REPORT NUMBER: SNCAP-CAL-01-1

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST

NISSAN MOTOR CO. LTD.
2001 NISSAN FRONTIER
4-DOOR PICK-UP

NHTSA NUMBER: M15200

VERIDIAN ENGINEERING TEST NUMBER: 8506-14

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

November 9, 2000

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Performance Standards
Office of Crashworthiness Standards
Mail Code: NPS-10
400 Seventh Street, SW, Room No. 5313
Washington, DC 20590

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FINAL REPORT ACCEPTANCE BY:

Accepted By: _____

Acceptance Date: _____

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Final Report of new Car Assessment Program Side Impact Testing of a 2001 Nissan Frontier 4-door Pick-Up NHTSA No.: M15200	November 9, 2000
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15. Supplementary Notes

16. Abstract

A 55/28 kph 90^0 Impact Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2001 Nissan Frontier 4-door Pick-Up in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the generation of consumer information on vehicle side crash protection. This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on November 9, 2000.

The impact velocity of the Moving Deformable Barrier (MDB) was 62.43 kph, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was $21\,^0$C. The target vehicle post-test maximum crush was 237 mm at level 1.

The test or target vehicle's performance is given below:

	Front SID		Rear SID	
Left Upper Rib Acceleration:	36	g's	51	g's
Left Lower Rib Acceleration:	35	g's	48	g's
Lower Spine Acceleration:	49	g's	44	g's
Thoracic Trauma Index (TTI):	43	g's	47	g's
Pelvis Acceleration (PEV):	88	g's	62	g's

The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.

17. Key Words	18. Distribution Statement
New Car Assessment Program (NCAP) Side Impact MDB Side Impact Dummy (SID)	Copies of this report are available from: 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 TEST PROCEDURE

This side impact test is part of the FY2001 New Car Assessment Program Side Impact Protection sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-98-C-02001. The purpose of this test was to generate comparative side impact performance in a 2001 Nissan Frontier 4-door Pick-Up. The test was conducted in accordance with the Office of Crashworthiness Standards's Laboratory Test Procedure dated July, 1997.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 2001 Nissan Frontier 4-door Pick-Up was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 62.43 kph (38.8 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Veridian Engineering Transportation Sciences Center in Buffalo, New York on November 9, 2000. Pre- and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SIDs) are included in Appendix A.

Two restrained Side Impact Dummies (SIDs) were placed in the driver (Pos. #1) and left rear (Pos. #4) designated seating positions according to the instructions specified in the OCWS Side Impact Laboratory Test Procedure which is dated July, 1997. The side impact test was documented by one real-time camera and 9 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SIDs were instrumented with the following accelerometers:

1. Left Upper Rib (LUR) uniaxial and redundant accelerometer (Y-direction)
2. Left Lower Rib (LLR) uniaxial and redundant accelerometer (Y-direction)
3. Lower Thoracic Spine (T_{12}) uniaxial and redundant accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial and redundant accelerometer (Y-direction)
5. Head triaxial accelerometers (X-, Y- and Z-direction)

A summary of the side impact dummy (SID) configuration and verification test data can be found in Appendix C. A total of 54 channels of data were recorded. Appendix B contains the vehicle, MDB and dummy response data traces.

The following table summarizes the results of the test.

Injury Criteria	Front SID	Rear SID
TTI (g)	43	47
PEV (g)	88	62

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET 1

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2001 Nissan Frontier 4-door Pick-Up

Vehicle Body Color: Blue VIN: 1N6ED27T91C336068

Vehicle NHTSA No.: M15200 Month & Year of Manufacture: 10/00

Engine Data: 6 Cylinders; - CID; 3.3 Liters; - cc

Engine Placement: x Longitudinal; or - Lateral

Transmission: 4 Speed; - Manual; x Automatic; - Overdrive

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

Odometer Reading 174 km

Options: x A/C; x Power Steering; x Pwr.Brakes; x Pwr. Windows

DATA FROM TIRE PLACARD

Tire Pressure* (at capacity); 179 kPa FRONT

179 kPa REAR

Recommended Tire Size: P255/65R16

Tires on Test Vehicle: P255/65R16 ; Manufacturer: General

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; - 3rd Seat; 5 Total

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

Type of Front Seat Back: - Fixed; x Adjustable with x Lever or - Knob

Vehicle Max Capacity Loading = 1089 kg (A)

No. of Occupants x 68.04 kg. = 340.2 kg (B)

Vehicle Cargo Capacity = 748.8 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front	=	479 kg	Left Rear	=	391.5 kg
Right Front	=	496.5 kg	Right Rear	=	407.5 kg
TOTAL FRONT	=	975.5 kg	TOTAL REAR	=	799.0 kg
% of Total Weight	=	55.0 %	% of Total Weight	=	45.0 %

TOTAL WEIGHT = 1774.5 kg

* Tire pressure used in test.

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max. Fluids			= 1774.5	kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle		136.1 kg maximum	= 136.1	kg (B)
Weight of instrumented Side Impact Dummies (1 or 2 X	81.2 kg)		= 162.4	kg (C)
TEST VEHICLE TARGET WEIGHT:			= 2073.0	kg (A+B+C)

FULLY LOADED TEST VEHICLE (UDVW + 1 or 2 SID(s) + CARGO):

Left Front	=	533.5 kg	Left Rear	=	533 kg
Right Front	=	496 kg	Right Rear	=	516 kg
TOTAL FRONT	=	1029.5 kg	TOTAL REAR	=	1049.0 kg
% of Total Weight	=	49.5 %	% of Total Weight	=	50.5 %

TOTAL TEST WEIGHT = 2078.5 kg

AS TESTED WEIGHT OF TEST VEHICLE (1 OR 2 SID(s) + CARGO + EQUIPMENT & INSTRUMENTATION):

Left Front	=	519.0 kg	Left Rear	=	521.5 kg
Right Front	=	505.5 kg	Right Rear	=	521.0 kg
TOTAL FRONT	=	1024.5 kg	TOTAL REAR	=	1042.5 kg
% of Total Weight	=	49.6 %	% of Total Weight	=	50.4 %

TOTAL TEST WEIGHT = 2067.0 kg

TEST VEHICLE ATTITUDE (all dimensions in millimeters);

AS DELIVERED:

Left Front 870 Right Front 875 Left Rear 866 Right Rear 860

FULLY LOADED:

Left Front 852 Right Front 868 Left Rear 812 Right Rear 820

READY FOR TEST:

Left Front 856 Right Front 868 Left Rear 820 Right Rear 821

Test Vehicle Wheelbase: 2956 millimeters

C.G. = 1490.9 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4975 millimeters

Left Side = 4975 millimeters

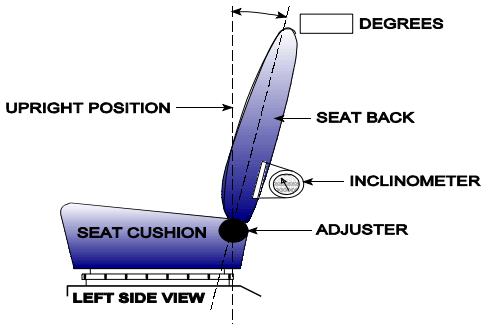
Centerline = 5064 millimeters

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

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

FRONT SEAT CUSHION PLACEMENT: Placed in 7th notch, mechanical middle

Total Length of Adjustment Travel: 145 millimeters

Total Number of Adjustment Positions or Detents: 13 detents

FRONT SEAT BACK ADJUSTMENT POSITION: Reclined seat back 7 notches from 1st detent

Seat Back Torso Angle: 25 degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: none millimeters

Seat Back Adjustment Position: Fixed

ADJUSTABLE STEERING COLUMN POSITION: Midposition

WINDOW POSITIONS: Left Front: closed Left Rear: closed

Right Front: removed Right Rear: removed

Note: Windows will be in closed position on struck side of test vehicle and in open position on opposite side.

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

73.4 liters (Fuel Tank Usable Capacity)

67.9 liters used for test (92%-94% of Fuel Tank Usable Capacity)

LOCATION OF IMPACT POINT ON TEST VEHICLE SIDE TO BE IMPACTED:

Wheelbase = 2956 millimeters

Impact Point is 538 millimeters rearward of front axle centerline

(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 541 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2001 Nissan Frontier

Body Style: 4-door Pick-Up VIN: 1N6ED27T91C336068

NHTSA No.: M15200 Test Date: November 9, 2000

Overall Length = 5064 millimeters; Overall Width = 1708 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front	=	519.0 kg	Left Rear	=	521.5 kg
Right Front	=	505.5 kg	Right Rear	=	521.0 kg
TOTAL FRONT	=	1024.5 kg	TOTAL REAR	=	1042.5 kg

TOTAL VEHICLE WEIGHT 2067.0 kg

Wheelbase = 2956 millimeters

Longitudinal C.G. from Center of Front Axle = 1490.9 millimeters

Impact Angle with Respect to Impactor = 90 degrees

ACTUAL IMPACT POINT

Actual Impact Point is 3 mm rwd of nominal impact ref. line (Lateral)

Actual Impact Point is 4 mm below nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (	443	mm above ground) =	237	millimeters
2. LEVEL 2 (	732	mm above ground) =	220	millimeters
3. LEVEL 3 (	802	mm above ground) =	219	millimeters
4. LEVEL 4 (	1065	mm above ground) =	104	millimeters
5. LEVEL 5 (	1572	mm above ground) =	-50	millimeters

Maximum Post-Test Intrusion = 237 millimeters

OCCUPANTS:	Front Passenger:	Rear Passenger:
Dummy Identification	013	027
Restraints Used	3-point belt system	3-point belt system

INSTRUMENTATION:

Number of Vehicle Data Channels:		=	18
Number of Cameras:	Onboard	=	3
	Offboard	=	8
	TOTAL	=	11

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore Inc.

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

Overall Width of Framework Carriage	=	1250	millimeters
Overall Length of MDB (incl. honeycomb impact face)	=	4120	millimeters
Wheelbase of Framework Carriage	=	2590	millimeters
Tread of Framework Carriage (Front & Rear)	=	1875	millimeters
C.G. Location Rearward of Front Axle	=	1104	millimeters

MDB WEIGHT:

Left Front	=	409.5	kg	Left Rear	=	281.5	kg
Right Front	=	372.5	kg	Right Rear	=	299.0	kg
TOTAL FRONT =		782.0	kg	TOTAL REAR	=	580.5	kg
TOTAL MDB WEIGHT =		1362.5	kg				

Impact Angle (MDB C/L to Target Vehicle C/L) = 90 degrees

Impact Speed = 62.43 kph

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	97	millimeters
2. Row B at Top of Bumper Level	=	99	millimeters
3. Row C at Mid Level	=	101	millimeters
4. Row D at Top of Stack Level	=	154	millimeters

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET 4

POST-TEST OBSERVATIONS

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

VISIBLE DUMMY CONTACT POINTS:

	LEFT FRONT SID	LEFT REAR SID
Head:	Left shoulder to side of head	Side to side window, top to roof liner
Upper Torso:	Door trim	Door trim
Lower Torso:	Door trim	Door trim
Left Knee:	Door trim	Door trim
Right Knee:	Left knee	Left knee

DOOR OPENING:

	LEFT DOOR	RIGHT DOOR
Front:	Closed / Inoperable	Closed / Operable
Rear:	Closed / Inoperable	Closed / Operable

MDB DISTANCE FROM TARGET IMPACT POINT: Vertical: 4 mm below

Horizontal: 3mm rearward

ARM REST LOCATIONS:

Front: Inboard

Rear: Inboard

SEAT MOVEMENT:

Front: Seat inboard

Rear: Seat inboard

GLAZING DAMAGE:

Windshield: None

Window: None

PILLAR PERFORMANCE:

OK

SILL SEPARATION:

OK

AIR BAG DEPLOYMENT STATUS:

	DRIVER	FRONT PASSENGER	REAR PASSENGER
FRONT	NO	NO	N/A
SIDE	-	-	N/A

OTHER NOTABLE IMPACT EFFECTS:

NONE

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

	Front Dummy ID# 013				Rear Dummy ID# 027			
	Pos. Direction		Neg. Direction		Pos. Direction		Neg. Direction	
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
HEAD ACCELERATIONS:								
Longitudinal X	7.8	33.7	-19.1	87.6	*	*	*	*
Lateral . . . . . Y	22.3	88.8	-6.6	192.1	66.9	52.7	-27.9	75.8
Vertical . . . . . Z	47.5	66	-6.7	36.6	41.5	52	-39.9	74
Resultant . . . . . R	50.6	65.8	0	-1.1	*	*	*	*
HIC	182.8				N/A			
RIB ACCELERATIONS:								
Upper Rib Lateral . . Y	35.6	35	-12	40	50.5	56.9	-4.2	171.8
Upper Rib Lateral . . Y(R)	50.8	51.3	-14.2	40	50.1	56.9	-4.1	171.9
Lower Rib Lateral . Y	35.3	34.4	-6.3	126.9	48.3	55	-6.4	103.8
Lower Rib Lateral . Y(R)	40	51.3	-6.2	126.3	49.5	55	-6.7	103.8
SPINE ACCELERATIONS:								
Lower Lateral . . . . . Y	49.4	38.8	-14.2	59.4	44.3	50	-9.9	97.5
Lower Lateral . . . . . Y(R)	47.6	38.8	-14.4	59.4	43.6	50	-9.9	97.5
PELVIC ACCELERATIONS:								
Lateral . . . . . Y	88.1	33.1	-17.2	51.3	62.2	42.5	-8.9	76.9
Lateral . . . . . Y(R)	88.6	33.1	-16.9	51.9	61.3	42.5	-8.4	76.9

REFERENCE: Positive Direction - Longitudinal (X) = forward
Lateral (Y) = to right
Vertical (Z) = up
Negative Direction - Longitudinal (X) = rearward
Lateral (Y) = to left
Vertical (Z) = down

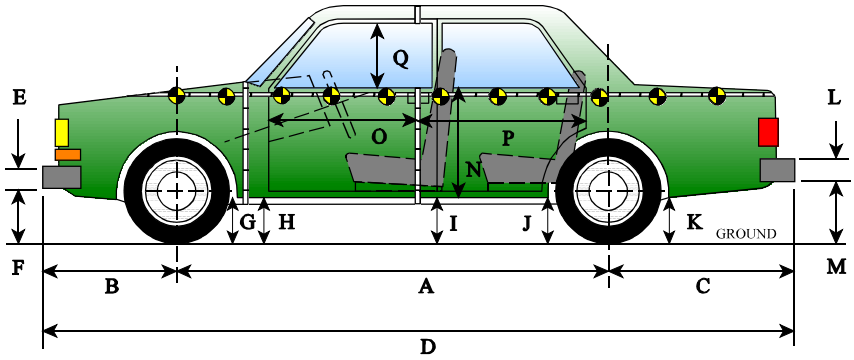
Note: Above data has been FIR filtered, Y(R) denotes redundant Y direction accelerometer.
Head Accelerations are filtered at SAE Class 1000.

* Passenger head x did not record

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



LEFT SIDE VIEW

NOTE: all dimensions are in millimeters with tolerance of ±3 mm

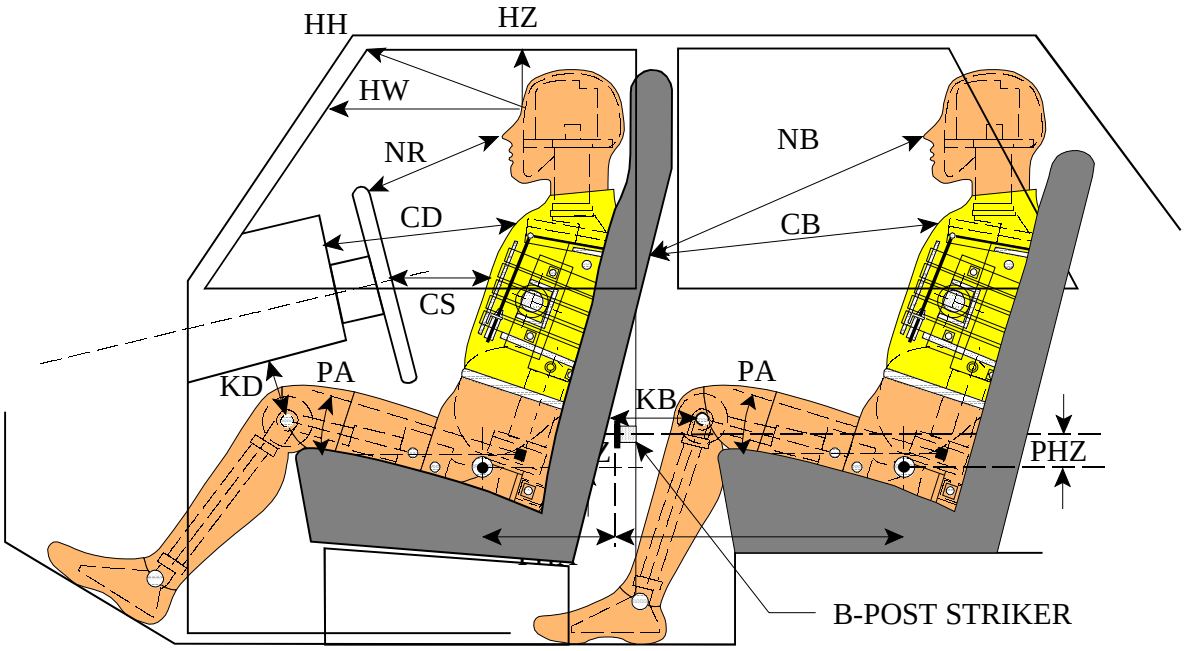
	PRE-TEST (as delivered)	PRE-TEST (as tested)	POST-TEST (as tested)	▵ CHANGE
A	2956	-	2954	-2
B	879	-	878	-1
C	1229	-	1174	-55
D	5064	-	5006	-58
E	475	-	475	0
F	419	412	419	7
G	424	392	434	42
H	424	392	434	42
I	431	393	414	21
J1	434	389	409	20
J2	457	413	432	19
K	489	437	486	49
L	220	-	220	0
M	464	418	421	3
N	681	-	646	-35
O	885	-	881	-4
P	1043	-	997	-46
Q	407	-	407	0
R	4975	-	4969	-6
S	4975	-	4914	-61
T	1708	-	1505	-203

D = Length at Centerline E&L = Bumper Thickness R = Right Side Length S = Left Side Length
T = Width at B-Pillar J1 = To Pinch Weld J2 = To Sill

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



LEFT SIDE VIEW

NOTE: 2-DOOR VEHICLE SHOWN. REAR DUMMY PHX & PHZ MEASUREMENTS FOR A 4-DOOR VEHICLE WOULD USE THE C-POST STRIKER AS A REFERENCE POINT

NOTE: All dimensions are in millimeters with tolerance of ±3 mm

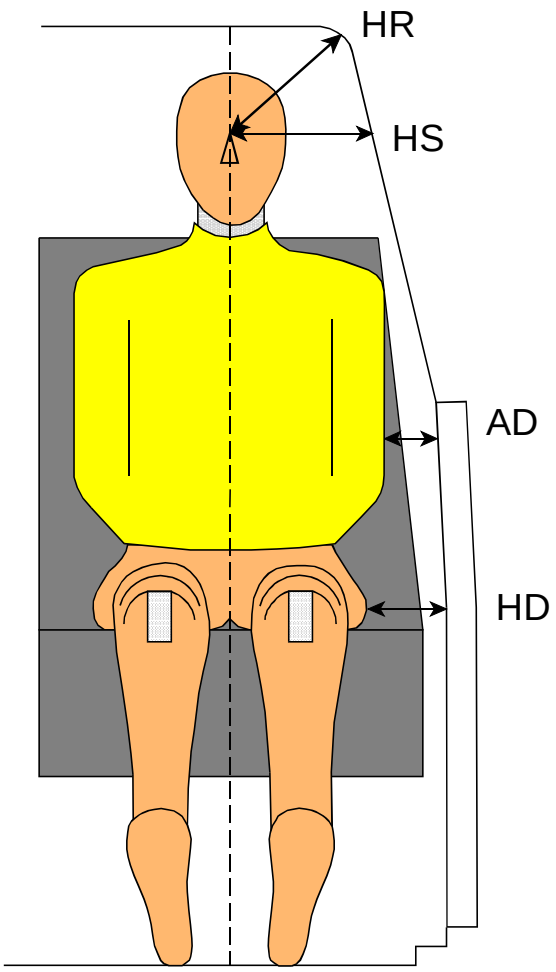
	DRIVER ID# 013	LEFT REAR PASS. ID# 027
HH	434	N/A
HW	642	N/A
HZ	190	159
NR/NB	430	483
CD/CB	576	438
CS	301	N/A
KDL(KDA°)/KBL(KDA°)	248 / (25 °)	155 / (25 °)
KDR(KBA°)/KBR(KBA°)	243 / (34 °)	152 / (36 °)
PA°	23.2 °	23.9 °
PHX	230	212
PHZ	90	44

Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



NOTE: All dimensions are in millimeters with tolerance of ±3 mm

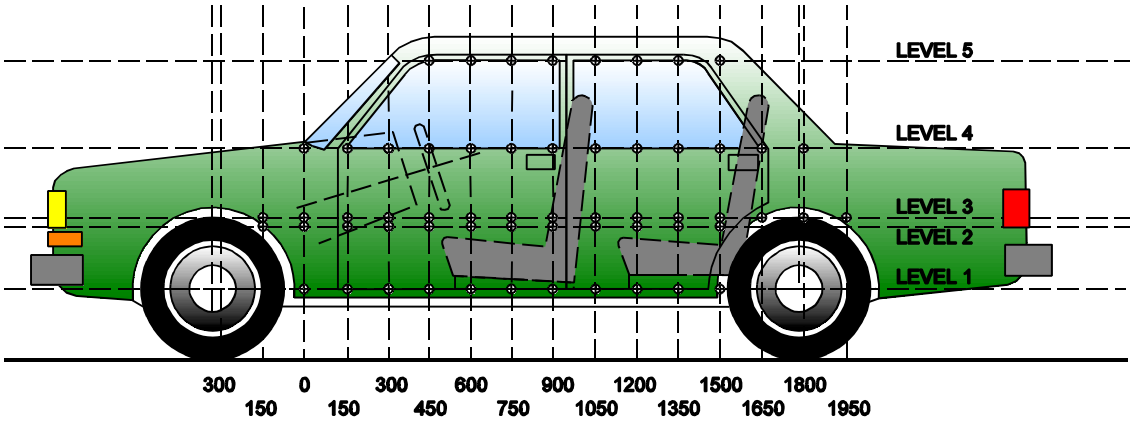
	DRIVER ID # 013	LEFT REAR PASS. ID # 027
HR	245	237
HS	307	307
AD*	LOWER: 85 UPPER: 88	LOWER: 112 UPPER: 107
HD	148	193

* Lower measurement is taken laterally at the center of the lower rib accelerometer height from the SID arm segment to the closest part of the vehicle side.
Upper measurement is taken laterally at the center of the upper rib accelerometer height from the SID arm segment to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



LEFT SIDE VIEW

NOTE: All measurements are in millimeters (mm)

LEVEL 5 - WINDOW TOP
LEVEL 4 - WINDOW SILL
LEVEL 3 - MID-DOOR
LEVEL 2 - OCCUPANT H-POINT
LEVEL 1 - AXLE CENTERLINE HEIGHT OR SILL TOP HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED" CONFIGURATION.
Measurements Along the Vertical 750 mm Line Shown Above:

Level 5 @ Window Top	=	1572	millimeters
Level 4 @ Window Sill	=	1065	millimeters
Level 3 @ Mid Door	=	802	millimeters
Level 2 @ Occupant H-Point	=	732	millimeters
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	443	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

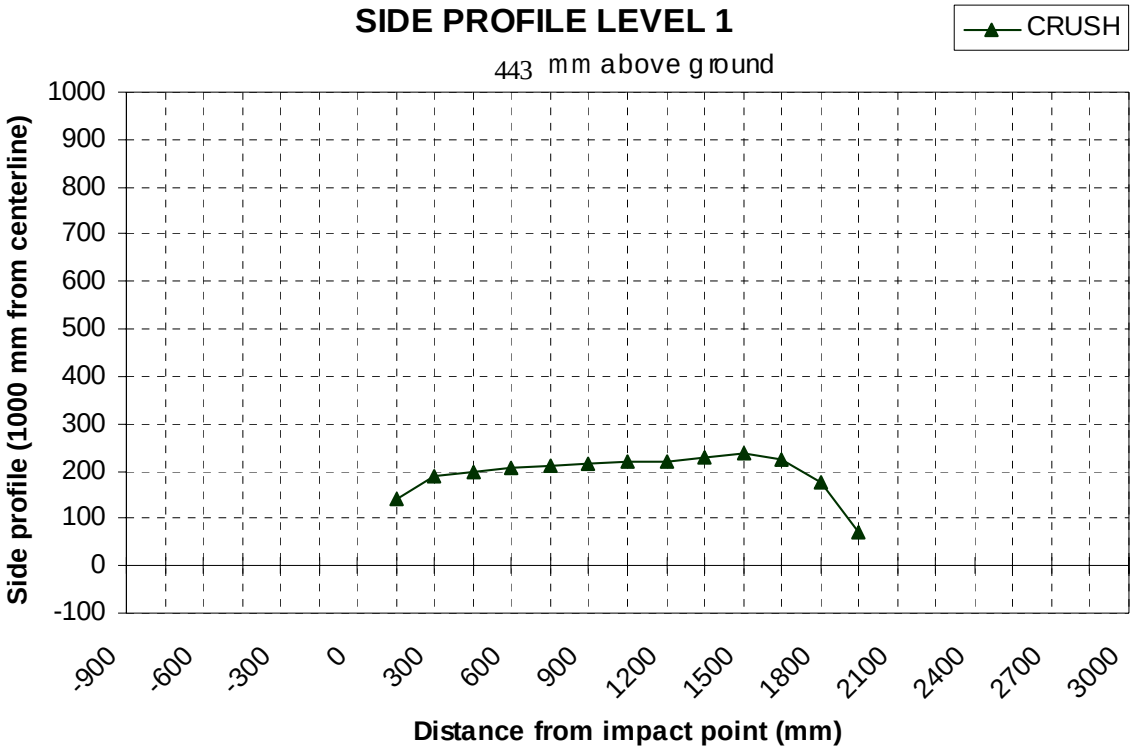
NOTE: All dimensions are in millimeters with a tolerance of ±3 mm

			DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																										
LEVEL	HEIGHT (mm)		-900	-750	-600	-450	-300	-150	0	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000
LEVEL 1	443	PRE	--	--	--	--	--	--	--	253	250	250	248	247	245	243	243	243	244	244	242	240	--	--	--	--	--	--	--
SIDE		POST	--	--	--	--	--	--	--	396	438	450	454	460	462	461	463	470	481	470	418	309	--	--	--	--	--	--	--
SILL		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	143	188	200	206	213	217	218	220	227	237	226	176	69	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LEVEL 2	732	PRE	161	--	--	--	--	131	188	189	191	188	188	187	187	185	187	185	185	185	184	184	136	--	--	--	139	149	191
H		POST	120	--	--	--	--	149	224	290	321	353	381	399	407	398	383	392	402	388	324	235	-85	--	--	--	-124	-121	-91
POINT		CRUSH	-41	N/A	N/A	N/A	N/A	18	36	101	130	165	193	212	220	213	196	207	217	203	140	51	-221	N/A	N/A	N/A	-263	-270	-282
LEVEL 3	802	PRE	171	--	--	--	126	140	185	185	184	182	179	180	182	179	179	179	176	175	174	175	147	127	129	128	137	156	188
MID		POST	131	--	--	--	130	153	217	303	331	356	373	374	382	390	365	398	387	357	304	229	-76	-105	-117	-127	-129	-116	-104
DOOR		CRUSH	-40	N/A	N/A	N/A	4	13	32	118	147	174	194	194	200	211	186	219	211	182	130	54	-223	-232	-246	-255	-266	-272	-292
LEVEL 4	1065	PRE	275	257	246	238	229	229	220	221	219	215	217	215	213	214	214	212	213	213	212	210	212	210	212	212	212	211	216
WINDOW		POST	230	216	217	213	213	215	219	234	244	248	257	267	278	298	318	287	254	228	210	214	-3	-12	-18	-26	-33	-45	-55
SILL		CRUSH	-45	-41	-29	-25	-16	-14	-1	13	25	33	40	52	65	84	104	75	41	15	-2	4	-215	-222	-230	-238	-245	-256	-271
LEVEL 5	1572	PRE	--	--	--	--	--	--	--	--	--	--	387	383	381	382	379	377	375	375	374	--	--	--	--	--	--	--	--	--
WINDOW		POST	####	--	--	--	--	--	--	--	--	--	282	300	315	332	328	303	276	253	231	--	--	--	--	--	--	--	--	--
TOP		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-105	-83	-66	-50	-51	-74	-99	-122	-143	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

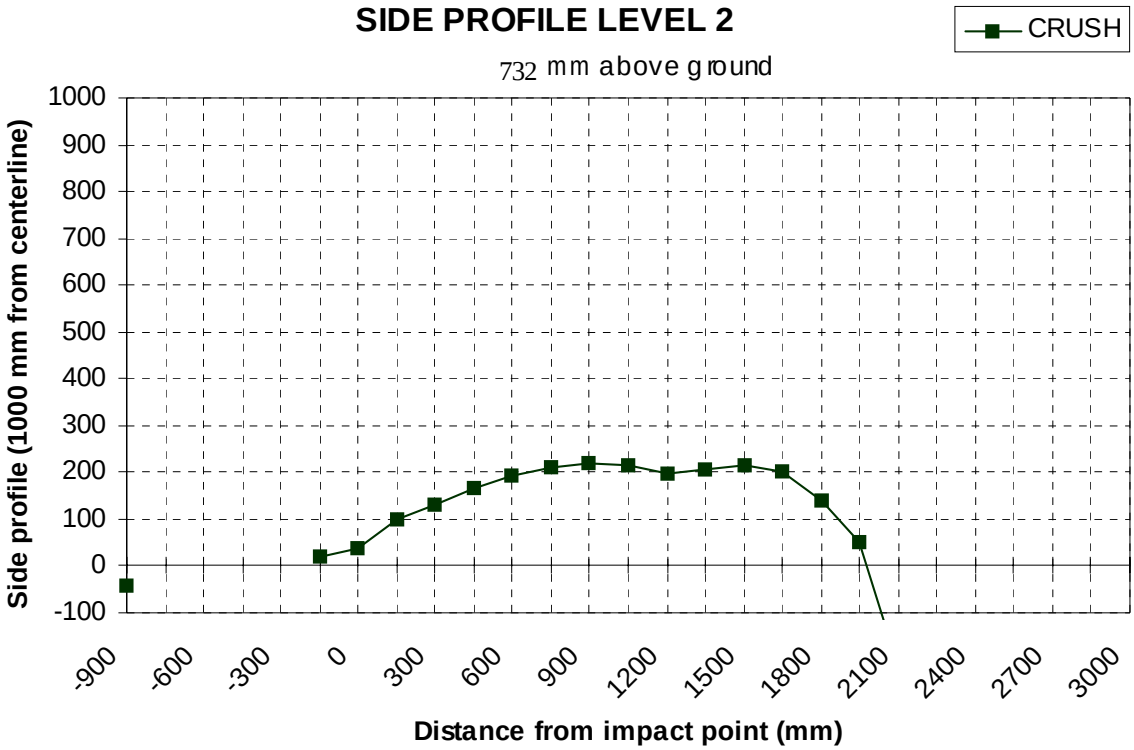
Vehicle: 2001 Nissan Frontier NHTSA No. No.



DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

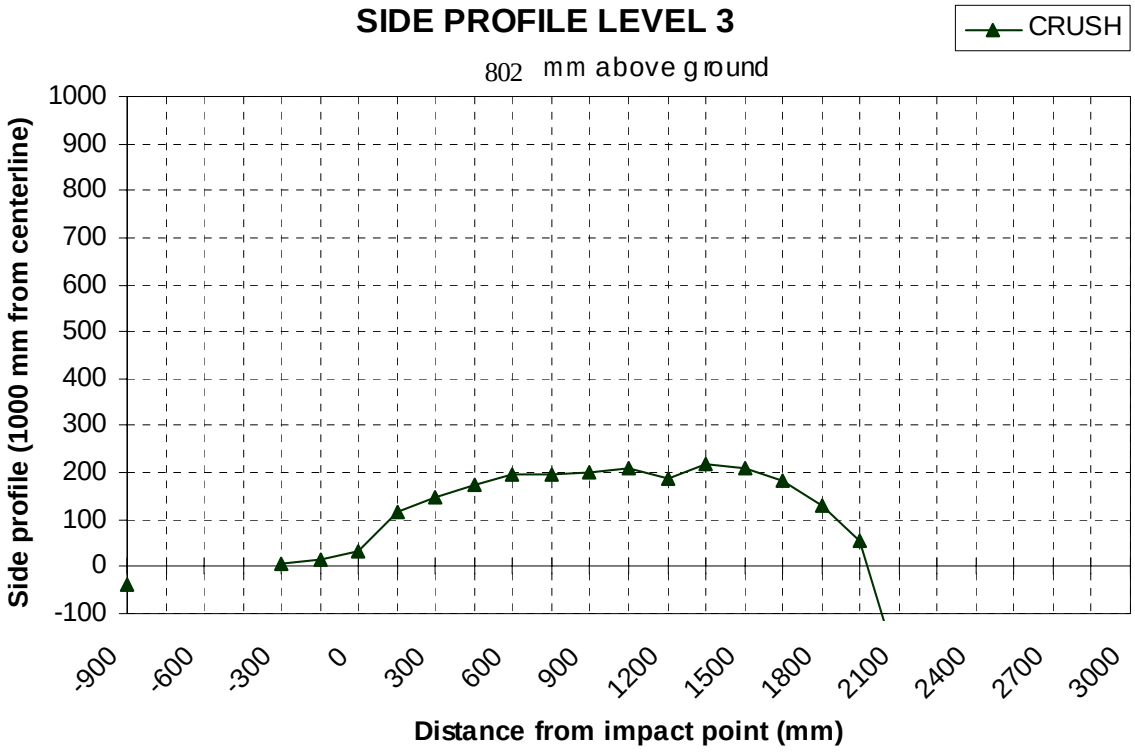
Vehicle: 2001 Nissan Frontier NHTSA No. M15200



DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

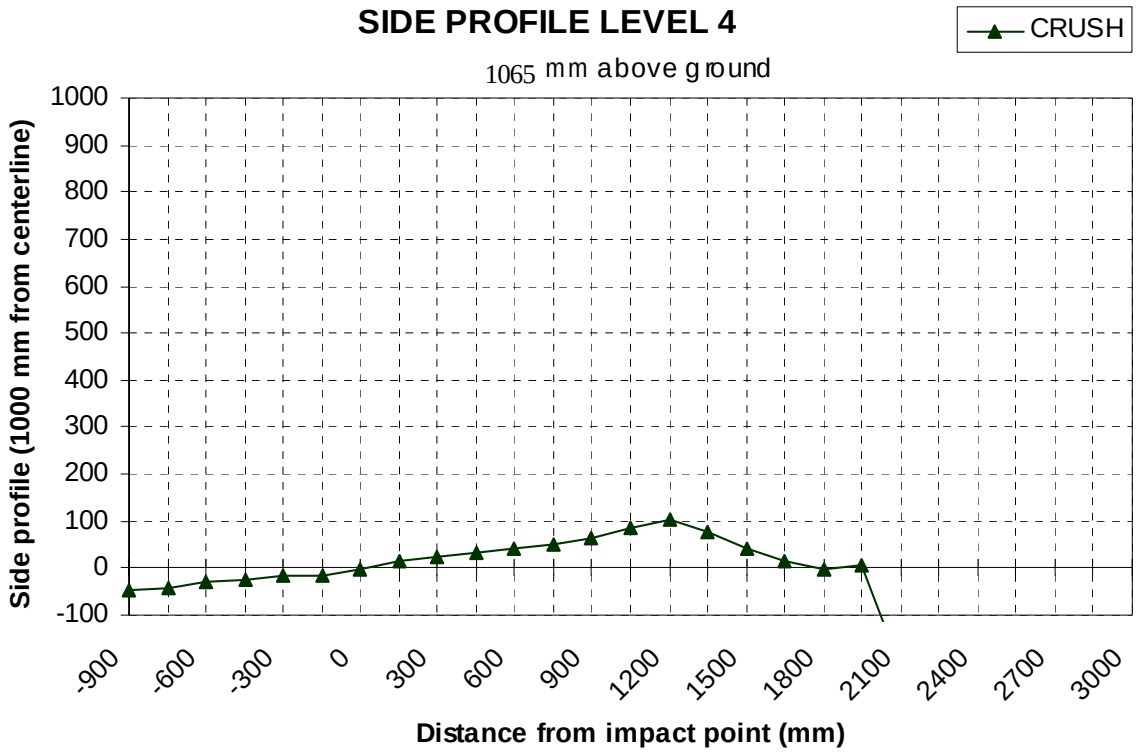
Vehicle: 2001 Nissan Frontier NHTSA No. M15200



DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

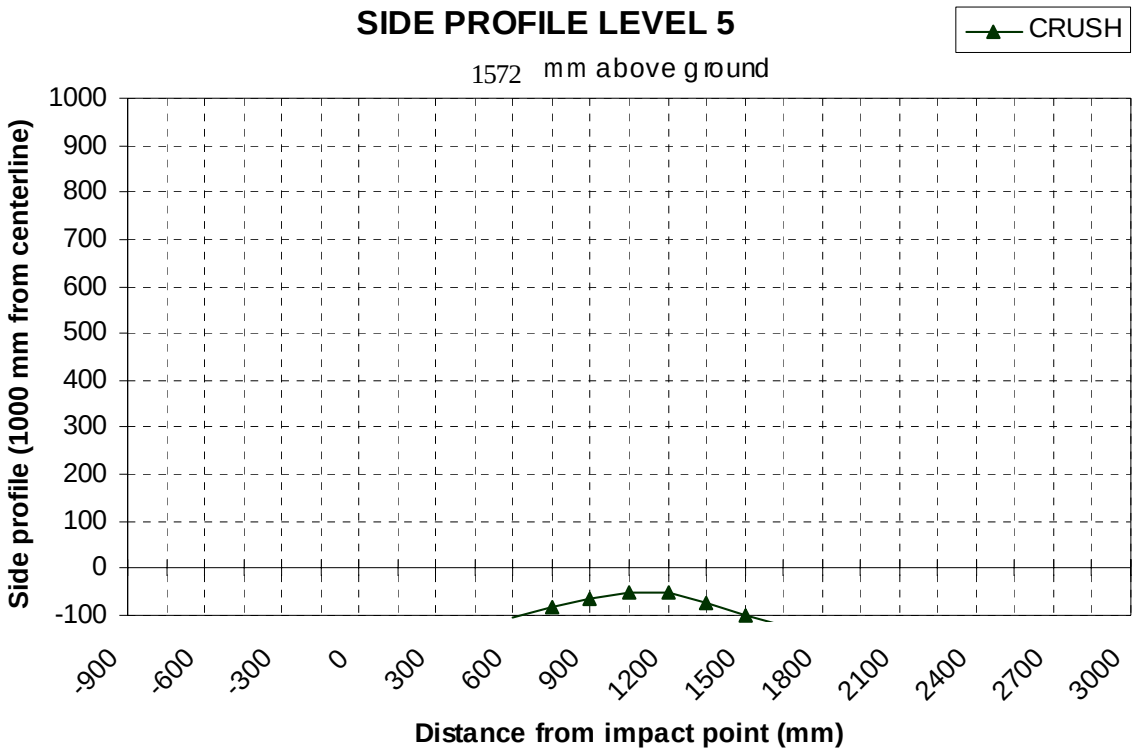
Vehicle: 2001 Nissan Frontier NHTSA No. M15200



DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

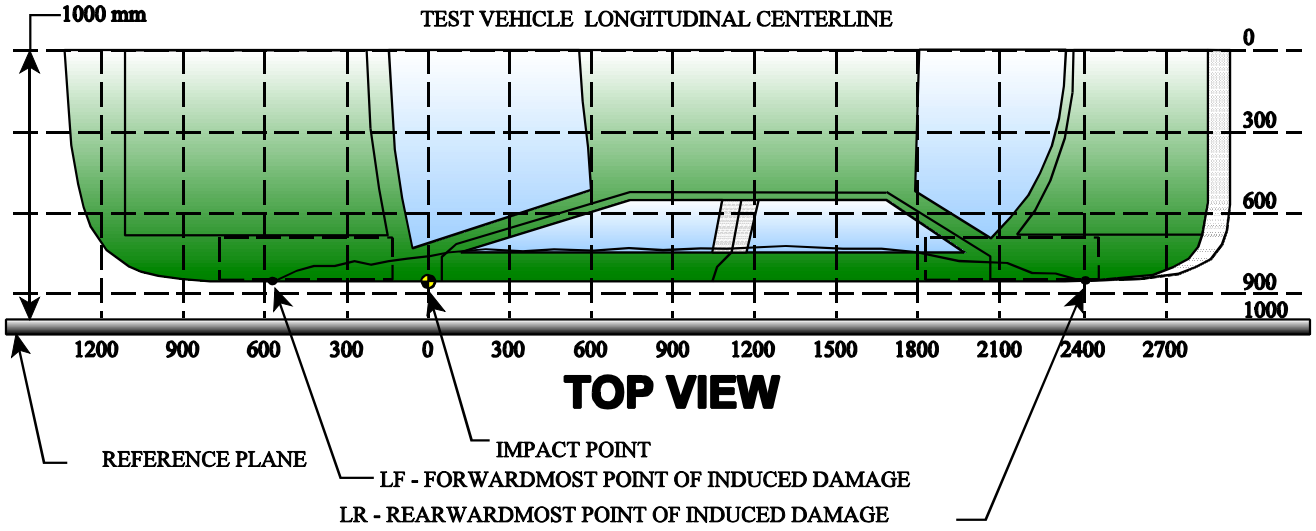
Vehicle: 2001 Nissan Frontier NHTSA No. M15200



DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



MEASUREMENT CONVENTIONS:
Forward of the impact point (towards front of vehicle) is considered negative (—).
Rearward of the impact point (toward rearend of vehicle) is considered positive (+).

NOTE: All dimensions are in millimeters with tolerance of ±3 mm.

DPD MEASUREMENTS		POST TEST (mm)	PRETEST (mm)	STATIC CRUSH (mm)
1	(LF = -300 mm)	130	126	4
2	320	397	253	144
3	940	454	248	206
4	1560	461	243	218
5	2180	480	244	236
6	(LR = 2800 mm)	178	170	8

DATA SHEET 12

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE
(Grid as looking at MDB from front)

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

NOTE: All dimensions are in millimeters with a tolerance of ±3 mm

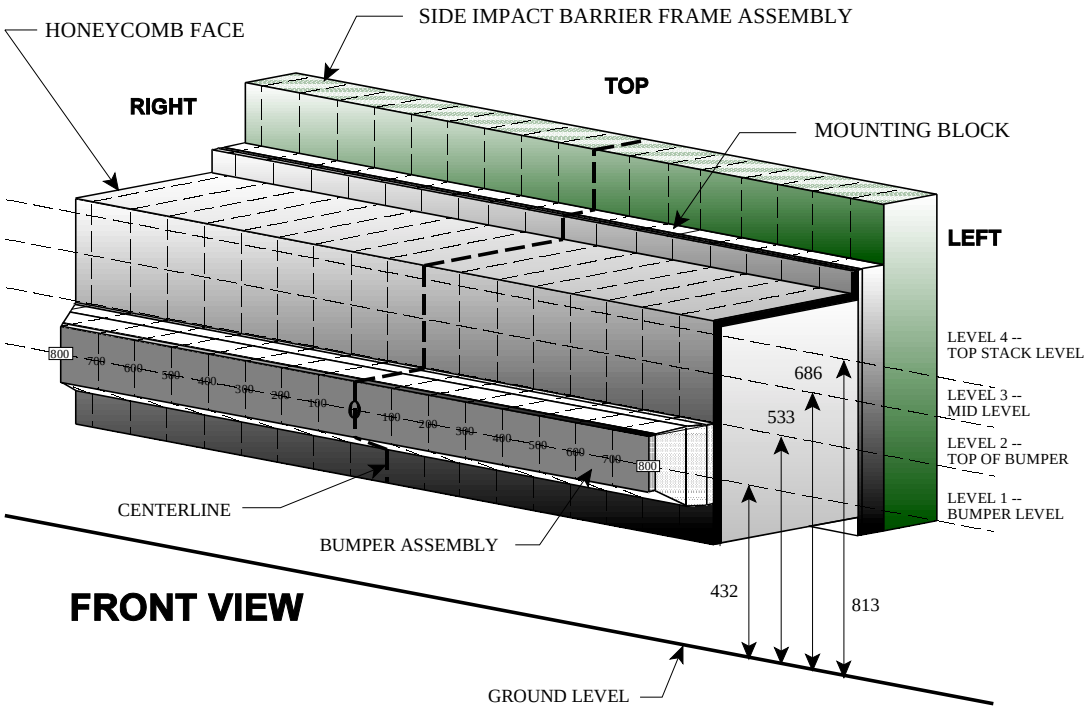
			DISTANCE RIGHT OF CENTER (mm)									DISTANCE LEFT OF CENTER (mm)							
LEVEL	HEIGHT AT CL (mm)*		800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	813	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	773	710	679	661	652	653	673	672	644	637	641	648	658	670	690	715	737
		CRUSH	154	91	60	42	33	34	54	53	25	18	22	29	39	51	71	96	118
LEVEL 3 MID LEVEL	686	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	720	692	679	646	631	625	628	635	632	629	630	634	642	645	654	671	695
		CRUSH	101	73	60	27	12	6	9	16	13	10	11	15	23	26	35	52	76
LEVEL 2 TOP BUMPER	533	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	718	683	672	667	667	675	676	677	678	682	685	692	696	696	697	705	713
		CRUSH	99	64	53	48	48	56	57	58	59	63	66	73	77	77	78	86	94
LEVEL 1 MID BUMPER	432	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	518	519	535
		POST	629	585	569	566	567	568	573	579	577	576	580	582	586	592	600	613	632
		CRUSH	94	66	51	48	49	50	55	61	59	58	62	64	68	74	82	94	97

*Heights measured above ground level.

DATA SHEET 12 (continued)

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

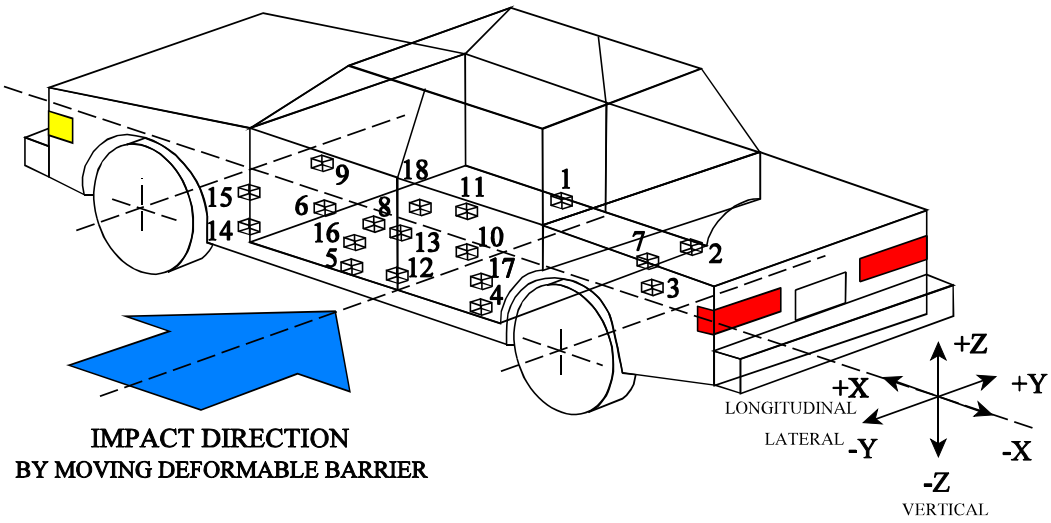


NOTE: Dimensions are shown in millimeters, mm

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



1-Right Side Sill @ Front Seat
2-Right Side Sill @ Rear Seat
3-Rear Floorpan Above Axle
4-Left Side Sill @ Rear Seat
5-Left Side Sill @ Front Seat
6-Left Front Door on Centerline
7-Right Rear Occupant Compartment
8-Midrear of Left Front Door
9-Left Front Door Upper Centerline
10-Midrear of Left Rear Door
11-Left Rear Door Upper Centerline
12-Left Lower B-Pillar
13-Left Middle B-Pillar
14-Left Lower A-Pillar
15-Left Middle A-Pillar
16-Front Seat Track
17-Rear Seat Track
18-Vehicle CG

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

Accel. No.	Location	Coordinates (mm)±3 mm				Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*		Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
1	Right Side Sill at Front Seat	3271	565	544	pos.	2.8	21.4	33.3	21.9	16.4	8.7	37.4	20.6
					neg.	-5.4	30.6	-6.1	60.8	-29.7	14.3	0	-13.5
2	Right Side Sill at Rear Seat	2310	553	556	pos.	9.8	19.5	39.4	9.5	31.5	48.2	52.1	21.1
					neg.	-7.9	31.5	-11.3	58.2	-39	21	0	-12.1
3	Rear Floorpan Above Axle	1267	0	767	pos.	6.7	33.4	22	22.9	19.3	59.7	32.3	49
					neg.	-11.5	48.1	-23.8	49.1	-20.3	76.8	0	-8.6
4	Left Side Sill at Rear Seat	2310	576	556	pos.	-	-	137.9	13.9	-	-	-	-
					neg.	-	-	-51.7	29.6	-	-	-	-
5	Left Side Sill at Front Seat	3271	601	544	pos.	-	-			-	-	-	-
					neg.	-	-			-	-	-	-
6	Left Front Door on Centerline	3059	701	961	pos.	-	-	120.8	14.7	-	-	-	-
					neg.	-	-	-92.4	31.1	-	-	-	-
7	Right Rear Occupant Compartment	2430	324	556	pos.	-	-	35.2	10	-	-	-	-
					neg.	-	-	-10.3	59.4	-	-	-	-
8	Midrear of Left Front Door	2699	713	1012	pos.	-	-	143.1	11.3	-	-	-	-
					neg.	-	-	-28.9	27	-	-	-	-
9	Left Front Door Upper Centerline	3059	713	1152	pos.	-	-	89.1	20.9	-	-	-	-
					neg.	-	-	-96.7	35.7	-	-	-	-
10	Midrear of Left Rear Door	1918	711	961	pos.	-	-	8.2	41.1	-	-	-	-
					neg.	-	-	-68.7	24.6	-	-	-	-
11	Left Rear Door Upper Centerline	2191	711	1131	pos.	-	-	92.3	12.5	-	-	-	-
					neg.	-	-	-124.8	32.8	-	-	-	-

*Reference: X - Rear Bumper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Up)

**Accelerometer was not requested by COTR.

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

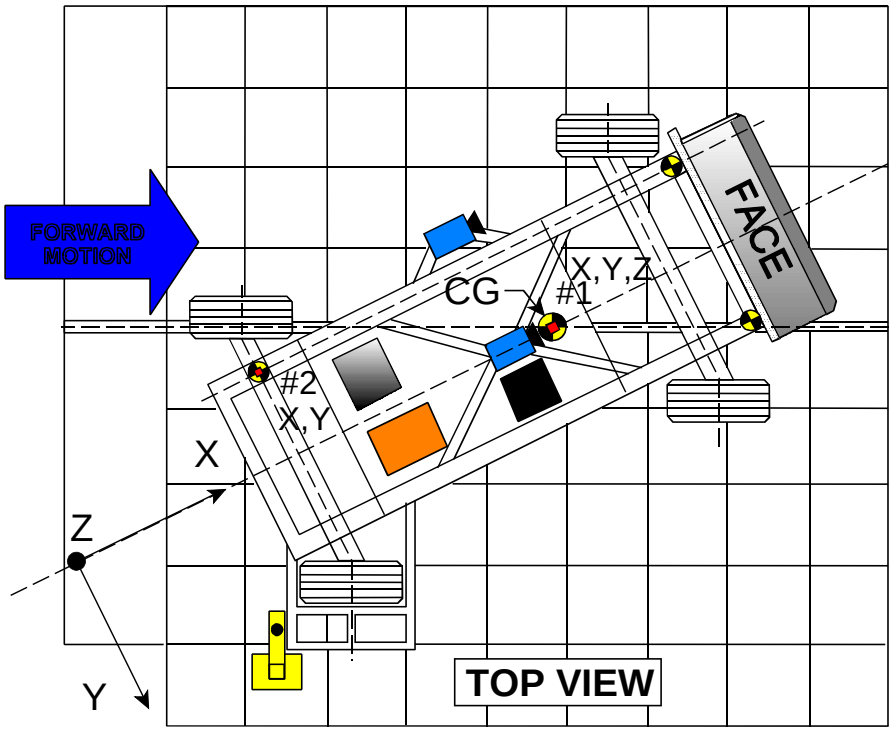
Accel. No.	Location	Coordinates (mm)±3 mm				Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*		Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
12	Left Lower B-Pillar	2468	639	1109	pos.	-	-	202.3	9.8	-	-	-	-
					neg.	-	-	-54.4	24.3	-	-	-	-
13	Left Middle B-Pillar	2468	639	586	pos.	-	-	152.5	12.2	-	-	-	-
					neg.	-	-	-50.1	38.2	-	-	-	-
14	Left Lower A-Pillar	3642	653	602	pos.	-	-	98.8	8.6	-	-	-	-
					neg.	-	-	-33.1	15	-	-	-	-
15	Left Middle A-Pillar	3610	647	1241	pos.	-	-	15.2	13.8	-	-	-	-
					neg.	-	-	-5.5	37.5	-	-	-	-
16	Front Seat Track	2704	596	1119	pos.	-	-	174.3	14	-	-	-	-
					neg.	-	-	-51.7	23.4	-	-	-	-
17	Rear Seat Track	1824	529	801	pos.	-	-	37.8	25.6	-	-	-	-
					neg.	-	-	-11.6	58.3	-	-	-	-
18	Vehicle CG	2693	0	827	pos.	28.4	27.3	134.9	24.8	18.9	21.4	135.1	24.8
					neg.	-36.4	80.4	-23.8	80.6	-30.3	10.1	0	-19.8

*Reference: X - Rear Bumper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Up)

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal... X	1859	0	330	0.7	150	-21.7	35.9
	Lateral..... Y				1.4	68	-8.4	37.7
	Vertical..... Z				18.8	20.6	-21.1	24.7
	Resultant..... R				29.5	37.3	0.1	197.3
2	Rear Frame Member							
	Longitudinal... X	386	-660	660	1.5	141.7	-21.4	38.2
	Lateral..... Y				4.4	44.2	-2.4	65.4

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

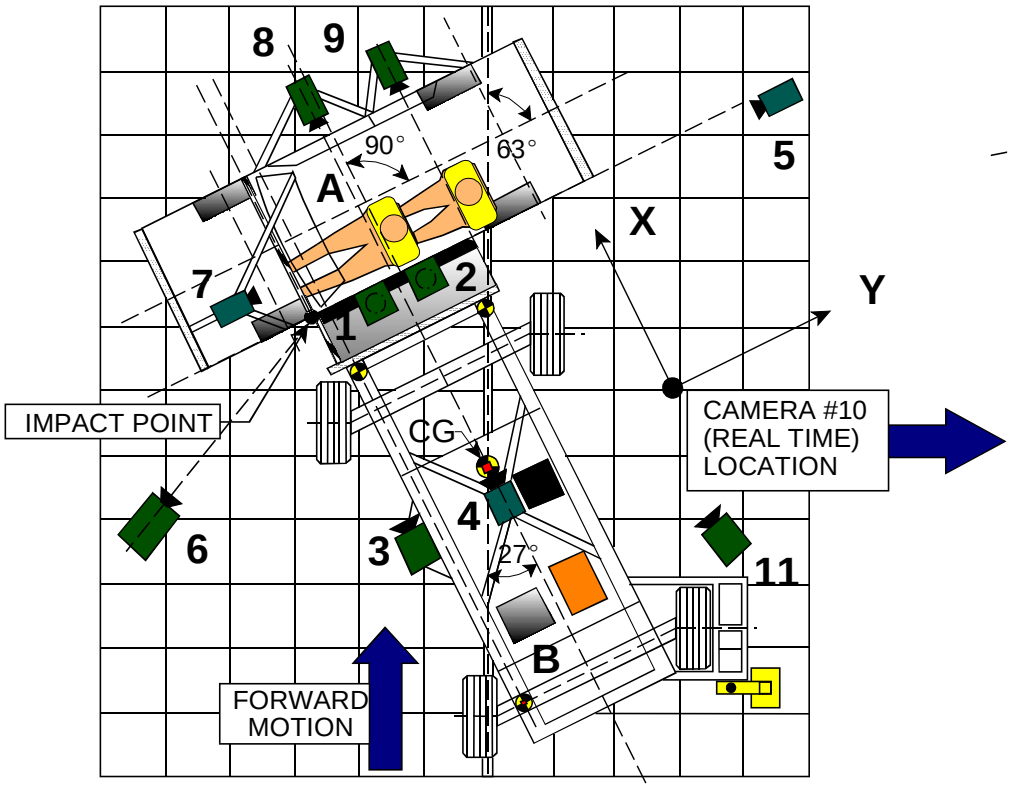
Z = Ground Level (+ Up)

All measurements accurate to within ±3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Nissan Frontier NHTSA No. M15200



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	185	2493	4880	-90	8	990
2	Overhead closeup view of impact plane	458	2639	4880	-90	12.5	1000
3	MDB onboard closeup view of impact point	1470	0	847	0	13	1000
4	MDB onboard view of driver dummy	1140	838	1586	-17	7.5	1000
5	Right side ground level overall view	-60	9556	1110	-4	25	1000
6	Left side ground level overall view	-1885	-1715	1082	-5	13	1000
7	Test vehicle onboard driver front view	529	-377	1495	-12	13	1000
8	Test vehicle onboard driver side view	1647	703	1190	-6	8	970
9	Test vehicle onboard passenger side view	1651	1508	1212	-8	8	1000
10	Real time film coverage of test	-	-	-	-	-	24
11	Secondary impact point view	-4290	2511	1060	-4	25	1000

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

+X = Forward

+Y = To Right

+Z = Upward

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA No.: M15200 TEST DATE: November 9, 2000

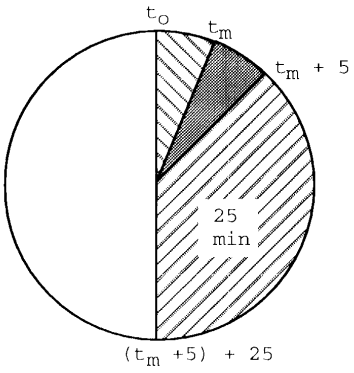
Vehicle Mfgr./Make/Model : 2001 Nissan Frontier 4-door Pick-Up

****

TEST VEHICLE IMPACT TYPE :

- \- Frontal (48.28 kph)
- \- Oblique (48.28 kph) with - ° barrier face first contacting the - side (driver/passenger)
- \- Rear Moving Barrier (48.28 kph)
- \- Lateral Moving Barrier (32.19 kph)
- X Side Impact Moving Deformable Barrier (62.0 kph) contacting the driver side side (driver/passenger)

FUEL SPILLAGE MEASUREMENT:



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

ACTUAL	MAX ALLOWED
0 g	28 g
0 g	142 g
0 g	28 g/1 min.

SOLVENT SPILLAGE DETAILS :

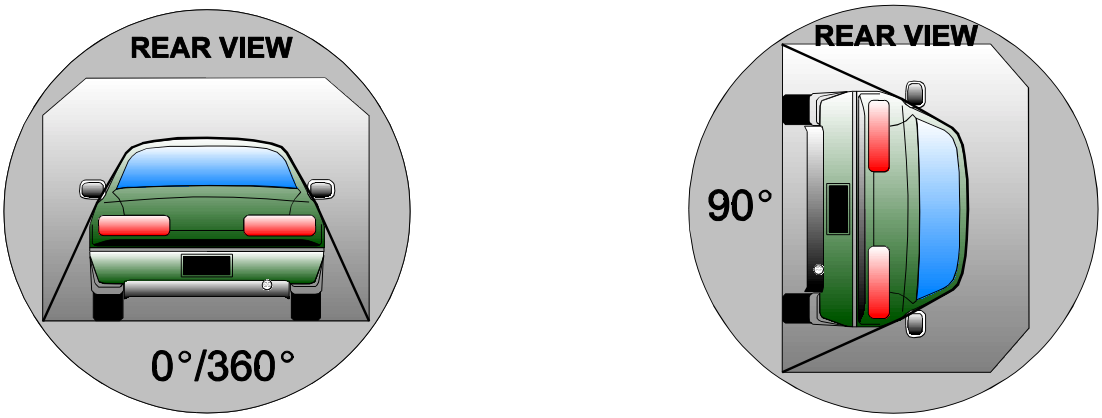
None

DATA SHEET 17

ROLLOVER DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90º Rotation Time	1	minutes	15	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
TOTAL	6	minutes	15	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

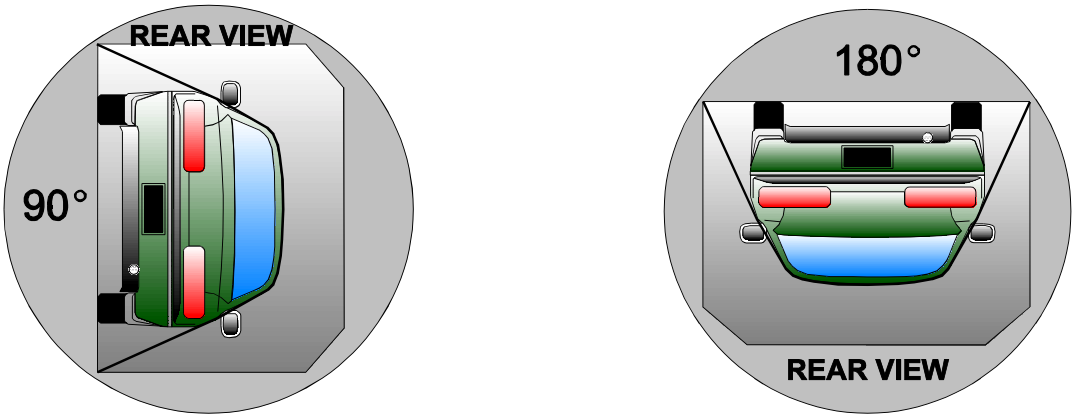
None

DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90º Rotation Time	1	minutes	3	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
TOTAL	6	minutes	3	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

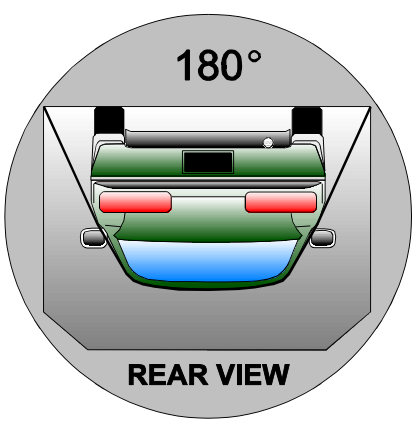
None

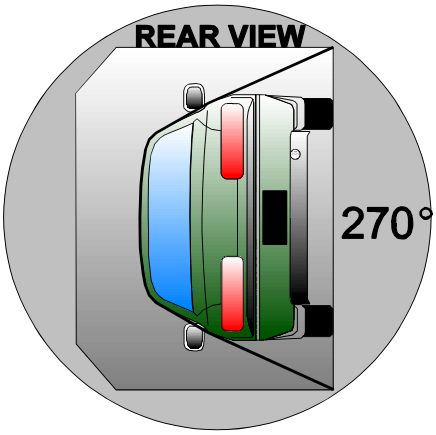
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

180 - 270 Degrees





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90º Rotation Time	1	minutes	12	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
TOTAL	6	minutes	12	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

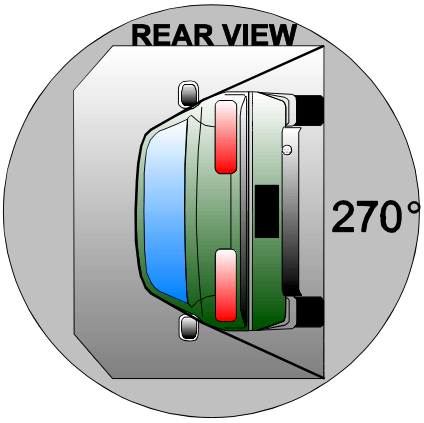
None

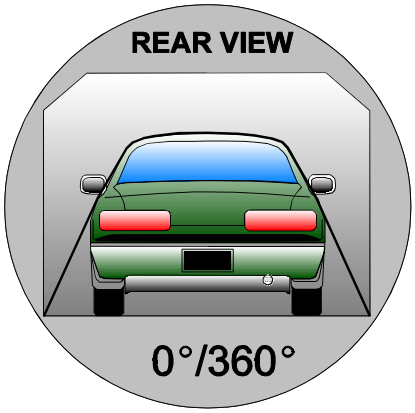
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2001 Nissan Frontier NHTSA No. M15200

270 - 360 Degrees





I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90º Rotation Time	1	minutes	12	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
TOTAL	6	minutes	12	seconds
Next whole minute interval	7	minutes		

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

First 5 minutes FROM onset of rotation	6th min.	7th min.	8th min. (if required)

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

APPENDIX A

PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Figure A-1 PRE-TEST FRONTAL VIEW OF TEST VEHICLE

Figure A-2 POST-TEST FRONTAL VIEW OF TEST VEHICLE

Figure A-3 PRE-TEST REAR VIEW OF TEST VEHICLE

Figure A-4 POST-TEST REAR VIEW OF TEST VEHICLE

Figure A-5 PRE-TEST IMPACTED SIDE VIEW OF TEST VEHICLE

Figure A-6 POST-TEST IMPACTED SIDE VIEW OF TEST VEHICLE

Figure A-7 PRE-TEST FRONTAL VIEW OF IMPACTOR FACE

Figure A-8 POST-TEST FRONTAL VIEW OF IMPACTOR FACE

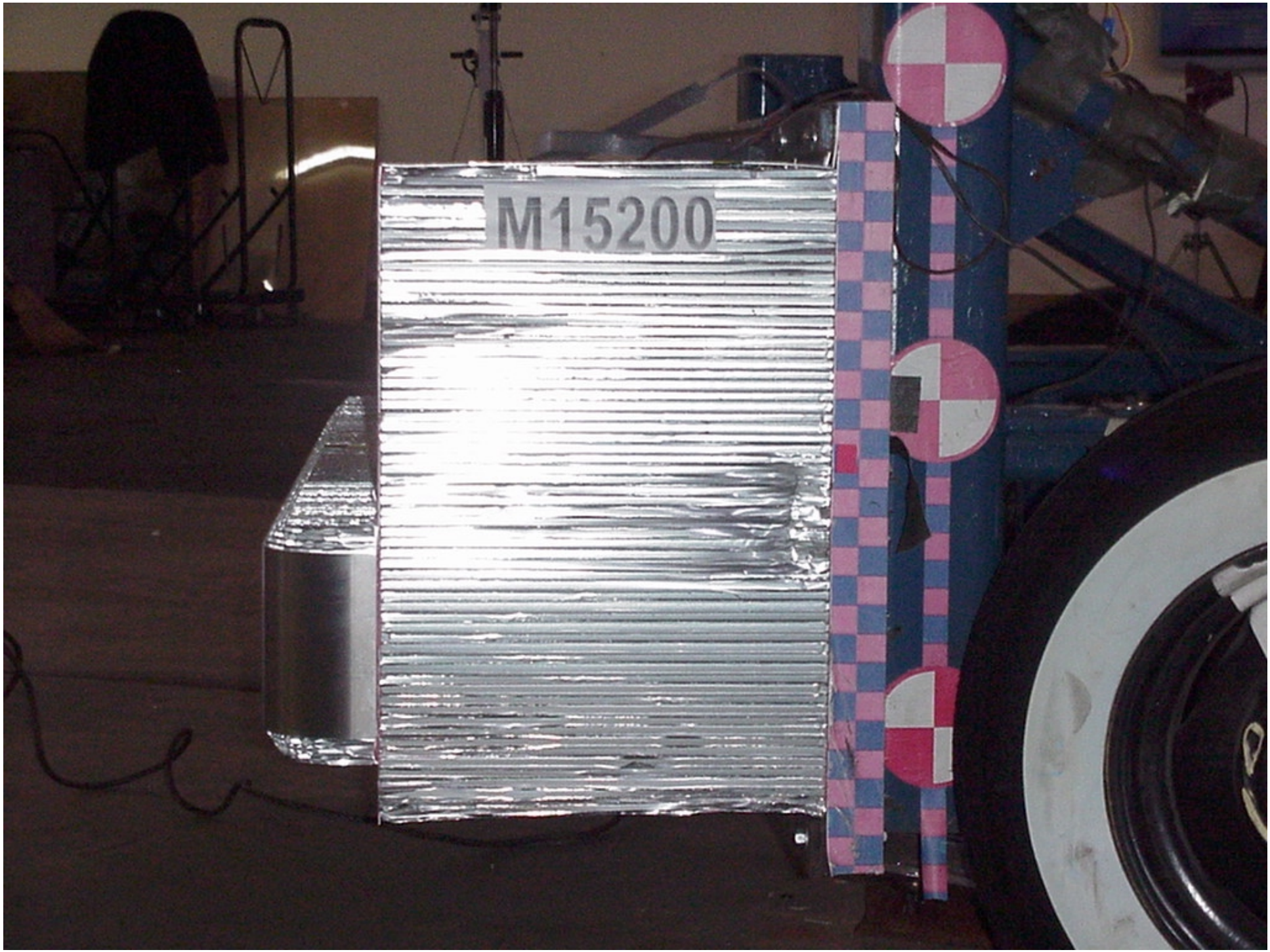


Figure A-9 PRE-TEST LEFT SIDE VIEW OF IMPACTOR FACE

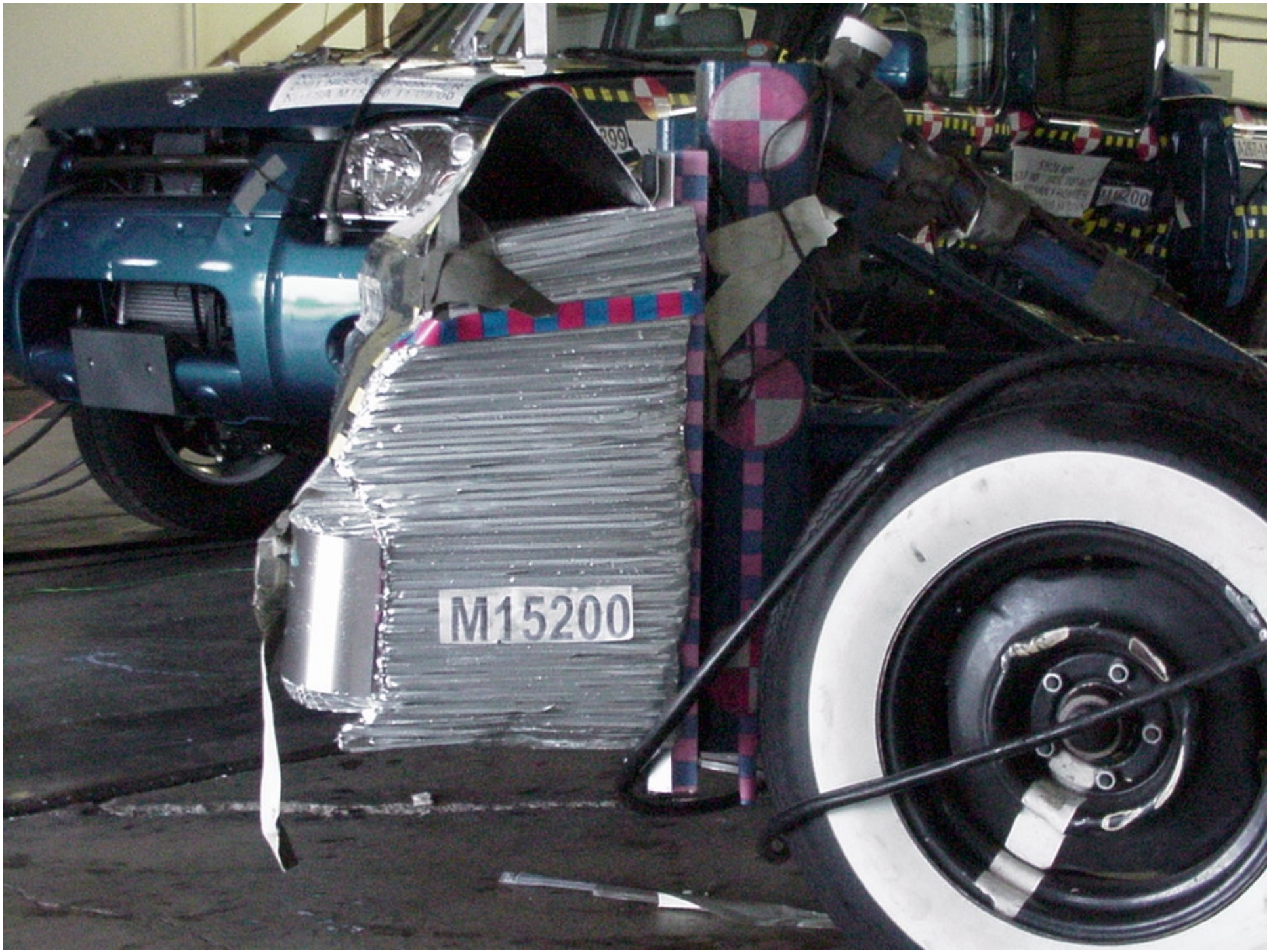


Figure A-10 POST-TEST LEFT SIDE VIEW OF IMPACTOR FACE

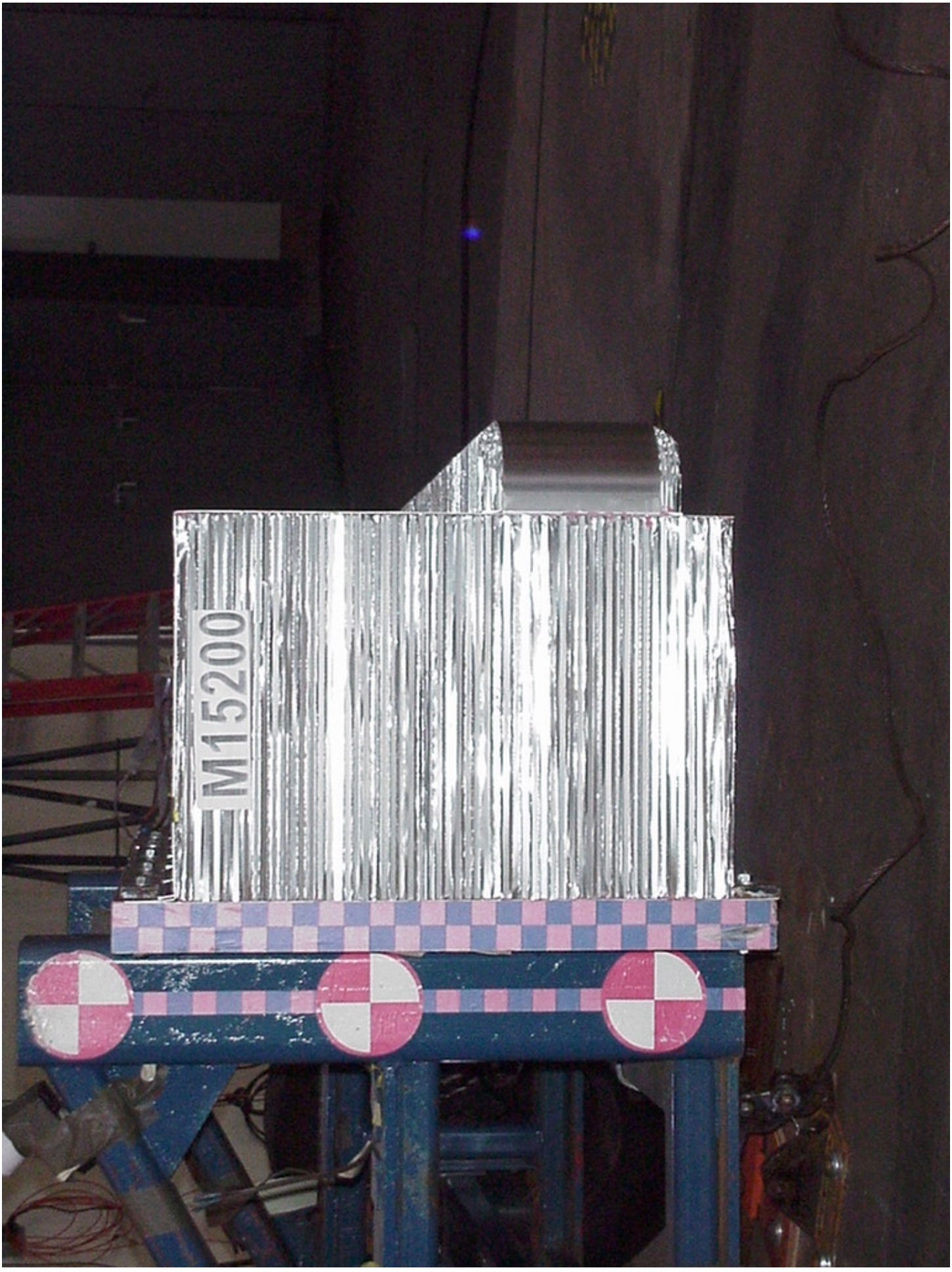


Figure A-11 PRE-TEST RIGHT SIDE VIEW OF IMPACTOR FACE

Figure A-12 POST-TEST RIGHT SIDE VIEW OF IMPACTOR FACE

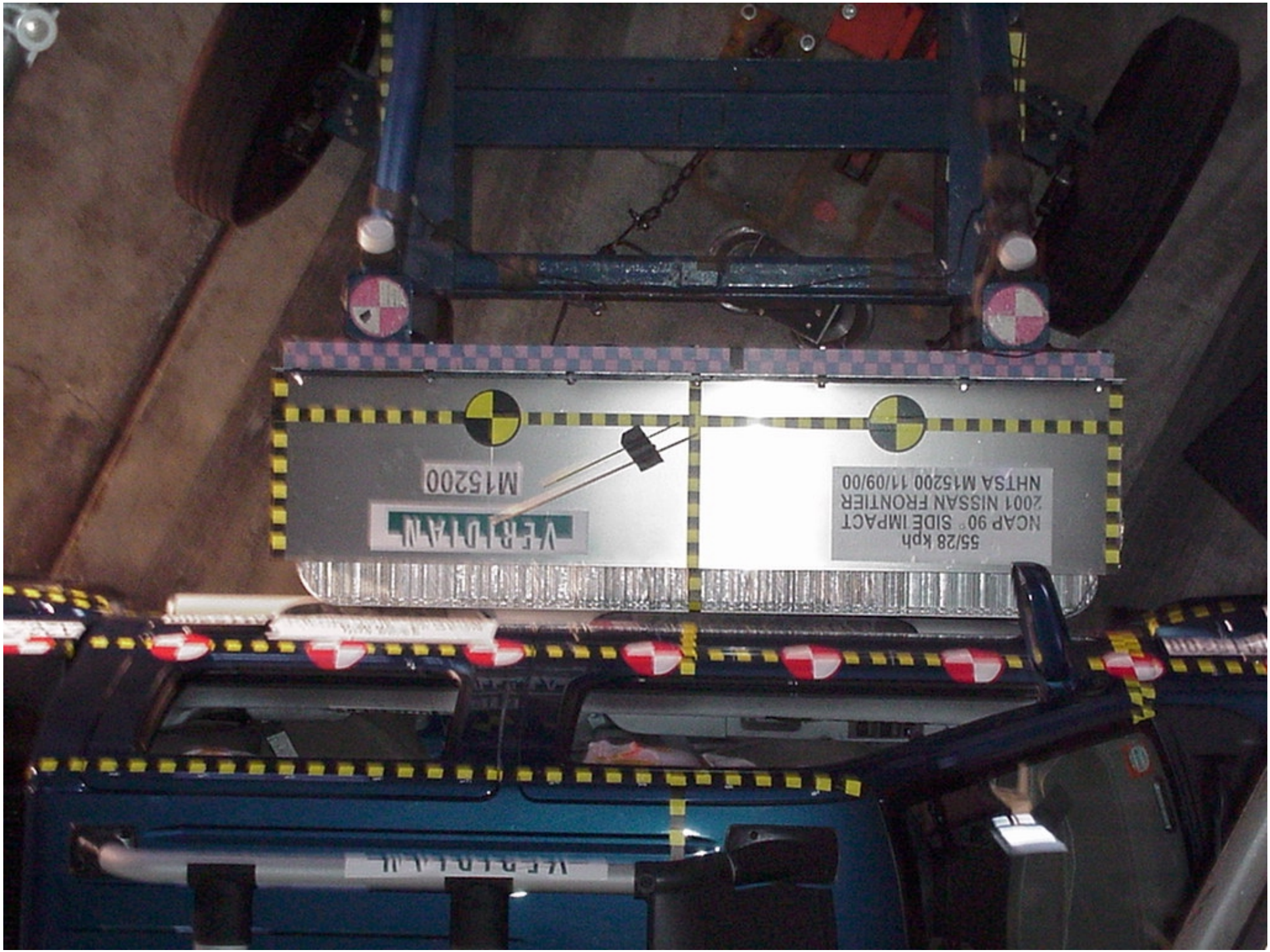


Figure A-13 PRE-TEST TOP VIEW OF IMPACTOR FACE

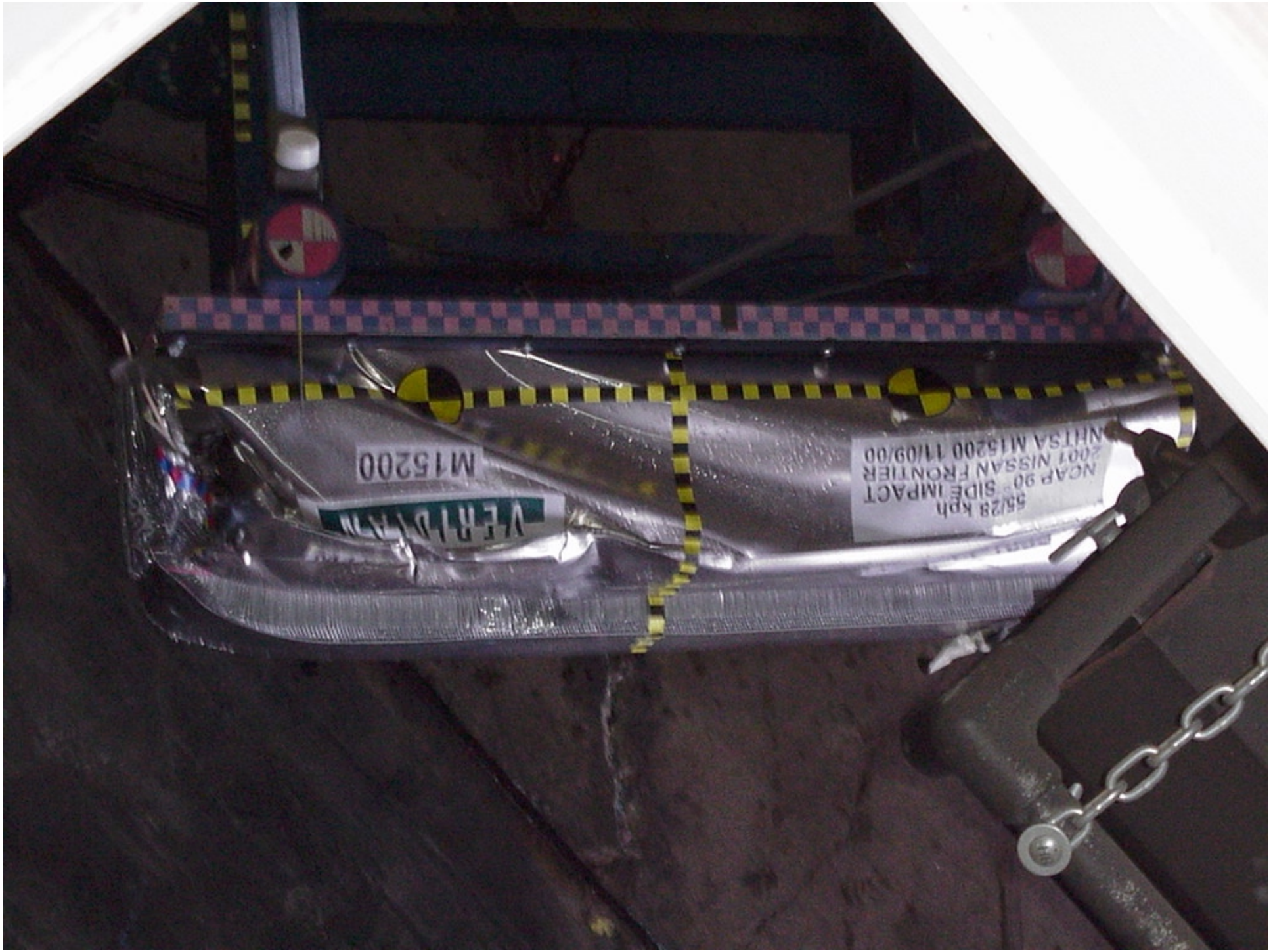


Figure A-14 POST-TEST TOP VIEW OF IMPACTOR FACE

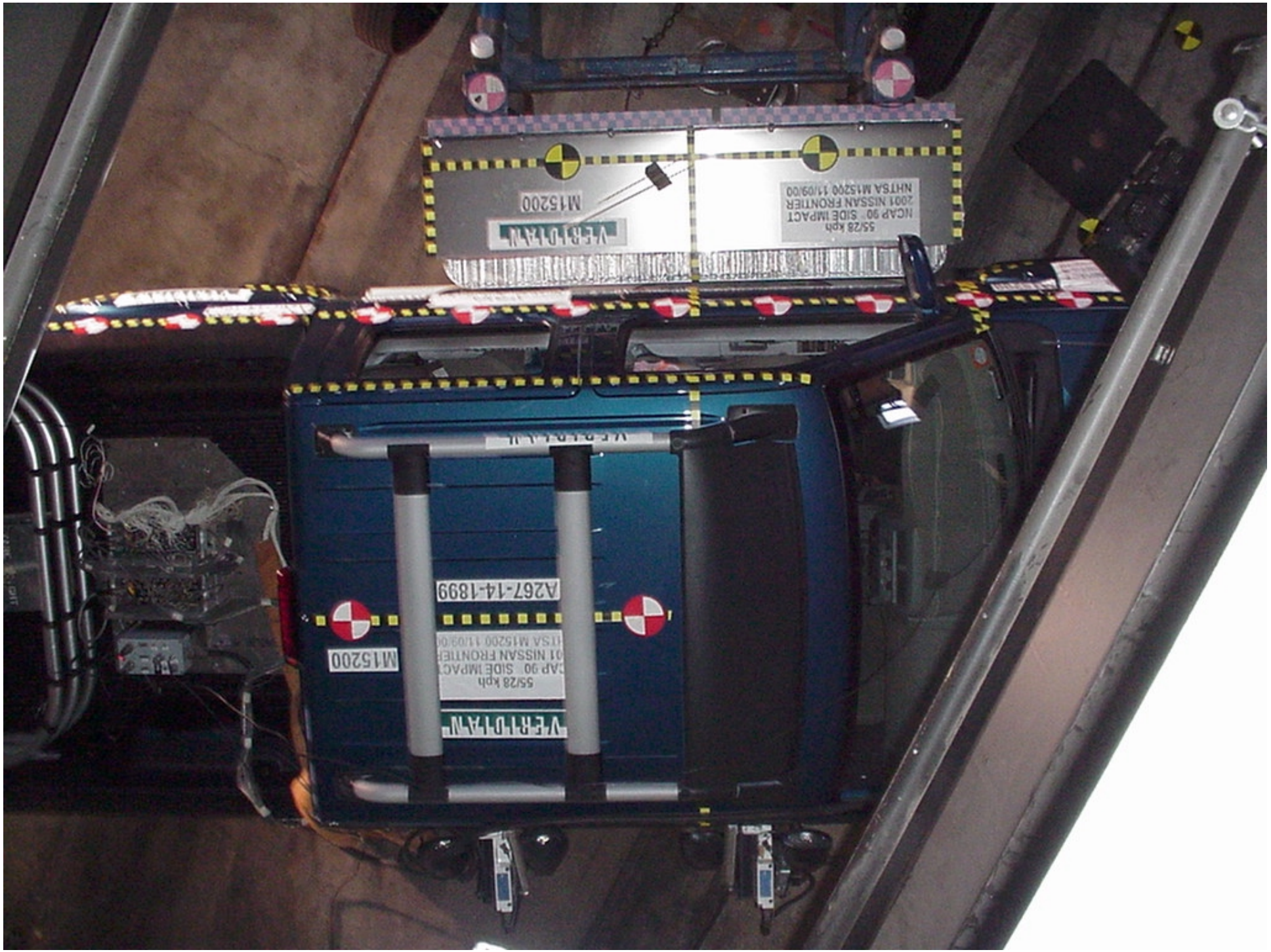


Figure A-15 PRE-TEST OVERHEAD VIEW OF ALIGNED MDB AND VEHICLE

Figure A-16 POST-TEST OVERHEAD VIEW OF MDB AND VEHICLE

Figure A-17 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID

Figure A-18 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID

Figure A-19 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID

Figure A-20 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID

Figure A-21 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID

Figure A-22 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID

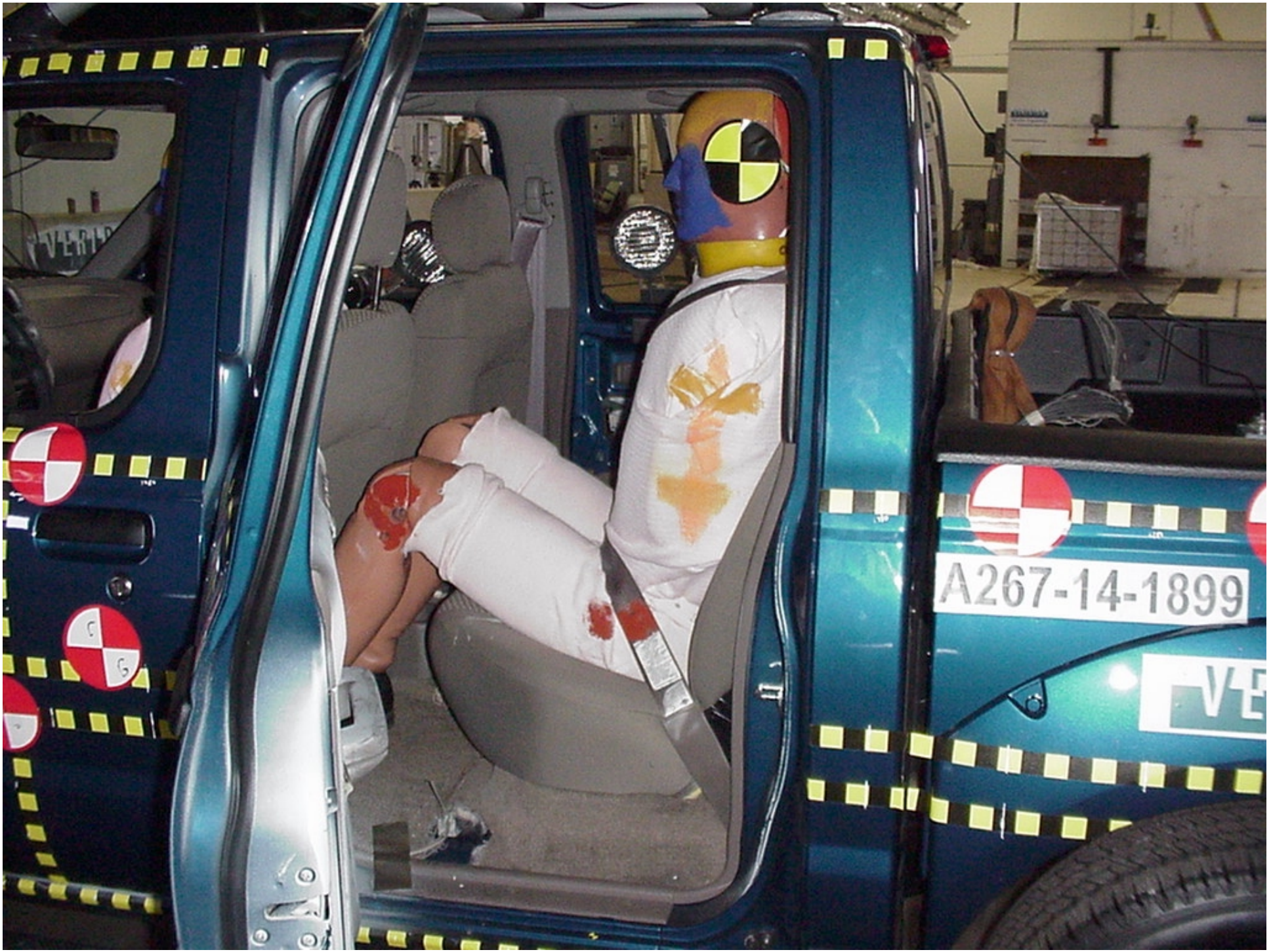


Figure A-23 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID

Figure A-24 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID

Figure A-25 PRE-TEST INTERIOR OF FRONT DOOR

Figure A-26 POST-TEST INTERIOR OF FRONT DOOR SHOWING SID IMPACT LOCATIONS

Figure A-27 PRE-TEST INTERIOR OF REAR DOOR

Figure A-28 POST-TEST INTERIOR OF REAR DOOR SHOWING SID IMPACT LOCATIONS

Figure A-29 PRE-TEST LEFT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION

Figure A-30 PRE-TEST RIGHT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION

Figure A-31 POST-TEST CLOSE-UP VIEW OF IMPACT POINT TARGET

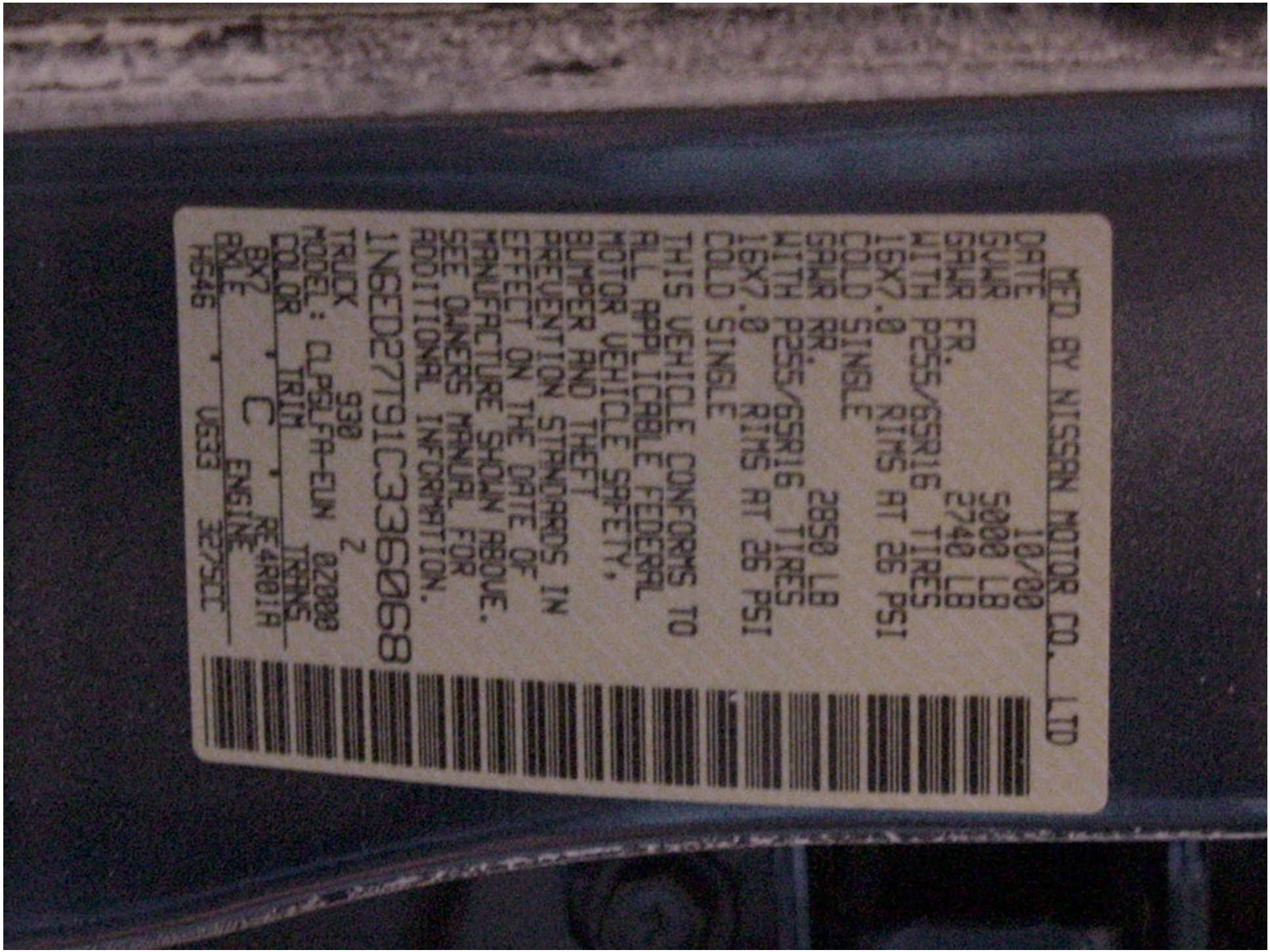


Figure A-32 CLOSE-UP VIEW OF VEHICLE'S CERTIFICATION LABEL

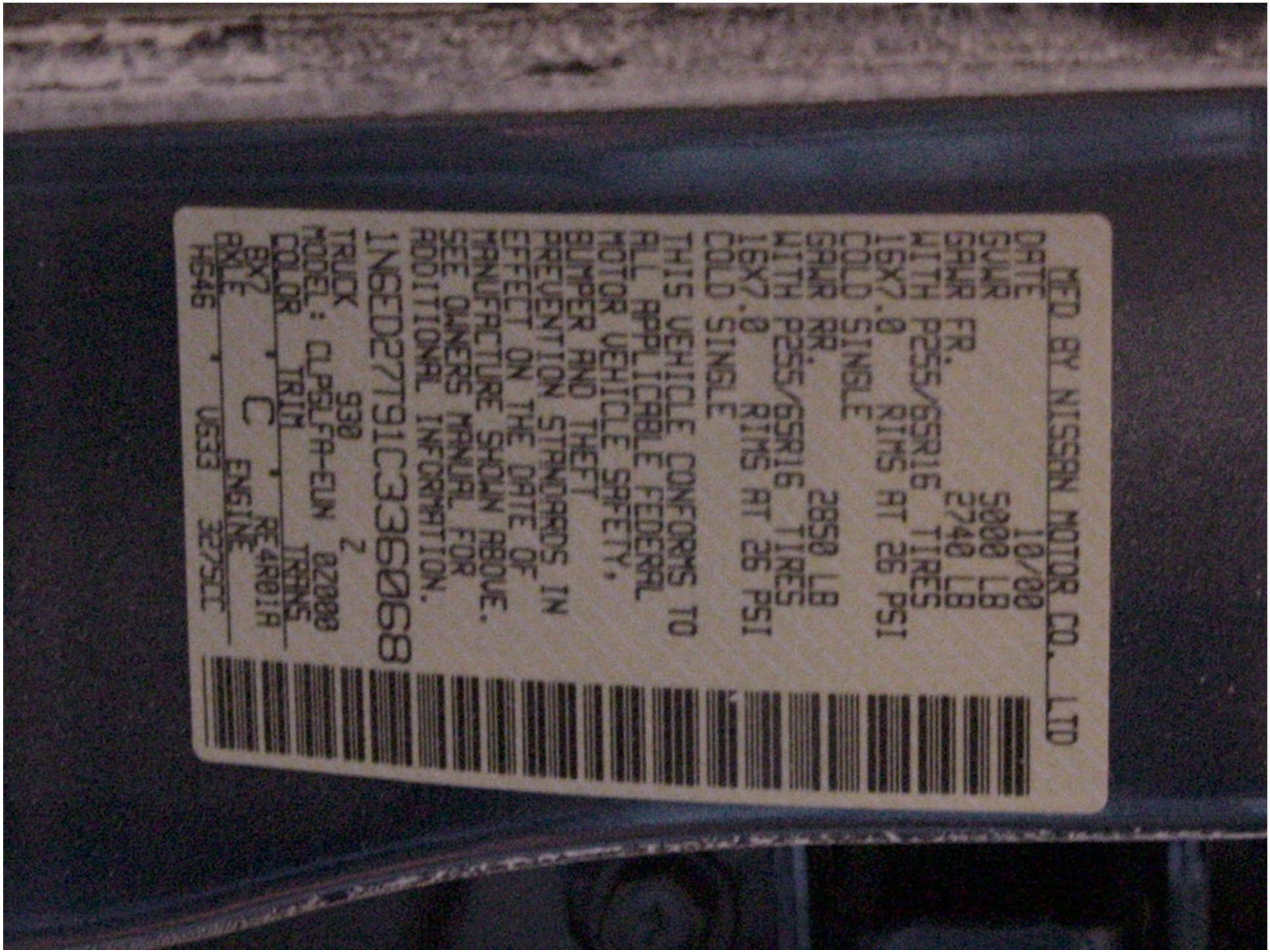


Figure A-33 CLOSE-UP VIEW OF VEHICLE'S TIRE PLACARD LABEL

Figure A-34 IMPACT PHOTO

Figure A-35 ROLLOVER 90 DEGREES

Figure A-36 ROLLOVER 180 DEGREES

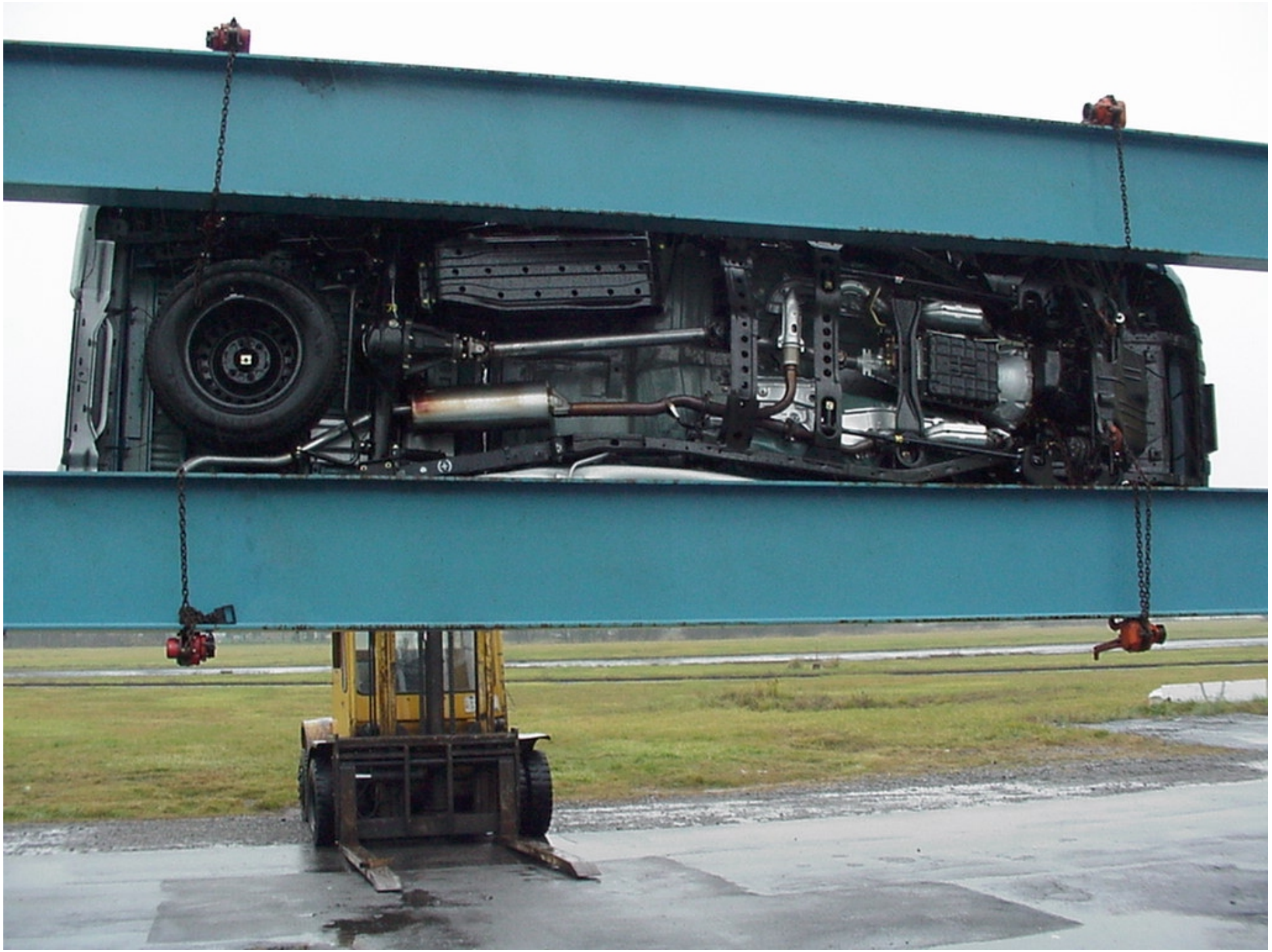


Figure A-37 ROLLOVER 270 DEGREES

Figure A-38 ROLLOVER 360 DEGREES

APPENDIX B

VEHICLE, MDB AND SID RESPONSE DATA

TABLE OF DATA PLOTS

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION DATA - FIR FILTERED

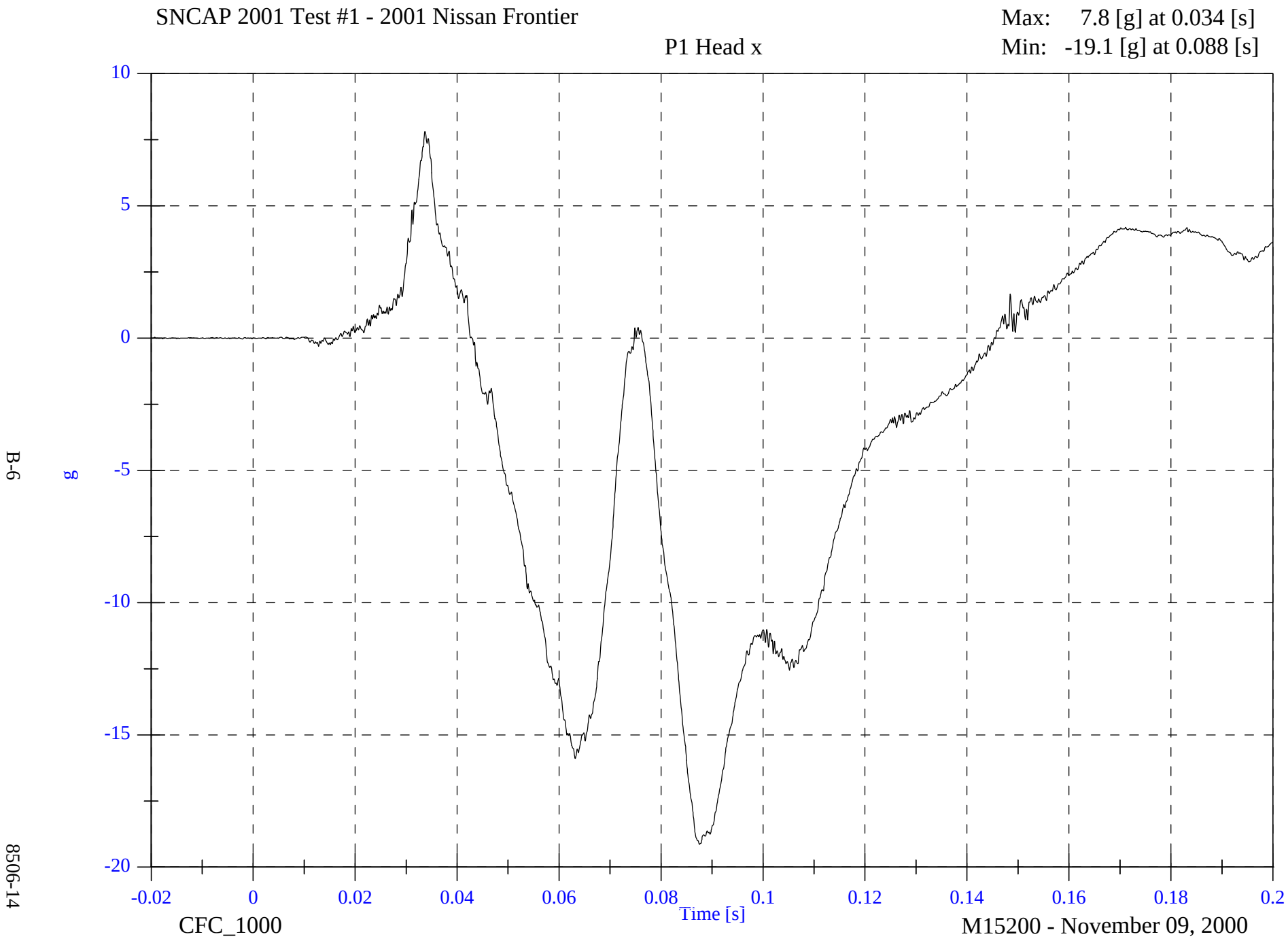
TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

MDB INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180

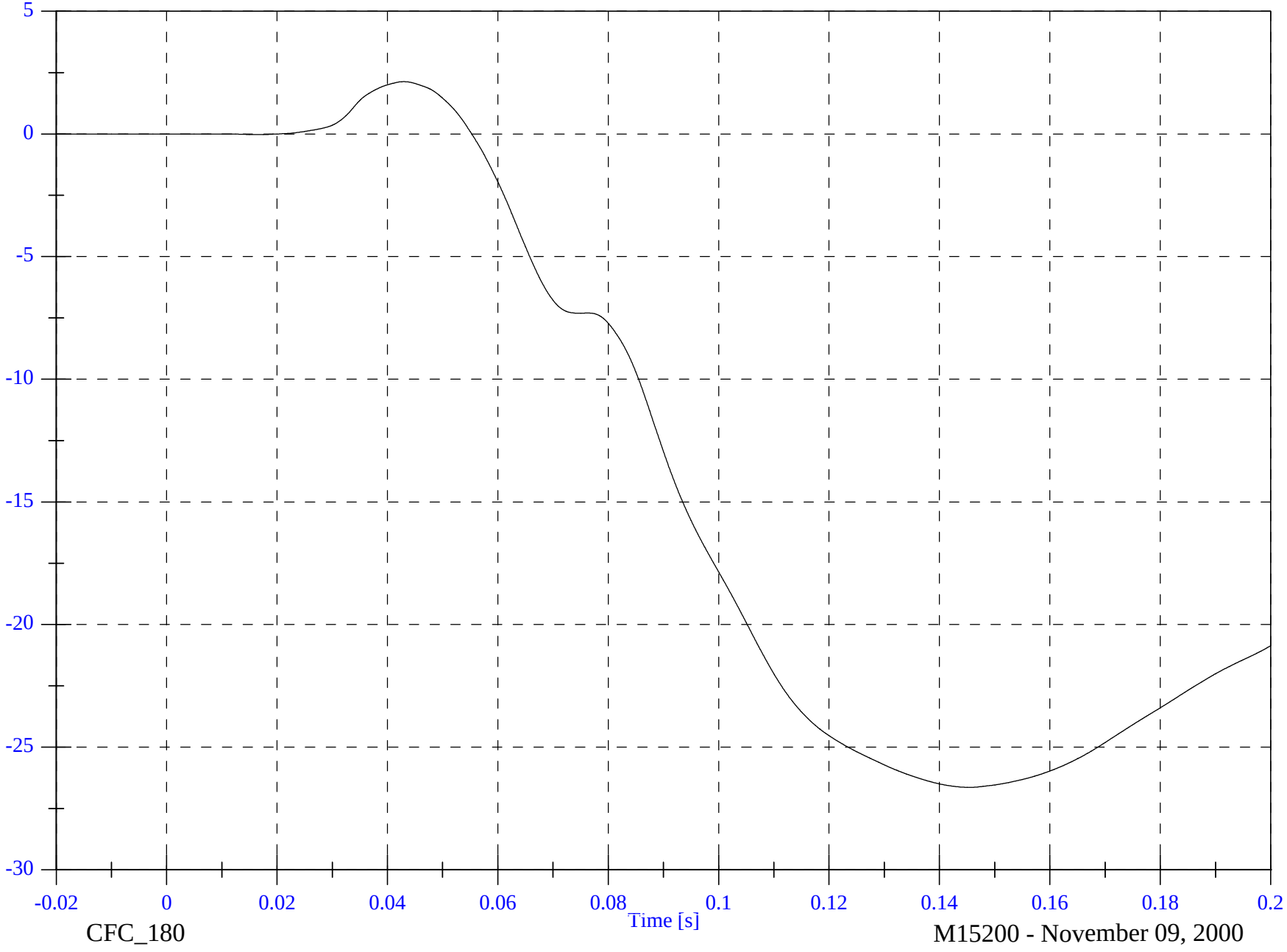
DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FIR FILTERED


SNCAP 2001 Test #1 - 2001 Nissan Frontier
P1 Head x
Max: 7.8 [g] at 0.034 [s]
Min: -19.1 [g] at 0.088 [s]
10
5
0
-5
-10
-15
-20
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_1000
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Head x Velocity

Max: 2.1 [kph] at 0.043 [s]
Min: -26.6 [kph] at 0.145 [s]



CFC_180

M15200 - November 09, 2000

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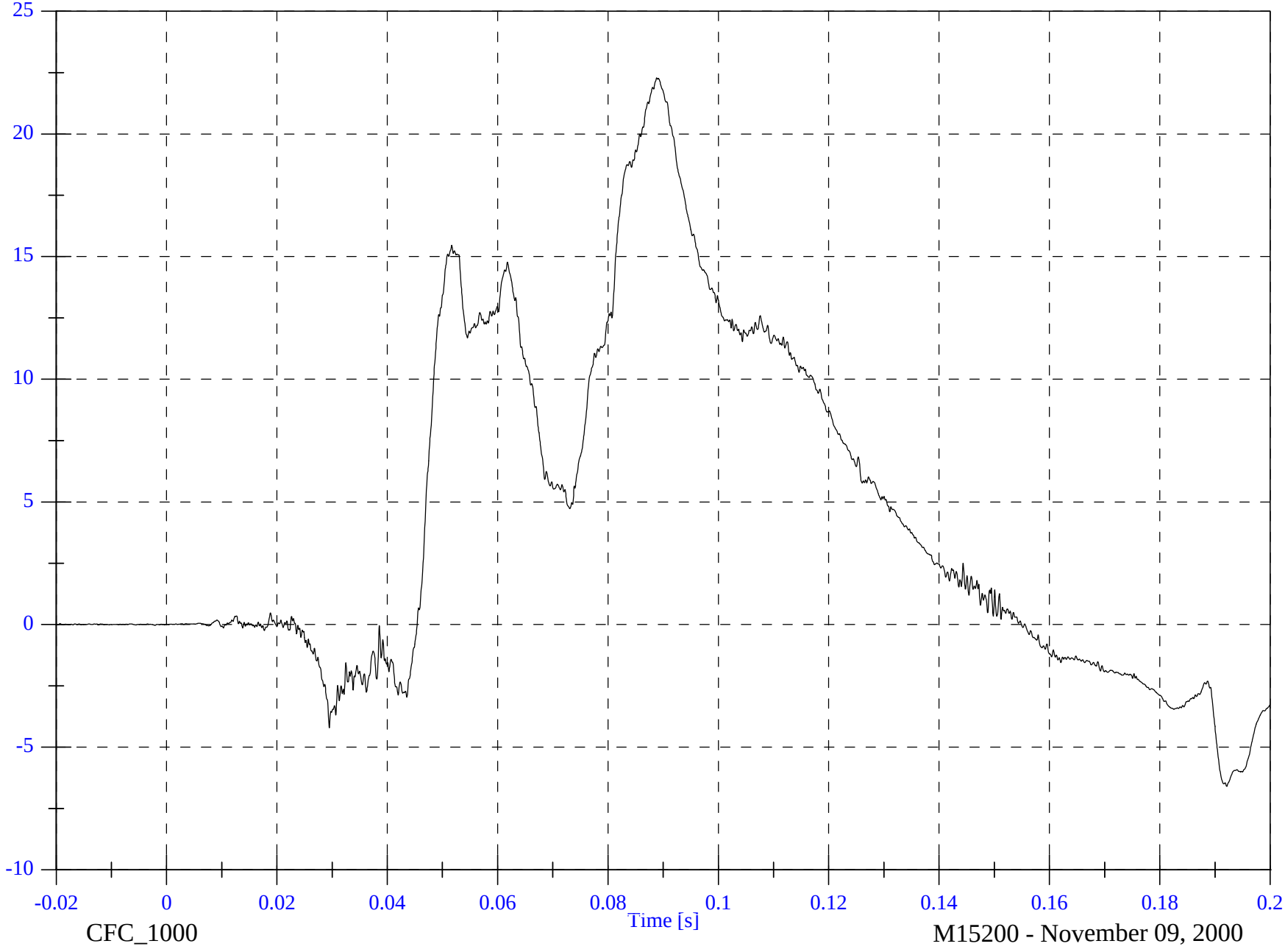
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Head y

Max: 22.3 [g] at 0.089 [s]
Min: -6.6 [g] at 0.192 [s]



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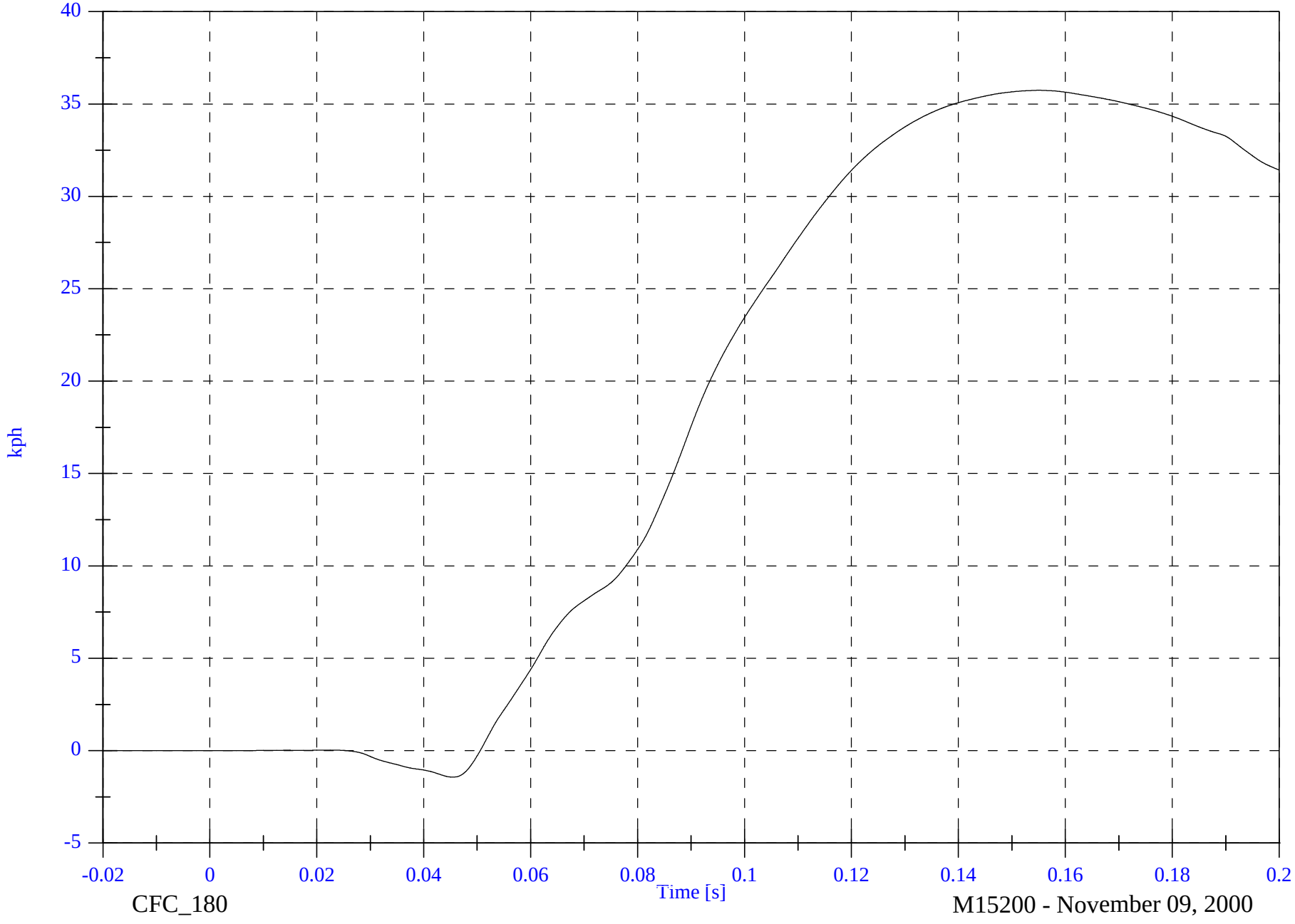
CFC_1000

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Head y Velocity

Max: 35.7 [kph] at 0.155 [s]
Min: -1.4 [kph] at 0.045 [s]



CFC_180

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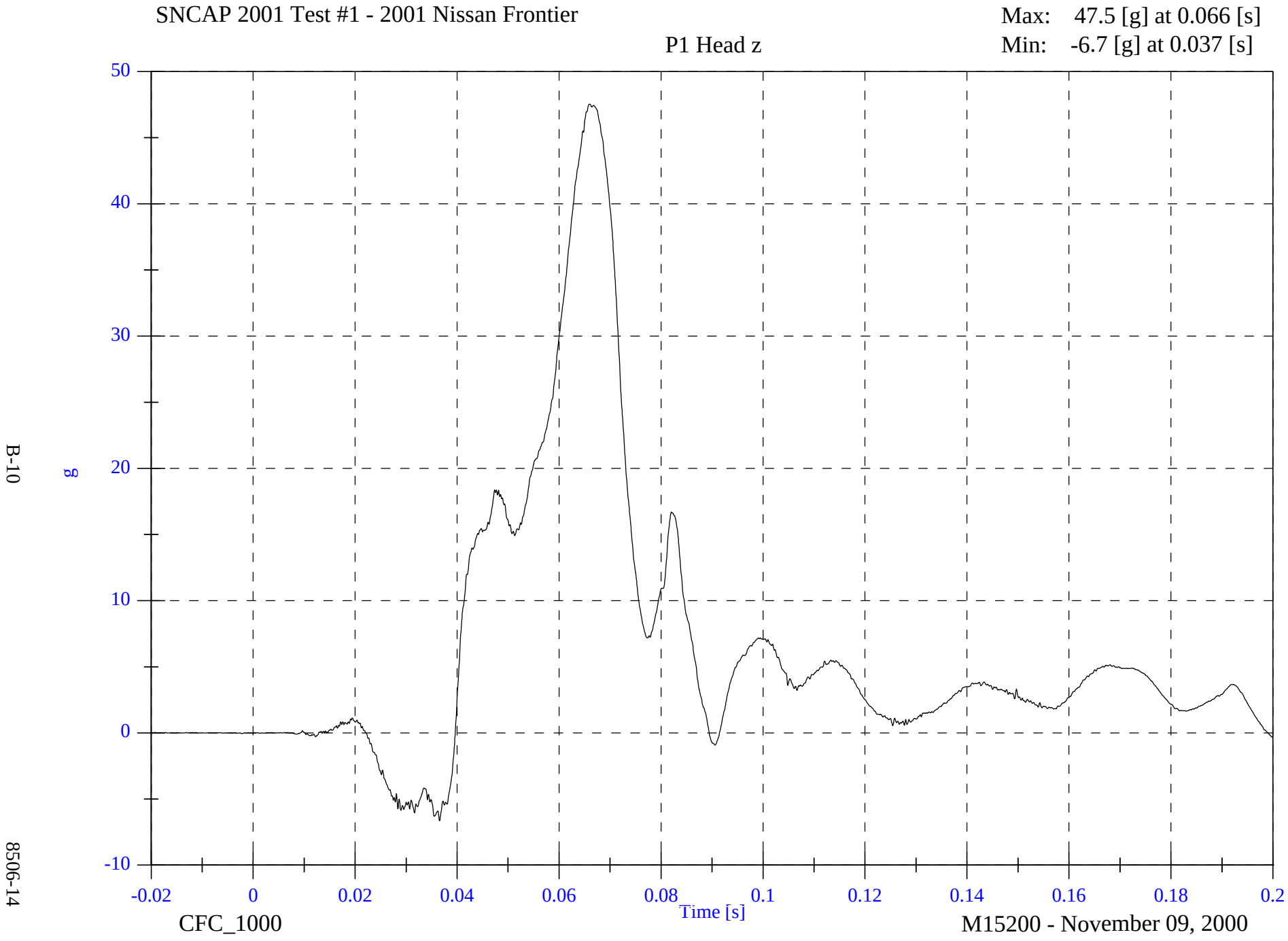
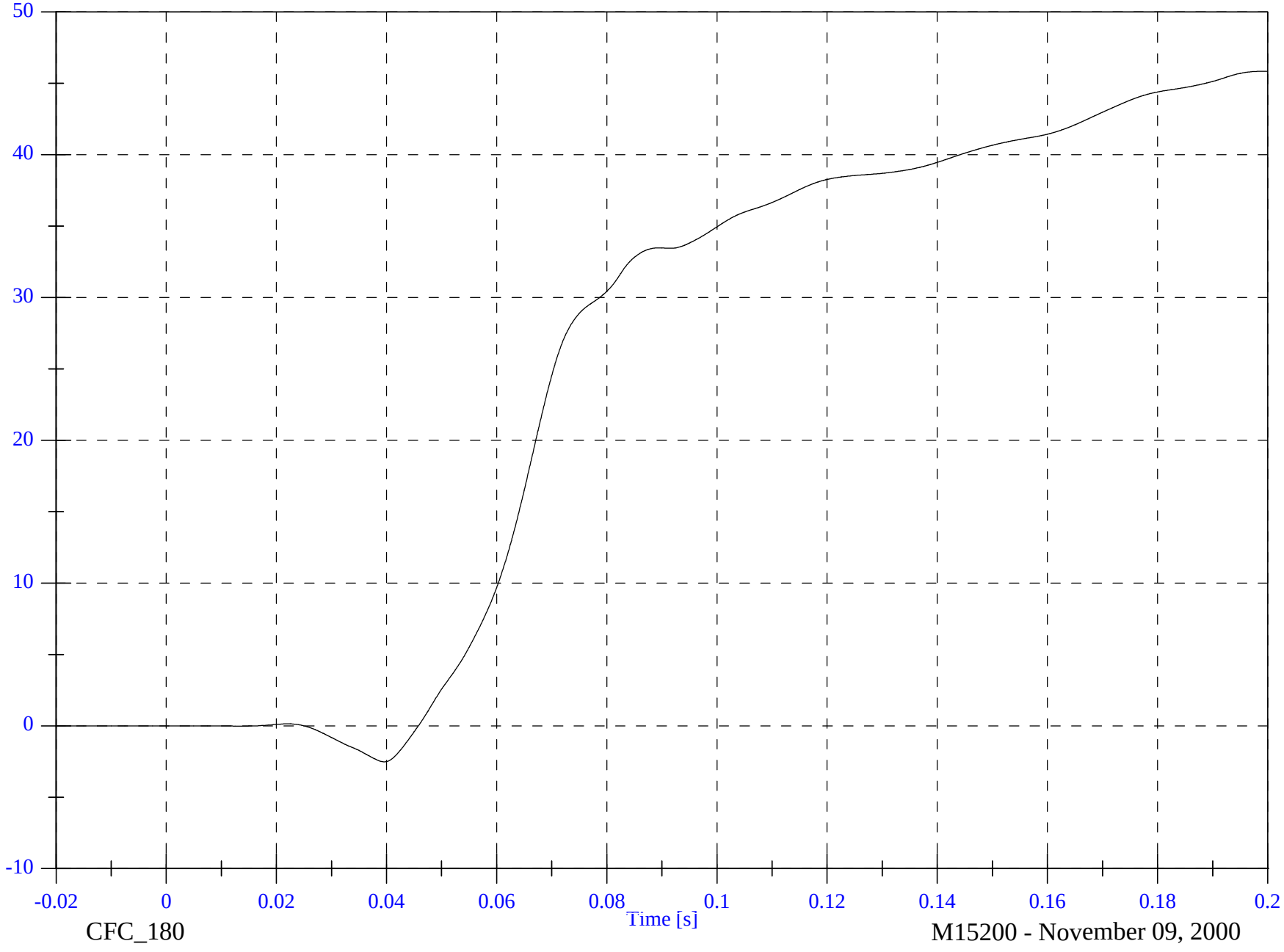

SNCAP 2001 Test #1 - 2001 Nissan Frontier
P1 Head z
Max: 47.5 [g] at 0.066 [s]
Min: -6.7 [g] at 0.037 [s]
50
40
30
20
10
0
-10
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_1000
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Head z Velocity

Max: 45.8 [kph] at 0.199 [s]

Min: -2.5 [kph] at 0.040 [s]



CFC_180

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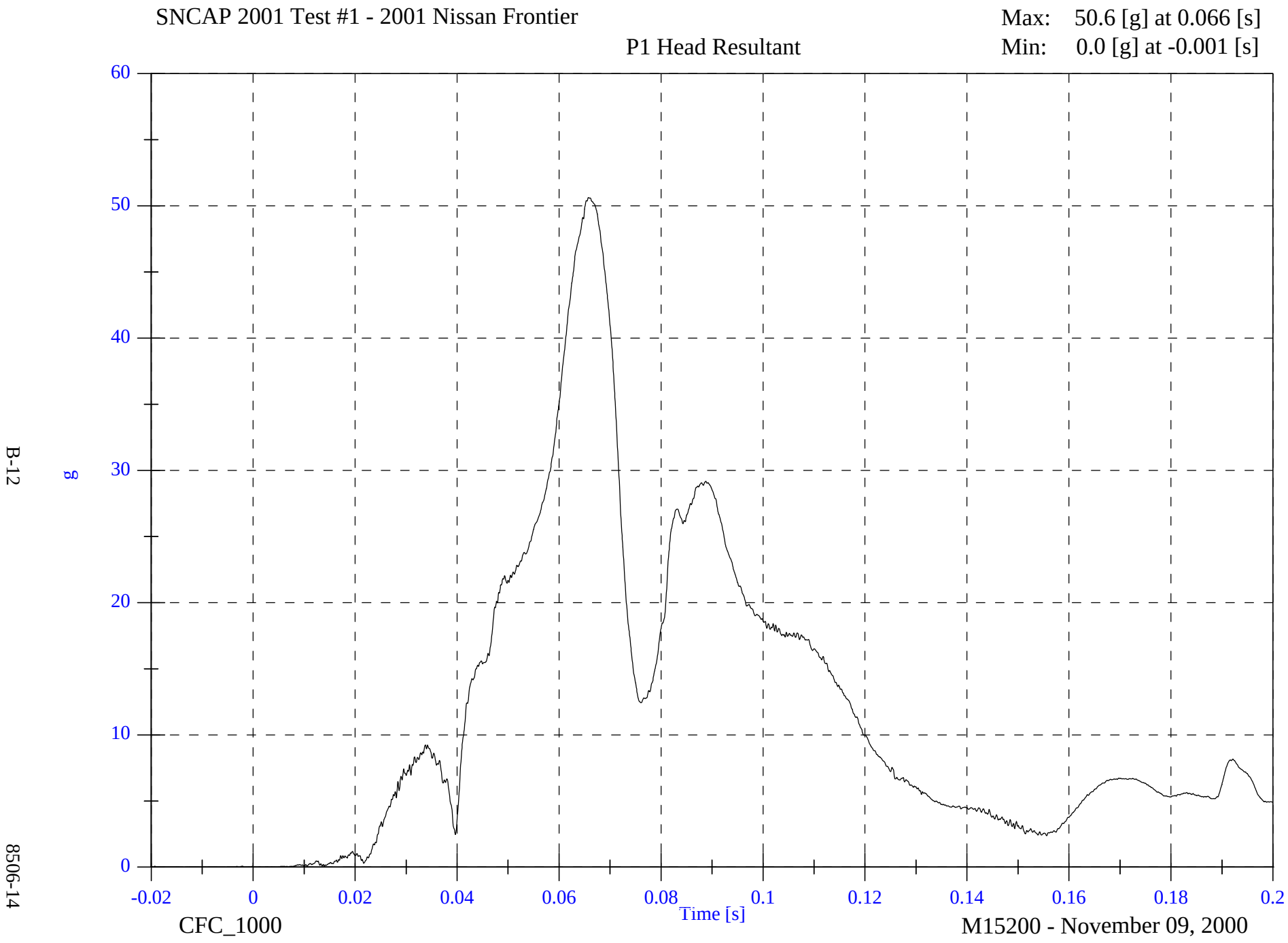
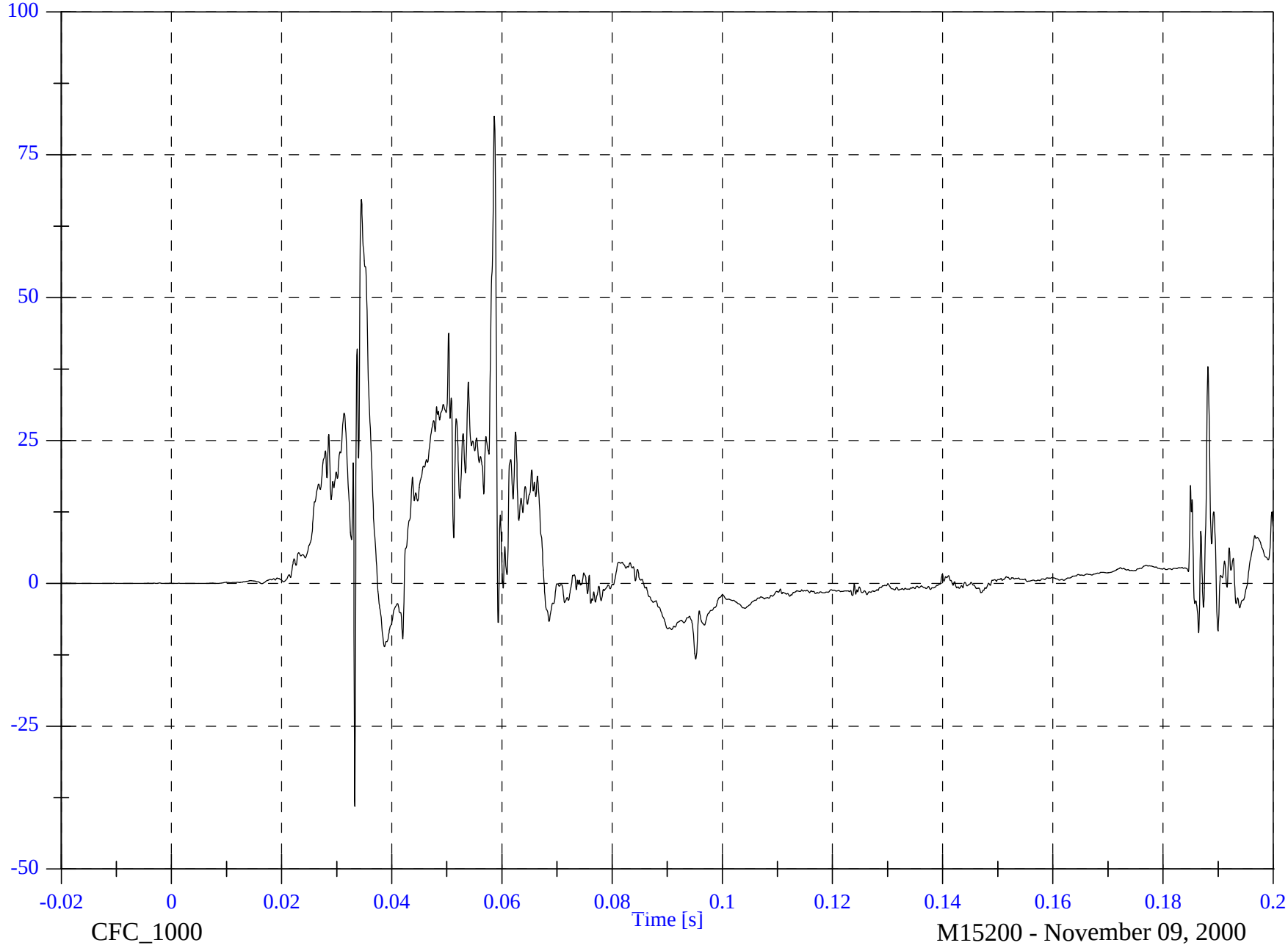

SNCAP 2001 Test #1 - 2001 Nissan Frontier
P1 Head Resultant
Max: 50.6 [g] at 0.066 [s]
Min: 0.0 [g] at -0.001 [s]
60
50
40
30
20
10
0
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_1000
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Upper Rib y

Max: 81.8 [g] at 0.059 [s]
Min: -39.1 [g] at 0.033 [s]



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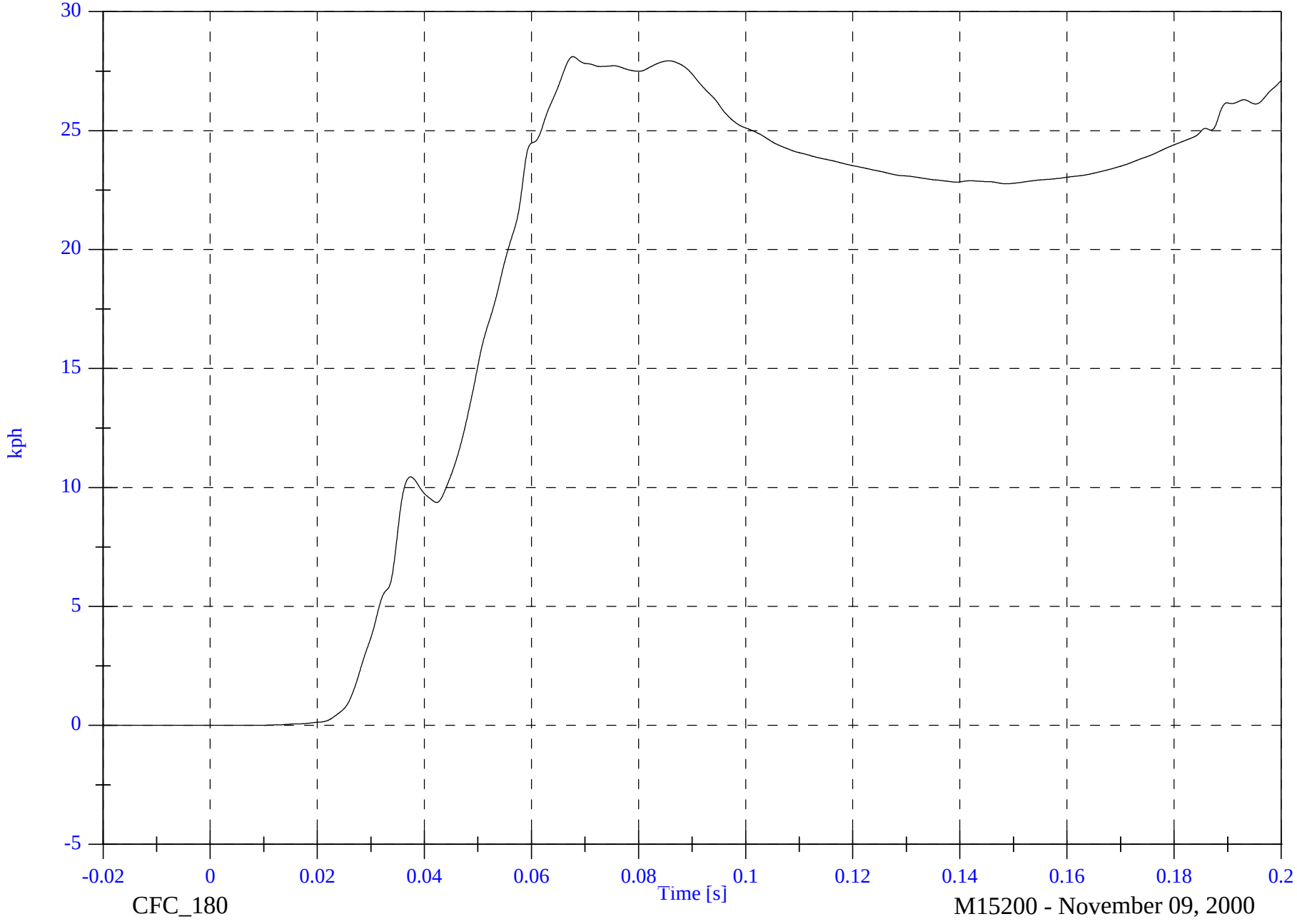
CFC_1000

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Upper Rib y Velocity

Max: 28.1 [kph] at 0.068 [s]
Min: -0.0 [kph] at -0.020 [s]



CFC_180

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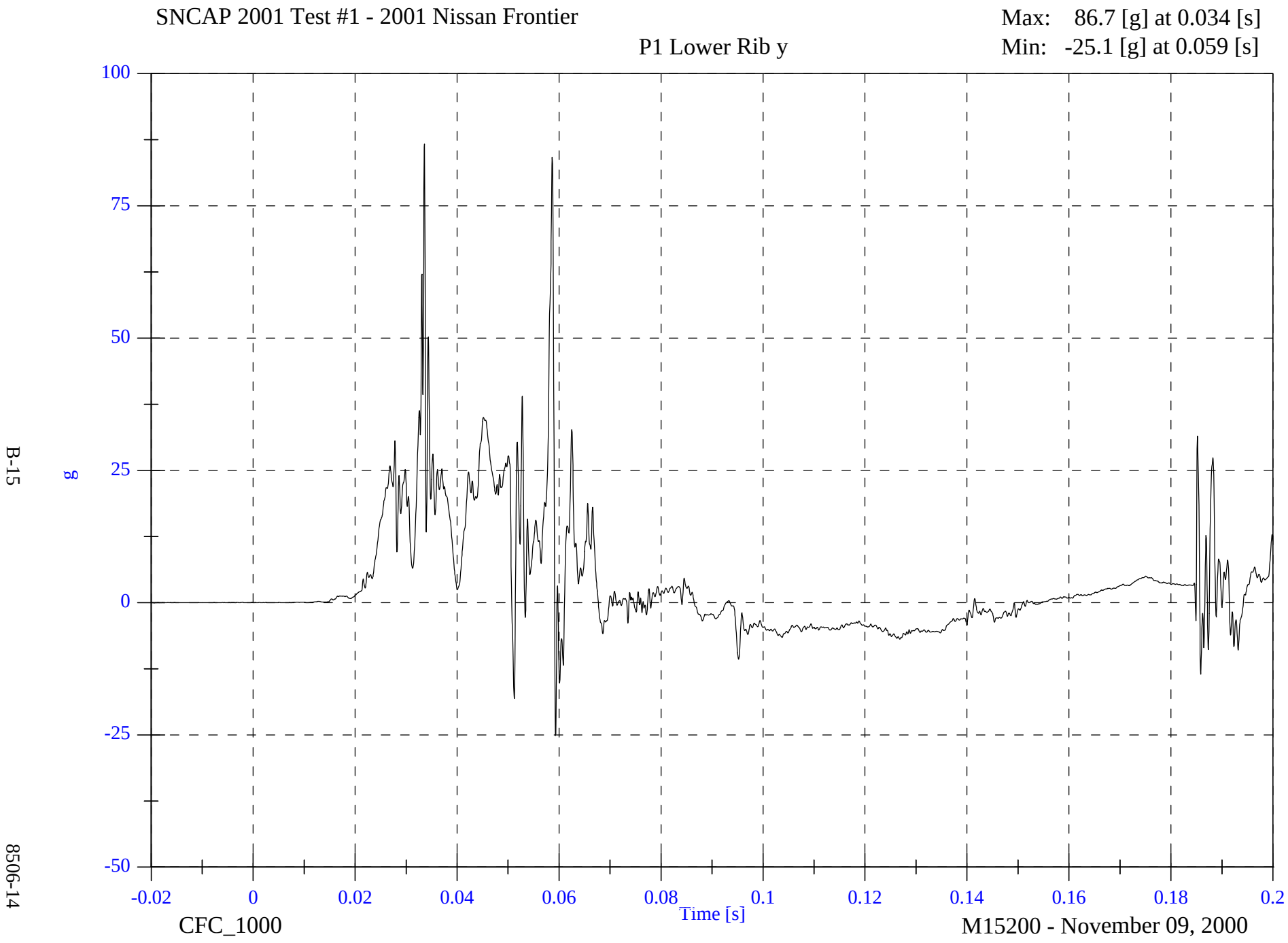
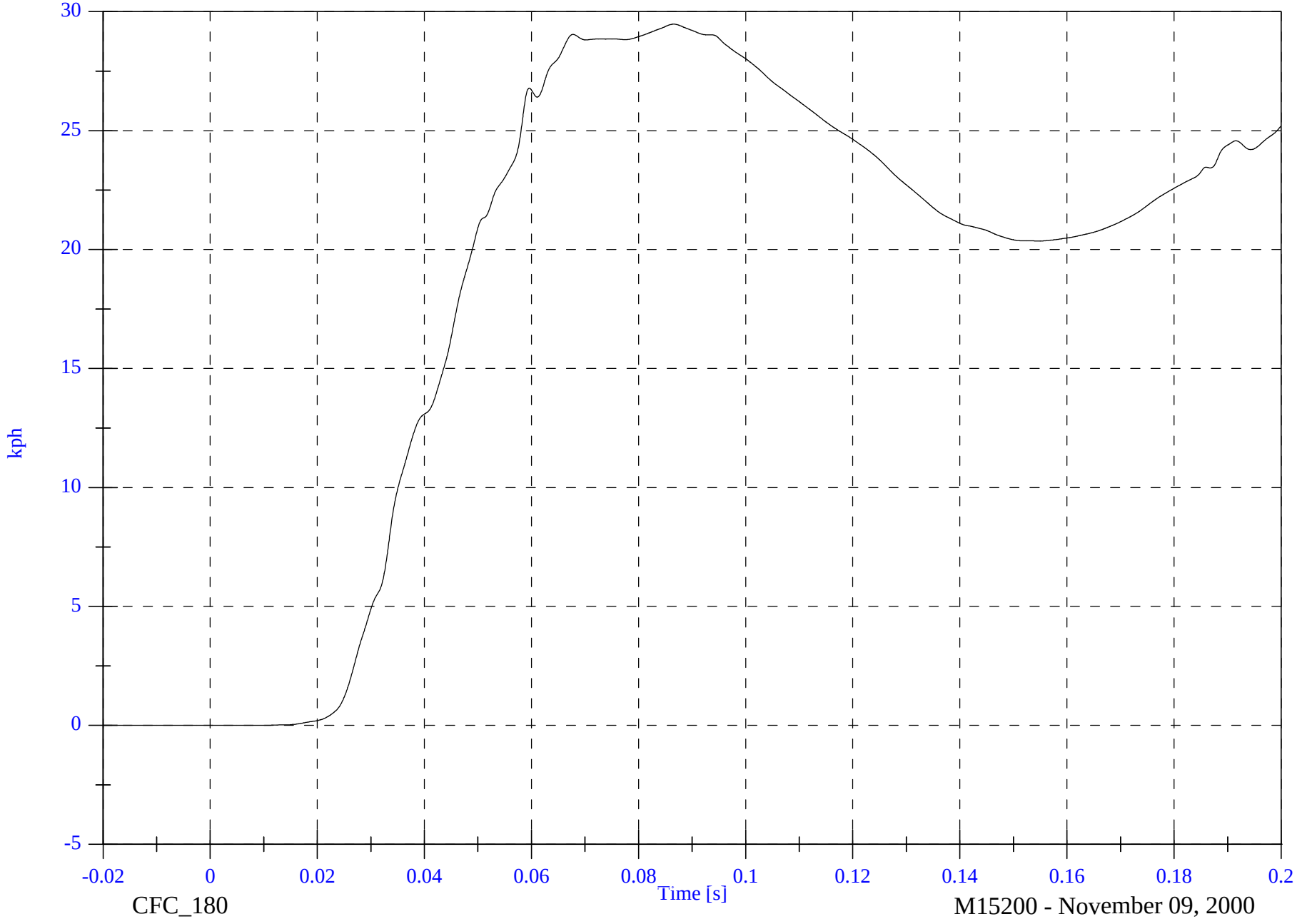

SNCAP 2001 Test #1 - 2001 Nissan Frontier
P1 Lower Rib y
Max: 86.7 [g] at 0.034 [s]
Min: -25.1 [g] at 0.059 [s]
100
75
50
25
0
-25
-50
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_1000
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Rib y Velocity

Max: 29.5 [kph] at 0.087 [s]
Min: -0.0 [kph] at -0.008 [s]



CFC_180

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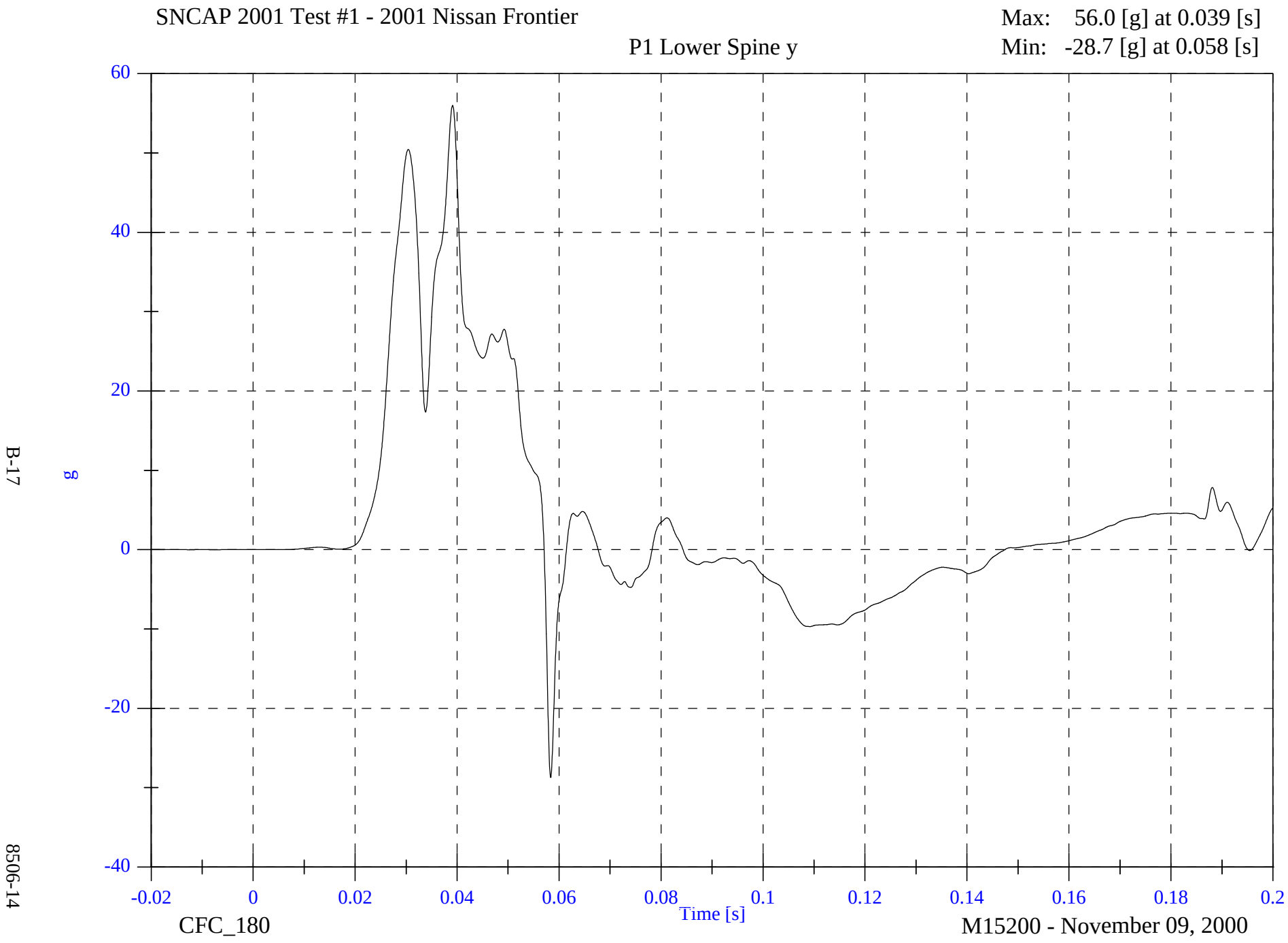
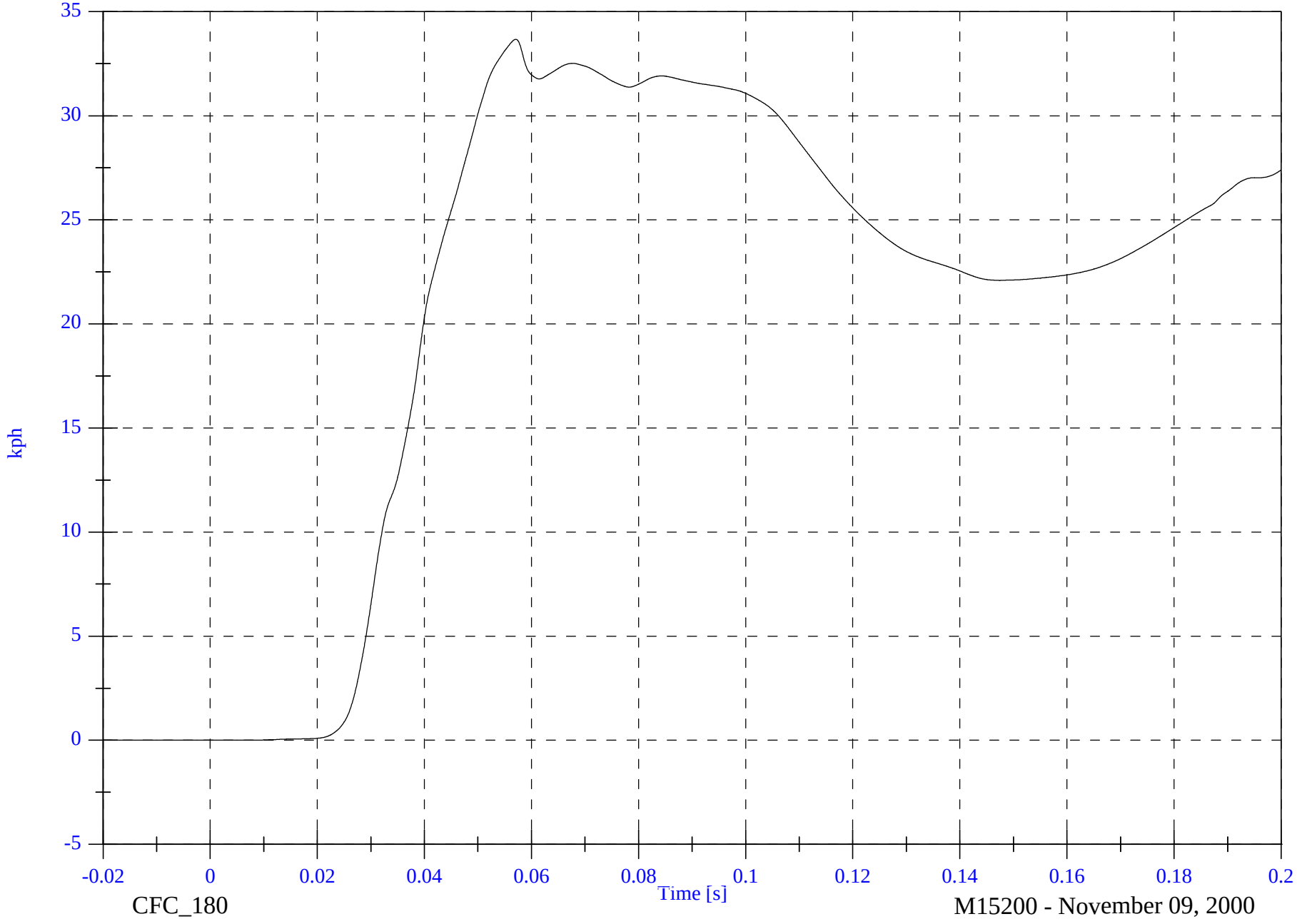

SNCAP 2001 Test #1 - 2001 Nissan Frontier
P1 Lower Spine y
Max: 56.0 [g] at 0.039 [s]
Min: -28.7 [g] at 0.058 [s]
60
40
20
0
-20
-40
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_180
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Spine y Velocity

Max: 33.7 [kph] at 0.057 [s]

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



CFC_180

M15200 - November 09, 2000

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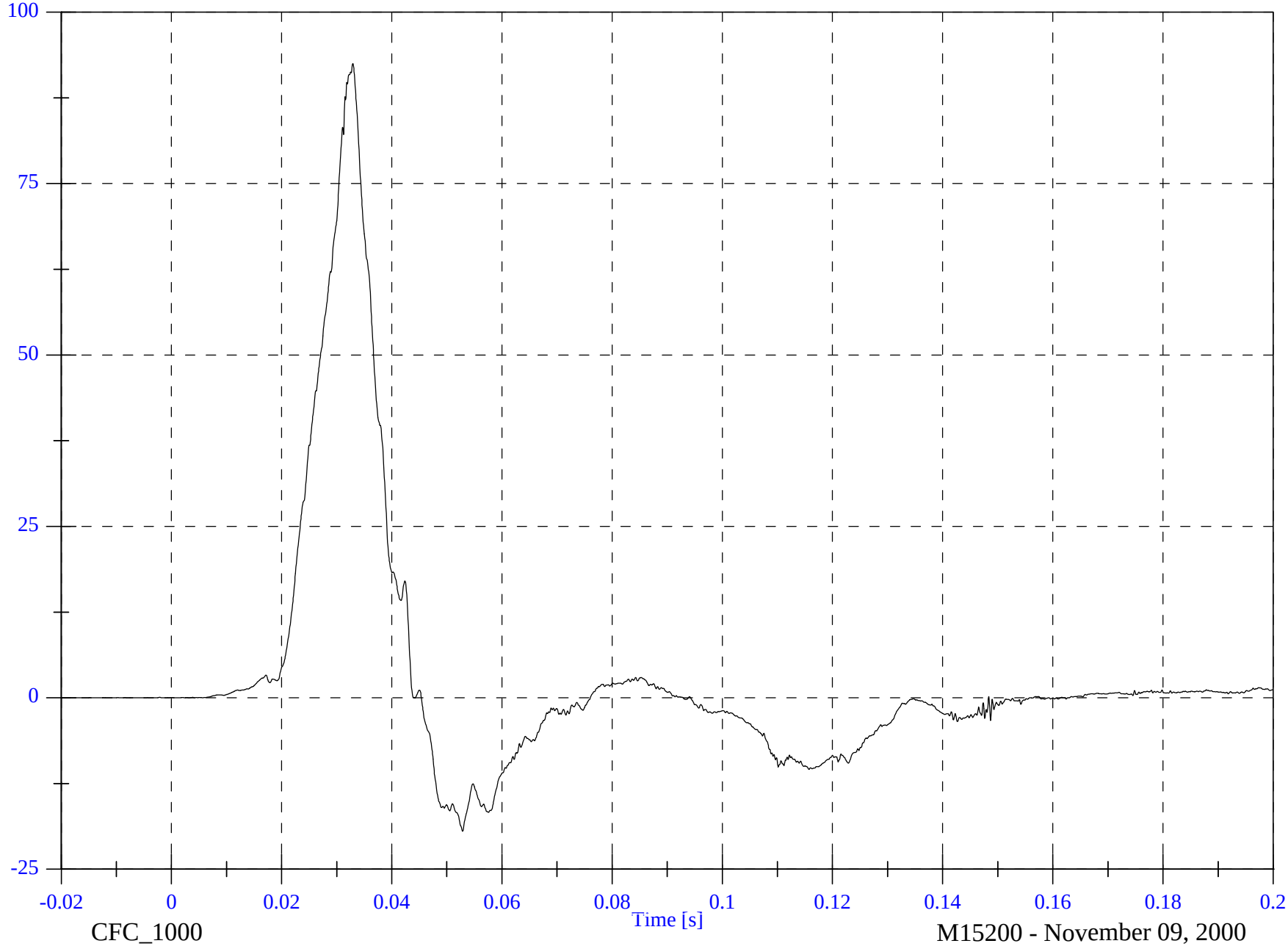
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Pelvic y

Max: 92.5 [g] at 0.033 [s]
Min: -19.5 [g] at 0.053 [s]



CFC_1000

M15200 - November 09, 2000

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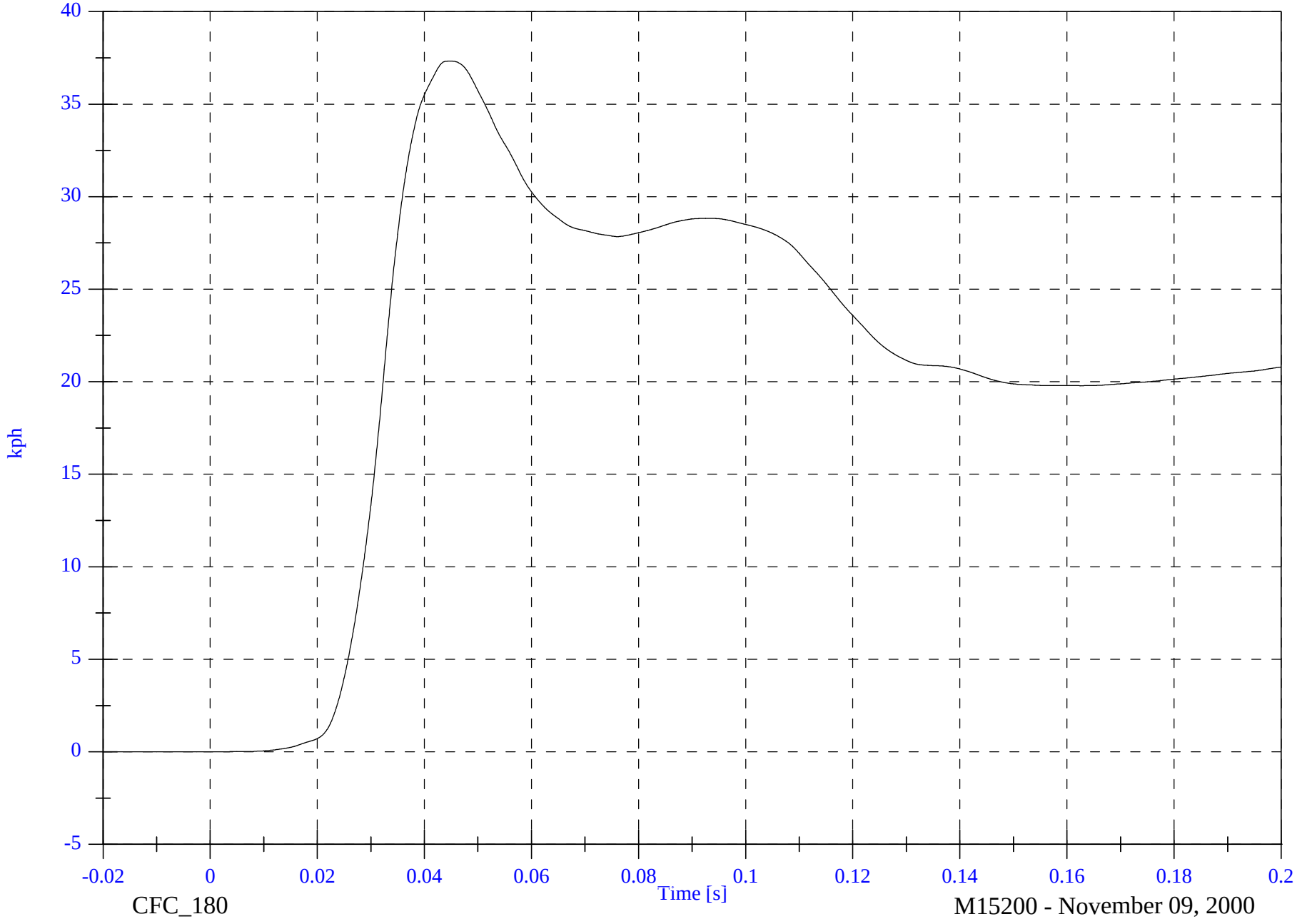
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Pelvic y Velocity

Max: 37.3 [kph] at 0.045 [s]
Min: -0.0 [kph] at -0.020 [s]



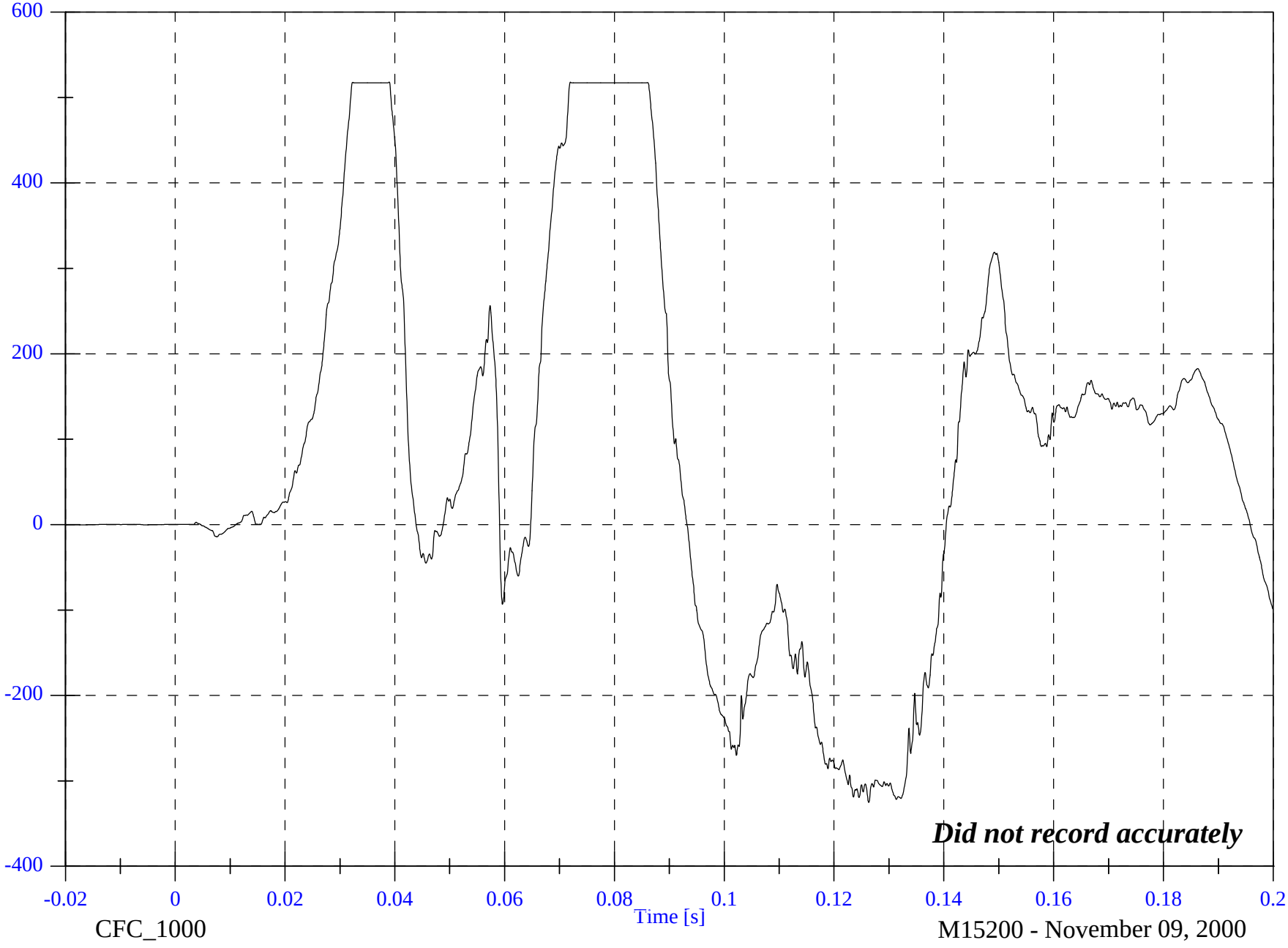
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head x

Max: 517.9 [g] at 0.039 [s]
Min: -325.4 [g] at 0.126 [s]



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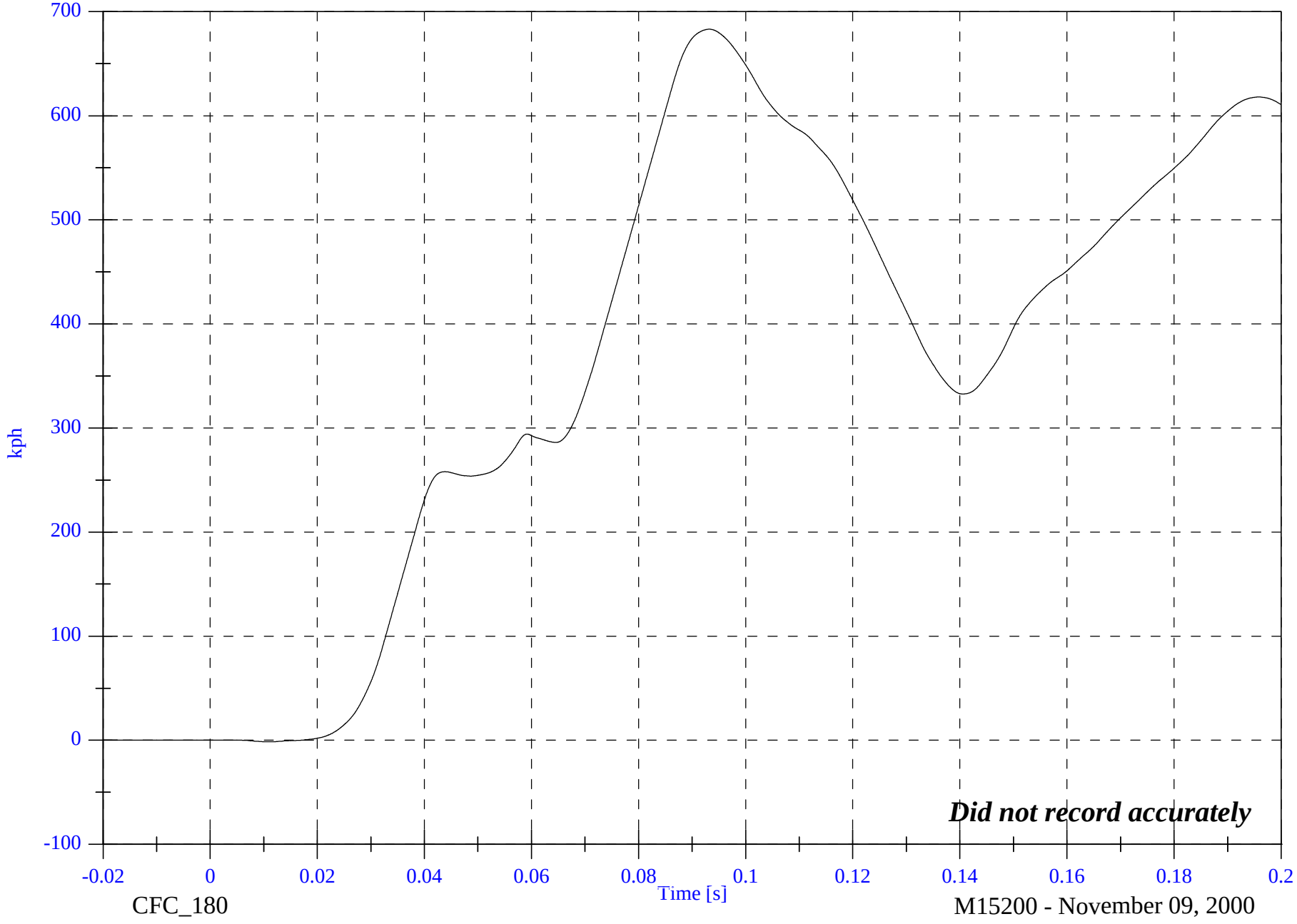
CFC_1000

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head x Velocity

Max: 683.1 [kph] at 0.093 [s]
Min: -1.4 [kph] at 0.011 [s]



CFC_180

M15200 - November 09, 2000

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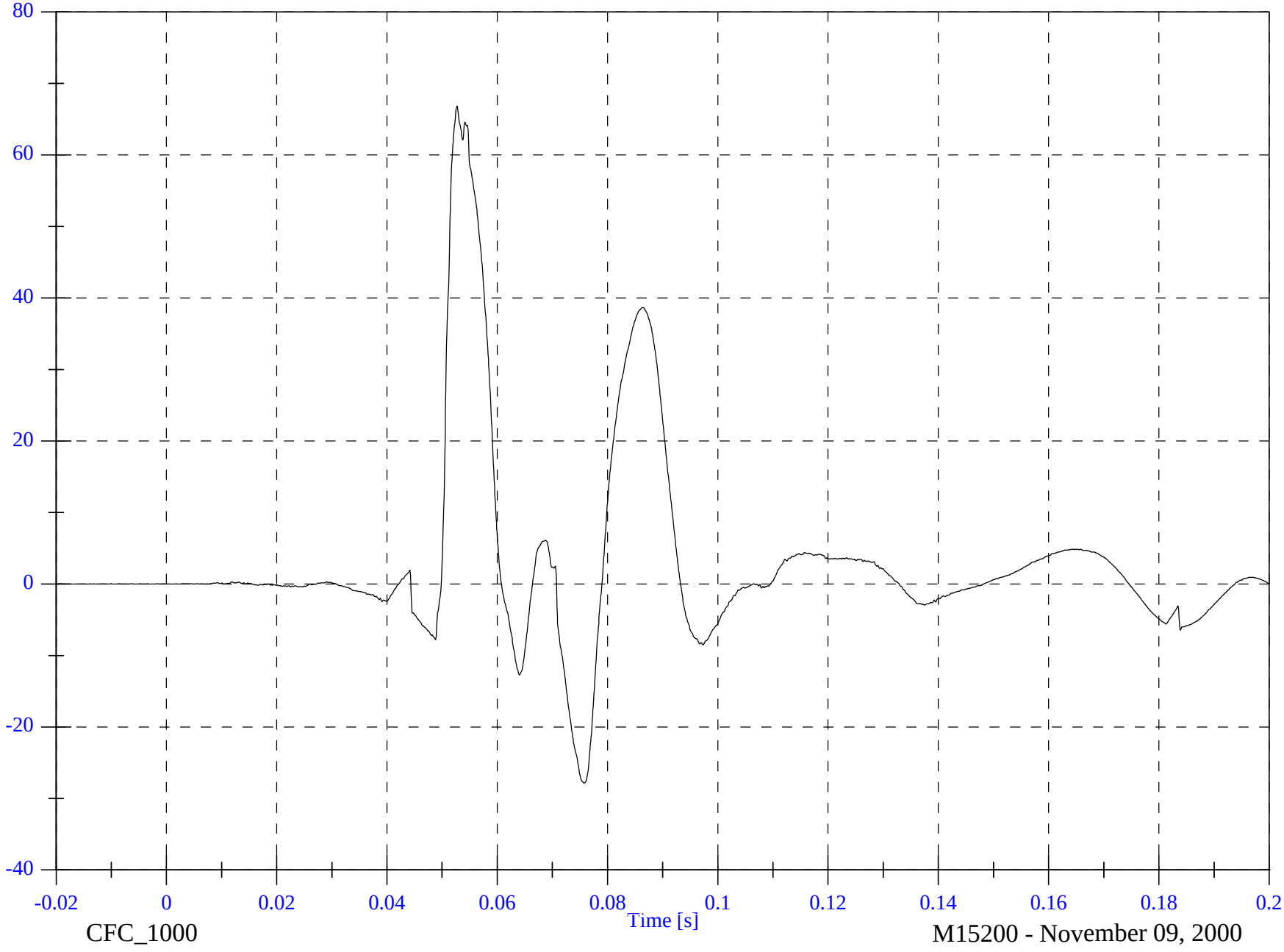
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head y

Max: 66.9 [g] at 0.053 [s]
Min: -27.9 [g] at 0.076 [s]



CFC_1000

M15200 - November 09, 2000

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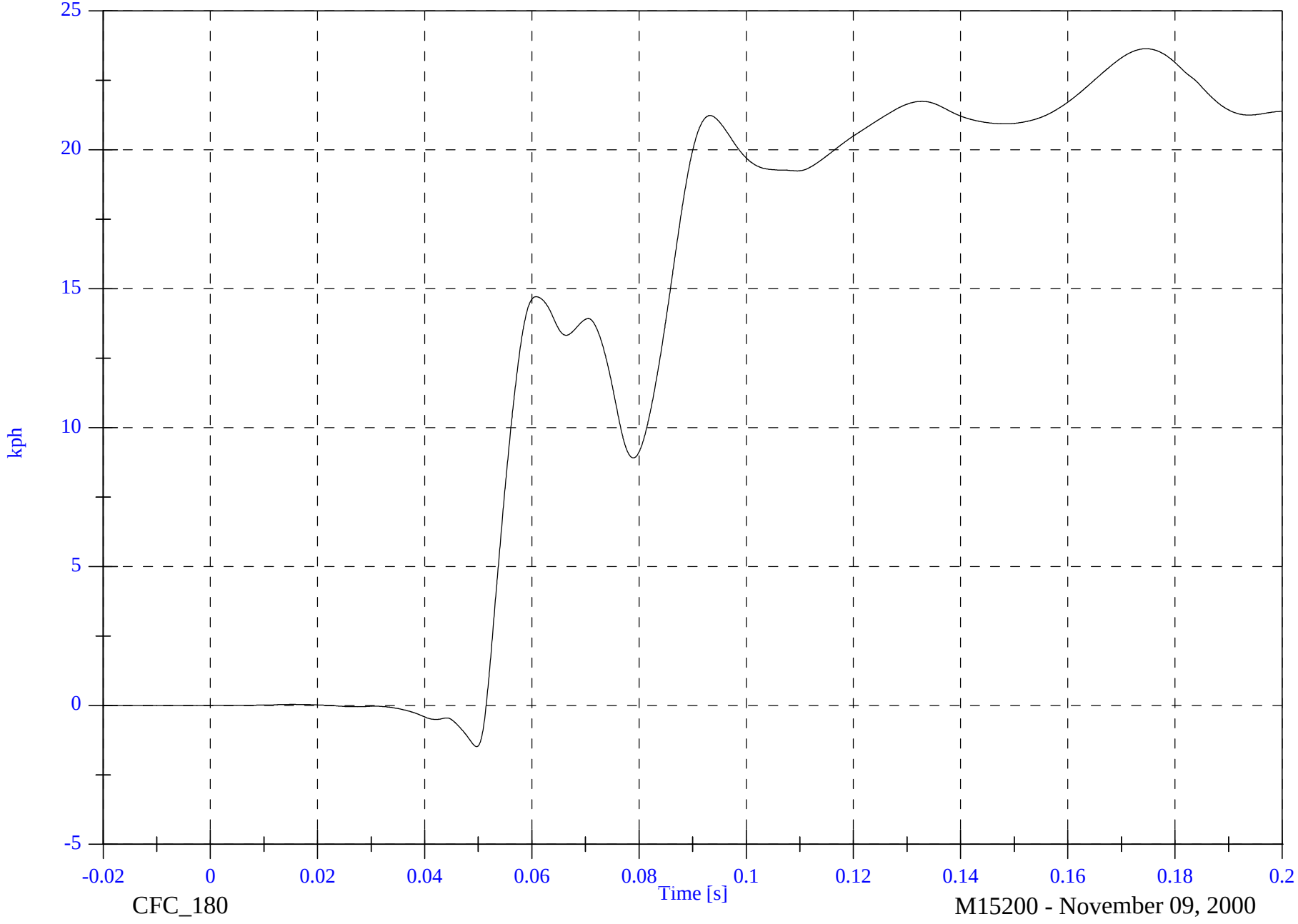
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head y Velocity

Max: 23.6 [kph] at 0.175 [s]
Min: -1.5 [kph] at 0.050 [s]



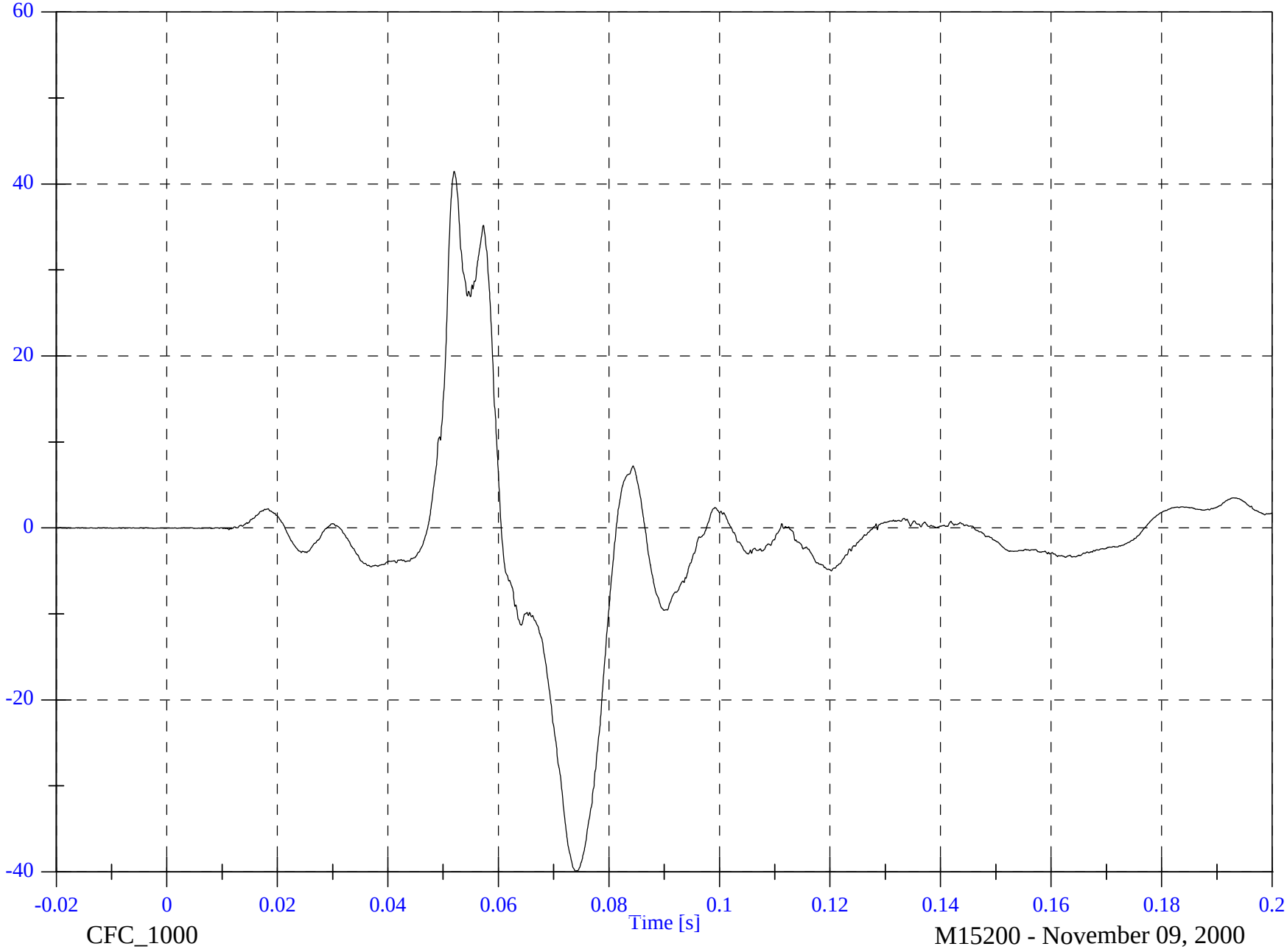
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head z

Max: 41.5 [g] at 0.052 [s]
Min: -39.9 [g] at 0.074 [s]



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CFC_1000

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head z Velocity

Max: 9.0 [kph] at 0.061 [s]
Min: -10.9 [kph] at 0.177 [s]

CFC_180

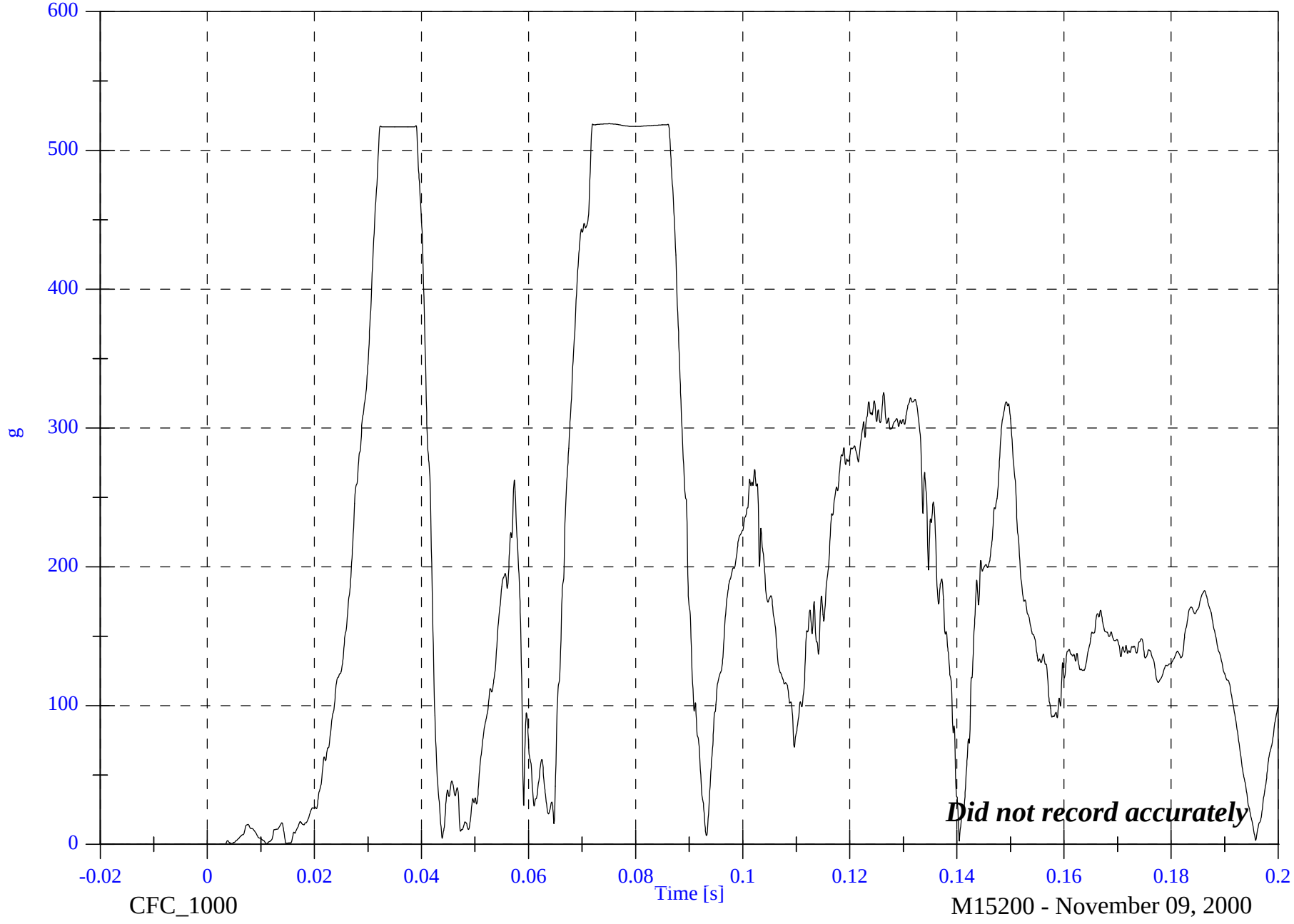
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Head Resultant

Max: 519.2 [g] at 0.075 [s]

Min: 0.0 [g] at -0.010 [s]



CFC_1000

M15200 - November 09, 2000

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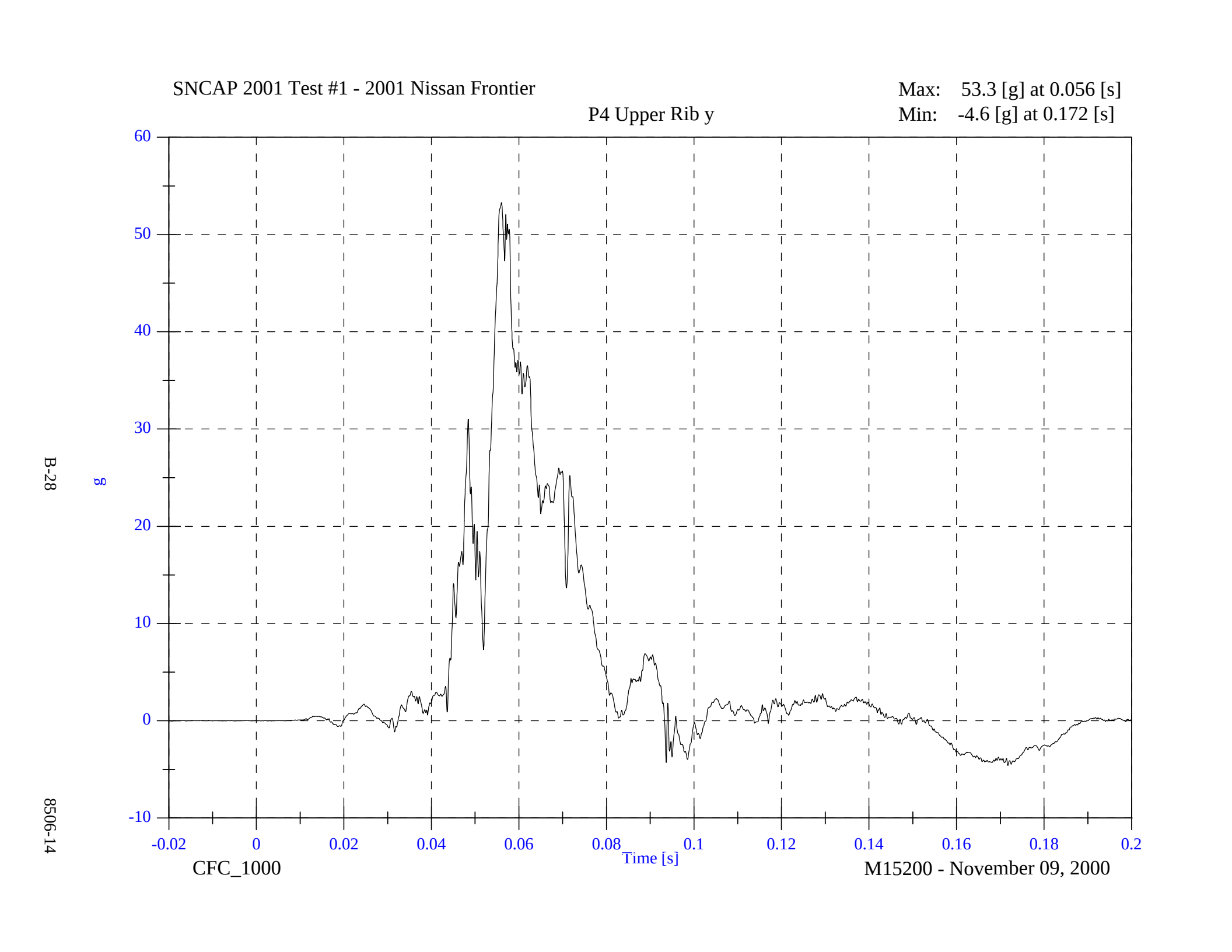
SNCAP 2001 Test #1 - 2001 Nissan Frontier
P4 Upper Rib y
Max: 53.3 [g] at 0.056 [s]
Min: -4.6 [g] at 0.172 [s]
60
50
40
30
20
10
0
-10
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_1000
M15200 - November 09, 2000
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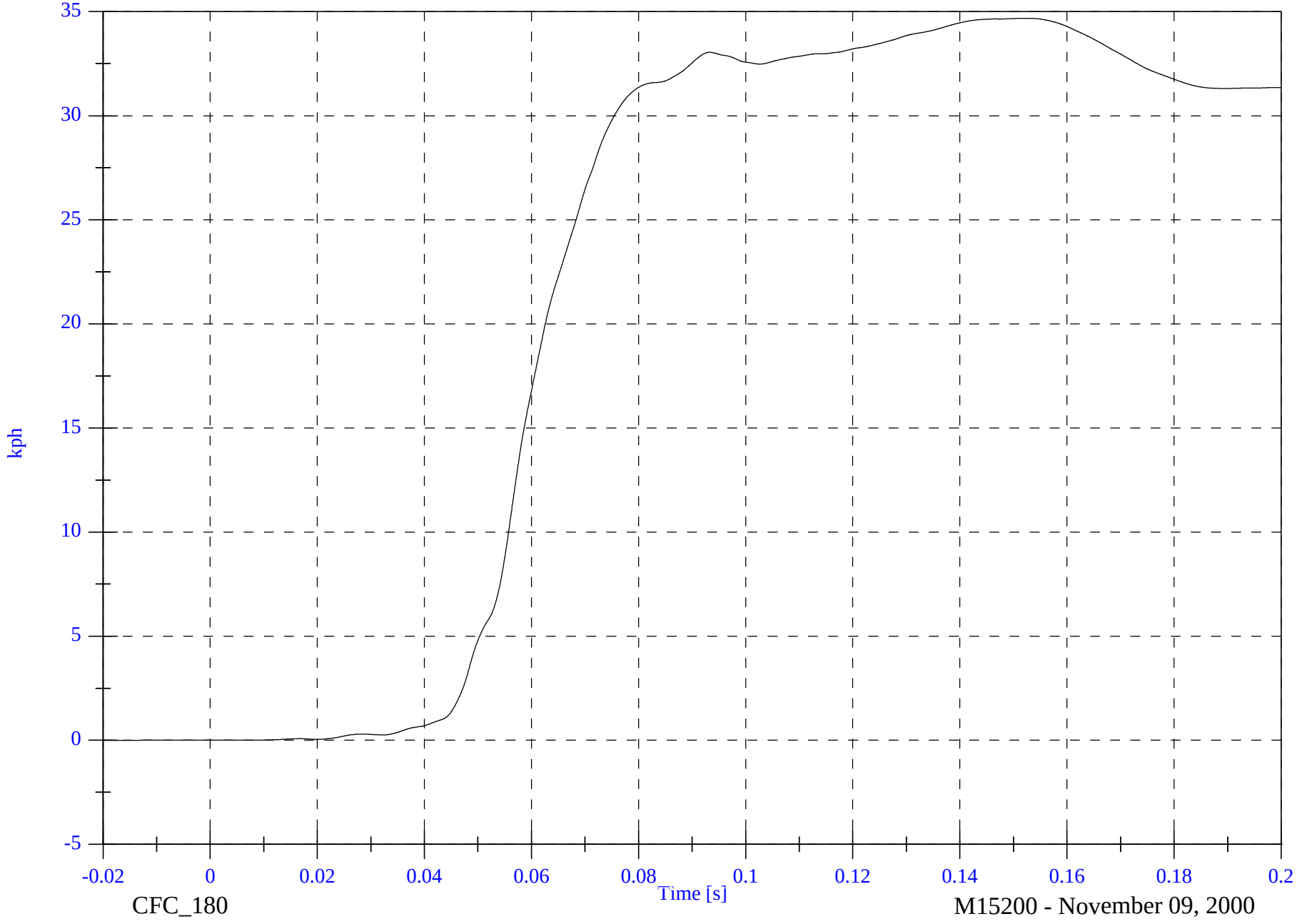
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Upper Rib y Velocity

Max: 34.7 [kph] at 0.153 [s]
Min: -0.0 [kph] at -0.019 [s]



CFC_180

M15200 - November 09, 2000

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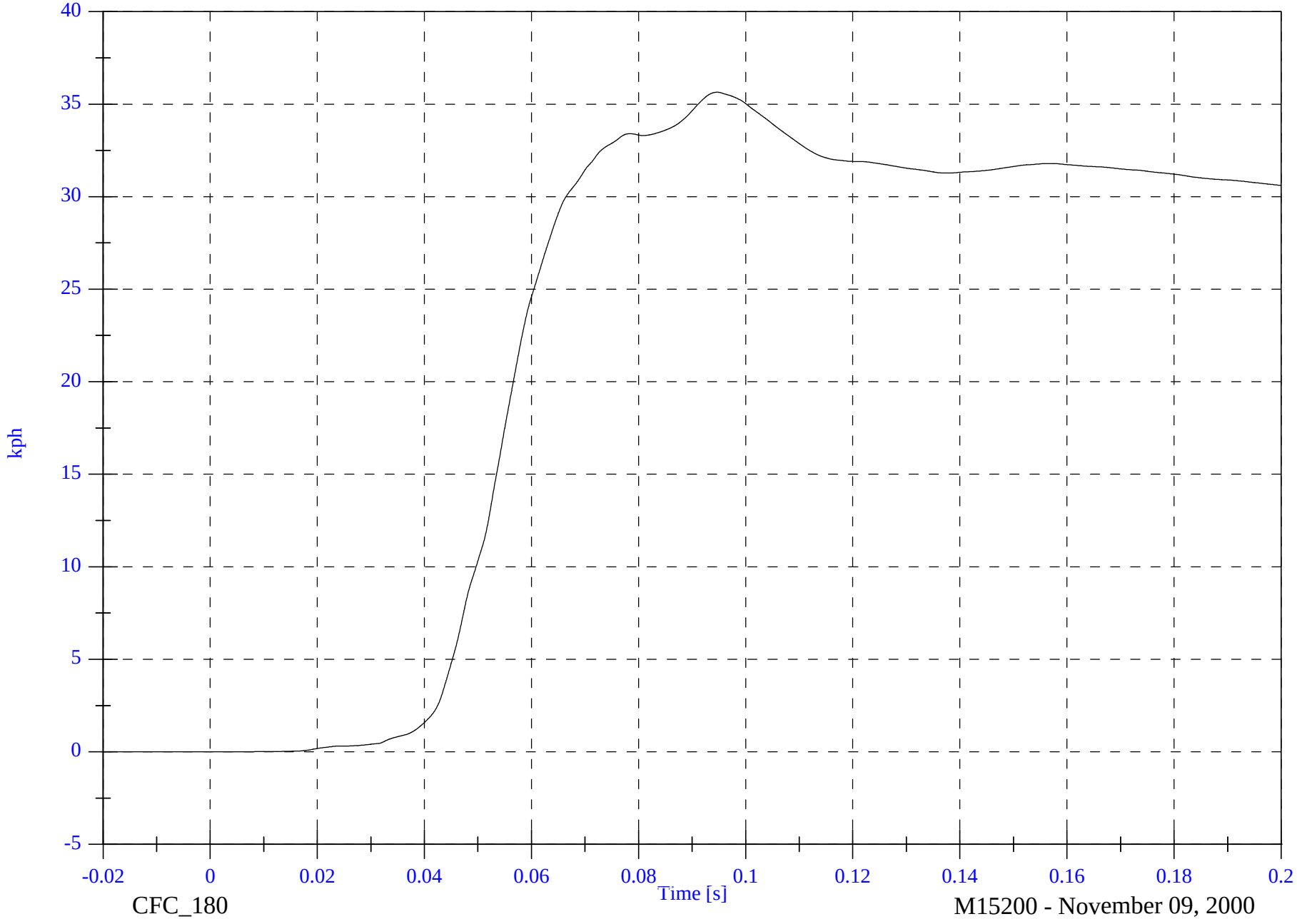
SNCAP 2001 Test #1 - 2001 Nissan Frontier
P4 Lower Rib y
Max: 53.7 [g] at 0.052 [s]
Min: -7.4 [g] at 0.100 [s]
60
50
40
30
20
10
0
-10
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_1000
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Rib y Velocity

Max: 35.7 [kph] at 0.095 [s]
Min: -0.0 [kph] at -0.017 [s]



CFC_180

M15200 - November 09, 2000

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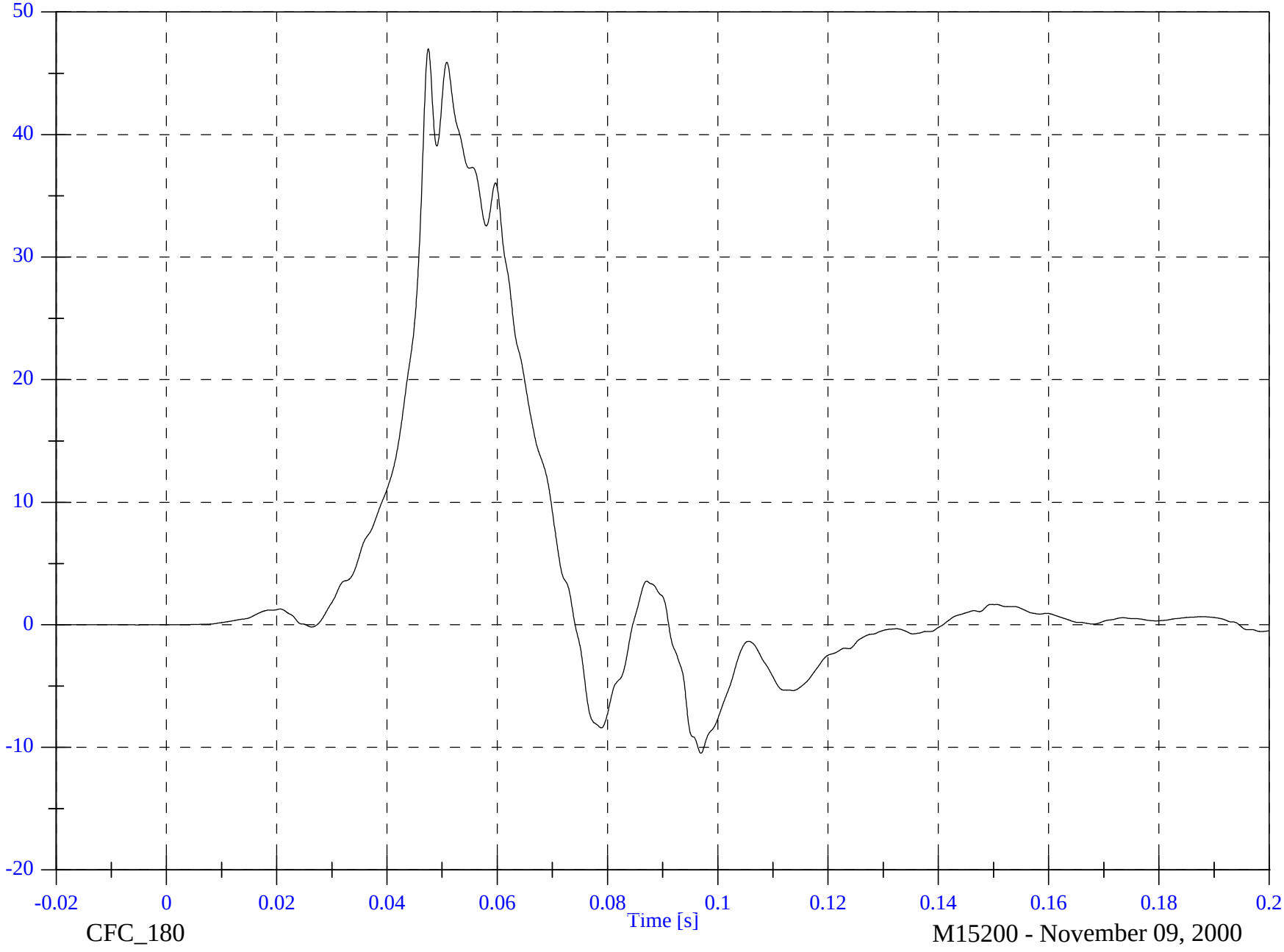
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Spine y

Max: 47.0 [g] at 0.048 [s]
Min: -10.5 [g] at 0.097 [s]



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8506-14

CFC_180

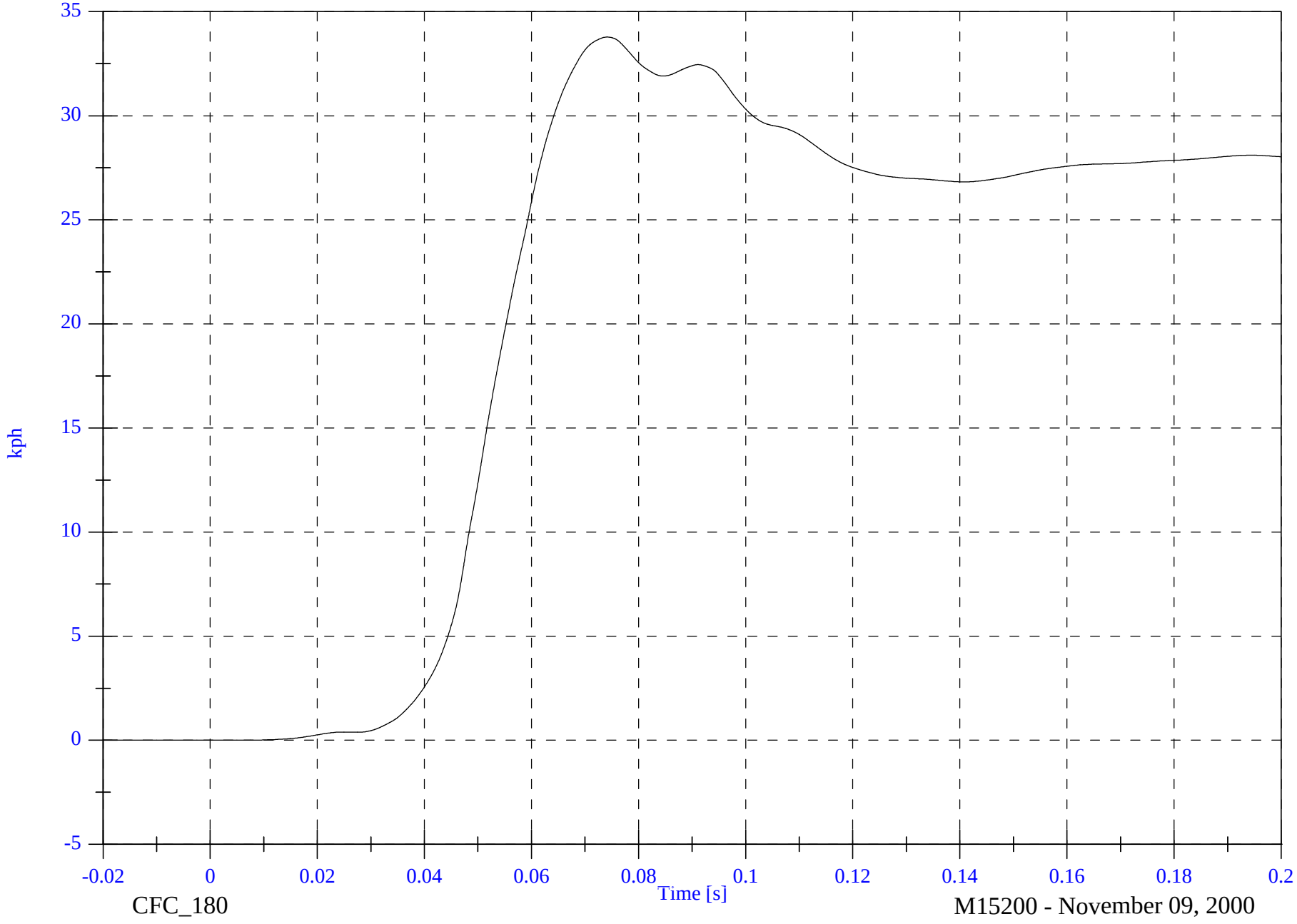
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Spine y Velocity

Max: 33.8 [kph] at 0.074 [s]

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



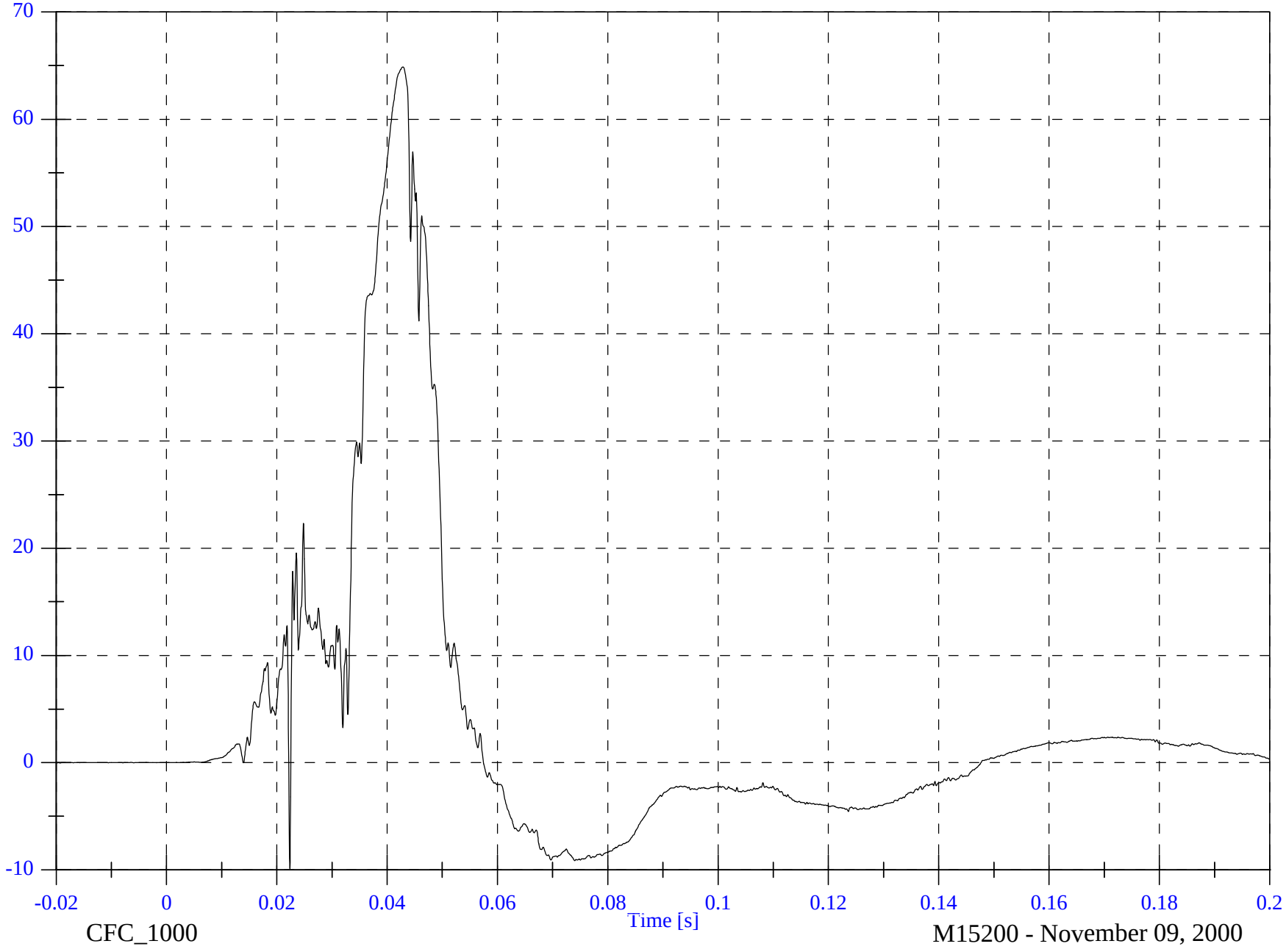
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Pelvic y

Max: 64.9 [g] at 0.043 [s]
Min: -9.9 [g] at 0.022 [s]



CFC_1000

M15200 - November 09, 2000

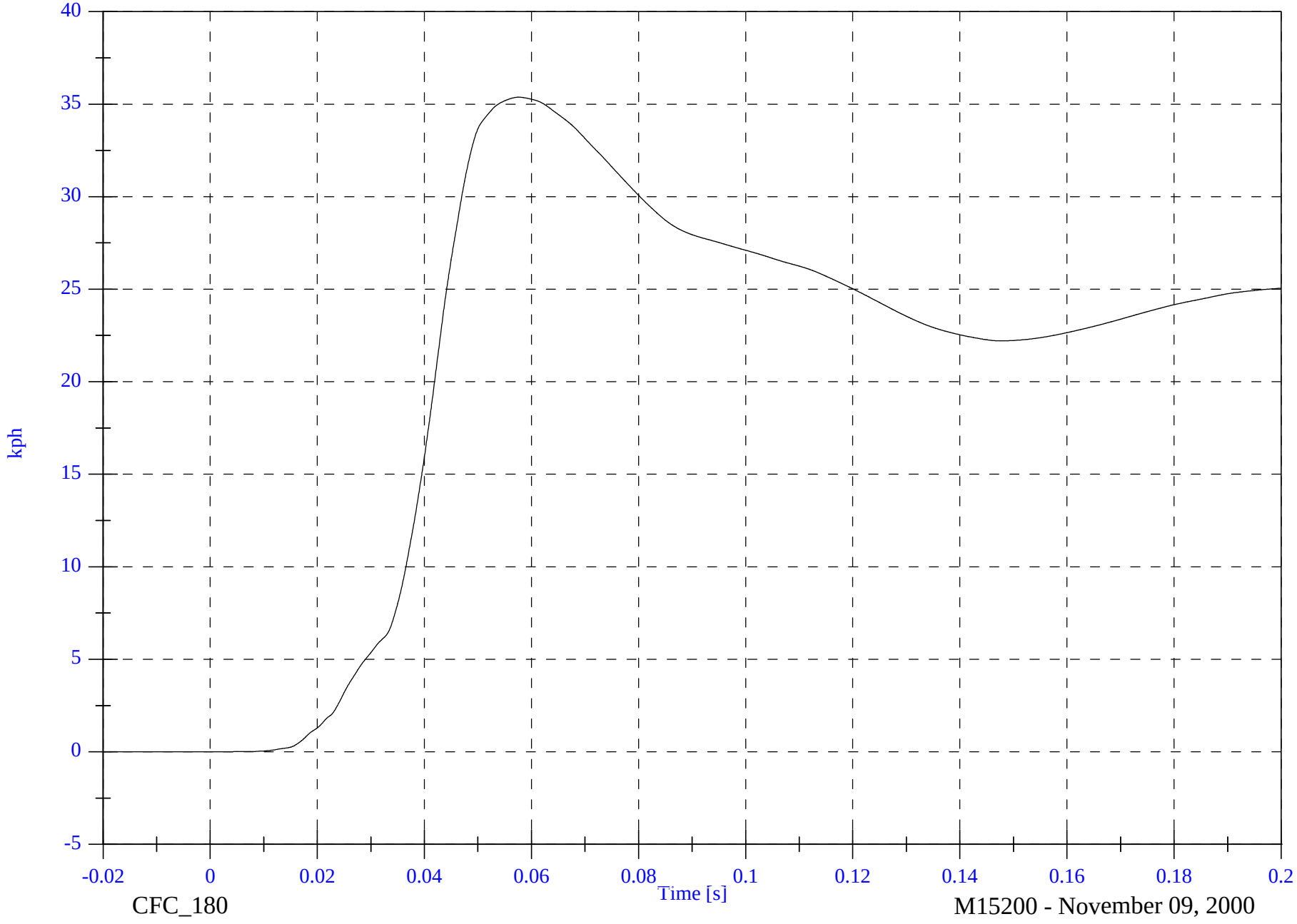
B-34

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Pelvic y Velocity

Max: 35.4 [kph] at 0.058 [s]
Min: -0.0 [kph] at -0.019 [s]



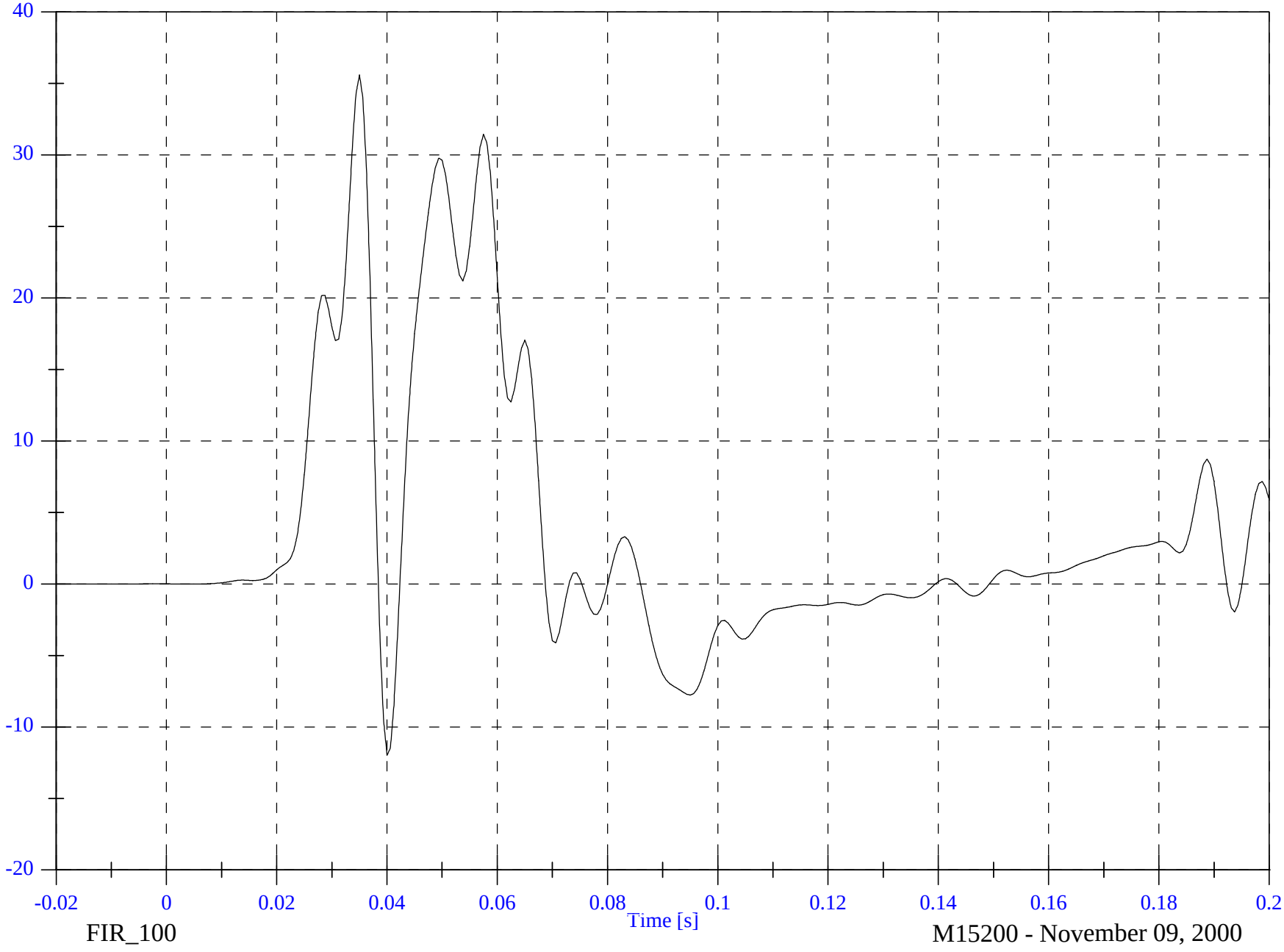
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Upper Rib y

Max: 35.6 [g] at 0.035 [s]
Min: -12.0 [g] at 0.040 [s]



FIR_100

M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Rib y

Max: 35.3 [g] at 0.034 [s]
Min: -6.3 [g] at 0.127 [s]

FIR_100

M15200 - November 09, 2000

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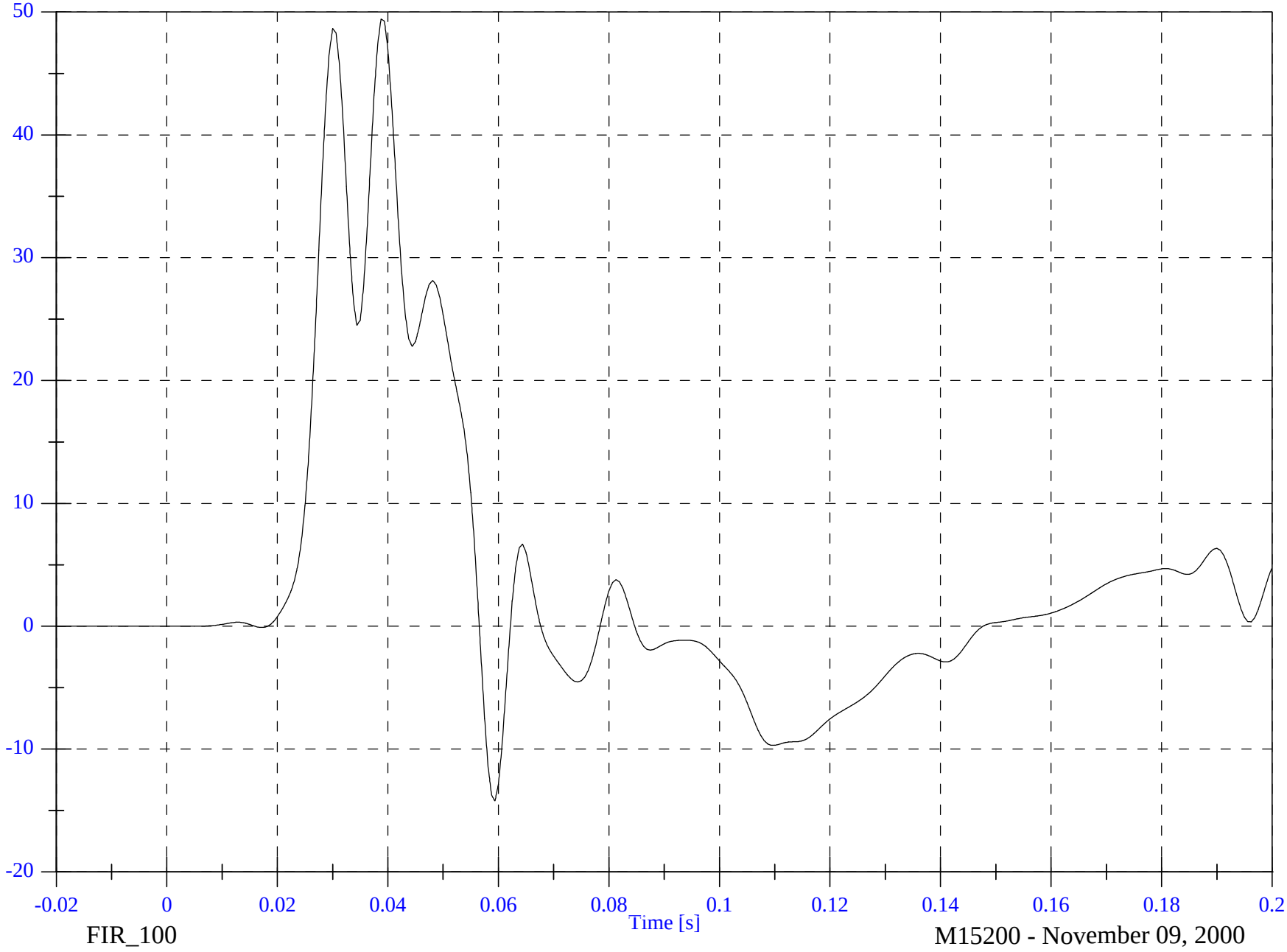
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Spine y

Max: 49.4 [g] at 0.039 [s]
Min: -14.2 [g] at 0.059 [s]



FIR_100

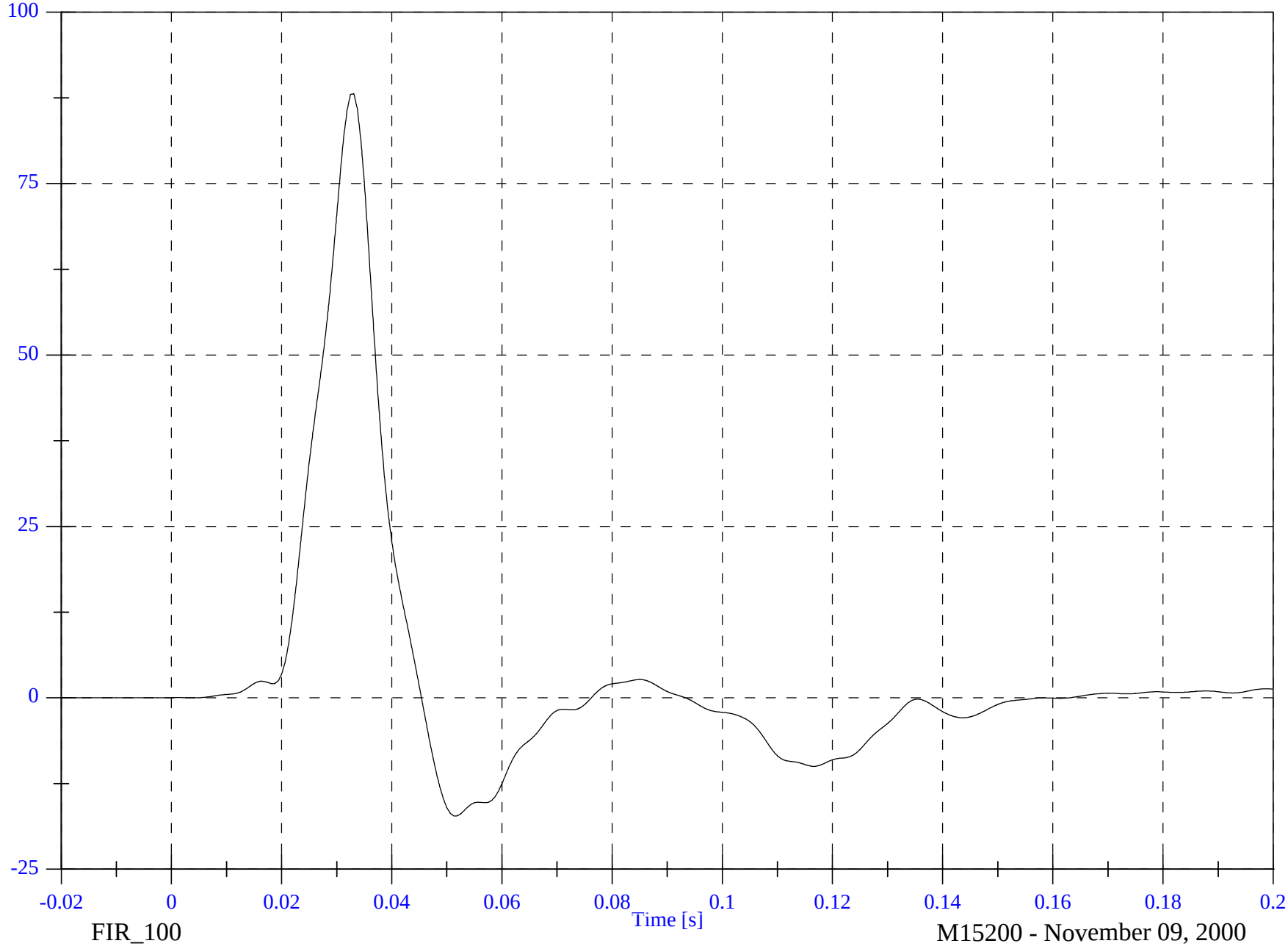
M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Pelvic y

Max: 88.1 [g] at 0.033 [s]
Min: -17.2 [g] at 0.051 [s]



FIR_100

M15200 - November 09, 2000

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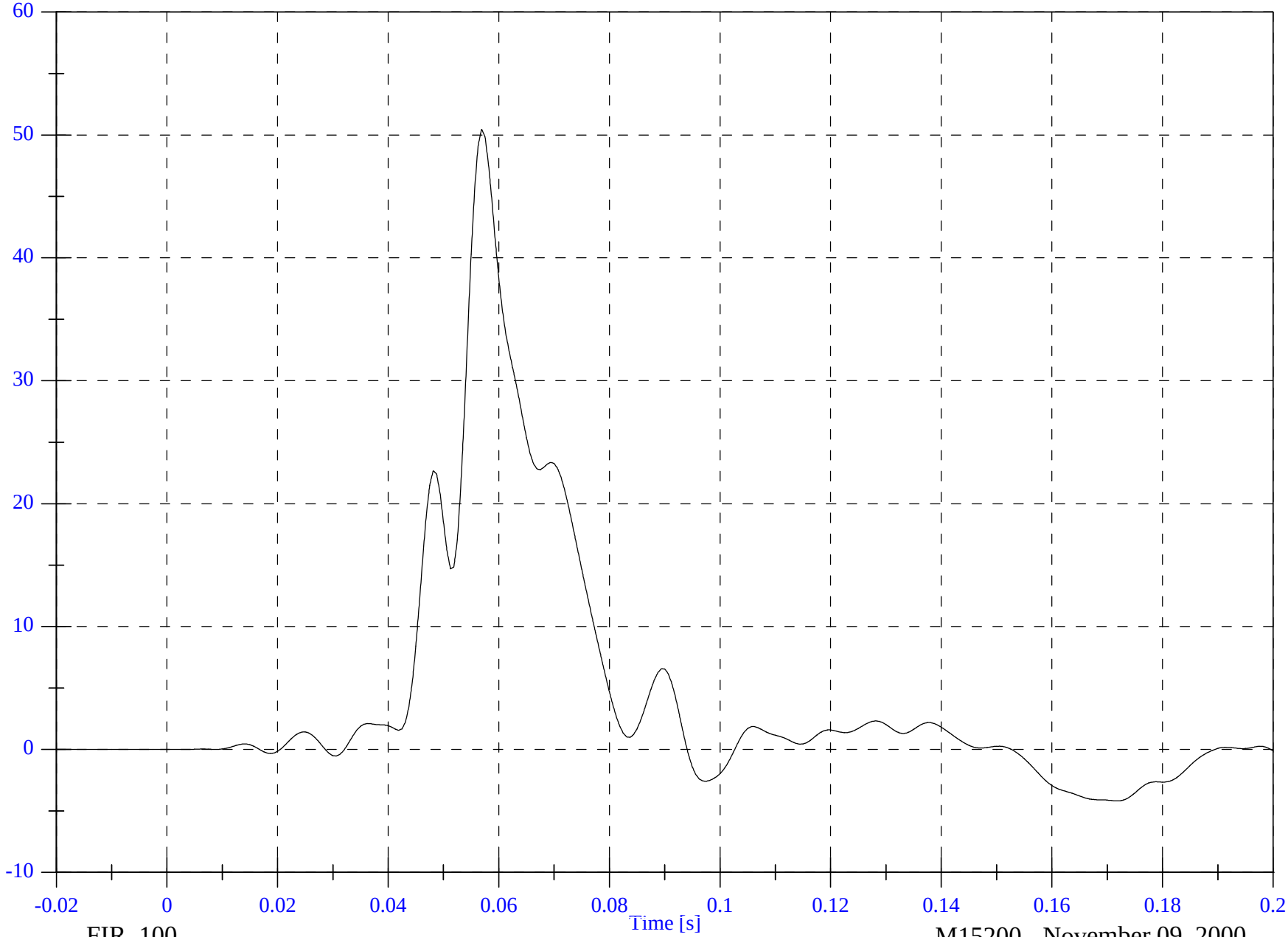
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Upper Rib y

Max: 50.5 [g] at 0.057 [s]
Min: -4.2 [g] at 0.172 [s]



FIR_100

M15200 - November 09, 2000

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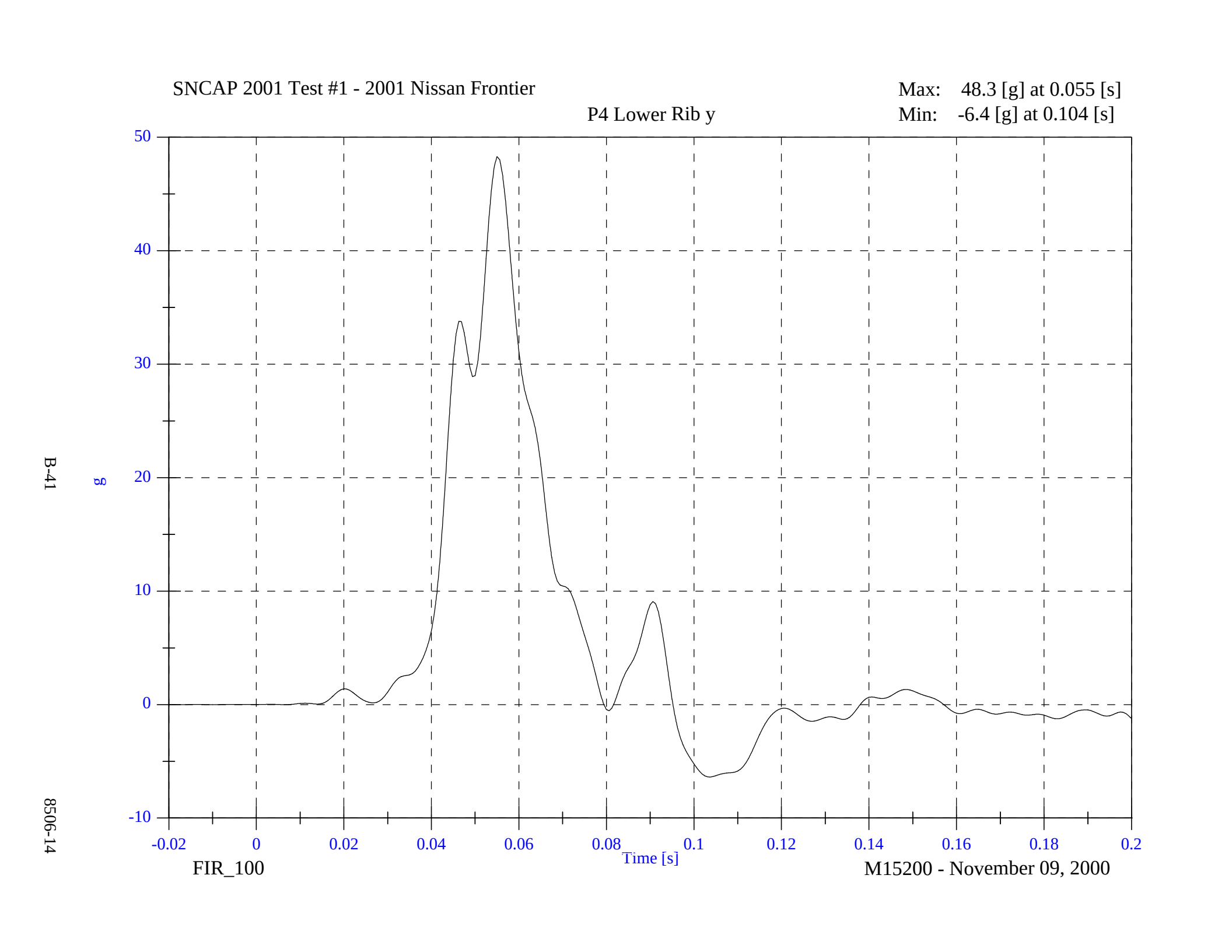
SNCAP 2001 Test #1 - 2001 Nissan Frontier
P4 Lower Rib y
Max: 48.3 [g] at 0.055 [s]
Min: -6.4 [g] at 0.104 [s]
50
40
30
20
10
0
-10
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
FIR_100
M15200 - November 09, 2000
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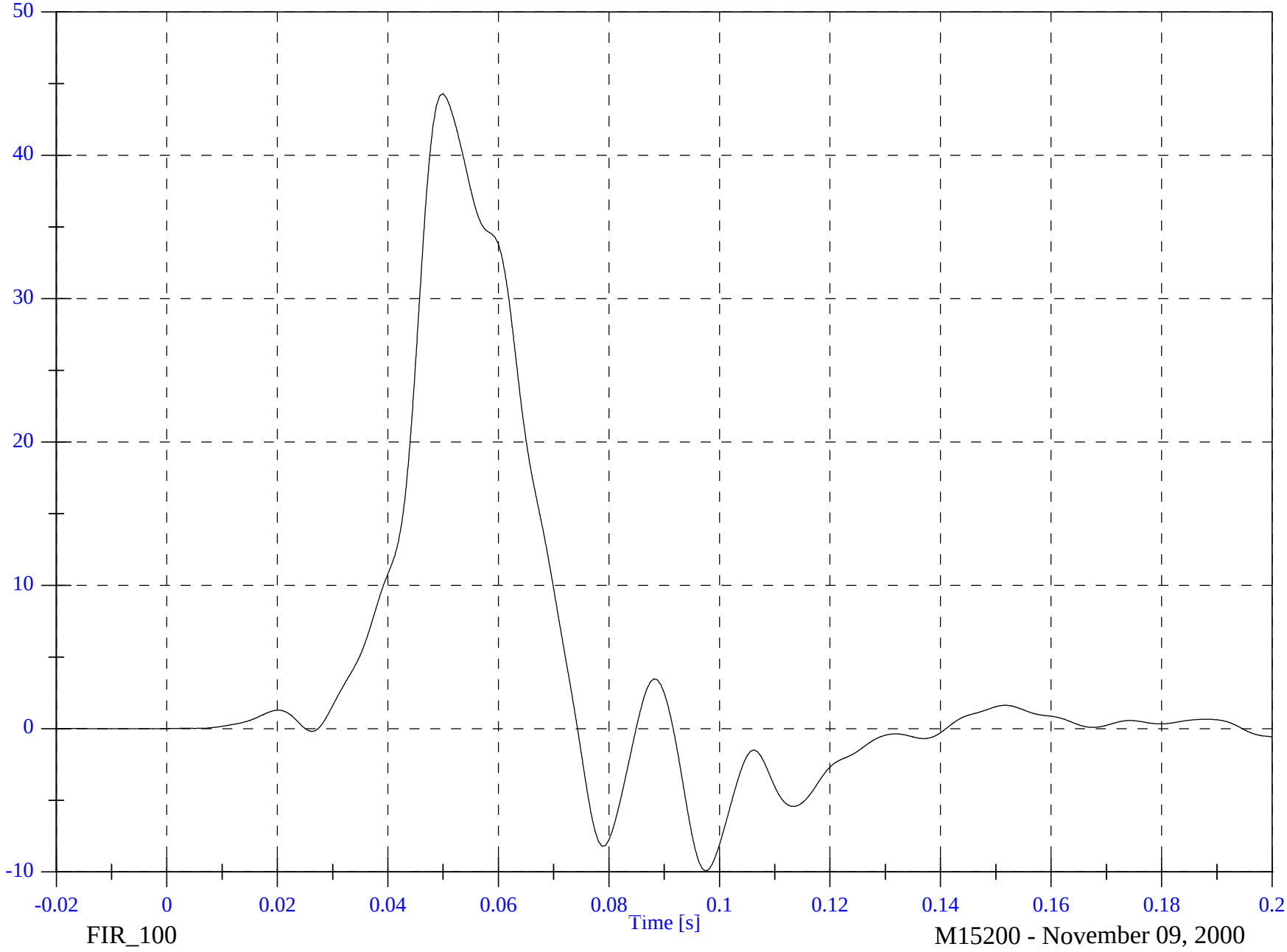
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Spine y

Max: 44.3 [g] at 0.050 [s]
Min: -9.9 [g] at 0.098 [s]



FIR_100

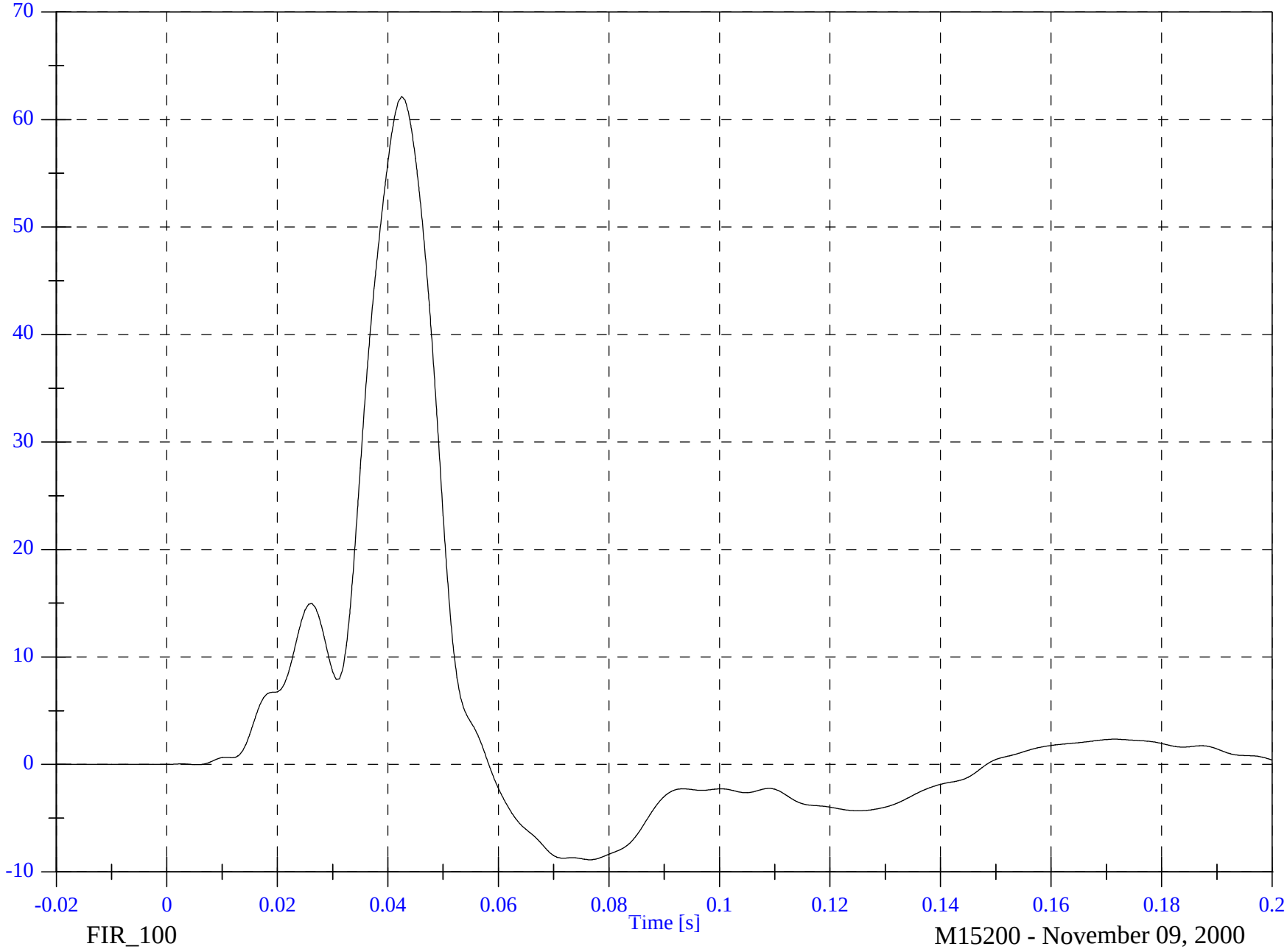
M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Pelvic y

Max: 62.2 [g] at 0.043 [s]
Min: -8.9 [g] at 0.077 [s]



FIR_100

M15200 - November 09, 2000

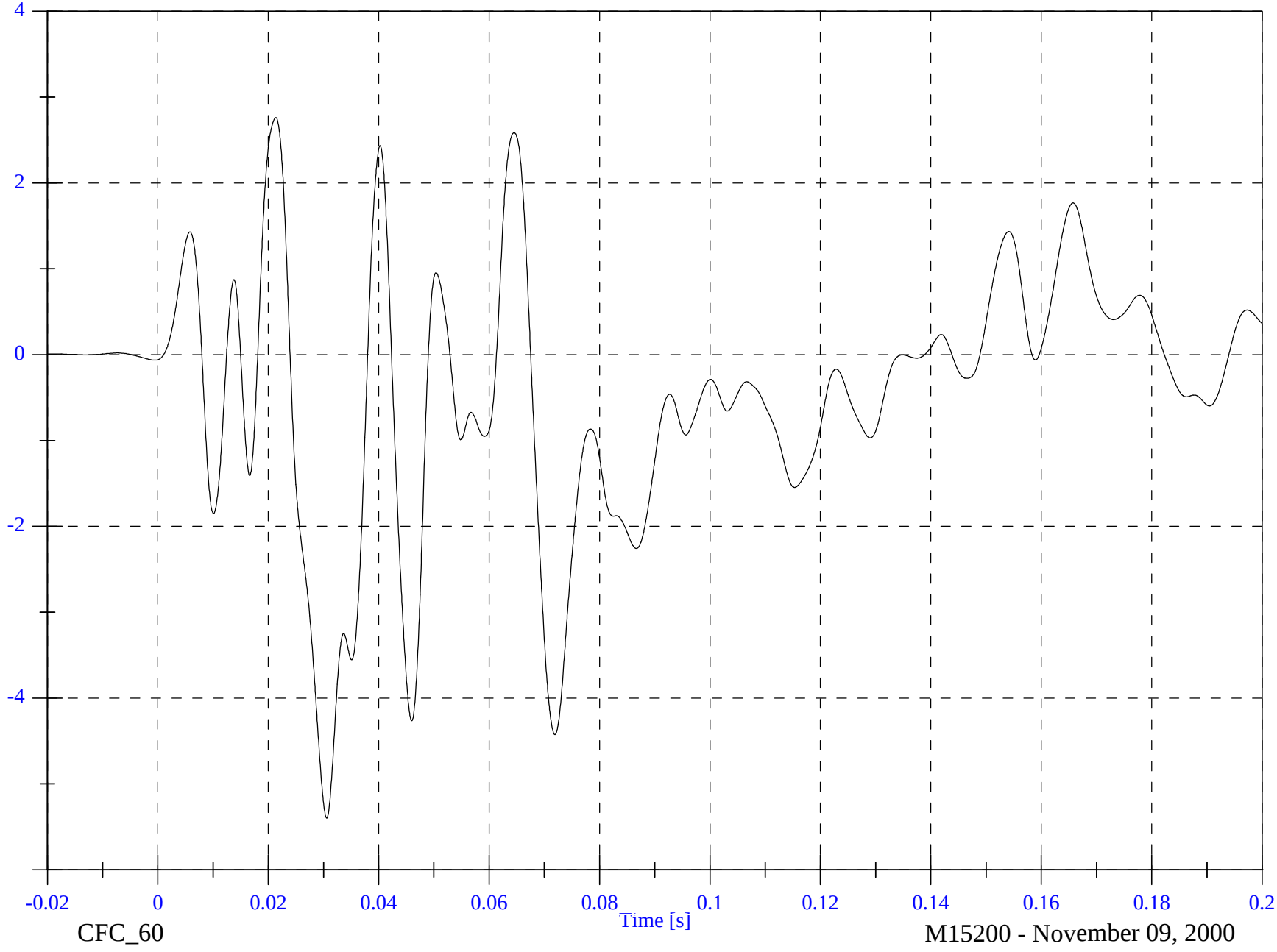
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill X

Max: 2.8 [g] at 0.021 [s]

Min: -5.4 [g] at 0.031 [s]



CFC_60

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill X Velocity

Max: 0.4 [kph] at 0.024 [s]

Min: -4.2 [kph] at 0.149 [s]

CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill Y

Max: 33.3 [g] at 0.022 [s]

Min: -6.1 [g] at 0.061 [s]

CFC_60

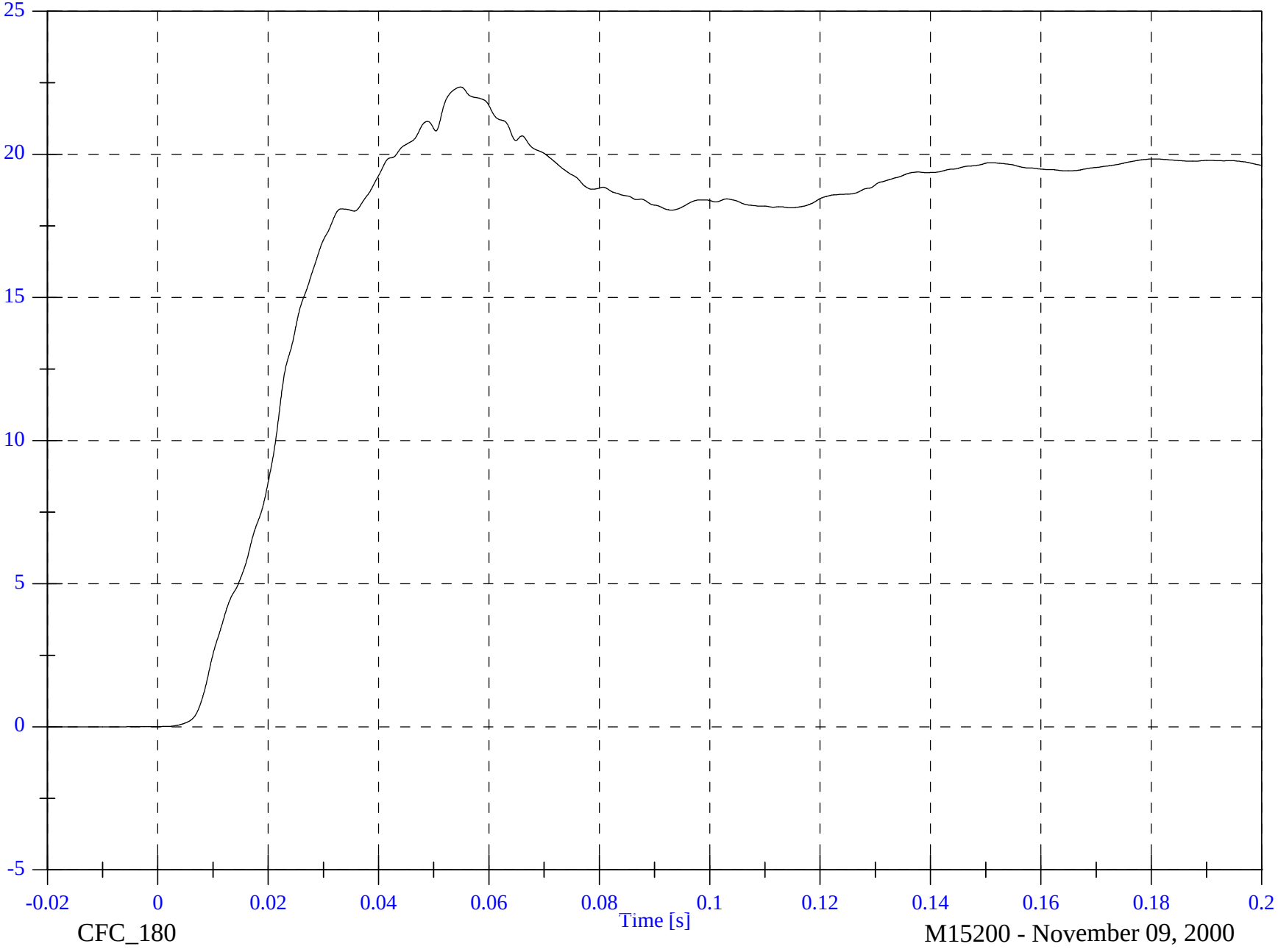
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill Y Velocity

Max: 22.4 [kph] at 0.055 [s]

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



CFC_180

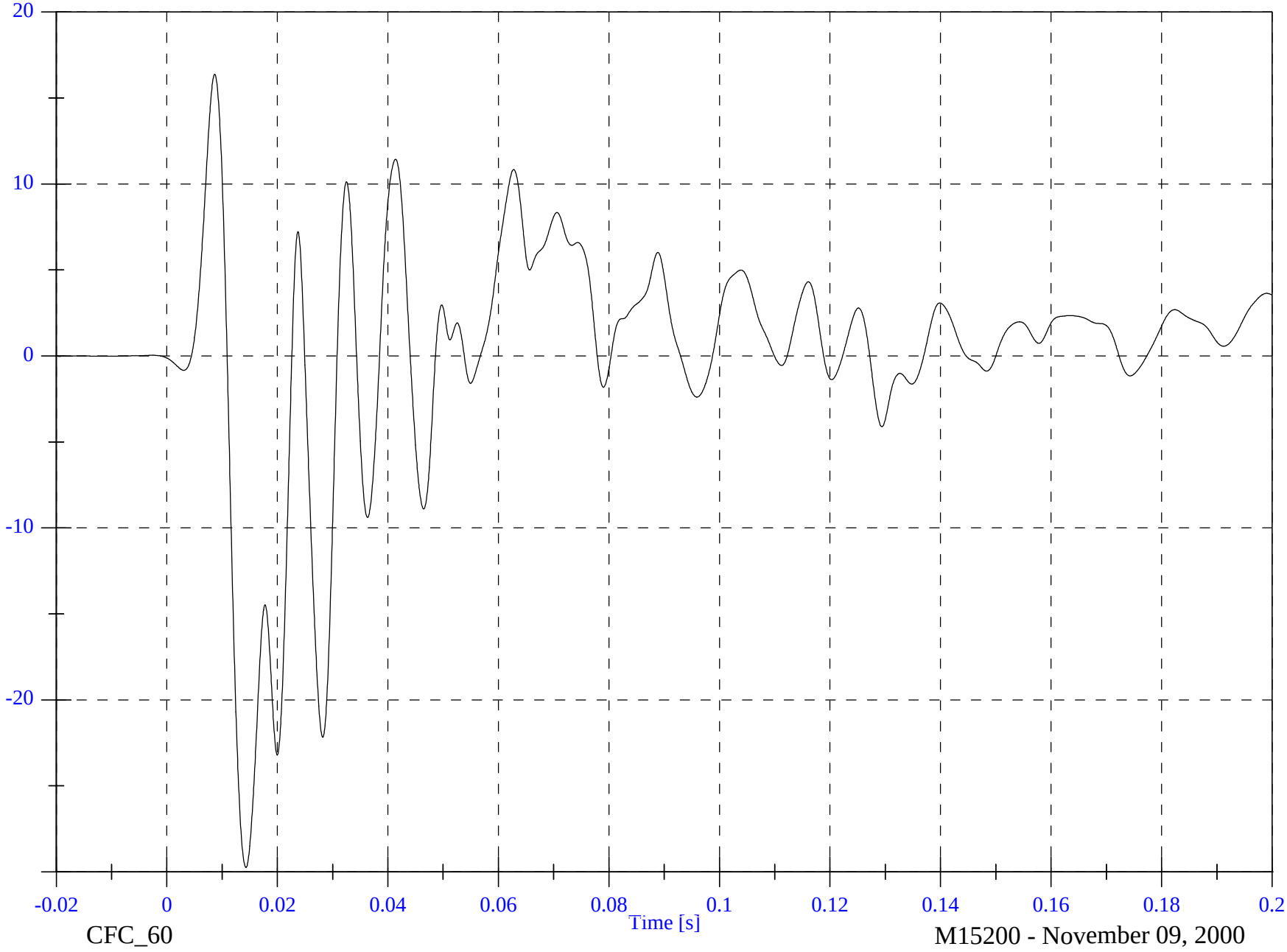
M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill Z

Max: 16.4 [g] at 0.009 [s]
Min: -29.7 [g] at 0.014 [s]



CFC_60

M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill Z Velocity

Max: 2.5 [kph] at 0.011 [s]

Min: -9.0 [kph] at 0.030 [s]

CFC_180

M15200 - November 09, 2000

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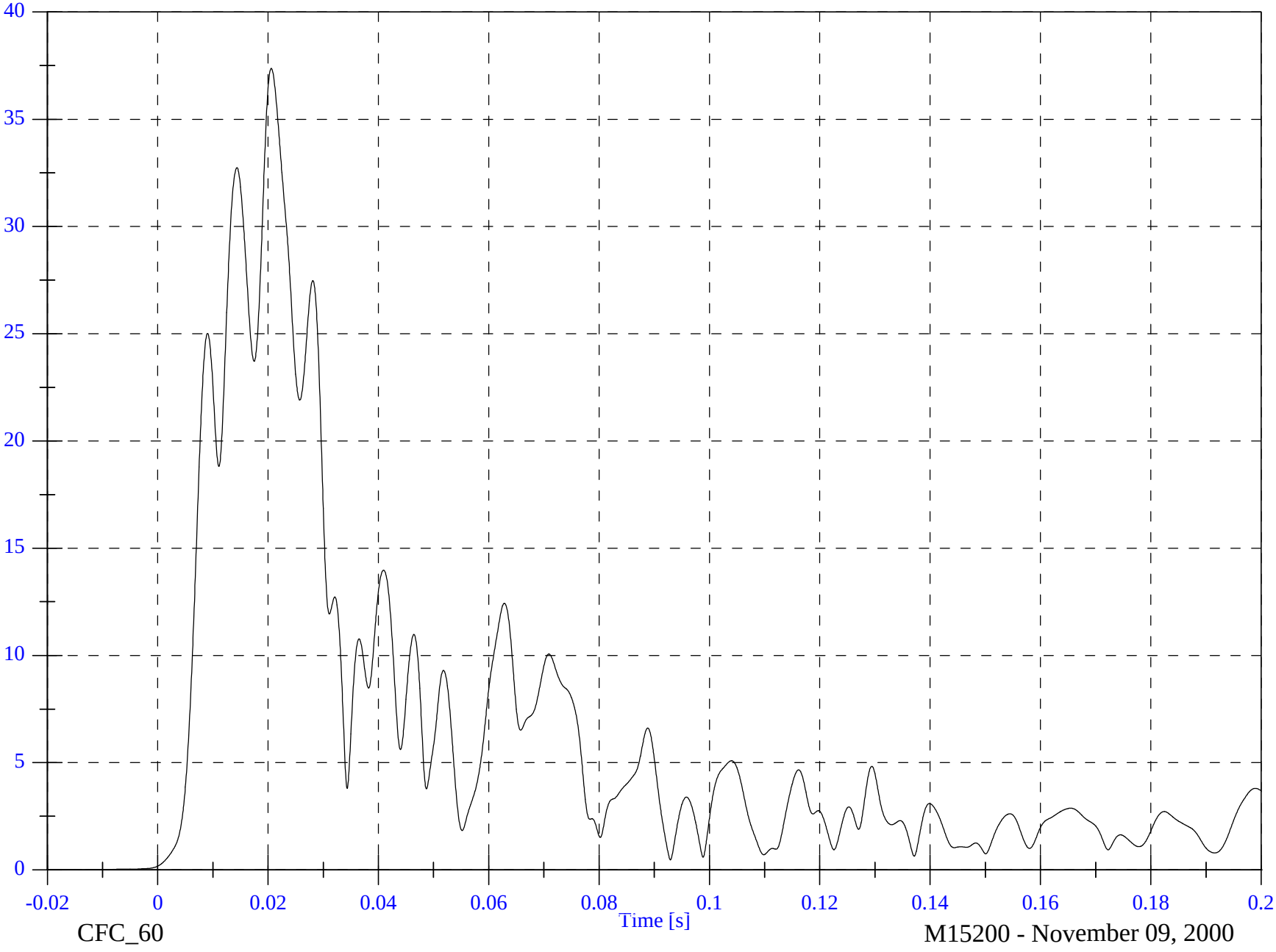
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 1 Right Front Sill Resultant

Max: 37.4 [g] at 0.021 [s]

Min: 0.0 [g] at -0.013 [s]



CFC_60

M15200 - November 09, 2000

B-50

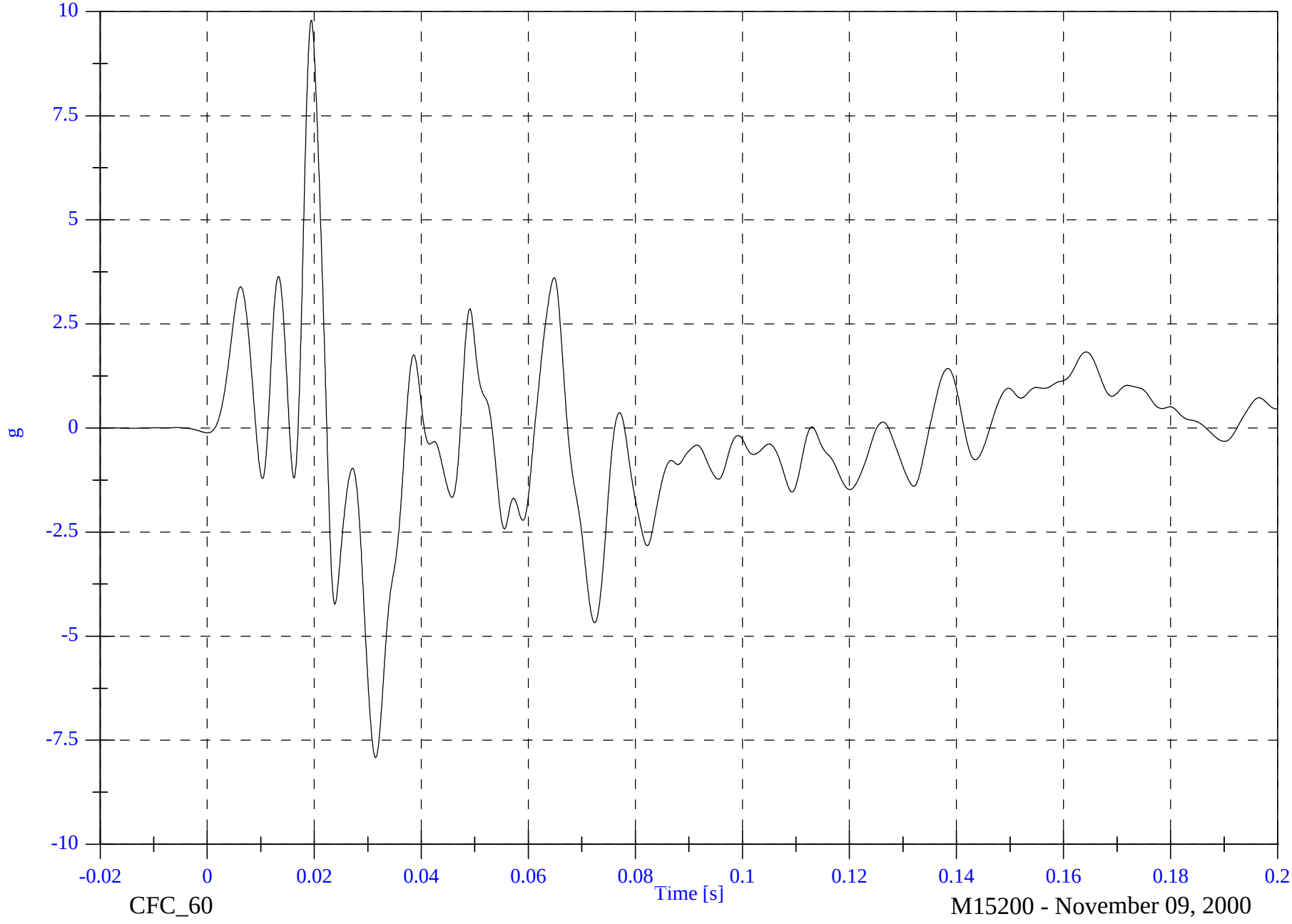
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 2 Right Rear Sill X

Max: 9.8 [g] at 0.019 [s]

Min: -7.9 [g] at 0.031 [s]



CFC_60

M15200 - November 09, 2000

B-51

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 2 Right Rear Sill X Velocity

Max: 2.1 [kph] at 0.023 [s]

Min: -2.5 [kph] at 0.134 [s]

CFC_180

M15200 - November 09, 2000

B-52

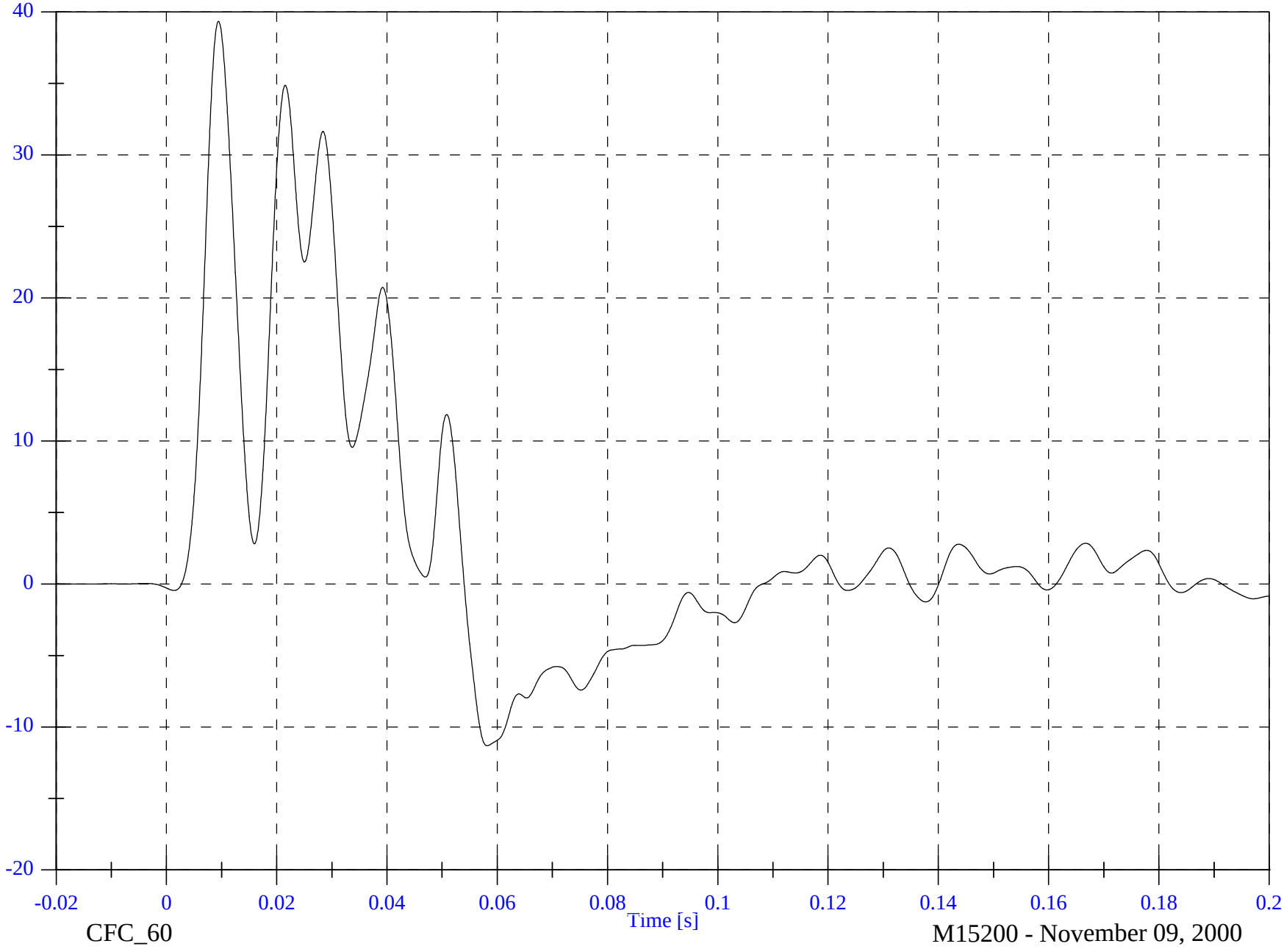
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 2 Right Rear Sill Y

Max: 39.4 [g] at 0.009 [s]

Min: -11.3 [g] at 0.058 [s]



CFC_60

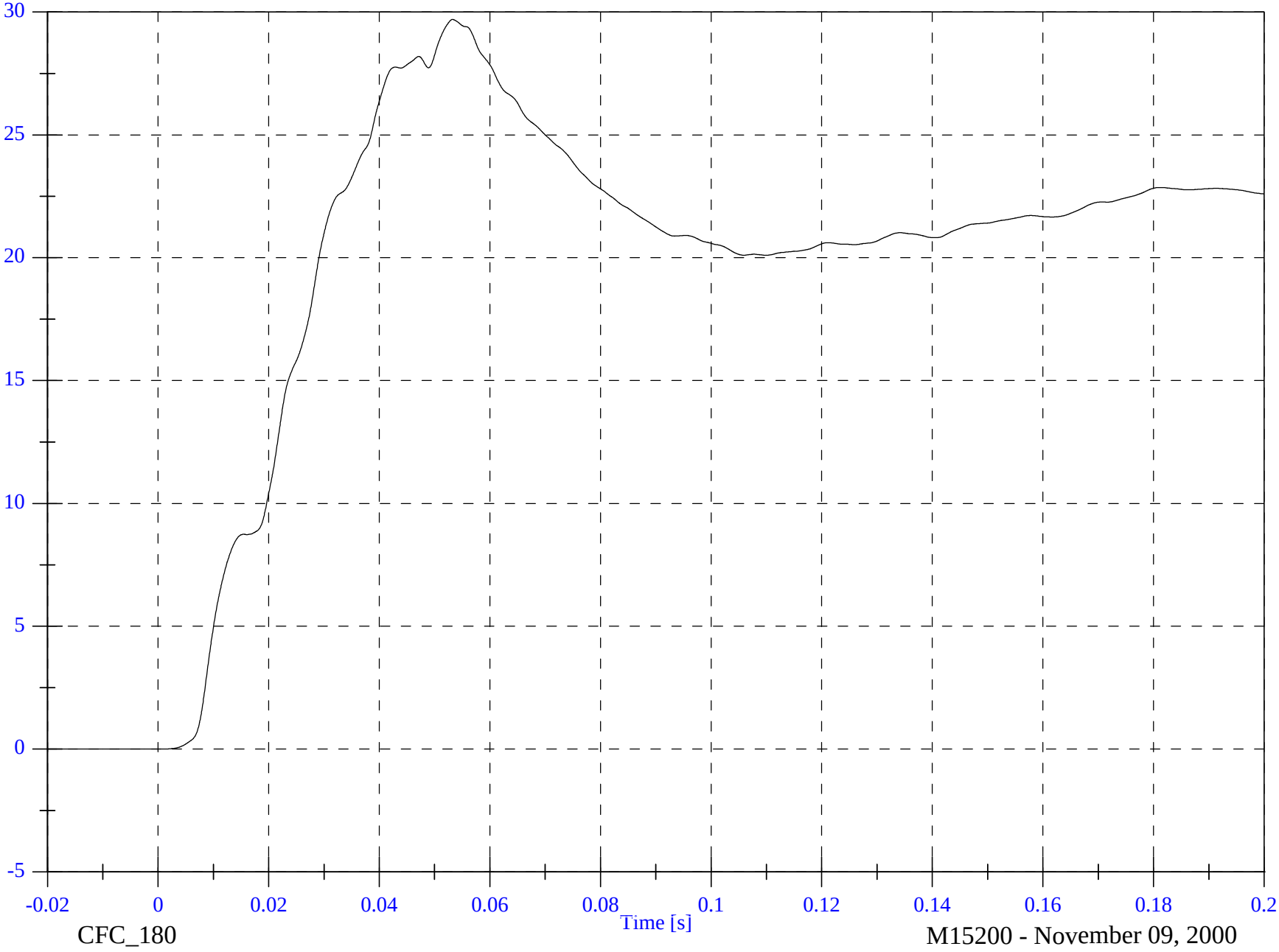
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 2 Right Rear Sill Y Velocity

Max: 29.7 [kph] at 0.053 [s]

Min: -0.0 [kph] at -0.012 [s]



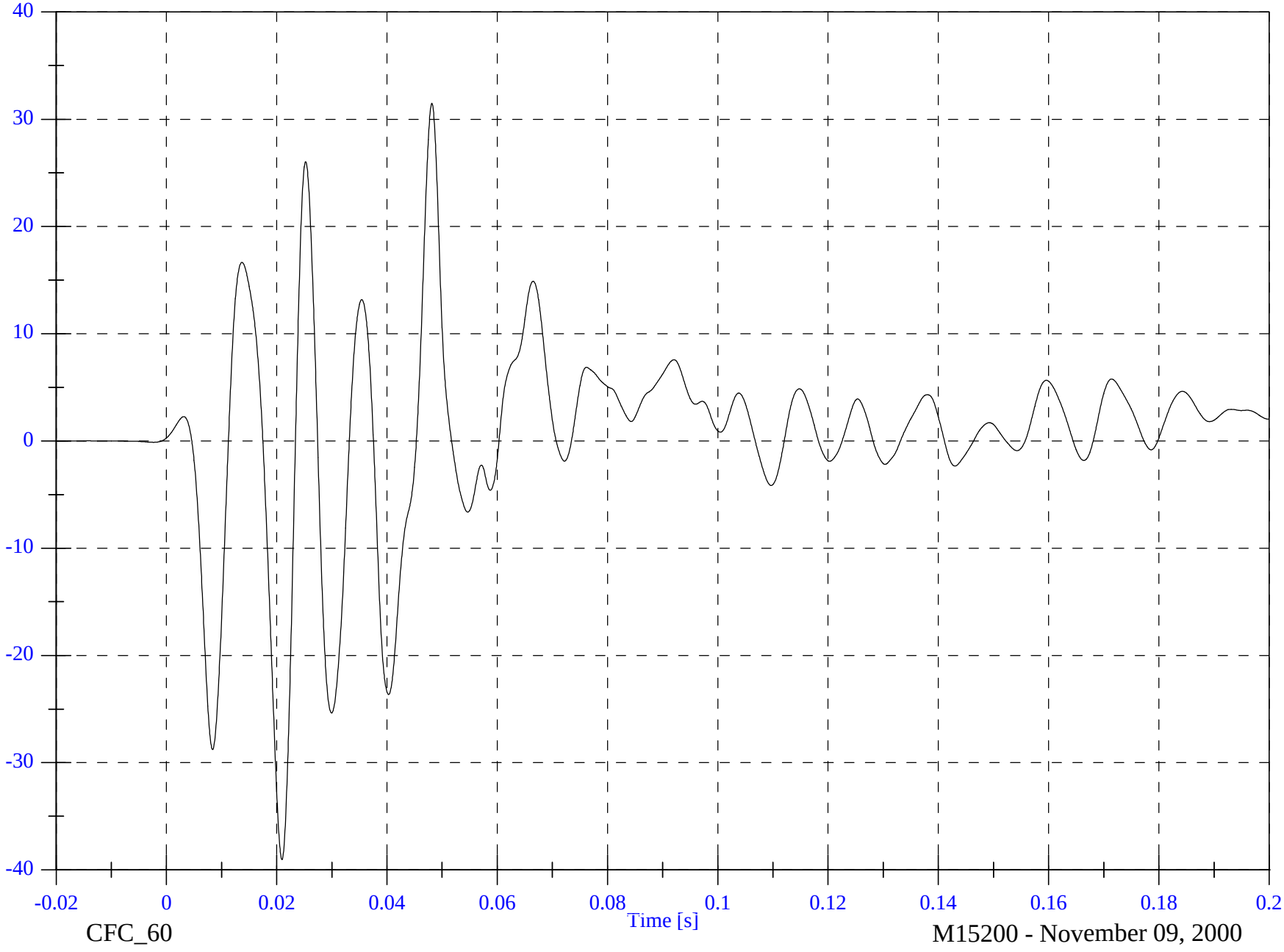
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 2 Right Rear Sill Z

Max: 31.5 [g] at 0.048 [s]
Min: -39.0 [g] at 0.021 [s]



CFC_60

M15200 - November 09, 2000

B-55

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 2 Right Rear Sill Z Velocity

Max: 5.8 [kph] at 0.200 [s]

Min: -9.8 [kph] at 0.047 [s]

CFC_180

M15200 - November 09, 2000

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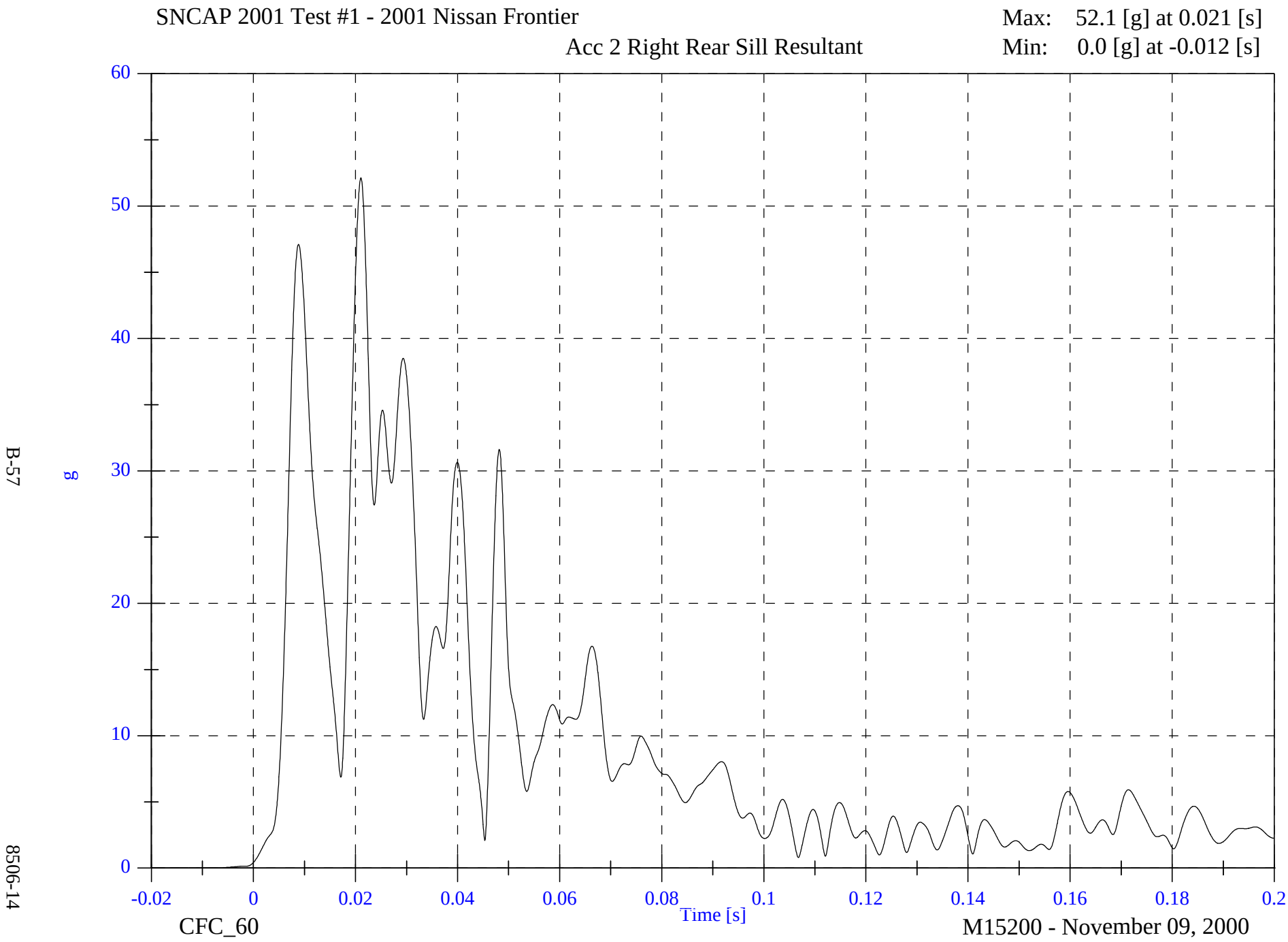
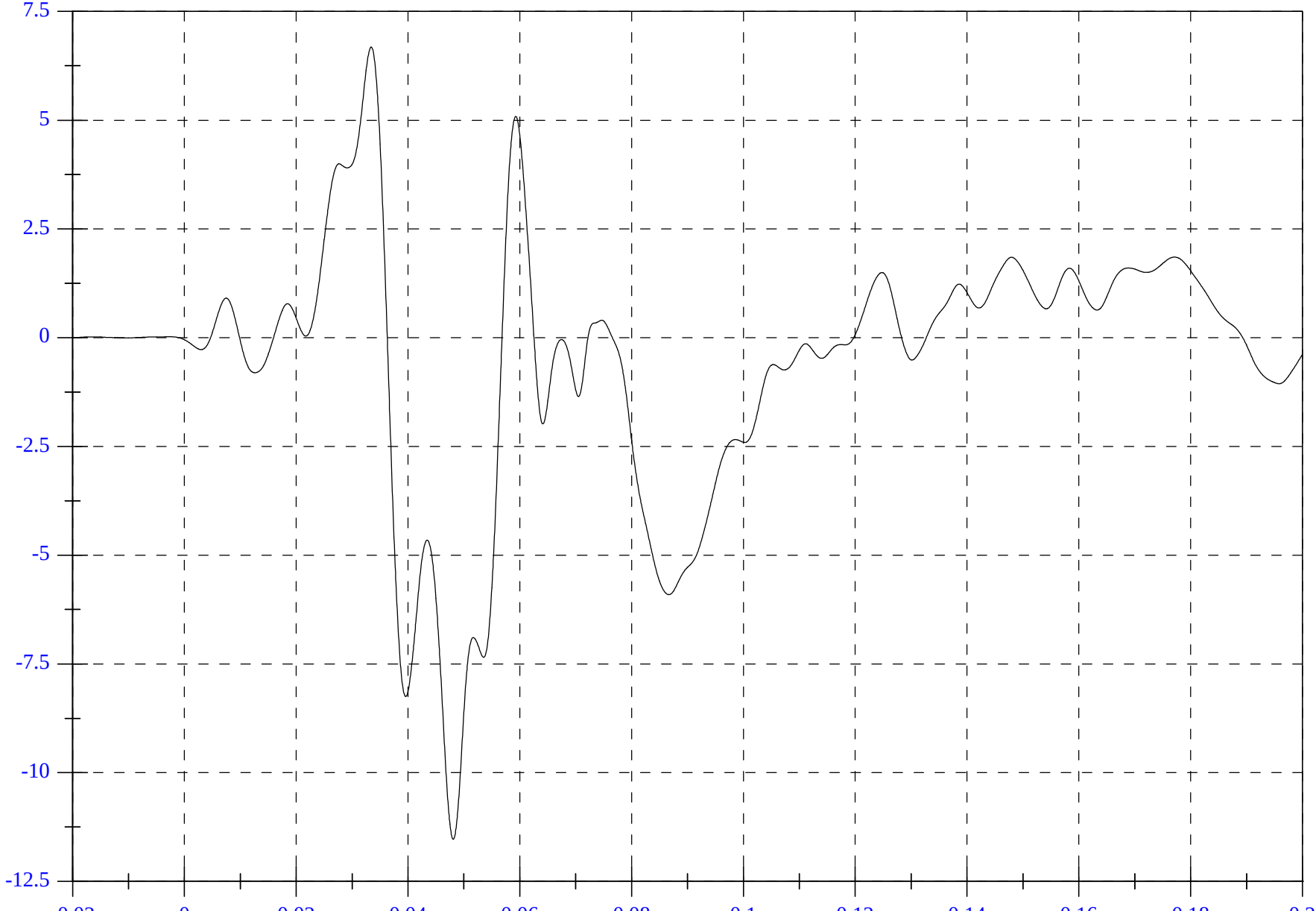

SNCAP 2001 Test #1 - 2001 Nissan Frontier
Acc 2 Right Rear Sill Resultant
Max: 52.1 [g] at 0.021 [s]
Min: 0.0 [g] at -0.012 [s]
60
50
40
30
20
10
0
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_60
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan X

Max: 6.7 [g] at 0.033 [s]
Min: -11.5 [g] at 0.048 [s]



CFC_60

M15200 - November 09, 2000

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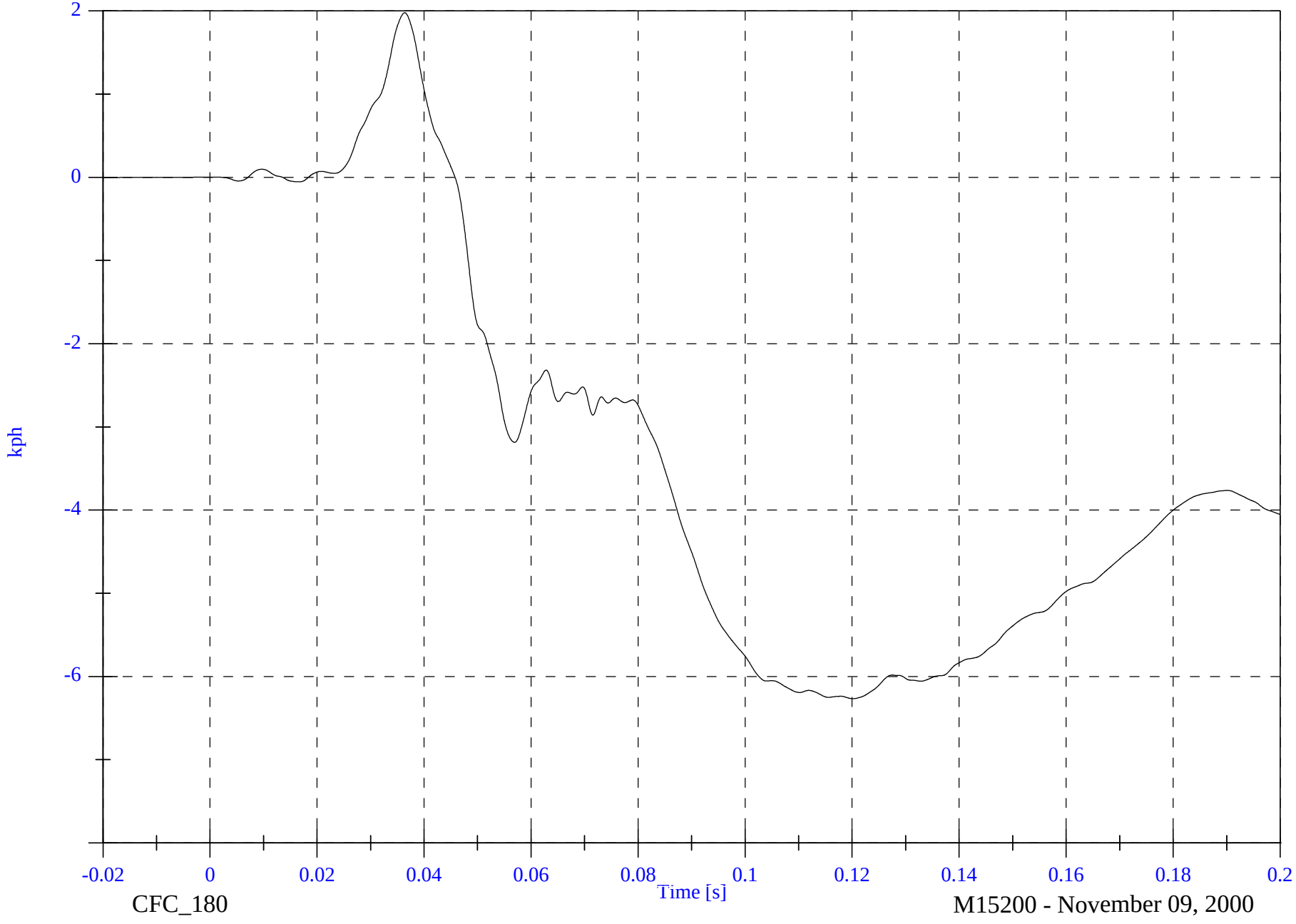
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan X Velocity

Max: 2.0 [kph] at 0.036 [s]

Min: -6.3 [kph] at 0.120 [s]



CFC_180

M15200 - November 09, 2000

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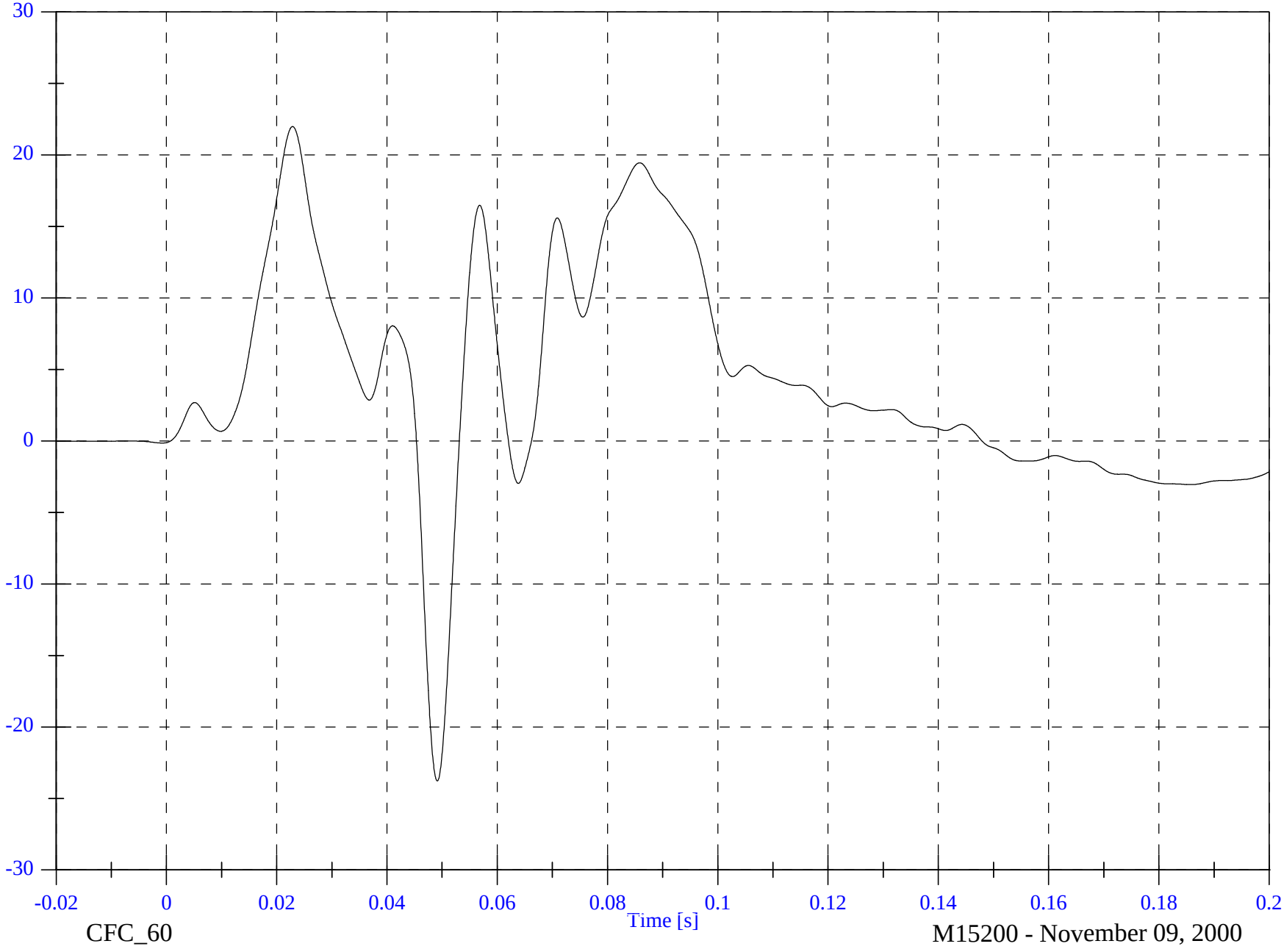
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan Y

Max: 22.0 [g] at 0.023 [s]
Min: -23.8 [g] at 0.049 [s]



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8506-14

CFC_60

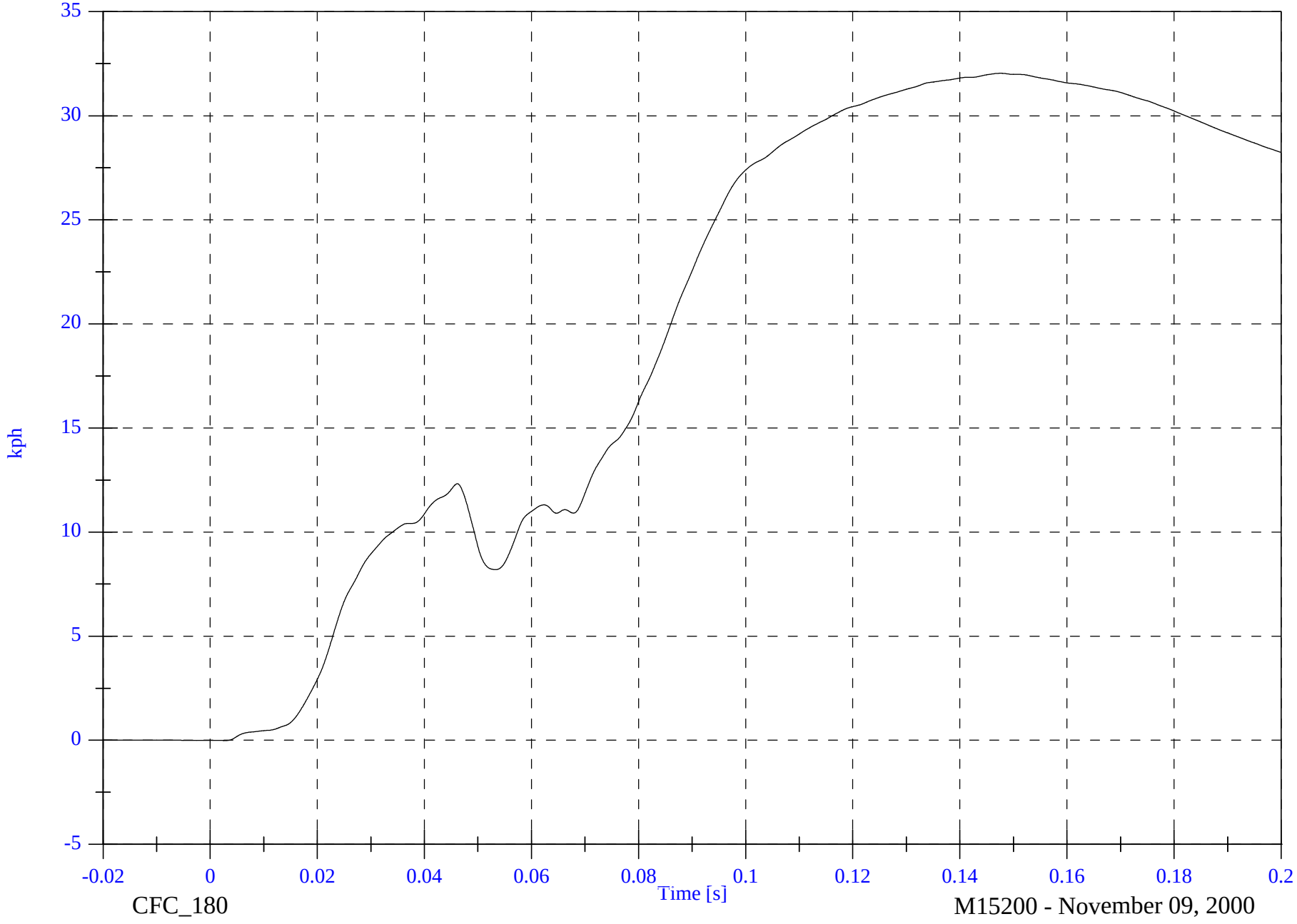
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan Y Velocity

Max: 32.0 [kph] at 0.148 [s]

Min: -0.0 [kph] at 0.003 [s]



CFC_180

M15200 - November 09, 2000

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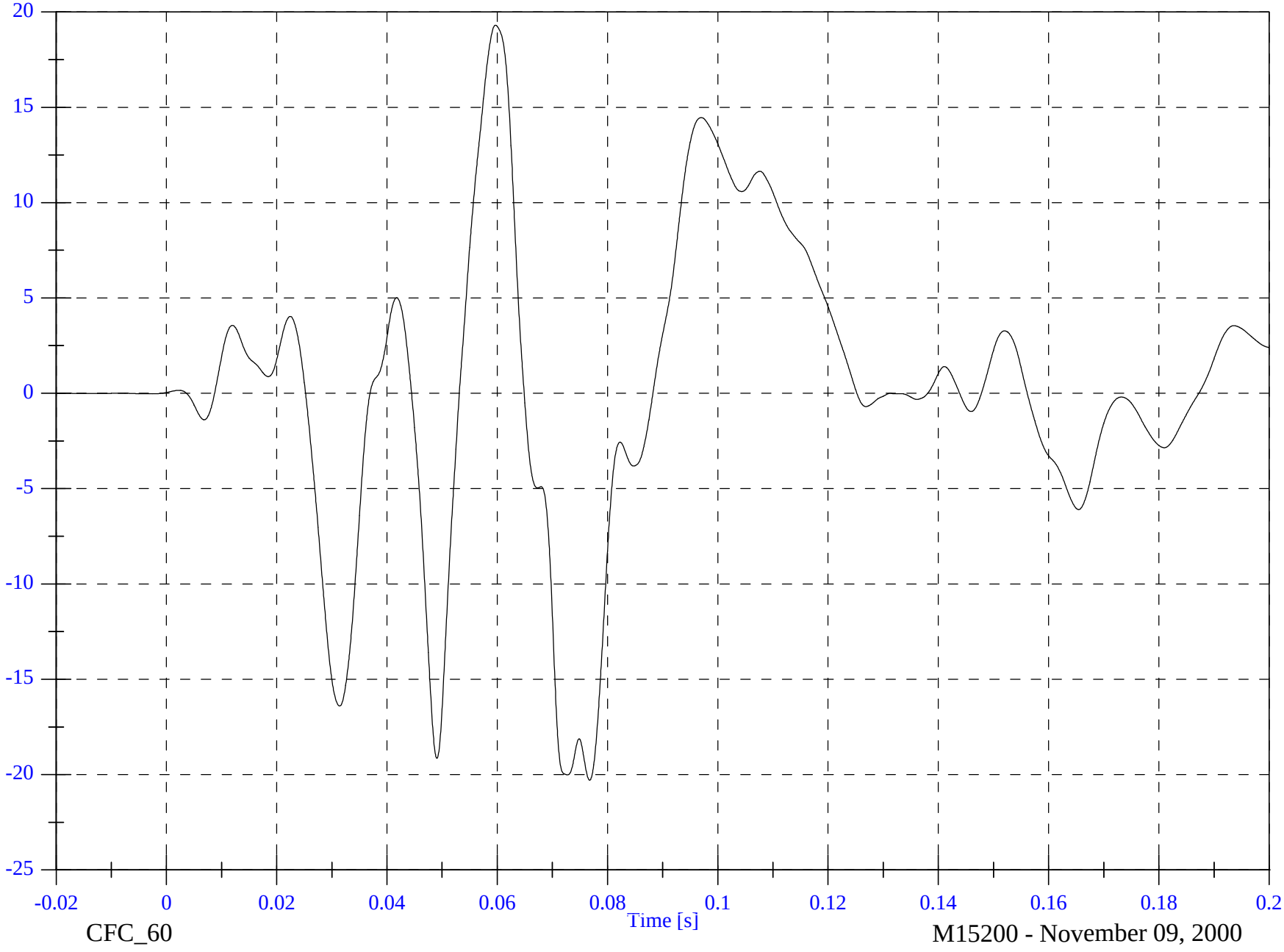
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan Z

Max: 19.3 [g] at 0.060 [s]
Min: -20.3 [g] at 0.077 [s]



CFC_60

M15200 - November 09, 2000

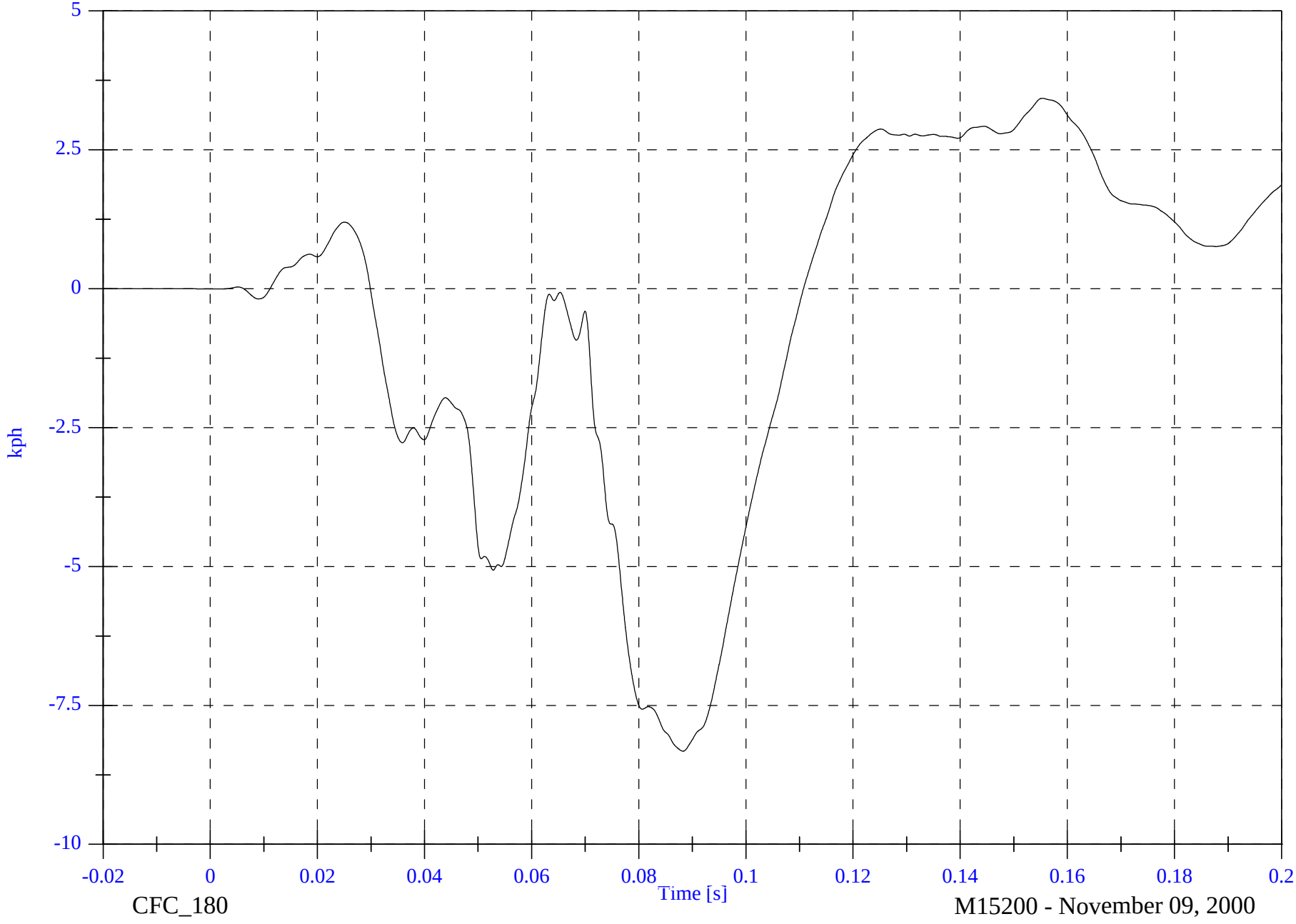
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan Z Velocity

Max: 3.4 [kph] at 0.155 [s]

Min: -8.3 [kph] at 0.088 [s]



CFC_180

M15200 - November 09, 2000

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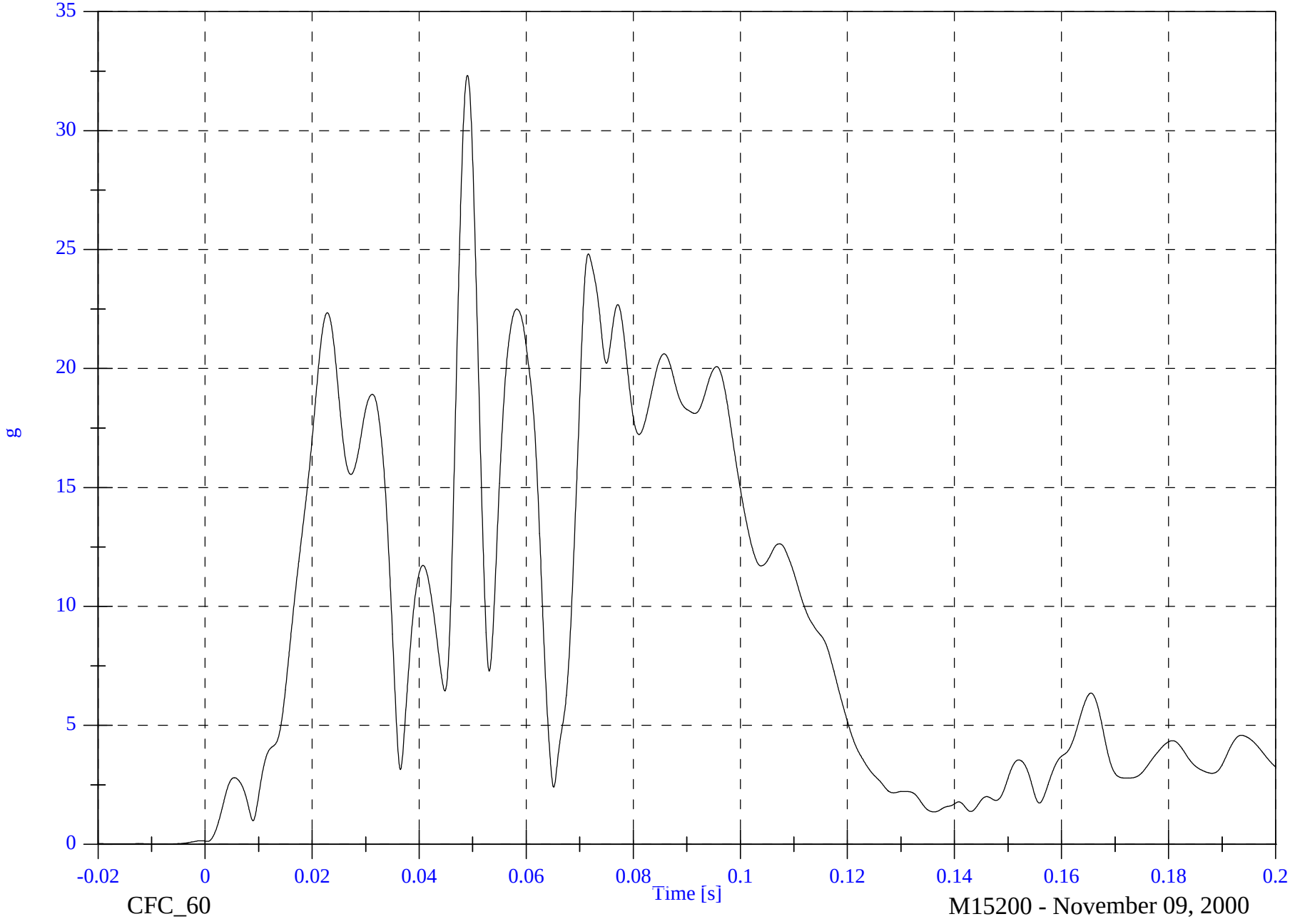
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 3 Rear Floorpan Resultant

Max: 32.3 [g] at 0.049 [s]

Min: 0.0 [g] at -0.009 [s]



CFC_60

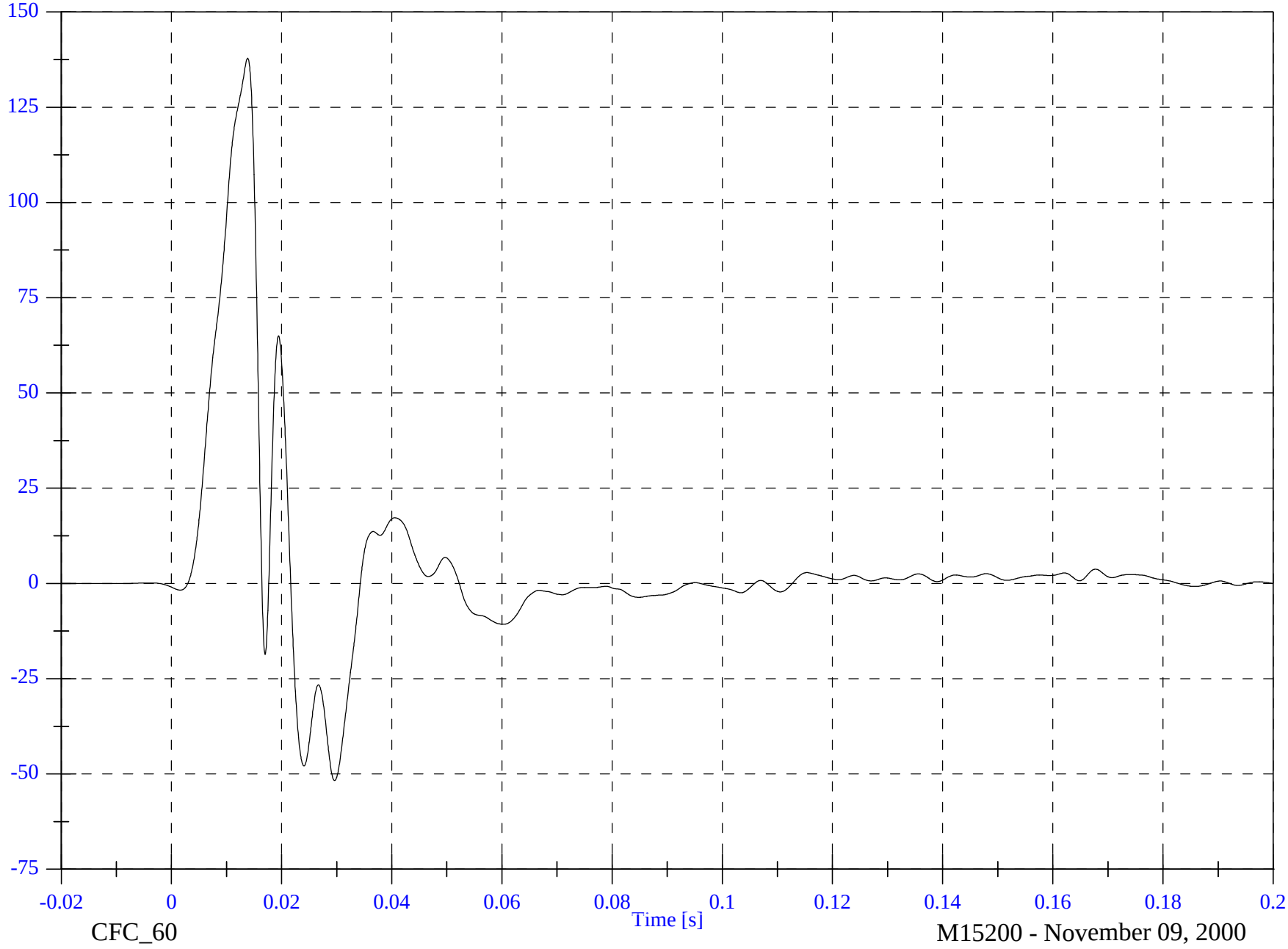
M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 4 Left Rear Sill Y

Max: 137.9 [g] at 0.014 [s]
Min: -51.7 [g] at 0.030 [s]



CFC_60

M15200 - November 09, 2000

B-65

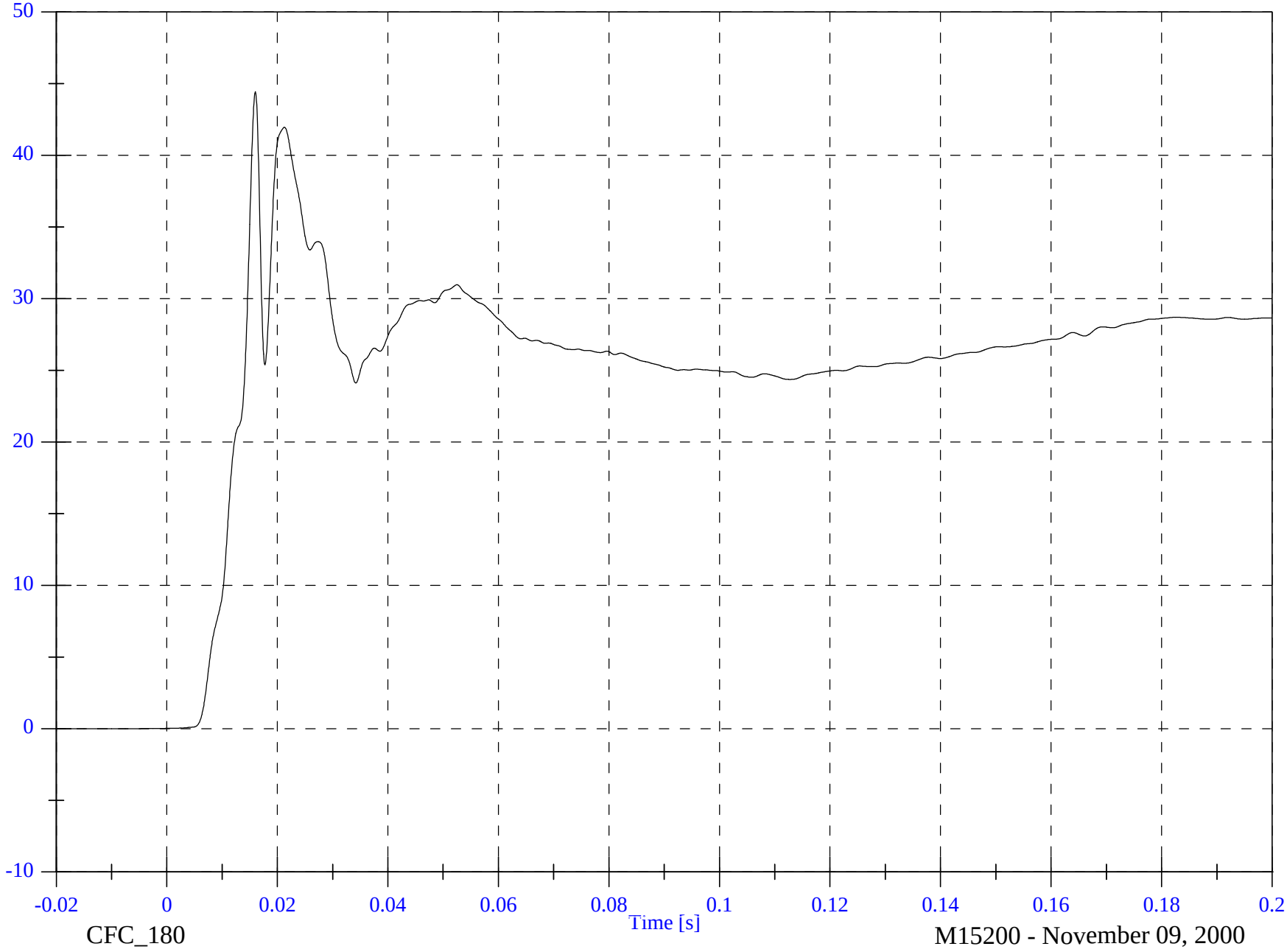
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 4 Left Rear Sill Y Velocity

Max: 44.4 [kph] at 0.016 [s]

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



CFC_180

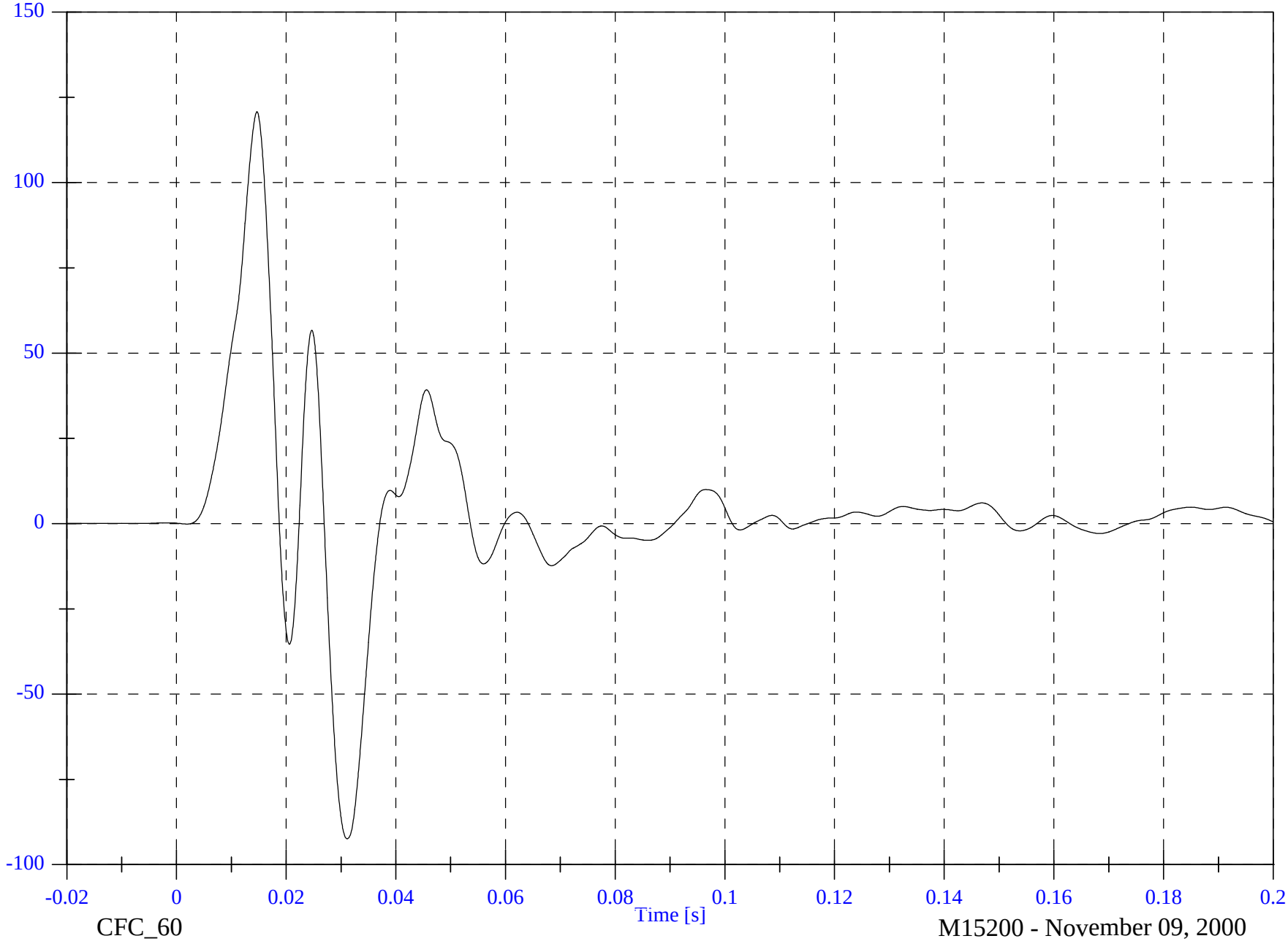
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 6 Left Front Door C/L Y

Max: 120.8 [g] at 0.015 [s]

Min: -92.4 [g] at 0.031 [s]



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8506-14

CFC_60

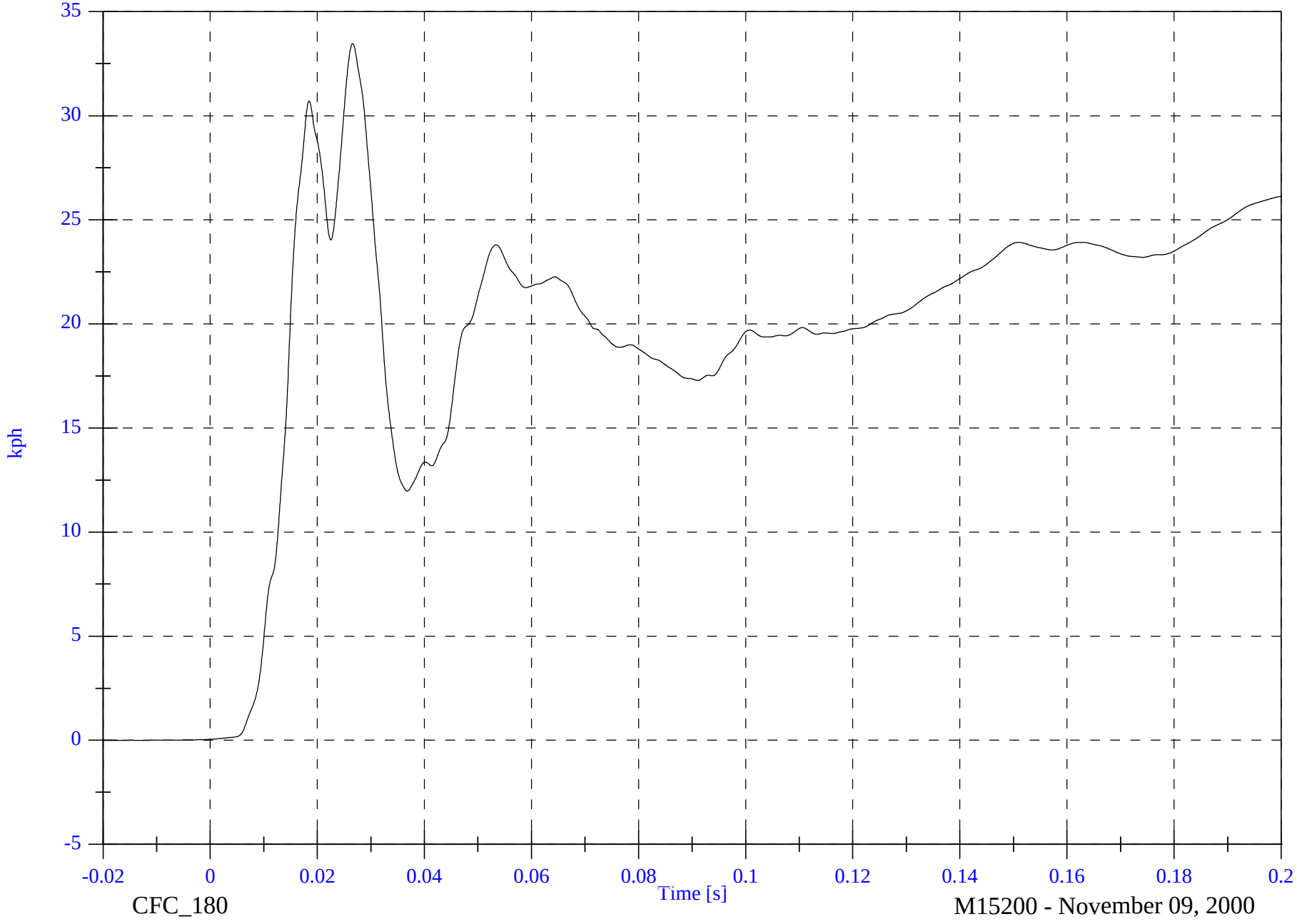
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 6 Left Front Door C/L Y Velocity

Max: 33.5 [kph] at 0.027 [s]

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



CFC_180

M15200 - November 09, 2000

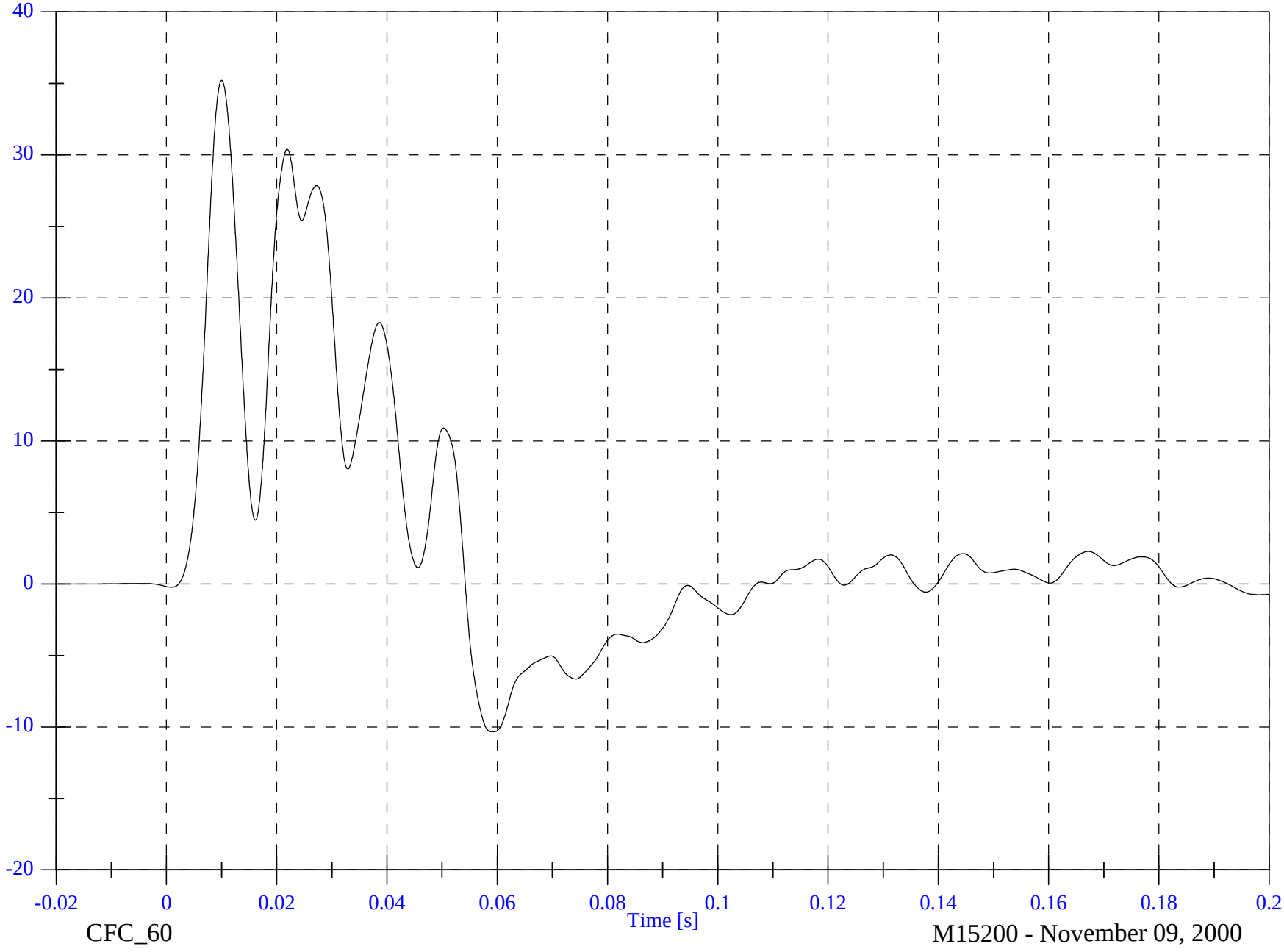
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 7 RightRear Compartment Y

Max: 35.2 [g] at 0.010 [s]

Min: -10.3 [g] at 0.059 [s]



CFC_60

M15200 - November 09, 2000

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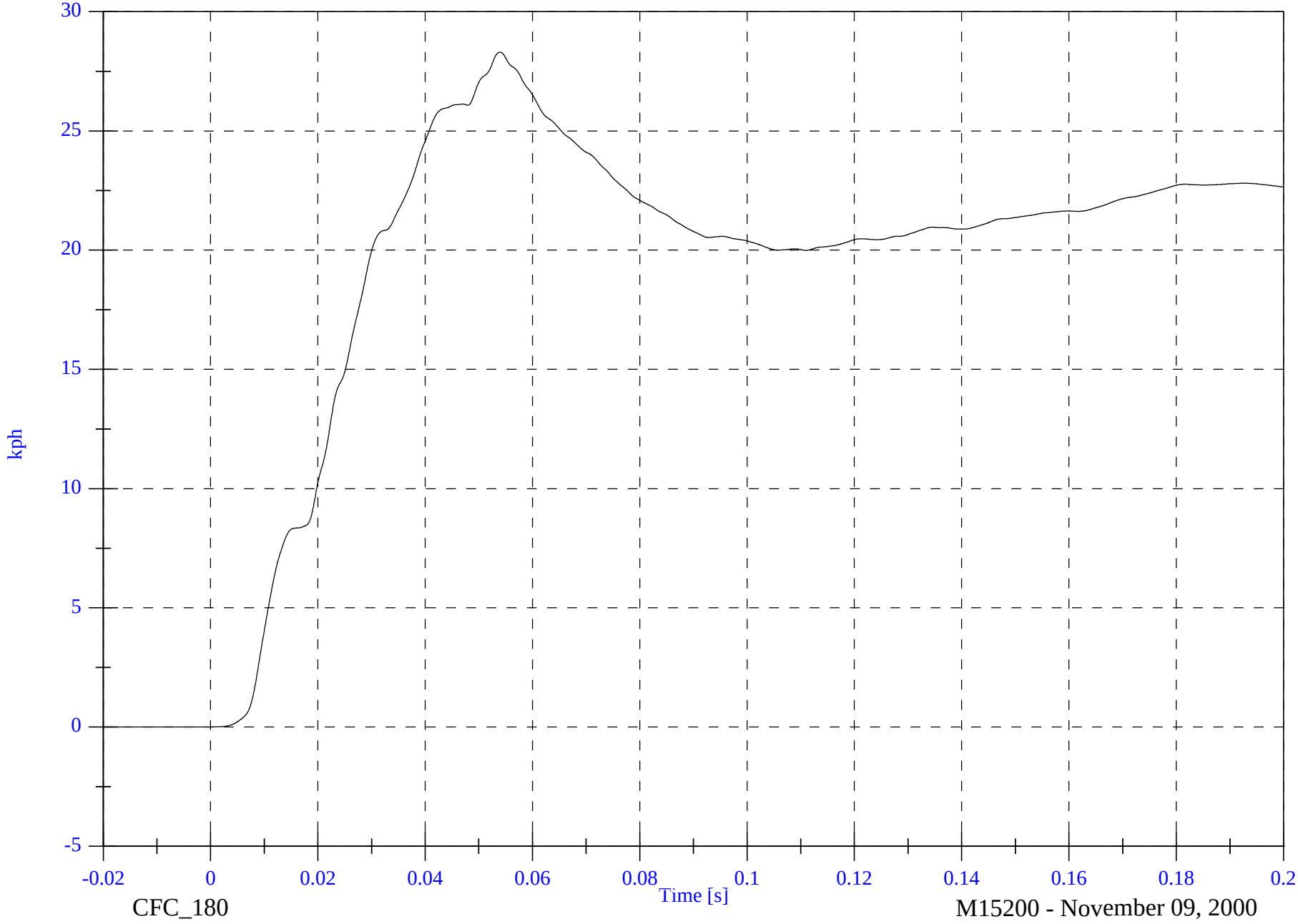
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 7 RightRear Compartment Y Velocity

Max: 28.3 [kph] at 0.054 [s]

Min: -0.0 [kph] at -0.013 [s]



CFC_180

M15200 - November 09, 2000

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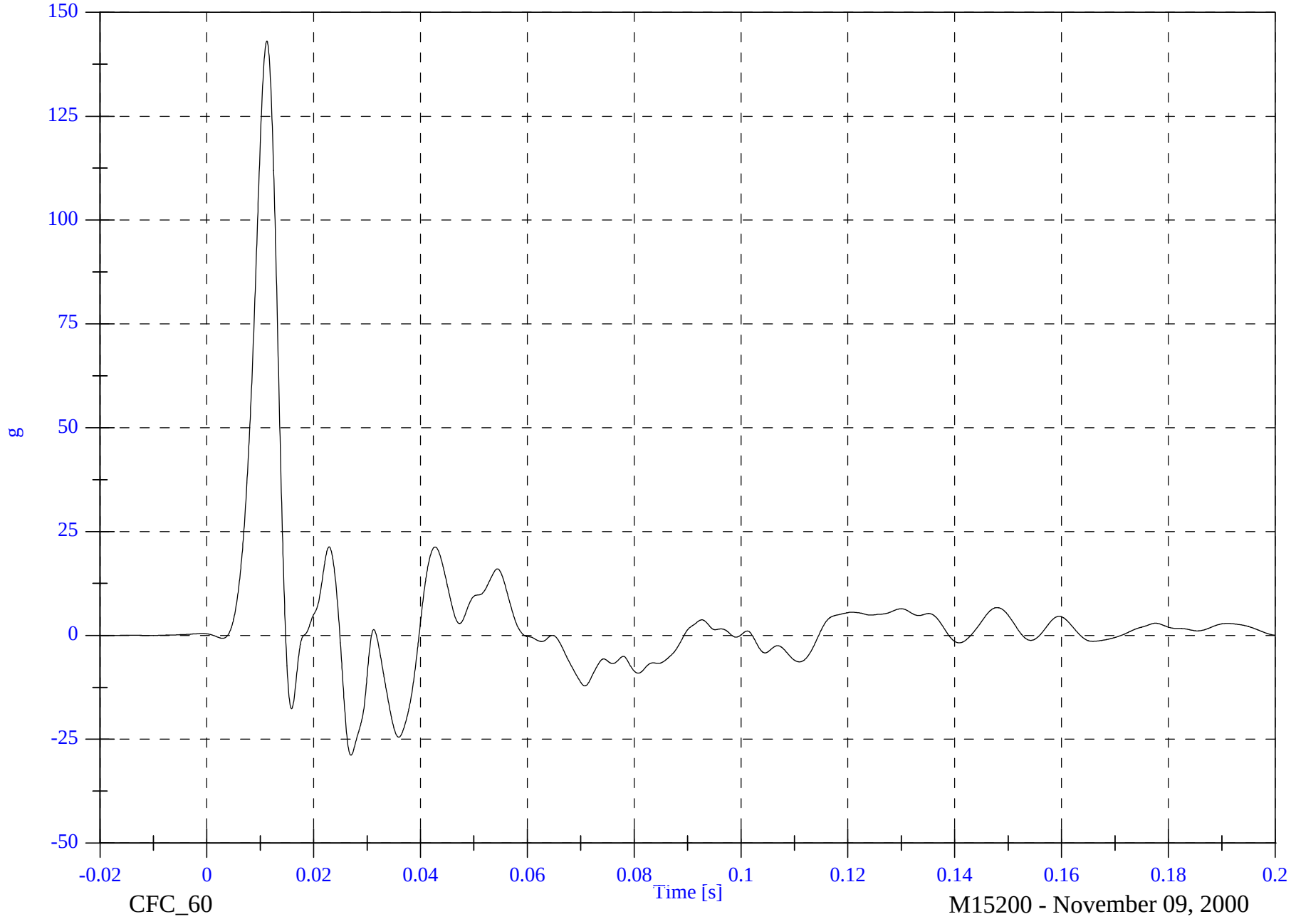
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 8 Left Front Door Midrear Y

Max: 143.1 [g] at 0.011 [s]

Min: -28.9 [g] at 0.027 [s]



CFC_60

M15200 - November 09, 2000

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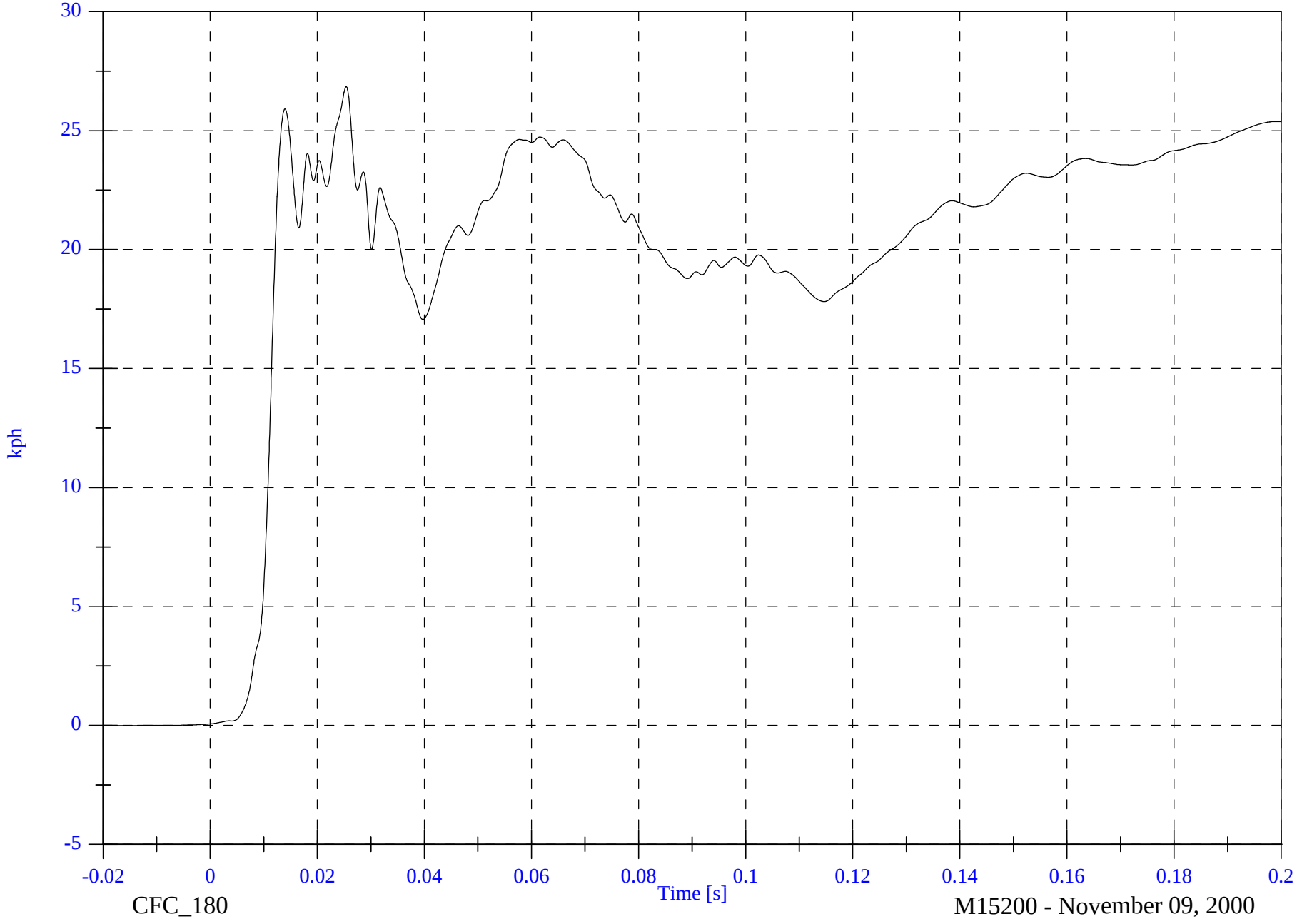
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 8 Left Front Door Midrear Y Velocity

Max: 26.9 [kph] at 0.025 [s]

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



CFC_180

M15200 - November 09, 2000

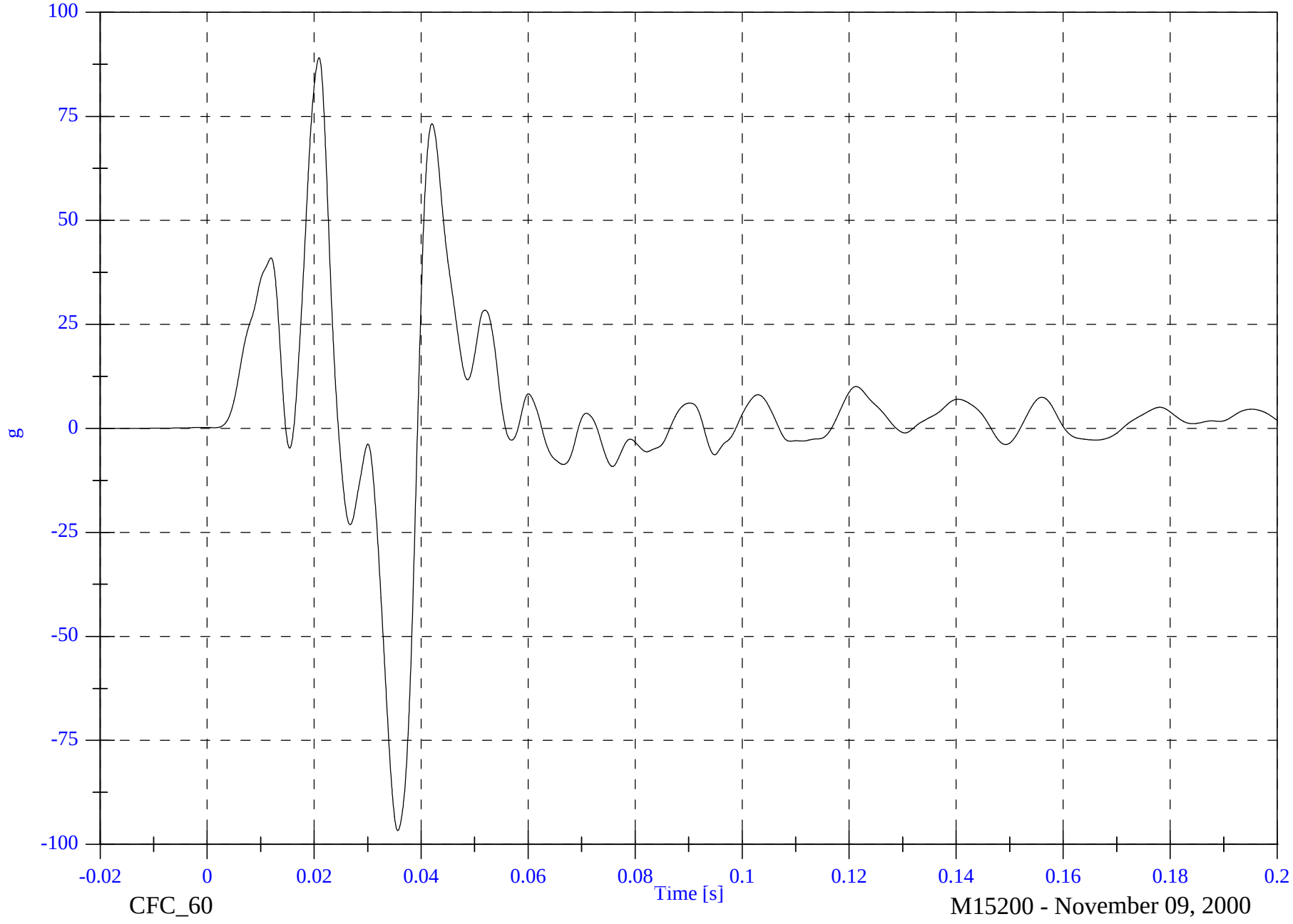
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Max: 89.1 [g] at 0.021 [s]

Acc 9 Left Front Door Upper Y

Min: -96.7 [g] at 0.036 [s]



CFC_60

M15200 - November 09, 2000

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SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 9 Left Front Door Upper Y Velocity

Max: 26.1 [kph] at 0.200 [s]

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

CFC_180

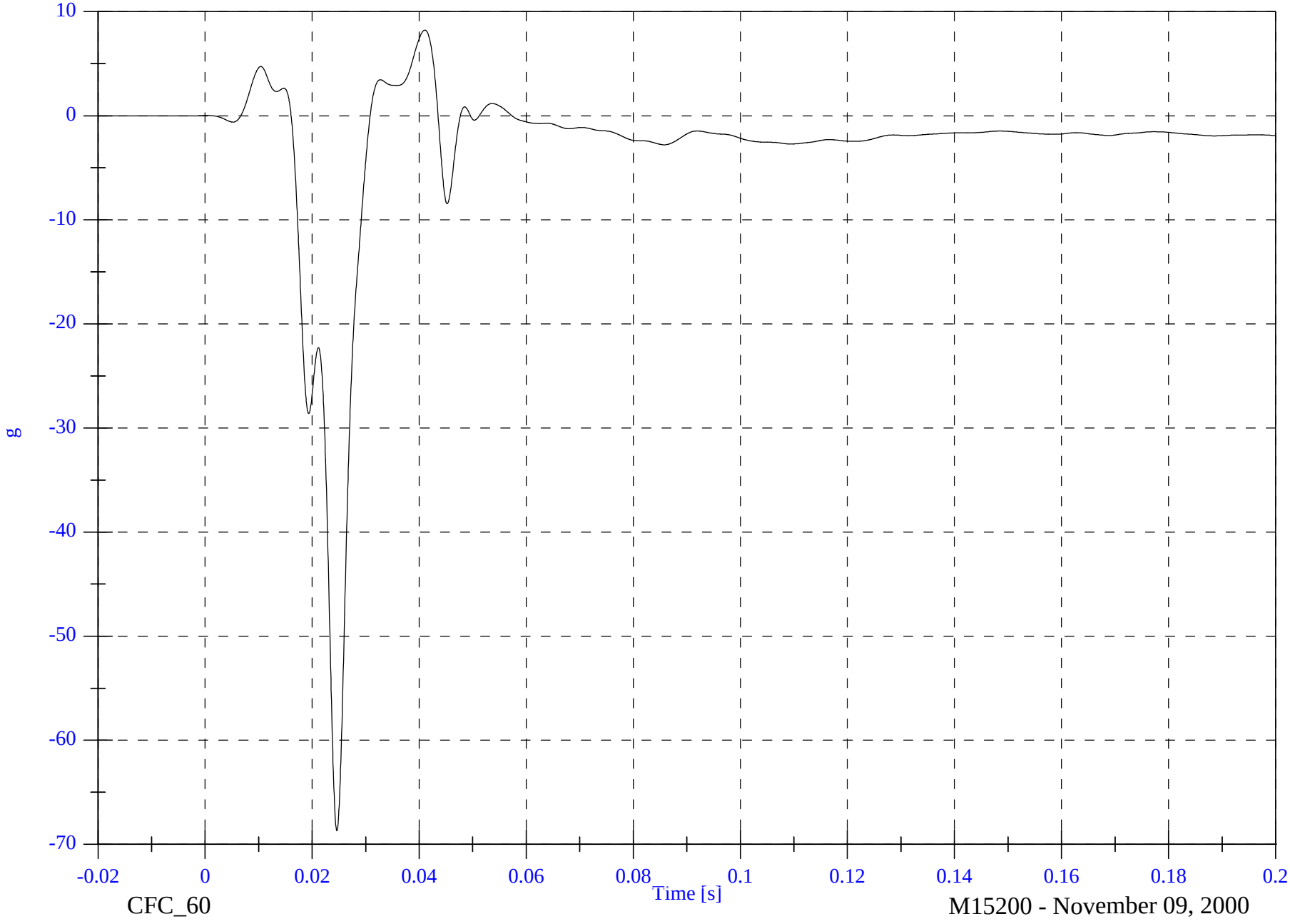
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 10 Left Rear Door Midrear Y

Max: 8.2 [g] at 0.041 [s]

Min: -68.7 [g] at 0.025 [s]



CFC_60

M15200 - November 09, 2000

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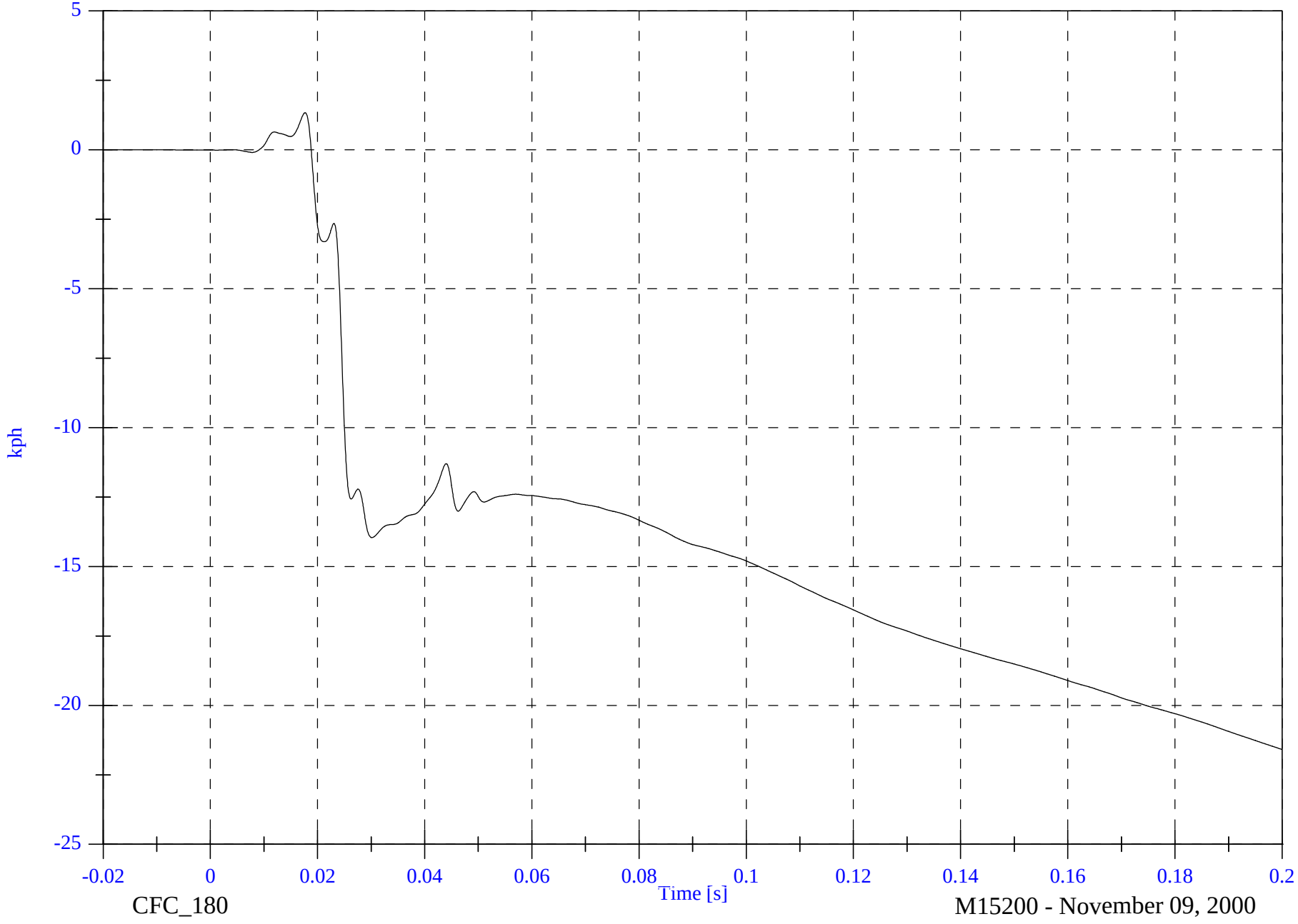
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 10 Left Rear Door Midrear Y Velocity

Max: 1.3 [kph] at 0.018 [s]

Min: -21.6 [kph] at 0.200 [s]



CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 11 Left Rear Door Upper Y

Max: 92.3 [g] at 0.012 [s]

Min: -124.8 [g] at 0.033 [s]

CFC_60

M15200 - November 09, 2000

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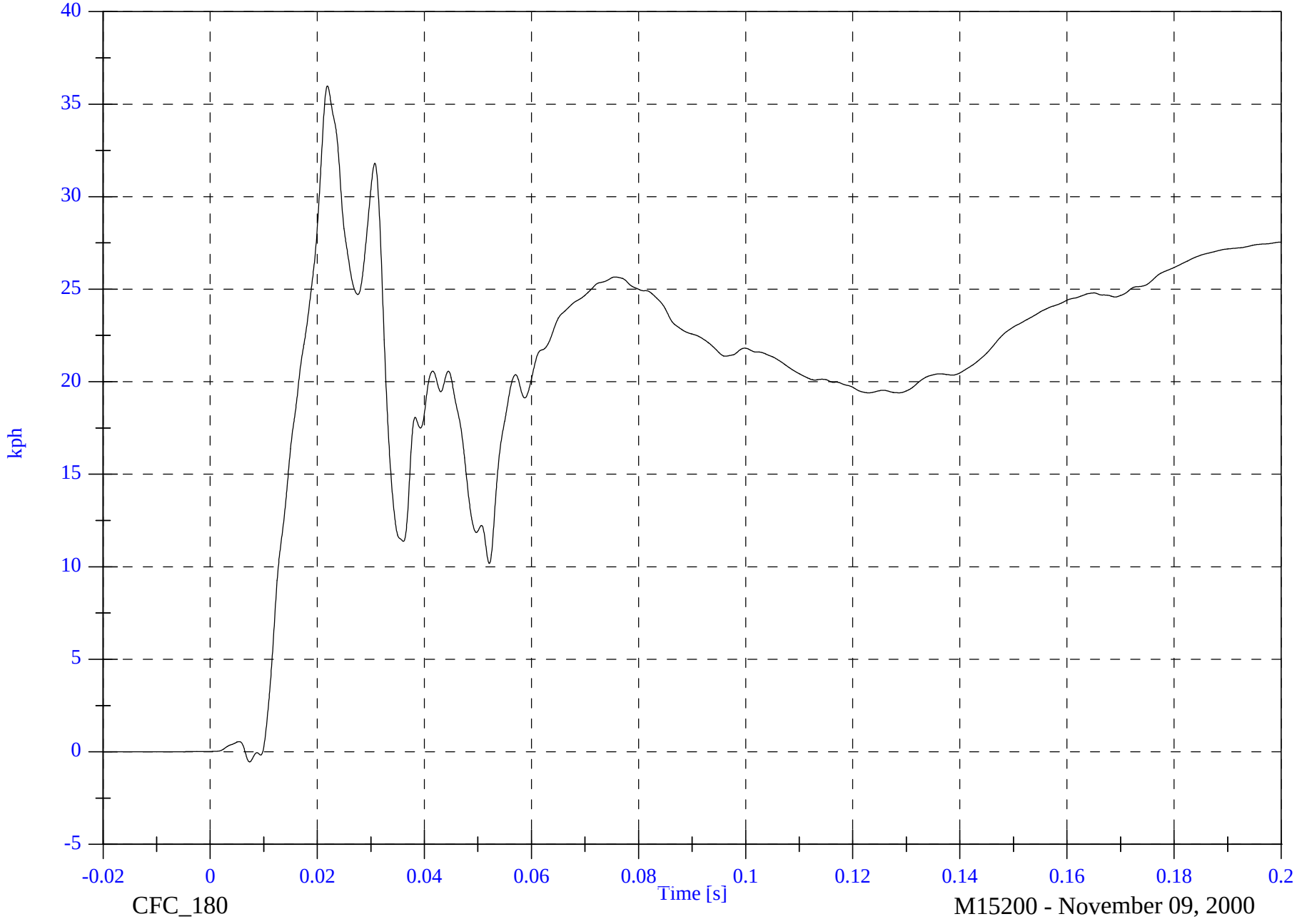
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 11 Left Rear Door Upper Y Velocity

Max: 36.0 [kph] at 0.022 [s]

Min: -0.5 [kph] at 0.007 [s]



CFC_180

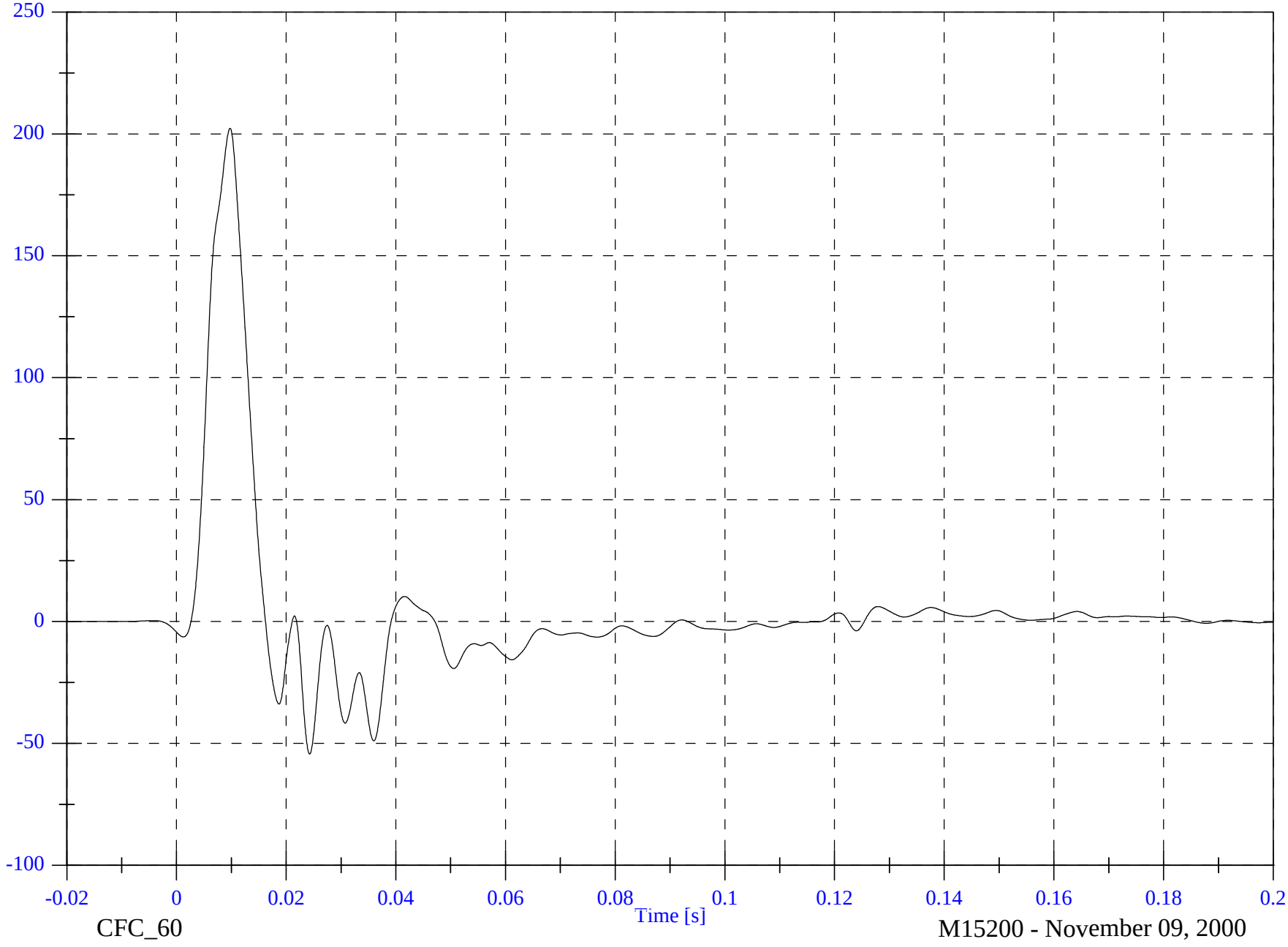
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 12 Left Lower B Post Y

Max: 202.3 [g] at 0.010 [s]

Min: -54.4 [g] at 0.024 [s]



CFC_60

M15200 - November 09, 2000

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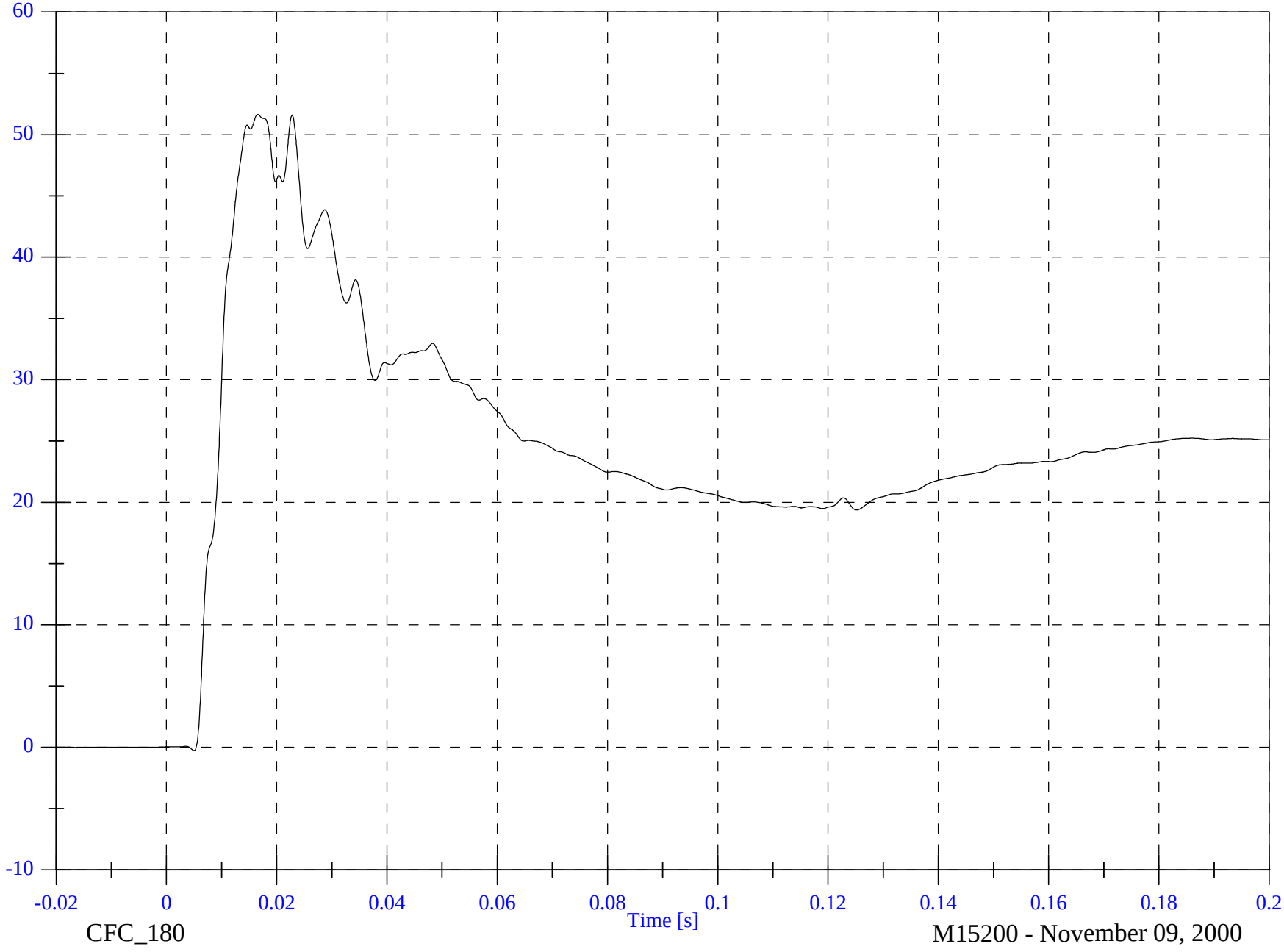
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 12 Left Lower B Post Y Velocity

Max: 51.7 [kph] at 0.017 [s]

Min: -0.3 [kph] at 0.005 [s]



CFC_180

M15200 - November 09, 2000

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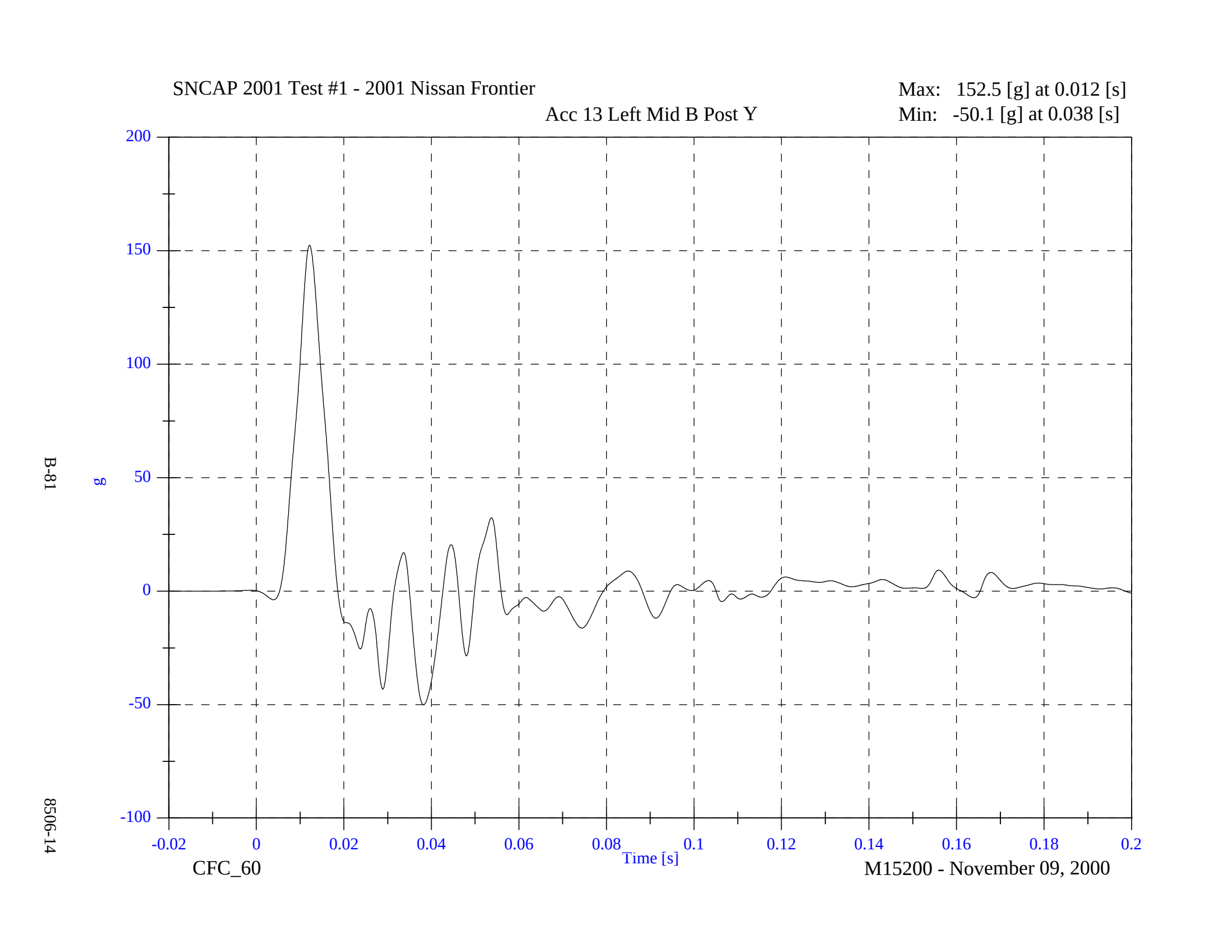

SNCAP 2001 Test #1 - 2001 Nissan Frontier
Acc 13 Left Mid B Post Y
Max: 152.5 [g] at 0.012 [s]
Min: -50.1 [g] at 0.038 [s]
200
150
100
50
0
-50
-100
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_60
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 13 Left Mid B Post Y Velocity

Max: 36.0 [kph] at 0.018 [s]

Min: -0.7 [kph] at 0.007 [s]

CFC_180

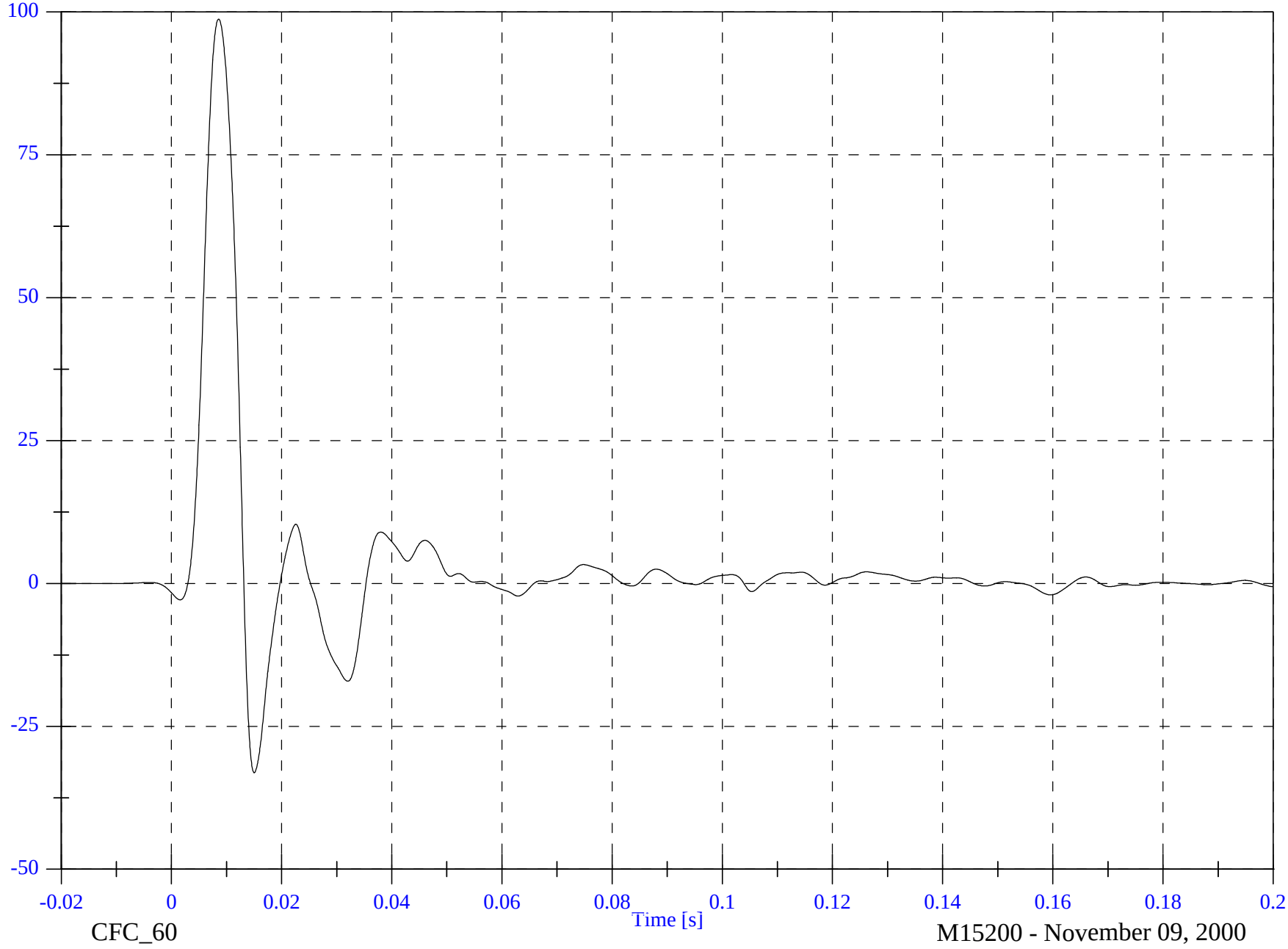
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 14 Left Lower A Post Y

Max: 98.8 [g] at 0.009 [s]

Min: -33.1 [g] at 0.015 [s]



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CFC_60

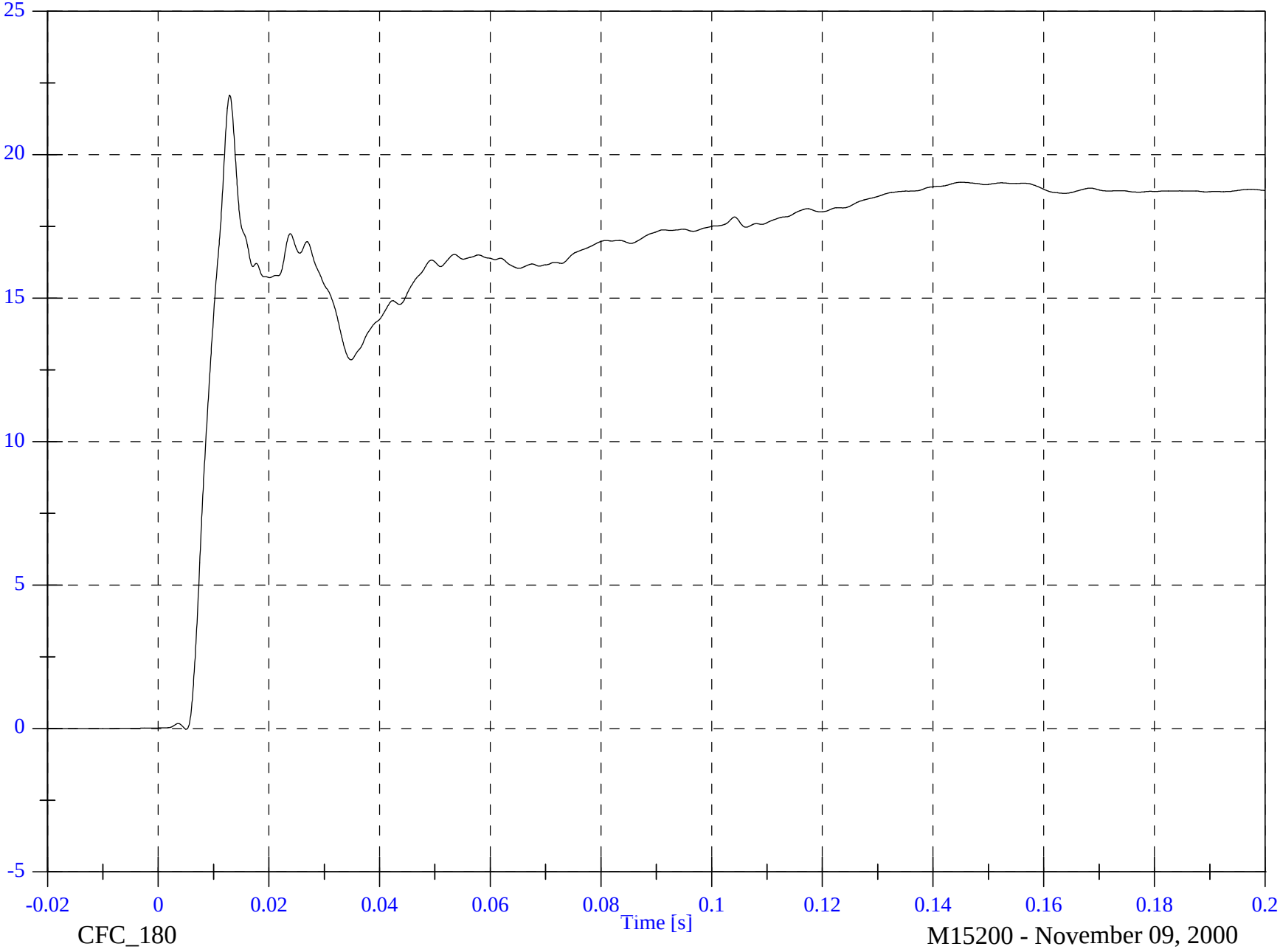
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 14 Left Lower A Post Y Velocity

Max: 22.1 [kph] at 0.013 [s]

Min: -0.0 [kph] at 0.005 [s]



CFC_180

M15200 - November 09, 2000

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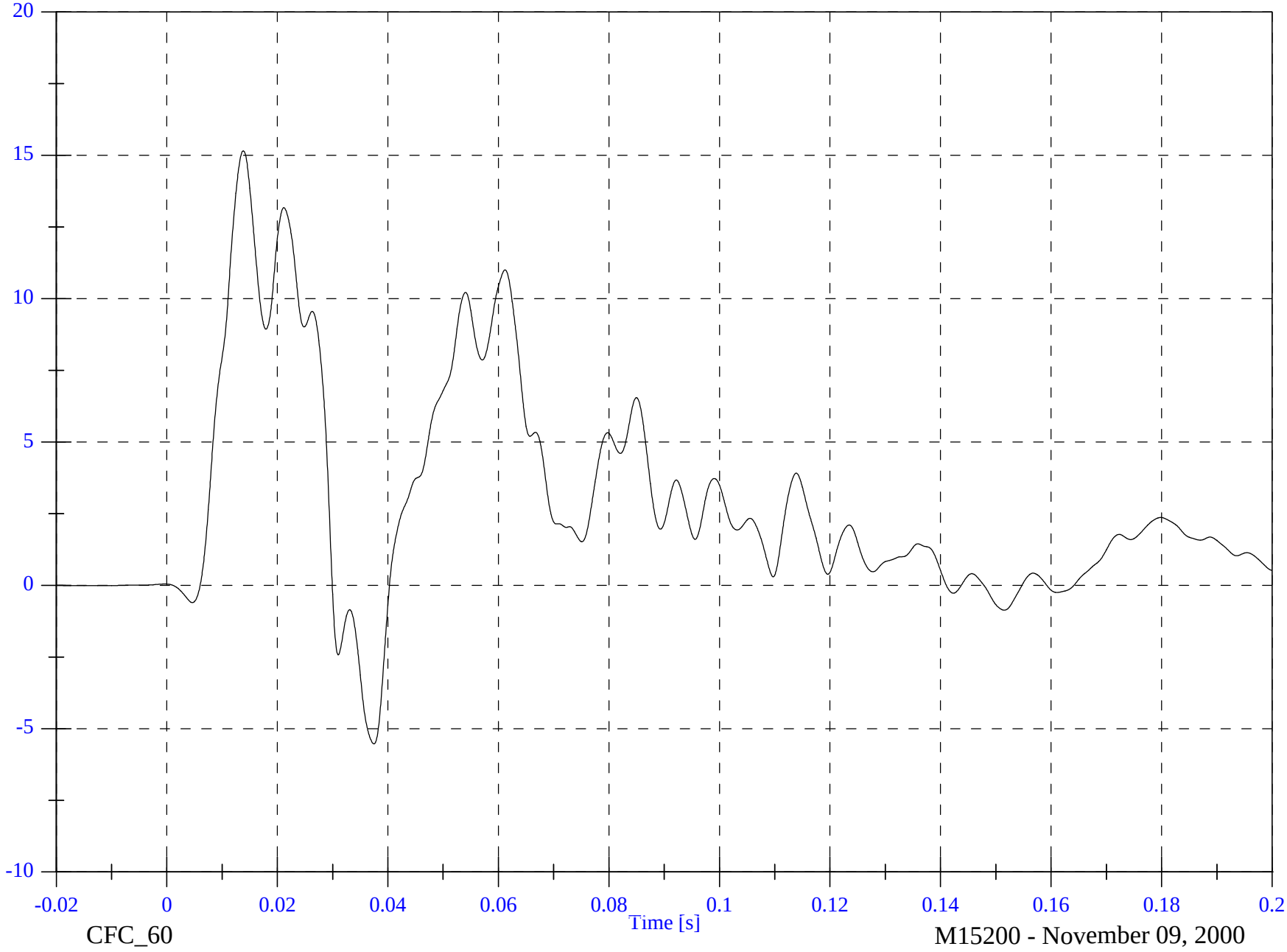
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 15 Left Mid A Post Y

Max: 15.2 [g] at 0.014 [s]

Min: -5.5 [g] at 0.037 [s]



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8506-14

CFC_60

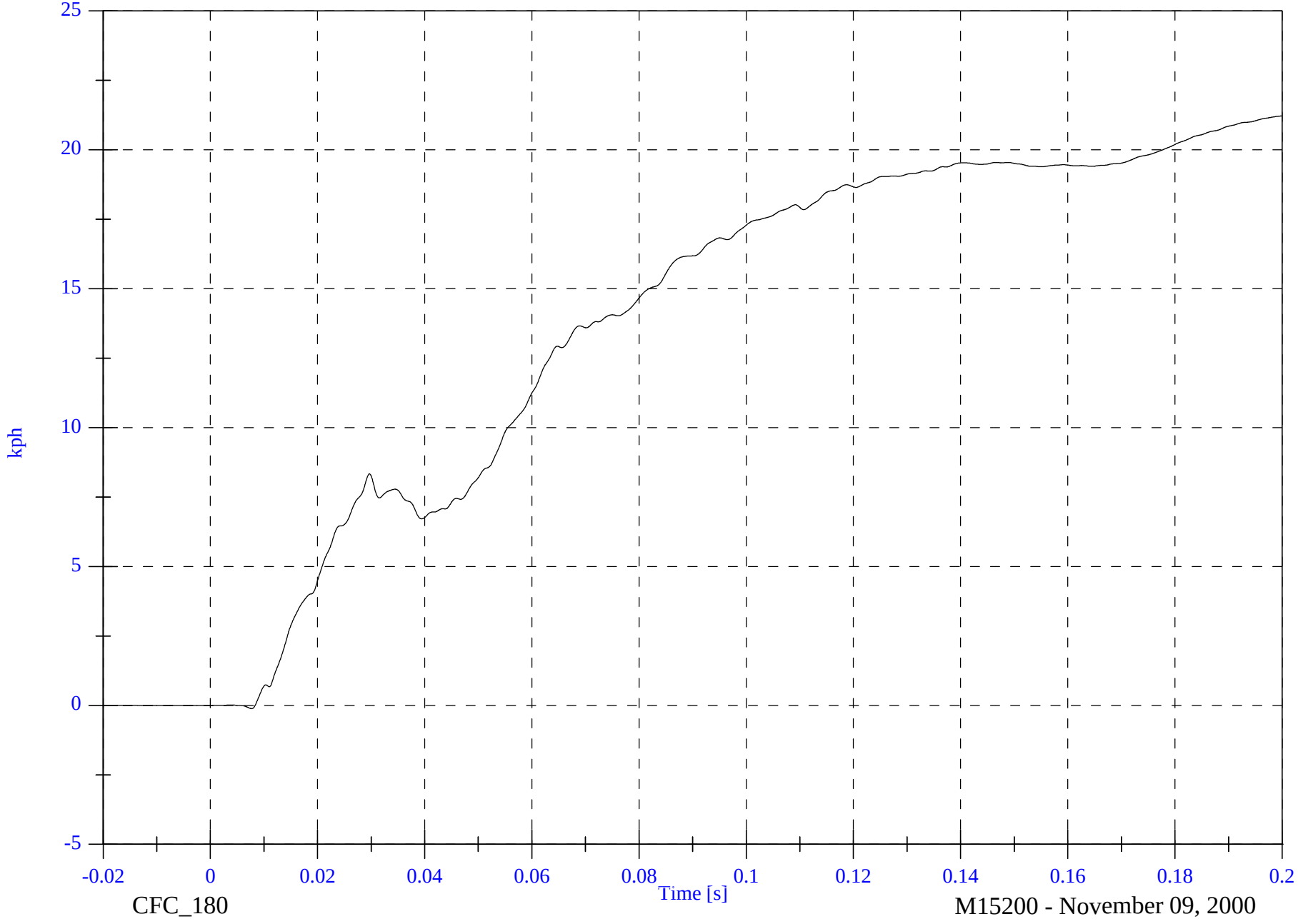
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 15 Left Mid A Post Y Velocity

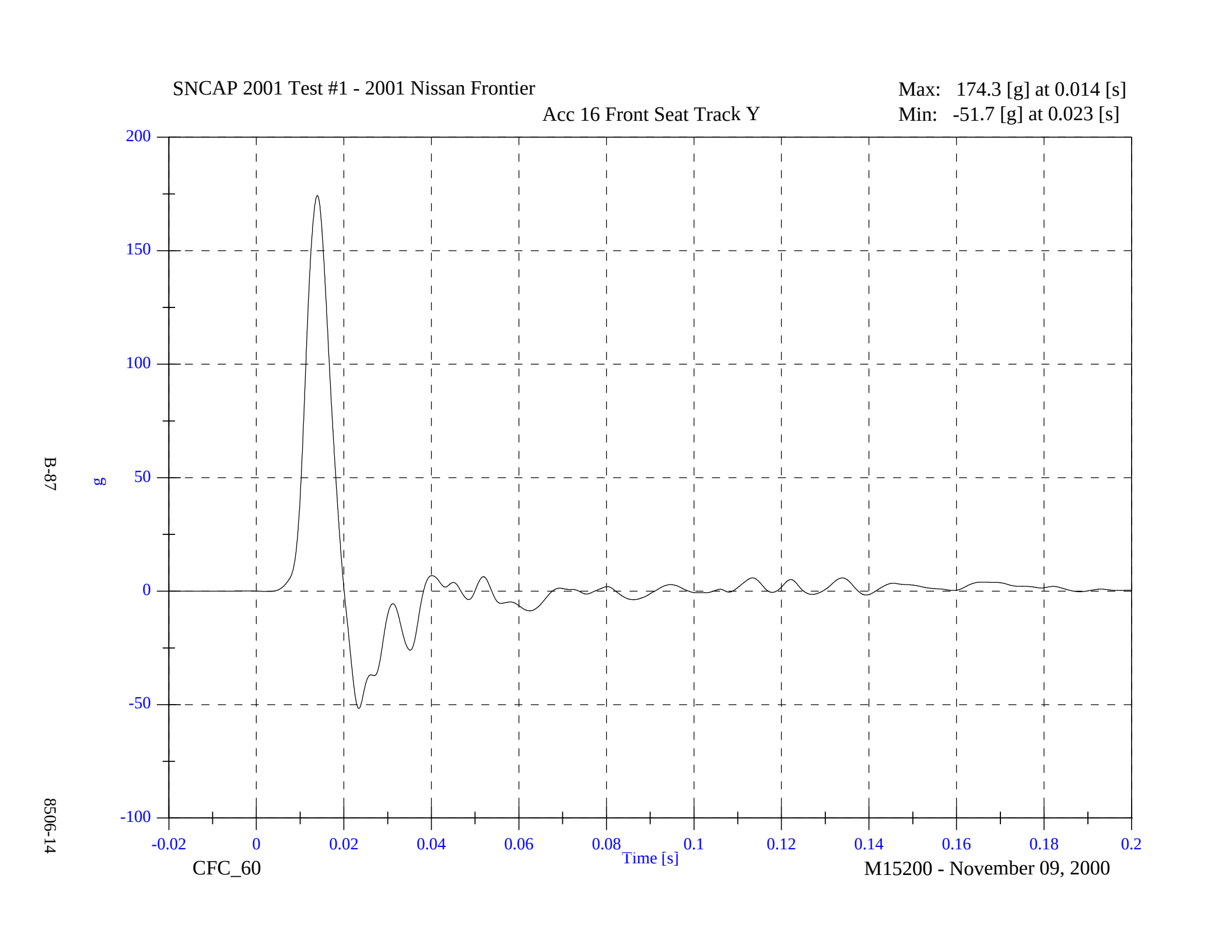
Max: 21.2 [kph] at 0.200 [s]

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



CFC_180

M15200 - November 09, 2000


SNCAP 2001 Test #1 - 2001 Nissan Frontier
Acc 16 Front Seat Track Y
Max: 174.3 [g] at 0.014 [s]
Min: -51.7 [g] at 0.023 [s]
200
150
100
50
0
-50
-100
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_60
M15200 - November 09, 2000
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SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 16 Front Seat Track Y Velocity

Max: 38.1 [kph] at 0.022 [s]

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

CFC_180

M15200 - November 09, 2000

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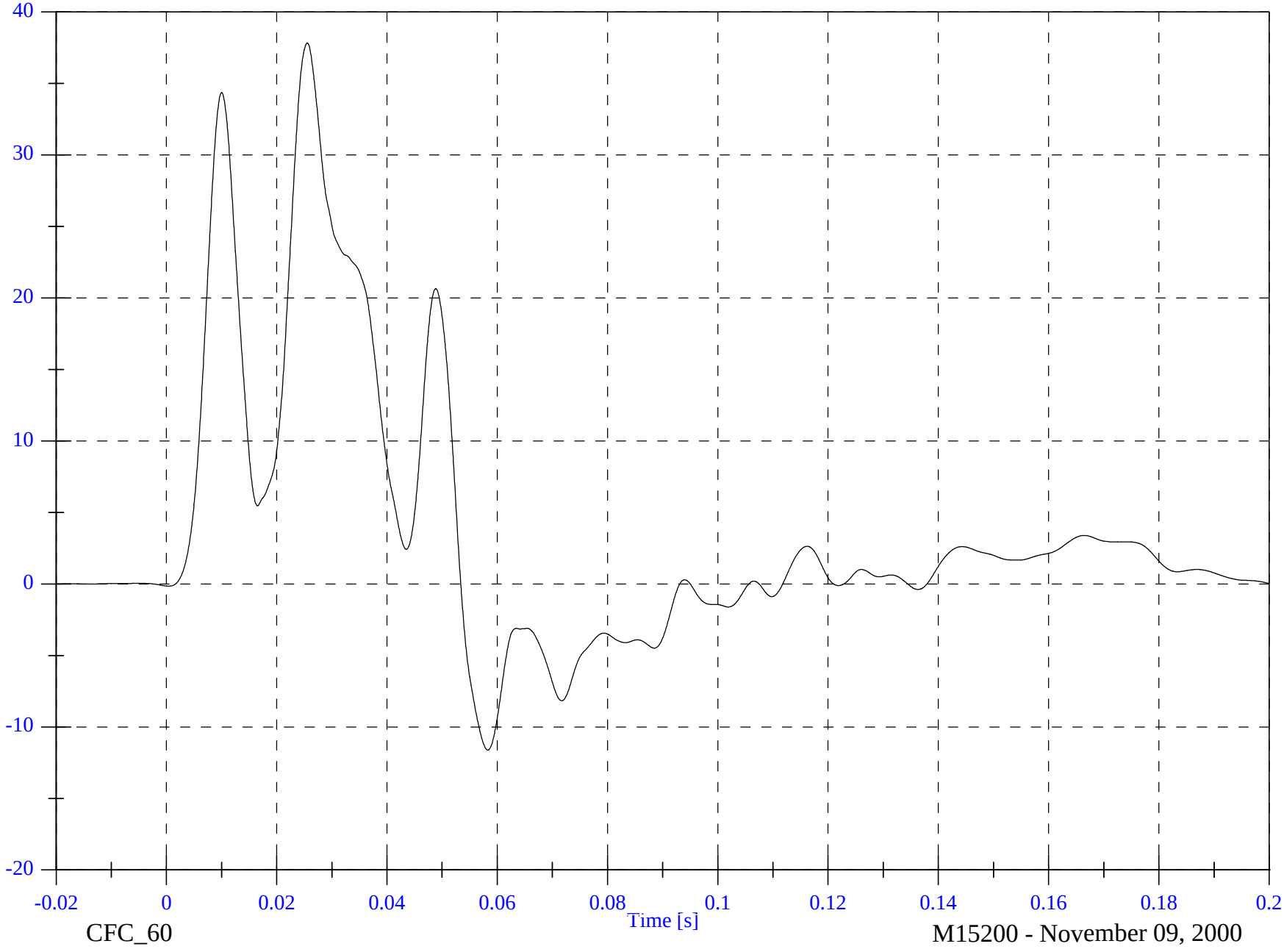
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 17 Rear Seat Track Y

Max: 37.8 [g] at 0.026 [s]
Min: -11.6 [g] at 0.058 [s]



CFC_60

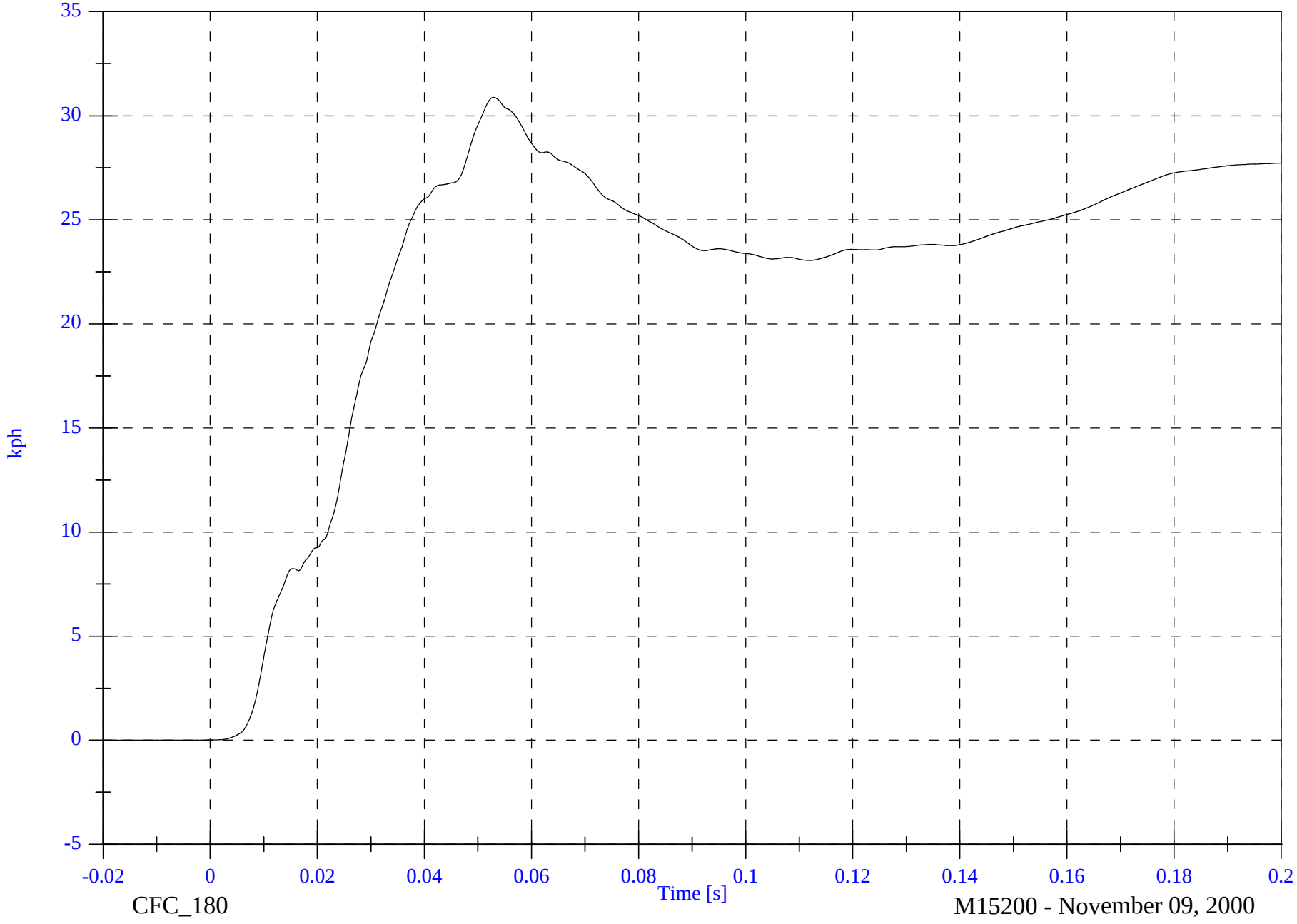
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 17 Rear Seat Track Y Velocity

Max: 30.9 [kph] at 0.053 [s]

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



CFC_180

M15200 - November 09, 2000

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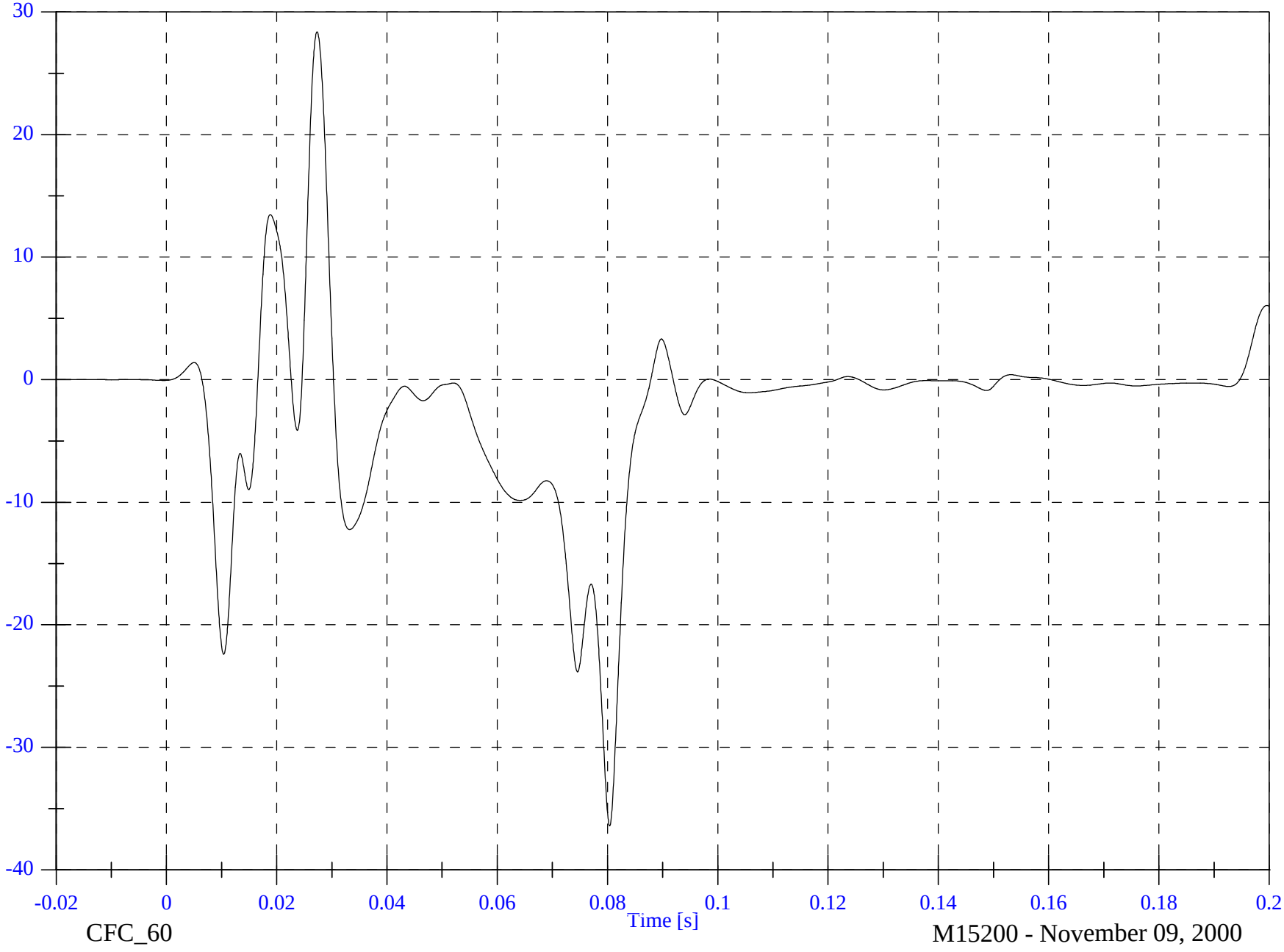
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG X

Max: 28.4 [g] at 0.027 [s]
Min: -36.4 [g] at 0.080 [s]



CFC_60

M15200 - November 09, 2000

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SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG X Velocity

Max: 2.0 [kph] at 0.030 [s]

Min: -17.7 [kph] at 0.196 [s]

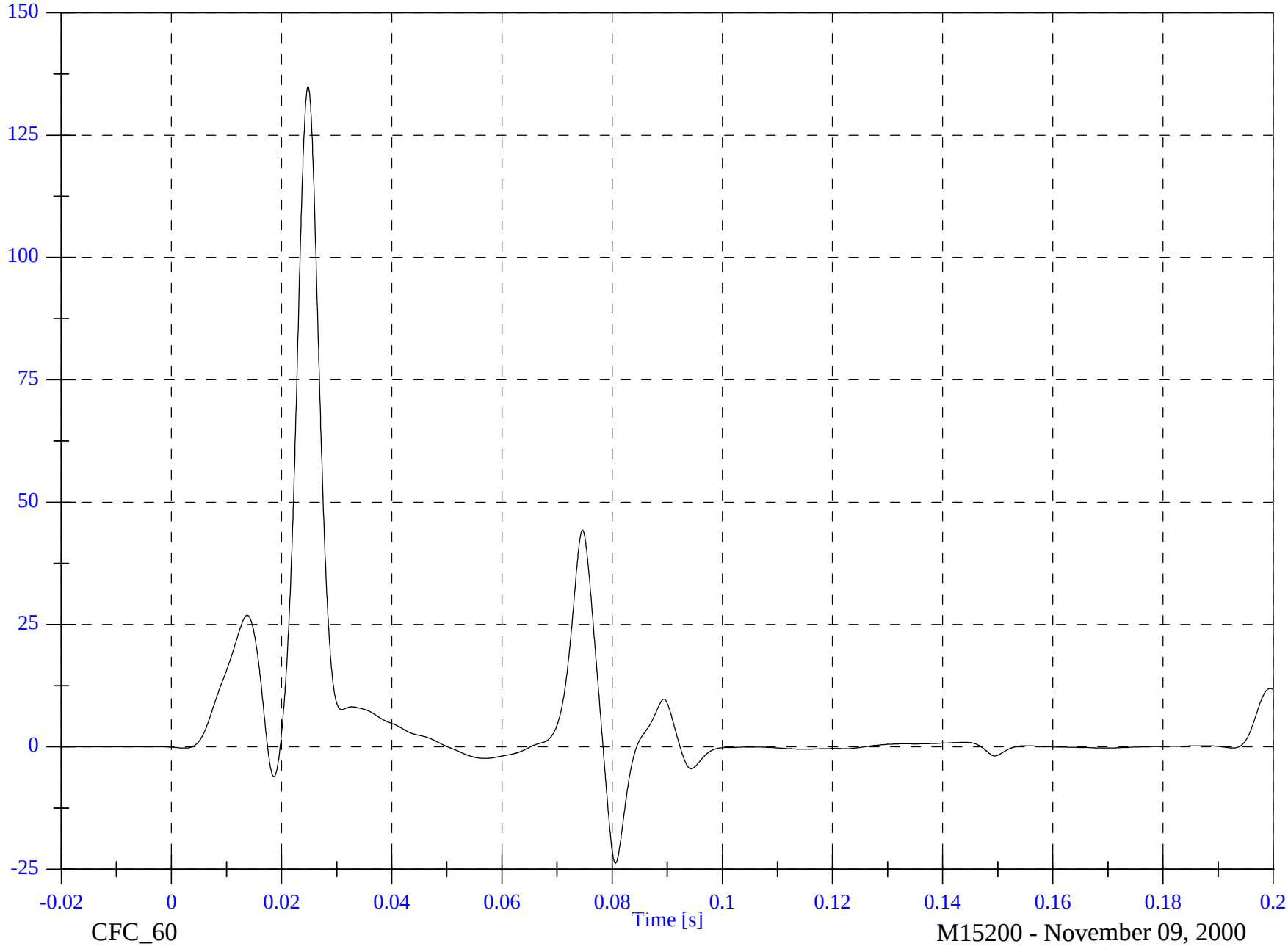
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG Y

Max: 134.9 [g] at 0.025 [s]
Min: -23.8 [g] at 0.081 [s]



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CFC_60

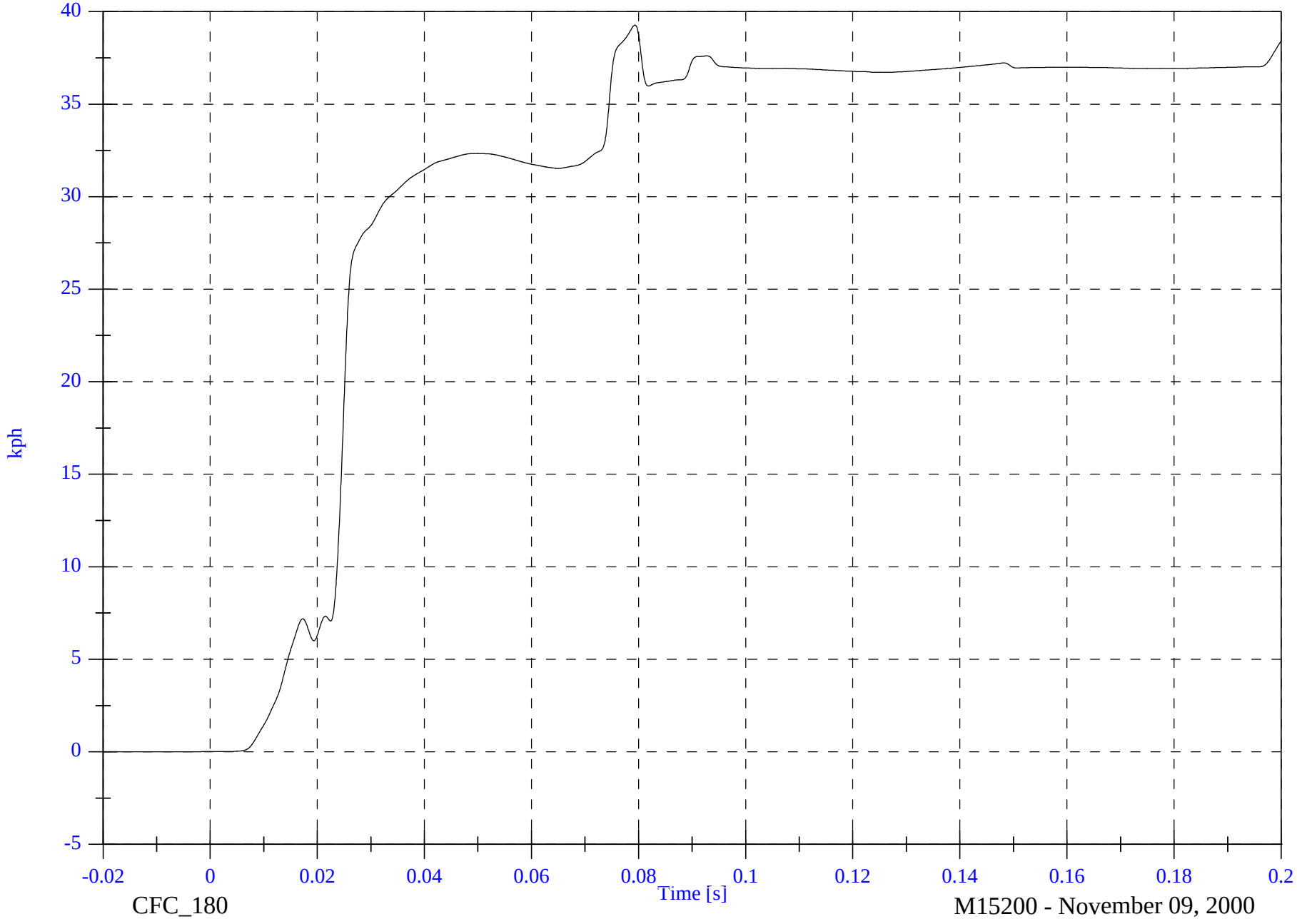
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG Y Velocity

Max: 39.3 [kph] at 0.079 [s]

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



CFC_180

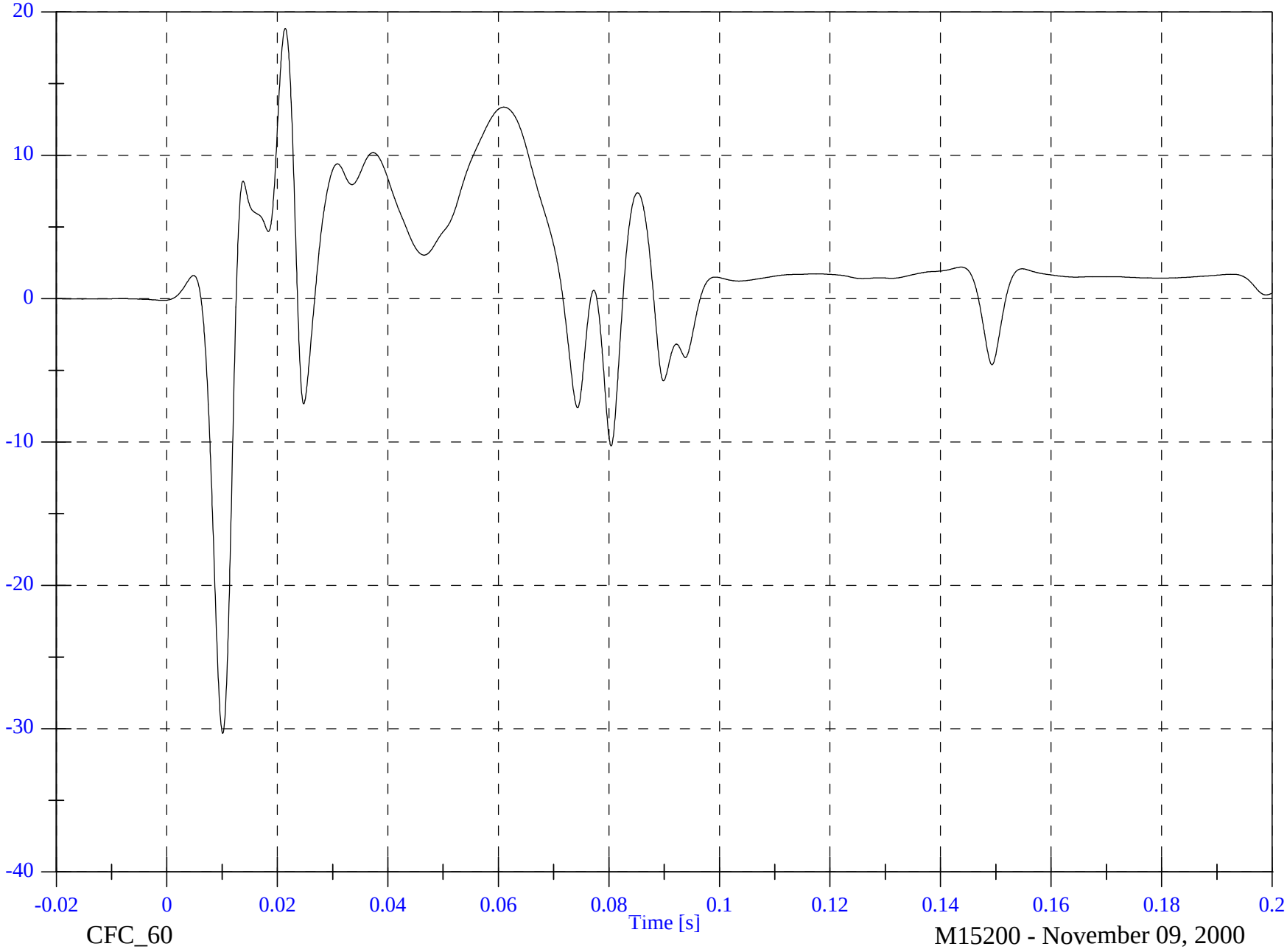
M15200 - November 09, 2000

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG Z

Max: 18.9 [g] at 0.021 [s]
Min: -30.3 [g] at 0.010 [s]



CFC_60

M15200 - November 09, 2000

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8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG Z Velocity

Max: 15.0 [kph] at 0.198 [s]

Min: -4.7 [kph] at 0.012 [s]

CFC_180

M15200 - November 09, 2000

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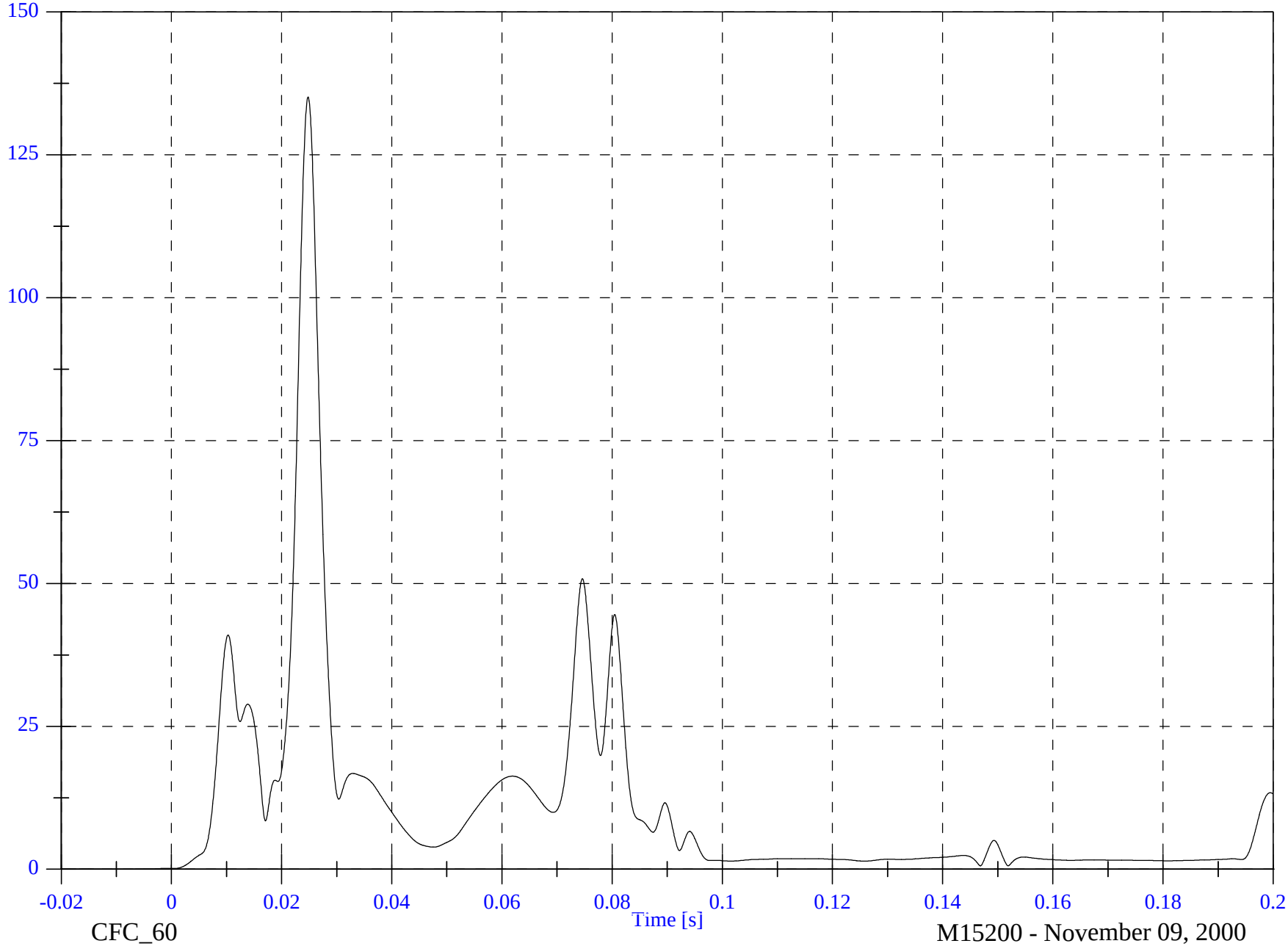
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Acc 18 Target CG Resultant

Max: 135.1 [g] at 0.025 [s]

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



CFC_60

M15200 - November 09, 2000

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8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG X

Max: 0.7 [g] at 0.150 [s]
Min: -21.7 [g] at 0.036 [s]

CFC_60

M15200 - November 09, 2000

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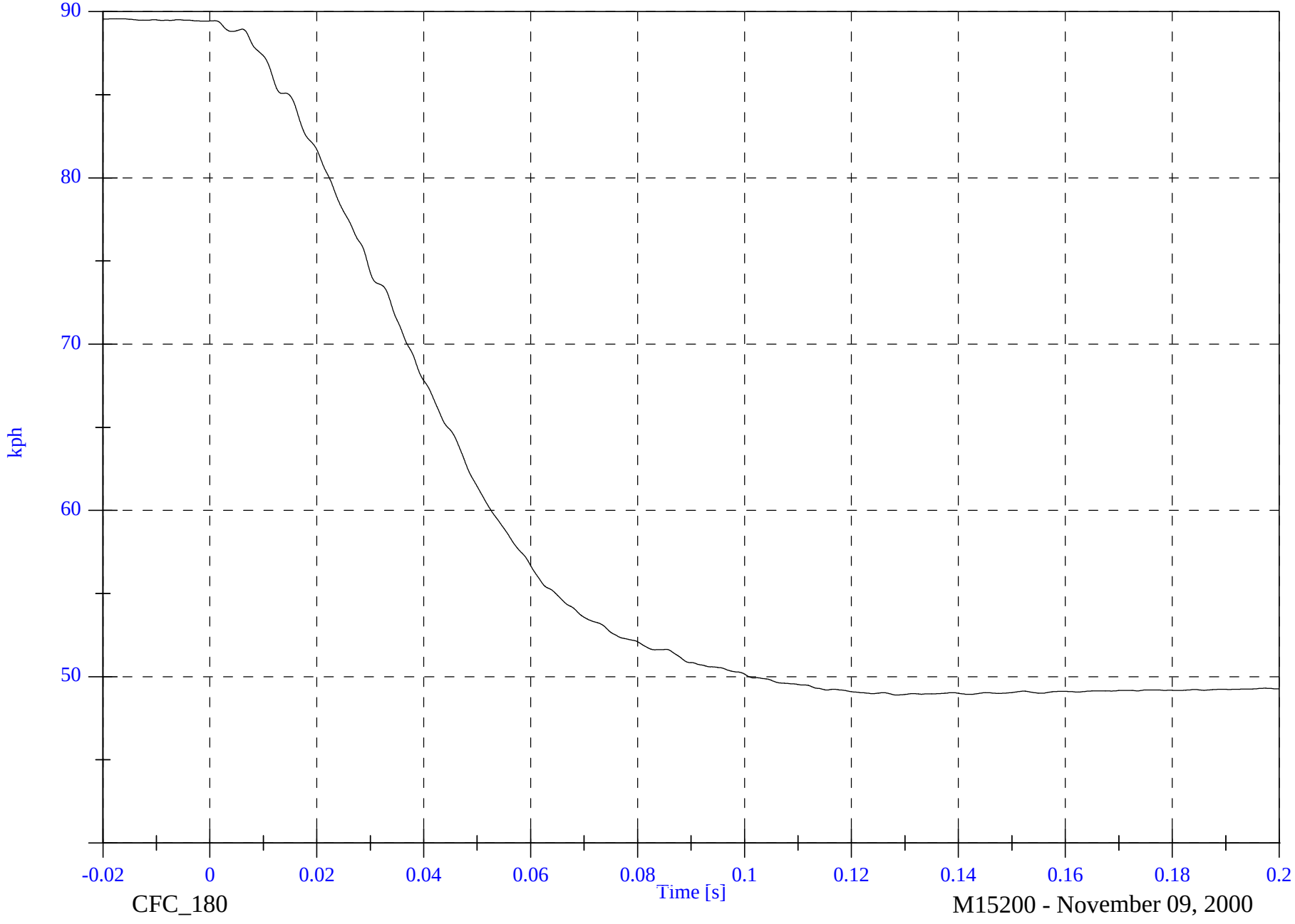
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG X Velocity

Max: 89.6 [kph] at -0.018 [s]

Min: 48.9 [kph] at 0.129 [s]



CFC_180

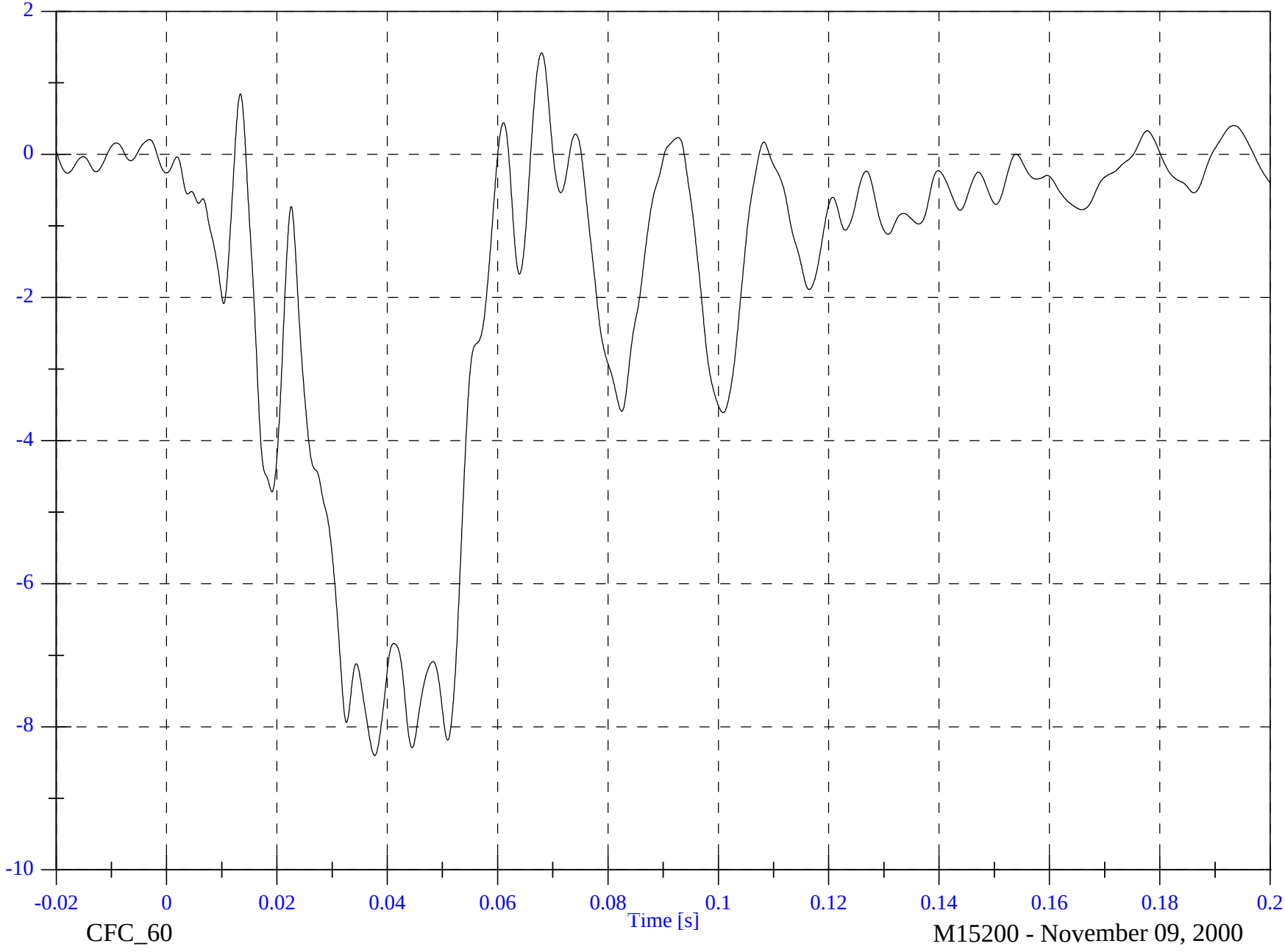
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG Y

Max: 1.4 [g] at 0.068 [s]

Min: -8.4 [g] at 0.038 [s]



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CFC_60

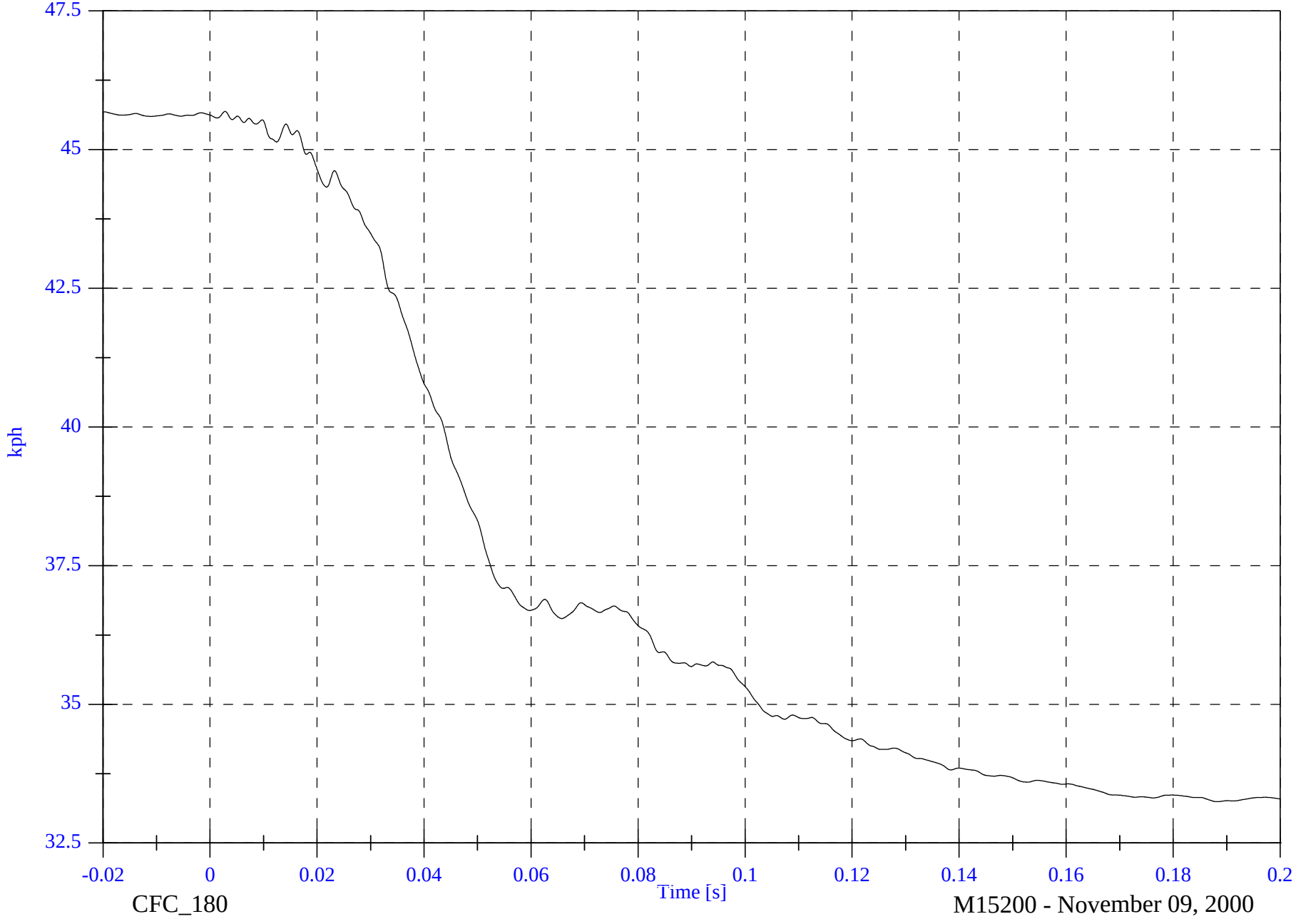
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG Y Velocity

Max: 45.7 [kph] at 0.003 [s]

Min: 33.2 [kph] at 0.188 [s]



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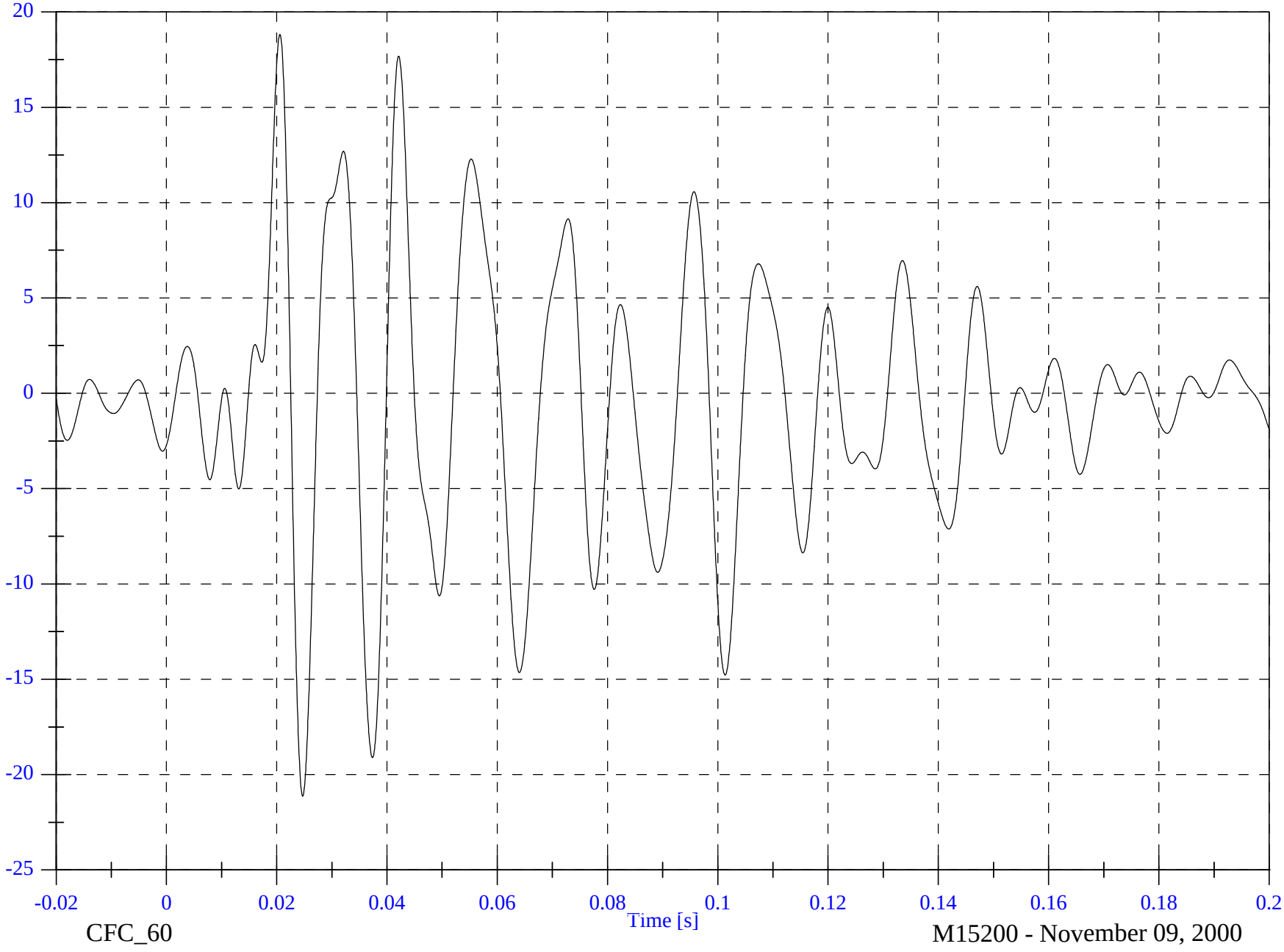
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG Z

Max: 18.8 [g] at 0.021 [s]
Min: -21.1 [g] at 0.025 [s]



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CFC_60

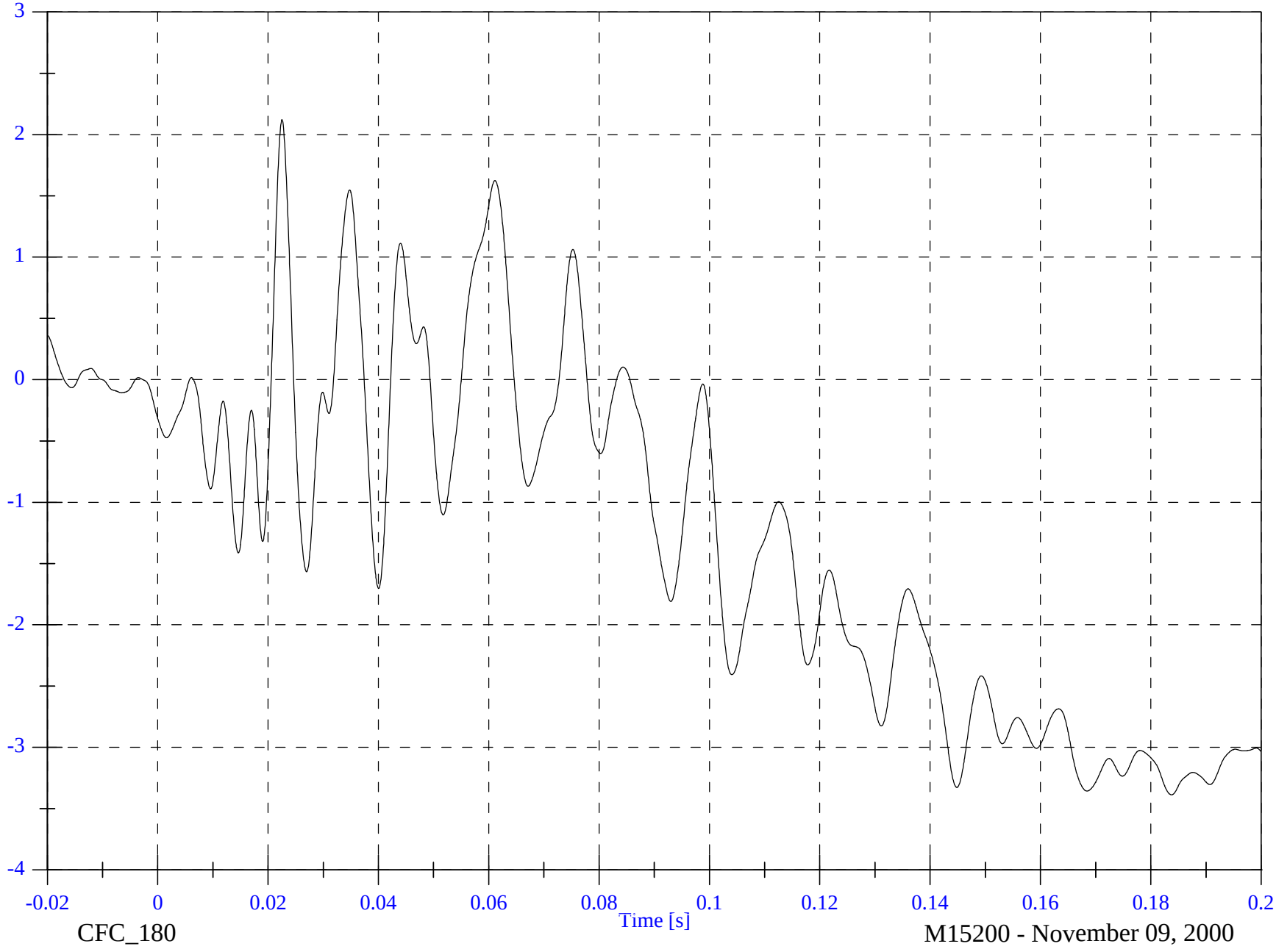
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG Z Velocity

Max: 2.1 [kph] at 0.023 [s]

Min: -3.4 [kph] at 0.184 [s]



CFC_180

M15200 - November 09, 2000

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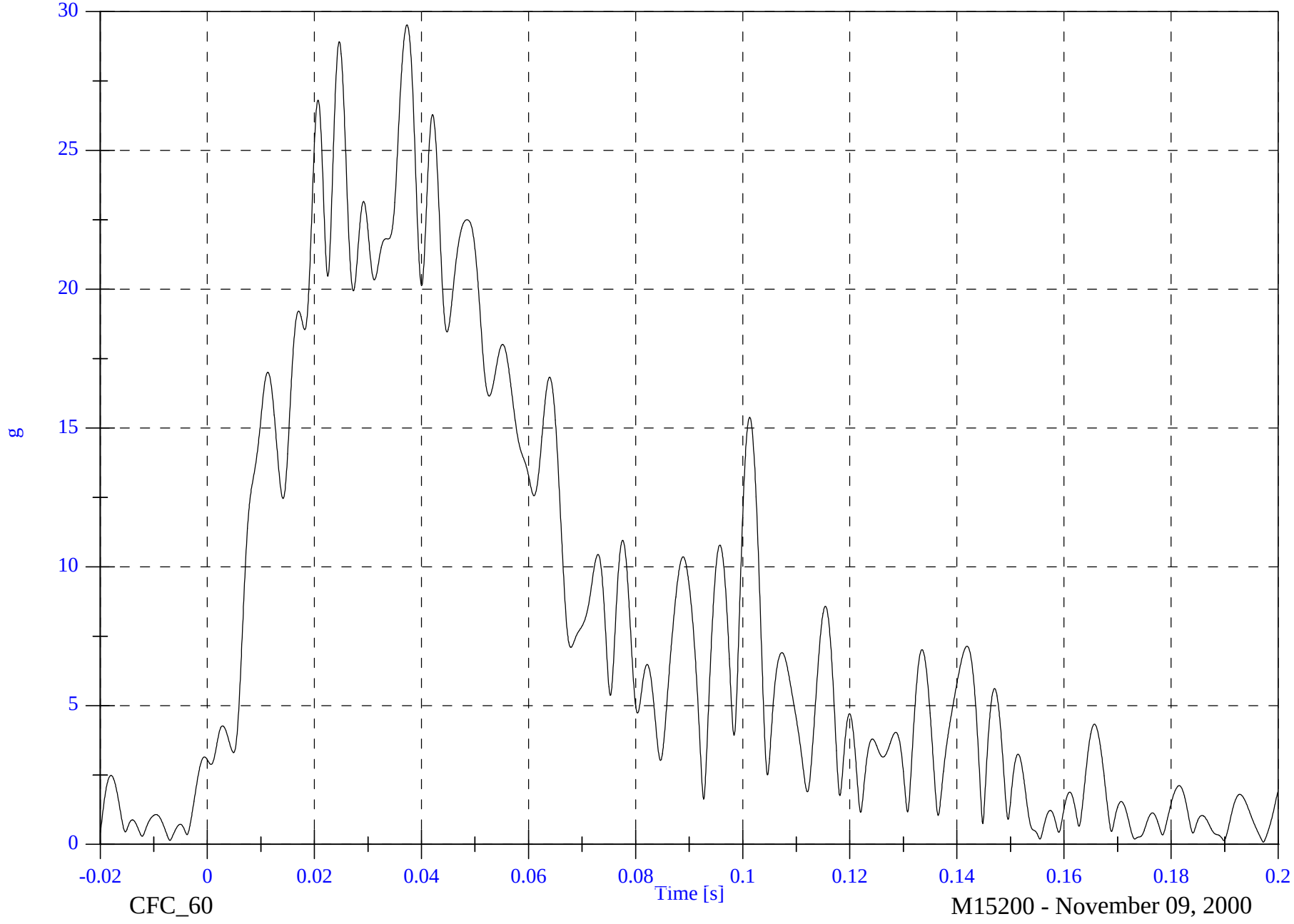
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier CG Resultant

Max: 29.5 [g] at 0.037 [s]

Min: 0.1 [g] at 0.197 [s]



CFC_60

M15200 - November 09, 2000

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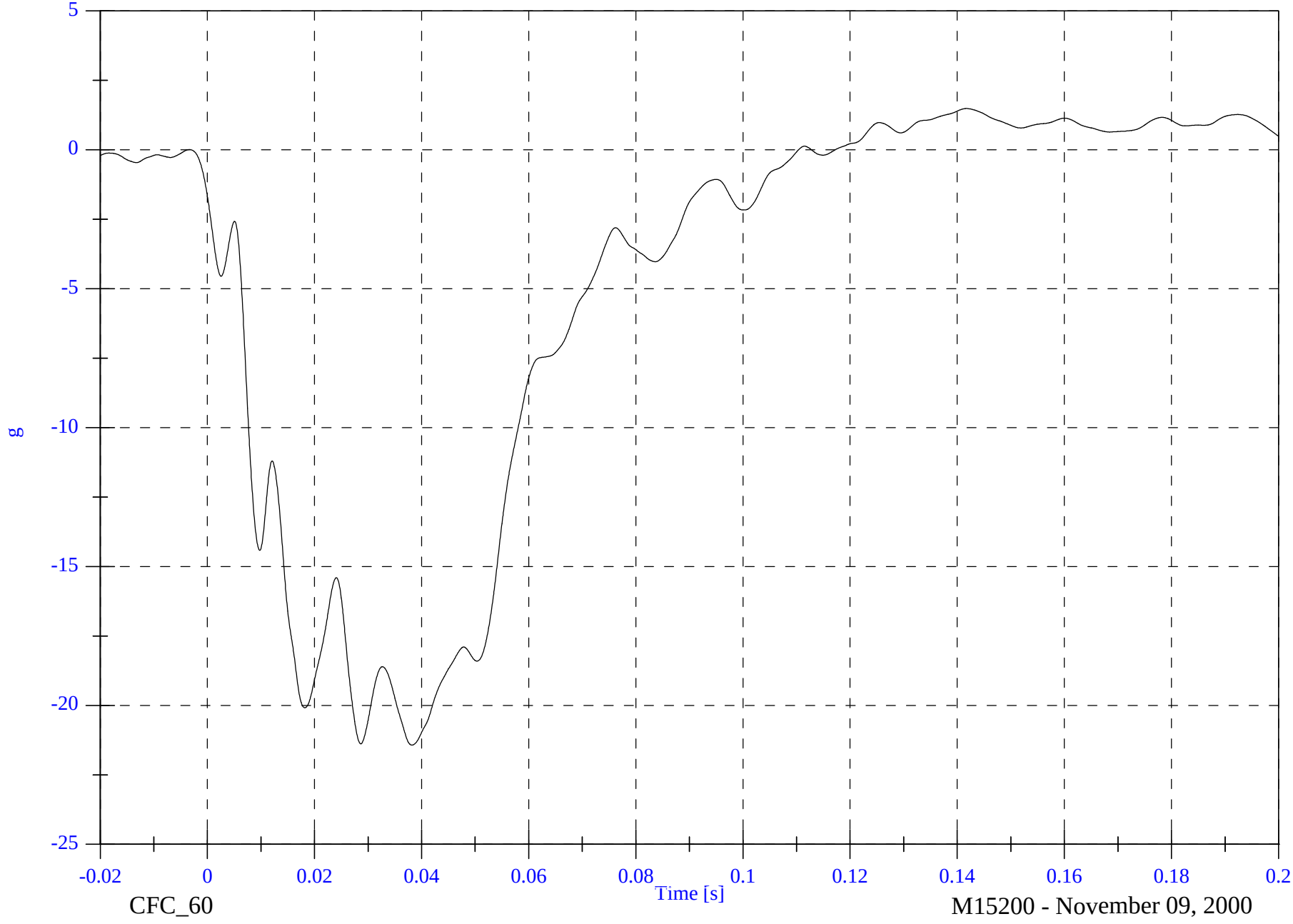
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier Left Rail X

Max: 1.5 [g] at 0.142 [s]

Min: -21.4 [g] at 0.038 [s]



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CFC_60

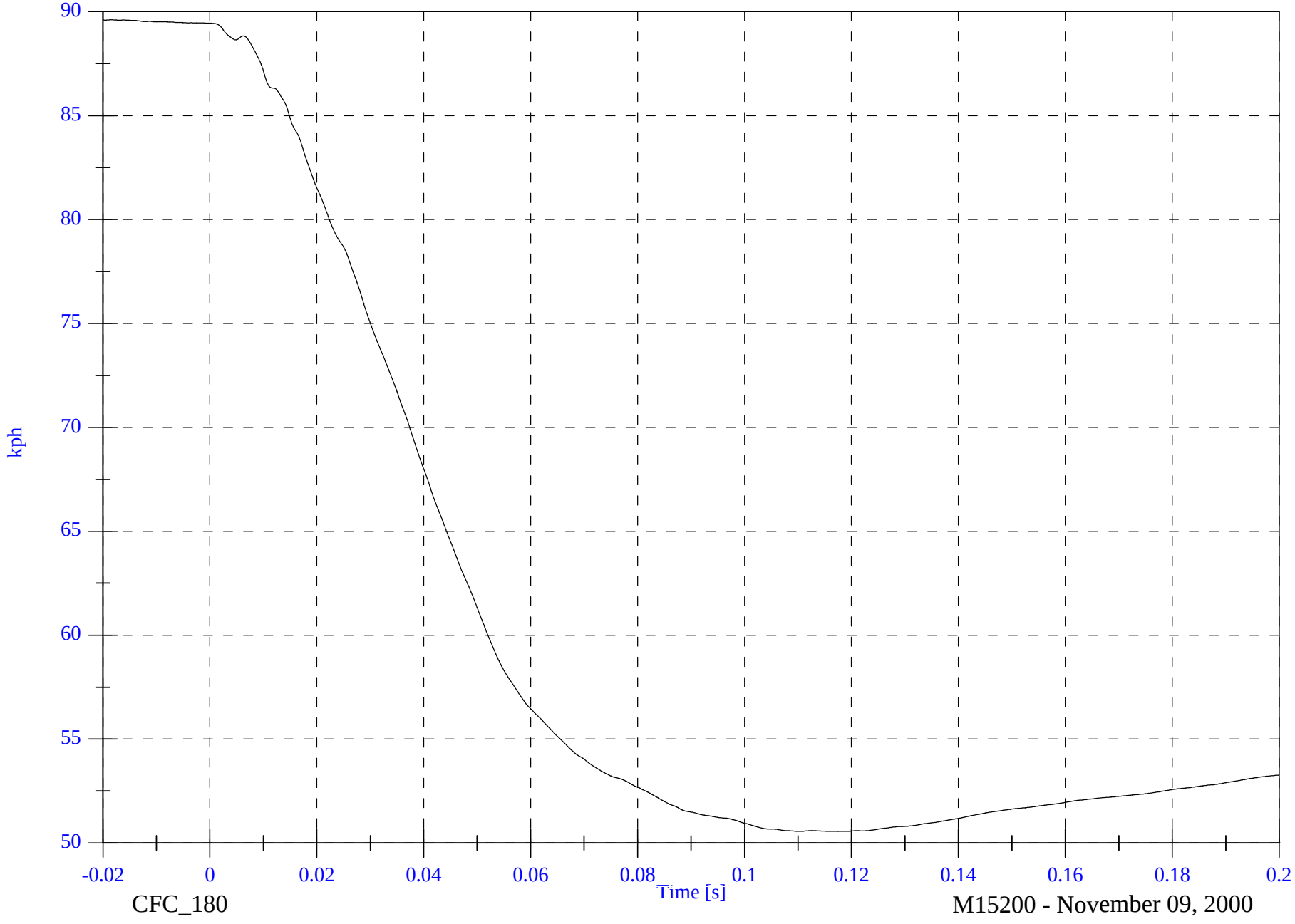
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier Left Rail X Velocity

Max: 89.6 [kph] at -0.018 [s]

Min: 50.6 [kph] at 0.116 [s]



CFC_180

M15200 - November 09, 2000

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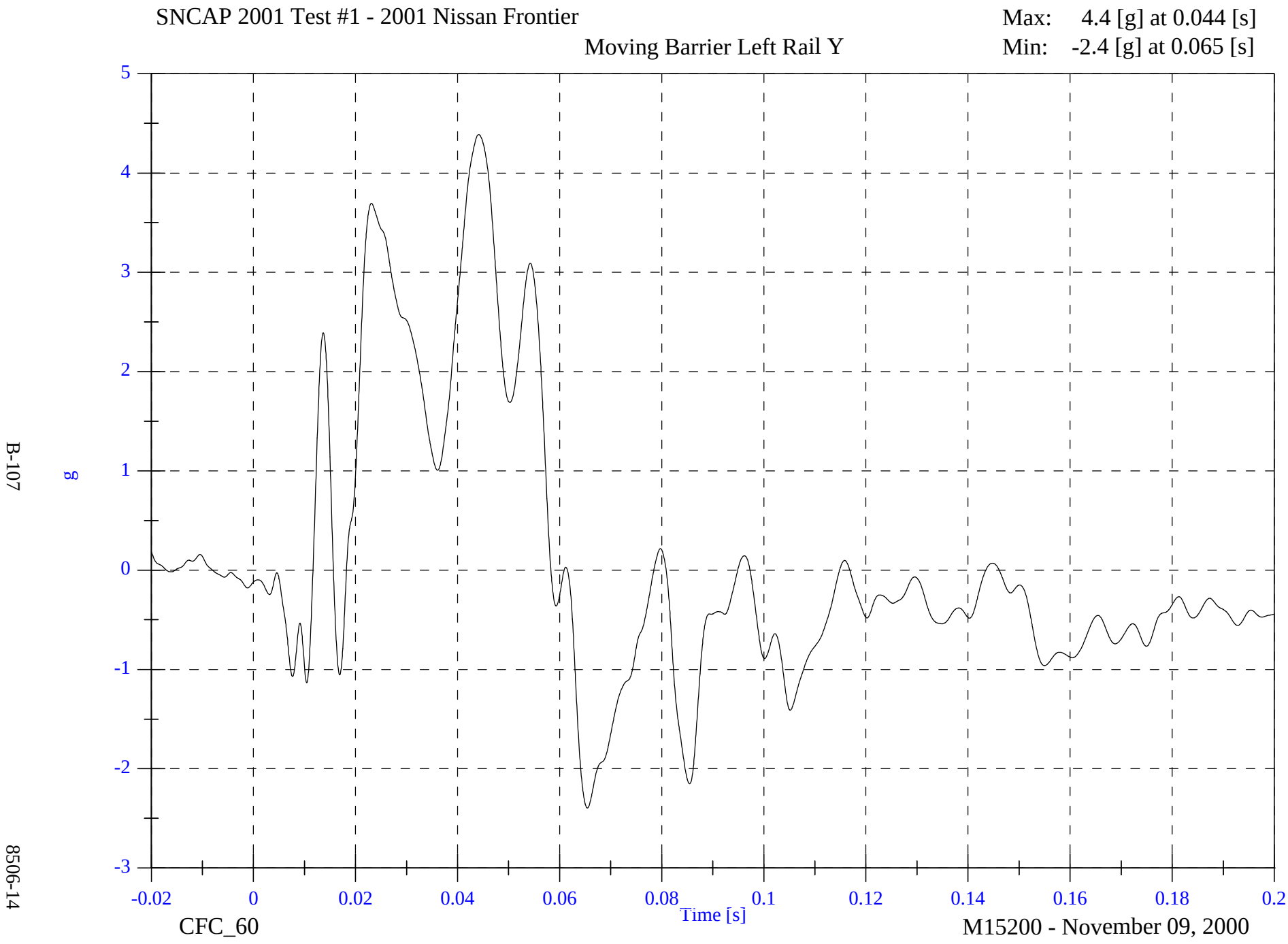
SNCAP 2001 Test #1 - 2001 Nissan Frontier
Moving Barrier Left Rail Y
Max: 4.4 [g] at 0.044 [s]
Min: -2.4 [g] at 0.065 [s]
5
4
3
2
1
0
-1
-2
-3
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
CFC_60
M15200 - November 09, 2000

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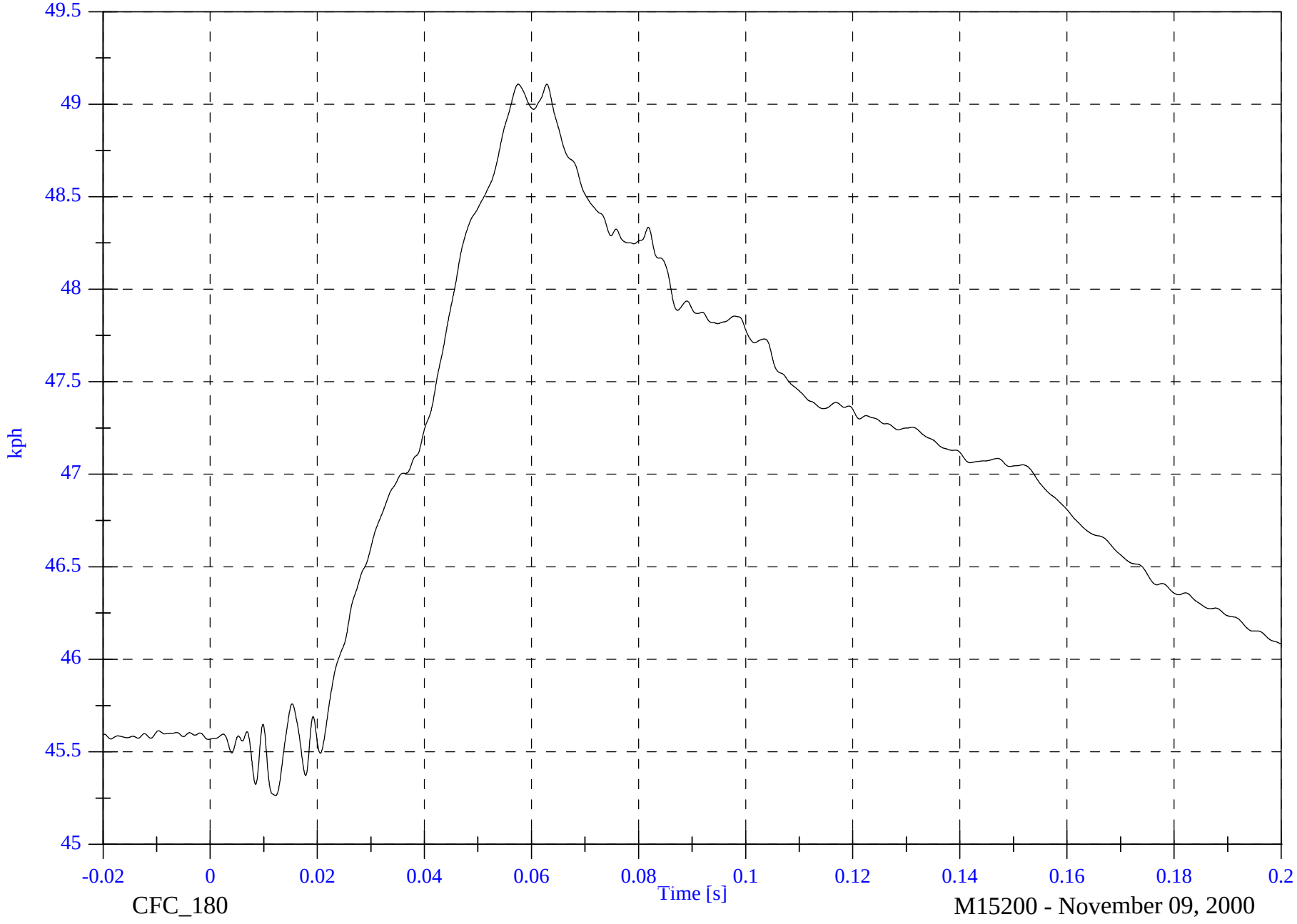
SNCAP 2001 Test #1 - 2001 Nissan Frontier

Moving Barrier Left Rail Y Velocity

Max: 49.1 [kph] at 0.058 [s]

Min: 45.3 [kph] at 0.012 [s]



CFC_180

M15200 - November 09, 2000

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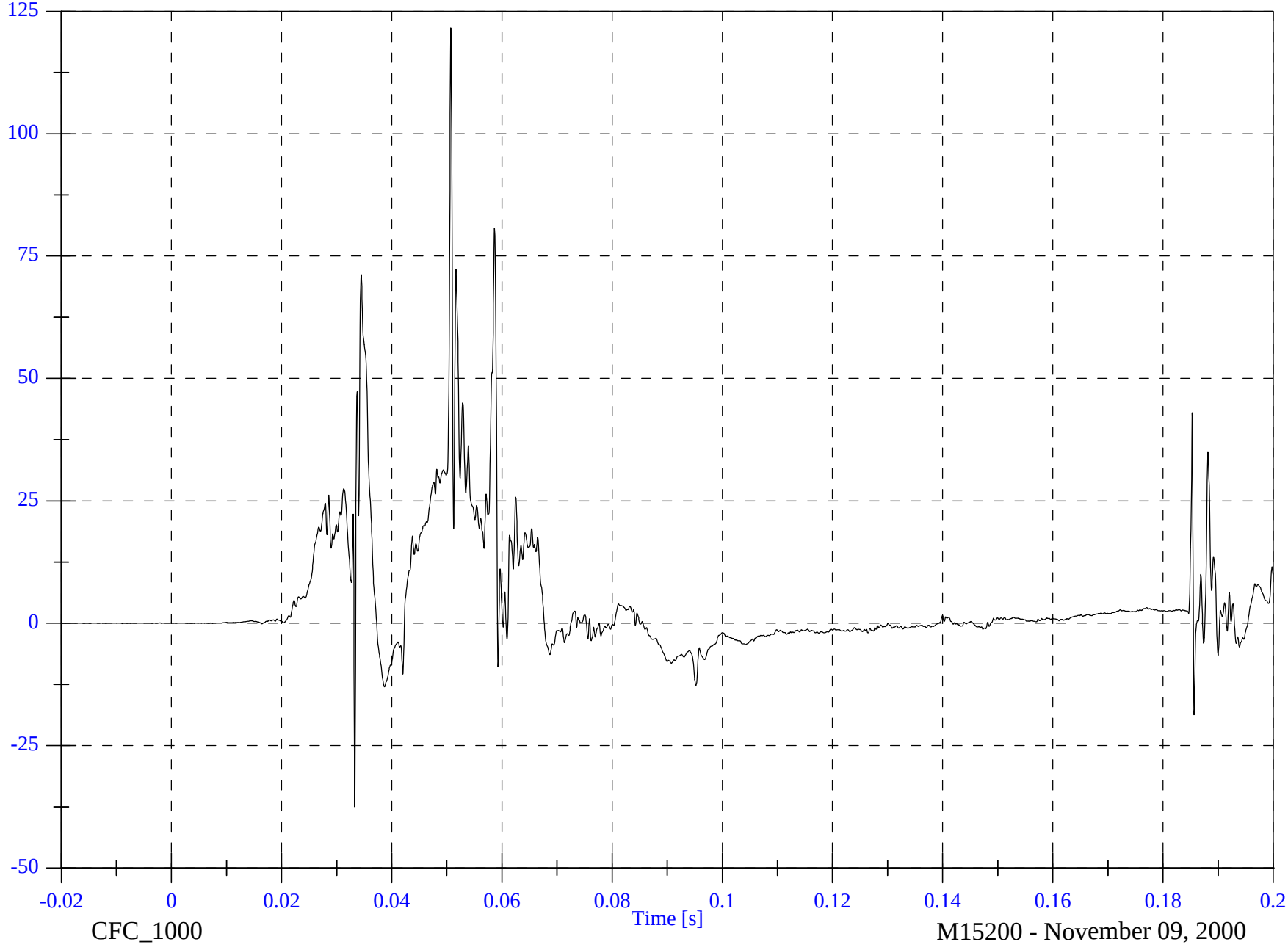
SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Upper Rib Ry

Max: 121.6 [g] at 0.051 [s]
Min: -37.5 [g] at 0.033 [s]



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8506-14

CFC_1000

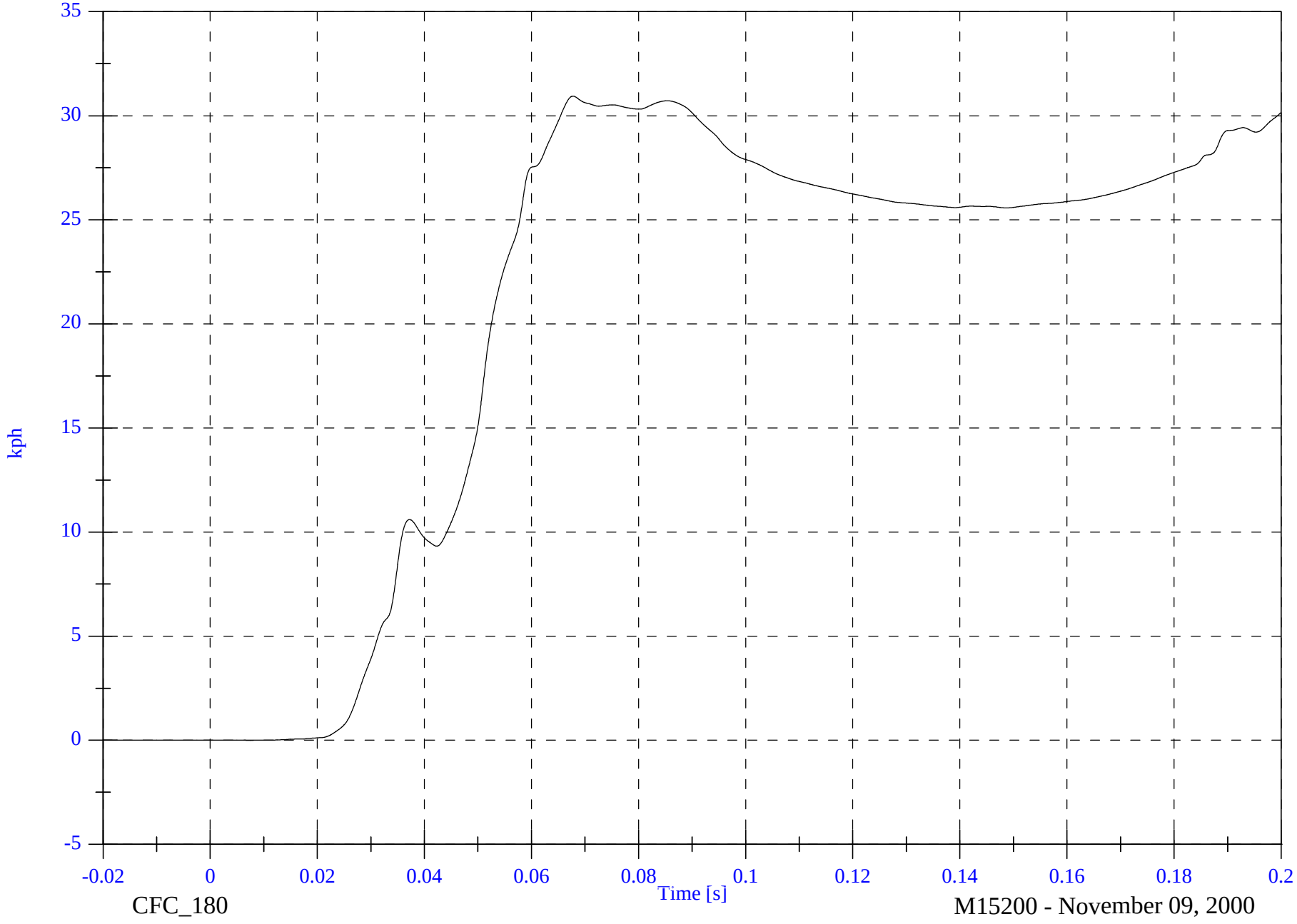
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Upper Rib Ry Velocity

Max: 30.9 [kph] at 0.068 [s]

Min: -0.0 [kph] at 0.007 [s]



CFC_180

M15200 - November 09, 2000

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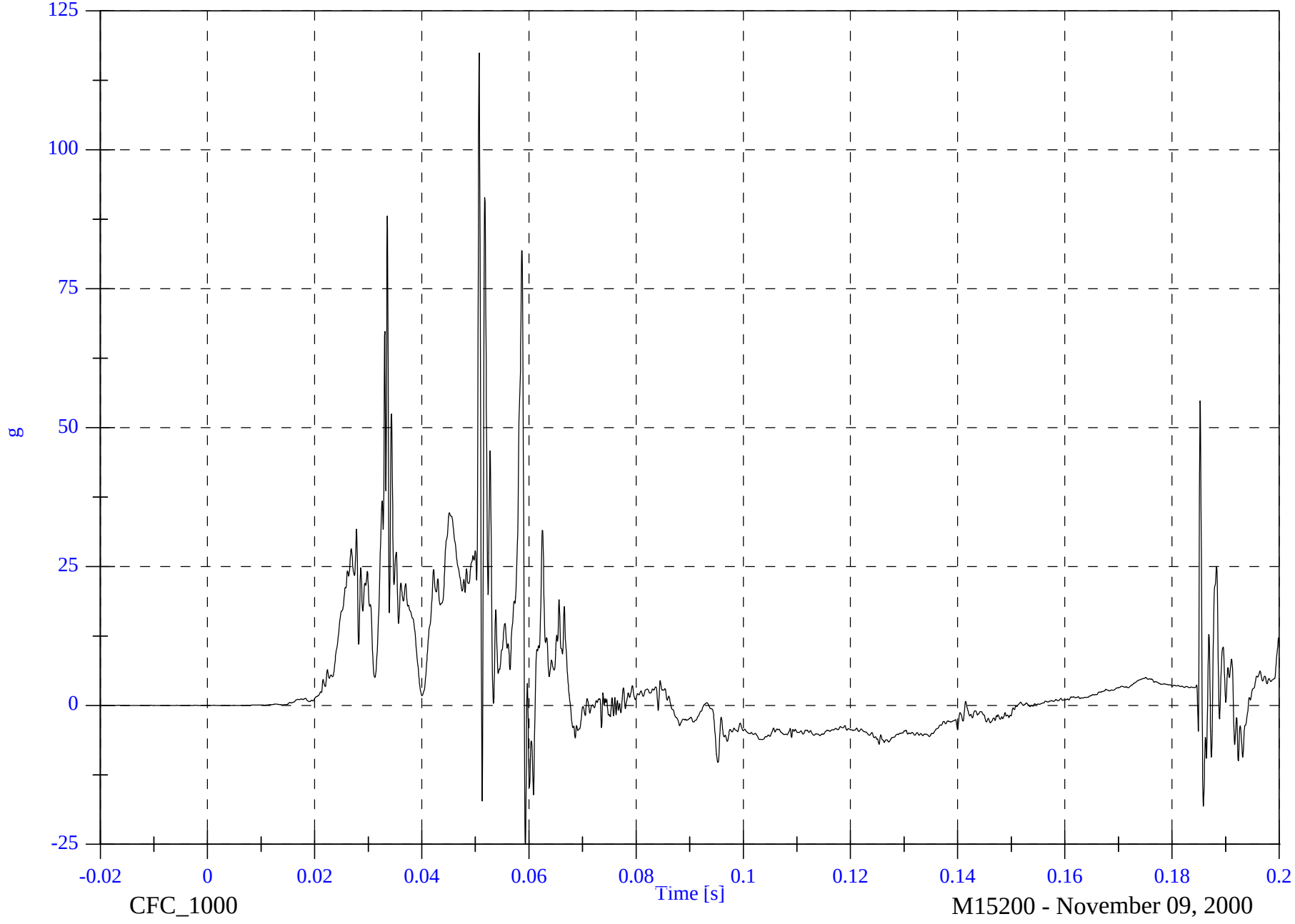
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Rib Ry

Max: 117.5 [g] at 0.051 [s]
Min: -24.8 [g] at 0.059 [s]



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CFC_1000

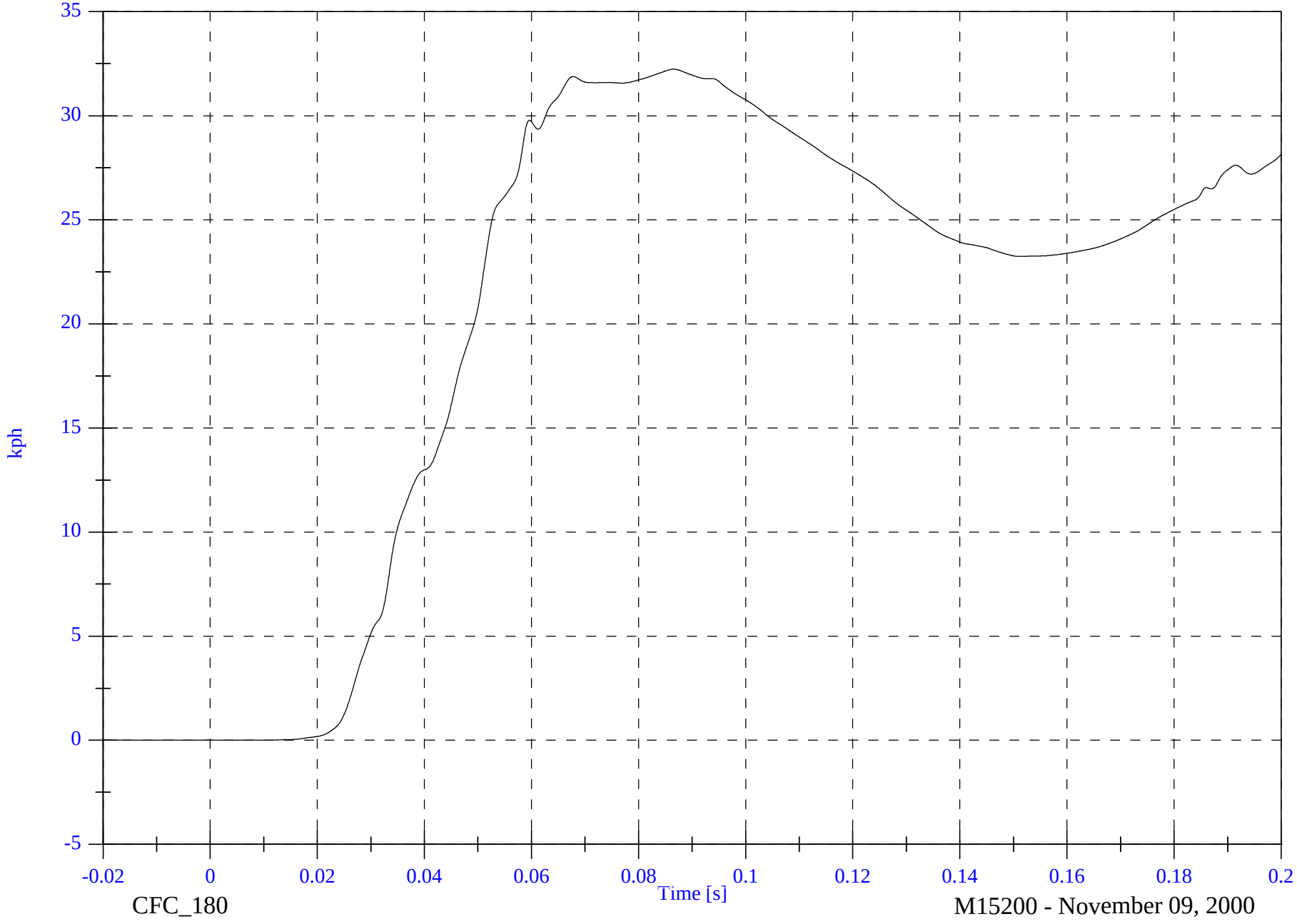
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Rib Ry Velocity

Max: 32.2 [kph] at 0.087 [s]

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



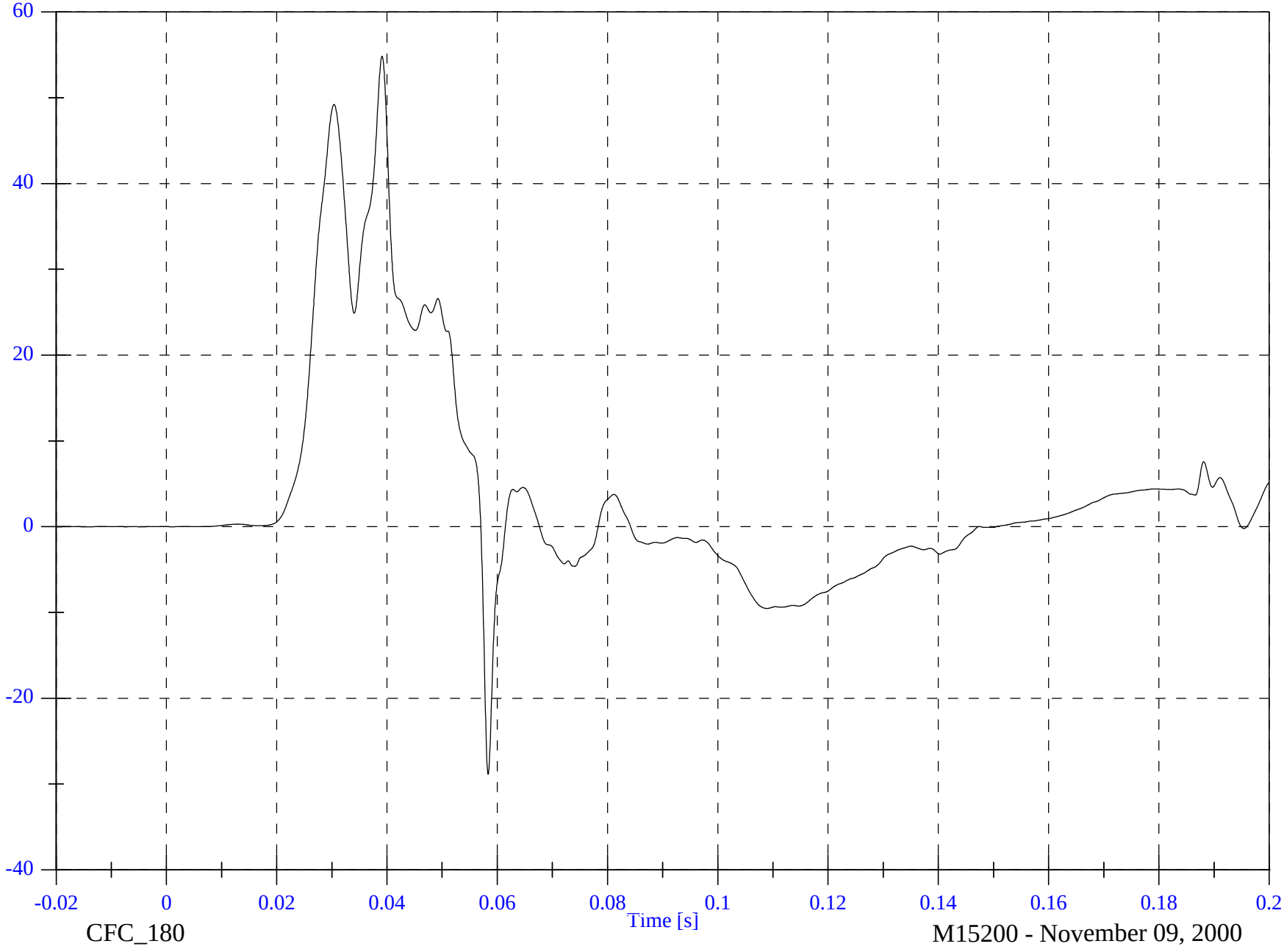
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Spine Ry

Max: 54.9 [g] at 0.039 [s]
Min: -28.9 [g] at 0.058 [s]



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CFC_180

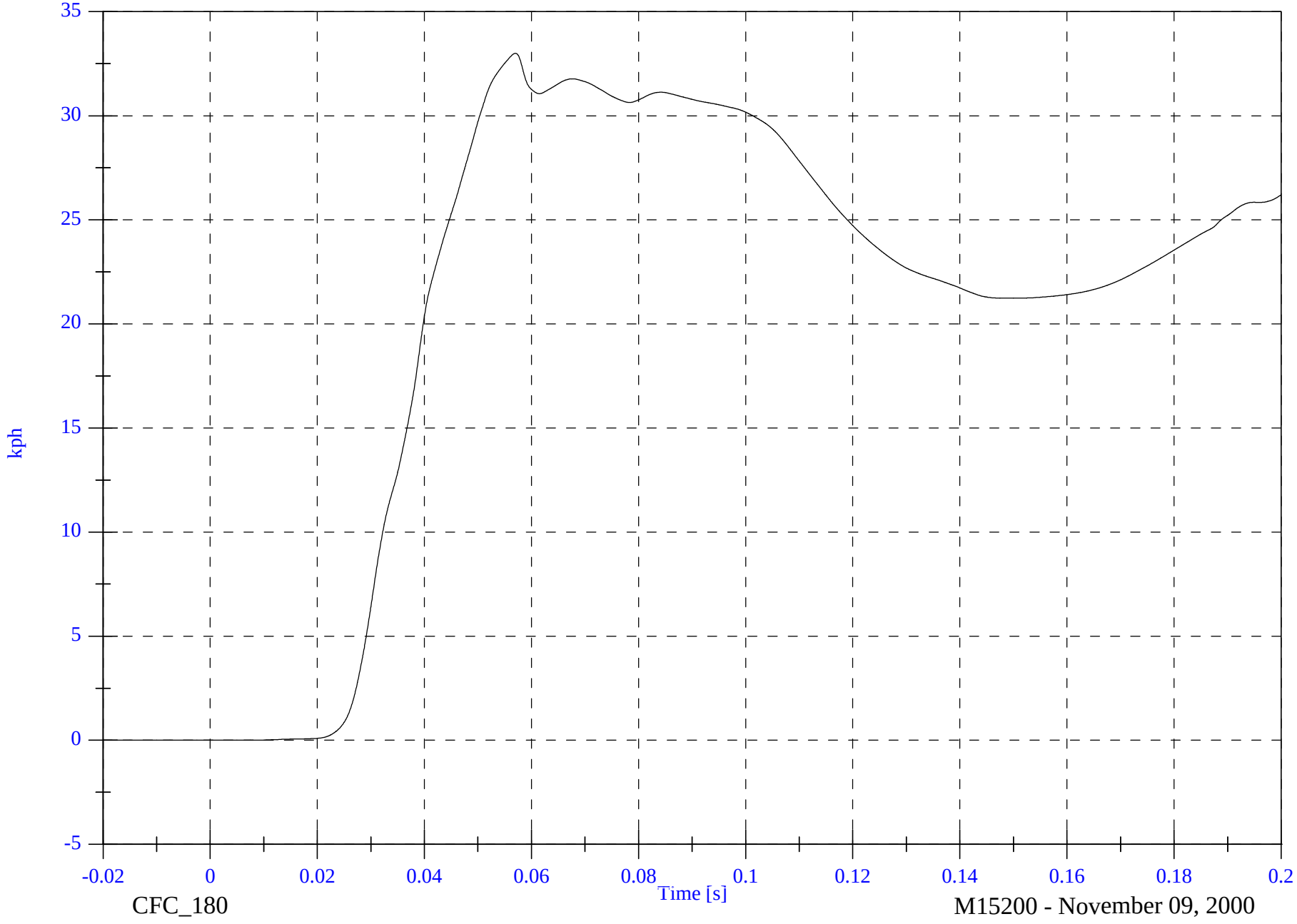
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Spine Ry Velocity

Max: 33.0 [kph] at 0.057 [s]

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



CFC_180

M15200 - November 09, 2000

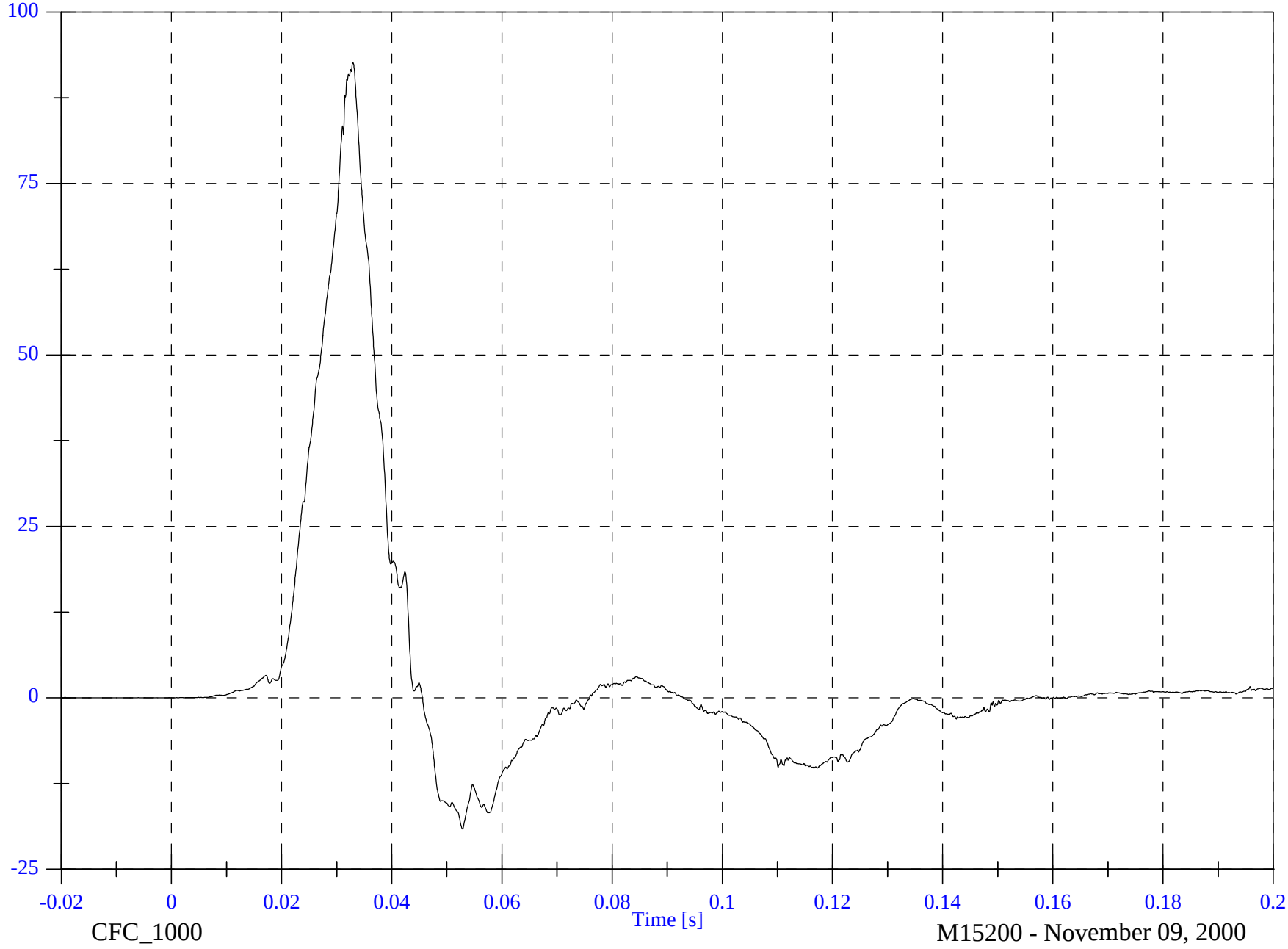
B-114

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Pelvic Ry

Max: 92.6 [g] at 0.033 [s]
Min: -19.1 [g] at 0.053 [s]



B-115

8506-14

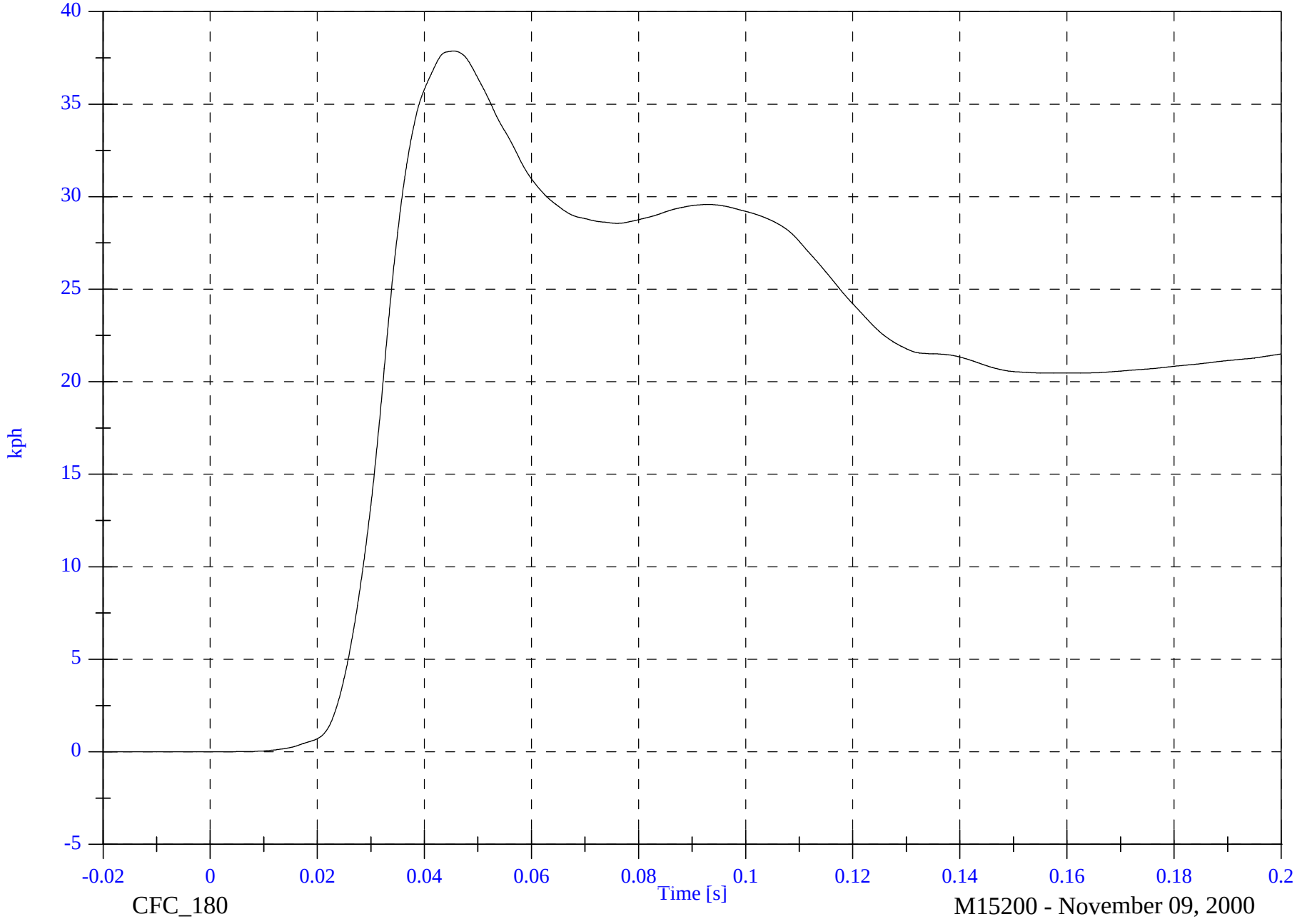
CFC_1000

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Pelvic Ry Velocity

Max: 37.9 [kph] at 0.045 [s]
Min: -0.0 [kph] at -0.020 [s]



B-116

8506-14

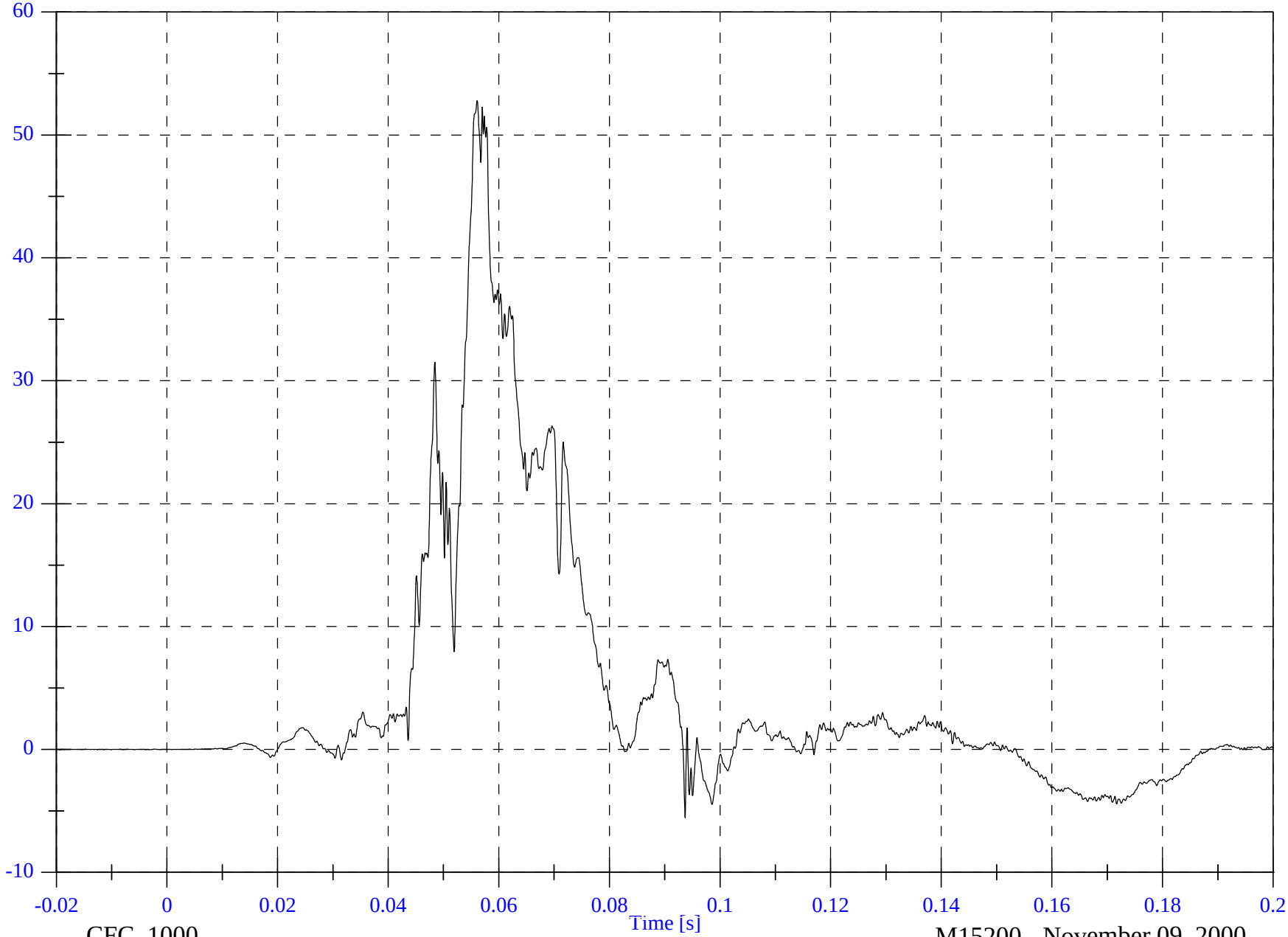
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Upper Rib Ry

Max: 52.8 [g] at 0.056 [s]
Min: -5.6 [g] at 0.094 [s]



B-117

8506-14

CFC_1000

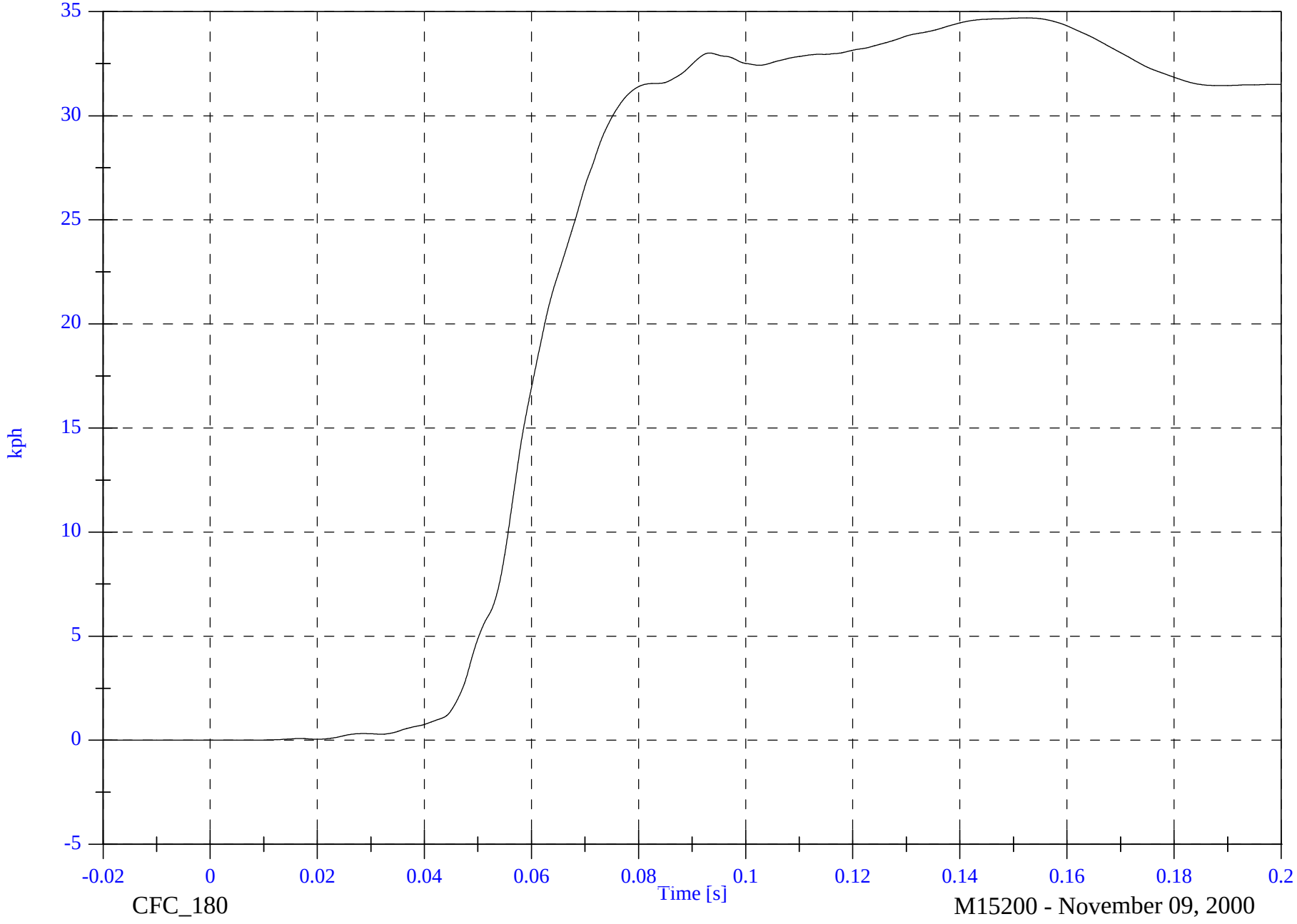
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Upper Rib Ry Velocity

Max: 34.7 [kph] at 0.152 [s]

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



CFC_180

M15200 - November 09, 2000

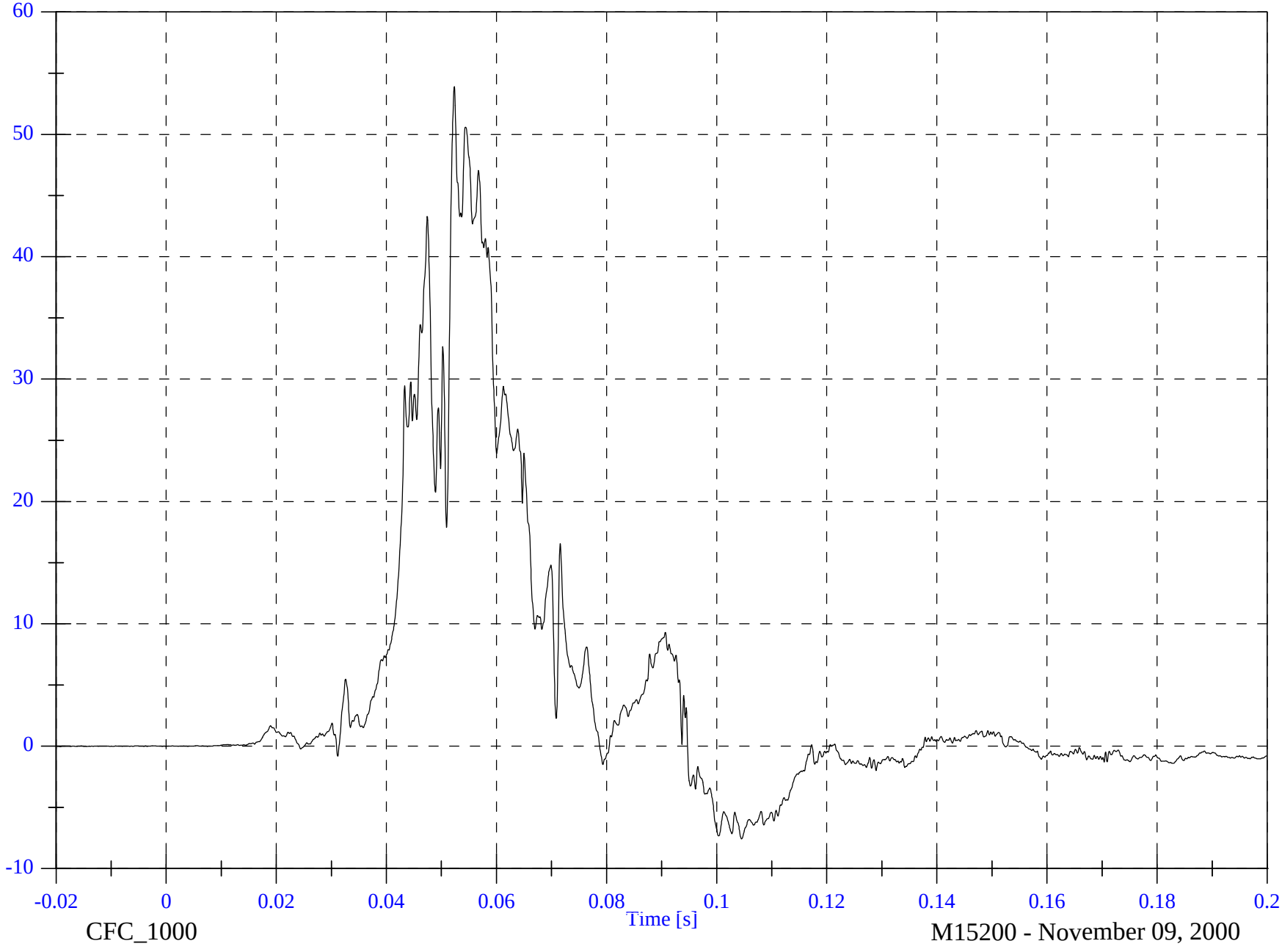
B-118

8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Rib Ry

Max: 53.9 [g] at 0.052 [s]
Min: -7.6 [g] at 0.105 [s]



B-119

8506-14

CFC_1000

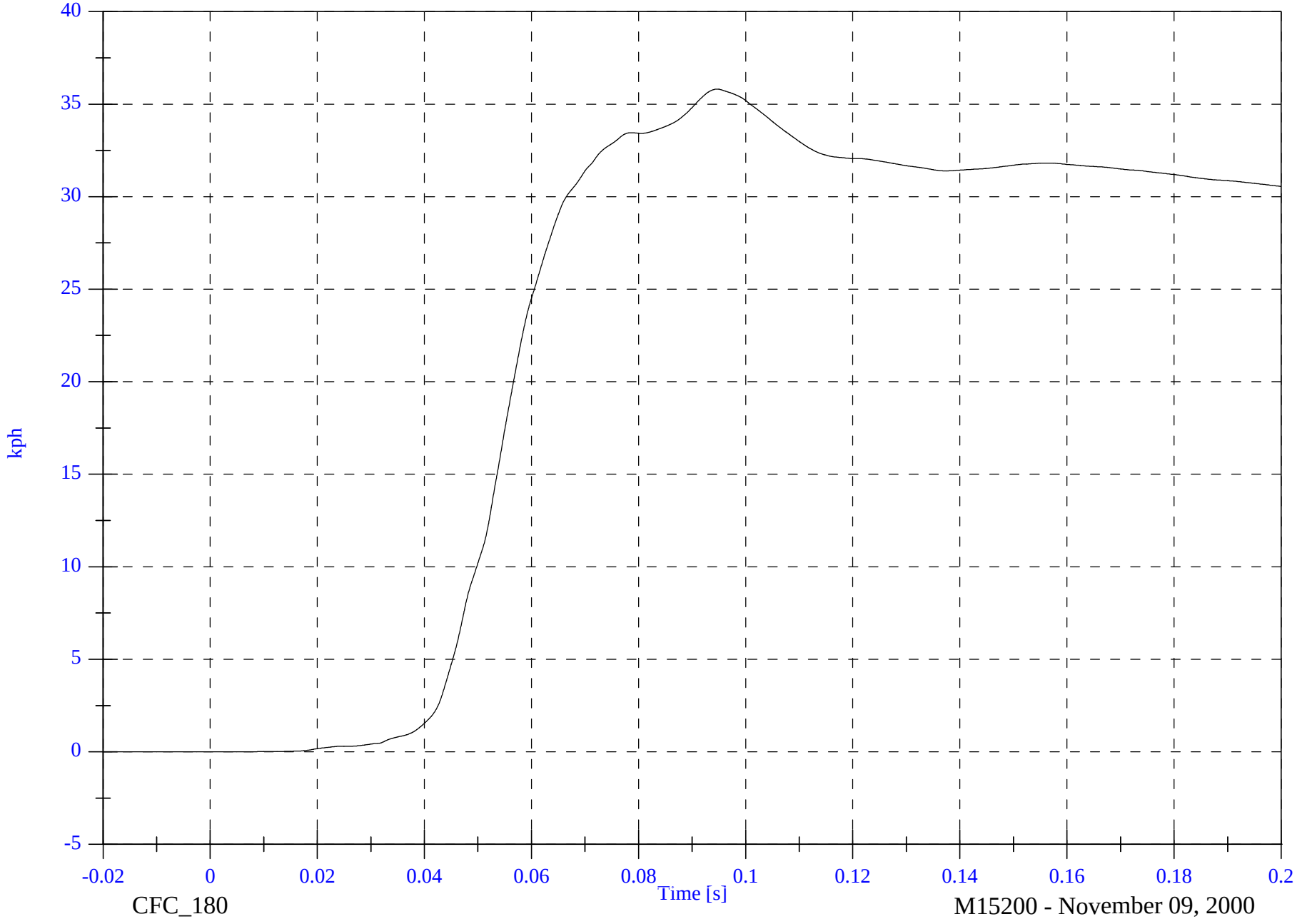
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Rib Ry Velocity

Max: 35.8 [kph] at 0.095 [s]

Min: -0.0 [kph] at -0.013 [s]



B-120

8506-14

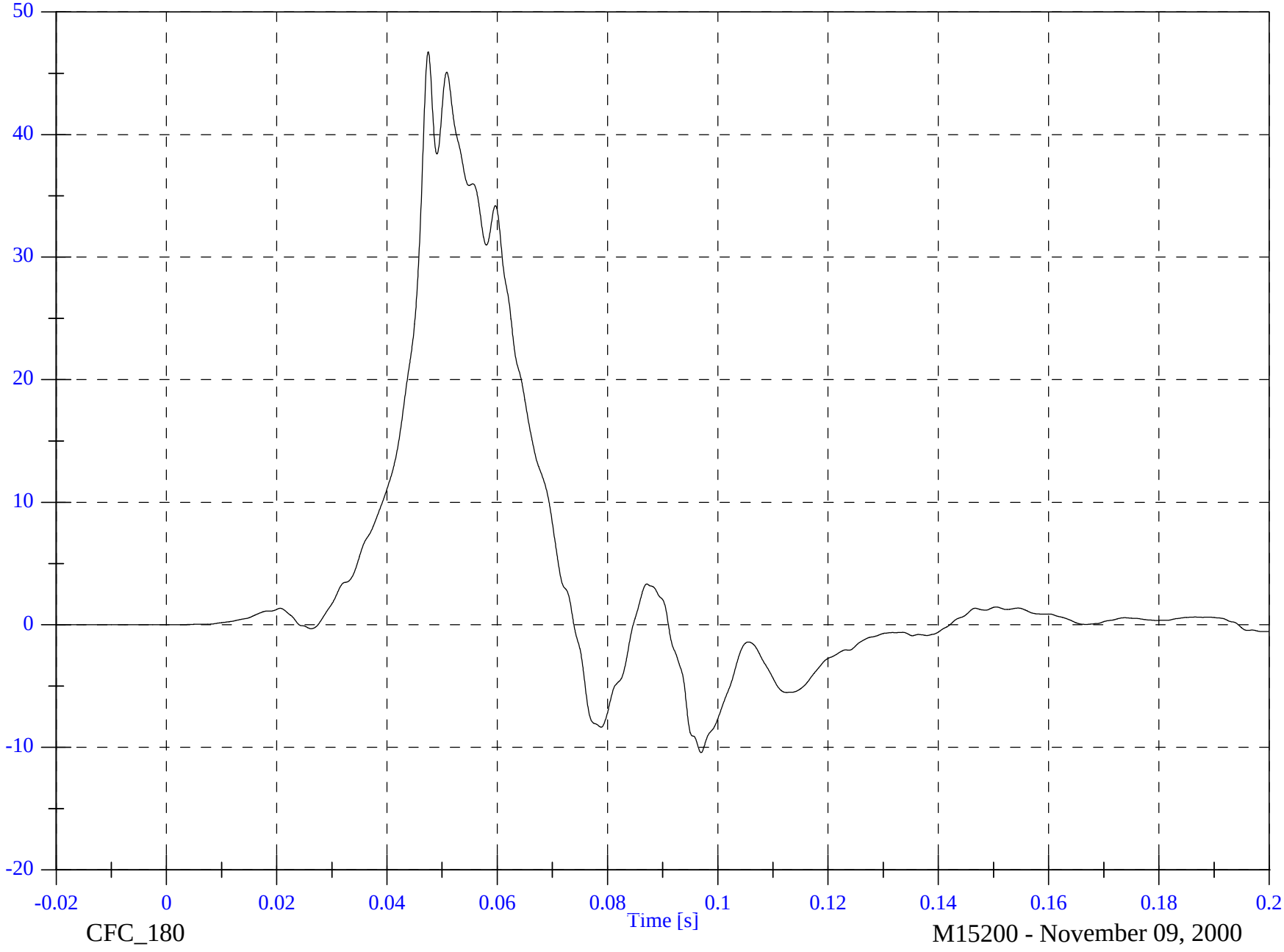
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Spine Ry

Max: 46.8 [g] at 0.047 [s]
Min: -10.4 [g] at 0.097 [s]



B-121

8506-14

CFC_180

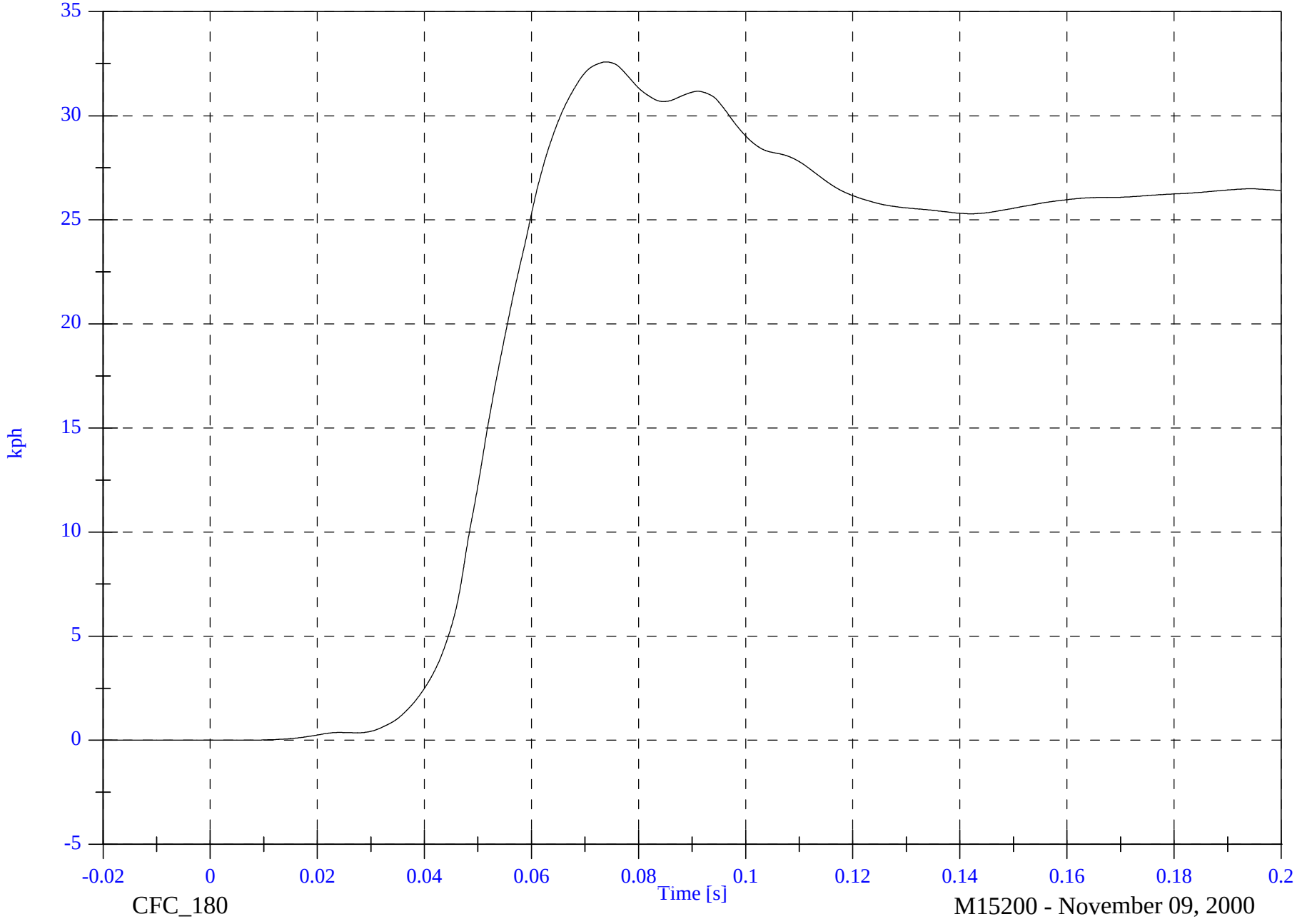
M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Spine Ry Velocity

Max: 32.6 [kph] at 0.074 [s]

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



B-122

8506-14

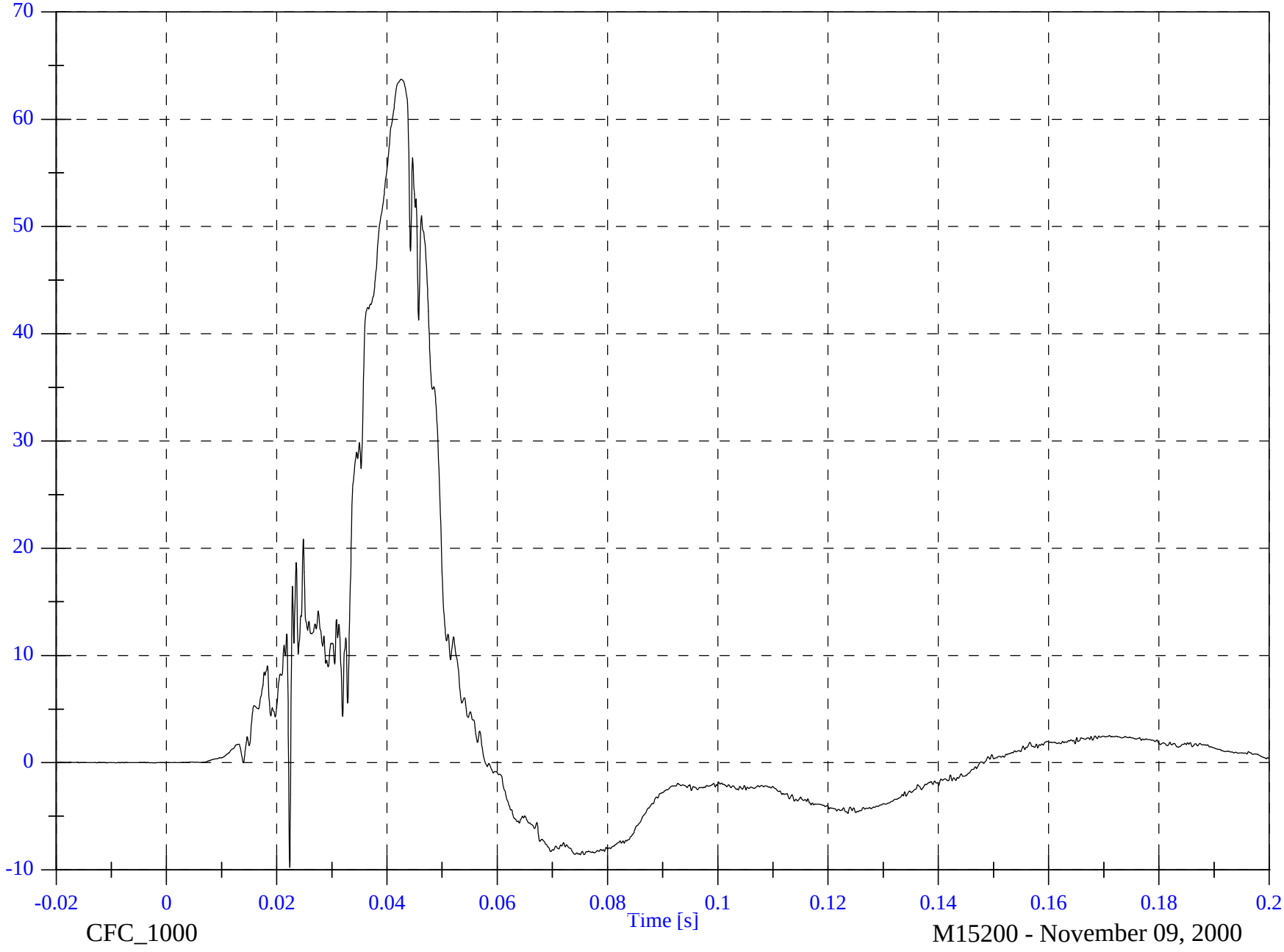
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Pelvic Ry

Max: 63.7 [g] at 0.043 [s]
Min: -9.8 [g] at 0.022 [s]



B-123

8506-14

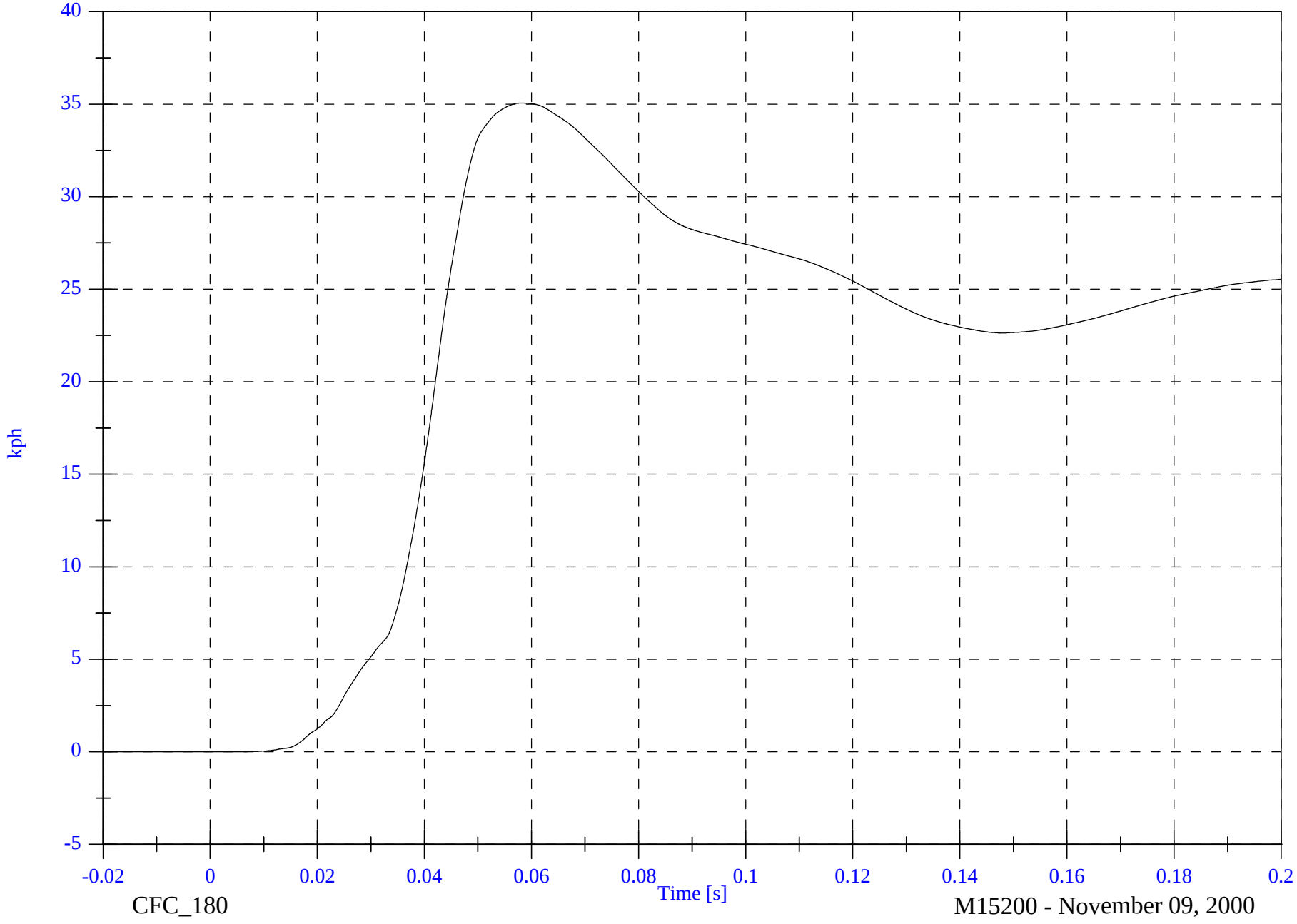
CFC_1000

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Pelvic Ry Velocity

Max: 35.1 [kph] at 0.058 [s]
Min: -0.0 [kph] at -0.020 [s]



B-124

8506-14

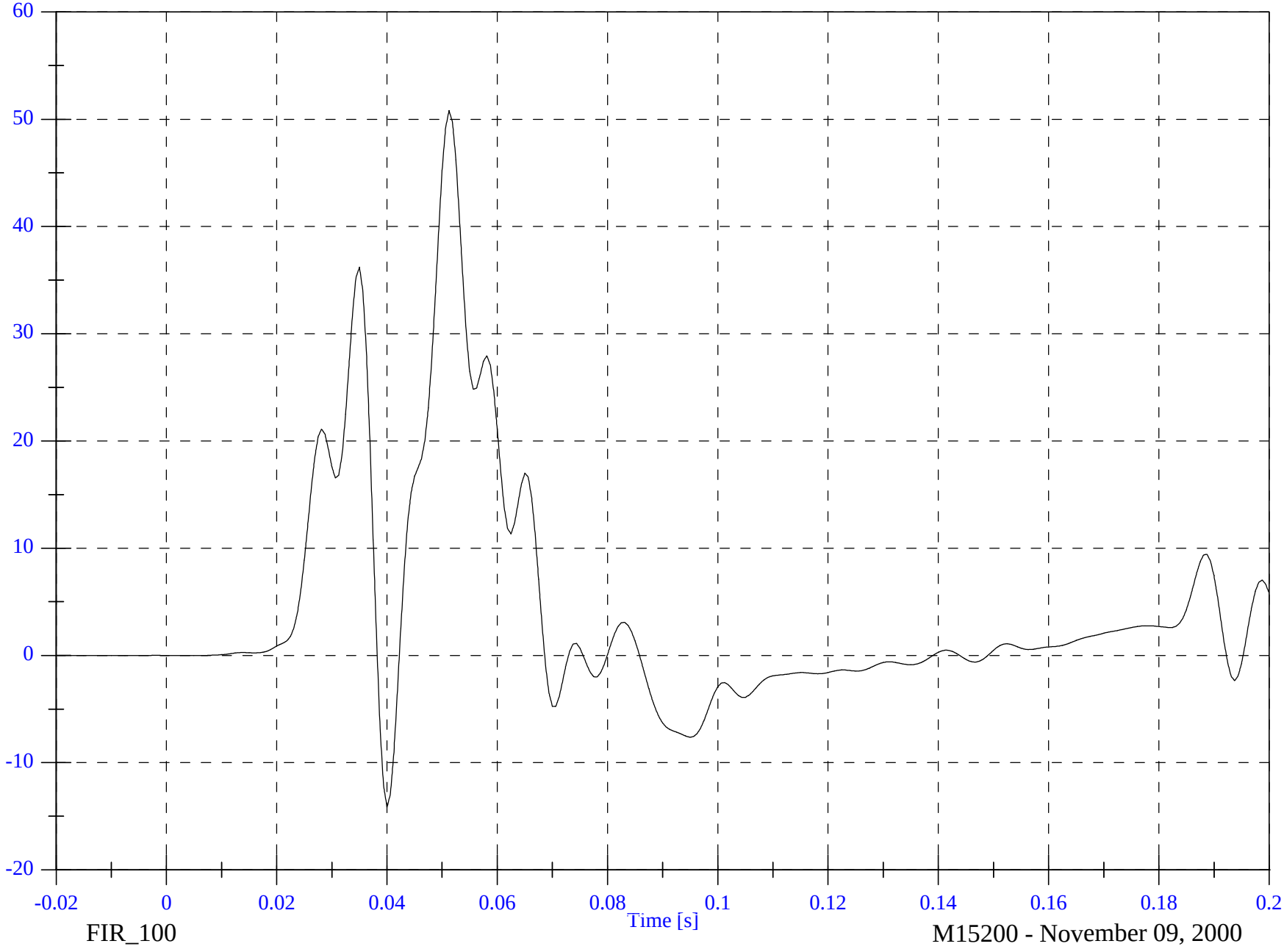
CFC_180

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Upper Rib Ry

Max: 50.8 [g] at 0.051 [s]
Min: -14.2 [g] at 0.040 [s]



B-125

8506-14

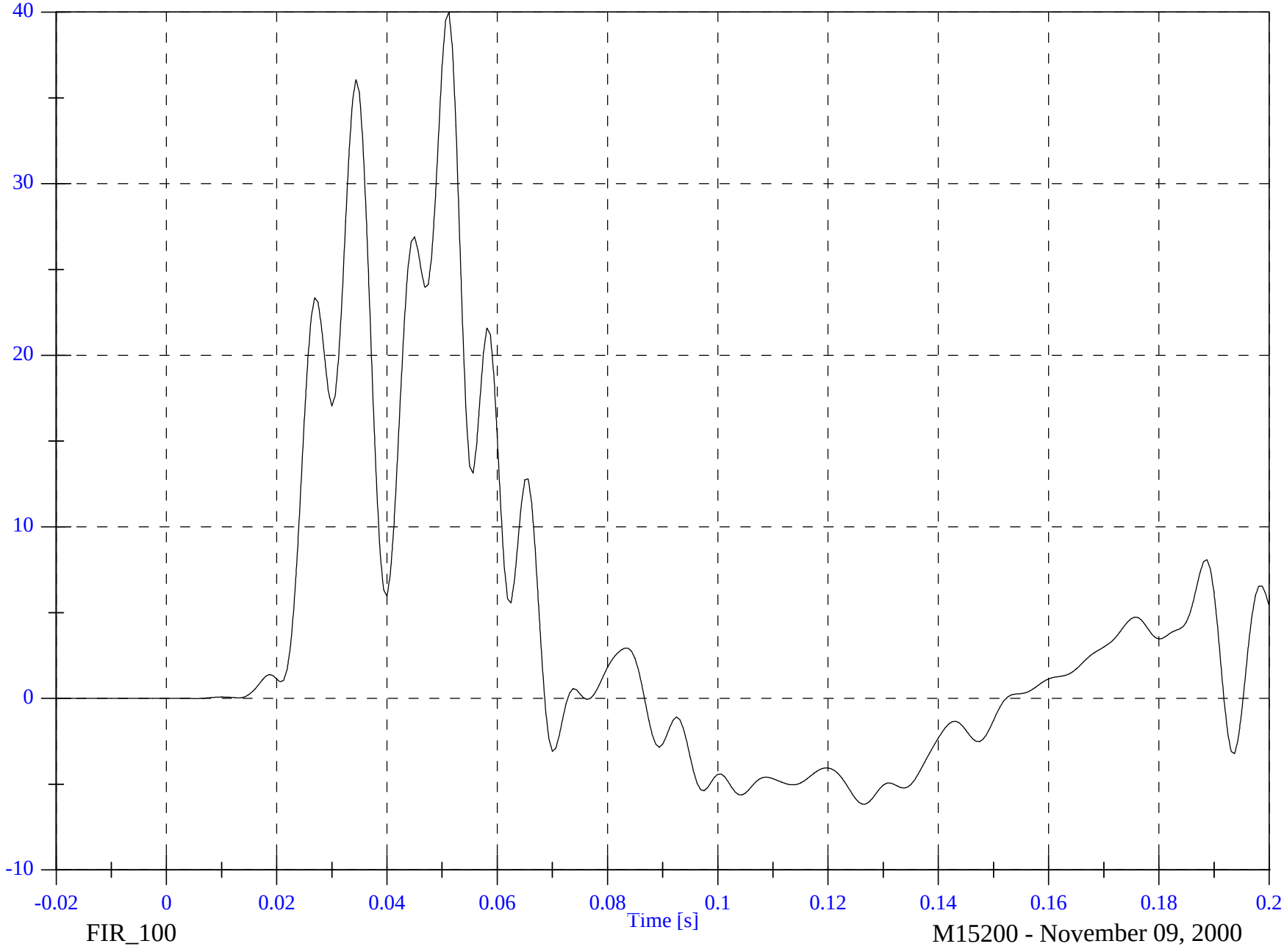
FIR_100

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Rib Ry

Max: 40.0 [g] at 0.051 [s]
Min: -6.2 [g] at 0.126 [s]



B-126

8506-14

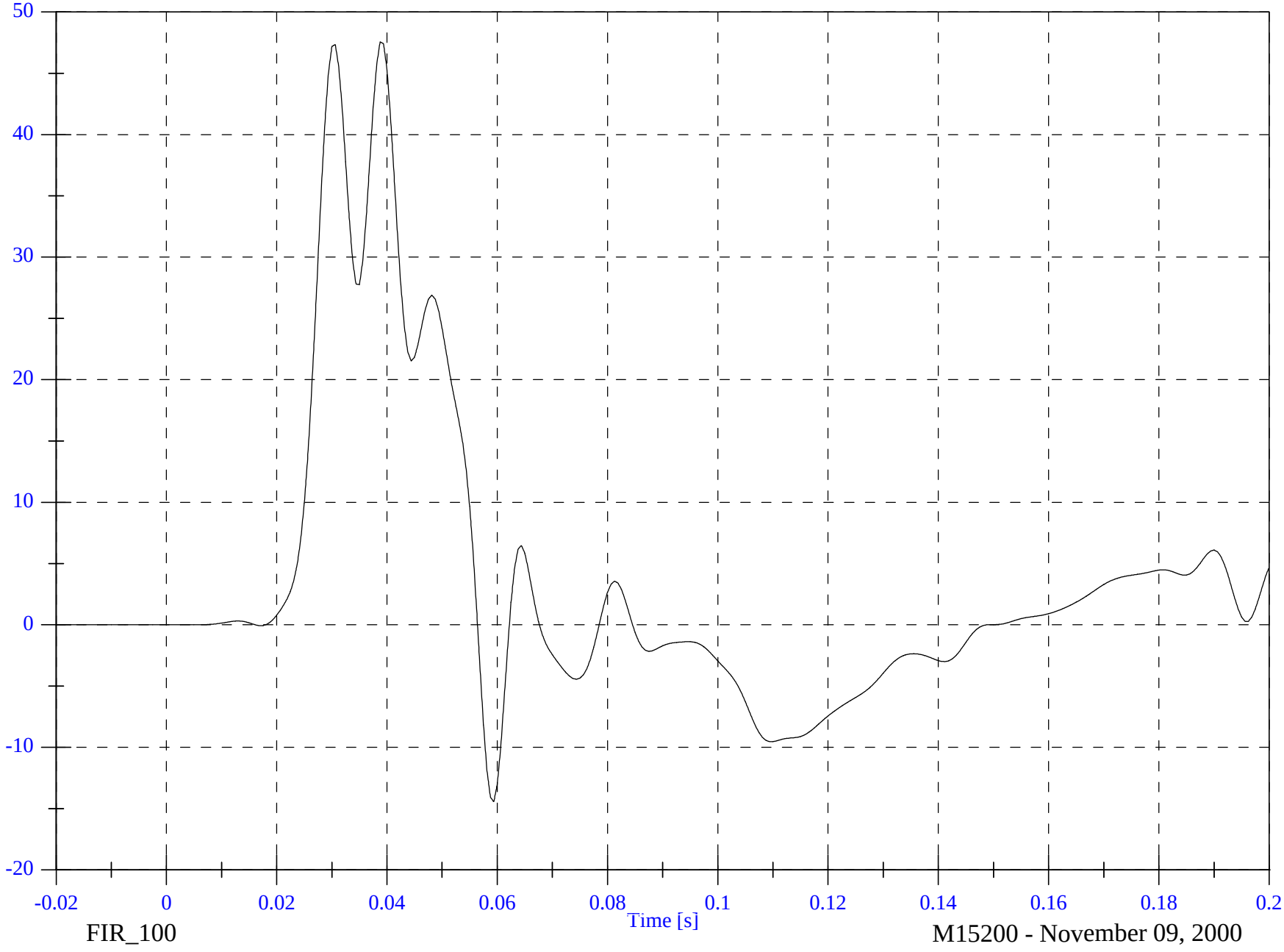
FIR_100

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P1 Lower Spine Ry

Max: 47.6 [g] at 0.039 [s]
Min: -14.4 [g] at 0.059 [s]

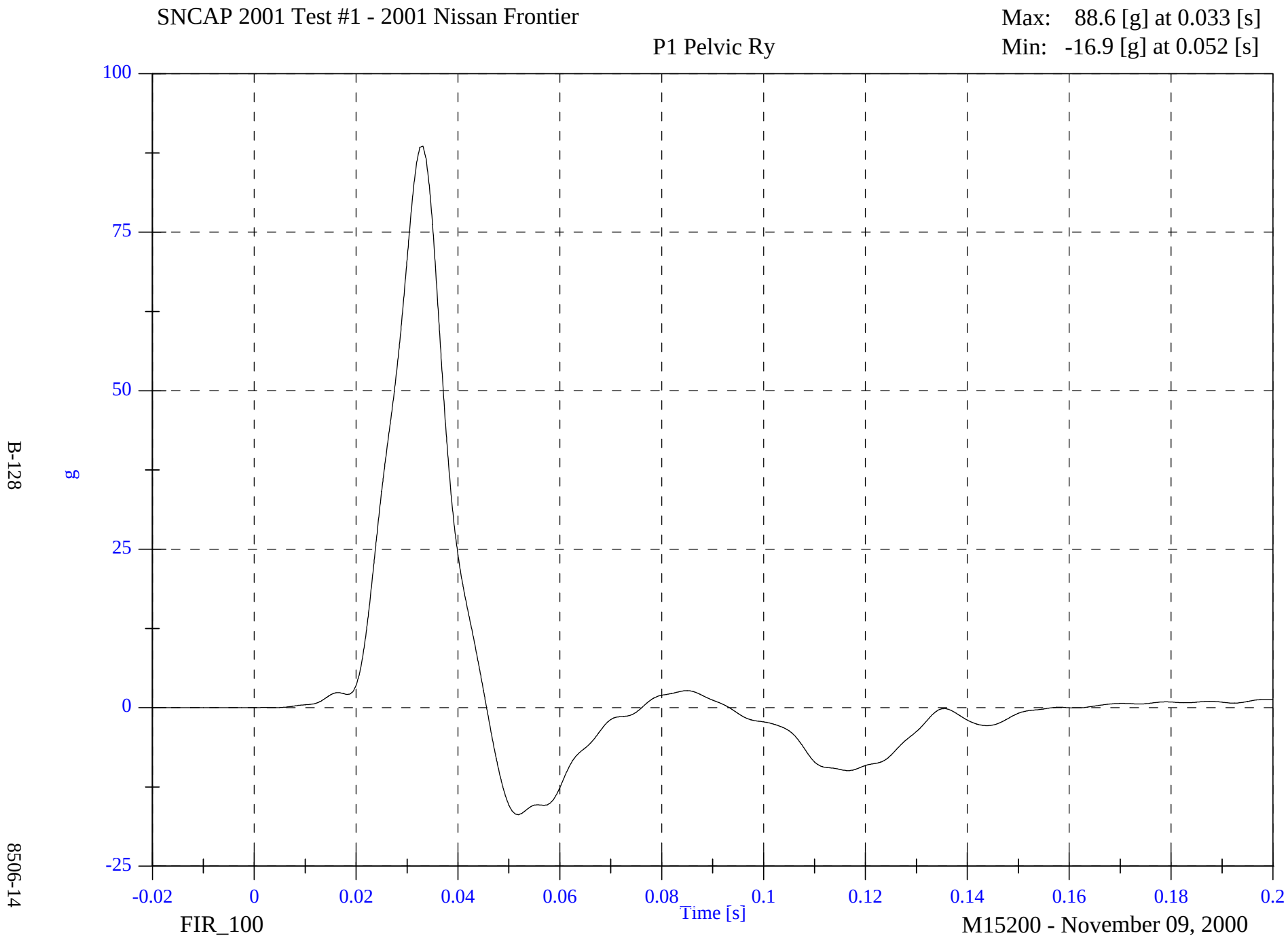


B-127

8506-14

FIR_100

M15200 - November 09, 2000


SNCAP 2001 Test #1 - 2001 Nissan Frontier
P1 Pelvic Ry
Max: 88.6 [g] at 0.033 [s]
Min: -16.9 [g] at 0.052 [s]
100
75
50
25
0
-25
g
-0.02
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
Time [s]
FIR_100
M15200 - November 09, 2000
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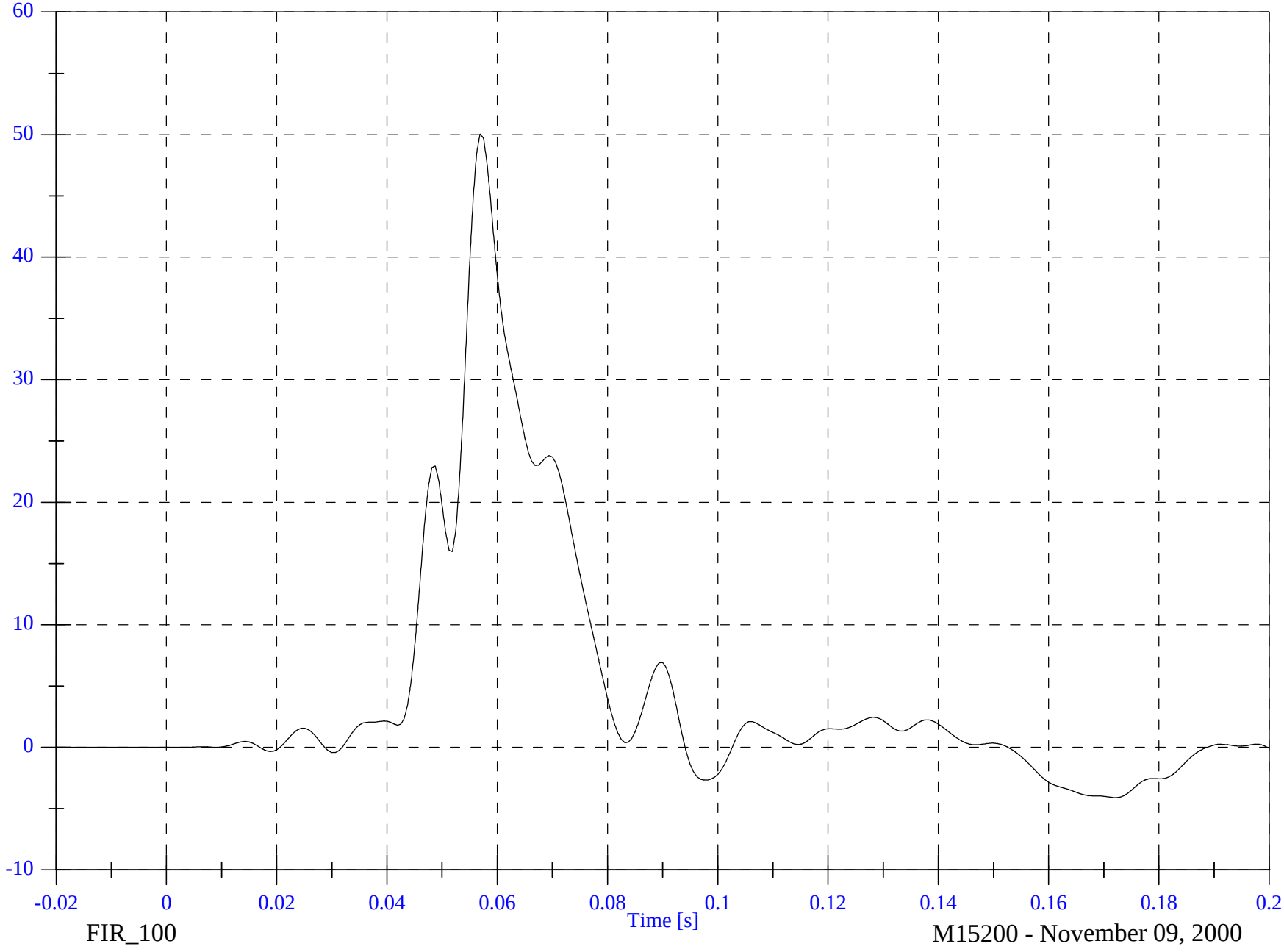
8506-14

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Upper Rib Ry

Max: 50.1 [g] at 0.057 [s]
Min: -4.1 [g] at 0.172 [s]



B-129

8506-14

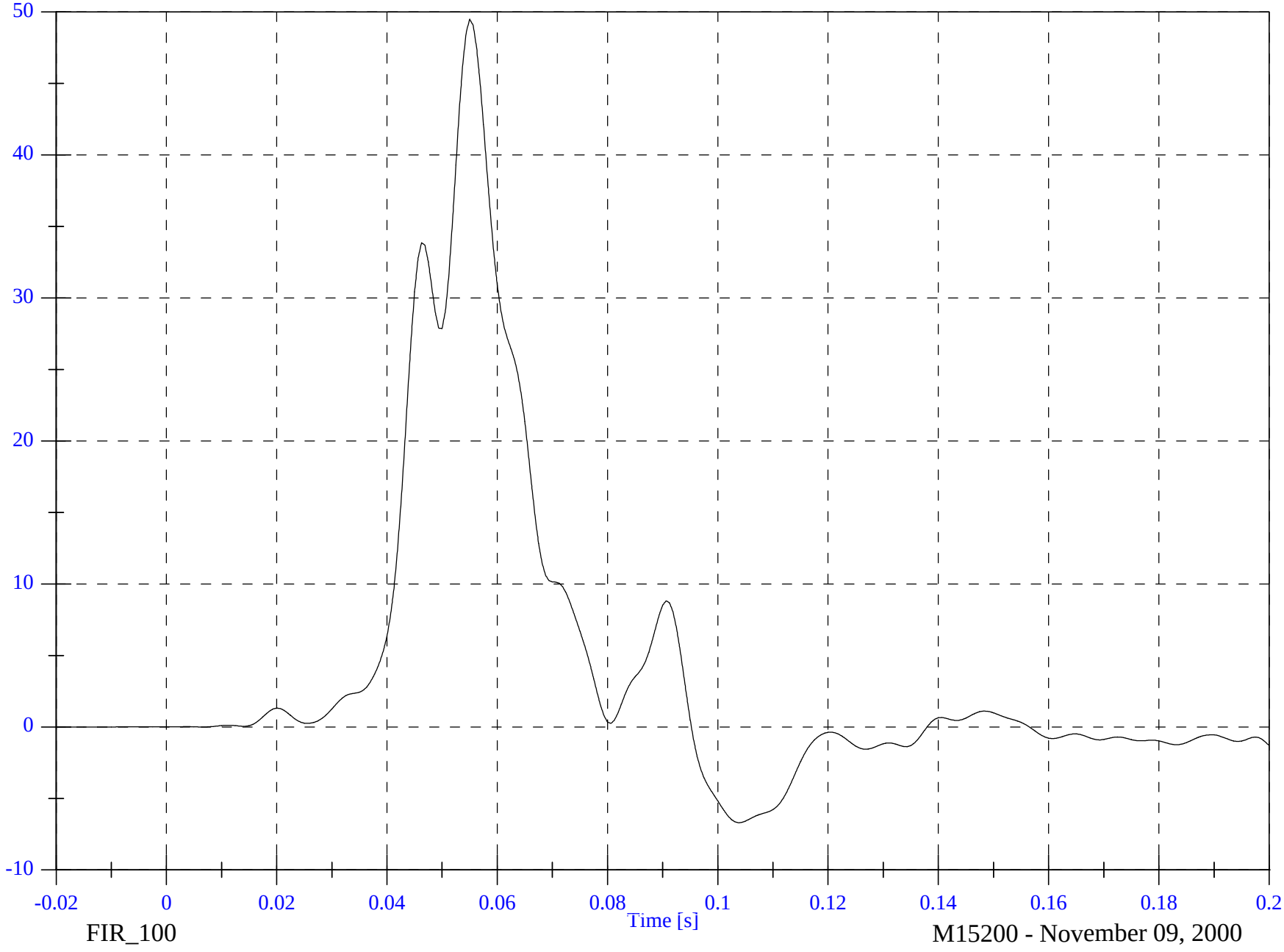
FIR_100

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Rib Ry

Max: 49.5 [g] at 0.055 [s]
Min: -6.7 [g] at 0.104 [s]



B-130

8506-14

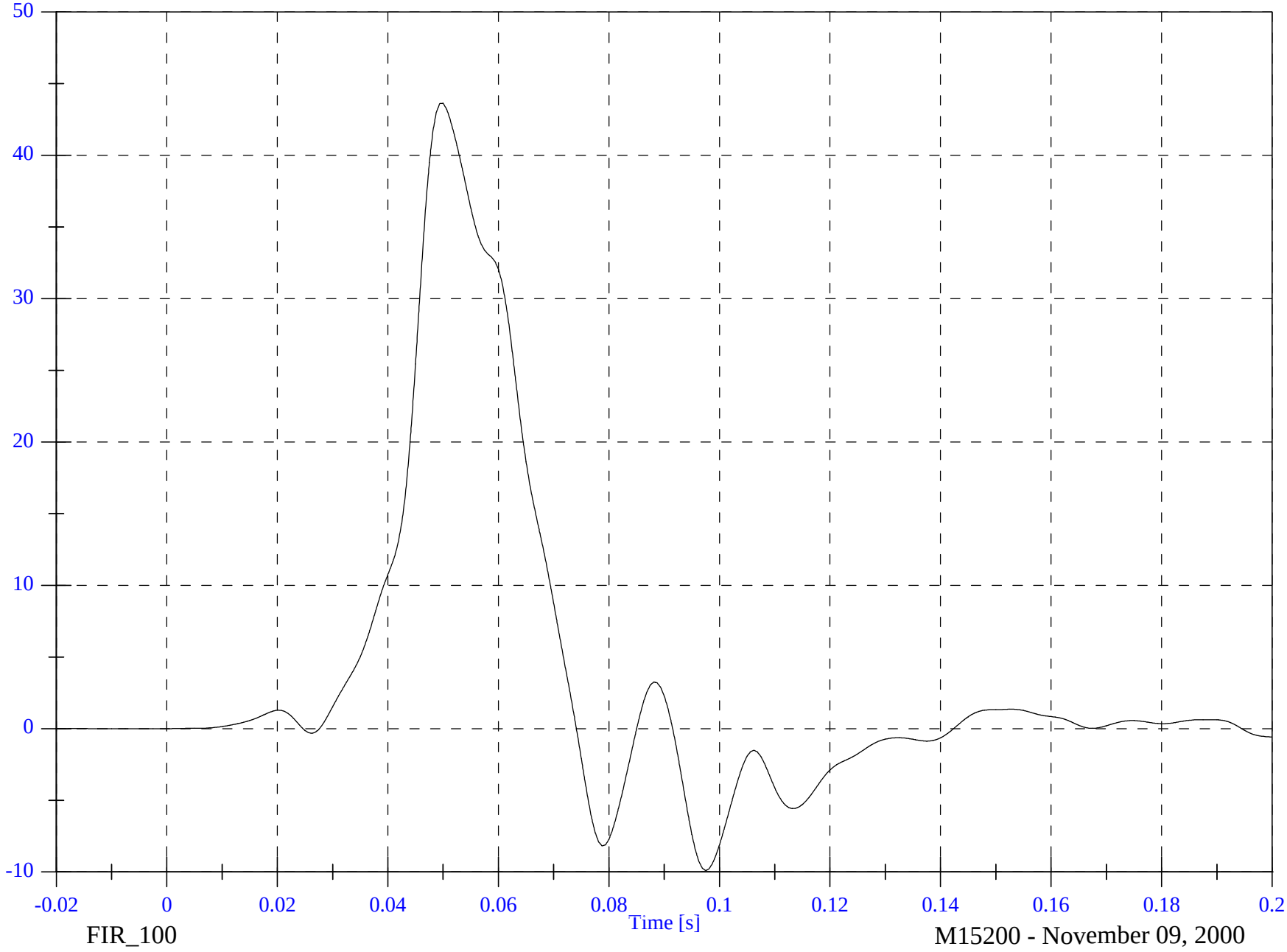
FIR_100

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Lower Spine Ry

Max: 43.6 [g] at 0.050 [s]
Min: -9.9 [g] at 0.098 [s]



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8506-14

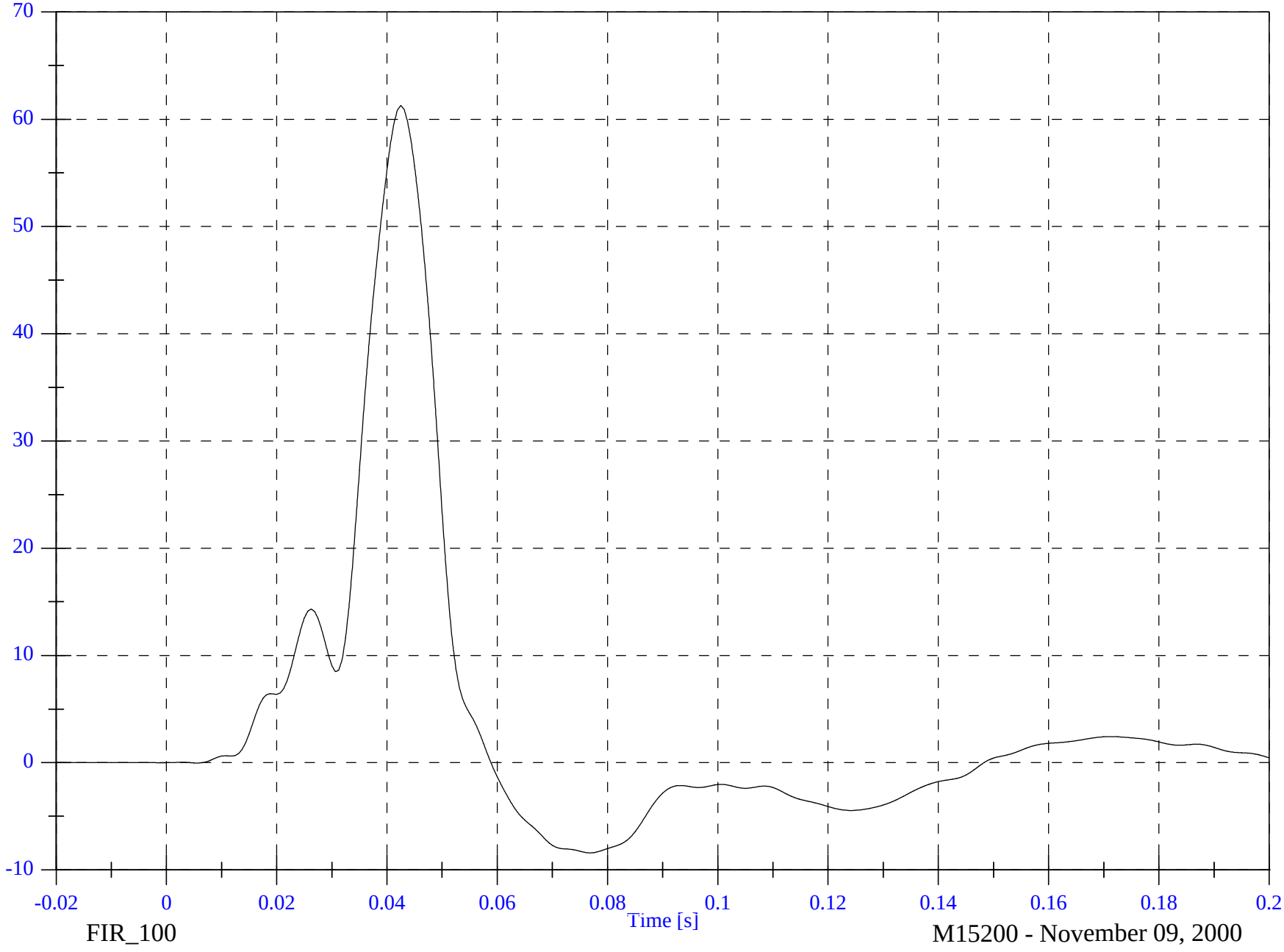
FIR_100

M15200 - November 09, 2000

SNCAP 2001 Test #1 - 2001 Nissan Frontier

P4 Pelvic Ry

Max: 61.3 [g] at 0.043 [s]
Min: -8.4 [g] at 0.077 [s]



FIR_100

M15200 - November 09, 2000

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8506-14

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID PRE & POST TEST CALIBRATION

CONFIGURED FOR LEFT SIDE IMPACT

Date: 10/21/00;10/21/00 Sequential Test Number: 1.1;1.3

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID NO.: 013		SID NO.: 027	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	902	902	907	907
RH- Rib Height (mm)	501 - 521	511	511	519	519
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	236	236	236	236
KV- Knee Pivot from Back Line (mm)	511 - 526	518	518	518	518
SW- Knee Pivot to Floor (mm)	490 - 505	493	493	493	493
HW- Hip Width (mm)	356 - 391	371	373	368	368
THORAX IMPACTS					
TEMPERATURE (°C)	18.9 - 25.5	21.7	21.7	21.7	21.1
RELATIVE. HUMIDITY (%)	10 -70	31	31	31	32
PROBE SPEED (m/s)	4.27 - 4.33	4.30	4.28	4.29	4.30
UPPER RIB (g's)	37 - 46	40.2	40.0	38.0	39.9
LOWER RIB (g's)	37 - 46	38.0	38.7	37.4	39.8
LOWER SPINE (g's)	15 -22	21.3	21.7	19.3	21.1
PELVIS IMPACT					
TEMPERATURE (°C)	18.9 - 25.5	21.7	21.7	21.7	21.1
RELATIVE HUMIDITY (%)	10 - 70	31	31	31	32
PROBE SPEED (m/s)	4.27 - 4.33	4.33	4.29	4.28	4.29
PELVIS (g's)	40 -60	43.2	44.2	51.4	53.4

REMARKS: None

CALIBRATION TEST RESULTS
PRE-TEST

SID NO.: 013

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

THORACIC SHOCK ABSORBER TESTS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 9/26/00 Laboratory Technician: B. Swiecicki

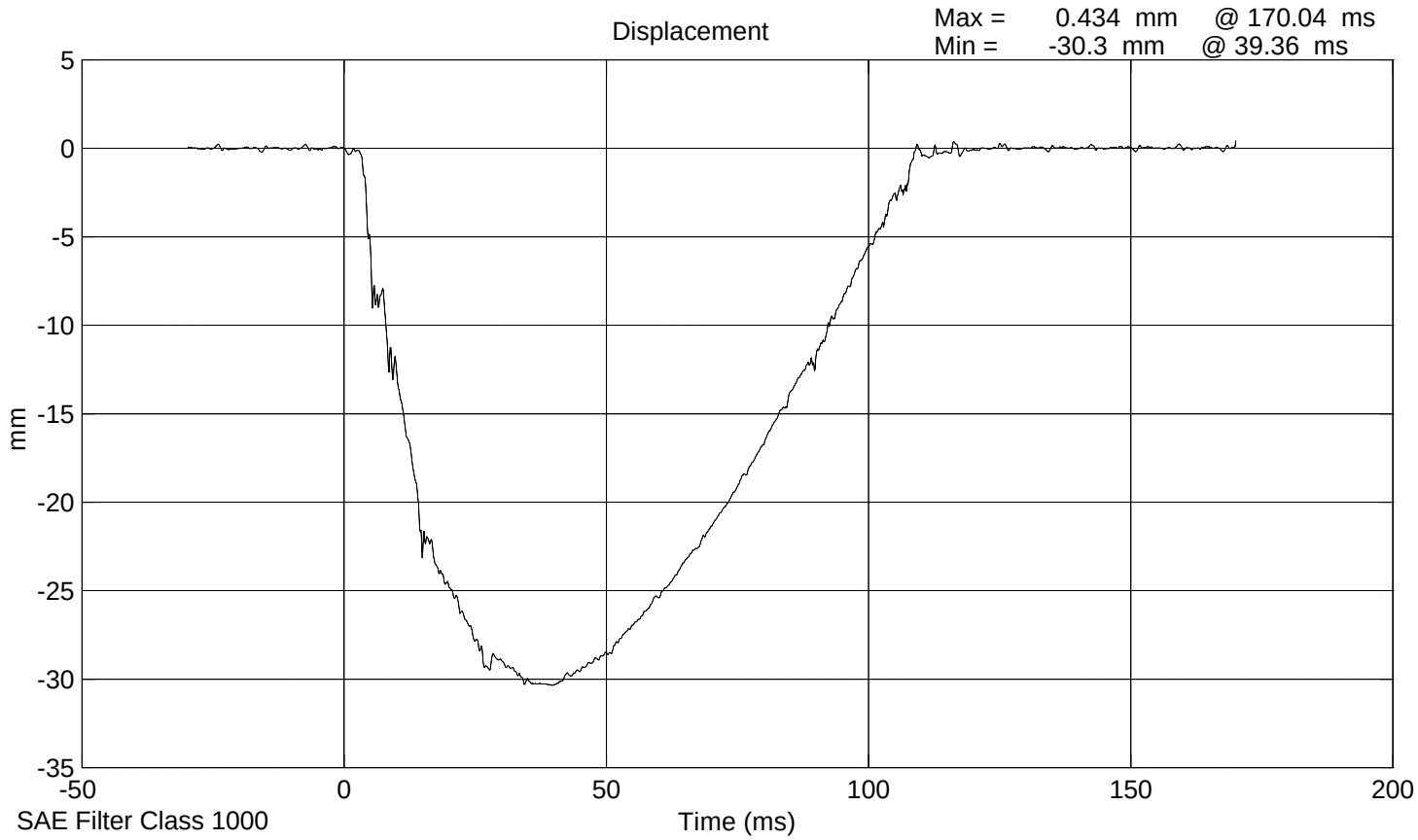
DAMPER IDENTIFICATION: 013

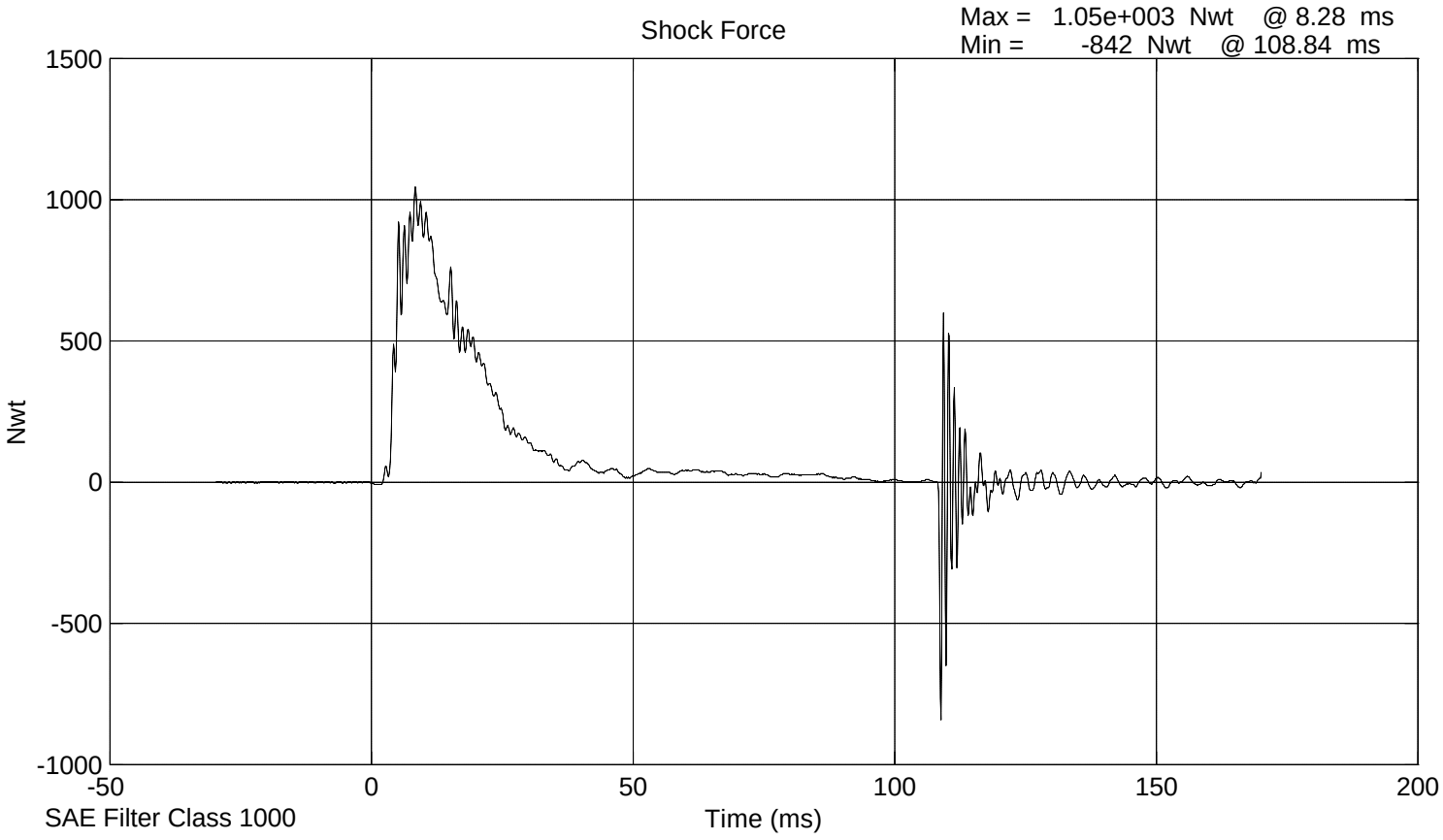
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	30
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	1046
	DISPLACEMENT (mm)	30 - 35	30
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1899
	DISPLACEMENT (mm)	32 - 37	34
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4263
	DISPLACEMENT (mm)	33 - 40	36

DAMPER SETTING: 5

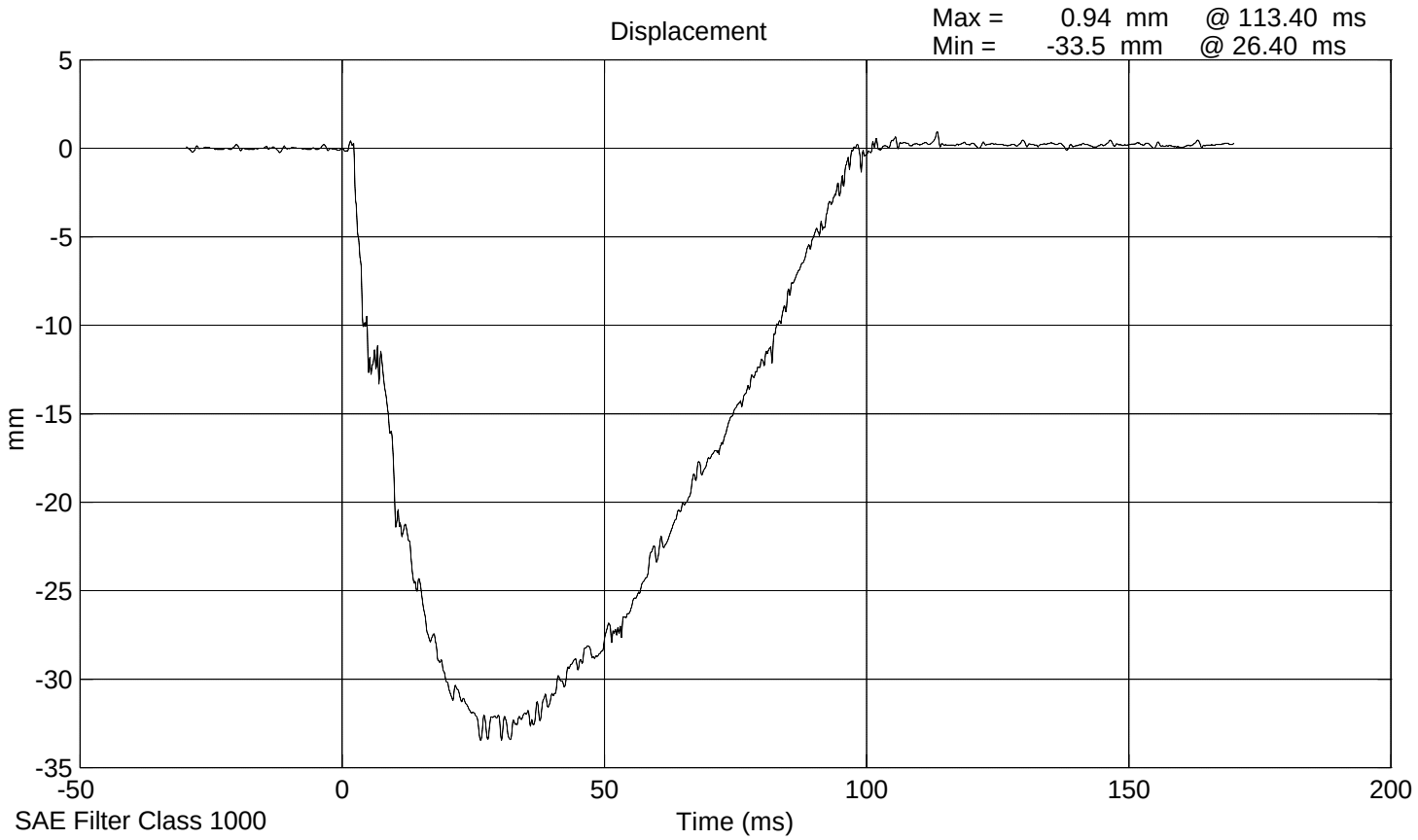
REMARKS: None

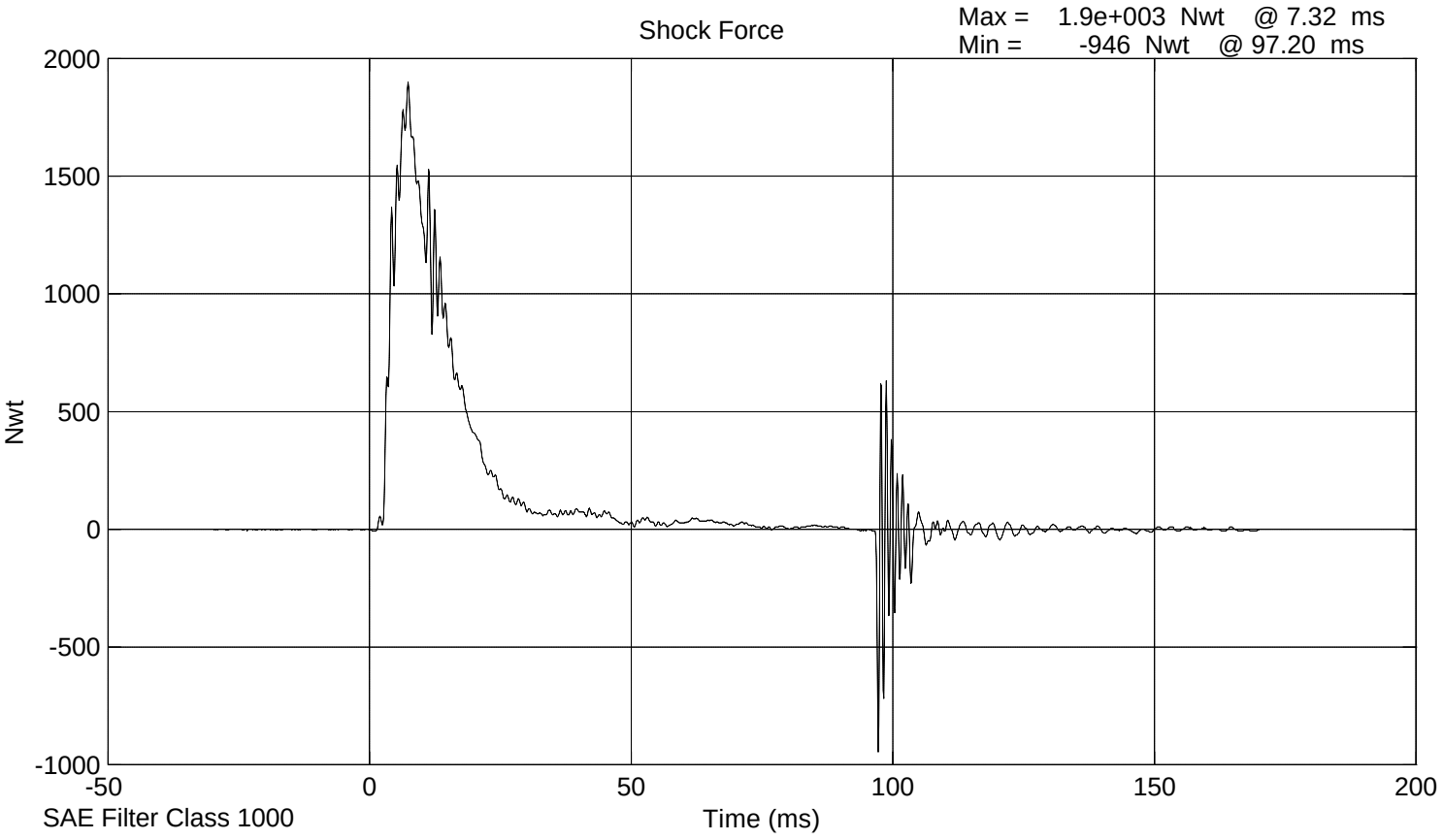
SID 013 Shock Absorber Impact Test @ 3.048 m/s



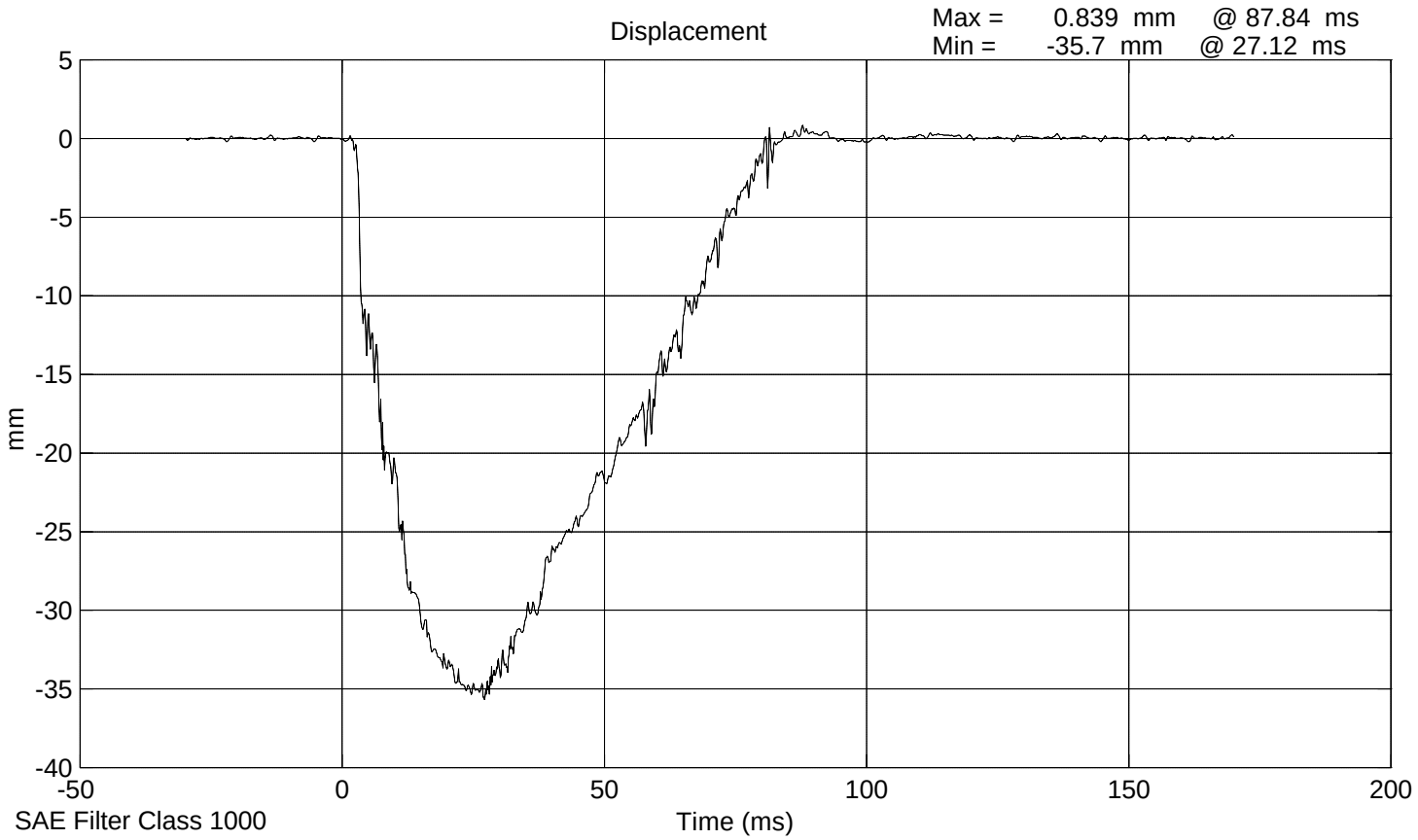


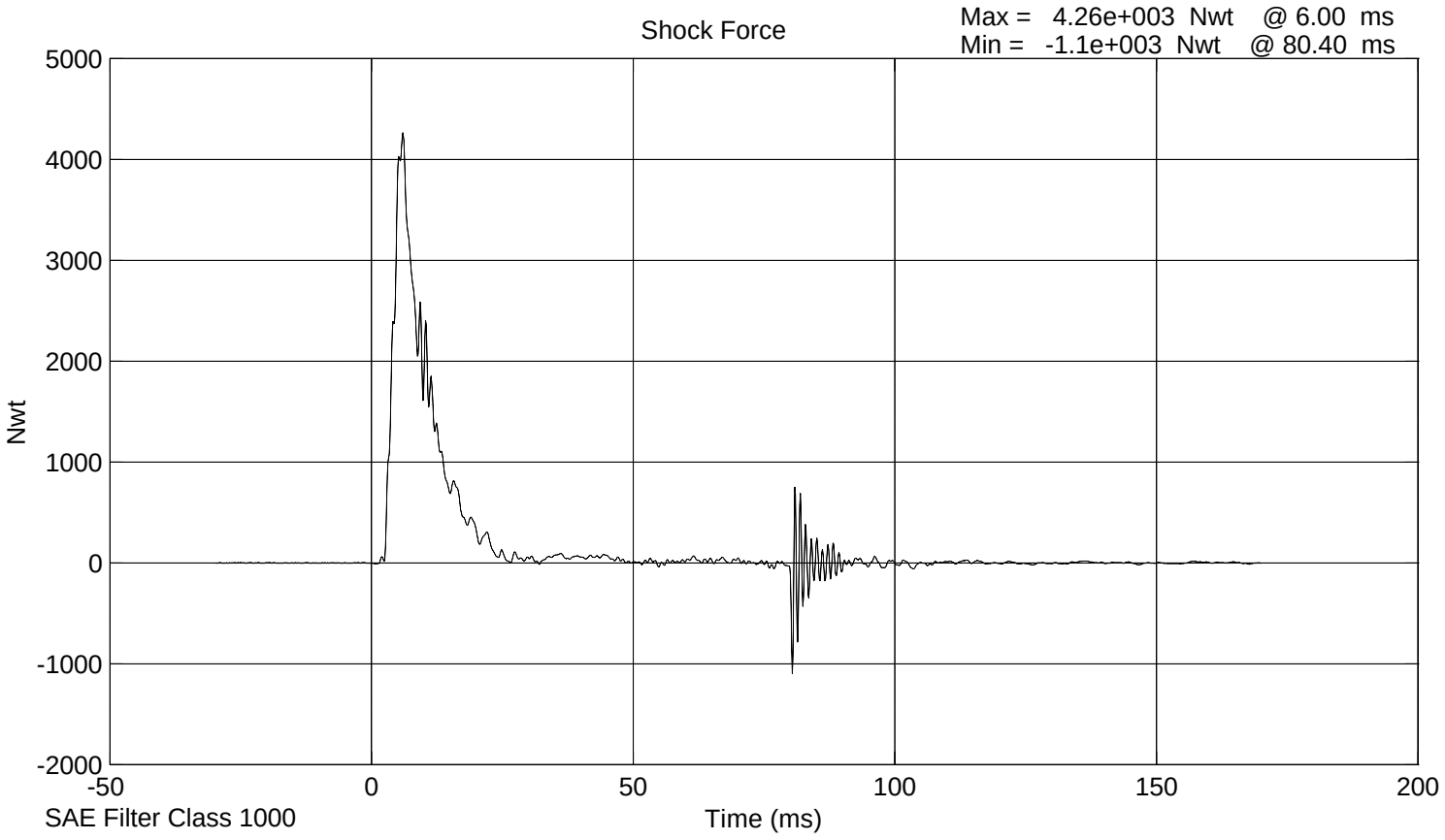
SID 013 Shock Absorber Impact Test @ 4.2672 m/s





SID 013 Shock Absorber Impact Test @ 6.096 m/s





LATERAL THORAX IMPACT TEST
PRE-TEST

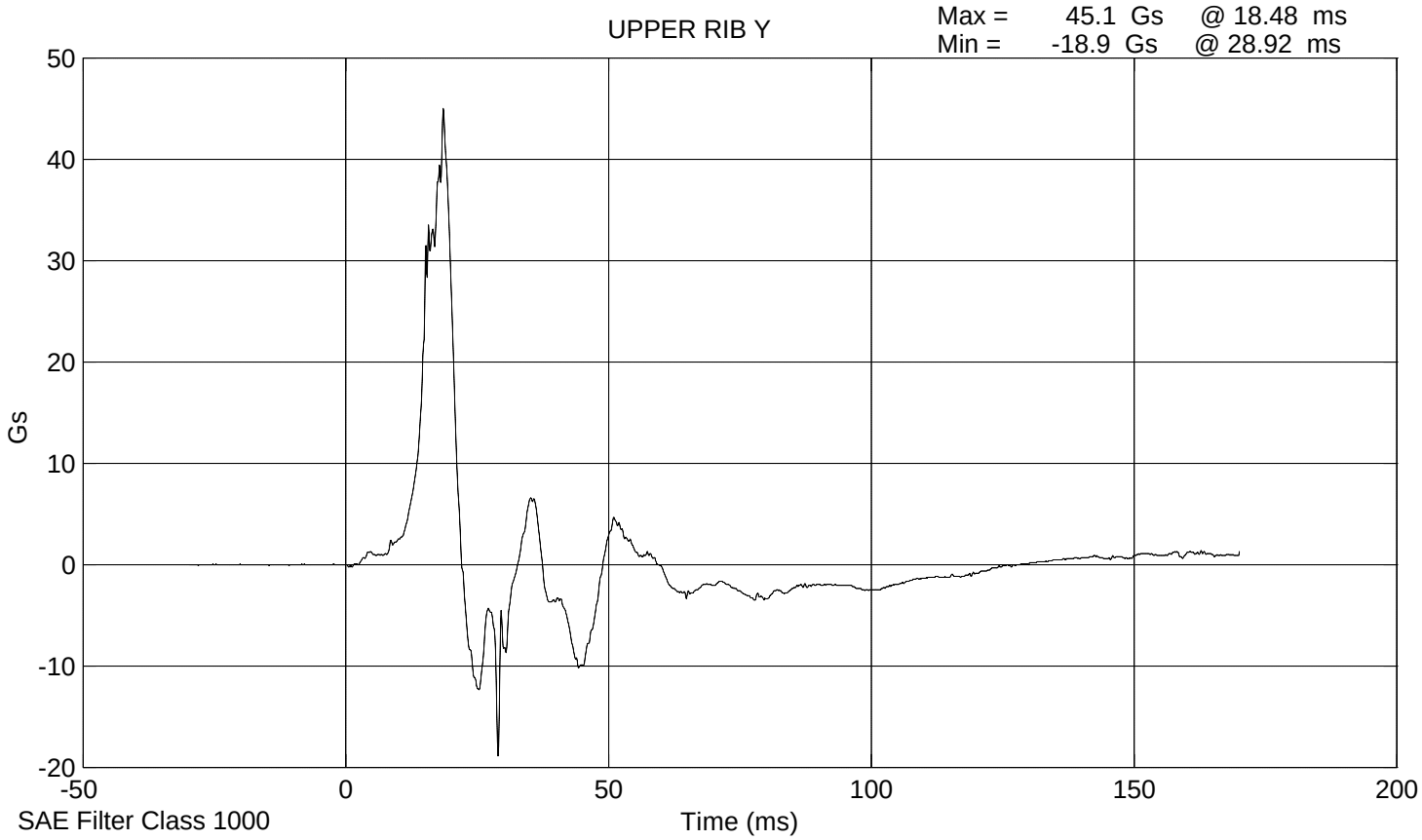
CONFIGURED FOR LEFT SIDE IMPACT

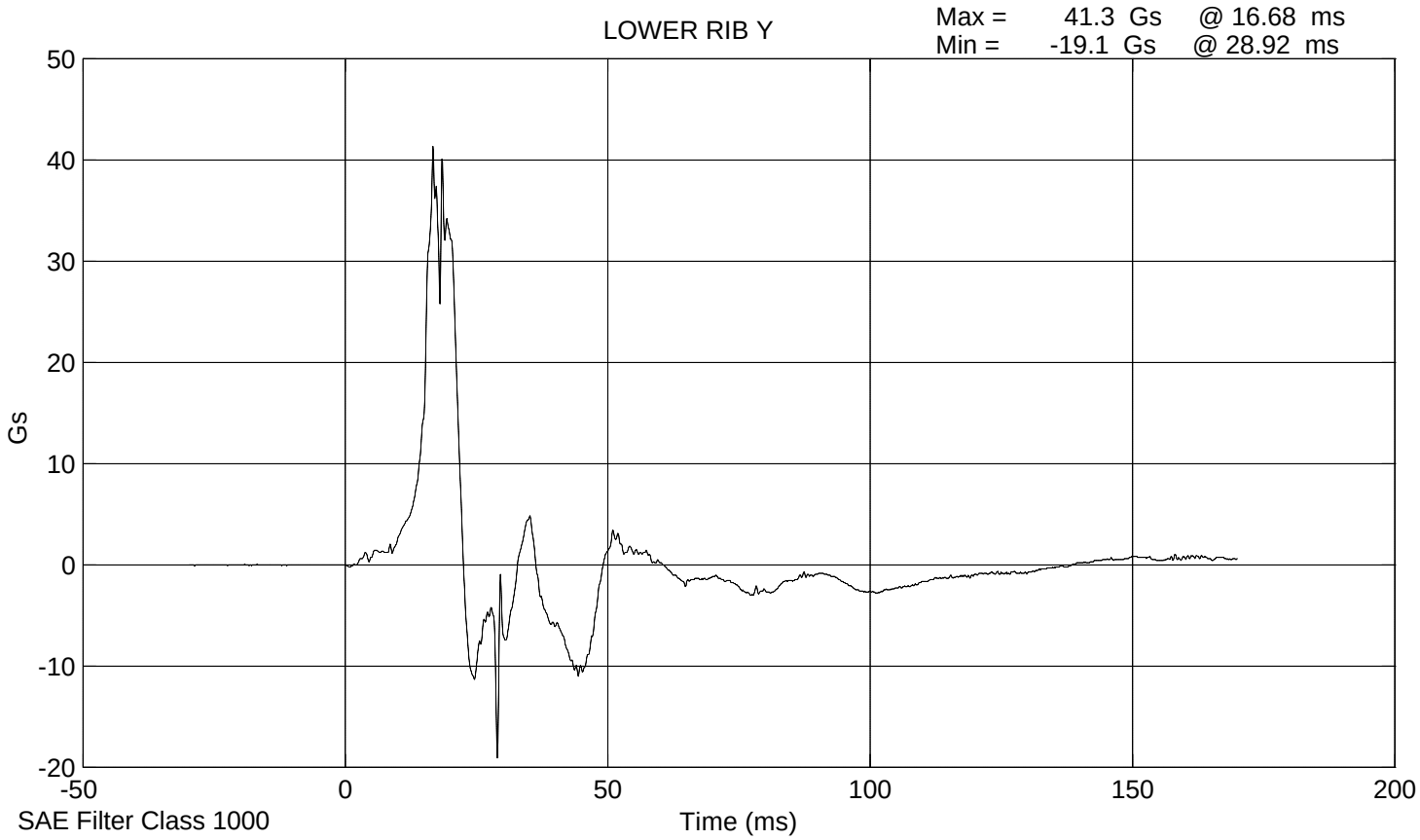
SID Serial No.: 013 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE. HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	40.2
LOWER RIB (g's)	37 - 46	38.0
LOWER SPINE (g's)	15 - 22	21.3

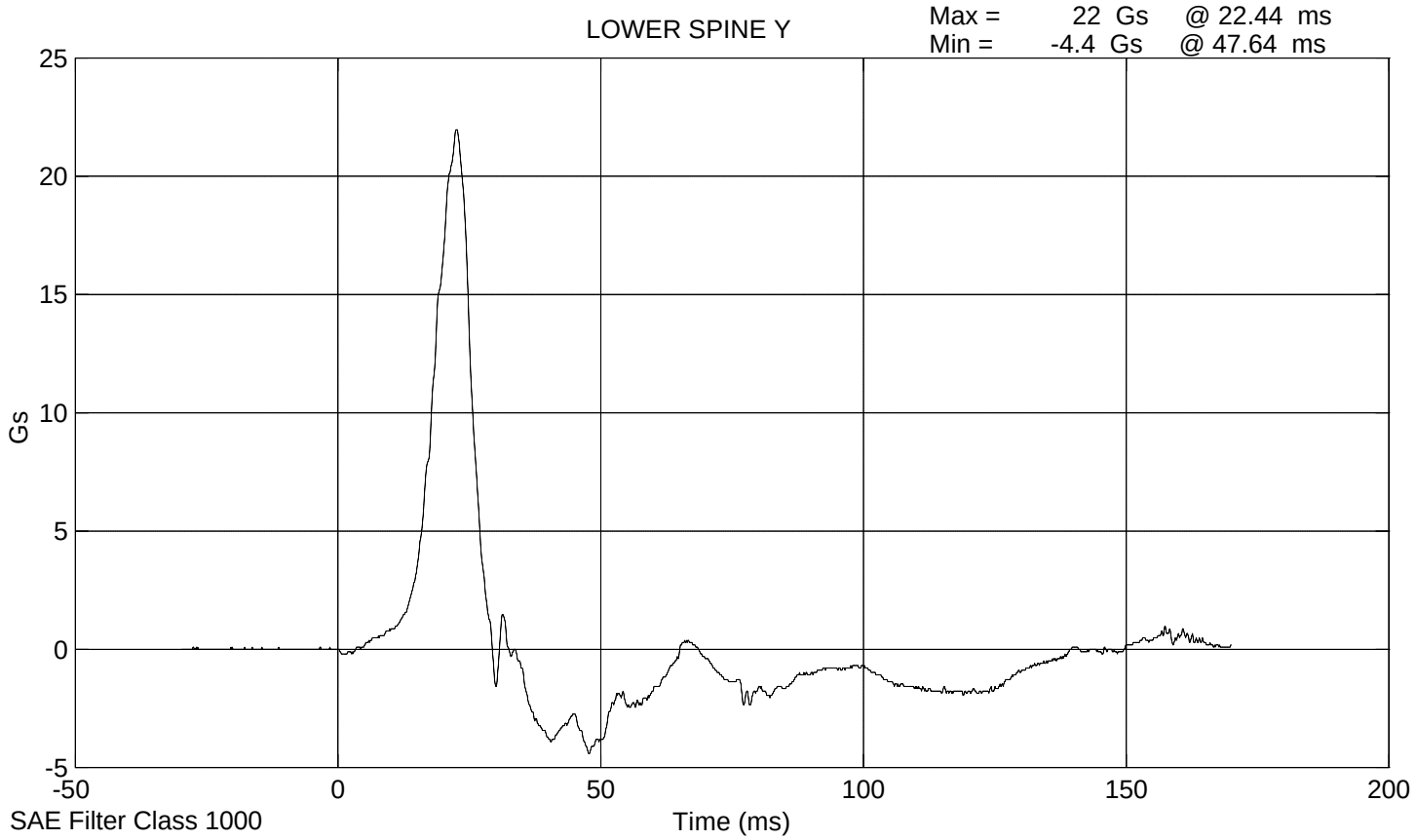
REMARKS: None

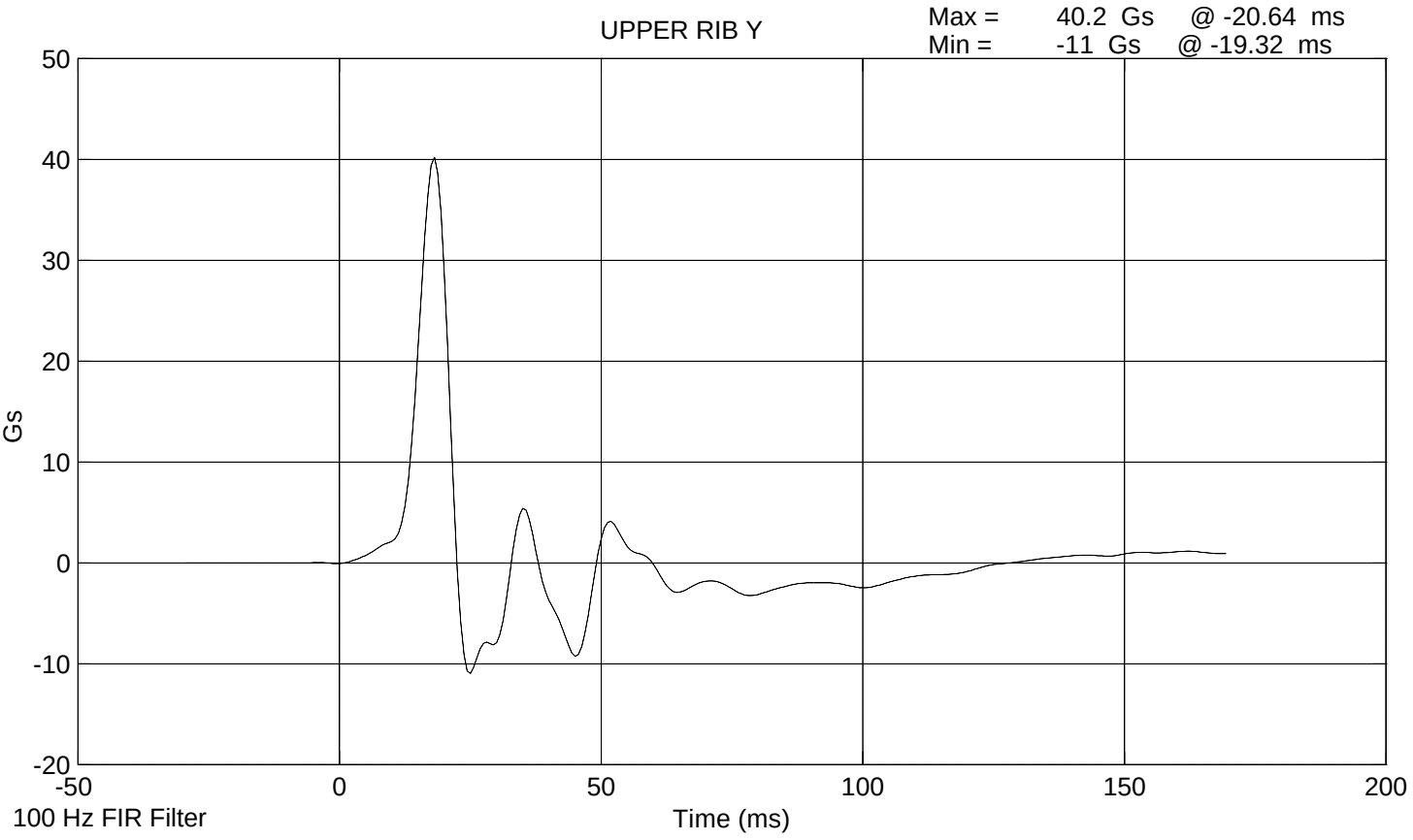
SID 013 Thorax Impact Test @ 4.2977 m/s



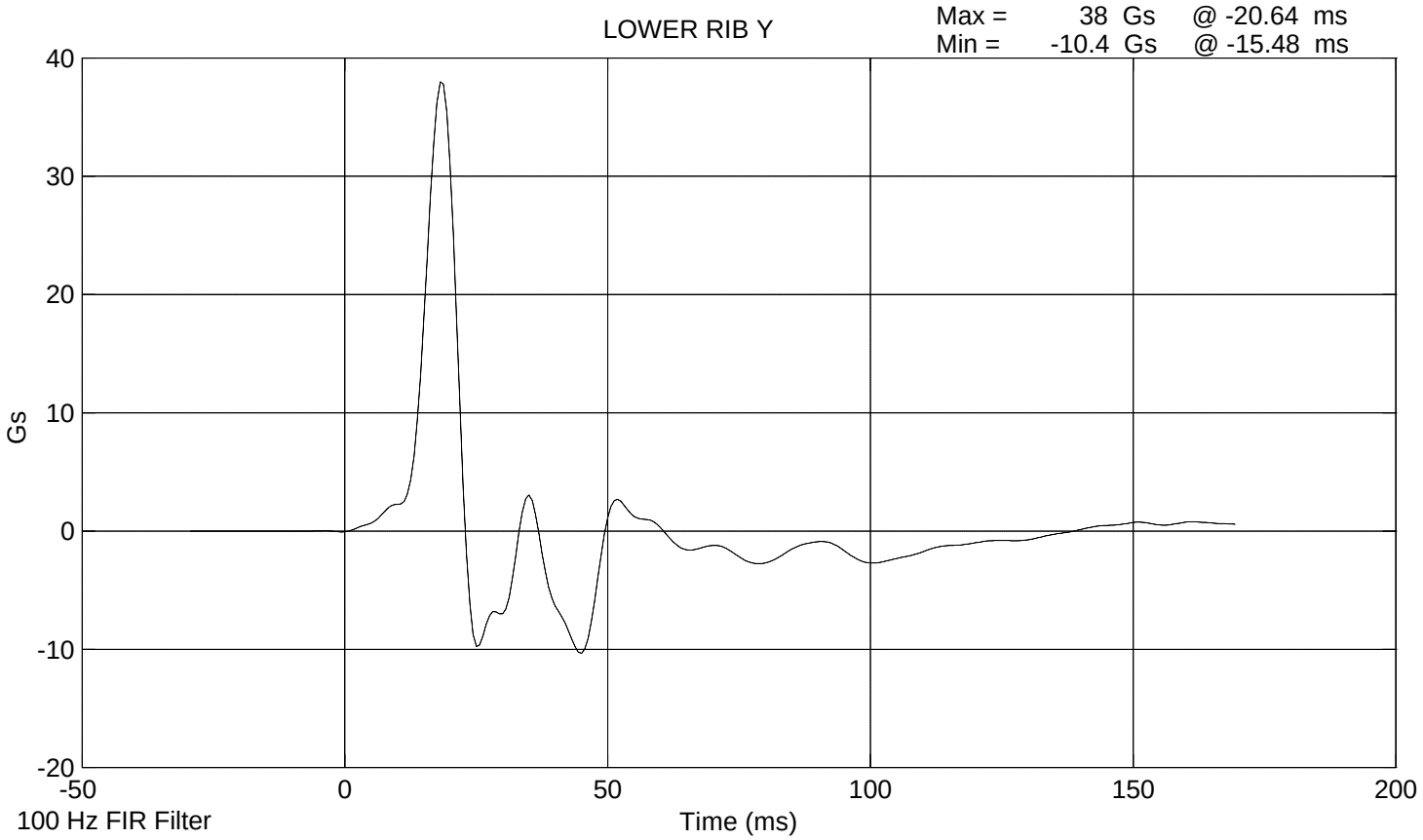


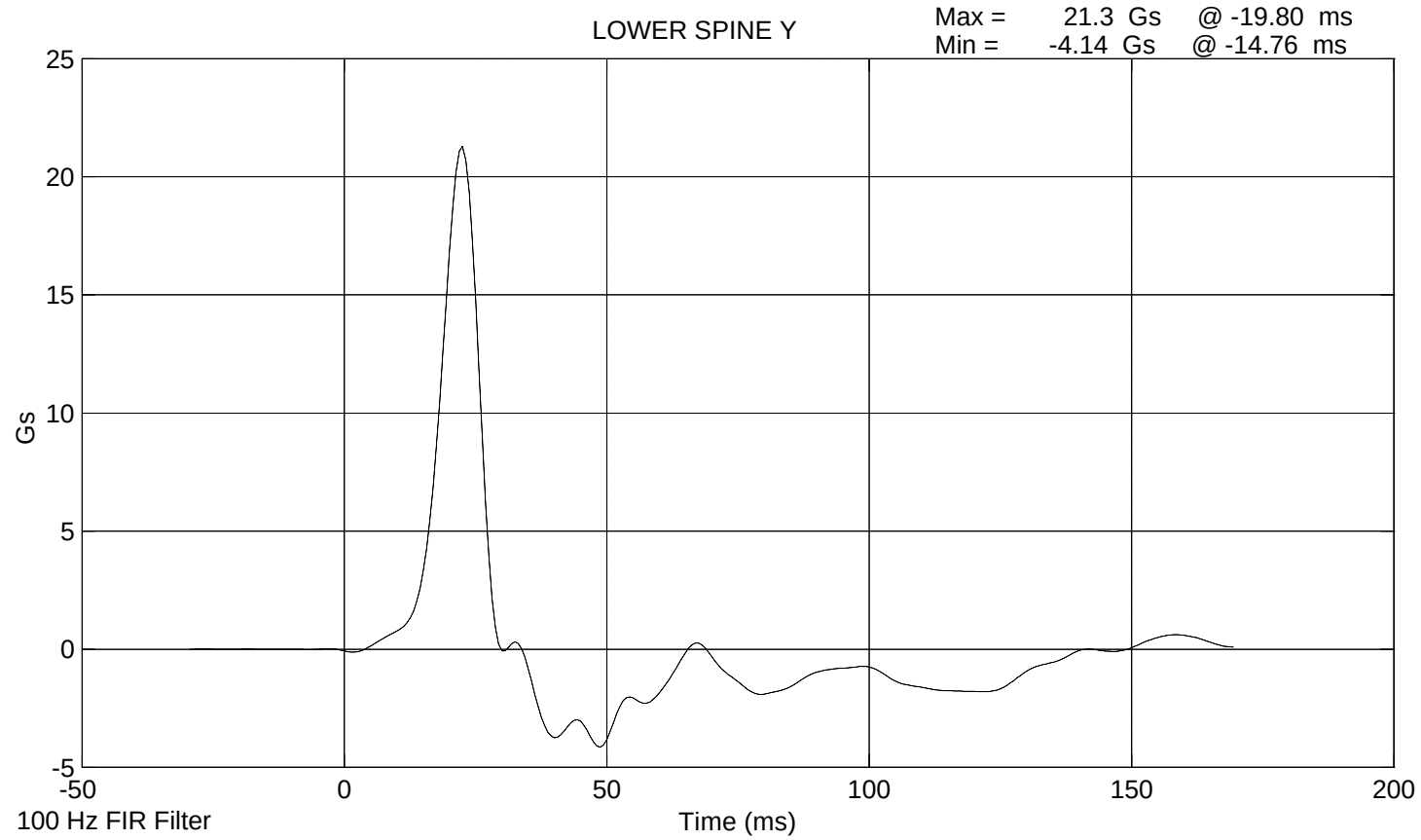
SID 013 Thorax Impact Test @ 4.2977 m/s





SID 013 Thorax Impact Test @ 4.2977 m/s





LATERAL PELVIS IMPACT TEST
PRE-TEST

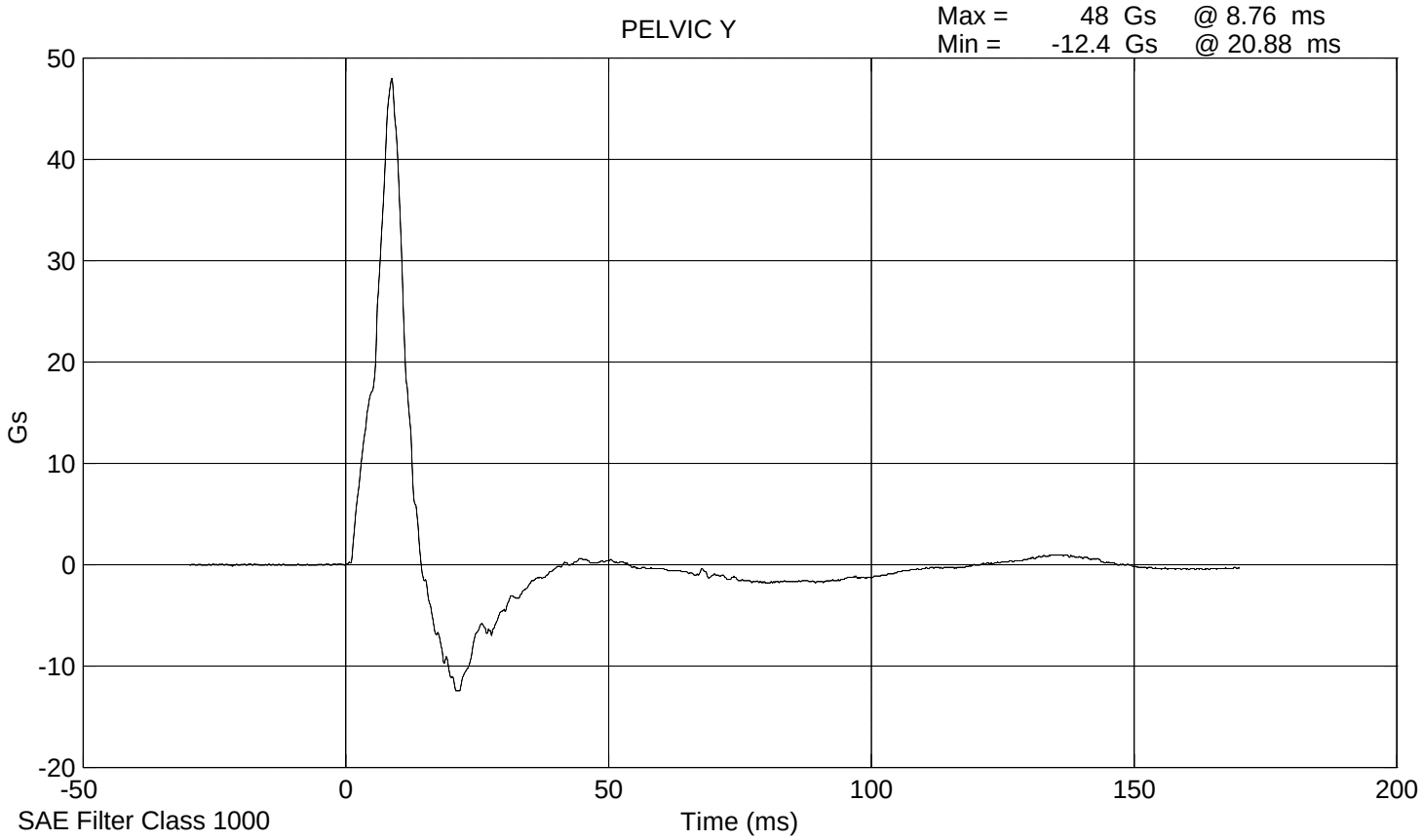
CONFIGURED FOR LEFT SIDE IMPACT

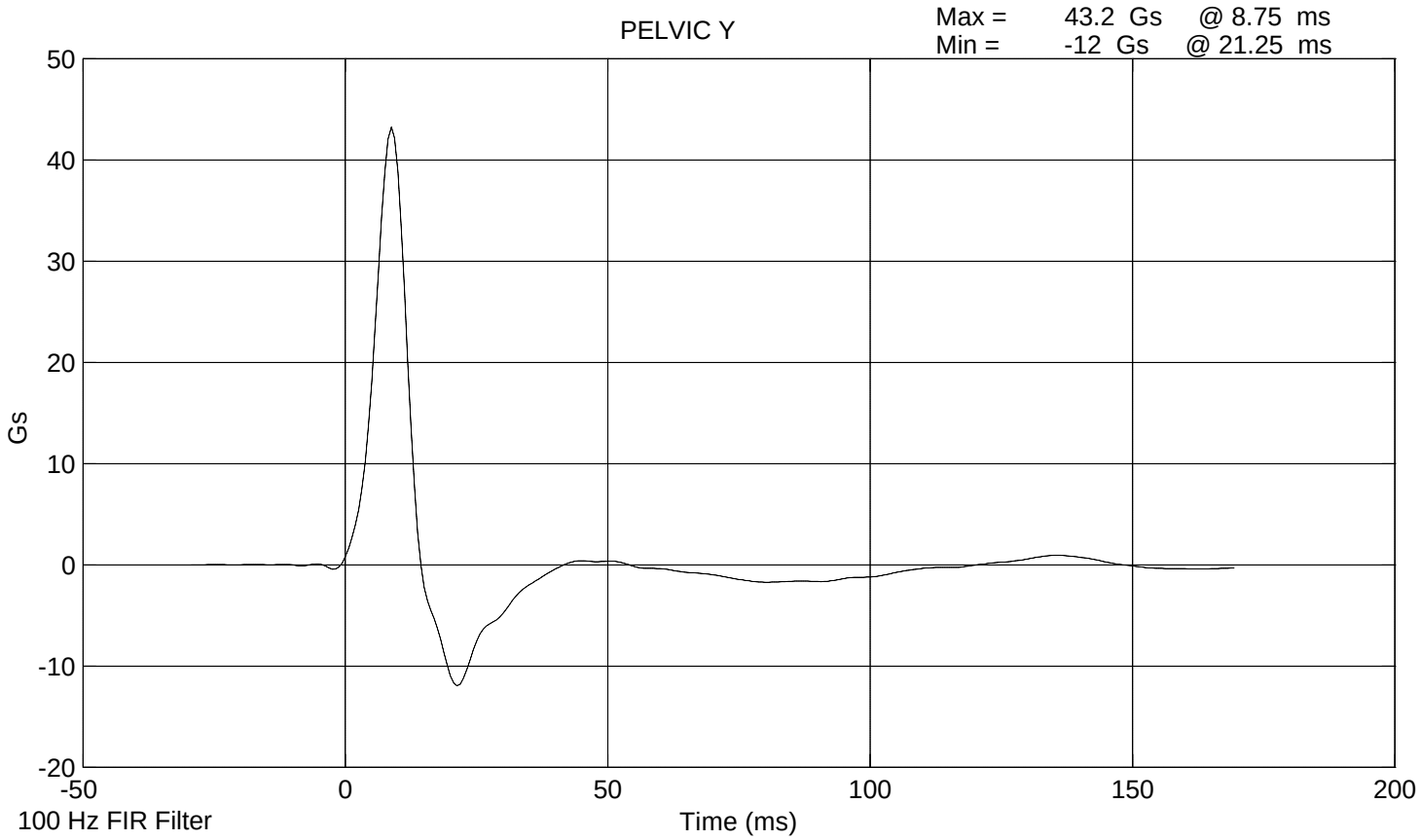
SID Serial No.: 013 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE. HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.33
PELVIS ACCELERATION (g's)	40 - 60	43.2

REMARKS: None

SID 013 Pelvic Impact Test @ 4.3251 m/s





HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

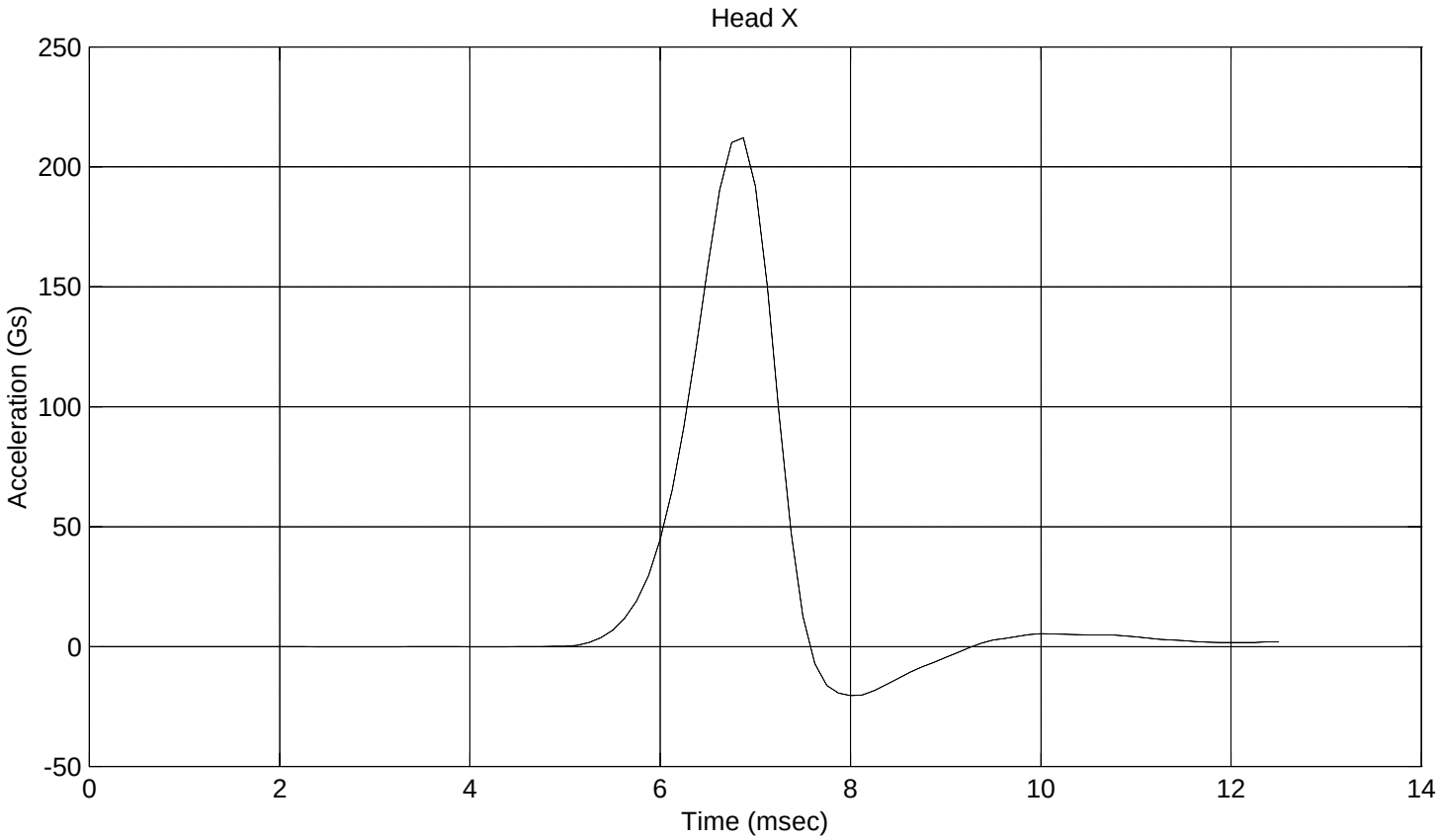
CONFIGURED FOR LEFT SIDE IMPACT

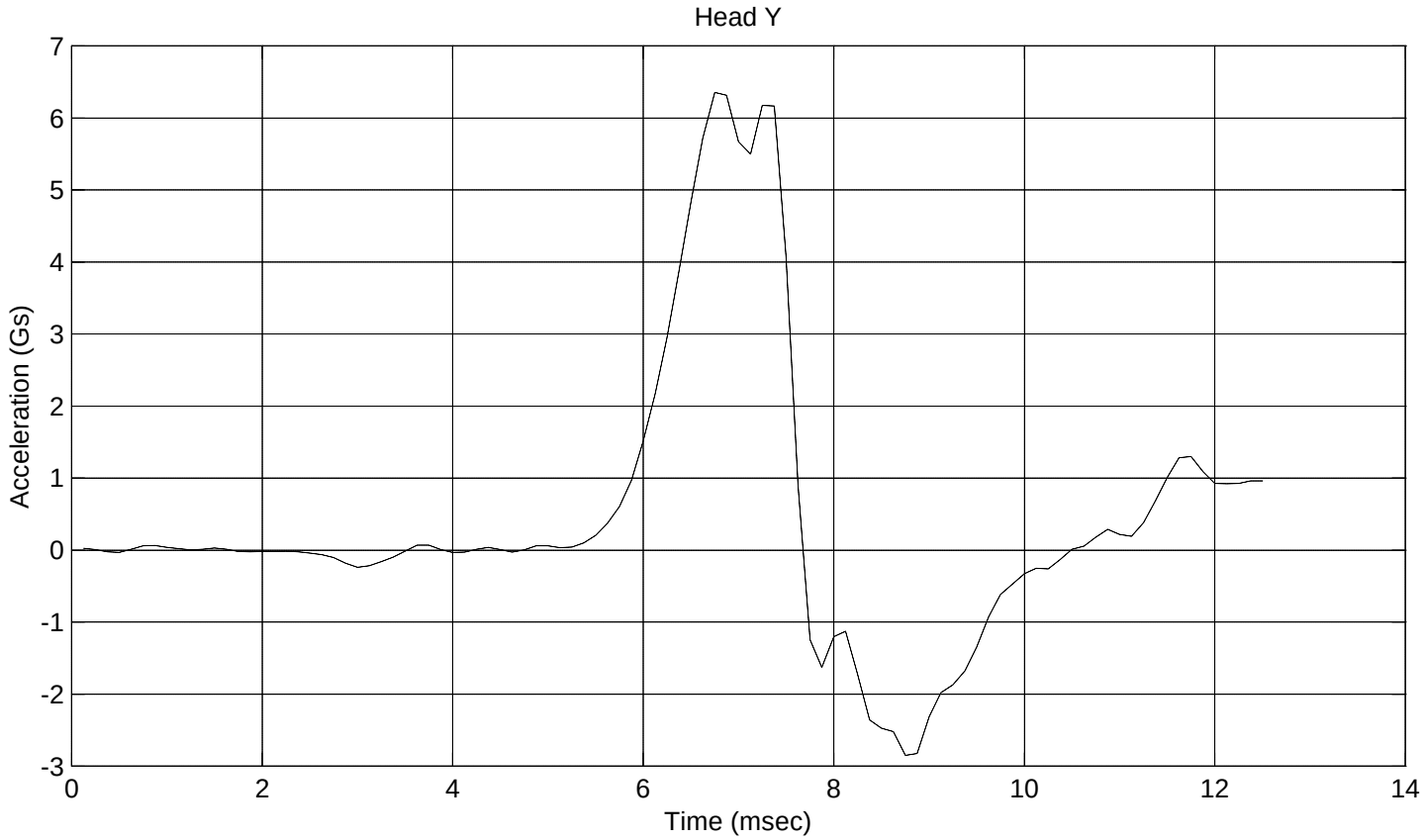
SID Serial No.: 013 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	259.8
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	6.4
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.00

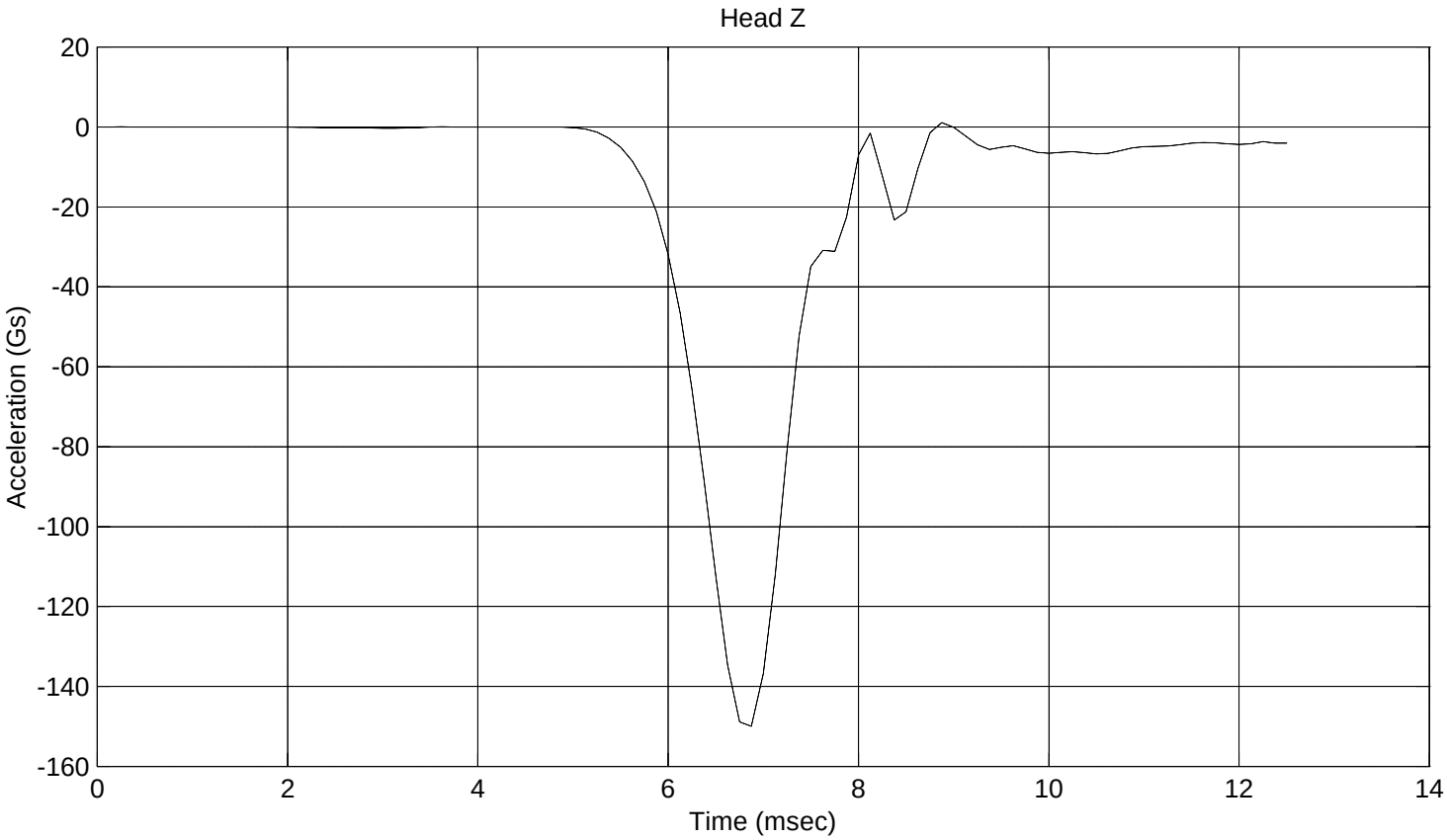
REMARKS: None

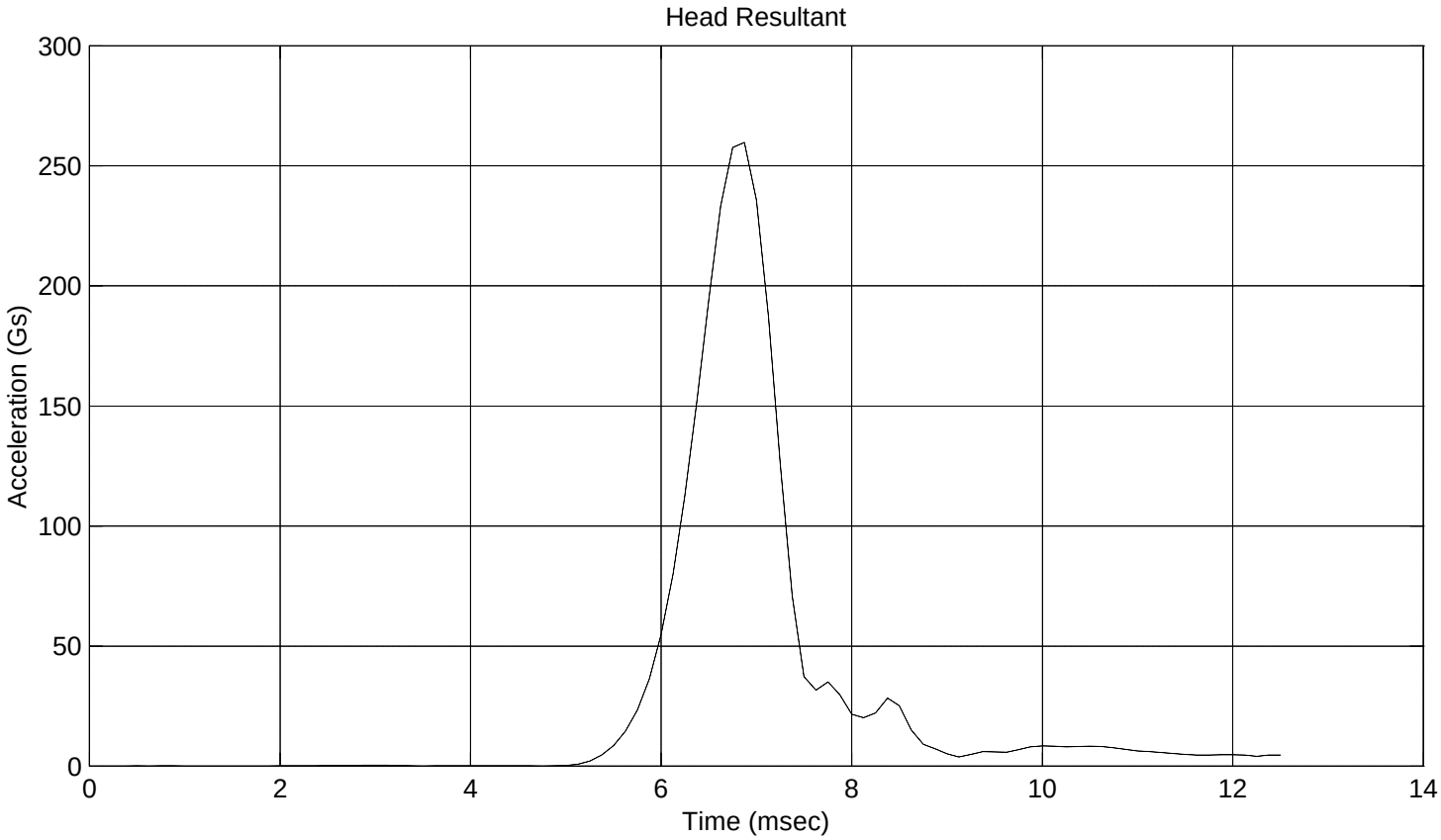
Hybrid II Head Drop Calibration 013200.hdp





Hybrid II Head Drop Calibration 013200.hdp





ABDOMINAL COMPRESSION TEST

PRE-TEST

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1

Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
FORCE @ 13 mm (N)	104 - 162	113
FORCE @ 19 mm (N)	163 - 221	177
FORCE @ 25 mm (N)	222 - 280	254
FORCE @ 33 mm (N)	325 - 391	373

REMARKS: None

Dummy S/N 013

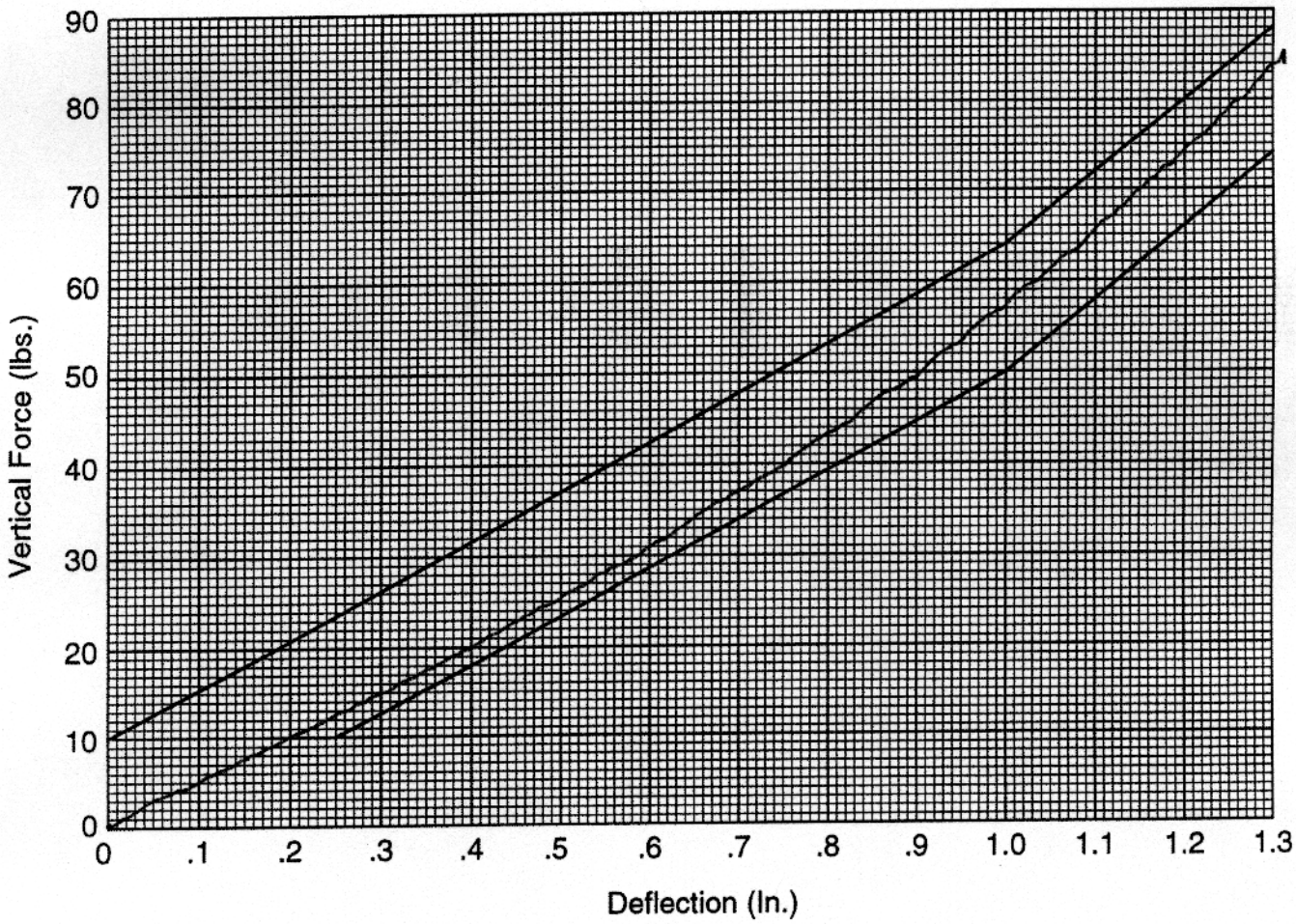
W/A _____

Date 10-21-2000

Performed By BS

Temp. 70°

Humidity 31%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	117.0
FORCE @ 30° (N)	151.2 - 204.6	166.8
FORCE @ 40° (N)	204.6 - 258	221.1
RETURN ANGLE	12° max.	4.2

REMARKS: None

Dummy S/N 013

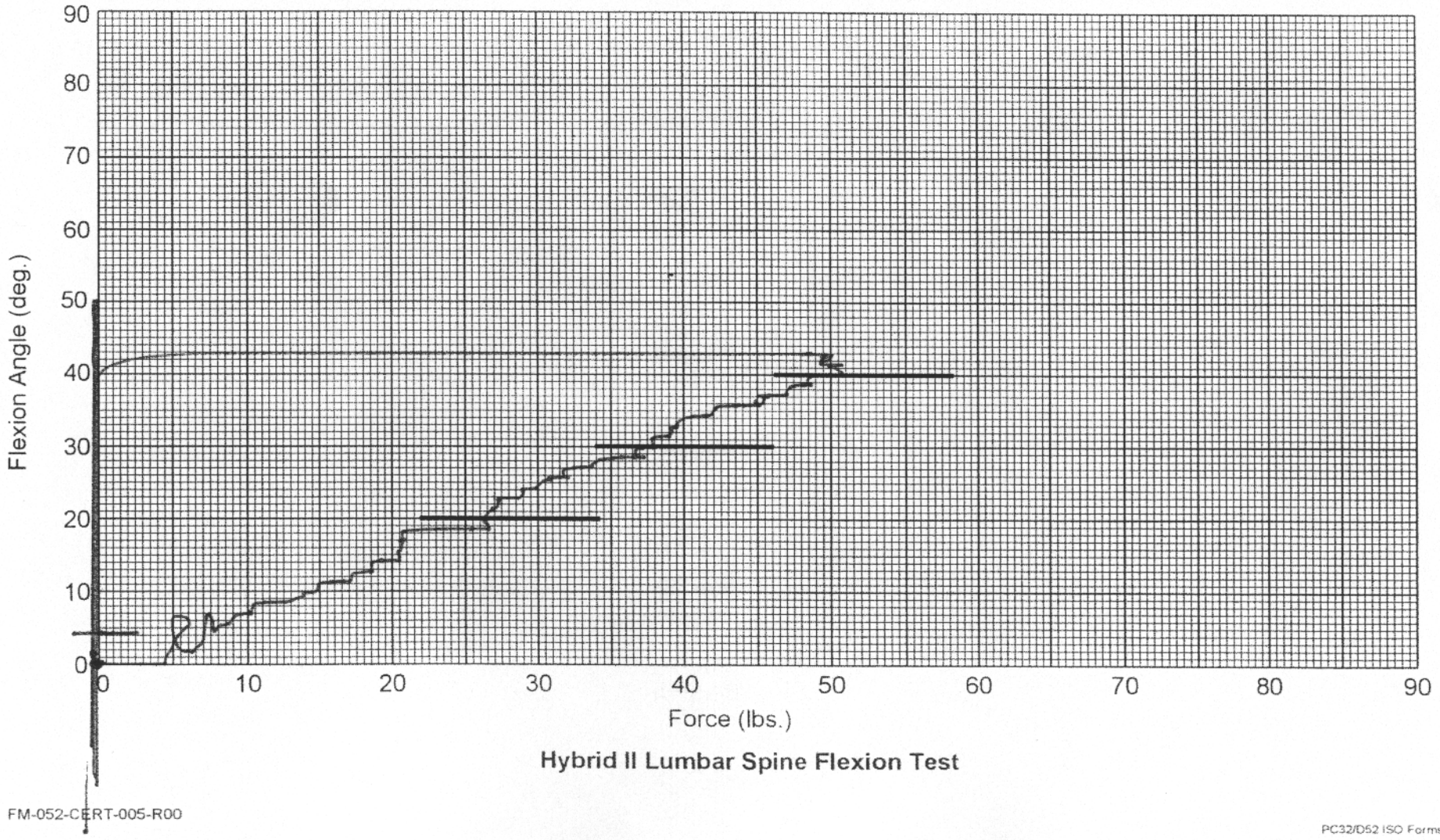
W/A

Date 10-21-2000

Performed By

Temp. 71°

Humidity 31%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1

Date: 10/21/00 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS
PRE-TEST

SID NO.: 027

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	907
RH- Rib Height (mm)	502 - 520	519
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	368

REMARKS: None

THORACIC SHOCK ABSORBER TESTS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 6/19/00 Laboratory Technician: B. Swiecicki

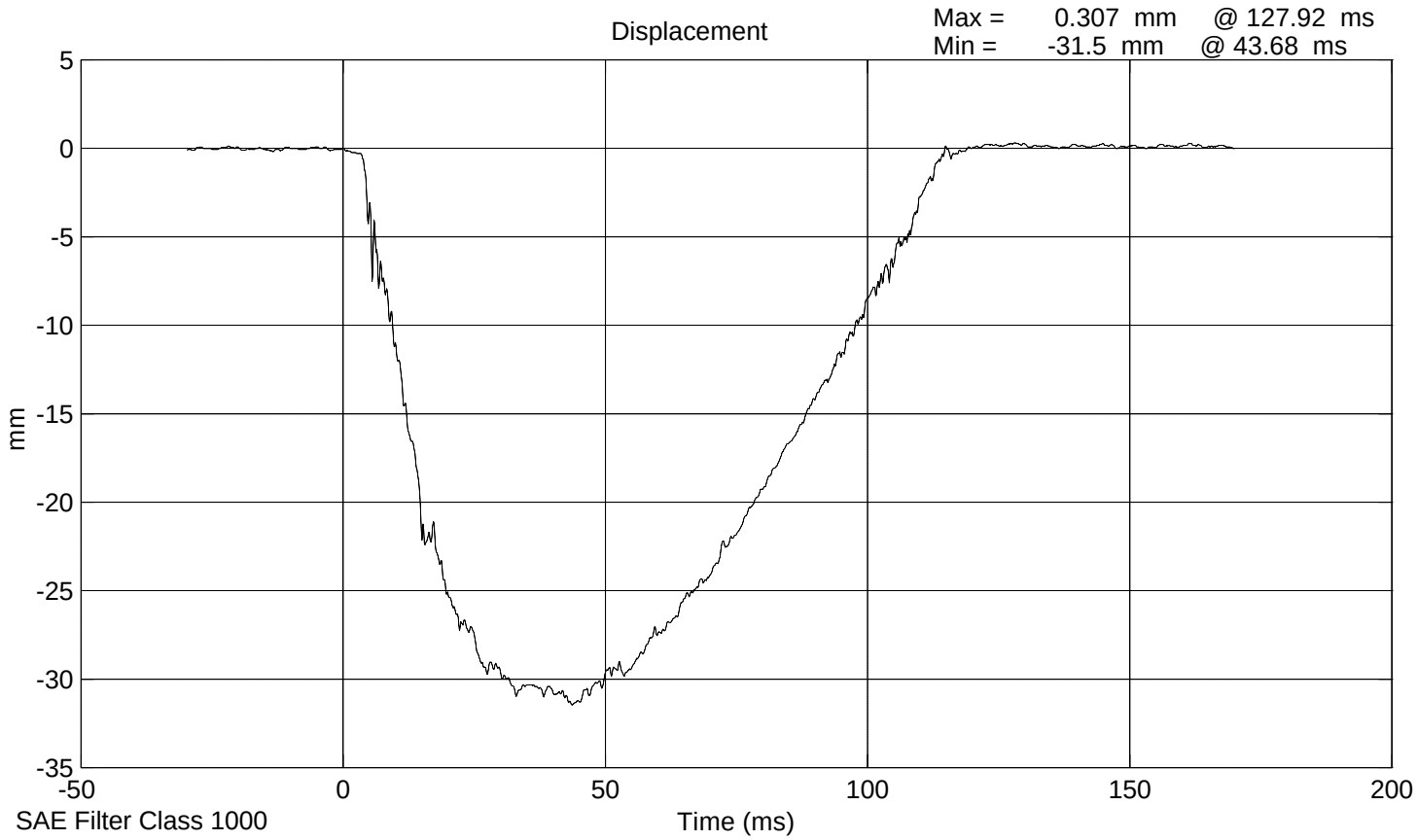
DAMPER IDENTIFICATION: 027

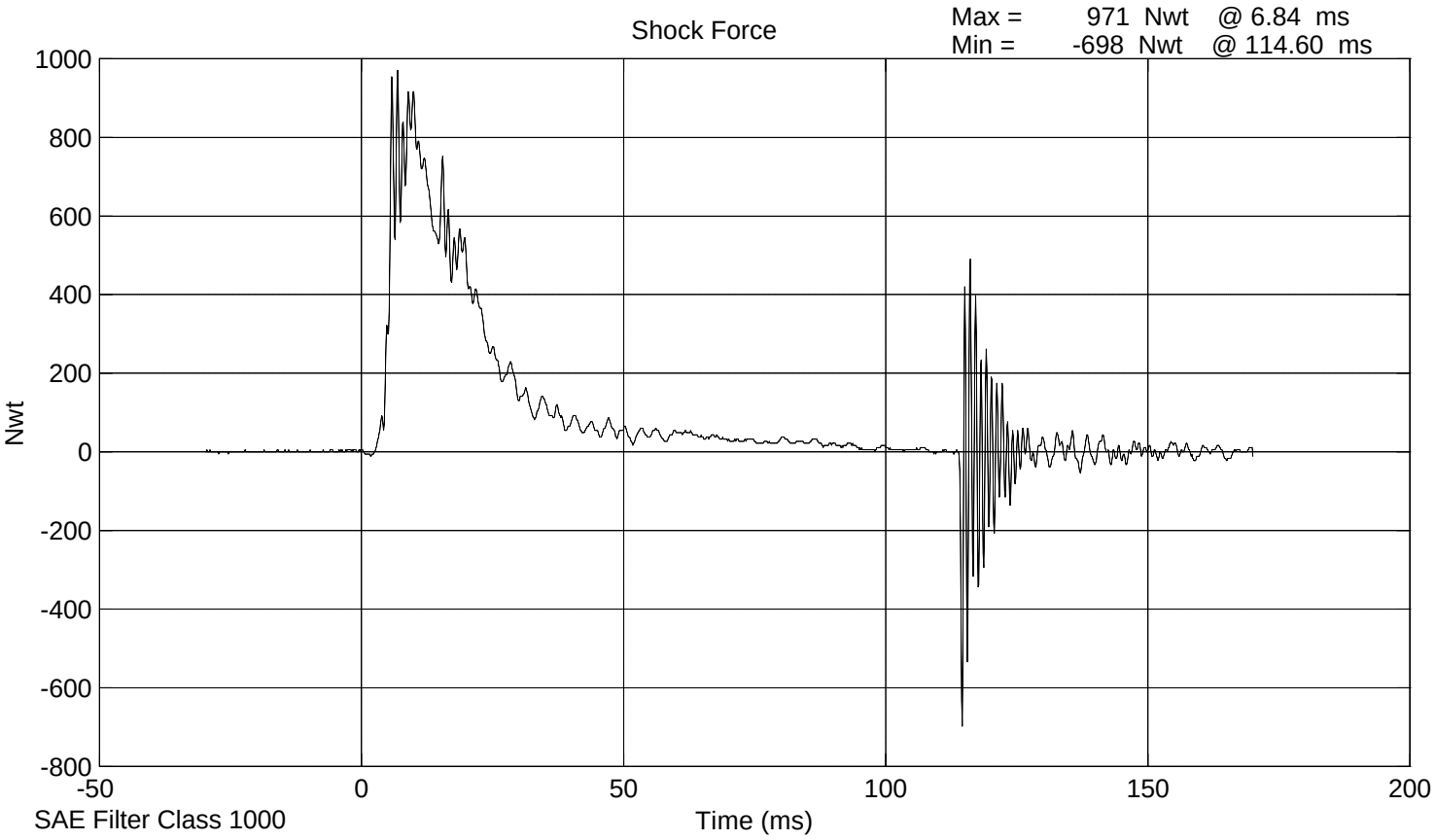
TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)		10 - 70	31
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	970.6
	DISPLACEMENT (mm)	30 - 35	31.5
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1825.9
	DISPLACEMENT (mm)	32 - 37	34.8
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3875.5
	DISPLACEMENT (mm)	33 - 40	35.4

DAMPER SETTING: 5

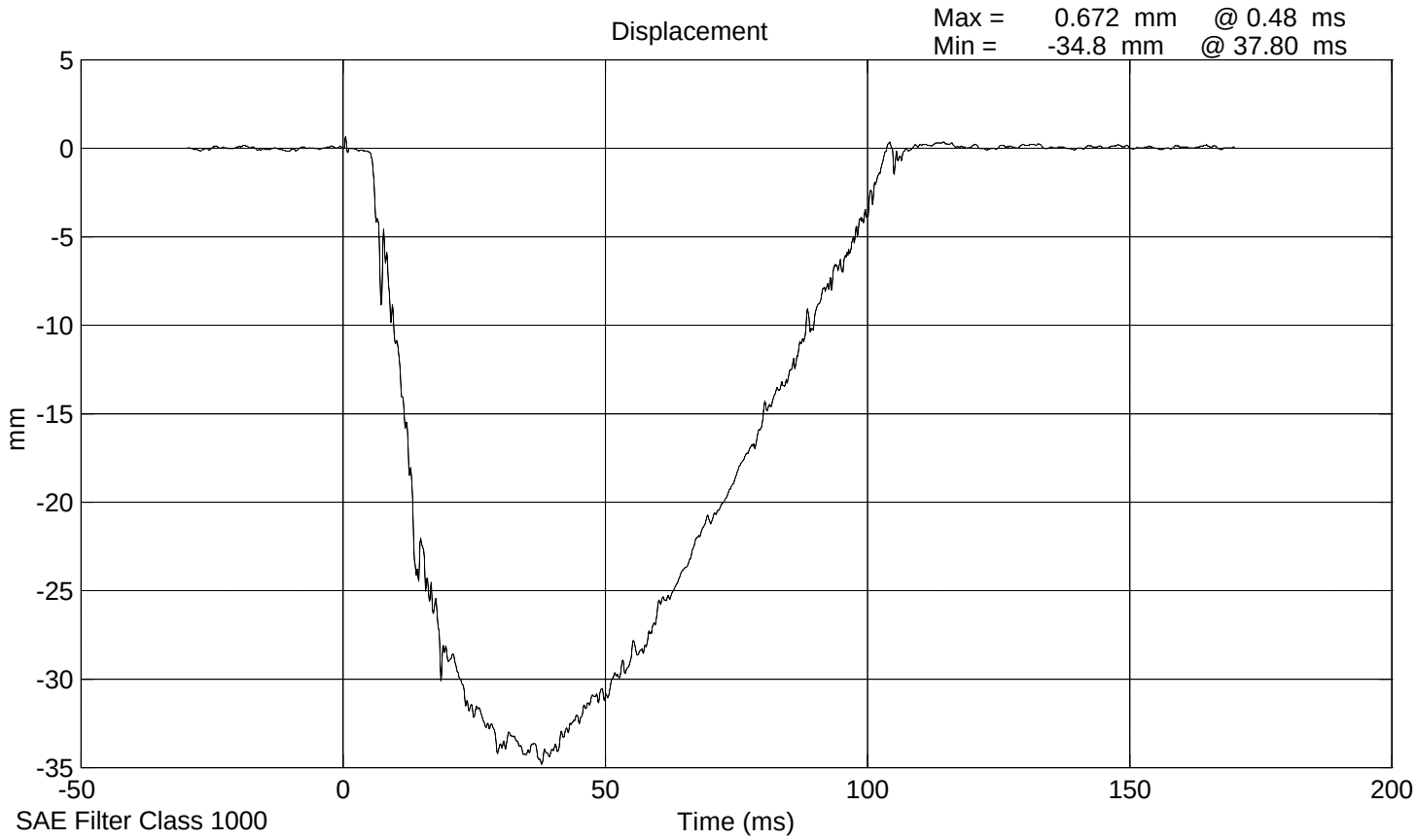
REMARKS: None

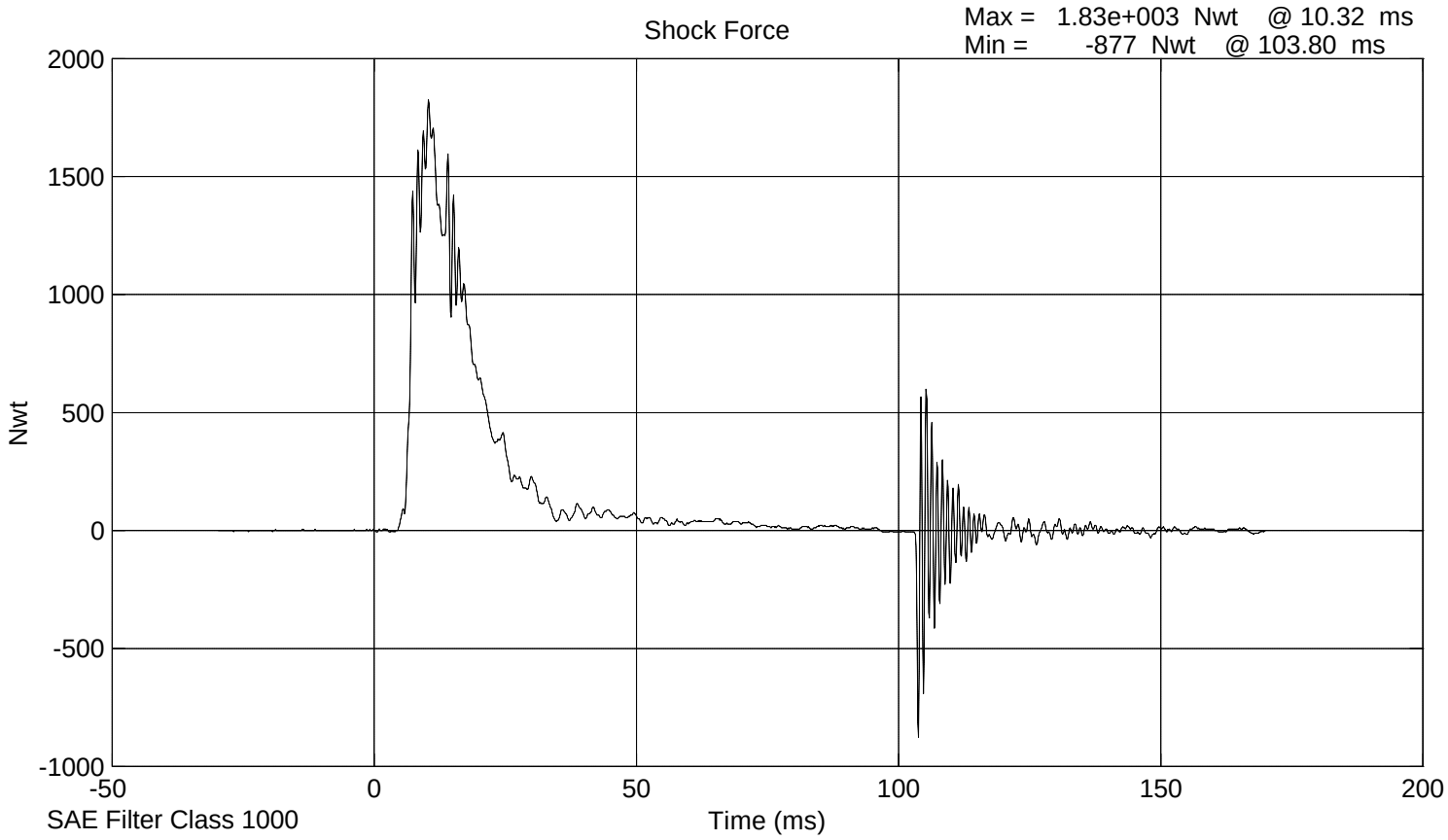
SID 027 Shock Absorber Impact Test @ 3.048 m/s



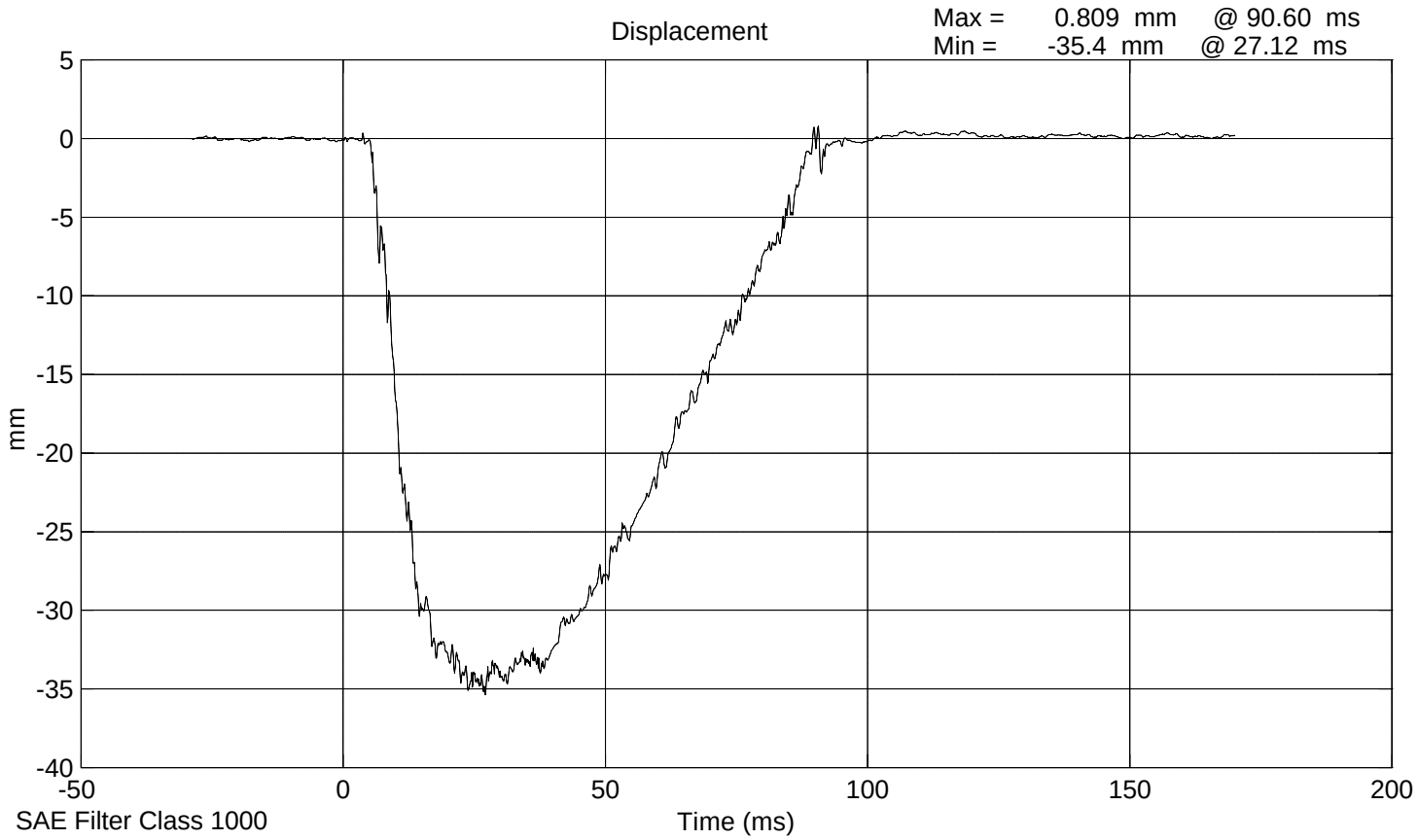


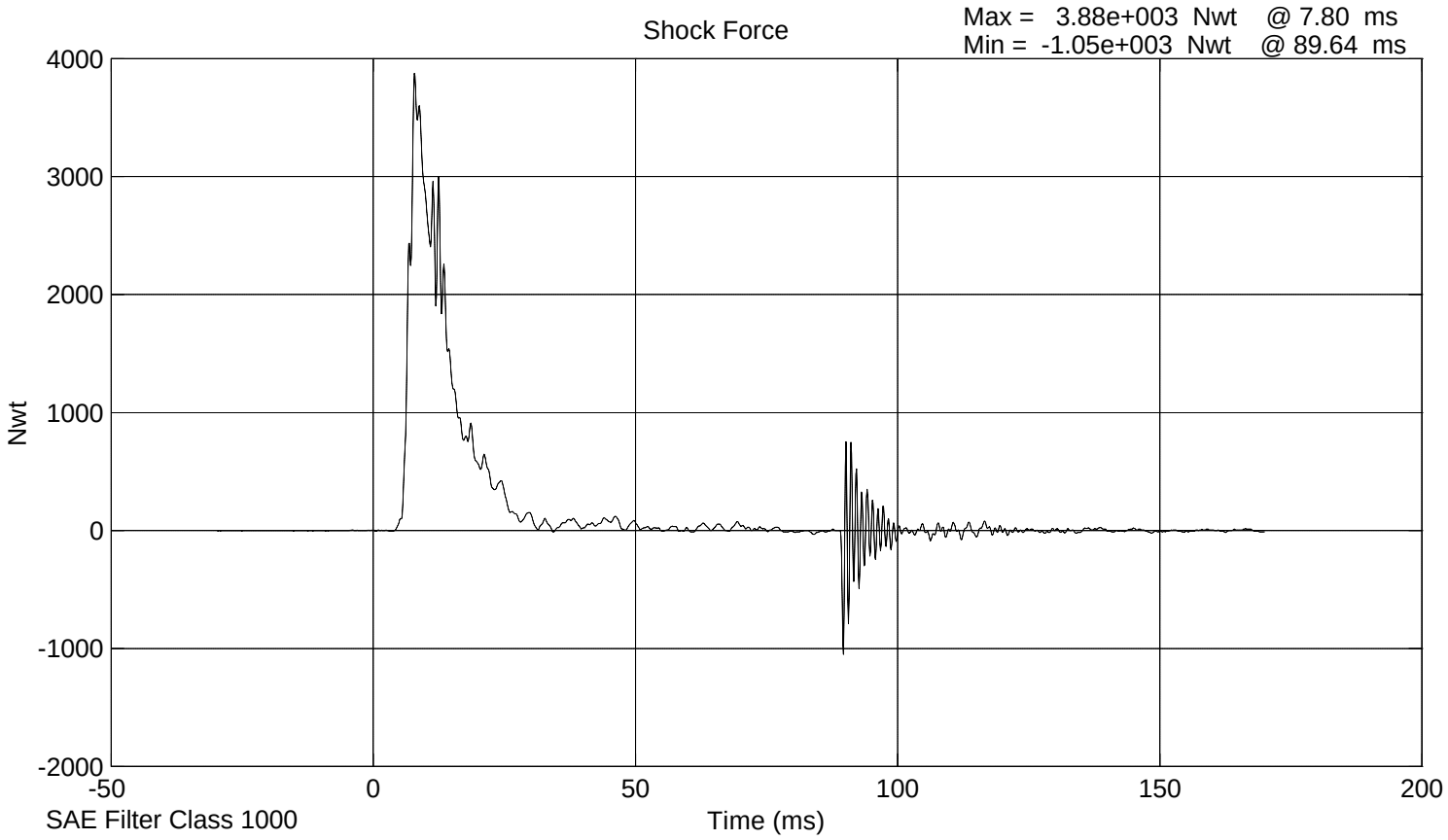
SID 027 Shock Absorber Impact Test @ 4.572 m/s





SID 027 Shock Absorber Impact Test @ 6.096 m/s





LATERAL THORAX IMPACT TEST
PRE-TEST

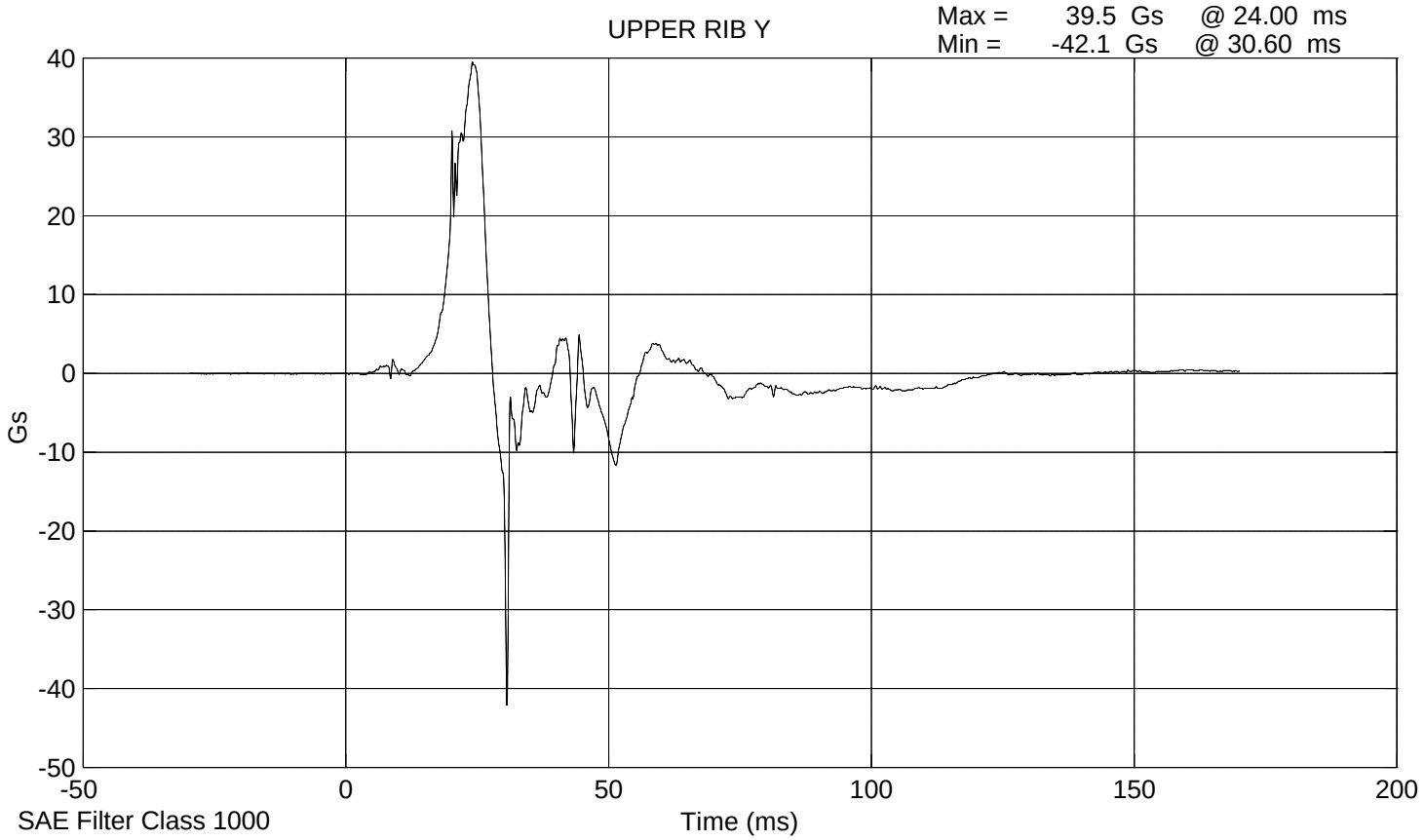
CONFIGURED FOR LEFT SIDE IMPACT

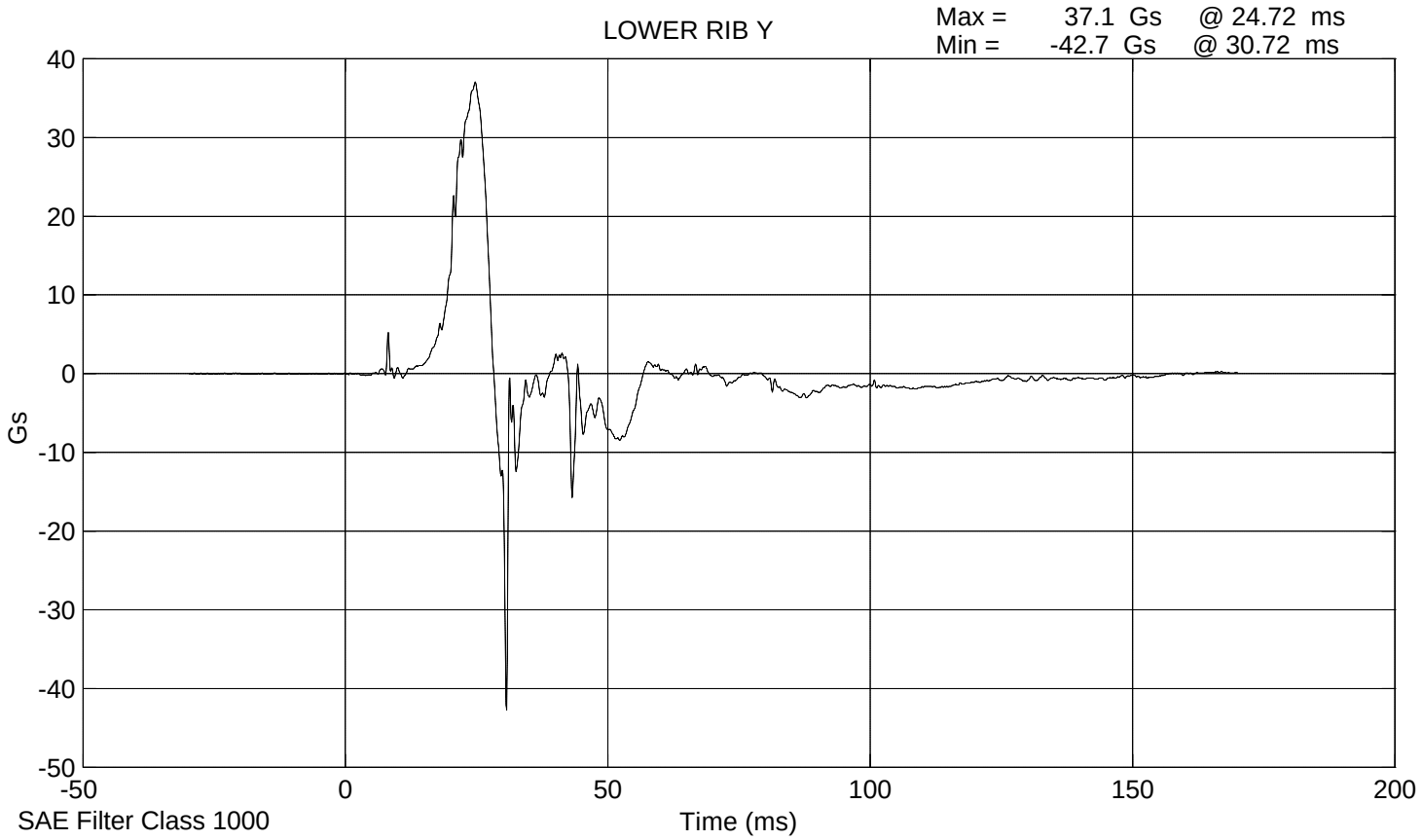
SID Serial No.: 027 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE. HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	38.0
LOWER RIB (g's)	37 - 46	37.4
LOWER SPINE (g's)	15 - 22	19.3

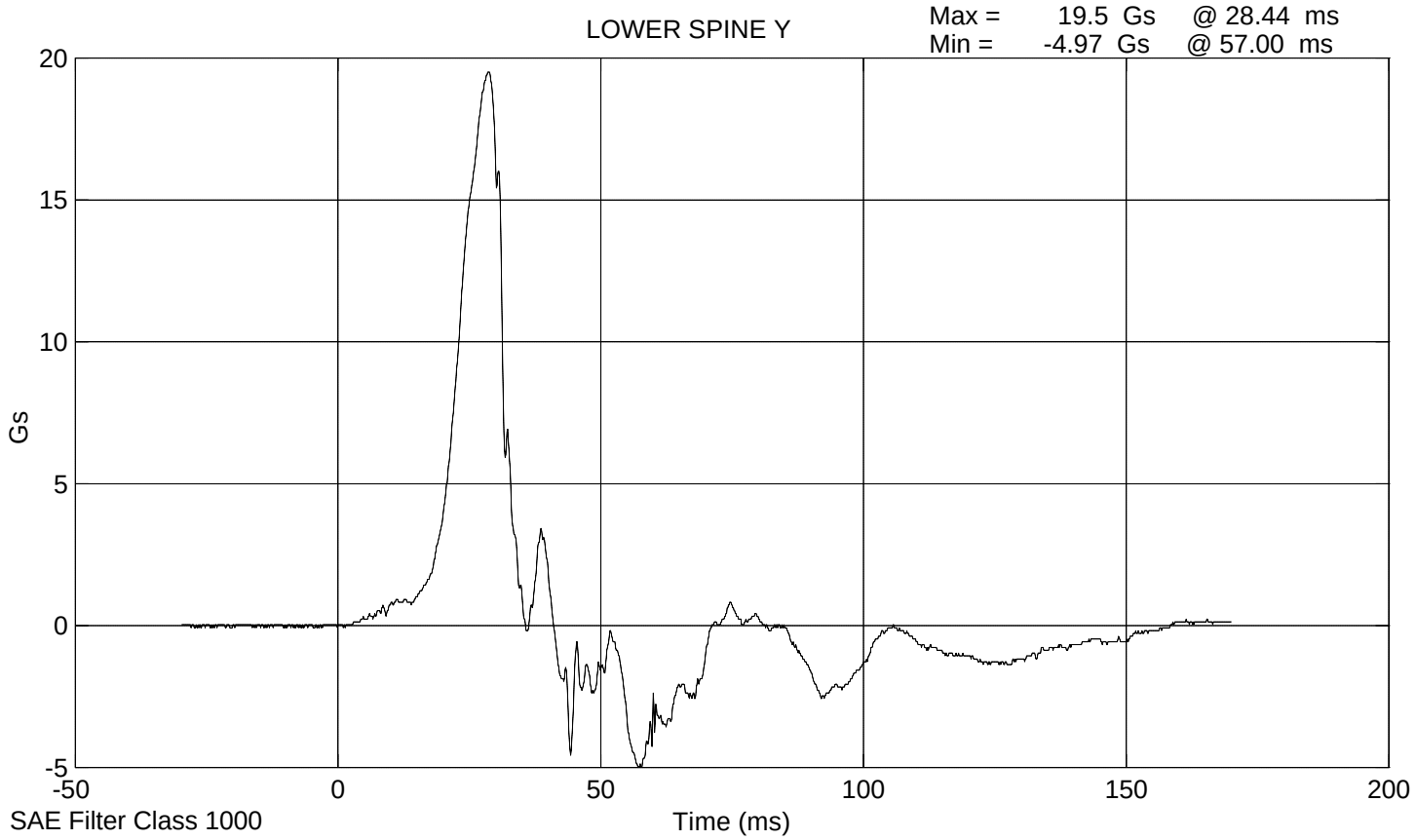
REMARKS: None

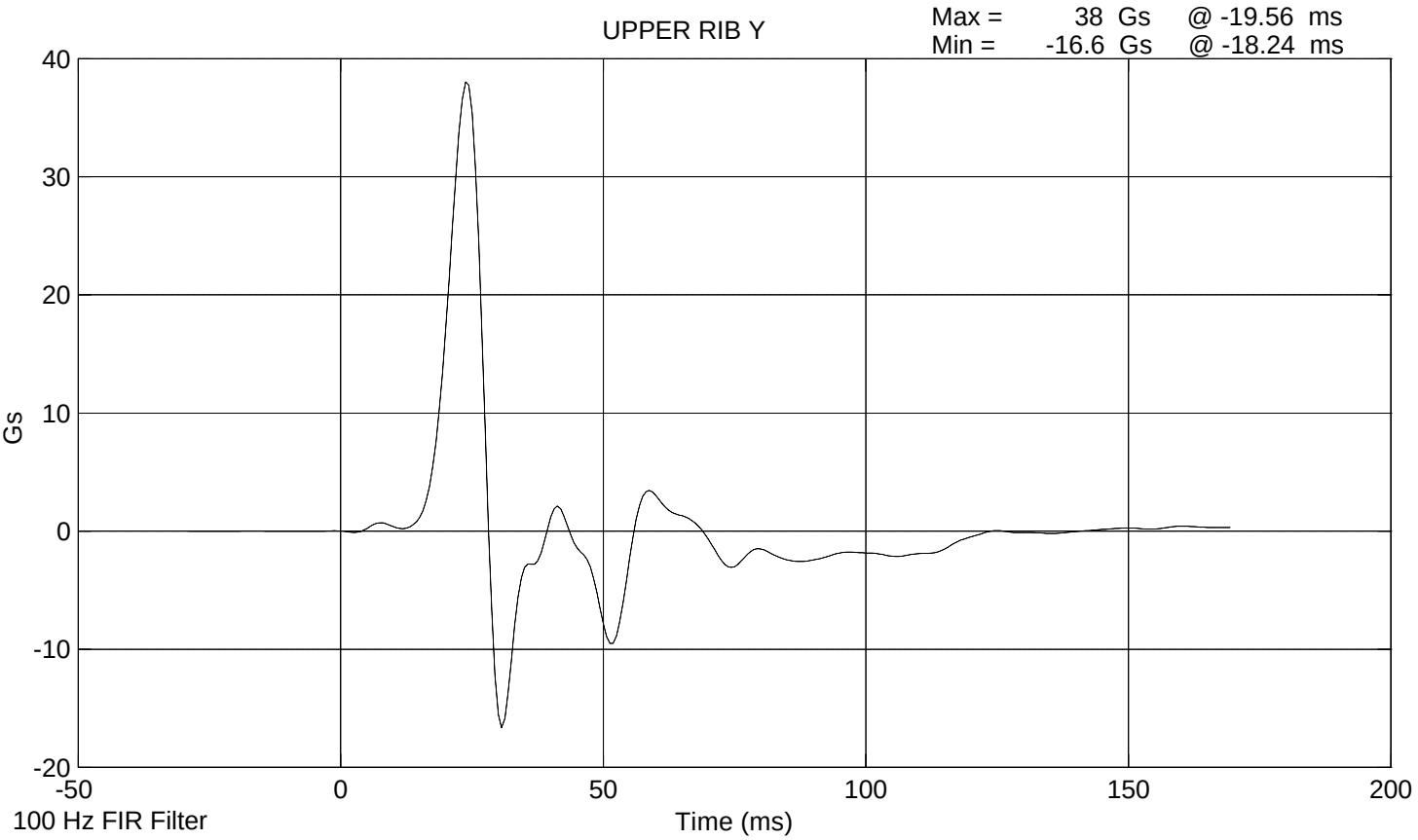
SID 027 Thorax Impact Test @ 4.2916 m/s



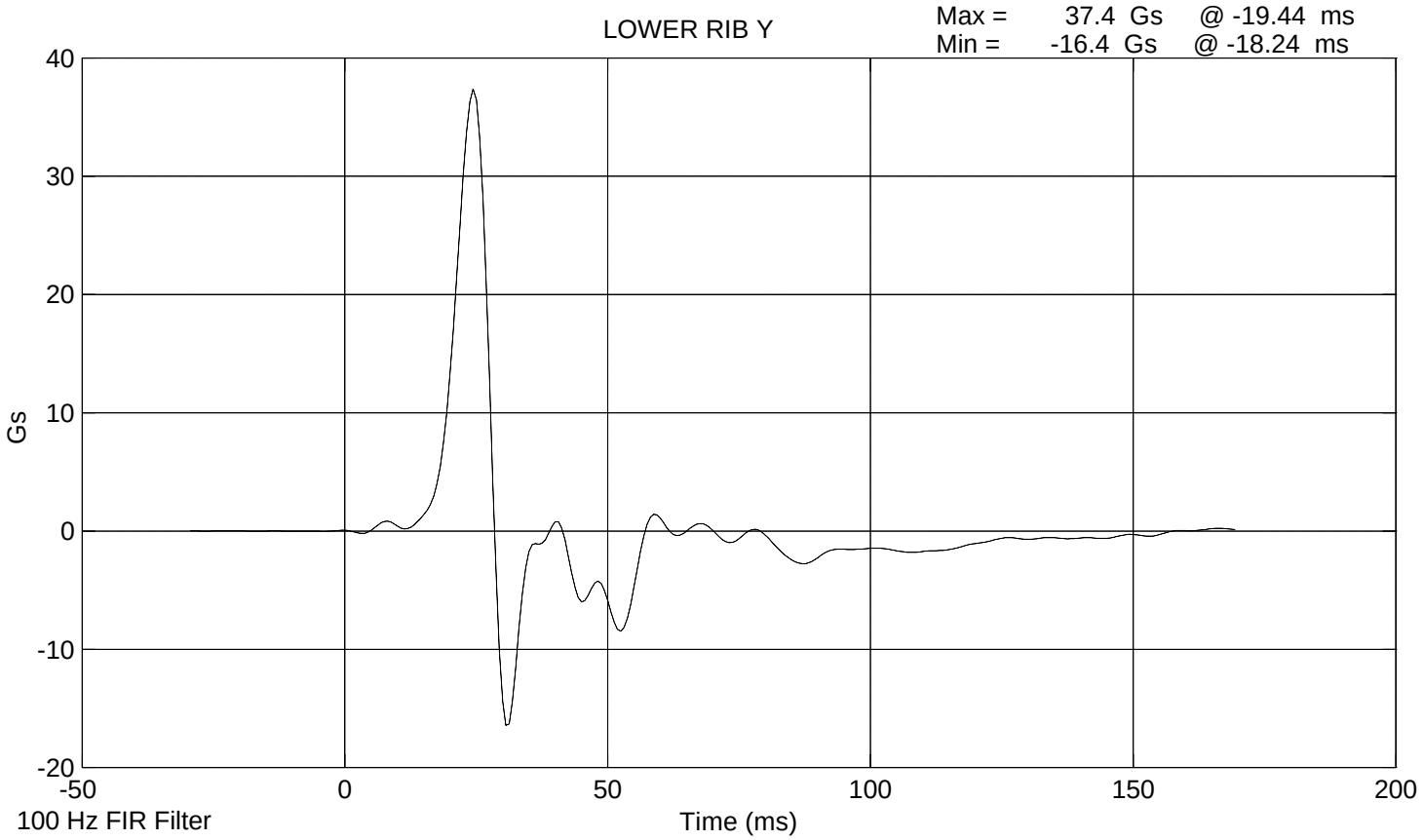


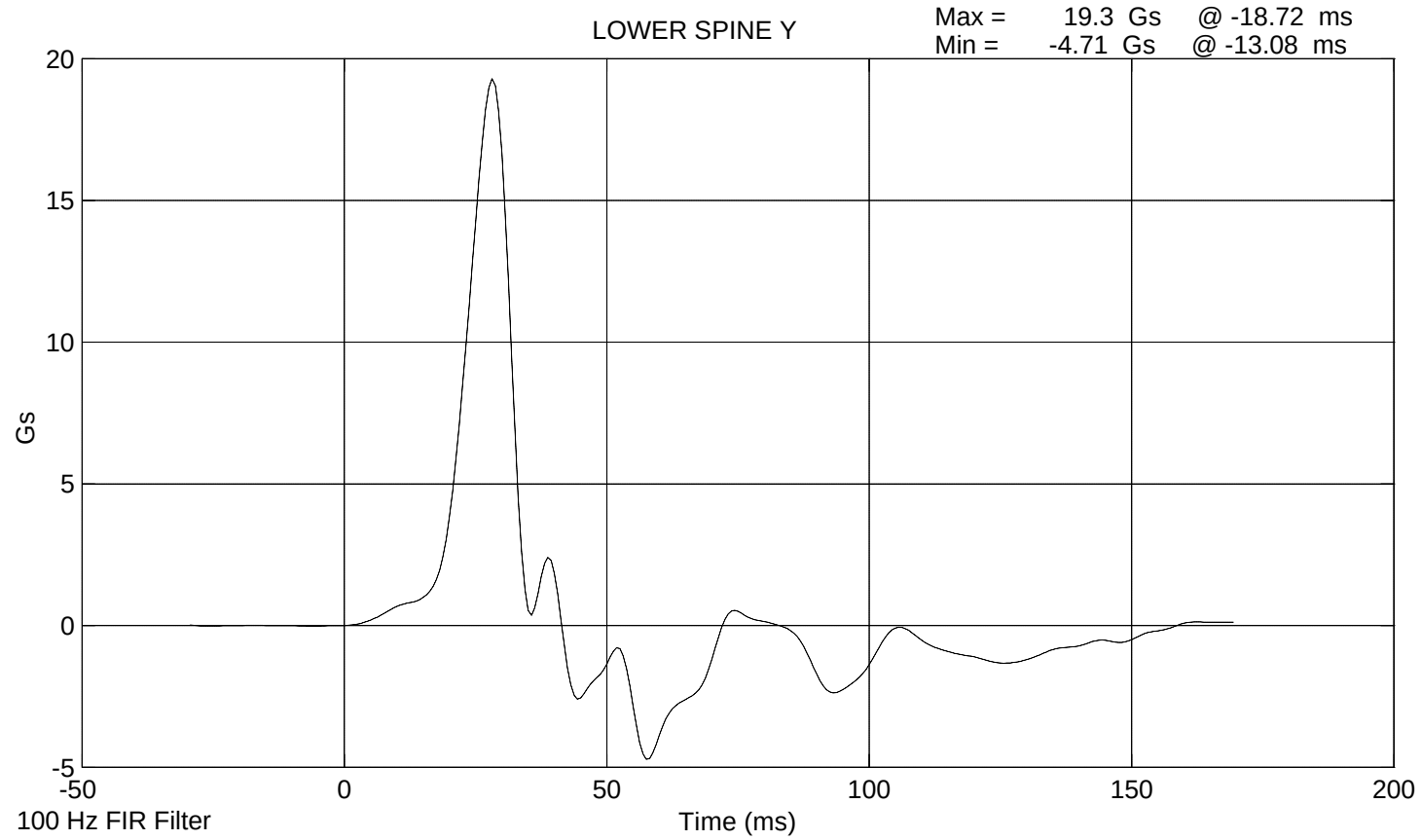
SID 027 Thorax Impact Test @ 4.2916 m/s





SID 027 Thorax Impact Test @ 4.2916 m/s





LATERAL PELVIS IMPACT TEST
PRE-TEST

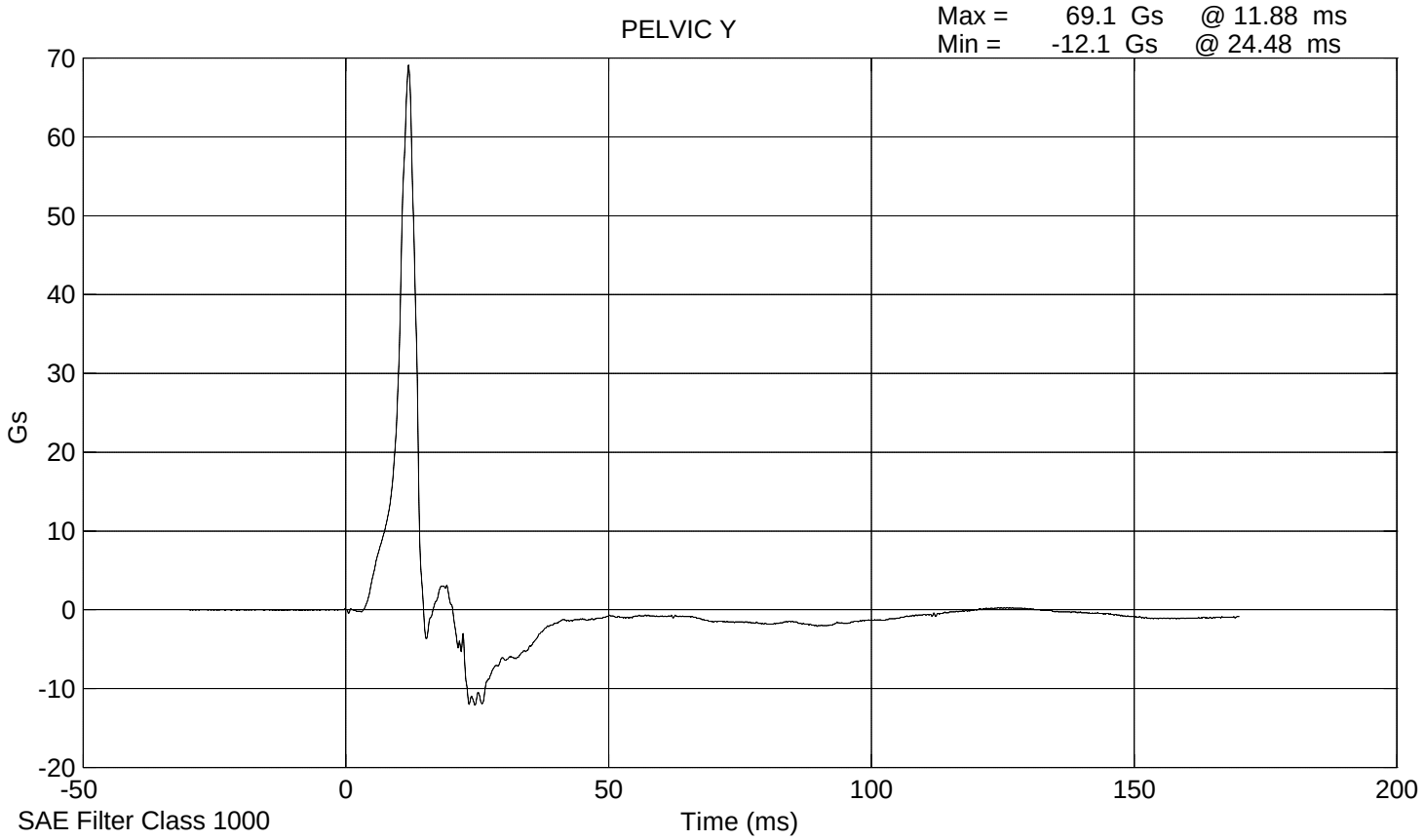
CONFIGURED FOR LEFT SIDE IMPACT

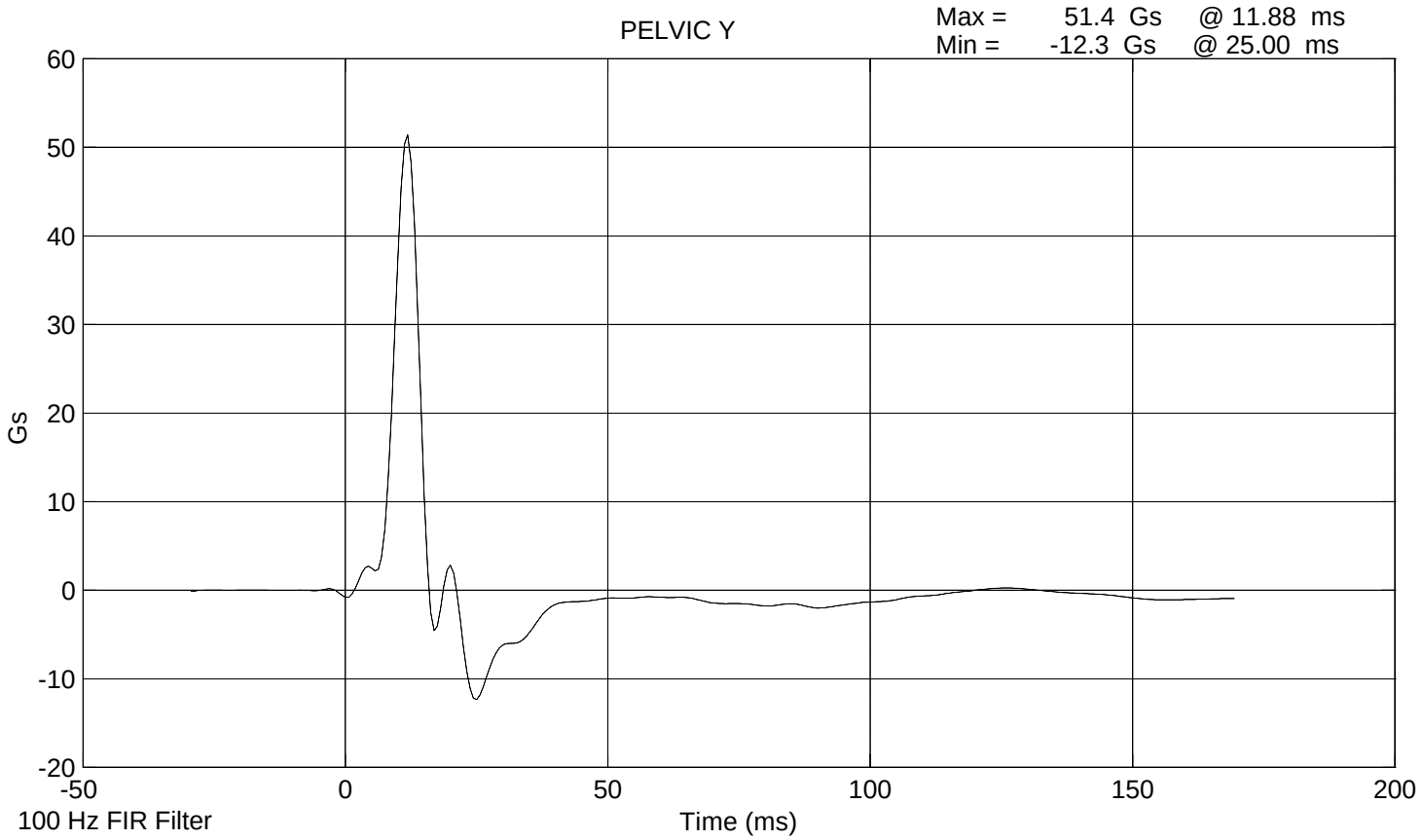
SID Serial No.: 027 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE. HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	51.4

REMARKS: None

SID 027 Pelvic Impact Test @ 4.2794 m/s





HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

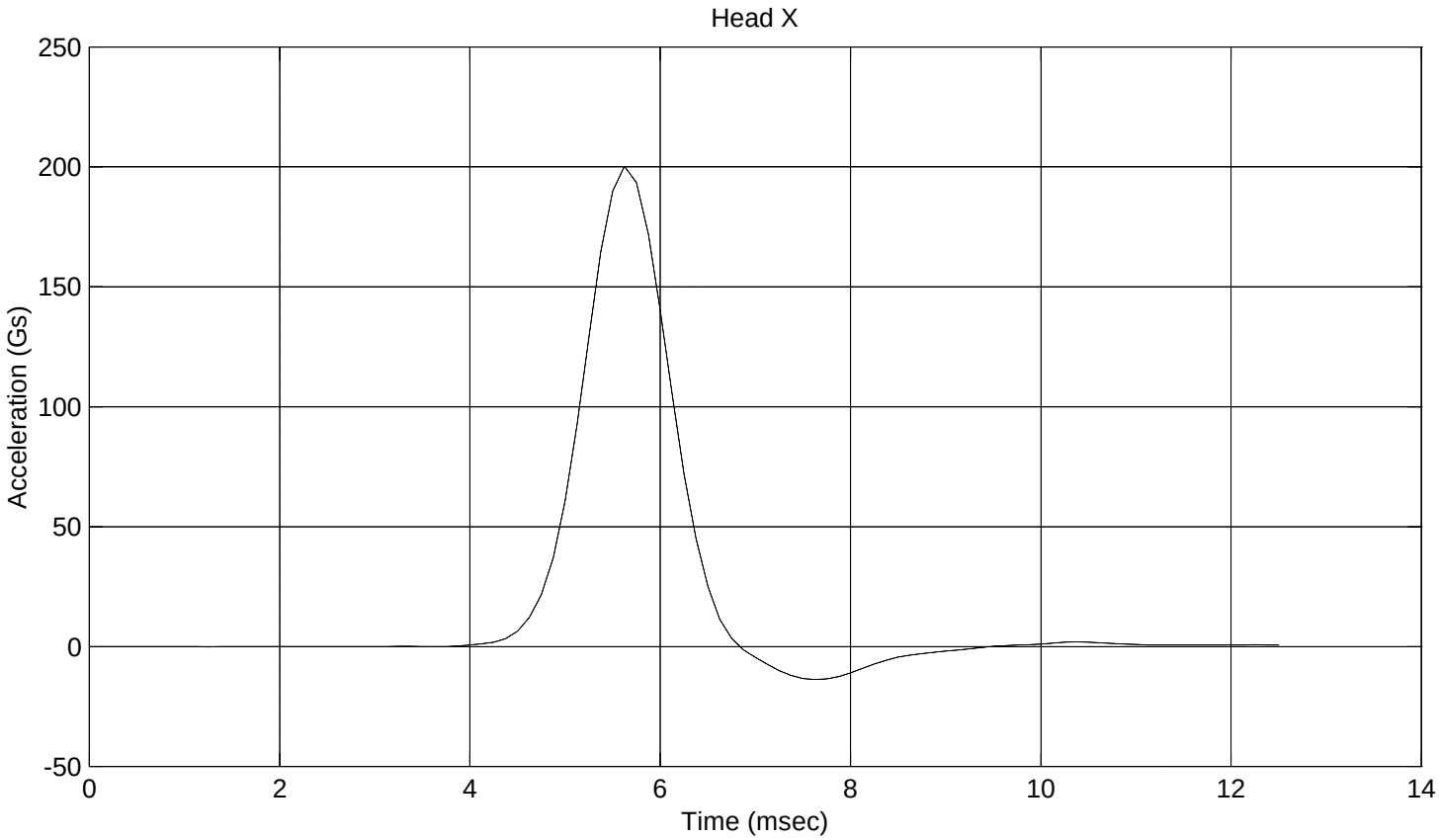
CONFIGURED FOR LEFT SIDE IMPACT

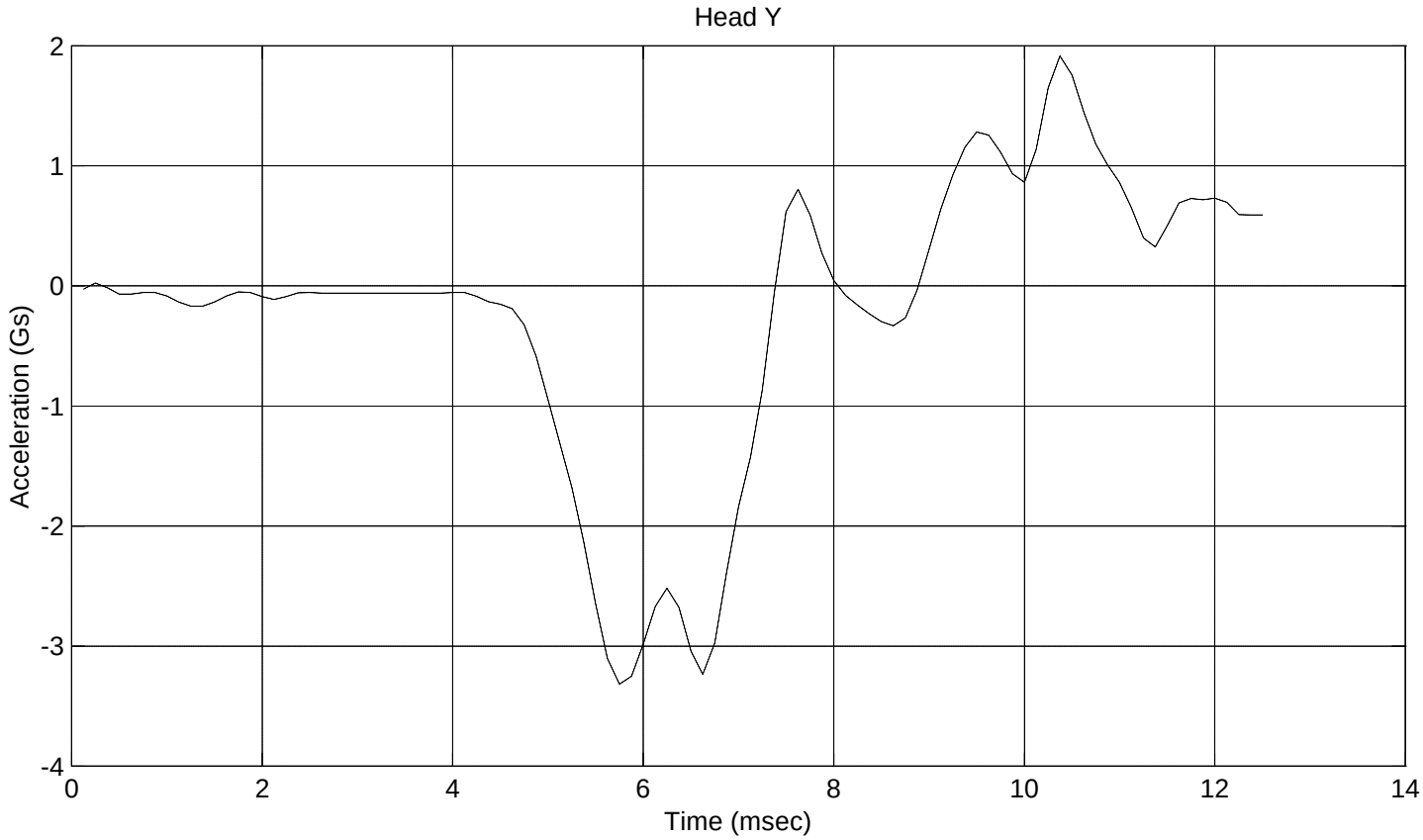
SID Serial No.: 027 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	250.3
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	3.32
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

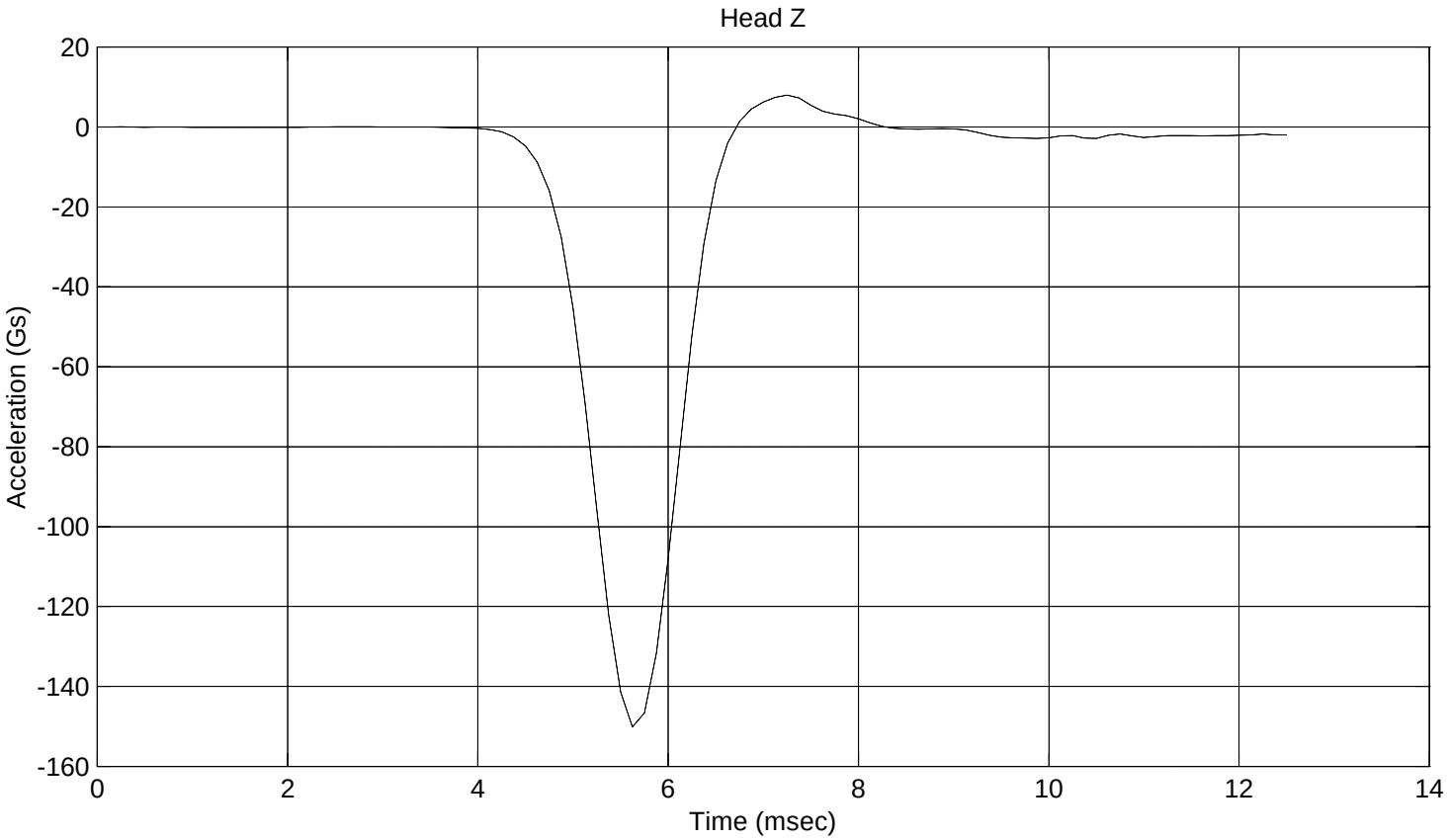
REMARKS: None

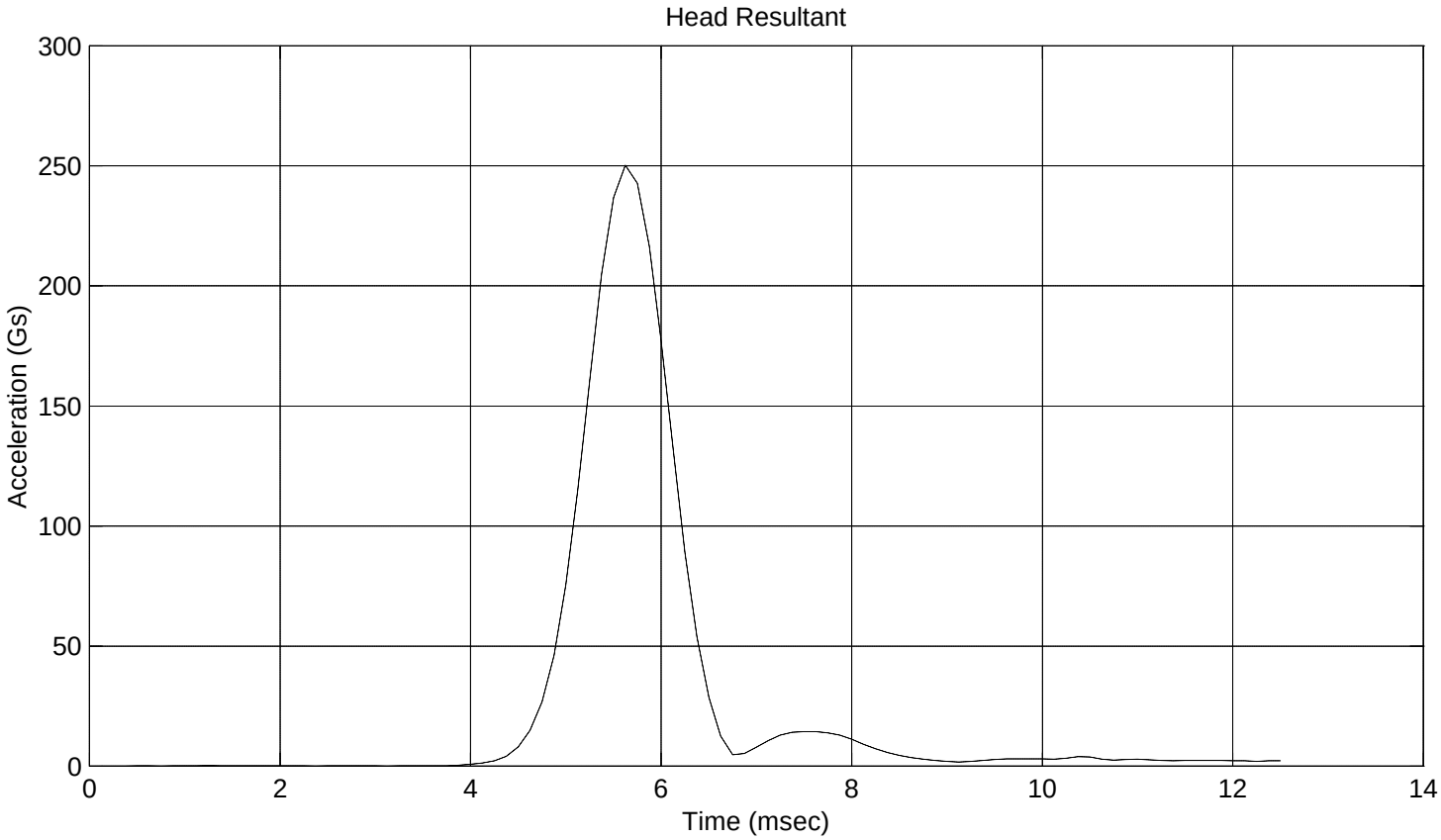
Hybrid II Head Drop Calibration 027800.hdp





Hybrid II Head Drop Calibration 027800.hdp





ABDOMINAL COMPRESSION TEST

PRE-TEST

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1

Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	114
FORCE @ 19 mm (N)	163 - 221	175
FORCE @ 25 mm (N)	222 - 280	254
FORCE @ 33 mm (N)	325 - 391	369

REMARKS: None

Dummy S/N 027

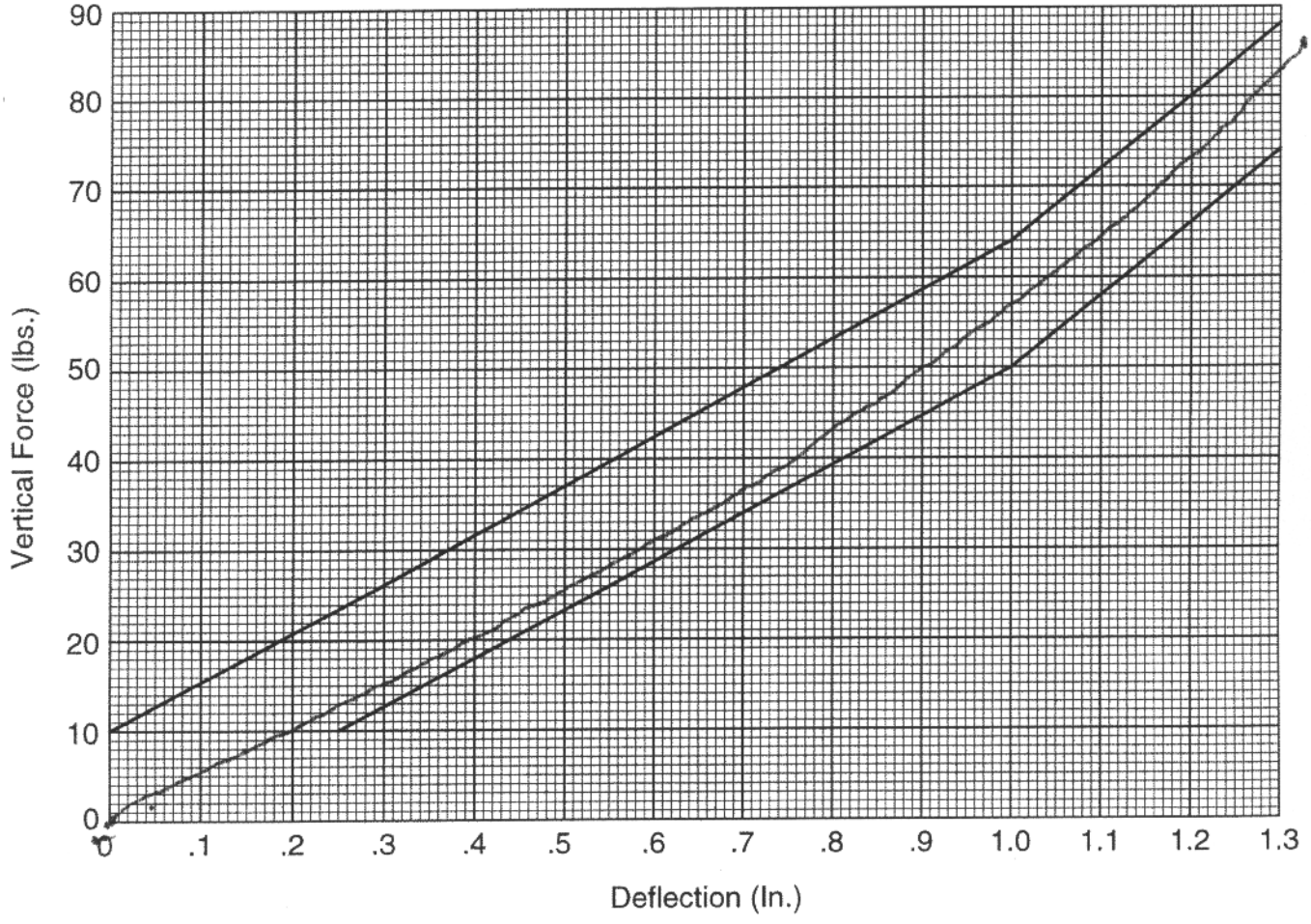
W/A

Date 10-21-2000

Performed By

Temp. 70°

Humidity 31%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 10/21/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	106.3
FORCE @ 30° (N)	151.2 - 204.6	165.5
FORCE @ 40° (N)	204.6 - 258	229.1
RETURN ANGLE	12° max.	4.3

REMARKS: None

Dummy S/N 027

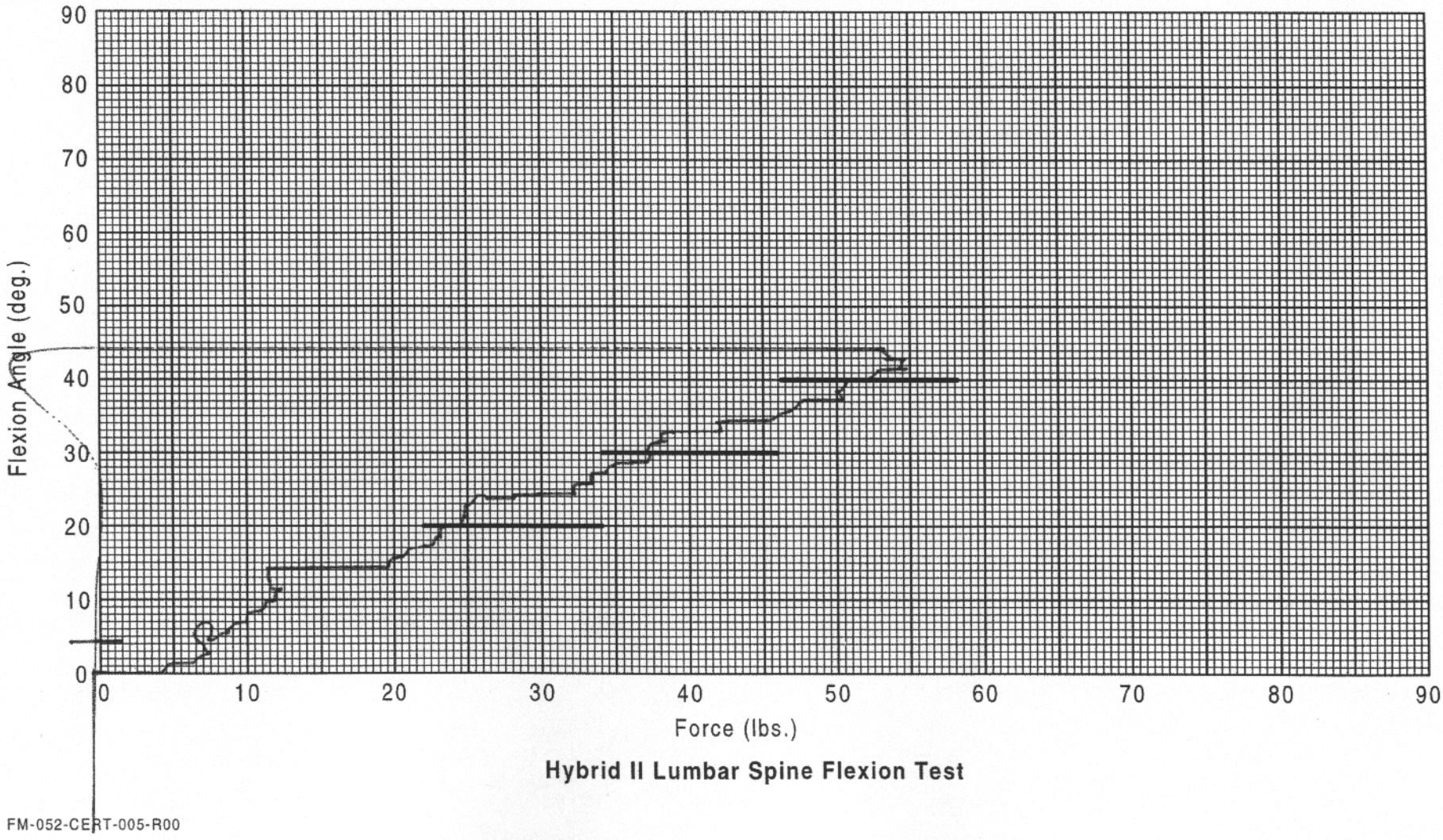
W/A

Date 10-21-2000

Performed By

Temp. 71°

Humidity 31%



Hybrid II Lumbar Spine Flexion Test

FM-052-CERT-005-R00

PRE-TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1

Date: 10/21/00 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS
POST TEST

SID NO.: 013

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	373

REMARKS: None

LATERAL THORAX IMPACT TEST
POST TEST

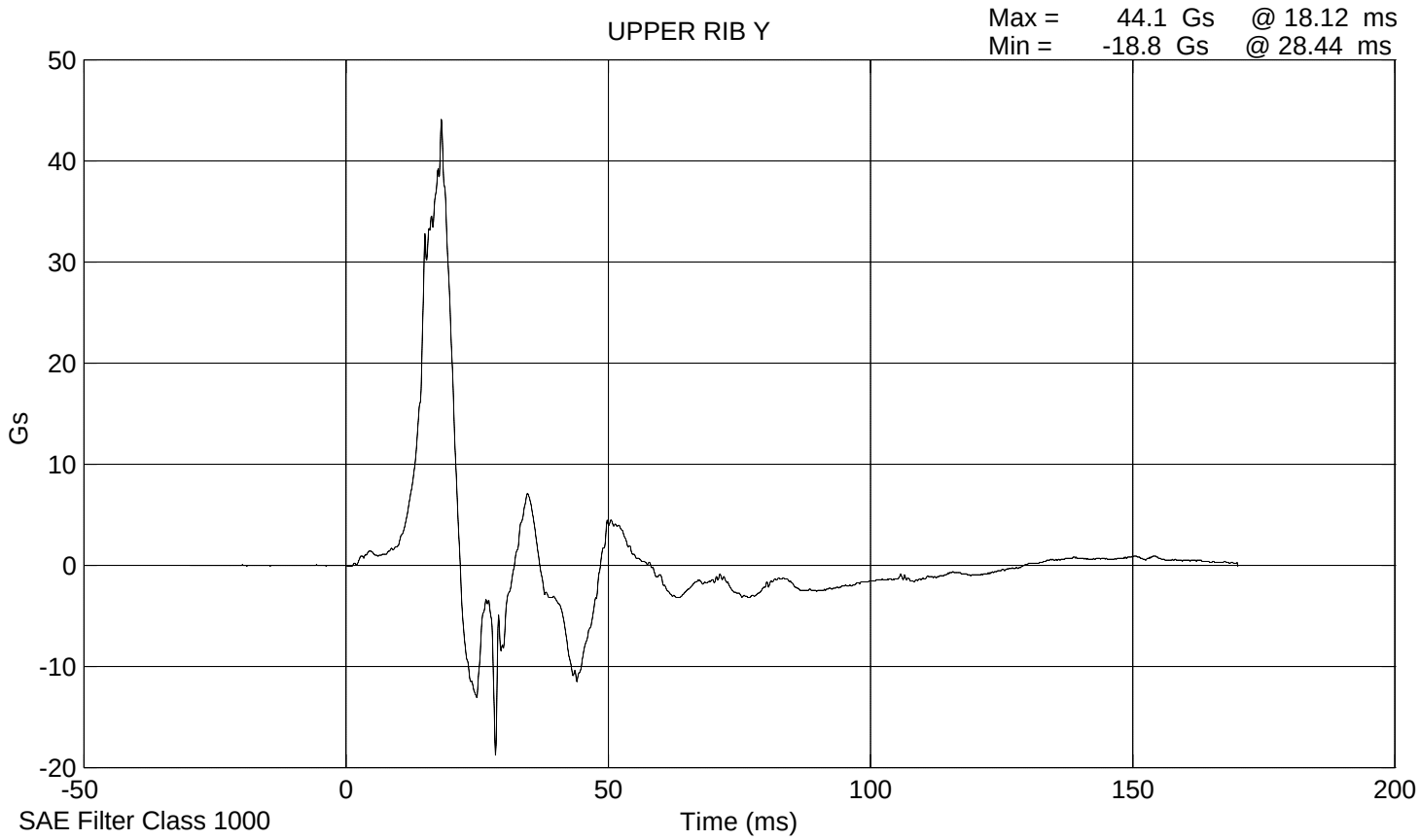
CONFIGURED FOR LEFT SIDE IMPACT

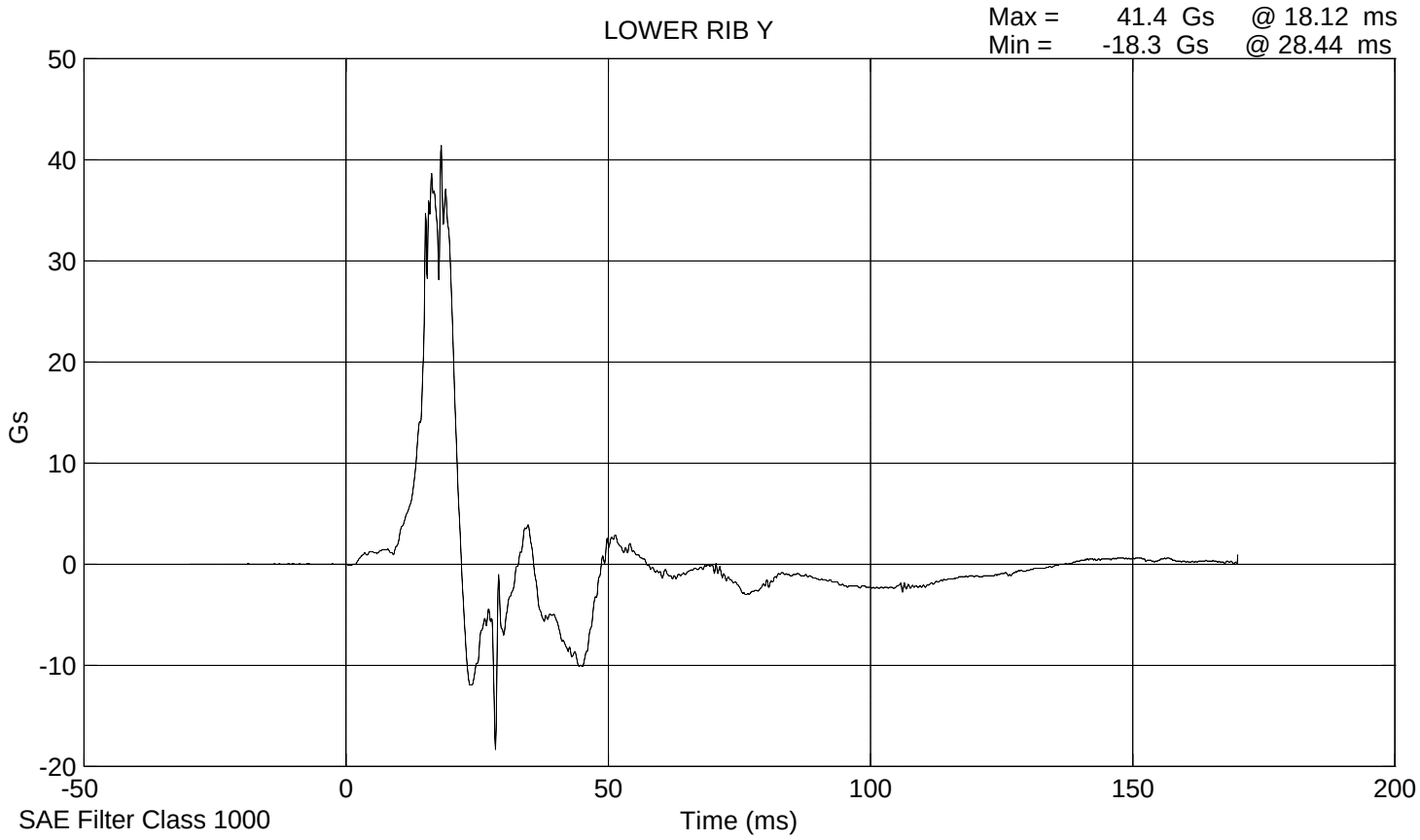
SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE. HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.28
UPPER RIB (g's)	37 - 46	39.99
LOWER RIB (g's)	37 - 46	38.65
LOWER SPINE (g's)	15 - 22	21.26

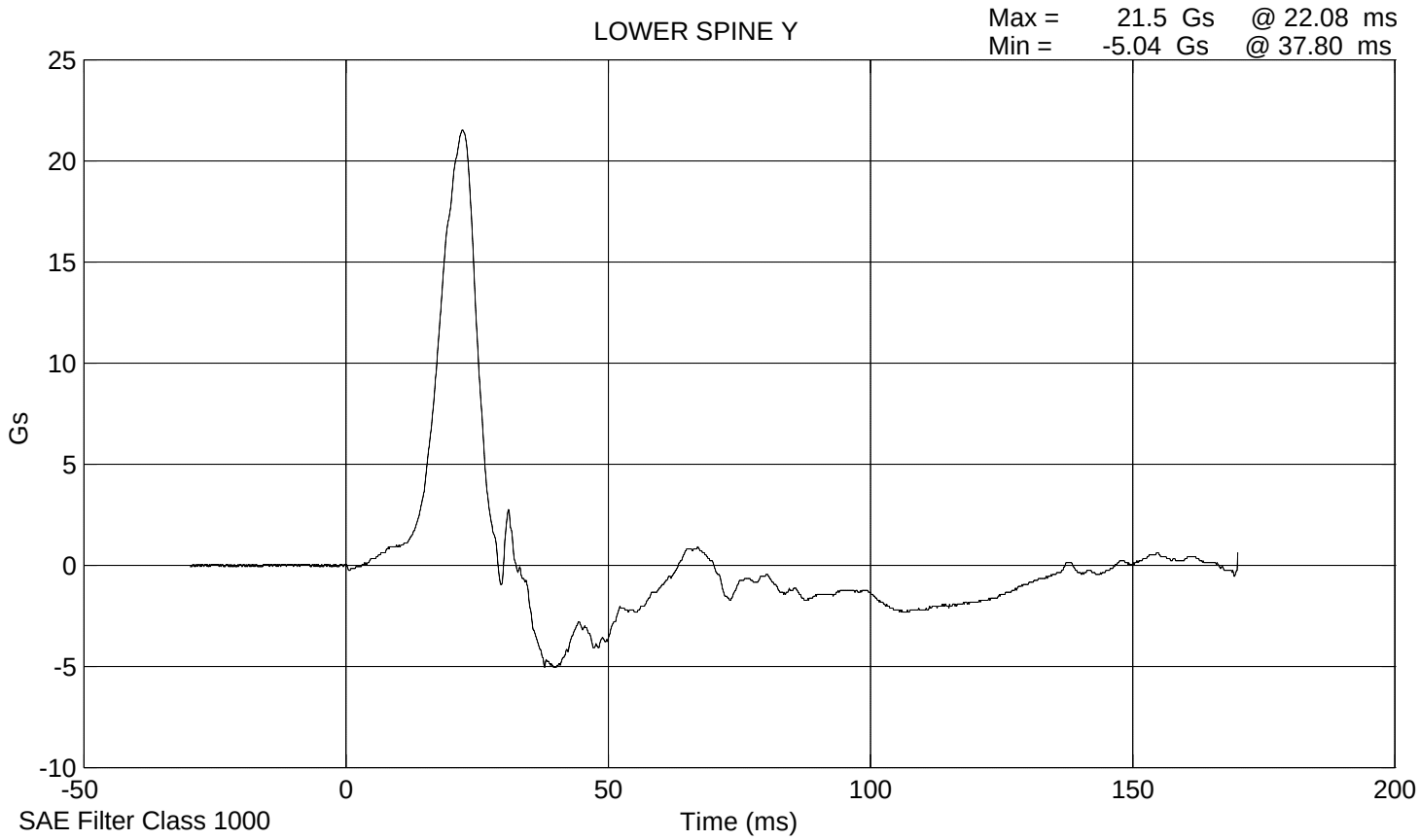
REMARKS: None

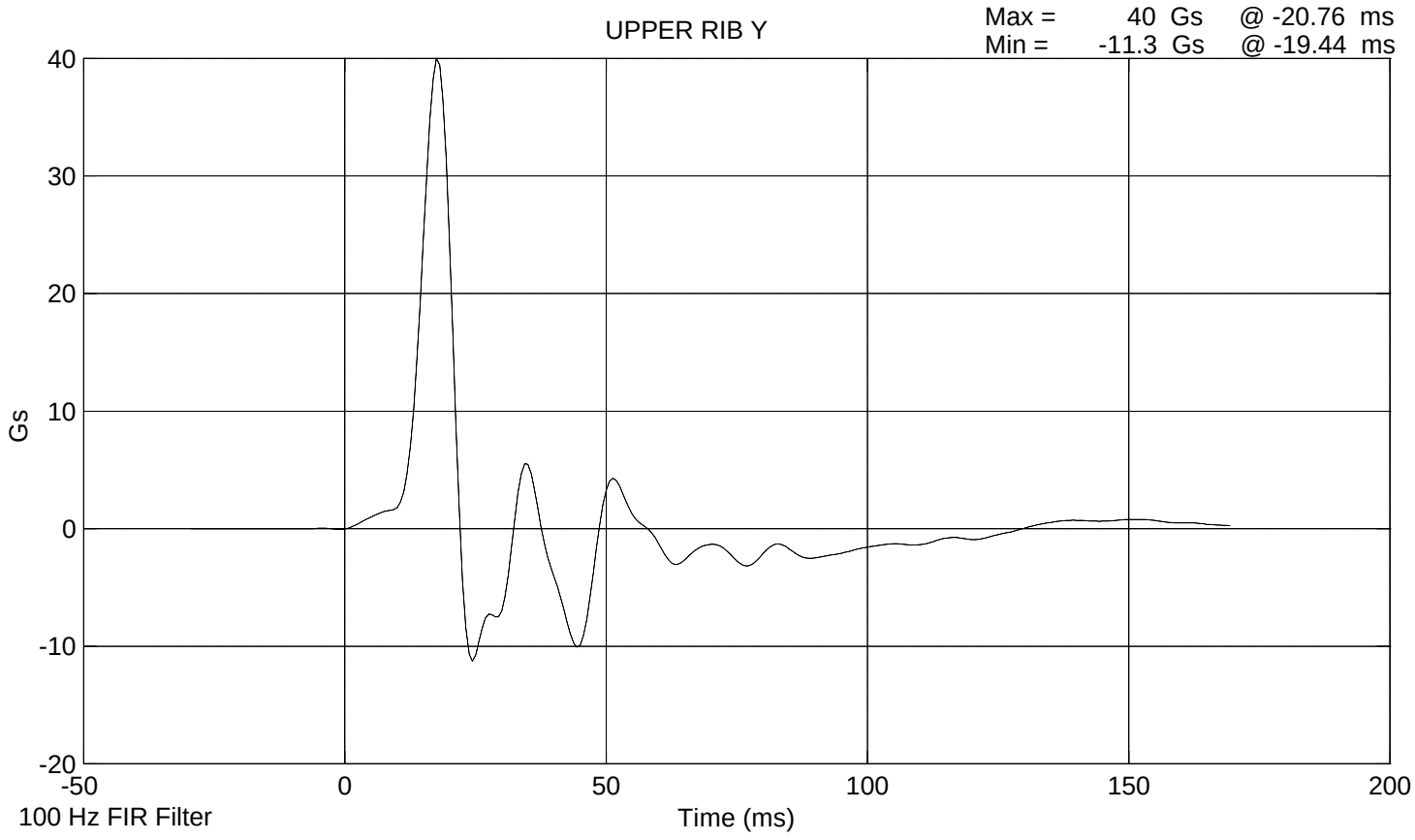
SID 013 Thorax Impact Test @ 4.2794 m/s



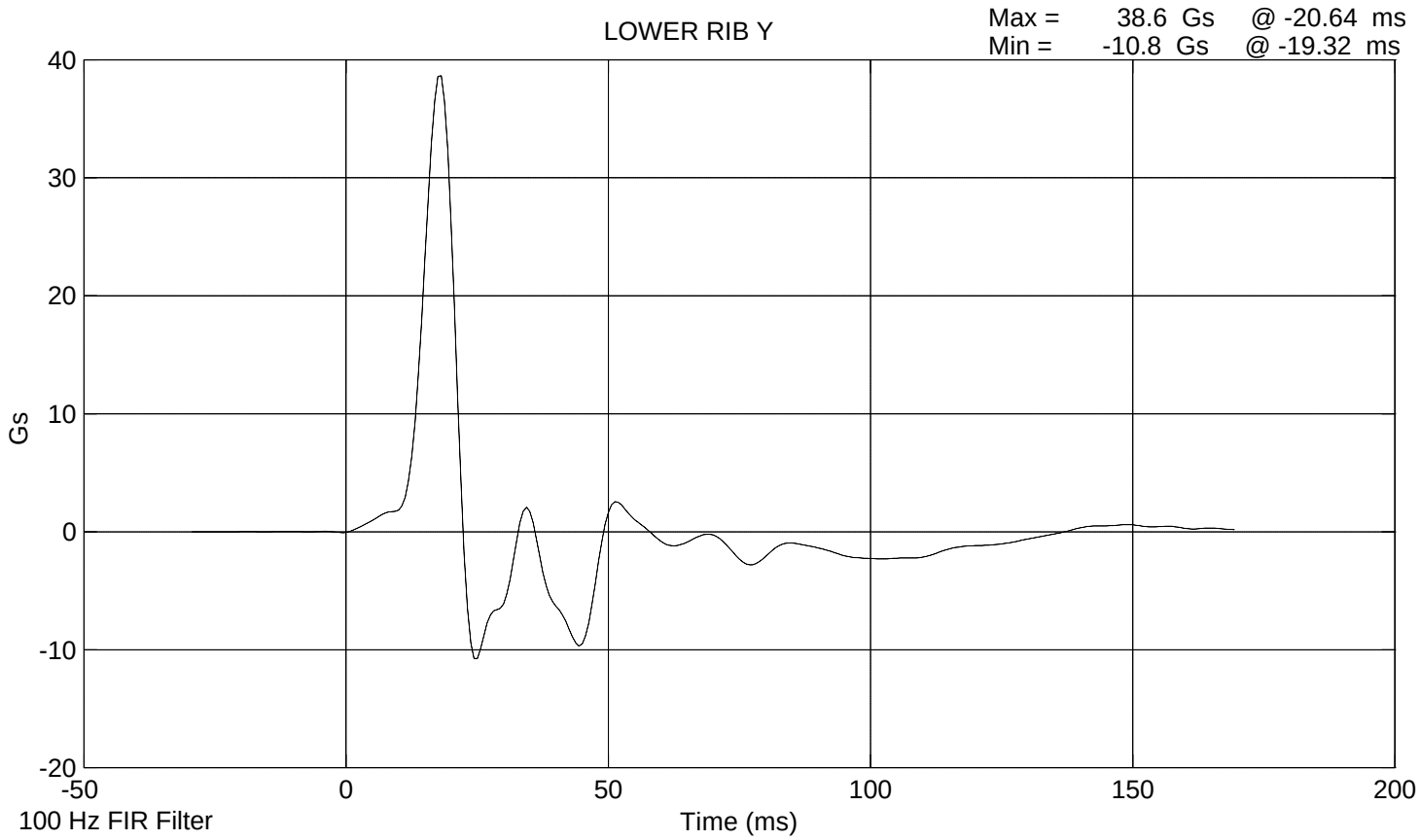


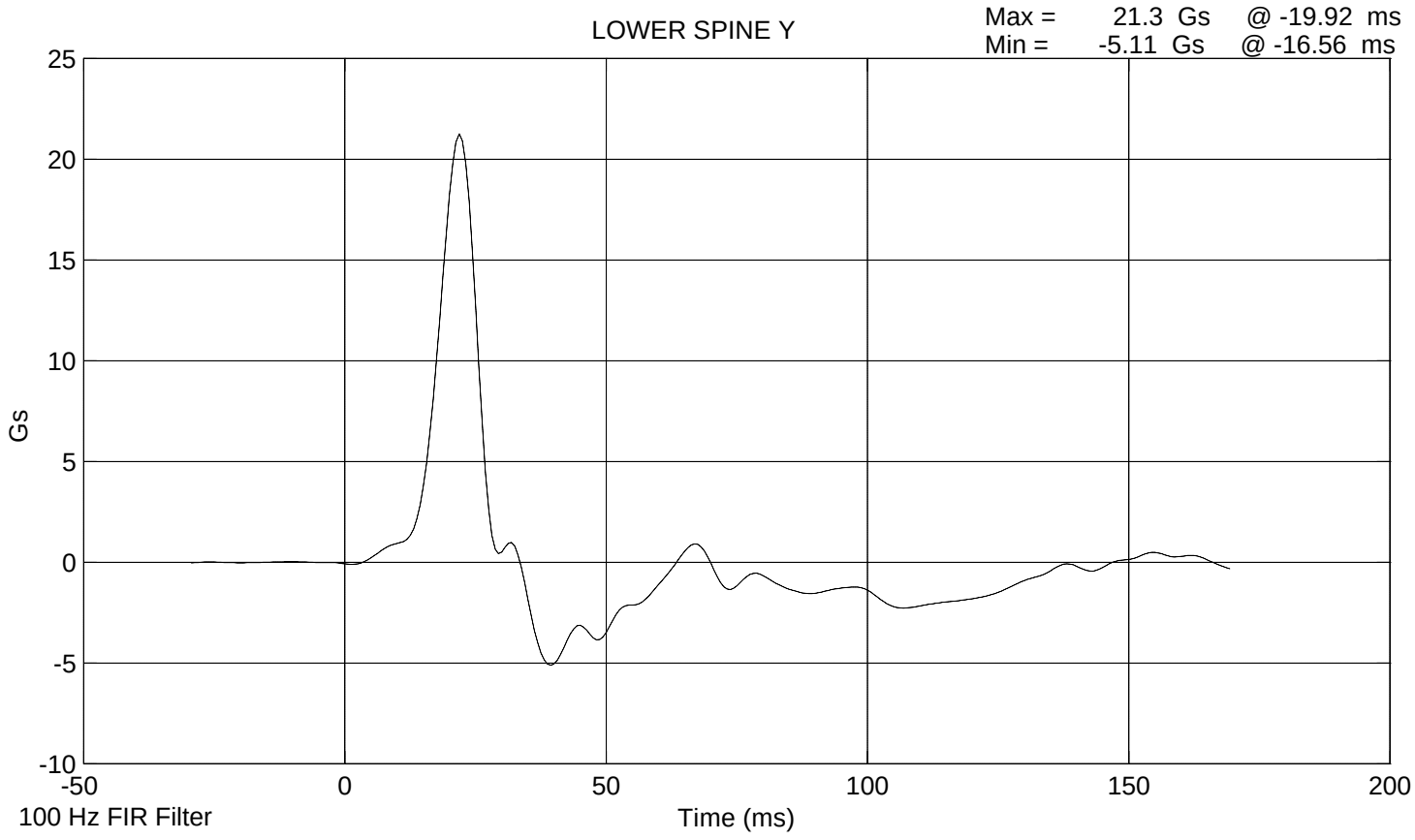
SID 013 Thorax Impact Test @ 4.2794 m/s





SID 013 Thorax Impact Test @ 4.2794 m/s





LATERAL PELVIS IMPACT TEST
POST TEST

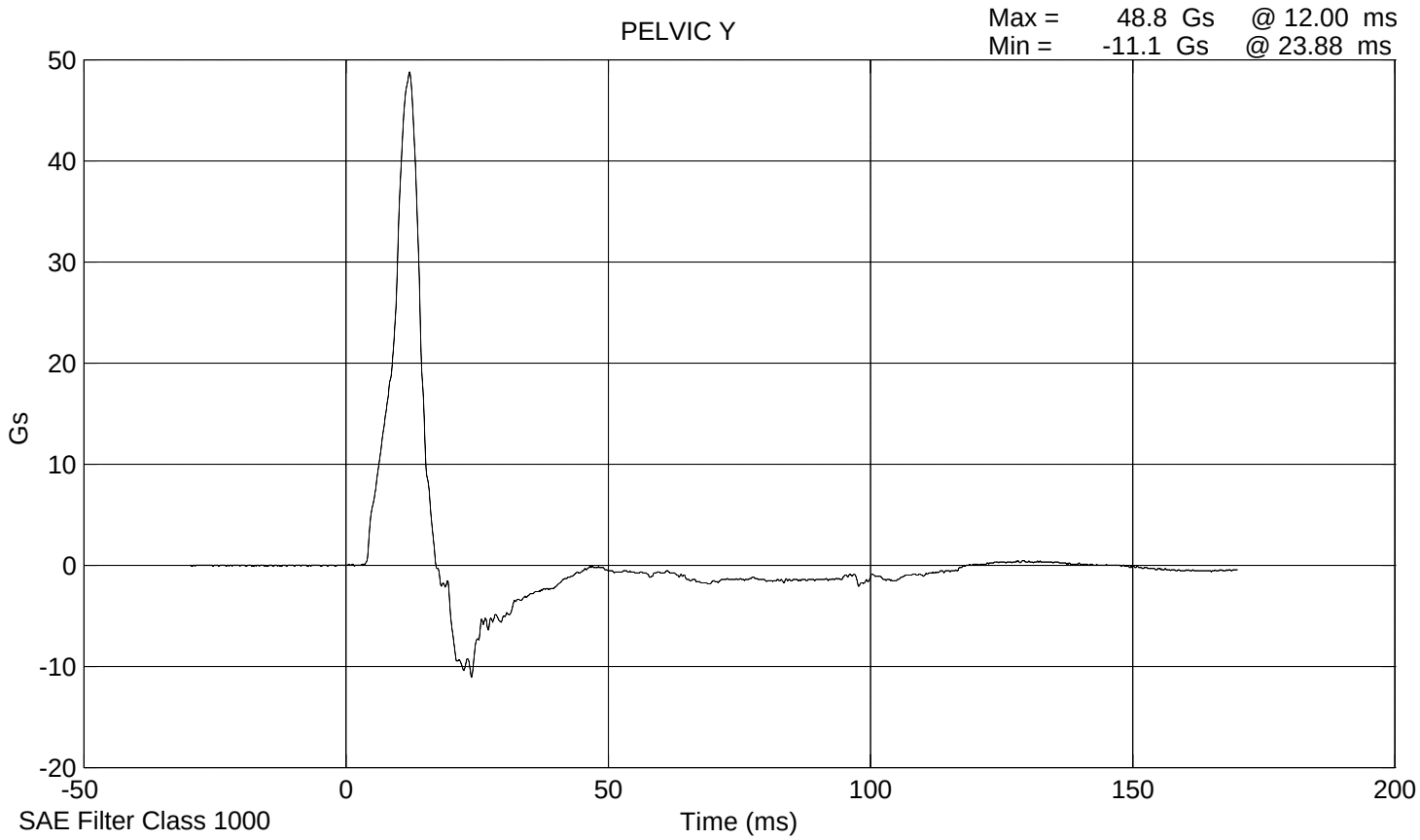
CONFIGURED FOR LEFT SIDE IMPACT

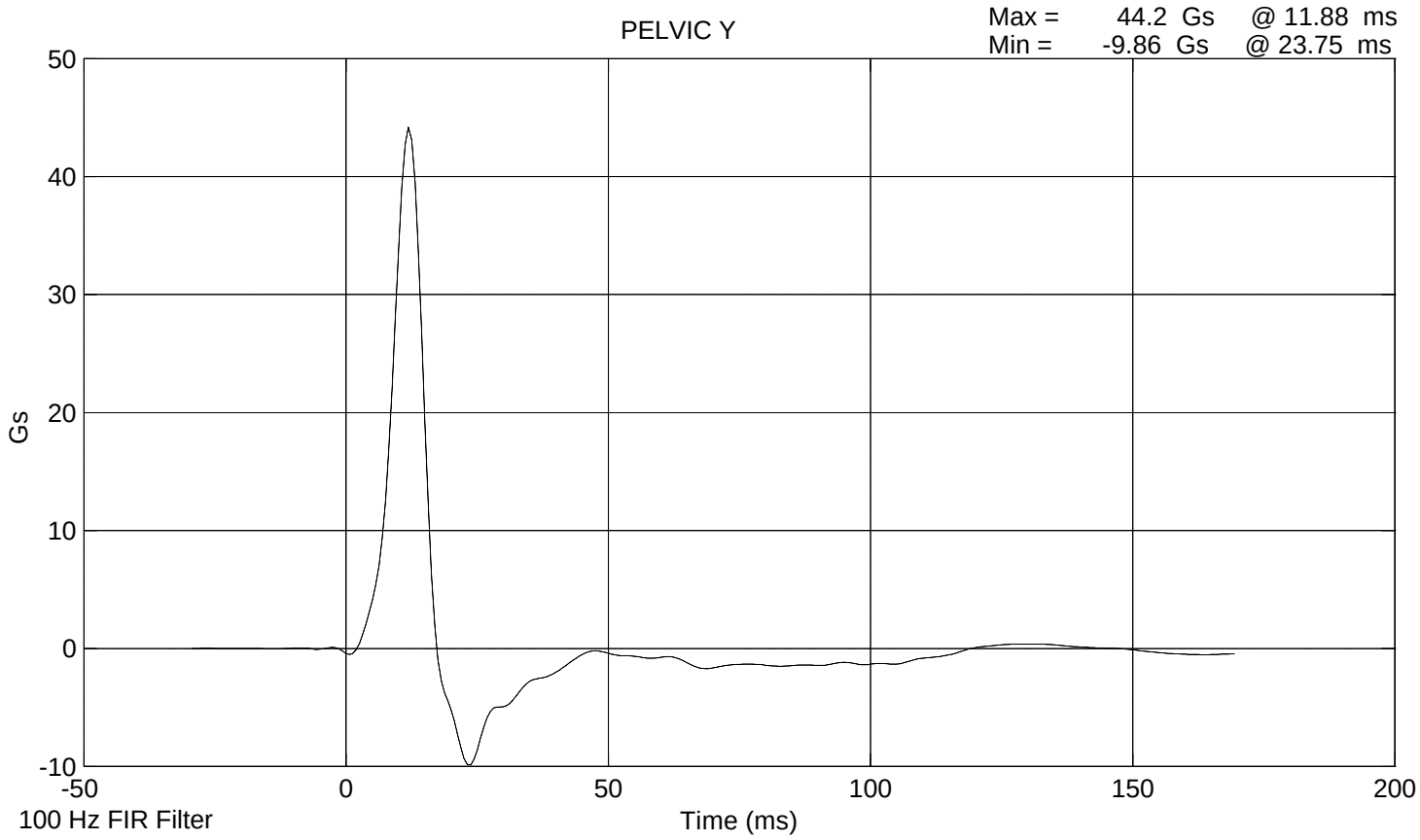
SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE. HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.29
PELVIS ACCELERATION (g's)	40 - 60	44.2

REMARKS: None

SID 013 Pelvic Impact Test @ 4.2855 m/s





HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

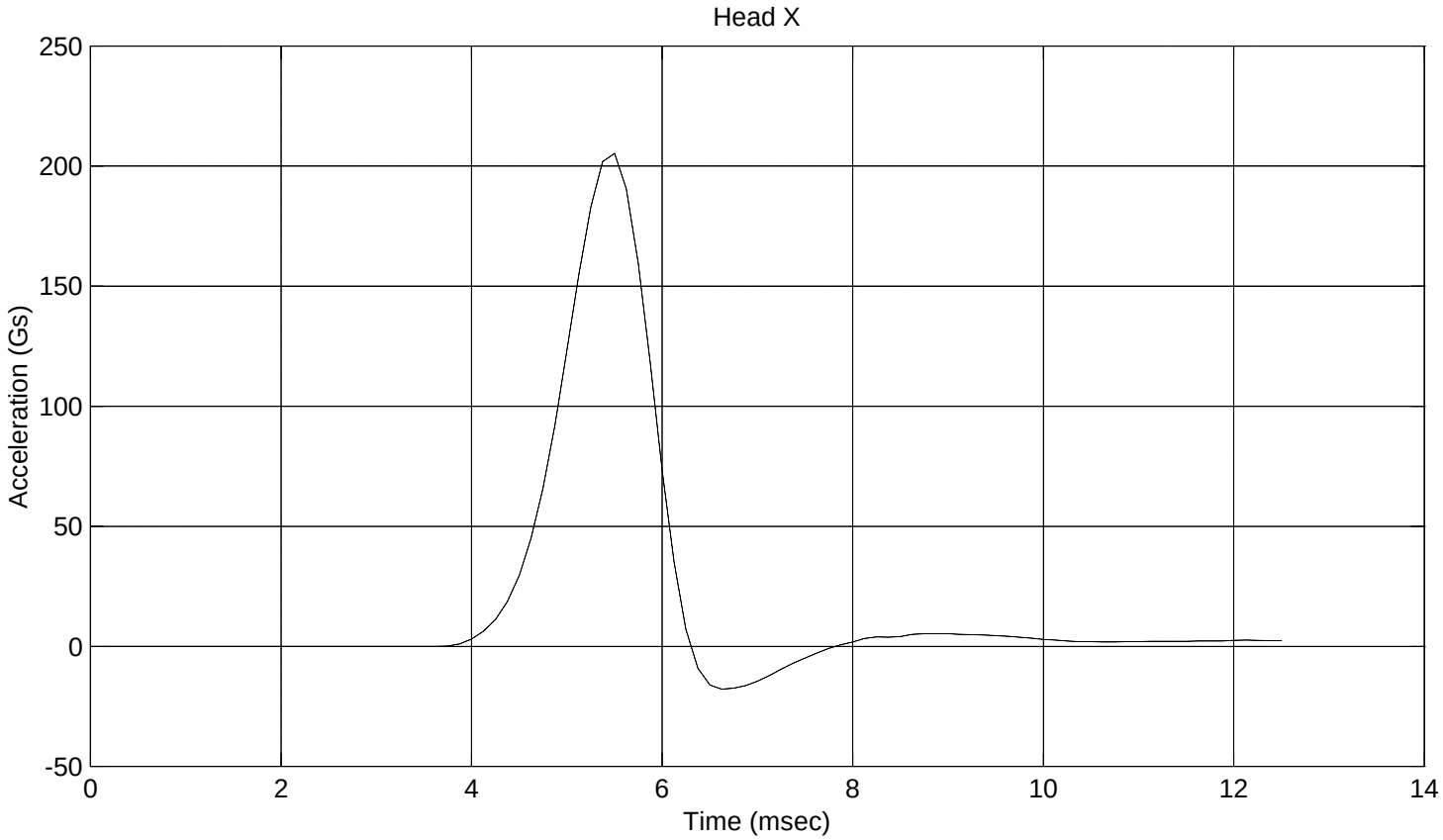
CONFIGURED FOR LEFT SIDE IMPACT

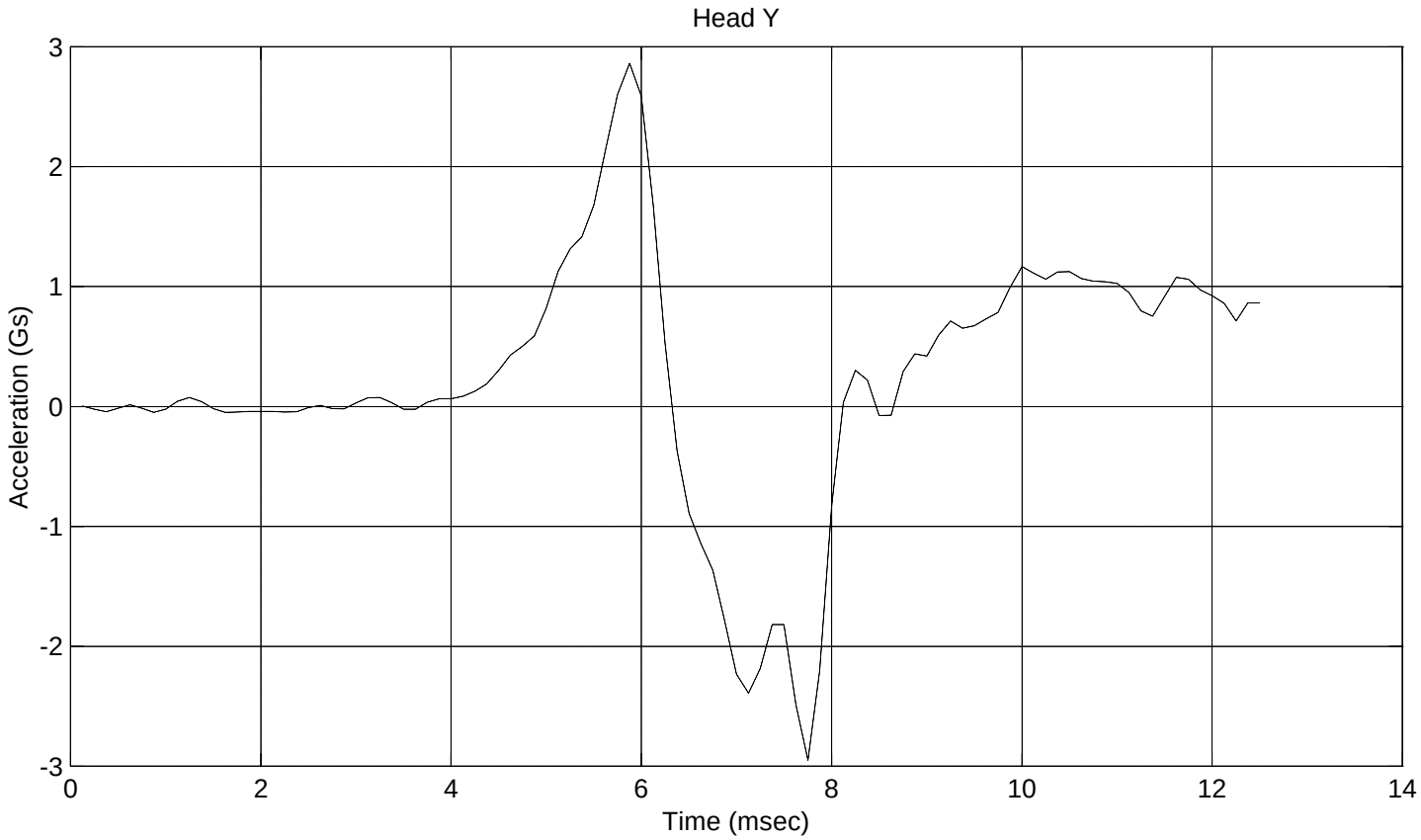
SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	245.23
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	2.95
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

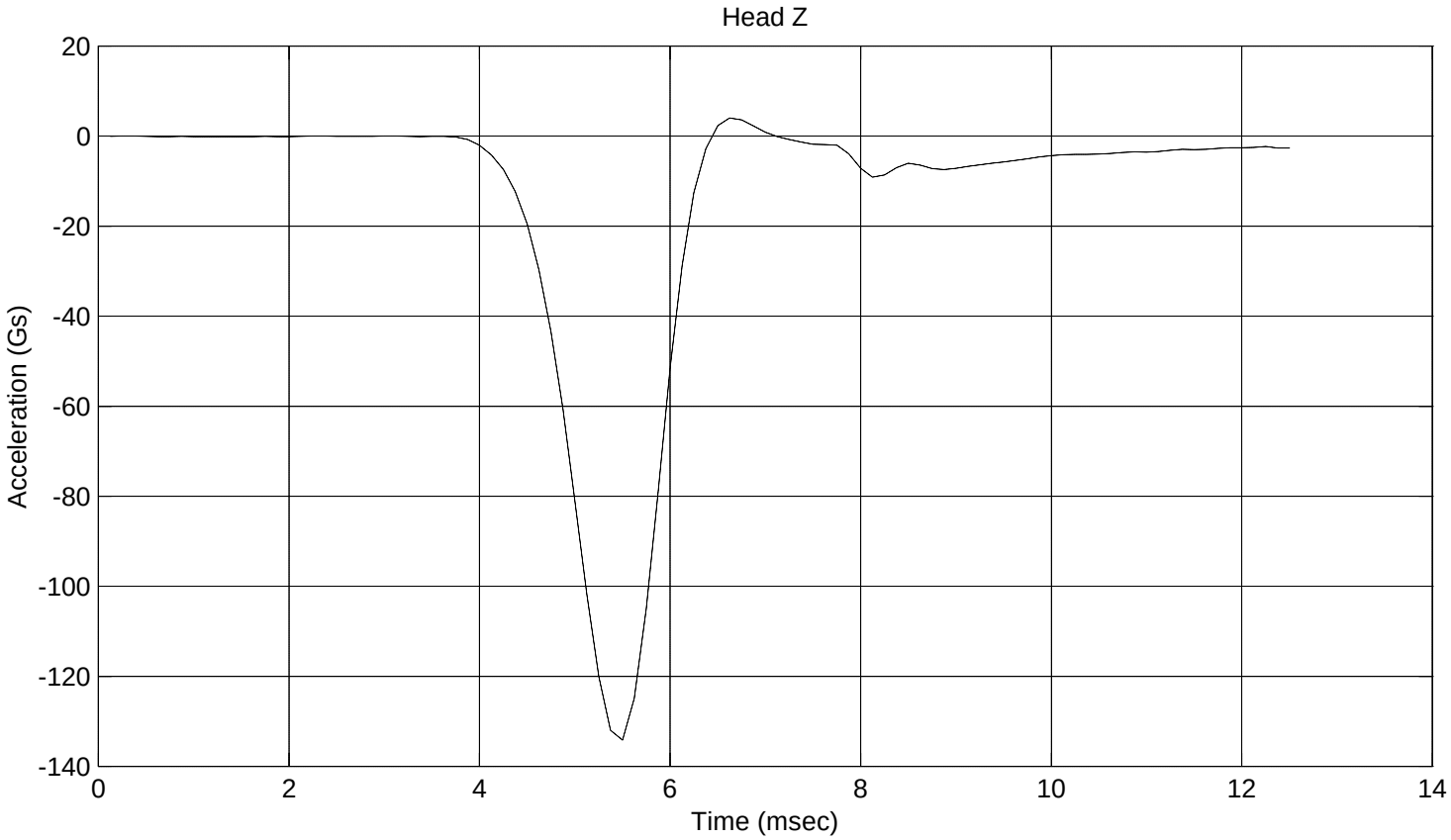
REMARKS: None

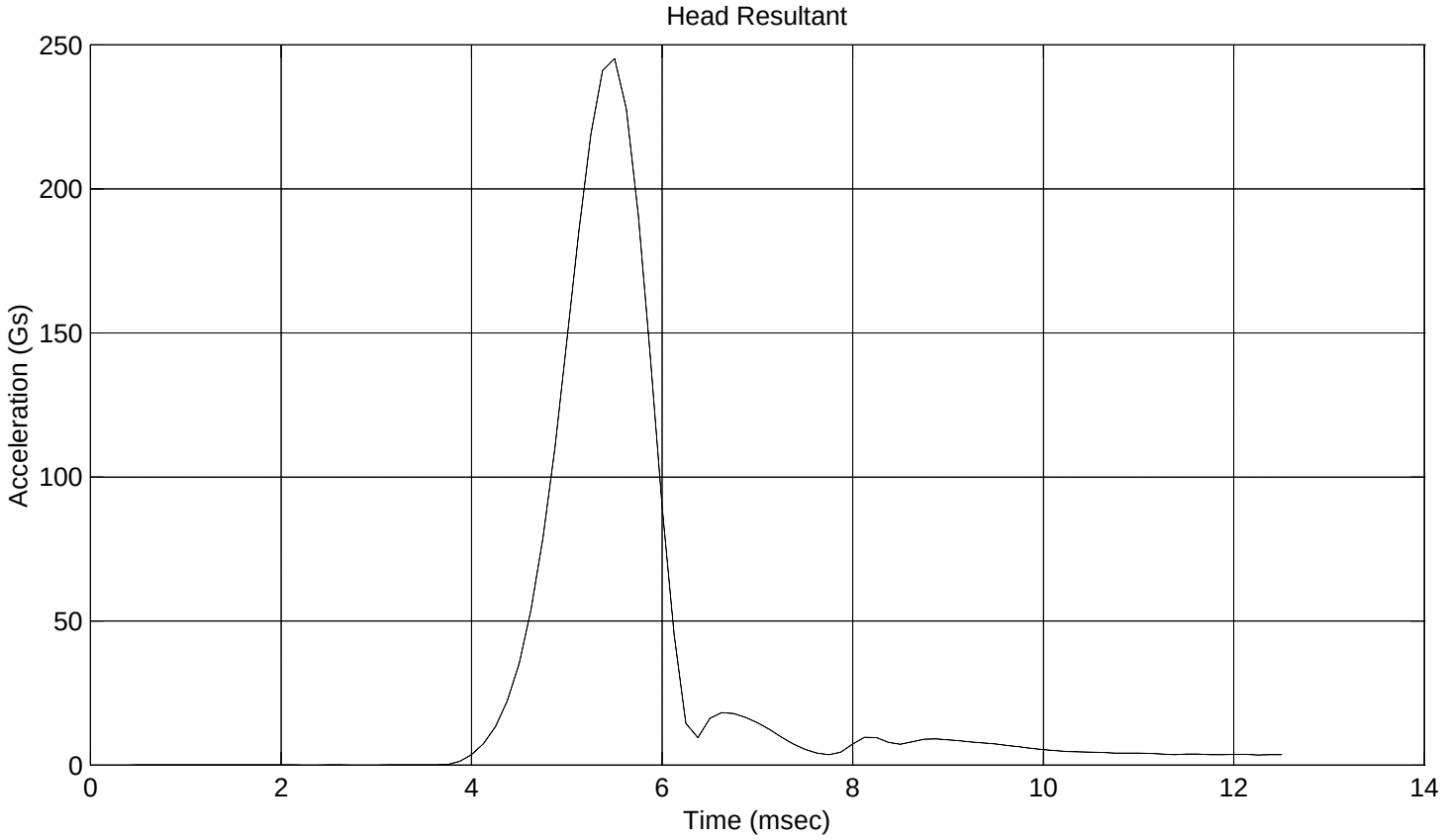
Hybrid II Head Drop Calibration 013300.hdp





Hybrid II Head Drop Calibration 013300.hdp





ABDOMINAL COMPRESSION TEST
POST TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	109
FORCE @ 19 mm (N)	163 - 221	173
FORCE @ 25 mm (N)	222 - 280	256
FORCE @ 33 mm (N)	325 - 391	383

REMARKS: None

Dummy S/N 013

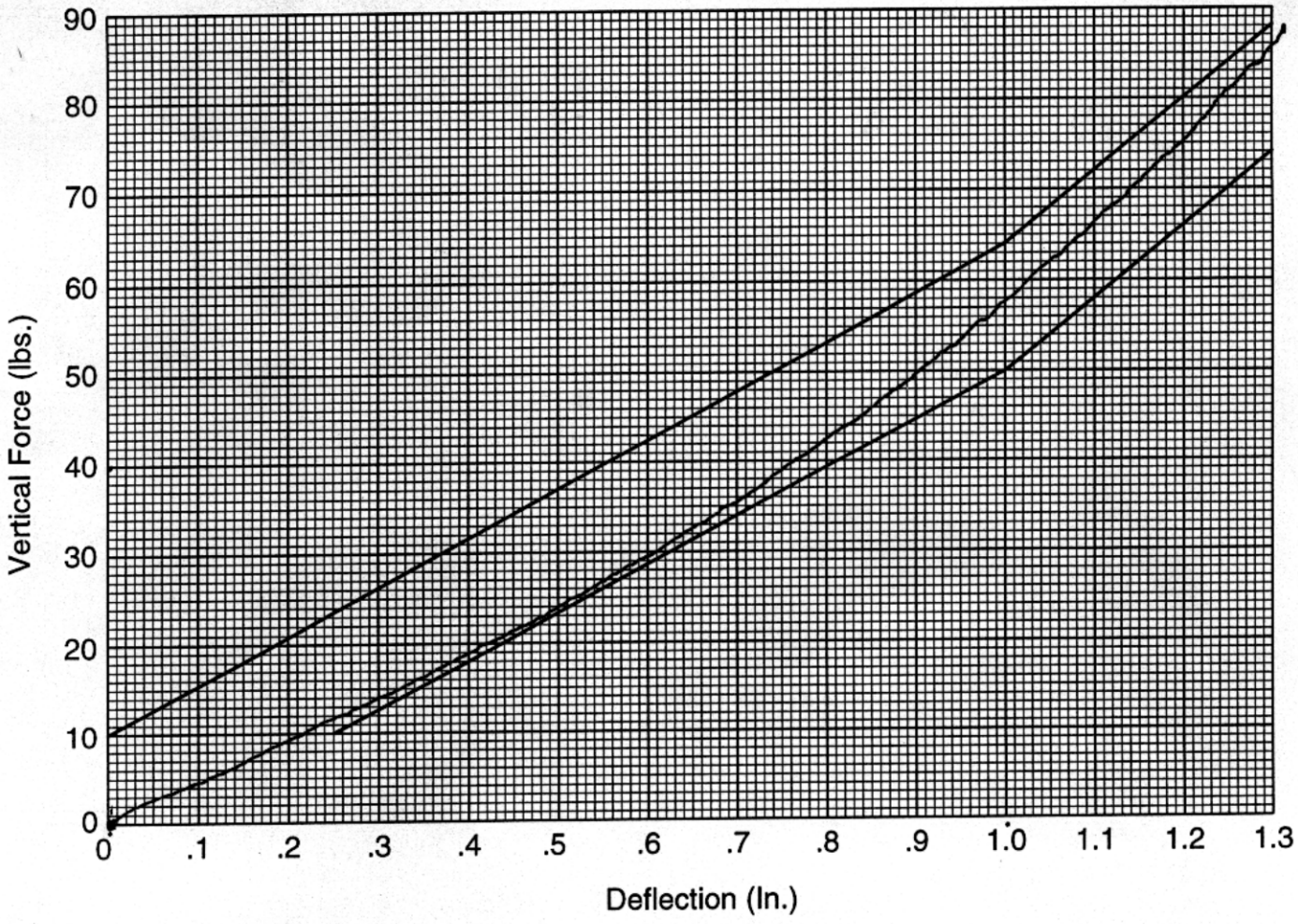
W/A

Date 11-30-2000

Performed By

Temp. 70°

Humidity 31%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	118
FORCE @ 30° (N)	151.2 - 204.6	171
FORCE @ 40° (N)	204.6 - 258	235
RETURN ANGLE	12° max.	5.5°

REMARKS: None

Dummy S/N 013

W/A

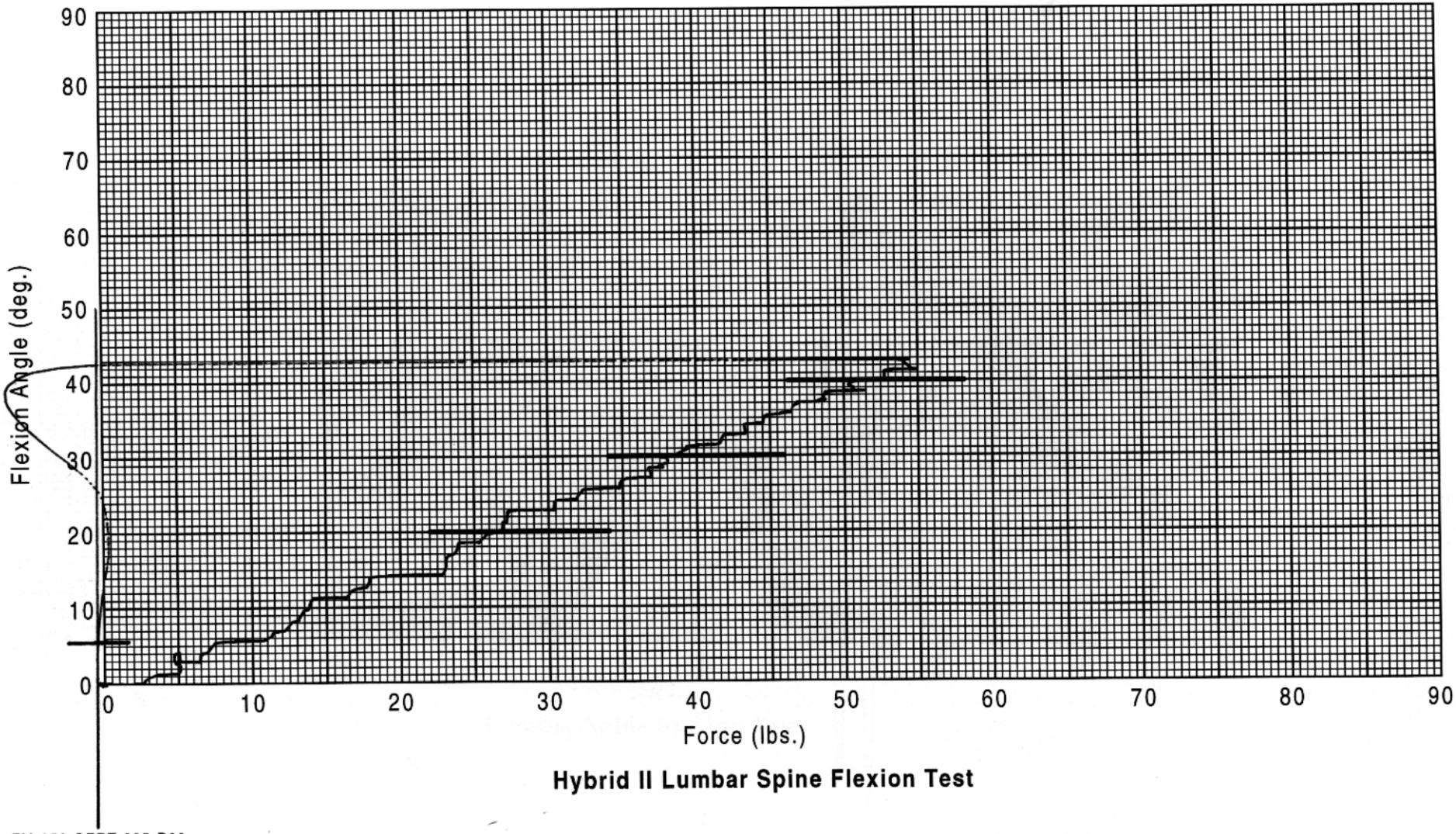
Date 11-30-2000

Performed By BS

Temp. 71°

Humidity 31%

ORIGINAL



Hybrid II Lumbar Spine Flexion Test

FM-052-CERT-005-R00

POST TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1

Date: 11/30/00 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS
POST TEST

SID NO.: 027

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	907
RH- Rib Height (mm)	502 - 520	519
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	368

REMARKS: None

LATERAL THORAX IMPACT TEST
POST TEST

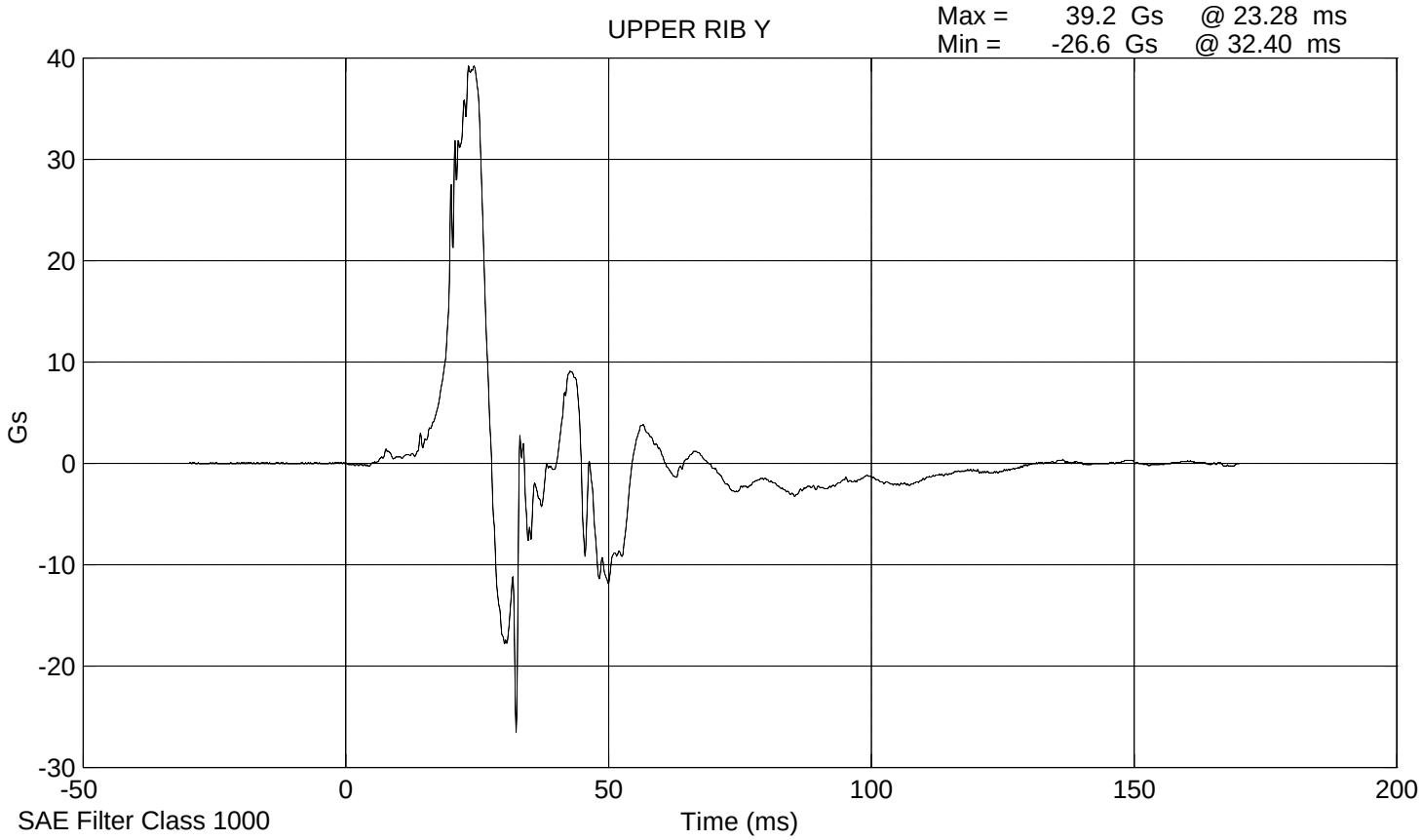
CONFIGURED FOR LEFT SIDE IMPACT

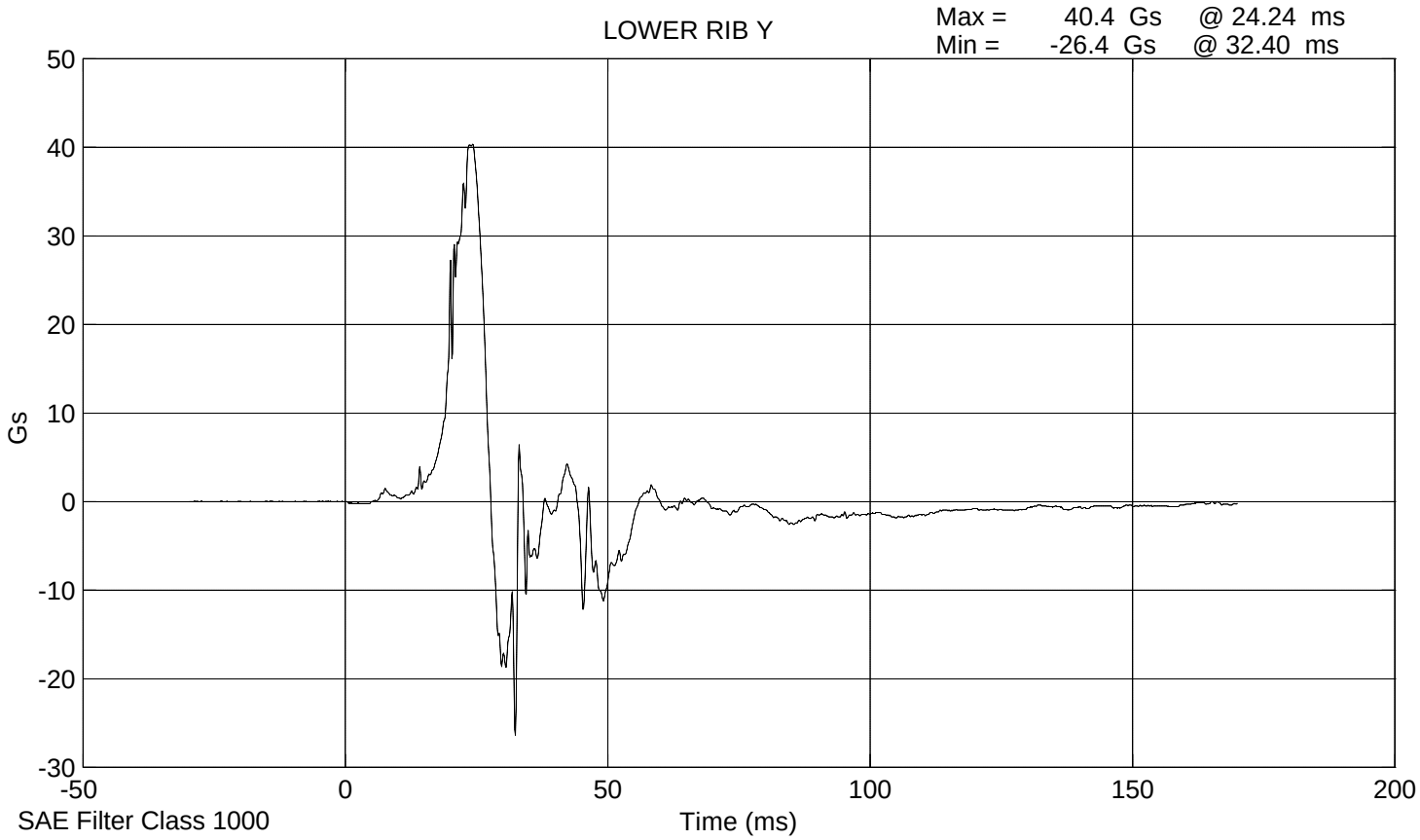
SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE. HUMIDITY (%)	10 - 70	32
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	39.9
LOWER RIB (g's)	37 - 46	39.8
LOWER SPINE (g's)	15 - 22	21.1

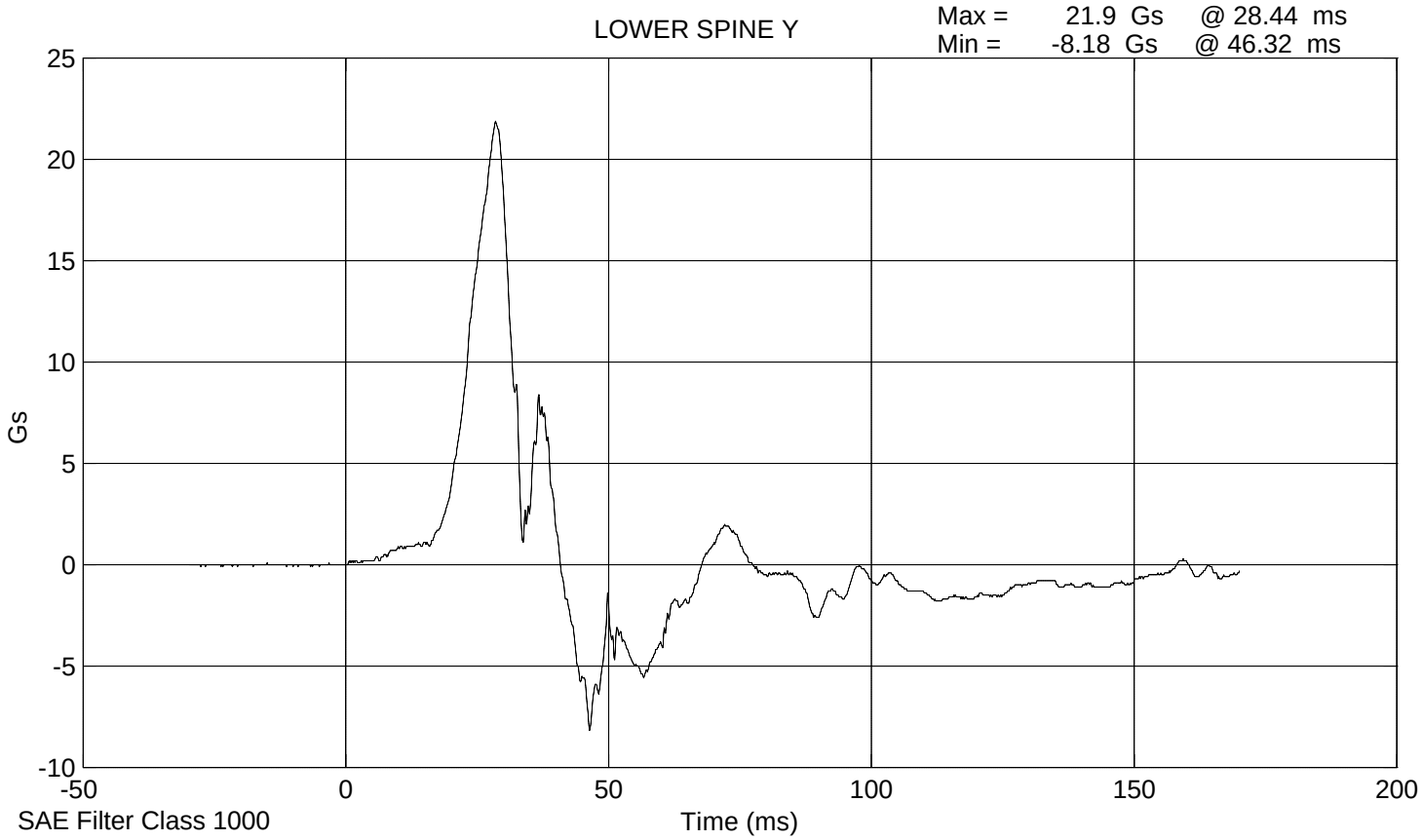
REMARKS: None

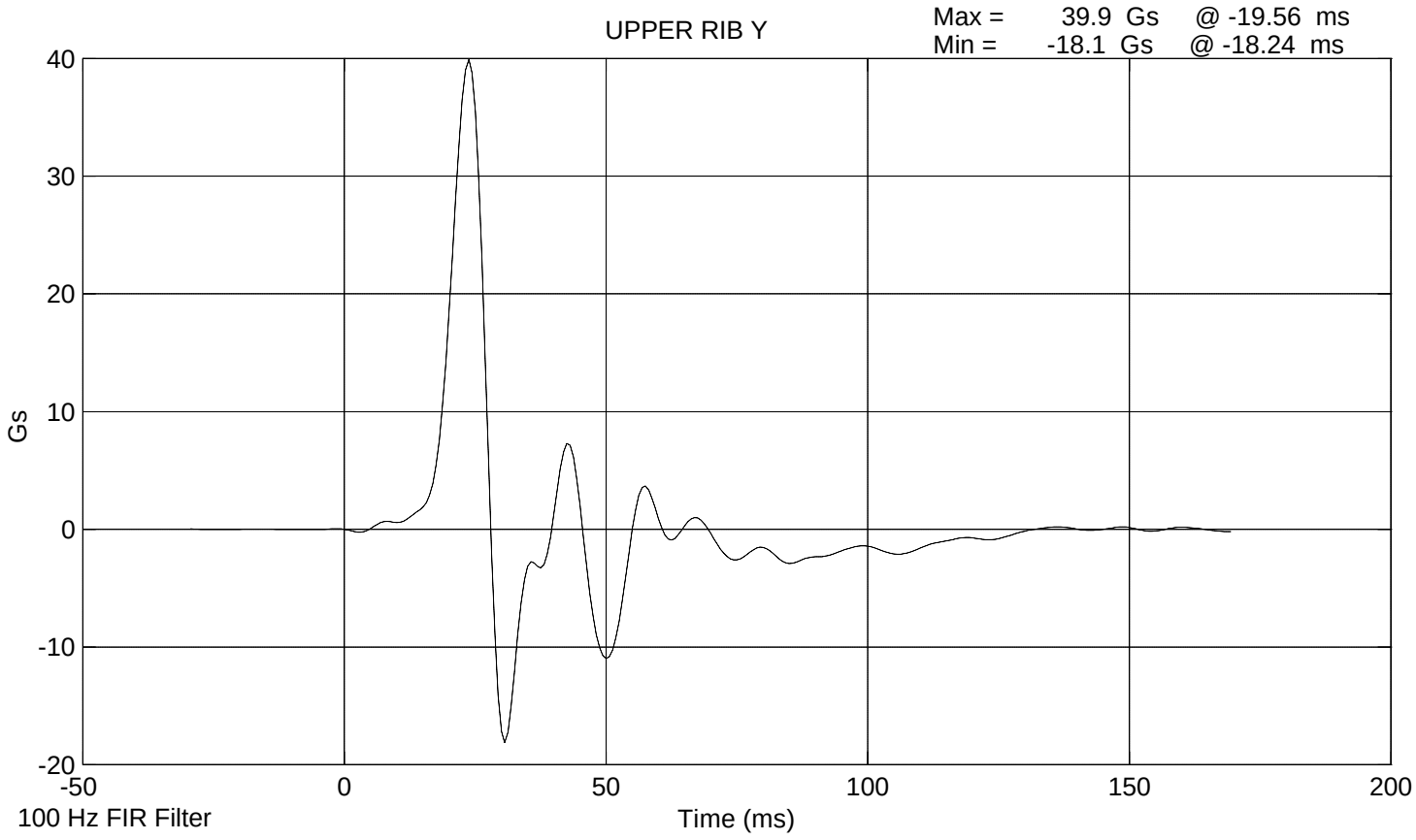
SID 027 Thorax Impact Test @ 4.2977 m/s



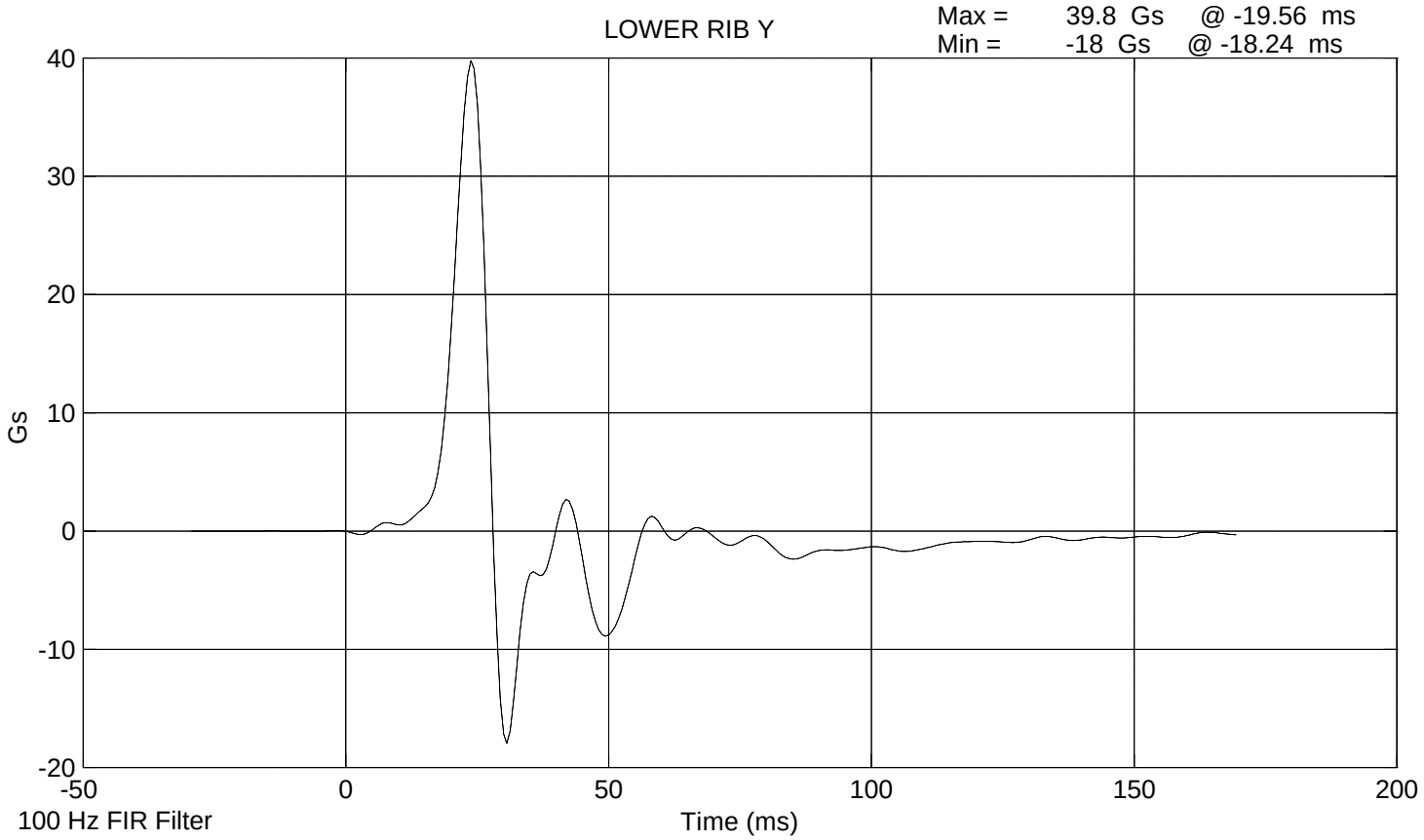


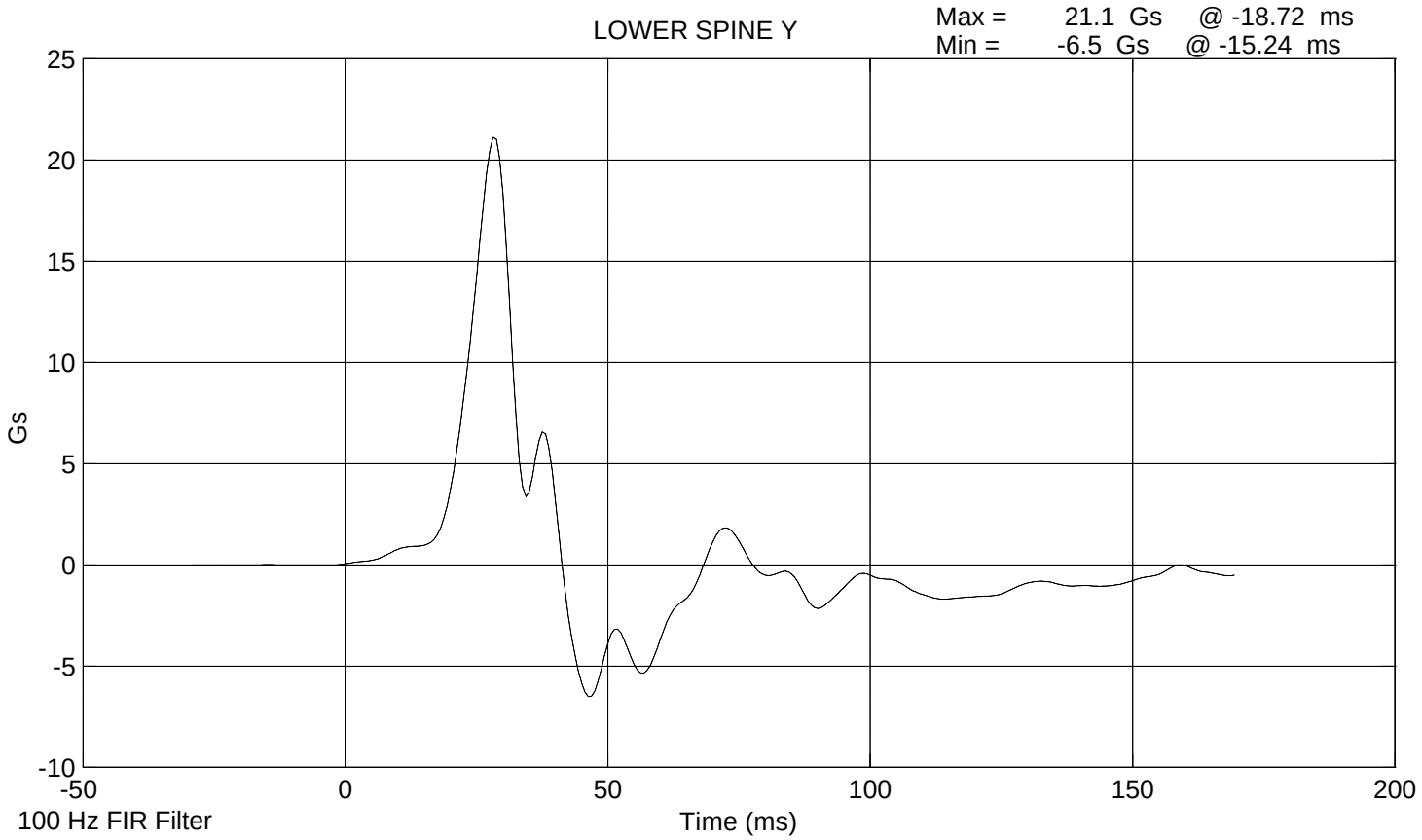
SID 027 Thorax Impact Test @ 4.2977 m/s





SID 027 Thorax Impact Test @ 4.2977 m/s





LATERAL PELVIS IMPACT TEST
POST TEST

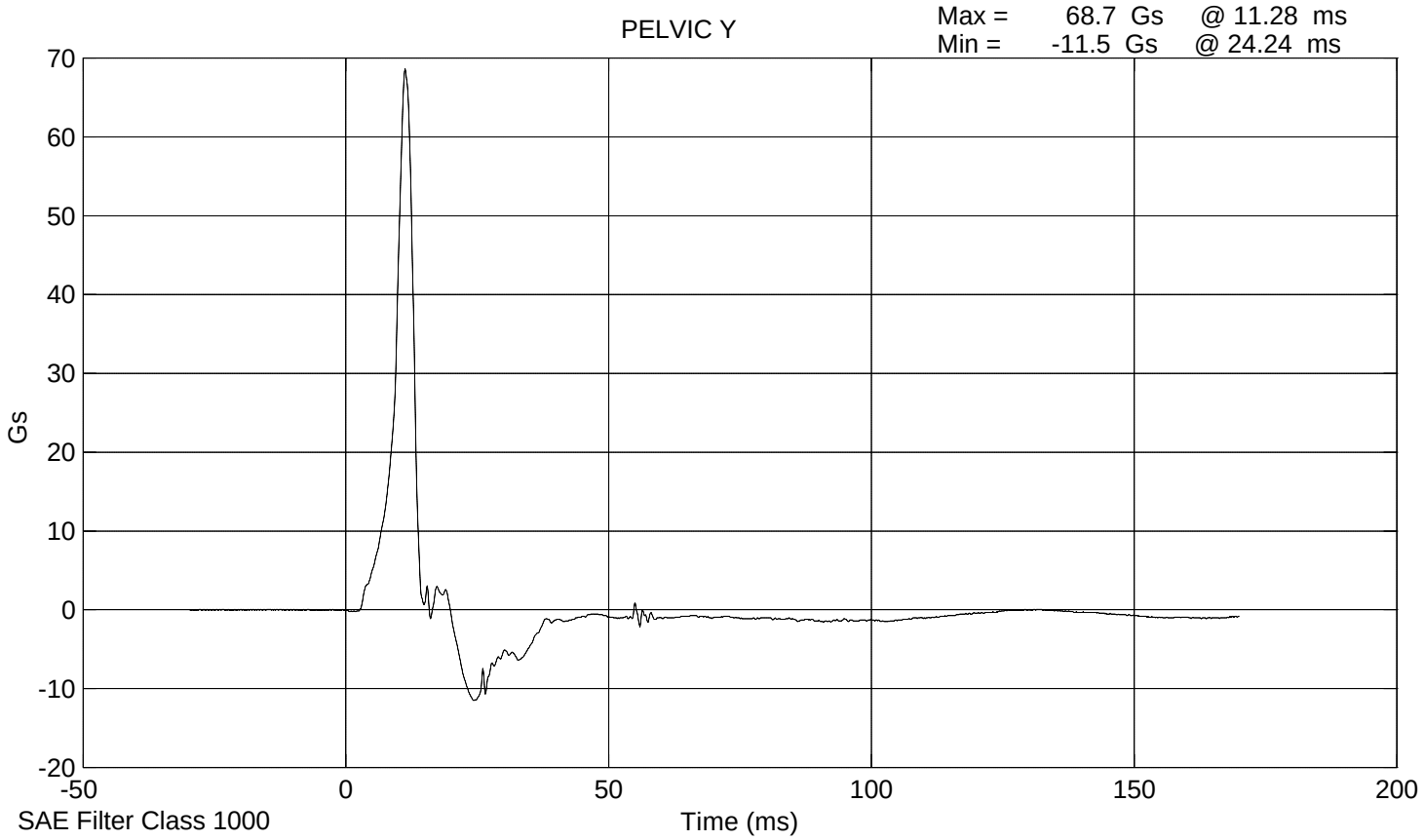
CONFIGURED FOR LEFT SIDE IMPACT

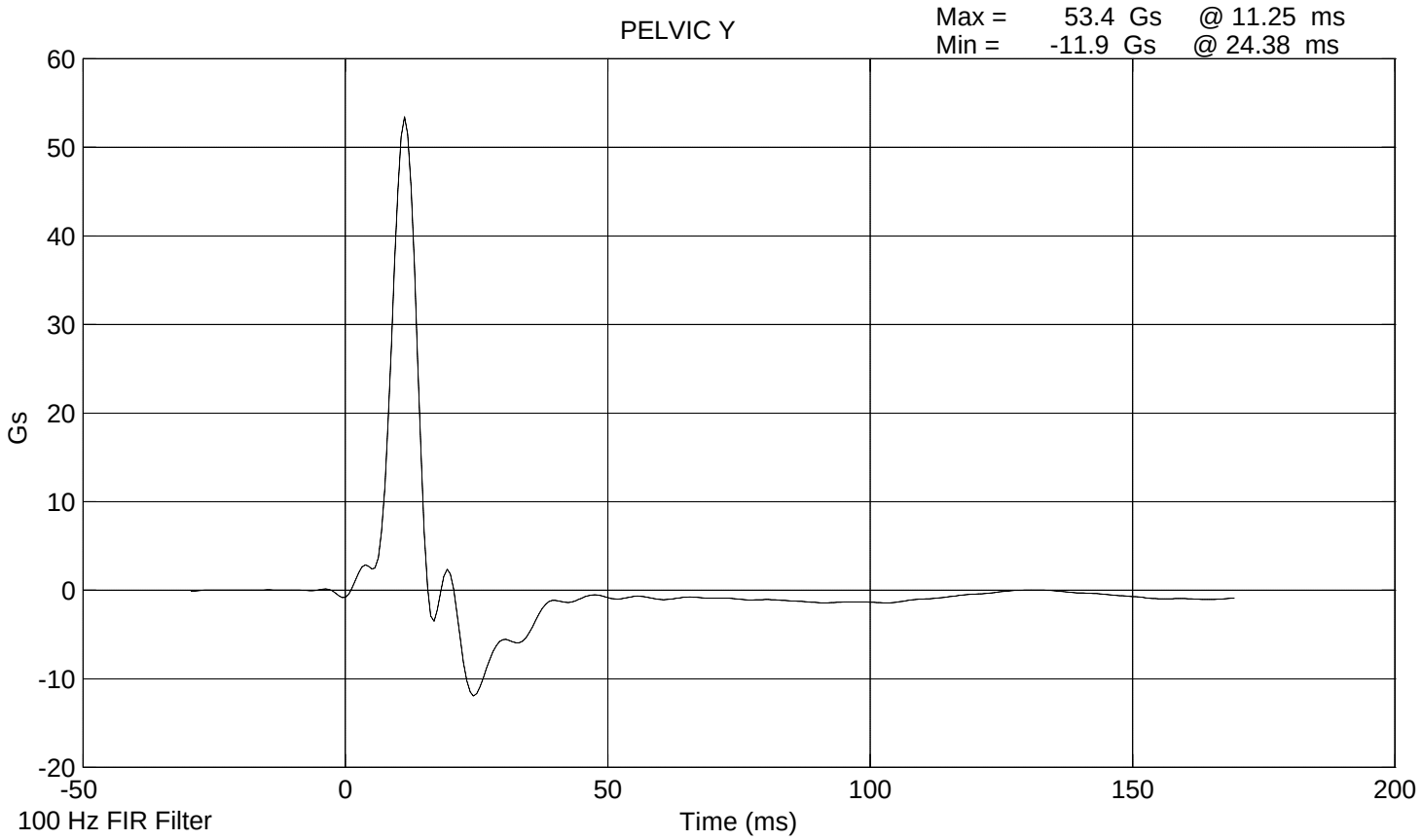
SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE. HUMIDITY (%)	10 - 70	32
PROBE SPEED (m/s)	4.27 - 4.33	4.29
PELVIS ACCELERATION (g's)	40 - 60	53.4

REMARKS: None

SID 027 Pelvic Impact Test @ 4.2885 m/s





HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

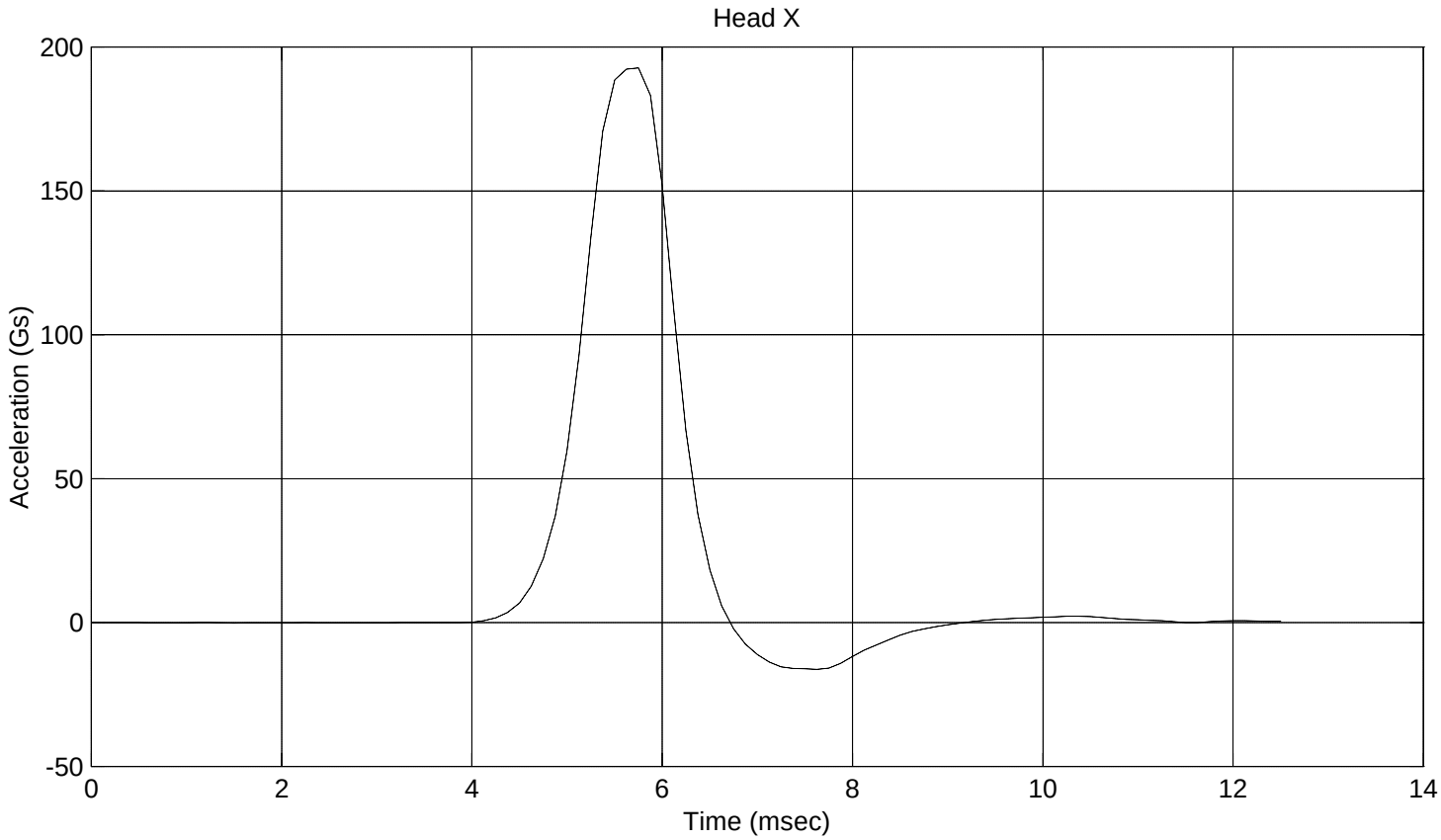
CONFIGURED FOR LEFT SIDE IMPACT

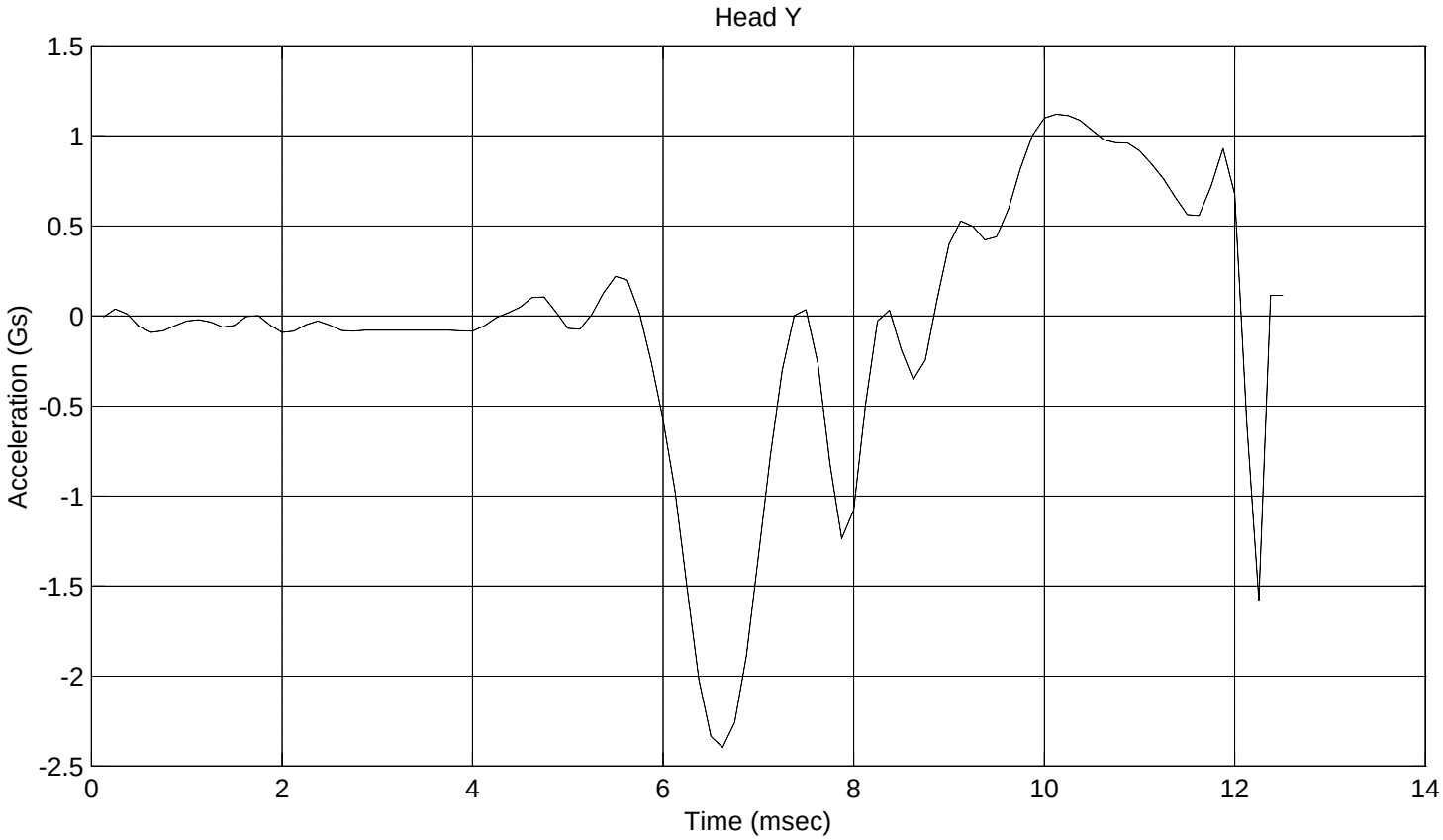
SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	243.5
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	2.4
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

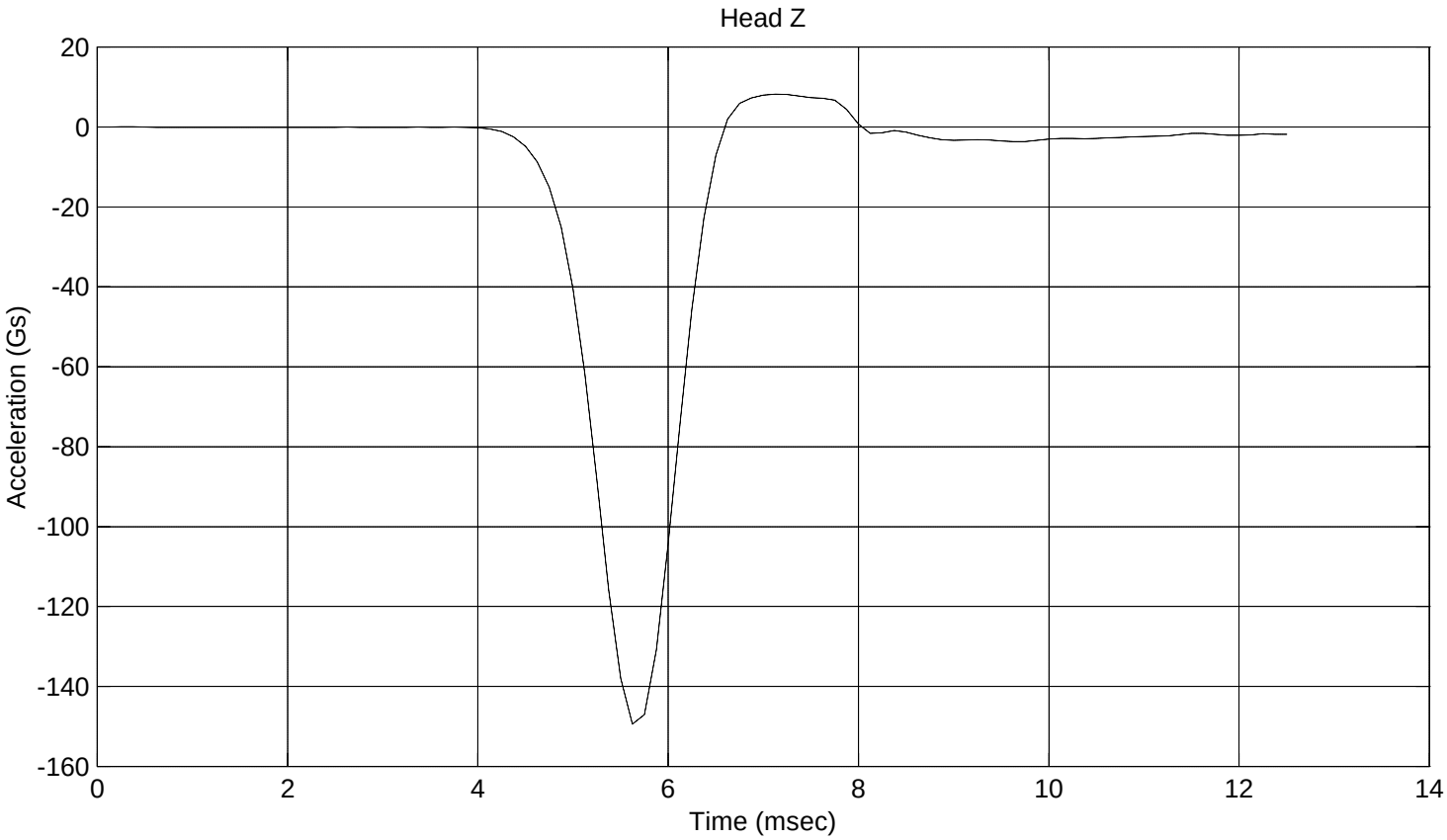
REMARKS: None

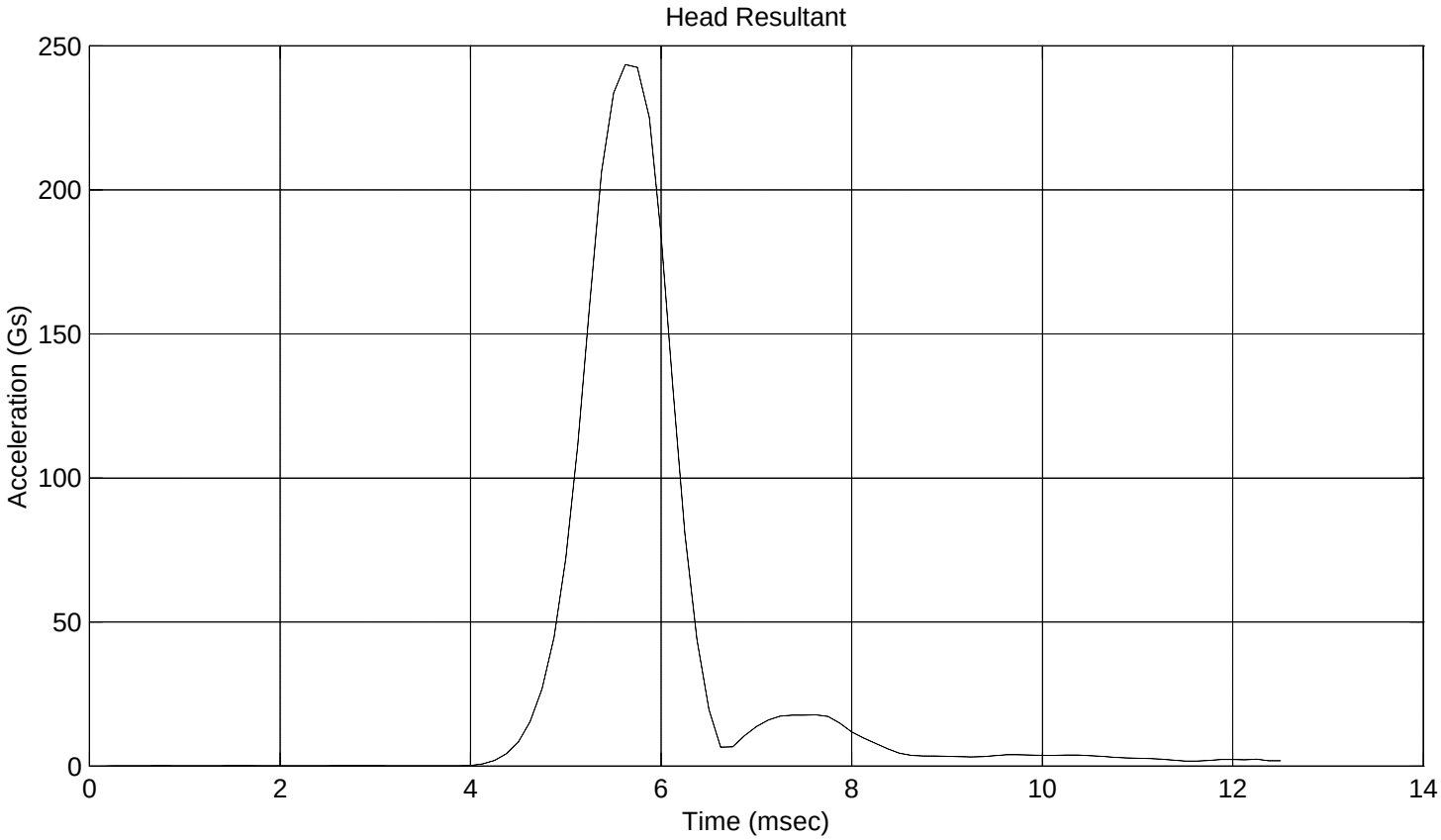
Hybrid II Head Drop Calibration 027900.hdp





Hybrid II Head Drop Calibration 027900.hdp





ABDOMINAL COMPRESSION TEST
POST TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32
FORCE @ 13 mm (N)	104 - 162	115
FORCE @ 19 mm (N)	163 - 221	179
FORCE @ 25 mm (N)	222 - 280	260
FORCE @ 33 mm (N)	325 - 391	389

REMARKS: None

Dummy S/N 027

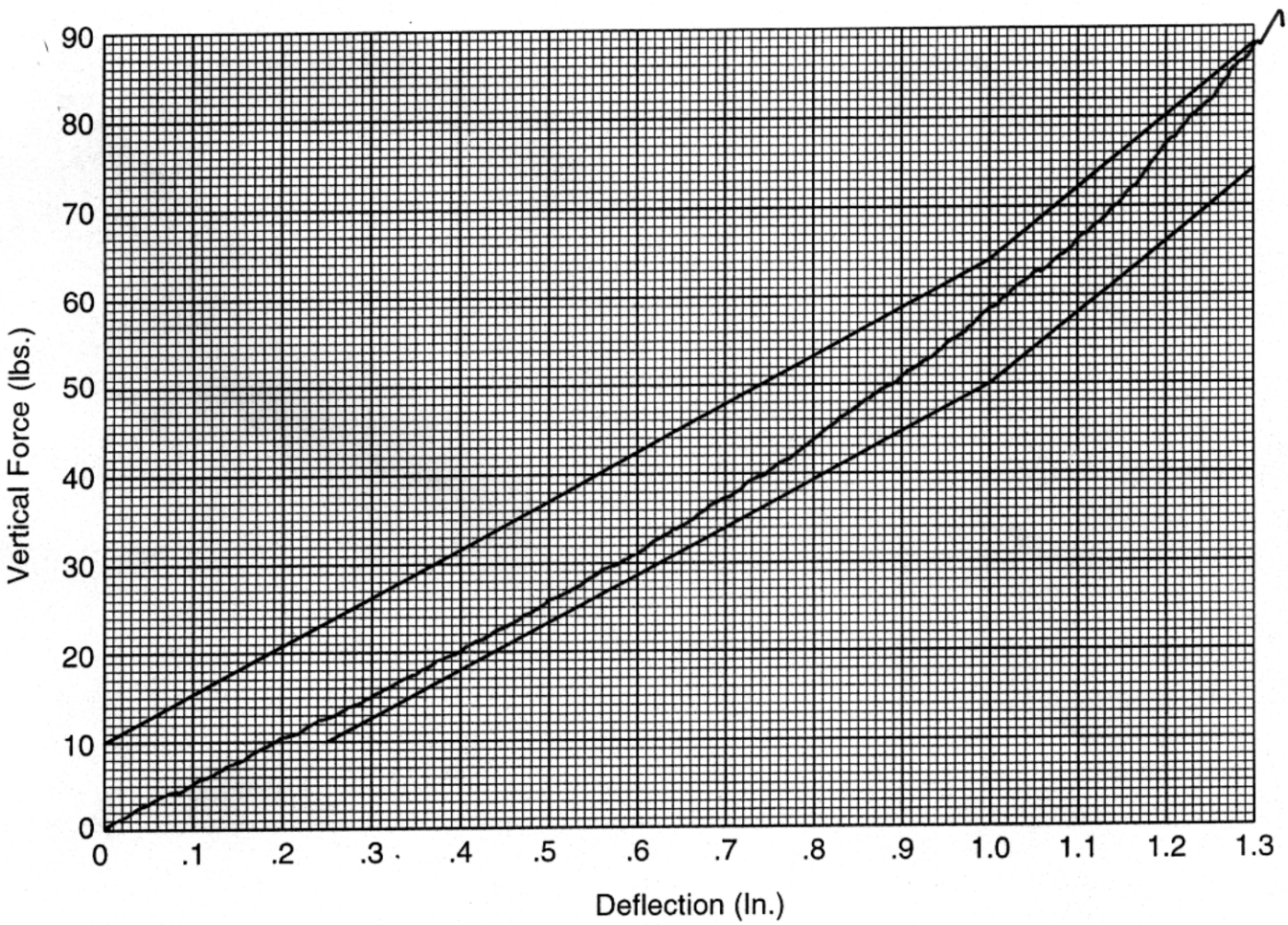
W/A

Date 12-5-2000

Performed By

Temp. 71°

Humidity 32%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: 11/30/00 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	107.6
FORCE @ 30° (N)	151.2 - 204.6	160.1
FORCE @ 40° (N)	204.6 - 258	226.9
RETURN ANGLE	12° max.	4.2°

REMARKS: None

Dummy S/N 027

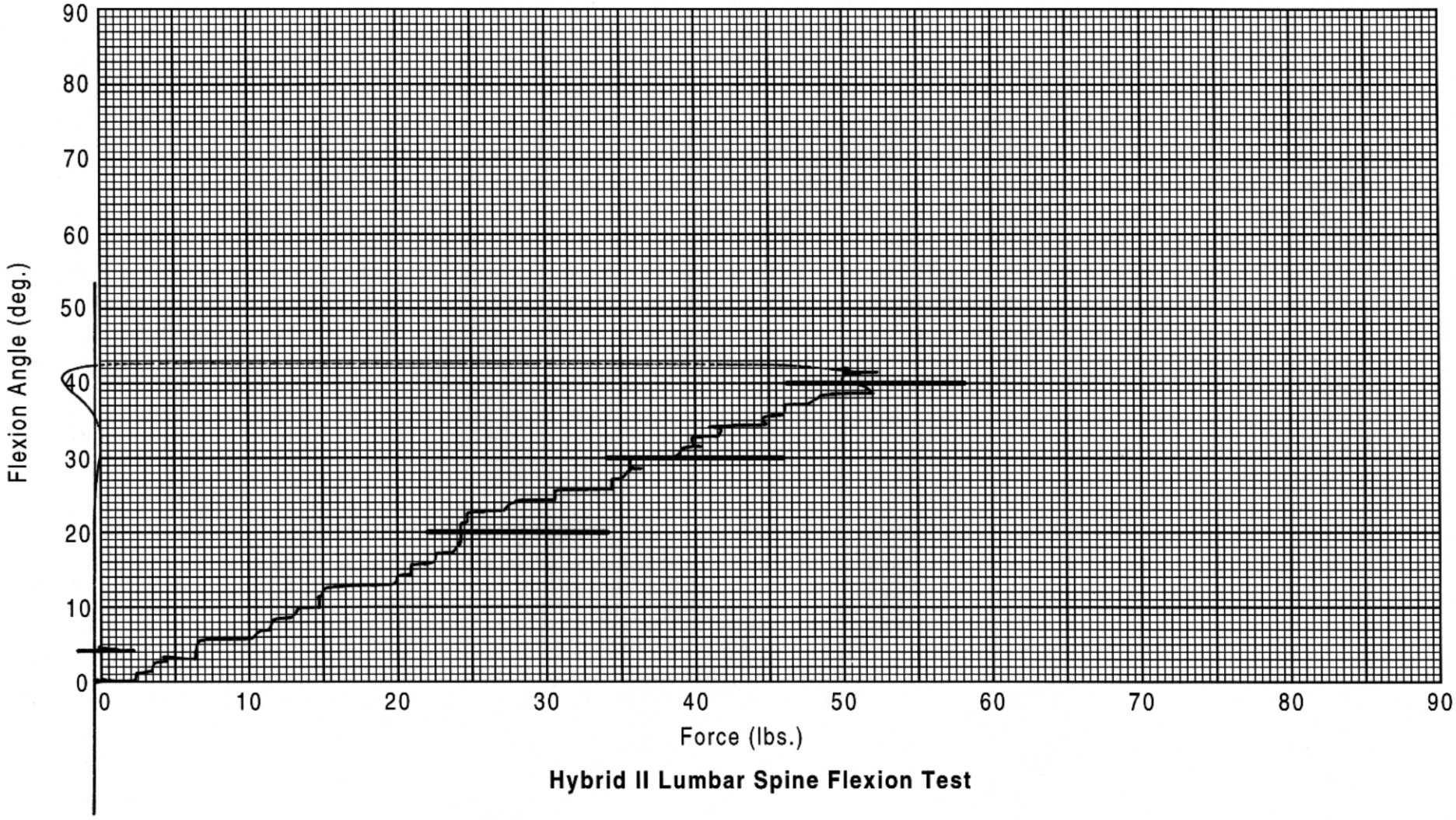
W/A

Date 12-5-2000

Performed By

Temp. 71°

Humidity 32%



Hybrid II Lumbar Spine Flexion Test

FM-052-CERT-005-R00

POST TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

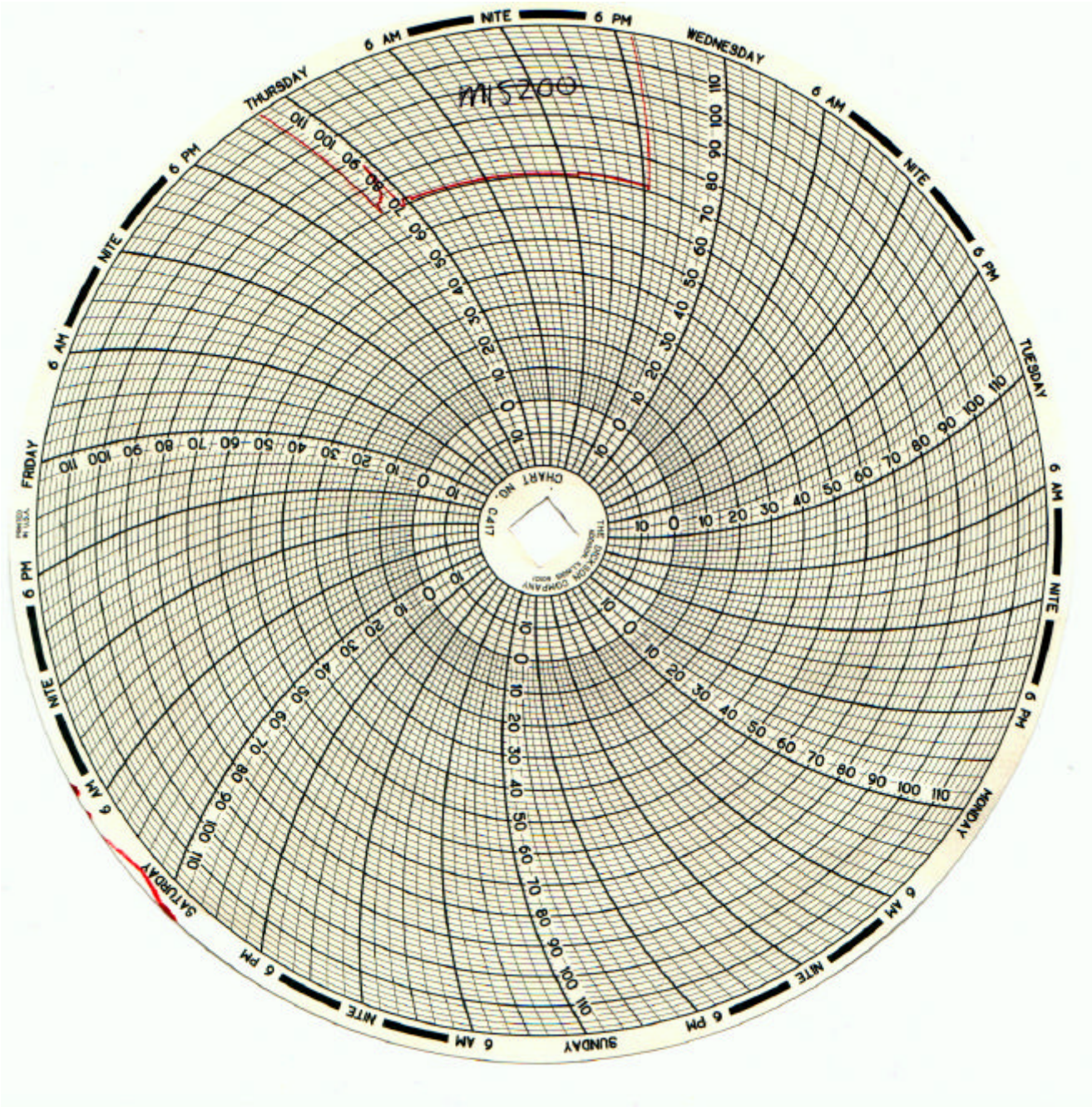
SID Serial No.: 027 Sequential Test Number: 1

Date: 11/30/00 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

TEMPERATURE TRACE



APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

SID INSTRUMENTATION

	FRONT SID NO.: 013		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P16813	ENDEVCO	9/13/00
HEAD AY	AC-P17255	ENDEVCO	9/14/00
HEAD AZ	AC-P17145	ENDEVCO	9/14/00
UPPER RIB	AC-P16761	ENDEVCO	9/14/00
LOWER RIB	AC-P17131	ENDEVCO	9/14/00
LOWER SPINE	AC-P15736	ENDEVCO	9/14/00
PELVIS	AC-P16628	ENDEVCO	9/14/00
UPPER RIB REDUNDANT	AC-P17247	ENDEVCO	9/14/00
LOWER RIB REDUNDANT	AC-P16616	ENDEVCO	9/13/00
LOWER SPINE REDUNDANT	AC-P17288	ENDEVCO	9/14/00
PELVIS REDUNDANT	AC-P16575	ENDEVCO	9/14/00

	REAR SID NO.: 027		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P16964	ENDEVCO	9/13/00
HEAD AY	AC-P17286	ENDEVCO	9/13/00
HEAD AZ	AC-P16597	ENDEVCO	9/13/00
UPPER RIB	AC-P17236	ENDEVCO	9/13/00
LOWER RIB	AC-P16593	ENDEVCO	9/13/00
LOWER SPINE	AC-P16979	ENDEVCO	9/15/00
PELVIS	AC-P14388	ENDEVCO	9/15/00
UPPER RIB REDUNDANT	AC-P16662	ENDEVCO	9/13/00
LOWER RIB REDUNDANT	AC-P17237	ENDEVCO	9/13/00
LOWER SPINE REDUNDANT	AC-P17258	ENDEVCO	9/15/00
PELVIS REDUNDANT	AC-P12587	ENDEVCO	9/15/00

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-B11073	ENDEVCO	9/7/00
RIGHT FRONT SILL (Y)	AC-B10954	ENDEVCO	9/7/00
RIGHT FRONT SILL (Z)	AC-J27941	ENDEVCO	8/31/00
RIGHT REAR SILL (X)	AC-ACC06	ENDEVCO	9/8/00
RIGHT REAR SILL (Y)	AC-B10481	ENDEVCO	9/8/00
RIGHT REAR SILL (Z)	AC-B11351	ENDEVCO	9/8/00
REAR FLOORPAN ABOVE AXLE (X)	AC-J32831	ENDEVCO	7/6/00
REAR FLOORPAN ABOVE AXLE (Y)	AC-J31026	ENDEVCO	9/21/00
REAR FLOORPAN ABOVE AXLE (Z)	AC-APA30	ENDEVCO	7/6/00
LEFT REAR SILL (Y)	AC-ACCW0	ENDEVCO	8/7/00
LEFT FRONT SILL (Y)	AC-J18436	ENDEVCO	8/31/00
LEFT FRONT DOOR CENTERLINE (Y)	AC-X86	ICS	8/14/00
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-D29	ICS	8/14/00
MID REAR OF LEFT FRONT DOOR (Y)	AC-D61	ICS	8/14/00
LEFT FRONT DOOR UPPER C\L (Y)	AC-A14124	ENDEVCO	8/7/00
MID REAR OF LEFT REAR DOOR (Y)	AC-13939	ENDEVCO	8/7/00
LEFT REAR DOOR UPPER C\L (Y)	AC-32779	ENDEVCO	8/7/00
LOWER LEFT B- PILLAR (Y)	AC-A13883	ENDEVCO	6/13/00
MIDDLE LEFT B-PILLAR (Y)	AC-A14126	ENDEVCO	6/13/00
LOWER LEFT A-PILLAR (Y)	AC-A14131	ENDEVCO	6/13/00
UPPER LEFT A-PILLAR (Y)	AC-A12776	ENDEVCO	6/12/00
FRONT SEAT TRACK (Y)	AC-A13926	ENDEVCO	6/12/00
REAR SEAT TRACK (Y)	AC-D79	ICS	8/14/00
VEHICLE CG (X)	AC-BB14	ENDEVCO	9/18/00
VEHICLE CG (Y)	AC-AP064	ENDEVCO	9/18/00
VEHICLE CG (Z)	AC-B10955	ENDEVCO	9/18/00
MDB CG (X)	AC-CL60	ENDEVCO	8/31/00
MDB CG (Y)	AC-CJ54	ENDEVCO	8/31/00
MDB CG (Z)	AC-GK12	ENDEVCO	8/31/00
MDB REAR FRAME MEMBER (X)	AC-CX05	ENDEVCO	8/31/00
MDB REAR FRAME MEMBER (Y)	AC-A27F	ENDEVCO	8/31/00

REMARKS: None