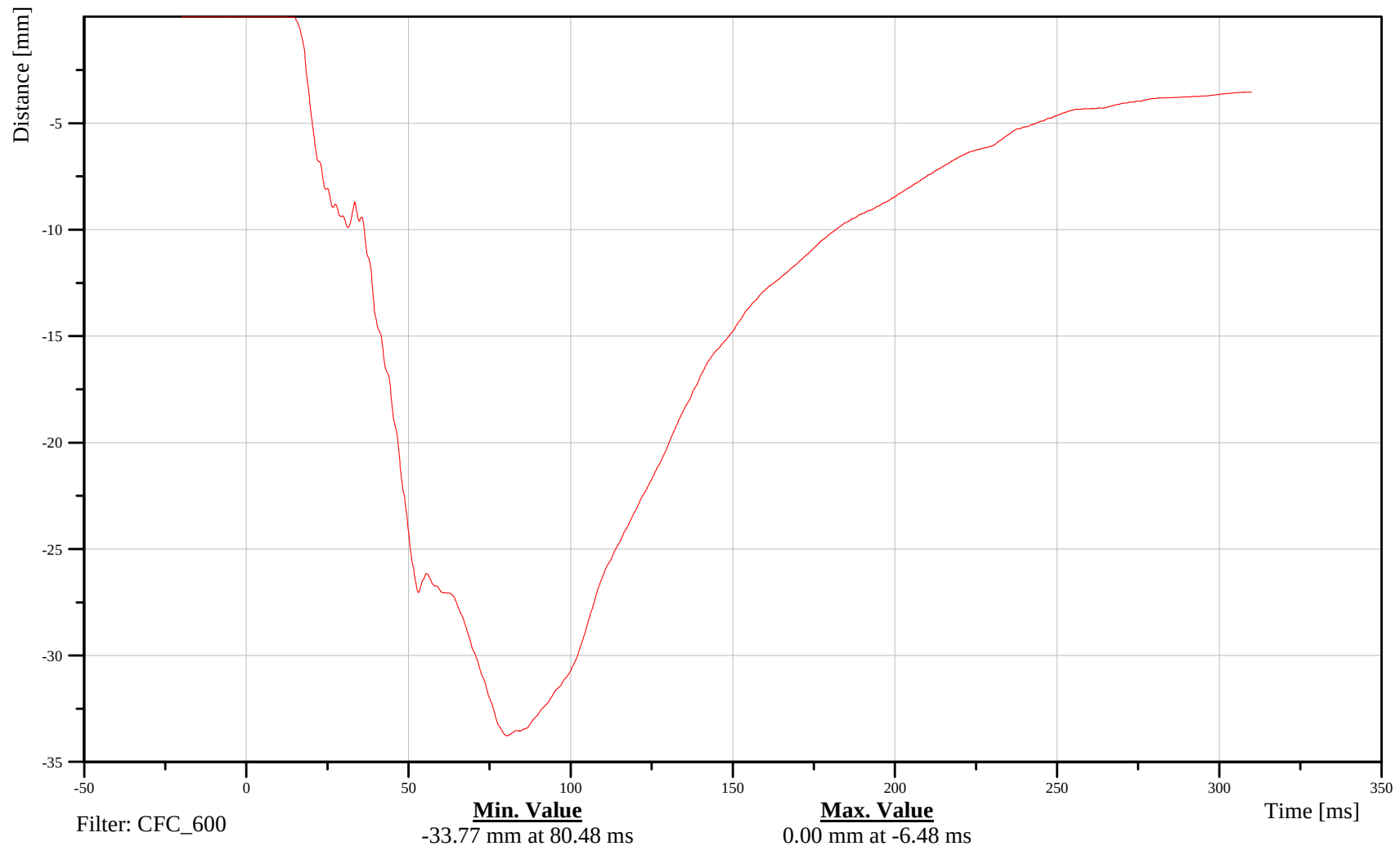
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11CHST0000H3DSXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Pelvis CG X-Axis Acceleration

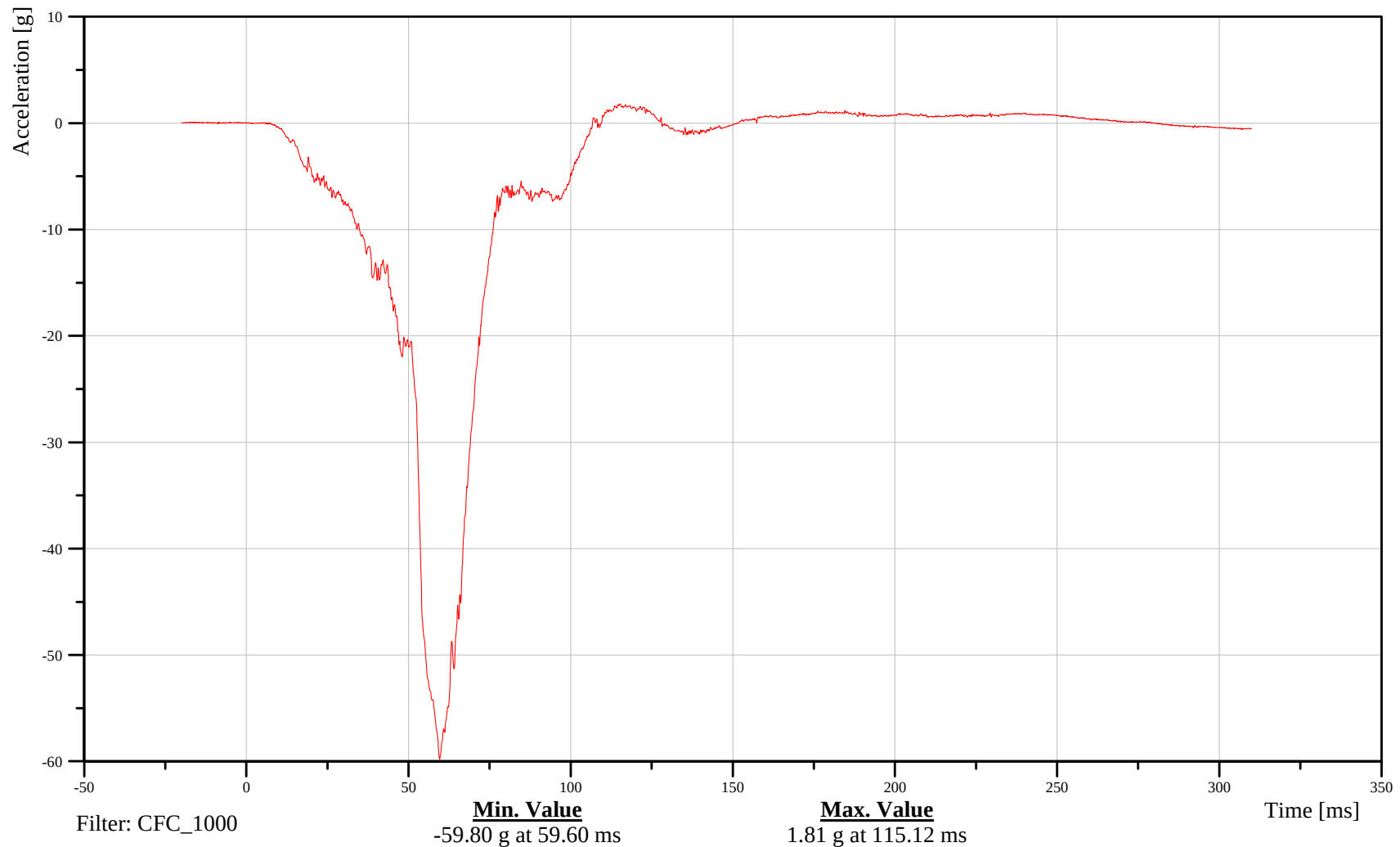
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11PELVCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

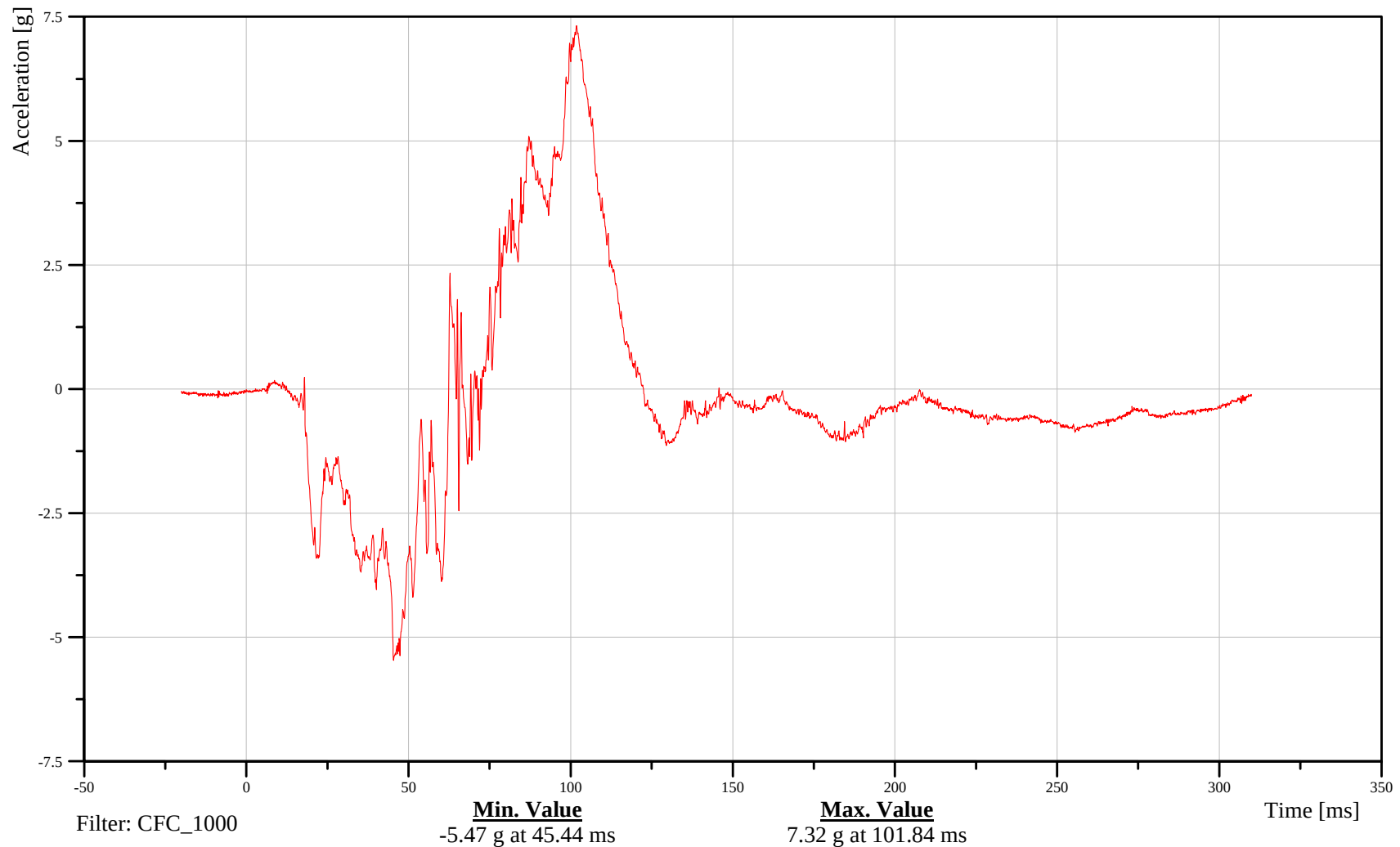
Bullet Driver Pelvis CG Y-Axis Acceleration

Customer: VRTC

11PELVCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Pelvis CG Z-Axis Acceleration

Date: 03/20/2006

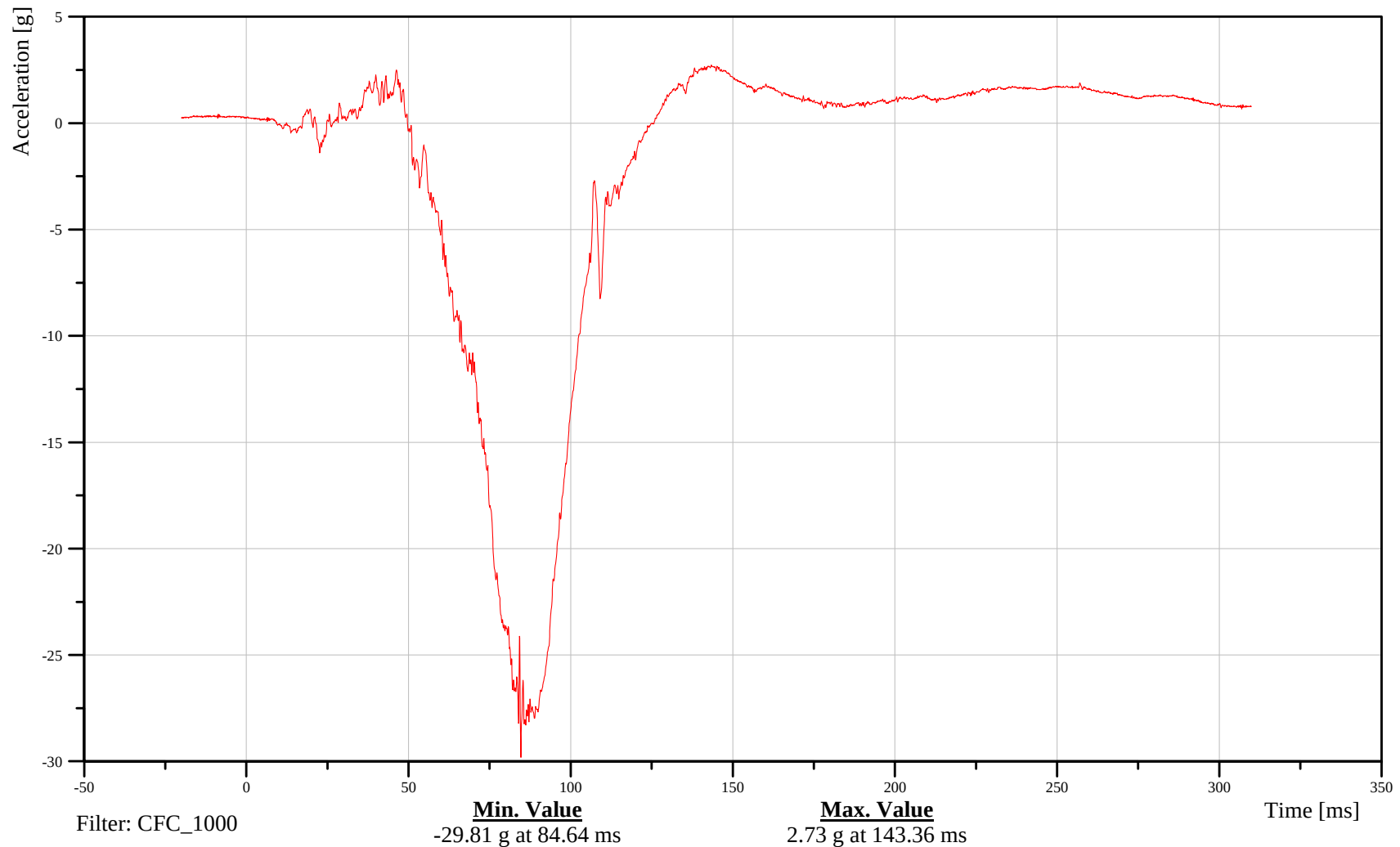
Time: 08:08

Customer: VRTC

11PELVCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

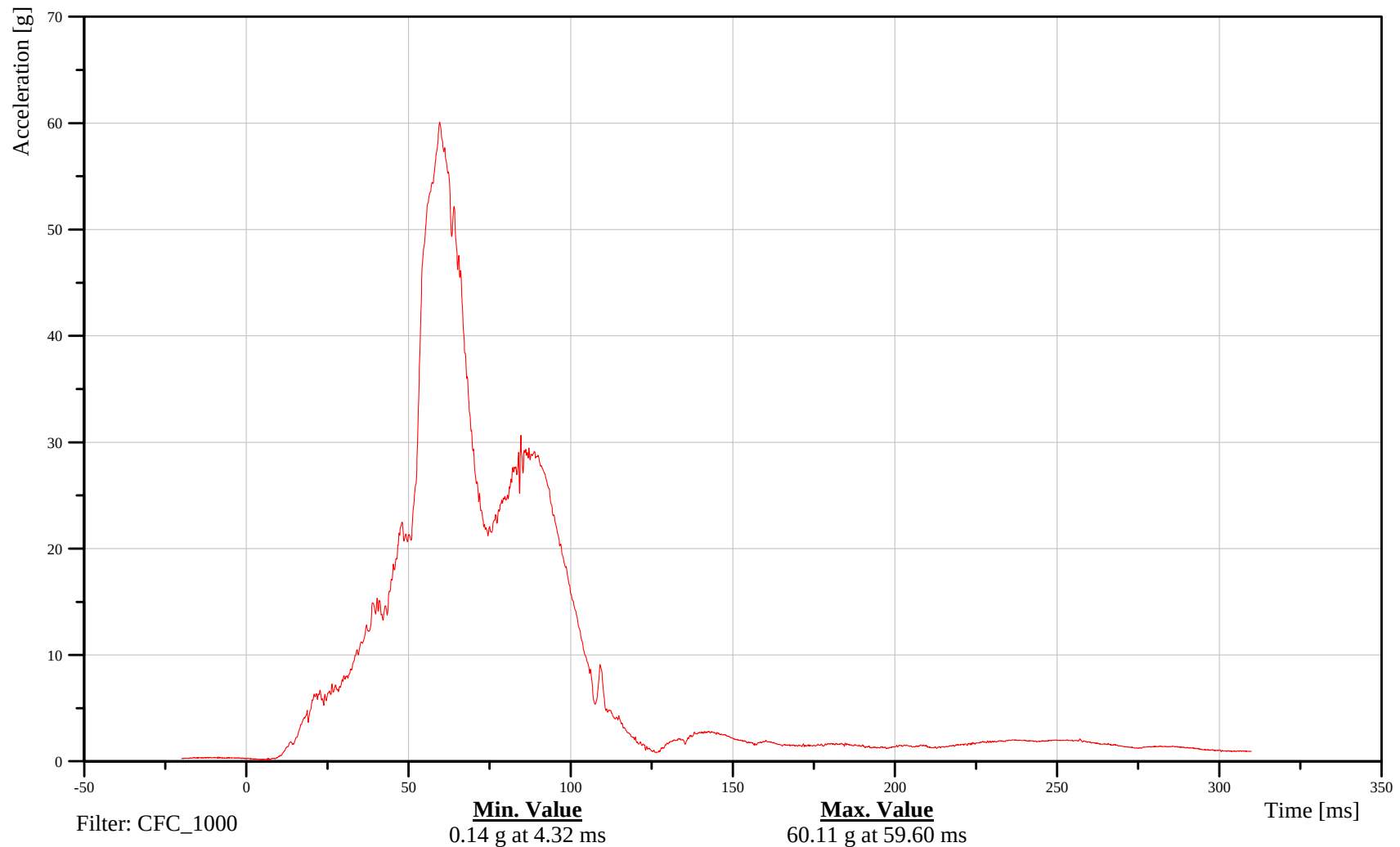
Bullet Driver Pelvis CG Resultant Acceleration

Customer: VRTC

11PELVCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Femur Z-Axis Force

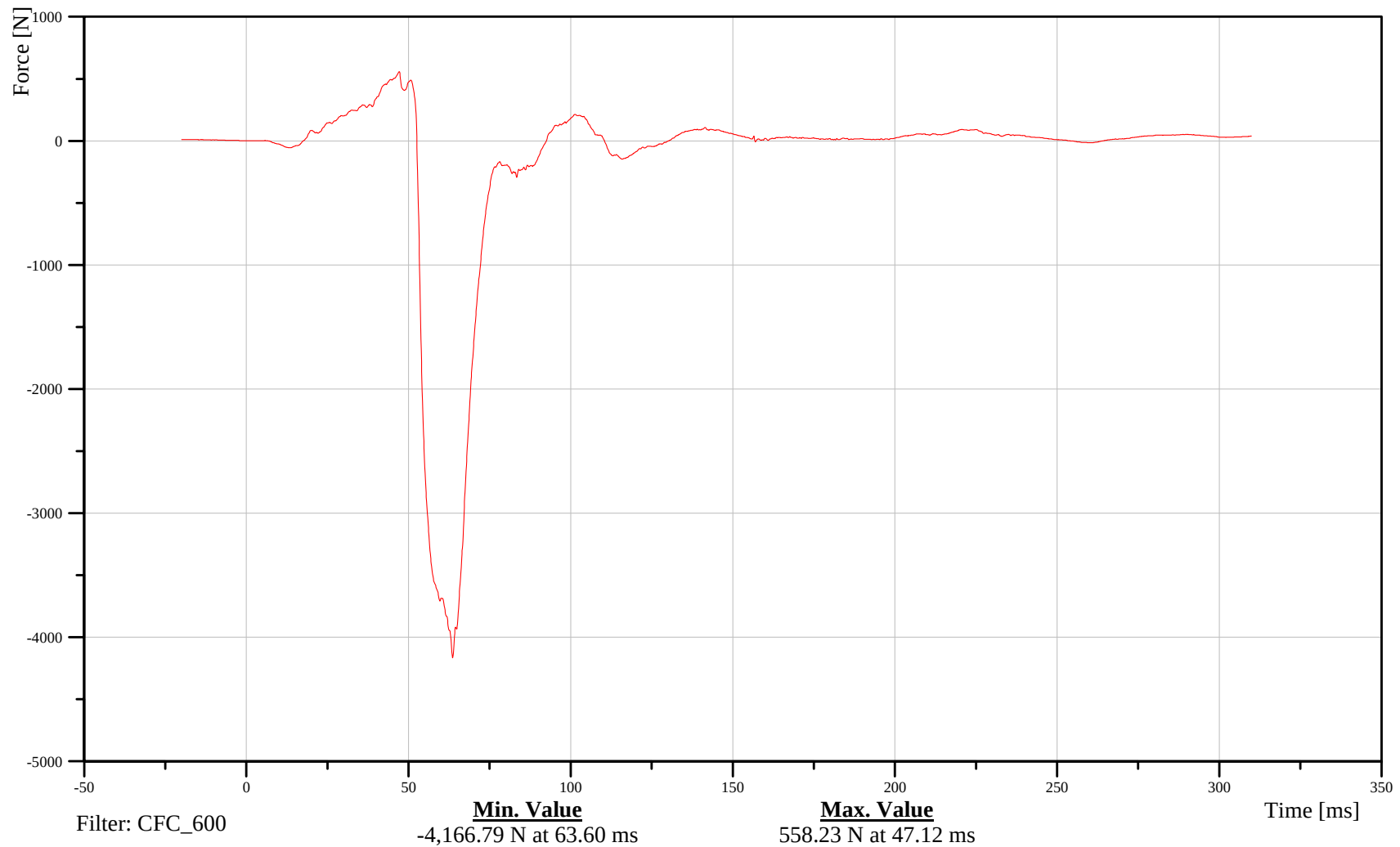
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Knee Displacement

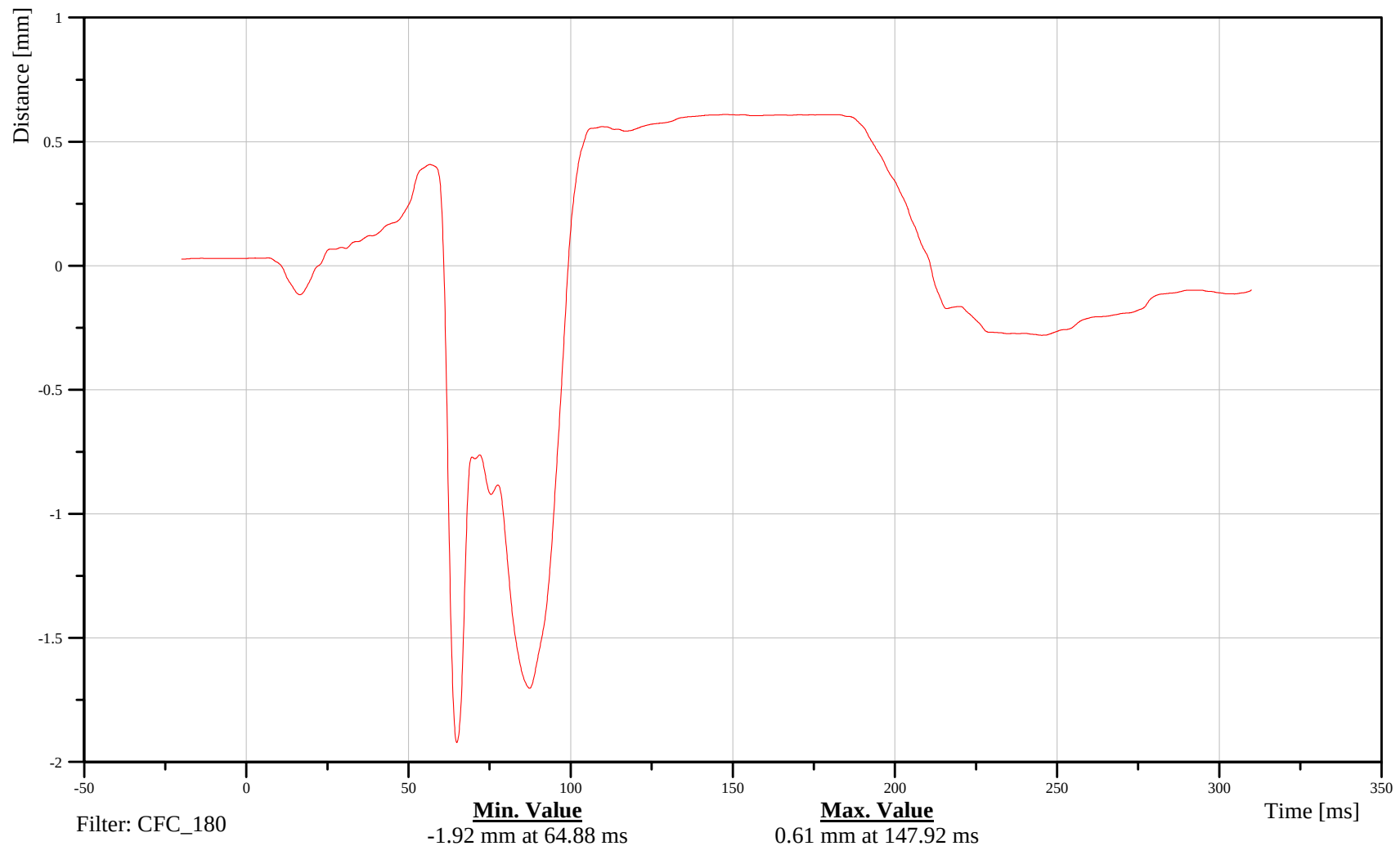
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Upper Tibia X-Axis Force

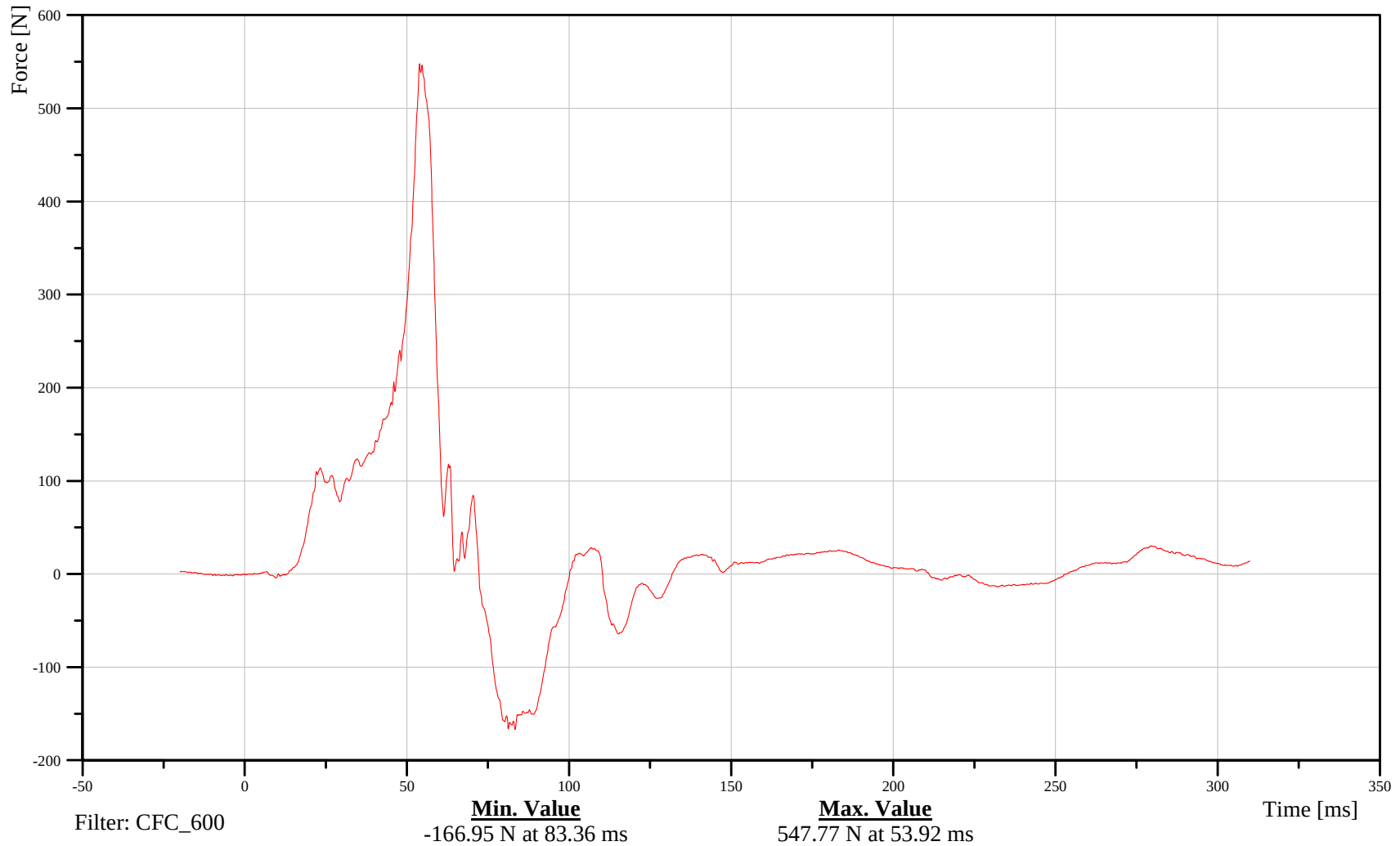
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBILULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Upper Tibia Z-Axis Force

Date: 03/20/2006

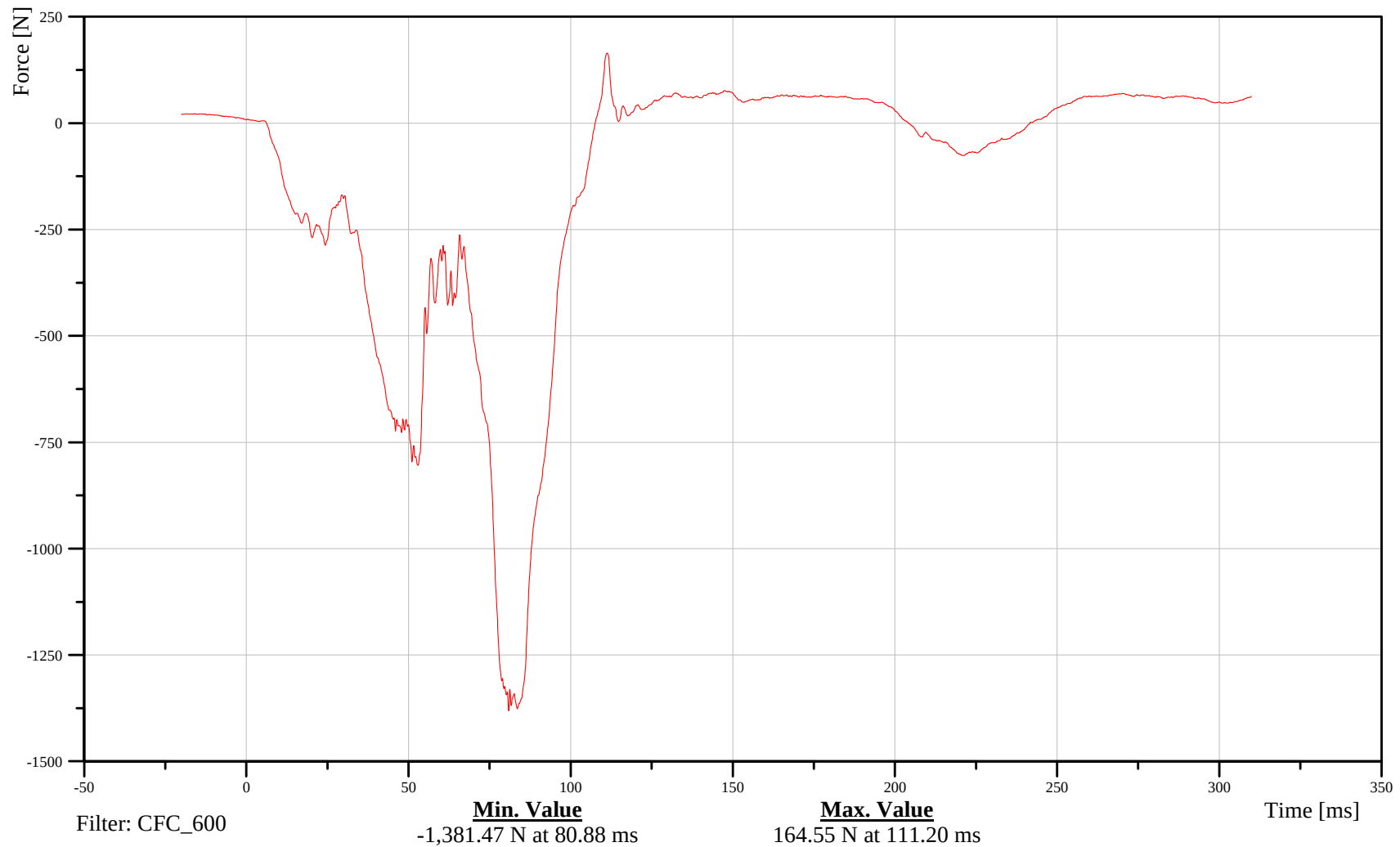
Time: 08:08

Customer: VRTC

11TIBILULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

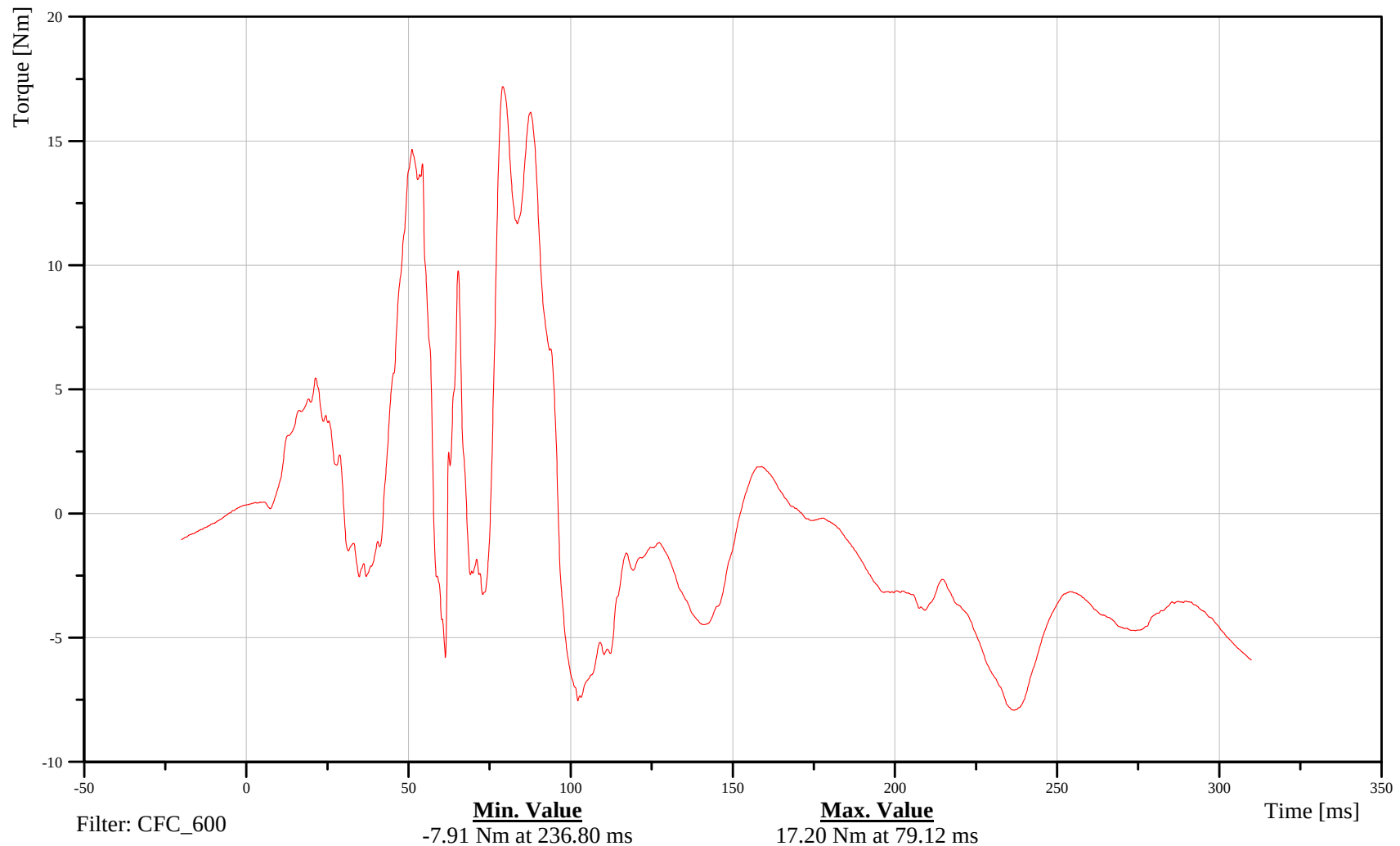
Bullet Driver Left Upper Tibia Moment About X Axis

Customer: VRTC

11TIBILULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

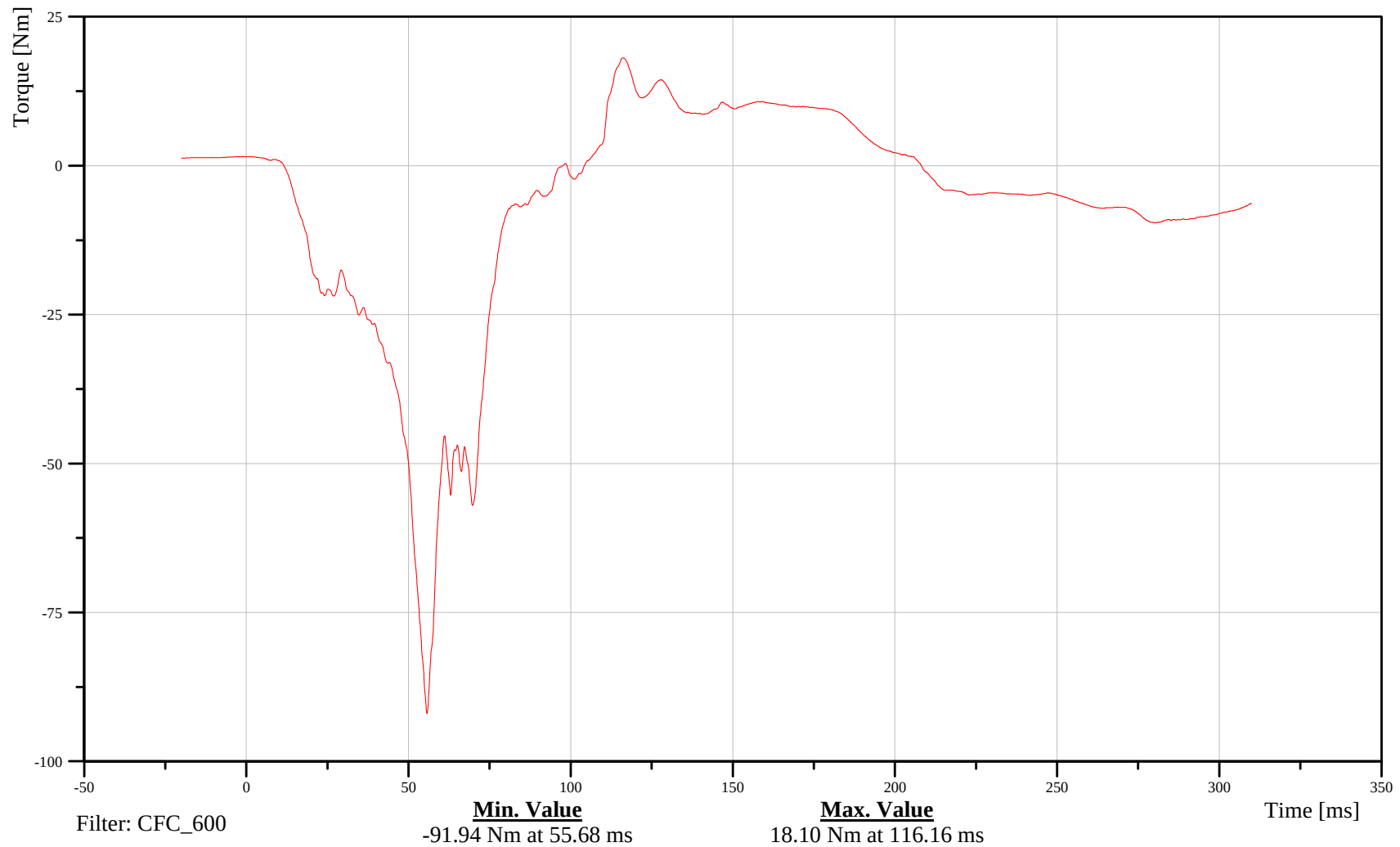
Bullet Driver Left Upper Tibia Moment About Y Axis

Customer: VRTC

11TIBILULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Tibia X-Axis Acceleration

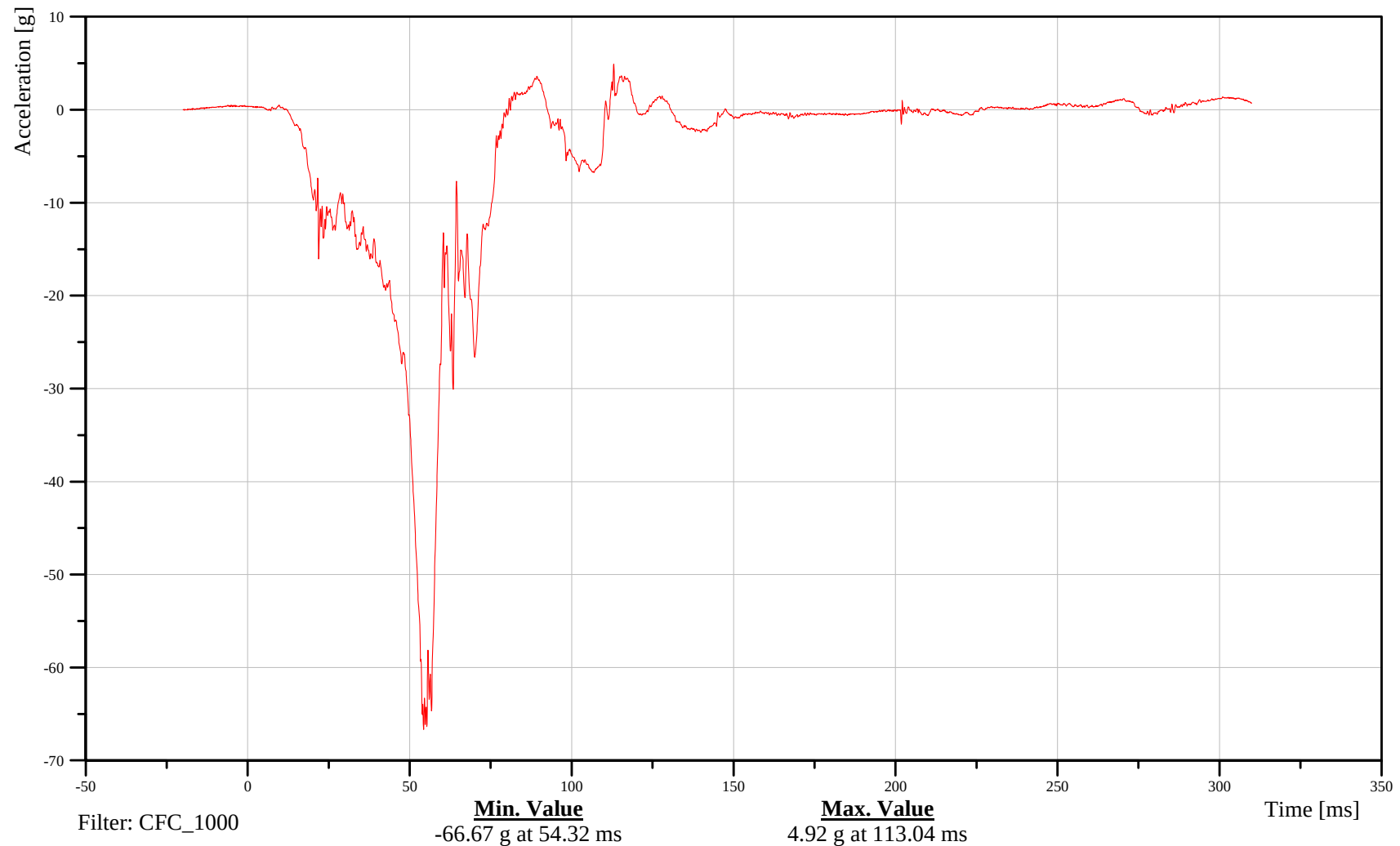
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBILELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

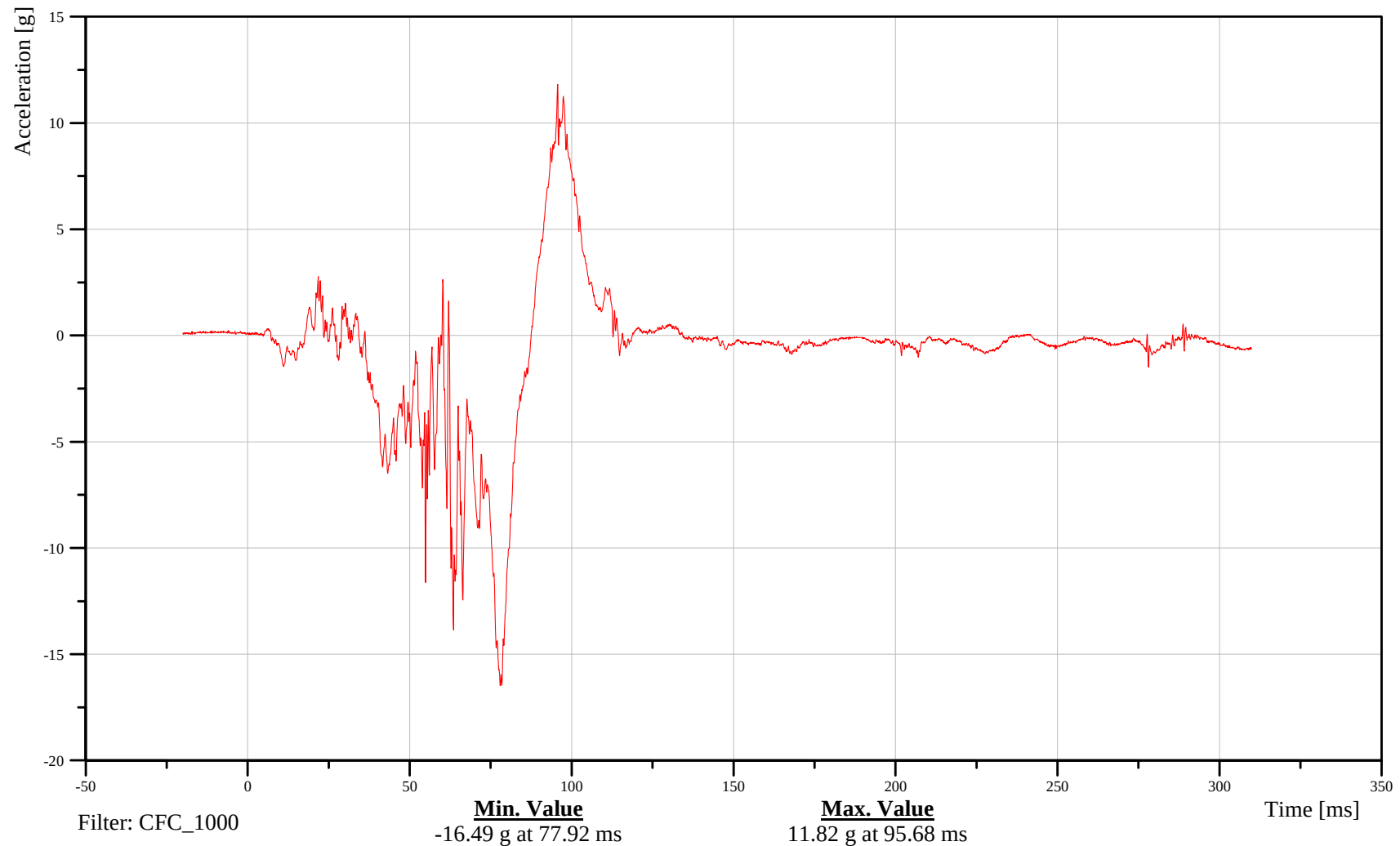
Bullet Driver Left Tibia Y-Axis Acceleration

Customer: VRTC

11TIBILELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Lower Tibia X-Axis Force

Date: 03/20/2006

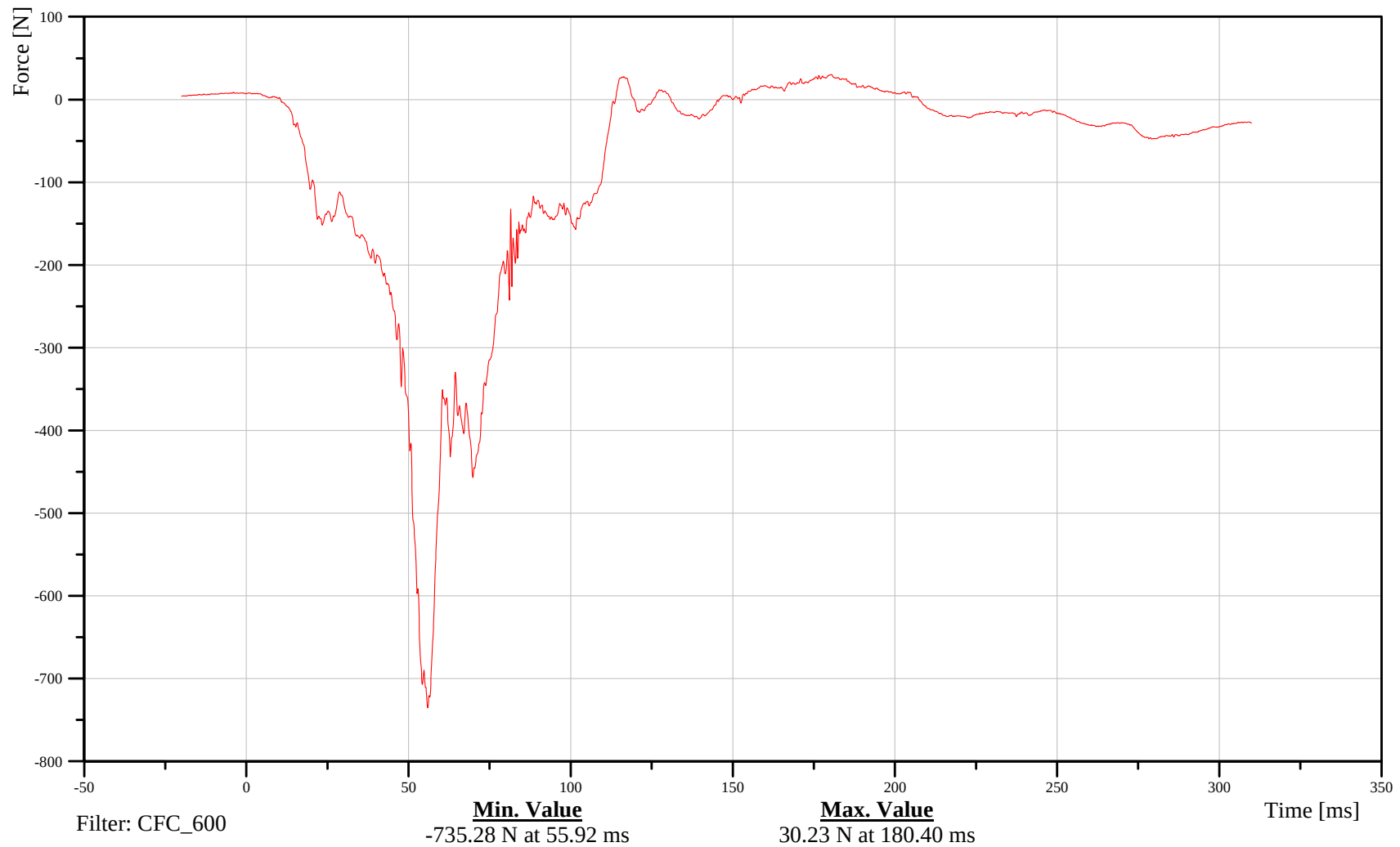
Time: 08:08

Customer: VRTC

11TIBILLXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Lower Tibia Y-Axis Force

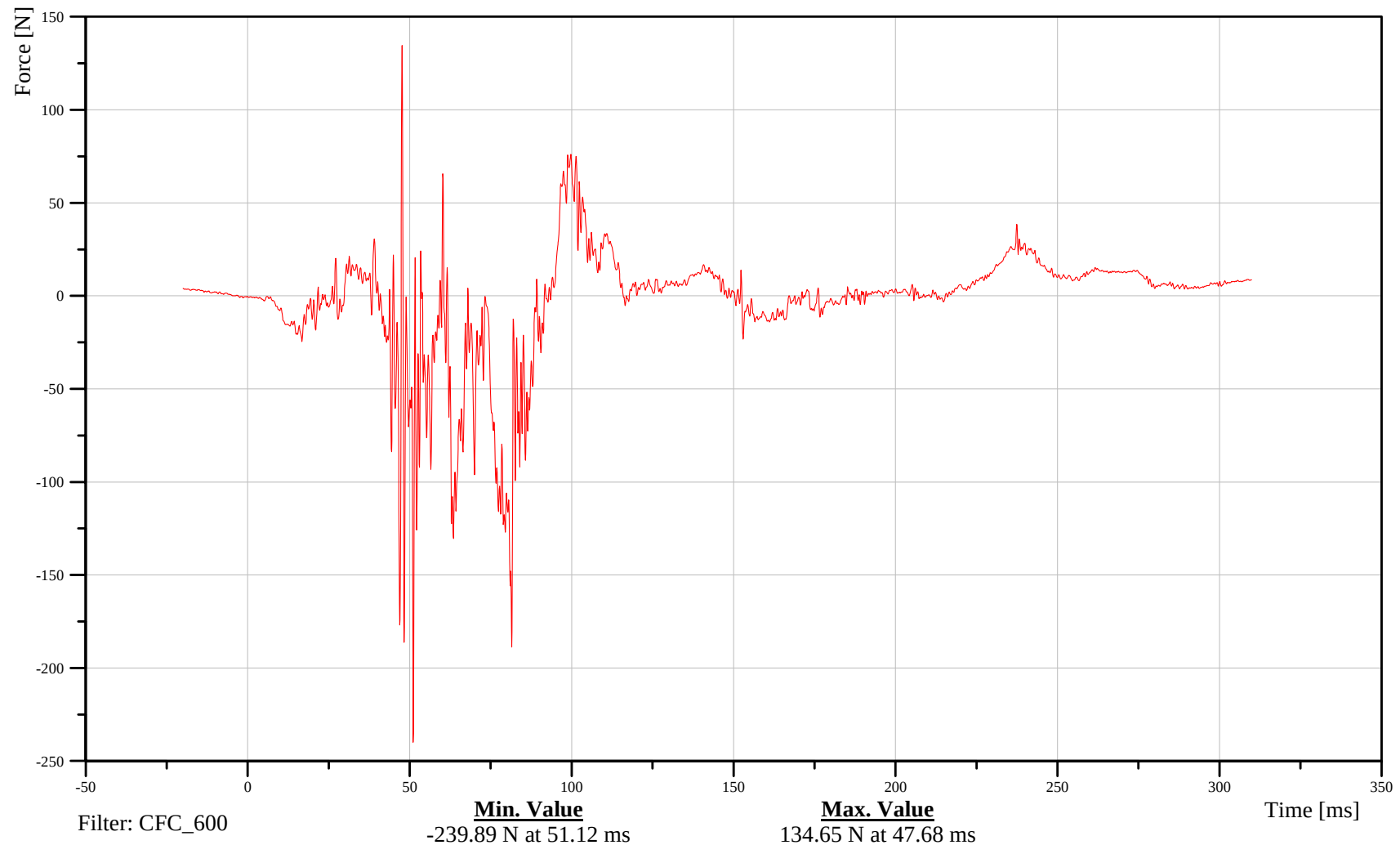
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBILLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Left Lower Tibia Z-Axis Force

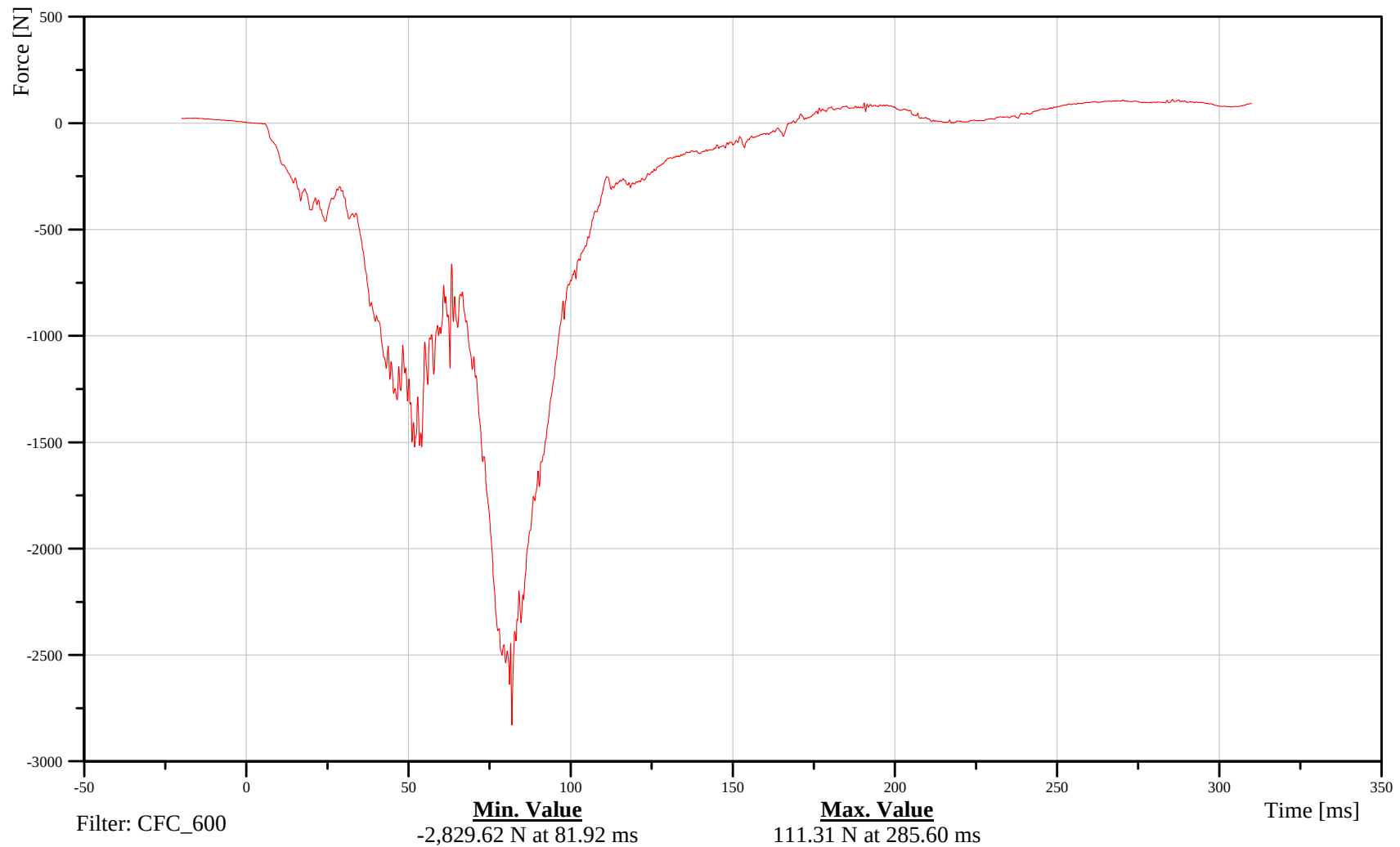
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBILLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

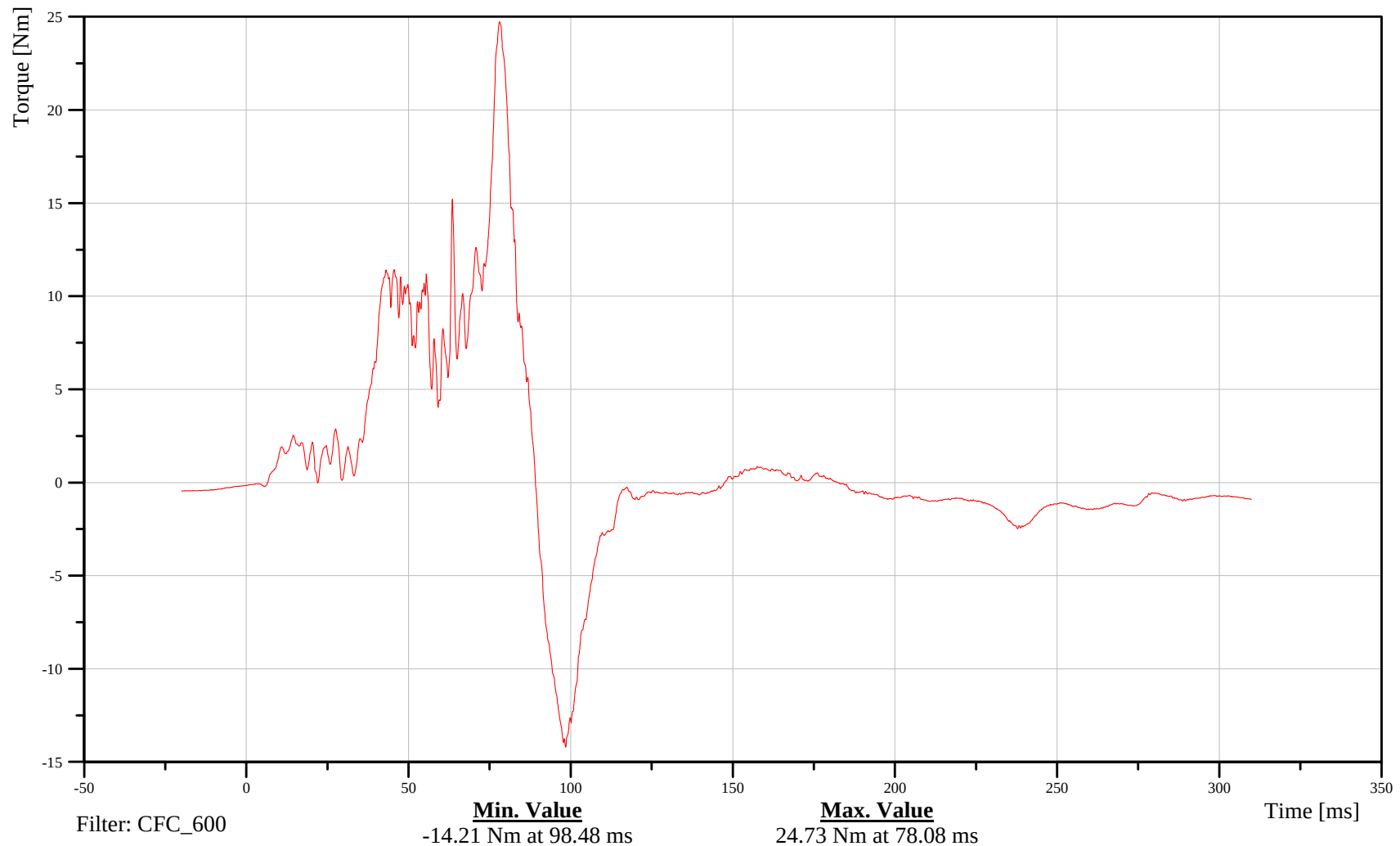
Bullet Driver Left Lower Tibia Moment About X Axis

Customer: VRTC

11TIBILLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

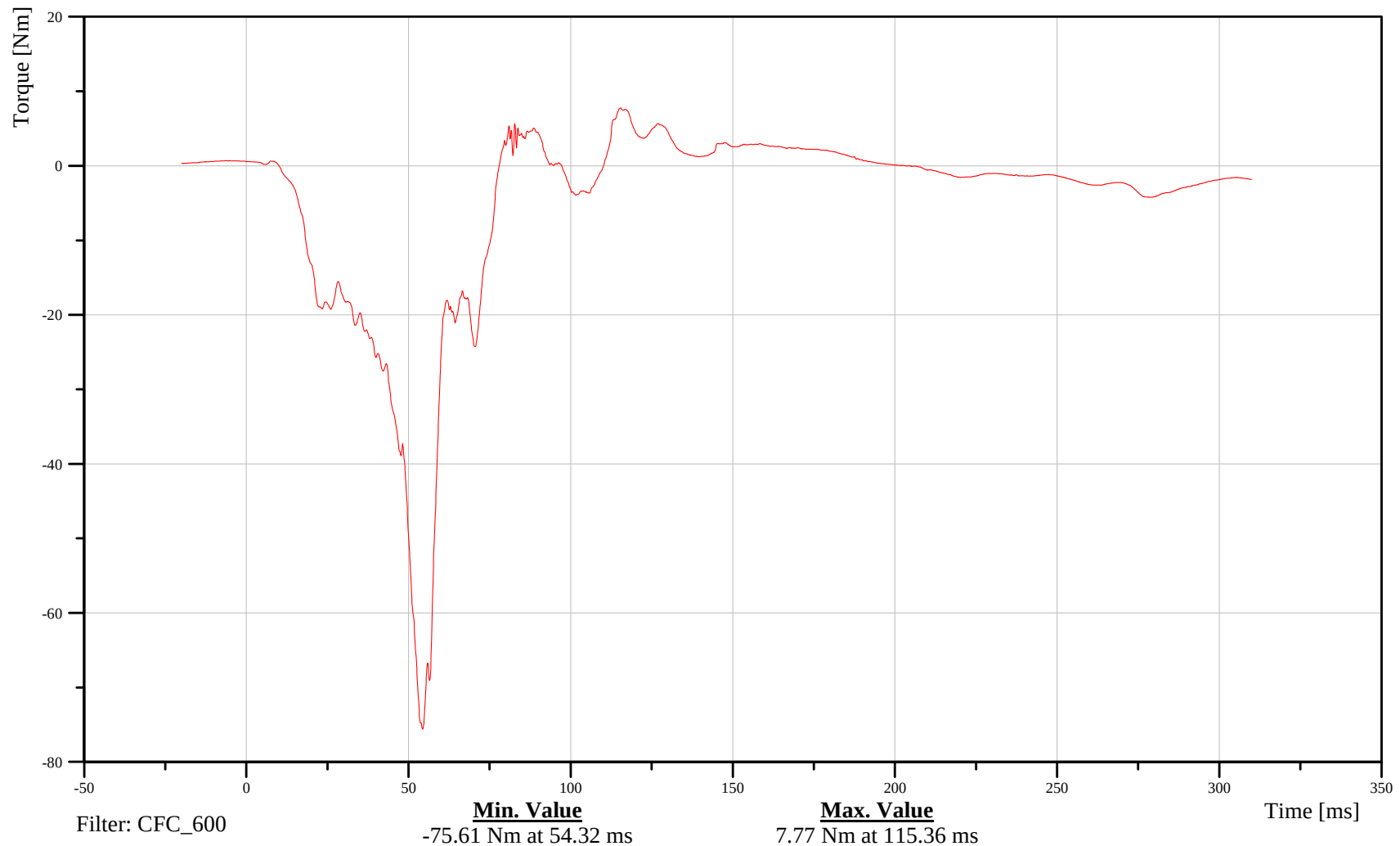
Bullet Driver Left Lower Tibia Moment About Y Axis

Customer: VRTC

11TIBILLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

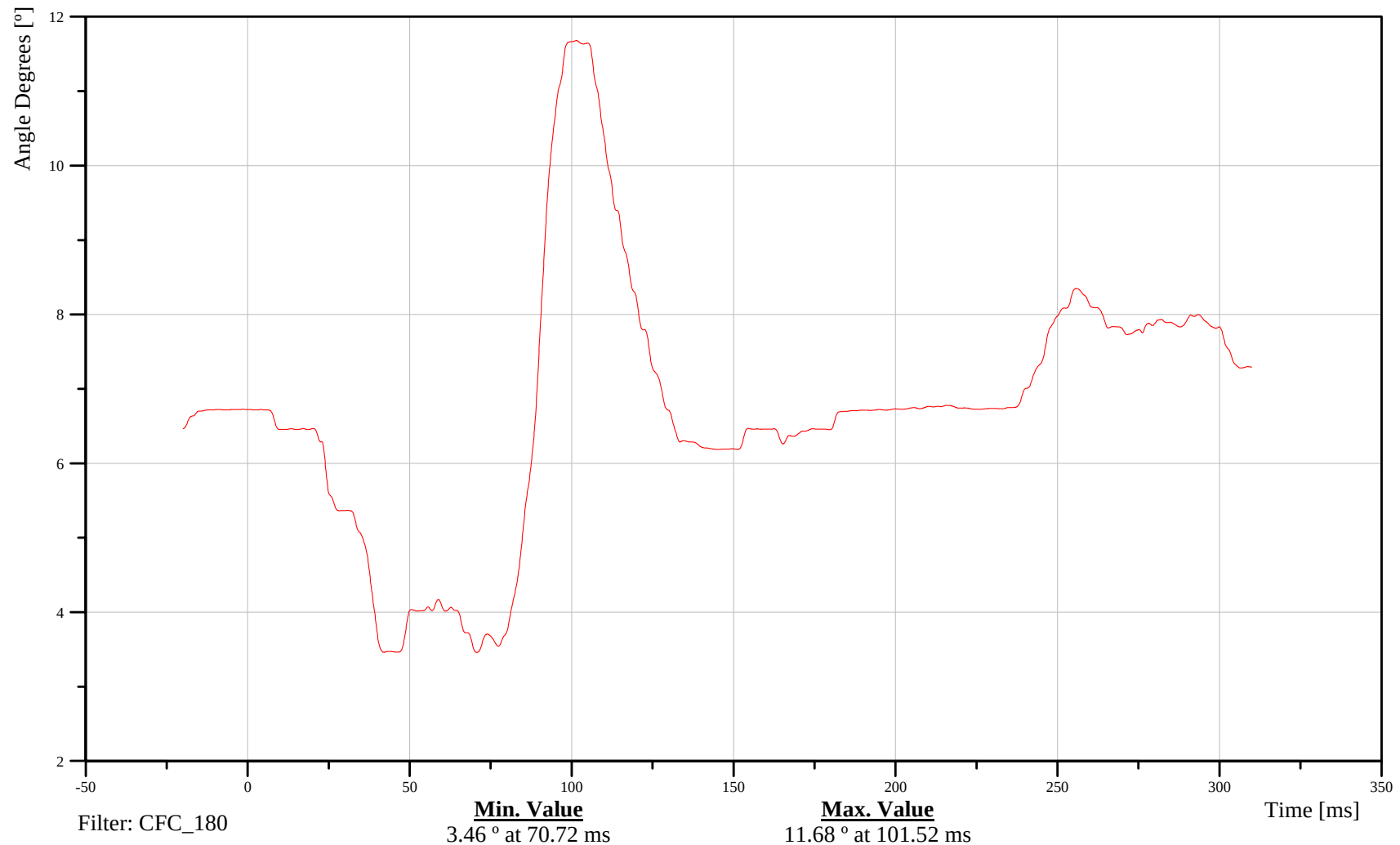
Bullet Driver Left Foot X-Axis Rotation

Customer: VRTC

11FOOTLELXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

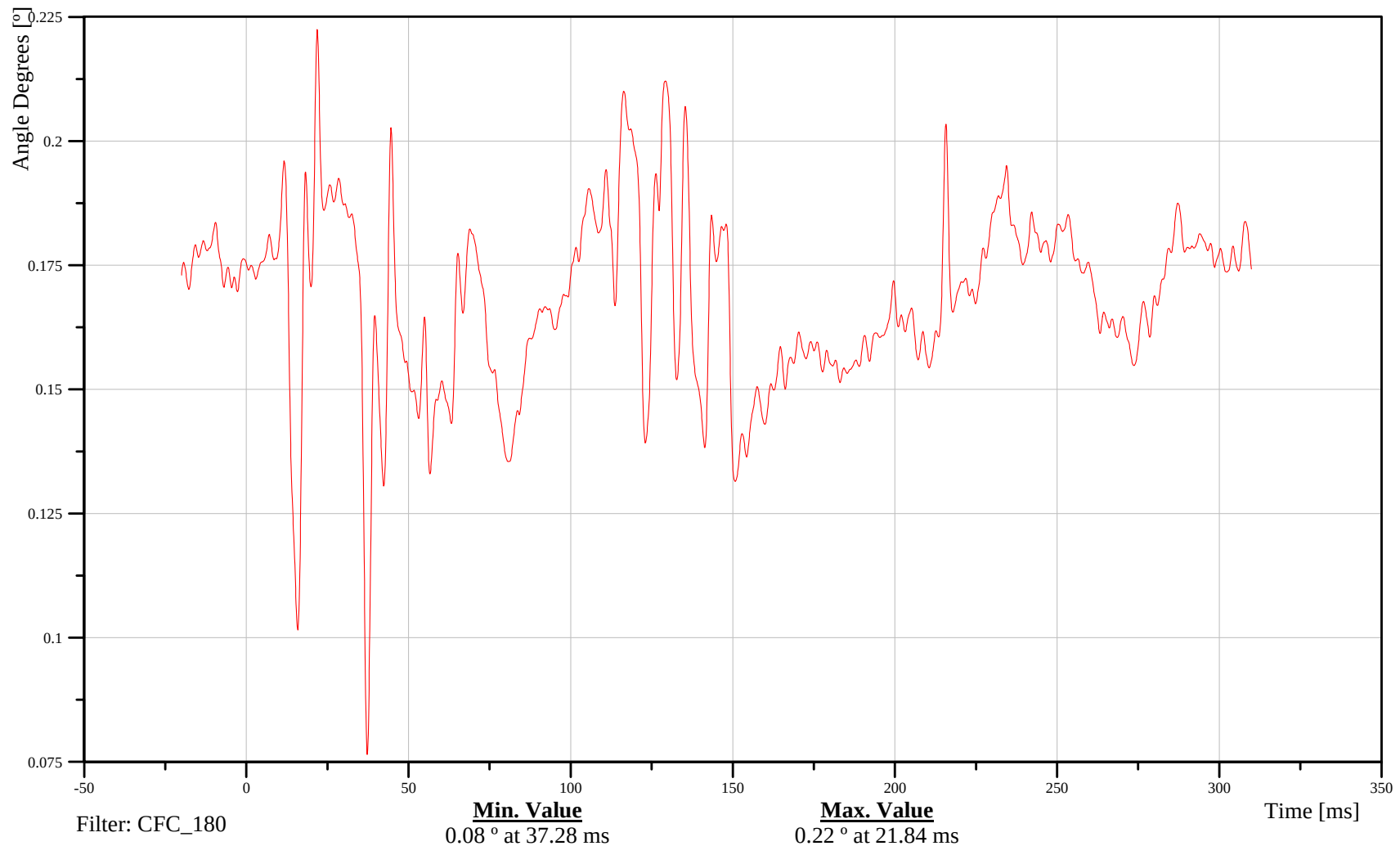
Bullet Driver Left Foot Y-Axis Rotation

Customer: VRTC

11FOOTLELXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Driver Left Foot Z-Axis Rotation

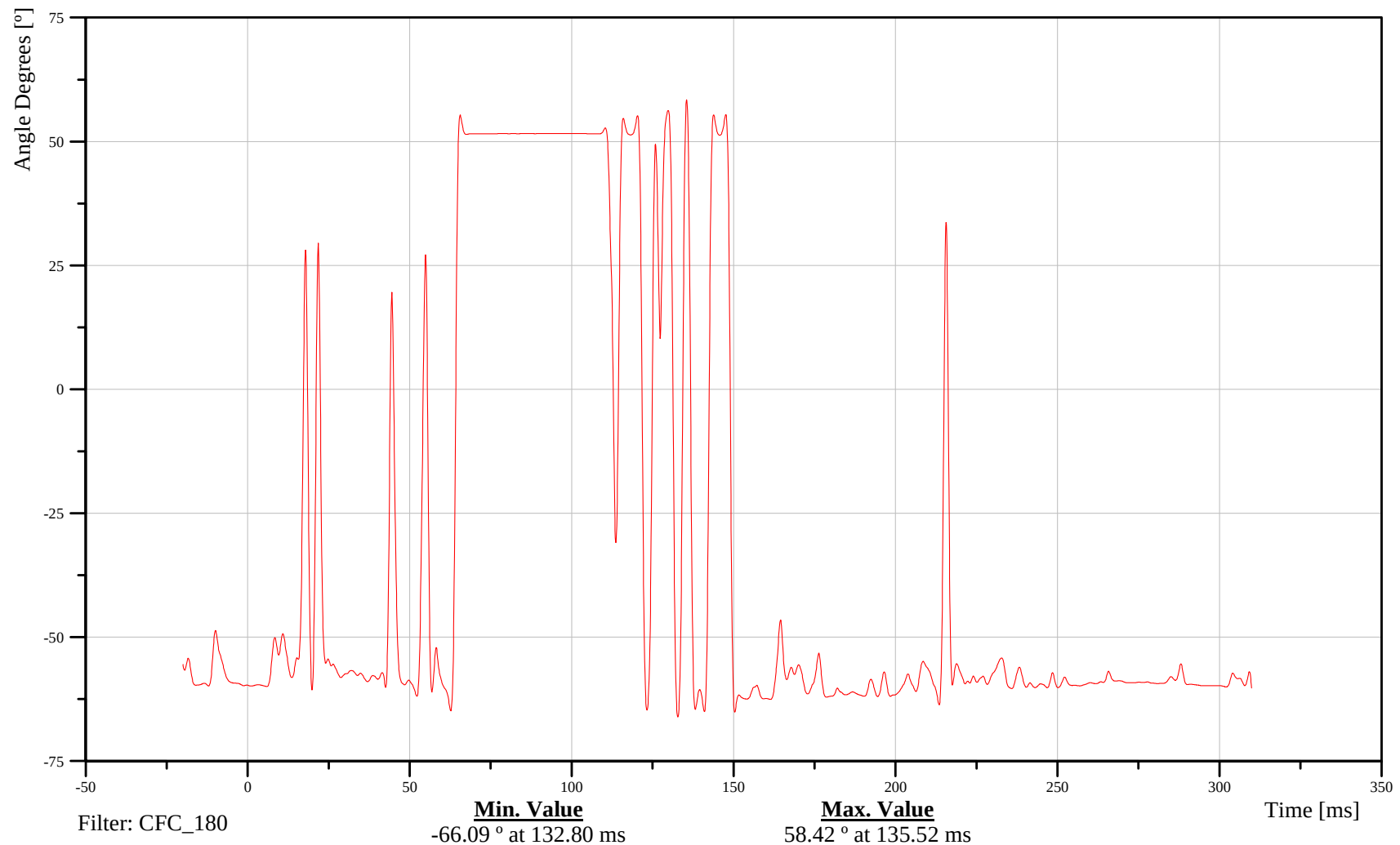
Time: 08:08

Customer: VRTC

11FOOTLELXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

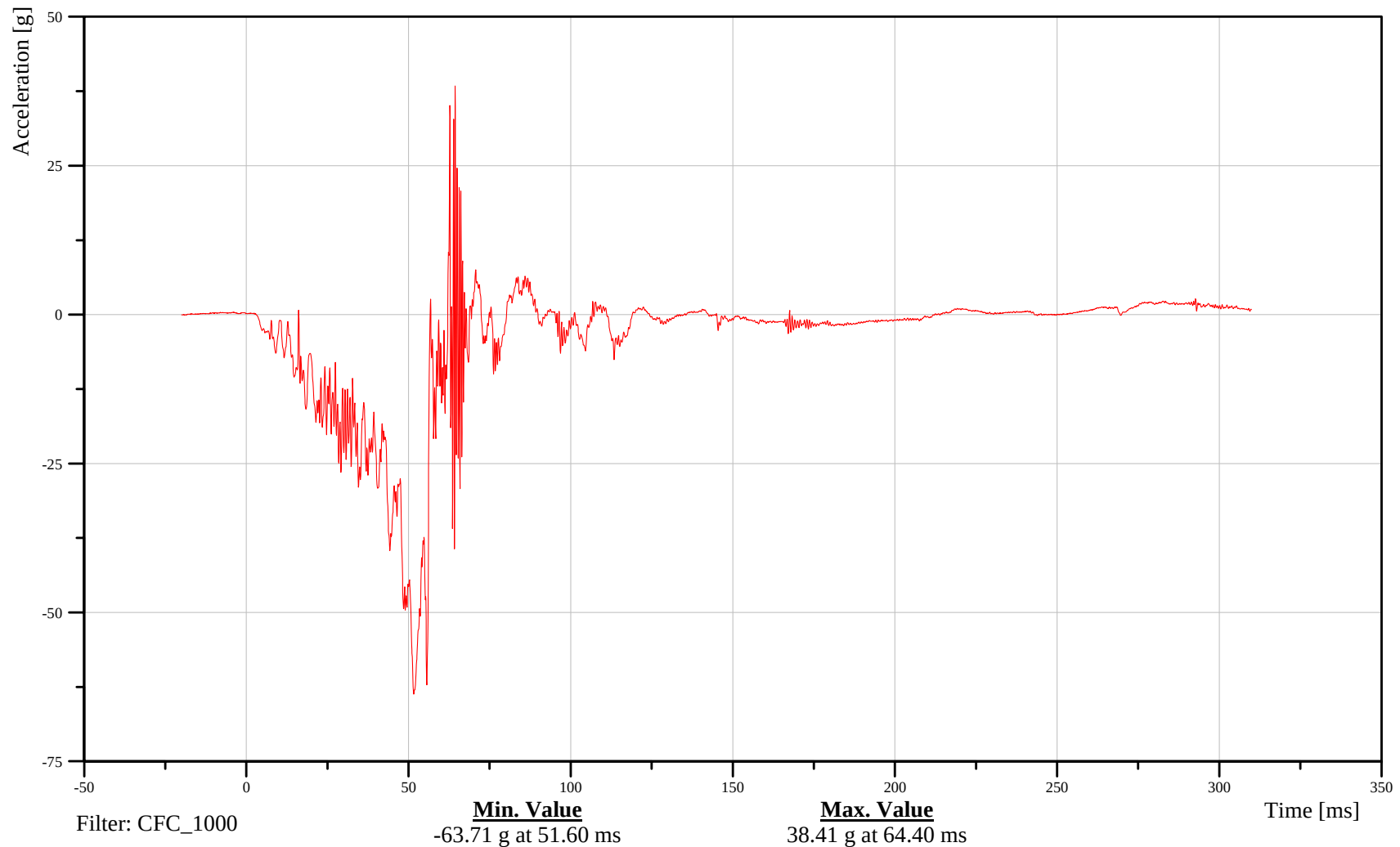
Bullet Driver Left Foot X-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

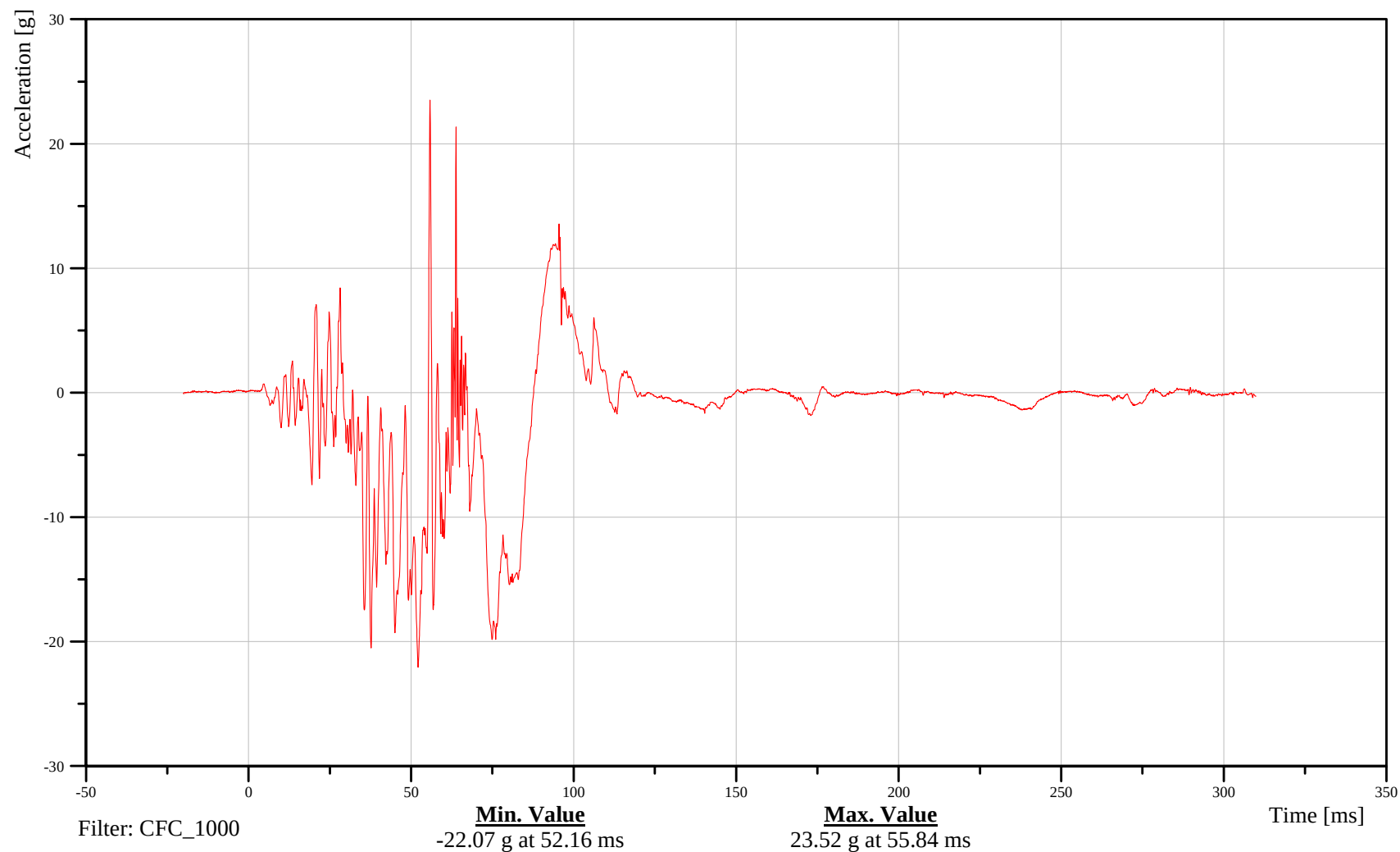
Bullet Driver Left Foot Y-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

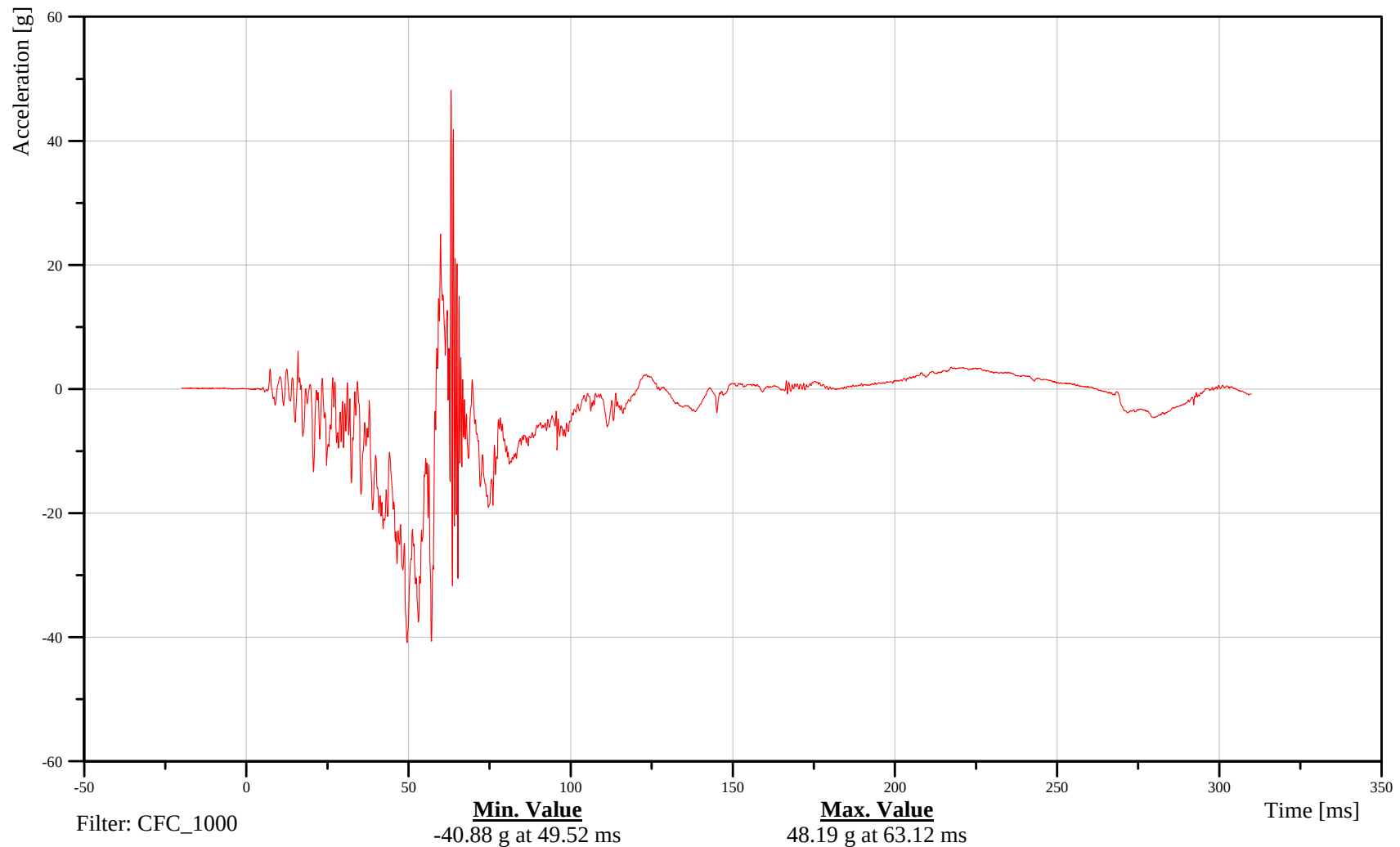
Bullet Driver Left Foot Z-Axis Acceleration

Customer: VRTC

11FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

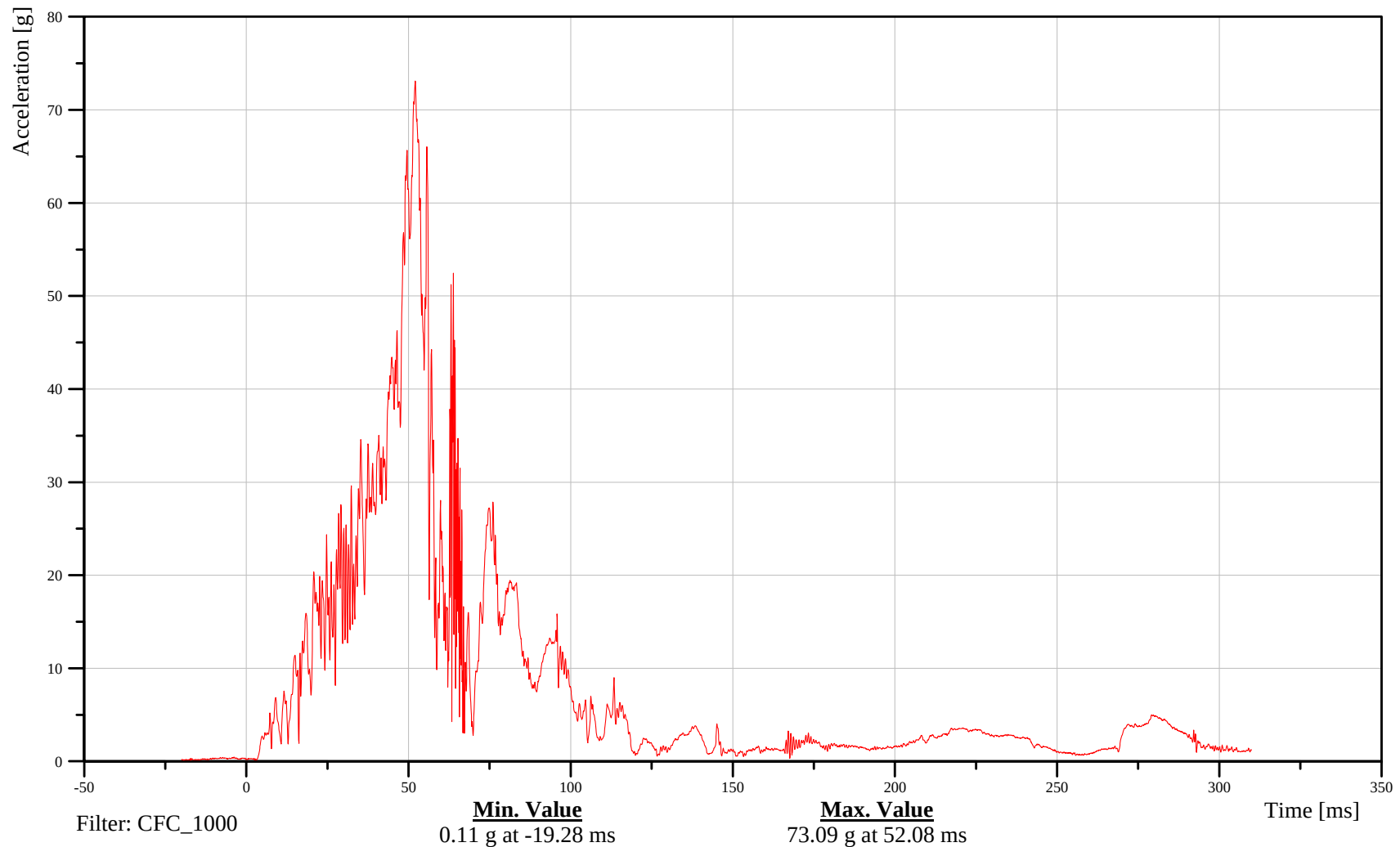
Bullet Driver Left Foot Resultant Acceleration

Customer: VRTC

11FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

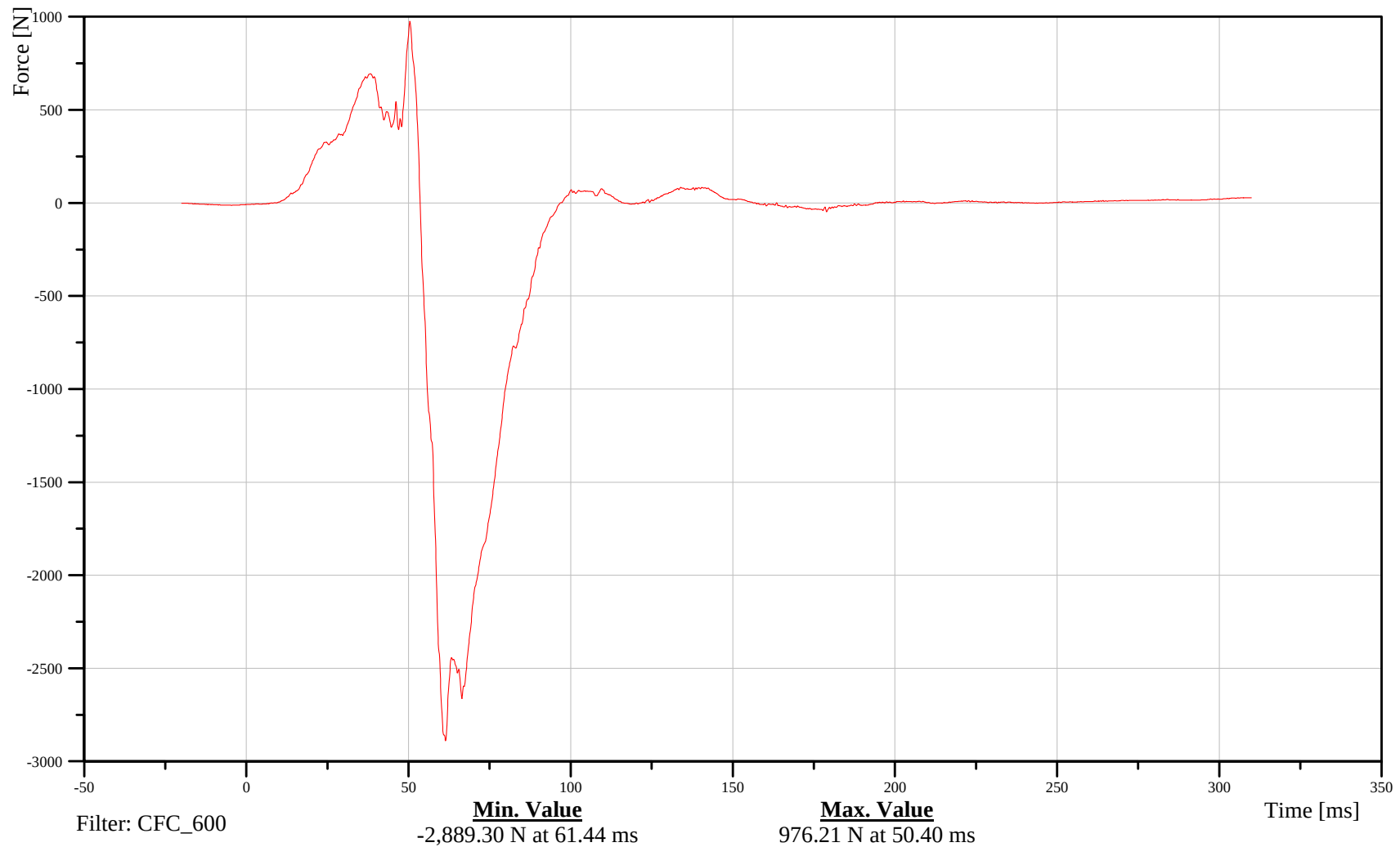
Bullet Driver Right Femur Z-Axis Force

Customer: VRTC

11FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Right Knee Displacement

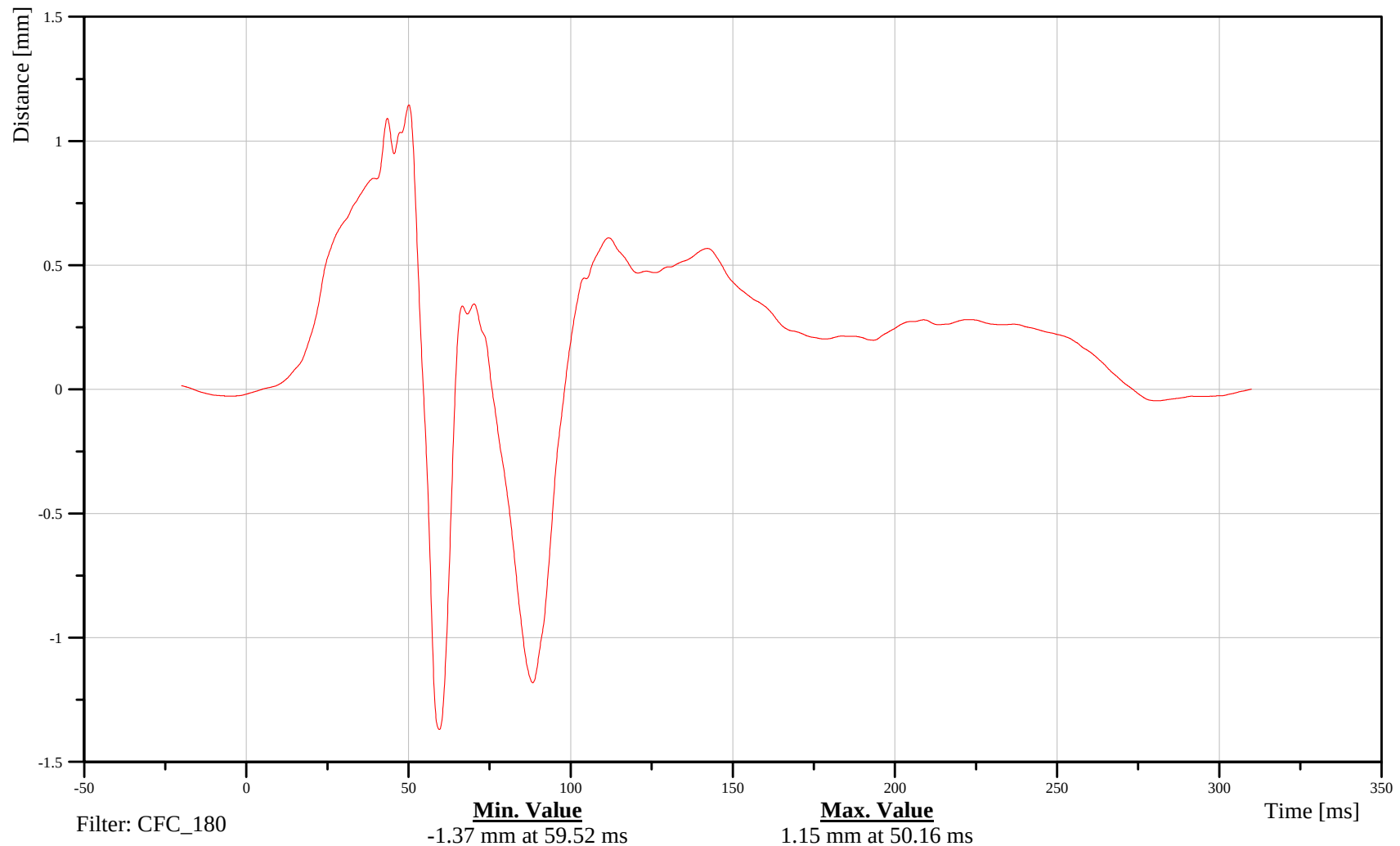
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Right Upper Tibia X-Axis Force

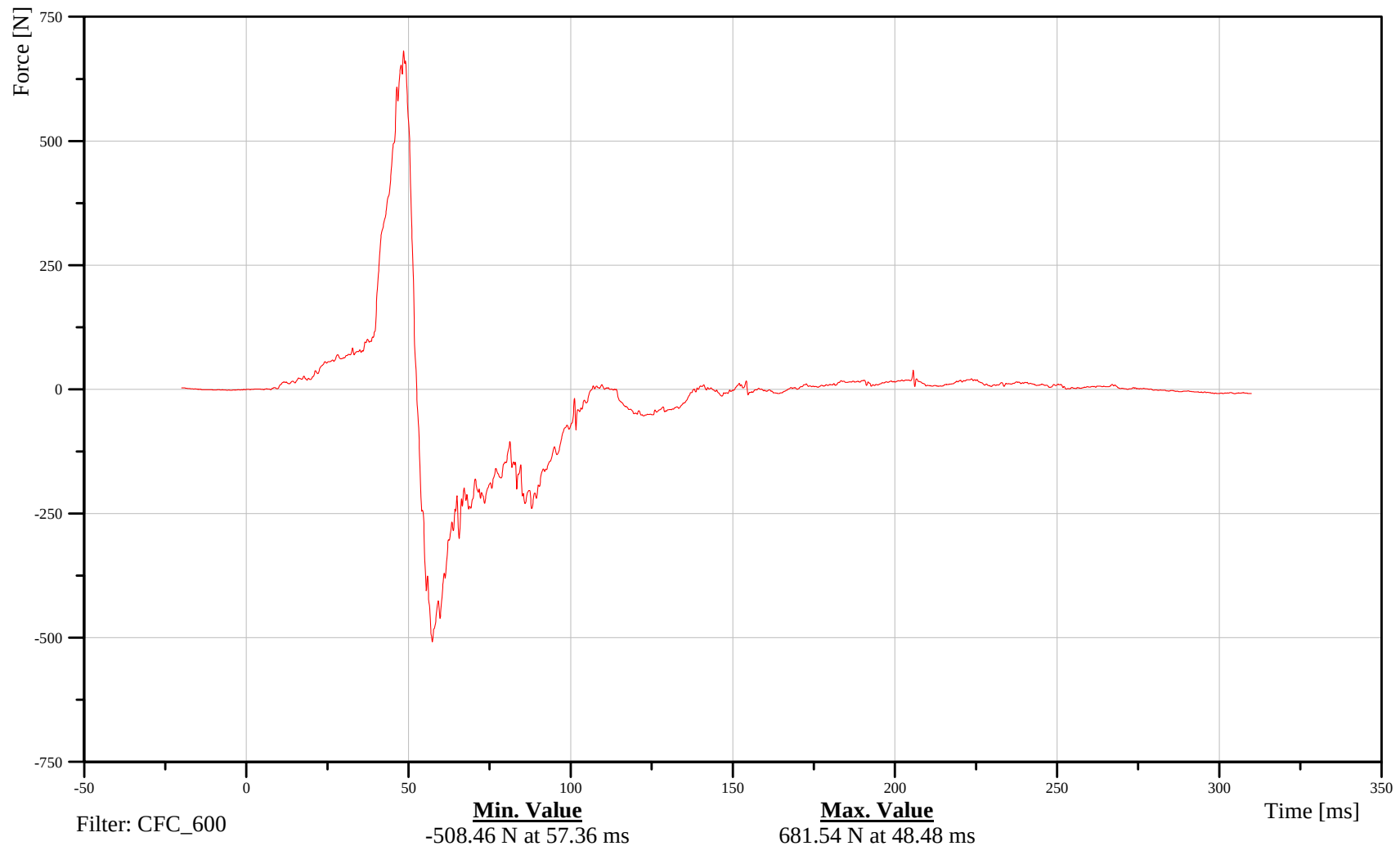
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBIRULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

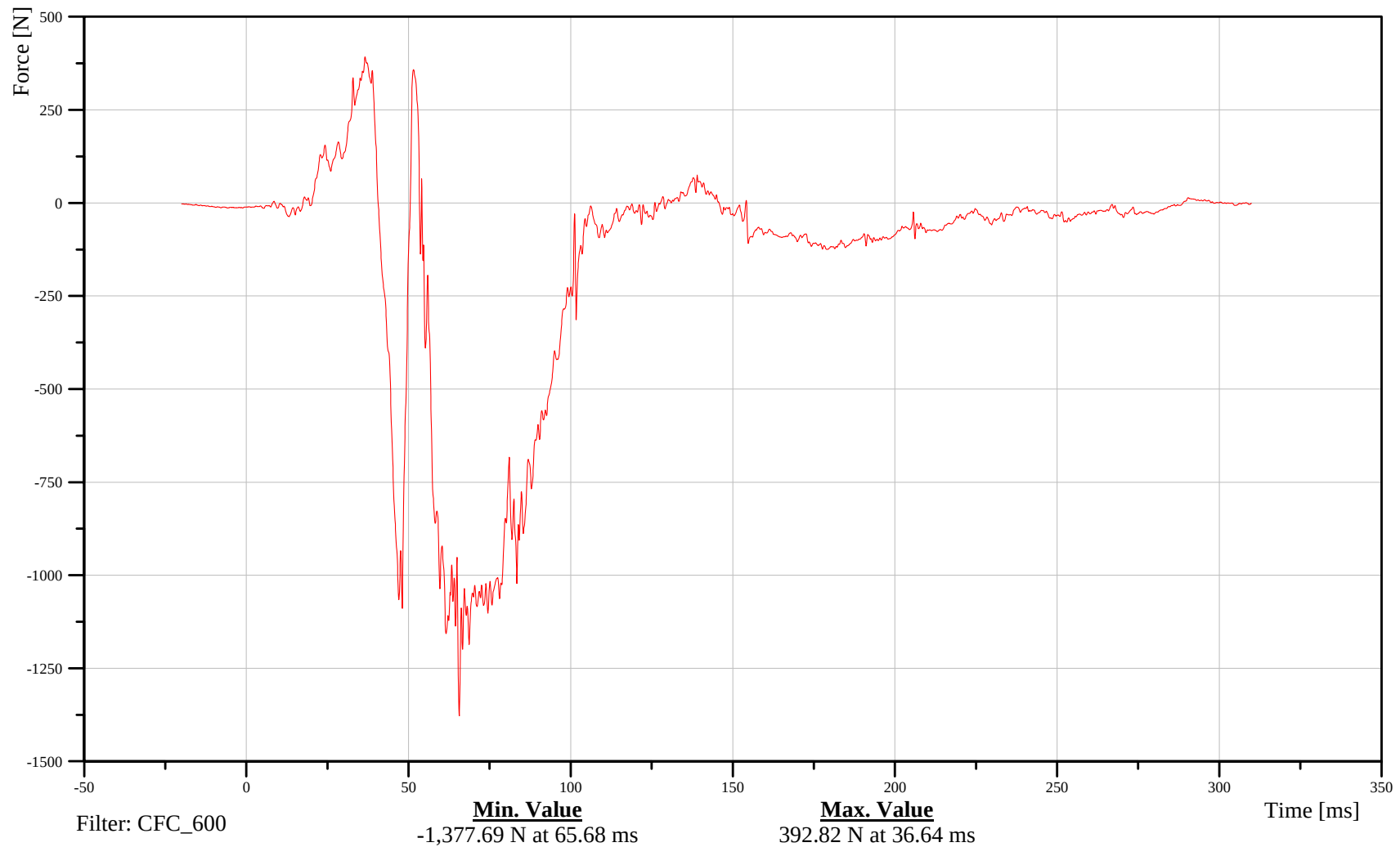
Bullet Driver Right Upper Tibia Z-Axis Force

Customer: VRTC

11TIBIRULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

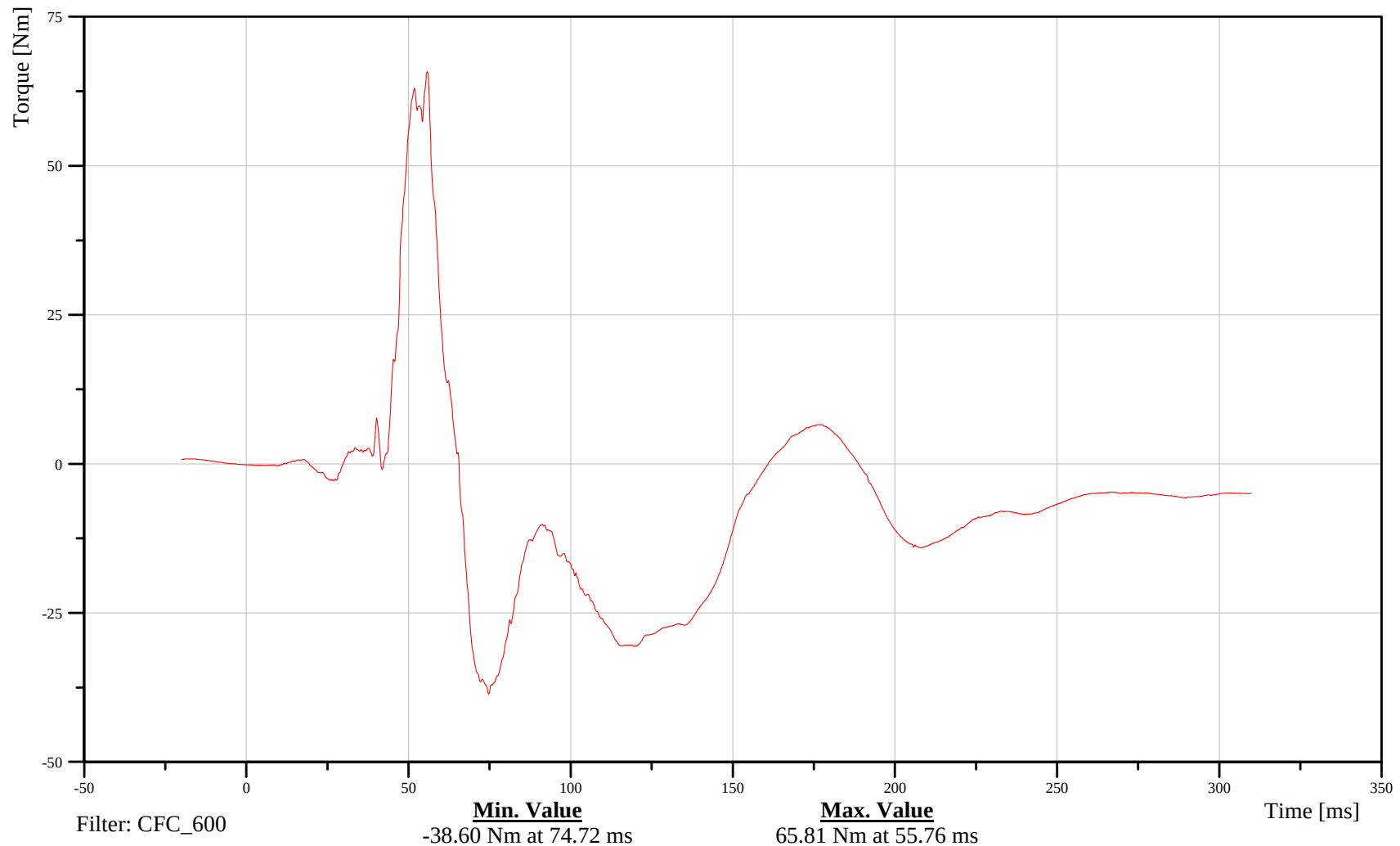
Bullet Driver Right Upper Tibia Moment About X Axis

Customer: VRTC

11TIBIRULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

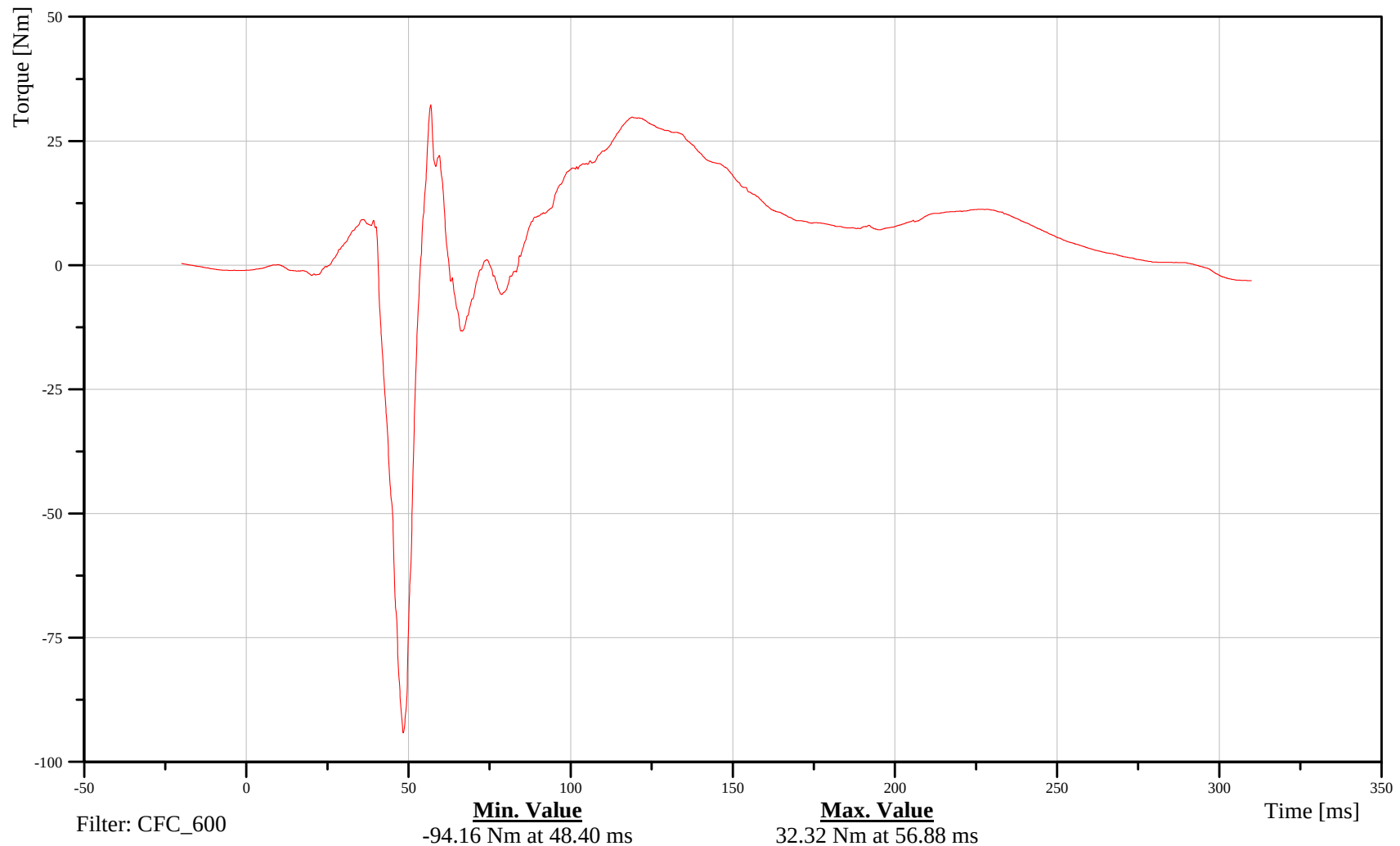
Bullet Driver Right Upper Tibia Moment About Y Axis

Customer: VRTC

11TIBIRULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Right Tibia X-Axis Acceleration

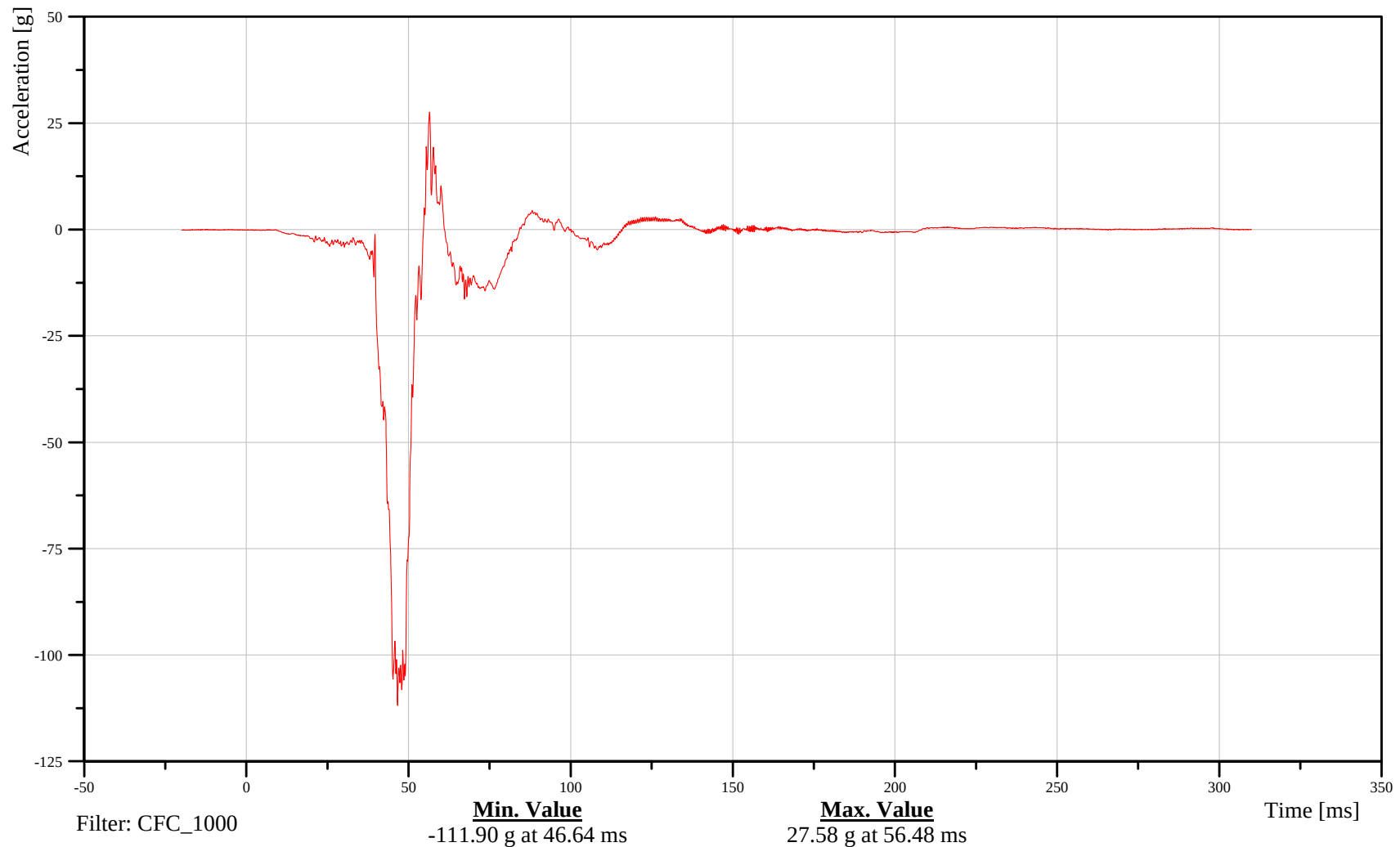
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

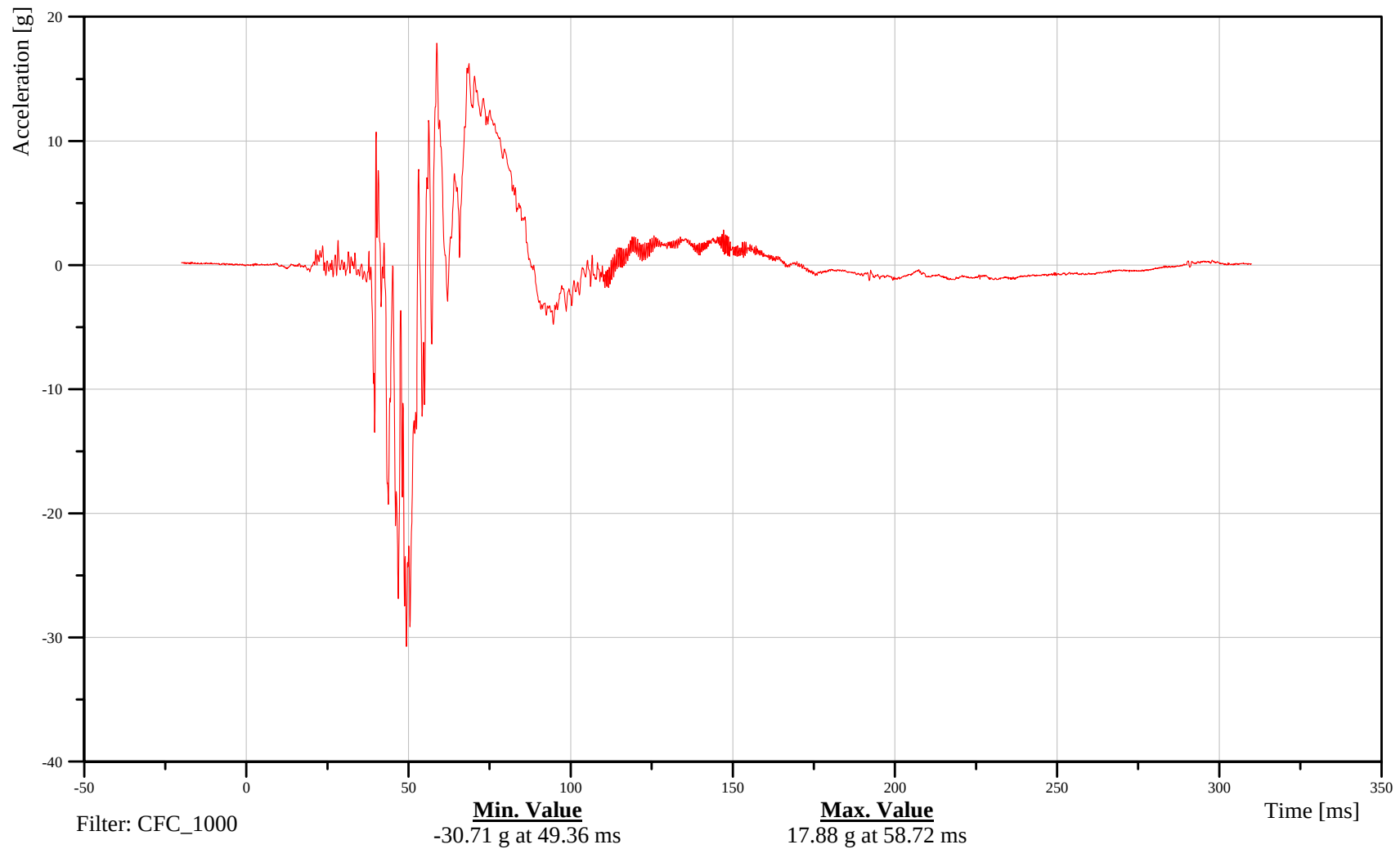
Bullet Driver Right Tibia Y-Axis Acceleration

Customer: VRTC

11TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

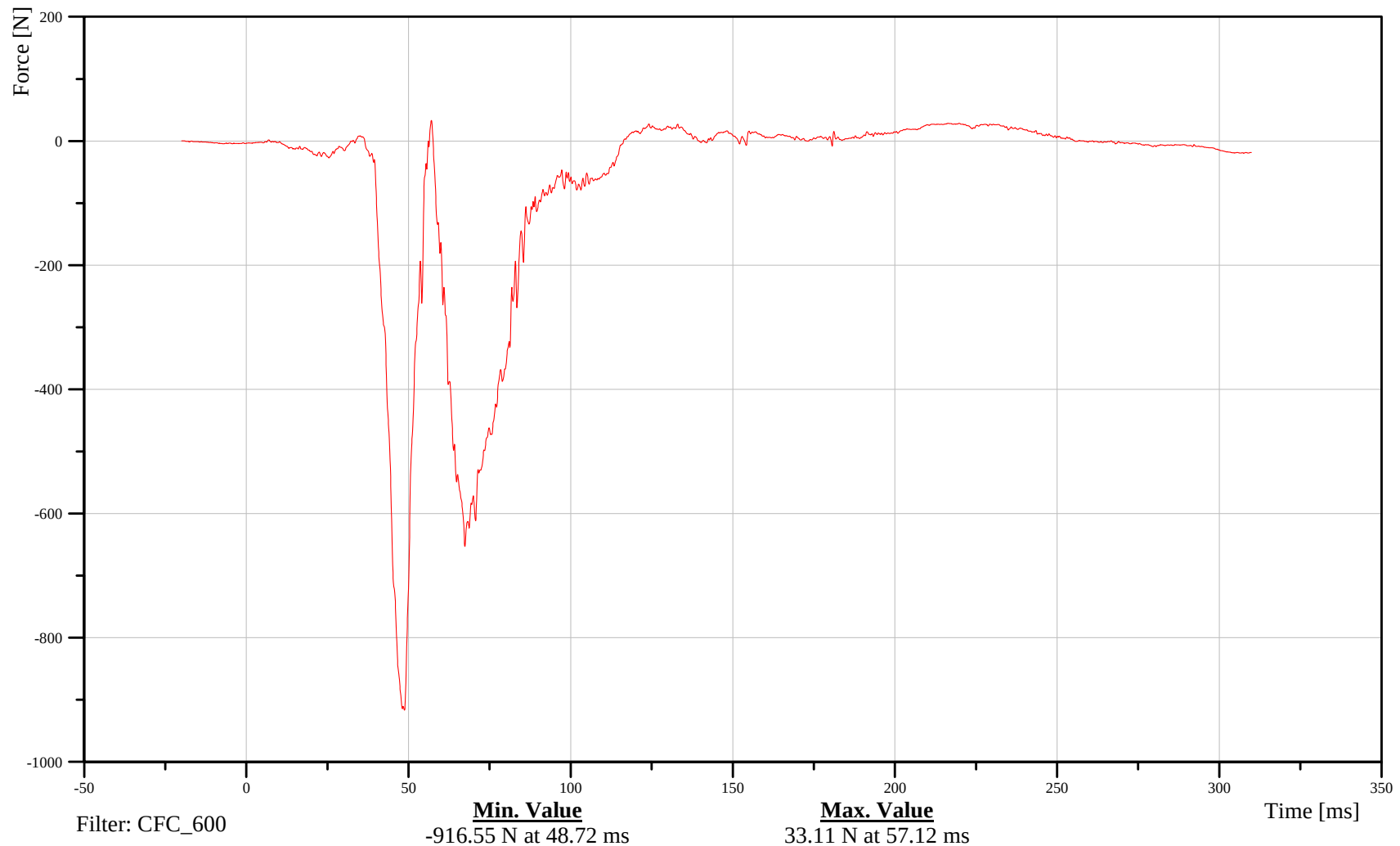
Bullet Driver Right Lower Tibia X-Axis Force

Customer: VRTC

11TIBIRLLXH3FOX B

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Right Lower Tibia Y-Axis Force

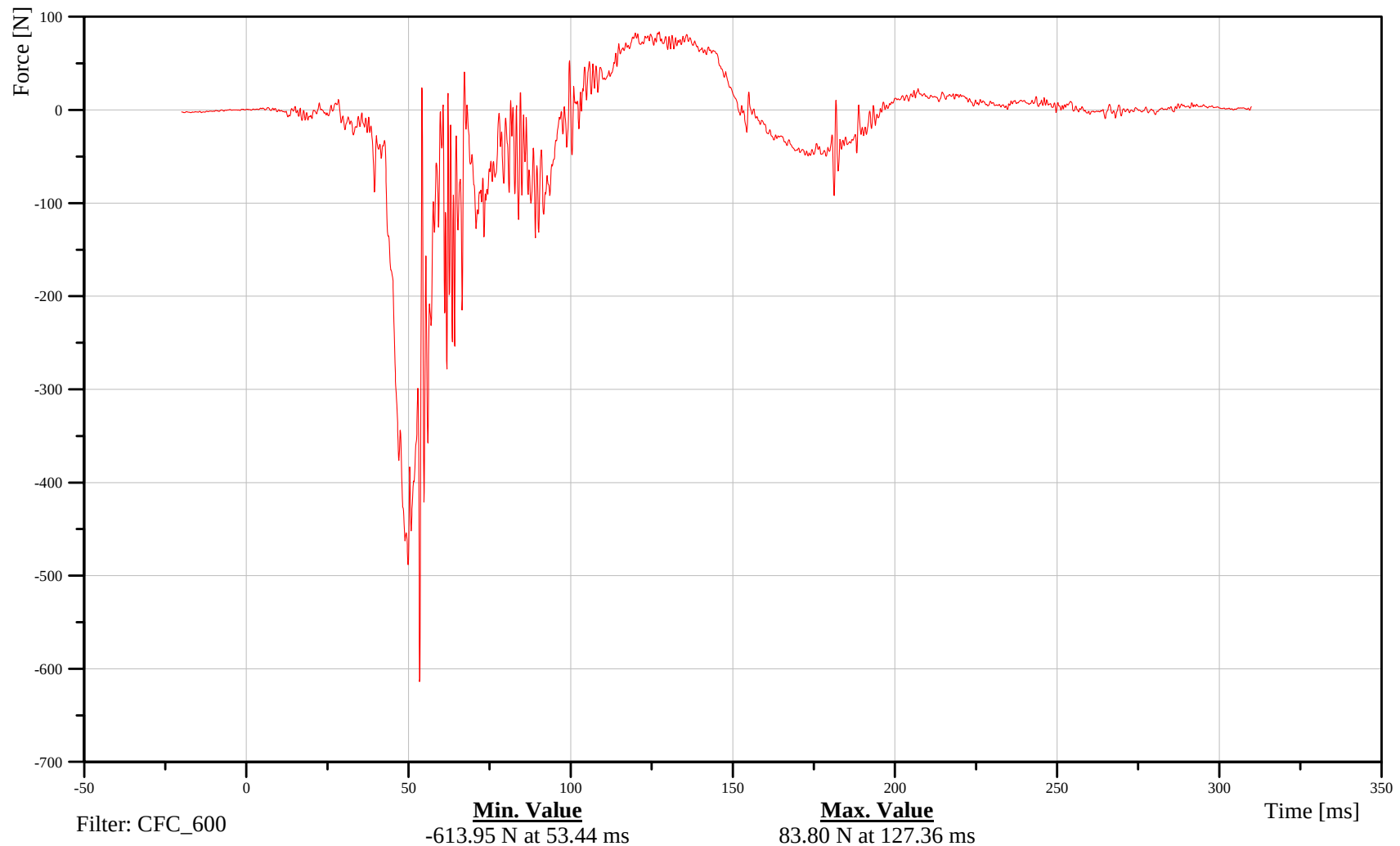
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBIRLLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Driver Right Lower Tibia Z-Axis Force

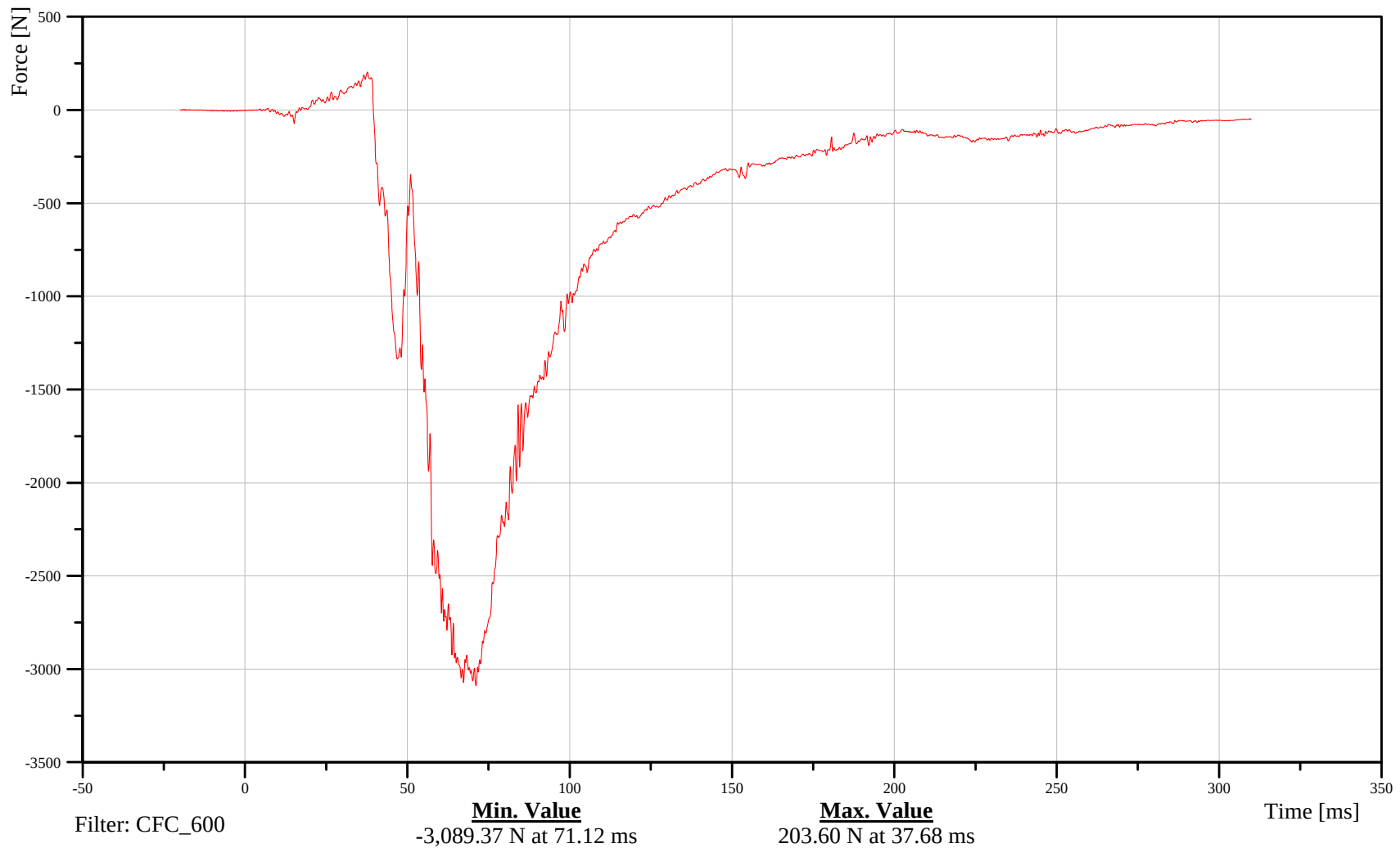
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11TIBIRLLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

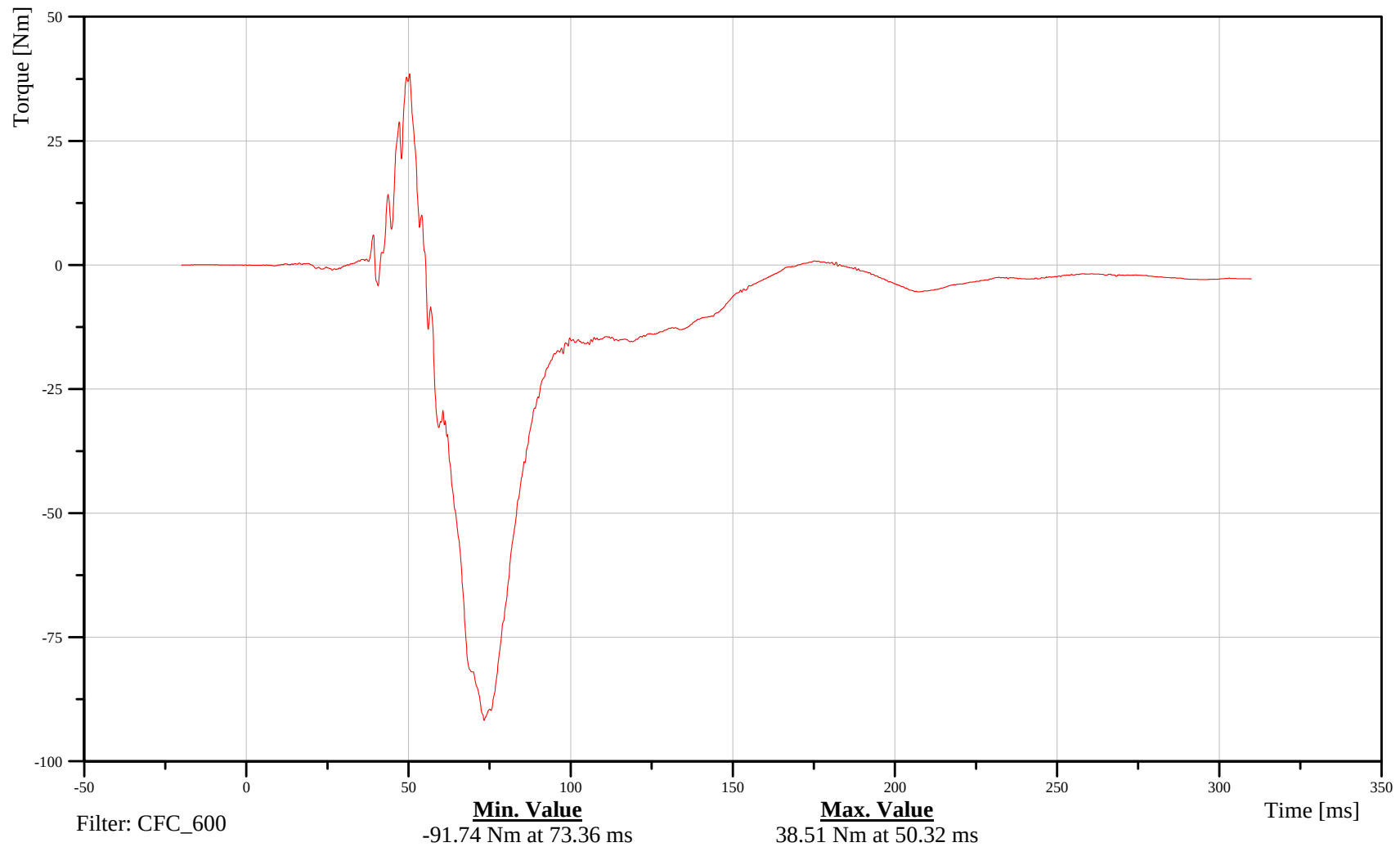
Bullet Driver Right Lower Tibia Moment About X Axis

Customer: VRTC

11TIBIRLLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

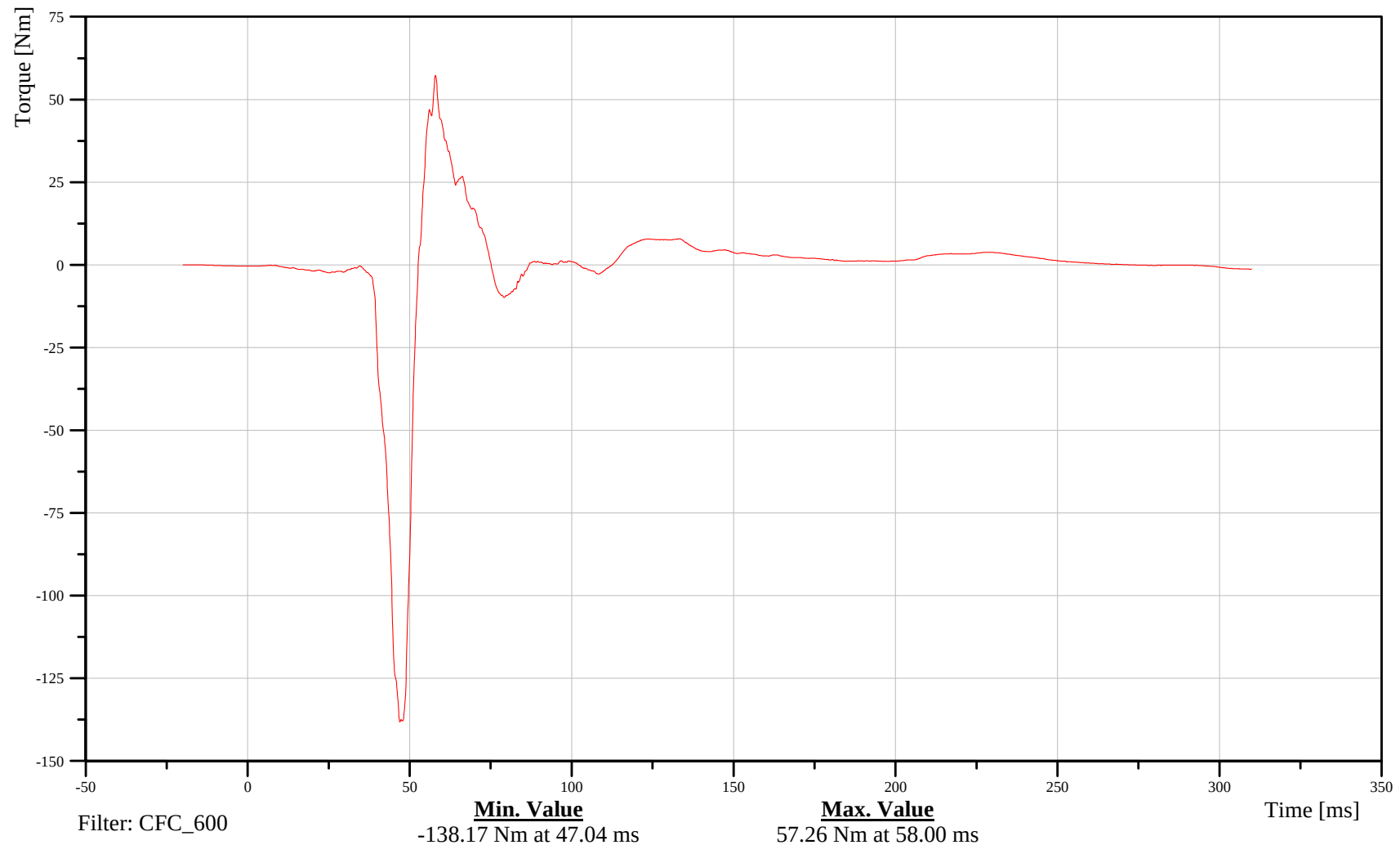
Bullet Driver Right Lower Tibia Moment About Y Axis

Customer: VRTC

11TIBIRLLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

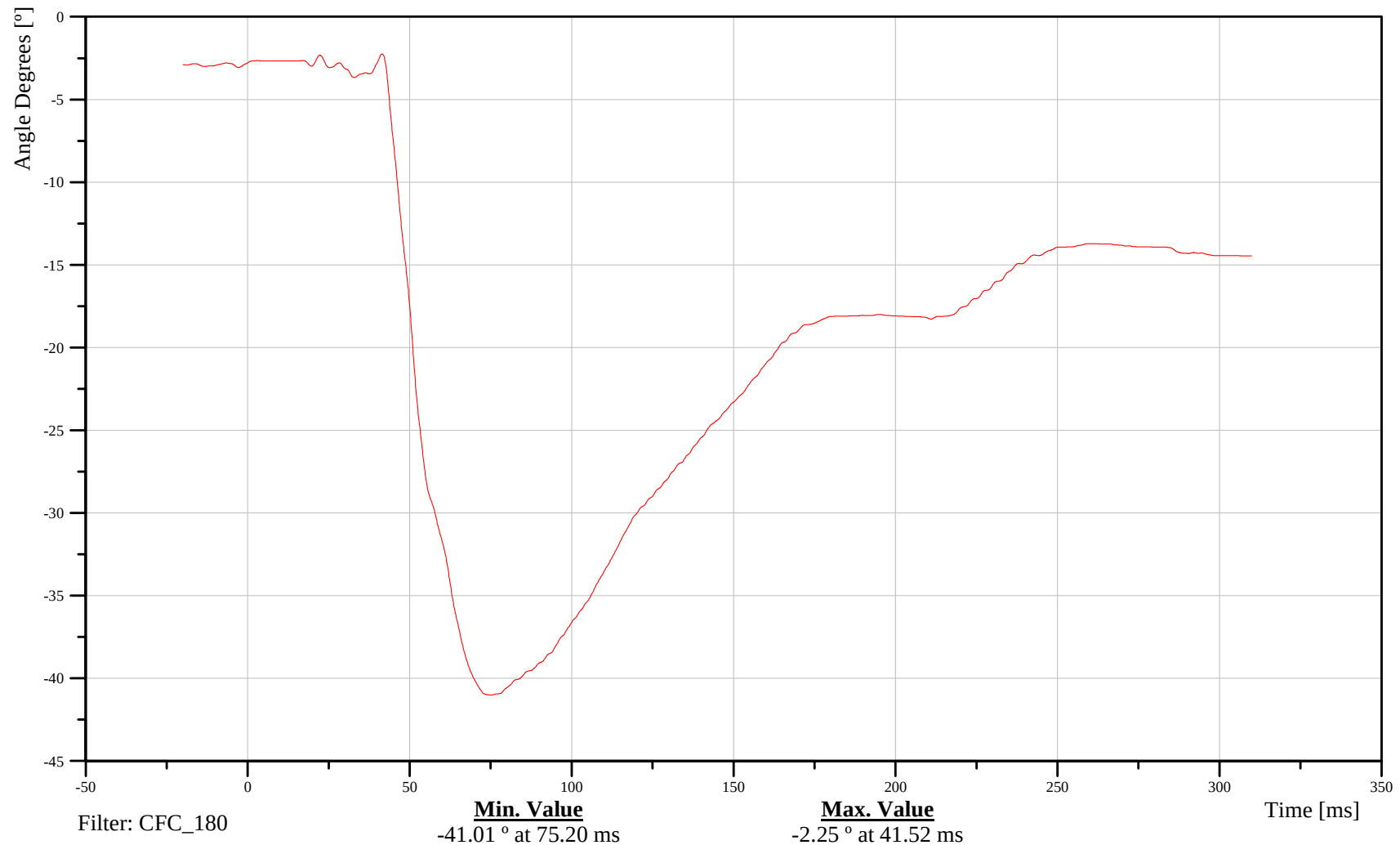
Bullet Driver Right Foot X-Axis Rotation

Customer: VRTC

11FOOTRILXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

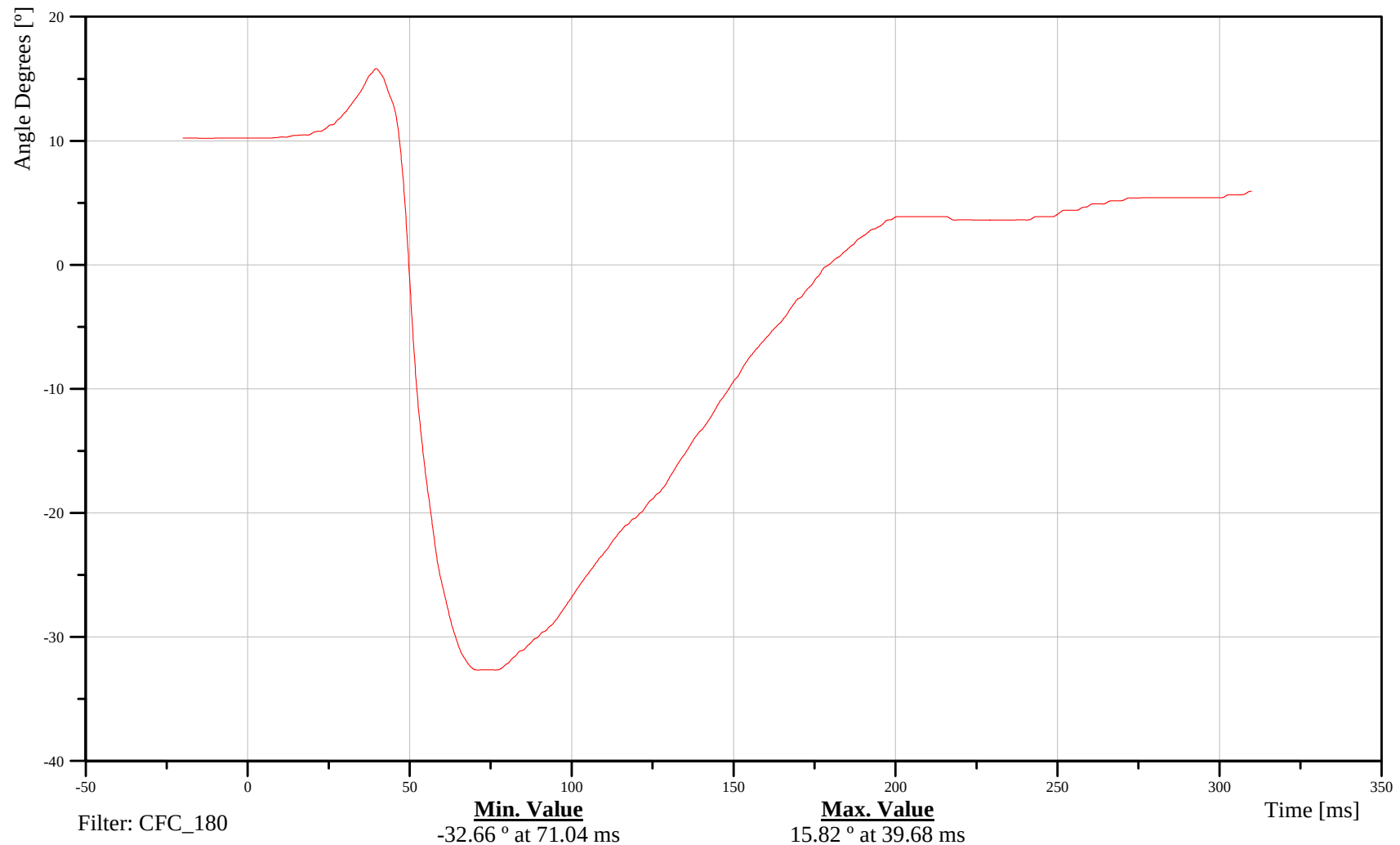
Bullet Driver Right Foot Y-Axis Rotation

Customer: VRTC

11FOOTRILXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

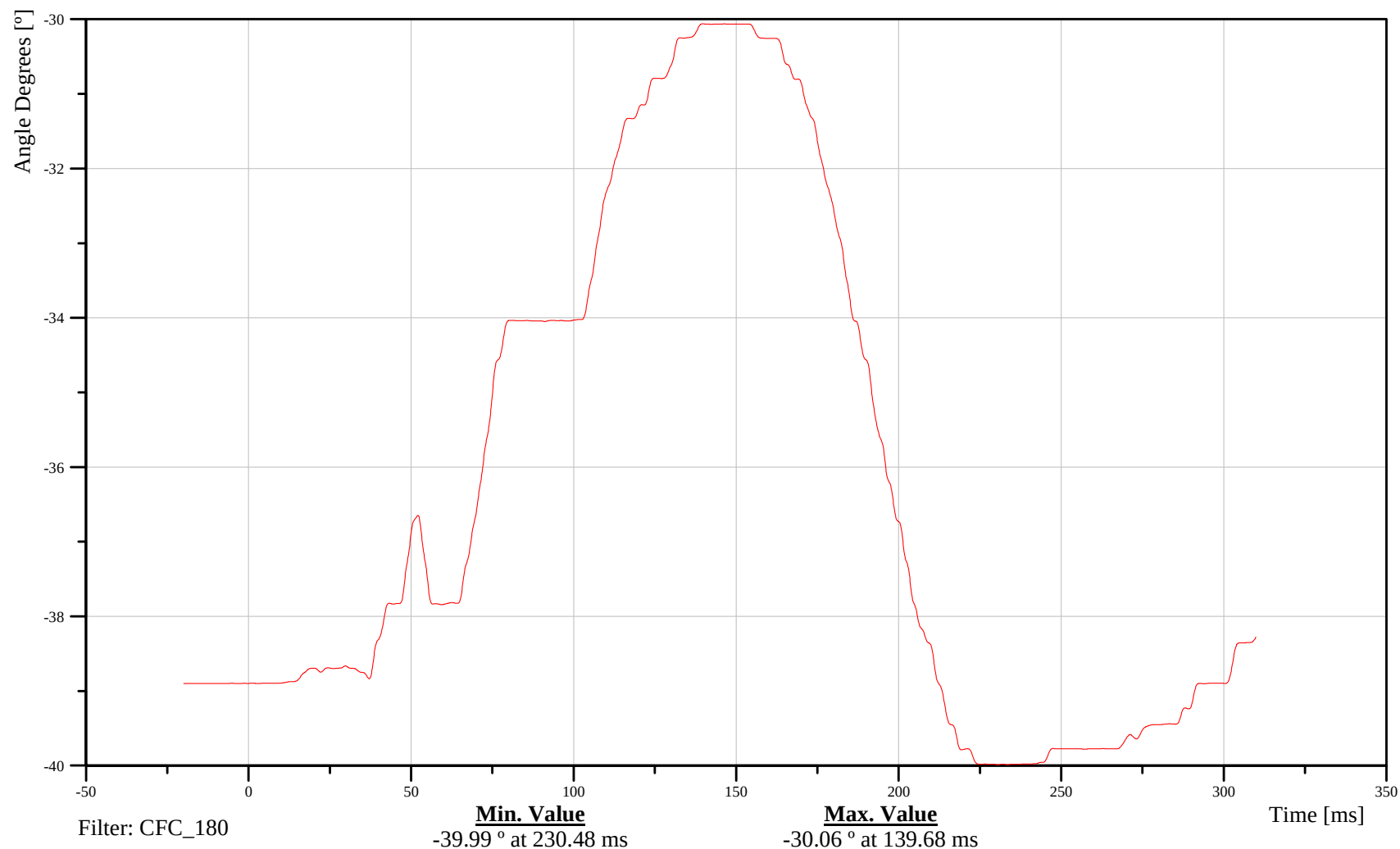
Bullet Driver Right Foot Z-Axis Rotation

Customer: VRTC

11FOOTRILXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

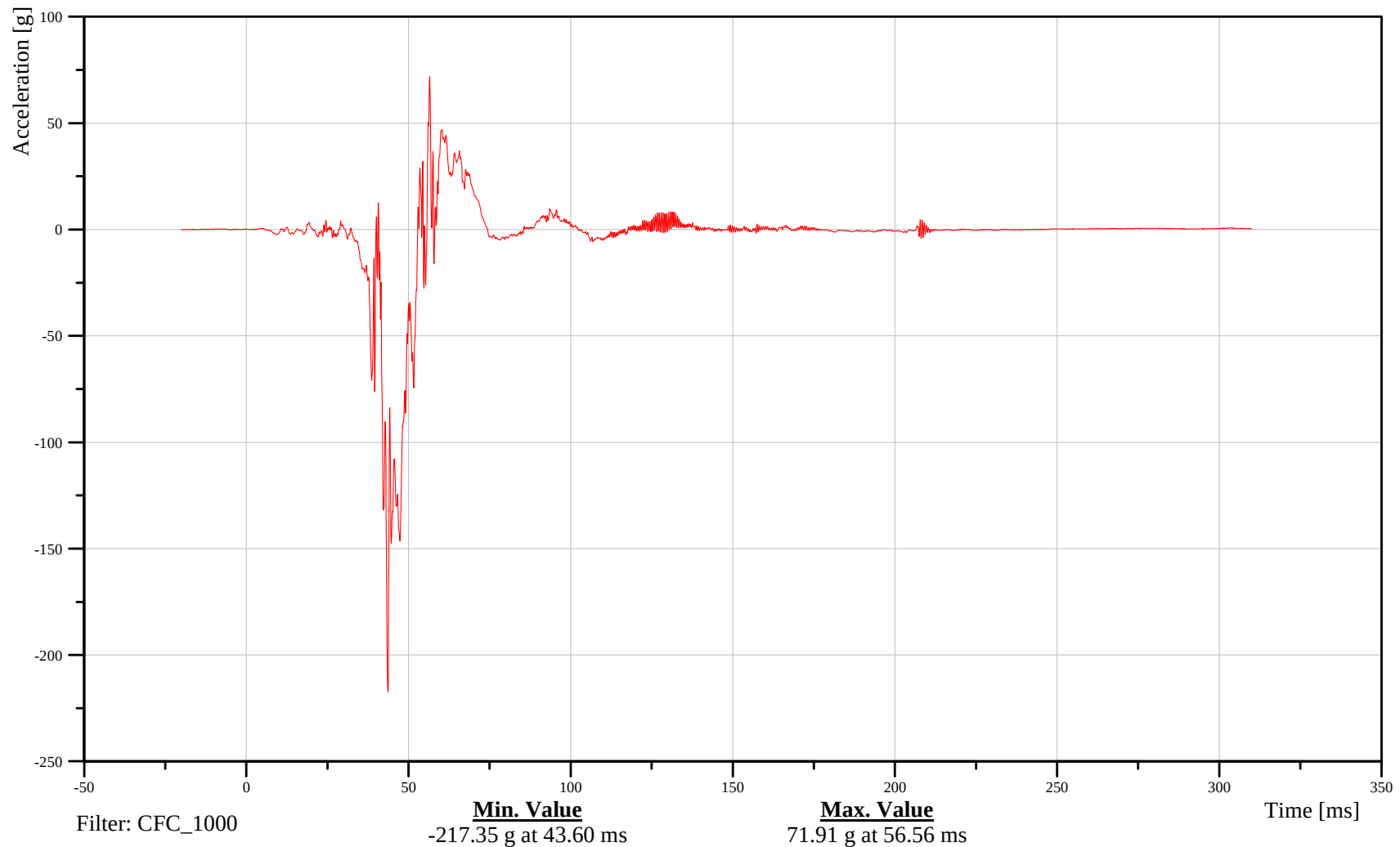
Bullet Driver Right Foot X-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

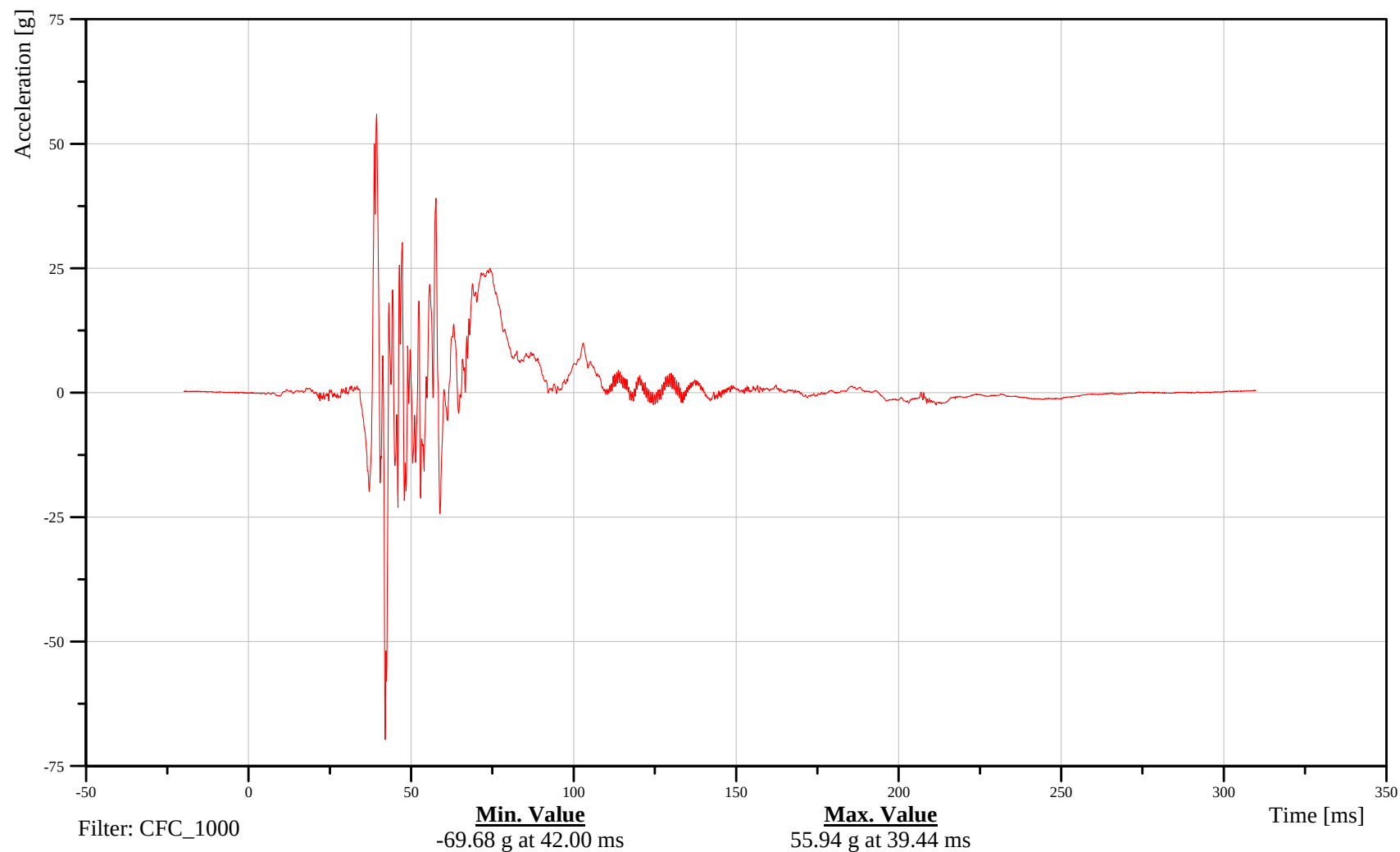
Bullet Driver Right Foot Y-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

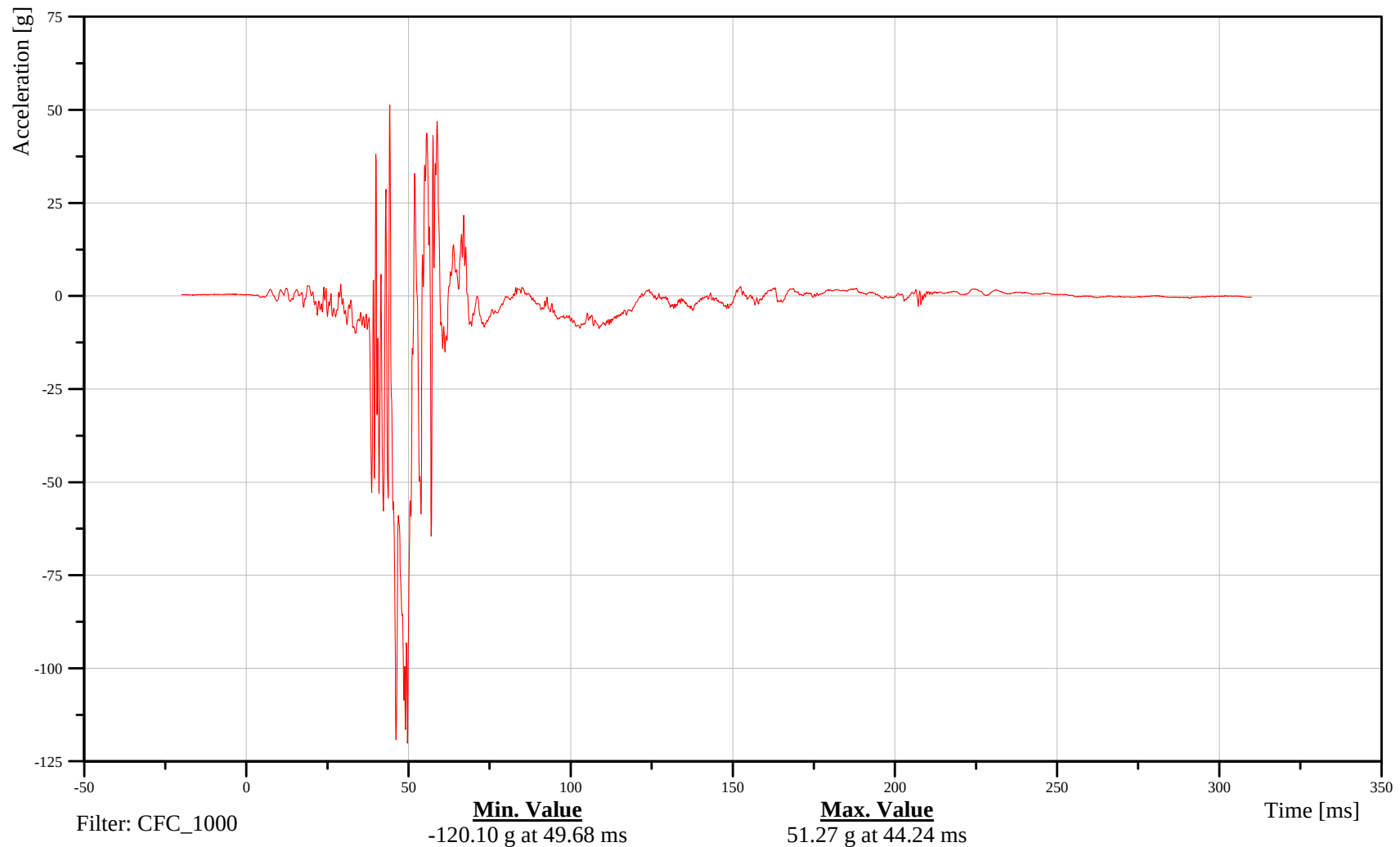
Bullet Driver Right Foot Z-Axis Acceleration

Customer: VRTC

11FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

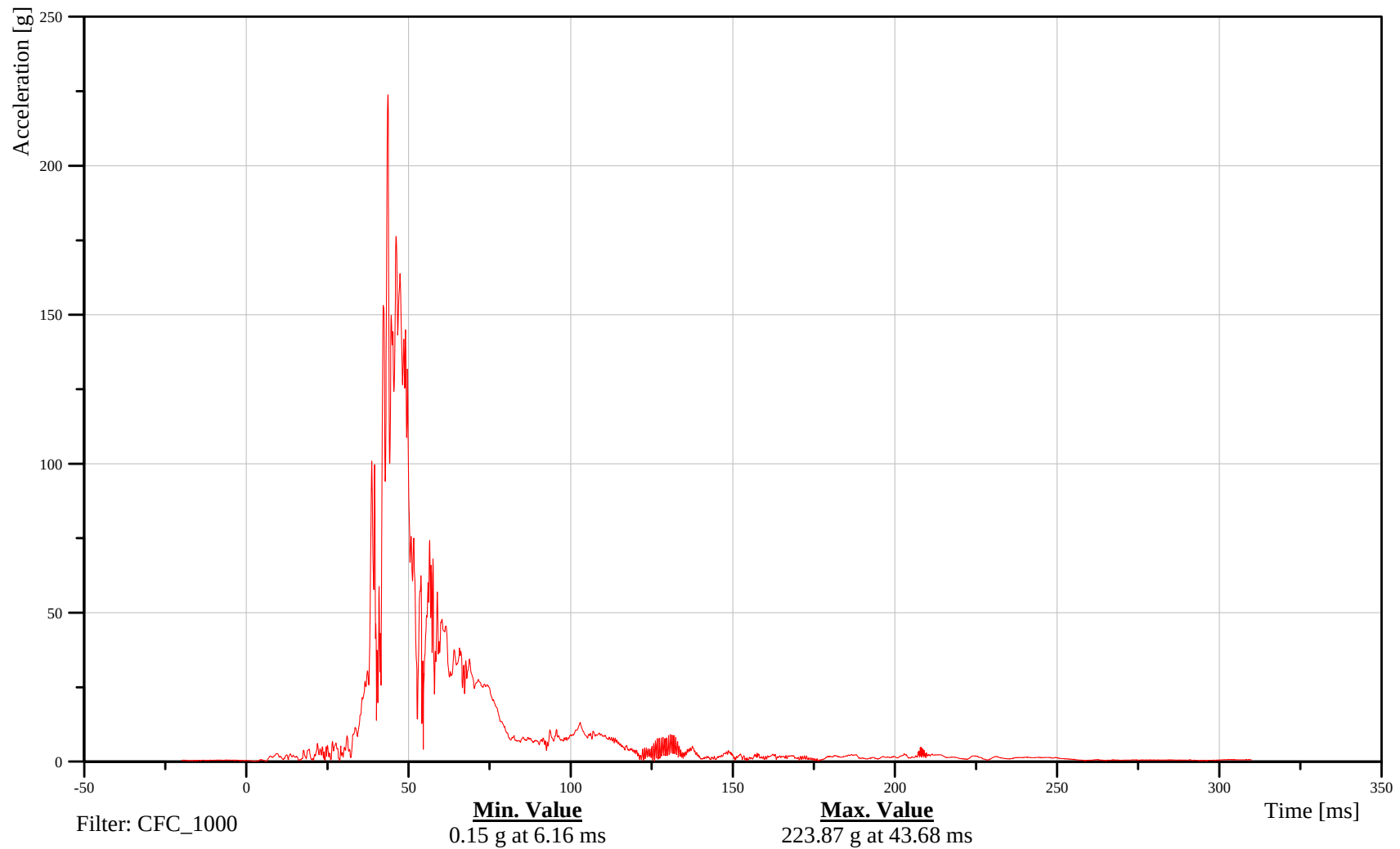
Bullet Driver Right Foot Resultant Acceleration

Customer: VRTC

11FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

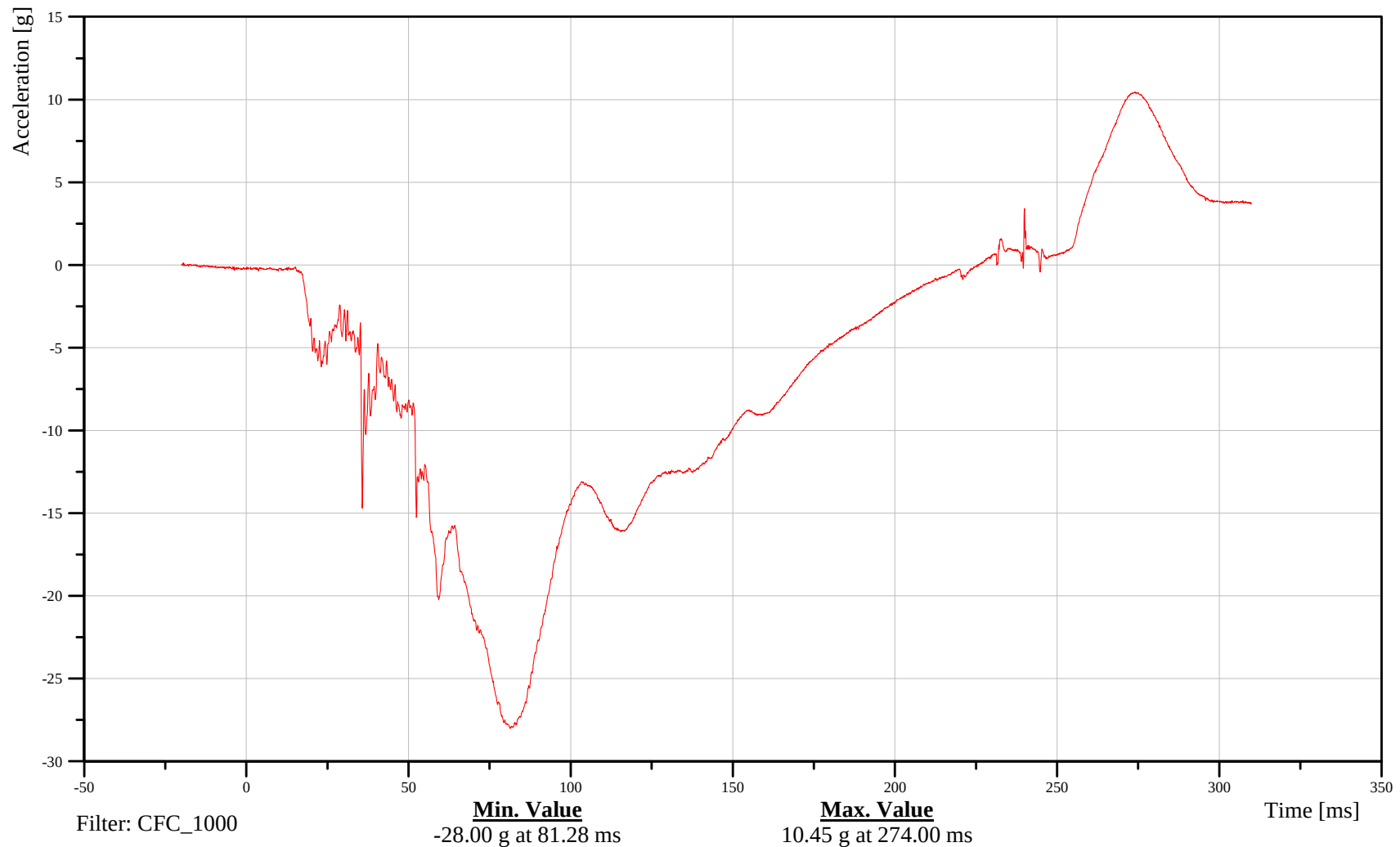
Bullet Passenger Head CG X-Axis Acceleration

Customer: VRTC

13HEADCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

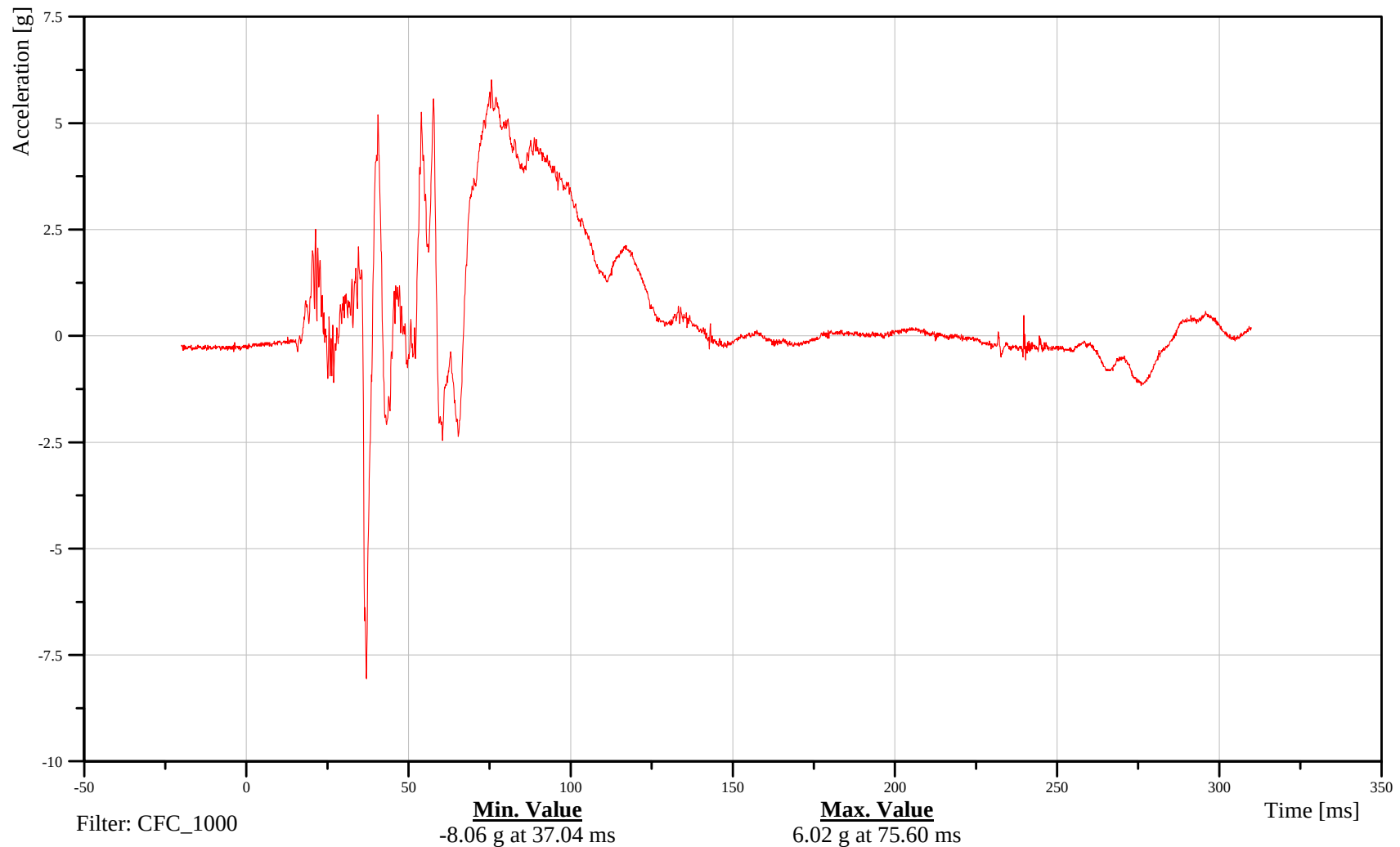
Bullet Passenger Head CG Y-Axis Acceleration

Customer: VRTC

13HEADCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Passenger Head CG Z-Axis Acceleration

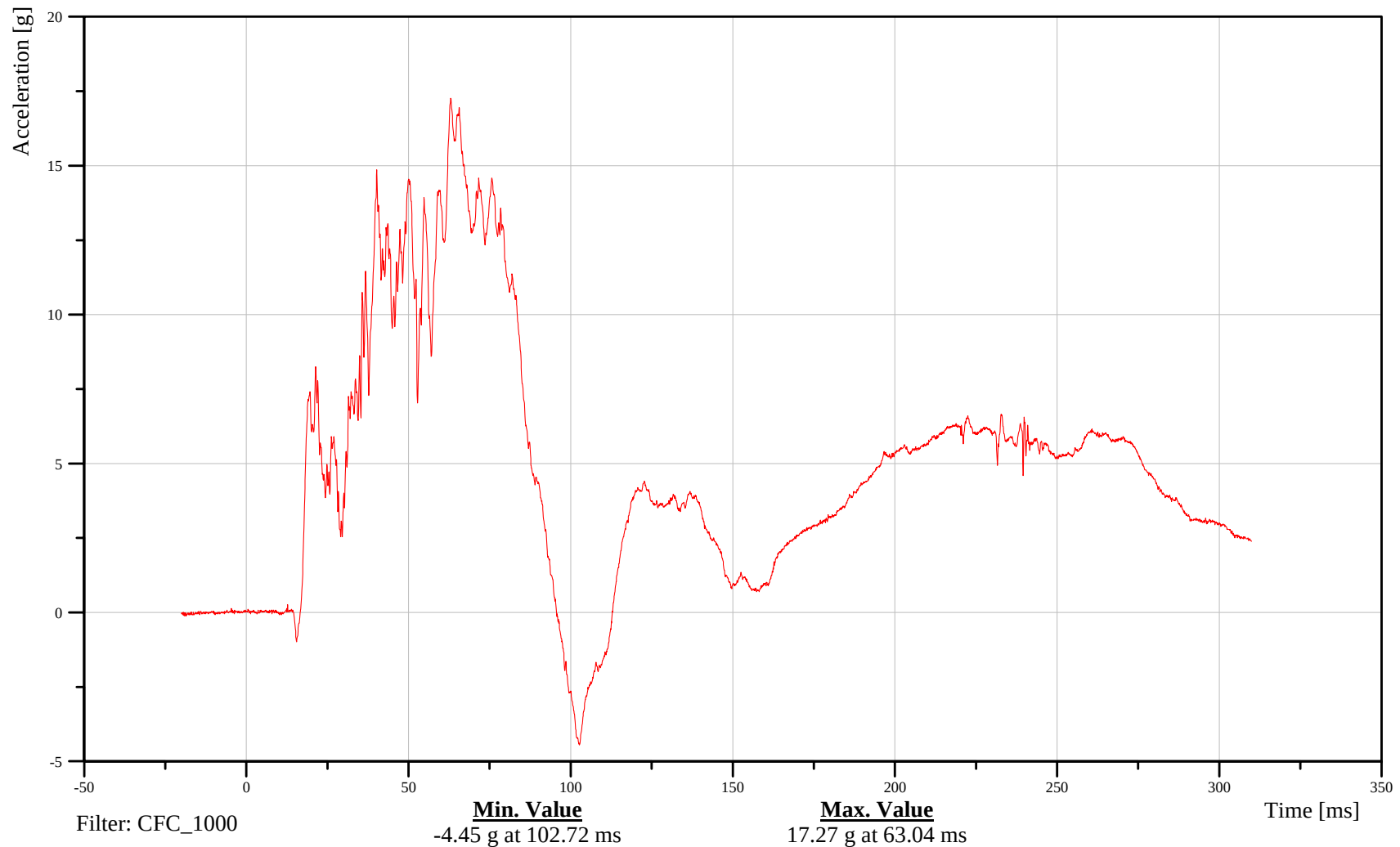
Date: 03/20/2006
Time: 08:08

Customer: VRTC

13HEADCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

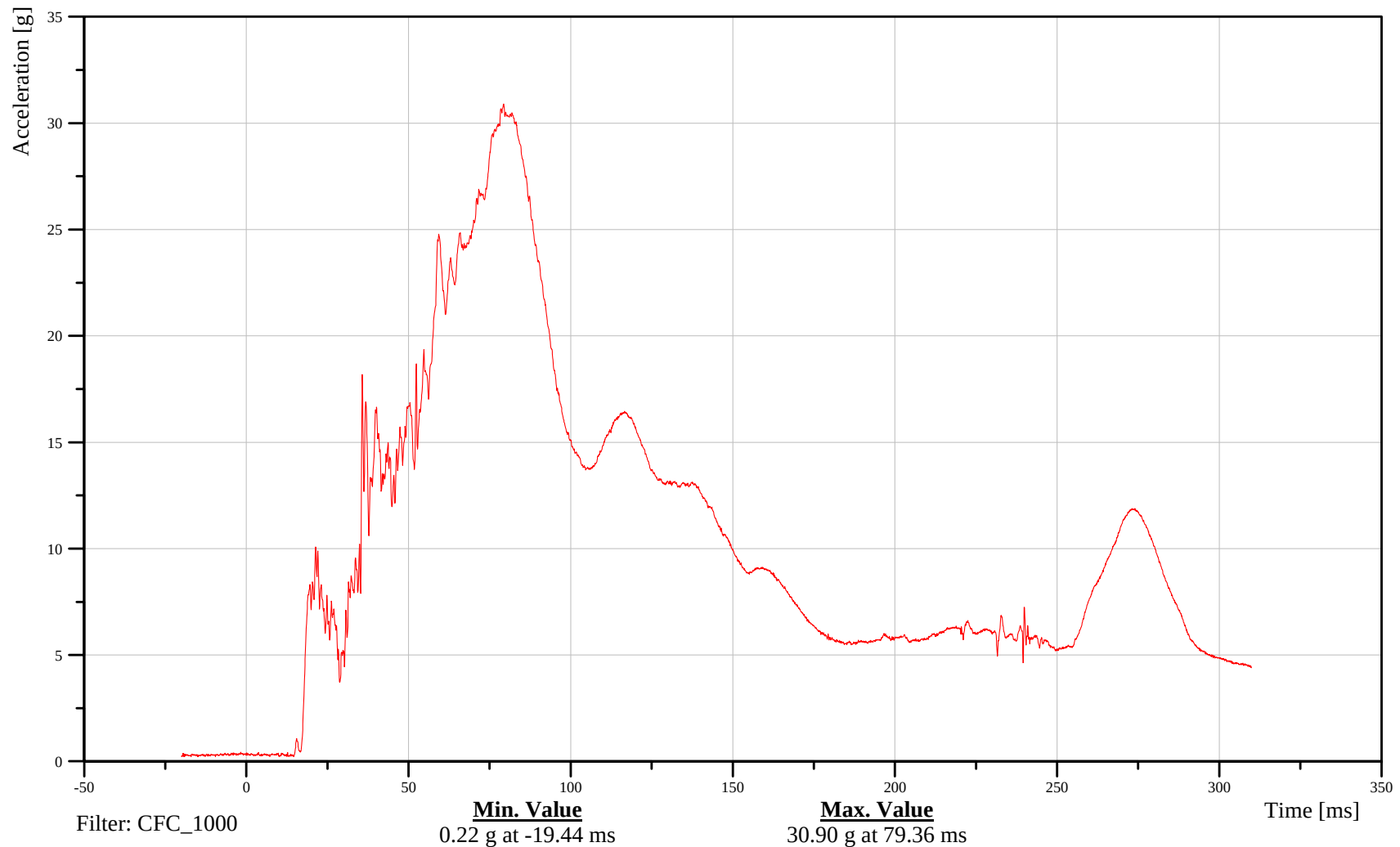
Bullet Passenger Head CG Resultant Acceleration

Customer: VRTC

13HEADCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

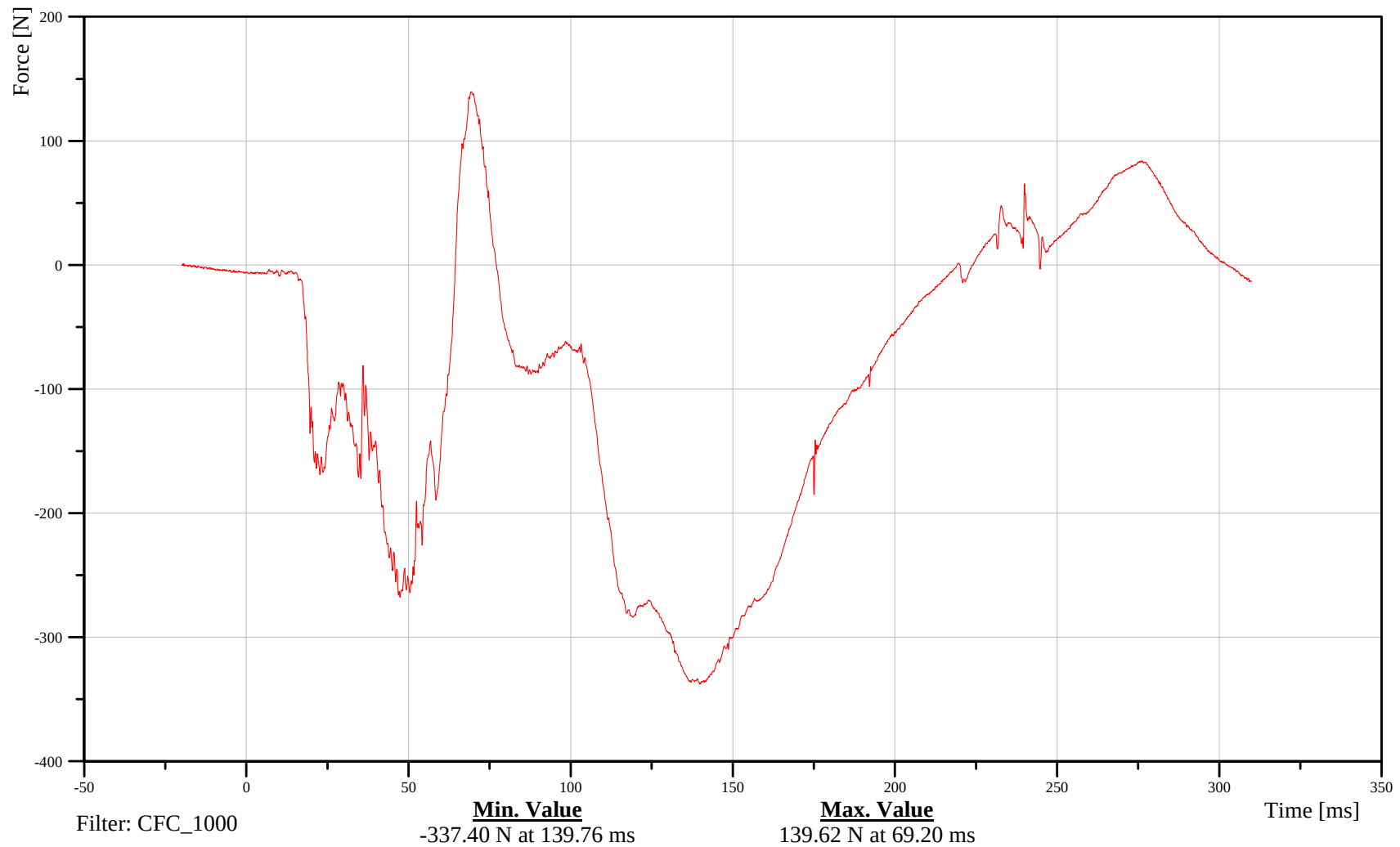
Bullet Passenger Upper Neck X-Axis Force

Customer: VRTC

13NECKUP00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Passenger Upper Neck Y-Axis Force

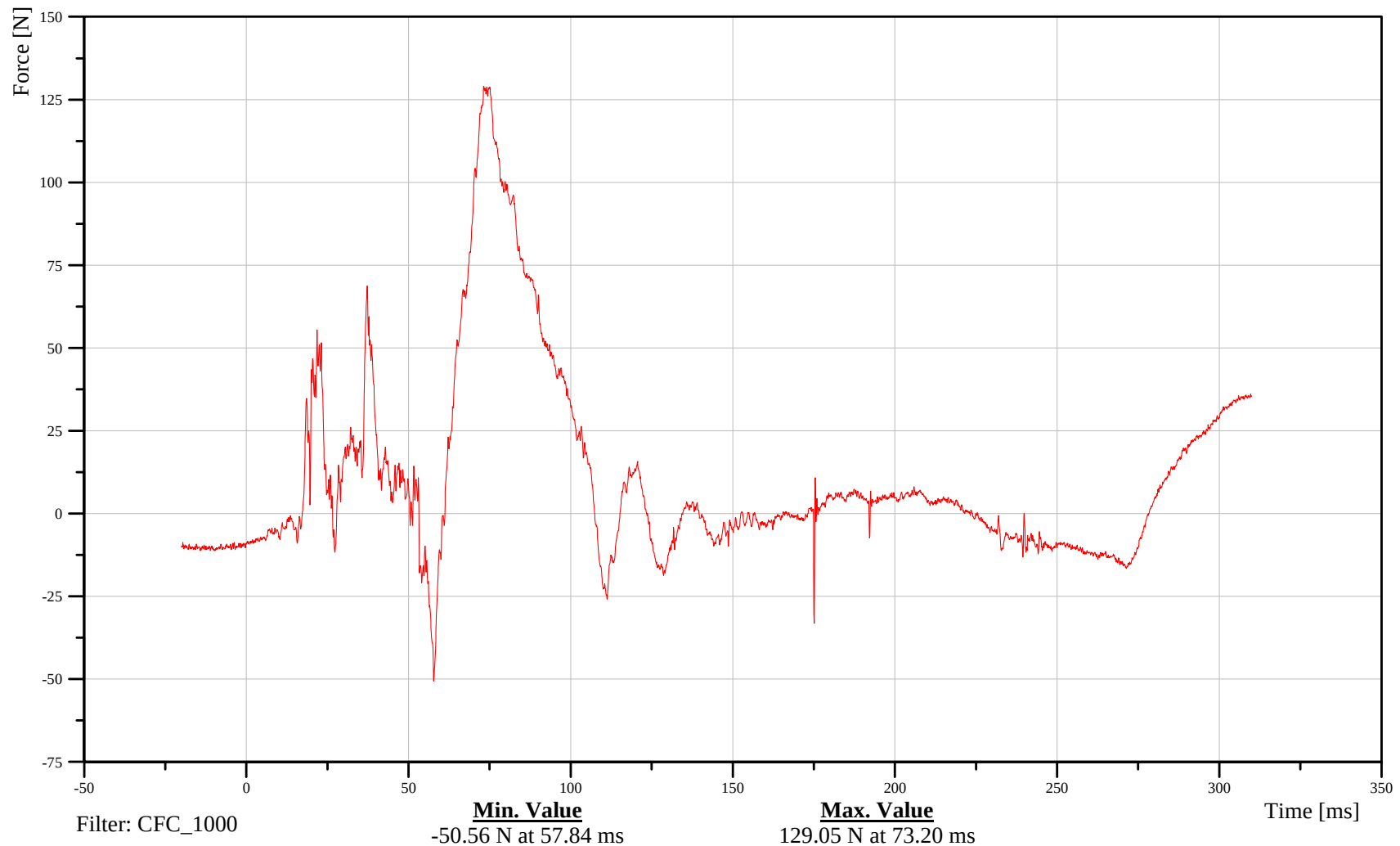
Time: 08:08

Customer: VRTC

13NECKUP00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

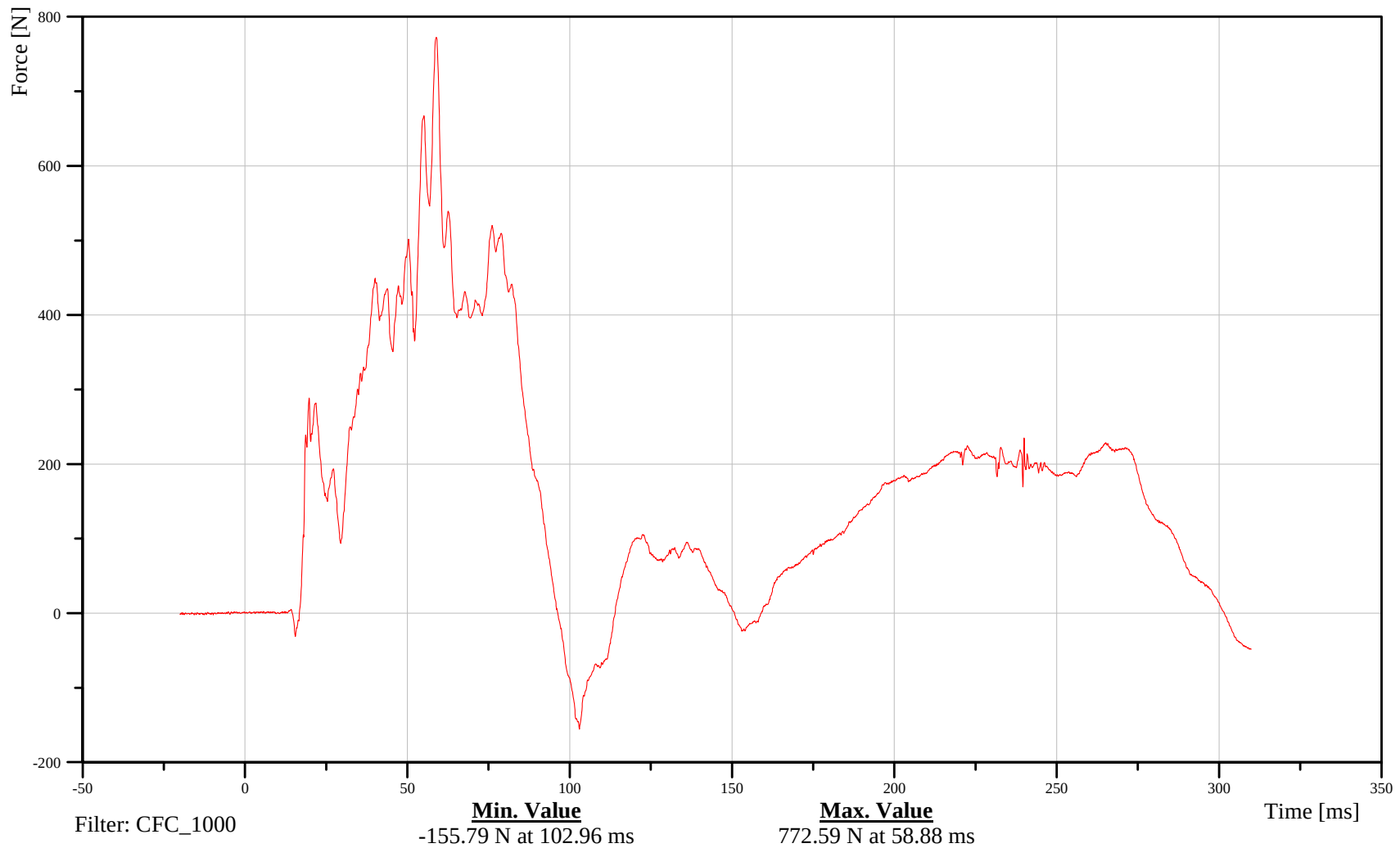
Bullet Passenger Upper Neck Z-Axis Force

Customer: VRTC

13NECKUP00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

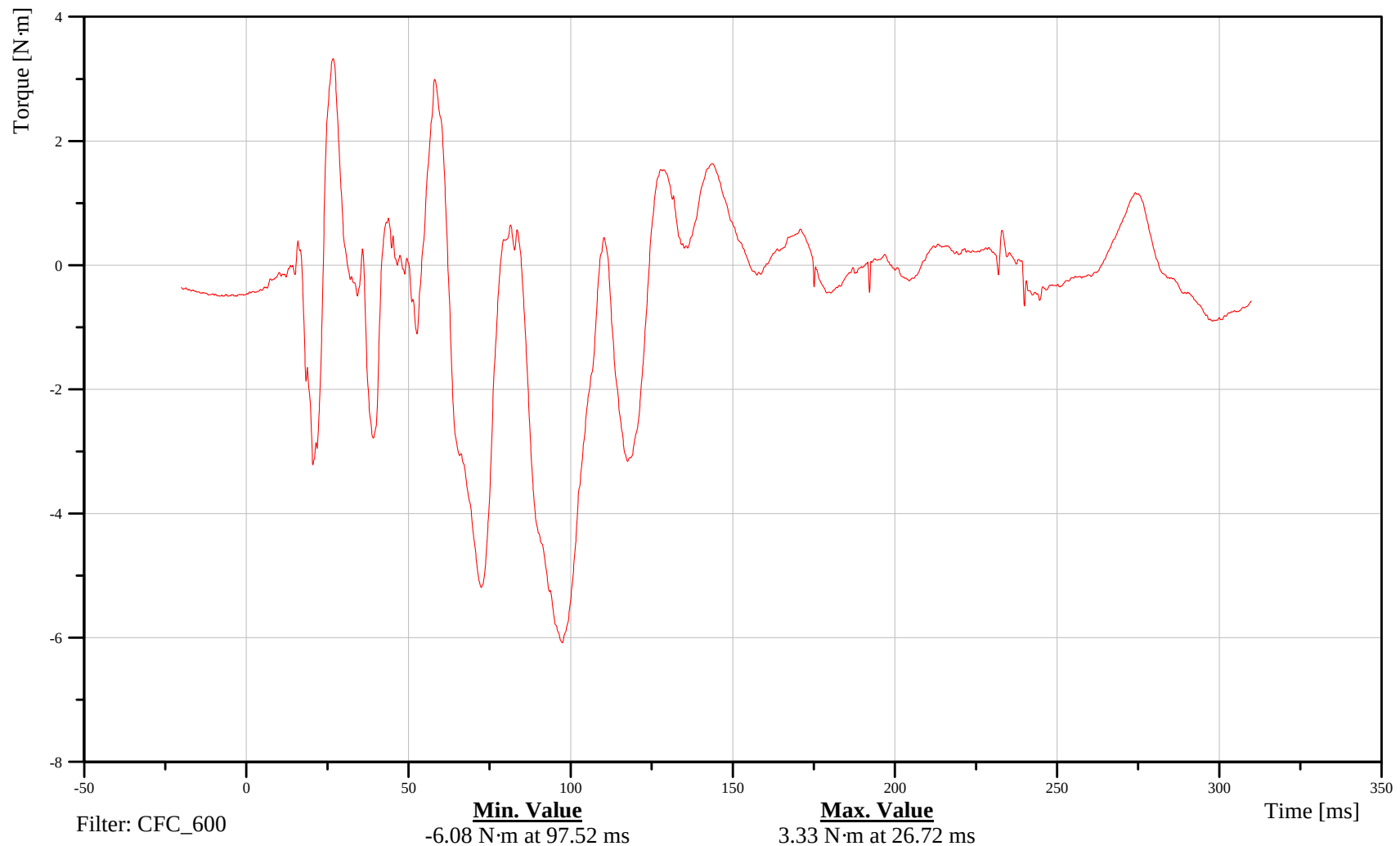
Bullet Passenger Upper Neck Moment About X Axis

Customer: VRTC

13NECKUP00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

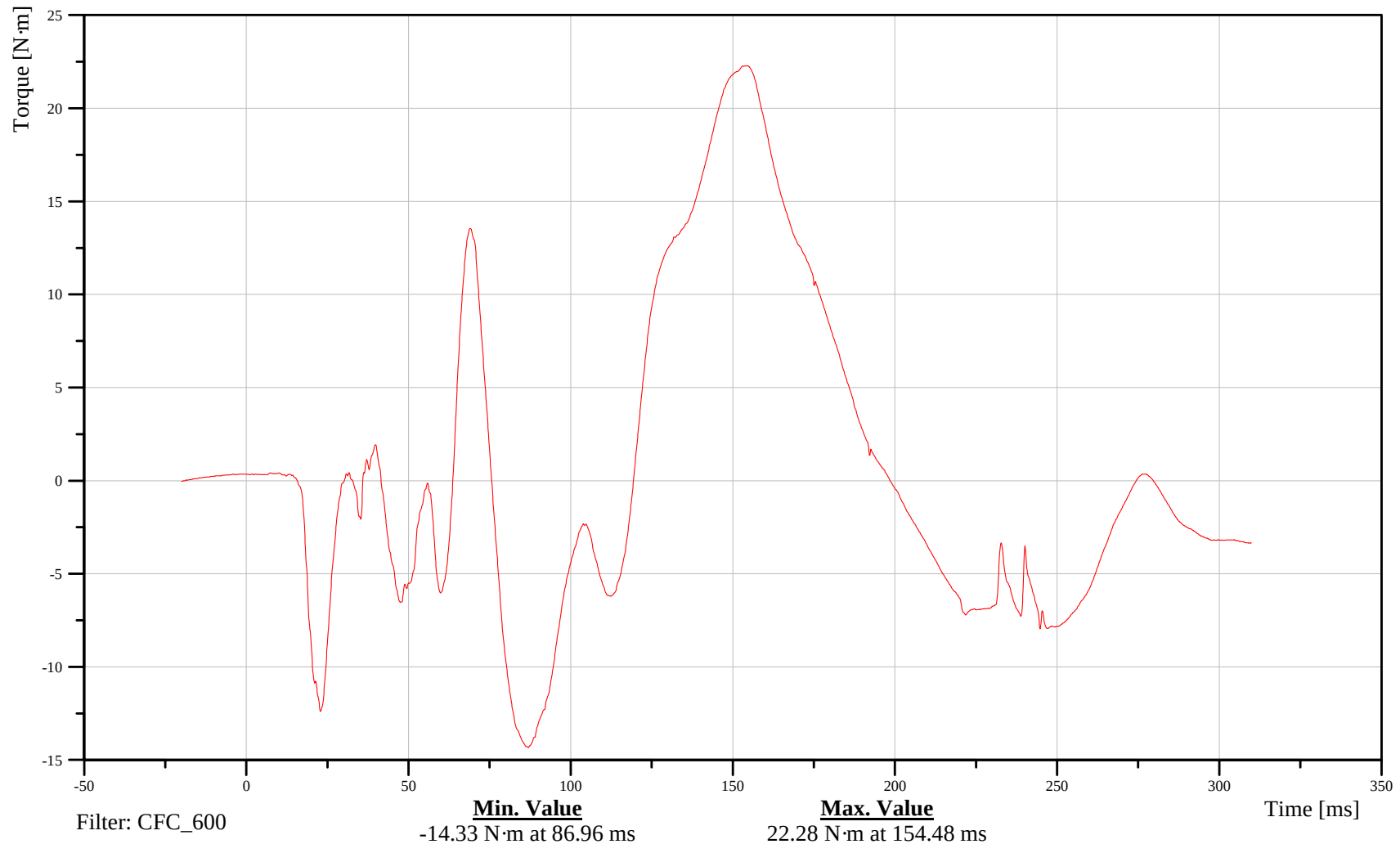
Bullet Passenger Upper Neck Moment About Y Axis

Customer: VRTC

13NECKUP00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

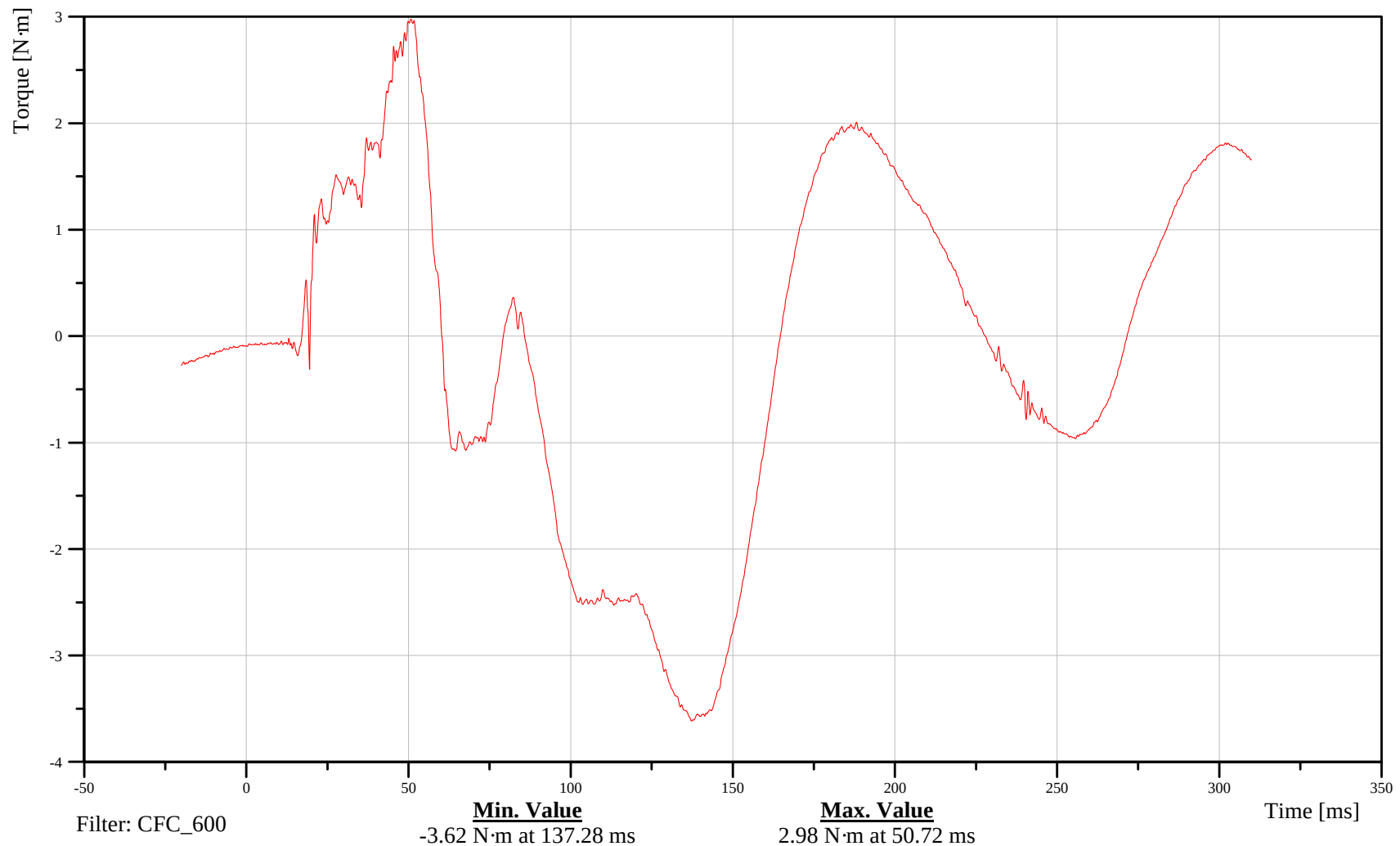
Bullet Passenger Upper Neck Moment About Z Axis

Customer: VRTC

13NECKUP00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

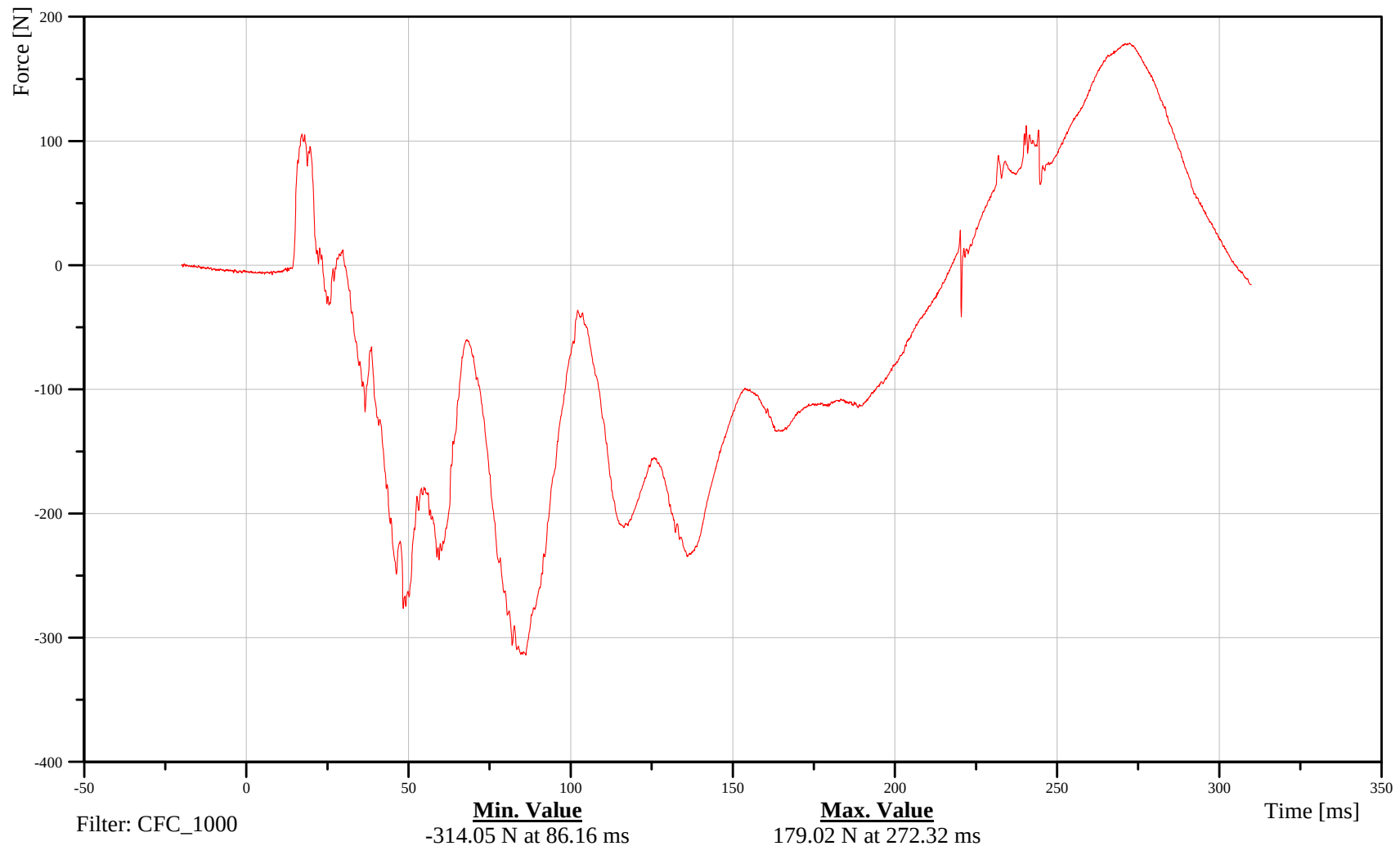
Bullet Passenger Lower Neck X-Axis Force

Customer: VRTC

13NECKLO00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

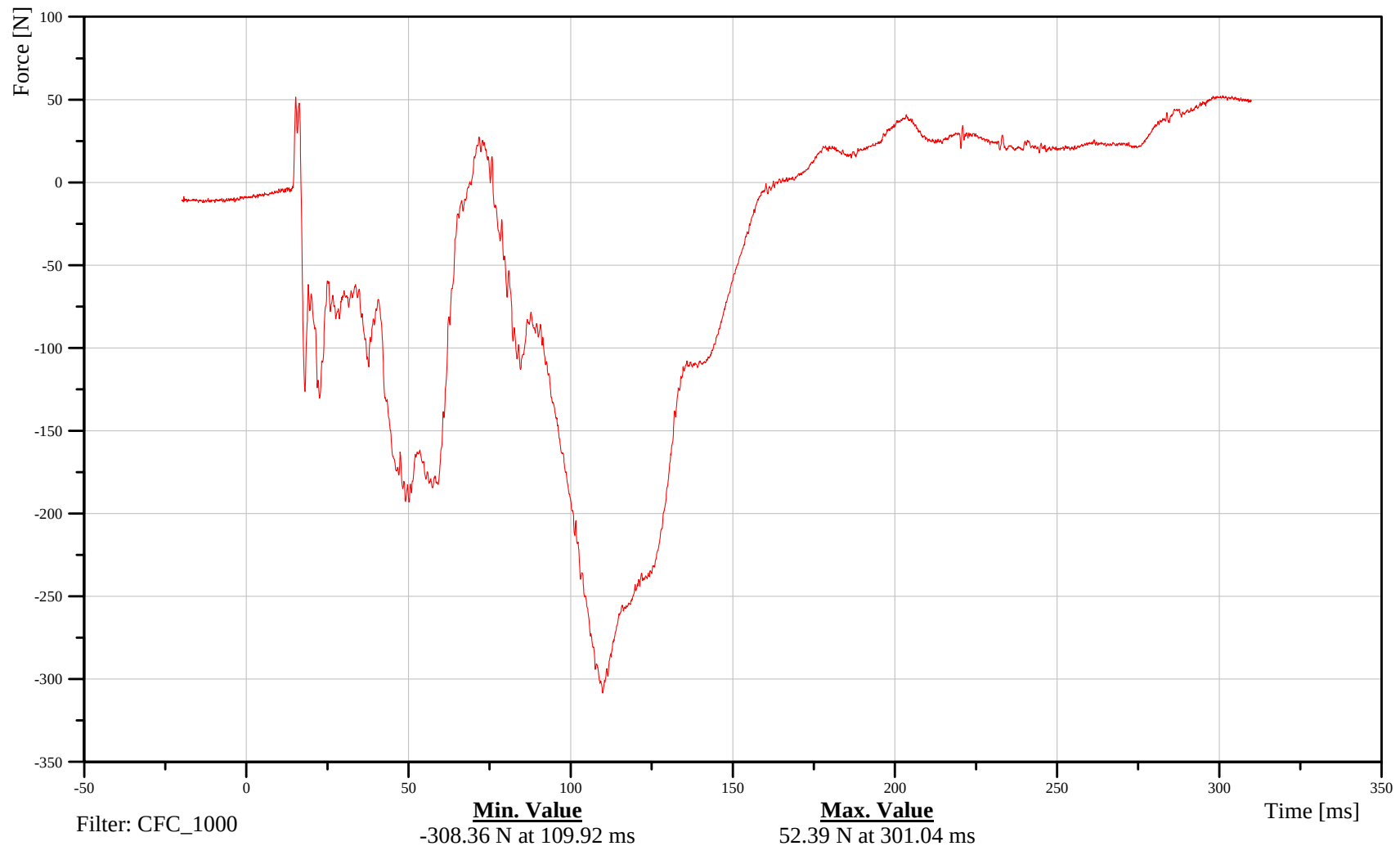
Bullet Passenger Lower Neck Y-Axis Force

Customer: VRTC

13NECKLO00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Passenger Lower Neck Z-Axis Force

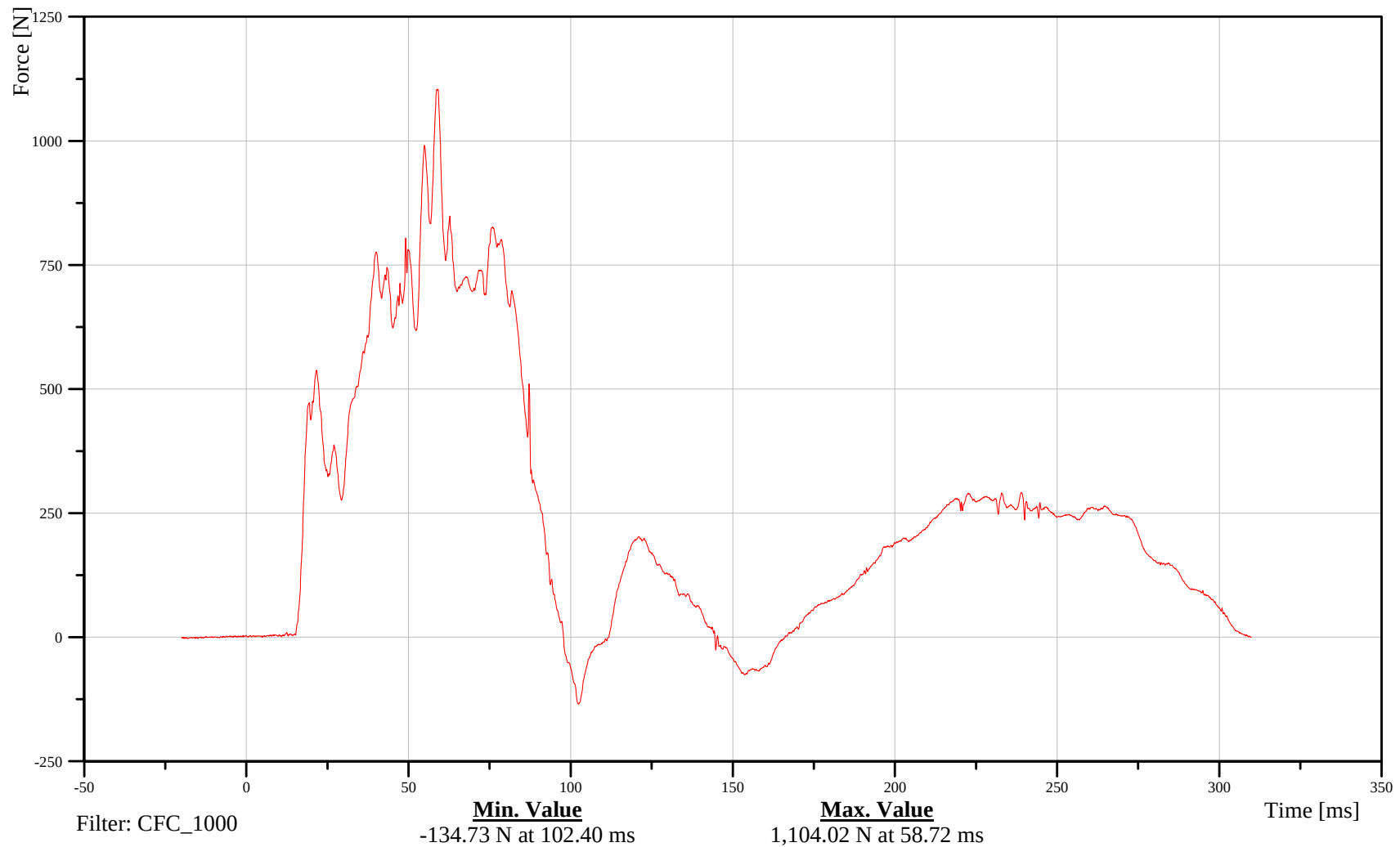
Date: 03/20/2006
Time: 08:08

Customer: VRTC

13NECKLO00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

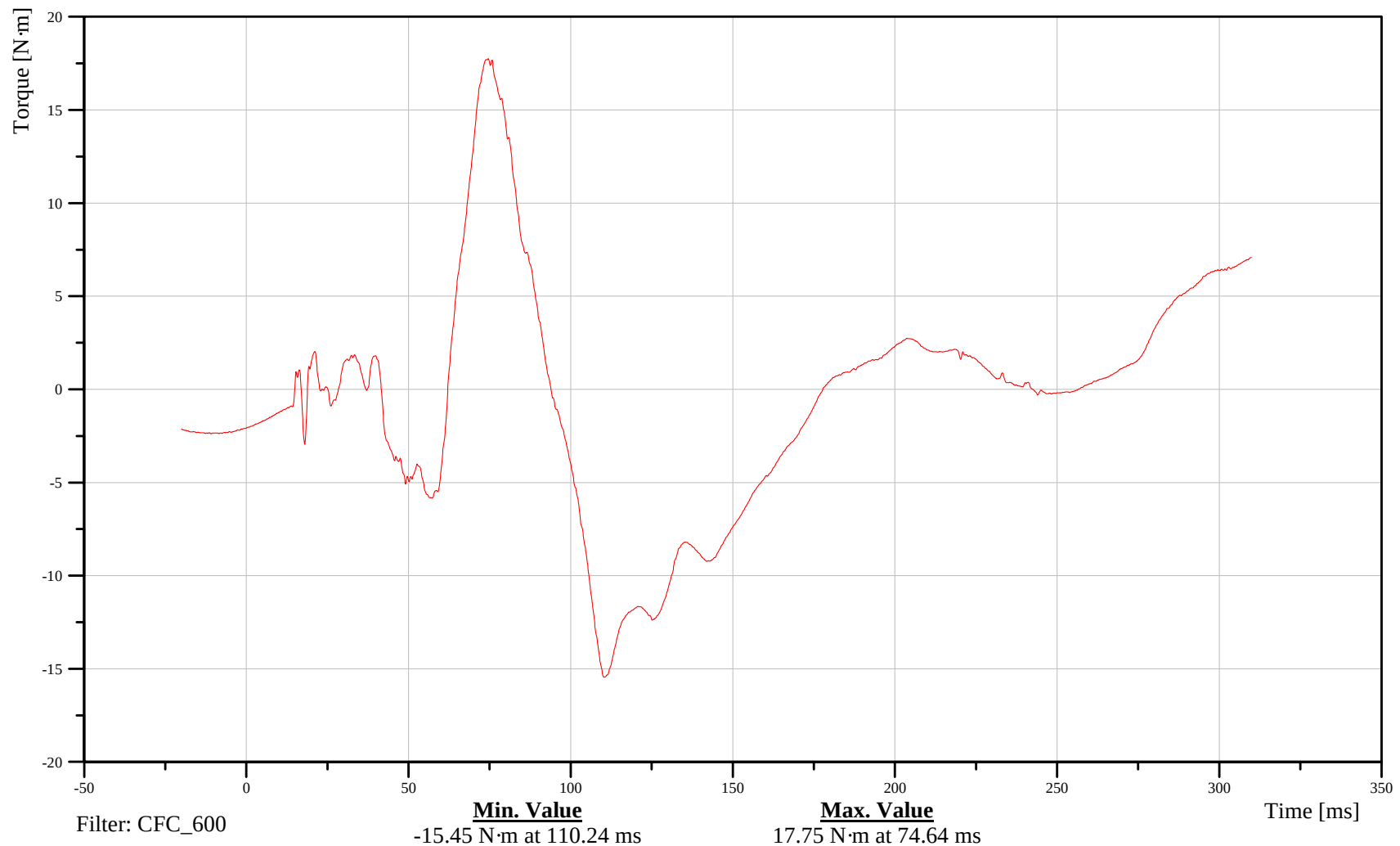
Bullet Passenger Lower Neck Moment About X Axis

Customer: VRTC

13NECKLO00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

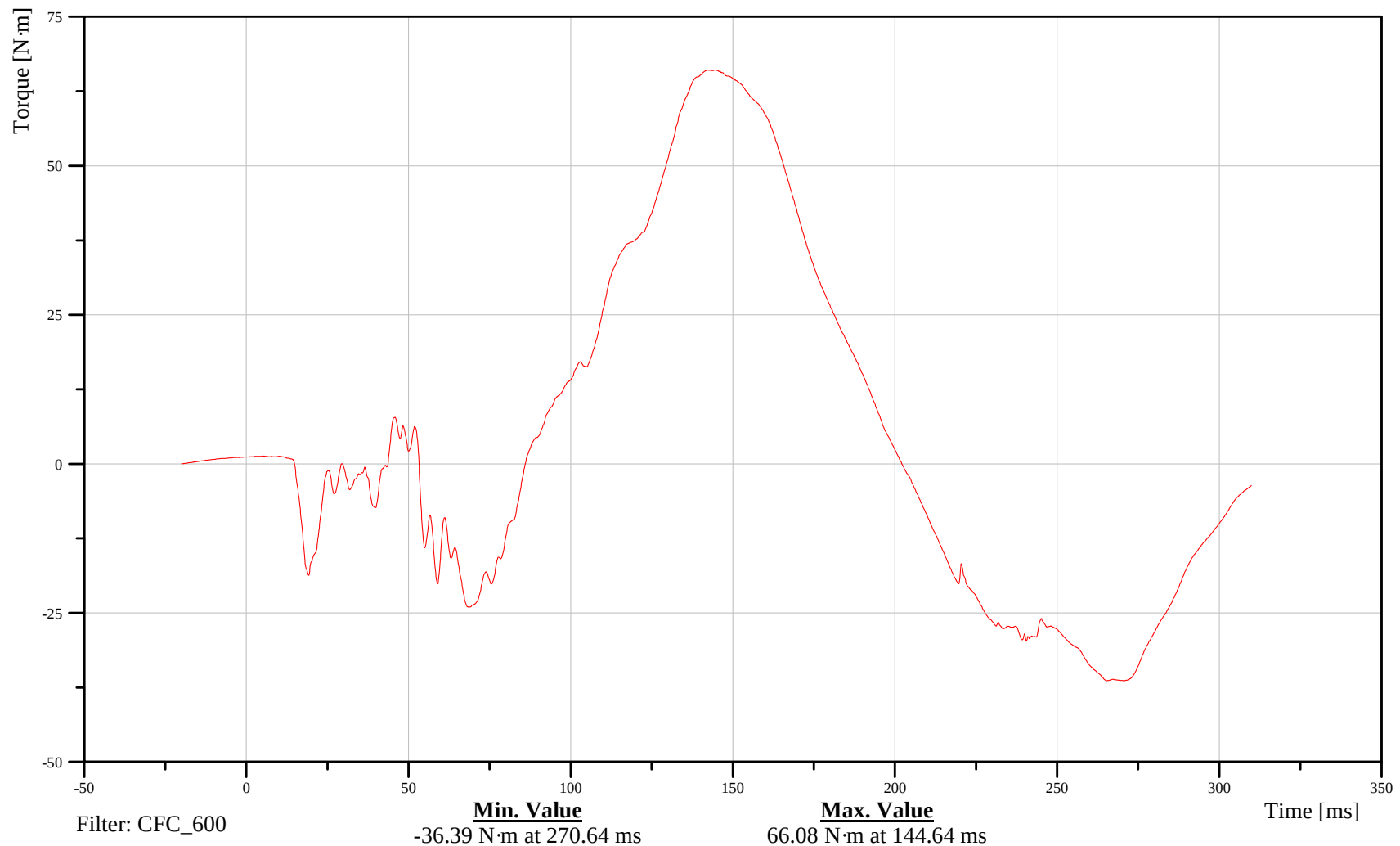
Bullet Passenger Lower Neck Moment About Y Axis

Customer: VRTC

13NECKLO00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

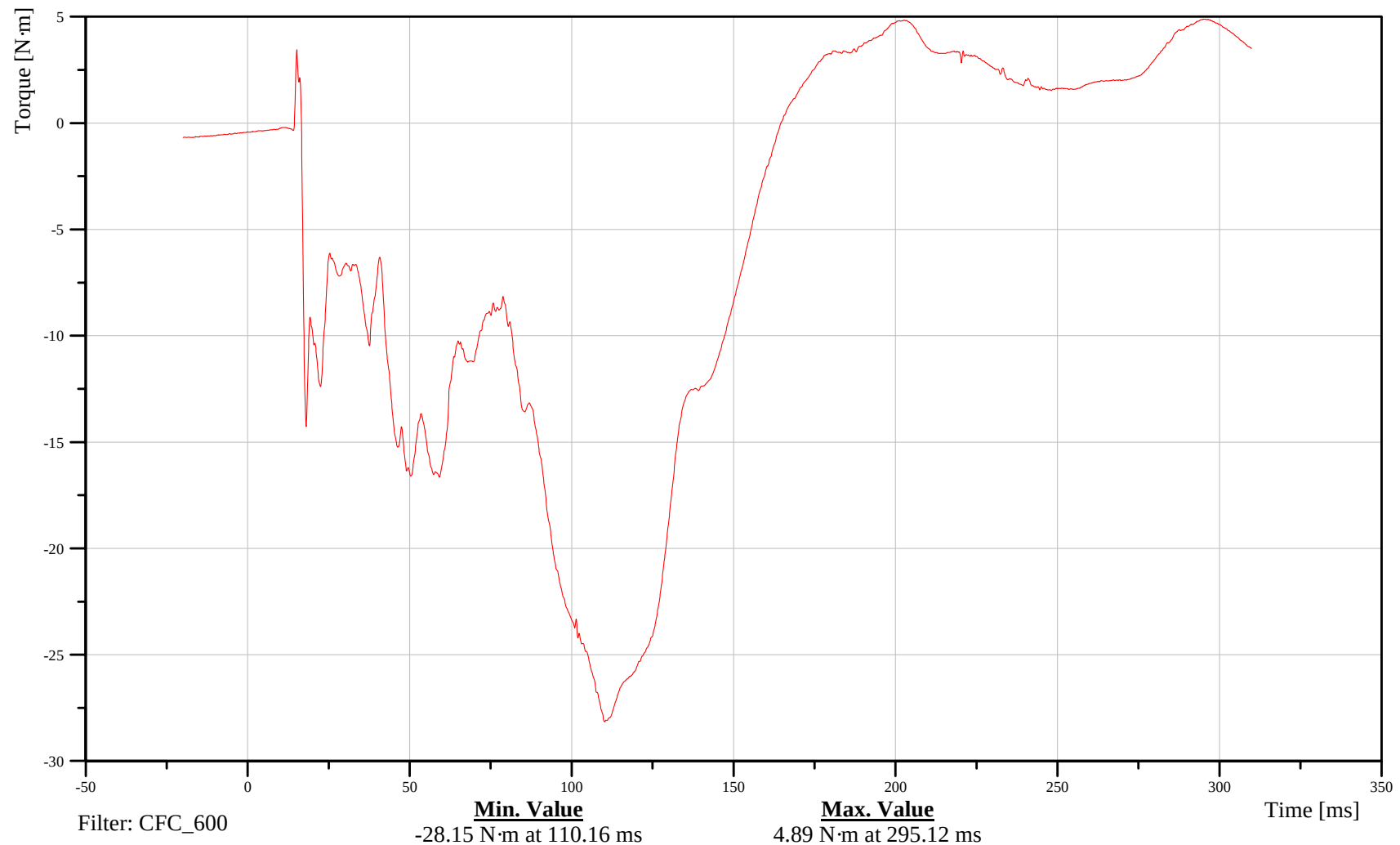
Bullet Passenger Lower Neck Moment About Z Axis

Customer: VRTC

13NECKLO00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Passenger Chest CG X-Axis Acceleration

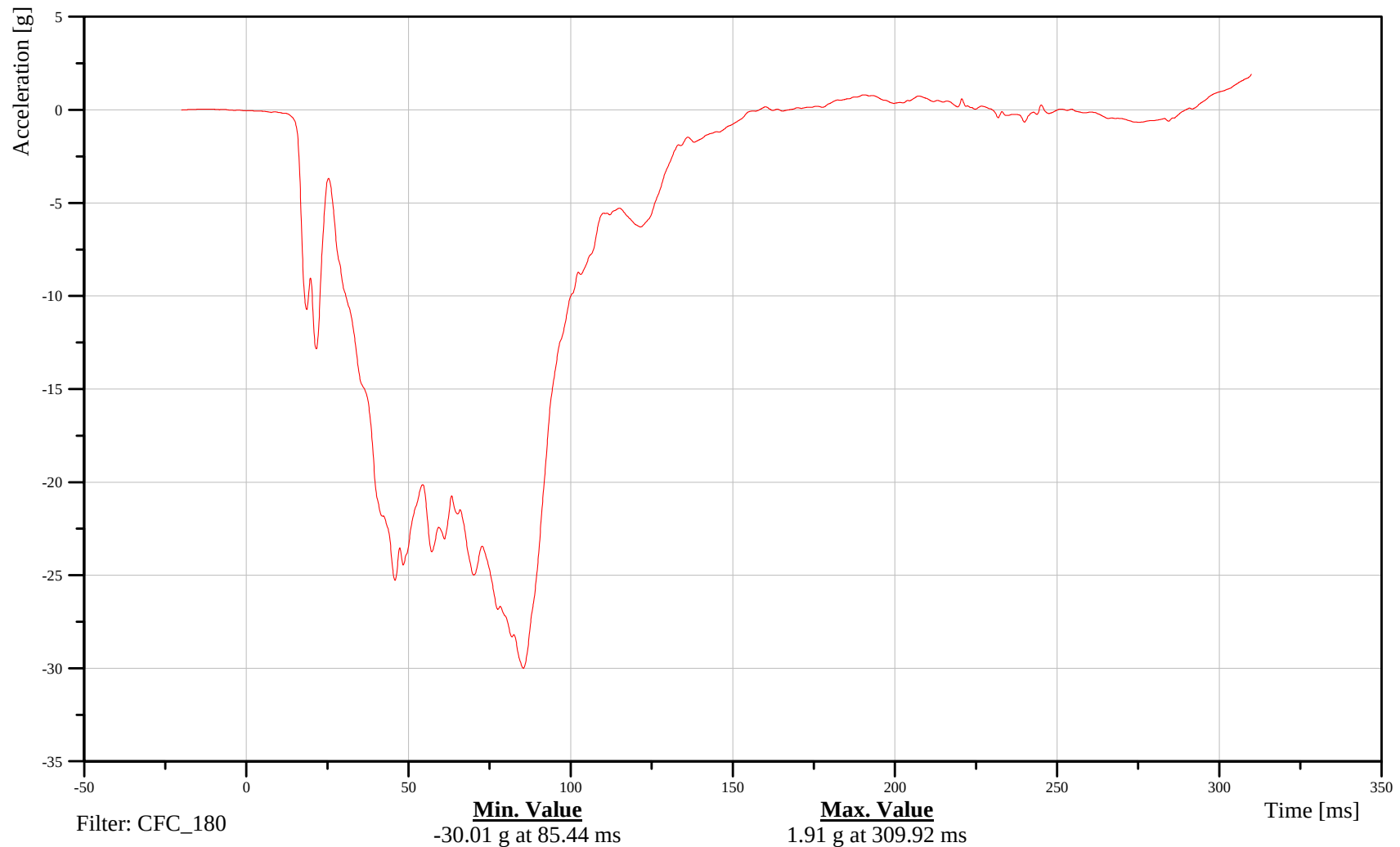
Time: 08:08

Customer: VRTC

13CHSTCG00HFACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Passenger Chest CG Y-Axis Acceleration

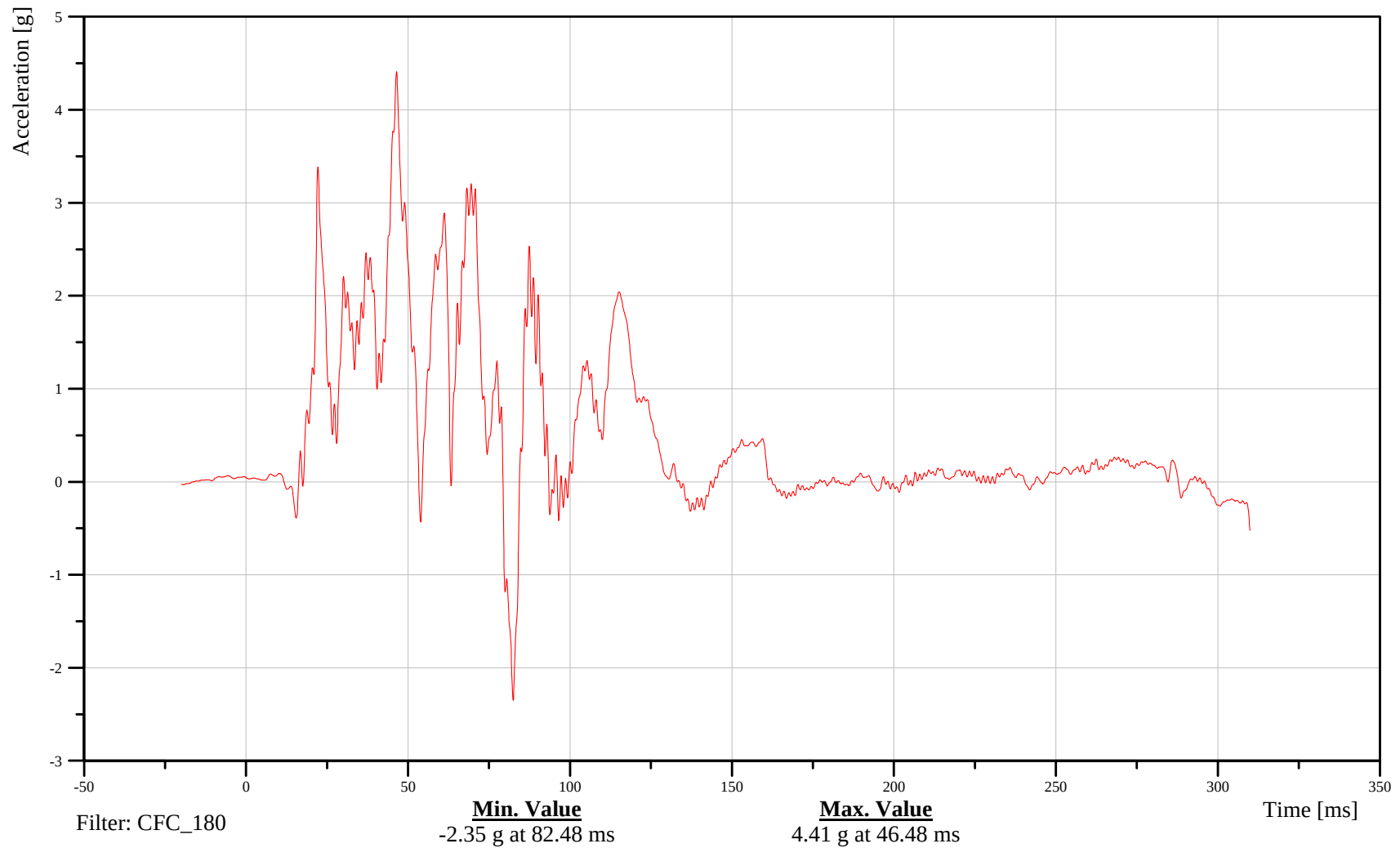
Time: 08:08

Customer: VRTC

13CHSTCG00HFACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Passenger Chest CG Z-Axis Acceleration

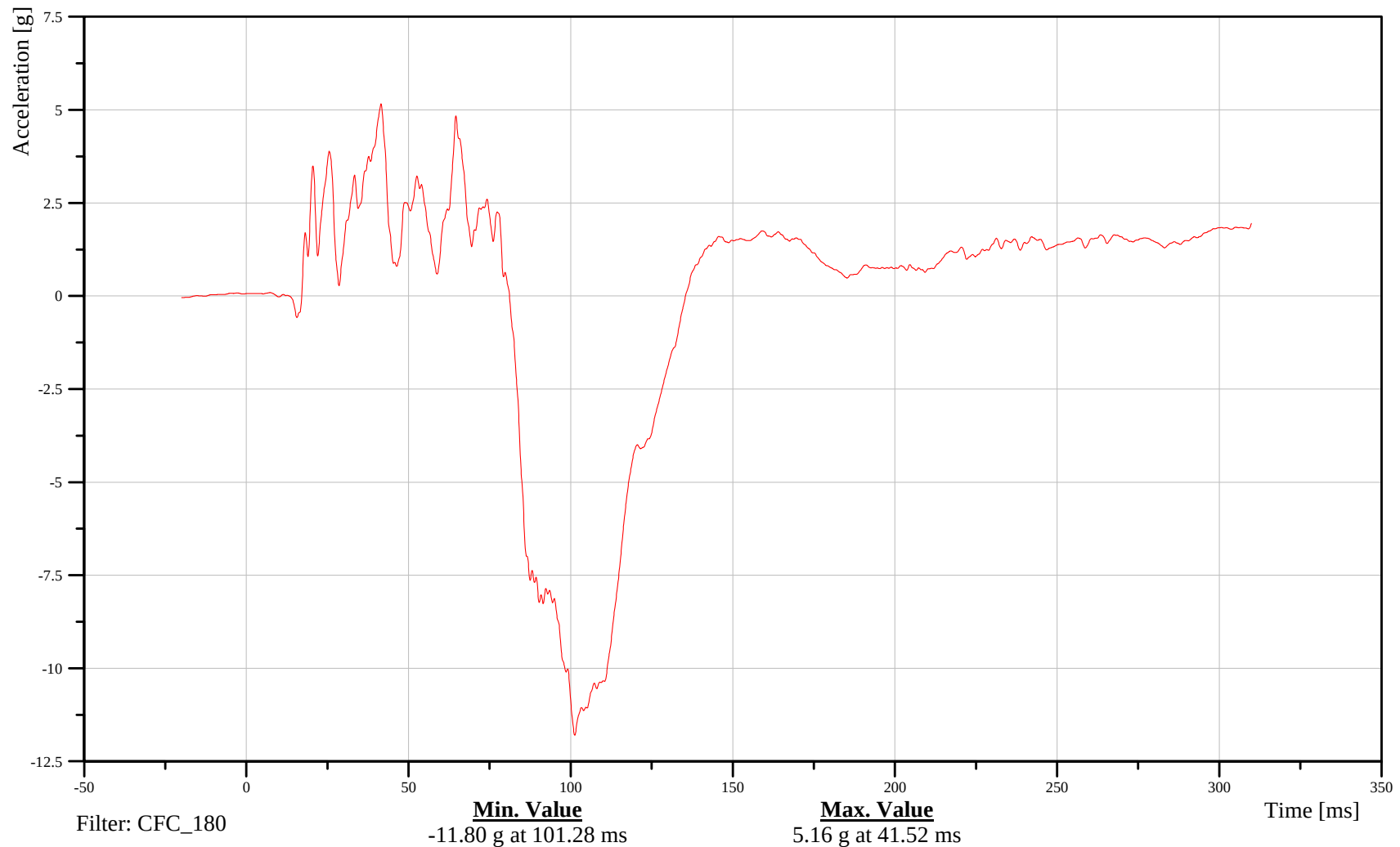
Time: 08:08

Customer: VRTC

13CHSTCG00HFACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

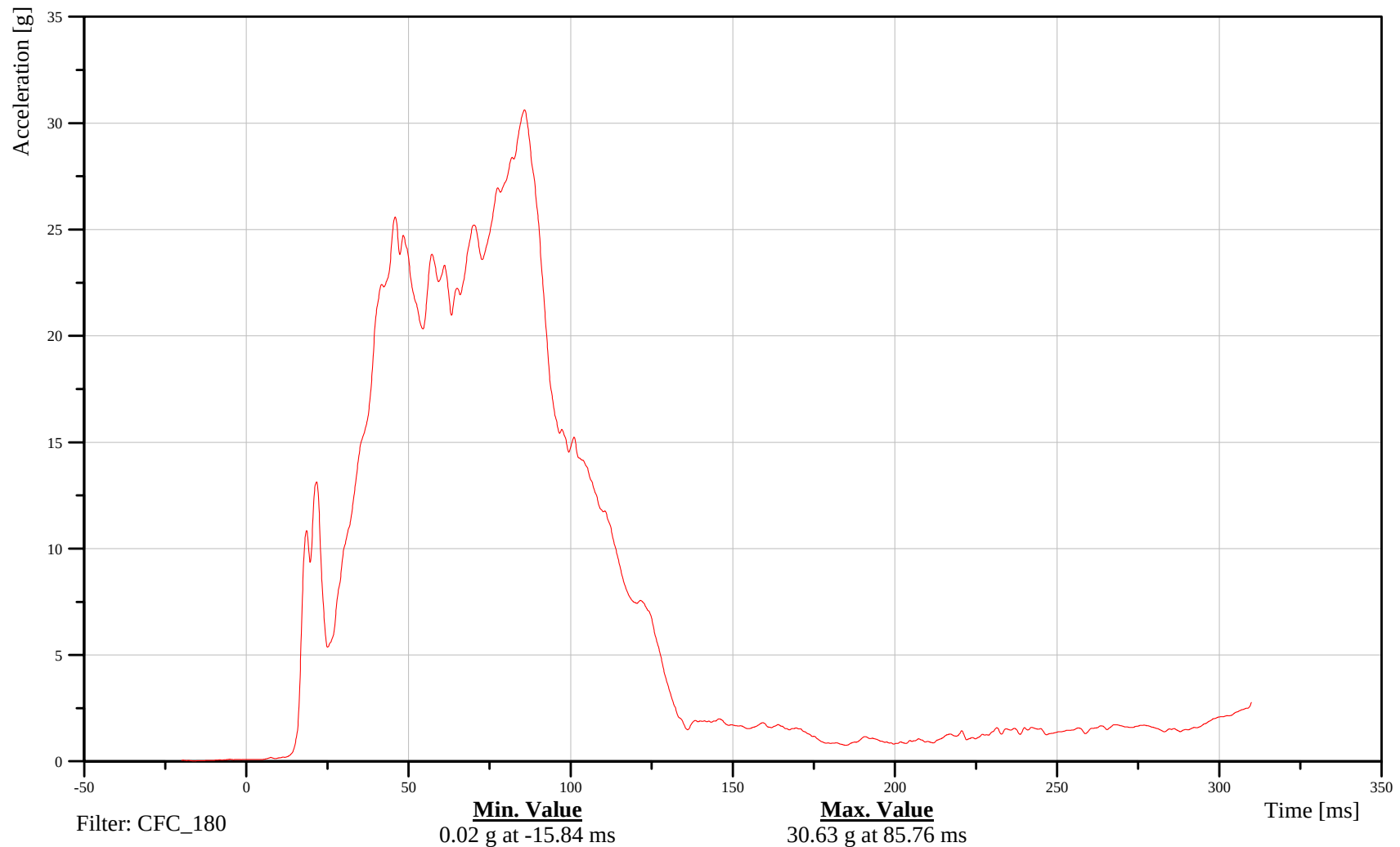
Bullet Passenger Chest CG Resultant Acceleration

Customer: VRTC

13CHSTCG00HFACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

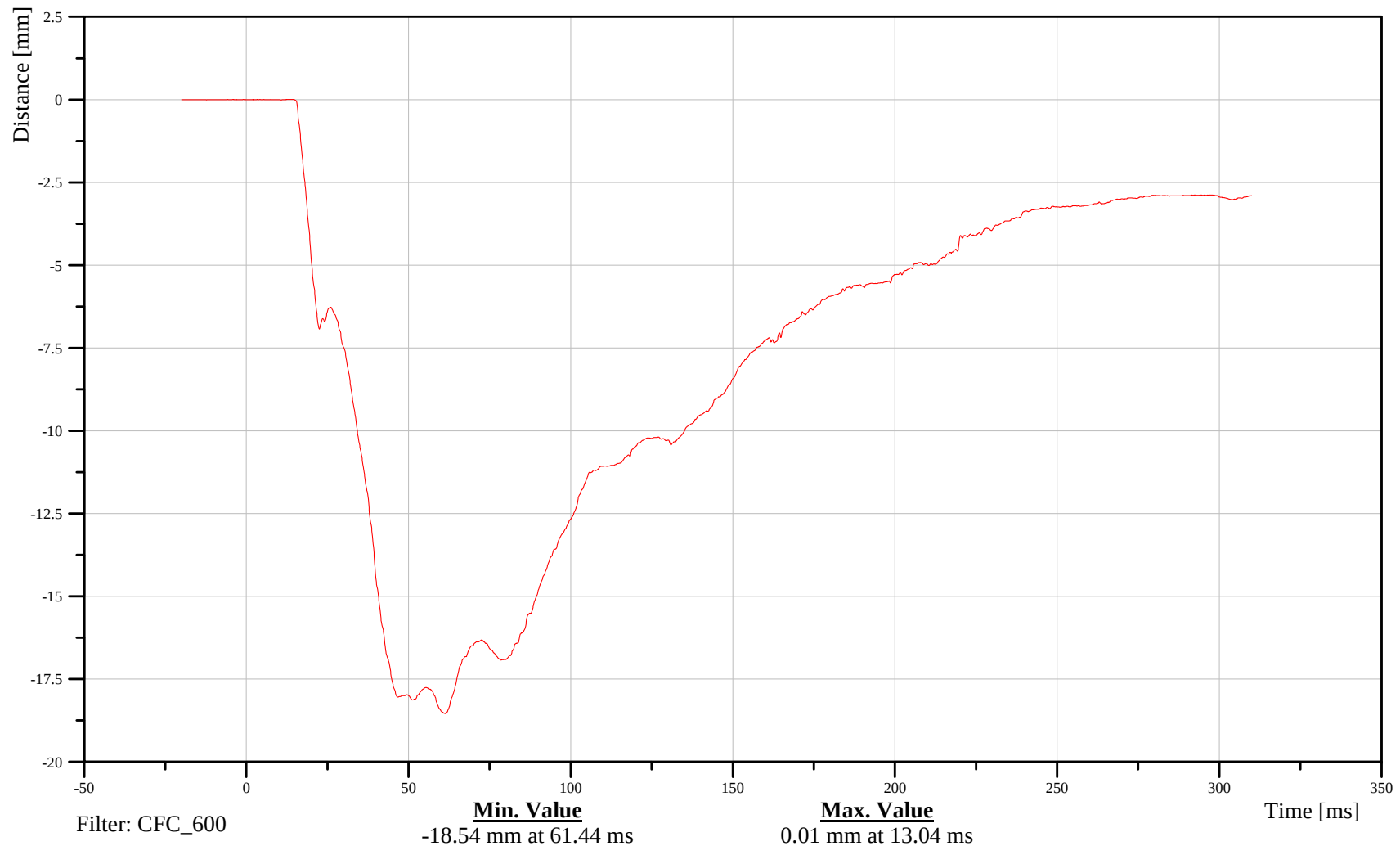
Bullet Passenger Chest Displacement

Customer: VRTC

13CHST0000HFDSXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

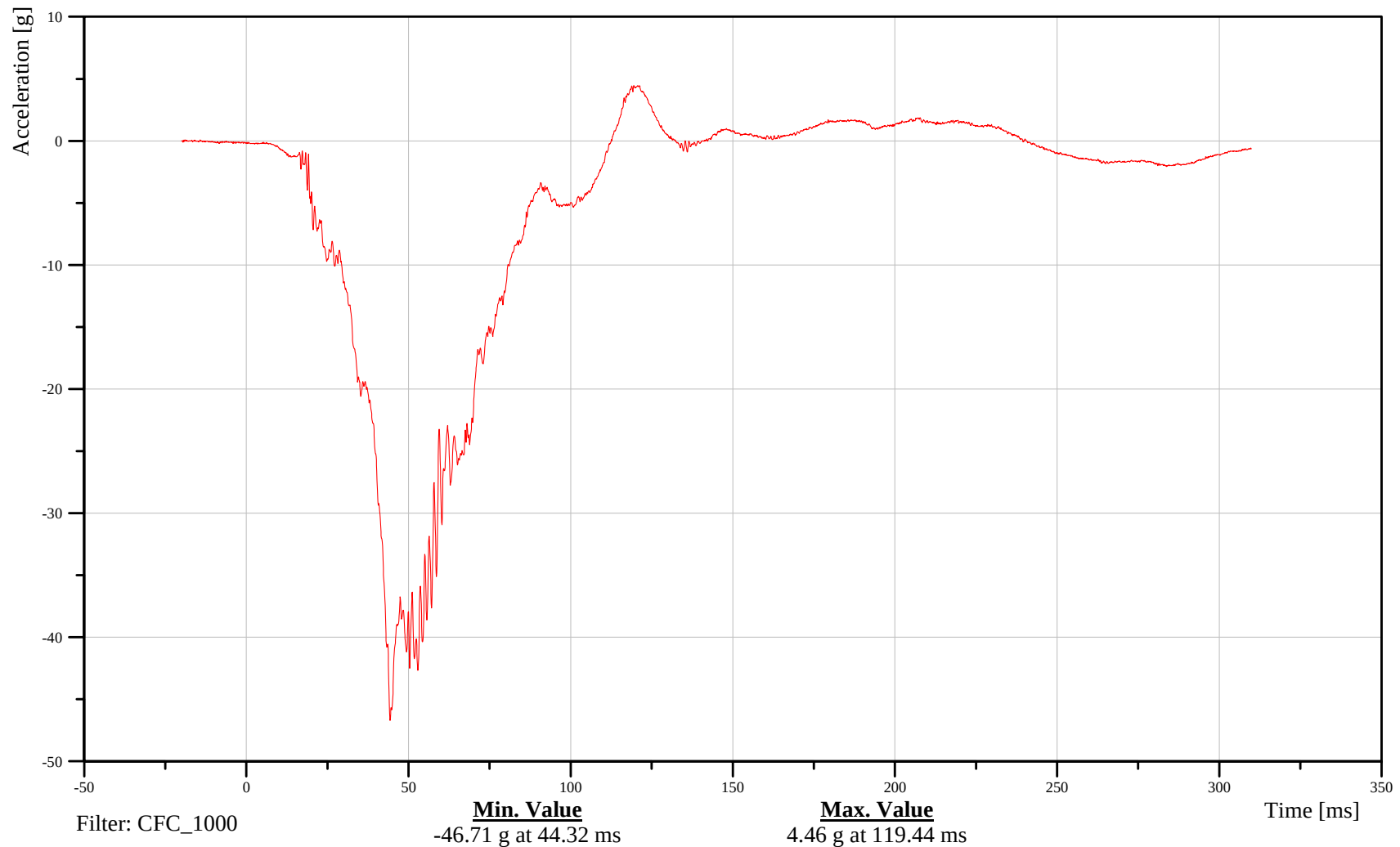
Bullet Passenger Pelvis CG X-Axis Acceleration

Customer: VRTC

13PELVCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

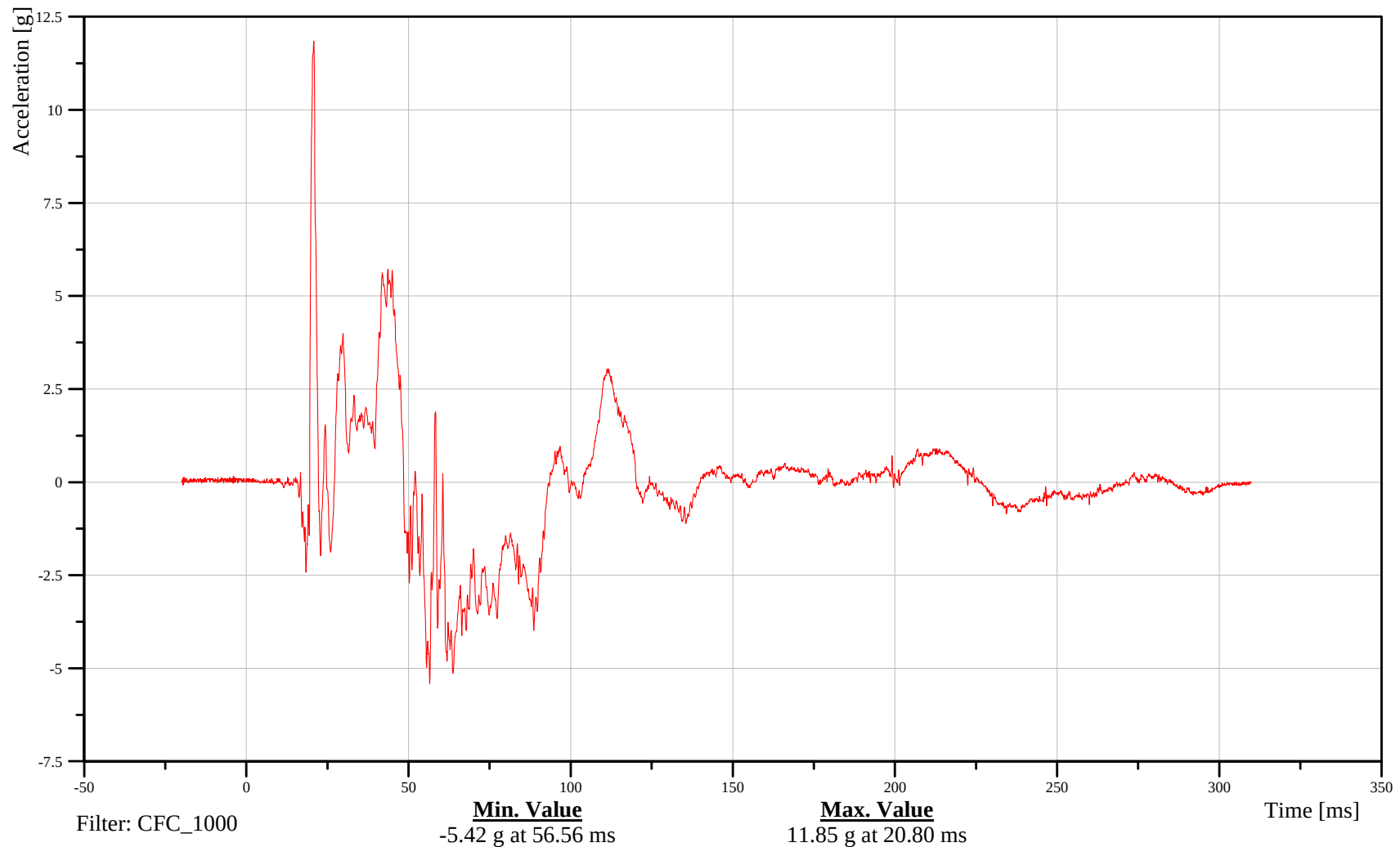
Bullet Passenger Pelvis CG Y-Axis Acceleration

Customer: VRTC

13PELVCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

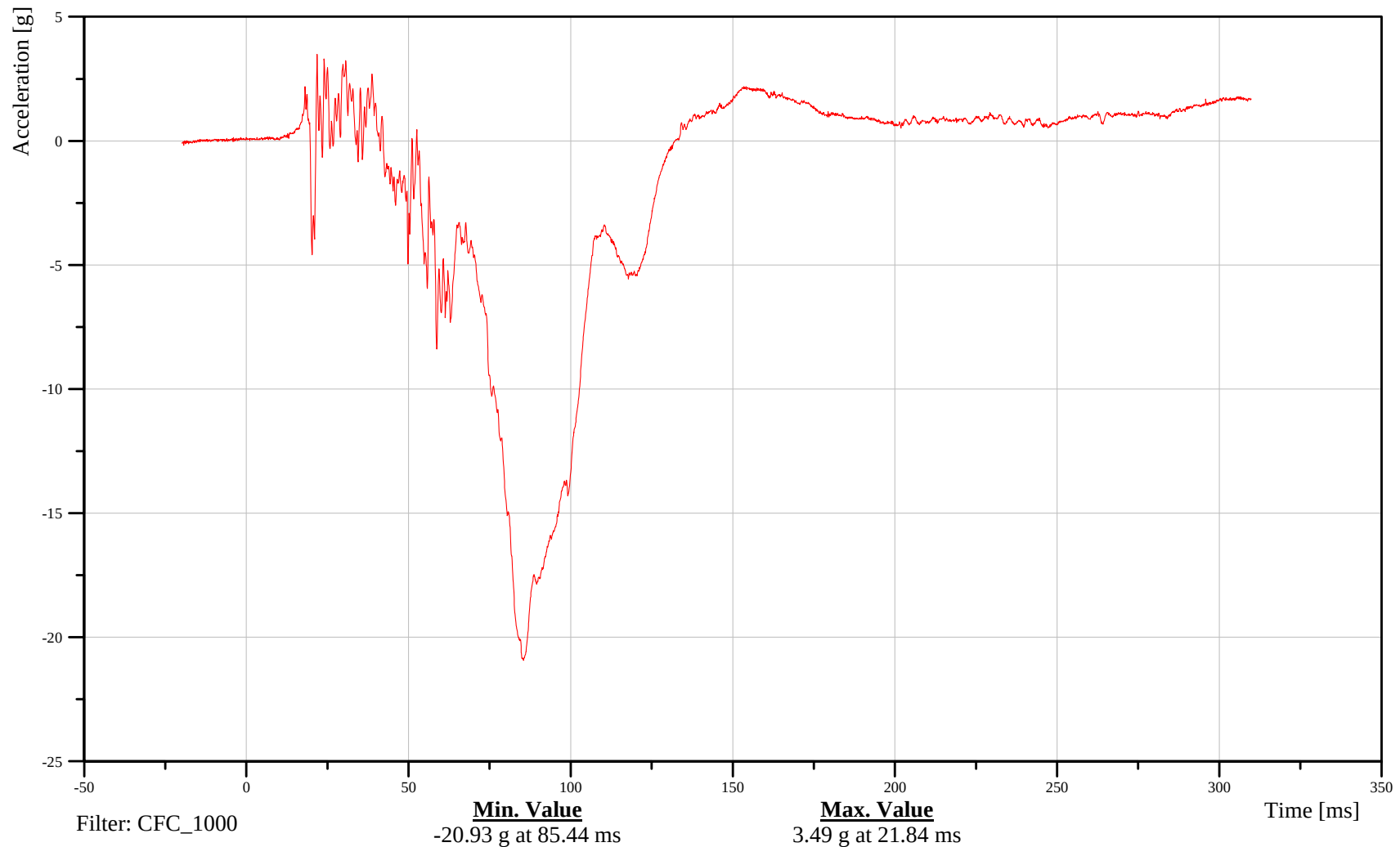
Bullet Passenger Pelvis CG Z-Axis Acceleration

Customer: VRTC

13PELVCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

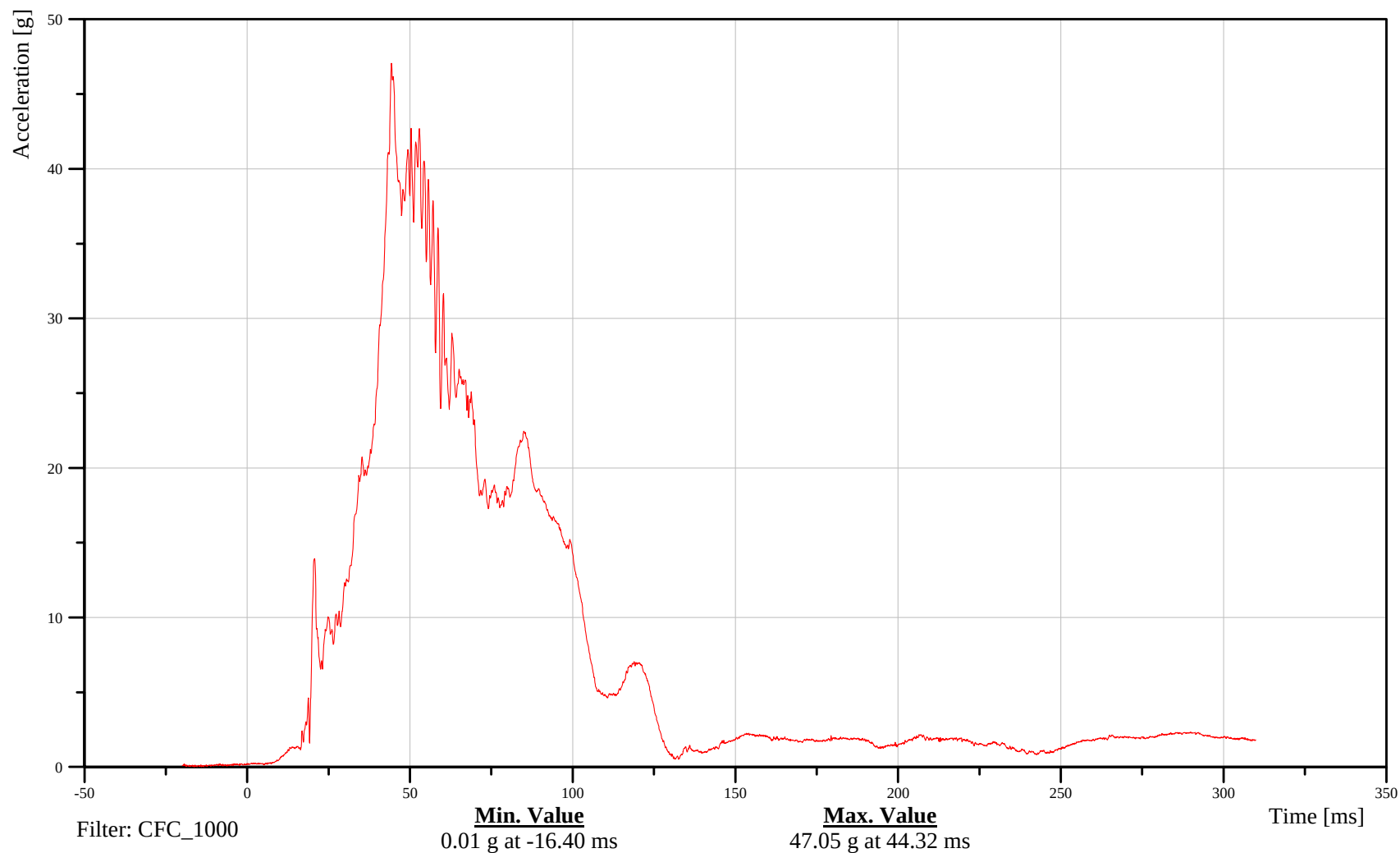
Bullet Passenger Pelvis CG Resultant Acceleration

Customer: VRTC

13PELVCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

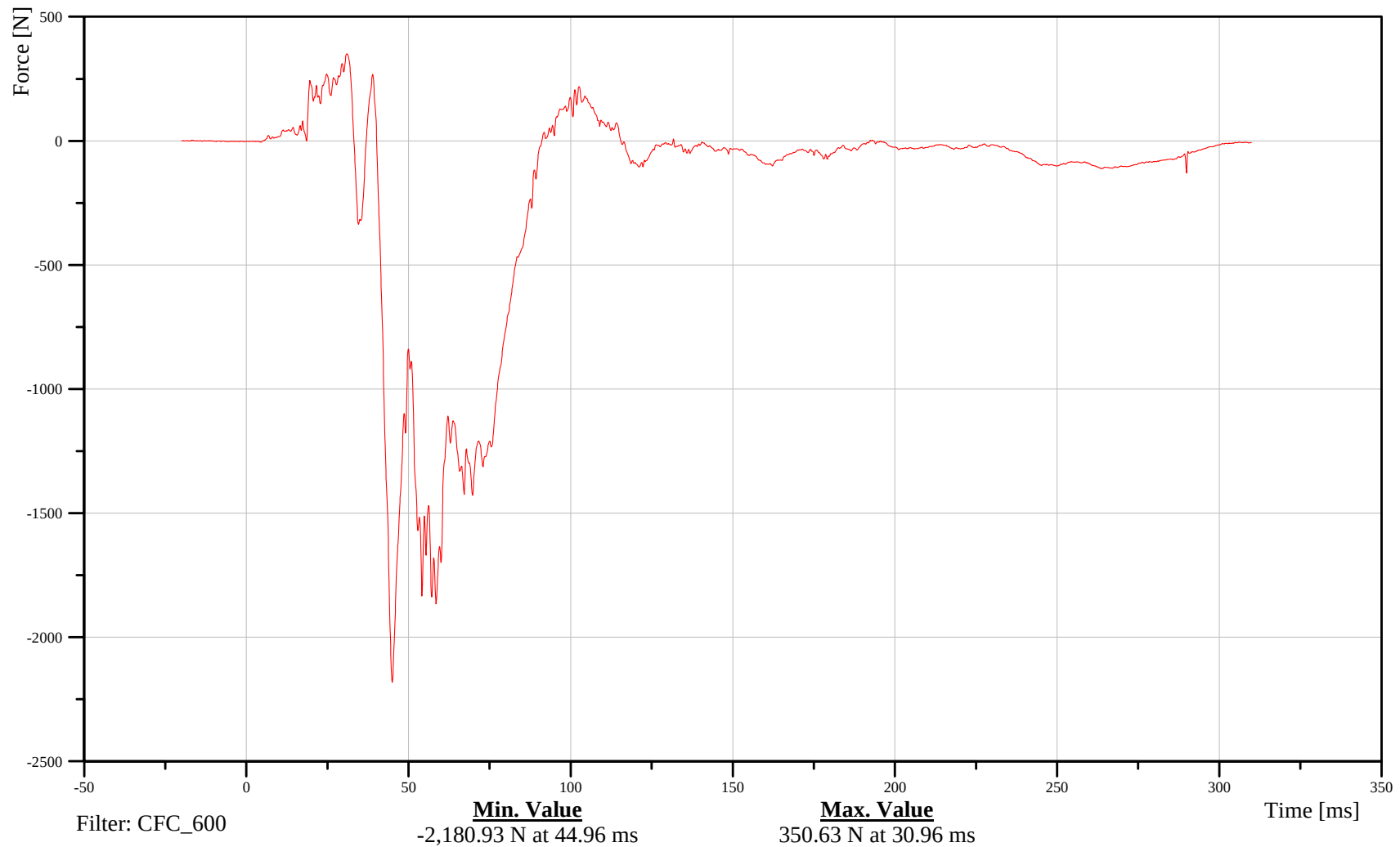
Bullet Passenger Left Femur Z-Axis Force

Customer: VRTC

13FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

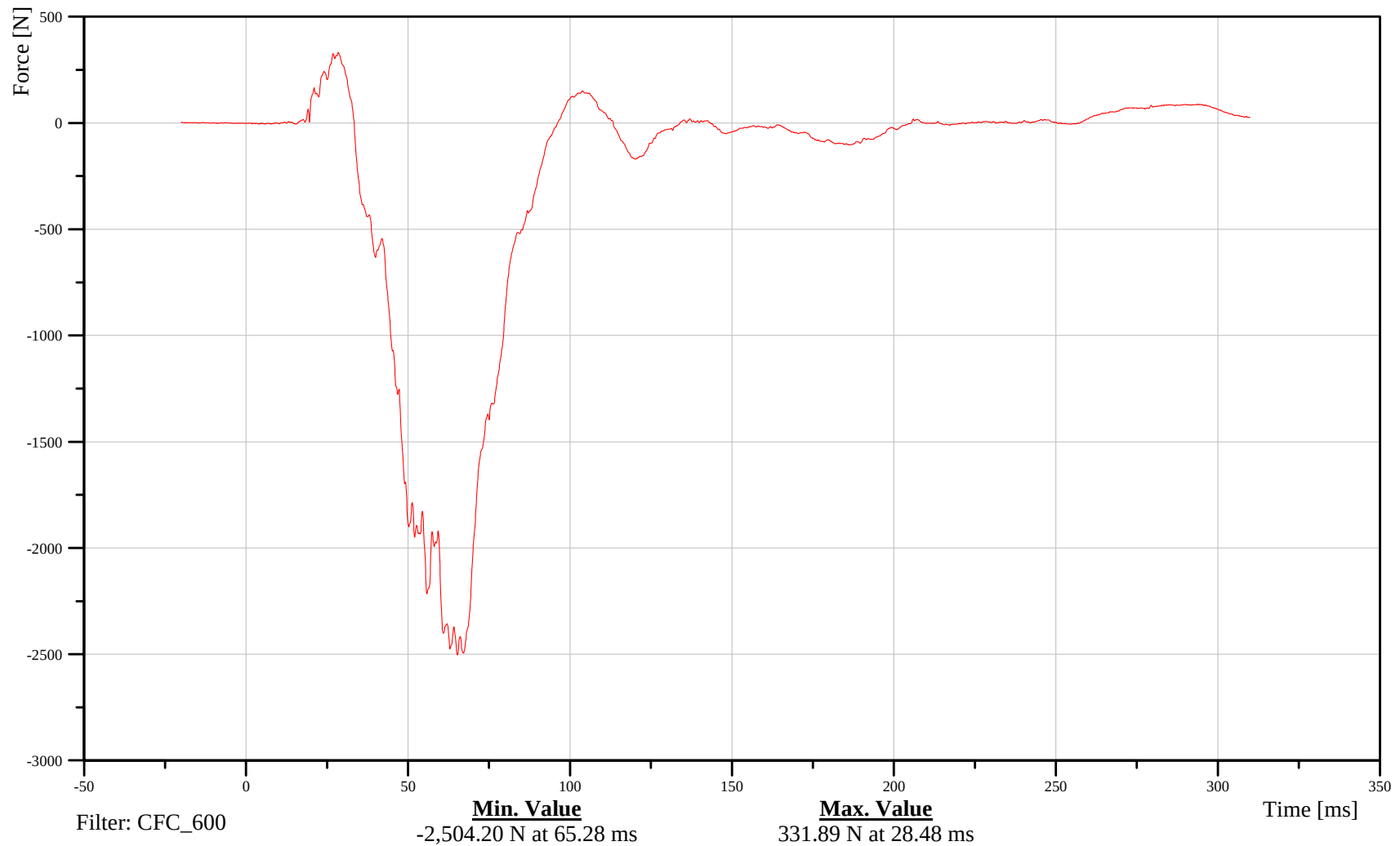
Bullet Passenger Right Femur Z-Axis Force

Customer: VRTC

13FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

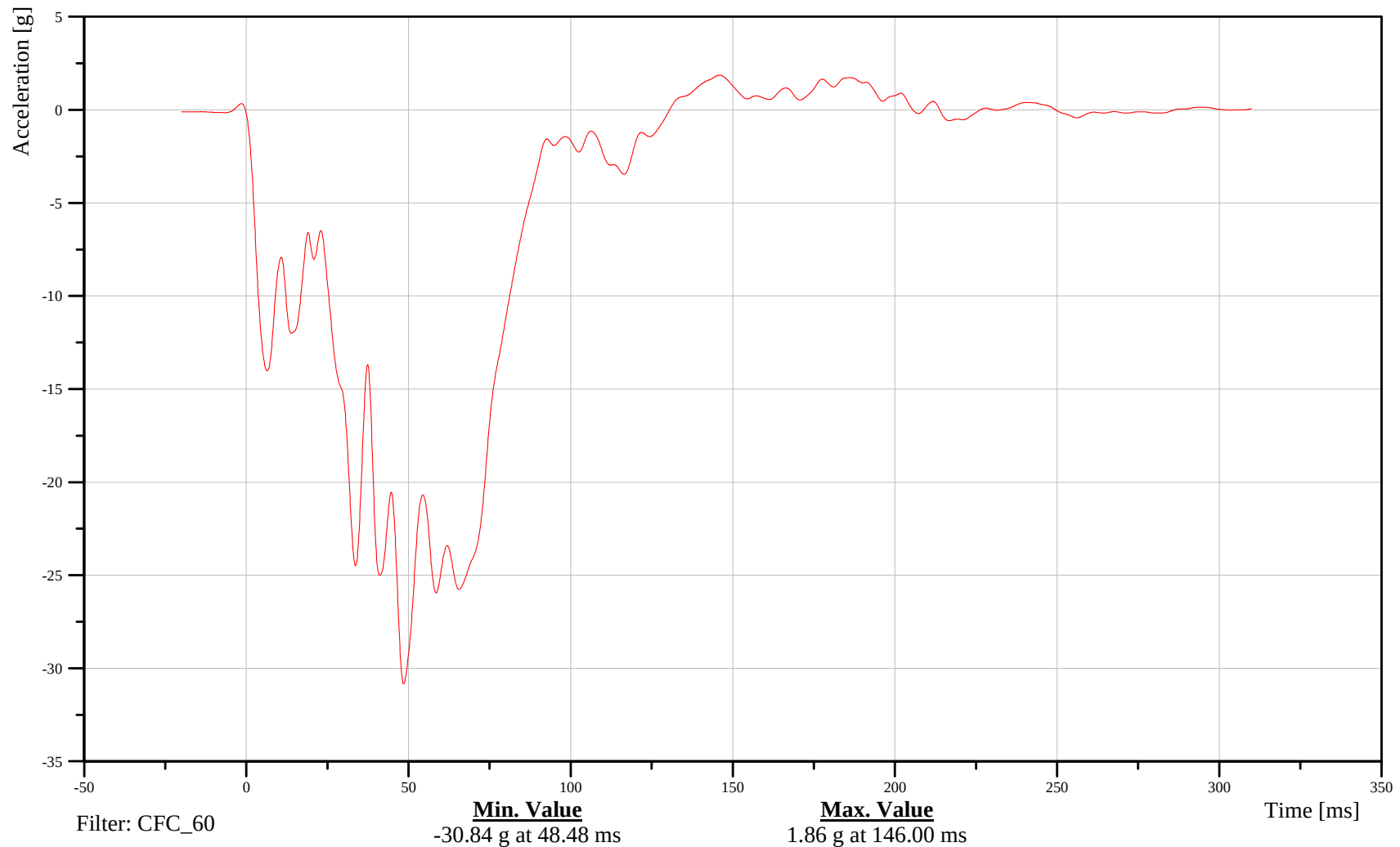
Bullet Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

14CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

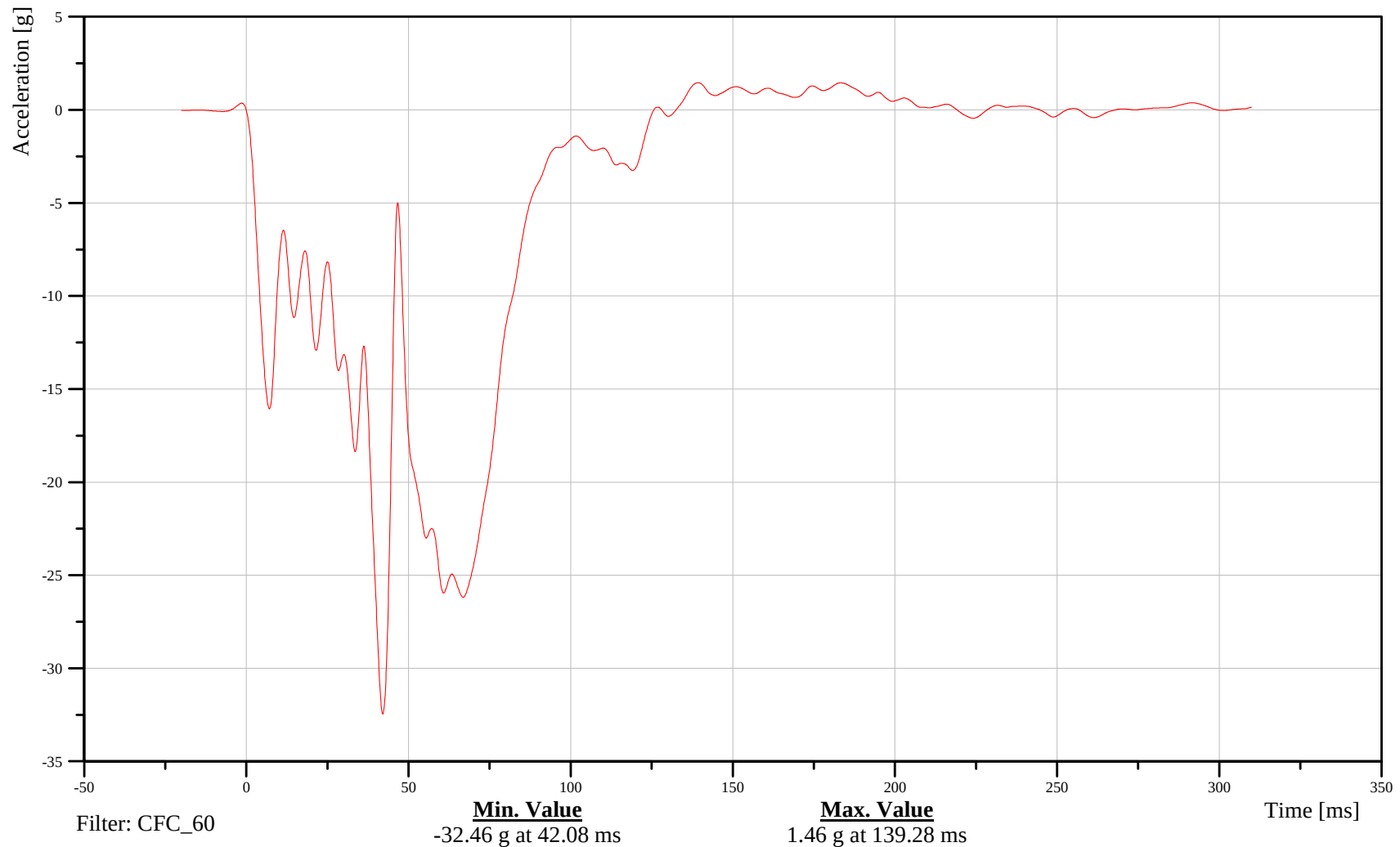
Bullet Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

16CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle Top of Engine X-Axis Acceleration

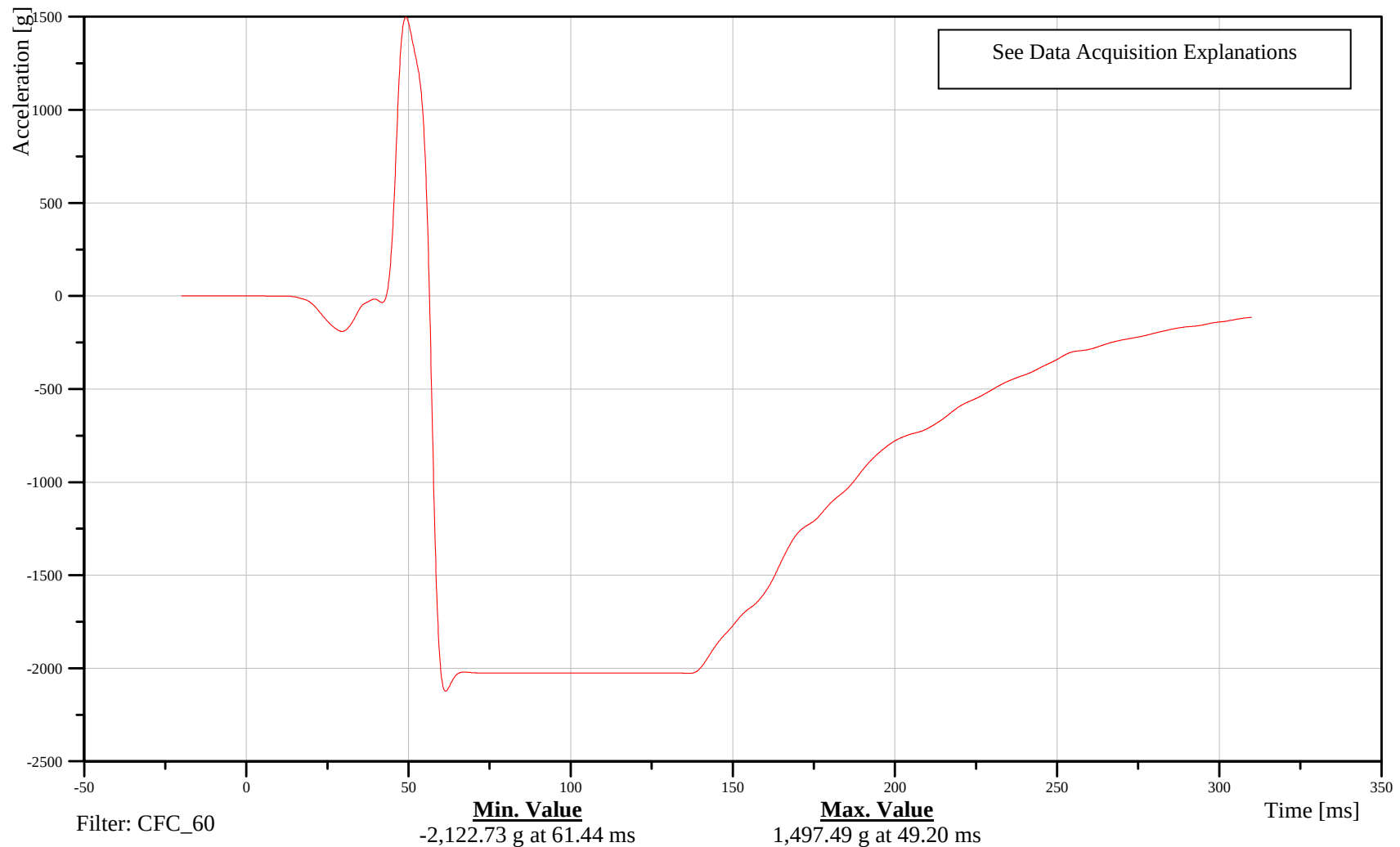
Date: 03/20/2006
Time: 08:08

Customer: VRTC

12ENGNT0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

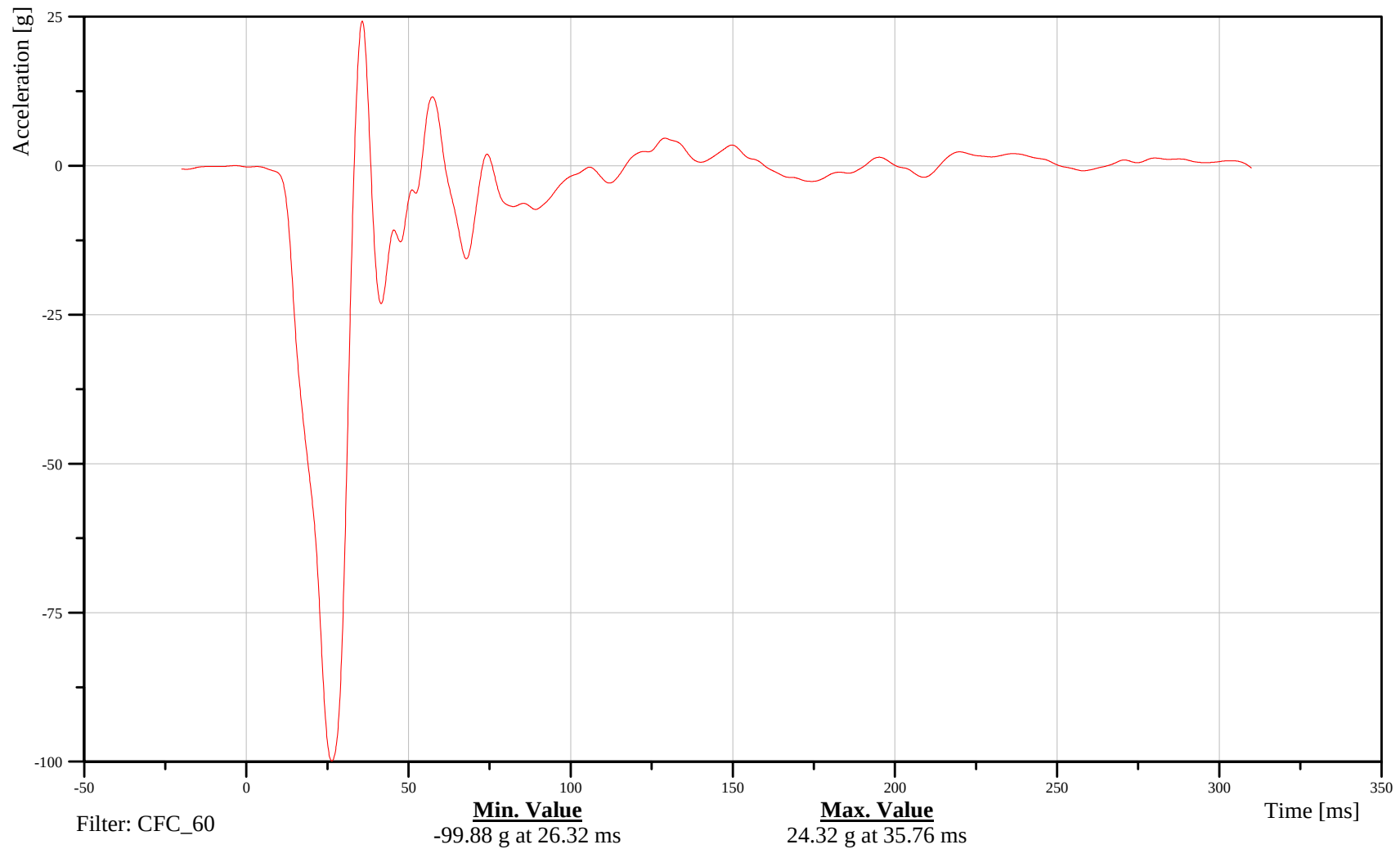
Bullet Vehicle Bottom of Engine X-Axis Acceleration

Customer: VRTC

12ENG NBO0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

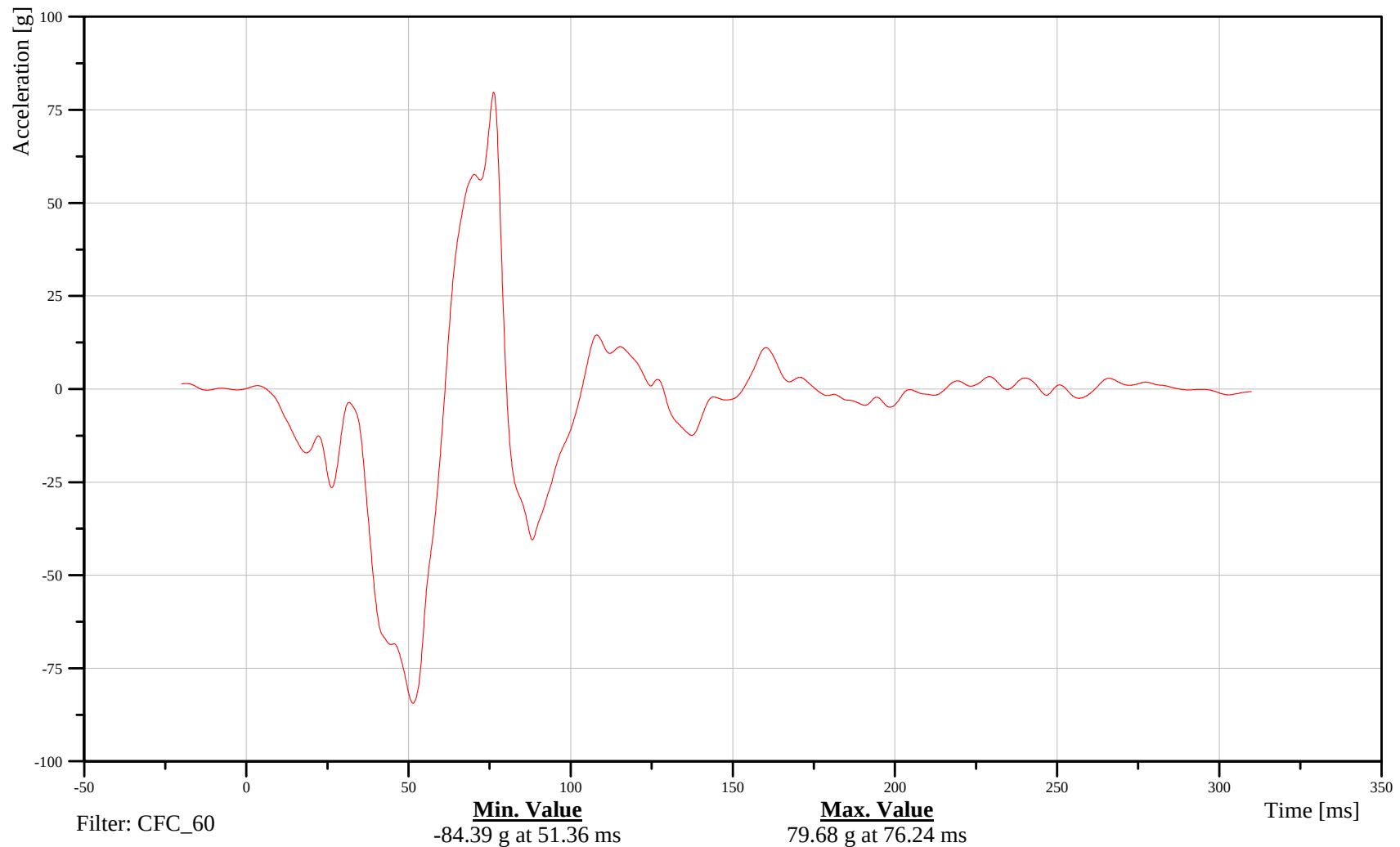
Bullet Vehicle Right Front Brake Caliper X-Axis Acceleration

Customer: VRTC

13VEHCRI0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

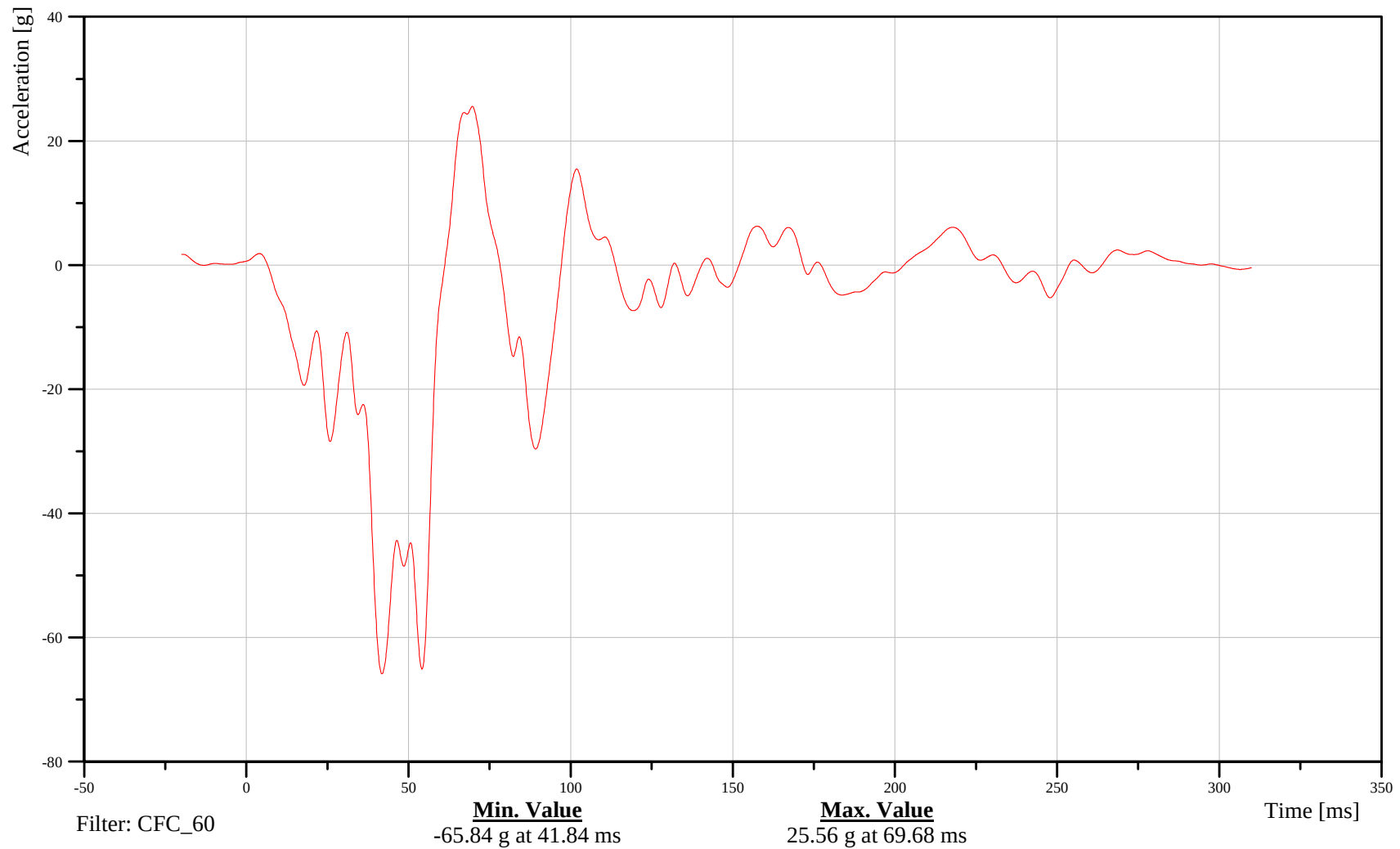
Bullet Vehicle Left Front Brake Caliper X-Axis Acceleration

Customer: VRTC

11VEHICLE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

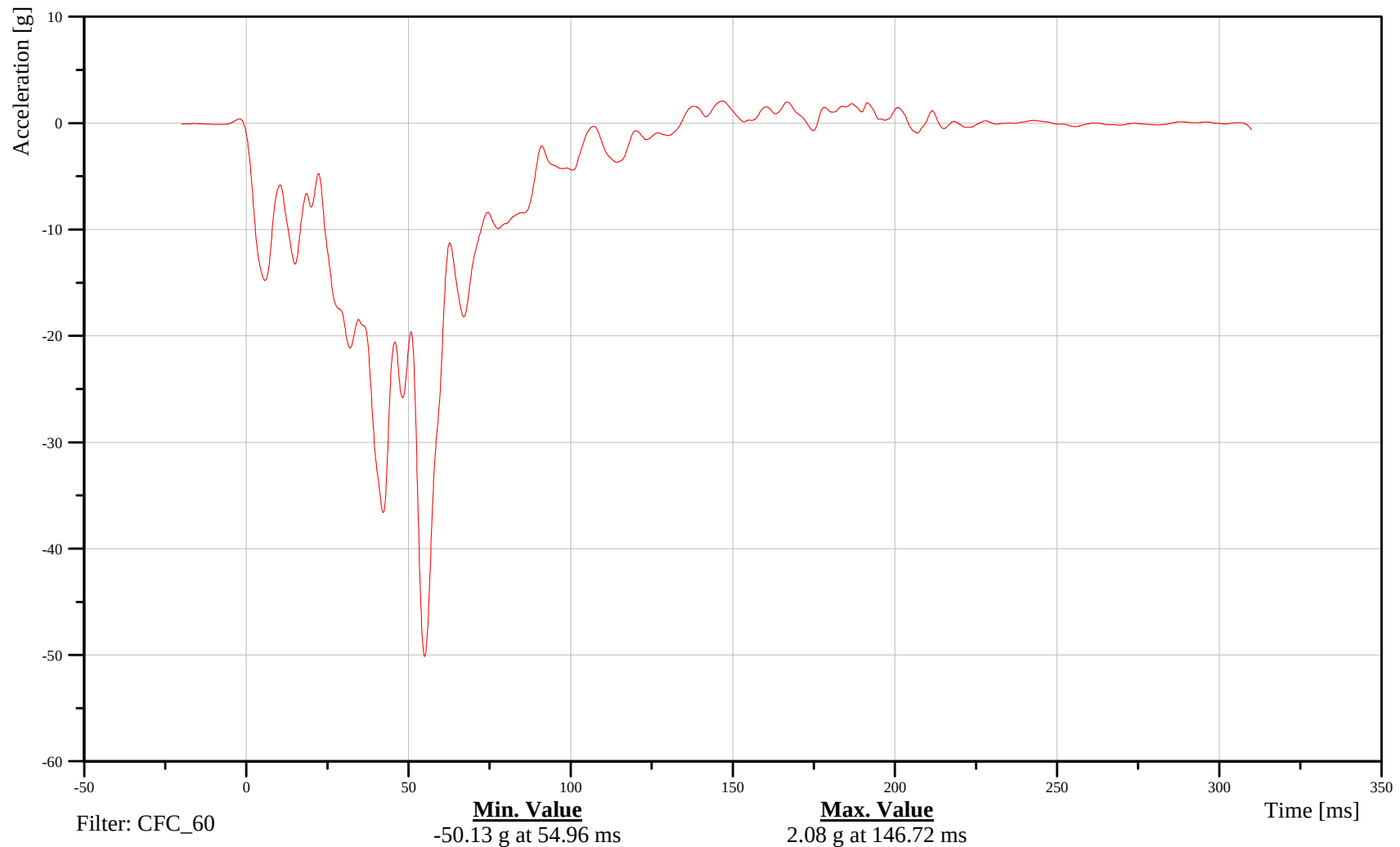
Bullet Vehicle Toe Pan Accelerator X-Axis Acceleration

Customer: VRTC

11PEAC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

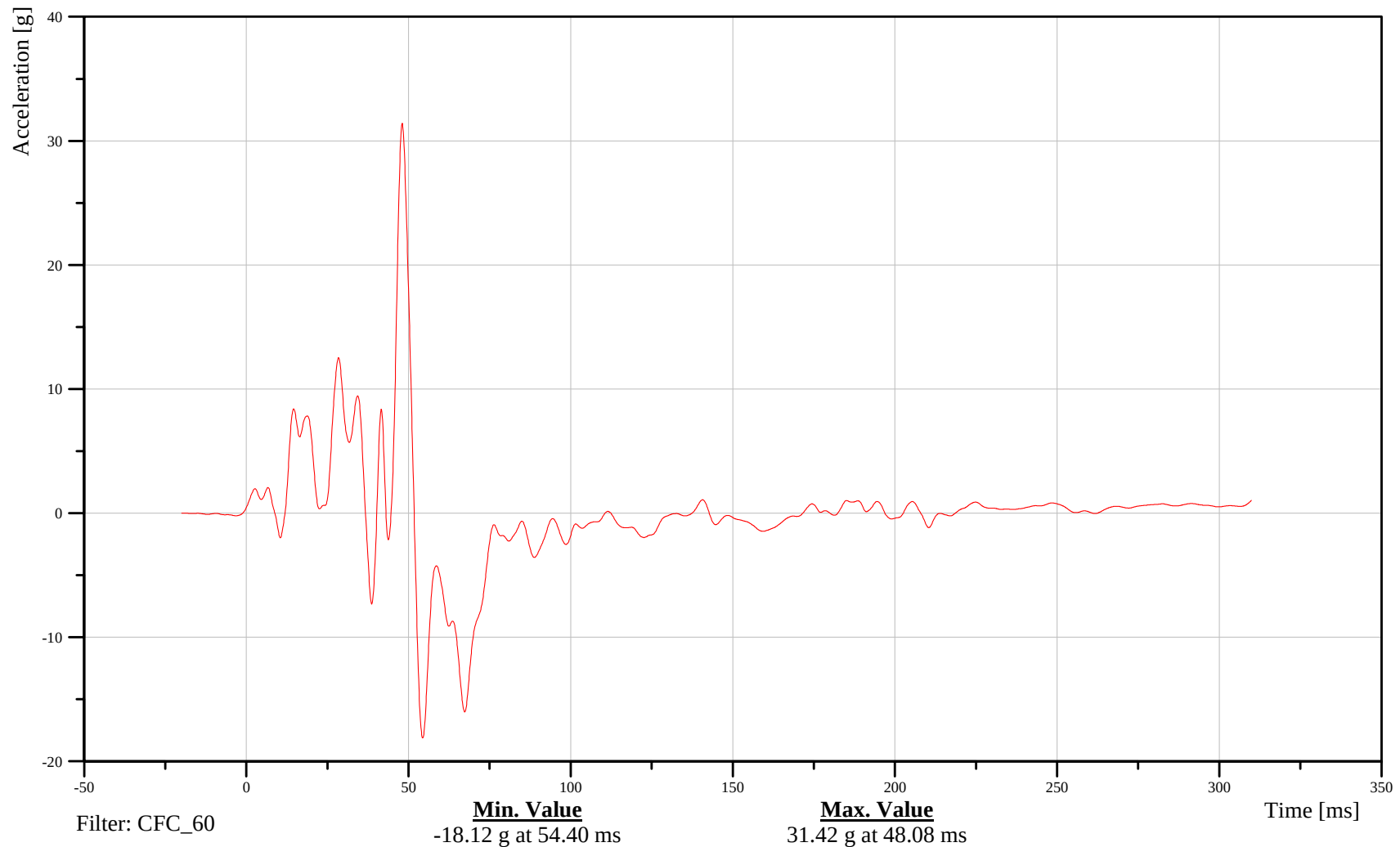
Bullet Vehicle Toe Pan Accelerator Z-Axis Acceleration

Customer: VRTC

11PEAC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

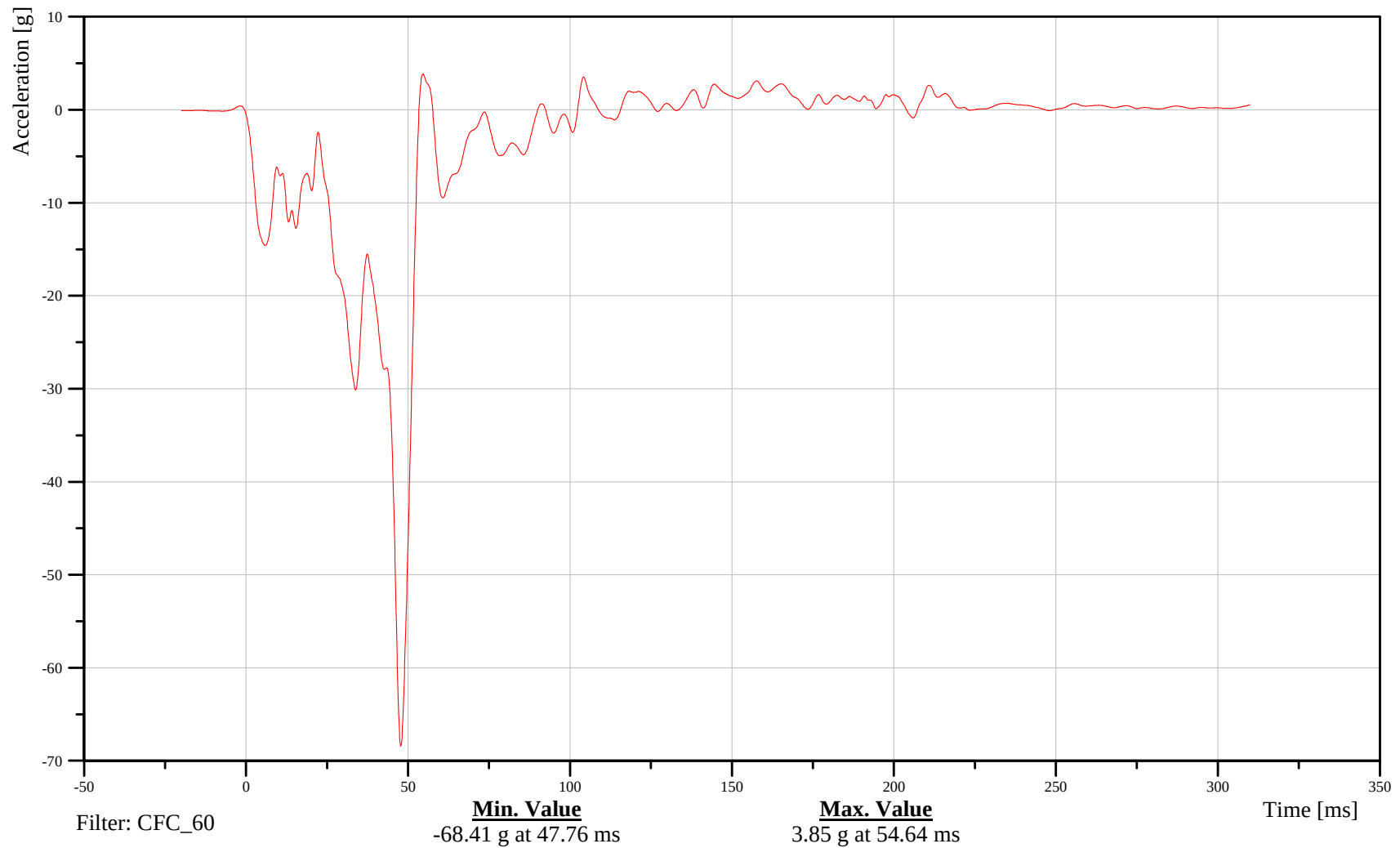
Bullet Vehicle Toe Pan Footrest X-Axis Acceleration

Customer: VRTC

11VEHC000001ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle Toe Pan Footrest Z-Axis Acceleration

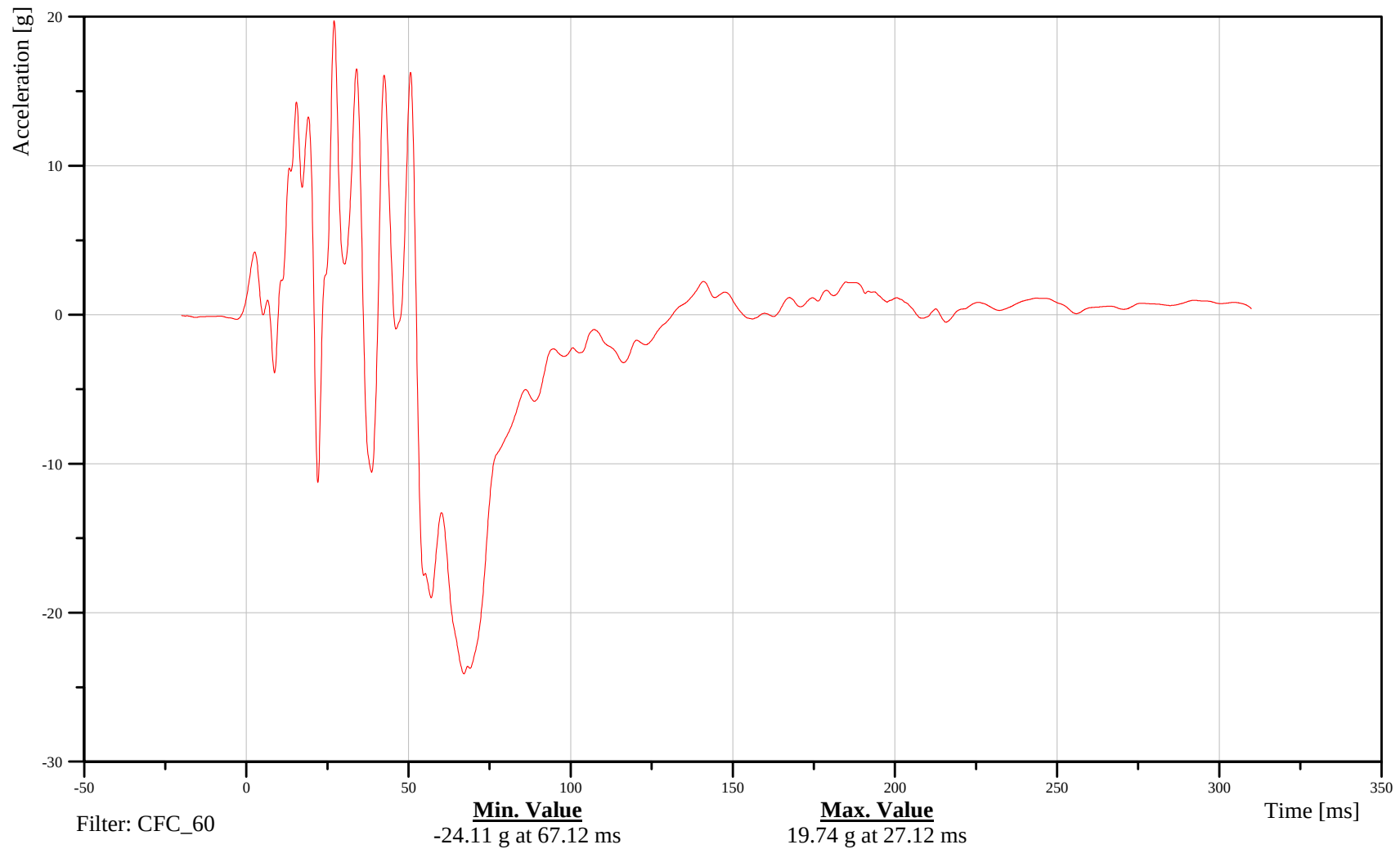
Date: 03/20/2006
Time: 08:08

Customer: VRTC

11VEHC000001ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

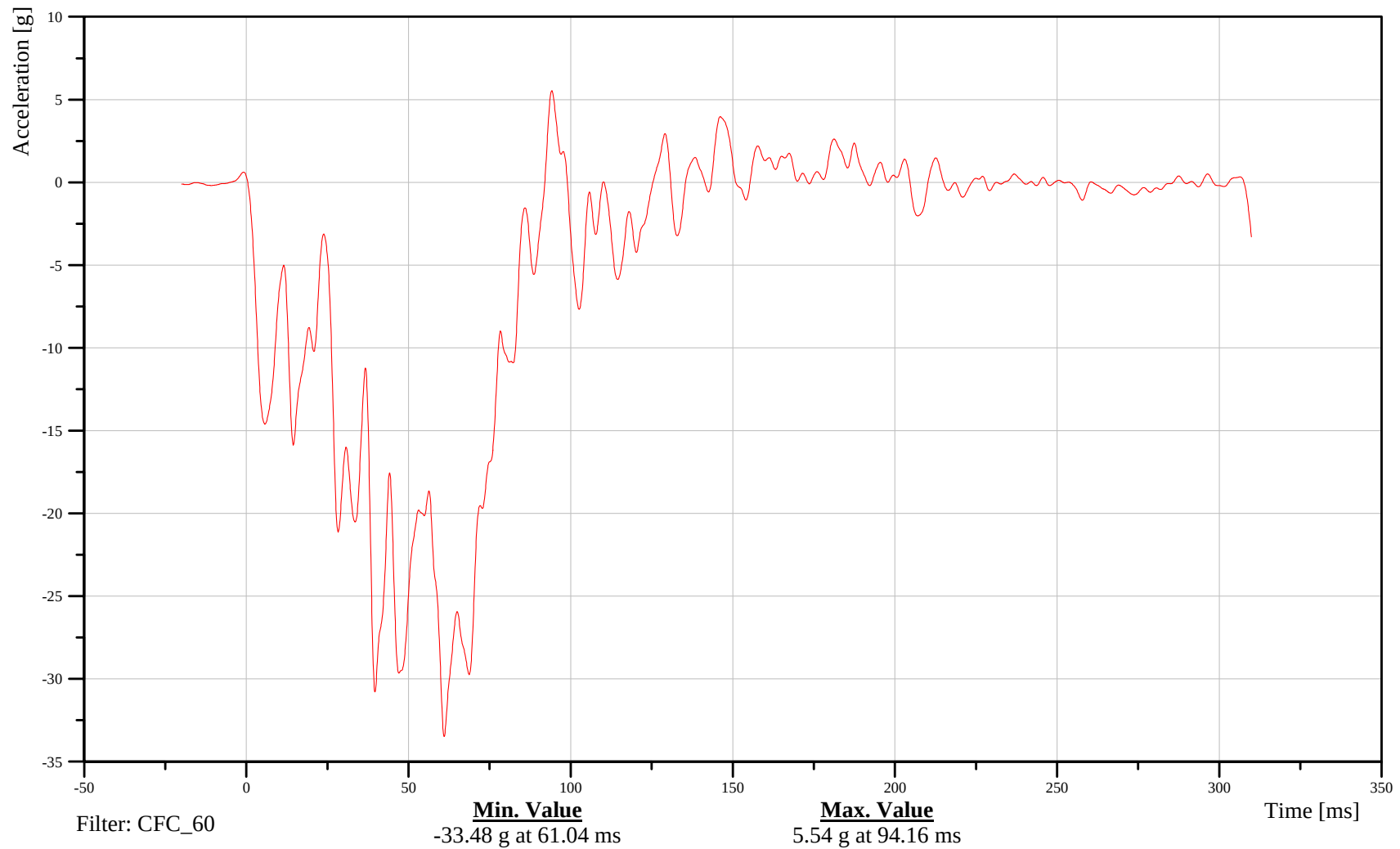
Bullet Vehicle Rear Tunnel Center X-Axis Acceleration

Customer: VRTC

15TUNNCY0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle CG X-Axis Acceleration

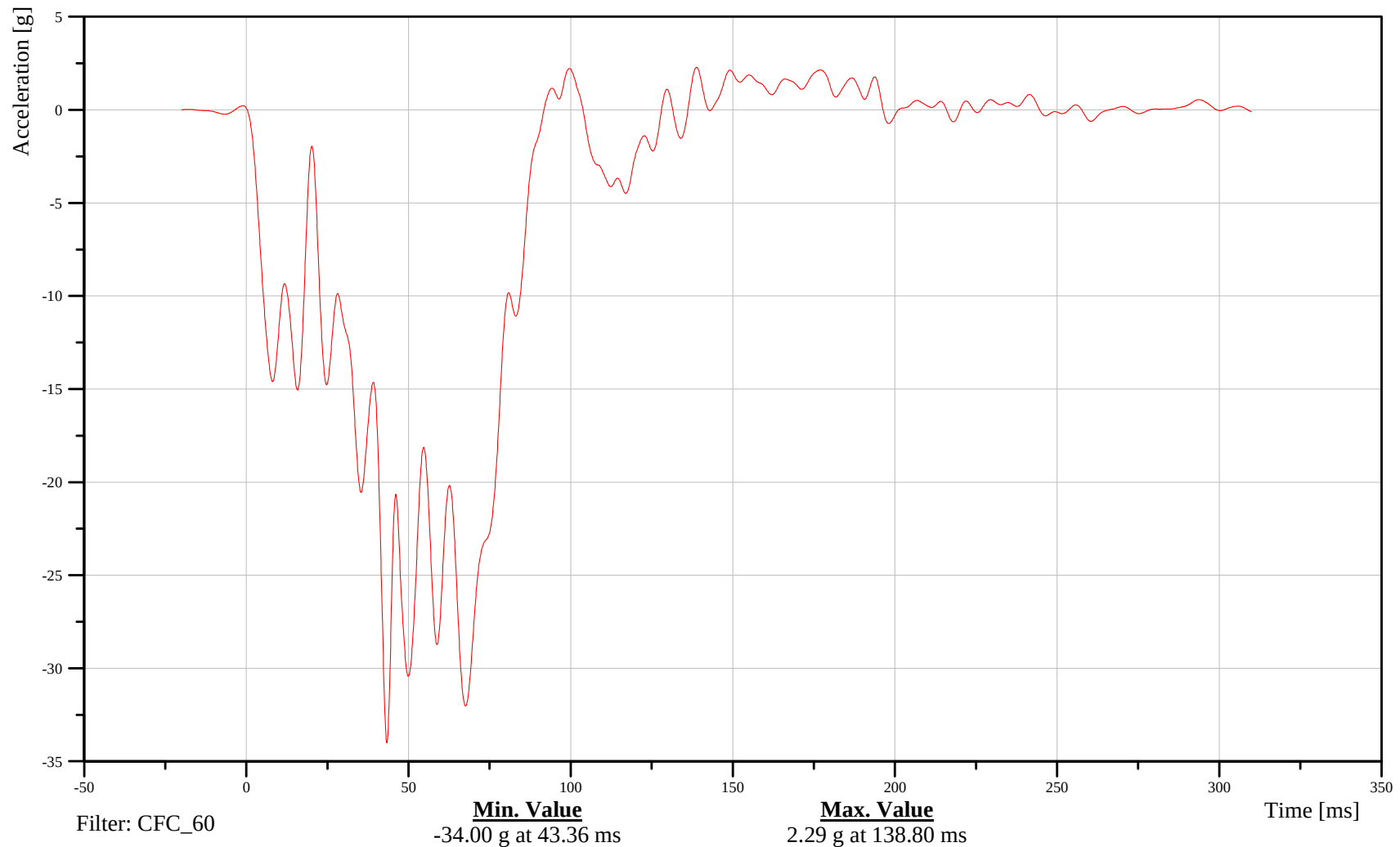
Date: 03/20/2006
Time: 08:08

Customer: VRTC

10VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

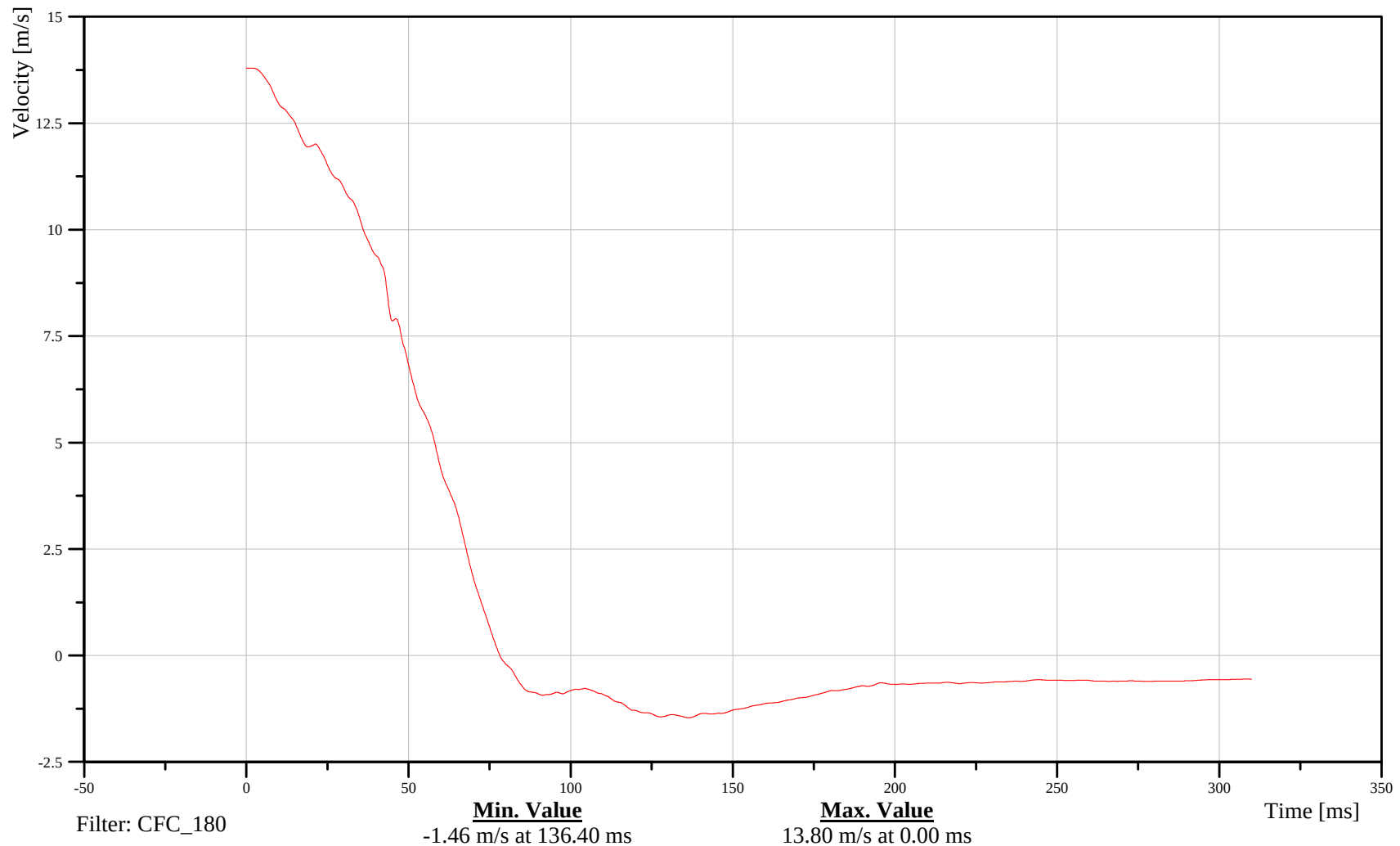
Bullet Vehicle CG X-Axis Velocity

Customer: VRTC

10VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

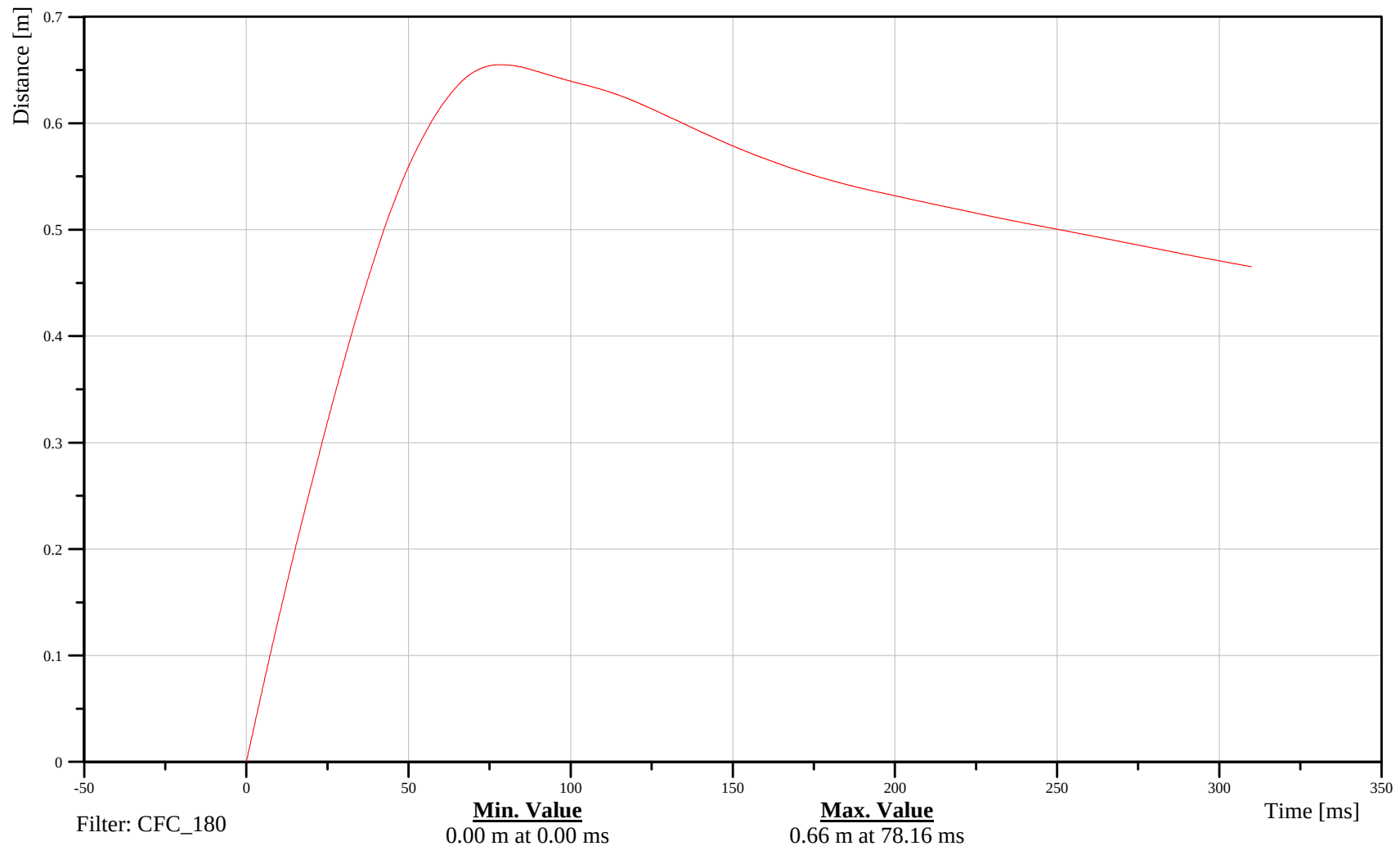
Bullet Vehicle CG X-Axis Displacement

Customer: VRTC

10VEHCCG0000DCXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

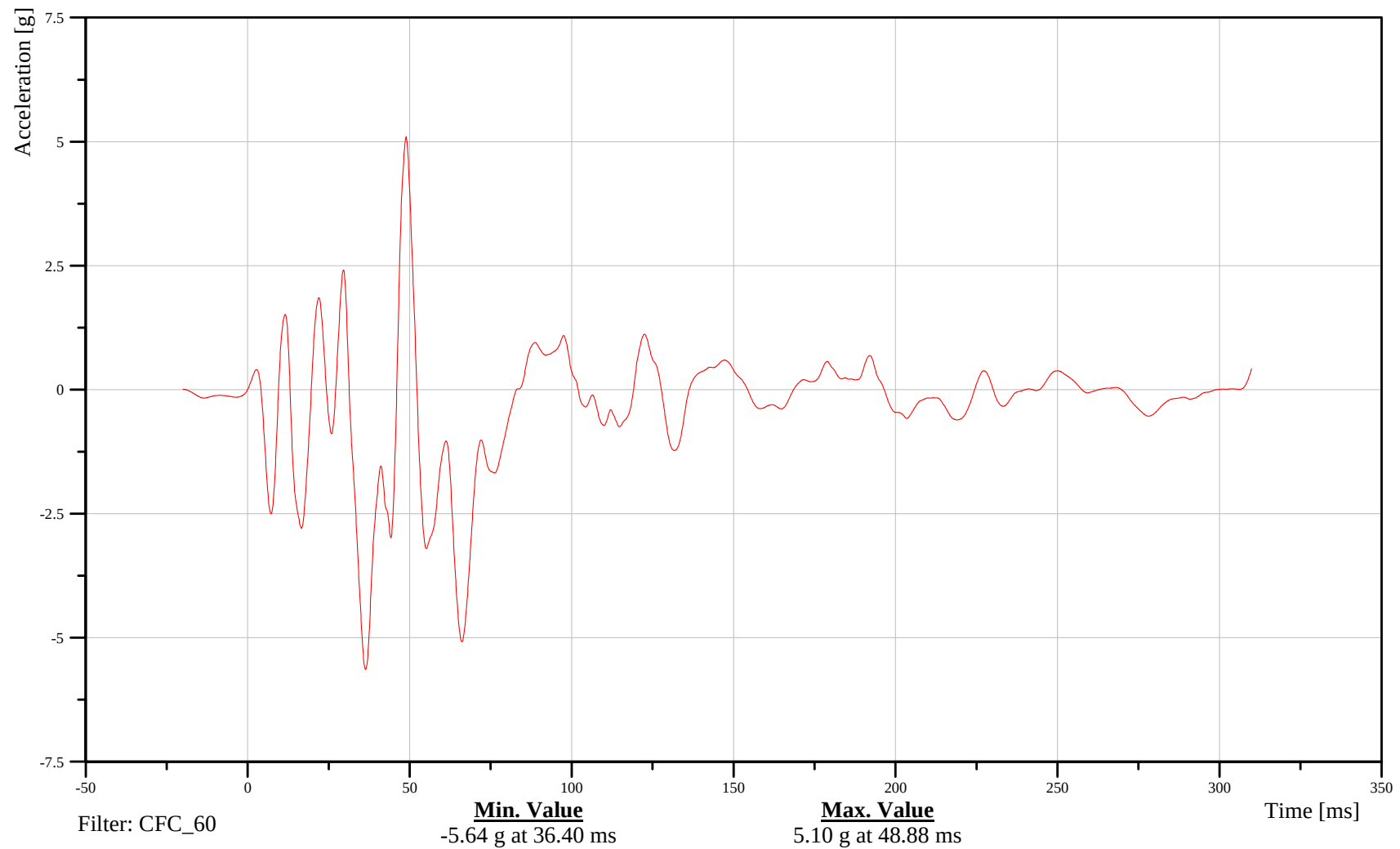
Bullet Vehicle CG Y-Axis Acceleration

Customer: VRTC

10VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

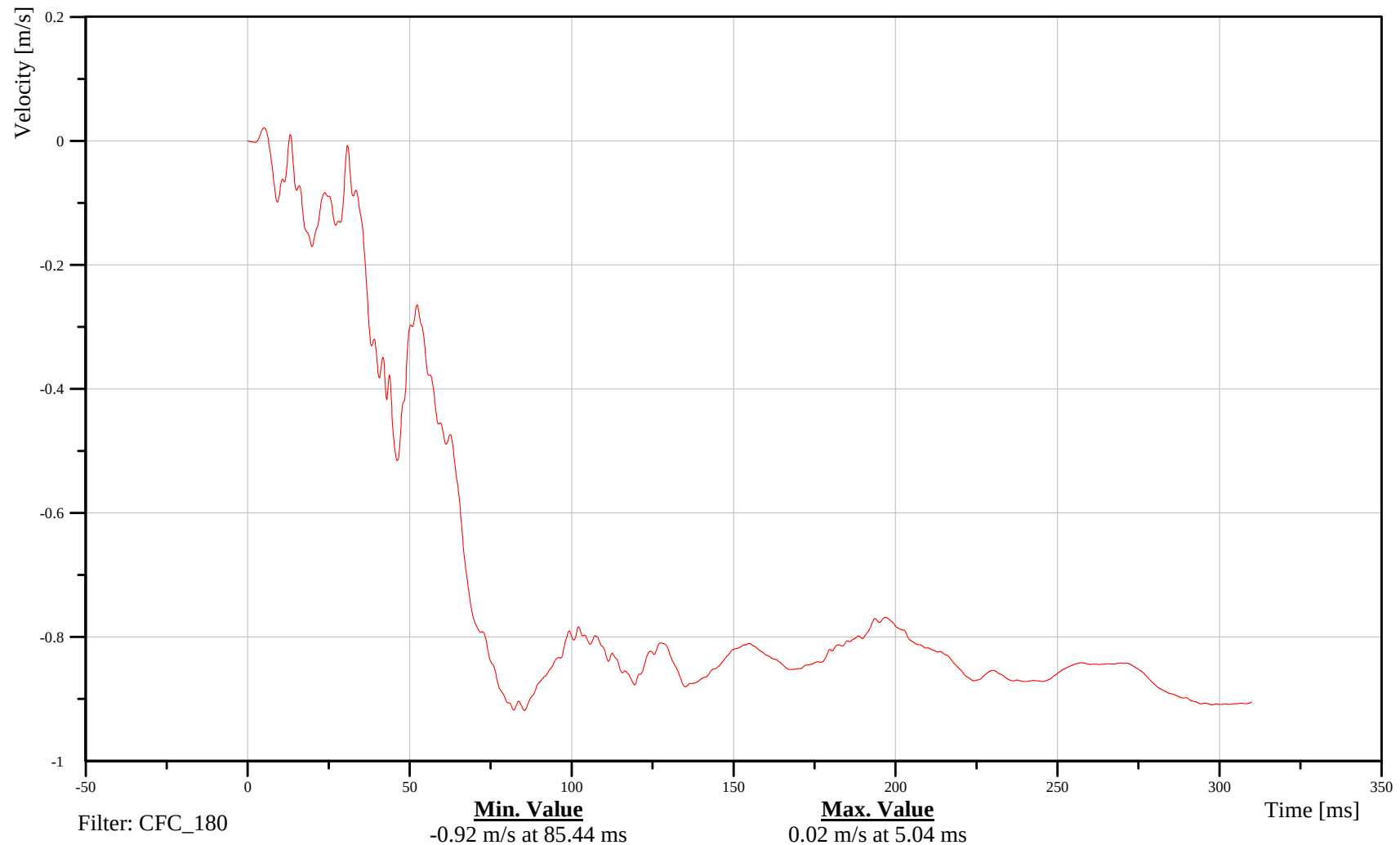
Bullet Vehicle CG Y-Axis Velocity

Customer: VRTC

10VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

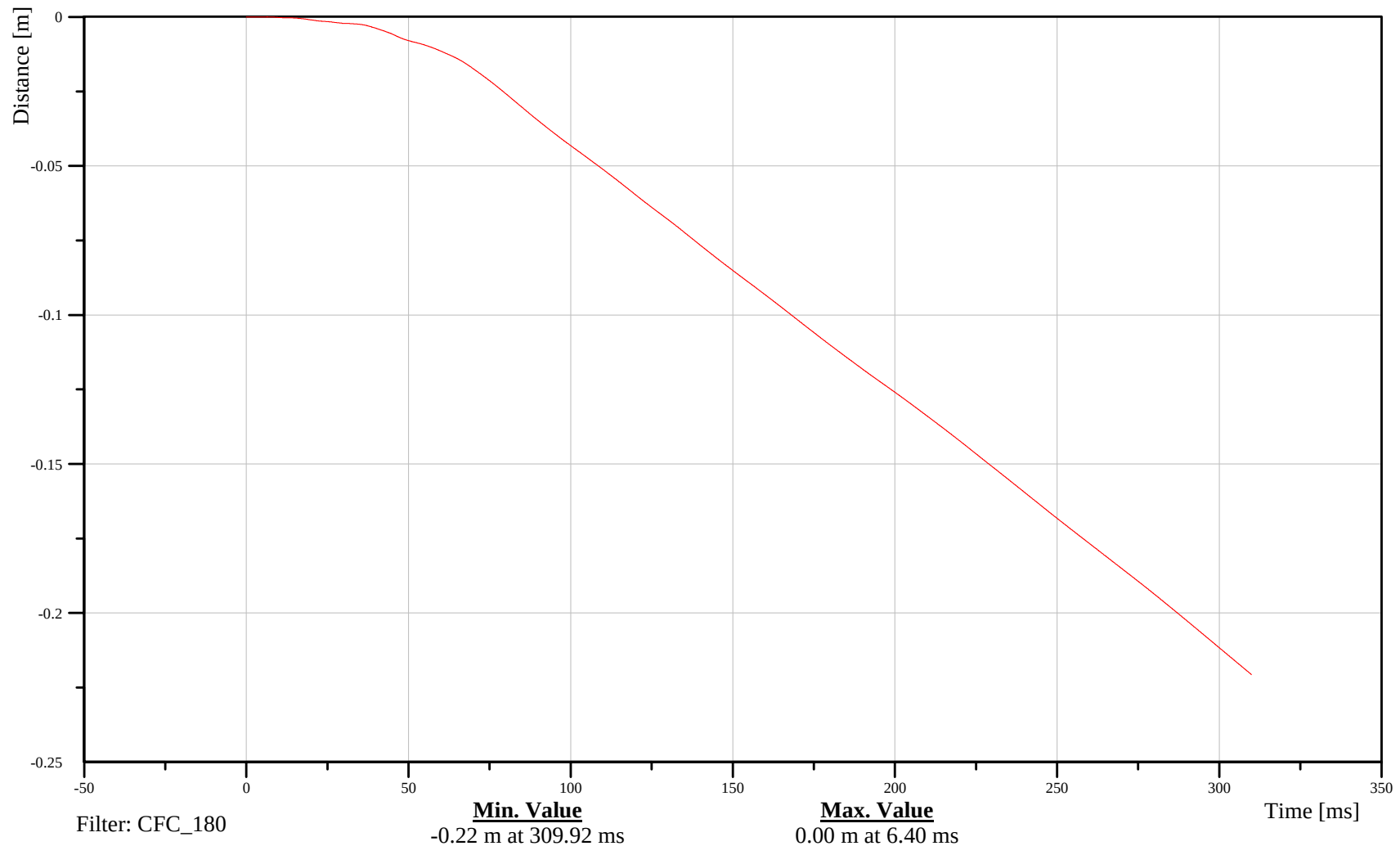
Bullet Vehicle CG Y-Axis Displacement

Customer: VRTC

10VEHCCG0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle CG Z-Axis Acceleration

Date: 03/20/2006

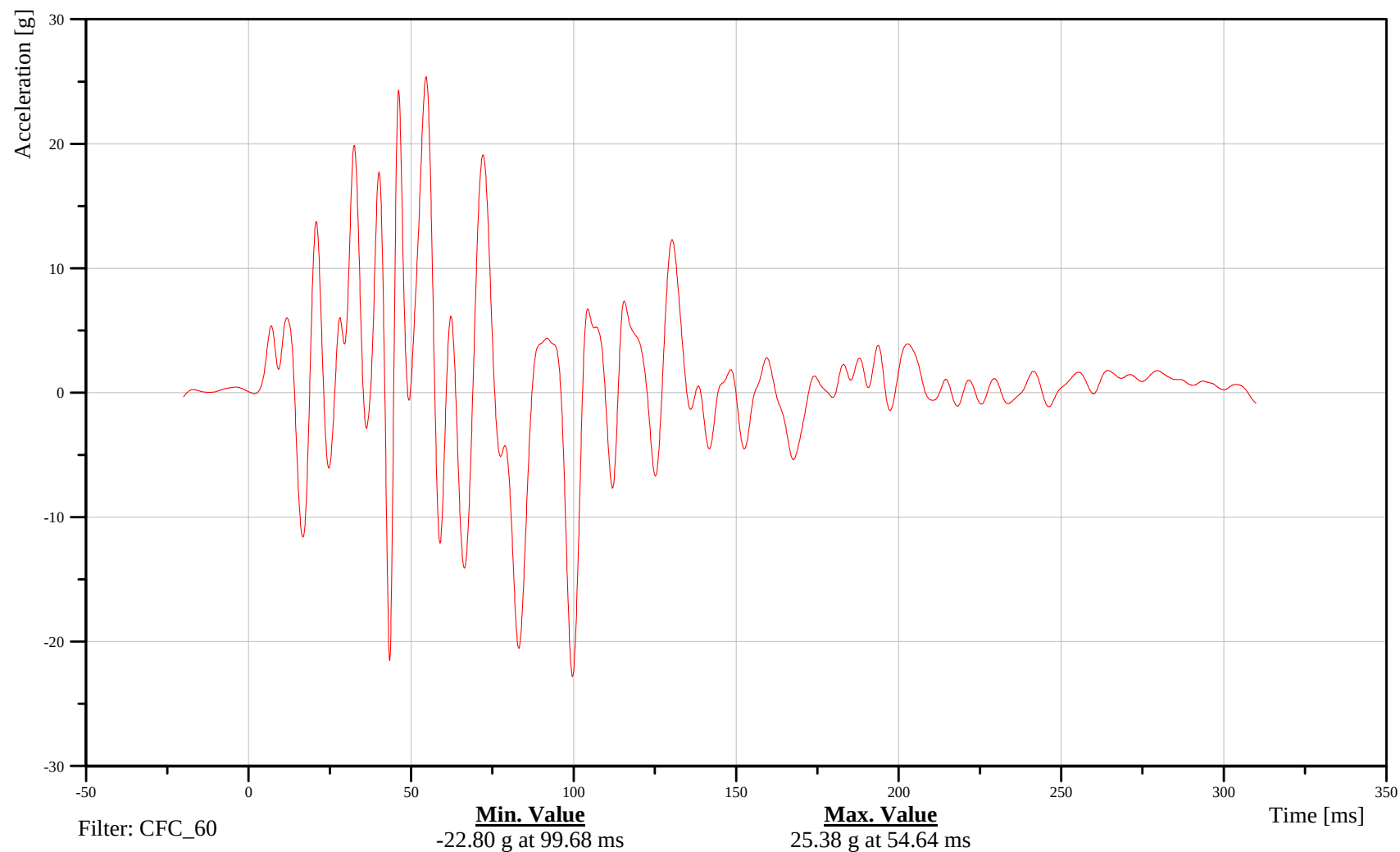
Time: 08:08

Customer: VRTC

10VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

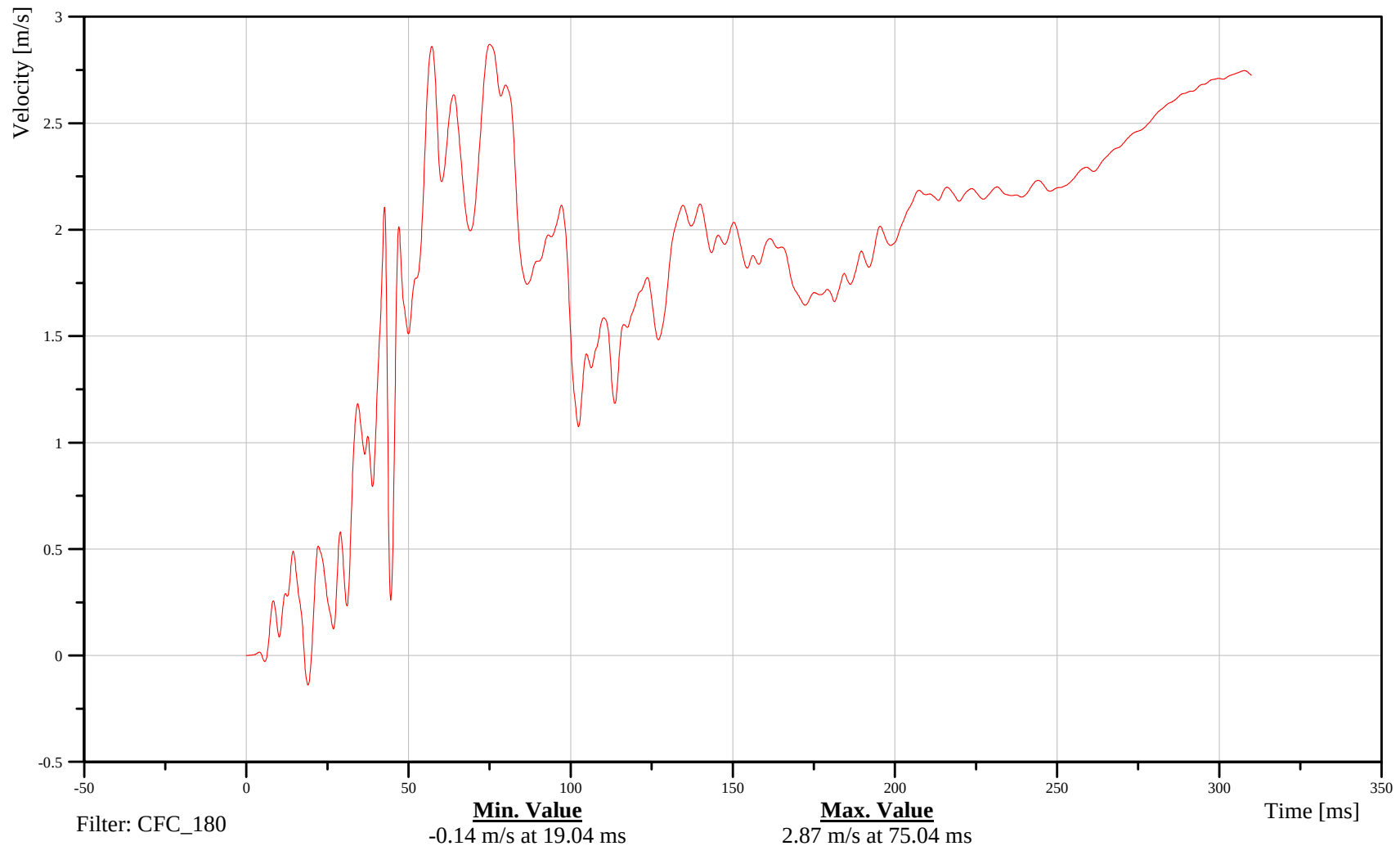
Bullet Vehicle CG Z-Axis Velocity

Customer: VRTC

10VEHCCG0000VEZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

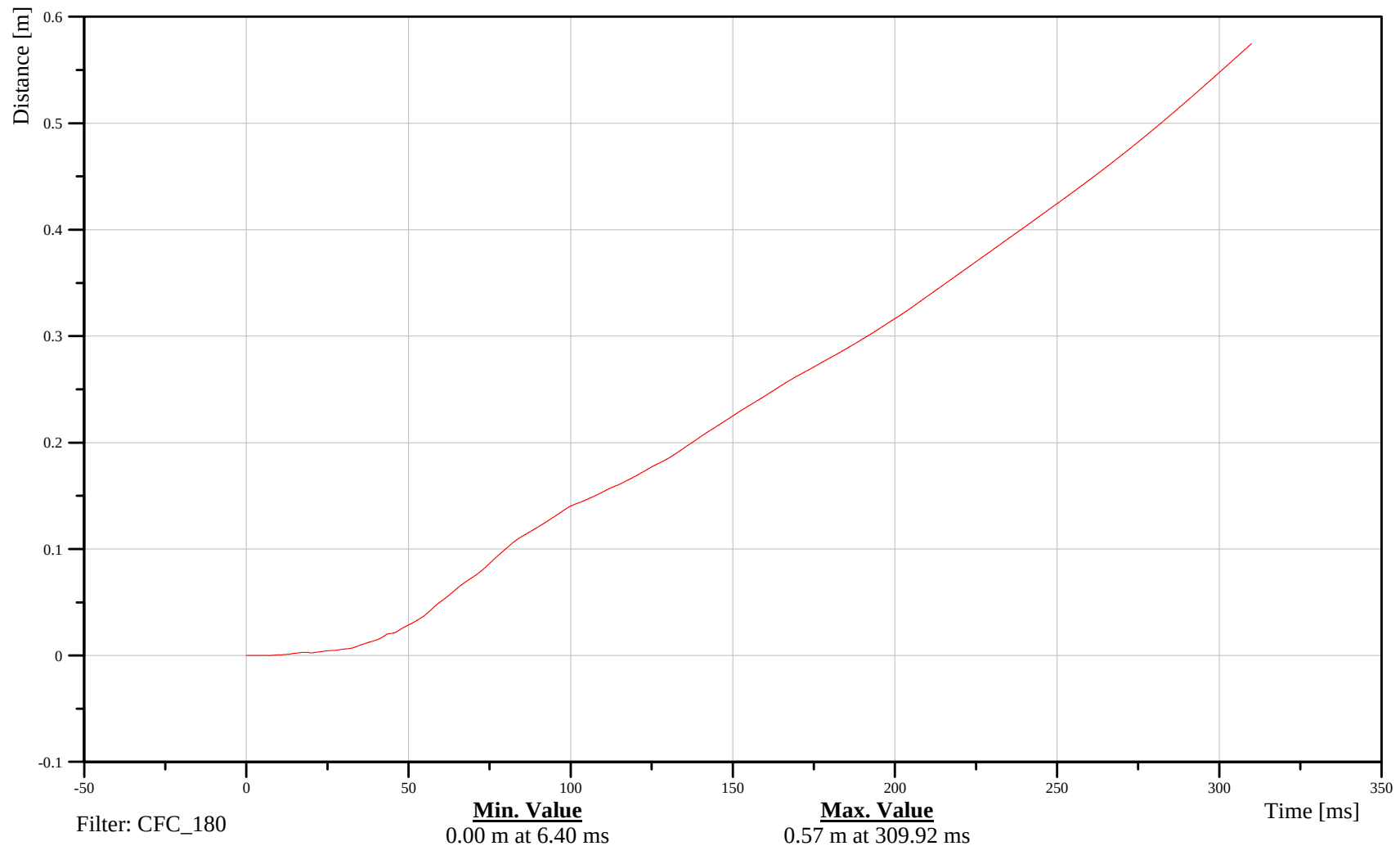
Bullet Vehicle CG Z-Axis Displacement

Customer: VRTC

10VEHCCG0000DCZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

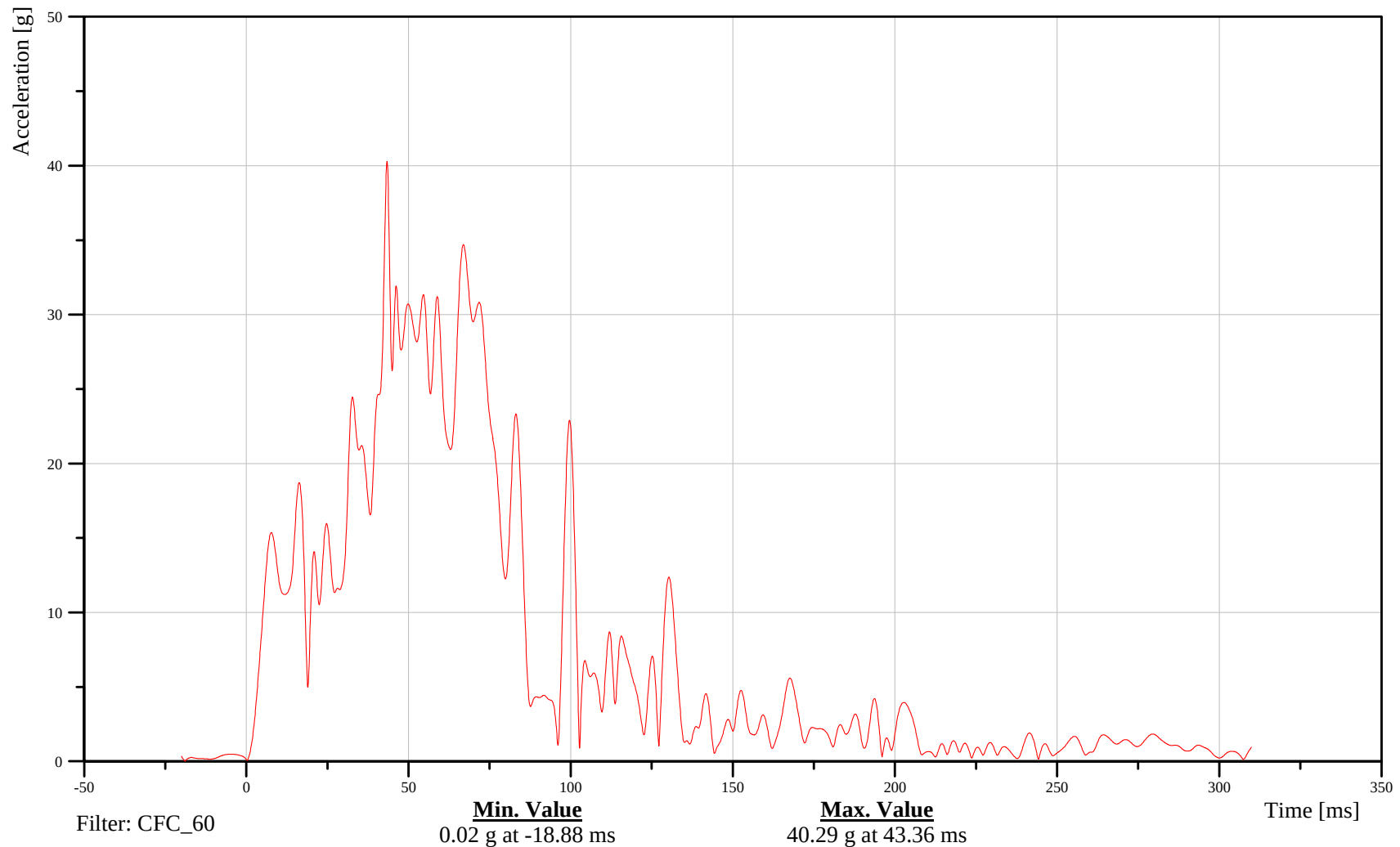
Bullet Vehicle CG Resultant Acceleration

Customer: VRTC

10VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

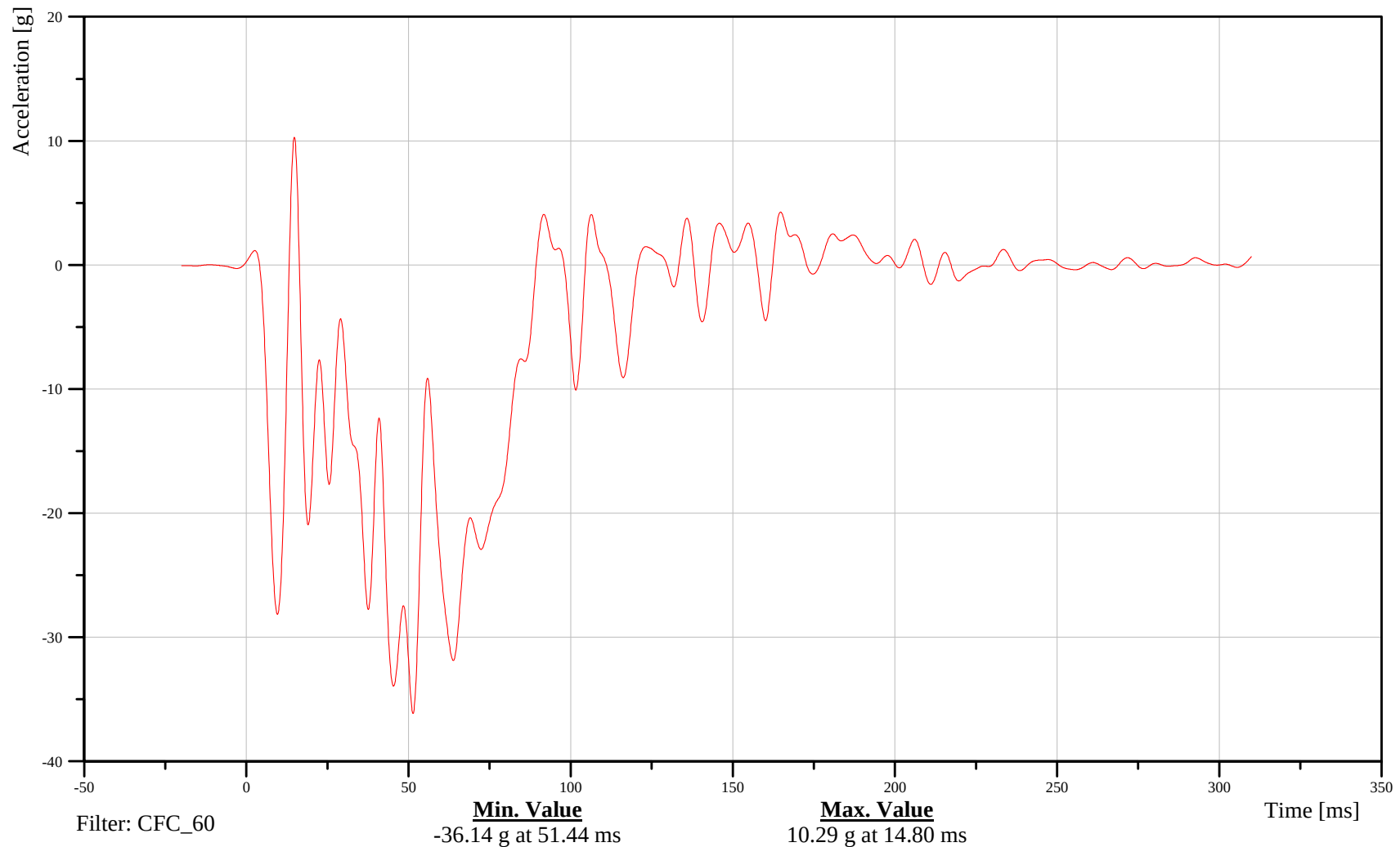
Bullet Vehicle Rear Deck X-Axis Acceleration

Customer: VRTC

18VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

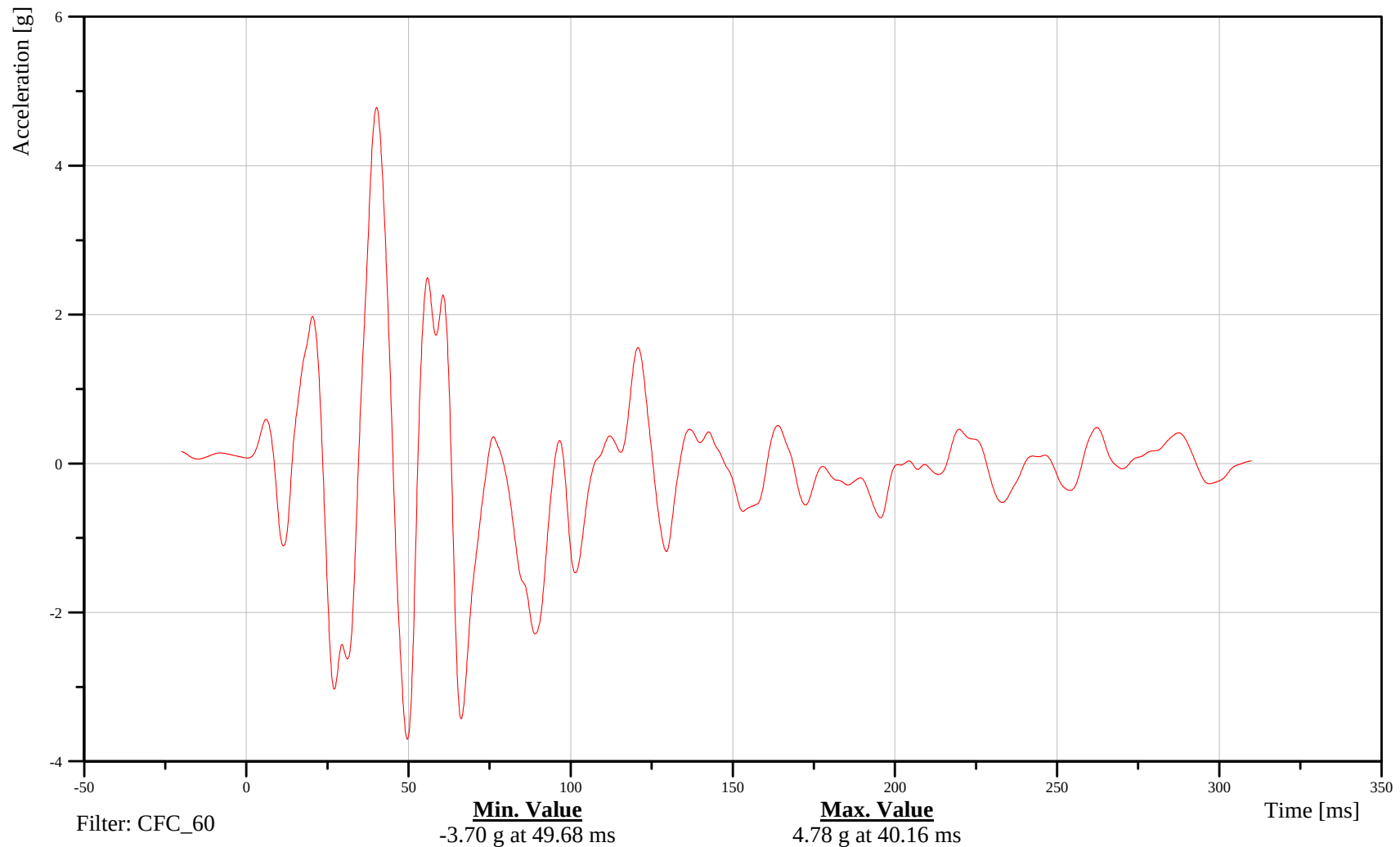
Bullet Vehicle Rear Deck Y-Axis Acceleration

Customer: VRTC

18VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

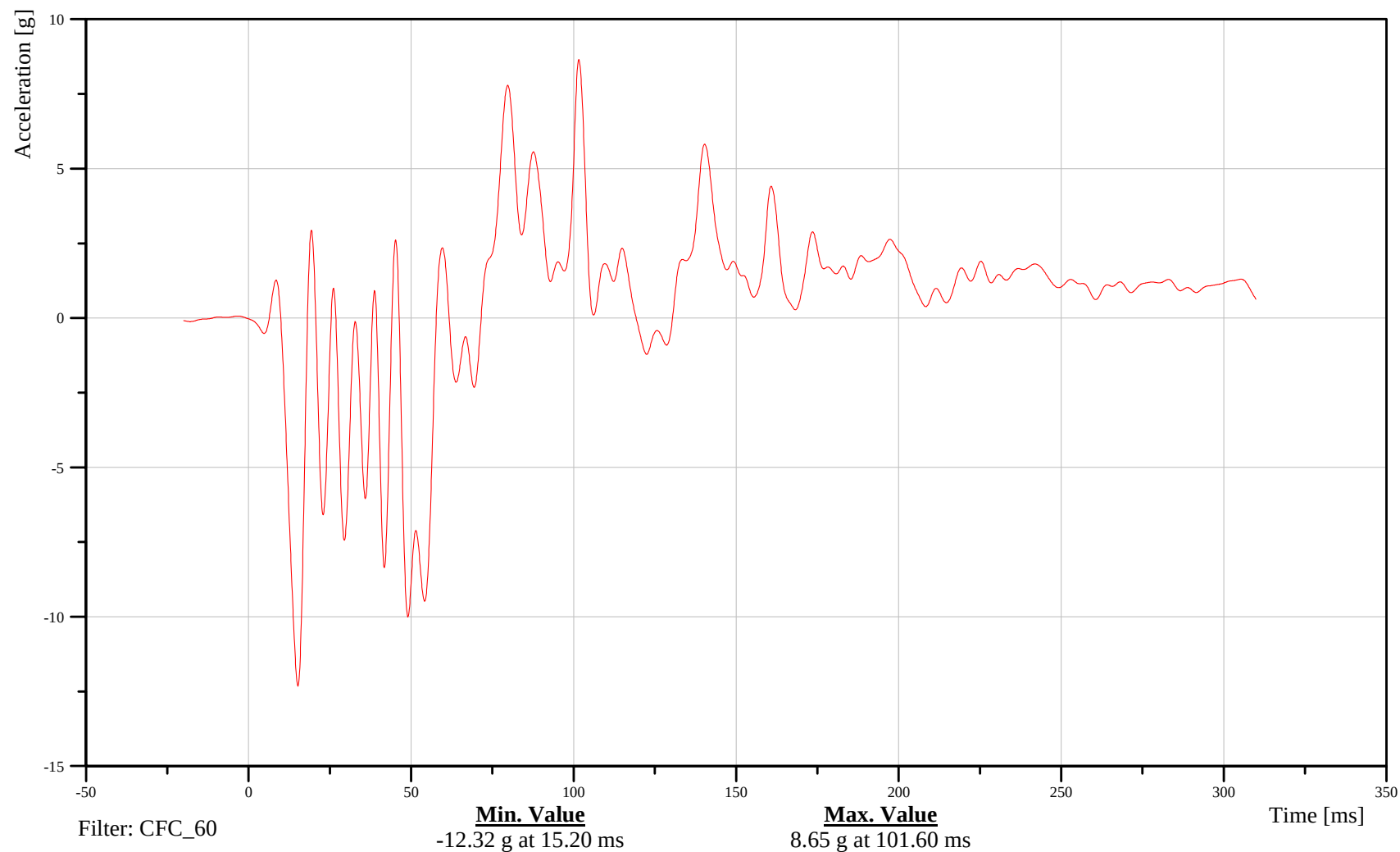
Bullet Vehicle Rear Deck Z-Axis Acceleration

Customer: VRTC

18VEHC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Bullet Vehicle Rear Deck Resultant Acceleration

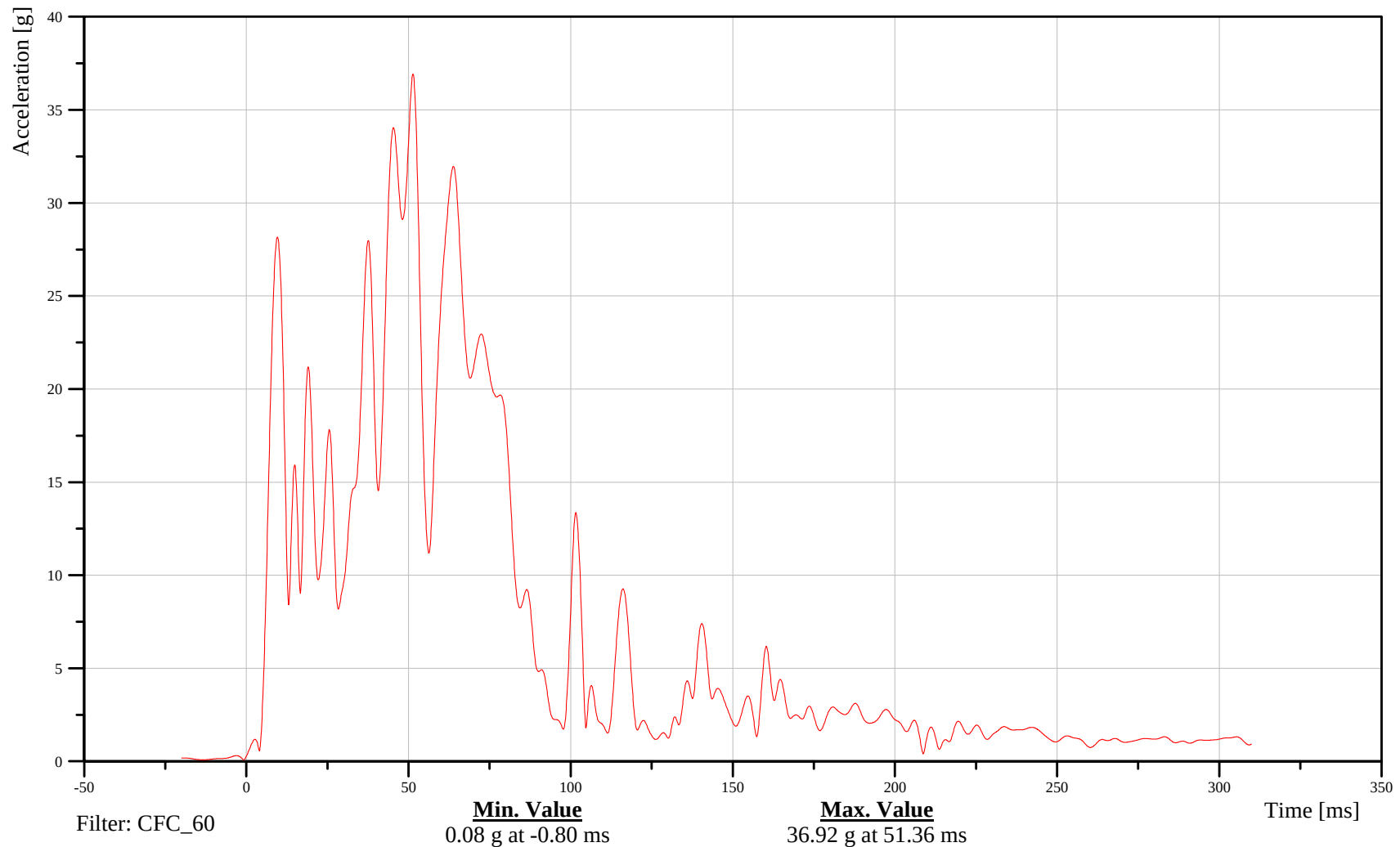
Time: 08:08

Customer: VRTC

18VEHC000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

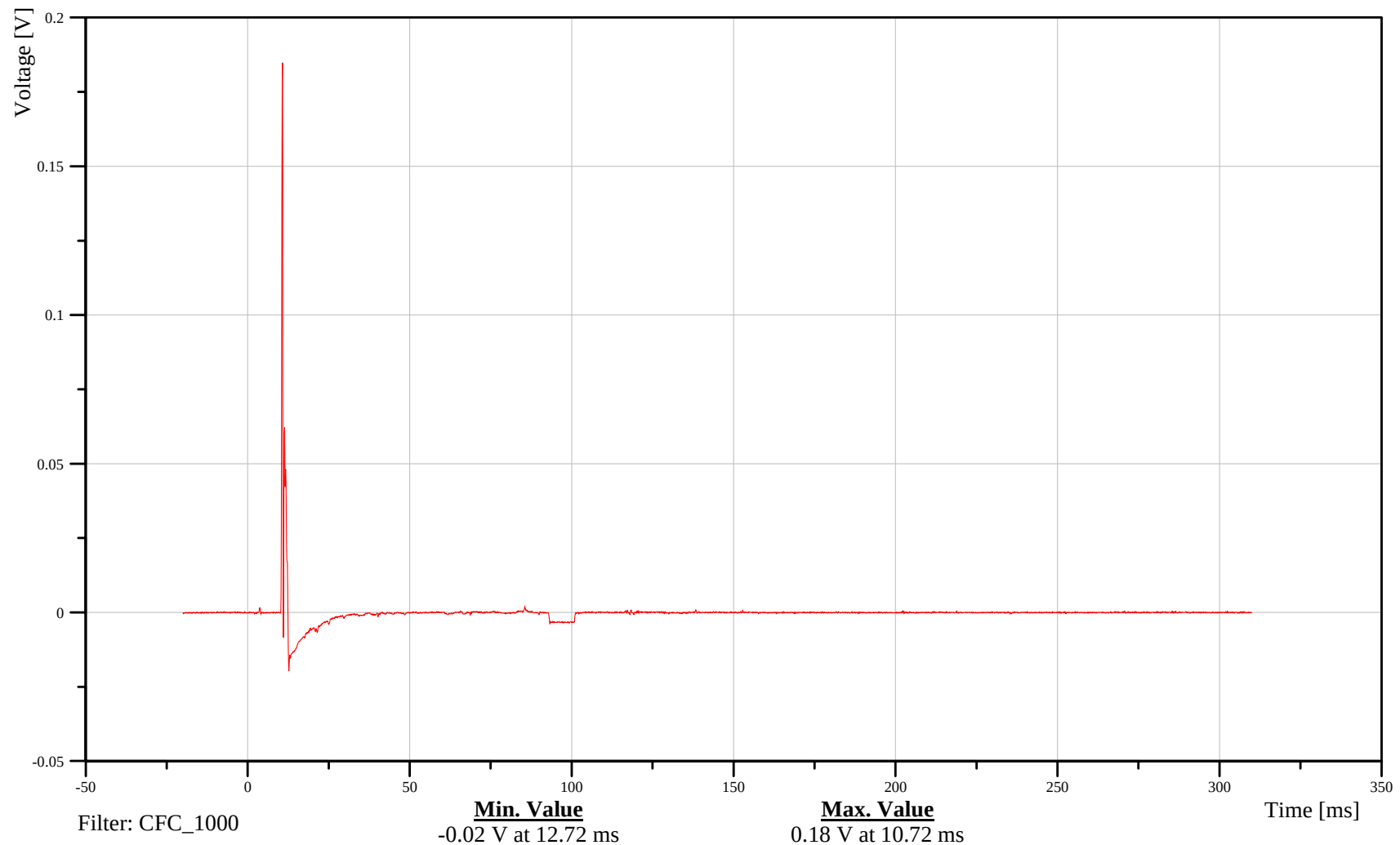
Bullet Vehicle Driver Airbag - Primary

Customer: VRTC

11AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

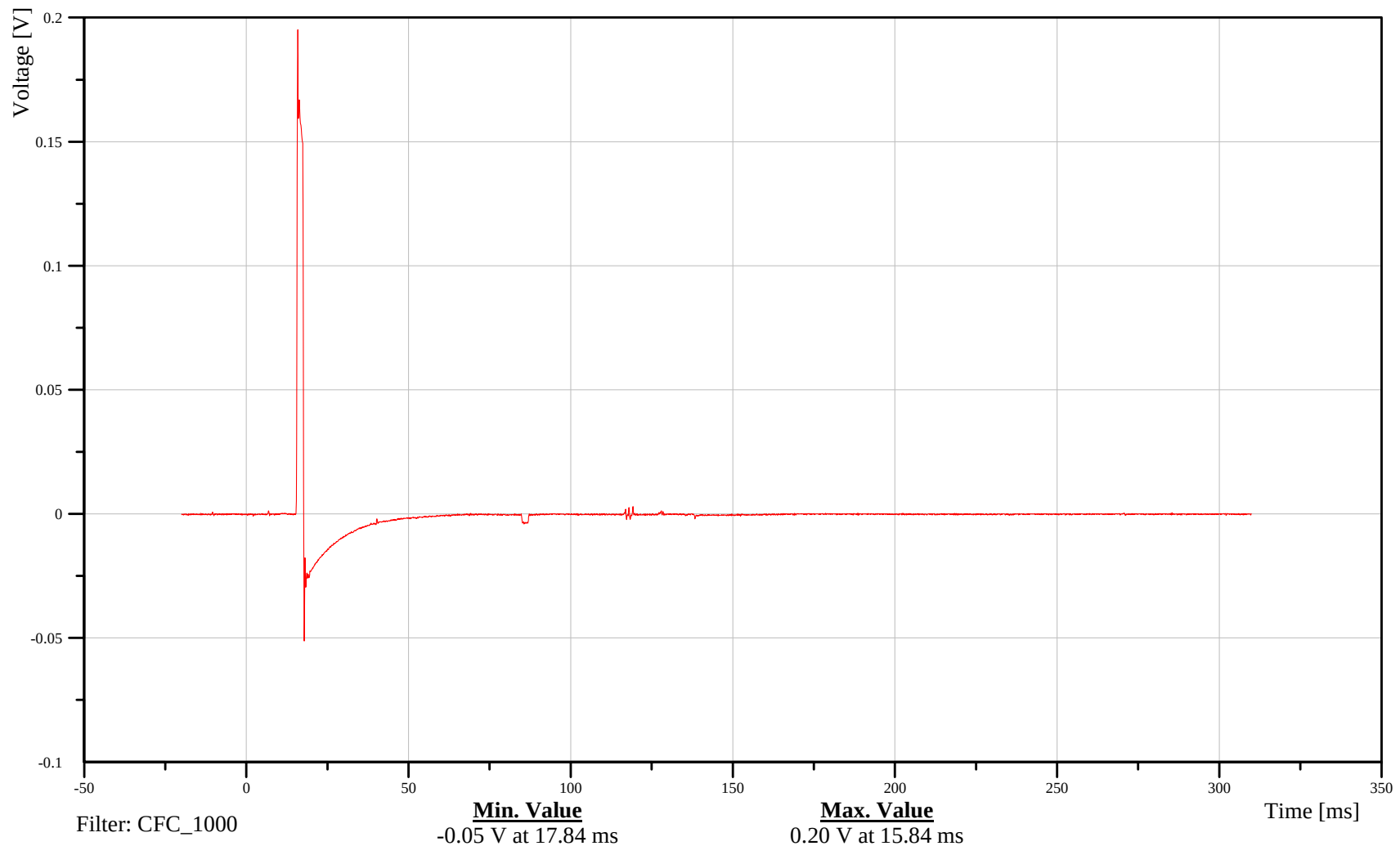
Bullet Vehicle Driver Airbag - Secondary

Customer: VRTC

11AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

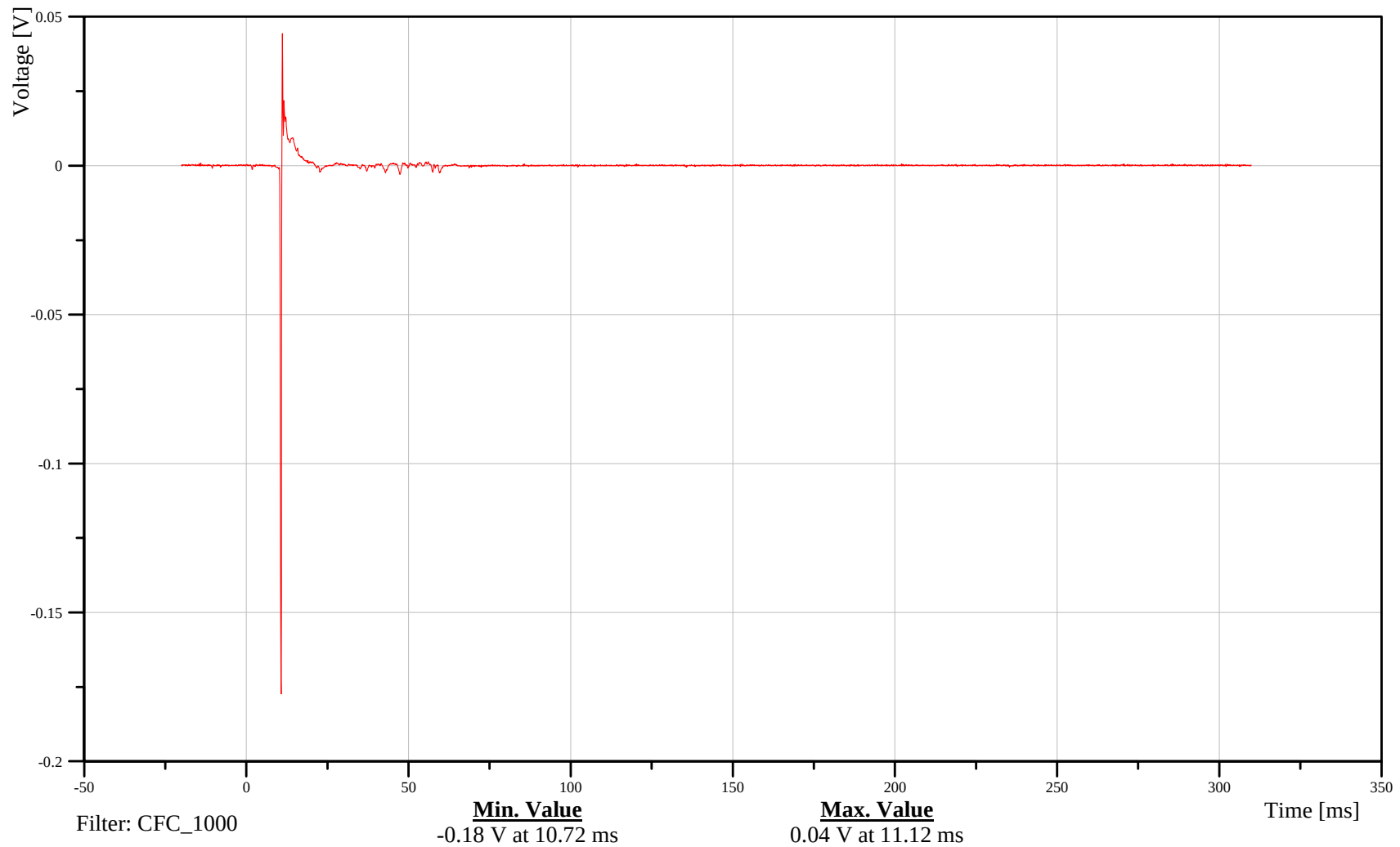
Bullet Vehicle Passenger Airbag - Primary

Customer: VRTC

13AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle Passenger Airbag - Secondary

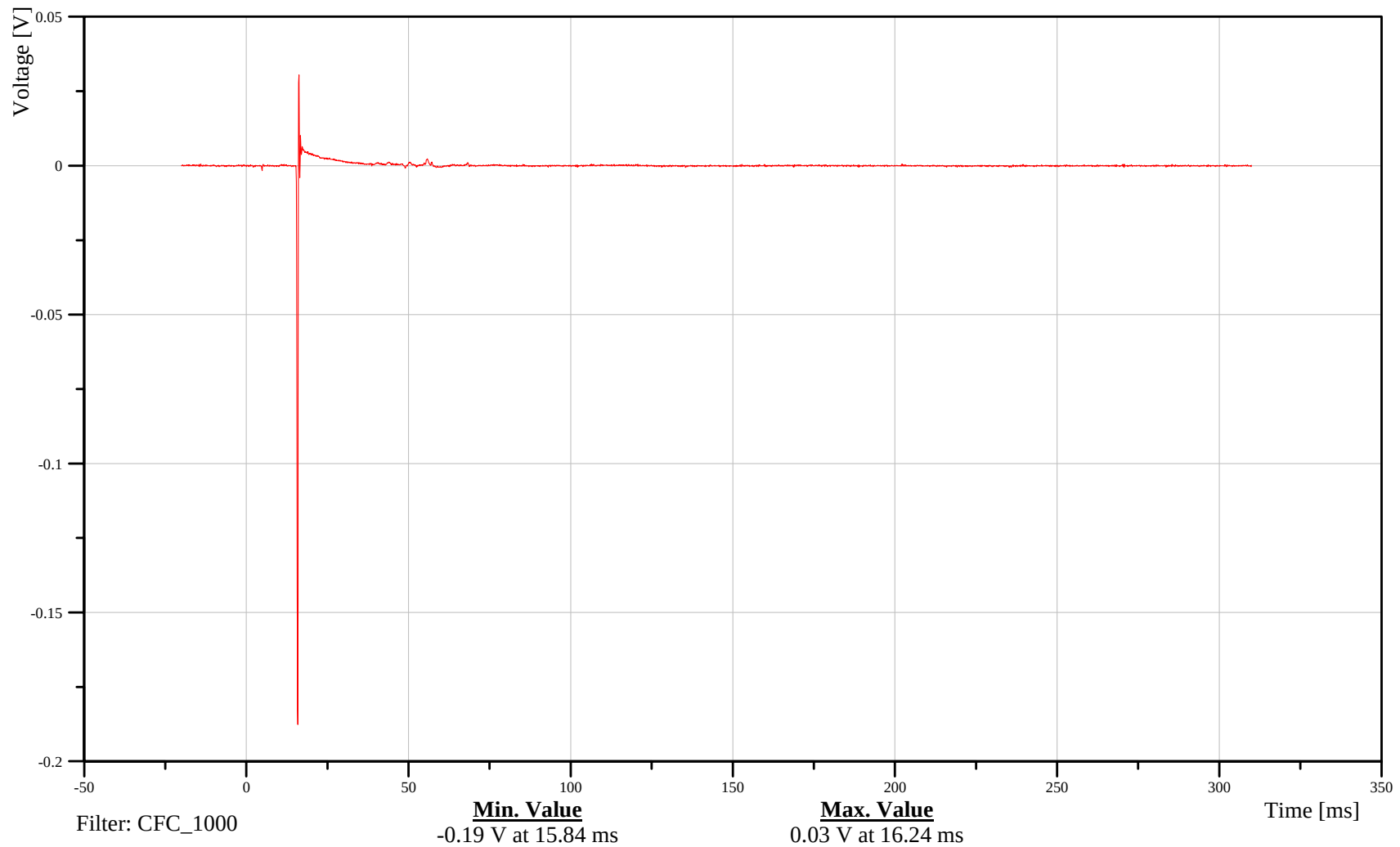
Date: 03/20/2006
Time: 08:08

Customer: VRTC

13AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

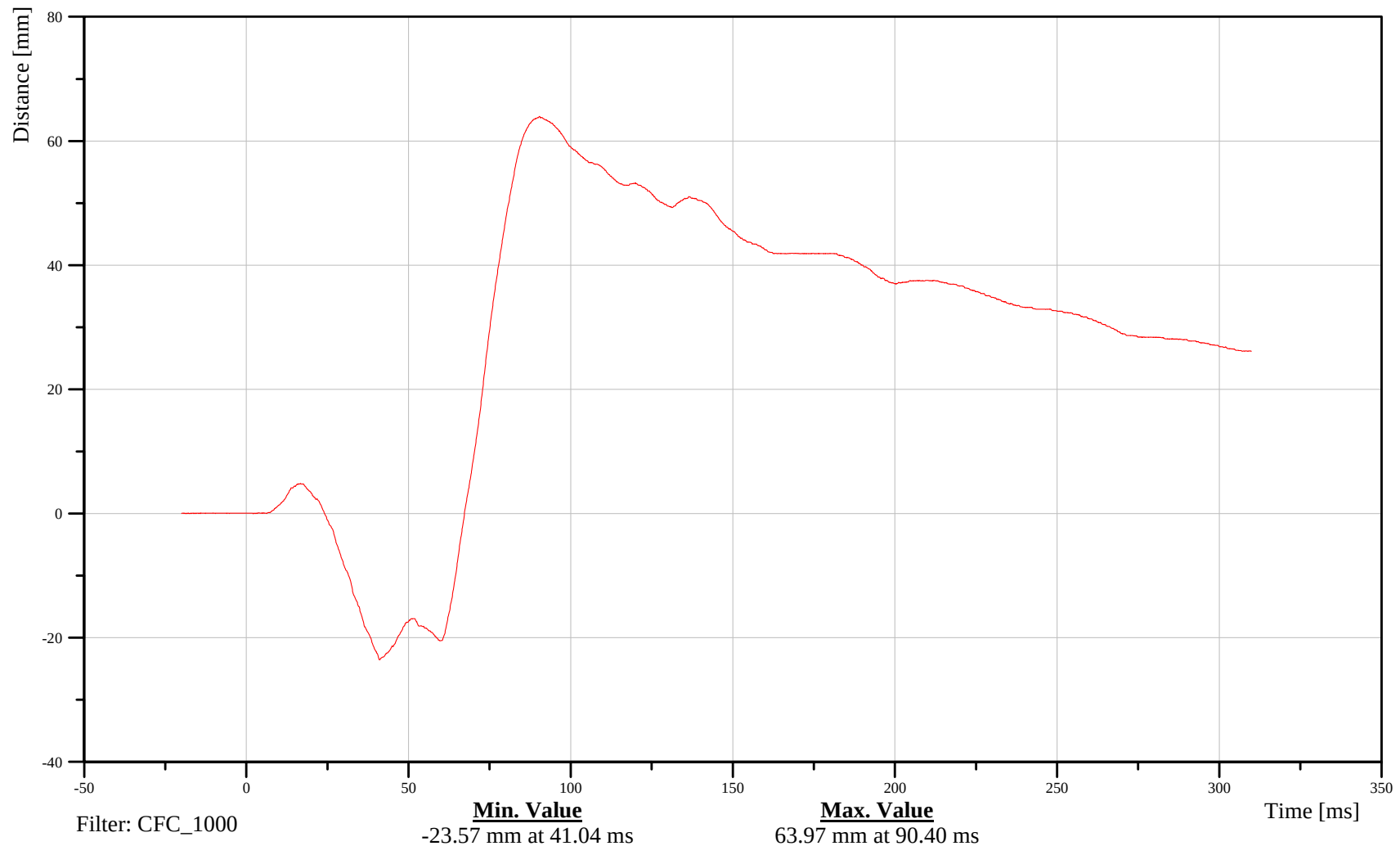
Bullet Vehicle Driver Shoulder Belt Spool and Retraction

Customer: VRTC

11SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle RF Passenger Lap Belt Spool

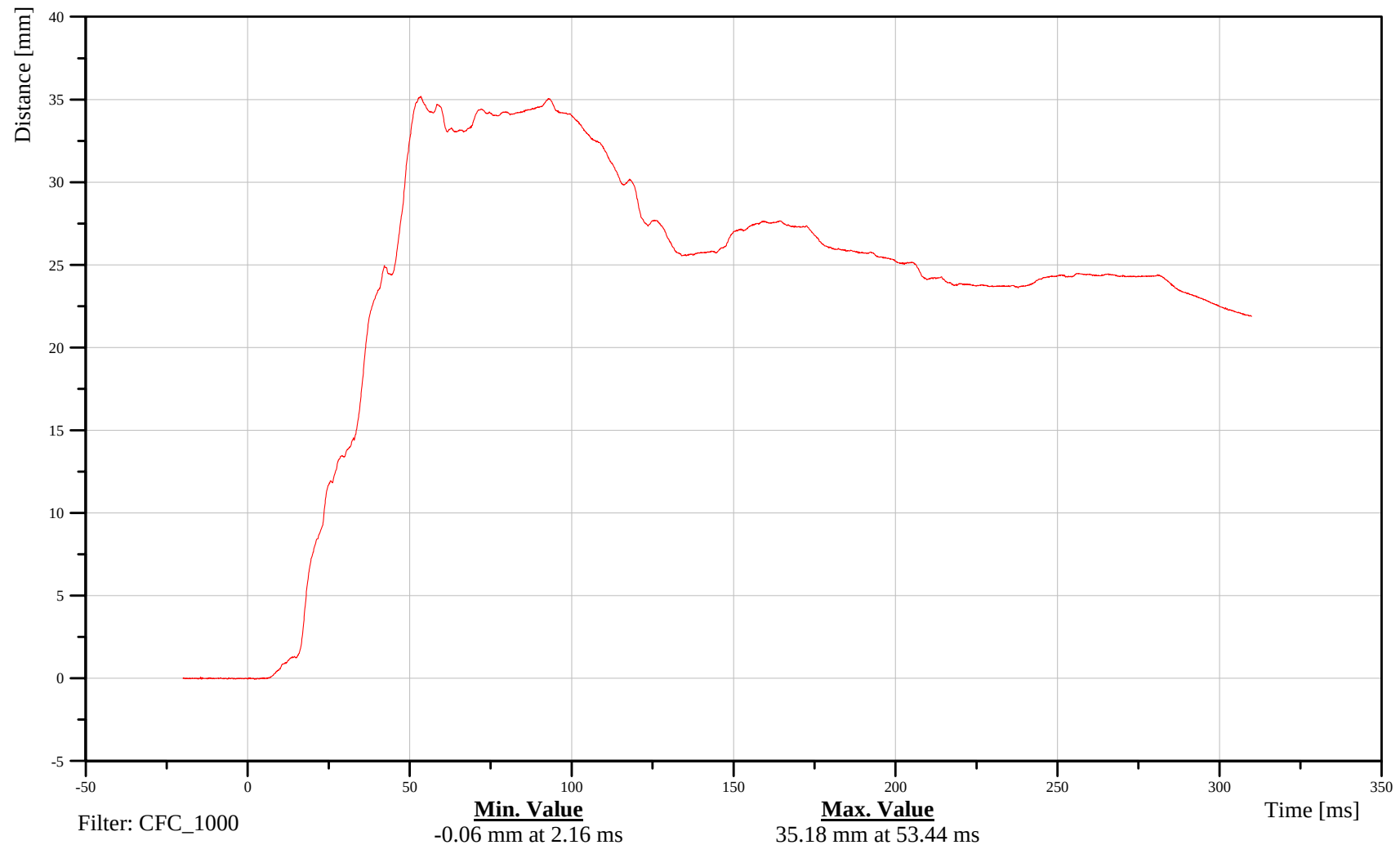
Date: 03/20/2006
Time: 08:08

Customer: VRTC

13SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

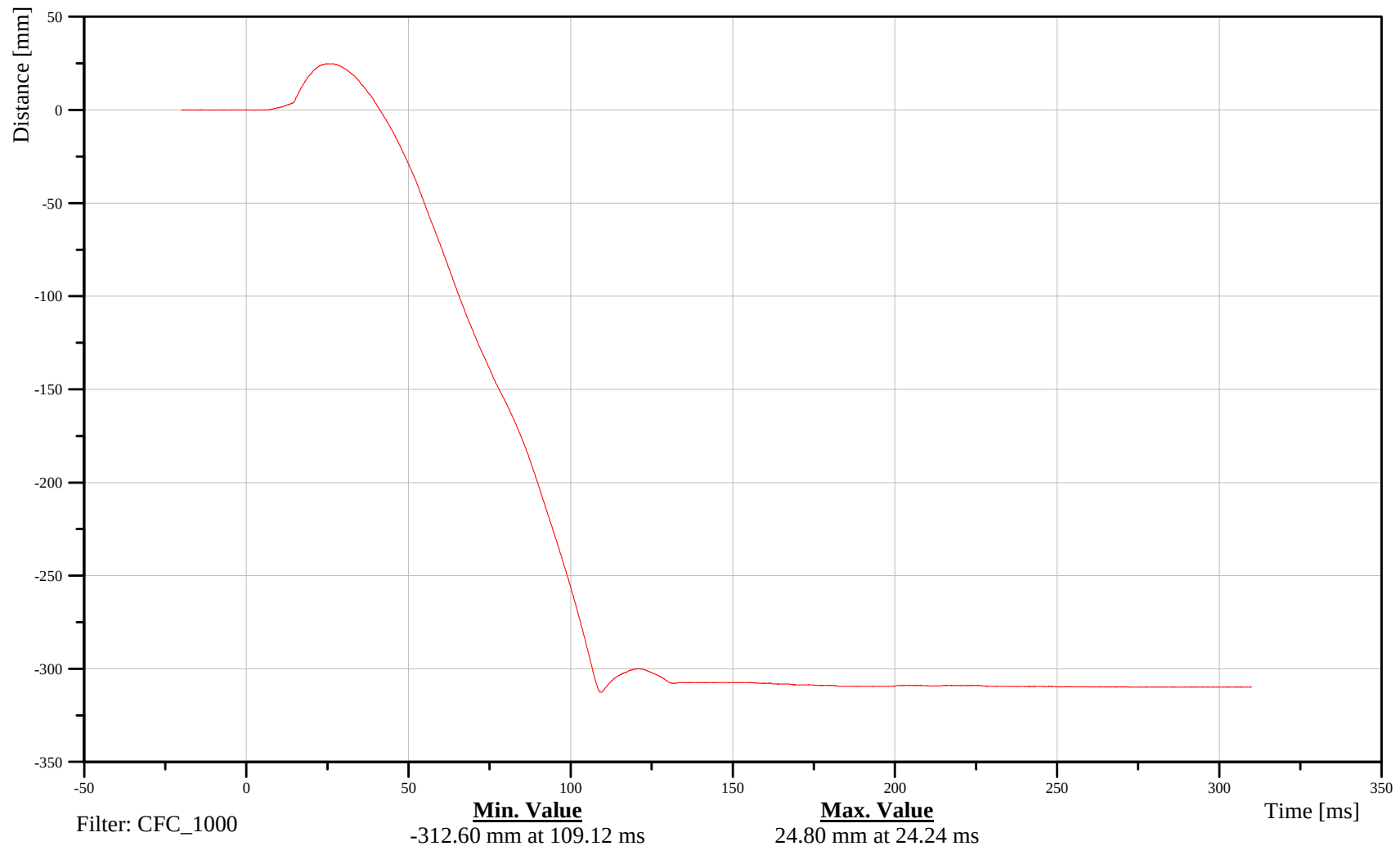
Bullet Vehicle RF Passenger Shoulder Belt Spool and Retraction

Customer: VRTC

13SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Bullet Vehicle IP Center

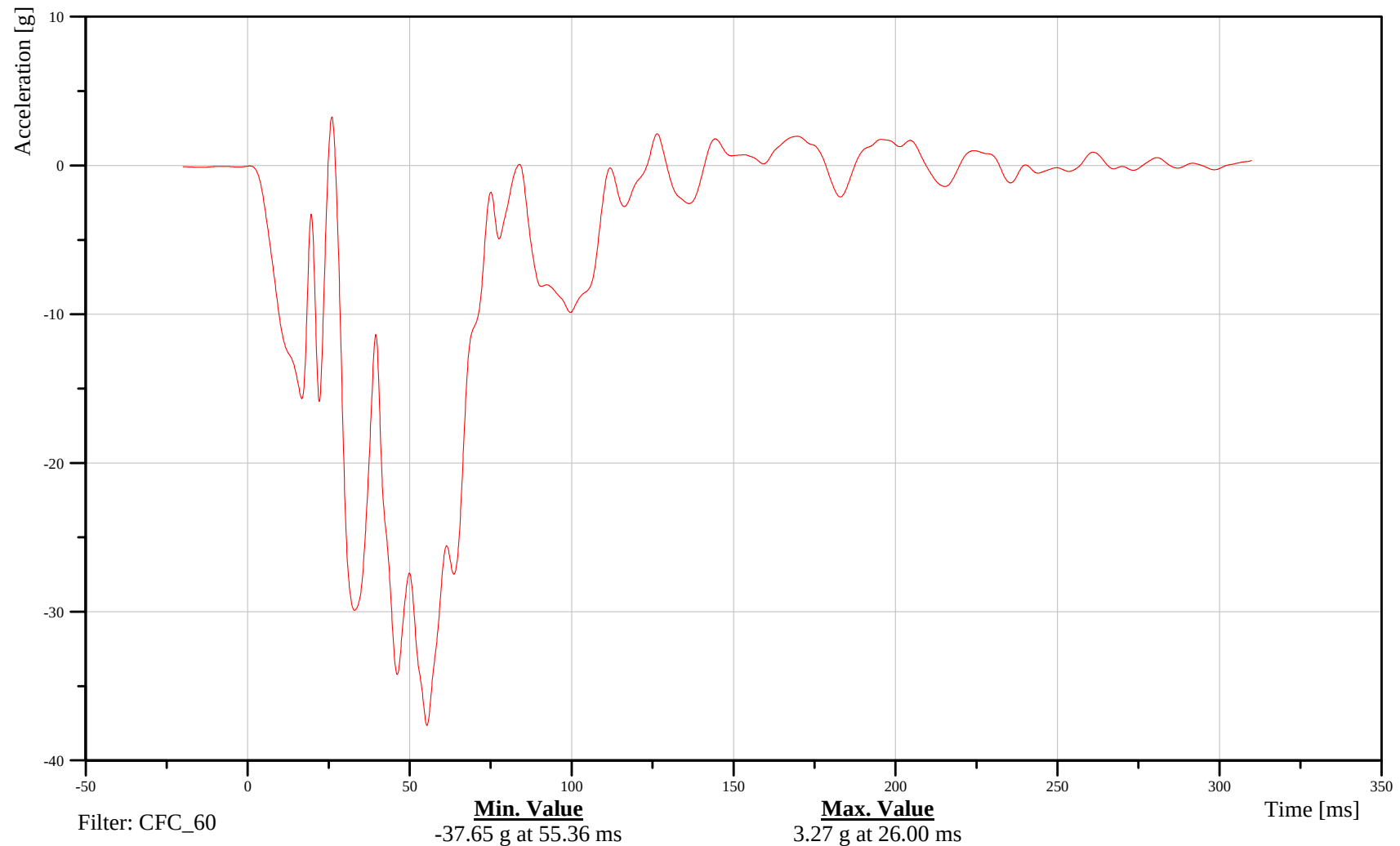
Date: 03/20/2006
Time: 08:08

Customer: VRTC

12DASH000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

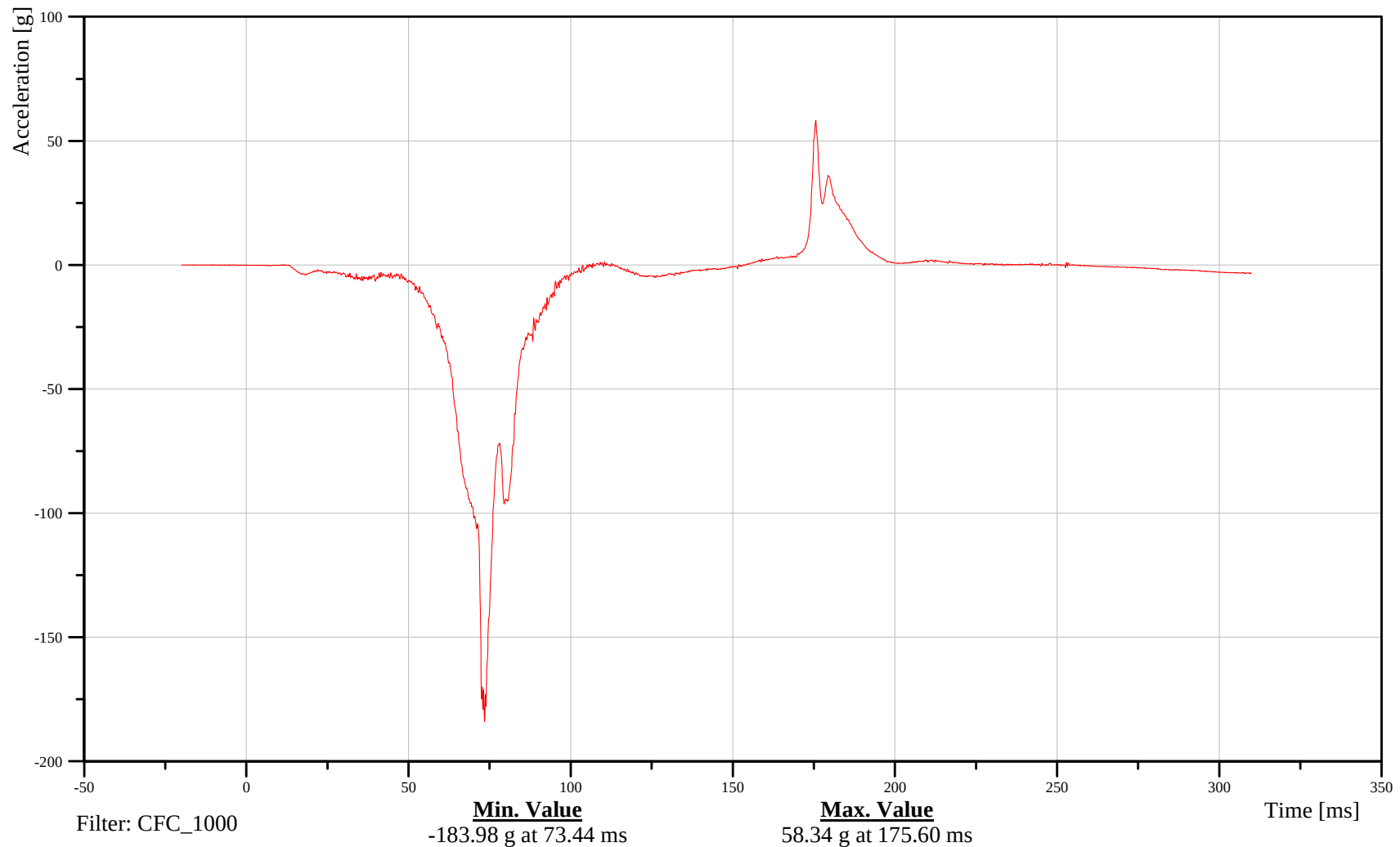
Target Driver Head X-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

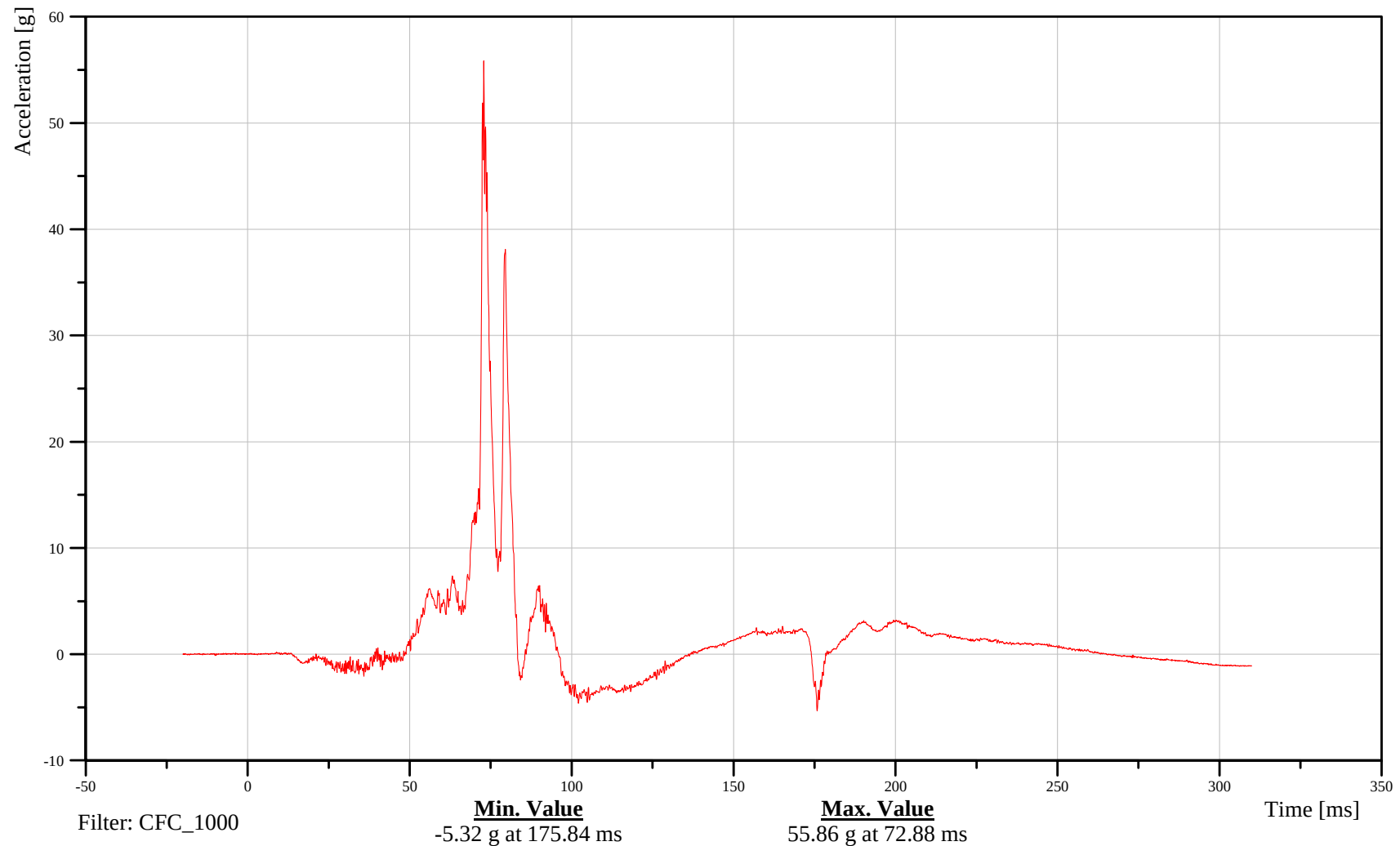
Target Driver Head Y-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

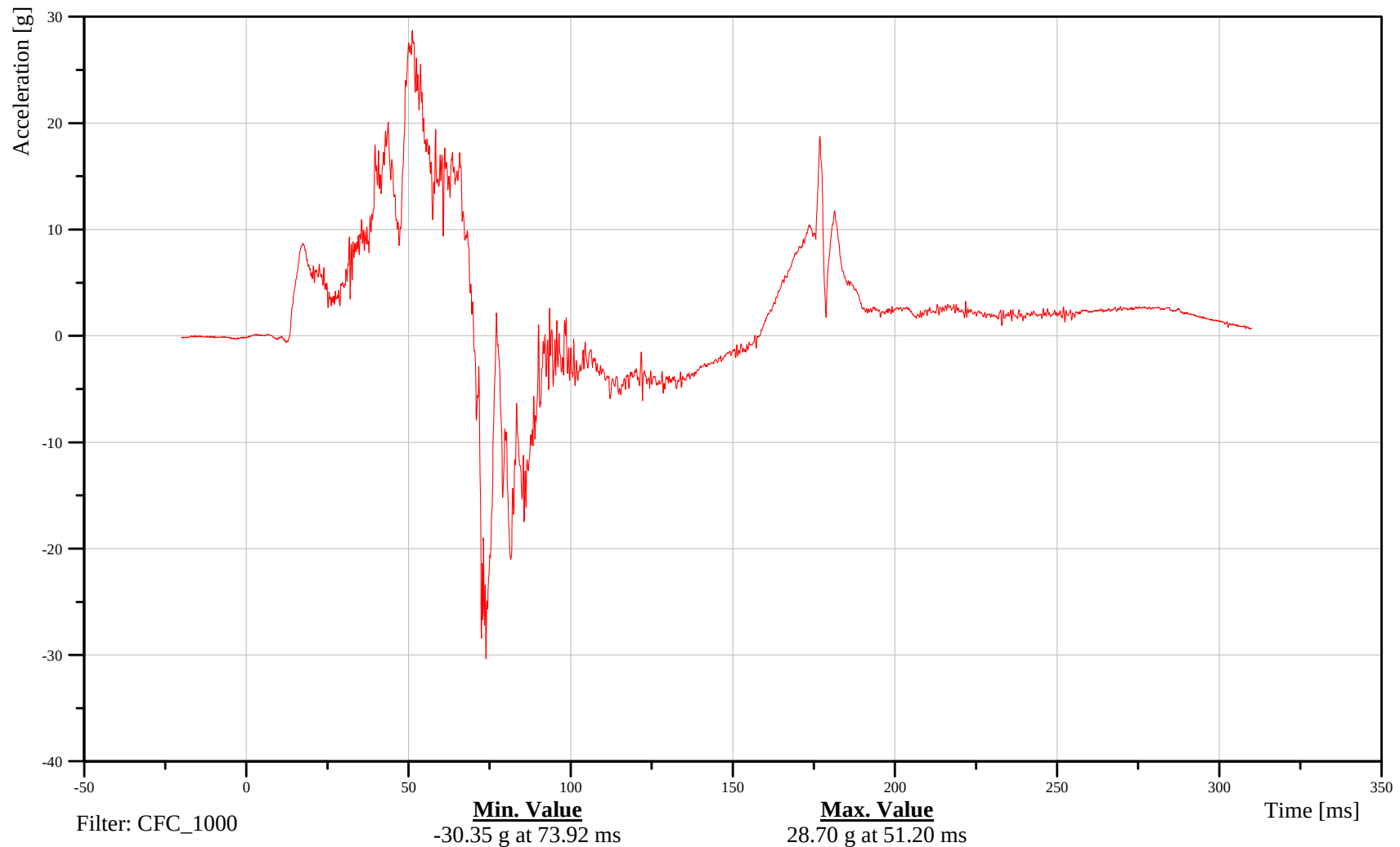
Target Driver Head Z-Axis Acceleration

Customer: VRTC

21HEADCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

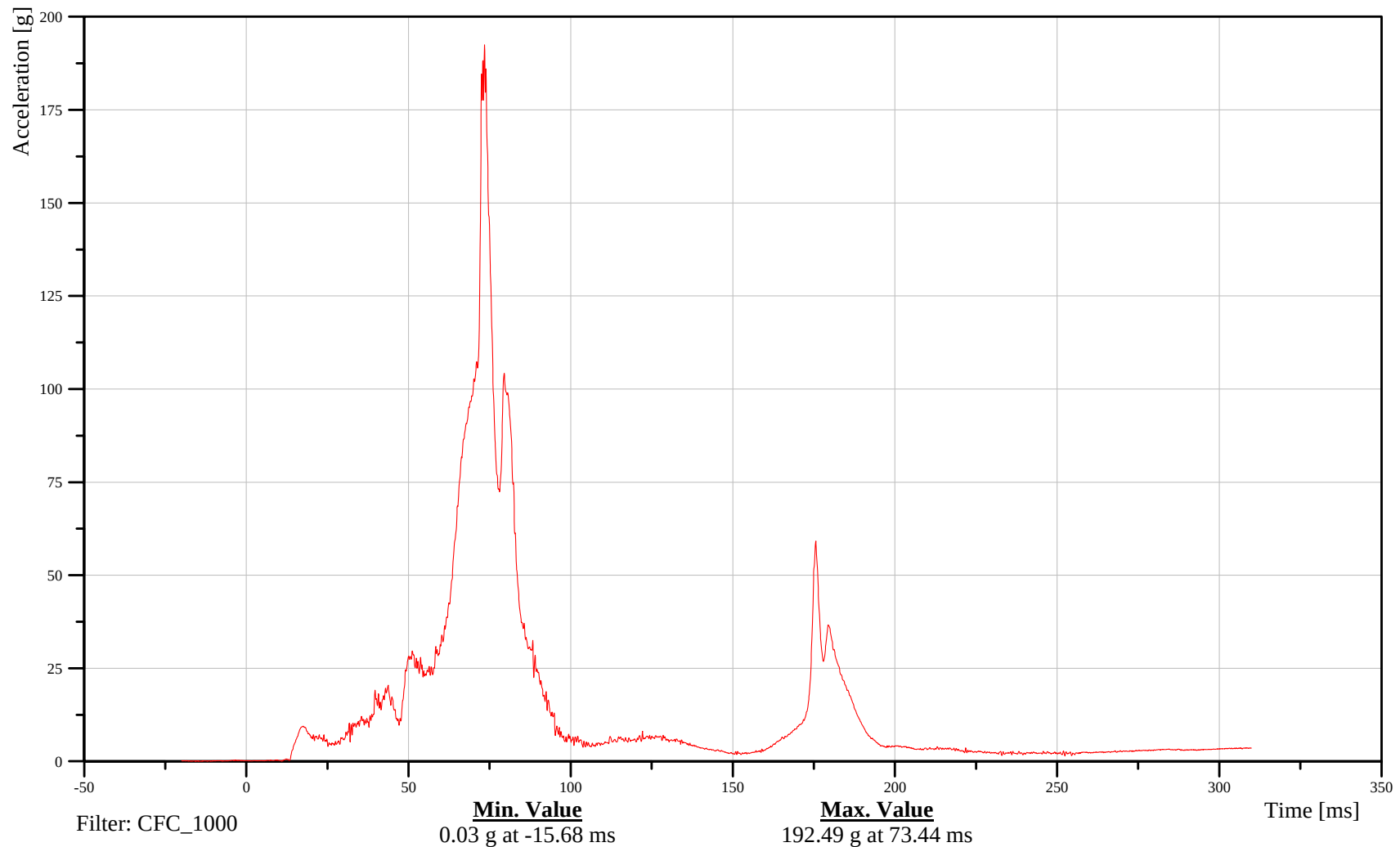
Target Driver Head Resultant Acceleration

Customer: VRTC

21HEADCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

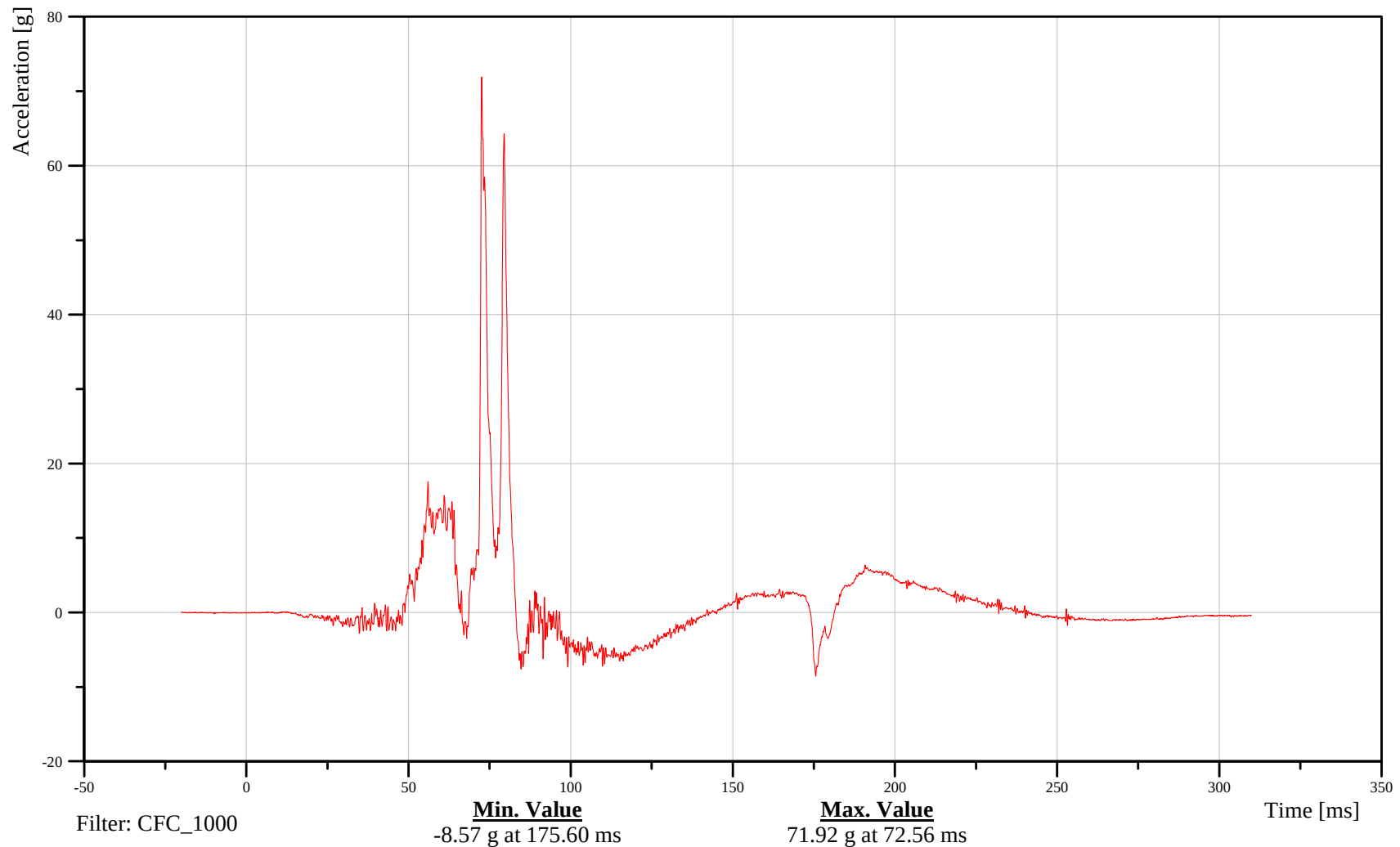
Target Driver Head Front Y-Axis Acceleration

Customer: VRTC

21HEADFR00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

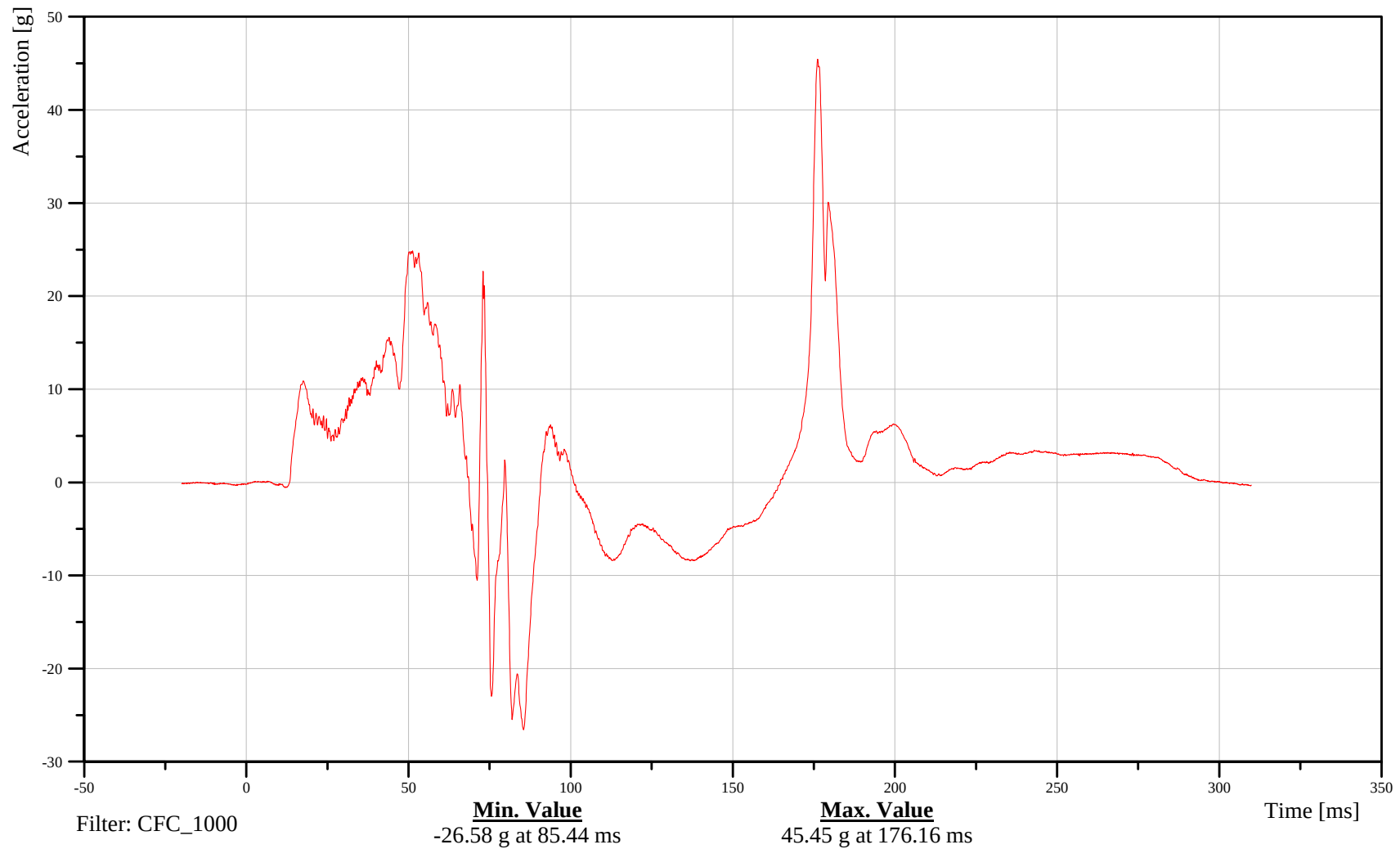
Target Driver Head Front Z-Axis Acceleration

Customer: VRTC

21HEADFR00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

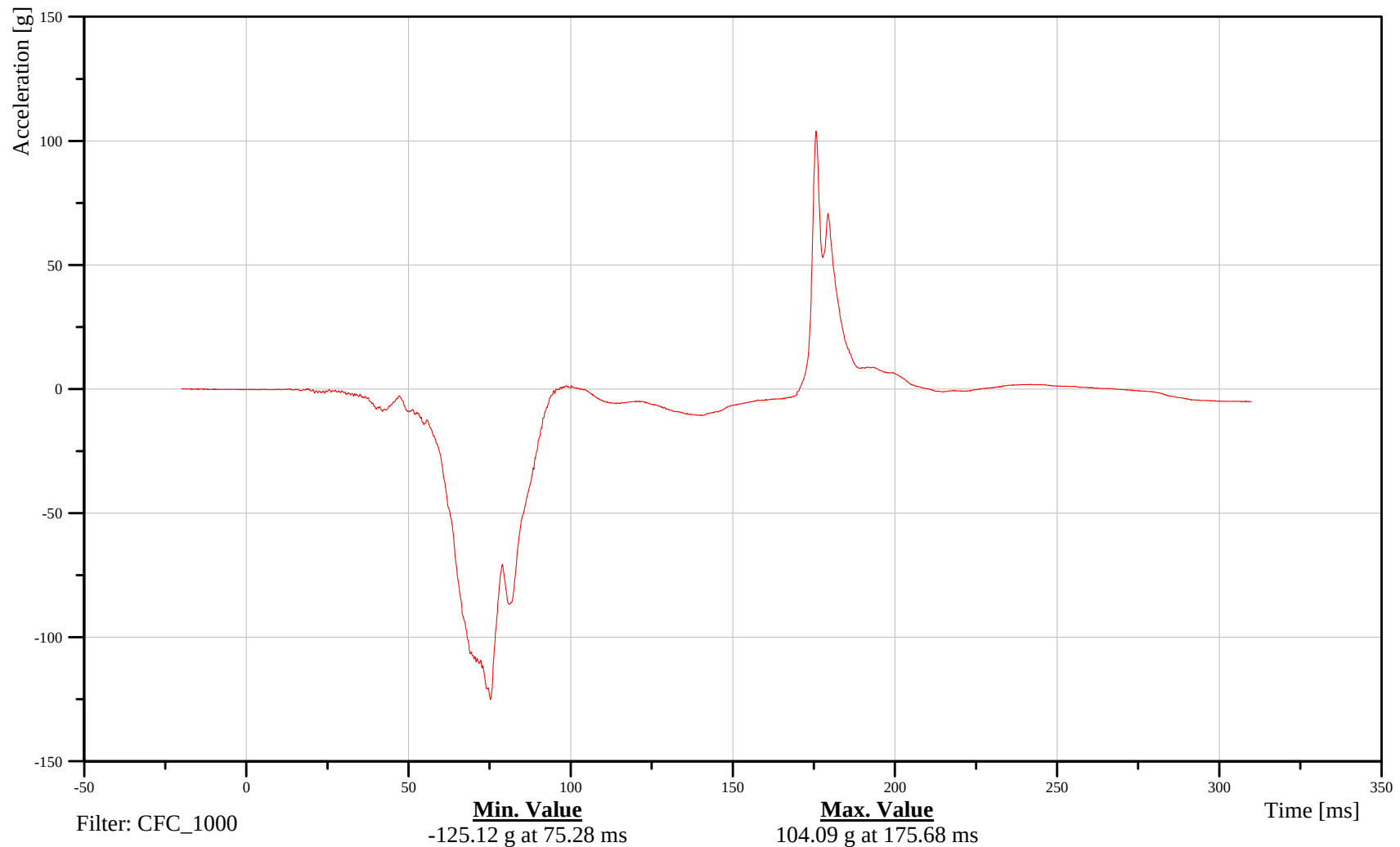
Target Driver Head Top X-Axis Acceleration

Customer: VRTC

21HEADUP00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

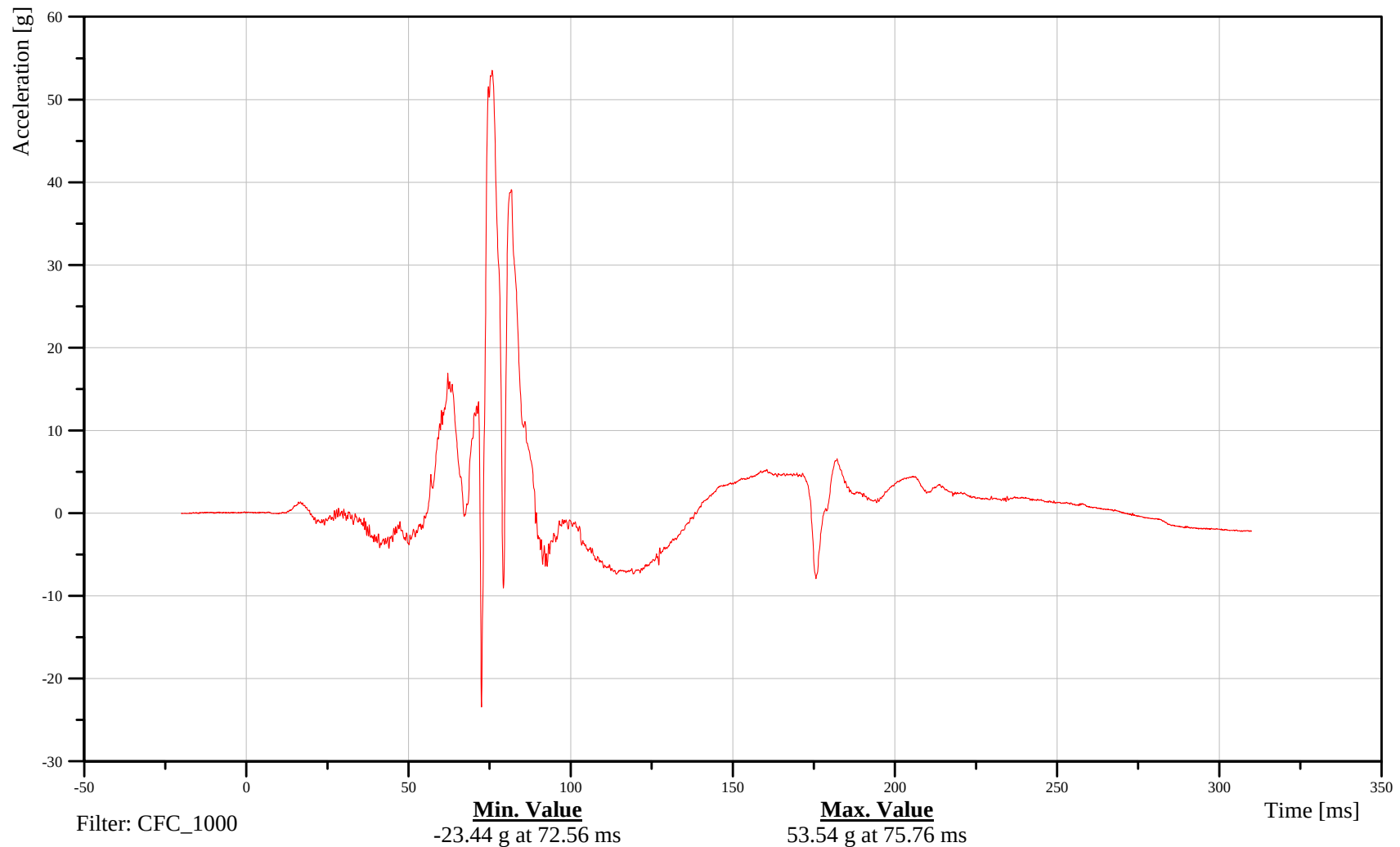
Target Driver Head Top Y-Axis Acceleration

Customer: VRTC

21HEADUP00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

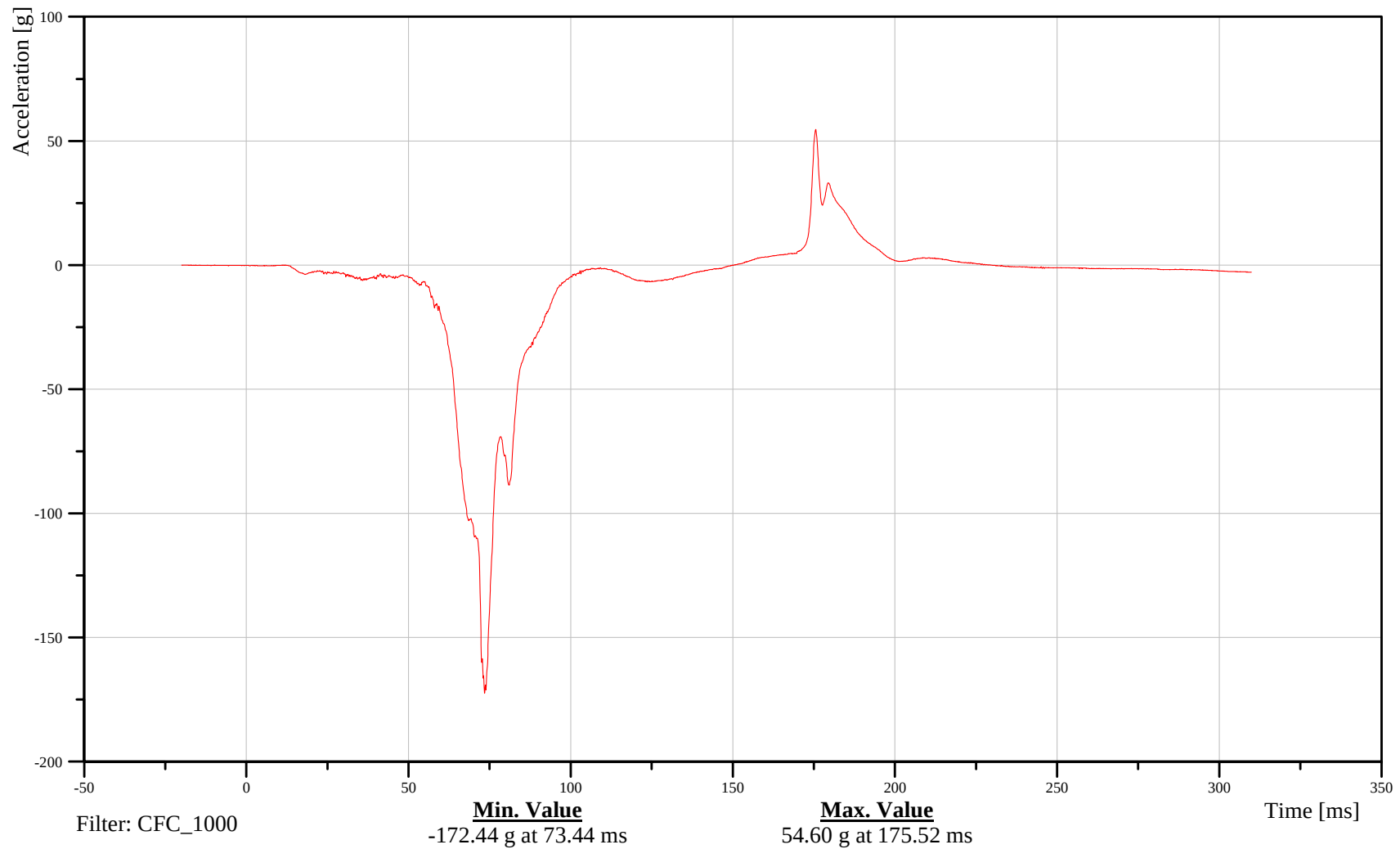
Target Driver Head Side X-Axis Acceleration

Customer: VRTC

21HEADLE00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

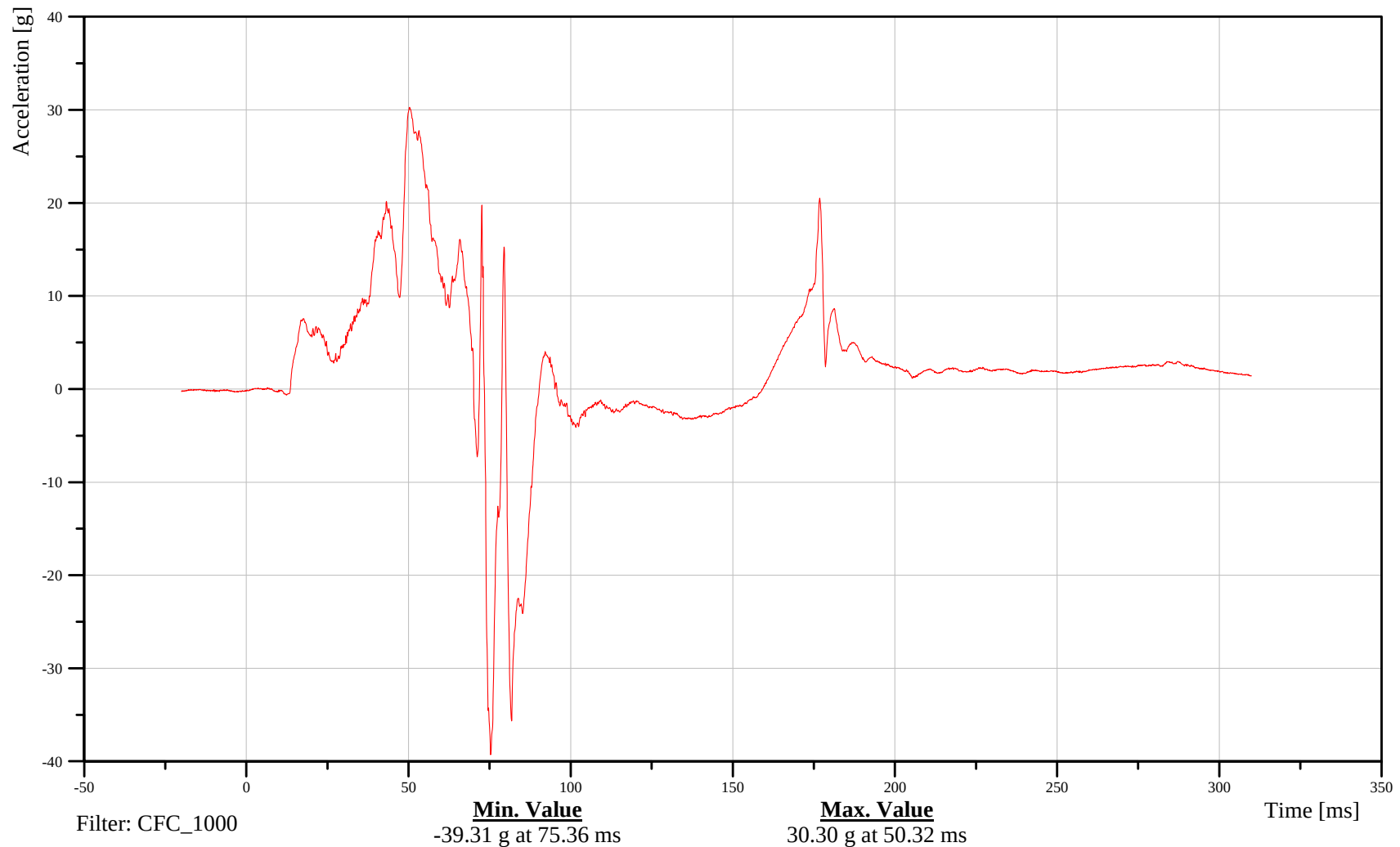
Target Driver Head Side Z-Axis Acceleration

Customer: VRTC

21HEADLE00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

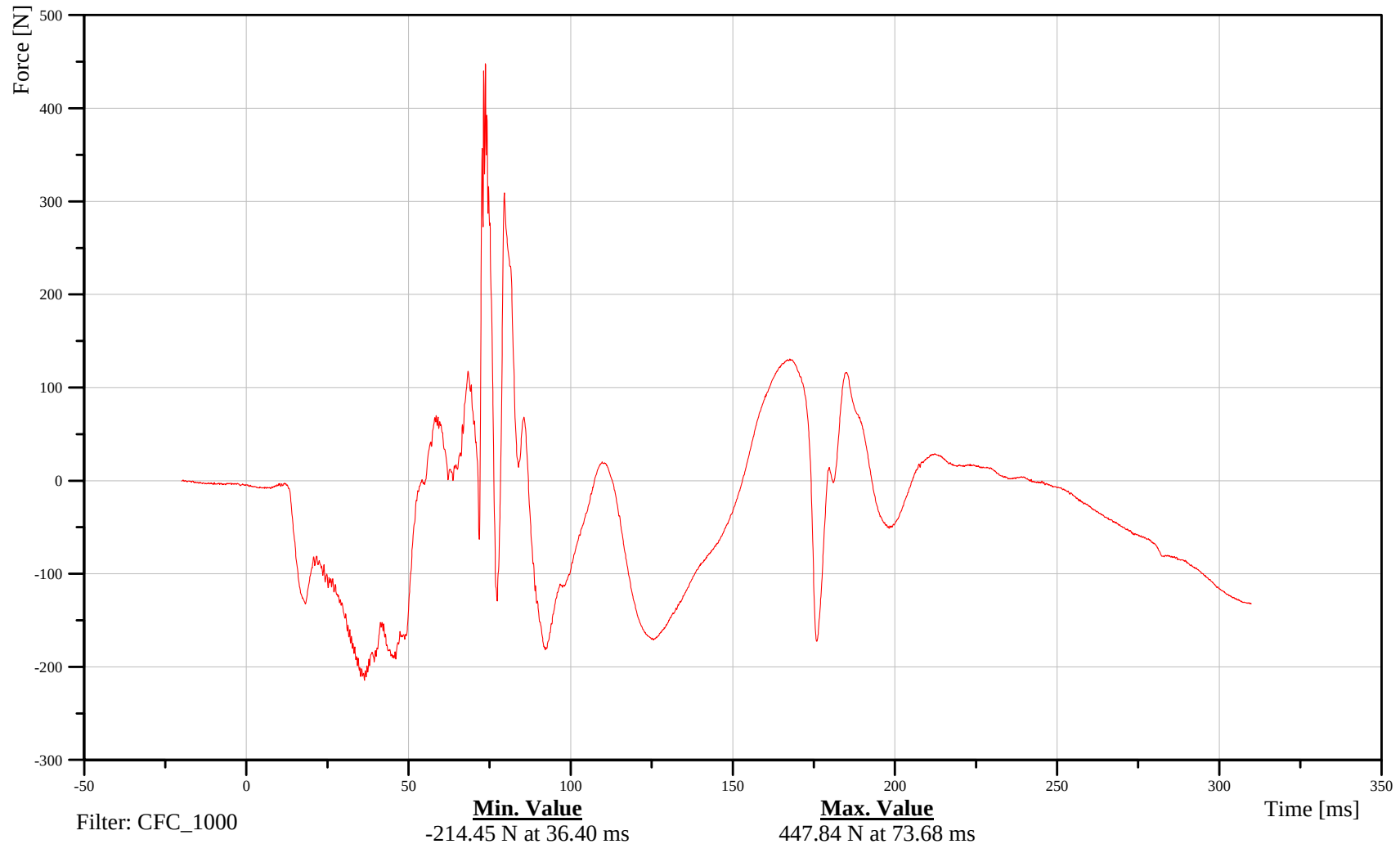
Target Driver Upper Neck X-Axis Force

Customer: VRTC

21NECKUP00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

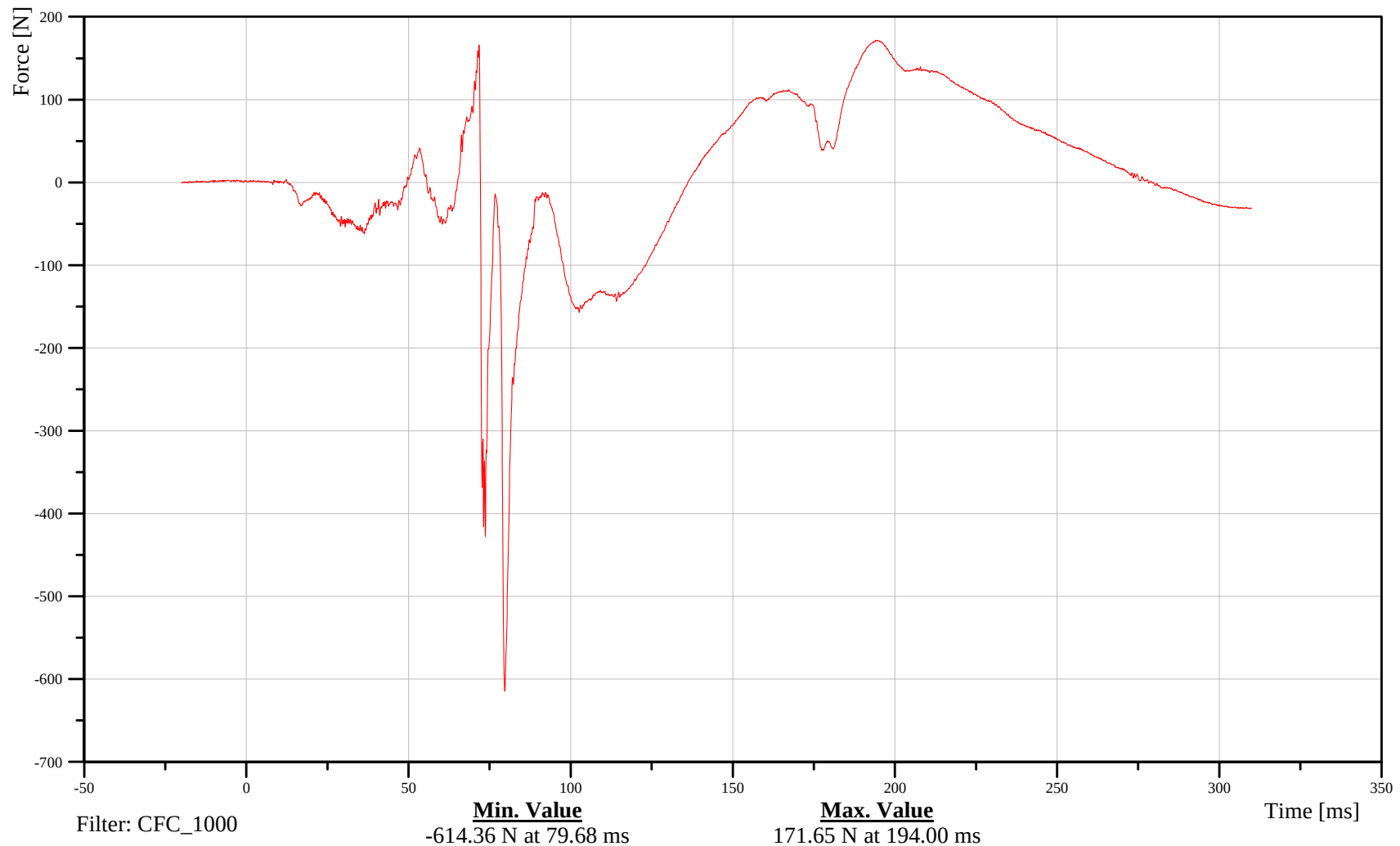
Target Driver Upper Neck Y-Axis Force

Customer: VRTC

21NECKUP00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

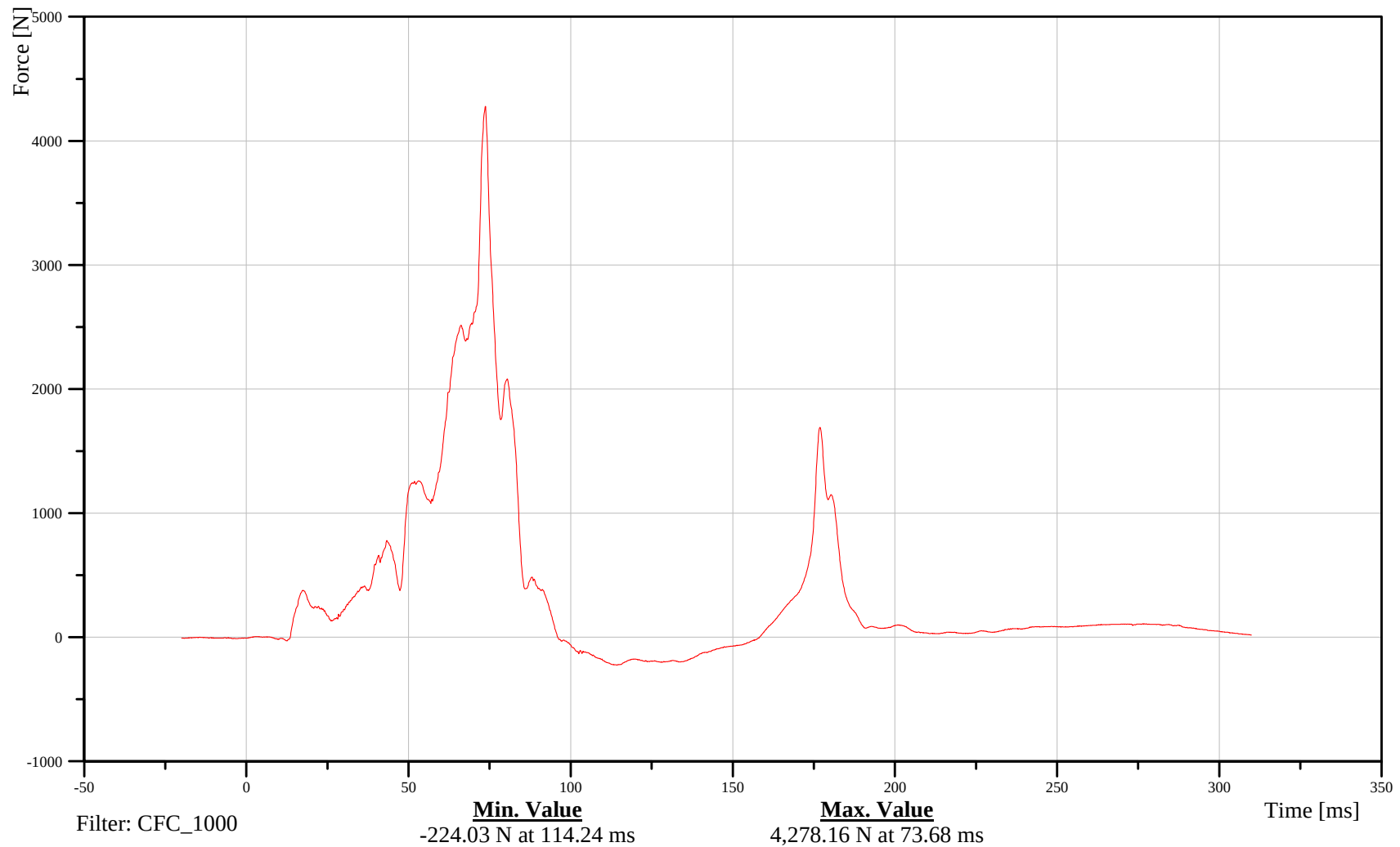
Target Driver Upper Neck Z-Axis Force

Customer: VRTC

21NECKUP00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

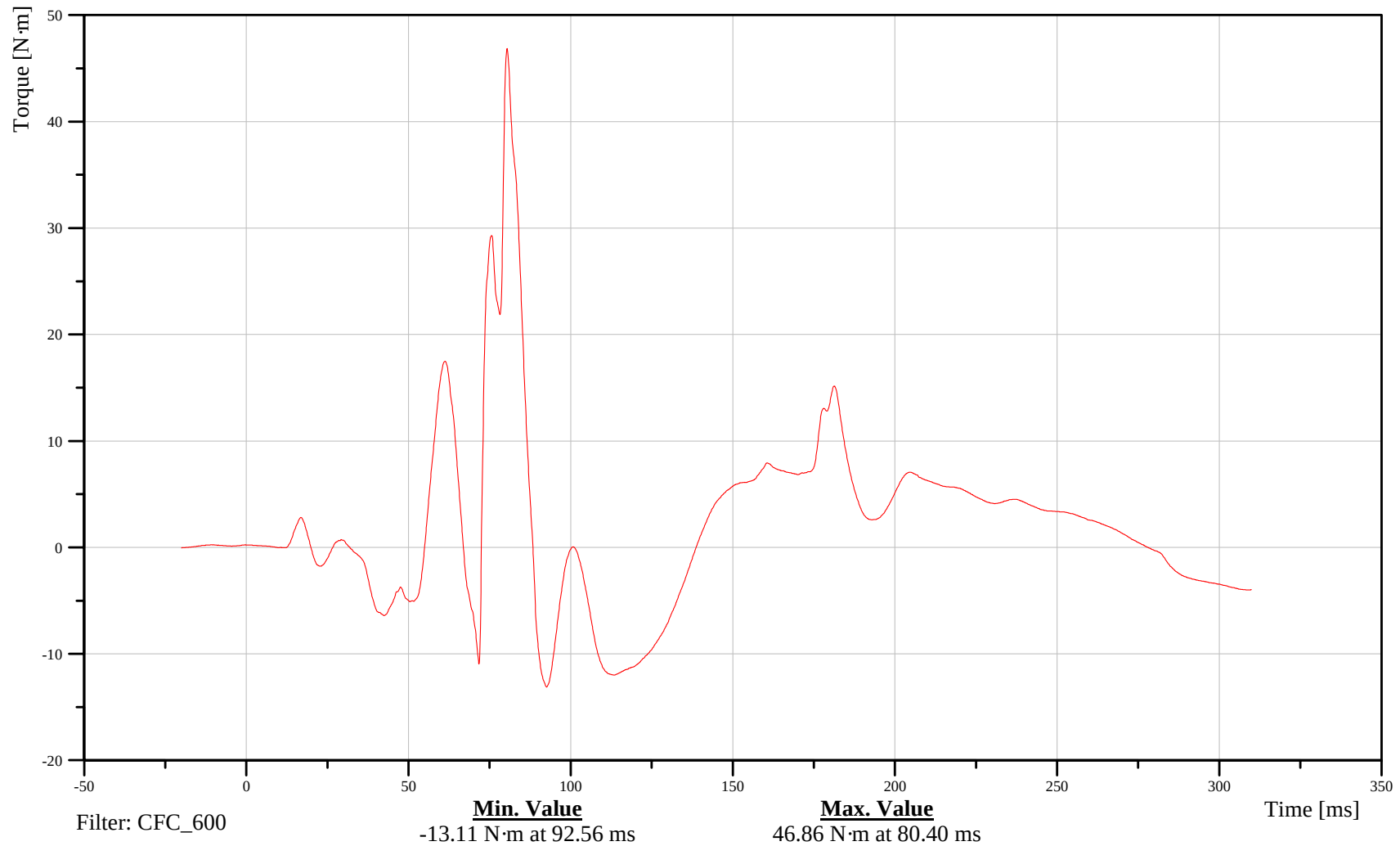
Target Driver Upper Neck Moment About X Axis

Customer: VRTC

21NECKUP00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

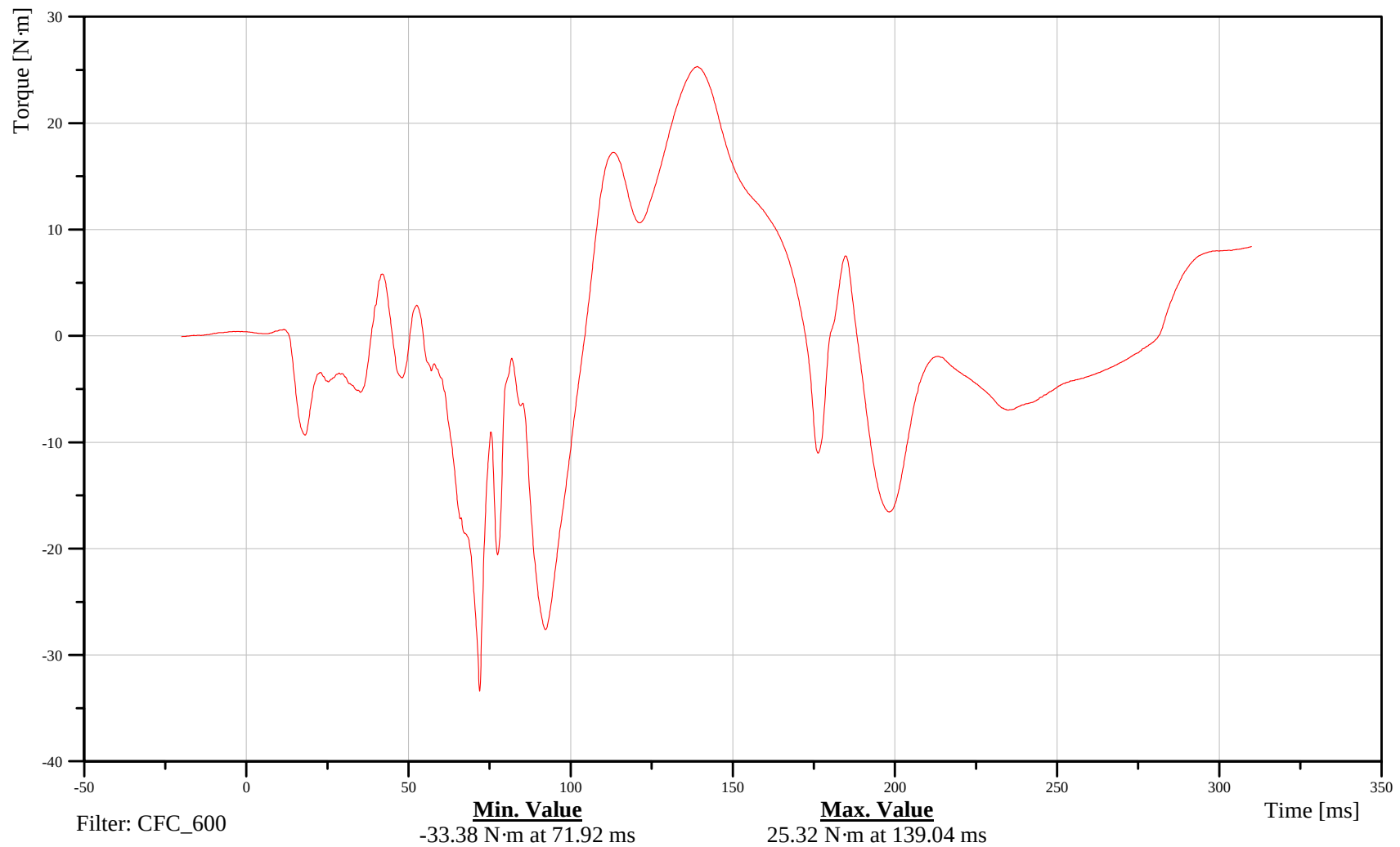
Target Driver Upper Neck Moment About Y Axis

Customer: VRTC

21NECKUP00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Target Driver Upper Neck Moment About Z Axis

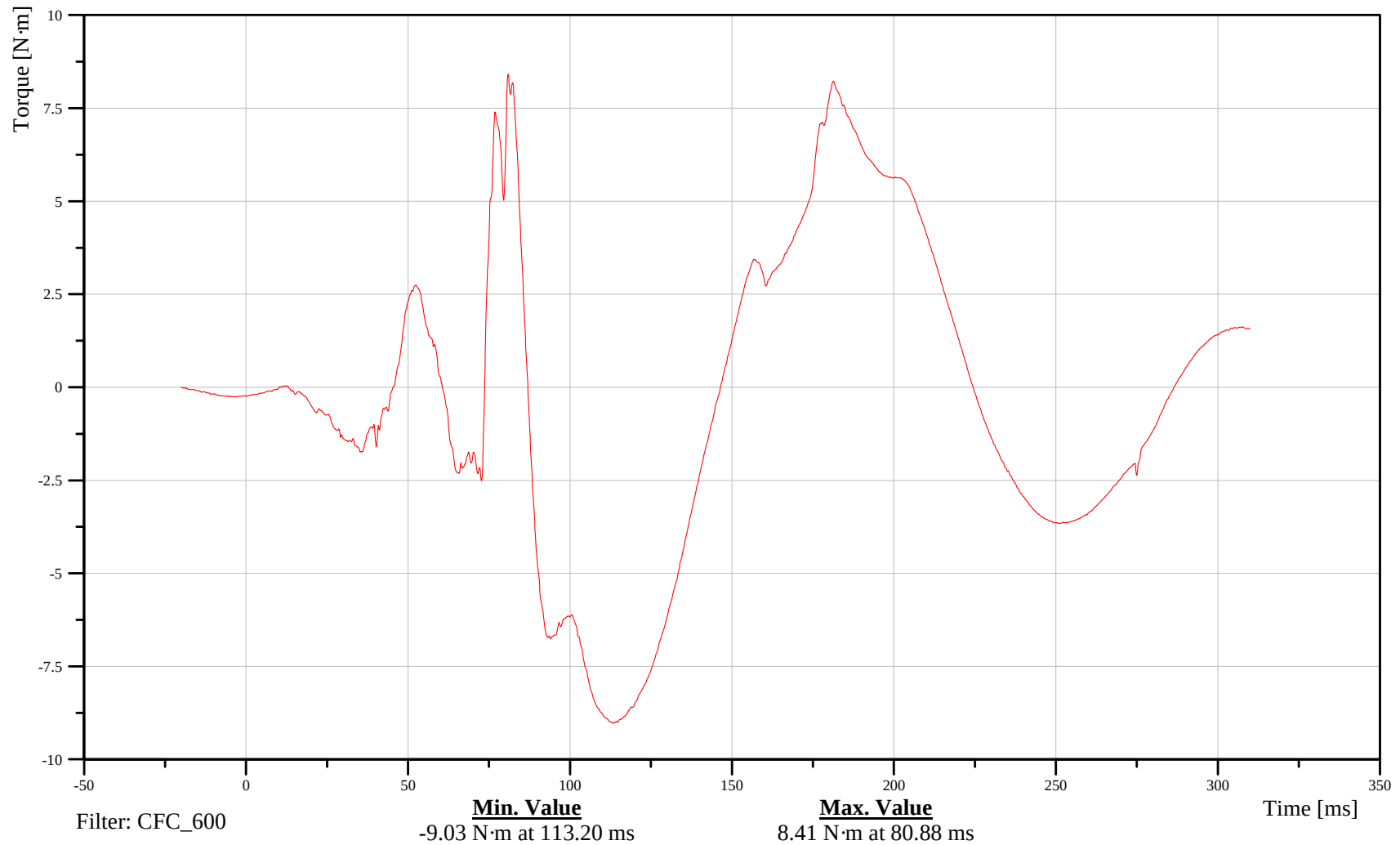
Time: 08:08

Customer: VRTC

21NECKUP00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

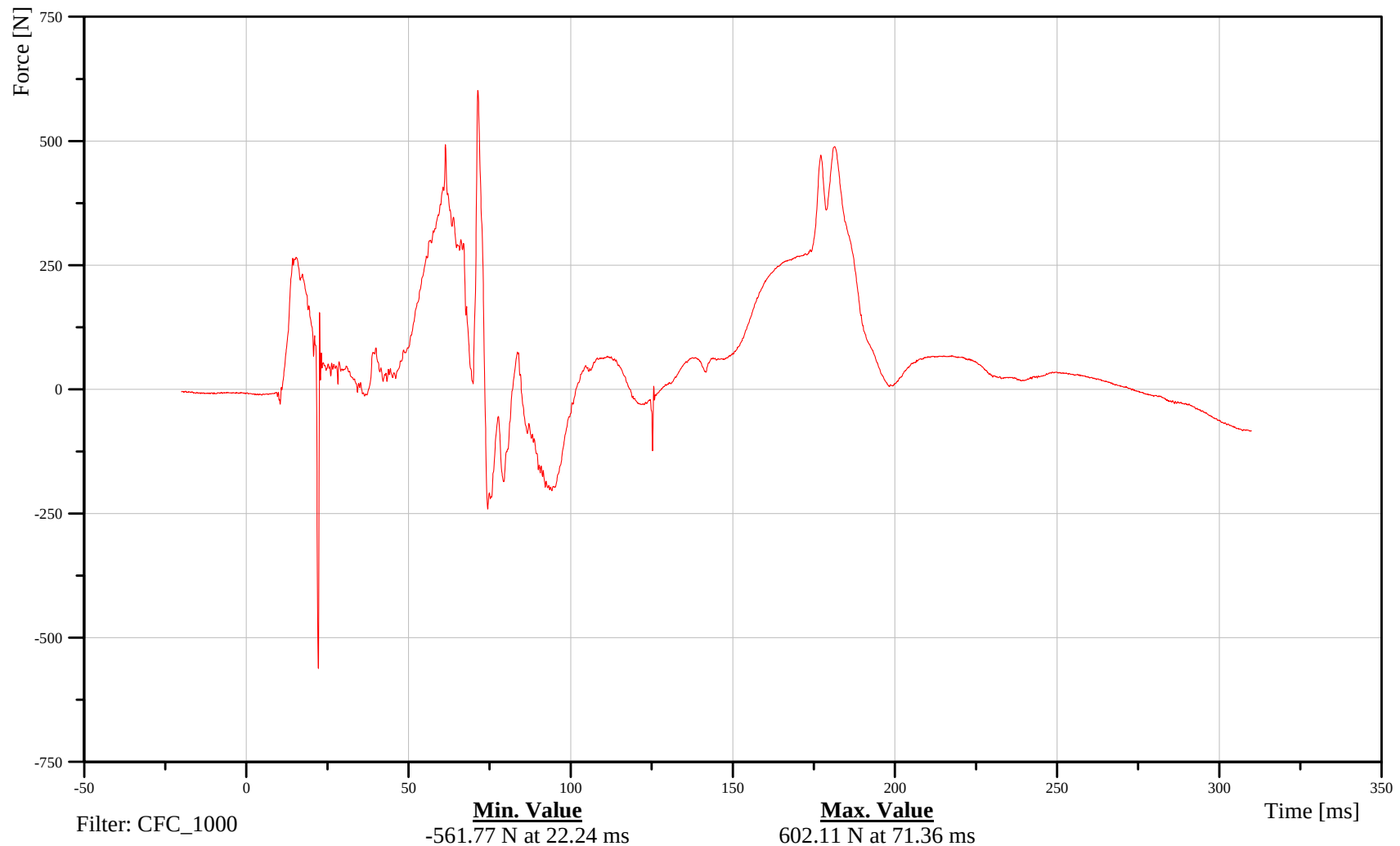
Target Driver Lower Neck X-Axis Force

Customer: VRTC

21NECKLO00H3FOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

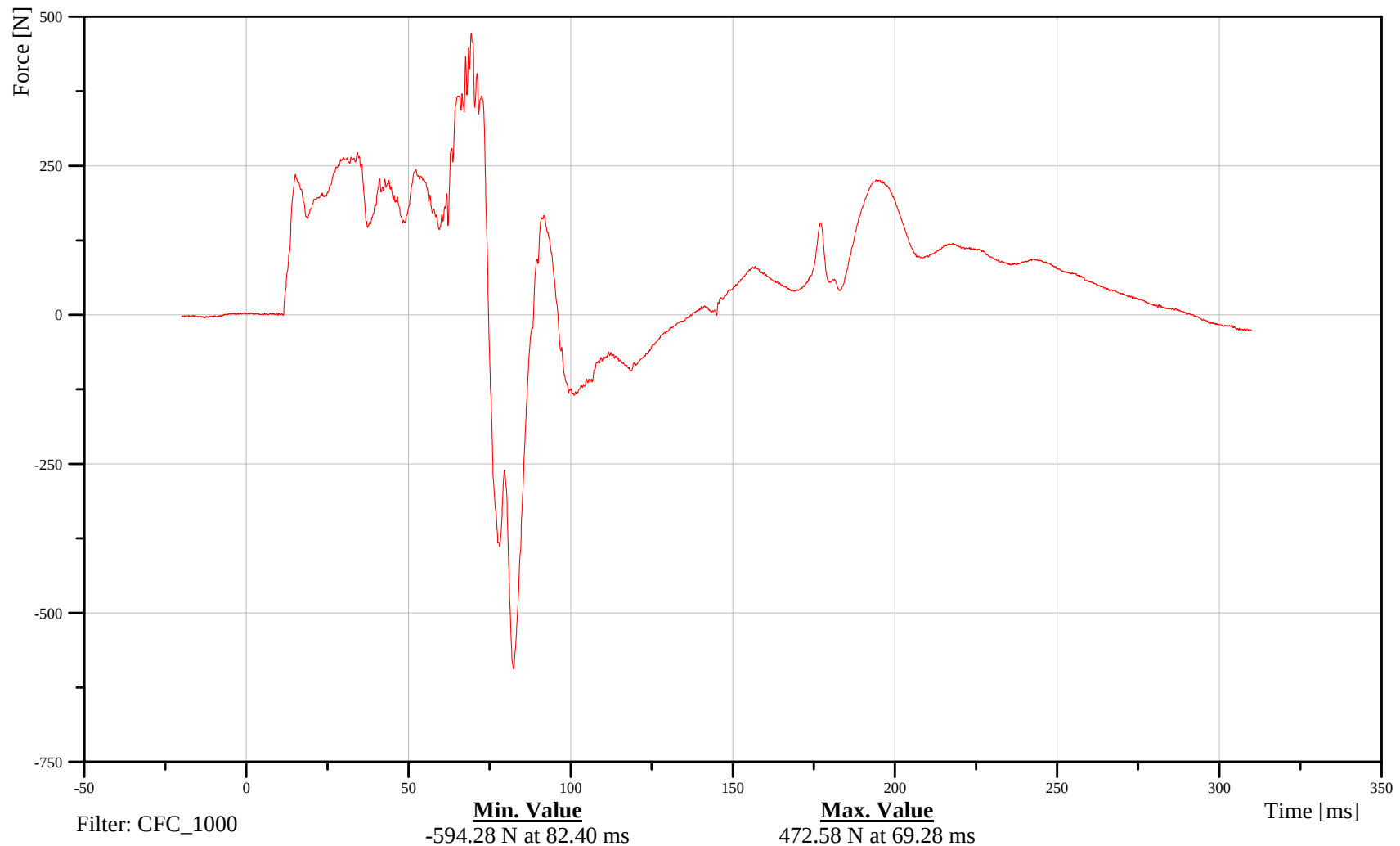
Target Driver Lower Neck Y-Axis Force

Customer: VRTC

21NECKLO00H3FOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

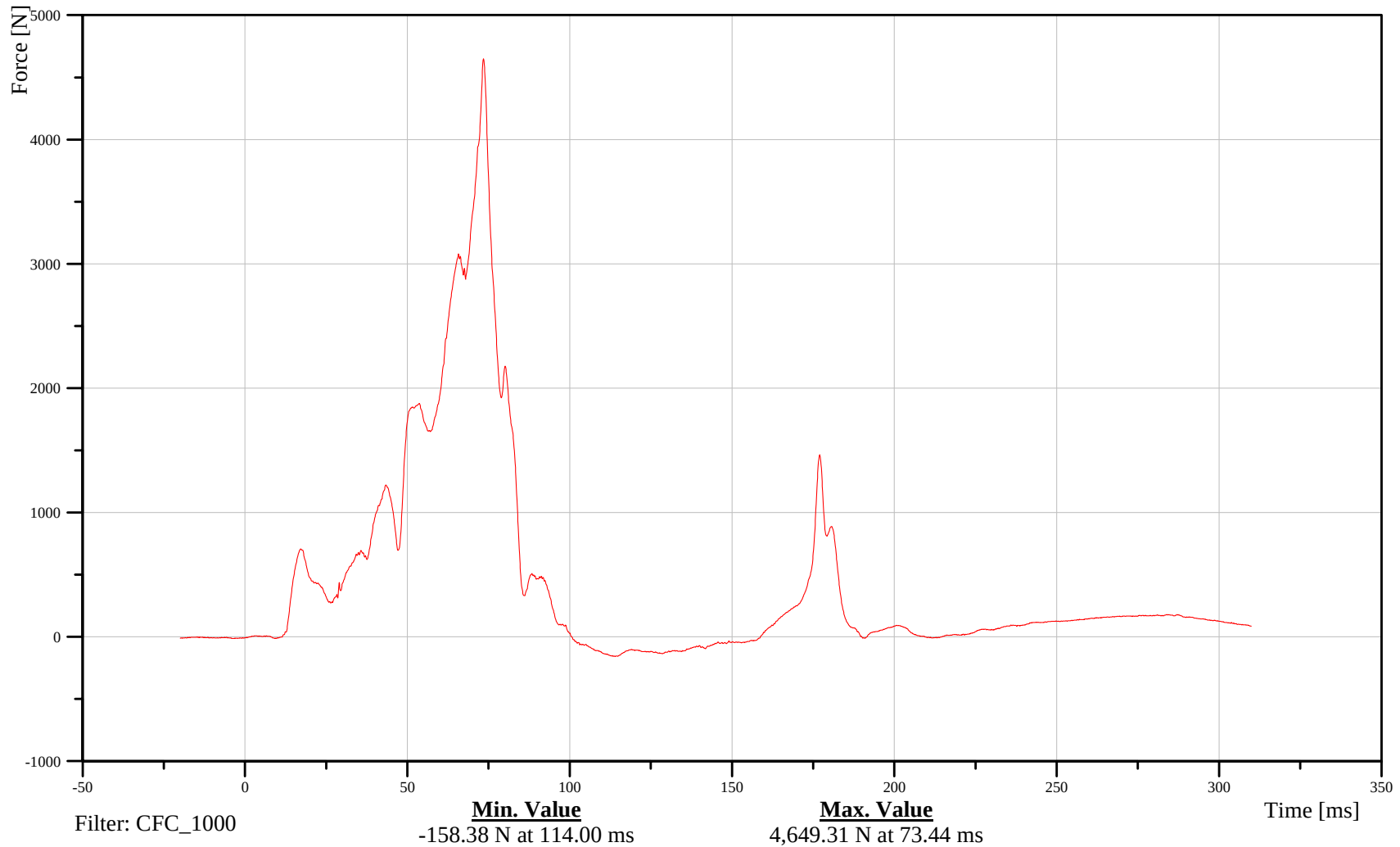
Target Driver Lower Neck Z-Axis Force

Customer: VRTC

21NECKLO00H3FOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

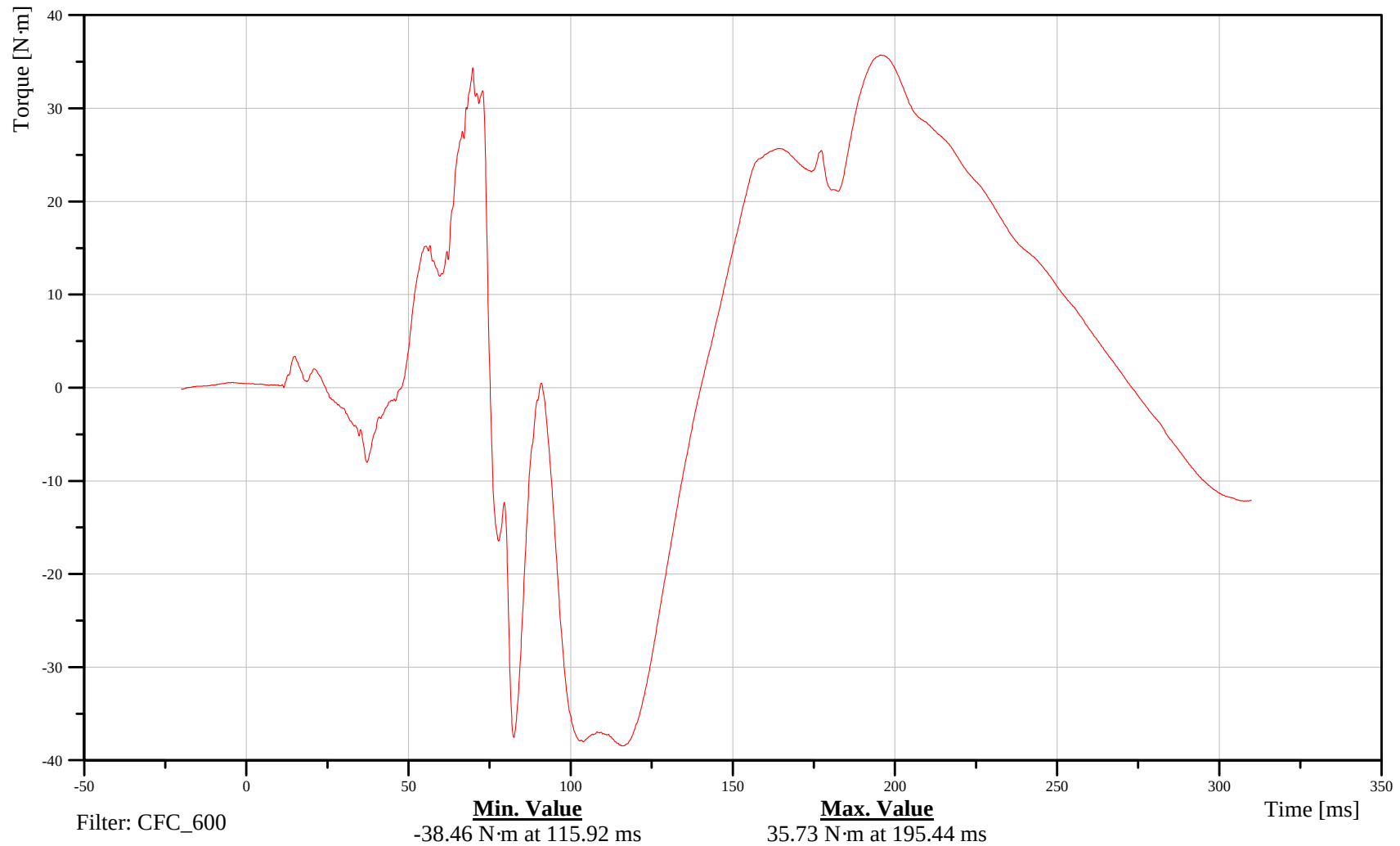
Target Driver Lower Neck Moment About X Axis

Customer: VRTC

21NECKLO00H3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

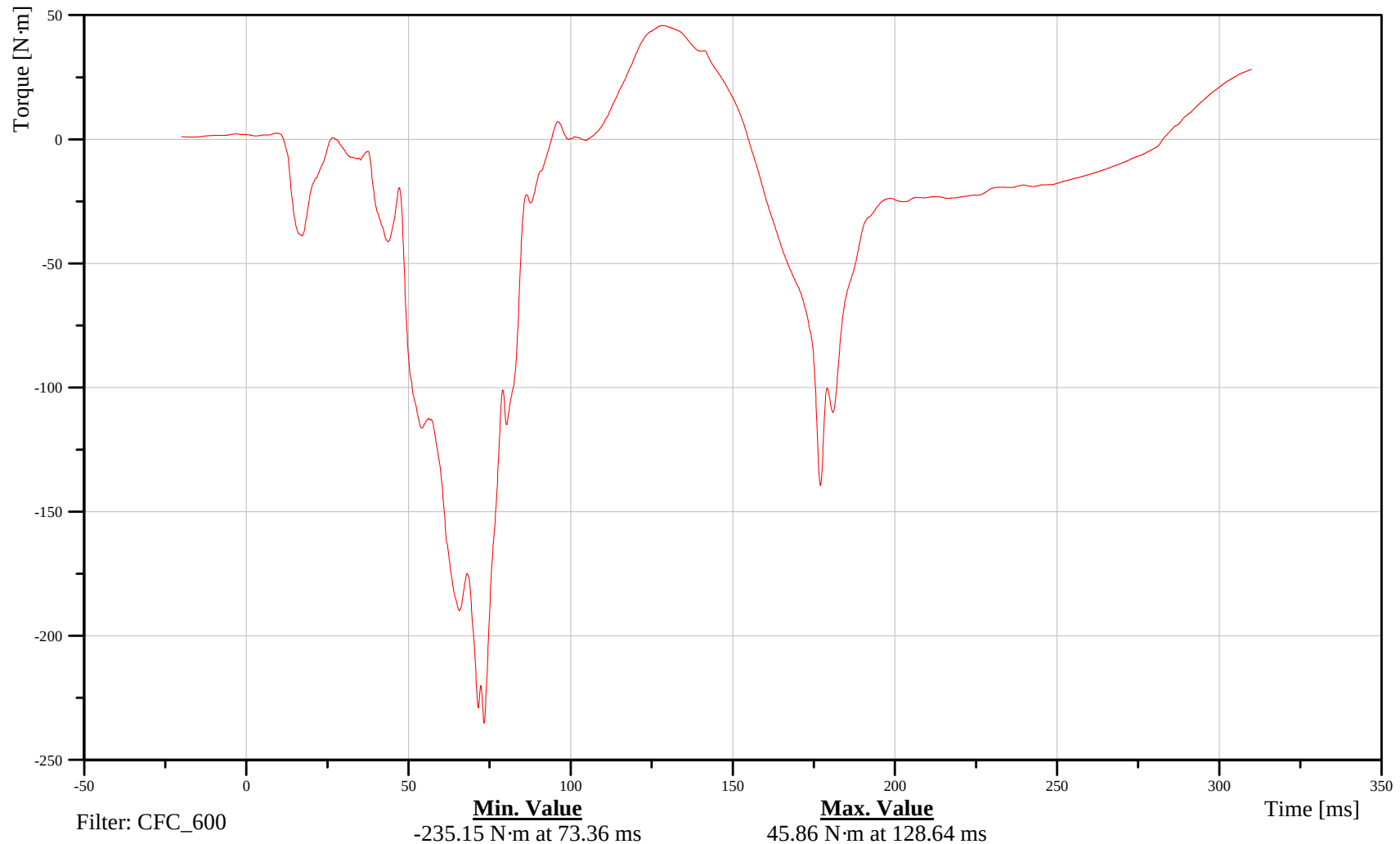
Target Driver Lower Neck Moment About Y Axis

Customer: VRTC

21NECKLO00H3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

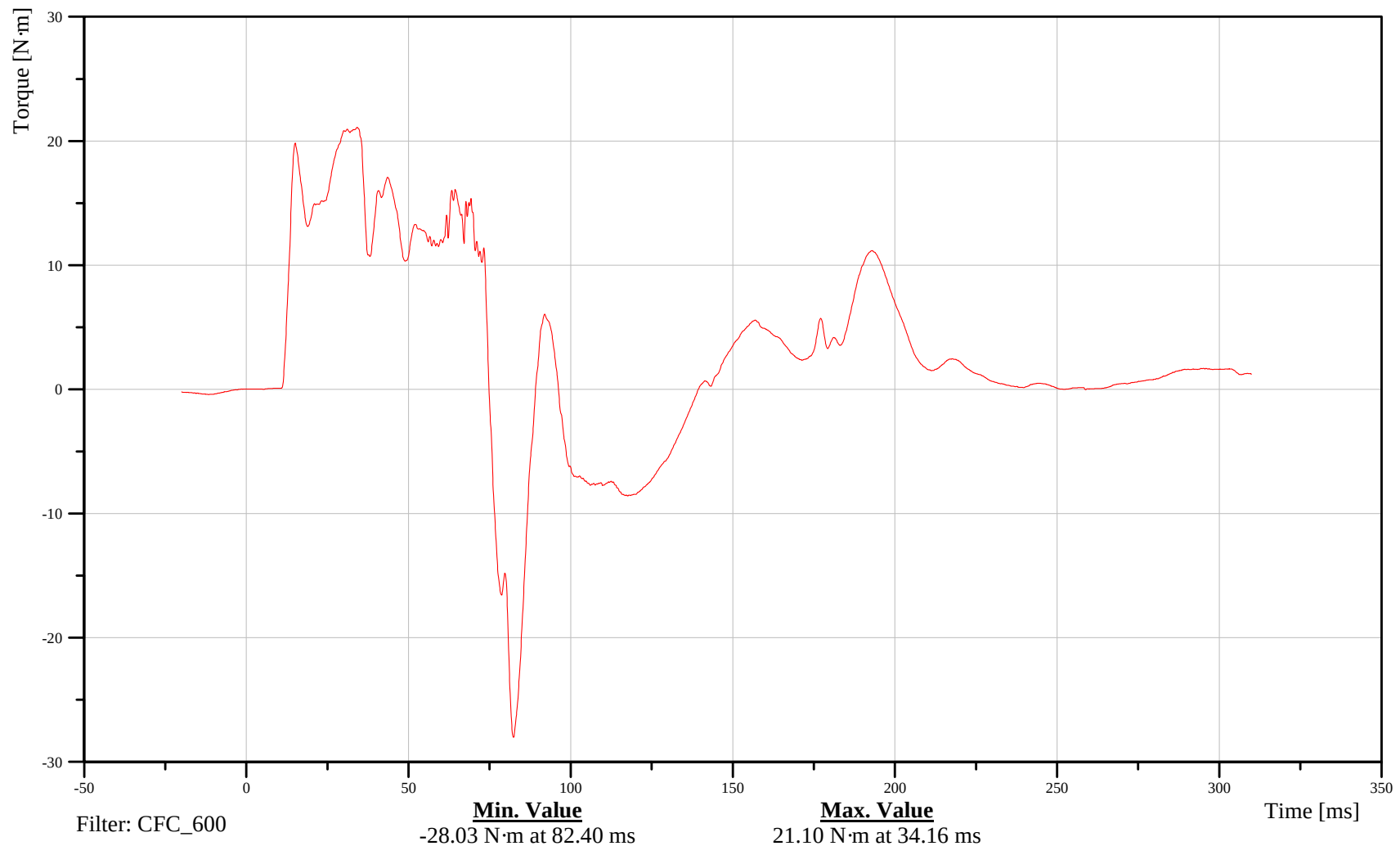
Target Driver Lower Neck Moment About Z Axis

Customer: VRTC

21NECKLO00H3MOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

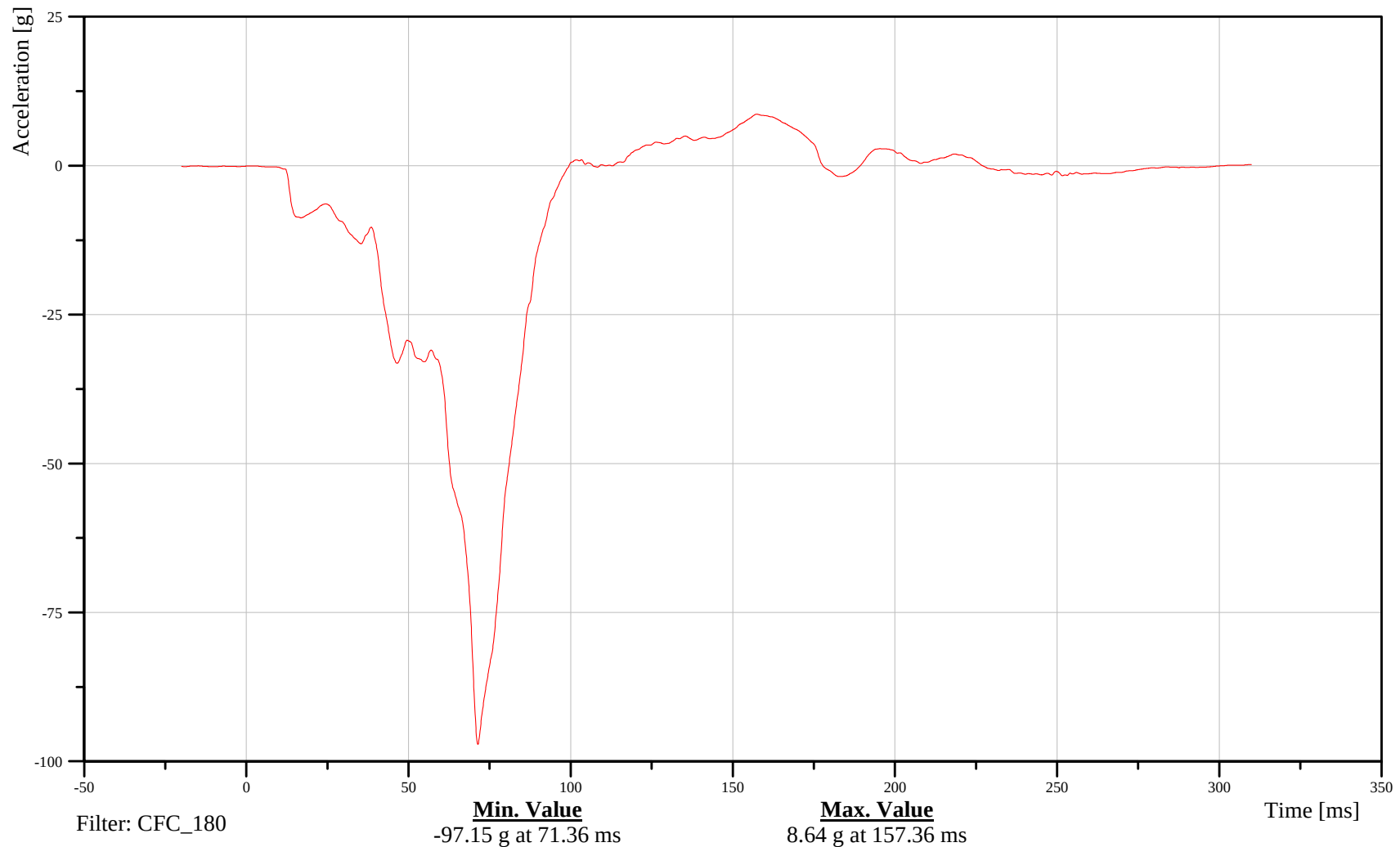
Target Driver Chest CG X-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

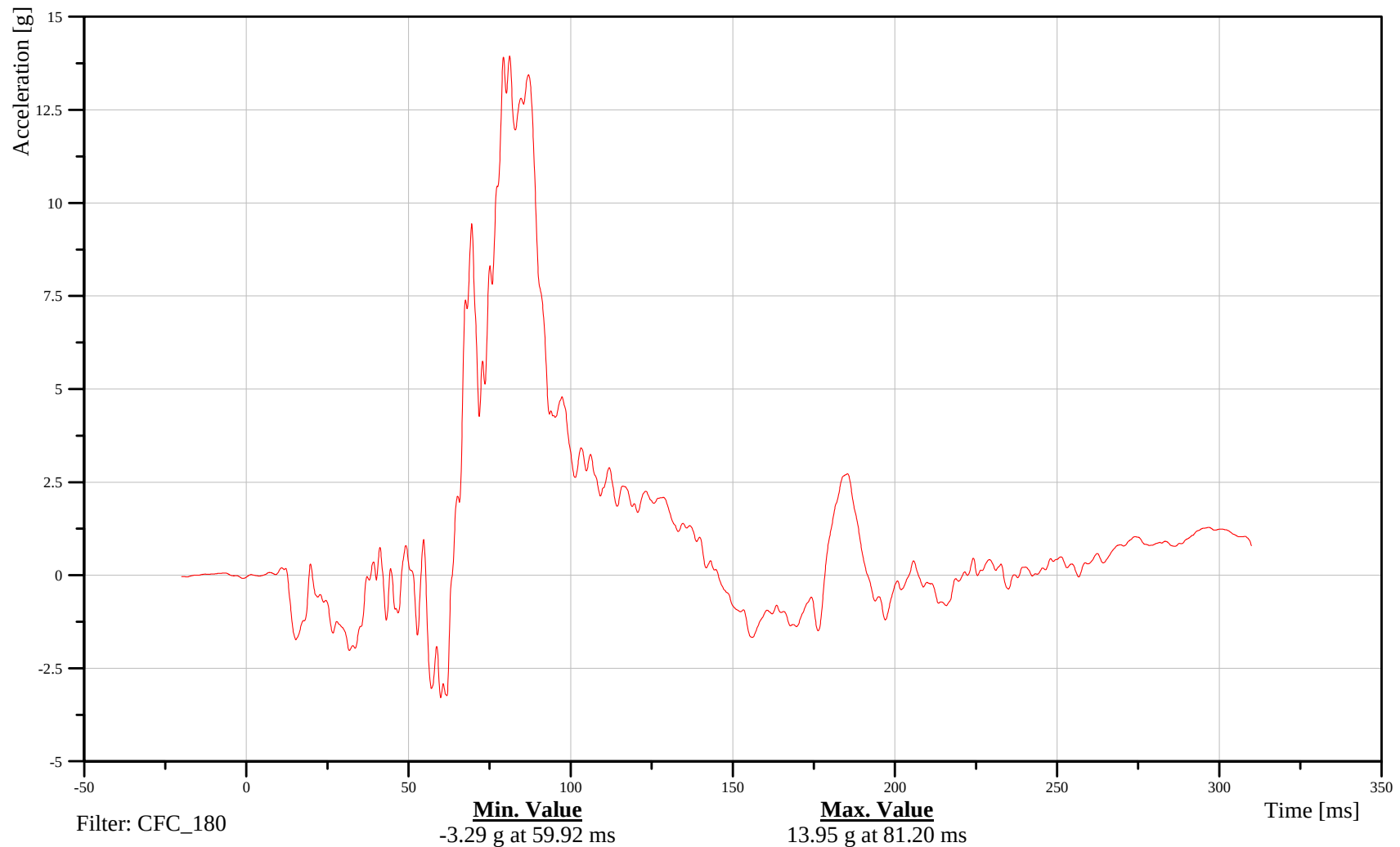
Target Driver Chest CG Y-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

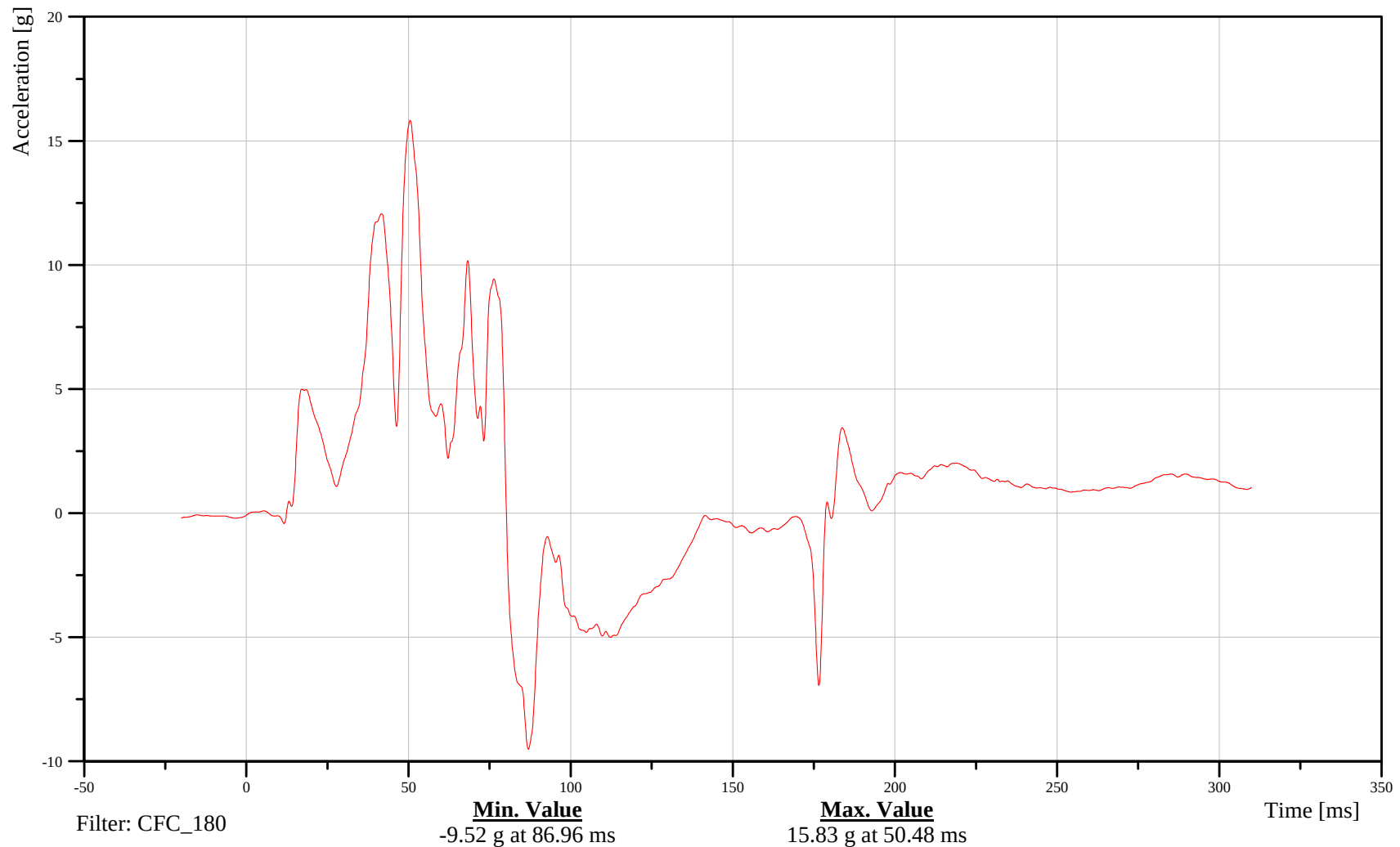
Target Driver Chest CG Z-Axis Acceleration

Customer: VRTC

21CHSTCG00H3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

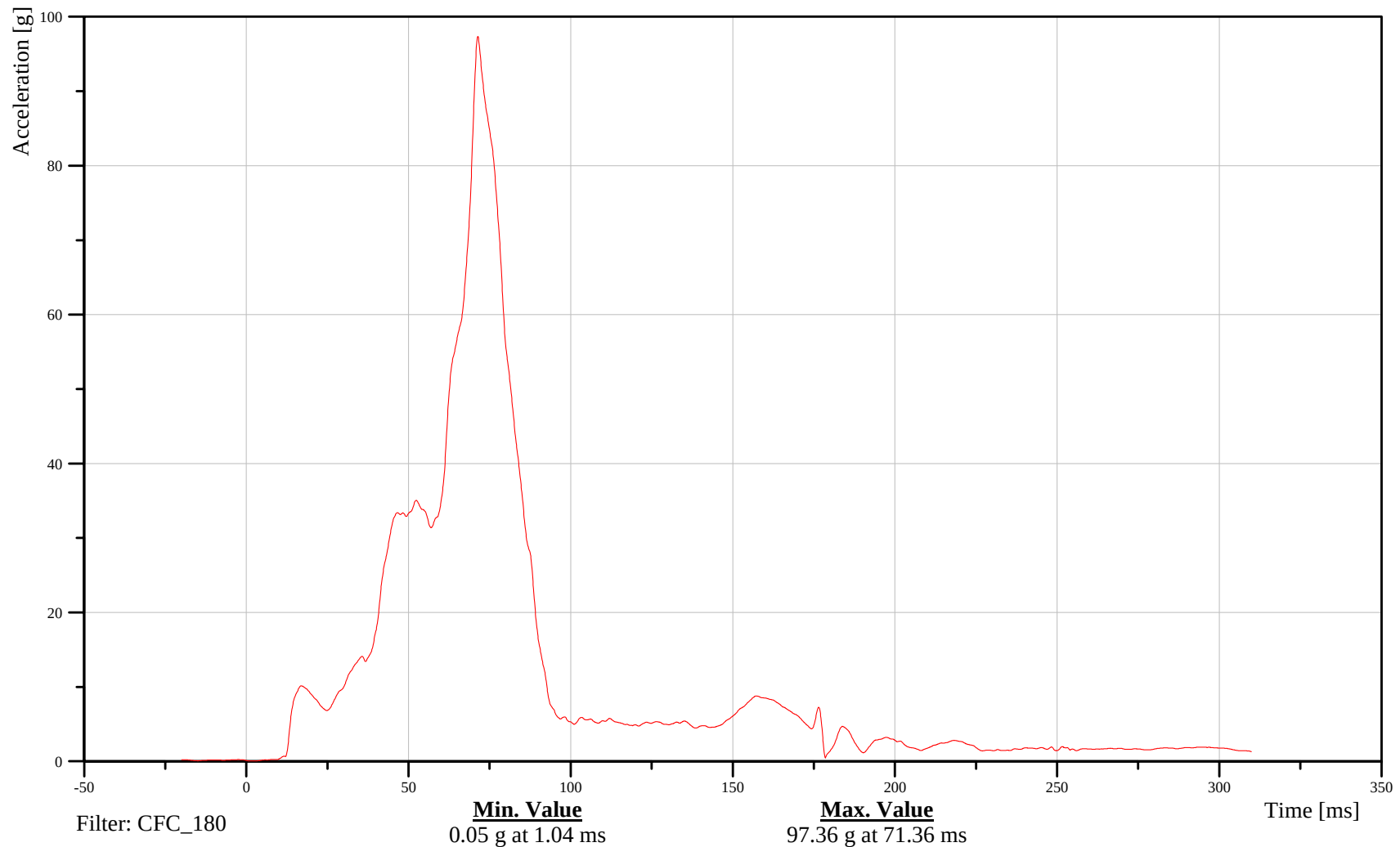
Target Driver Chest CG Resultant Acceleration

Customer: VRTC

21CHSTCG00H3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

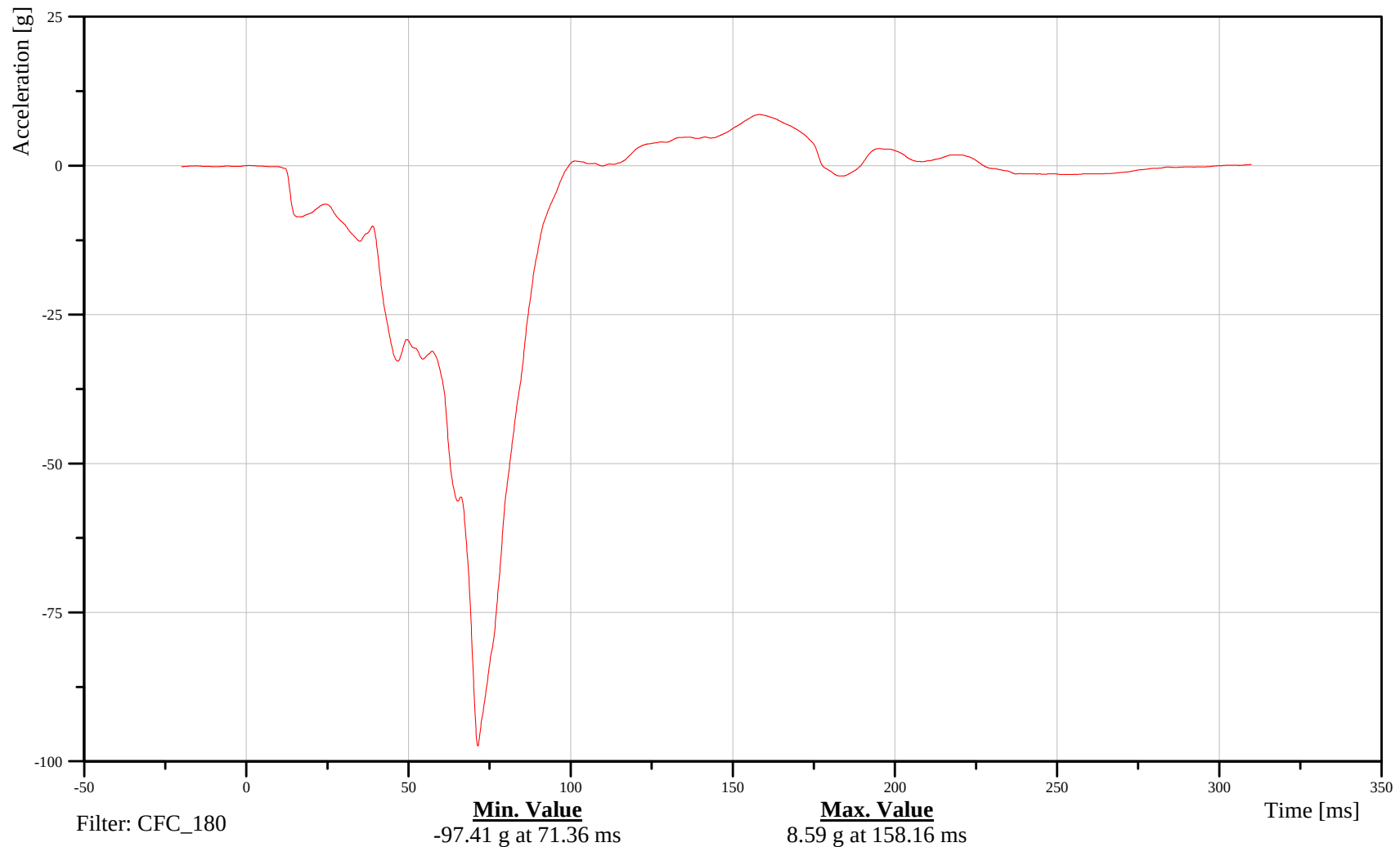
Target Driver Redundant Chest CG X-Axis Acceleration

Customer: VRTC

21CHSTCGRDH3ACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

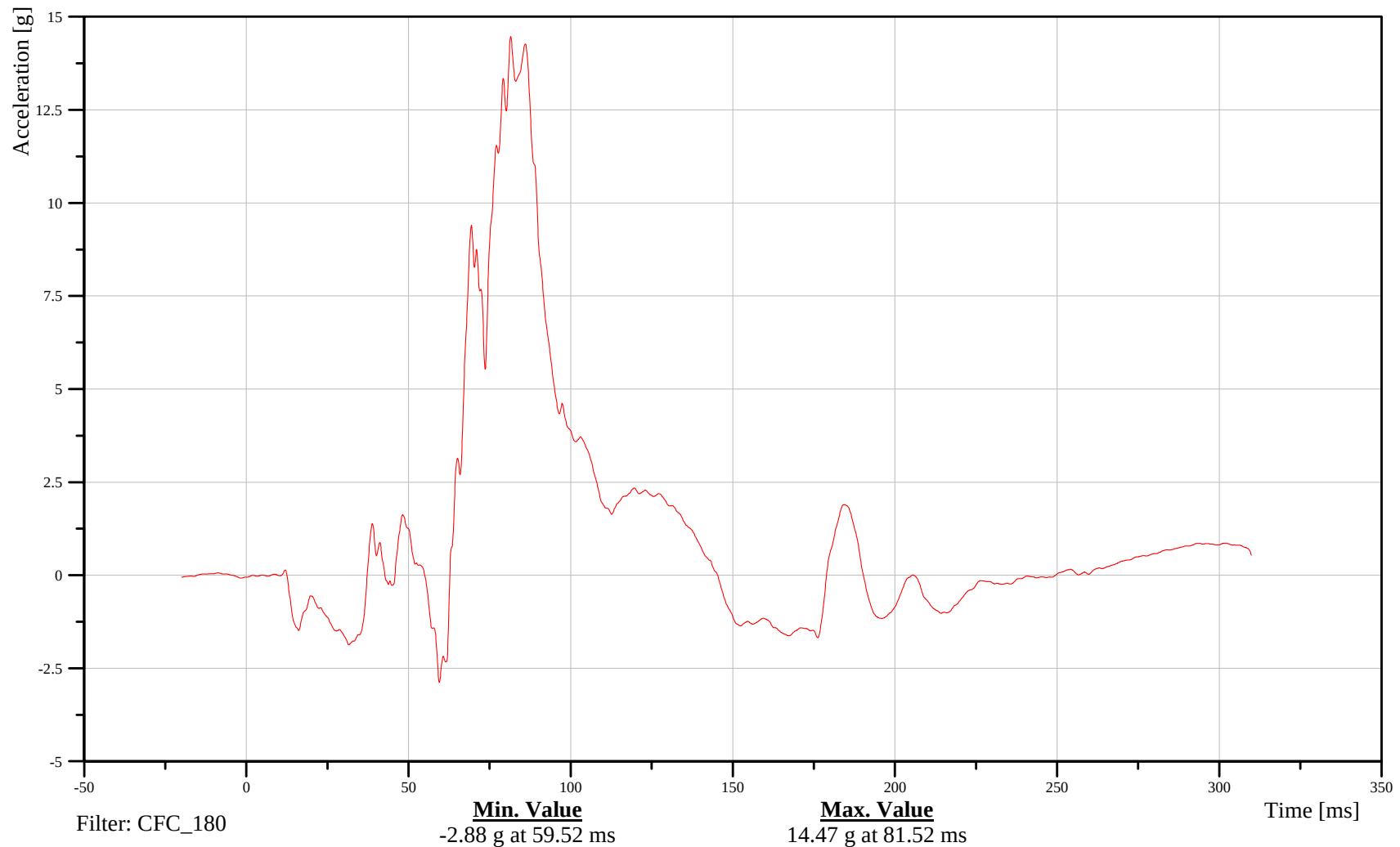
Target Driver Redundant Chest CG Y-Axis Acceleration

Customer: VRTC

21CHSTCGRDH3ACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

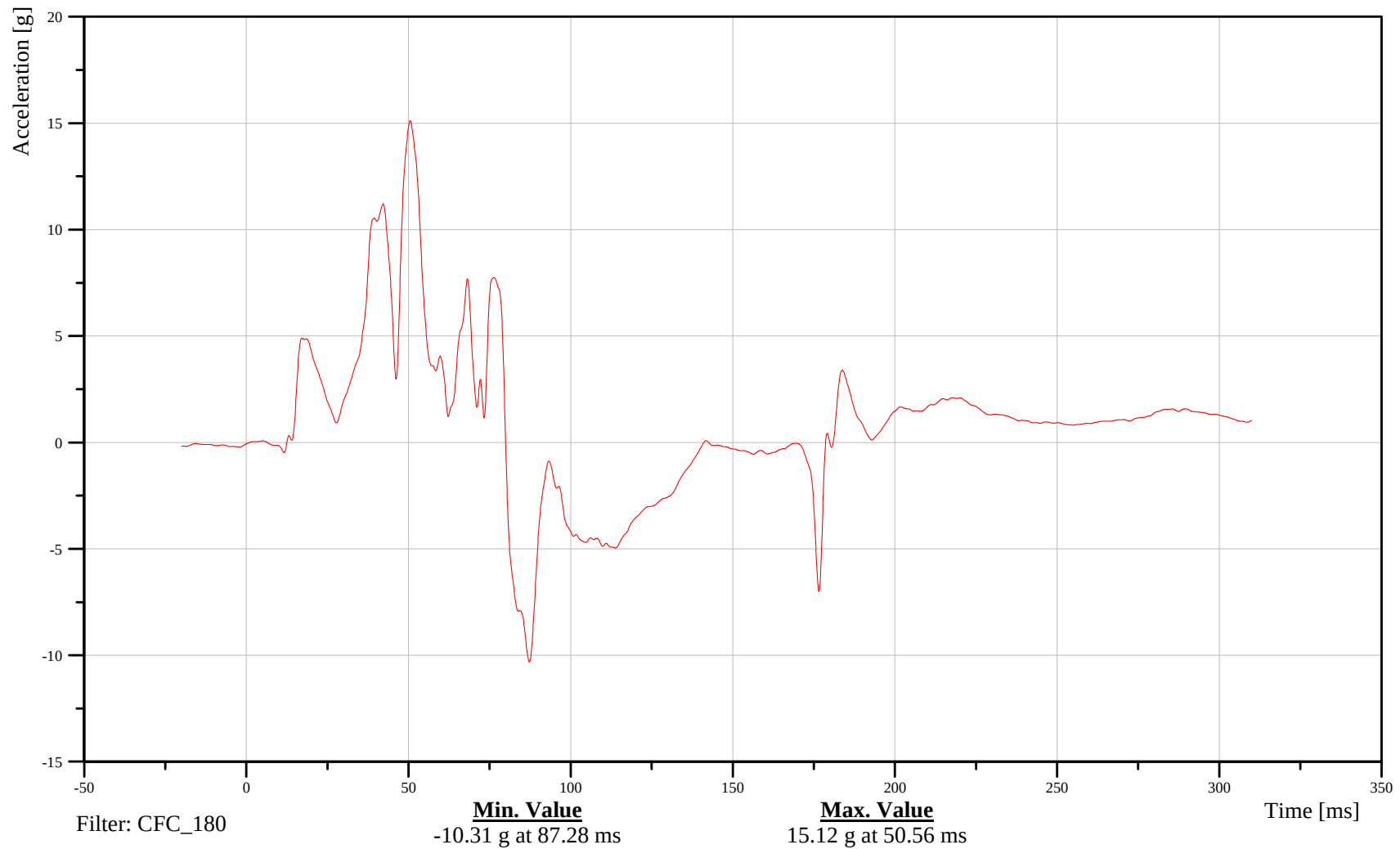
Target Driver Redundant Chest CG Z-Axis Acceleration

Customer: VRTC

21CHSTCGRDH3ACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

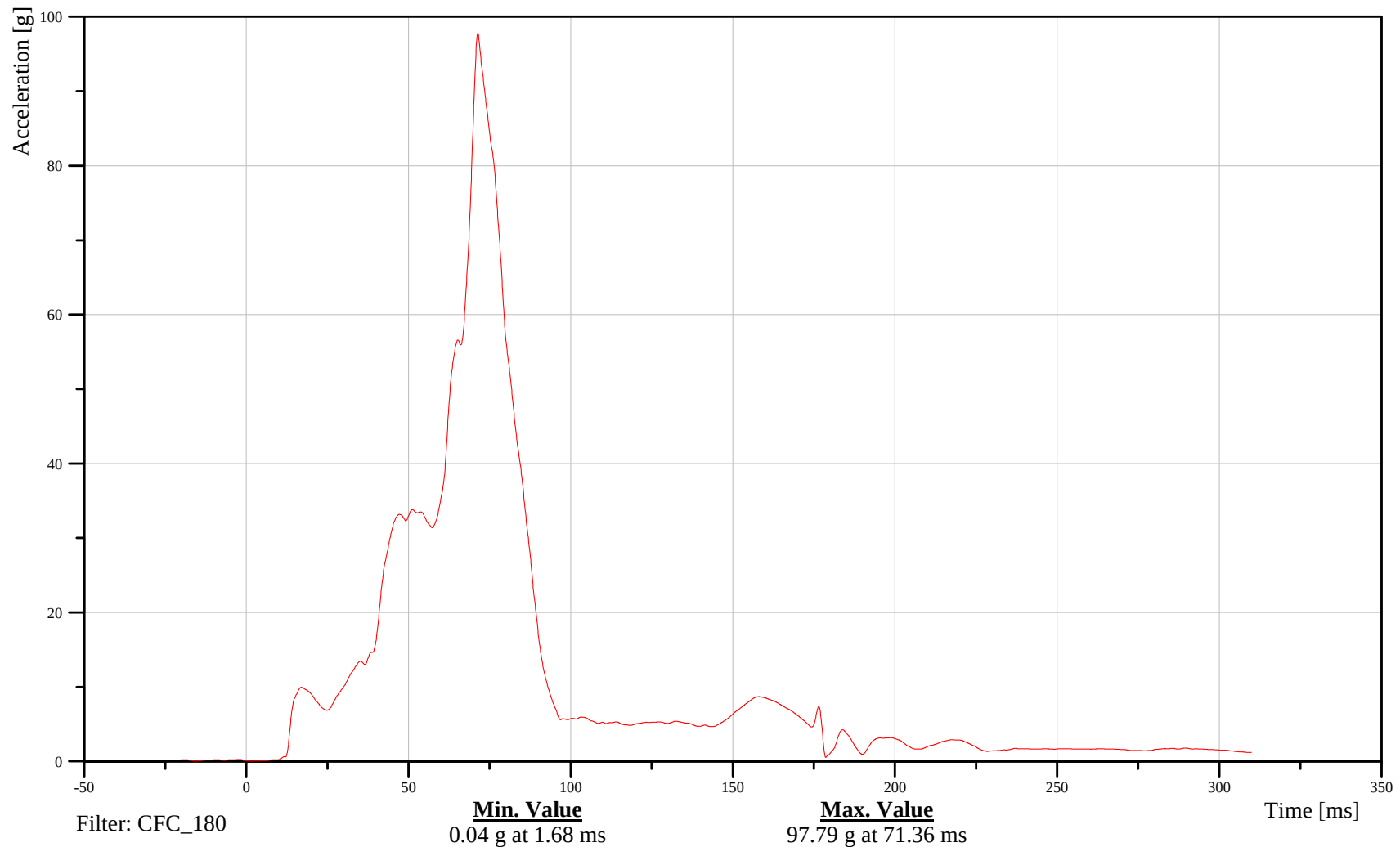
Target Driver Redundant Chest CG Resultant Acceleration

Customer: VRTC

21CHSTCGRDH3ACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

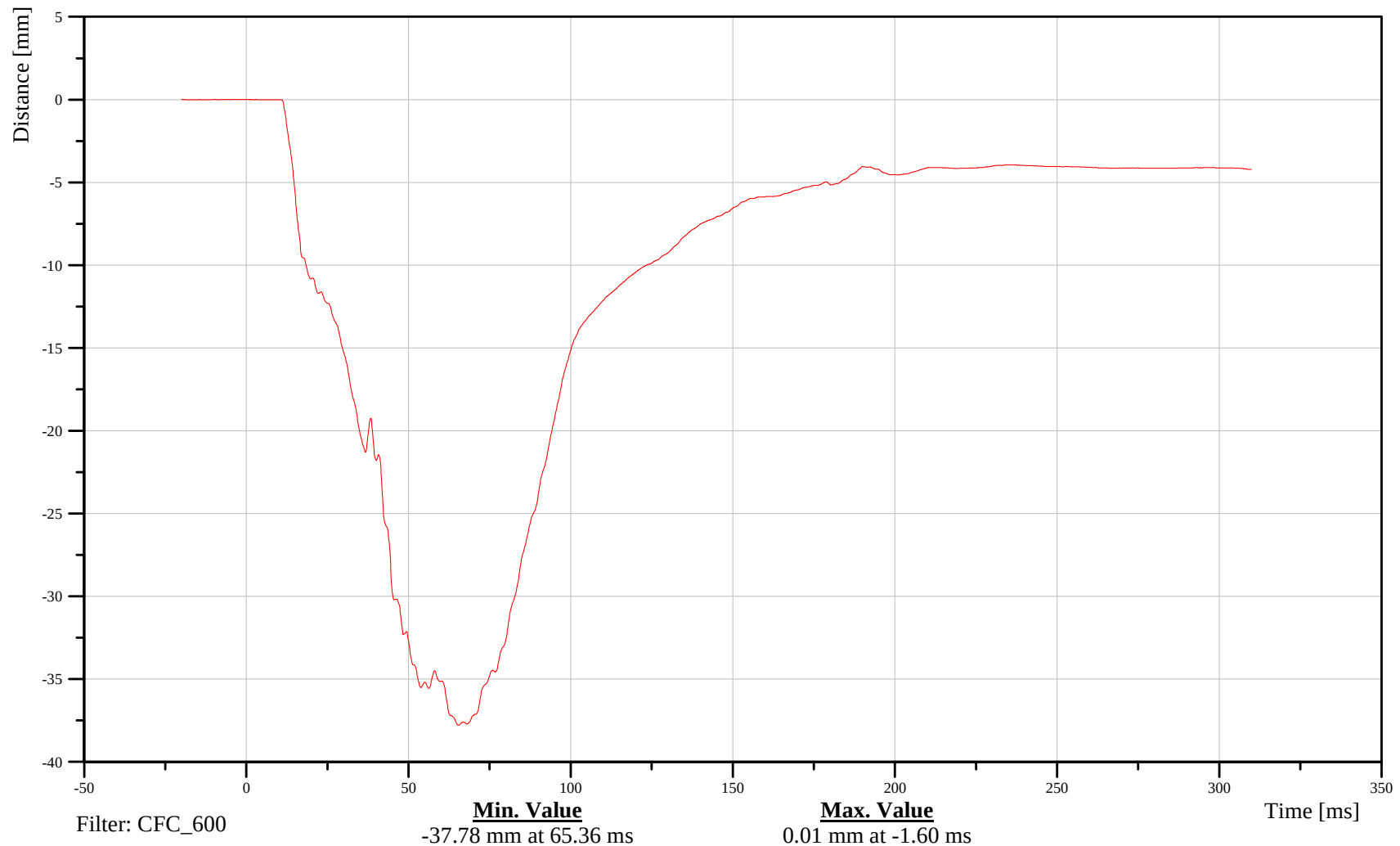
Target Driver Chest Displacement

Customer: VRTC

21CHST0000H3DSXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

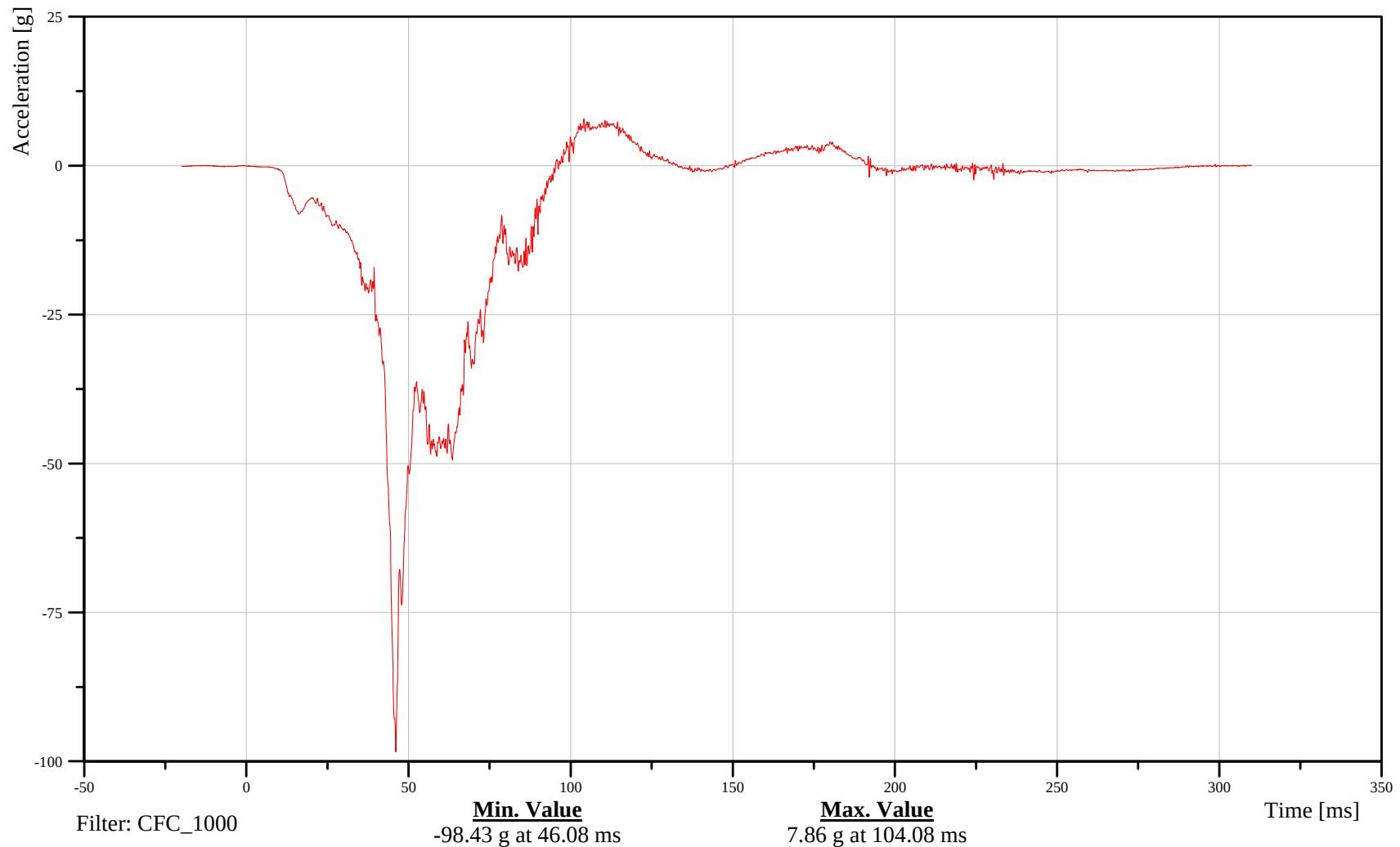
Target Driver Pelvis CG X-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

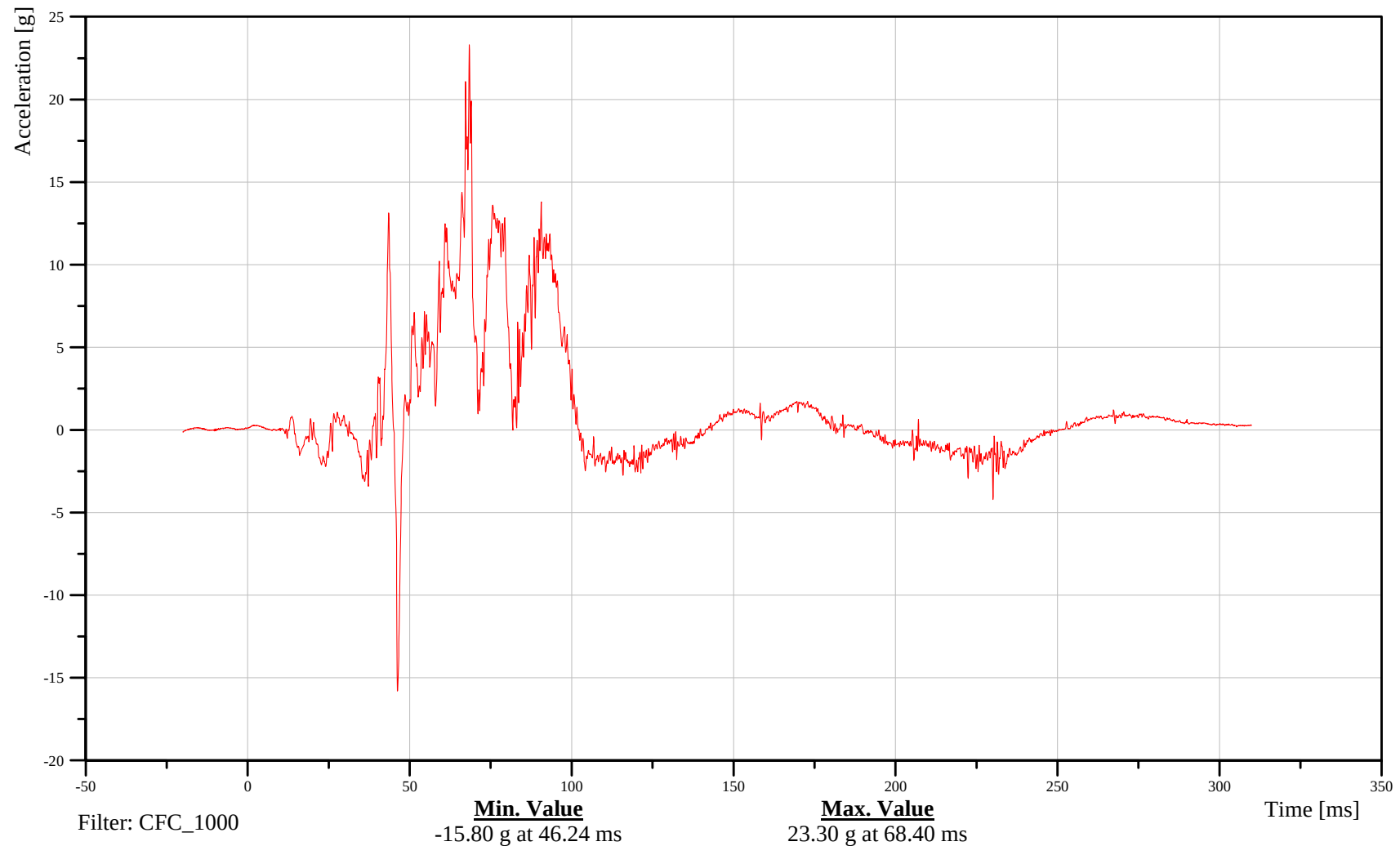
Target Driver Pelvis CG Y-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

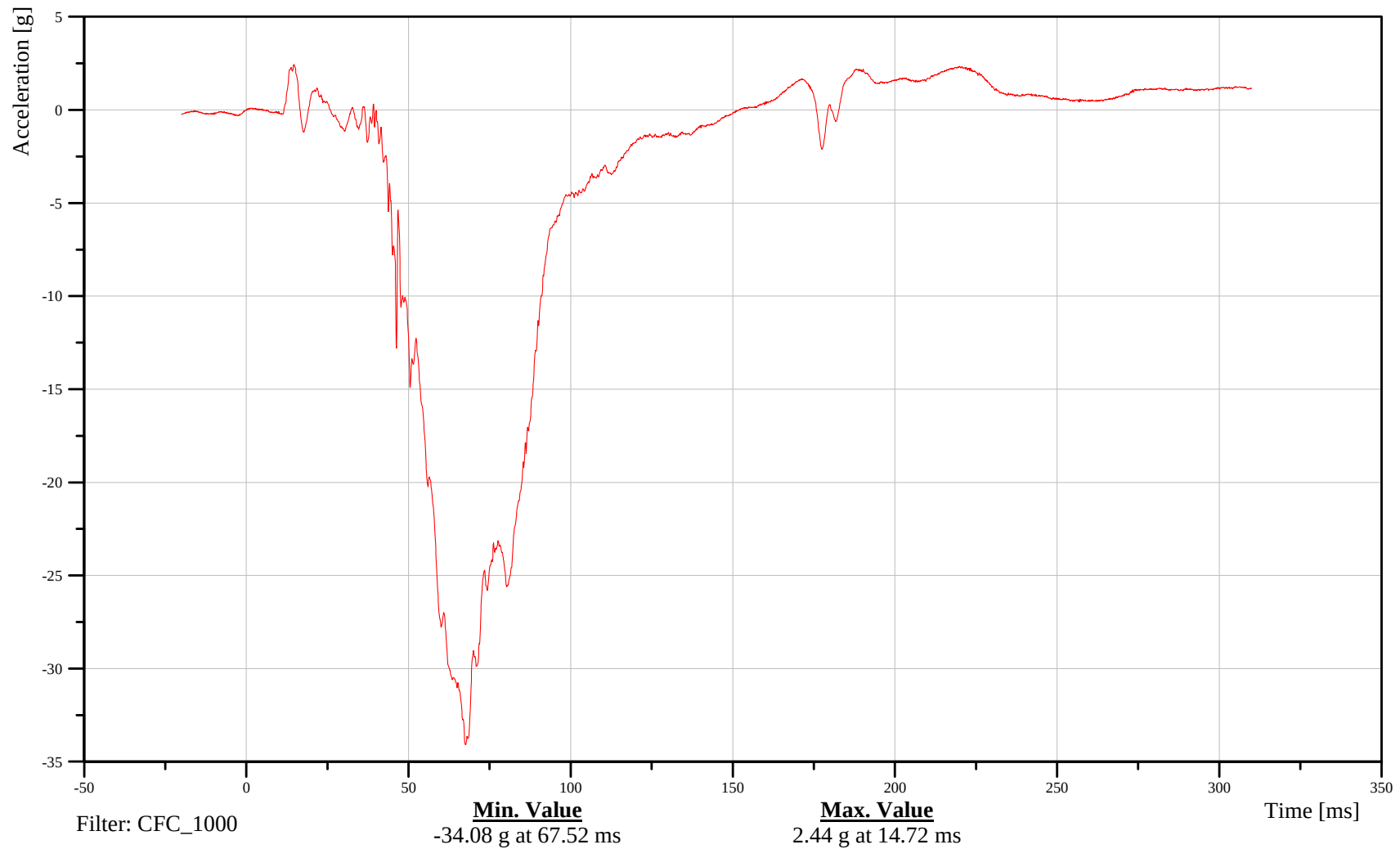
Target Driver Pelvis CG Z-Axis Acceleration

Customer: VRTC

21PELVCG00H3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

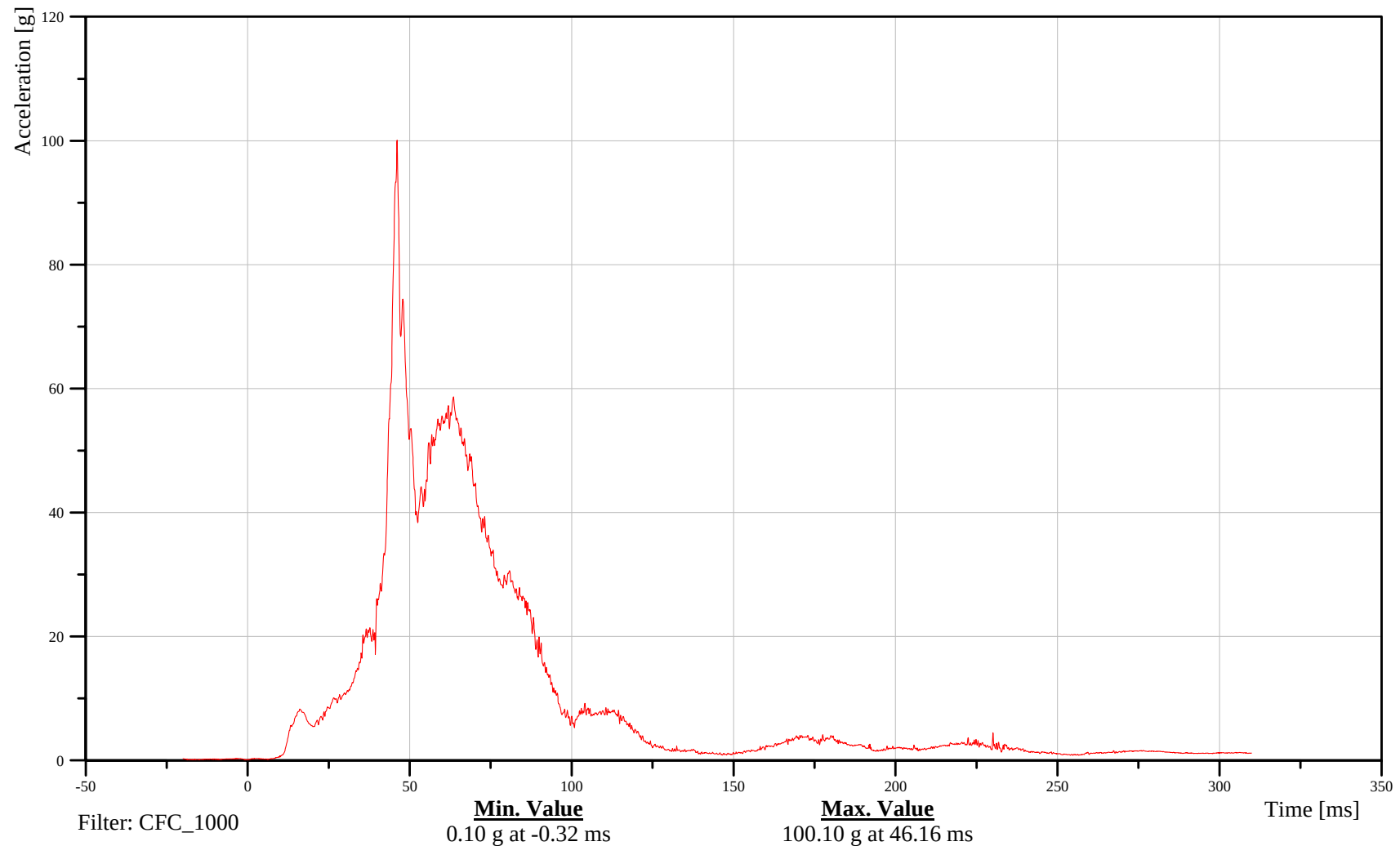
Target Driver Pelvis CG Resultant Acceleration

Customer: VRTC

21PELVCG00H3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

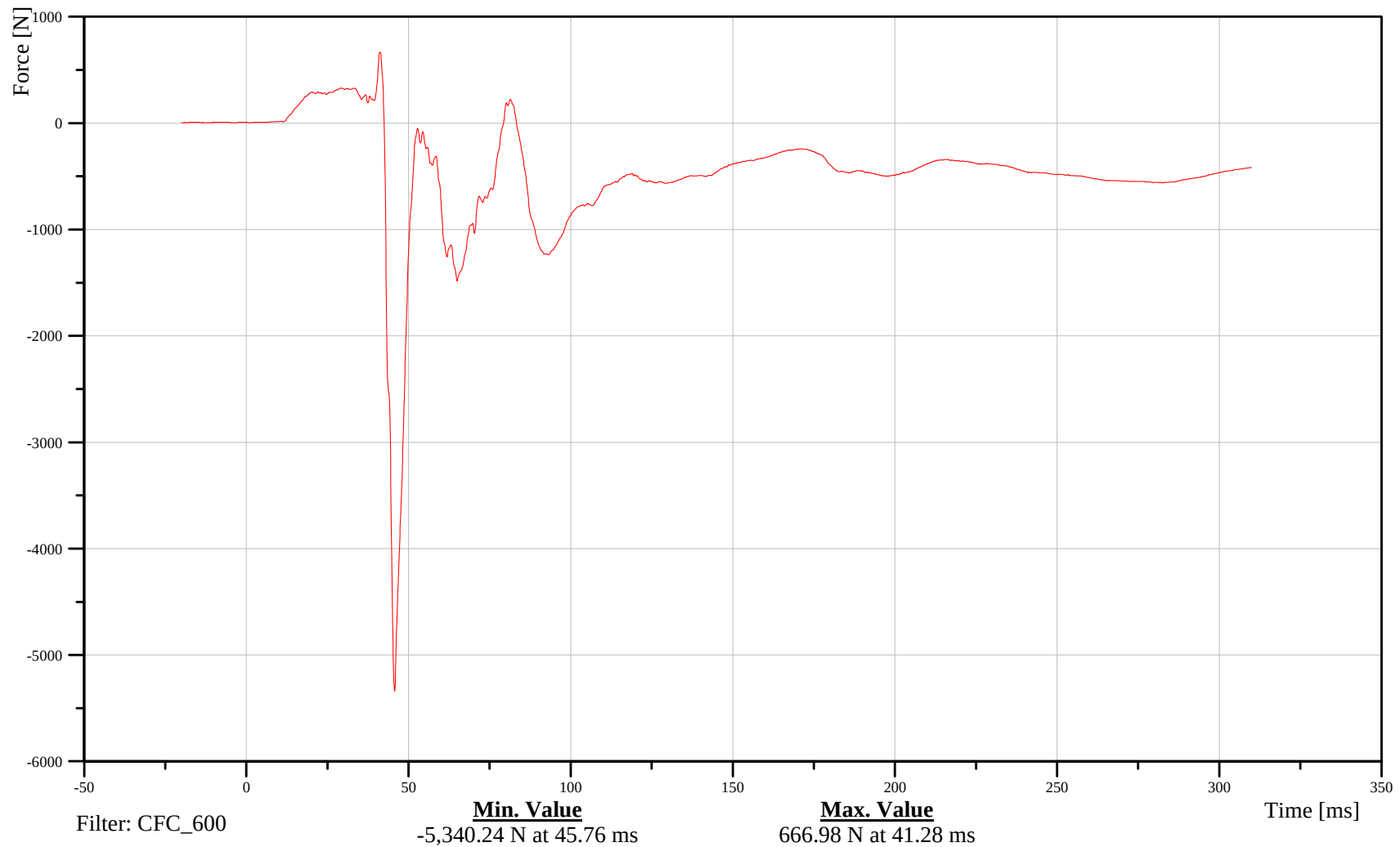
Target Driver Left Femur Z-Axis Force

Customer: VRTC

21FEMRLL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Driver Left Knee Displacement

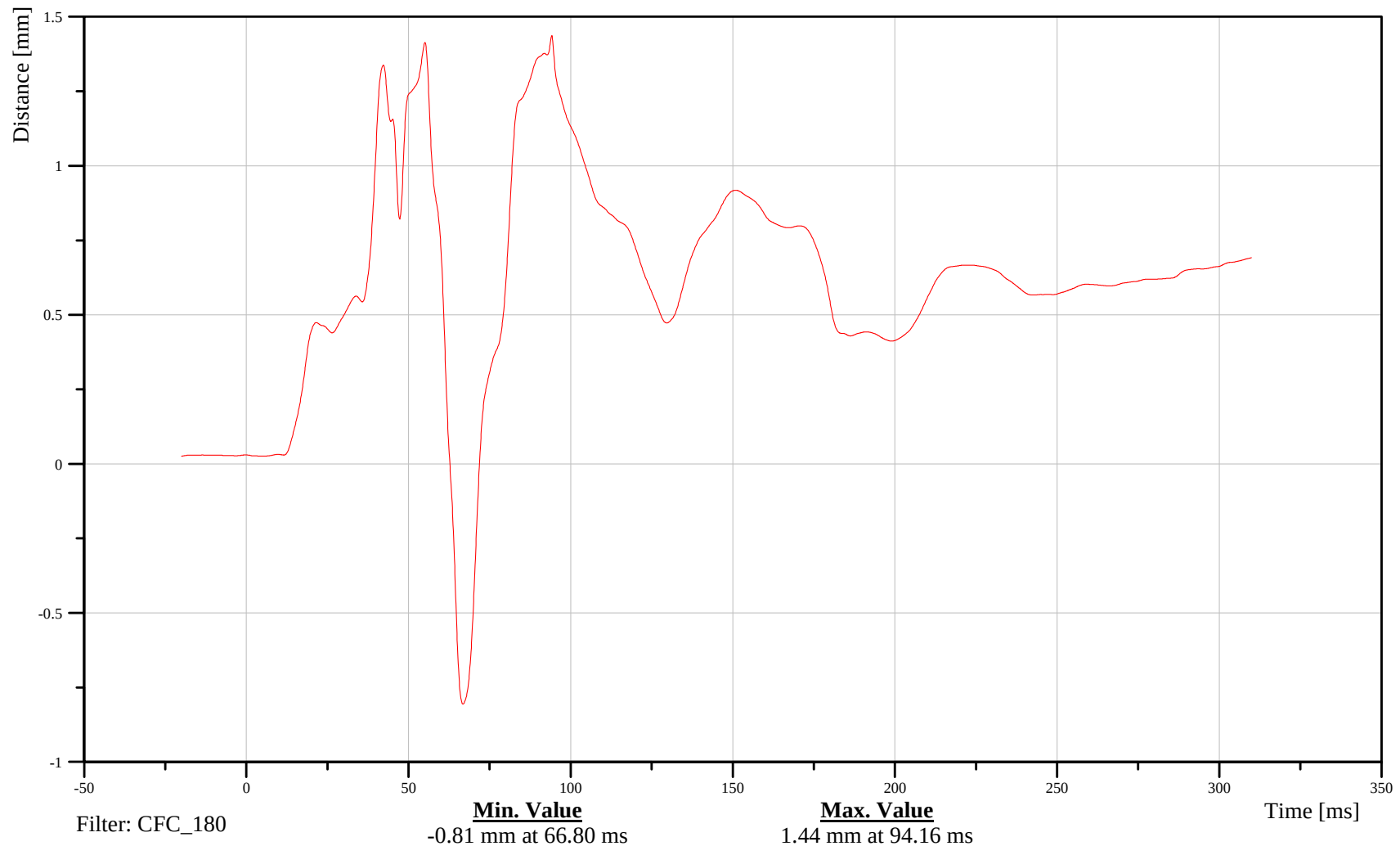
Date: 03/20/2006
Time: 08:08

Customer: VRTC

21KNSLLE00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

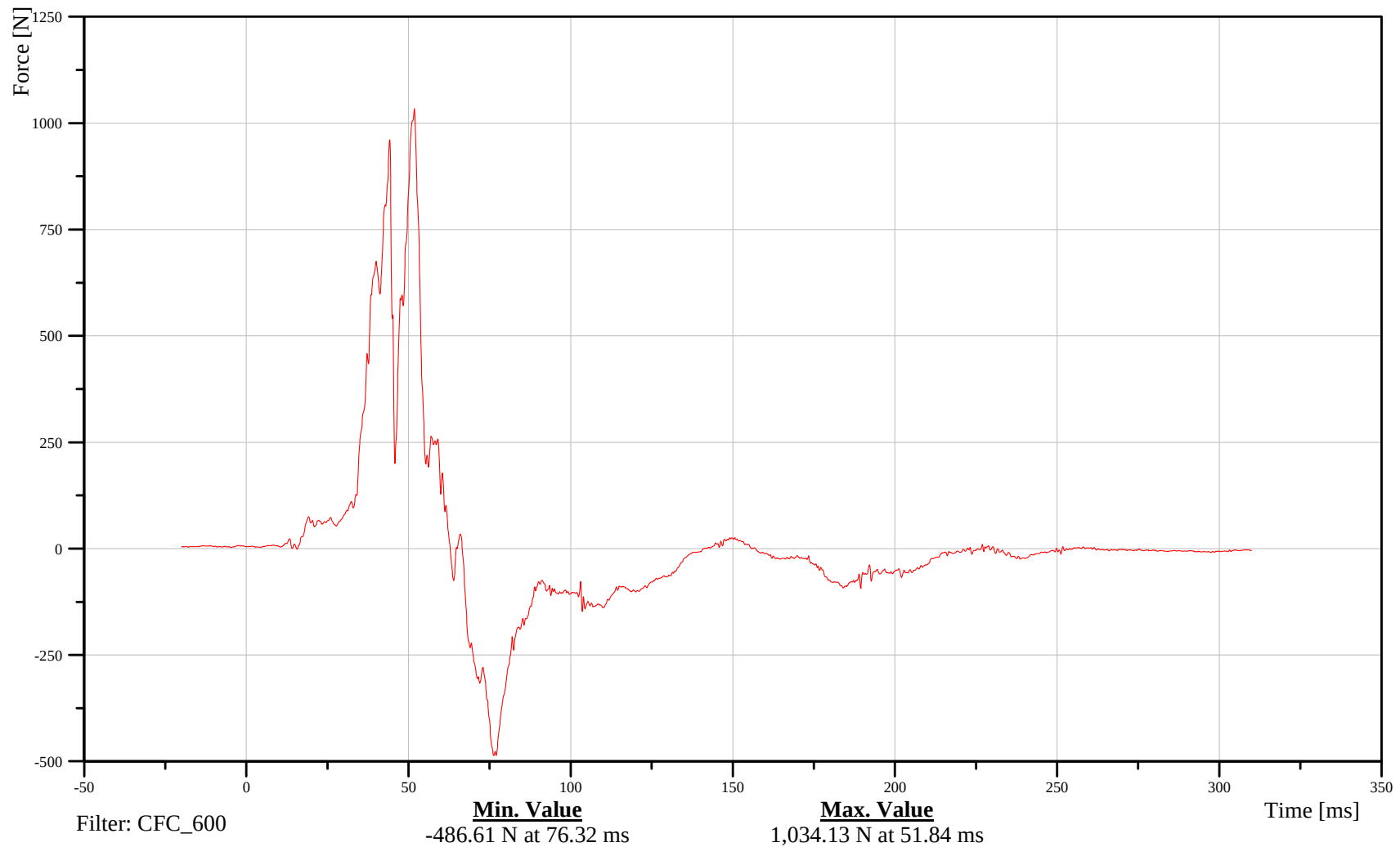
Target Driver Left Upper Tibia X-Axis Force

Customer: VRTC

21TIBILULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

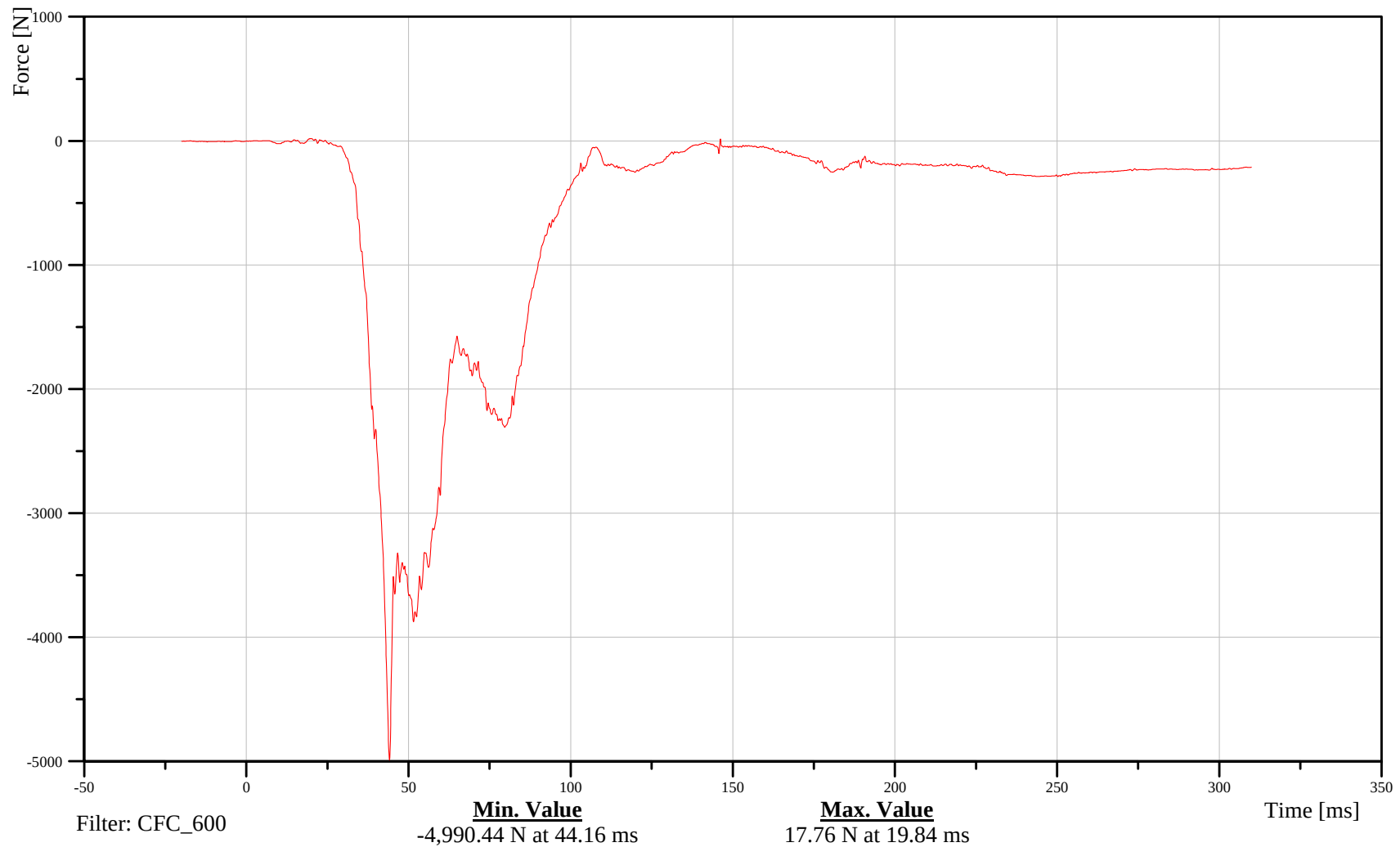
Target Driver Left Upper Tibia Z-Axis Force

Customer: VRTC

21TIBILULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

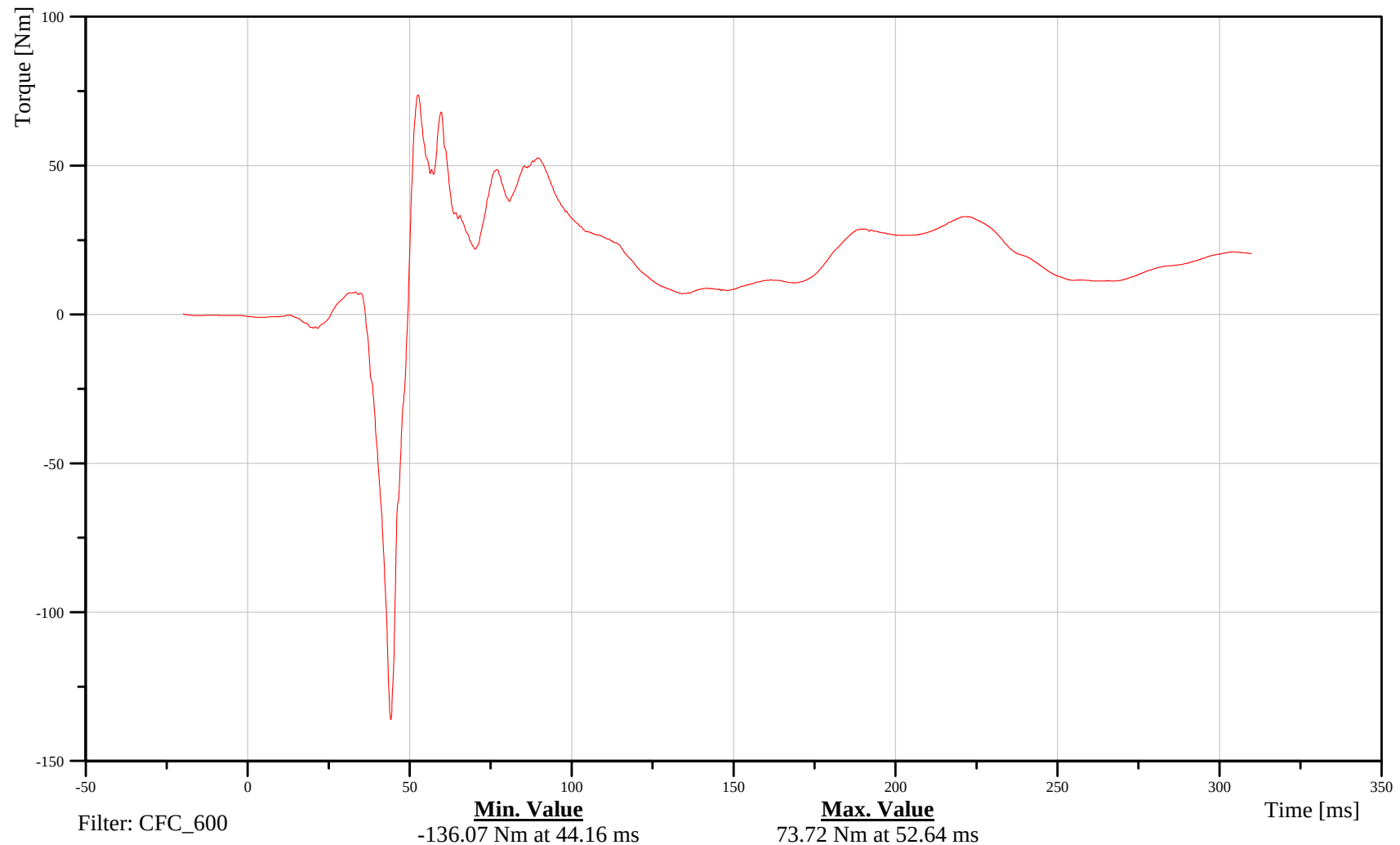
Target Driver Left Upper Tibia Moment About X Axis

Customer: VRTC

21TIBILULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

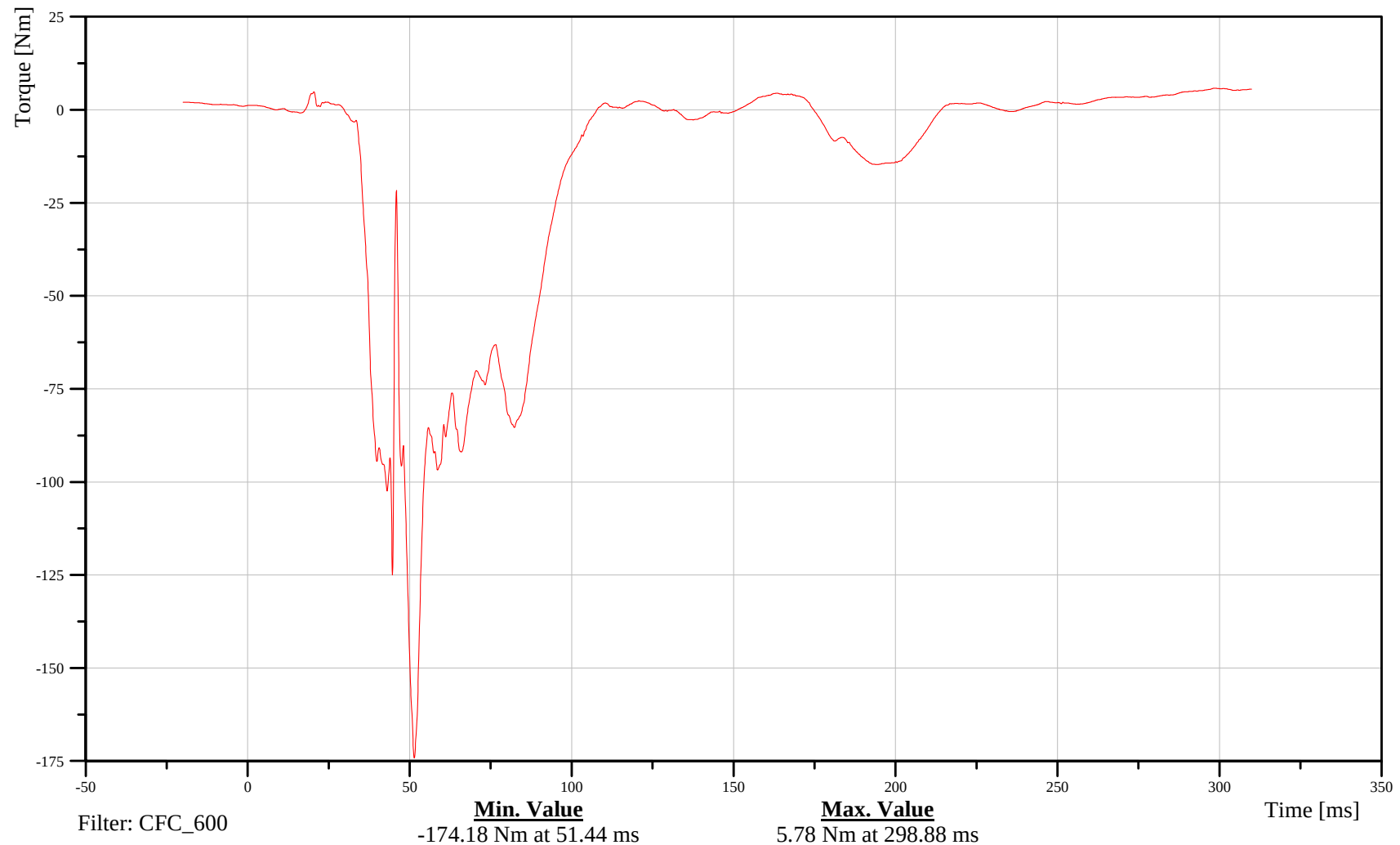
Target Driver Left Upper Tibia Moment About Y Axis

Customer: VRTC

21TIBILULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

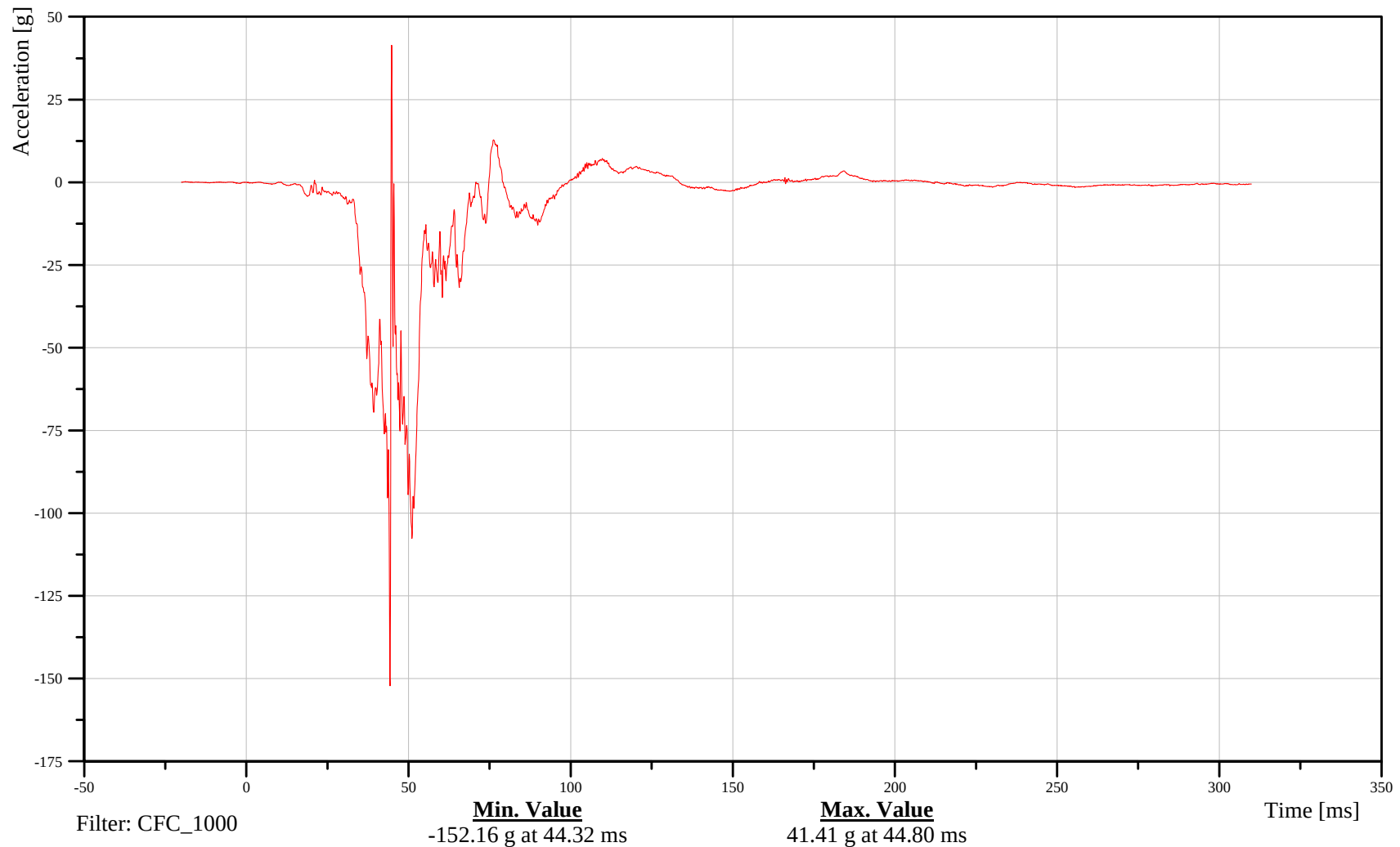
Target Driver Left Tibia X-Axis Acceleration

Customer: VRTC

21TIBILELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

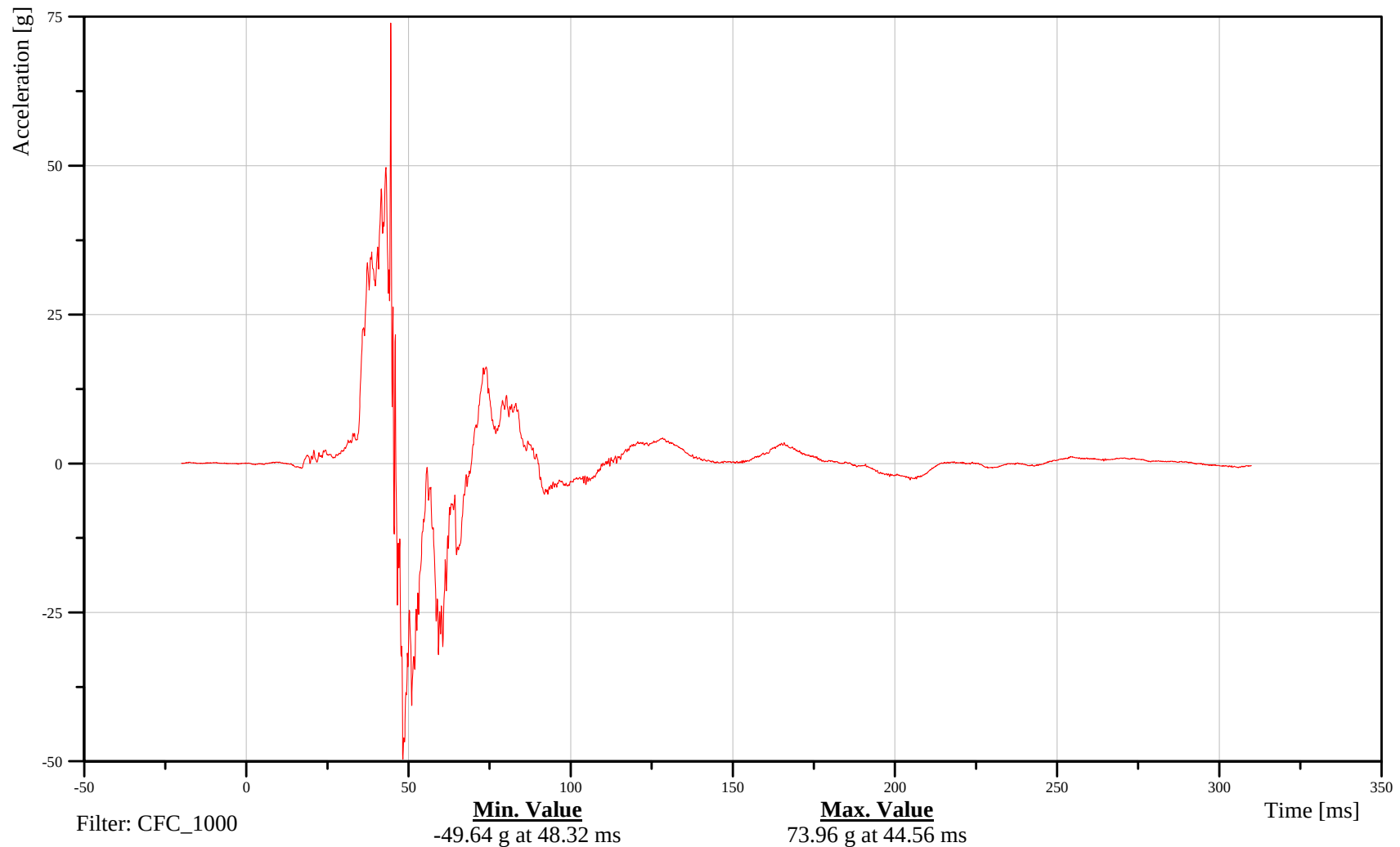
Target Driver Left Tibia Y-Axis Acceleration

Customer: VRTC

21TIBILELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

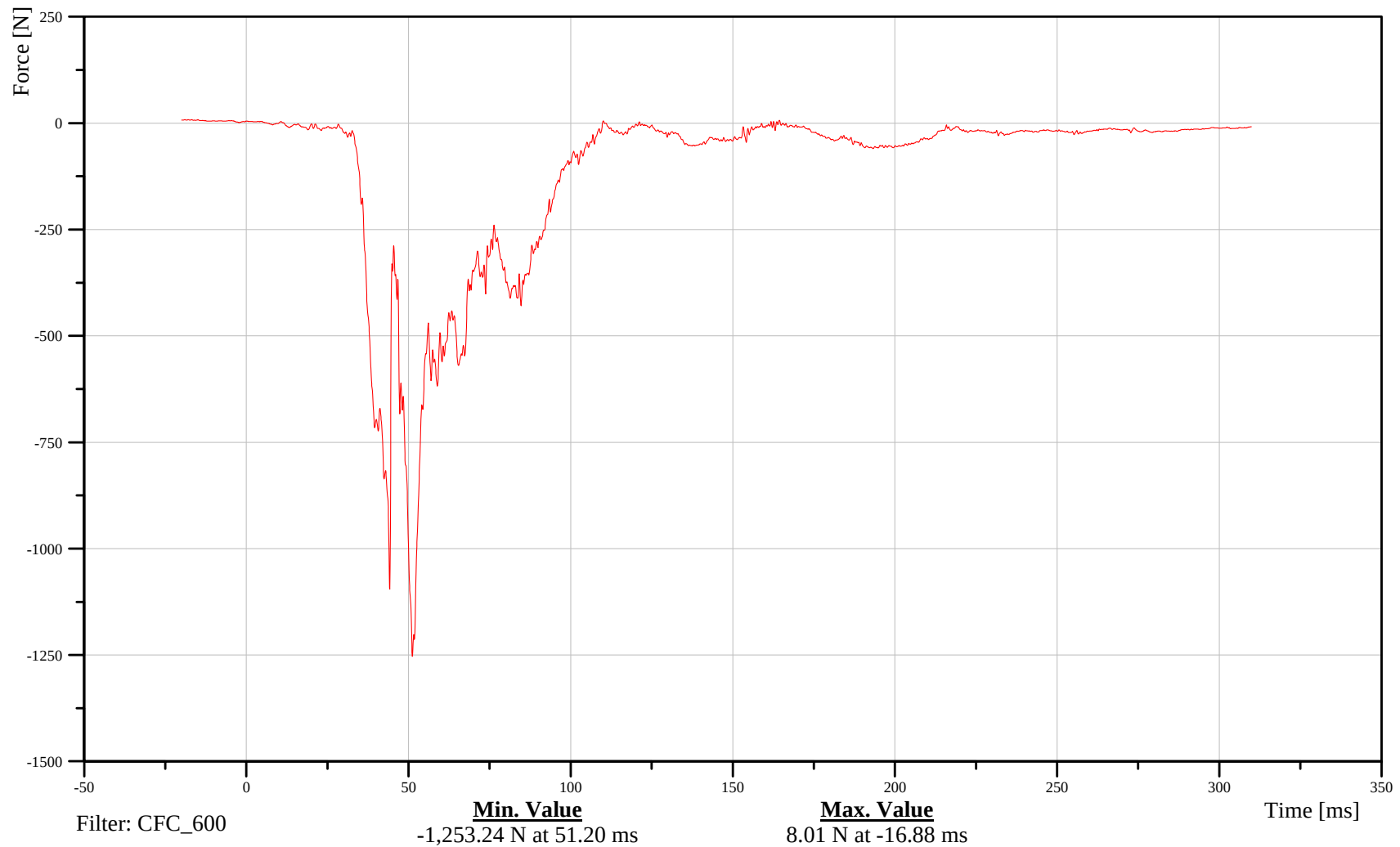
Target Driver Left Lower Tibia X-Axis Force

Customer: VRTC

21TIBILLX3H3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

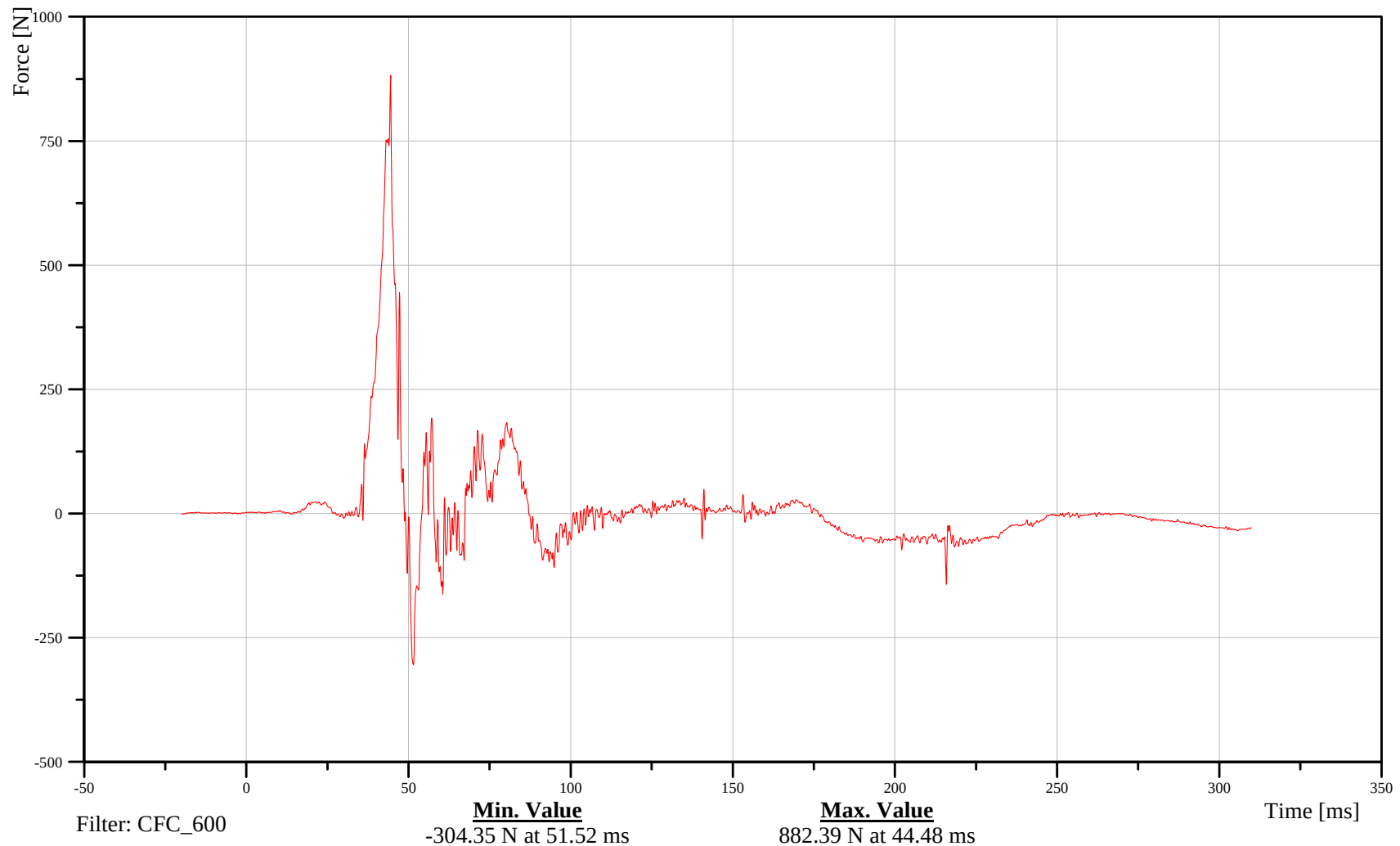
Target Driver Left Lower Tibia Y-Axis Force

Customer: VRTC

21TIBILLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

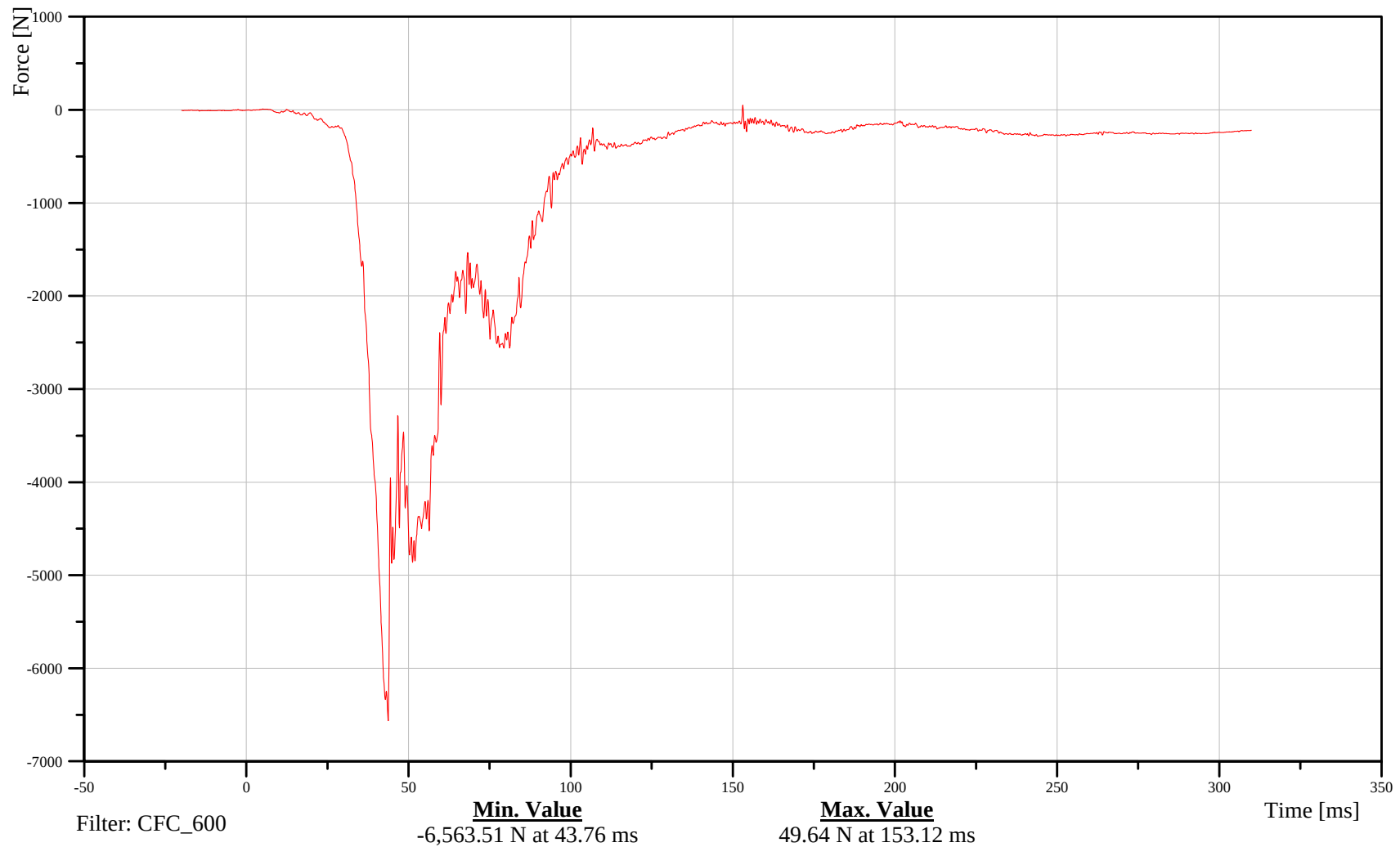
Target Driver Left Lower Tibia Z-Axis Force

Customer: VRTC

21TIBILLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

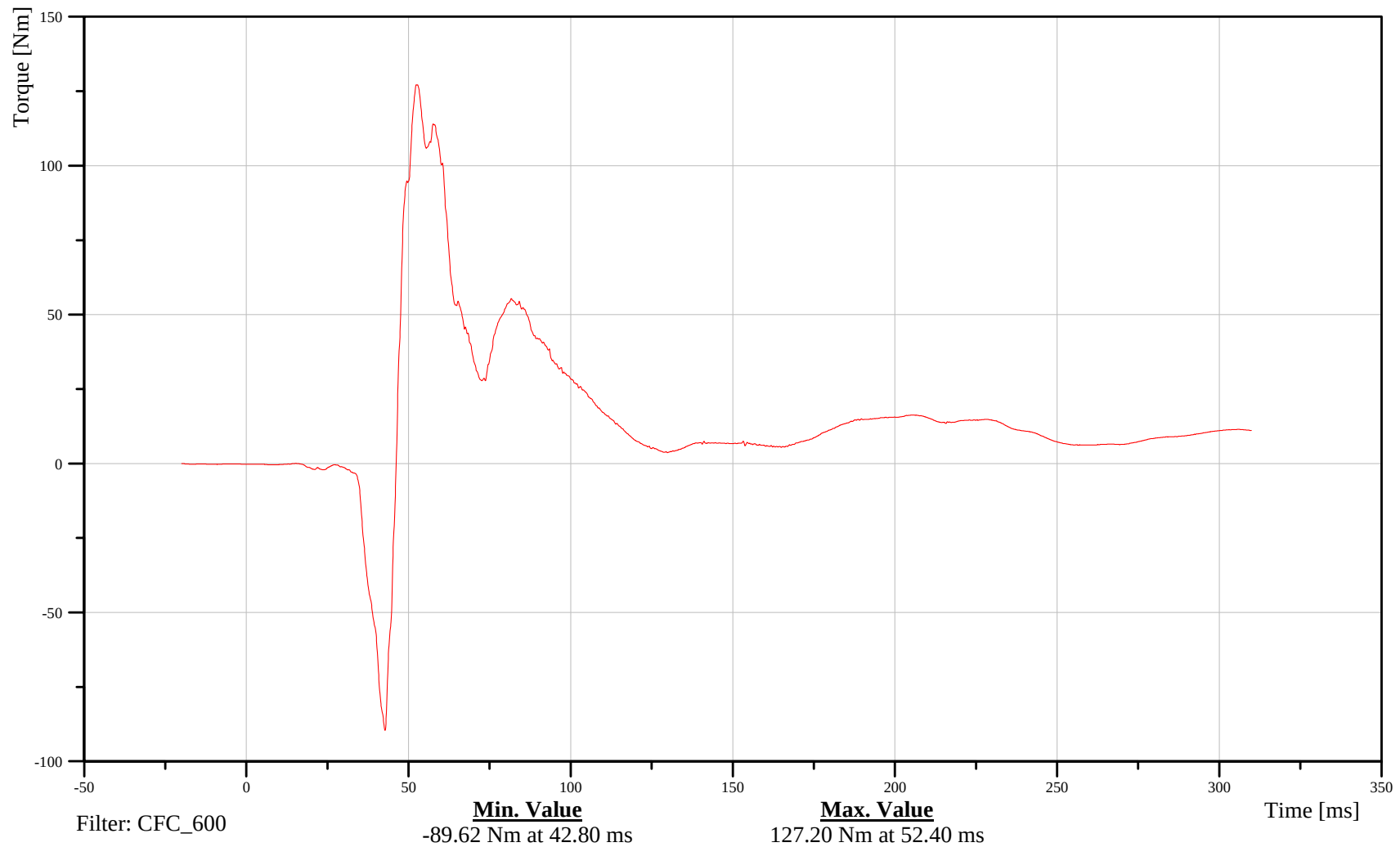
Target Driver Left Lower Tibia Moment About X Axis

Customer: VRTC

21TIBILLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

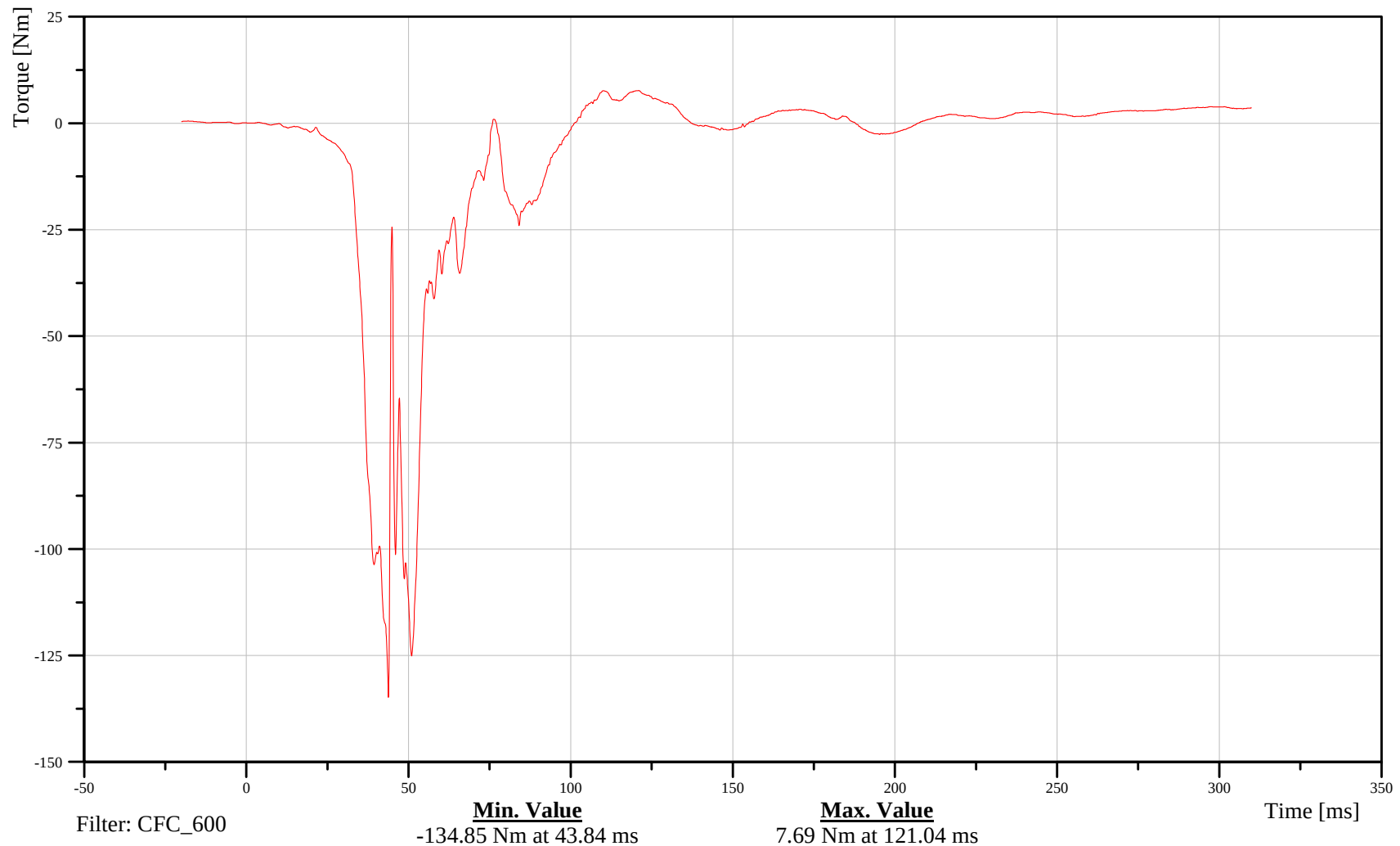
Target Driver Left Lower Tibia Moment About Y Axis

Customer: VRTC

21TIBILLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

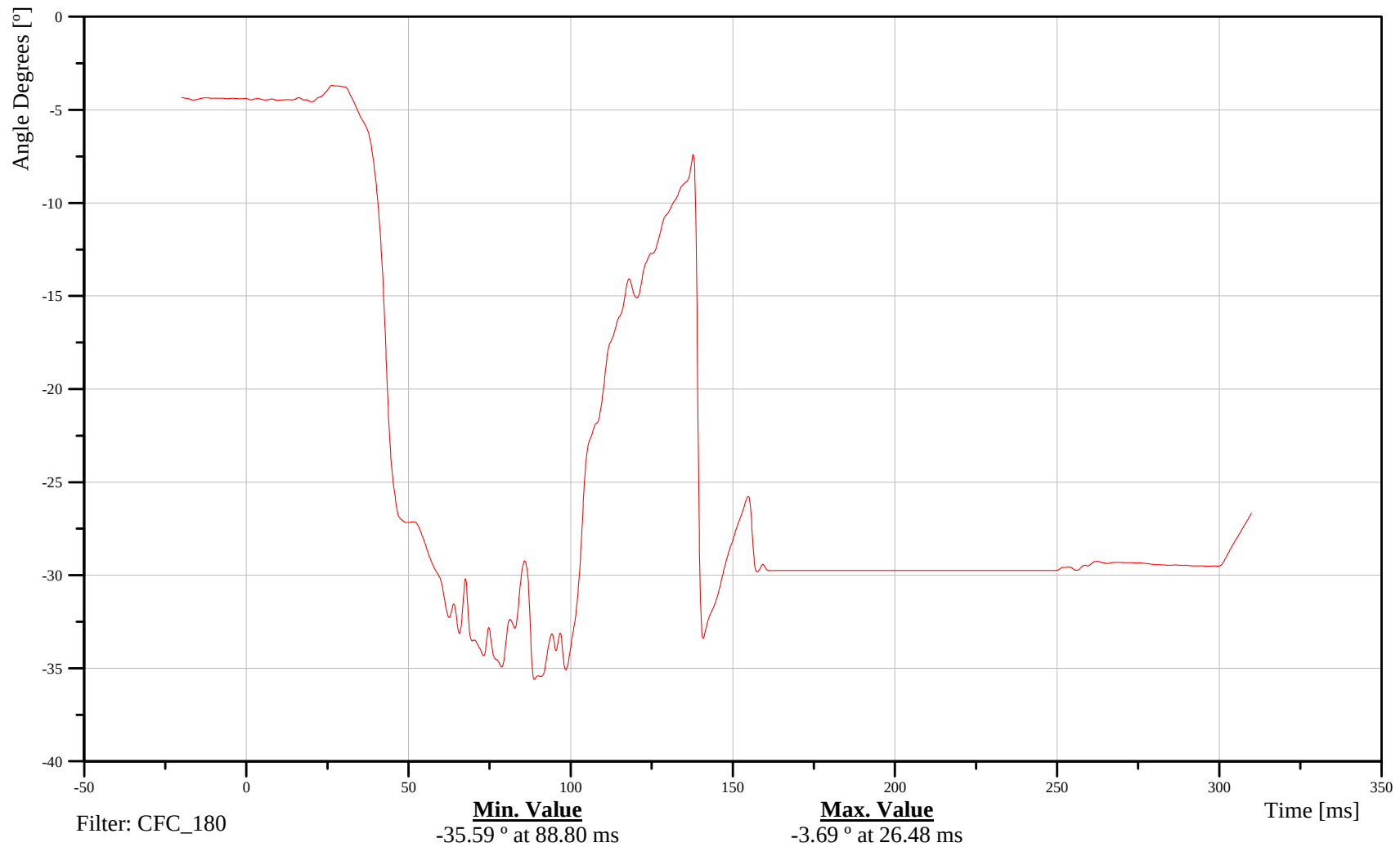
Target Driver Left Foot X-Axis Rotation

Customer: VRTC

21FOOTLELXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

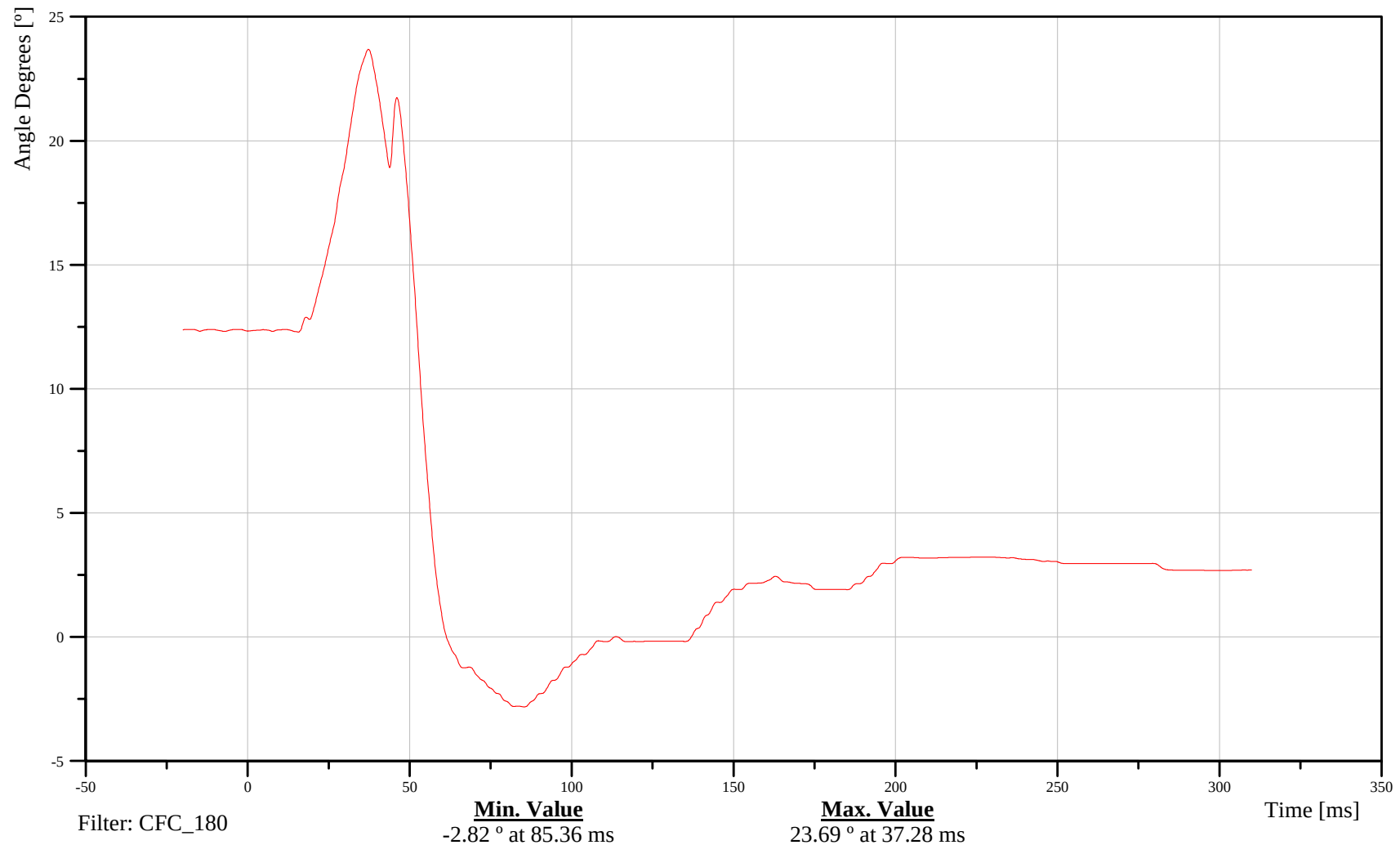
Target Driver Left Foot Y-Axis Rotation

Customer: VRTC

21FOOTLELXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

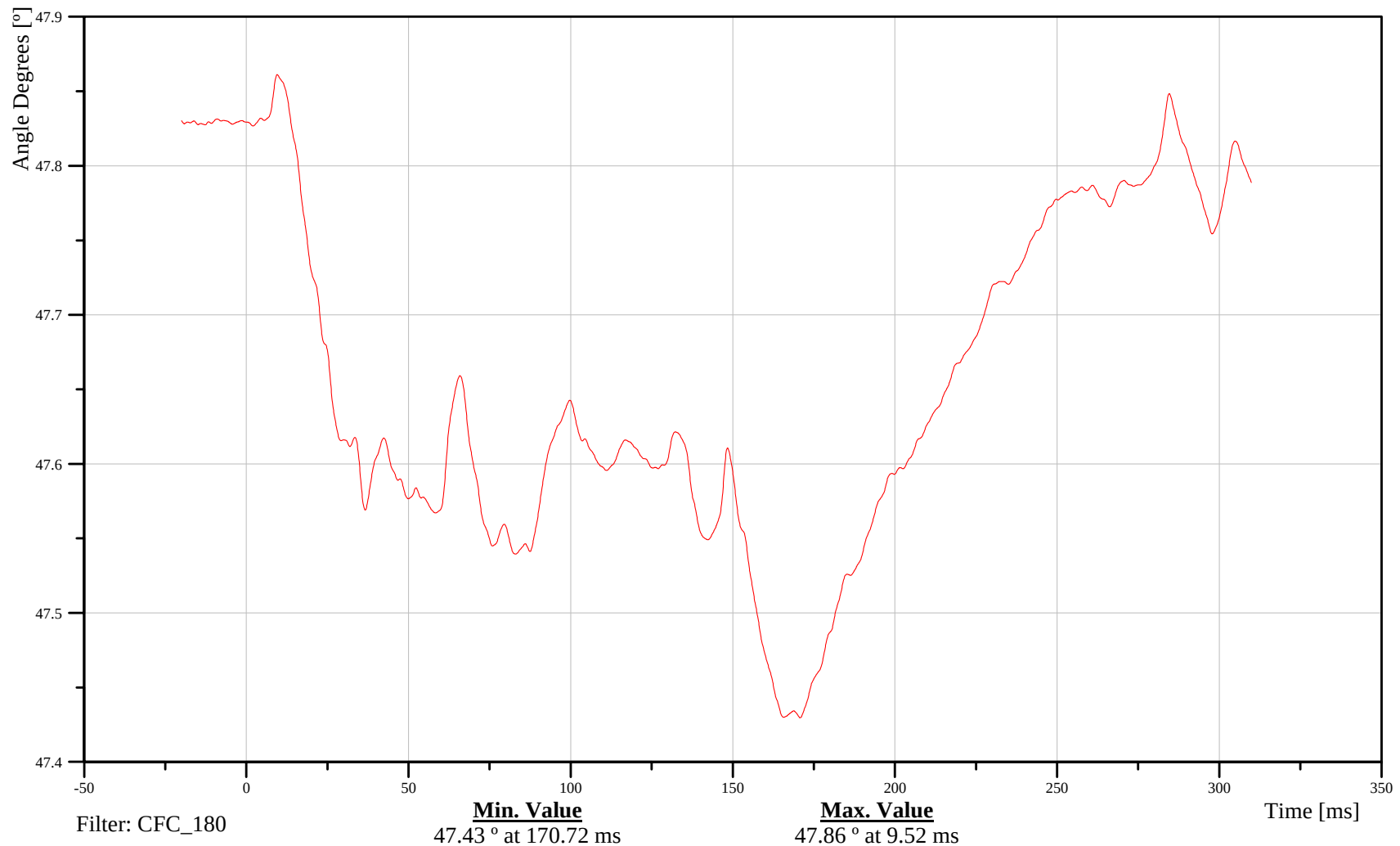
Target Driver Left Foot Z-Axis Rotation

Customer: VRTC

21FOOTLELXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

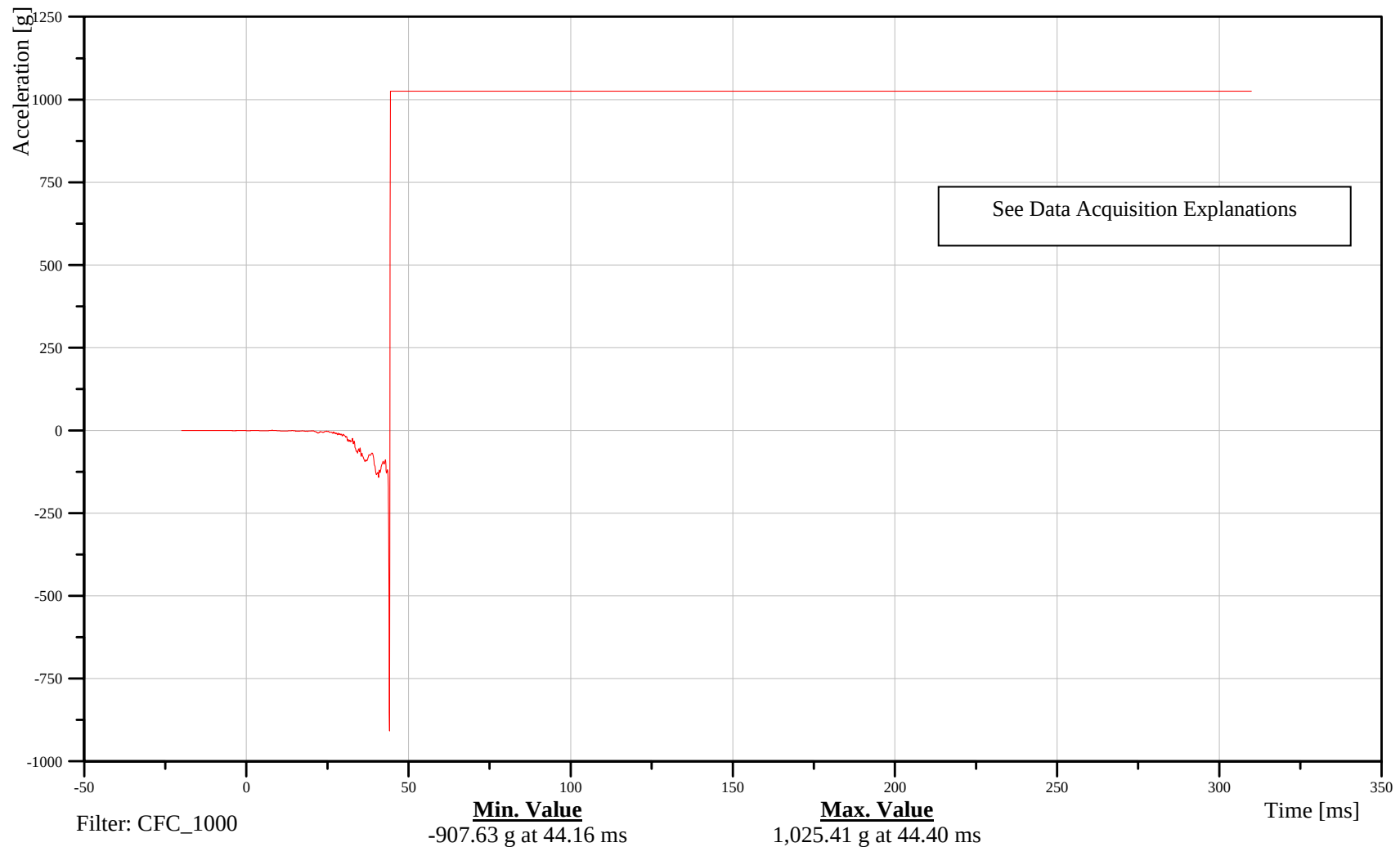
Target Driver Left Foot X-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

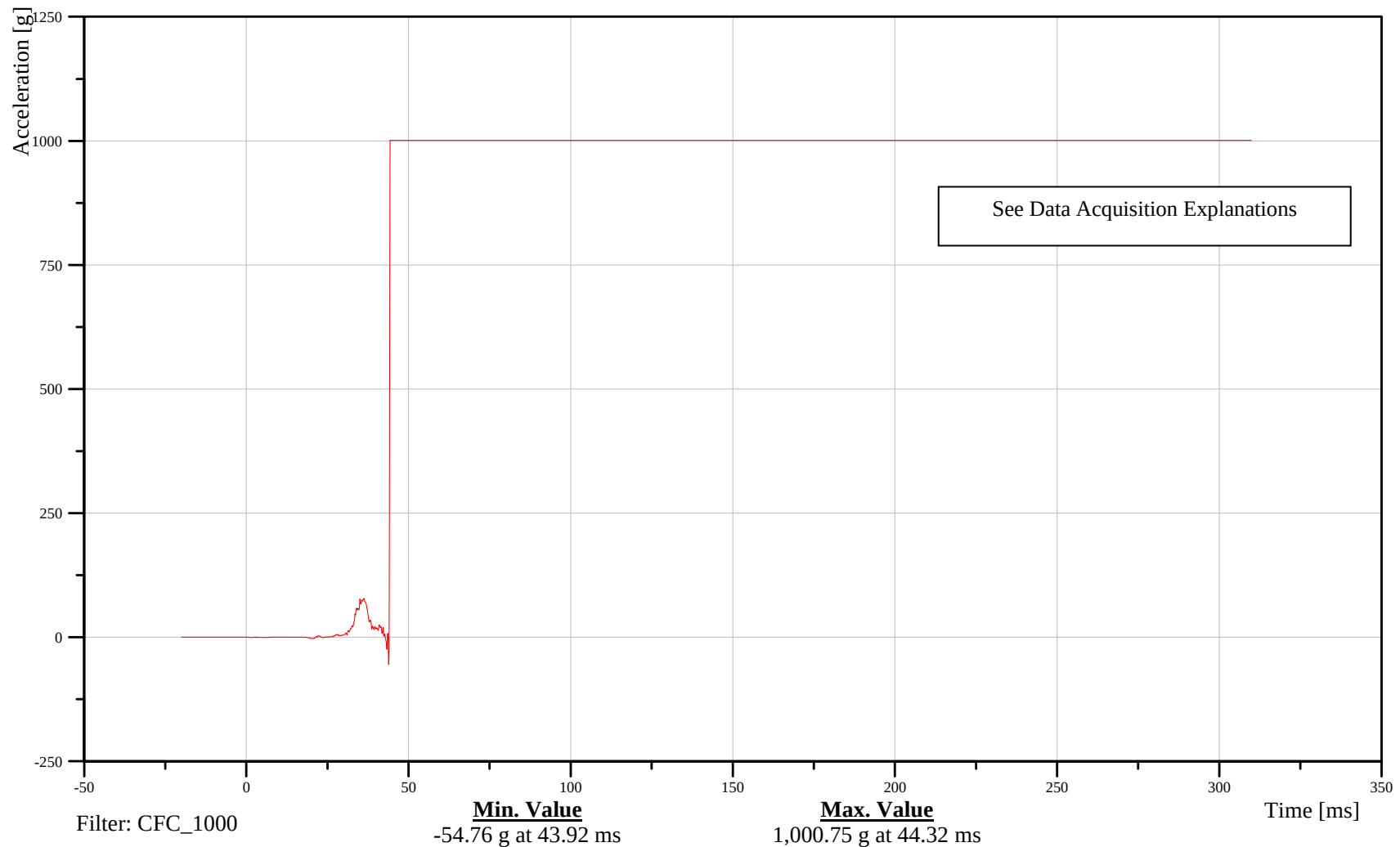
Target Driver Left Foot Y-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

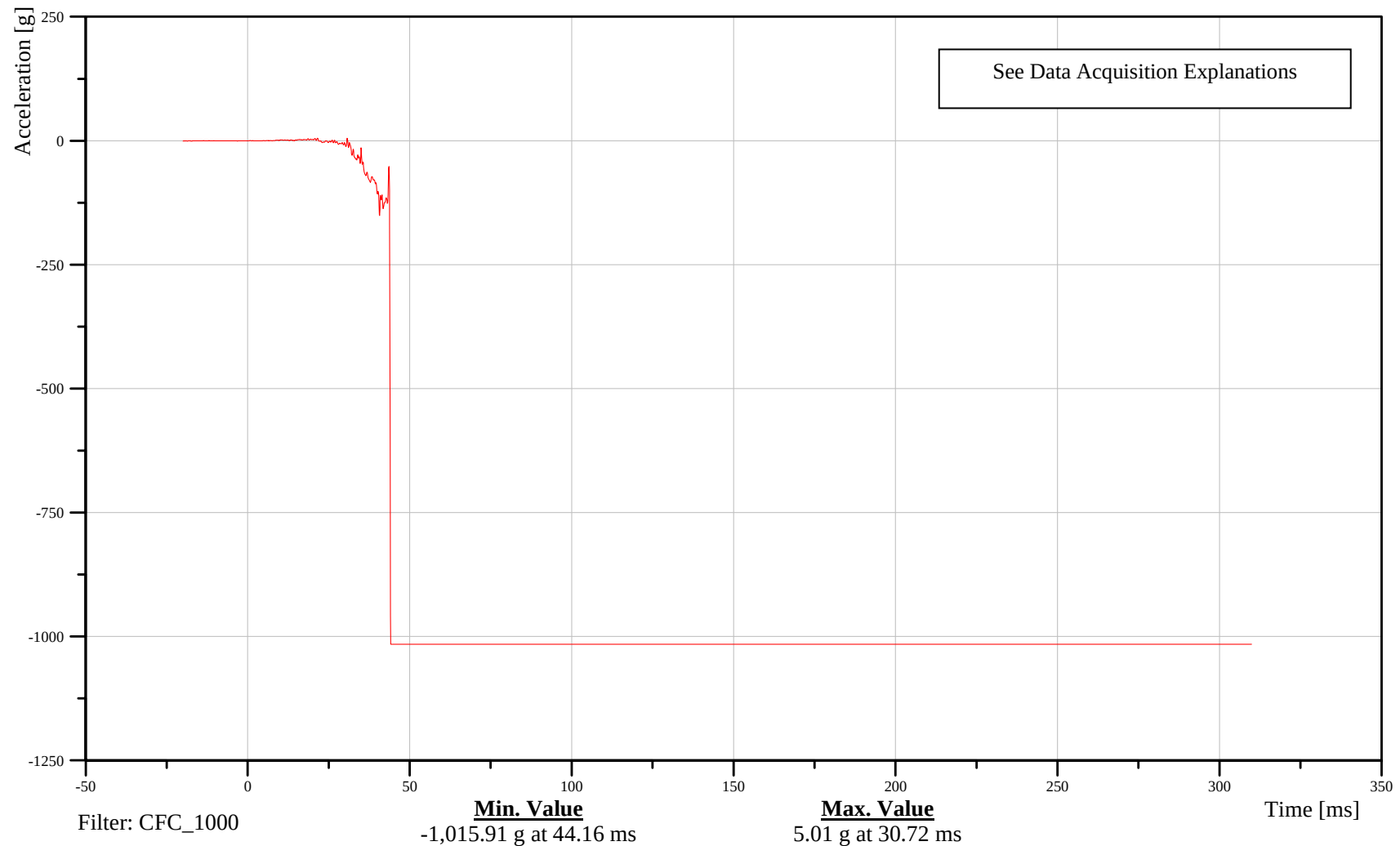
Target Driver Left Foot Z-Axis Acceleration

Customer: VRTC

21FOOTLELXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

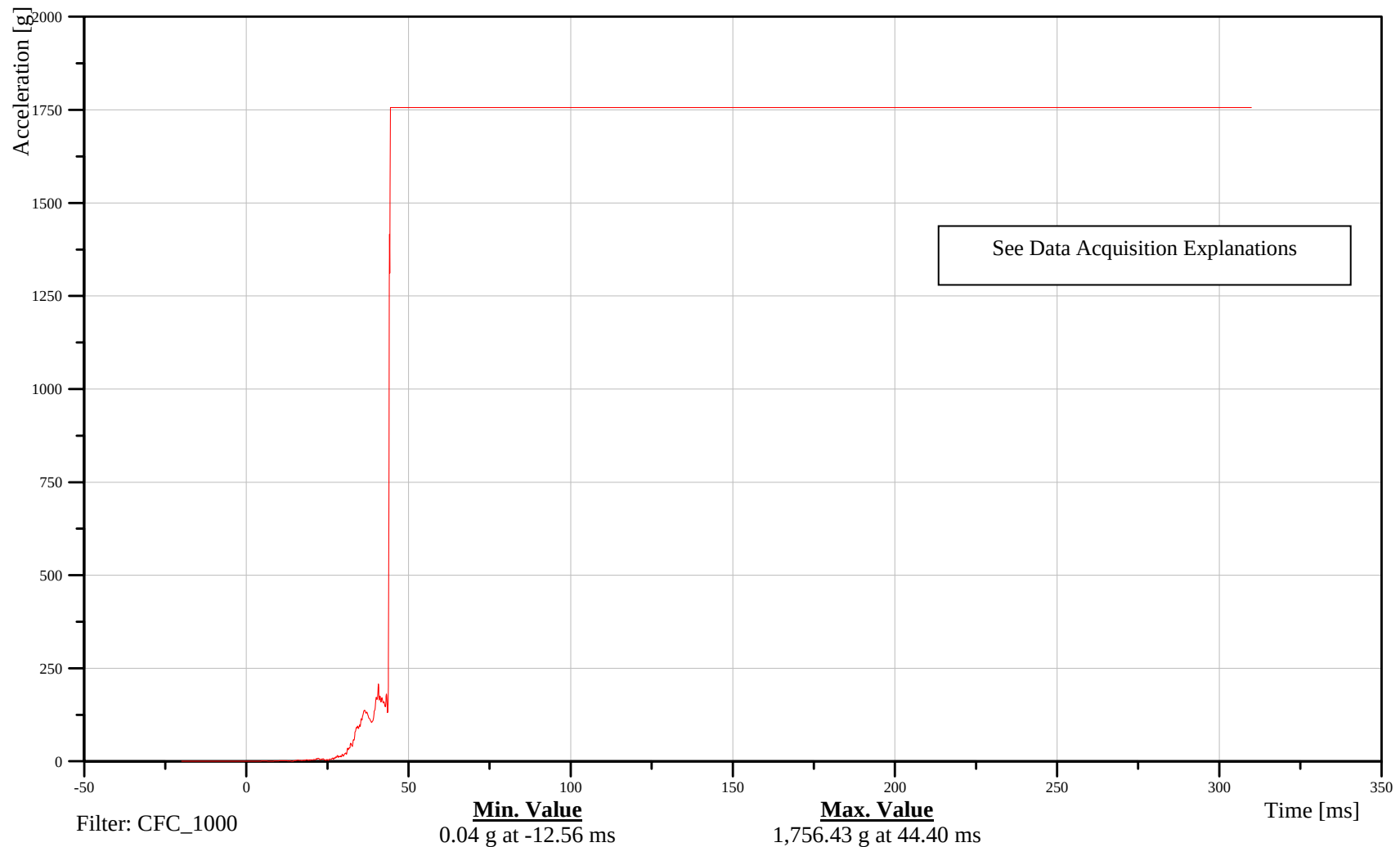
Target Driver Left Foot Resultant Acceleration

Customer: VRTC

21FOOTLELXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

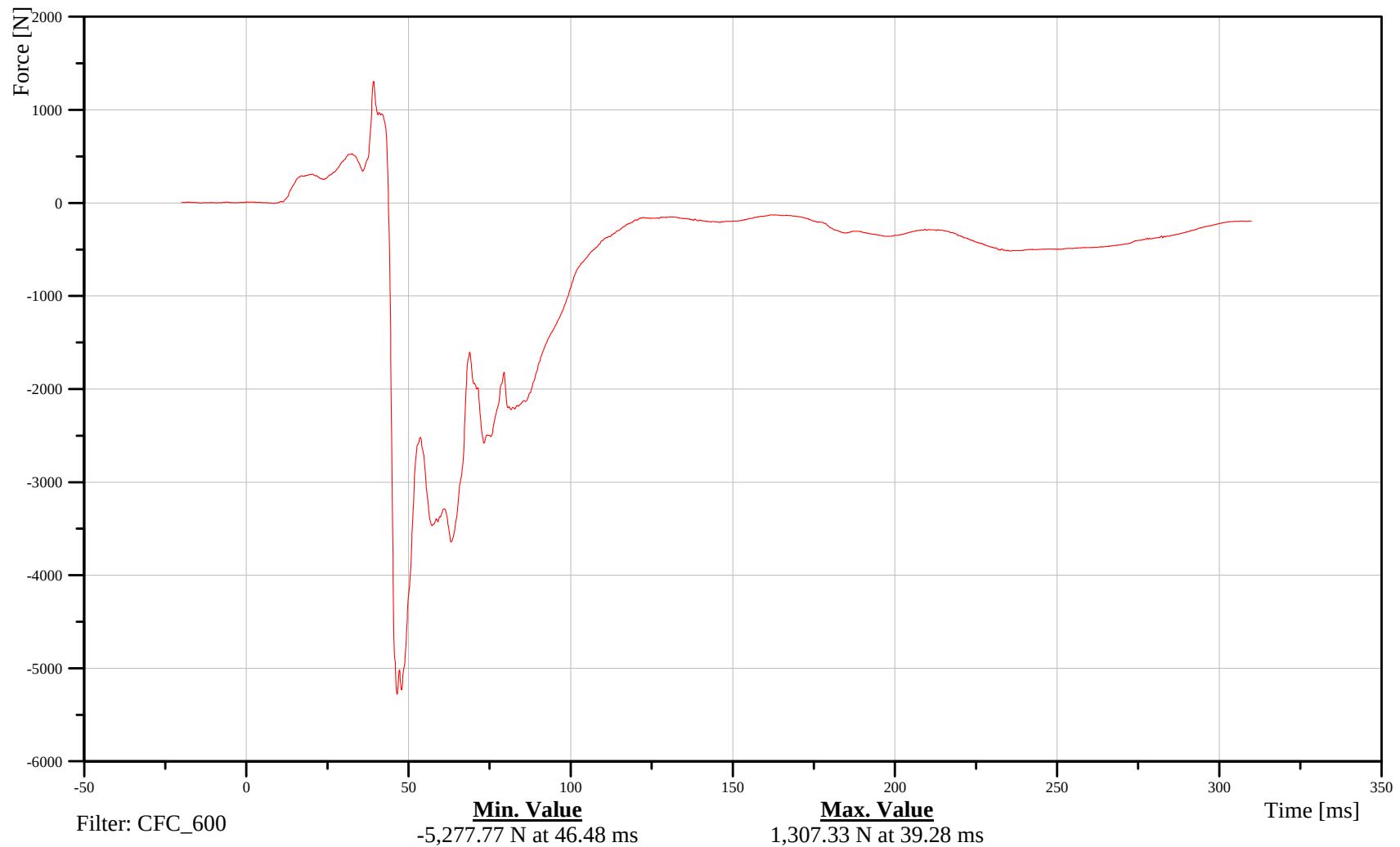
Target Driver Right Femur Z-Axis Force

Customer: VRTC

21FEMRRL00H3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

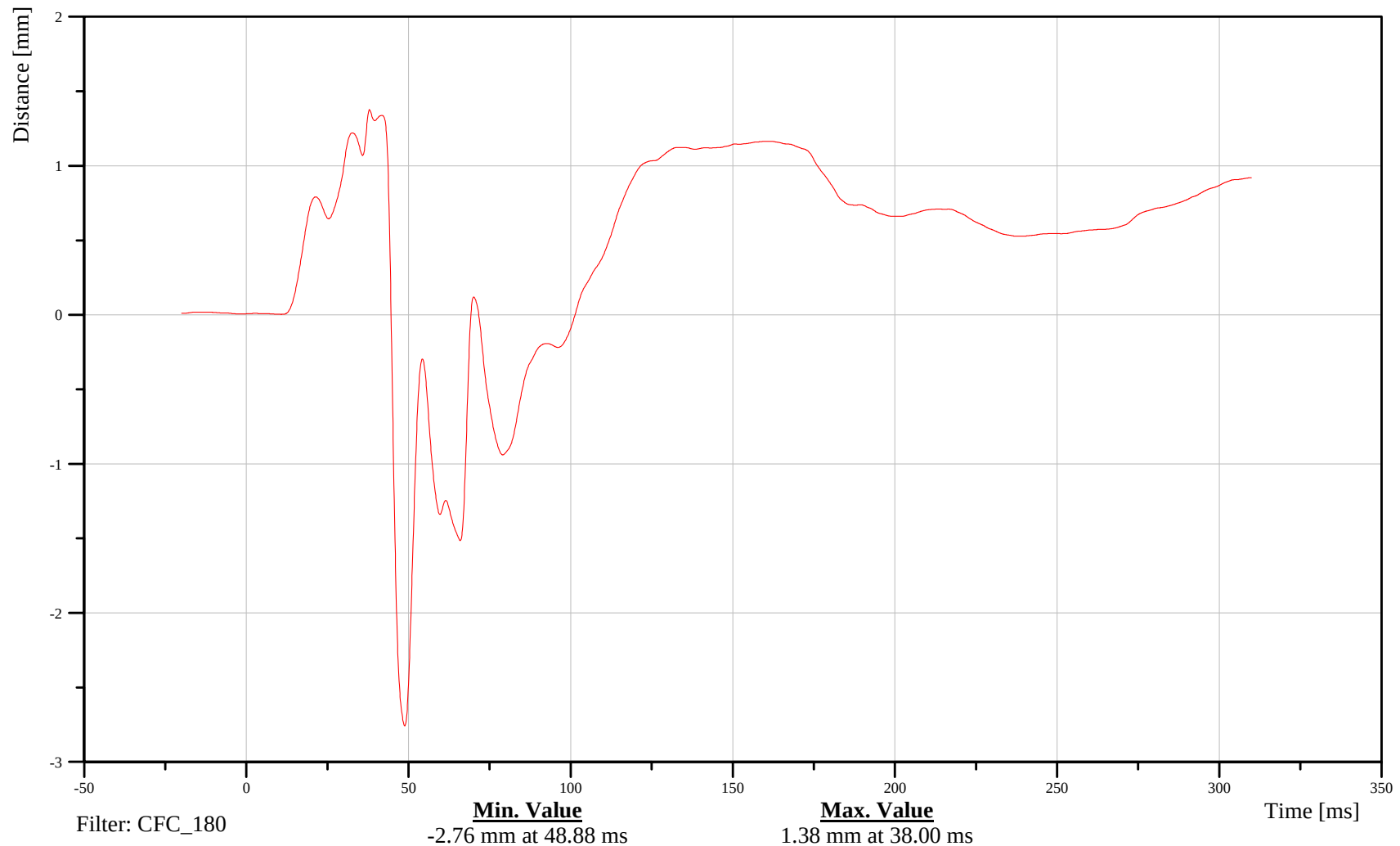
Target Driver Right Knee Displacement

Customer: VRTC

21KNSLRI00H3DSXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

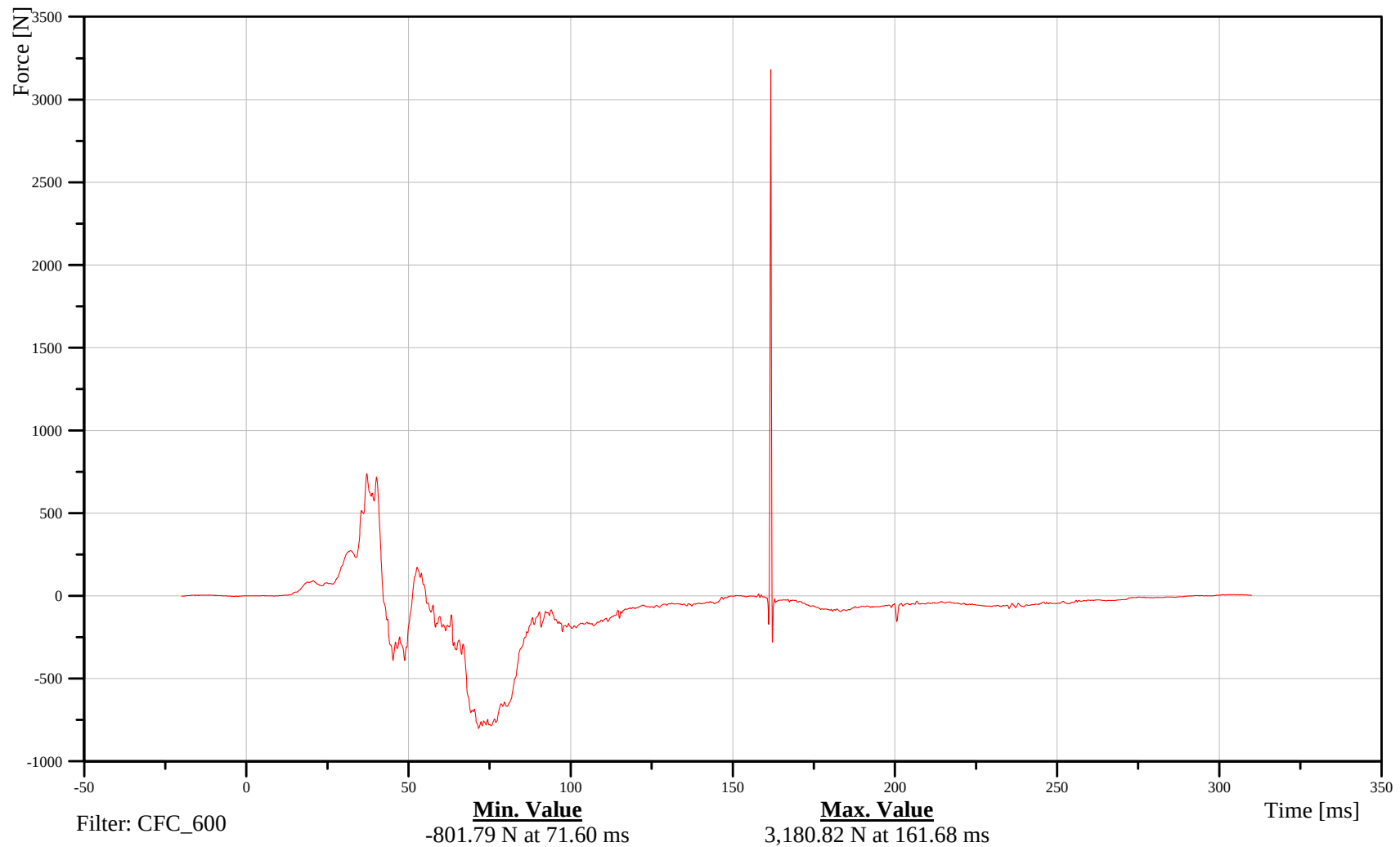
Target Driver Right Upper Tibia X-Axis Force

Customer: VRTC

21TIBIRULXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

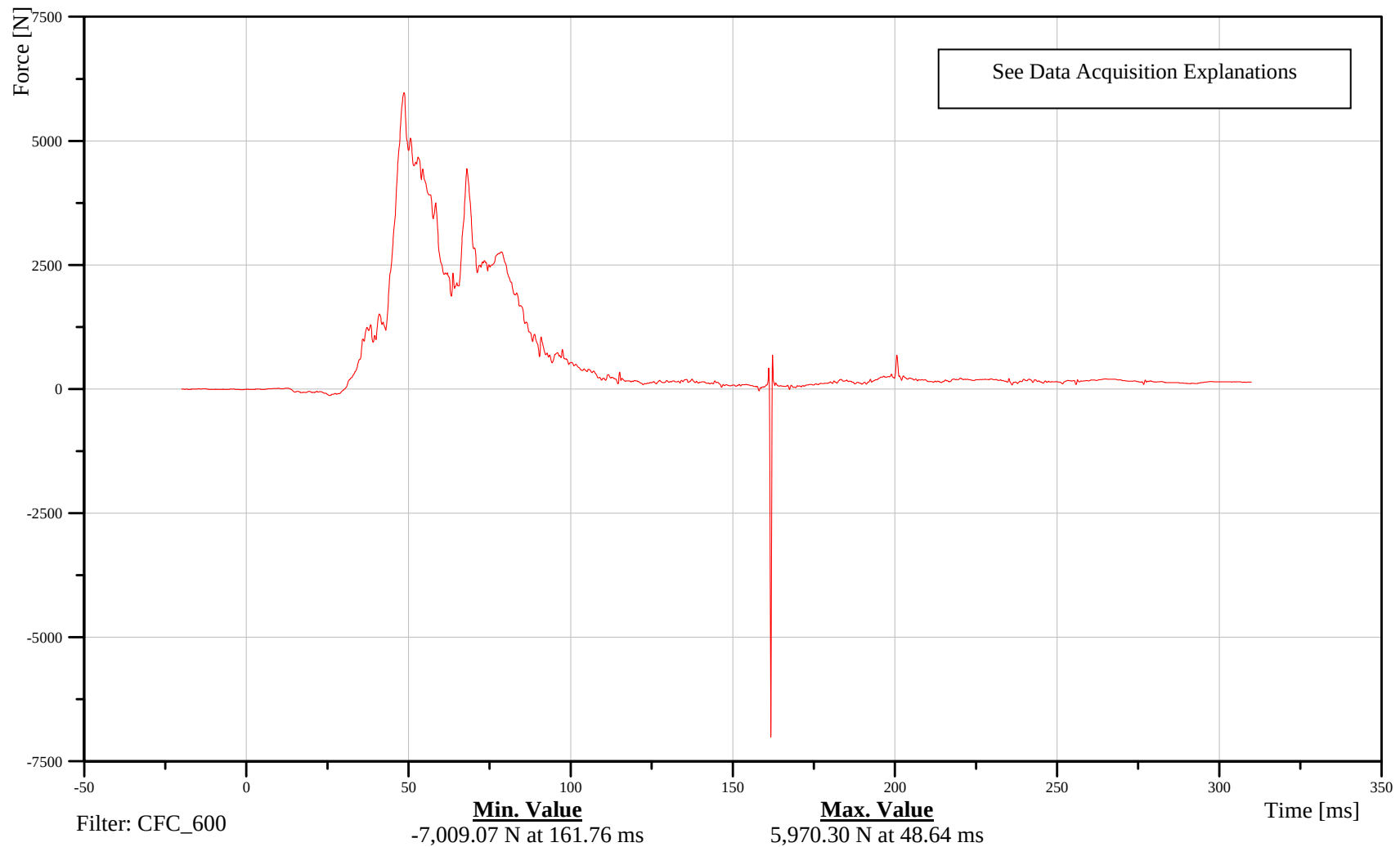
Target Driver Right Upper Tibia Z-Axis Force

Customer: VRTC

21TIBIRULXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

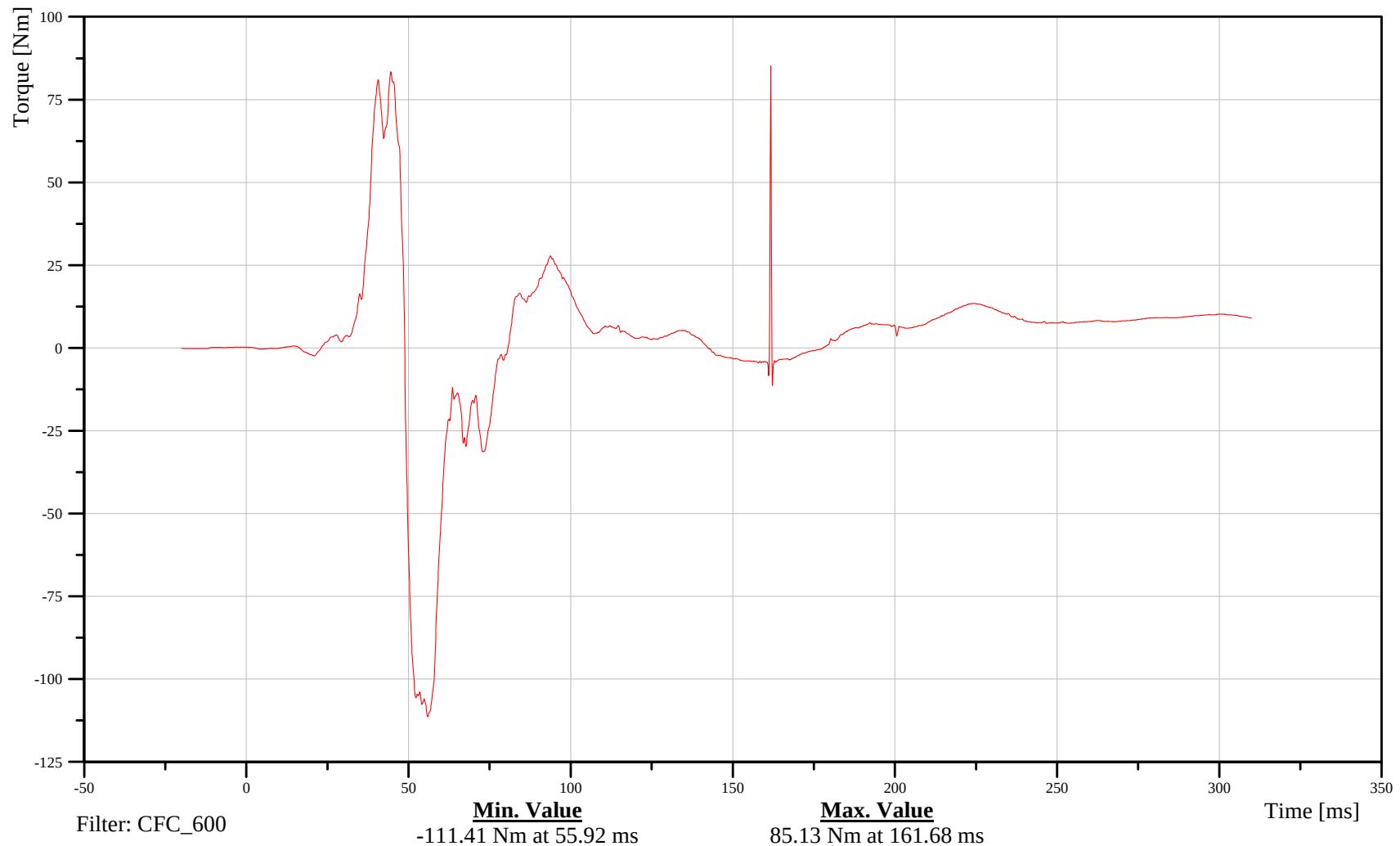
Target Driver Right Upper Tibia Moment About X Axis

Customer: VRTC

21TIBIRULXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

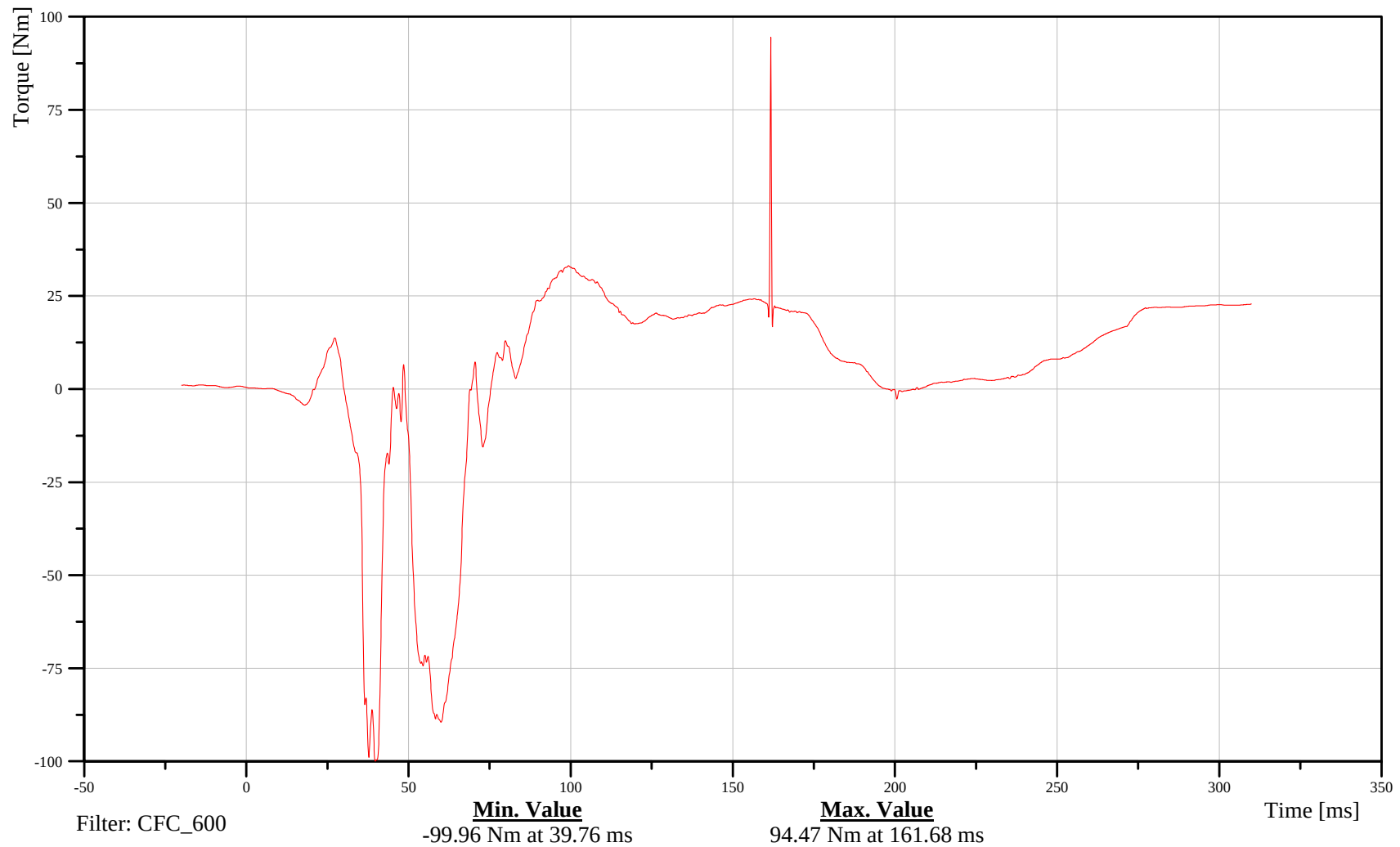
Target Driver Right Upper Tibia Moment About Y Axis

Customer: VRTC

21TIBIRULXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

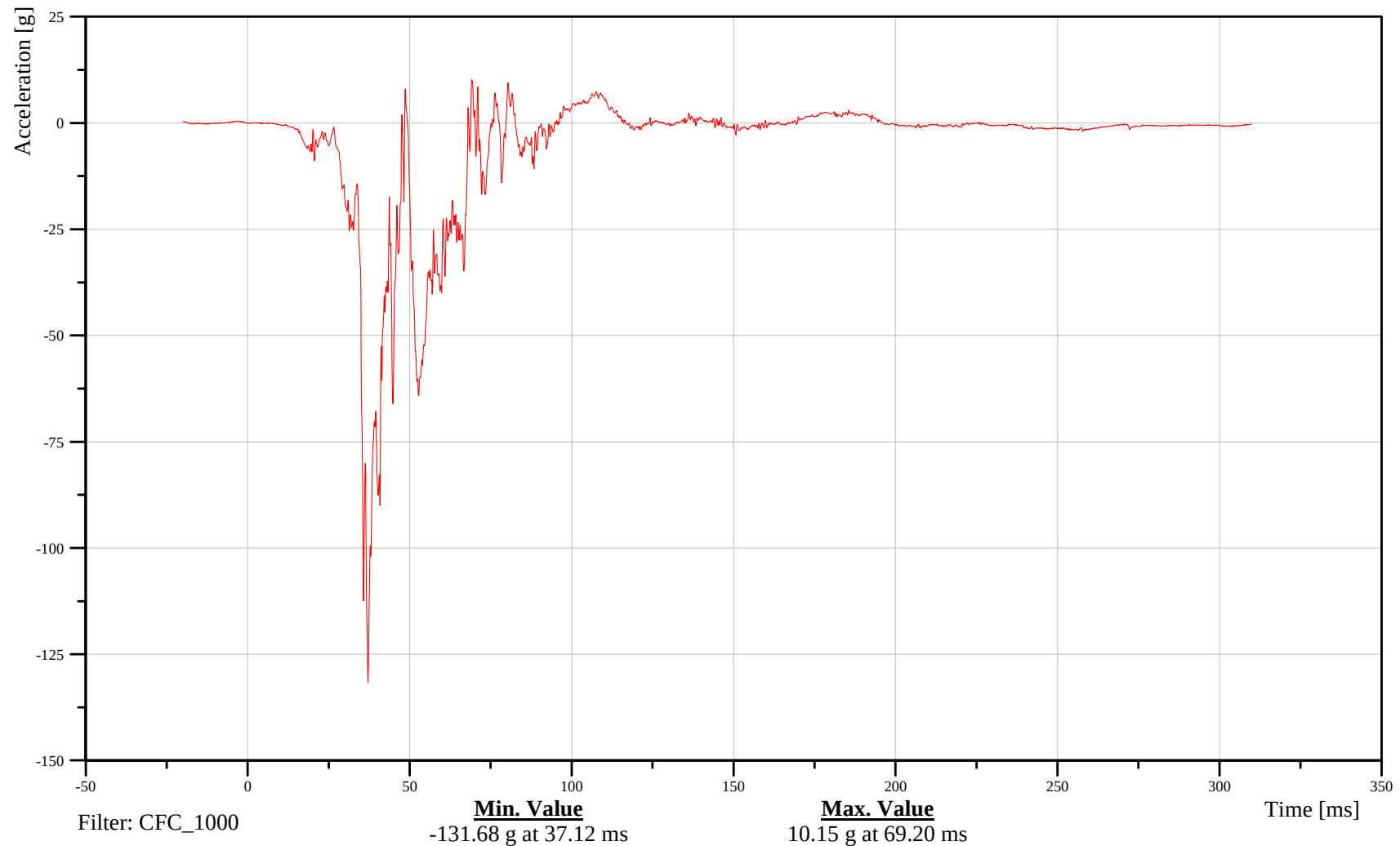
Target Driver Right Tibia X-Axis Acceleration

Customer: VRTC

21TIBIRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

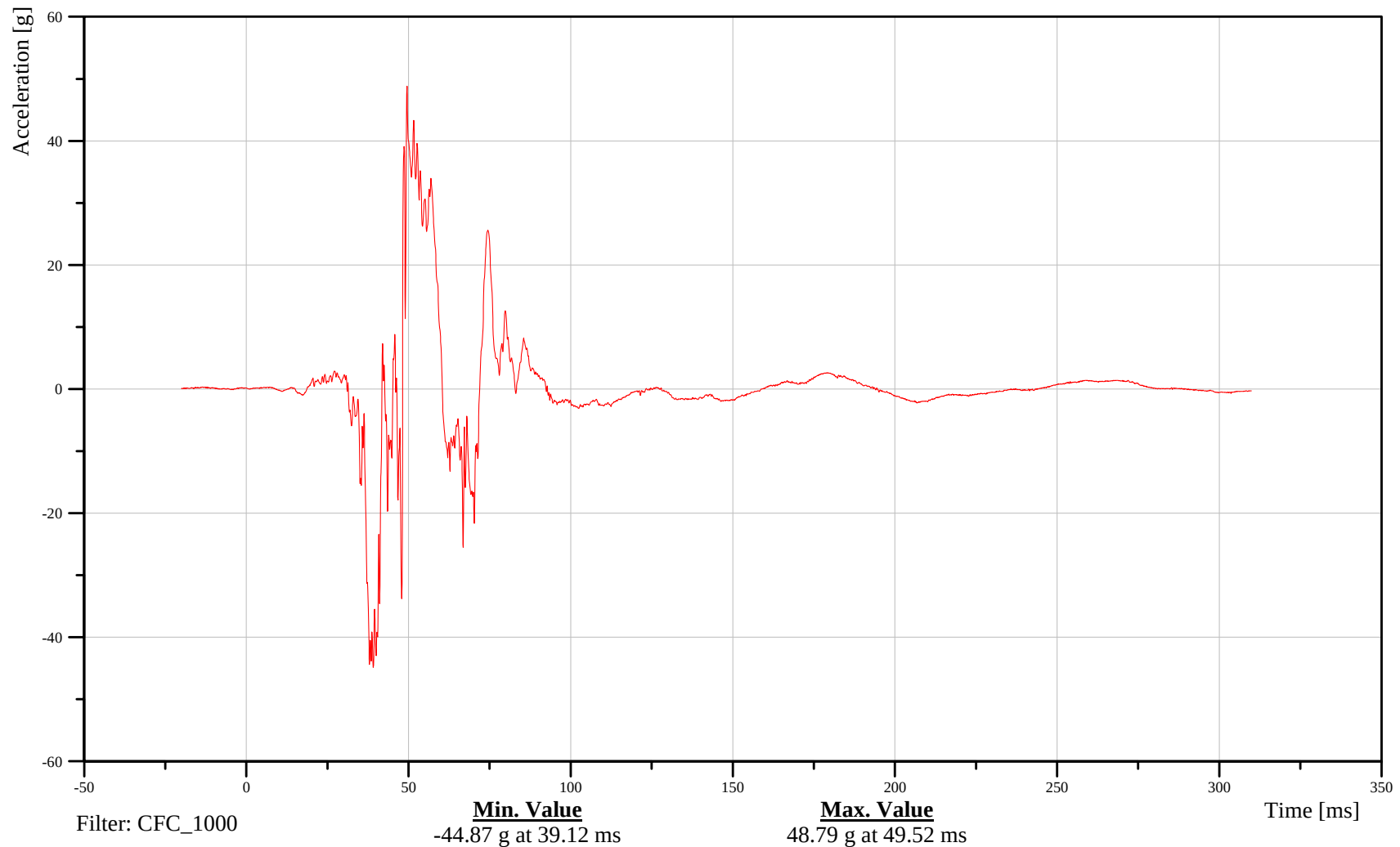
Target Driver Right Tibia Y-Axis Acceleration

Customer: VRTC

21TIBIRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

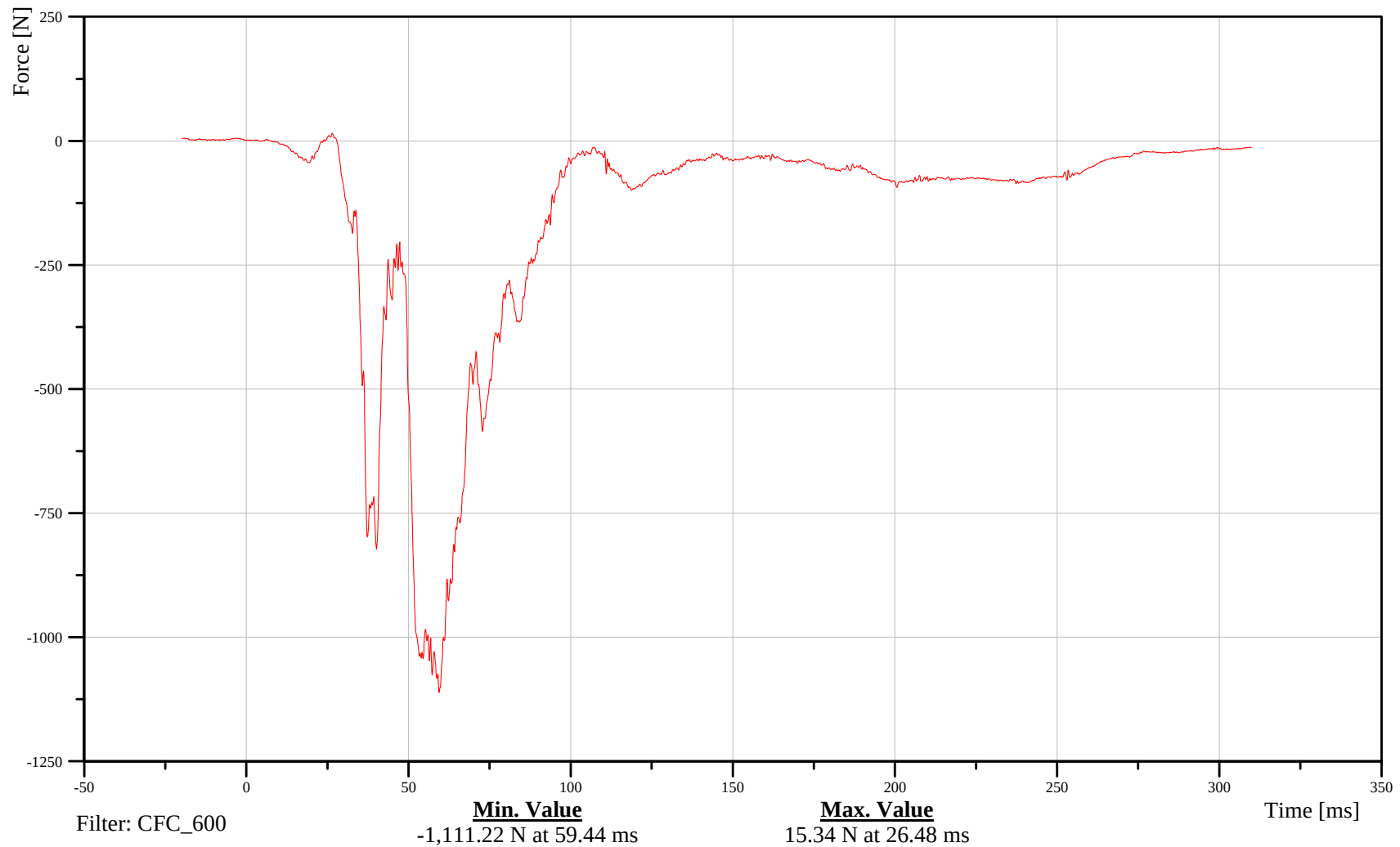
Target Driver Right Lower Tibia X-Axis Force

Customer: VRTC

21TIBIRLLXH3FOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

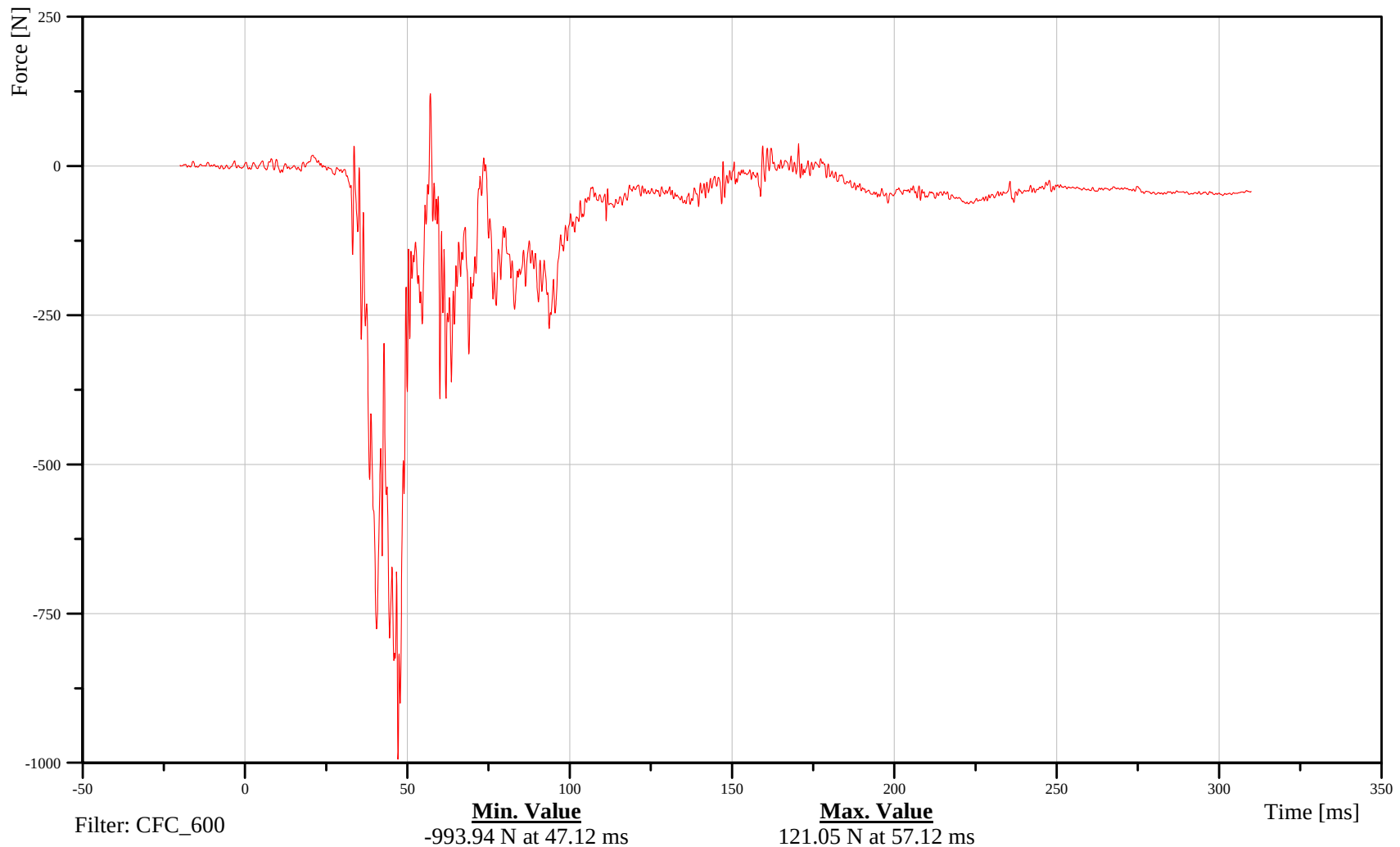
Target Driver Right Lower Tibia Y-Axis Force

Customer: VRTC

21TIBIRLLXH3FOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

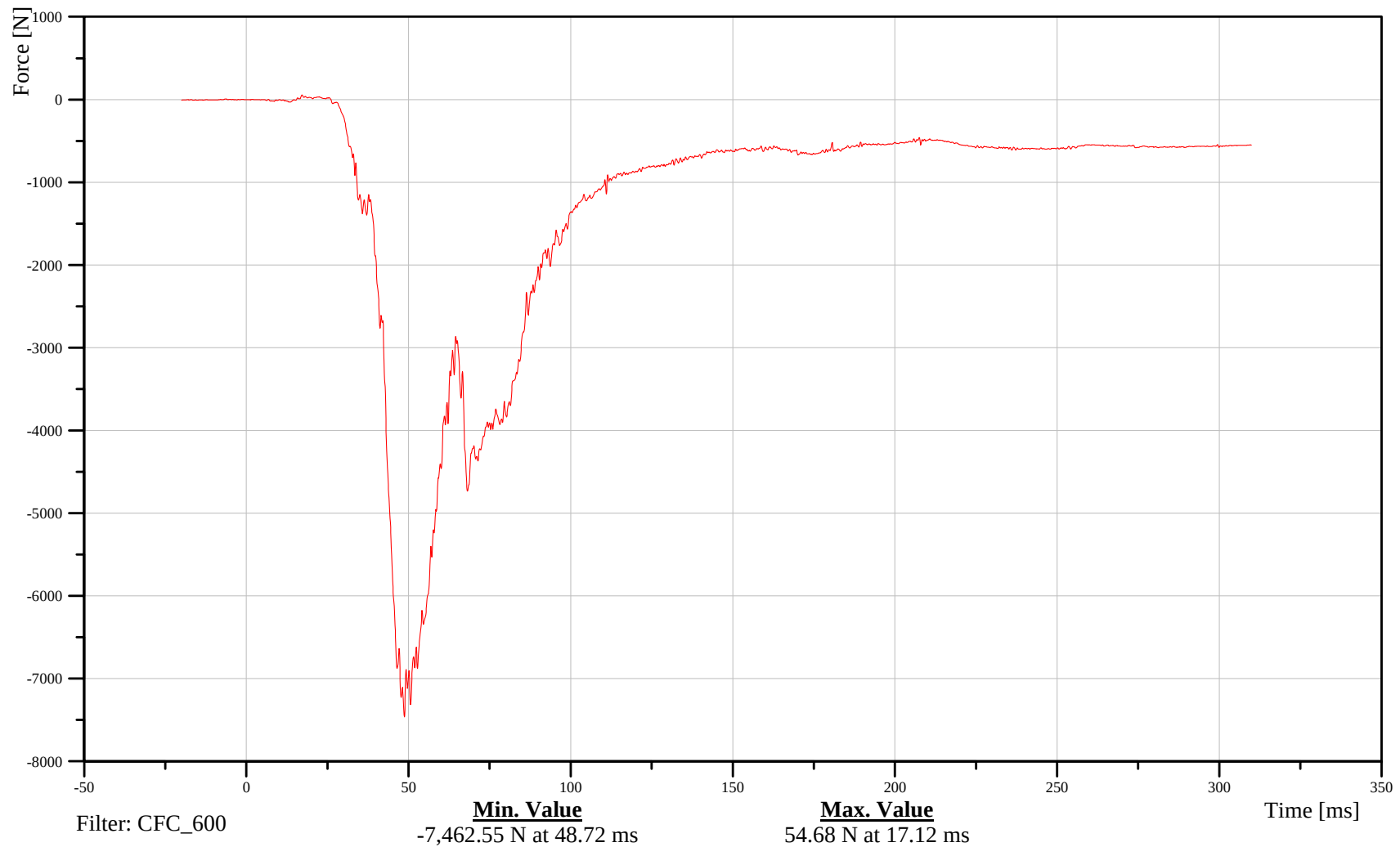
Target Driver Right Lower Tibia Z-Axis Force

Customer: VRTC

21TIBIRLLXH3FOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

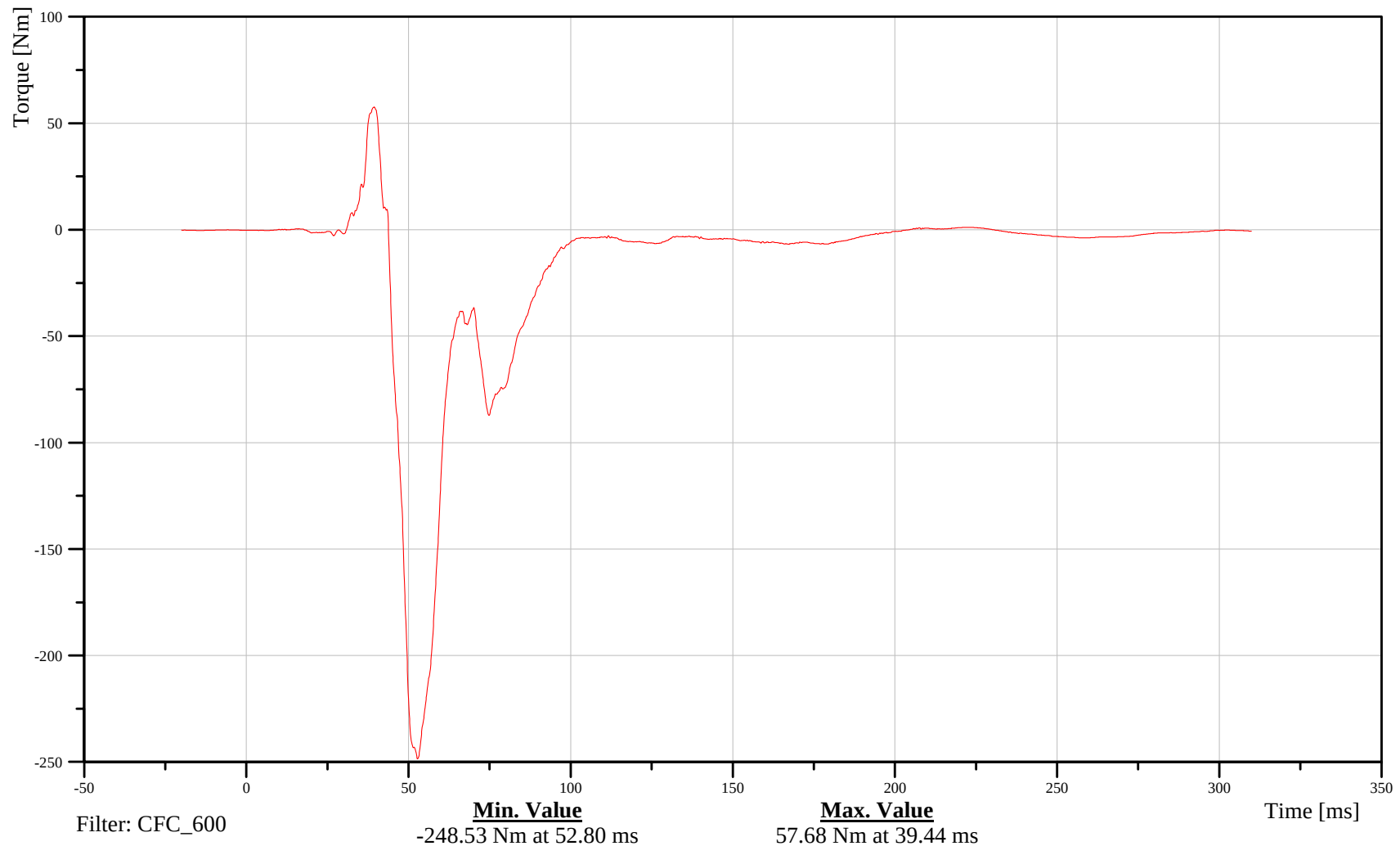
Target Driver Right Lower Tibia Moment About X Axis

Customer: VRTC

21TIBIRLLXH3MOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

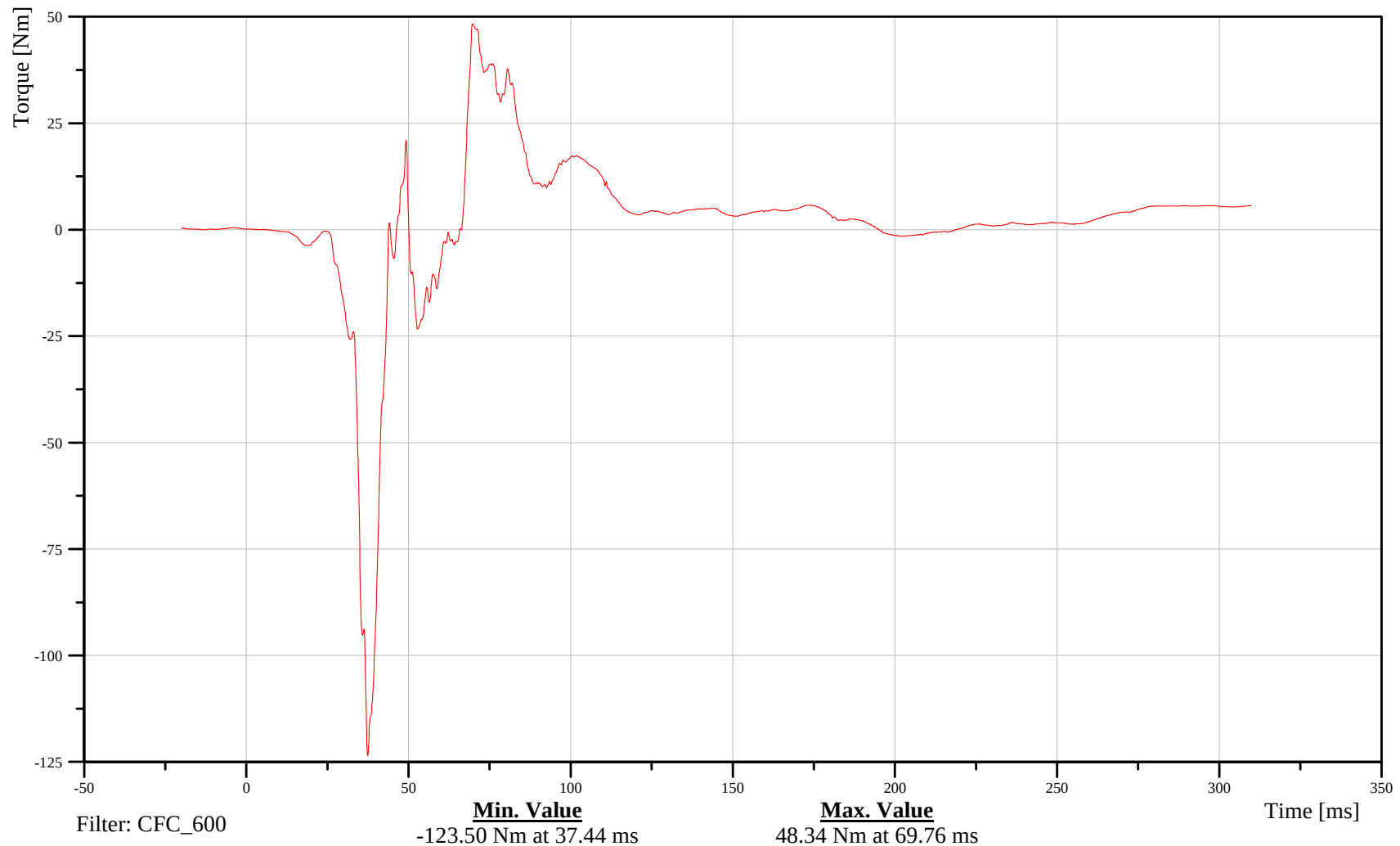
Target Driver Right Lower Tibia Moment About Y Axis

Customer: VRTC

21TIBIRLLXH3MOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

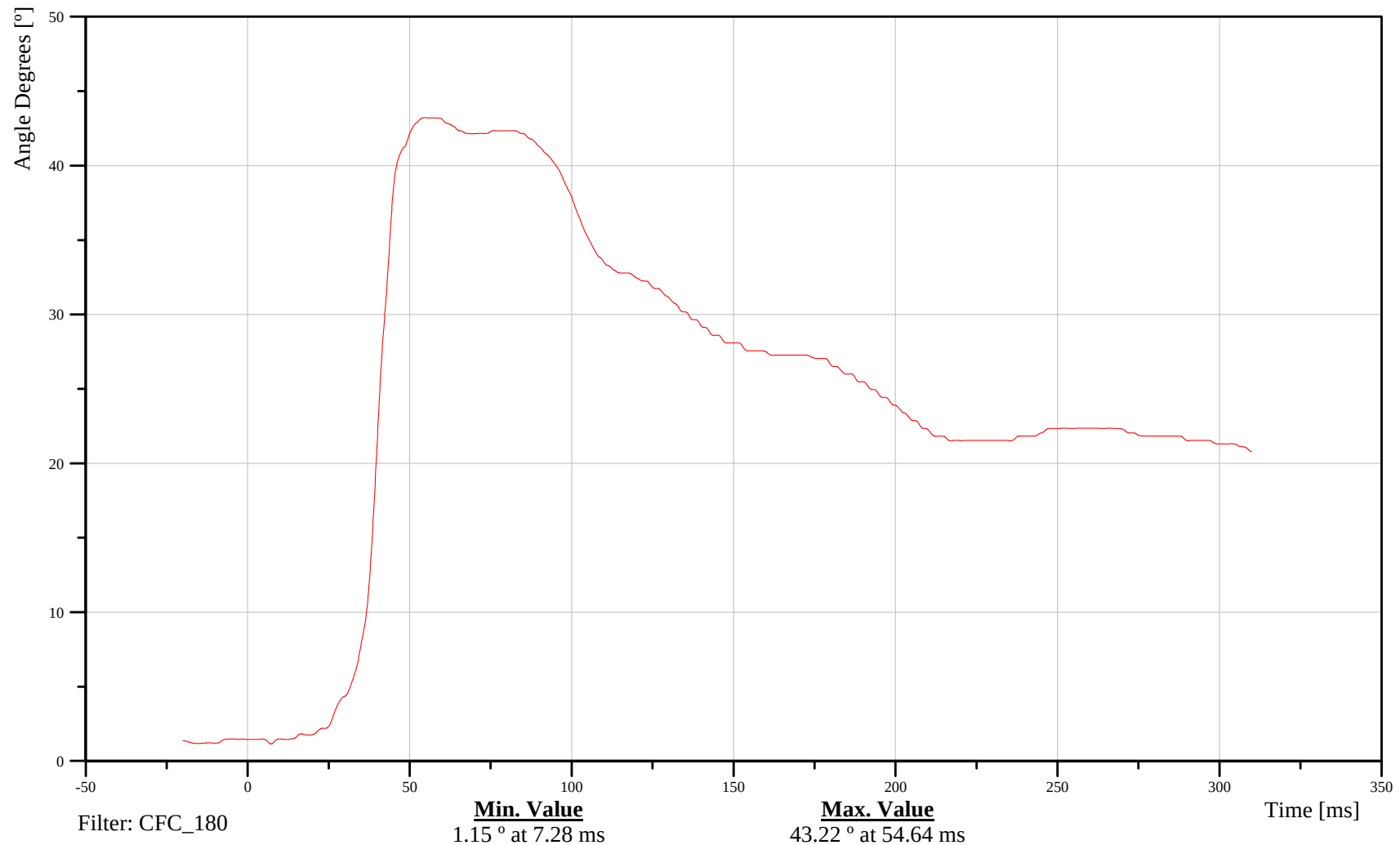
Target Driver Right Foot X-Axis Rotation

Customer: VRTC

21FOOTRILXH3ANXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

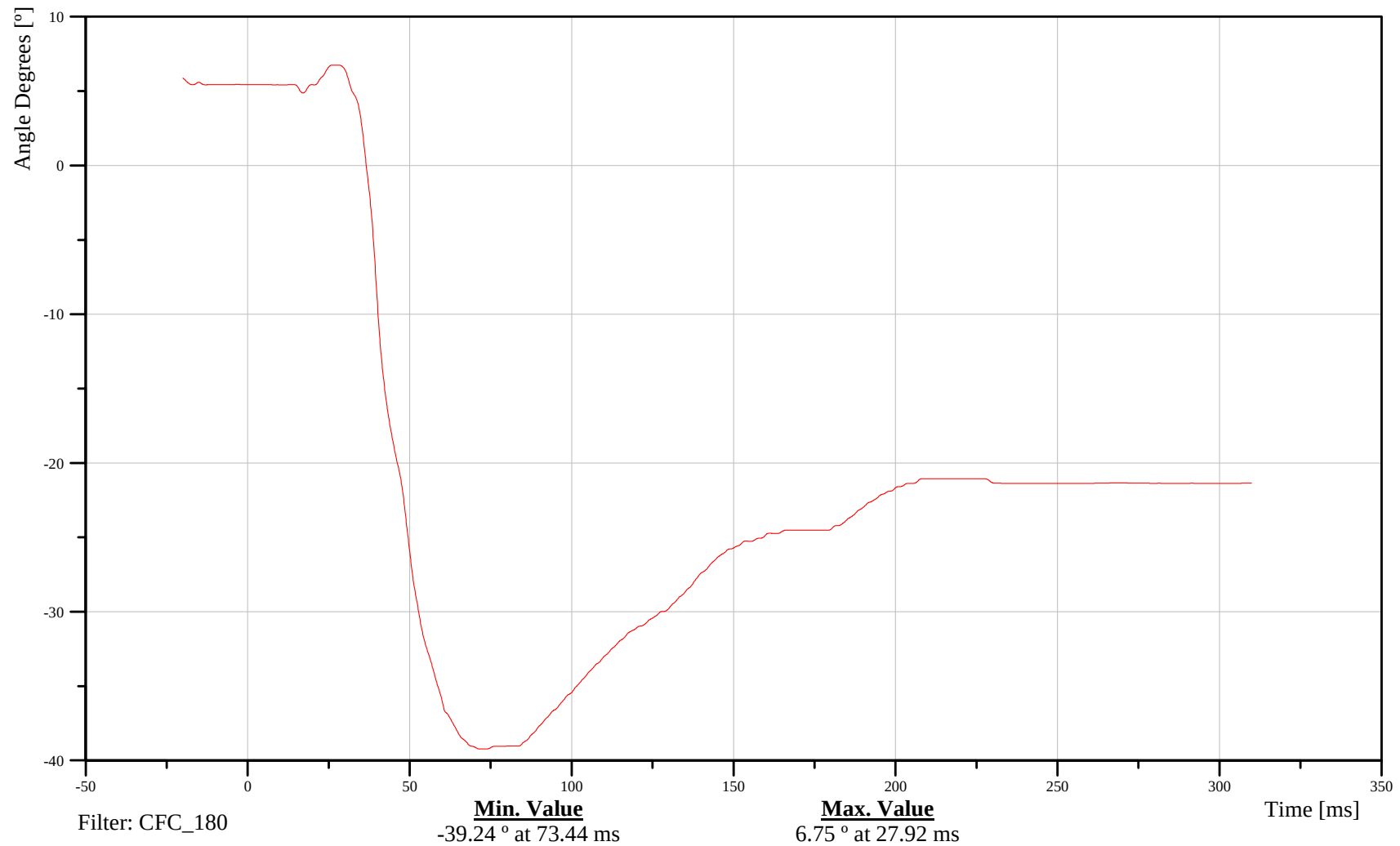
Target Driver Right Foot Y-Axis Rotation

Customer: VRTC

21FOOTRILXH3ANYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

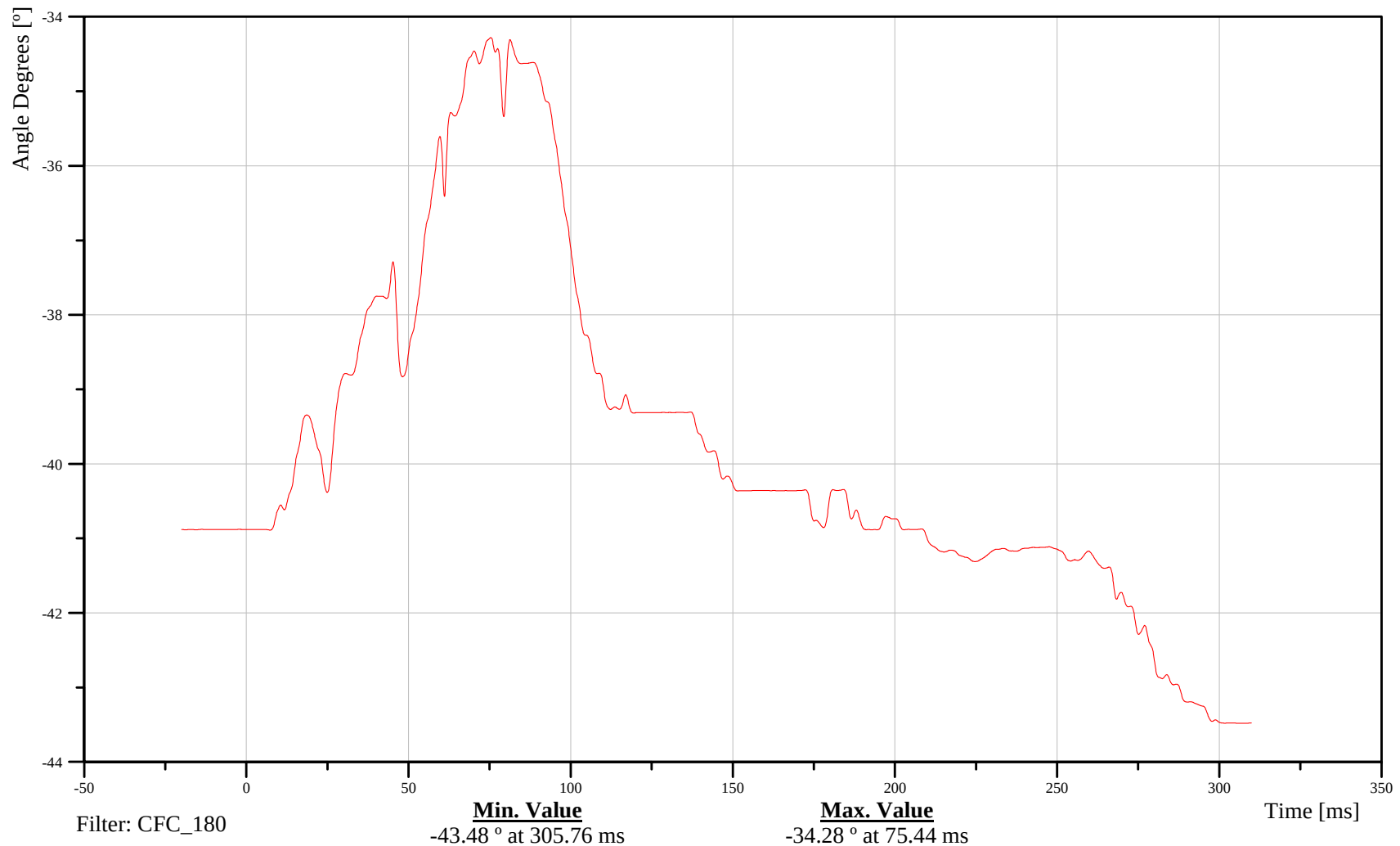
Target Driver Right Foot Z-Axis Rotation

Customer: VRTC

21FOOTRILXH3ANZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

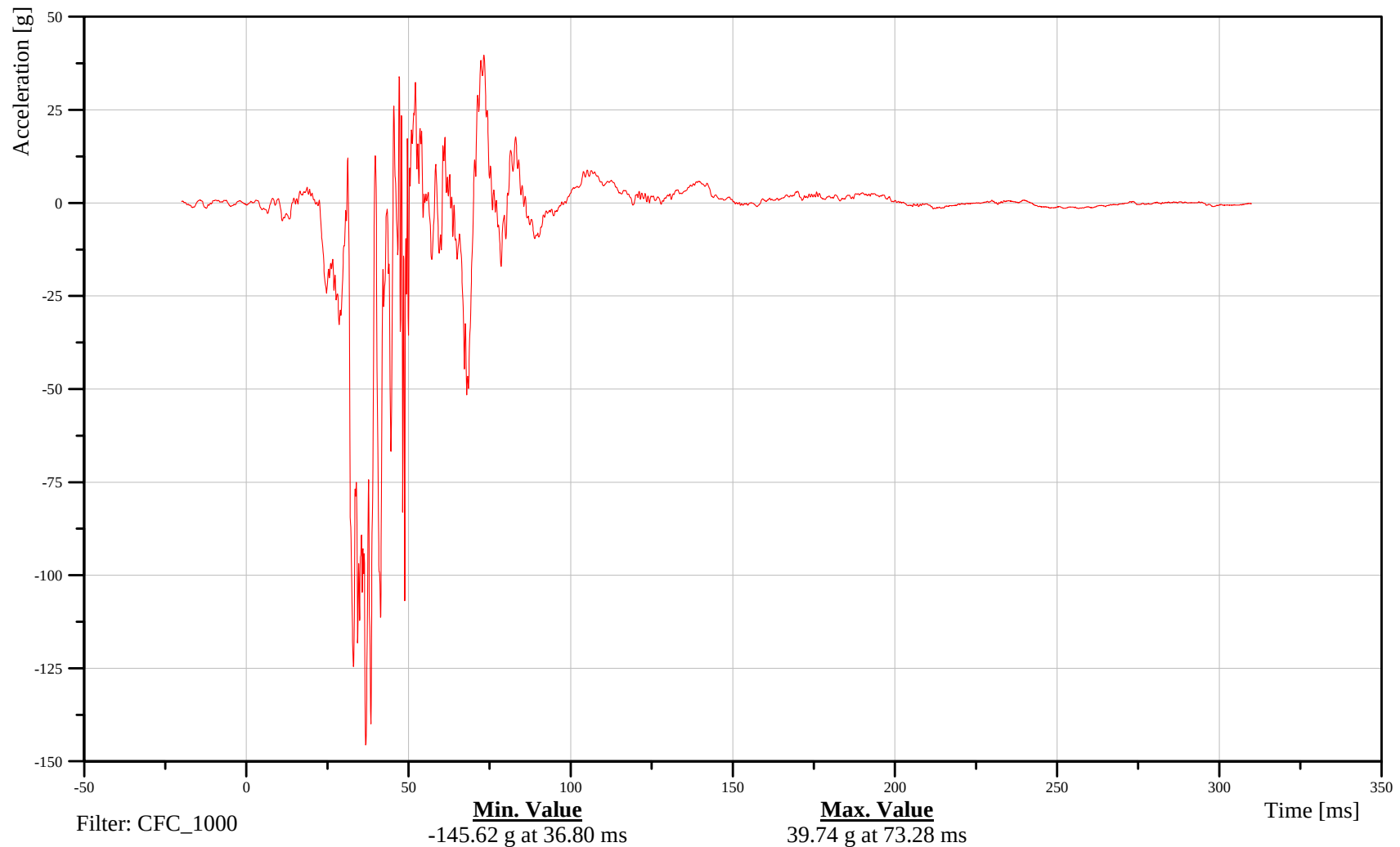
Target Driver Right Foot X-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

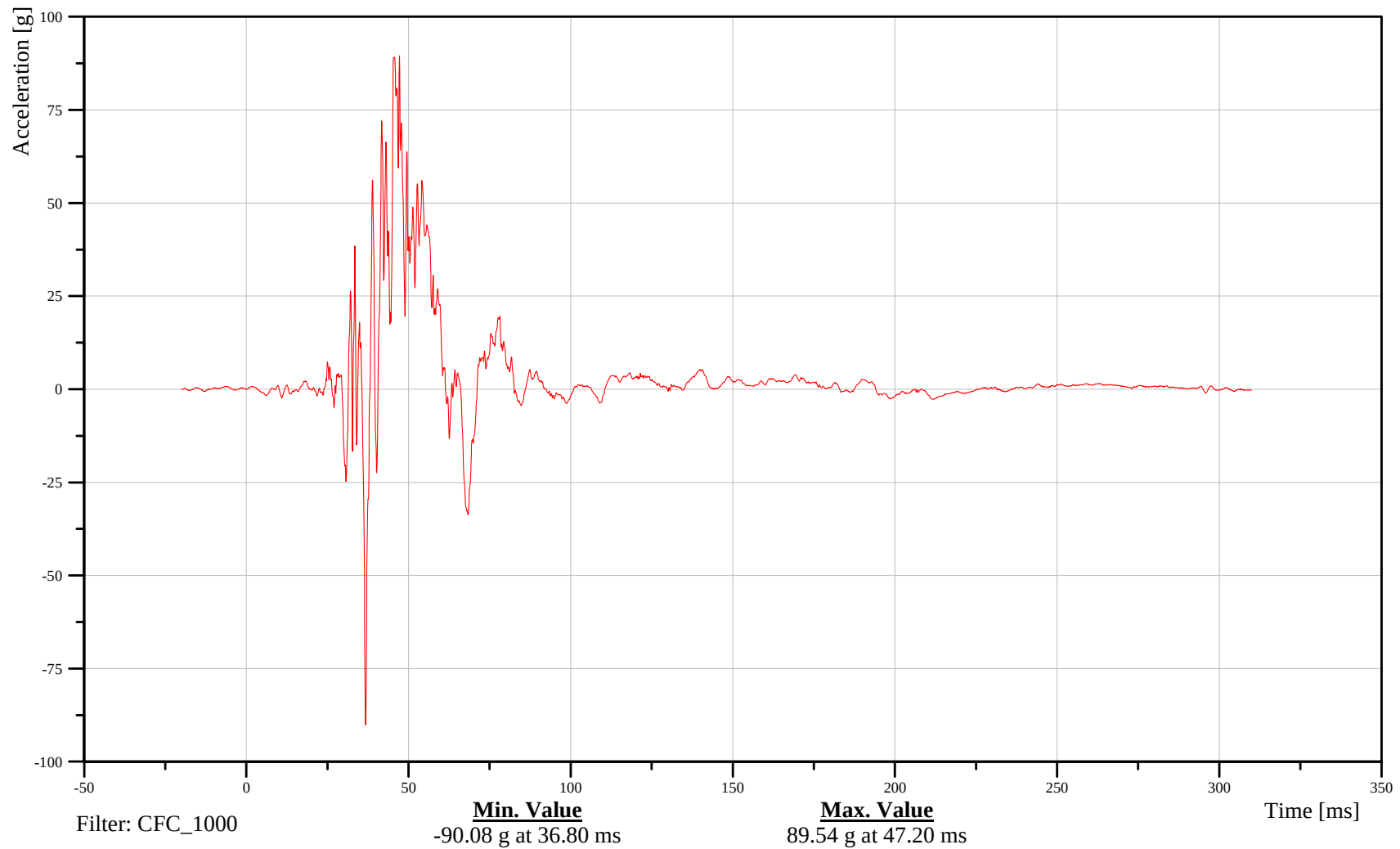
Target Driver Right Foot Y-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

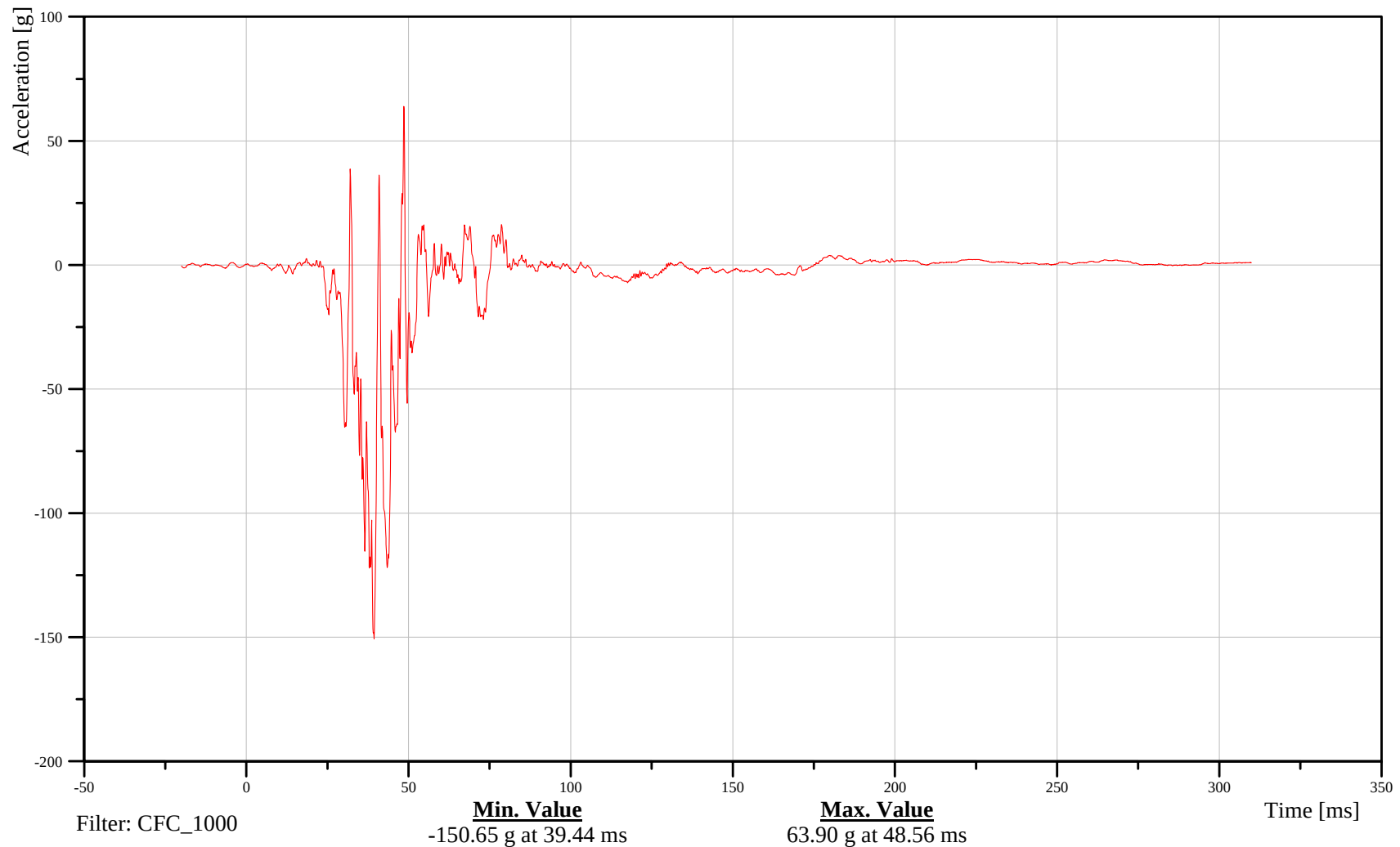
Target Driver Right Foot Z-Axis Acceleration

Customer: VRTC

21FOOTRILXH3ACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

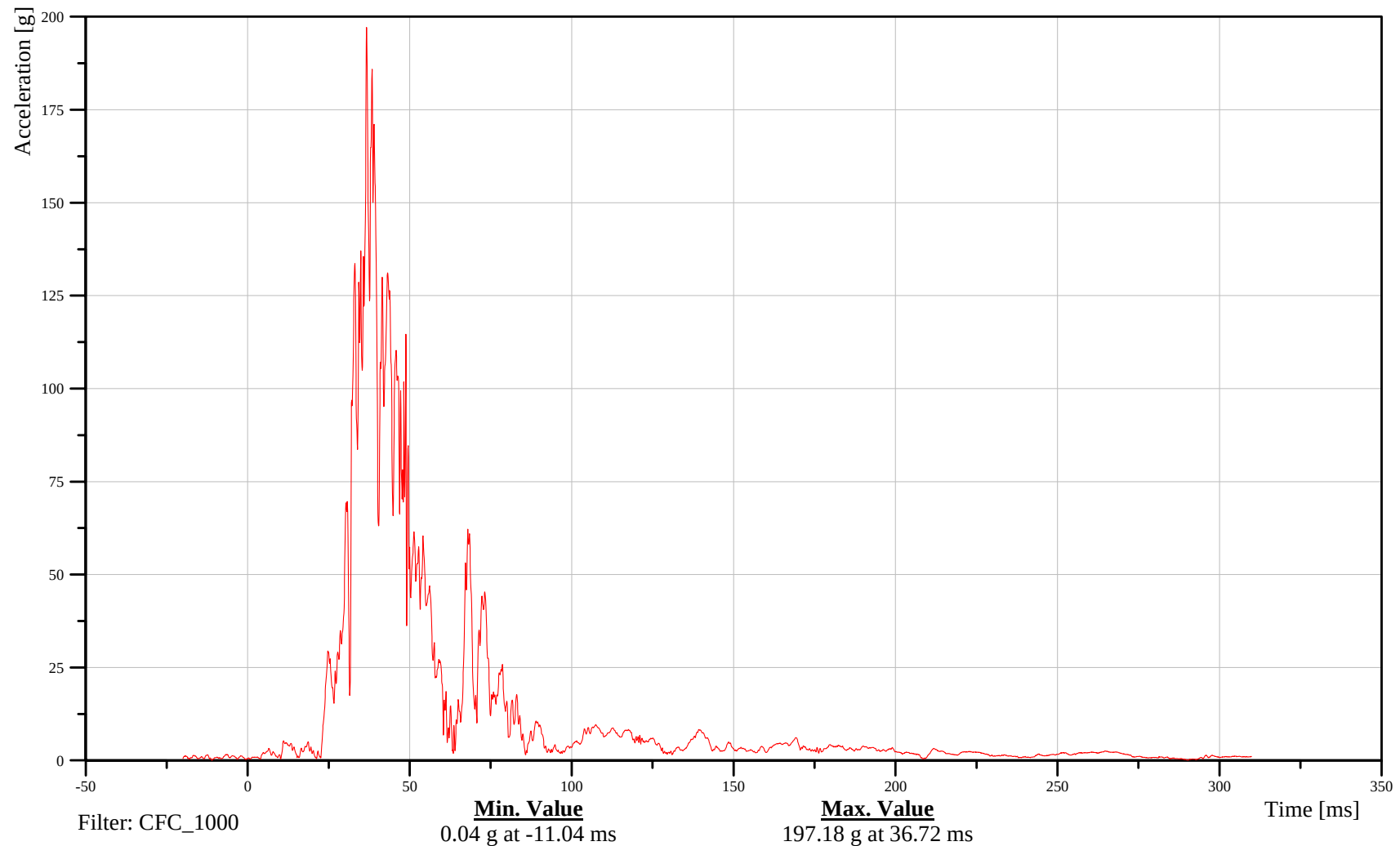
Target Driver Right Foot Resultant Acceleration

Customer: VRTC

21FOOTRILXH3ACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

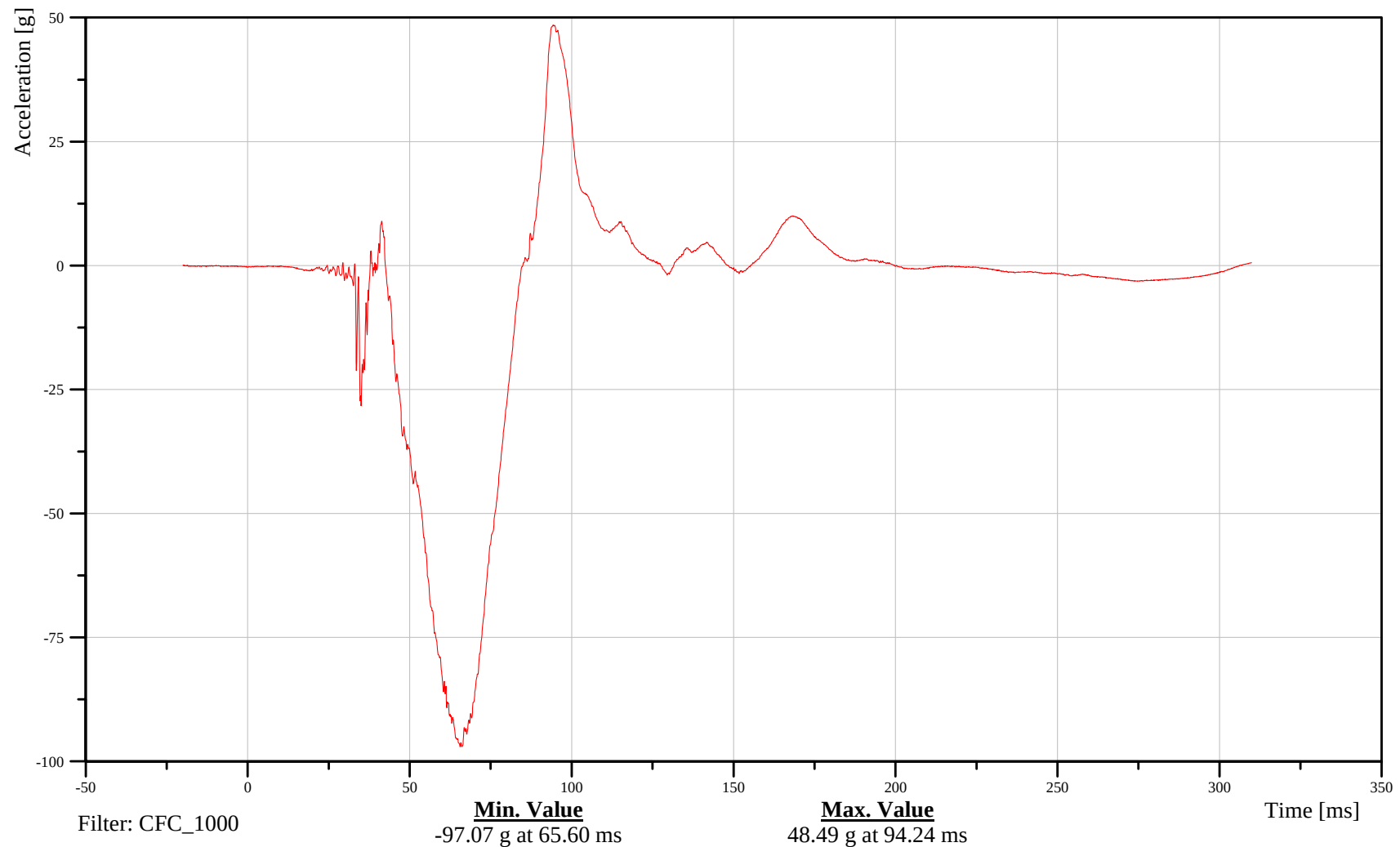
Target Passenger Head CG X-Axis Acceleration

Customer: VRTC

23HEADCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

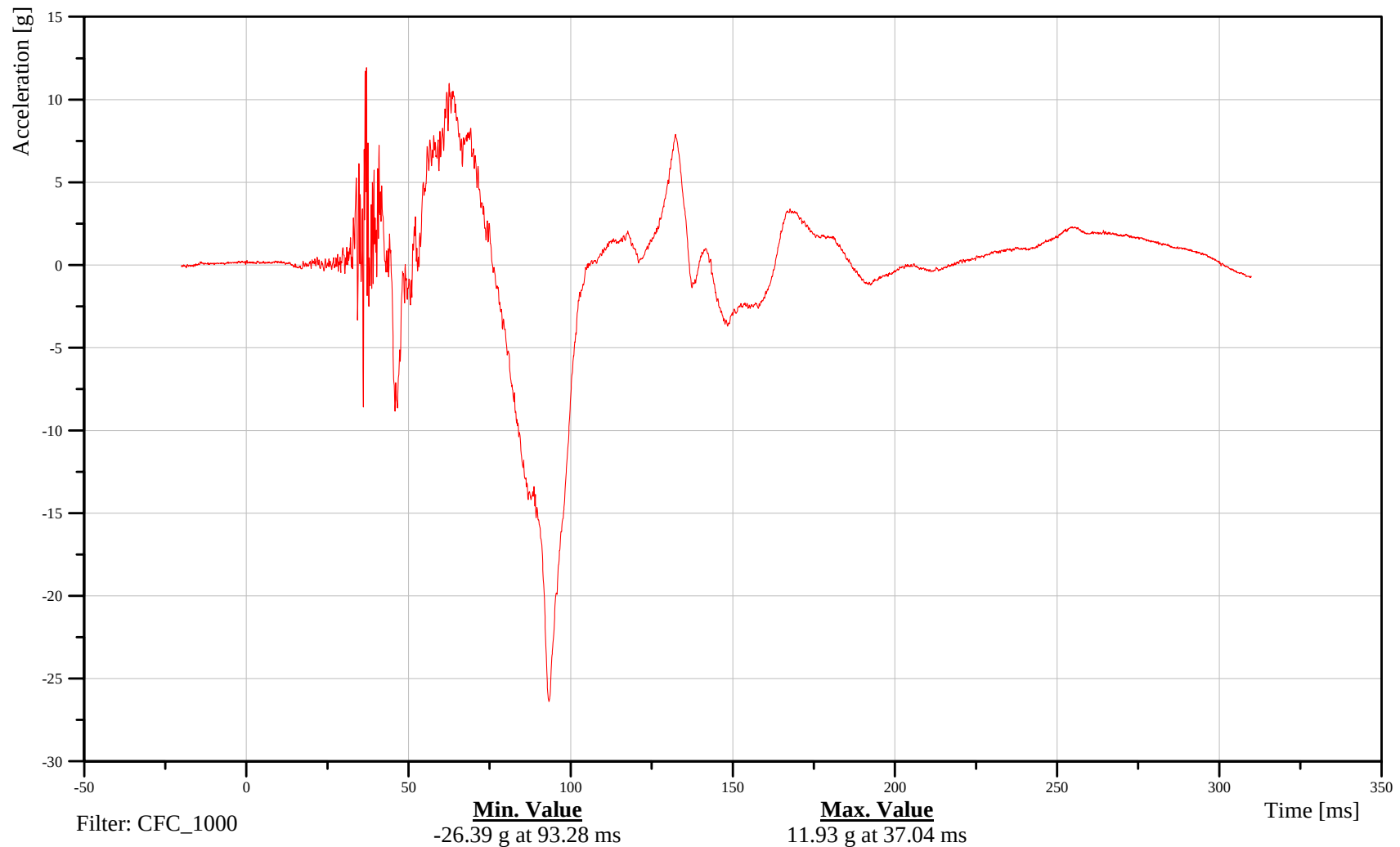
Target Passenger Head CG Y-Axis Acceleration

Customer: VRTC

23HEADCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

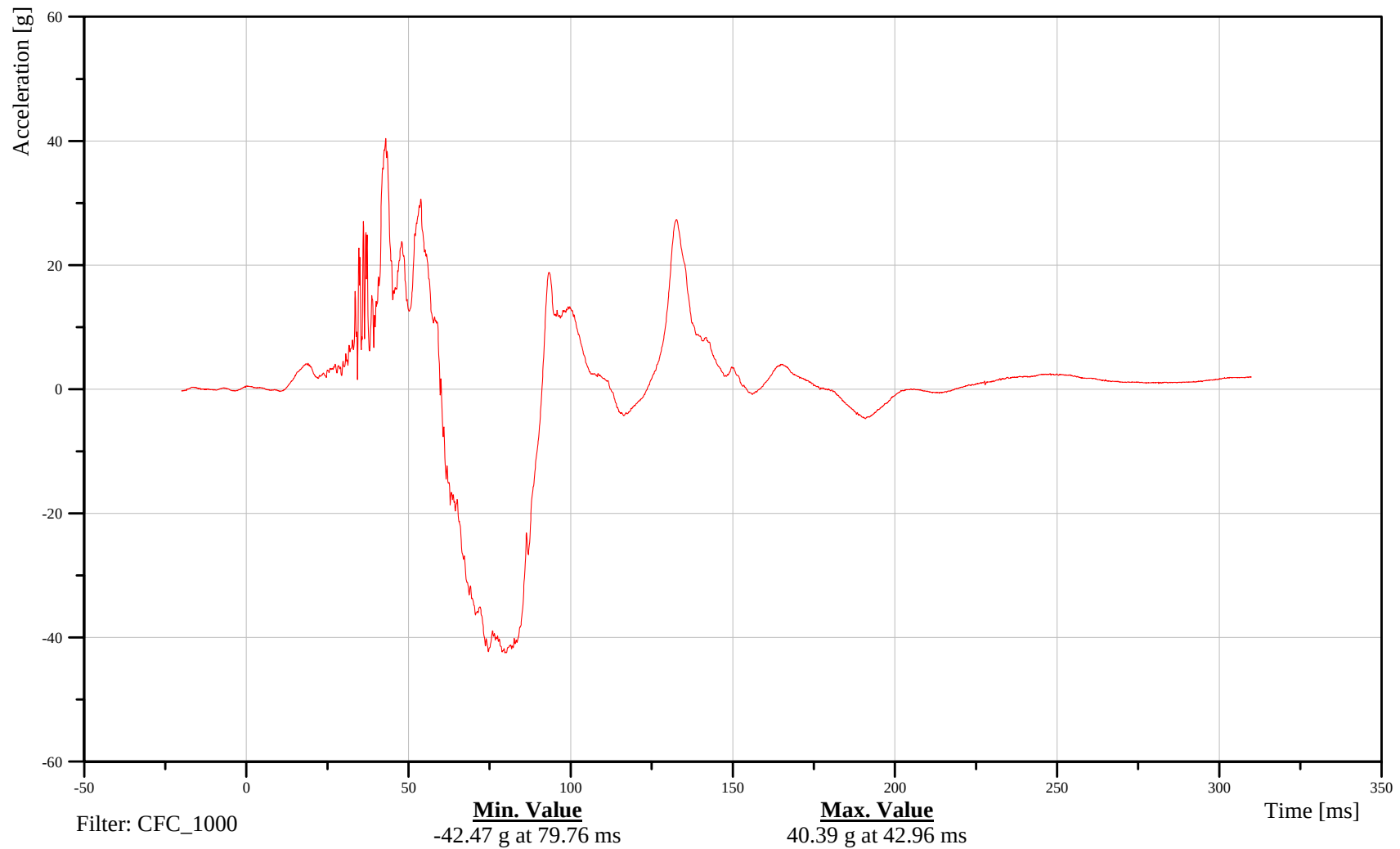
Target Passenger Head CG Z-Axis Acceleration

Customer: VRTC

23HEADCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

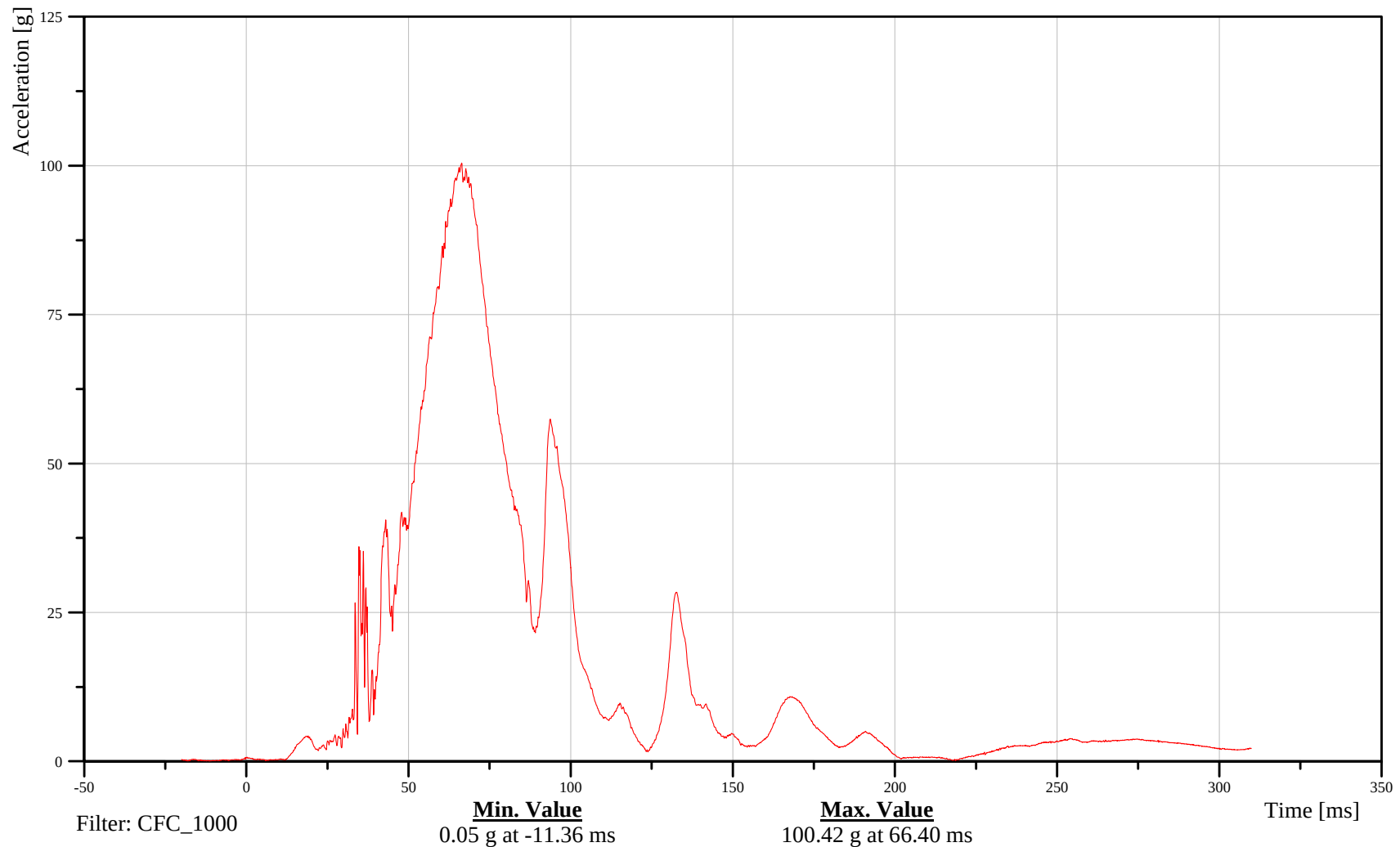
Target Passenger Head CG Resultant Acceleration

Customer: VRTC

23HEADCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

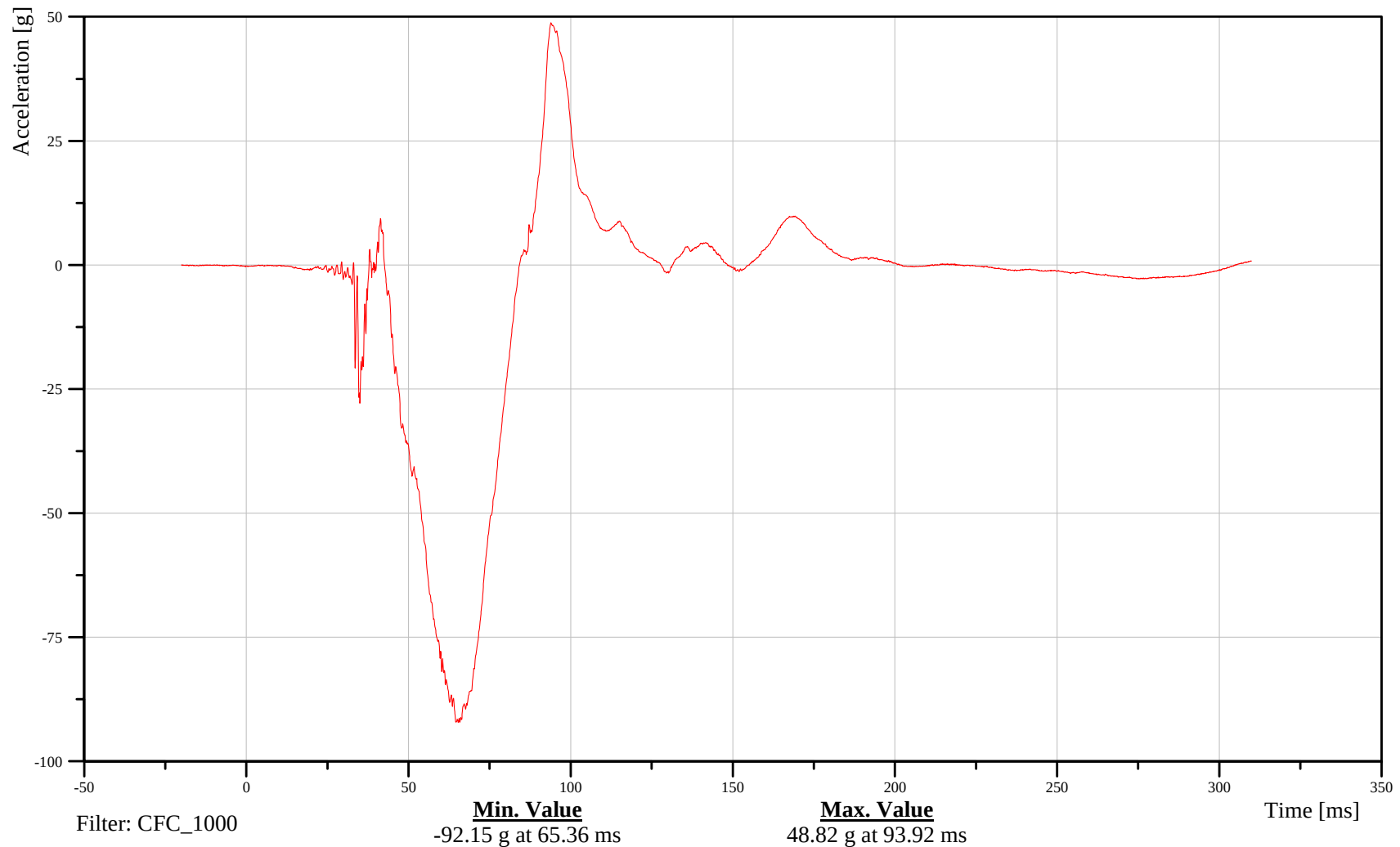
Target Passenger Redundant Head CG X-Axis Acceleration

Customer: VRTC

23HEADCGRDHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

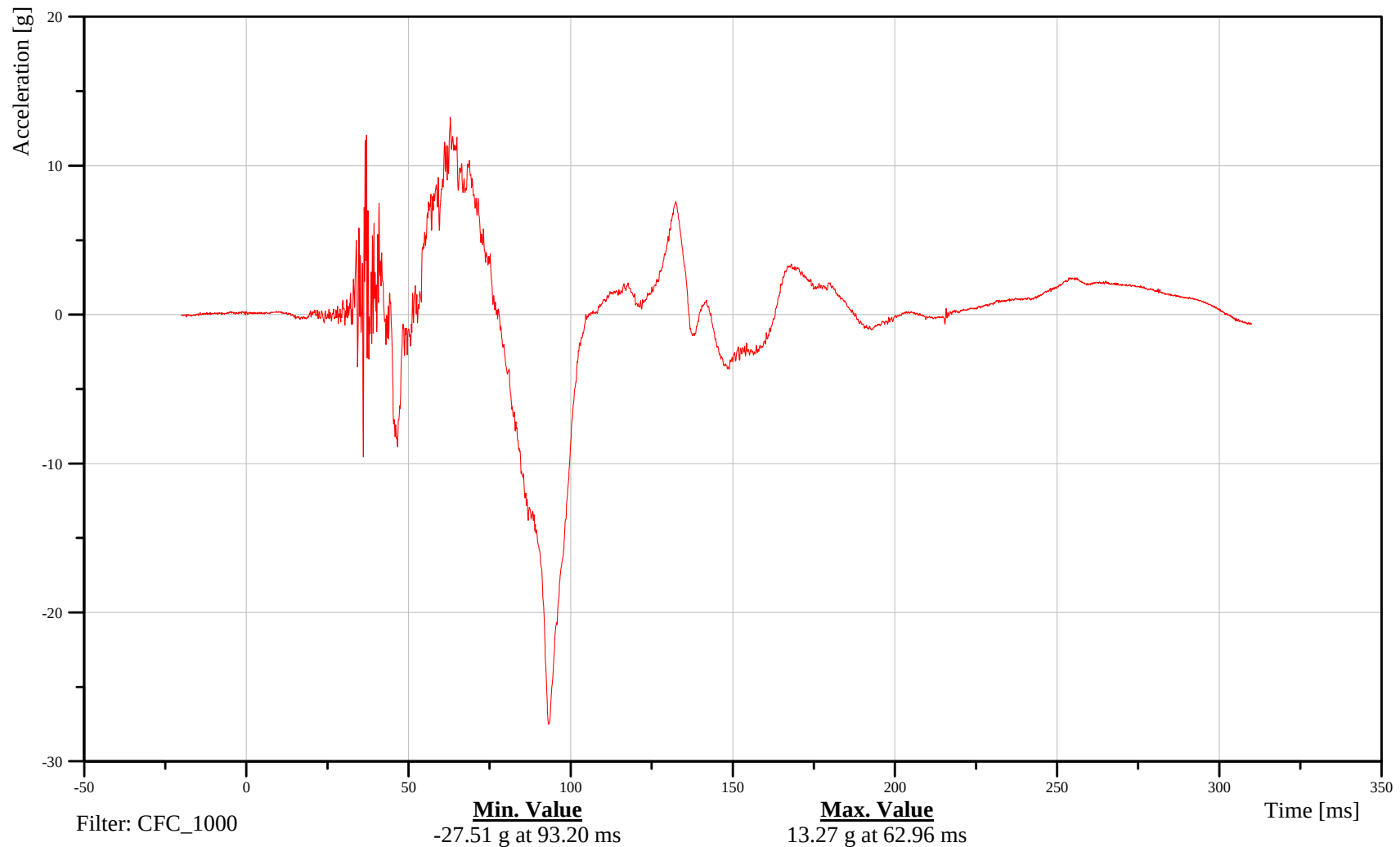
Target Passenger Redundant Head CG Y-Axis Acceleration

Customer: VRTC

23HEADCGRDHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

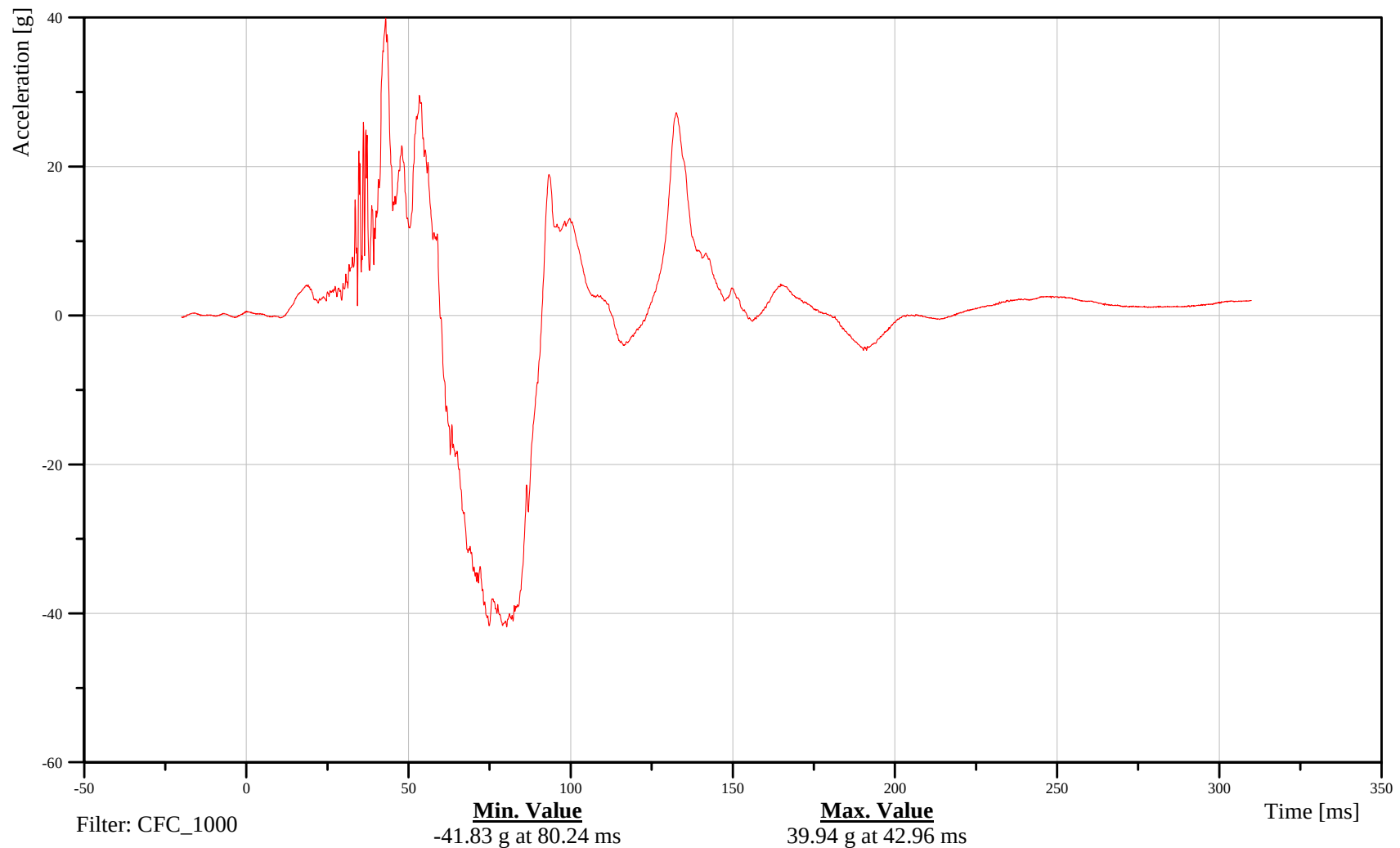
Target Passenger Redundant Head CG Z-Axis Acceleration

Customer: VRTC

23HEADCGRDHFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

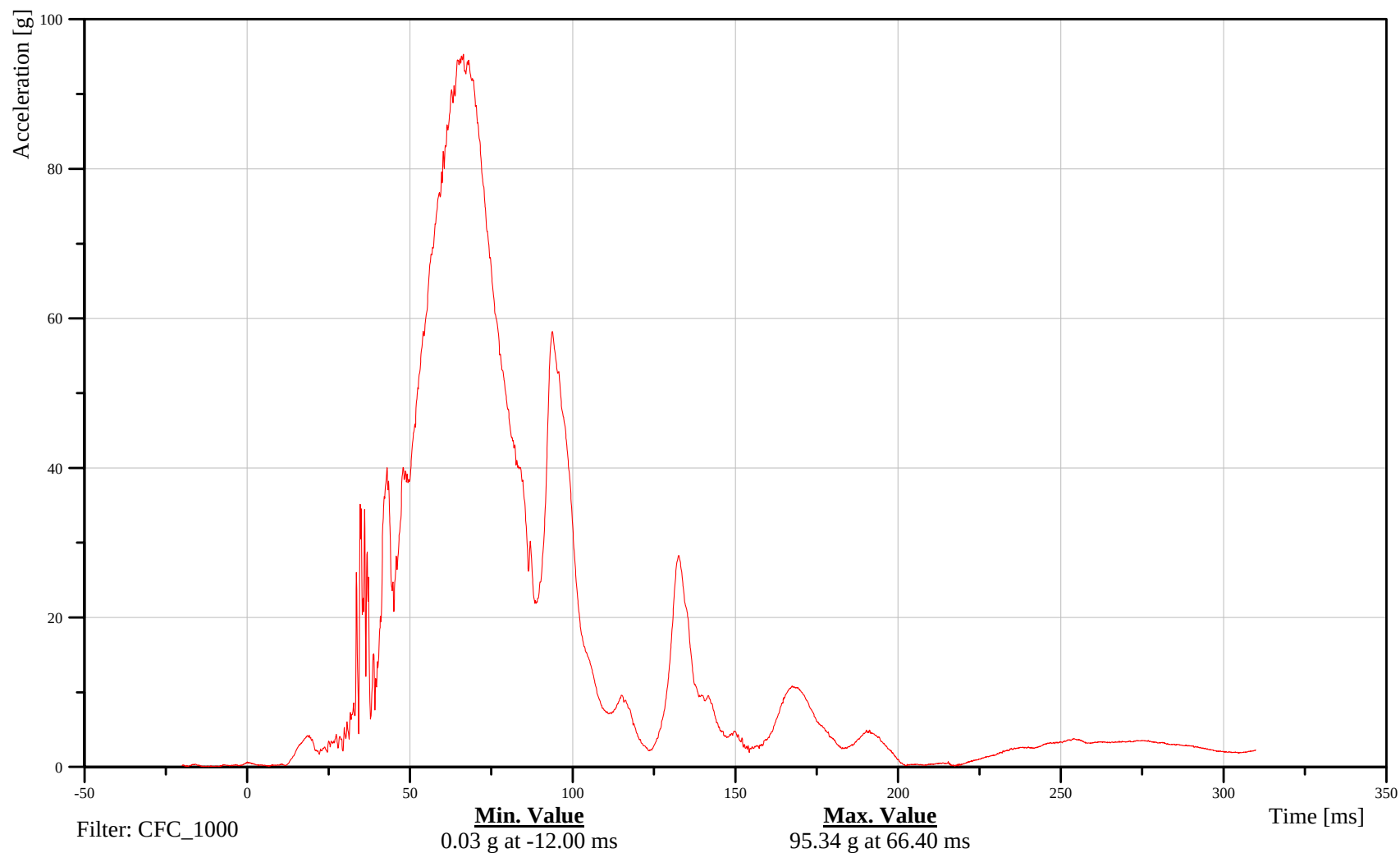
Target Passenger Redundant Head CG Resultant Acceleration

Customer: VRTC

23HEADCGRDHFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

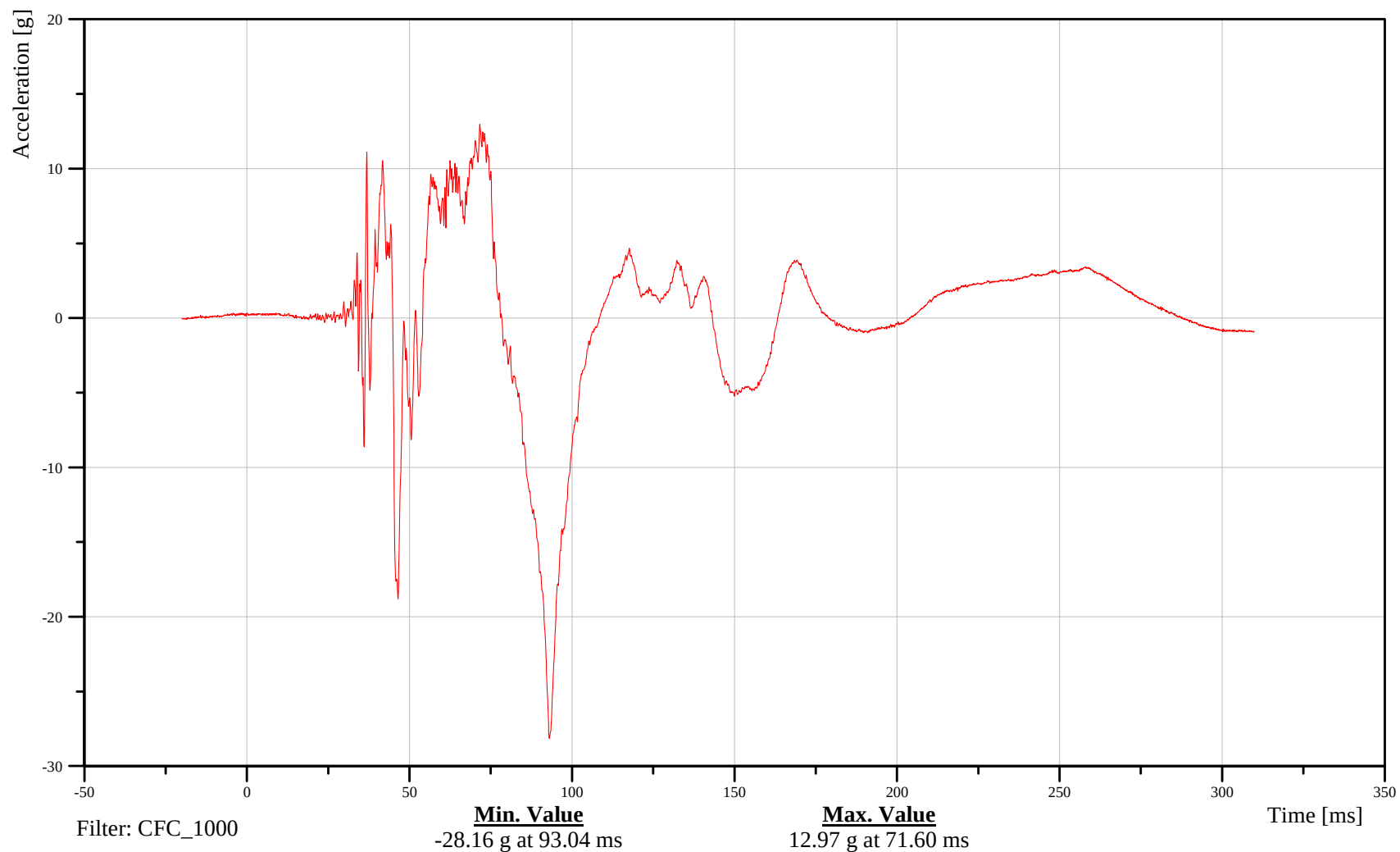
Target Passenger Head Front Y-Axis Acceleration

Customer: VRTC

23HEADFR00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

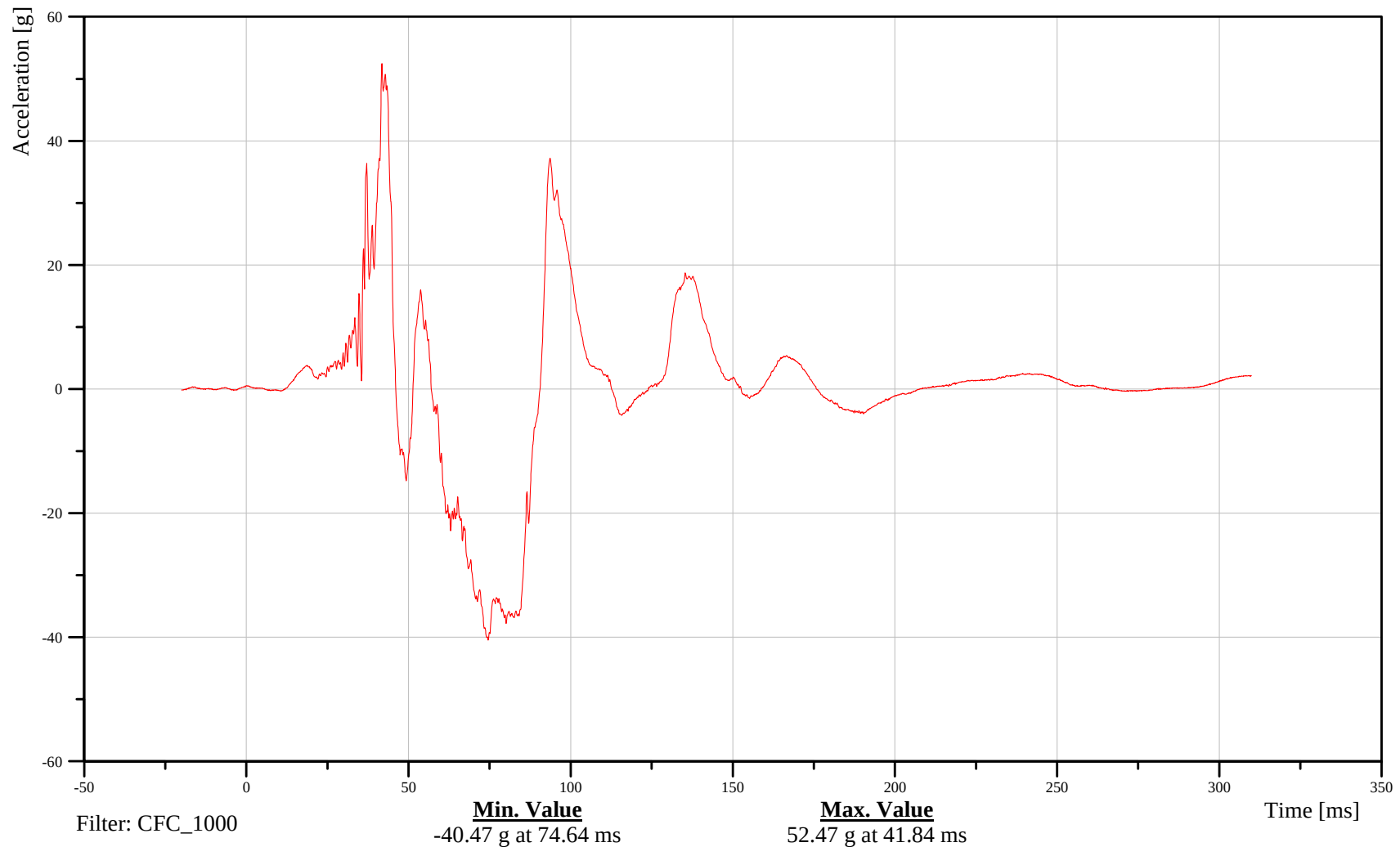
Target Passenger Head Front Z-Axis Acceleration

Customer: VRTC

23HEADFR00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

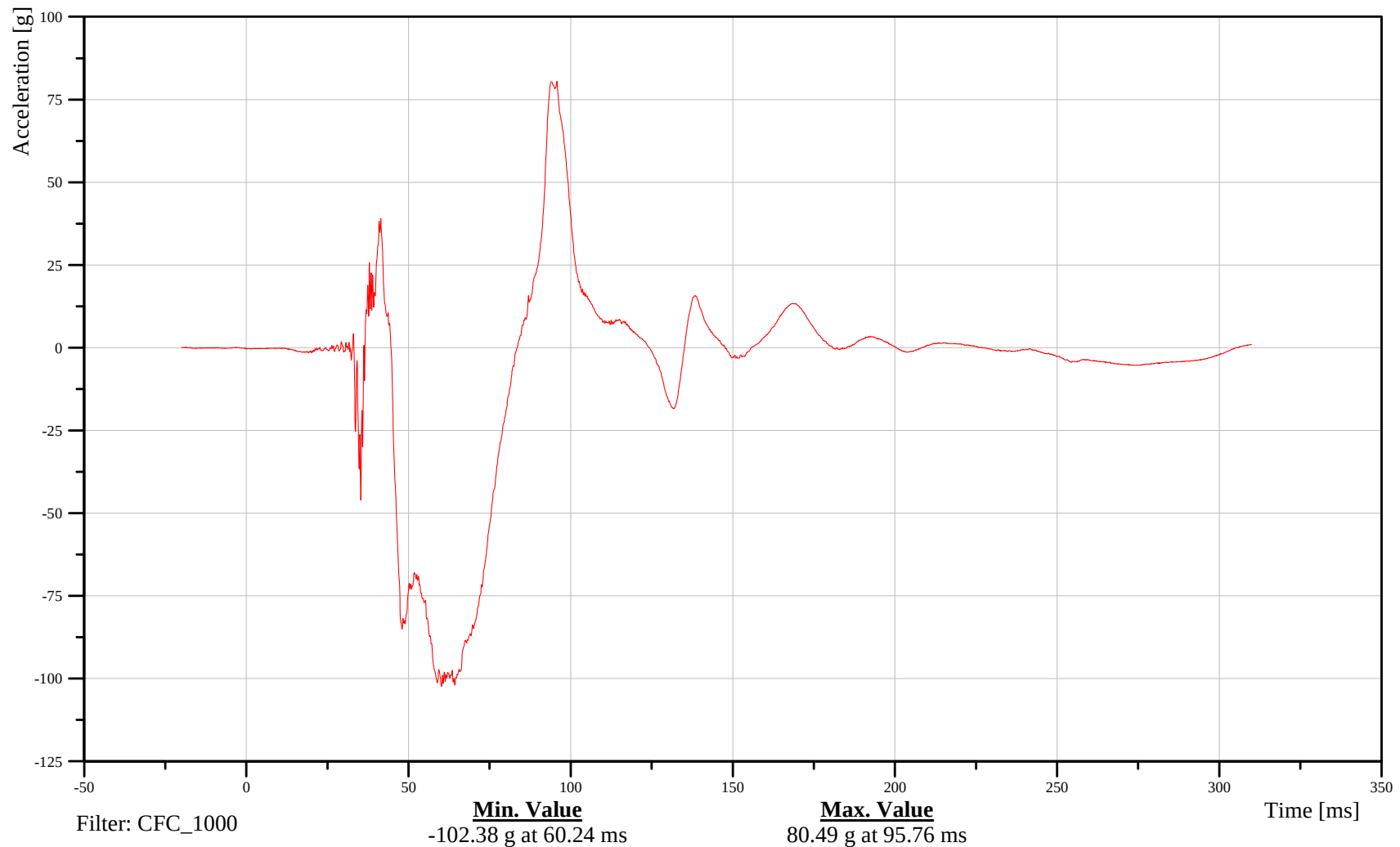
Target Passenger Head Top X-Axis Acceleration

Customer: VRTC

23HEADUP00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

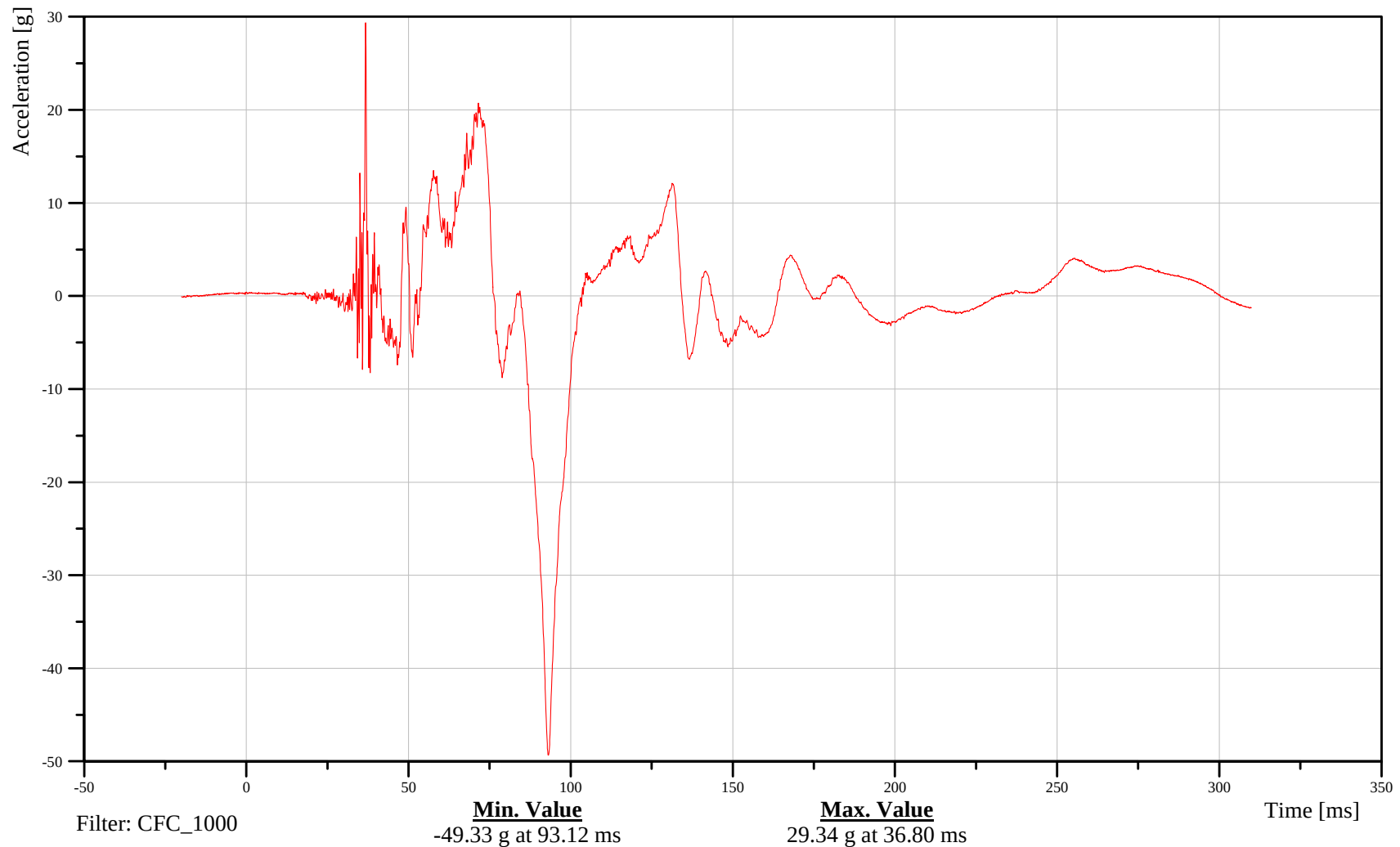
Target Passenger Head Top Y-Axis Acceleration

Customer: VRTC

23HEADUP00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

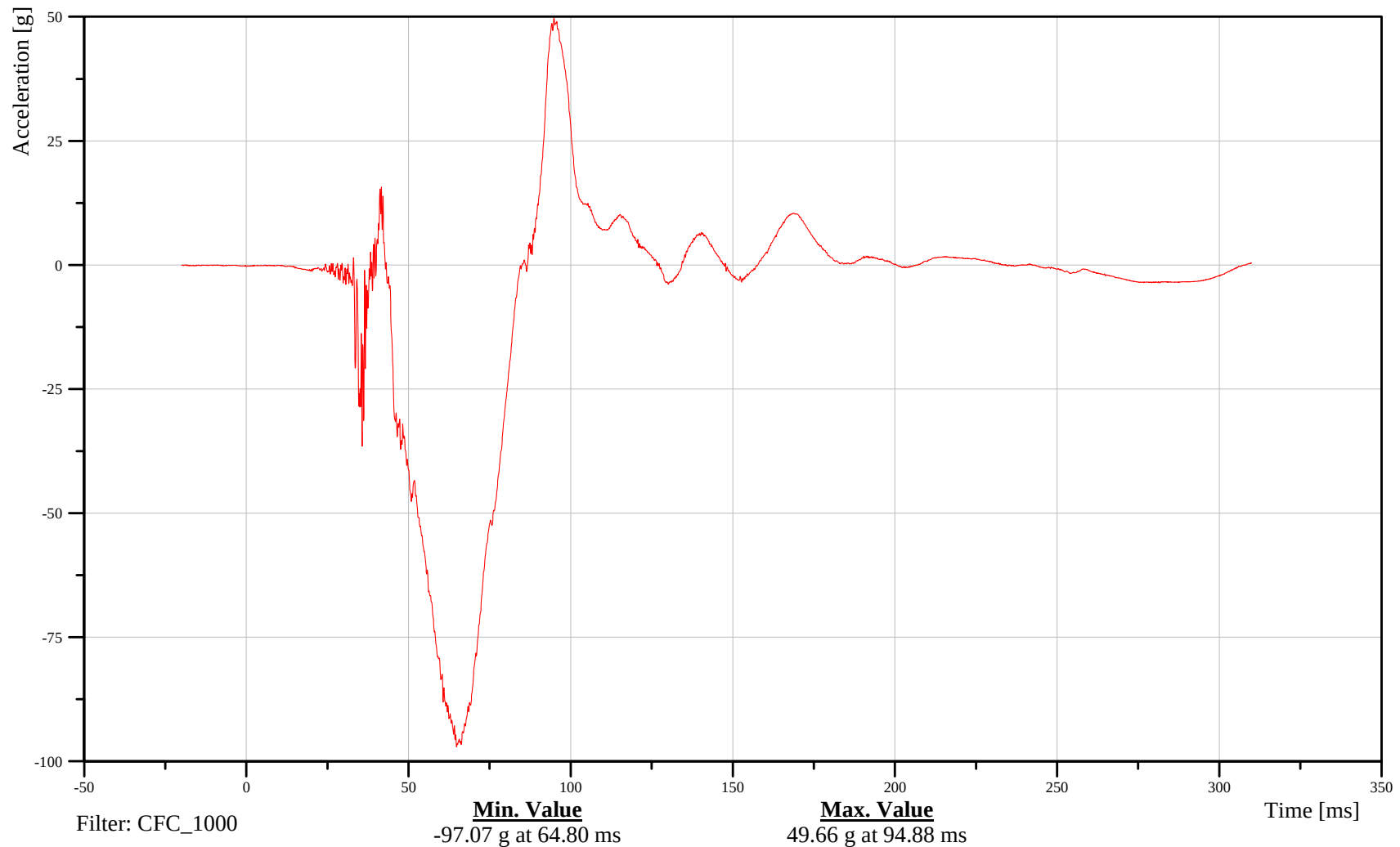
Target Passenger Head Side X-Axis Acceleration

Customer: VRTC

23HEADLE00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

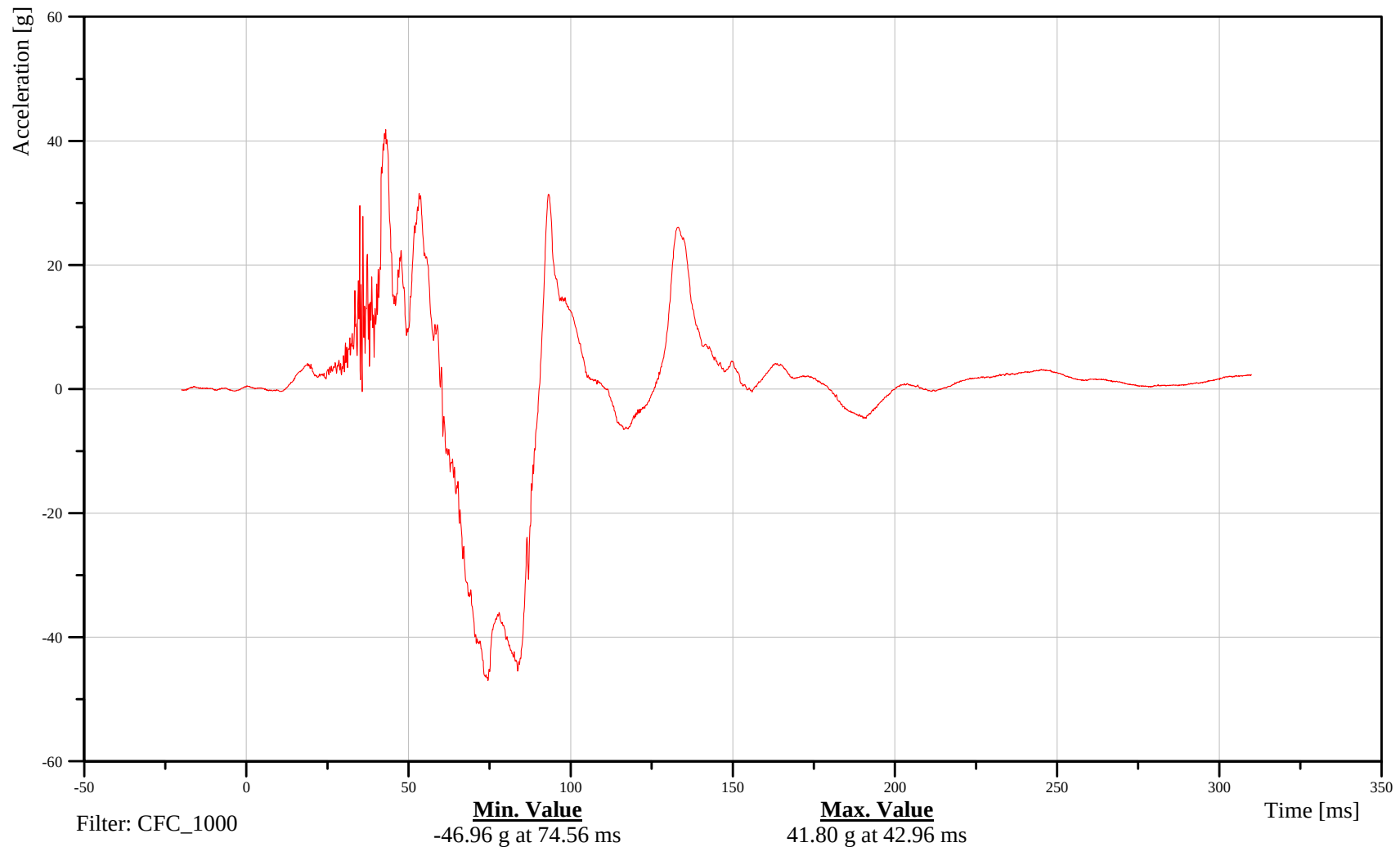
Target Passenger Head Side Z-Axis Acceleration

Customer: VRTC

23HEADLE00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

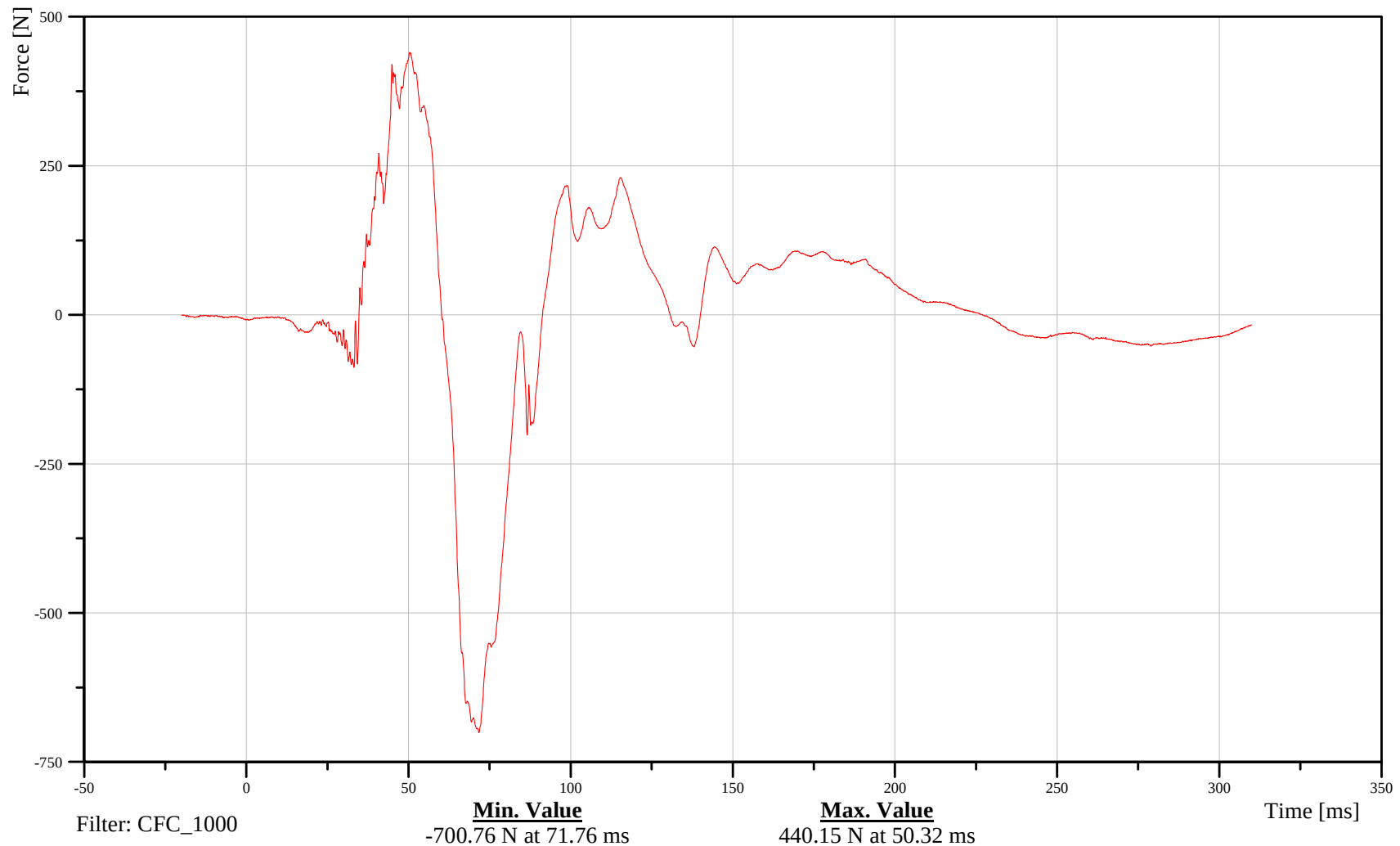
Target Passenger Upper Neck X-Axis Force

Customer: VRTC

23NECKUP00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

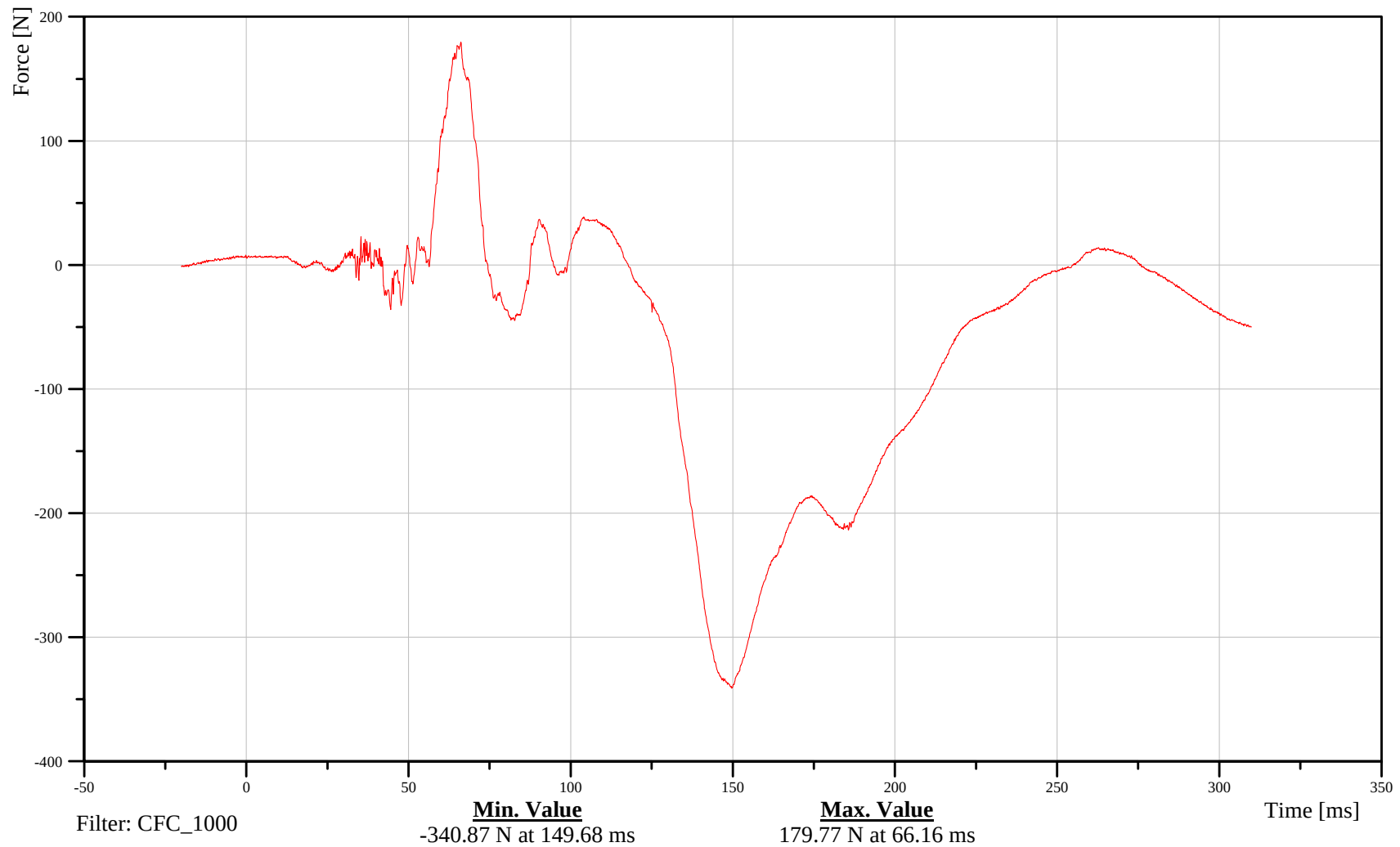
Target Passenger Upper Neck Y-Axis Force

Customer: VRTC

23NECKUP00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

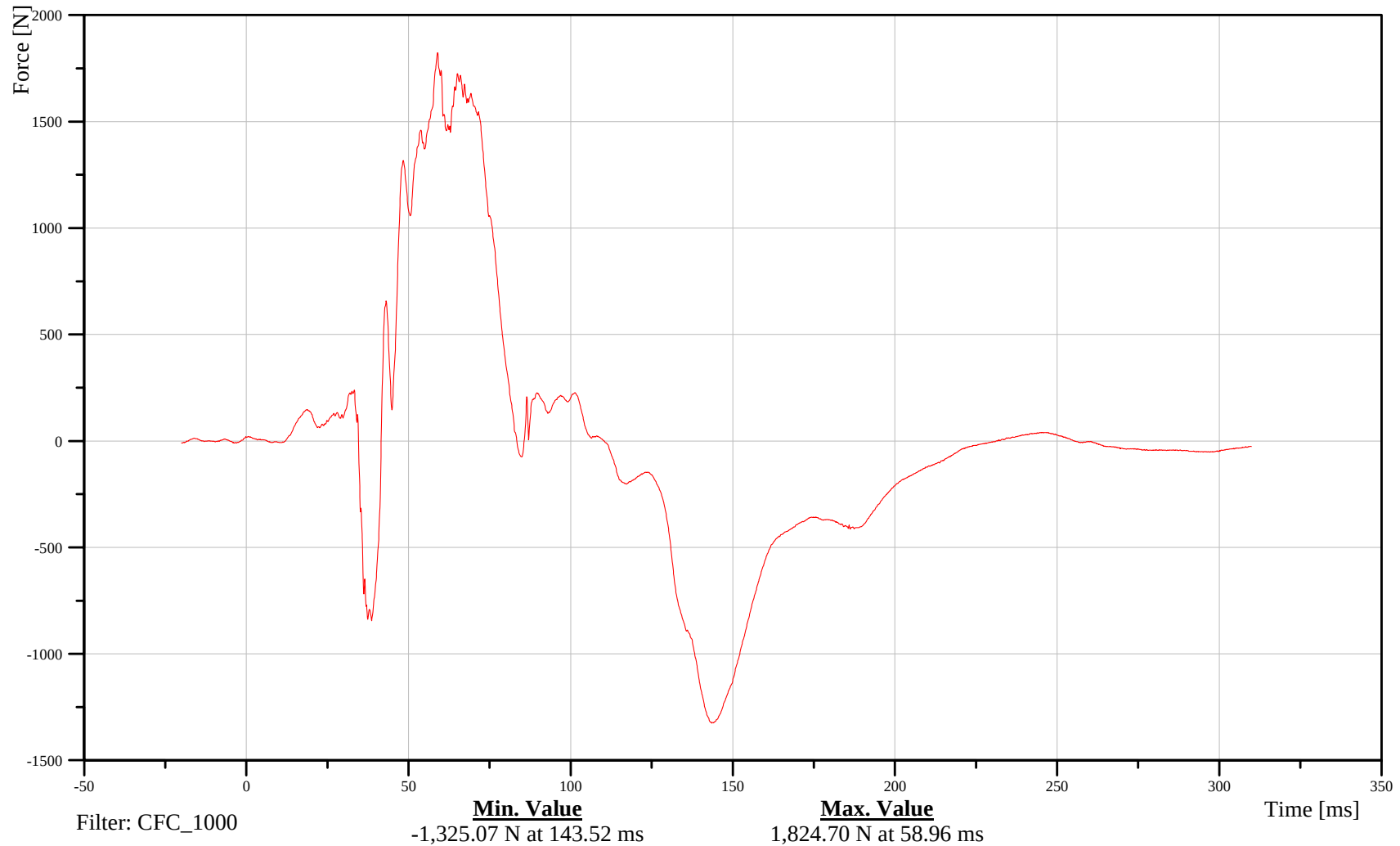
Target Passenger Upper Neck Z-Axis Force

Customer: VRTC

23NECKUP00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

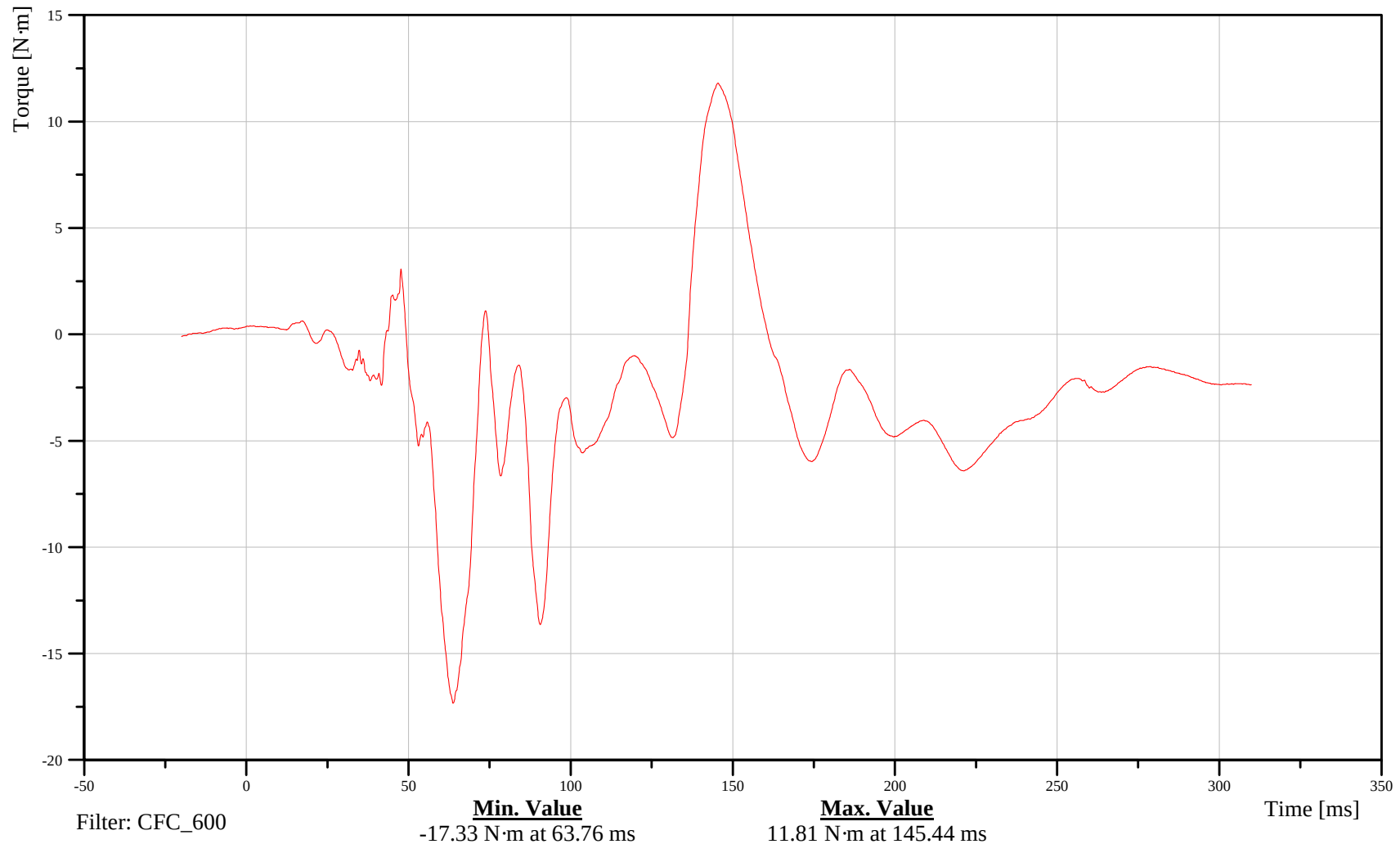
Target Passenger Upper Neck Moment About X Axis

Customer: VRTC

23NECKUP00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

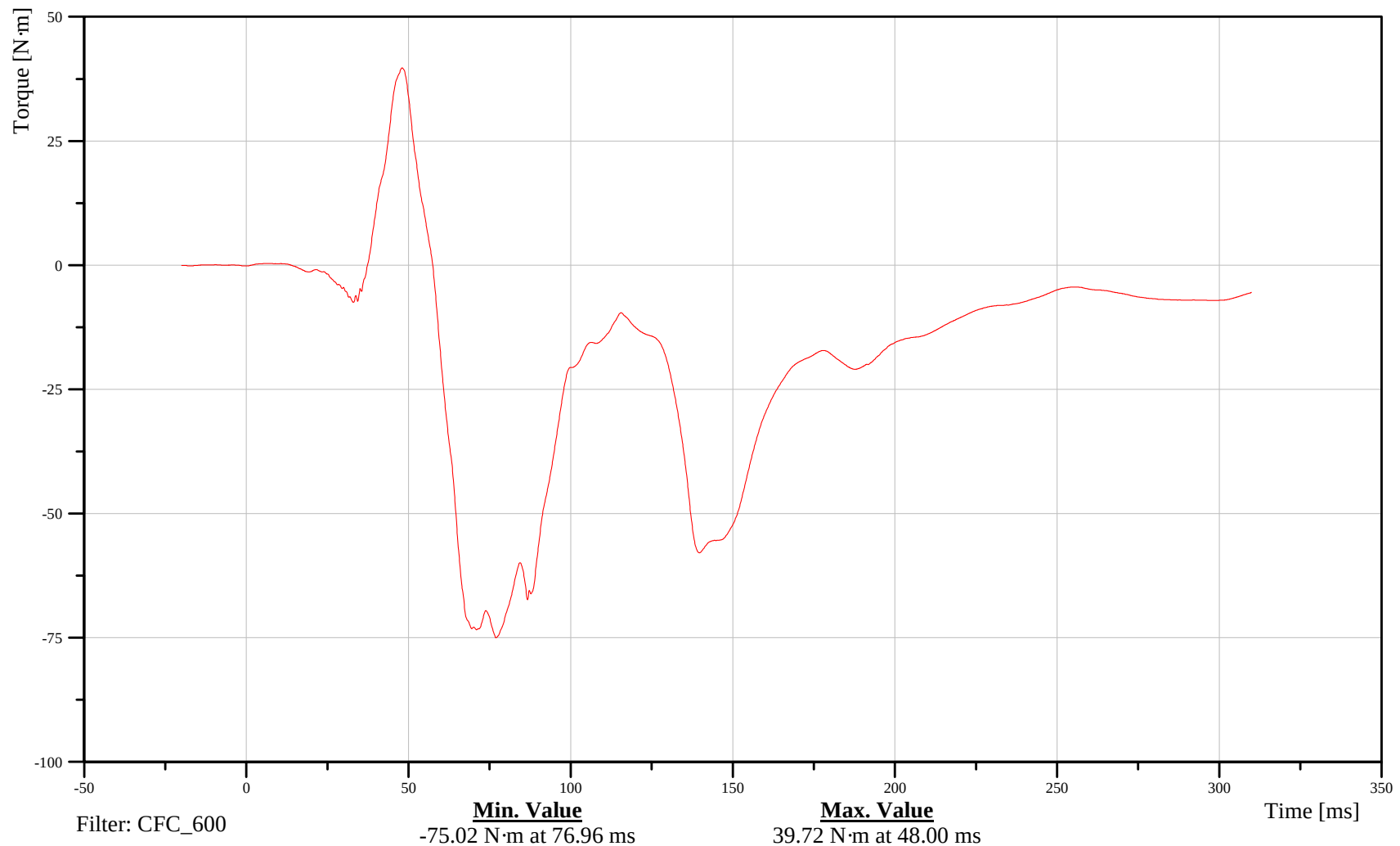
Target Passenger Upper Neck Moment About Y Axis

Customer: VRTC

23NECKUP00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

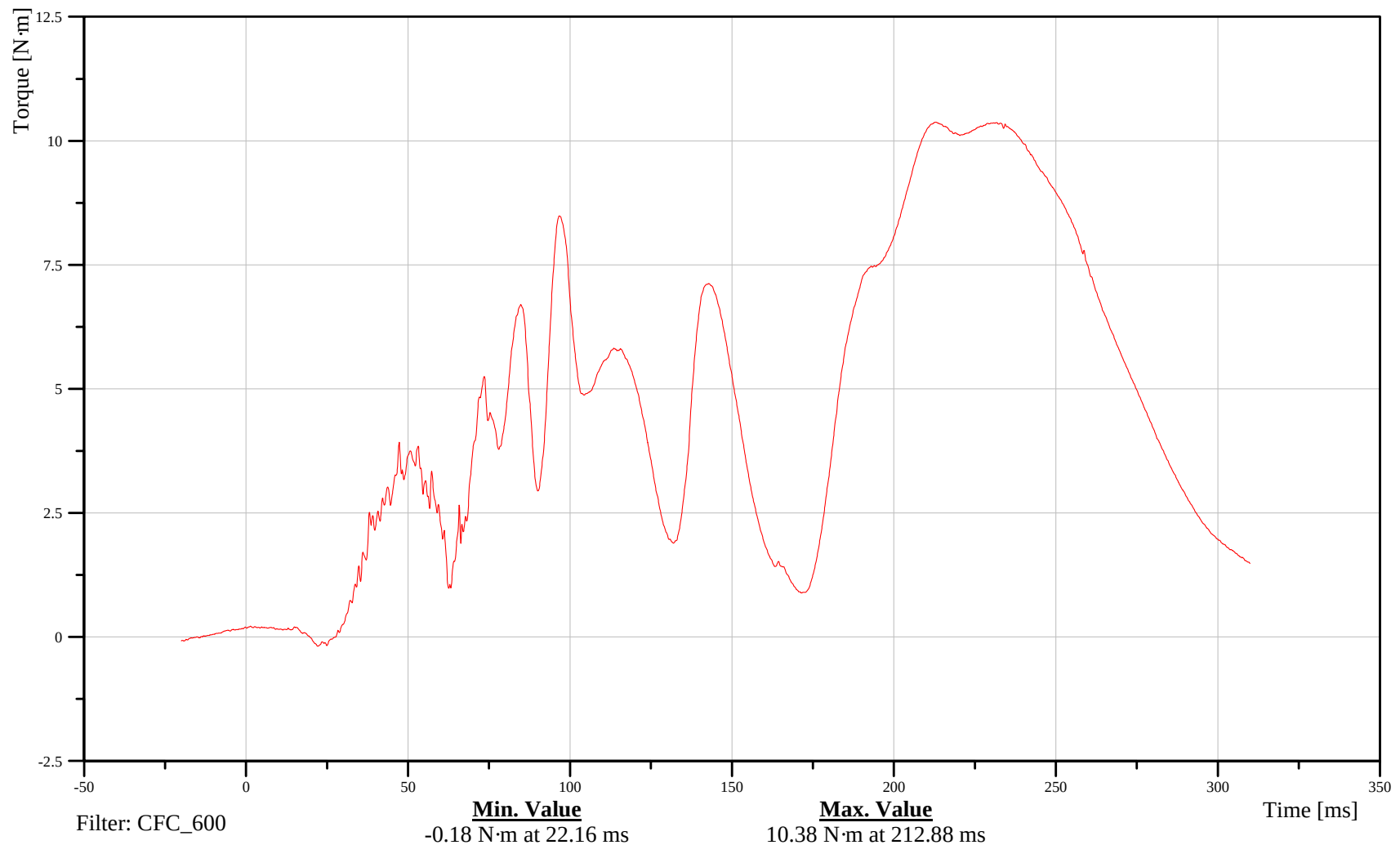
Target Passenger Upper Neck Moment About Z Axis

Customer: VRTC

23NECKUP00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

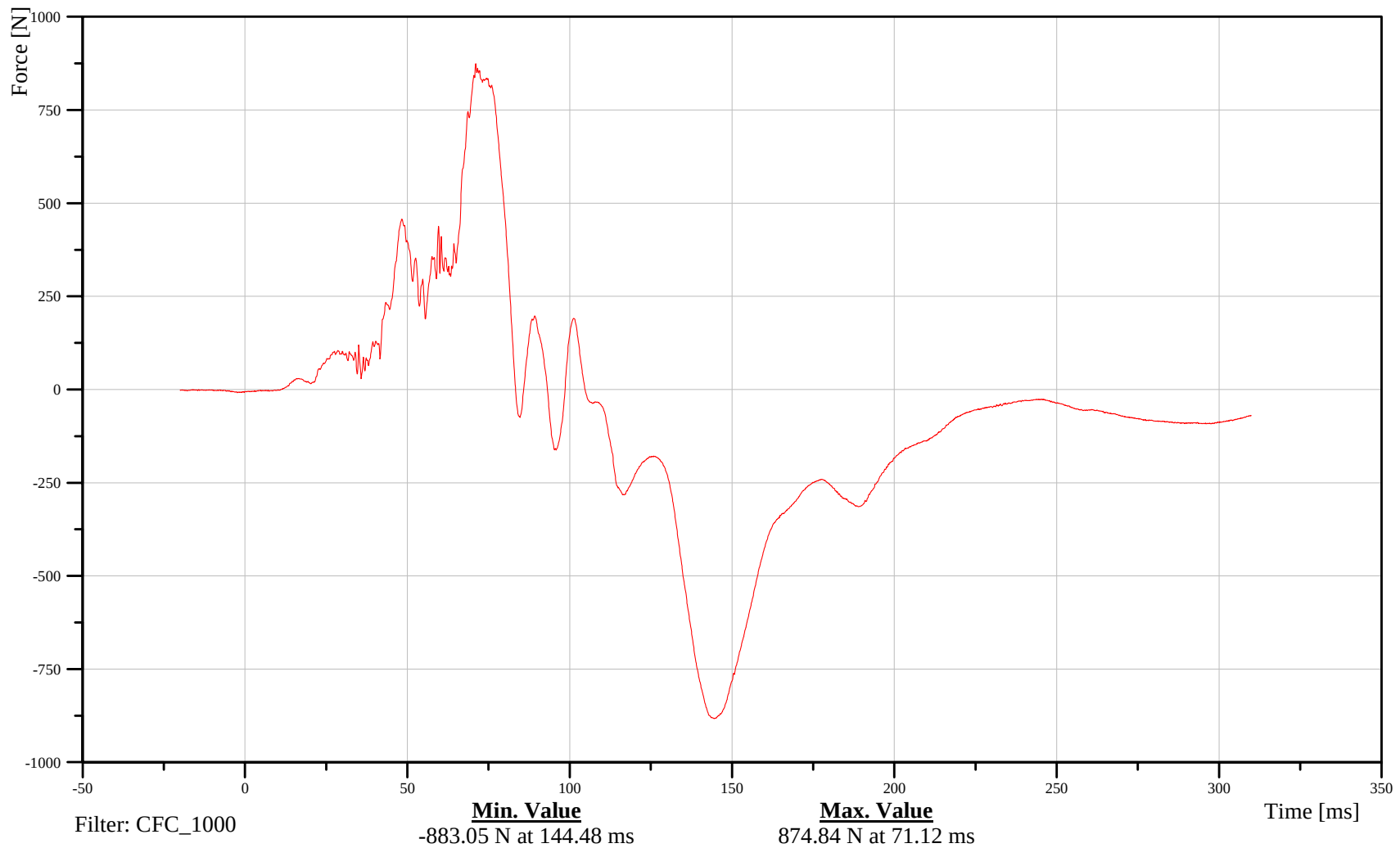
Target Passenger Lower Neck X-Axis Force

Customer: VRTC

23NECKLO00HFFOXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

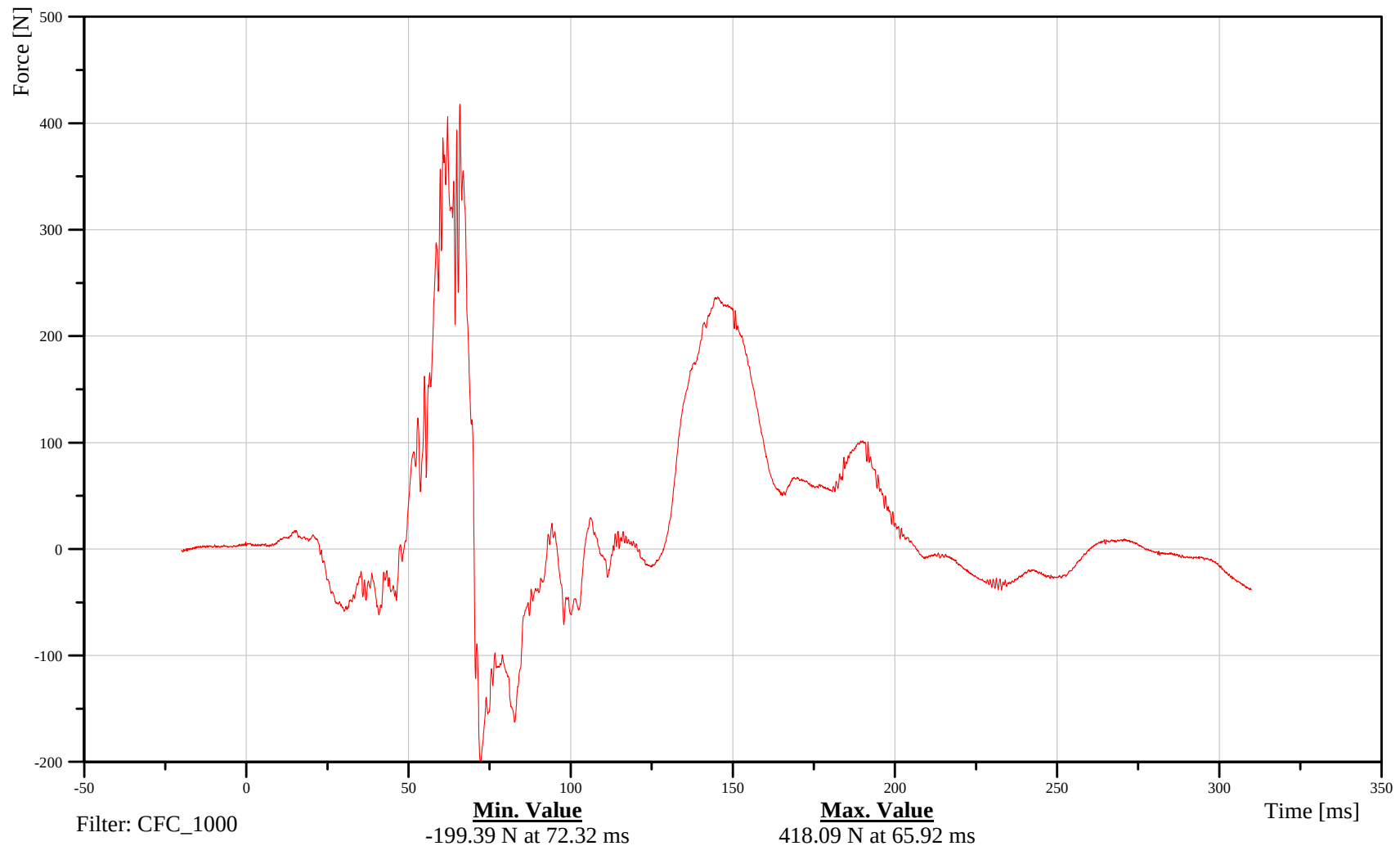
Target Passenger Lower Neck Y-Axis Force

Customer: VRTC

23NECKLO00HFFOYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

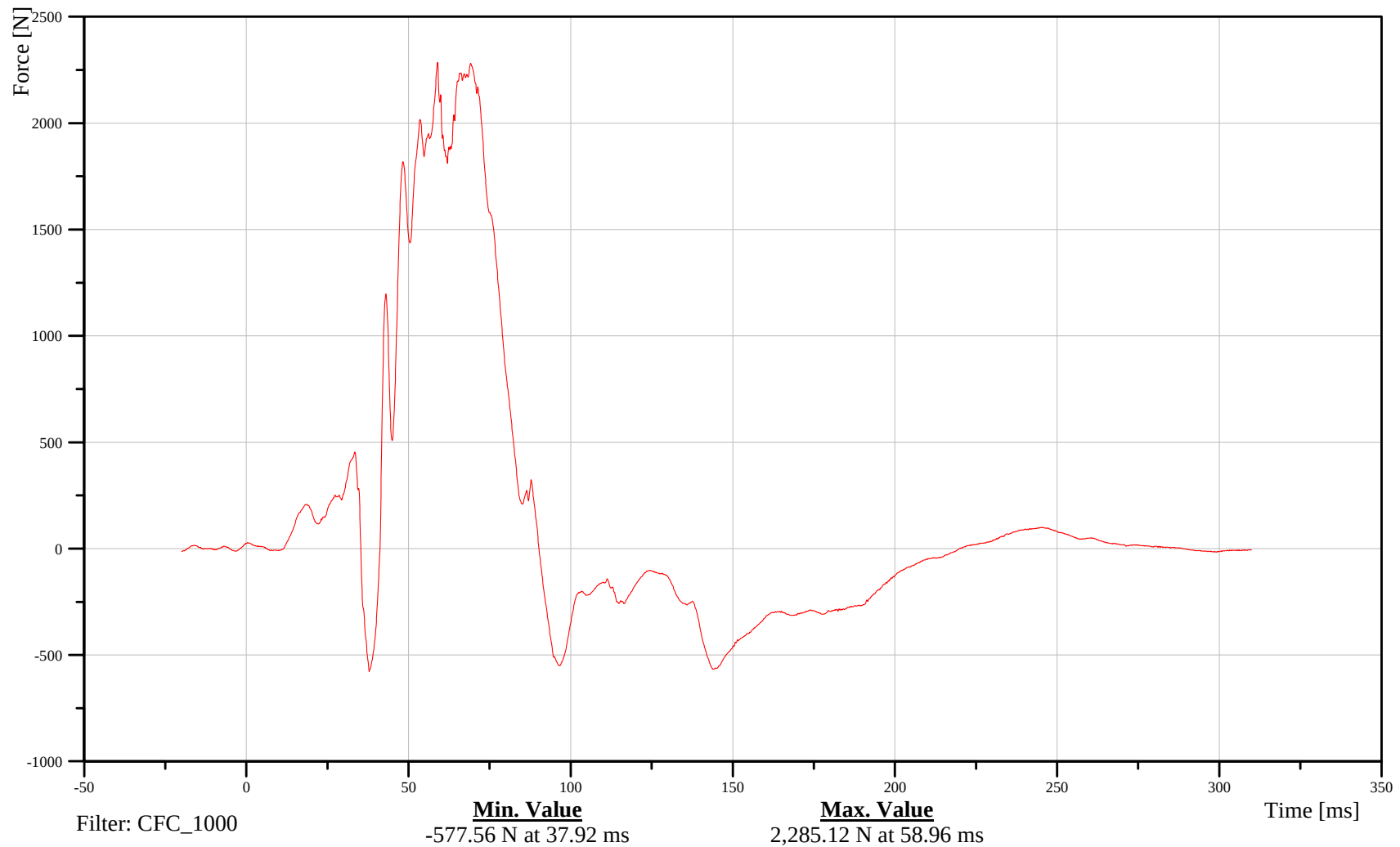
Target Passenger Lower Neck Z-Axis Force

Customer: VRTC

23NECKLO00HFFOZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

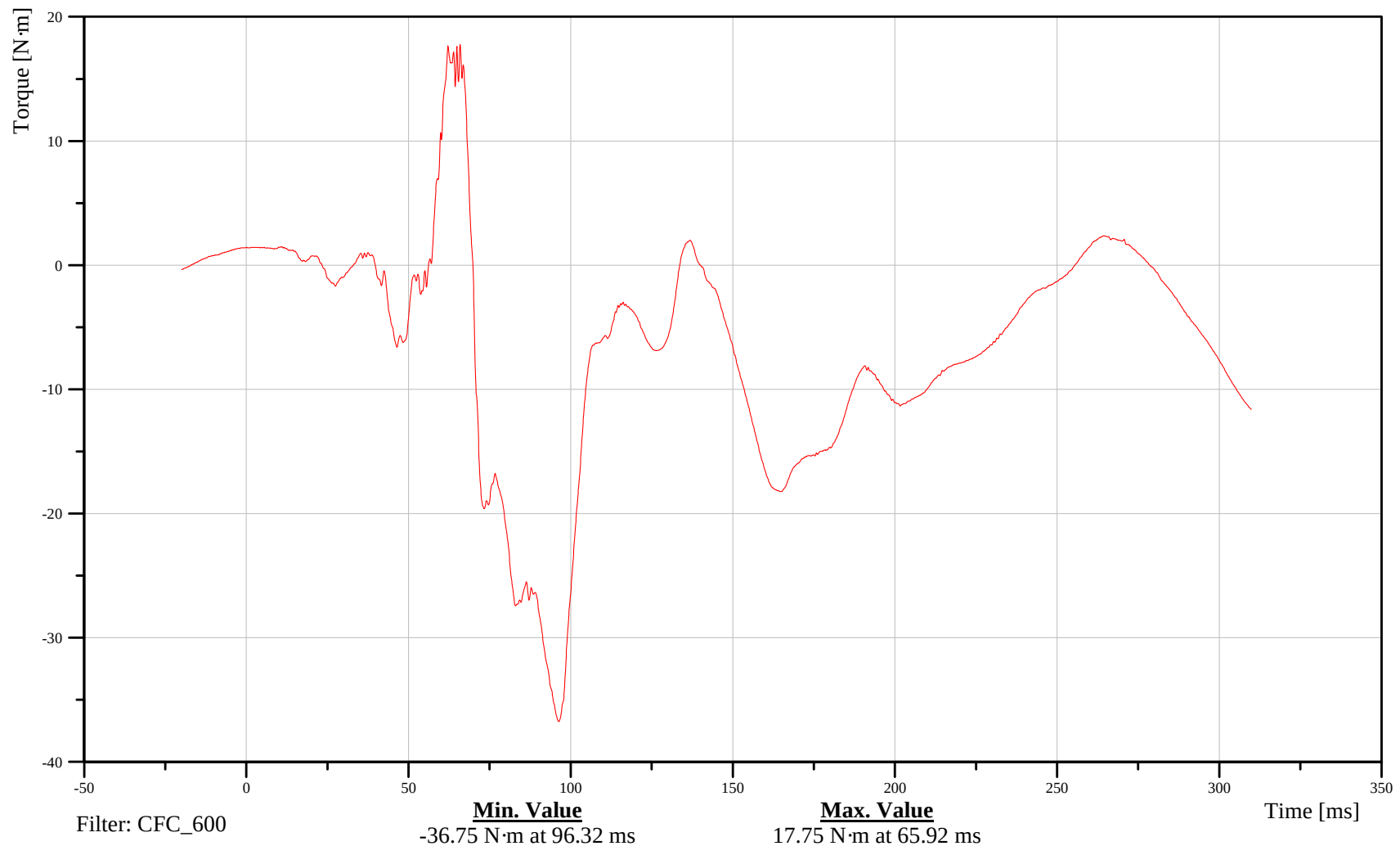
Target Passenger Lower Neck Moment About X Axis

Customer: VRTC

23NECKLO00HFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

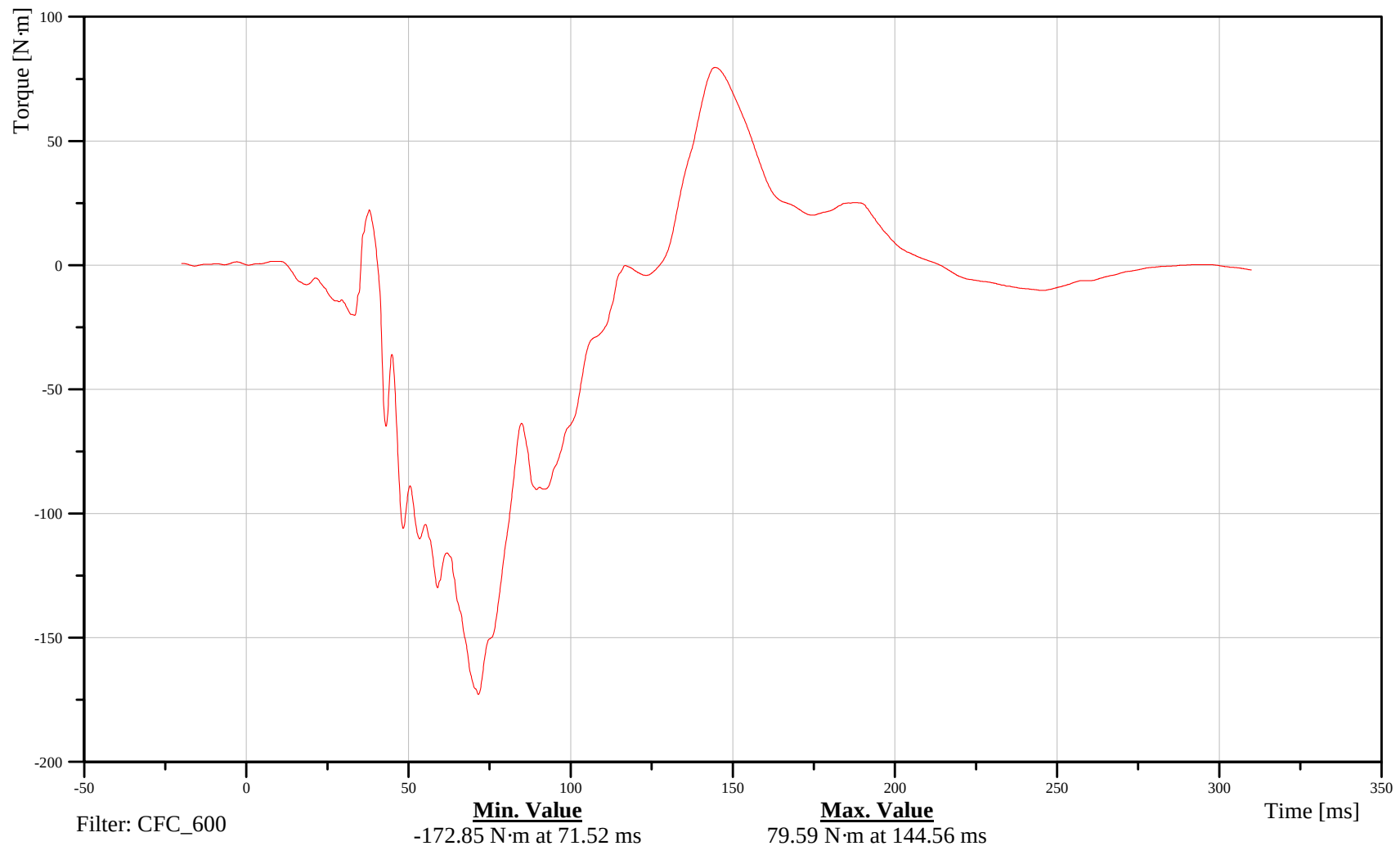
Target Passenger Lower Neck Moment About Y Axis

Customer: VRTC

23NECKLO00HFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

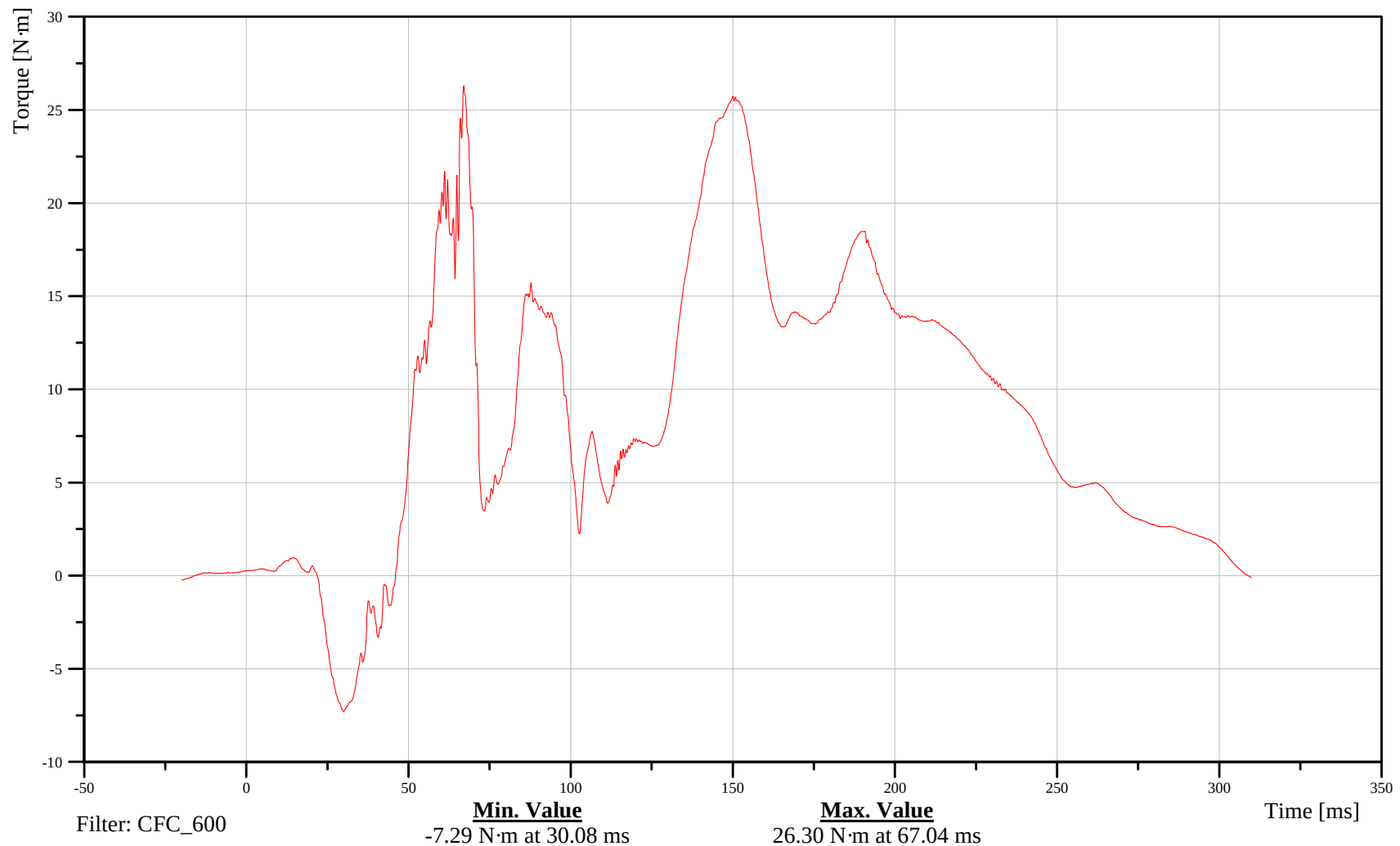
Target Passenger Lower Neck Moment About Z Axis

Customer: VRTC

23NECKLO00HFMOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

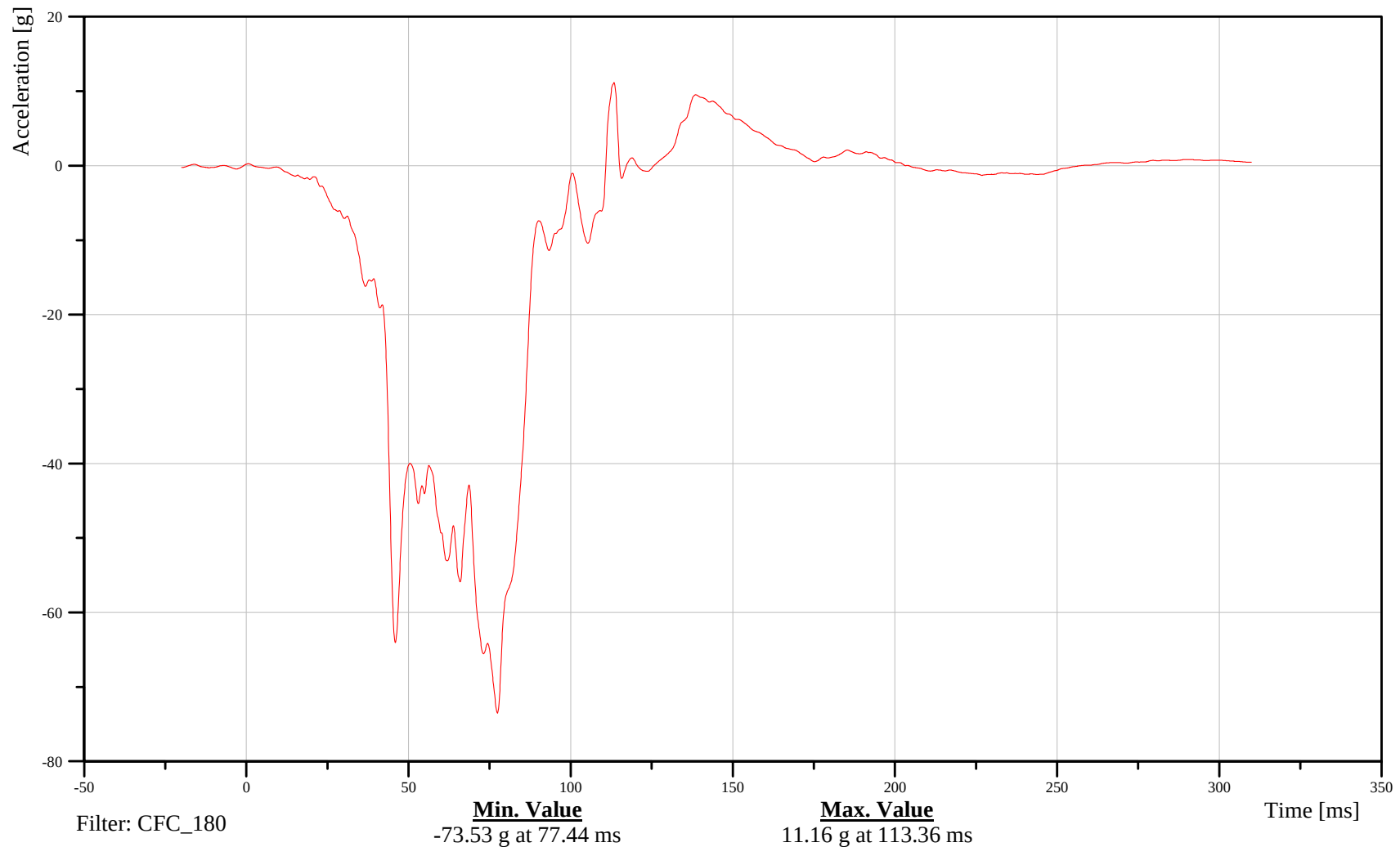
Target Passenger Chest CG X-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

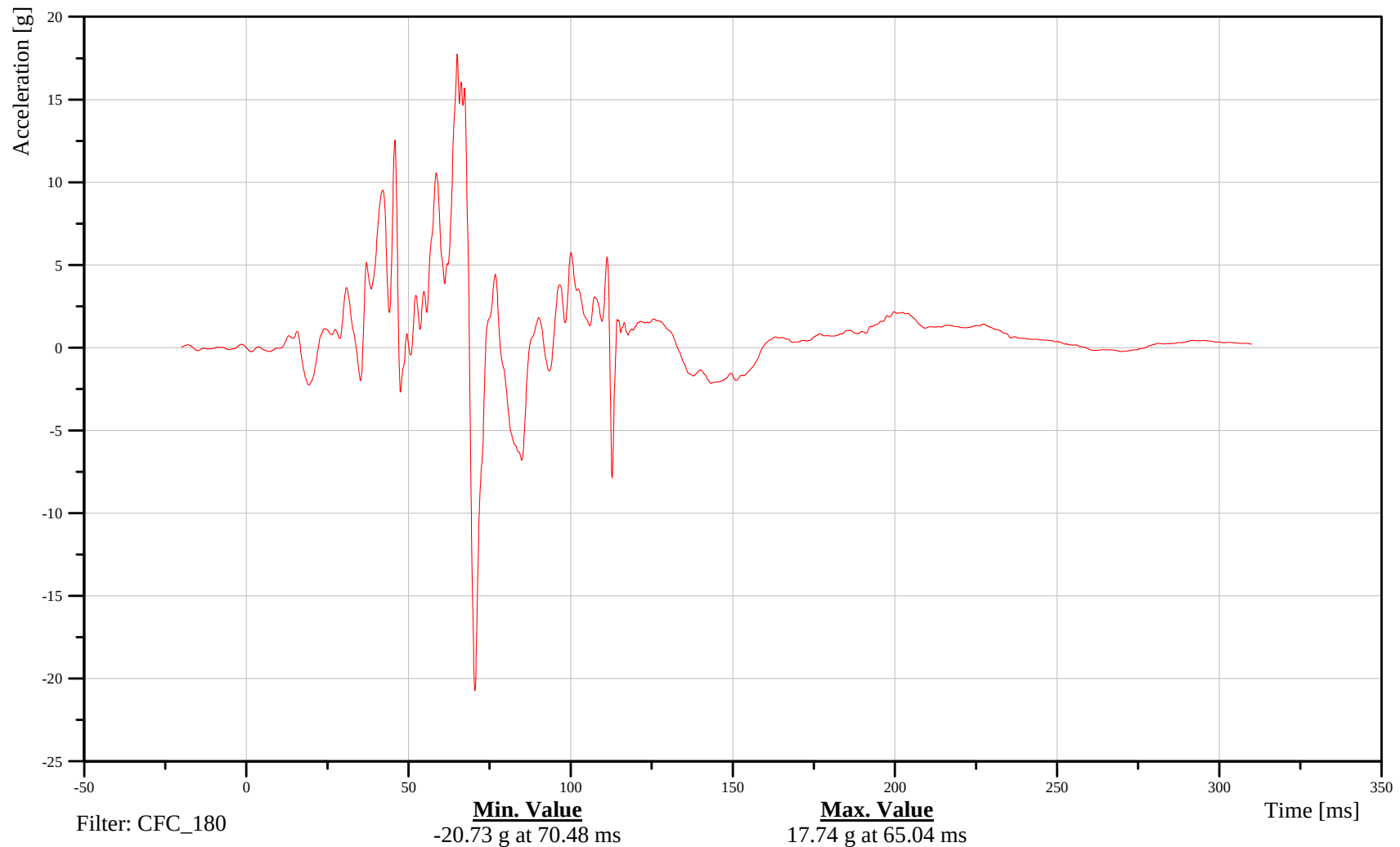
Target Passenger Chest CG Y-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

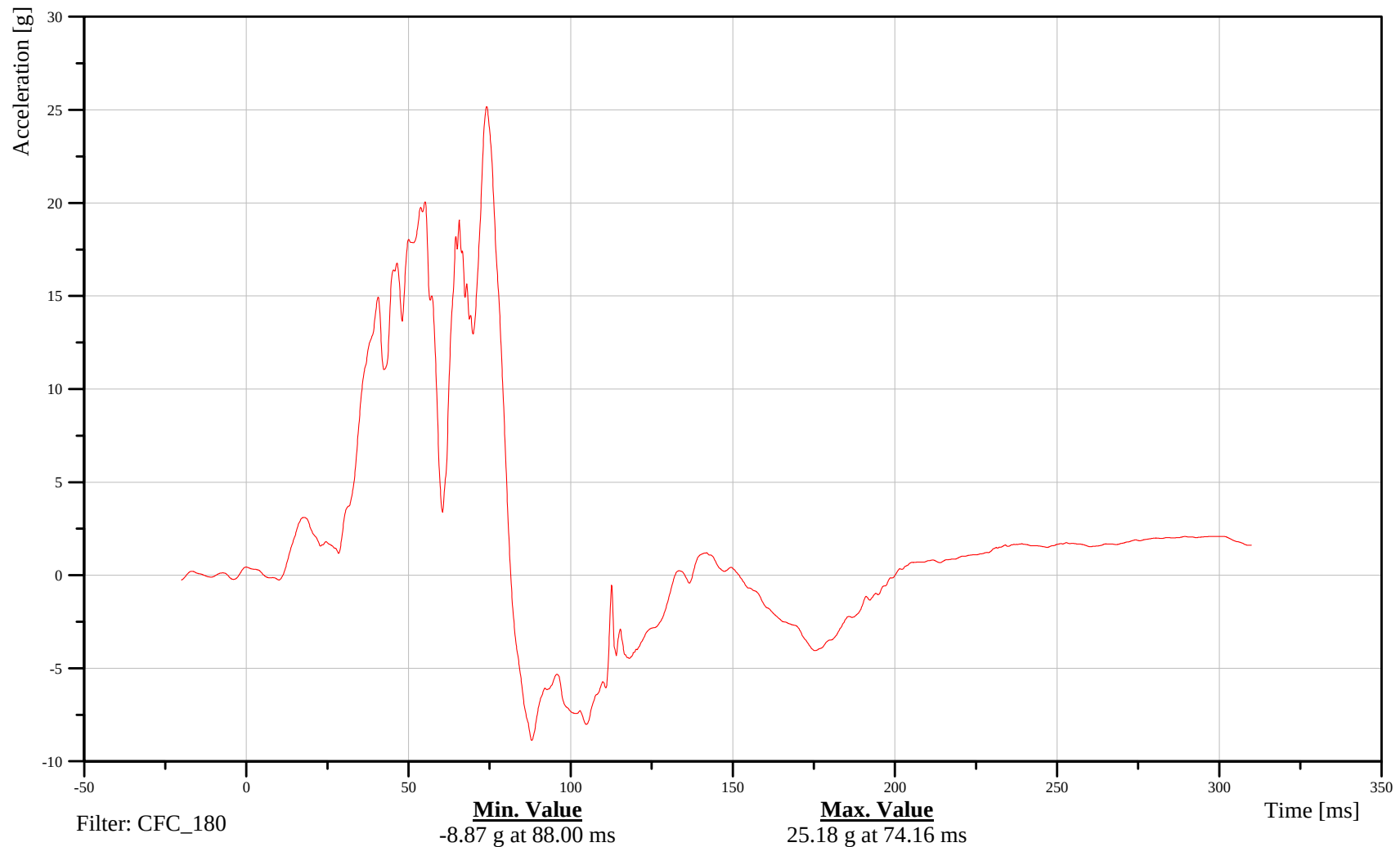
Target Passenger Chest CG Z-Axis Acceleration

Customer: VRTC

23CHSTCG00HFACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

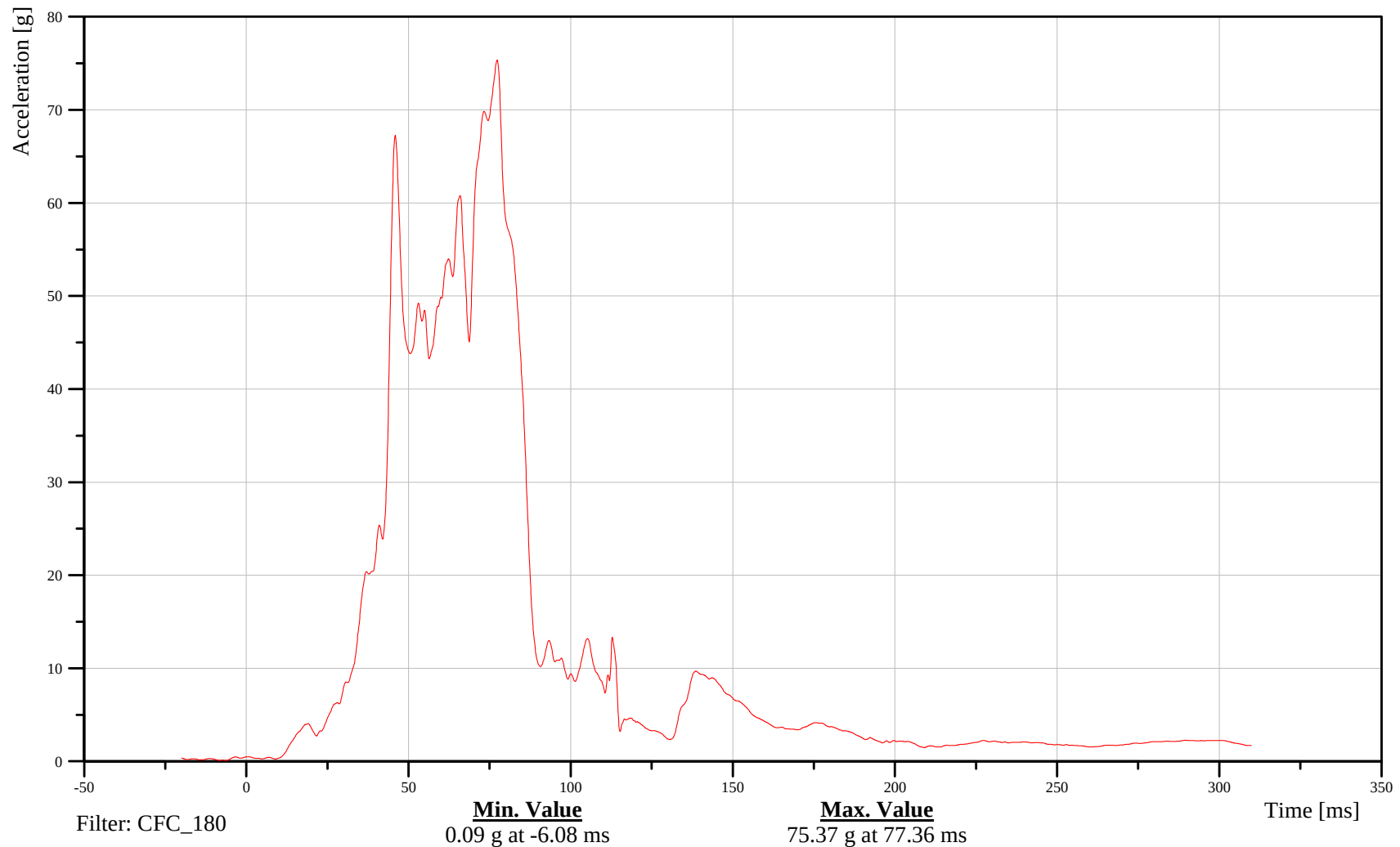
Target Passenger Chest CG Resultant Acceleration

Customer: VRTC

23CHSTCG00HFACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

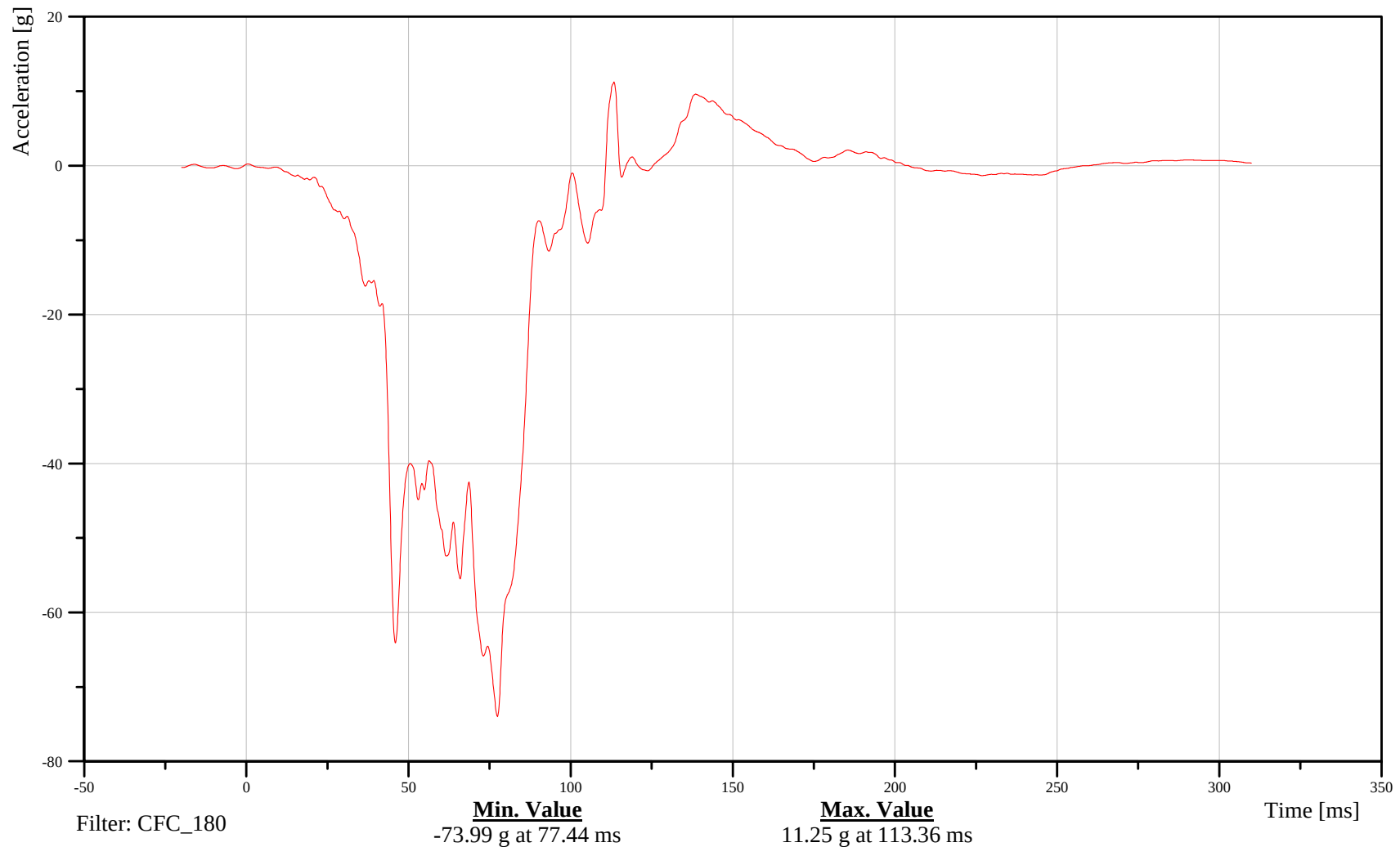
Target Passenger Redundant Chest CG X-Axis Acceleration

Customer: VRTC

23CHSTCGRDHFACXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

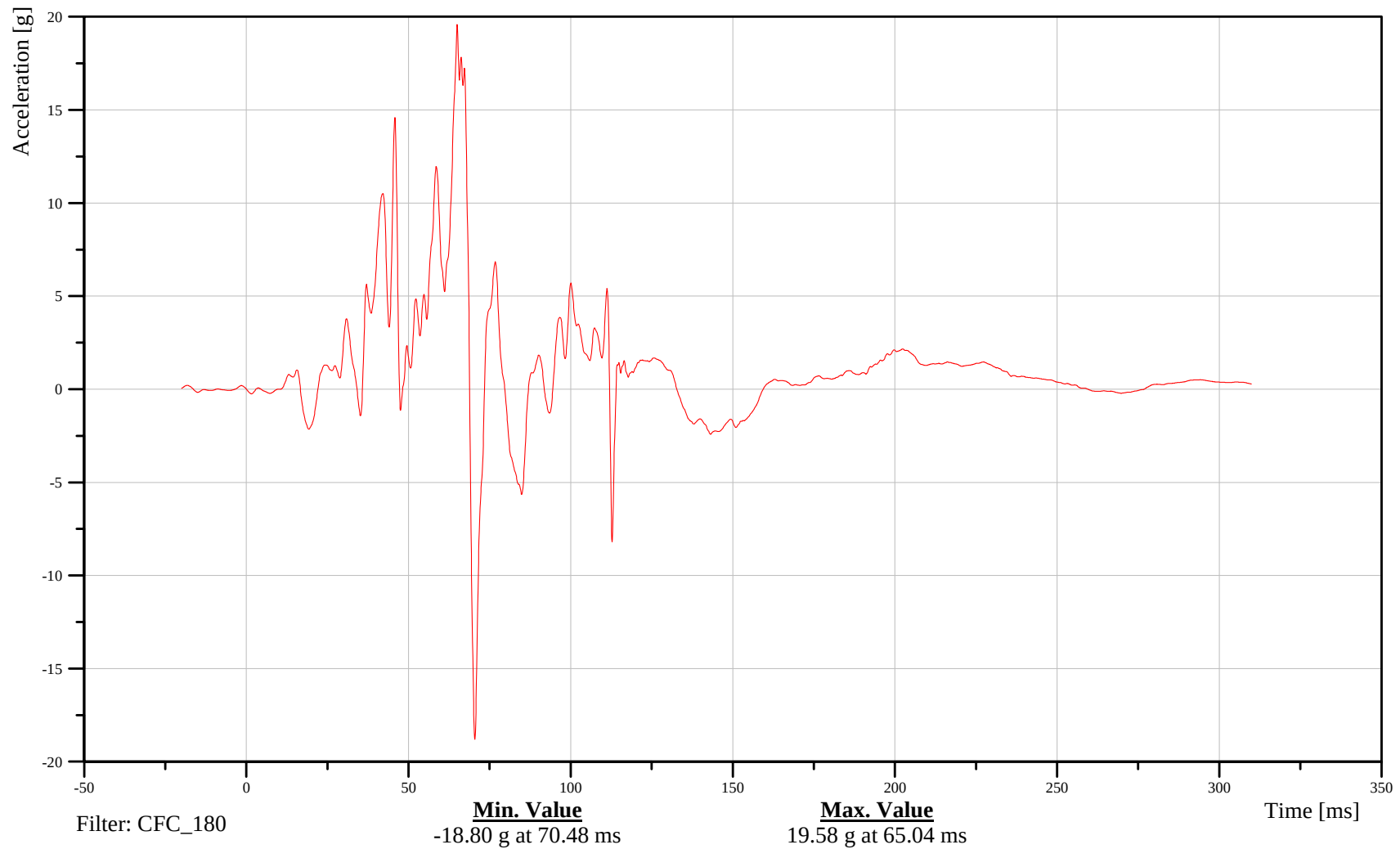
Target Passenger Redundant Chest CG Y-Axis Acceleration

Customer: VRTC

23CHSTCGRDHFACYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

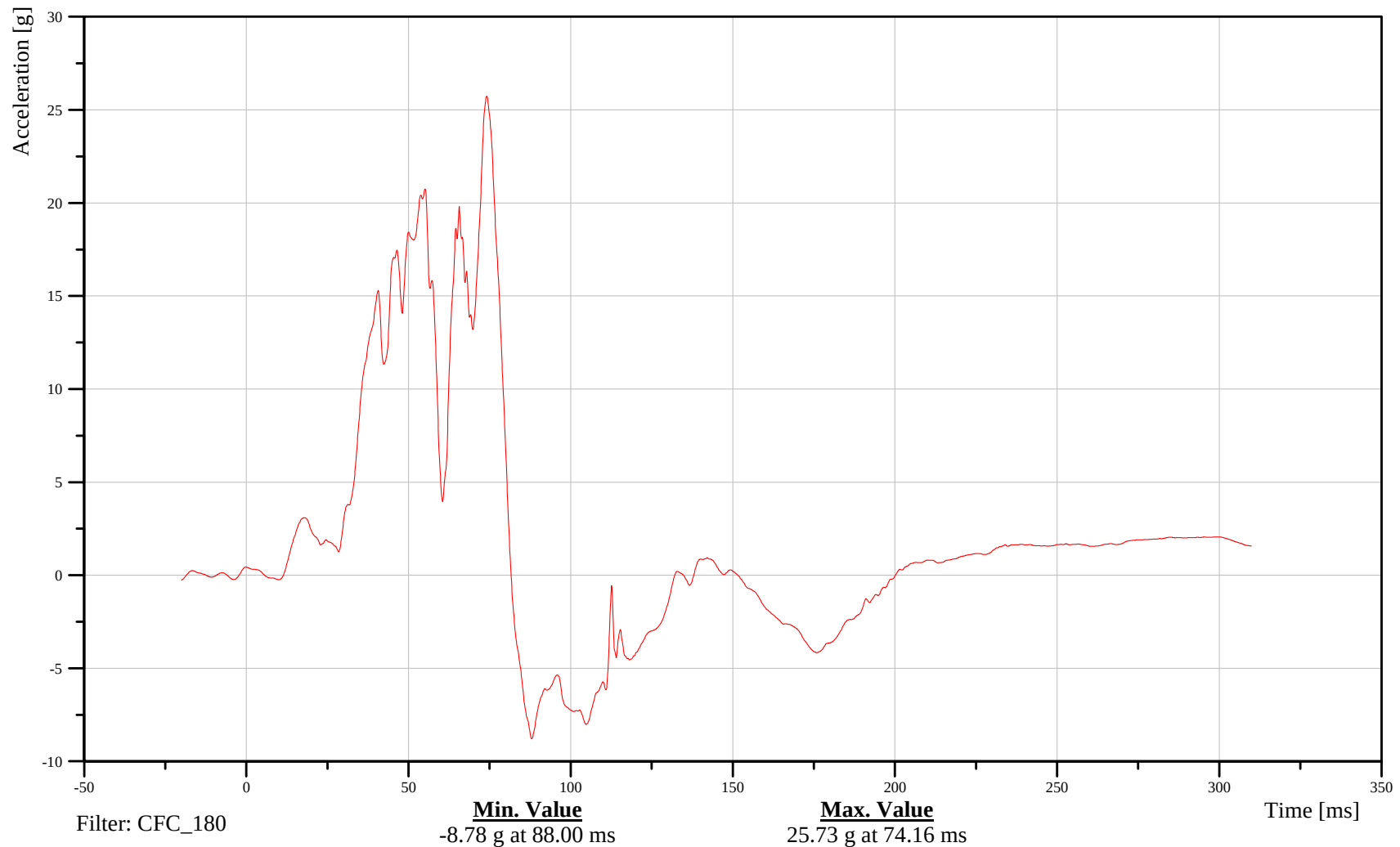
Target Passenger Redundant Chest CG Z-Axis Acceleration

Customer: VRTC

23CHSTCGRDHFACZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

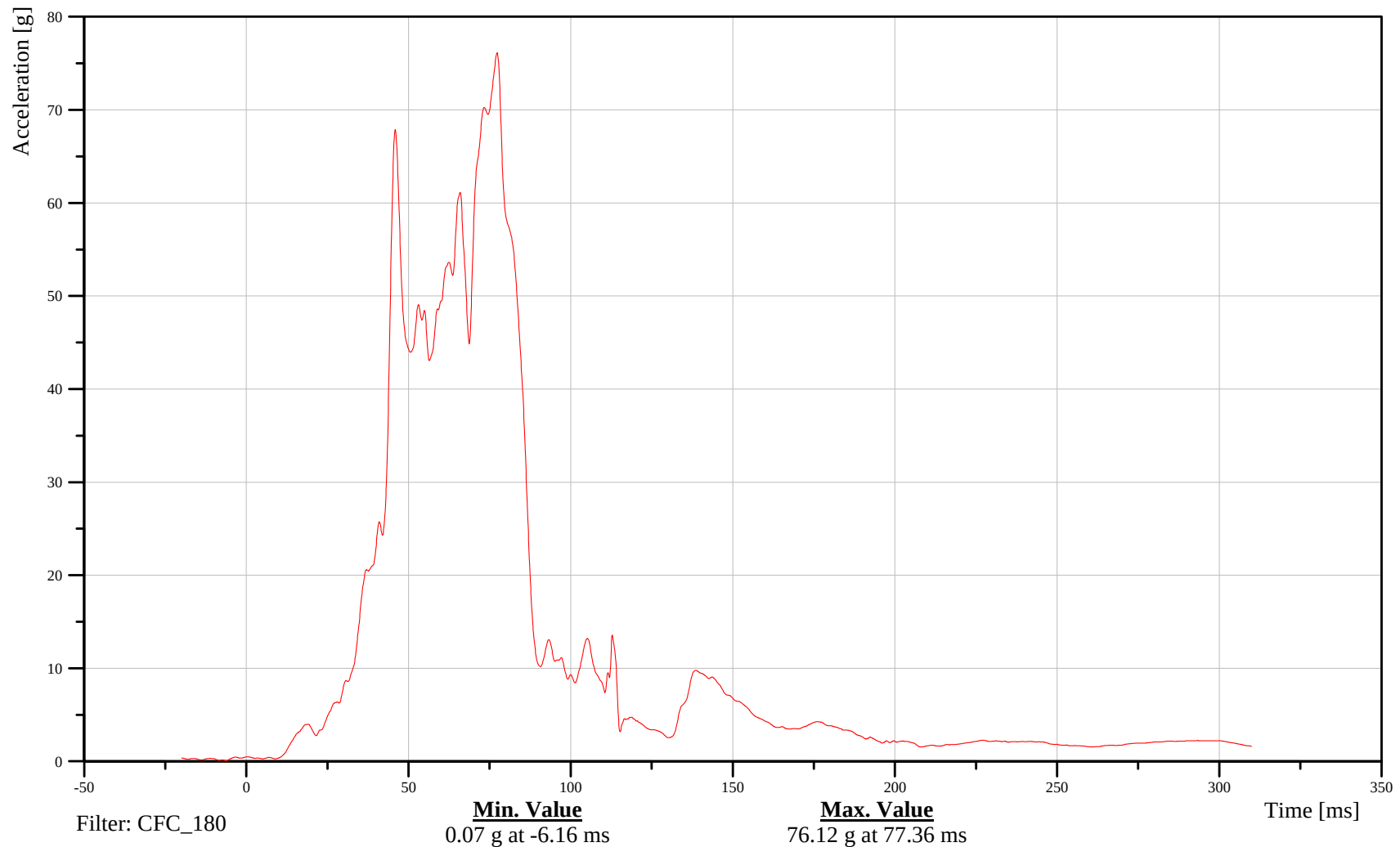
Target Passenger Redundant Chest CG Resultant Acceleration

Customer: VRTC

23CHSTCGRDHFACRC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

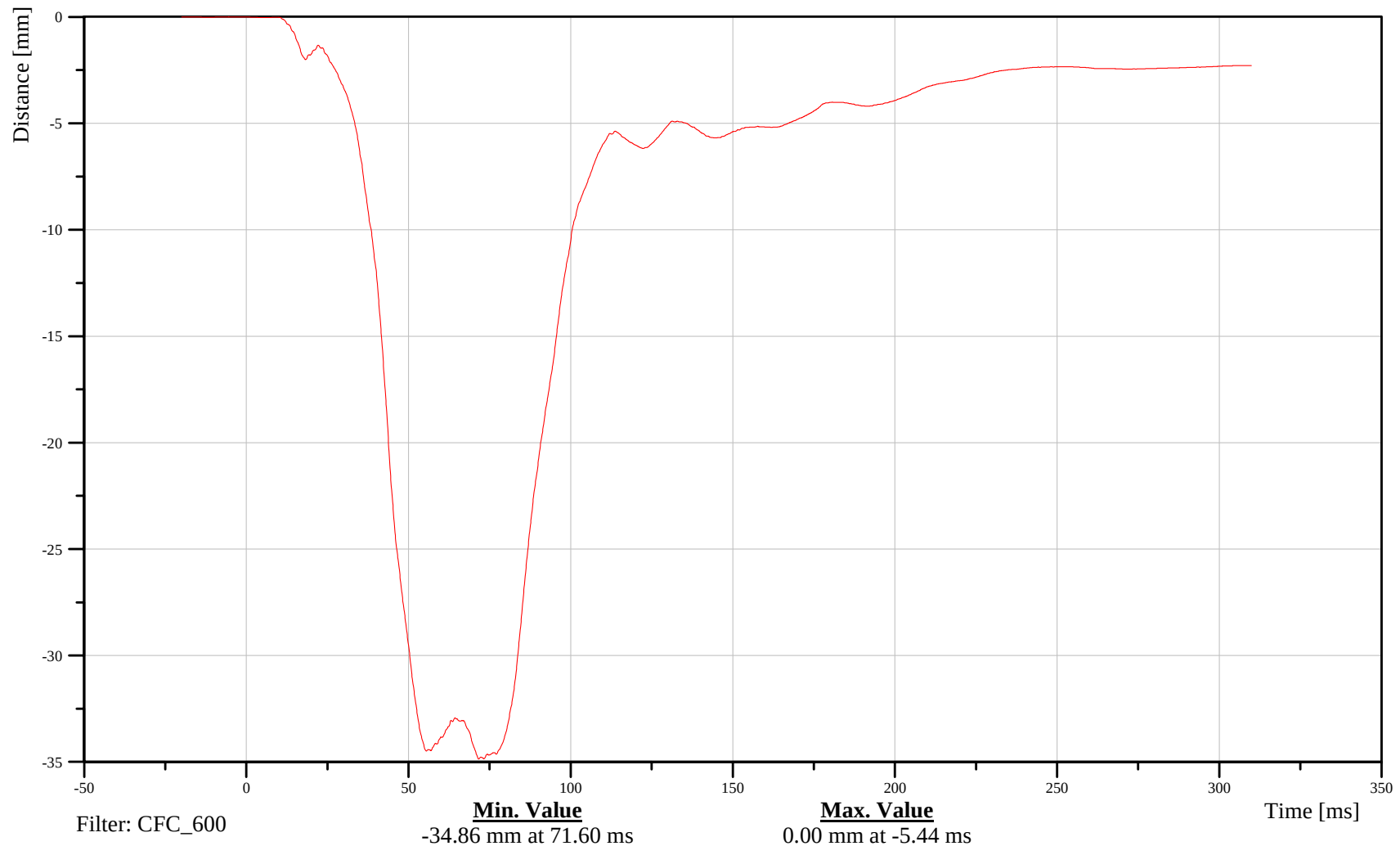
Target Passenger Chest Displacement

Customer: VRTC

23CHST0000HFDSXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

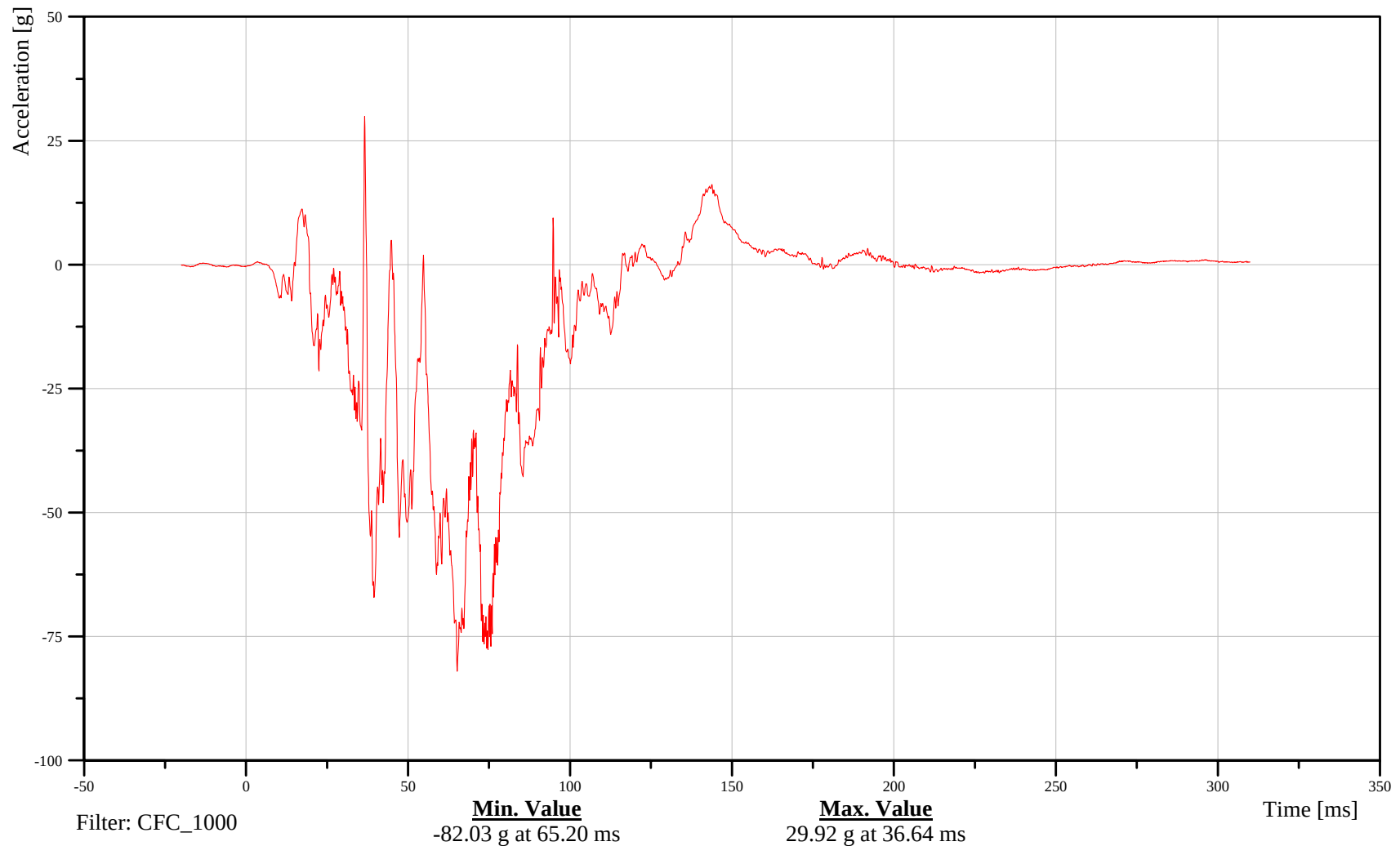
Target Passenger Sternum Upper X-Axis Acceleration

Customer: VRTC

23STRNUP00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

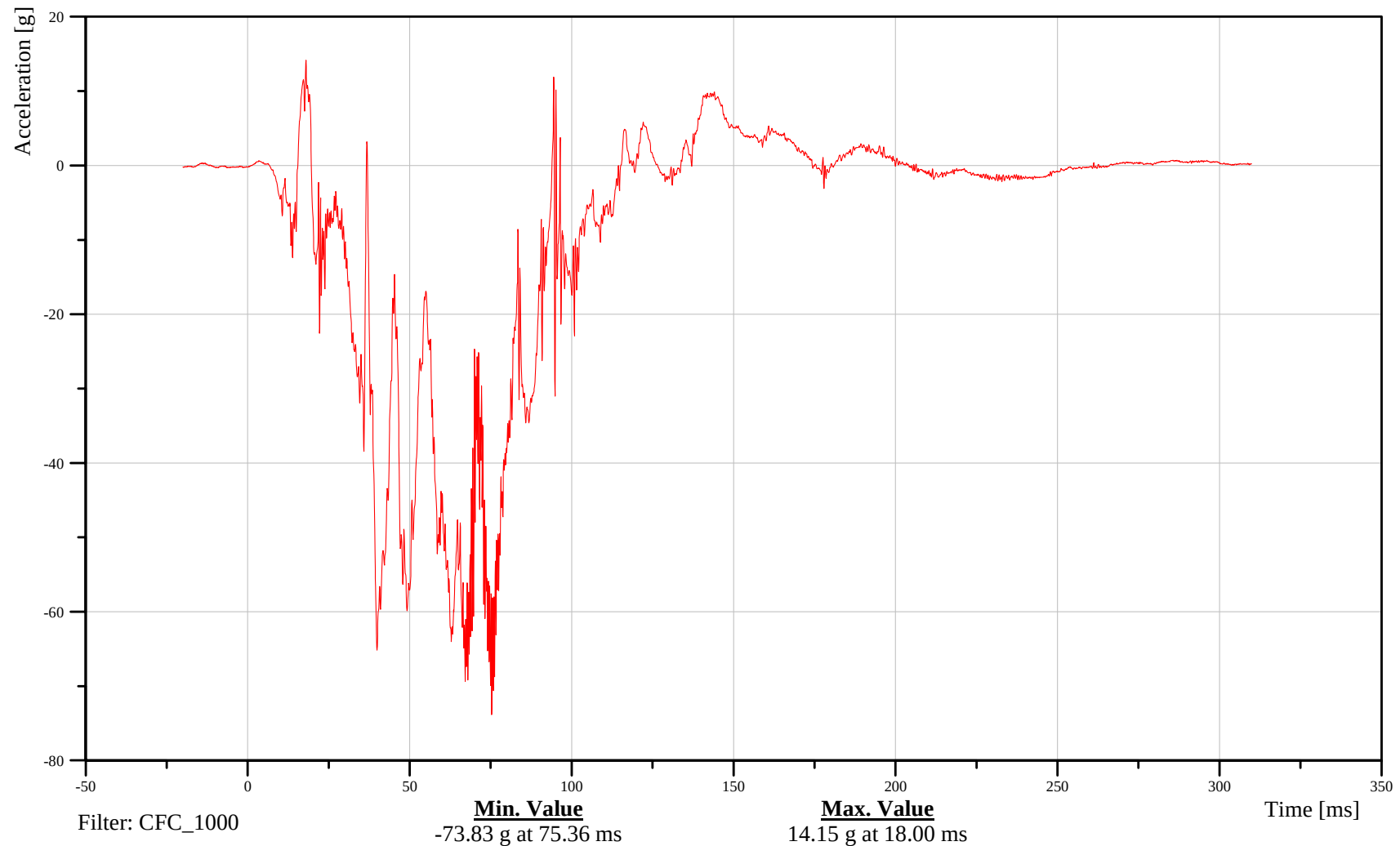
Target Passenger Sternum Mid X-Axis Acceleration

Customer: VRTC

23STRNMI00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

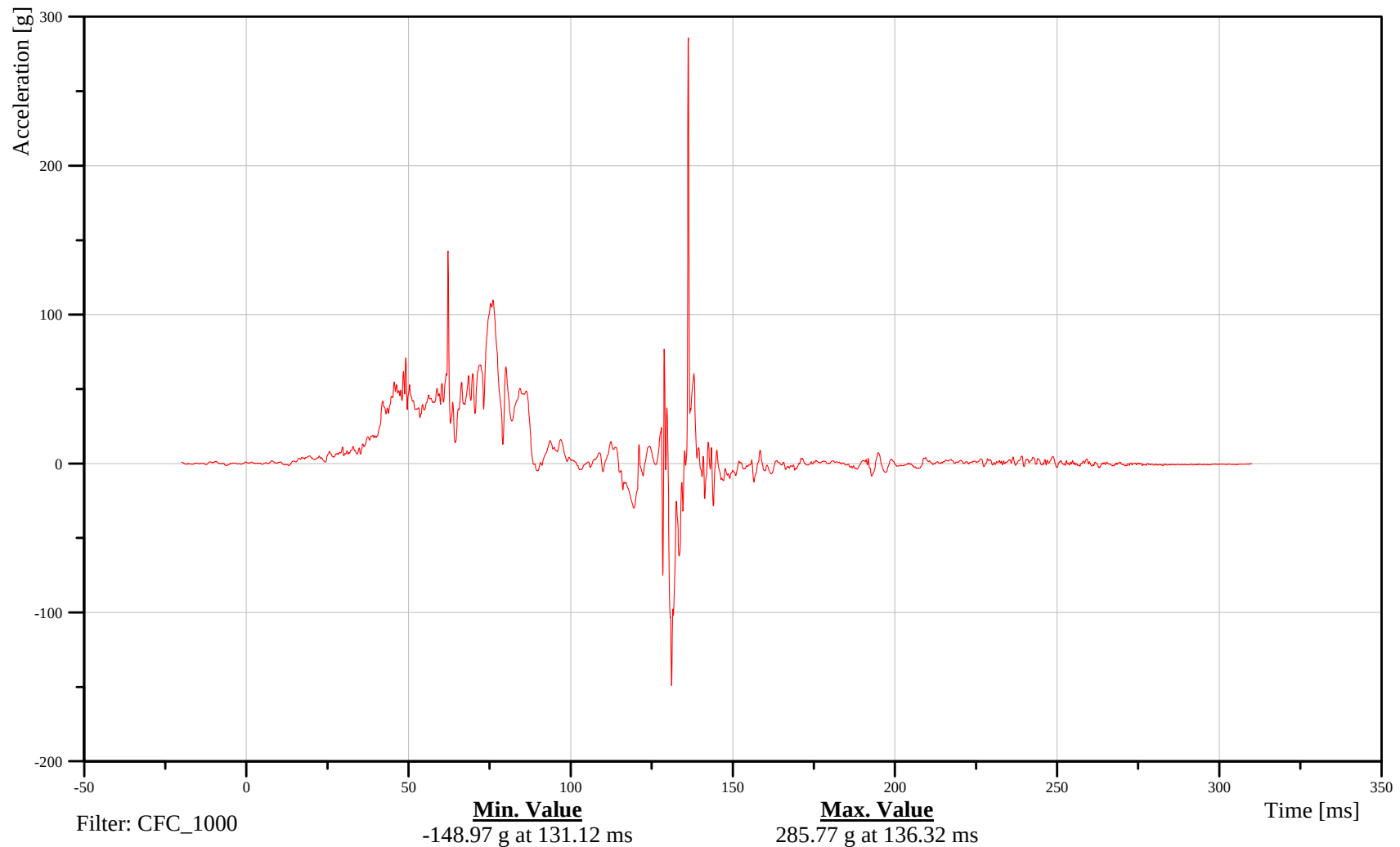
Target Passenger Sternum Lower X-Axis Acceleration

Customer: VRTC

23STRNLO00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

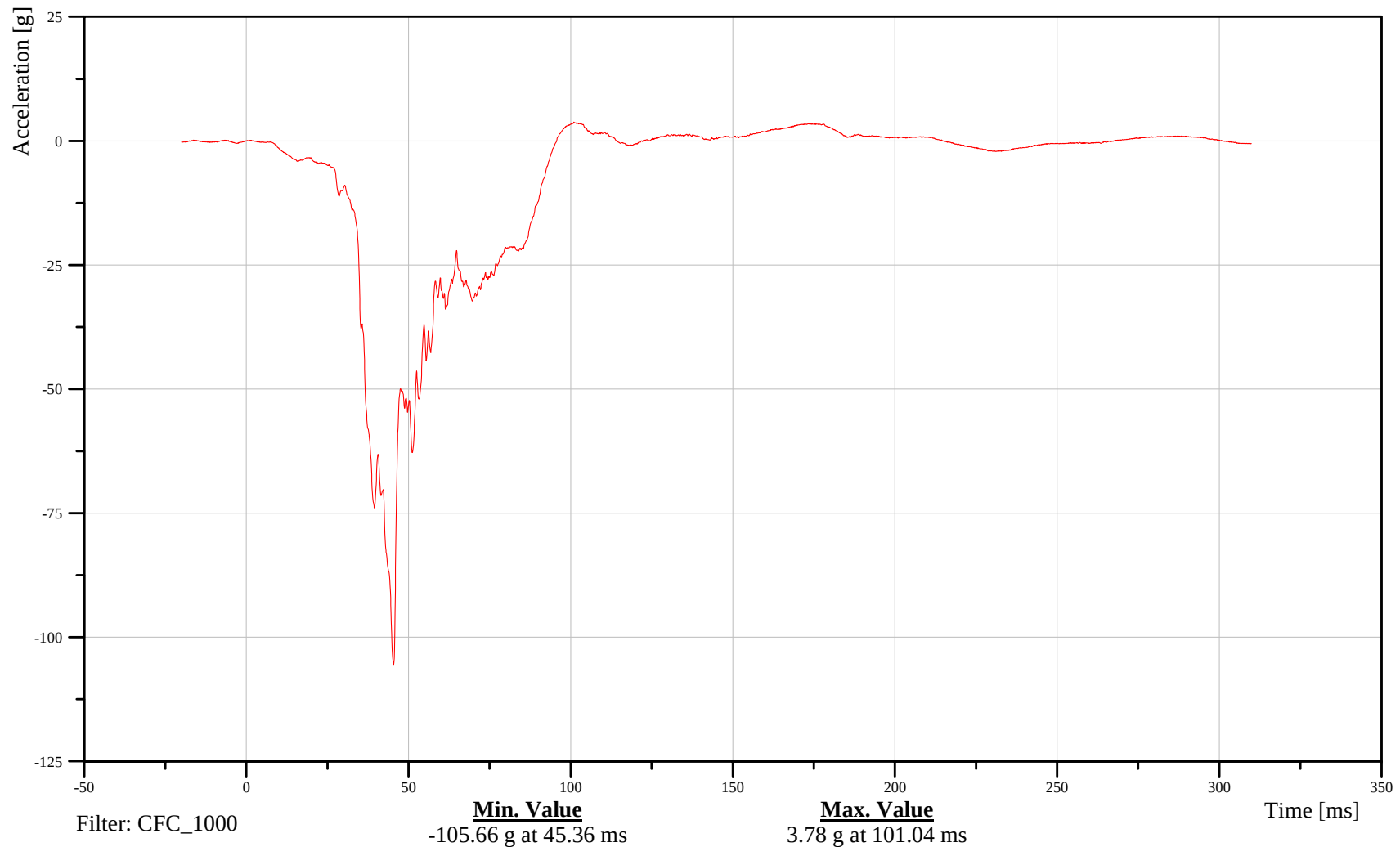
Target Passenger Pelvis CG X-Axis Acceleration

Customer: VRTC

23PELVCG00HFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

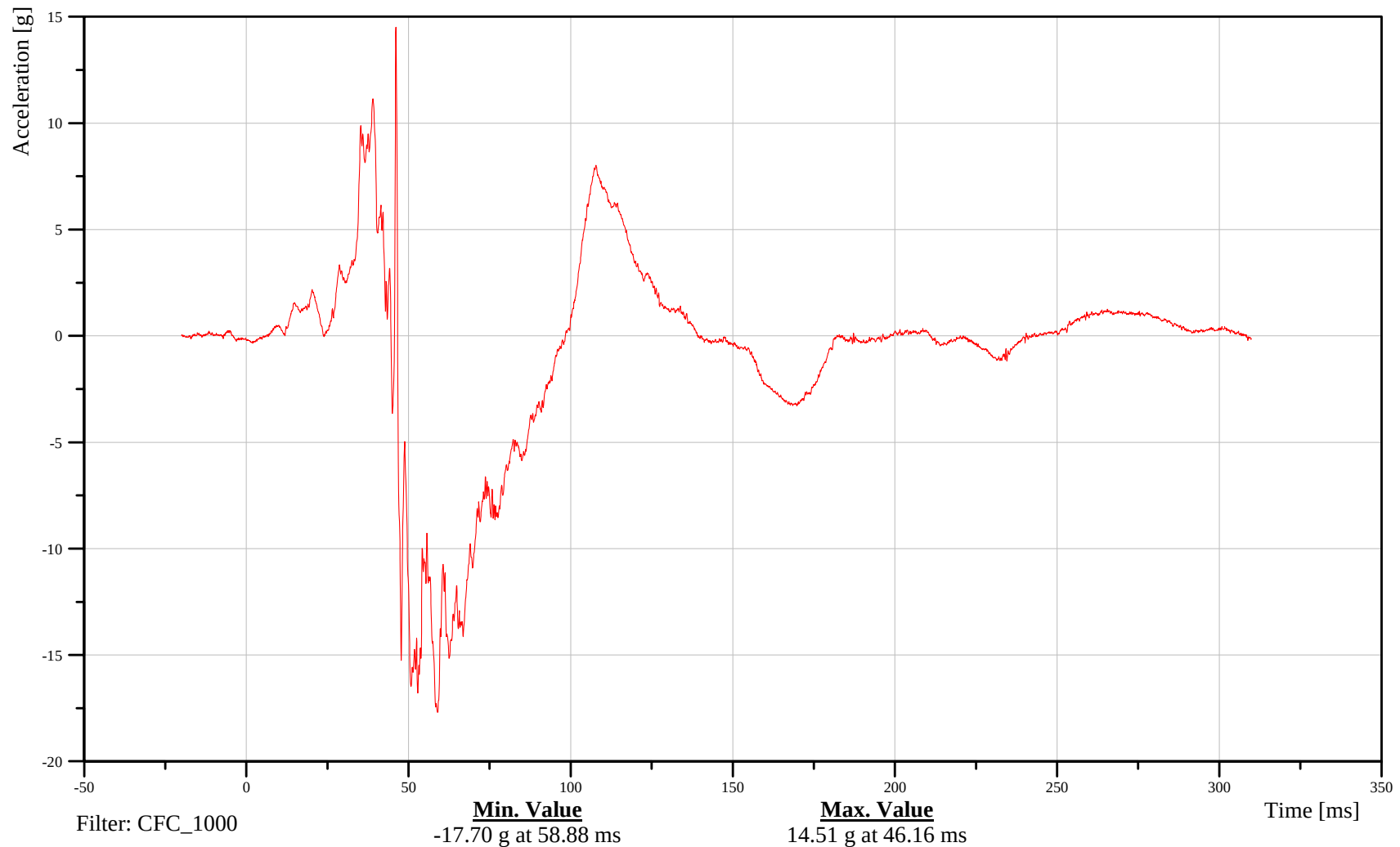
Target Passenger Pelvis CG Y-Axis Acceleration

Customer: VRTC

23PELVCG00HFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

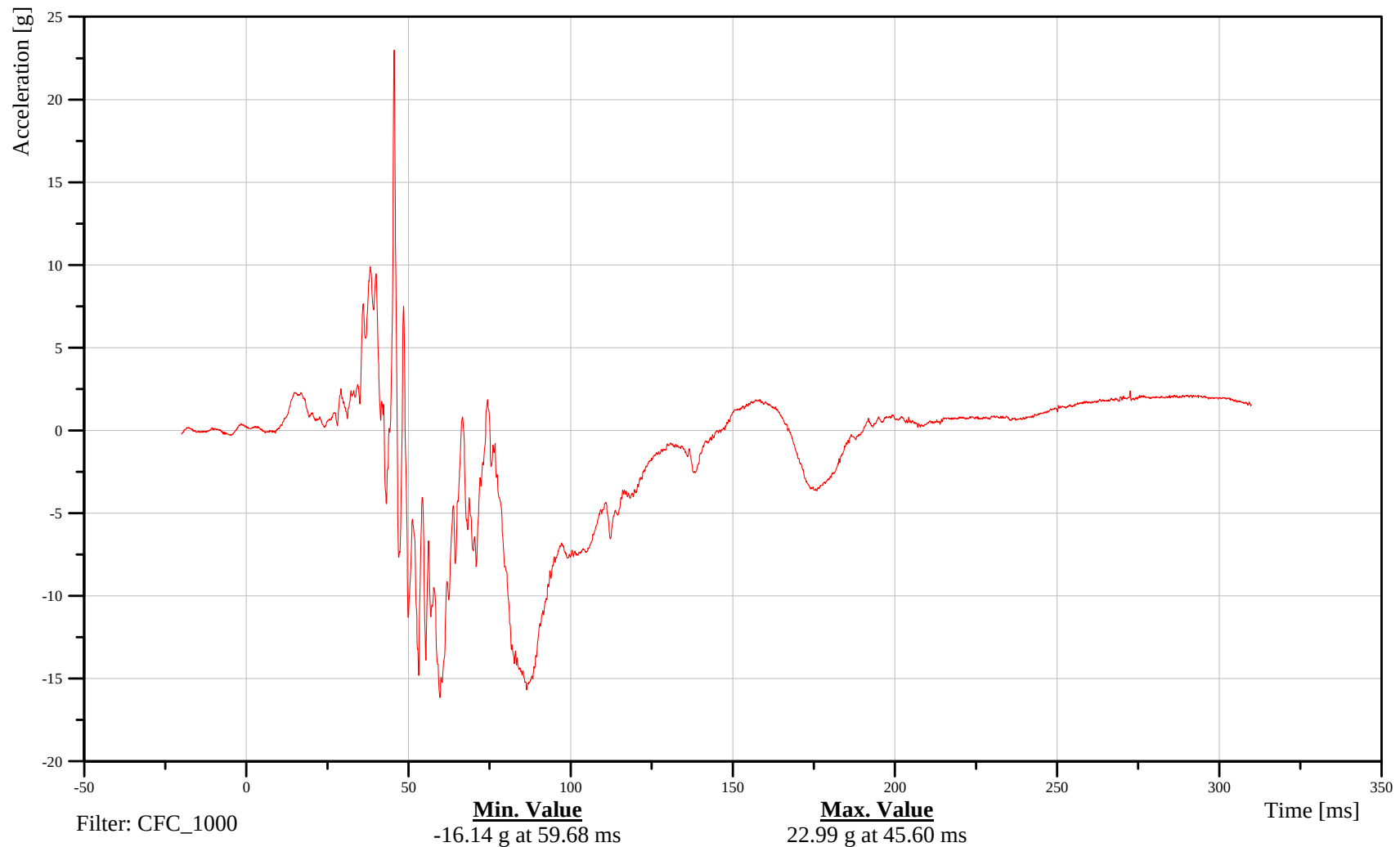
Target Passenger Pelvis CG Z-Axis Acceleration

Customer: VRTC

23PELVCG00HFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

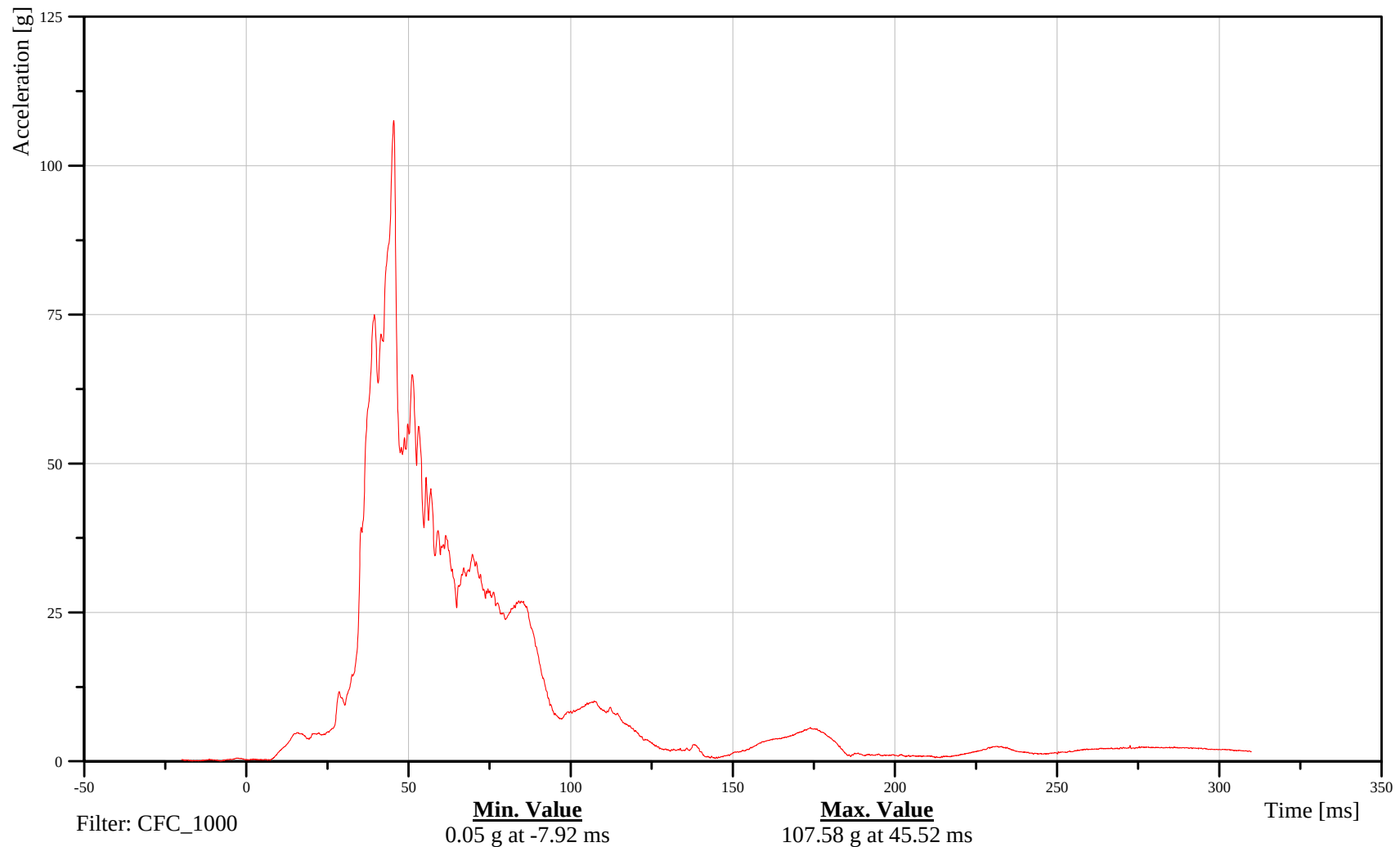
Target Passenger Pelvis CG Resultant Acceleration

Customer: VRTC

23PELVCG00HFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

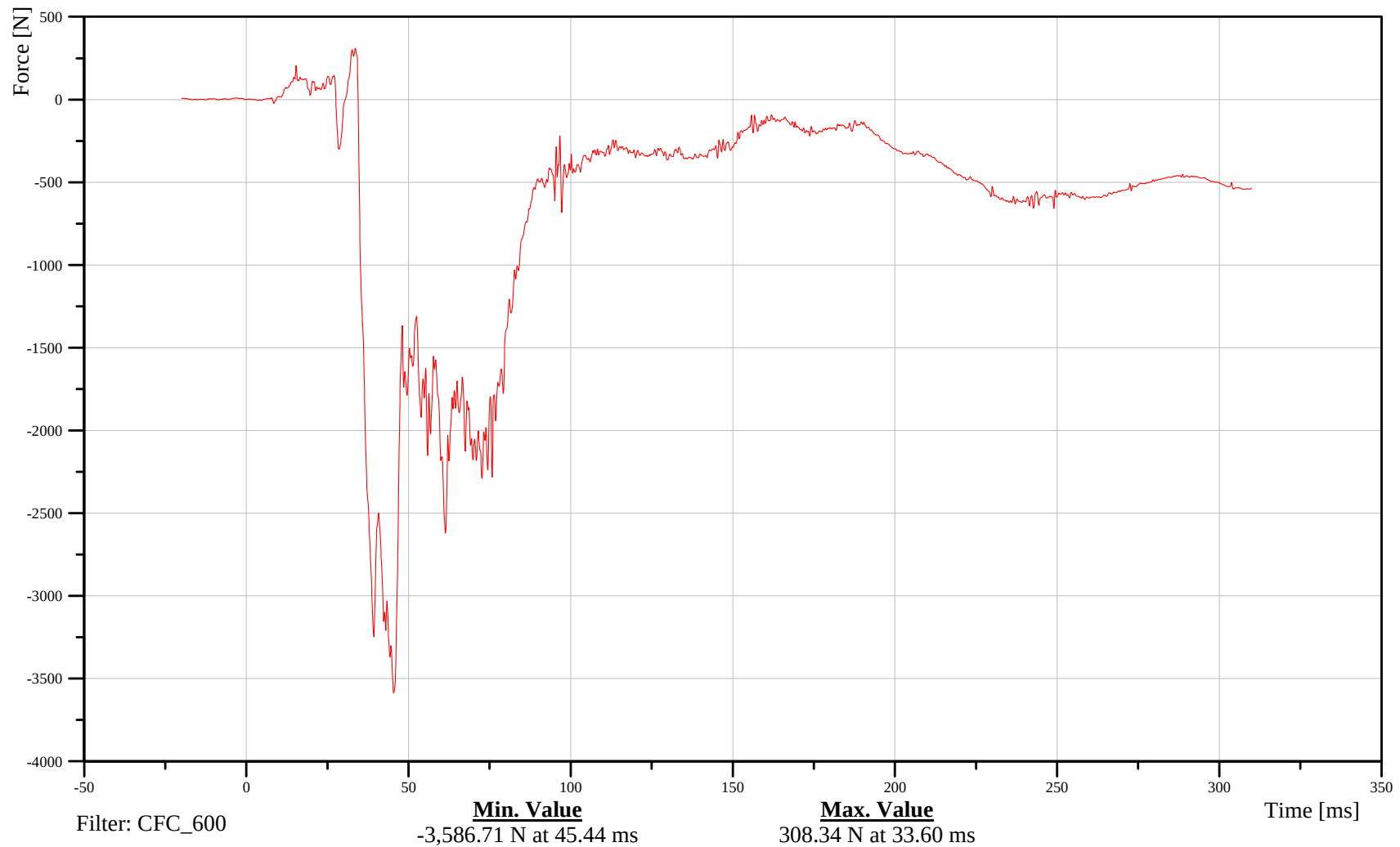
Target Passenger Left Femur Z-Axis Force

Customer: VRTC

23FEMRLL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

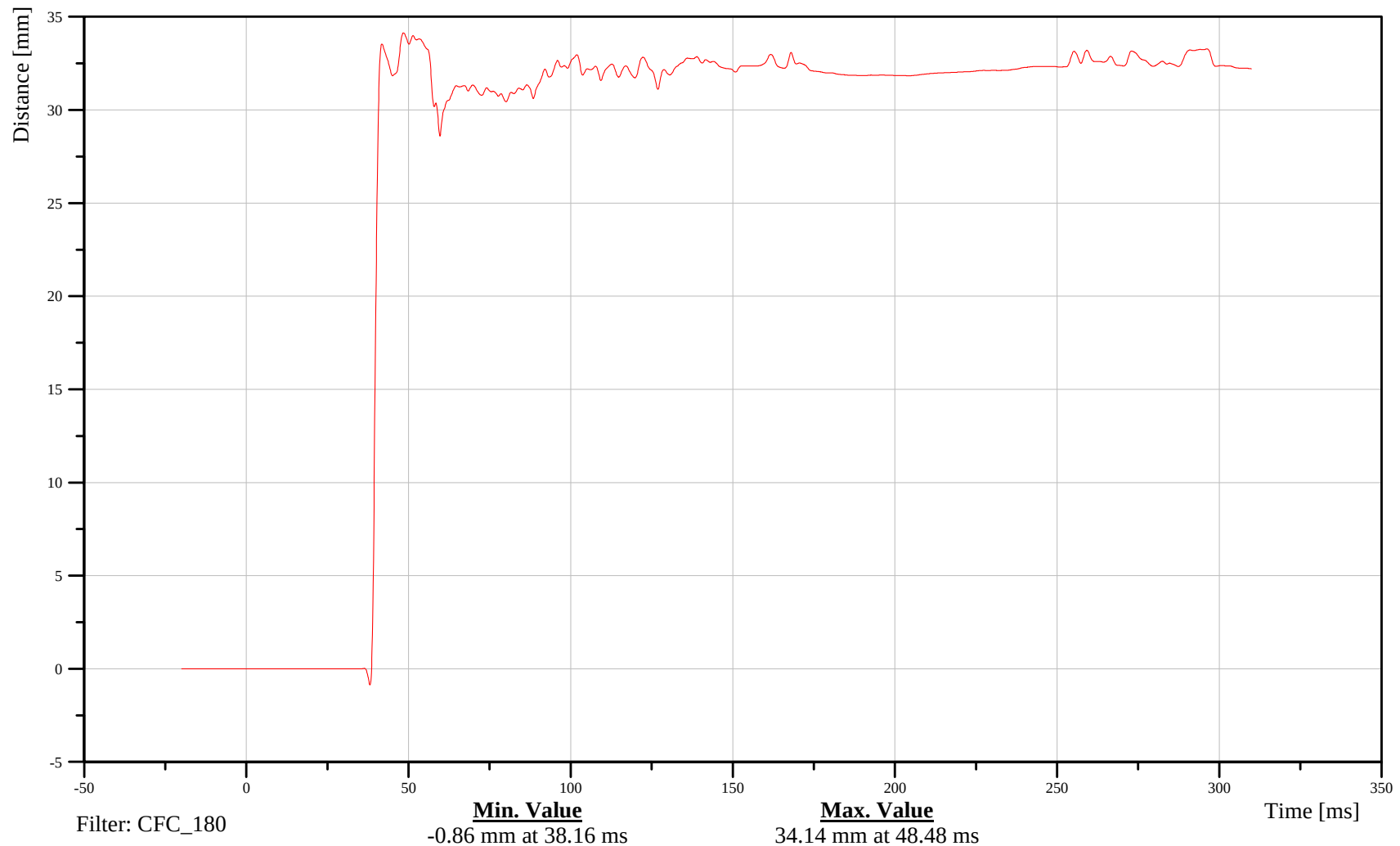
Target Passenger Left Knee Displacement

Customer: VRTC

23KNSLLE00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

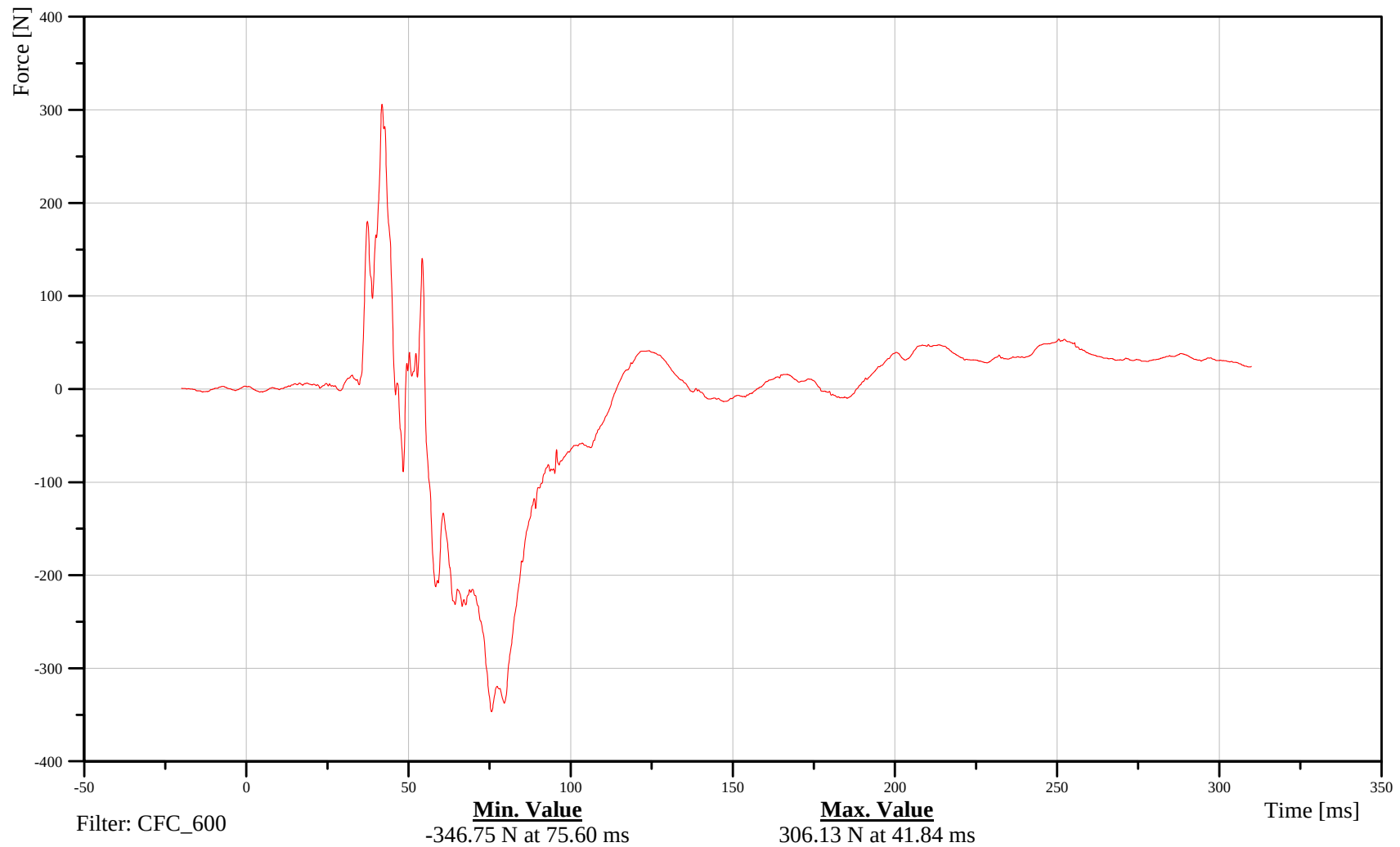
Target Passenger Left Upper Tibia X-Axis Force

Customer: VRTC

23TIBILUFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

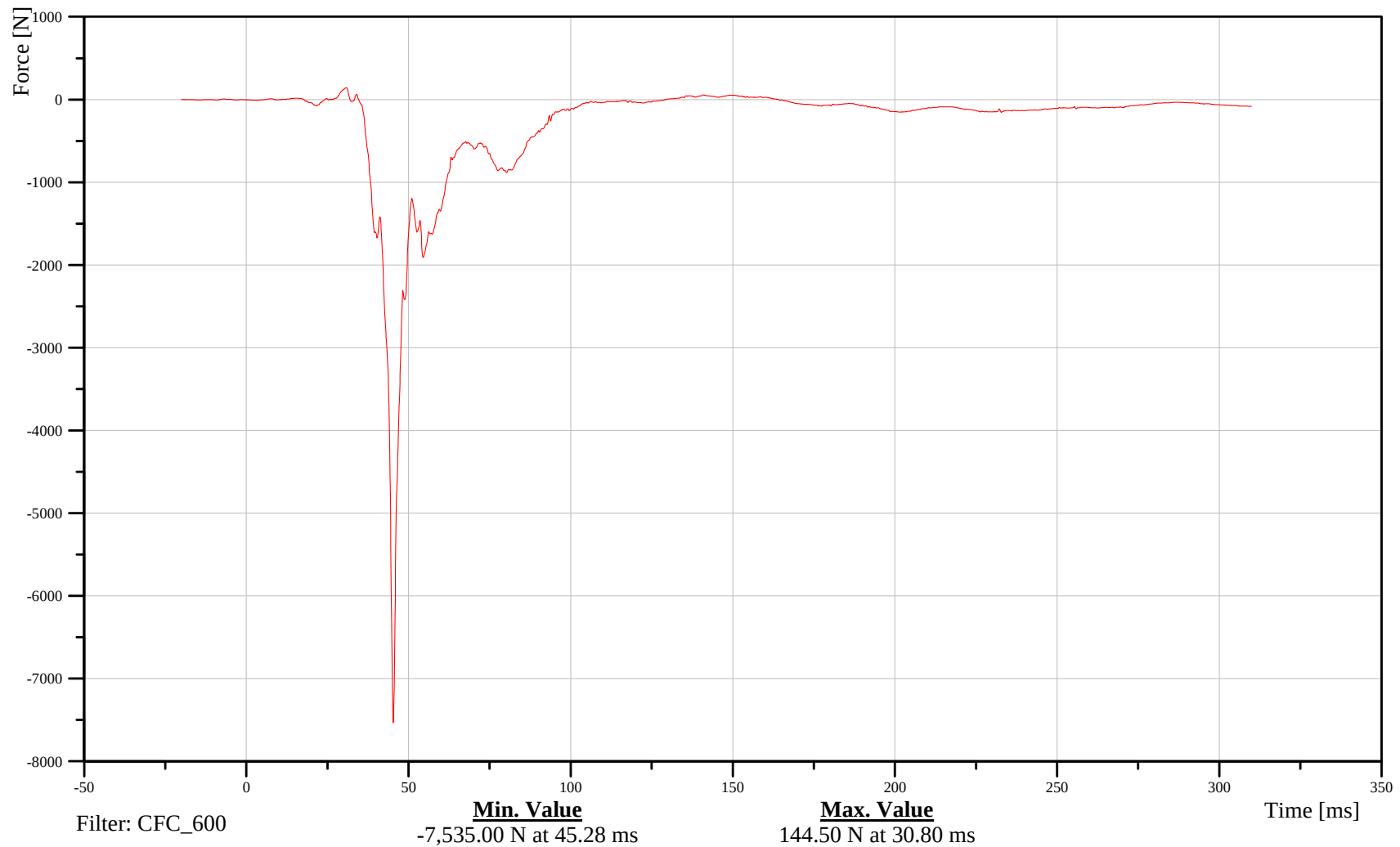
Target Passenger Left Upper Tibia Z-Axis Force

Customer: VRTC

23TIBILUFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

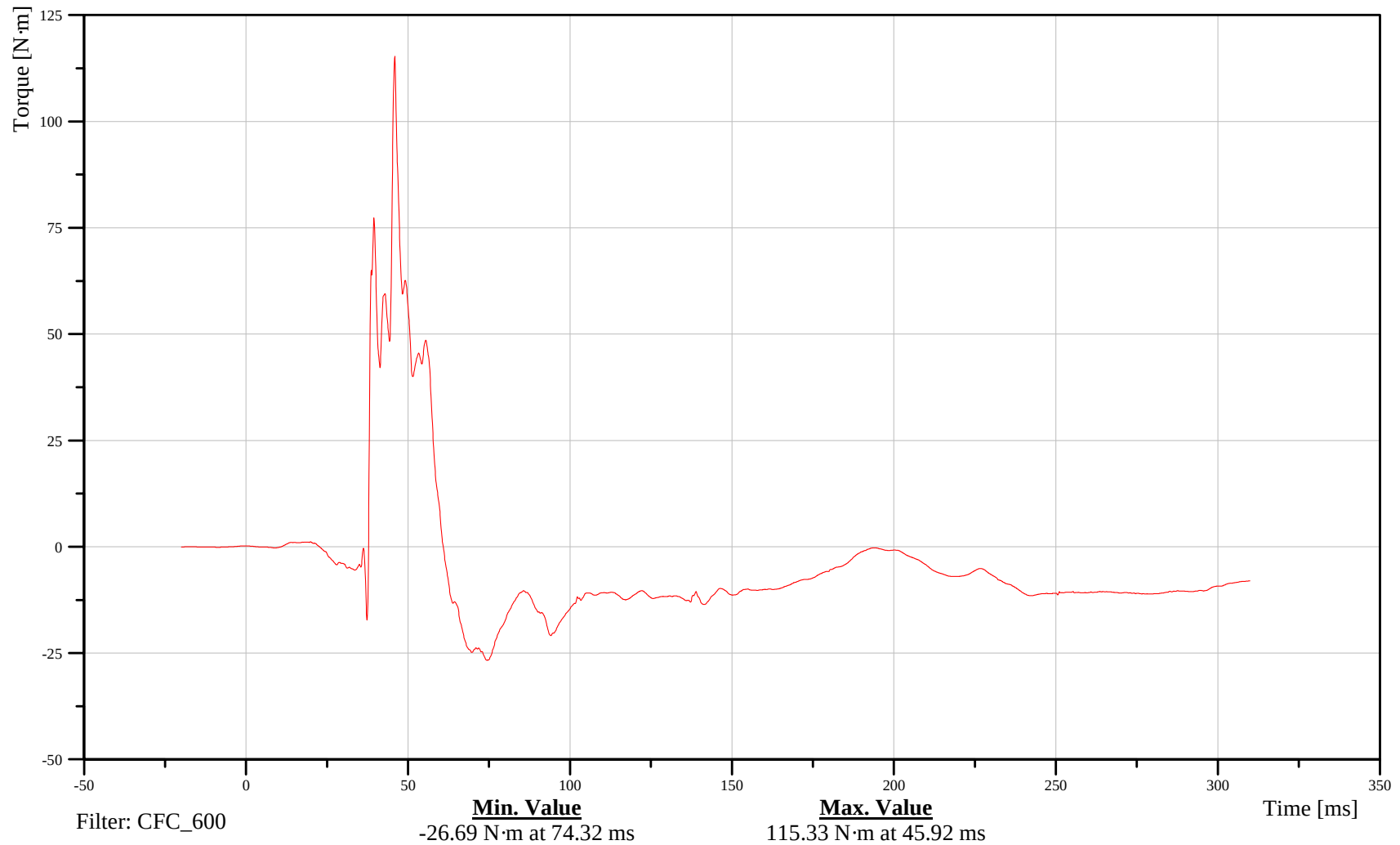
Target Passenger Left Upper Tibia Moment About X Axis

Customer: VRTC

23TIBILUFXHFM0XB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

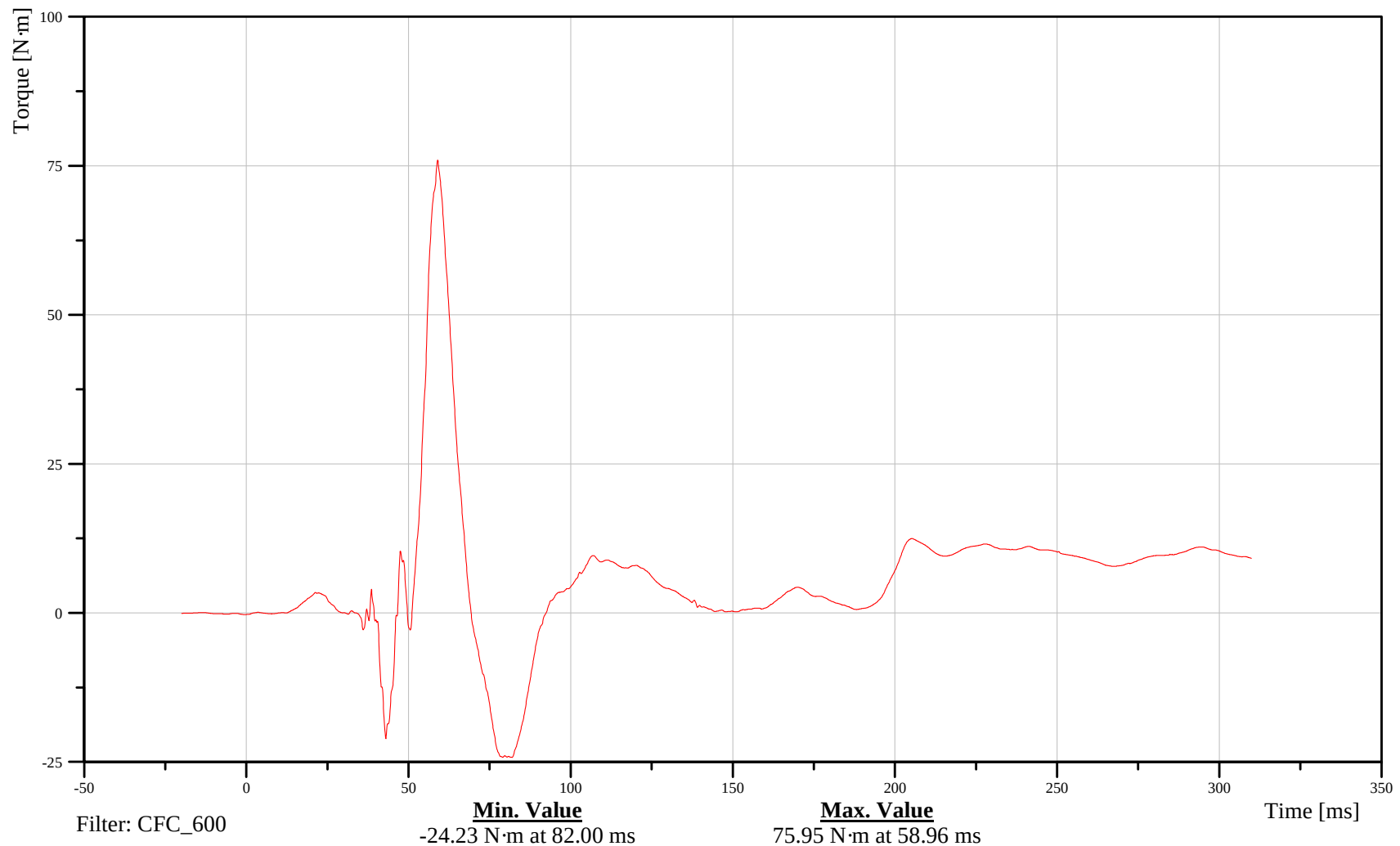
Target Passenger Left Upper Tibia Moment About Y Axis

Customer: VRTC

23TIBILUFXHFM0YB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

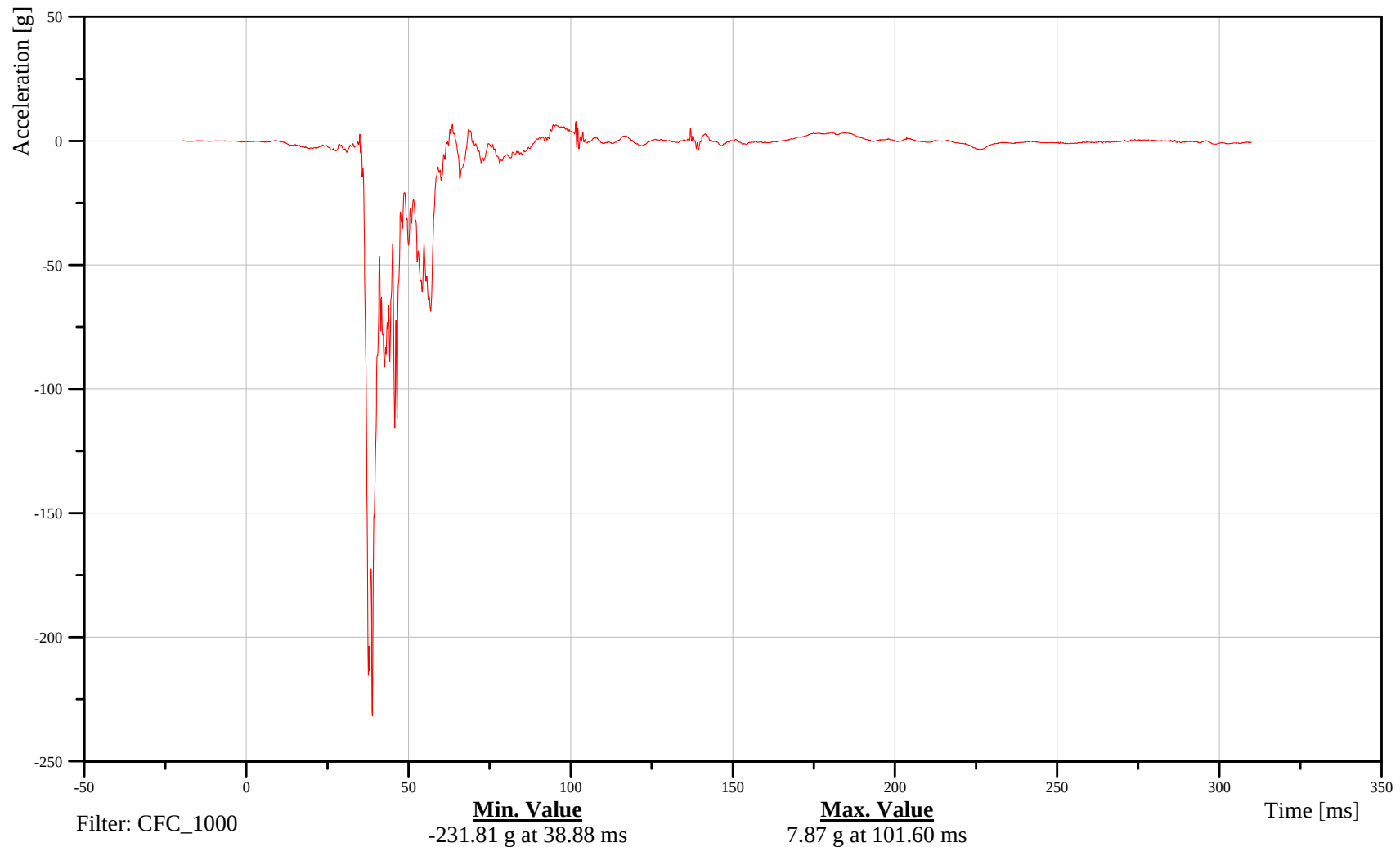
Target Passenger Left Tibia X-Axis Acceleration

Customer: VRTC

23TIBILEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

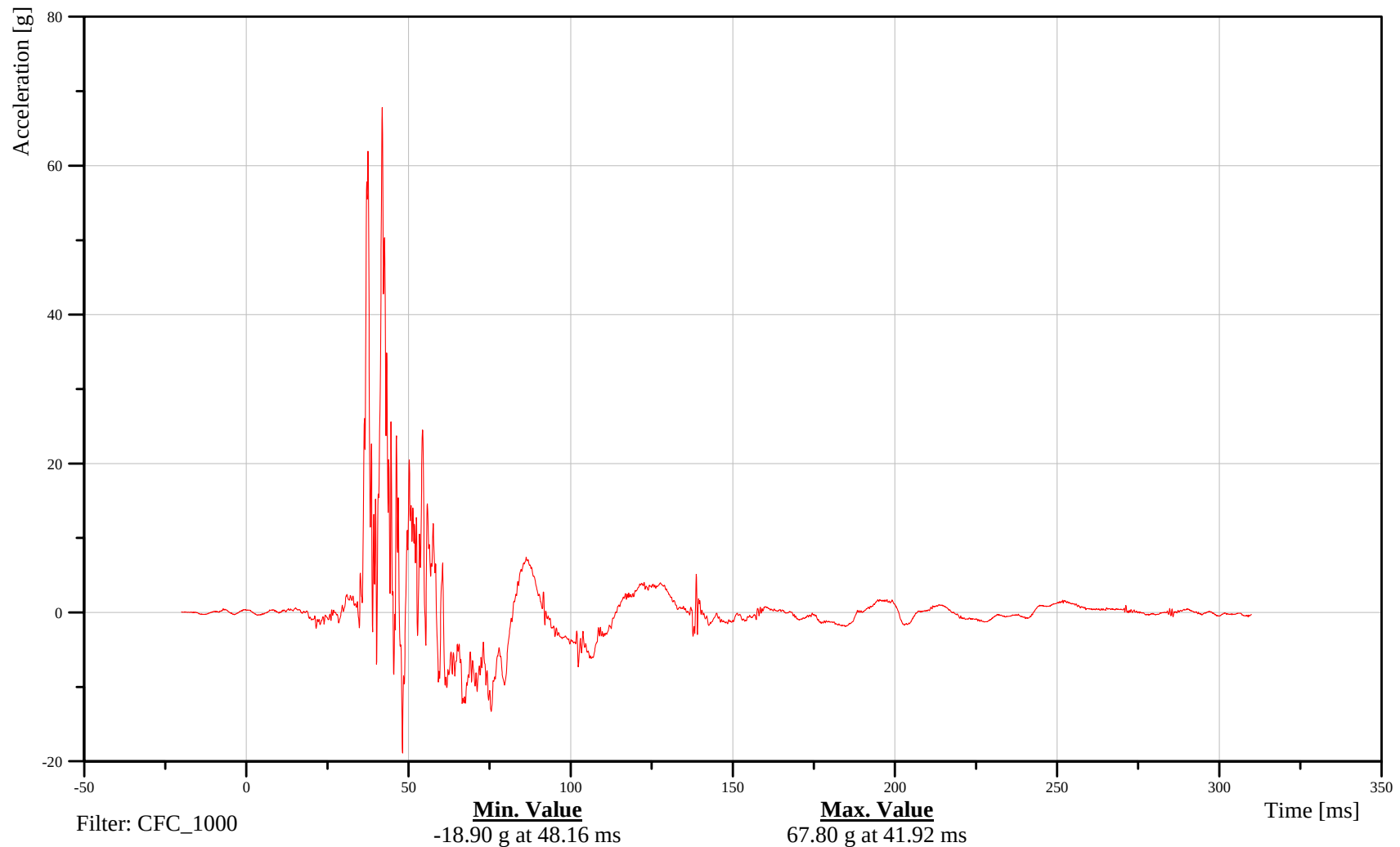
Target Passenger Left Tibia Y-Axis Acceleration

Customer: VRTC

23TIBILEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Passenger Left Lower Tibia X-Axis Force

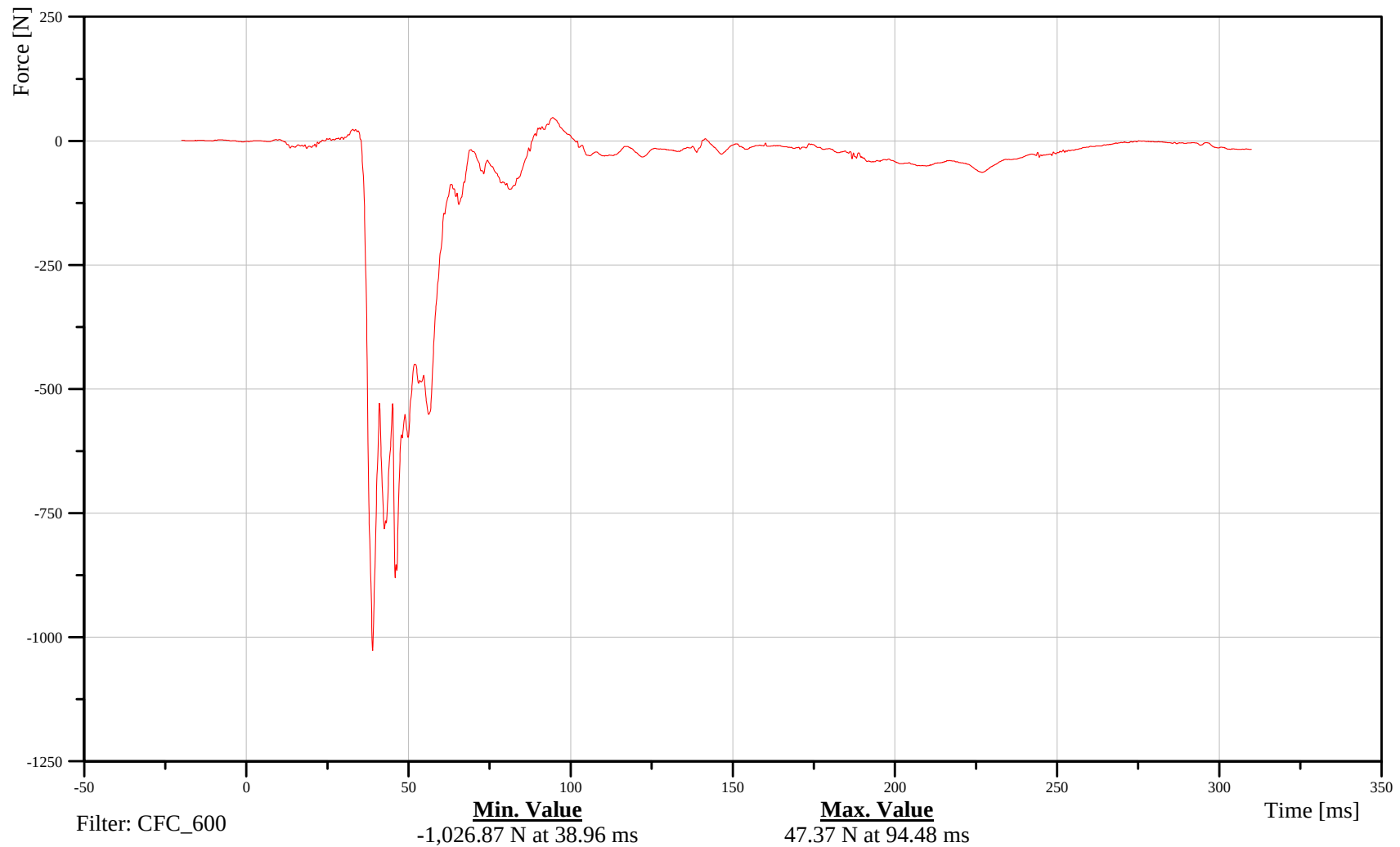
Date: 03/20/2006
Time: 08:08

Customer: VRTC

23TIBILLFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Passenger Left Lower Tibia Y-Axis Force

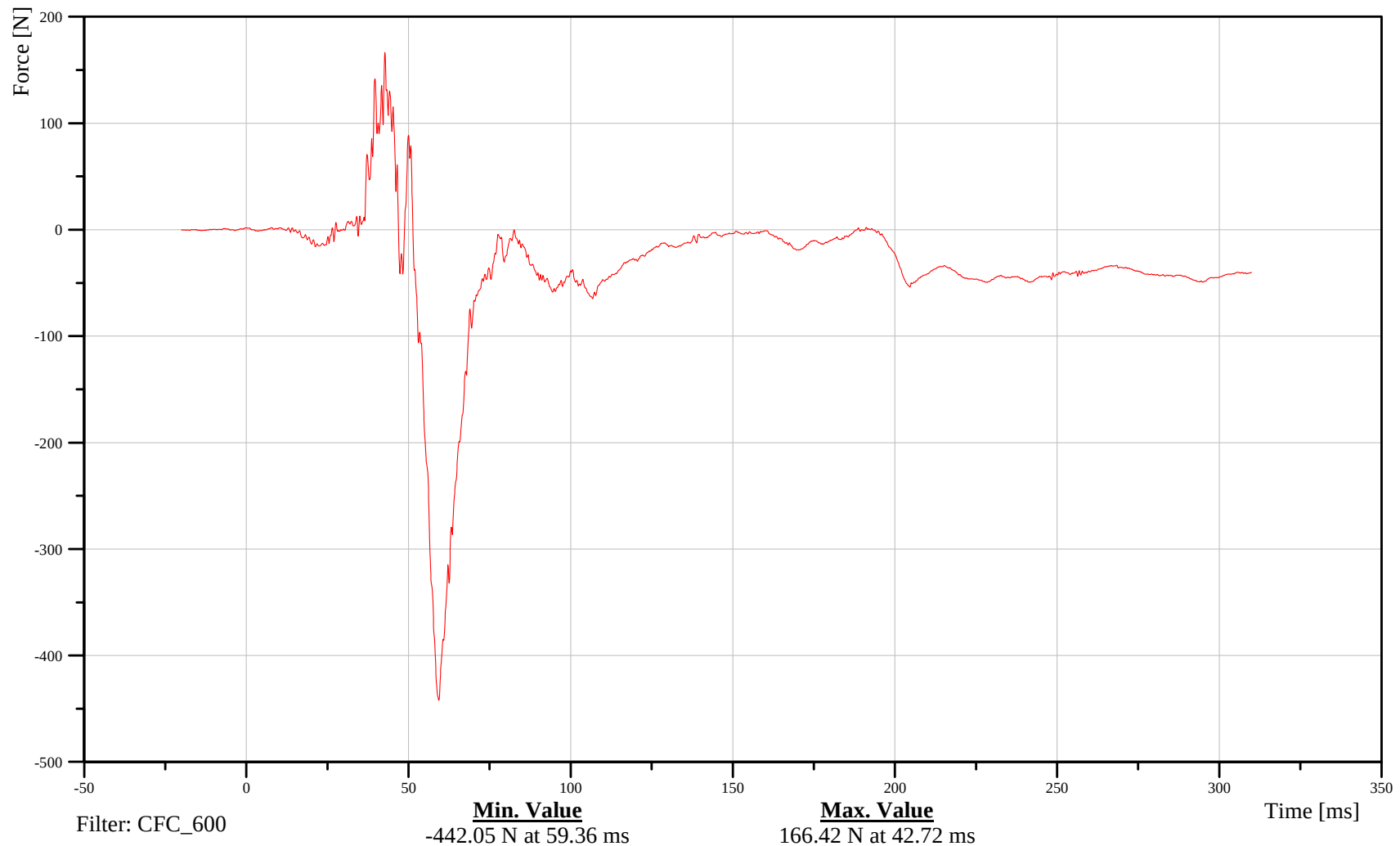
Date: 03/20/2006
Time: 08:08

Customer: VRTC

23TIBILLFXHFFOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

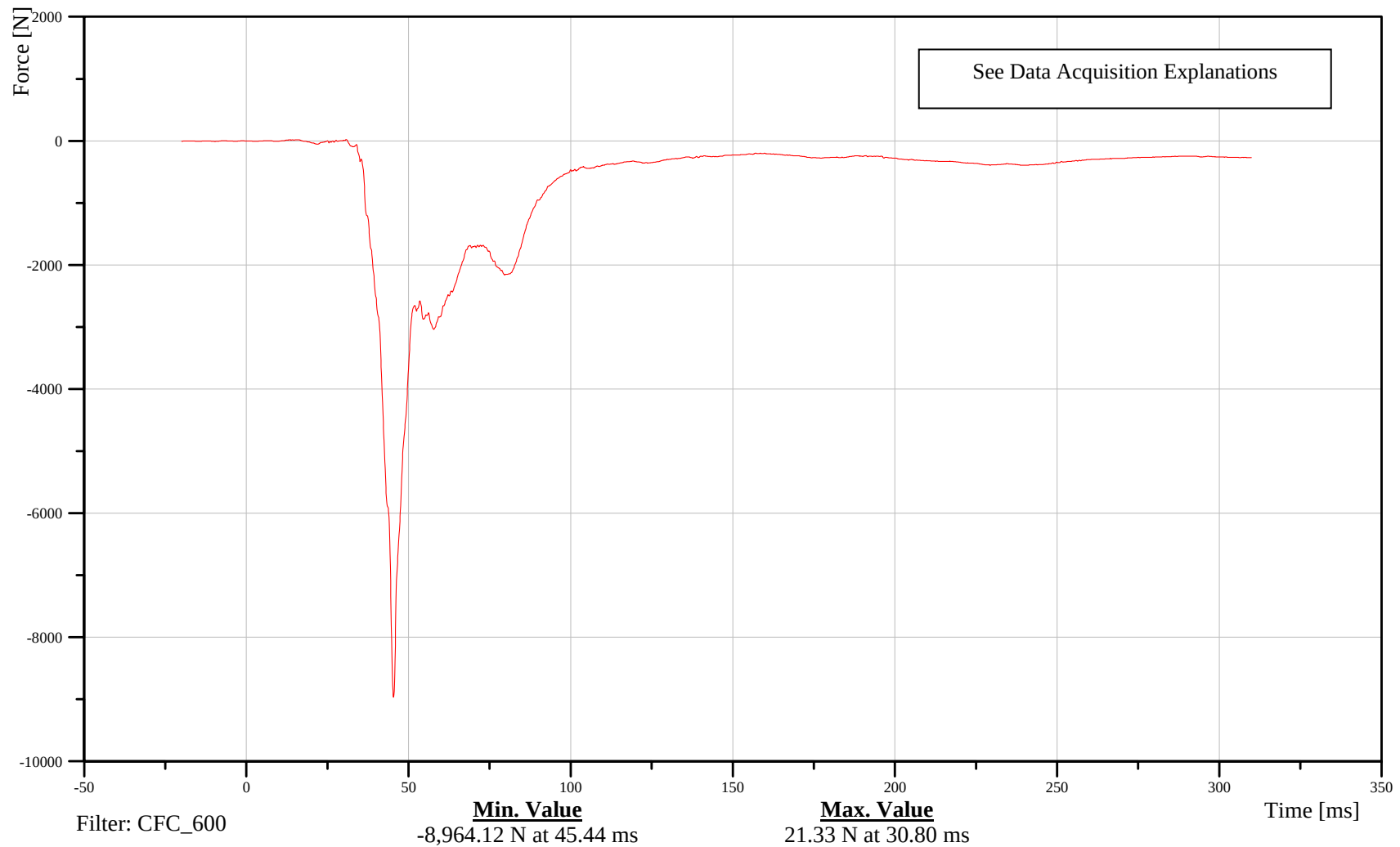
Target Passenger Left Lower Tibia Z-Axis Force

Customer: VRTC

23TIBILLFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

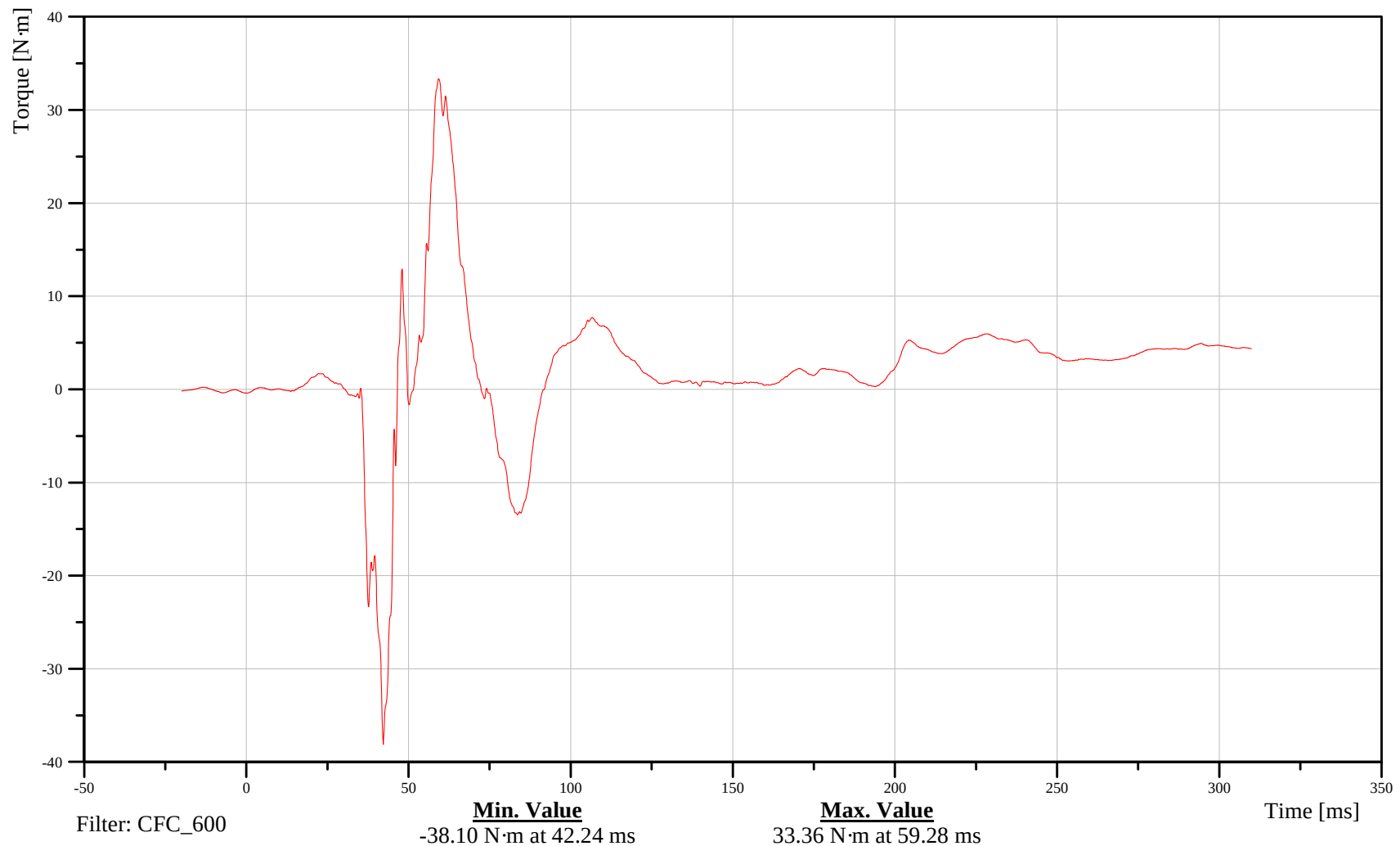
Target Passenger Left Lower Tibia Moment About X Axis

Customer: VRTC

23TIBILLFXHFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

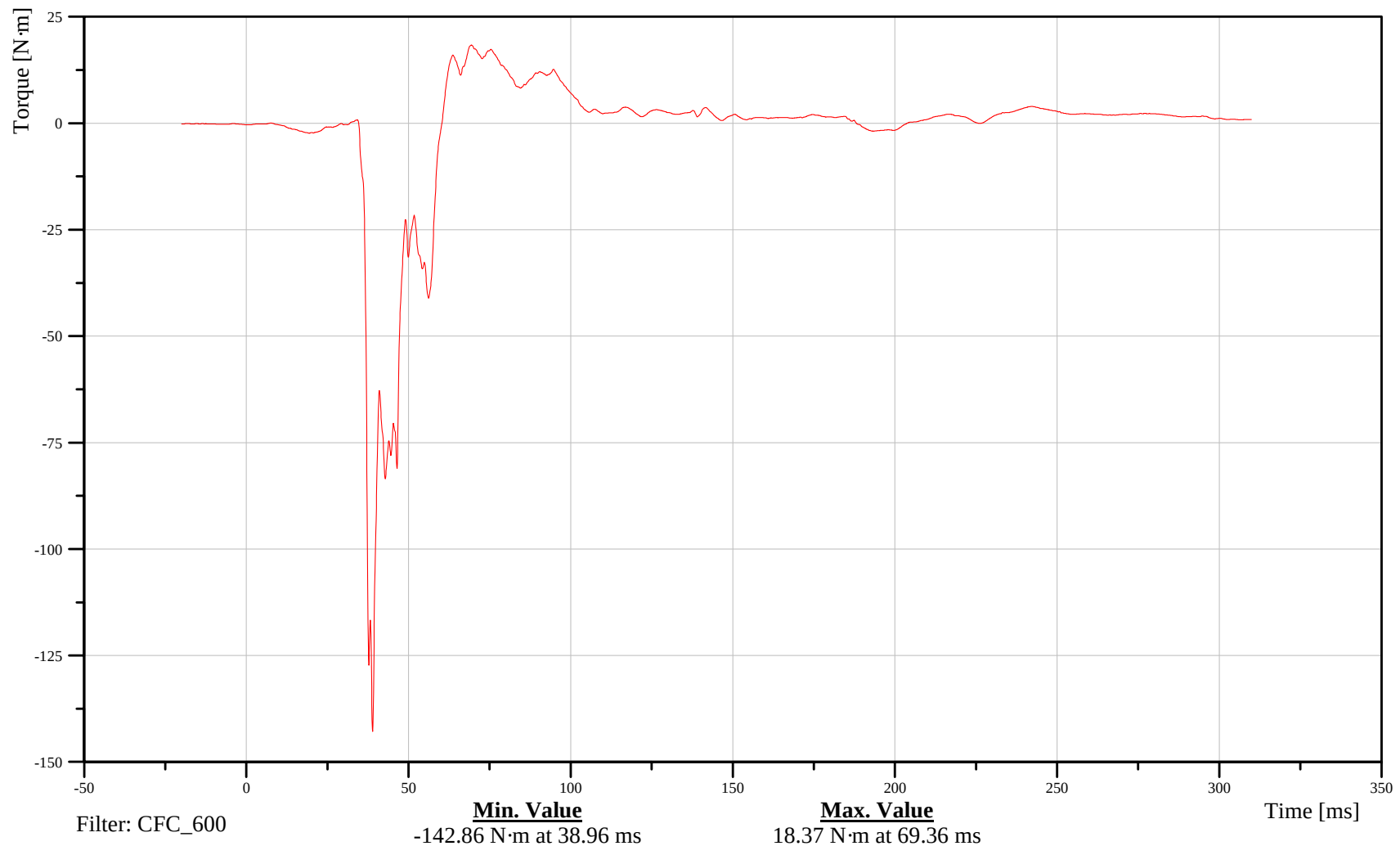
Target Passenger Left Lower Tibia Moment About Y Axis

Customer: VRTC

23TIBILLFXHFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

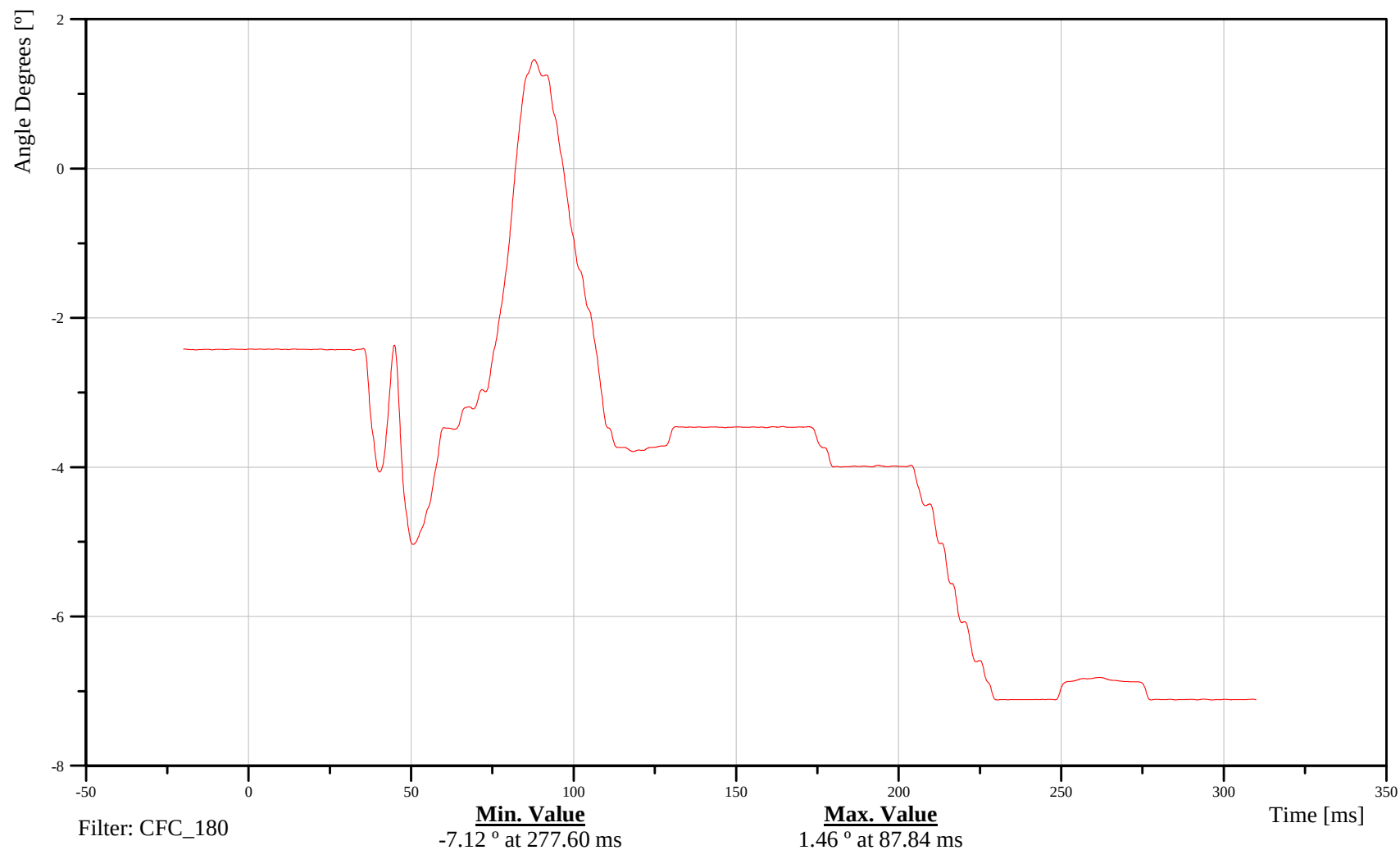
Target Passenger Left Foot X-Axis Rotation

Customer: VRTC

23FOOTLEFXHFANXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

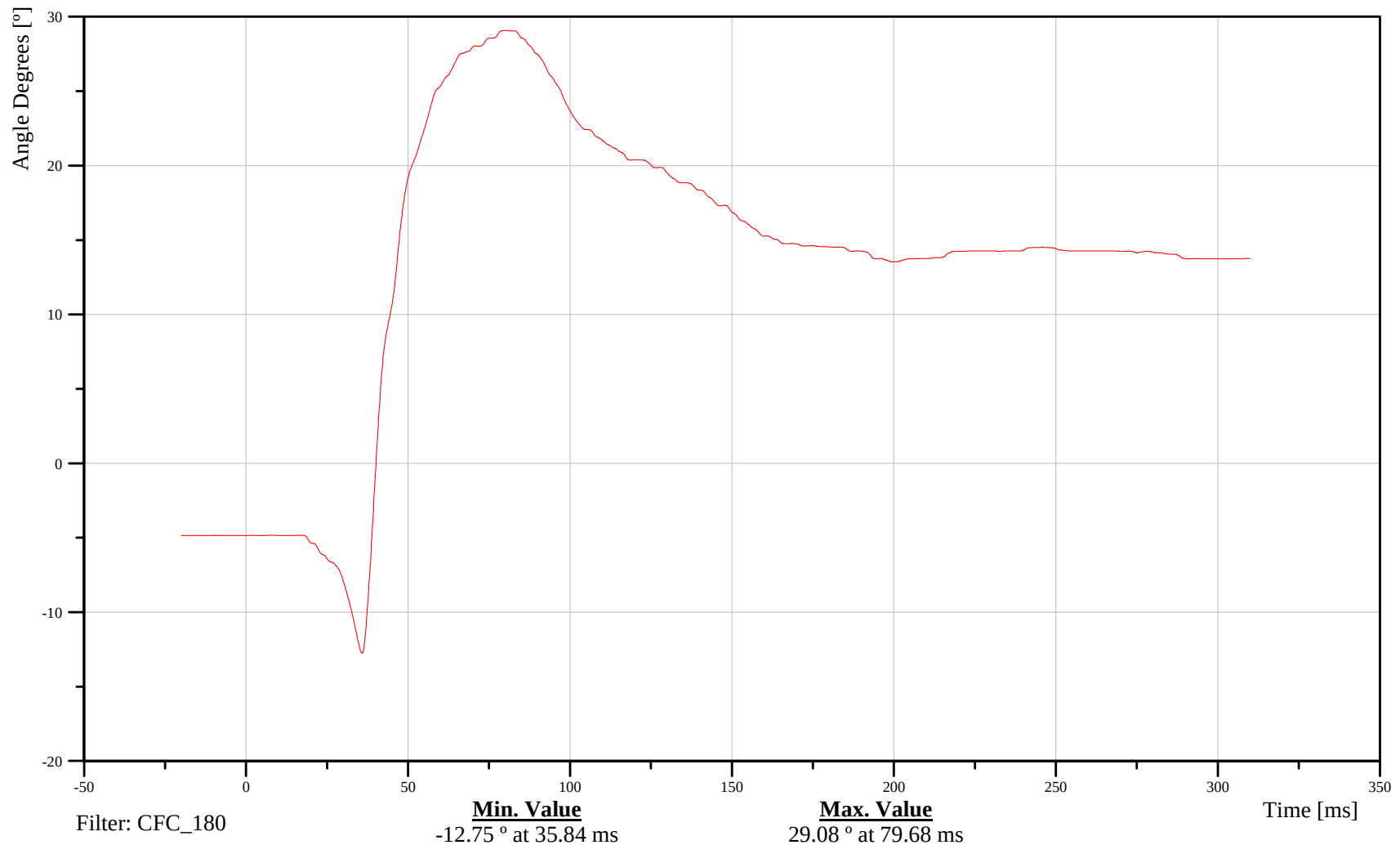
Target Passenger Left Foot Y-Axis Rotation

Customer: VRTC

23FOOTLEFXHFANYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

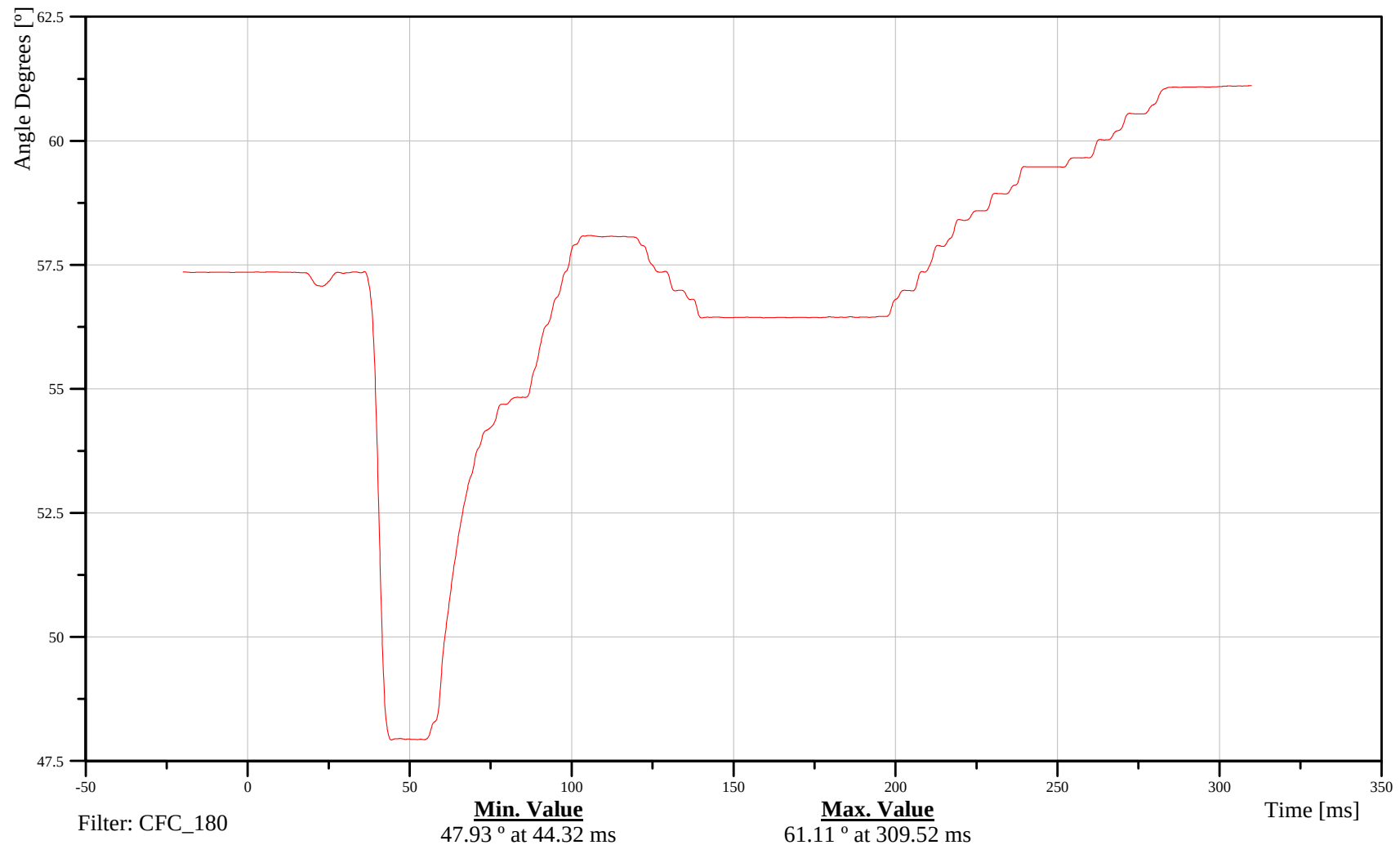
Target Passenger Left Foot Z-Axis Rotation

Customer: VRTC

23FOOTLEFXHFANZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

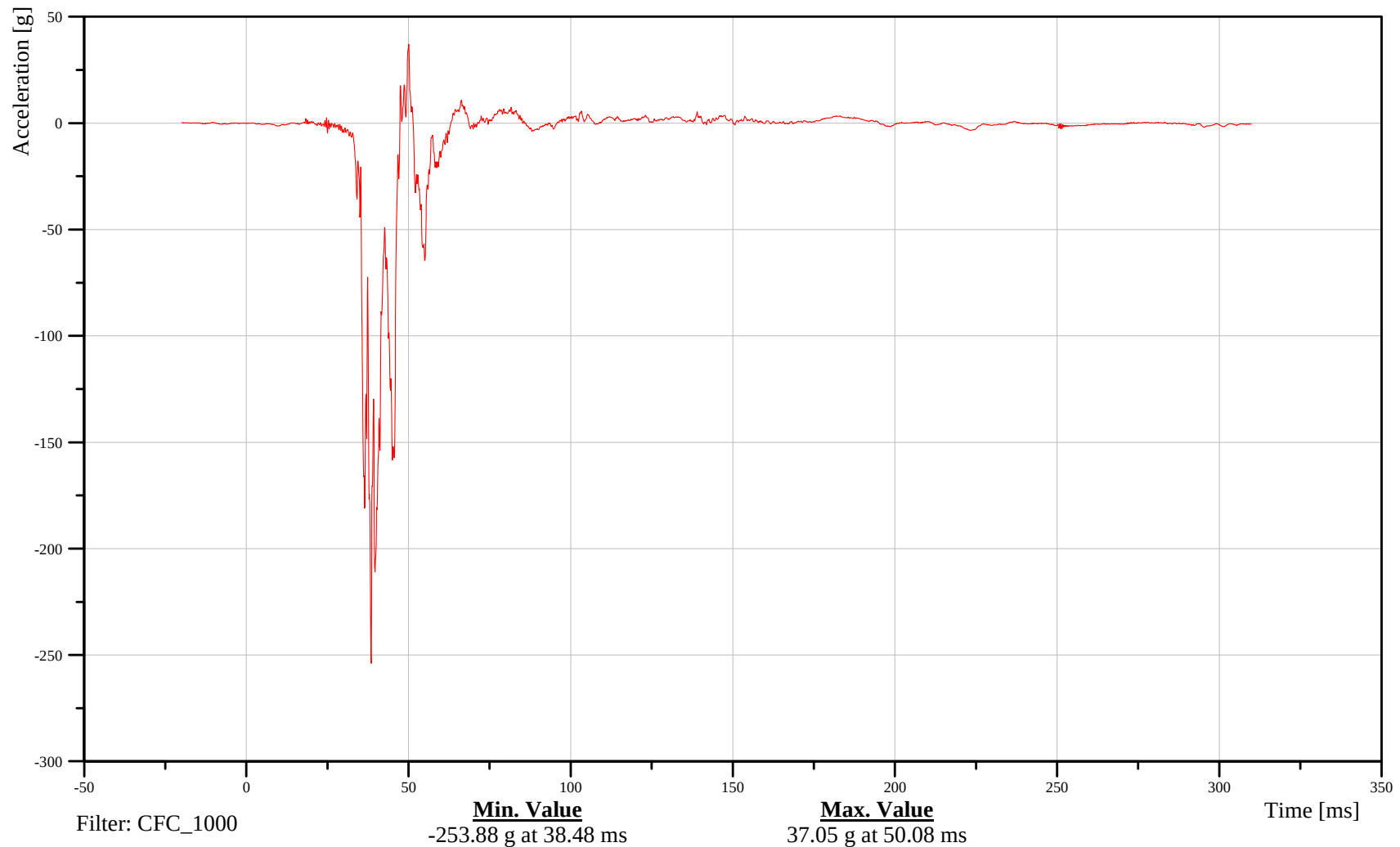
Target Passenger Left Foot X-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

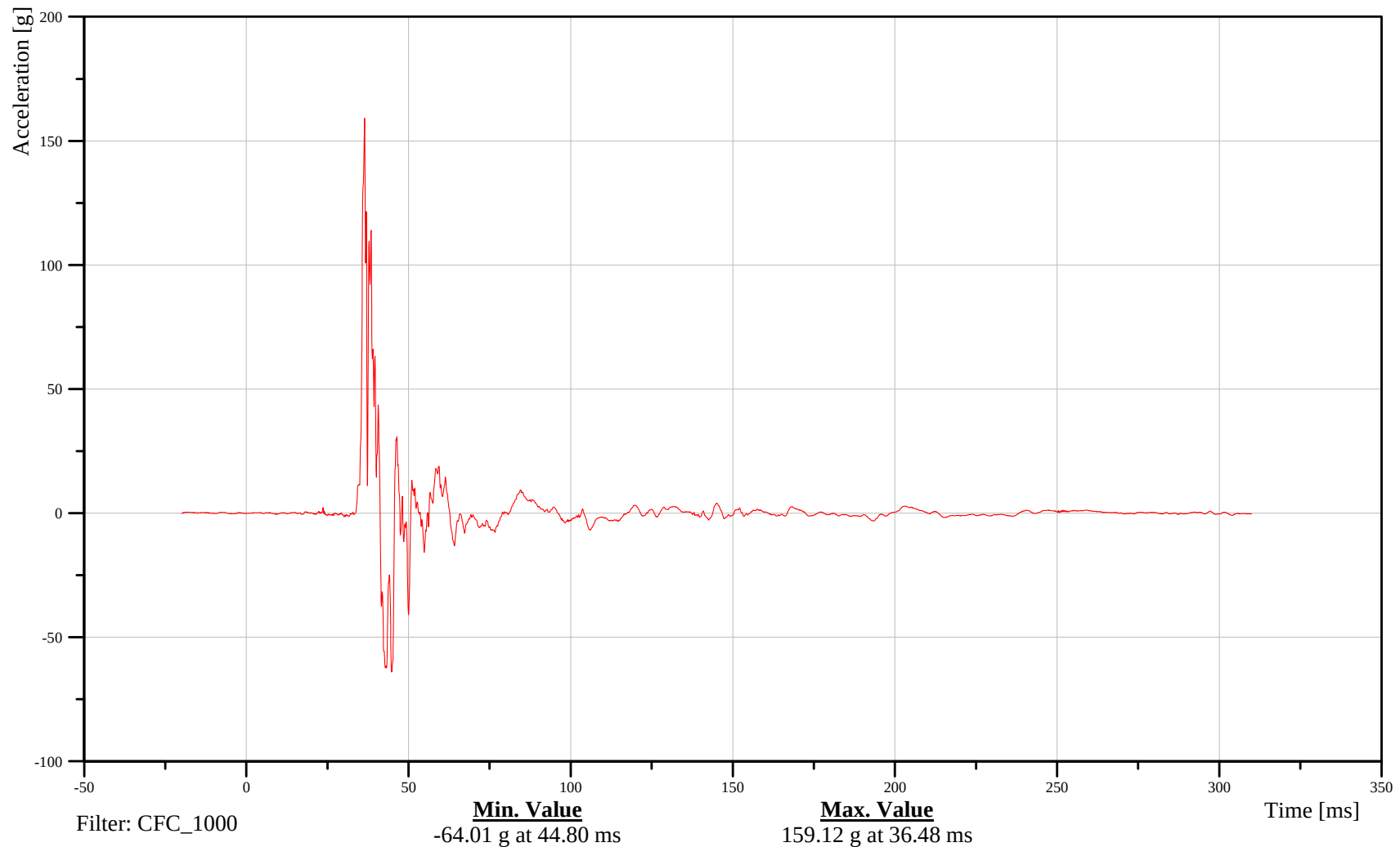
Target Passenger Left Foot Y-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

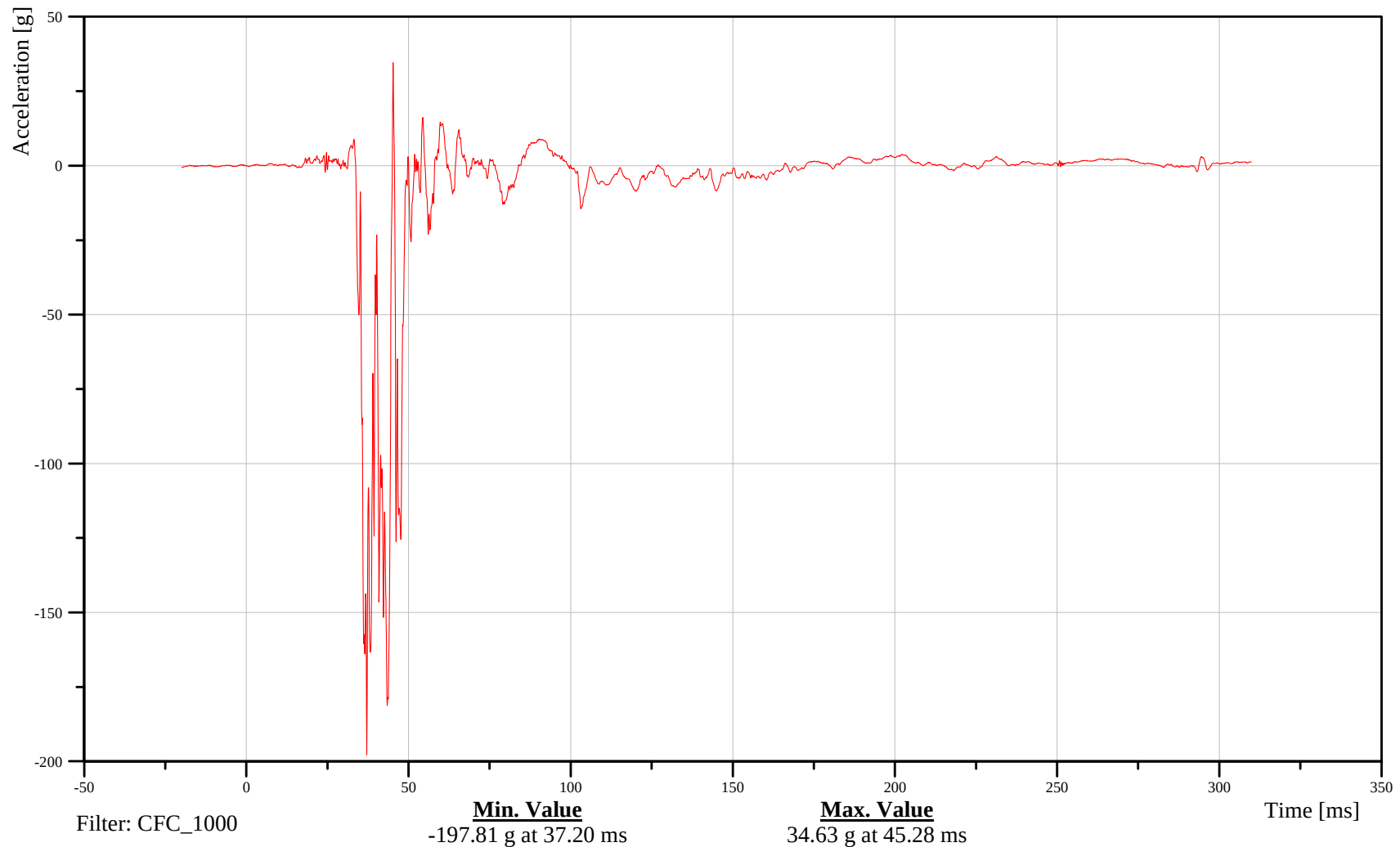
Target Passenger Left Foot Z-Axis Acceleration

Customer: VRTC

23FOOTLEFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

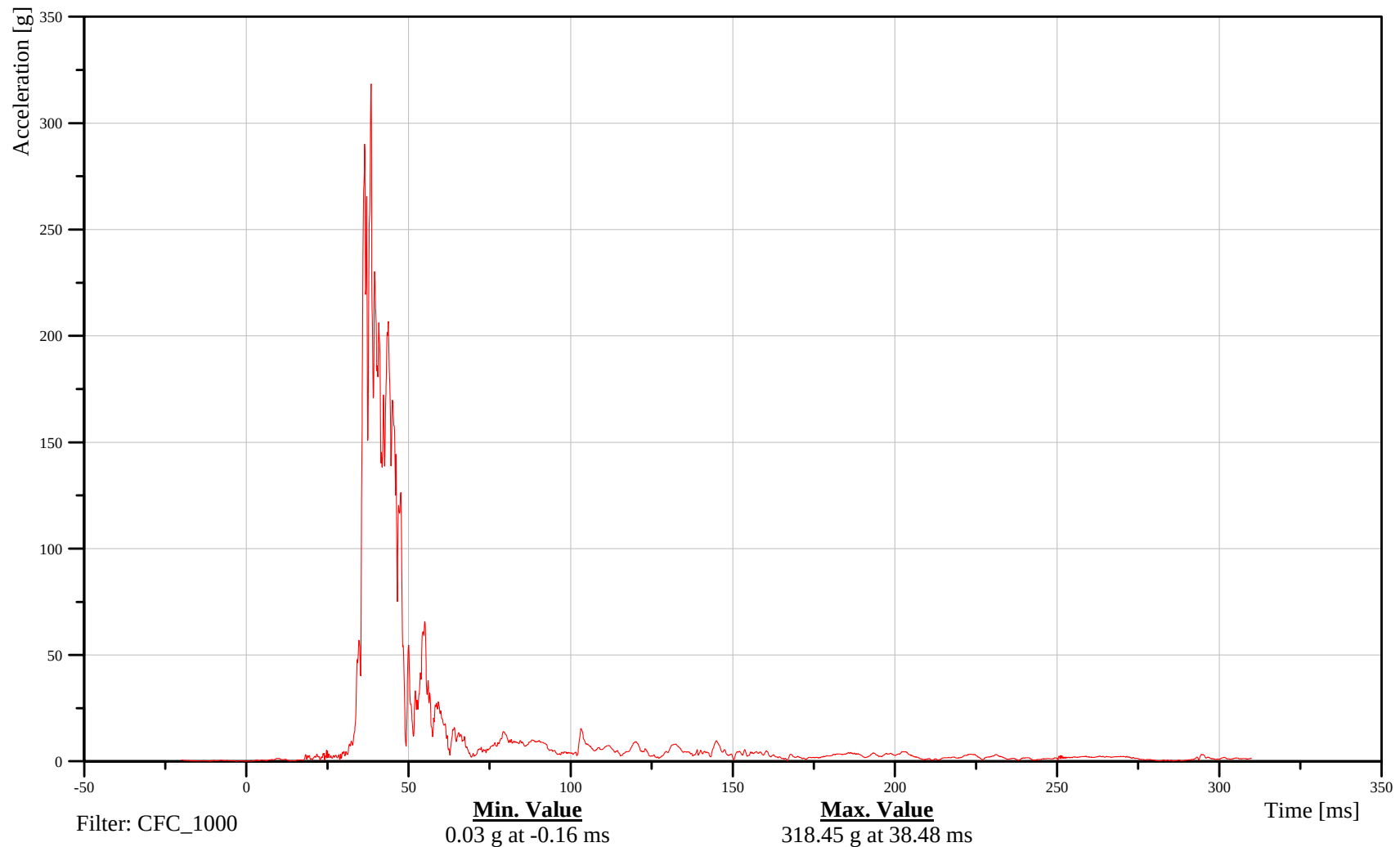
Target Passenger Left Foot Resultant Acceleration

Customer: VRTC

23FOOTLEFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

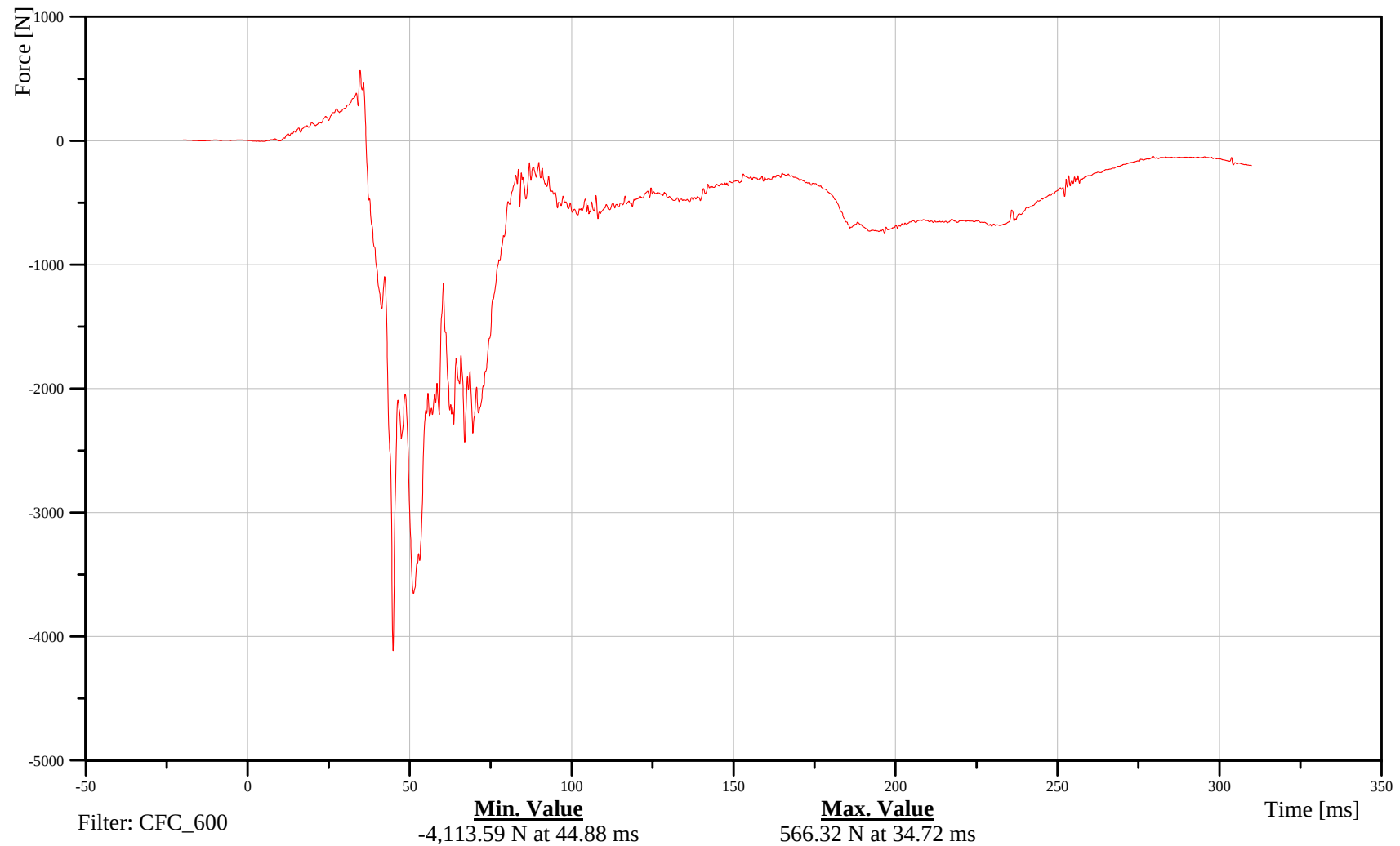
Target Passenger Right Femur Z-Axis Force

Customer: VRTC

23FEMRRL00HFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

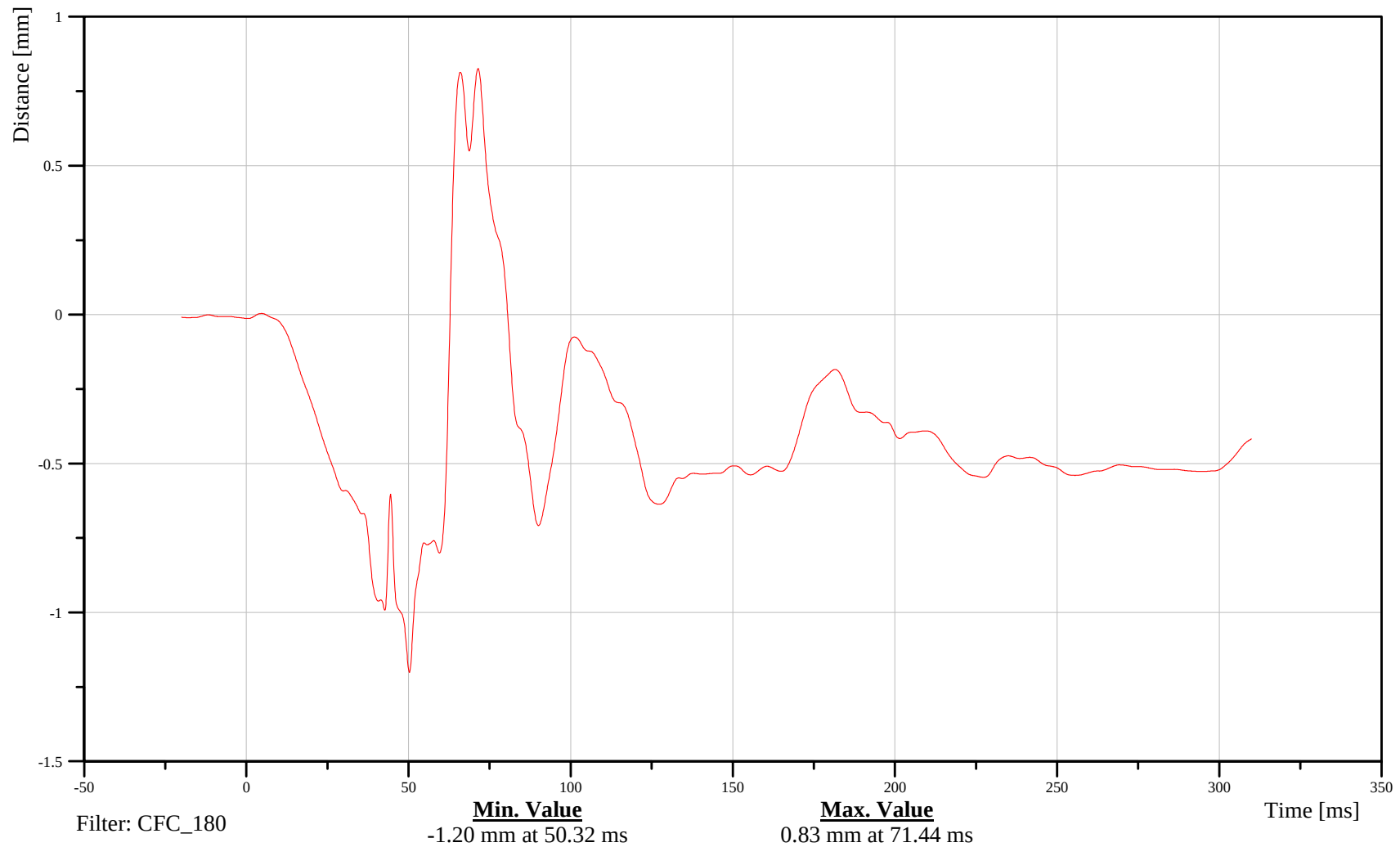
Target Passenger Right Knee Displacement

Customer: VRTC

23KNSLRI00HFDSXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

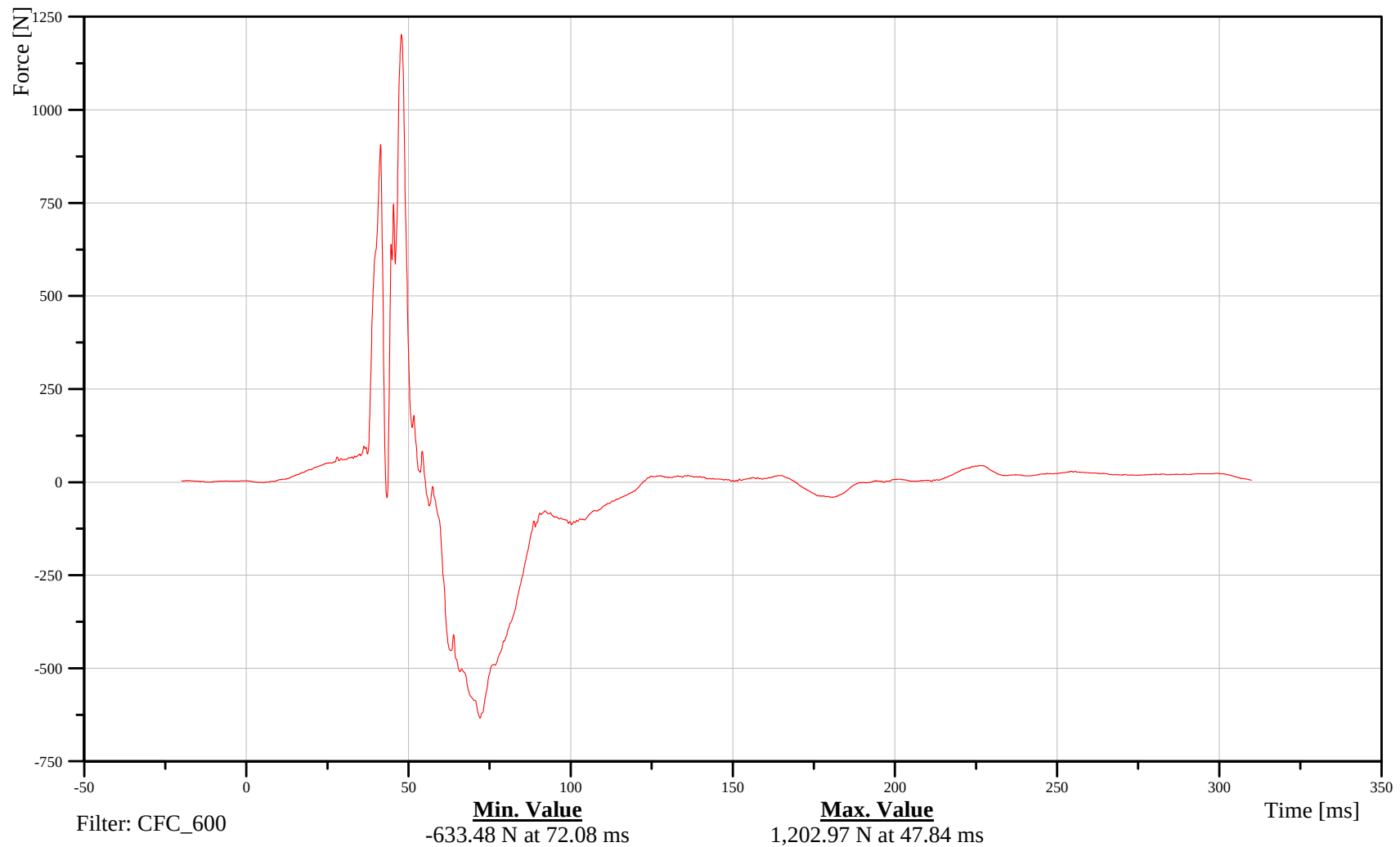
Target Passenger Right Upper Tibia X-Axis Force

Customer: VRTC

23TIBIRUFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

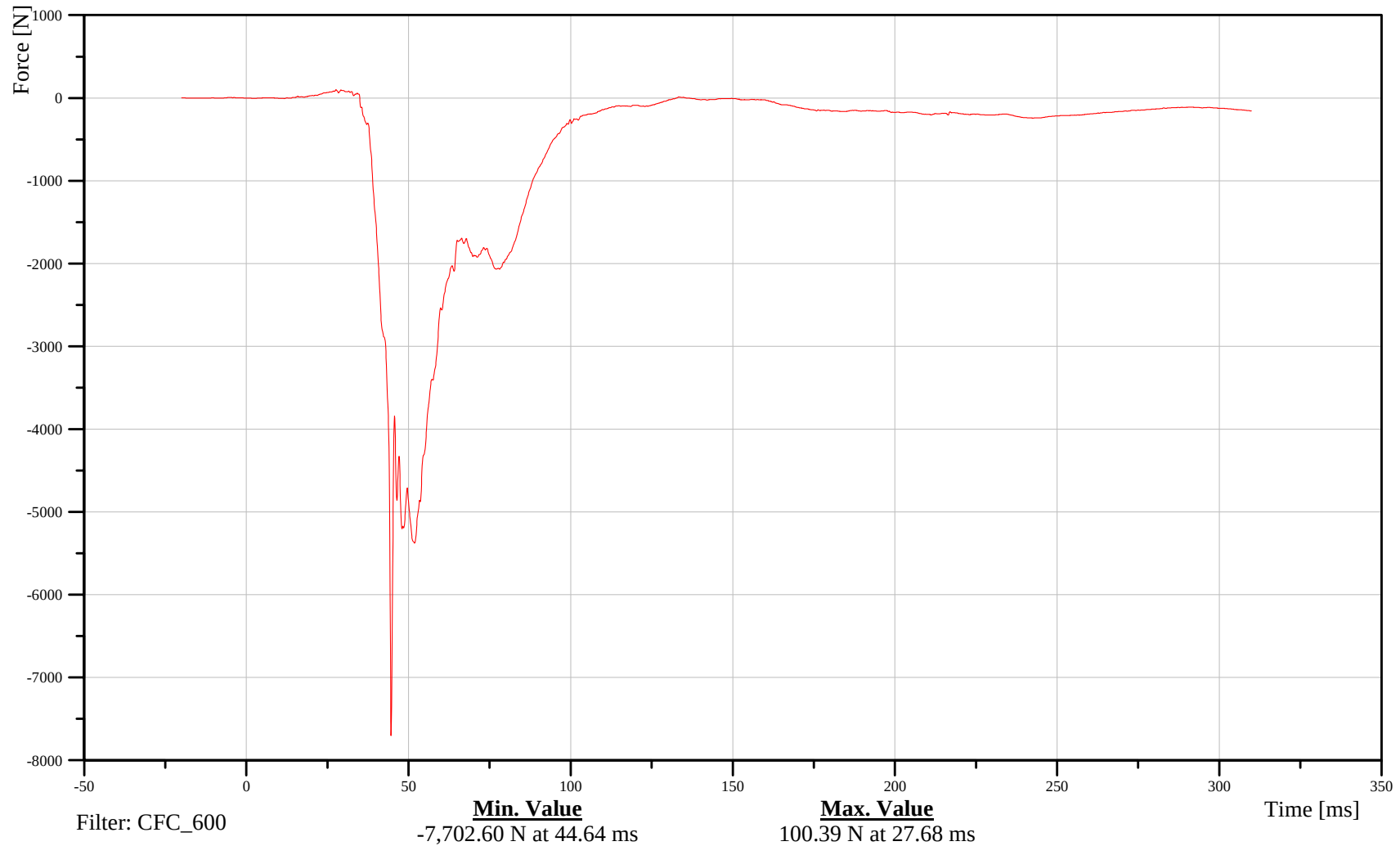
Target Passenger Right Upper Tibia Z-Axis Force

Customer: VRTC

23TIBIRUFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

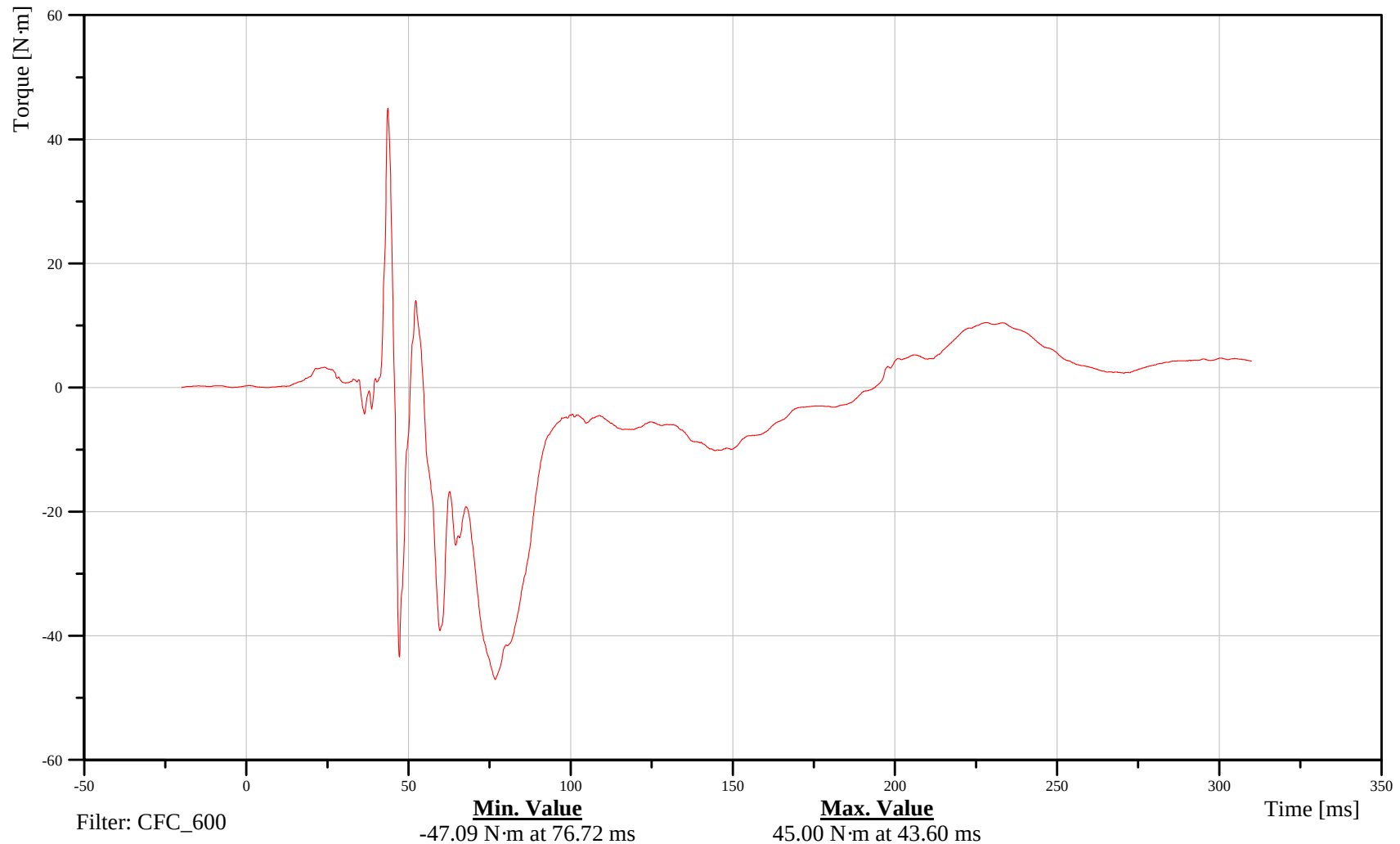
Target Passenger Right Upper Tibia Moment About X Axis

Customer: VRTC

23TIBIRUFXHFM0XB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

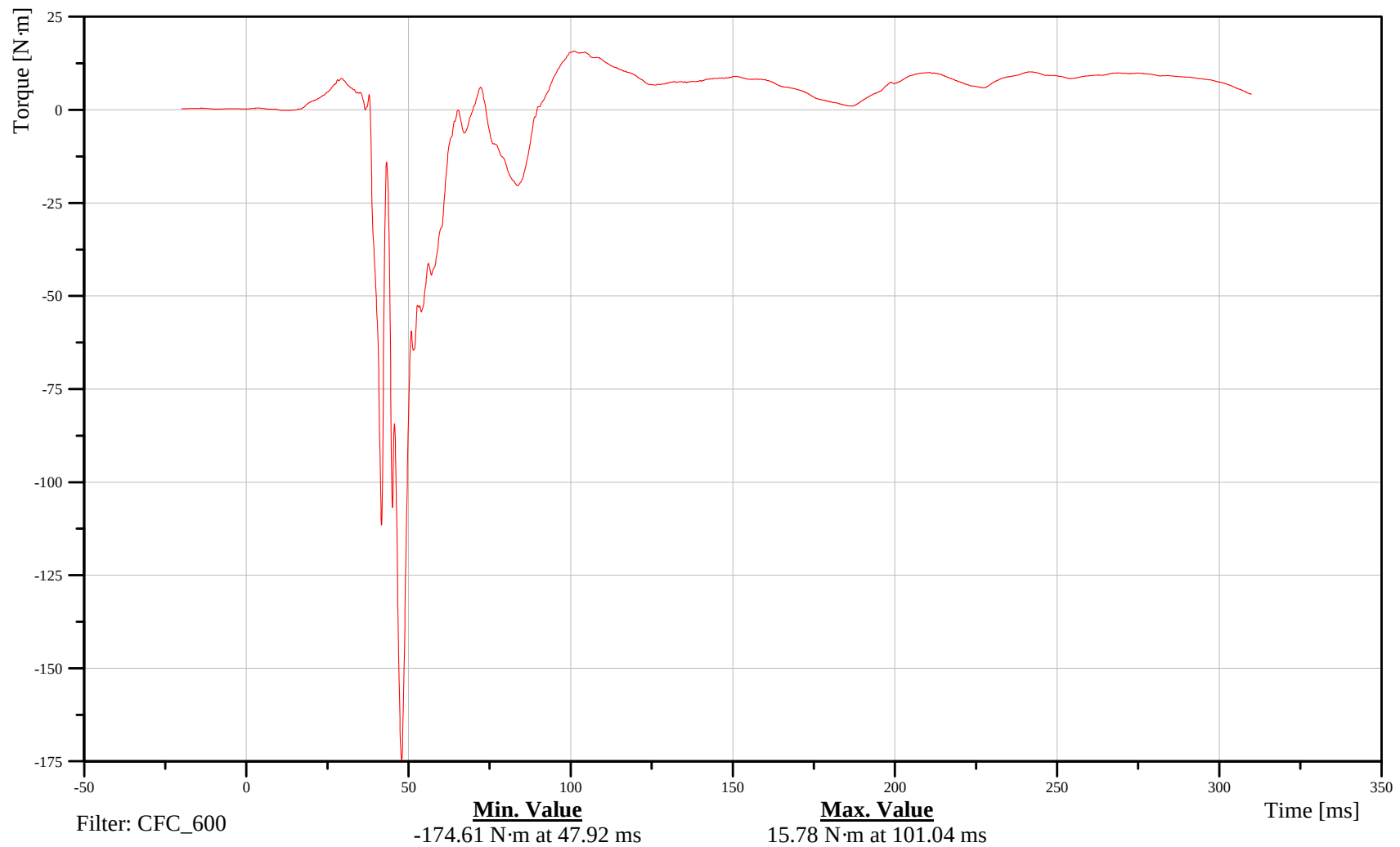
Target Passenger Right Upper Tibia Moment About Y Axis

Customer: VRTC

23TIBIRUFXHFM0YB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

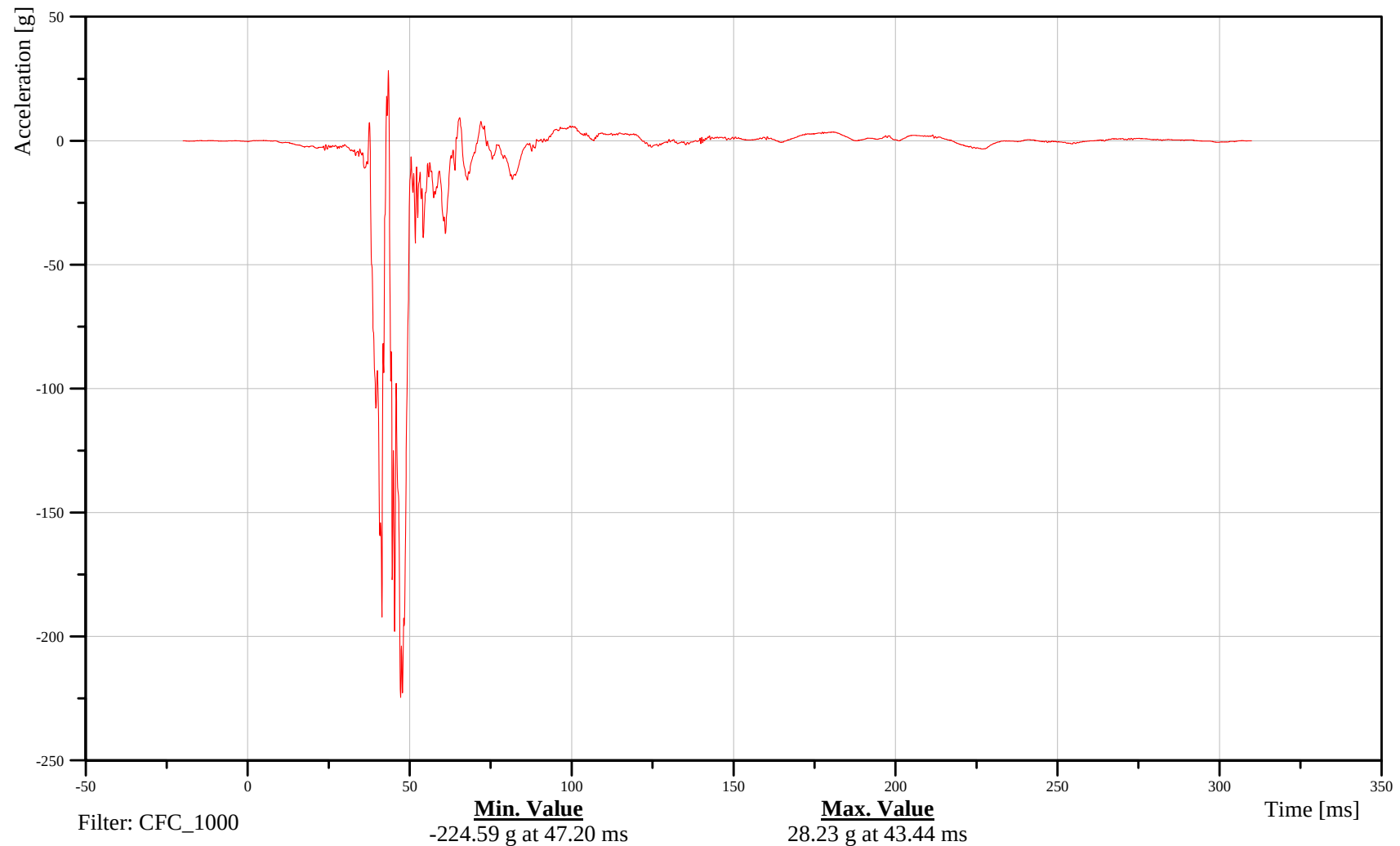
Target Passenger Right Tibia X-Axis Acceleration

Customer: VRTC

23TIBIRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

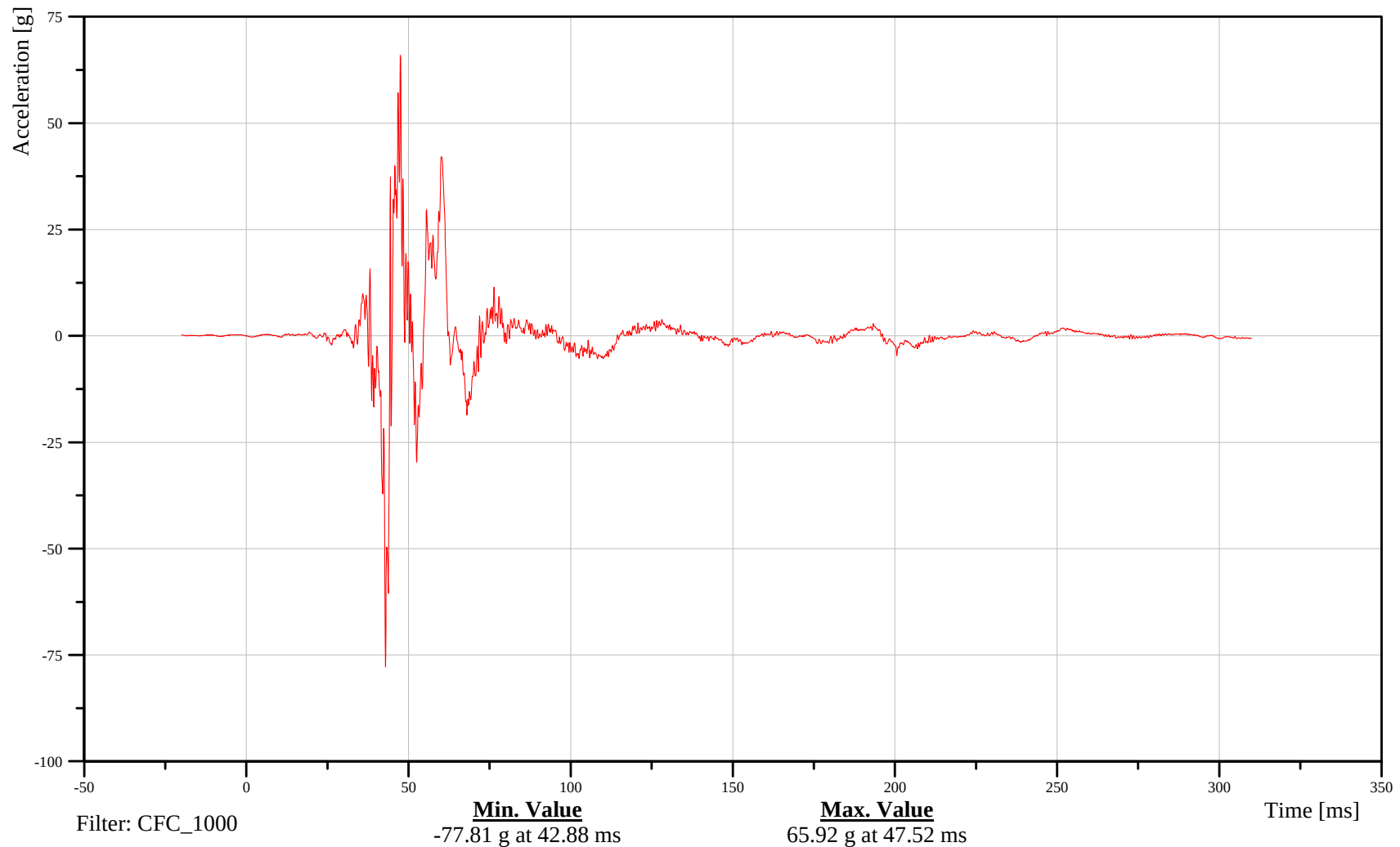
Target Passenger Right Tibia Y-Axis Acceleration

Customer: VRTC

23TIBIRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

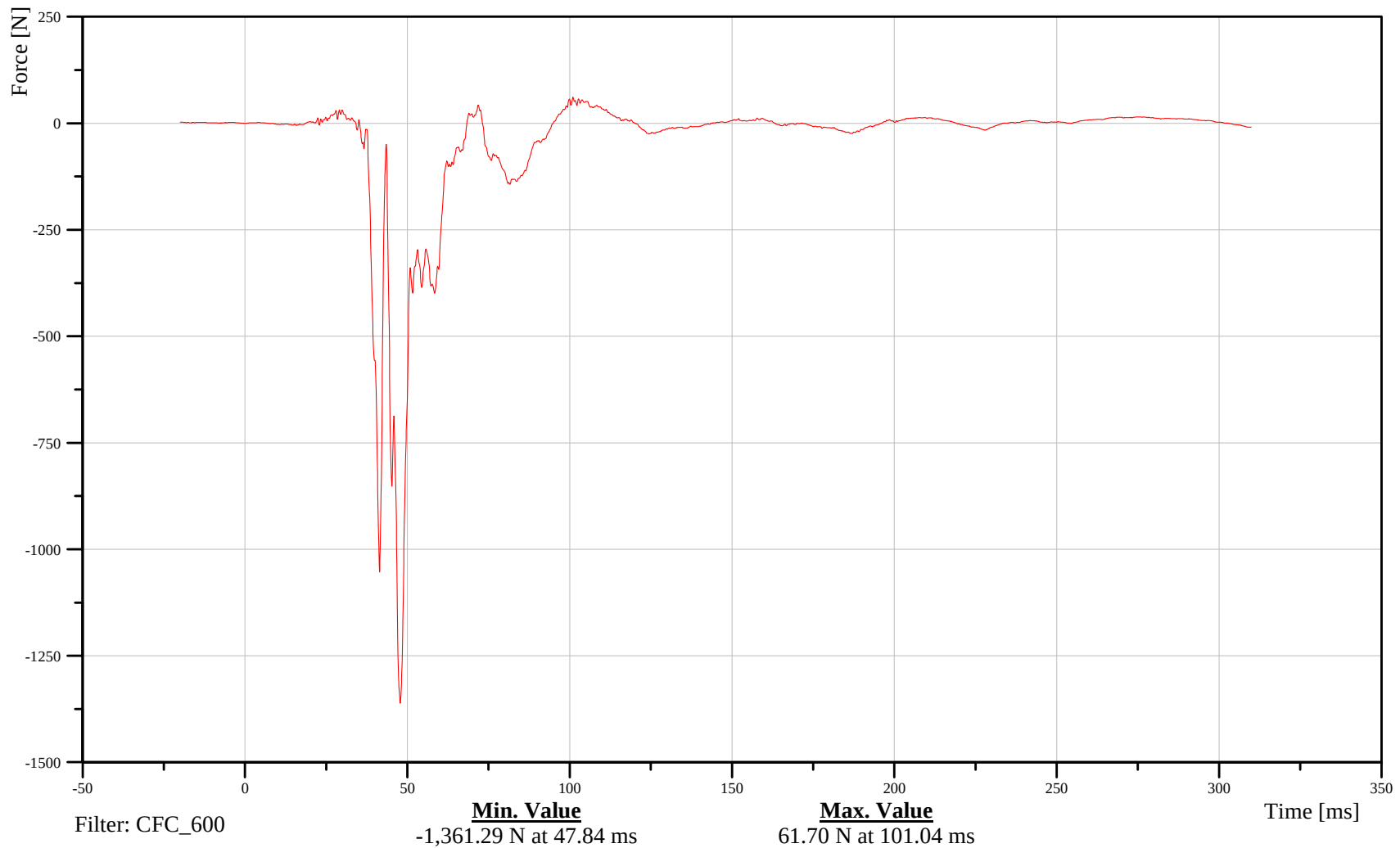
Target Passenger Right Lower Tibia X-Axis Force

Customer: VRTC

23TIBIRLFXHFFOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

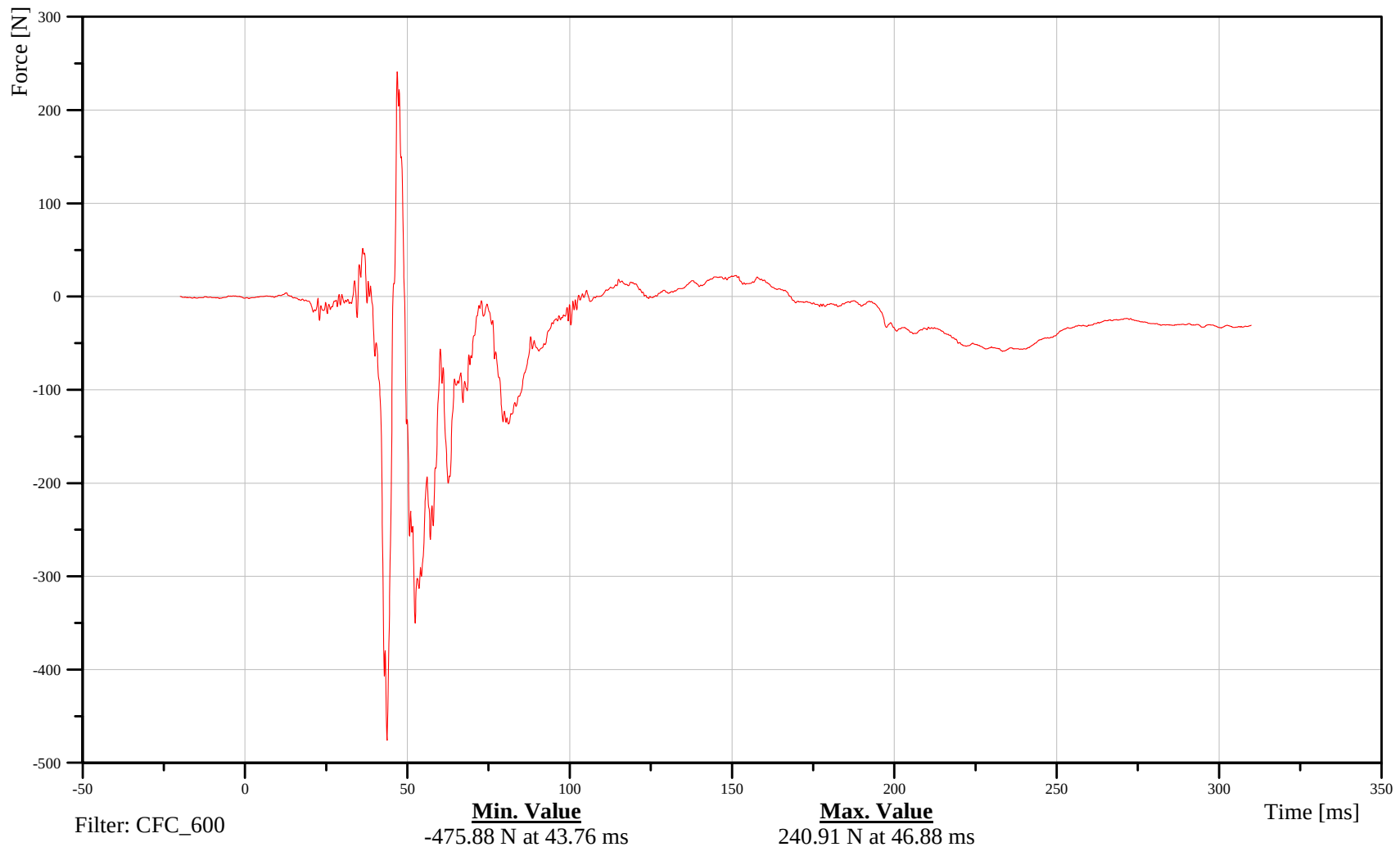
Target Passenger Right Lower Tibia Y-Axis Force

Customer: VRTC

23TIBIRLFXHFFOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

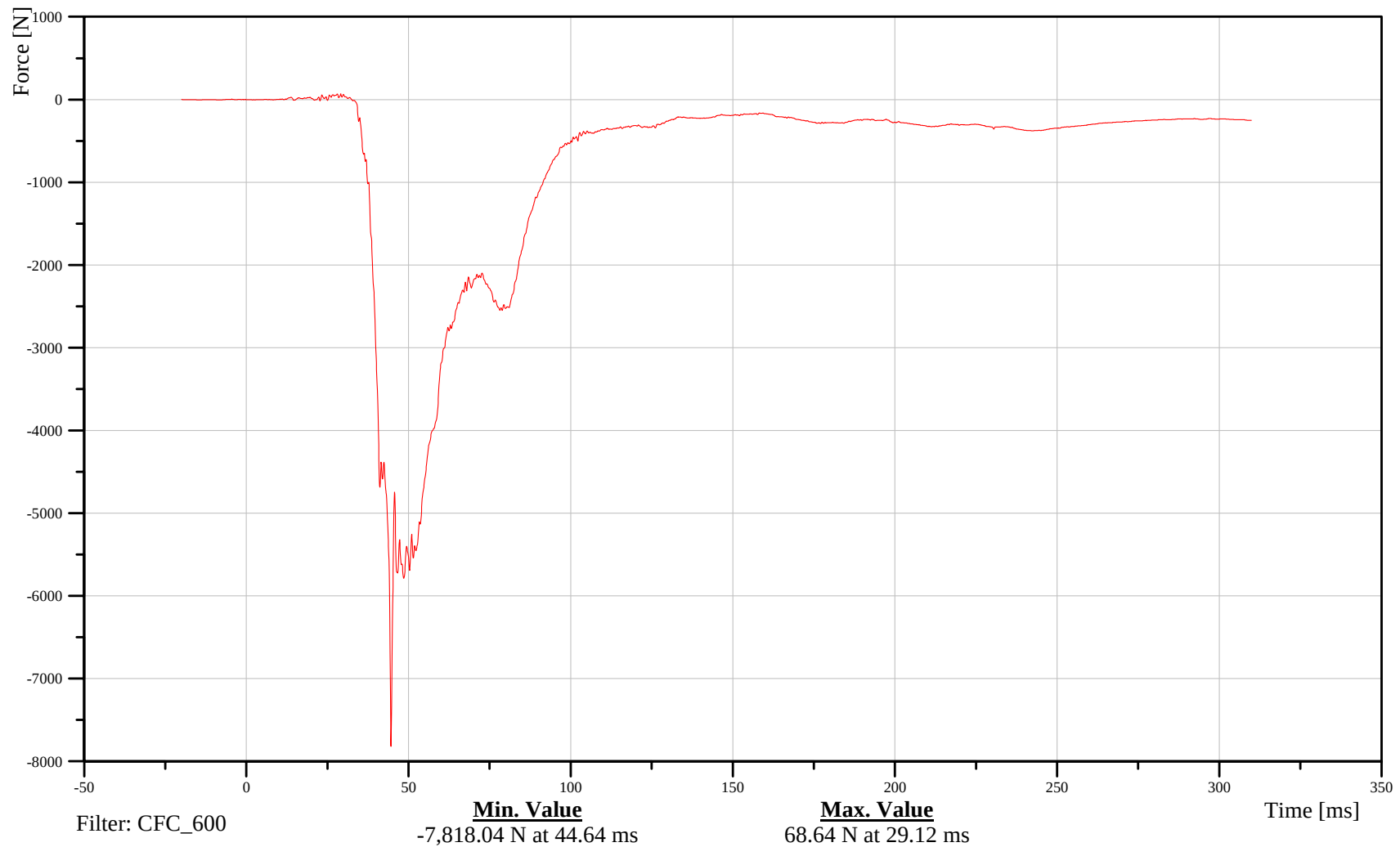
Target Passenger Right Lower Tibia Z-Axis Force

Customer: VRTC

23TIBIRLFXHFFOZB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

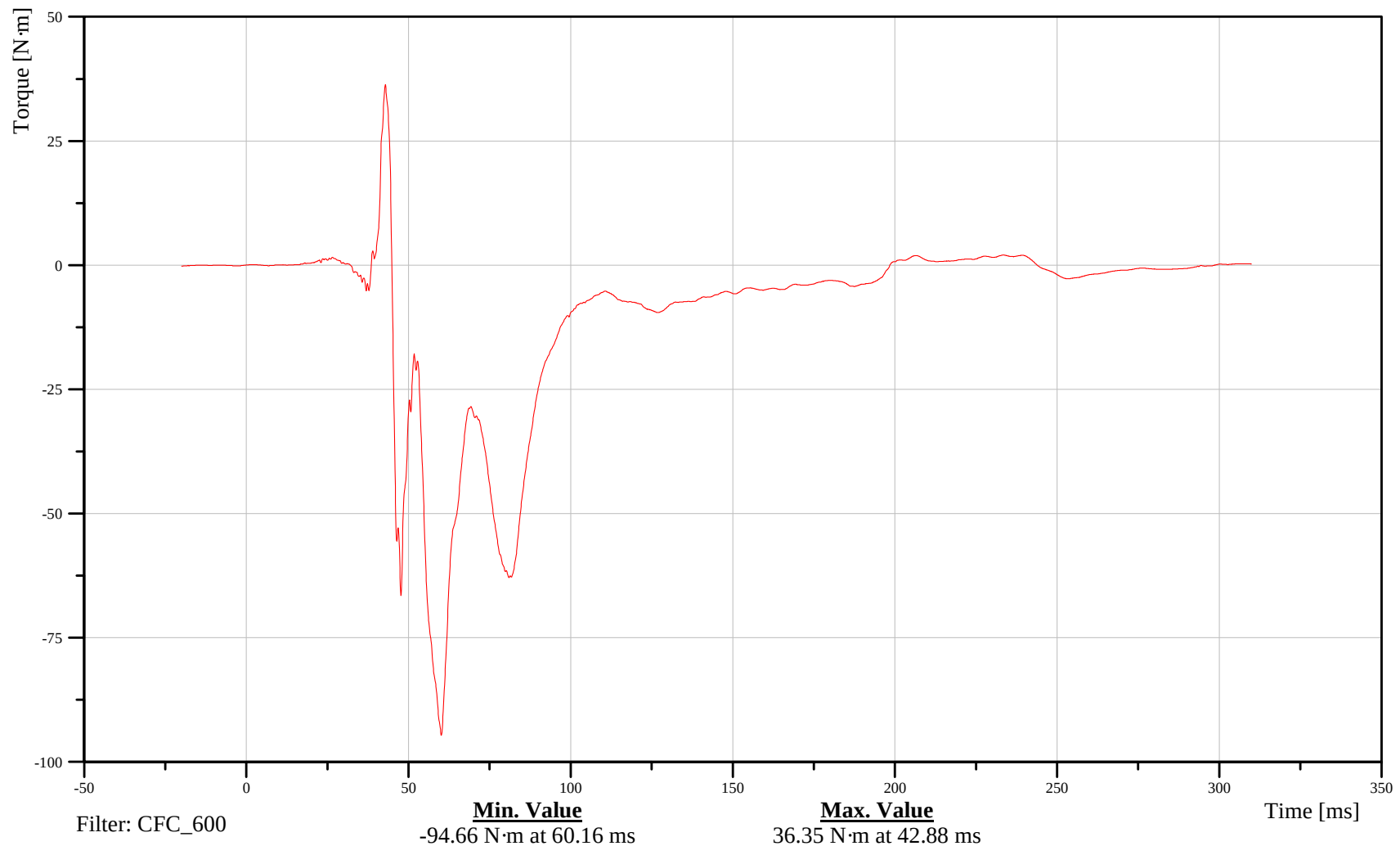
Target Passenger Right Lower Tibia Moment About X Axis

Customer: VRTC

23TIBIRLFXHFMOXB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

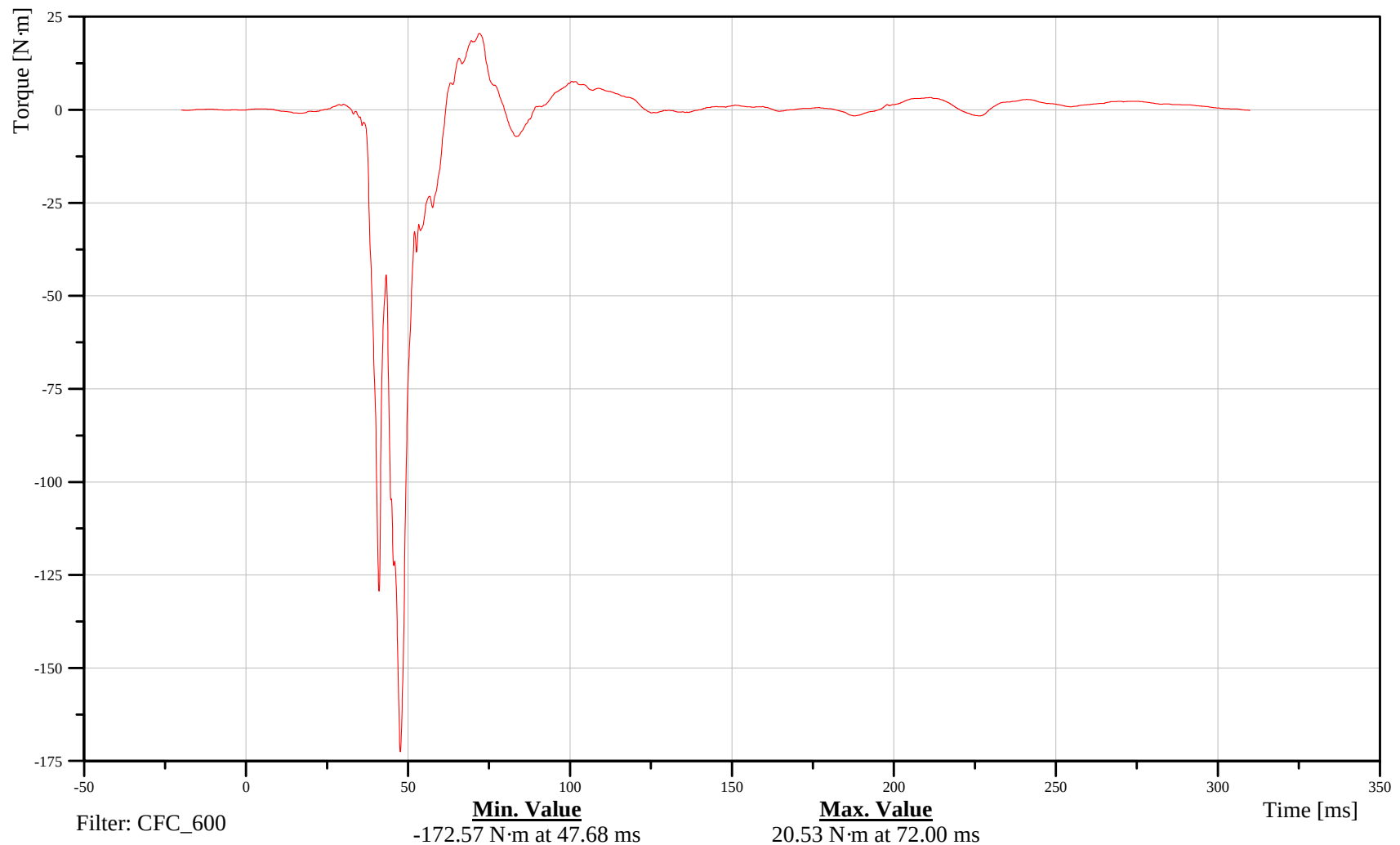
Target Passenger Right Lower Tibia Moment About Y Axis

Customer: VRTC

23TIBIRLFXHFMOYB

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

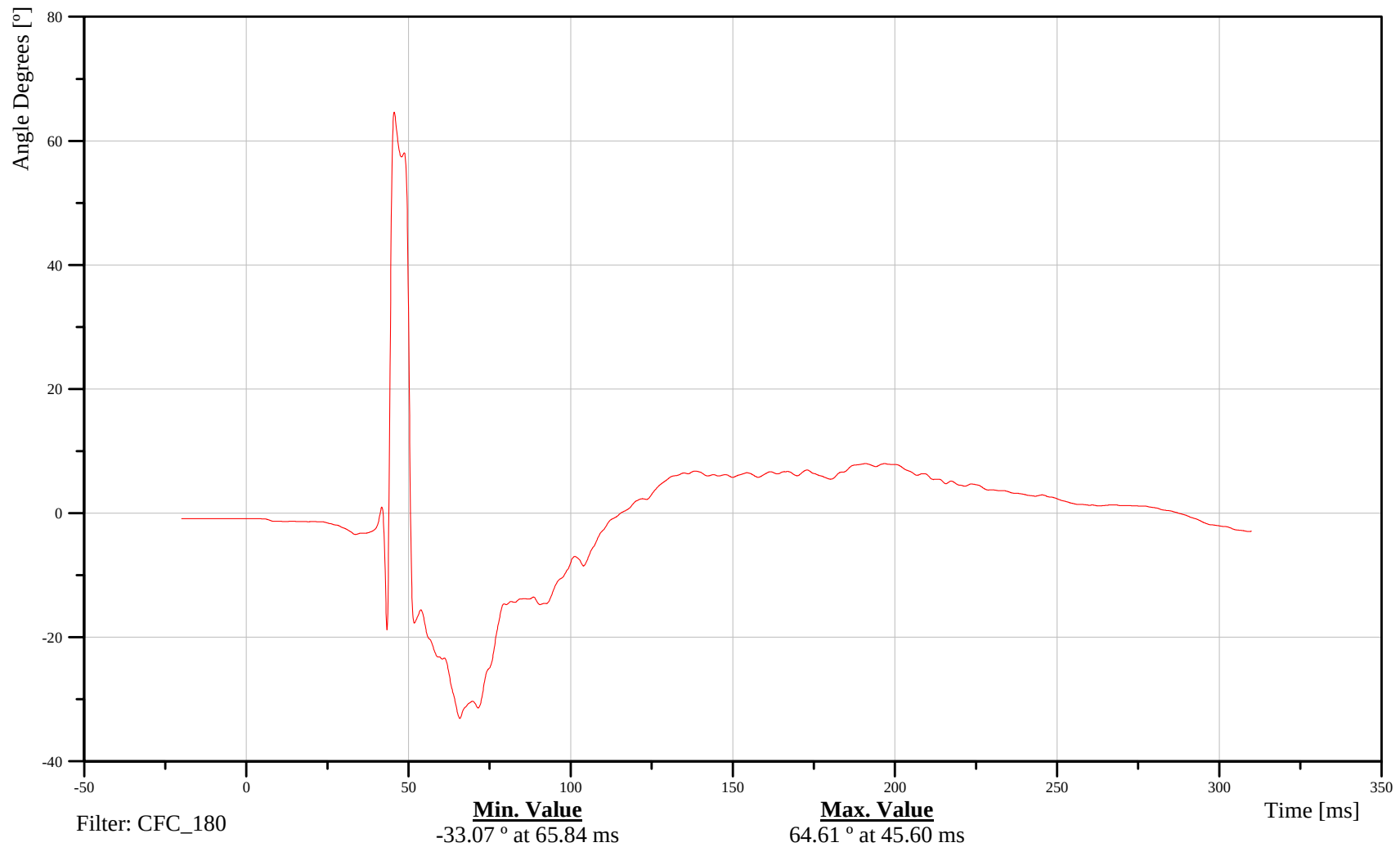
Target Passenger Right Foot X-Axis Rotation

Customer: VRTC

23FOOTRIFXHFANXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

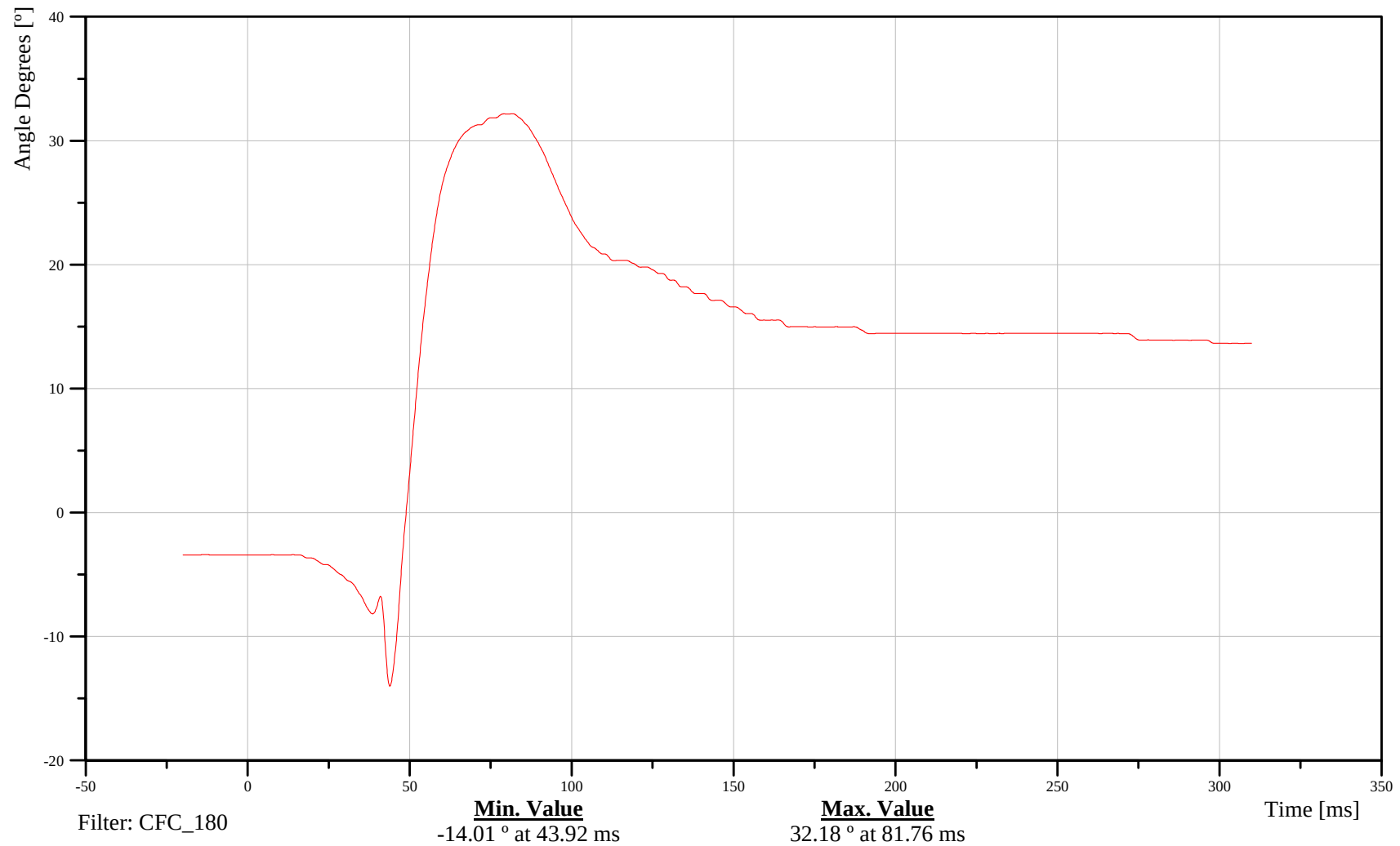
Target Passenger Right Foot Y-Axis Rotation

Customer: VRTC

23FOOTRIFXHFANYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

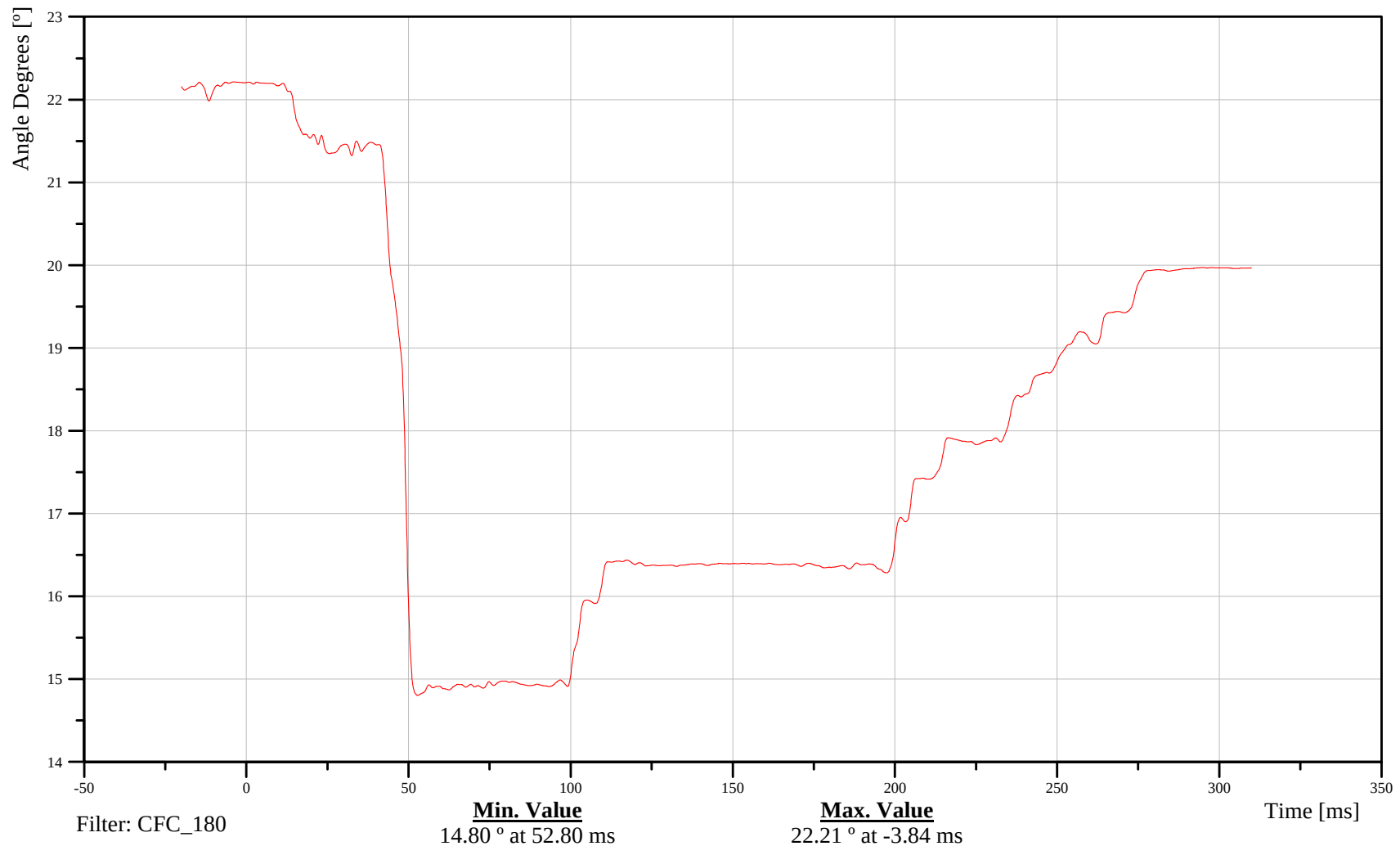
Target Passenger Right Foot Z-Axis Rotation

Customer: VRTC

23FOOTRIFXHFANZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

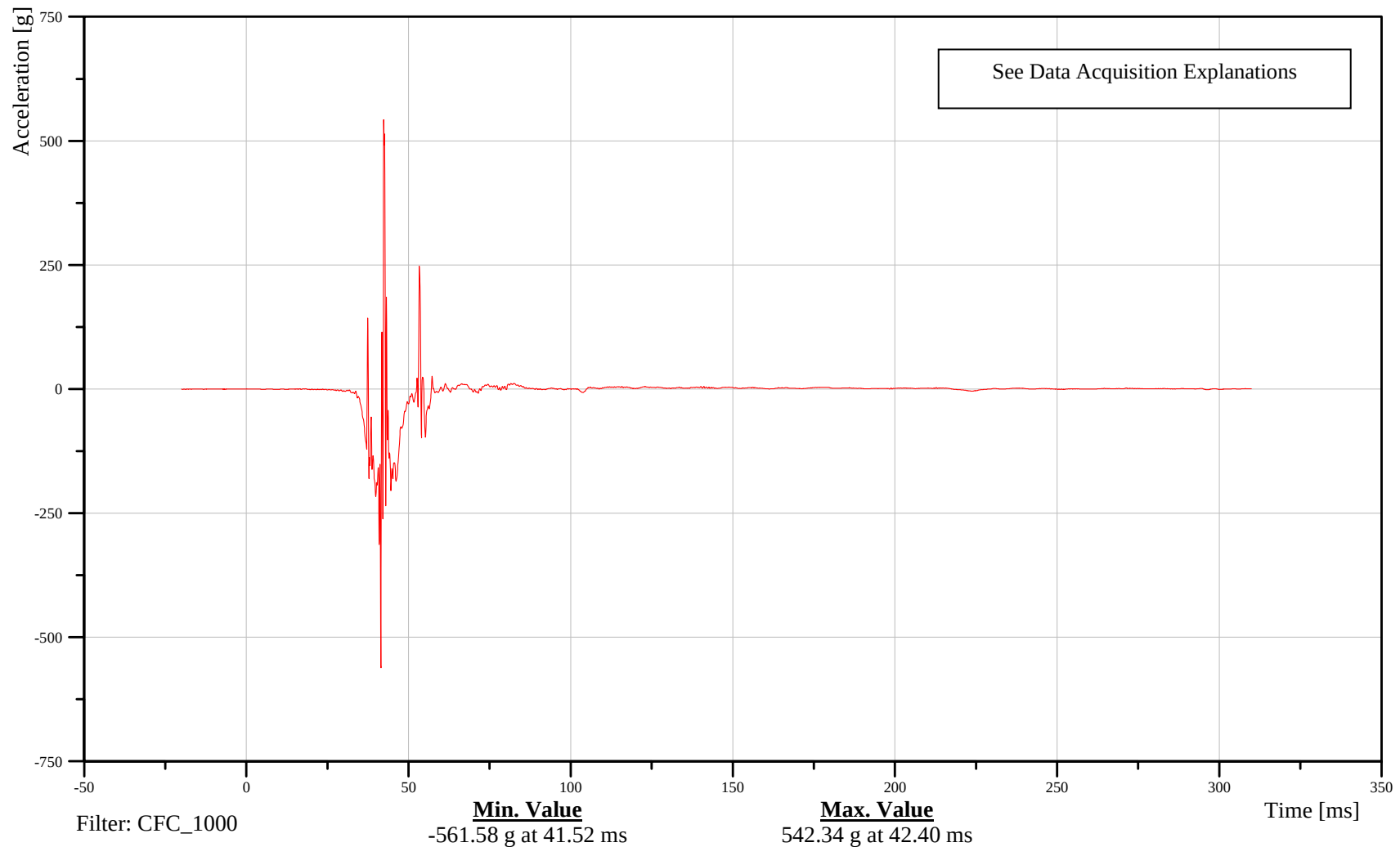
Target Passenger Right Foot X-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACXA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

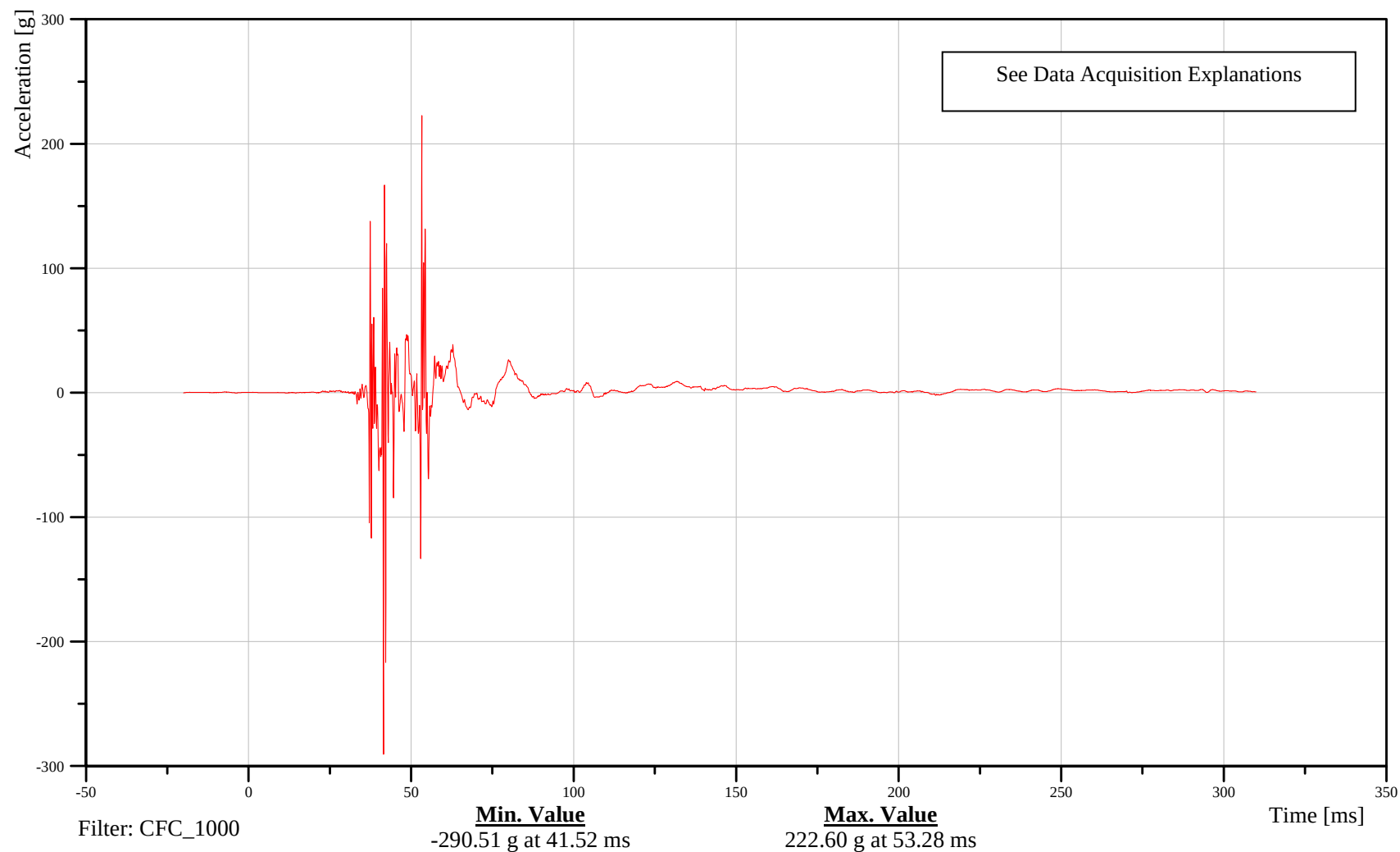
Target Passenger Right Foot Y-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACYA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

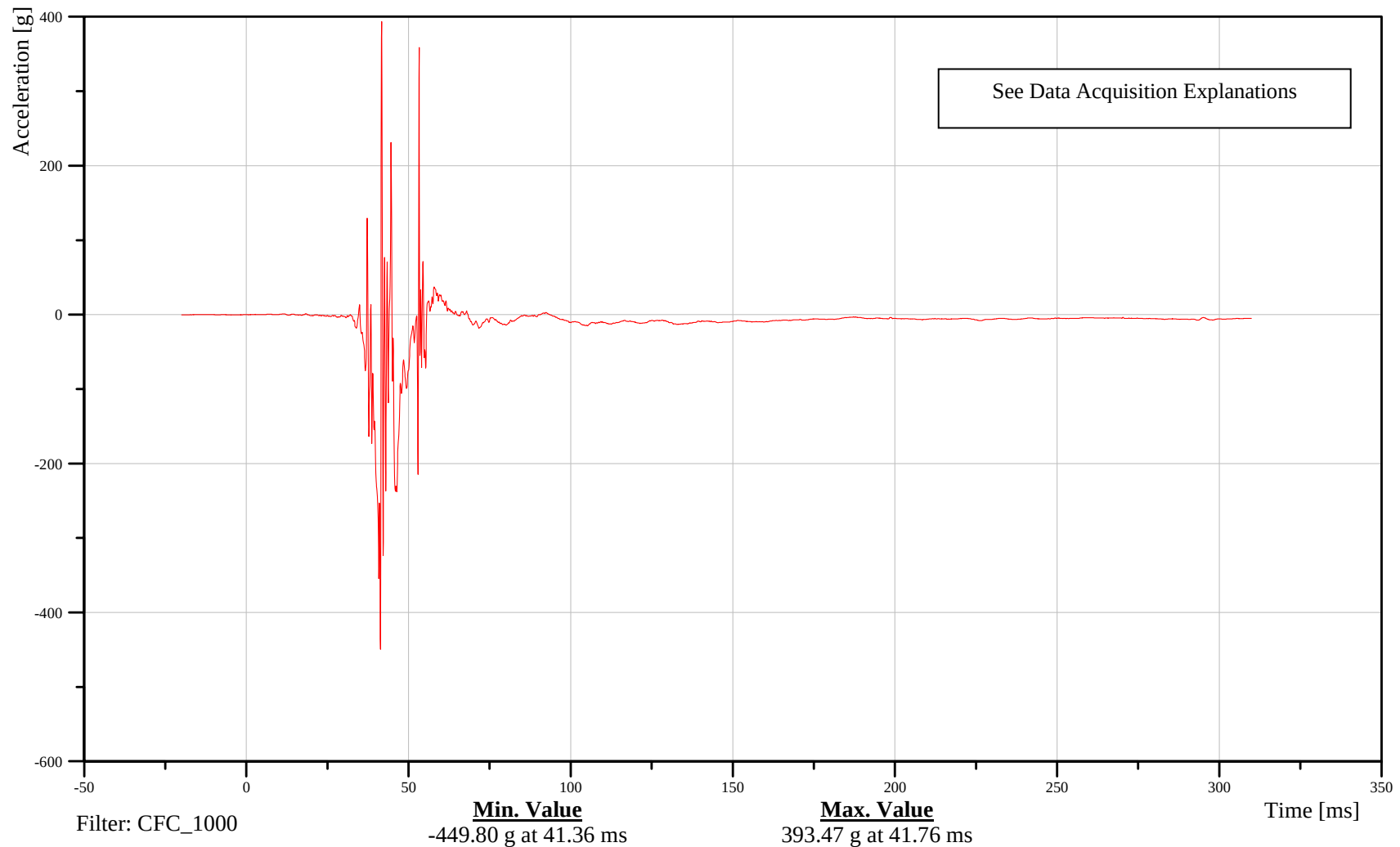
Target Passenger Right Foot Z-Axis Acceleration

Customer: VRTC

23FOOTRIFXHFACZA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

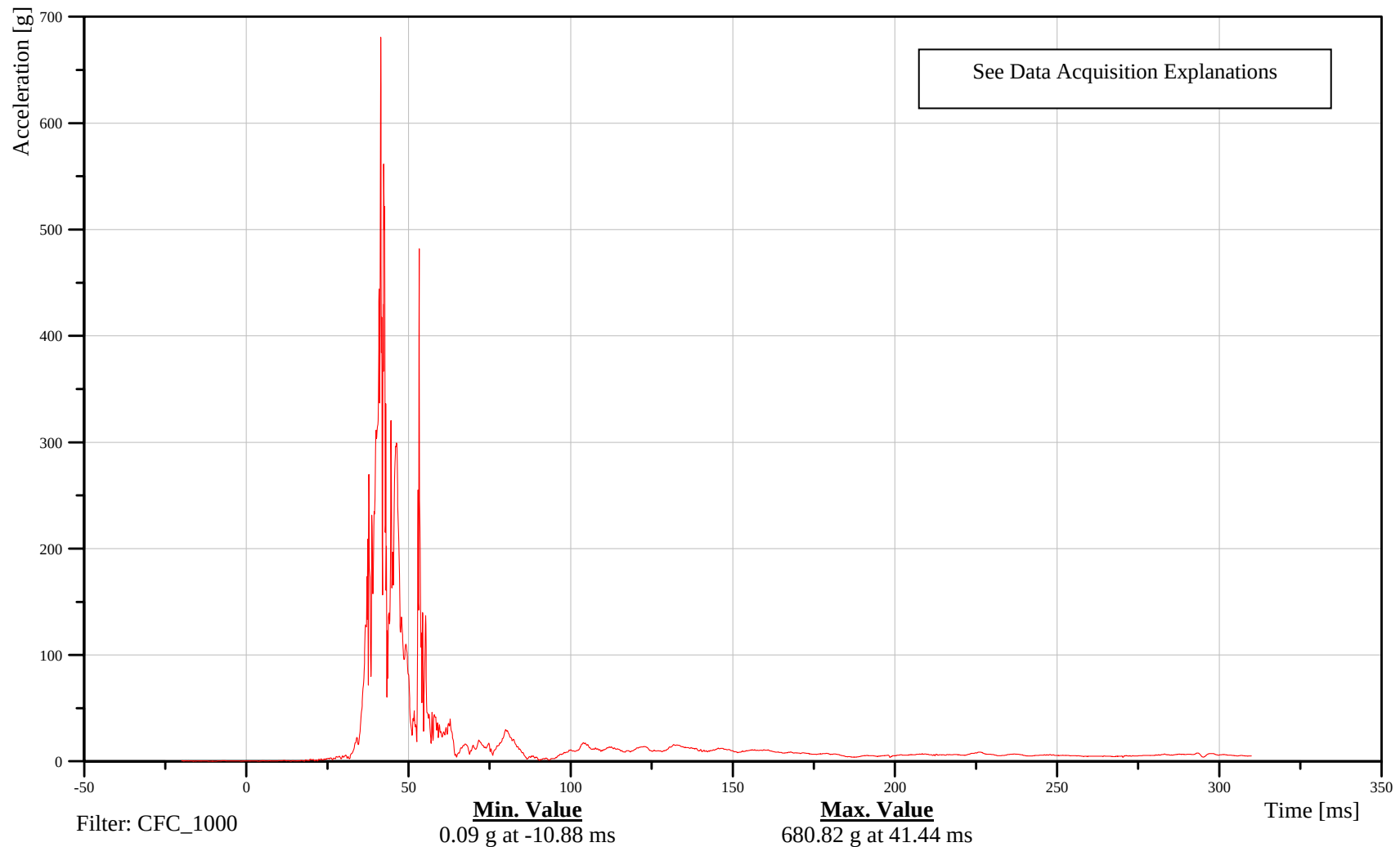
Target Passenger Right Foot Resultant Acceleration

Customer: VRTC

23FOOTRIFXHFACRA

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

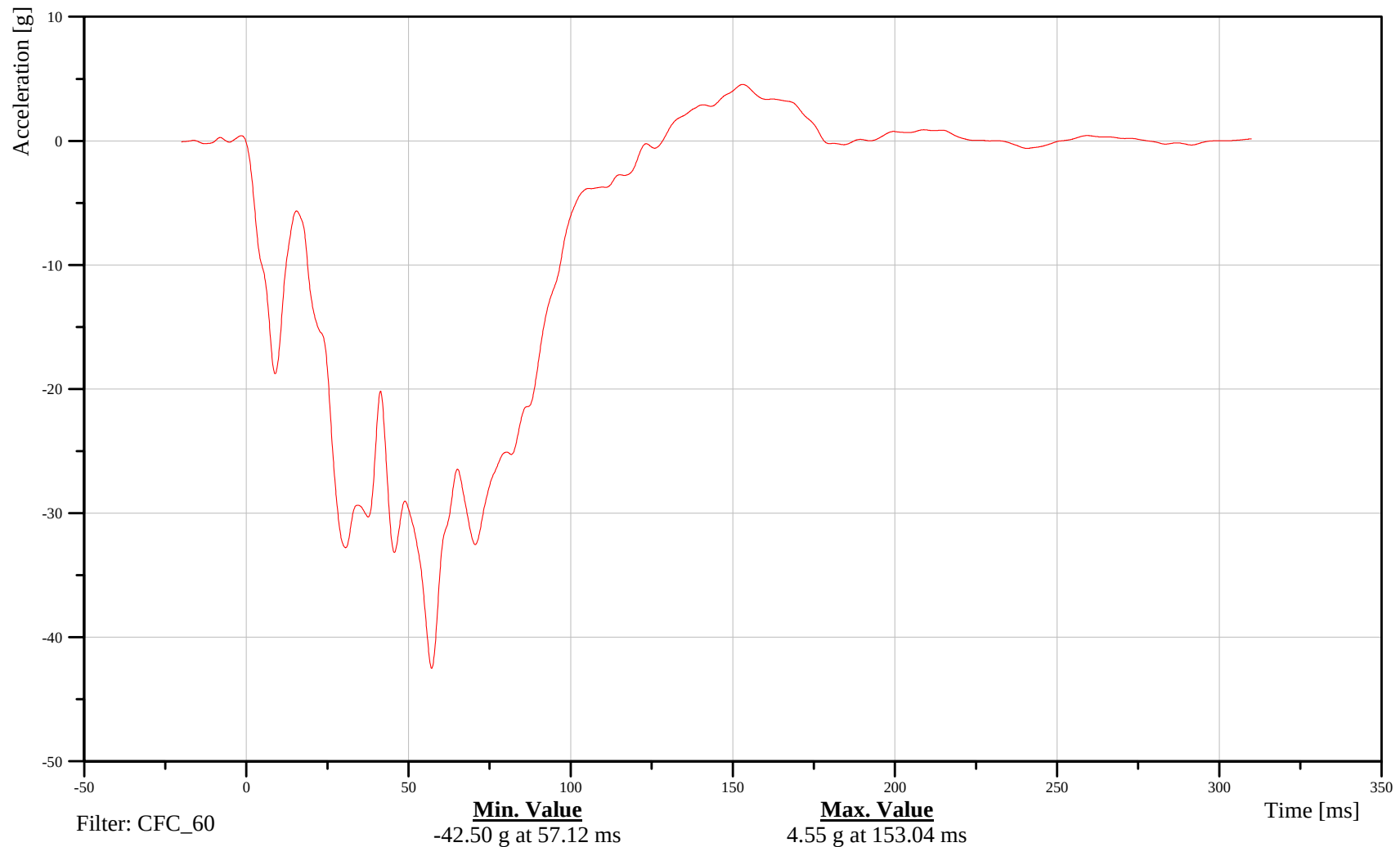
Target Vehicle Left Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

24CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

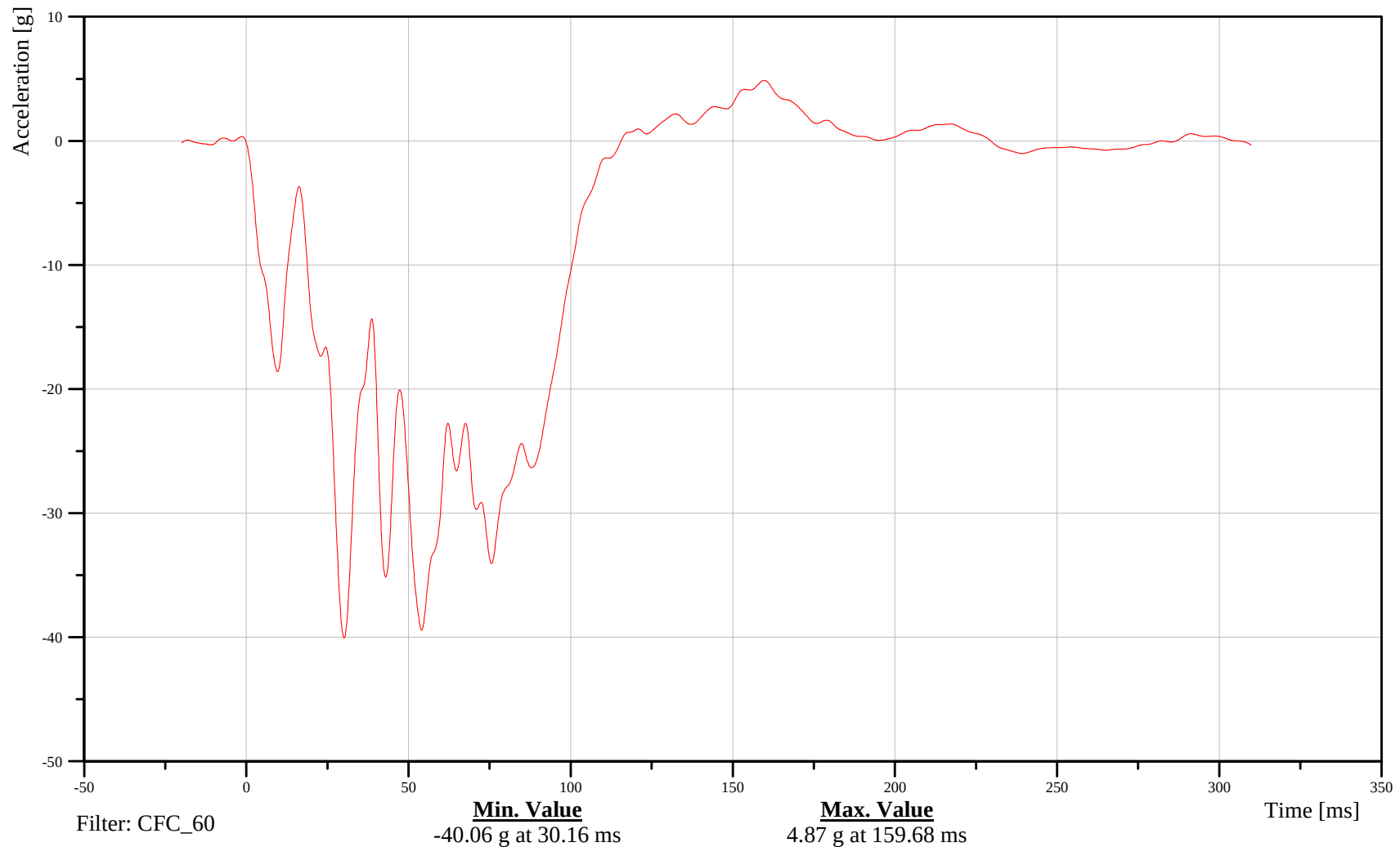
Target Vehicle Right Rear Seat Crossmember X-Axis Acceleration

Customer: VRTC

26CRME000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

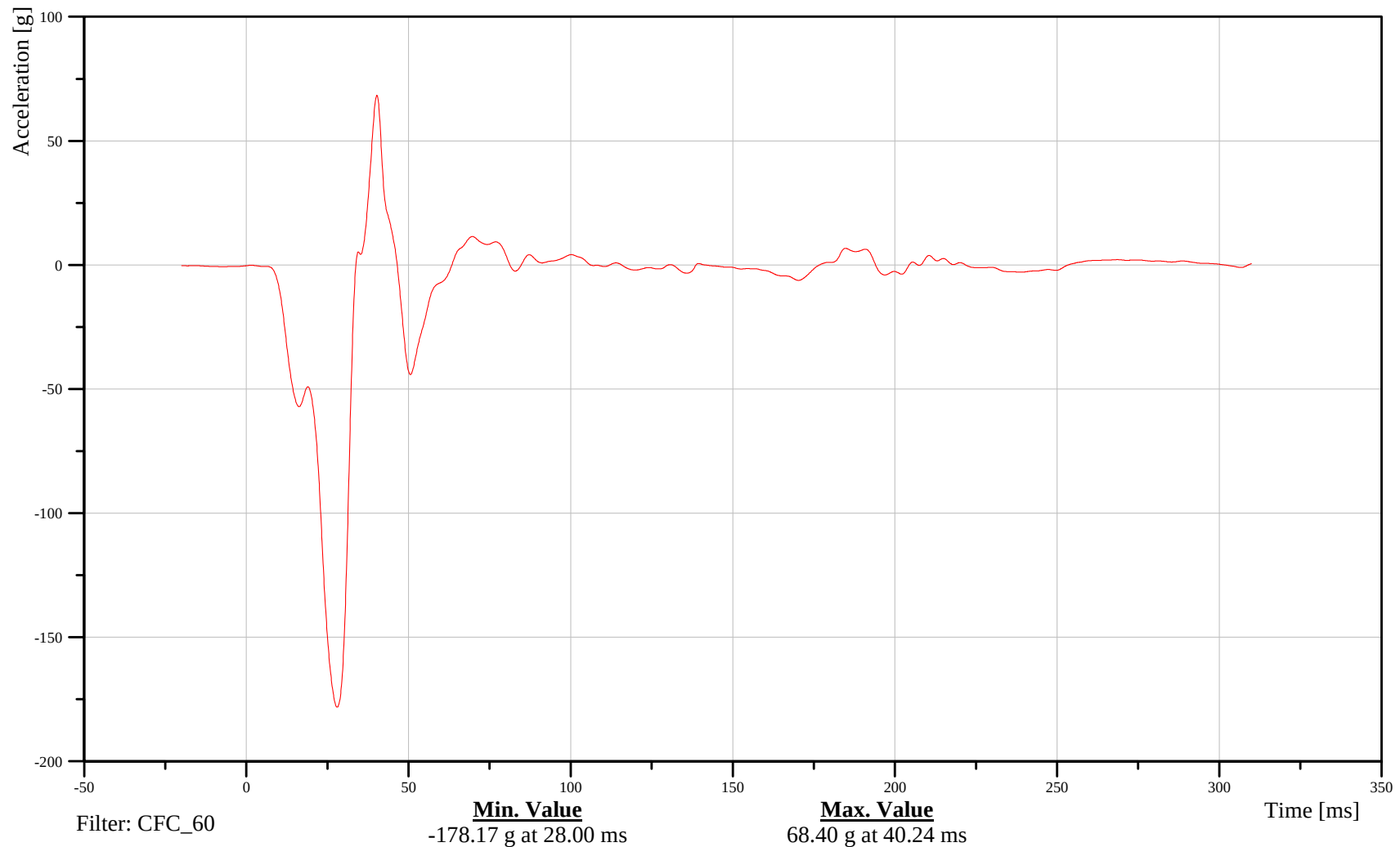
Target Vehicle Top of Engine X-Axis Acceleration

Customer: VRTC

22ENGNTTP0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

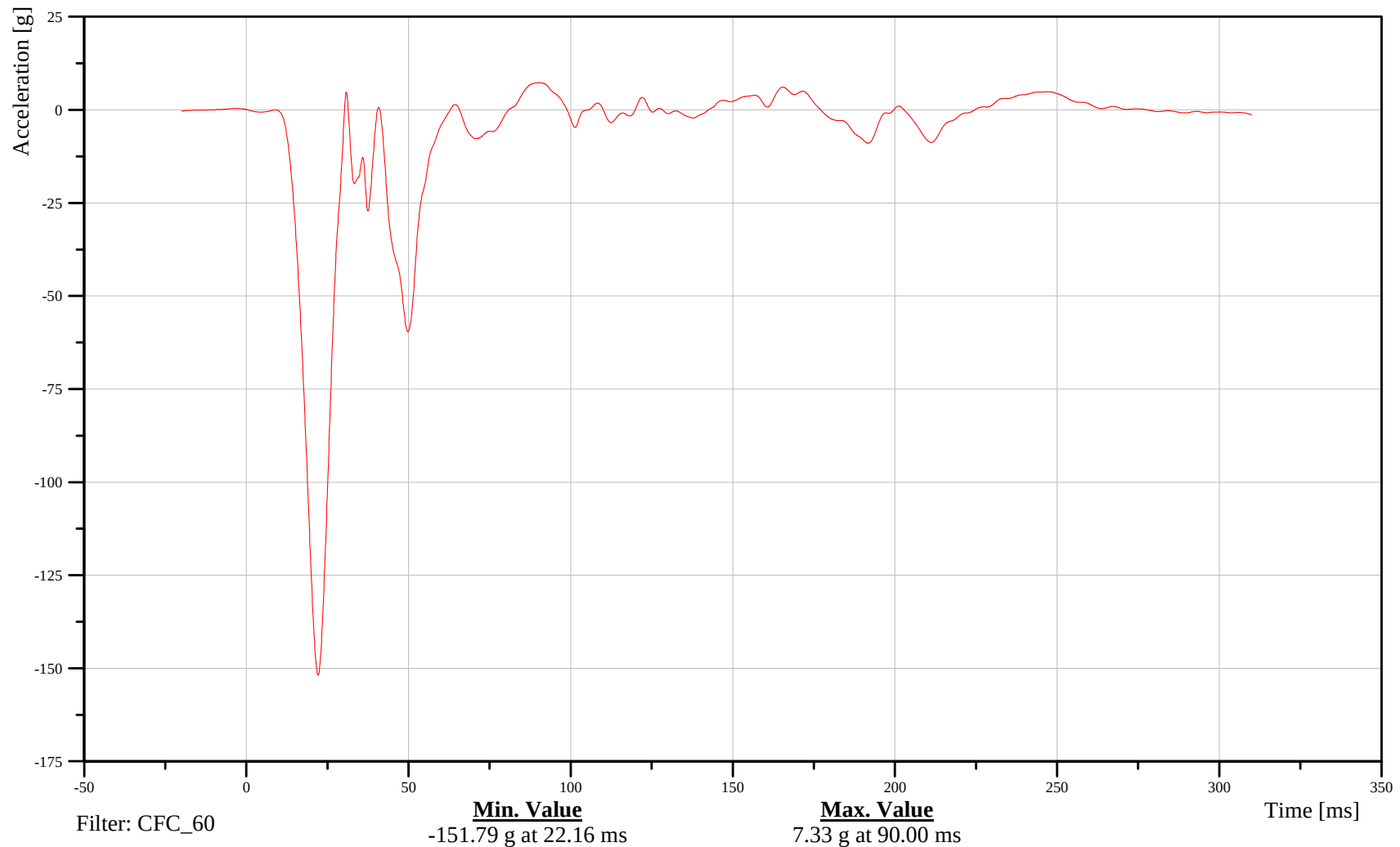
Target Vehicle Bottom of Engine X-Axis Acceleration

Customer: VRTC

22ENGNBO0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

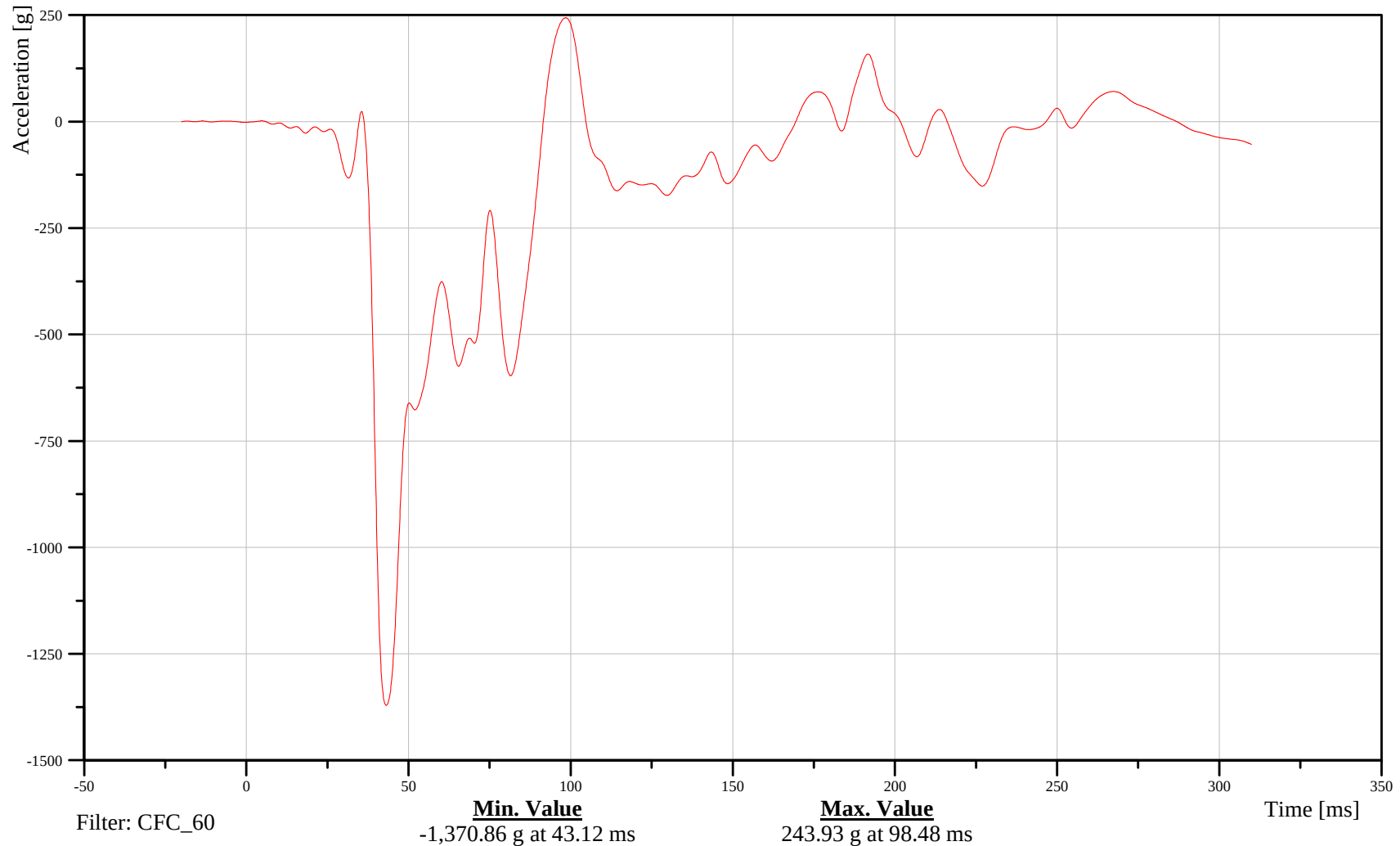
Target Vehicle Right Front Brake Caliper X-Axis Acceleration

Customer: VRTC

23VEHCRI0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

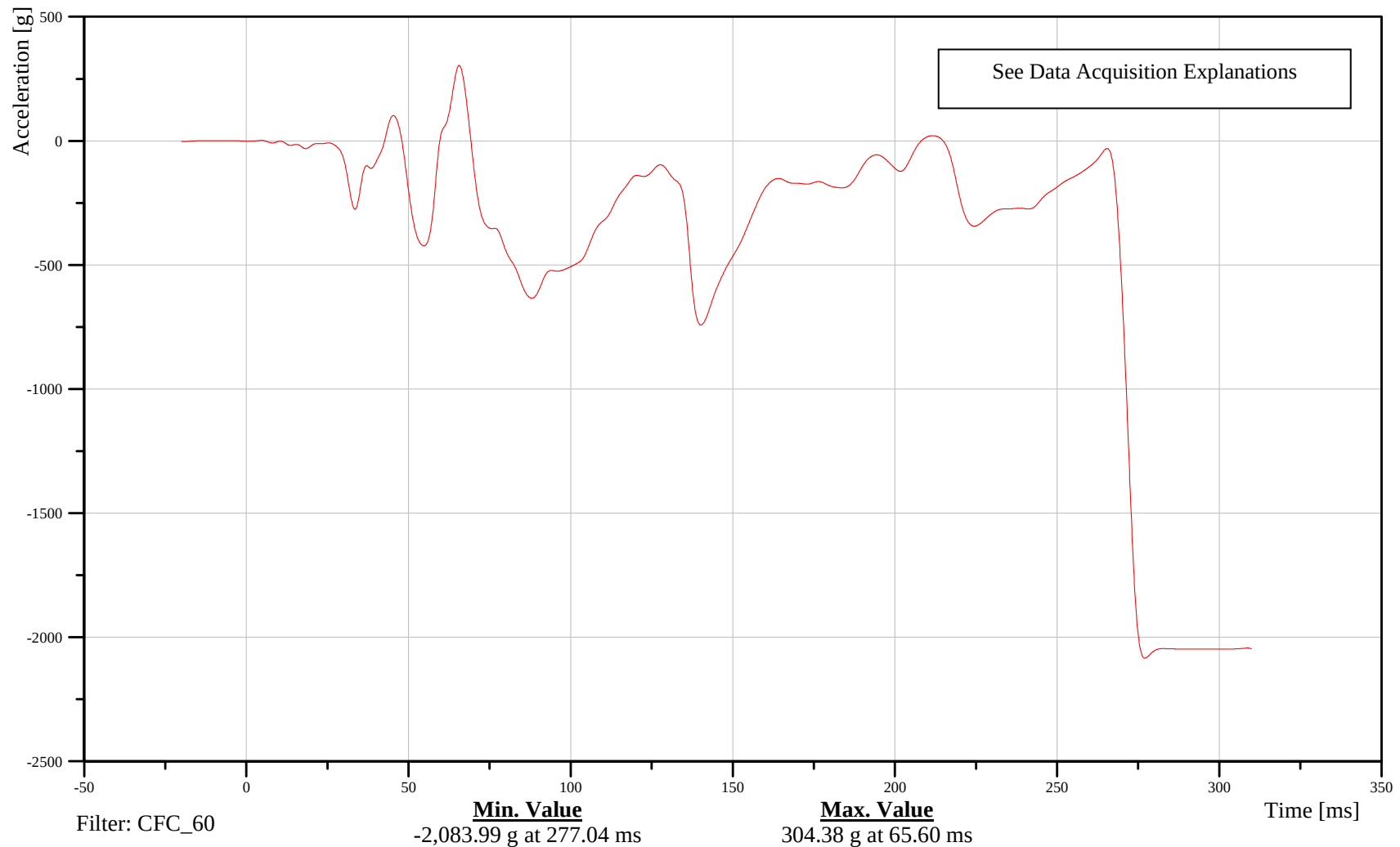
Target Vehicle Left Front Brake Caliper X-Axis Acceleration

Customer: VRTC

21VEHICLE0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

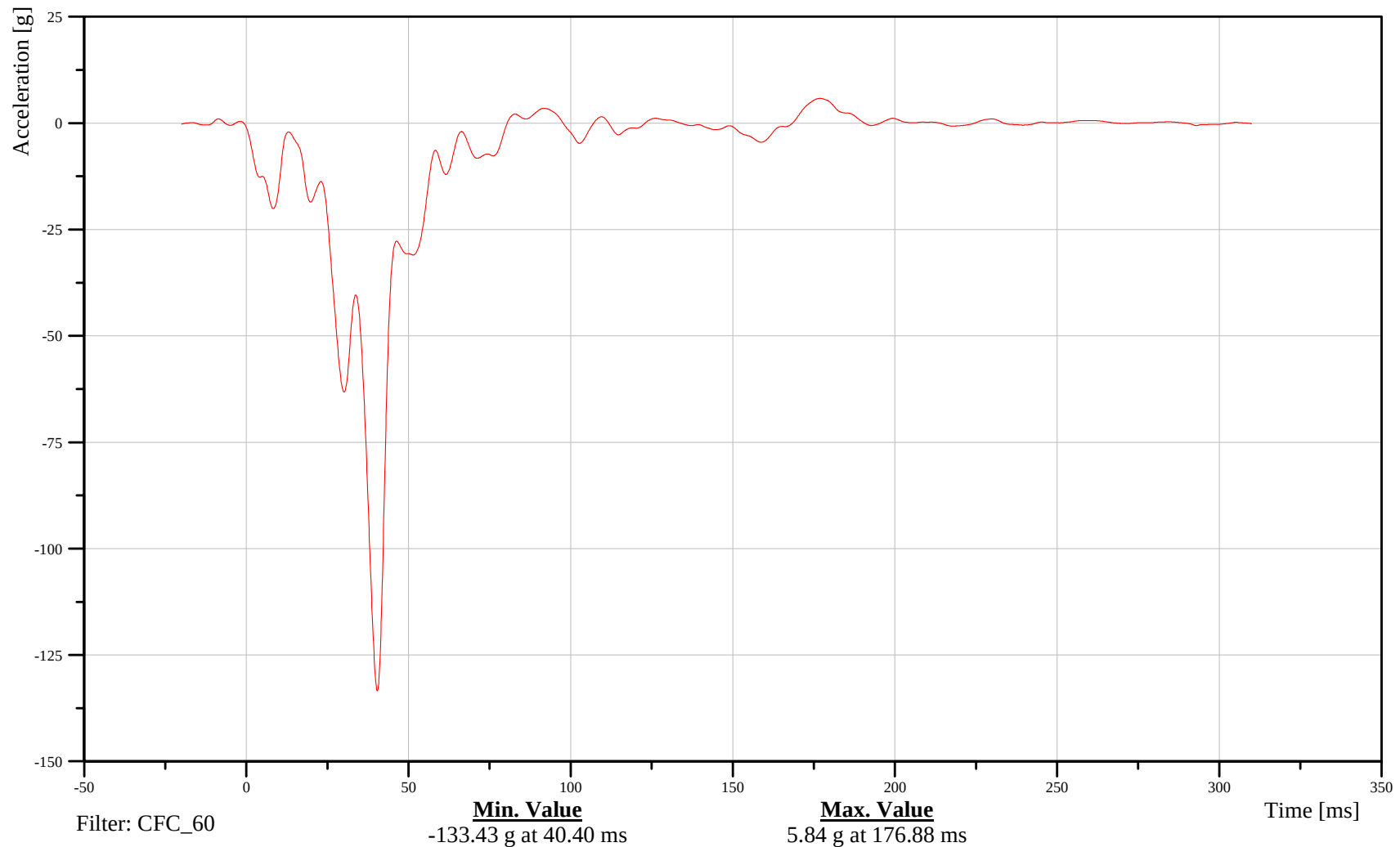
Target Vehicle Toe Pan Accelerator X-Axis Acceleration

Customer: VRTC

21PEAC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

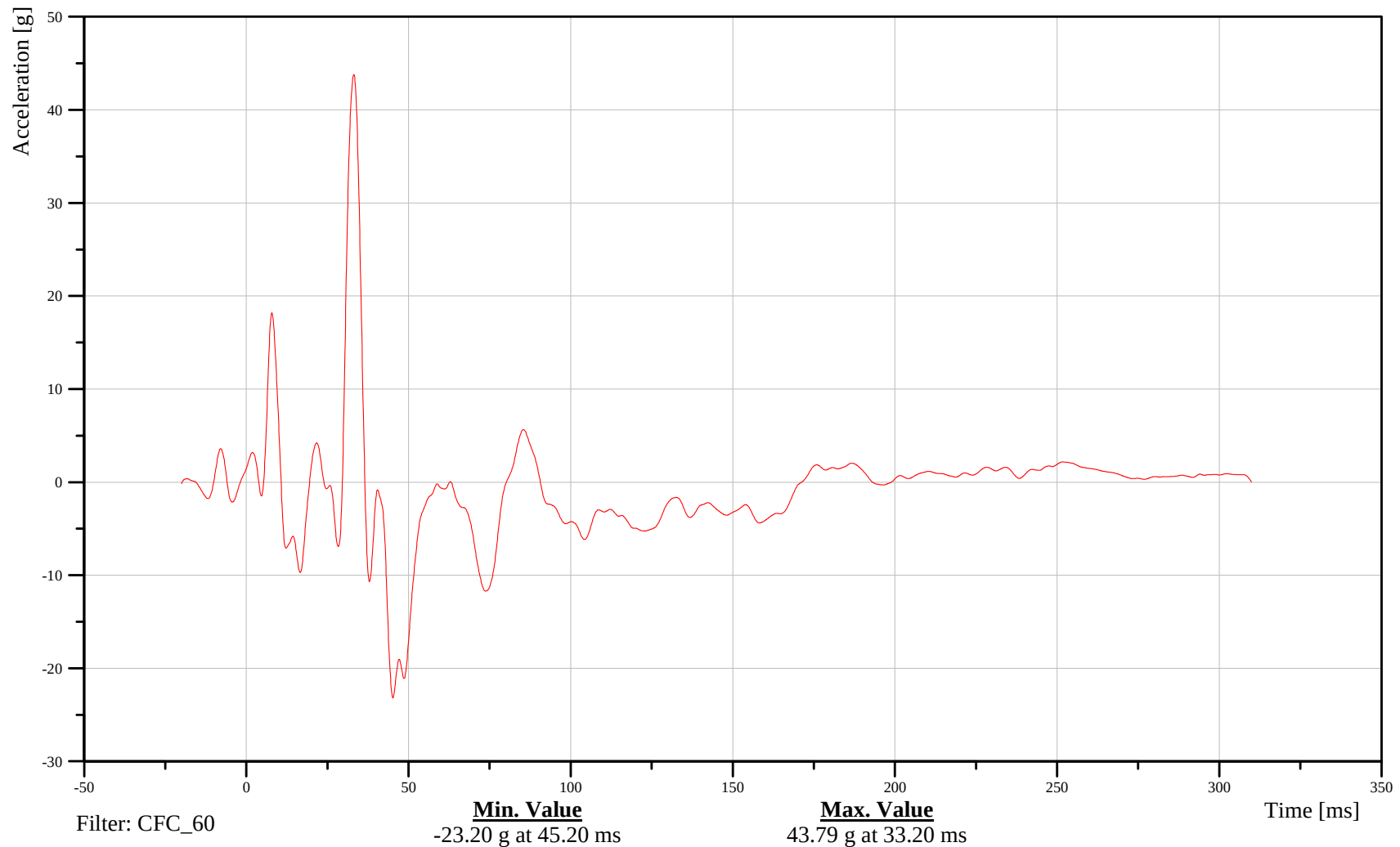
Target Vehicle Toe Pan Accelerator Z-Axis Acceleration

Customer: VRTC

21PEAC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

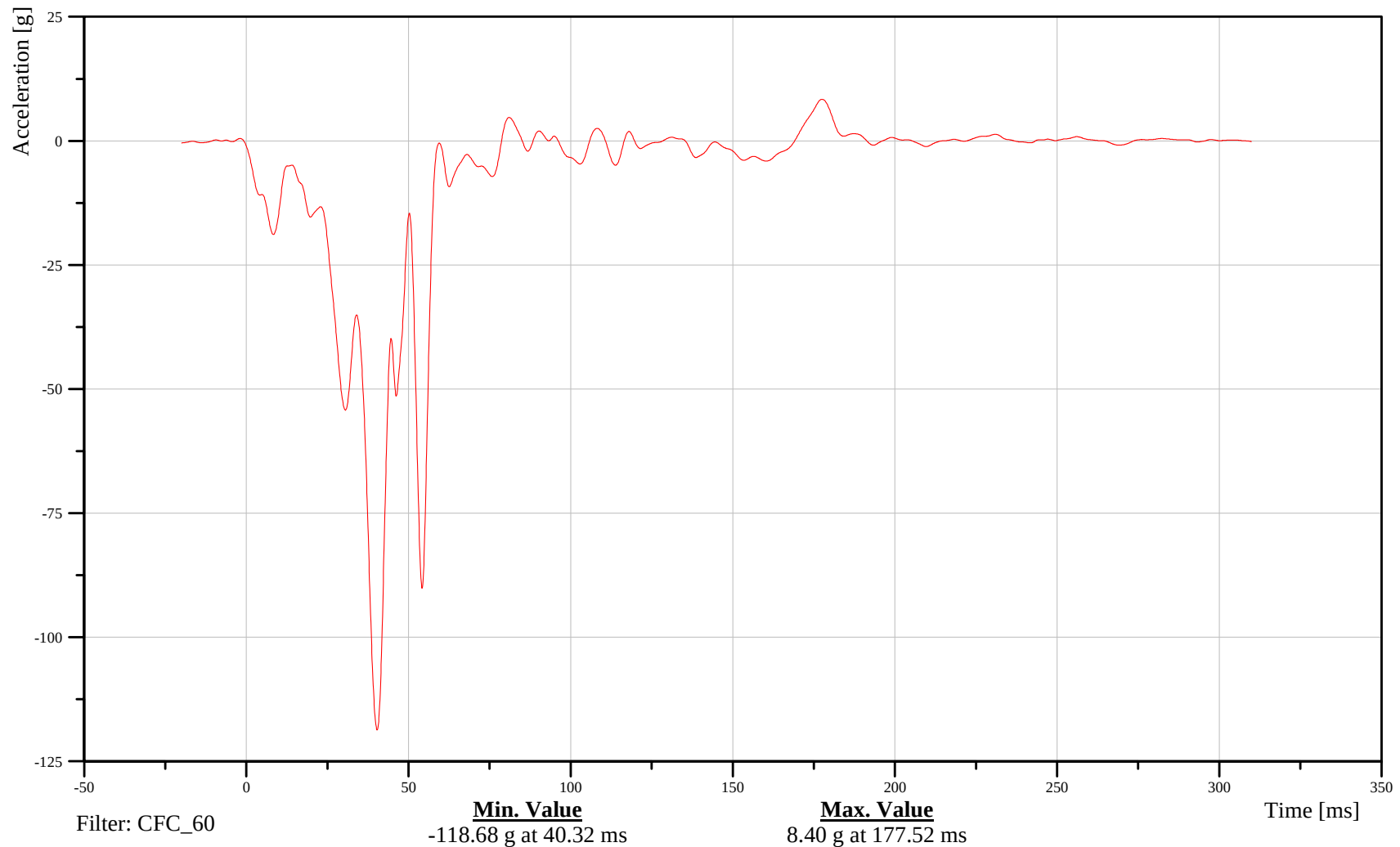
Target Vehicle Toe Pan Footrest X-Axis Acceleration

Customer: VRTC

21VEHC000001ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

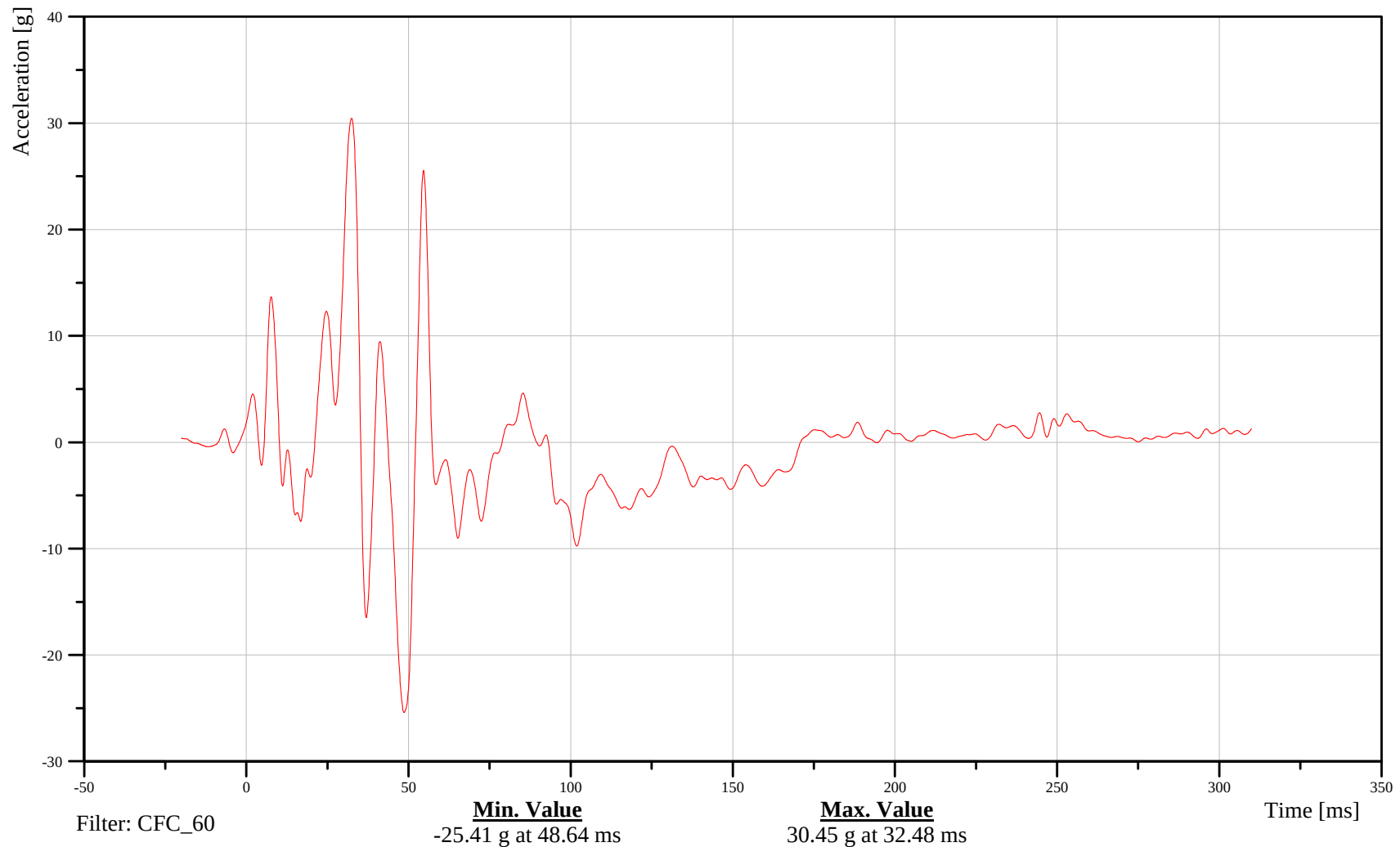
Target Vehicle Toe Pan Footrest Z-Axis Acceleration

Customer: VRTC

21VEHC000001ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

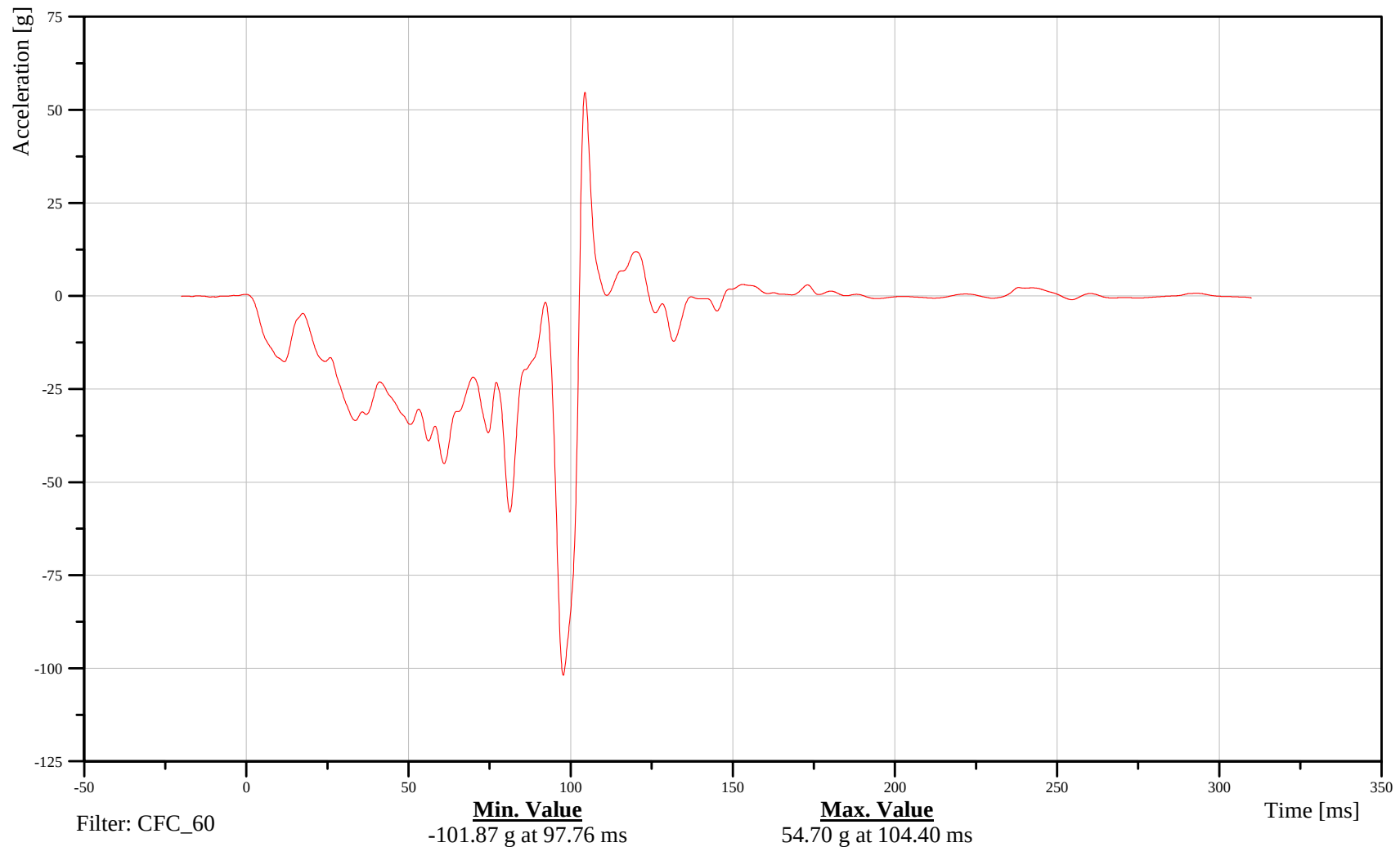
Target Vehicle Rear Tunnel Center X-Axis Acceleration

Customer: VRTC

25TUNNCY0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

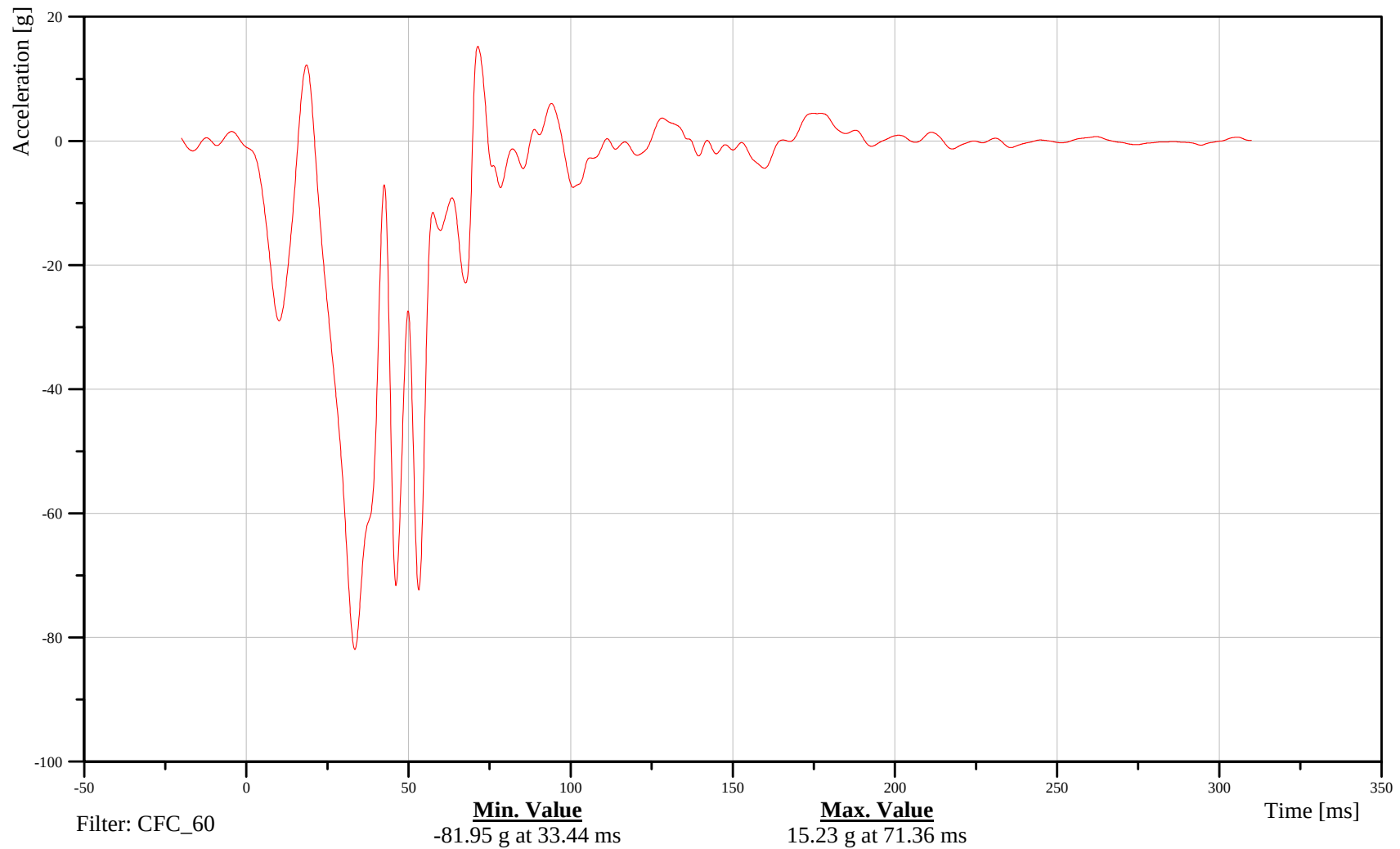
Target Vehicle CG X-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

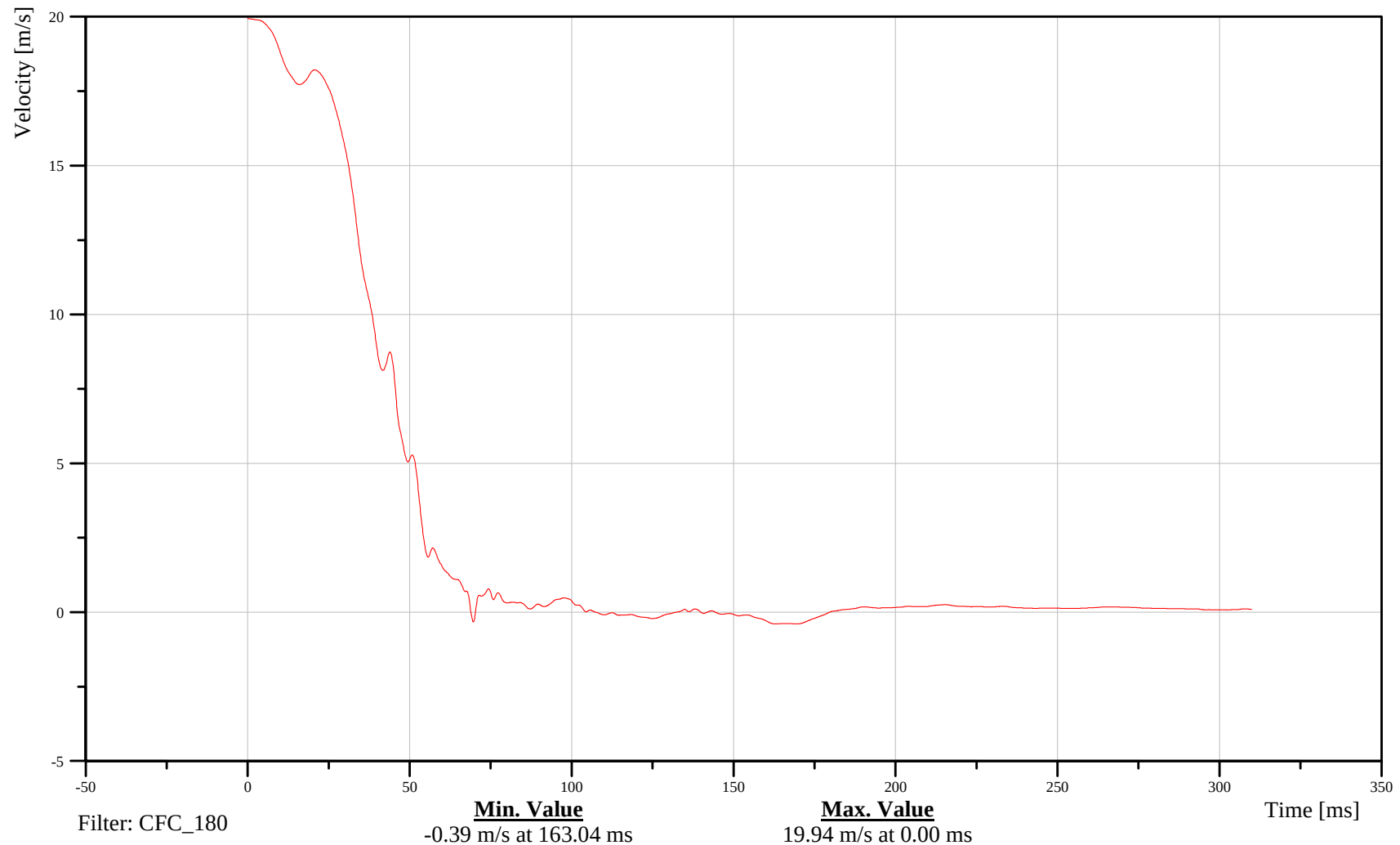
Target Vehicle CG X-Axis Velocity

Customer: VRTC

20VEHCCG0000VEXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

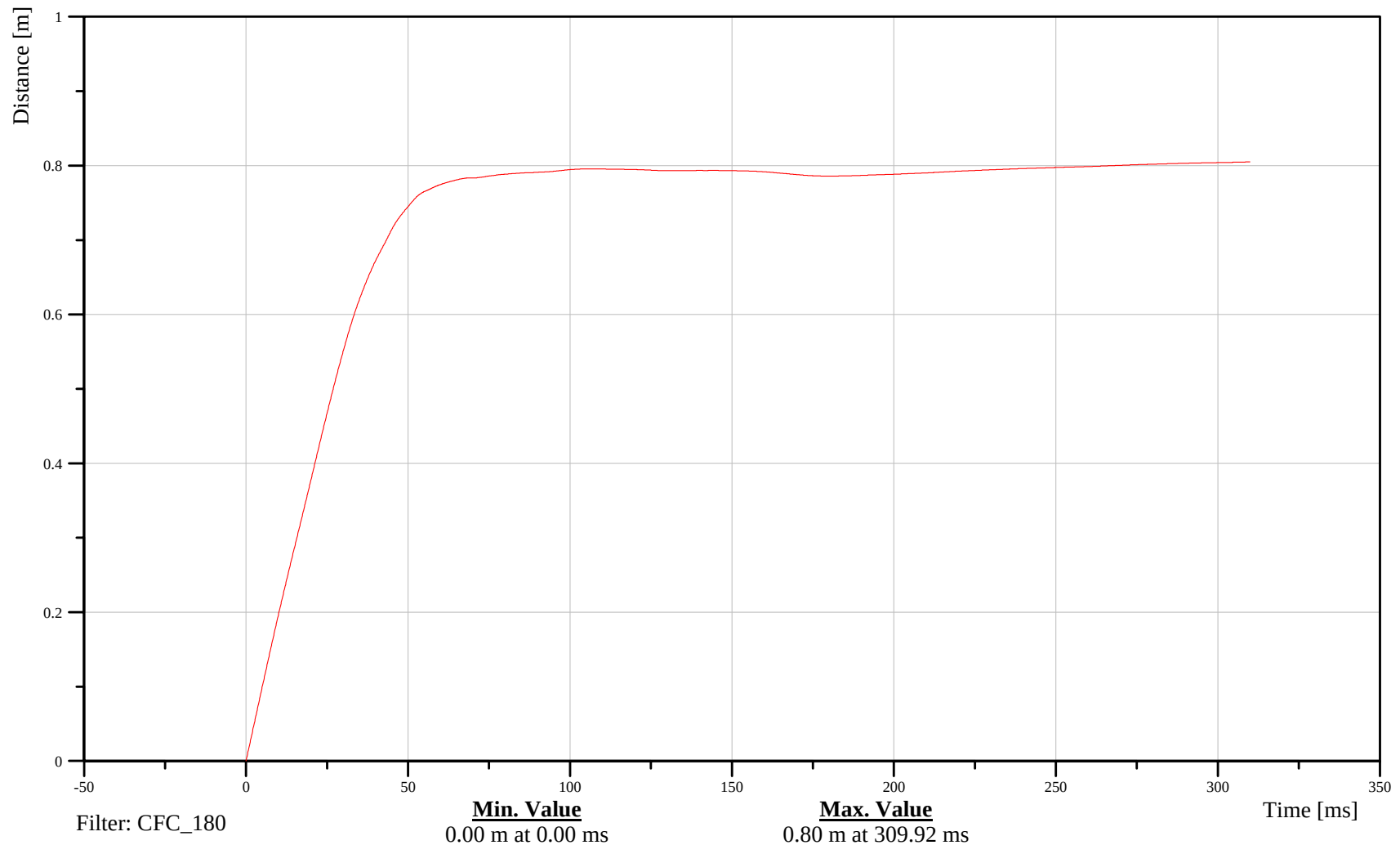
Target Vehicle CG X-Axis Displacement

Customer: VRTC

20VEHCCG0000DCXC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

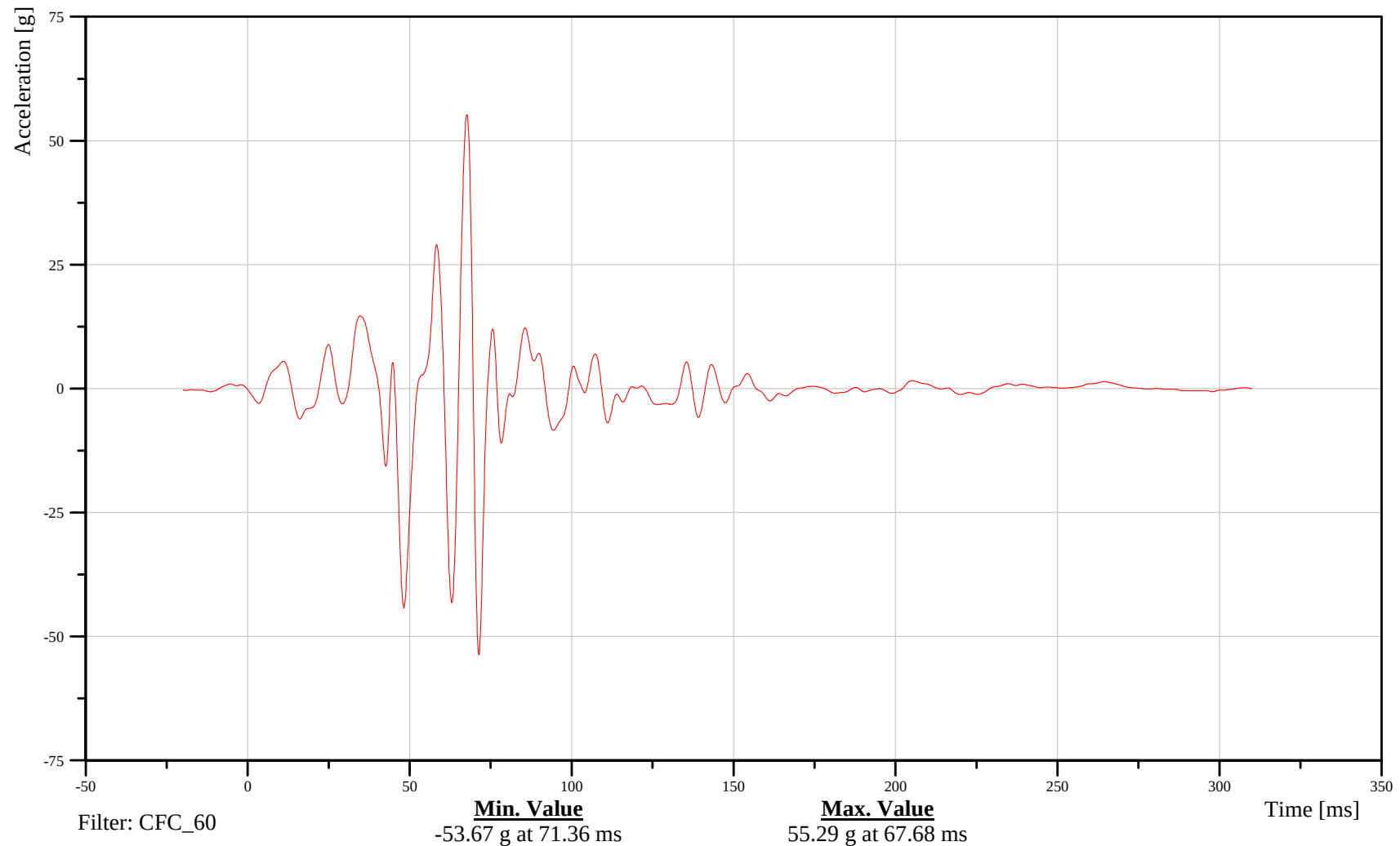
Target Vehicle CG Y-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

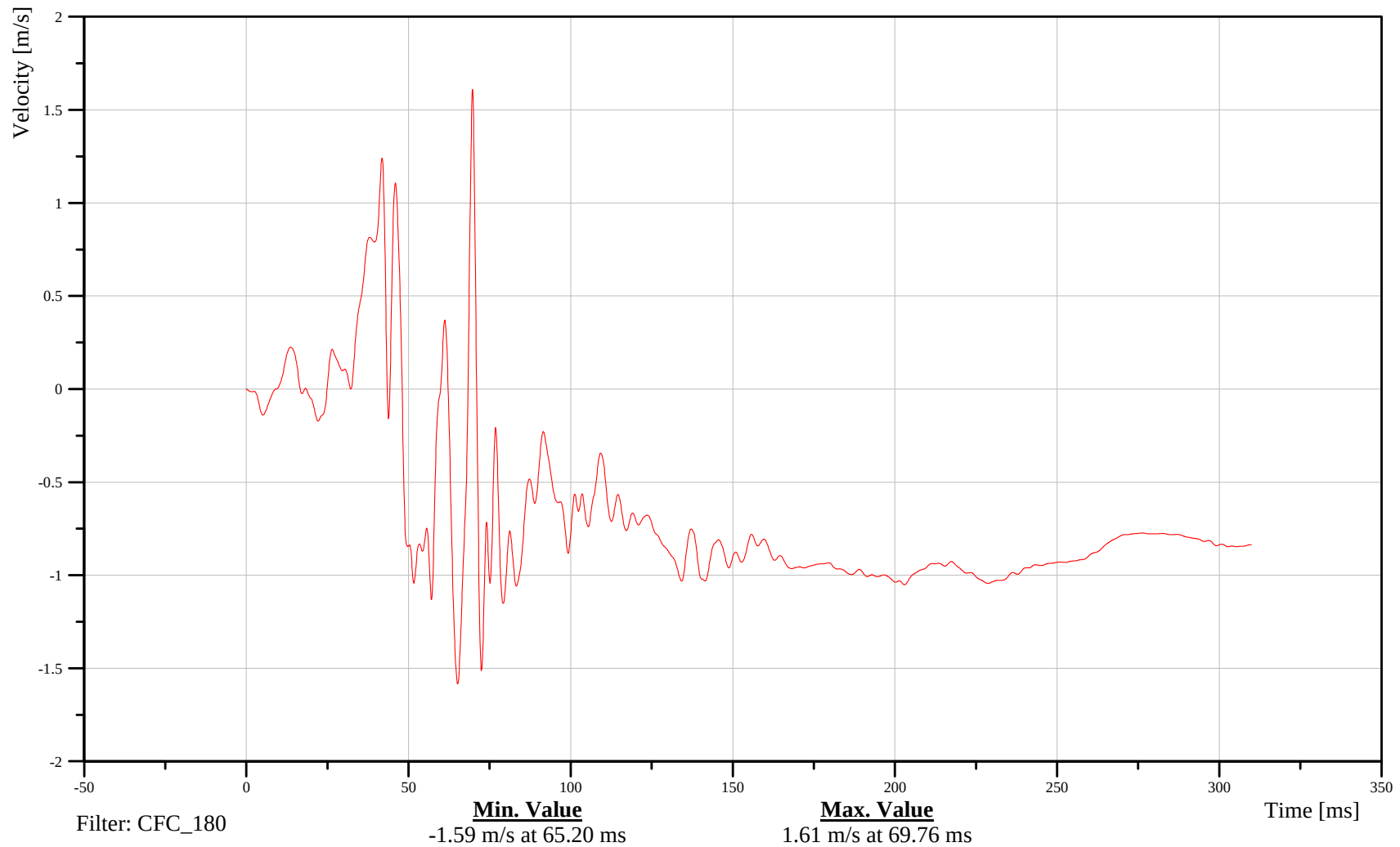
Target Vehicle CG Y-Axis Velocity

Customer: VRTC

20VEHCCG0000VEYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

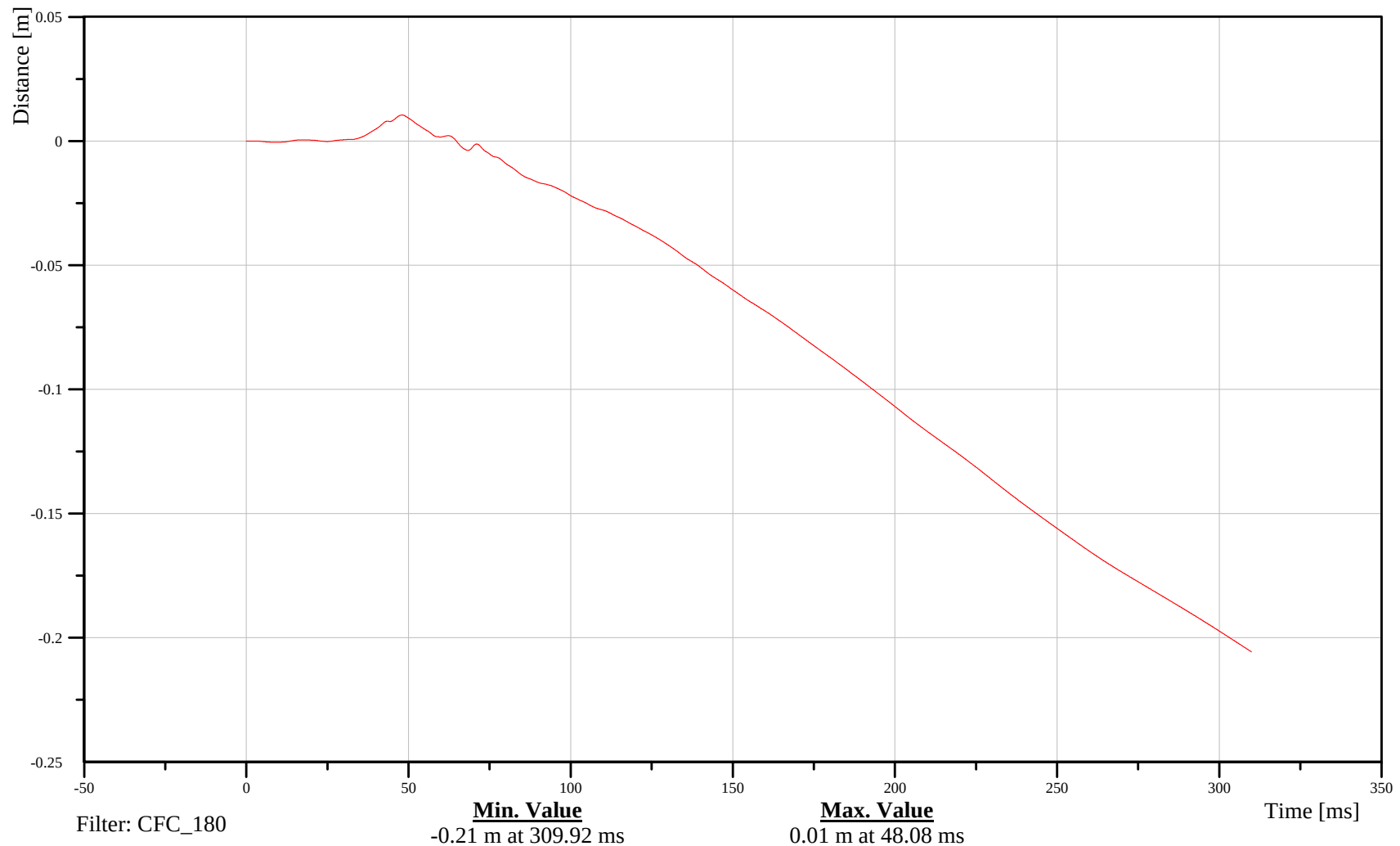
Target Vehicle CG Y-Axis Displacement

Customer: VRTC

20VEHCCG0000DCYC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

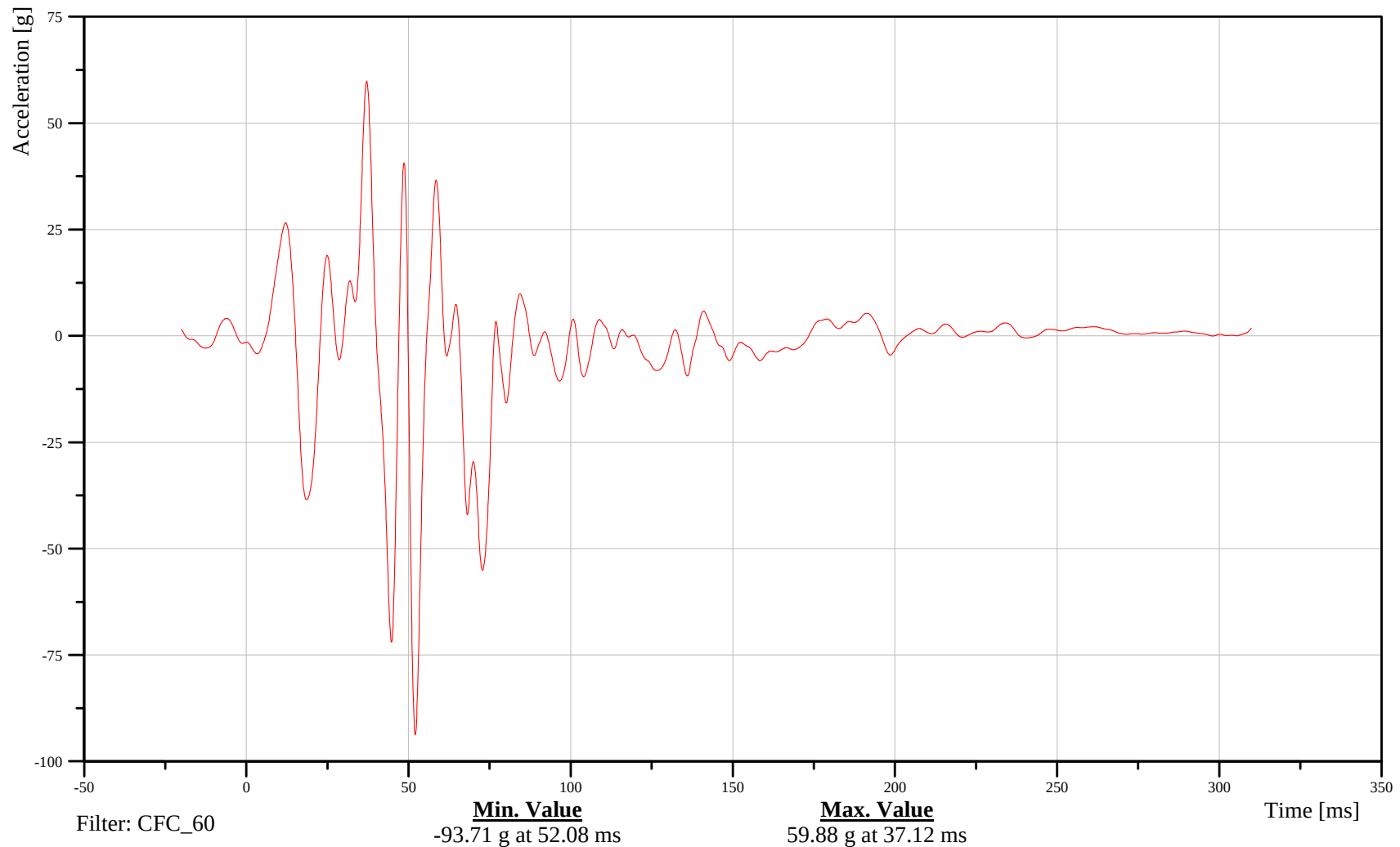
Target Vehicle CG Z-Axis Acceleration

Customer: VRTC

20VEHCCG0000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

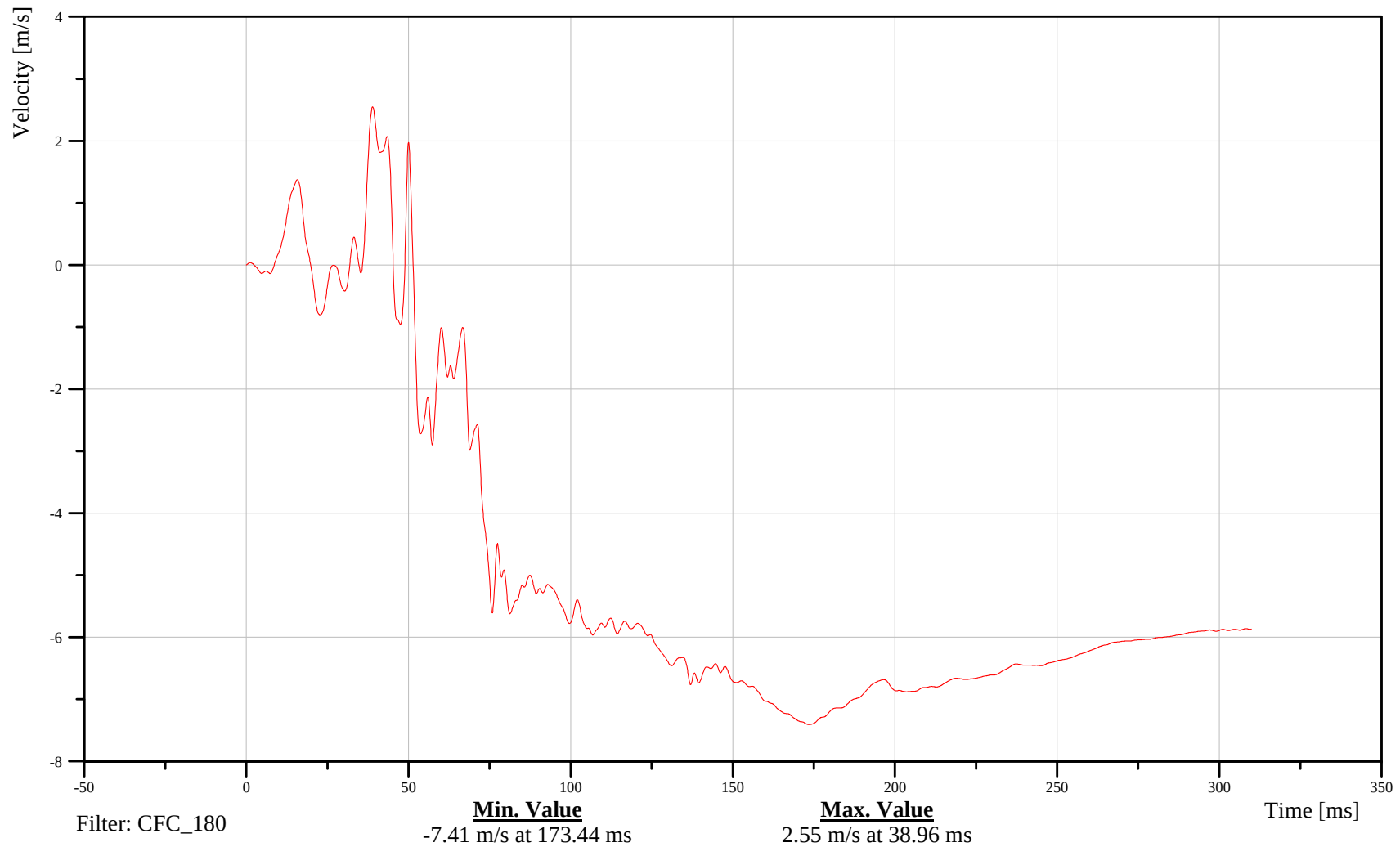
Target Vehicle CG Z-Axis Velocity

Customer: VRTC

20VEHCCG0000VEZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

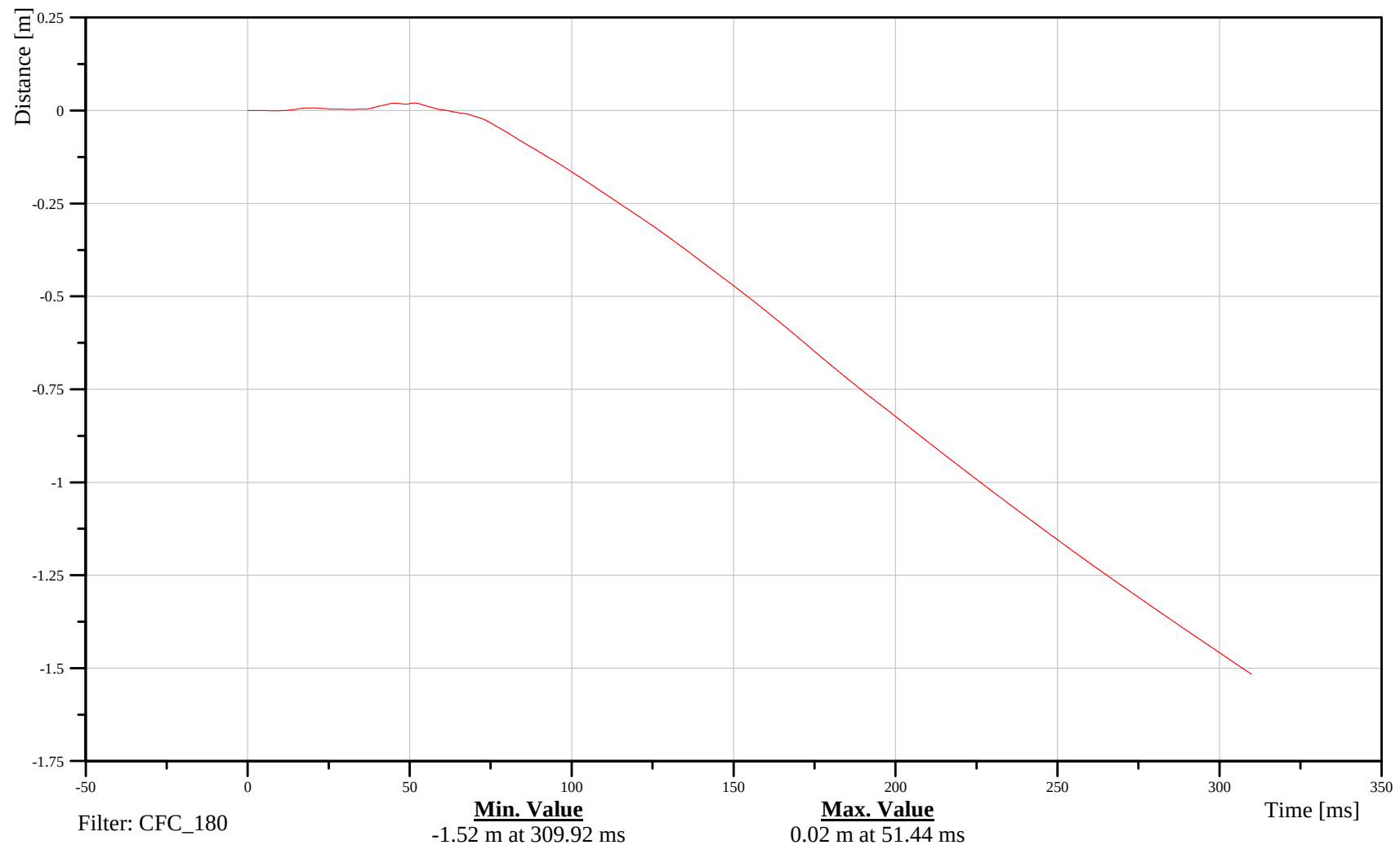
Target Vehicle CG Z-Axis Displacement

Customer: VRTC

20VEHCCG0000DCZC

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

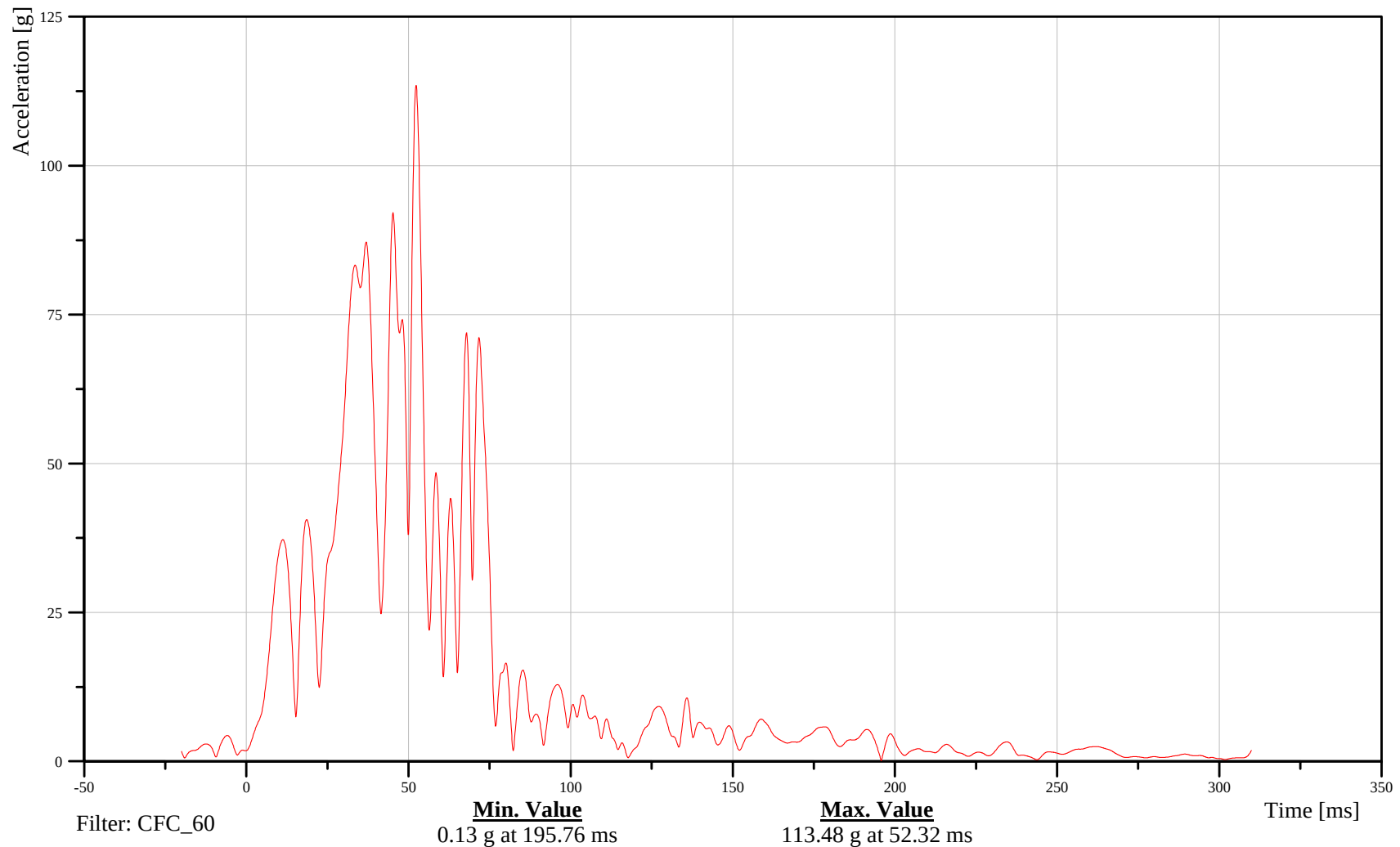
Target Vehicle CG Resultant Acceleration

Customer: VRTC

20VEHCCG0000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

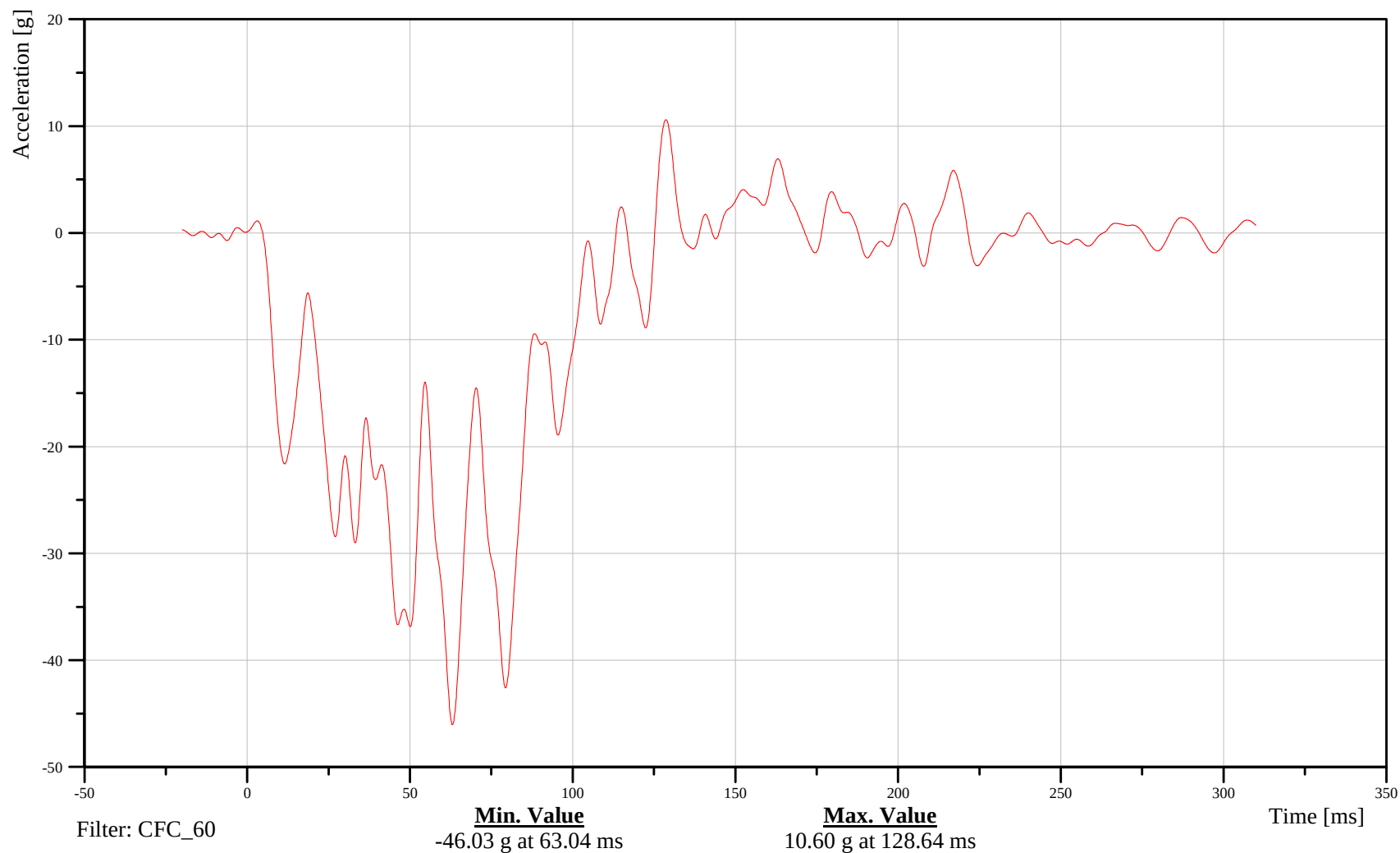
Target Vehicle Rear Deck X-Axis Acceleration

Customer: VRTC

28VEHC000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

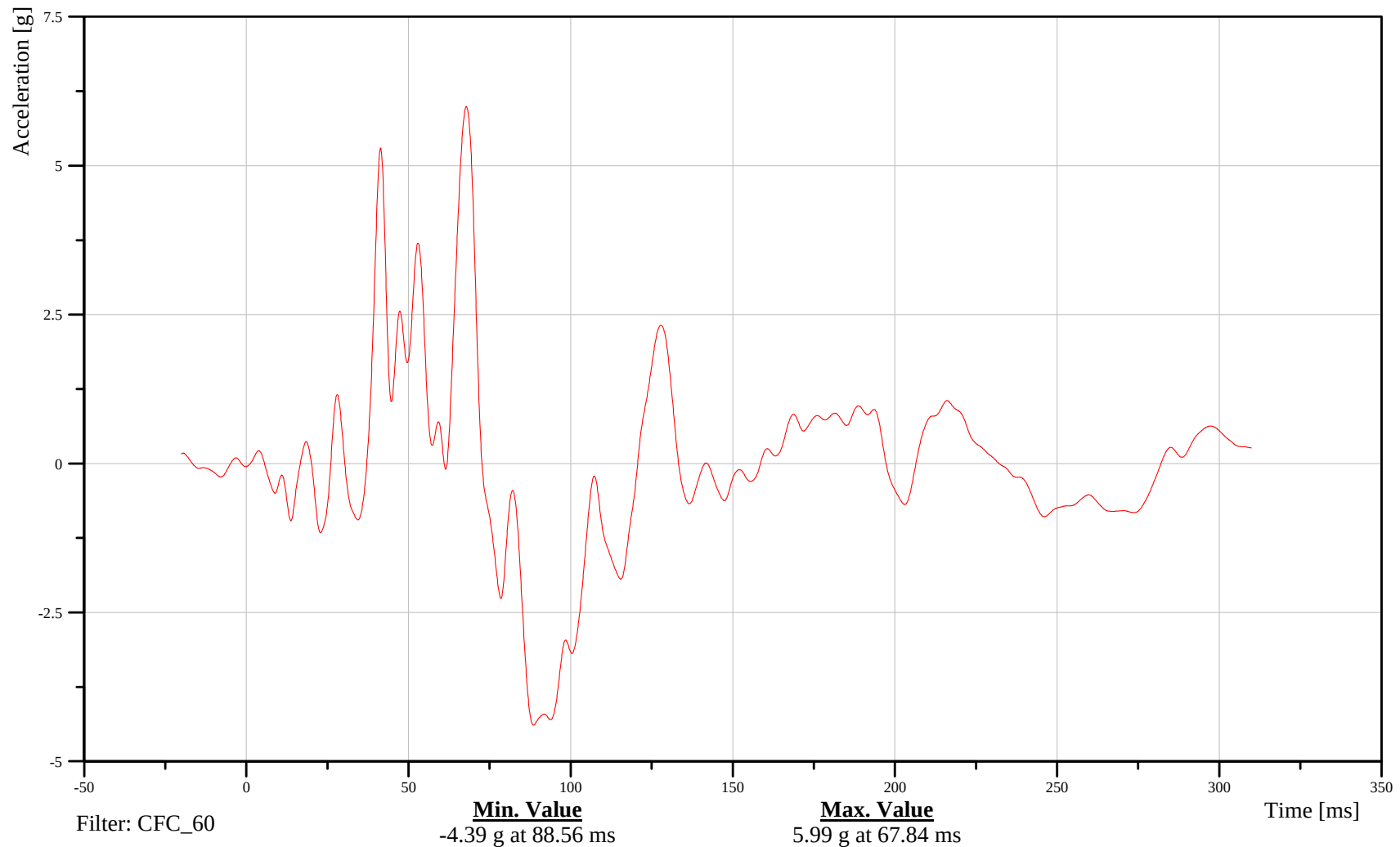
Target Vehicle Rear Deck Y-Axis Acceleration

Customer: VRTC

28VEHC000000ACYD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

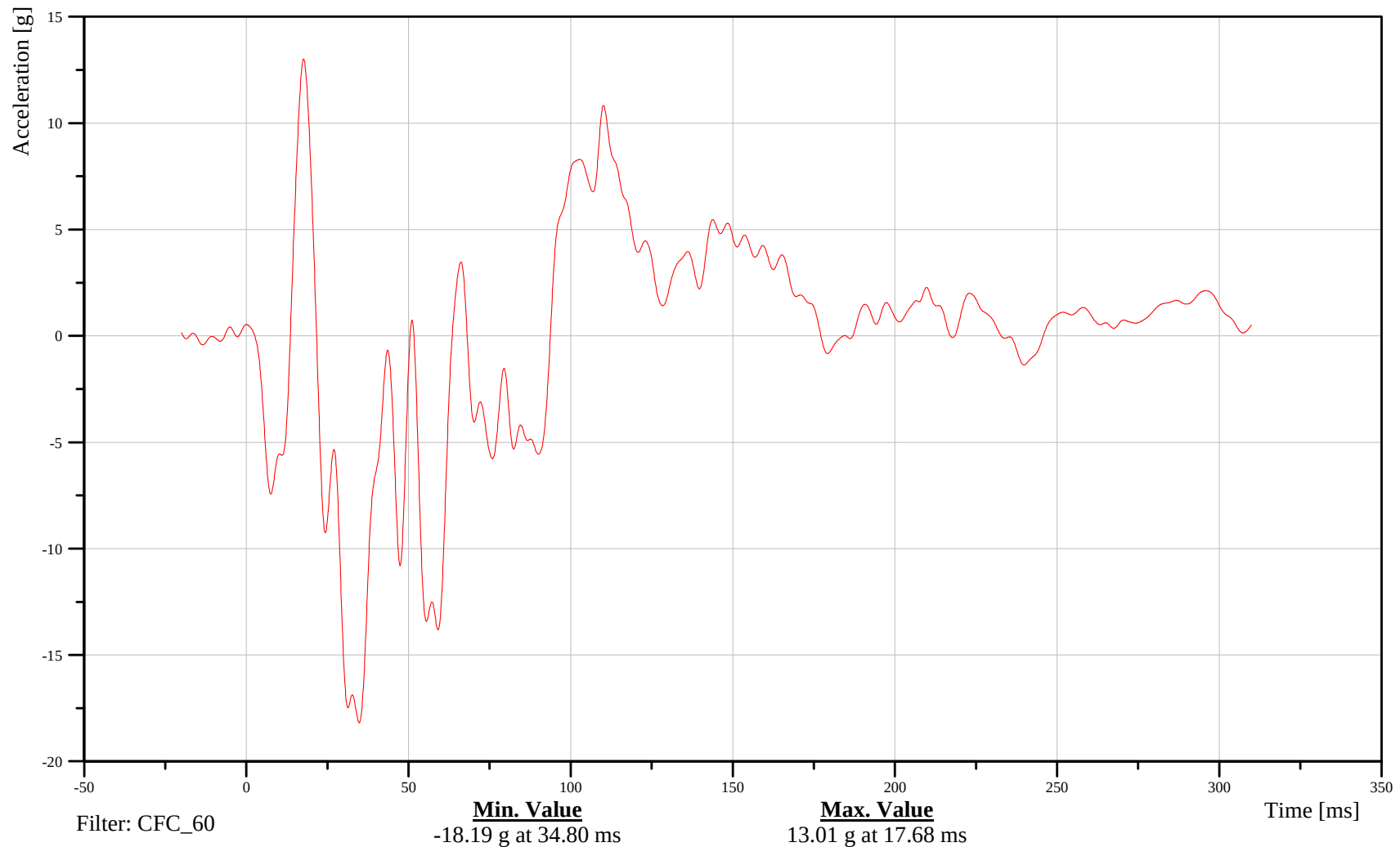
Target Vehicle Rear Deck Z-Axis Acceleration

Customer: VRTC

28VEHC000000ACZD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

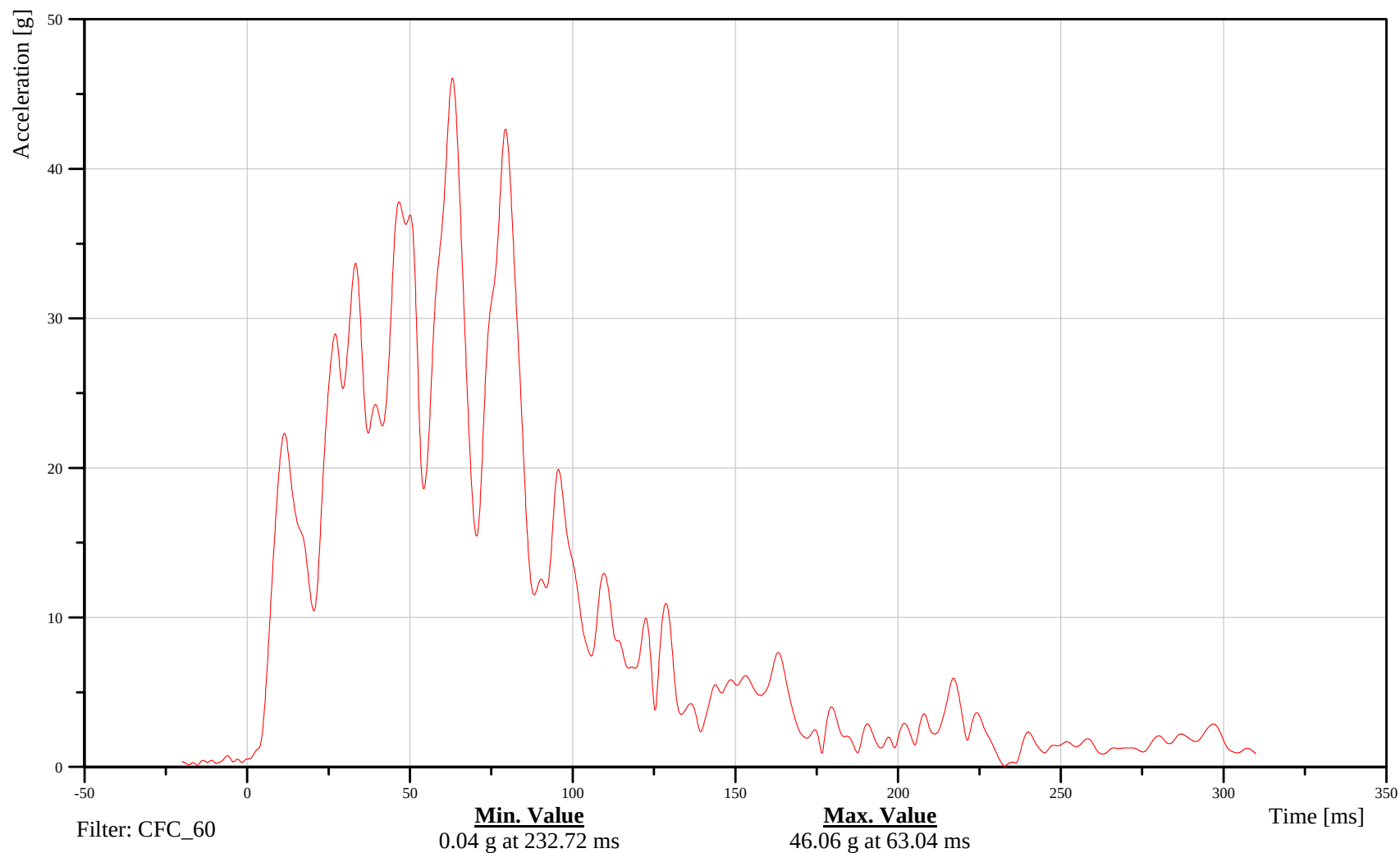
Target Vehicle Rear Deck Resultant Acceleration

Customer: VRTC

28VEHC000000ACRD

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Vehicle Driver Airbag - Primary

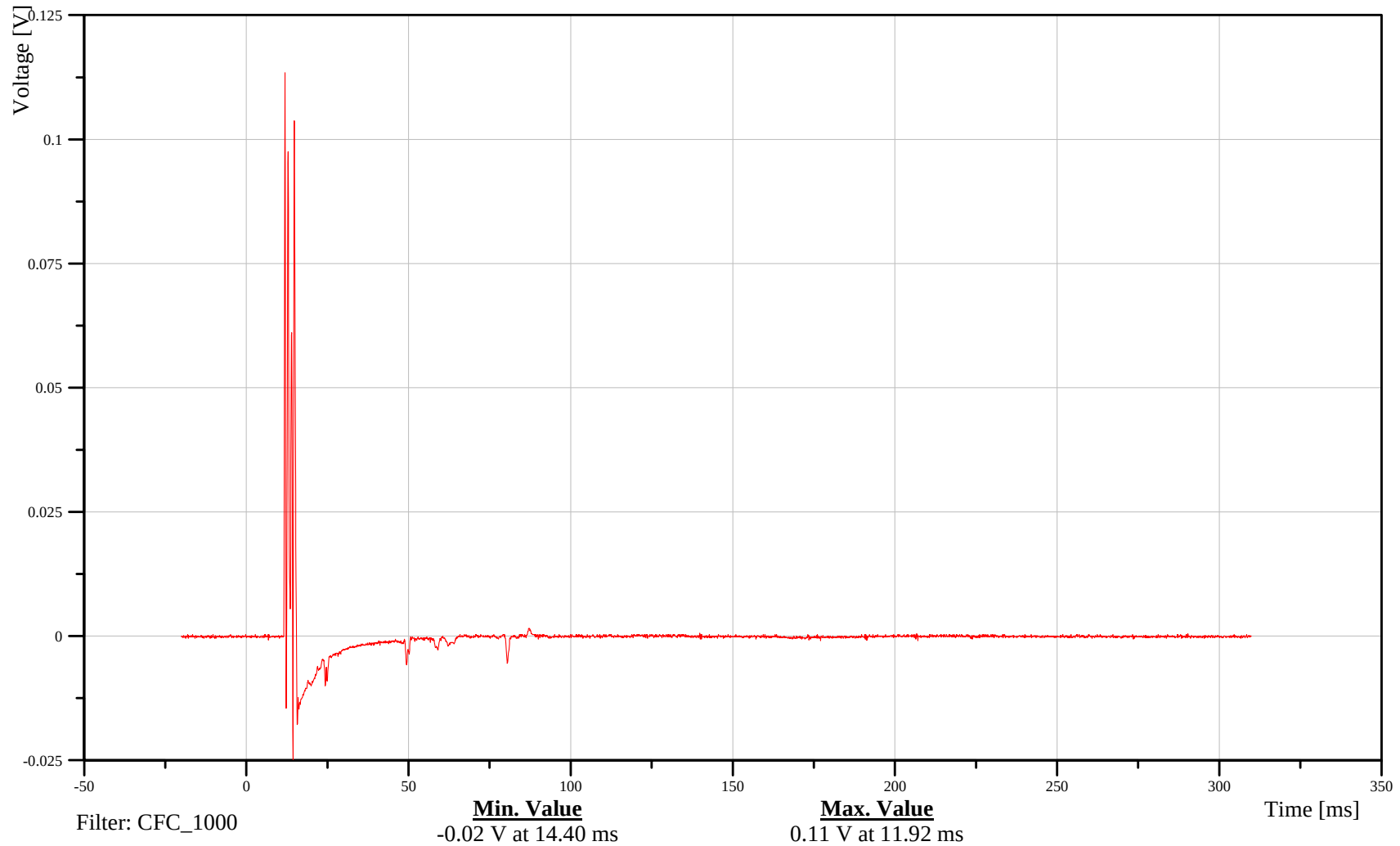
Date: 03/20/2006
Time: 08:08

Customer: VRTC

21AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

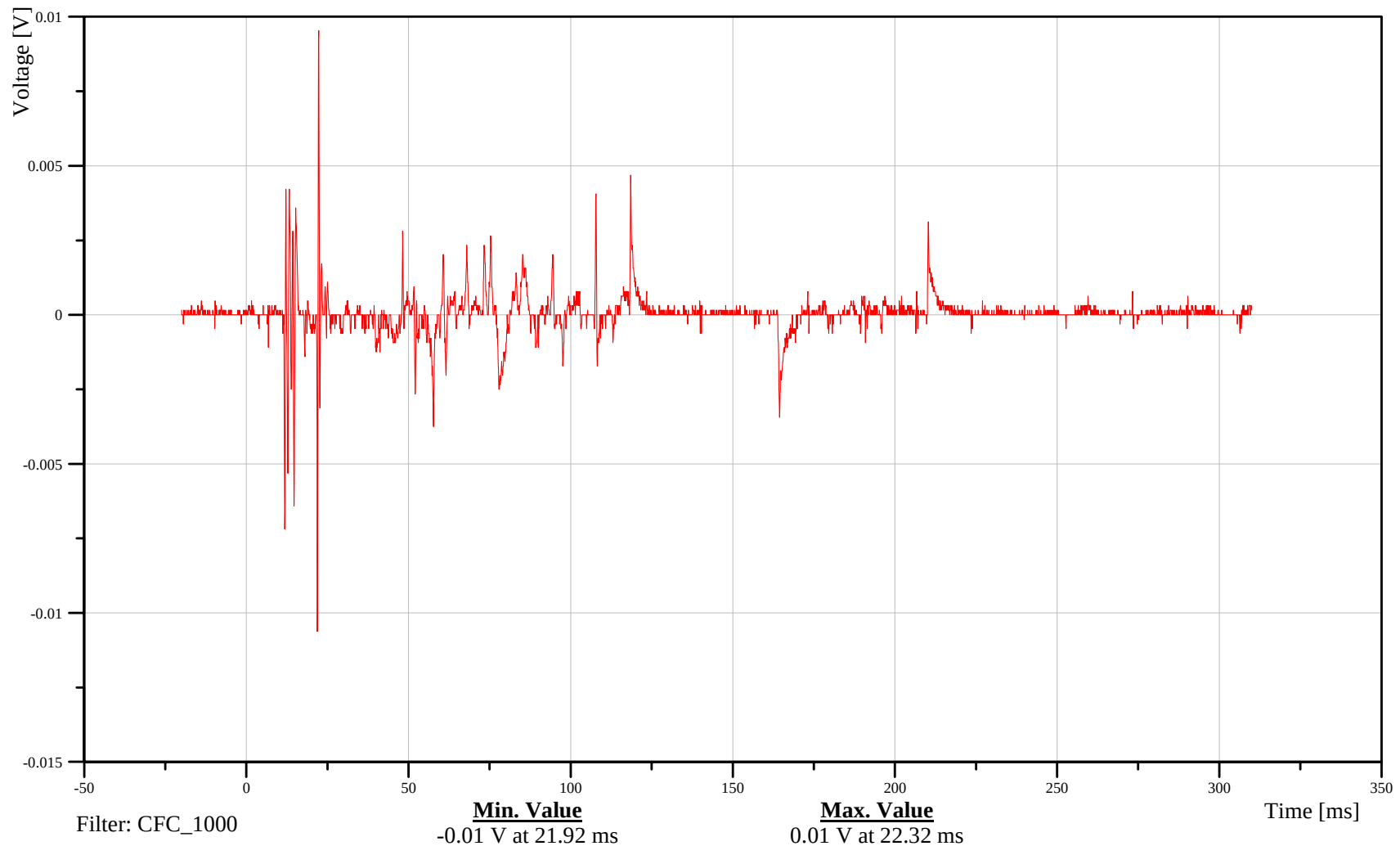
Target Vehicle Driver Airbag - Secondary

Customer: VRTC

21AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006
Time: 08:08

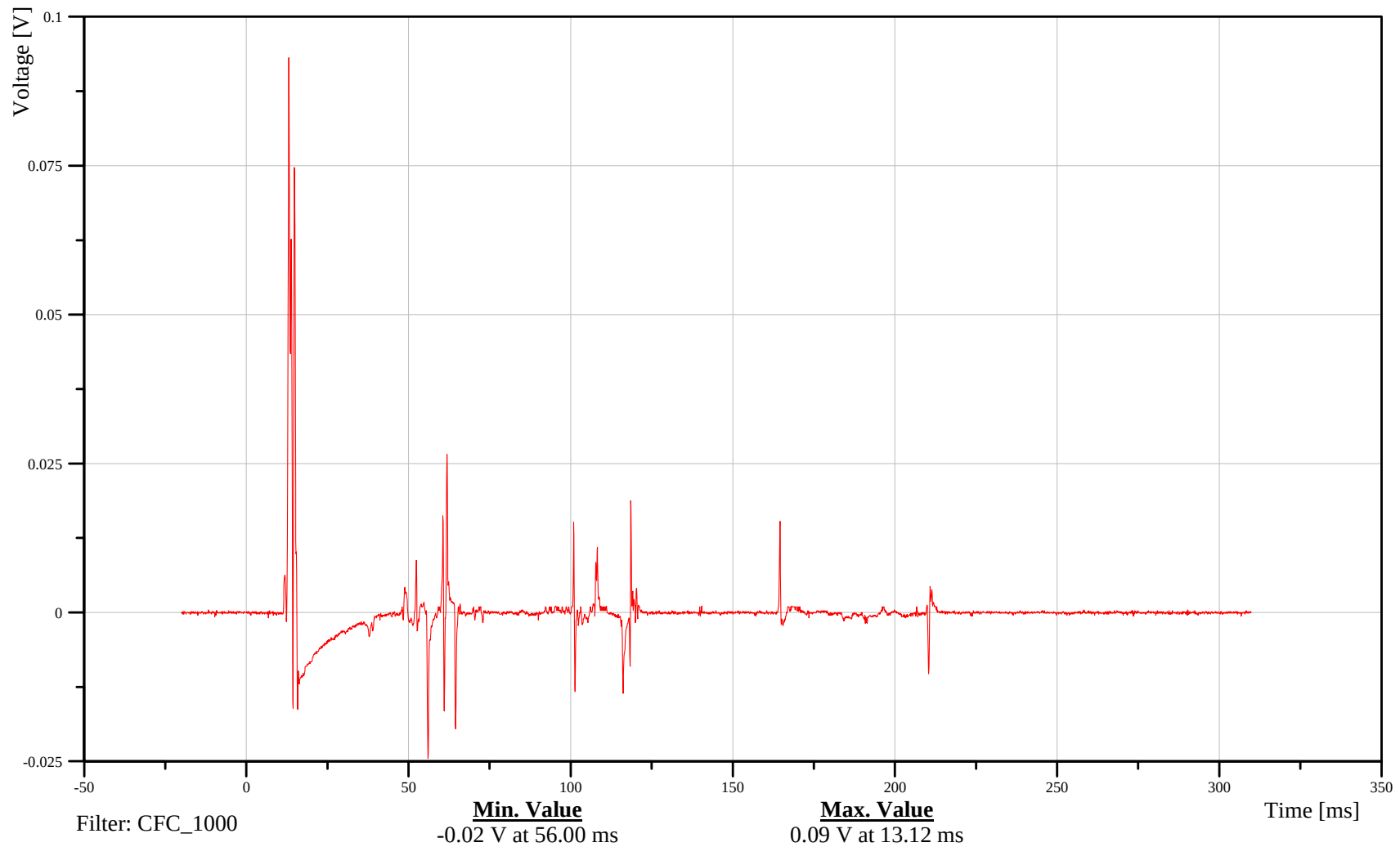
Target Vehicle Passenger Airbag - Primary

Customer: VRTC

23AIRBFR0100EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

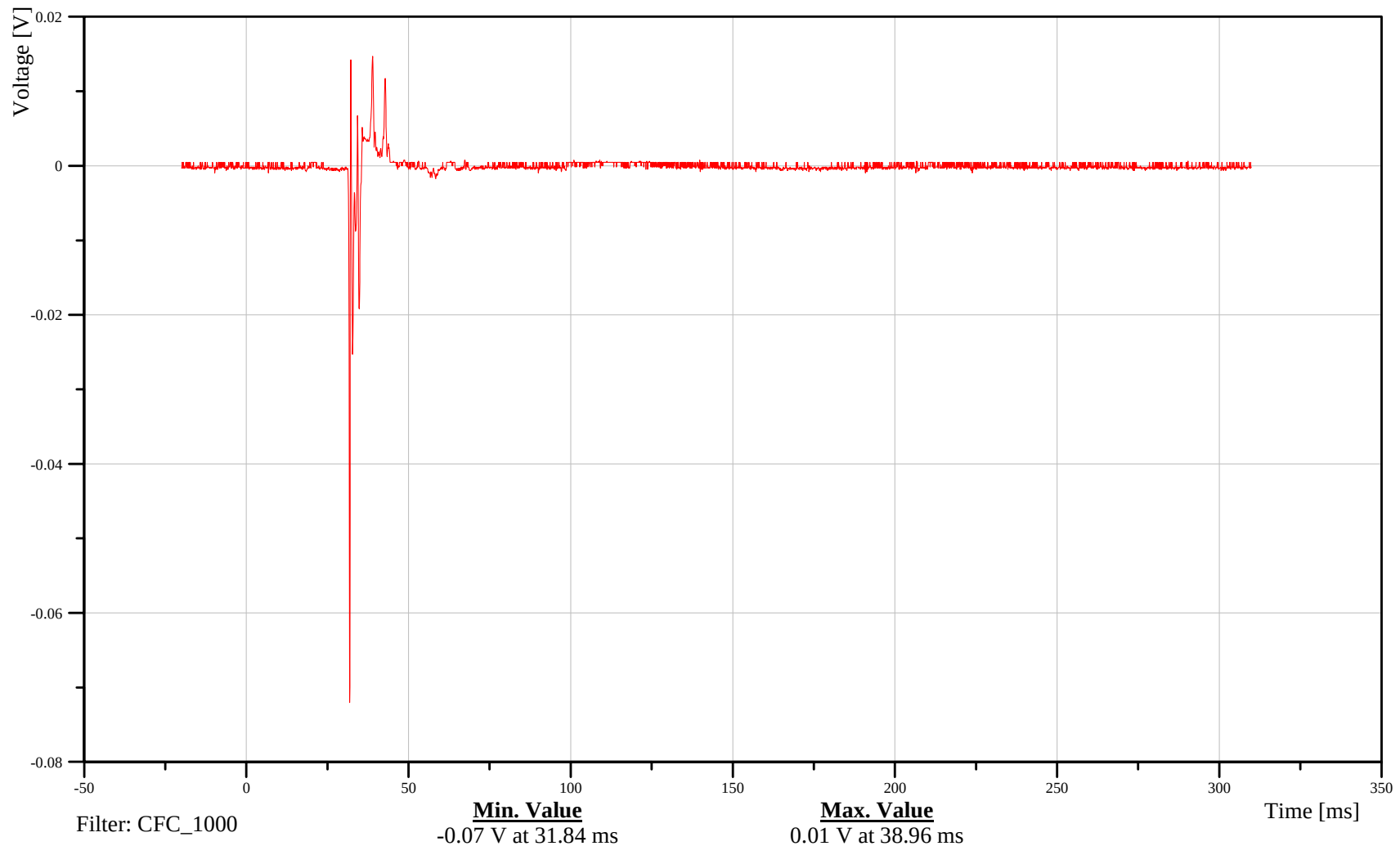
Target Vehicle Passenger Airbag - Secondary

Customer: VRTC

23AIRBFR0200EV0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Vehicle Driver Lap Belt Spool

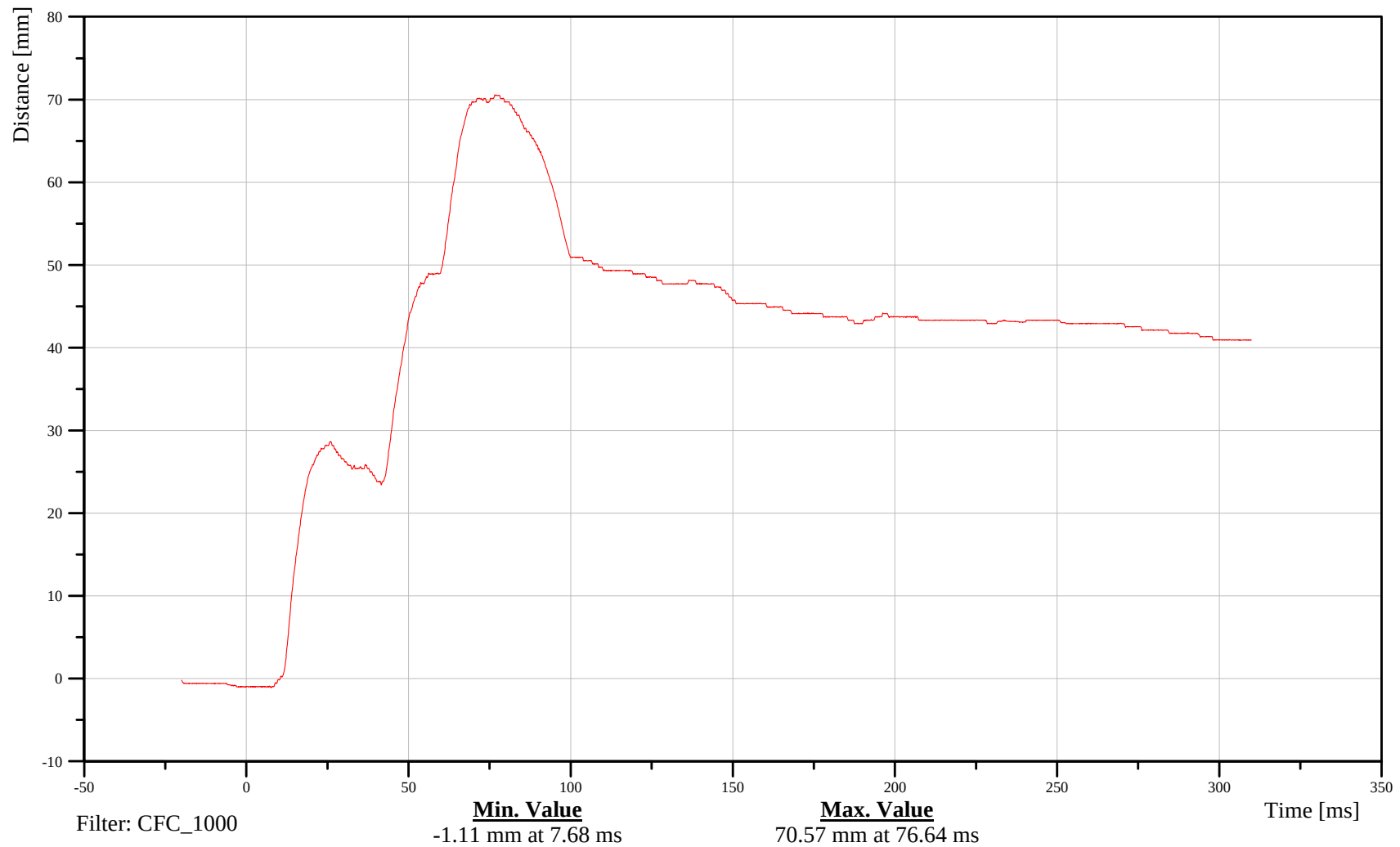
Date: 03/20/2006
Time: 08:08

Customer: VRTC

21SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

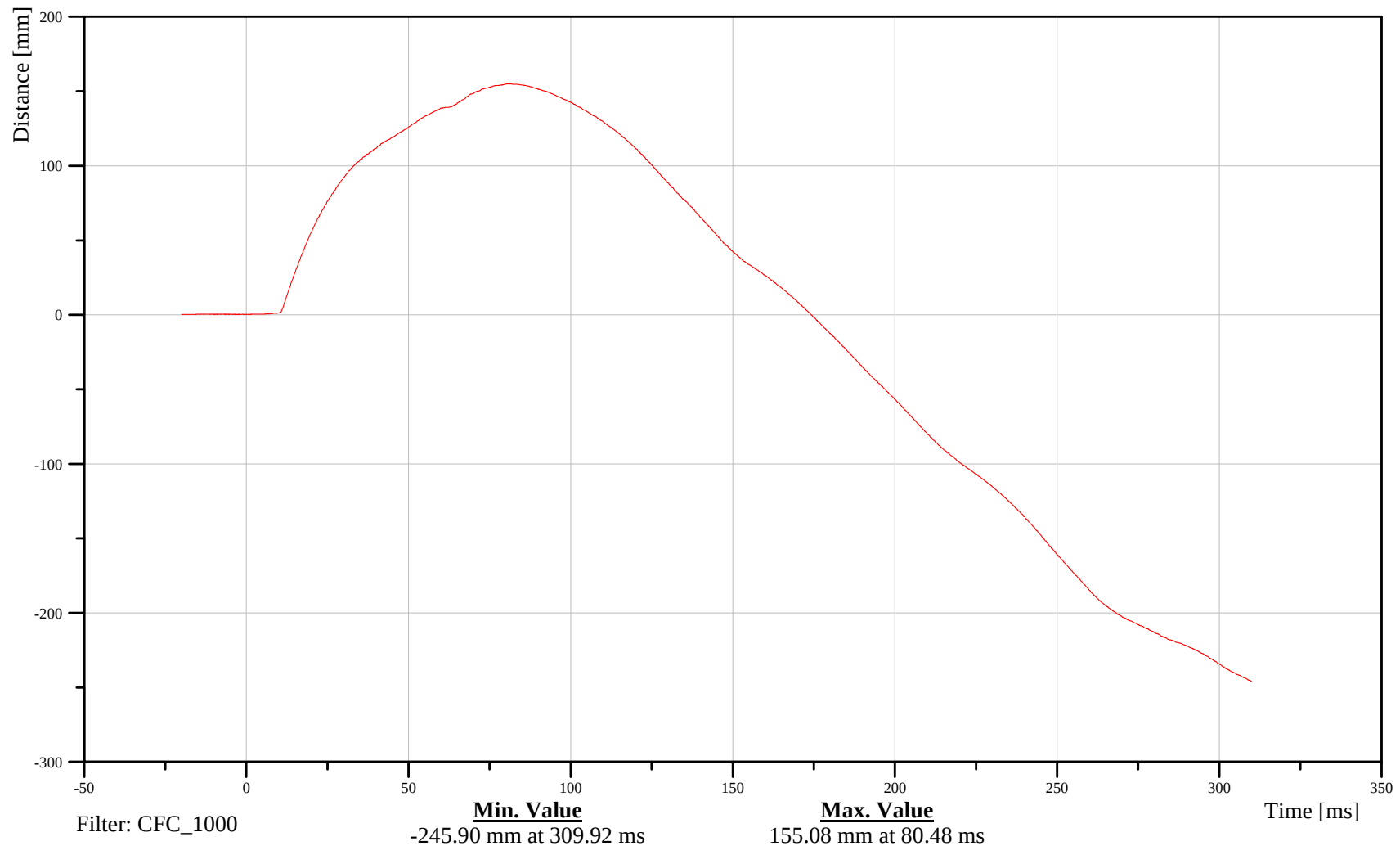
Target Vehicle Driver Shoulder Belt Spool and Retraction

Customer: VRTC

21SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Vehicle RF Pass Lap Belt Spool

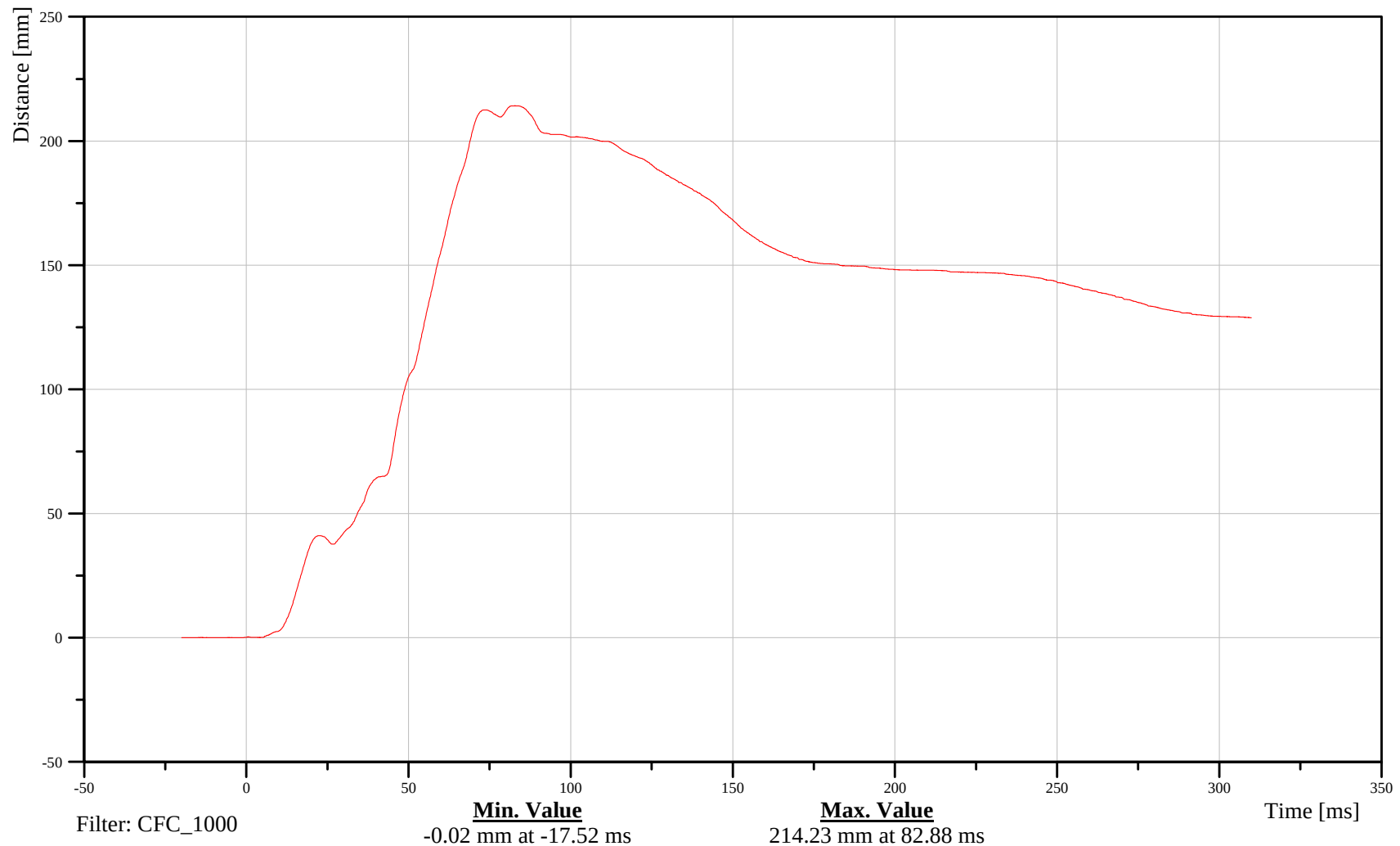
Date: 03/20/2006
Time: 08:08

Customer: VRTC

23SEBA0000B5DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Date: 03/20/2006

Time: 08:08

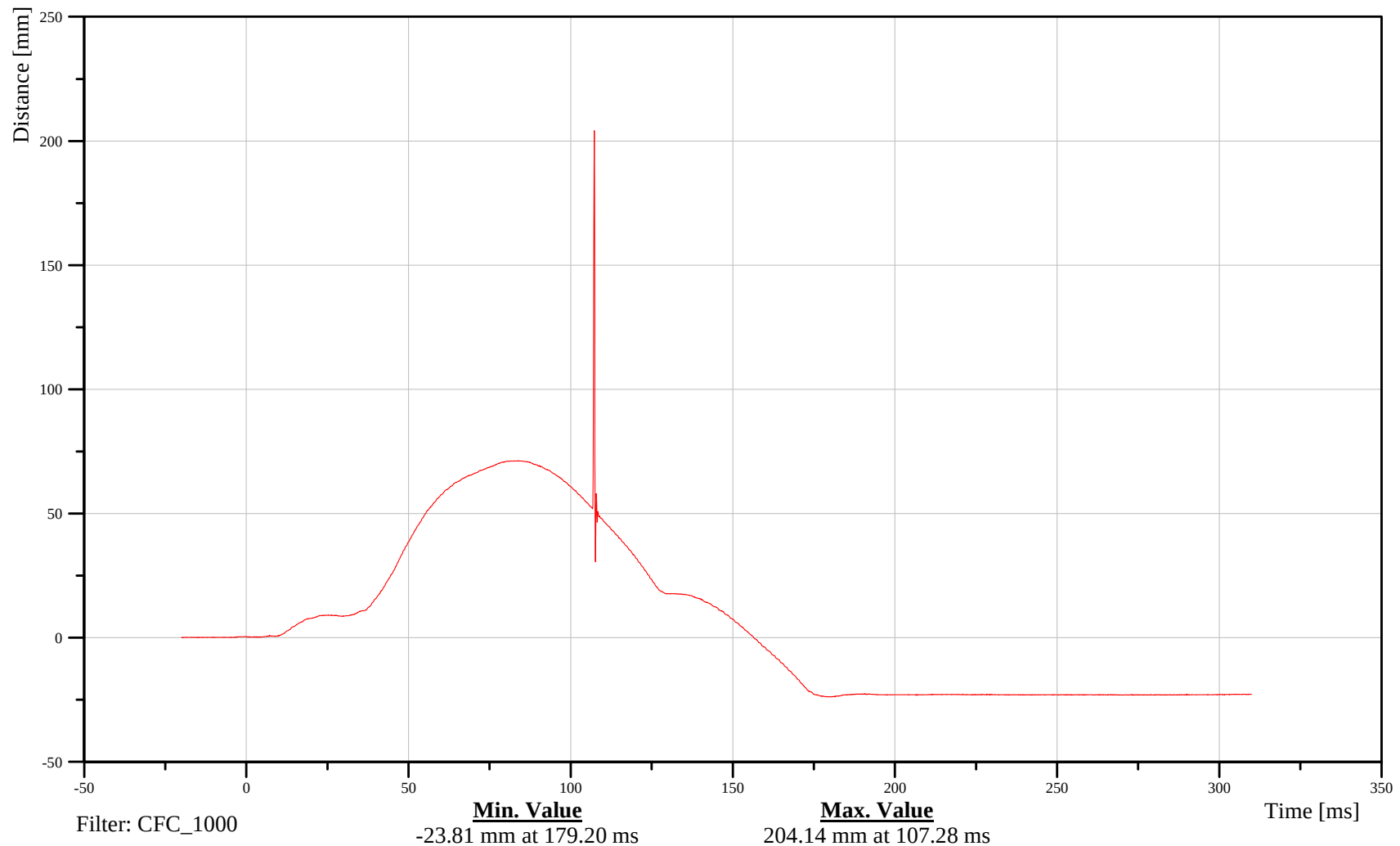
Target Vehicle RF Pass Shoulder Belt Spool and Retraction

Customer: VRTC

23SEBA0000B3DS0A

TRC Inc. Test Lab: CTF

Test Number: 060317





2005 Honda Odyssey into 2002 Ford Focus Full Frontal Collinear

Target Vehicle IP Center

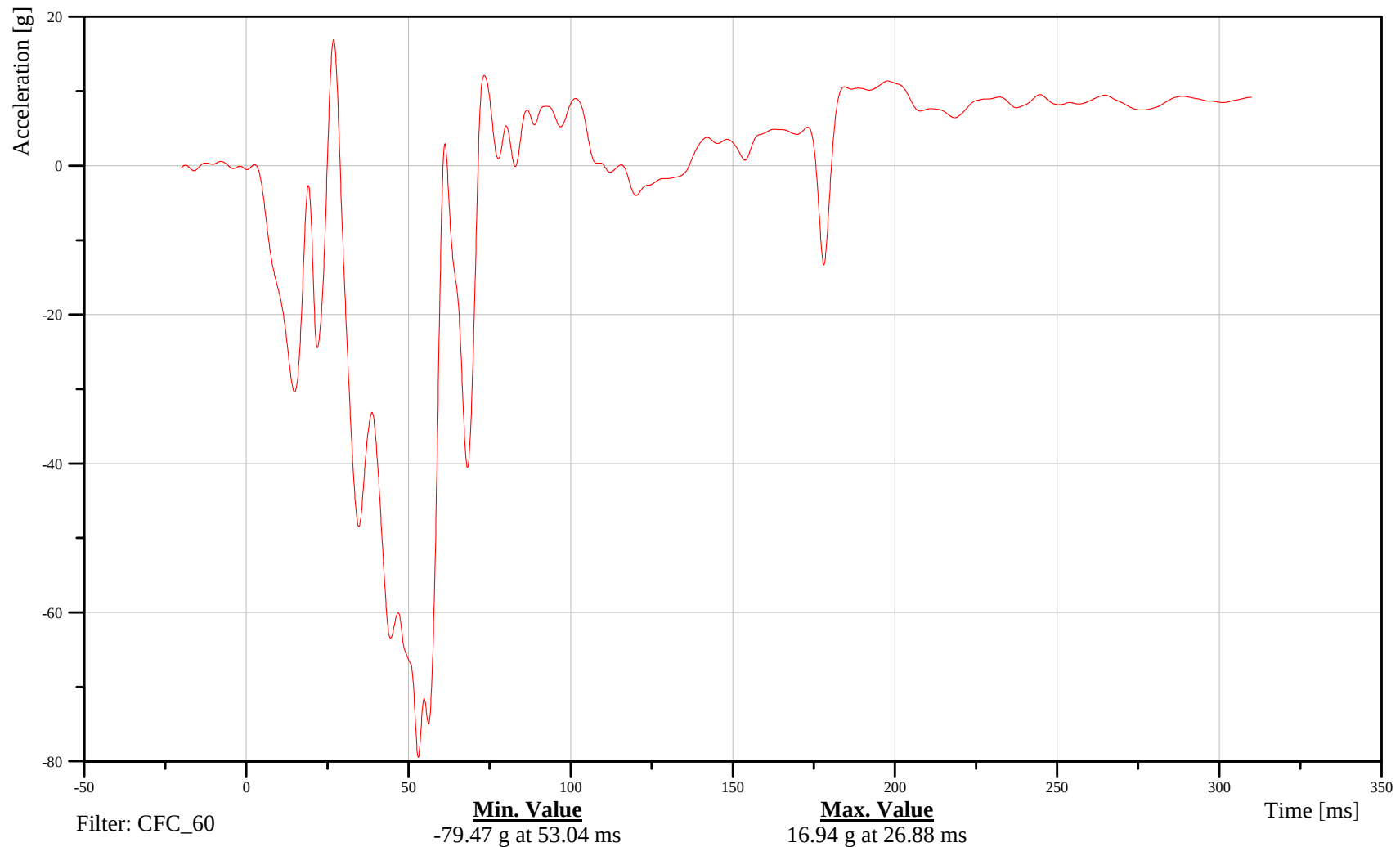
Date: 03/20/2006
Time: 08:08

Customer: VRTC

22DASH000000ACXD

TRC Inc. Test Lab: CTF

Test Number: 060317



Appendix C

Dummy Configuration and Performance Verification Data

Pre-Test Dummy Configuration and Performance Verification Data

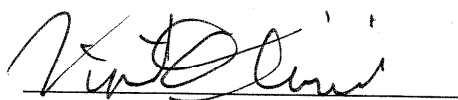
Target Vehicle Driver Dummy S/N: 110

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. 23-1

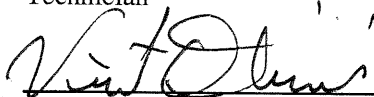
Test Date: 03/15/2006

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	259.3 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	3.1 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

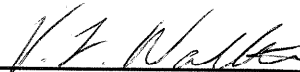
Test meets specifications.

Comments:

Technician



Approved



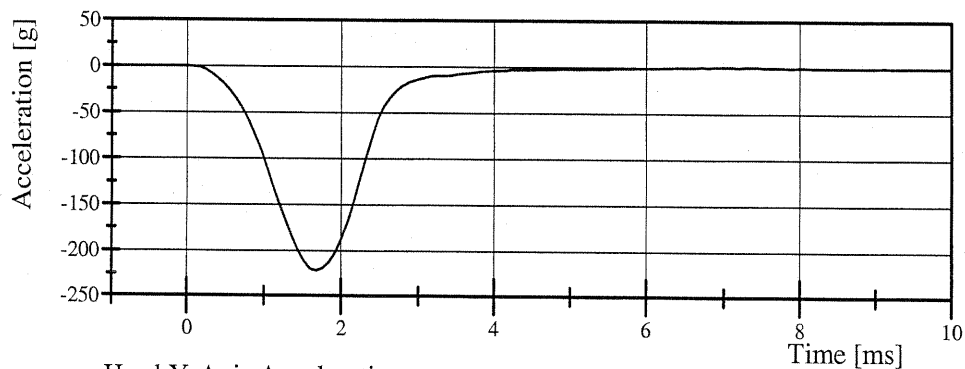
Transportation Research Center Inc.

Front Head Drop

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

Test Date: 03/15/2006

Head X-Axis Acceleration

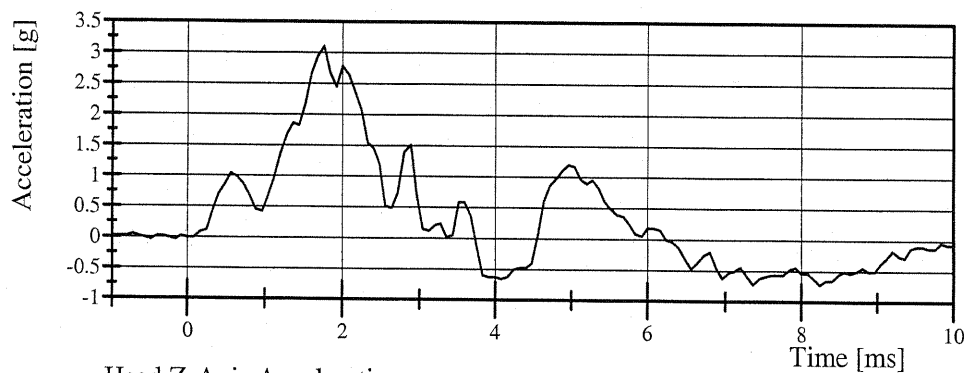


Filter Class: CFC_1000

Max: 0.4 g at 7.4 ms

Min: -221.7 g at 1.7 ms

Head Y-Axis Acceleration

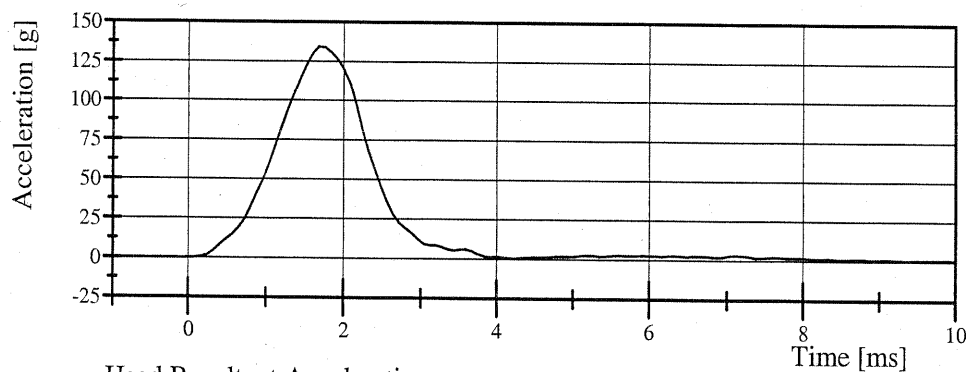


Filter Class: CFC_1000

Max: 3.1 g at 1.8 ms

Min: -0.7 g at 7.4 ms

Head Z-Axis Acceleration

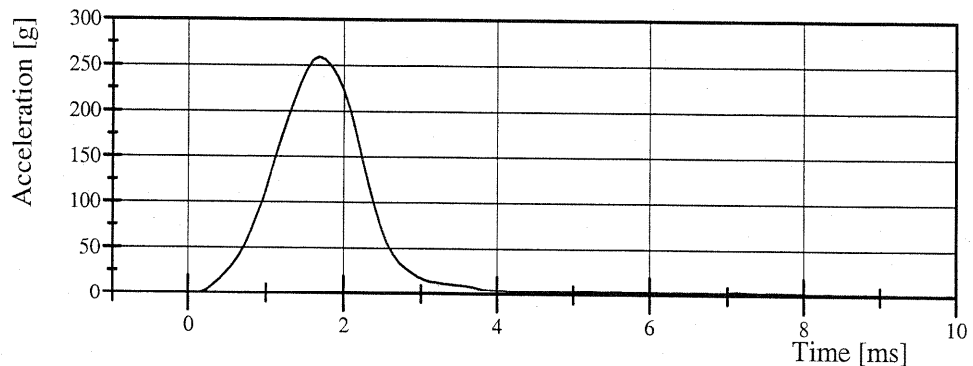


Filter Class: CFC_1000

Max: 134.5 g at 1.7 ms

Min: -0.0 g at -0.1 ms

Head Resultant Acceleration



Filter Class: CFC_1000

Max: 259.3 g at 1.7 ms

Min: 0.0 g at -0.2 ms

Transportation Research Center Inc.

Neck Flexion

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

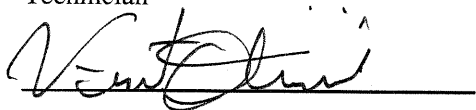
Test Date: 03/16/2006

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

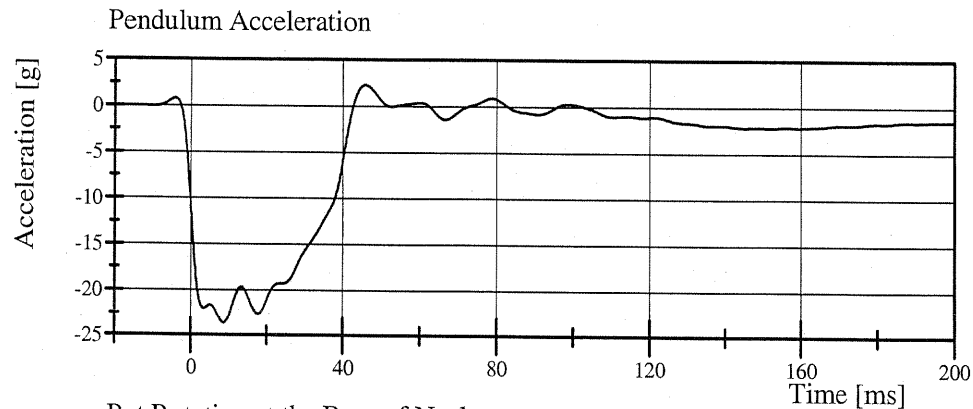


Transportation Research Center Inc.

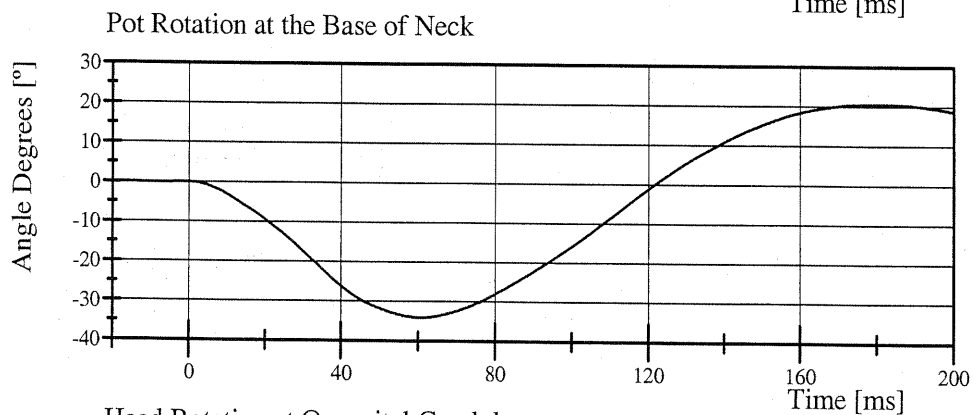
Neck Flexion

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

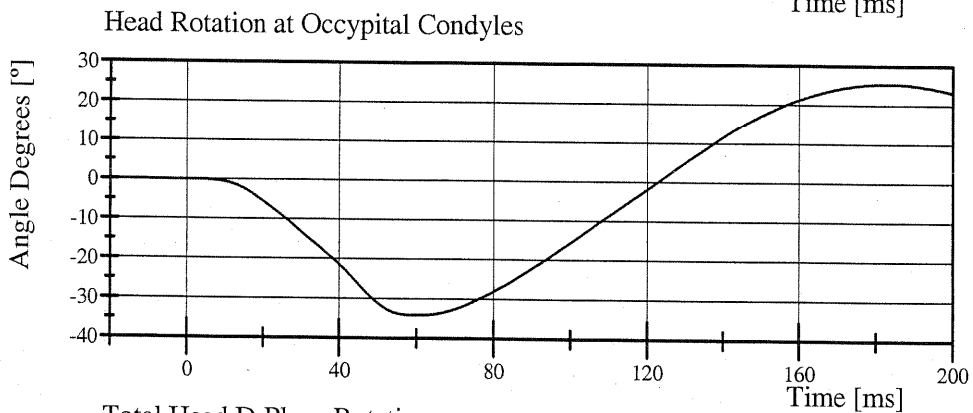
Test Date: 03/16/2006



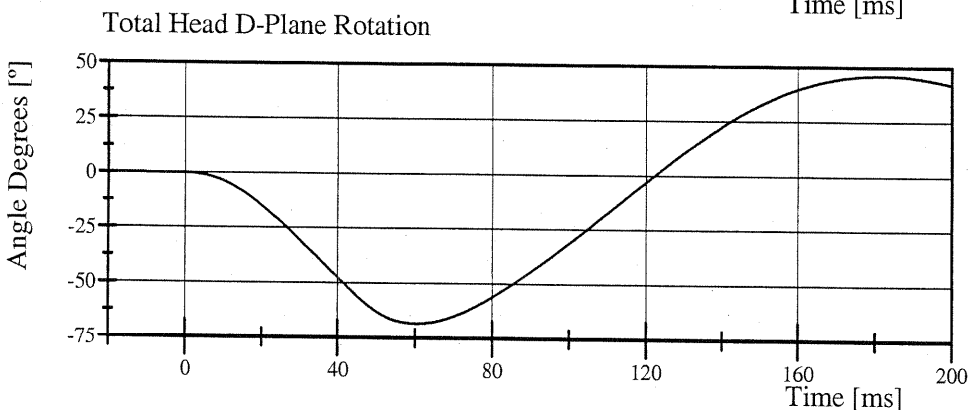
Filter Class: CFC_60
Max: 2.3 g at 45.8 ms
Min: -23.6 g at 8.6 ms



Filter Class: CFC_60
Max: 20.7 ° at 180.5 ms
Min: -34.0 ° at 60.9 ms



Filter Class: CFC_60
Max: 25.5 ° at 183.1 ms
Min: -34.2 ° at 59.7 ms



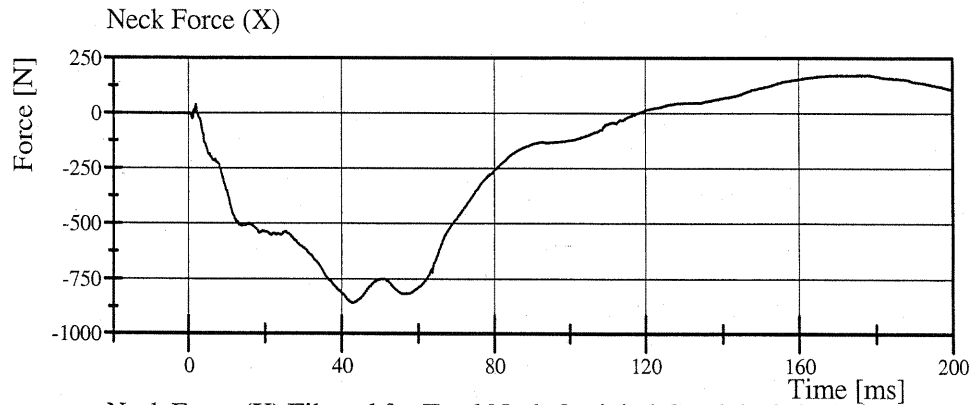
Filter Class: CFC_60
Max: 46.2 ° at 182.2 ms
Min: -68.2 ° at 60.5 ms

Transportation Research Center Inc.

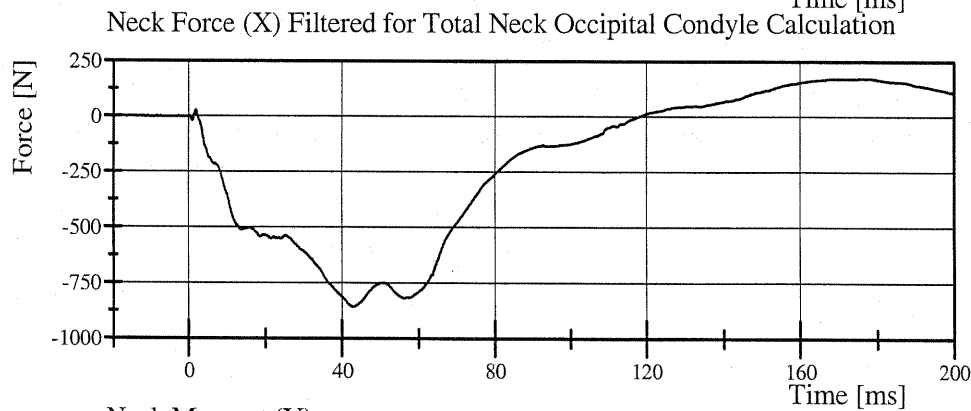
Neck Flexion

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

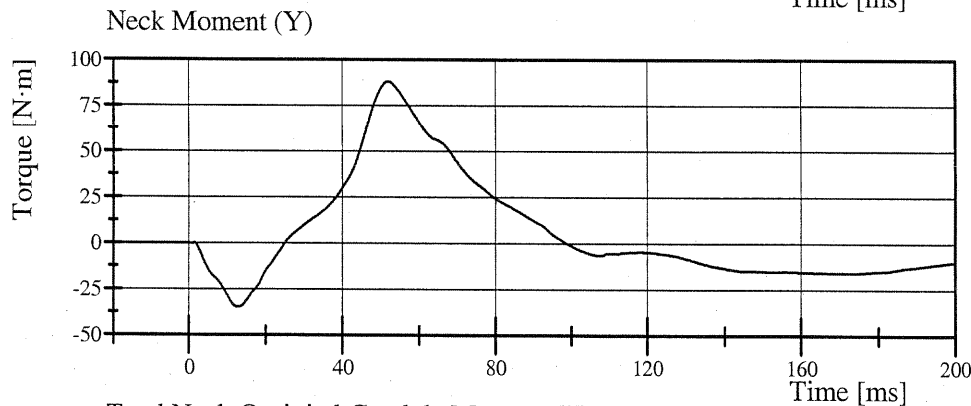
Test Date: 03/16/2006



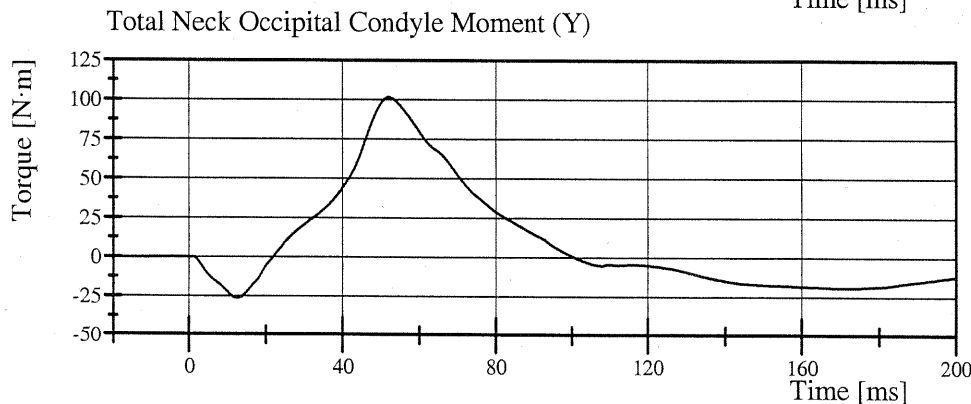
Filter Class: CFC_1000
Max: 173.9 N at 175.4 ms
Min: -856.6 N at 42.8 ms



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

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

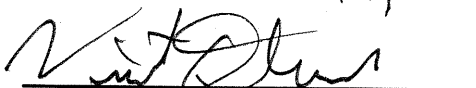
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °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

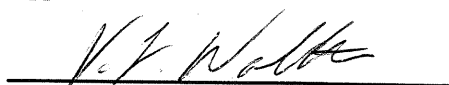
Test meets specifications.

Comments:

Technician



Approved

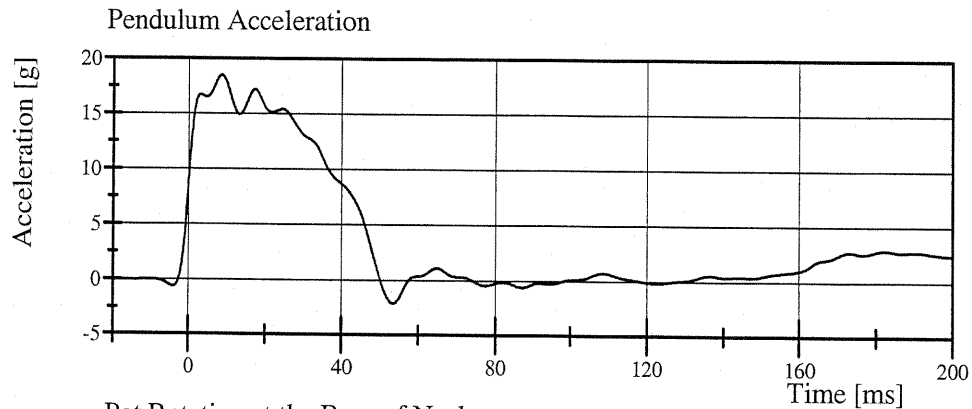


Transportation Research Center Inc.

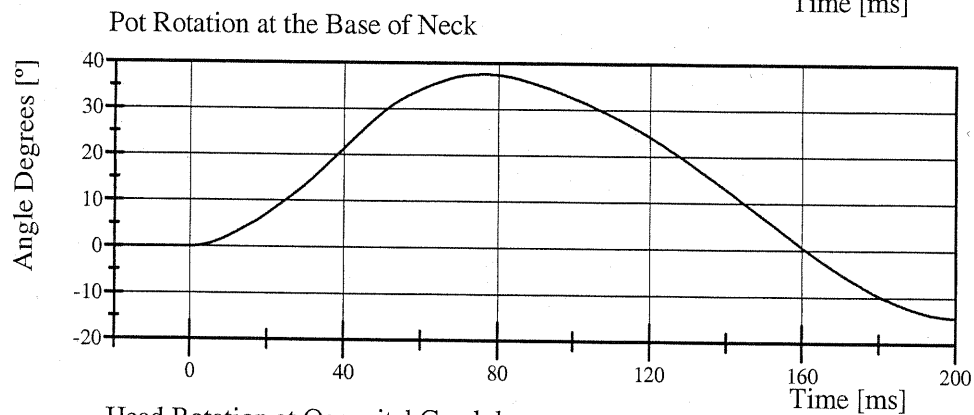
Neck Extension

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

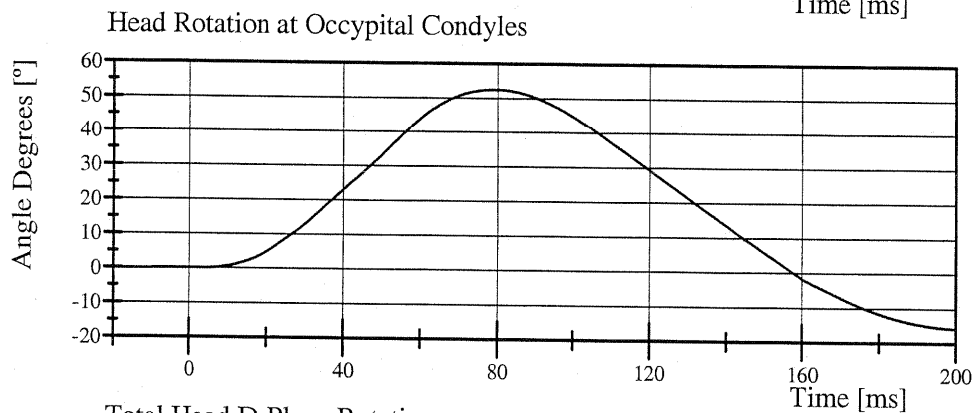
Test Date: 03/16/2006



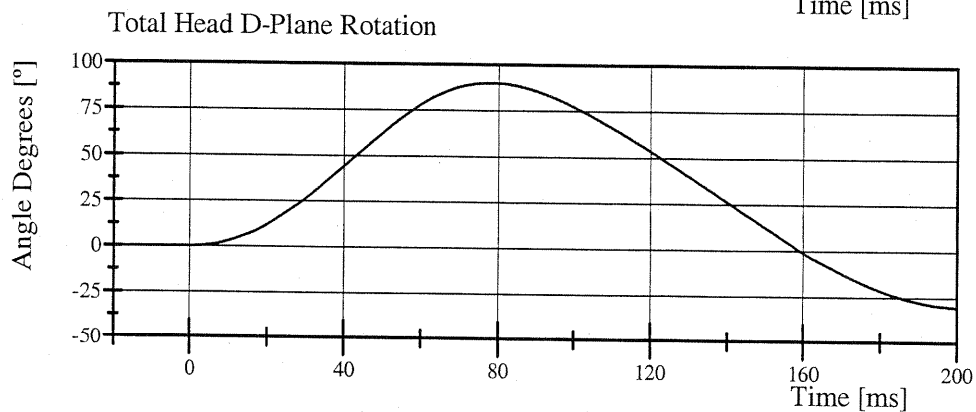
Filter Class: CFC_60
Max: 18.5 g at 8.6 ms
Min: -2.1 g at 53.4 ms



Filter Class: CFC_60
Max: 37.6 ° at 76.5 ms
Min: -14.4 ° at 200.0 ms



Filter Class: CFC_60
Max: 52.5 ° at 79.4 ms
Min: -15.7 ° at 200.0 ms



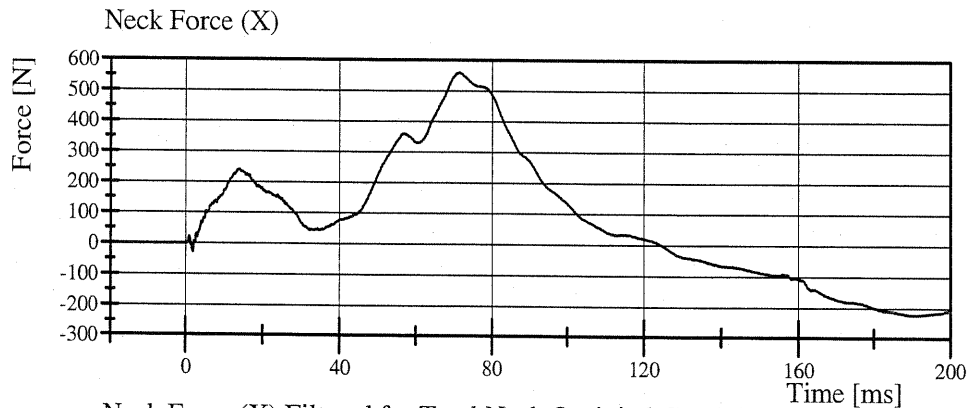
Filter Class: CFC_60
Max: 90.1 ° at 78.3 ms
Min: -30.2 ° at 200.0 ms

Transportation Research Center Inc.

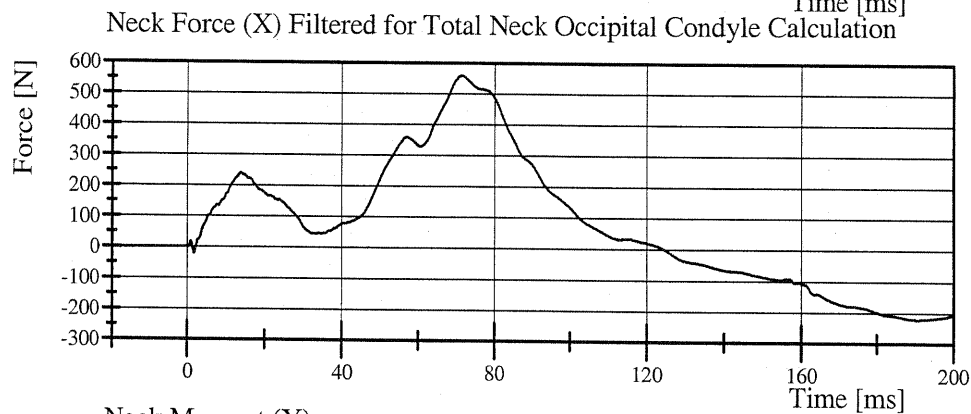
Neck Extension

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

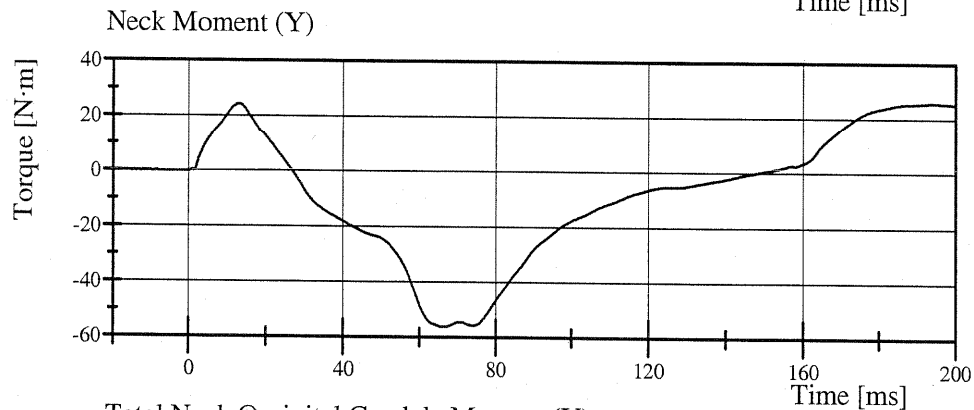
Test Date: 03/16/2006



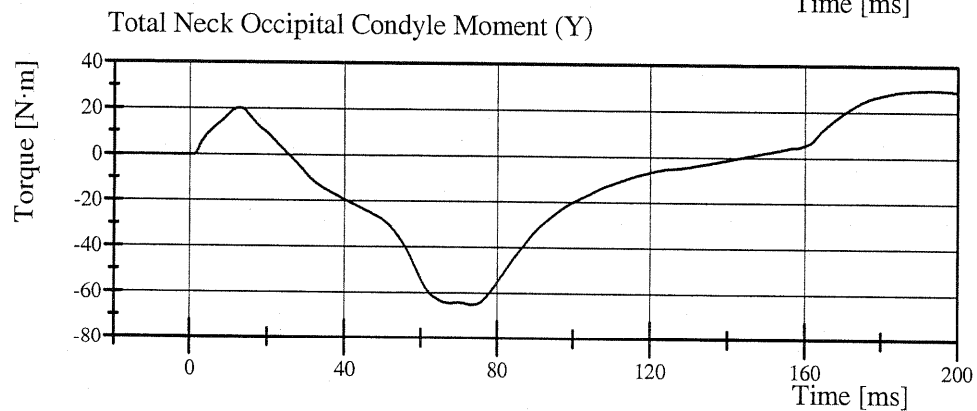
Filter Class: CFC_1000
Max: 560.3 N at 71.4 ms
Min: -222.1 N at 190.3 ms



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

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	21.2 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.638 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,727.6 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-67.77 mm	Yes
Internal Hysteresis	65 - 85 %	73.0 %	Yes

Test meets specifications.

Comments:

Technician



Approved



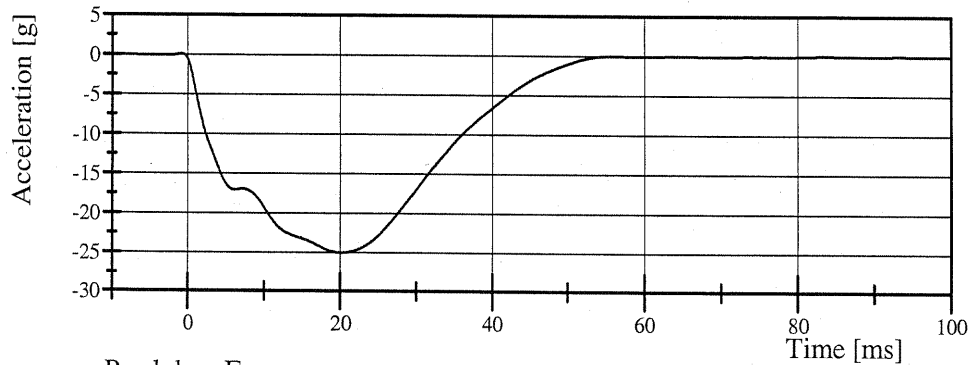
Transportation Research Center Inc.

Front Thorax

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

Test Date: 03/16/2006

Pendulum Acceleration

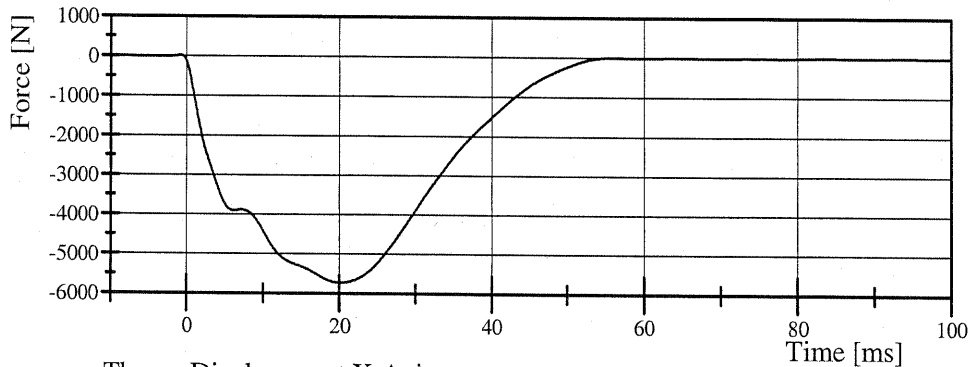


Filter Class: CFC_180

Max: 0.1 g at -0.8 ms

Min: -25.0 g at 20.2 ms

Pendulum Force

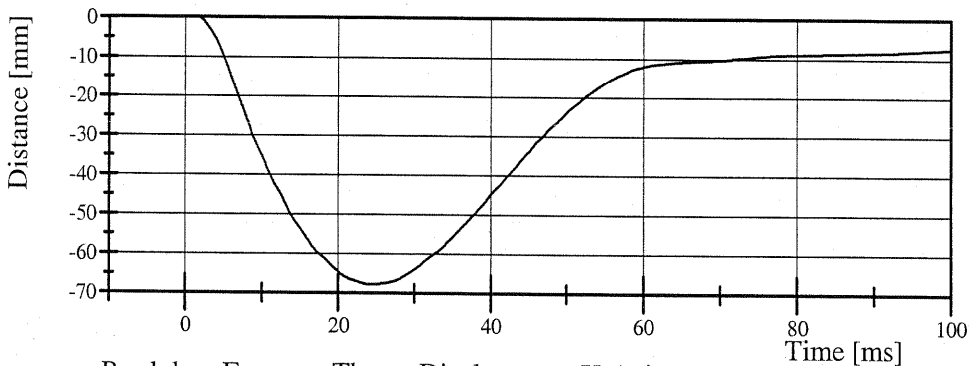


Filter Class: CFC_180

Max: 27.3 N at -0.8 ms

Min: -5,727.6 N at 20.2 ms

Thorax Displacement X-Axis

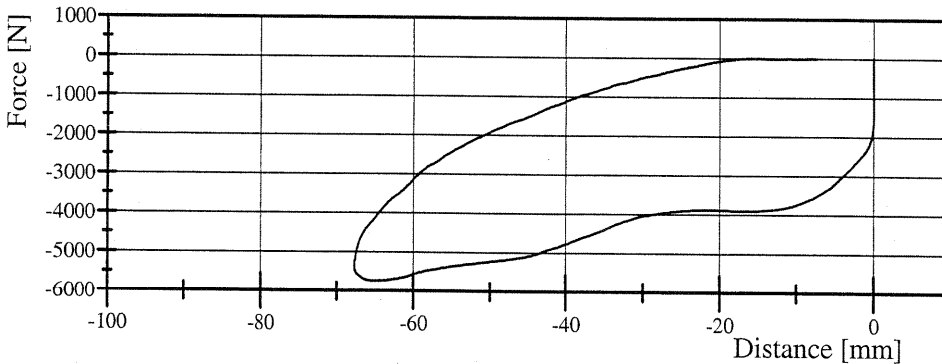


Filter Class: CFC_600

Max: 0.0 mm at -1.8 ms

Min: -67.8 mm at 24.3 ms

Pendulum Force vs. Thorax Displacement X-Axis



Filter Class: CFC_180

Max: 27.3 N at 0.0 mm

Min: -5,727.6 N at -64.8 mm

Applied Safety Technologies Corp.

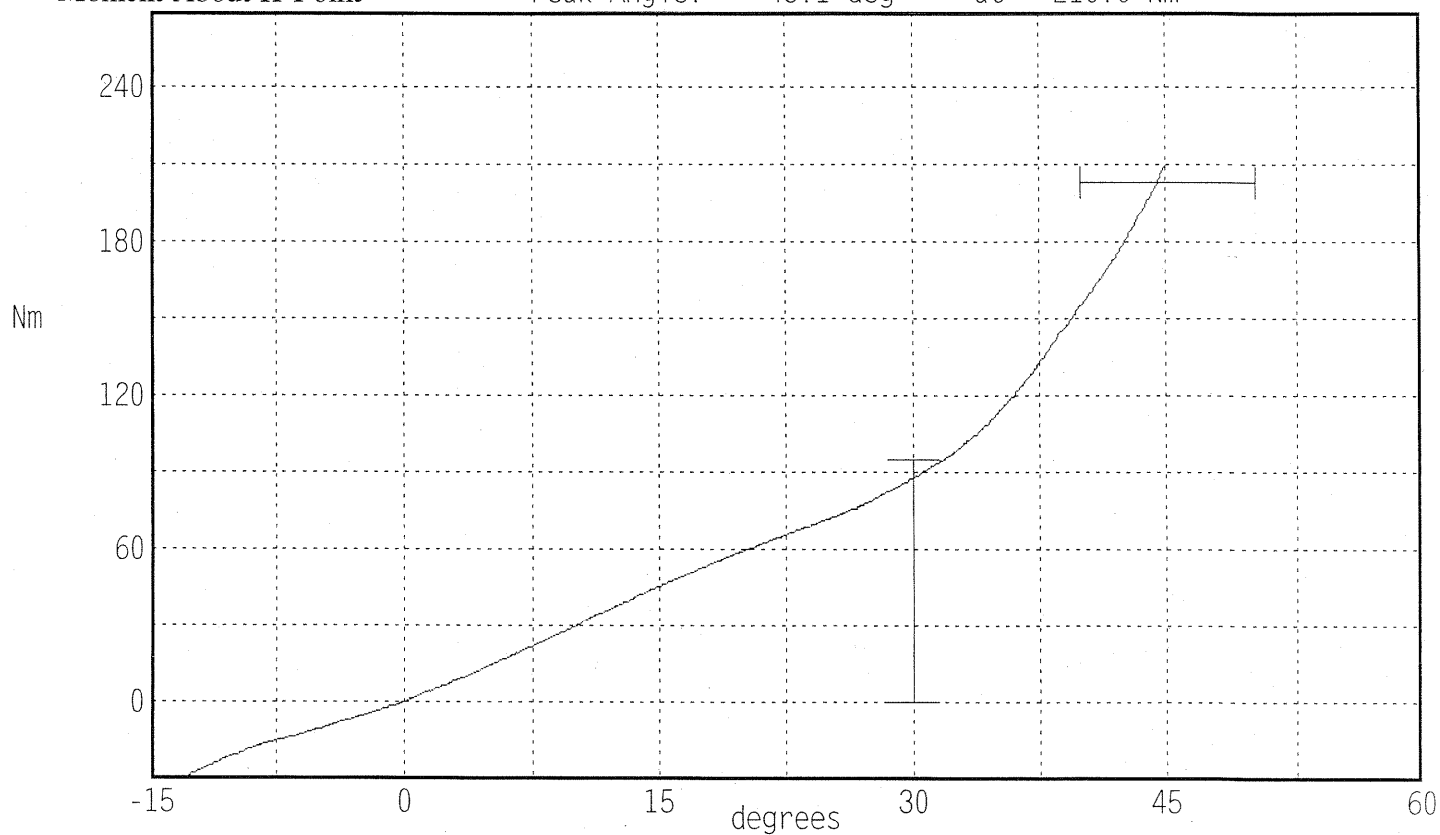
Hybrid III Hip Range of Motion

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

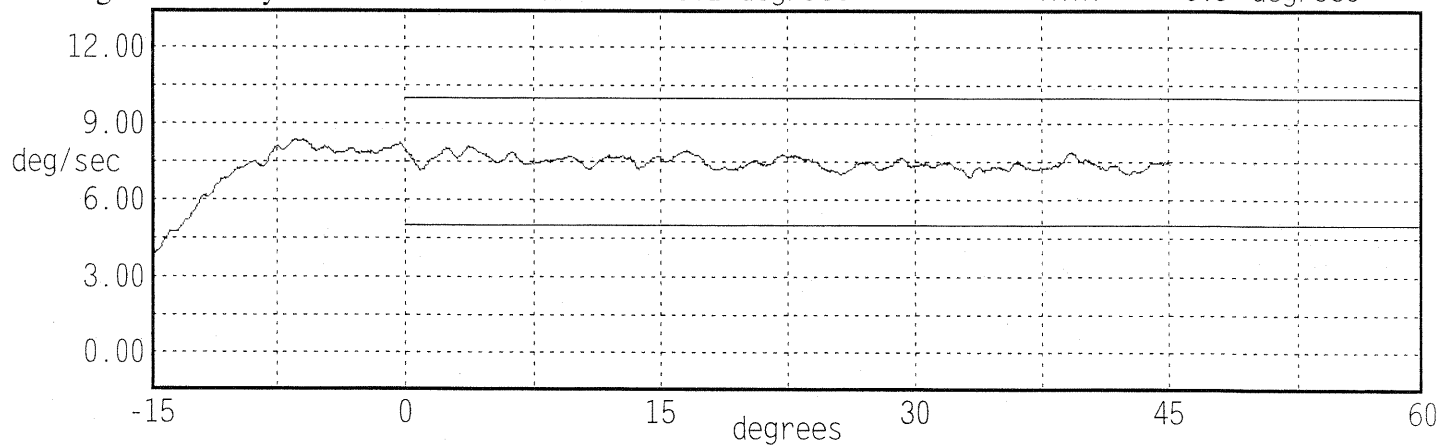
Date: 03/15/2006
Time: 16:23

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

Moment About H-Point
Peak Moment: 210.0 Nm at 45.1 deg
Peak Angle: 45.1 deg at 210.0 Nm



Angular Velocity
Max: 8.1 deg/sec
Min: 6.9 deg/sec



Applied Safety Technologies Corp.

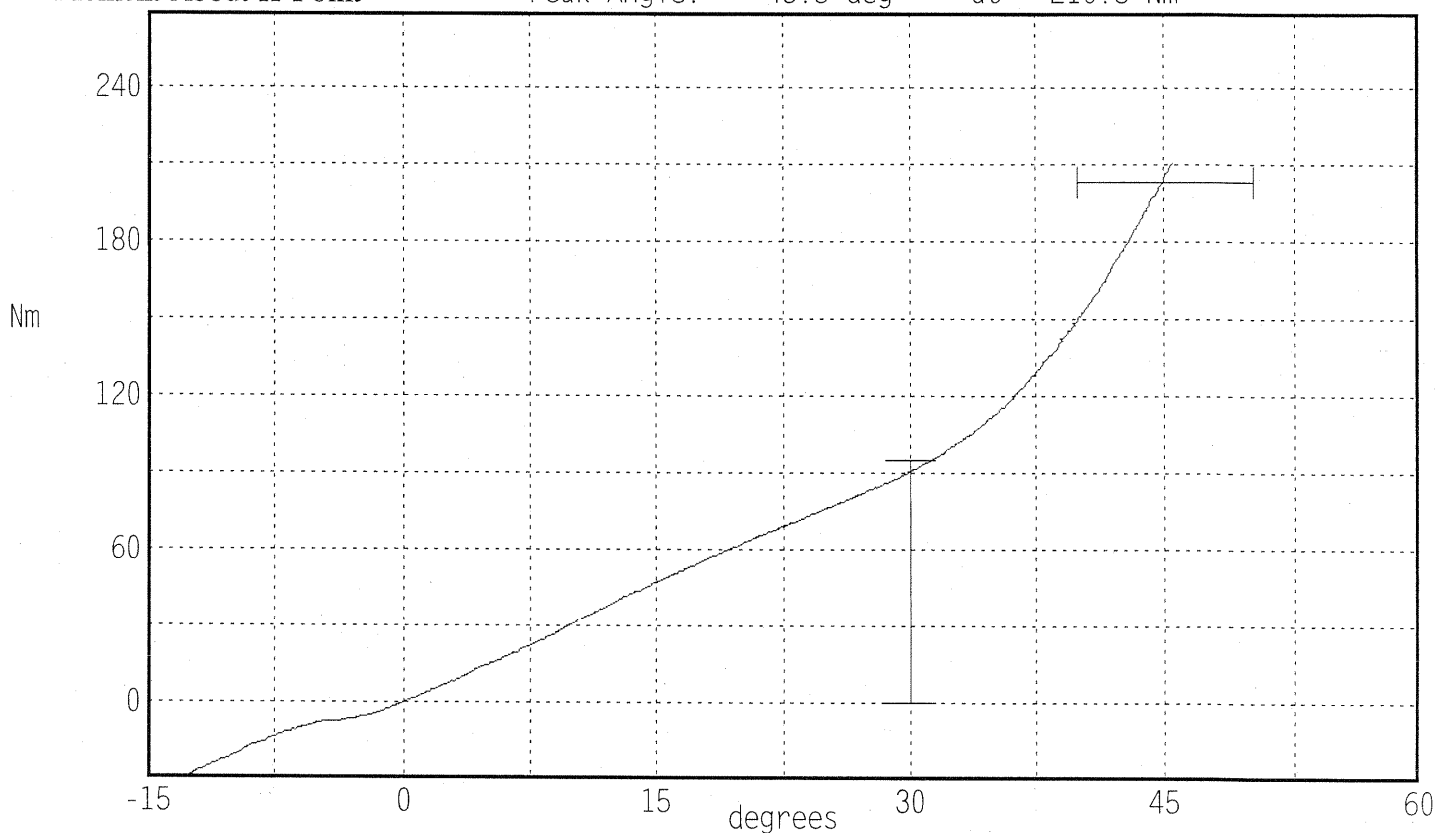
Hybrid III Hip Range of Motion

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

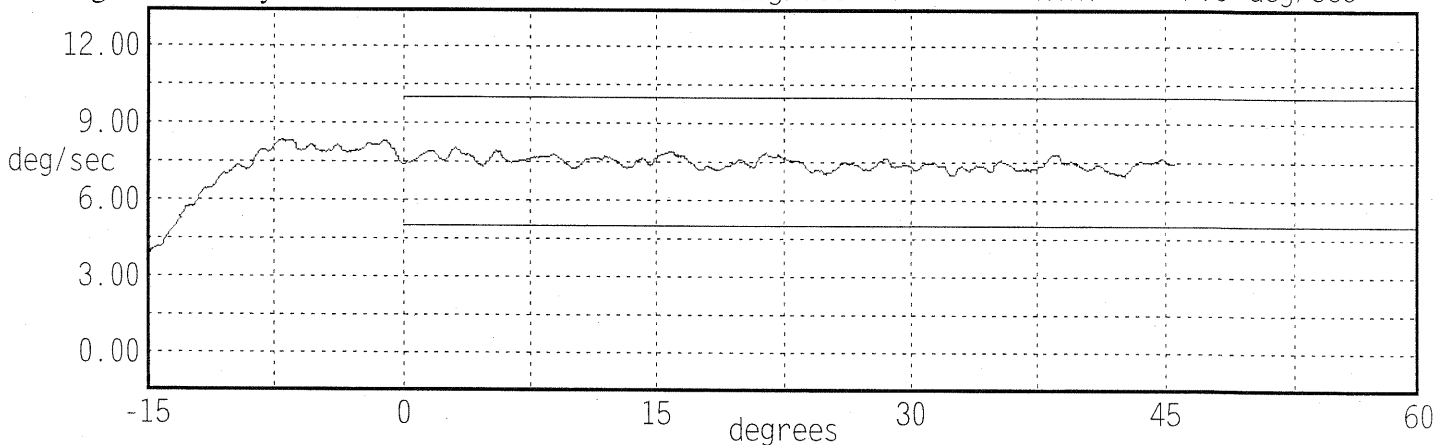
Date: 03/15/2006
Time: 16:29

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. 3-1

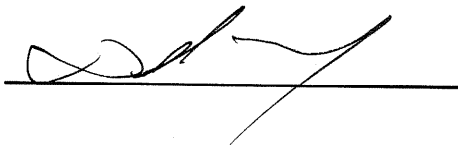
Test Date: 02/21/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.110 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,543.32 N	Yes

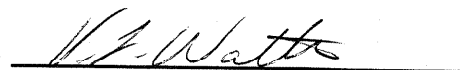
Test meets specifications.

Comments:

Technician



Approved

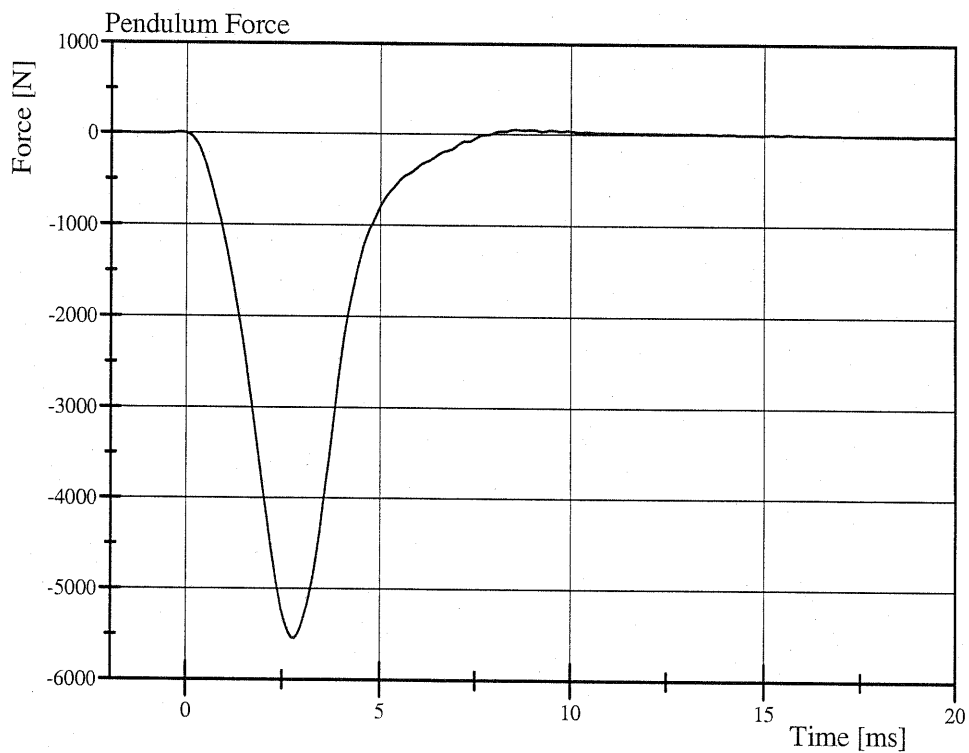
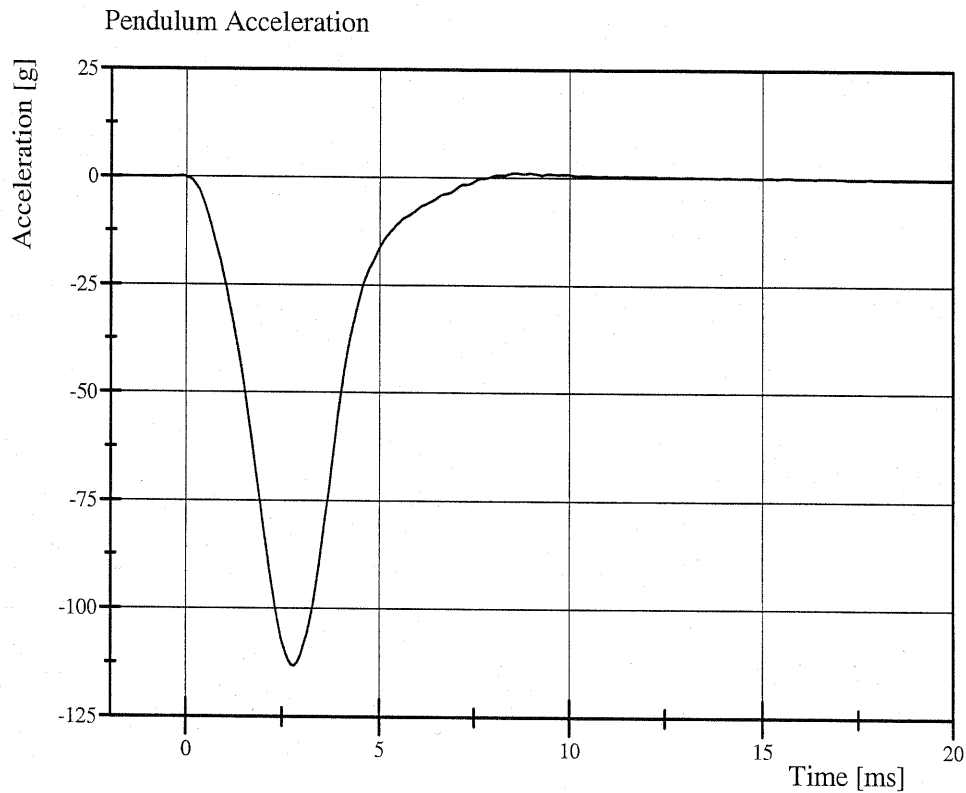


Transportation Research Center Inc.

Left Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 3-1

Test Date: 02/21/2006



Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 5-1

Test Date: 03/16/2006

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	2.091 m/s	Yes
Peak Femur Force	(-4,715.2) - (-5,782.6) N	-5,508.01 N	Yes

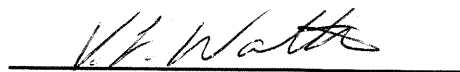
Test meets specifications.

Comments:

Technician



Approved

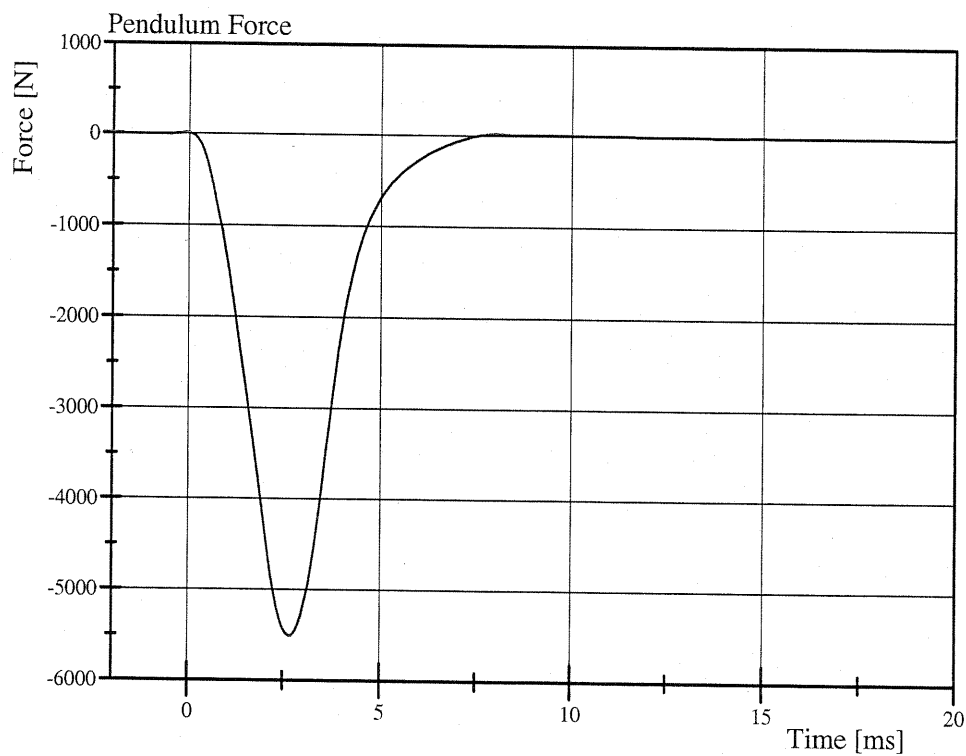
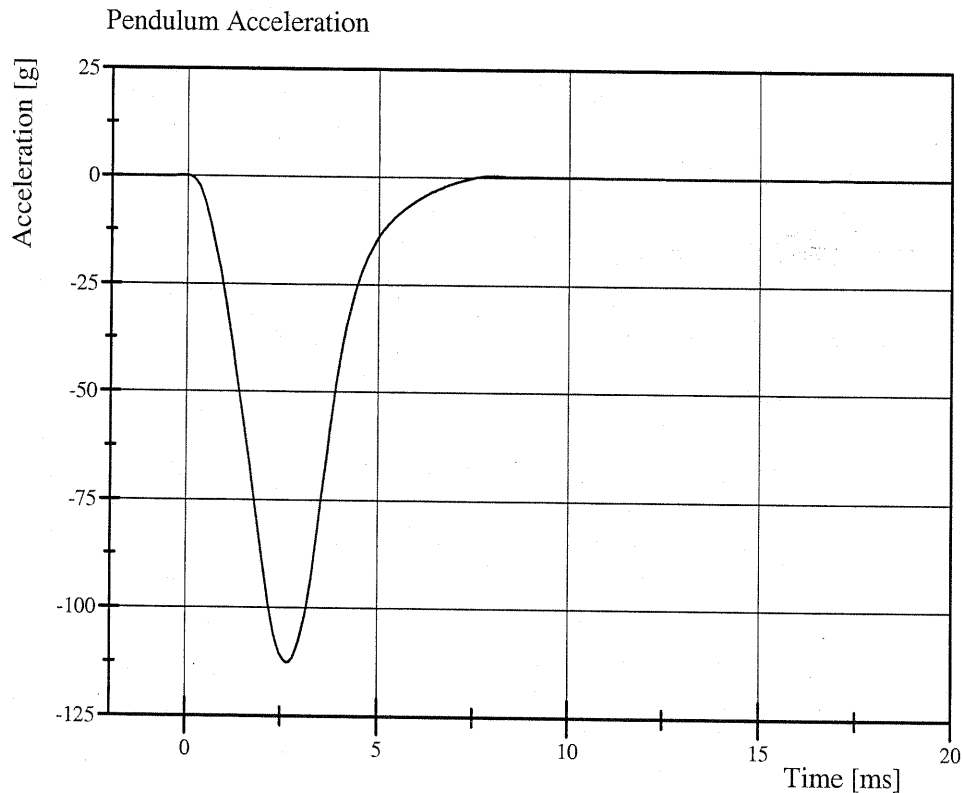


Transportation Research Center Inc.

Right Knee Femur Response Test

HIII 50th Serial No. LX116117 Certification No. 5-1

Test Date: 03/16/2006



Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX116117 Certification No. 5-1

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 %	28 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.736 m/s	Yes
Force Peak at 10.0 mm Deflection	(-1,260) - (-1,720) N	-1,402.3 N	Yes
Force Peak at 18.0 mm Deflection	(-2,270) - (-3,100) N	-2,682.7 N	Yes

Test meets specifications.

Comments:

Technician

V. J. Dine

Approved

V. L. Walter

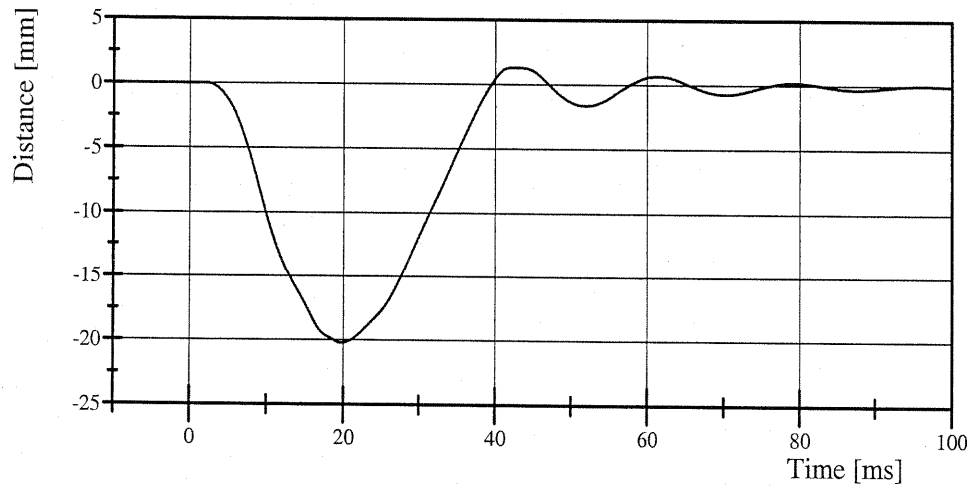
Transportation Research Center Inc.

Right Knee Slider

HIII 50th Serial No. LX116117 Certification No. 5-1

Test Date: 03/16/2006

Knee Slider Displacement

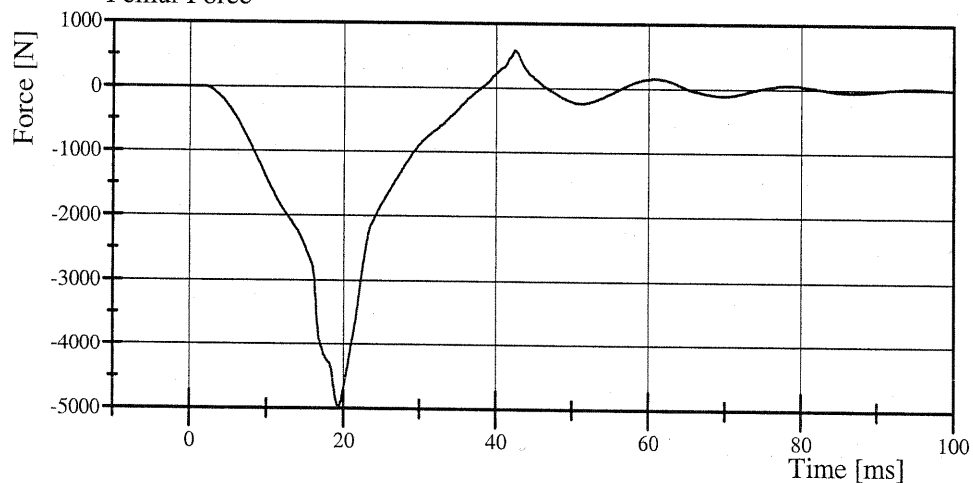


Filter Class: CFC_180

Max: 1.3 mm at 42.4 ms

Min: -20.2 mm at 19.8 ms

Femur Force

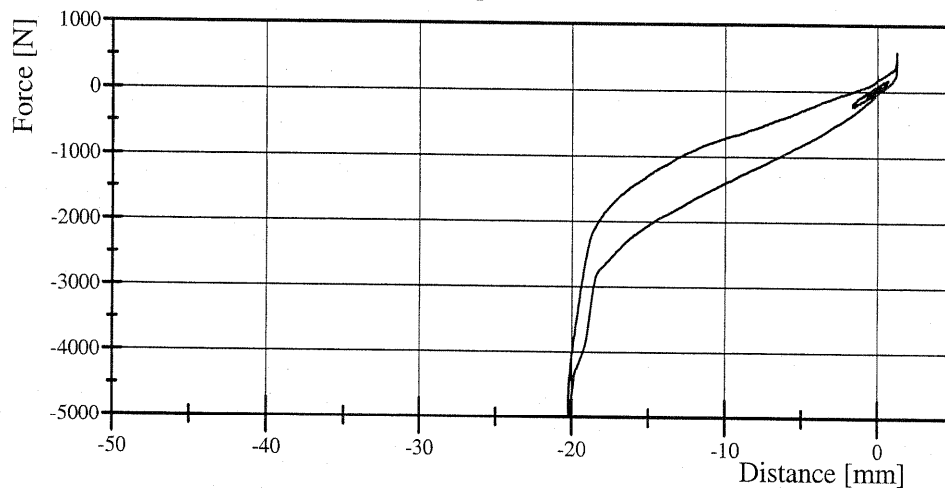


Filter Class: CFC_600

Max: 588.2 N at 42.5 ms

Min: -4,966.2 N at 19.3 ms

Femur Force vs. Knee Slider Displacement



Filter Class: CFC_600

Max: 588.2 N at 1.3 mm

Min: -4,966.2 N at -20.2 mm

Post-Test Dummy Configuration and Performance Verification Data

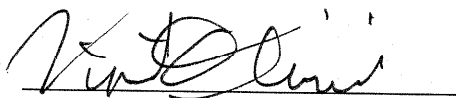
Target Vehicle Driver Dummy S/N: 110

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

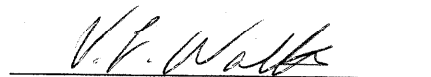
Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	883	Yes
B	Shoulder Pivot Height	505.5 - 520.7	513	Yes
C	H-Point Height	83.8 - 88.9	86	Yes
D	H-Point From Seatback	134.6 - 139.7	137	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	92	Yes
F	Thigh Clearance	139.7 - 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

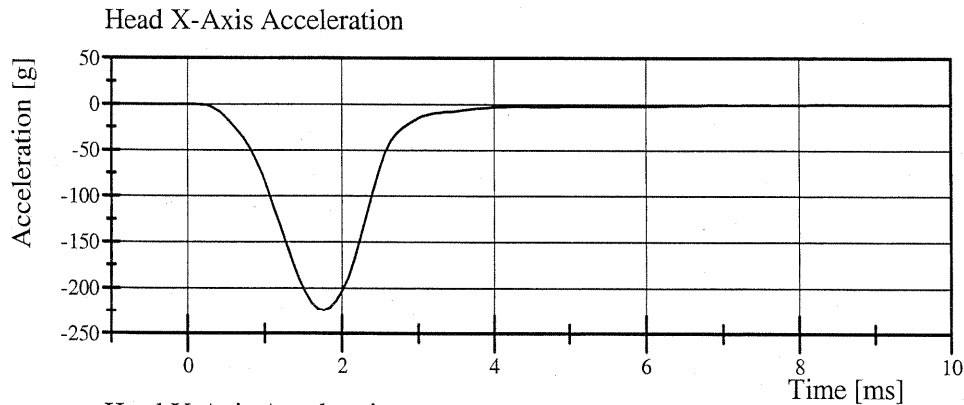


Transportation Research Center Inc.

Front Head Drop

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

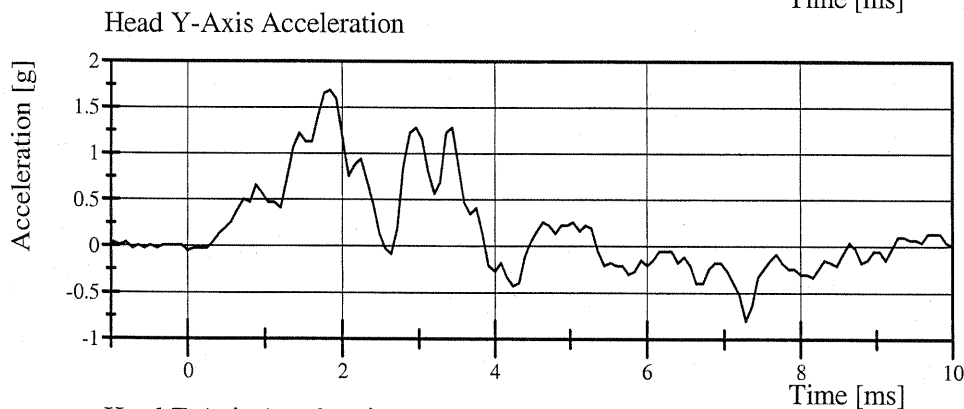
Test Date: 03/21/2006



Filter Class: CFC_1000

Max: 0.2 g at 9.1 ms

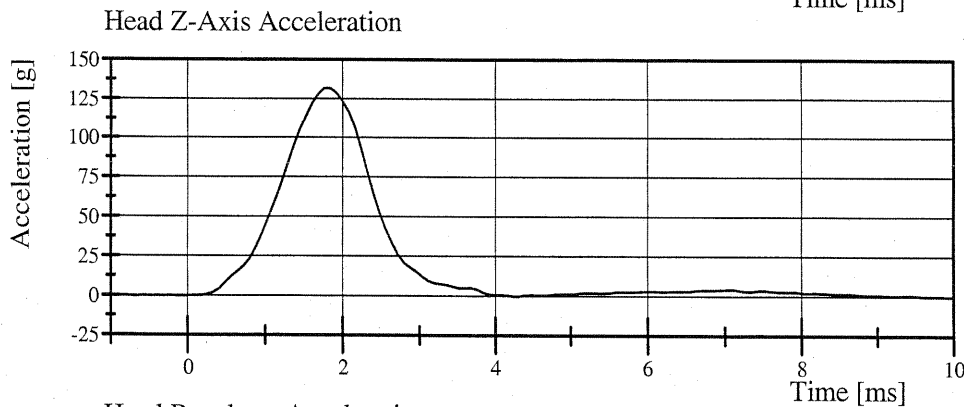
Min: -224.3 g at 1.8 ms



Filter Class: CFC_1000

Max: 1.7 g at 1.8 ms

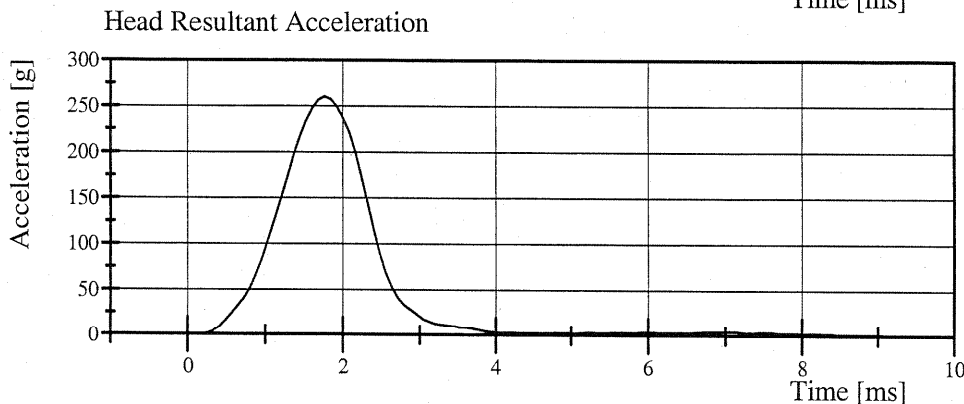
Min: -0.8 g at 7.3 ms



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

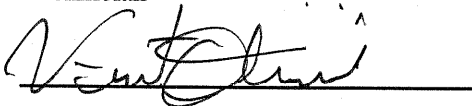
Test Date: 03/16/2006

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



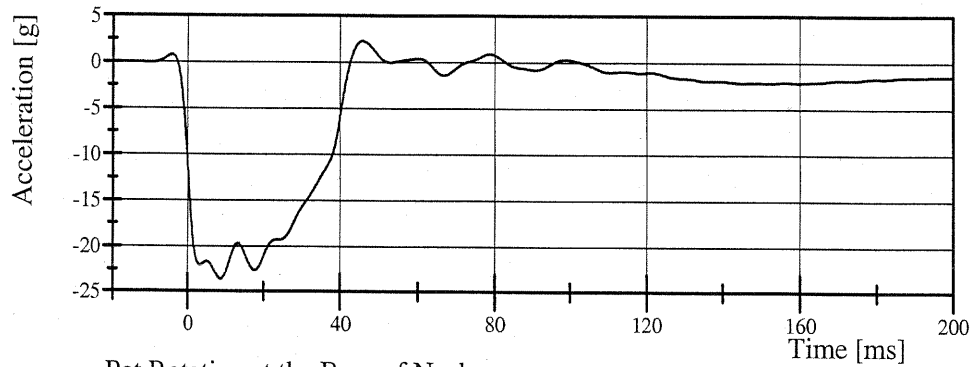
Transportation Research Center Inc.

Neck Flexion

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

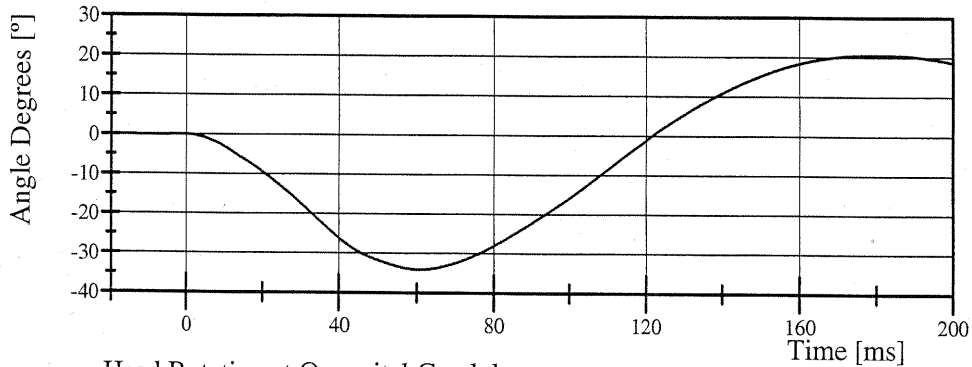
Test Date: 03/16/2006

Pendulum Acceleration



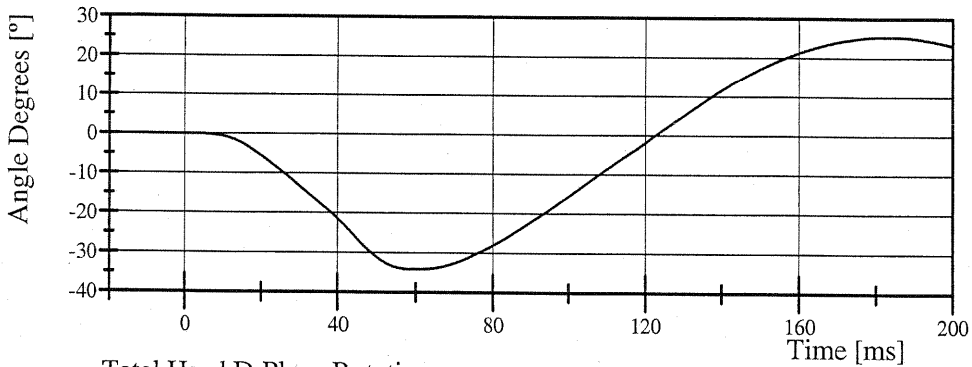
Filter Class: CFC_60
Max: 2.3 g at 45.8 ms
Min: -23.6 g at 8.6 ms

Pot Rotation at the Base of Neck



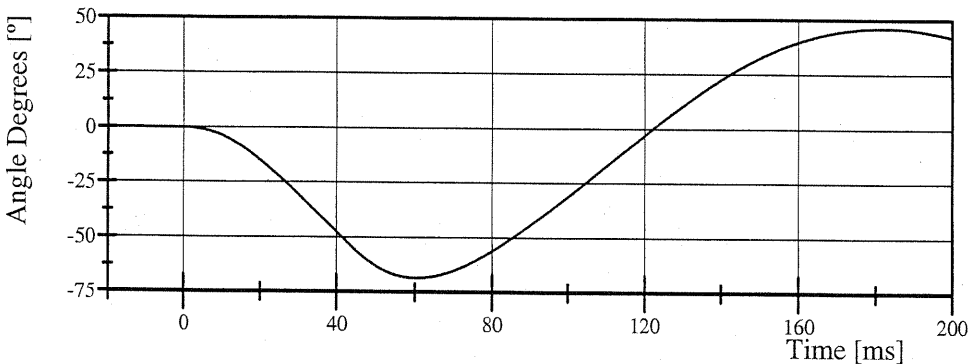
Filter Class: CFC_60
Max: 20.7 ° at 180.5 ms
Min: -34.0 ° at 60.9 ms

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



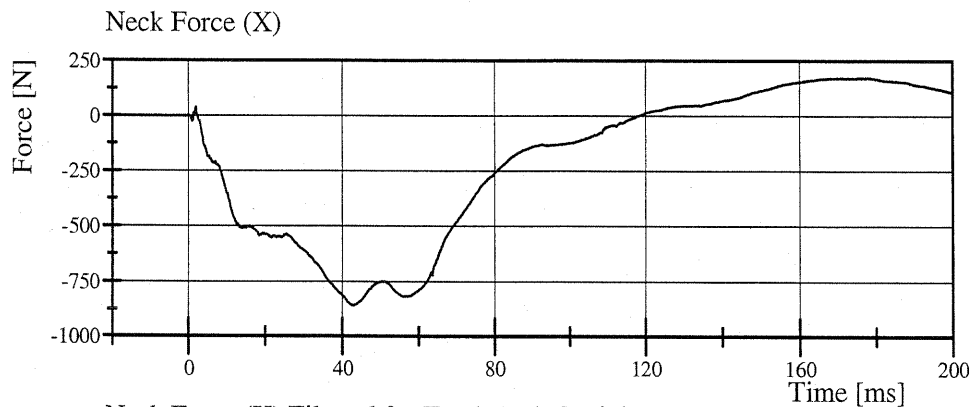
Filter Class: CFC_60
Max: 46.2 ° at 182.2 ms
Min: -68.2 ° at 60.5 ms

Transportation Research Center Inc.

Neck Flexion

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

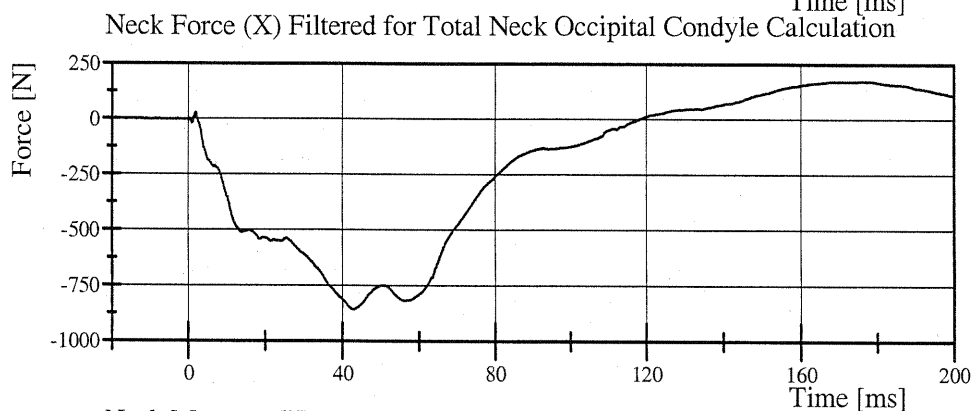
Test Date: 03/16/2006



Filter Class: CFC_1000

Max: 173.9 N at 175.4 ms

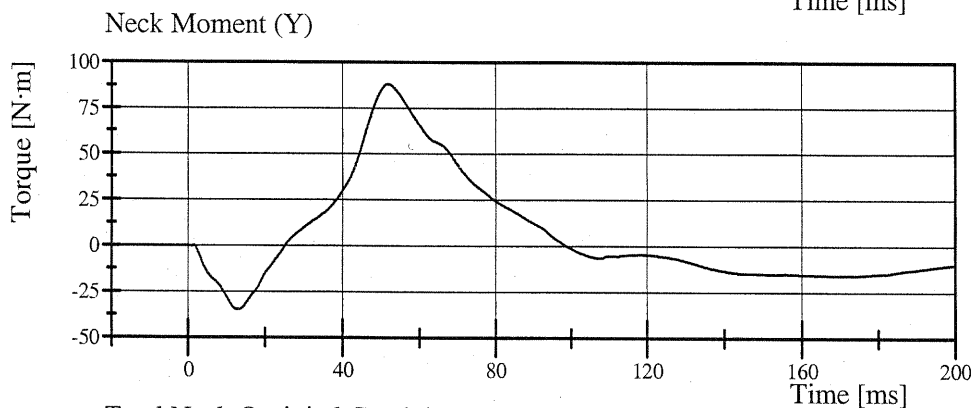
Min: -856.6 N at 42.8 ms



Filter Class: CFC_600

Max: 173.8 N at 177.8 ms

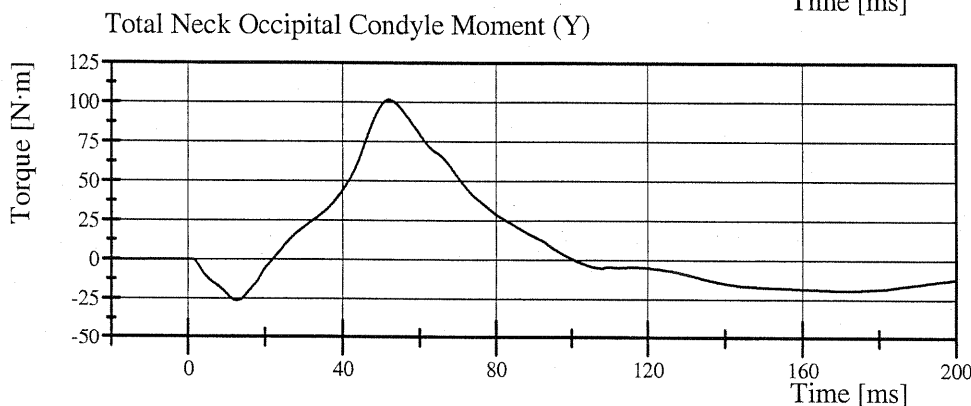
Min: -856.3 N at 42.8 ms



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

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

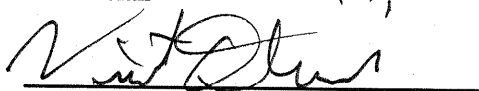
Test Date: 03/16/2006

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



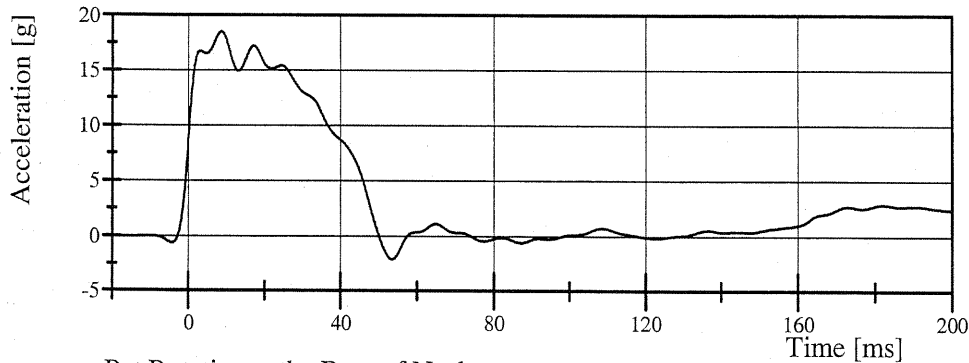
Transportation Research Center Inc.

Neck Extension

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

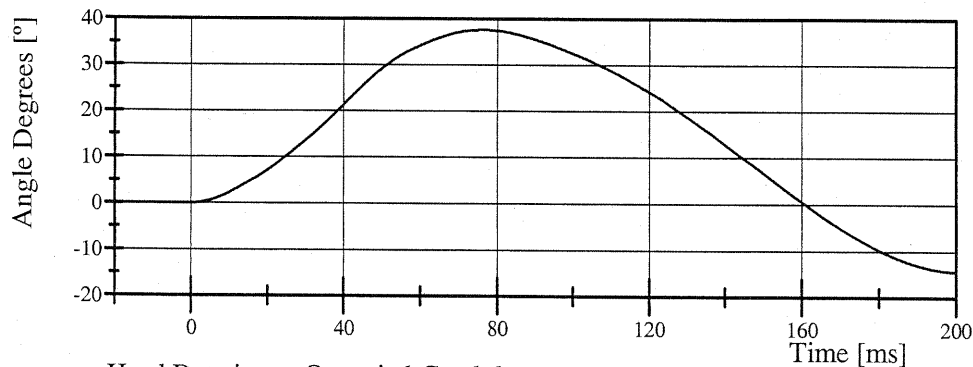
Test Date: 03/16/2006

Pendulum Acceleration



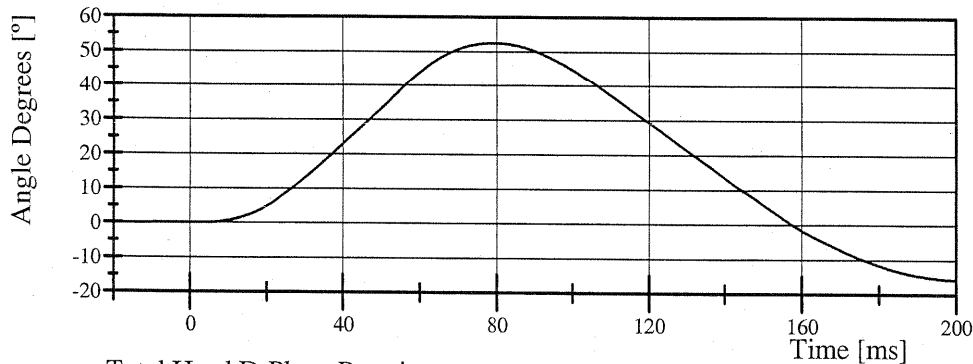
Filter Class: CFC_60
Max: 18.5 g at 8.6 ms
Min: -2.1 g at 53.4 ms

Pot Rotation at the Base of Neck



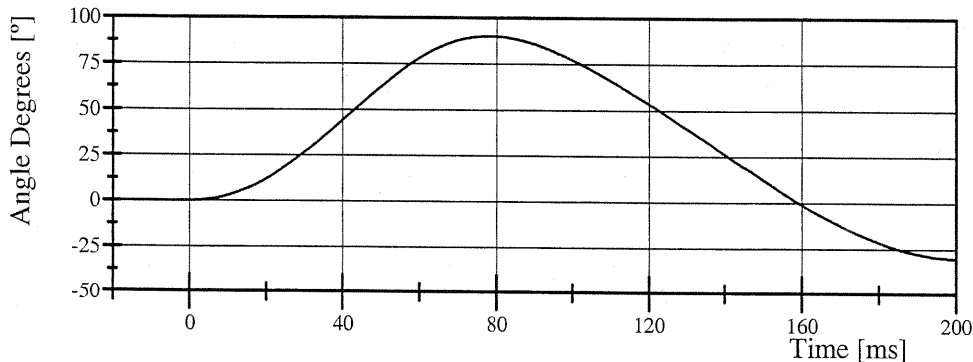
Filter Class: CFC_60
Max: 37.6 ° at 76.5 ms
Min: -14.4 ° at 200.0 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 52.5 ° at 79.4 ms
Min: -15.7 ° at 200.0 ms

Total Head D-Plane Rotation



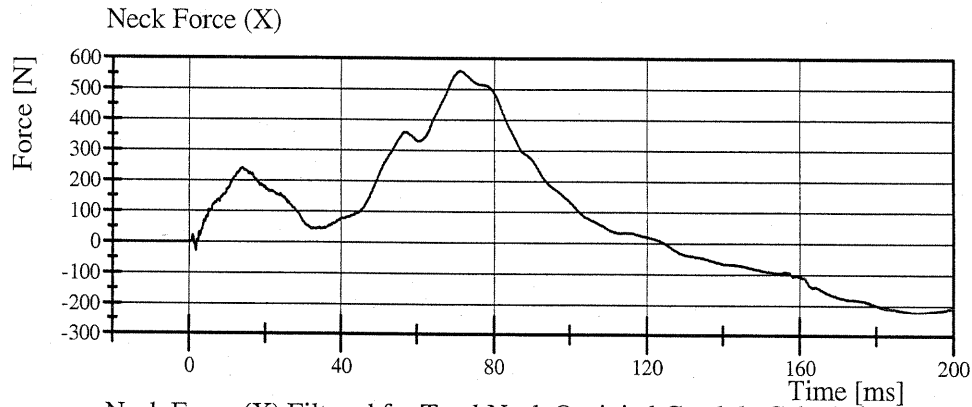
Filter Class: CFC_60
Max: 90.1 ° at 78.3 ms
Min: -30.2 ° at 200.0 ms

Transportation Research Center Inc.

Neck Extension

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

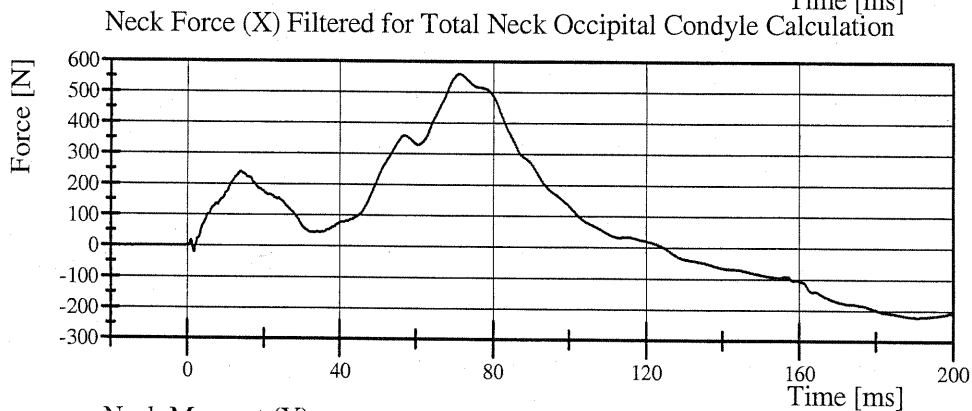
Test Date: 03/16/2006



Filter Class: CFC_1000

Max: 560.3 N at 71.4 ms

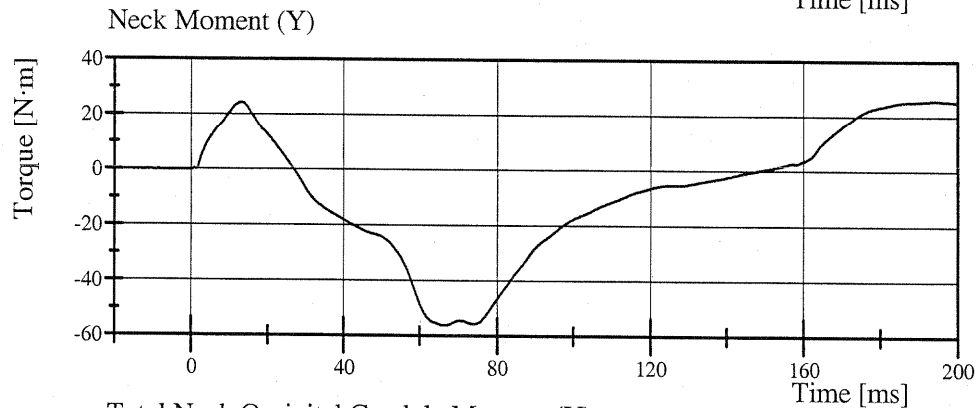
Min: -222.1 N at 190.3 ms



Filter Class: CFC_600

Max: 560.0 N at 71.4 ms

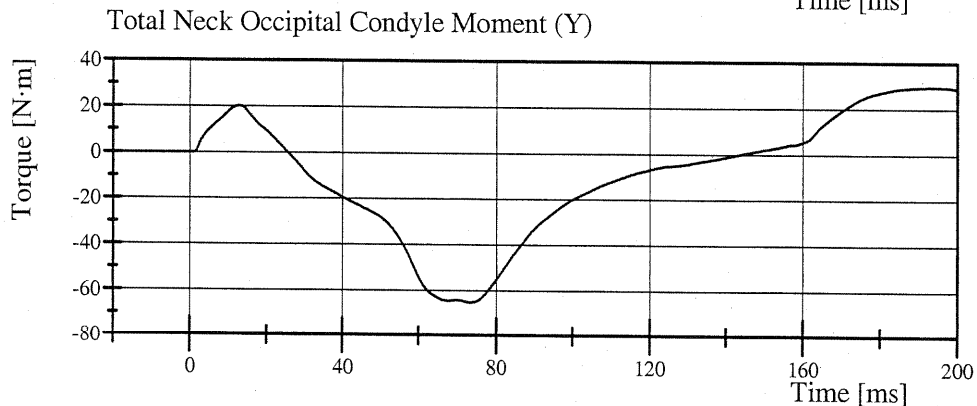
Min: -221.9 N at 190.9 ms



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

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

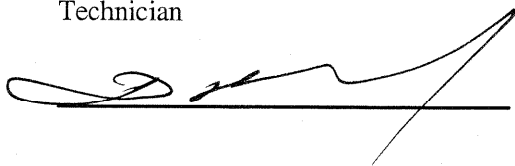
Test Date: 03/22/2006

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

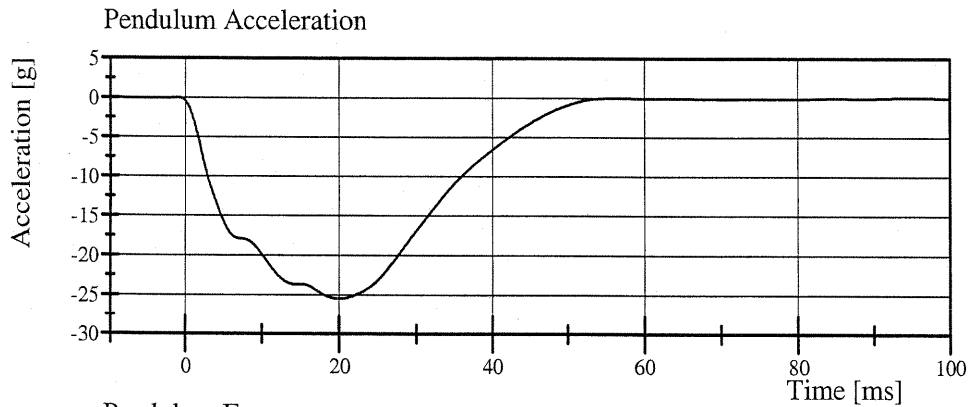


Transportation Research Center Inc.

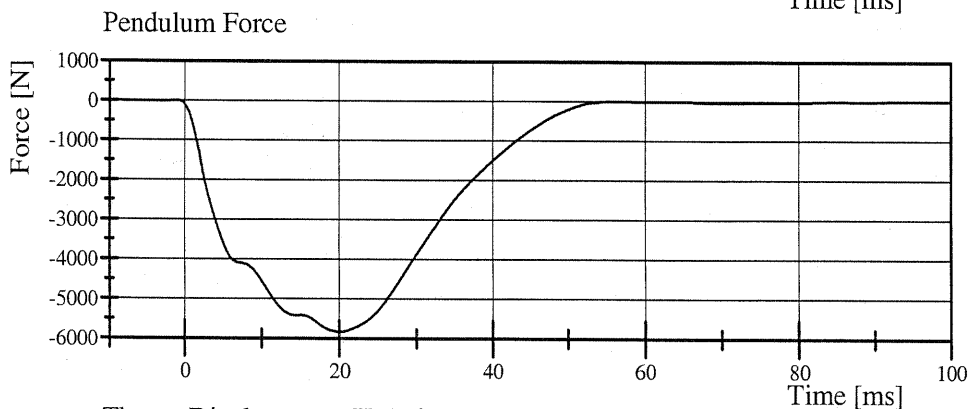
Front Thorax

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

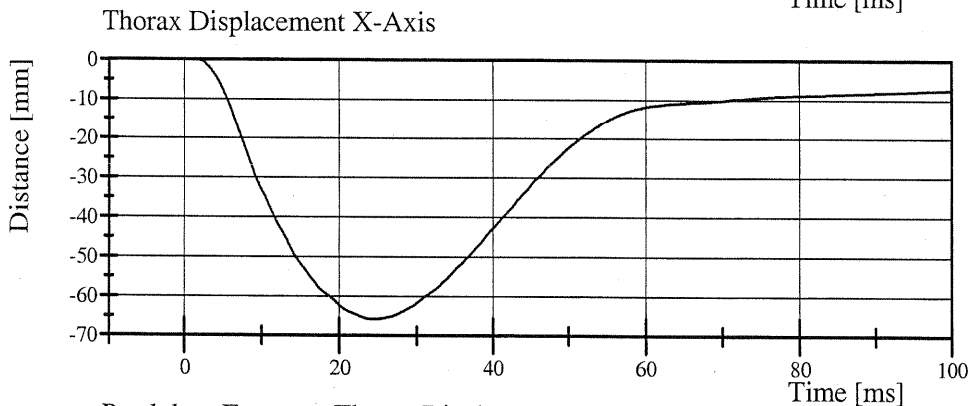
Test Date: 03/22/2006



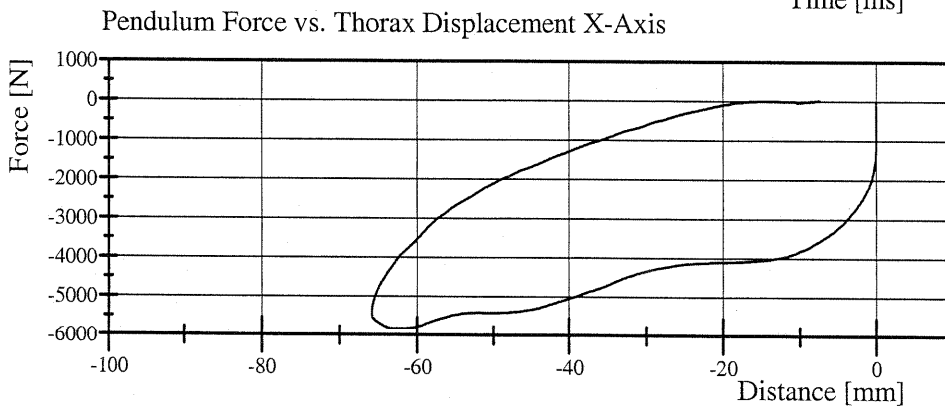
Filter Class: CFC_180
Max: 0.1 g at 95.6 ms
Min: -25.4 g at 20.1 ms



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

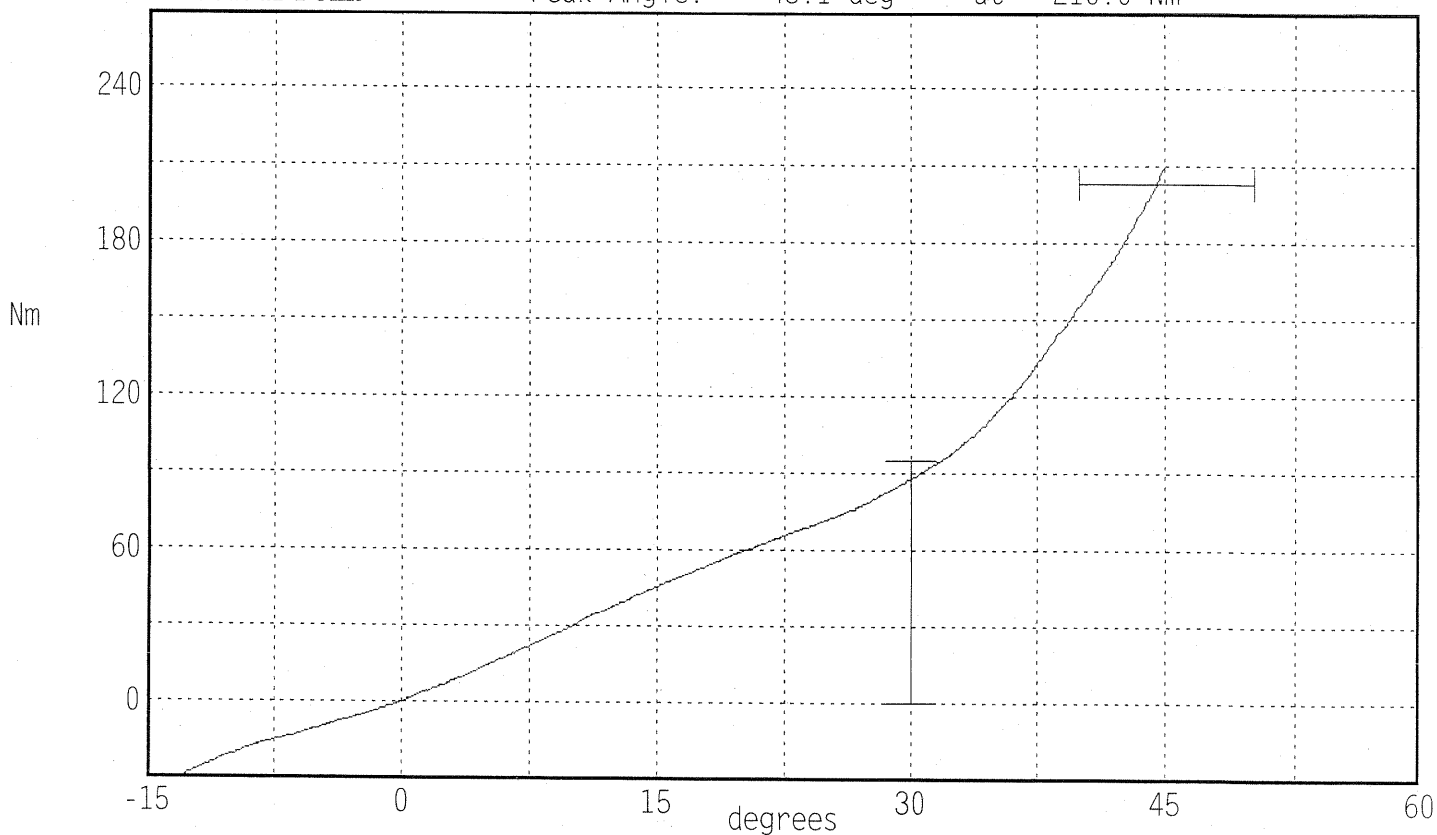
Serial Number: 110L
Test Number: 110C23
Comments:

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

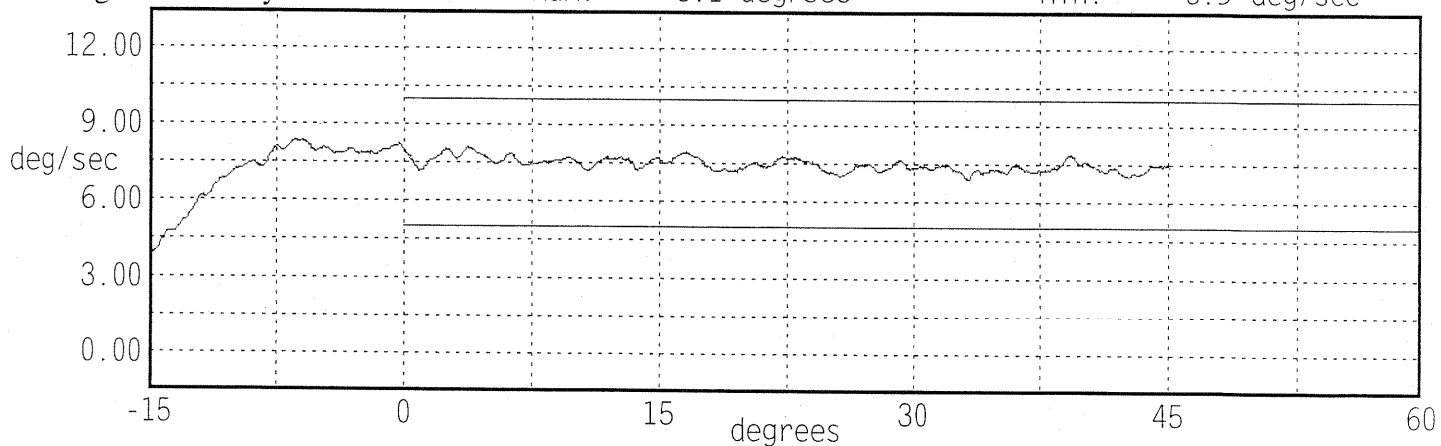
Moment About H-Point



Angular Velocity

Max: 8.1 deg/sec

Min: 6.9 deg/sec



Applied Safety Technologies Corp.

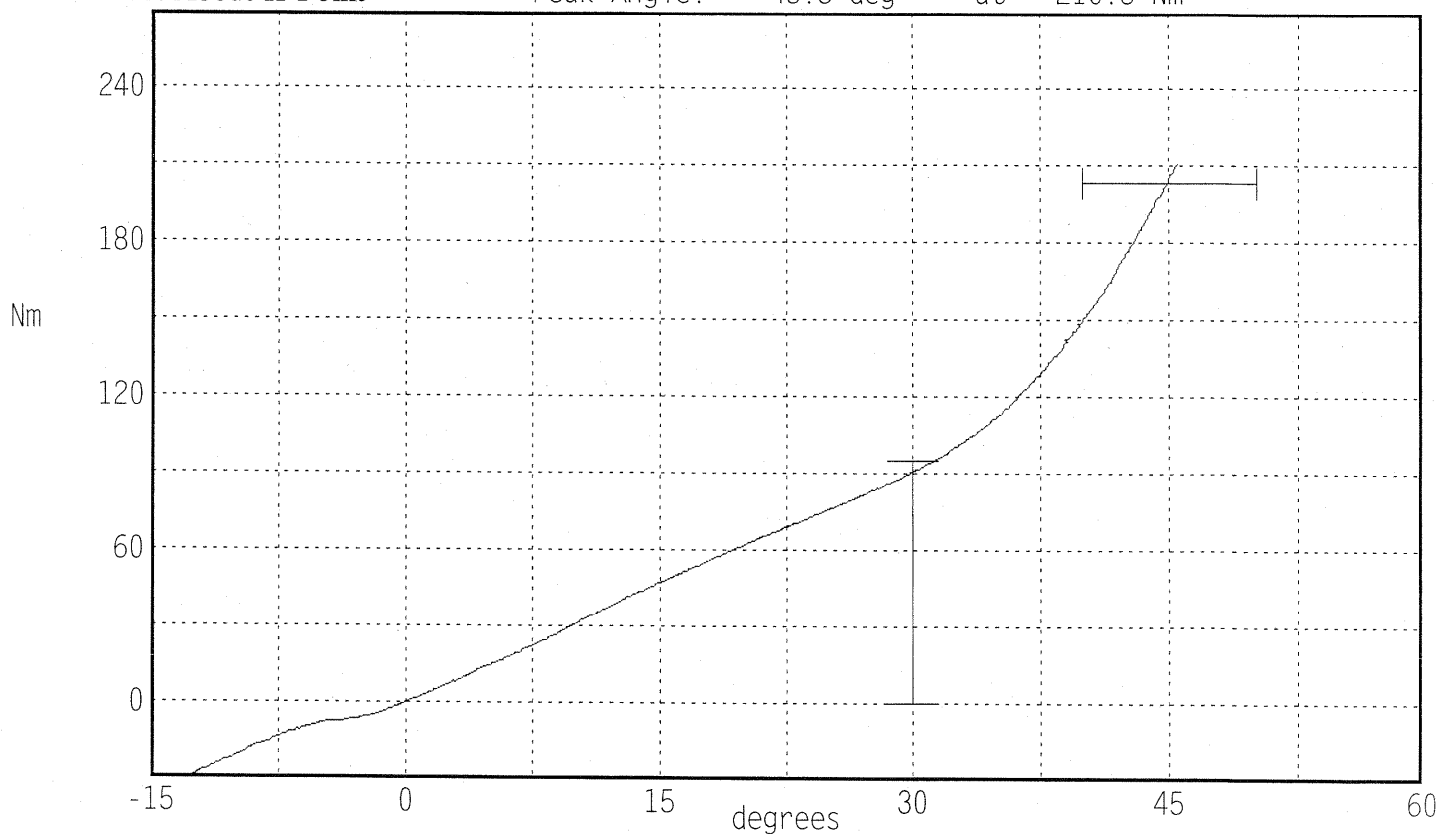
Hybrid III Hip Range of Motion

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

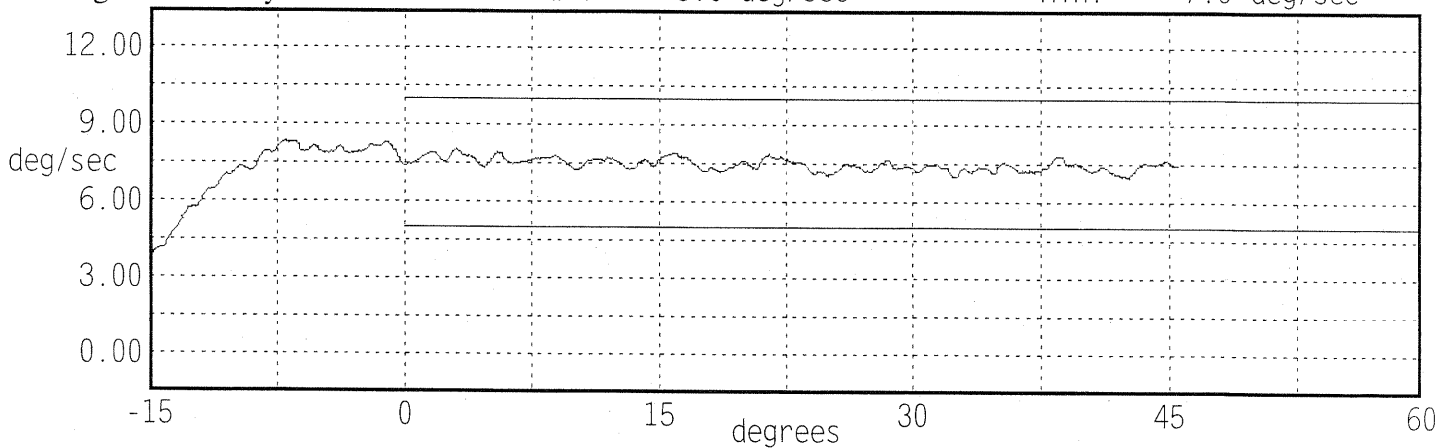
Date: 03/15/2006
Time: 16:29

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

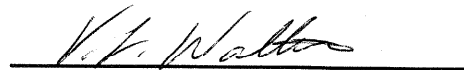
Test meets specifications.

Comments:

Technician



Approved

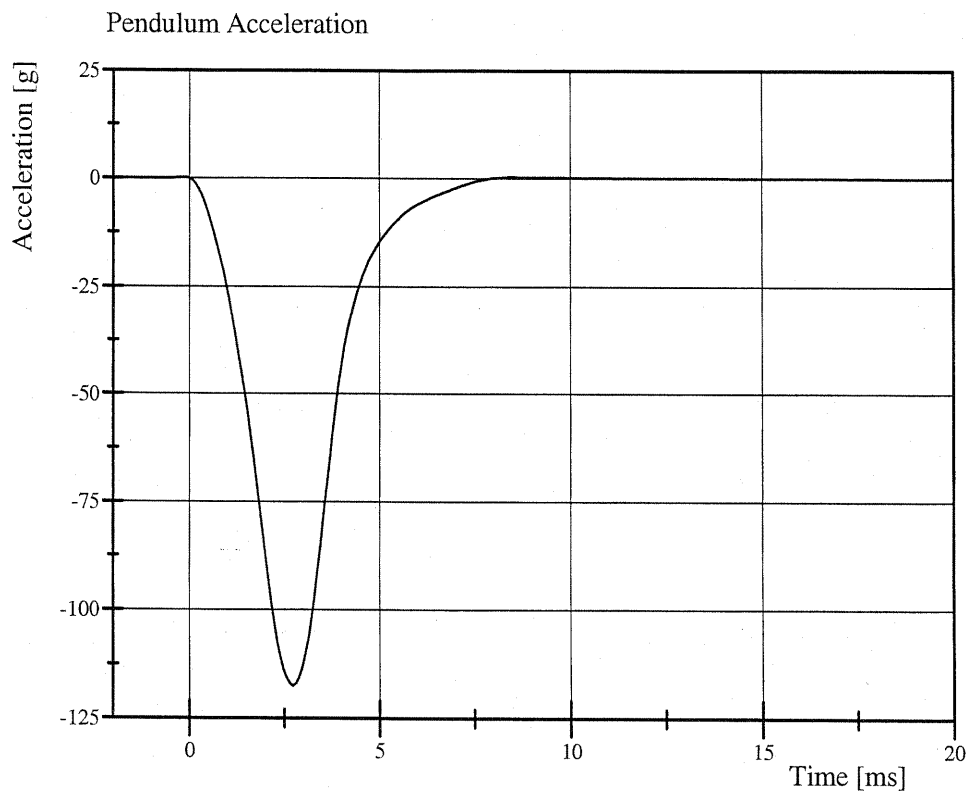


Transportation Research Center Inc.

Left Knee Femur Response Test

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

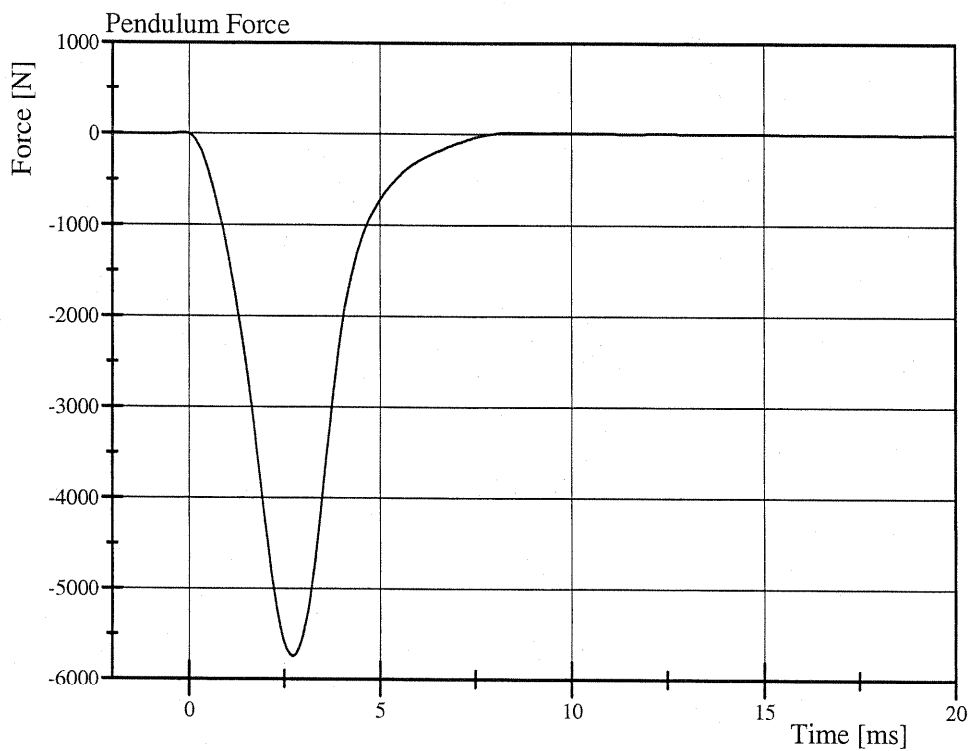
Test Date: 03/21/2006



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

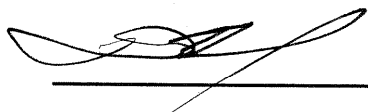
Test Date: 03/21/2006

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

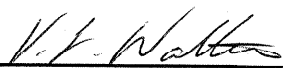
Test meets specifications.

Comments:

Technician



Approved

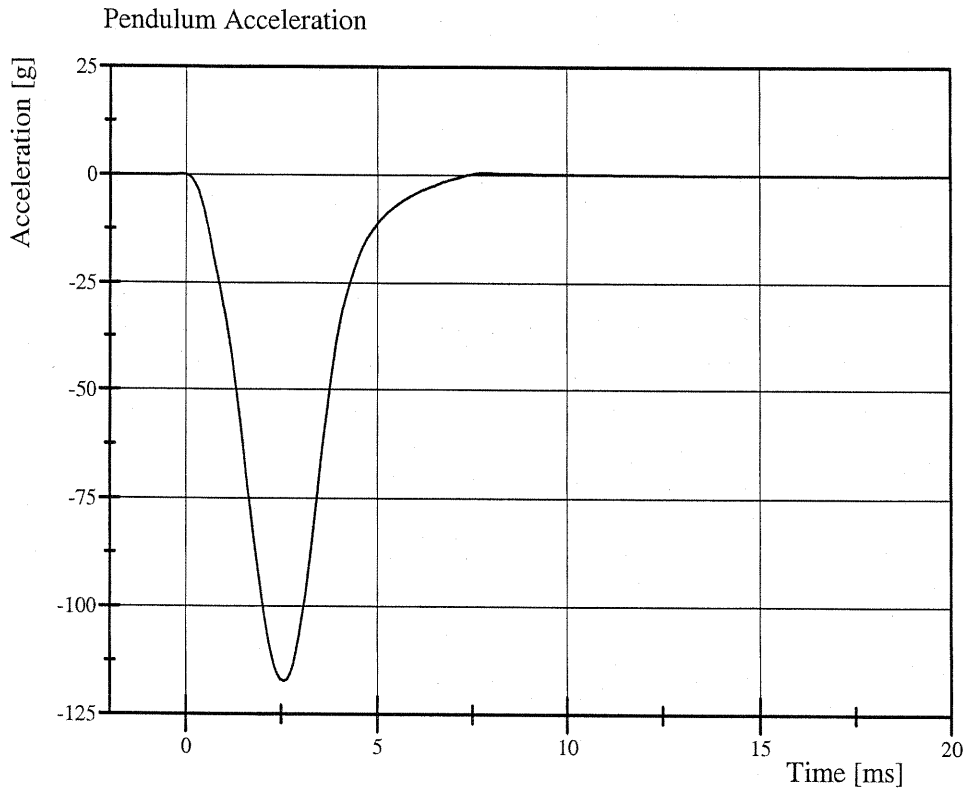


Transportation Research Center Inc.

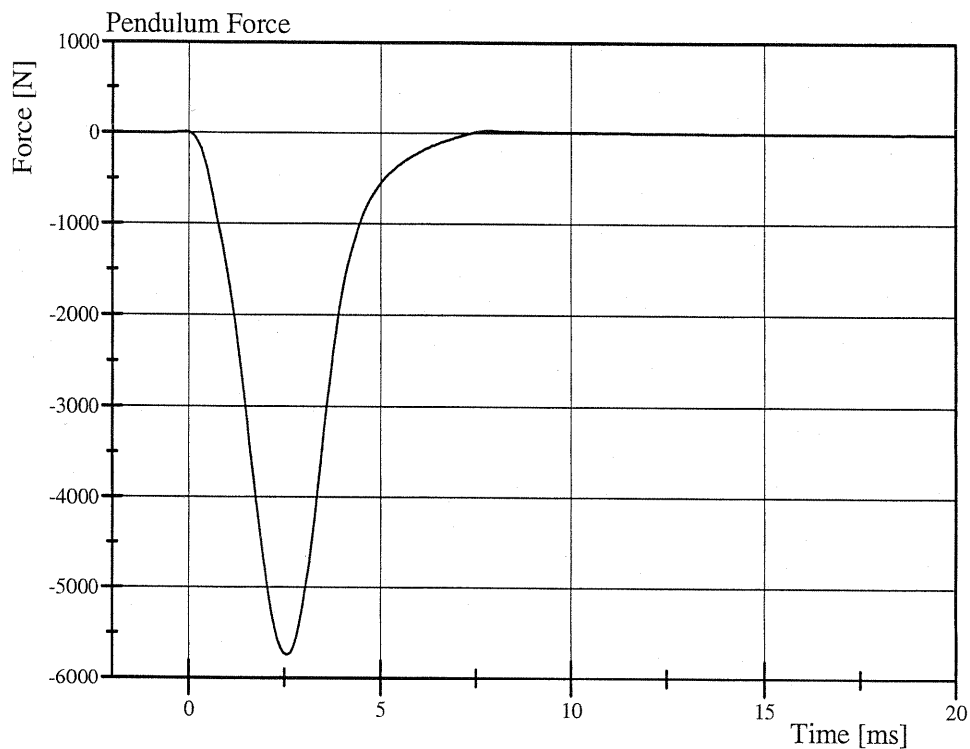
Right Knee Femur Response Test

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

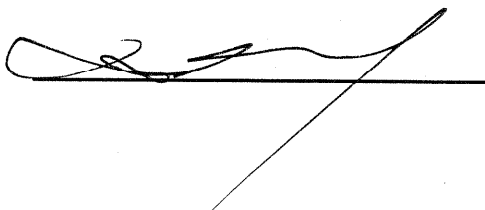
Test Date: 03/22/2006

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



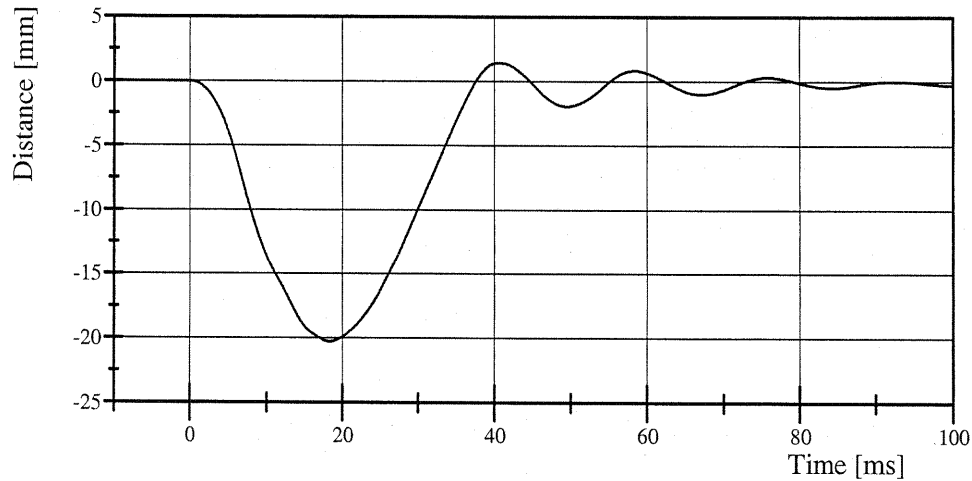
Transportation Research Center Inc.

Left Knee Slider

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

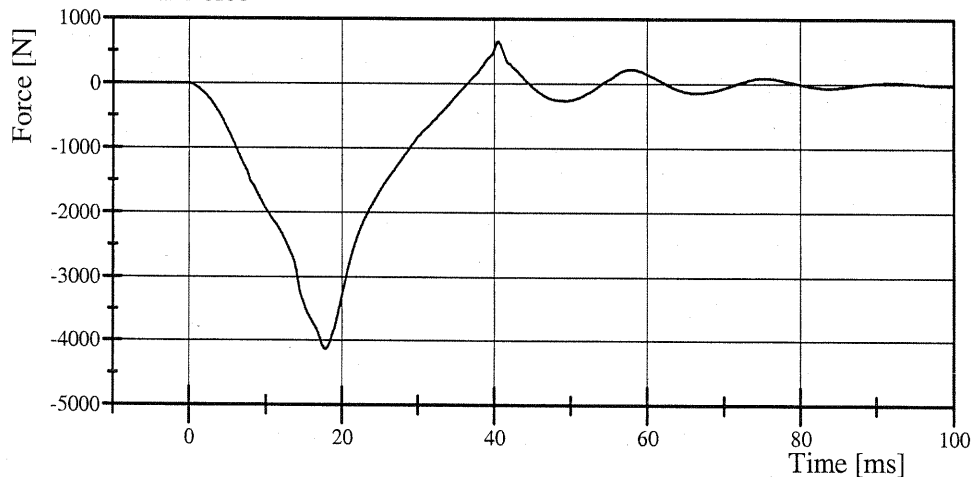
Test Date: 03/22/2006

Knee Slider Displacement



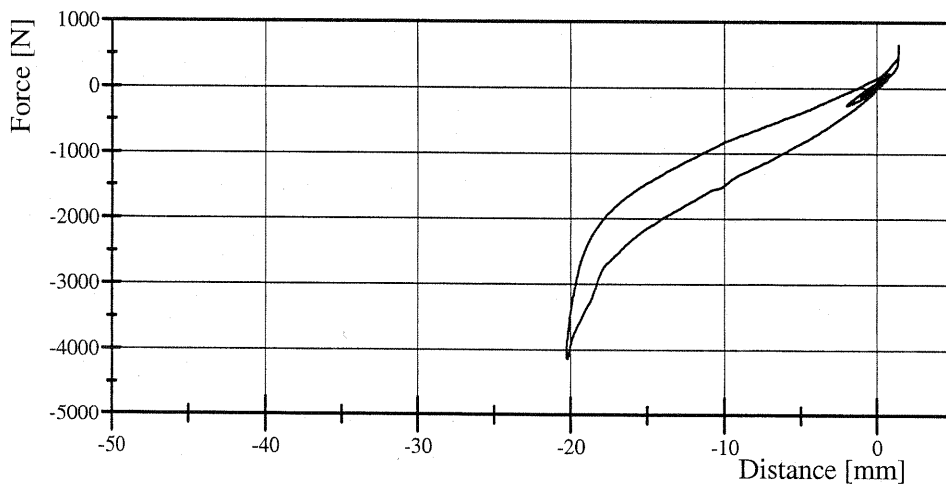
Filter Class: CFC_180
Max: 1.4 mm at 40.6 ms
Min: -20.3 mm at 18.3 ms

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

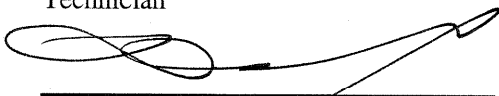
Test Date: 03/22/2006

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



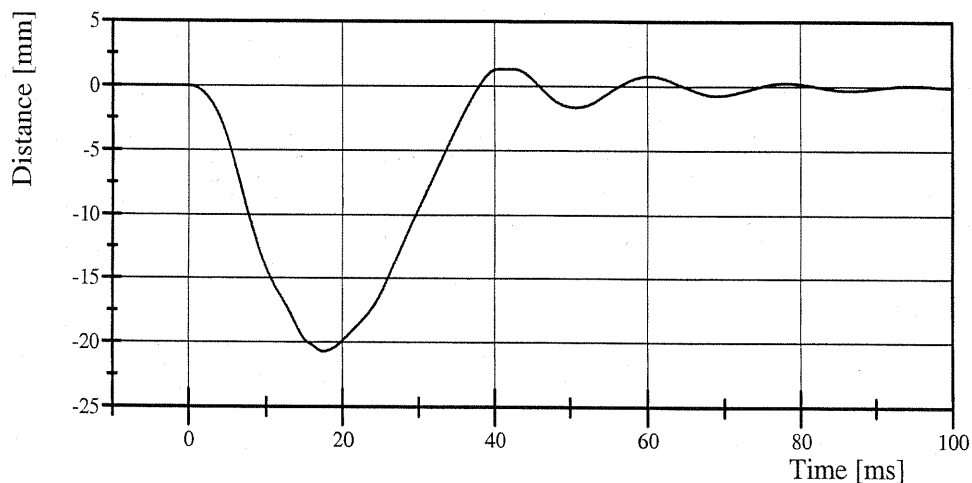
Transportation Research Center Inc.

Right Knee Slider

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

Test Date: 03/22/2006

Knee Slider Displacement

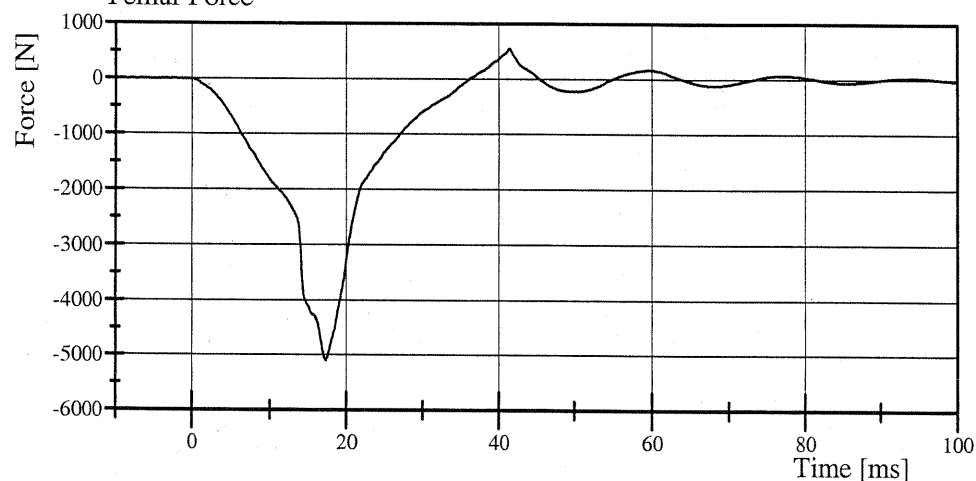


Filter Class: CFC_180

Max: 1.3 mm at 41.0 ms

Min: -20.7 mm at 17.4 ms

Femur Force

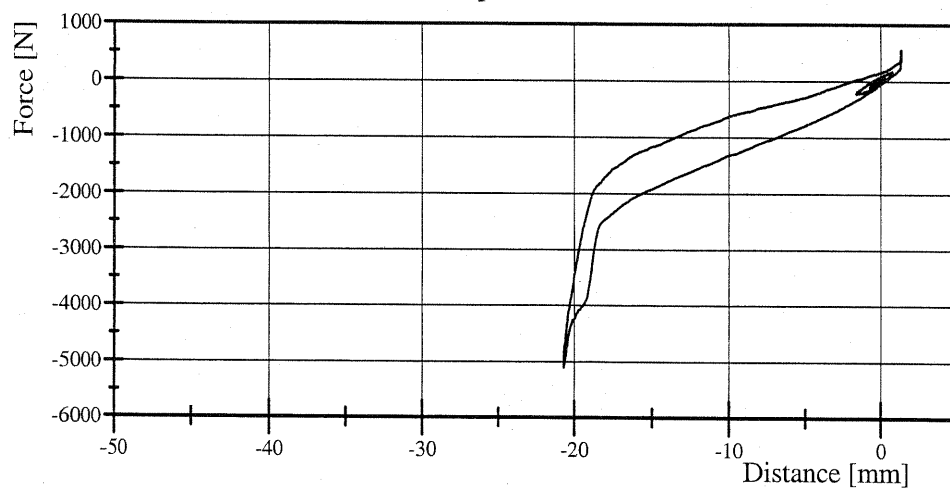


Filter Class: CFC_600

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

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

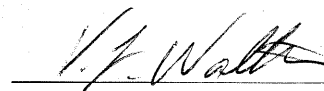
Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	774.7 - 800.1	782	Yes
B	Shoulder Pivot Height	431.8 - 457.2	451	Yes
C	Hip Pivot Height	81.3 - 86.3	85	Yes
D	Hip Pivot from Backline	144.8 - 149.8	147	Yes
E	Shoulder Pivot from Backline	68.6 - 83.8	78	Yes
F	Thigh Clearance	119.4 - 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. 36-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Peak Head Resultant Acceleration	250 - 300 g	279.4 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	8.1 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved

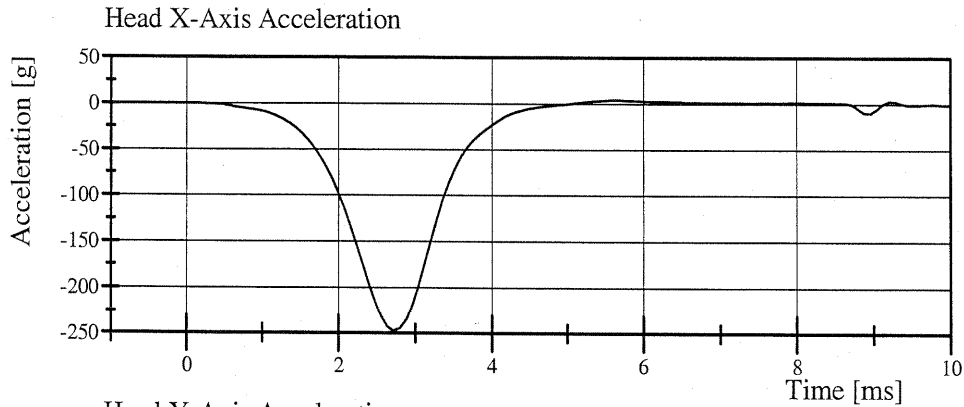


Transportation Research Center Inc.

Front Head Drop

HIII 5th Serial No. 416 Certification No. 36-1

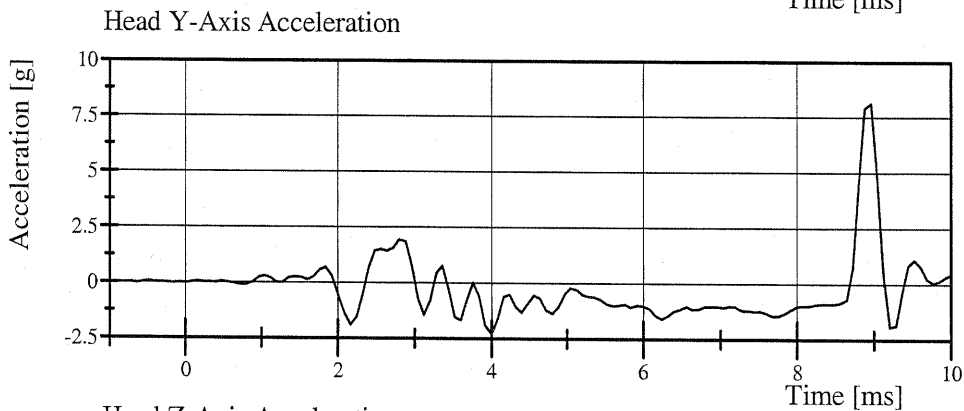
Test Date: 03/16/2006



Filter Class: CFC_1000

Max: 4.2 g at 5.6 ms

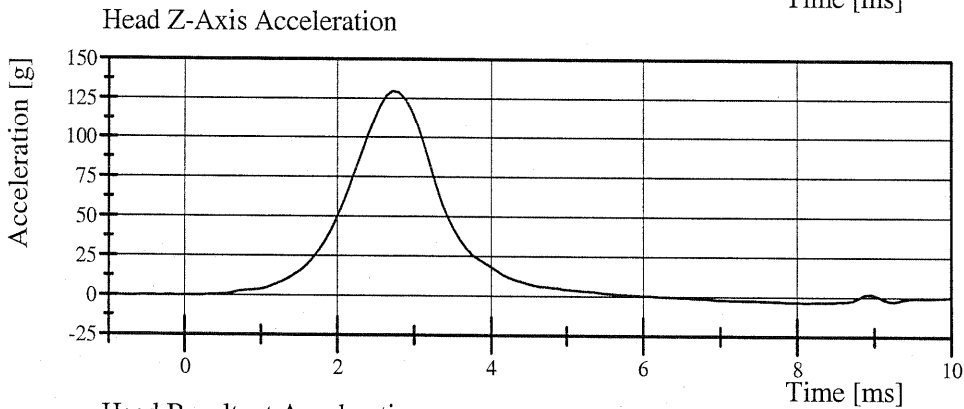
Min: -247.4 g at 2.7 ms



Filter Class: CFC_1000

Max: 8.1 g at 9.0 ms

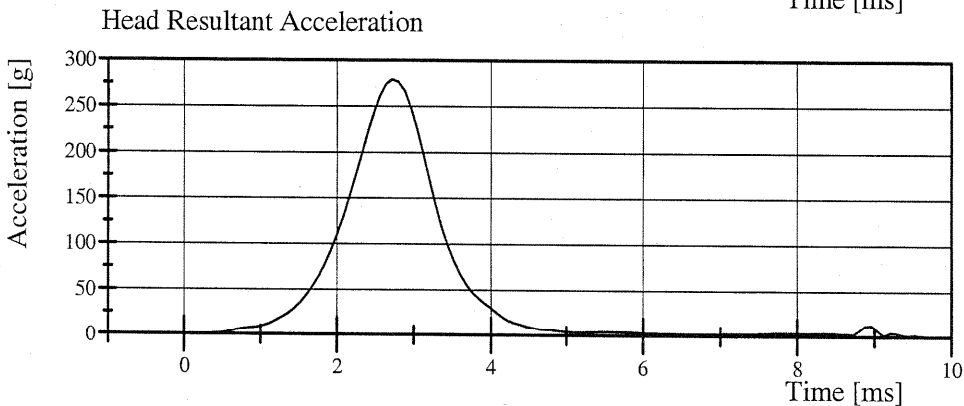
Min: -2.3 g at 4.0 ms



Filter Class: CFC_1000

Max: 129.9 g at 2.7 ms

Min: -3.3 g at 8.2 ms



Filter Class: CFC_1000

Max: 279.4 g at 2.7 ms

Min: 0.0 g at -1.0 ms

Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 36-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	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	-2.33 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	(-4.0) - (-5.0) m/s	-4.51 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	(-5.8) - (-7.0) m/s	-6.43 m/s	Yes
Total Head D-Plane Rotation	(-77) - (-91) °	-79.9 °	Yes
Total Neck Occipital Condyles Moment Between -77° and -91° Rotation	69 - 83 N·m	79.1 N·m	Yes
Total Neck Occipital Condyles Moment Decay to 10 N·m	80 - 100 ms	85.6 ms	Yes

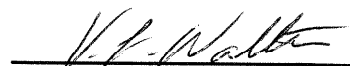
Test meets specifications.

Comments:

Technician



Approved

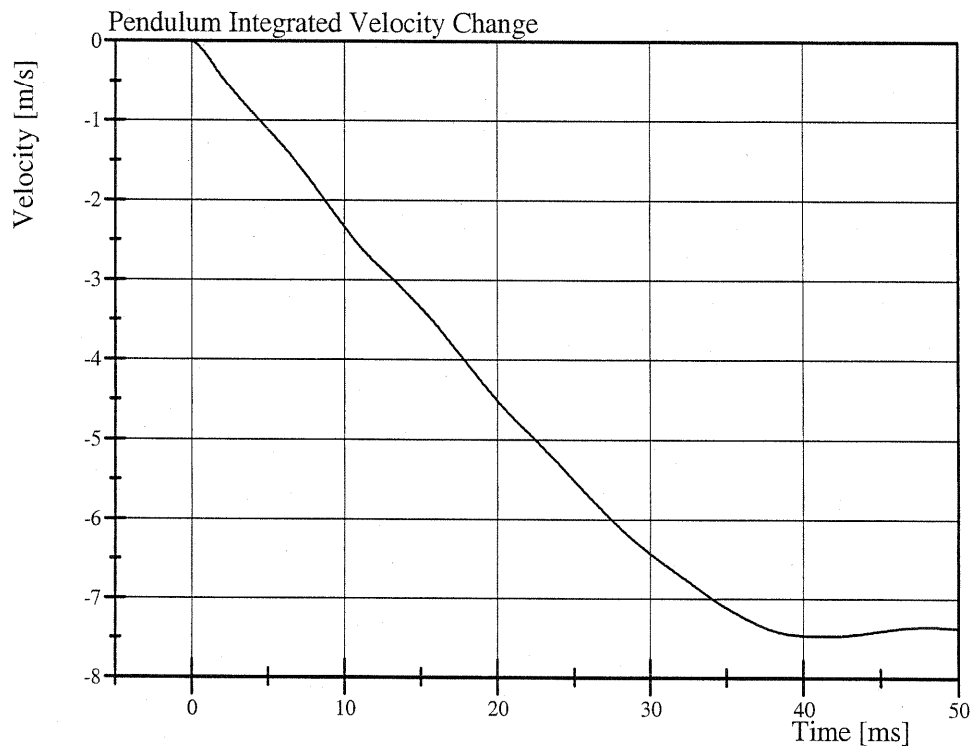
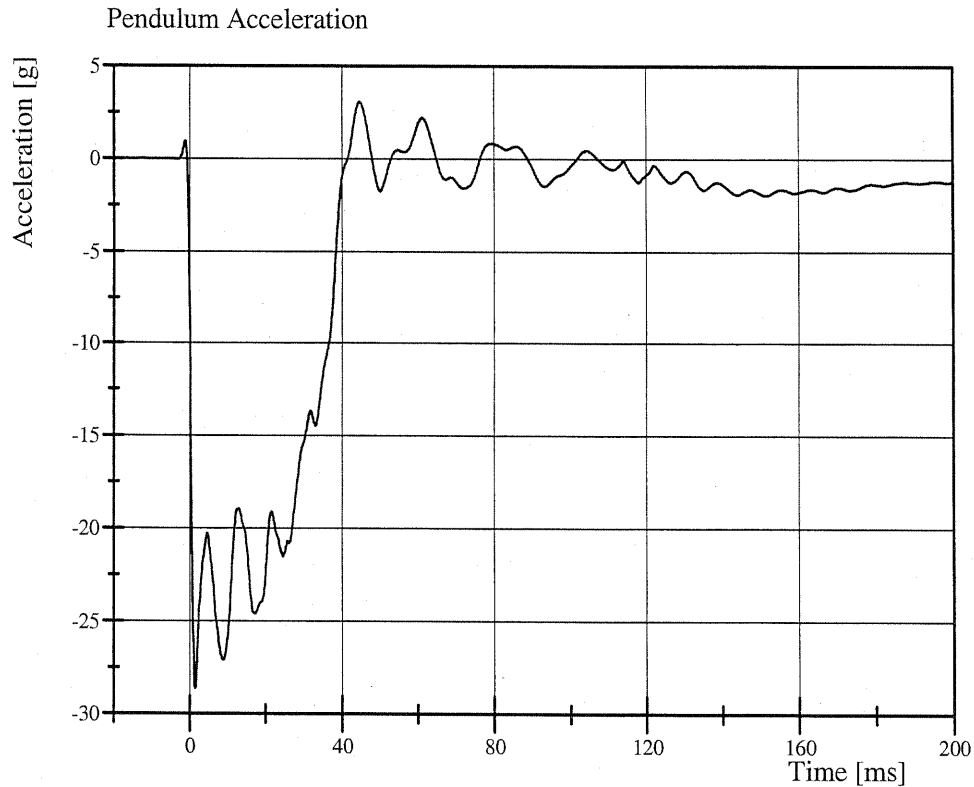


Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 36-1

Test Date: 03/16/2006



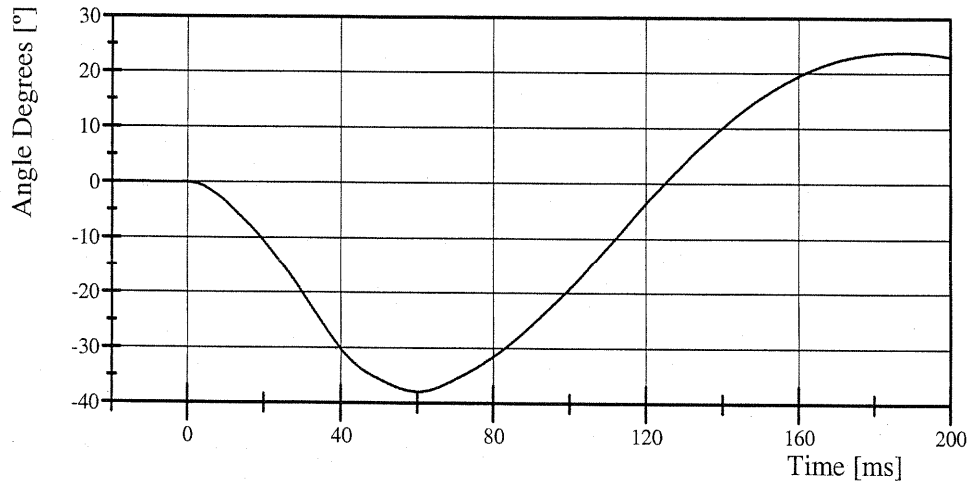
Transportation Research Center Inc.

Neck Flexion

HIII 5th Serial No. 416 Certification No. 36-1

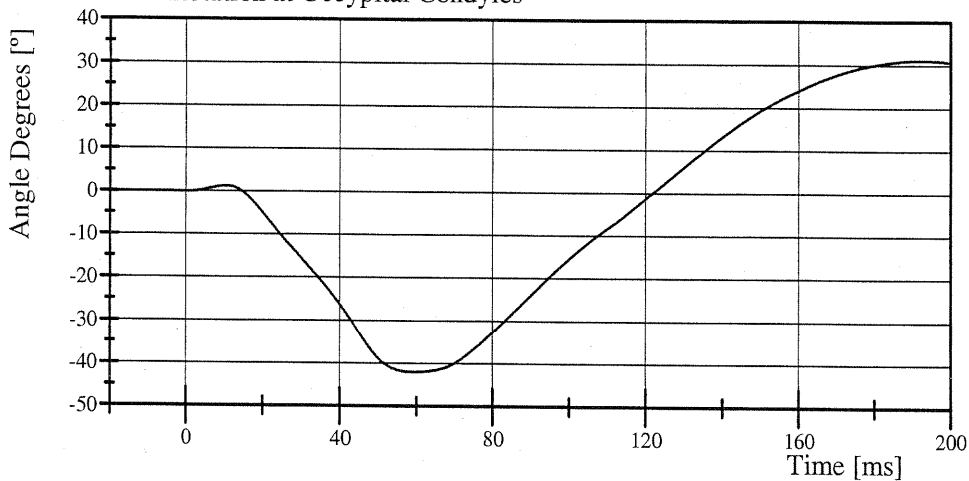
Test Date: 03/16/2006

Pot Rotation at the Base of Neck



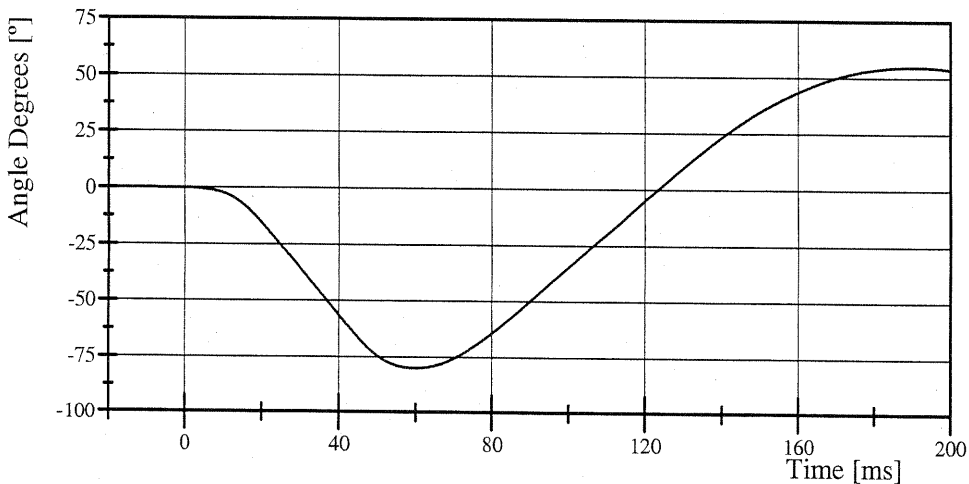
Filter Class: CFC_60
Max: 23.8 ° at 187.2 ms
Min: -37.9 ° at 60.3 ms

Head Rotation at Occypital Condyles



Filter Class: CFC_60
Max: 31.2 ° at 192.2 ms
Min: -42.0 ° at 59.4 ms

Total Head D-Plane Rotation



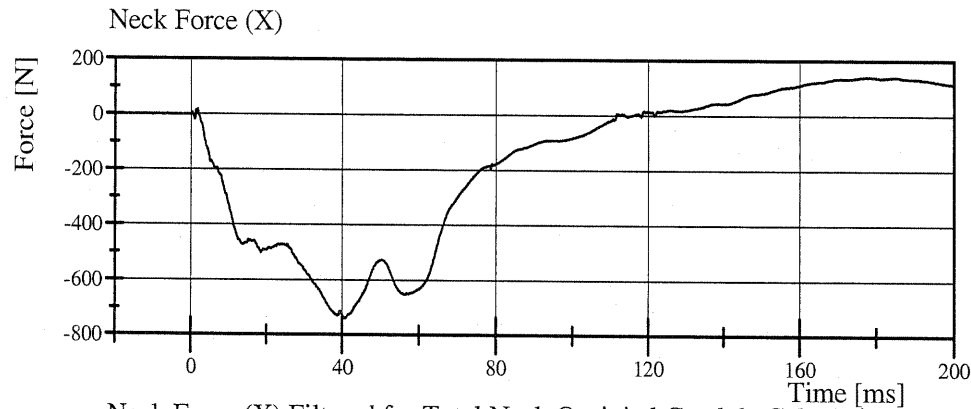
Filter Class: CFC_60
Max: 54.9 ° at 190.6 ms
Min: -79.9 ° at 60.0 ms

Transportation Research Center Inc.

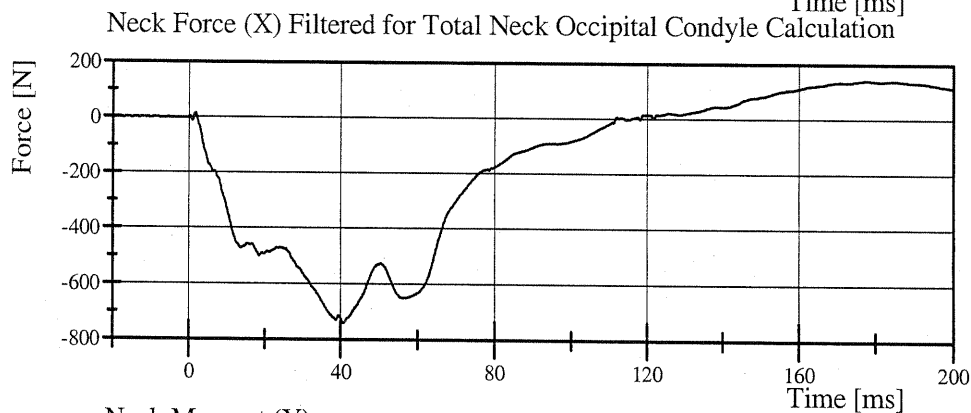
Neck Flexion

HIII 5th Serial No. 416 Certification No. 36-1

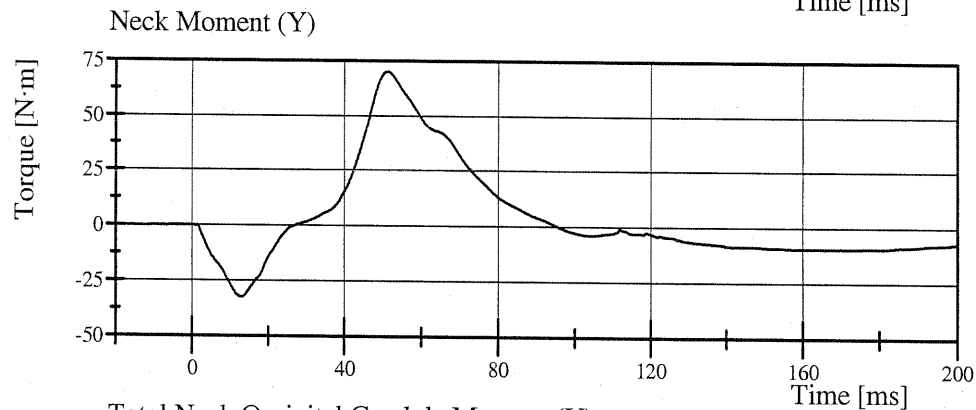
Test Date: 03/16/2006



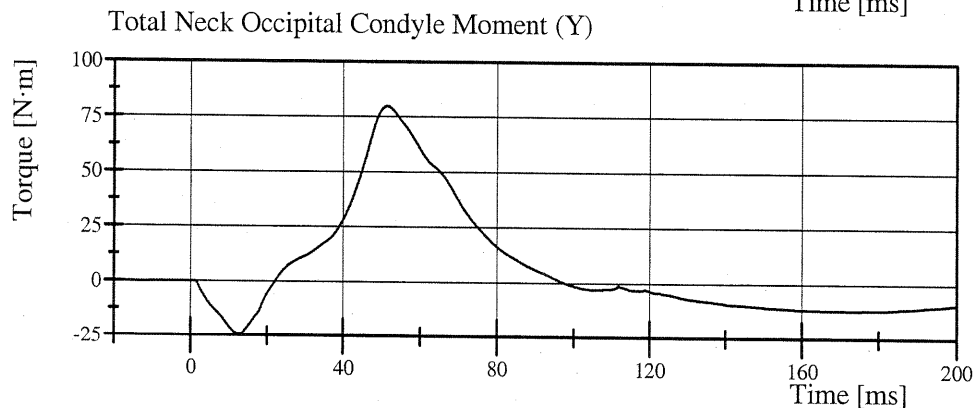
Filter Class: CFC_1000
Max: 143.1 N at 177.6 ms
Min: -741.3 N at 40.7 ms



Filter Class: CFC_600
Max: 142.8 N at 178.0 ms
Min: -740.7 N at 40.6 ms



Filter Class: CFC_600
Max: 70.3 N·m at 51.3 ms
Min: -32.2 N·m at 13.0 ms



Filter Class: CFC_600
Max: 79.9 N·m at 51.4 ms
Min: -24.1 N·m at 12.6 ms

Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 36-2

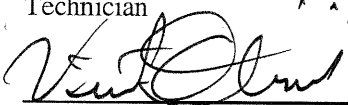
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Pendulum Velocity	(-5.95) - (-6.19) m/s	-6.062 m/s	Yes
Pendulum Integrated Velocity Change at 10ms	1.5 - 1.9 m/s	1.79 m/s	Yes
Pendulum Integrated Velocity Change at 20ms	3.1 - 3.9 m/s	3.50 m/s	Yes
Pendulum Integrated Velocity Change at 30ms	4.6 - 5.6 m/s	5.12 m/s	Yes
Total Head D-Plane Rotation	99 - 114 °	107.3 °	Yes
Total Neck Occipital Condyles Moment Between 99° and 114° Rotation	(-53) - (-65) N·m	-57.2 N·m	Yes
Total Neck Occipital Condyles Moment Decay to -10 N·m	94 - 114 ms	102.4 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



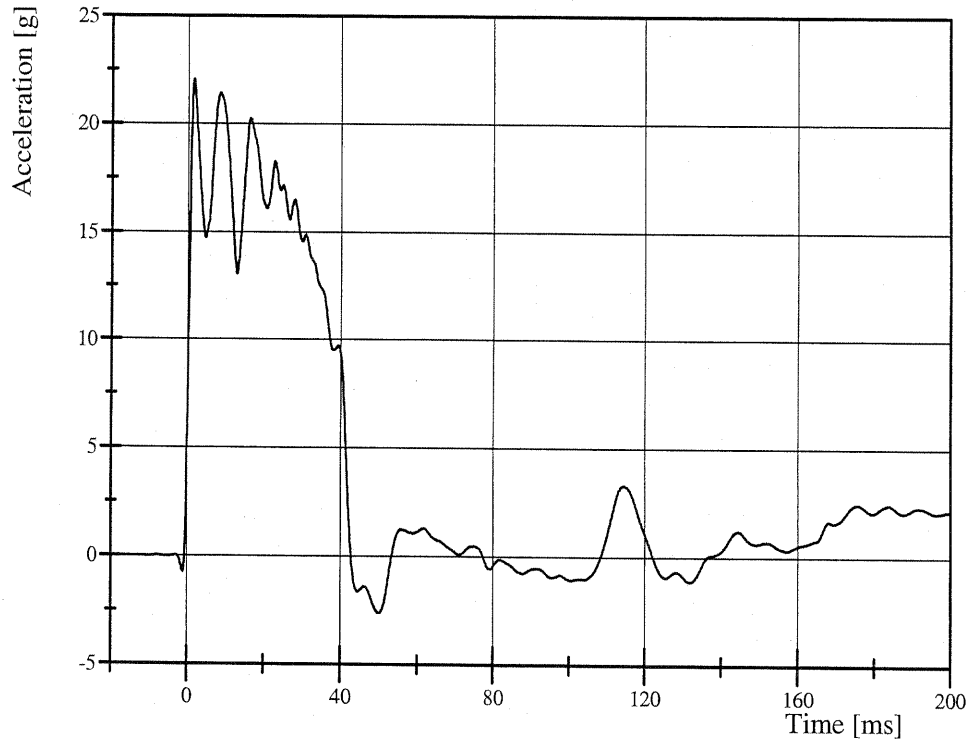
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 36-2

Test Date: 03/16/2006

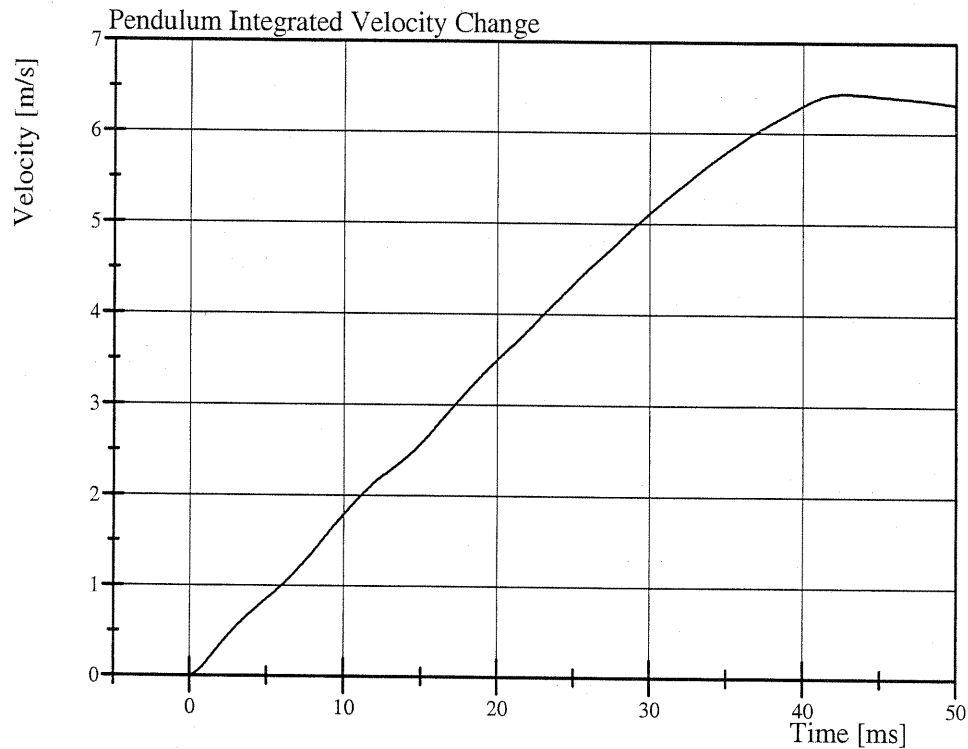
Pendulum Acceleration



Filter Class: CFC_180

Max: 22.0 g at 1.5 ms

Min: -2.6 g at 50.0 ms



Filter Class: CFC_180

Max: 6.4 m/s at 42.7 ms

Min: 0.0 m/s at 0.0 ms

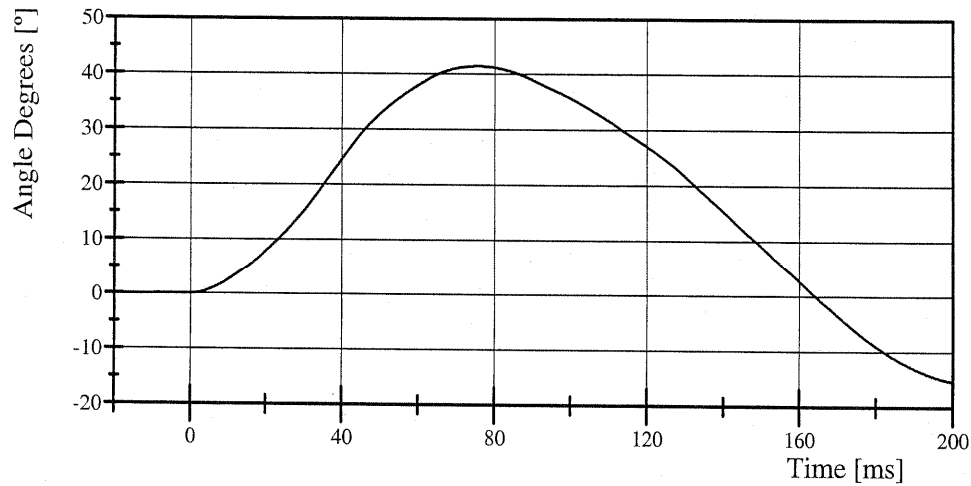
Transportation Research Center Inc.

Neck Extension

HIII 5th Serial No. 416 Certification No. 36-2

Test Date: 03/16/2006

Pot Rotation at the Base of Neck

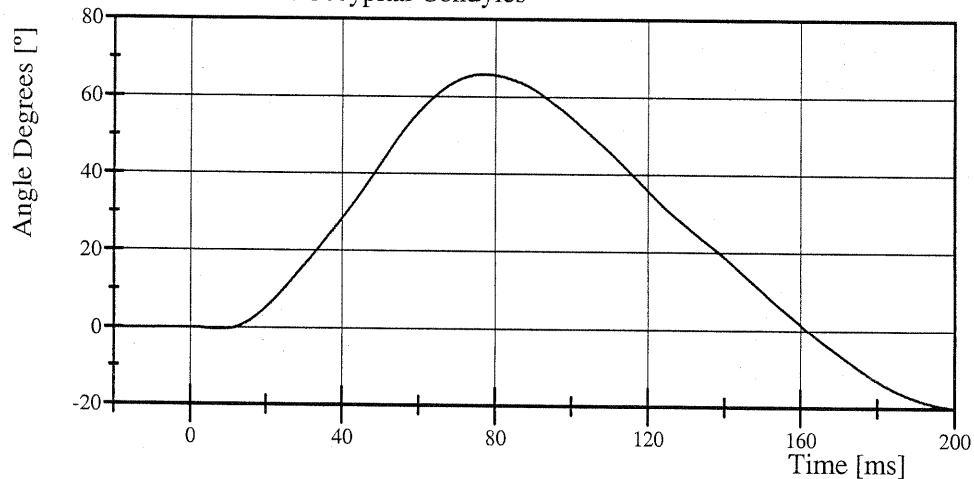


Filter Class: CFC_60

Max: 41.4 ° at 75.7 ms

Min: -15.3 ° at 200.0 ms

Head Rotation at Occypital Condyles

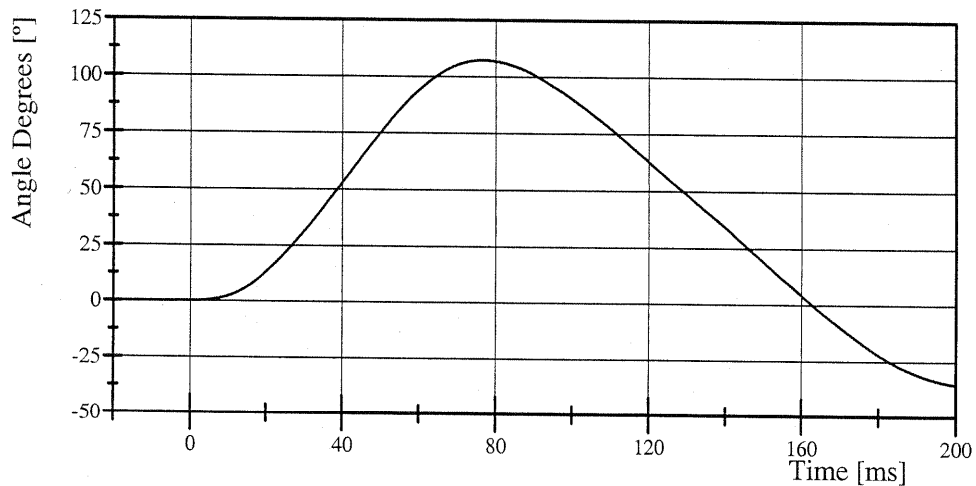


Filter Class: CFC_60

Max: 65.9 ° at 77.0 ms

Min: -20.0 ° at 200.0 ms

Total Head D-Plane Rotation



Filter Class: CFC_60

Max: 107.3 ° at 76.7 ms

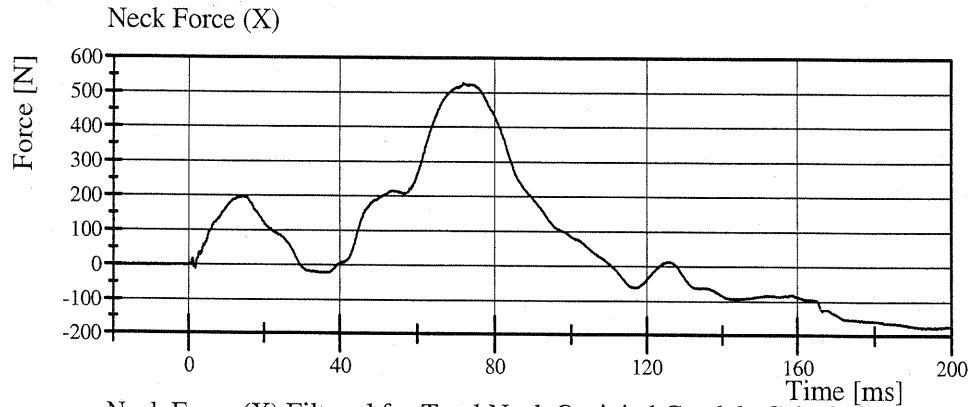
Min: -35.3 ° at 200.0 ms

Transportation Research Center Inc.

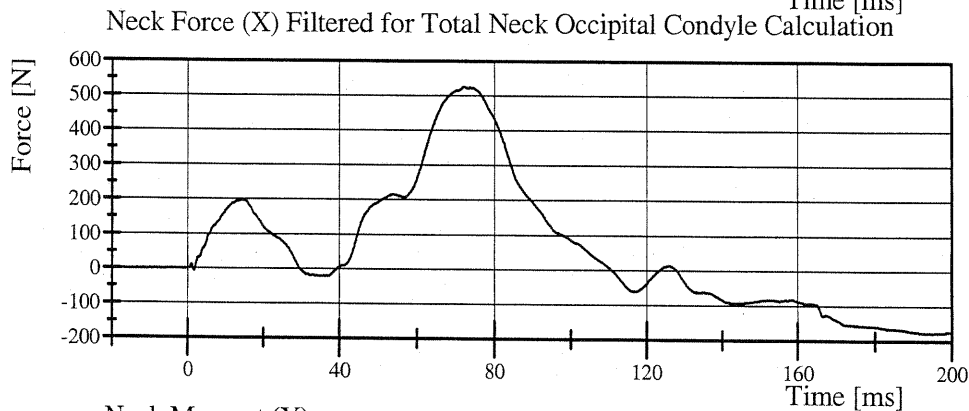
Neck Extension

HIII 5th Serial No. 416 Certification No. 36-2

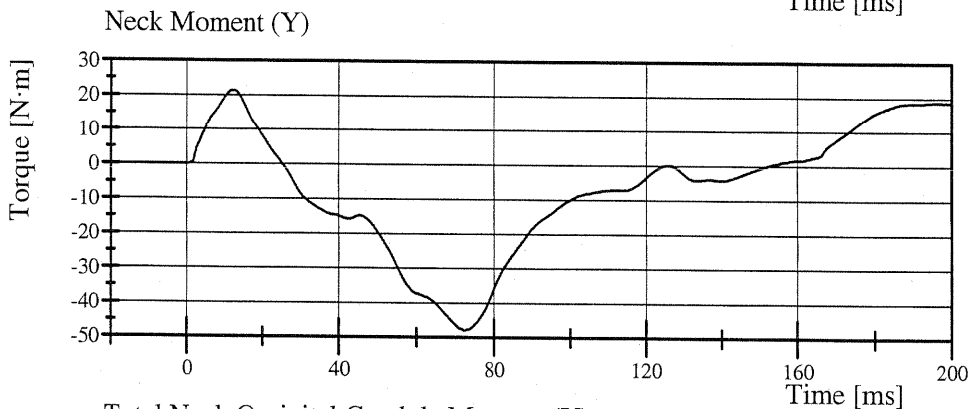
Test Date: 03/16/2006



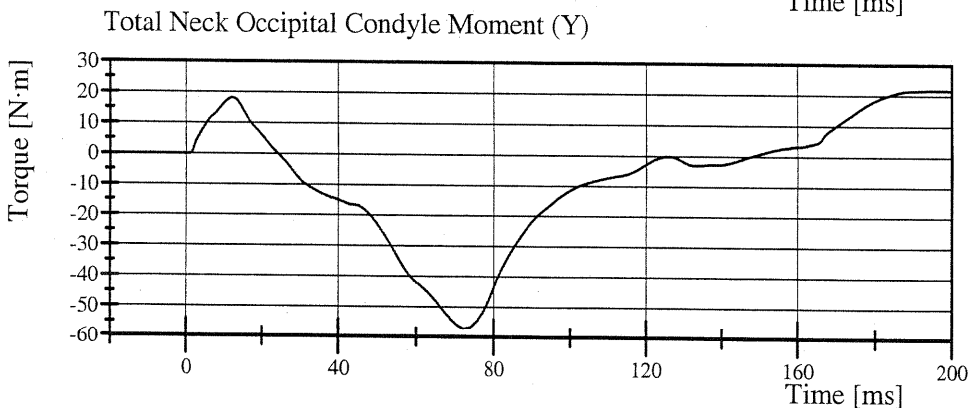
Filter Class: CFC_1000
Max: 527.3 N at 72.0 ms
Min: -178.0 N at 194.9 ms



Filter Class: CFC_600
Max: 526.5 N at 72.1 ms
Min: -177.7 N at 195.0 ms



Filter Class: CFC_600
Max: 21.4 N·m at 12.1 ms
Min: -47.8 N·m at 72.5 ms



Filter Class: CFC_600
Max: 21.9 N·m at 195.0 ms
Min: -57.2 N·m at 72.4 ms

Transportation Research Center Inc.

Front Thorax

HIII 5th Serial No. 416 Certification No. 36-1

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	6.616 m/s	Yes
Probe Force Peak Between 50.0 mm and 58.0 mm Chest Deflection	(-3,900) - (-4,400) N	-4,157.6 N	Yes
Probe Force Peak Between 18.0 mm and 50.0 mm Chest Deflection	$\geq$ (-4,600) N	-3,977.6 N	Yes
Maximum Chest Compression	(-50) - (-58) mm	-55.9 mm	Yes
Internal Hysteresis	69 - 85 %	71.1 %	Yes

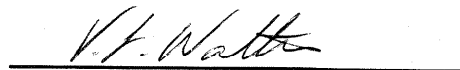
Test meets specifications.

Comments:

Technician



Approved

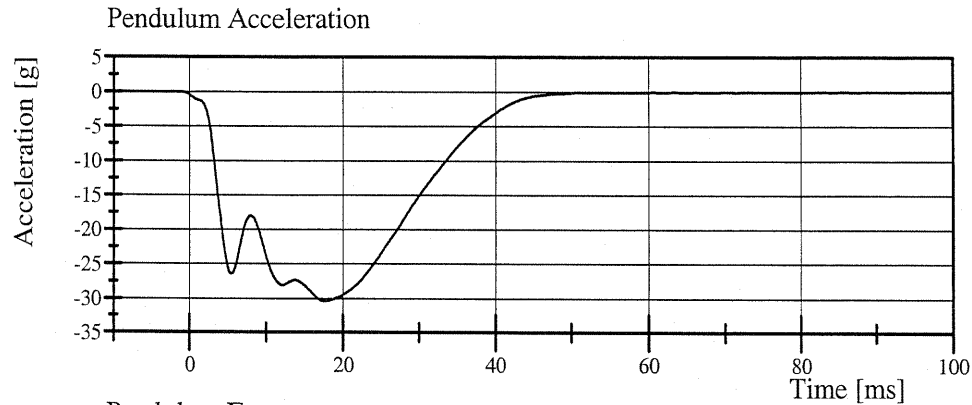


Transportation Research Center Inc.

Front Thorax

HIH 5th Serial No. 416 Certification No. 36-1

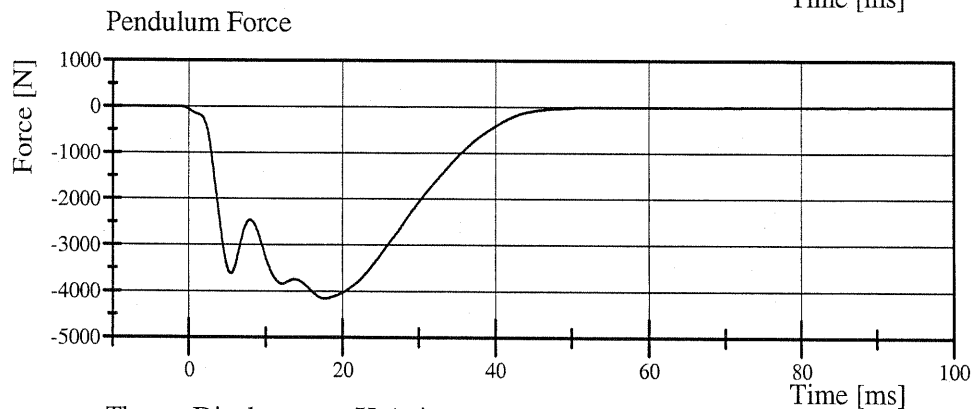
Test Date: 03/16/2006



Filter Class: CFC_180

Max: 0.1 g at 95.6 ms

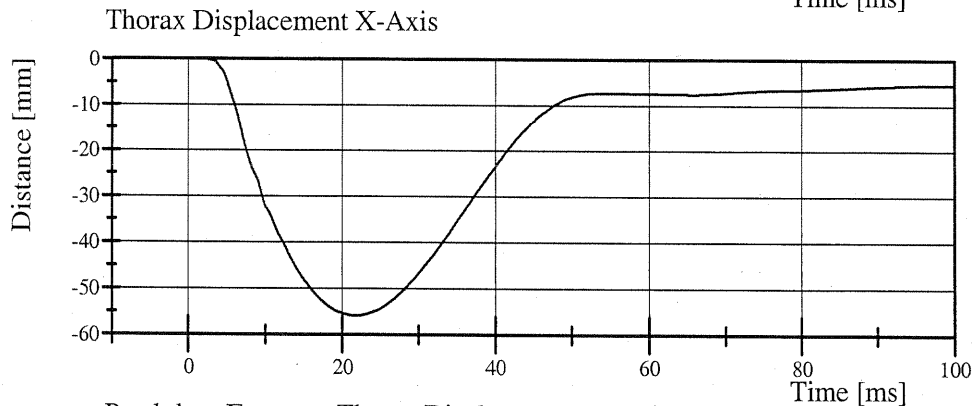
Min: -30.3 g at 17.6 ms



Filter Class: CFC_180

Max: 10.8 N at 95.6 ms

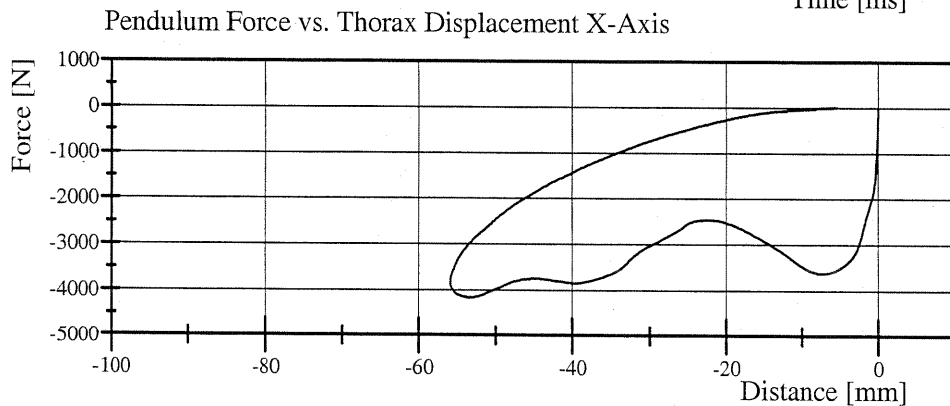
Min: -4,157.6 N at 17.6 ms



Filter Class: CFC_600

Max: 0.0 mm at -9.1 ms

Min: -55.9 mm at 21.8 ms



Filter Class: CFC_180

Max: 10.8 N at -5.4 mm

Min: -4,157.6 N at -53.1 mm

TRANSPORTATION RESEARCH CENTER INC.

TORSO FLEXION TEST

HYBRID III SMALL FEMALE

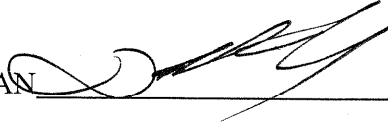
CAL DATE: 16-Mar-06

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	$\leq 20^\circ$ 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	$\pm 8^\circ$ 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. 36-2
Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.08 - 2.13 m/s	2.104 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,736.0 N	Yes

Test meets specifications.

Comments:

Technician



Approved

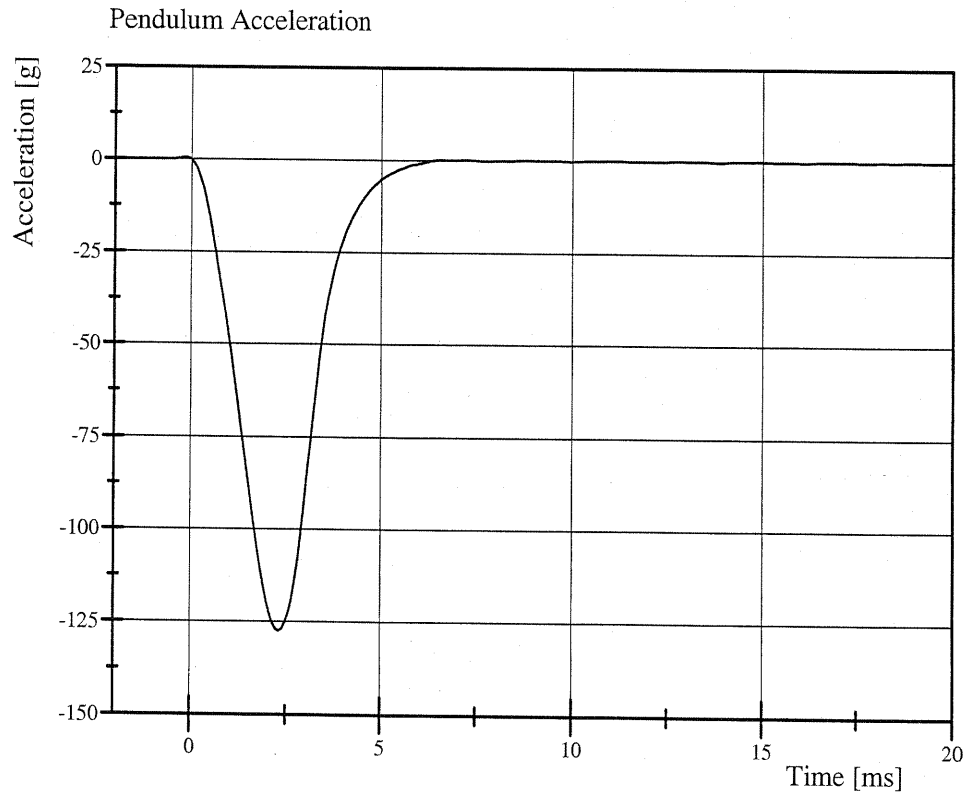


Transportation Research Center Inc.

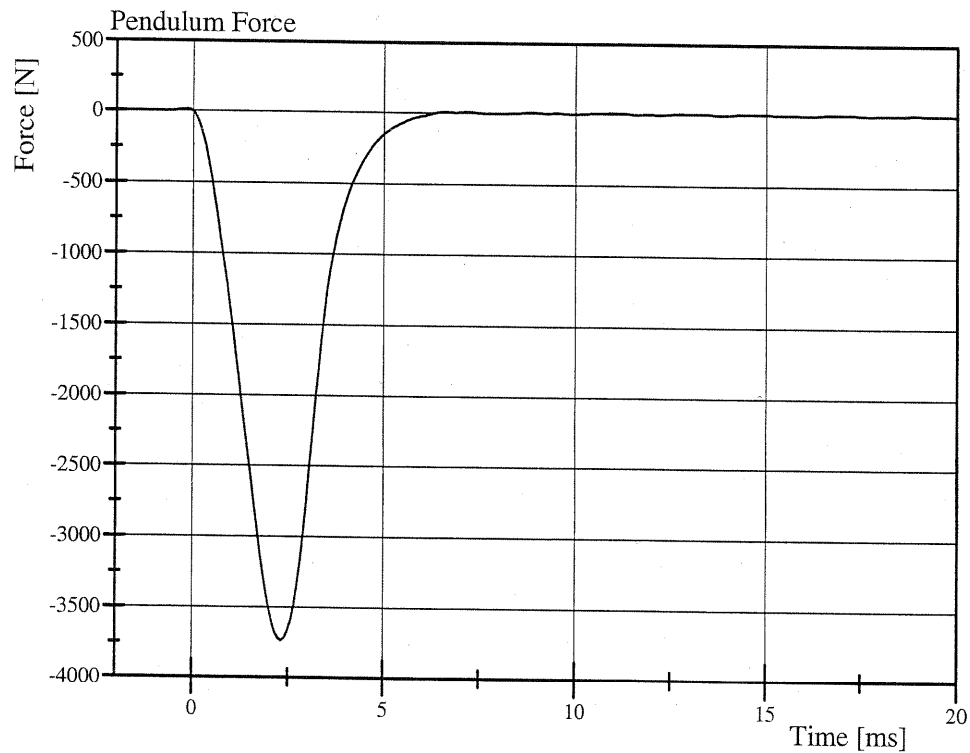
Left Knee Femur Response Test

HIII 5th Serial No. 416 Certification No. 36-2

Test Date: 03/16/2006



Filter Class: CFC_600
Max: 0.4 g at -0.2 ms
Min: -127.4 g at 2.3 ms



Filter Class: CFC_600
Max: 10.6 N at -0.2 ms
Min: -3,736.0 N at 2.3 ms

Transportation Research Center Inc.

Right Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 36-2
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	2.123 m/s	Yes
Peak Femur Force	(-3,450) - (-4,060) N	-3,738.5 N	Yes

Test meets specifications.

Comments:

Technician

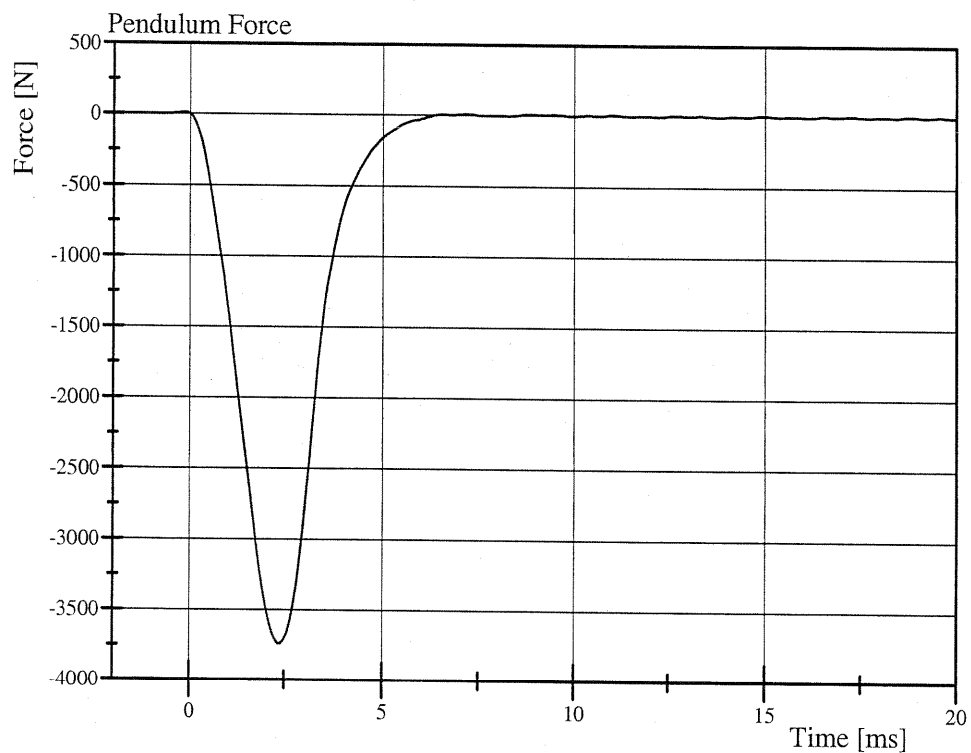
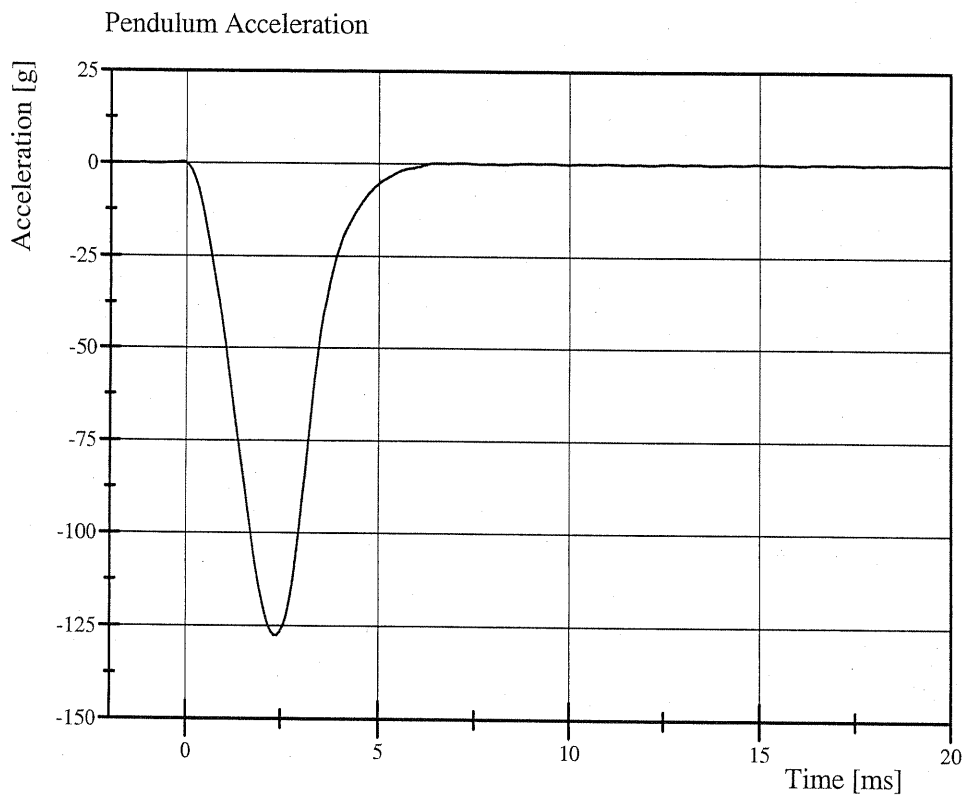


Approved



Transportation Research Center Inc.

Right Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 36-2
Test Date: 03/16/2006



Transportation Research Center Inc.

Left Knee Slider

HIII 5th Serial No. 416 Certification No. 36-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.748 m/s	Yes
Peak Deflection	(-12.7) - (-15.5) mm	-13.19 mm	Yes

Test meets specifications.

Comments:

Technician

V. J. Oliver

Approved

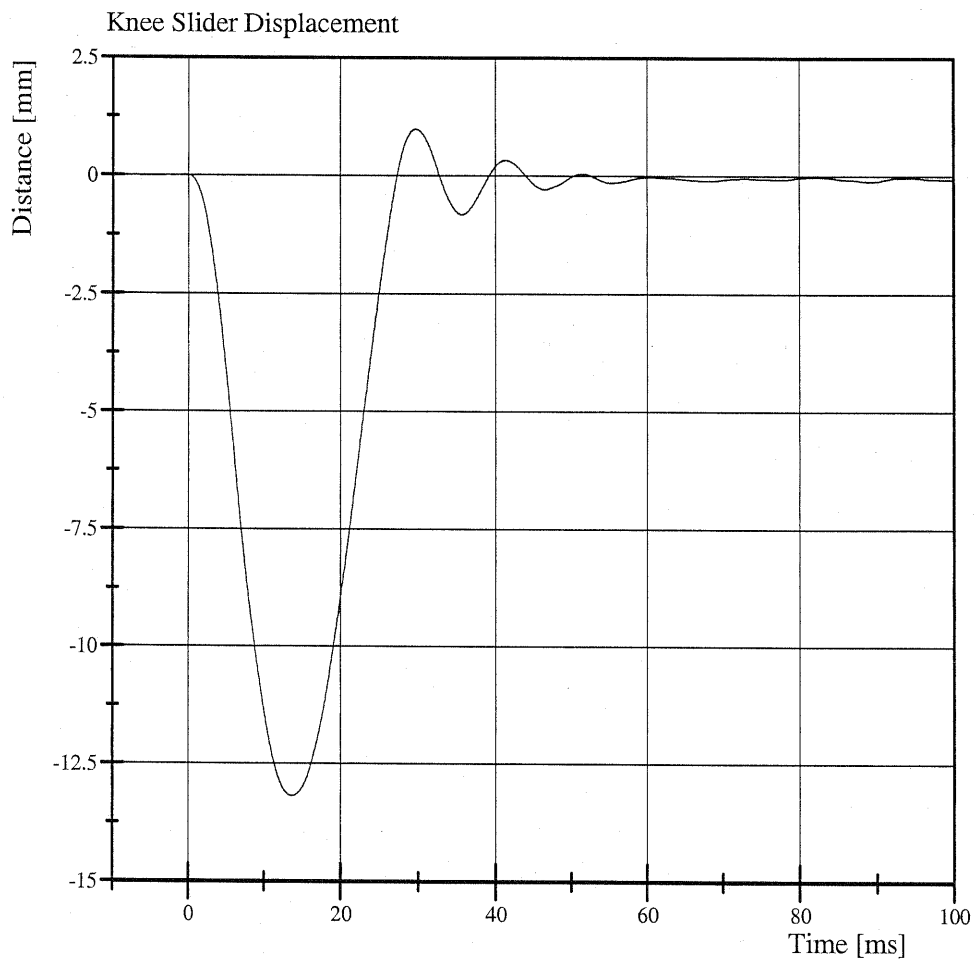
V. L. Walter

Transportation Research Center Inc.

Left Knee Slider

HIII 5th Serial No. 416 Certification No. 36-1

Test Date: 03/16/2006



Filter Class: CFC_180

Max: 1.0 mm at 29.8 ms

Min: -13.2 mm at 13.7 ms

Transportation Research Center Inc.

Right Knee Slider

HIII 5th Serial No. 416 Certification No. 36-1

Test Date: 03/16/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Probe Velocity	2.70 - 2.80 m/s	2.748 m/s	Yes
Peak Deflection	(-12.7) - (-15.5) mm	-13.05 mm	Yes

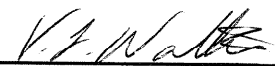
Test meets specifications.

Comments:

Technician



Approved

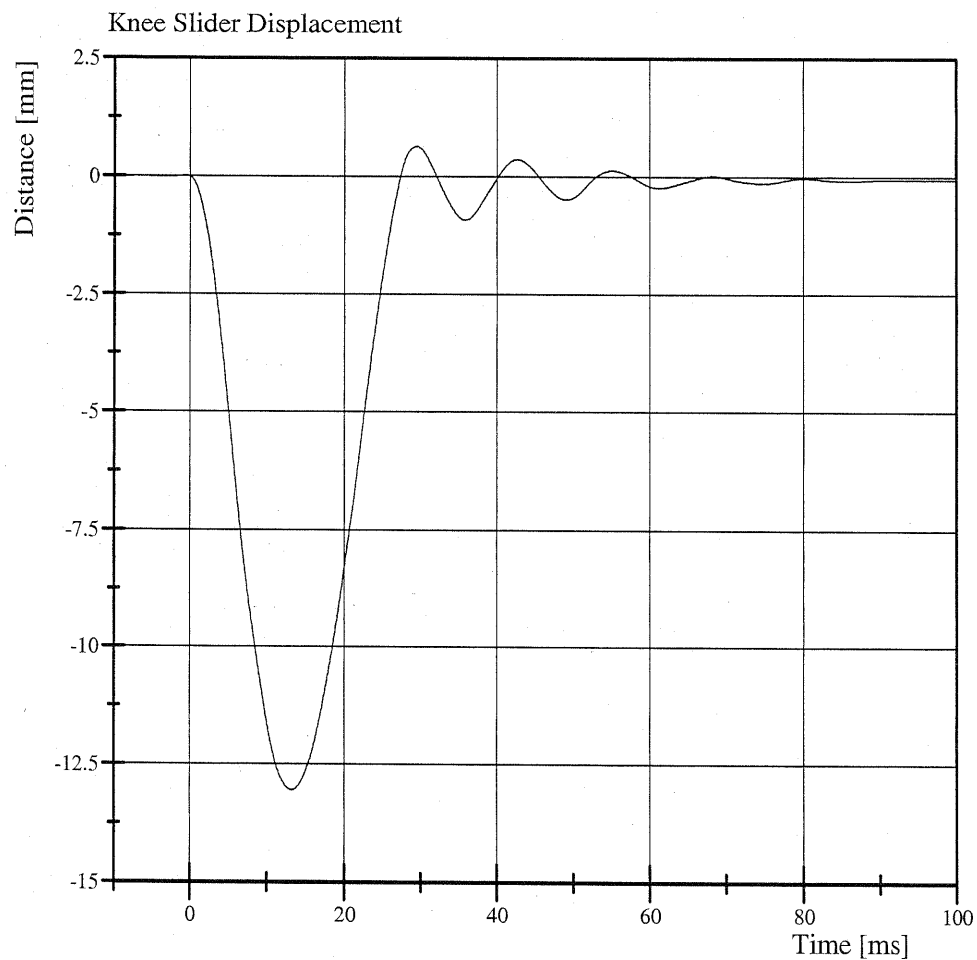


Transportation Research Center Inc.

Right Knee Slider

HIII 5th Serial No. 416 Certification No. 36-1

Test Date: 03/16/2006



Filter Class: CFC_180

Max: 0.6 mm at 29.4 ms

Min: -13.0 mm at 13.3 ms

Post-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

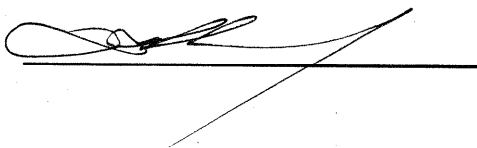
Test Date: 03/21/2006

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

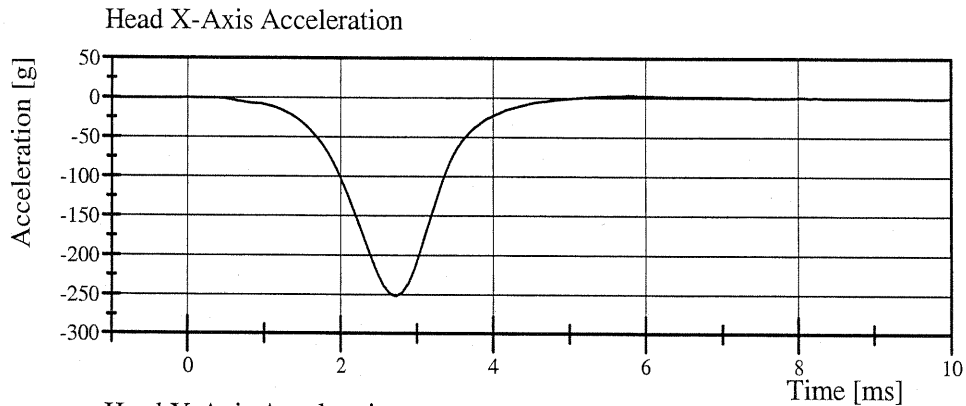


Transportation Research Center Inc.

Front Head Drop

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

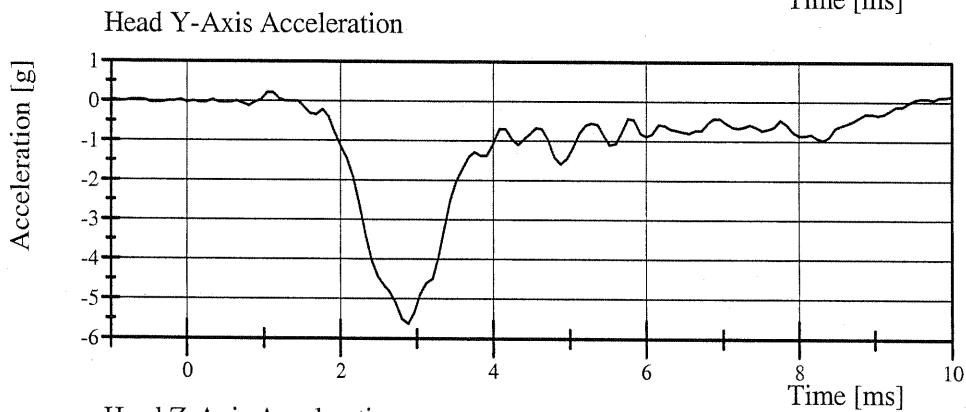
Test Date: 03/21/2006



Filter Class: CFC_1000

Max: 3.1 g at 5.8 ms

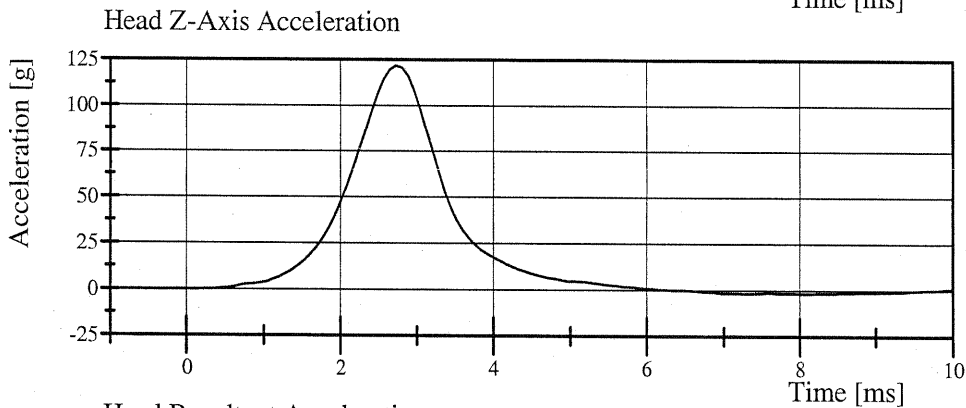
Min: -251.8 g at 2.7 ms



Filter Class: CFC_1000

Max: 0.2 g at 1.0 ms

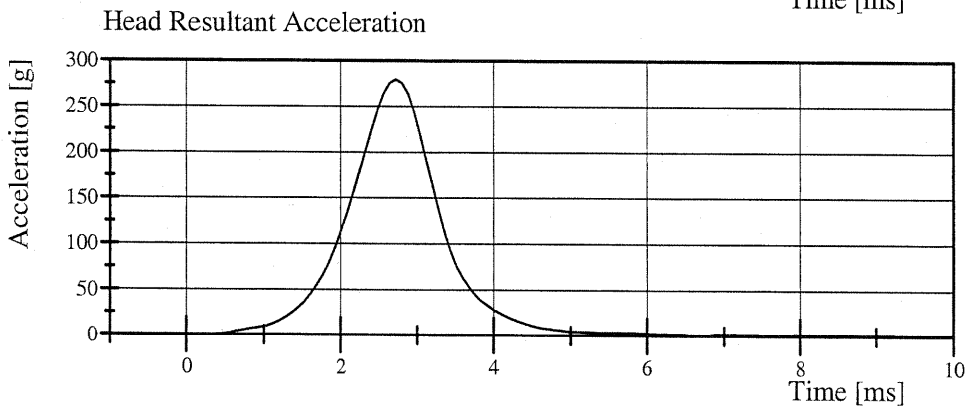
Min: -5.6 g at 2.9 ms



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

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

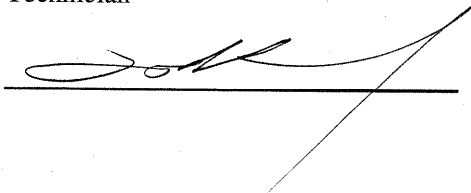
Test Date: 03/22/2006

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

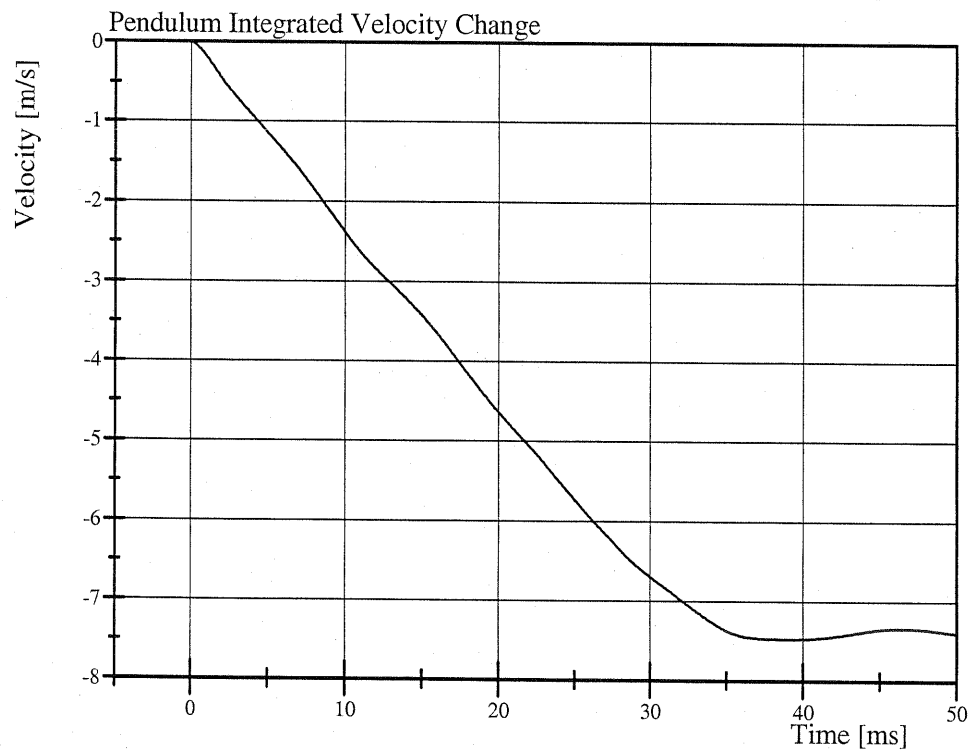
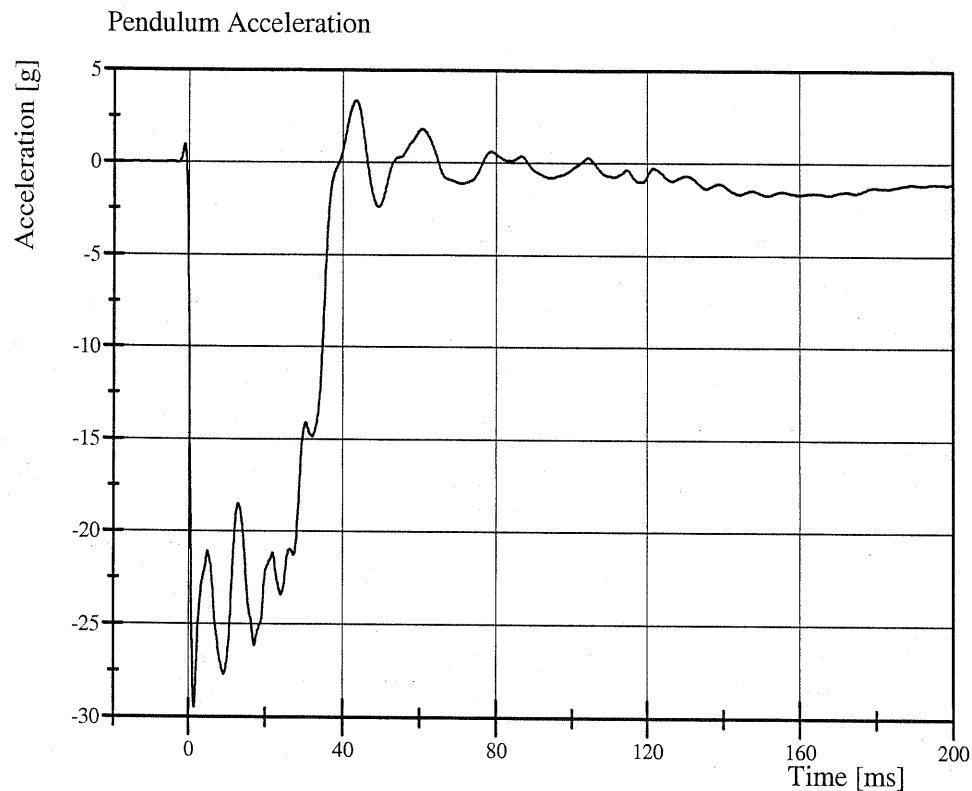


Transportation Research Center Inc.

Neck Flexion

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

Test Date: 03/22/2006



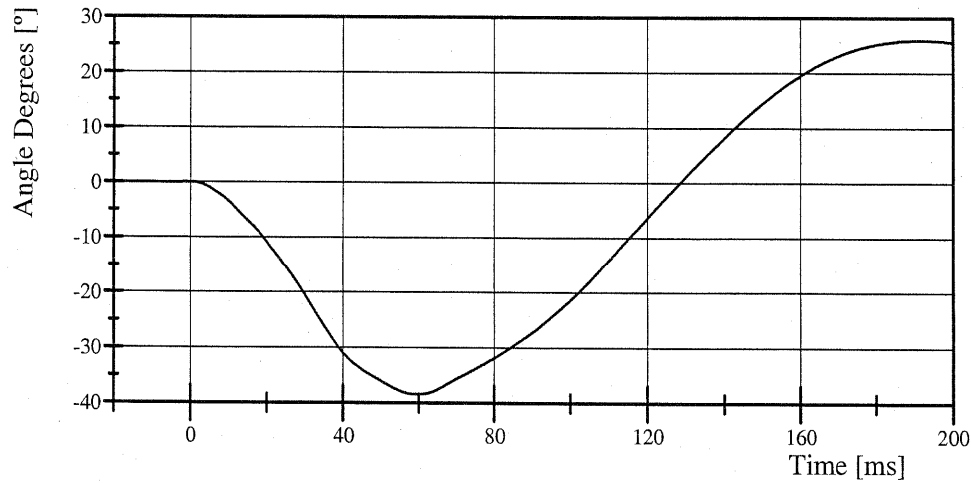
Transportation Research Center Inc.

Neck Flexion

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

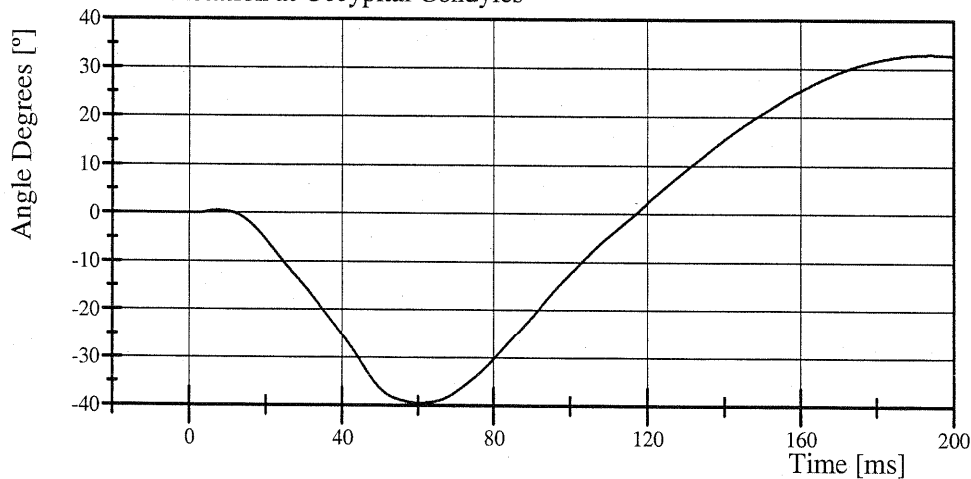
Test Date: 03/22/2006

Pot Rotation at the Base of Neck



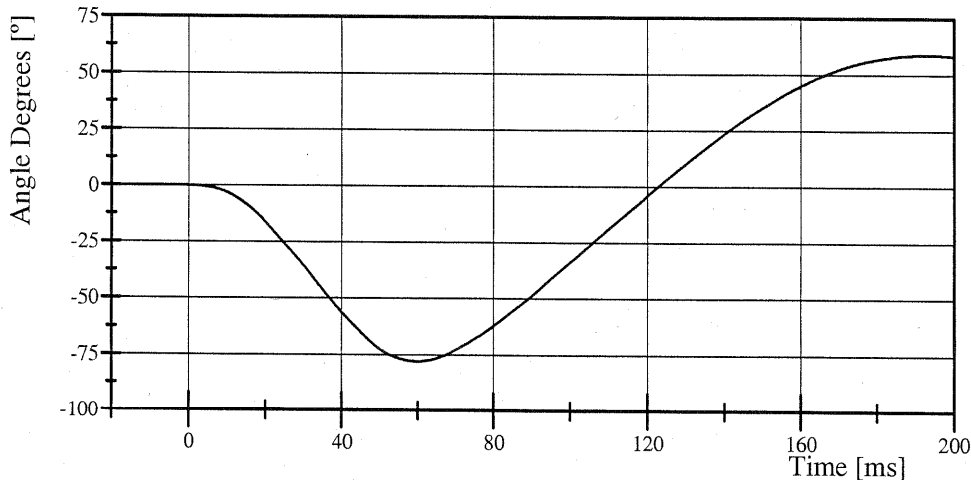
Filter Class: CFC_60
Max: 26.0 ° at 191.8 ms
Min: -38.4 ° at 59.7 ms

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



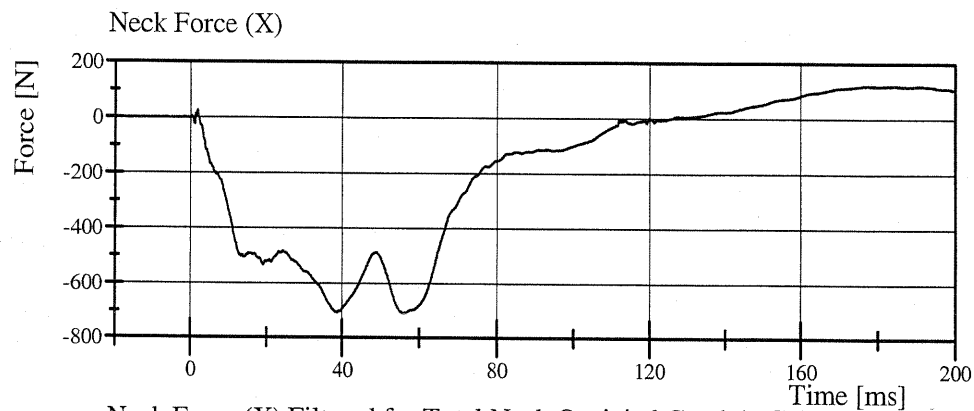
Filter Class: CFC_60
Max: 58.9 ° at 193.3 ms
Min: -77.9 ° at 60.1 ms

Transportation Research Center Inc.

Neck Flexion

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

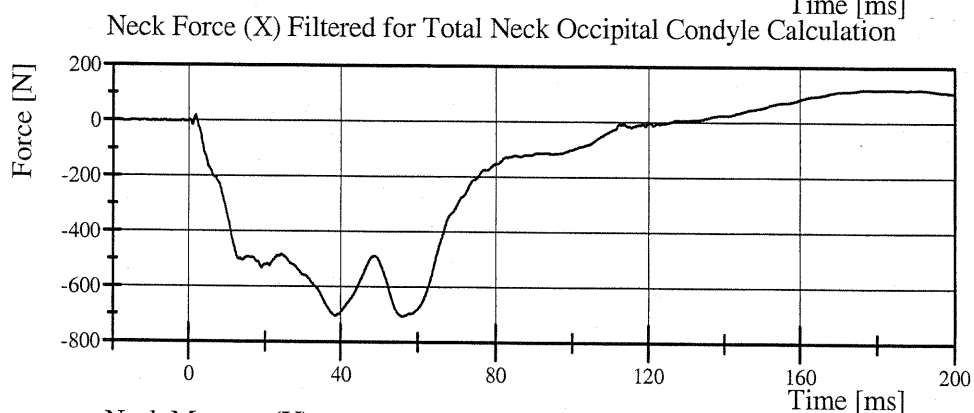
Test Date: 03/22/2006



Filter Class: CFC_1000

Max: 121.3 N at 178.5 ms

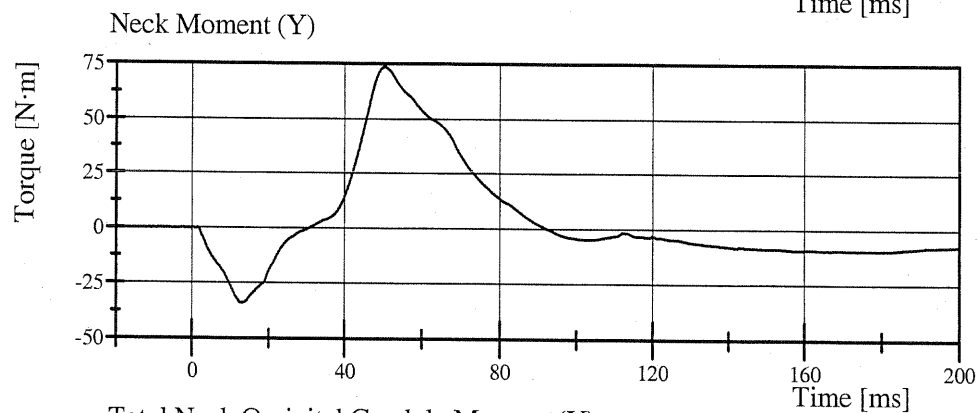
Min: -706.8 N at 55.8 ms



Filter Class: CFC_600

Max: 120.8 N at 184.2 ms

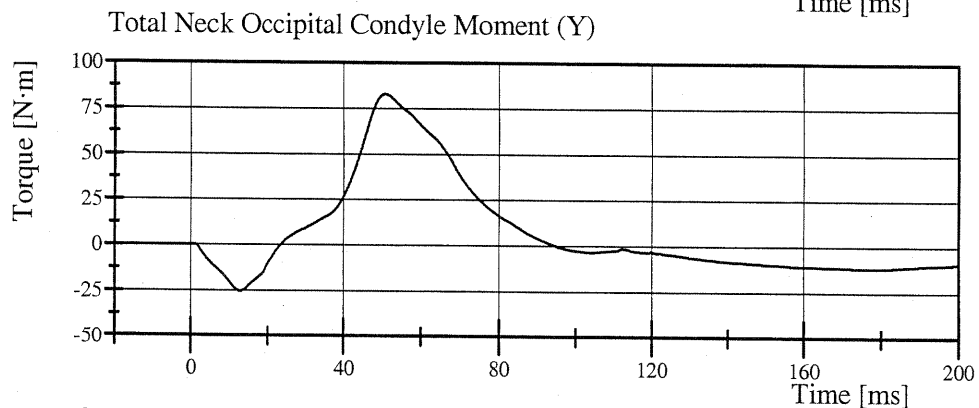
Min: -706.4 N at 55.8 ms



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

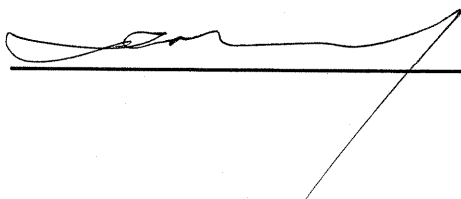
Test Date: 03/22/2006

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



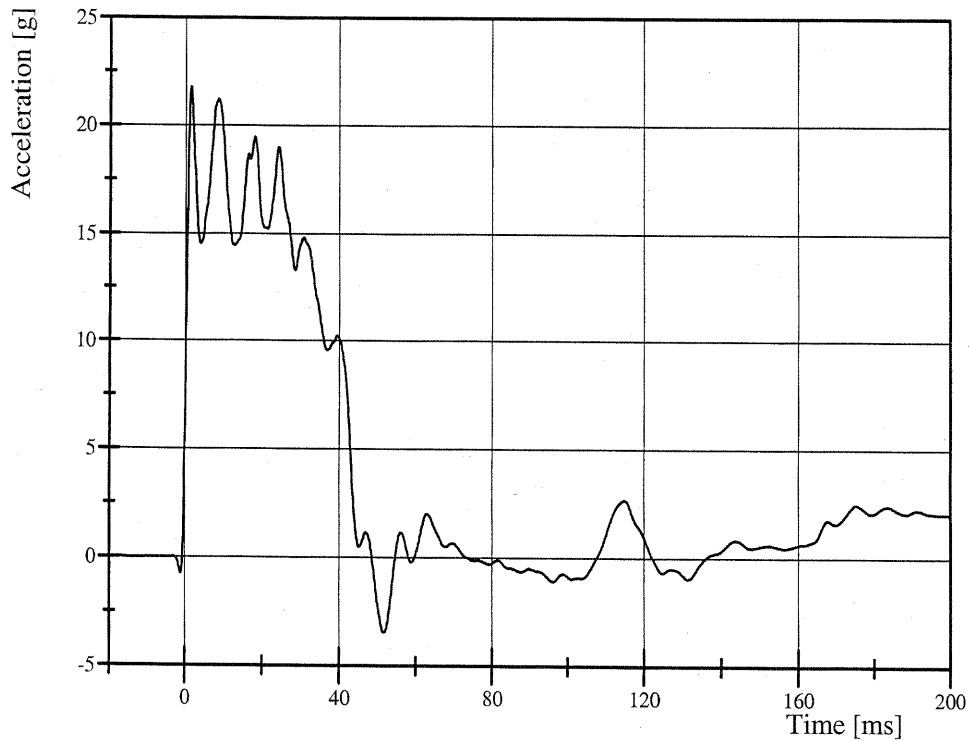
Transportation Research Center Inc.

Neck Extension

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

Test Date: 03/22/2006

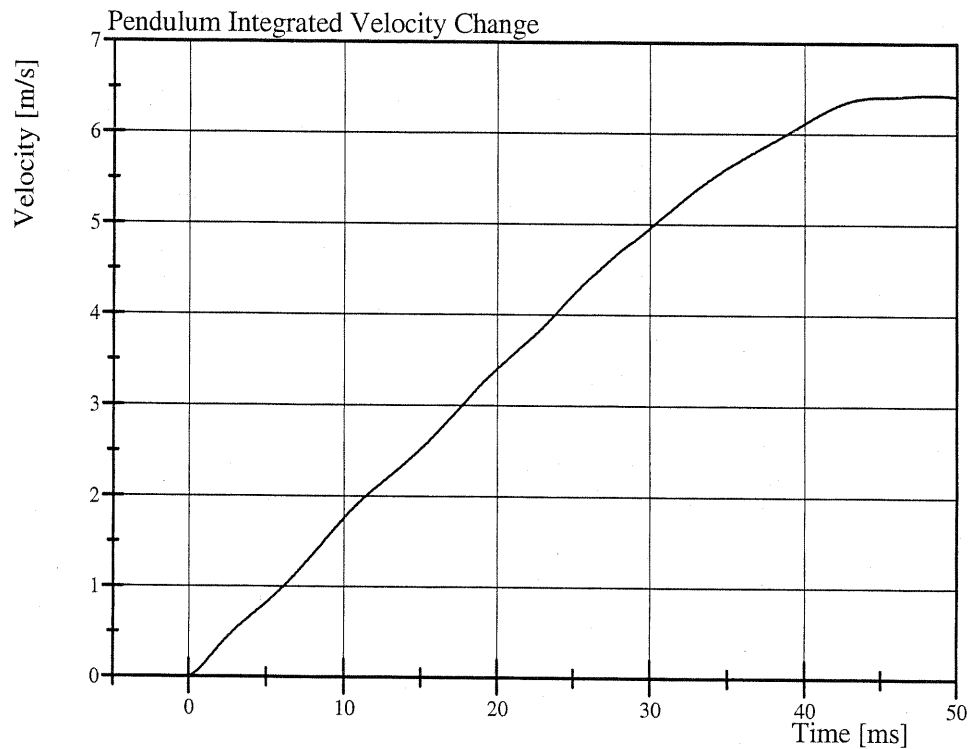
Pendulum Acceleration



Filter Class: CFC_180

Max: 21.8 g at 1.4 ms

Min: -3.4 g at 51.5 ms



Filter Class: CFC_180

Max: 6.4 m/s at 48.5 ms

Min: 0.0 m/s at 0.0 ms

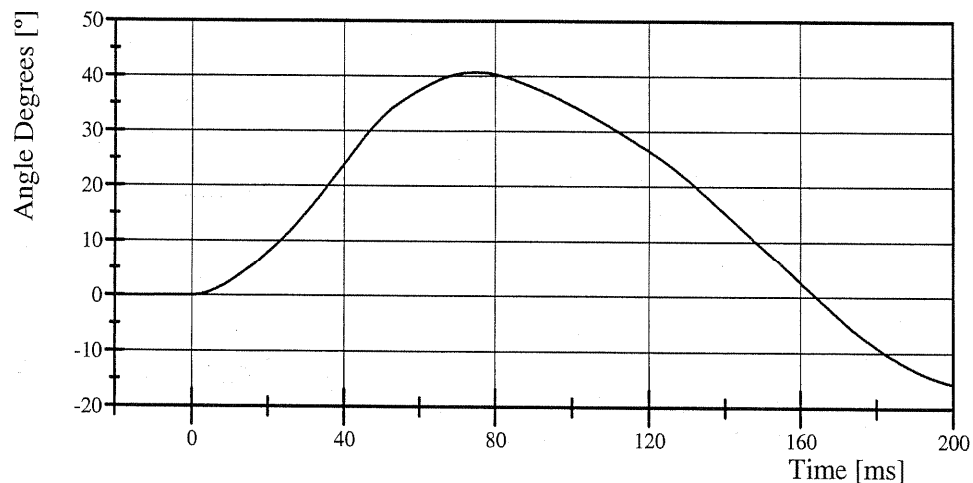
Transportation Research Center Inc.

Neck Extension

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

Test Date: 03/22/2006

Pot Rotation at the Base of Neck

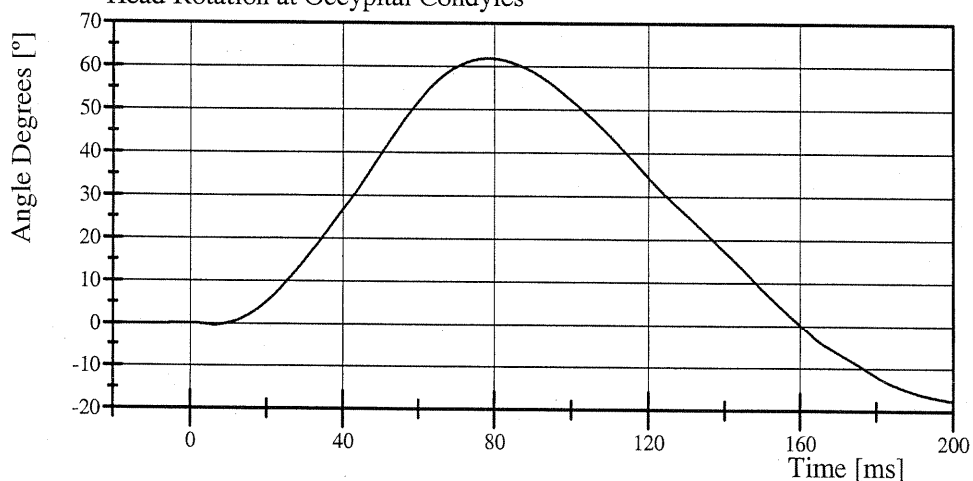


Filter Class: CFC_60

Max: 40.7 ° at 74.9 ms

Min: -15.6 ° at 200.0 ms

Head Rotation at Occypital Condyles

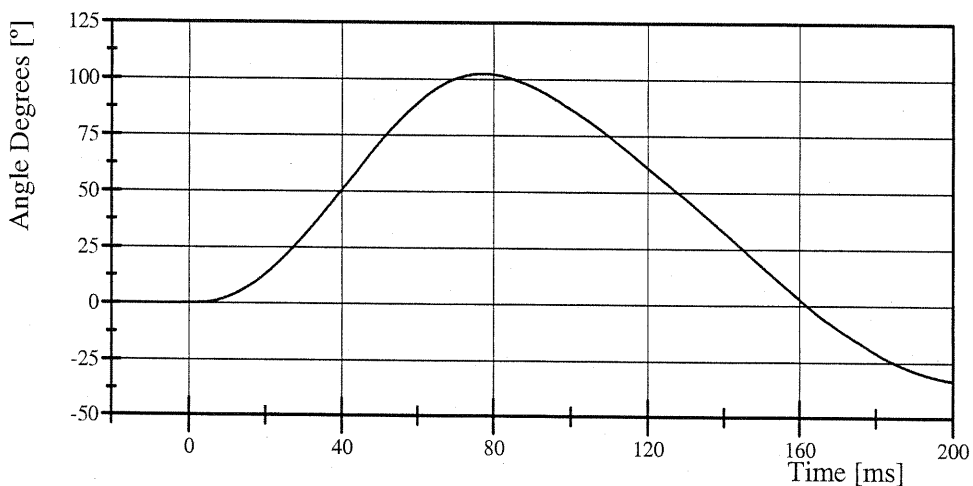


Filter Class: CFC_60

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

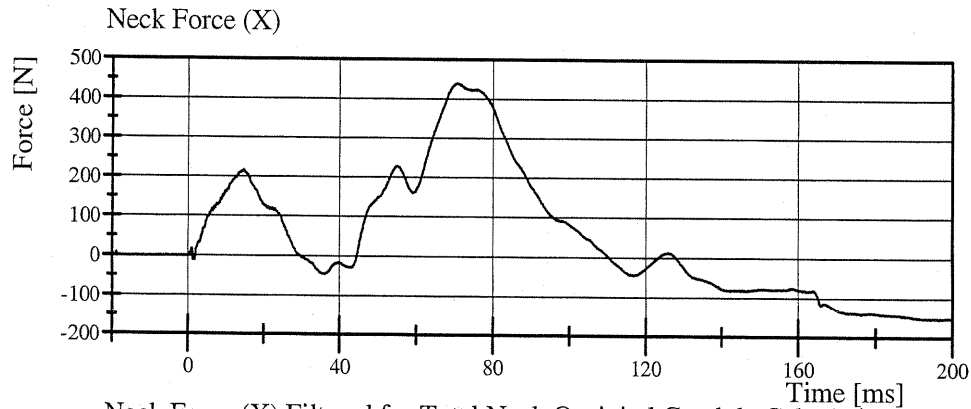
Min: -33.2 ° at 200.0 ms

Transportation Research Center Inc.

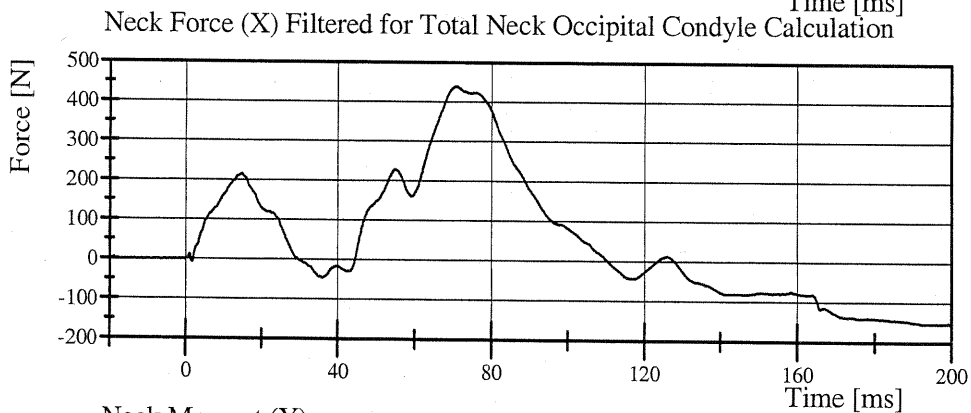
Neck Extension

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

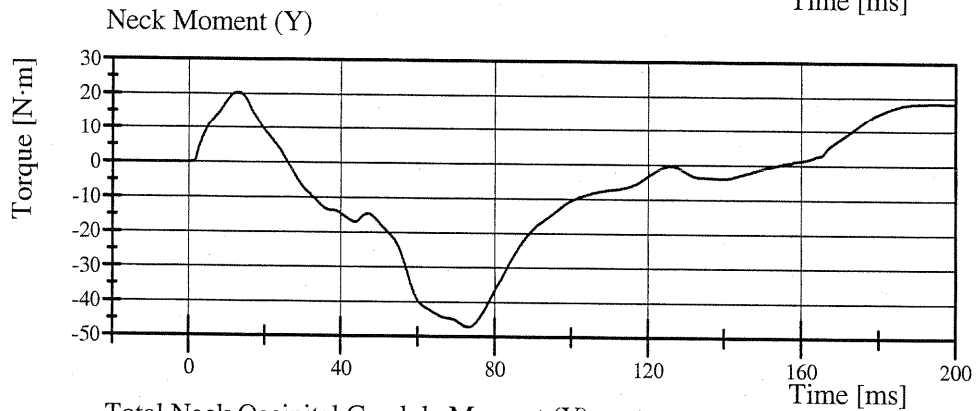
Test Date: 03/22/2006



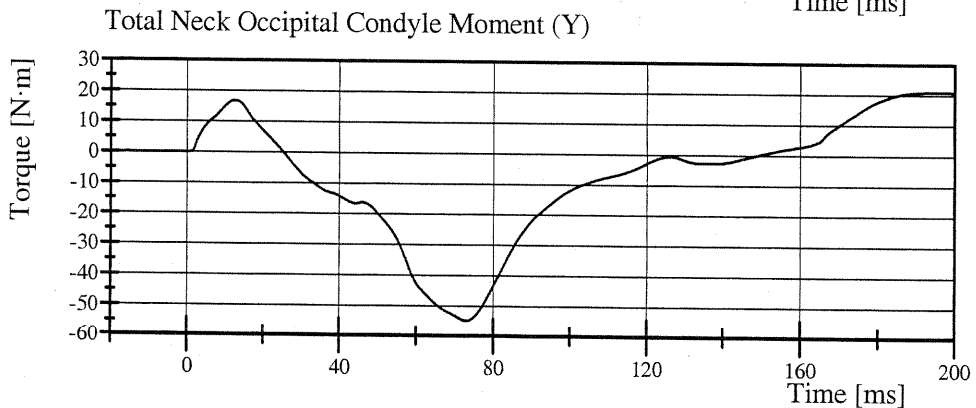
Filter Class: CFC_1000
Max: 440.2 N at 70.8 ms
Min: -154.2 N at 196.6 ms



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

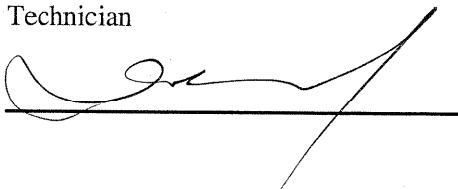
Test Date: 03/22/2006

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

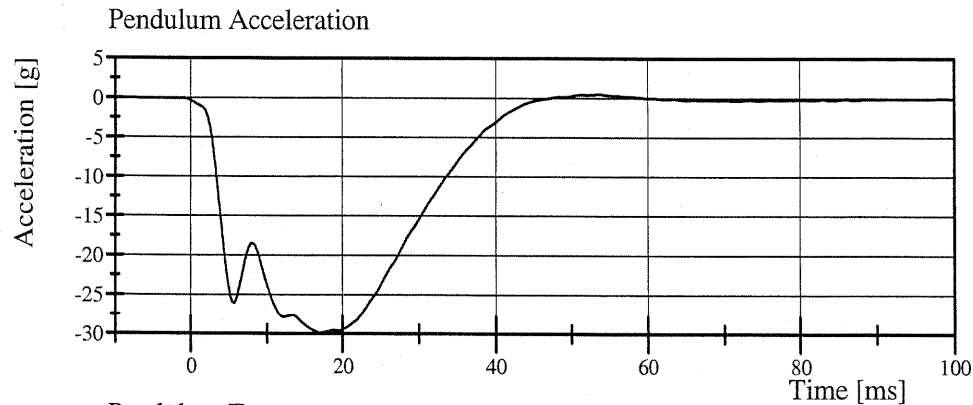


Transportation Research Center Inc.

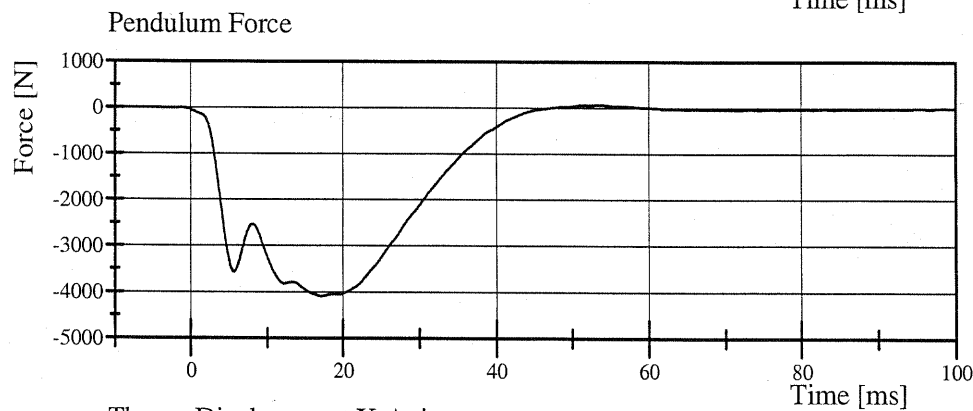
Front Thorax

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

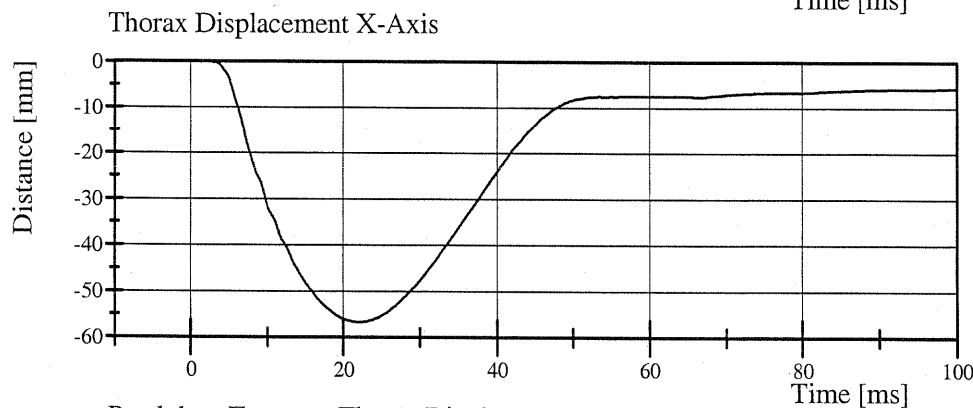
Test Date: 03/22/2006



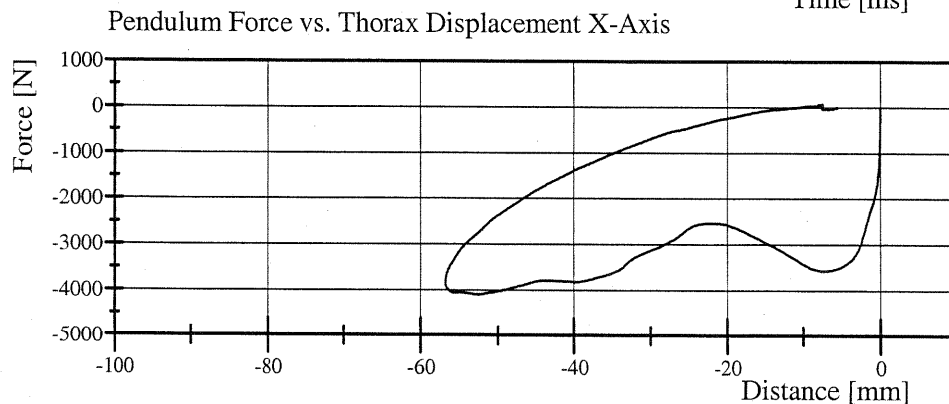
Filter Class: CFC_180
Max: 0.5 g at 53.6 ms
Min: -29.9 g at 17.0 ms



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.

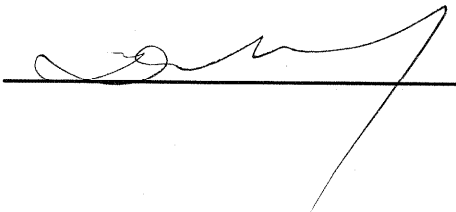
Left Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 37-2
Test Date: 03/22/2006

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

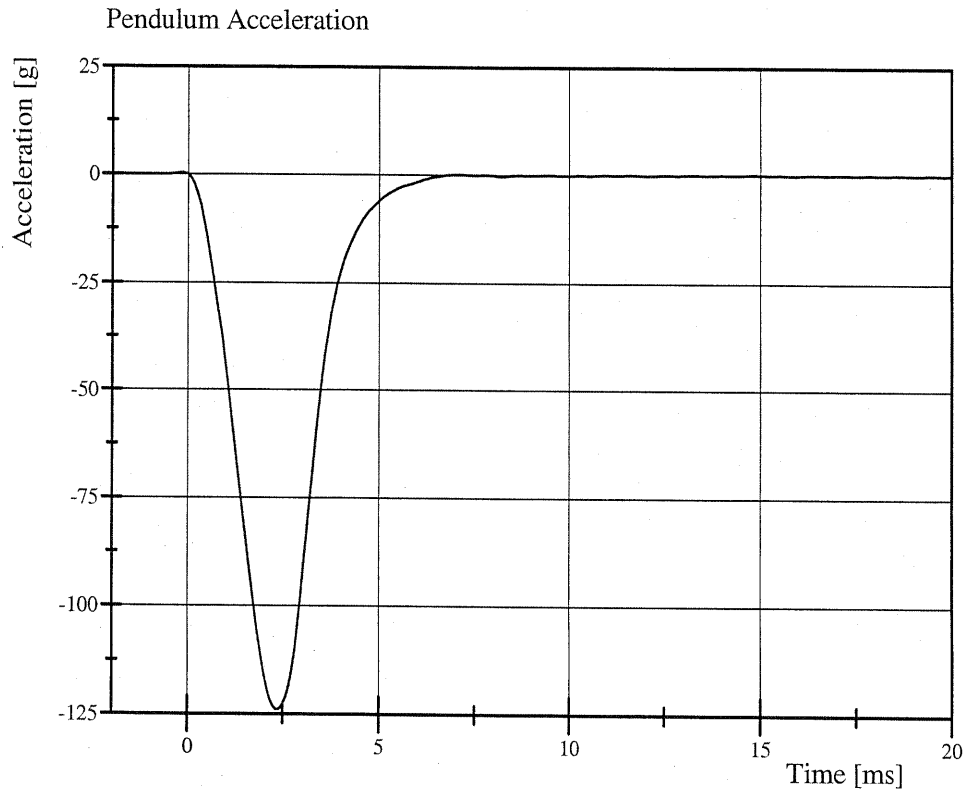


Approved

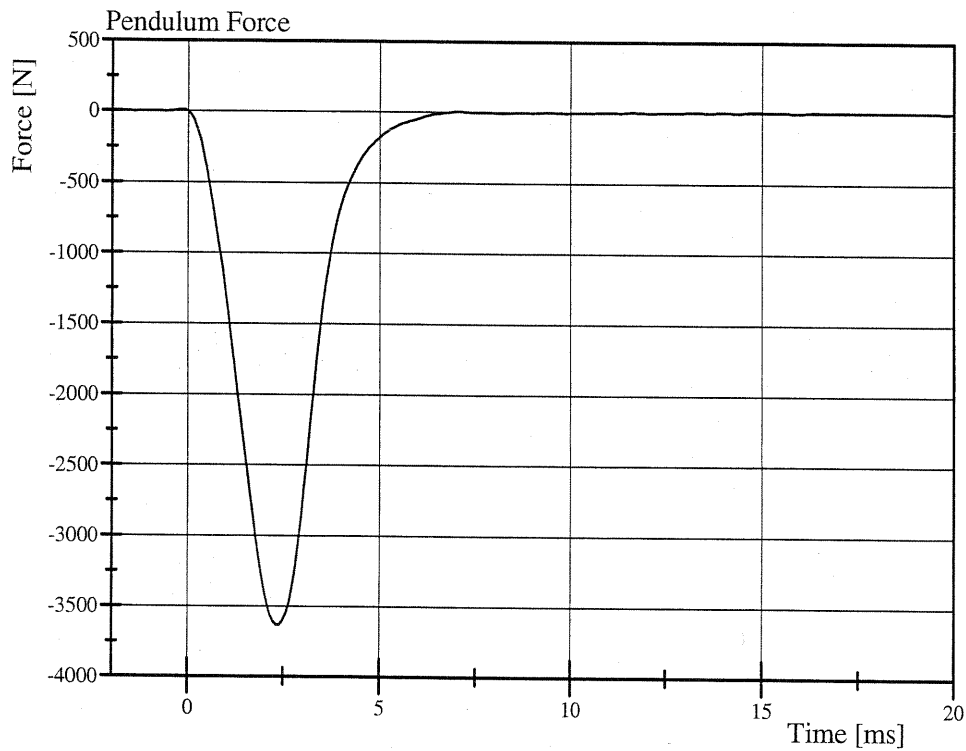


Transportation Research Center Inc.

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.

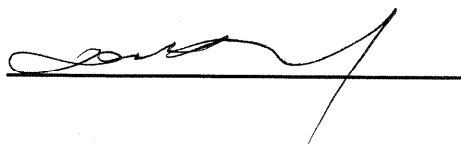
Right Knee Femur Response Test
HIII 5th Serial No. 416 Certification No. 37-2
Test Date: 03/23/2006

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

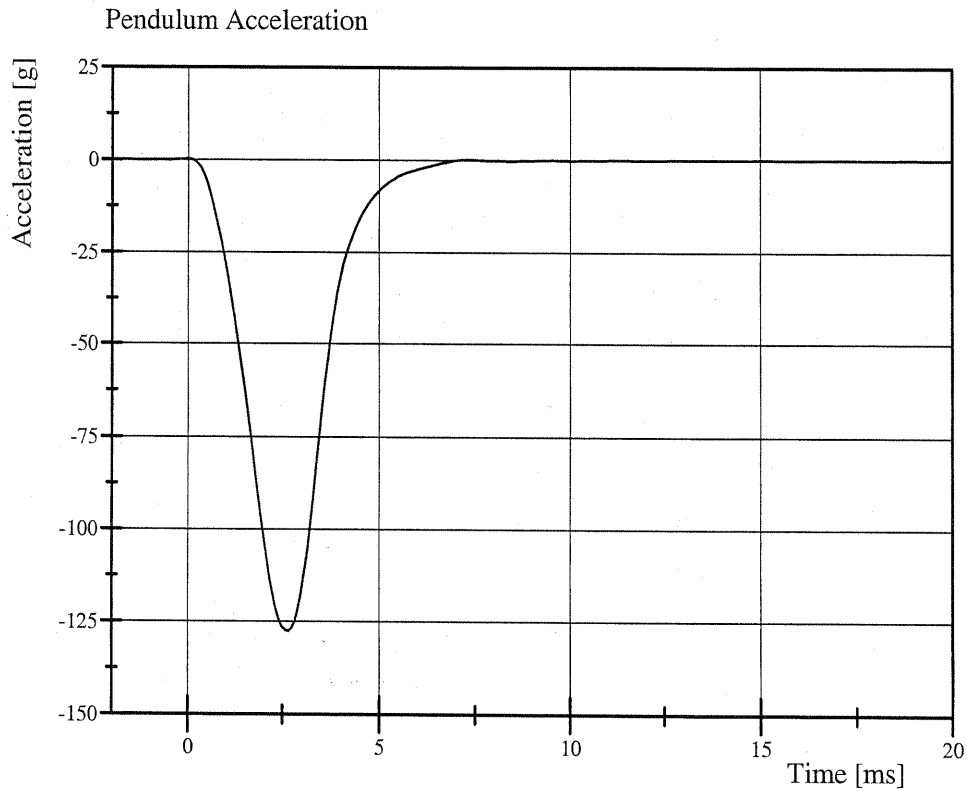


Approved

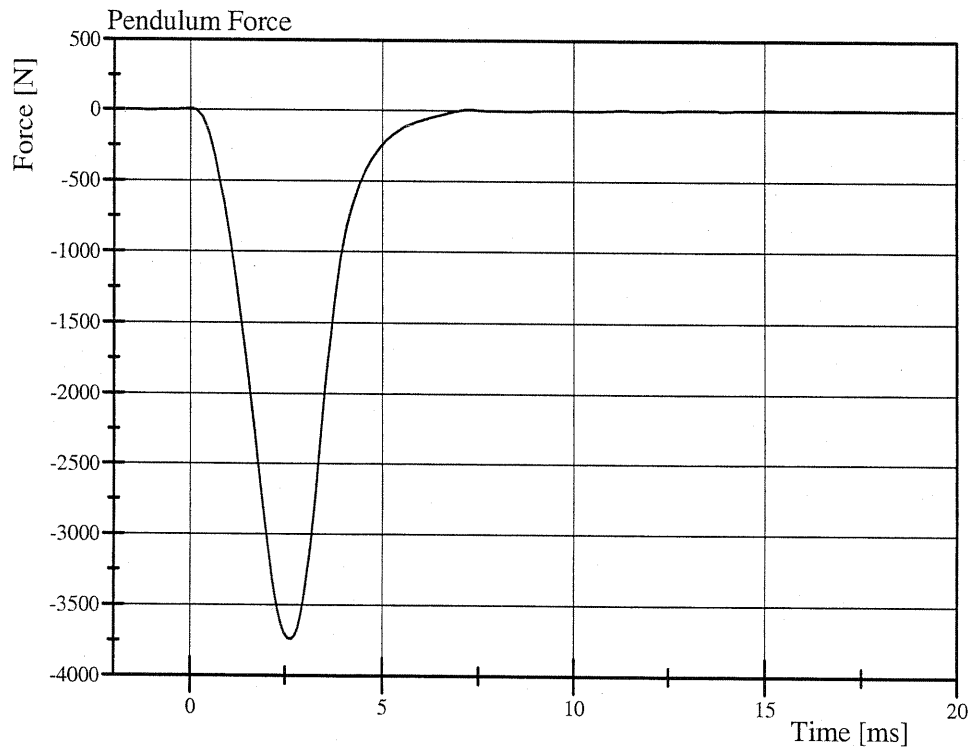


Transportation Research Center Inc.

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

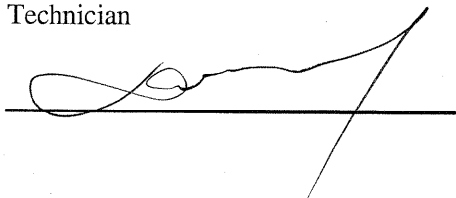
Test Date: 03/22/2006

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

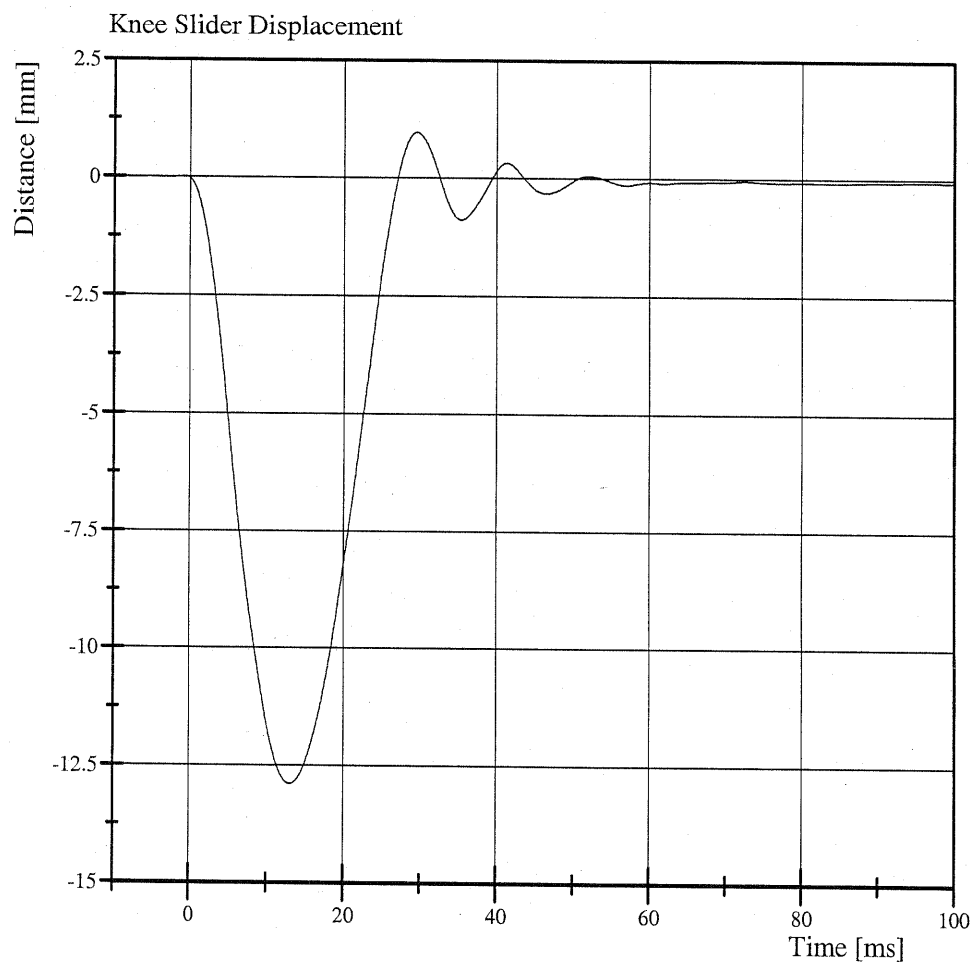


Transportation Research Center Inc.

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

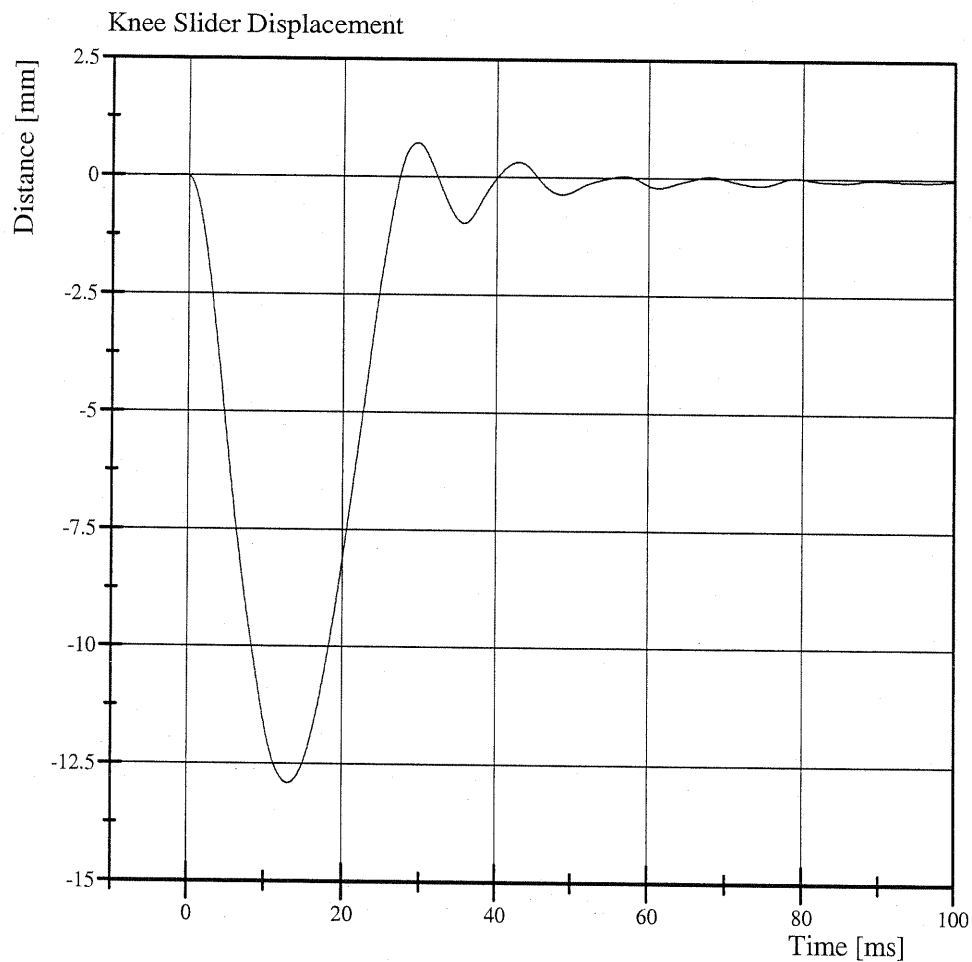


Transportation Research Center Inc.

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

Pre-Test Dummy Configuration and Performance Verification Data

Bullet Vehicle Driver Dummy S/N: 090

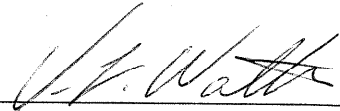
NHTSA/VRTC
572E HIII 50th Male Dummy
External Dimensions
Serial No. 090 w/ THOR-LX legs Calibration No. 53

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Total Sitting Height	878.8 - 889.0	882	Yes
B	Shoulder Pivot Height	505.5 - 520.7	508	Yes
C	H-Point Height	83.8 - 88.9	86	Yes
D	H-Point From Seatback	134.6 - 139.7	136	Yes
E	Shoulder Pivot From Backline	83.8 - 94.0	89	Yes
F	Thigh Clearance	139.7 - 154.9	151	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	220	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

HIII 50th Serial No. 090 Certification No. 53-1

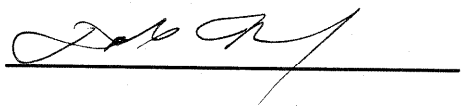
Test Date: 02/23/2006

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Peak Head Resultant Acceleration	225 - 275 g	240.3 g	Yes
Peak Head Lateral Acceleration	(-15) - 15 g	2.2 g	Yes
Is Acceleration Curve Unimodal within 10% of Peak?	Yes	Yes	Yes

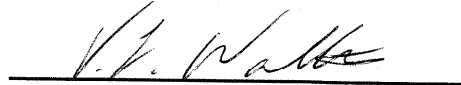
Test meets specifications.

Comments:

Technician



Approved



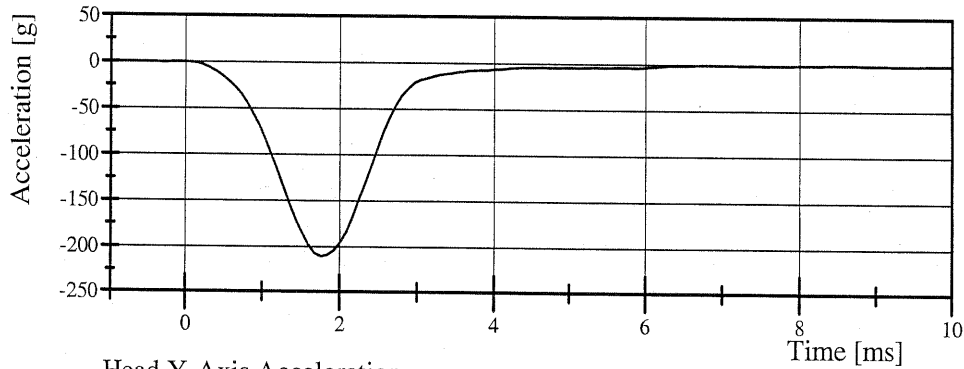
Transportation Research Center Inc.

Front Head Drop

HIII 50th Serial No. 090 Certification No. 53-1

Test Date: 02/23/2006

Head X-Axis Acceleration

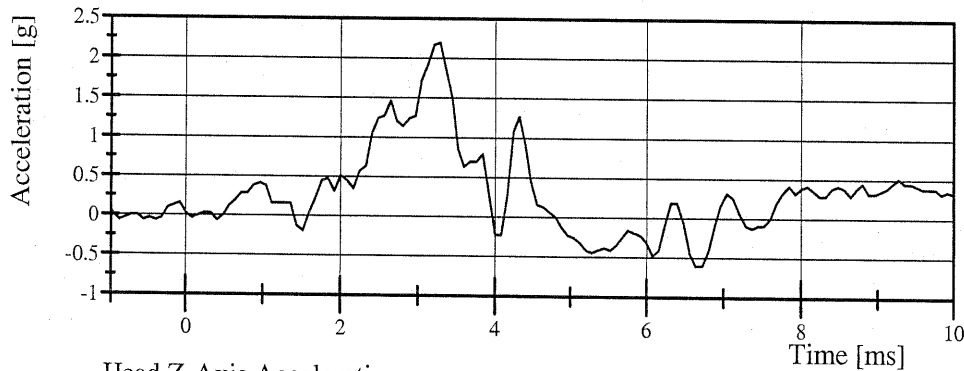


Filter Class: CFC_1000

Max: 0.2 g at -0.6 ms

Min: -210.2 g at 1.8 ms

Head Y-Axis Acceleration

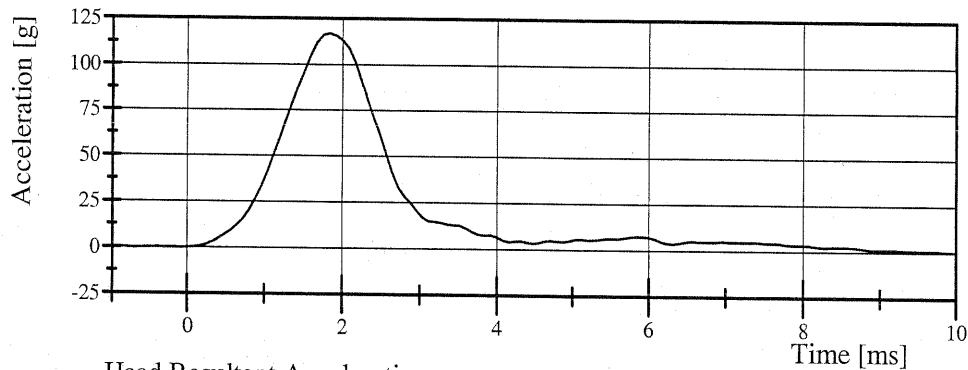


Filter Class: CFC_1000

Max: 2.2 g at 3.3 ms

Min: -0.6 g at 6.6 ms

Head Z-Axis Acceleration

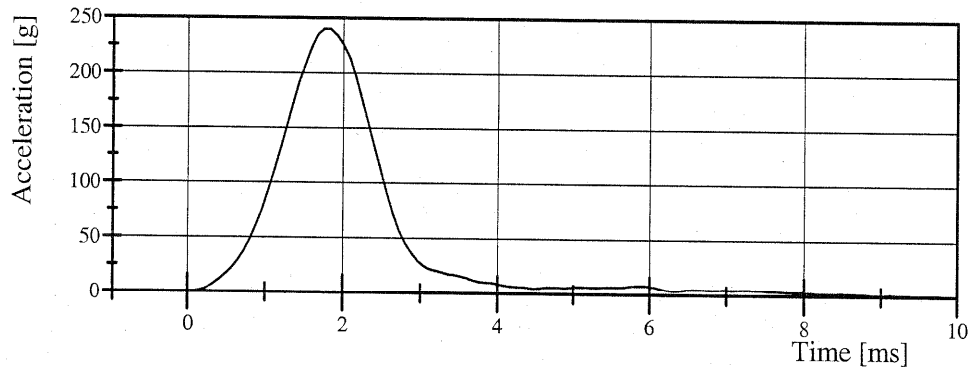


Filter Class: CFC_1000

Max: 117.0 g at 1.8 ms

Min: -0.2 g at -0.7 ms

Head Resultant Acceleration



Filter Class: CFC_1000

Max: 240.3 g at 1.8 ms

Min: 0.1 g at -0.8 ms

Transportation Research Center Inc.

Neck Flexion

HIII 50th Serial No. 090 Certification No. 53-1

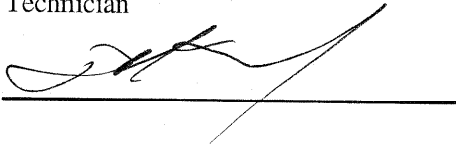
Test Date: 02/23/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Pendulum Velocity	6.89 - 7.13 m/s	6.927 m/s	Yes
Pendulum Acceleration Decay Crossing -5g	34 - 42 ms	37.2 ms	Yes
Pendulum Acceleration at 10ms	(-22.5) - (-27.5) g	-23.10 g	Yes
Pendulum Acceleration at 20ms	(-17.6) - (-22.6) g	-21.88 g	Yes
Pendulum Acceleration at 30ms	(-12.5) - (-18.5) g	-17.70 g	Yes
Pendulum Acceleration > 30ms	>= (-29.0) g	-17.70 g	Yes
Total Head D-Plane Rotation Peak	(-64) - (-78) °	-71.7 °	Yes
Time of Peak	57 - 64 ms	59.4 ms	Yes
Total Head D-Plane Rotation Decay to 0°	113 - 128 ms	118.5 ms	Yes
Total Neck Occipital Condyles Moment Peak	88 - 108 N·m	101.5 N·m	Yes
Time of Peak	47 - 58 ms	49.2 ms	Yes
Total Neck Occipital Condyles Moment Decay to 0 N·m	97 - 107 ms	101.2 ms	Yes

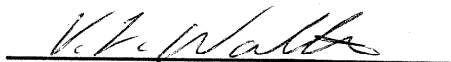
Test meets specifications.

Comments:

Technician



Approved

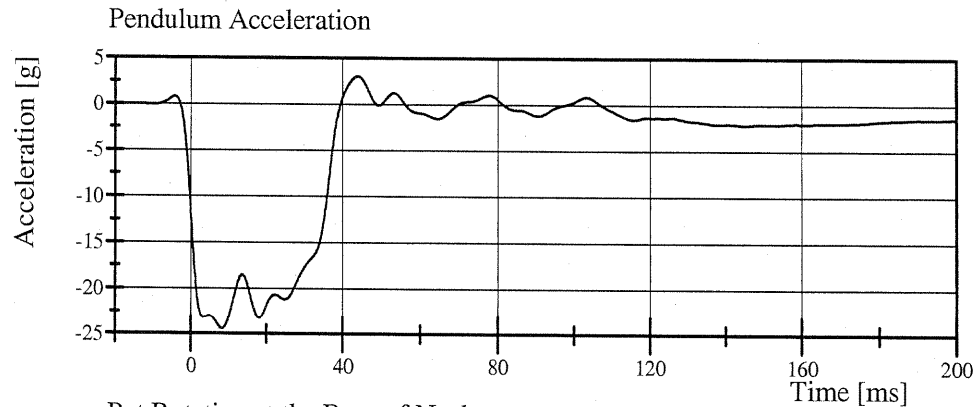


Transportation Research Center Inc.

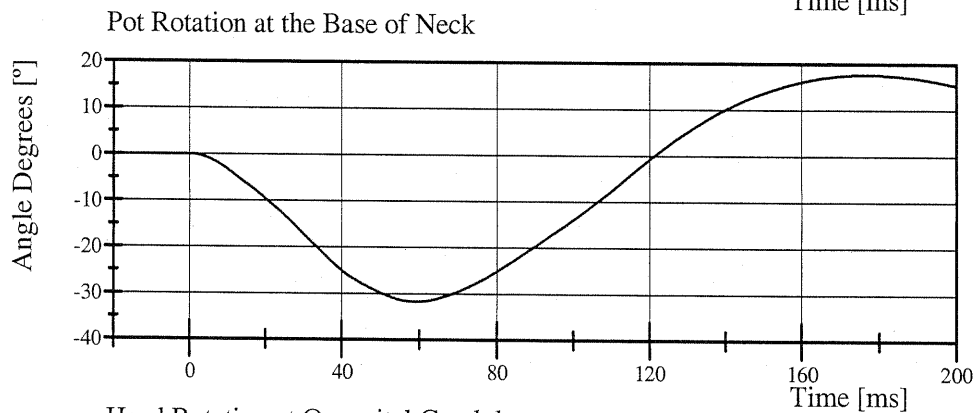
Neck Flexion

HIII 50th Serial No. 090 Certification No. 53-1

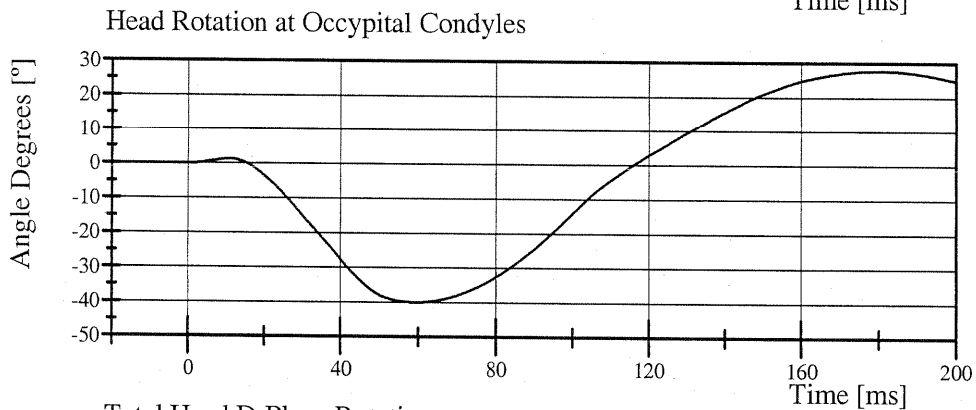
Test Date: 02/23/2006



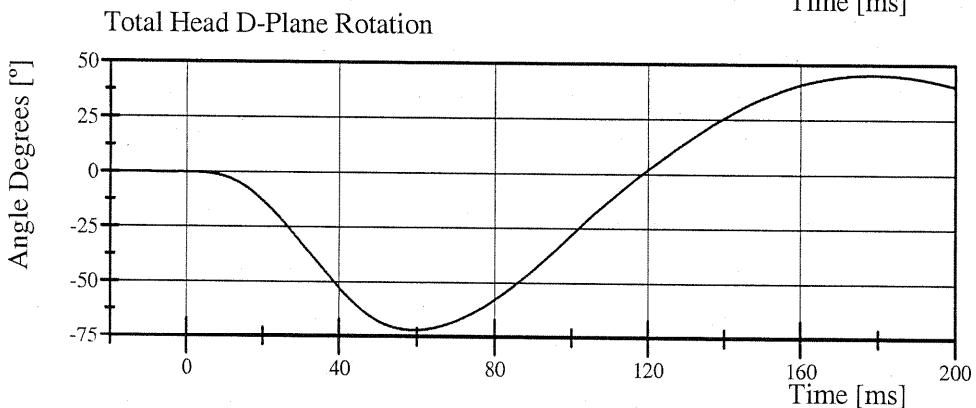
Filter Class: CFC_60
Max: 3.0 g at 43.8 ms
Min: -24.4 g at 8.2 ms



Filter Class: CFC_60
Max: 17.7 ° at 176.9 ms
Min: -31.7 ° at 59.3 ms



Filter Class: CFC_60
Max: 27.7 ° at 180.4 ms
Min: -40.0 ° at 59.6 ms



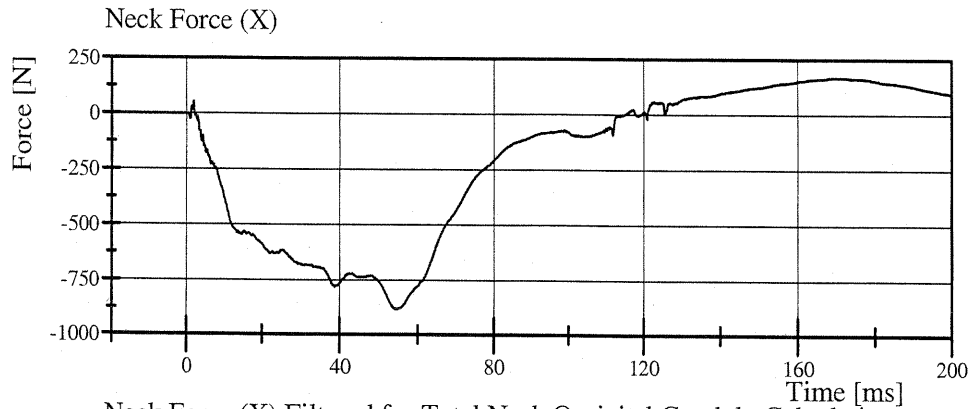
Filter Class: CFC_60
Max: 45.4 ° at 178.7 ms
Min: -71.7 ° at 59.4 ms

Transportation Research Center Inc.

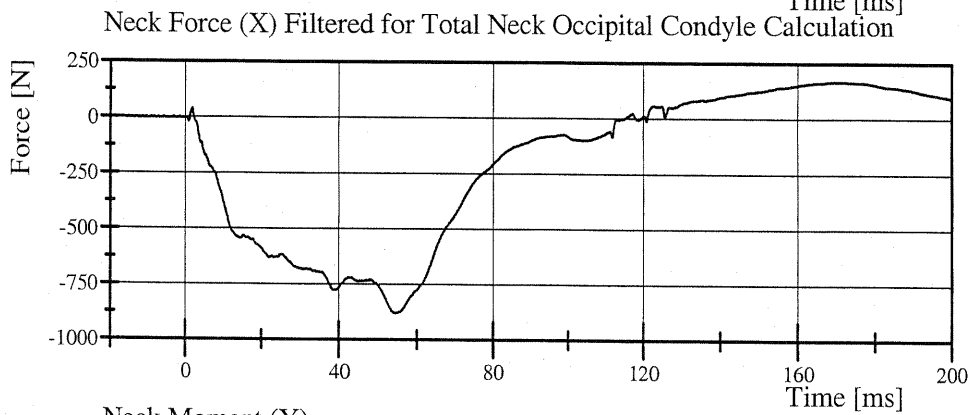
Neck Flexion

HIII 50th Serial No. 090 Certification No. 53-1

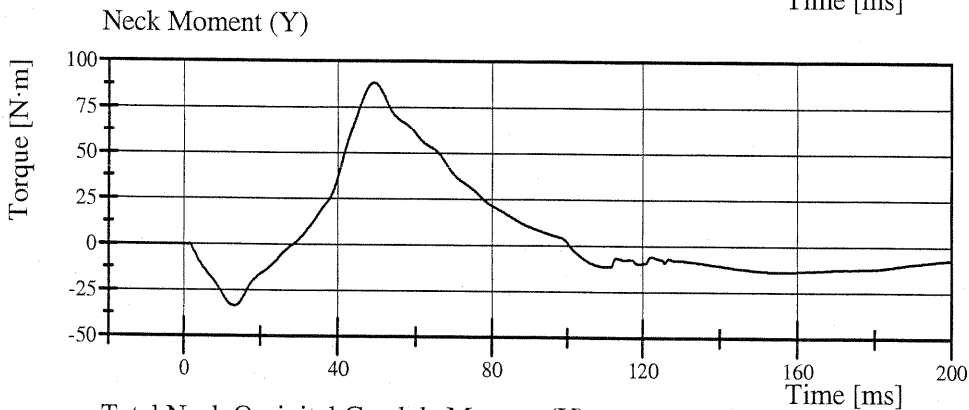
Test Date: 02/23/2006



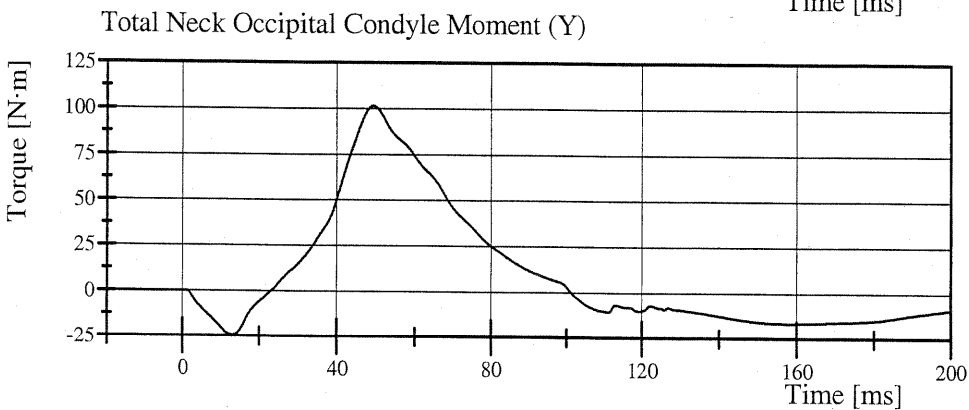
Filter Class: CFC_1000
Max: 169.6 N at 172.2 ms
Min: -879.2 N at 54.4 ms



Filter Class: CFC_600
Max: 169.0 N at 170.6 ms
Min: -879.0 N at 54.5 ms



Filter Class: CFC_600
Max: 88.4 N·m at 49.1 ms
Min: -33.6 N·m at 13.3 ms



Filter Class: CFC_600
Max: 101.5 N·m at 49.2 ms
Min: -24.2 N·m at 12.9 ms

Transportation Research Center Inc.

Neck Extension

HIH 50th Serial No. 090 Certification No. 53-1

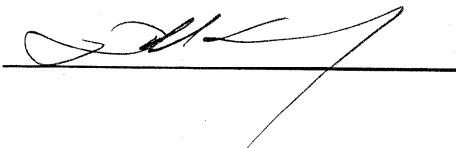
Test Date: 02/23/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Pendulum Velocity	(-5.95) - (-6.18) m/s	-5.989 m/s	Yes
Pendulum Acceleration Decay Crossing 5g	38 - 46 ms	45.5 ms	Yes
Pendulum Acceleration at 10ms	17.2 - 21.2 g	17.96 g	Yes
Pendulum Acceleration at 20ms	14.0 - 19.0 g	15.71 g	Yes
Pendulum Acceleration at 30ms	11.0 - 16.0 g	12.94 g	Yes
Pendulum Acceleration > 30ms	<= 22.0 g	12.94 g	Yes
Total Head D-Plane Rotation Peak	81 - 106 °	95.0 °	Yes
Time of Peak	72 - 82 ms	79.8 ms	Yes
Total Head D-Plane Rotation Decay to 0°	147 - 174 ms	164.1 ms	Yes
Total Neck Occipital Condyles Moment Peak	(-53) - (-80) N·m	-61.0 N·m	Yes
Time of Peak	65 - 79 ms	74.8 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

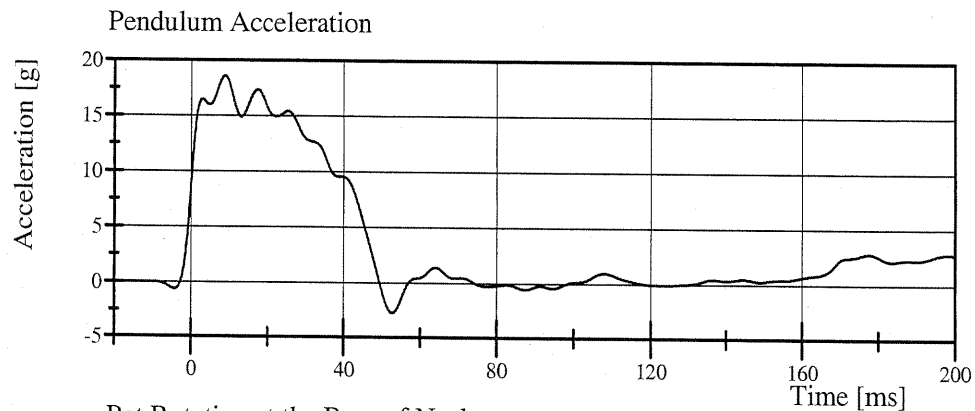


Transportation Research Center Inc.

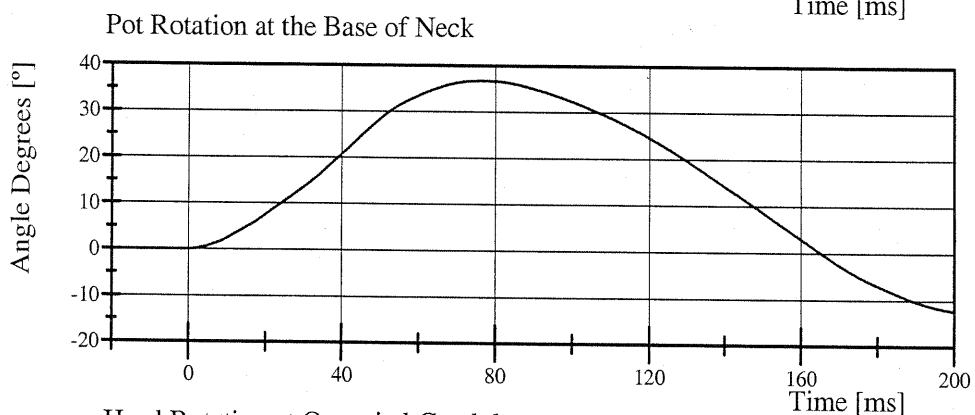
Neck Extension

HIII 50th Serial No. 090 Certification No. 53-1

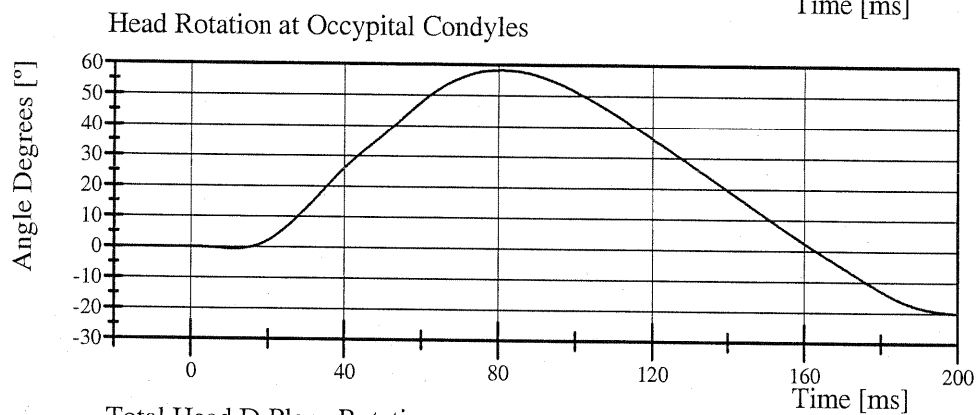
Test Date: 02/23/2006



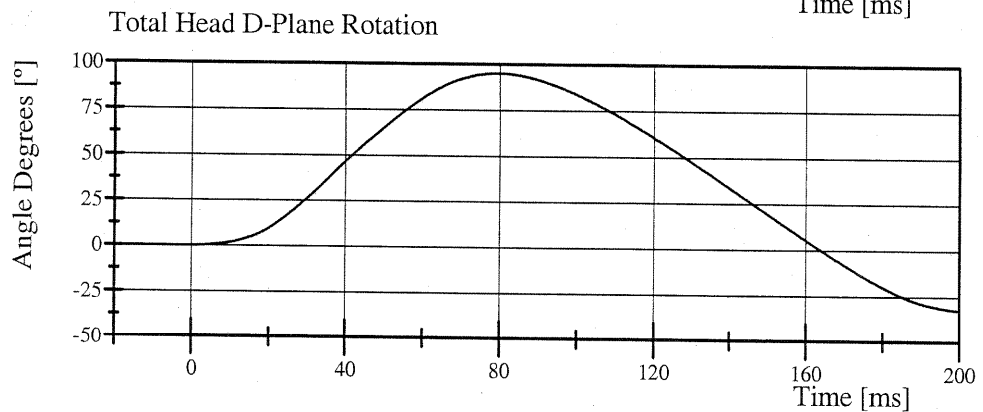
Filter Class: CFC_60
Max: 18.6 g at 8.8 ms
Min: -2.7 g at 52.8 ms



Filter Class: CFC_60
Max: 36.8 ° at 77.1 ms
Min: -12.3 ° at 200.0 ms



Filter Class: CFC_60
Max: 58.3 ° at 81.0 ms
Min: -20.1 ° at 200.0 ms



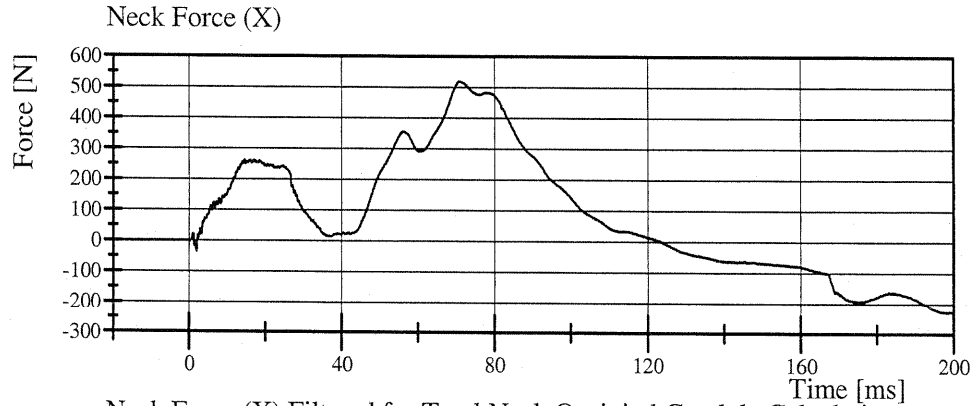
Filter Class: CFC_60
Max: 95.0 ° at 79.8 ms
Min: -32.4 ° at 200.0 ms

Transportation Research Center Inc.

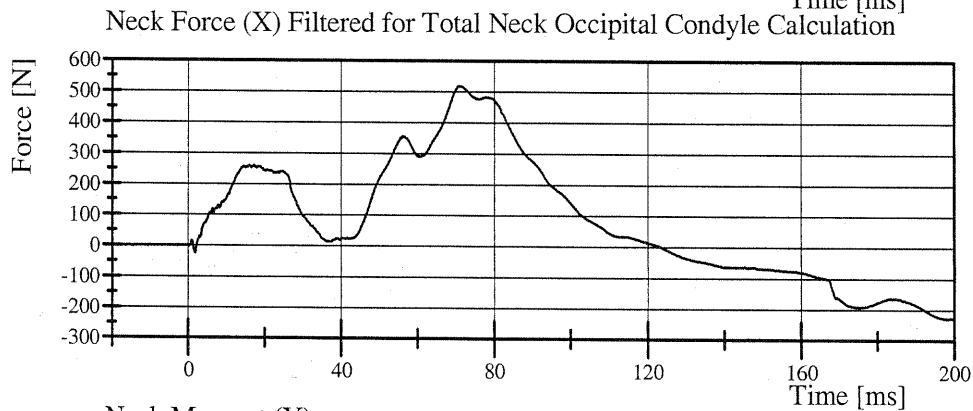
Neck Extension

HIII 50th Serial No. 090 Certification No. 53-1

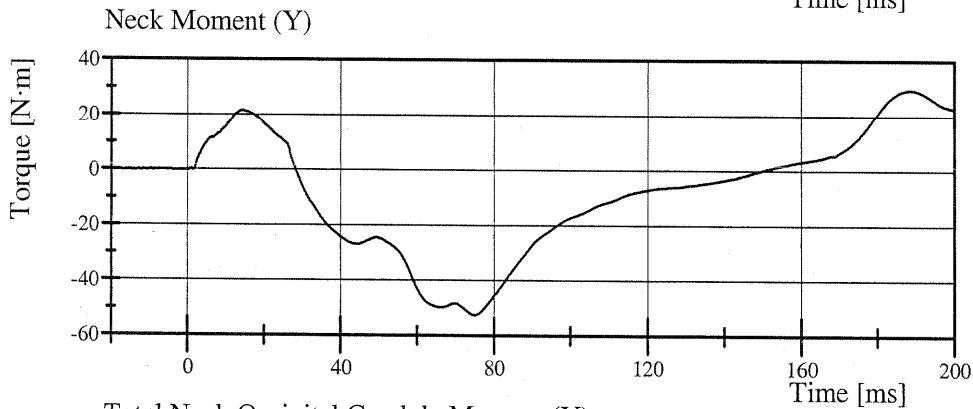
Test Date: 02/23/2006



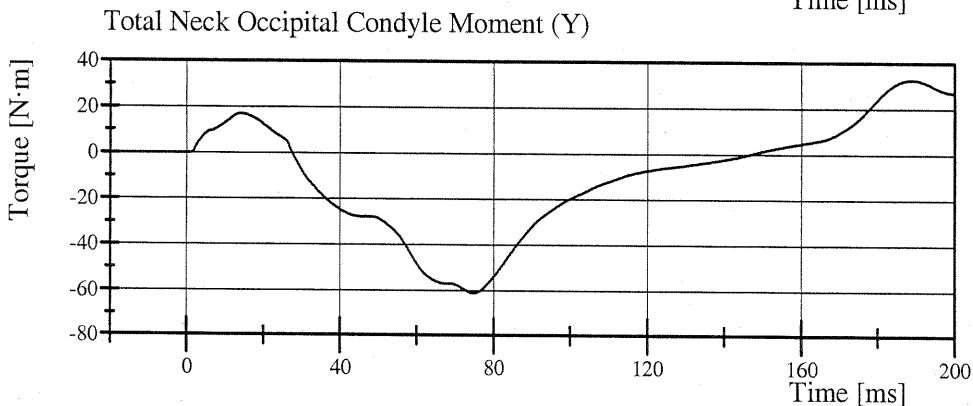
Filter Class: CFC_1000
Max: 519.0 N at 71.1 ms
Min: -228.9 N at 198.2 ms



Filter Class: CFC_600
Max: 518.6 N at 71.0 ms
Min: -228.5 N at 198.3 ms



Filter Class: CFC_600
Max: 29.6 N·m at 188.2 ms
Min: -52.5 N·m at 75.0 ms



Filter Class: CFC_600
Max: 32.7 N·m at 189.2 ms
Min: -61.0 N·m at 74.8 ms



Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 090 Certification No. 53-1

Test Date: 02/23/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Probe Velocity	6.59 - 6.83 m/s	6.622 m/s	Yes
Probe Force Peak	(-5,160) - (-5,893) N	-5,850.1 N	Yes
Maximum Chest Compression	(-63.5) - (-72.6) mm	-69.35 mm	Yes
Internal Hysteresis	65 - 85 %	74.2 %	Yes

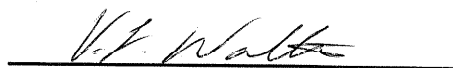
Test meets specifications.

Comments:

Technician



Approved

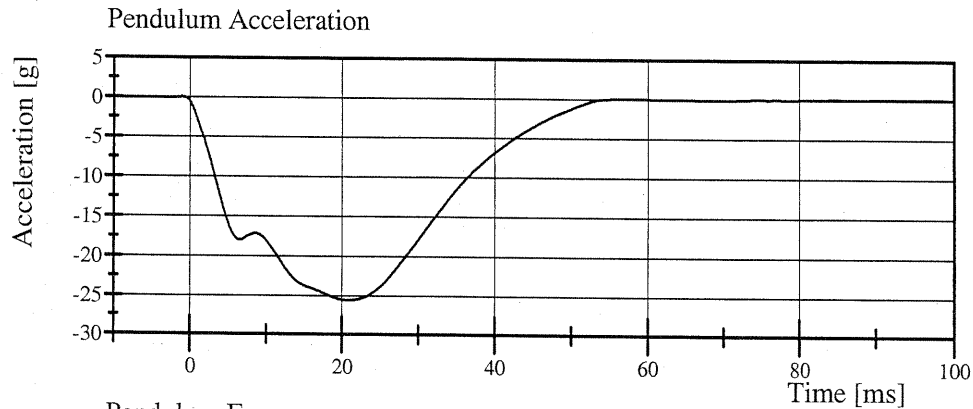


Transportation Research Center Inc.

Front Thorax

HIII 50th Serial No. 090 Certification No. 53-1

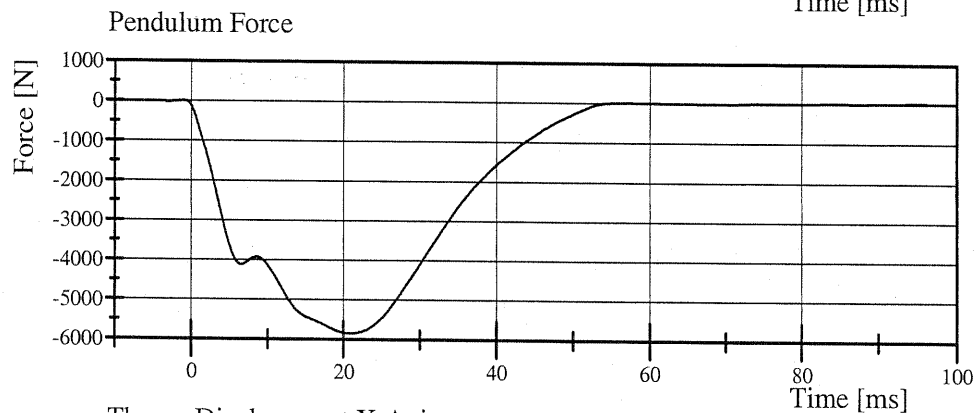
Test Date: 02/23/2006



Filter Class: CFC_180

Max: 0.1 g at 94.0 ms

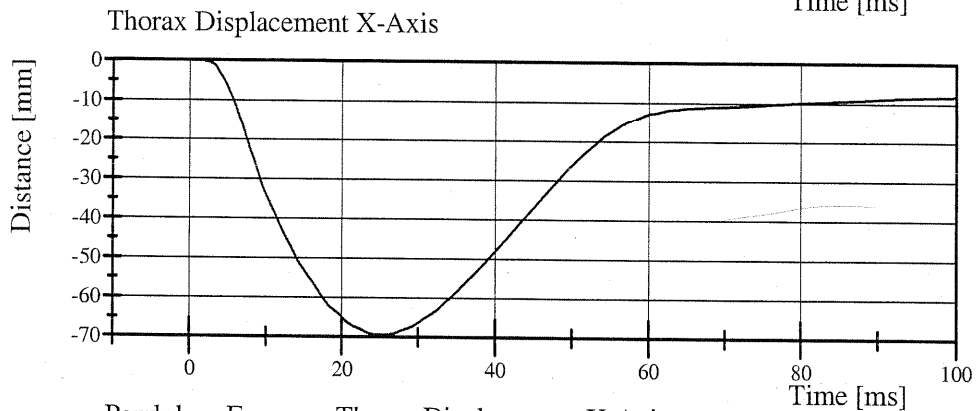
Min: -25.5 g at 20.9 ms



Filter Class: CFC_180

Max: 32.0 N at 94.0 ms

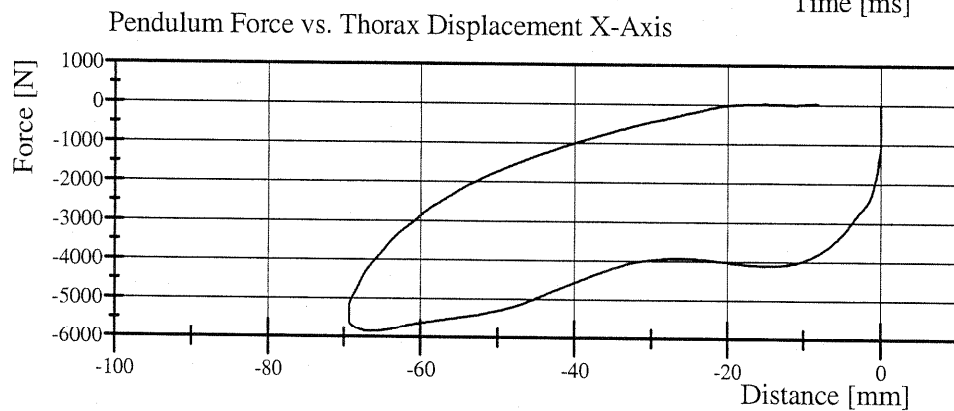
Min: -5,850.1 N at 20.9 ms



Filter Class: CFC_600

Max: 0.0 mm at -6.8 ms

Min: -69.3 mm at 24.5 ms



Filter Class: CFC_180

Max: 32.0 N at -8.5 mm

Min: -5,850.1 N at -66.5 mm

Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

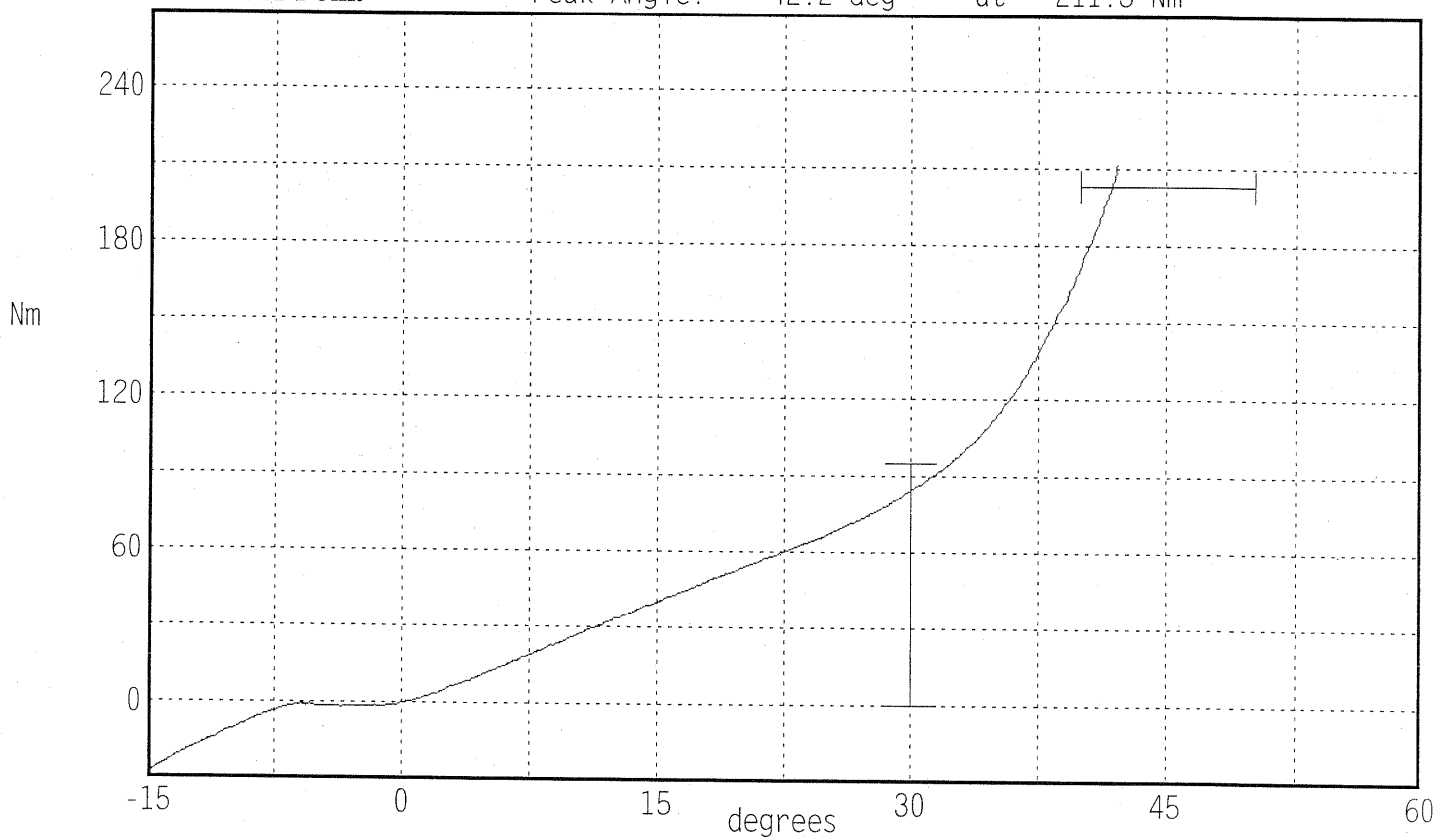
Serial Number: 090L
Test Number: 090C54
Comments:

Date: 02/23/2006
Time: 14:32

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.2 °C Pass
Humidity	10 - 70	31 % Pass
Moment at 30 deg	<= 94.9	84.4 Nm Pass
Angle at 203 Nm	40.0 - 50.0	41.8 deg Pass
Average Velocity	5.0 - 10.0	7.5 deg/sec Pass

Moment About H-Point

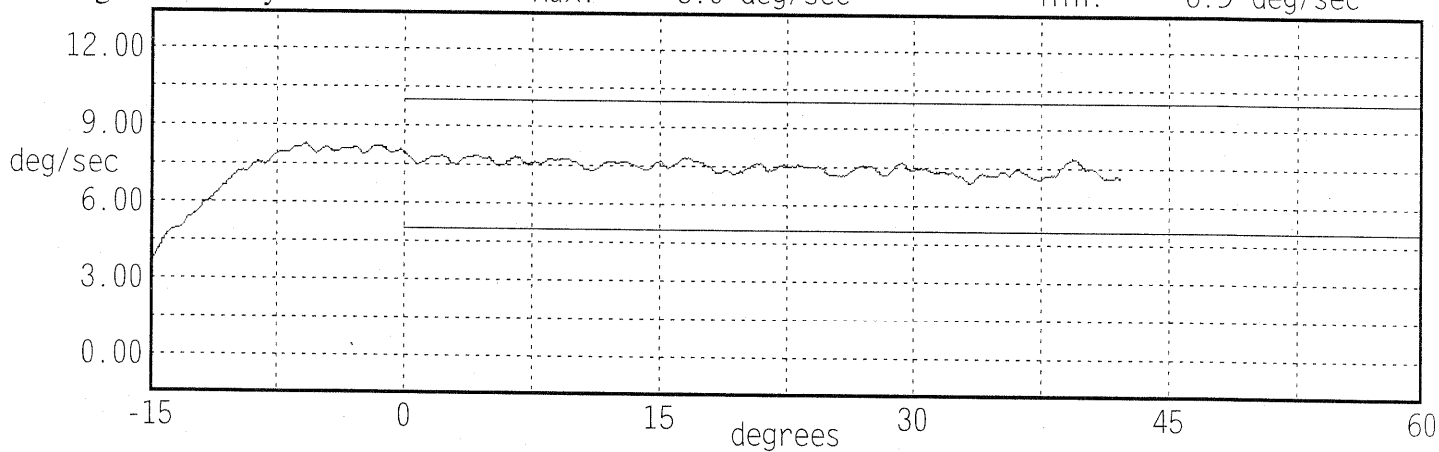
Peak Moment: 211.3 Nm at 42.2 deg
Peak Angle: 42.2 deg at 211.3 Nm



Angular Velocity

Max: 8.0 deg/sec

Min: 6.9 deg/sec



Applied Safety Technologies Corp.

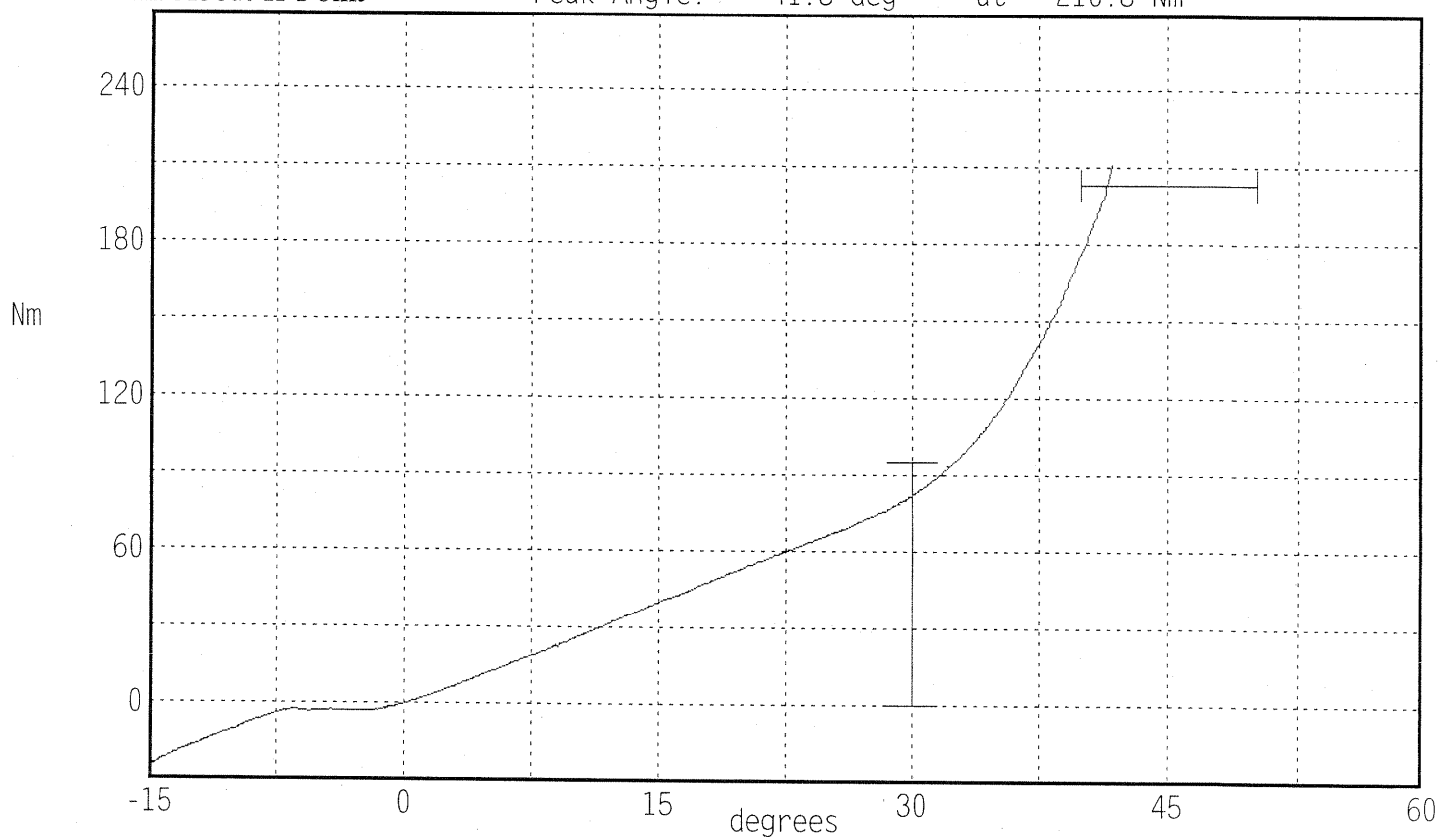
Hybrid III Hip Range of Motion

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

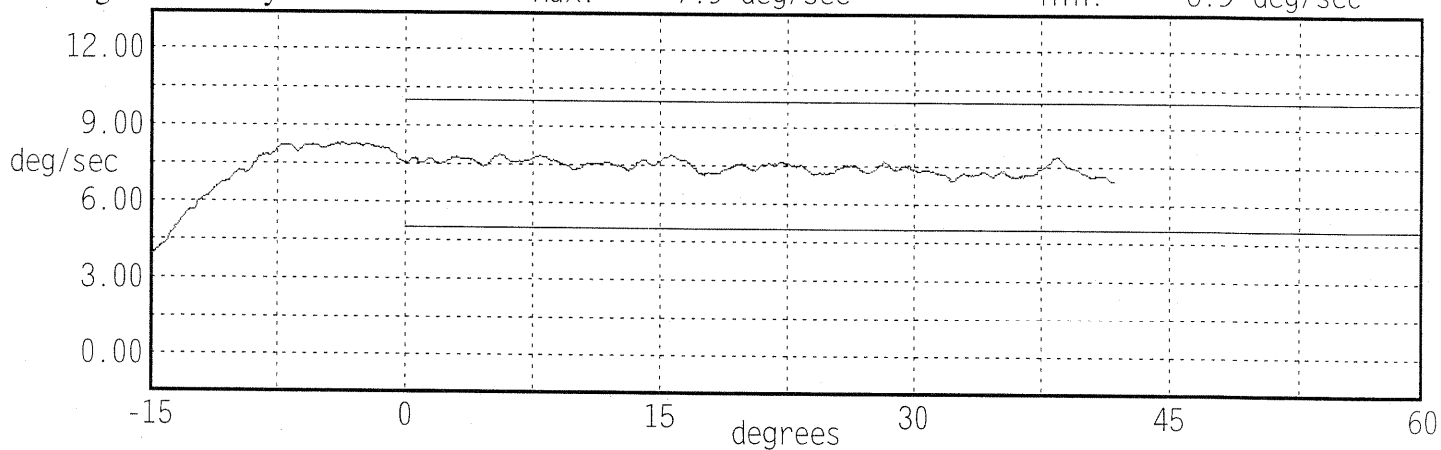
Date: 02/23/2006
Time: 14:28

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 - 25.6	21.2 °C Pass
Humidity	10 - 70	31 % Pass
Moment at 30 deg	<= 94.9	82.2 Nm Pass
Angle at 203 Nm	40.0 - 50.0	41.5 deg Pass
Average Velocity	5.0 - 10.0	7.4 deg/sec Pass

Moment About H-Point
Peak Moment: 210.8 Nm at 41.8 deg
Peak Angle: 41.8 deg at 210.8 Nm



Angular Velocity
Max: 7.9 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

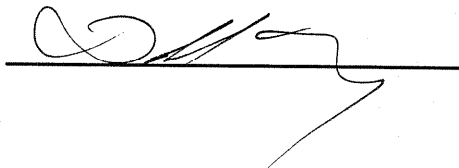
Test Date: 03/15/2006

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

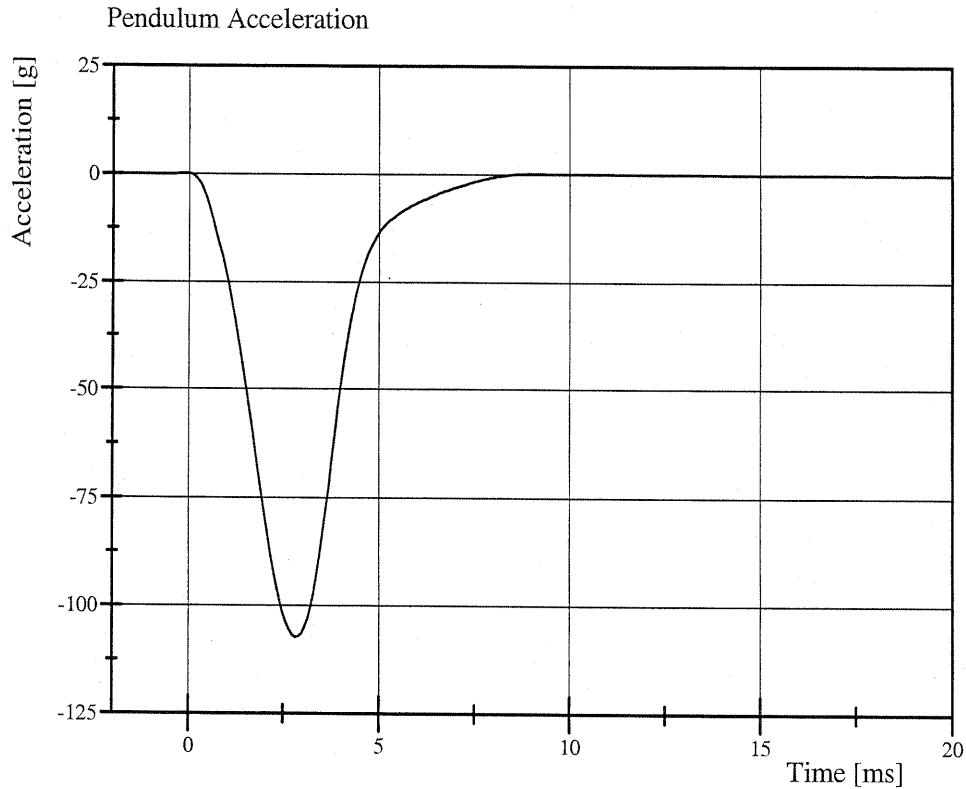


Transportation Research Center Inc.

Left Knee Femur Response Test

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

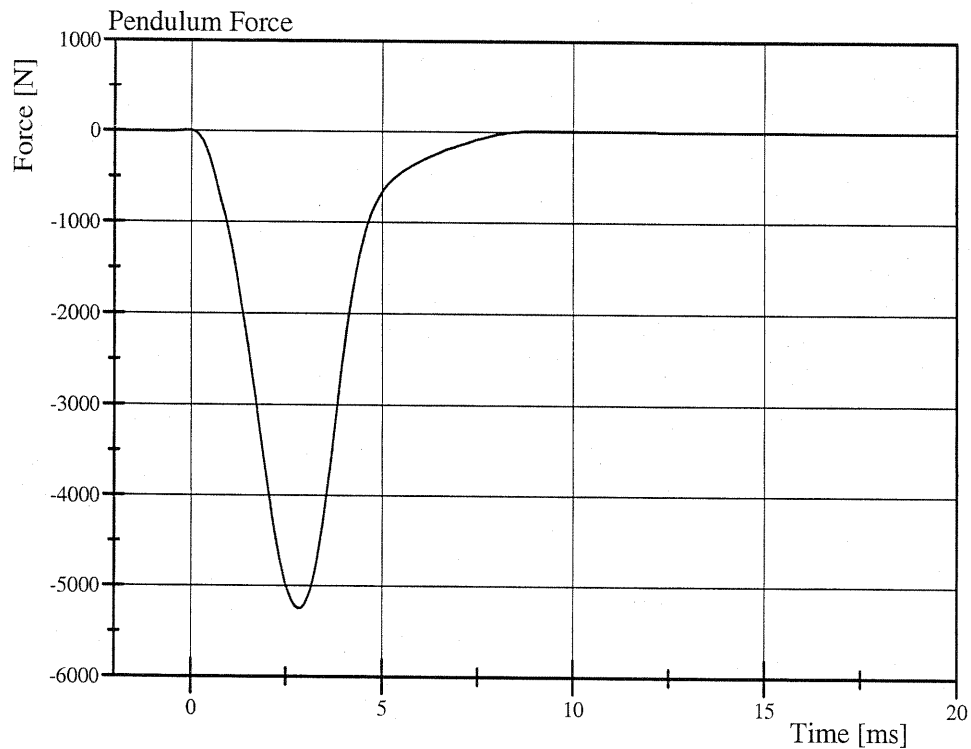
Test Date: 03/15/2006



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

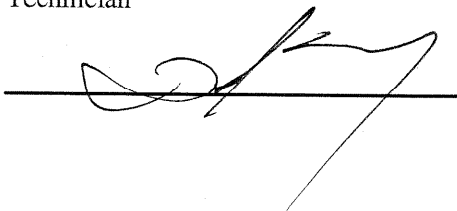
Test Date: 03/16/2006

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

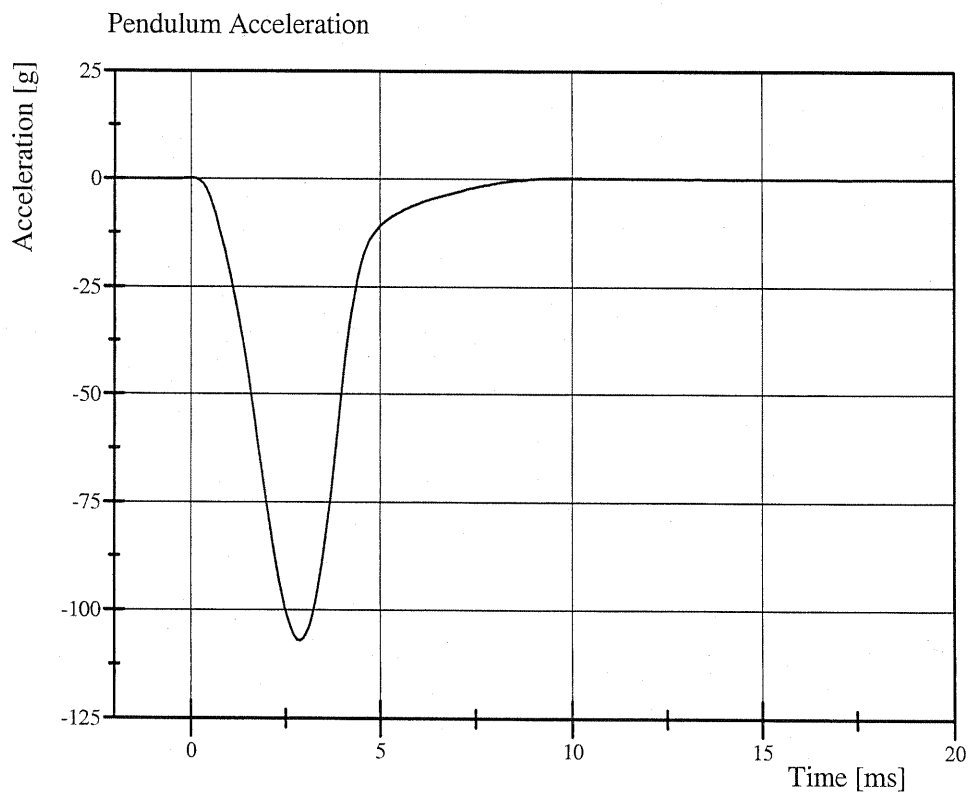


Transportation Research Center Inc.

Right Knee Femur Response Test

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

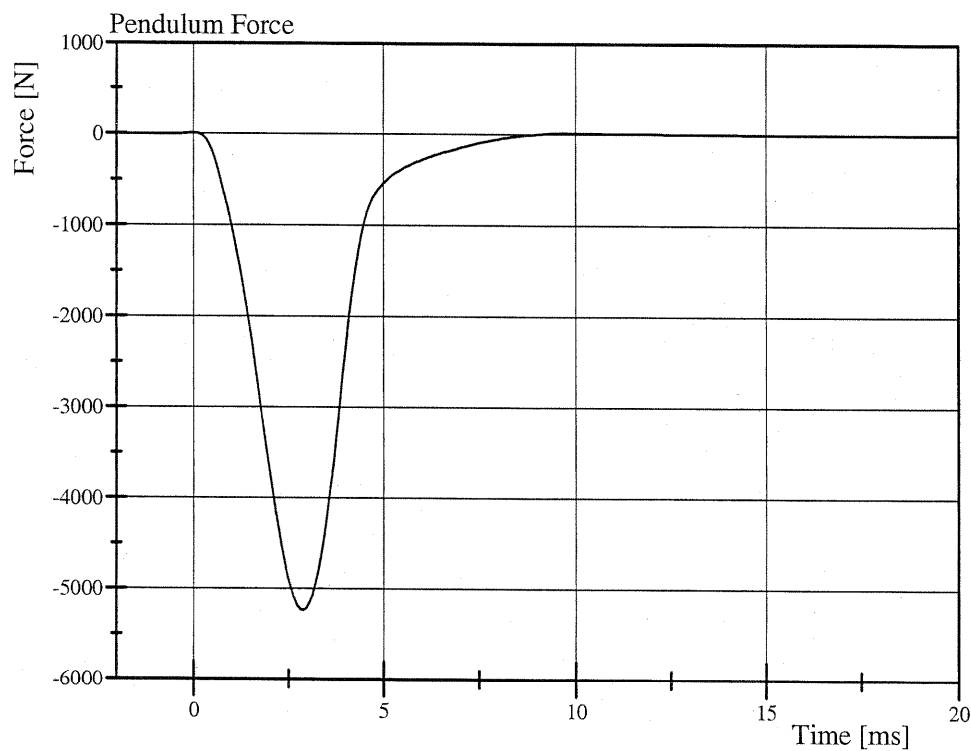
Test Date: 03/16/2006



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

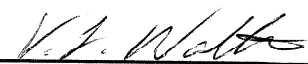
Test meets specifications.

Comments:

Technician



Approved



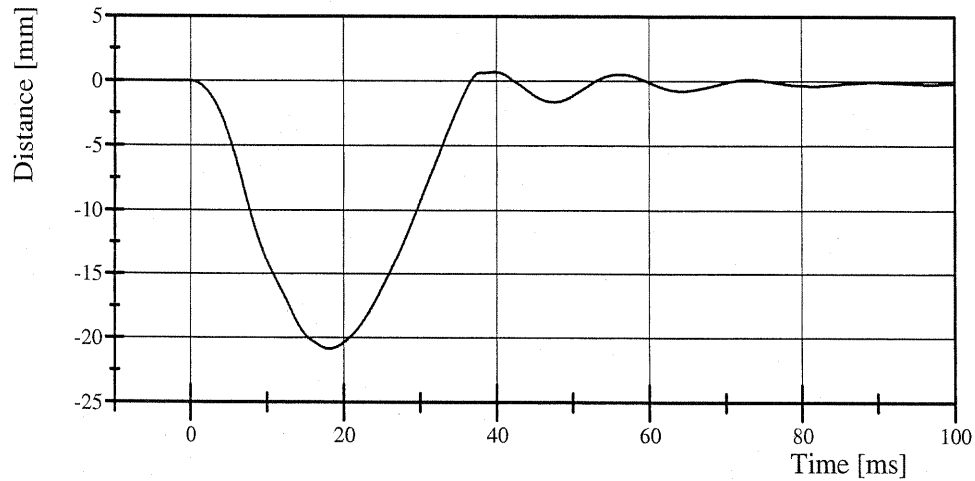
Transportation Research Center Inc.

Left Knee Slider

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

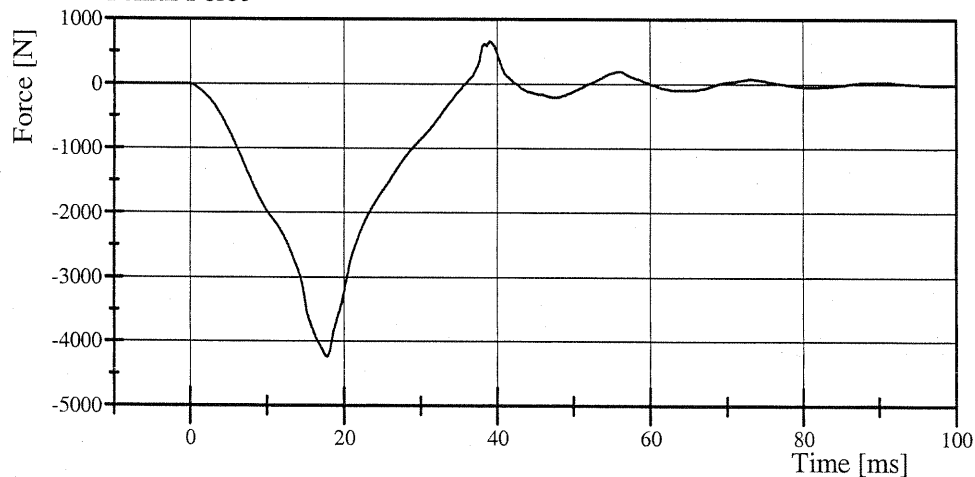
Test Date: 03/16/2006

Knee Slider Displacement



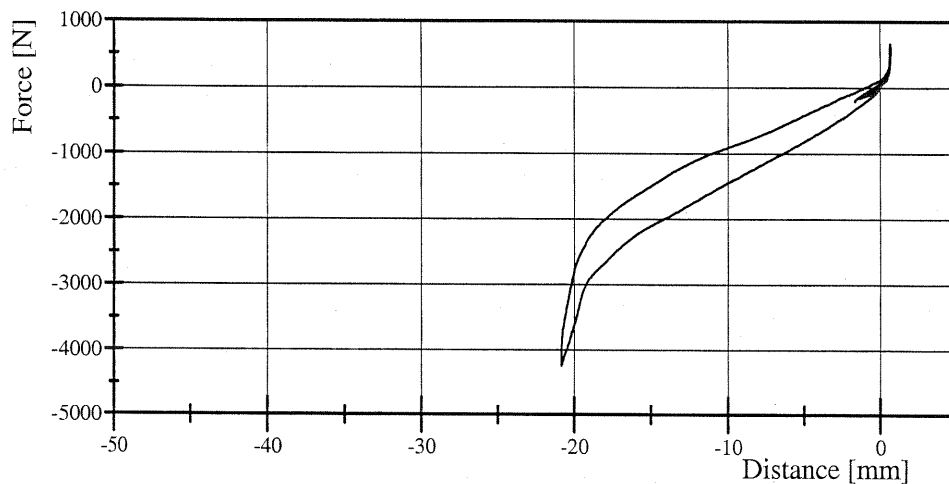
Filter Class: CFC_180
Max: 0.7 mm at 39.8 ms
Min: -20.9 mm at 18.1 ms

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

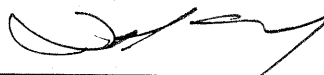
Test Date: 03/16/2006

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



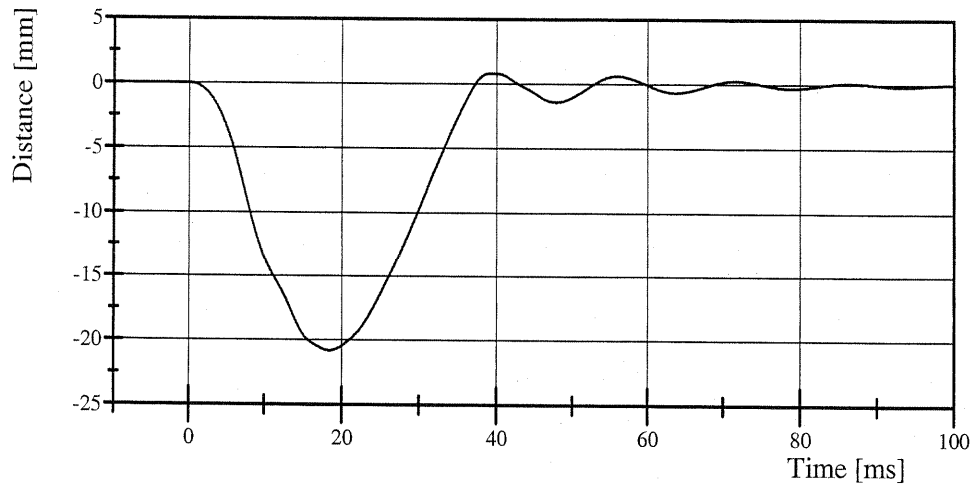
Transportation Research Center Inc.

Right Knee Slider

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

Test Date: 03/16/2006

Knee Slider Displacement

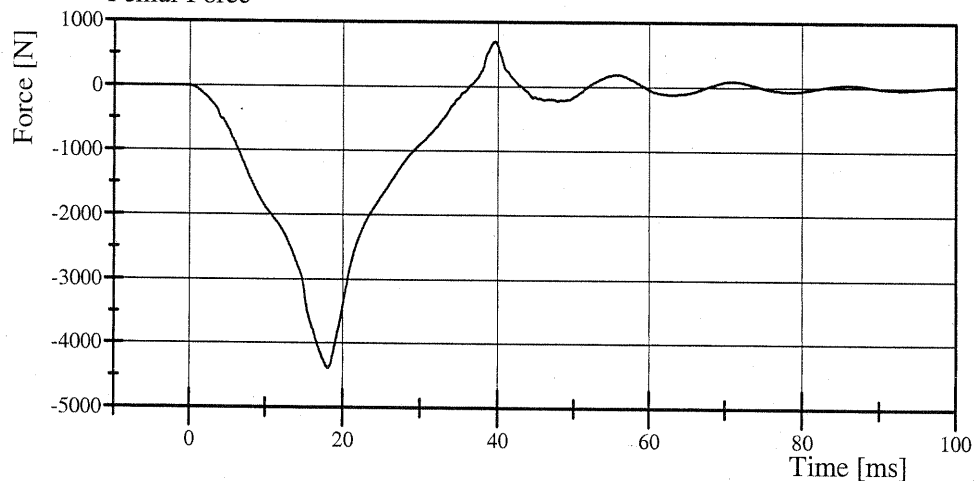


Filter Class: CFC_180

Max: 0.8 mm at 39.5 ms

Min: -20.8 mm at 18.4 ms

Femur Force

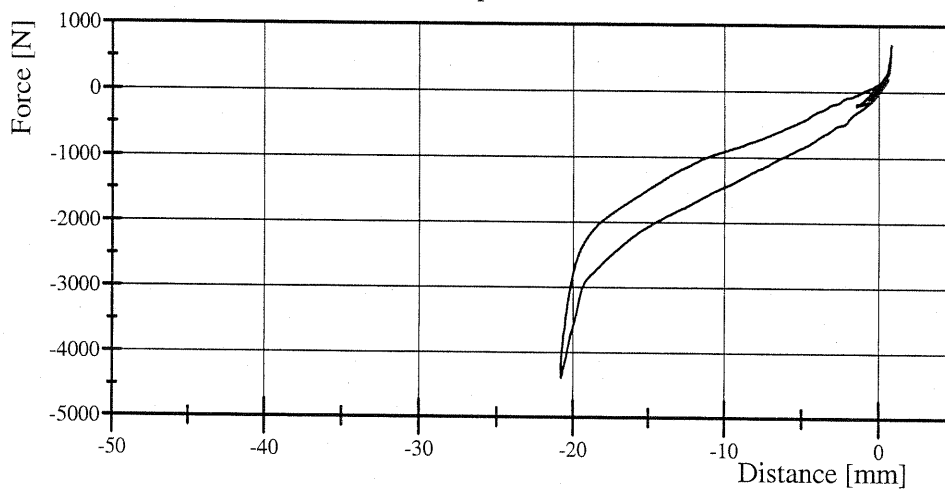


Filter Class: CFC_600

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

Post-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

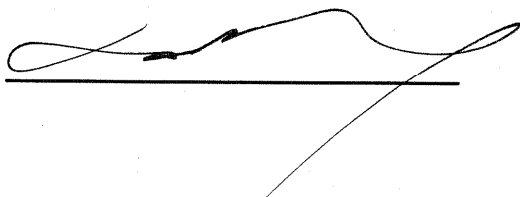
Test Date: 03/21/2006

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

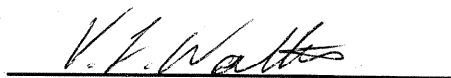
Test meets specifications.

Comments:

Technician



Approved



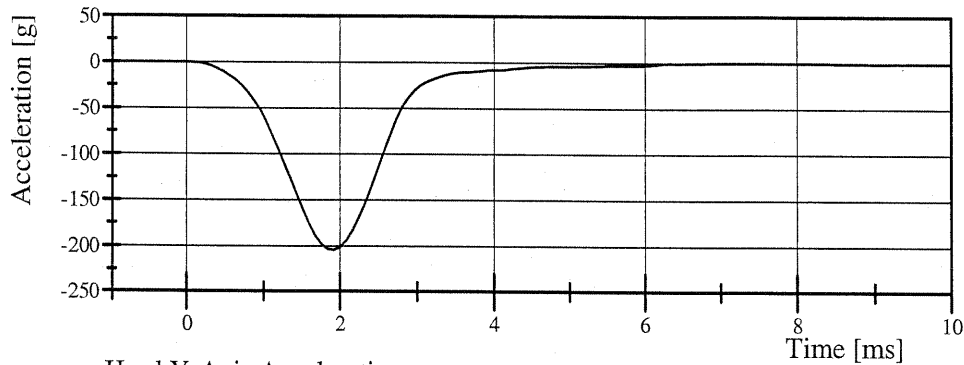
Transportation Research Center Inc.

Front Head Drop

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

Test Date: 03/21/2006

Head X-Axis Acceleration

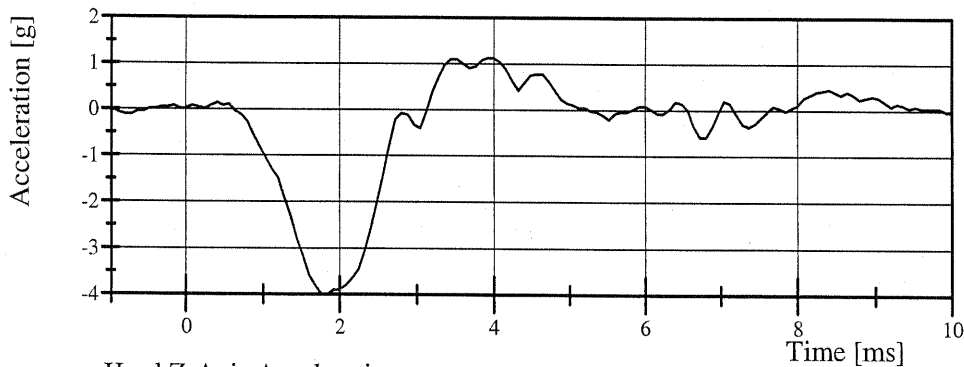


Filter Class: CFC_1000

Max: 0.2 g at 8.1 ms

Min: -204.4 g at 1.9 ms

Head Y-Axis Acceleration

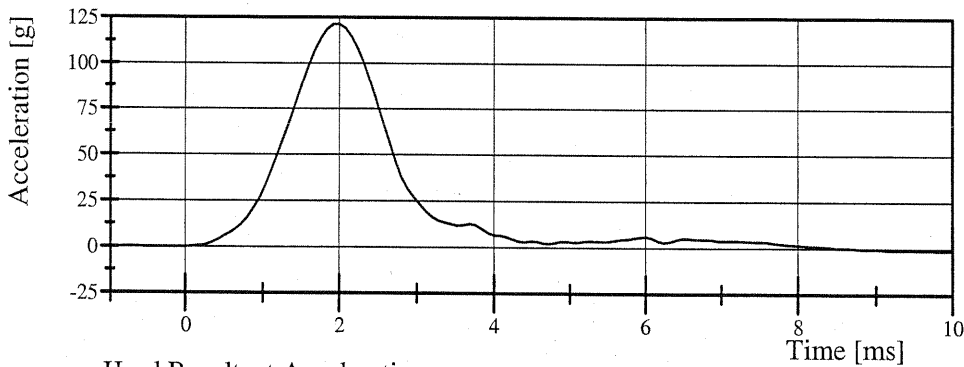


Filter Class: CFC_1000

Max: 1.1 g at 3.9 ms

Min: -4.0 g at 1.8 ms

Head Z-Axis Acceleration

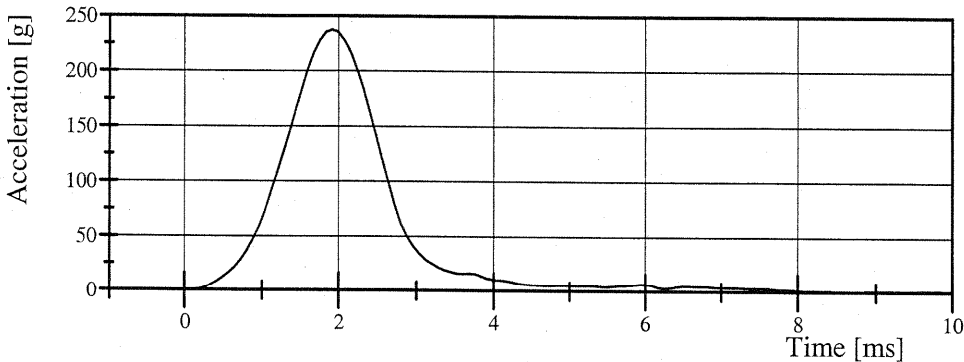


Filter Class: CFC_1000

Max: 121.5 g at 2.0 ms

Min: -1.1 g at 9.8 ms

Head Resultant Acceleration



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

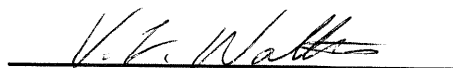
Test meets specifications.

Comments:

Technician



Approved

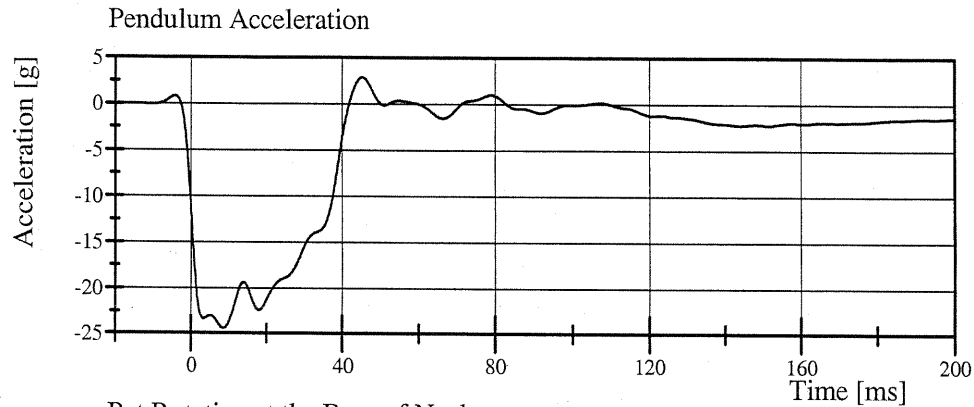


Transportation Research Center Inc.

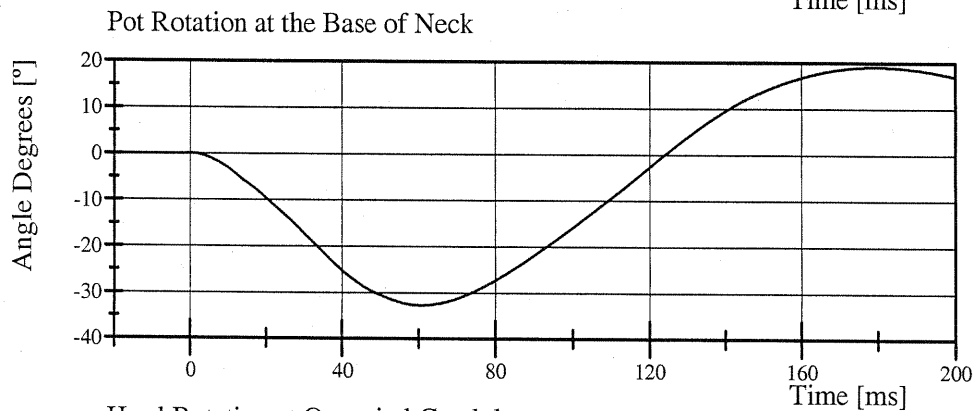
Neck Flexion

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

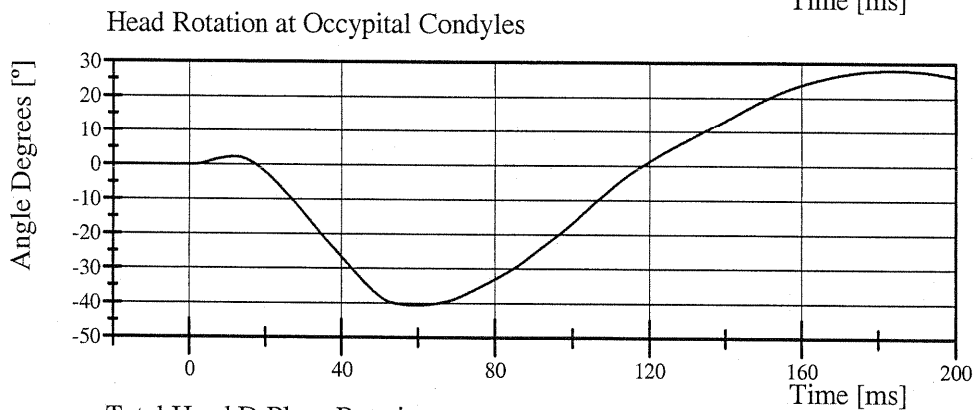
Test Date: 03/22/2006



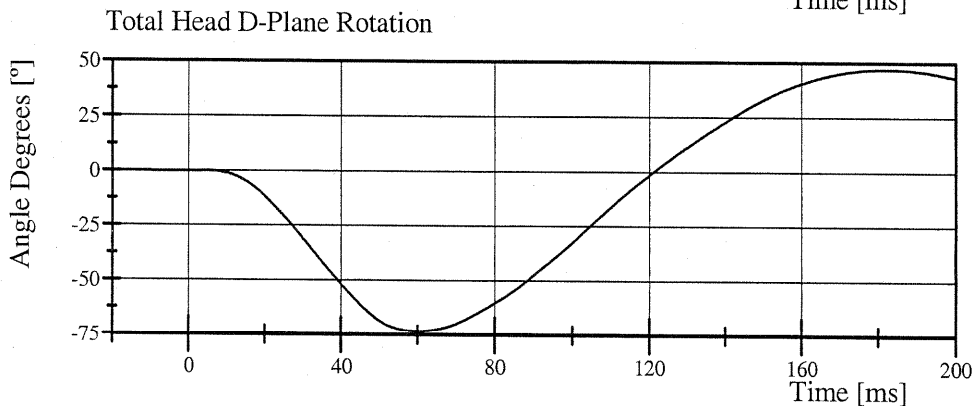
Filter Class: CFC_60
Max: 2.9 g at 45.2 ms
Min: -24.5 g at 8.5 ms



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



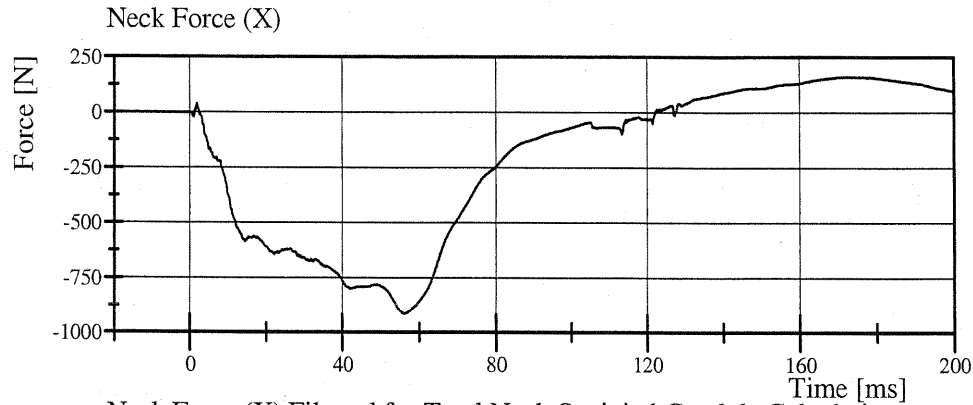
Filter Class: CFC_60
Max: 47.1 ° at 182.2 ms
Min: -73.3 ° at 60.2 ms

Transportation Research Center Inc.

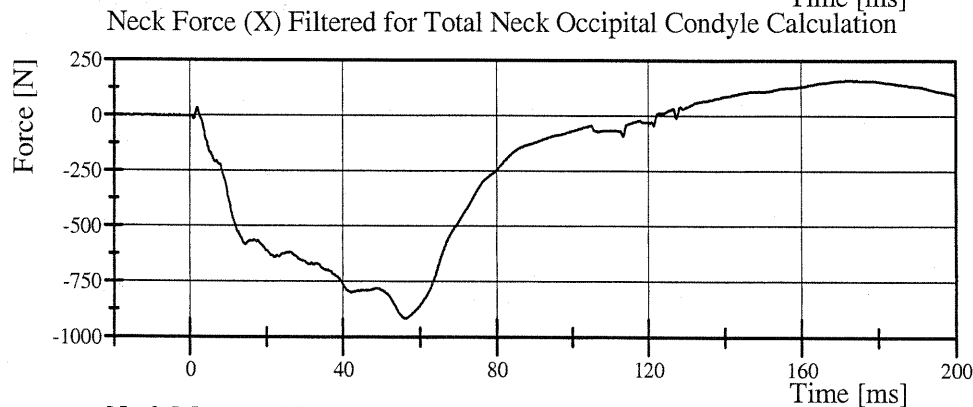
Neck Flexion

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

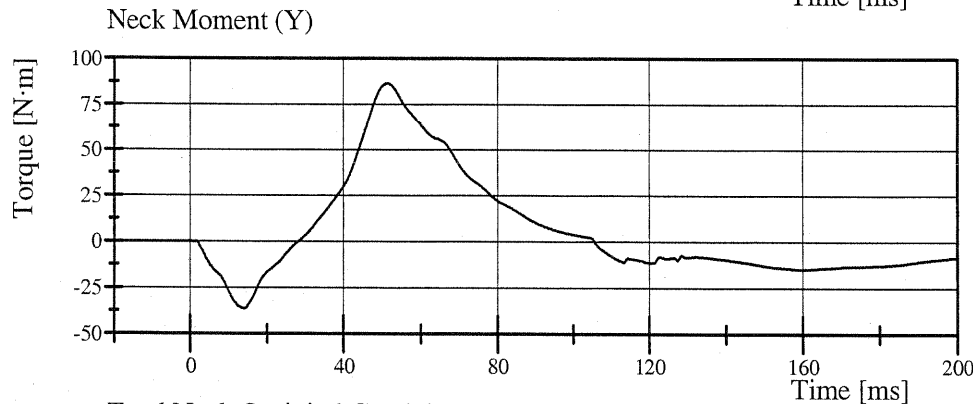
Test Date: 03/22/2006



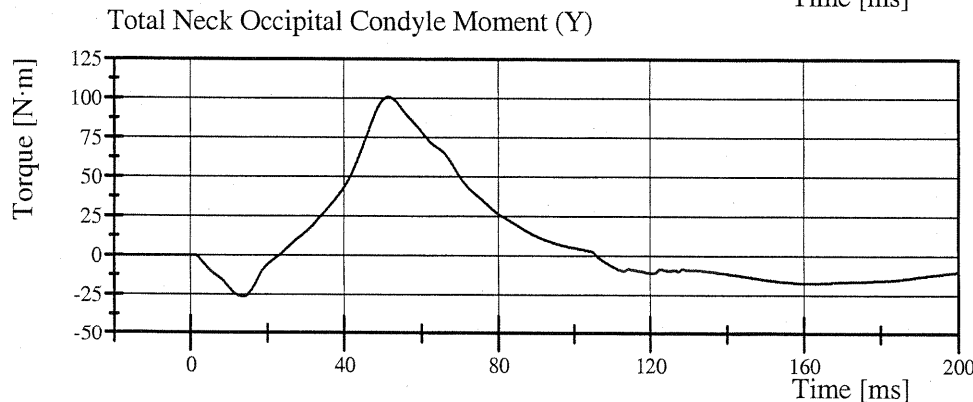
Filter Class: CFC_1000
Max: 162.2 N at 171.9 ms
Min: -916.0 N at 56.0 ms



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

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

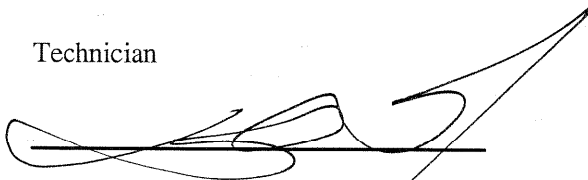
Test Date: 03/22/2006

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °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

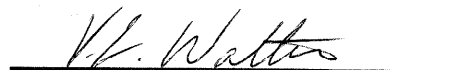
Test meets specifications.

Comments:

Technician



Approved

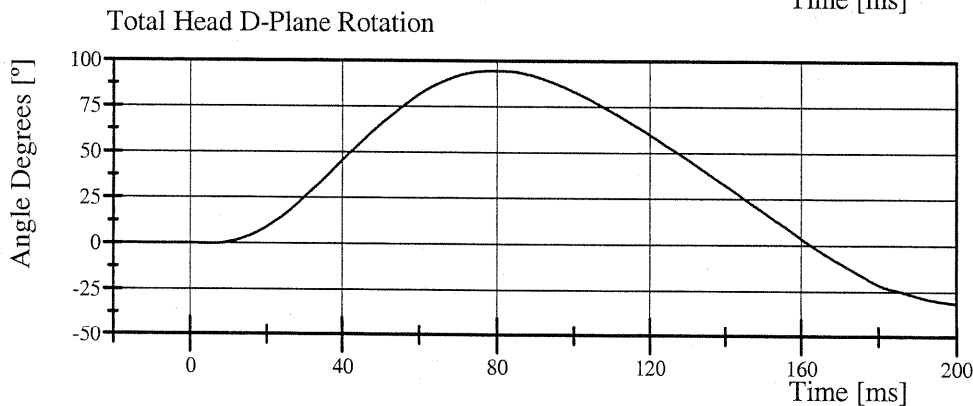
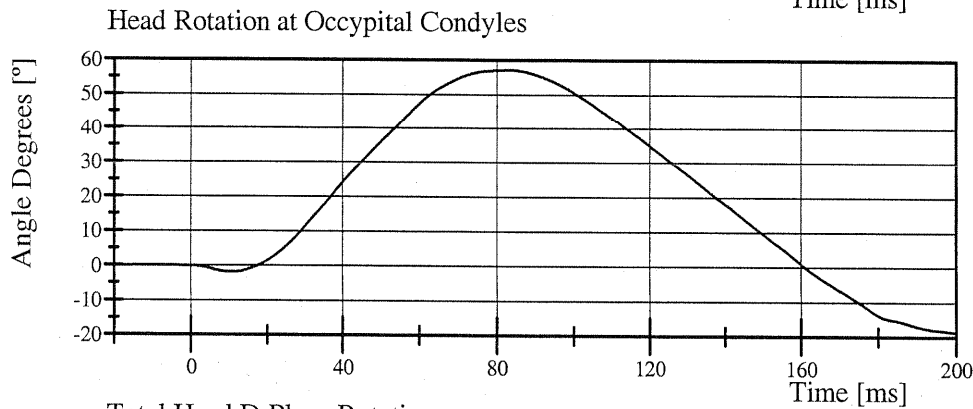
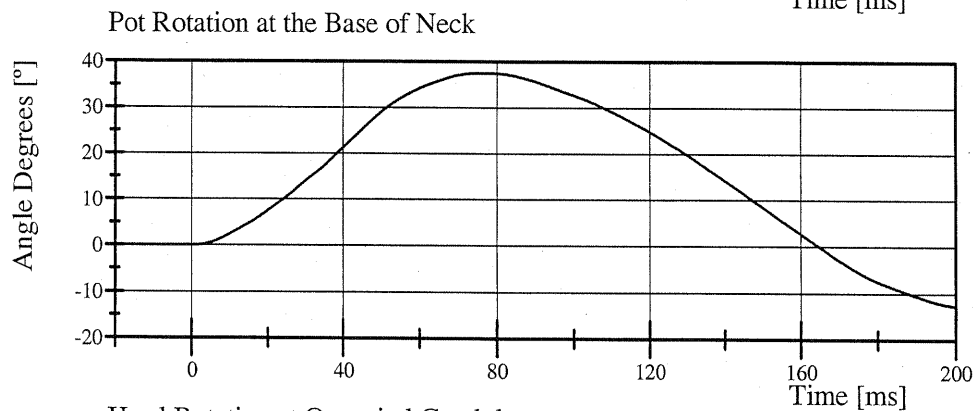
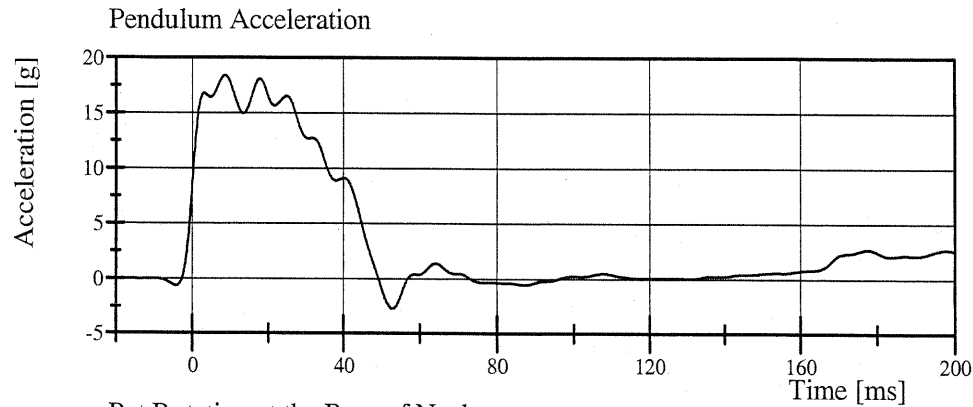


Transportation Research Center Inc.

Neck Extension

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

Test Date: 03/22/2006

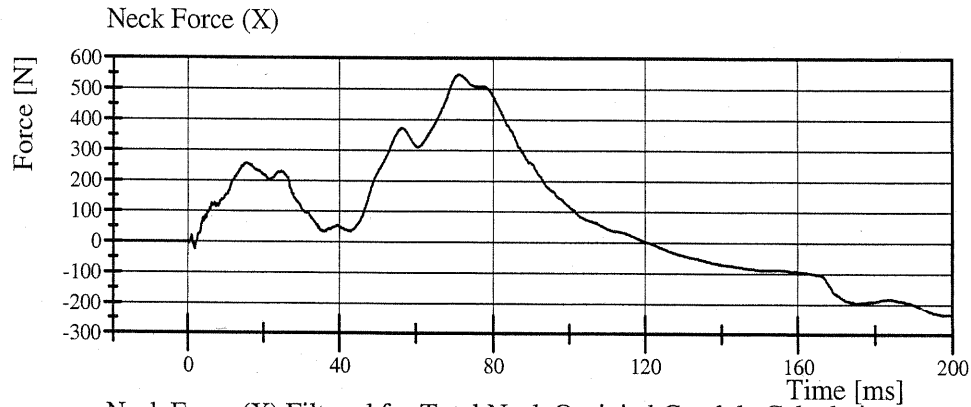


Transportation Research Center Inc.

Neck Extension

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

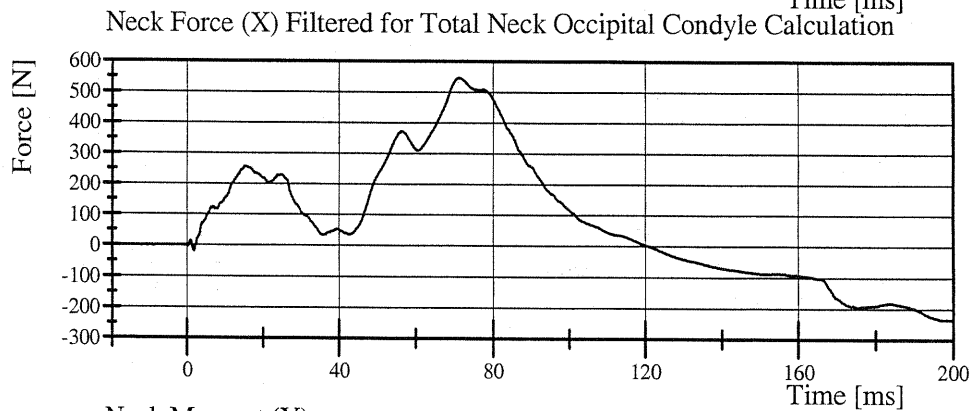
Test Date: 03/22/2006



Filter Class: CFC_1000

Max: 547.1 N at 71.0 ms

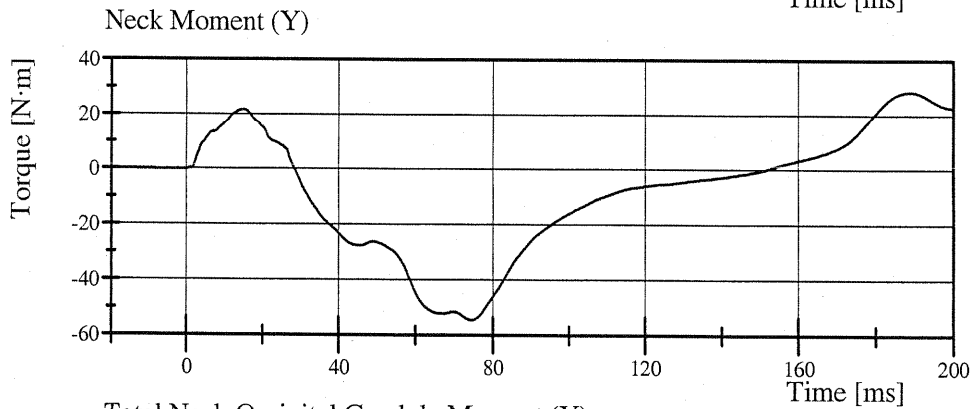
Min: -236.1 N at 198.5 ms



Filter Class: CFC_600

Max: 546.9 N at 71.1 ms

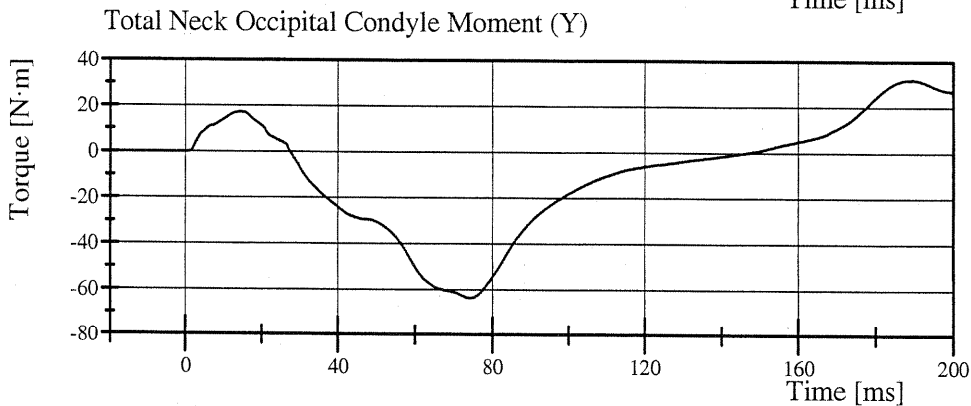
Min: -235.7 N at 198.4 ms



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

HIH 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

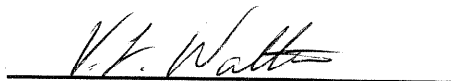
Test meets specifications.

Comments:

Technician



Approved

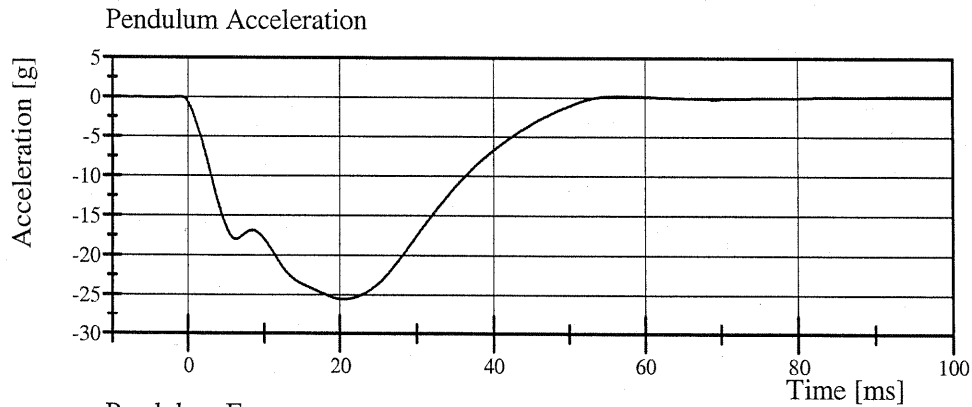


Transportation Research Center Inc.

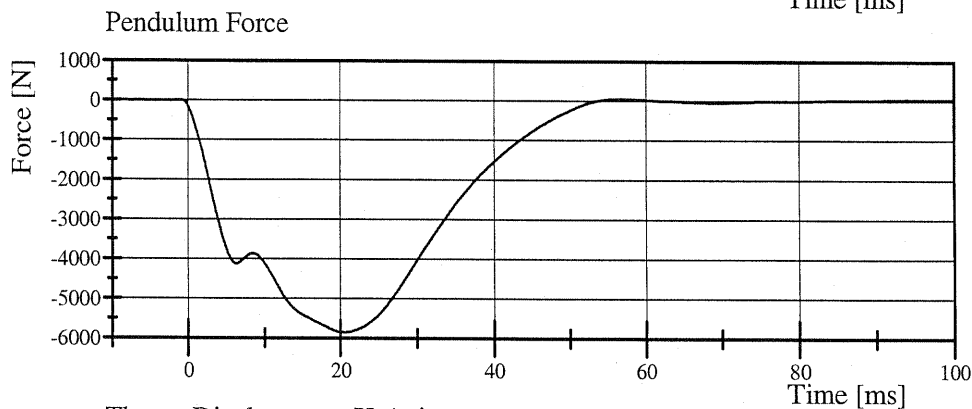
Front Thorax

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

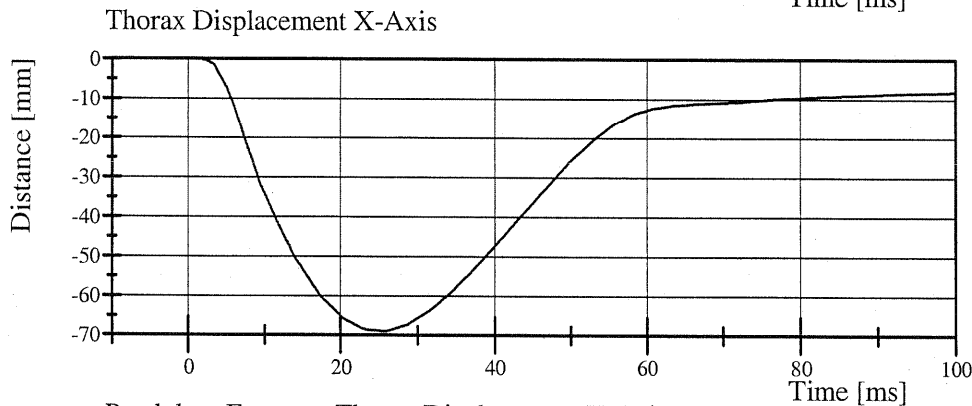
Test Date: 03/22/2006



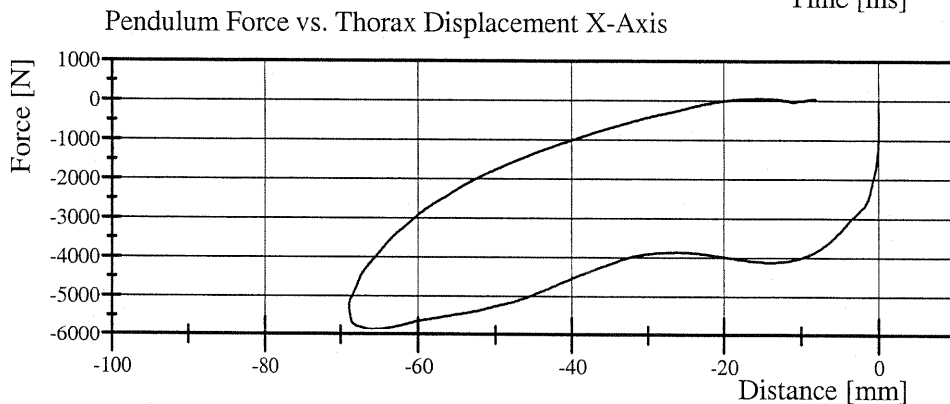
Filter Class: CFC_180
Max: 0.2 g at 56.7 ms
Min: -25.5 g at 20.6 ms



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



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



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

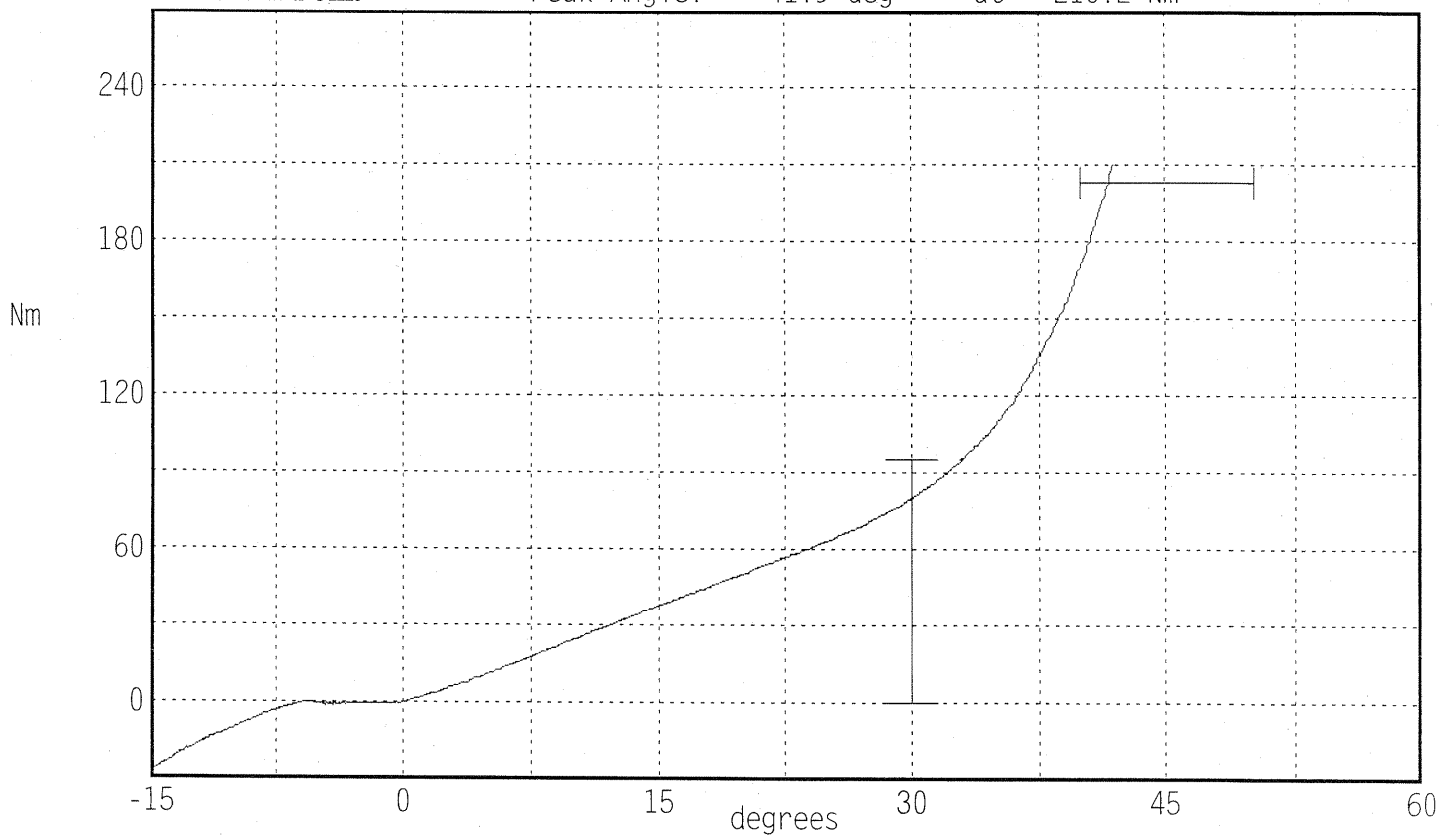
Serial Number: 090L
Test Number: 090C54
Comments:

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

Peak Moment: 210.2 Nm at 41.9 deg
Peak Angle: 41.9 deg at 210.2 Nm

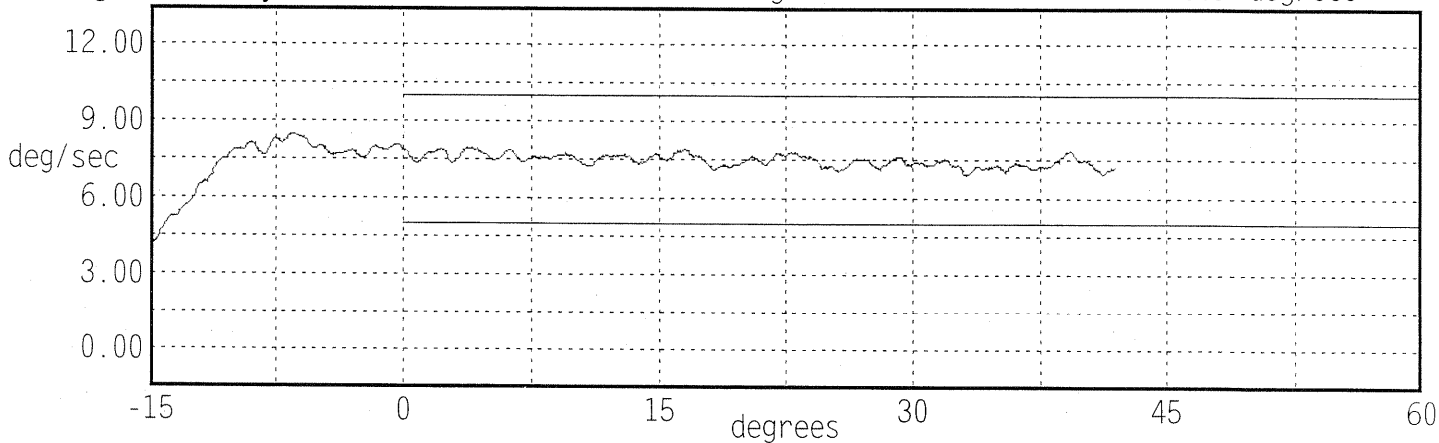
Moment About H-Point



Angular Velocity

Max: 7.9 deg/sec

Min: 6.9 deg/sec



Applied Safety Technologies Corp.

Hybrid III Hip Range of Motion

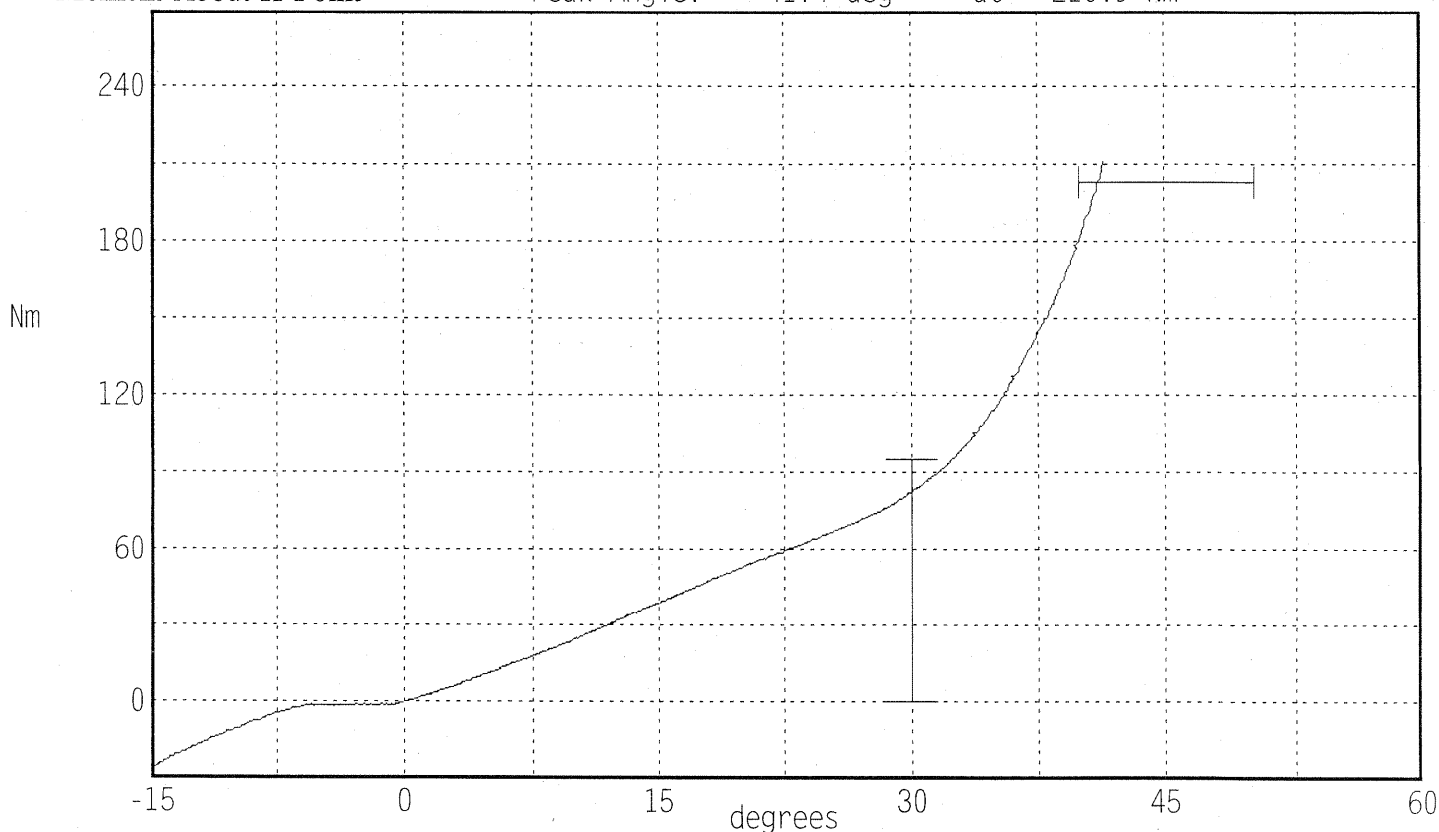
Serial Number: 090R
Test Number: 090C54
Comments:

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

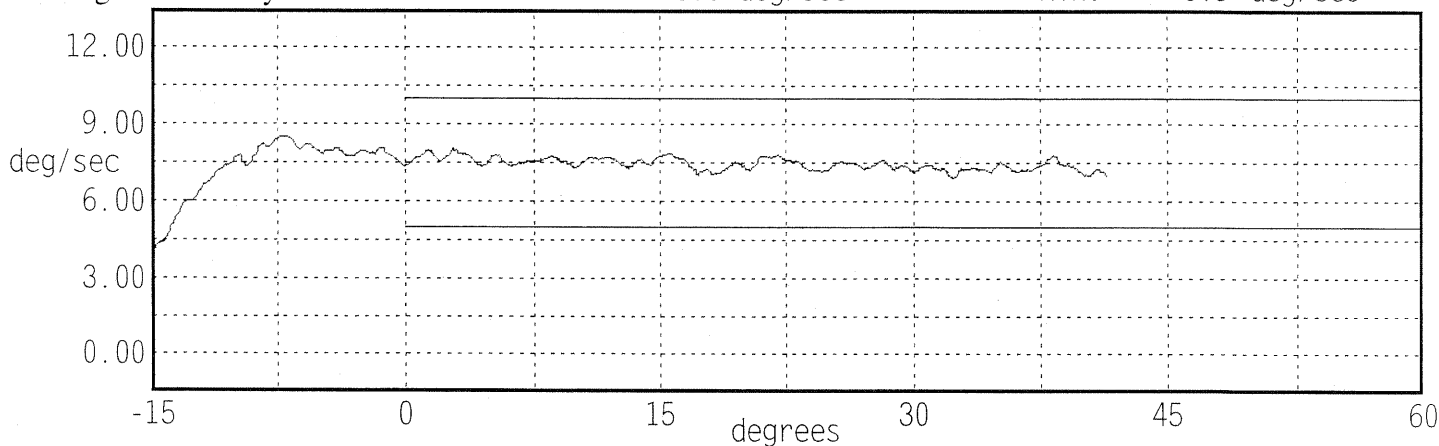
Moment About H-Point



Angular Velocity

Max: 8.0 deg/sec

Min: 6.9 deg/sec



Pre-Test Dummy Configuration and Performance Verification Data

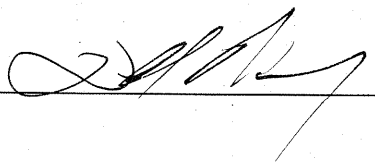
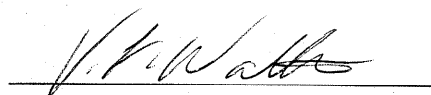
Bullet Vehicle Passenger Dummy S/N: 070

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

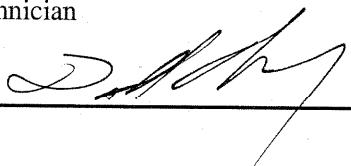
Test Date: 03/16/2006

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

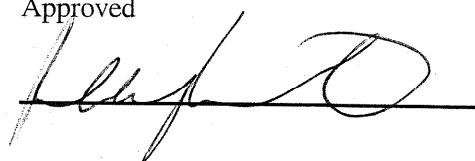
Test meets specifications.

Comments:

Technician



Approved

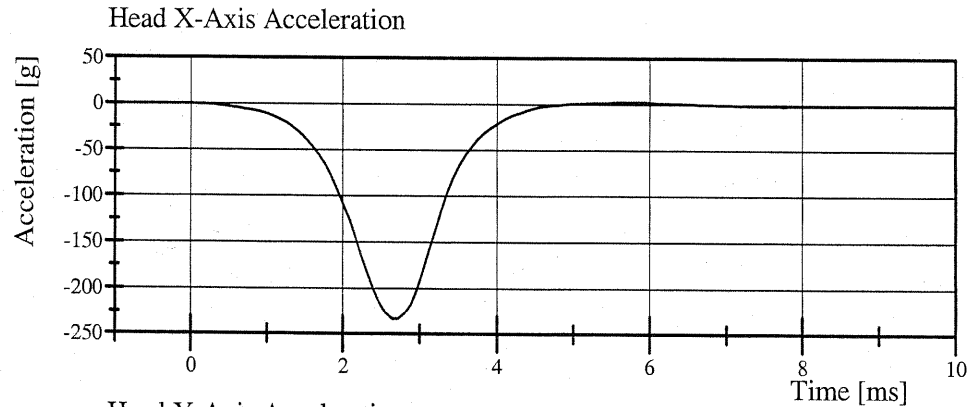


Transportation Research Center Inc.

Front Head Drop

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

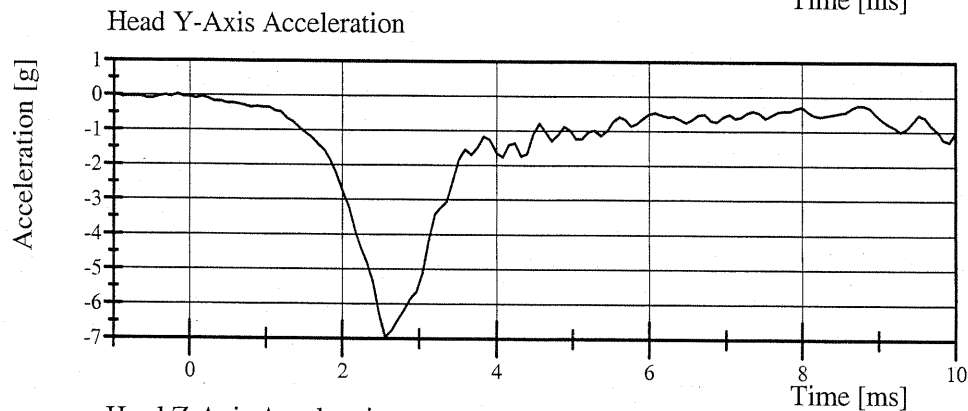
Test Date: 03/16/2006



Filter Class: CFC_1000

Max: 2.7 g at 5.7 ms

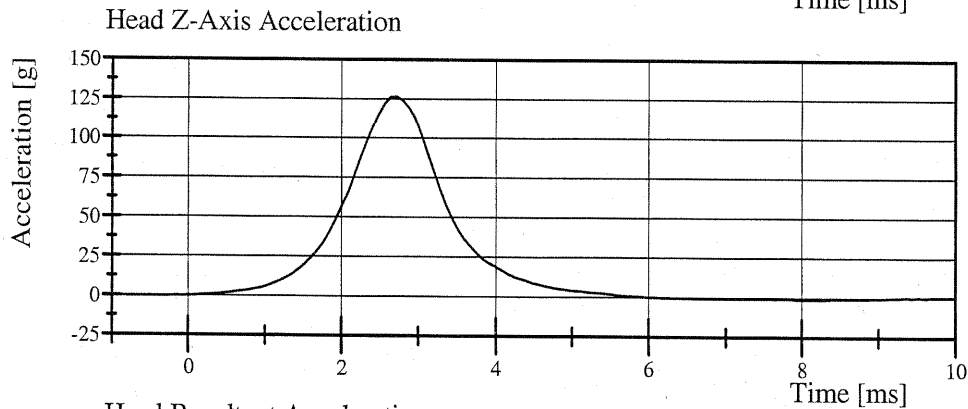
Min: -233.6 g at 2.7 ms



Filter Class: CFC_1000

Max: 0.0 g at -0.2 ms

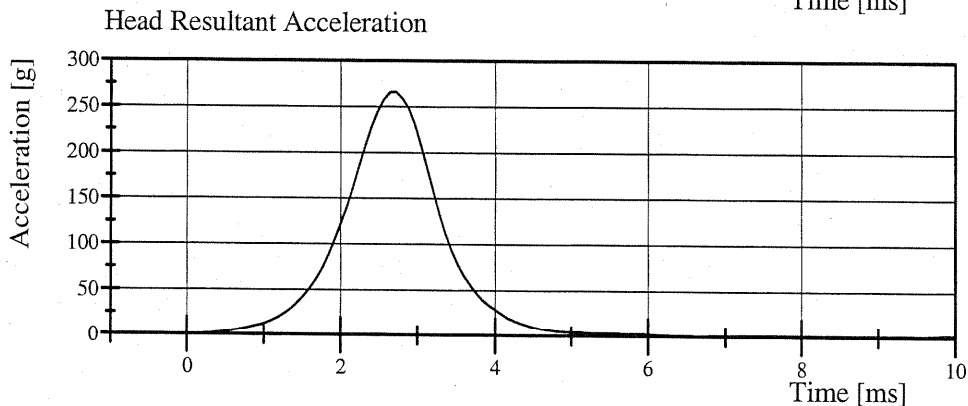
Min: -7.0 g at 2.6 ms



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

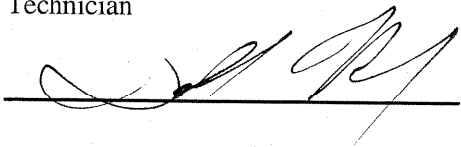
Test Date: 03/16/2006

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

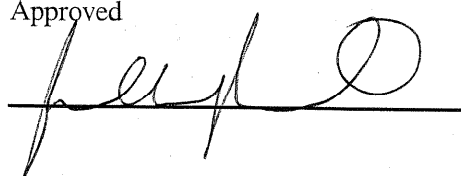
Test meets specifications.

Comments:

Technician



Approved

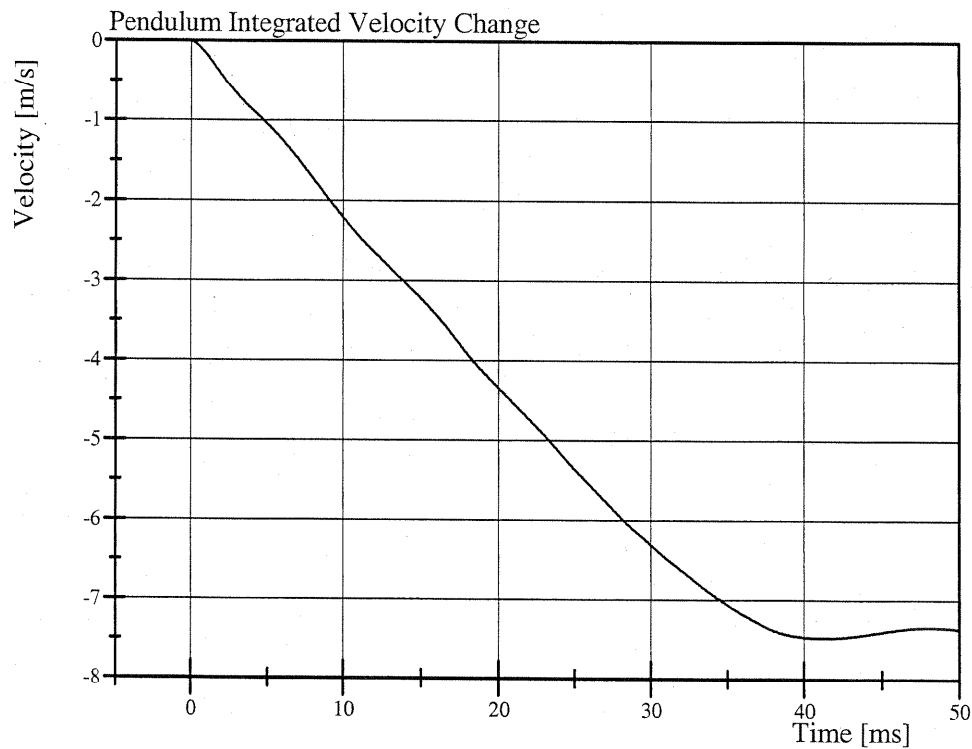
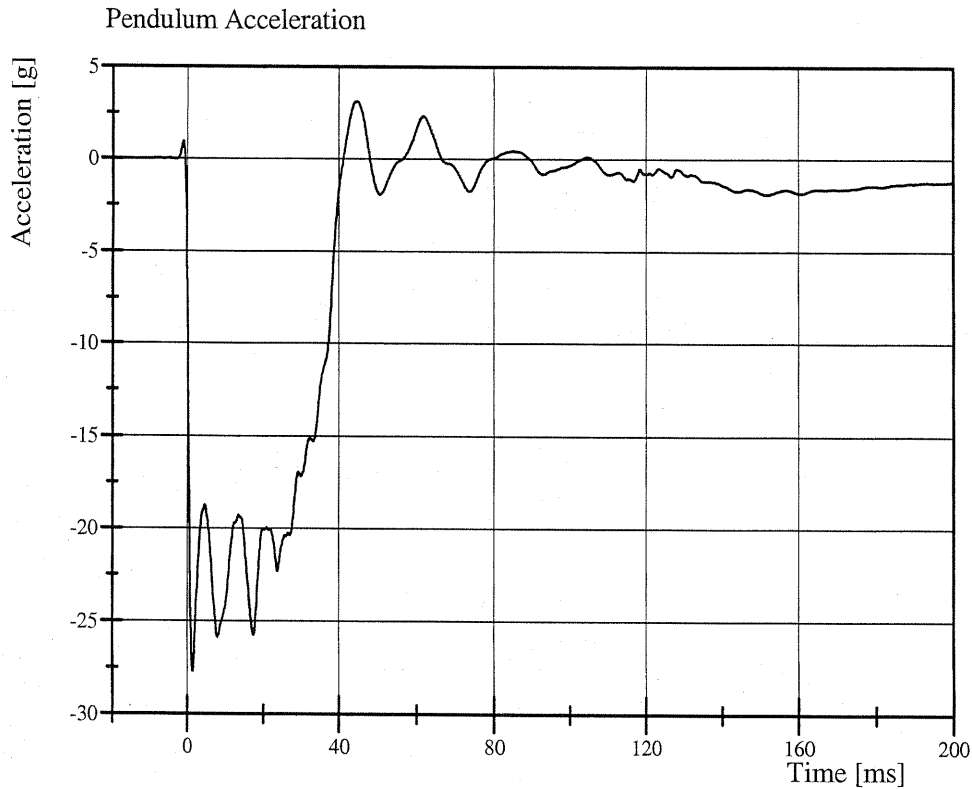


Transportation Research Center Inc.

Neck Flexion

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

Test Date: 03/16/2006



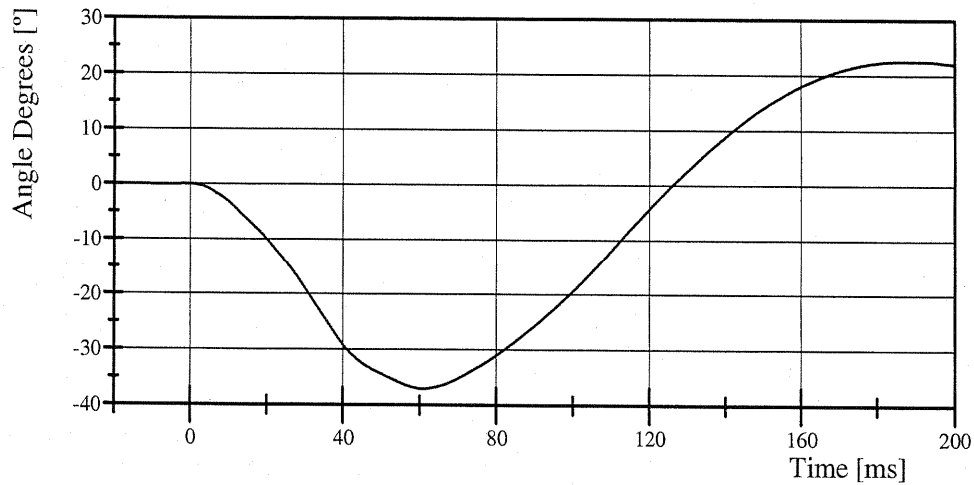
Transportation Research Center Inc.

Neck Flexion

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

Test Date: 03/16/2006

Pot Rotation at the Base of Neck

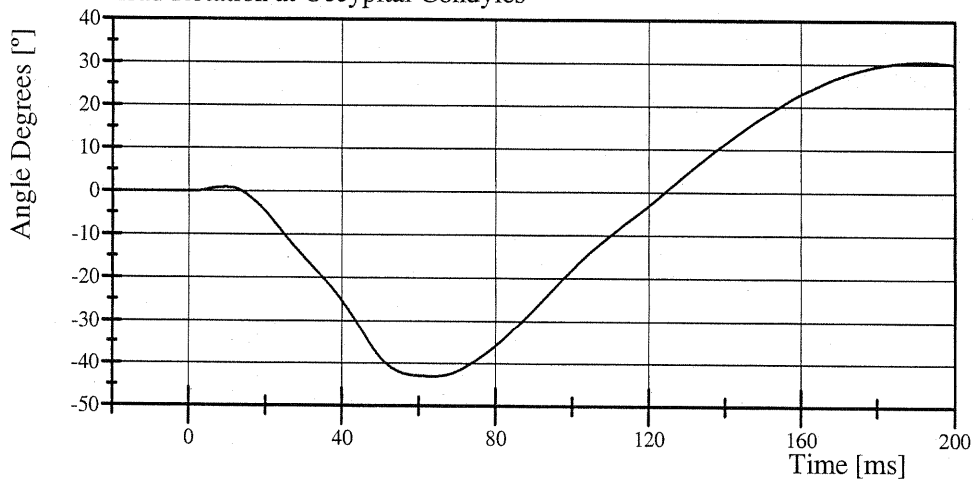


Filter Class: CFC_60

Max: 22.6 ° at 188.5 ms

Min: -37.0 ° at 61.0 ms

Head Rotation at Occypital Condyles

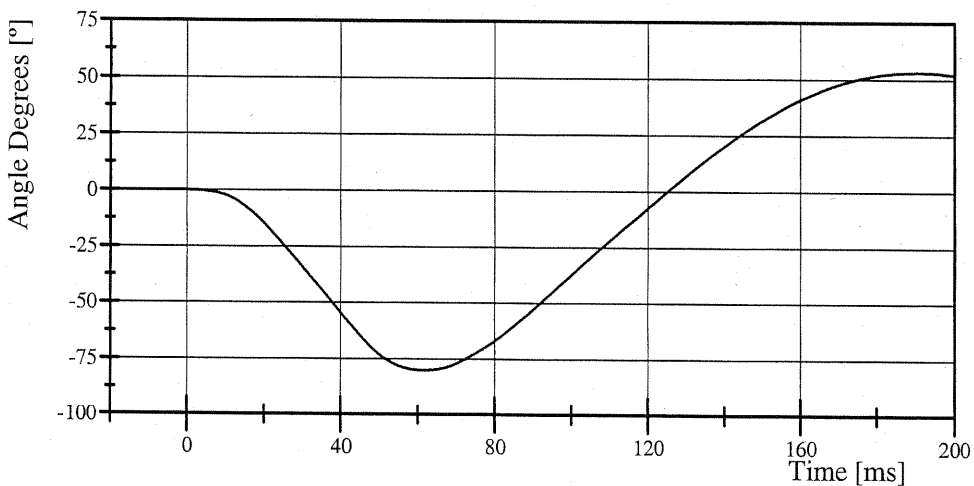


Filter Class: CFC_60

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

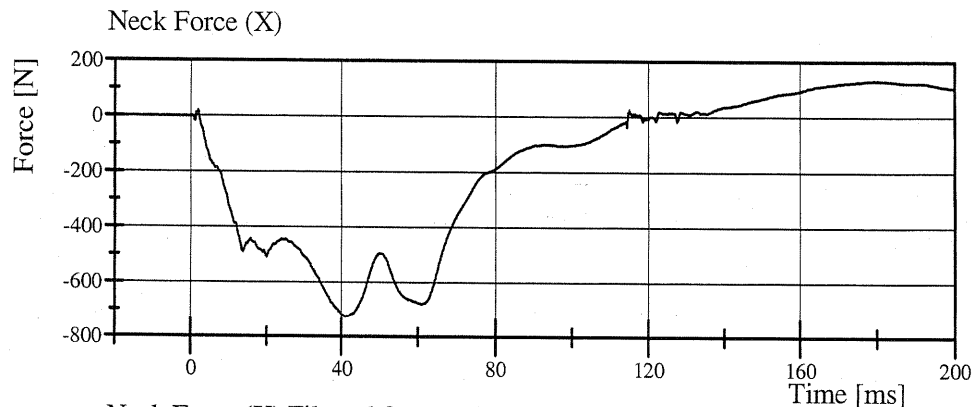
Min: -80.0 ° at 61.5 ms

Transportation Research Center Inc.

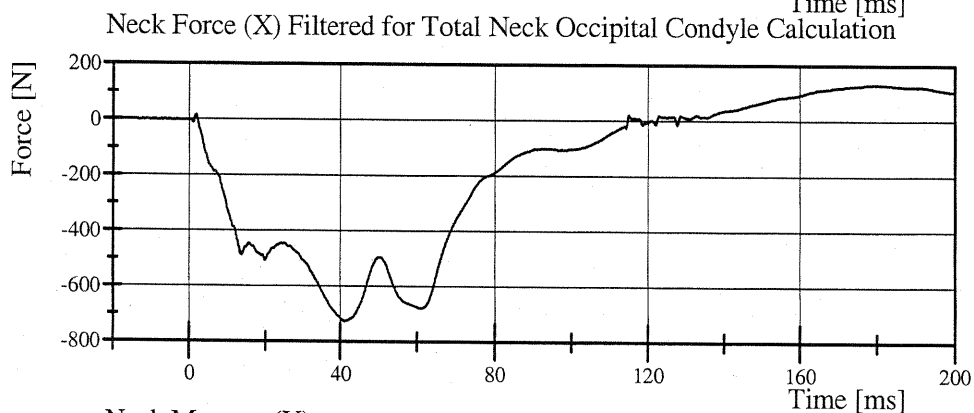
Neck Flexion

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

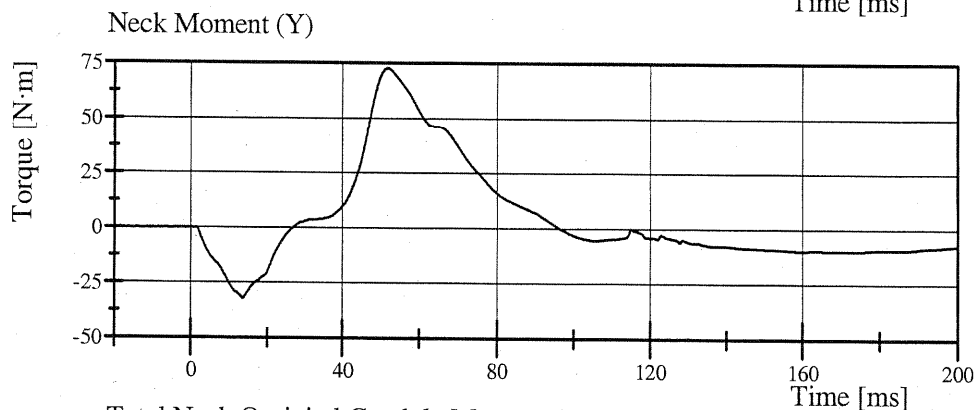
Test Date: 03/16/2006



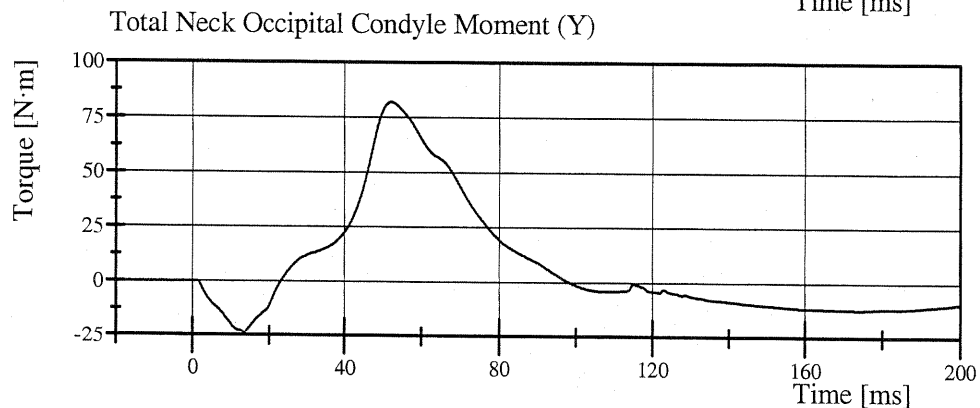
Filter Class: CFC_1000
Max: 132.9 N at 179.2 ms
Min: -726.9 N at 41.0 ms



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

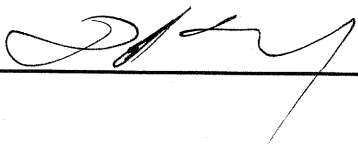
Test Date: 03/16/2006

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

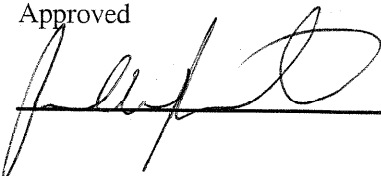
Test meets specifications.

Comments:

Technician



Approved

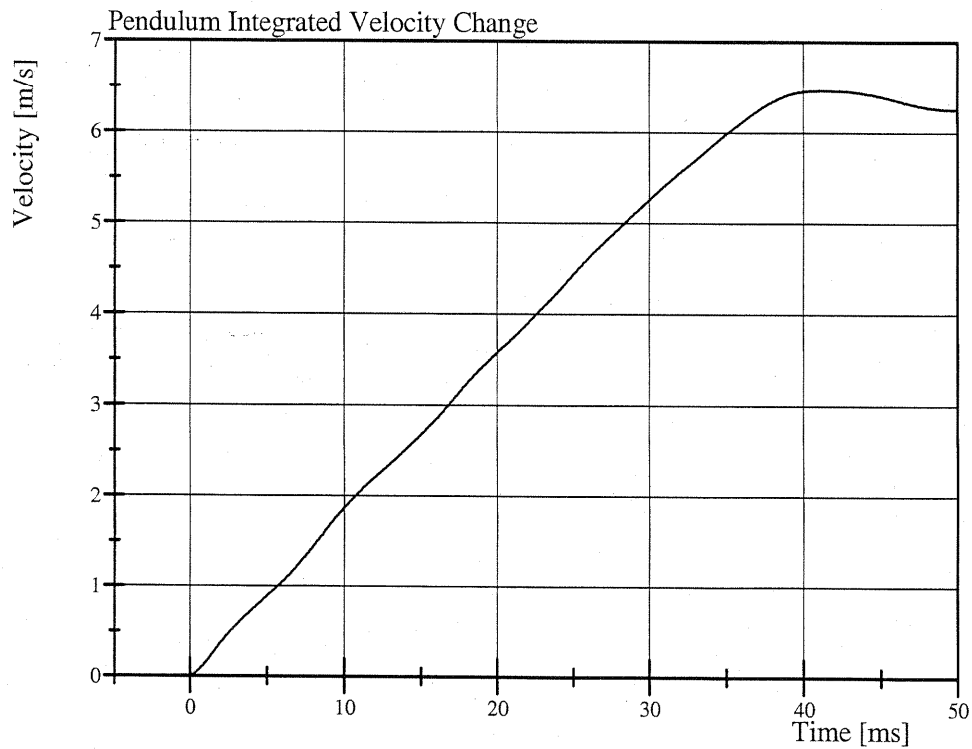
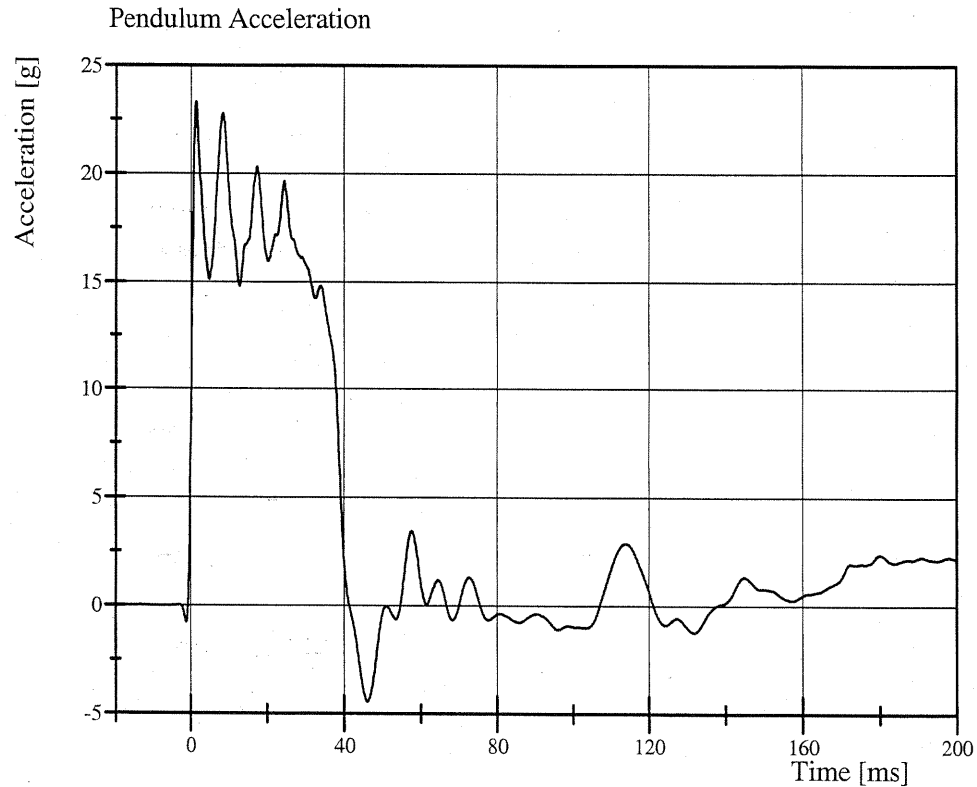


Transportation Research Center Inc.

Neck Extension

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

Test Date: 03/16/2006



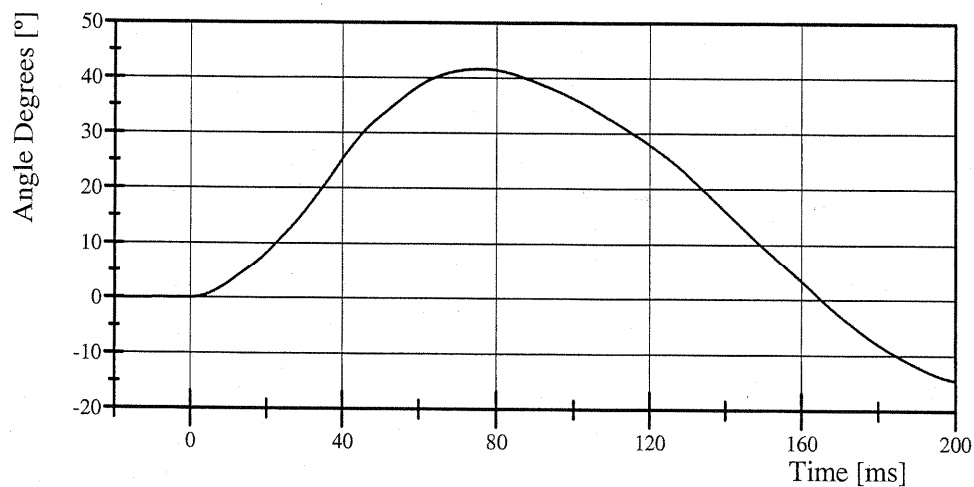
Transportation Research Center Inc.

Neck Extension

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

Test Date: 03/16/2006

Pot Rotation at the Base of Neck

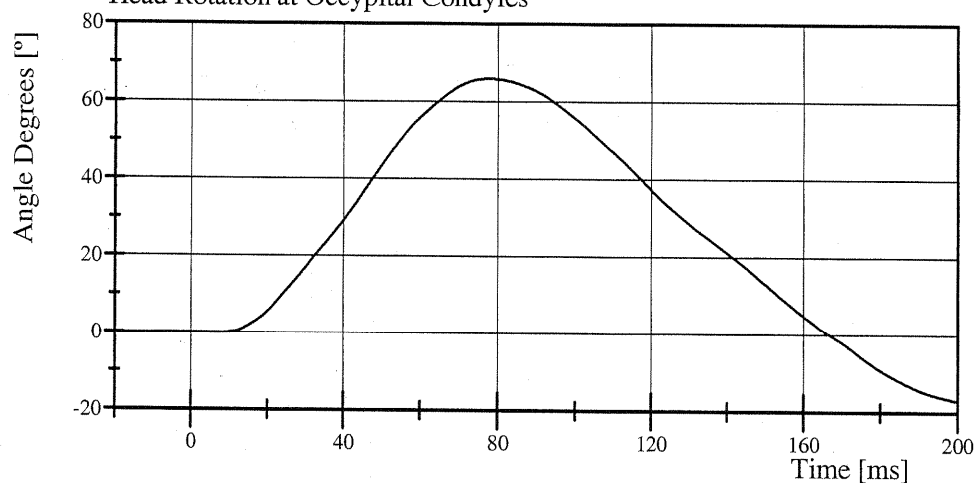


Filter Class: CFC_60

Max: 41.7 ° at 76.4 ms

Min: -14.5 ° at 200.0 ms

Head Rotation at Occypital Condyles

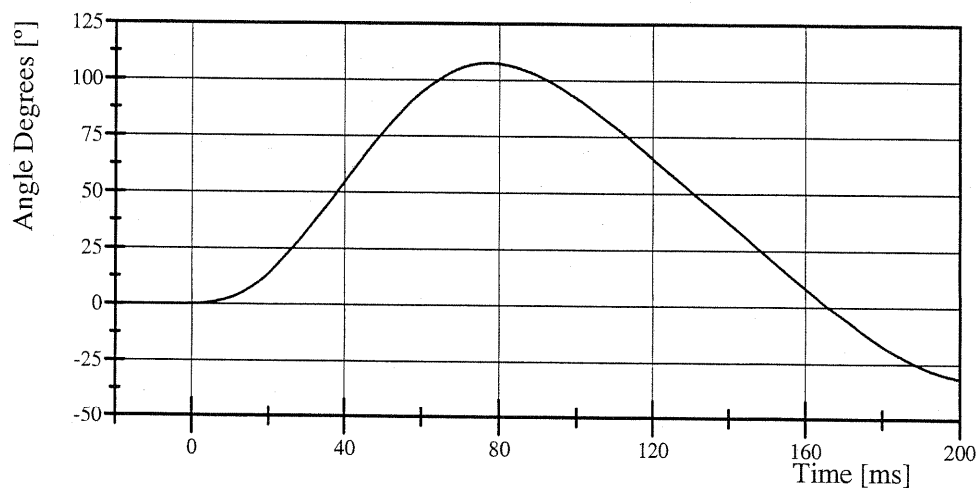


Filter Class: CFC_60

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

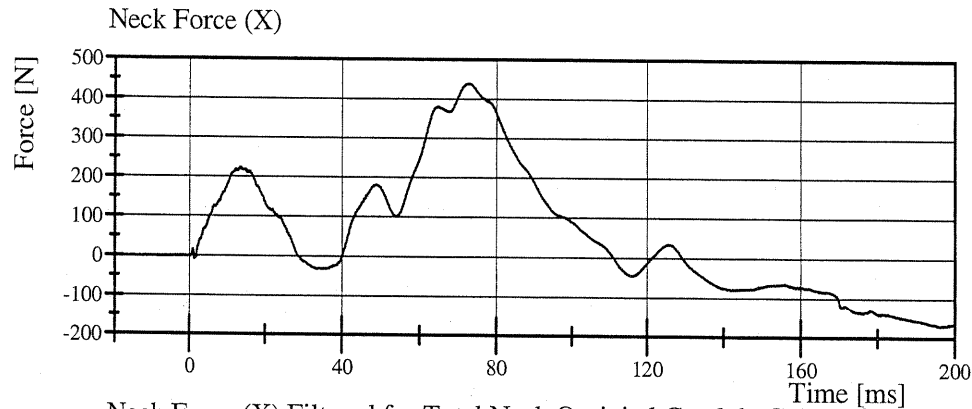
Min: -31.5 ° at 200.0 ms

Transportation Research Center Inc.

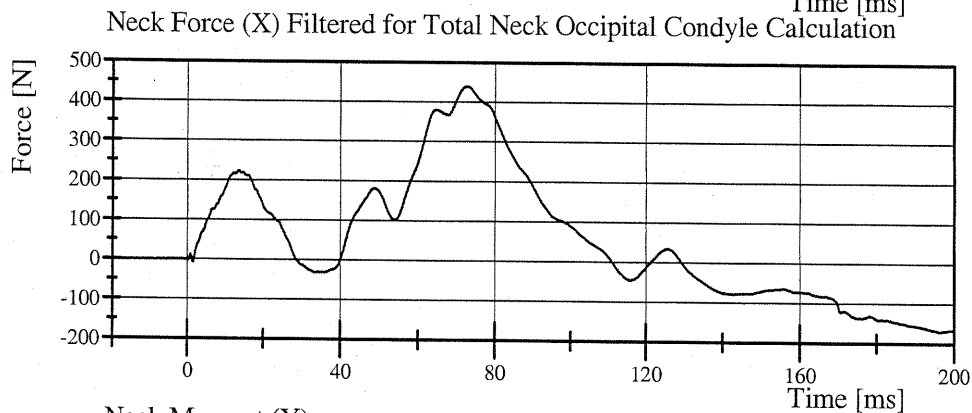
Neck Extension

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

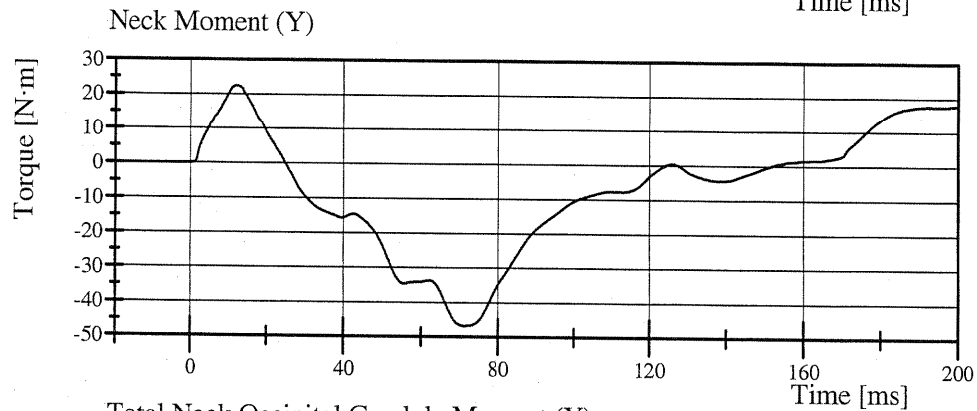
Test Date: 03/16/2006



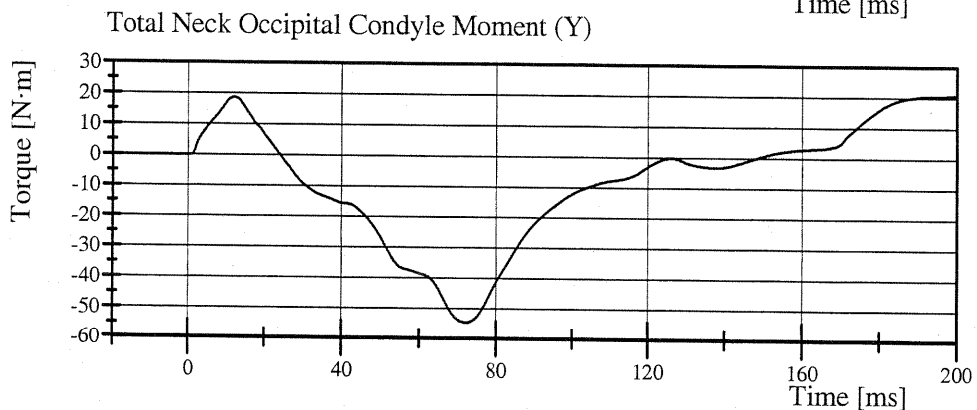
Filter Class: CFC_1000
Max: 439.8 N at 72.6 ms
Min: -169.8 N at 196.1 ms



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

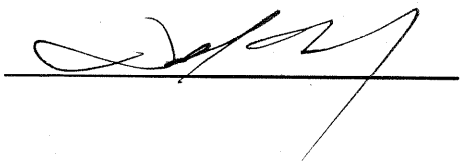
Test Date: 03/16/2006

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

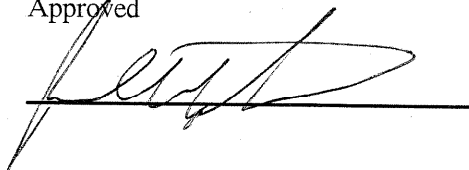
Test meets specifications.

Comments:

Technician



Approved

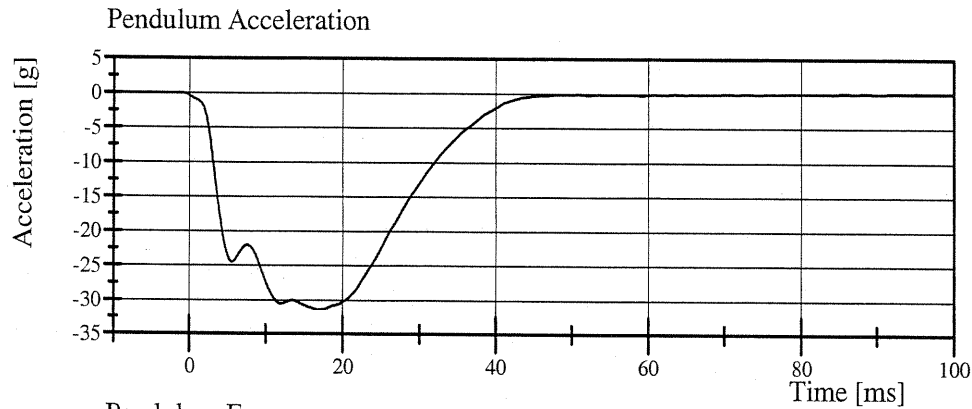


Transportation Research Center Inc.

Front Thorax

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

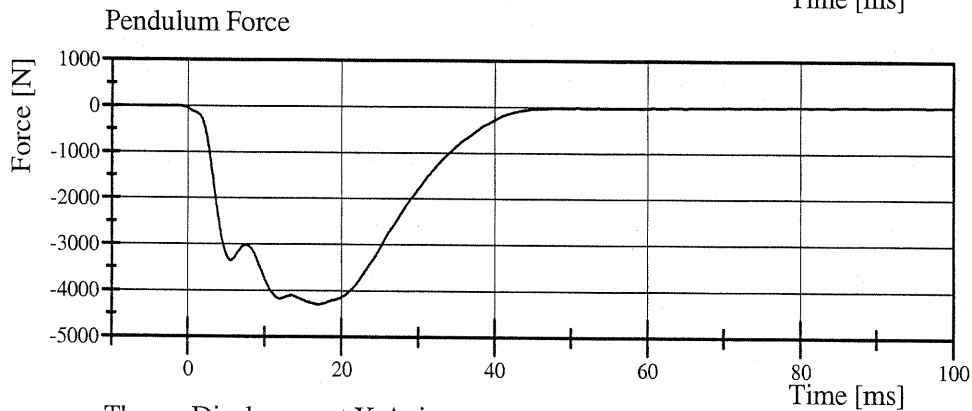
Test Date: 03/16/2006



Filter Class: CFC_180

Max: 0.2 g at 95.4 ms

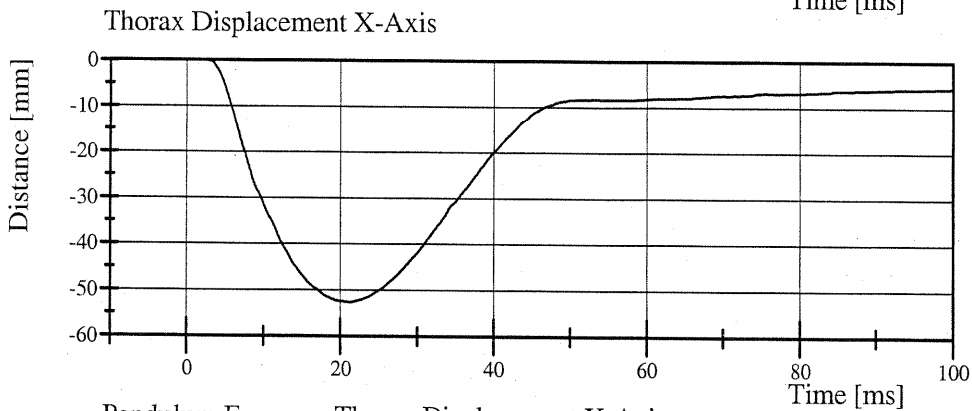
Min: -31.4 g at 17.0 ms



Filter Class: CFC_180

Max: 21.7 N at 95.4 ms

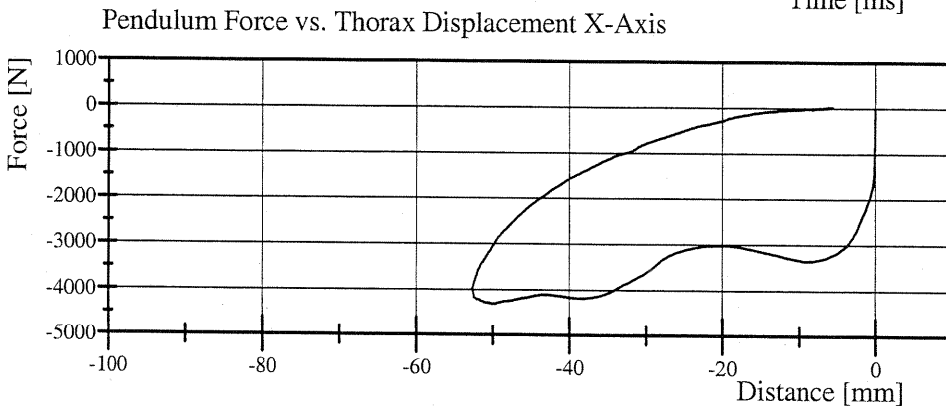
Min: -4,301.4 N at 17.0 ms



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

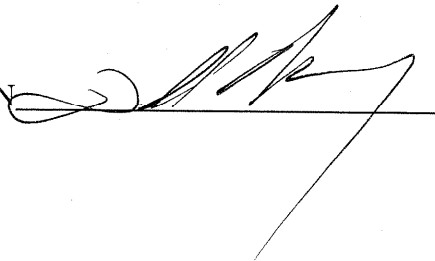
TRC, INC. TEST NO: 070C14TF1 572 O SN070 TORSO FLEX CAL 14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	20.6 – 22.2° C	21.4° C
RELATIVE HUMIDITY	10 – 70 %	28 %
INITIAL ANGLE OF UNSUPPORTRED 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

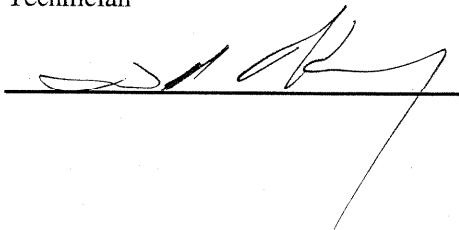
Test Date: 03/16/2006

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

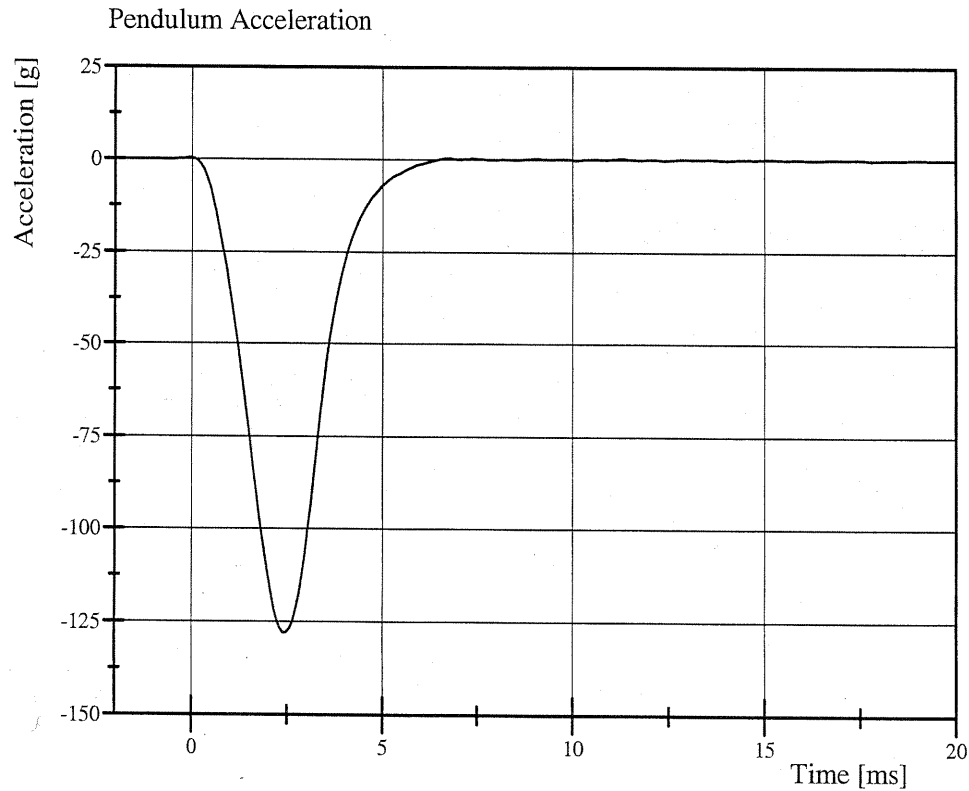


Transportation Research Center Inc.

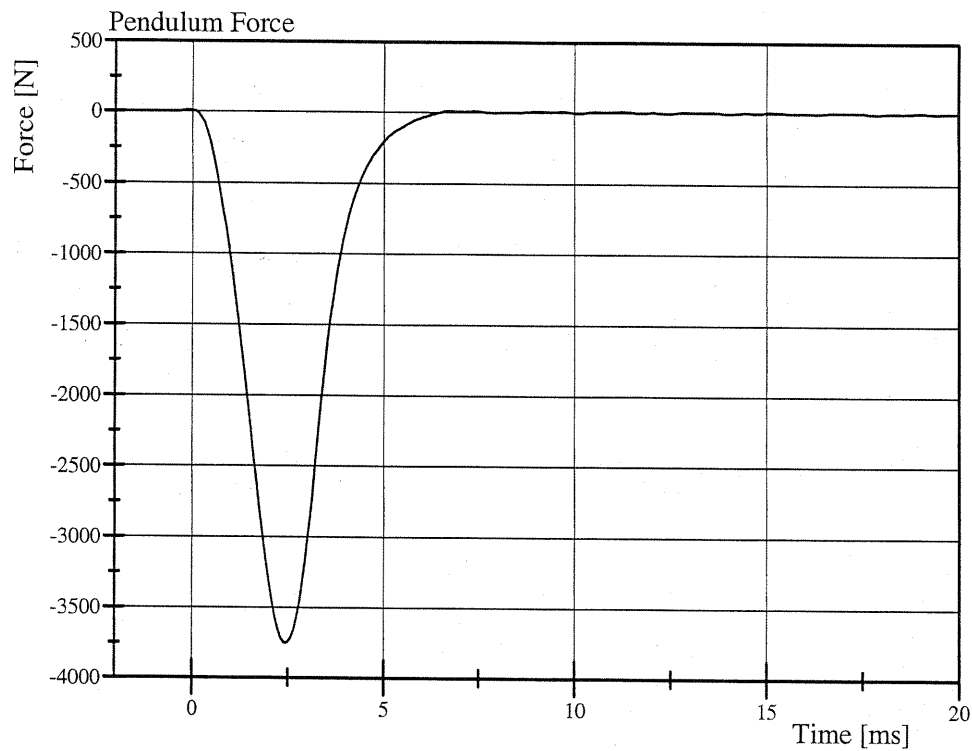
Left Knee Femur Response Test

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.

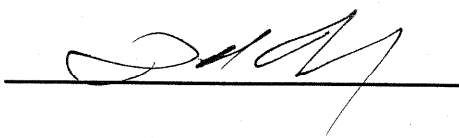
Right Knee Femur Response Test
HIII 5th Serial No. 070 Certification No. 14-1
Test Date: 03/16/2006

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

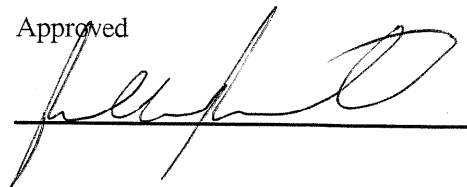
Test meets specifications.

Comments:

Technician

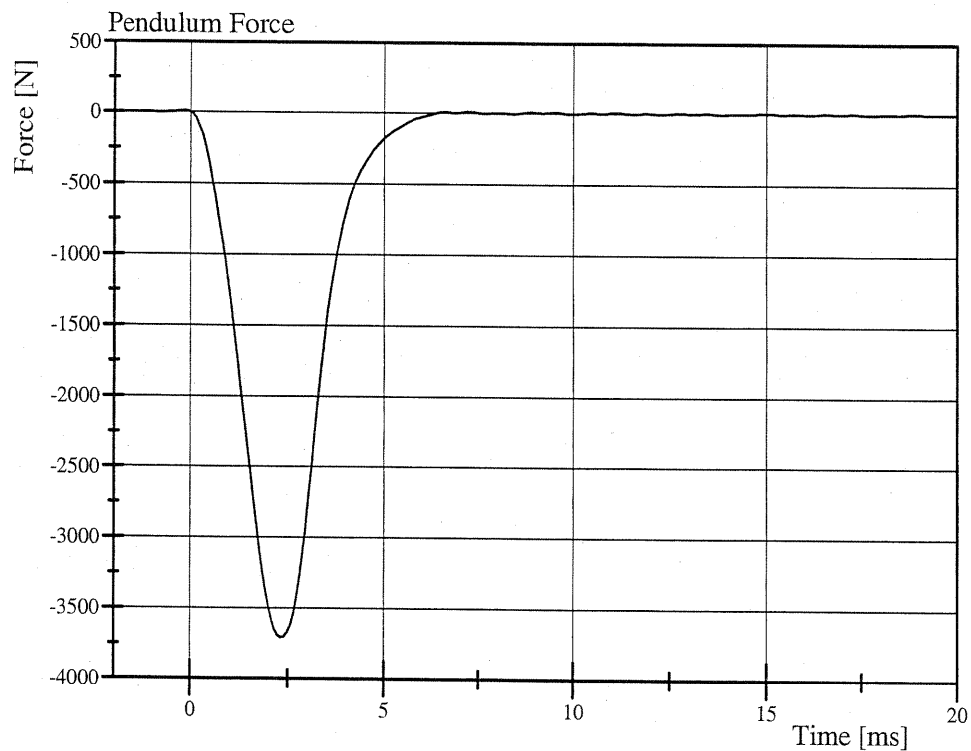
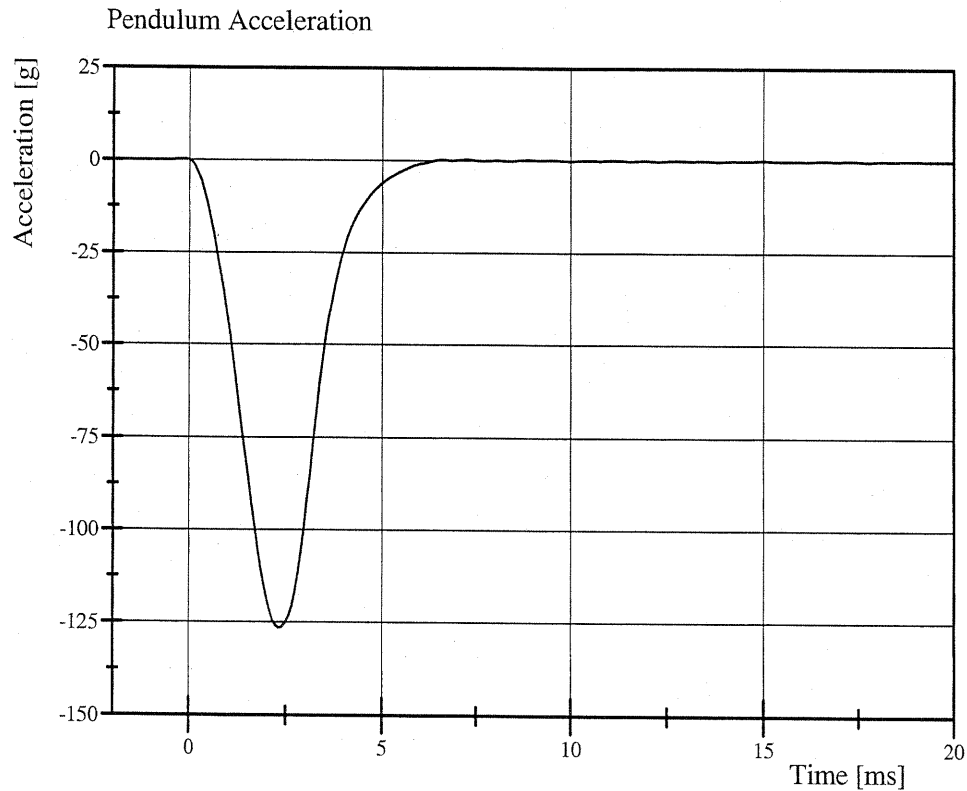


Approved



Transportation Research Center Inc.

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



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 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
1	Trig D1	10ZERO000000VO0A	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 060317

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	-	Hold 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, knold 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 060317

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	11KNSLRIO0H3DSXA	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 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
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	P50309	14CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
96	P50290	16CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
97	P49886	12ENGNT0000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
98	P50409	12ENGNB0000ACXA	Bottom of Engine X-axis Acceleration	2000	g	-	Rearward	

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
99	P50289	13VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
100	P50286	11VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
101	P50319	12DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
102	P49918	11PEAC000000ACXA	Toe Pan Accelerator x-axis acceleration	2000	g	+	Forward	
103	P48657	11PEAC000000ACZA	Toe Pan Accelerator z-axis acceleration	2000	g	-	Upward	
104	P49634	11VEHC000001ACXA	Toe Pan footrest x-axis acceleration	2000	g	+	Forward	
105	P49396	11VEHC000001ACZA	Toe Pan footrest z-axis acceleration	2000	g	-	Upward	
106	P42044	15TUNNCY0000ACXA	Rear Tunnel center x-axis acceleration	1000	g	+	Forward	
107	P38644	10VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
108	P49786	10VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	-	Leftward	
109	P46914	10VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
110	P40708	18VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
111	P49400	18VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
112	P49912	18VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	+	Downward	
113	A23305	11SEBA0000B3DS0A	Driver shoulder belt spool and retraction	635	mm	+	Bipolar	
114	A23306	13SEBA0000B5DS0A	RF Pass lap belt spool	635	mm	+	Bipolar	
115	A60897	13SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction C	1270	mm	+	Bipolar	
116	ABFire1	11AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND IP21	5	V	+	Bipolar	
117	ABFire2	11AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND	5	V	+	Bipolar	
118	ABFire3	13AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND IP32	5	V	+	Bipolar	
119	ABFire4	13AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND IP36	5	V	+	Bipolar	

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
1	Trig D1	20ZERO000000VO0A	EVENT		1 Logic	+	Bipolar	
2	J36743	21HEADCG00H3ACXA	Head Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.001
3	99102-F15	21HEADCG00H3ACYA	Head Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.002
4	J19227	21HEADCG00H3ACZA	Head Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.003
5	J27490	21HEADFR00H3ACYA	Head (FT) Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.004
6	03E03E21-M21	21HEADFR00H3ACZA	Head (FT) Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.005
7	00L13-F14	21HEADUP00H3ACXA	Head (TP) Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.006
8	99H12-F08	21HEADUP00H3ACYA	Head (TP) Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.007
9	03E03E20-N01	21HEADLE00H3ACXA	Head (LT) Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.008
10	03D03D16-F14	21HEADLE00H3ACZA	Head (LT) Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.009
11	1716A-1039-FX	21NECKUP00H3FOXA	Neck Force X	8896.4	N	-	Head forward, chest rearward	1-110 HIII 50th FTSS.010
12	1716A-1039-FY	21NECKUP00H3FOYA	Neck Force Y	8896.4	N	+	Head leftward, chest rightward	1-110 HIII 50th FTSS.011
13	1716A-1039-FZ	21NECKUP00H3FOZA	Neck Force Z	13344	N	+	Head upward, chest downward	1-110 HIII 50th FTSS.012
14	1716A-1039-MX	21NECKUP00H3MOXA	Neck Moment X	282	N·m	-	Right ear toward right shoulder	1-110 HIII 50th FTSS.013
15	1716A-1039-MY	21NECKUP00H3MOYA	Neck Moment Y	282	N·m	+	Chin toward sternum	1-110 HIII 50th FTSS.014
16	1716A-1039-MZ	21NECKUP00H3MOZA	Neck Moment Z	282	N·m	+	Chin toward left shoulder	1-110 HIII 50th FTSS.015
17	1794A-215-FX	21NECKLO00H3FOXA	Neck Lower Force X	13344	N	-	Head forward, chest rearward	1-110 HIII 50th FTSS.016
18	1794A-215-FY	21NECKLO00H3FOYA	Neck Lower Force Y	13344	N	+	Head leftward, chest rightward	1-110 HIII 50th FTSS.017
19	1794A-215-FZ	21NECKLO00H3FOZA	Neck Lower Force Z	13344	N	+	Head upward, chest downward	1-110 HIII 50th FTSS.018
20	1794A-215-MX	21NECKLO00H3MOXA	Neck Lower Moment X	452	N·m	-	Right ear toward right shoulder	1-110 HIII 50th FTSS.019
21	1794A-215-MY	21NECKLO00H3MOYA	Neck Lower Moment Y	452	N·m	+	Chin toward sternum	1-110 HIII 50th FTSS.020
22	1794A-215-MZ	21NECKLO00H3MOZA	Neck Lower Moment Z	452	N·m	+	Chin toward left shoulder	1-110 HIII 50th FTSS.021
23	AJ534	21CHSTCG00H3ACXA	Chest Accel X	1000	g	+	Forward	1-110 HIII 50th FTSS.022
24	J17976	21CHSTCG00H3ACYA	Chest Accel Y	1000	g	-	Leftward	1-110 HIII 50th FTSS.023
25	J32884	21CHSTCG00H3ACZA	Chest Accel Z	1000	g	-	Upward	1-110 HIII 50th FTSS.024
26	02I02110-N15	21CHSTCGRDH3ACXA	Chest Accel X Red.	1000	g	-	Rearward	1-110 HIII 50th FTSS.025
27	02D02C21-N02	21CHSTCGRDH3ACYA	Chest Accel Y Red.	1000	g	-	Leftward	1-110 HIII 50th FTSS.026

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
28	98H10-F18	21CHSTCGRDH3ACZA	Chest Accel Z Red.	1000	g	-	Upward	1-110 HIII 50th FTSS.027
29	CST110	21CHST0000H3DSXA	Chest Deflection X	100	mm	-	Rearward	1-110 HIII 50th FTSS.028
30	J23803	21PELVCG00H3ACXA	Pelvis Accel X	600	g	-	Rearward	1-110 HIII 50th FTSS.029
31	J32180	21PELVCG00H3ACYA	Pelvis Accel Y	600	g	-	Leftward	1-110 HIII 50th FTSS.030
32	J20556	21PELVCG00H3ACZA	Pelvis Accel Z	600	g	-	Upward	1-110 HIII 50th FTSS.031
33	2121A-1396	21FEMRLL00H3FOZA	Left Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-110 HIII 50th FTSS.032
34	2121A-1397	21FEMRRL00H3FOZA	Right Femur Force Z	13344	N	+	Knee forward, pelvis rearward	1-110 HIII 50th FTSS.033
35	150-0121VL-14696	21KNSLLE00H3DSXA	Left Knee Displacement X	21.1	mm	-	Hold femur in place, tibia rearward	1-LX116-117.001
36	4353J-97-FX	21TIBILULXH3FOXA	Left Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX116-117.002
37	4353J-97-FZ	21TIBILULXH3FOZA	Left Upper Tibia Force Z	11120	N	+	Tibia downward, femur upward	1-LX116-117.003
38	4353J-97-MX	21TIBILULXH3MOXA	Left Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.004
39	4353J-97-MY	21TIBILULXH3MOYA	Left Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.005
40	02I02I10-N28	21TIBILELXH3ACXA	Left Tibia Accel X	1000	g	+	Tibia forward	1-LX116-117.006
41	01G25-N01	21TIBILELXH3ACYA	Left Tibia Accel Y	1000	g	+	Tibia right	1-LX116-117.007
42	4929J-80-FX	21TIBILLXH3FOXA	Left Lower Tibia Force X	11120	N	+	Ankle forward, knee rearward	1-LX116-117.008
43	4929J-80-FY	21TIBILLXH3FOYA	Left Lower Tibia Force Y	11120	N	+	Ankle rightward, knee leftward	1-LX116-117.009
44	4929J-80-FZ	21TIBILLXH3FOZA	Left Lower Tibia Force Z	11120	N	+	Ankle downward, knee upwar	1-LX116-117.010
45	4929J-80-MX	21TIBILLXH3MOXA	Left Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.011
46	4929J-80-MY	21TIBILLXH3MOYA	Left Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.012
47	PD210-4B-60	21FOOTLELXH3ANXA	Left Foot Angular Dis. X LX117X	165	°	+	Eversion	1-LX116-117.013
48	PD210-4B-61	21FOOTLELXH3ANYA	Left Foot Angular Dis. Y LX117Y	165	°	+	Dorsiflexion	1-LX116-117.014
49	PD210-4B-62	21FOOTLELXH3ANZA	Left Foot Angular Dis. Z LX117Z	165	°	+	Internal rotation	1-LX116-117.015

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
50	02A04-A24	21FOOTLELXH3ACXA	Left Foot Accel X	1000	g	+	Foot forward	1-LX116-117.016
51	03E03E18-F22	21FOOTLELXH3ACYA	Left Foot Accel Y	1000	g	+	Foot rightward	1-LX116-117.017
52	03E03E20-N06	21FOOTLELXH3ACZA	Left Foot Accel Z	1000	g	+	Foot down	1-LX116-117.018
53	150-0121VL-14672	21KNSLRI00H3DSXA	Right Knee Displacement X	21.1	mm	-	Hold femur in place, tibia rearward	1-LX116-117.019
54	4353J-79-FX	21TIBIRULXH3FOXA	Right Upper Tibia Force X	11120	N	+	Tibia forward, knee rearward	1-LX116-117.020
55	4353J-79-FZ	21TIBIRULXH3FOZA	Right Upper Tibia Force Z	11120	N	+	Tibia downward, femur upward	1-LX116-117.021
56	4353J-79-MX	21TIBIRULXH3MOXA	Right Upper Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.022
57	4353J-79-MY	21TIBIRULXH3MOYA	Right Upper Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.023
58	J32157	21TIBIRILXH3ACXA	Right Tibia Accel X	1000	g	+	Tibia forward	1-LX116-117.024
59	P16171	21TIBIRILXH3ACYA	Right Tibia Accel Y	1000	g	+	Tibia right	1-LX116-117.025
60	4929J-79-FX	21TIBIRLLXH3FOXA	Right Lower Tibia Force X	11120	N	+	Ankle forward, knee rearward	1-LX116-117.026
61	4929J-79-FY	21TIBIRLLXH3FOYA	Right Lower Tibia Force Y	11120	N	+	Ankle rightward, knee leftward	1-LX116-117.027
62	4929J-79-FZ	21TIBIRLLXH3FOZA	Right Lower Tibia Force Z	11120	N	+	Ankle downward, knee upward	1-LX116-117.028
63	4929J-79-MX	21TIBIRLLXH3MOXA	Right Lower Tibia Moment X	395.4	Nm	+	Ankle leftward, hold knee in place	1-LX116-117.029
64	4929J-79-MY	21TIBIRLLXH3MOYA	Right Lower Tibia Moment Y	395.4	Nm	+	Ankle forward, hold knee in place	1-LX116-117.030
65	PD210-4B-338	21FOOTRILXH3ANXA	Right Foot Angular Dis. X LX116X	164	°	+	Inversion	1-LX116-117.031
66	PD210-4B-58	21FOOTRILXH3ANYA	Right Foot Angular Dis. Y LX116Y	165	°	+	Dorsiflexion	1-LX116-117.032
67	PD210-4B-339	21FOOTRILXH3ANZA	Right Foot Angular Dis. Z LX116Z	165	°	+	External rotation	1-LX116-117.033
68	04J04J07-M01	21FOOTRILXH3ACXA	Right Foot Accel X	1000	g	+	Foot forward	1-LX116-117.034
69	02I02I16-A20	21FOOTRILXH3ACYA	Right Foot Accel Y	1000	g	+	Foot rightward	1-LX116-117.035
70	P49870	21FOOTRILXH3ACZA	Right Foot Accel Z	1000	g	+	Foot down	1-LX116-117.036
71	03E03E20-N20	23HEADCG00HFACXA	Head Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.001
72	02A18-N10	23HEADCG00HFACYA	Head Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.002
73	02A09-F15	23HEADCG00HFACZA	Head Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.003

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
74	01L26-F02	23HEADCGRDHFACXA	Head Accel Red X	1000	g	-	Rearward	3-416 HIII 5th FTSS.004
75	02A09-F13	23HEADCGRDHFACYA	Head Accel Red Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.005
76	02A16-A06	23HEADCGRDHFACZA	Head Accel Red Z	1000	g	-	Upward	3-416 HIII 5th FTSS.006
77	02A18-N04	23HEADFR00HFACYA	Head (FT) Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.007
78	02A18-N20	23HEADFR00HFACZA	Head (FT) Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.008
79	03F03F09-N05	23HEADUP00HFACXA	Head (TP) Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.009
80	98H14-K10	23HEADUP00HFACYA	Head (TP) Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.010
81	02A16-A19	23HEADLE00HFACXA	Head (LT) Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.011
82	02A16-A22	23HEADLE00HFACZA	Head (LT) Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.012
83	IF-205-161-FX	23NECKUP00HFFOXA	Neck Force X	8896	N	-	Head forward, chest rearward	3-416 HIII 5th FTSS.013
84	IF-205-161-FY	23NECKUP00HFFOYA	Neck Force Y	8896	N	+	Head leftward, chest rightward	3-416 HIII 5th FTSS.014
85	IF-205-161-FZ	23NECKUP00HFFOZA	Neck Force Z	13344	N	+	Head upward, chest downward	3-416 HIII 5th FTSS.015
86	IF-205-161-MX	23NECKUP00HFMOXA	Neck Moment X	282	N-m	-	Right ear toward right shoulder	3-416 HIII 5th FTSS.016
87	IF-205-161-MY	23NECKUP00HFMOYA	Neck Moment Y	282	N-m	+	Chin toward sternum	3-416 HIII 5th FTSS.017
88	IF-205-161-MZ	23NECKUP00HFMOZA	Neck Moment Z	282	N-m	+	Chin toward left shoulder	3-416 HIII 5th FTSS.018
89	3251-108-FX	23NECKLO00HFFOXA	Neck Lower Force X	13344	N	-	Head forward, chest rearward	3-416 HIII 5th FTSS.019
90	3251-108-FY	23NECKLO00HFFOYA	Neck Lower Force Y	13344	N	+	Head leftward, chest rightward	3-416 HIII 5th FTSS.020
91	3251-108-FZ	23NECKLO00HFFOZA	Neck Lower Force Z	13344	N	+	Head upward, chest downward	3-416 HIII 5th FTSS.021
92	3251-108-MX	23NECKLO00HFMOXA	Neck Lower Moment X	452	N-m	-	Right ear toward right shoulder	3-416 HIII 5th FTSS.022
93	3251-108-MY	23NECKLO00HFMOYA	Neck Lower Moment Y	452	N-m	+	Chin toward sternum	3-416 HIII 5th FTSS.023
94	3251-108-MZ	23NECKLO00HFMOZA	Neck Lower Moment Z	338.95	N-m	+	Chin toward left shoulder	3-416 HIII 5th FTSS.024
95	02A16-A04	23CHSTCG00HFACXA	Chest Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.025
96	C02B19-F02	23CHSTCG00HFACYA	Chest Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.026
97	C02B19-F06	23CHSTCG00HFACZA	Chest Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.027
98	B02A25-N08	23CHSTCGRDHFACXA	Chest Accel Red X	1000	g	-	Rearward	3-416 HIII 5th FTSS.028
99	03E03E19-N02	23CHSTCGRDHFACYA	Chest Accel Red Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.029
100	C02B19-F04	23CHSTCGRDHFACZA	Chest Accel Red Z	1000	g	-	Upward	3-416 HIII 5th FTSS.030

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
101	B02A09-F08	23STRNUP00HFACXA	Sternum Upper Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.031
102	02A16-A05	23STRNMI00HFACXA	Sternum Mid Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.032
103	03F03F09-N18	23STRNLO00HFACXA	Sternum Lower Accel X	1000	g	+	Forward	3-416 HIII 5th FTSS.033
104	14CB1-2897-416	23CHST0000HFDSXA	Chest Deflection X 516	100	mm	+	Forward	3-416 HIII 5th FTSS.034
105	C02B19-F03	23PELVCG00HFACXA	Pelvis Accel X	1000	g	-	Rearward	3-416 HIII 5th FTSS.035
106	02A16-A27	23PELVCG00HFACYA	Pelvis Accel Y	1000	g	-	Leftward	3-416 HIII 5th FTSS.036
107	C02B19-F01	23PELVCG00HFACZA	Pelvis Accel Z	1000	g	-	Upward	3-416 HIII 5th FTSS.037
108	2430-736	23FEMRLL00HFFOZA	Left Femur Force Z #8	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.038
109	2430-742	23FEMRRL00HFFOZA	Right Femur Force Z 507	13344	N	+	Knee forward, pelvis rearward	3-416 HIII 5th FTSS.057
110	150-0121VR-22653	23KNSLLE00HFDSXA	Left Knee Displacement	40	mm	-	Hold femur in place, tibia rearward	3-416 HIII 5th FTSS.039
111	4825J-91-FX	23TIBILUFXHFFOXA	Left Upper Tibia Force X	8896.4	N	+	Tibia forward, knee rearward	3-416 HIII 5th FTSS.040
112	4825J-91-FZ	23TIBILUFXHFFOZA	Left Upper Tibia Force Z	8896.4	N	+	Tibia downward, femur upward	3-416 HIII 5th FTSS.041
113	4825J-91-MX	23TIBILUFXHFM OXA	Left Upper Tibia Moment X	282.4	N·m	+	Ankle leftward, hold knee in place	3-416 HIII 5th FTSS.042
114	4825J-91-MY	23TIBILUFXHFM OYA	Left Upper Tibia Moment Y	282.4	N·m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.043
115	99H30-Z01	23TIBILEFXHFACXA	Left Tibia Accel X	1000	g	+	Tibia forward	3-416 HIII 5th FTSS.044
116	99108-F26	23TIBILEFXHFACYA	Left Tibia Accel Y	1000	g	+	Tibia right	3-416 HIII 5th FTSS.045
117	4826J-92-FX	23TIBILLFXHFFOXA	Left Lower Tibia Force X	8896.4	N	+	Ankle forward, knee rearward	3-416 HIII 5th FTSS.046
118	4826J-92-FY	23TIBILLFXHFFOYA	Left Lower Tibia Force Y	8896.4	N	+	Ankle rightward, knee leftward	3-416 HIII 5th FTSS.047
119	4826J-92-FZ	23TIBILLFXHFFOZA	Left Lower Tibia Force Z	8896.4	N	+	Ankle downward, knee upward	3-416 HIII 5th FTSS.048
120	4826J-92-MX	23TIBILLFXHFM OXA	Left Lower Tibia Moment X	282.4	N·m	+	Ankle leftward, hold knee in place	3-416 HIII 5th FTSS.049
121	4826J-92-MY	23TIBILLFXHFM OYA	Left Lower Tibia Moment Y	282.4	N·m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.050
122	PD210-4B-AK-044	23FOOTLEFXHFANXA	Left Foot Disp. X FLX102X	318	°	-	Inversion	3-416 HIII 5th FTSS.051

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS Flip	Positive Polarity	Assembly
123	PD210-4B-AK-043	23FOOTLEFXHFANYA	Left Foot Disp. Y FLX102Y	318	°	-	Dorsiflexion	3-416 HIII 5th FTSS.052
124	PD210-4B-265	23FOOTLEFXHFANZA	Left Foot Disp. Z FLX102Z	318	°	-	External rotation	3-416 HIII 5th FTSS.053
125	02I02I05-F13	23FOOTLEFXHFACXA	Left Foot Accel X	1000	g	+	Foot forward	3-416 HIII 5th FTSS.054
126	03E03E21-M10	23FOOTLEFXHFACYA	Left Foot Accel Y	1000	g	+	Foot rightward	3-416 HIII 5th FTSS.055
127	03F03E29-N16	23FOOTLEFXHFACZA	Left Foot Accel Z	1000	g	+	Foot down	3-416 HIII 5th FTSS.056
128	150-0121VL-030583	23KNSLRIO0HFDSXA	Right Knee Displacement	21.1	mm	-	Hold femur in place, tibia rearward	3-416 HIII 5th FTSS.058
129	4825J-90-FX	23TIBIRUFXHFFOXA	Right Upper Tibia Force X	8896.4	N	+	Tibia forward, knee rearward	3-416 HIII 5th FTSS.059
130	4825J-90-FZ	23TIBIRUFXHFFOZA	Right Upper Tibia Force Z	8896.4	N	+	Tibia downward, femur upward	3-416 HIII 5th FTSS.060
131	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
132	4825J-90-MY	23TIBIRUFXHFMOMYA	Right Upper Tibia Moment Y	282.4	N·m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.062
133	98H10-F05	23TIBIRIFXHFAACXA	Right Tibia Accel X	1000	g	+	Tibia forward	3-416 HIII 5th FTSS.063
134	J35987	23TIBIRIFXHFAACYA	Right Tibia Accel Y	1000	g	+	Tibia right	3-416 HIII 5th FTSS.064
135	4826J-93-FX	23TIBIRLFXHFFOXA	Right Lower Tibia Force X	8896.4	N	+	Ankle forward, knee rearward	3-416 HIII 5th FTSS.065
136	4826J-93-FY	23TIBIRLFXHFFOYA	Right Lower Tibia Force Y	8896.4	N	+	Ankle rightward, knee leftward	3-416 HIII 5th FTSS.066
137	4826J-93-FZ	23TIBIRLFXHFFOZA	Right Lower Tibia Force Z	8896.4	N	+	Ankle downward, knee upward	3-416 HIII 5th FTSS.067
138	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
139	4826J-93-MY	23TIBIRLFXHFMOMYA	Right Lower Tibia Moment Y	282.4	N·m	+	Ankle forward, hold knee in place	3-416 HIII 5th FTSS.069
140	PD210-4B-AK-029	23FOOTRIFXHFANXA	Right Foot Disp. X FLX101X	318	°	-	Eversion	3-416 HIII 5th FTSS.070
141	PD210-4B-AK-030	23FOOTRIFXHFANYA	Right Foot Disp. Y FLX101Y	318	°	+	Dorsiflexion	3-416 HIII 5th FTSS.071
142	PD210-4B-345	23FOOTRIFXHFANZA	Right Foot Disp. Z FLX101Z	318	°	-	Internal rotation	3-416 HIII 5th FTSS.072
143	02I02I10-N18	23FOOTRIFXHFACXA	Right Foot Accel X	1000	g	+	Foot forward	3-416 HIII 5th FTSS.073
144	00L13-F29	23FOOTRIFXHFACYA	Right Foot Accel Y	1000	g	+	Foot rightward	3-416 HIII 5th FTSS.074
145	01G25-N08	23FOOTRIFXHFACZA	Right Foot Accel Z	1000	g	+	Foot down	3-416 HIII 5th FTSS.075
146	P50439	24CRME000000ACXA	Left Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	

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Channel Report Test Number 060317

Ref	Transducer ID	ISO Signal Identifier	Description	FScale	Units	DAS		Assembly
						Flip	Positive Polarity	
147	P49762	26CRME000000ACXA	Right Rear Seat Cross-member X-axis Acceleration	1000	g	+	Forward	
148	P46214	22ENGNTPO000ACXA	Top of Engine X-axis Acceleration	2000	g	+	Forward	
149	P49693	22ENGNB00000ACXA	Bottom of Engine X-axis Acceleration	2000	g	+	Forward	
150	P49405	23VEHCRI0000ACXA	Right Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
151	P49709	21VEHCLE0000ACXA	Left Front Brake Caliper X-axis acceleration	2000	g	+	Forward	
152	P47526	22DASH000000ACXA	Dash Center X-axis acceleration	1500	g	+	Forward	
153	P49635	21PEAC000000ACXA	Toe Pan Accelerator x-axis acceleration	2000	g	-	Rearward	
154	P49696	21PEAC000000ACZA	Toe Pan Accelerator z-axis acceleration	2000	g	-	Upward	
155	P49965	21VEHC000001ACXA	Toe Pan footrest x-axis acceleration	2000	g	+	Forward	
156	P50421	21VEHC000001ACZA	Toe Pan footrest z-axis acceleration	2000	g	-	Upward	
157	P49733	25TUNNCY0000ACXA	Rear Tunnel center x-axis acceleration	1000	g	+	Forward	
158	P47403	20VEHCCG0000ACXA	Vehicle CG X-axis acceleration	1500	g	+	Forward	
159	P47429	20VEHCCG0000ACYA	Vehicle CG Y-axis acceleration	1500	g	-	Leftward	
160	P46892	20VEHCCG0000ACZA	Vehicle CG Z-axis acceleration	1500	g	-	Upward	
161	P50411	28VEHC000000ACXA	Vehicle rear deck X-axis acceleration	1000	g	+	Forward	
162	P50457	28VEHC000000ACYA	Vehicle rear deck Y-axis acceleration	1000	g	-	Leftward	
163	P49968	28VEHC000000ACZA	Vehicle rear deck Z-axis acceleration	1000	g	+	Downward	
164	A37490	21SEBA0000B5DS0A	Driver lap belt spool S3	635	mm	+	Bipolar	
165	K1506281A	21SEBA0000B3DS0A	Driver shoulder belt spool and retraction SPOOL 3	1270	mm	+	Bipolar	
166		14672 23SEBA0000B5DS0A	RF Pass lap belt spool 5S	635	mm	+	Bipolar	
167	K1506282A	23SEBA0000B3DS0A	RF Pass shoulder belt spool and retraction SPOOL 4	1270	mm	+	Bipolar	
168	ABFire1	21AIRBFR0100EV0A	DRIV. FRONT AIRBAG1 IND	5	V	+	Bipolar	
169	ABFire2	21AIRBFR0200EV0A	DRIV. FRONT AIRBAG2 IND	5	V	+	Bipolar	
170	ABFire3	23AIRBFR0100EV0A	PASS. FRONT AIRBAG1 IND	5	V	+	Bipolar	
171	ABFire4	23AIRBFR0200EV0A	PASS. FRONT AIRBAG2 IND	5	V	+	Bipolar	

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Command File Test Number 060317

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
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

Command File Test Number 060317

Channel	Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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	11TIBILLXH3FOXA	Bullet Driver Left Lower Tibia X-Axis Force	600	+	yes	11120
41	11TIBILLXH3FOYA	Bullet Driver Left Lower Tibia Y-Axis Force	600	+	yes	11120
42	11TIBILLXH3FOZA	Bullet Driver Left Lower Tibia Z-Axis Force	600	+	yes	11120
43	11TIBILLXH3MOXA	Bullet Driver Left Lower Tibia Moment About X Axis	600	+	yes	395.4
44	11TIBILLXH3MOYA	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	11KNSLRI00H3DSXA	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
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

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Channel	Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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
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	12ENGNTPO000ACXA	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

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Channel	Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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
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	11SEBA0000B3DS0A	Bullet Vehicle Driver Shoulder Belt Spool and Retraction	1000	+	yes	635
116	13SEBA0000B5DS0A	Bullet Vehicle RF Passenger Lap Belt Spool	1000	+	yes	635
117	13SEBA0000B3DS0A	Bullet Vehicle RF Passenger Shoulder Belt Spool and Retraction	1000	+	yes	1270
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

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Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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
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 21FEMRL00H3FOZA	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 21TIBILLXH3FOXA	Target Driver Left Lower Tibia X-Axis Force	600 +	yes		11120
159 21TIBILLXH3FOYA	Target Driver Left Lower Tibia Y-Axis Force	600 +	yes		11120
160 21TIBILLXH3FOZA	Target Driver Left Lower Tibia Z-Axis Force	600 +	yes		11120
161 21TIBILLXH3MOXA	Target Driver Left Lower Tibia Moment About X Axis	600 +	yes		395.4
162 21TIBILLXH3MOYA	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

Command File Test Number 060317

Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
165 21FOOTLELXH3ANZA	Target Driver Left Foot Z-Axis Rotation	180	+	no	165
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 21FEMRRLO0H3FOZA	Target Driver Right Femur Z-Axis Force	600	+	yes	13344
170 21KNSLRIO0H3DSXA	Target Driver Right Knee Displacement	180	+	yes	21.1
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
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

Command File Test Number 060317

Channel	Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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	339
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
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	23FEMRLLO0HFFOZA	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	23TIBILUFXHFMOMA	Target Passenger Left Upper Tibia Moment About X Axis	600	+	yes	282.4
230	23TIBILUFXHFMOMA	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

Command File Test Number 060317

Channel	Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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	23FEMRRLO0HFFOZA	Target Passenger Right Femur Z-Axis Force	600	+	yes	13344
245	23KNSLRIO0HFDSXA	Target Passenger Right Knee Displacement	180	+	yes	22.1
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	23TIBIRUFXHFMOMA	Target Passenger Right Upper Tibia Moment About X Axis	600	+	yes	282.4
249	23TIBIRUFXHFMOMA	Target Passenger Right Upper Tibia Moment About Y Axis	600	+	yes	282.4
250	23TIBIRIFXHFAcXA	Target Passenger Right Tibia X-Axis Acceleration	1000	+	yes	1000
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	22ENGNB000000ACXA	Target Vehicle Bottom of Engine X-Axis Acceleration	60	+	yes	2000

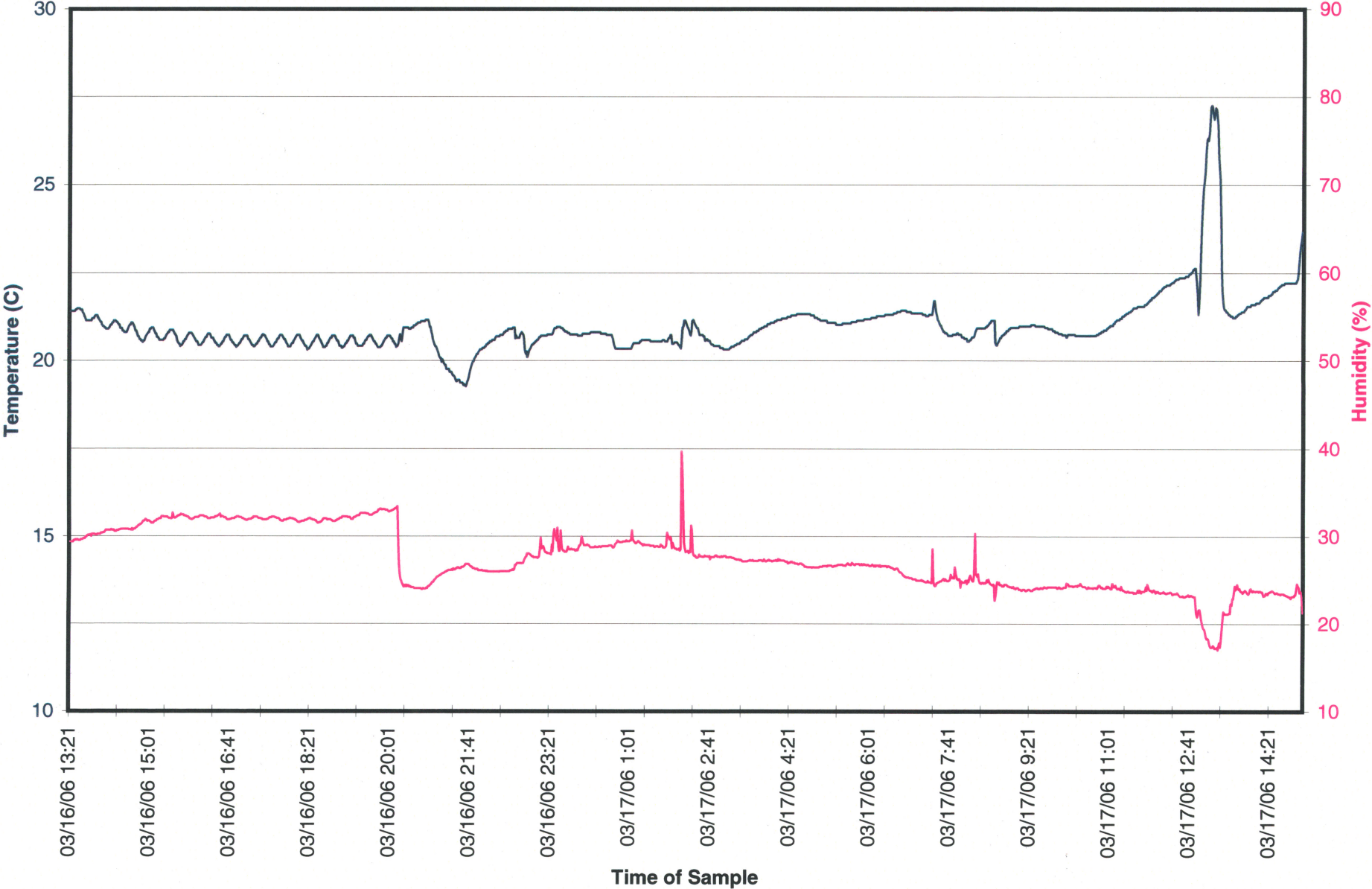
Command File Test Number 060317

Channel Mnemonic	Channel Title	Filter Class	Flip	Zero	Full Scale
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
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	1270
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

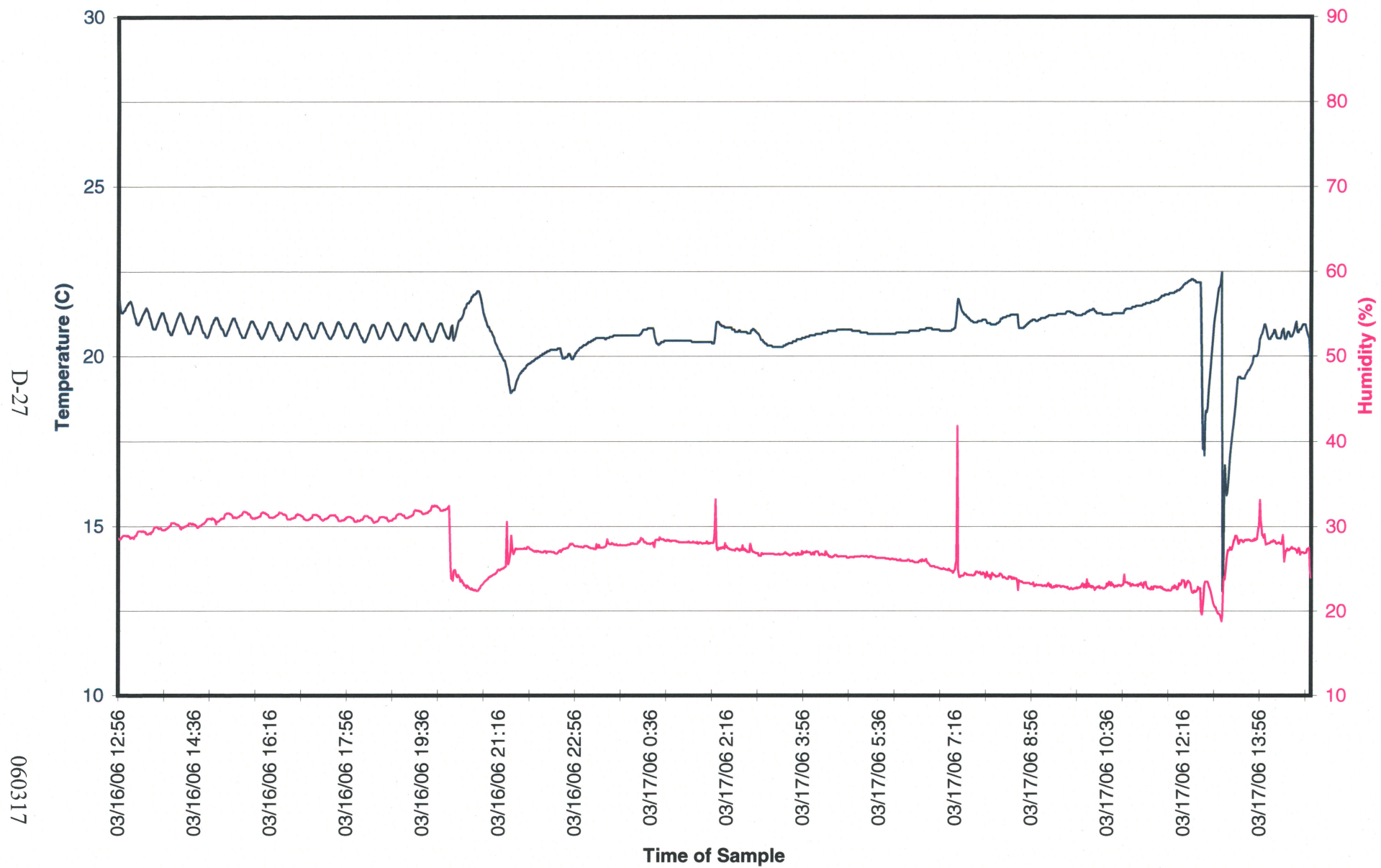
FULL FRONTAL COLLINEAR 2002 FORD FOCUS

D-26

060317



FULL FRONTAL COLLINEAR 2005 HONDA ODYSSEY



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.

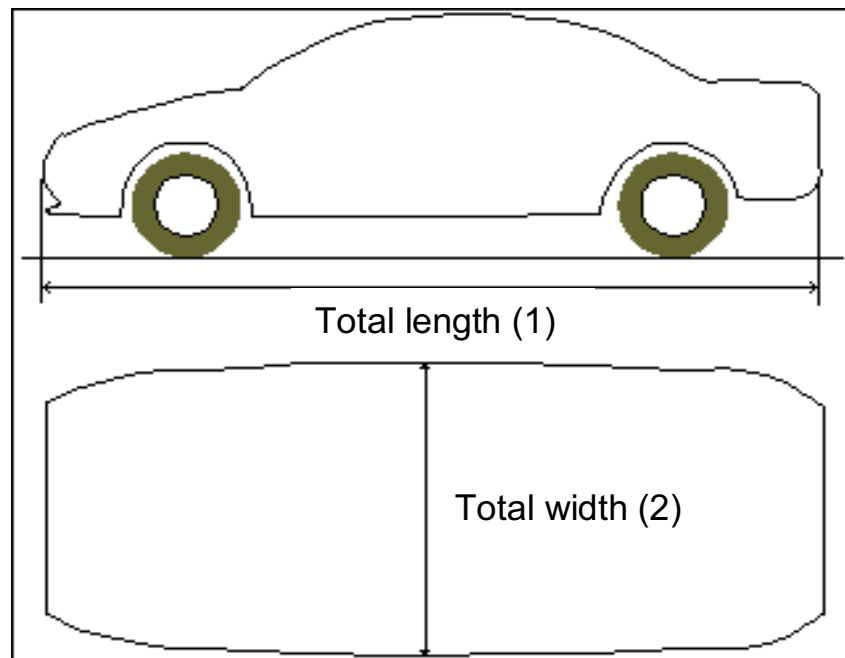


Figure 1.- Definition of the main resistant elements. General dimensions.

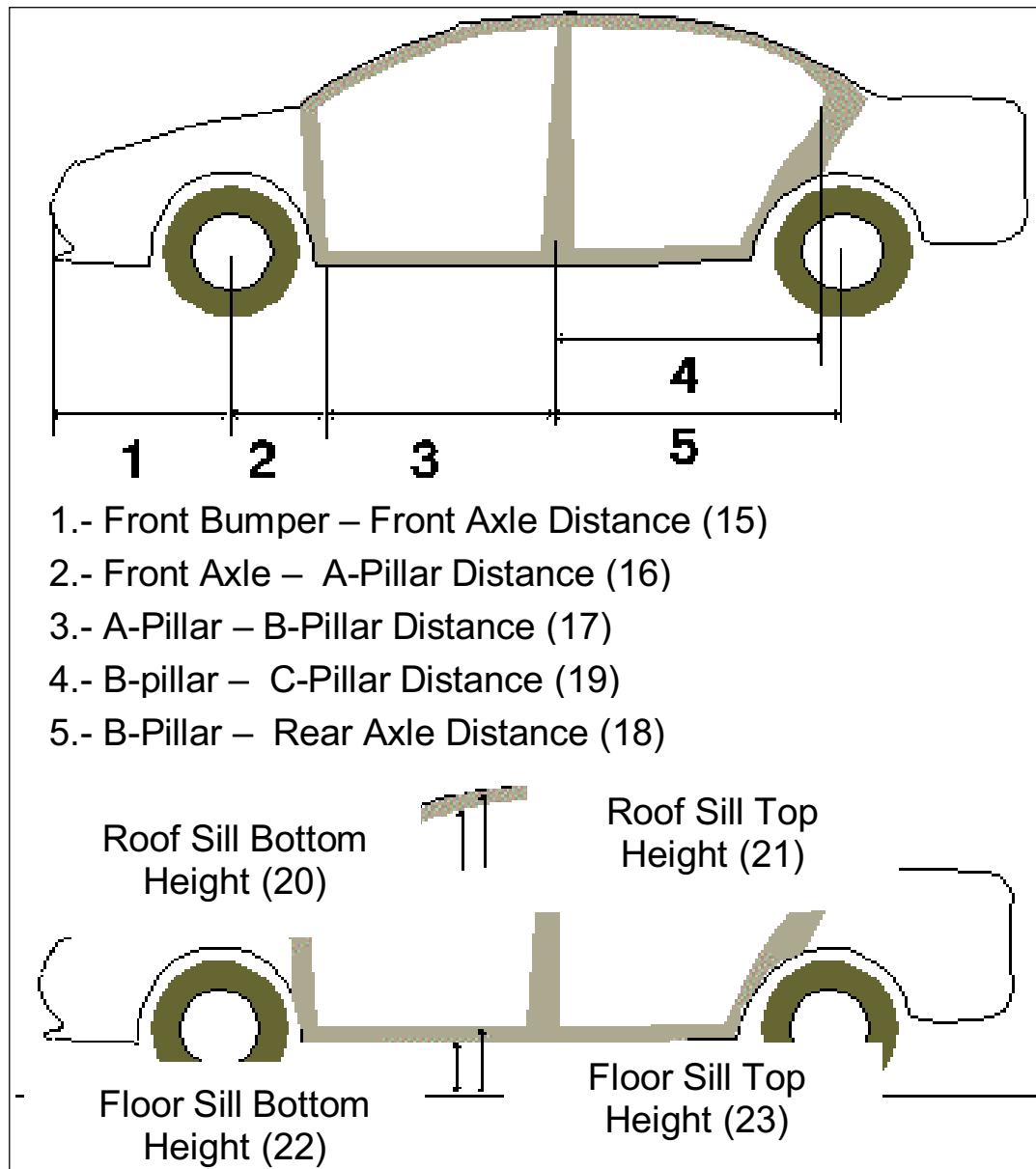


Figure 2.- Definition of the main resistant elements. Side elements.

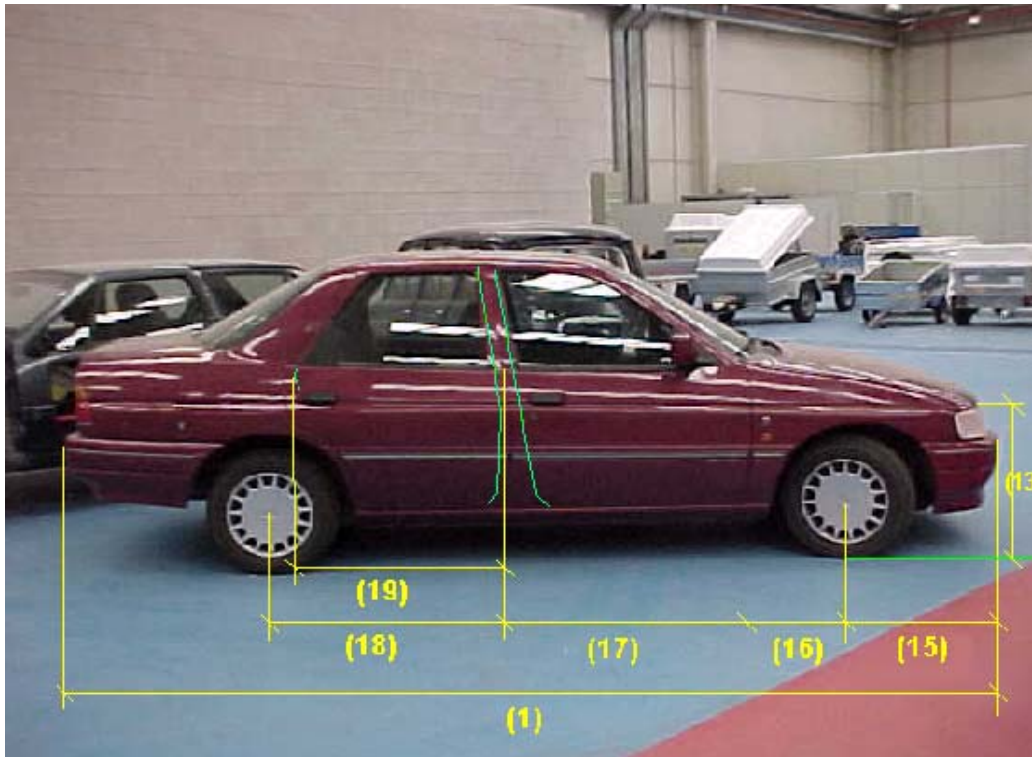


Figure 3.-
Measurements of
the side resistant
elements (outer).

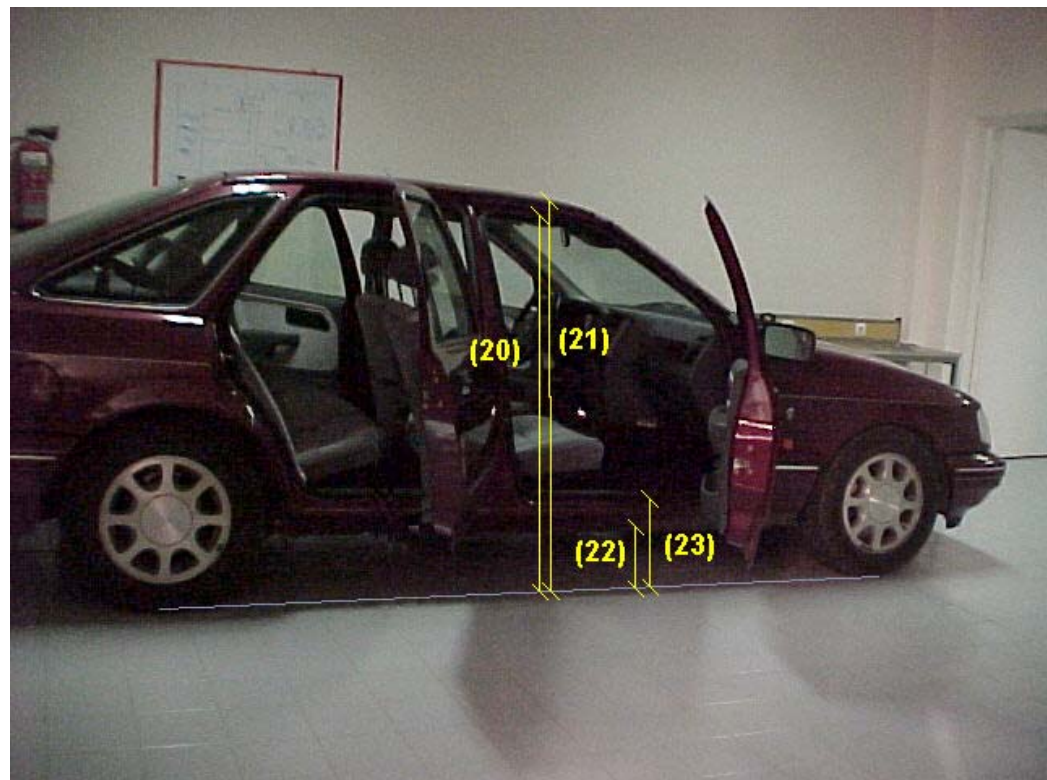


Figure 4.- Measurements
of the side resistant
elements (inner).

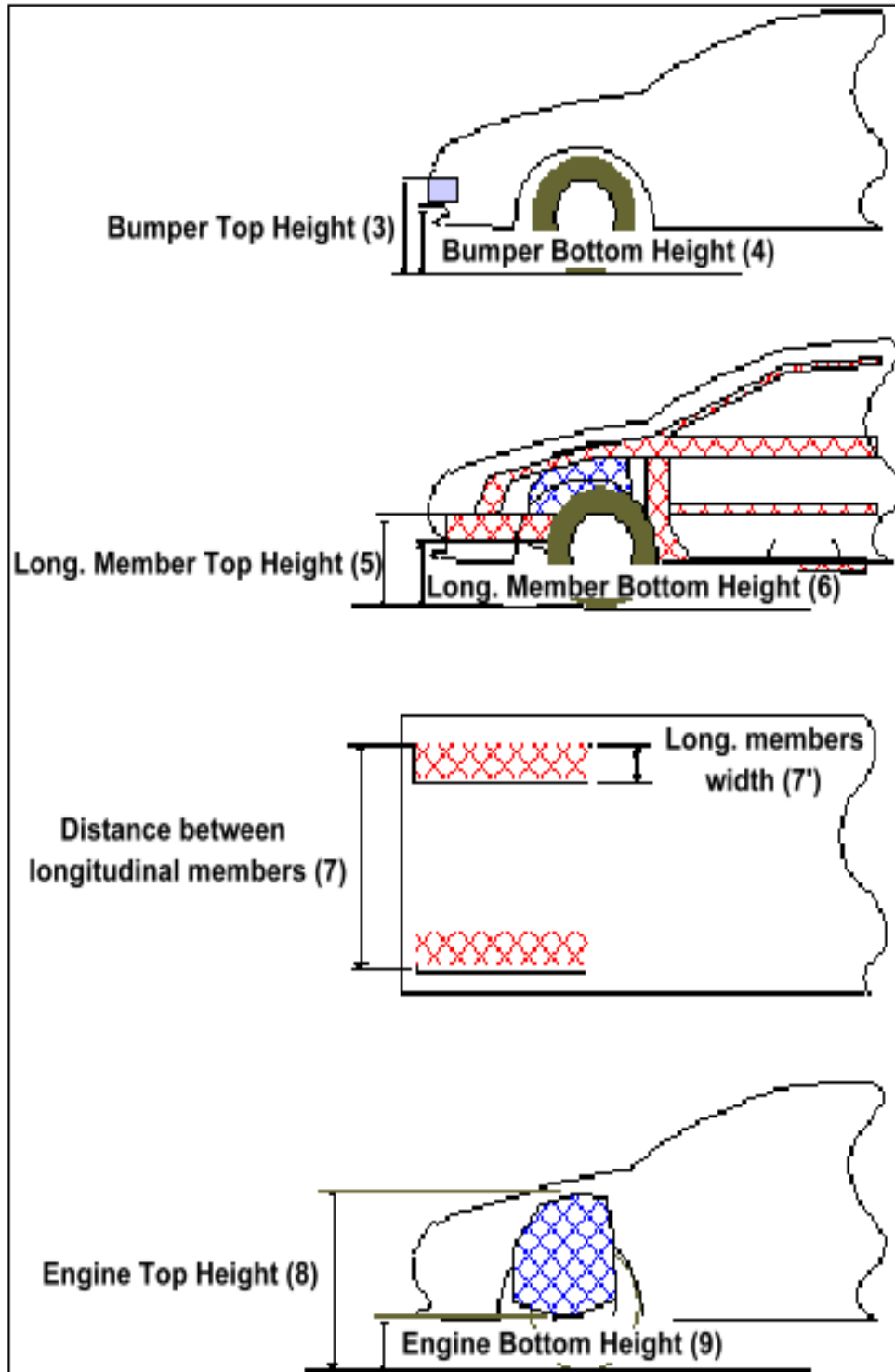


Figure 5.- Definition of the main resistant elements. Front elements.

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

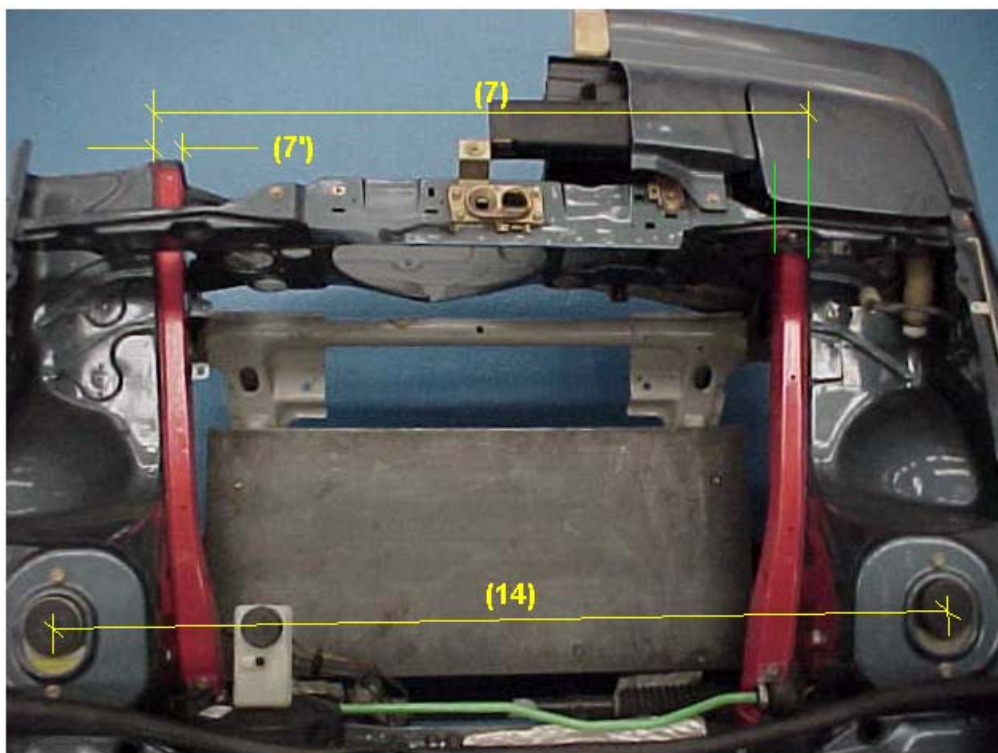
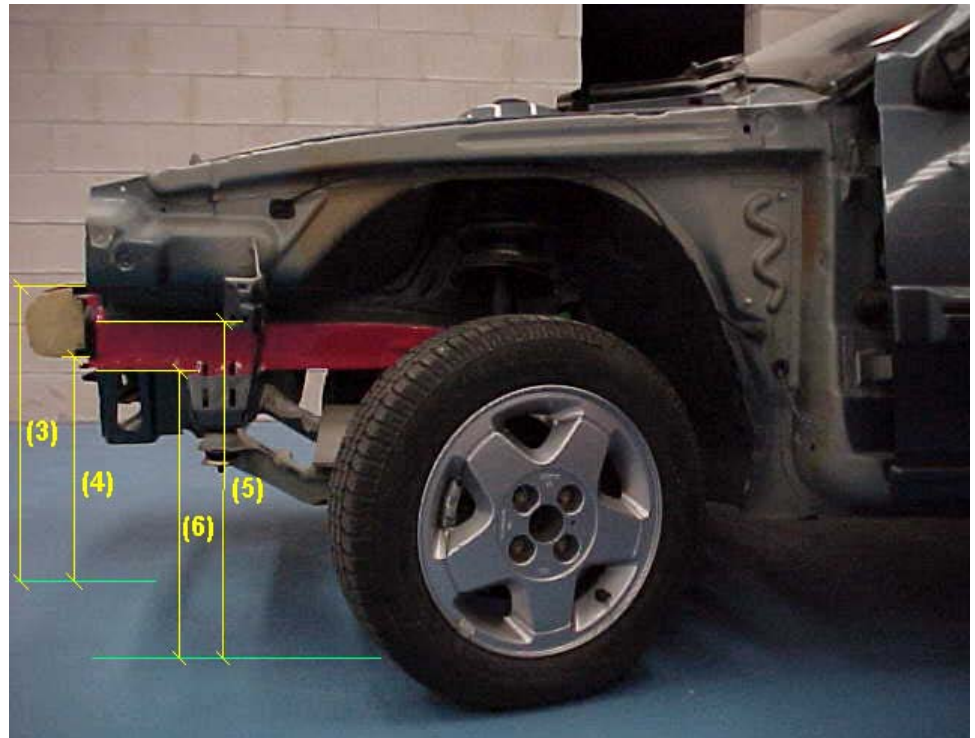


Figure 7.-
Measurements
of the main
resistant
elements. Front
elements 2.

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

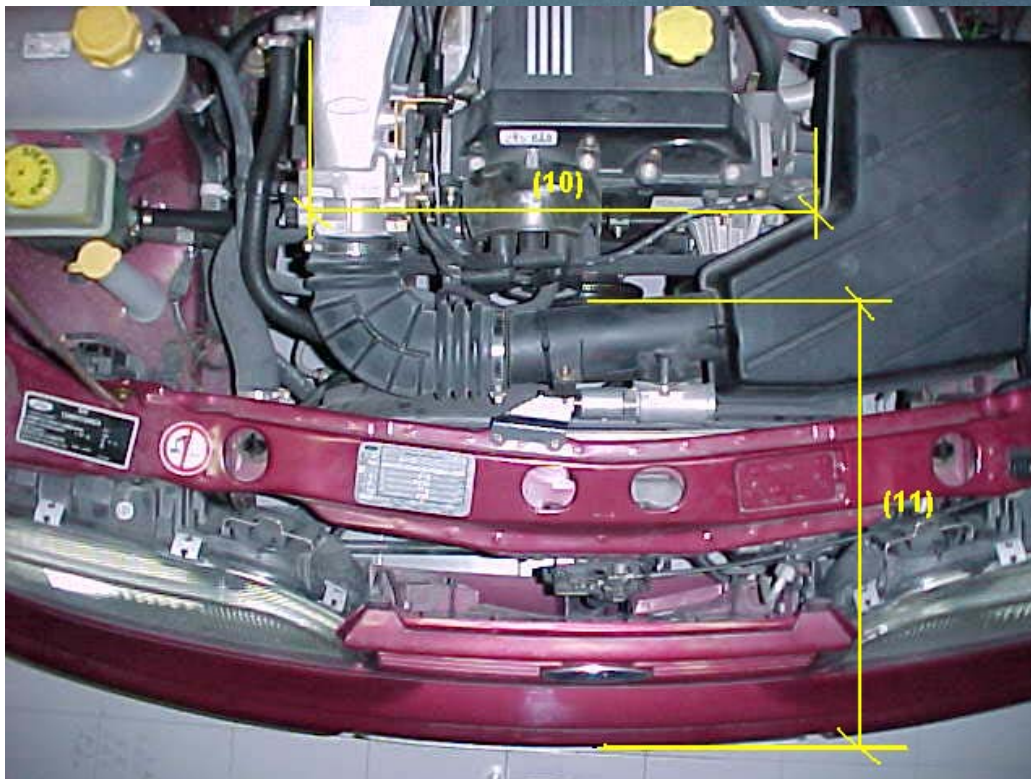
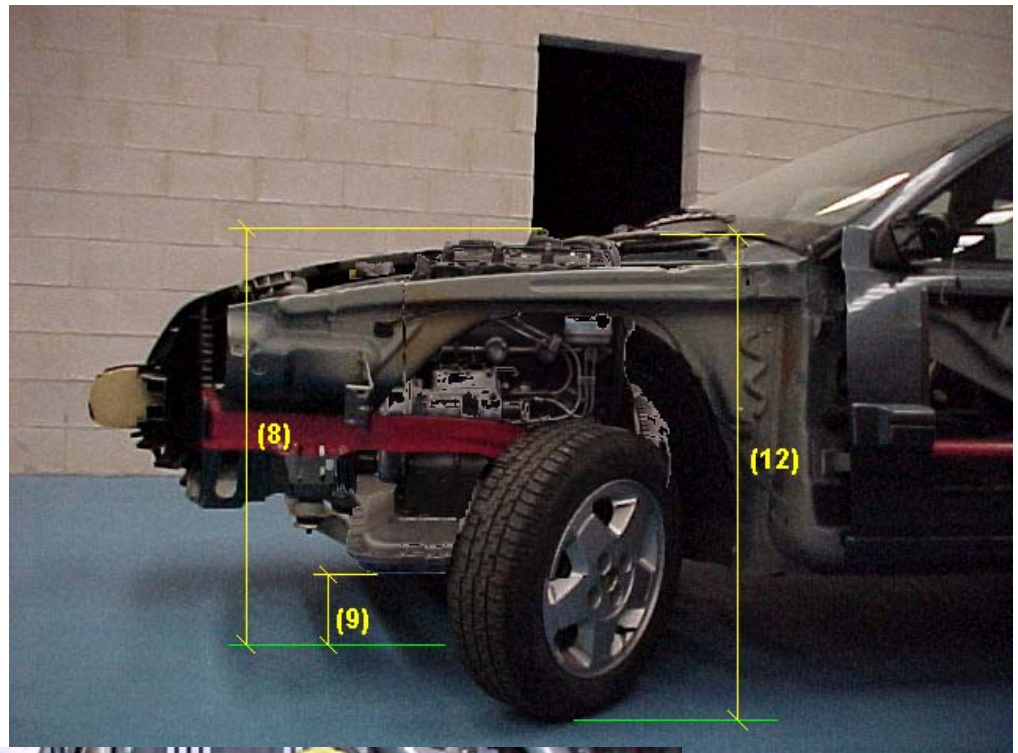


Figure 9.-
Definition of
the main
resistant
elements. Front
elements
(Longitudinal
engine).



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.