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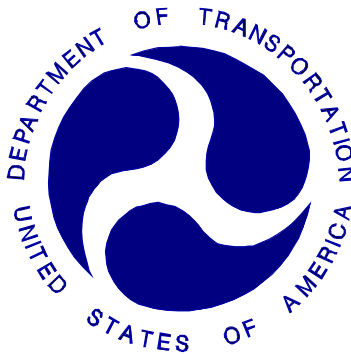
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

HONDA OF AMERICA MFG., INC.
2003 HONDA ACCORD
2-DOOR COUPE

NHTSA NUMBER: M35302

VERIDIAN TEST NUMBER: 8642-NCAP-24

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
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December 10, 2002

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Rulemaking
Office of Crashworthiness Standards
Mail Code: NVS-111
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Manager, New Car Assessment Program (NCAP)
NHTSA, Office of Crashworthiness Standards

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15. <i>Supplementary Notes</i>					
16. <i>Abstract</i> A frontal barrier test of a 2003 Honda Accord 2-Door Coupe was performed at Veridian Engineering crash test facility in Buffalo, New York, on December 10, 2002. The impact velocity was 56.49 kph and the temperature at the barrier face was 21.1 °C. The maximum post-test vehicle crush was 534 mm. The test vehicle was equipped with 3-point pretensioning restraint systems, knee bolsters, and airbags at both the driver and right outboard passenger seating positions. With respect to FMVSS 208 "Occupant Crash Protection - Injury Criteria" both the driver and passenger appeared to comply with head, chest, and femur requirements.					
ATD Position	HIC	Clip (g's)	Chest Disp (mm)	Left Femur (N)	Right Femur (N)
Driver (061)	246.9	42.3	31.1	653.4	889.4
Passenger (064)	323.9	41.0	27.3	1067.8	526.7
17. <i>Key Words</i> 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)				18. <i>Distribution Statement</i> <u>Copies of this report are available from:</u> NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, DC 20590	
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SECTION 1

PURPOSE AND SUMMARY OF TEST

1.1 PURPOSE

This 56.49 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-01-D-32005. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 48.3 kph requirements.

The 56.49 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

1.2 TEST PROCEDURE

This 56.49 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated December 1999. Data was obtained indicant of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219, "Windshield Zone Intrusion (Partial)"; and FMVSS 301 "Fuel System Integrity" performance. Procedures for receiving, inspection testing and reporting of test results are described in the test procedures and are not repeated in this report.

One real-time camera and 16 high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in this report.

Two Part 572E, 50th percentile male anthropomorphic test devices (ATDs), were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the Laboratory Indicant Test Procedure.

Both ATDs were fully instrumented with head, chest and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and passenger's lap belts to measure pelvic section loading. The driver (position 1) ATD (Serial No. 061) and the right-front passenger (position 2) ATD (Serial No.064) were calibrated previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C.

The vehicle, occupant, camera and measurement data are presented in Section 2. Appendix A contains the still photograph prints. The 91 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle and dummy response data traces. Appendix C contains the dummy calibration data and Appendix D contains the transducer calibration dates. Barrier load cell data was not collected from this test.

1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A fixed barrier was impacted by a 2003 Honda Accord 2-Door Coupe at a velocity of 56.49 kph. The test was performed at Veridian Engineering on December 10, 2002. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The occupant data is summarized below.

	HIC	Clip (g)	Chest Disp. (mm)	Left Femur (N)	Right Femur (N)	Belt Spool (mm)	Belt Stretch (mm/50 mm)
Driver ATD	246.9	42.3	31.1	653.4	889.4	-	-
Passenger ATD	323.9	41.0	27.3	1067.8	526.7	-	-

There was 100 percent windshield retention and no intrusion into the protected zone of the windshield during the event. There was no Stoddard solvent leakage after the event or during any phase of the static rollover.

The maximum vehicle static crush was 534 mm and both the driver and passenger side doors remained closed during the impact event and were operable after the impact.

The driver's visible contact points were as follows: : Face to center of airbag, back of head to head restraint, left knee to knee bolster, and right knee to knee bolster. The passenger's visible contact points were as follows: Face to right third of airbag, back of head to head restraint, left knee to left quarter of glove compartment door, right knee to center of glove compartment door.

The 2003 Honda Accord 2-Door Coupe did not exceed the requirements of FMVSS 208, FMVSS 212, FMVSS 219, and FMVSS 301. Data pertaining to these standards are presented in the data sheets.

SECTION 2

GENERAL TEST AND VEHICLE PARAMETER DATA

DATA SHEET NO. 1 CRASH TEST SUMMARY

Vehicle NHTSA No.:	M35302	Test Mode:	56.3 kph Frontal Barrier
Test Date:	December 10, 2002	Time:	14:30
		Temperature:	21.1 °C
Vehicle Make/Model/Body Style:	2003 Honda Accord 2-Door Coupe		
Vehicle Test Weight:	1586.5	kg	
Vehicle/Barrier Impact Angle:	0	°	
Impact Velocity:	56.49	kph	
Maximum Static Crush:	534	mm	
Vehicle Rebound:	444	mm	
<u>DUMMIES:</u>		<u>DRIVER</u>	<u>PASSENGER</u>
Type:		572E	572E
Restraint System:		Seatbelt (pretensioning), Airbag, Knee Bolster	Seatbelt (pretensioning), Airbag, Knee Bolster
Number of Data Channels:	91		
Number of Cameras:	1	Real Time	
	16	High Speed	
<u>DOOR OPENING DATA:</u>	Door remained closed and latched, door opened without tools - Left Front		
	Door remained closed and latched, door opened without tools - Right Front		
Front Seat(s) Data:		<u>DRIVER</u>	<u>PASSENGER</u>
Seat Track Failure: (mm of shift)		0	0
Seat Back Failure:		None	None
<u>VISIBLE DUMMY CONTACT POINTS:</u>		<u>DRIVER</u>	<u>PASSENGER</u>
Head:		Face to center of airbag; Back of head to head restraint	Face to right third of airbag; Back of head to head restraint
Abdomen:		Airbag	Airbag
Chest:		None	None
Knees:		Left knee to knee bolster left of steering column, Right knee to knee bolster right of steering column	Left knee to left quarter of glove compartment door; Right knee to center of glove compartment door

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2003 Honda Accord 2-Door Coupe

NHTSA No. : M35302 ; VIN: 1HGCM72233A003368 ; Color: Silver

Engine Data: 4 cylinders; - CID; 2.4 Liters; - cc

Placement: - Longitudinal or In-Line; X Transverse or Lateral

Transmission Data: 5 speeds; - Manual; X Automatic; X Overdrive

Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive

Safety Belt Features – Driver X Pretensioner (Shoulder); - Load Limiter; - Adj. Anchorage

Safety Belt Features - Passenger X Pretensioner (Shoulder); - Load Limiter; - Adj. Anchorage

Major Options: X A/C; X Pwr.Strg.; X Pwr. Brakes

X Pwr. Windows; X Pwr. Door Locks; X Tilt Wheel

Date Received: 11/7/02 ; Odometer Reading 127 km

Selling Dealer: IDE Pontiac, Inc.

& Address: 875 Panorama Trail, Rochester, NY 14625

DATA FROM TIRE VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Honda of America Mfg., Inc.

Date of Manufacture 10/02

GVWR: 1851 kg; GAWR: 996 kg FRONT; 889 kg REAR

DATA FROM TIRE PLACARD:

Recommended Tire Size: P205/65R15 92H

* Recommended Cold Tire Pressure: 207 kpa FRONT; 200 kpa REAR

DATA FROM TIRE SIDEWALL:

Size of Tires on Test Vehicle: P205/65R15 92H ; Manufacturer: Bridgestone

Tire Pressure with Maximum Capacity Vehicle Load: Front: 303 kPa; Rear: 303 kPa

Treadwear: 300 ; Traction: A ; Temperature: A

VEHICLE CAPACITY DATA:

Type of Front Seats: - Bench; X Bucket; - Split Bench

Number of Occupants: 2 Front; 3 Rear; 5 Total

Vehicle Capacity Weight (VCW) = 385.0 kg

No. of Occupants x 68.04 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 44.8 kg

*Tire pressure used for test

DATA SHEET NO. 2 GENERAL TEST AND VEHICLE PARAMETER DATA (cont.)

WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (with maximum fluids)= UDW:

Right Front	=	<u>436.0</u>	kg	Right Rear	=	<u>255.5</u>	kg
Left Front	=	<u>430.5</u>	kg	Left Rear	=	<u>273.5</u>	kg
TOTAL FRONT	=	<u>866.5</u>	kg	TOTAL REAR	=	<u>529.0</u>	kg
TOTAL DELIVERED WEIGHT	=	<u>1395.5</u>	kg				
% of Total Front of Vehicle Weight	=	<u>62.1%</u>		% of Total Rear Weight	=	<u>37.9%</u>	%

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW)	=	<u>1395.5</u>	kg
Rated Cargo/Luggage Weight (RCLW)	=	<u>44.8</u>	kg
Weight of 2 p.572 Dummies @ 76 each	=	<u>152</u>	kg
TARGET TEST WEIGHT	=	<u>1592.3</u>	kg

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 39.0 KG OF CARGO WEIGHT:

Right Front	=	<u>468.0</u>	kg	Right Rear	=	<u>308.5</u>	kg
Left Front	=	<u>474.0</u>	kg	Left Rear	=	<u>336.0</u>	kg
TOTAL FRONT	=	<u>942.0</u>	kg	TOTAL REAR	=	<u>644.5</u>	kg
TOTAL TEST WEIGHT	=	<u>1586.5</u>	kg				
% of Total Front Weight	=	<u>59.4%</u>	%	% of Total Rear Weight	=	<u>40.6%</u>	%
Weight of Ballast Secured in Vehicle Trunk Area	=	<u>0</u>	kg				
Vehicle Components Removed for Weight Reduction:				Muffler, trunk lid, trunk trim, rear bumper assembly, wheel covers, and side mirrors.			

VEHICLE ATTITUDE (all dimension in millimeters):

AS DELIVERED:	RF	<u>715</u>	LF	<u>714</u>	RR	<u>706</u>	LR	<u>703</u>
FULLY LOADED:	RF	<u>705</u>	LF	<u>703</u>	RR	<u>685</u>	LR	<u>680</u>
AS TESTED:	RF	<u>705</u>	LF	<u>703</u>	RR	<u>687</u>	LR	<u>682</u>
Vehicle's Wheel Base:		<u>2669</u>	mm					
Location of Vehicle's C.G.:		<u>1084</u>	mm rearward of front wheel center.					

FUEL SYSTEM DATA:

Fuel System Capacity From Owner's Manual	=	<u>64.7</u>	liters
Usable Capacity Figure Furnished by COTR	=	<u>64.7</u>	liters
Test Volume Range (92 to 94% of Usable Capacity)	=	<u>59.52</u>	to <u>60.82</u> liters
ACTUAL TEST VOLUME	=	<u>11.7 *</u>	liters (with entire fuel system filled)
Test Fluid Type:	<u>Stoddard Solution</u>	; Spec. Grav. =	<u>0.764</u>
Kinematic Viscosity	=	<u>0.96</u>	centistokes; Color = <u>Orange</u>
Type of Fuel Pump: Electric-	<u>X</u>	; Mechanical-	<u>-</u>
Does Electric Pump operate with ignition switch "ON" & engine "OFF"		Yes- <u>X</u>	No- <u>-</u>
Details of Fuel System:	<u>Fuel Tank -Located on the vehicle underbody between the rear wheels; Fuel Lines - Routed along the vehicle underbody inboard of the left body stiffener; Fuel Filler – Located on the left rear quarter panel, rear of the rear wheel.</u>		

* Stoddard volume was reduced to achieve target test weight and was approved by the COTR.

DATA SHEET NO. 3 POST IMPACT DATA

TYPE OF TEST:

Type of Test: Frontal Barrier Impact Angle: 0°
Test Date: December 10, 2002 Time: 14:30 Temperature: 21.1 °C
Vehicle NHTSA No.: M35302
Required Impact Velocity Range: 55.5 to 57.1 kph

BARRIER IMPACT VELOCITY: (Speed traps within 5 feet of impact plane.)

Trap No. 1 = 56.49 kph; Trap No. 2 = 56.49 kph
Distance from vehicle to barrier: (1) entering trap = 813 mm
(2) exiting trap = 305 mm

VEHICLE STATIC CRUSH: (mm) (For frontal and rear impacts only.)

Vehicle Length:

Pre-Test	Left = <u>4687</u> ; C/L = <u>4770</u> ; Right = <u>4686</u>
Post-Test	Left = <u>4209</u> ; C/L = <u>4244</u> ; Right = <u>4188</u>
Crush	Left = <u>478</u> ; C/L = <u>526</u> ; Right = <u>498</u>
AVERAGE	= <u>501</u> mm

VEHICLE REBOUND: (From rigid barrier only.)

Distance from front of test vehicle to impact point:

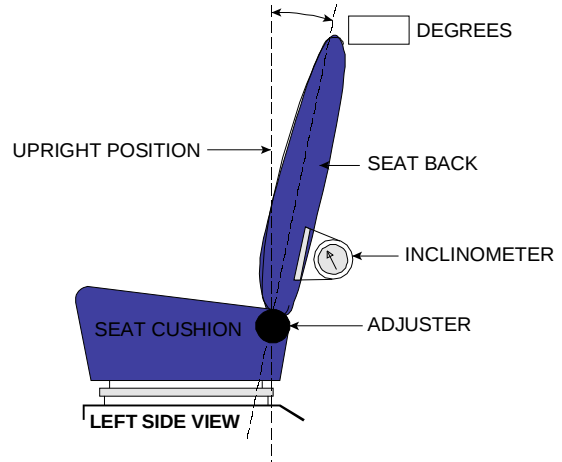
	Left = <u>473</u> ; C/L = <u>465</u> ; Right = <u>395</u>
AVERAGE	= <u>444</u> mm

DATA SHEET NO. 4 TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2003 Vehicle Model: Honda ACCORD Body Style : 2-Door Coupe

1. Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.



FRONT SEAT ASSEMBLY

Seat back angle for driver's seat: 17.5

Measurement instructions: Where the forward-most position is defined as detent 0, place seat back in detent 4.

Seat back angle for passenger's seat: 17.5

Measurement instructions: Where the forward-most position is defined as detent 0, place seat back in detent 4.

2. Seat Fore and Aft Positioning

Positioning of the driver's seat: Where the forward-most position is defined as detent 0, place the seat in detent 12 (25 total positions).

Positioning of the passenger's seat: Where the forward-most position is defined as detent 0, place the seat in detent 12 (25 total positions).

3. Fuel Tank Capacity Data

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 64.7 liters

B. "Usable Capacity" of the optional equipment fuel tank is - liters

C. "Usable Capacity" of the vehicle(s) used for certification testing to requirements of FMVSS 301 = 64.7 liters

3.2 Amount of Stoddard solvent added to vehicle(s) used for certification test(s) = 11.7 liters

3.3 Is vehicle equipped with electric fuel pump? Yes- X ; No- -

If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.

The fuel pump operates for 2 seconds when the ignition switch is turned to the ON position with the engine not running. The fuel pump operates continuously while the engine is running.

DATA SHEET NO. 4 TEST VEHICLE INFORMATION (cont.)

4. STEERING COLUMN ADJUSTMENTS:

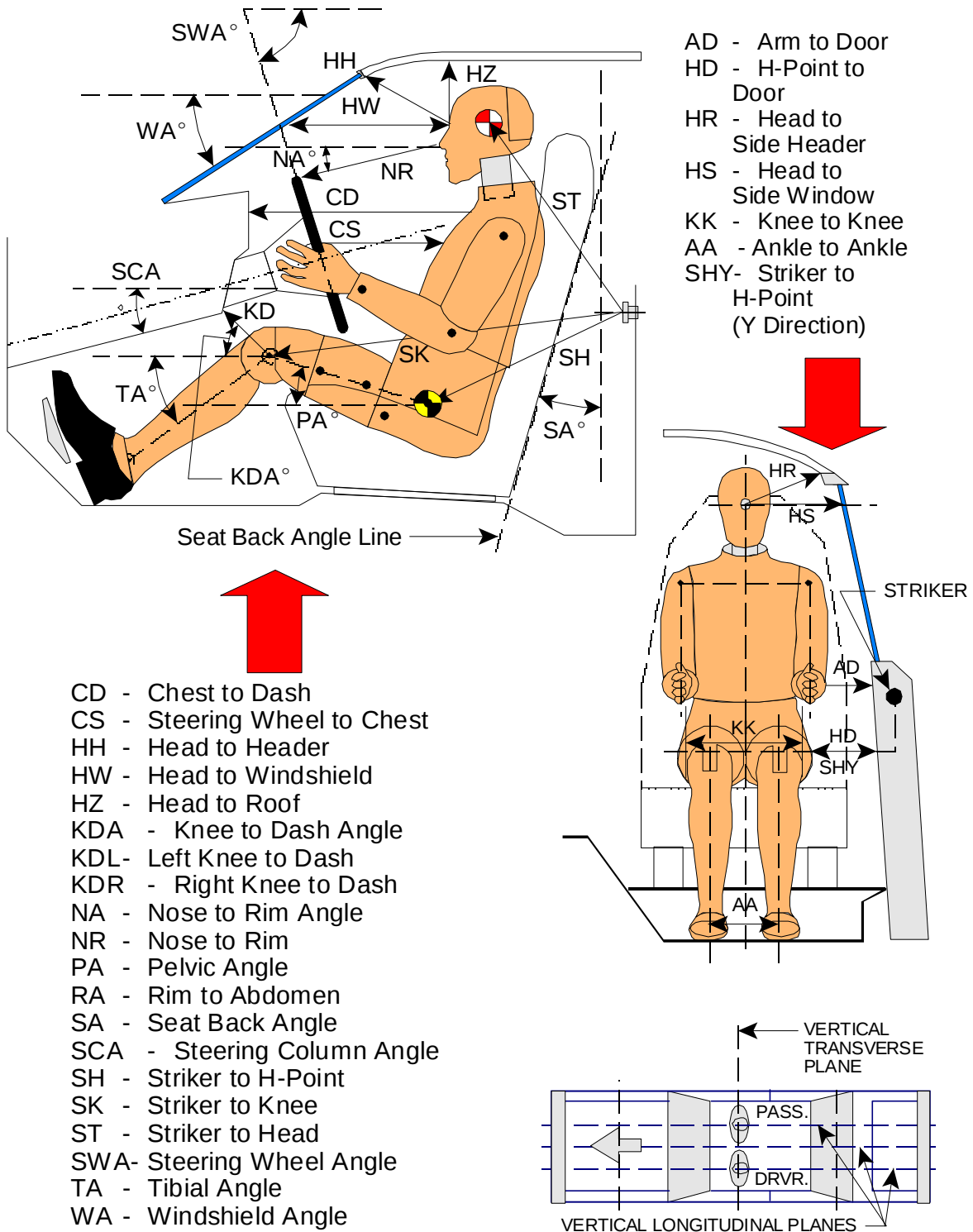
Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.

Operational Instructions: Place the steering column in the geometric center of its travel. This can be achieved by placing the steering wheel in the lowest and most forward position, then relocate the steering wheel 20 mm rearward and 31 mm upward as measured at the bottom edge of the steering wheel rim.

5. SEAT BELT UPPER ANCHORAGE

Nominal design riding position: Fixed

DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



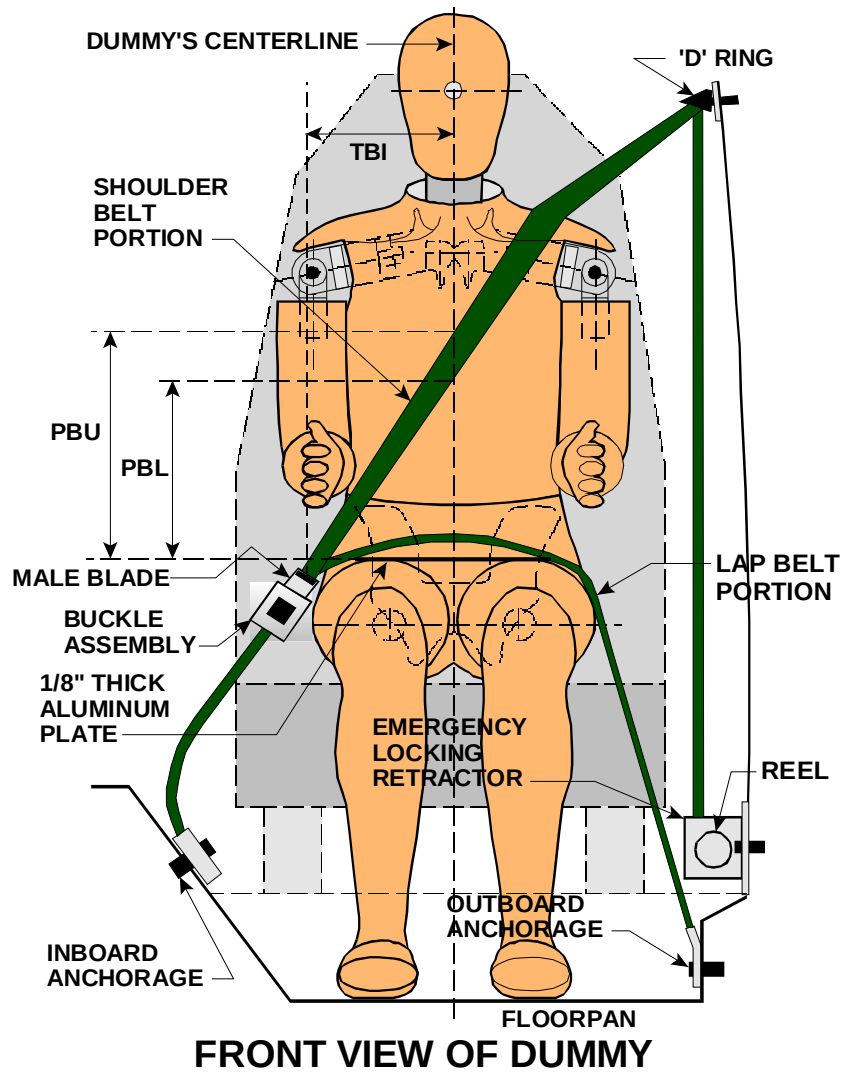
DATA SHEET NO. 5 FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #061)			PASS. (Serial #064)		
WA ^o	24.5 deg.			N/A		
SWA ^o	67 deg.			N/A		
SCA ^o	23 deg.			N/A		
SA ^o	17.5 deg.			17.5 deg.		
HZ	178			162		
HH	350			347		
HW	676			666		
HR	192			195		
NR	406	Angle	5.5 deg.	N/A		
CD	541			574		
CS	340			N/A		
RA	208			N/A		
KDL	202	Angle (KDA)	19 deg.	174		
KDR	175			203	Angle (KDA)	35 deg.
PA ^o	25 deg.			25 deg.		
TA ^o	42 deg.			35 deg.		
KK	350			270		
AA	345			212		
ST	549	Angle	25 deg.	538	Angle	25 deg.
SK	790	Angle	93 deg.	798	Angle	95 deg.
SH	445	Angle	102 deg.	429	Angle	101 deg.
SHY	235			237		
HS	328			333		
HD	142			136		
AD	105			140		

Dimensions in millimeters

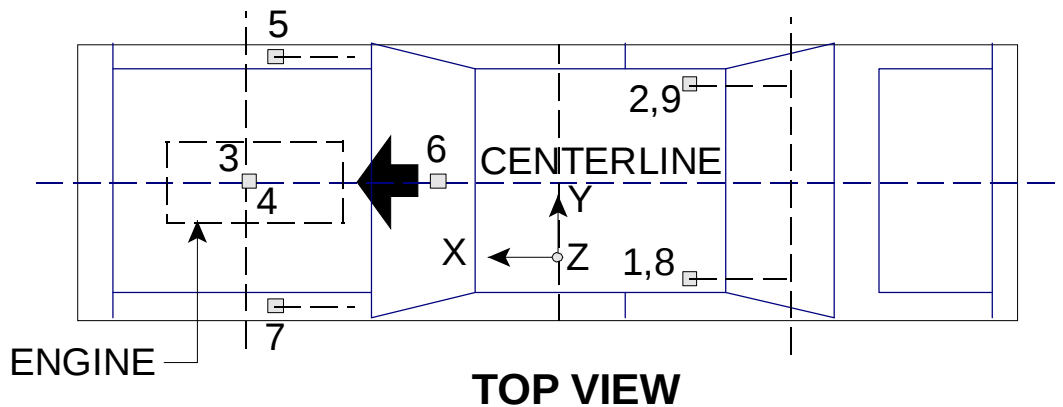
DATA SHEET NO. 6 SEAT BELT POSITIONING DATA

SEAT BELT POSITIONING DATA

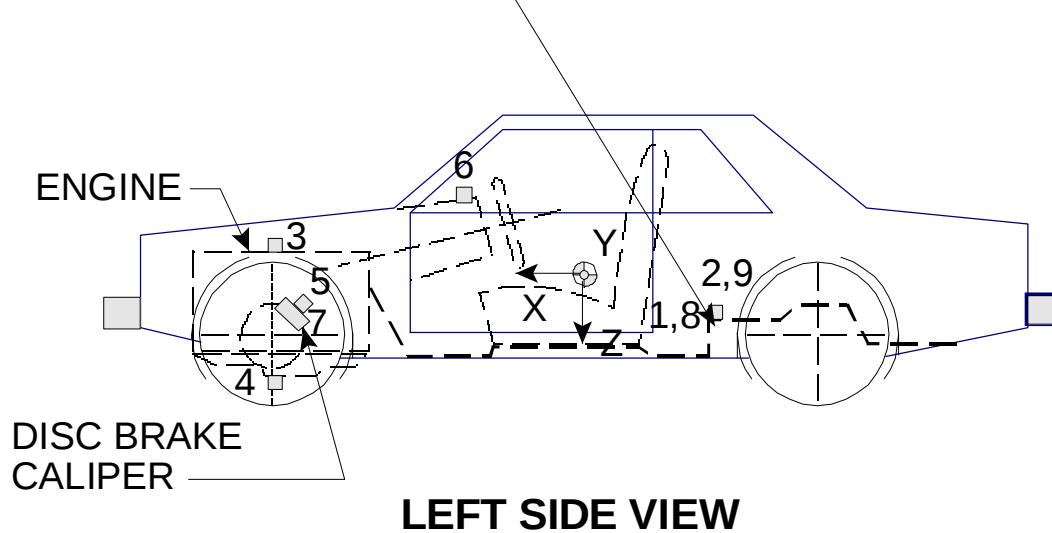


	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	347	345
PBL-- Top surface of alum. plate to belt lower edge	267	264
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT



Note: Vehicle accelerometer location and data summary shown in DATA SHEET NO. 7

DATA SHEET NO. 7 VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY (cont.)

LOCATION		PRE-TEST LENGTH (mm)		
		X	Y	Z
1	Left Rear Seat Cross Member X	2004	-615	-215
2	Right Rear Seat Cross Member X	2026	596	-211
3	Top of Engine Block	3913	-20	-776
4	Bottom of Engine	3904	-92	-219
5	Disc Brake Caliper @ Right Side	3804	707	-449
6	Instrument Panel	2947	47	-769
7	Disc Brake Caliper @Left Side	3755	-713	-439
8	Left Rear Seat Cross Member Z	2004	-615	-215
9	Right Rear Seat Cross Member Z	2026	596	-211

LOCATION NUMBER	DESCRIPTION	MAXIMUM VALUE (g's)			
		Pos.	msec.	Neg.	msec.
1	Left Rear Seat Cross Member X	3.1	119.9	-35.2	59.2
2	Right Rear Seat Cross Member X	3.9	120.1	-33.1	72.3
3	Top of Engine Block	58.9	47.1	-135.2	30.1
4	Bottom of Engine	†	-	†	-
5	Disc Brake Caliper @ Right Side	8.4	55.7	-102.5	30.3
6	Instrument Panel	22.1	30.4	-56.4	40.9
7	Disc Brake Caliper @Left Side	††	-	††	-
8	Left Rear Seat Cross Member Z	12.1	34.7	-13.9	21.6
9	Right Rear Seat Cross Member Z	14.8	16.3	-15.6	54.1

† Transducer failed.

†† Transducer wire was cut at 25 milliseconds.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES

Vehicle Year/Make/Model/Body Style: 2003 Honda Accord 2-Door Coupe

NHTSA Test No.: M35302 Test Date: December 10, 2002

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	9.1	296.2	-40.0	64.9	12.9	283.1	-48.6	65.4
Head Y	g	5.9	46.6	-7.8	86.7	8.8	58.3	-4.8	98.4
Head Z	g	16.9	55.6	-1.3	15.4	15.1	44.7	-11.7	83.8
Head Resultant	g	40.7	64.5	-	-	49.2	65.4	-	-
Redundant Head X	g	†	-	†	-	12.8	283.1	-49.0	65.4
Redundant Head Y	g	6.0	46.6	-7.4	86.7	8.9	58.3	-4.8	95.9
Redundant Head Z	g	17.2	55.6	-1.4	15.4	14.8	45.1	-11.6	83.8
Redundant Head Resultant	g	†	-	-	-	49.6	65.4	-	-
Upper Neck Fx	N	317.4	69.6	-467.4	99.3	254.0	89.5	-329.8	44.6
Upper Neck Fy	N	158.6	135.9	-253.8	85.7	††	-	††	-
Upper Neck Fz	N	939.9	55.0	-56.7	15.5	635.9	44.3	-233.1	95.8
Upper Neck F Resultant	N	964.5	55.1	-	-	726.6††	44.3	-	-
Upper Neck Mx	N-m	12.2	50.9	-17.0	102.0	13.5	53.6	-13.9	125.6
Upper Neck My	N-m	44.8	57.2	-26.3	95.0	30.1	151.0	-36.7	99.6
Upper Neck Mz	N-m	4.6	109.8	-4.8	53.7	9.7	102.9	-5.9	153.3
Upper Neck M Resultant	N-m	46.2	57.6	-	-	38.7	99.4	-	-
Chest X	g	2.8	261.7	-40.7	71.0	3.1	254.4	-42.1	81.6
Chest Y	g	3.5	87.8	-4.7	44.1	2.5	35.2	-2.8	80.5
Chest Z	g	6.3	47.5	-17.6	76.4	6.3	43.3	-11.8	75.3
Chest Resultant	g	43.3	71.3	-	-	42.6	81.5	-	-
Redundant Chest X	g	2.8	262.0	-40.5	70.5	3.2	254.5	-42.5	81.6
Redundant Chest Y	g	3.8	96.1	-4.9	44.2	2.9	35.5	-2.6	80.7
Redundant Chest Z	g	6.5	47.7	-17.2	81.8	5.8	43.3	-12.7	71.6
Redundant Chest Resultant	g	43.1	70.7	-	-	43.0	81.5	-	-
Chest Displacement	mm	0.0	-2.2	-31.1	72.3	0.0	-7.7	-27.3	98.8
Pelvic X	g	6.4	210.0	-45.4	62.0	5.3	210.1	-36.4	64.4
Pelvic Y	g	10.0	80.0	-6.7	49.3	5.7	52.5	-5.9	76.9
Pelvic Z	g	4.4	203.6	-40.2	74.9	3.6	203.0	-37.8	80.3
Pelvic Resultant	g	55.6	65.0	-	-	46.7	64.3	-	-

† Redundant Head X accelerometer failed at 24 milliseconds.

†† Noise present in data from 53 to 89 milliseconds.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES (cont.)

Vehicle Year/Make/Model/Body Style: 2003 Honda Accord 2-Door Coupe

NHTSA Test No.: M35302 Test Date: December 10, 2002

		MAXIMUM VALUE							
		Driver				Passenger			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Left Femur	N	1254.0	53.8	-653.4	22.3	976.8	47.9	-1067.8	61.9
Right Femur	N	1064.6	48.6	-889.4	60.5	1211.3	69.6	-526.7	37.9
Left Upper Tibia Mx	N-m	10.8	18.3	-16.8	60.0	30.7	74.7	-11.8	36.4
Left Upper Tibia My	N-m	13.8	198.5	-81.0	50.9	24.5	224.3	-79.1	76.9
Left Lower Tibia Fz	N	96.5	130.4	-2510.3	22.7	83.2	165.8	-2719.7	36.3
Left Lower Tibia Mx	N-m	58.0	67.0	-4.3	24.3	38.5	74.1	-6.4	165.0
Left Lower Tibia My	N-m	20.7	64.6	-28.6	52.8	34.5	38.2	-36.3	52.4
Right Upper Tibia Mx	N-m	14.5	70.9	-34.4	33.2	74.6	67.6	-8.9	40.9
Right Upper Tibia My	N-m	21.3	60.0	-94.2	32.5	24.1	232.9	-114.9	68.0
Right Lower Tibia Fz	N	78.7	125.5	-2847.6	33.1	420.7	174.0	-3192.2	71.7
Right Lower Tibia Mx	N-m	56.8	70.6	-14.7	33.4	29.3	66.5	-17.8	78.5
Right Lower Tibia My	N-m	137.3	70.8	-26.6	51.3	20.2	38.0	-31.7	20.2
Left Foot Aft Ax	g	8.6	34.2	-63.0	18.6	15.4	68.6	-52.4	20.8
Left Foot Aft Az	g	4.1	222.9	-39.9	19.5	7.6	59.0	-64.8	50.9
Left Foot Fore Az	g	9.8	15.7	-92.9	17.7	50.7	24.6	-99.6	51.4
Right Foot Aft Ax	g	41.3	69.2	-63.0	34.6	11.9	42.7	-49.3	26.5
Right Foot Aft Az	g	3.6	222.3	-89.7	28.5	27.2	25.9	-48.5	34.3
Right Foot Fore Az	g	43.9	26.3	-286.3	28.5	65.3	26.0	-92.8	20.3
Lap Belt Load	N	8430.6	64.6	-11.1	280.0	6695.8	62.0	-5.6	164.6
Torso Belt	N	†	-	†	-	†	-	†	-

† Vehicle was equipped with pretensioning seat belts, transducer was not installed.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES (cont.)

Vehicle Year/Make/Model/Body Style: 2003 Honda Accord 2-Door Coupe

NHTSA Test No.: M35302 Test Date: December 10, 2002

HEAD INJURY CRITERIA (HIC)				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	246.9	55.4	91.4	34.2
Position #2 - Passenger	323.9	54.4	90.3	38.2

** HIC is as defined in FMVSS 208. The maximum time interval from t₁ to t₂ is 36 milliseconds.

CLIP SUMMARY*				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	42.3	69.4	72.4	429.3
Position #2 - Passenger	41.0	79.5	82.5	345.2

* The maximum chest resultant acceleration is defined as the maximum acceleration which exceeds 0.003 seconds in duration.

DATA SHEET NO. 8 DUMMY INJURY CRITERIA VALUES (cont.)
REDUNDANT DATA

Vehicle Year/Make/Model/Body Style: 2003 Honda Accord 2-Door Coupe

NHTSA Test No.: M35302 Test Date: December 10, 2002

HEAD INJURY CRITERIA (HIC) REDUNDANT				
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration t ₁ to t ₂
Position #1 - Driver	249.1 †	55.3	91.3	34.4
Position #2 - Passenger	319.4	54.4	89.9	38.2

** HIC is as defined in FMVSS 208. The maximum time interval from t₁ to t₂ is 36 milliseconds.

† The Redundant Head X accelerometer failed during the test, the Primary Head X accelerometer was used in its place for the HIC calculation.

CLIP SUMMARY* REDUNDANT				
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #1 - Driver	42.2	69.0	72.0	429.7
Position #2 - Passenger	41.4	79.6	82.6	357.4

* The maximum chest resultant acceleration is defined as the maximum acceleration which exceeds 0.003 seconds in duration.

DATA SHEET NO. 9 SEAT BELT PERFORMANCE ASSESSMENT TEST DATA

BELT LENGTH DATA:

	<u>Driver</u>	<u>Passenger</u>
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems.	<u>1909</u>	<u>1905</u>
Shoulder belt length as measured on Part 572 Dummy.	<u>1009</u>	<u>1002</u>
Lap belt length as measured on Part 572 Dummy.	<u>845</u>	<u>848</u>

SHOULDER BELT SPOOL-OFF DATA:

As determined by film analysis.	<u>†</u>	<u>†</u>
As determined mechanically.	<u>††</u>	<u>††</u>
As determined electronically.	<u>††</u>	<u>††</u>

BELT STRETCH DATA:

Measured electronically between shoulder belt load cell and the "D" ring.	<u>†† mm/m</u>	<u>†† mm/m</u>
Measured mechanically.	<u>0 mm/m</u>	<u>0 mm/m</u>

† Onboard camera was used for CRS view. Close-up high speed camera view of shoulder belts is not available.

†† Vehicle was equipped with pretensioning seatbelts. Device was not installed to prevent potential interference with system.

Dimensions in millimeters

DATA SHEET NO.10 SUMMARY OF FMVSS 212 DATA

FMVSS NO. 212 - "WINDSHIELD MOUNTING" DATA

DETAILS OF WINDSHIELD MOUNTING SUCH AS RETENTION METHOD, TRIM TYPE, ETC.:

Windshield is bonded in place and covered with a 17 mm wide molding.

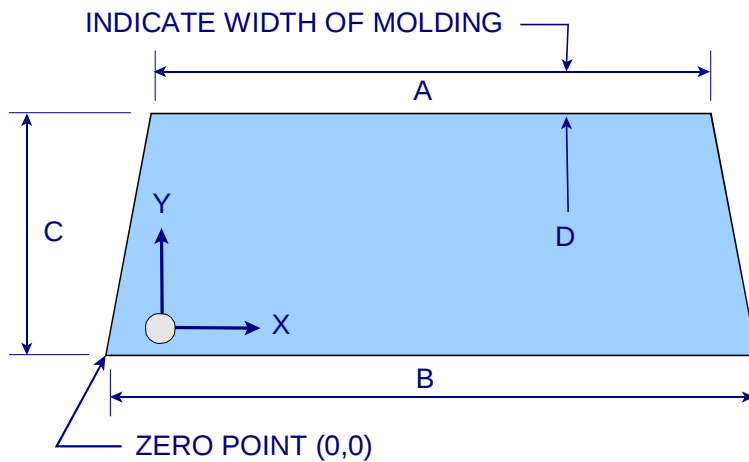
FMVSS 212 REQUIREMENTS:

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 the windshield for vehicles equipped with automatic restraint systems for front occupants,

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		% OF RETENTION
	PRE-TEST (mm)	POST-TEST (mm)	
RIGHT SIDE	2152.5	2152.5	100.0%
LEFT SIDE	2152.5	2152.5	100.0%
TOTAL	4305	4305	100.0%

AREA OF RETENTION FAILURE:



DIMENSIONS (mm)	
A	1146
B	1475
C	842
D	17

FRONT VIEW OF WINDSHIELD

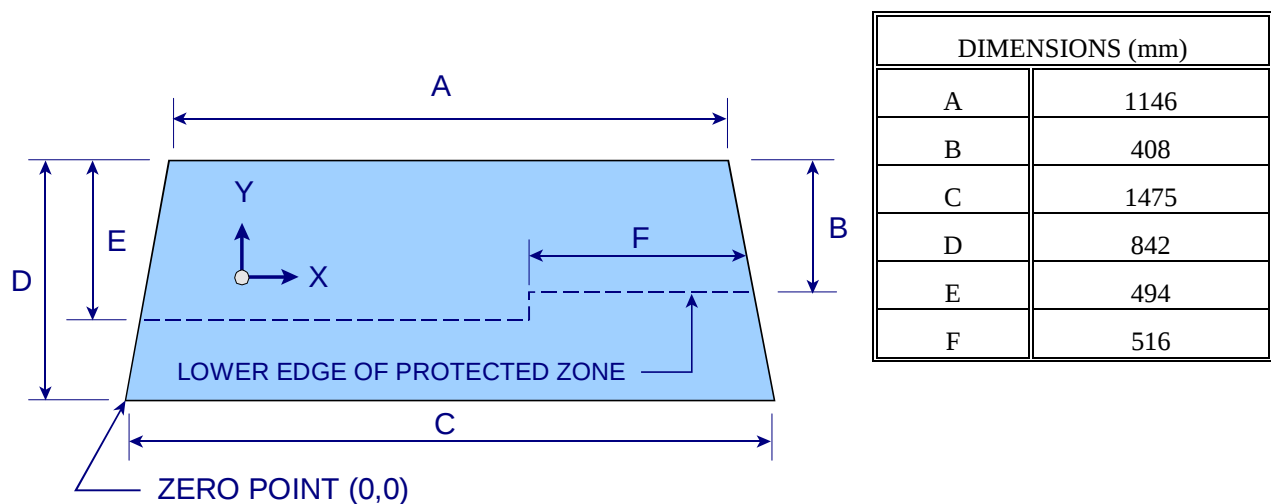
FAILURE DETAILS: None

DATA SHEET NO. 11 FMVSS NO. 219 (PARTIAL) - "WINDSHIELD ZONE INTRUSION" DATA

PROTECTED ZONE LOWER EDGE REQUIREMENT:

The lower edge of the protected zone is determined by placing a 165 mm 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. The locus of points is drawn on the inner surface of the windshield contacted 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, then draw a line on the inner surface of the windshield below and 13 mm distant from the locus line. The LOWER EDGE OF THE PROTECTED ZONE is the longitudinal projection of this line onto the outer surface of the windshield.

FMVSS 219 TEST DATA:



FRONT VIEW OF WINDSHIELD

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

(Show location of penetration on the above sketch)

COORDINATES		
	X	Y
1.	-	-
2.	-	-
3.	-	-
4.	-	-

<u>NHTSA TEST No.:</u>	M35302	<u>TEST DATE:</u>	December 10, 2002
<u>VEHICLE MAKE/MODEL:</u>	2003 Honda Accord 2-Door Coupe		

=====

TEST VEHICLE IMPACT TYPE:	
X	Frontal (56 kph)
	Oblique (48 kph) with _____ deg. barrier face first contacting _____
-	(driver/passenger) side
-	Rear Moving Barrier (48 kph)
-	Lateral Moving Barrier (32 kph)

1. From impact until vehicle motion ceases
2. For 5 minute period after vehicle motion ceases
3. For next 25 minutes

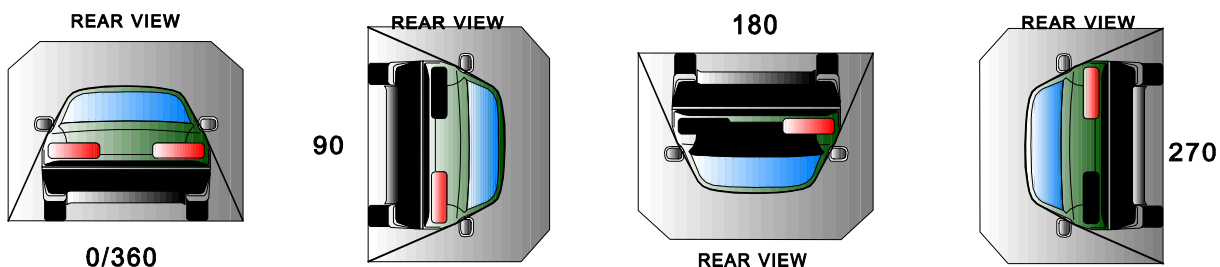
ACTUAL	MAX ALLOWED
0	28 g
0	141 g
0	28 g/min.

8642-NCAP-24

DATA SHEET NO. 13 - ROLLOVER DATA

Vehicle: 2003 Honda Accord 2-Door Coupe

NHTSA No.: M35302



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	5	seconds	5	minutes	6	minutes	5	seconds	7	minutes
90° - 180°	1	minutes	10	seconds	5	minutes	6	minutes	10	seconds	7	minutes
180°-270°	1	minutes	2	seconds	5	minutes	6	minutes	2	seconds	7	minutes
270°-360°	1	minutes	5	seconds	5	minutes	6	minutes	5	seconds	7	minutes

II. FMVSS 301 REQUIREMENTS: (Maximum allowable solvent spillage):

First 5 minutes from onset of rotation	6th min.	7th min.	8th min. (if required)
142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

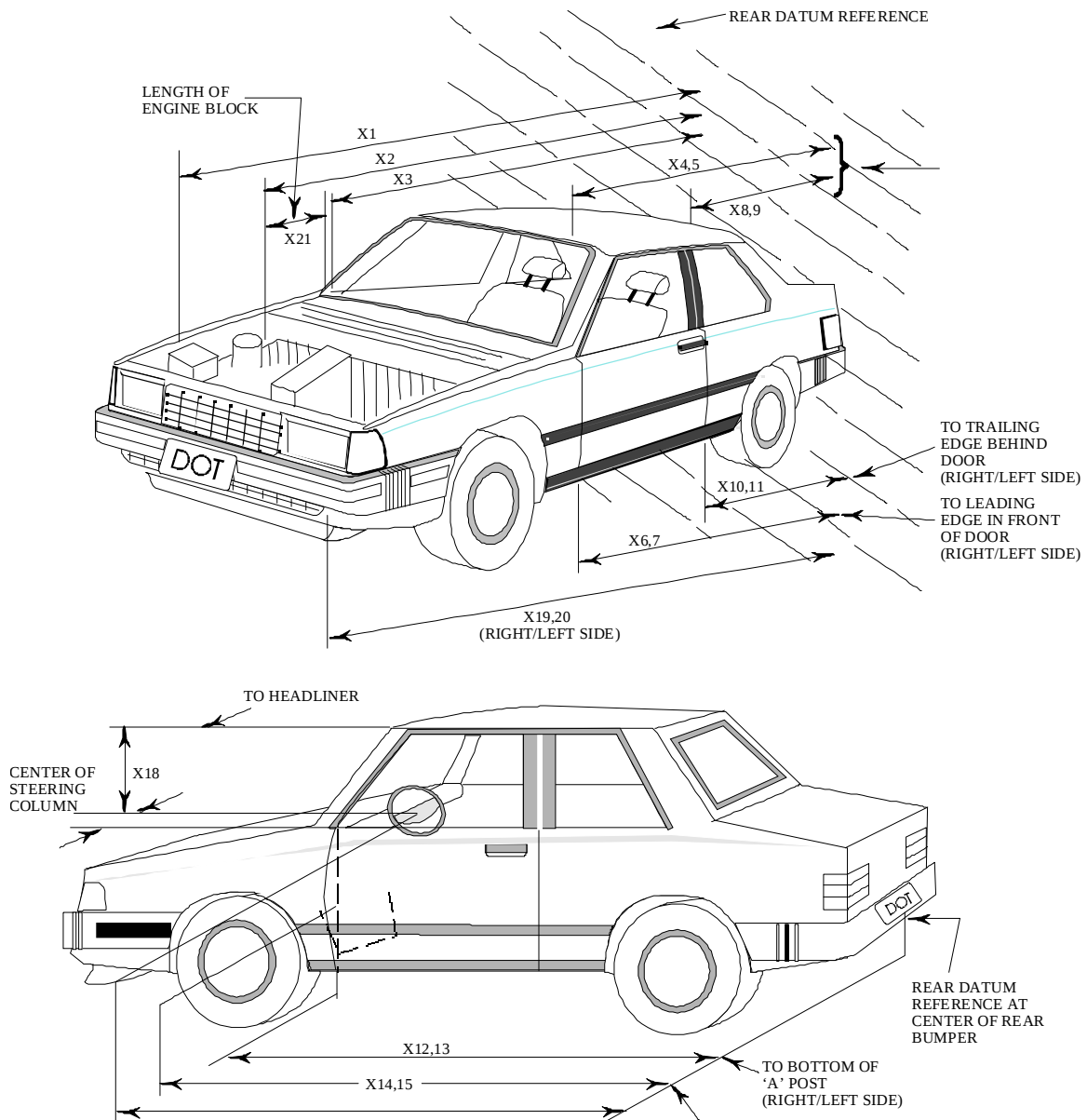
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	-
90° - 180°	0	0	0	-
180°-270°	0	0	0	-
270°-360°	0	0	0	-

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

Rollover Stage	Spillage Location
0° - 90°	-
90° - 180°	-
180°-270°	-
270°-360°	-

DATA SHEET NO. 14 TEST VEHICLE MEASUREMENTS

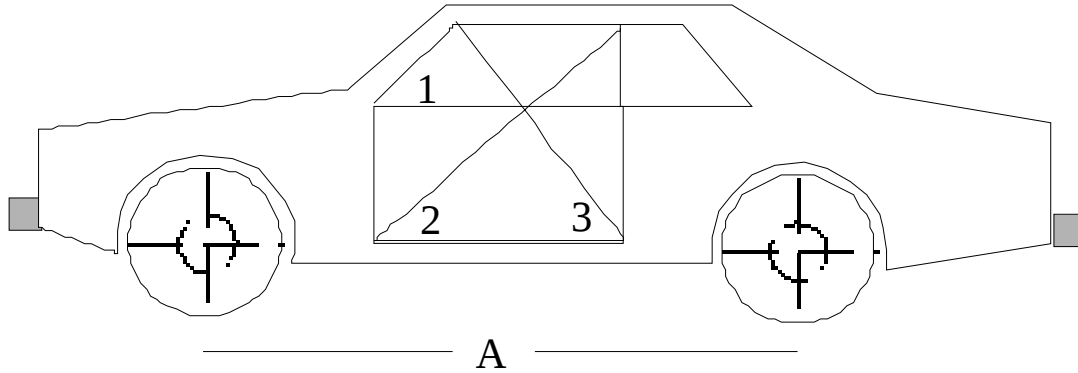


DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	4770	4244	526
X2	Rear Surface of Vehicle to Front of Engine	4259	4032	227
X3	Rear Surface of Vehicle to Firewall	3672	3690	-18
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3287	3282	5
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3288	3287	1
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3280	3282	-2
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3291	3276	15
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	1980	1975	5
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	1980	1976	4
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2006	2006	0
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2004	2004	0
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3386	3390	-4
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3388	3361	27
X14	Rear Surface of Vehicle to Firewall, Right Side	3610	3620	-10
X15	Rear Surface of Vehicle to Firewall, Left Side	3611	3644	-33
X16	Rear Surface of Vehicle to Steering Column	2788	2797	-9
X17	Center of Steering Column to "A" Post	284	282	2
X18	Center of Steering Column to Headliner	409	375	34
X19	Rear Surface of Vehicle to Right Side of Front Bumper	4686	4188	498
X20	Rear Surface of Vehicle to Left Side of Front Bumper	4687	4209	478
X21	Length of Engine Block	497	497	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	2991	2985	6
CD	Rear Surface of Vehicle to Center of Dash Panel	3007	3007	0
LD	Rear Surface of Vehicle to Left Side of Dash Panel	2985	2980	5

All Dimensions in mm

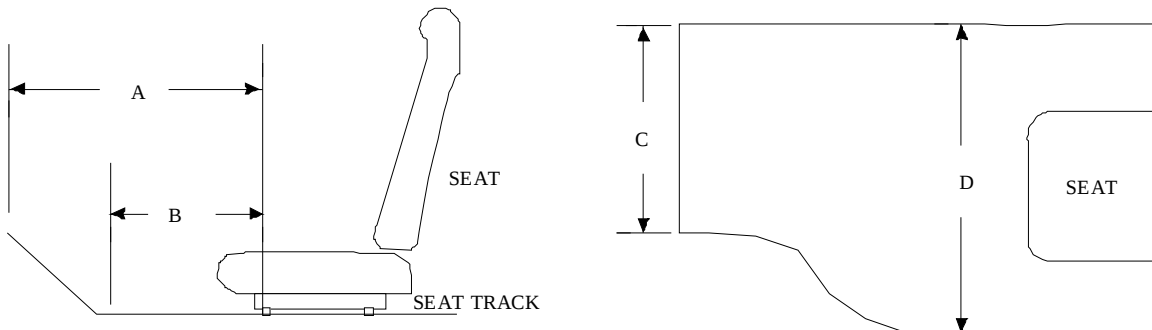
DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 DOOR OPENING WIDTH



UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1245	1543	1082	1252	1558	1084
AFTER TEST	1253	1534	1076	1254	1557	1082
DIFFERENCE	-8	9	6	-2	1	2

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	2669	2669
AFTER TEST	2560	2566
DIFFERENCE	109	103

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
 VEHICLE INTRUSION MEASUREMENTS
 STATIC FOOTWELL DEFORMATION



DRIVER

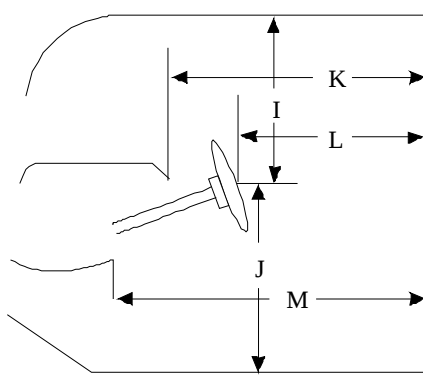
Measurement	Pre-Test	Post-Test	Difference
A	788	746	42
B	579	576	3
C	350	350	0
D	326	329	-3

PASSENGER

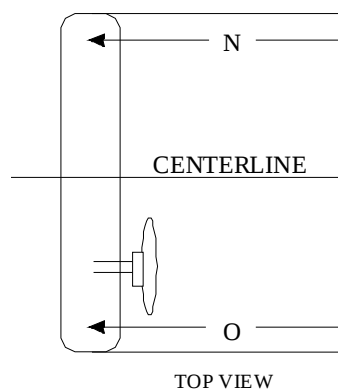
Measurement	Pre-Test	Post-Test	Difference
A	783	741	42
B	567	559	8
C	429	422	7
D	347	349	-2

Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
VEHICLE INTRUSION MEASUREMENTS
STATIC PASSENGER COMPARTMENT INTRUSION

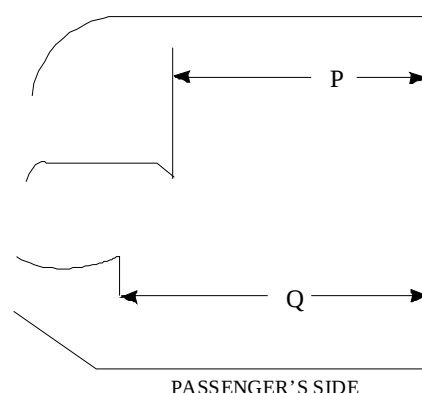


DRIVER'S SIDE



TOP VIEW

MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE

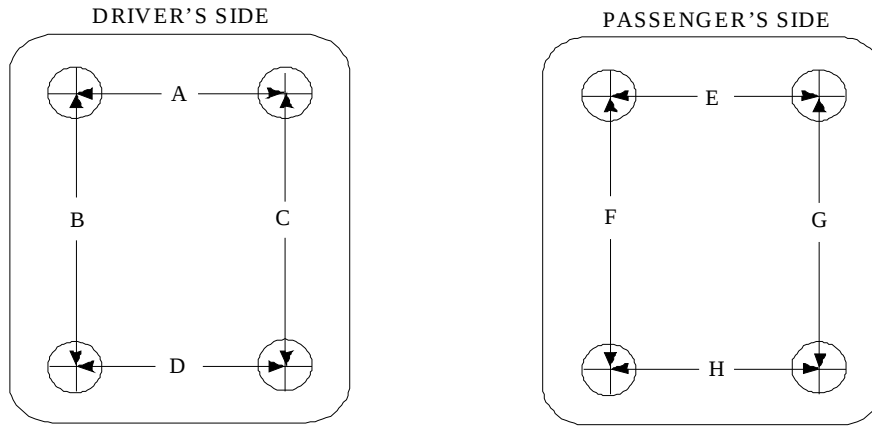


PASSENGER'S SIDE

Measurement	Pre-Test	Post-Test	Difference
I	409	375	34
J	634	684	-50
K	1857	1854	3
L	1679	1689	-10
M	1960	1959	1
N	1878	1880	-2
O	1877	1872	5
P = K (PASS.)	2100	2083	17
Q = M (PASS.)	1928	1944	-16

Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
FLOORBOARD DEFORMATION

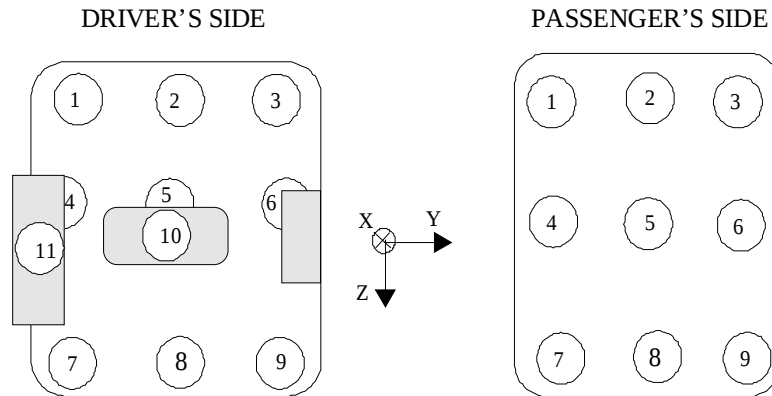


TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	350	350	0
B	463	461	2
C	436	420	16
D	326	329	-3
E	429	422	7
F	479	477	2
G	446	442	4
H	347	349	-2

Units = mm

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
TOE-PAN INTRUSION



Driver Side Toe-pan Measurements

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3461	3429	32	-468	-490	22
2	3472	3426	46	-471	-496	25
3	3468	3394	74	-463	-486	23
4	3386	3372	14	-345	-345	0
5	3393	3352	41	-339	-352	13
6	3389	3345	44	-331	-350	19
7	3288	3257	31	-248	-246	-2
8	3263	3256	7	-242	-234	-8
9	3262	3252	10	-248	-222	-26
10	3286	3282	4	-432	-427	-5
11	3370	3356	14	-430	-425	-5

Passenger Side Toe-pan Measurements

Toe-pan Location	X Deformation (mm)			Z Deformation (mm)		
	Pre-Test	Post-Test	Difference	Pre-Test	Post-Test	Difference
1	3438	3399	39	-453	-484	31
2	3468	3425	43	-448	-476	28
3	3437	3394	43	-472	-491	19
4	3367	3342	25	-331	-337	6
5	3378	3362	16	-331	-351	20
6	3379	3363	16	-328	-351	23
7	3240	3230	10	-252	-239	-13
8	3251	3244	7	-258	-250	-8
9	3242	3257	-15	-250	-270	20

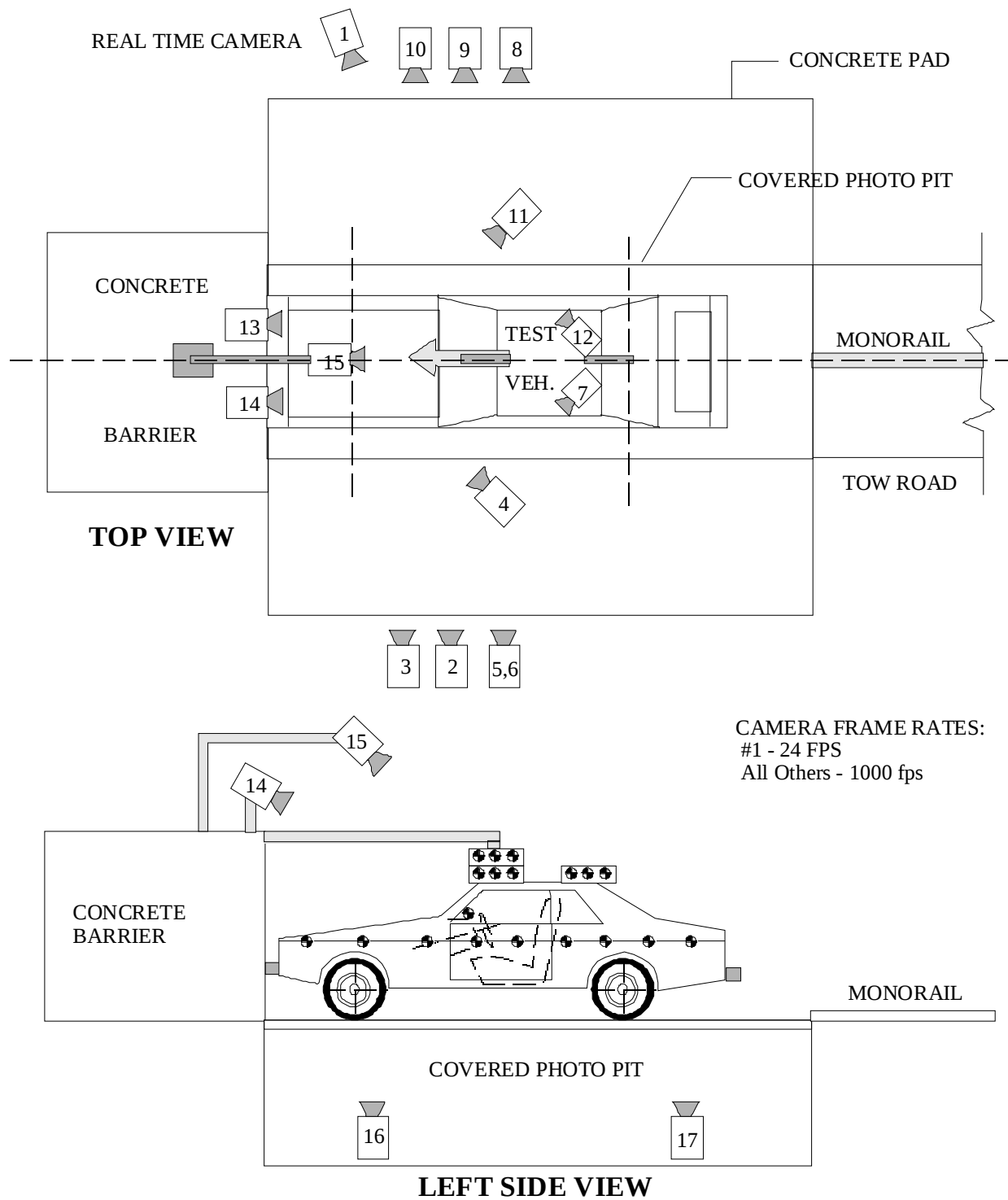
Reference: SAE: X = Rear Bumper (Positive: forward); Z = Ground (Positive: down)

DATA SHEET NO.14 VEHICLE MEASUREMENTS (cont.)
TARGET VEHICLE STRUCTURAL MEASUREMENTS

	Elements	Pre-Test (mm)
1	Total length	4770
2	Total Width	1807
3	Bumper Top Height	528
4	Bumper Bottom Height	430
5	Longitudinal Member Top Height	540
6	Distance Between Longitudinal Members	1125
7	Longitudinal Member Width	85
8	Engine top height	840
9	Engine bottom height	195
10	Engine and gearbox width	858
11	Front bumper-engine distance	520
12	Front shock absorber fixing height	838
13	Bonnet leading edge height	660
14	Front shock absorber fixing width	970
15	Front bumper – front axle distance	994
16	Front axle – a pillar distance	450
17	A-pillar – B pillar distance	1375
18	B-pillar – rear axle distance	844
19	B-pillar – C Pillar distance	-
20	Roof sill bottom height	1265
21	Roof sill top height	1385
22	Floor sill bottom height	210
23	Floor sill top height	390

DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS

NOTE: Camera information shown in DATA SHEET NO. 15.



DATA SHEET NO.15 HIGH-SPEED CAMERA LOCATIONS (cont.)

NHTSA Test No.: M35302 Vehicle: 2003 Honda Accord 2-Door Coupe

CAMERA NO.	VIEW	CAMERA POSITIONS (mm)*			ANGLE (deg)**	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Camera	-	-	-	-	-	-	24
2	Overall Left Side	6541	1578	1085	-4.4	6186	12.5	1010
3	Left Side View	8598	805	1096	-2.9	8243	25	1010
4	Driver and Interior View	7710	2535	1995	-9.6	-	25	1055
5	Steering Column (Bottom)	7226	1760	1162	-3.9	6871	25	1010
6	Steering Column (Top)	7226	1760	1775	-9.2	6871	25	1005
7	Left Belt	-	-	-	-	-	13	-
8	Overall Right Side	6758	1988	1106	-4.2	7055	12.5	1010
9	Right Side View	7668	2709	1975	-8.4	7965	25	1005
10	Right Passenger View	7956	1837	1386	-3.7	8253	35	1000
11	Passenger and Interior View	8485	1459	1975	-3.8	-	25	1000
12	Onboard CRS View	830	3055	-1090	-14.8	-	13	1020
13	Passenger Front View	620	-92	1987	-35.9	-	13	1005
14	Driver Front View	620	-92	1987	-35.3	-	13	1010
15	Windshield View	0	-530	3374	-50.9	-	13	1010
16	Pit View of Engine	0	1000	-3048	90	-	13	1005
17	Pit View of Fuel Tank	0	3355	-3048	90	-	13	1050

*X = film plane to monorail centerline ** = referenced to horizontal plane

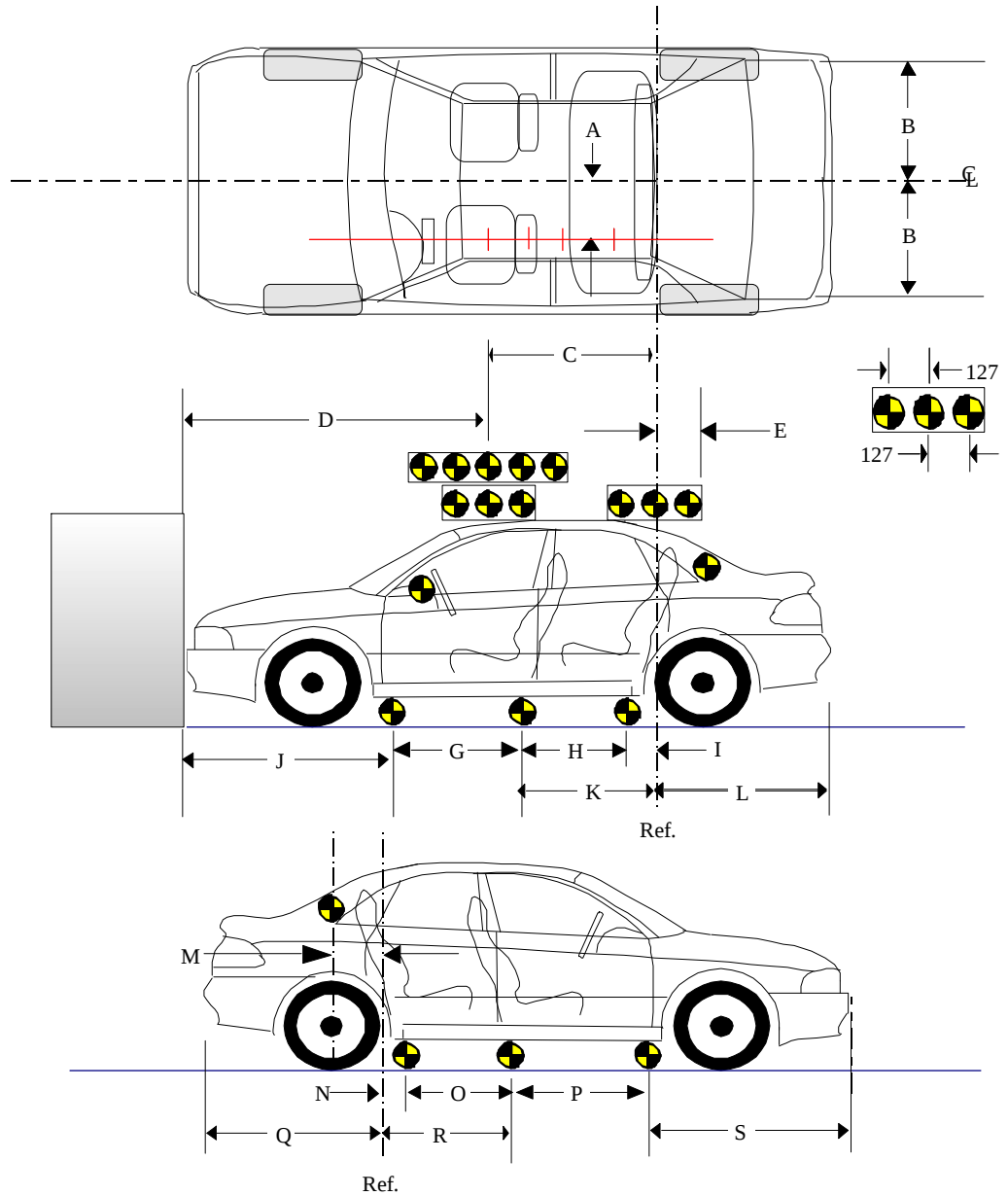
Y = film plane to impact location N.T. indicates No Timing

Z = film plane to ground

DATA SHEET NO. 16 VEHICLE REFERENCE PHOTO TARGET LOCATIONS

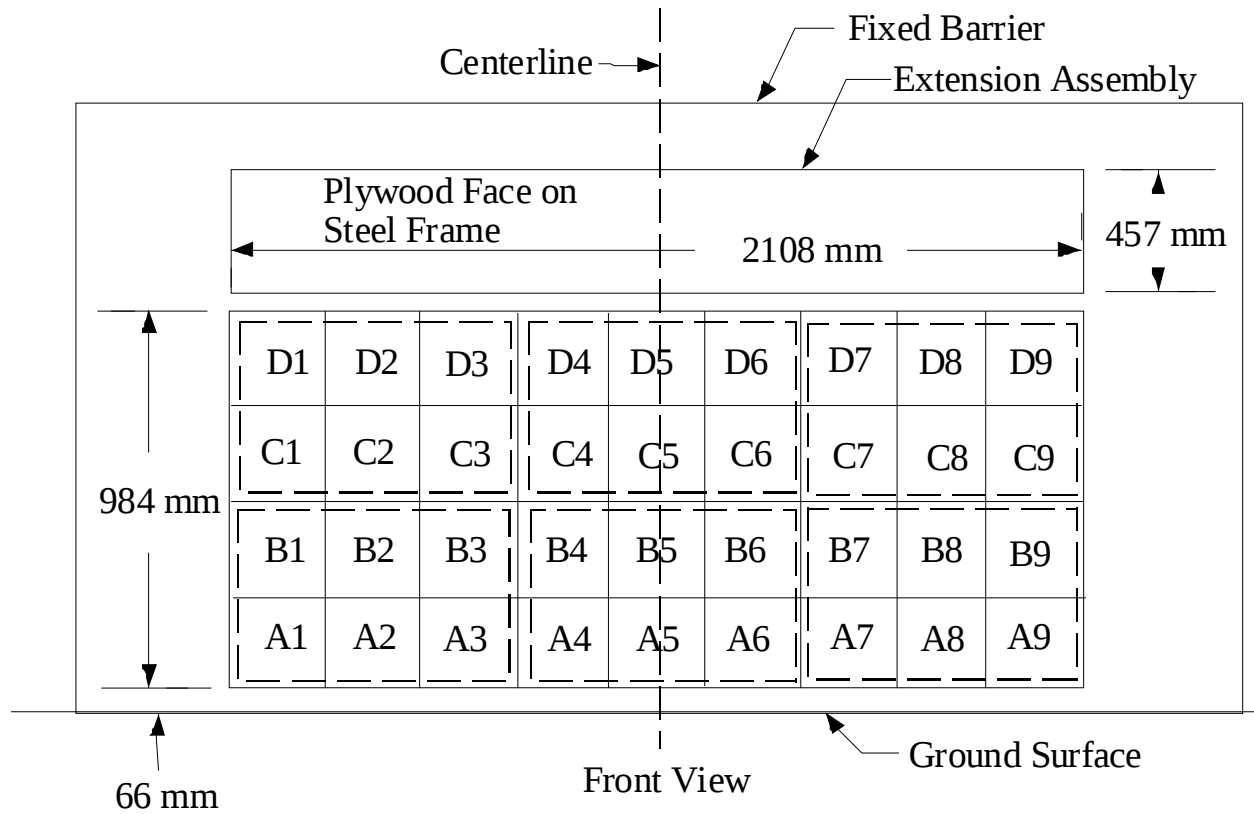
(Dimensions in millimeters)

A	373
B	652
C	1230
D	2120
E	312
F	1521
G	896
H	891
I	129
J	1432
K	1020
L	1421
M	307
N	110
O	896
P	892
Q	1436
R	1006
S	1436



DATA SHEET NO. 17 LOAD CELL LOCATIONS ON FIXED BARRIER †

36 Load Cells
 4 Rows
 9 Columns
 6 Groupings (6 cells/group)



6 GROUPS OF 6 LOAD CELLS EACH

Group 4 C1 thru D3	Group 5 C4 thru D6	Group 6 C7 thru D9
Group 1 A1 thru B3	Group 2 A4 thru B6	Group 3 A7 thru B9

- (1)Data from 36 individual load cells
- (2)Total or Sum of 36 individual load cells
- (3)Data from 6 Groupings shown above (6 cells/group)

† Load Cell Barrier data is not available for this test.

DATA SHEET NO. 18 POST TEST AIR BAG DATA

NHTSA No.: M35302; Test Date: December 10, 2002; Technician: Lawrence Q. Valvo

Vehicle Model Year/Make/Model: 2003 Honda Accord 2-Door Coupe

A. No. of vent holes: 2 -Driver 2 -Passenger

B. Size of vent holes: (mm²) 1257 -Driver 1963 -Passenger

C. Total vent area: (mm²) 2514 -Driver 3926 -Passenger

D. Deflated air bag length and width dimensions or, if round, diameter. (mm)

Driver: 560 -Height; 560 -Width; 220 -Depth

Passenger: 700 -Height; 470 -Width; 430 -Depth

E. Is the air bag tethered?

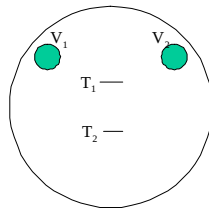
Driver: X -Yes; - -No; If yes, record length of tether- 220

Passenger: - -Yes; X -No; If yes, record length of tether- -

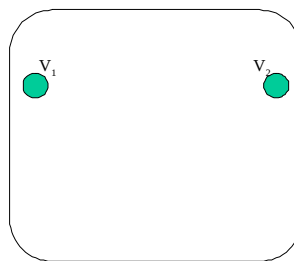
Sketch the air bag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel.

(Note: Not to scale; V_n = Vent hole_n, T_n = Tether_n).

Driver



Passenger



F. Record part numbers and manufacturer name of the air bag and gas generator.

Driver: Air bag: SDNS6H115

Generator: Z50DZ008256

Passenger: Air bag: SANS79273

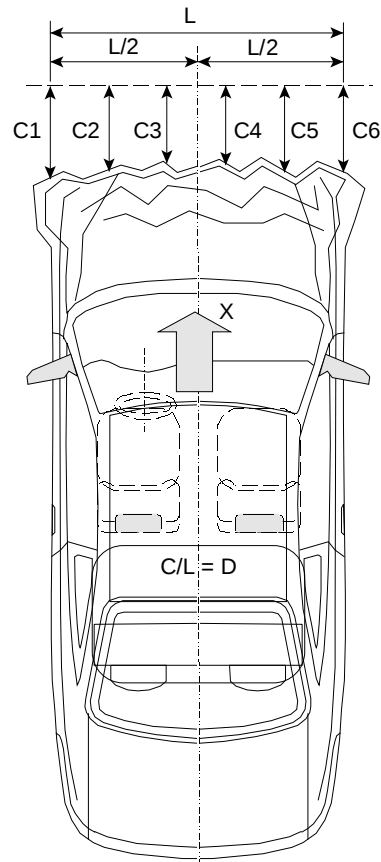
Generator: SDB2805; A0000025883; P0Z5\$2KVUOD

DATA SHEET NO. 19 ACCIDENT INVESTIGATION DIVISION DATA
FOR FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Honda Accord 2-Door Coupe
 NHTSA Test No.: M35302 VIN: 1HGCM72233A003368
 Model Year: 2003 Build Date: 10/02 Test Date: December 10, 2002
 Vehicle Size Category: PASSENGER CAR Test Weight: 1586.5 kg
 Vehicle Wheelbase: 2669 mm; Front Overhang: 990 mm; Overall Width: 1807 mm
 Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions

	PRE (mm)	POST (mm)	DIFF (mm)
C1 =	4517	4295	222
C2 =	4695	4211	484
C3 =	4764	4247	517
C4 =	4766	4232	534
C5 =	4695	4184	511
C6 =	4516	4230	286



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

Length of Damaged Region: L1= 1473 mm
 L2= 736.5 mm
 L5= 294.6 mm

APPENDIX A
PHOTOGRAPHS

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A-49	Post-Test Passenger And Interior View	A-52
A-50	Pre-Test Passenger Feet View	A-53
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A-54	Pre-Test Passenger Floor Pan View	A-57
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Figure A-1 LOAD CELL LOCATIONS

MFD. BY HONDA OF AMERICA MFG., INC. 10/02
GVWR 4080LBS GAWR F 2195LBS R 1960LBS
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY, BUMPER,
AND THEFT PREVENTION STANDARDS IN EFFECT
ON THE DATE OF MANUFACTURE SHOWN ABOVE:

V.I.N. 1HGCM72233A003368



PASSENGER CAR

Figure A-2 VEHICLE CERTIFICATION PLACARD

TIRE INFORMATION				
VEHICLE CAPACITY WEIGHT		SEATING CAPACITY		
850 LBS (385KG)		TOTAL 5 FRONT 2 REAR 3		
RECOMMENDED TIRE SIZE	COLD TIRE INFLATION PRESSURE		SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION	
P205/65R15 92H	FRONT	210KPA, 30PSI		
	REAR	200KPA, 29PSI		
COMPACT SPARE TIRE	UP TO VEHICLE CAPACITY WEIGHT			
T135/90D15 100M	420KPA, 60PSI		42762-SDA-A110	

Figure A-3 VEHICLE TIRE PLACARD



Figure A-4 RIGHT FRONT, AS RECEIVED



Figure A-5 LEFT REAR, AS RECEIVED



Figure A-6 PRE-TEST FRONT VIEW



Figure A-7 POST-TEST FRONT VIEW



Figure A-8 PRE-TEST LEFT SIDE VIEW

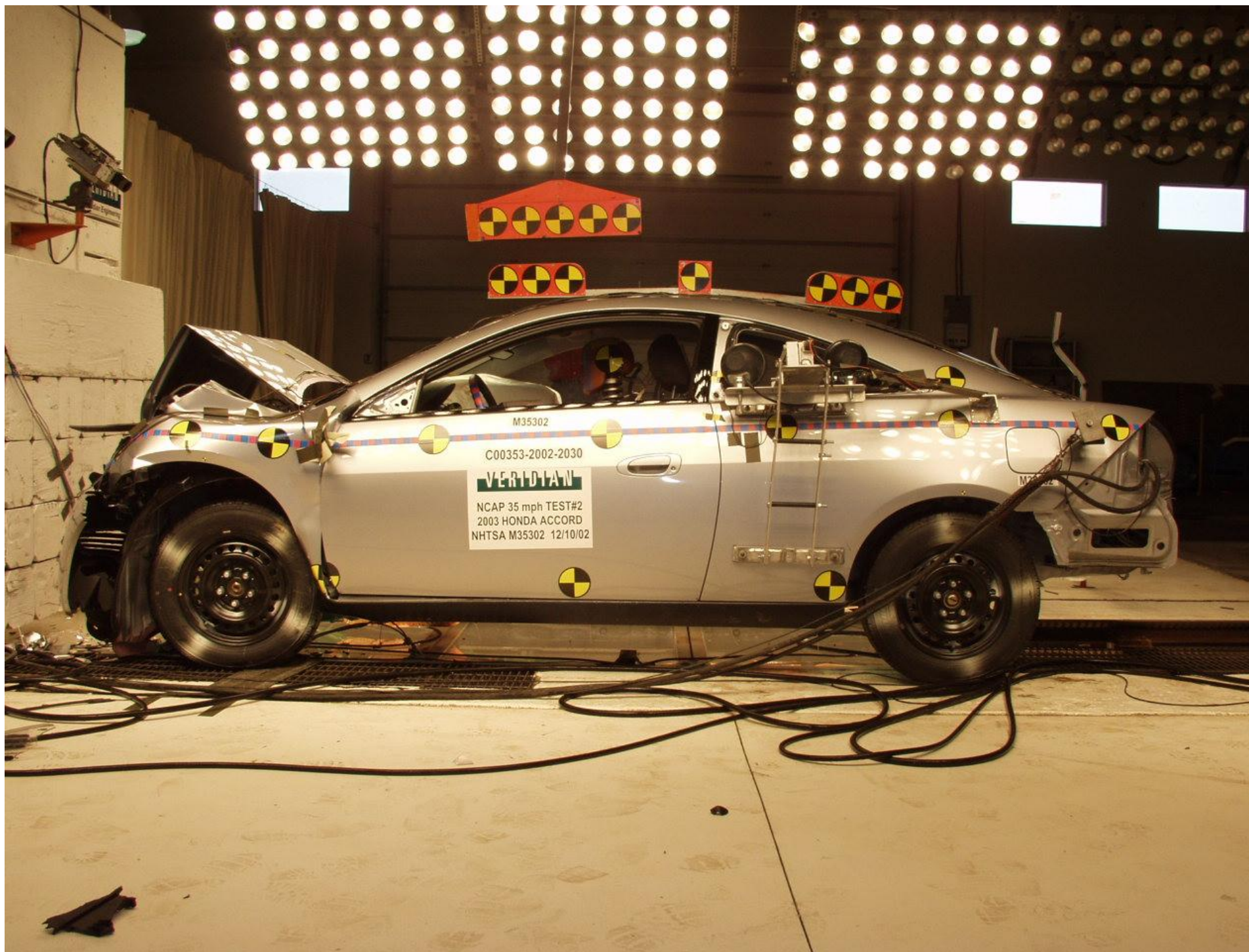


Figure A-9 POST-TEST LEFT SIDE VIEW



Figure A-10 PRE-TEST RIGHT SIDE VIEW



Figure A-11 POST-TEST RIGHT SIDE VIEW



Figure A-12 PRE-TEST RIGHT FRONT THREE-QUARTER VIEW



Figure A-13 POST-TEST RIGHT FRONT THREE-QUARTER VIEW



Figure A-14 PRE-TEST LEFT REAR THREE-QUARTER VIEW



Figure A-15 POST-TEST LEFT REAR THREE-QUARTER VIEW



Figure A-16 LEFT REAR THREE-QUARTER VIEW OF DOORS AFTER IMPACT



Figure A-17 RIGHT REAR THREE-QUARTER VIEW OF DOORS AFTER IMPACT



Figure A-18 PRE-TEST WINDSHIELD VIEW

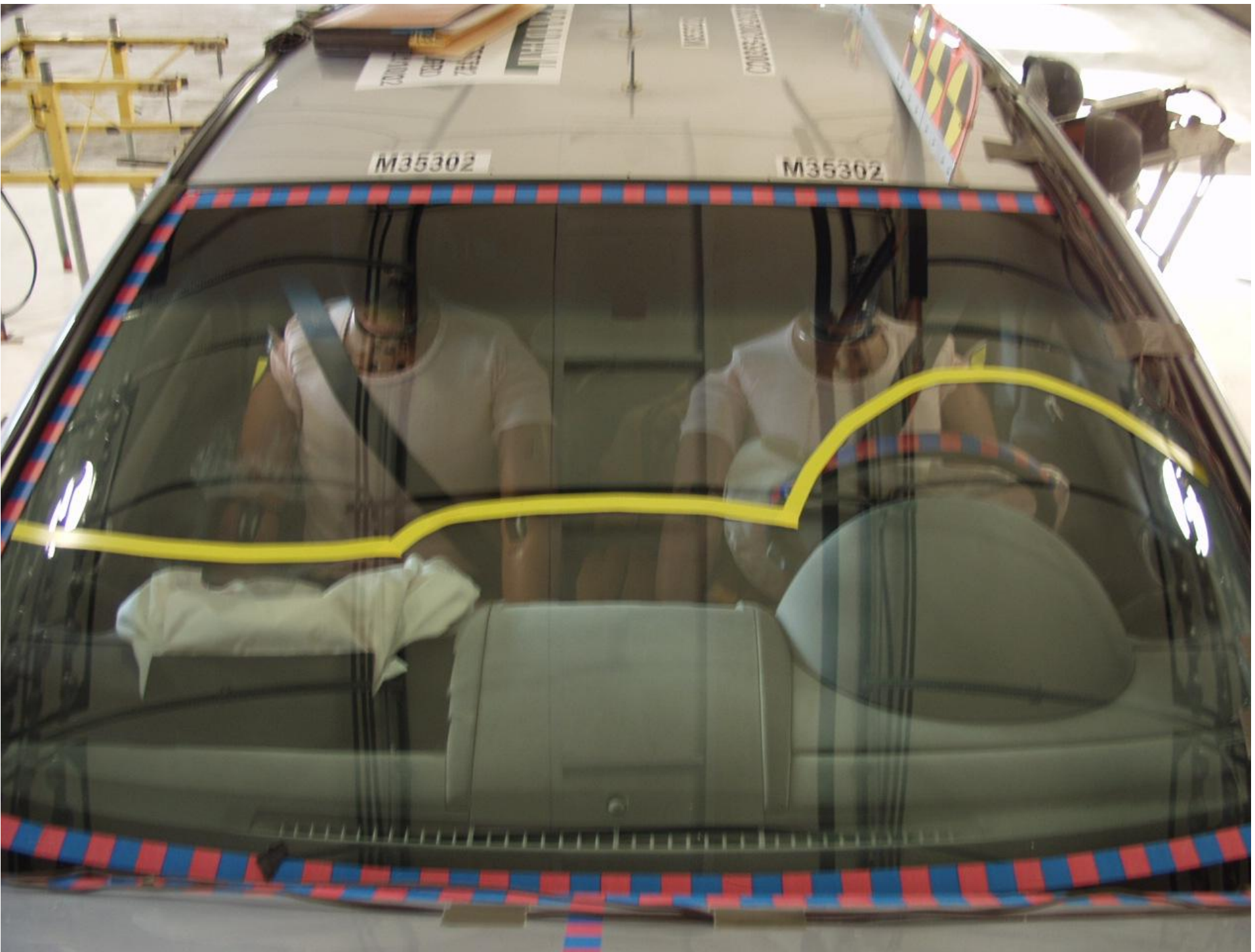


Figure A-19 POST-TEST WINDSHIELDVIEW



A-23

8642-NCAP-24

Figure A-20 PRE-TEST ENGINE COMPARTMENT VIEW



Figure A-21 POST-TEST ENGINE COMPARTMENT VIEW



Figure A-22 PRE-TEST FUEL CAP VIEW



Figure A-23 POST-TEST FUEL CAP VIEW



Figure A-24 PRE-TEST FRONT UNDERBODY VIEW

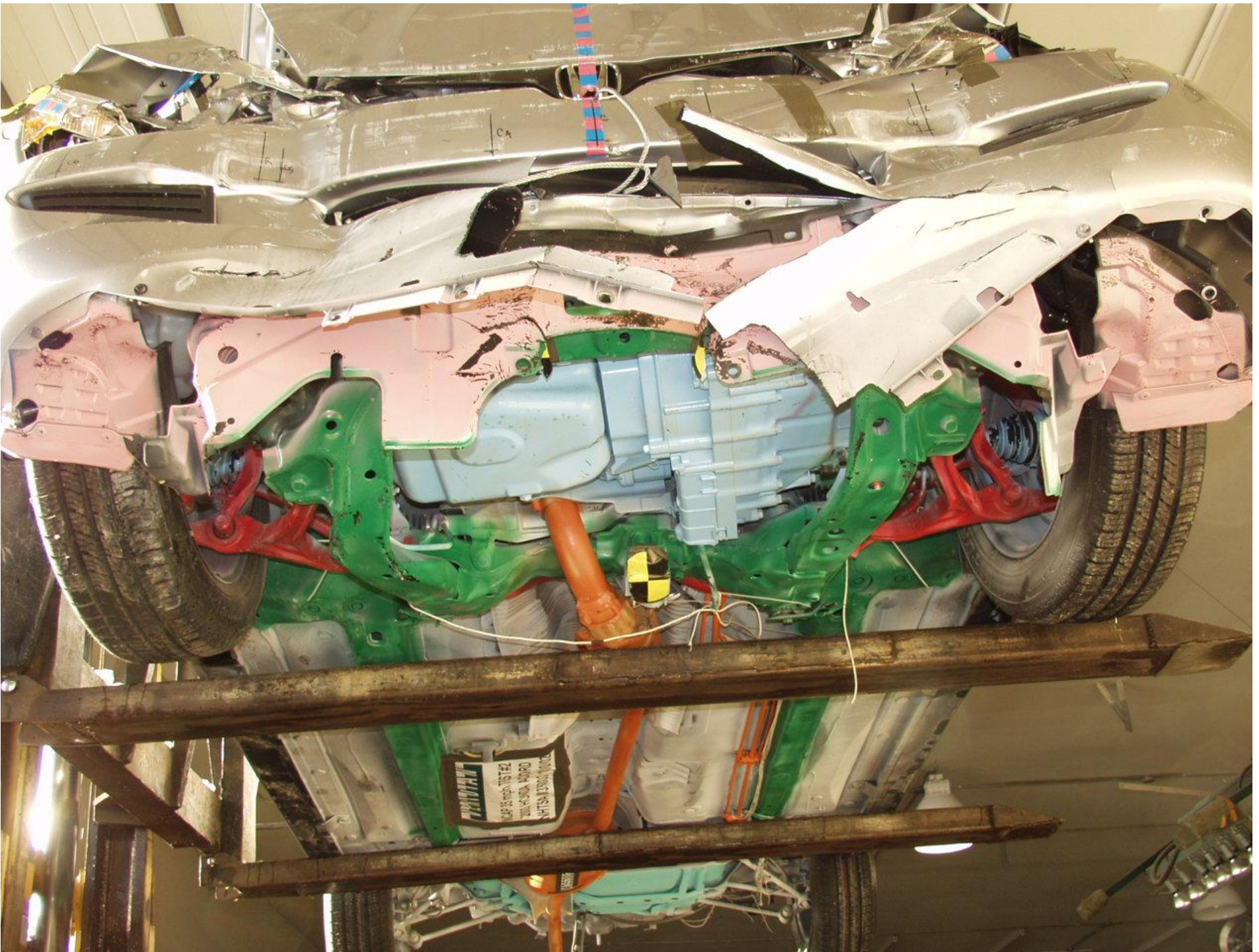


Figure A-25 POST-TEST FRONT UNDERBODY VIEW



Figure A-26 PRE-TEST MID UNDERBODY VIEW



Figure A-27 POST-TEST MID UNDERBODY VIEW



Figure A-28 PRE-TEST REAR UNDERBODY VIEW

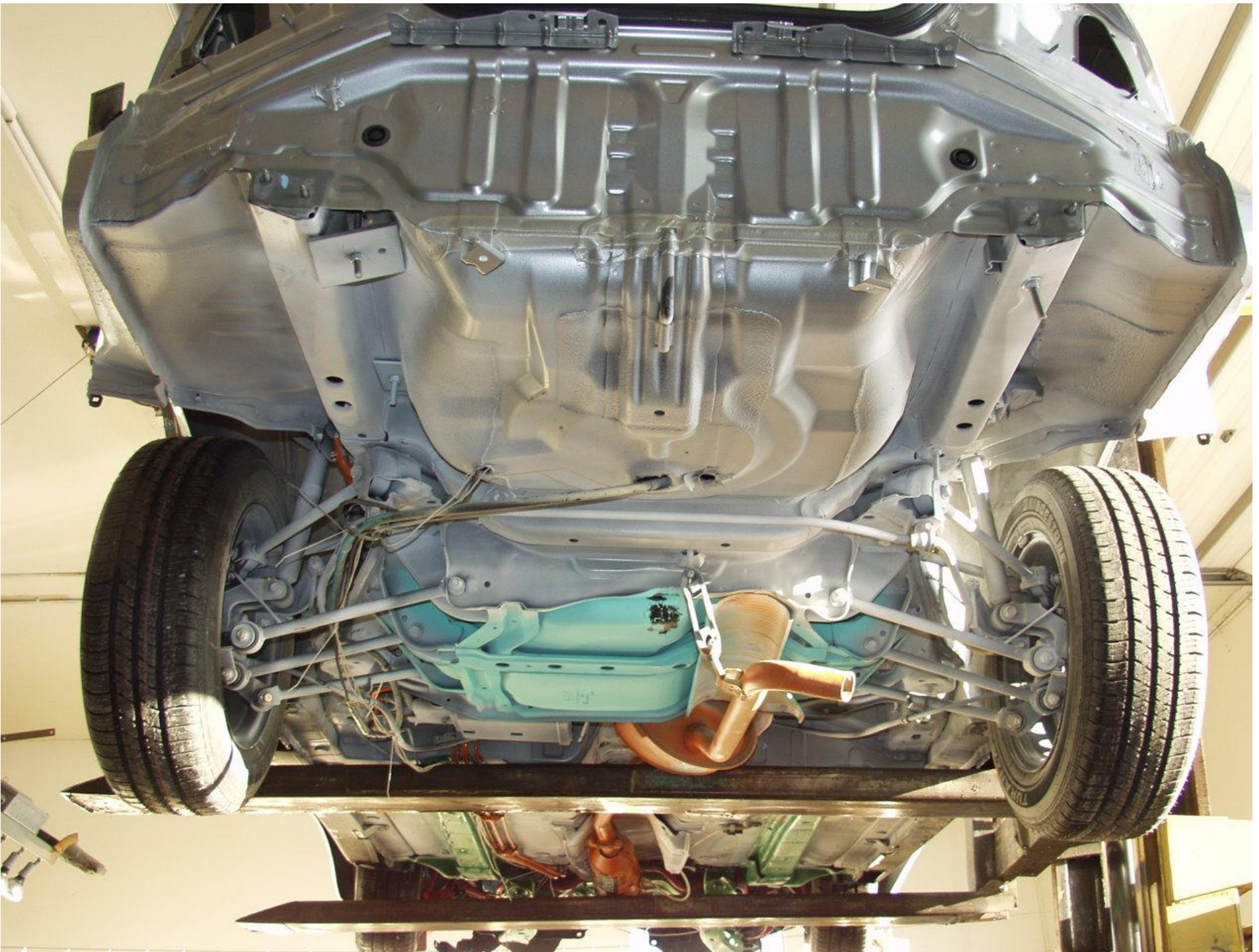


Figure A-29 POST-TEST REAR UNDERBODY VIEW



Figure A-30 PRE-TEST DRIVER HEAD LOCATION



Figure A-31 POST-TEST DRIVER HEAD LOCATION



Figure A-32 PRE-TEST DRIVER POSITION VIEW



Figure A-33 POST-TEST DRIVER POSITION VIEW



Figure A-34 PRE-TEST DRIVER AND INTERIOR VIEW



Figure A-35 POST-TEST DRIVER AND INTERIOR VIEW



Figure A-36 PRE-TEST DRIVER FEET VIEW



Figure A-37 POST-TEST DRIVER FEET VIEW



Figure A-38 PRE-TEST DRIVER KNEE BOLSTER VIEW



Figure A-39 POST-TEST DRIVER KNEE BOLSTER VIEW



Figure A-40 PRE-TEST DRIVER FLOOR PAN VIEW



Figure A-41 POST-TEST DRIVER FLOOR PAN VIEW



Figure A-42 POST-TEST DRIVER HEAD VIEW



Figure A-43 POST-TEST DRIVER CONTACT TO AIRBAG



Figure A-44 PRE-TEST PASSENGER HEAD LOCATION



Figure A-45 POST-TEST PASSENGER HEAD LOCATION



Figure A-46 PRE-TEST PASSENGER POSITION VIEW



Figure A-47 POST-TEST PASSENGER POSITION VIEW



Figure A-48 PRE-TEST PASSENGER AND INTERIOR VIEW



Figure A-49 POST-TEST PASSENGER AND INTERIOR VIEW



Figure A-50 PRE-TEST FEET VIEW



Figure A-51 POST-TEST FEET VIEW



Figure A-52 PRE-TEST PASSENGER KNEE BOLSTER VIEW



Figure A-53 POST-TEST PASSENGER KNEE BOLSTER VIEW



Figure A-54 PRE-TEST PASSENGER FLOOR PAN VIEW



Figure A-55 POST-TEST PASSENGER FLOOR PAN VIEW



Figure A-56 POST-TEST PASSENGER HEAD VIEW



Figure A-57 POST-TEST PASSENGER CONTACT TO AIRBAG



Figure A-58 ROLLOVER VIEW



Figure A-59 IMPACT VIEW

APPENDIX B

DUMMY AND VEHICLE RESPONSE DATA

**Hybrid III Dummy Sign Conventions
Load Cells and Special Transducers**

Transducer	SAE Sign Convention (positive unless noted)	
Upper Neck Load Cell	Fx	Head rearward
	Fy	Head left
	Fz	Neck in tension
	Mx	Left ear to left shoulder
	My	Chin to chest (flexion)
	Mz	Chin to left shoulder (look left)
Chest Displacement Potentiometer	Compression is negative	
Pelvic Load Cell (Lower Lumbar)	Fx	Chest rearward
	Fy	Chest left
	Fz	Spine in tension
Femur Load Cell	Compression is negative	
Upper Tibia Load Cell (right and left leg)	Mx	Support tibia at ends, load left side center
	My	Support tibia at ends, load front (shin) center
Lower Tibia Load Cell (right and left leg)	Fz	Tibia in tension
	Mx	Support tibia at ends, load left side center
	My	Support tibia at ends, load front (shin) center

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO. M35302

DATA TYPE	SAE FILTER CLASS (Hz)
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	600
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180
Vehicle Displacement Integrations	180

TABLE OF DATA PLOTS

PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
1	V1P1 Head CG x [g, CFC_1000]	B-7
2	V1P1 Head CG y [g, CFC_1000]	B-8
3	V1P1 Head CG z [g, CFC_1000]	B-9
4	V1P1 Head CG Resultant [g, CFC_1000]	B-10
5	V1P1 Head CG Red x [g, CFC_1000]	B-11
6	V1P1 Head CG Red y [g, CFC_1000]	B-12
7	V1P1 Head CG Red z [g, CFC_1000]	B-13
8	V1P1 Head CG Red Resultant [g, CFC_1000]	B-14
9	V1P1 Upper Neck Fx [N, CFC_1000]	B-15
10	V1P1 Upper Neck Fy [N, CFC_1000]	B-16
11	V1P1 Upper Neck Fz [N, CFC_1000]	B-17
12	V1P1 Upper Neck F Resultant [N, CFC_1000]	B-18
13	V1P1 Upper Neck Mx [N-m, CFC_600]	B-19
14	V1P1 Upper Neck My [N-m, CFC_600]	B-20
15	V1P1 Upper Neck Mz [N-m, CFC_600]	B-21
16	V1P1 Upper Neck M Resultant [N-m, CFC_600]	B-22
17	V1P1 Chest x [g, CFC_180]	B-23
18	V1P1 Chest y [g, CFC_180]	B-24
19	V1P1 Chest z [g, CFC_180]	B-25
20	V1P1 Chest Resultant [g, CFC_180]	B-26
21	V1P1 Chest Red x [g, CFC_180]	B-27
22	V1P1 Chest Red y [g, CFC_180]	B-28
23	V1P1 Chest Red z [g, CFC_180]	B-29
24	V1P1 Chest Red Resultant [g, CFC_180]	B-30
25	V1P1 Chest Compression x [mm, CFC_600]	B-31
26	V1P1 Pelvic x [g, CFC_1000]	B-32
27	V1P1 Pelvic y [g, CFC_1000]	B-33
28	V1P1 Pelvic z [g, CFC_1000]	B-34
29	V1P1 Pelvic Resultant [g, CFC_1000]	B-35
30	V1P1 Left Femur z [N, CFC_600]	B-36
31	V1P1 Right Femur z [N, CFC_600]	B-37
32	V1P1 Left Upper Tibia Mx [N-m, CFC_600]	B-38
33	V1P1 Left Upper Tibia My [N-m, CFC_600]	B-39
34	V1P1 Left Lower Tibia Fz [N, CFC_600]	B-40
35	V1P1 Left Lower Tibia Mx [N-m, CFC_600]	B-41
36	V1P1 Left Lower Tibia My [N-m, CFC_600]	B-42
37	V1P1 Right upper Tibia Mx [N-m, CFC_600]	B-43
38	V1P1 Right upper Tibia My [N-m, CFC_600]	B-44
39	V1P1 Right Lower Tibia Fz [N, CFC_600]	B-45
40	V1P1 Right Lower Tibia Mx [N-m, CFC_600]	B-46
41	V1P1 Right Lower Tibia My [N-m, CFC_600]	B-47
42	V1P1 Left Foot Aft x [g, CFC_600]	B-48

43	V1P1 Left Foot Aft z [g, CFC_600]	B-49
44	V1P1 Left Foot Fore z [g, CFC_600]	B-50
45	V1P1 Right Foot Aft x [g, CFC_600]	B-51
46	V1P1 Right foot Aft z [g, CFC_600]	B-52
47	V1P1 Right Foot Fore z [g, CFC_600]	B-53
48	V1P1 Driver Lap Belt [N, CFC_60]	B-54
49	V1P2 Head CG x [g, CFC_1000]	B-55
50	V1P2 Head CG y [g, CFC_1000]	B-56
51	V1P2 Head CG z [g, CFC_1000]	B-57
52	V1P2 Head CG Resultant [g, CFC_1000]	B-58
53	V1P2 Head CG Red x [g, CFC_1000]	B-59
54	V1P2 Head CG Red y [g, CFC_1000]	B-60
55	V1P2 Head CG Red z [g, CFC_1000]	B-61
56	V1P2 Head CG Red Resultant [g, CFC_1000]	B-62
57	V1P2 Upper Neck Fx [N, CFC_1000]	B-63
58	V1P2 Upper Neck Fy [N, CFC_1000]	B-64
59	V1P2 Upper Neck Fz [N, CFC_1000]	B-65
60	V1P2 Upper Neck F Resultant [N, CFC_1000]	B-66
61	V1P2 Upper Neck Mx [N-m, CFC_600]	B-67
62	V1P2 Upper Neck My [N-m, CFC_600]	B-68
63	V1P2 Upper Neck Mz [N-m, CFC_600]	B-69
64	V1P2 Upper Neck M Resultant [N-m, CFC_600]	B-70
65	V1P2 Chest x [g, CFC_180]	B-71
66	V1P2 Chest y [g, CFC_180]	B-72
67	V1P2 Chest z [g, CFC_180]	B-73
68	V1P2 Chest Resultant [g, CFC_180]	B-74
69	V1P2 Chest Red x [g, CFC_180]	B-75
70	V1P2 Chest Red y [g, CFC_180]	B-76
71	V1P2 Chest Red z [g, CFC_180]	B-77
72	V1P2 Chest Red Resultant [g, CFC_180]	B-78
73	V1P2 Chest Compression x [mm, CFC_600]	B-79
74	V1P2 Pelvic x [g, CFC_1000]	B-80
75	V1P2 Pelvic y [g, CFC_1000]	B-81
76	V1P2 Pelvic z [g, CFC_1000]	B-82
77	V1P2 Pelvic Resultant [g, CFC_1000]	B-83
78	V1P2 Left Femur z [N, CFC_600]	B-84
79	V1P2 Right Femur z [N, CFC_600]	B-85
80	V1P2 Left Upper Tibia Mx [N-m, CFC_600]	B-86
81	V1P2 Left Upper Tibia My [N-m, CFC_600]	B-87
82	V1P2 Left Lower Tibia Fz [N, CFC_600]	B-88
83	V1P2 Left Lower Tibia Mx [N-m, CFC_600]	B-89
84	V1P2 Left Lower Tibia My [N-m, CFC_600]	B-90
85	V1P2 Right Upper Tibia Mx [N-m, CFC_600]	B-91
86	V1P2 Right Upper Tibia My [N-m, CFC_600]	B-92
87	V1P2 Right Lower Tibia Fz [N, CFC_600]	B-93
88	V1P2 Right Lower Tibia Mx [N-m, CFC_600]	B-94
89	V1P2 Right Lower Tibia My [N-m, CFC_600]	B-95

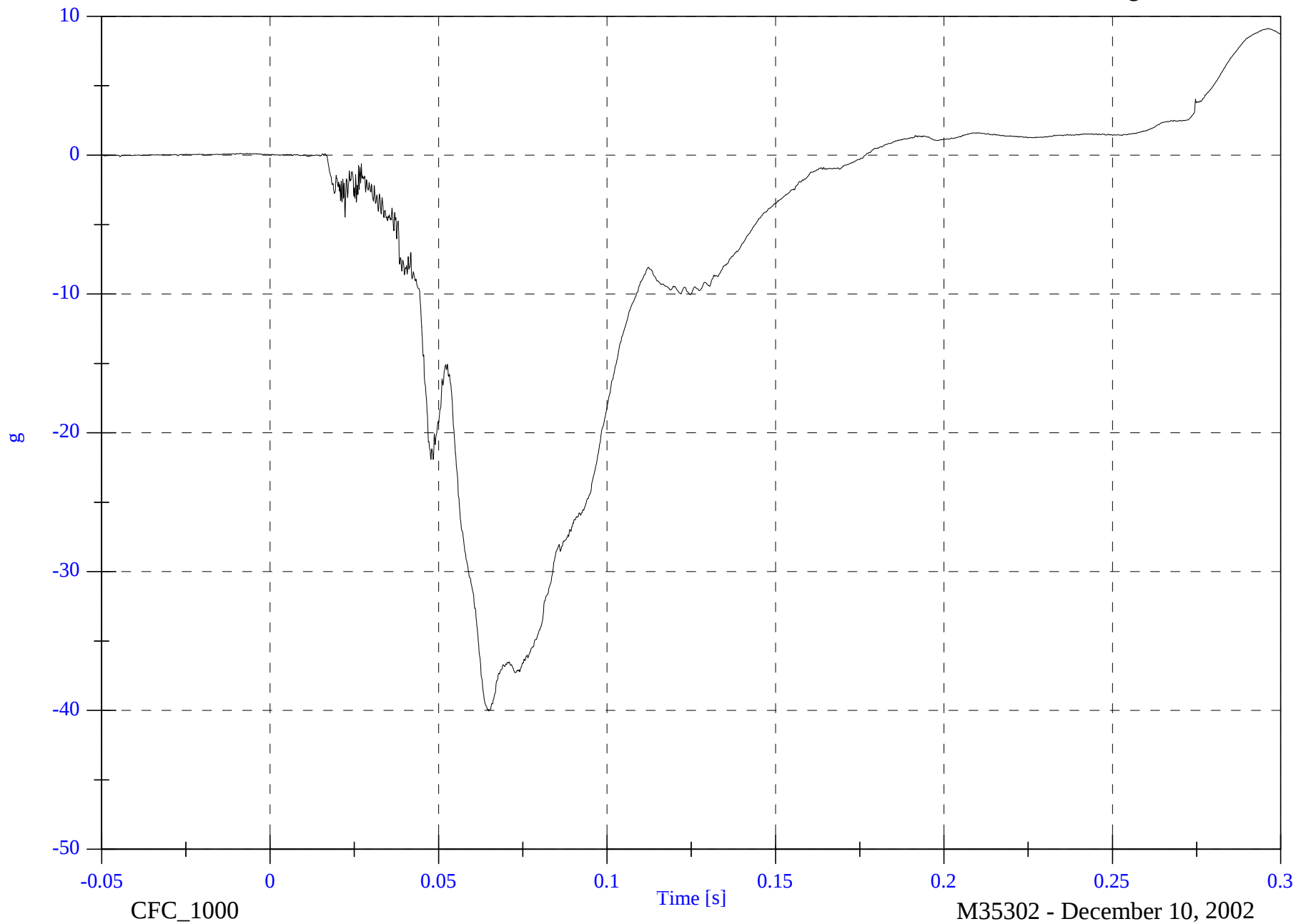
90	V1P2 Left Foot Aft x [g, CFC_600]	B-96
91	V1P2 Left Foot Aft z [g, CFC_600]	B-97
92	V1P2 Left Foot Fore z [g, CFC_600]	B-98
93	V1P2 Right Foot Aft x [g, CFC_600]	B-99
94	V1P2 Right Foot Aft z [g, CFC_600]	B-100
95	V1P2 Right Foot Fore z [g, CFC_600]	B-101
96	V1P2 RFP Lap Belt [N, CFC_60]	B-102
97	V1 Left Rear #1x [g, CFC_60]	B-103
98	V1 Left Rear #1x Velocity [kph, CFC_180]	B-104
99	V1 Left Rear #1x Displacement [mm, CFC_180]	B-105
100	V1 Right Rear #2x [g, CFC_60]	B-106
101	V1 Right Rear #2x Velocity [kph, CFC_180]	B-107
102	V1 Right Rear #2x Displacement [mm, CFC_180]	B-108
103	V1 Engine Top #3x [g, CFC_60]	B-109
104	V1 Engine Top #3x Velocity [kph, CFC_180]	B-110
105	V1 Engine Top #3x Displacement [mm, CFC_180]	B-111
106	V1 Engine Bottom #4x [g, CFC_60]	B-112
107	V1 Engine Bottom #4x Velocity [kph, CFC_180]	B-113
108	V1 Engine Bottom #4x Displacement [mm, CFC_180]	B-114
109	V1 Right Caliper #5x [g, CFC_60]	B-115
110	V1 Right Caliper #5x Velocity [kph, CFC_180]	B-116
111	V1 Right Caliper #5x Displacement [mm, CFC_180]	B-117
112	V1 Instrument Panel #6x [g, CFC_60]	B-118
113	V1 Instrument Panel #6x Velocity [kph, CFC_180]	B-119
114	V1 Instrument Panel #6x Displacement [mm, CFC_180]	B-120
115	V1 Left Caliper #7x [g, CFC_60]	B-121
116	V1 Left Caliper #7x Velocity [kph, CFC_180]	B-122
117	V1 Left Caliper #7x Displacement [mm, CFC_180]	B-123
118	V1 Left Rear #8z [g, CFC_60]	B-124
119	V1 Left Rear #8z Velocity [kph, CFC_180]	B-125
120	V1 Left Rear #8z Displacement [mm, CFC_180]	B-126
121	V1 Right Rear #9z [g, CFC_60]	B-127
122	V1 Right Rear #9z Velocity [kph, CFC_180]	B-128
123	V1 Right Rear #9z Displacement [mm, CFC_180]	B-129

NCAP Test #2 - 2003 Honda Accord

V1P1 Head CG x

Max: 9.1 [g] at 0.296 [s]

Min: -40.0 [g] at 0.065 [s]



B-7

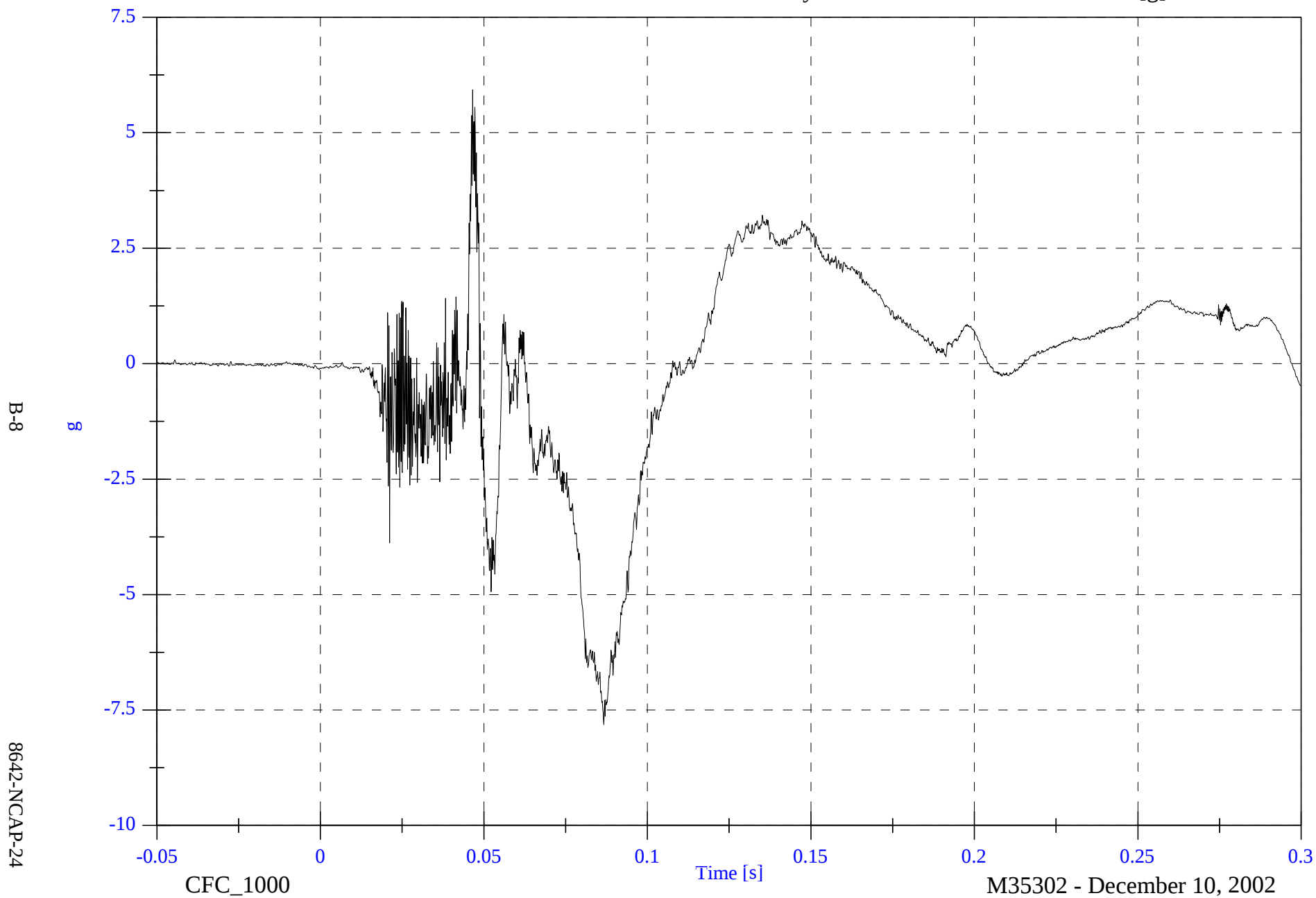
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P1 Head CG y

Max: 5.9 [g] at 0.047 [s]

Min: -7.8 [g] at 0.087 [s]

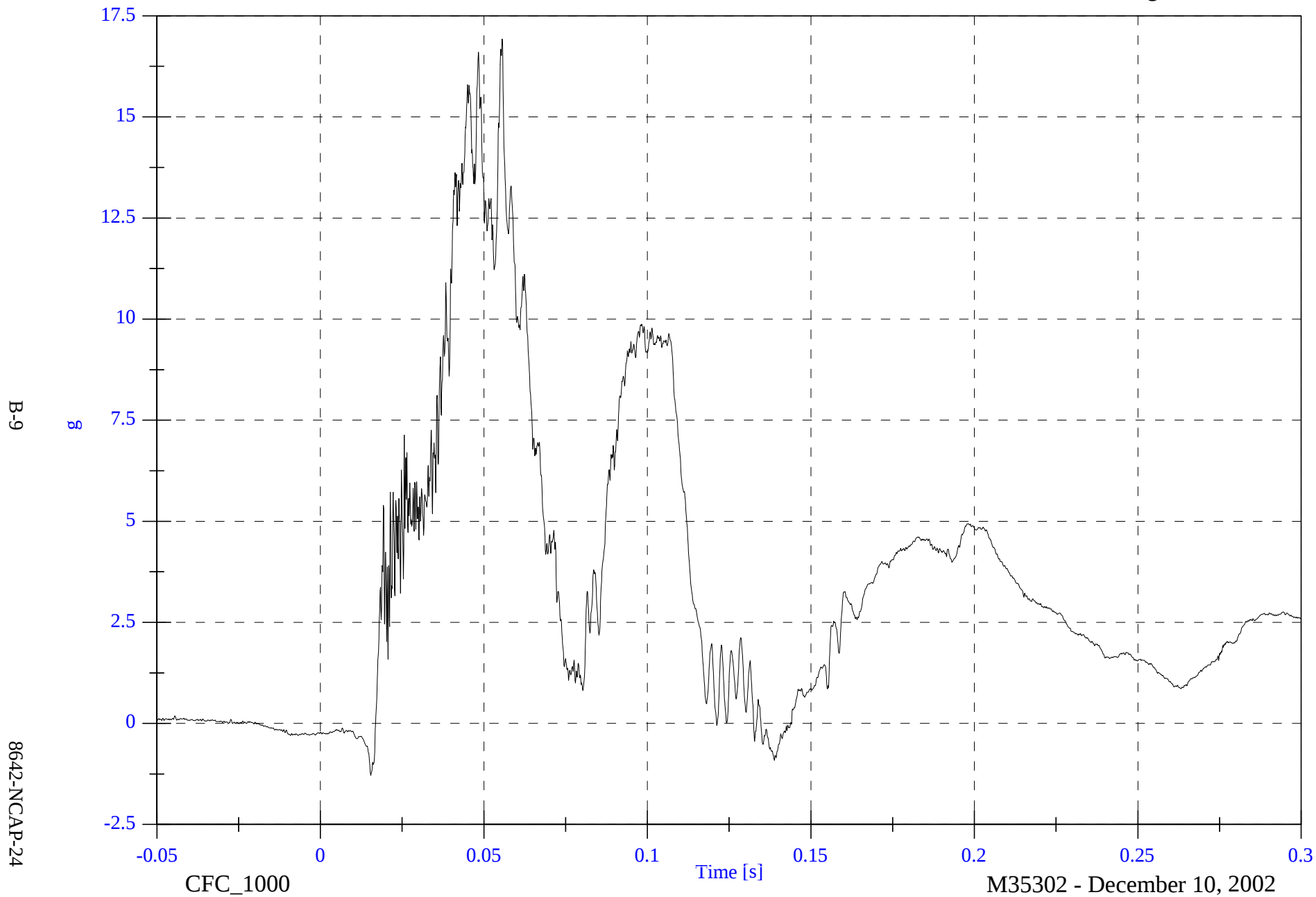


NCAP Test #2 - 2003 Honda Accord

V1P1 Head CG z

Max: 16.9 [g] at 0.056 [s]

Min: -1.3 [g] at 0.015 [s]



NCAP Test #2 - 2003 Honda Accord

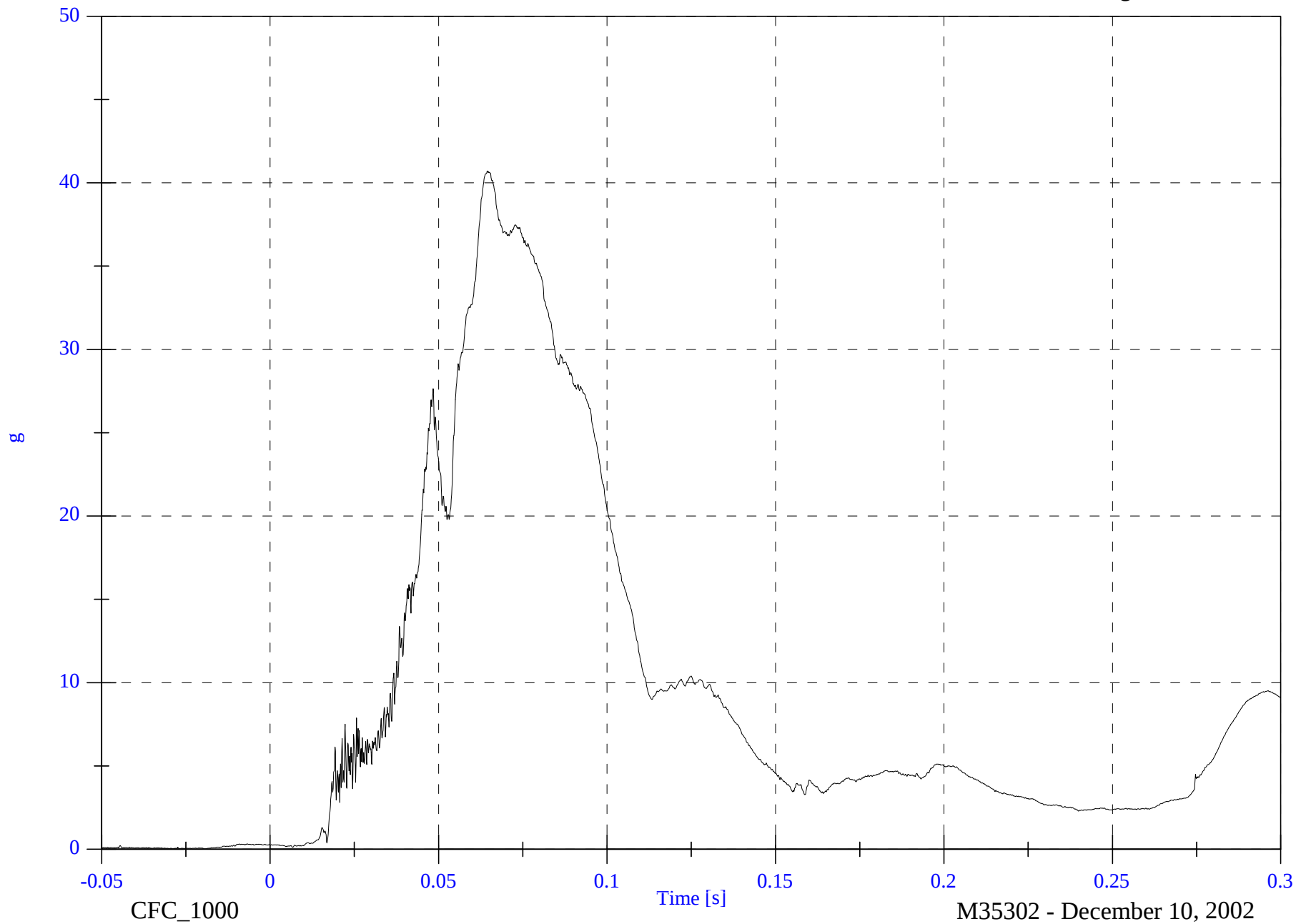
V1P1 Head CG Resultant

Max: 40.7 [g] at 0.064 [s]

Min: 0.0 [g] at -0.019 [s]

B-10

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

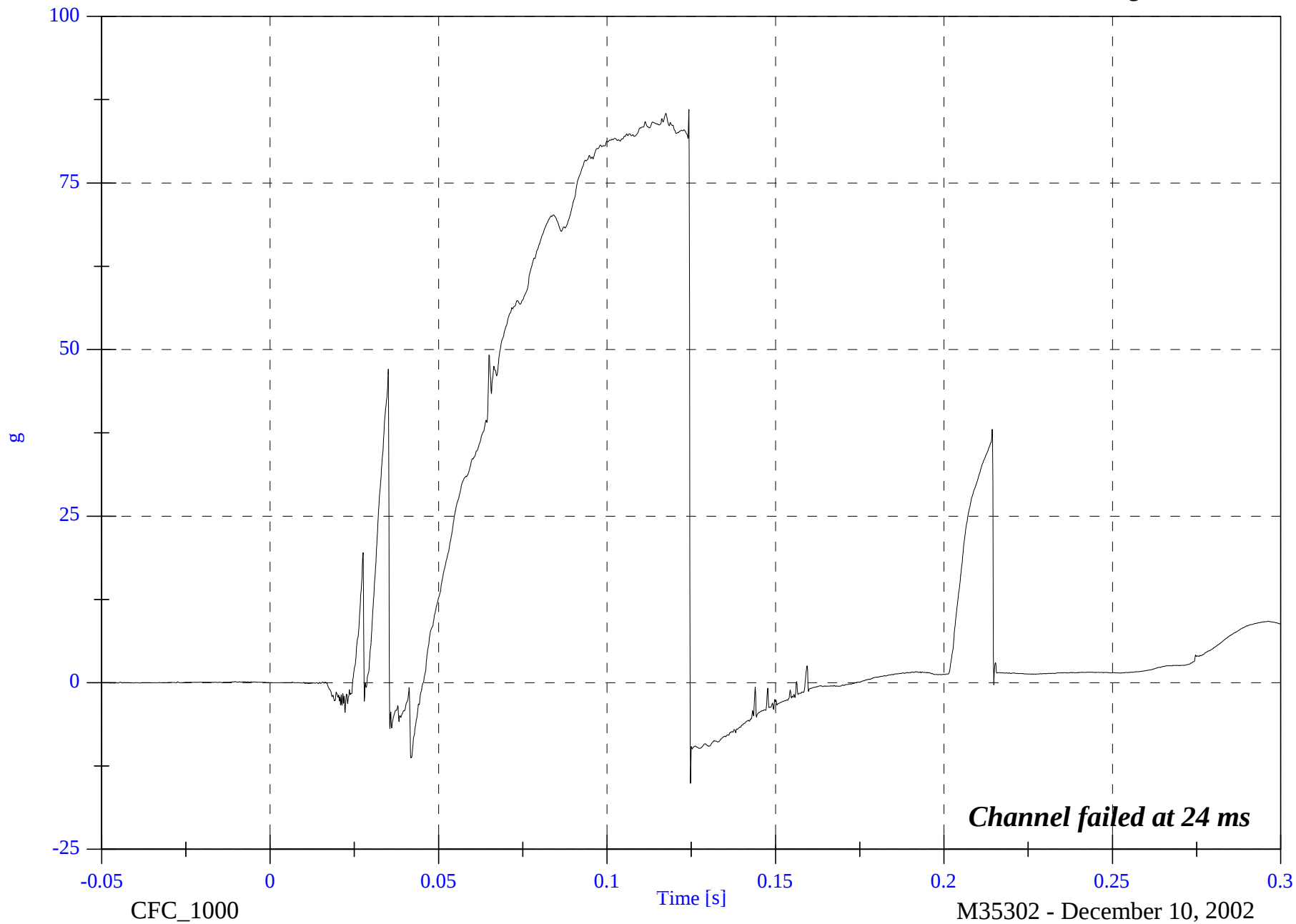
V1P1 Head CG Red x

Max: 86.0 [g] at 0.124 [s]

Min: -15.1 [g] at 0.125 [s]

B-11

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

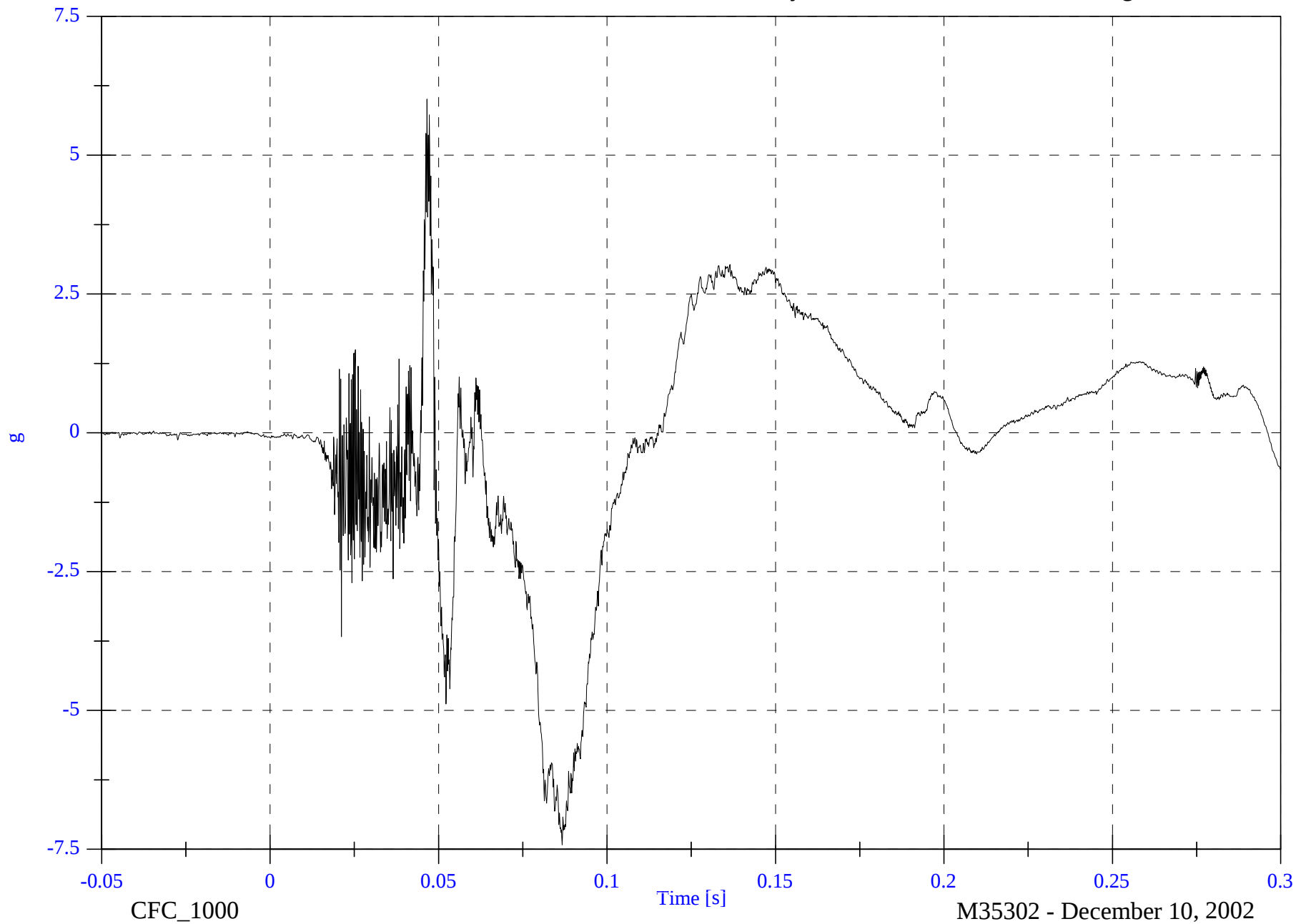
V1P1 Head CG Red y

Max: 6.0 [g] at 0.047 [s]

Min: -7.4 [g] at 0.087 [s]

B-12

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

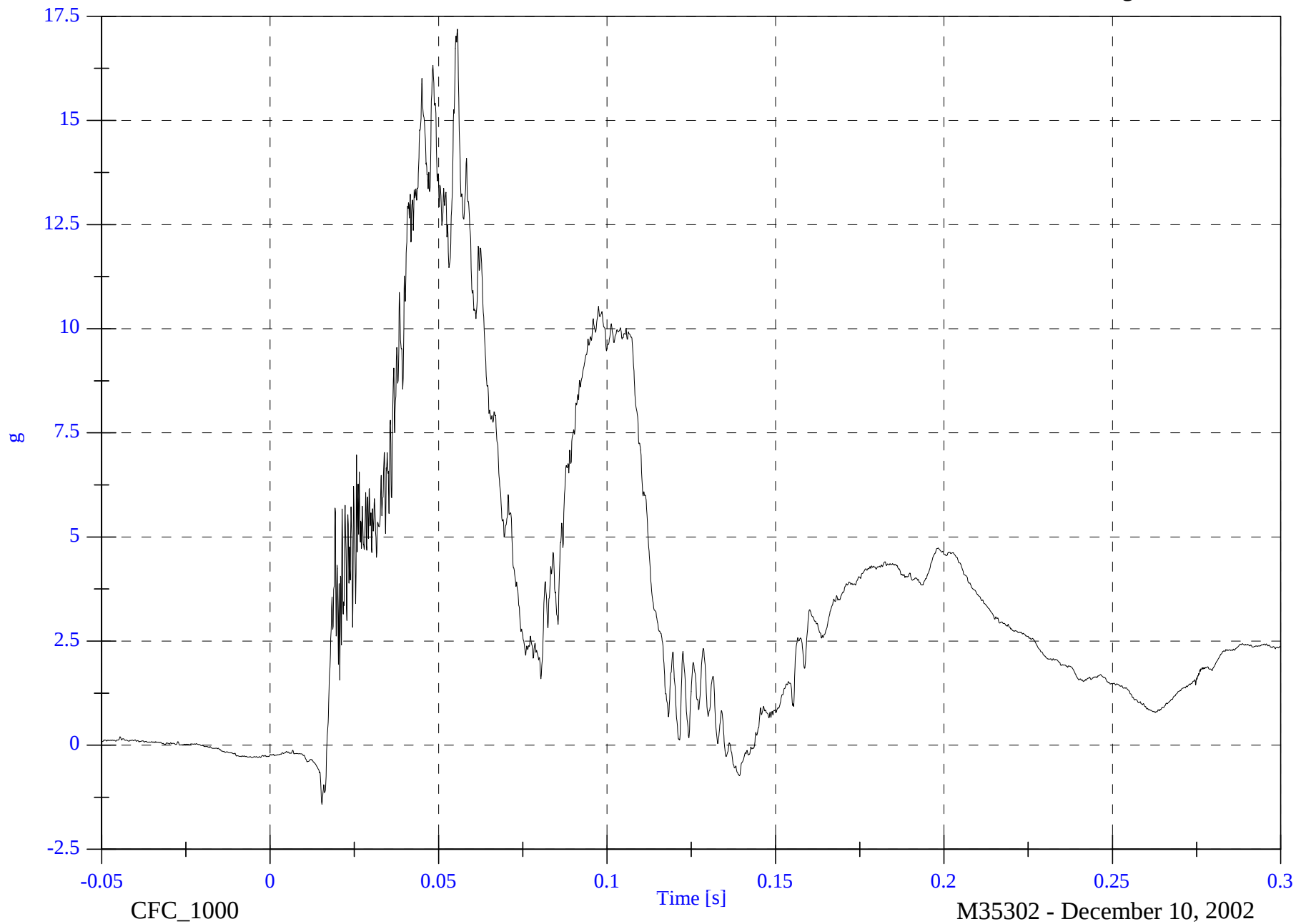
V1P1 Head CG Red z

Max: 17.2 [g] at 0.056 [s]

Min: -1.4 [g] at 0.015 [s]

B-13

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

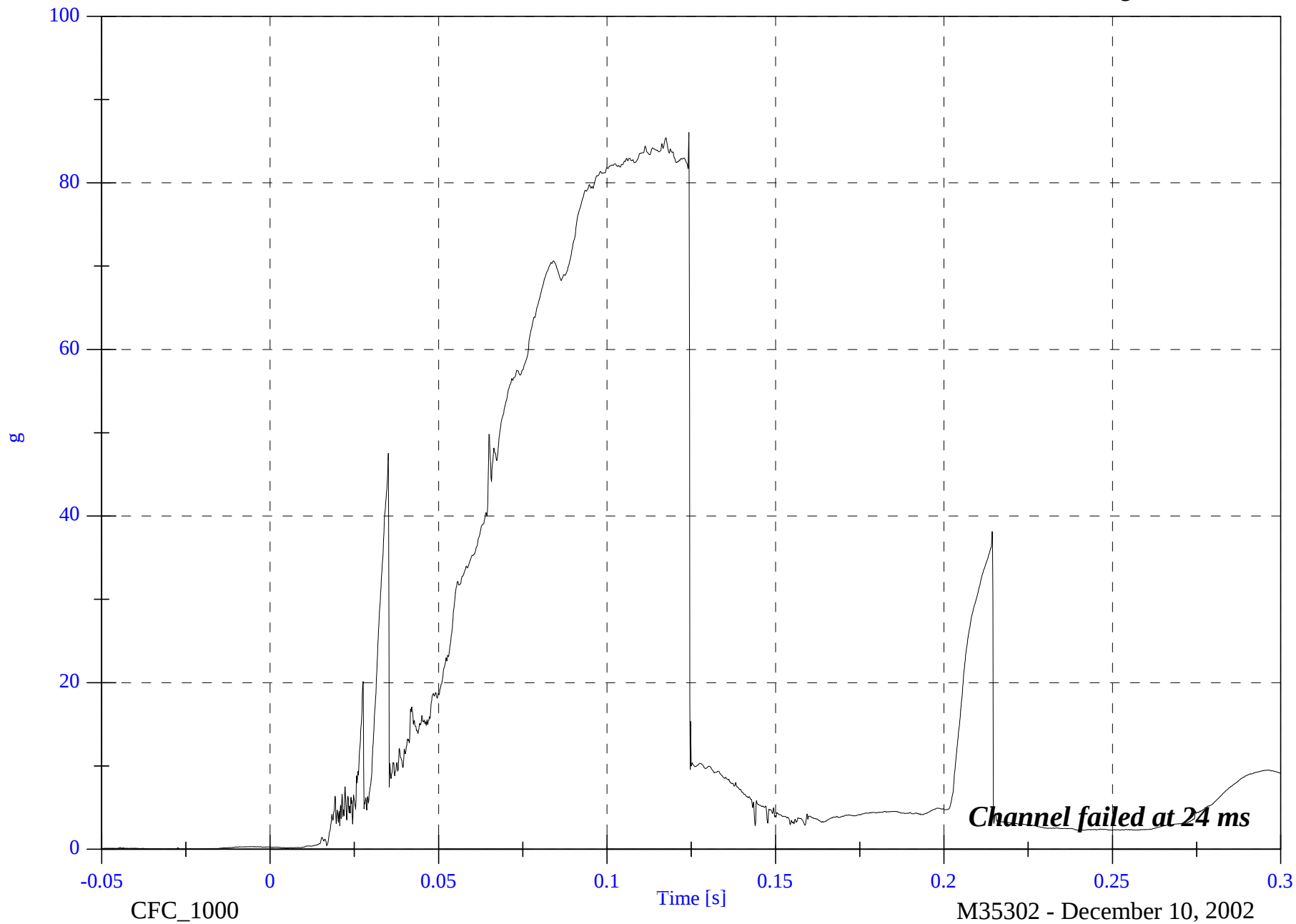
V1P1 Head CG Red Resultant

Max: 86.0 [g] at 0.124 [s]

Min: 0.0 [g] at -0.027 [s]

B-14

8642-NCAP-24

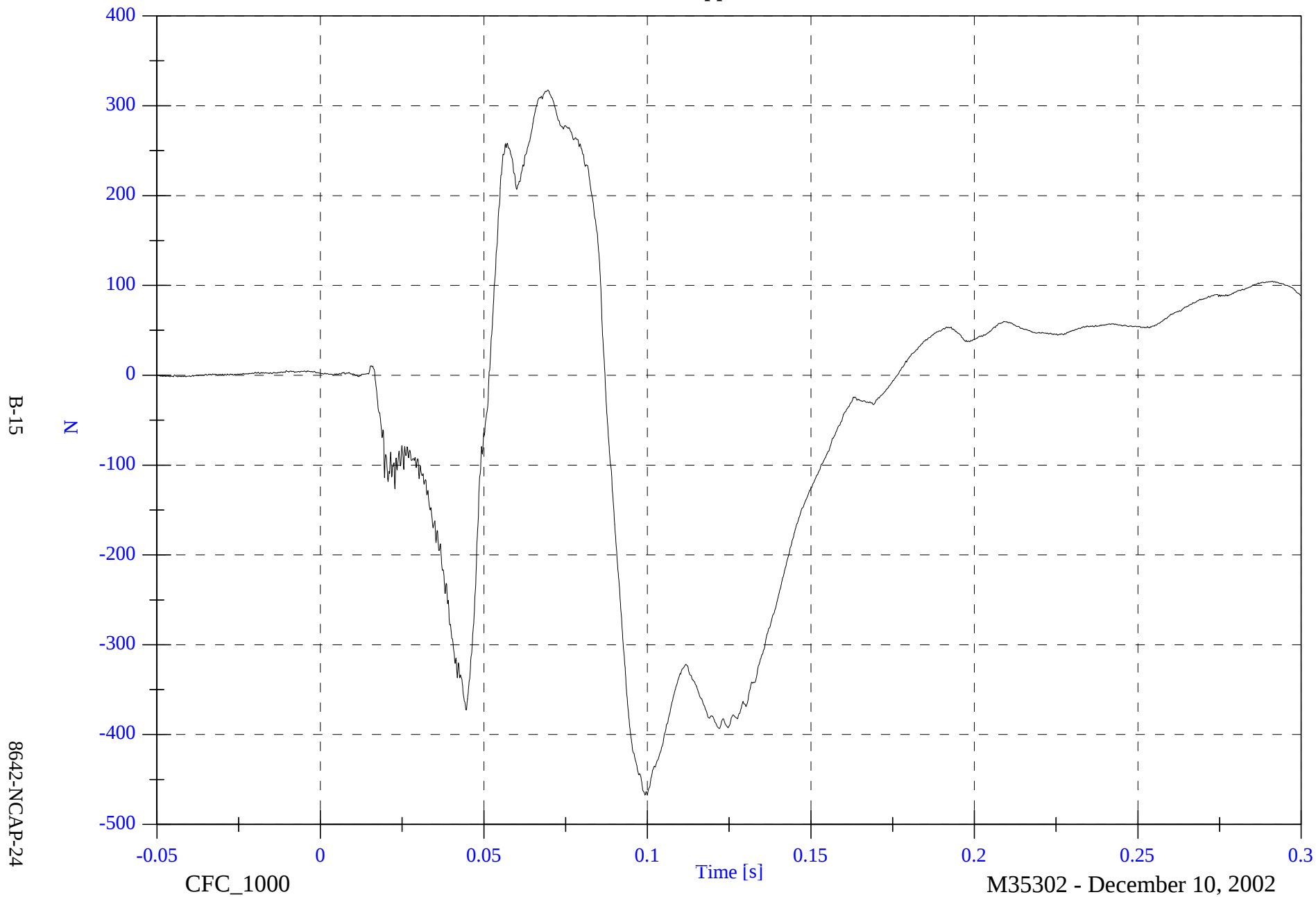


NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck Fx

Max: 317.4 [N] at 0.070 [s]

Min: -467.4 [N] at 0.099 [s]

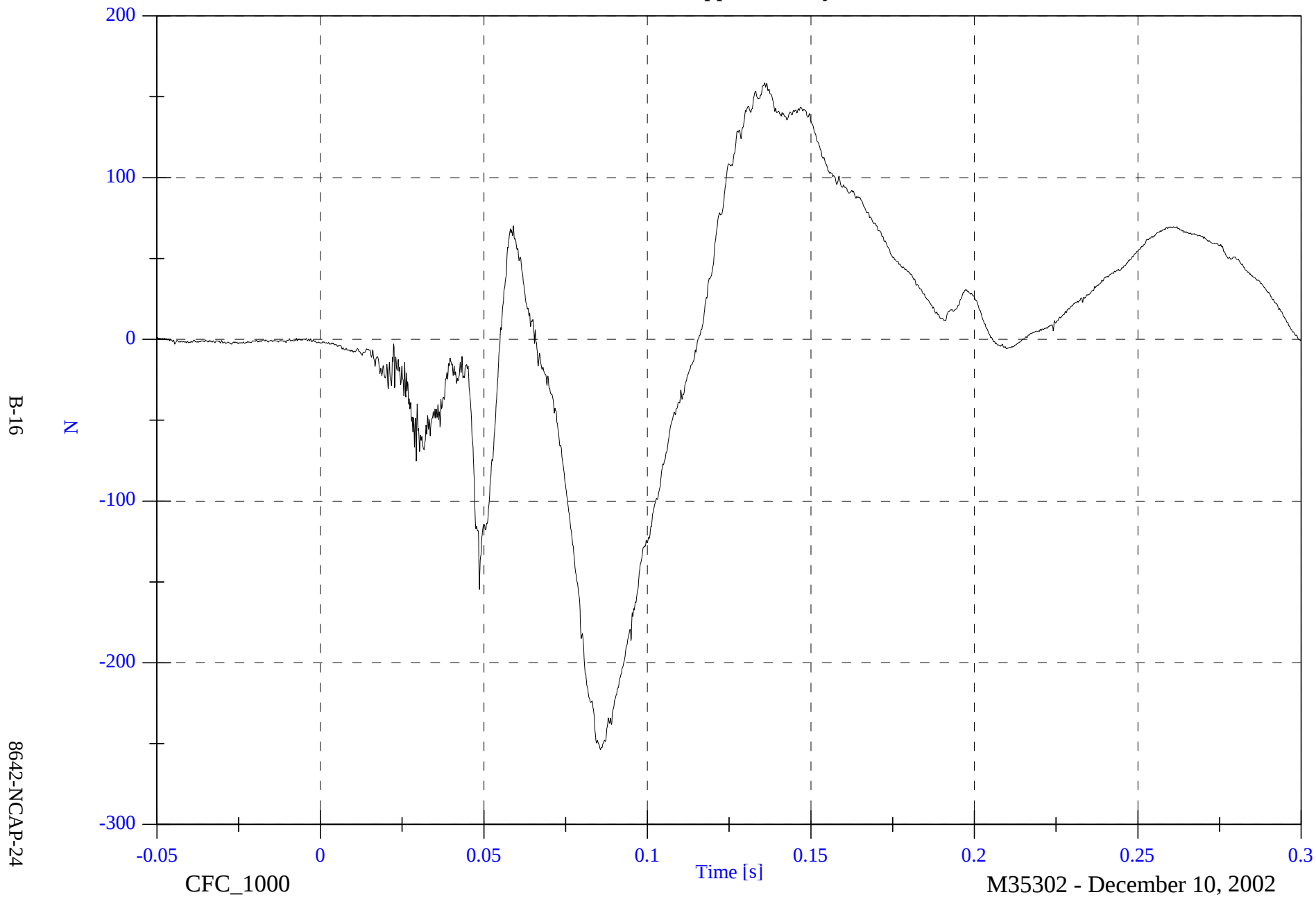


NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck Fy

Max: 158.6 [N] at 0.136 [s]

Min: -253.8 [N] at 0.086 [s]



NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck Fz

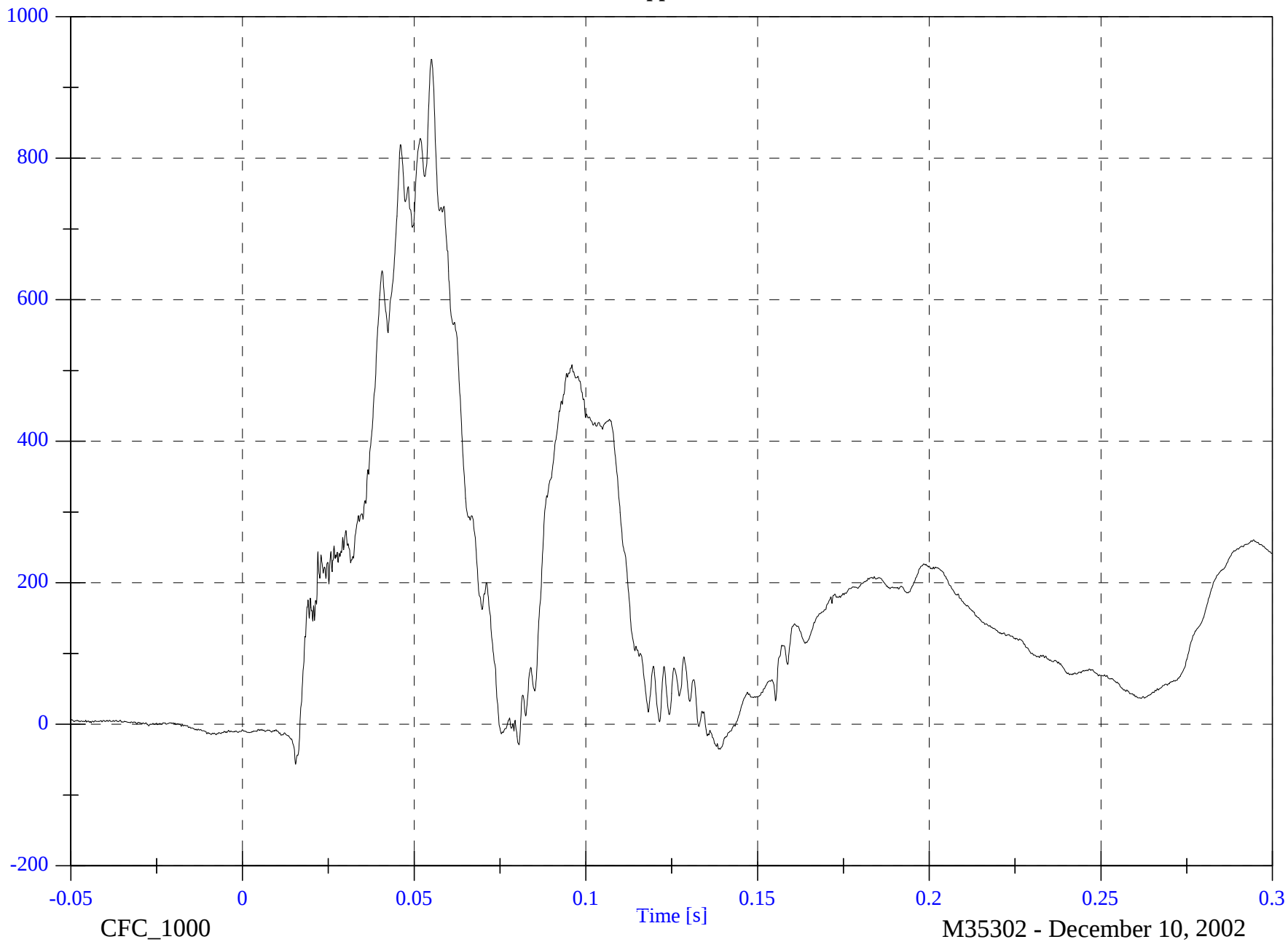
Max: 939.9 [N] at 0.055 [s]

Min: -56.7 [N] at 0.015 [s]

B-17

N

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

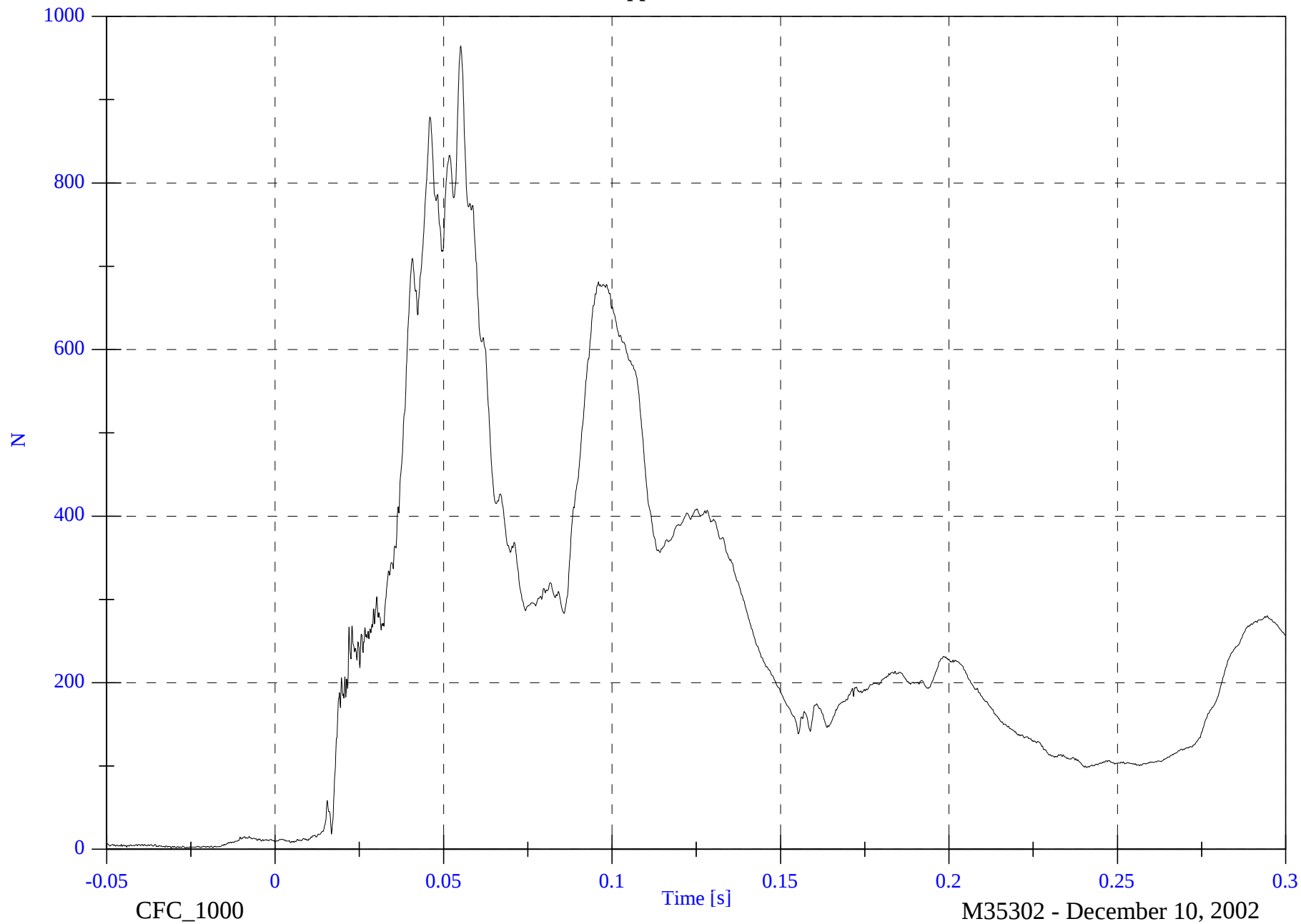
V1P1 Upper Neck F Resultant

Max: 964.5 [N] at 0.055 [s]

Min: 1.4 [N] at -0.031 [s]

B-18

8642-NCAP-24

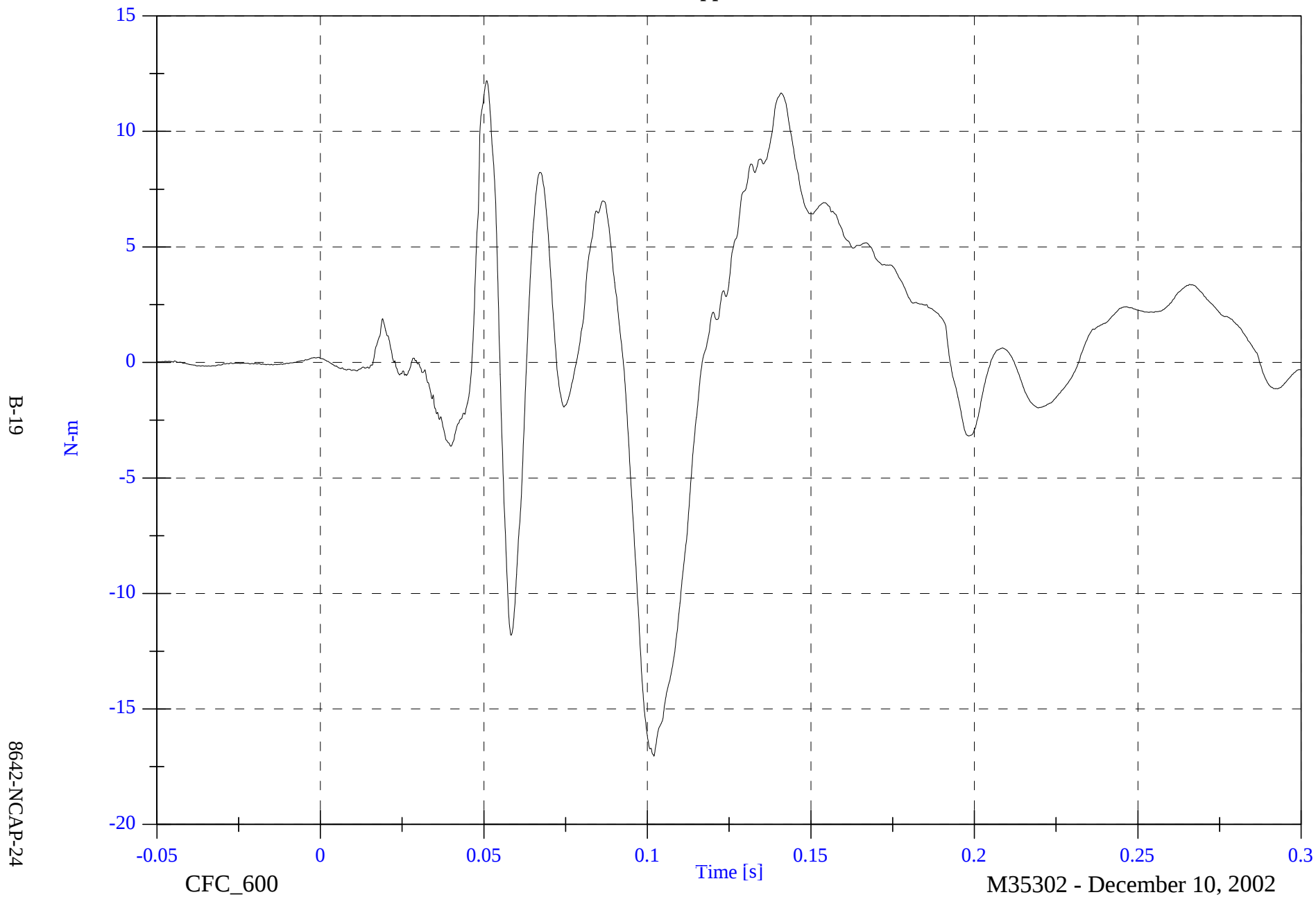


NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck Mx

Max: 12.2 [N-m] at 0.051 [s]

Min: -17.0 [N-m] at 0.102 [s]

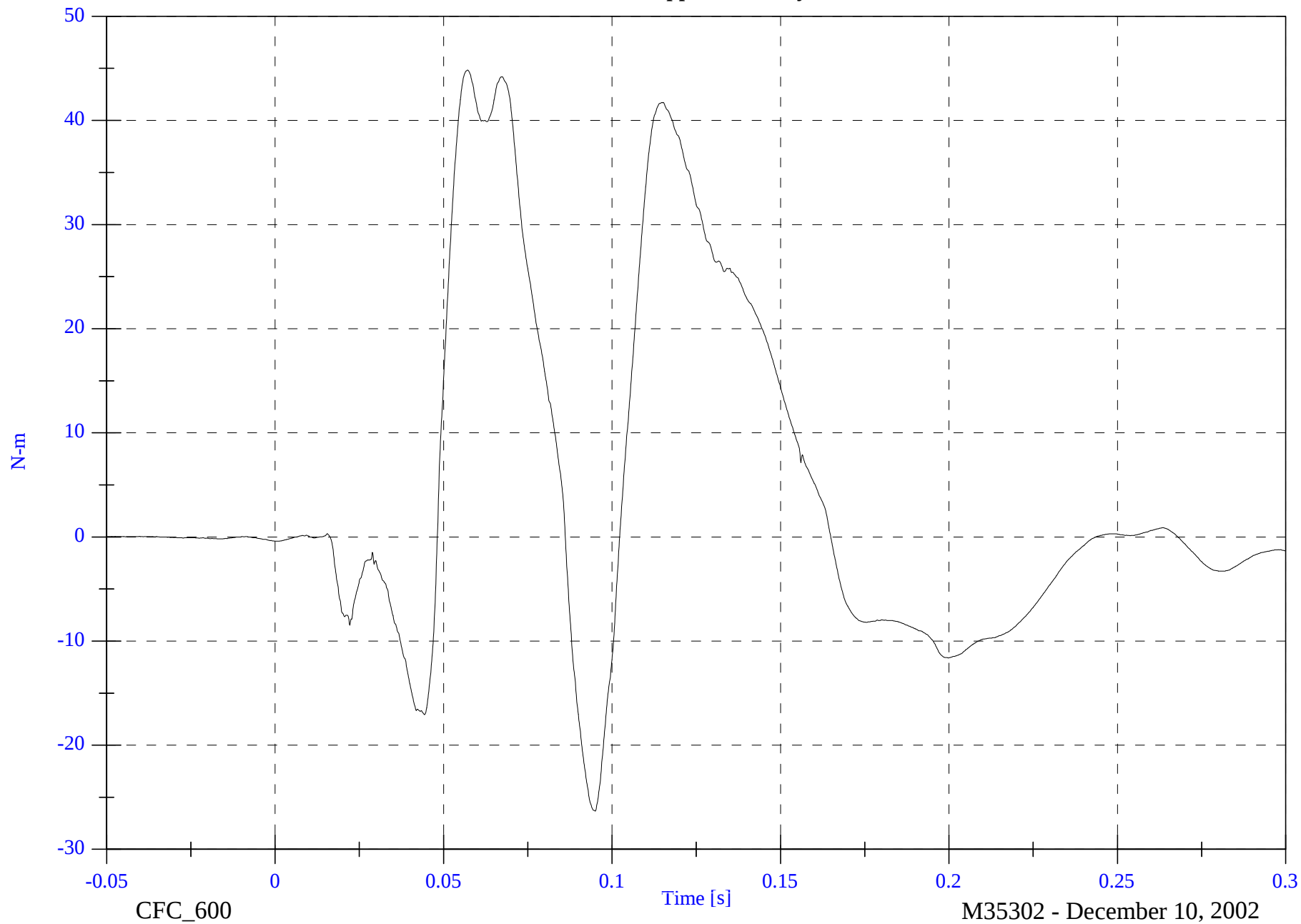


NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck My

Max: 44.8 [N-m] at 0.057 [s]

Min: -26.3 [N-m] at 0.095 [s]



B-20

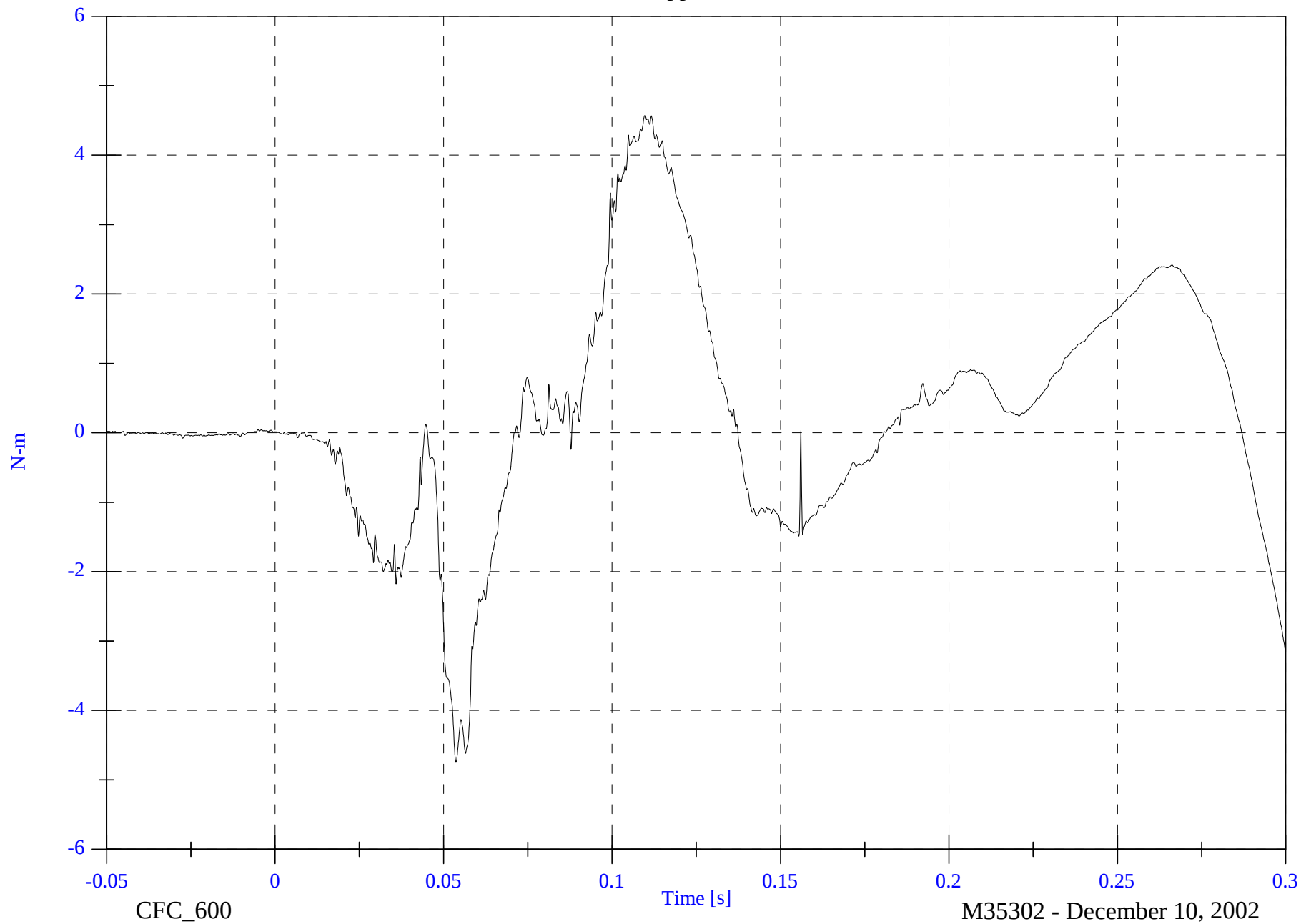
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck Mz

Max: 4.6 [N-m] at 0.110 [s]

Min: -4.8 [N-m] at 0.054 [s]



B-21

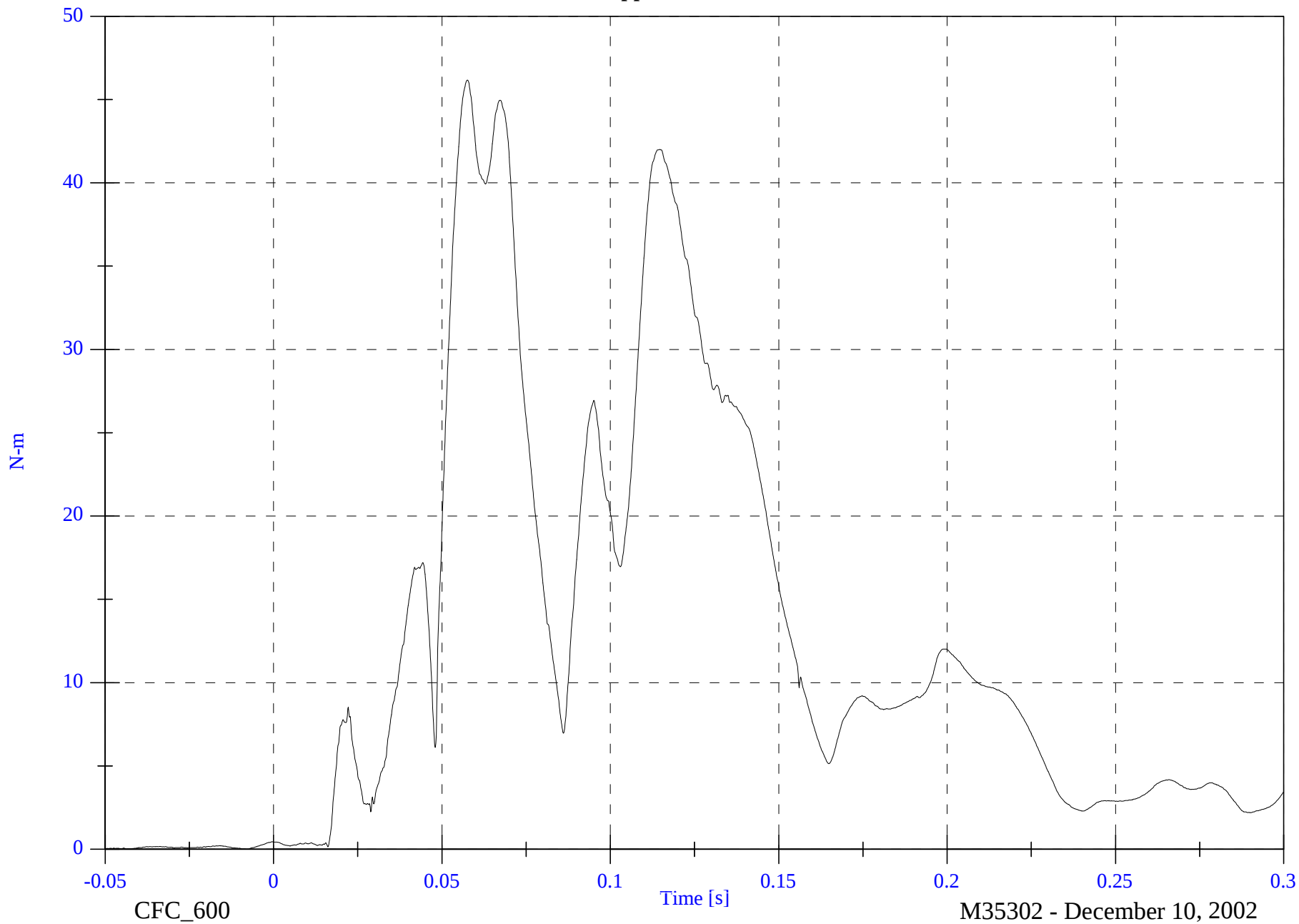
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P1 Upper Neck M Resultant

Max: 46.2 [N-m] at 0.058 [s]

Min: 0.0 [N-m] at -0.008 [s]



B-22

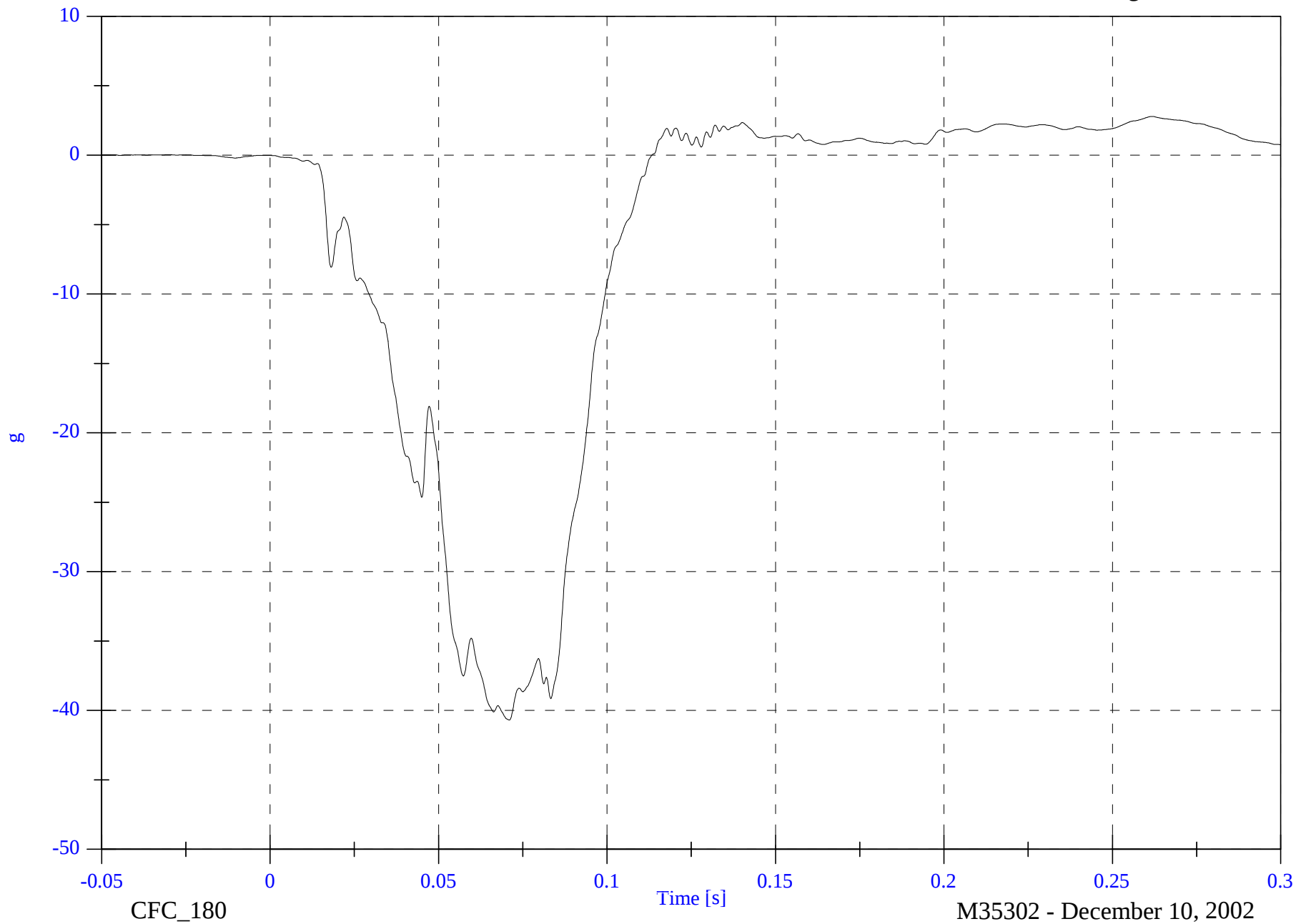
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P1 Chest x

Max: 2.8 [g] at 0.262 [s]

Min: -40.7 [g] at 0.071 [s]

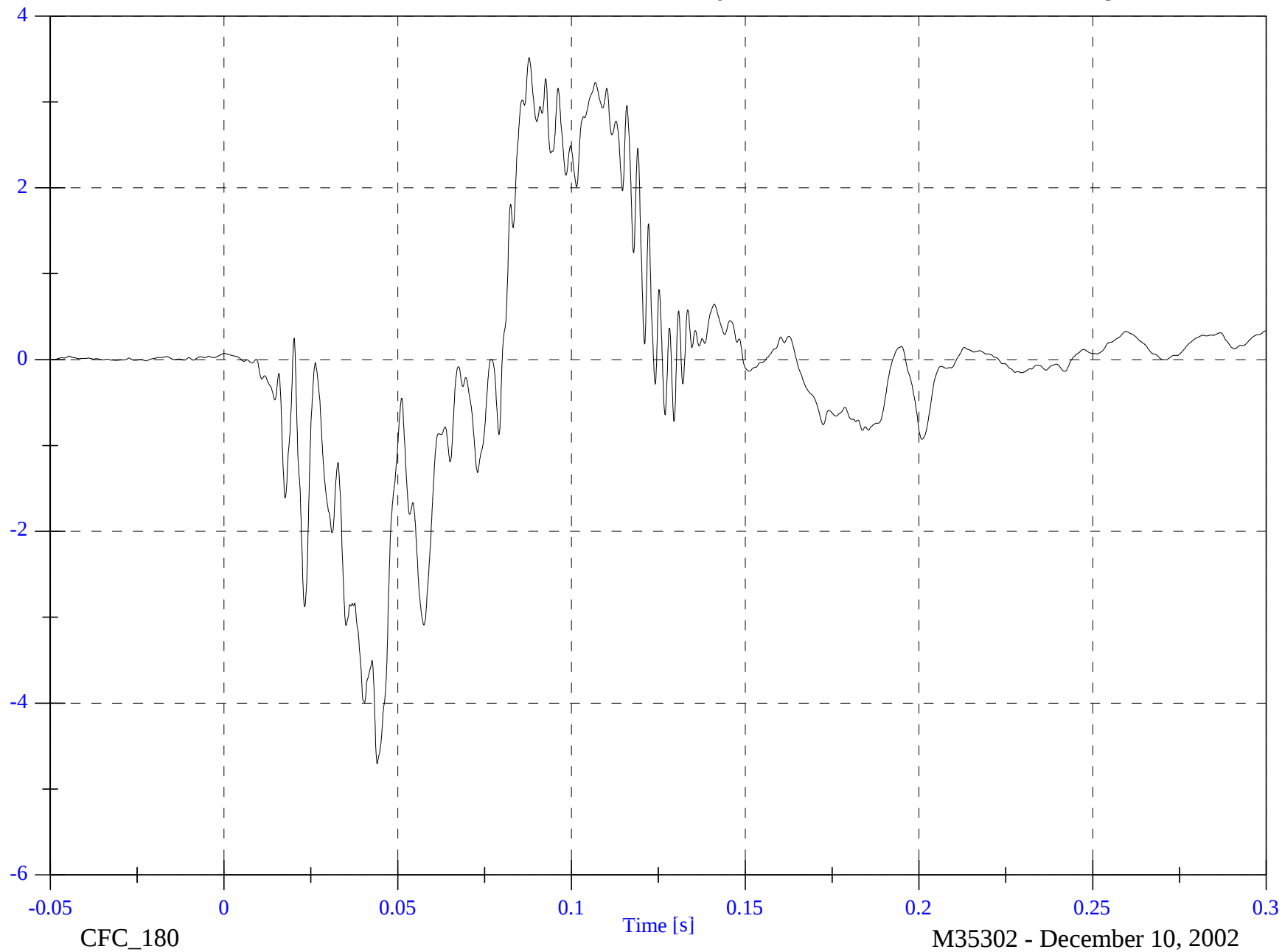


NCAP Test #2 - 2003 Honda Accord

V1P1 Chest y

Max: 3.5 [g] at 0.088 [s]

Min: -4.7 [g] at 0.044 [s]



B-24

8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

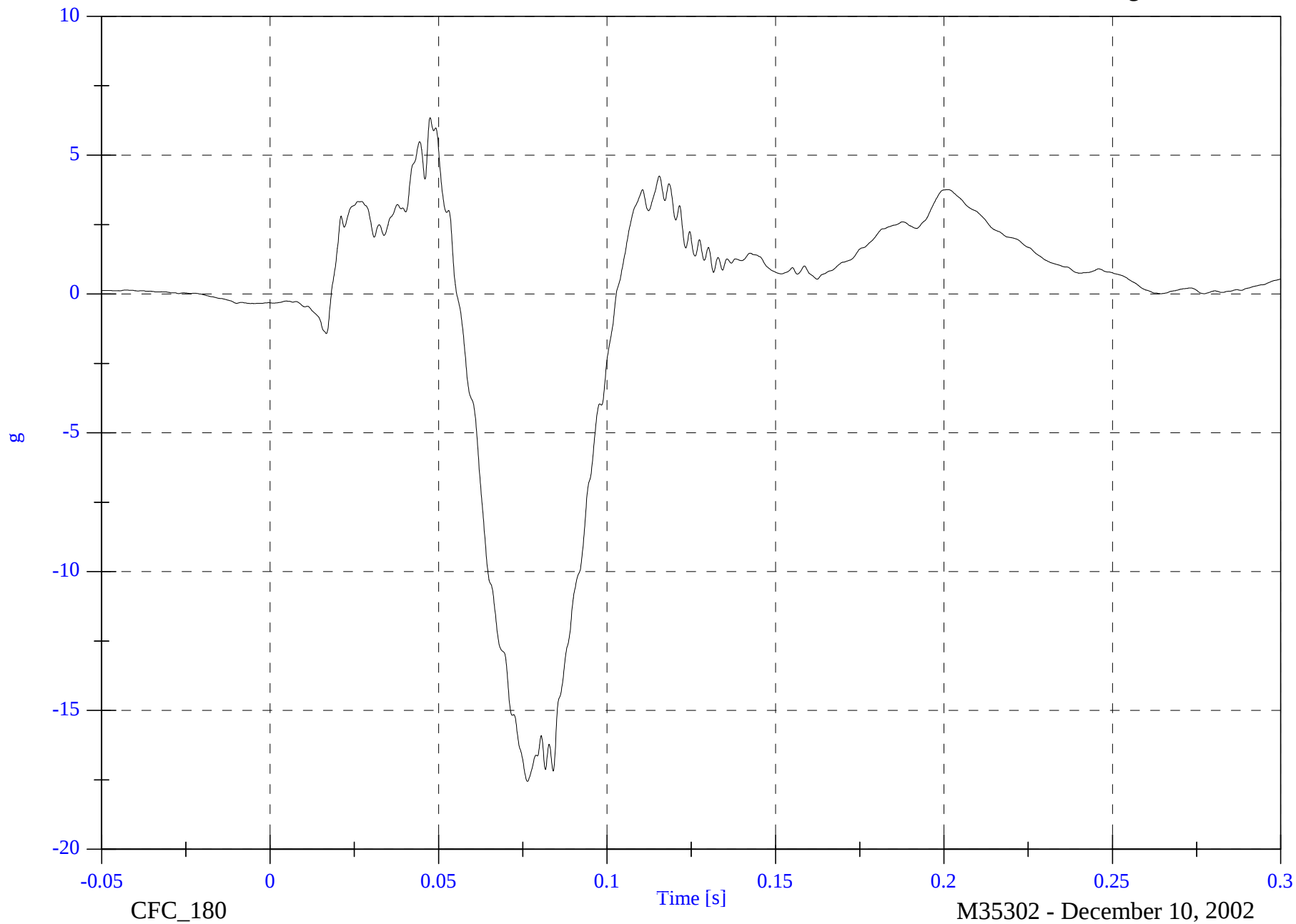
V1P1 Chest z

Max: 6.3 [g] at 0.048 [s]

Min: -17.6 [g] at 0.076 [s]

B-25

8642-NCAP-24

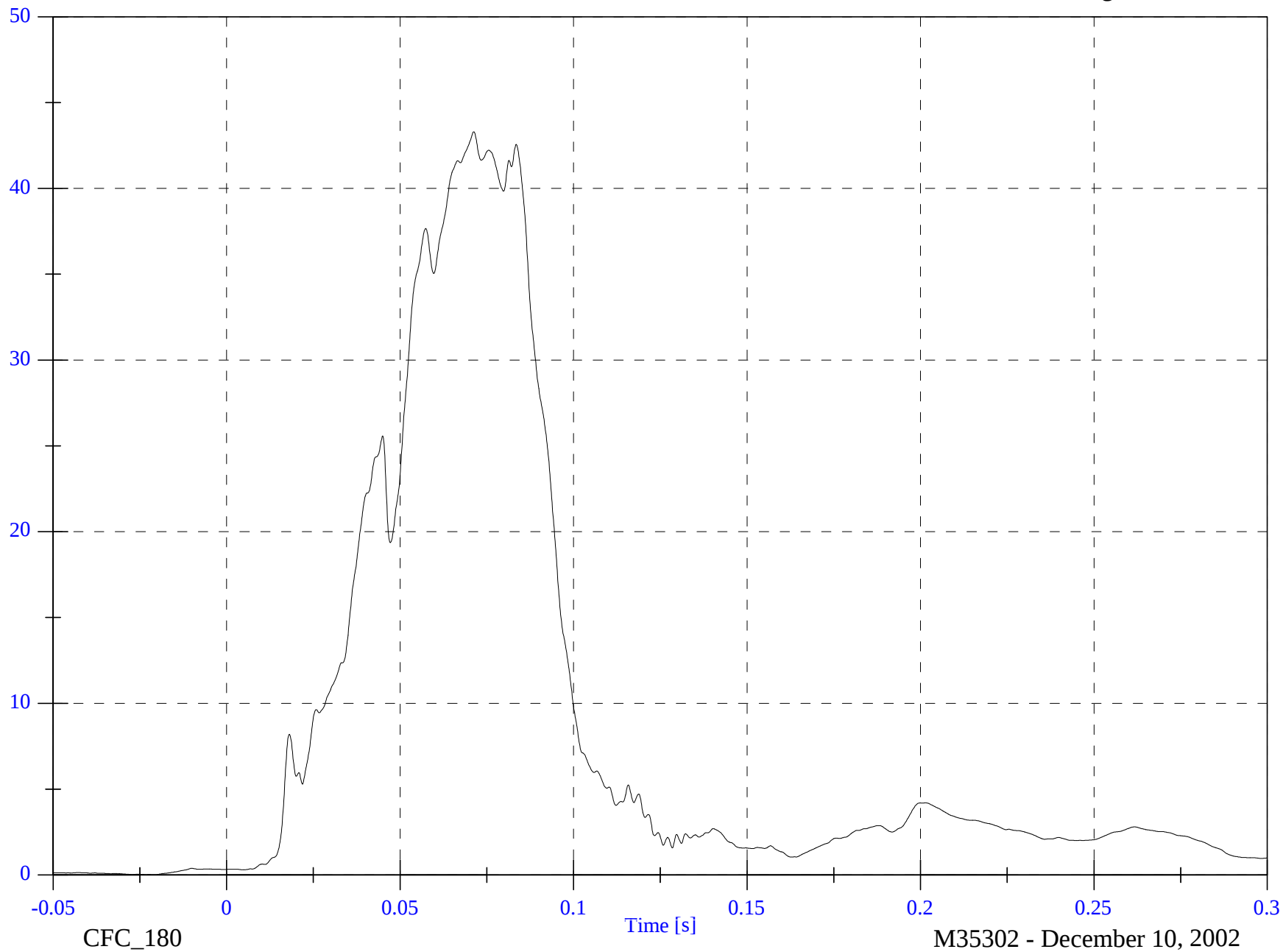


NCAP Test #2 - 2003 Honda Accord

V1P1 Chest Resultant

Max: 43.3 [g] at 0.071 [s]

Min: 0.0 [g] at -0.021 [s]



B-26

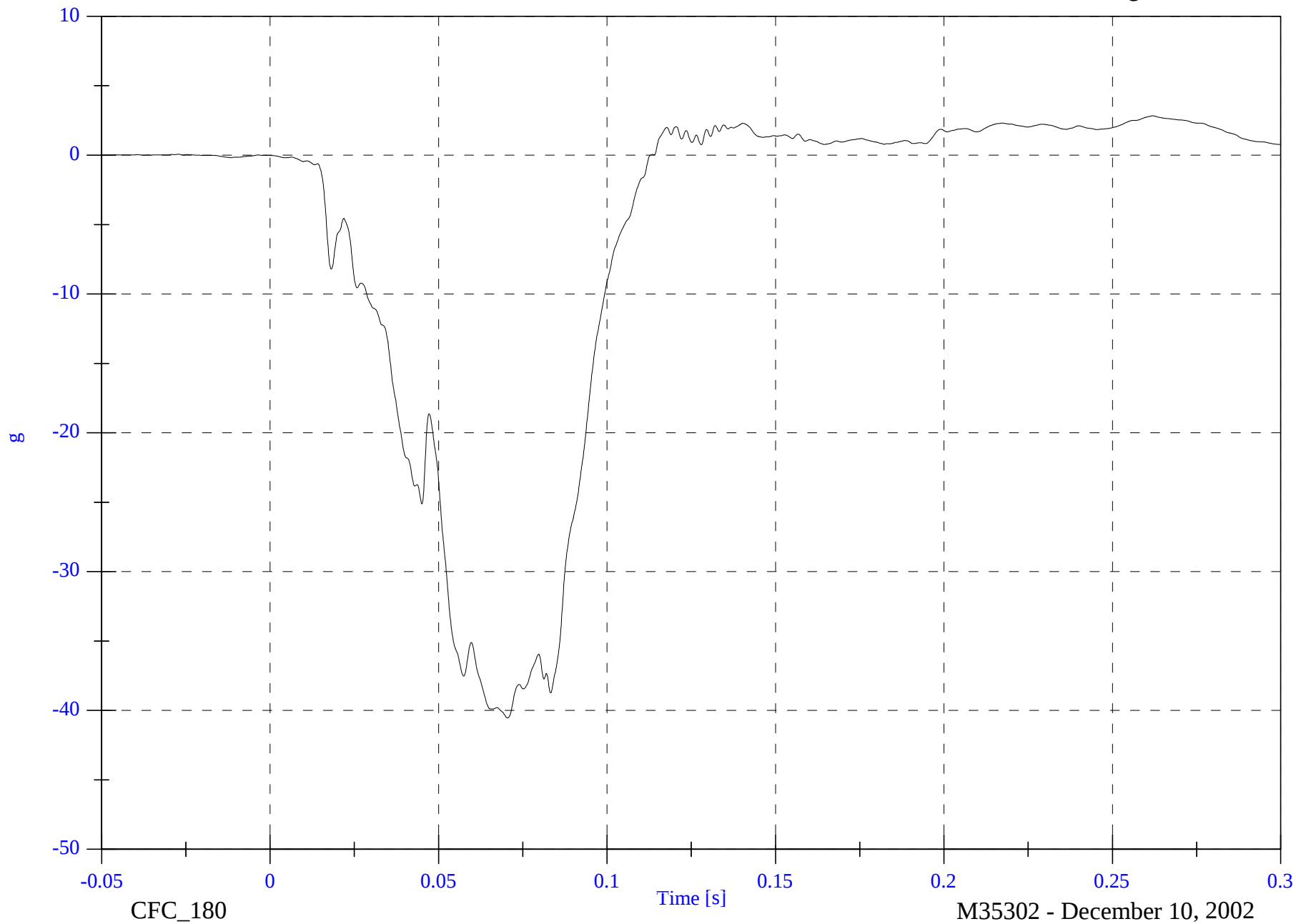
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P1 Chest Red x

Max: 2.8 [g] at 0.262 [s]

Min: -40.5 [g] at 0.070 [s]

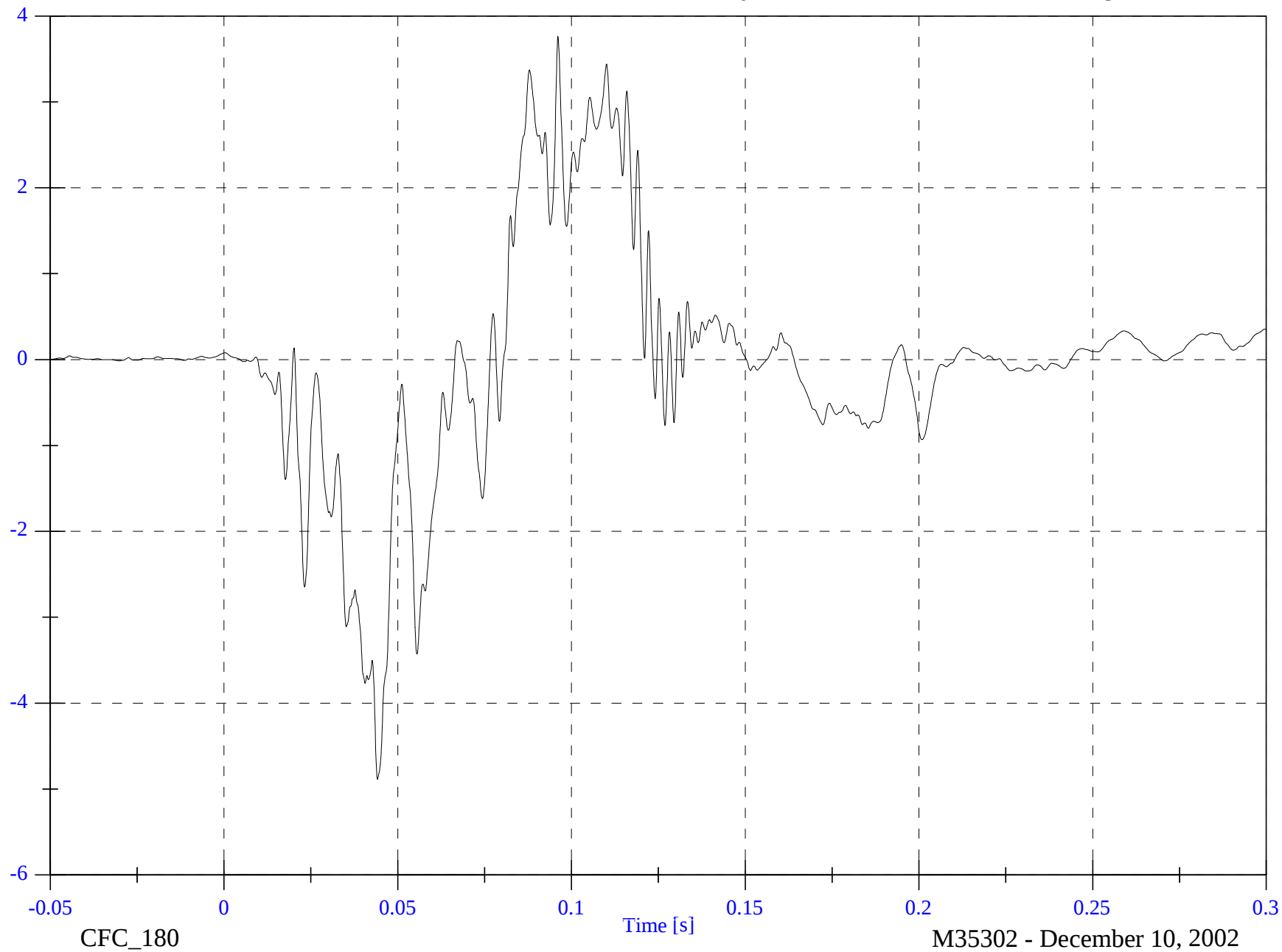


NCAP Test #2 - 2003 Honda Accord

V1P1 Chest Red y

Max: 3.8 [g] at 0.096 [s]

Min: -4.9 [g] at 0.044 [s]



B-28

8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

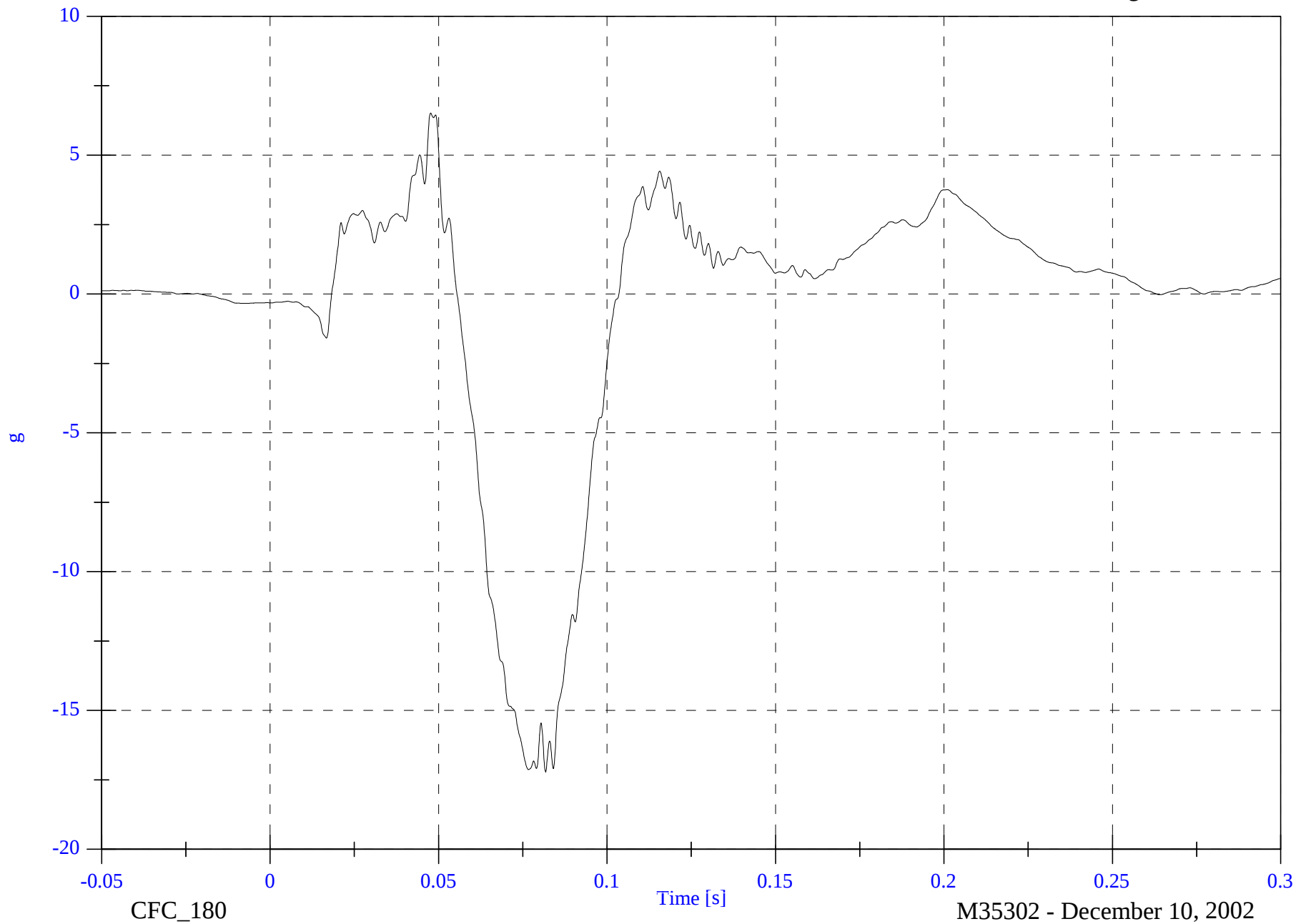
V1P1 Chest Red z

Max: 6.5 [g] at 0.048 [s]

Min: -17.2 [g] at 0.082 [s]

B-29

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P1 Chest Red Resultant

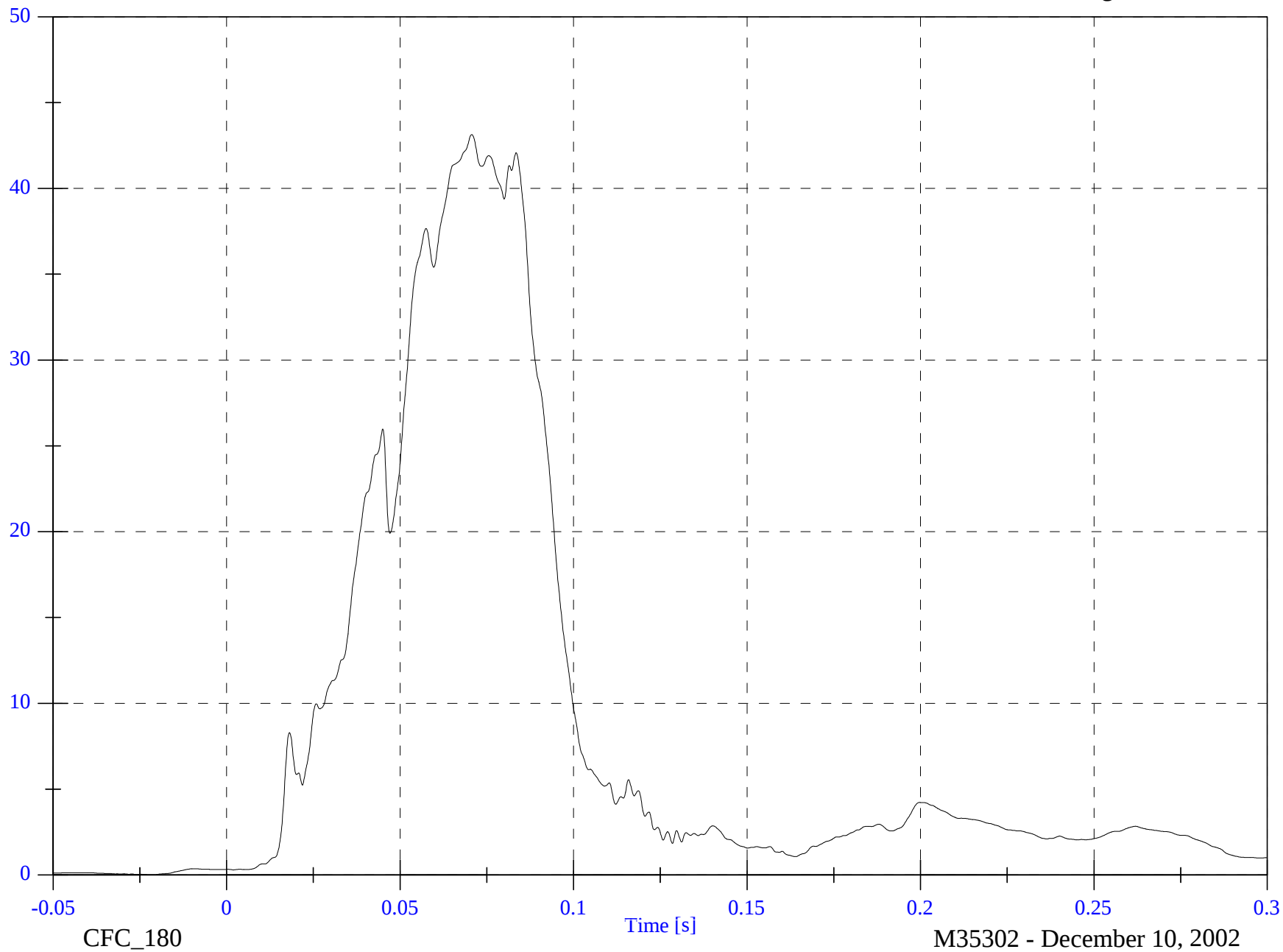
Max: 43.1 [g] at 0.071 [s]

Min: 0.0 [g] at -0.021 [s]

B-30

8642-NCAP-24

g



NCAP Test #2 - 2003 Honda Accord

V1P1 Chest Compression x

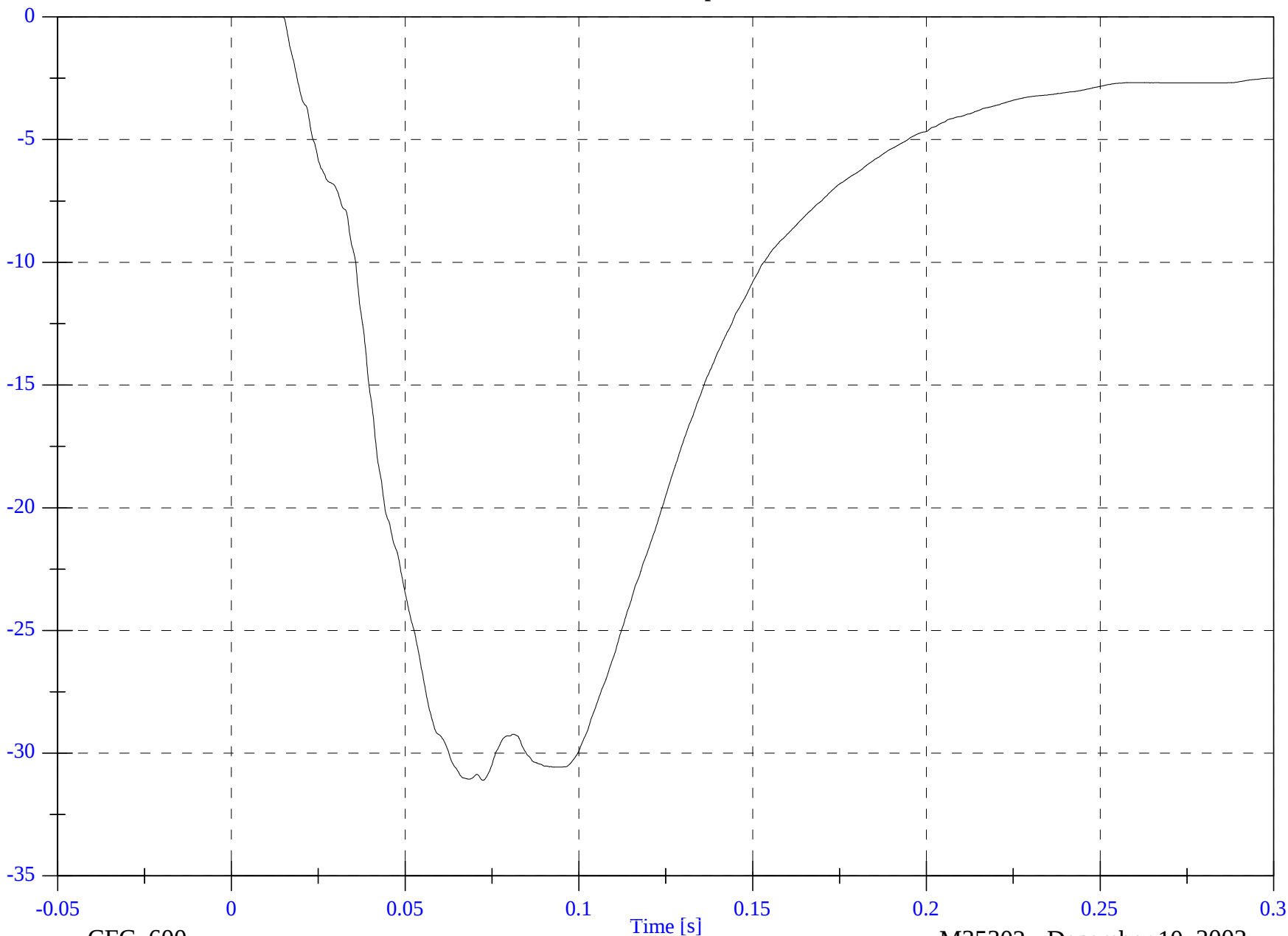
Max: 0.0 [mm] at -0.002 [s]

Min: -31.1 [mm] at 0.072 [s]

B-31

8642-NCAP-24

mm



CFC_600

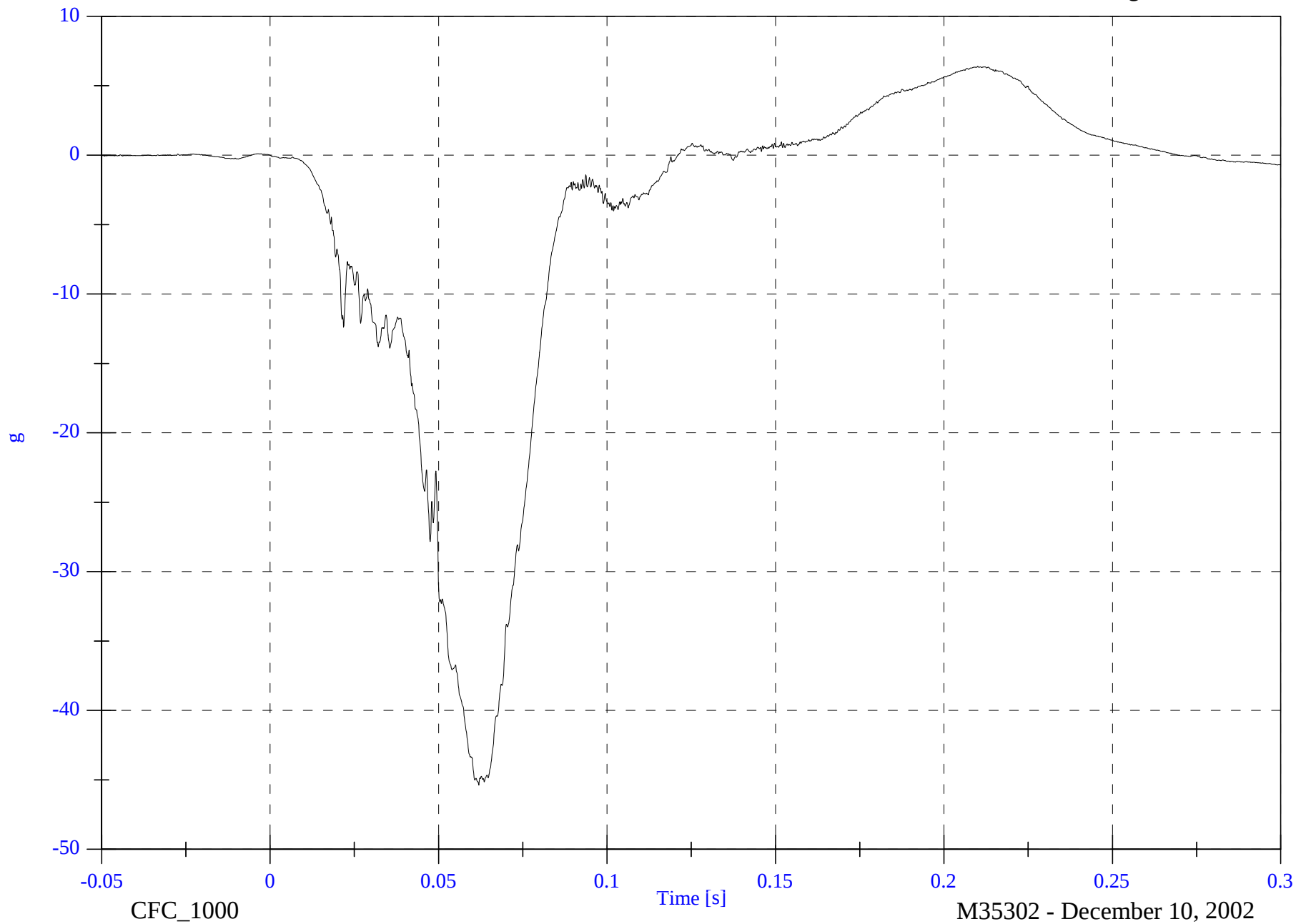
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P1 Pelvic x

Max: 6.4 [g] at 0.210 [s]

Min: -45.4 [g] at 0.062 [s]



NCAP Test #2 - 2003 Honda Accord

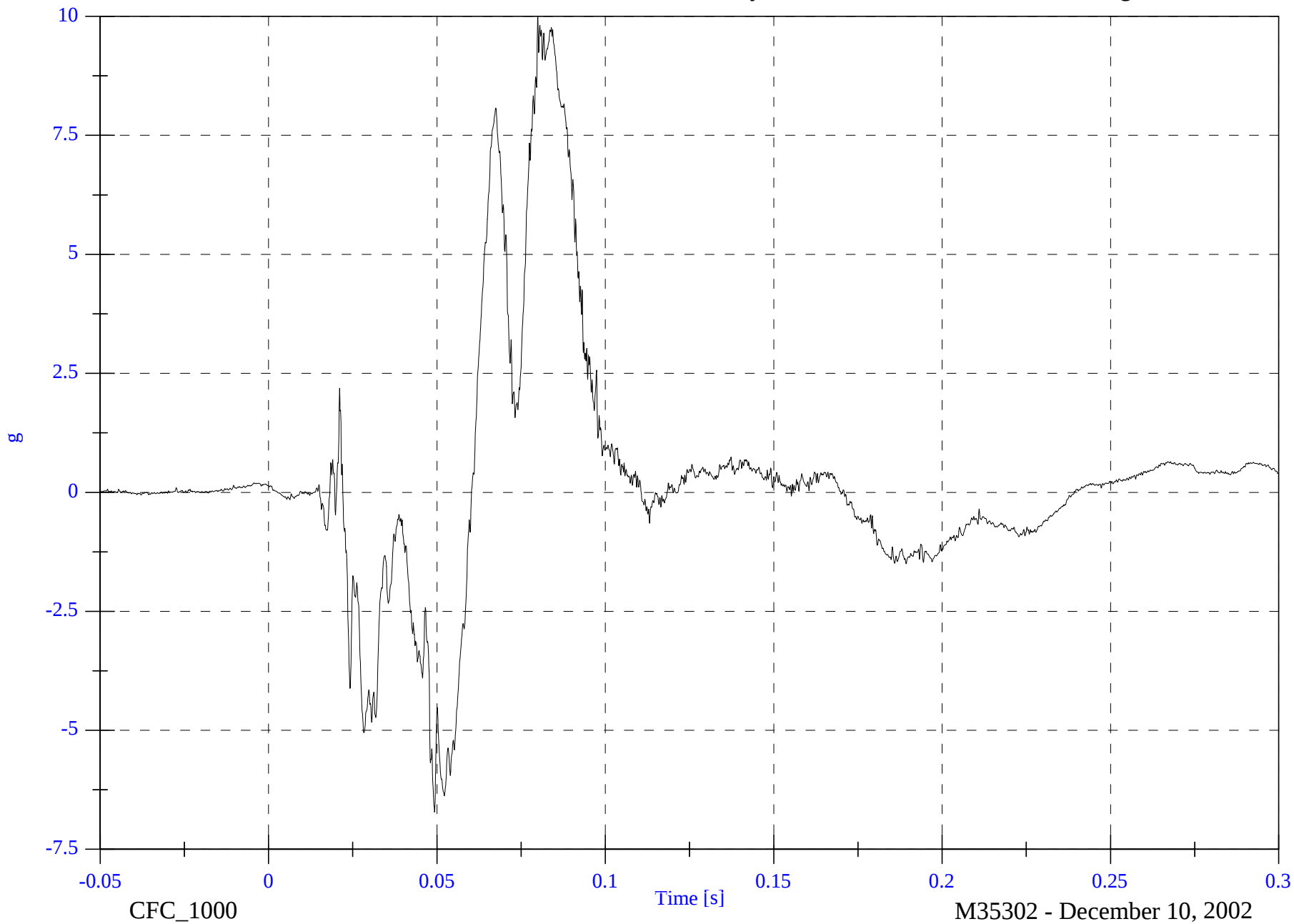
V1P1 Pelvic y

Max: 10.0 [g] at 0.080 [s]

Min: -6.7 [g] at 0.049 [s]

B-33

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

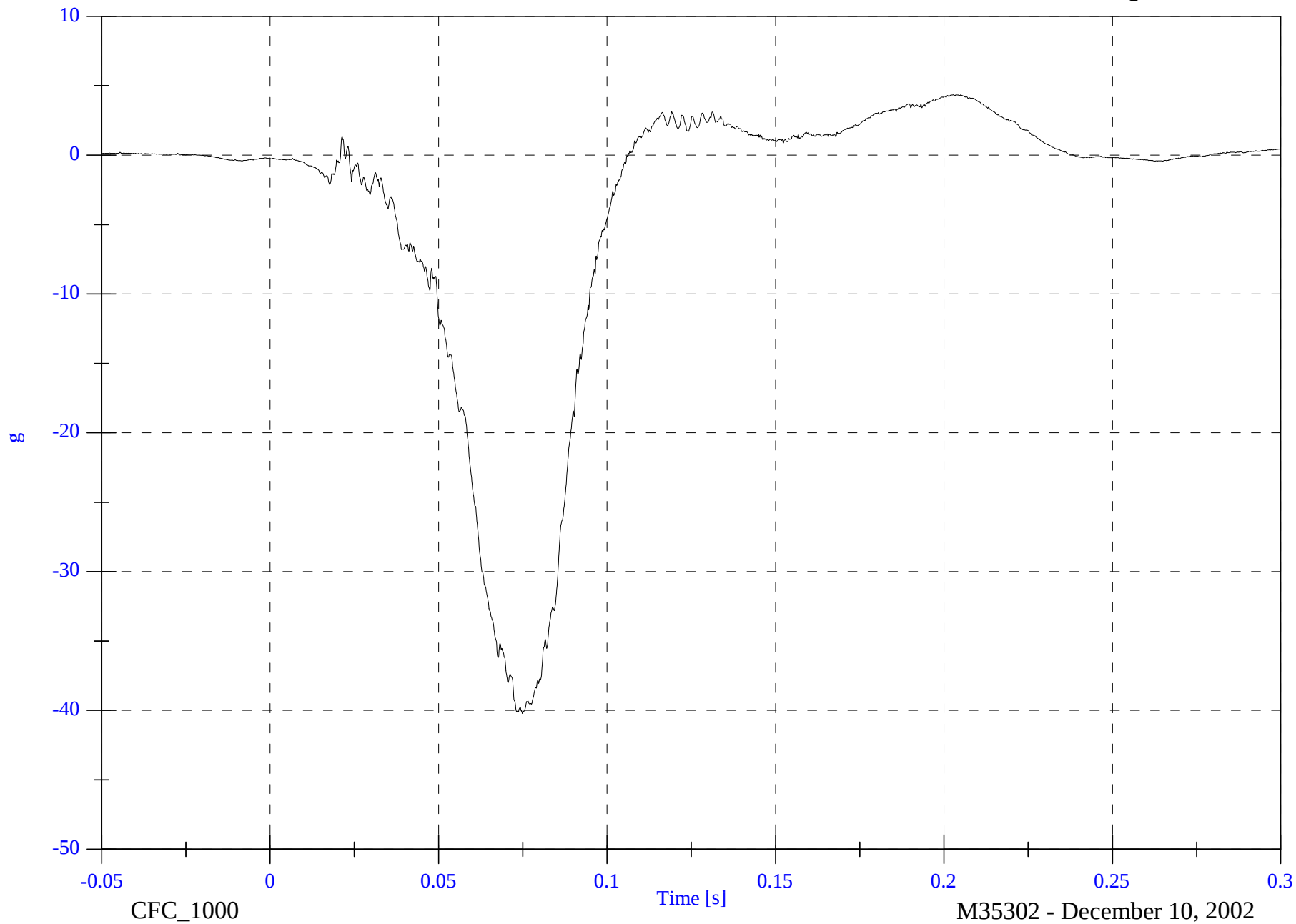
V1P1 Pelvic z

Max: 4.4 [g] at 0.204 [s]

Min: -40.2 [g] at 0.075 [s]

B-34

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

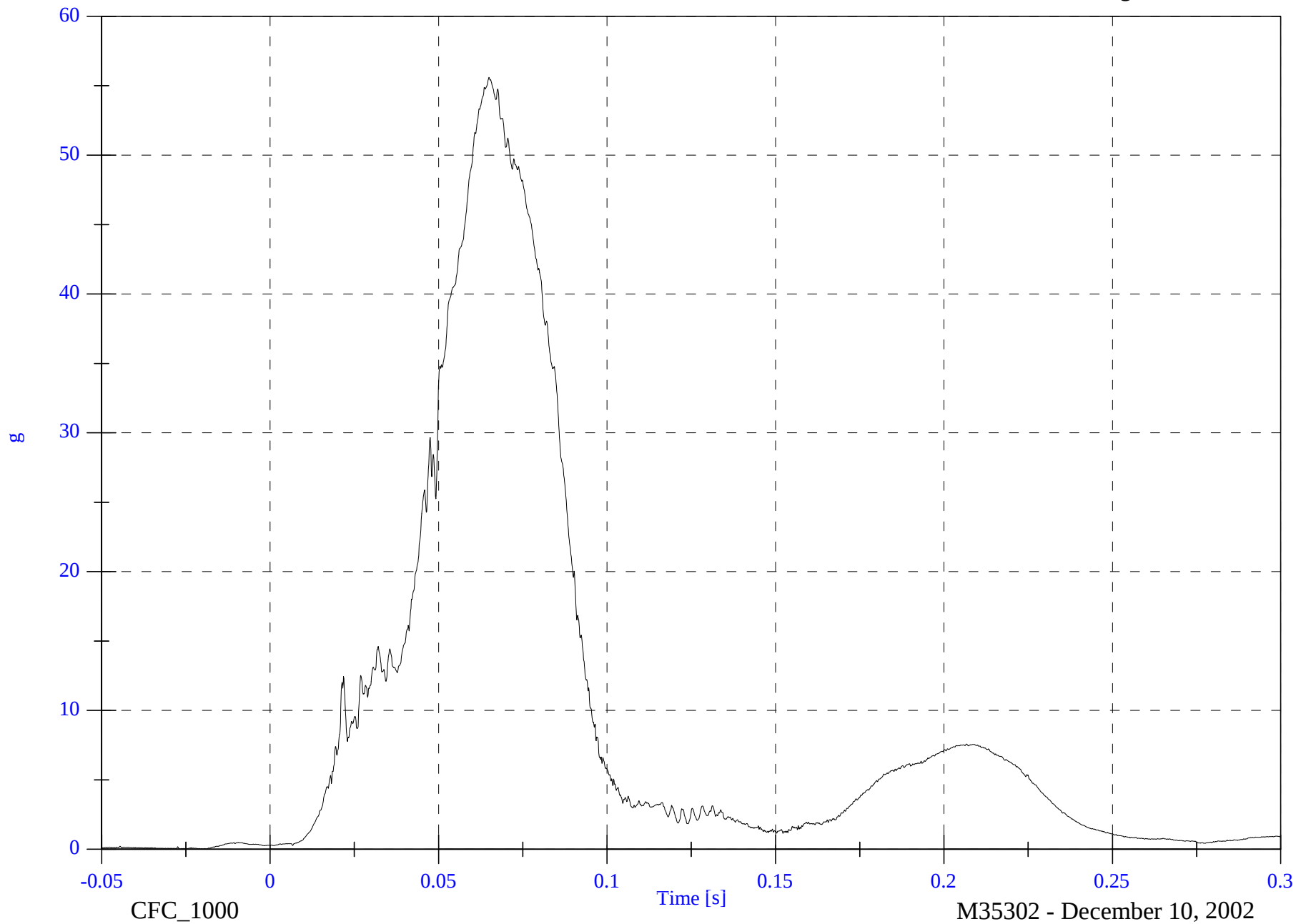
V1P1 Pelvic Resultant

Max: 55.6 [g] at 0.065 [s]

Min: 0.0 [g] at -0.020 [s]

B-35

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P1 Left Femur z

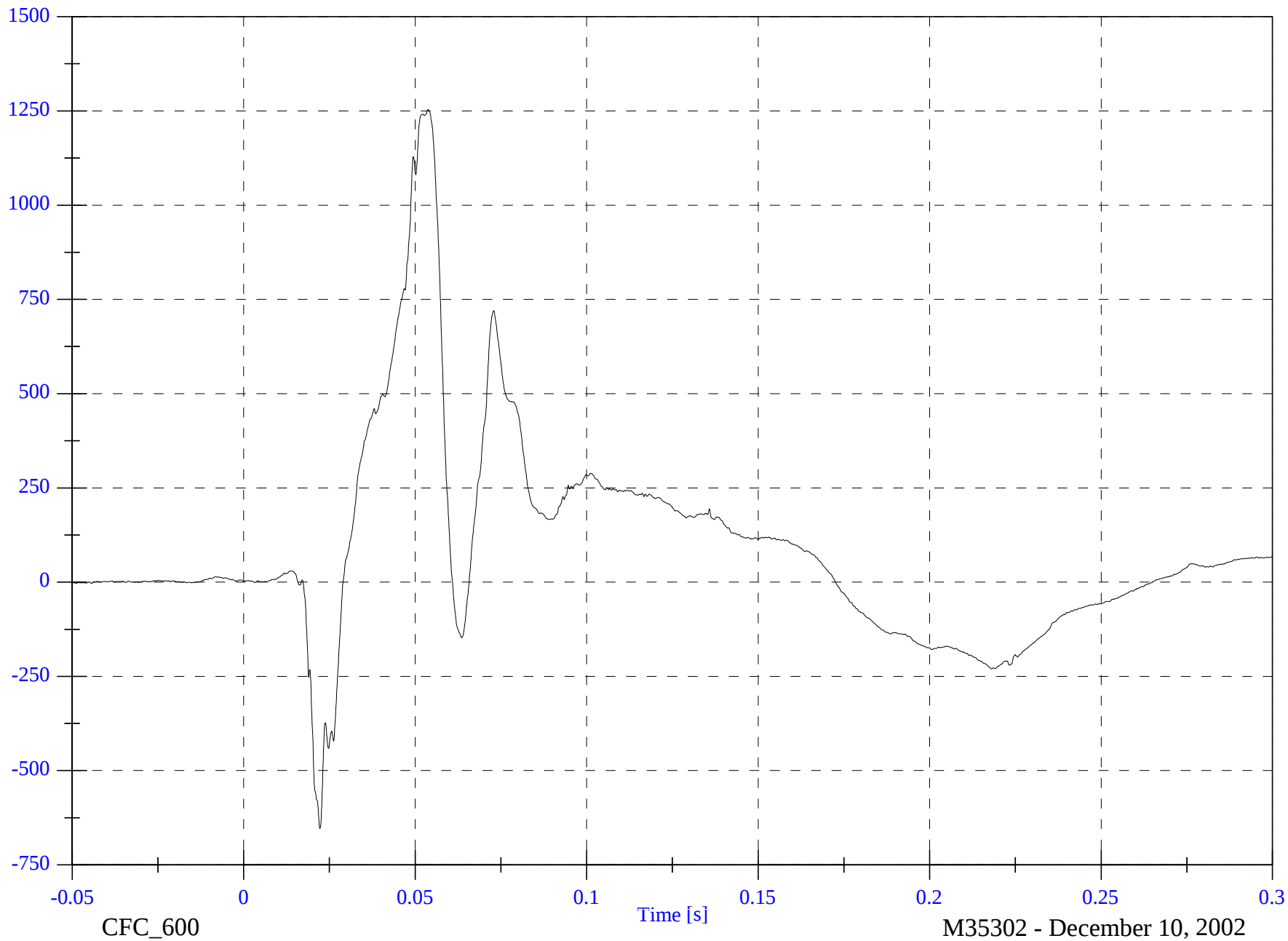
Max: 1254.0 [N] at 0.054 [s]

Min: -653.4 [N] at 0.022 [s]

B-36

N

8642-NCAP-24



-0.05

0

0.05

0.1

0.15

0.2

0.25

0.3

CFC_600

Time [s]

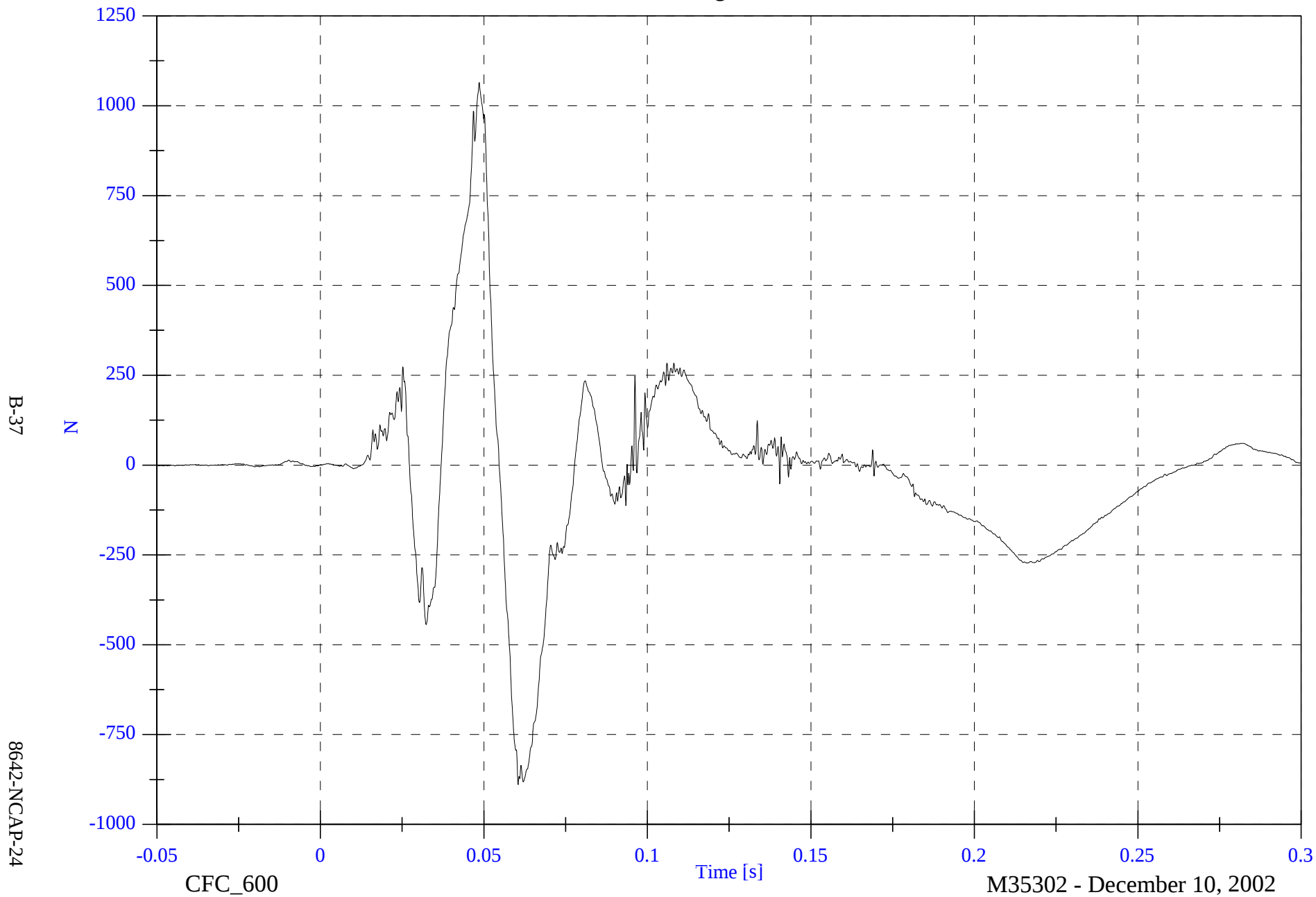
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P1 Right Femur z

Max: 1064.6 [N] at 0.049 [s]

Min: -889.4 [N] at 0.060 [s]



NCAP Test #2 - 2003 Honda Accord

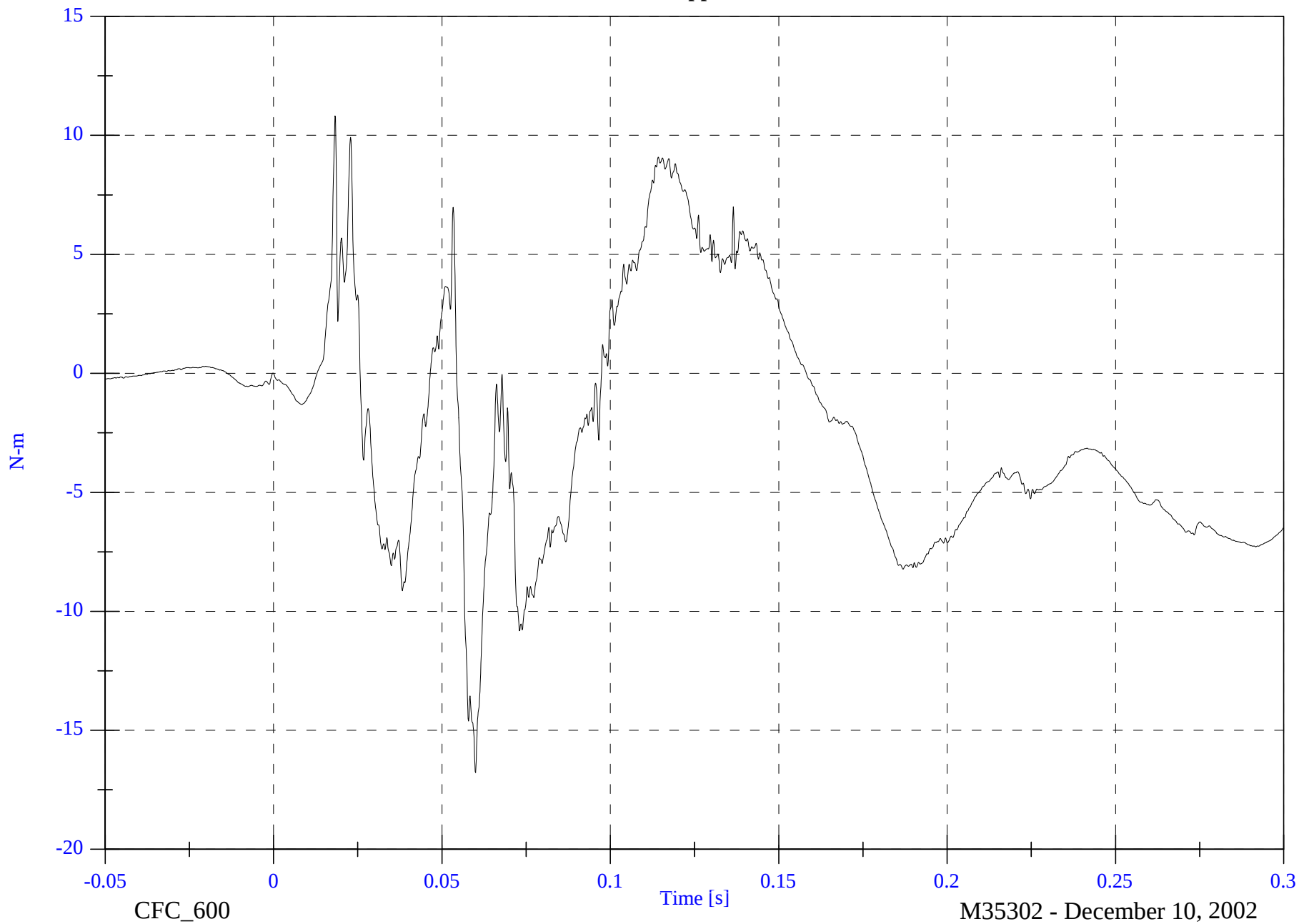
V1P1 Left Upper Tibia Mx

Max: 10.8 [N-m] at 0.018 [s]

Min: -16.8 [N-m] at 0.060 [s]

B-38

8642-NCAP-24

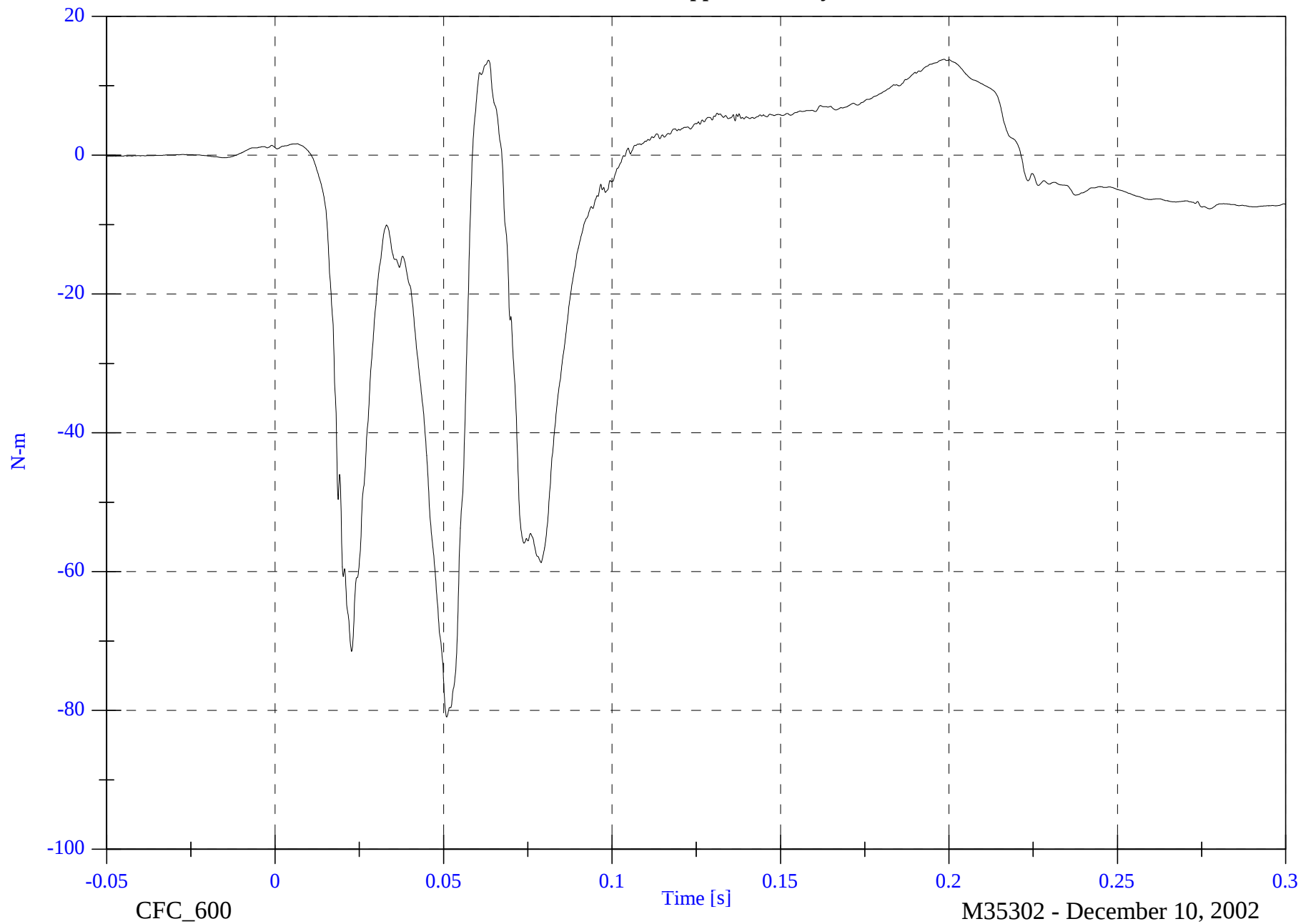


NCAP Test #2 - 2003 Honda Accord

V1P1 Left Upper Tibia My

Max: 13.8 [N-m] at 0.199 [s]

Min: -81.0 [N-m] at 0.051 [s]



B-39

8642-NCAP-24

CFC_600

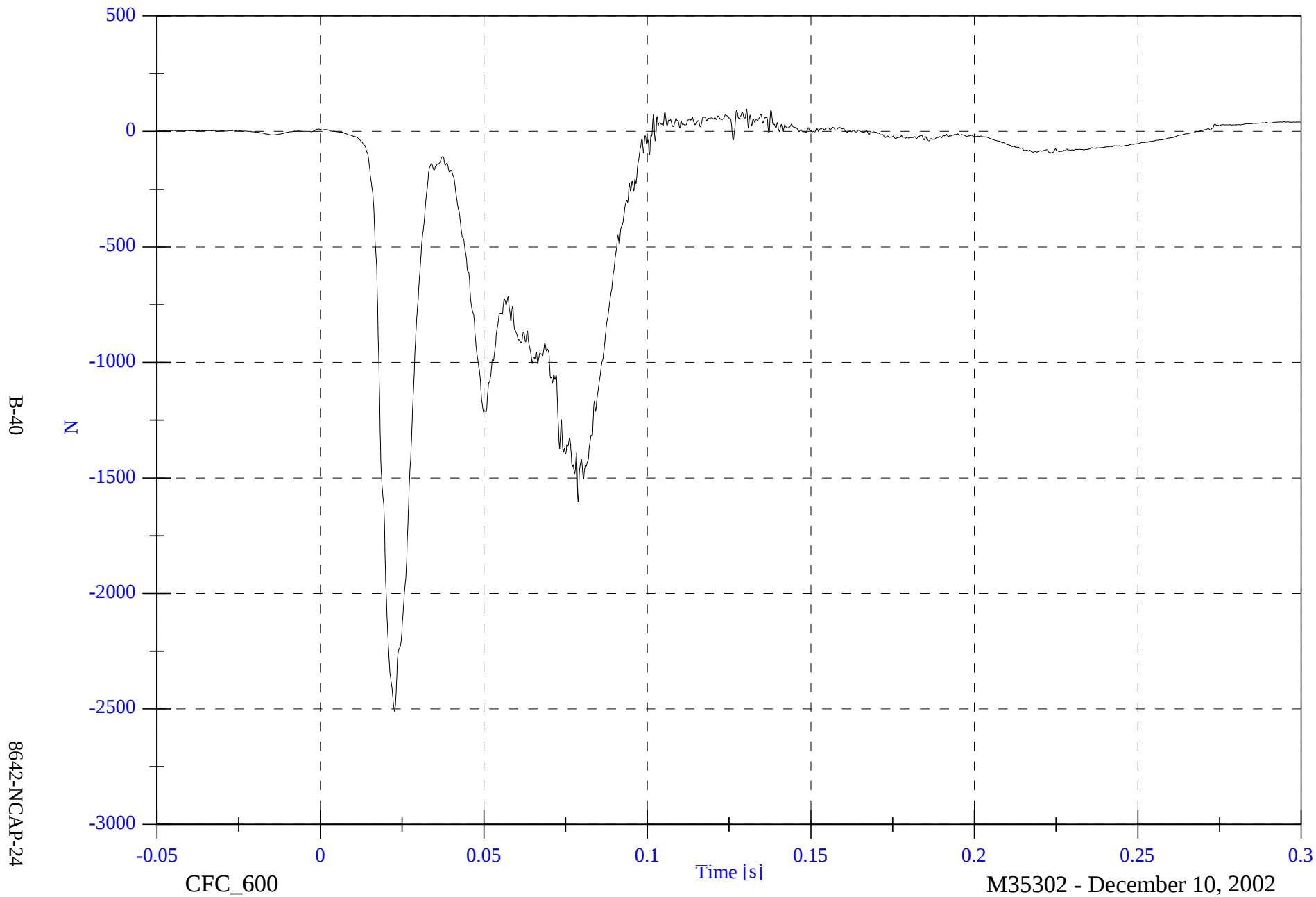
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P1 Left Lower Tibia Fz

Max: 96.5 [N] at 0.130 [s]

Min: -2510.3 [N] at 0.023 [s]



NCAP Test #2 - 2003 Honda Accord

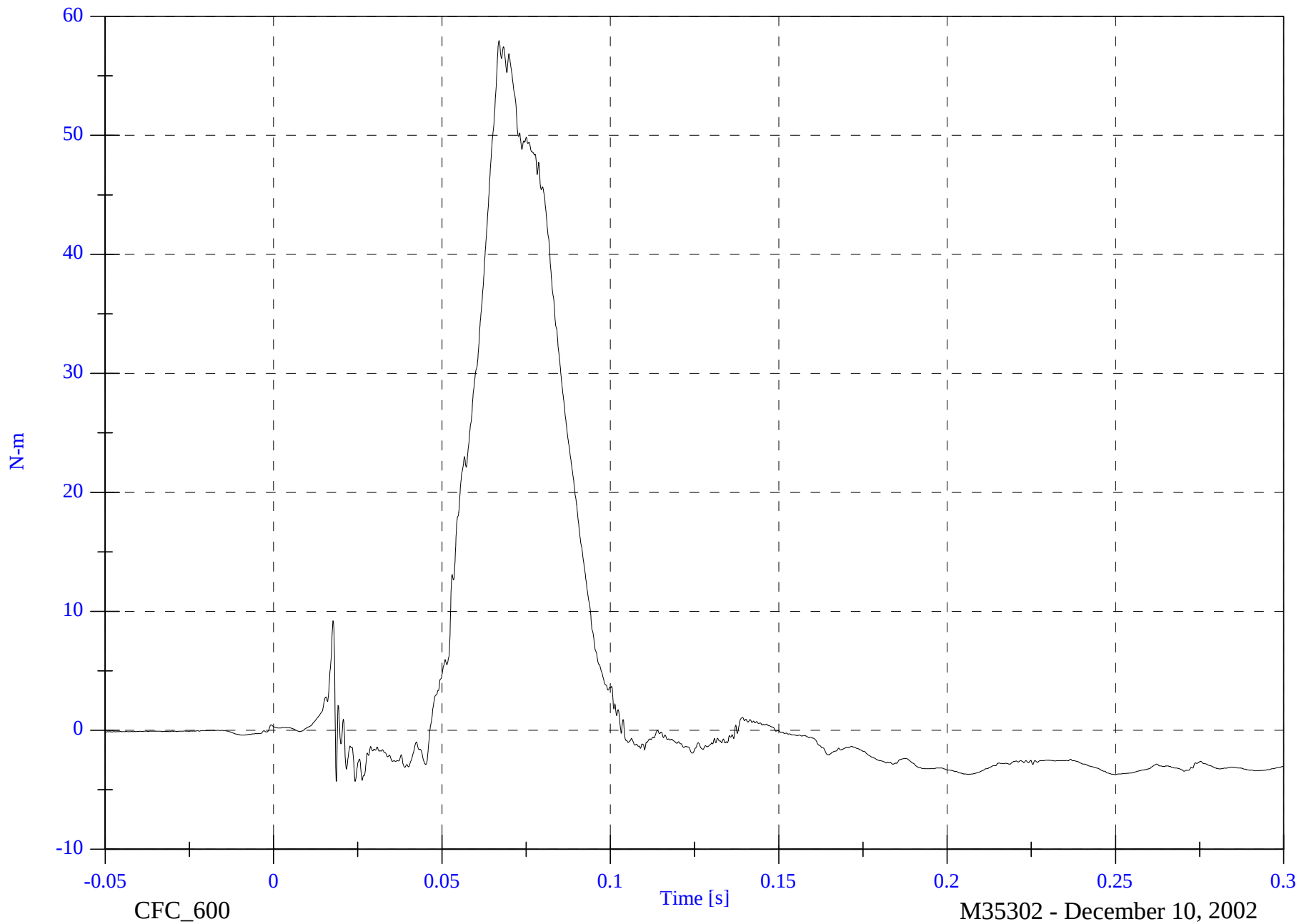
V1P1 Left Lower Tibia Mx

Max: 58.0 [N-m] at 0.067 [s]

Min: -4.3 [N-m] at 0.024 [s]

B-41

8642-NCAP-24

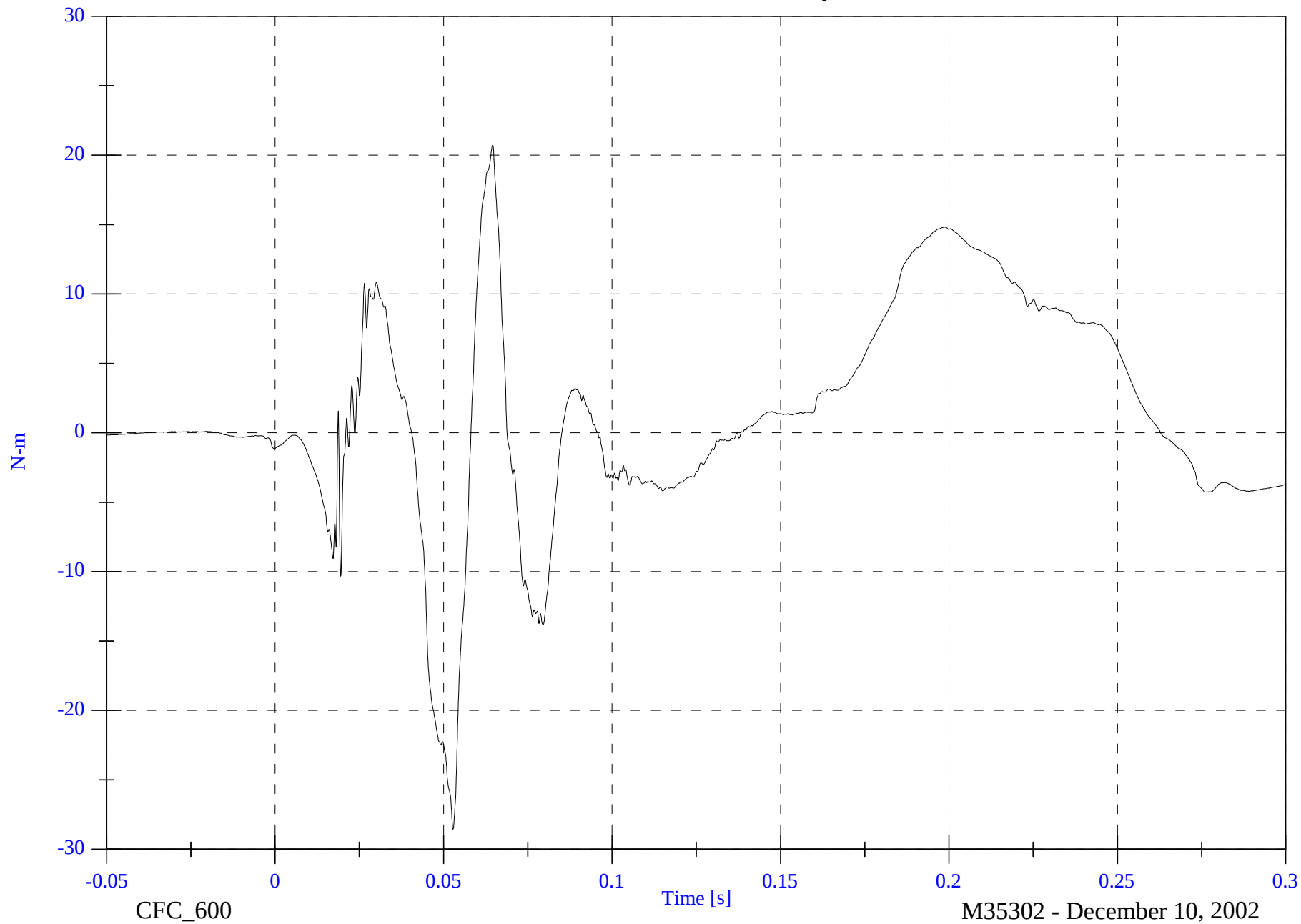


NCAP Test #2 - 2003 Honda Accord

V1P1 Left Lower Tibia My

Max: 20.7 [N-m] at 0.065 [s]

Min: -28.6 [N-m] at 0.053 [s]



B-42

8642-NCAP-24

CFC_600

Time [s]

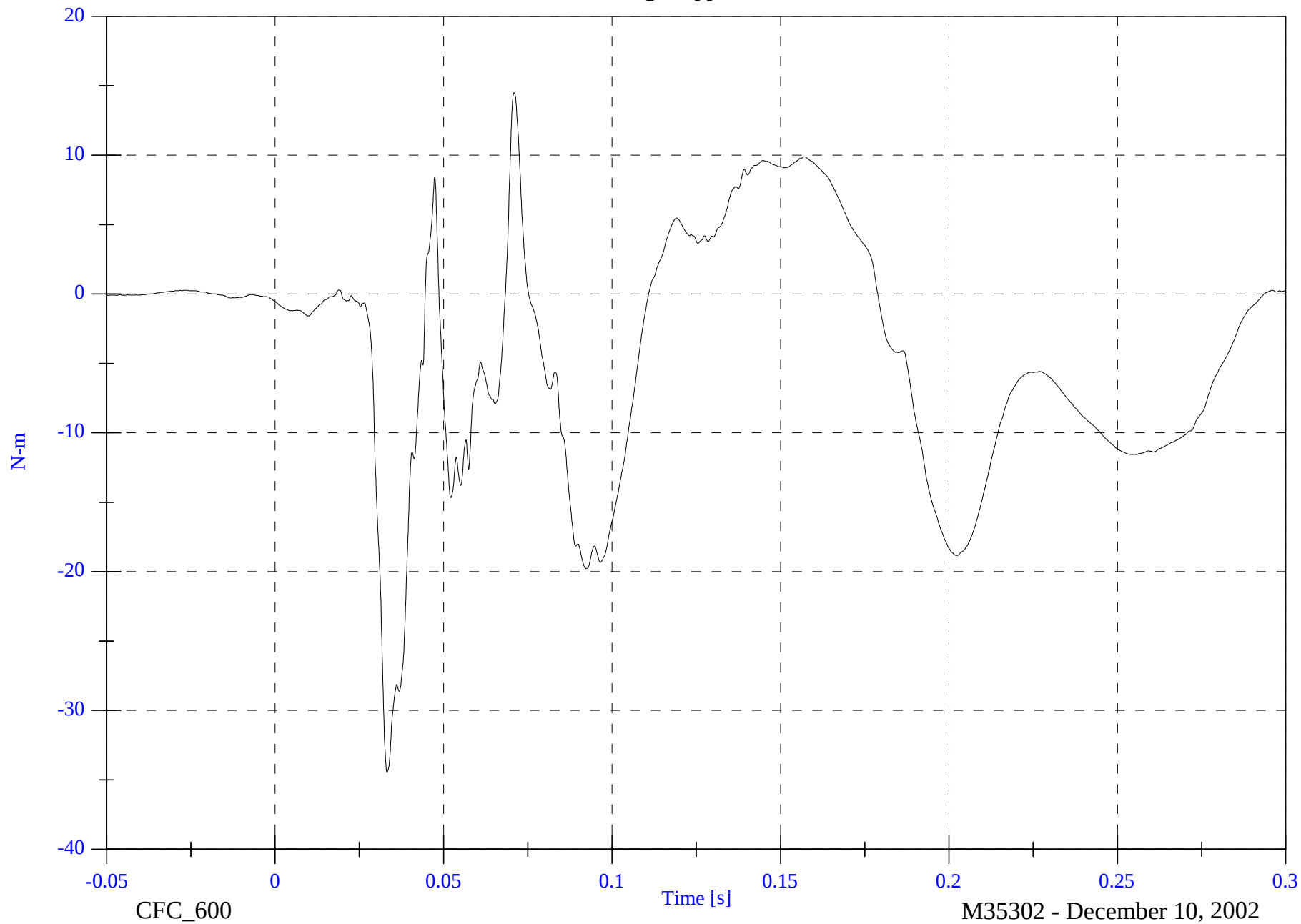
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P1 Right upper Tibia Mx

Max: 14.5 [N-m] at 0.071 [s]

Min: -34.4 [N-m] at 0.033 [s]



B-43

8642-NCAP-24

CFC_600

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

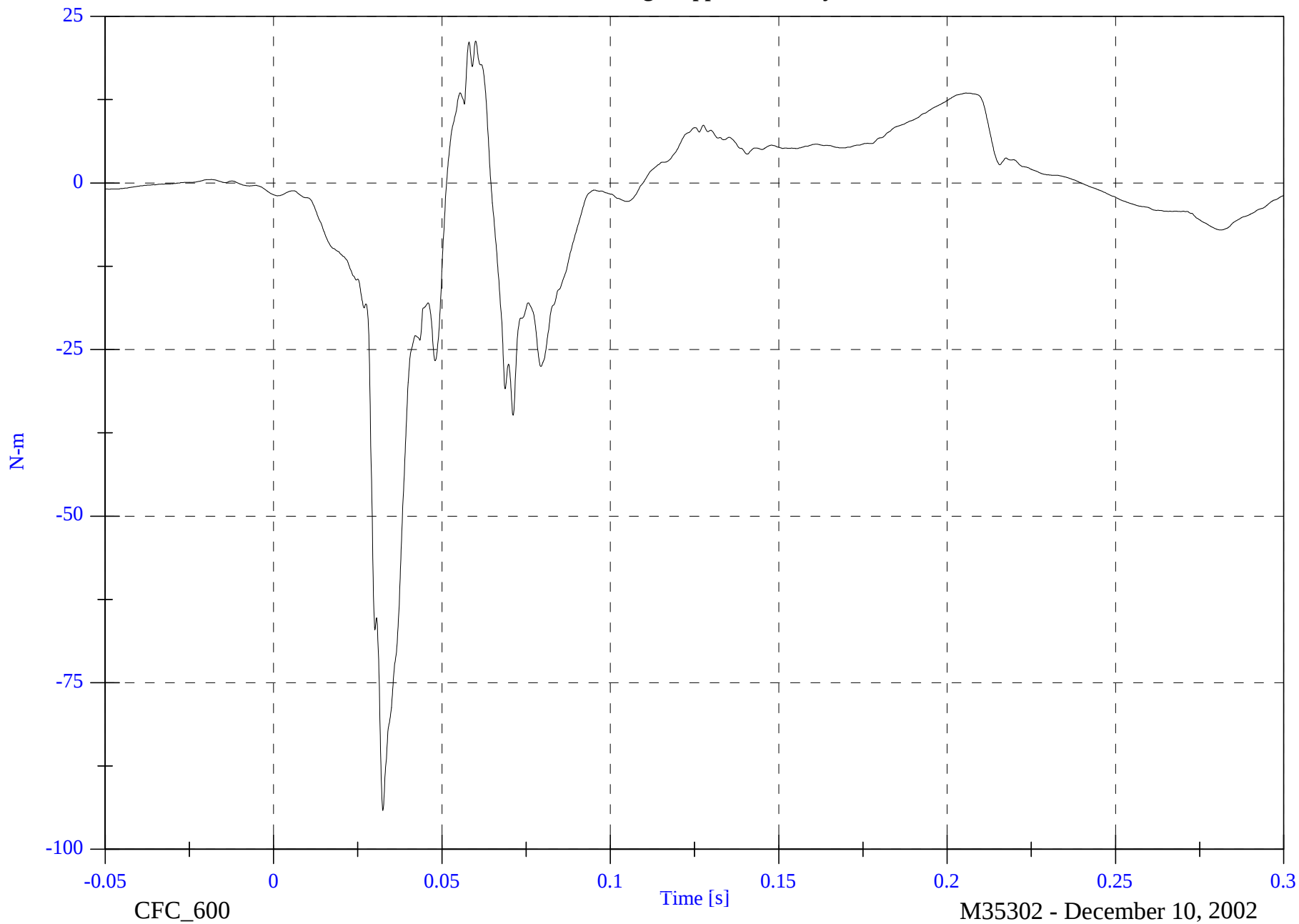
V1P1 Right upper Tibia My

Max: 21.3 [N-m] at 0.060 [s]

Min: -94.2 [N-m] at 0.032 [s]

B-44

8642-NCAP-24

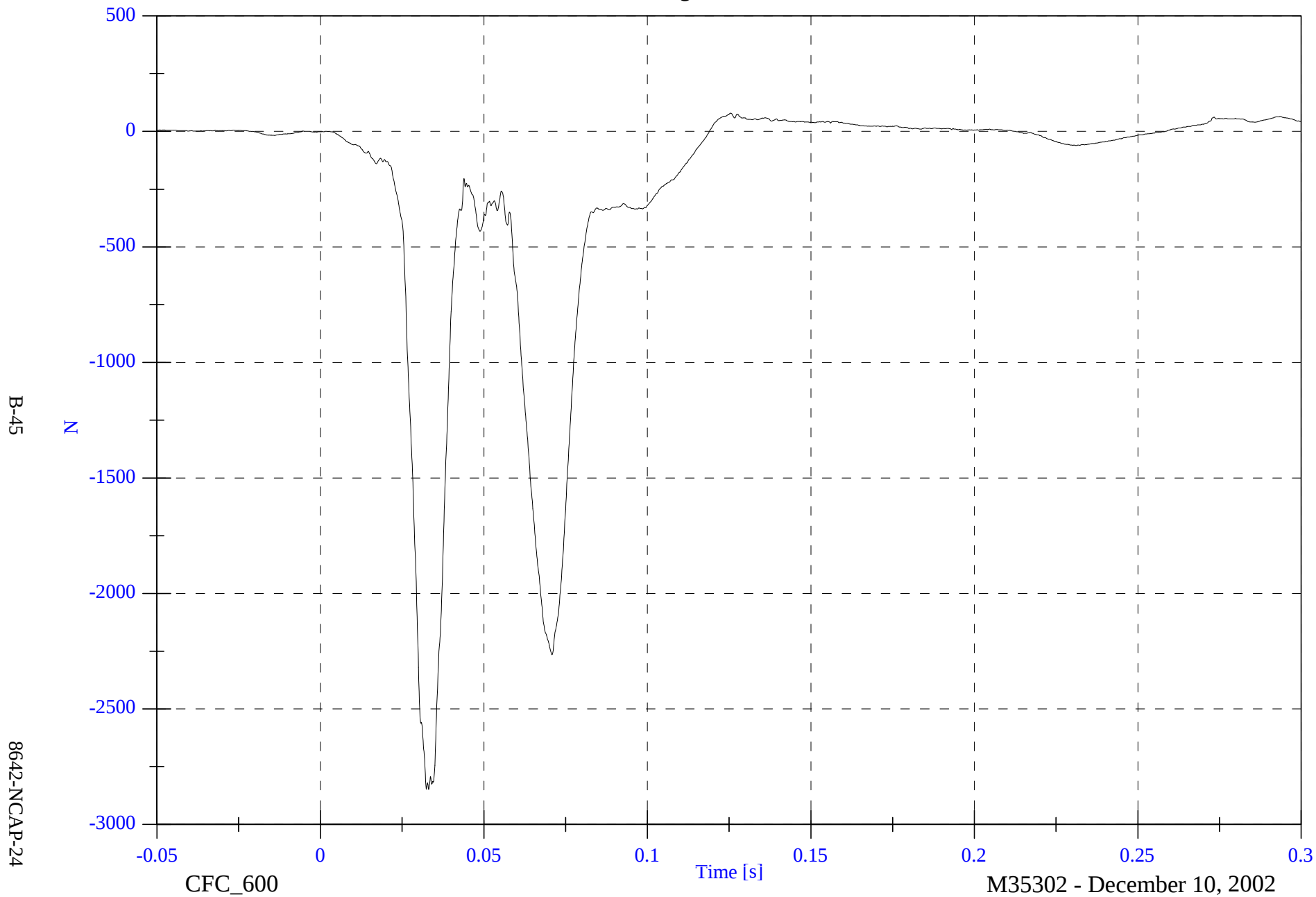


NCAP Test #2 - 2003 Honda Accord

V1P1 Right Lower Tibia Fz

Max: 78.7 [N] at 0.125 [s]

Min: -2847.6 [N] at 0.033 [s]

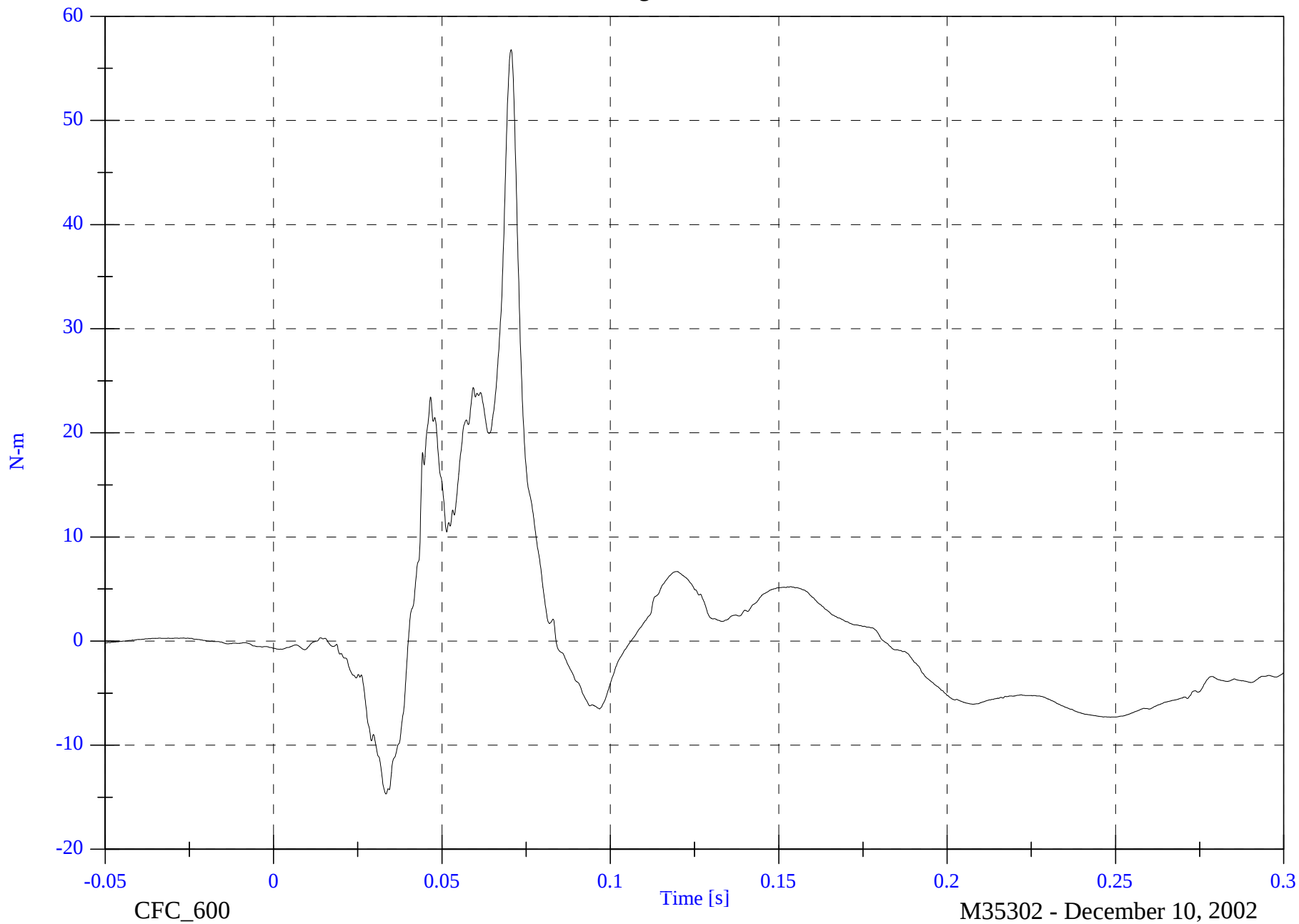


NCAP Test #2 - 2003 Honda Accord

V1P1 Right Lower Tibia Mx

Max: 56.8 [N-m] at 0.071 [s]

Min: -14.7 [N-m] at 0.033 [s]



B-46

8642-NCAP-24

CFC_600

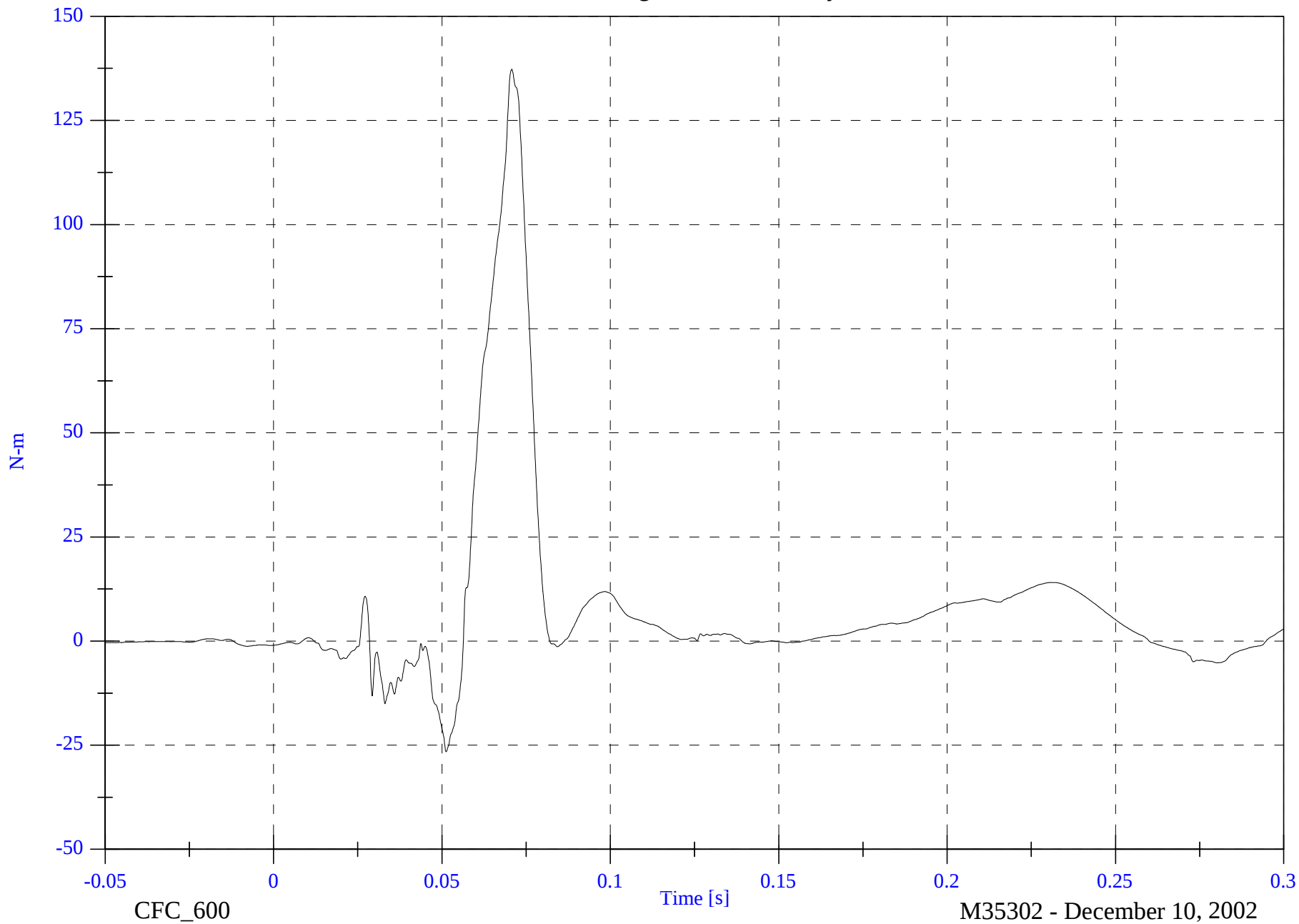
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P1 Right Lower Tibia My

Max: 137.3 [N-m] at 0.071 [s]

Min: -26.6 [N-m] at 0.051 [s]



B-47

8642-NCAP-24

CFC_600

Time [s]

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

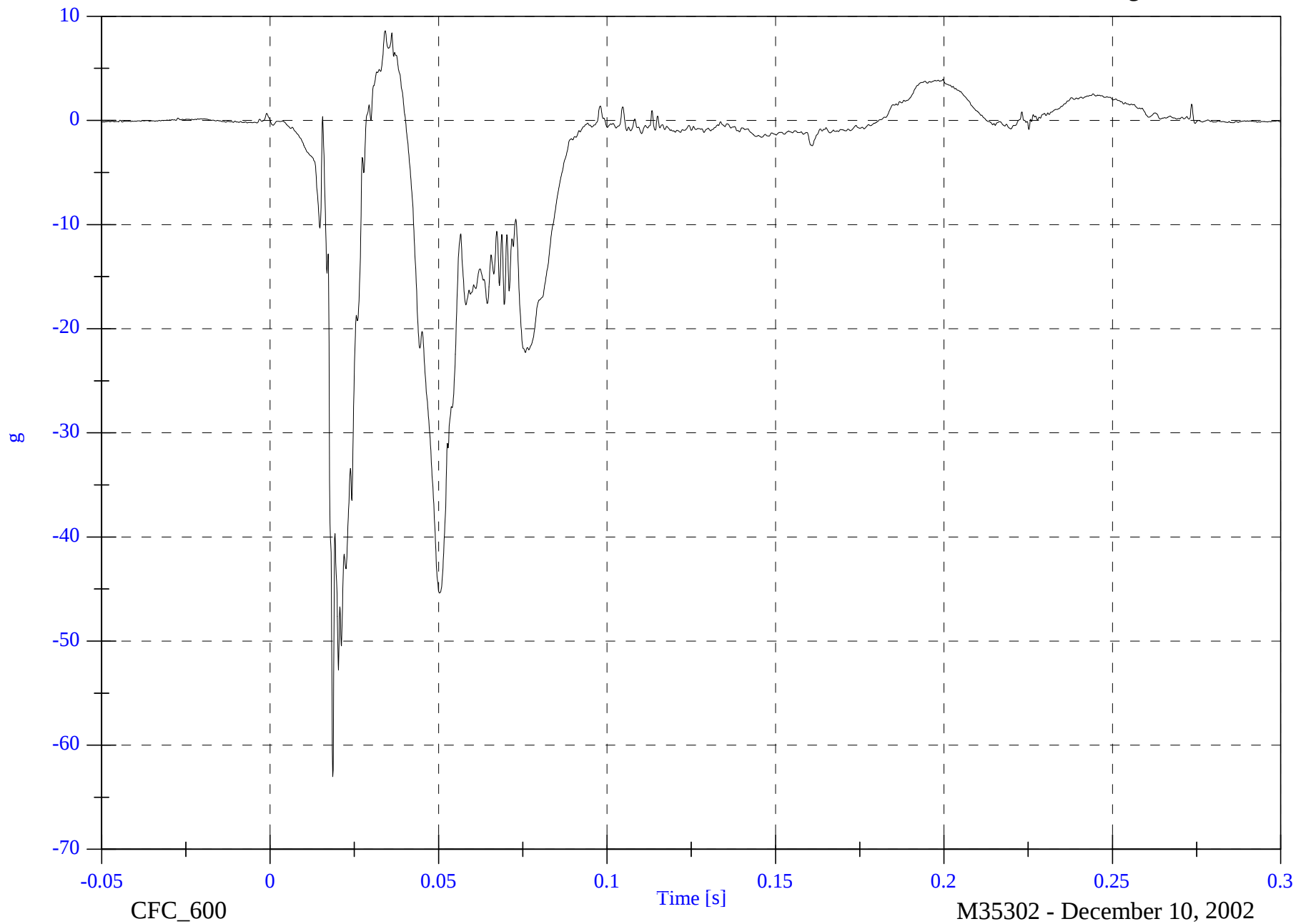
V1P1 Left Foot Aft x

Max: 8.6 [g] at 0.034 [s]

Min: -63.0 [g] at 0.019 [s]

B-48

8642-NCAP-24

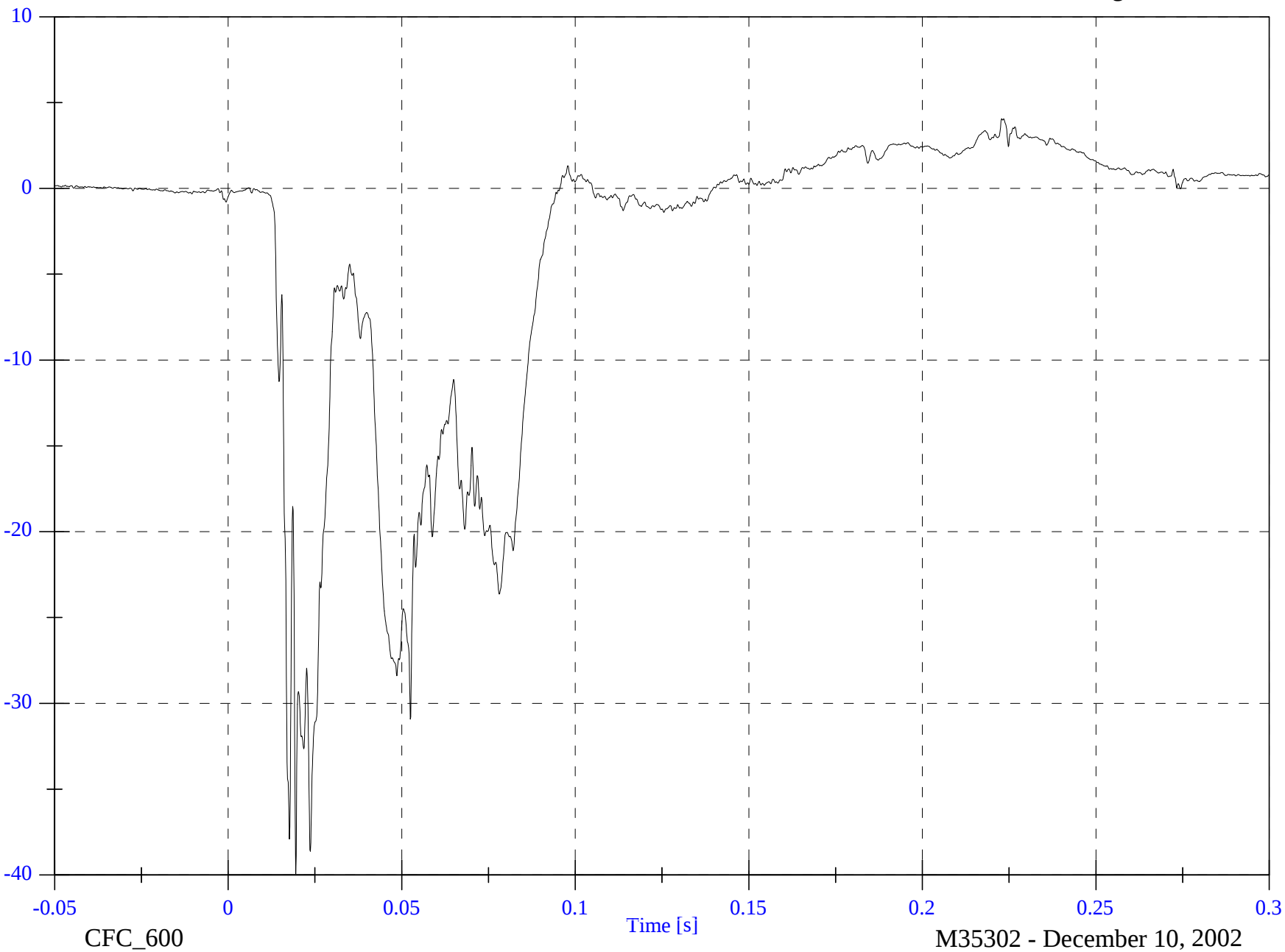


NCAP Test #2 - 2003 Honda Accord

V1P1 Left Foot Aft z

Max: 4.1 [g] at 0.223 [s]

Min: -39.9 [g] at 0.020 [s]



B-49

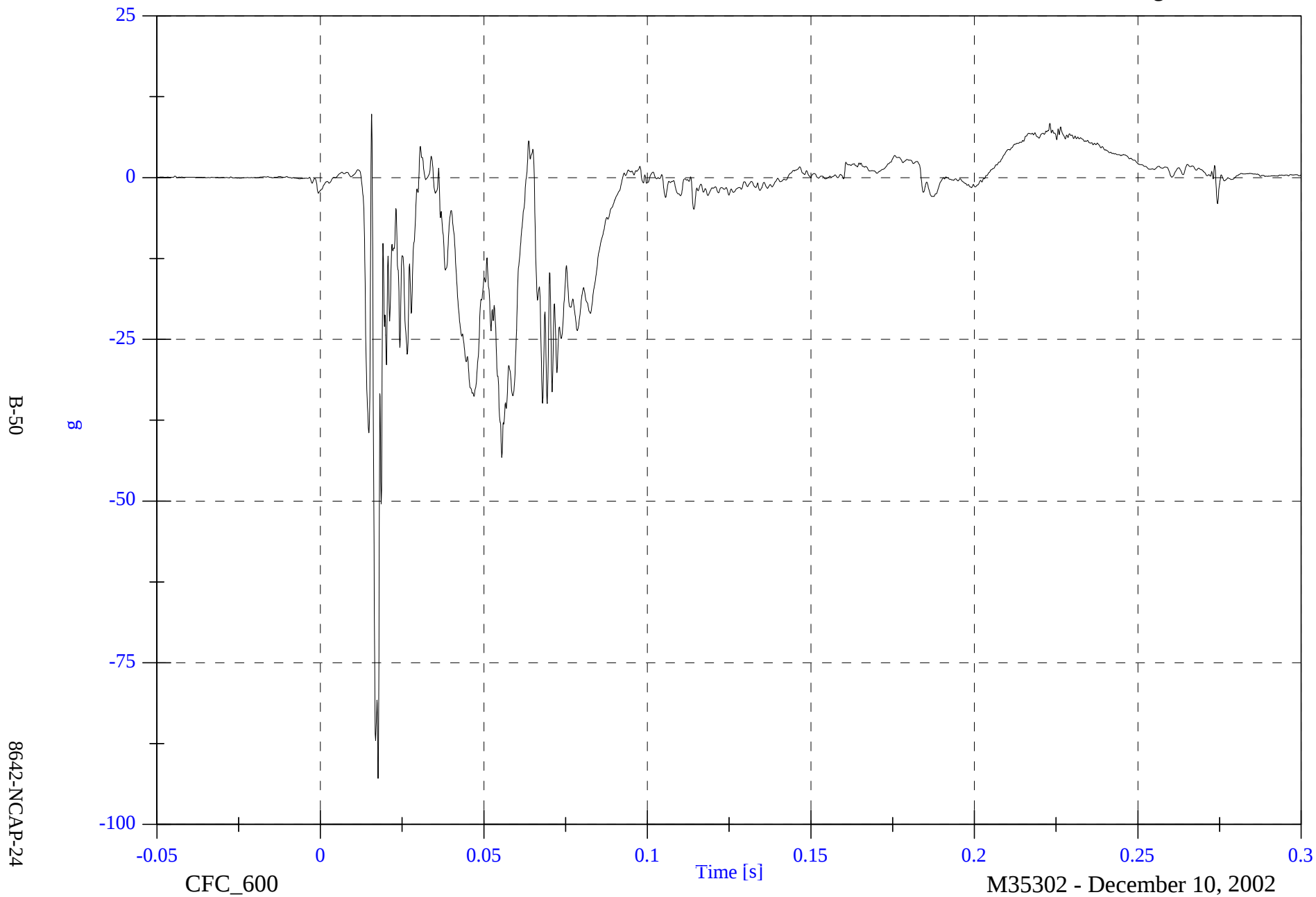
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P1 Left Foot Fore z

Max: 9.8 [g] at 0.016 [s]

Min: -92.9 [g] at 0.018 [s]



NCAP Test #2 - 2003 Honda Accord

V1P1 Right Foot Aft x

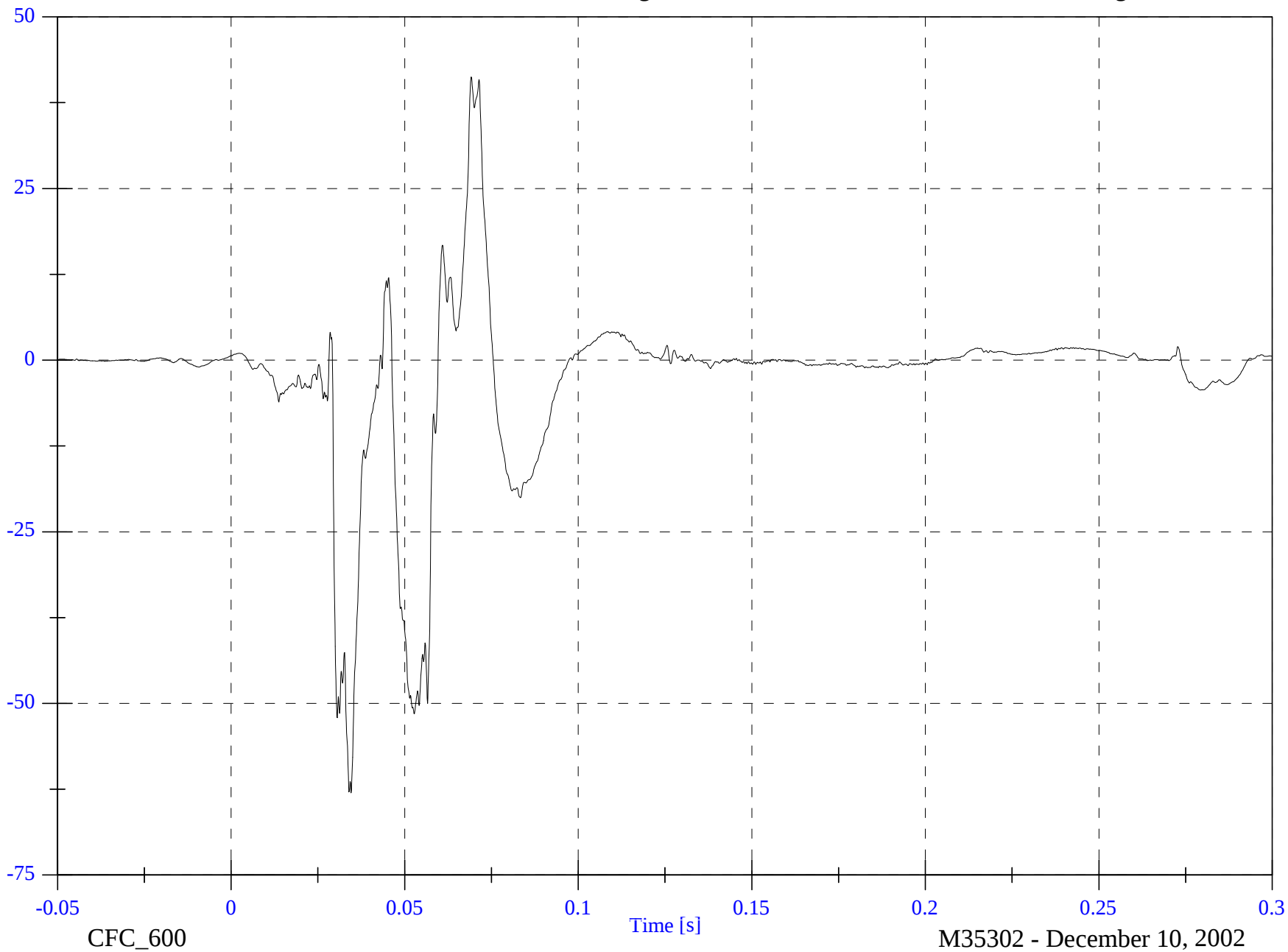
Max: 41.3 [g] at 0.069 [s]

Min: -63.0 [g] at 0.035 [s]

B-51

8642-NCAP-24

g



CFC_600

Time [s]

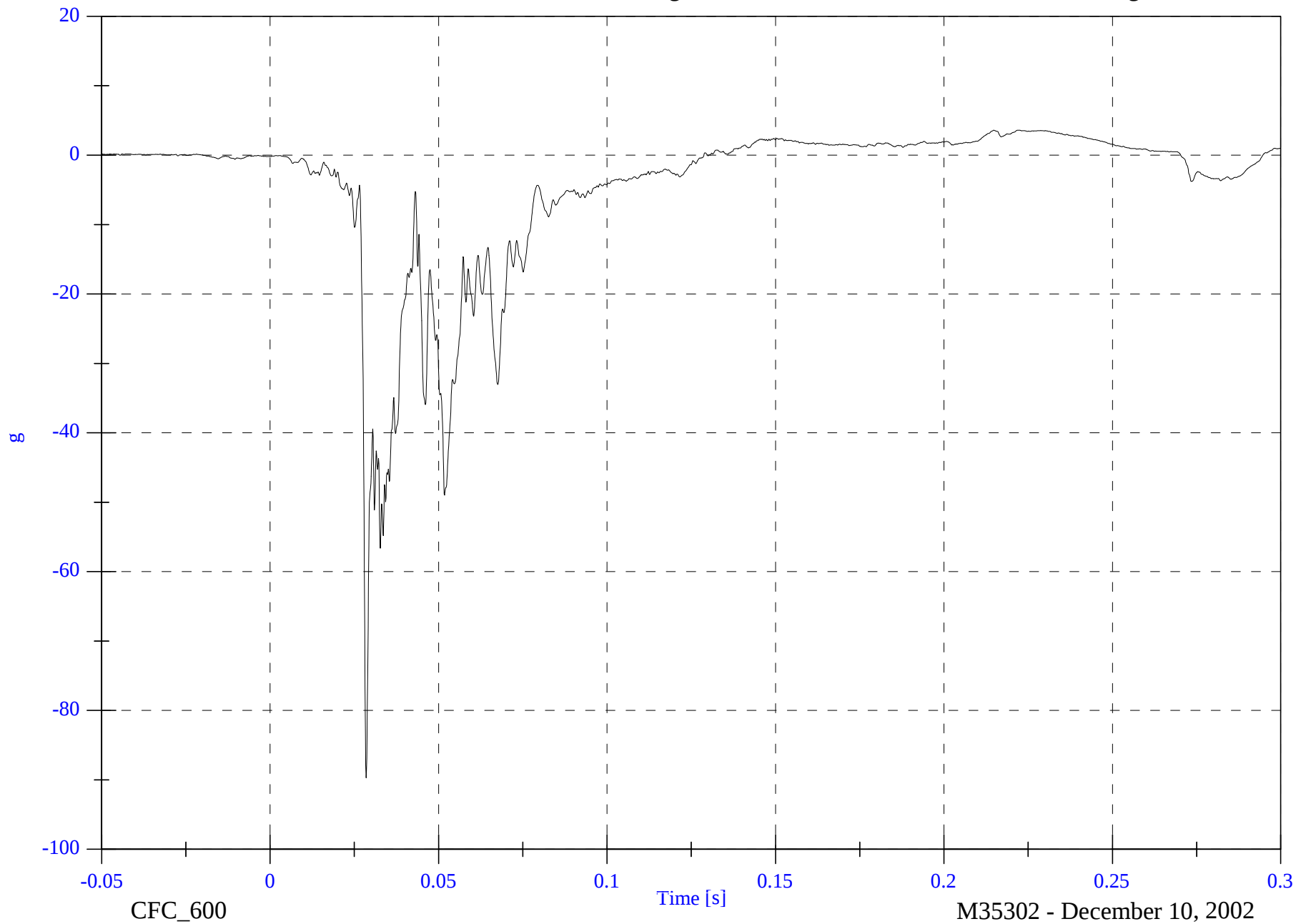
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P1 Right foot Aft z

Max: 3.6 [g] at 0.222 [s]

Min: -89.7 [g] at 0.029 [s]



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8642-NCAP-24

CFC_600

Time [s]

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

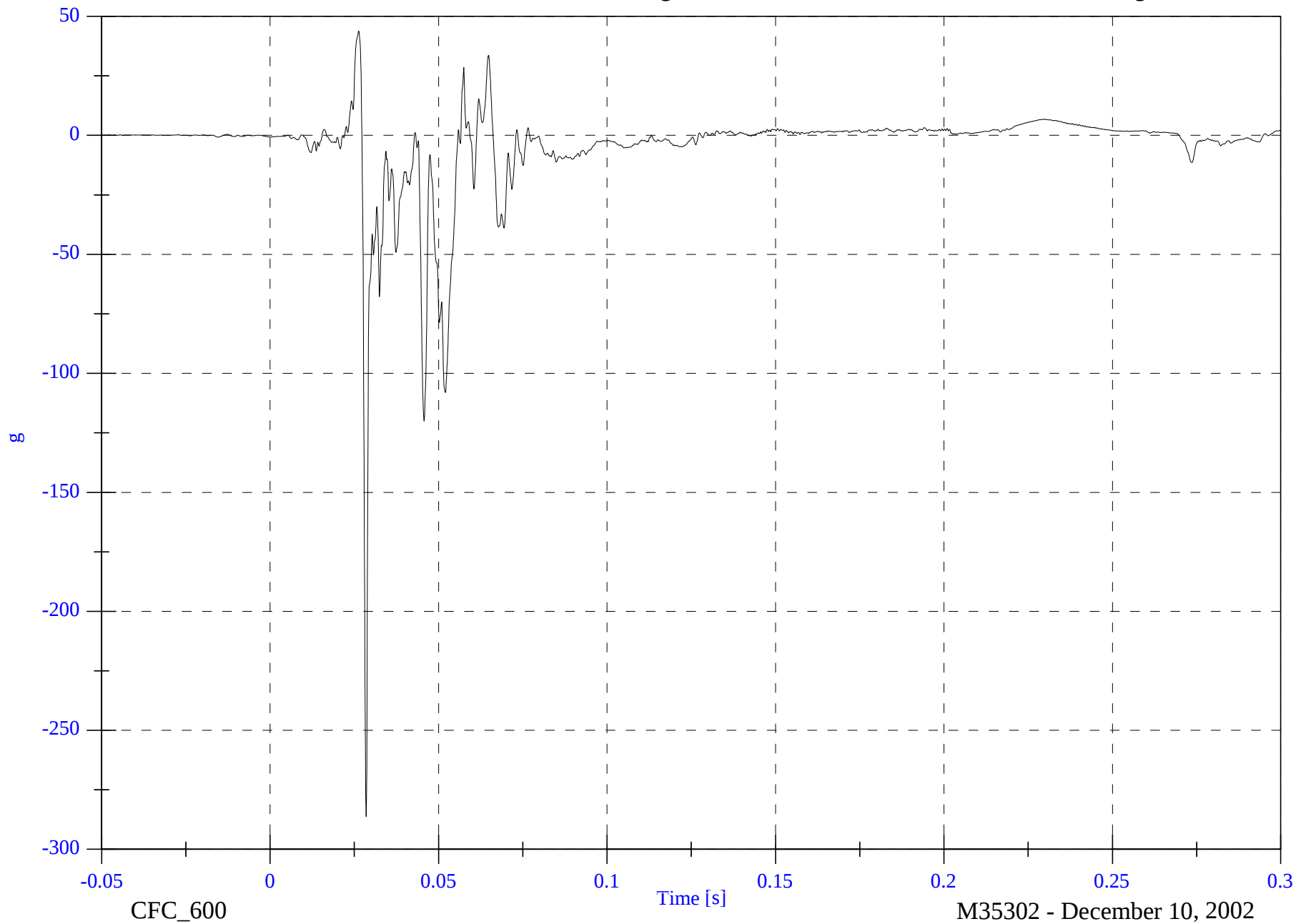
V1P1 Right Foot Fore z

Max: 43.9 [g] at 0.026 [s]

Min: -286.3 [g] at 0.029 [s]

B-53

8642-NCAP-24

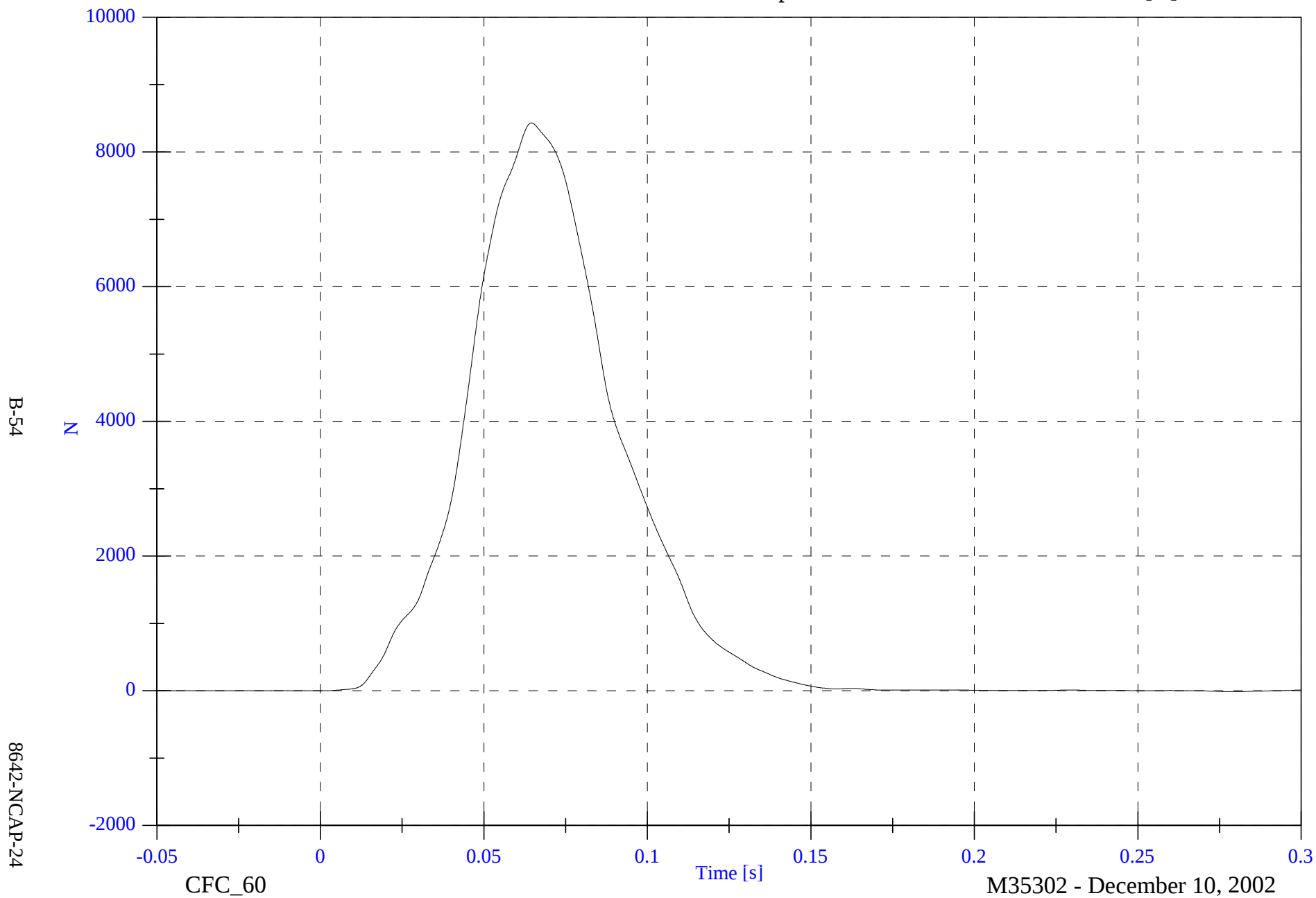


NCAP Test #2 - 2003 Honda Accord

V1P1 Driver Lap Belt

Max: 8430.6 [N] at 0.065 [s]

Min: -11.1 [N] at 0.280 [s]

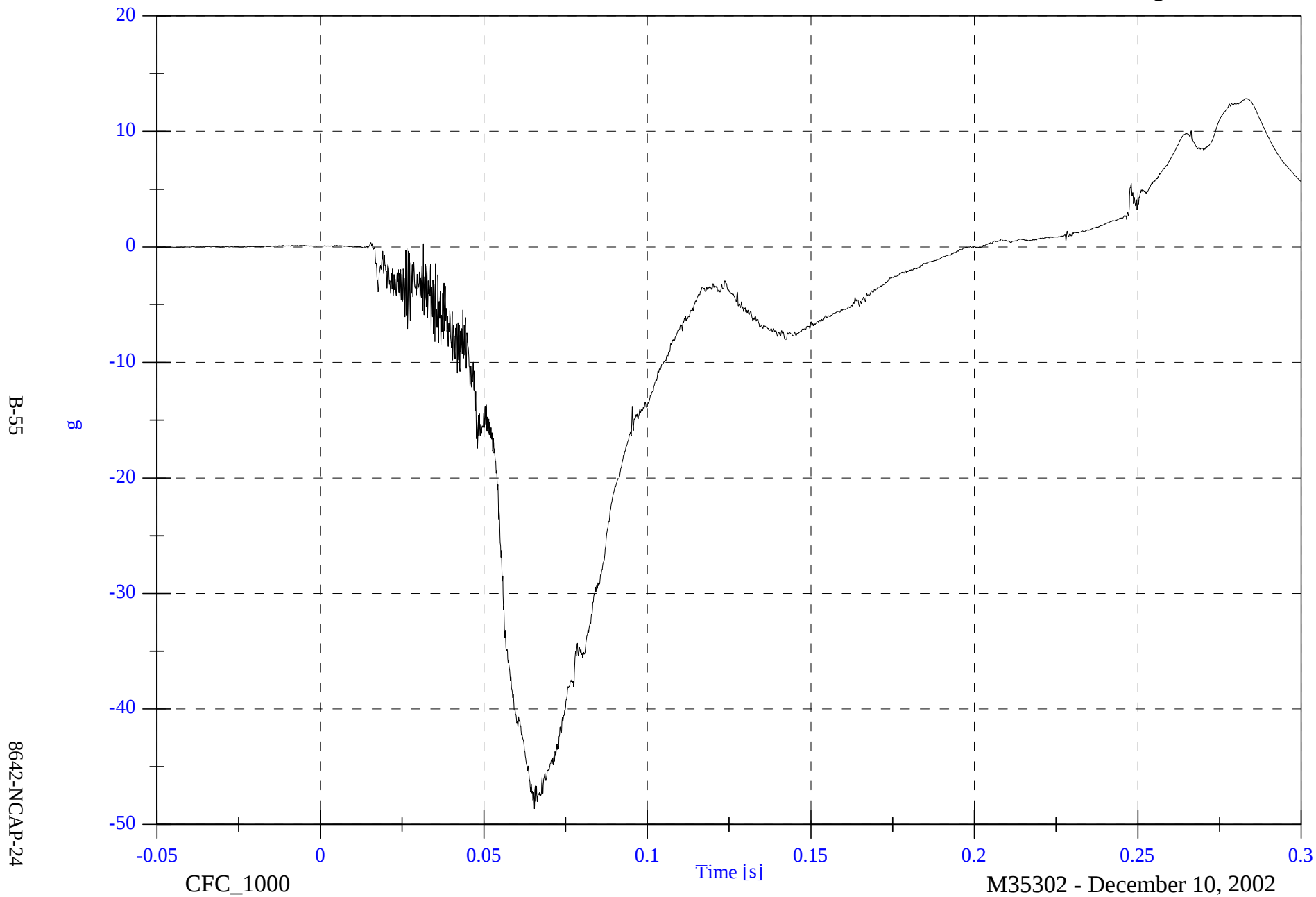


NCAP Test #2 - 2003 Honda Accord

V1P2 Head CG x

Max: 12.9 [g] at 0.283 [s]

Min: -48.6 [g] at 0.065 [s]



NCAP Test #2 - 2003 Honda Accord

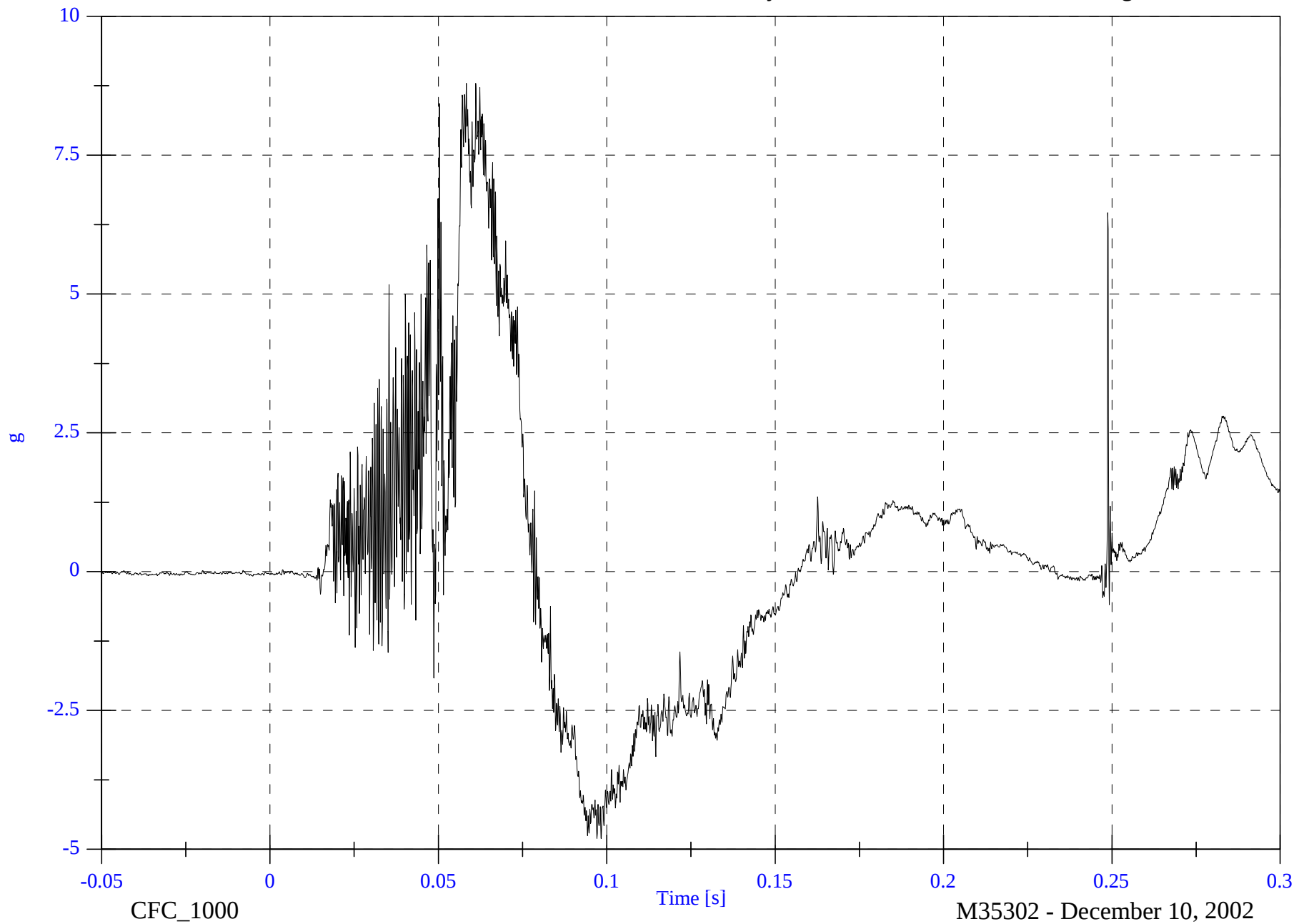
V1P2 Head CG y

Max: 8.8 [g] at 0.058 [s]

Min: -4.8 [g] at 0.098 [s]

B-56

8642-NCAP-24

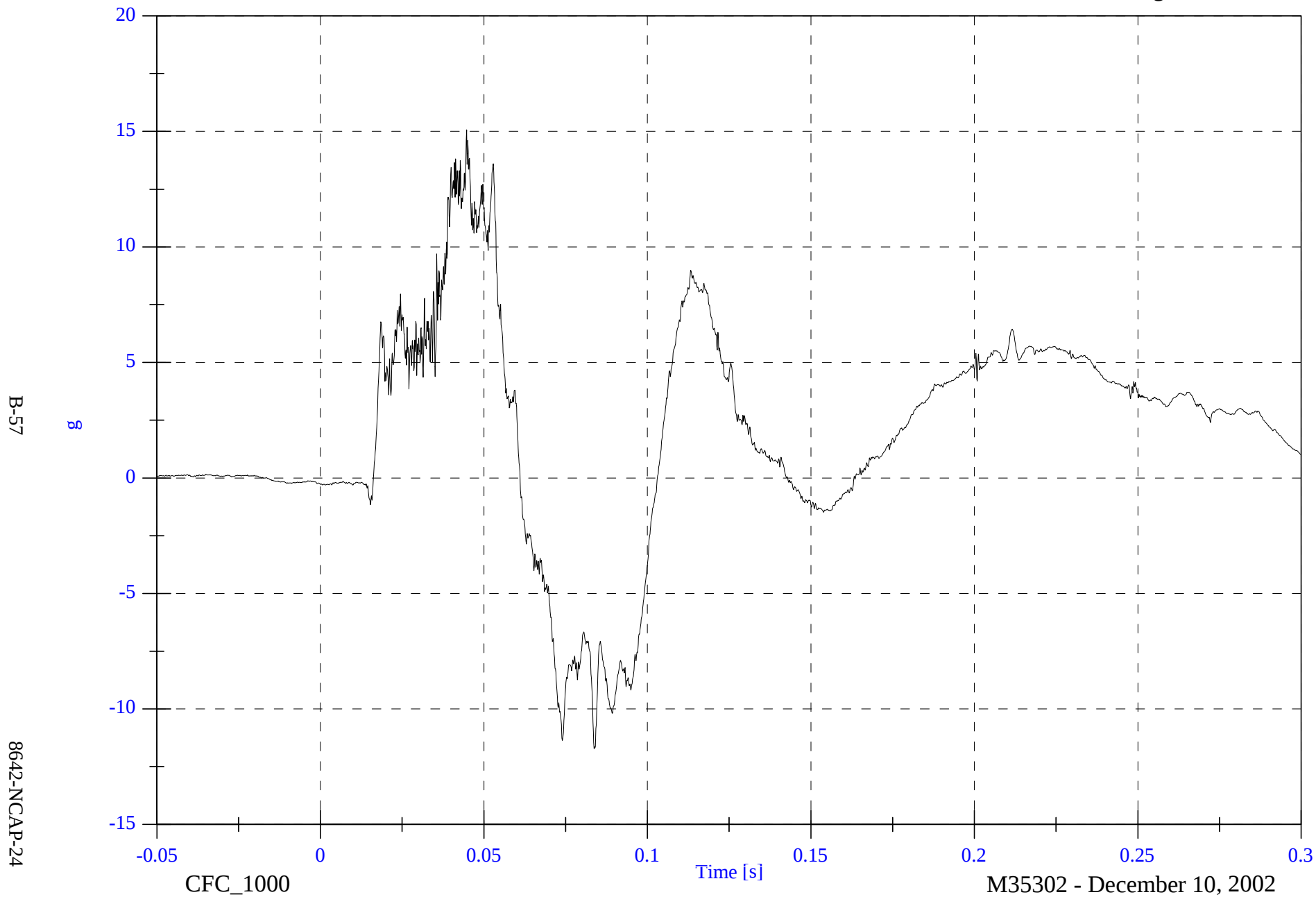


NCAP Test #2 - 2003 Honda Accord

V1P2 Head CG z

Max: 15.1 [g] at 0.045 [s]

Min: -11.7 [g] at 0.084 [s]

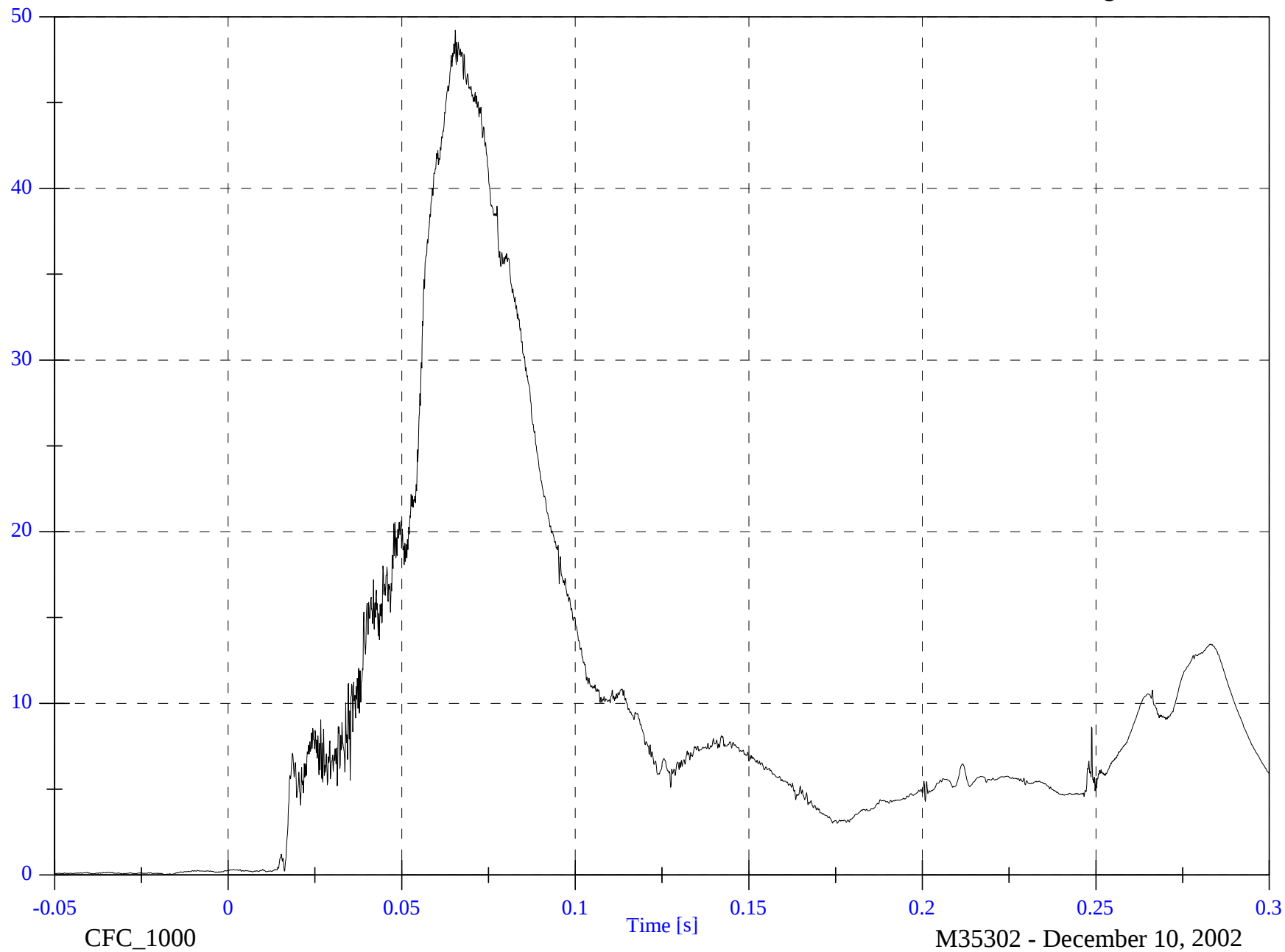


NCAP Test #2 - 2003 Honda Accord

V1P2 Head CG Resultant

Max: 49.2 [g] at 0.065 [s]

Min: 0.0 [g] at -0.018 [s]



B-58

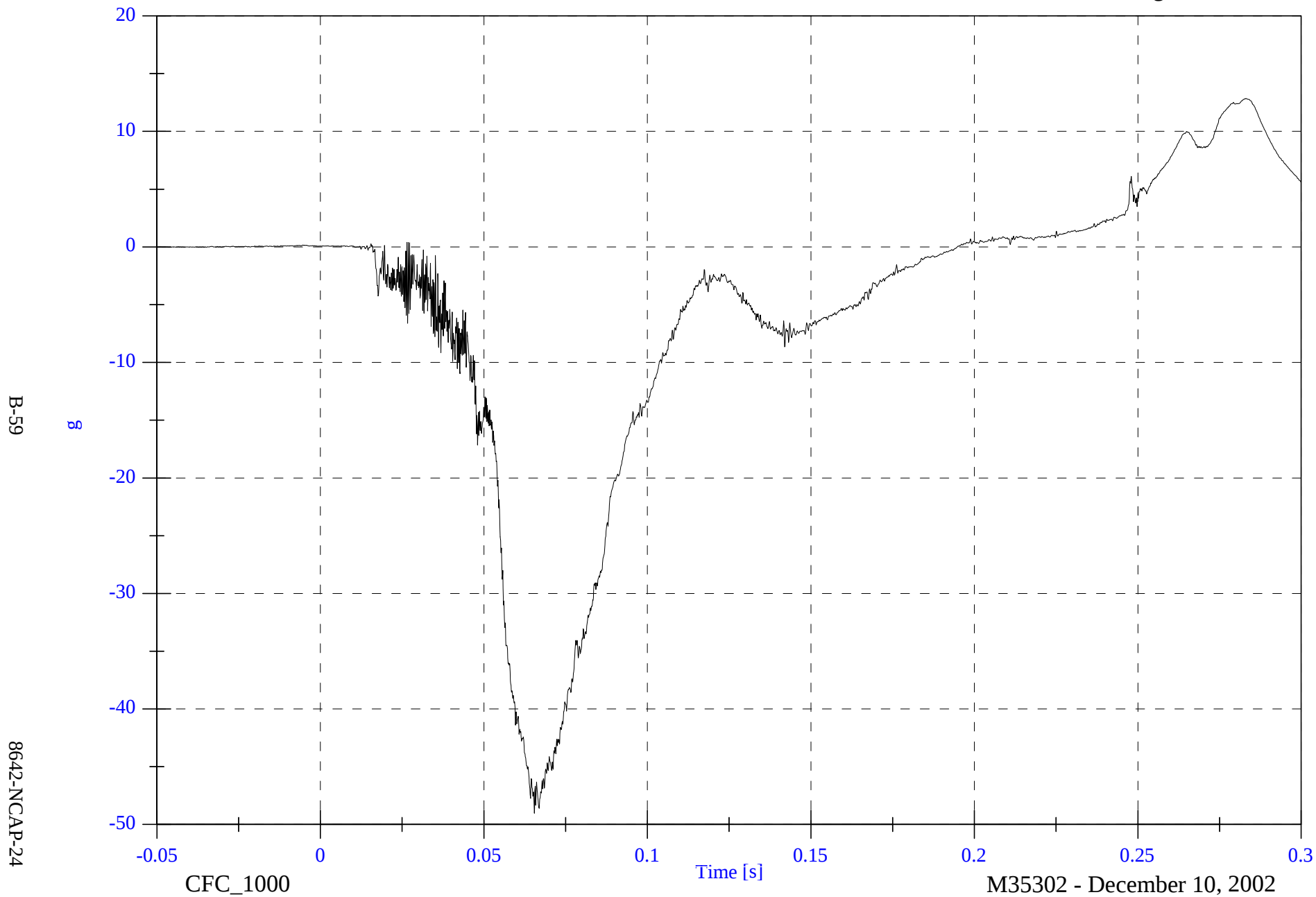
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P2 Head CG Red x

Max: 12.8 [g] at 0.283 [s]

Min: -49.0 [g] at 0.065 [s]

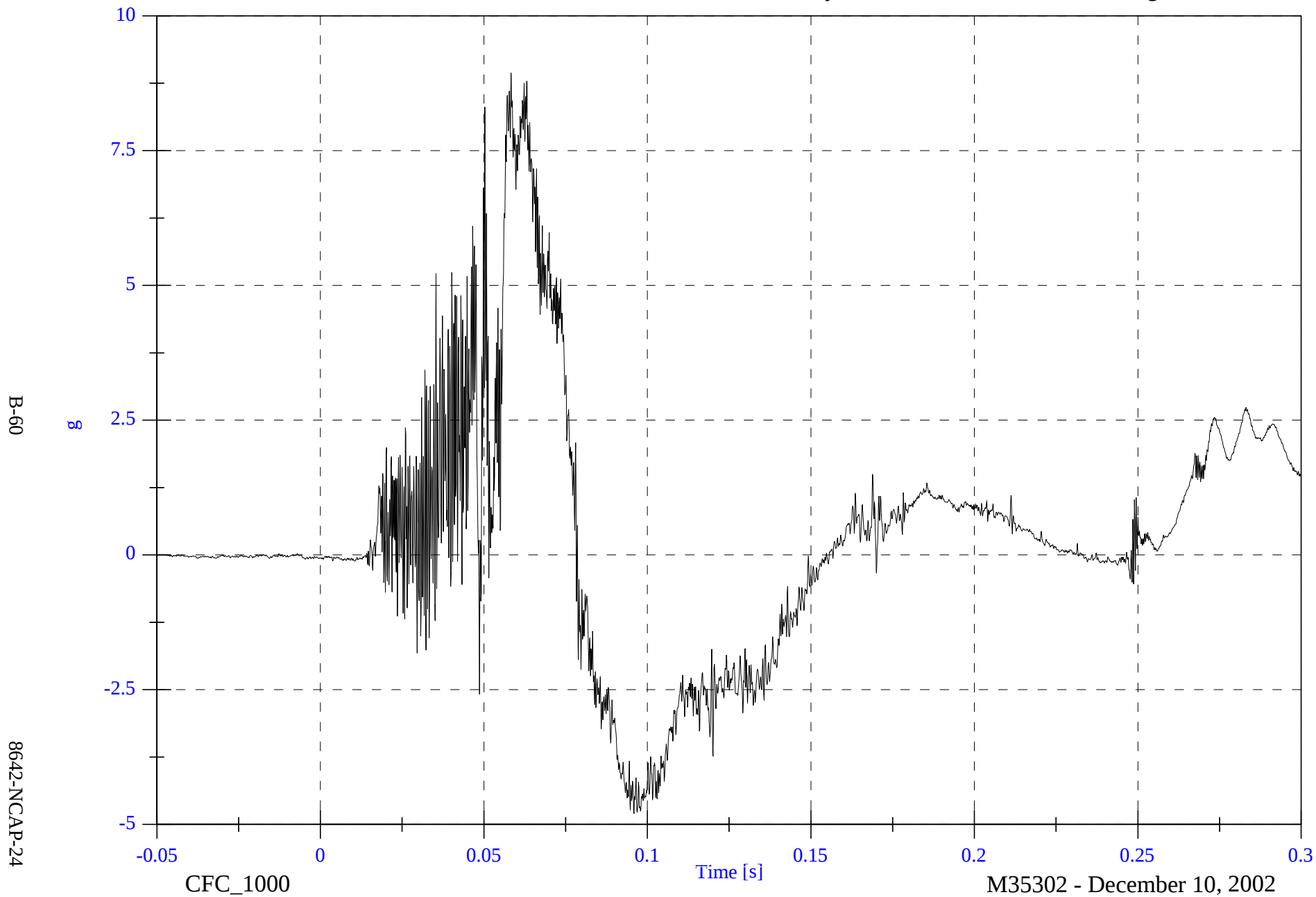


NCAP Test #2 - 2003 Honda Accord

V1P2 Head CG Red y

Max: 8.9 [g] at 0.058 [s]

Min: -4.8 [g] at 0.096 [s]



NCAP Test #2 - 2003 Honda Accord

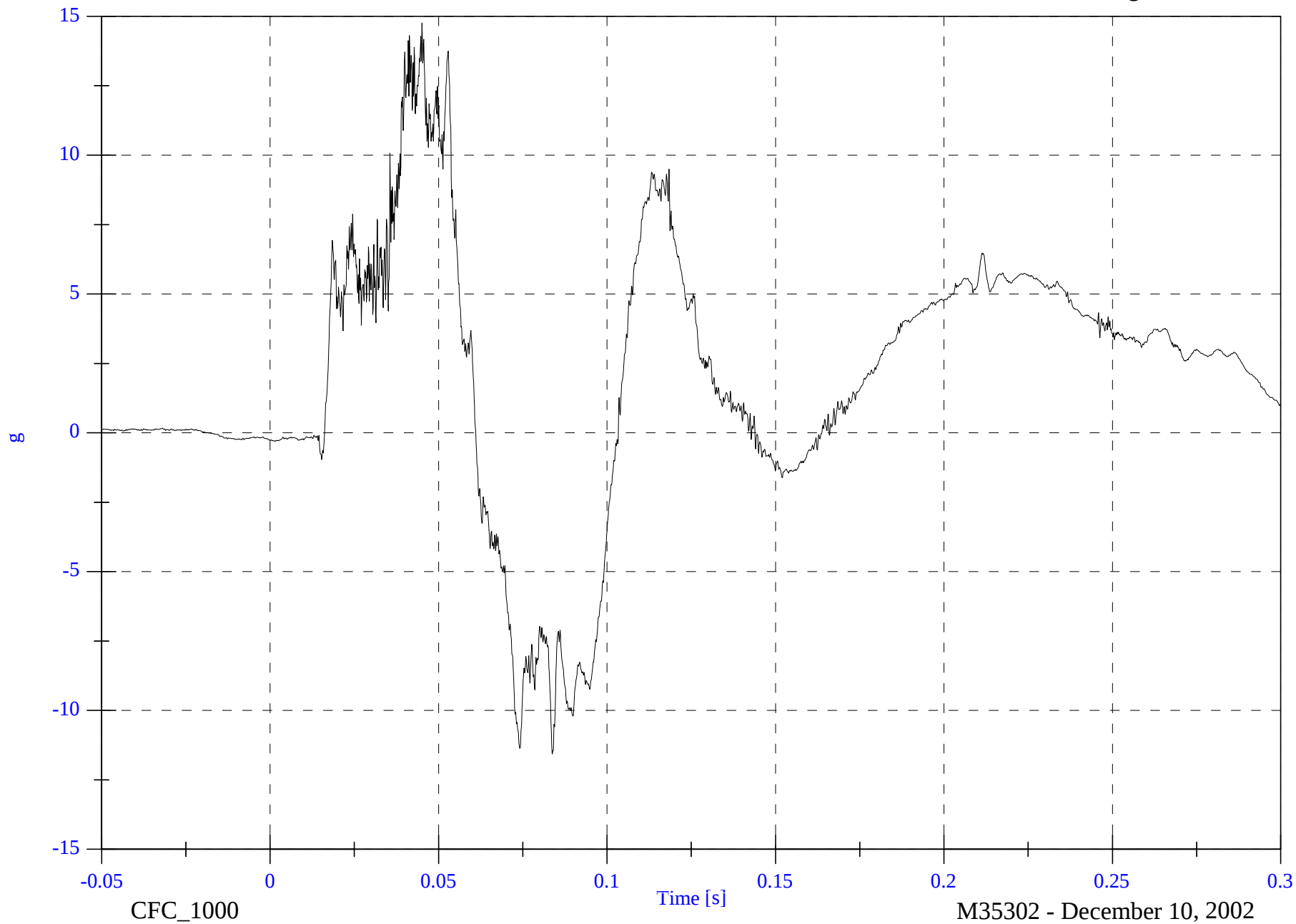
V1P2 Head CG Red z

Max: 14.8 [g] at 0.045 [s]

Min: -11.6 [g] at 0.084 [s]

B-61

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P2 Head CG Red Resultant

Max: 49.6 [g] at 0.065 [s]

Min: 0.0 [g] at -0.017 [s]



B-62

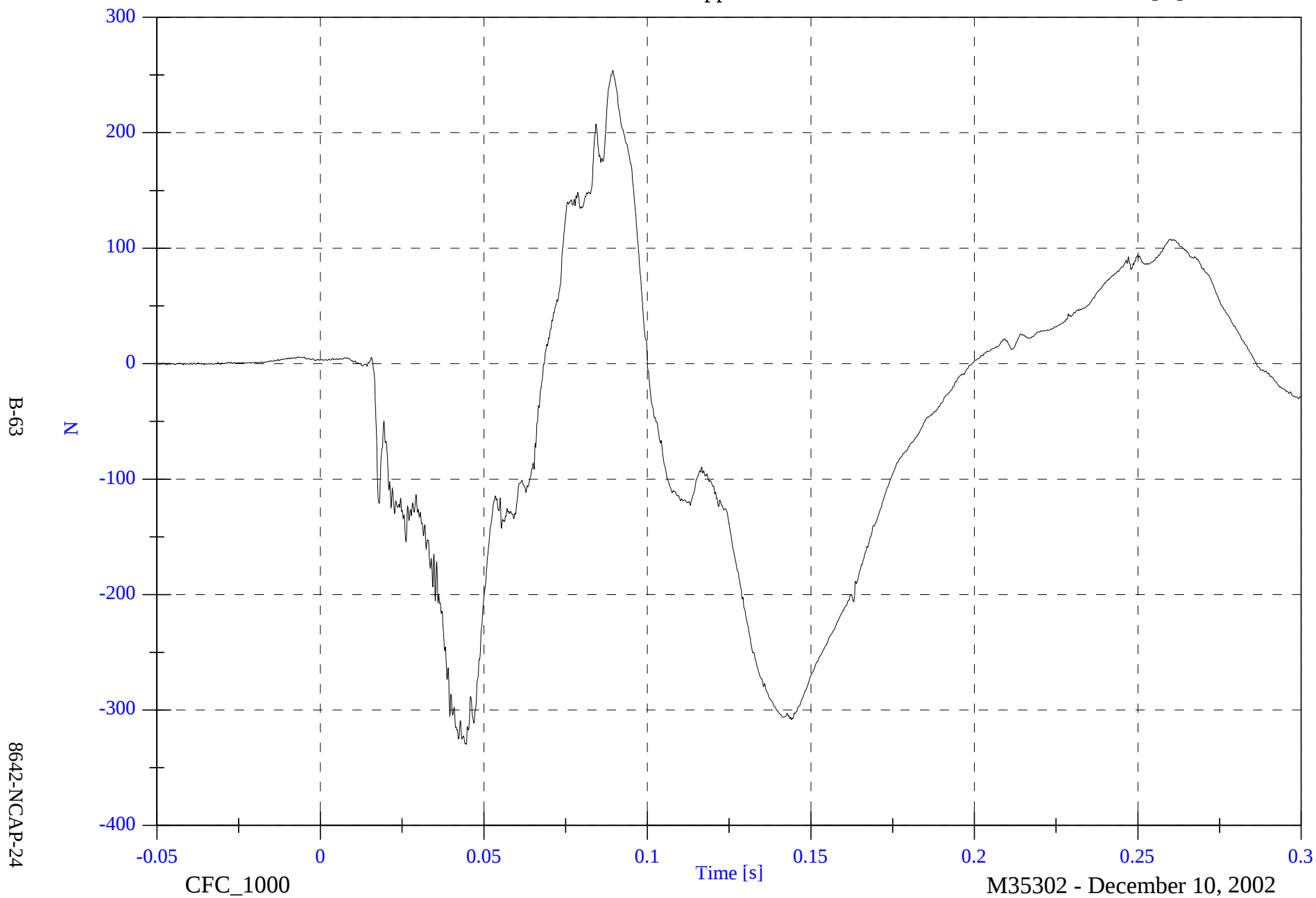
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck Fx

Max: 254.0 [N] at 0.090 [s]

Min: -329.8 [N] at 0.045 [s]

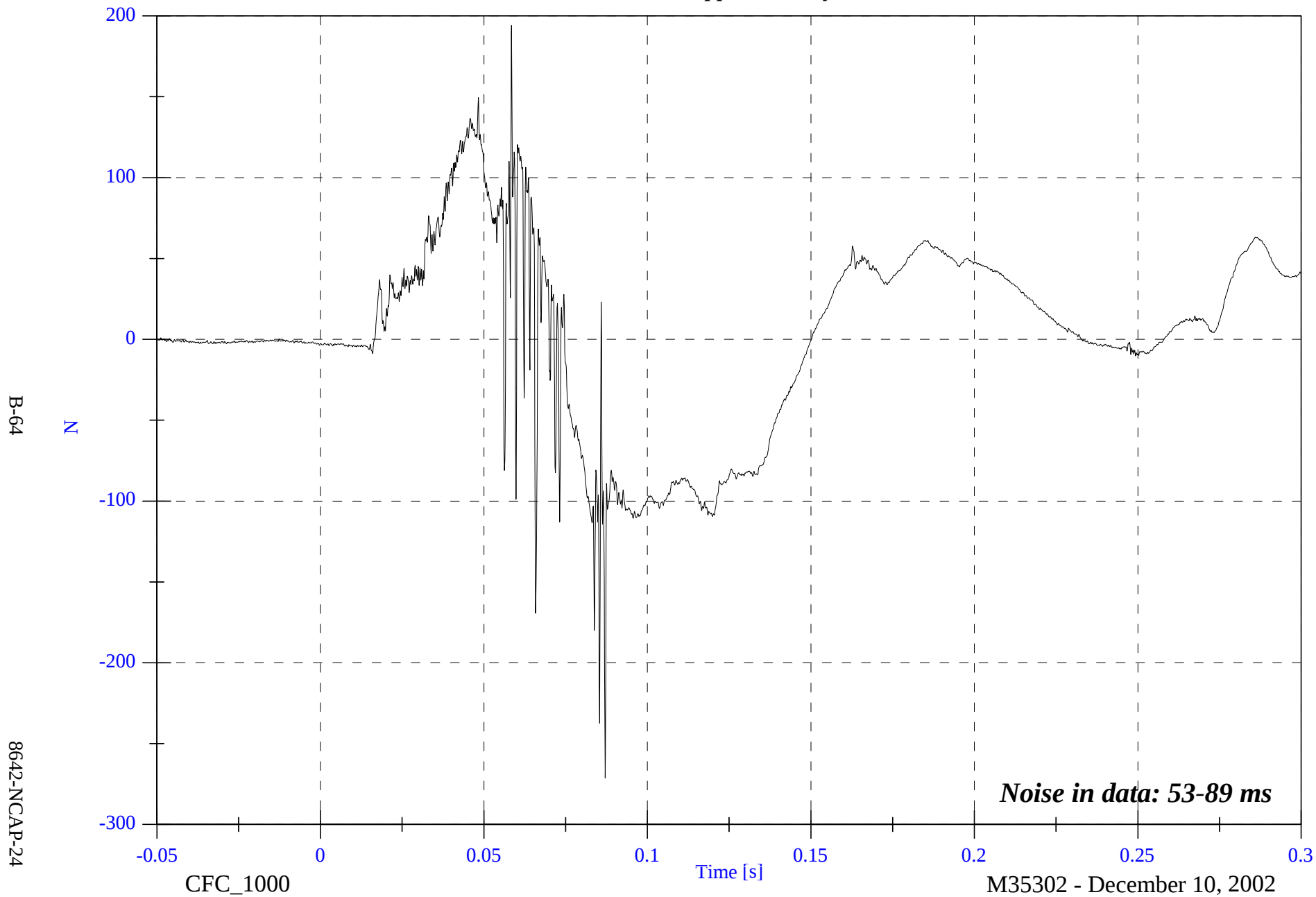


NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck Fy

Max: 194.1 [N] at 0.058 [s]

Min: -271.3 [N] at 0.087 [s]

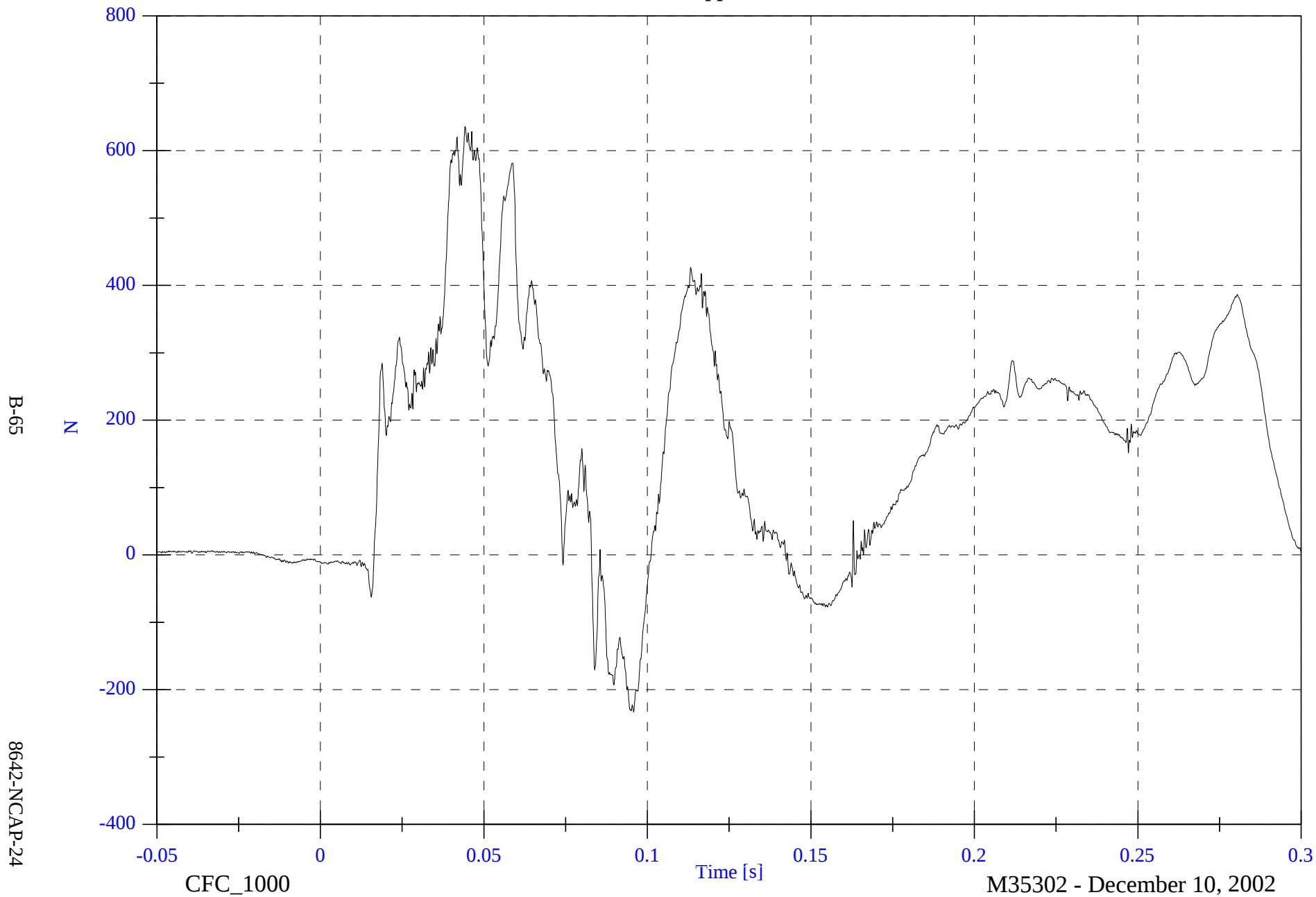


NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck Fz

Max: 635.9 [N] at 0.044 [s]

Min: -233.1 [N] at 0.096 [s]



NCAP Test #2 - 2003 Honda Accord

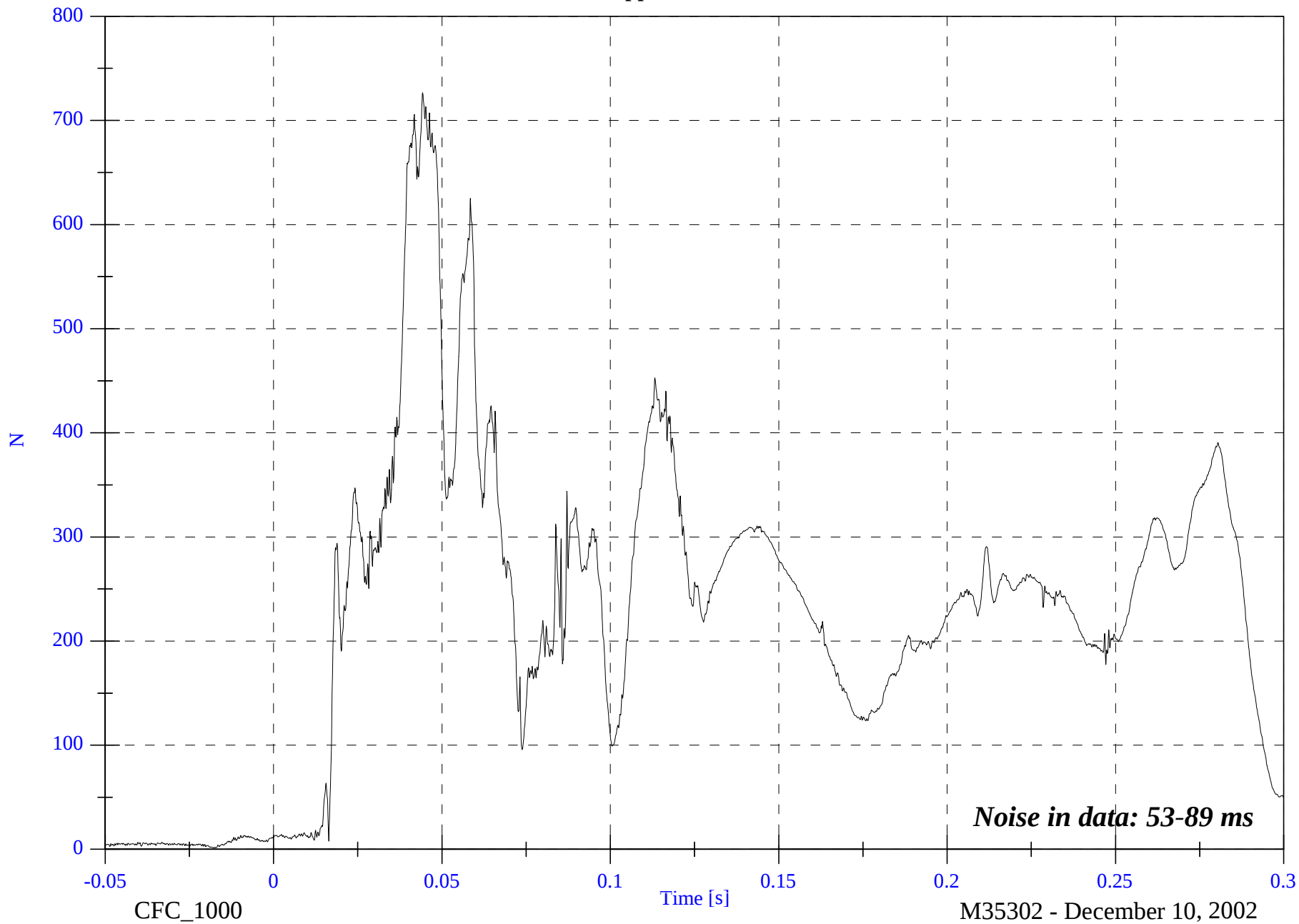
V1P2 Upper Neck F Resultant

Max: 726.6 [N] at 0.044 [s]

Min: 1.3 [N] at -0.018 [s]

B-66

8642-NCAP-24

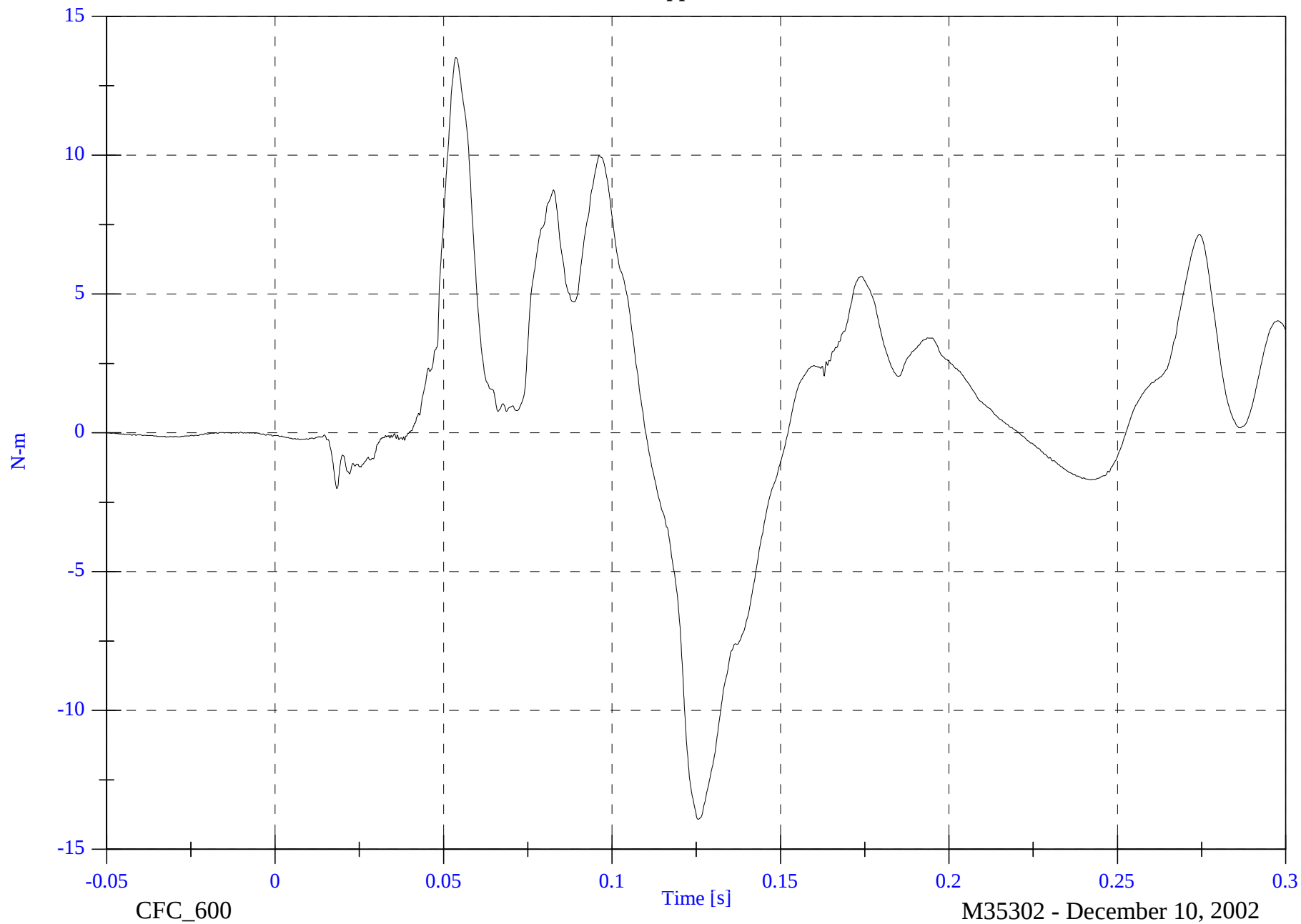


NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck Mx

Max: 13.5 [N-m] at 0.054 [s]

Min: -13.9 [N-m] at 0.126 [s]



B-67

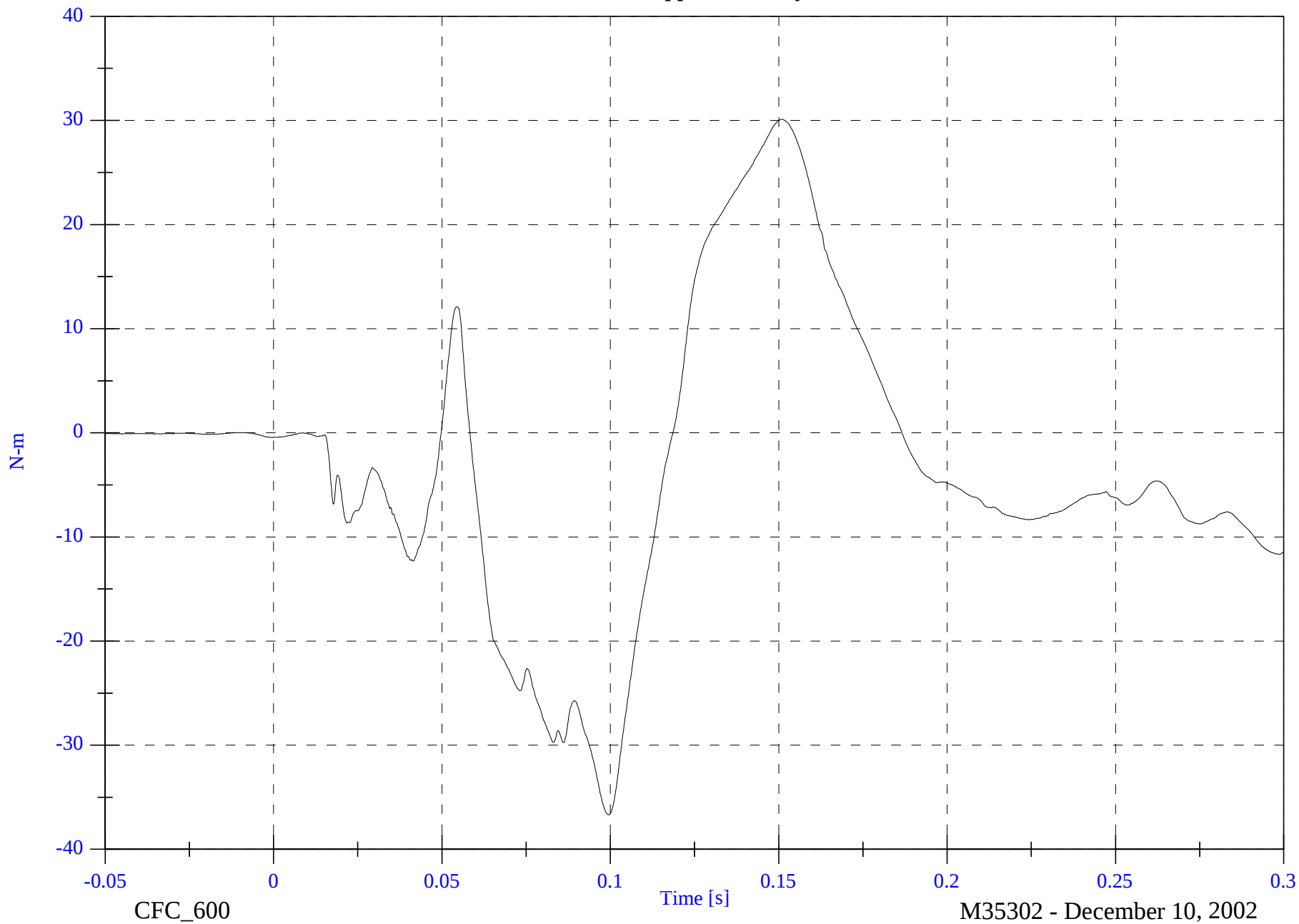
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck My

Max: 30.1 [N-m] at 0.151 [s]

Min: -36.7 [N-m] at 0.100 [s]



B-68

8642-NCAP-24

CFC_600

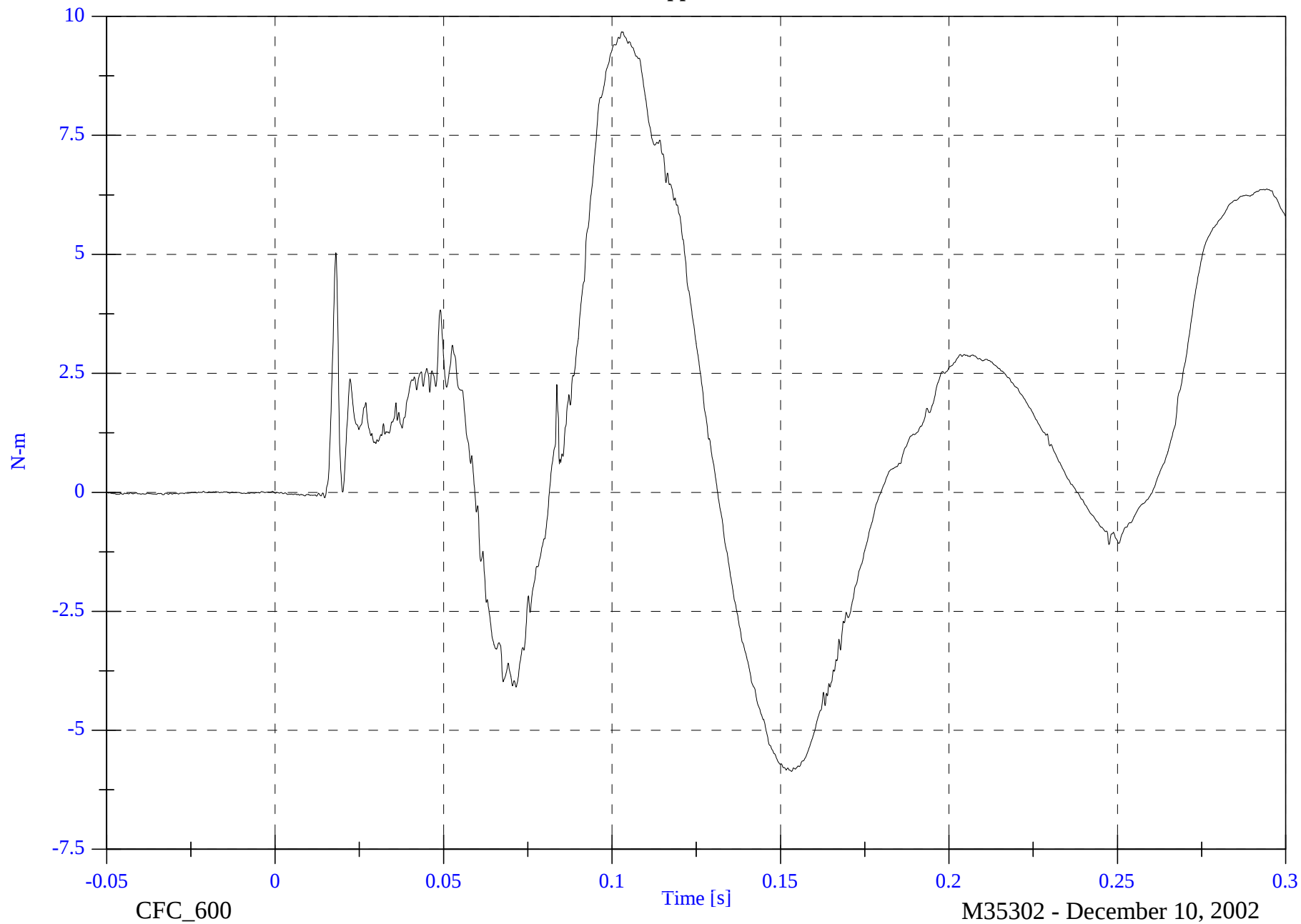
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck Mz

Max: 9.7 [N-m] at 0.103 [s]

Min: -5.9 [N-m] at 0.153 [s]



B-69

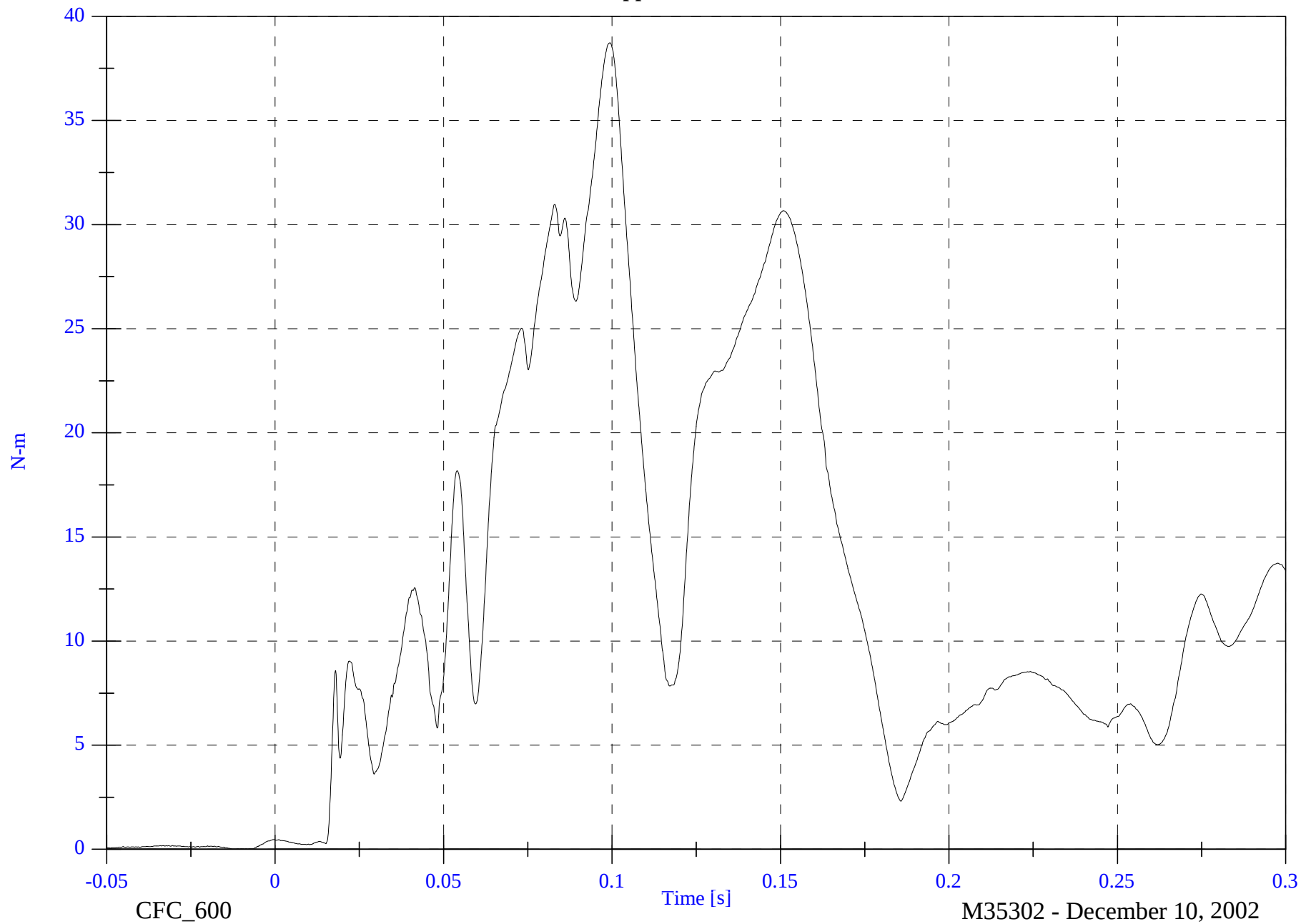
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P2 Upper Neck M Resultant

Max: 38.7 [N-m] at 0.099 [s]

Min: 0.0 [N-m] at -0.012 [s]



B-70

8642-NCAP-24

CFC_600

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

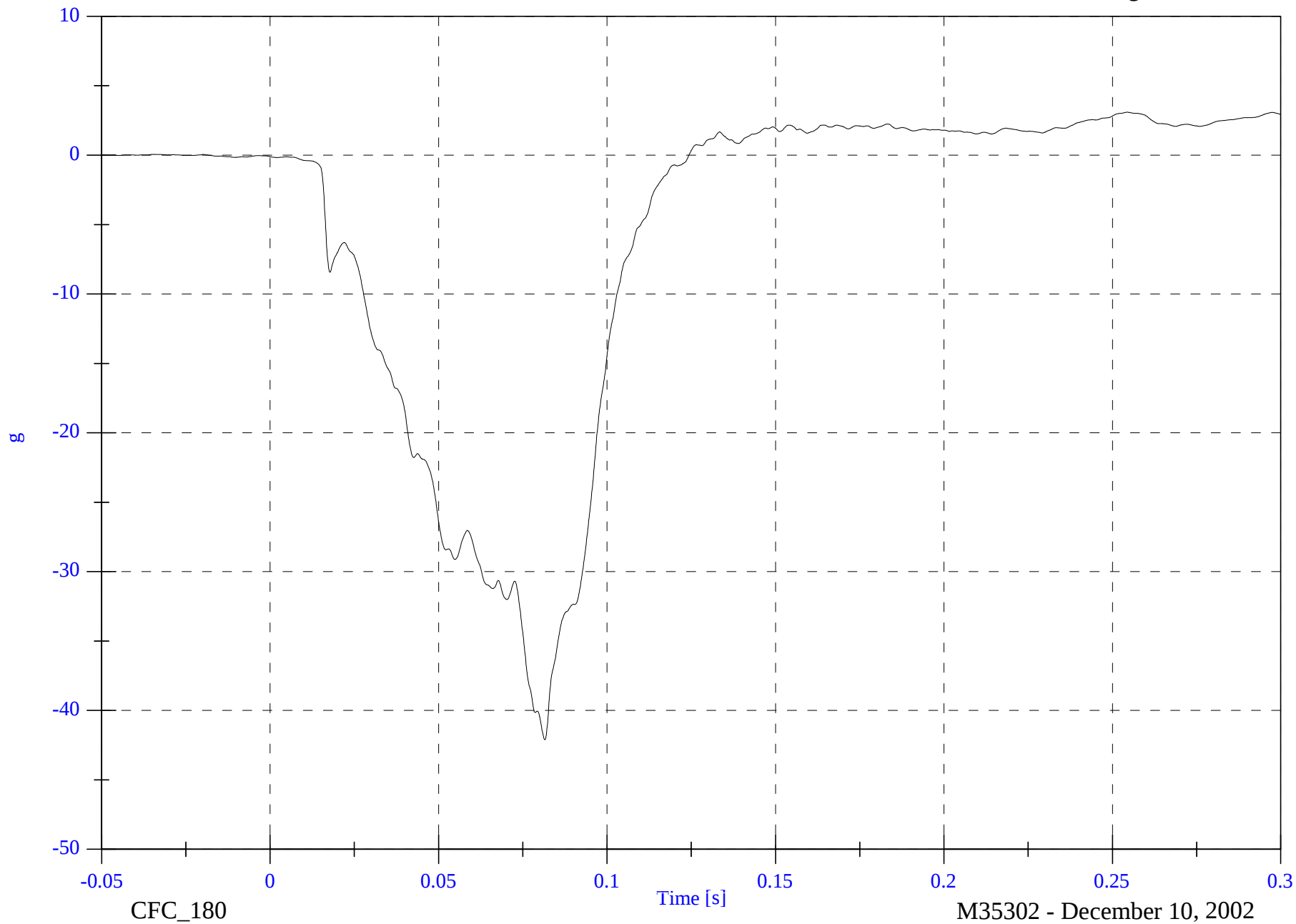
V1P2 Chest x

Max: 3.1 [g] at 0.254 [s]

Min: -42.1 [g] at 0.082 [s]

B-71

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

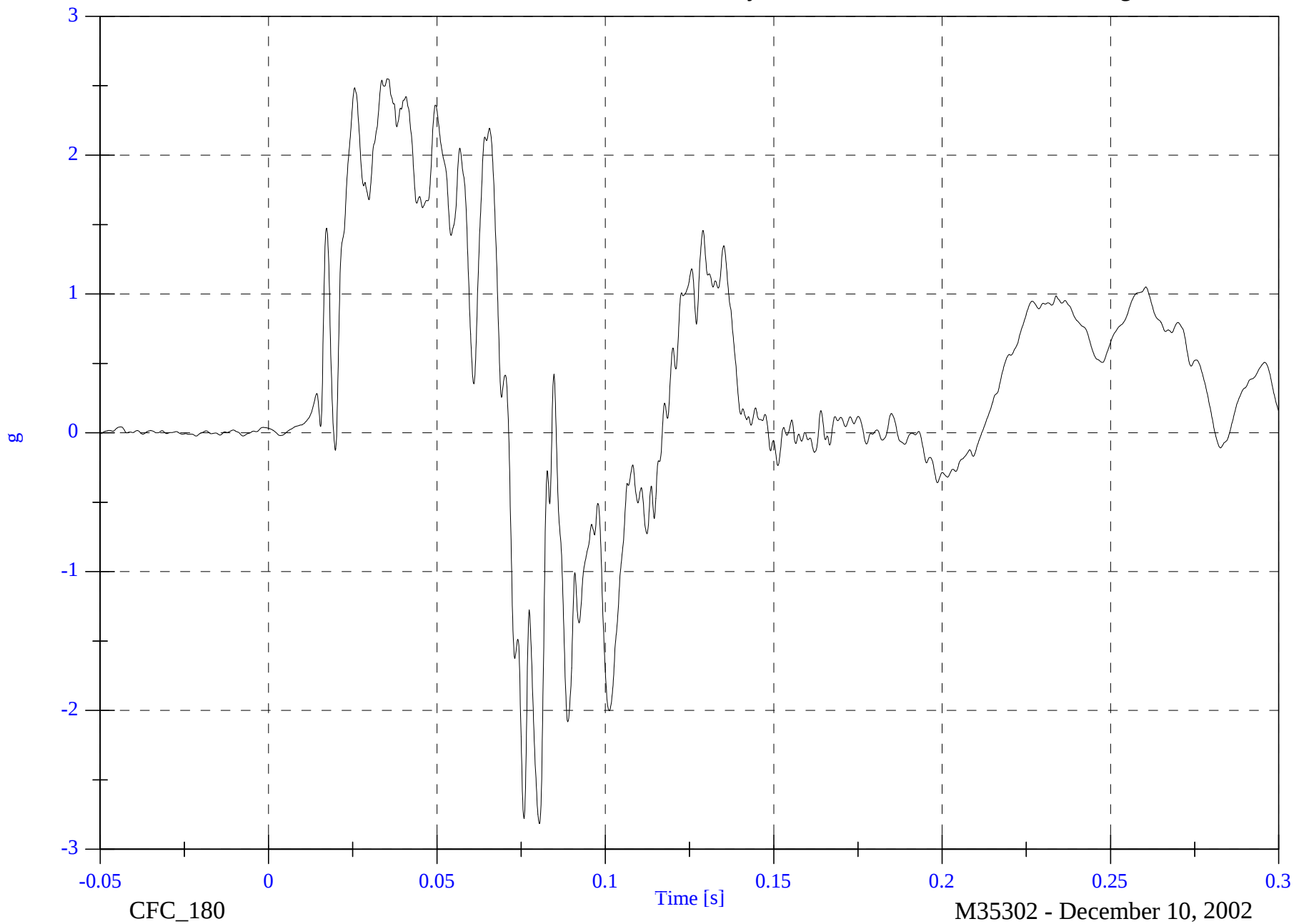
V1P2 Chest y

Max: 2.5 [g] at 0.035 [s]

Min: -2.8 [g] at 0.081 [s]

B-72

8642-NCAP-24

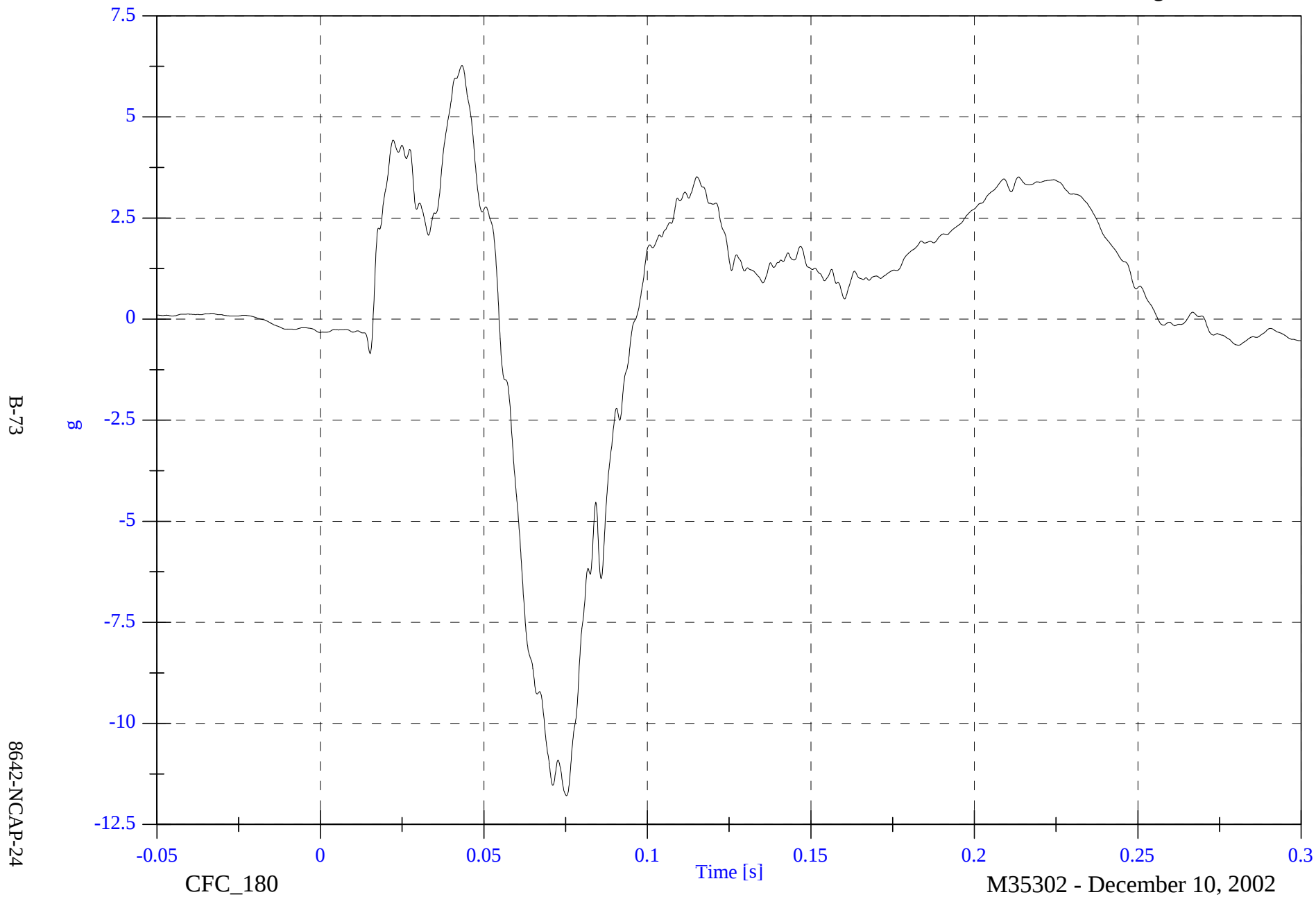


NCAP Test #2 - 2003 Honda Accord

V1P2 Chest z

Max: 6.3 [g] at 0.043 [s]

Min: -11.8 [g] at 0.075 [s]



NCAP Test #2 - 2003 Honda Accord

V1P2 Chest Resultant

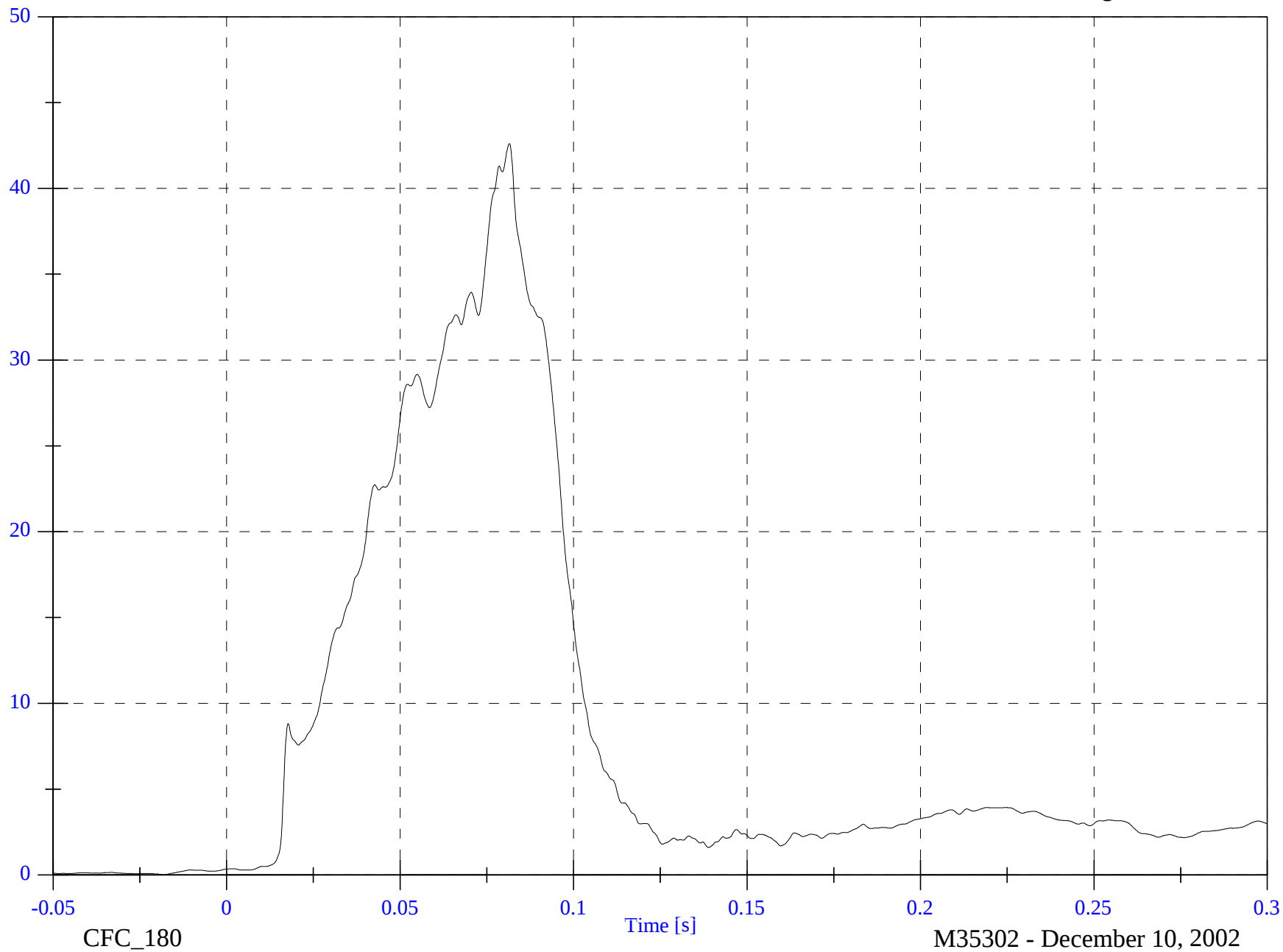
Max: 42.6 [g] at 0.081 [s]

Min: 0.0 [g] at -0.018 [s]

B-74

8642-NCAP-24

g

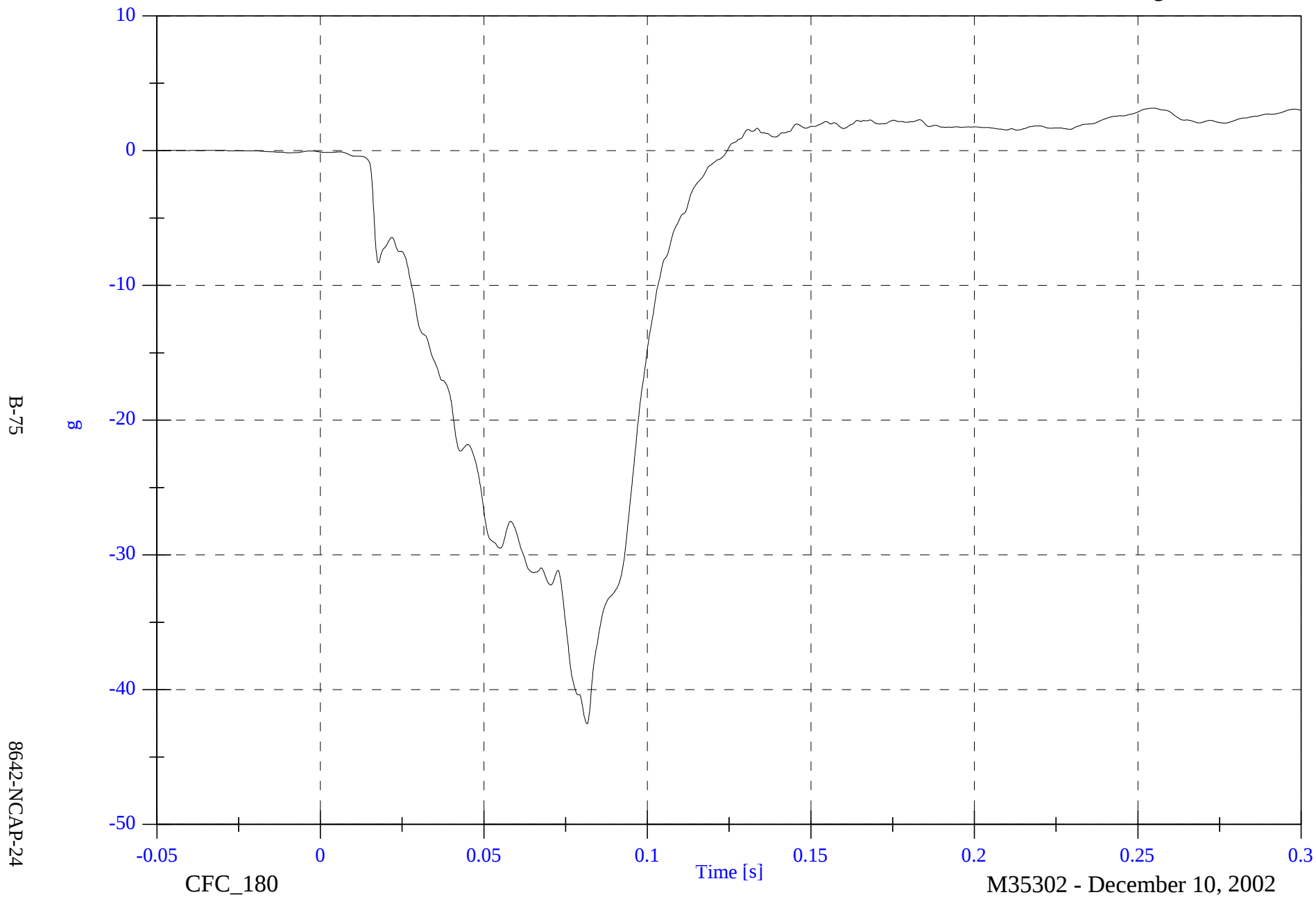


NCAP Test #2 - 2003 Honda Accord

V1P2 Chest Red x

Max: 3.2 [g] at 0.255 [s]

Min: -42.5 [g] at 0.082 [s]



NCAP Test #2 - 2003 Honda Accord

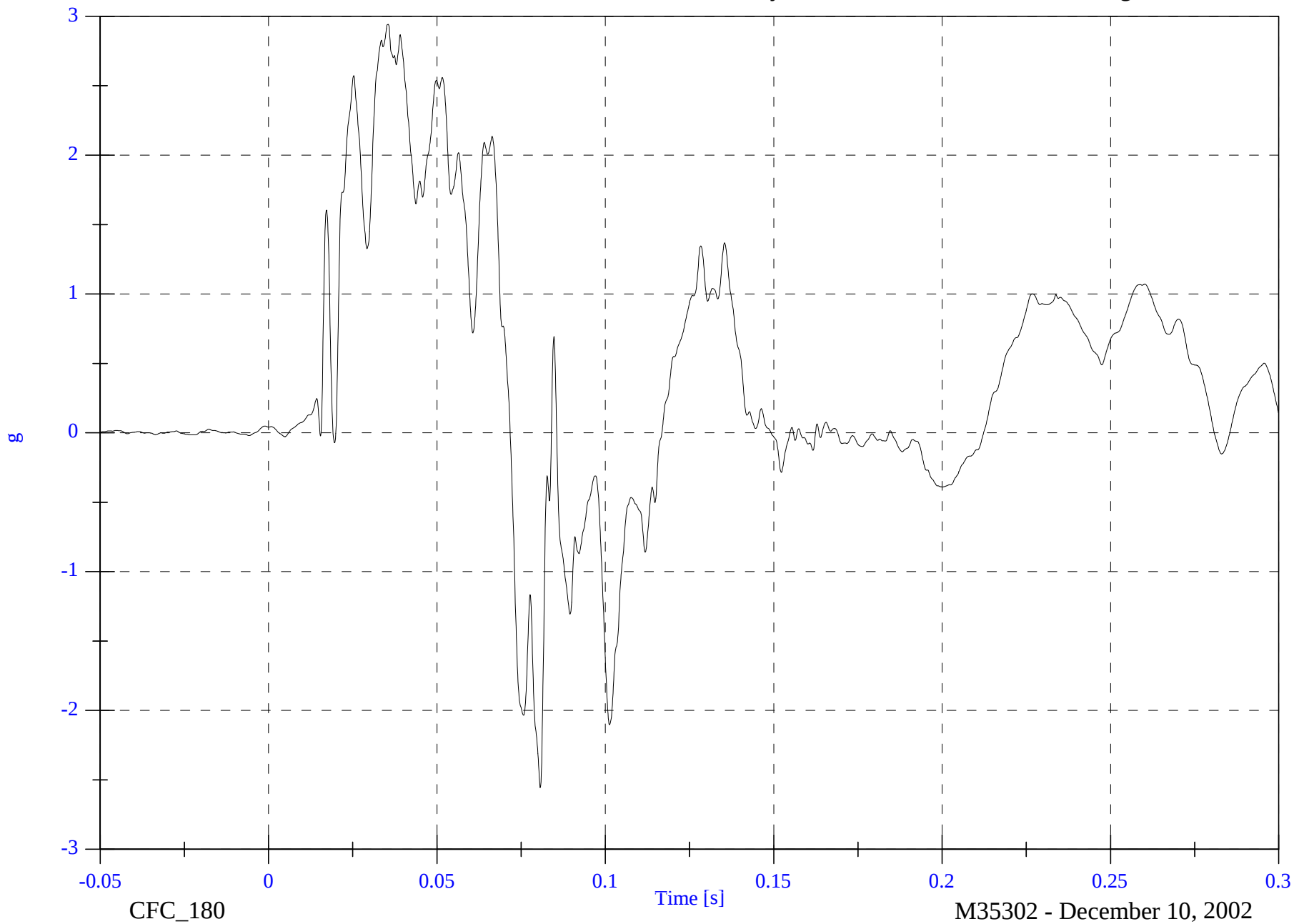
V1P2 Chest Red y

Max: 2.9 [g] at 0.035 [s]

Min: -2.6 [g] at 0.081 [s]

B-76

8642-NCAP-24

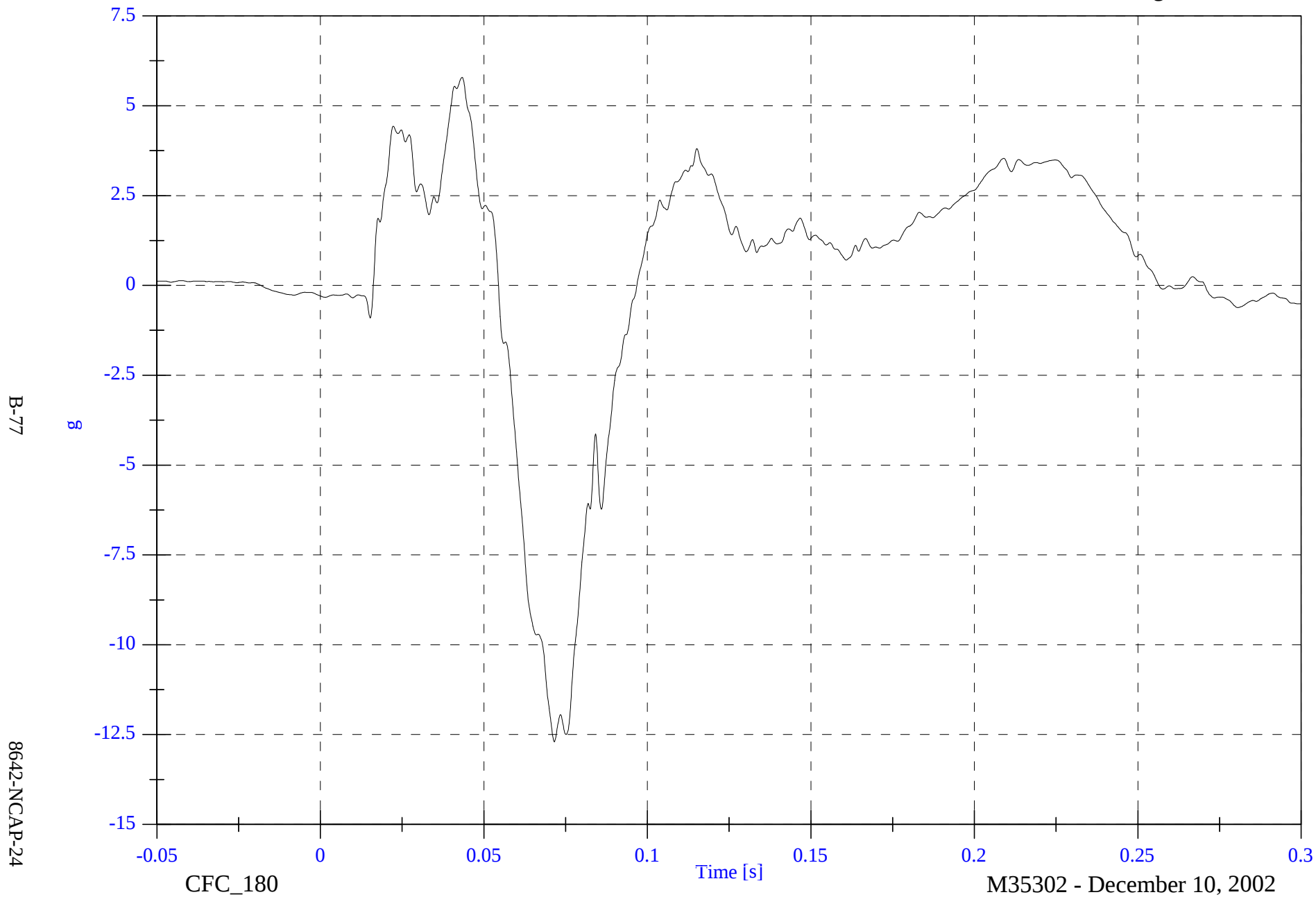


NCAP Test #2 - 2003 Honda Accord

V1P2 Chest Red z

Max: 5.8 [g] at 0.043 [s]

Min: -12.7 [g] at 0.072 [s]



NCAP Test #2 - 2003 Honda Accord

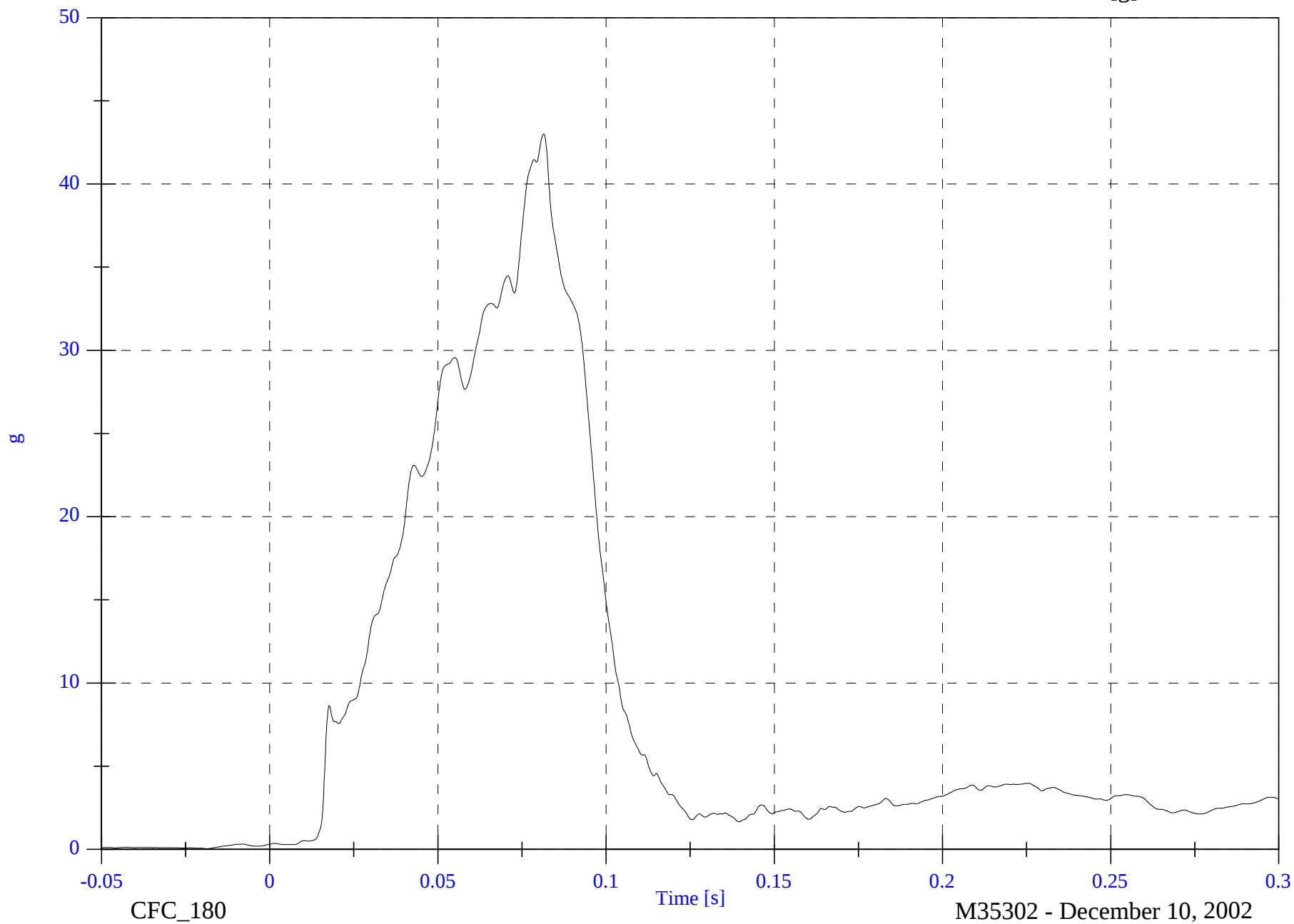
V1P2 Chest Red Resultant

Max: 43.0 [g] at 0.081 [s]

Min: 0.0 [g] at -0.019 [s]

B-78

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

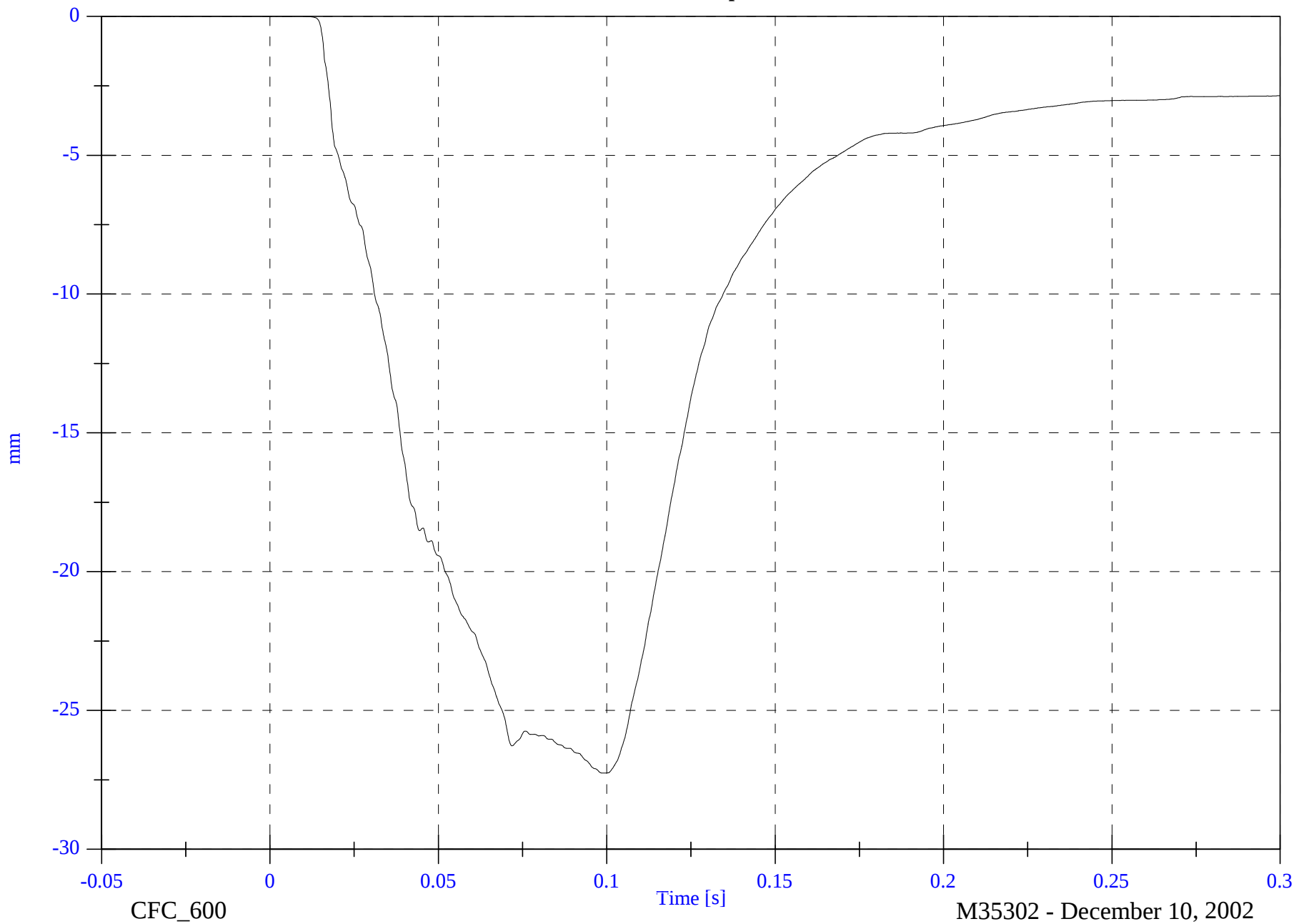
V1P2 Chest Compression x

Max: 0.0 [mm] at -0.008 [s]

Min: -27.3 [mm] at 0.099 [s]

B-79

8642-NCAP-24

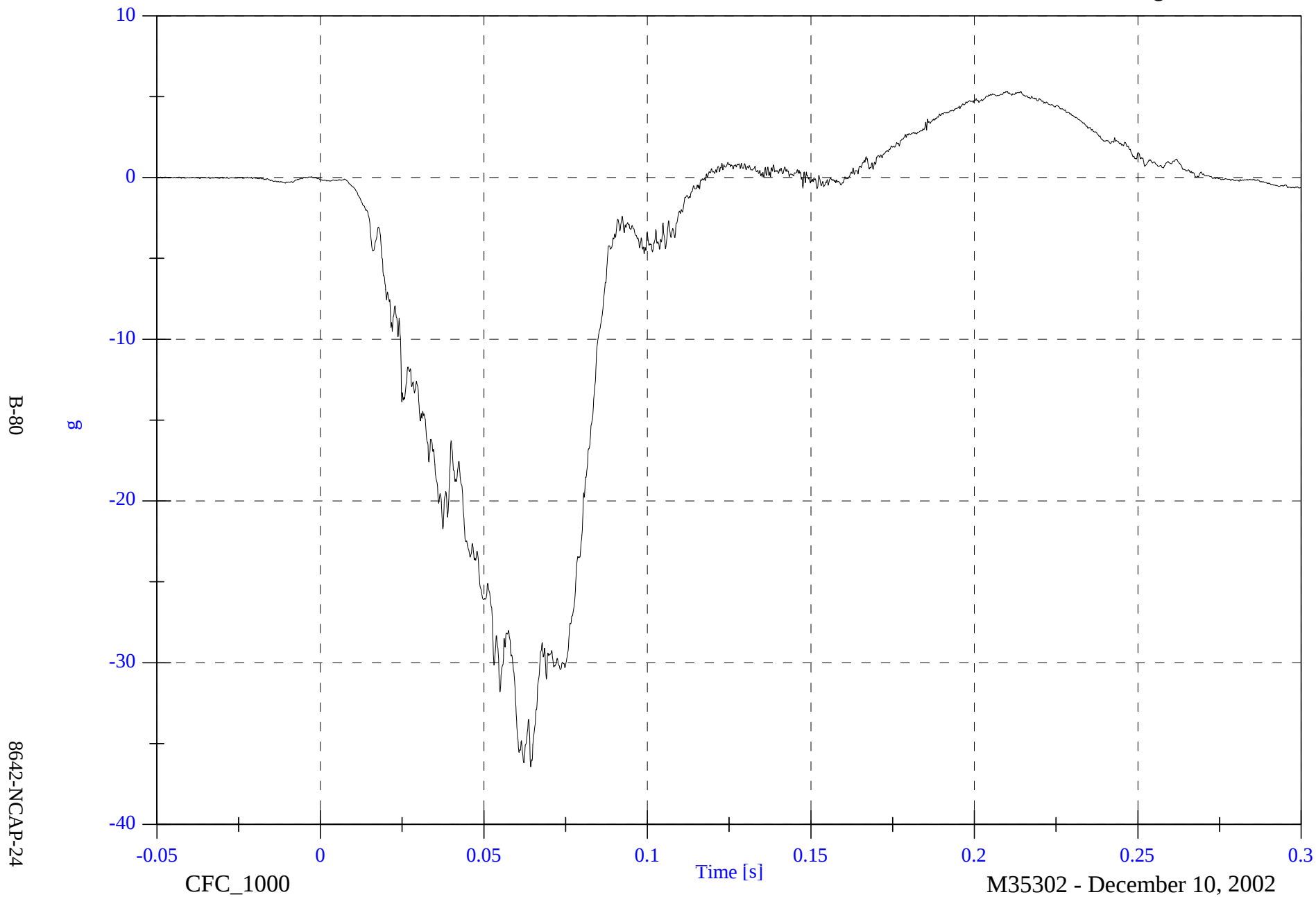


NCAP Test #2 - 2003 Honda Accord

V1P2 Pelvic x

Max: 5.3 [g] at 0.210 [s]

Min: -36.4 [g] at 0.064 [s]



NCAP Test #2 - 2003 Honda Accord

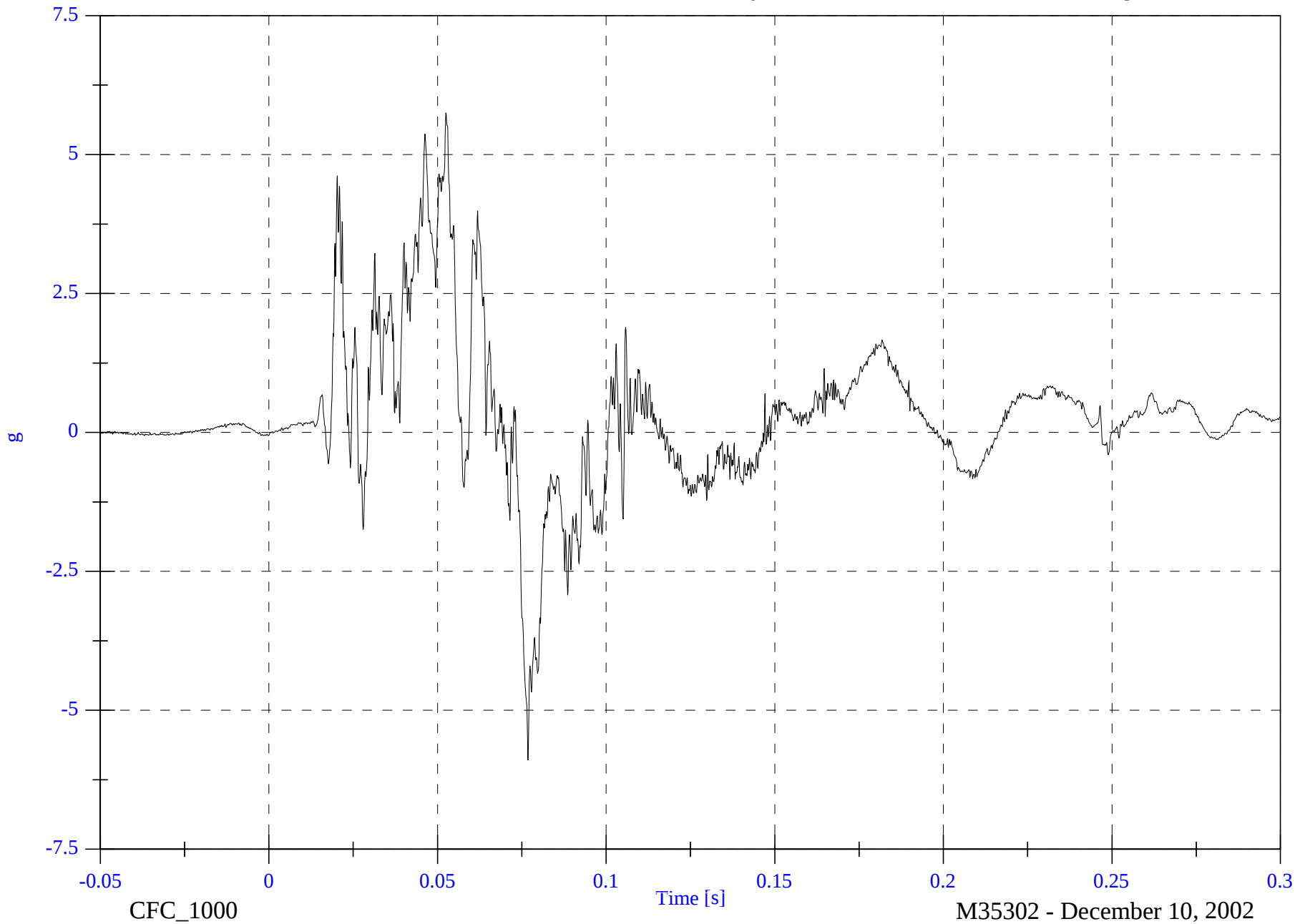
V1P2 Pelvic y

Max: 5.7 [g] at 0.053 [s]

Min: -5.9 [g] at 0.077 [s]

B-81

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

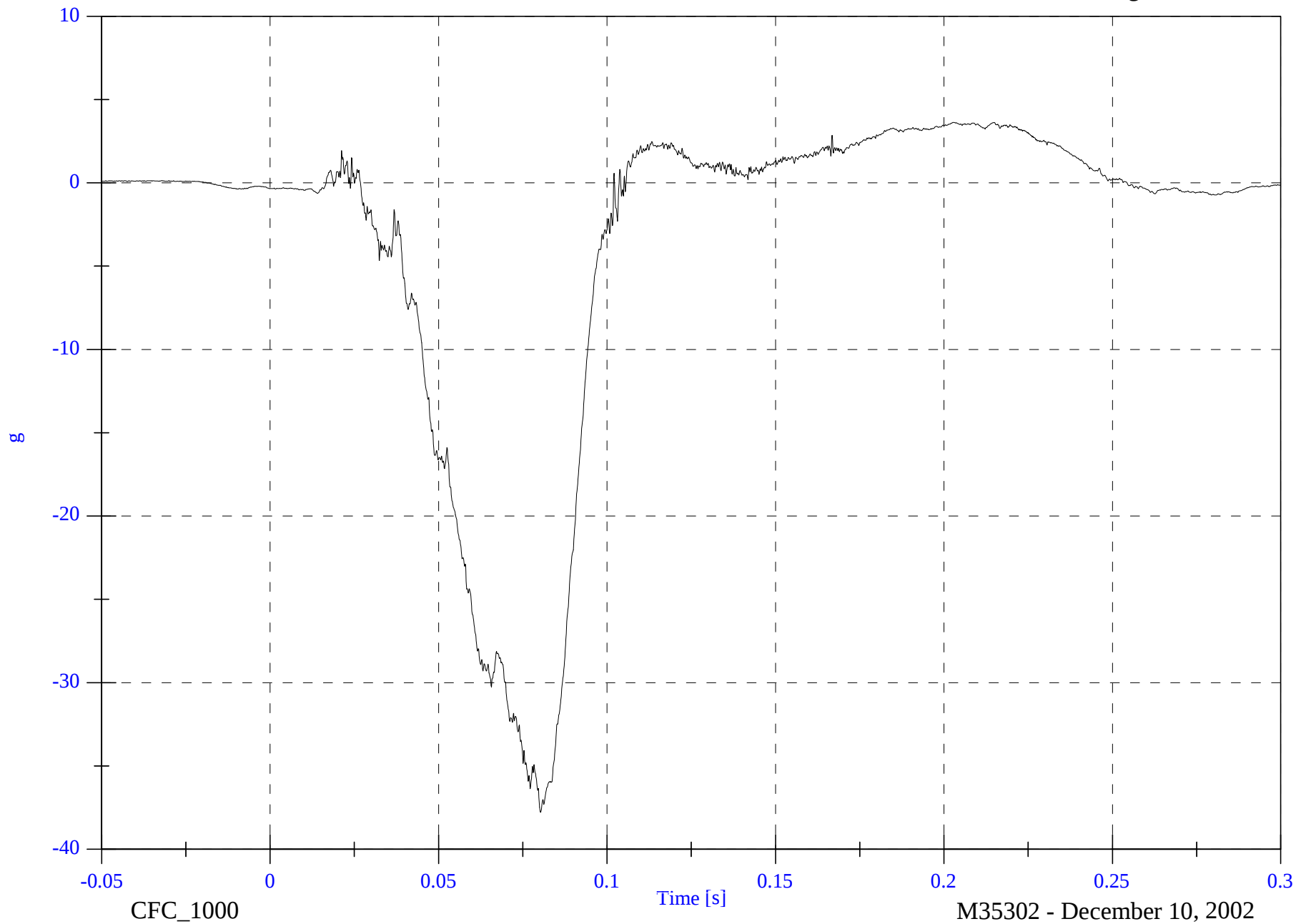
V1P2 Pelvic z

Max: 3.6 [g] at 0.203 [s]

Min: -37.8 [g] at 0.080 [s]

B-82

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

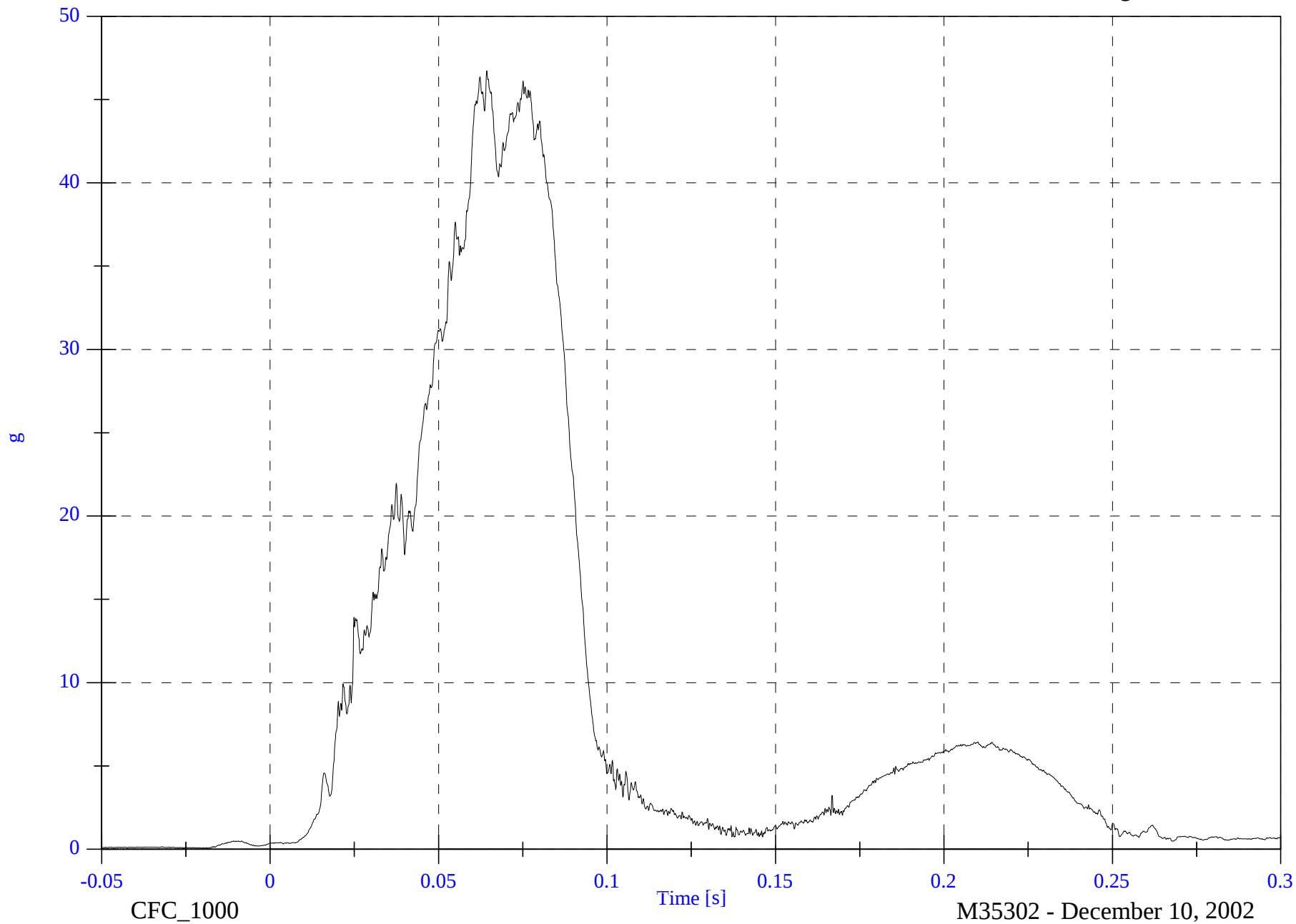
V1P2 Pelvic Resultant

Max: 46.7 [g] at 0.064 [s]

Min: 0.1 [g] at -0.020 [s]

B-83

8642-NCAP-24

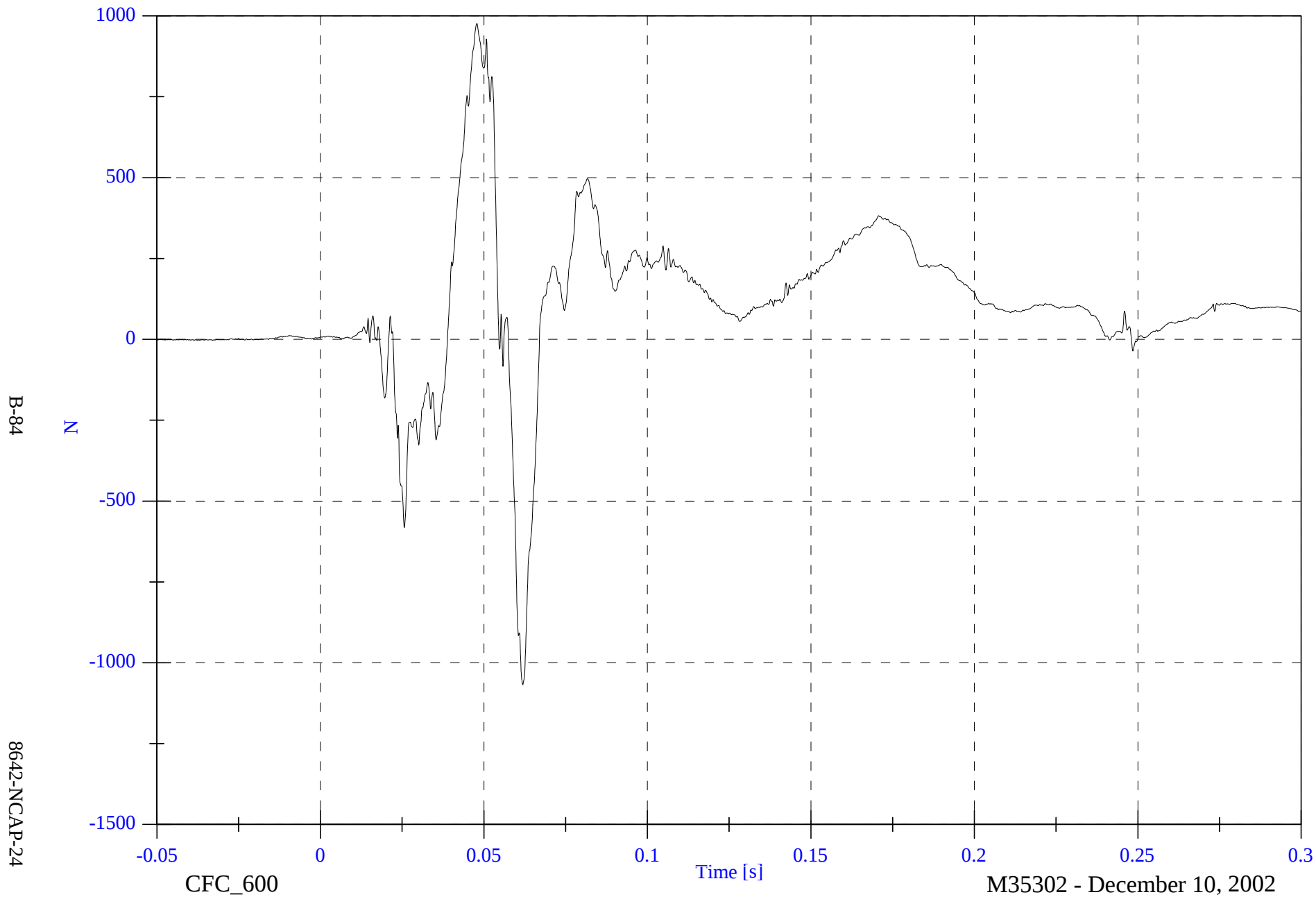


NCAP Test #2 - 2003 Honda Accord

V1P2 Left Femur z

Max: 976.8 [N] at 0.048 [s]

Min: -1067.8 [N] at 0.062 [s]

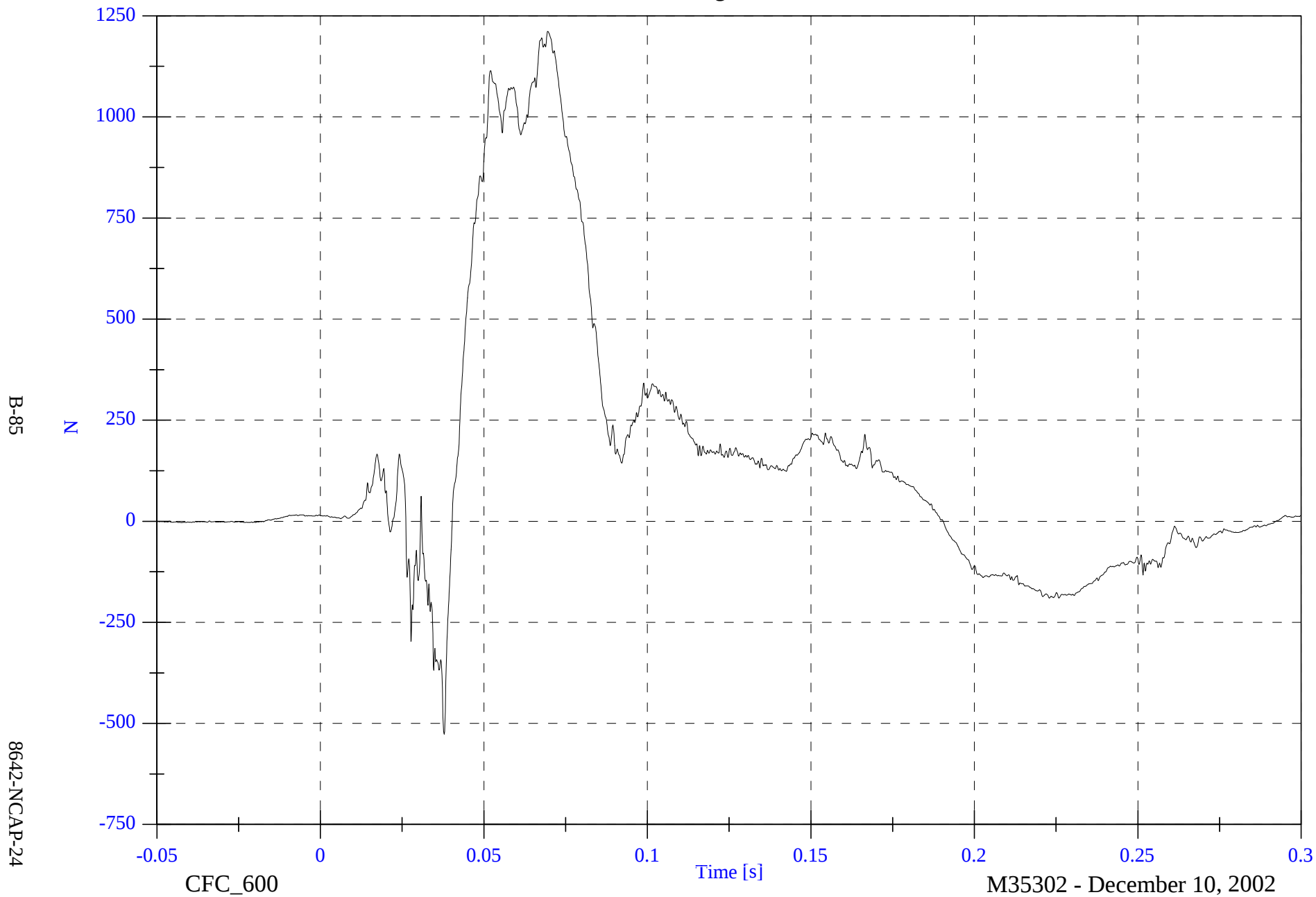


NCAP Test #2 - 2003 Honda Accord

V1P2 Right Femur z

Max: 1211.3 [N] at 0.070 [s]

Min: -526.7 [N] at 0.038 [s]

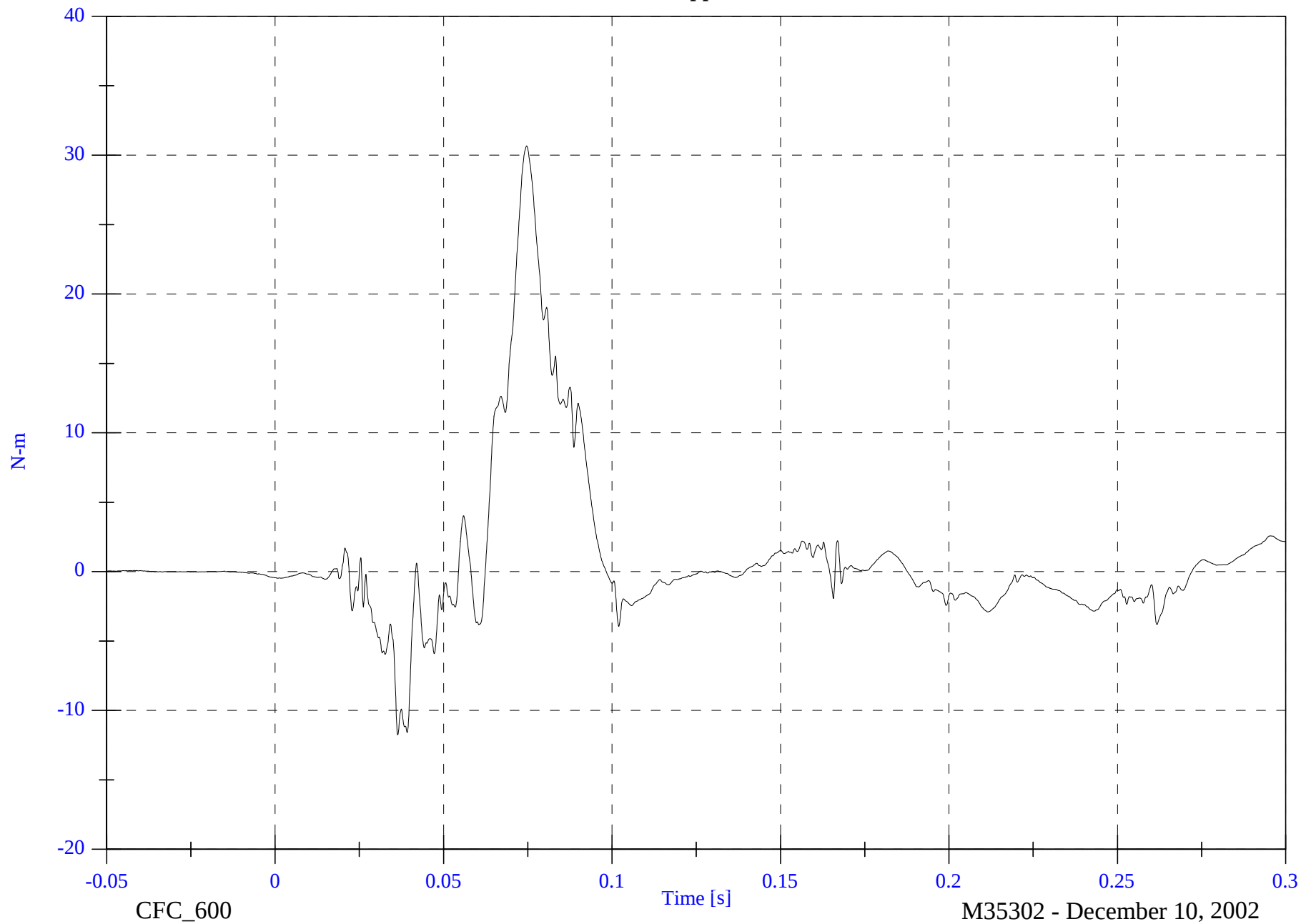


NCAP Test #2 - 2003 Honda Accord

V1P2 Left Upper Tibia Mx

Max: 30.7 [N-m] at 0.075 [s]

Min: -11.8 [N-m] at 0.036 [s]



B-86

8642-NCAP-24

CFC_600

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

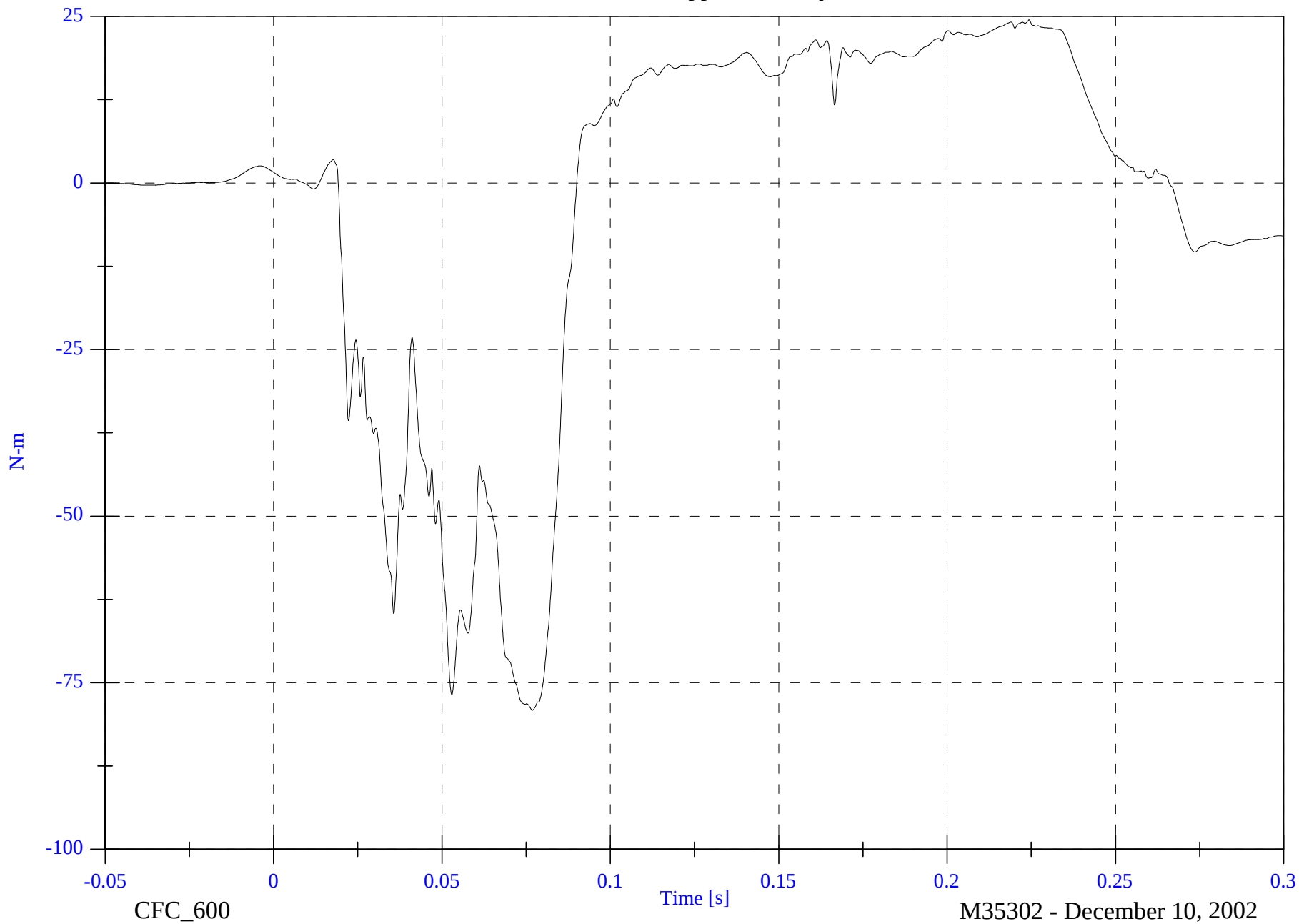
V1P2 Left Upper Tibia My

Max: 24.5 [N-m] at 0.224 [s]

Min: -79.1 [N-m] at 0.077 [s]

B-87

8642-NCAP-24



CFC_600

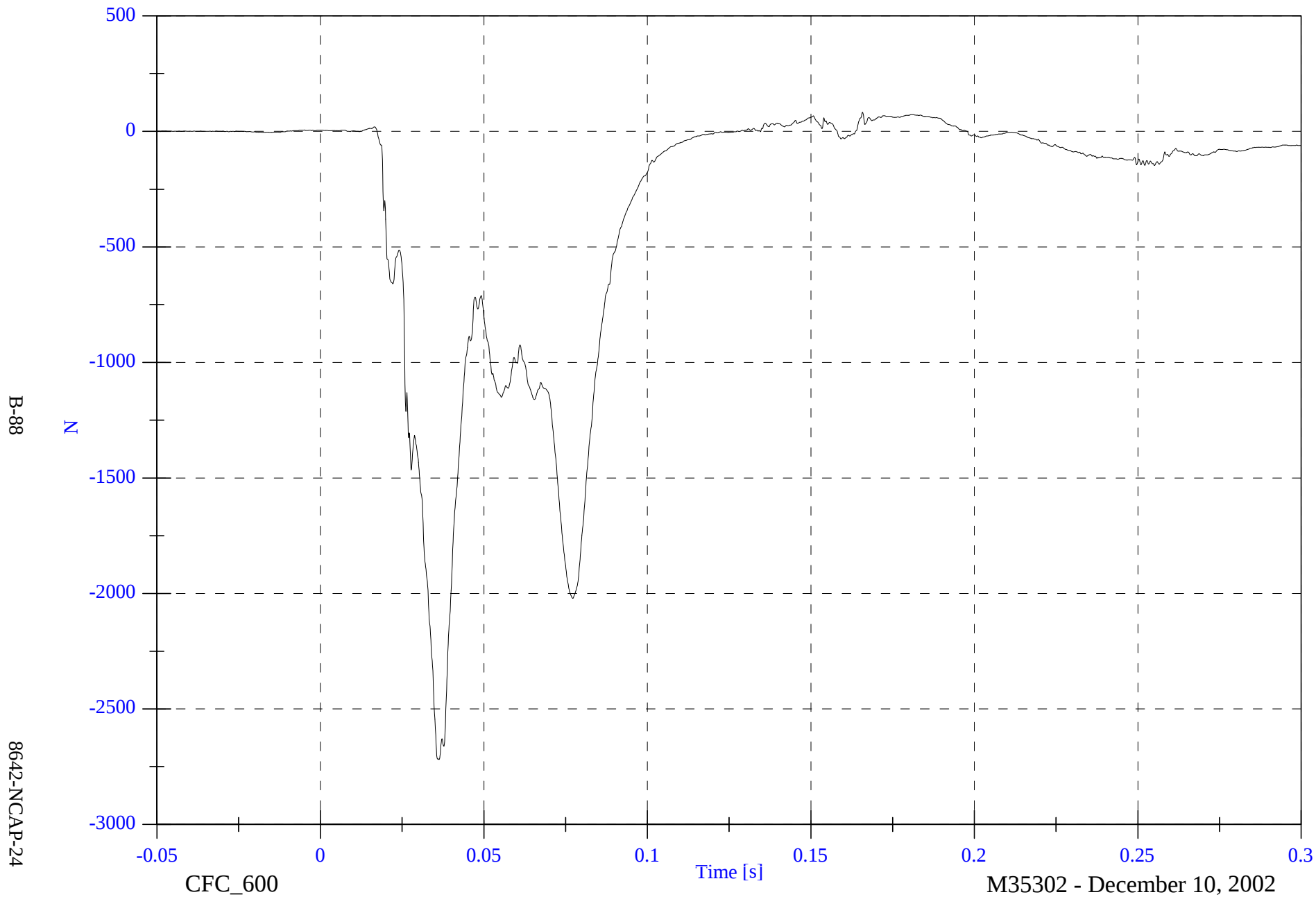
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P2 Left Lower Tibia Fz

Max: 83.2 [N] at 0.166 [s]

Min: -2719.7 [N] at 0.036 [s]

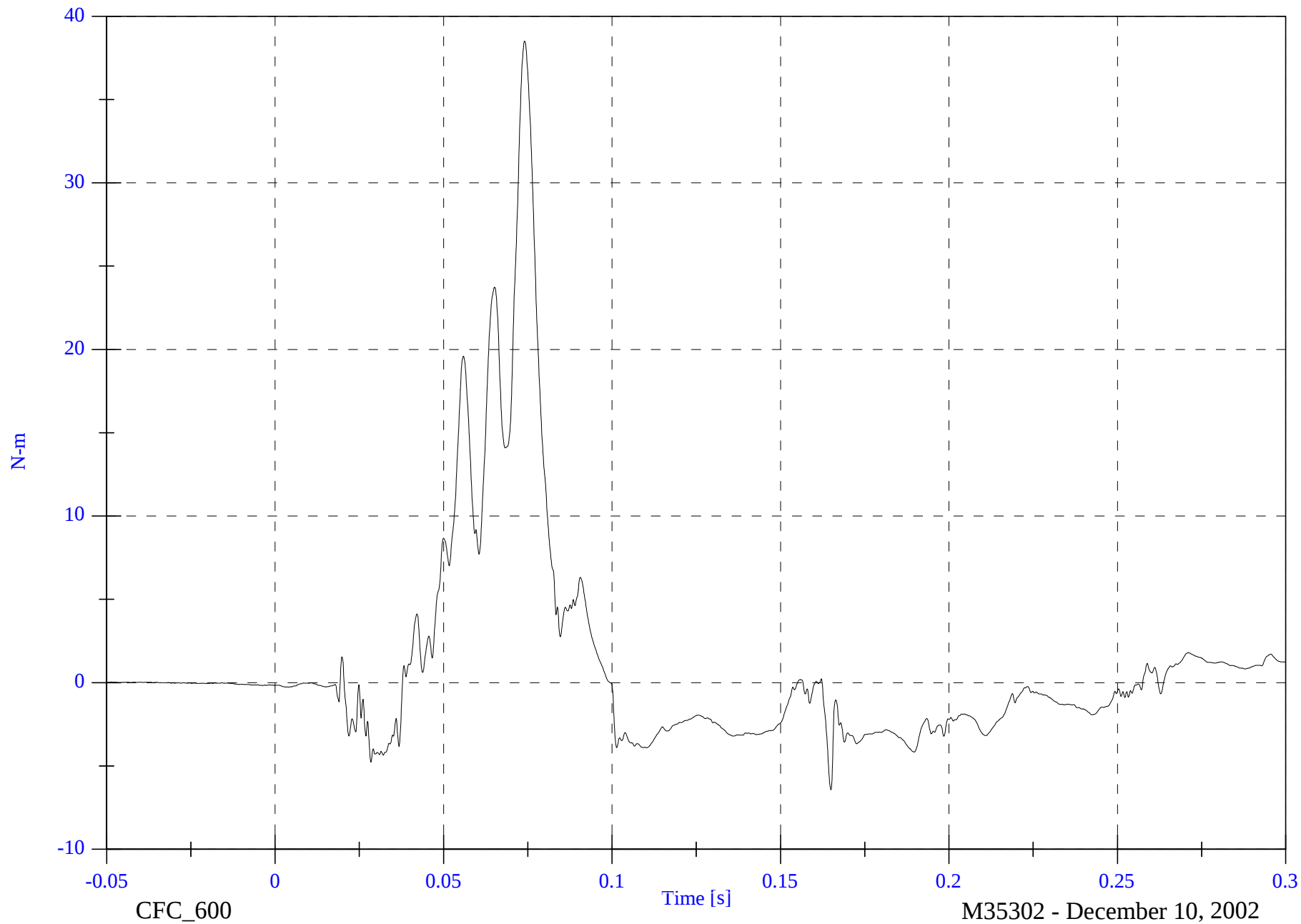


NCAP Test #2 - 2003 Honda Accord

V1P2 Left Lower Tibia Mx

Max: 38.5 [N-m] at 0.074 [s]

Min: -6.4 [N-m] at 0.165 [s]



B-89

8642-NCAP-24

CFC_600

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

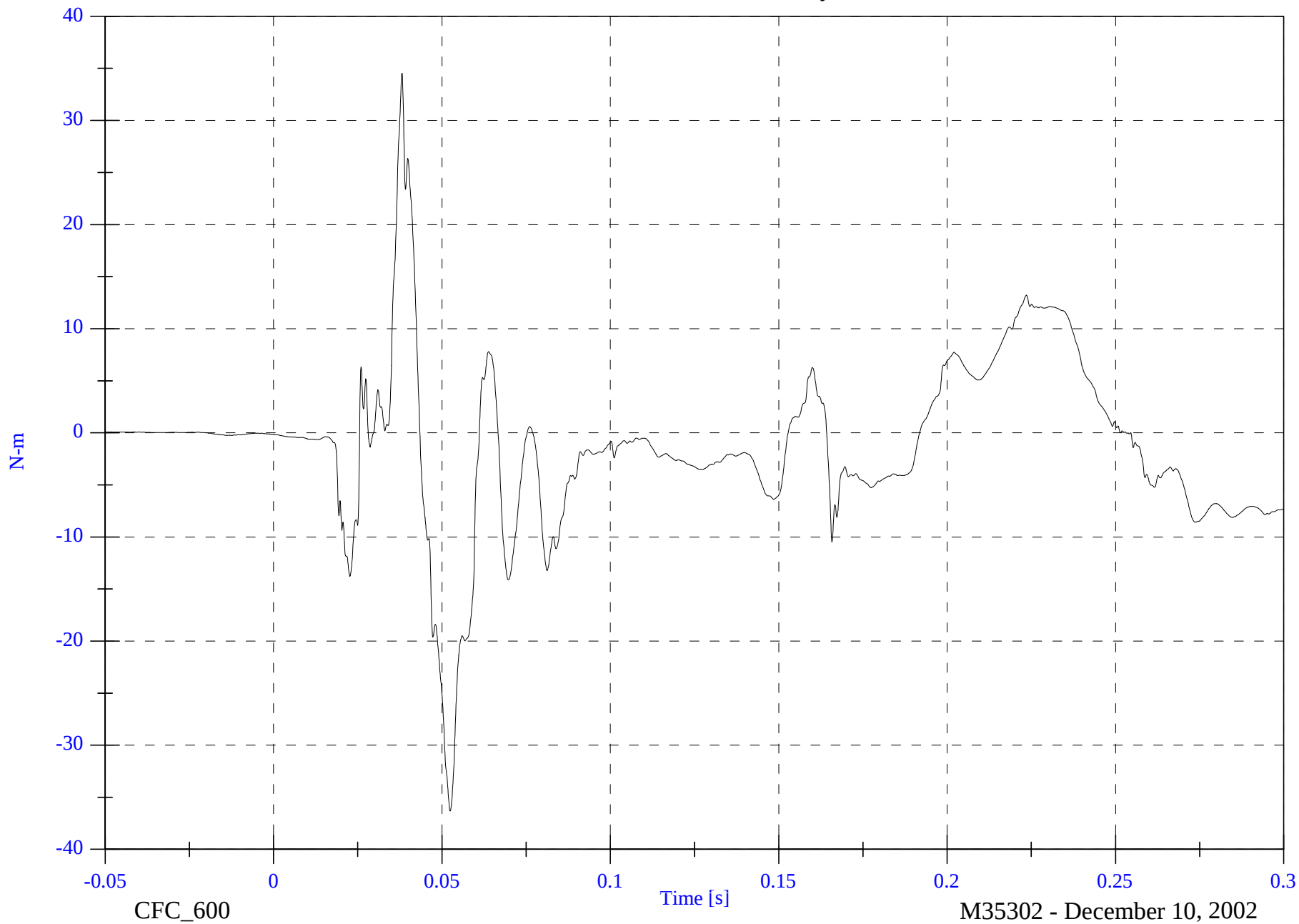
V1P2 Left Lower Tibia My

Max: 34.5 [N-m] at 0.038 [s]

Min: -36.3 [N-m] at 0.052 [s]

B-90

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

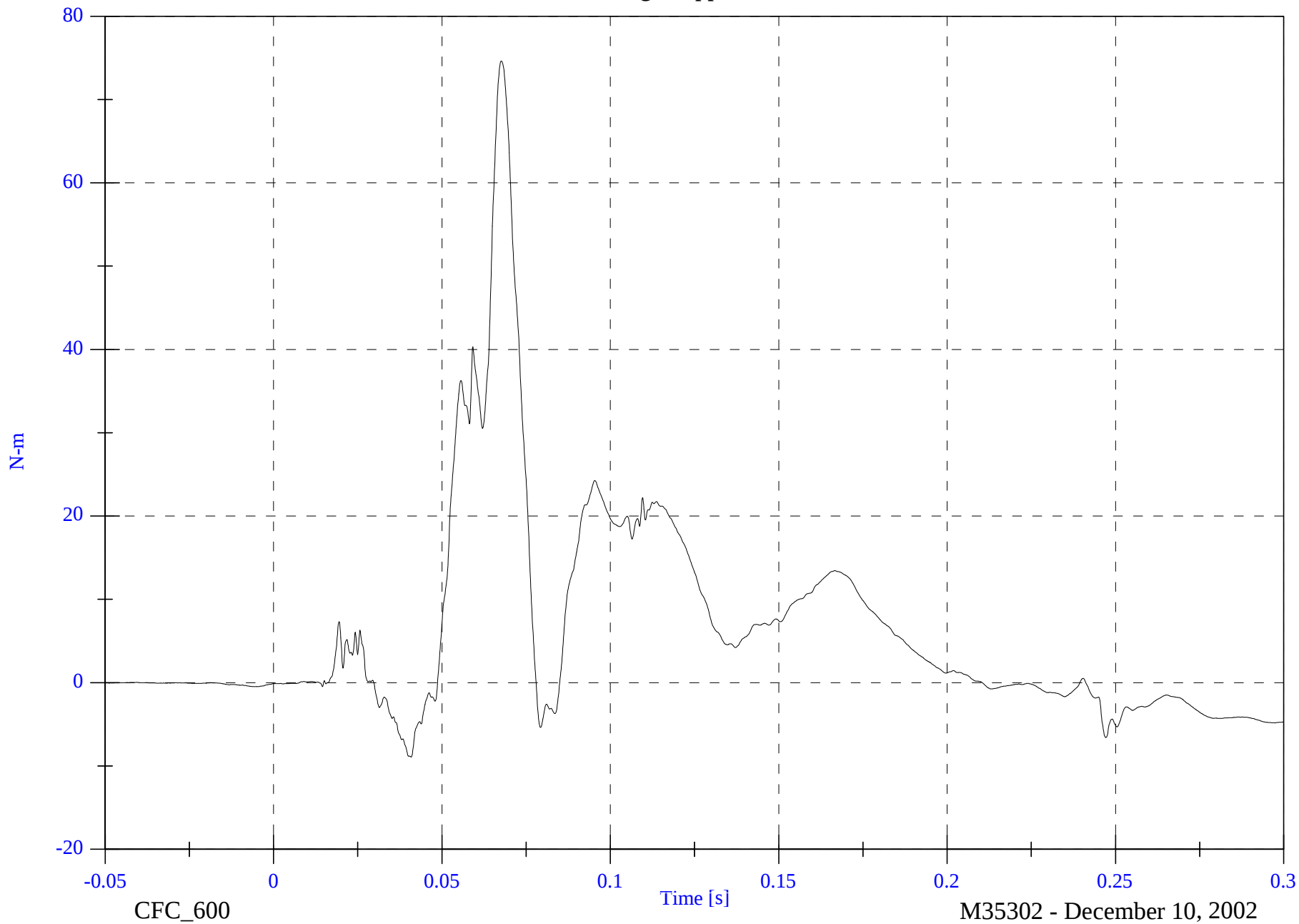
V1P2 Right Upper Tibia Mx

Max: 74.6 [N-m] at 0.068 [s]

Min: -8.9 [N-m] at 0.041 [s]

B-91

8642-NCAP-24

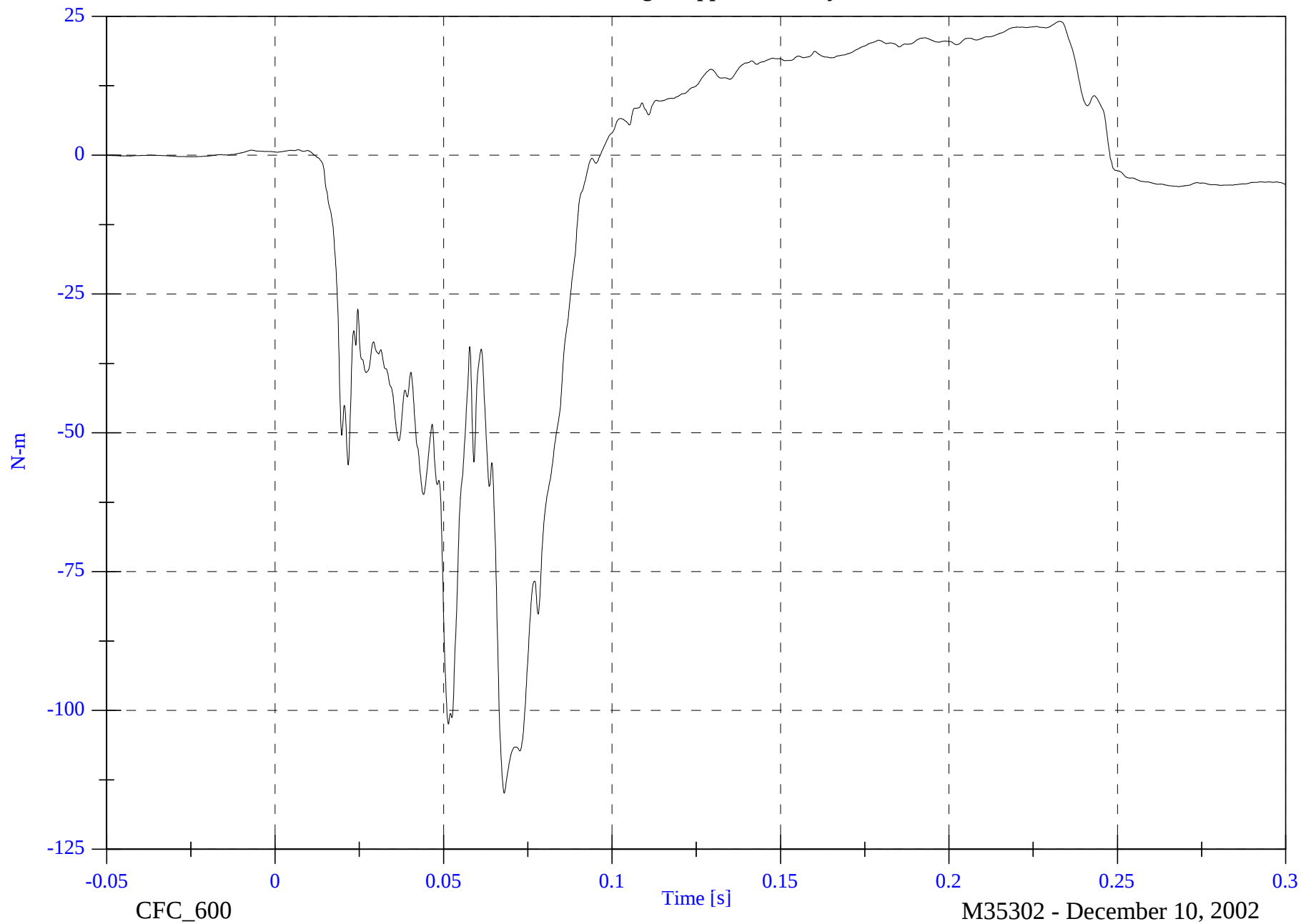


NCAP Test #2 - 2003 Honda Accord

V1P2 Right Upper Tibia My

Max: 24.1 [N-m] at 0.233 [s]

Min: -114.9 [N-m] at 0.068 [s]



B-92

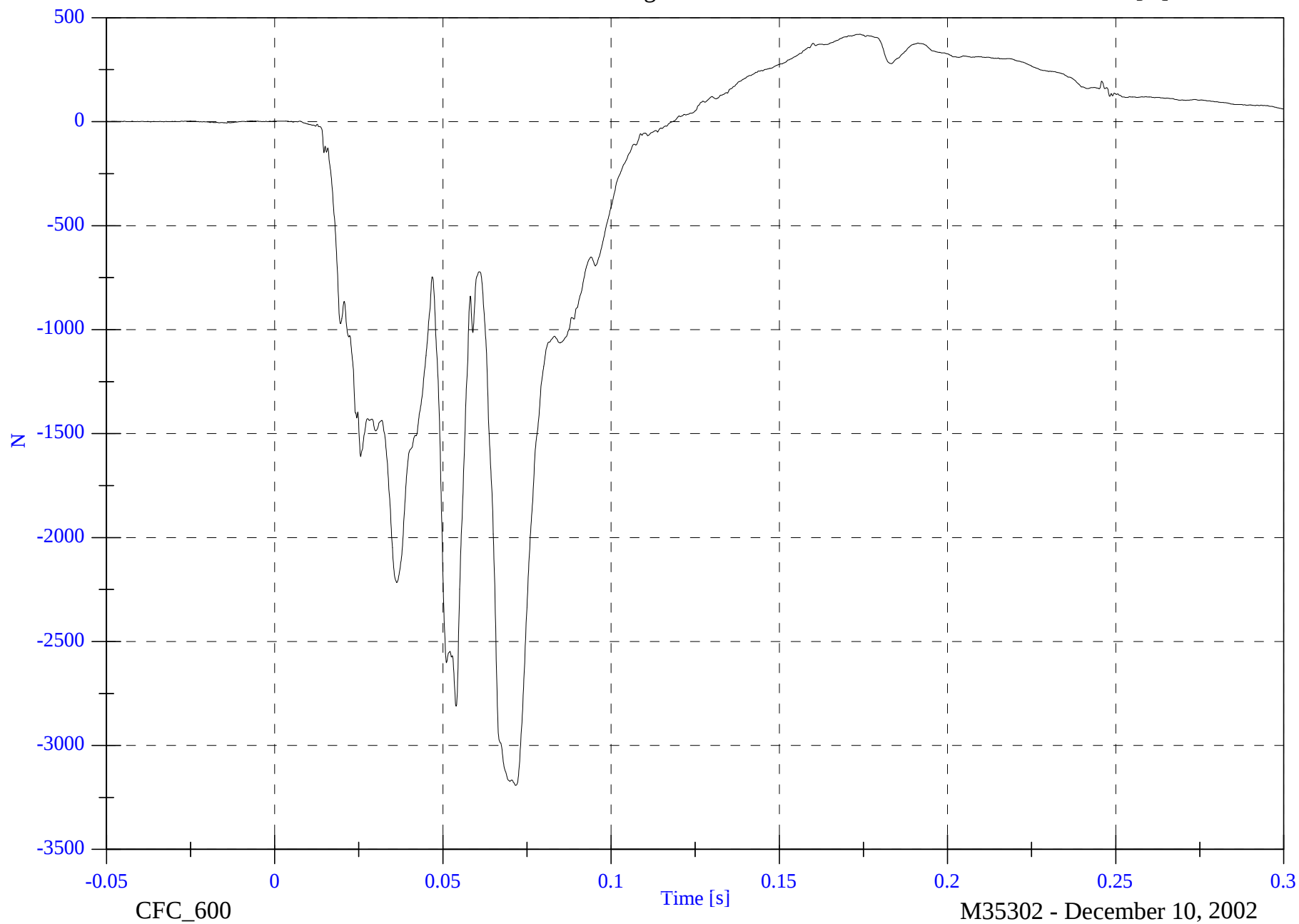
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P2 Right Lower Tibia Fz

Max: 420.7 [N] at 0.174 [s]

Min: -3192.2 [N] at 0.072 [s]

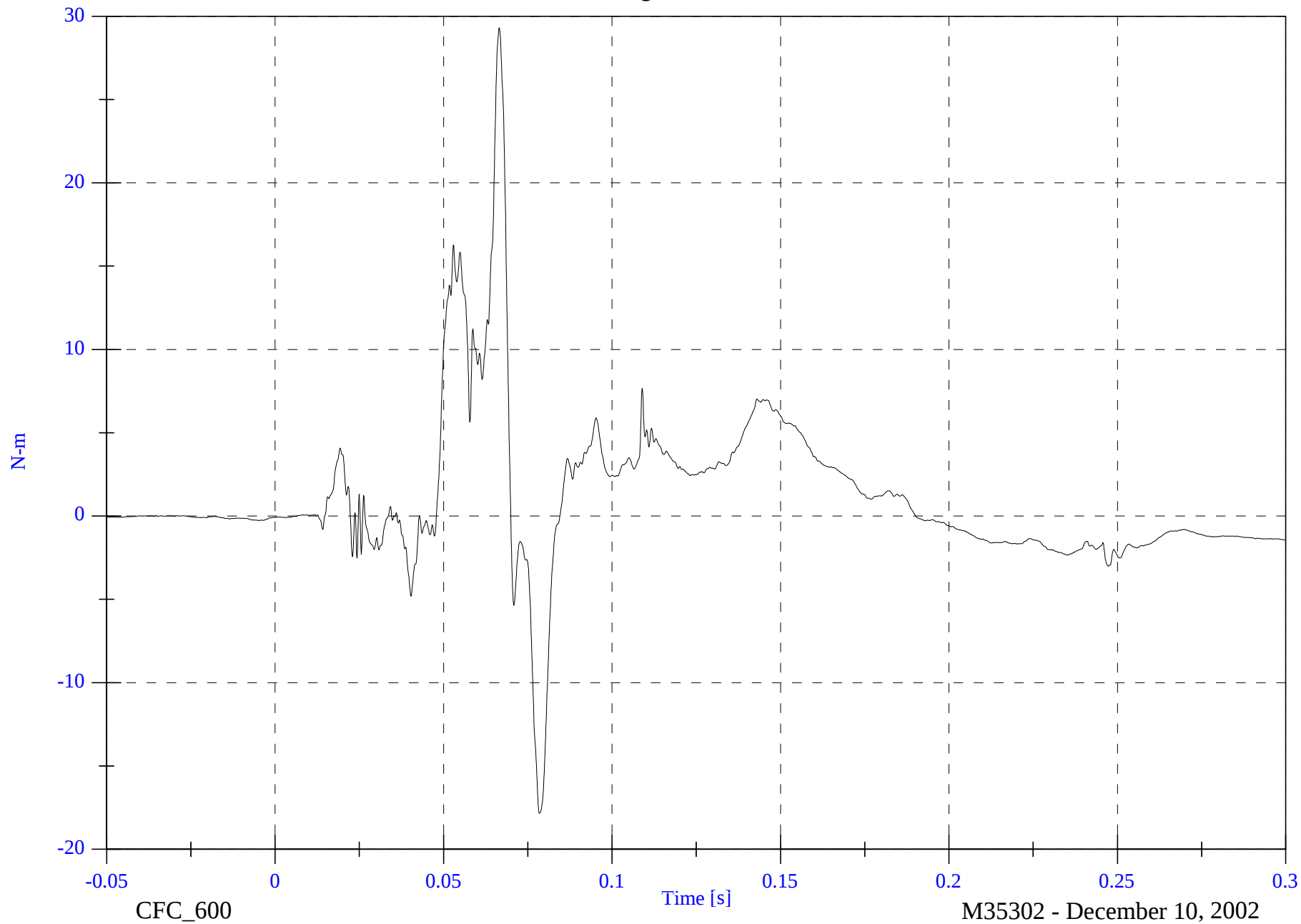


NCAP Test #2 - 2003 Honda Accord

V1P2 Right Lower Tibia Mx

Max: 29.3 [N-m] at 0.067 [s]

Min: -17.8 [N-m] at 0.078 [s]



B-94

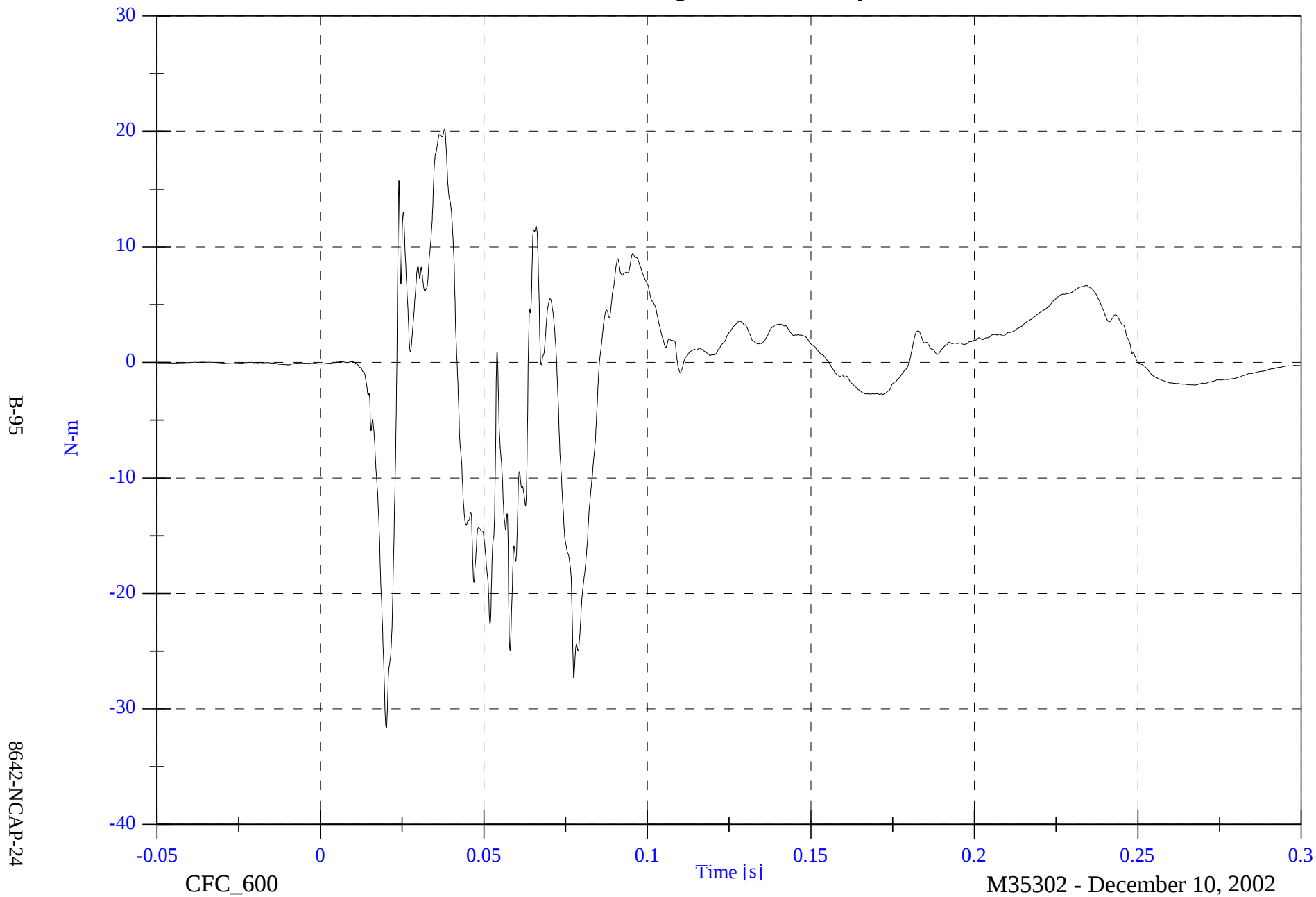
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P2 Right Lower Tibia My

Max: 20.2 [N-m] at 0.038 [s]

Min: -31.7 [N-m] at 0.020 [s]



NCAP Test #2 - 2003 Honda Accord

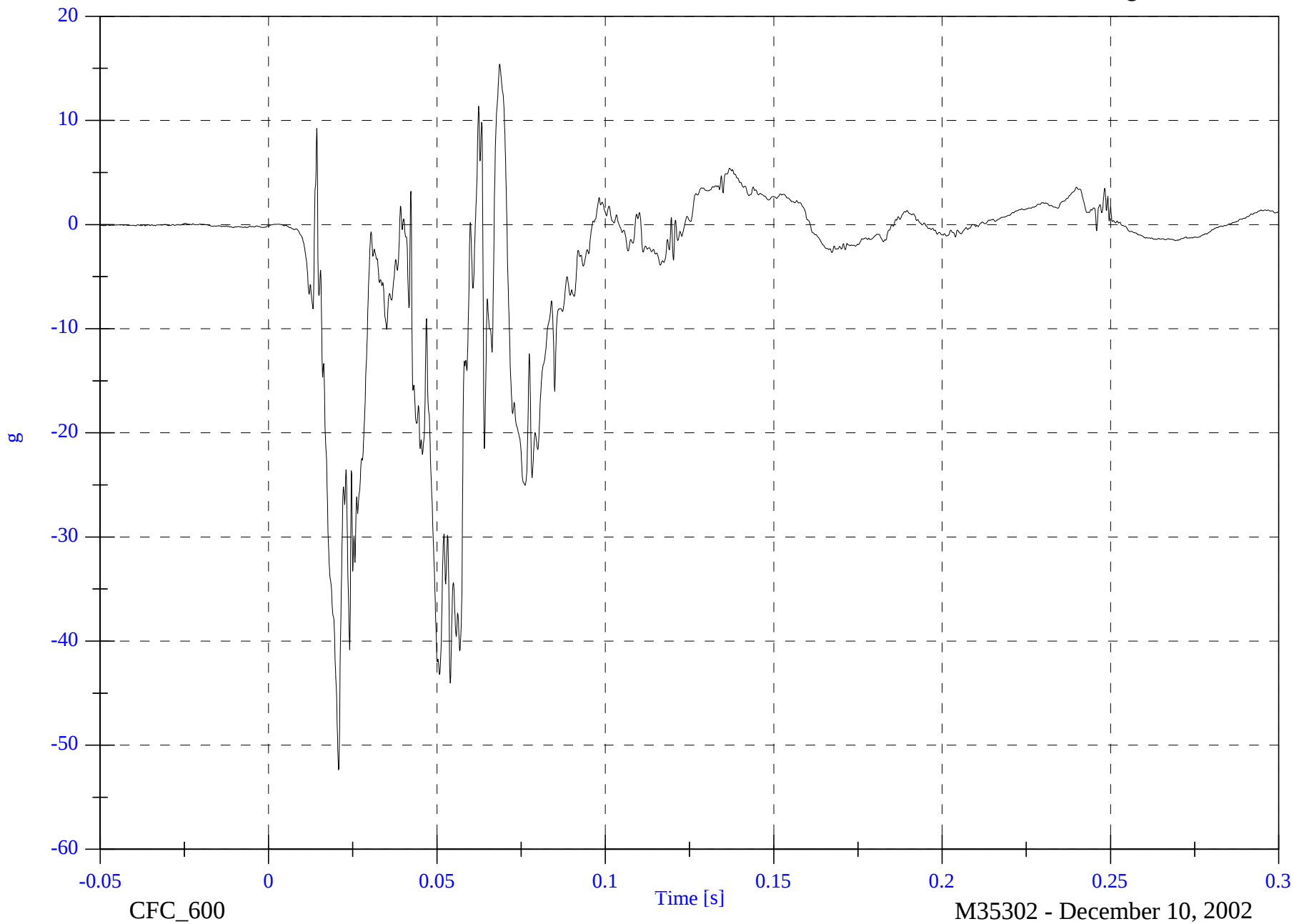
V1P2 Left Foot Aft x

Max: 15.4 [g] at 0.069 [s]

Min: -52.4 [g] at 0.021 [s]

B-96

8642-NCAP-24

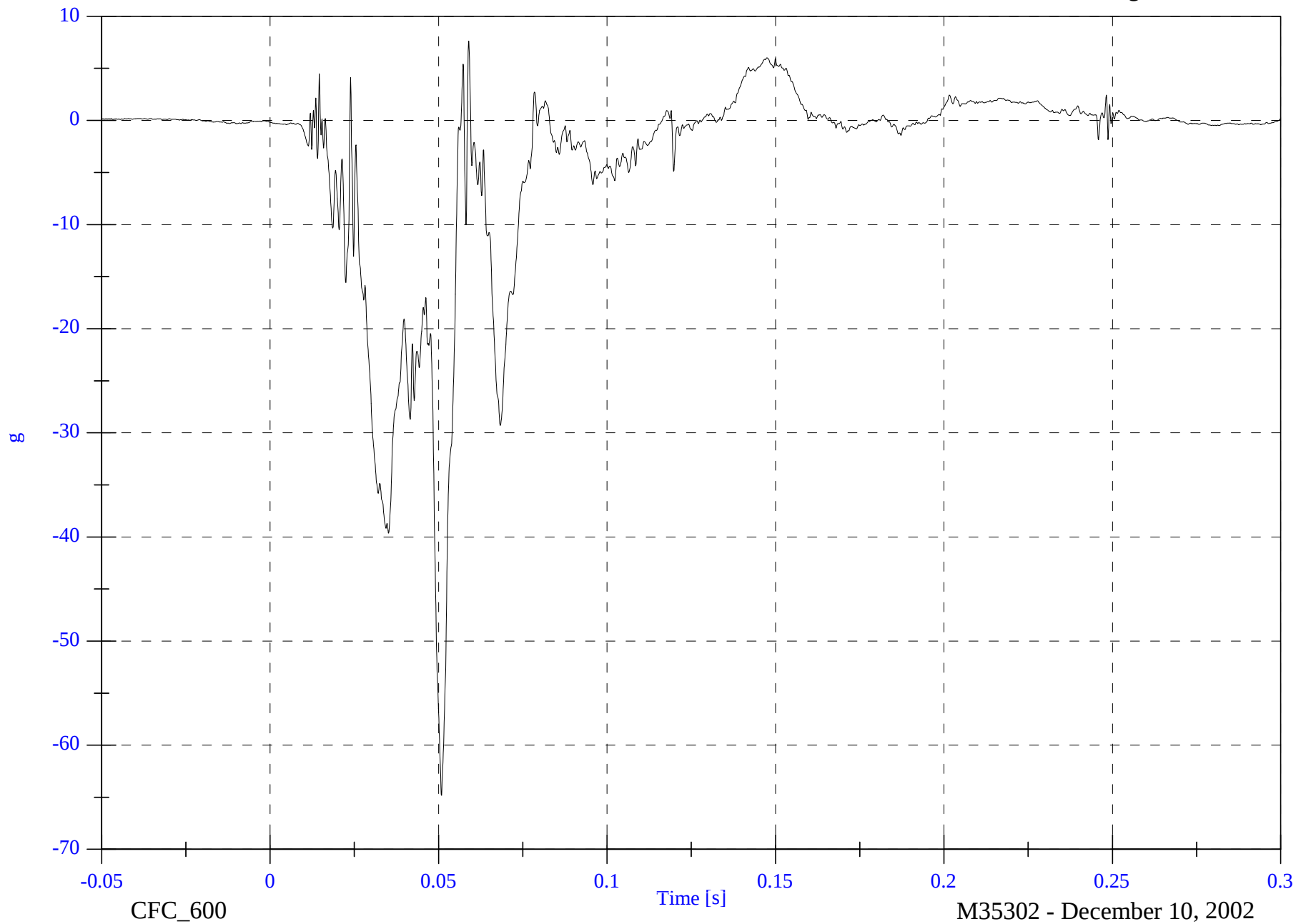


NCAP Test #2 - 2003 Honda Accord

V1P2 Left Foot Aft z

Max: 7.6 [g] at 0.059 [s]

Min: -64.8 [g] at 0.051 [s]



B-97

8642-NCAP-24

CFC_600

Time [s]

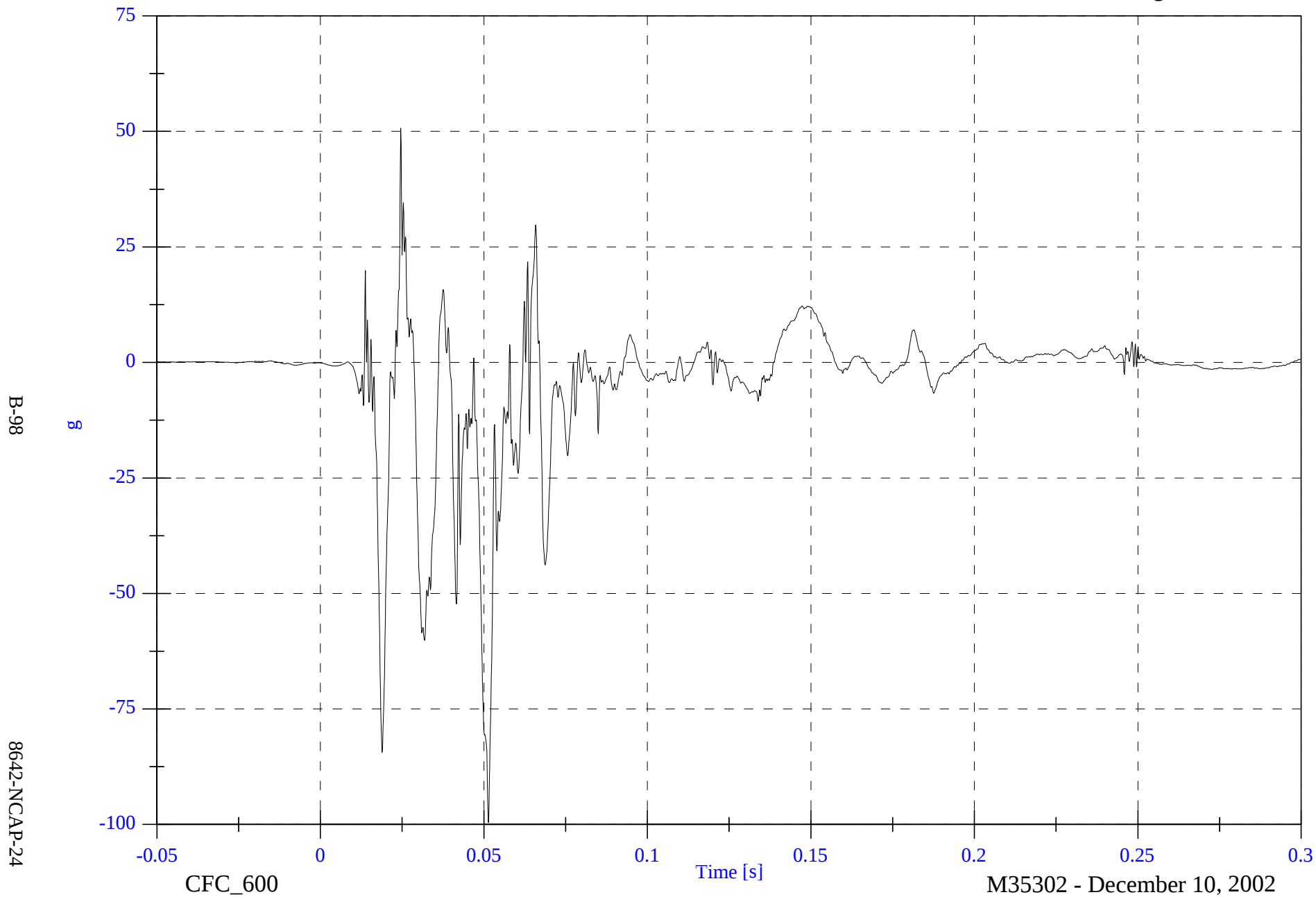
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P2 Left Foot Fore z

Max: 50.7 [g] at 0.025 [s]

Min: -99.6 [g] at 0.051 [s]



NCAP Test #2 - 2003 Honda Accord

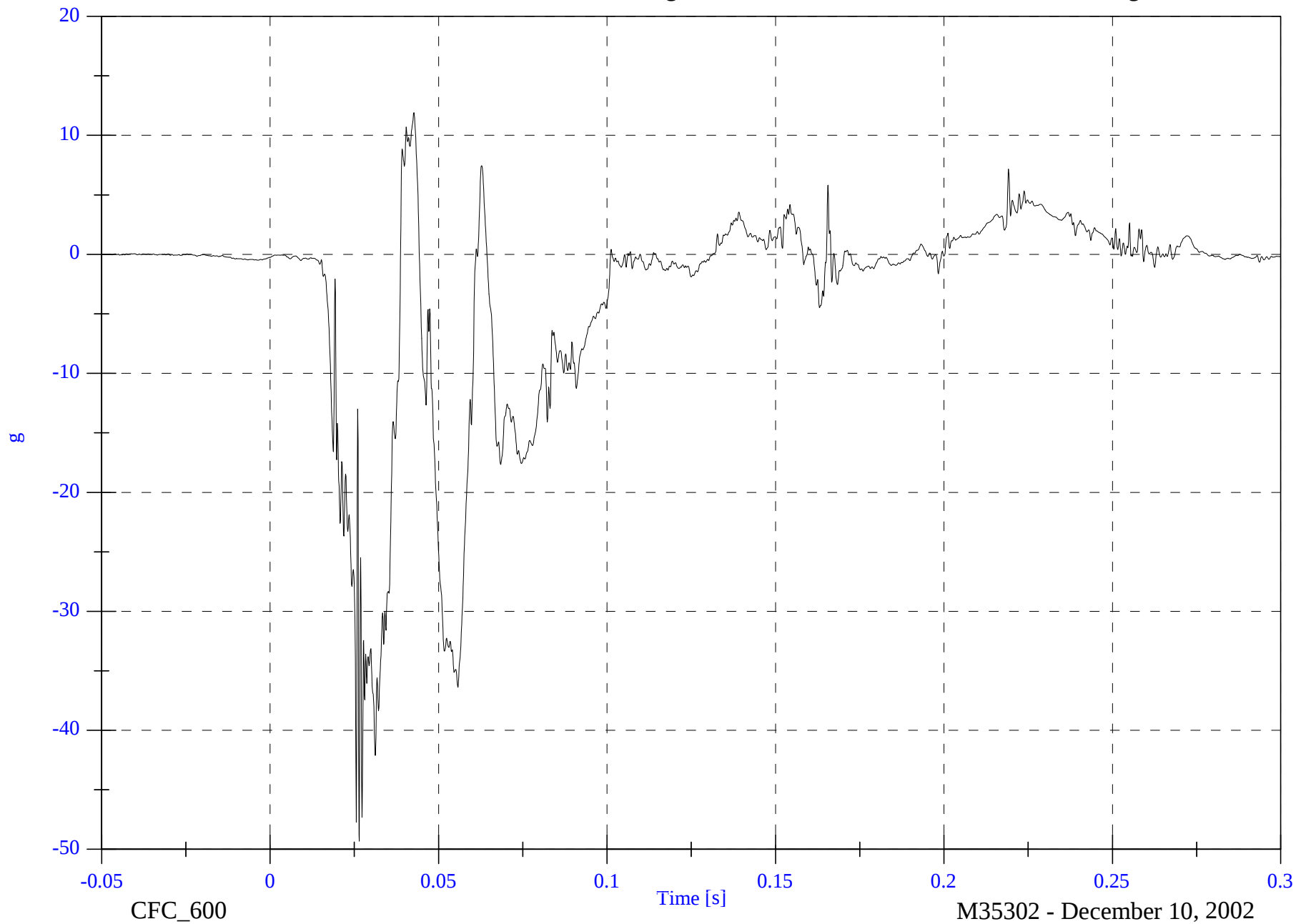
V1P2 Right Foot Aft x

Max: 11.9 [g] at 0.043 [s]

Min: -49.3 [g] at 0.026 [s]

B-99

8642-NCAP-24

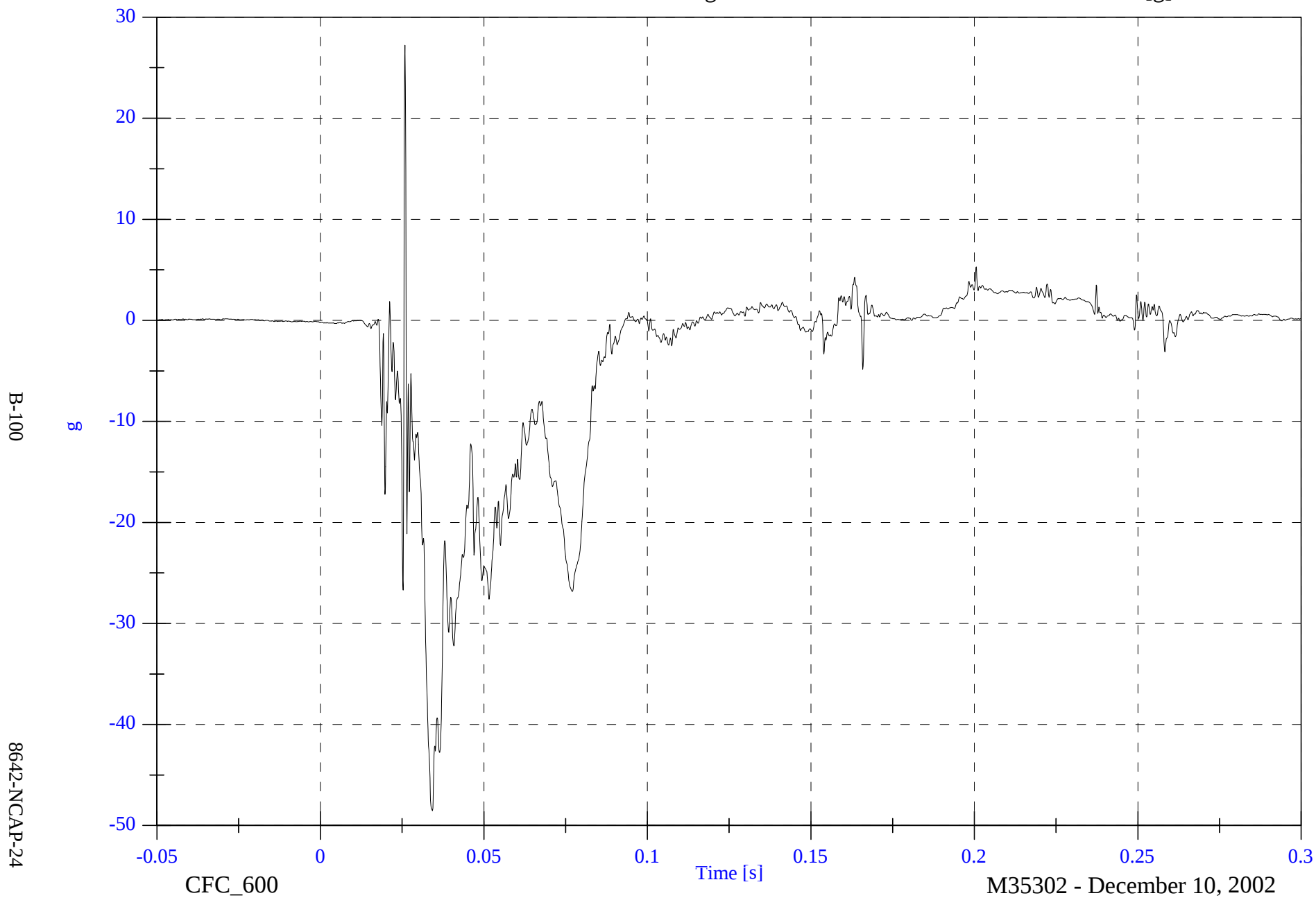


NCAP Test #2 - 2003 Honda Accord

V1P2 Right Foot Aft z

Max: 27.2 [g] at 0.026 [s]

Min: -48.5 [g] at 0.034 [s]

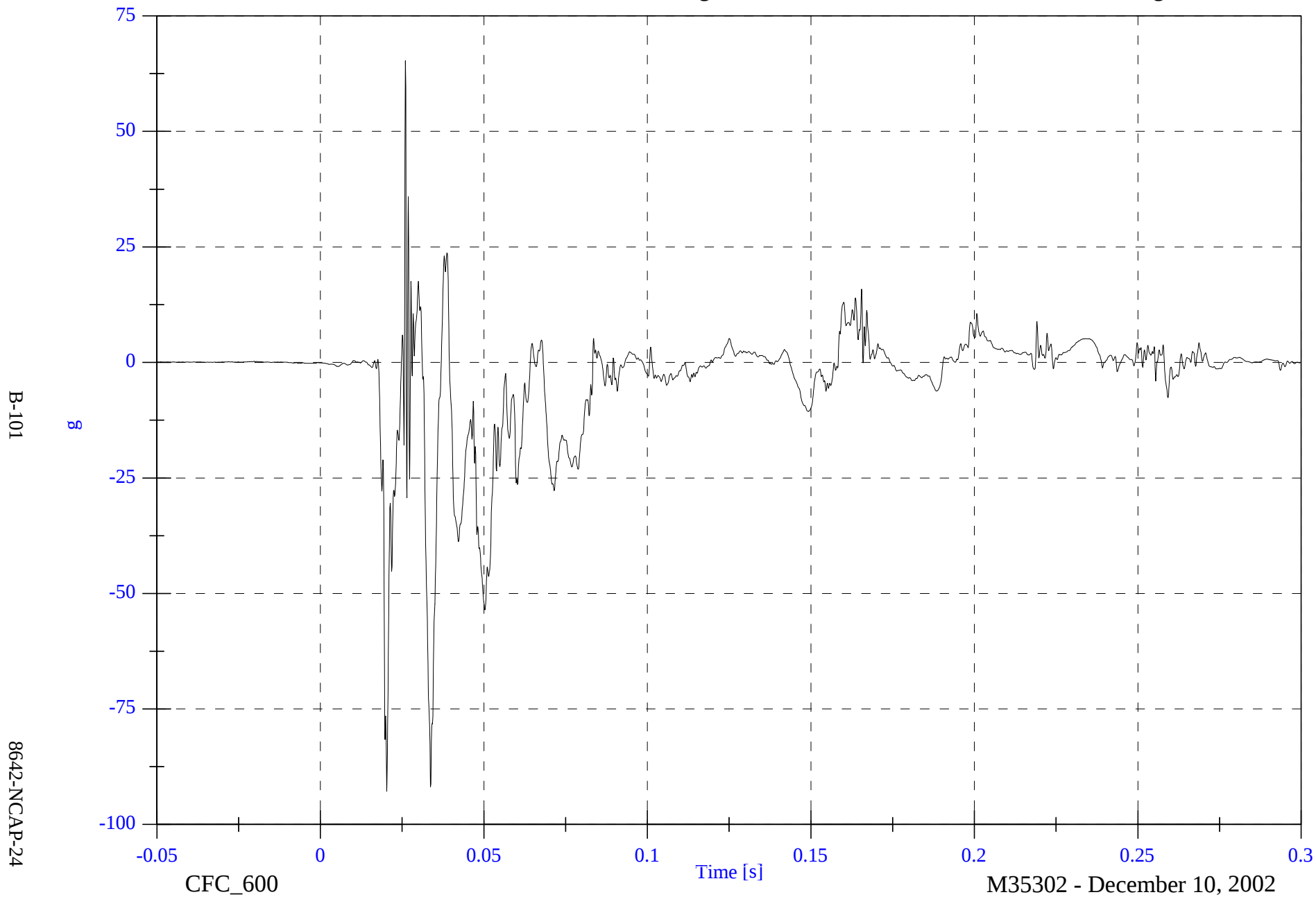


NCAP Test #2 - 2003 Honda Accord

V1P2 Right Foot Fore z

Max: 65.3 [g] at 0.026 [s]

Min: -92.8 [g] at 0.020 [s]

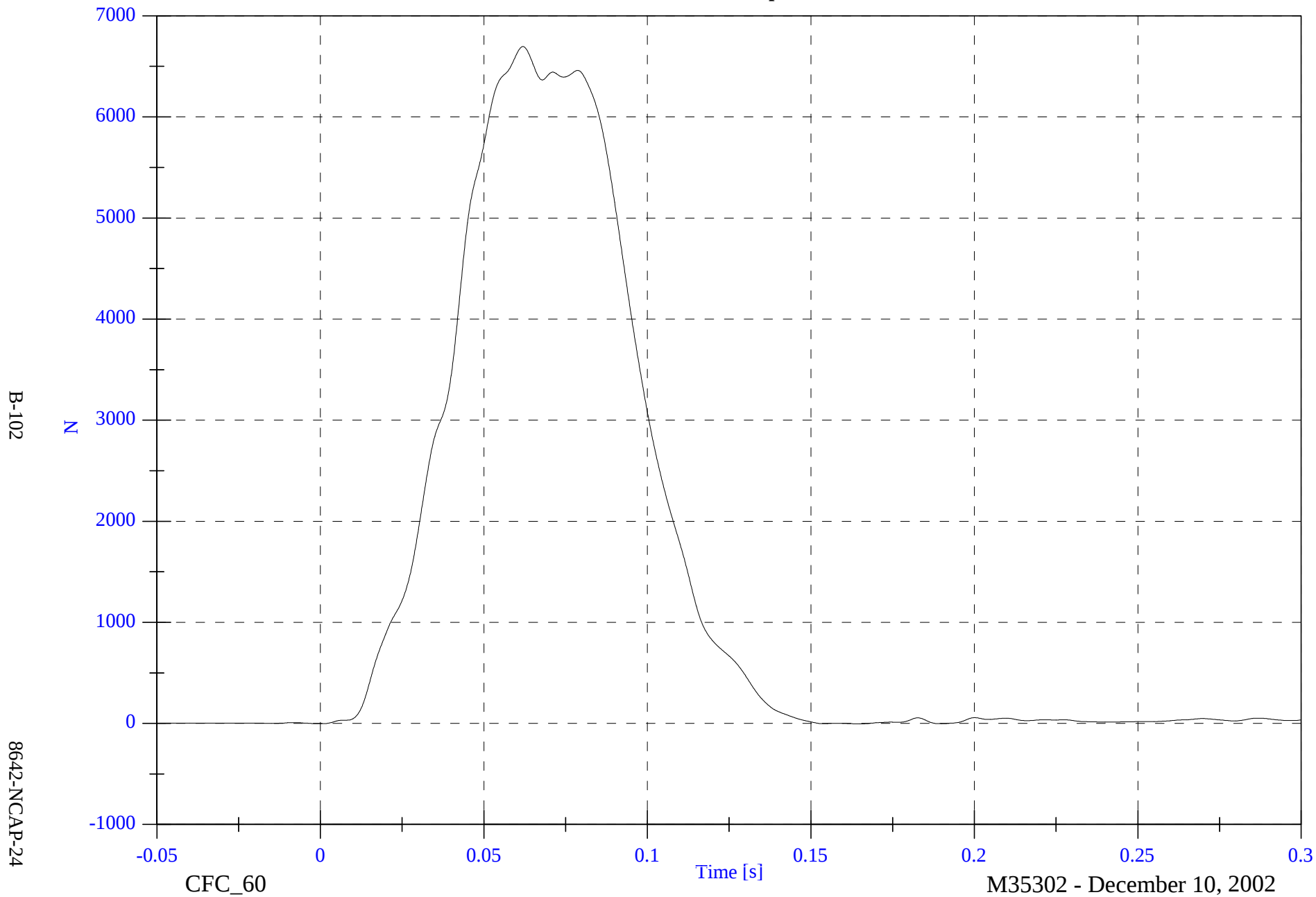


NCAP Test #2 - 2003 Honda Accord

V1P2 RFP Lap Belt

Max: 6695.8 [N] at 0.062 [s]

Min: -5.6 [N] at 0.165 [s]



NCAP Test #2 - 2003 Honda Accord

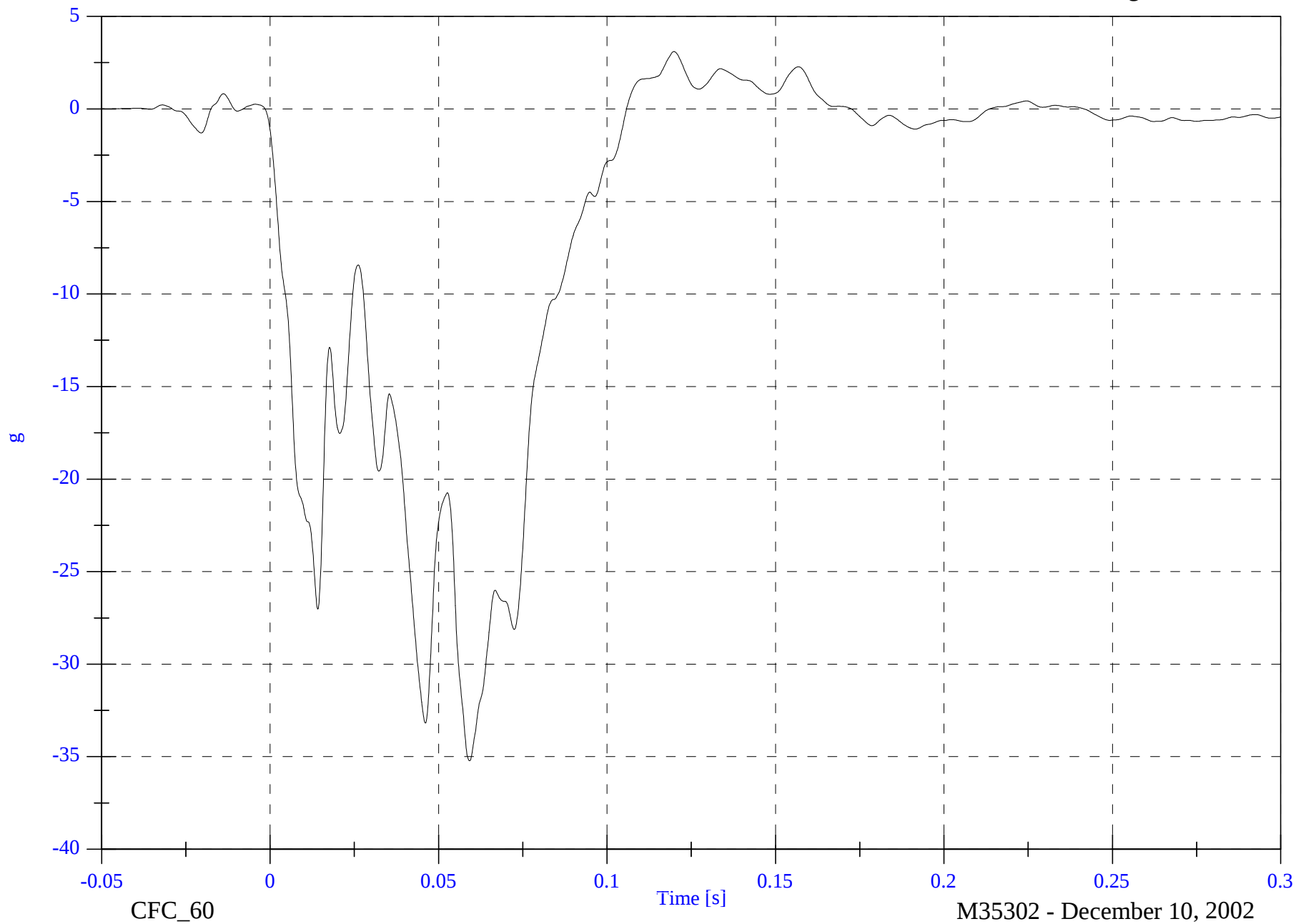
V1 Left Rear #1x

Max: 3.1 [g] at 0.120 [s]

Min: -35.2 [g] at 0.059 [s]

B-103

8642-NCAP-24

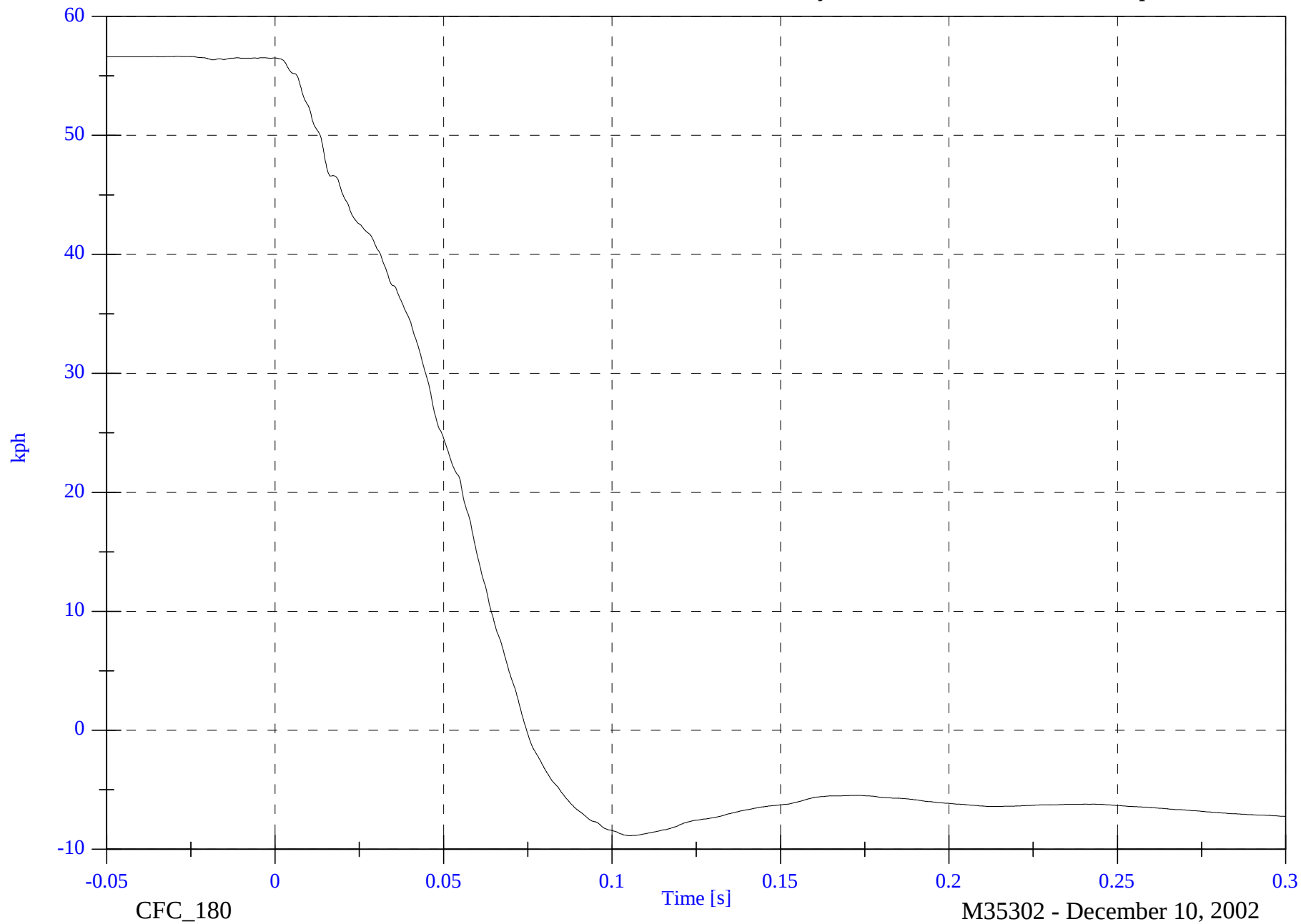


NCAP Test #2 - 2003 Honda Accord

V1 Left Rear #1x Velocity

Max: 56.6 [kph] at -0.029 [s]

Min: -8.9 [kph] at 0.105 [s]



NCAP Test #2 - 2003 Honda Accord

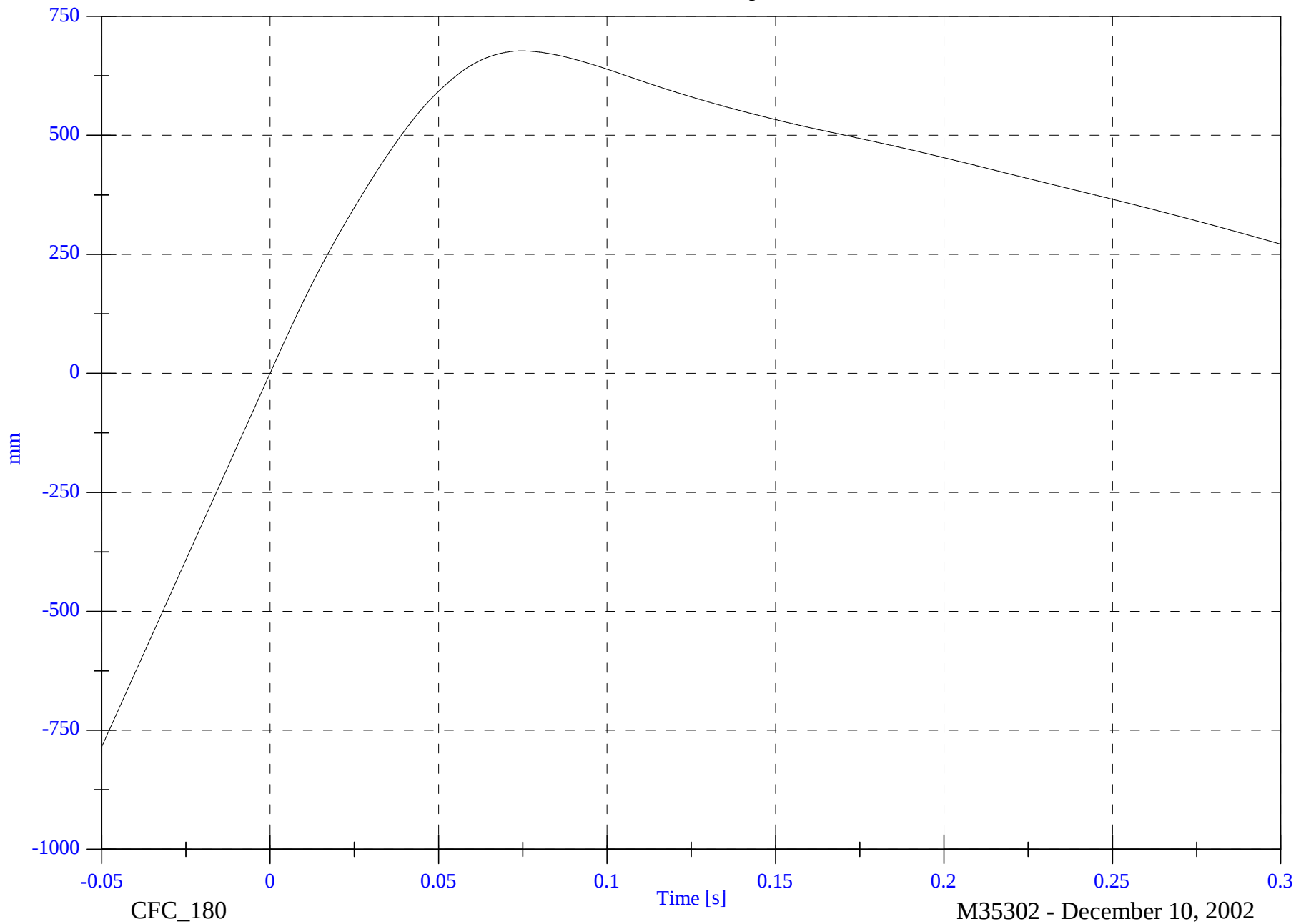
V1 Left Rear #1x Displacement

Max: 677.4 [mm] at 0.075 [s]

Min: -785.3 [mm] at -0.050 [s]

B-105

8642-NCAP-24



CFC_180

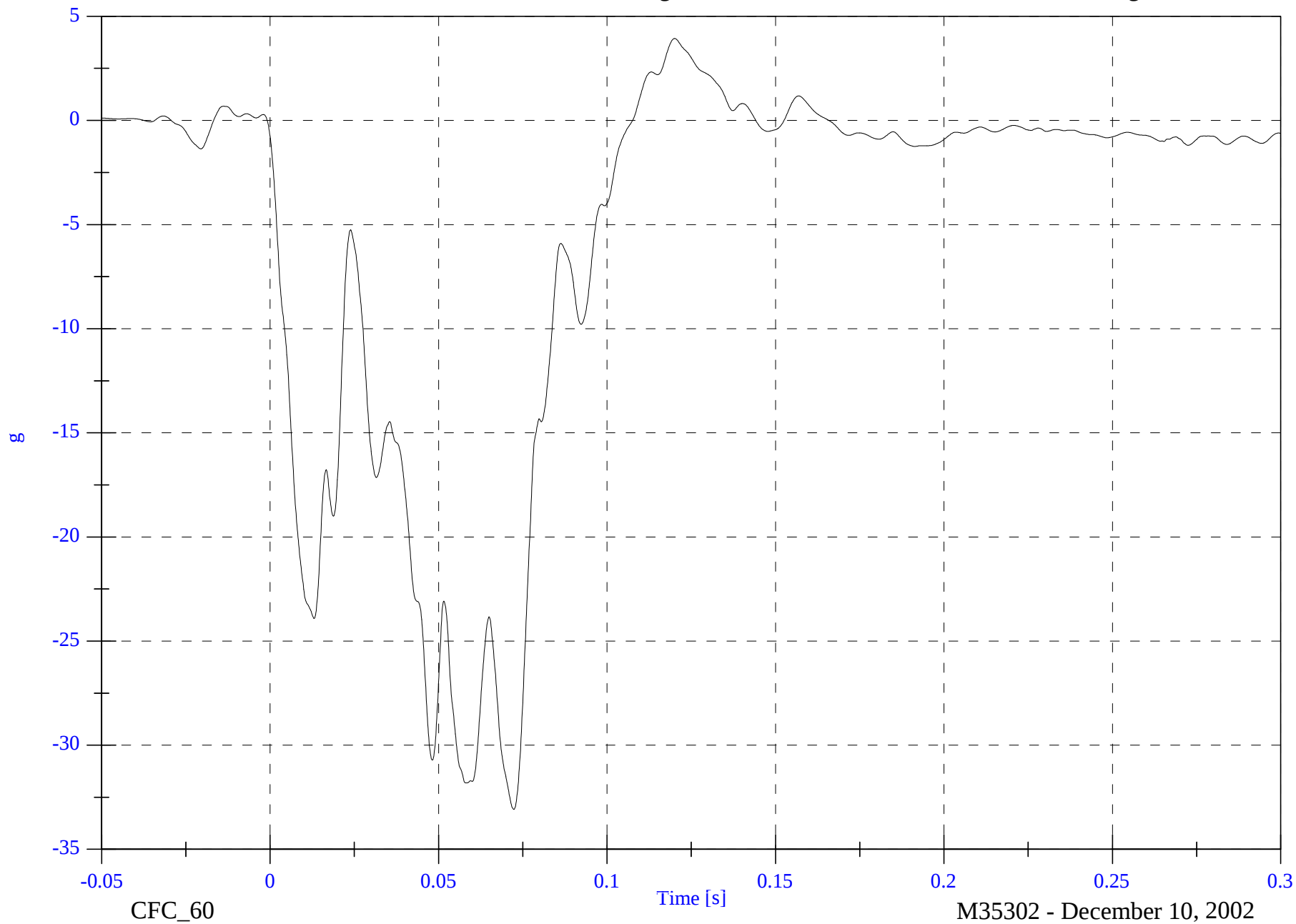
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1 Right Rear #2x

Max: 3.9 [g] at 0.120 [s]

Min: -33.1 [g] at 0.072 [s]



B-106

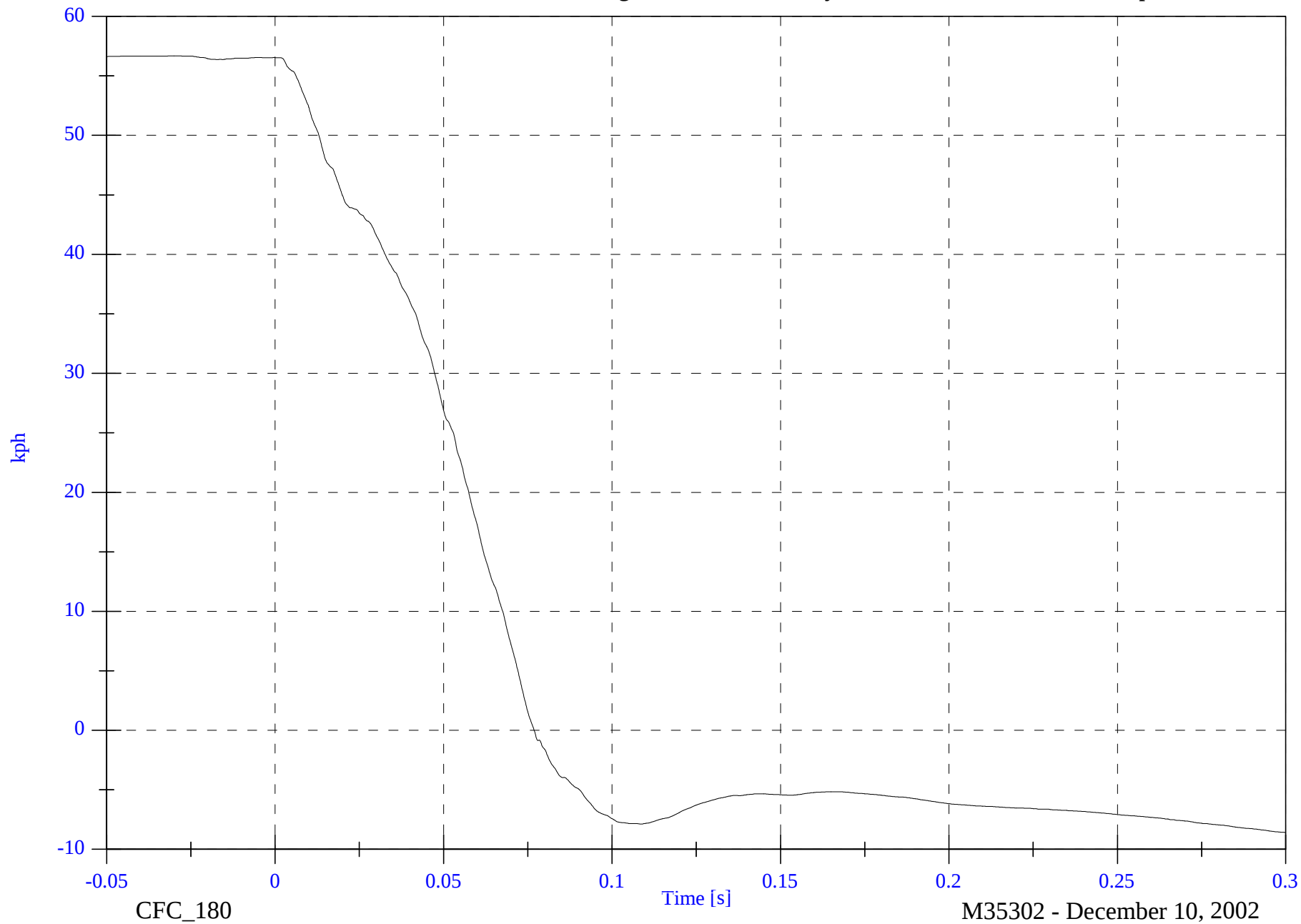
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1 Right Rear #2x Velocity

Max: 56.7 [kph] at -0.030 [s]

Min: -8.6 [kph] at 0.300 [s]



B-107

8642-NCAP-24

CFC_180

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

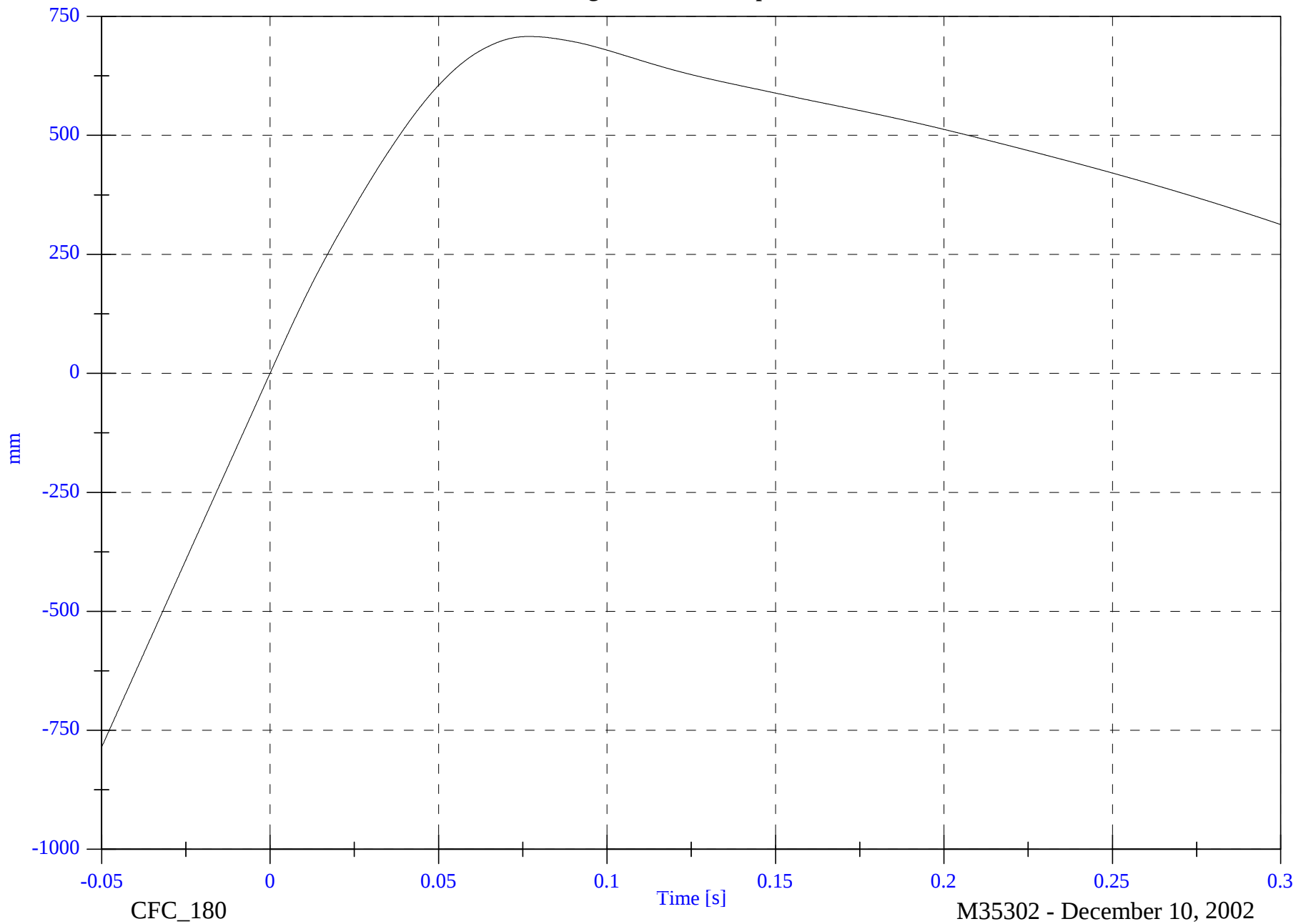
V1 Right Rear #2x Displacement

Max: 707.8 [mm] at 0.077 [s]

Min: -785.7 [mm] at -0.050 [s]

B-108

8642-NCAP-24



CFC_180

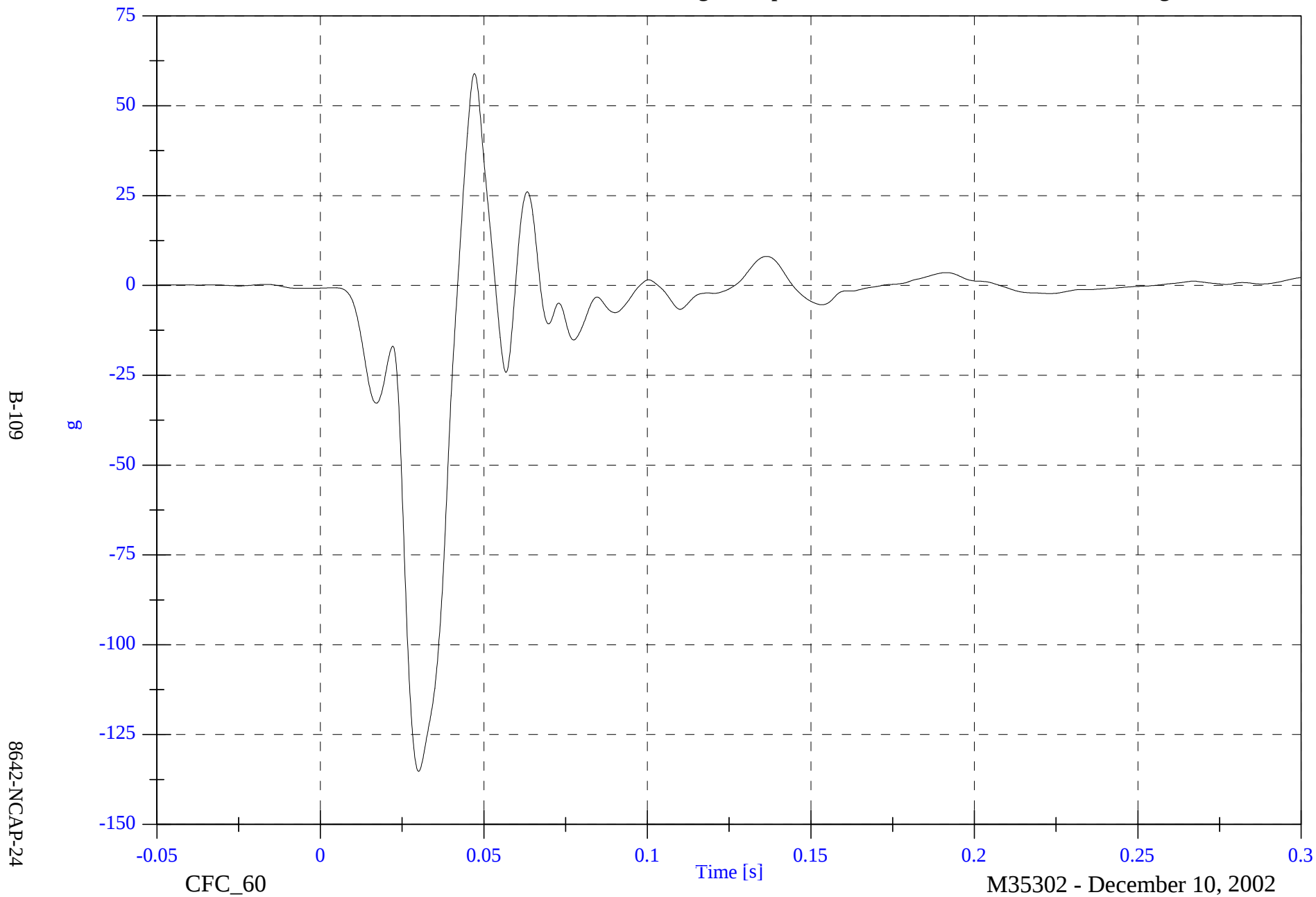
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1 Engine Top #3x

Max: 58.9 [g] at 0.047 [s]

Min: -135.2 [g] at 0.030 [s]

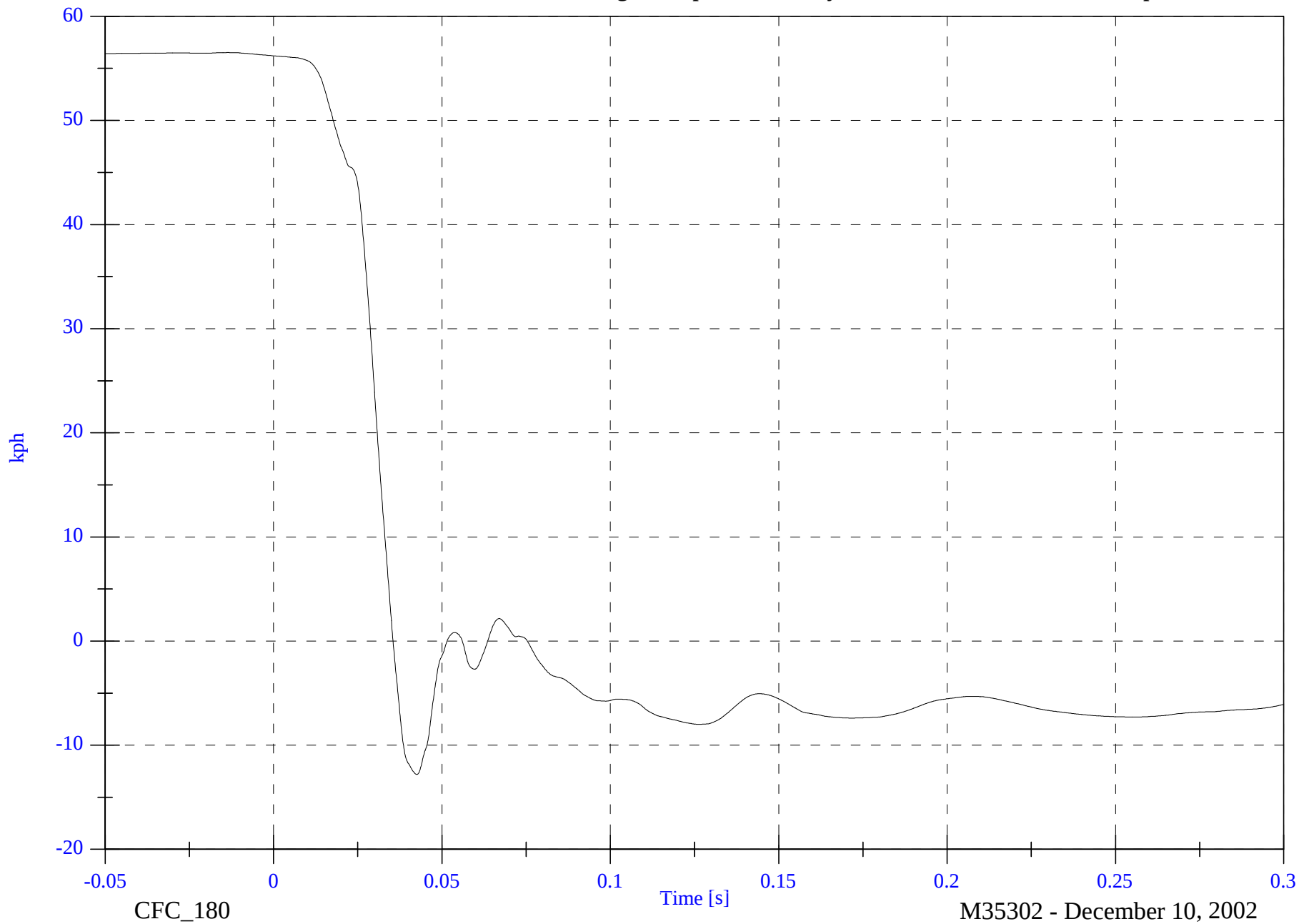


NCAP Test #2 - 2003 Honda Accord

V1 Engine Top #3x Velocity

Max: 56.5 [kph] at -0.014 [s]

Min: -12.8 [kph] at 0.043 [s]



B-110

8642-NCAP-24

CFC_180

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

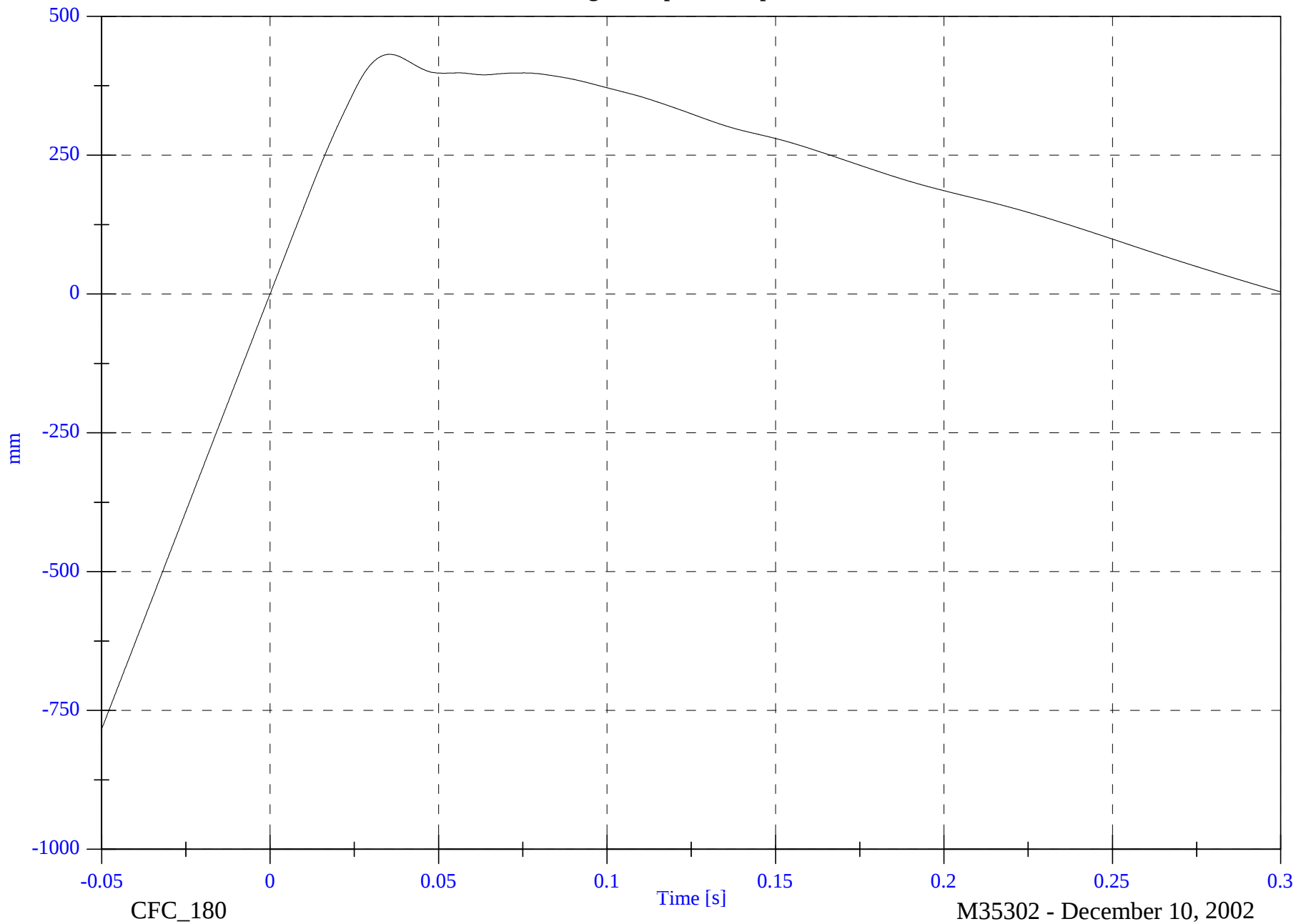
V1 Engine Top #3x Displacement

Max: 431.6 [mm] at 0.035 [s]

Min: -783.9 [mm] at -0.050 [s]

B-111

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

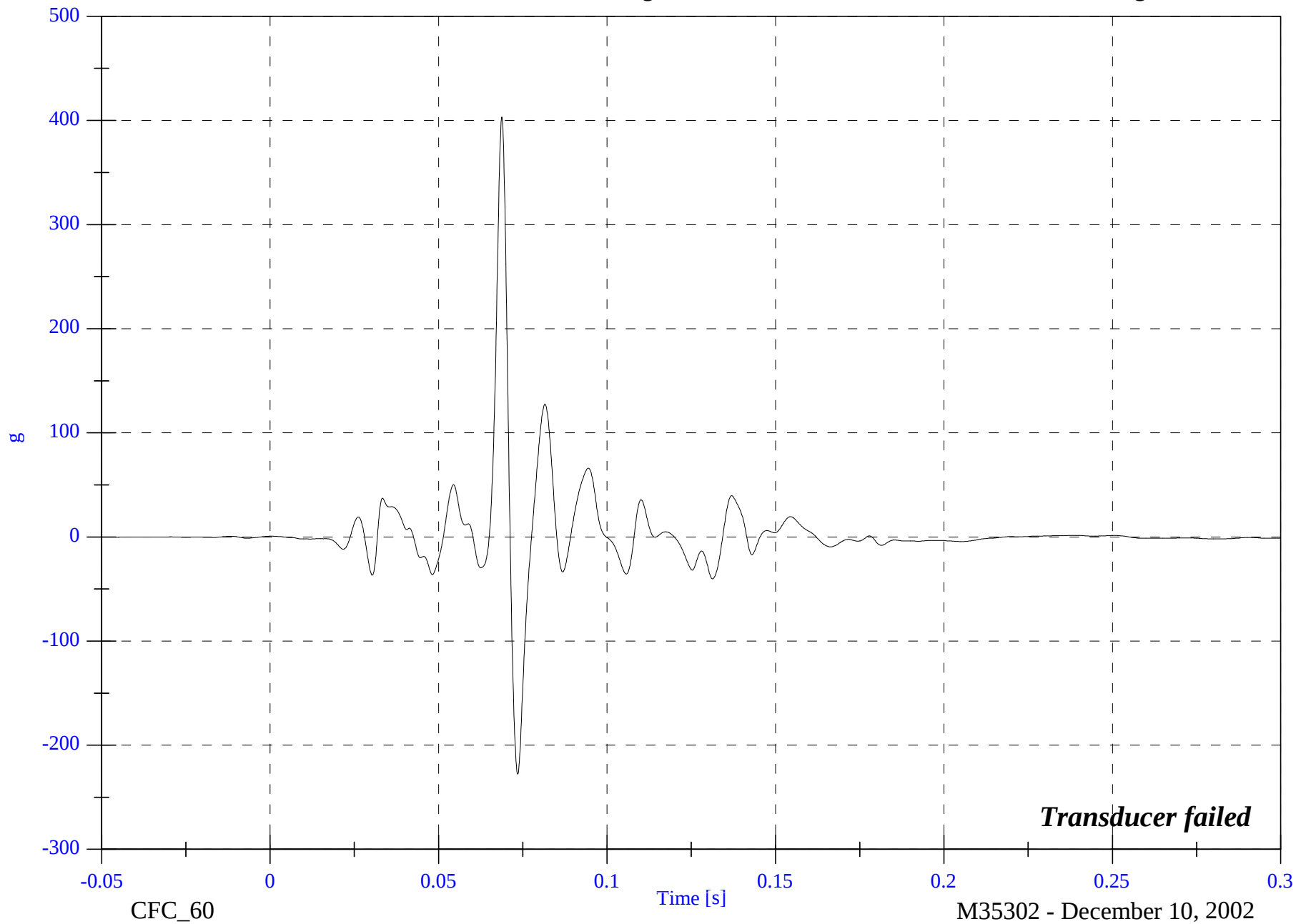
V1 Engine Bottom #4x

Max: 403.2 [g] at 0.069 [s]

Min: -227.8 [g] at 0.073 [s]

B-112

8642-NCAP-24

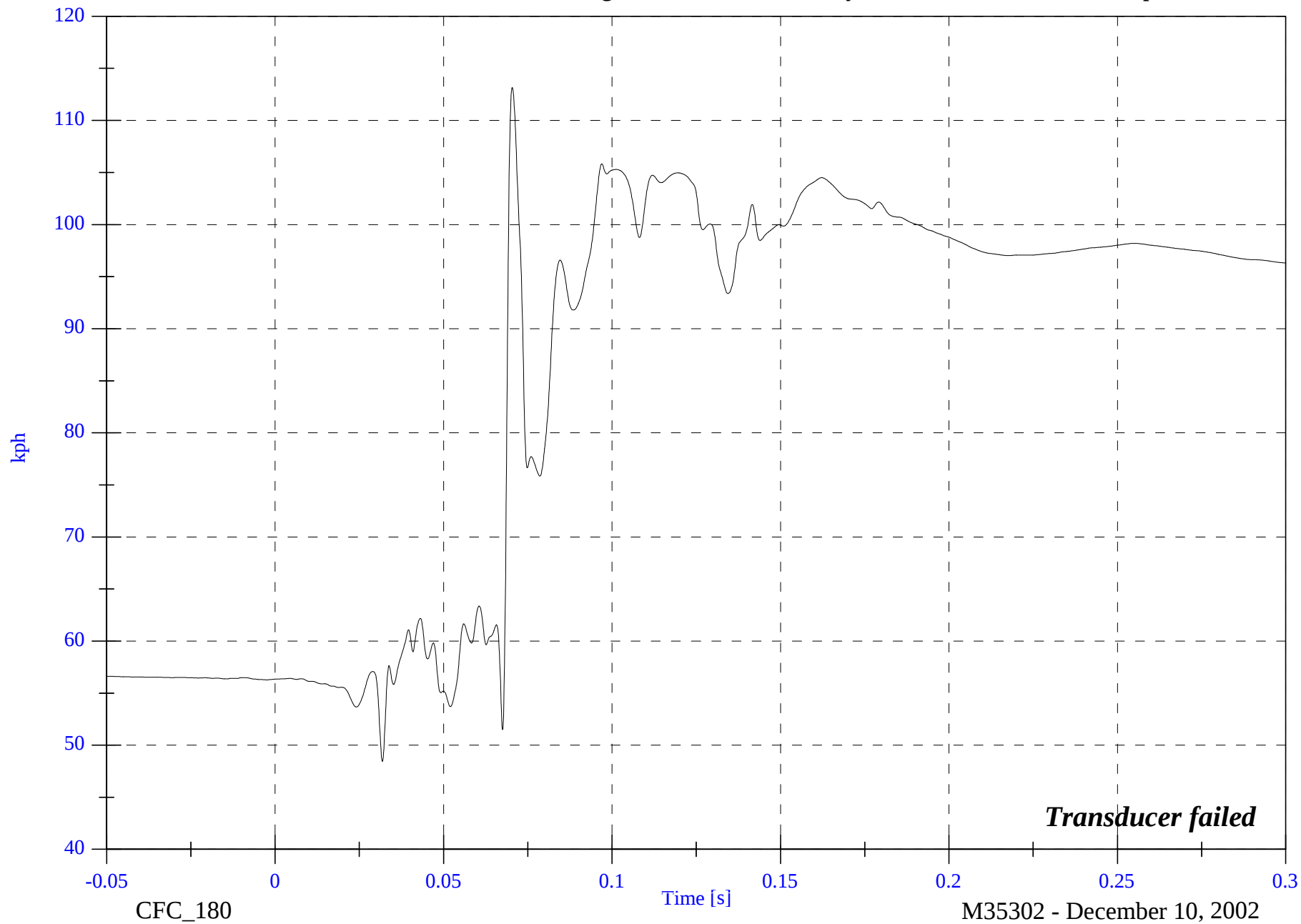


NCAP Test #2 - 2003 Honda Accord

V1 Engine Bottom #4x Velocity

Max: 113.2 [kph] at 0.070 [s]

Min: 48.4 [kph] at 0.032 [s]

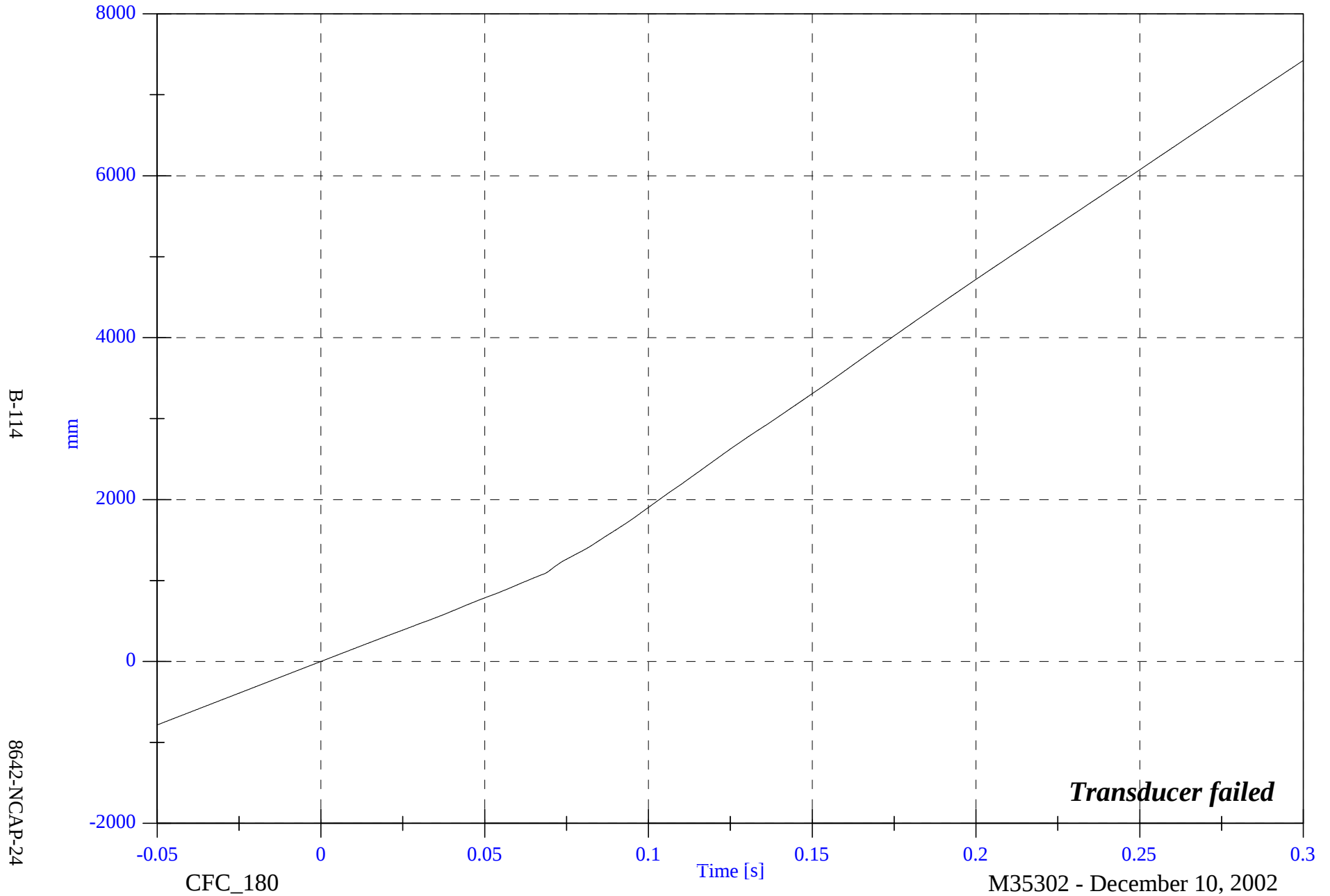


NCAP Test #2 - 2003 Honda Accord

V1 Engine Bottom #4x Displacement

Max: 7422.0 [mm] at 0.300 [s]

Min: -784.3 [mm] at -0.050 [s]



NCAP Test #2 - 2003 Honda Accord

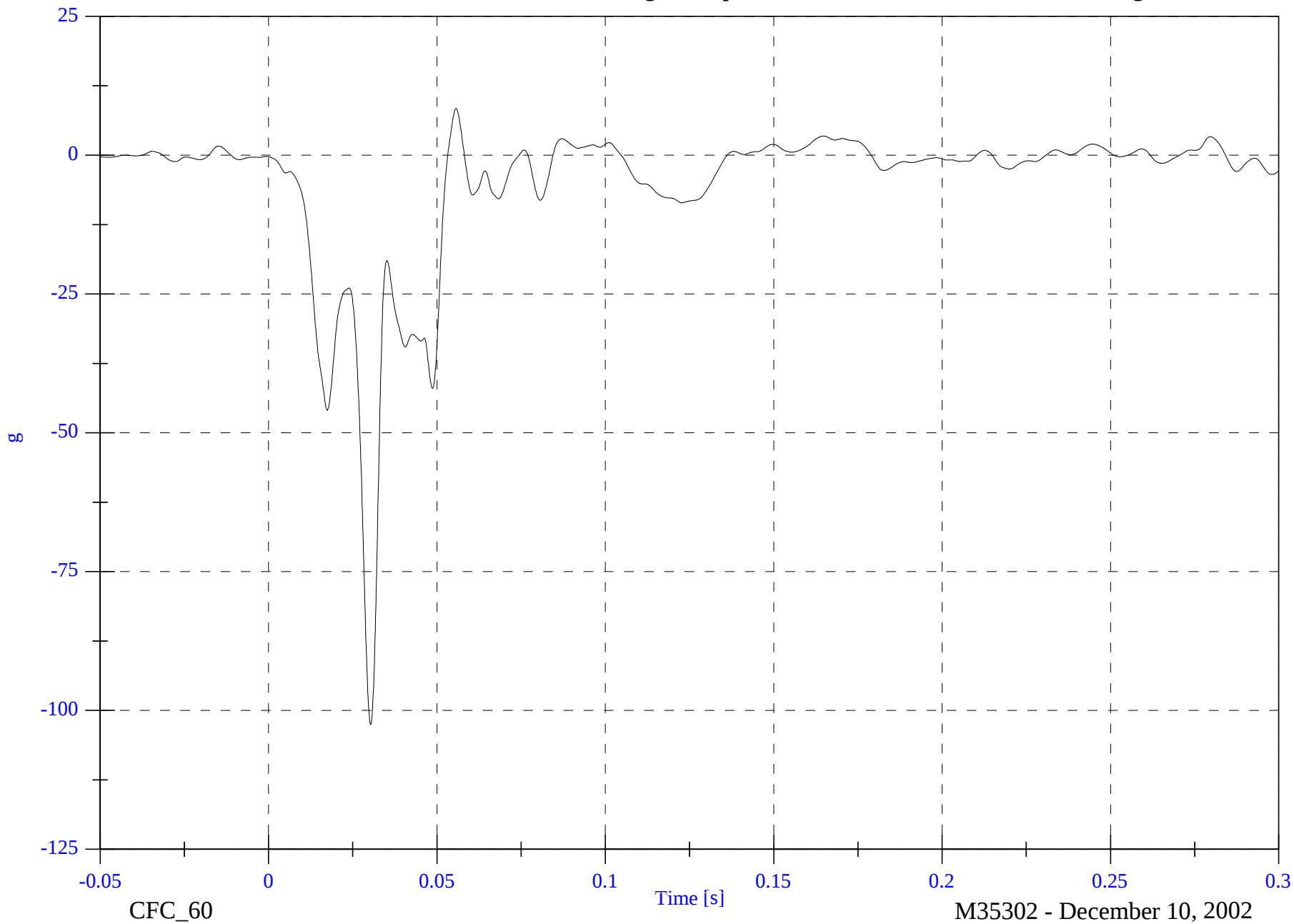
V1 Right Caliper #5x

Max: 8.4 [g] at 0.056 [s]

Min: -102.5 [g] at 0.030 [s]

B-115

8642-NCAP-24

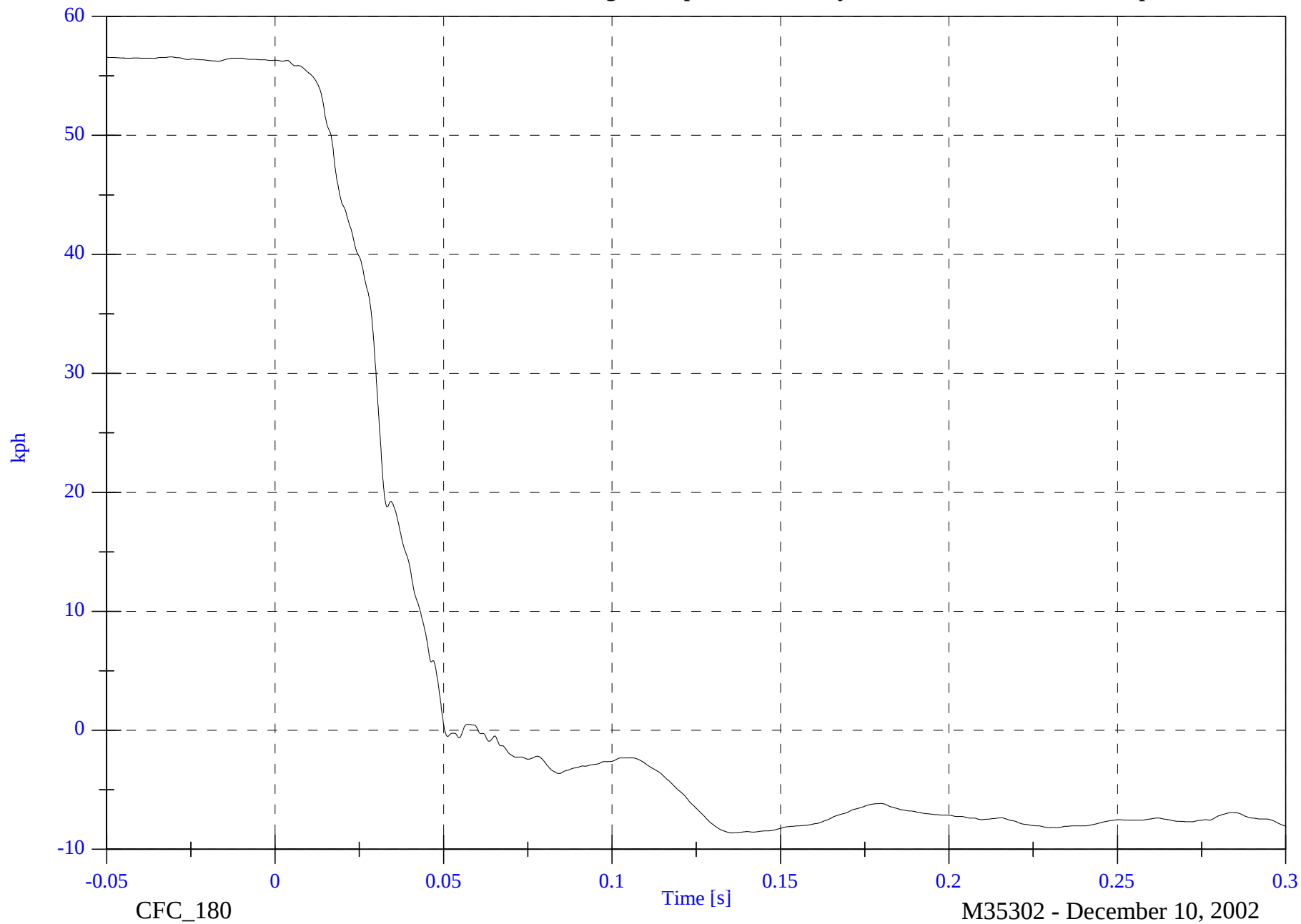


NCAP Test #2 - 2003 Honda Accord

V1 Right Caliper #5x Velocity

Max: 56.6 [kph] at -0.031 [s]

Min: -8.6 [kph] at 0.136 [s]



B-116

8642-NCAP-24

CFC_180

Time [s]

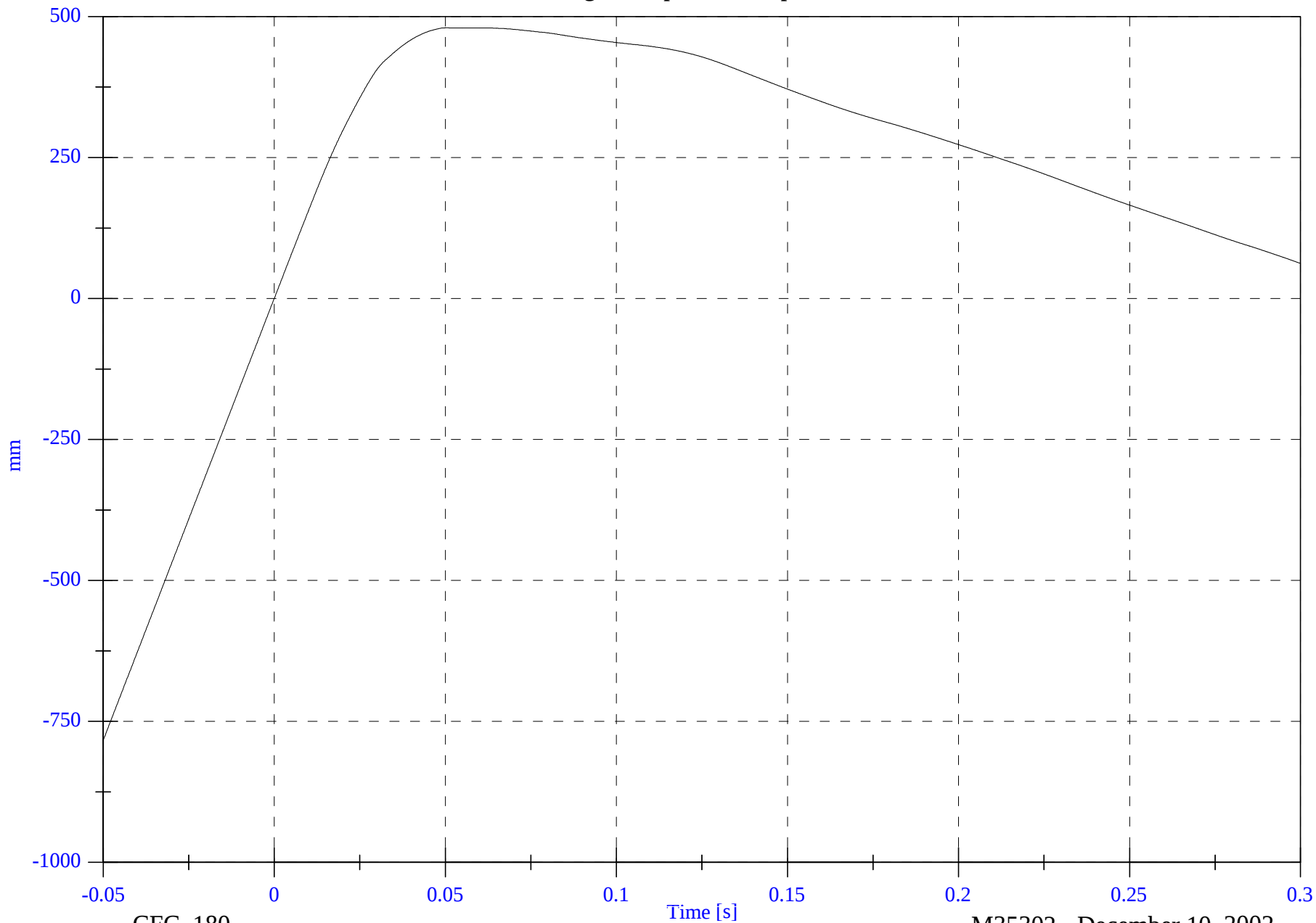
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1 Right Caliper #5x Displacement

Max: 480.0 [mm] at 0.050 [s]

Min: -783.8 [mm] at -0.050 [s]



B-117

8642-NCAP-24

CFC_180

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

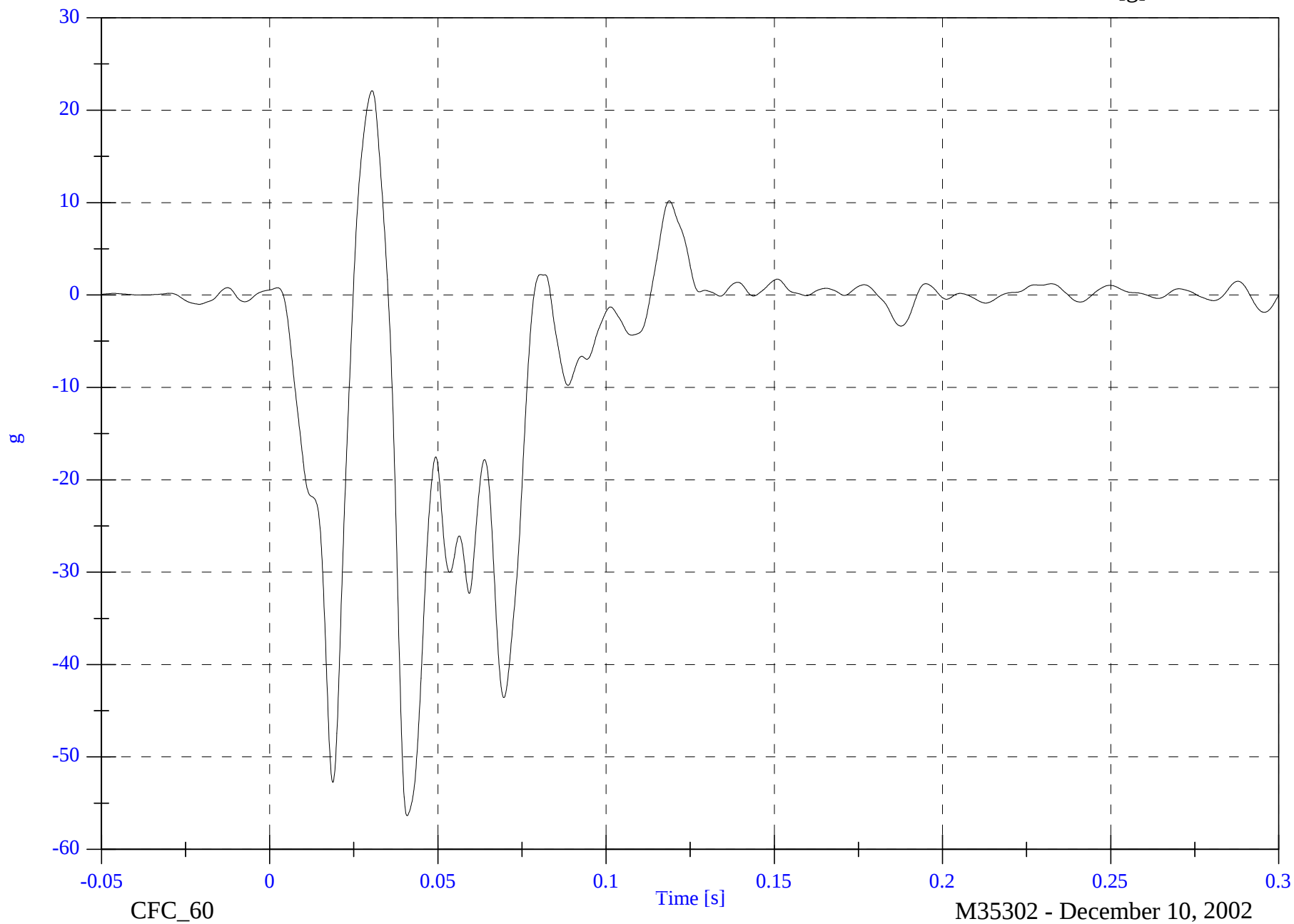
V1 Instrument Panel #6x

Max: 22.1 [g] at 0.030 [s]

Min: -56.4 [g] at 0.041 [s]

B-118

8642-NCAP-24

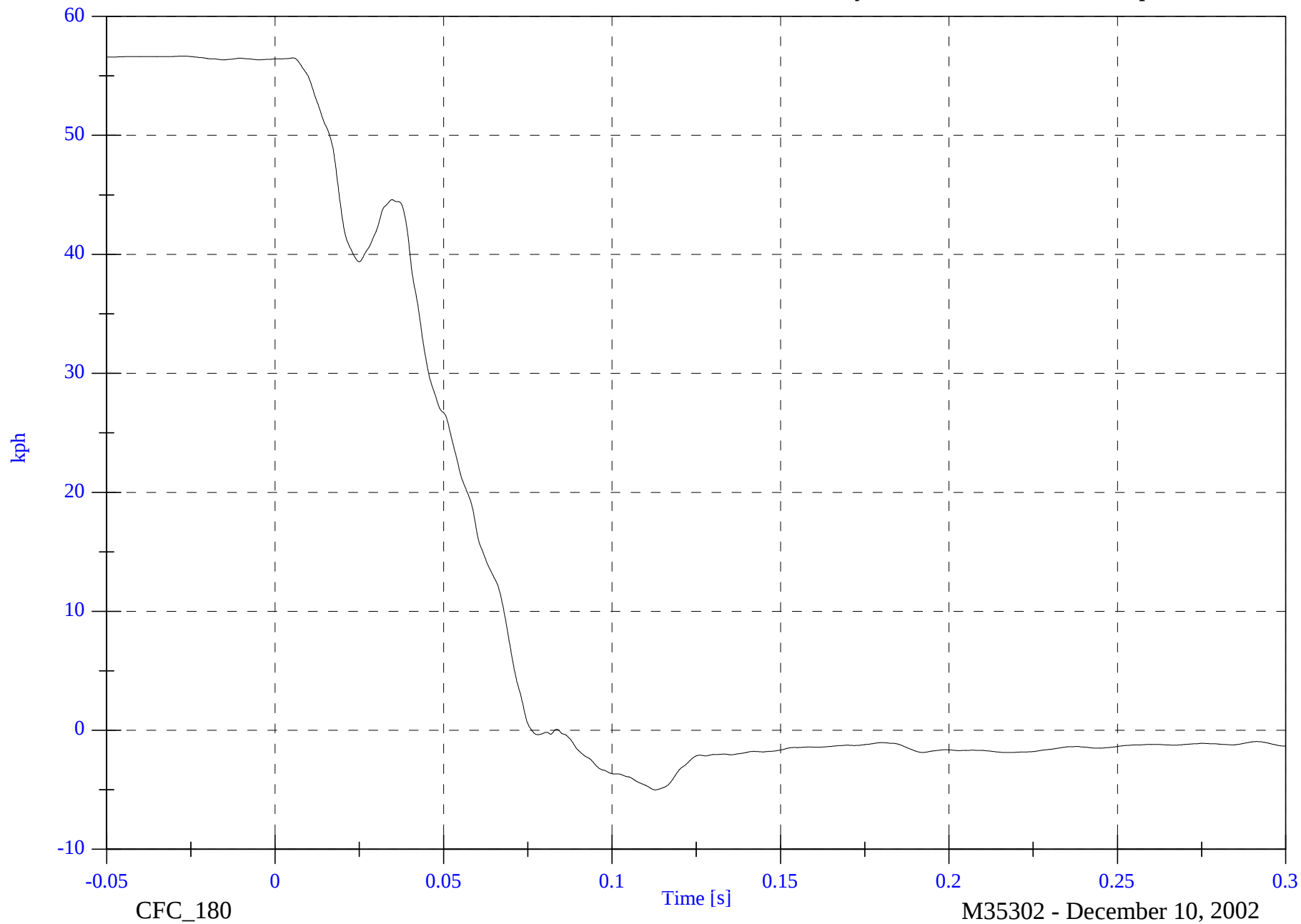


NCAP Test #2 - 2003 Honda Accord

V1 Instrument Panel #6x Velocity

Max: 56.6 [kph] at -0.027 [s]

Min: -5.0 [kph] at 0.113 [s]



B-119

8642-NCAP-24

CFC_180

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

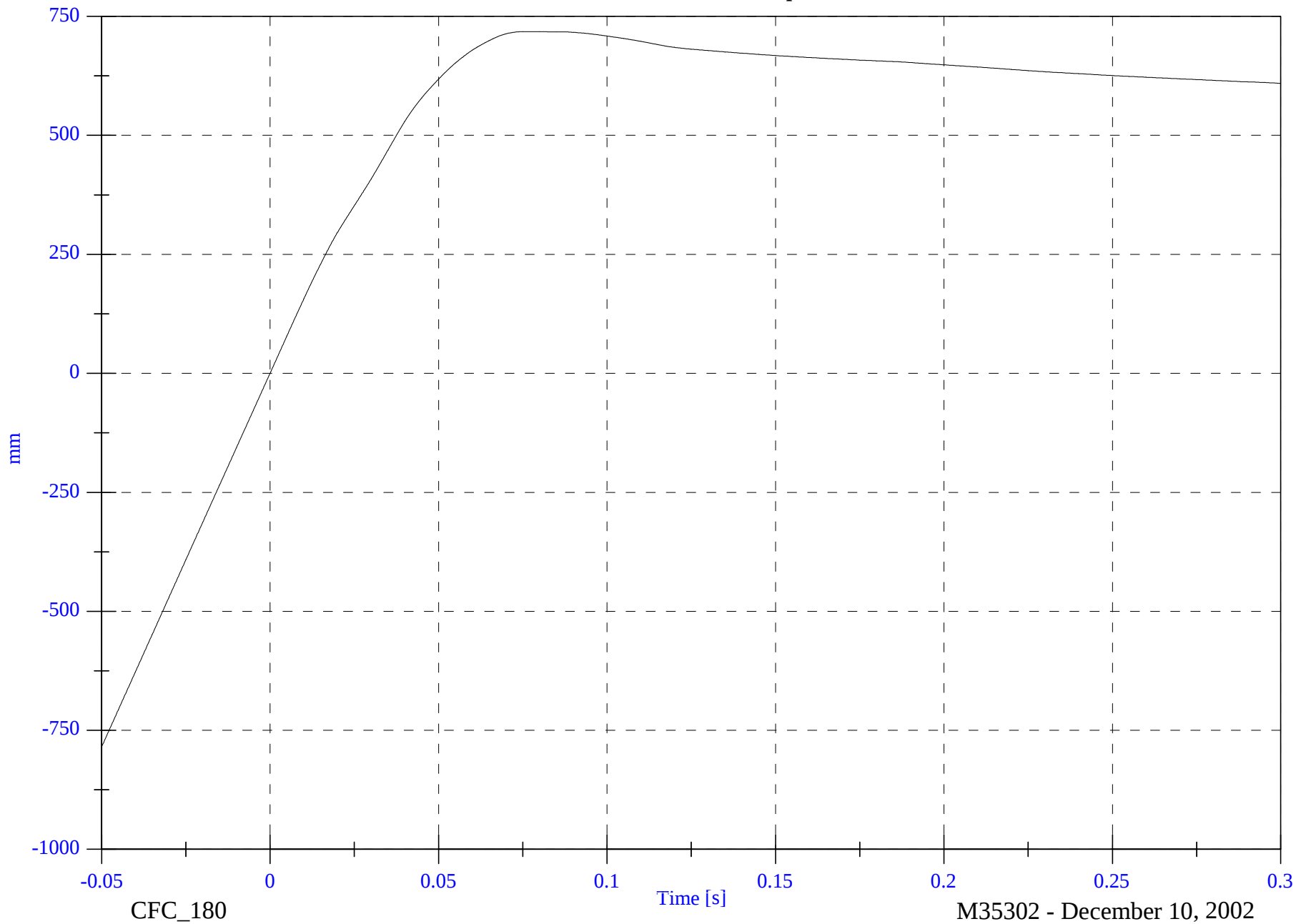
V1 Instrument Panel #6x Displacement

Max: 718.0 [mm] at 0.076 [s]

Min: -785.0 [mm] at -0.050 [s]

B-120

8642-NCAP-24



CFC_180

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

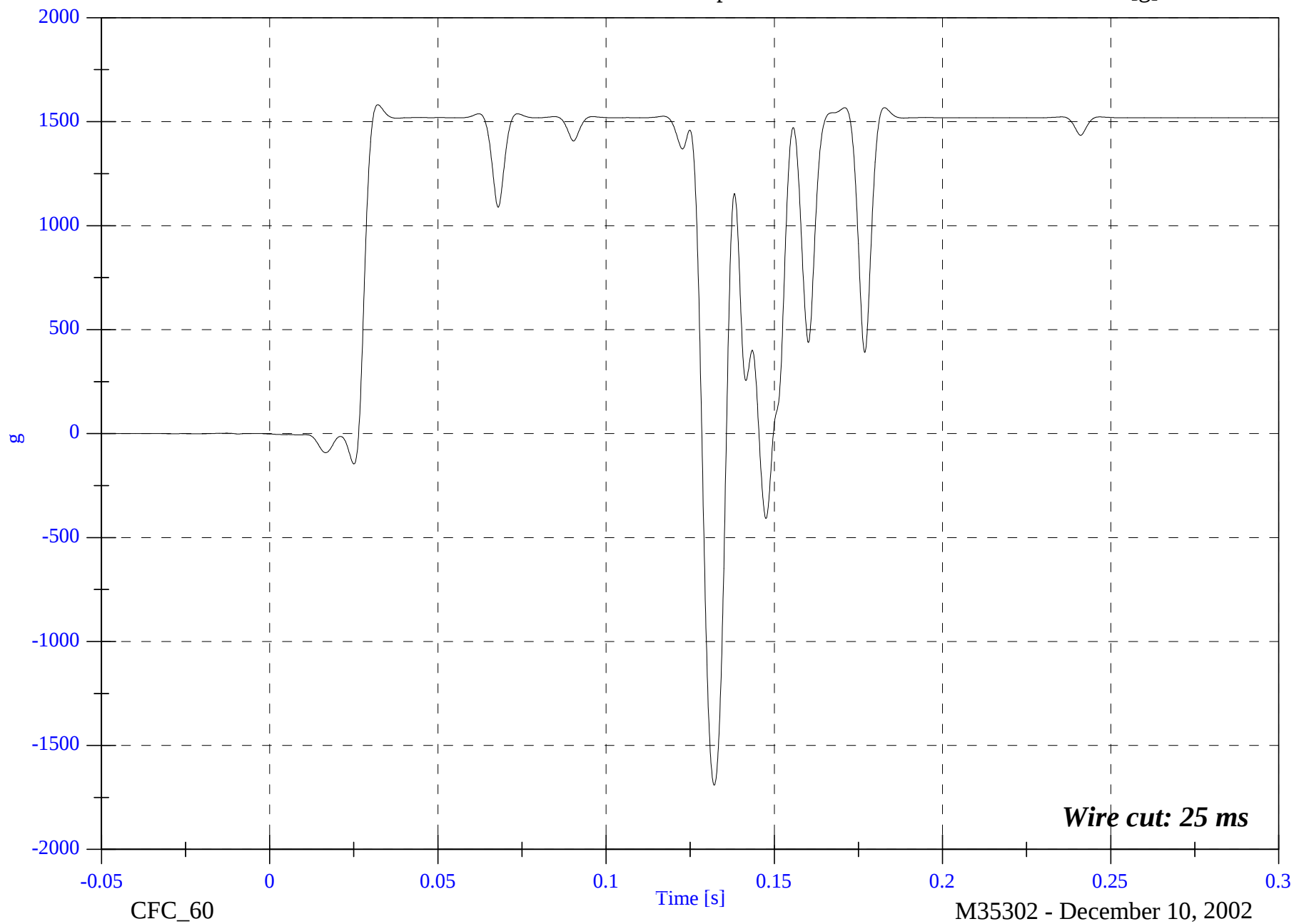
V1 Left Caliper #7x

Max: 1581.7 [g] at 0.032 [s]

Min: -1691.1 [g] at 0.132 [s]

B-121

8642-NCAP-24



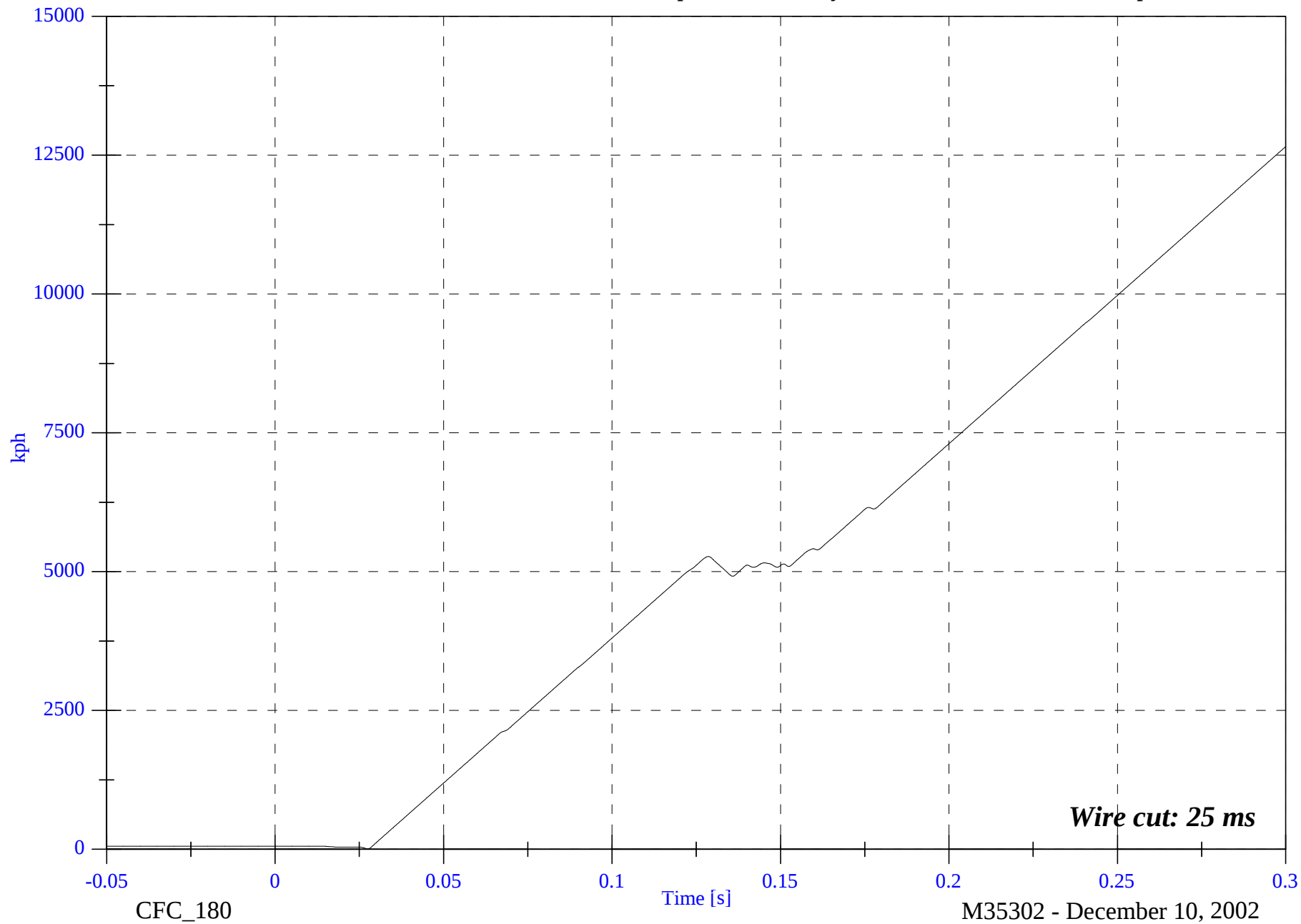
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1 Left Caliper #7x Velocity

Max: 12651.2 [kph] at 0.300 [s]

Min: 7.0 [kph] at 0.027 [s]



NCAP Test #2 - 2003 Honda Accord

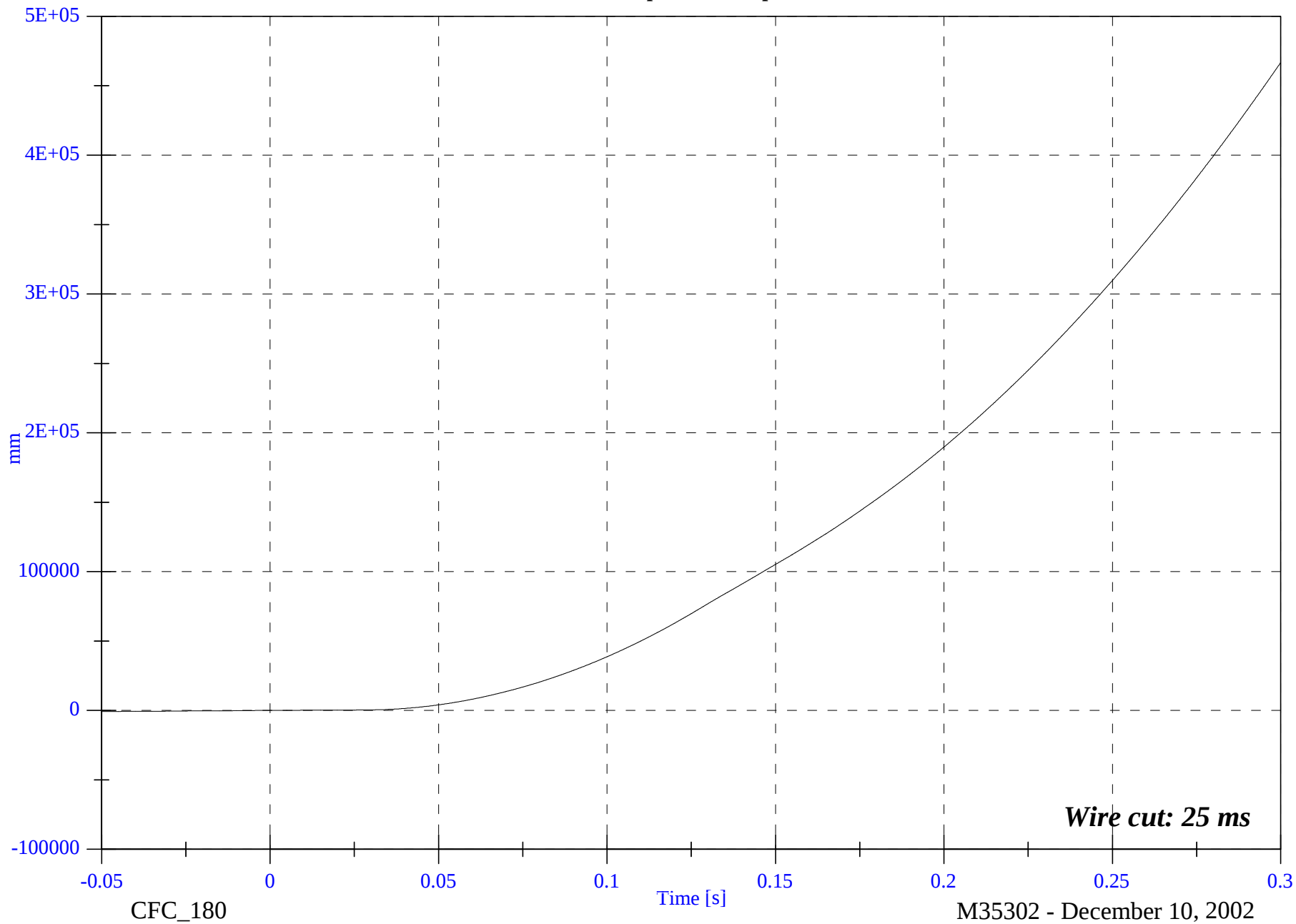
V1 Left Caliper #7x Displacement

Max: 466530.8 [mm] at 0.300 [s]

Min: -782.7 [mm] at -0.050 [s]

B-123

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

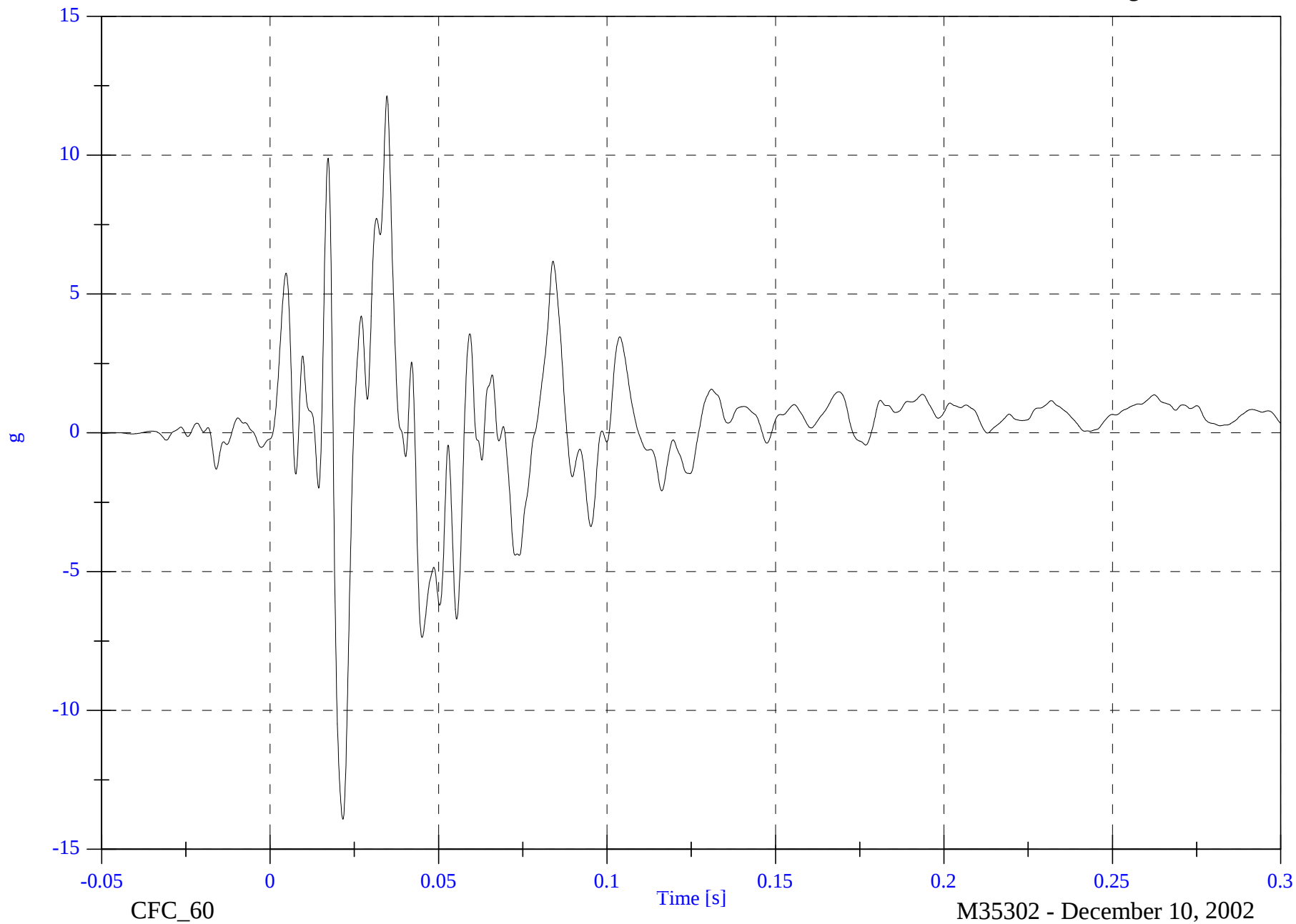
V1 Left Rear #8z

Max: 12.1 [g] at 0.035 [s]

Min: -13.9 [g] at 0.022 [s]

B-124

8642-NCAP-24

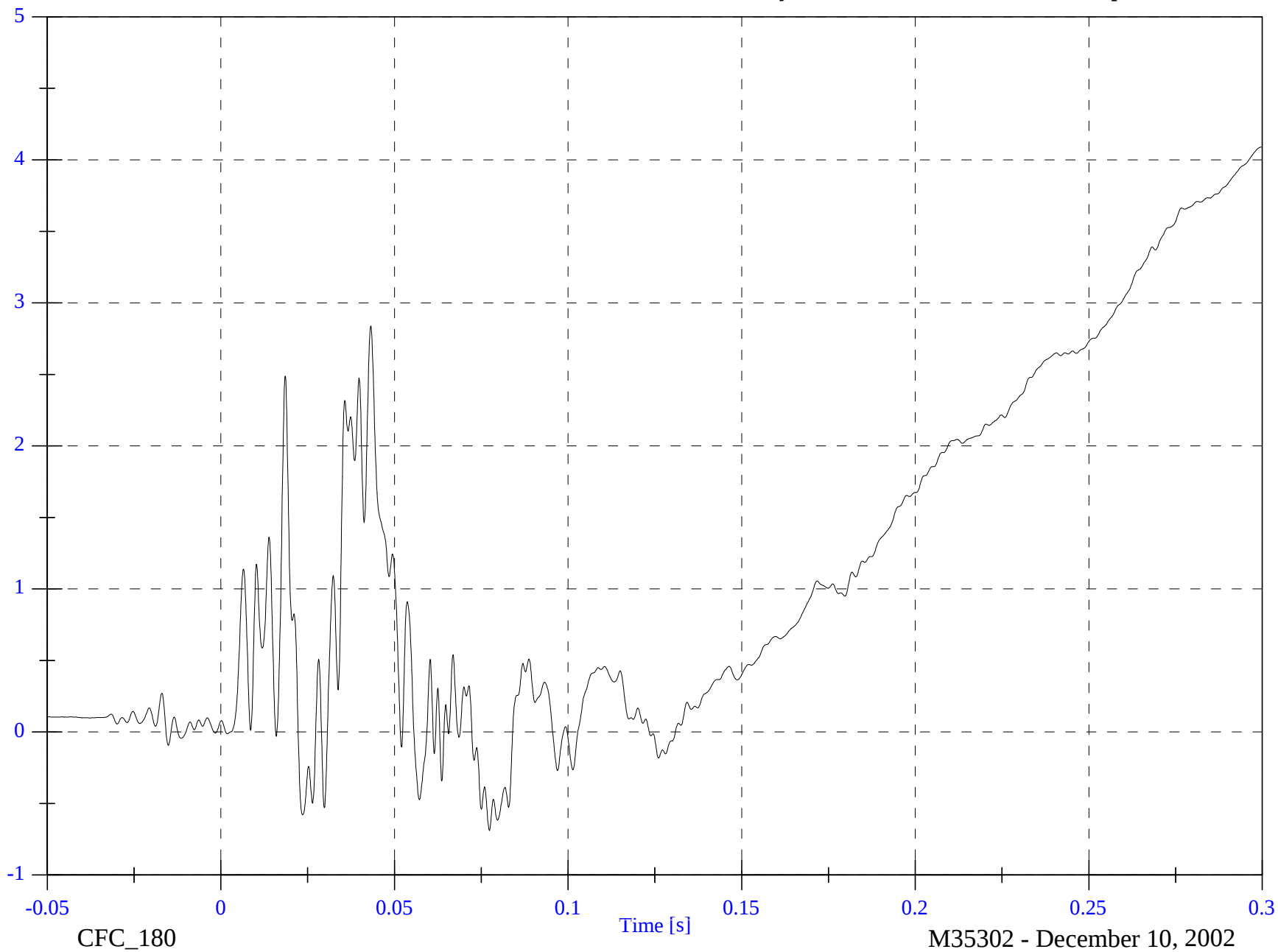


NCAP Test #2 - 2003 Honda Accord

V1 Left Rear #8z Velocity

Max: 4.1 [kph] at 0.300 [s]

Min: -0.7 [kph] at 0.077 [s]



B-125

8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

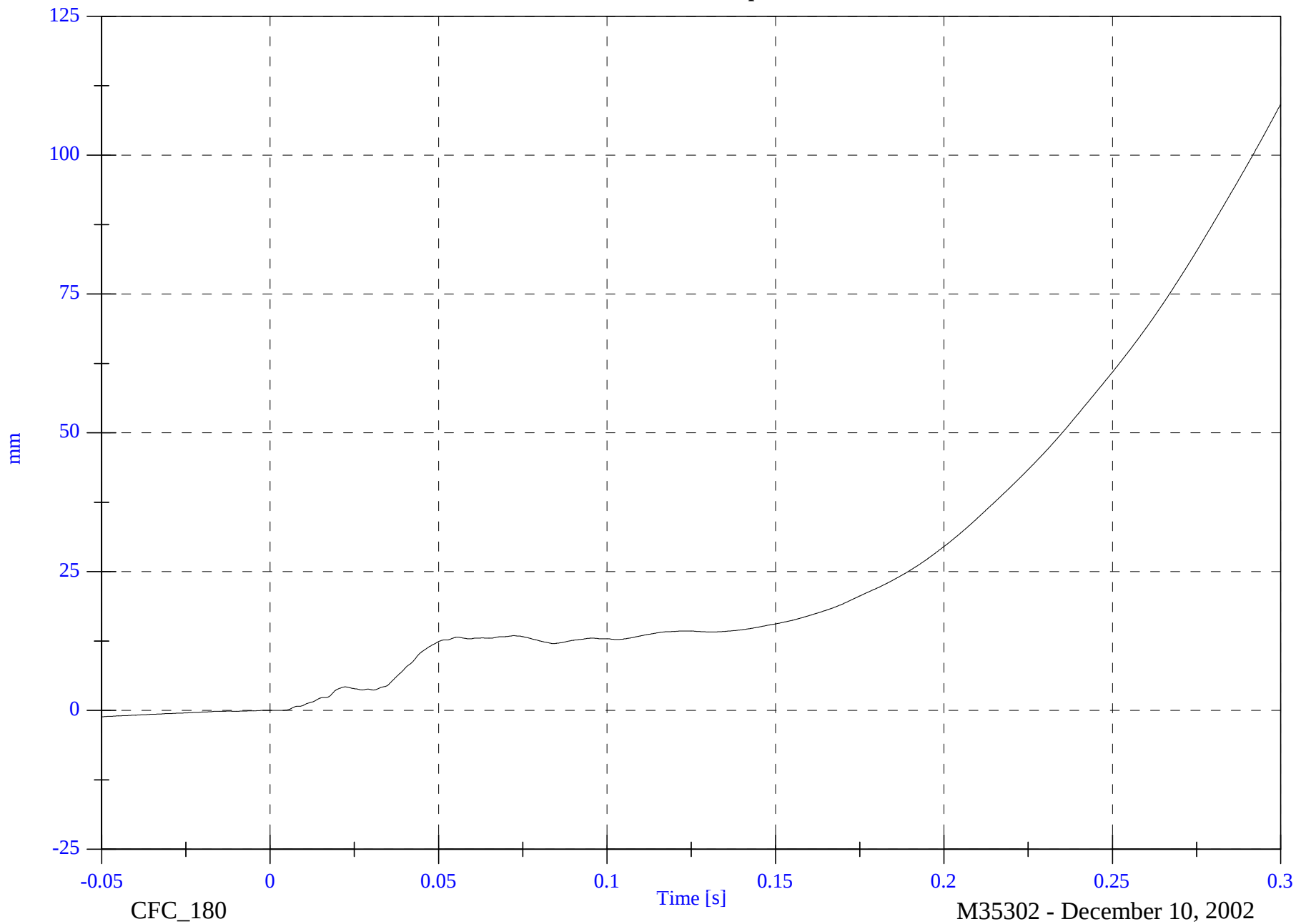
V1 Left Rear #8z Displacement

Max: 109.1 [mm] at 0.300 [s]

Min: -1.1 [mm] at -0.050 [s]

B-126

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1 Right Rear #9z

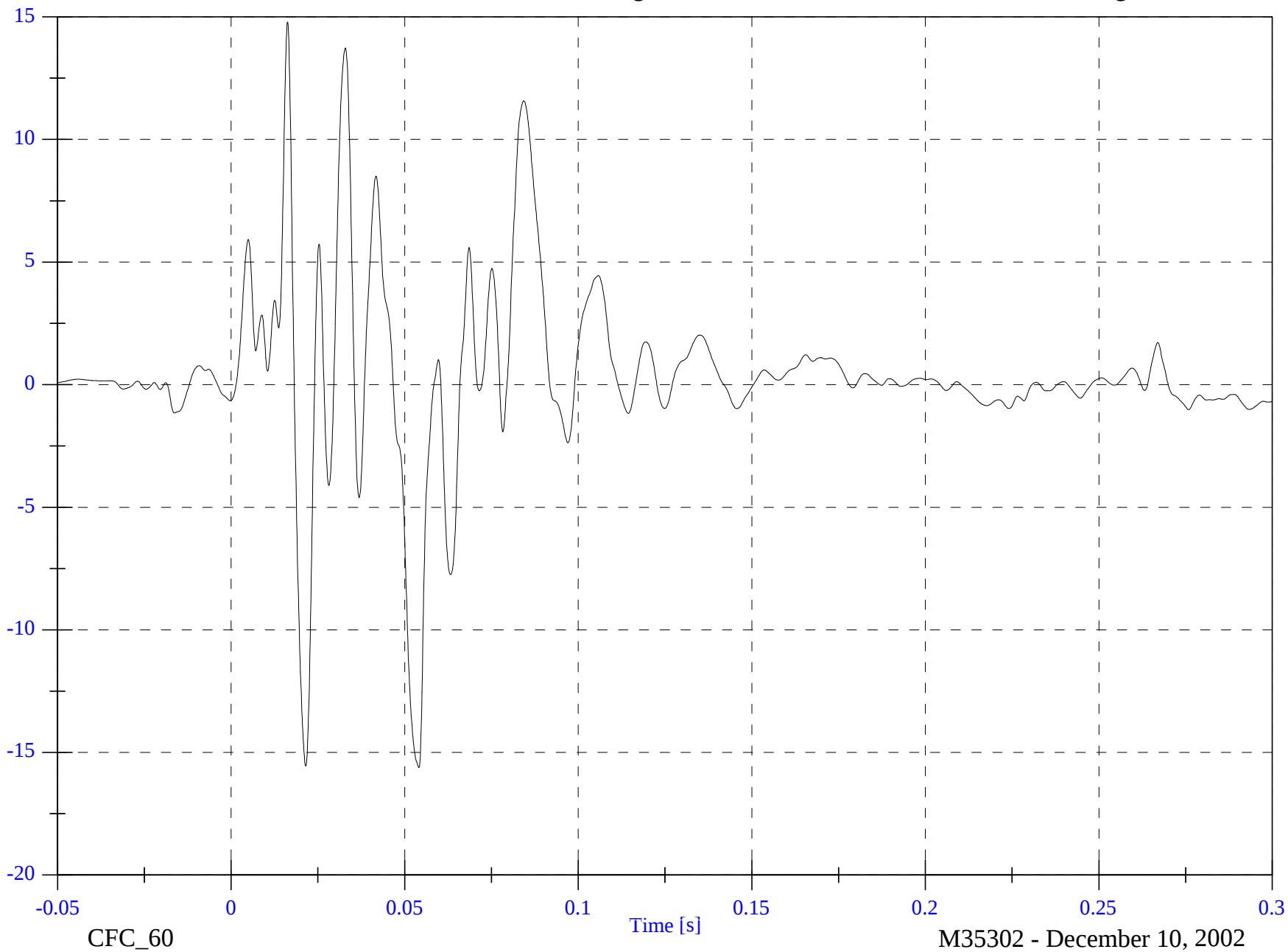
Max: 14.8 [g] at 0.016 [s]

Min: -15.6 [g] at 0.054 [s]

B-127

8642-NCAP-24

g

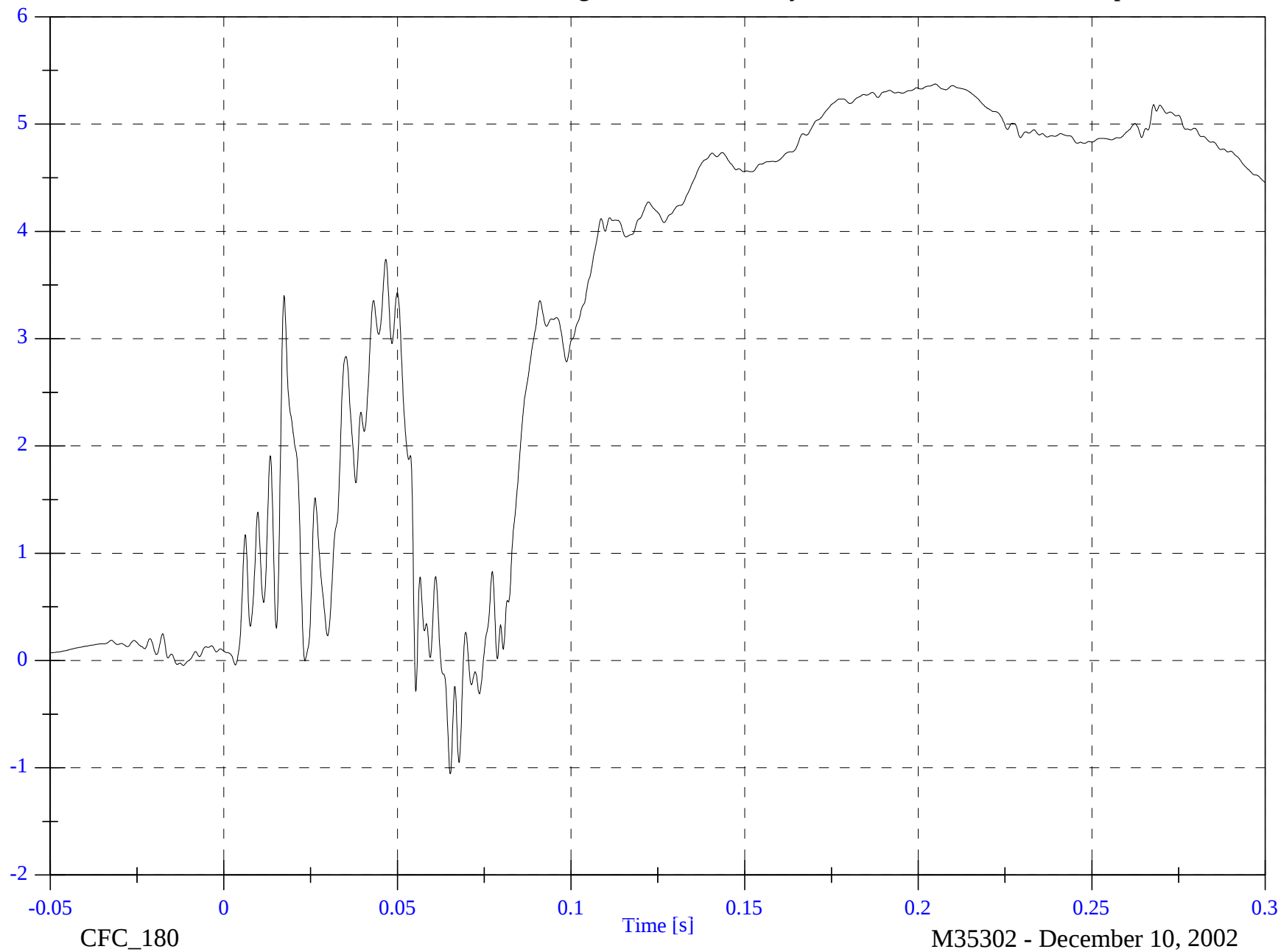


NCAP Test #2 - 2003 Honda Accord

V1 Right Rear #9z Velocity

Max: 5.4 [kph] at 0.205 [s]

Min: -1.1 [kph] at 0.065 [s]



B-128

8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

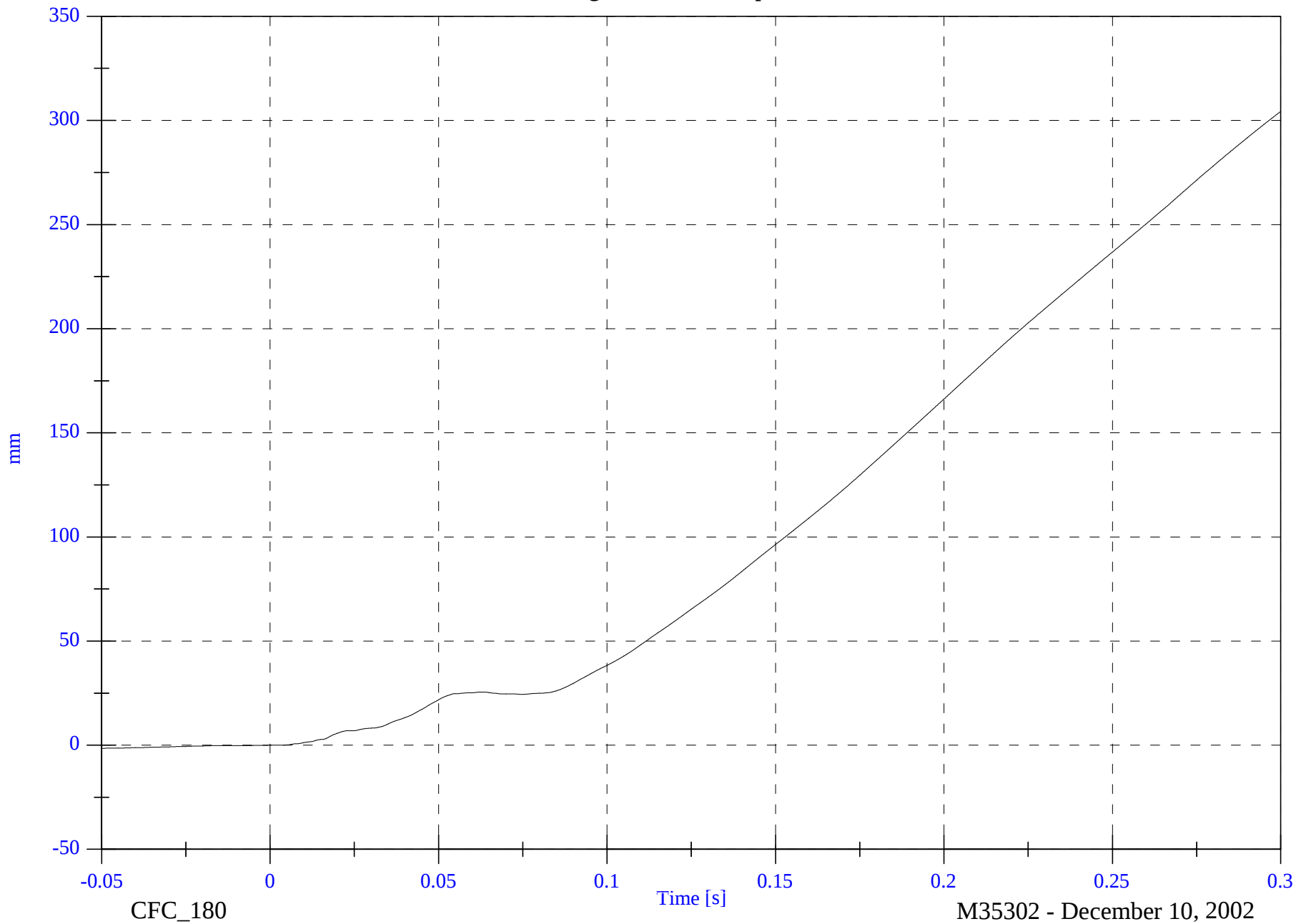
V1 Right Rear #9z Displacement

Max: 304.3 [mm] at 0.300 [s]

Min: -1.5 [mm] at -0.050 [s]

B-129

8642-NCAP-24



CFC_180

M35302 - December 10, 2002

APPENDIX C

PART 572B/E DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA SHEETS

Appendix C contains the results from certification tests performed on the 50th percentile male anthropomorphic test devices utilized for this crash test. The results indicate that the dummies meet all of the performance requirements of the six standard tests as specified in 49 CFR Part 572, Federal Register, Volume 42, No. 25, dated February 7, 1977.

The tests were conducted at the Dummy Certification Test Facility of Veridian Engineering. A summary of the test results, and Part 572 specifications are included in this Appendix.

Dummy serial numbers and certification dates are:

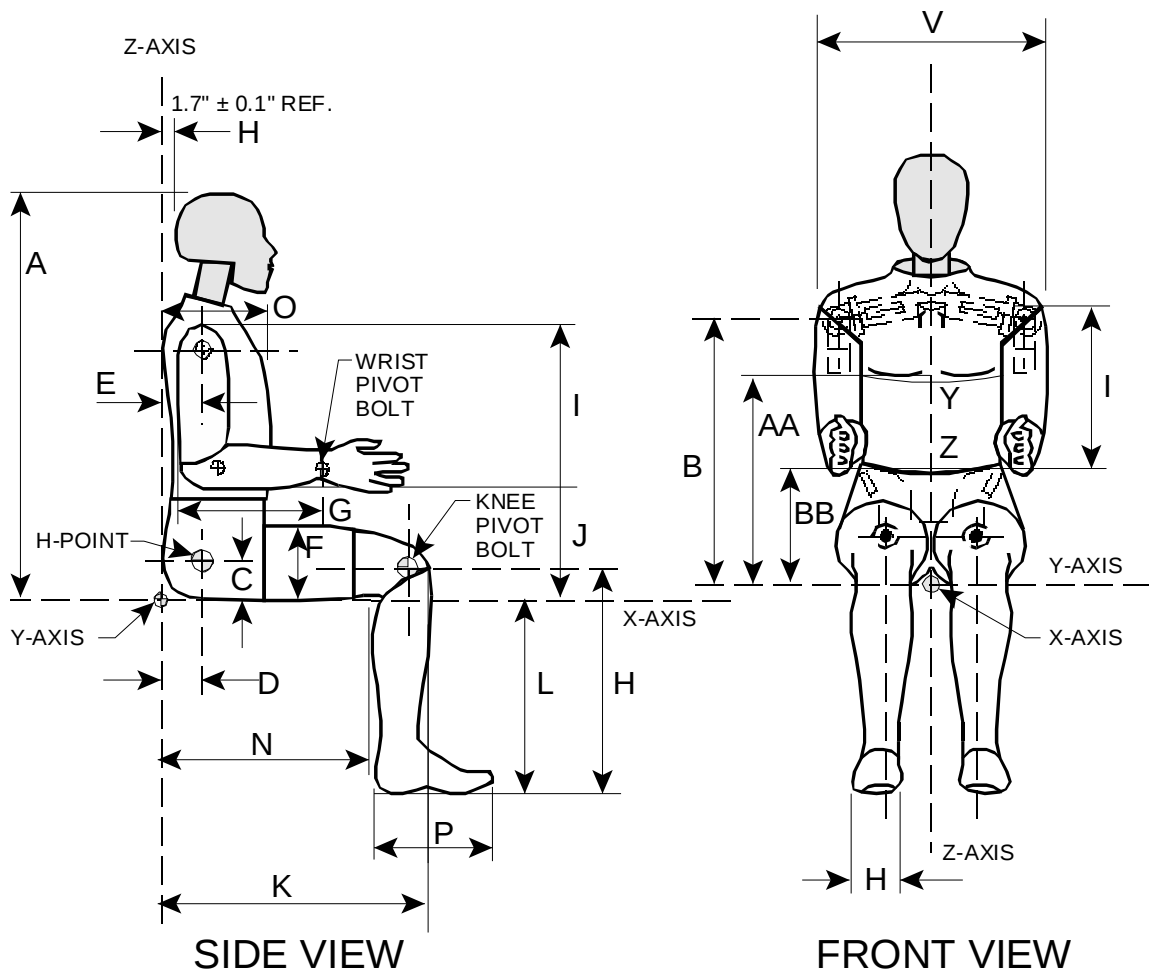
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	061	December 2, 2002
#2/Right Front Passenger	064	December 2, 2002

Electronic Test Equipment

The complement of signal conditioning, recording and display equipment, in conjunction with dummy certification testing, can be found in New Car Assessment and Standards Inducant Testing Final Report No. 6525-V-1.

DUMMY CONFIGURATION DIMENSIONS

EXTERNAL DIMENSIONS SPECIFICATIONS



NOTE: Figure is referenced to the erect seated position. The curved lumbar does not allow the Hybrid III to be positioned in a perfect erect attitude.
(REF: S572.31(A)(6))

PART 572E
HEAD DROP TEST

Dummy Serial Number 061
Sequential Test Number 1
Date 11/23/02
Workfile 061H1 11-23-02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	31.0
Peak Resultant Acceleration	225-275 G's	249.82
Peak Lateral Acceleration	15 G's Max	1.96
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	6	
Date	11/23/02	6 Axis Neck Transducer
Workfile	061Flx6 11-23-02	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71.00
Relative Humidity		10% - 70%	31.00
Impact Velocity		22.60 - 23.40 Ft/s	23.07
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	23.08
	20 ms	17.60 - 22.60 G's	21.40
	30 ms	12.50 - 18.50 G's	18.10
Max Pendulum G's Above 30 ms		29 G's Max	18.10
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	37.30
D Plane Rotation	Max	64 - 78 Deg	68.67
	Time	57 - 64 ms	58.90
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	69.26
	Time	47 - 58 ms	51.20
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	113.10
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	101.00

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	1	
Date	11/23/02	6 Axis Neck Transducer
Workfile	061Ext1 11-23-02	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71.00
Relative Humidity		10% - 70%	31.00
Impact Velocity		19.50 - 20.30 Ft/s	19.85
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	18.17
	20 ms	14.00 - 19.00 G's	16.42
	30 ms	11.00 - 16.00 G's	13.33
Max Pendulum G's Above 30 ms		22 G's Max	13.69
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	41.60
D Plane Rotation	Max	81 - 106 Deg	91.30
	Time	72 - 82 ms	76.40
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-57.50
	Time	65 - 79 ms	70.70
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	151.40
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	137.10

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 1
Date December 2, 2002
Workfile 061T 12-2-02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	69
Relative Humidity	10% - 70%	43
Pendulum Velocity	21.6 - 22.4 Ft/s	22.34
Maximum Deflection	2.50 - 2.86 in	2.61
Maximum Resistive Force	1160 - 1325 Lbs	1281.43
Internal Hysteresis	69 - 85 %	76.90

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 1
Date 11/24/02
Workfile 061LF 11-24-02/061RF 11-24-02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	31.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1166.09
RIGHT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	31.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1177.25

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
Sequential Test Number 1
Date 11/24/02

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			44
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	33.5
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.9
Thigh Clearance	F	5.5 - 6.1 in	6.1
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.7
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.5
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.1
Elbow Rest Height	J	7.5 - 8.3 in	7.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 064
Sequential Test Number 1
Date 11/23/02
Workfile 064H 11-23-02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	66-78 Deg F	70.0
Relative Humidity	10% - 70%	31.00
Peak Resultant Acceleration	225-275 G's	261.35
Peak Lateral Acceleration	15 G's Max	4.66
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	064	
Sequential Test Number	5	
Date	11/23/02	6 Axis Neck Transducer
Workfile	064Flx5 11-23-02	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	71.00
Relative Humidity		10% - 70%	33.00
Impact Velocity		22.60 - 23.40 Ft/s	23.33
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	25.31
	20 ms	17.60 - 22.60 G's	20.44
	30 ms	12.50 - 18.50 G's	15.79
Max Pendulum G's Above 30 ms		29 G's Max	16.07
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	37.70
D Plane Rotation	Max	64 - 78 Deg	67.05
	Time	57 - 64 ms	60.40
Moment About Occipital Condyle	Max	65 - 80 Ft-Lbs	76.08
	Time	47 - 58 ms	49.20
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	119.50
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	97.00

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	064	
Sequential Test Number	1	
Date	11/23/02	6 Axis Neck Transducer
Workfile	064Ext 11-23-02	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		69-72 Deg F	70.0
Relative Humidity		10% - 70%	33.0
Impact Velocity		19.50 - 20.30 Ft/s	19.75
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	17.61
	20 ms	14.00 - 19.00 G's	16.40
	30 ms	11.00 - 16.00 G's	13.39
Max Pendulum G's Above 30 ms		22 G's Max	13.48
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	41.70
D Plane Rotation	Max	81 - 106 Deg	81.62
	Time	72 - 82 ms	76.60
Moment About Occipital Condyle	Max	-59.0 - -39.0 Ft-Lbs	-58.34
	Time	65 - 79 ms	72.30
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	153.40
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	137.10

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 1
Date December 2, 2002
Workfile 064T 12-2-02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	69-72 Deg F	69
Relative Humidity	10% - 70%	44
Pendulum Velocity	21.6 - 22.4 Ft/s	22.28
Maximum Deflection	2.50 - 2.86 in	2.52
Maximum Resistive Force	1160 - 1325 Lbs	1320.69
Internal Hysteresis	69 - 85 %	75.05

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 1
Date 11/24/02
Workfile 064LF 11-24-02/064RF 11-24-02

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	31.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1120.80
RIGHT KNEE		
Temperature	66 - 78 Deg F	71.0
Relative Humidity	10% - 70%	31.00
Probe Velocity	6.8 - 7.0 Ft/s	7.00
Peak Knee Impact Force	1060 - 1300 Lbs	1151.48

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
Sequential Test Number 1
Date 11/24/02

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			71
Relative Humidity			44
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	33.6
Chest Depth	O	8.4 - 9.0 in	8.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Total Sitting Height	A	34.6 - 35.0 in	34.8
Thigh Clearance	F	5.5 - 6.1 in	6.0
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Popliteal Height	L	16.9 - 17.9 in	17.3
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Foot Length	P	9.9 - 10.5 in	10.1
Foot Breadth	W	3.6 - 4.2 in	3.8
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.4
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6

Remarks:

Laboratory Technician:

B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENTRAN	AC-00L13-F04	08/21/02	02/19/03
	Y	ENTRAN	AC-01G18-F15	08/21/02	02/19/03
	Z	ENTRAN	AC-01G18-F14	08/21/02	02/19/03
Head	X (R)	ENTRAN	AC-01G18-F20	08/21/02	02/19/03
	Y (R)	ENTRAN	AC-01G18-F05	08/21/02	02/19/03
	Z (R)	ENDEVCO	AC-J14668	08/21/02	02/19/03
Neck Load Cell	X	DENTON	LC-205FX	10/15/02	04/15/03
	Y	DENTON	LC-205FY	10/15/02	04/15/03
	Z	DENTON	LC-205FZ	10/15/02	04/15/03
Neck Moment	X	DENTON	LC-205MX	10/15/02	04/15/03
	Y	DENTON	LC-205MY	10/15/02	04/15/03
	Z	DENTON	LC-205MZ	10/15/02	04/15/03
Chest	X	ENDEVCO	AC-P21373	08/20/02	02/18/03
	Y	ENDEVCO	AC-P22639	08/20/02	02/18/03
	Z	ENDEVCO	AC-P21297	08/20/02	02/18/03
Chest	X (R)	ENDEVCO	AC-P21171	08/20/02	02/18/03
	Y (R)	ENDEVCO	AC-P23136	08/20/02	02/18/03
	Z (R)	ENDEVCO	AC-P23128	08/20/02	02/18/03
Chest Deflection	X	SERVO	DS-061	09/23/02	03/24/03
Pelvic	X	ENDEVCO	AC-P21441	08/20/02	02/18/03
	Y	ENDEVCO	AC-P19246	08/20/02	02/18/03
	Z	ENDEVCO	AC-P21516	08/20/02	02/18/03

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	GSE	LC-659	09/25/02	03/26/03
Right Femur Load Cell	Fz	GSE	LC-723	09/25/02	03/26/03
Left Upper Tibia	Mx	DENTON	LC-016MX	10/25/02	04/25/03
	My	DENTON	LC-016MY	10/25/02	04/25/03
Left Lower Tibia	Fz	DENTON	LC-123FZ	10/25/02	04/25/03
	Mx	DENTON	LC-123MX	10/25/02	04/25/03
	My	DENTON	LC-123MY	10/25/02	04/25/03
Right Upper Tibia	Mx	DENTON	LC-023MX	10/25/02	04/25/03
	My	DENTON	LC-023MY	10/25/02	04/25/03
Right Lower Tibia	Fz	DENTON	LC-111FZ	10/25/02	04/25/03
	Mx	DENTON	LC-111MX	10/25/02	04/25/03
	My	DENTON	LC-111MY	10/25/02	04/25/03
Left Foot Rear	X	ENDEVCO	AC-P19343	08/20/02	02/18/03
	Z	ENDEVCO	AC-P16583	08/20/02	02/18/03
Left Foot Front	Z	ENDEVCO	AC-P18525	08/20/02	02/18/03
Right Foot Rear	X	ENDEVCO	AC-P18628	08/20/02	02/18/03
	Z	ENDEVCO	AC-P18741	08/20/02	02/18/03
Right Foot Front	Z	ENDEVCO	AC-P23276	08/20/02	02/18/03
Lap Belt Load Cell		LEBOW	LC-706	11/12/02	05/13/03
Shoulder Belt Load Cell		-	-	-	-
Belt Stretch Transducer		-	-	-	-

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Head	X	ENDEVCO	AC-J32184	08/27/02	02/25/03
	Y	ENDEVCO	AC-J32185	08/27/02	02/25/03
	Z	ENDEVCO	AC-J31011	08/27/02	02/25/03
Head	X (R)	ENDEVCO	AC-J31020	08/27/02	02/25/03
	Y (R)	ENDEVCO	AC-J31101	08/27/02	02/25/03
	Z (R)	ENDEVCO	AC-J31059	08/27/02	02/25/03
Neck Load Cell	X	DENTON	LC-440FX	10/15/02	04/15/03
	Y	DENTON	LC-440FY	10/15/02	04/15/03
	Z	DENTON	LC-440FZ	10/15/02	04/15/03
Neck Moment	X	DENTON	LC-440MX	10/15/02	04/15/03
	Y	DENTON	LC-440MY	10/15/02	04/15/03
	Z	DENTON	LC-440MZ	10/15/02	04/15/03
Chest	X	ENDEVCO	AC-J34019	08/28/02	02/26/03
	Y	ENDEVCO	AC-J33018	08/27/02	02/25/03
	Z	ENDEVCO	AC-J32783	08/28/02	02/26/03
Chest	X (R)	ENDEVCO	AC-J31066	08/28/02	02/26/03
	Y (R)	ENDEVCO	AC-P16979	08/27/02	02/25/03
	Z (R)	ENDEVCO	AC-J31022	08/28/02	02/26/03
Chest Deflection	X	SERVO	DS-064	09/23/02	03/24/03
Pelvic	X	ENDEVCO	AC-P23174	08/23/02	02/21/03
	Y	ENDEVCO	AC-P23164	08/23/02	02/21/03
	Z	ENDEVCO	AC-P23137	08/23/02	02/21/03

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	GSE	LC-954	09/25/02	03/26/03
Right Femur Load Cell	Fz	GSE	LC-955	09/25/02	03/26/03
Left Upper Tibia	Mx	DENTON	LC-045MX	10/24/02	04/24/03
	My	DENTON	LC-045MY	10/24/02	04/24/03
Left Lower Tibia	Fz	DENTON	LC-125FZ	10/24/02	04/24/03
	Mx	DENTON	LC-125MX	10/24/02	04/24/03
	My	DENTON	LC-125MY	10/24/02	04/24/03
Right Upper Tibia	Mx	DENTON	LC-038MX	10/24/02	04/24/03
	My	DENTON	LC-038MY	10/24/02	04/24/03
Right Lower Tibia	Fz	DENTON	LC-124FZ	10/24/02	04/24/03
	Mx	DENTON	LC-124MX	10/24/02	04/24/03
	My	DENTON	LC-124MY	10/24/02	04/24/03
Left Foot Rear	X	ENDEVCO	AC-J30491	08/23/02	02/21/03
	Z	ENDEVCO	AC-J31026	08/23/02	02/21/03
Left Foot Front	Z	ENDEVCO	AC-J32831	08/23/02	02/21/03
Right Foot Rear	X	ENDEVCO	AC-J33376	08/23/02	02/21/03
	Z	ENDEVCO	AC-J32832	08/23/02	02/21/03
Right Foot Front	Z	ENDEVCO	AC-J31095	08/23/02	02/21/03
Lap Belt Load Cell		LEBOW	LC-711	11/12/02	05/13/03
Shoulder Belt Load Cell		-	-	-	-
Belt Stretch Transducer		-	-	-	-

INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS
(Six Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	ICS	AC-8084-006	11/20/02	05/21/03
Right Rear Seat Crossmember X	ICS	AC-8086-047	11/20/02	05/21/03
Top of Engine	ENDEVCO	AC-P16585	08/06/02	02/04/03
Bottom of Engine	ENDEVCO	AC-P18948	07/29/02	01/27/03
Right Disc Brake Caliper	ENTRAN	AC-B03	08/01/02	01/30/03
Instrument Panel	ENDEVCO	AC-P18728	10/01/02	04/01/03
Left Disc Brake Caliper	ENDEVCO	AC-P23288	07/29/02	01/27/03
Left Seat Rear Crossmember Z	ICS	AC-8084-041	11/20/02	05/21/03
Right Seat Rear Crossmember Z	ICS	AC-8084-023	11/20/02	05/21/03

REPORT NUMBER: CAL-03-20

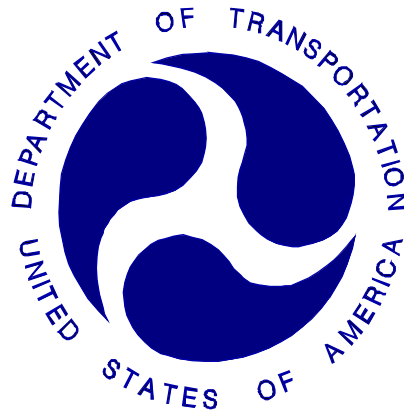
NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST

CENTURY 1500 STE
FORWARD FACING CONFIGURATION
SECURED WITH THE LATCH SYSTEM AND TOP TETHER

NHTSA NUMBER: M35302

VERIDIAN ENGINEERING TEST NUMBER: 8642-NCAP-24

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
BUFFALO, NEW YORK 14225



December 10, 2002

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Rulemaking
Office of Crashworthiness Standards
Mail Code: NVS-111
400 Seventh Street, SW, Room No. 5313
Washington, DC 20590

This Final Test Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-01-D-32005. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

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Accepted By:

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4. Title and Subtitle Final Report of Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether NHTSA No.: M35302				5. Report Date December 10, 2002	
				6. Performing Organization Code CAL	
7. Author(s) Lawrence Q. Valvo, Project Engineer David J. Travale, Program Manager				8. Performing Organization Report No. 8642-NCAP-24	
9. Performing Organization Name and Address Veridian Engineering Transportation Sciences Center P.O. Box 400 Buffalo, New York 14225				10. Work Unit No.	
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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code: NVS-111 400 Seventh SW, Room 5313 Washington, D.C. 20590				13. Type of Report and Period Covered Final Report December, 2002 – January, 2003	
				14. Sponsoring Agency Code NVS-111	
15. Supplementary Notes					
16. Abstract A frontal load cell barrier test was conducted on the subject CRS (Century 1500 STE, forward facing configuration, secured with the LATCH system and top tether) in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the determination of CRS crashworthiness. This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on December 10, 2002.					
17. Key Words New Car Assessment Program (NCAP)				18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Reference Division Room 5108 (NAD-52) 400 Seventh St., S.W. Washington, D.C. 20590 Telephone No. (202) 366-4946 ATTN: Robert Hornicle	
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SECTION 1

PURPOSE AND SUMMARY OF TEST M35302

The purpose of this test was to obtain CRS performance data in a frontal impact NCAP condition. The 56.49 kph NCAP frontal impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure.

SUMMARY

A 3 Year Old Hybrid III (P572 P) child dummy (serial no. 142) was secured in a Century 1500 STE CRS in the vehicle right rear occupant position (Position 3). The CRS was in its forward facing configuration and was attached to the vehicle with the LATCH system and top tether. The child dummy was instrumented with head, chest, and pelvic triaxial accelerometers and a head redundant z accelerometer. In addition, chest displacement and upper and lower six axial neck force and moment load cell sensors were utilized. This dummy was calibrated previous to this test. Child dummy certification information is found in section 5.

The right rear child dummy's HIC was 520.2, maximum chest deceleration over 3 ms was 53.1 g's.

SECTION 2
DATA SHEET NO. 1
CRASH TEST SUMMARY

TEST DUMMY INFORMATION:

DESCRIPTION	Position #3 CRS	Position #4 CRS
ATD Type/Serial No.	3 Year Old Hybrid III (P572 P) / 142	None
Restraint System:	Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether	None

Number of Data Channels 26
Number of Cameras: 1 Real Time
1 High Speed

POST TEST DOOR OPENING

DESCRIPTION	FRONT	REAR
Left Side Doors	Door remained closed and latched, door opened without tools	-
Right Side Doors	Door remained closed and latched, door opened without tools	-
Hatch/Other Door	-	-

POST TEST SEAT DATA

LOCATION	SEAT MOVEMENT (mm)	SEAT BACK FAILURE
P1 (Left Front)	0	None
P2 (Right Front)	0	None
P3 (Right Rear)	0	None
P4 (Left Rear)	0	None

VISIBLE DUMMY CONTACT POINTS

	Position #3 CRS	Position #4 CRS
Head Contact:	Chin to CRS seat belt chest clip.	-
Upper Torso Contact:	None	-
Lower Torso Contact:	None	-
Left Knee Contact:	None	-
Right Knee Contact:	None	-

DATA SHEET NO. 2

CRS PARAMETER DATA

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Delivered Weight of Vehicle with Maximum Fluids = 1395.5 kg (A)

AS TESTED WEIGHT OF VEHICLE(2 P572E + 1 P572P w/CRS +CARGO+EQUIPMENT & INSTRUMENTATION):

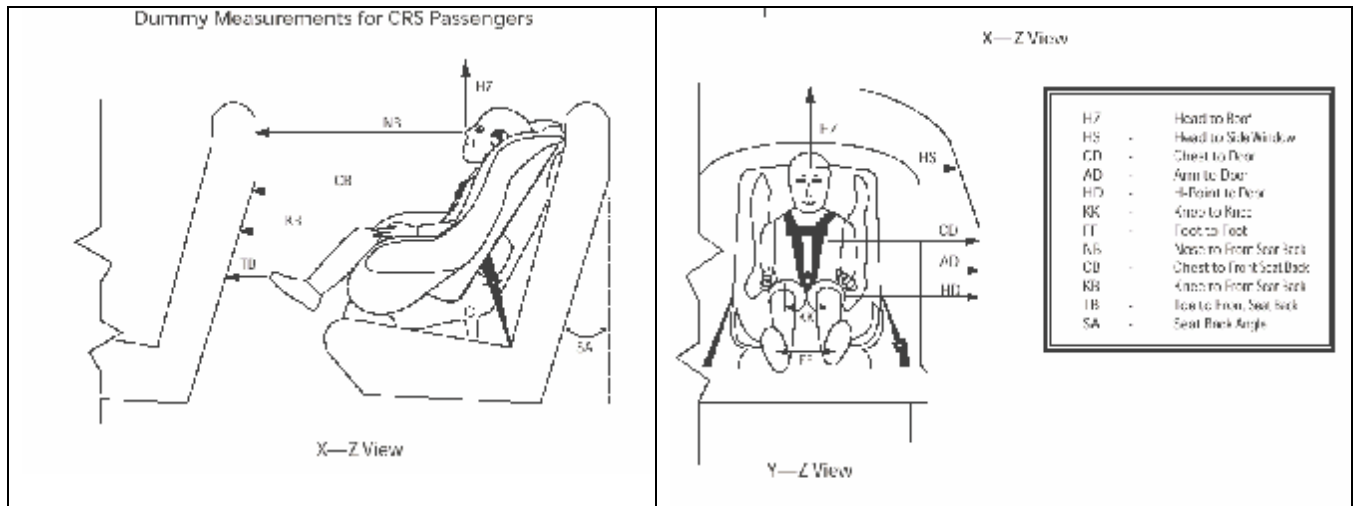
Left Front	=	<u>474.0</u>	kg	Left Rear	=	<u>336.0</u>	kg
Right Front	=	<u>468.0</u>	kg	Right Rear	=	<u>308.5</u>	kg
TOTAL FRONT	=	<u>942.0</u>	kg	TOTAL REAR	=	<u>644.5</u>	kg
TOTAL TEST WEIGHT =		<u>1586.5</u>	kg				

DATA SHEET NO. 3

CHILD DUMMY POSITIONING IN VEHICLE

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302



Measurement	Pre-Test (mm)		Post Test (mm)	
	P3 CRS (142)	P4 CRS (-)	P3 CRS (142)	P4 CRS (-)
SA	25.0°	°	25.5°	°
HS	380	-	391	-
CD	388	-	396	-
AD	252	-	254	-
HD	315	-	315	-
HZ	325	-	325	-
NB	480	-	503	-
CB	485	-	520	-
KB	132	-	152	-
FF	135	-	193	-
KB – LEFT	302	-	324	-
KB – RIGHT	303	-	331	-
TB – LEFT	30	-	55	-
TB – RIGHT	30	-	36	-

All dimensions in mm (unless noted)

P3 – Right Rear Passenger (CRS #1)

P4 – Left Rear Passenger (CRS #2)

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302

DESCRIPTION	Unit	MAXIMUM VALUE							
		Position #3				Position #4			
		Pos	msec	Neg	msec	Pos	msec	Neg	msec
Head X	g	27.0	194.8	-28.5	85.7	-	-	-	-
Head Y	g	6.0	88.9	-1.9	60.8	-	-	-	-
Head Z	g	64.1	76.7	-8.6	41.1	-	-	-	-
Head Resultant	g	68.5	76.7	-	-	-	-	-	-
Head RZ	g	88.2	82.0	-21.0	42.2	-	-	-	-
Upper Neck Fx	N	71.6	227.8	-775.9	86.1	-	-	-	-
Upper Neck Fy	N	123.7	88.4	-42.0	58.7	-	-	-	-
Upper Neck Fz	N	1864.0	77.1	-237.6	41.3	-	-	-	-
Upper Neck F Resultant	N	1976.2	78.9	-	-	-	-	-	-
Upper Neck Mx	N-m	11.2	92.8	-3.0	186.0	-	-	-	-
Upper Neck My	N-m	7.0	138.8	-10.5	204.4	-	-	-	-
Upper Neck Mz	N-m	2.0	65.8	-2.1	235.8	-	-	-	-
Upper Neck M Resultant	N-m	12.6	92.9	-	-	-	-	-	-
Lower Neck Fx	N	223.8	183.2	-1069.6	84.8	-	-	-	-
Lower Neck Fy	N	87.0	70.5	-120.7	100.4	-	-	-	-
Lower Neck Fz	N	1198.5	76.6	-383.2	42.3	-	-	-	-
Lower Neck F Resultant	N	1524.2	82.2	-	-	-	-	-	-
Lower Neck Mx	N-m	26.8	89.8	-4.8	58.0	-	-	-	-
Lower Neck My	N-m	126.9	85.2	-16.7	183.8	-	-	-	-
Lower Neck Mz	N-m	12.2	91.6	-1.8	113.7	-	-	-	-
Lower Neck M Resultant	N-m	129.0	85.3	-	-	-	-	-	-

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES (CONTINUED)

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302

		MAXIMUM VALUE							
		Position #3				Position #4			
DESCRIPTION	Unit	Pos	msec	Neg	msec	Pos	msec	Neg	msec
Chest X	g	16.2	179.6	-36.0	63.4	-	-	-	-
Chest Y	g	7.5	76.4	-1.7	211.7	-	-	-	-
Chest Z	g	23.3	86.4	-40.9	62.2	-	-	-	-
Chest Resultant	g	54.3	62.6	-	-	-	-	-	-
Chest Displacement	g	0.0	3.1	-23.8	95.1	-	-	-	-
Pelvic X	g	6.6	194.4	-38.0	65.7	-	-	-	-
Pelvic Y	g	5.3	83.3	-3.4	56.8	-	-	-	-
Pelvic Z	g	17.1	194.7	-47.7	63.6	-	-	-	-
Pelvic Resultant	g	60.6	65.6	-	-	-	-	-	-

DATA SHEET 4

CHILD DUMMY INJURY CRITERIA VALUES (CONTINUED)

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302

	HEAD INJURY CRITERIA (HIC)			
	HIC**	t ₁ (msec)	t ₂ (msec)	Average Acceleration (g's) t ₁ to t ₂
Position #3 - Right	520.2	71.4	86.4	65.5
Position #4 - Left	-	-	-	-

** HIC is as defined in FMVSS 208. The maximum time interval from t₁ to t₂ is 15 milliseconds.

	CLIP SUMMARY*			
	CLIP (g's)	t ₁ (msec)	t ₂ (msec)	CSI
Position #3 - Right	53.1	61.0	64.0	500.2
Position #4 - Left	-	-	-	-

* The maximum chest resultant acceleration is defined as the maximum acceleration which exceeds 0.003 seconds in duration.

Position 3 Neck Injury Summary (3 Year Old Hybrid III (P572 P) – In Position)

Nij V10	Nij	Time (ms)	Z Force (N)	X Force (N)	Y Moment (N-m)
Ntf	0.16	138.1	141.6	-29.5	7.0
Nte	0.89	86.0	1766.3	-775.7	-4.1
Ncf	0.03	22.4	-65.8	-5.1	0.1
Nce	0.30	41.7	-227.4	-144.3	-5.8

Peak Tension (CFC1000) 1864.0 N

Peak Compression (CFC1000) 237.6 N

Critical Values

Nij Intercepts				Peak Limits	
Tension (CVt)	2340 N	Extension (mCVe)	30 N-m	Tension	1430 N
Compression (CVc)	2120 N	Flexion (mCVf)	68 N-m	Compression	-1380 N

Condyle Offset -0.0000

DATA SHEET NO. 5

CRS PERFORMANCE DATA

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302

		MAXIMUM VALUE			
DESCRIPTION	Unit	Positive	Time (ms)	Negative	Time (ms)
P3 Child Seat x	g	18.1	211.6	-54.2	54.4
P3 Child Seat y	g	8.5	193.1	-4.9	179.2
P3 Child Seat z	g	23.6	45.0	-33.3	185.5
P3 Child Seat Resultant	g	54.7	54.1	-	-

DATA SHEET NO. 5**CRS PERFORMANCE DATA (CONTINUED)**CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top TetherNHTSA No. M35302**POSITION #3 CRS POST-TEST INSPECTION (Serial No. 44164ELM)**

LOCATION	DAMAGE	REMARKS
Upper Tether Strap	No	-
Upper Tether Buckle	No	-
Upper Tether Hook	No	-
Vehicle Upper Tether Anchor	No	-
Lower Anchor Strap	No	-
Lower Anchor Buckle	No	-
Lower Anchor Hooks	No	-
Vehicle Lower CRS Anchors	No	-
Five Point Harness Connections	No	-
Cracks on CRS	No	-
Fabric Tears on CRS	No	-
Vehicle Seat Structure	No	-
Vehicle Seat Fabric Tears	No	-
Child Dummy	No	-

POSITION #4 CRS POST-TEST INSPECTION (Serial No. -)

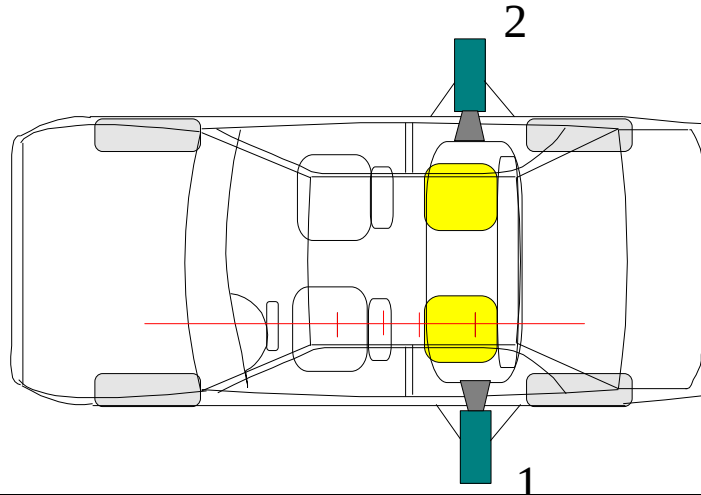
LOCATION	DAMAGE	REMARKS
Upper Tether Strap	-	-
Upper Tether Buckle	-	-
Upper Tether Hook	-	-
Vehicle Upper Tether Anchor	-	-
Lower Anchor Strap	-	-
Lower Anchor Buckle	-	-
Lower Anchor Hooks	-	-
Vehicle Lower CRS Anchors	-	-
Five Point Harness Connections	-	-
Cracks on CRS	-	-
Fabric Tears on CRS	-	-
Vehicle Seat Structure	-	-
Vehicle Seat Fabric Tears	-	-
Child Dummy	-	-

DATA SHEET NO. 6

CRS CAMERA DATA

CRS: Century 1500 STE Forward Facing Configuration Secured with LATCH and Top Tether

NHTSA No. M35302



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Left side CRS lateral view	8485	1459	1975	-3.8	25	1000
2	Right side CRS lateral view	-	-	-	-	-	-

* Reference (from point of impact); all measurements accurate to within ± 6 mm.

X = + Forward

Y = + To Right

Z = + Down

SECTION 3

PHOTOGRAPHS

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using a seat belt designed to restrain both the car seat and your child or by using LATCH. Many seat belts are NOT safe to use with this car seat, even though they can easily be threaded through or around the car seat!

6. Properly securing your child in the car seat.

Manufactured by: Graco Children's Products, Inc.
Macedonia, Ohio USA 44056

Model number

Manufactured in:

44164ELM
1500 STE MG

2002 10 02 M
YEAR - MONTH - DAY
ANNEE - MOIS - JOUR

PM 282300

PB-28230-A

Figure 3-1: CLOSE-UP VIEW OF POSITION 3 CRS LABEL



Figure 3-2: PRE-TEST FRONTAL VIEW OF POSITION 3 CRS



Figure 3-3: POST-TEST FRONTAL VIEW OF POSITION 3 CRS



Figure 3-4: PRE-TEST REAR VIEW OF POSITION 3 CRS



Figure 3-5: POST-TEST REAR VIEW OF POSITION 3 CRS



Figure 3-6: PRE-TEST LEFT SIDE VIEW OF POSITION 3 CRS



Figure 3-7: POST-TEST LEFT SIDE VIEW OF POSITION 3 CRS



Figure 3-8: PRE-TEST RIGHT SIDE VIEW OF POSITION 3 CRS



Figure 3-9: POST-TEST RIGHT SIDE VIEW OF POSITION 3 CRS



Figure 3-10: PRE-TEST POSITION 3 LEFT SIDE VIEW



Figure 3-11: POST-TEST POSITION 3 LEFT SIDE VIEW



Figure 3-12: PRE-TEST POSITION 3 RIGHT SIDE VIEW



Figure 3-13: POST-TEST POSITION 3 RIGHT SIDE VIEW



Figure 3-14: PRE-TEST POSITION 3 FRONT VIEW



Figure 3-15: POST-TEST POSITION 3 FRONT VIEW

SECTION 4

CHILD DUMMY RESPONSE AND CRS DATA TRACES

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11	V1P3 Upper Neck My [N-m, CFC_600]	4-13
12	V1P3 Upper Neck Mz [N-m, CFC_600]	4-14
13	V1P3 Upper Neck M Resultant [N-m, CFC_600]	4-15
14	V1P3 Lower Neck Fx [N, CFC_1000]	4-16
15	V1P3 Lower Neck Fy [N, CFC_1000]	4-17
16	V1P3 Lower Neck Fz [N, CFC_1000]	4-18
17	V1P3 Lower Neck F Resultant [N, CFC_1000]	4-19
18	V1P3 Lower Neck Mx [N-m, CFC_600]	4-20
19	V1P3 Lower Neck My [N-m, CFC_600]	4-21
20	V1P3 Lower Neck Mz [N-m, CFC_600]	4-22
21	V1P3 Lower Neck M Resultant [N-m, CFC_600]	4-23
22	V1P3 Chest x [g, CFC_180]	4-24
23	V1P3 Chest y [g, CFC_180]	4-25
24	V1P3 Chest z [g, CFC_180]	4-26
25	V1P3 Chest Resultant [g, CFC_180]	4-27
26	V1P3 Chest Compression [mm, CFC_600]	4-28
27	V1P3 Pelvic x [g, CFC_1000]	4-29
28	V1P3 Pelvic y [g, CFC_1000]	4-30
29	V1P3 Pelvic z [g, CFC_1000]	4-31
30	V1P3 Pelvic Resultant [g, CFC_1000]	4-32
31	V1P3 Child Seat x [g, CFC_60]	4-33
32	V1P3 Child Seat x Velocity [kph, CFC_180]	4-34
33	V1P3 Child Seat x Displacement [mm, CFC_180]	4-35
34	V1P3 Child Seat y [g, CFC_60]	4-36
35	V1P3 Child Seat y Velocity [kph, CFC_180]	4-37
36	V1P3 Child Seat y Displacement [mm, CFC_180]	4-38
37	V1P3 Child Seat z [g, CFC_60]	4-39
38	V1P3 Child Seat z Velocity [kph, CFC_180]	4-40
39	V1P3 Child Seat z Displacement [mm, CFC_180]	4-41
40	V1P3 Child Seat Resultant [g, CFC_60]	4-42

NCAP Test #2 - 2003 Honda Accord

V1P3 Head x

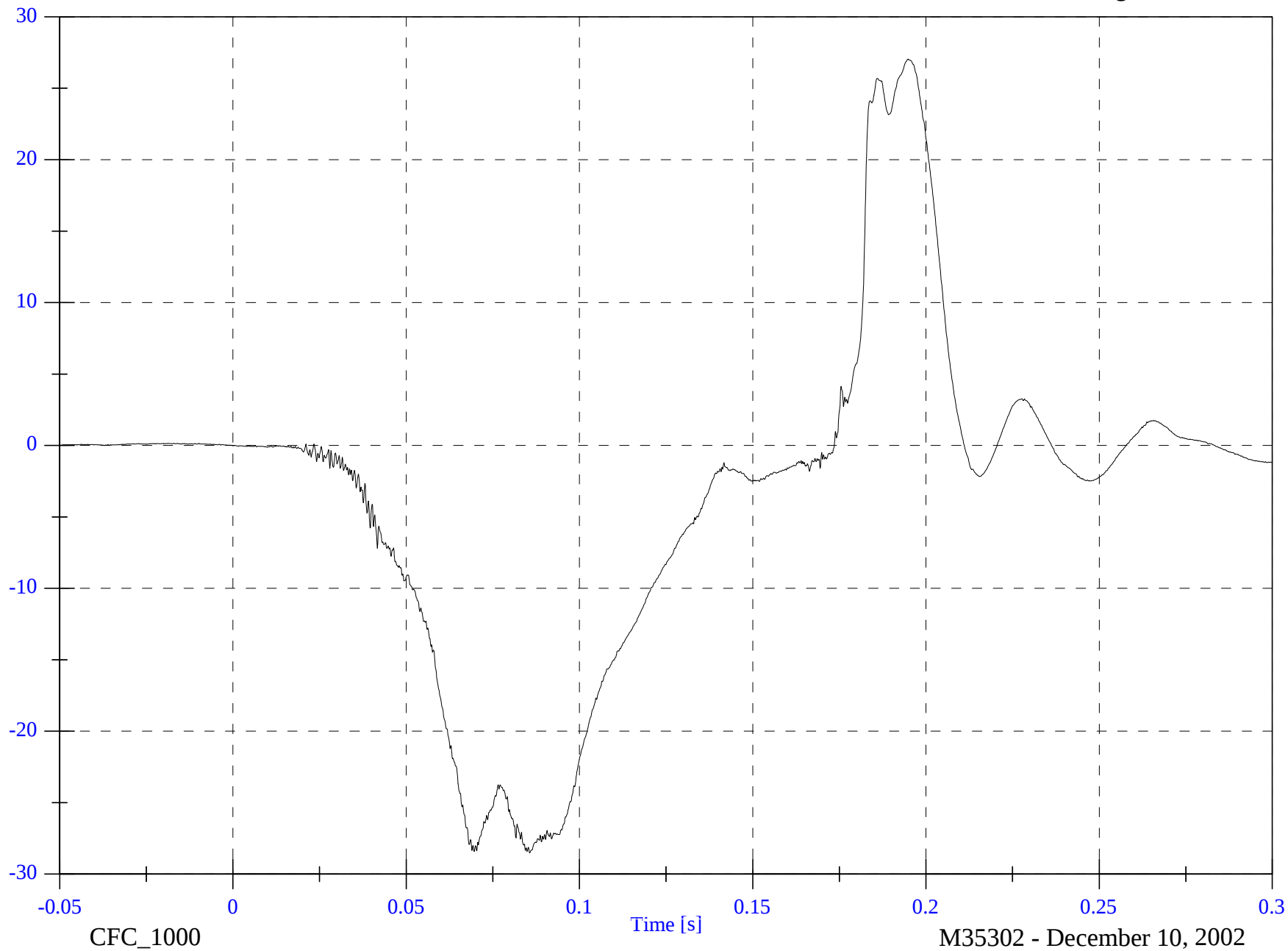
Max: 27.0 [g] at 0.195 [s]

Min: -28.5 [g] at 0.086 [s]

4-3

g

8642-NCAP-24

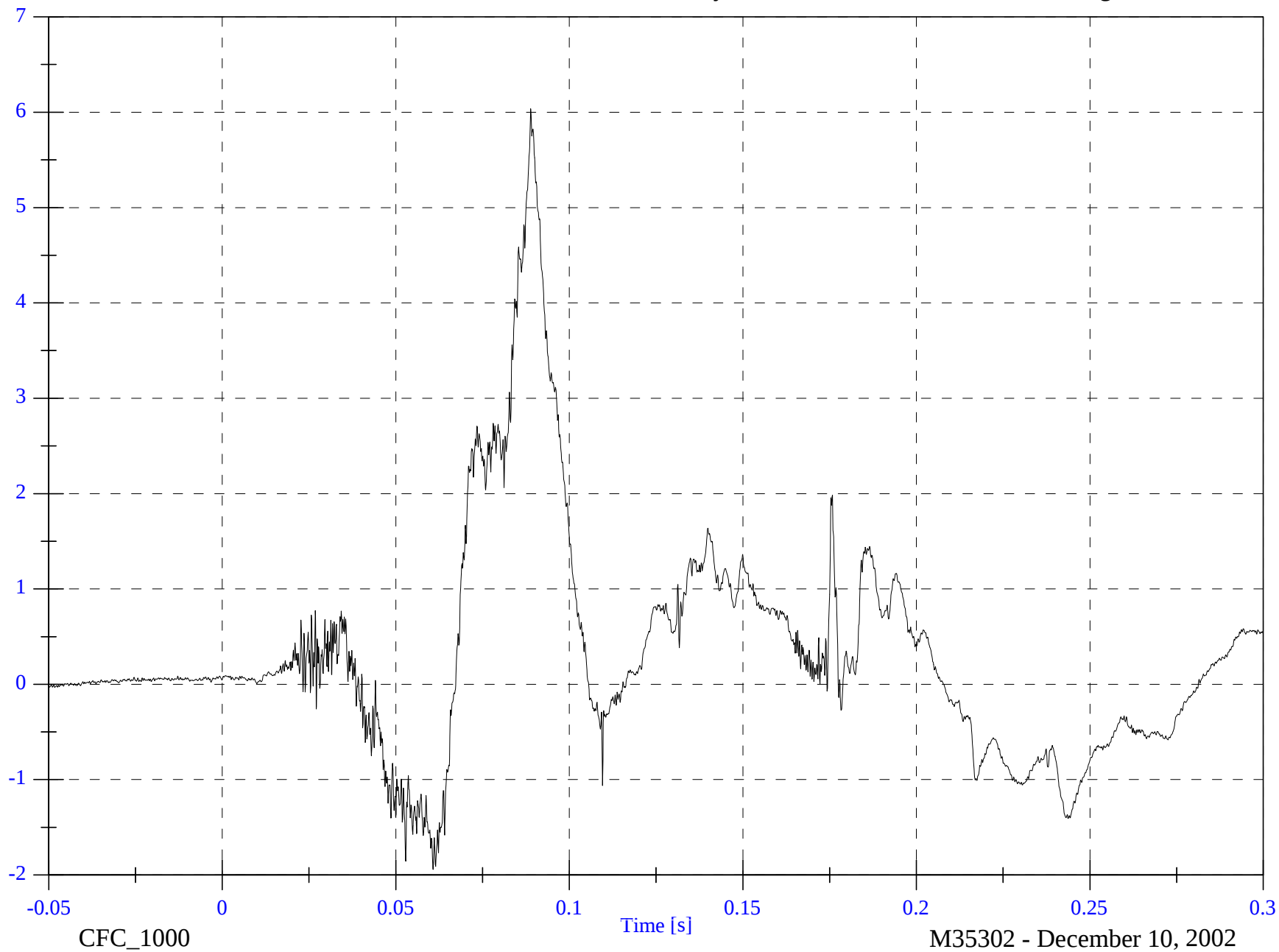


NCAP Test #2 - 2003 Honda Accord

V1P3 Head y

Max: 6.0 [g] at 0.089 [s]

Min: -1.9 [g] at 0.061 [s]



NCAP Test #2 - 2003 Honda Accord

V1P3 Head z

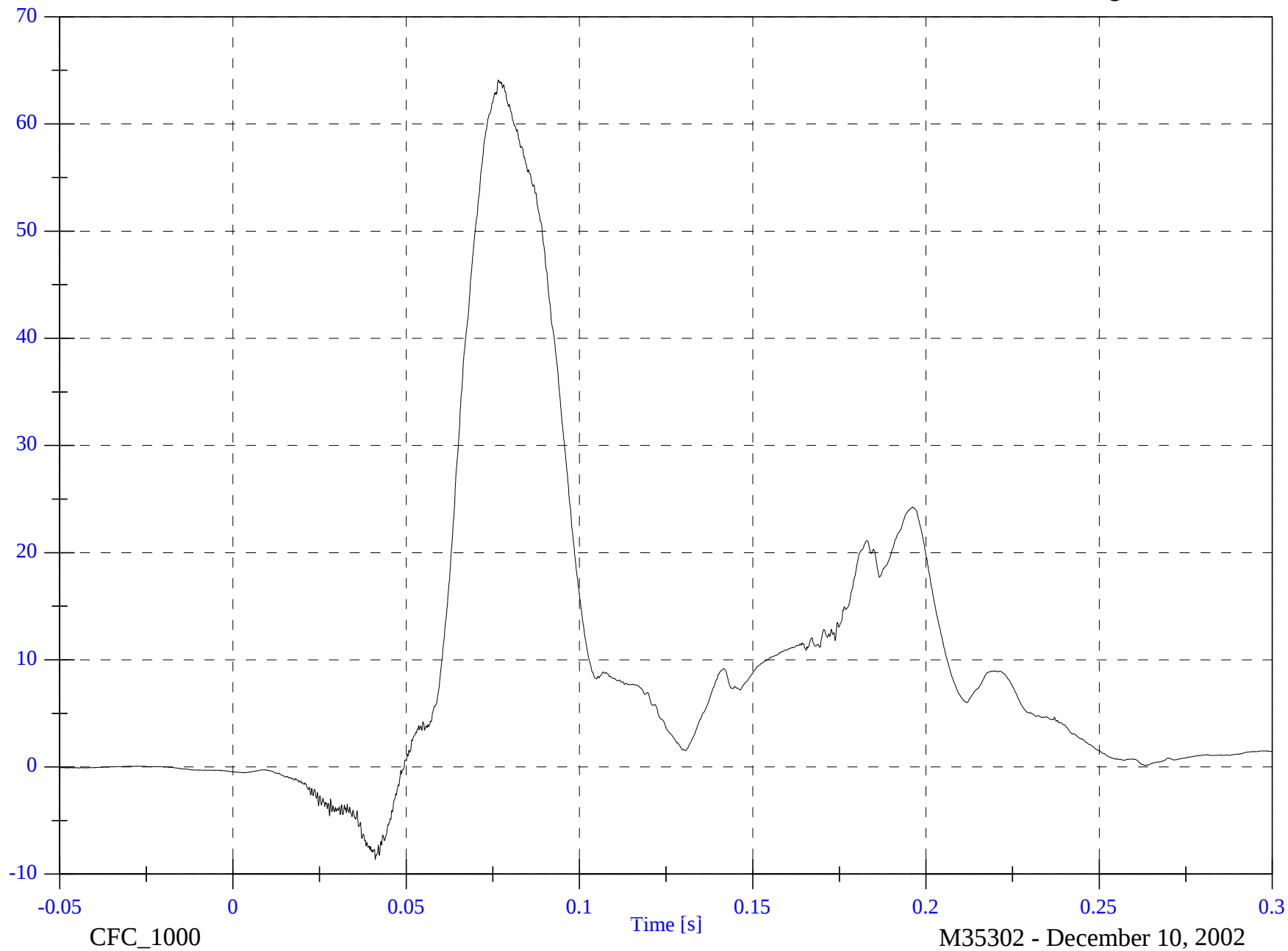
Max: 64.1 [g] at 0.077 [s]

Min: -8.6 [g] at 0.041 [s]

4-5

g

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P3 Head Resultant

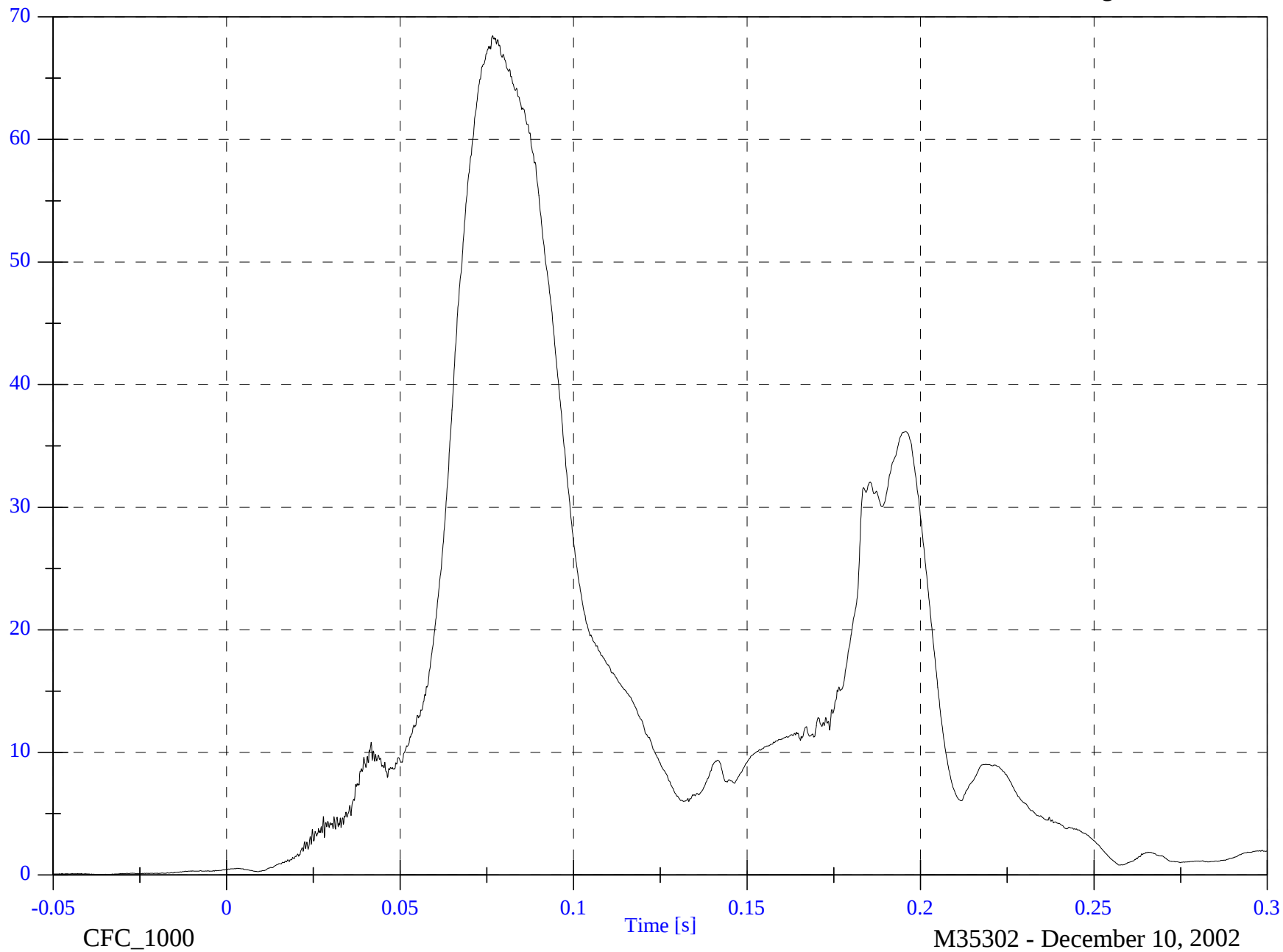
Max: 68.5 [g] at 0.077 [s]

Min: 0.0 [g] at -0.037 [s]

4-6

g

8642-NCAP-24

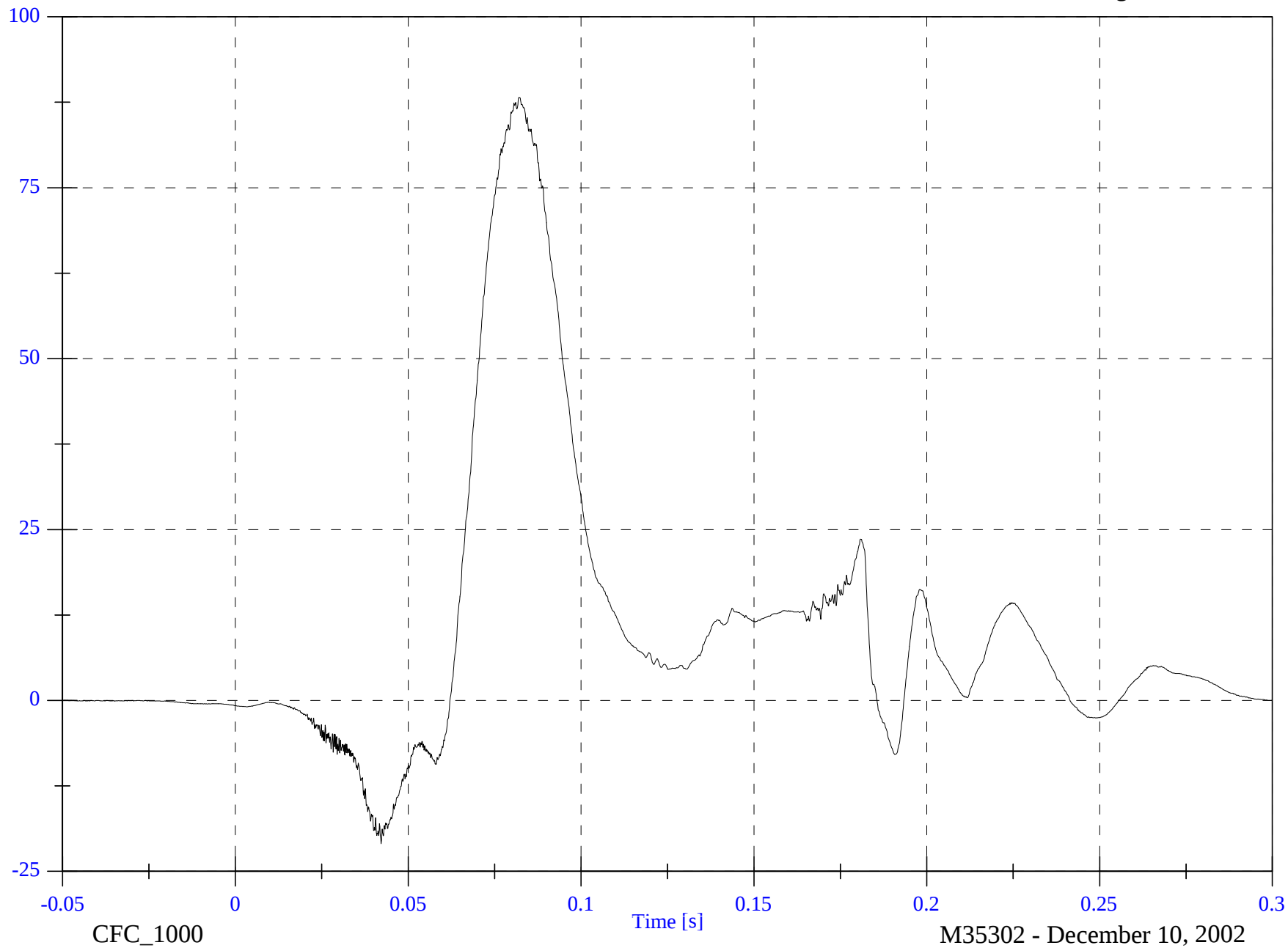


NCAP Test #2 - 2003 Honda Accord

V1P3 Head Red z

Max: 88.2 [g] at 0.082 [s]

Min: -21.0 [g] at 0.042 [s]



4-7

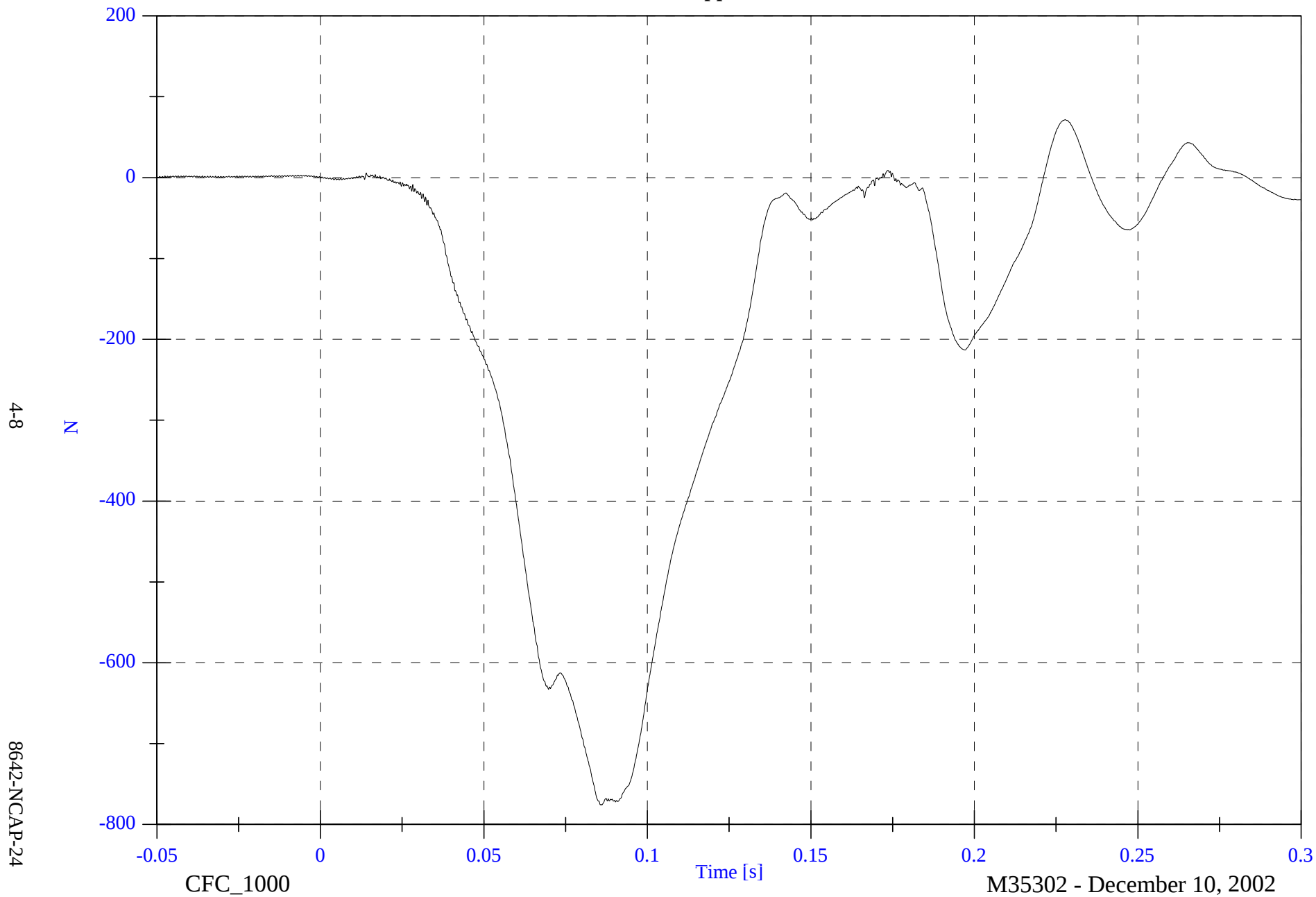
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P3 Upper Neck Fx

Max: 71.6 [N] at 0.228 [s]

Min: -775.9 [N] at 0.086 [s]

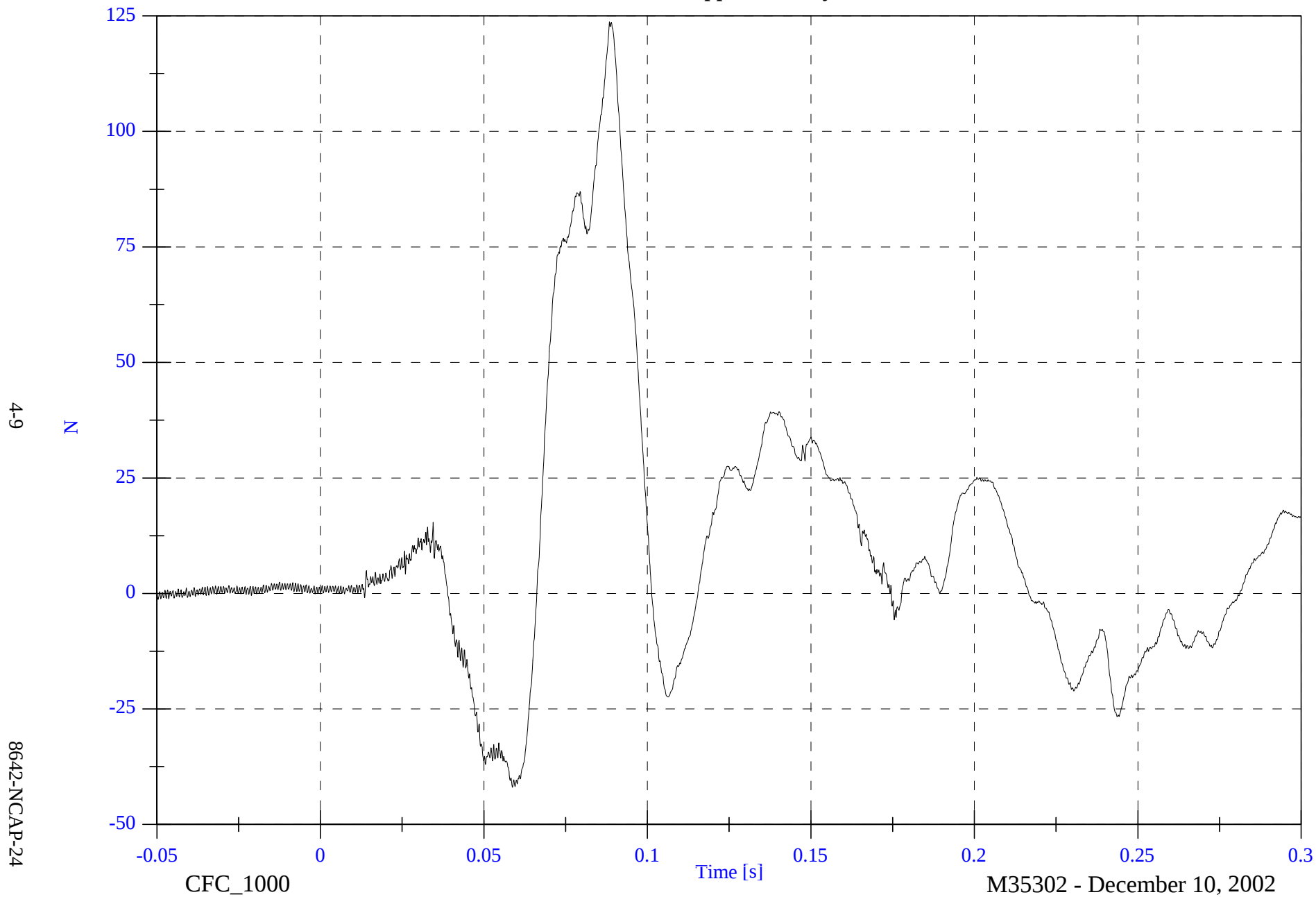


NCAP Test #2 - 2003 Honda Accord

V1P3 Upper Neck Fy

Max: 123.7 [N] at 0.088 [s]

Min: -42.0 [N] at 0.059 [s]

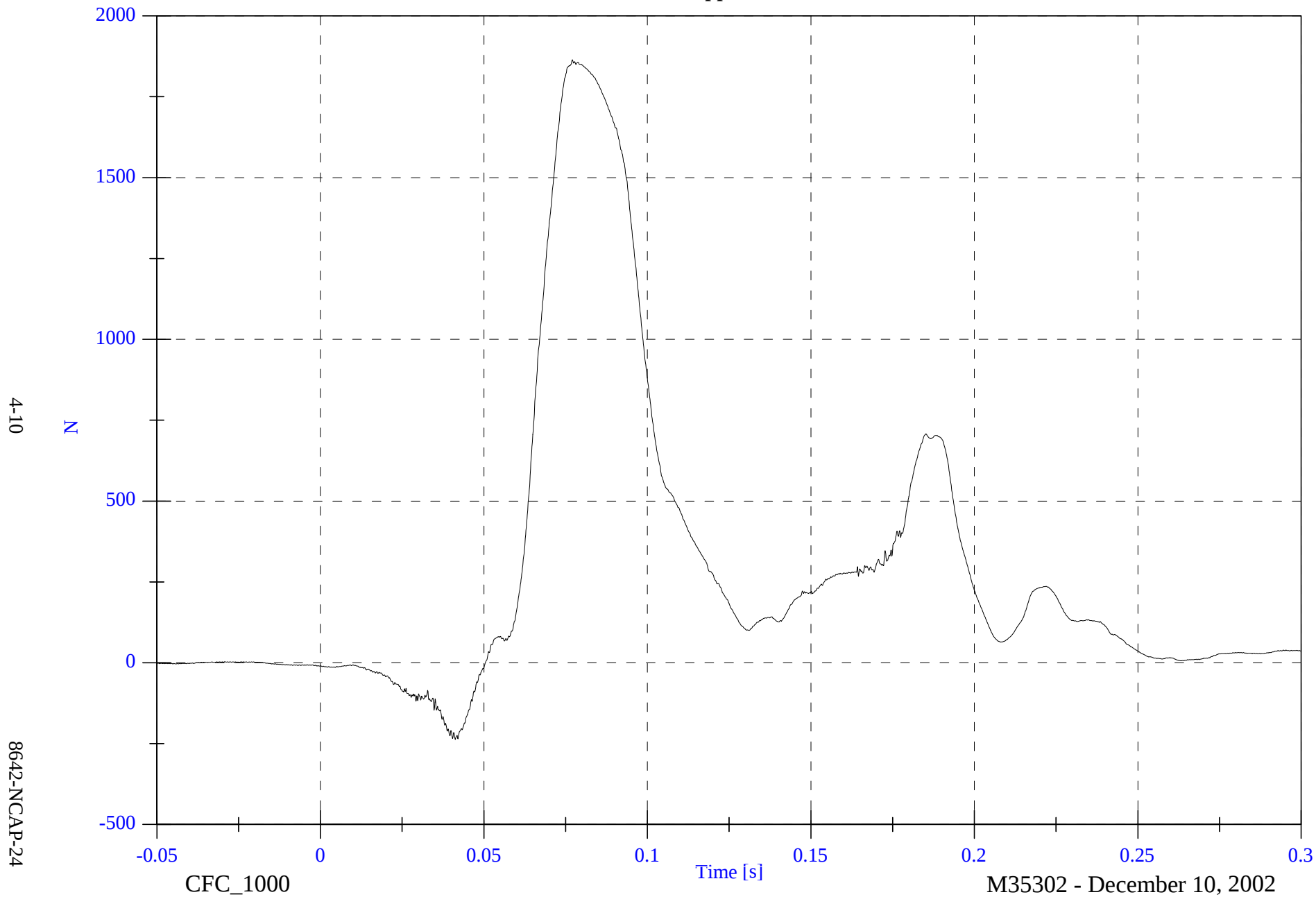


NCAP Test #2 - 2003 Honda Accord

V1P3 Upper Neck Fz

Max: 1864.0 [N] at 0.077 [s]

Min: -237.6 [N] at 0.041 [s]



NCAP Test #2 - 2003 Honda Accord

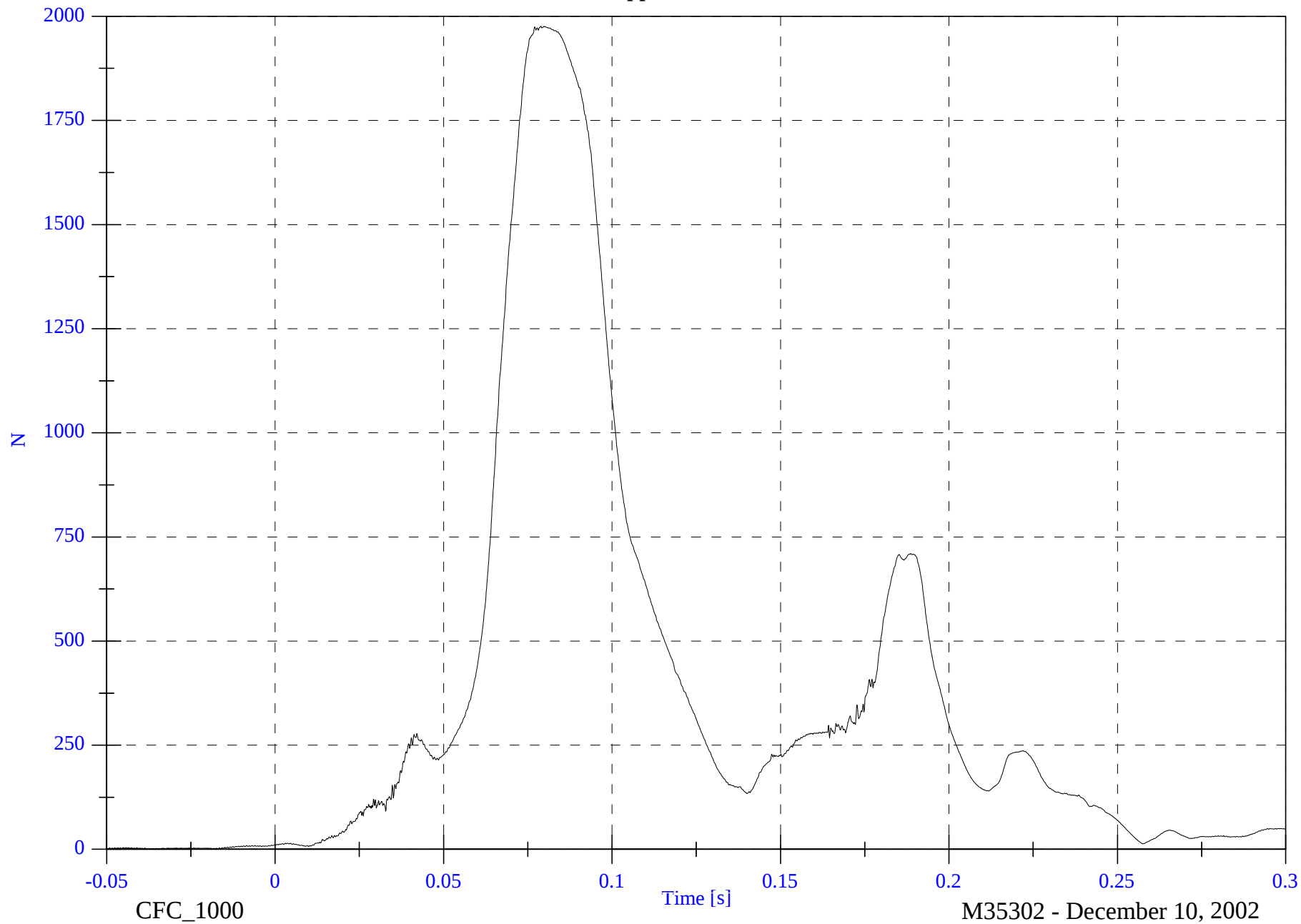
V1P3 Upper Neck F Resultant

Max: 1976.2 [N] at 0.079 [s]

Min: 0.7 [N] at -0.037 [s]

4-11

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P3 Upper Neck Mx

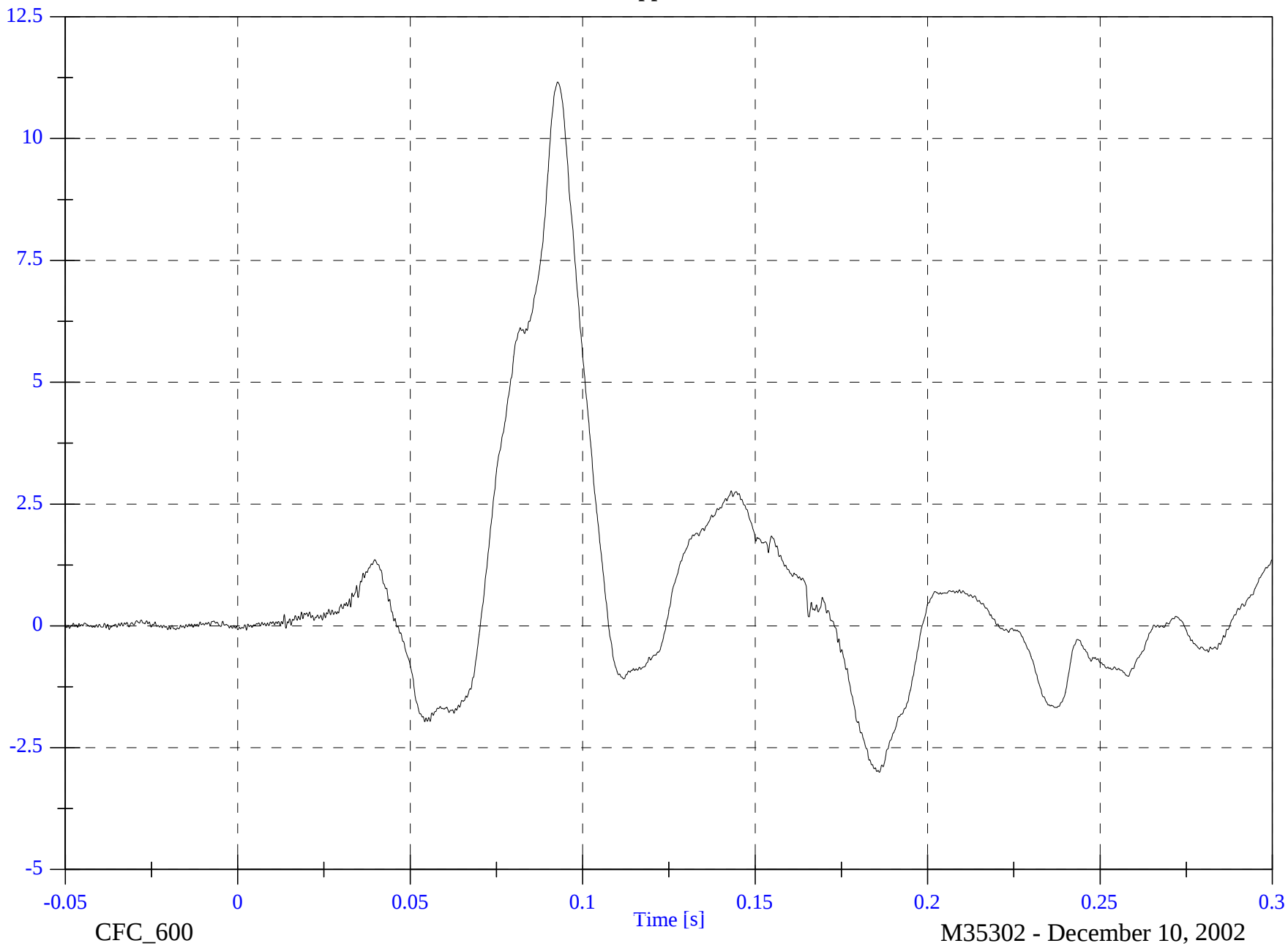
Max: 11.2 [N-m] at 0.093 [s]

Min: -3.0 [N-m] at 0.186 [s]

4-12

N-m

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

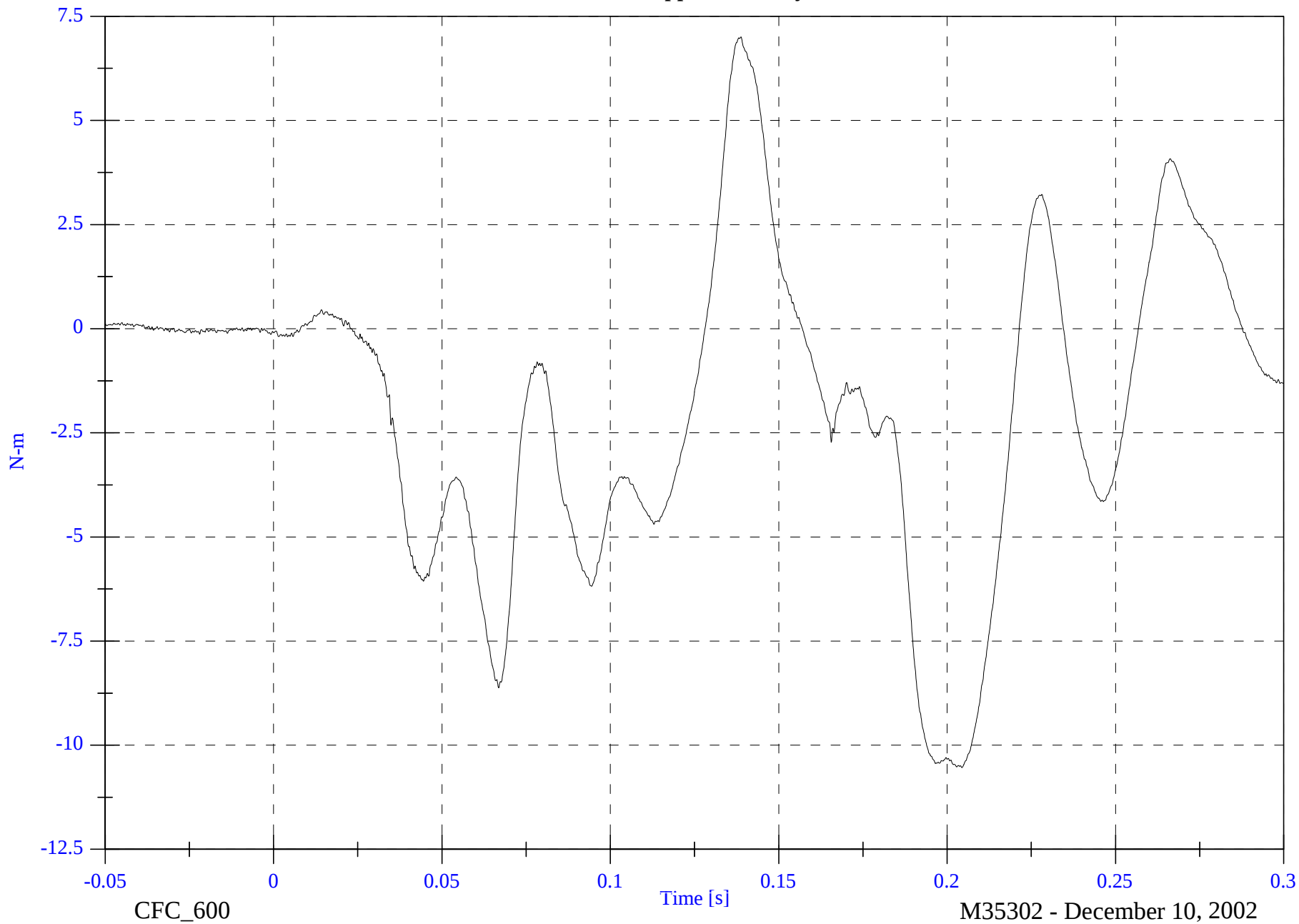
V1P3 Upper Neck My

Max: 7.0 [N-m] at 0.139 [s]

Min: -10.5 [N-m] at 0.204 [s]

4-13

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P3 Upper Neck Mz

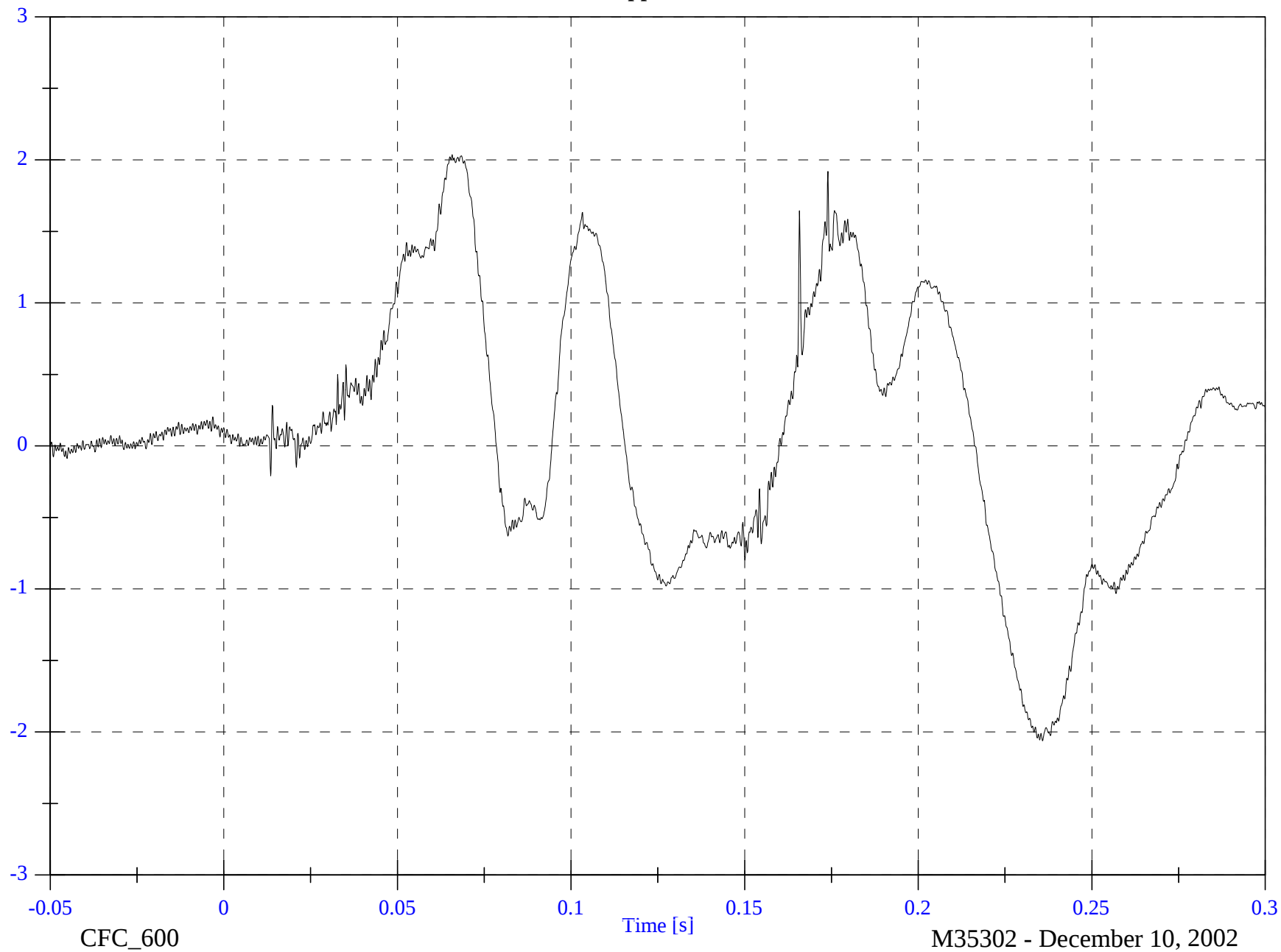
Max: 2.0 [N-m] at 0.066 [s]

Min: -2.1 [N-m] at 0.236 [s]

4-14

N-m

8642-NCAP-24



CFC_600

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

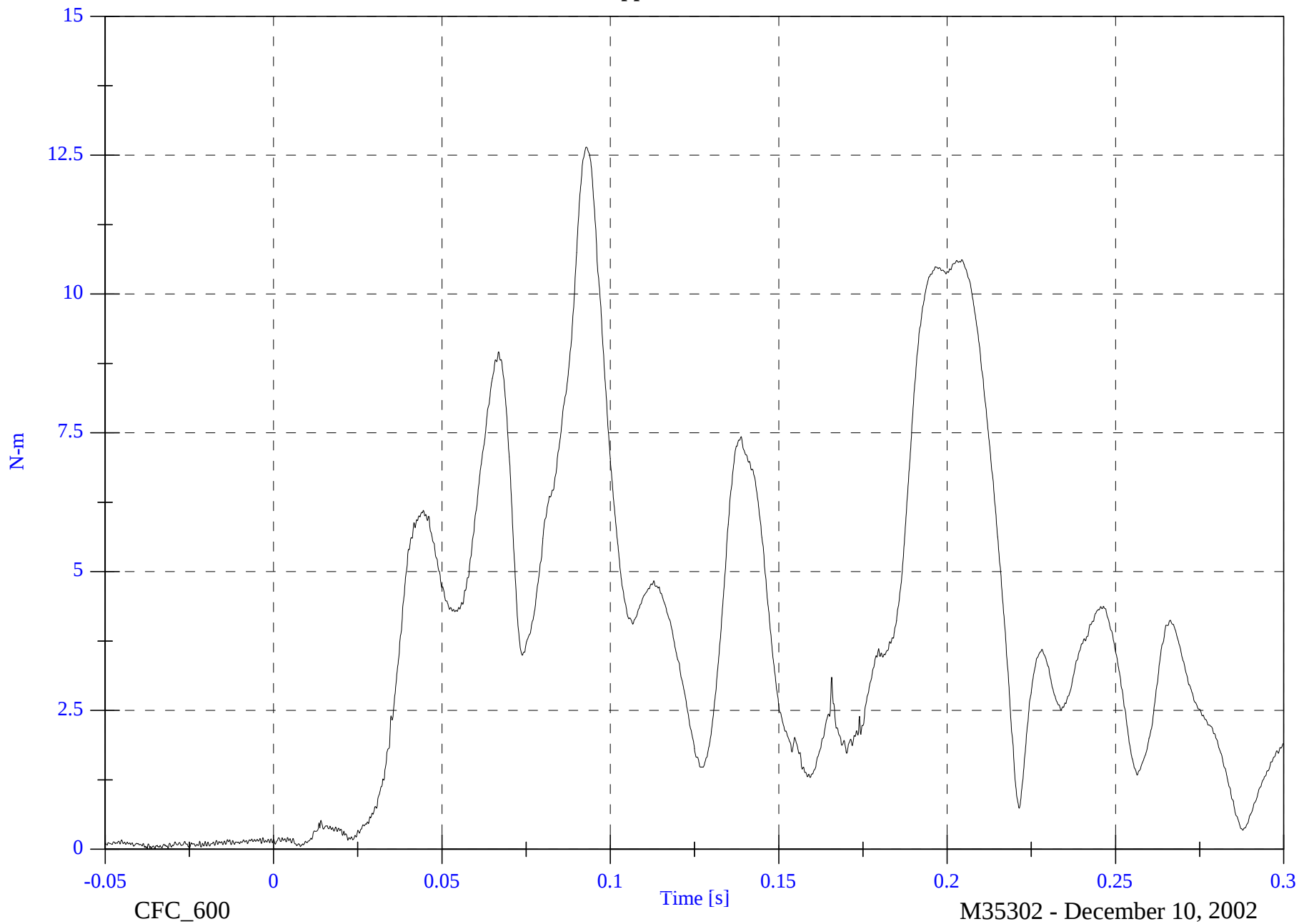
V1P3 Upper Neck M Resultant

Max: 12.6 [N-m] at 0.093 [s]

Min: 0.0 [N-m] at -0.035 [s]

4-15

8642-NCAP-24

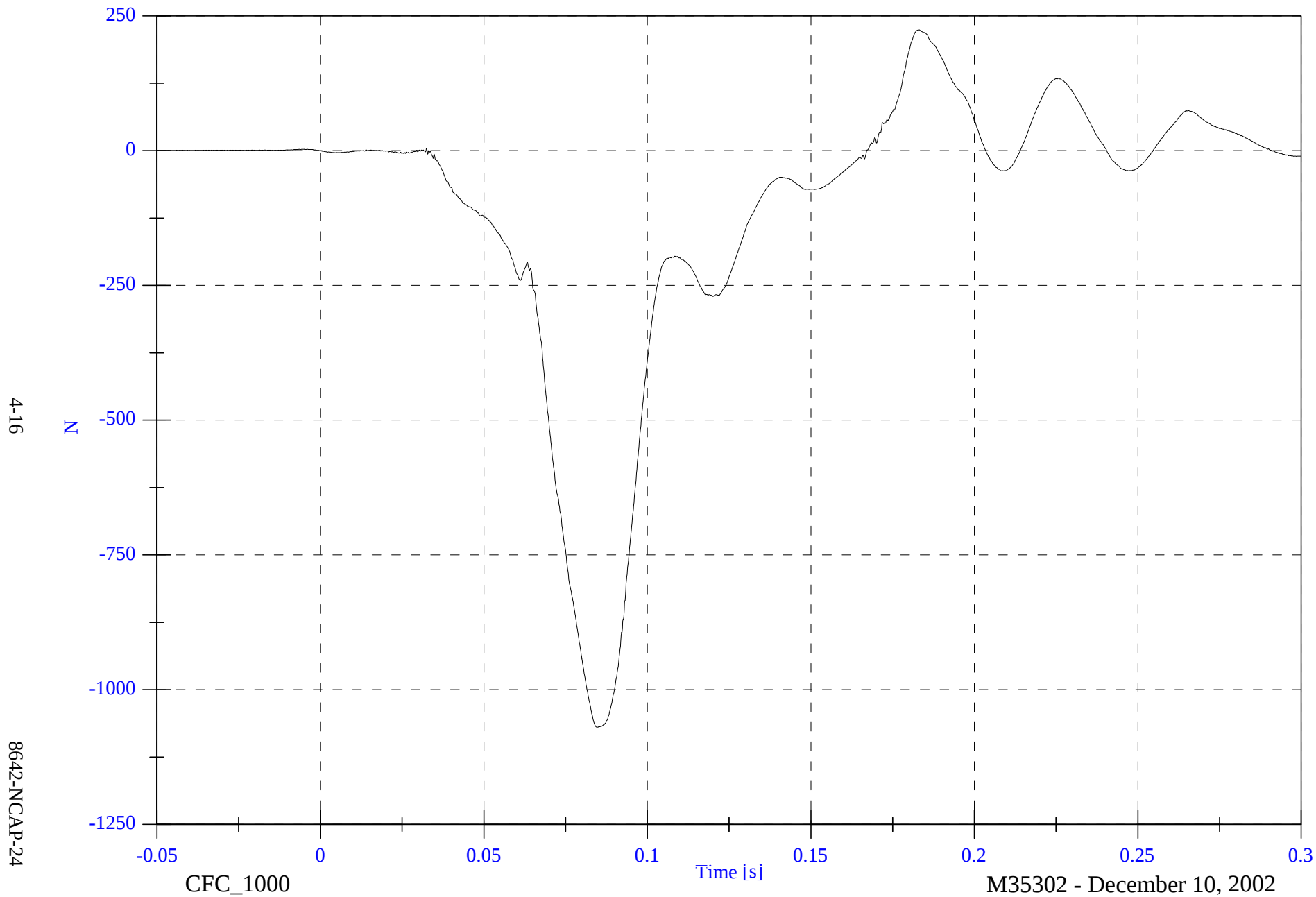


NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck Fx

Max: 223.8 [N] at 0.183 [s]

Min: -1069.6 [N] at 0.085 [s]

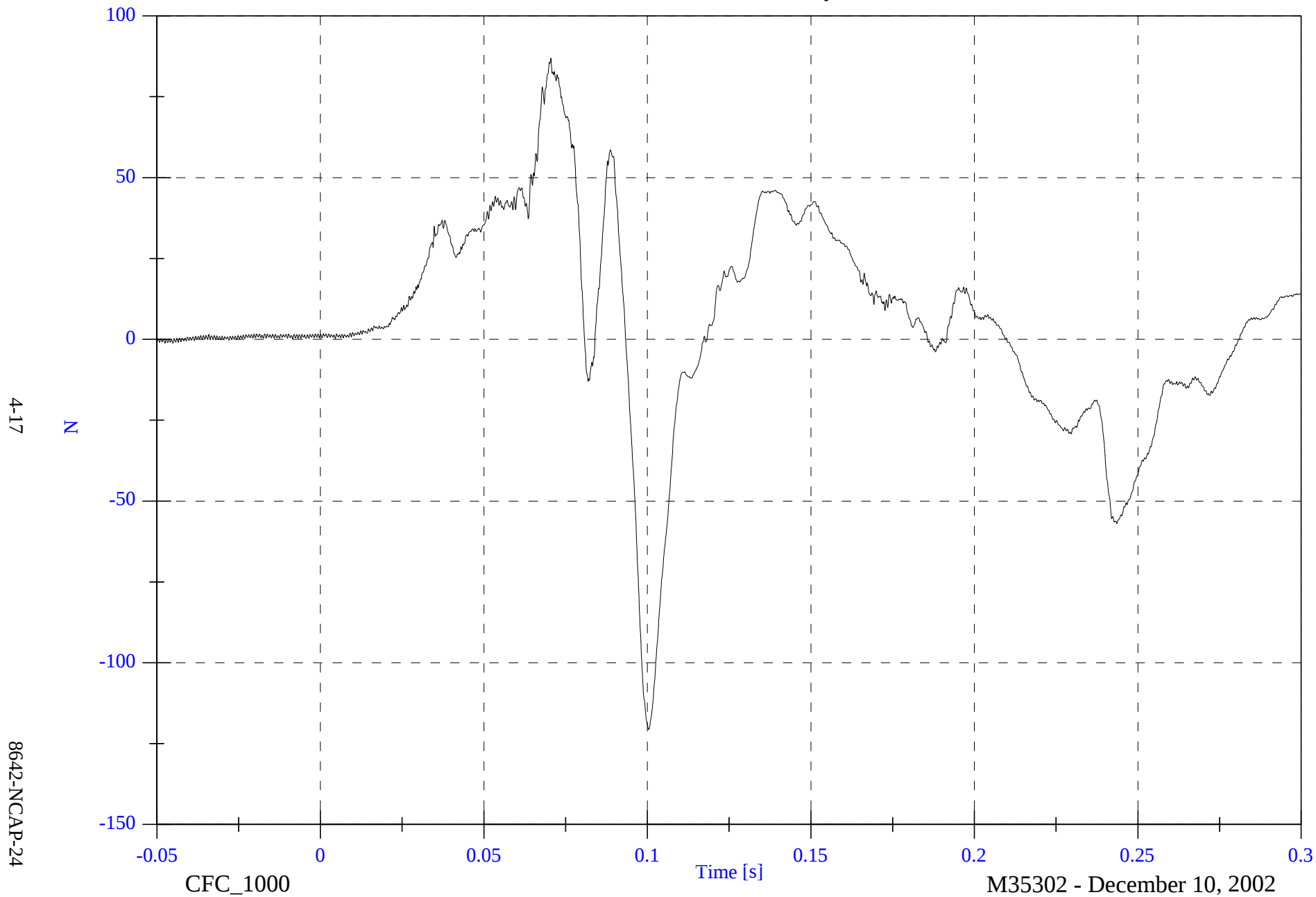


NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck Fy

Max: 87.0 [N] at 0.070 [s]

Min: -120.7 [N] at 0.100 [s]

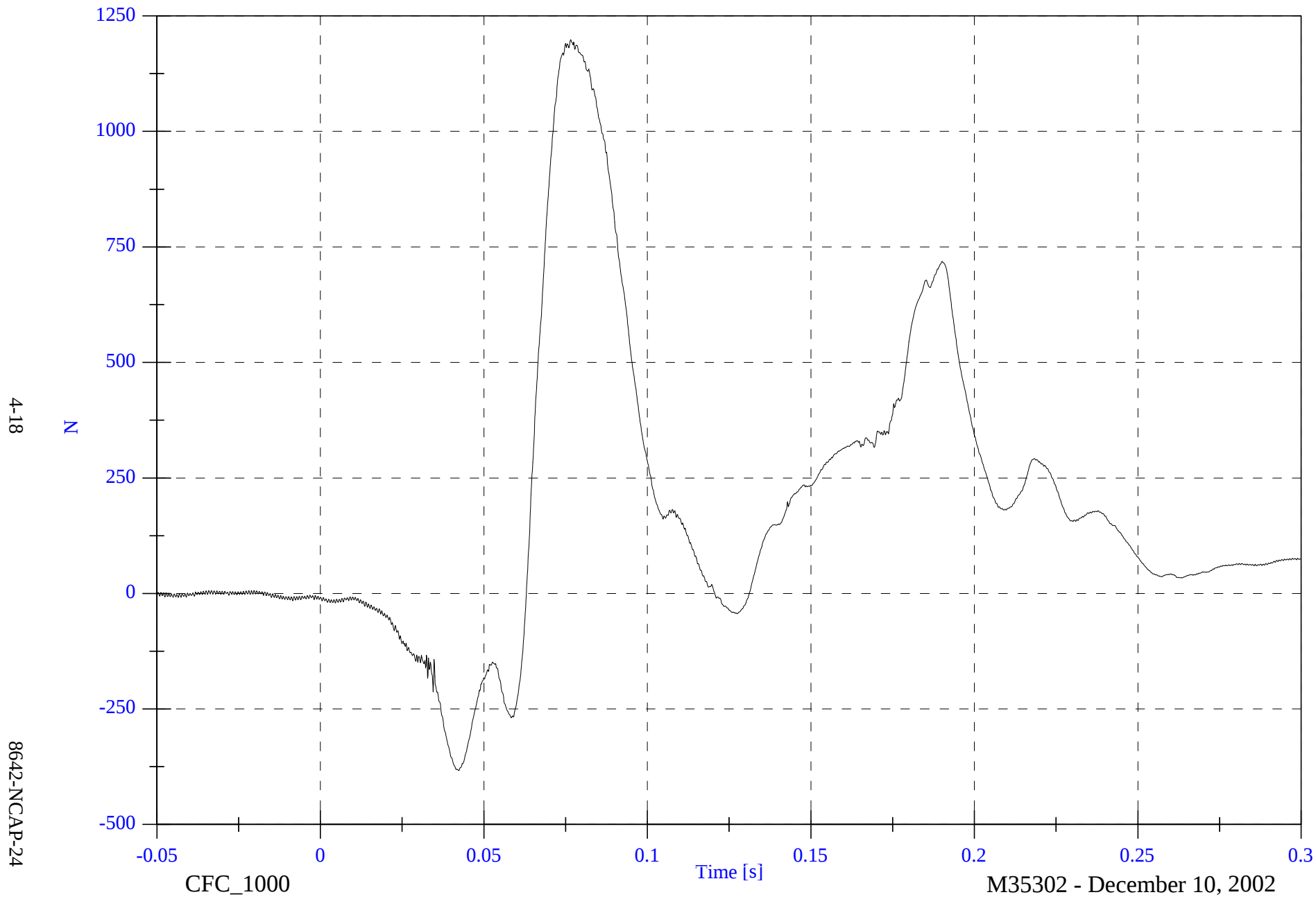


NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck Fz

Max: 1198.5 [N] at 0.077 [s]

Min: -383.2 [N] at 0.042 [s]



NCAP Test #2 - 2003 Honda Accord

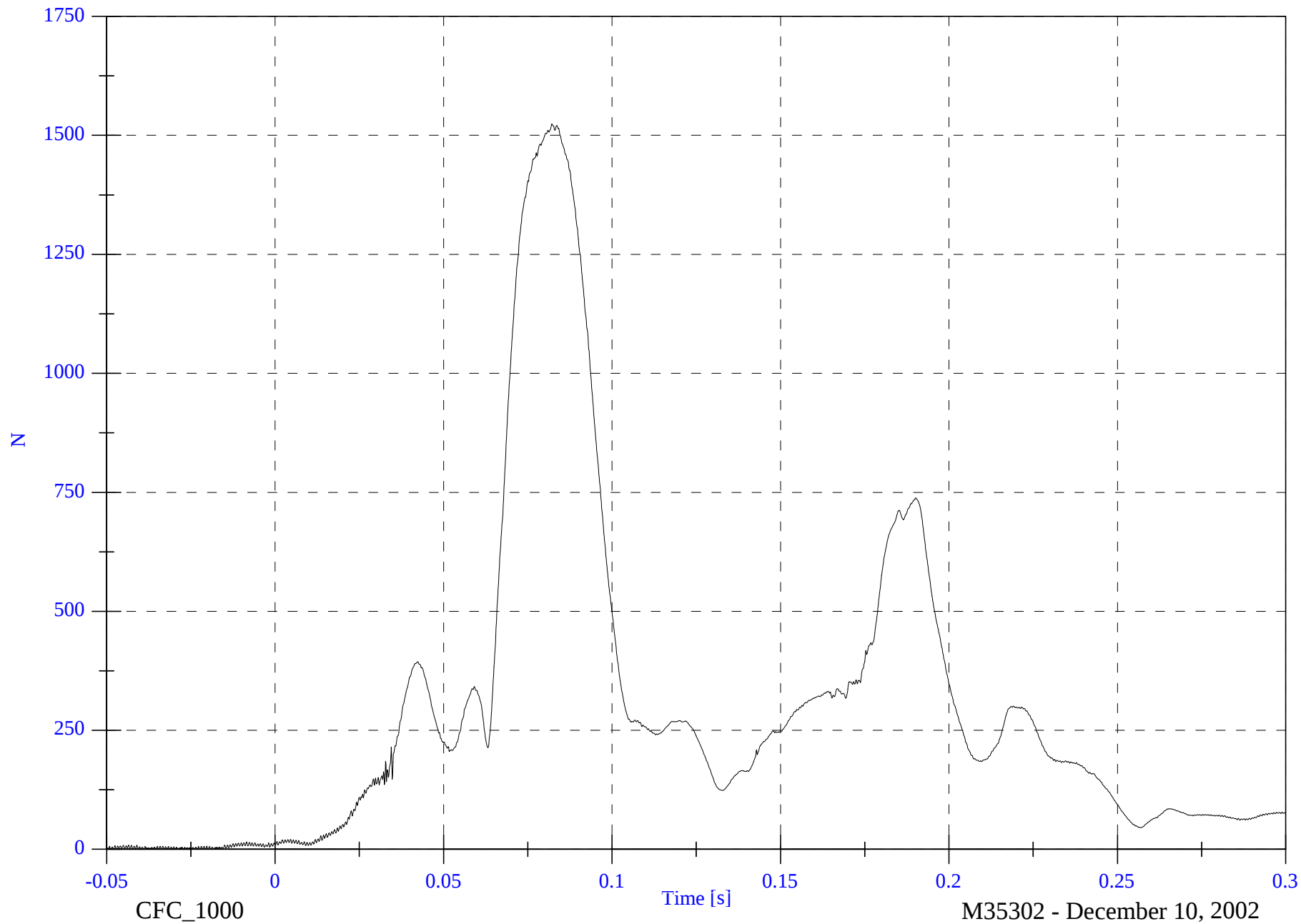
V1P3 Lower Neck F Resultant

Max: 1524.2 [N] at 0.082 [s]

Min: 0.5 [N] at -0.023 [s]

4-19

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck Mx

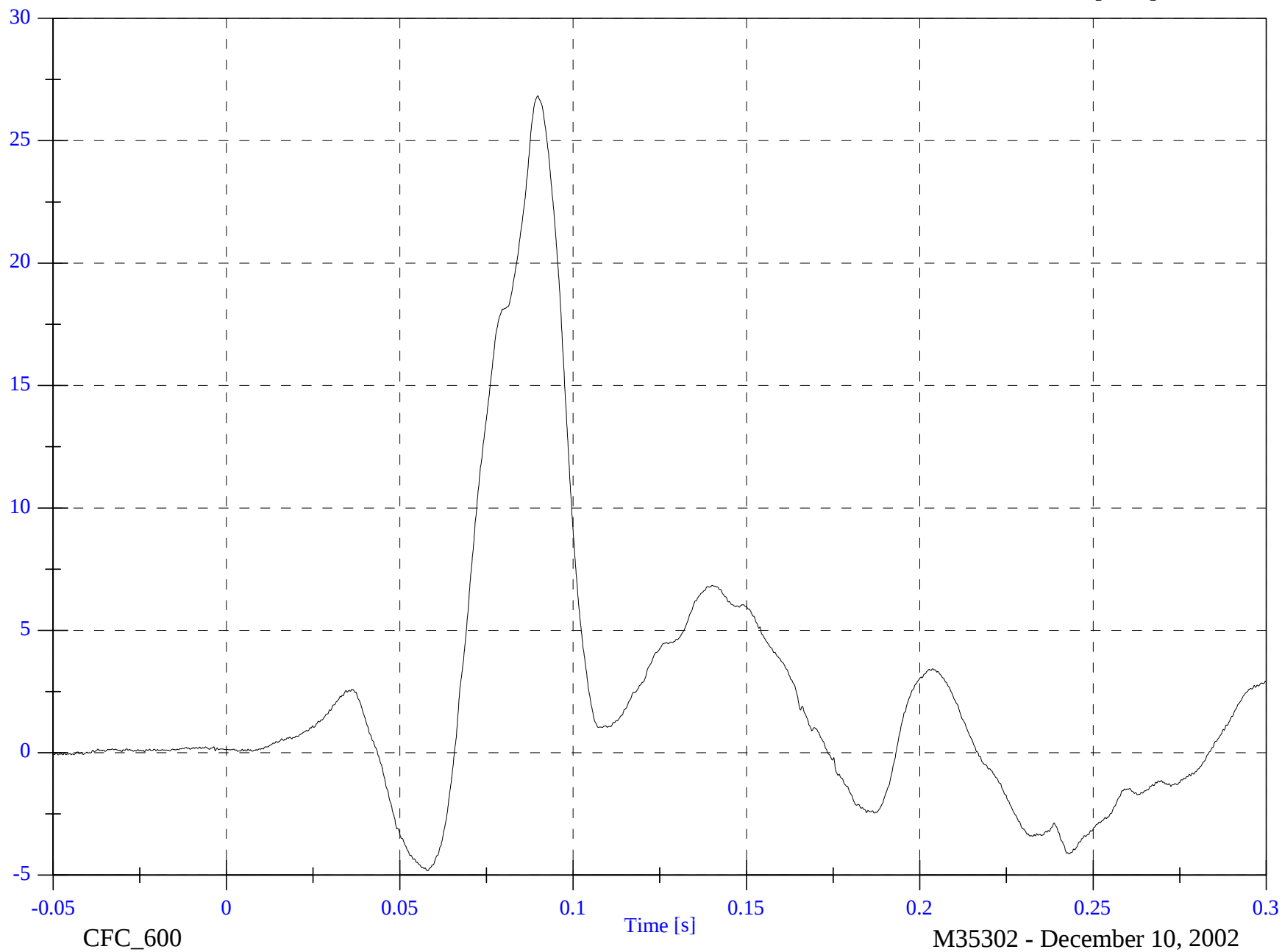
Max: 26.8 [N-m] at 0.090 [s]

Min: -4.8 [N-m] at 0.058 [s]

4-20

N-m

8642-NCAP-24

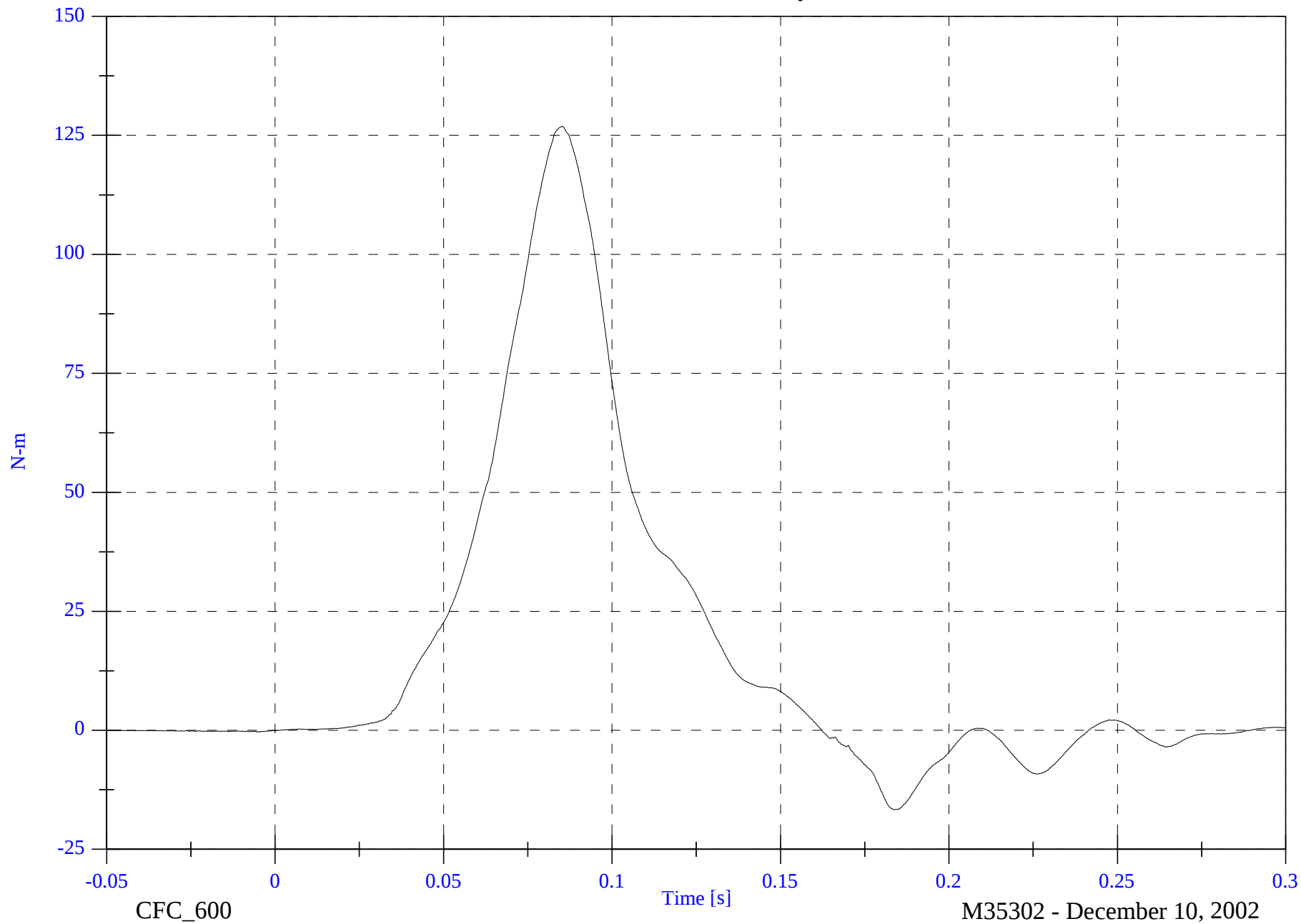


NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck My

Max: 126.9 [N-m] at 0.085 [s]

Min: -16.7 [N-m] at 0.184 [s]



4-21

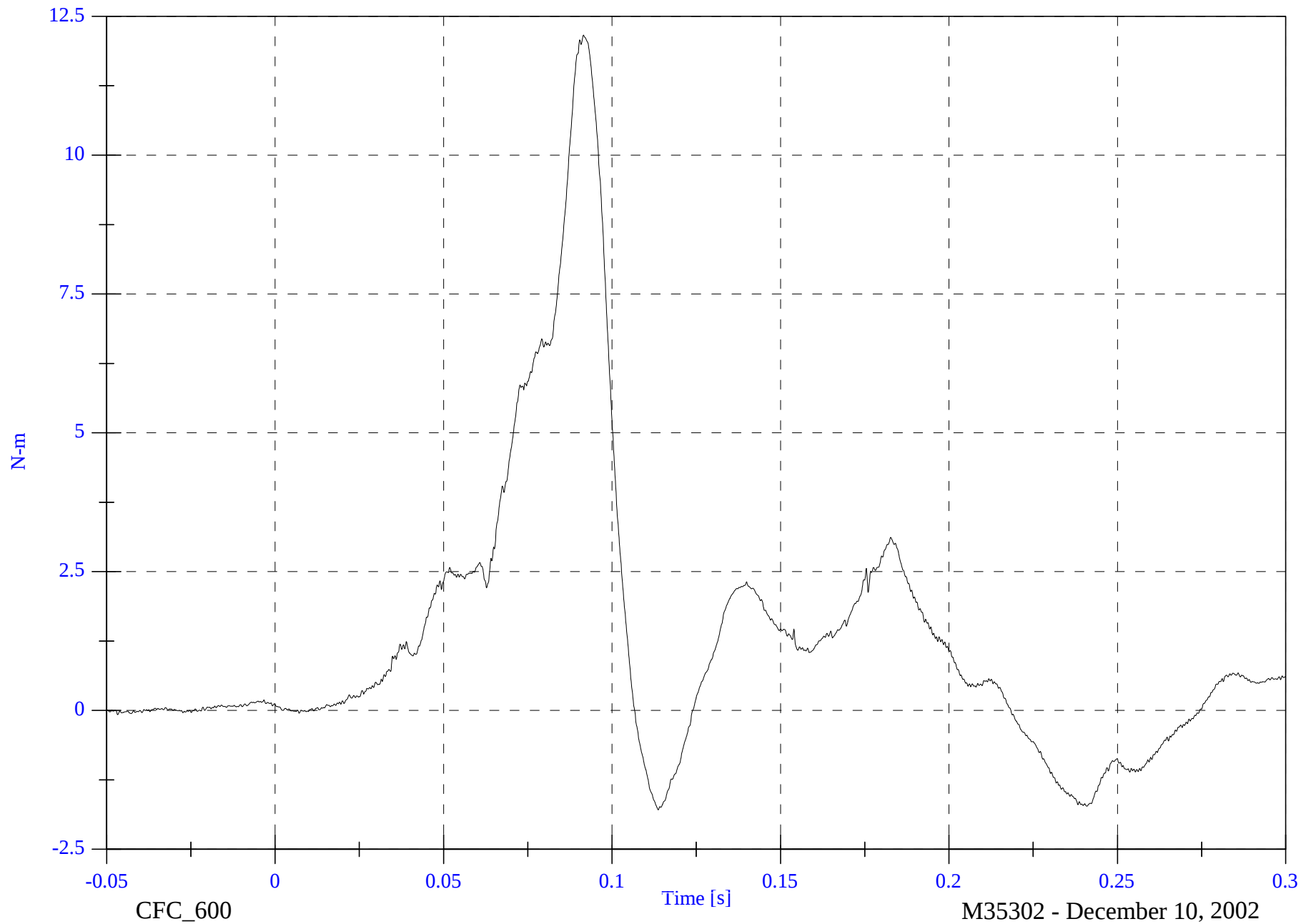
8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck Mz

Max: 12.2 [N-m] at 0.092 [s]

Min: -1.8 [N-m] at 0.114 [s]



4-22

8642-NCAP-24

CFC_600

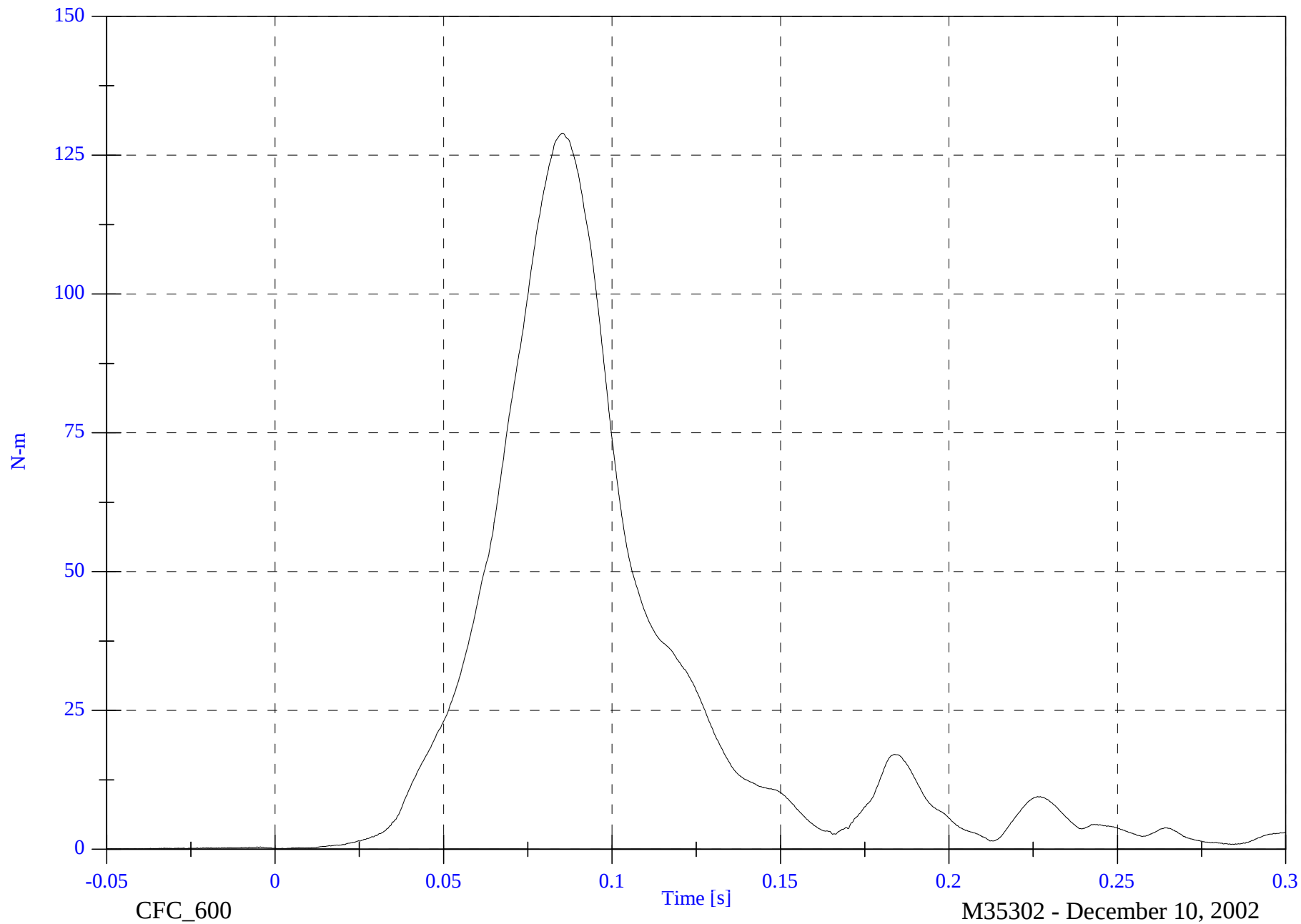
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P3 Lower Neck M Resultant

Max: 129.0 [N-m] at 0.085 [s]

Min: 0.0 [N-m] at -0.050 [s]



4-23

8642-NCAP-24

CFC_600

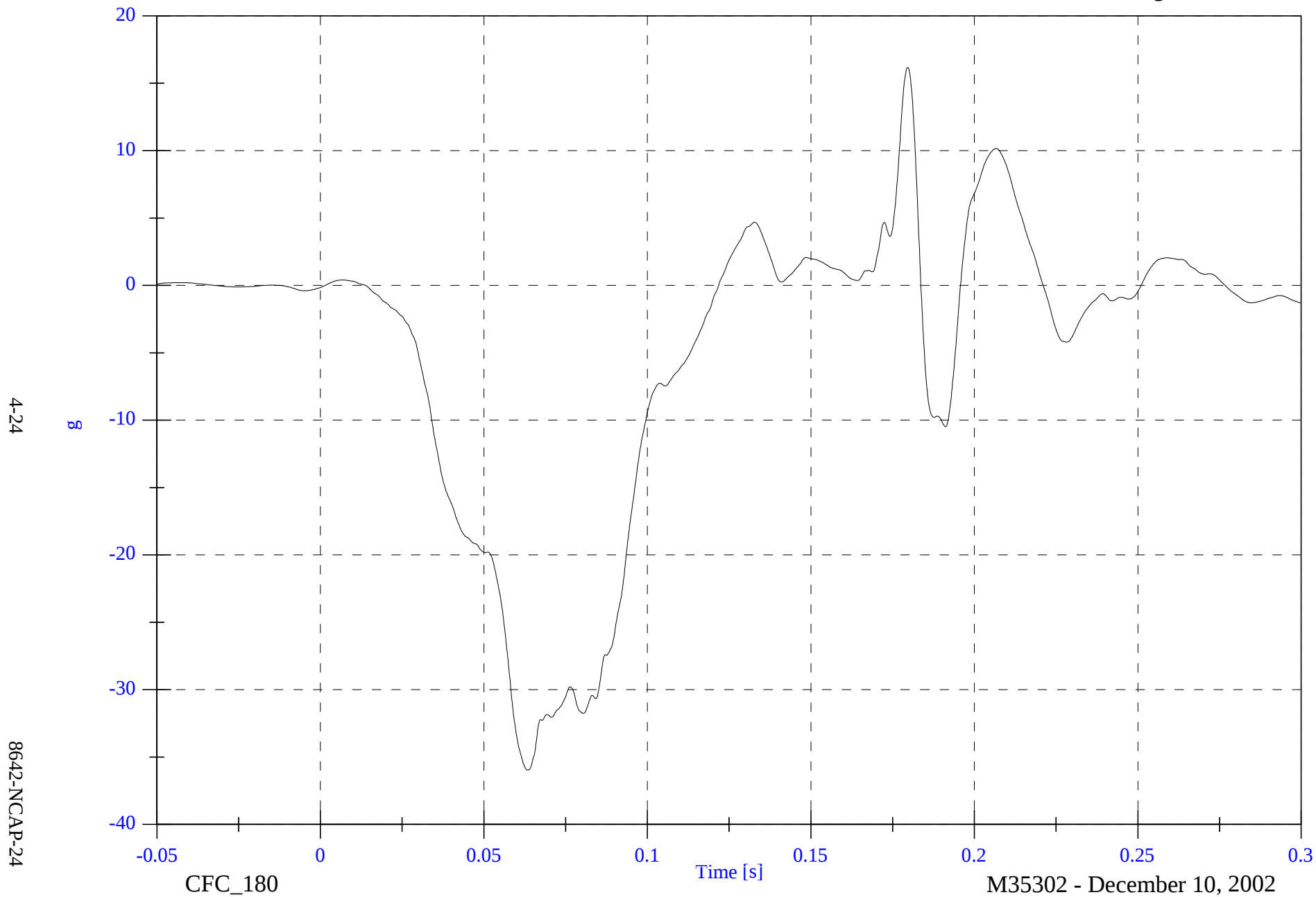
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P3 Chest x

Max: 16.2 [g] at 0.180 [s]

Min: -36.0 [g] at 0.063 [s]

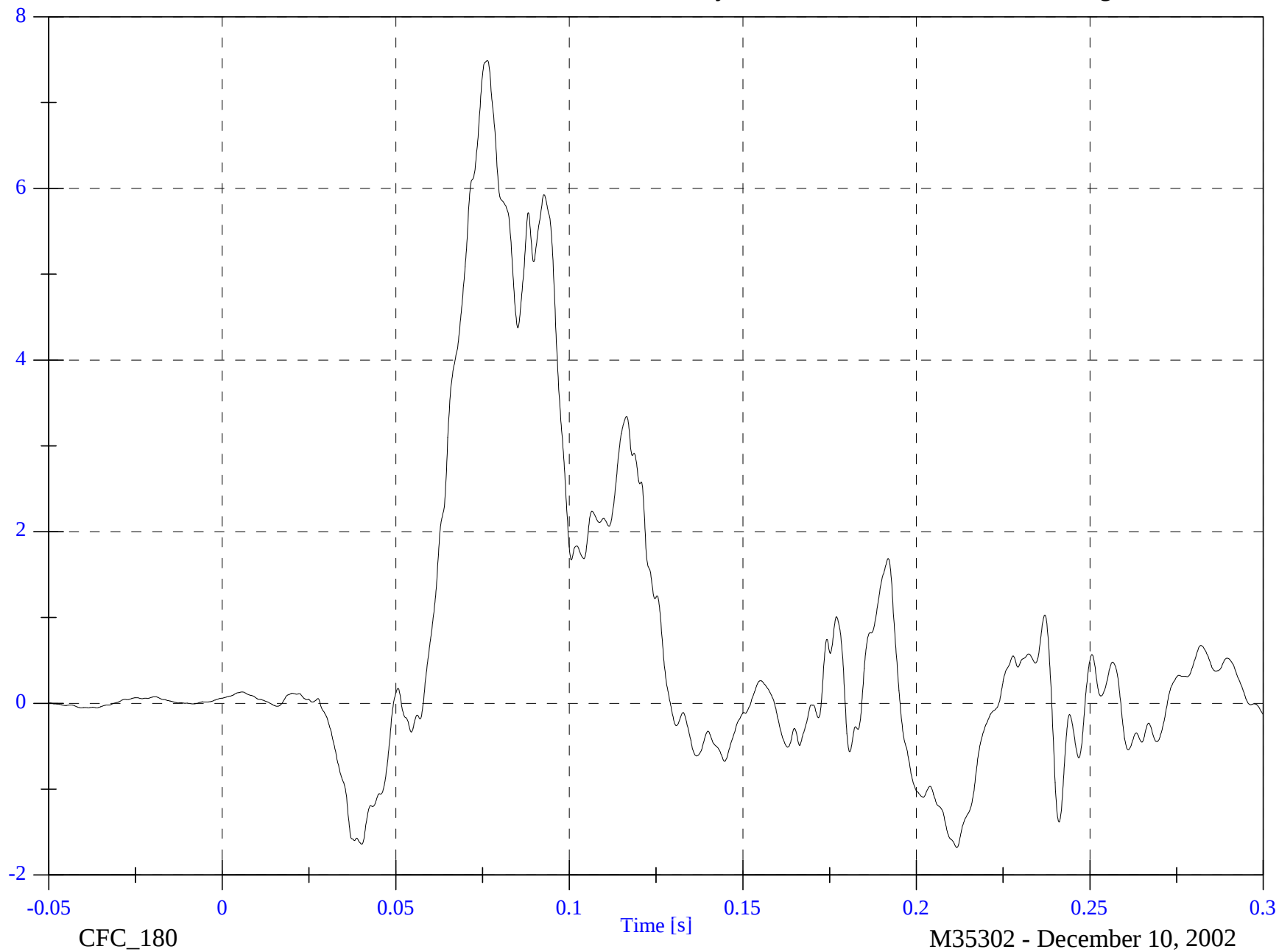


NCAP Test #2 - 2003 Honda Accord

V1P3 Chest y

Max: 7.5 [g] at 0.076 [s]

Min: -1.7 [g] at 0.212 [s]



4-25

8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

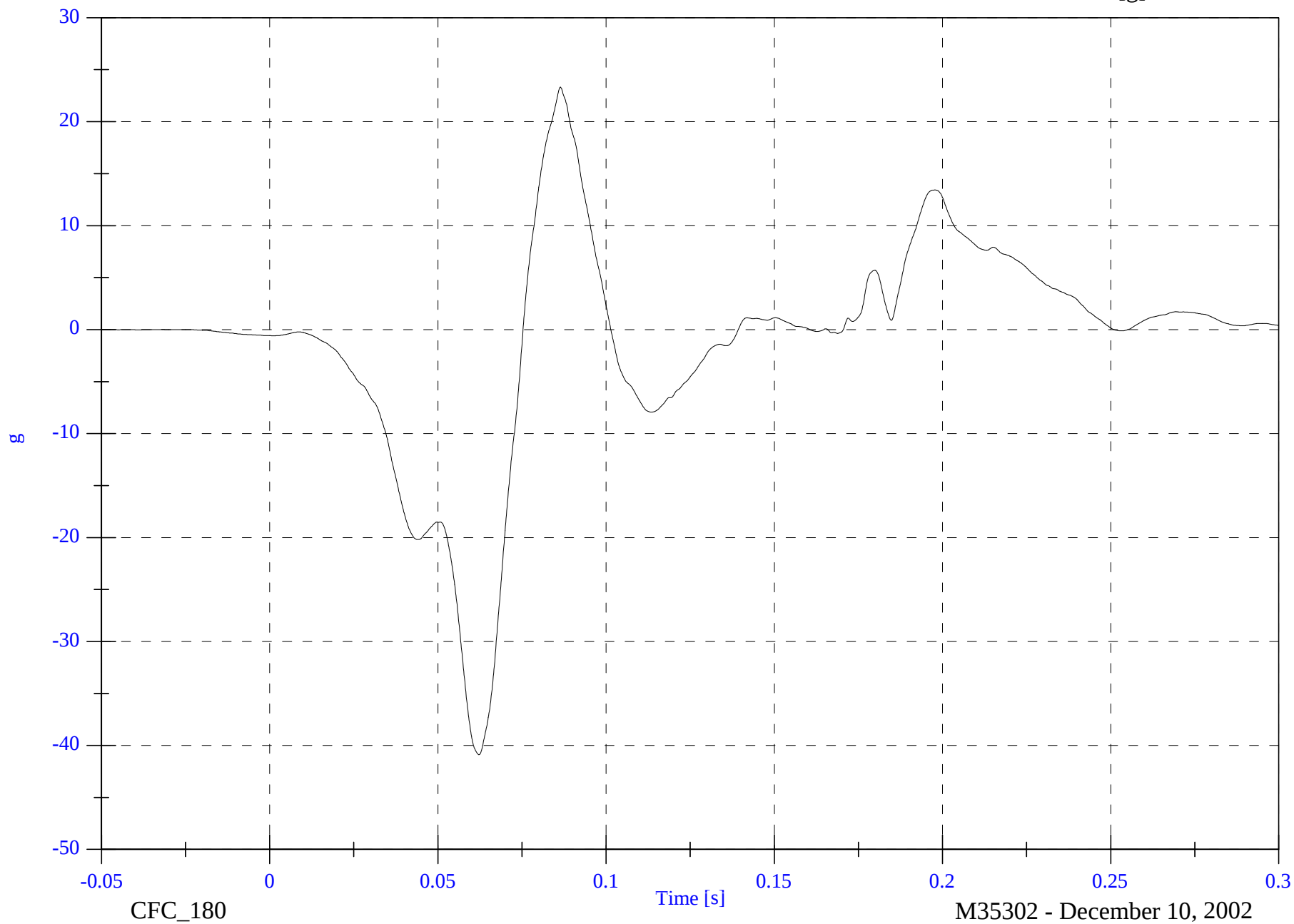
V1P3 Chest z

Max: 23.3 [g] at 0.086 [s]

Min: -40.9 [g] at 0.062 [s]

4-26

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

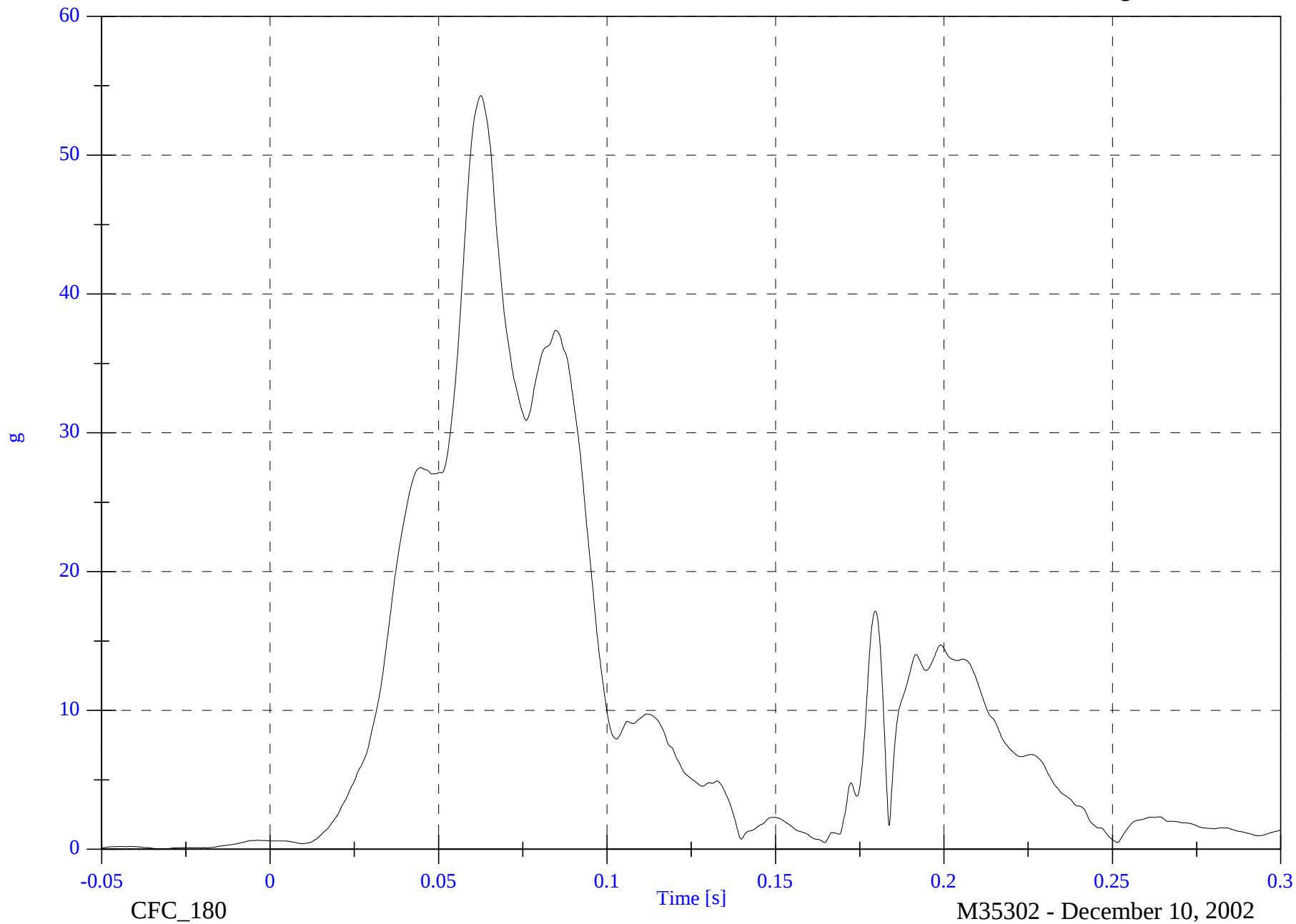
V1P3 Chest Resultant

Max: 54.3 [g] at 0.063 [s]

Min: 0.0 [g] at -0.032 [s]

4-27

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

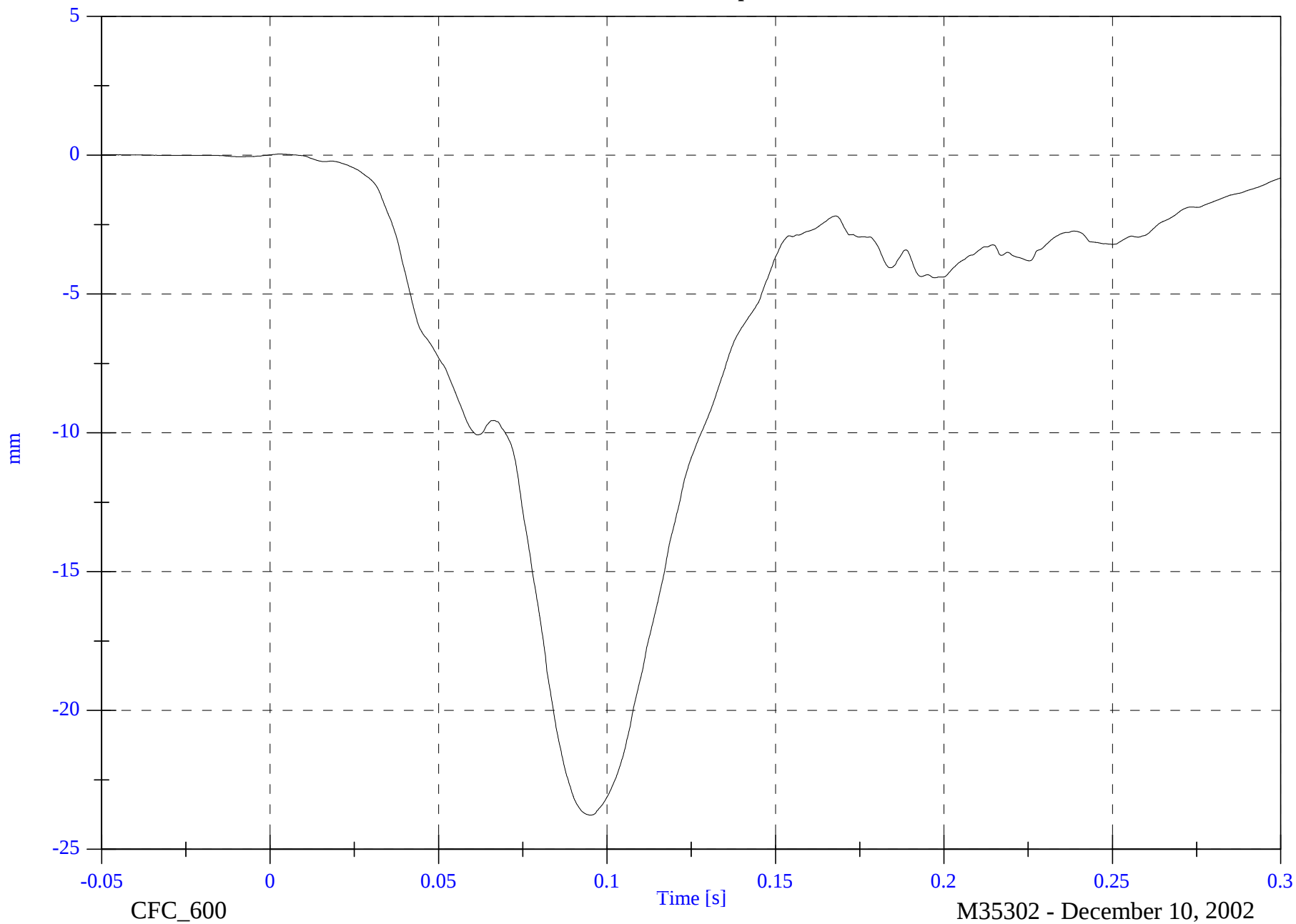
V1P3 Chest Compression

Max: 0.0 [mm] at 0.003 [s]

Min: -23.8 [mm] at 0.095 [s]

4-28

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

V1P3 Pelvic x

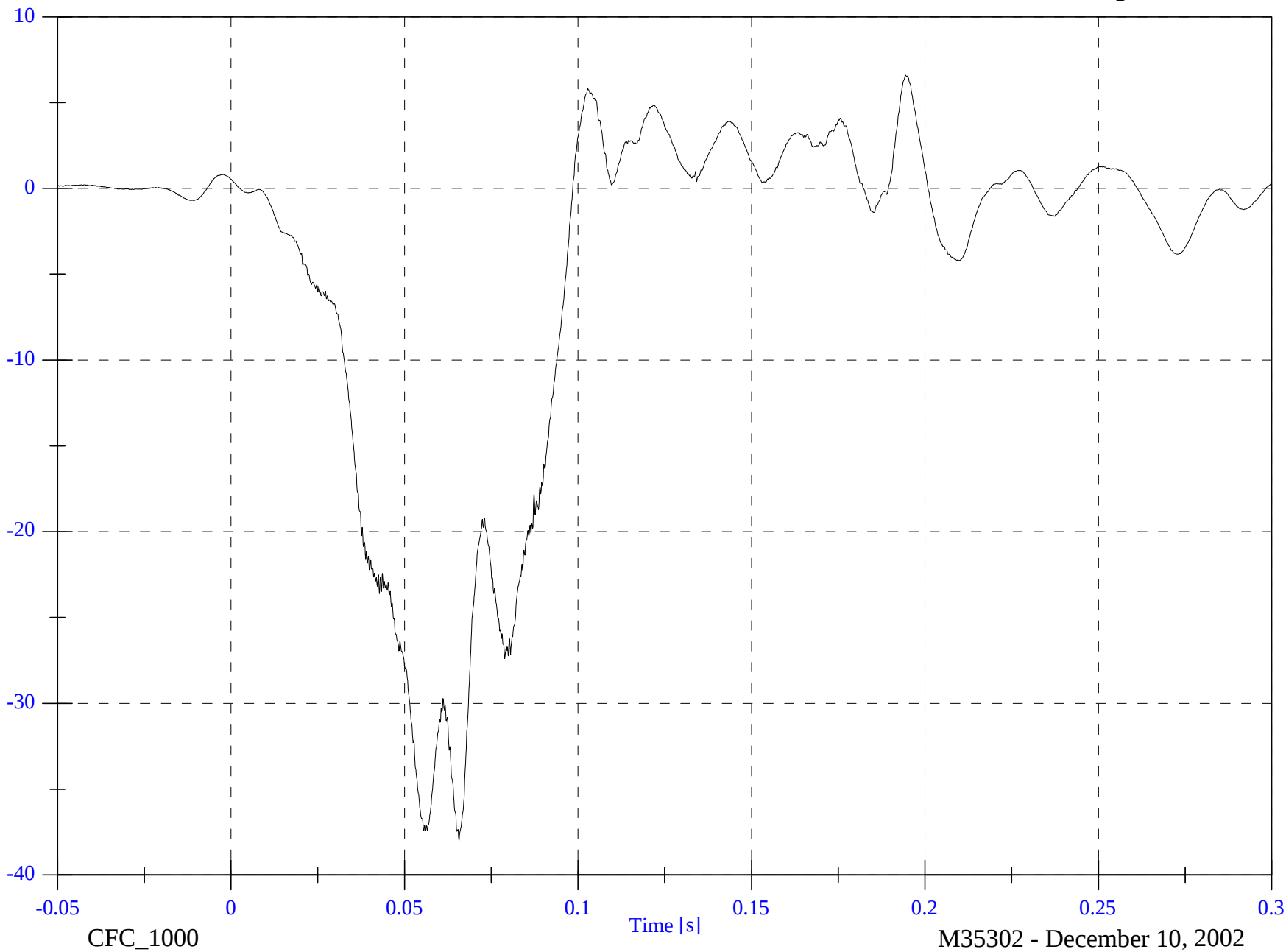
Max: 6.6 [g] at 0.194 [s]

Min: -38.0 [g] at 0.066 [s]

4-29

8642-NCAP-24

g

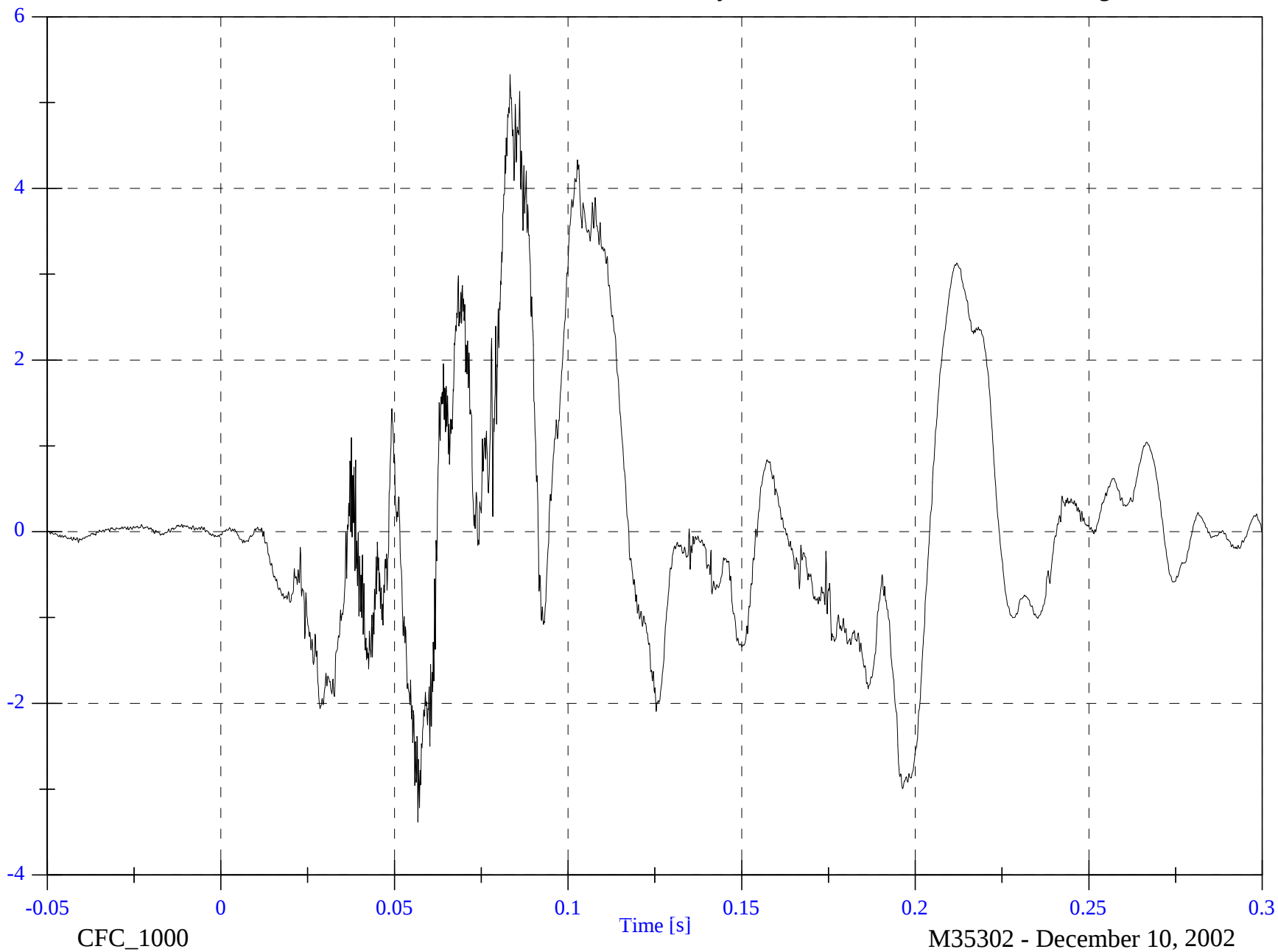


NCAP Test #2 - 2003 Honda Accord

V1P3 Pelvic y

Max: 5.3 [g] at 0.083 [s]

Min: -3.4 [g] at 0.057 [s]



4-30

8642-NCAP-24

NCAP Test #2 - 2003 Honda Accord

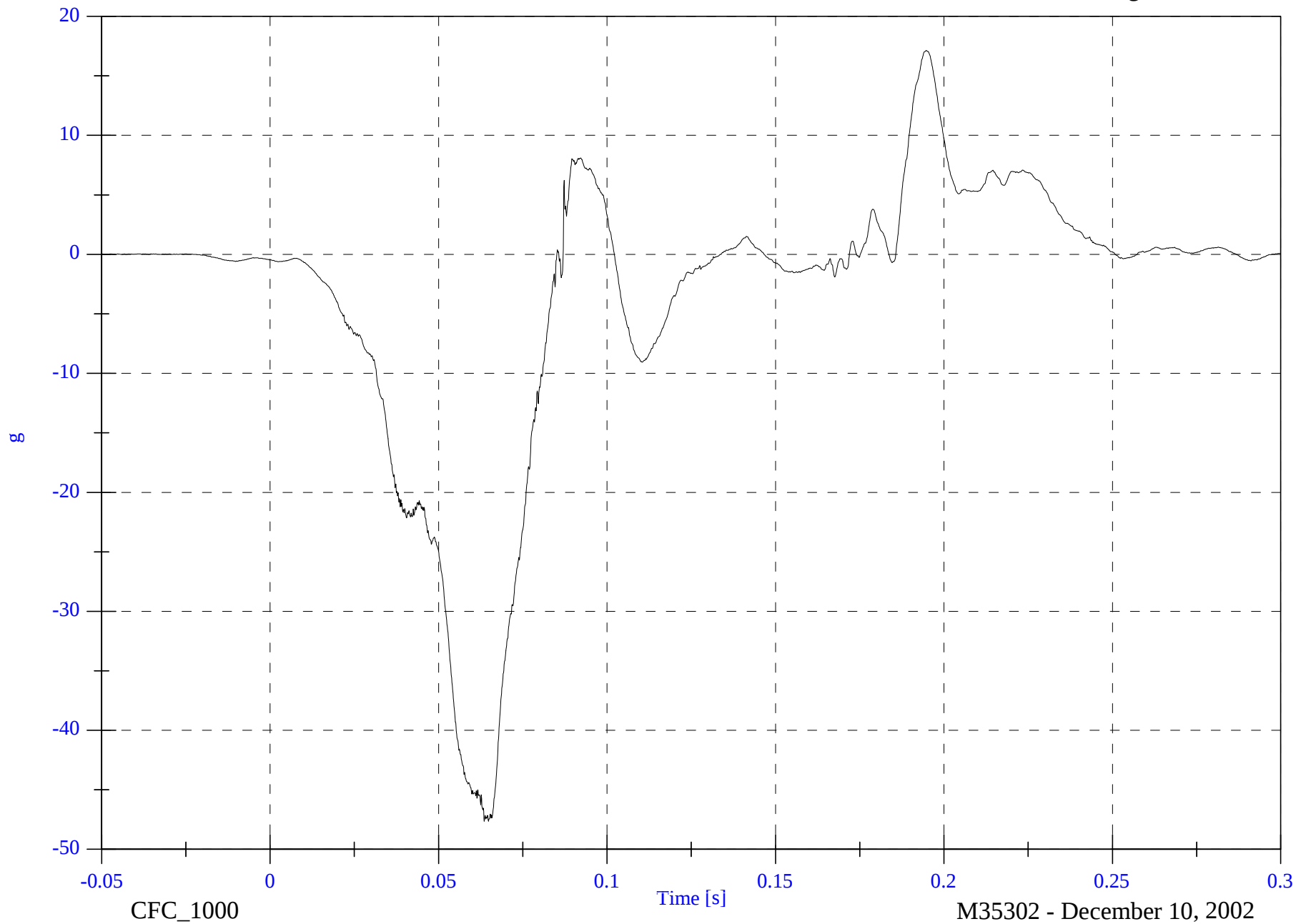
V1P3 Pelvic z

Max: 17.1 [g] at 0.195 [s]

Min: -47.7 [g] at 0.064 [s]

4-31

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

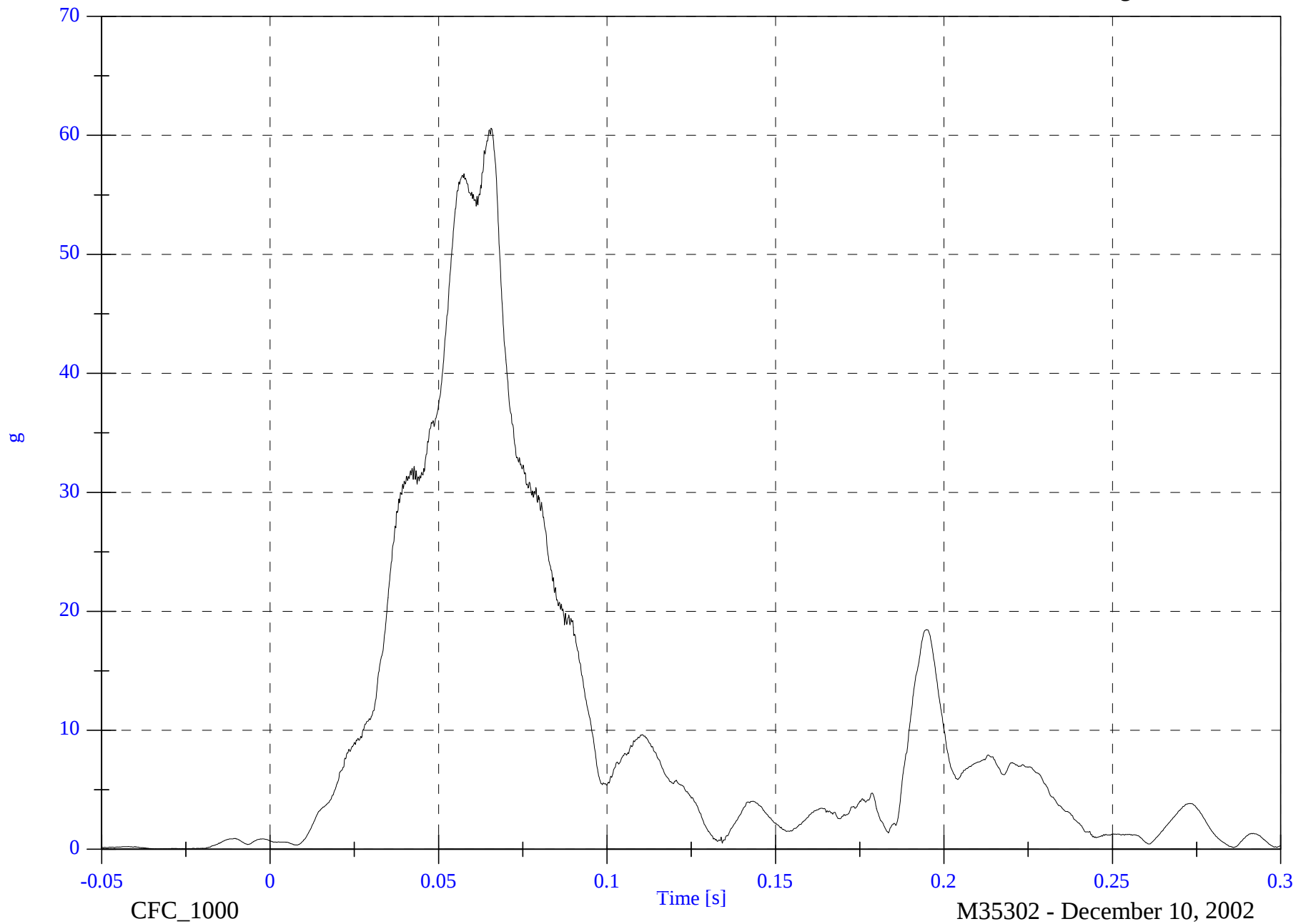
V1P3 Pelvic Resultant

Max: 60.6 [g] at 0.066 [s]

Min: 0.0 [g] at -0.034 [s]

4-32

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

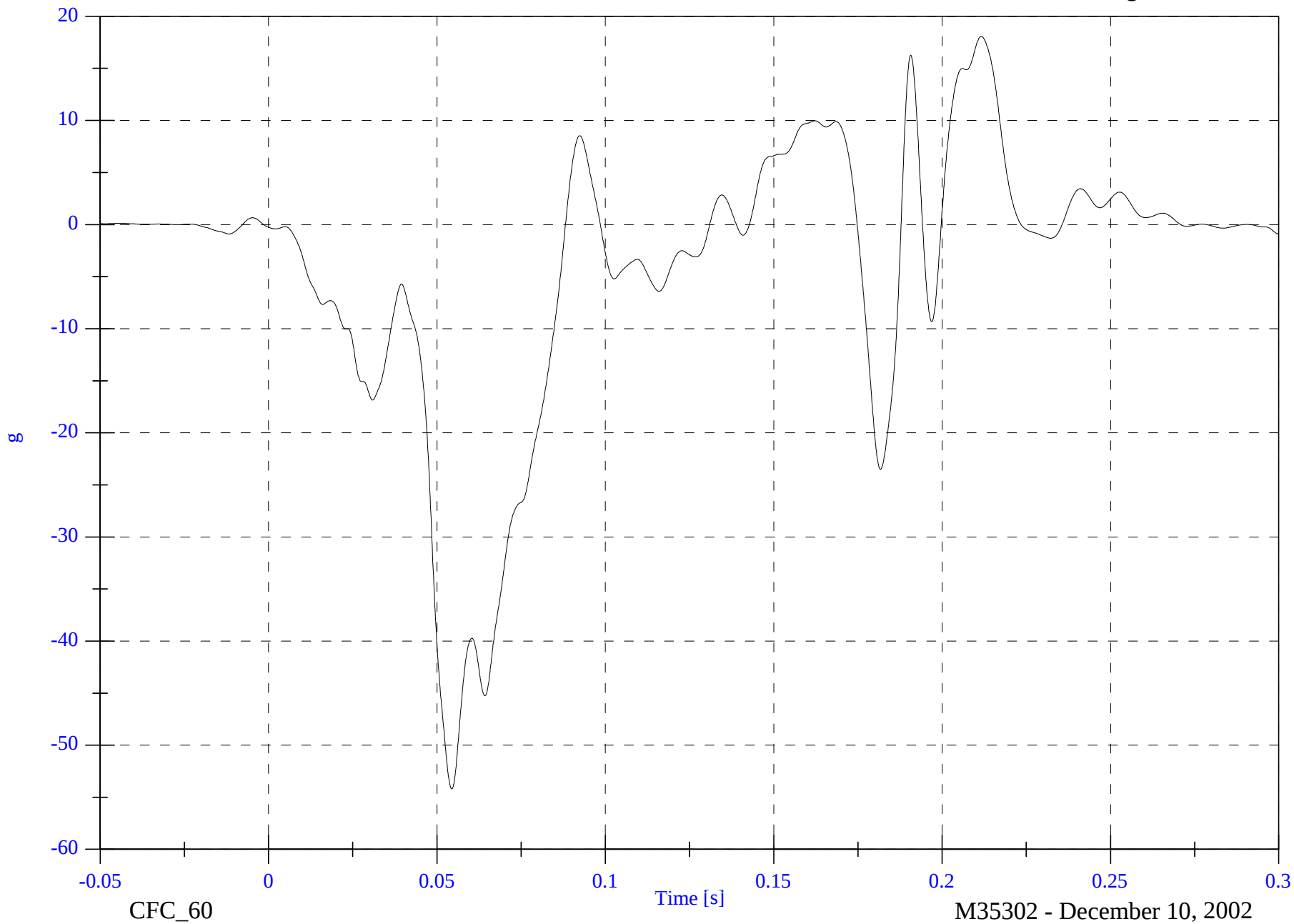
V1P3 Child Seat x

Max: 18.1 [g] at 0.212 [s]

Min: -54.2 [g] at 0.054 [s]

4-33

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

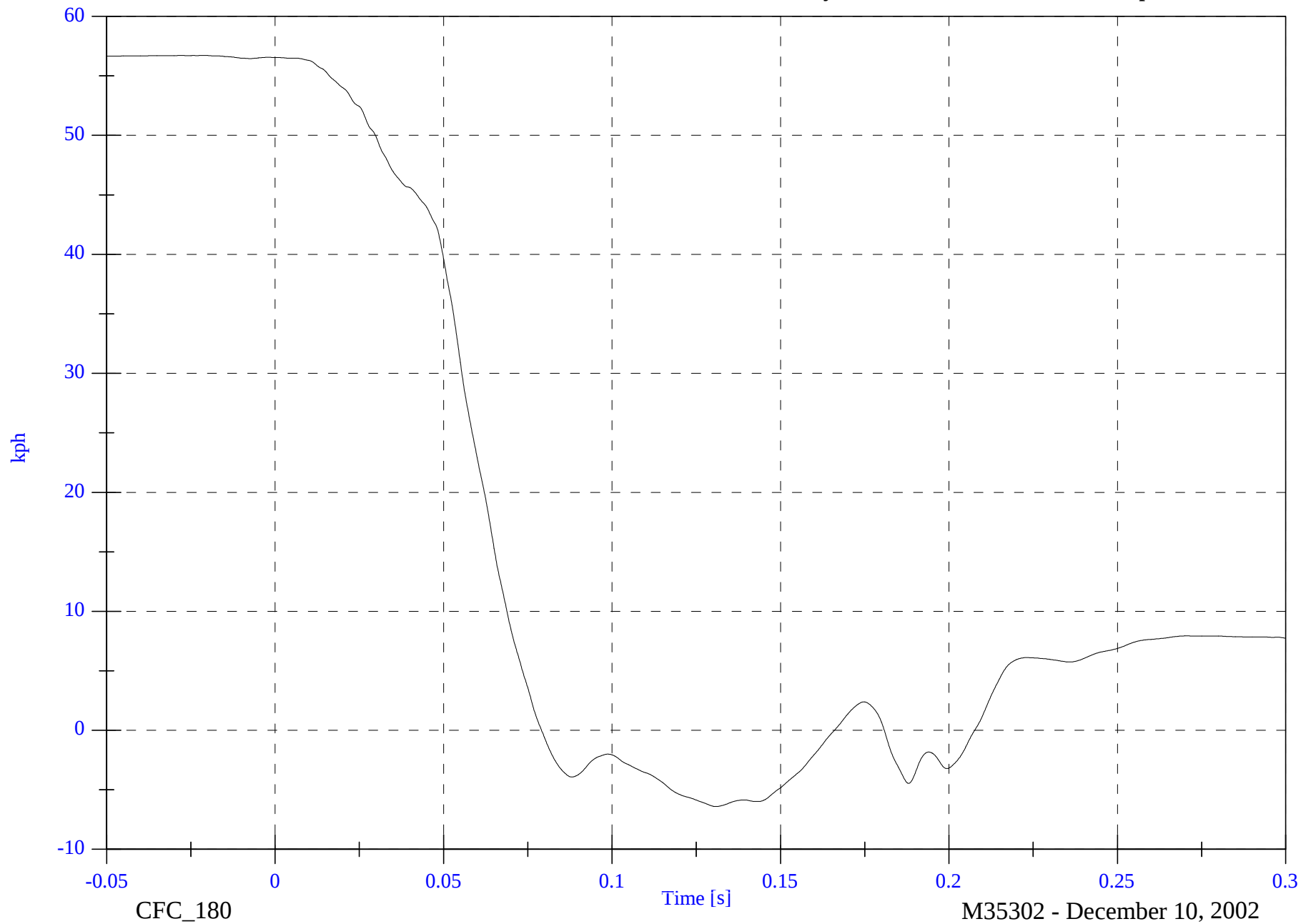
V1P3 Child Seat x Velocity

Max: 56.7 [kph] at -0.021 [s]

Min: -6.4 [kph] at 0.131 [s]

4-34

8642-NCAP-24



NCAP Test #2 - 2003 Honda Accord

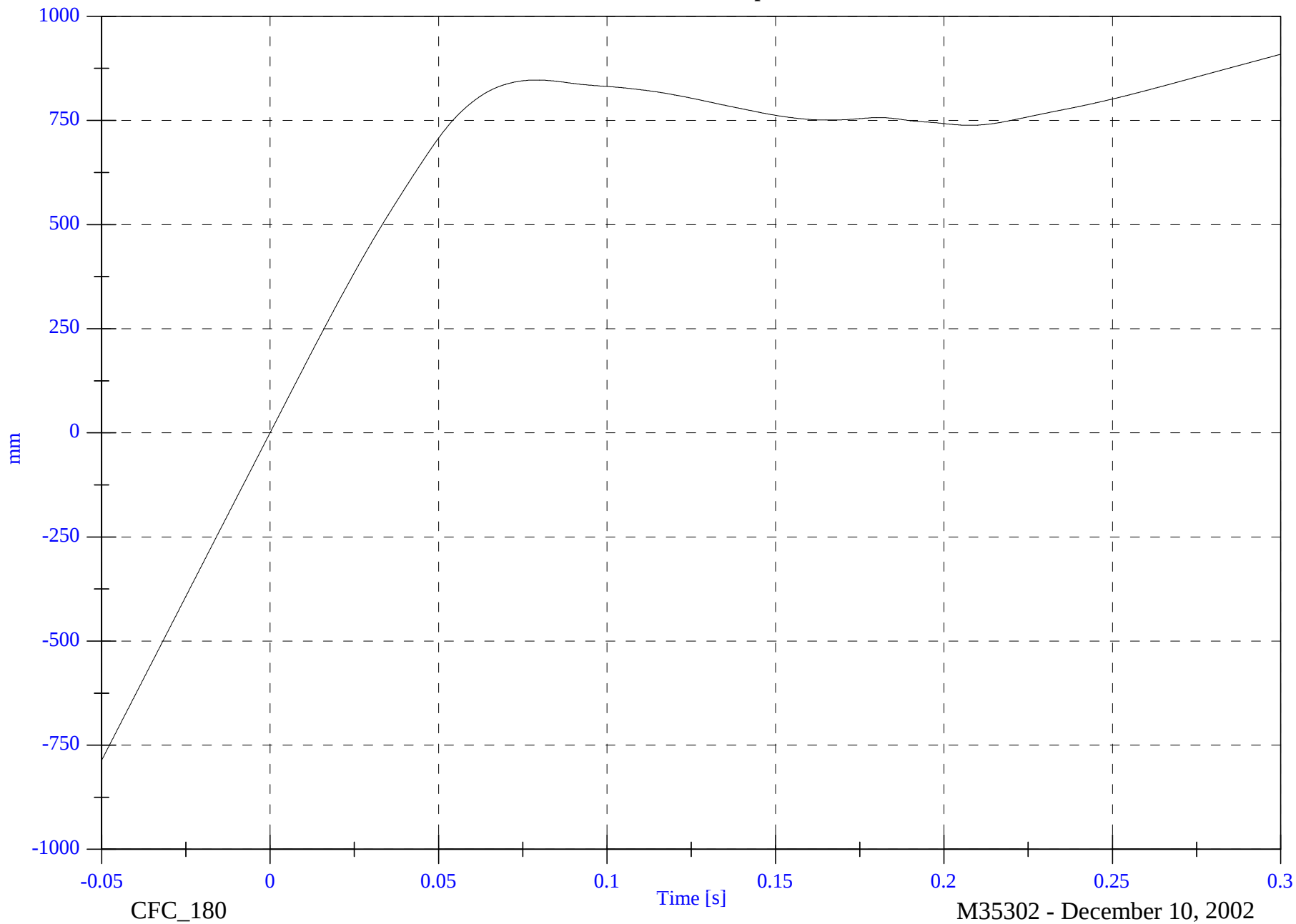
V1P3 Child Seat x Displacement

Max: 908.8 [mm] at 0.300 [s]

Min: -786.6 [mm] at -0.050 [s]

4-35

8642-NCAP-24



CFC_180

M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

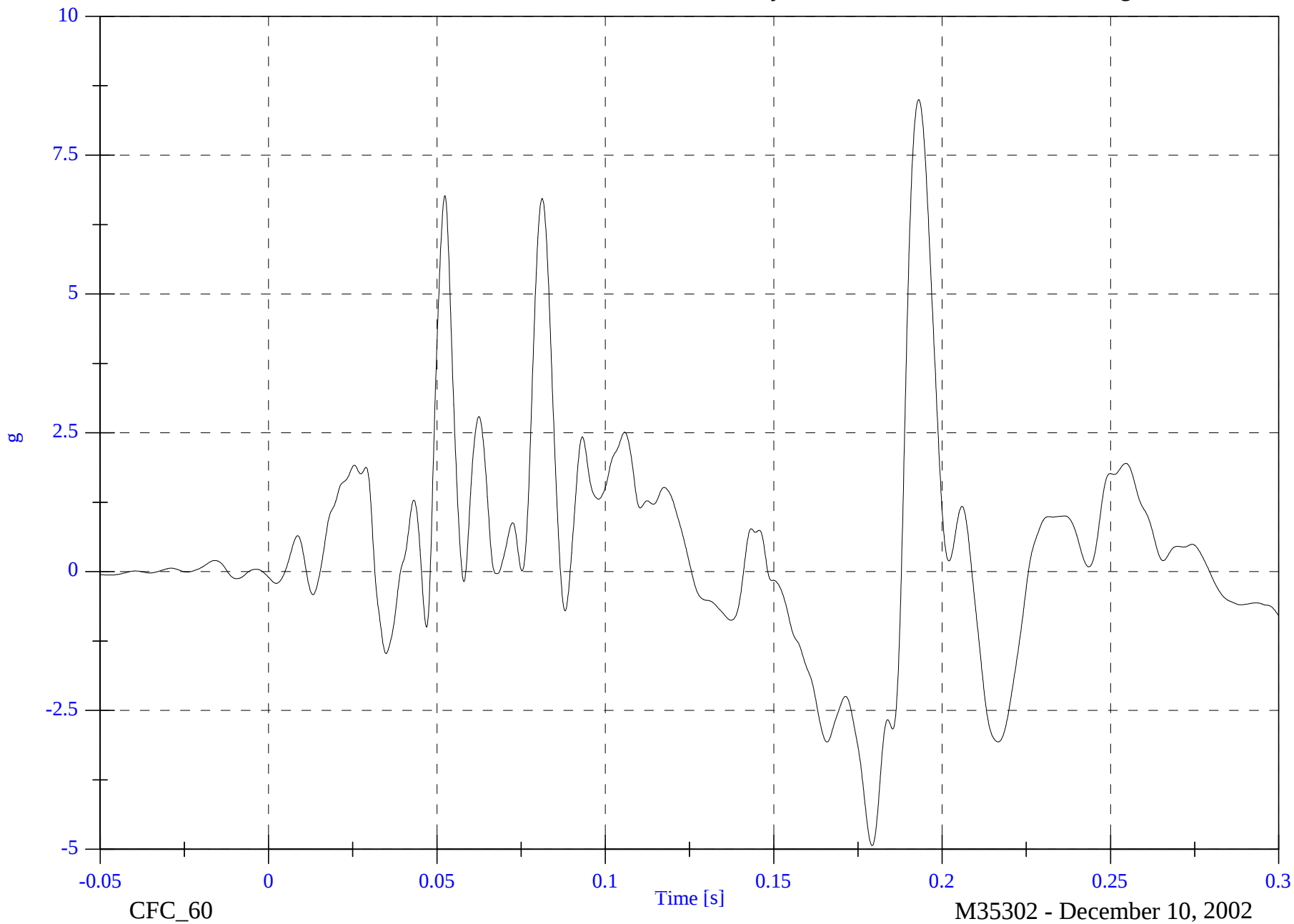
V1P3 Child Seat y

Max: 8.5 [g] at 0.193 [s]

Min: -4.9 [g] at 0.179 [s]

4-36

8642-NCAP-24

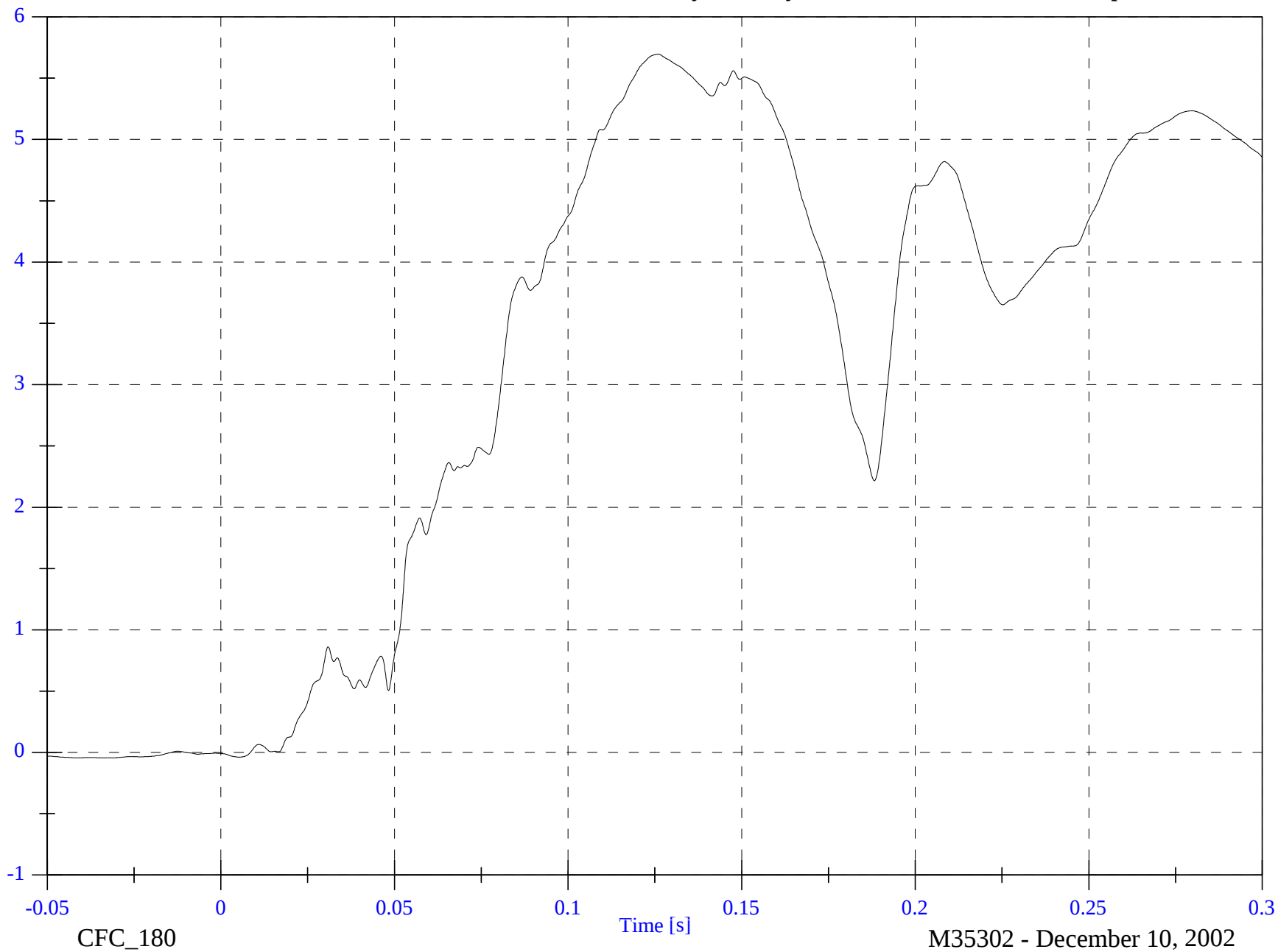


NCAP Test #2 - 2003 Honda Accord

V1P3 Child Seat y Velocity

Max: 5.7 [kph] at 0.126 [s]

Min: -0.0 [kph] at -0.033 [s]



NCAP Test #2 - 2003 Honda Accord

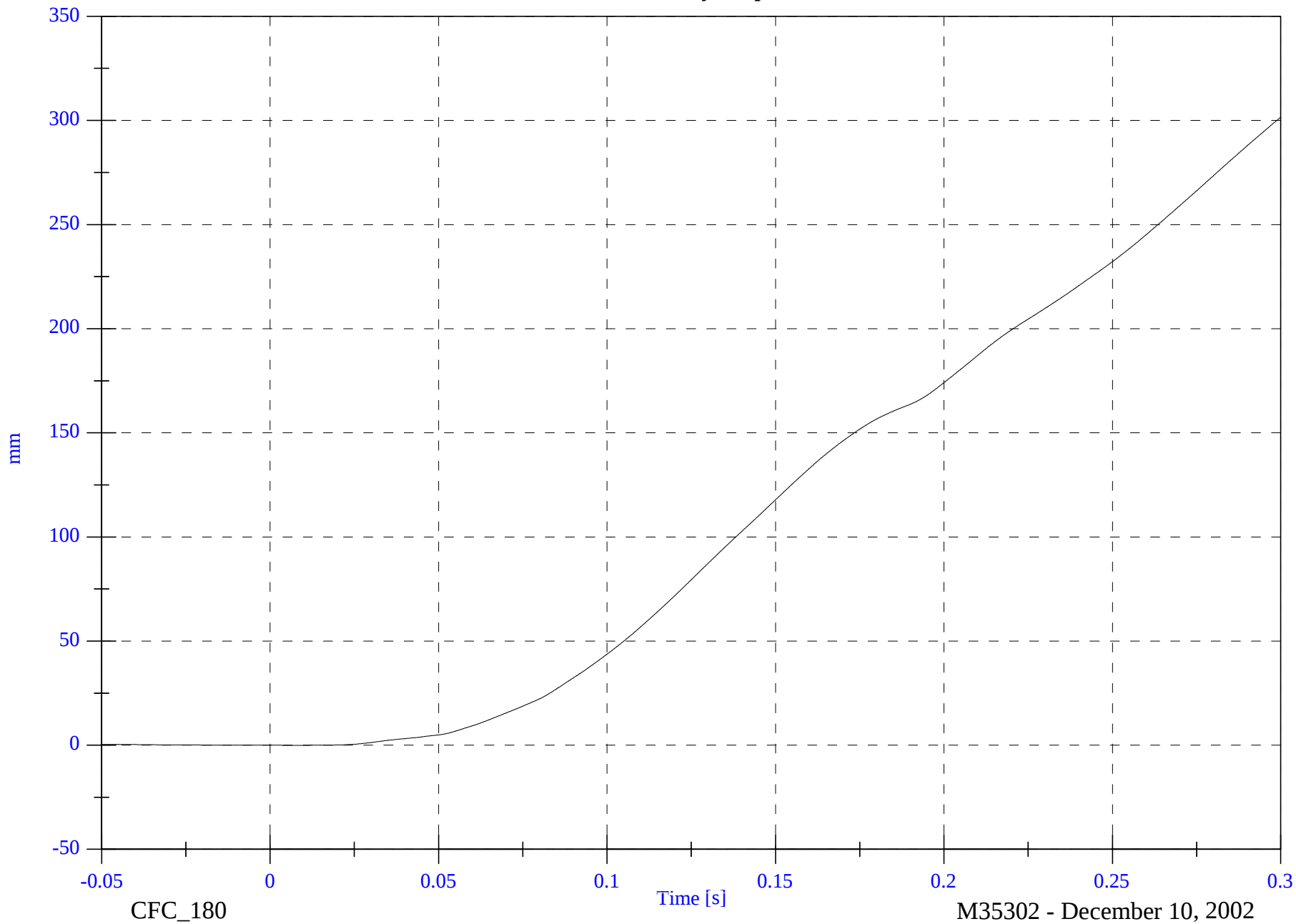
V1P3 Child Seat y Displacement

Max: 301.5 [mm] at 0.300 [s]

Min: -0.1 [mm] at 0.008 [s]

4-38

8642-NCAP-24

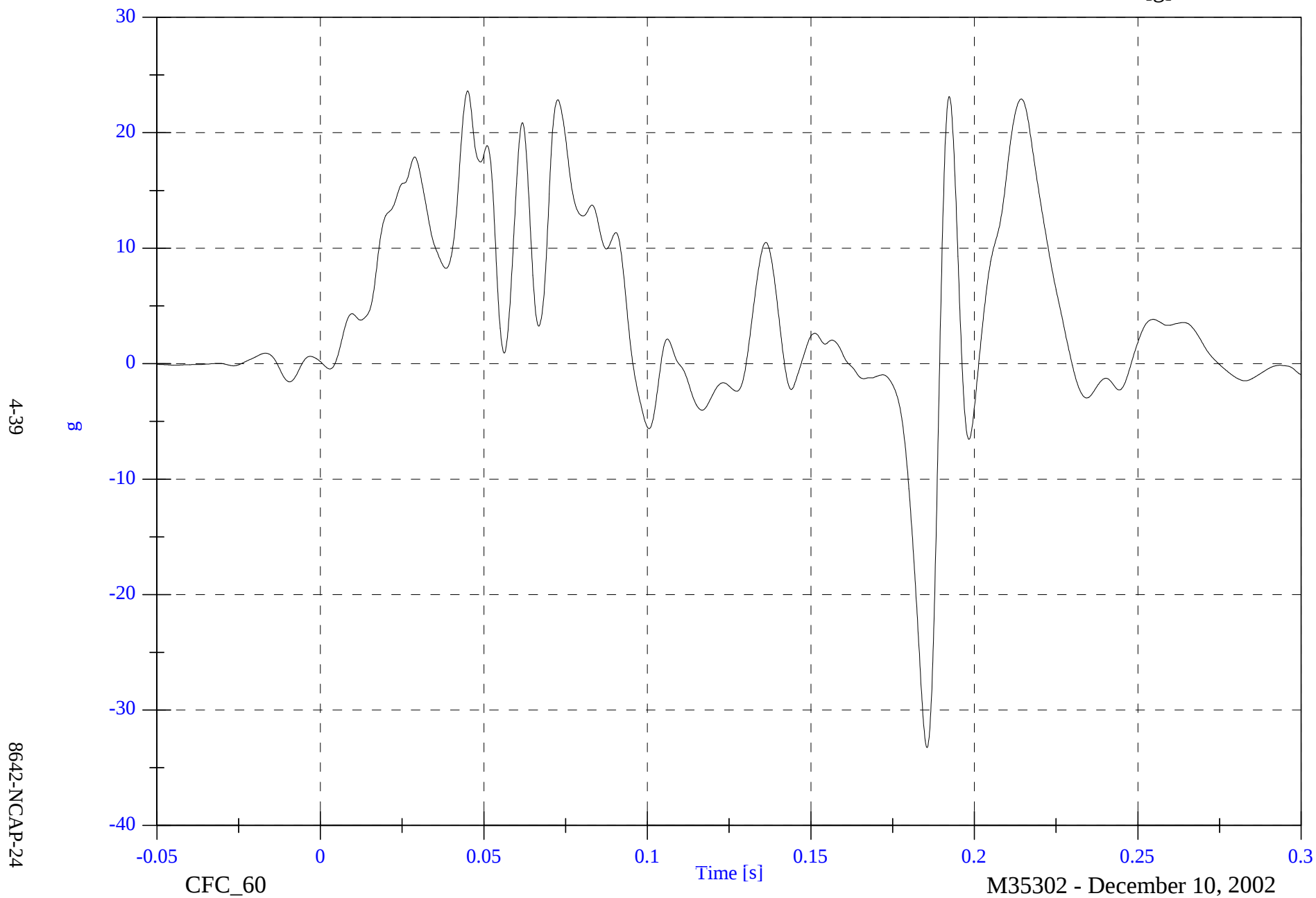


NCAP Test #2 - 2003 Honda Accord

V1P3 Child Seat z

Max: 23.6 [g] at 0.045 [s]

Min: -33.3 [g] at 0.185 [s]



NCAP Test #2 - 2003 Honda Accord

V1P3 Child Seat z Velocity

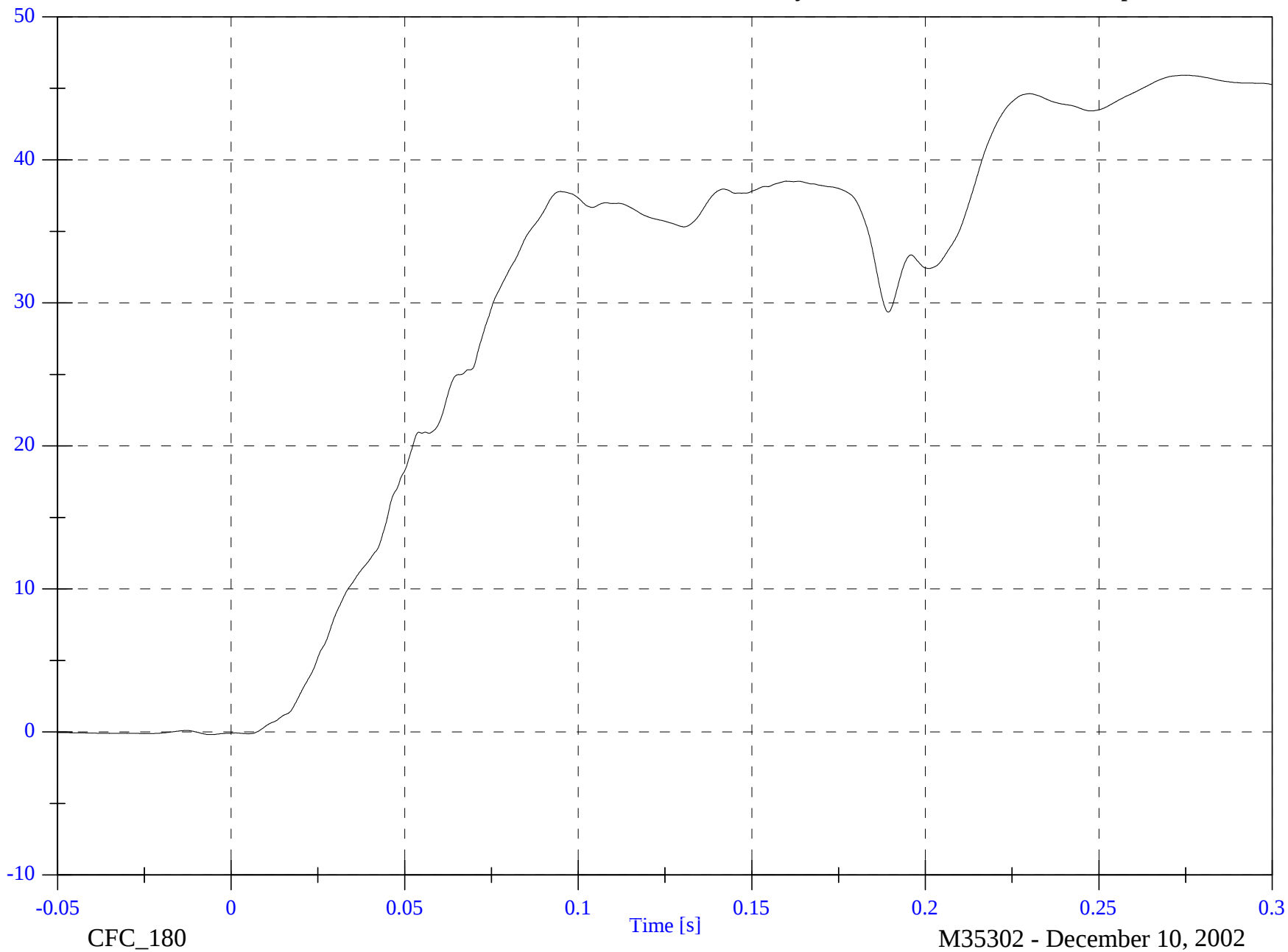
Max: 45.9 [kph] at 0.275 [s]

Min: -0.2 [kph] at -0.006 [s]

4-40

kph

8642-NCAP-24



CFC_180

Time [s]

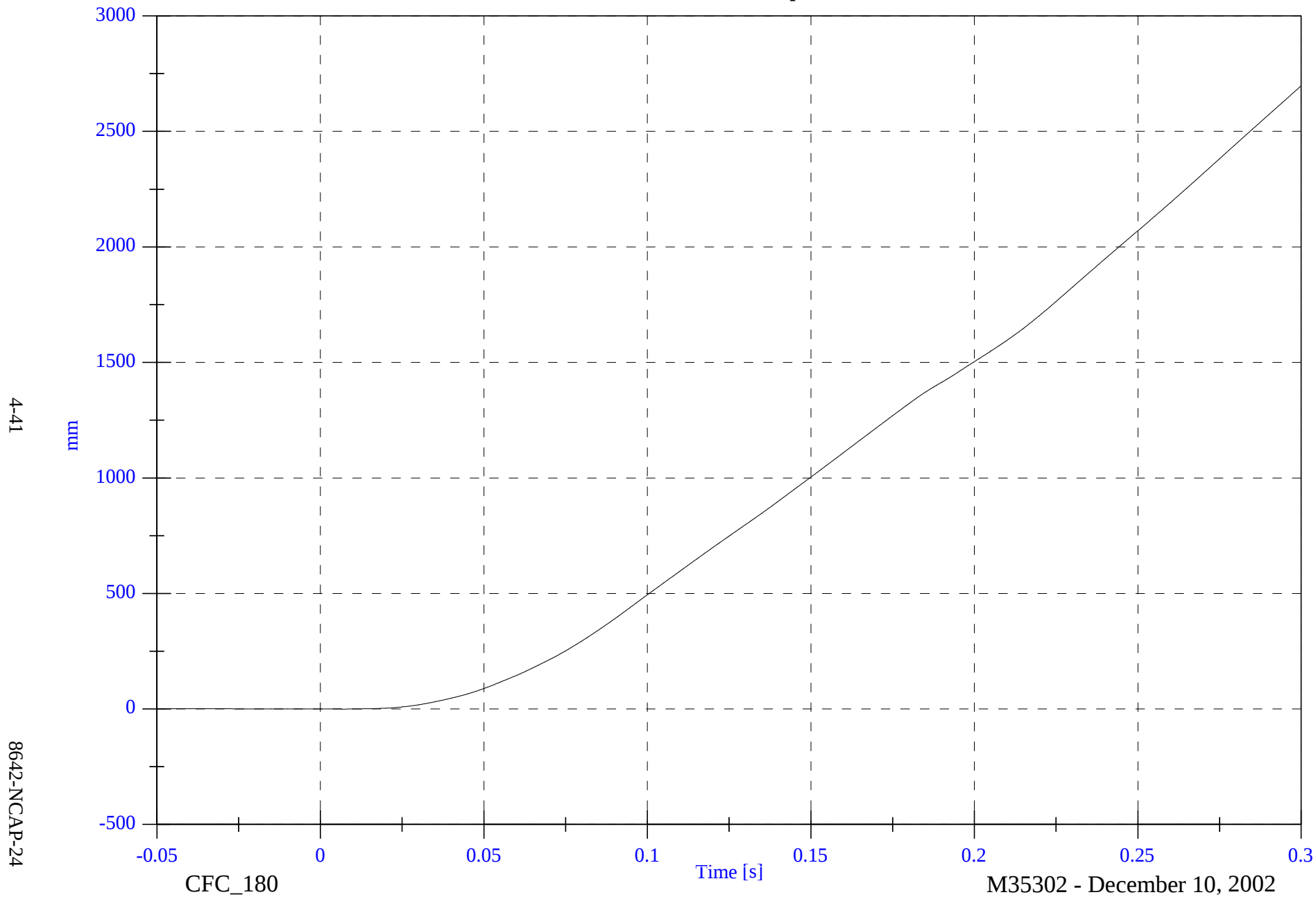
M35302 - December 10, 2002

NCAP Test #2 - 2003 Honda Accord

V1P3 Child Seat z Displacement

Max: 2696.4 [mm] at 0.300 [s]

Min: -0.2 [mm] at 0.007 [s]



NCAP Test #2 - 2003 Honda Accord

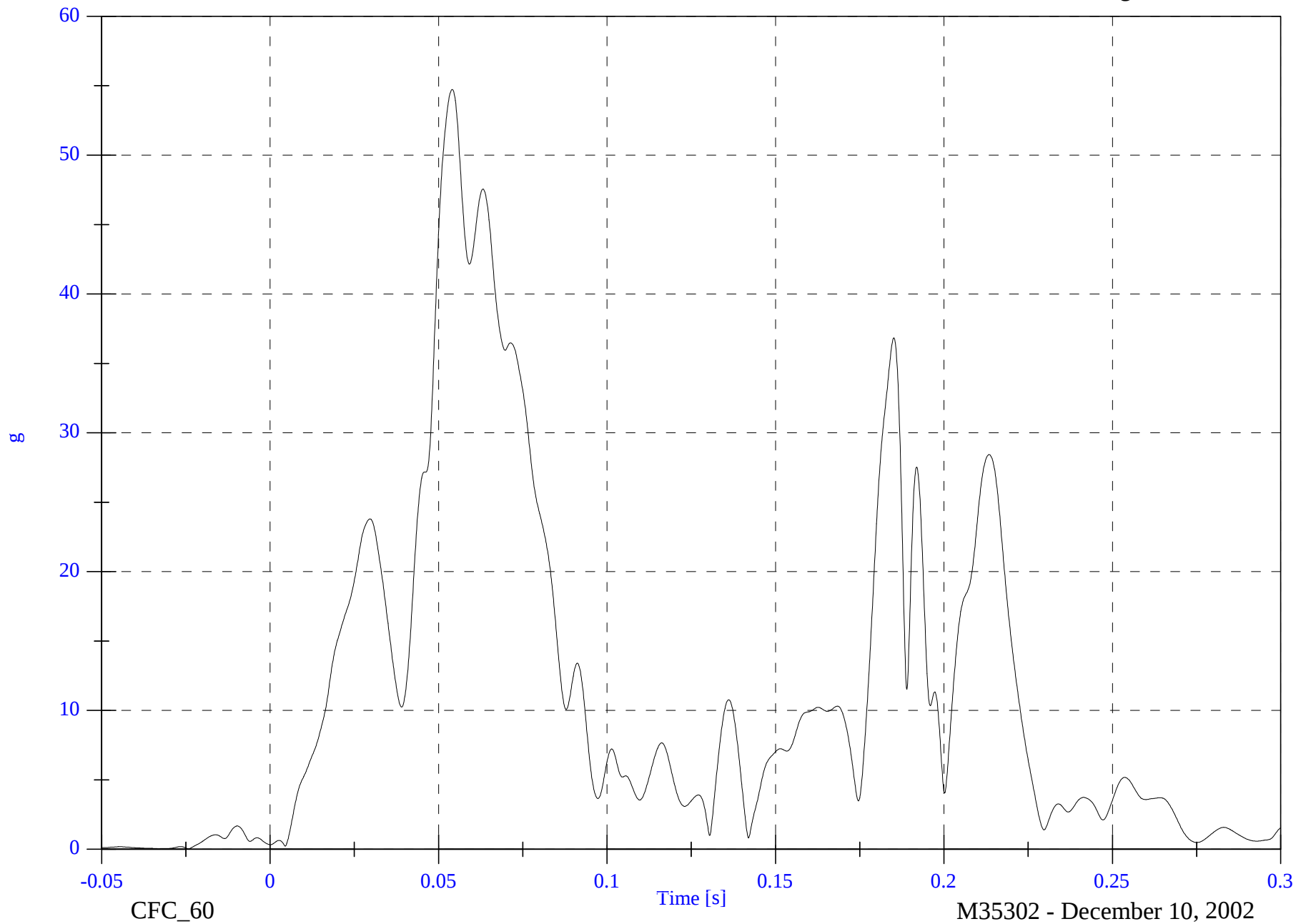
V1P3 Child Seat Resultant

Max: 54.7 [g] at 0.054 [s]

Min: 0.0 [g] at -0.024 [s]

4-42

8642-NCAP-24



SECTION 5

CHILD DUMMY CALIBRATION INFORMATION

142 Head Drop

Part 572P Head Drop

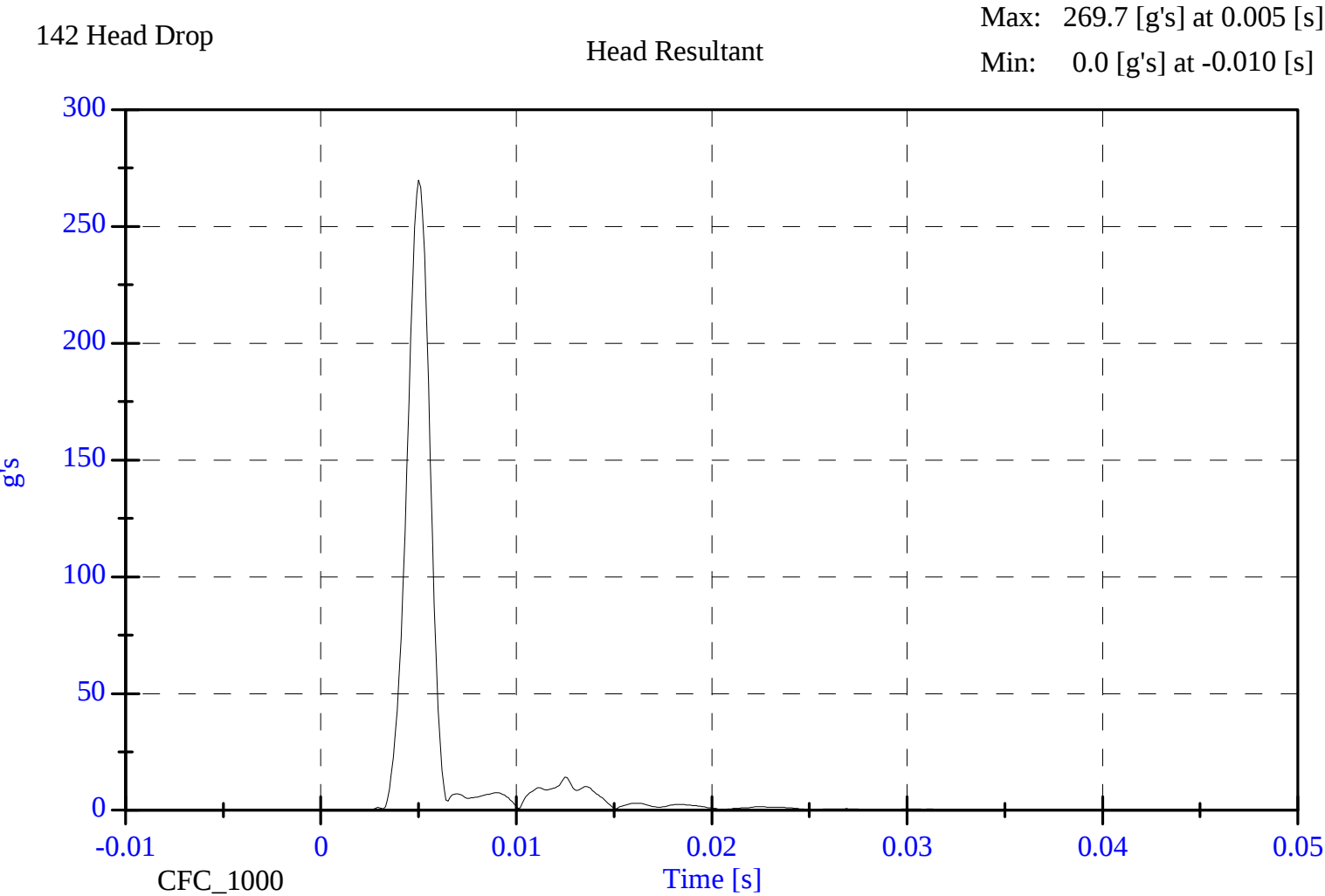
Calibration Date:11-15-02

Serial No:142

Work File:142H1 11-15-02

-----TEST RESULTS-----

TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	66.0-78.0 F	69.0 F	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Peak Resultant Accel.:	250-280 Gs	269.74 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	8.65 Gs	Passed
Curve PerCent NonModal:	< 10%	5.27 %	Passed



142 Chest Impact

Part 572P Thorax Impact

Calibration Date: 11-21-02

Serial No: 142

Work File: 142T 11-21-02

-----TEST RESULTS-----

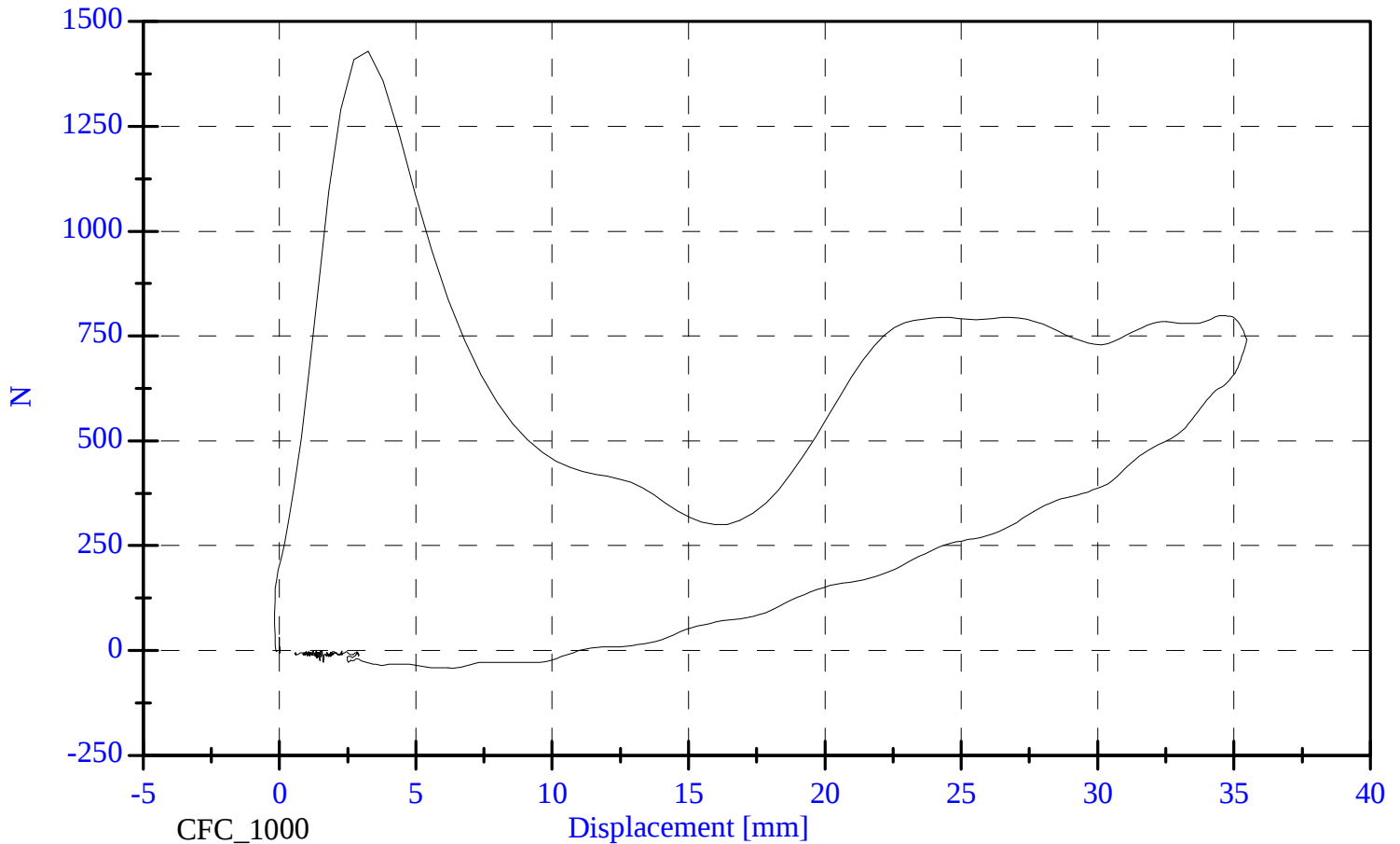
<u>TEST CONDITION</u>	<u>PARAMETERS</u>	<u>RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Pendulum Velocity:	5.90- 6.10 m/s	6.03 m/s	Passed
Maximum Deflection:	32.00-38.00 mm	35.46 mm	Passed
Maximum Res. Force:	680.00- 810.00 N	798.56 N	Passed
Internal Hysteresis:	65-85 %	75.17 %	Passed
Pass Sternum Force Criteria?:	860.00 N	798.56	Passed

142 Chest Impact

Probe Force vs. Displacement

Max: 1429.2 [N] at 3.251 [mm]

Min: -42.0 [N] at 6.333 [mm]



142 Neck Ext.
Part 572P Neck Extension Test
Part 572P Serial No: 142
Calibration Date: 11-20-02
Work File: 142Ext9a 11-20-02

-----Neck Test Results-----

TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	69.0-72.0 F	70.00 F	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Test Pendulum Speed:	11.58-12.38 ft/s	12.01 ft/s	Passed

-----Pendulum Pulse-----

Pulse at 6 ms:	3.30- 4.60 ft/s	3.94 ft/s	Passed
Pulse at 10 ms:	6.20- 8.20 ft/s	6.94 ft/s	Passed
Deceleration at 14 ms:	9.20-11.50 ft/s	9.27 ft/s	Passed

-----D Plane Rotation-----

Maximum Rotation:	83.0-93.0 Deg	84.61 Deg	Passed
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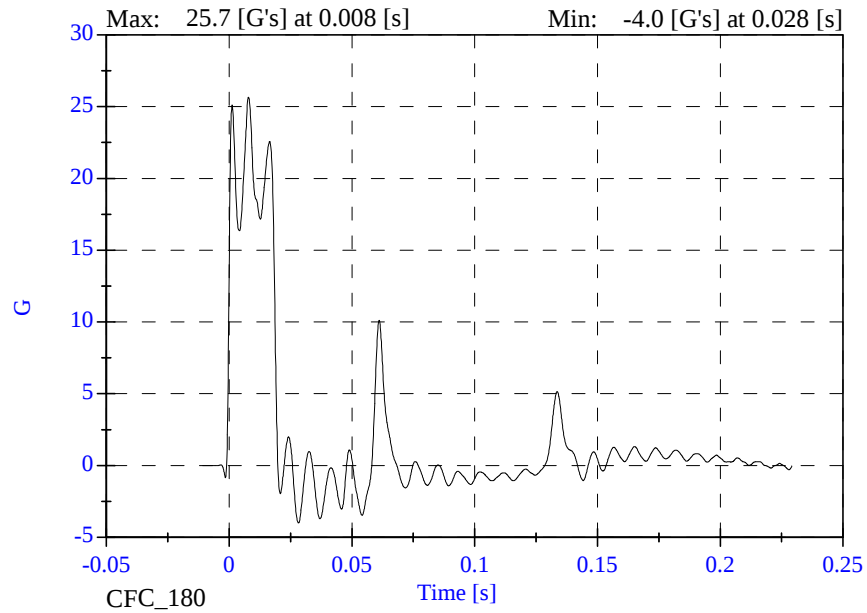
-----Moment About the Occipital Condyle-----

Max Occipital Moment:	0.00- 0.00 N	-49.03 N	Failed
Occipital Moment Decay:	60.0-80.0 ms	72.20 ms	Passed

Certified By: B.Swiecicki Date: 11-20-02

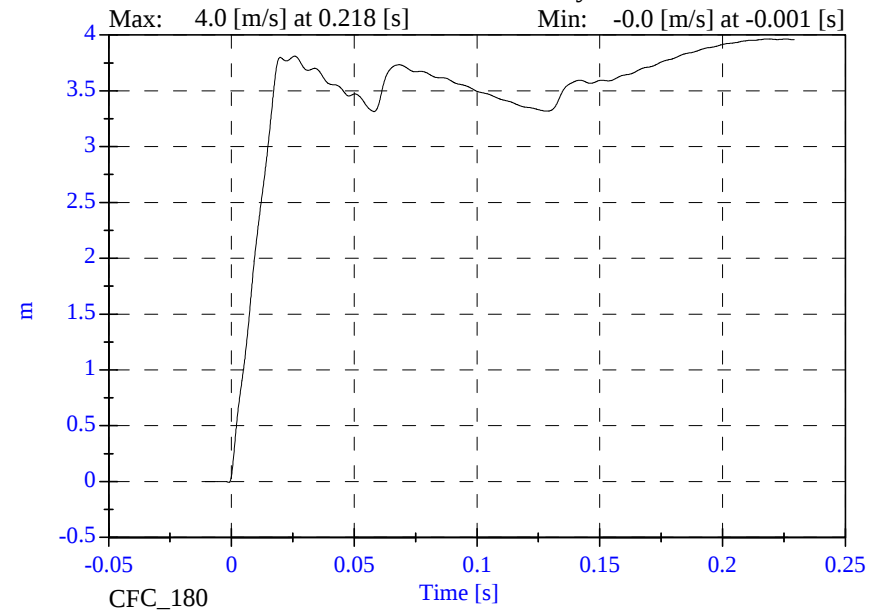
142 Neck Ext.

Pendulum Acceleration

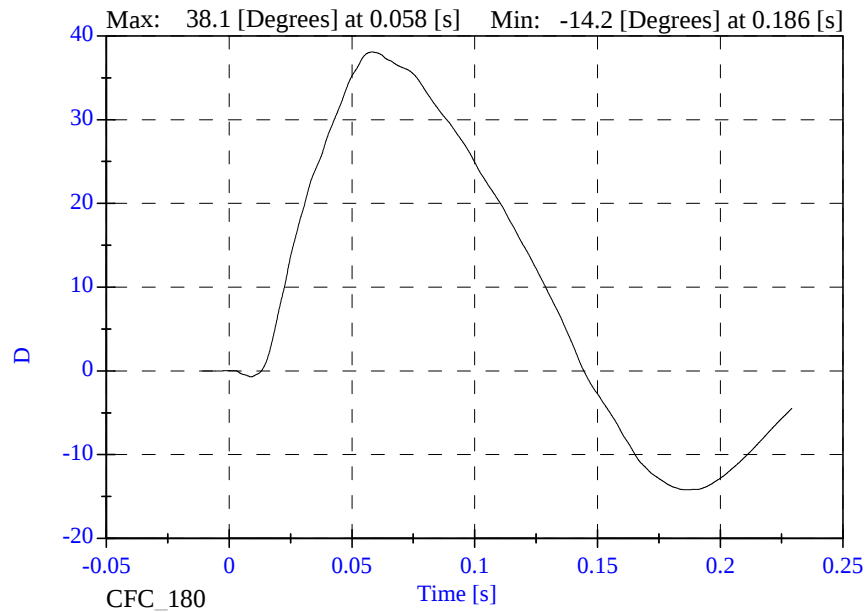


11-20-02

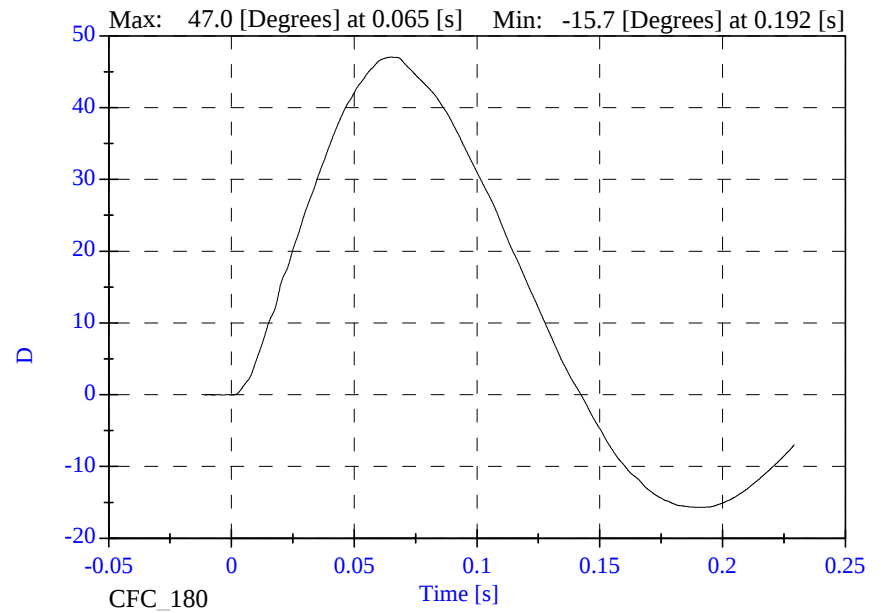
Pendulum Velocity



Head Rotation

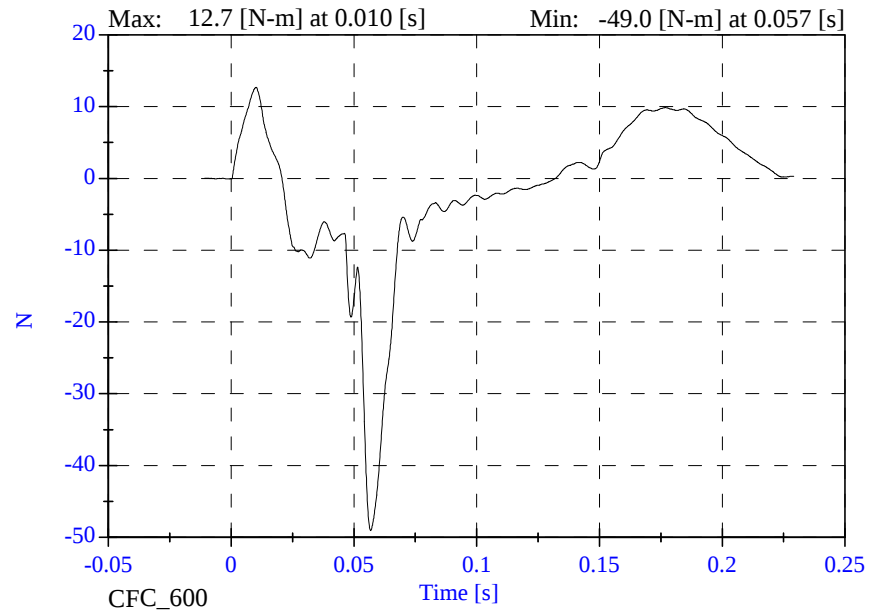


Arm Rotation



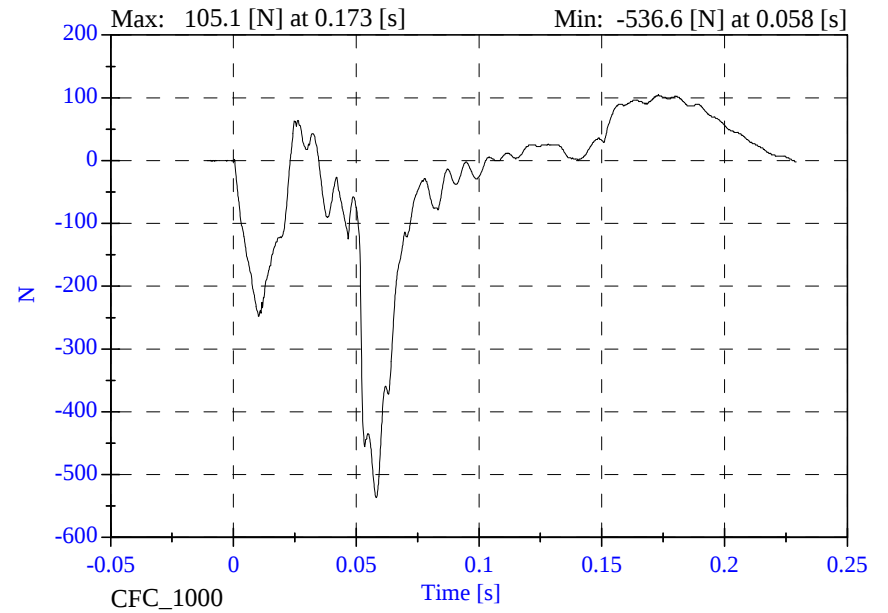
142 Neck Ext.

Neck Moment Y

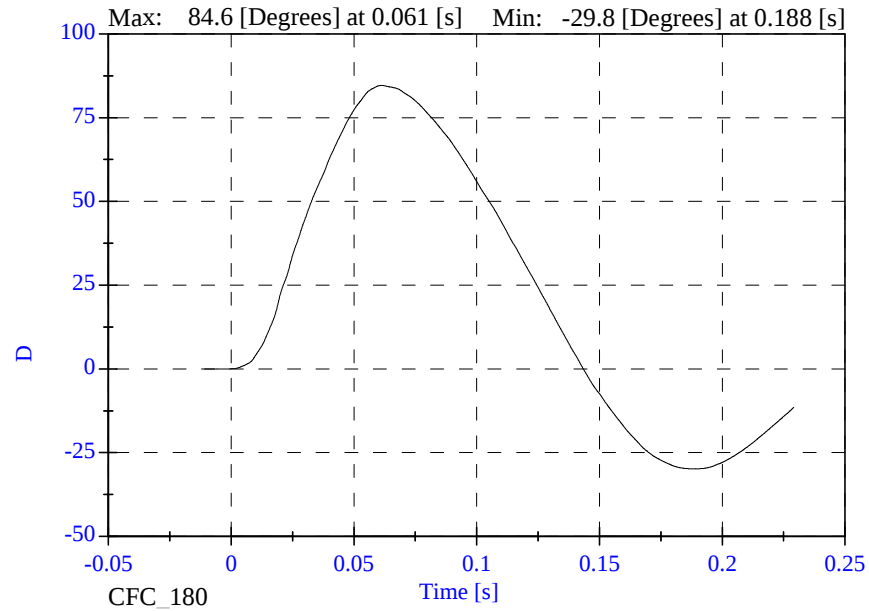


11-20-02

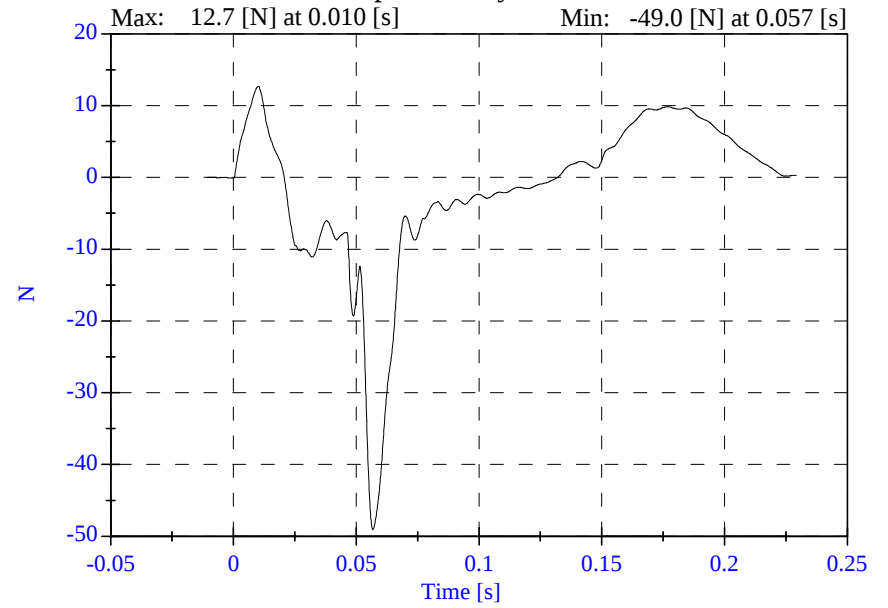
Neck Force X



Total Rotation



Occipital Condyle Moment



142FLX1 11-20-02.TXT

142 Neck Flex
Part 572P Neck Flexion Test
Part 572P Serial No: 142
Calibration Date: 11-20-02
Work File: 142Flx1 11-20-02

-----Neck Test Results-----

TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	20.6-22.2 C	21.11 C	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Test Pendulum Speed:	5.40- 5.60 m/s	5.55 m/s	Passed

-----Pendulum Pulse----

Pulse at 10 ms:	2.00- 2.70 m/s	2.09 m/s	Passed
Pulse at 15 ms:	3.00- 4.00 m/s	3.13 m/s	Passed
Deceleration at 20 ms:	4.00- 5.10 m/s	4.33 m/s	Passed

-----D Plane Rotation----

Maximum Rotation:	70.0-82.0 Deg	77.98 Deg	Passed
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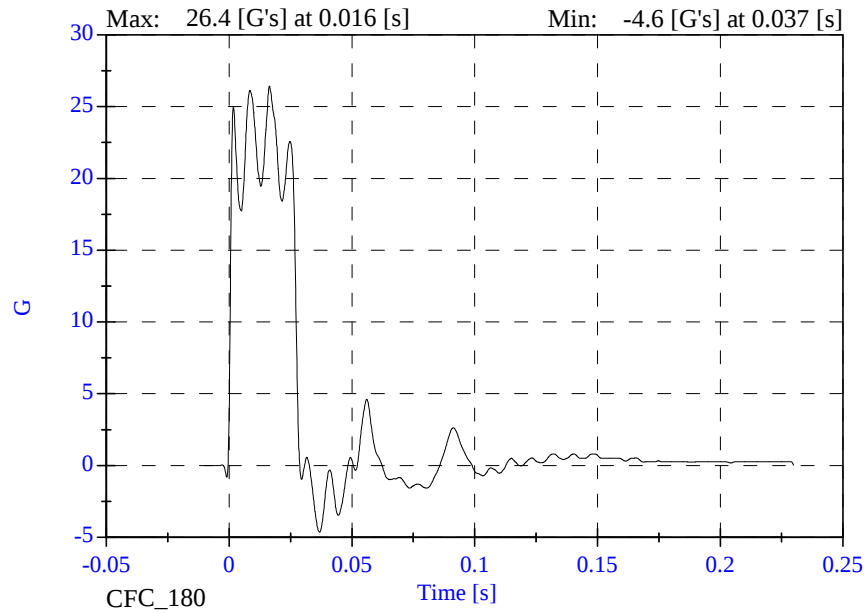
-----Moment About the Occipital Condyle----

Max Occipital Moment:	42.00- 53.00 N-M	44.98 N-M	Passed
Occipital Moment Decay:	60.0-80.0 ms	71.10 ms	Passed

Certified By: B.Swiecicki Date: 11-20-02

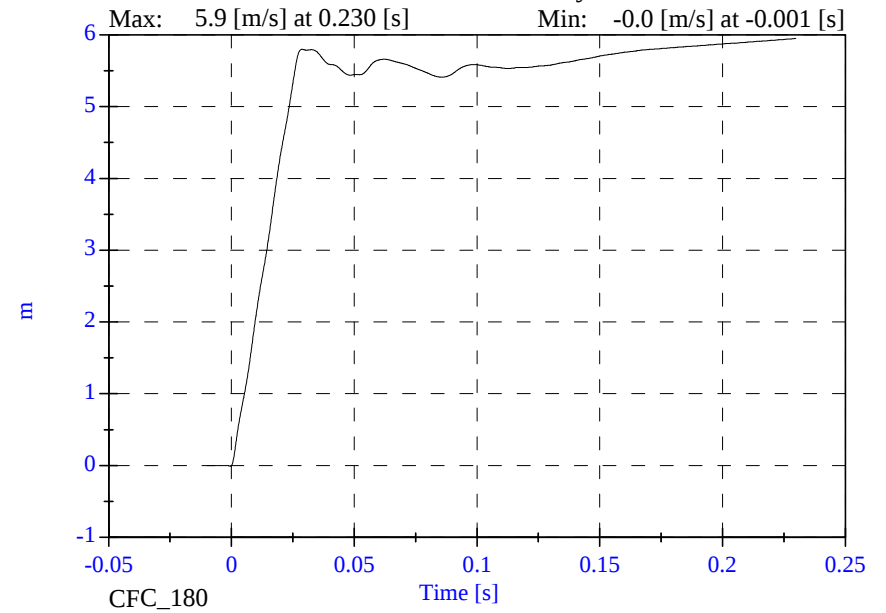
142 Neck Flex

Pendulum Acceleration

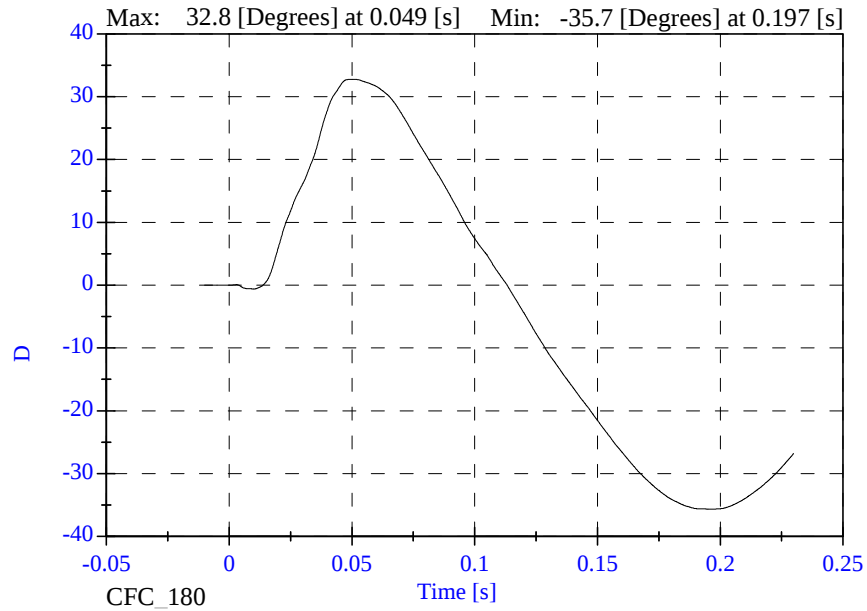


11-20-02

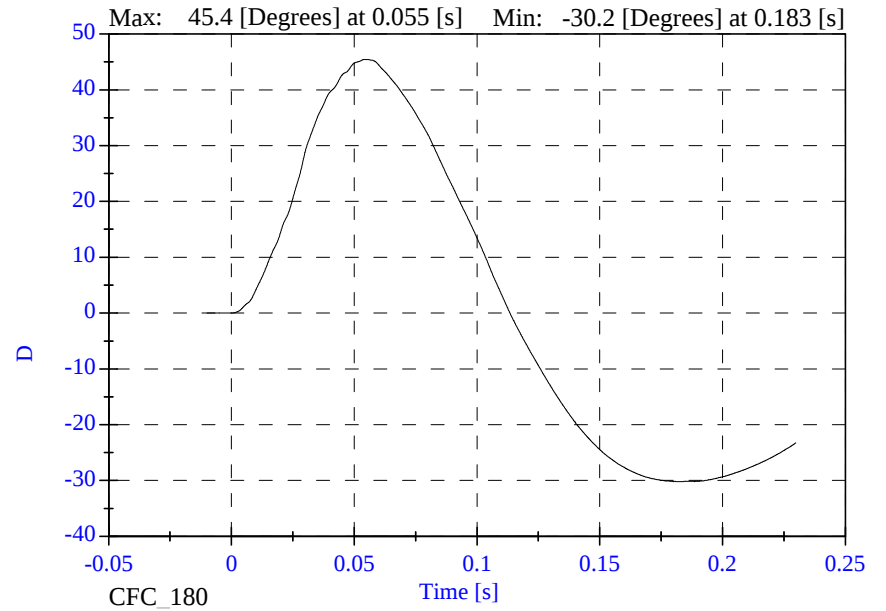
Pendulum Velocity



Head Rotation

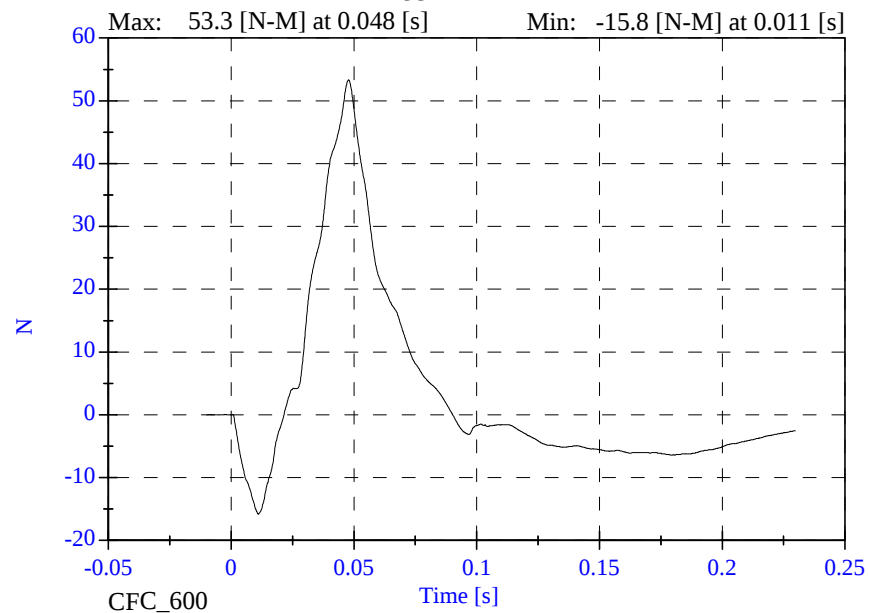


Arm Rotation



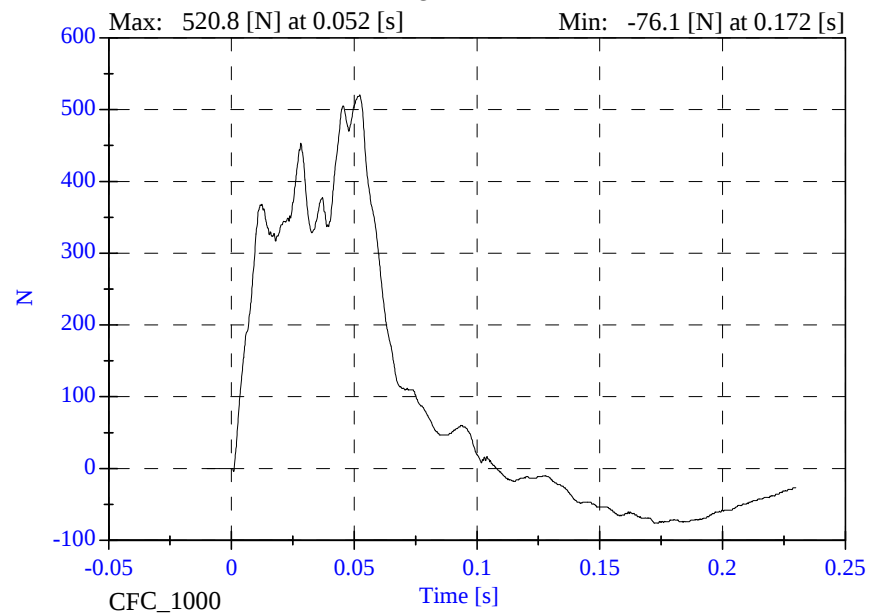
142 Neck Flex

Neck Moment Y

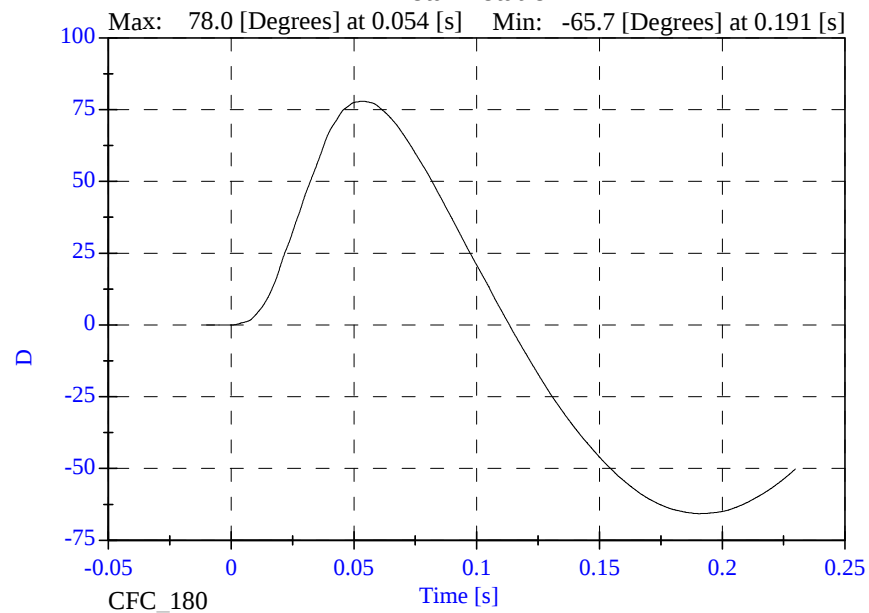


11-20-02

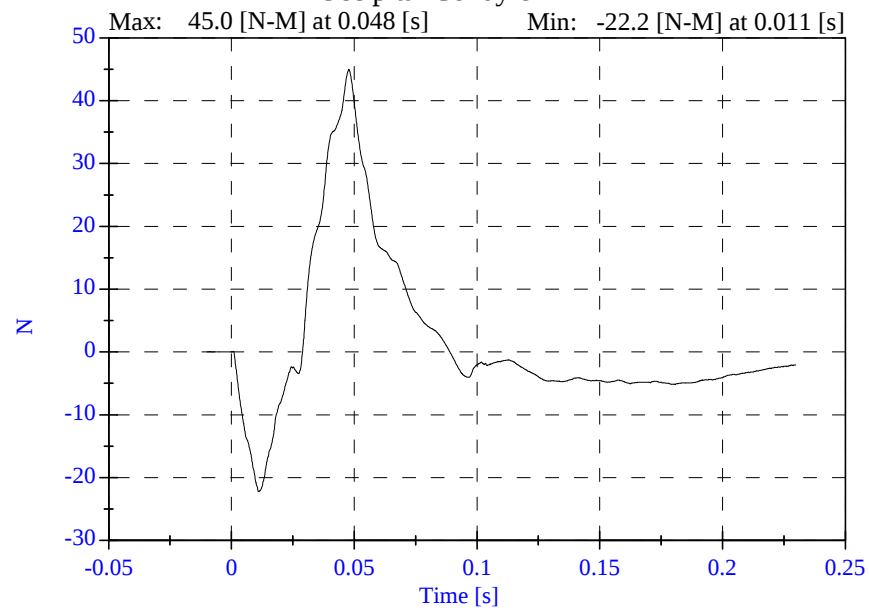
Neck Force X



Total Rotation



Occipital Condyle Moment



Spine_Flexion_test.txt

142 Lumbar Spine Flexion

Date: 11-21-02

Result: 45 degrees - 40.8 lbf

Certified By: B.Swiecicki Date: 11-21-02

SECTION 6

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

P572 P INSTRUMENTATION

	POSITION #3 (RIGHT) SERIAL NO.: 142		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	ENTRAN	AC-99108-F29	11/11/02
HEAD AY	ENTRAN	AC-99102-F12	11/11/02
HEAD AZ	ENTRAN	AC-00L13-F03	11/11/02
HEAD RAZ	ENTRAN	AC-98G18-F18	11/11/02
UPPER NECK FX	DENTON	LC-213-FX	10/14/02
UPPER NECK FY	DENTON	LC-213-FY	10/14/02
UPPER NECK FZ	DENTON	LC-213-FZ	10/14/02
UPPER NECK MX	DENTON	LC-213-MX	10/14/02
UPPER NECK MY	DENTON	LC-213-MY	10/14/02
UPPER NECK MZ	DENTON	LC-213-MZ	10/14/02
LOWER NECK FX	DENTON	LC-214FX	10/14/02
LOWER NECK FY	DENTON	LC-214-FY	10/14/02
LOWER NECK FZ	DENTON	LC-214-FZ	10/15/02
LOWER NECK MX	DENTON	LC-214-MX	10/15/02
LOWER NECK MY	DENTON	LC-214-MY	10/15/02
LOWER NECK MZ	DENTON	LC-214-MZ	10/15/02
CHEST AX	ENTRAN	AC-99108-F30	11/11/02
CHEST AY	ENTRAN	AC-99108-F28	11/11/02
CHEST AZ	ENTRAN	AC-99H30-Z04	11/11/02
CHEST DISPLACEMENT X	SERVO	DS-142	11/13/02
PELVIS AX	ENTRAN	AC-99102-F06	11/11/02
PELVIS AY	ENTRAN	AC-99102-F15	11/11/02
PELVIS AZ	ENTRAN	AC-99G29-Q13	11/11/02

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
P3 CRS (X)	ENDEVCO	AC-P23138	09/17/02
P3 CRS (Y)	ENDEVCO	AC-P19253	09/17/02
P3 CRS (Z)	ENDEVCO	AC-P21392	09/17/02

REMARKS: None