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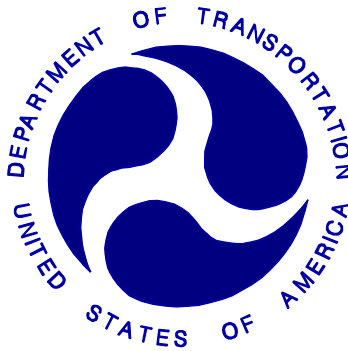
**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

DAIMLERCHRYSLER
2001 DODGE CARAVAN
MPV

NHTSA NUMBER: M10302

VERIDIAN ENGINEERING TEST NUMBER: 8506-17

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
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February 26, 2001

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

This Final Test Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-98-C-02001. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

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15. Supplementary Notes																																	
16. Abstract A 55/28 kph 90° Impact Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2001 Dodge Caravan Minivan 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 February 26, 2001. The impact velocity of the Moving Deformable Barrier (MDB) was 61.80 kph, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21 °C. The target vehicle post-test maximum crush was 383 mm at level 2. The test or target vehicle's performance is given below: <table border="0"> <thead> <tr> <th></th> <th><u>Front SID</u></th> <th></th> <th><u>Rear SID</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td><u>47</u></td> <td>g's</td> <td><u>45</u></td> <td>g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td><u>54</u></td> <td>g's</td> <td><u>52</u></td> <td>g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td><u>68</u></td> <td>g's</td> <td><u>62</u></td> <td>g's</td> </tr> <tr> <td>Thoracic Trauma Index (TTI):</td> <td><u>61</u></td> <td>g's</td> <td><u>57</u></td> <td>g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td><u>64</u></td> <td>g's</td> <td><u>105</u></td> <td>g's</td> </tr> </tbody> </table> The driver's door 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. The left sliding door unlatched and the upper and middle trolleys detached during the impact event.					<u>Front SID</u>		<u>Rear SID</u>		Left Upper Rib Acceleration:	<u>47</u>	g's	<u>45</u>	g's	Left Lower Rib Acceleration:	<u>54</u>	g's	<u>52</u>	g's	Lower Spine Acceleration:	<u>68</u>	g's	<u>62</u>	g's	Thoracic Trauma Index (TTI):	<u>61</u>	g's	<u>57</u>	g's	Pelvis Acceleration (PEV):	<u>64</u>	g's	<u>105</u>	g's
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17. Key Words New Car Assessment Program (NCAP) Side Impact MDB Side Impact Dummy (SID)		18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Reference Division Room 5108 (NAD-52) 400 Seventh St., S.W. Washington, D.C. 20590 Telephone No. (202) 366-4946 ATTN: Robert Hornicle																															
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SECTION 1

PURPOSE AND 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 Dodge Caravan MPV. 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 Dodge Caravan MPV 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 61.80 kph (38.4 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 February 26, 2001. 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 (T₁₂) 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)	61	57
PEV (g)	64	105

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET 1

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2001 Dodge Caravan MPV
 Vehicle Body Color: Green VIN: 1B4GP25B21B135936
 Vehicle NHTSA No.: M10302 Month & Year of Manufacture: 1-01
 Engine Data: 4 Cylinders; - CID; 2.4 Liters; - cc
 Engine Placement: - Longitudinal; or X Lateral
 Transmission: 4 Speed; - Manual; X Automatic; X Overdrive
 Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel
 Odometer Reading 48 km
 Options: X A/C; X Power Steering; X Pwr.Brakes; X Pwr. Windows

DATA FROM TIRE PLACARD

Tire Pressure* (at capacity); 248 kPa FRONT
248 kPa REAR
 Recommended Tire Size: P215/70R15
 Tires on Test Vehicle: P215/70R15 ; Manufacturer: Goodyear
 Vehicle Capacity Data:
 Number of Occupants: 2 Front; 2 Rear; 3 3rd Seat; 7 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 = 522 kg (A)
 No. of Occupants x 68.04 kg. = 476.3 kg (B)
 Vehicle Cargo Capacity = 45.7 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front = <u>526.0</u> kg	Left Rear = <u>375.0</u> kg
Right Front = <u>481.0</u> kg	Right Rear = <u>366.0</u> kg
TOTAL FRONT = <u>1007.0</u> kg	TOTAL REAR = <u>741.0</u> kg
% of Total Weight = <u>57.6</u> %	% of Total Weight = <u>42.4</u> %
TOTAL WEIGHT = <u>1748.0</u> kg	

* Tire pressure used in test.

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max. Fluids	=	<u>1748.0</u>	kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	<u>45.7</u>	kg (B)
Weight of two instrumented Side Impact Dummies	=	<u>162.4</u>	kg (C)
TEST VEHICLE TARGET WEIGHT:	=	<u>1956.1</u>	kg (A+B+C)

FULLY LOADED TEST VEHICLE (UDVW + 2 SIDs + CARGO):

Left Front	=	<u>595.5</u>	kg	Left Rear	=	<u>458.5</u>	kg
Right Front	=	<u>478.0</u>	kg	Right Rear	=	<u>428.5</u>	kg
TOTAL FRONT	=	<u>1073.5</u>	kg	TOTAL REAR	=	<u>887.0</u>	kg
% of Total Weight	=	<u>54.8</u>	%	% of Total Weight	=	<u>45.2</u>	%
TOTAL TEST WEIGHT	=	<u>1960.5</u>	kg				

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

Left Front	=	<u>578.0</u>	kg	Left Rear	=	<u>463.5</u>	kg
Right Front	=	<u>474.5</u>	kg	Right Rear	=	<u>435.5</u>	kg
TOTAL FRONT	=	<u>1052.5</u>	kg	TOTAL REAR	=	<u>899.0</u>	kg
% of Total Weight	=	<u>53.9</u>	%	% of Total Weight	=	<u>46.1</u>	%
TOTAL TEST WEIGHT	=	<u>1951.5</u>	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED:

Left Front 795 Right Front 793 Left Rear 787 Right Rear 794

FULLY LOADED:

Left Front 772 Right Front 781 Left Rear 754 Right Rear 770

READY FOR TEST:

Left Front 778 Right Front 786 Left Rear 755 Right Rear 772

Test Vehicle Wheelbase: 2878 millimeters

C.G. = 1325.8 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side	=	<u>4695</u>	millimeters
Left Side	=	<u>4695</u>	millimeters
Centerline	=	<u>4805</u>	millimeters

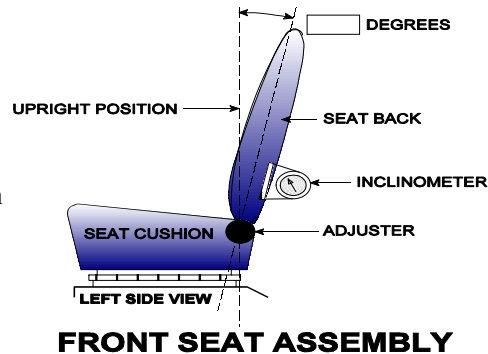
DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302

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 CUSHION PLACEMENT: Placed in detent 11 (of 0 to 22 detents) or mid-position

Total Length of Adjustment Travel: 220 millimeters

Total Number of Adjustment Positions or Detents: 23

FRONT SEAT BACK ADJUSTMENT POSITION: Reclined 9E rearward of full upright

Seat Back Torso Angle: 13.4 degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0 millimeters

Seat Back Adjustment Position: N/A

ADJUSTABLE STEERING COLUMN POSITION: Not Adjustable

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:

75.7 liters (Fuel Tank Usable Capacity)

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

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

Wheelbase = 2878 millimeters

Impact Point is 499 millimeters rearward of front axle centerline

(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 494 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2001 Dodge Caravan

Body Style: Minivan

VIN: 1B4GP25B21B135936

NHTSA No.: M10302

Test Date: February 26, 2001

Overall Length = 4805 millimeters; Overall Width = 1945 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front = 578.0 kg Left Rear = 463.5 kg

Right Front = 474.5 kg Right Rear = 435.5 kg

TOTAL FRONT = 1052.5 kg TOTAL REAR = 899.0 kg

TOTAL VEHICLE WEIGHT 1951.5 kg

Wheelbase = 2878 millimeters

Longitudinal C.G. from Center of Front Axle = 1325.8 millimeters

Impact Angle with Respect to Impactor = 90 degrees

ACTUAL IMPACT POINT

Actual Impact Point is 5 mm forward of nominal impact ref. line (Lateral)

Actual Impact Point is 5 mm below nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (305 mm above ground) = 229 millimeters

2. LEVEL 2 (776 mm above ground) = 383 millimeters

3. LEVEL 3 (643 mm above ground) = 350 millimeters

4. LEVEL 4 (957 mm above ground) = 298 millimeters

5. LEVEL 5 (1634 mm above ground) = 19 millimeters

Maximum Post-Test Intrusion = 383 millimeters

OCCUPANTS:

Front Passenger:

Rear Passenger:

Dummy Identification 013 268

Restraints Used 3-point seat belt 3-point seat belt

INSTRUMENTATION:

Number of Vehicle Data Channels: = 49

Number of Cameras: Onboard = 3

Offboard = 8

TOTAL = 11

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore Inc., 094A1200-4 001B1200

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

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

MDB WEIGHT:

Left Front	=	<u>409.5</u>	kg	Left Rear	=	<u>281.5</u>	kg
Right Front	=	<u>372.5</u>	kg	Right Rear	=	<u>299.0</u>	kg
TOTAL FRONT =		<u>782.0</u>	kg	TOTAL REAR =		<u>580.5</u>	kg
TOTAL MDB WEIGHT =		<u>1362.5</u>	kg				
Impact Angle (MDB C/L to Target Vehicle C/L)	=	<u>90</u>	degrees				
Impact Speed	=	<u>61.80</u>	kph				

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	<u>127</u>	millimeters
2. Row B at Top of Bumper Level	=	<u>65</u>	millimeters
3. Row C at Mid Level	=	<u>111</u>	millimeters
4. Row D at Top of Stack Level	=	<u>135</u>	millimeters

INSTRUMENTATION:

Number of MDB Data Channels	=	<u>5</u>
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DATA SHEET 4

POST-TEST OBSERVATIONS

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head:	<u>Side of head to the left shoulder; Top of the head to the left side window</u>	<u>Side of head to the left shoulder; Back of the head to the B-pillar</u>
Upper Torso:	<u>Interior door trim panel</u>	<u>Interior door trim panel</u>
Lower Torso:	<u>Interior door trim panel</u>	<u>Interior door trim panel</u>
Left Knee:	<u>Interior door trim panel</u>	<u>Interior door trim panel</u>
Right Knee:	<u>Left Knee</u>	<u>Left Knee</u>

DOOR OPENING:

	<u>LEFT DOOR</u>	<u>RIGHT DOOR</u>
Front:	<u>Closed/Operable</u>	<u>Closed/Operable</u>
Rear:	<u>See Comments</u>	<u>Closed/Operable</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

<u>Vertical: 5 mm forward</u>
<u>Horizontal: 5 mm below</u>

ARM REST LOCATIONS:

Front:	<u>Moved inboard during the event</u>
Rear:	<u>Moved inboard and cracked during the event</u>

SEAT MOVEMENT:

Front:	<u>Moved inboard during the event</u>
Rear:	<u>None</u>

GLAZING DAMAGE:

Windshield:	<u>Cracked at left top corner</u>
Window:	<u>Shattered during the event</u>

PILLAR PERFORMANCE:

The A- and B-pillars were moved inboard during the event with no separation occurring

SILL SEPARATION:

There were no visible tears or separation

AIR BAG DEPLOYMENT STATUS:

	<u>DRIVER</u>	<u>FRONT PASSENGER</u>	<u>REAR PASSENGER</u>
<u>FRONT</u>	<u>No</u>	<u>No</u>	<u>N/A</u>
<u>SIDE</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

OTHER NOTABLE IMPACT EFFECTS:

The left rear passenger door detached at the latch and top and middle tracks leaving it partially open after the event. The door was held only by its lower sliding track. The rear impact mark was 5 mm below and 5 mm forward.

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302

	Front Dummy ID# 013				Rear Dummy ID# 268			
	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	4.4	71.3	-19.7	82.1	64.5	91.2	-15.9	97.6
Lateral Y	37.4	59.8	-9.2	42.2	69.1	90.9	-17.7	51.0
Vertical Z	64.6	67.0	-6.6	53.7	115.5	90.8	-12.6	63.0
Resultant R	64.7	66.9	0.0	-18.8	134.8	90.8	0.0	-5.3
HIC	318.8				394.4			
RIB ACCELERATIONS:								
Upper Rib Lateral . . Y	47.2	45.7	-14.1	92.5	44.8	63.2	-8.9	106.3
Upper Rib Lateral . . Y(R)	46.3	45.7	-14.4	92.5	43.5	63.2	-10.2	162.5
Lower Rib Lateral . . Y	54.4	45.0	-6.9	106.9	51.7	49.3	-8.2	162.5
Lower Rib Lateral . . Y(R)	53.9	45.0	-9.2	163.2	53.0	48.7	-9.6	162.5
SPINE ACCELERATIONS:								
Lower Lateral Y	68.1	41.9	-11.5	60.6	62.4	47.5	*	*
Lower Lateral Y(R)	66.4	41.9	-11.4	60.6	62.0	47.5	-4.9	72.5
PELVIC ACCELERATIONS:								
Lateral Y	64.0	40.6	-6.6	53.8	104.7	43.1	-16.1	75.0
Lateral Y(R)	63.6	40.6	-6.6	53.8	109.9	43.1	-17.8	75.0

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.

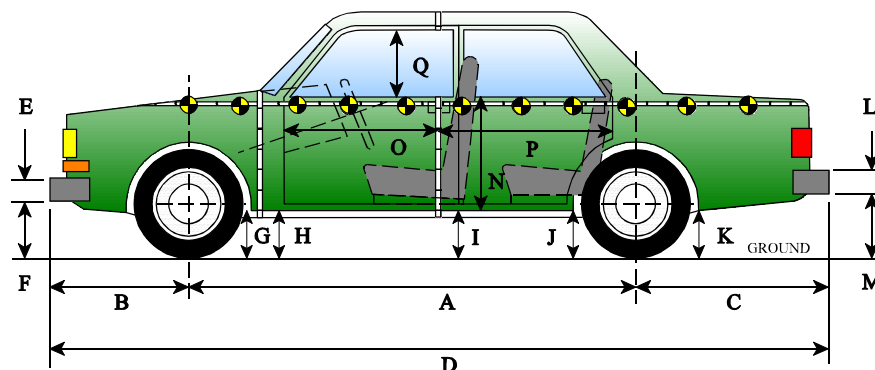
* Not accurate after 116 ms

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



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)	^a CHANGE
A	2876	2878	2865	-13
B	967	-	981	14
C	962	-	929	-33
D	4805	-	4775	-30
E	127	-	127	0
F	392	391	427	36
G	202	184	202	18
H	272	249	275	26
I	287	256	291	35
J1	248	222	242	20
J2	285	258	282	24
K	312	277	283	6
L	188	-	188	0
M	359	319	316	-3
N	763	-	695	-68
O	925	-	845	-80
P	1114	-	1080	-34
Q	569	-	610	41
R	4695	-	2869	-1,826
S	4695	-	4645	-50
T	1945	-	1690	-255

D = Length at Centerline
T = Width at B-Pillar

E&L = Bumper Thickness
J1 = To Pinch Weld

R = Right Side Length
J2 = To Sill

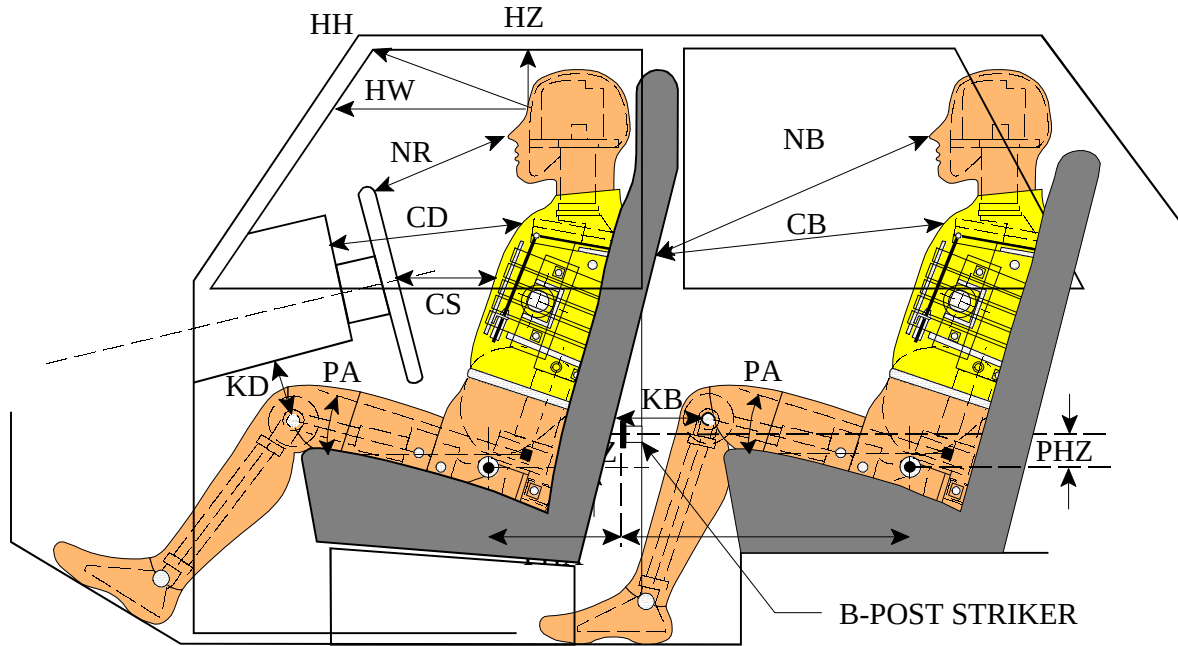
S = Left Side Length

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



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# <u>013</u>	LEFT REAR PASS. ID# <u>268</u>
HH	357	N/A
HW	583	N/A
HZ	176	180
NR/NB	411	620
CD/CB	547	597
CS	265	N/A
KDL(KDA°)/KBL(KBA°)	168 / (36 °)	232 / (13 °)
KDR(KBA°)/KBR(KBA°)	200 / (24 °)	238 / (13 °)
PA°	23.4 °	24.2 °
PHX	232	242
PHZ	34	53

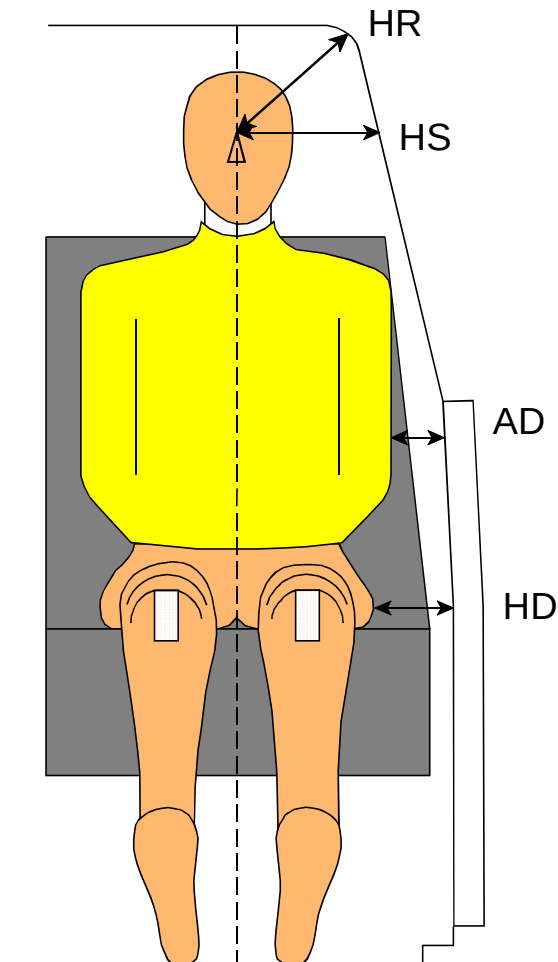
Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



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

	DRIVER ID # <u>013</u>		LEFT REAR PASS. ID # <u>268</u>	
HR	174		239	
HS	331		372	
AD*	LOWER: 130	UPPER: 200	LOWER: 194	UPPER: 245
HD	150		285	

* 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.

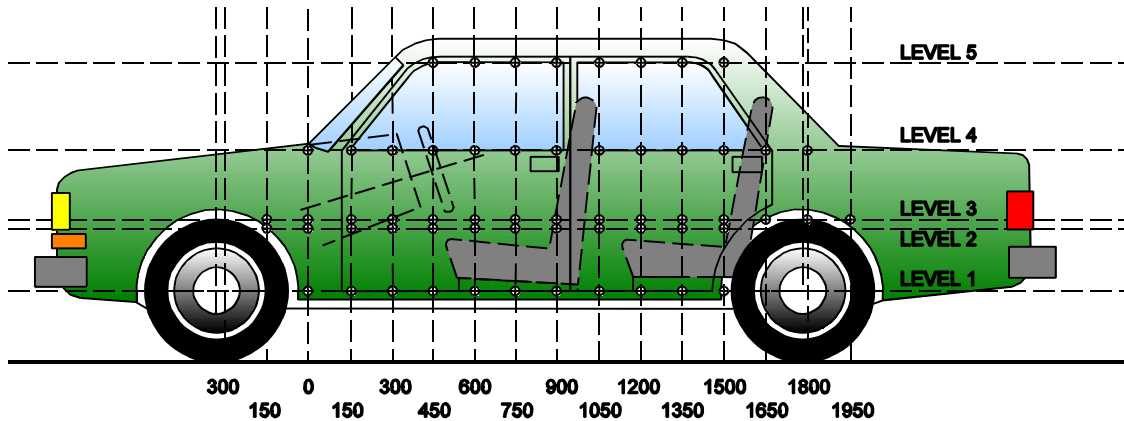
Upper measurement is taken laterally at the center of the upper rib accelerometer height from the SID arm segment to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



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:

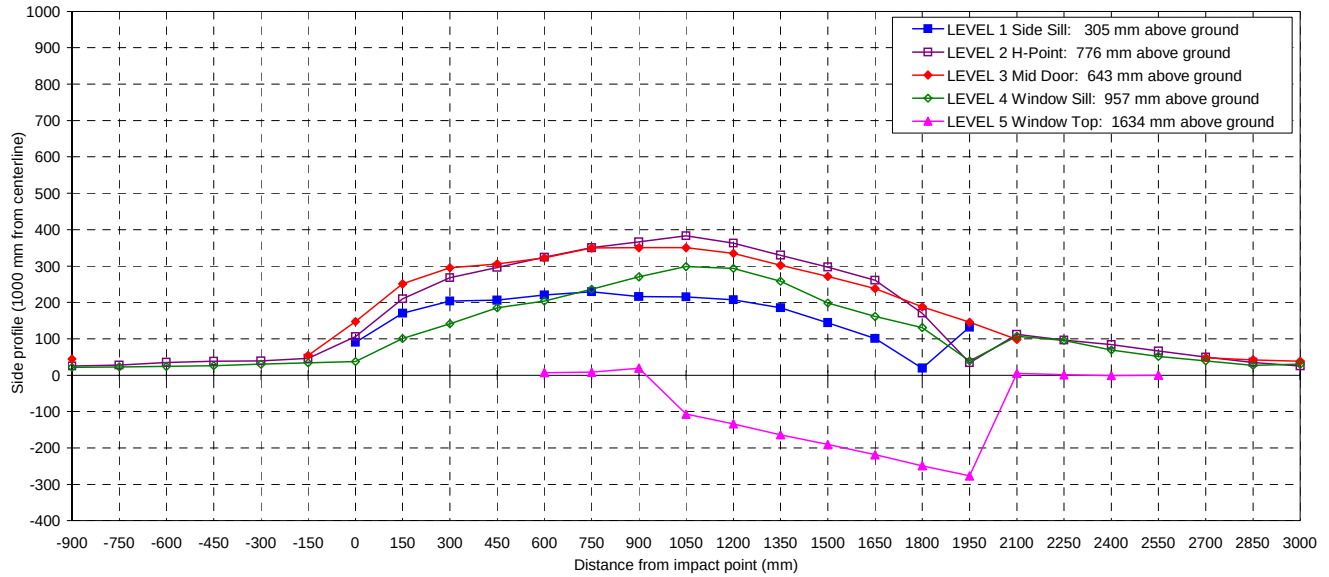
Level 5 @ Window Top	=	<u>1634</u>	millimeters
Level 4 @ Window Sill	=	<u>957</u>	millimeters
Level 3 @ Mid Door	=	<u>643</u>	millimeters
Level 2 @ Occupant H-Point	=	<u>776</u>	millimeters
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>305</u>	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



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

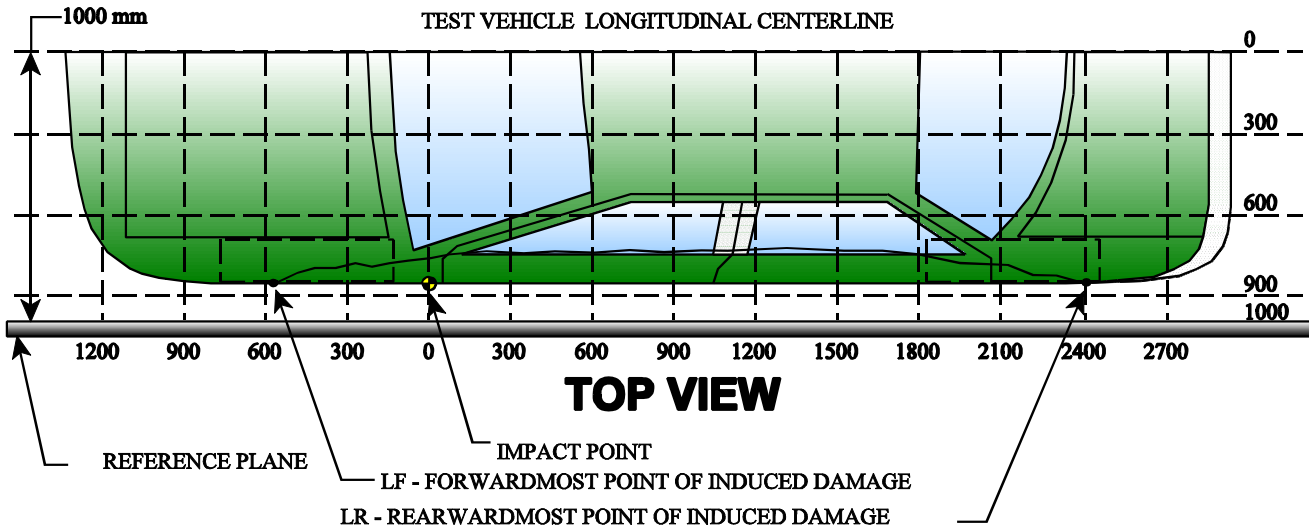
			DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																											
LEVEL	HEIGHT (mm)		-900	-750	-600	-450	-300	-150	0	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	
LEVEL 1 SIDE SILL	305	PRE	--	--	--	--	--	--	158	159	155	152	150	143	143	138	143	142	141	147	145	147	--	--	--	--	--	--	--	--
		POST	--	--	--	--	--	--	248	329	359	358	370	372	359	353	350	327	285	248	164	279	--	--	--	--	--	--	--	--
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	90	170	204	206	220	229	216	215	207	185	144	101	19	132	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LEVEL 2 H POINT	776	PRE	181	137	98	87	84	84	76	69	64	59	54	48	44	43	45	46	47	46	48	49	52	47	47	60	85	99	121	
		POST	206	165	133	125	123	130	182	279	332	355	378	398	410	426	408	376	344	307	218	83	164	143	131	126	135	134	146	
		CRUSH	25	28	35	38	39	46	106	210	268	296	324	350	366	383	363	330	297	261	170	34	112	96	84	66	50	35	25	
LEVEL 3 MID DOOR	643	PRE	153	--	--	--	--	78	76	70	66	63	61	57	55	52	52	56	56	61	61	64	70	--	--	--	62	112	135	
		POST	197	--	--	--	--	132	223	321	361	369	383	406	405	402	387	358	327	299	249	209	168	--	--	--	110	154	173	
		CRUSH	44	N/A	N/A	N/A	N/A	54	147	251	295	306	322	349	350	350	335	302	271	238	188	145	98	N/A	N/A	N/A	48	42	38	
LEVEL 4 WINDOW SILL	957	PRE	350	234	187	160	139	123	105	90	80	71	63	58	54	52	49	49	48	52	55	58	62	66	73	83	89	104	115	
		POST	372	257	211	186	169	157	142	191	221	256	267	294	324	350	342	307	246	213	186	97	169	161	142	135	128	131	145	
		CRUSH	22	23	24	26	30	34	37	101	141	185	204	236	270	298	293	258	198	161	131	39	107	95	69	52	39	27	30	
LEVEL 5 WINDOW TOP	1634	PRE	--	--	--	--	--	--	--	--	--	--	550	390	366	354	345	339	335	333	332	332	333	336	343	350	--	--	--	
		POST	--	--	--	--	--	--	--	--	--	--	--	557	398	385	247	211	175	144	114	83	55	338	337	342	350	--	--	--
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	8	19	-107	-134	-164	-191	-219	-249	-277	5	1	-1	0	N/A	N/A	N/A

DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



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.

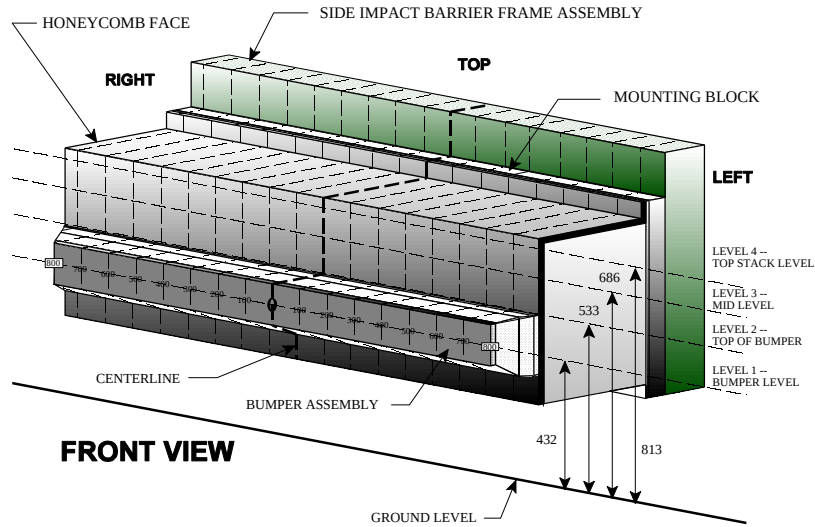
DPD MEASUREMENTS		POST TEST (mm)	PRETEST (mm)	STATIC CRUSH (mm)
1	(LF = <u>-300</u> mm)	123	84	39
2	300	361	66	295
3	900	410	44	366
4	1500	344	47	297
5	2100	164	52	112
6	(LR = <u>2700</u> mm)	135	85	50

DATA SHEET 12

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



NOTE: Dimensions are shown in millimeters, mm

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	707	674	647	634	625	624	635	635	642	637	646	645	653	667	689	718	754		
		CRUSH	88	55	28	15	6	5	16	16	23	18	27	26	34	48	70	99	135		
LEVEL 3 MID LEVEL	686	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619		
		POST	672	658	644	634	627	627	628	637	638	635	634	633	637	646	662	692	730		
		CRUSH	53	39	25	15	8	8	9	18	19	16	15	14	18	27	43	73	111		
LEVEL 2 TOP BUMPER	533	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619		
		POST	679	681	679	679	680	682	681	682	674	664	660	665	667	669	672	677	684		
		CRUSH	60	62	60	60	61	63	62	63	55	45	41	46	48	50	53	58	65		
LEVEL 1 MID BUMPER	432	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	518	519	535		
		POST	656	643	642	643	642	643	645	643	640	627	616	614	612	611	614	620	636		
		CRUSH	121	124	124	125	124	125	127	125	122	109	98	96	94	93	96	101	101		

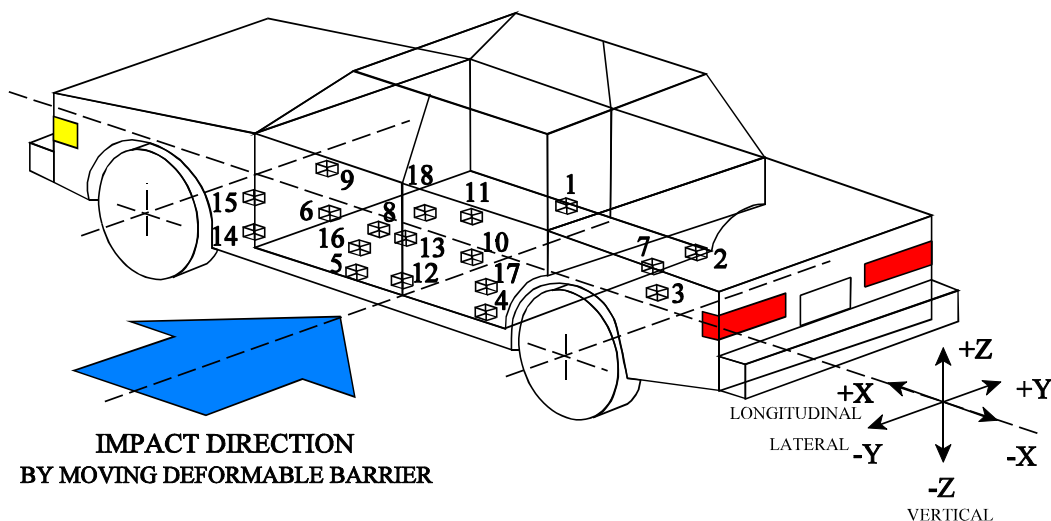
*Heights measured above ground level.

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



- 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 Dodge Caravan

NHTSA No. M10302

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	3081	651	-214	pos.	3.4	39.2	21.9	8.5	7.9	34.2	22.6	8.5
					neg.	-7.2	18.8	-2.0	150.3	-5.7	14.1	0.0	-14.8
2	Right Side Sill at Rear Seat	2576	665	-241	pos.	7.3	18.8	23.9	8.2	6.3	35.0	24.1	8.2
					neg.	-5.7	38.7	-1.9	147.8	-10.0	18.4	0.0	-20.0
3	Rear Floorpan Above Axle	839	51	-267	pos.	1.5	60.5	24.4	38.3	8.2	21.4	25.8	35.8
					neg.	-7.1	17.8	-2.4	121.3	-12.3	65.5	0.0	-3.4
4	Left Side Sill at Rear Seat	2002	-645	-233	pos.	-	-	71.6	10.4	-	-	-	-
					neg.	-	-	-11.1	58.7	-	-	-	-
5	Left Side Sill at Front Seat	3121	-646	-202	pos.	-	-	105.5	8.9	-	-	-	-
					neg.	-	-	-49.6	17.6	-	-	-	-
6	Left Front Door on Centerline	3020	-770	-509	pos.	-	-	238.9	8.6	-	-	-	-
					neg.	-	-	-313.3	13.6	-	-	-	-
7	Right Rear Occupant Compartment	2193	376	-228	pos.	-	-	23.0	8.0	-	-	-	-
					neg.	-	-	-1.8	147.9	-	-	-	-
8	Midrear of Left Front Door	2698	-776	-773	pos.	-	-	138.2	17.7	-	-	-	-
					neg.	-	-	-252.7	24.5	-	-	-	-
9	Left Front Door Upper Centerline	2935	-770	-710	pos.	-	-	102.5	34.5	-	-	-	-
					neg.	-	-	-136.0	25.7	-	-	-	-
10	Midrear of Left Rear Door	1720	-855	-374	pos.	-	-	362.4	28.8	-	-	-	-
					neg.	-	-	-200.5	92.4	-	-	-	-
11	Left Rear Door Upper Centerline	1921	-815	-761	pos.	-	-	146.3	21.2	-	-	-	-
					neg.	-	-	-145.2	38.4	-	-	-	-

*Reference: X - Rear Bumper (+ Forward)

Y - Vehicle Centerline (+ To Right)

Z - Ground Level (+ Down)

**Accelerometer was not requested by COTR.

4-11

8506-17

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302

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	2377	-654	-259	pos. neg.	- -	- -	+ +	+ +	- -	- -	- -	- -
13	Left Middle B-Pillar	2334	-737	-939	pos. neg.	- -	- -	# #	# #	- -	- -	- -	- -
14	Left Lower A-Pillar	3389	-701	-291	pos. neg.	- -	- -	93.2 -58.9	37.2 48.1	- -	- -	- -	- -
15	Left Middle A-Pillar	3303	-690	-976	pos. neg.	- -	- -	22.7 -2.0	13.8 29.3	- -	- -	- -	- -
16	Front Seat Track	25350	-547	-249	pos. neg.	- -	- -	42.2 -57.6	17.0 12.1	- -	- -	- -	- -
17	Rear Seat Track	1469	-465	-250	pos. neg.	- -	- -	** **	** **	- -	- -	- -	- -
18	Vehicle CG	2645	31	-211	pos. neg.	11.3 -11.9	58.0 18.7	24.5 -5.3	10.5 58.4	18.3 -44.0	57.0 65.3	45.2 0.0	65.3 -4.6

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

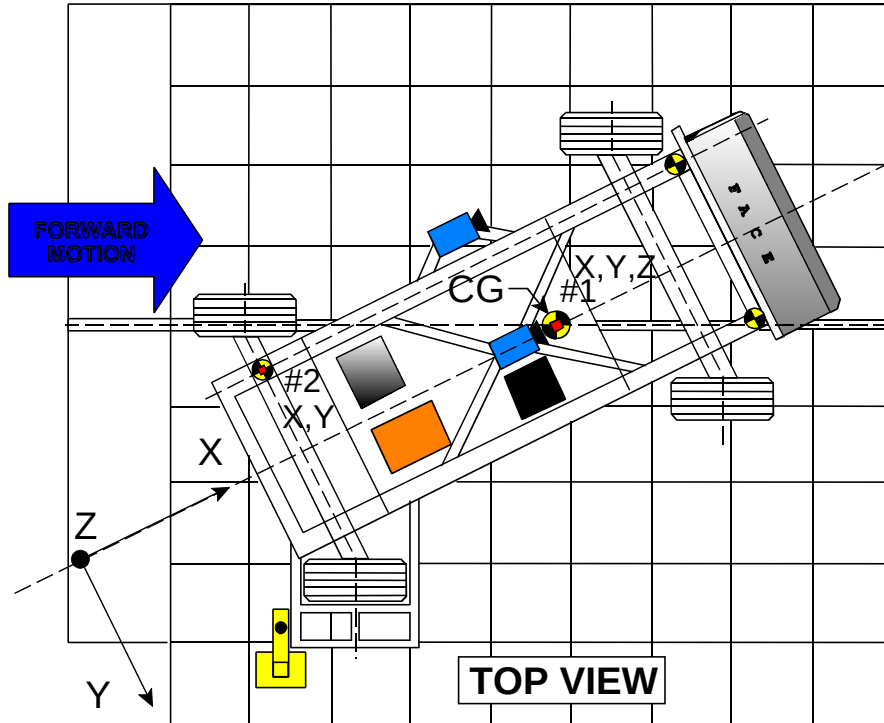
+ Data is clipped # Data is not accurate after 32 ms ** Not accurate

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
					Max (g)	Time (msec)	Max (g)	Time (msec)
		X*	Y*	Z*				
1	MDB Center of Gravity							
	Longitudinal... X	1859	0	-330	1.3	123.3	-21.5	39.6
	Lateral..... Y				0.8	61.9	-9.6	13.3
	Vertical..... Z				10.9	37.9	-13.3	21.0
	Resultant..... R				23.5	38.5	0.1	-16.7
2	Rear Frame Member							
	Longitudinal... X	386	-660	-660	1.8	110.1	-21.6	32.4
	Lateral..... Y				6.2	18.1	-2.4	71.1

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Down)

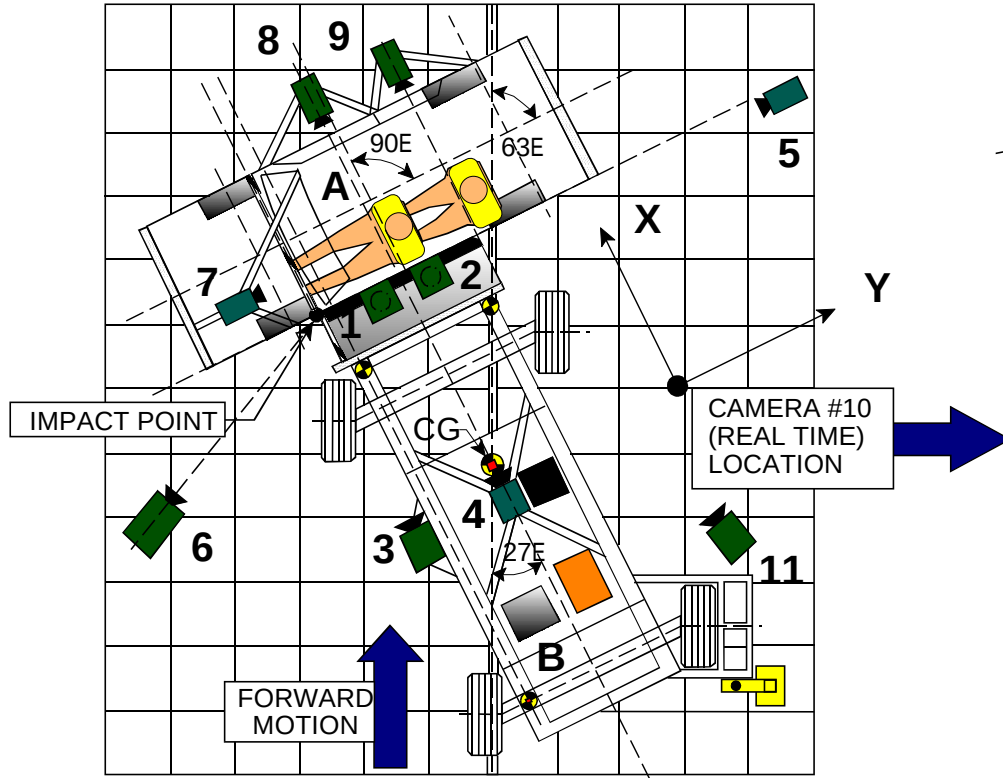
All measurements accurate to within ± 3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	77	833	-4880	-90	8	1025
2	Overhead closeup view of impact plane	213	881	-4880	-90	12.5	1000
3	MDB onboard closeup view of impact point	-1470	0	-847	0	13	1025
4	MDB onboard view of driver dummy	-1140	838	-1586	-17	7.5	N/A
5	Right side ground level overall view	94	9594	-1097	-2.1	25	1000
6	Left side ground level overall view	-2014	-1715	-1072	-5.5	13	1000
7	Test vehicle onboard driver front view	544	-730	-1394	-5.9	13	1000
8	Test vehicle onboard driver side view	1888	575	-1117	-2.7	8	1015
9	Test vehicle onboard passenger side view	1900	1520	-1160	-3.0	8	995
10	Real time film coverage of test	-	-	-	-	-	24
11	Secondary impact point view	-4201	3305	-1058	-3.2	25	1000

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

X = (Impact Point) Positive Forward

Y = (Impact Point) Positive Right

Z = (Ground) Positive Down

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

FMVSS 301 FUEL SYSTEM INTEGRITY DATA

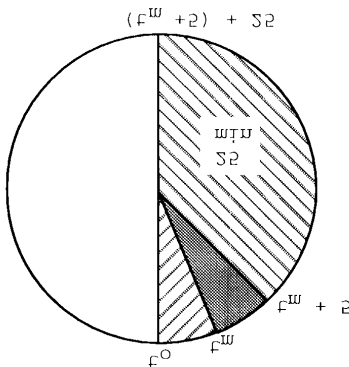
NHTSA No.: M10302 TEST DATE: February 26, 2001

Vehicle Mfgr./Make/Model : 2001 Dodge Caravan Minivan

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 :

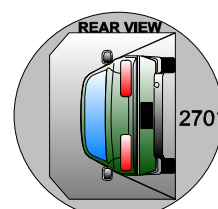
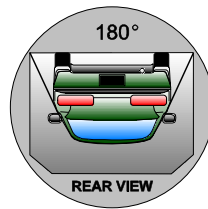
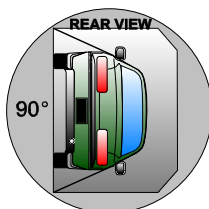
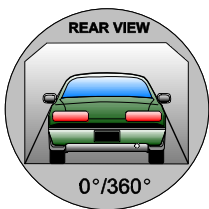
None

DATA SHEET 17

ROLLOVER DATA

Vehicle: 2001 Dodge Caravan

NHTSA No. M10302



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0E - 90E	1	minutes	15	seconds	5	minutes	6	minutes	15	seconds	7	minutes
90E - 180E	1	minutes	08	seconds	5	minutes	6	minutes	8	seconds	7	minutes
180E - 270E	1	minutes	02	seconds	5	minutes	6	minutes	2	seconds	7	minutes
270E - 360E	1	minutes	09	seconds	5	minutes	6	minutes	9	seconds	7	minutes

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

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

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

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

IV. SOLVENT SPILLAGE LOCATION(S):

Rollover Stage	Spillage Location
0E - 90E	None
90E - 180E	None
180E - 270E	None
270E - 360E	None

APPENDIX A

PHOTOGRAPHS

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Figure A- 33	CLOSE-UP VIEW OF VEHICLE'S TIRE PLACARD LABEL	A- 35
Figure A- 34	IMPACT PHOTO	A- 36
Figure A- 35	ROLLOVER 90 DEGREES	A- 37
Figure A- 36	ROLLOVER 180 DEGREES	A- 38
Figure A- 37	ROLLOVER 270 DEGREES	A- 39
Figure A- 38	ROLLOVER 360 DEGREES	A- 40

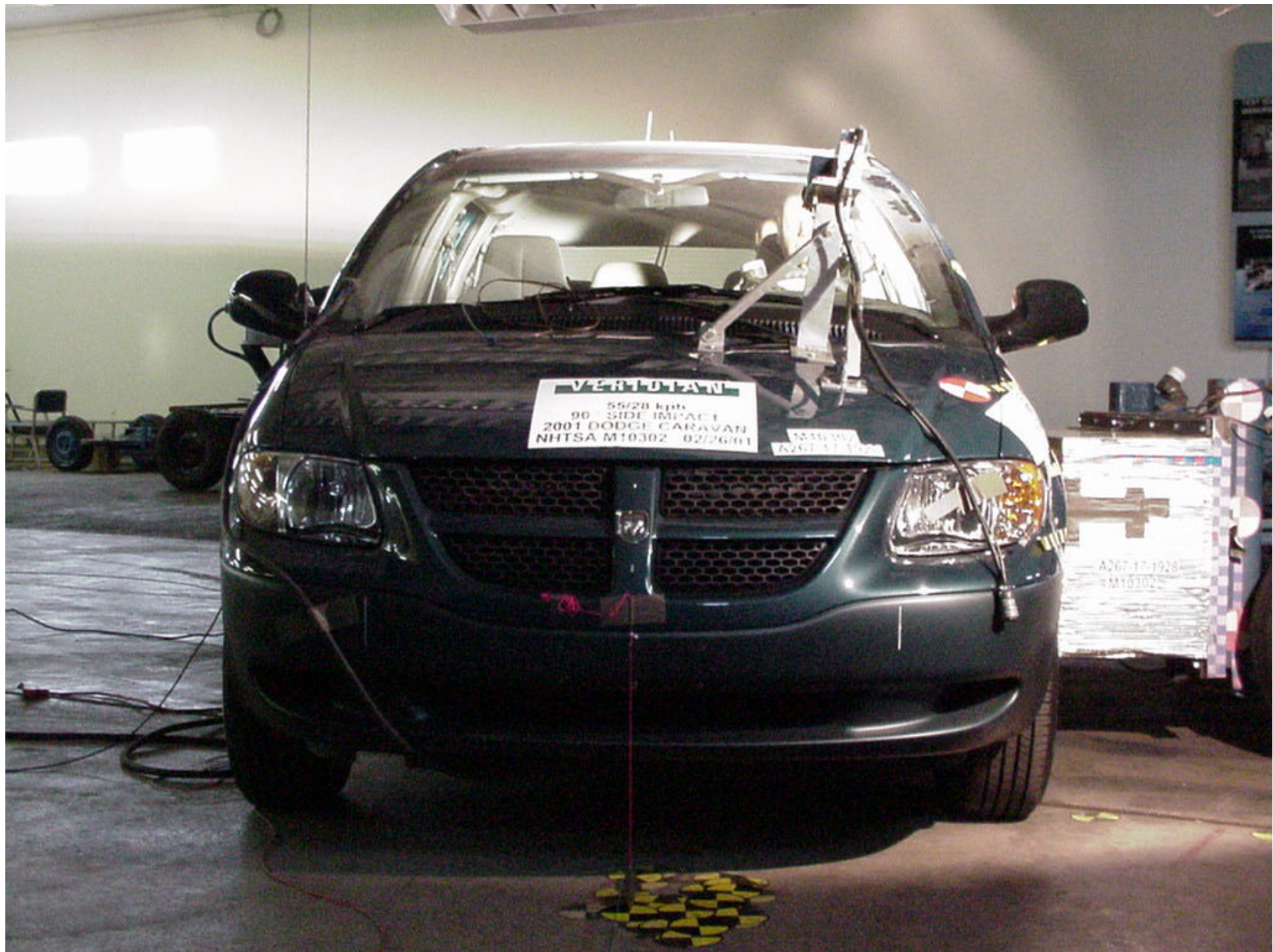


Figure A-1 PRE-TEST FRONTAL VIEW OF TEST VEHICLE

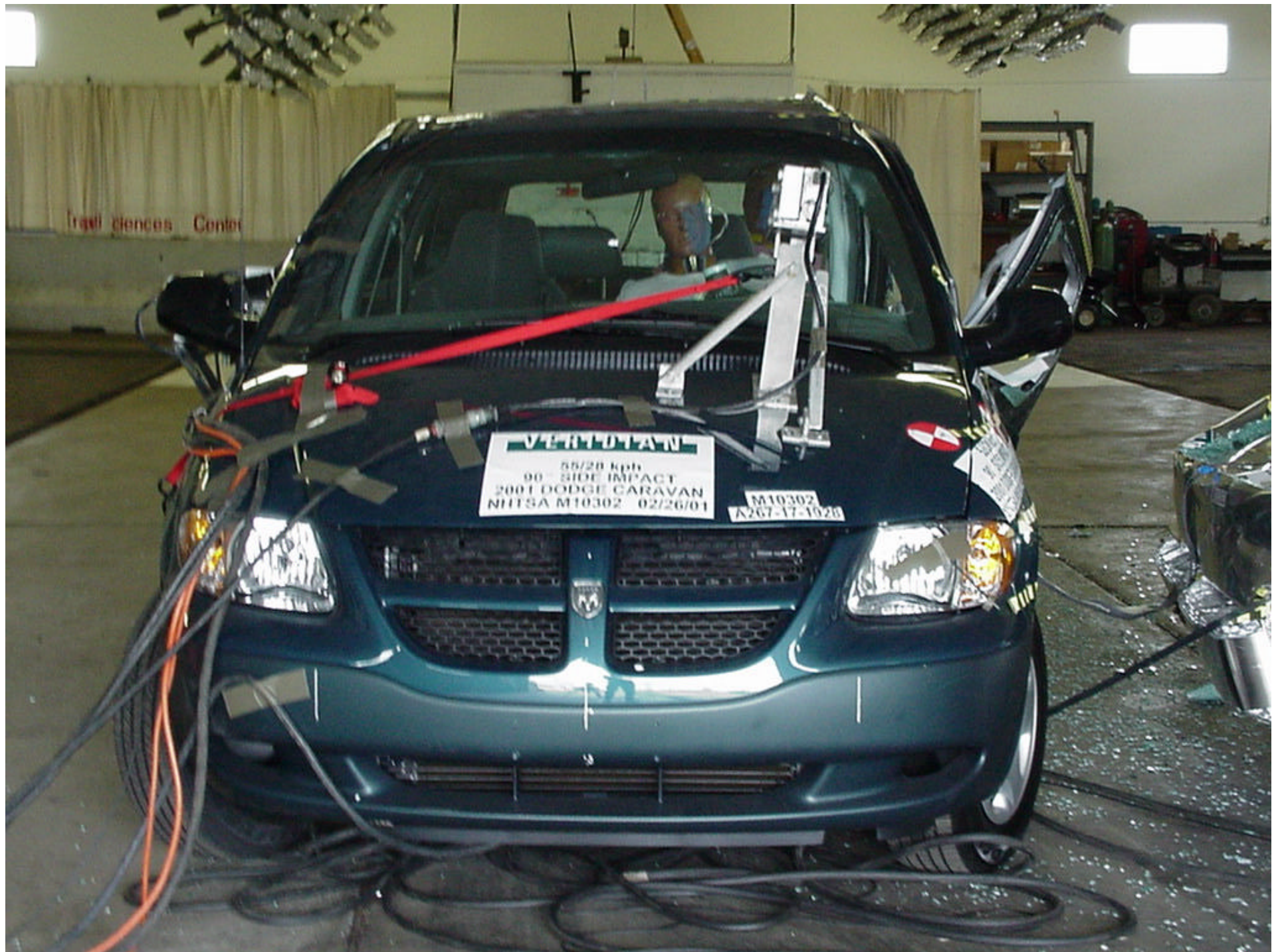


Figure A-2 POST-TEST FRONTAL VIEW OF TEST VEHICLE



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



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M10302

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

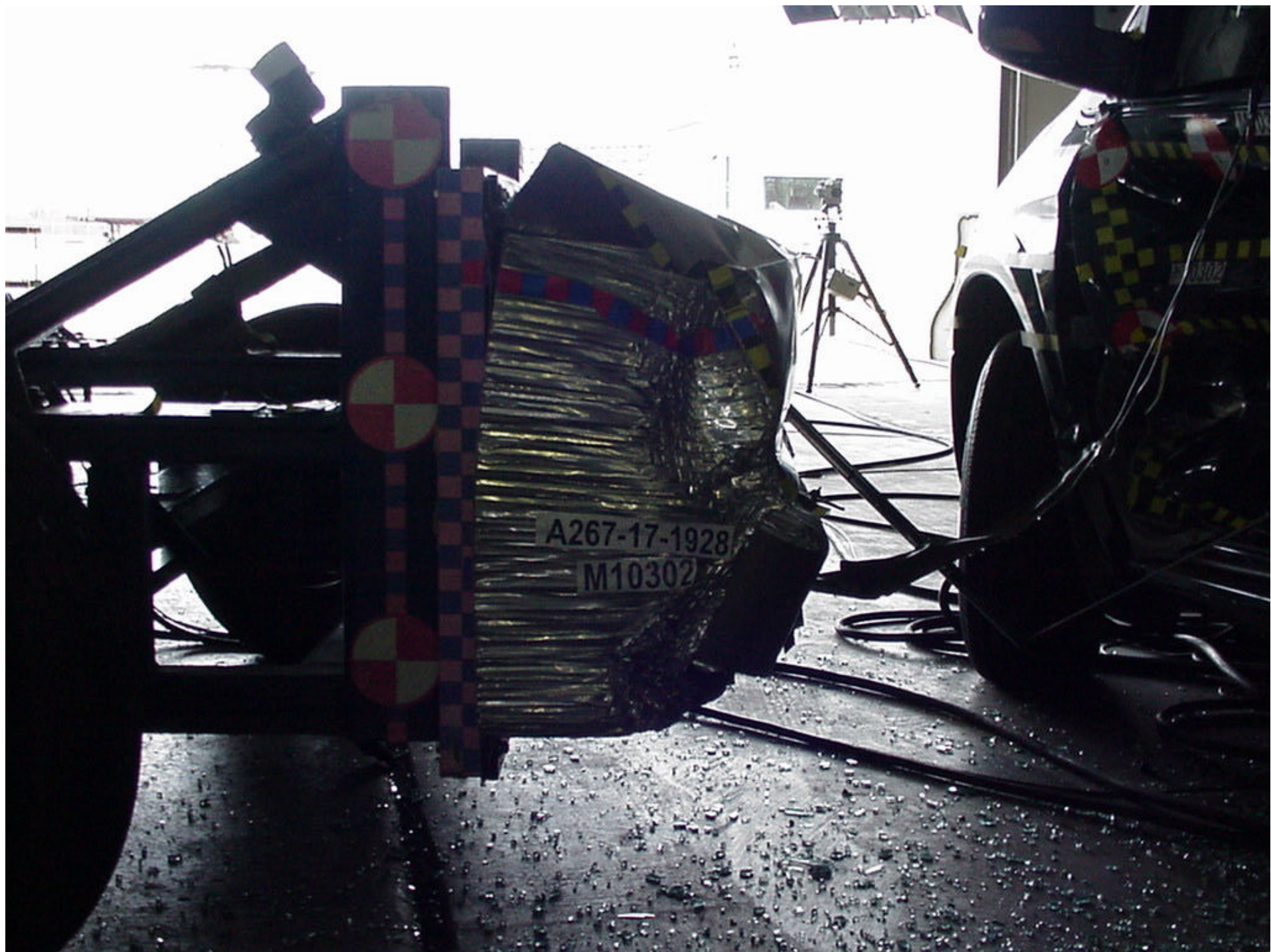


Figure A-12 POST-TEST RIGHT SIDE VIEW OF IMPACTOR FACE



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

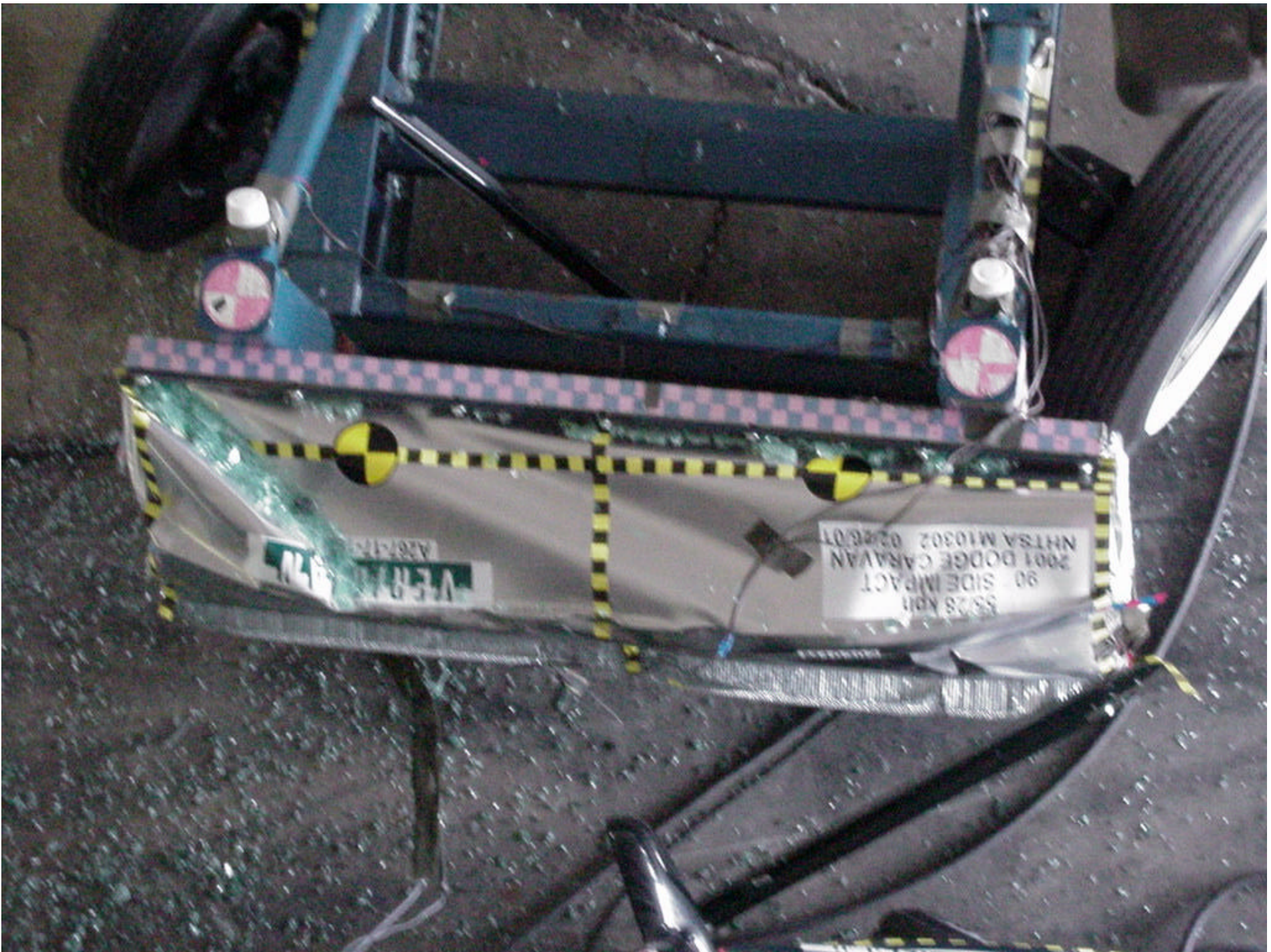


Figure A-14 POST-TEST TOP VIEW OF IMPACTOR FACE

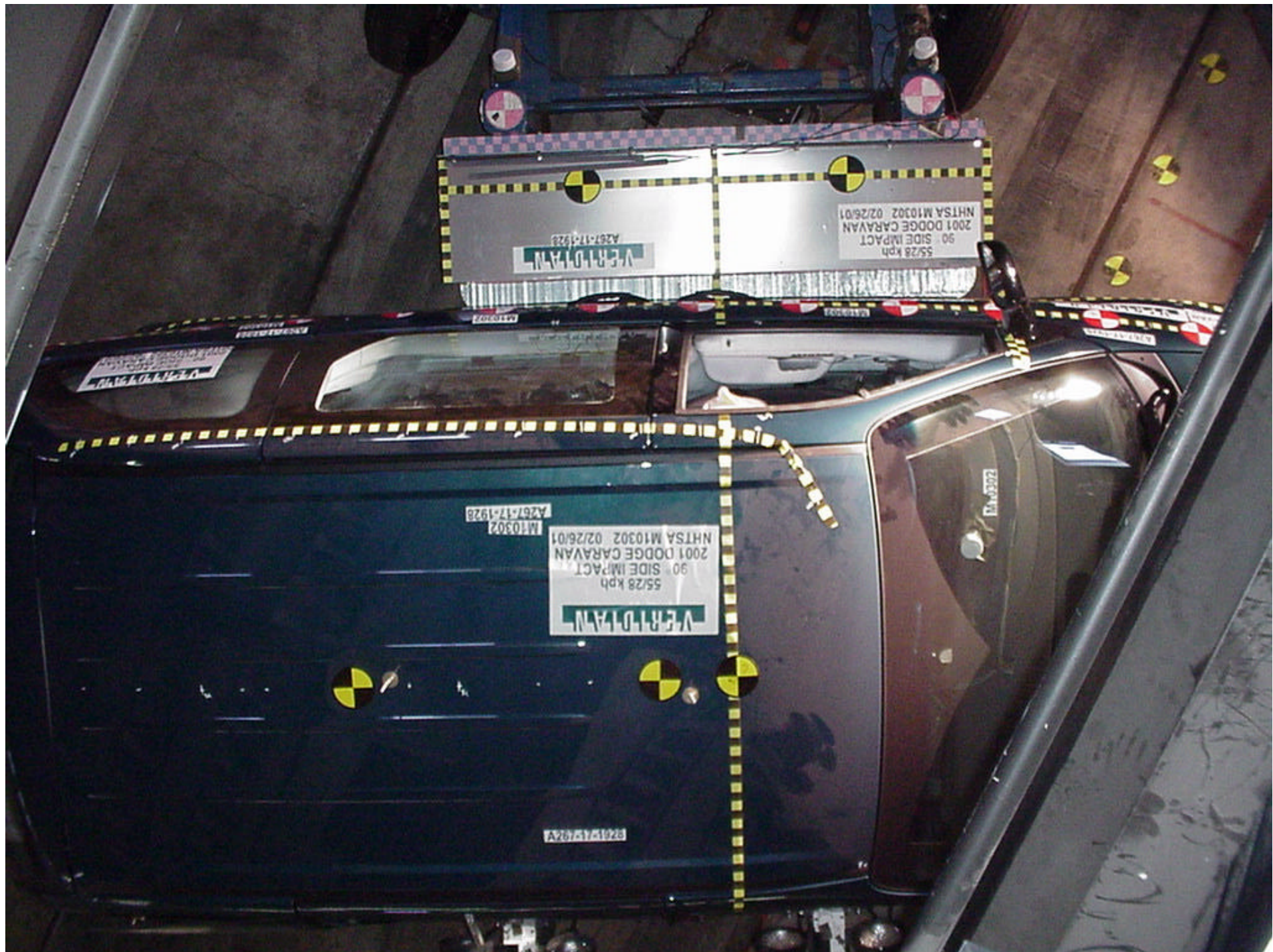


Figure A-15 PRE-TEST OVERHEAD VIEW OF ALIGNED MDB AND VEHICLE



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

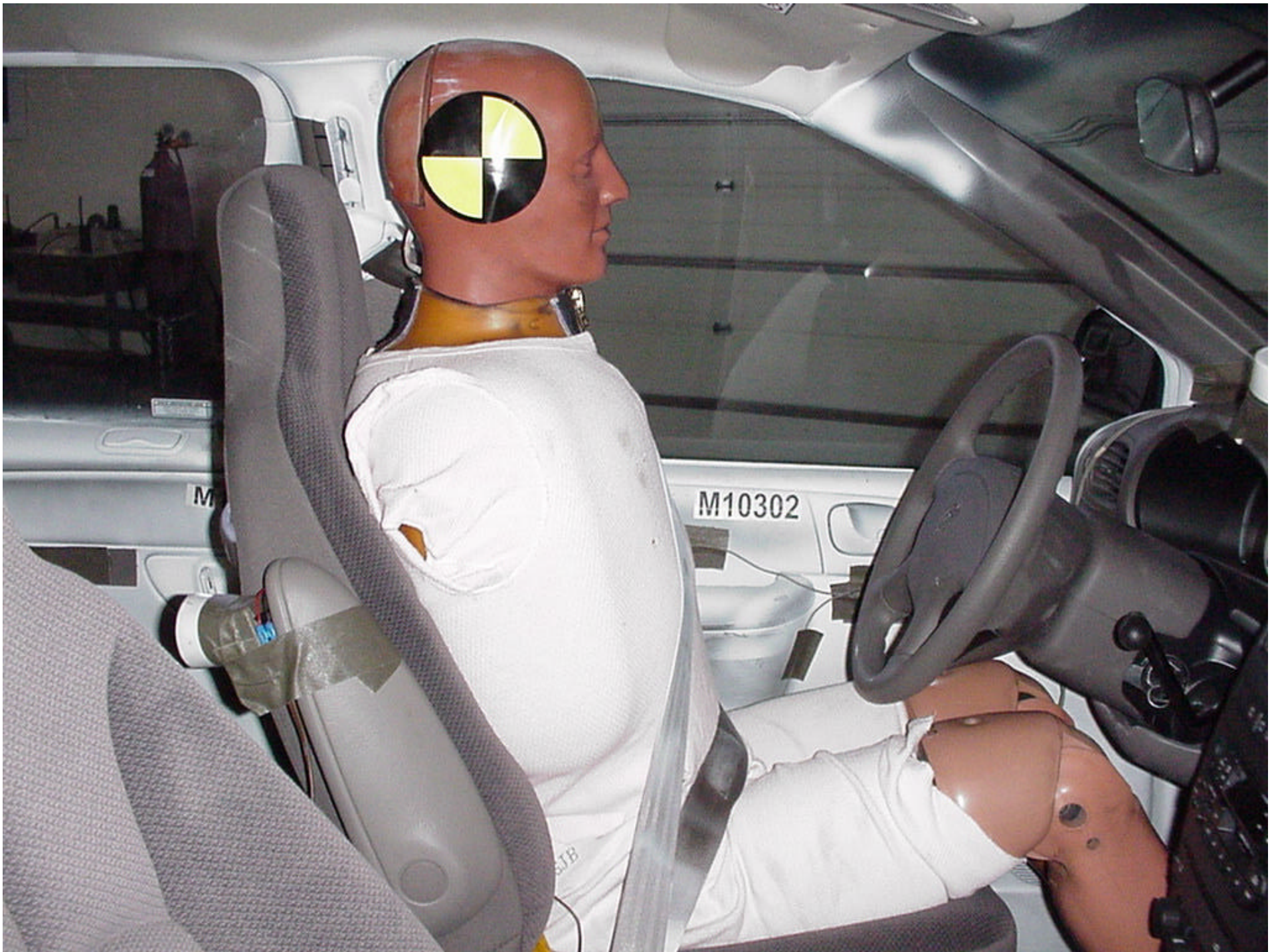


Figure A-17 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID



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

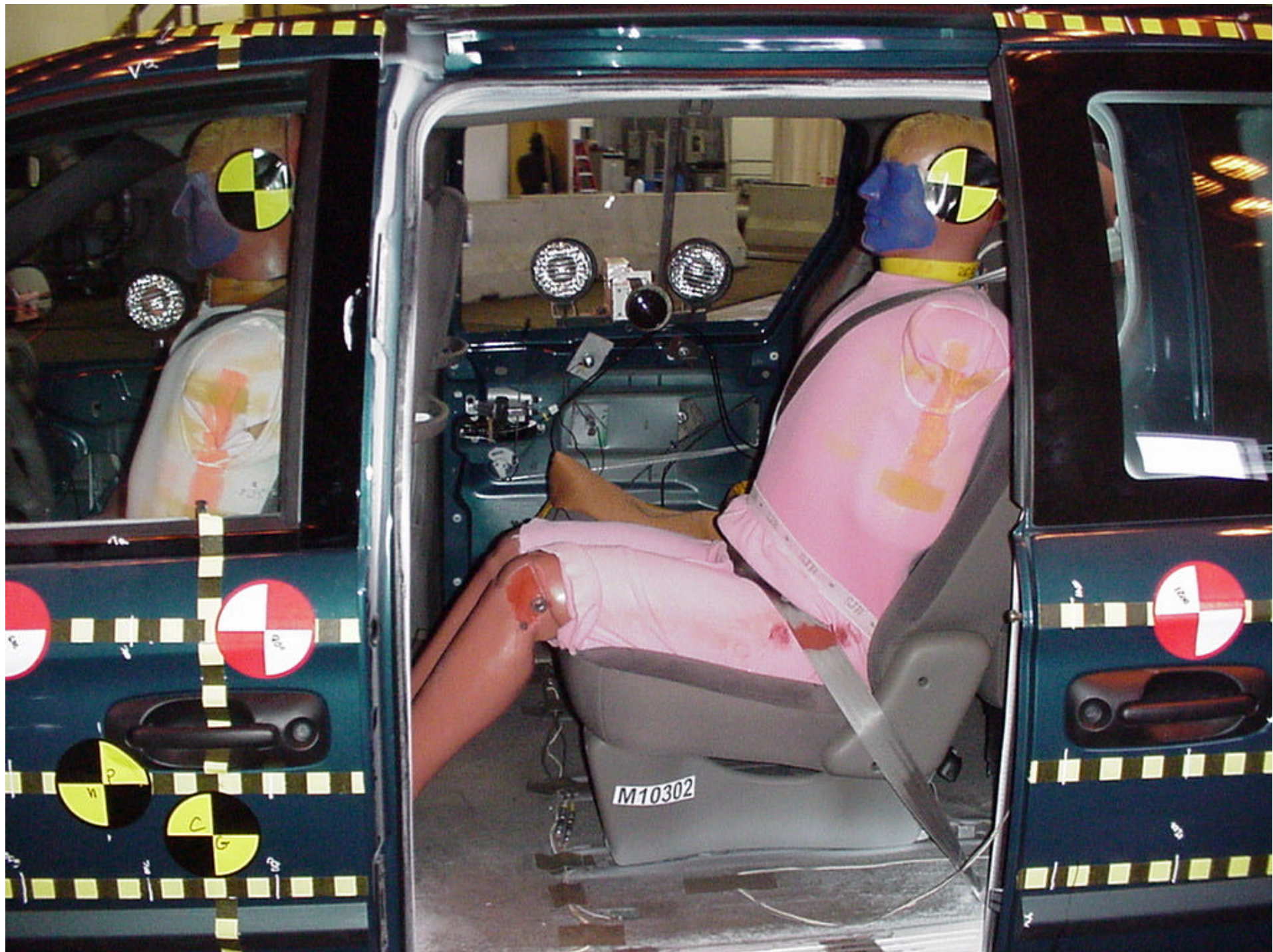


Figure A-23 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID



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

MFD BY DAIMLERCHRYSLER CORPORATION DATE OF MFR 1-01 GWR 2450 KG(05400 LB)

GWR FRONT	WITH TIRES	RIMS AT	COLD
1233 KG(2850 LB)	215/70R15 A/S	15X6.5	248 KPA(36 PSI)
GWR REAR	WITH TIRES	RIMS AT	COLD
1233 KG(2850 LB)	215/70R15 A/S	15X6.5	248 KPA(36 PSI)

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

VIN: 1B4GP25B21B135936 TYPE: MPV SINGLE X DUAL



MDH: 010512 371AA PNT:POW VEHICLE MADE IN U.S.A. TRM:K5L5 4648563

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

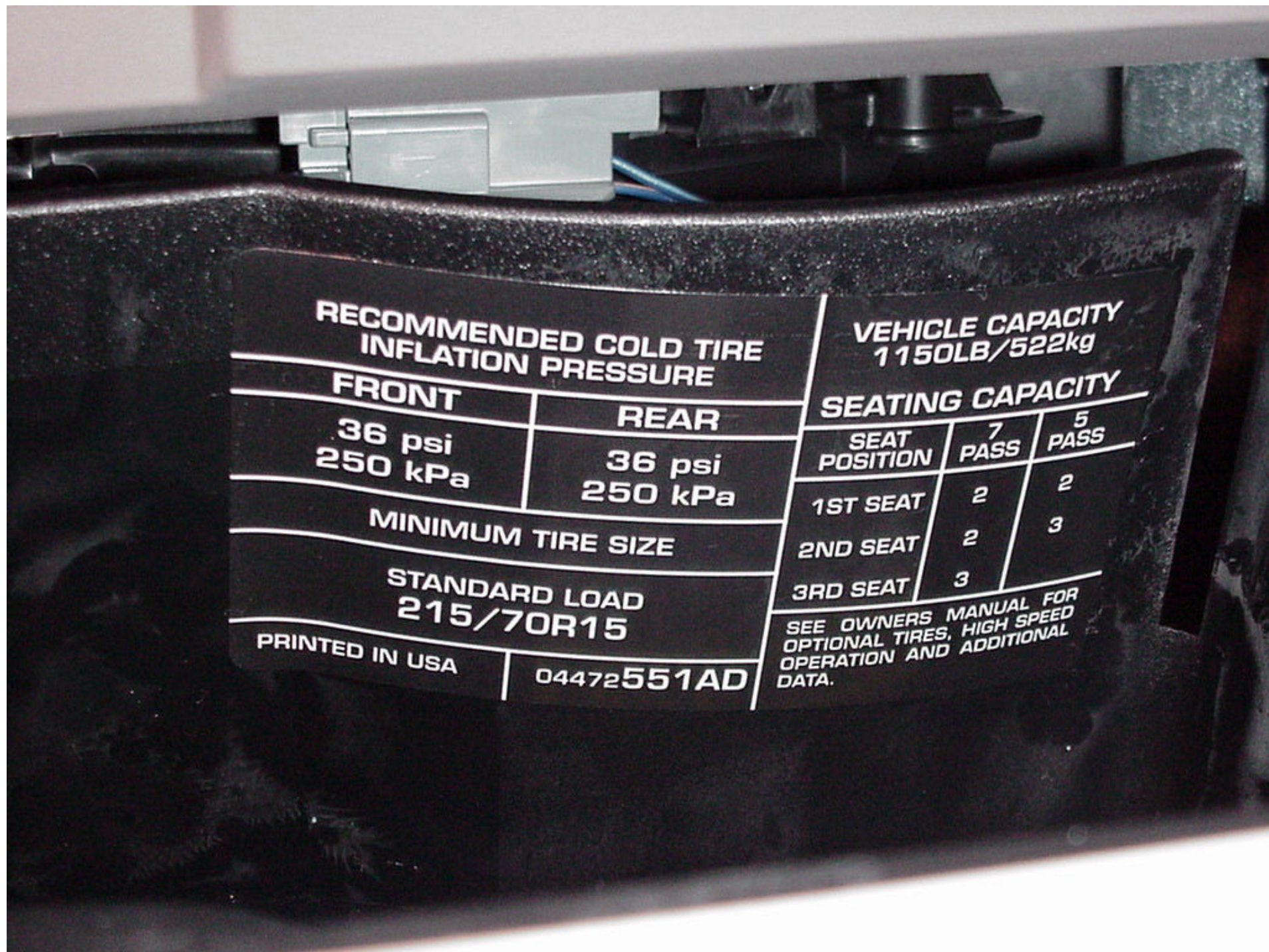


Figure A-33 CLOSE-UP VIEW OF VEHICLE'S TIRE PLACARD LABEL



Figure A-34 IMPACT PHOTO



Figure A-35 ROLLOVER 90 DEGREES



Figure A-36 ROLLOVER 180 DEGREES



Figure A-37 ROLLOVER 270 DEGREES

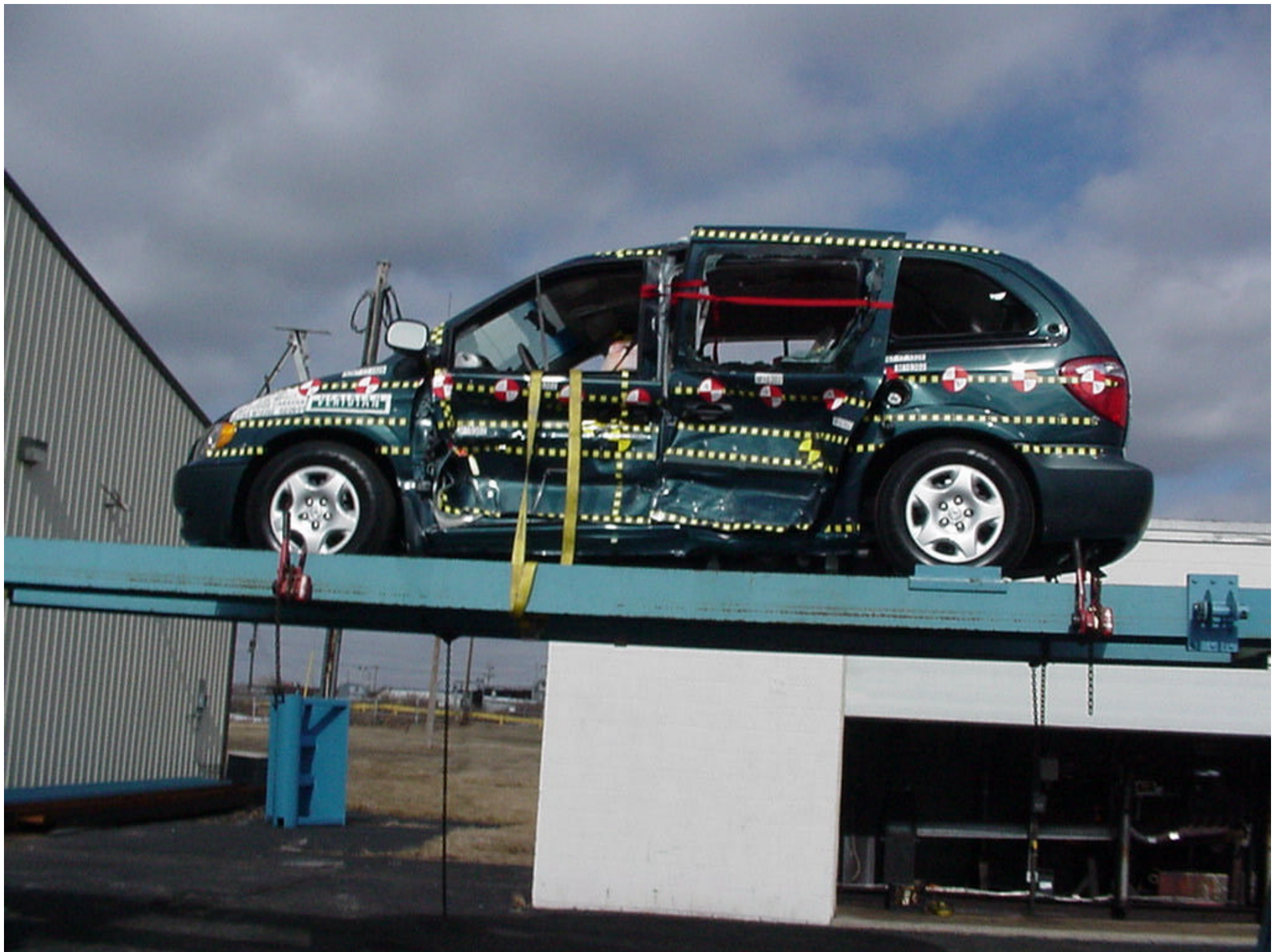


Figure A-38 ROLLOVER 360 DEGREES

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

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
1	DRIVER HEAD (X) ACCELERATION VS TIME	B- 6
2	DRIVER HEAD (X) VELOCITY VS TIME	B- 7
3	DRIVER HEAD (Y) ACCELERATION VS TIME	B- 8
4	DRIVER HEAD (Y) VELOCITY VS TIME	B- 9
5	DRIVER HEAD (Z) ACCELERATION VS TIME	B- 10
6	DRIVER HEAD (Z) VELOCITY VS TIME	B- 11
7	DRIVER HEAD RESULTANT ACCELERATION VS TIME	B- 12
8	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 13
9	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 14
10	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 15
11	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 16
12	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 17
13	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 18
14	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 19
15	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 20
16	PASSENGER HEAD (X) ACCELERATION VS TIME	B- 21
17	PASSENGER HEAD (X) VELOCITY VS TIME	B- 22
18	PASSENGER HEAD (Y) ACCELERATION VS TIME	B- 23
19	PASSENGER HEAD (Y) VELOCITY VS TIME	B- 24
20	PASSENGER HEAD (Z) ACCELERATION VS TIME	B- 25
21	PASSENGER HEAD (Z) VELOCITY VS TIME	B- 26
22	PASSENGER HEAD RESULTANT ACCELERATION VS TIME	B- 27
23	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 28
24	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 29
25	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 30
26	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 31
27	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 32
28	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 33
29	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 34
30	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 35

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION DATA - FIR FILTERED

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
31	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 36
32	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 37
33	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 38
34	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 39
35	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 40
36	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 41
37	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 42
38	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 43

TEST VEHICLE INSTRUMENTATION PLOTS

ACCELERATION DATA - FILTER CLASS 60

INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
39	RIGHT SIDE SILL AT FRONT SEAT (X) ACCELERATION VS TIME	B- 44
40	RIGHT SIDE SILL AT FRONT SEAT (X) VELOCITY VS TIME	B- 45
41	RIGHT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 46
42	RIGHT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 47
43	RIGHT SIDE SILL AT FRONT SEAT (Z) ACCELERATION VS TIME	B- 48
44	RIGHT SIDE SILL AT FRONT SEAT (Z) VELOCITY VS TIME	B- 49
45	RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION VS TIME	B- 50
46	RIGHT SIDE SILL AT REAR SEAT (X) ACCELERATION VS TIME	B- 51
47	RIGHT SIDE SILL AT REAR SEAT (X) VELOCITY VS TIME	B- 52
48	RIGHT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 53
49	RIGHT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 54
50	RIGHT SIDE SILL AT REAR SEAT (Z) ACCELERATION VS TIME	B- 55
51	RIGHT SIDE SILL AT REAR SEAT (Z) VELOCITY VS TIME	B- 56
52	RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION VS TIME	B- 57
53	REAR FLOORPAN ABOVE AXLE (X) ACCELERATION VS TIME	B- 58
54	REAR FLOORPAN ABOVE AXLE (X) VELOCITY VS TIME	B- 59
55	REAR FLOORPAN ABOVE AXLE (Y) ACCELERATION VS TIME	B- 60
56	REAR FLOORPAN ABOVE AXLE (Y) VELOCITY VS TIME	B- 61
57	REAR FLOORPAN ABOVE AXLE (Z) ACCELERATION VS TIME	B- 62
58	REAR FLOORPAN ABOVE AXLE (Z) VELOCITY VS TIME	B- 63
59	REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION VS TIME	B- 64
60	LEFT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 65
61	LEFT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 66
62	LEFT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 67
63	LEFT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 68
64	LEFT FRONT DOOR ON CENTERLINE (Y) ACCELERATION VS TIME	B- 69
65	LEFT FRONT DOOR ON CENTERLINE (Y) VELOCITY VS TIME	B- 70
66	RIGHT REAR OCCUPANT COMPARTMENT (Y) ACCELERATION VS TIME	B- 71
67	RIGHT REAR OCCUPANT COMPARTMENT (Y) VELOCITY VS TIME	B- 72
68	MID REAR OF LEFT FRONT DOOR (Y) ACCELERATION VS TIME	B- 73
69	MID REAR OF LEFT FRONT DOOR (Y) VELOCITY VS TIME	B- 74
70	LEFT FRONT DOOR UPPER CENTERLINE (Y) ACCELERATION VS TIME	B- 75
71	LEFT FRONT DOOR UPPER CENTERLINE (Y) VELOCITY VS TIME	B- 76
72	MID REAR OF LEFT REAR DOOR (Y) ACCELERATION VS TIME	B- 77
73	MID REAR OF LEFT REAR DOOR (Y) VELOCITY VS TIME	B- 78
74	LEFT REAR DOOR UPPER CENTERLINE (Y) ACCELERATION VS TIME	B- 79
75	LEFT REAR DOOR UPPER CENTERLINE (Y) VELOCITY VS TIME	B- 80
76	LOWER B-POST (Y) ACCELERATION VS TIME	B- 81
77	LOWER B-POST (Y) VELOCITY VS TIME	B- 82
78	UPPER B-POST (Y) ACCELERATION VS TIME	B- 83
79	UPPER B-POST (Y) VELOCITY VS TIME	B- 84
80	LOWER A-POST (Y) ACCELERATION VS TIME	B- 85

TEST VEHICLE INSTRUMENTATION PLOTS

ACCELERATION DATA - FILTER CLASS 60

INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
81	LOWER A-POST (Y) VELOCITY VS TIME	B- 86
82	UPPER A-POST (Y) ACCELERATION VS TIME	B- 87
83	UPPER A-POST (Y) VELOCITY VS TIME	B- 88
84	FRONT SEAT TRACK (Y) ACCELERATION VS TIME	B- 89
85	FRONT SEAT TRACK (Y) VELOCITY VS TIME	B- 90
86	REAR SEAT TRACK (Y) ACCELERATION VS TIME	B- 91
87	REAR SEAT TRACK (Y) VELOCITY VS TIME	B- 92
88	VEHICLE CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 93
89	VEHICLE CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 94
90	VEHICLE CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 95
91	VEHICLE CENTER OF GRAVITY (Y) VELOCITY ACCELERATION VS TIME	B- 96
92	VEHICLE CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 97
93	VEHICLE CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 98
94	VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 99

MDB INSTRUMENTATION PLOTS

ACCELERATION DATA - FILTER CLASS 60

INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
95	MDB CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 100
96	MDB CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 101
97	MDB CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 102
98	MDB CENTER OF GRAVITY (Y) VELOCITY VS TIME	B- 103
99	MDB CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 104
100	MDB CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 105
101	MDB CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 106
102	MDB REAR (X) ACCELERATION VS TIME	B- 107
103	MDB REAR (X) VELOCITY VS TIME	B- 108
104	MDB REAR (Y) ACCELERATION VS TIME	B- 109
105	MDB REAR (Y) VELOCITY VS TIME	B- 110

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

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
106	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 111
107	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 112
108	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 113
109	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 114
110	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 115
111	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 116
112	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 117
113	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 118
114	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 119
115	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 120
116	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 121
117	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 122
118	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 123
119	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 124
120	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 125
121	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 126

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

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
122	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 127
123	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 128
124	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 129
125	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 130
126	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 131
127	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 132
128	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 133
129	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 134

SNCAP Test #17 - 2001 Dodge Caravan

Max: 4.4 [g] at 0.071 [s]

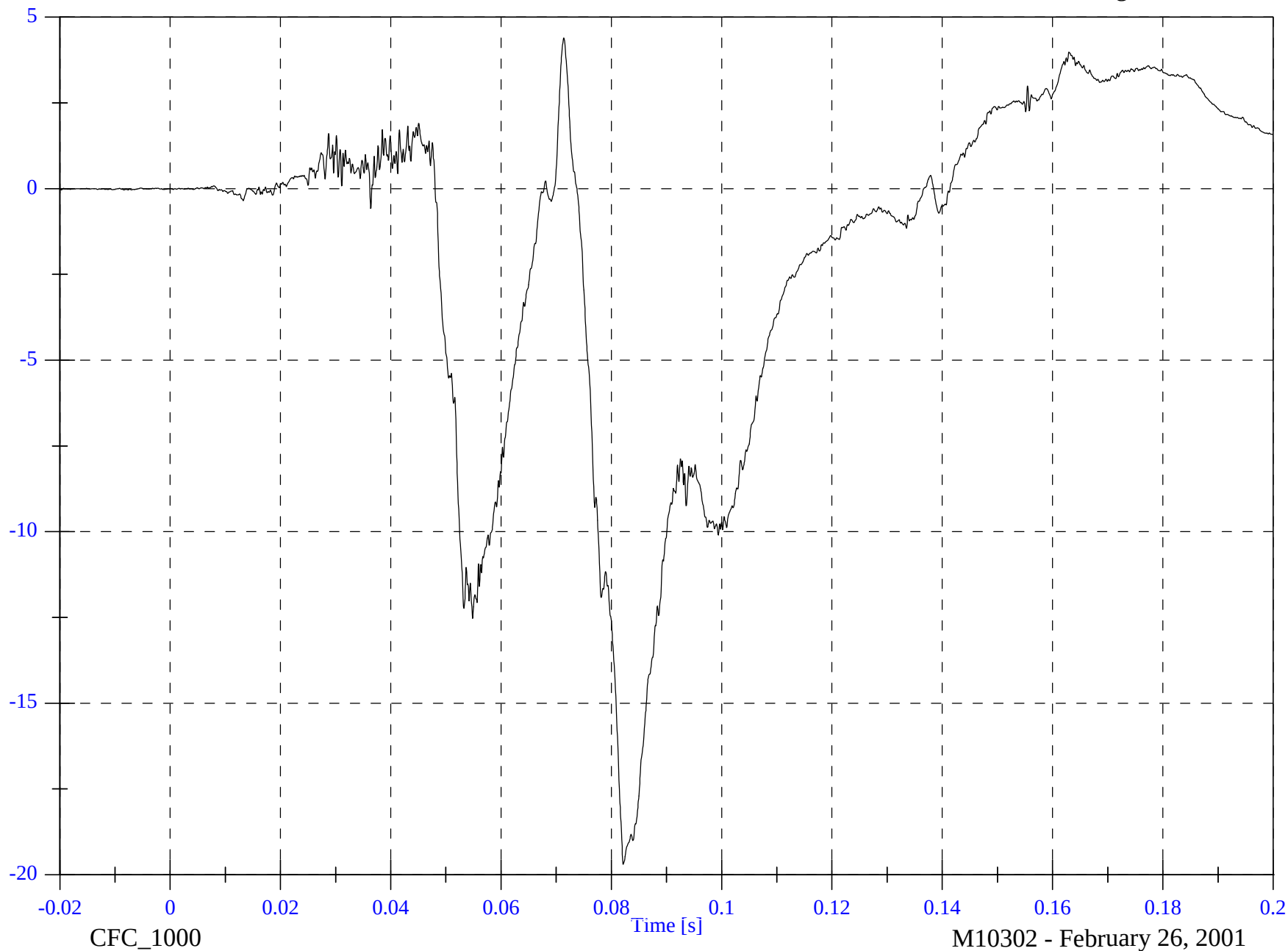
Min: -19.7 [g] at 0.082 [s]

P1 Head x

B-6

g

8506-17

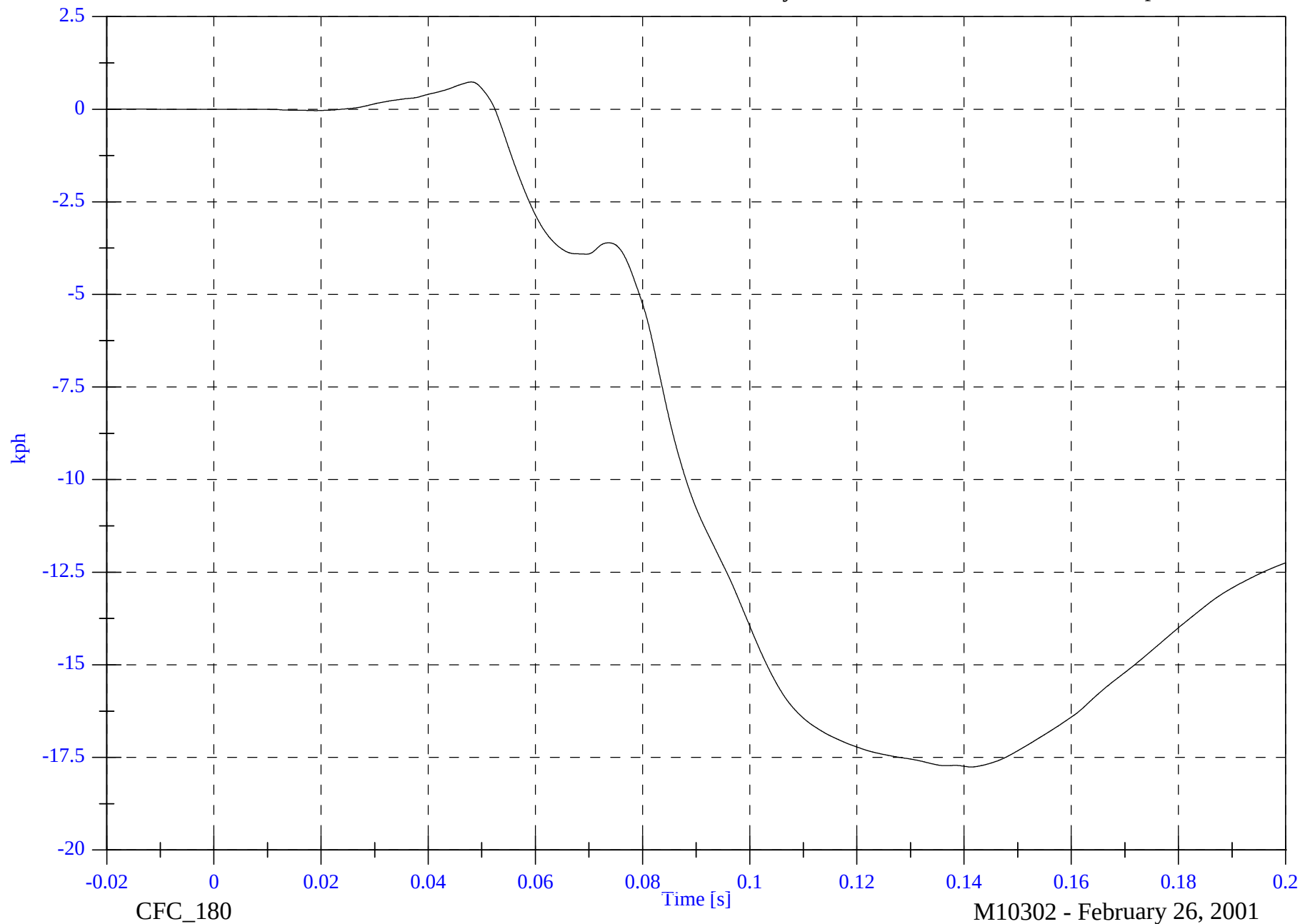


SNCAP Test #17 - 2001 Dodge Caravan

P1 Head x Velocity

Max: 0.7 [kph] at 0.048 [s]

Min: -17.8 [kph] at 0.141 [s]



B-7

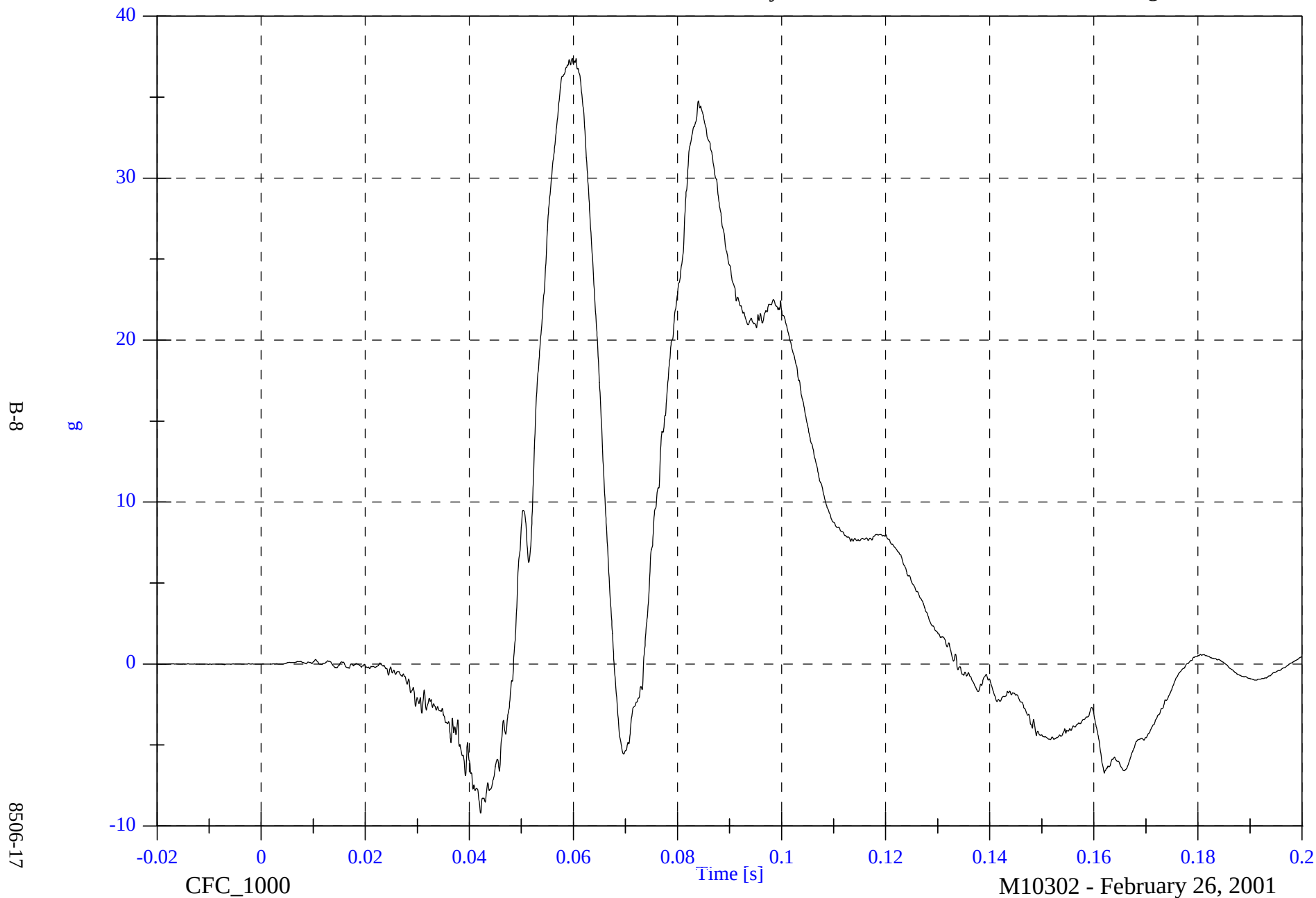
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

Max: 37.4 [g] at 0.060 [s]

Min: -9.2 [g] at 0.042 [s]

P1 Head y



SNCAP Test #17 - 2001 Dodge Caravan

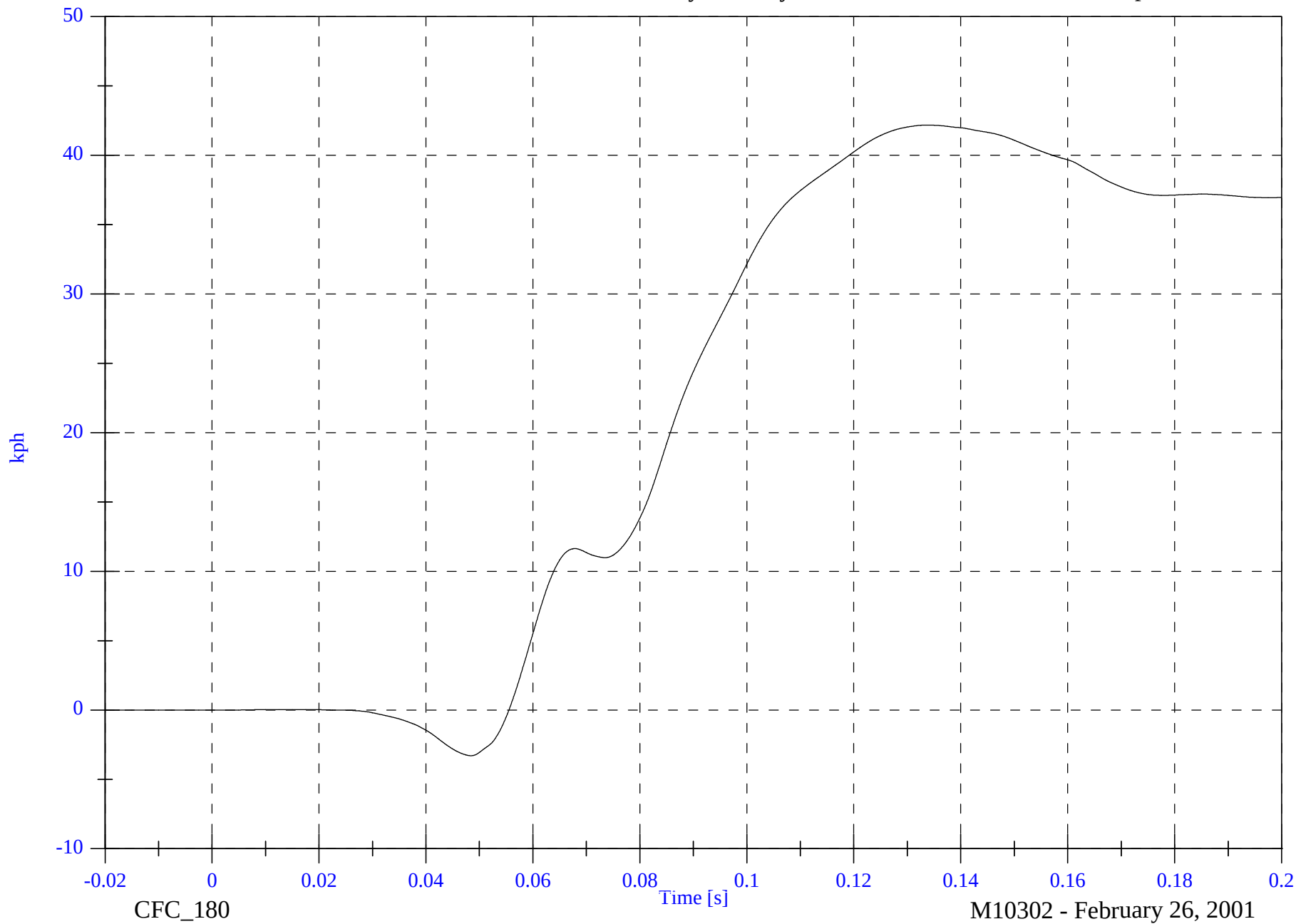
P1 Head y Velocity

Max: 42.2 [kph] at 0.134 [s]

Min: -3.3 [kph] at 0.048 [s]

B-9

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

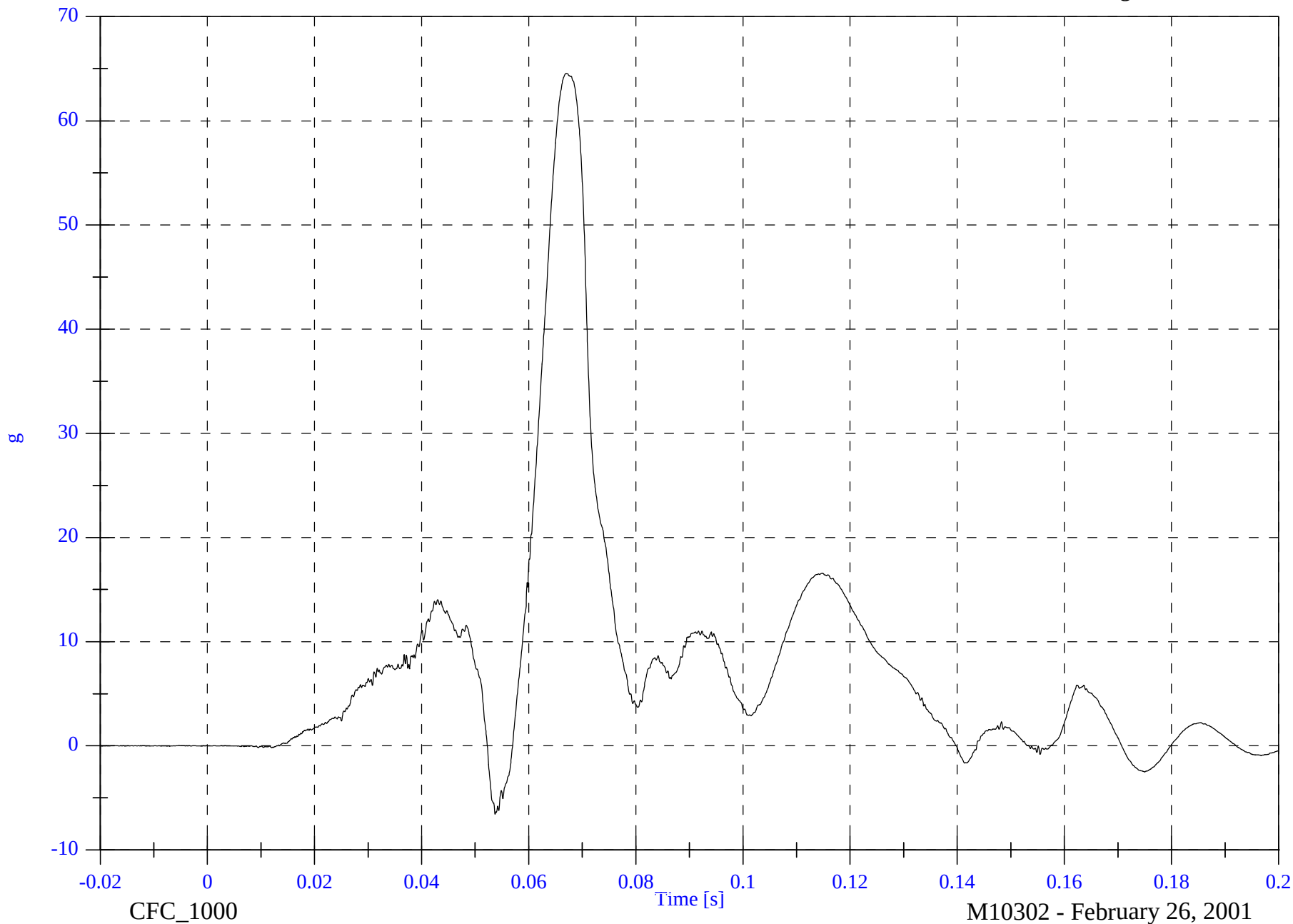
P1 Head z

Max: 64.6 [g] at 0.067 [s]

Min: -6.6 [g] at 0.054 [s]

B-10

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

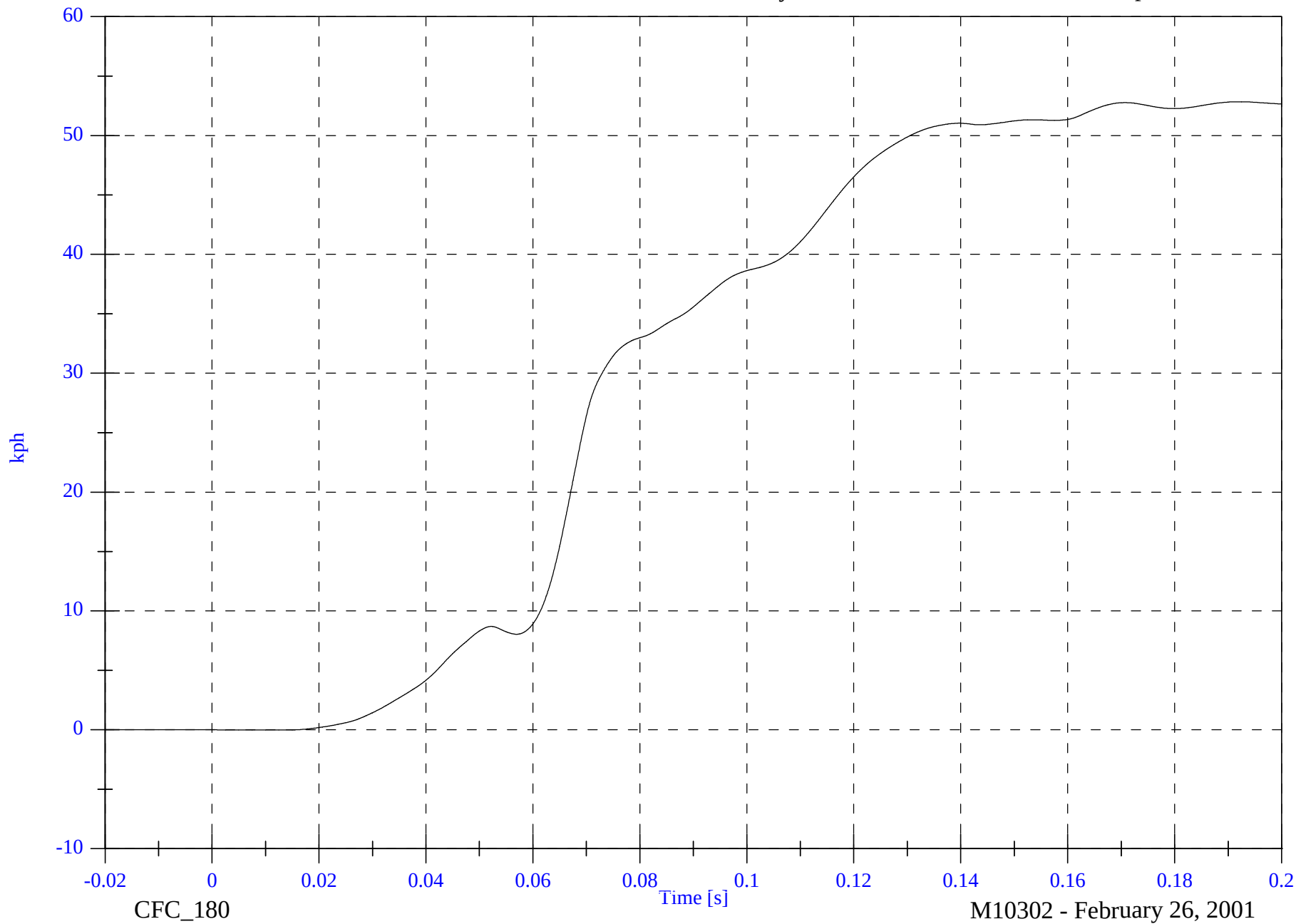
P1 Head z Velocity

Max: 52.8 [kph] at 0.192 [s]

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

B-11

8506-17

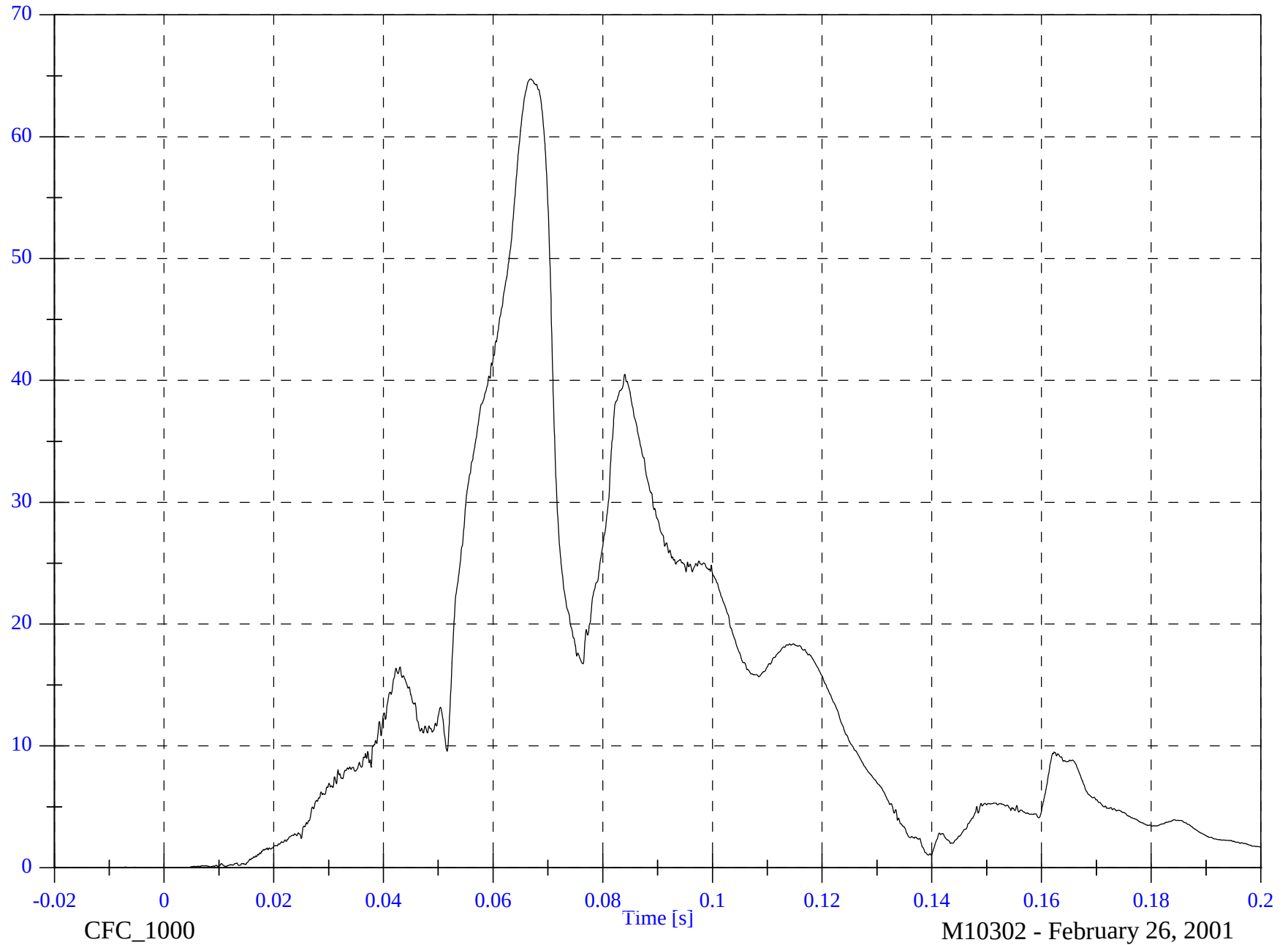


SNCAP Test #17 - 2001 Dodge Caravan

P1 Head Resultant

Max: 64.7 [g] at 0.067 [s]

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



B-12

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

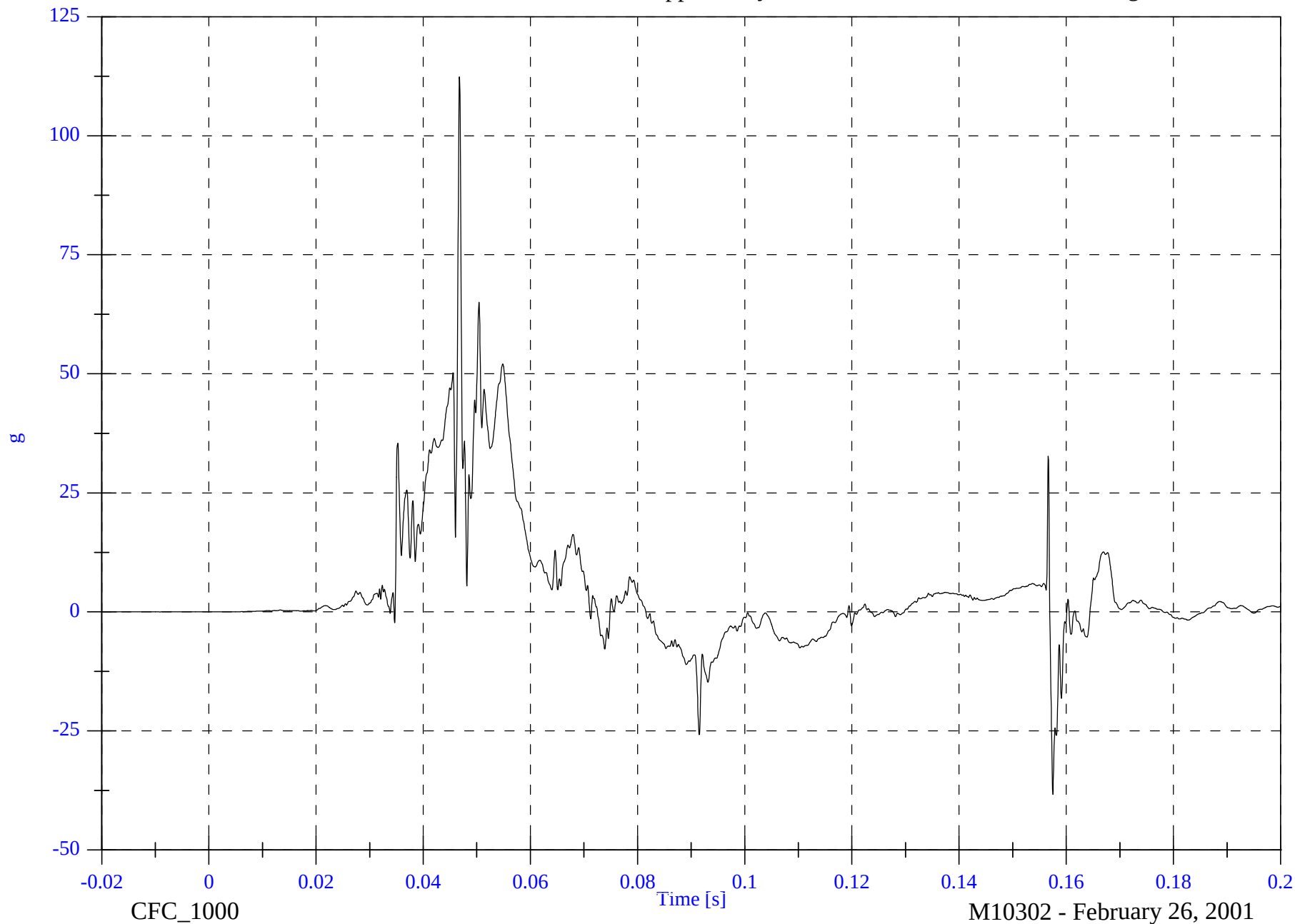
P1 Upper Rib y

Max: 112.3 [g] at 0.047 [s]

Min: -38.3 [g] at 0.158 [s]

B-13

8506-17

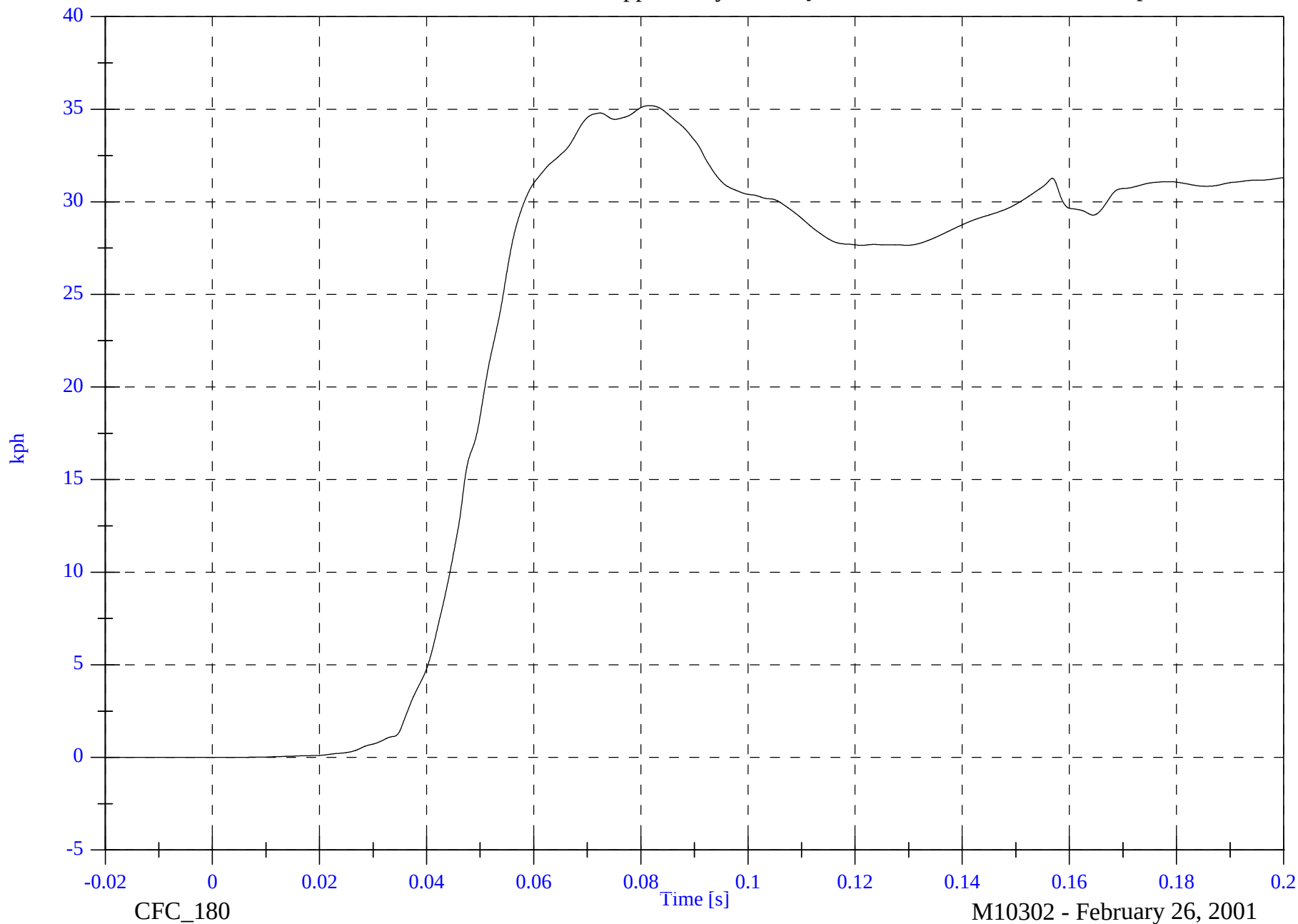


SNCAP Test #17 - 2001 Dodge Caravan

P1 Upper Rib y Velocity

Max: 35.2 [kph] at 0.082 [s]

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



B-14

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

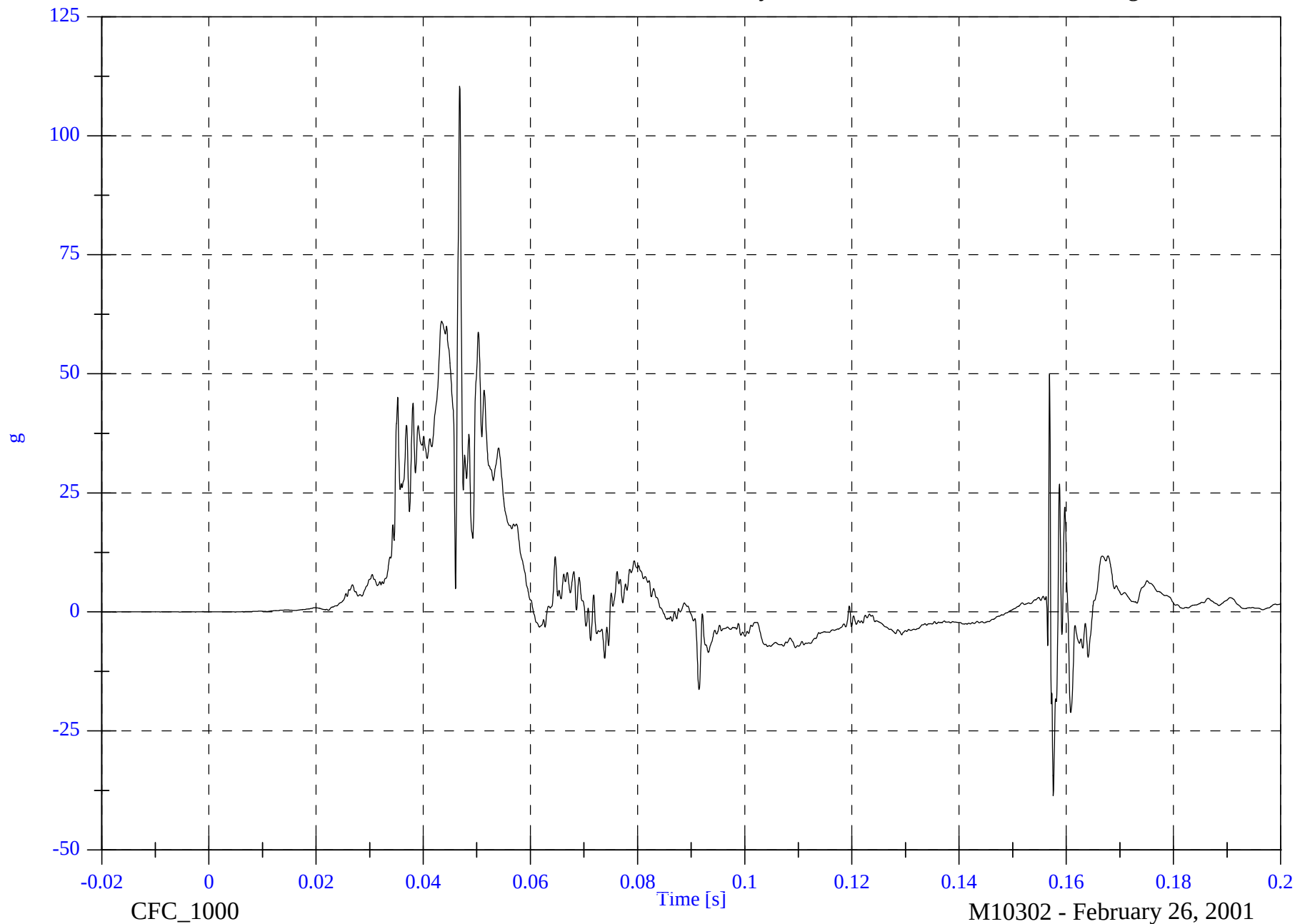
P1 Lower Rib y

Max: 110.4 [g] at 0.047 [s]

Min: -38.6 [g] at 0.158 [s]

B-15

8506-17

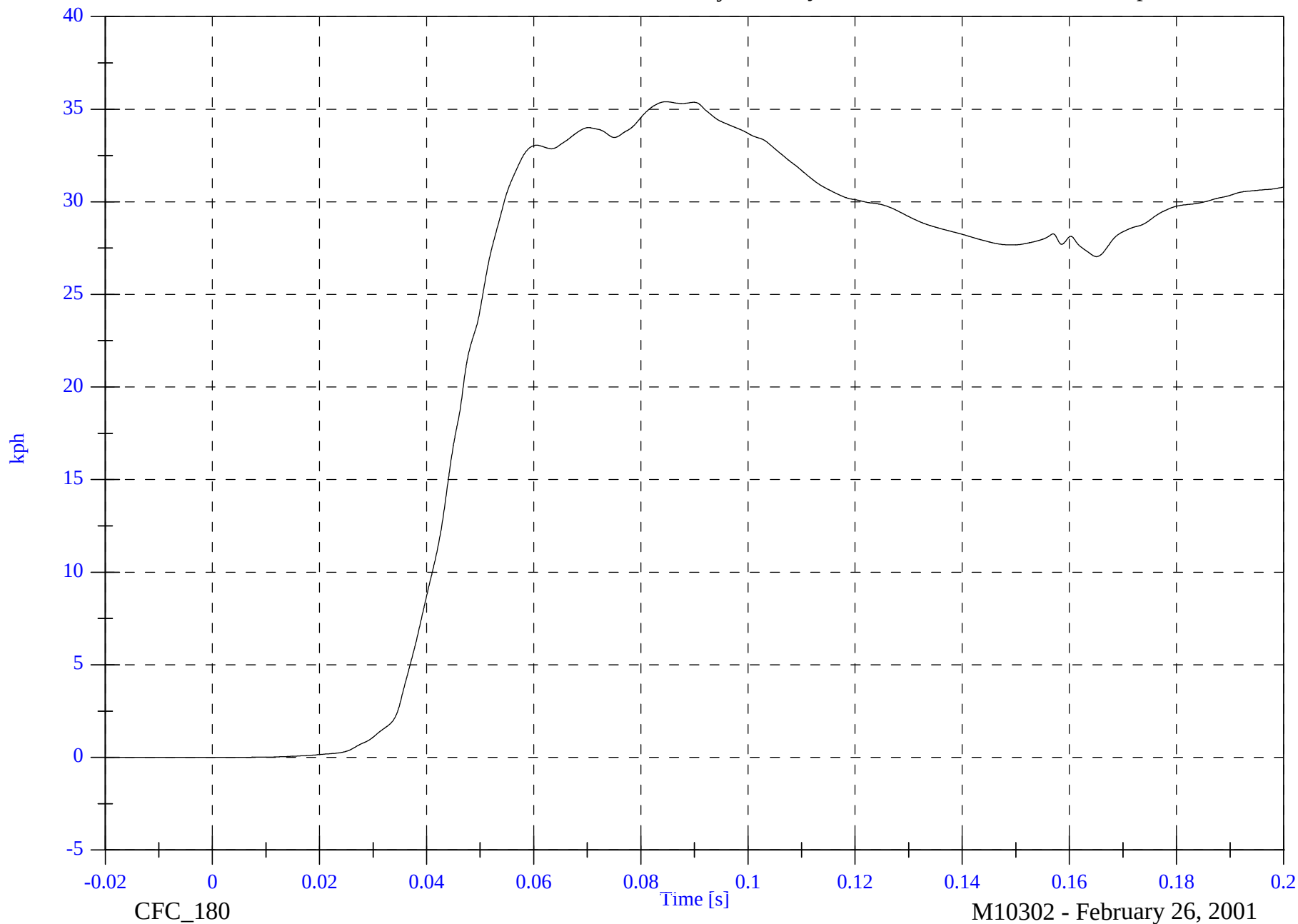


SNCAP Test #17 - 2001 Dodge Caravan

Max: 35.4 [kph] at 0.085 [s]

Min: -0.0 [kph] at -0.016 [s]

P1 Lower Rib y Velocity



B-16

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

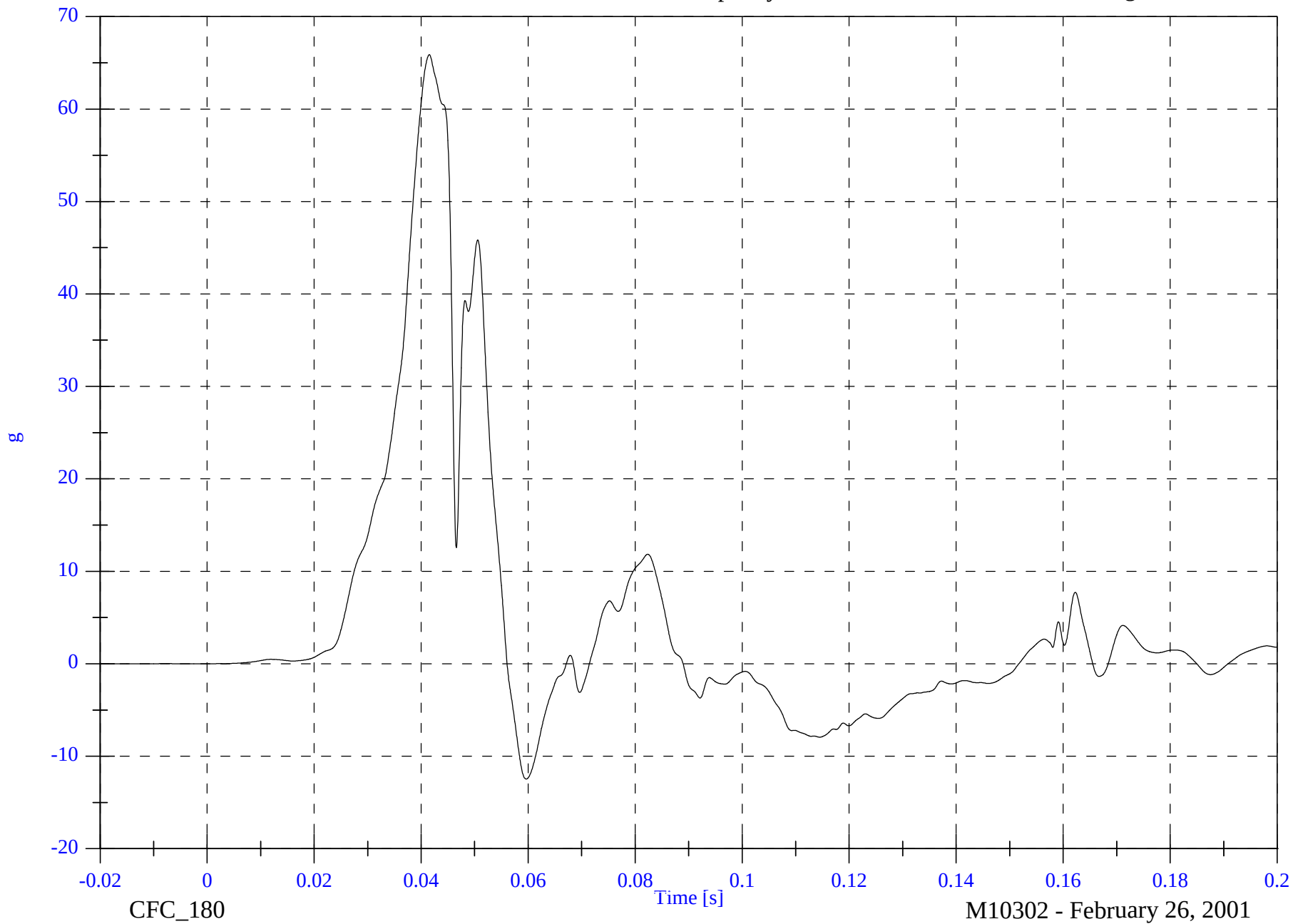
P1 Lower Spine y

Max: 65.9 [g] at 0.042 [s]

Min: -12.5 [g] at 0.060 [s]

B-17

8506-17

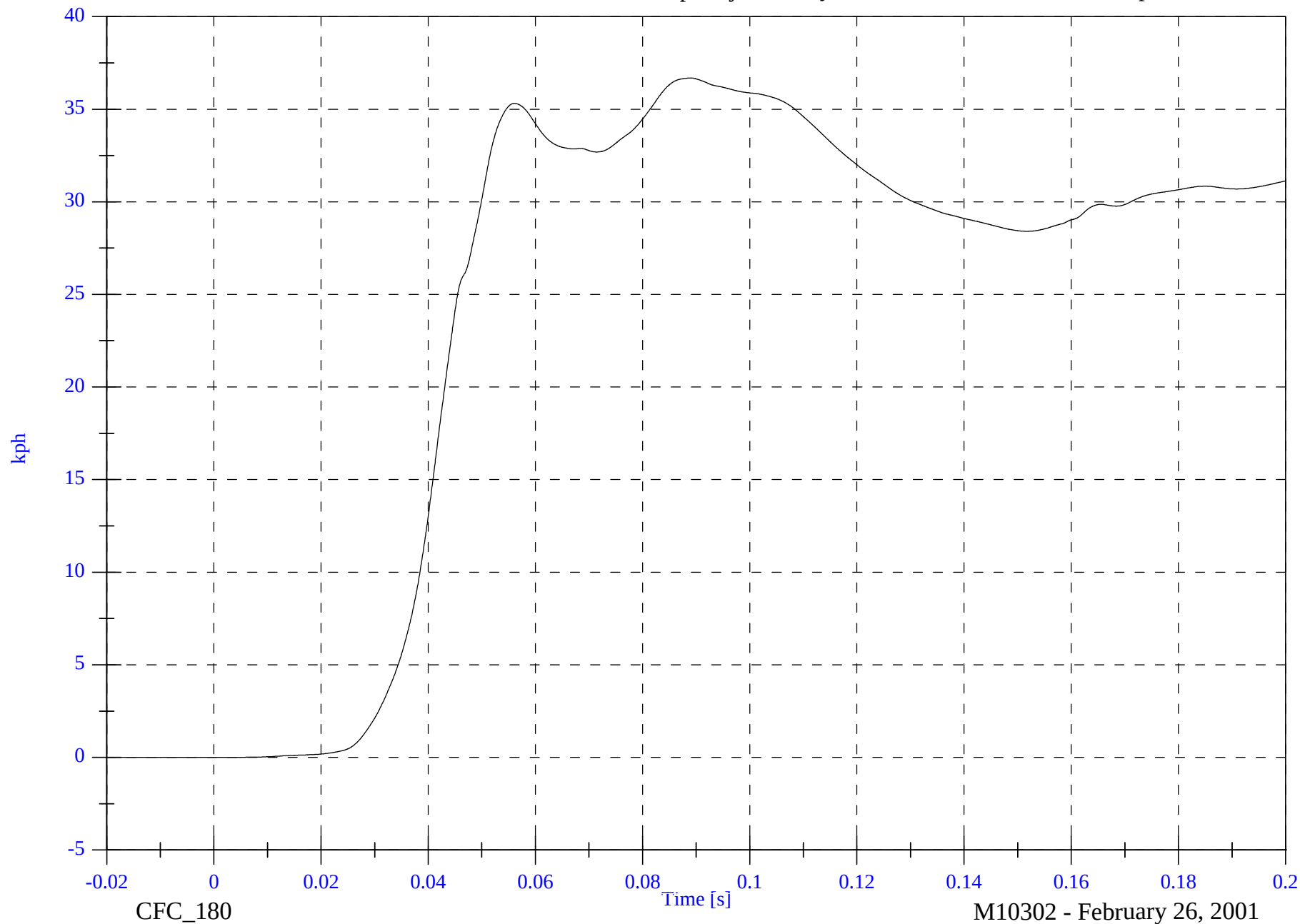


SNCAP Test #17 - 2001 Dodge Caravan

P1 Lower Spine y Velocity

Max: 36.7 [kph] at 0.089 [s]

Min: -0.0 [kph] at -0.016 [s]



B-18

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

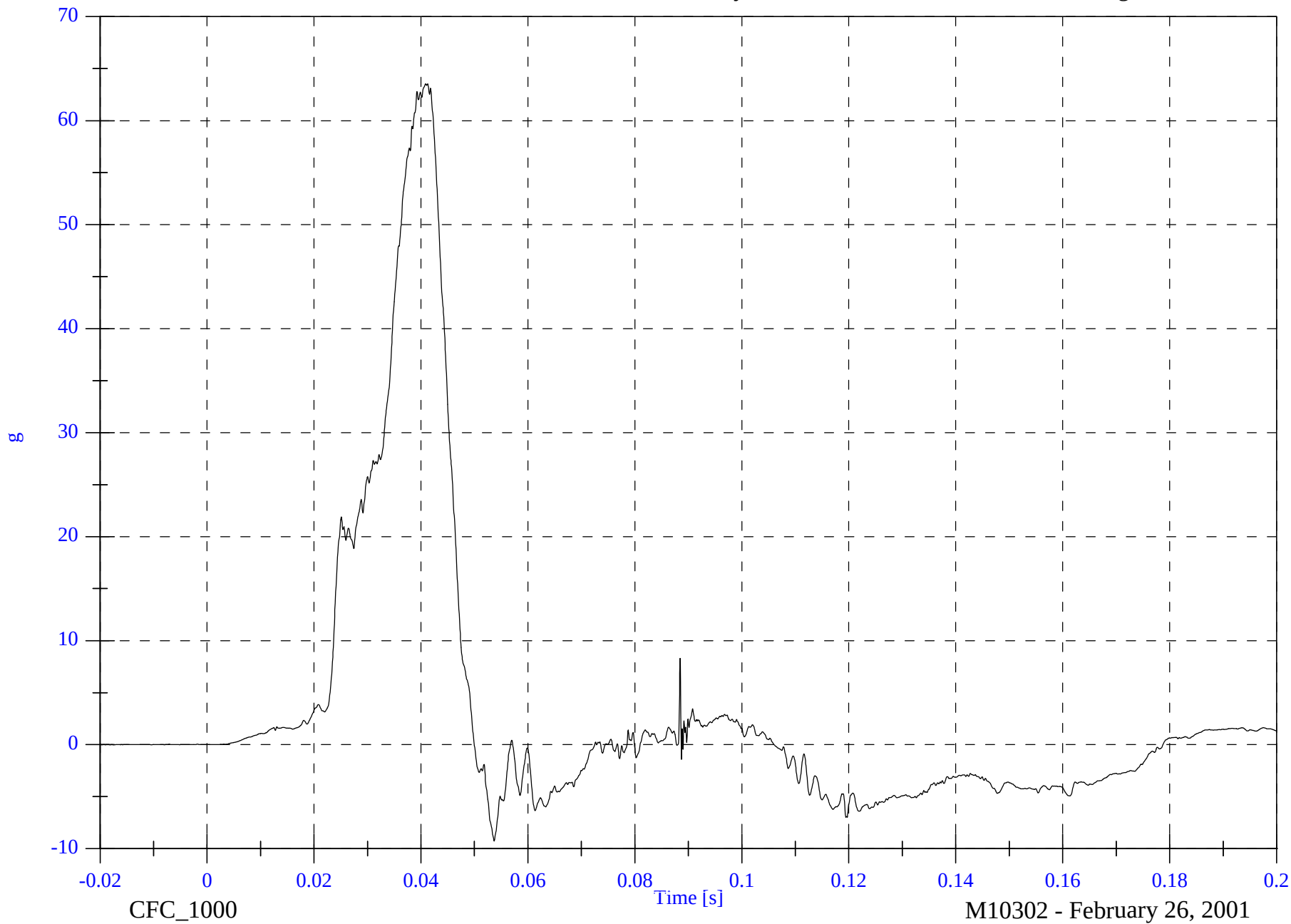
P1 Pelvic y

Max: 63.5 [g] at 0.041 [s]

Min: -9.3 [g] at 0.054 [s]

B-19

8506-17

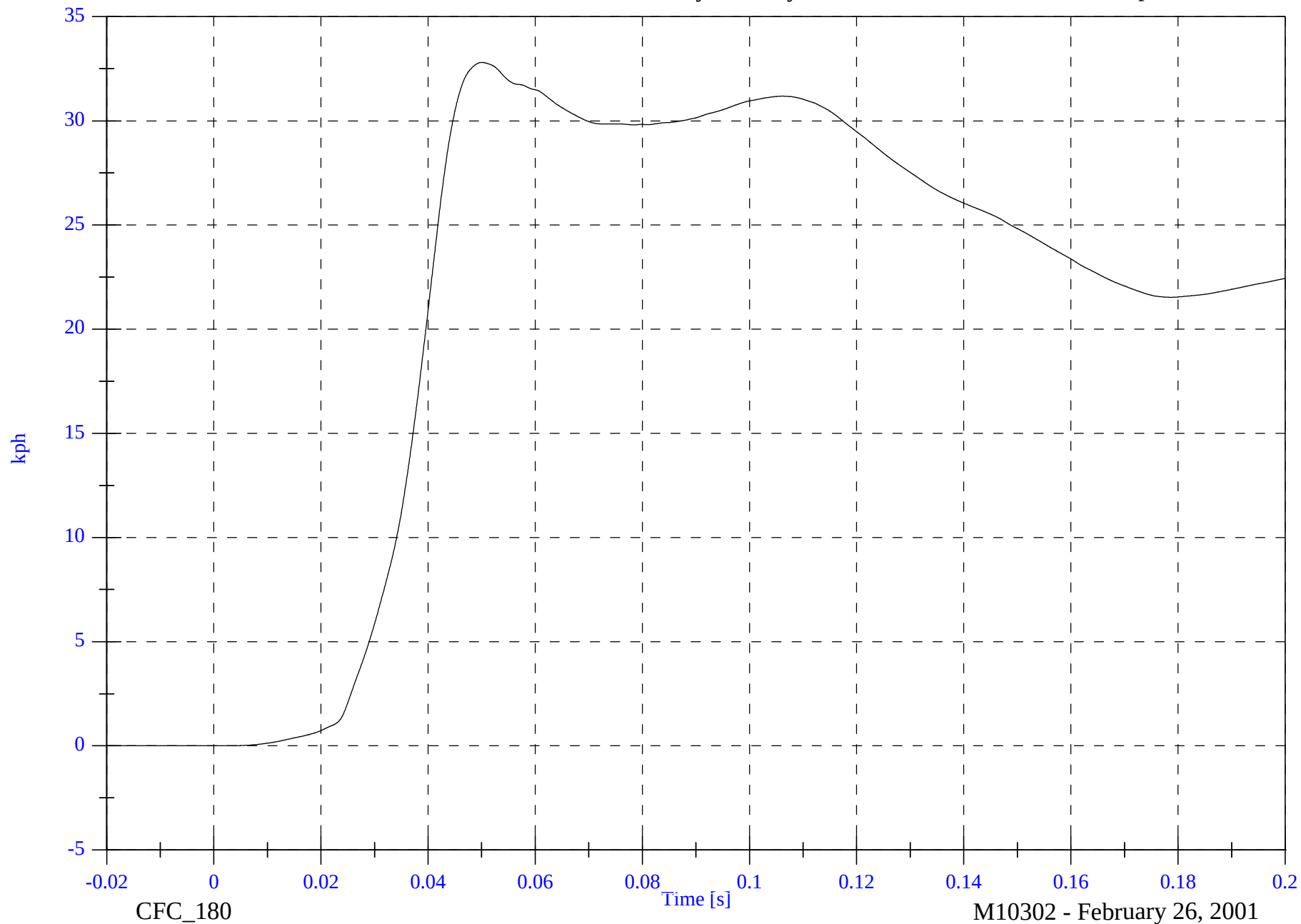


SNCAP Test #17 - 2001 Dodge Caravan

Max: 32.8 [kph] at 0.050 [s]

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

P1 Pelvic y Velocity



B-20

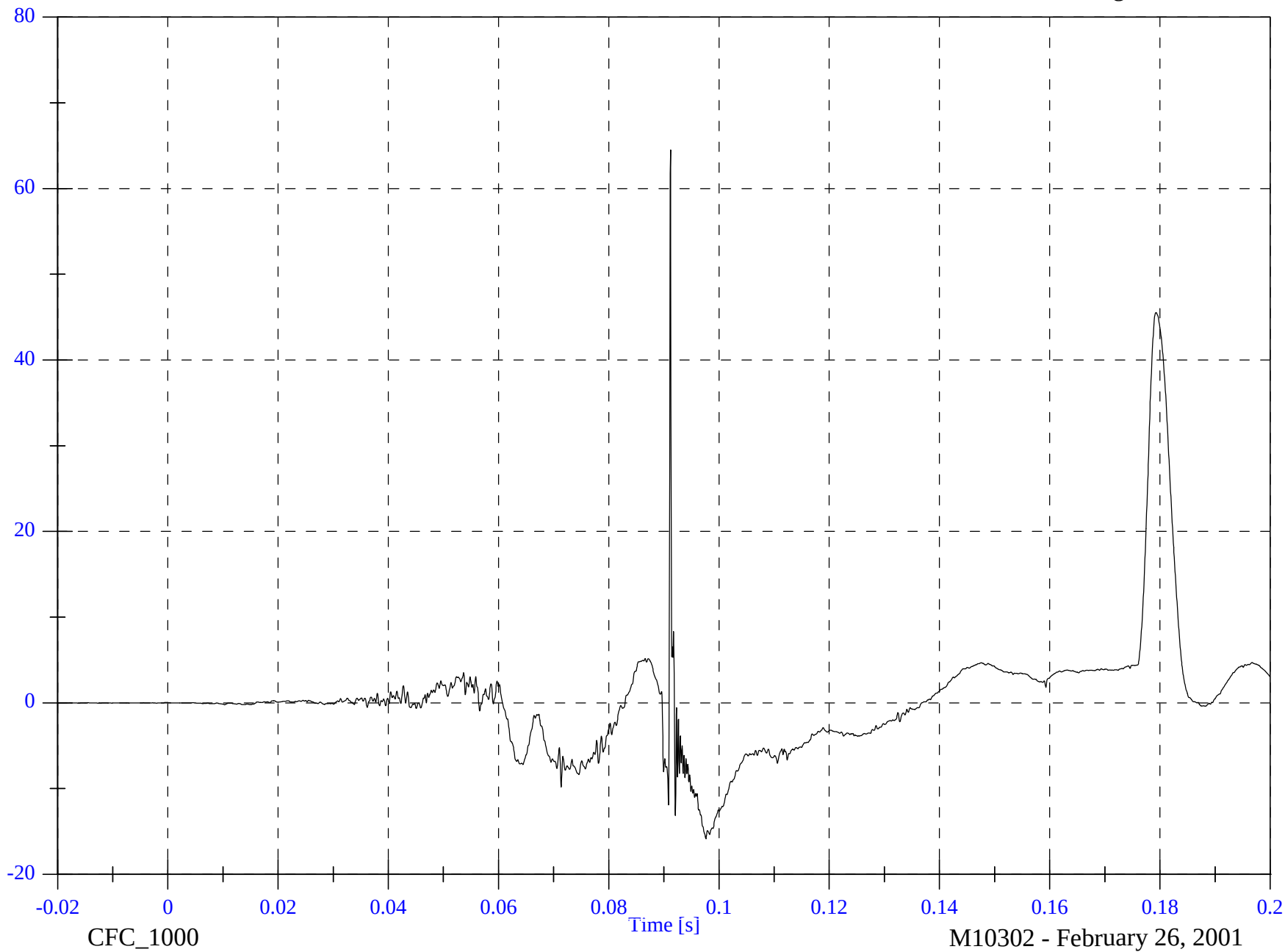
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P4 Head x

Max: 64.5 [g] at 0.091 [s]

Min: -15.9 [g] at 0.098 [s]



B-21

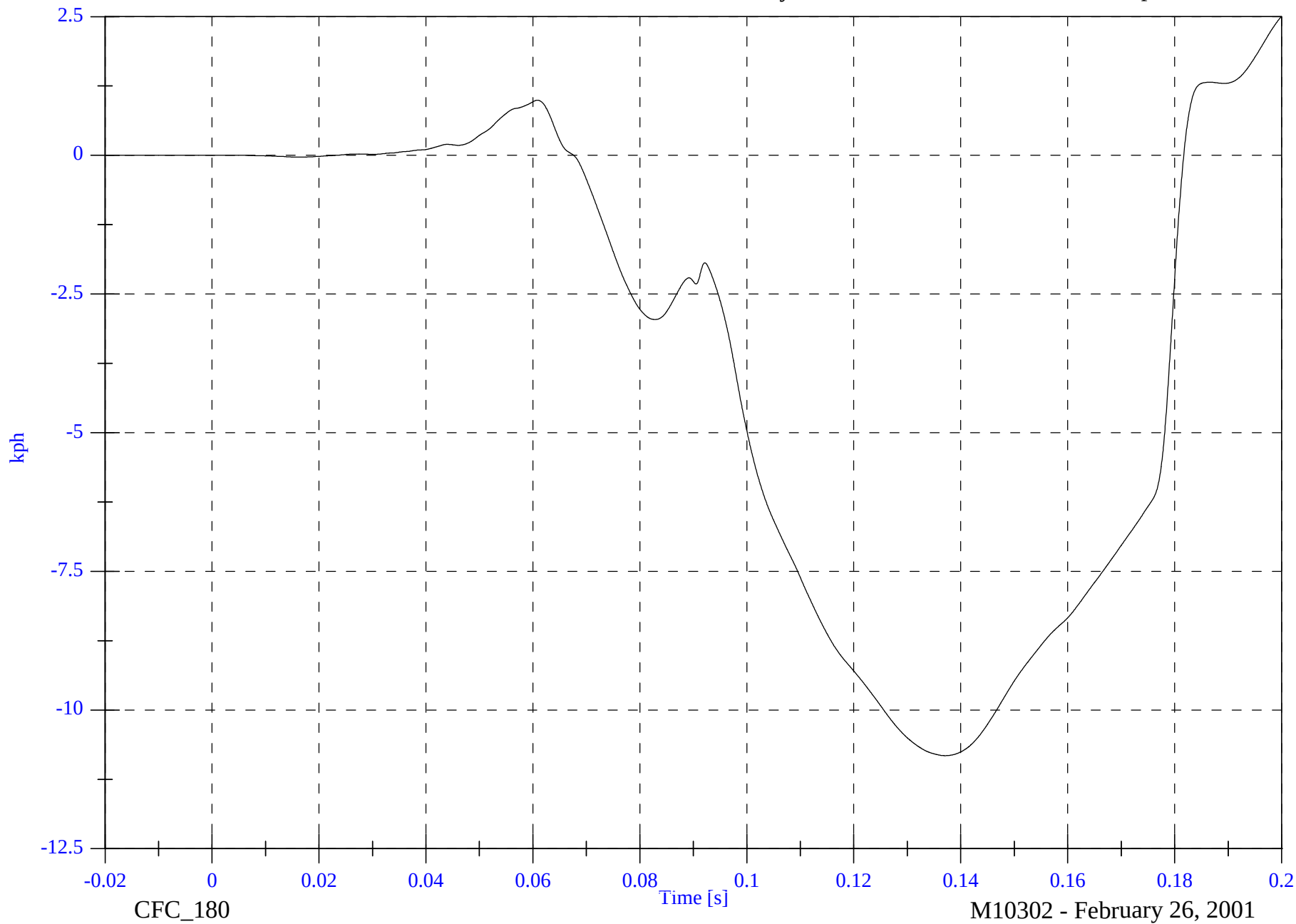
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P4 Head x Velocity

Max: 2.5 [kph] at 0.200 [s]

Min: -10.8 [kph] at 0.137 [s]



B-22

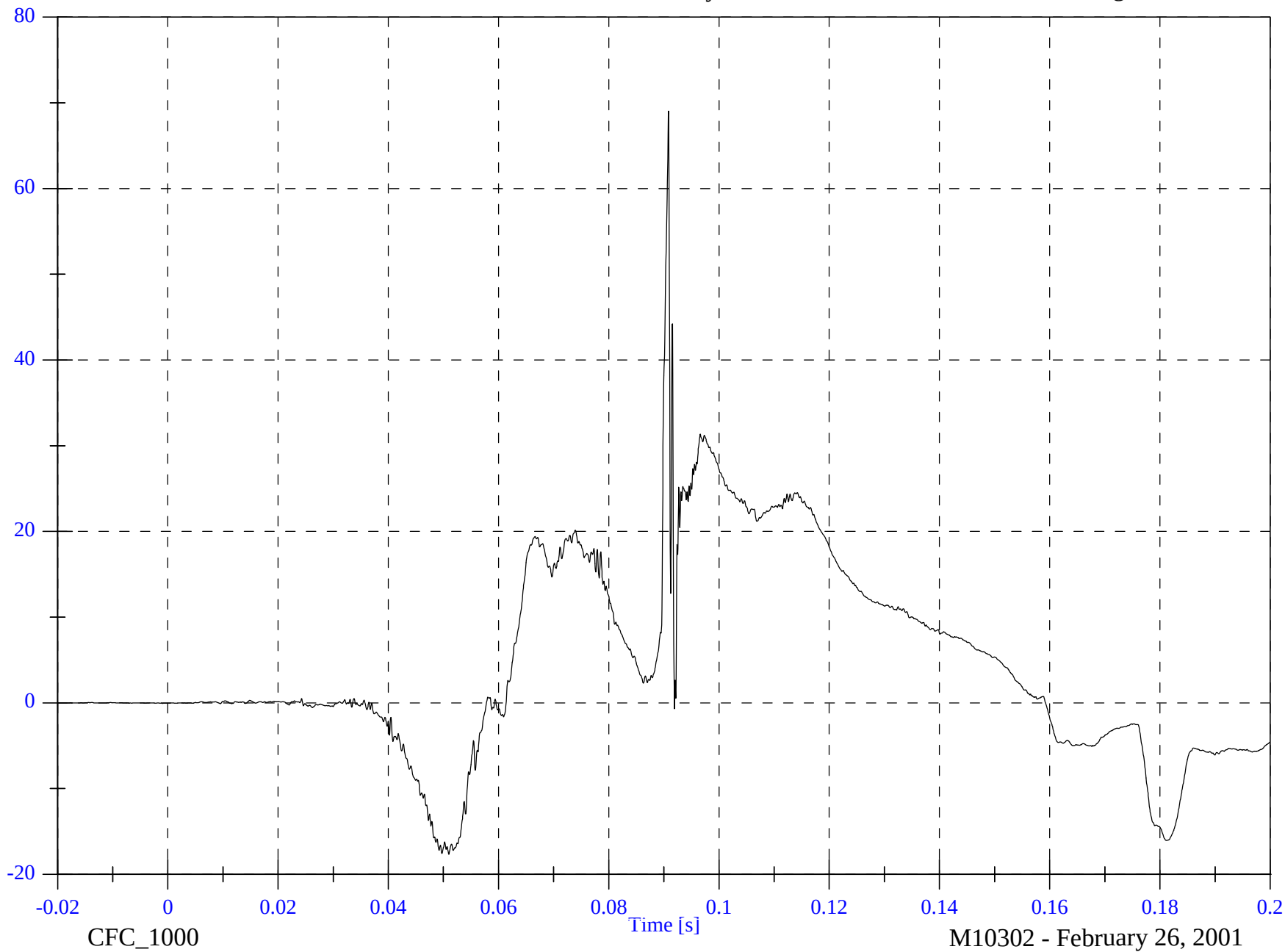
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P4 Head y

Max: 69.1 [g] at 0.091 [s]

Min: -17.7 [g] at 0.051 [s]



B-23

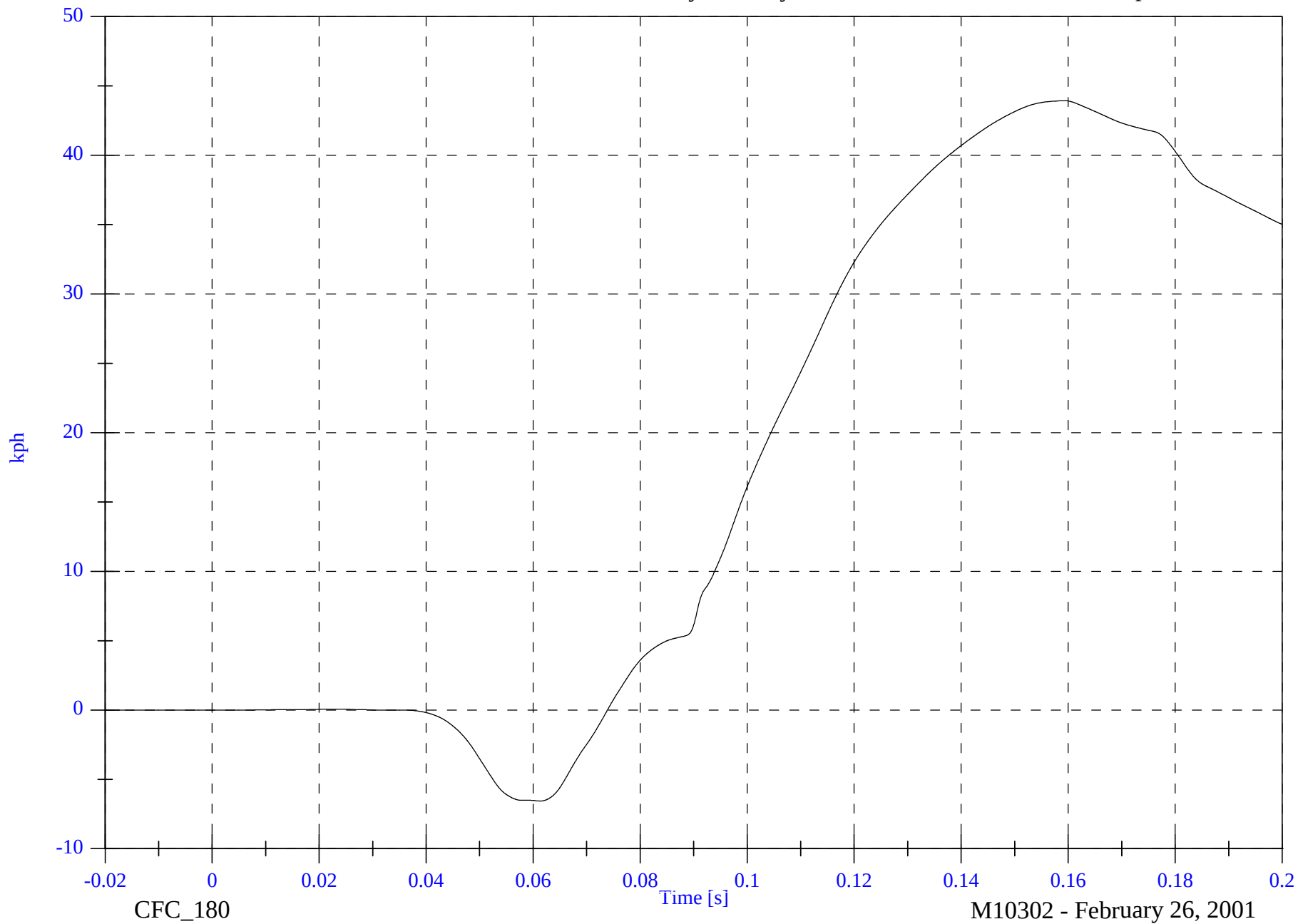
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P4 Head y Velocity

Max: 43.9 [kph] at 0.159 [s]

Min: -6.6 [kph] at 0.061 [s]



B-24

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

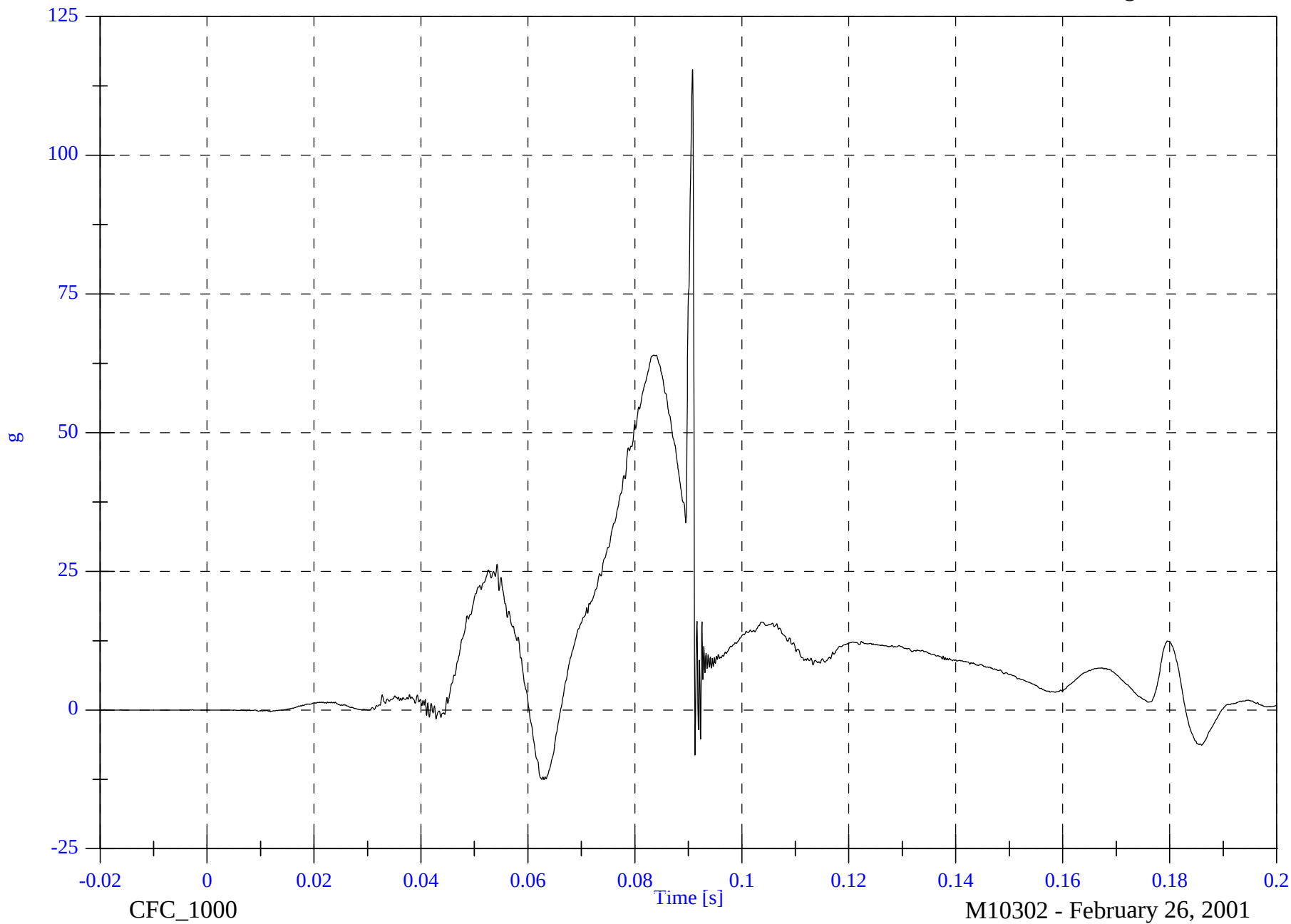
Max: 115.5 [g] at 0.091 [s]

Min: -12.6 [g] at 0.063 [s]

P4 Head z

B-25

8506-17

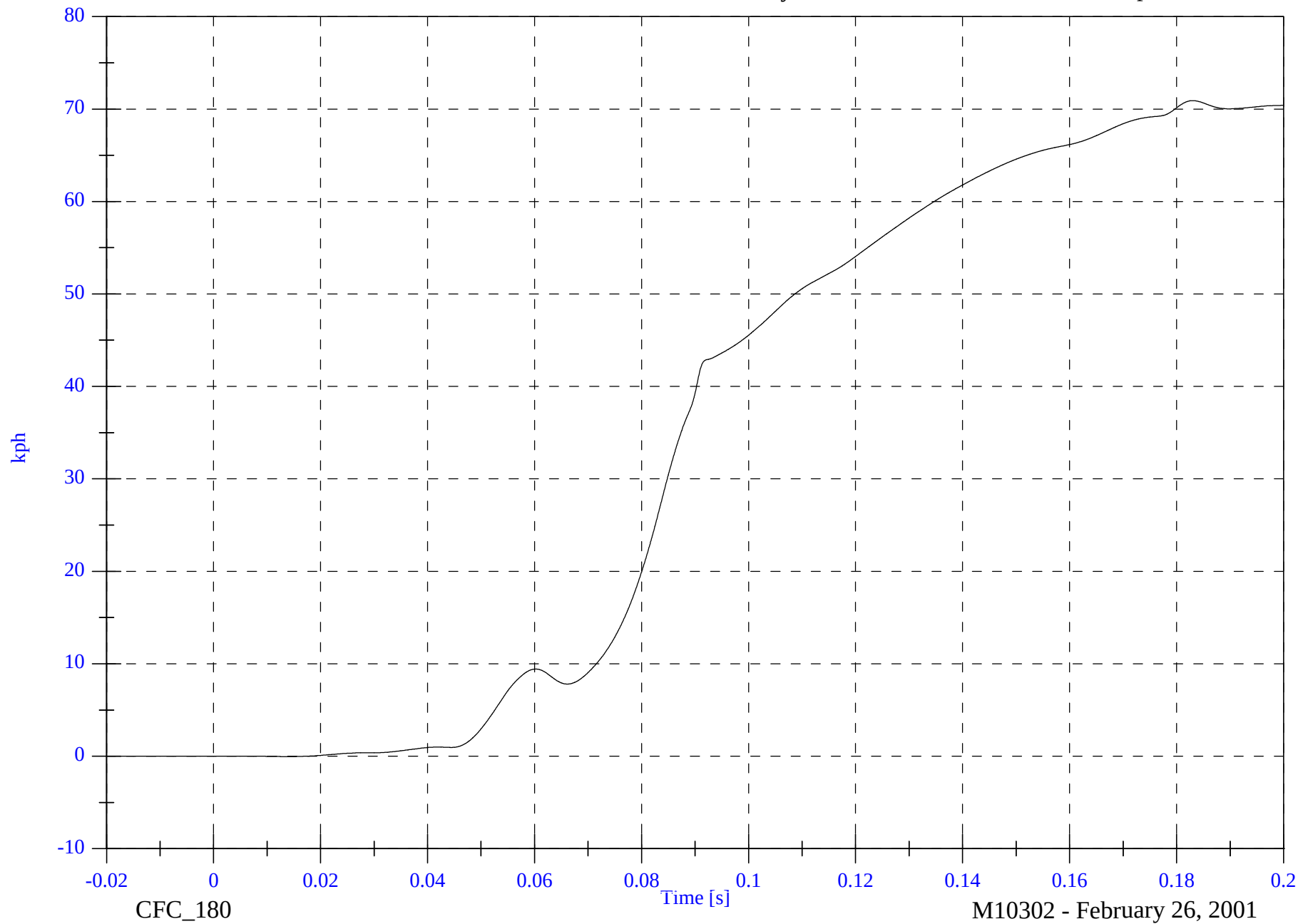


SNCAP Test #17 - 2001 Dodge Caravan

P4 Head z Velocity

Max: 70.9 [kph] at 0.183 [s]

Min: -0.0 [kph] at 0.014 [s]



B-26

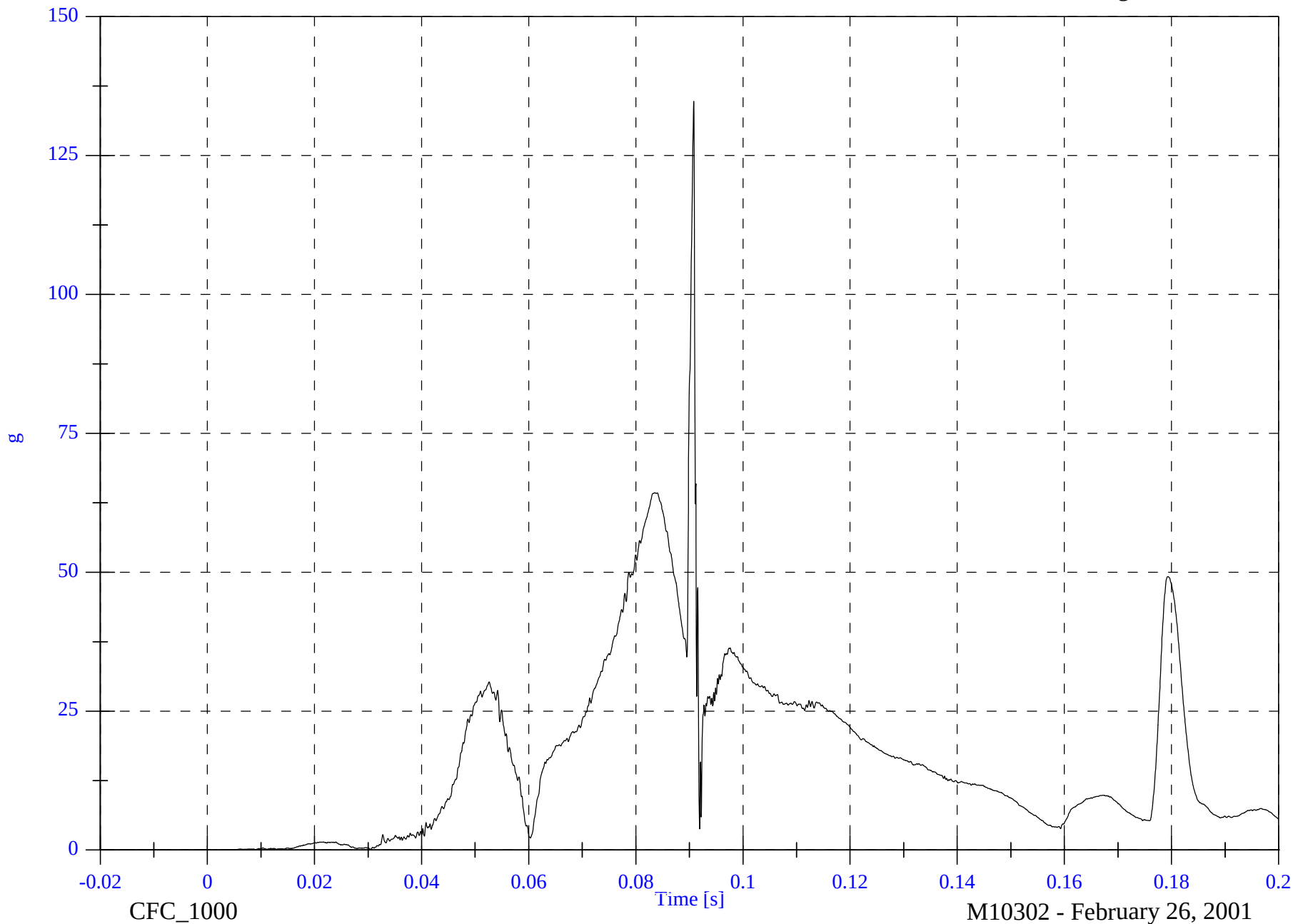
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P4 Head Resultant

Max: 134.8 [g] at 0.091 [s]

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



B-27

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

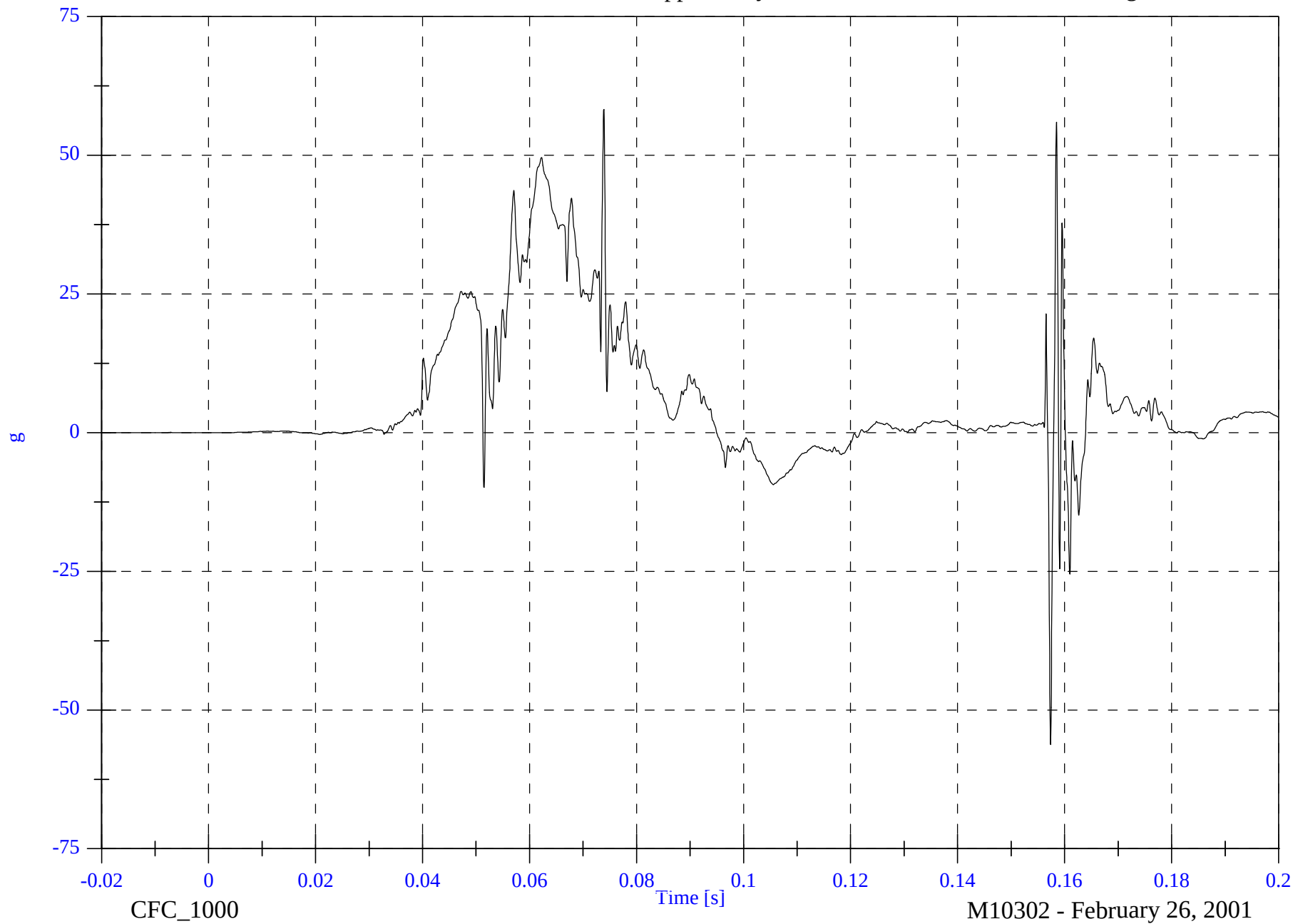
P4 Upper Rib y

Max: 58.3 [g] at 0.074 [s]

Min: -56.2 [g] at 0.157 [s]

B-28

8506-17

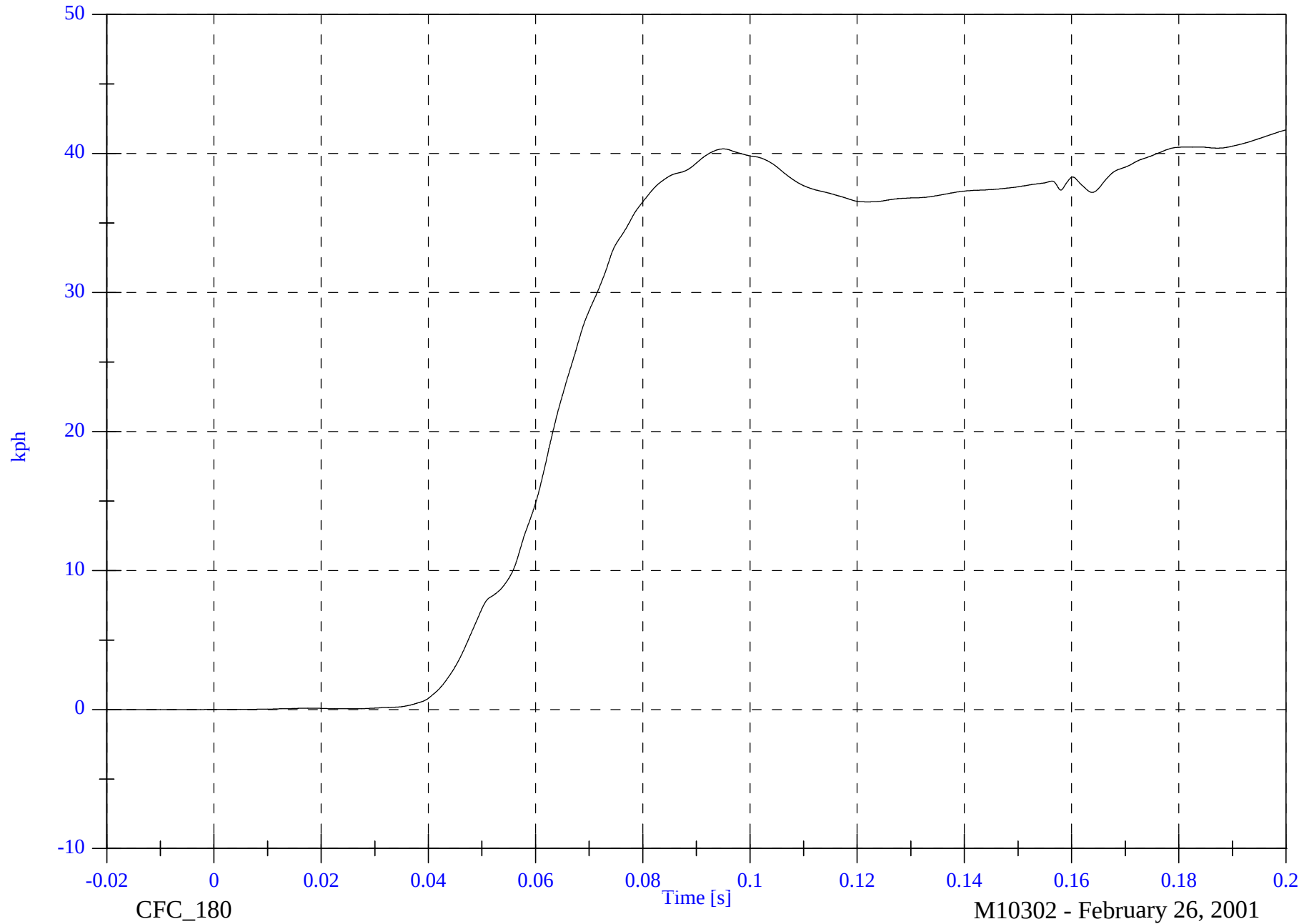


SNCAP Test #17 - 2001 Dodge Caravan

P4 Upper Rib y Velocity

Max: 41.7 [kph] at 0.200 [s]

Min: -0.0 [kph] at -0.011 [s]



B-29

8506-17

CFC_180

M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

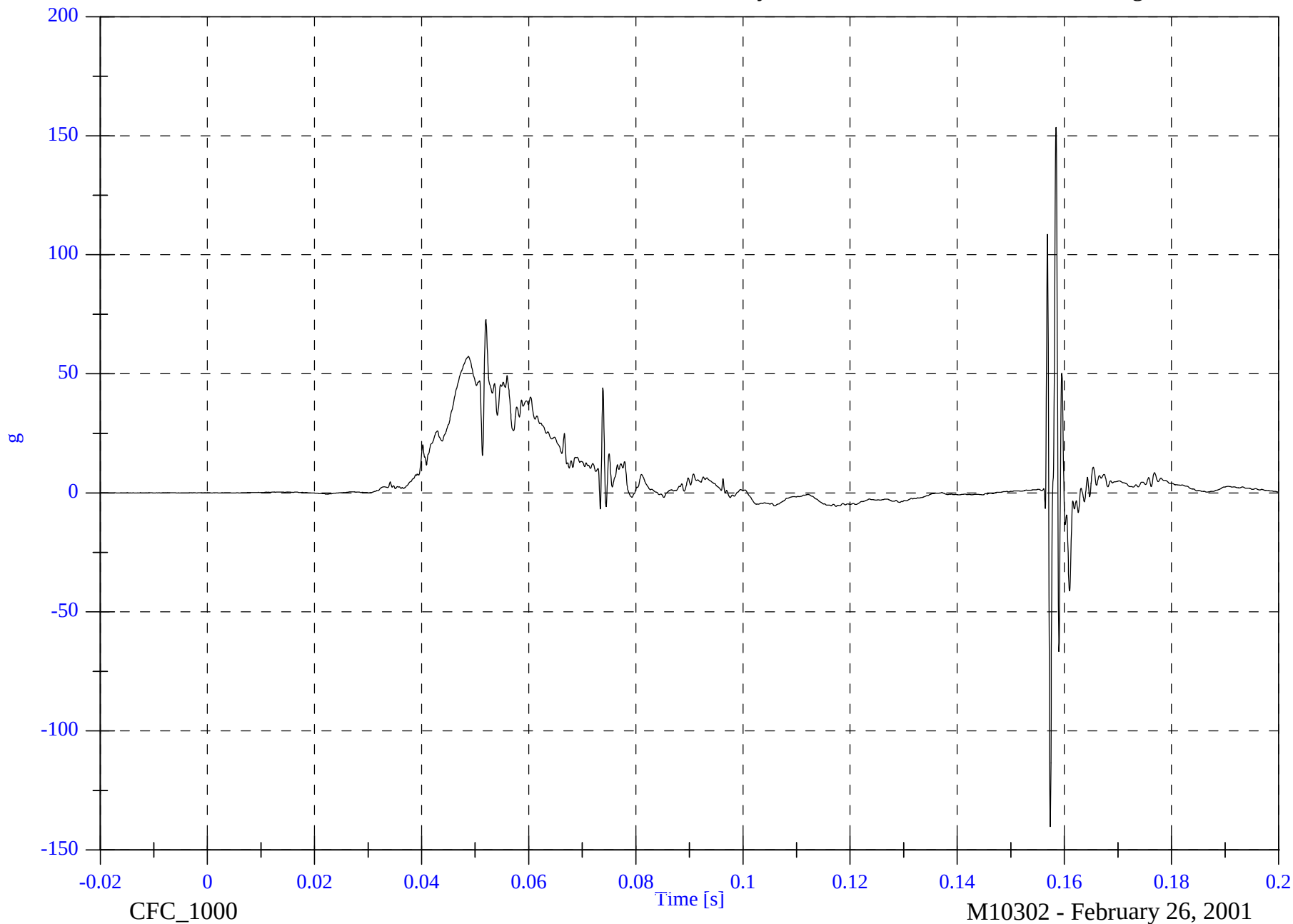
P4 Lower Rib y

Max: 153.5 [g] at 0.158 [s]

Min: -140.2 [g] at 0.157 [s]

B-30

8506-17

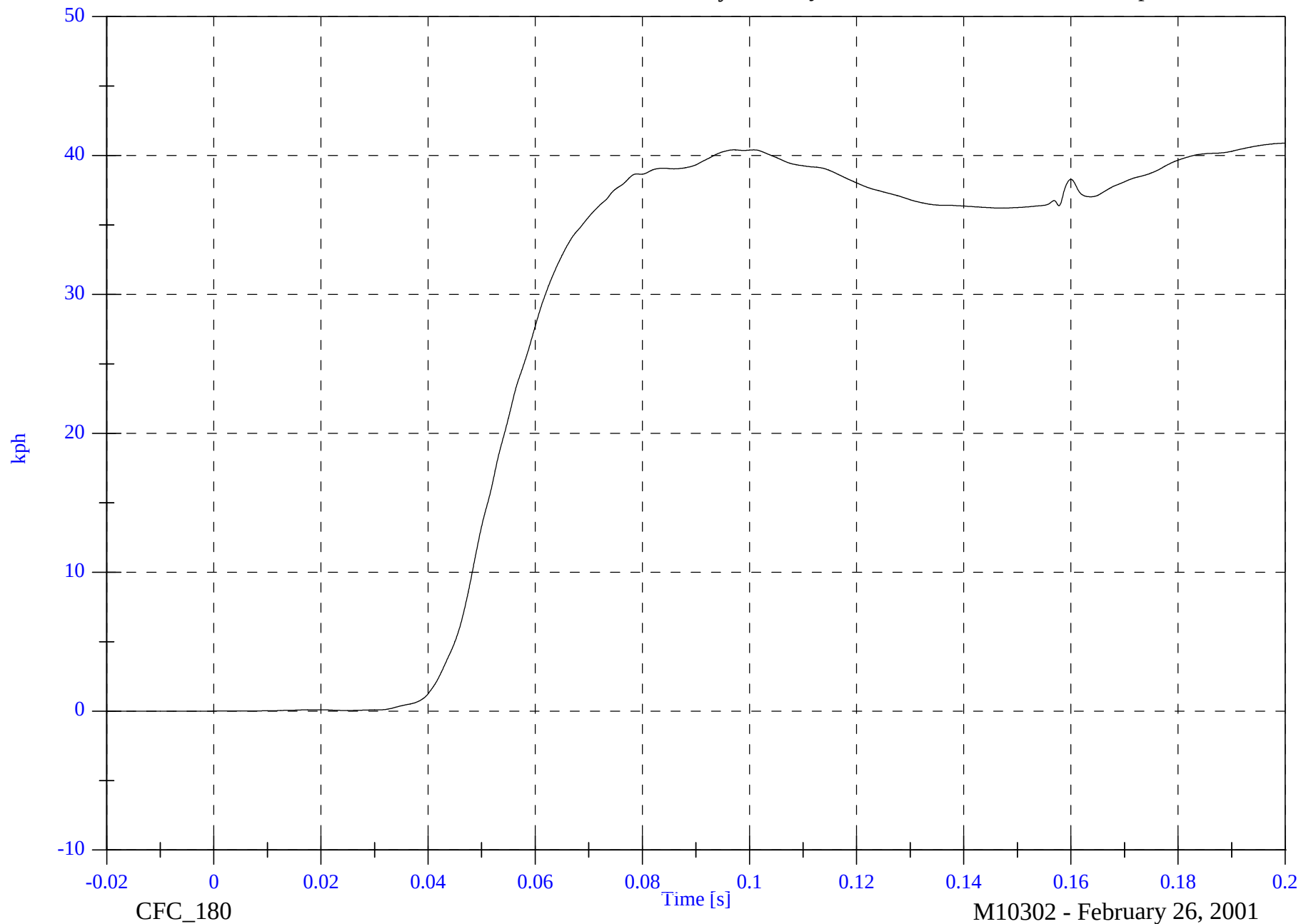


SNCAP Test #17 - 2001 Dodge Caravan

P4 Lower Rib y Velocity

Max: 40.9 [kph] at 0.200 [s]

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



B-31

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

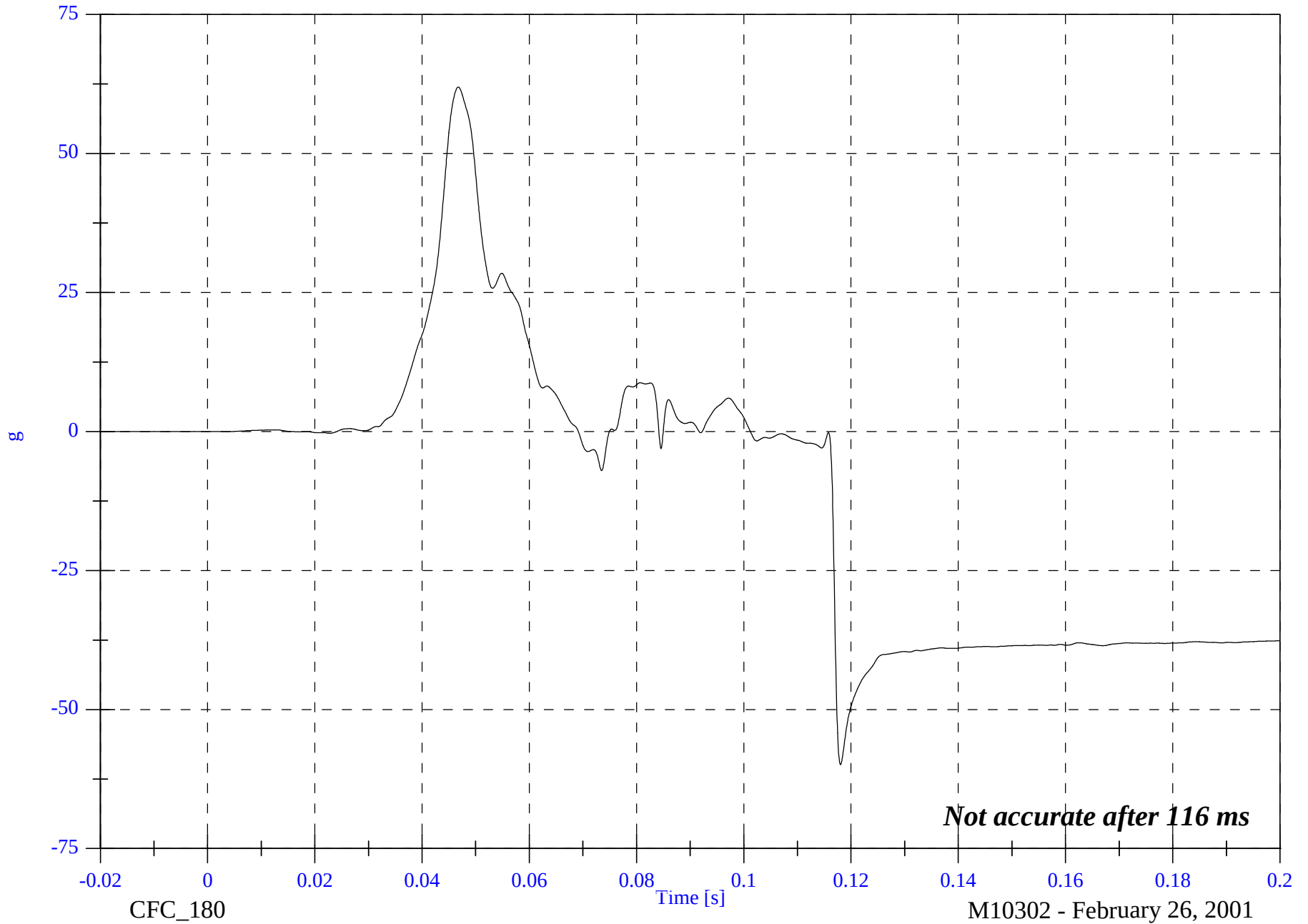
P4 Lower Spine y

Max: 62.0 [g] at 0.047 [s]

Min: -59.9 [g] at 0.118 [s]

B-32

8506-17

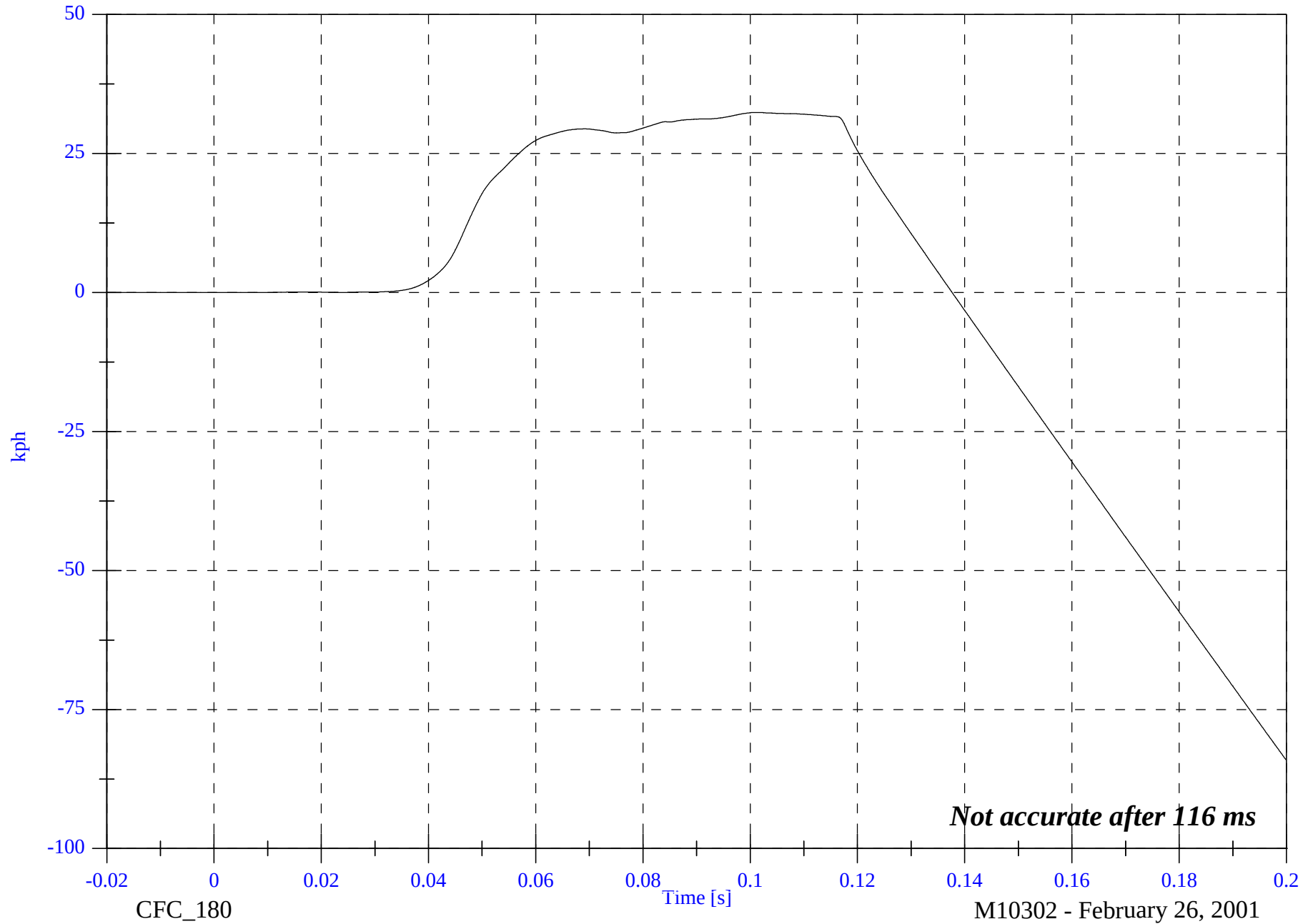


SNCAP Test #17 - 2001 Dodge Caravan

P4 Lower Spine y Velocity

Max: 32.4 [kph] at 0.101 [s]

Min: -84.1 [kph] at 0.200 [s]



B-33

8506-17

CFC_180

Time [s]

M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

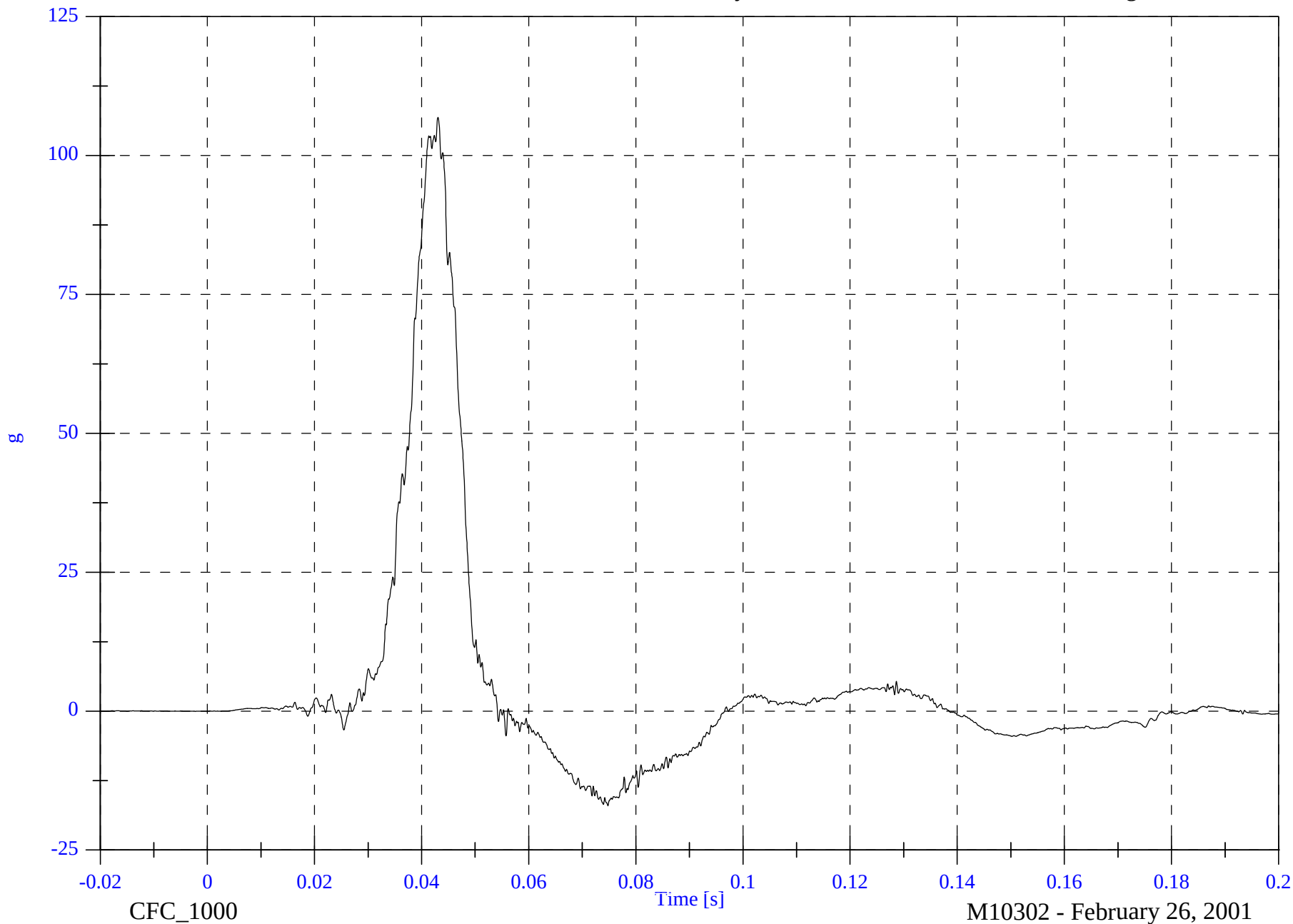
P4 Pelvic y

Max: 106.9 [g] at 0.043 [s]

Min: -17.1 [g] at 0.075 [s]

B-34

8506-17

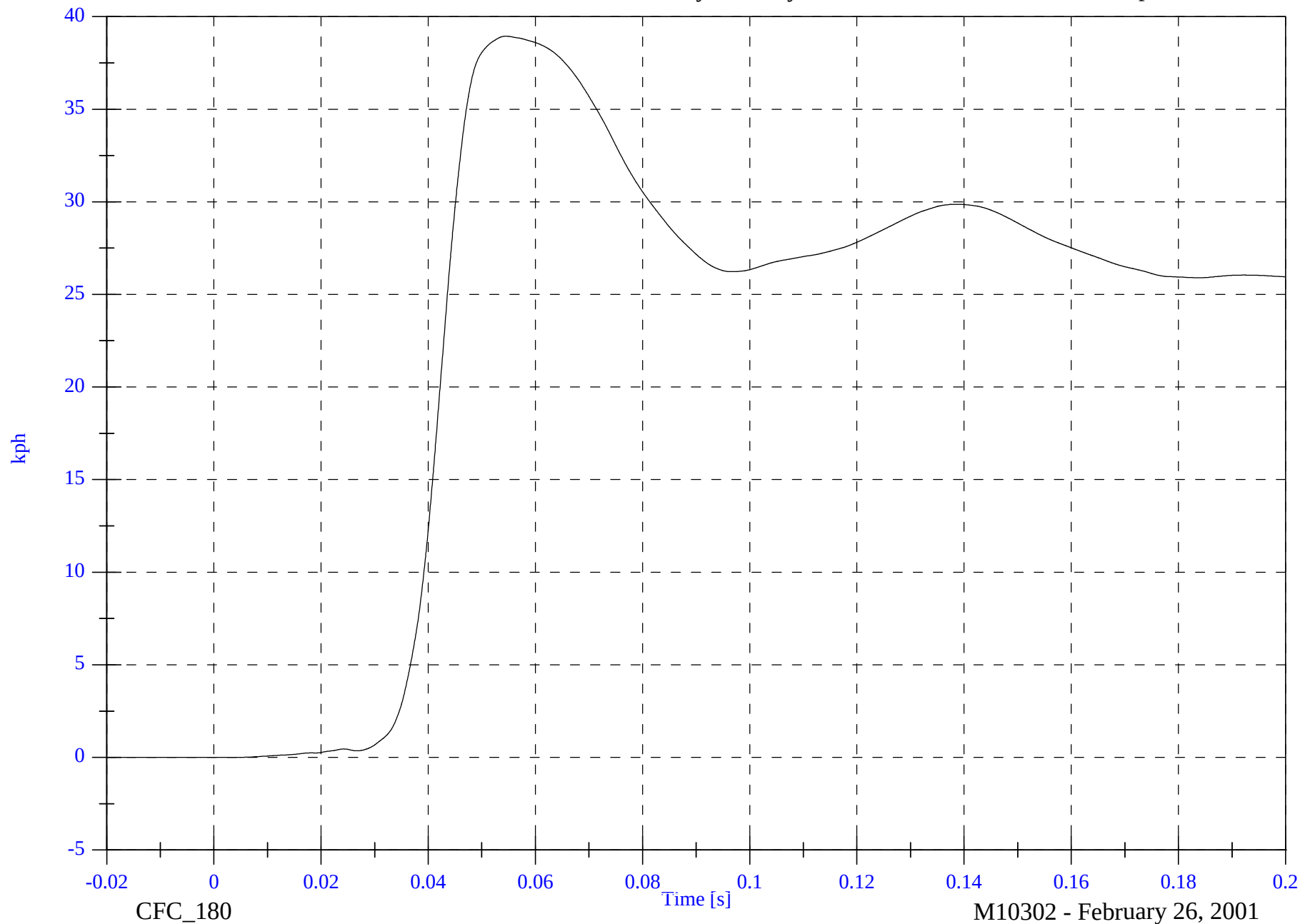


SNCAP Test #17 - 2001 Dodge Caravan

Max: 38.9 [kph] at 0.054 [s]

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

P4 Pelvic y Velocity



B-35

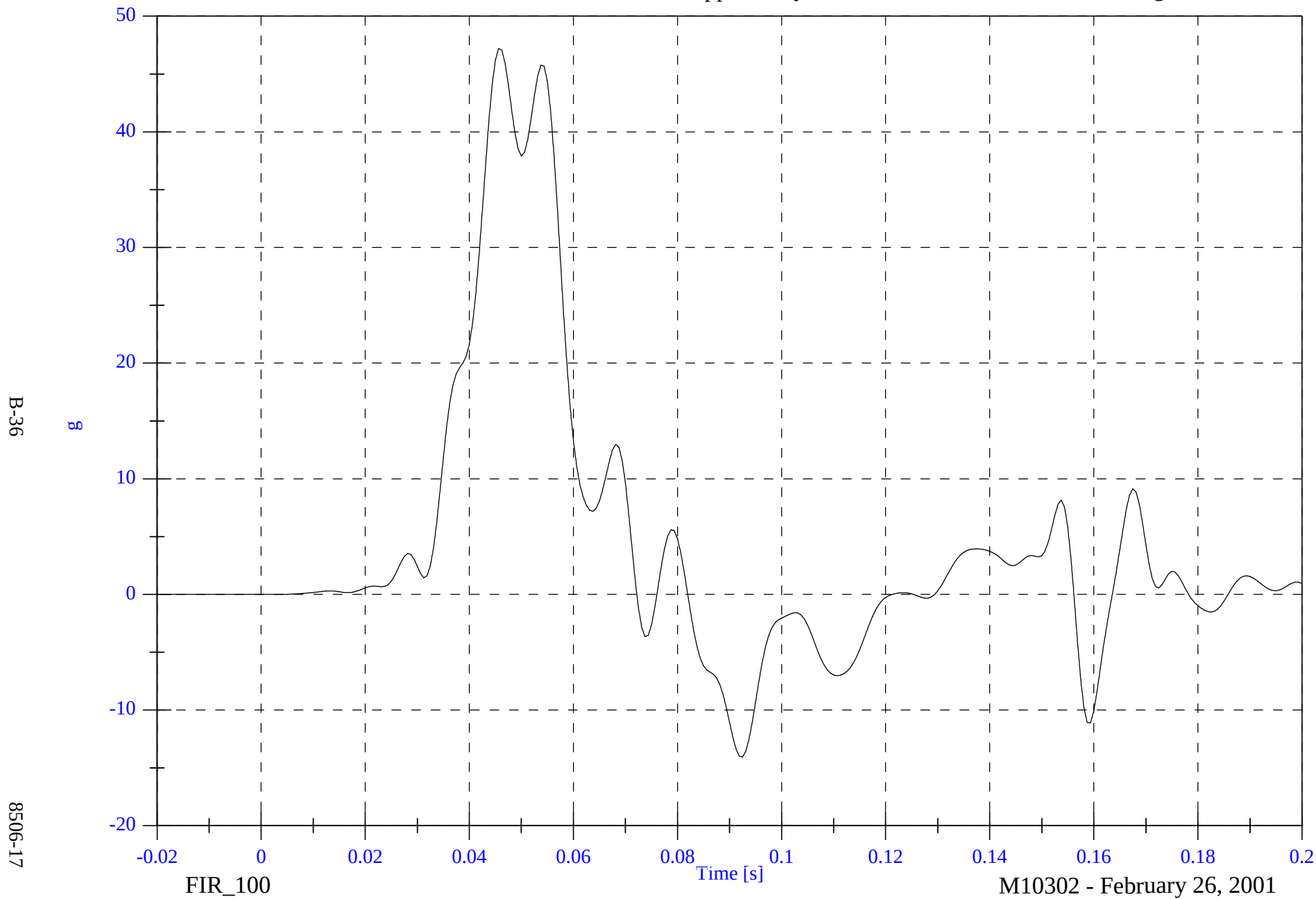
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P1 Upper Rib y

Max: 47.2 [g] at 0.046 [s]

Min: -14.1 [g] at 0.093 [s]



SNCAP Test #17 - 2001 Dodge Caravan

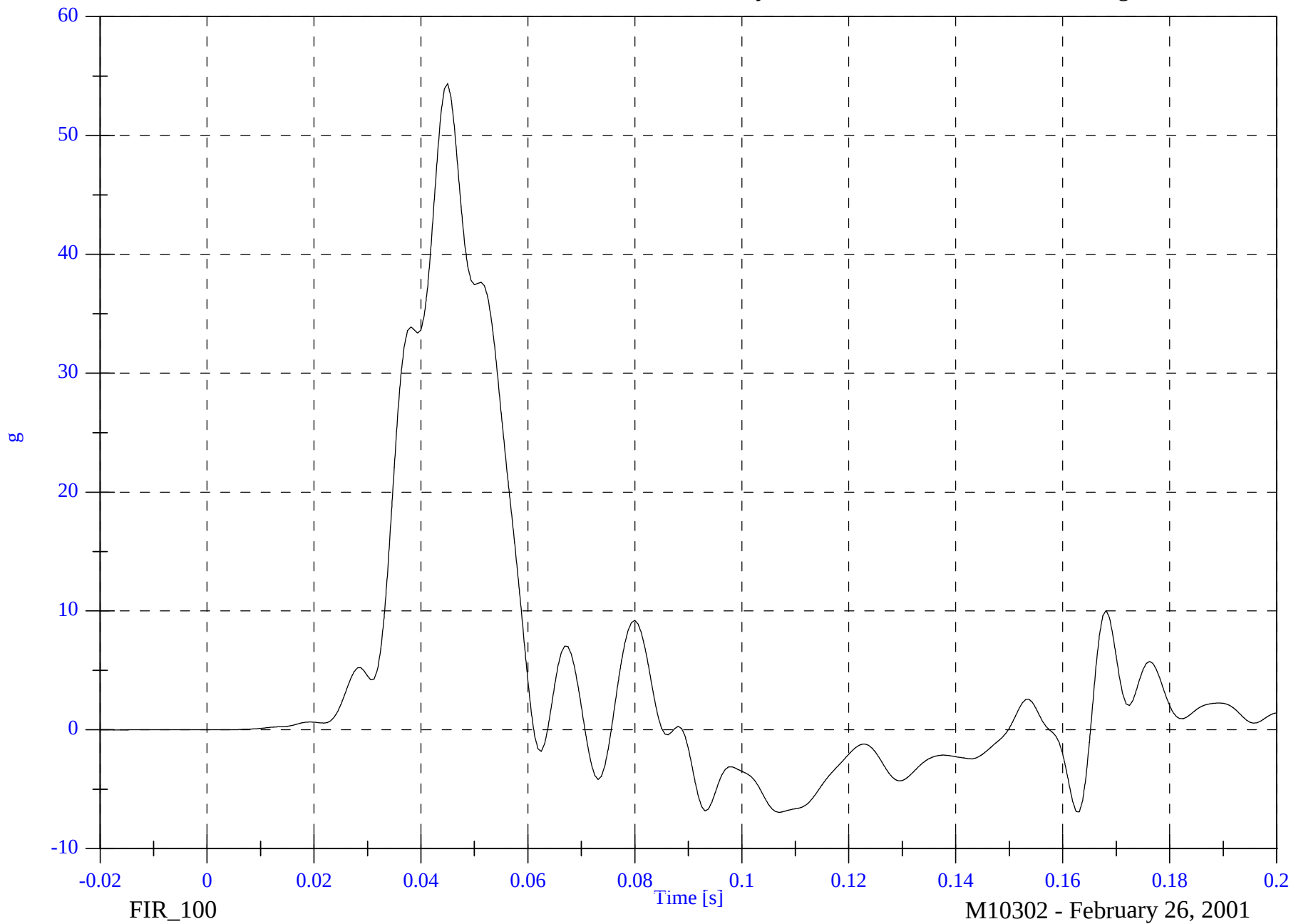
P1 Lower Rib y

Max: 54.4 [g] at 0.045 [s]

Min: -6.9 [g] at 0.107 [s]

B-37

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

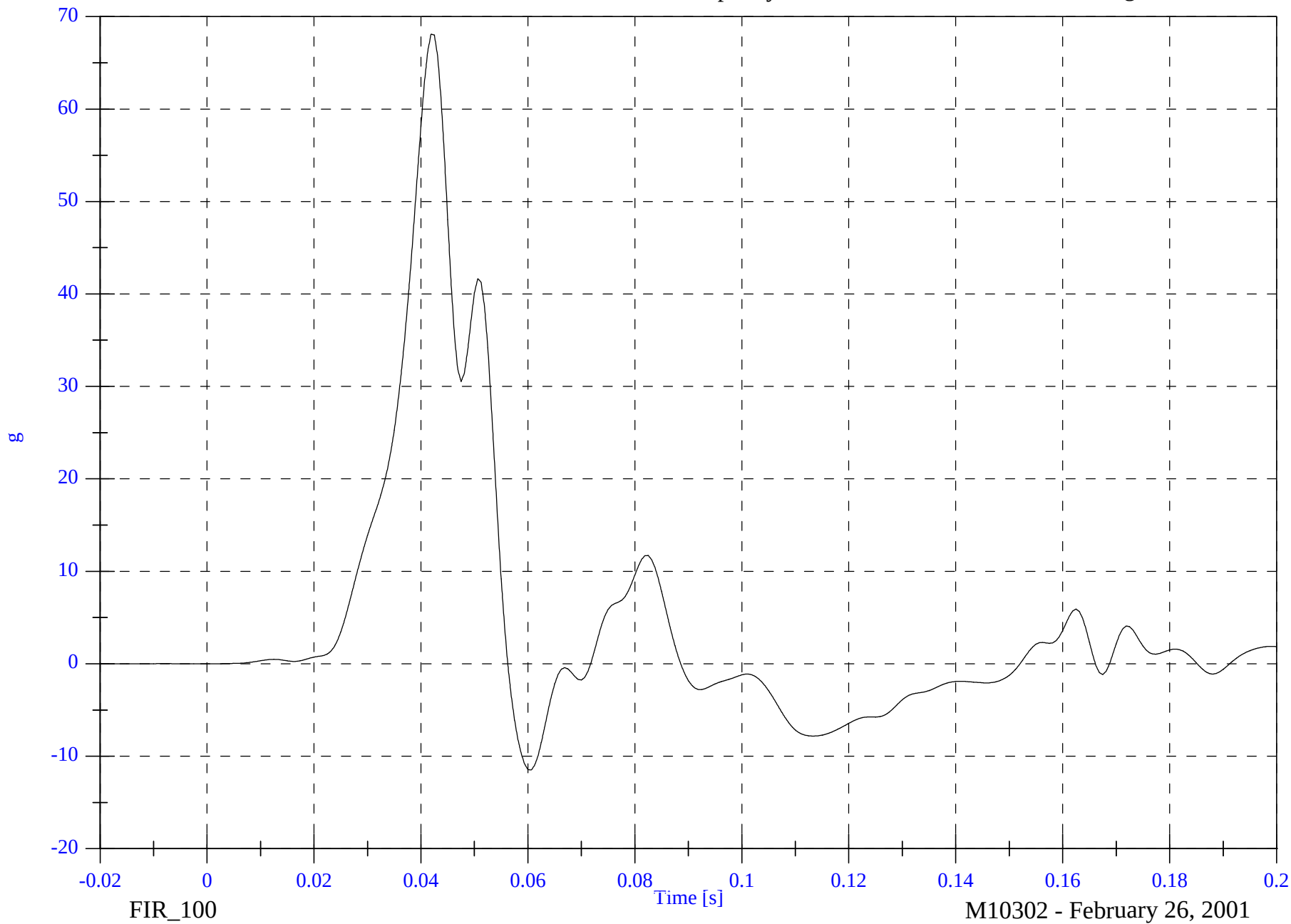
P1 Lower Spine y

Max: 68.1 [g] at 0.042 [s]

Min: -11.5 [g] at 0.061 [s]

B-38

8506-17

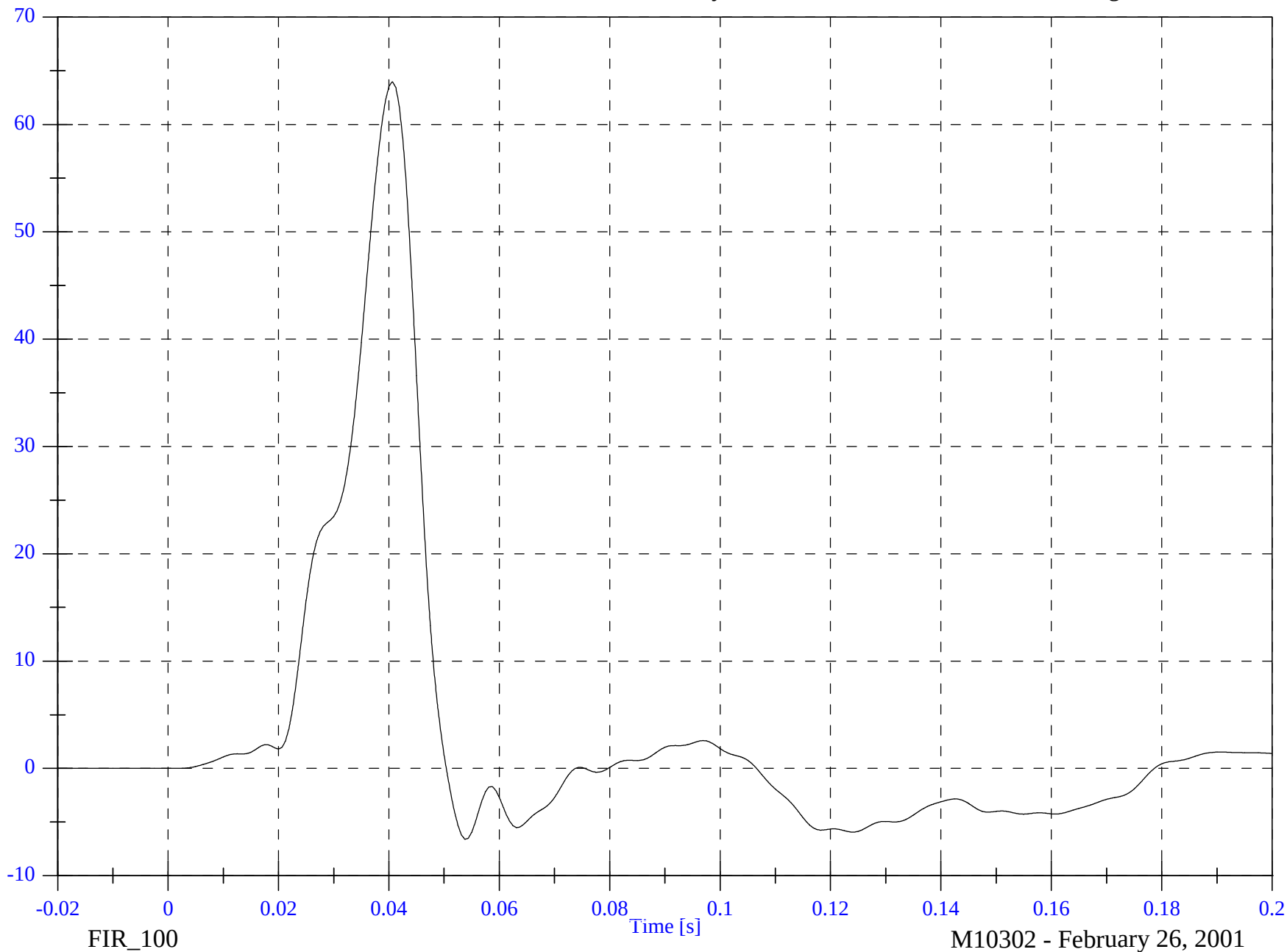


SNCAP Test #17 - 2001 Dodge Caravan

P1 Pelvic y

Max: 64.0 [g] at 0.041 [s]

Min: -6.6 [g] at 0.054 [s]



B-39

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

P4 Upper Rib y

Max: 44.8 [g] at 0.063 [s]

Min: -8.9 [g] at 0.106 [s]



SNCAP Test #17 - 2001 Dodge Caravan

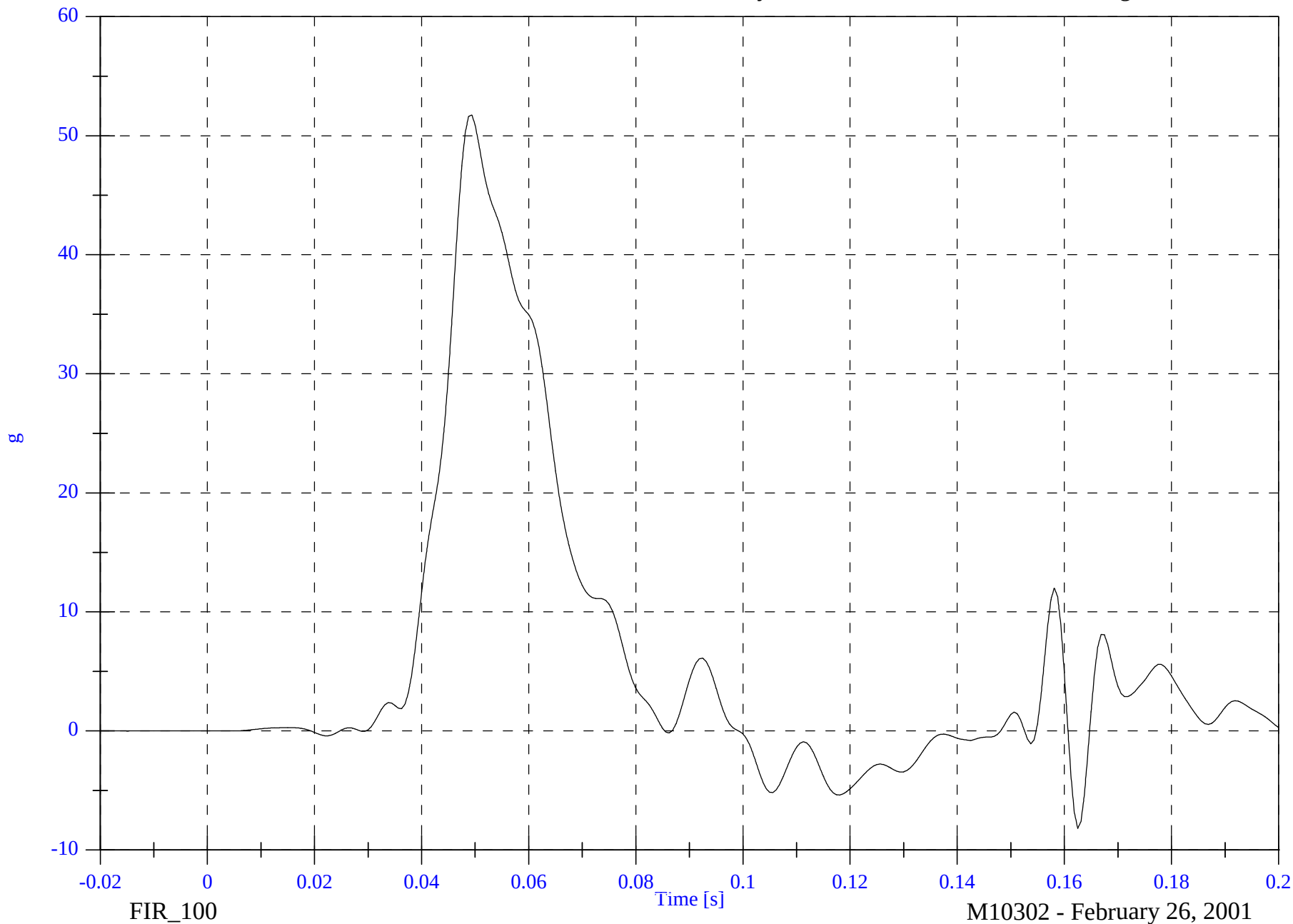
P4 Lower Rib y

Max: 51.7 [g] at 0.049 [s]

Min: -8.2 [g] at 0.162 [s]

B-41

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

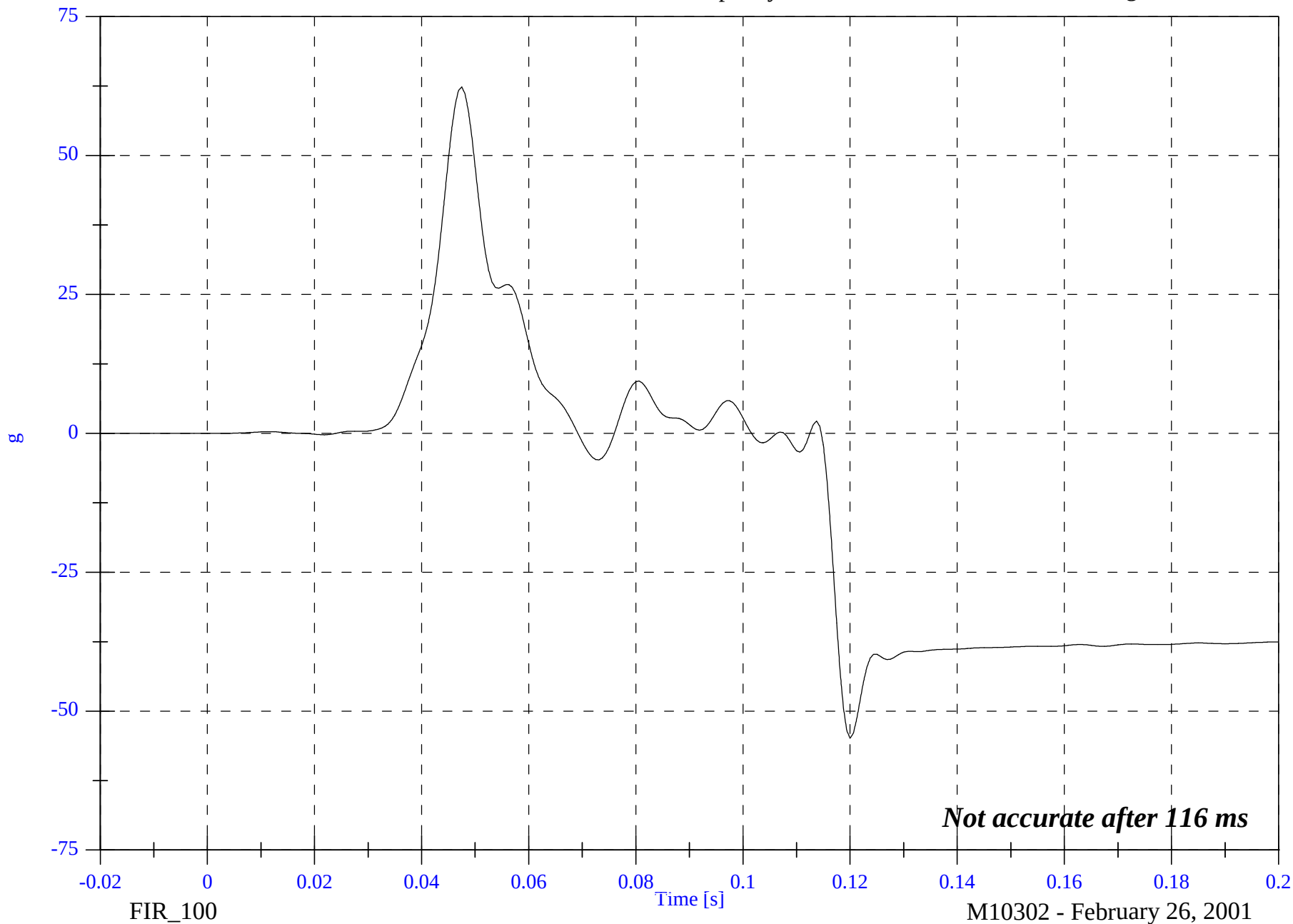
P4 Lower Spine y

Max: 62.4 [g] at 0.047 [s]

Min: -54.9 [g] at 0.120 [s]

B-42

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

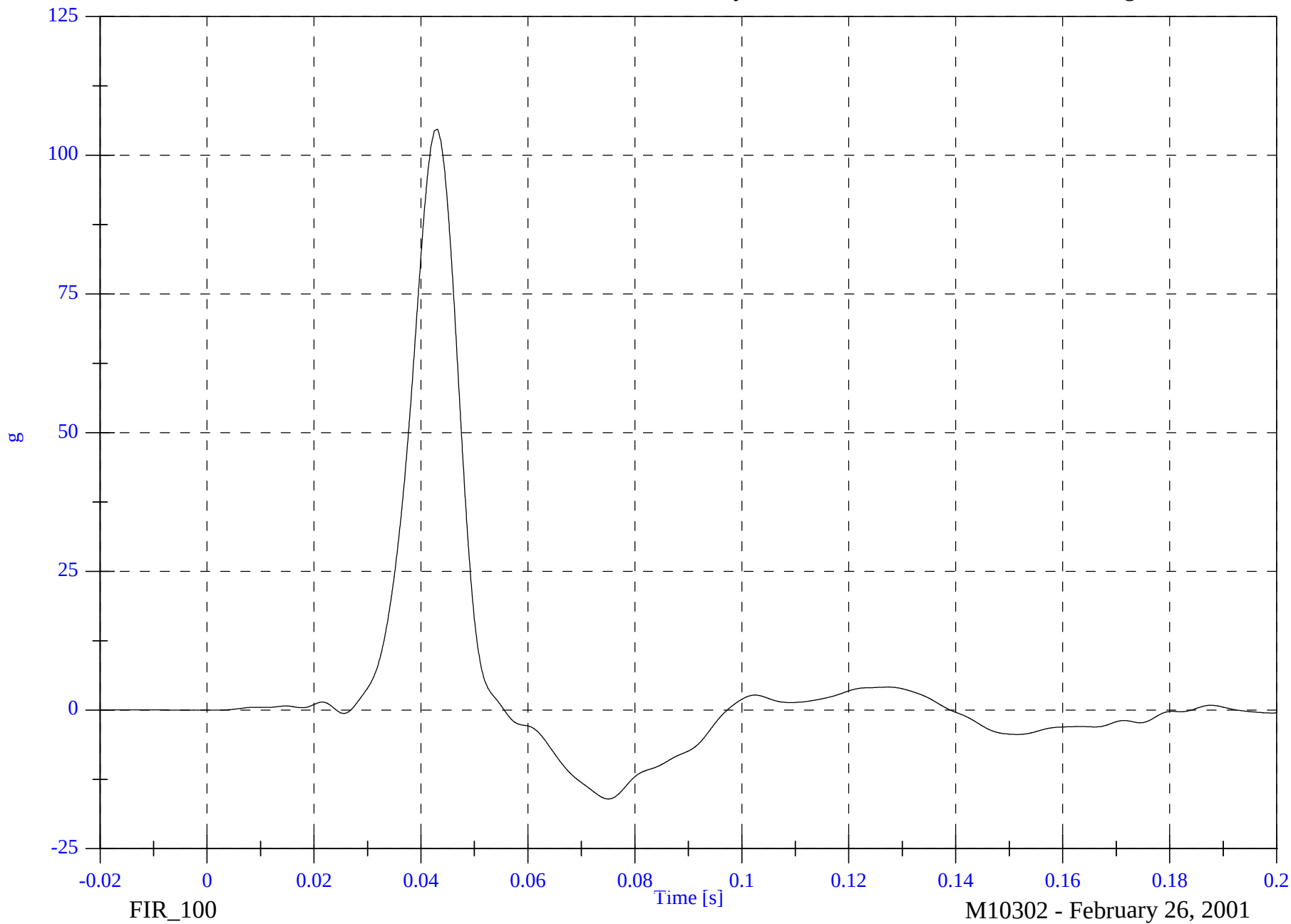
P4 Pelvic y

Max: 104.7 [g] at 0.043 [s]

Min: -16.1 [g] at 0.075 [s]

B-43

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

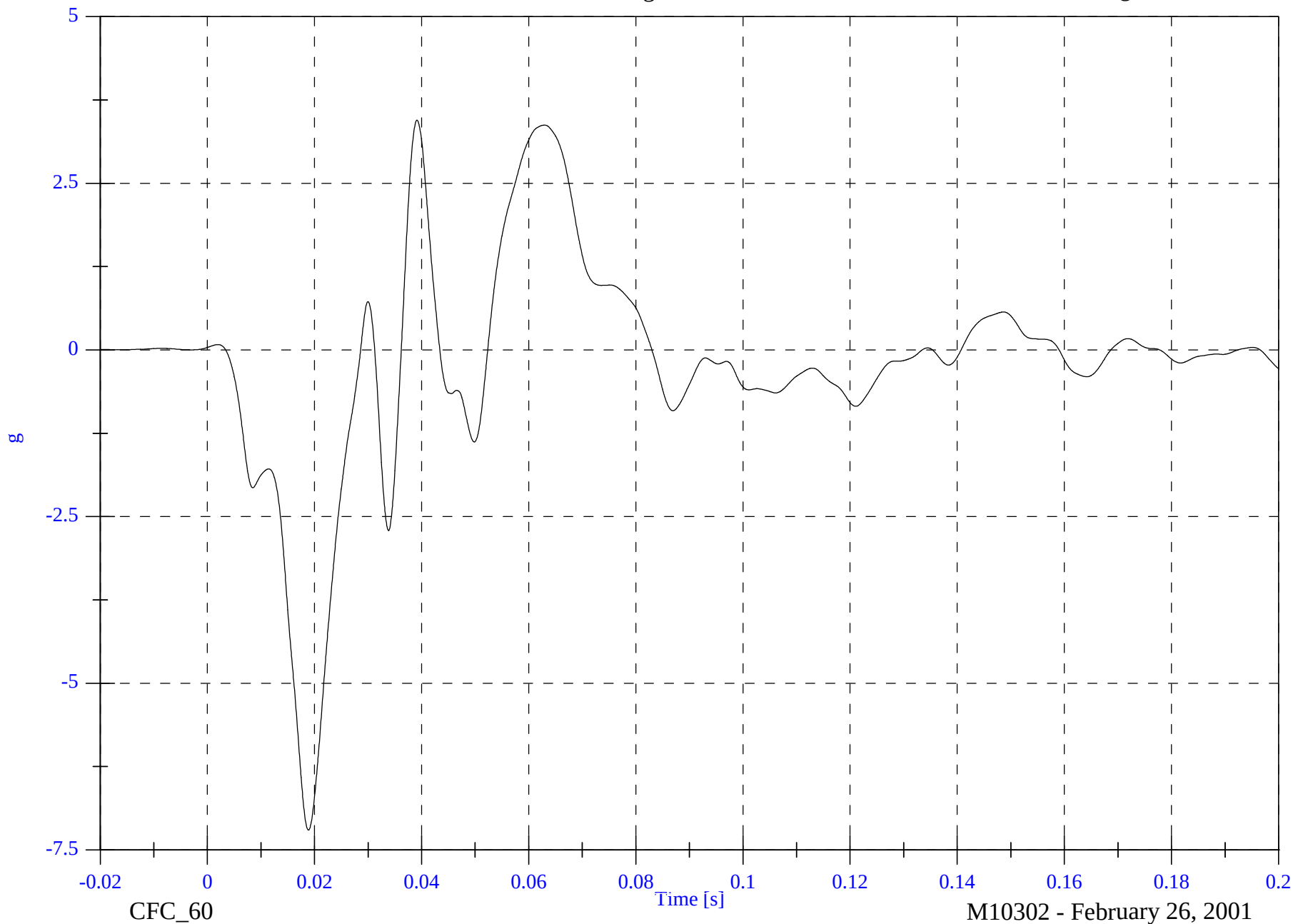
A1 Right Front Sill X

Max: 3.4 [g] at 0.039 [s]

Min: -7.2 [g] at 0.019 [s]

B-44

8506-17

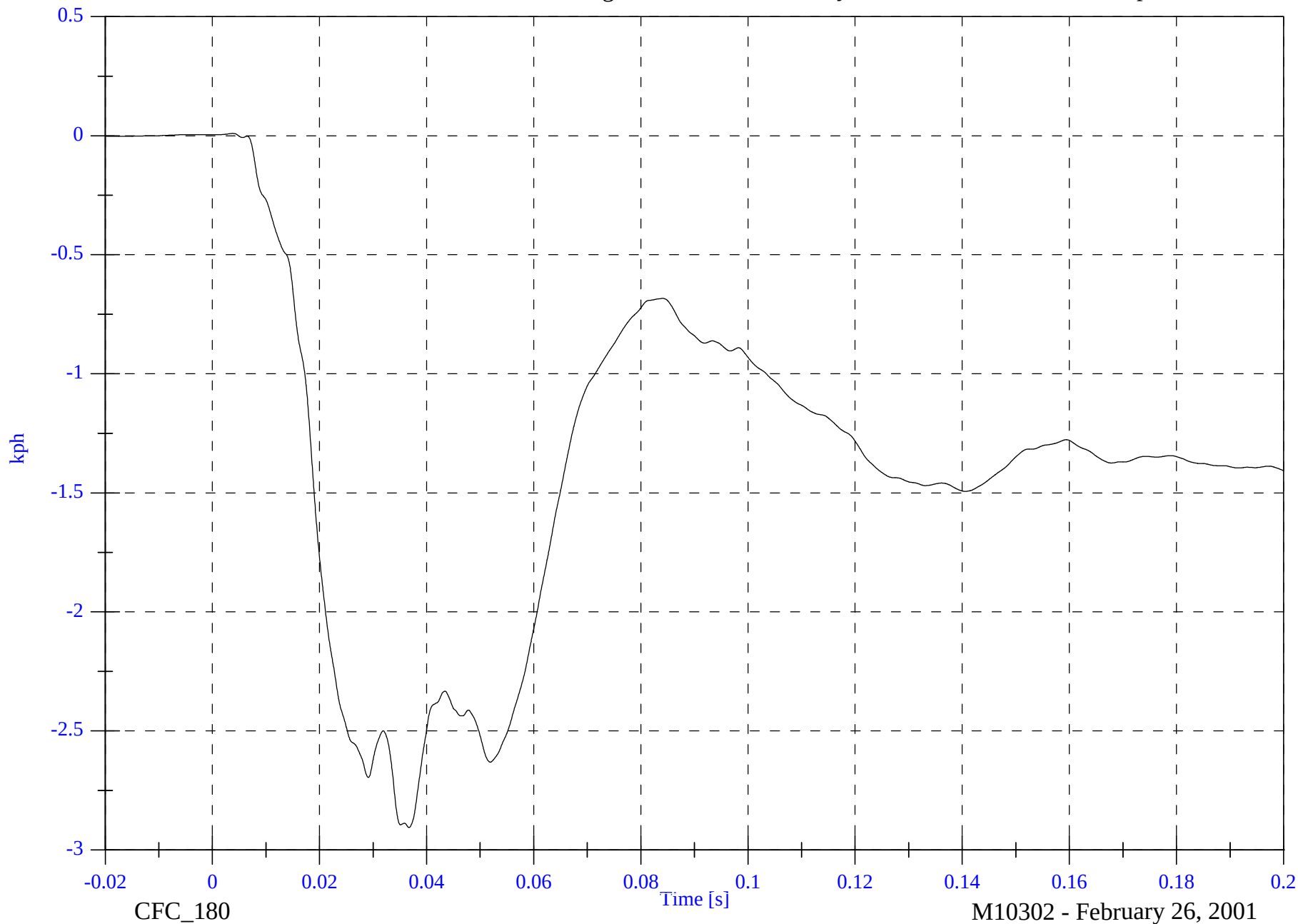


SNCAP Test #17 - 2001 Dodge Caravan

A1 Right Front Sill X Velocity

Max: 0.0 [kph] at 0.004 [s]

Min: -2.9 [kph] at 0.037 [s]



B-45

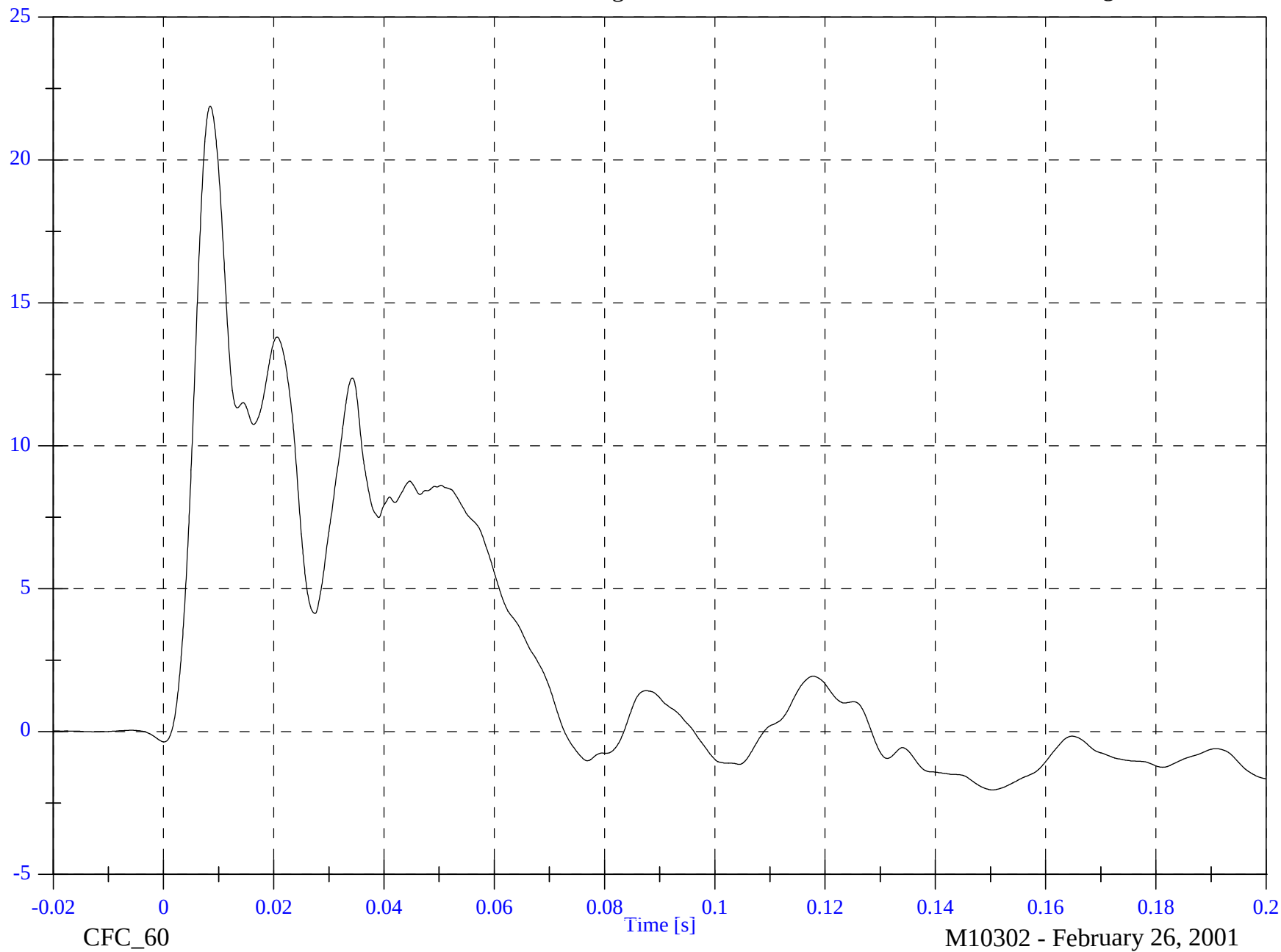
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A1 Right Front Sill Y

Max: 21.9 [g] at 0.008 [s]

Min: -2.0 [g] at 0.150 [s]



B-46

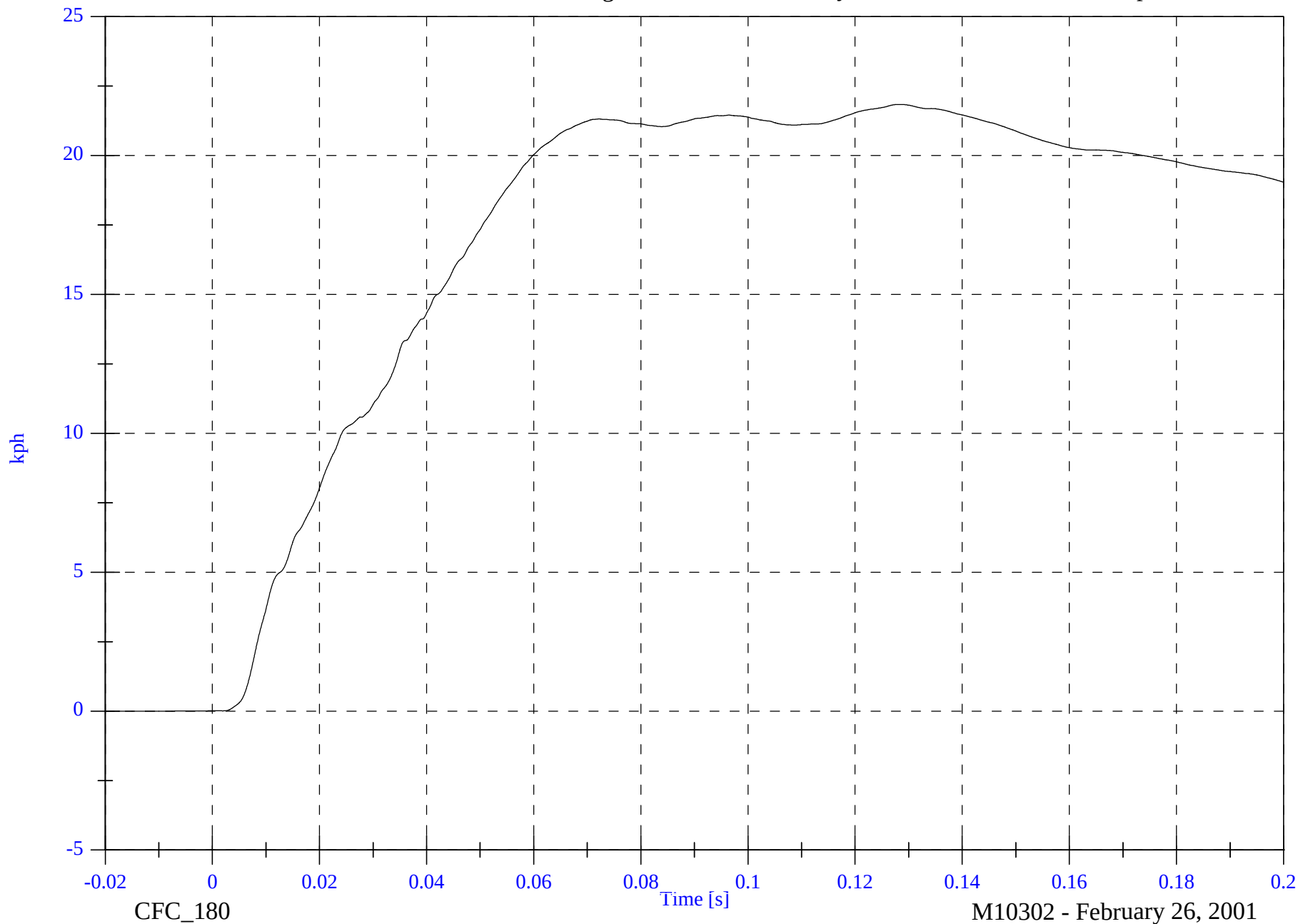
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A1 Right Front Sill Y Velocity

Max: 21.8 [kph] at 0.128 [s]

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



B-47

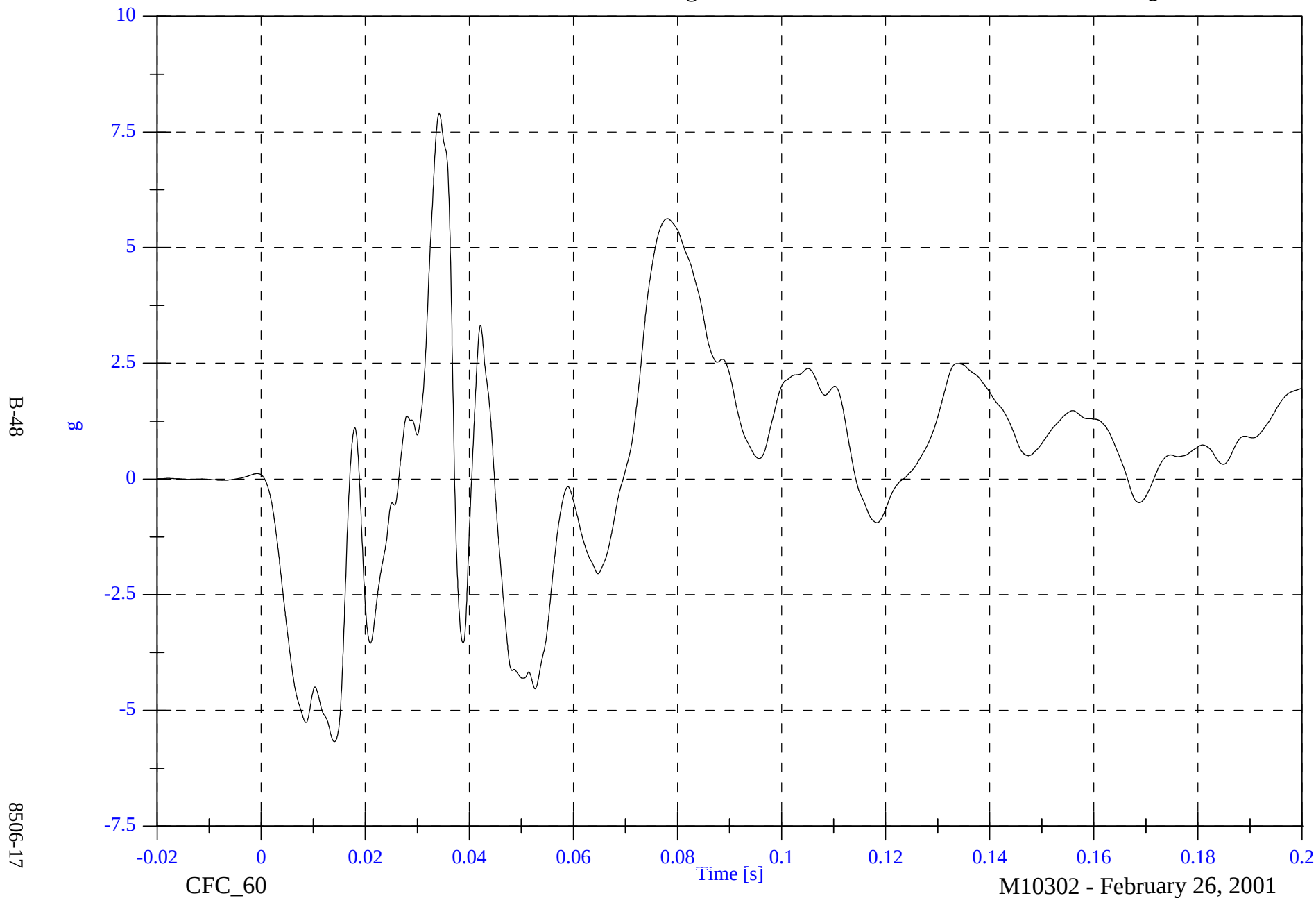
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A1 Right Front Sill Z

Max: 7.9 [g] at 0.034 [s]

Min: -5.7 [g] at 0.014 [s]



SNCAP Test #17 - 2001 Dodge Caravan

A1 Right Front Sill Z Velocity

Max: 3.4 [kph] at 0.200 [s]

Min: -3.1 [kph] at 0.068 [s]



B-49

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A1 Right Front Sill Resultant

Max: 22.6 [g] at 0.008 [s]

Min: 0.0 [g] at -0.015 [s]



SNCAP Test #17 - 2001 Dodge Caravan

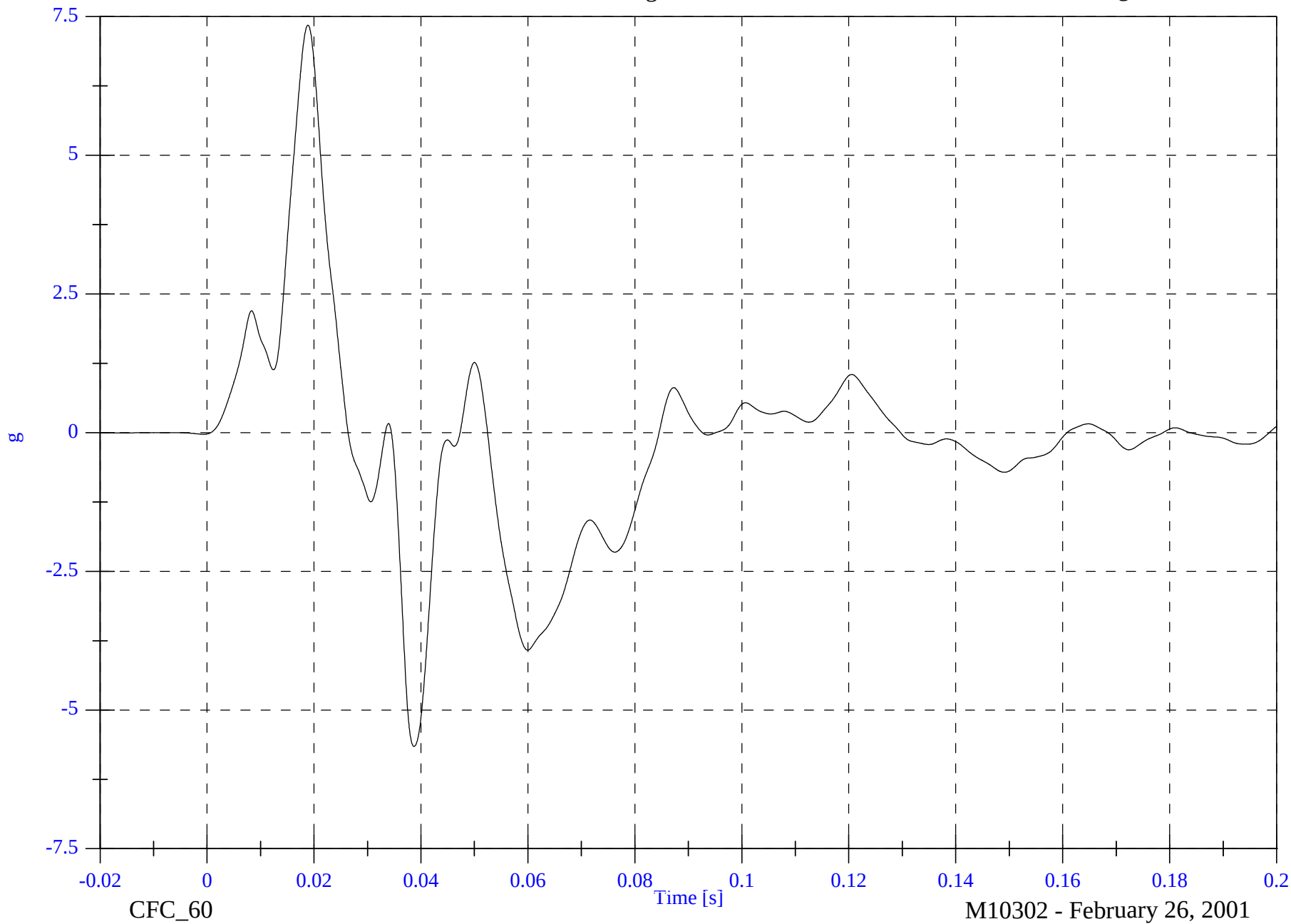
A2 Right Rear Sill X

Max: 7.3 [g] at 0.019 [s]

Min: -5.7 [g] at 0.039 [s]

B-51

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

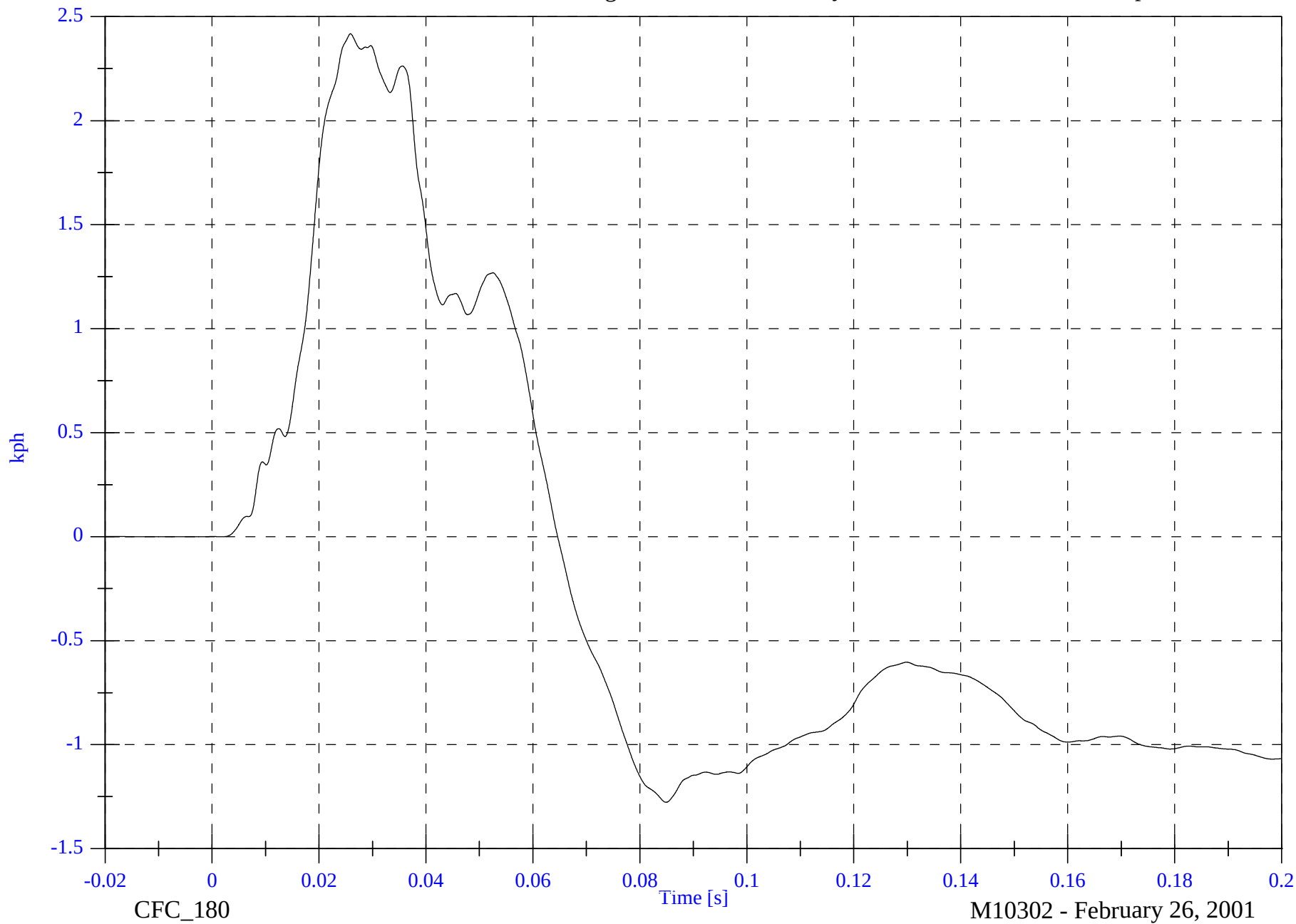
A2 Right Rear Sill X Velocity

Max: 2.4 [kph] at 0.026 [s]

Min: -1.3 [kph] at 0.085 [s]

B-52

8506-17

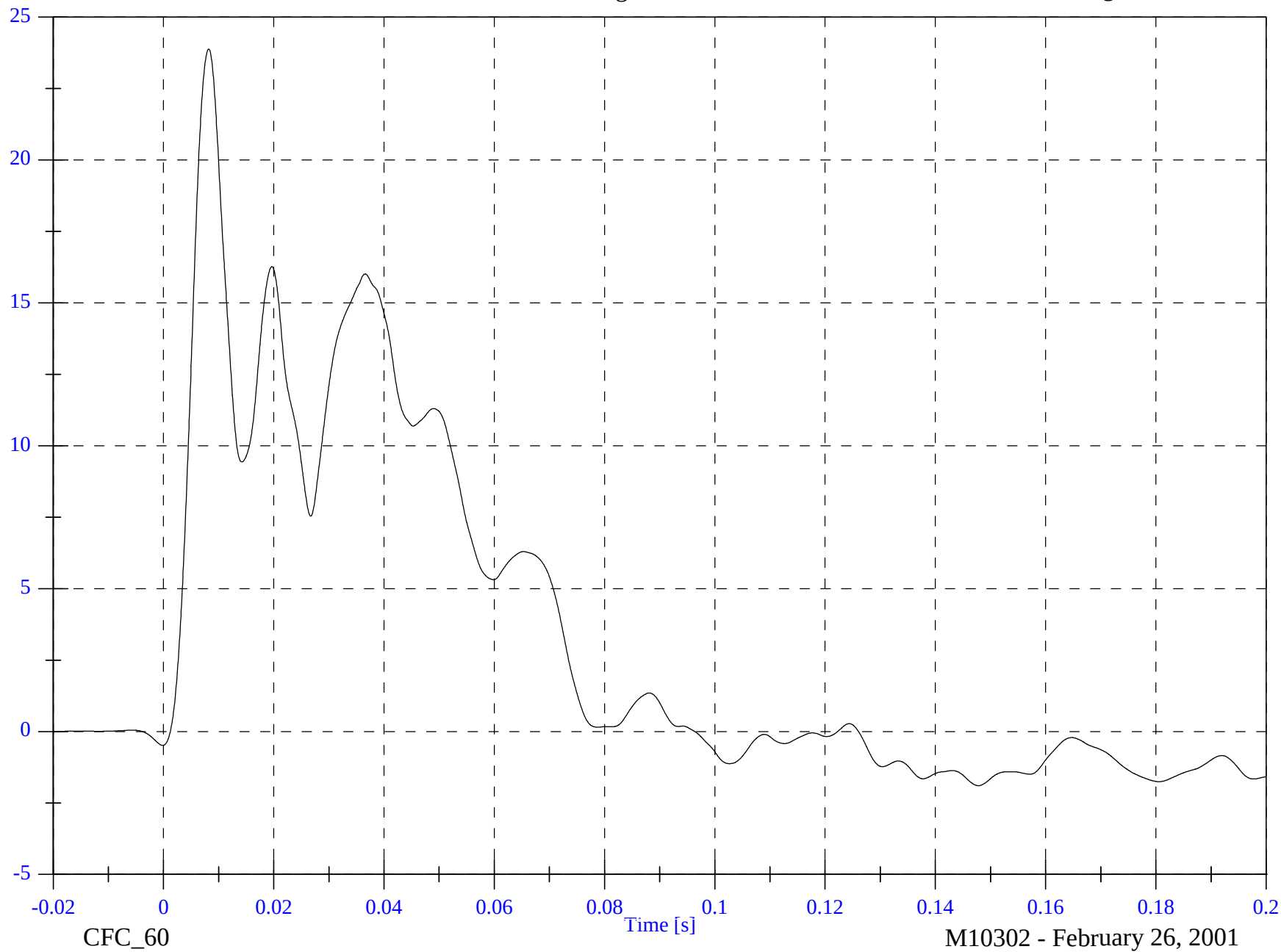


SNCAP Test #17 - 2001 Dodge Caravan

A2 Right Rear Sill Y

Max: 23.9 [g] at 0.008 [s]

Min: -1.9 [g] at 0.148 [s]



B-53

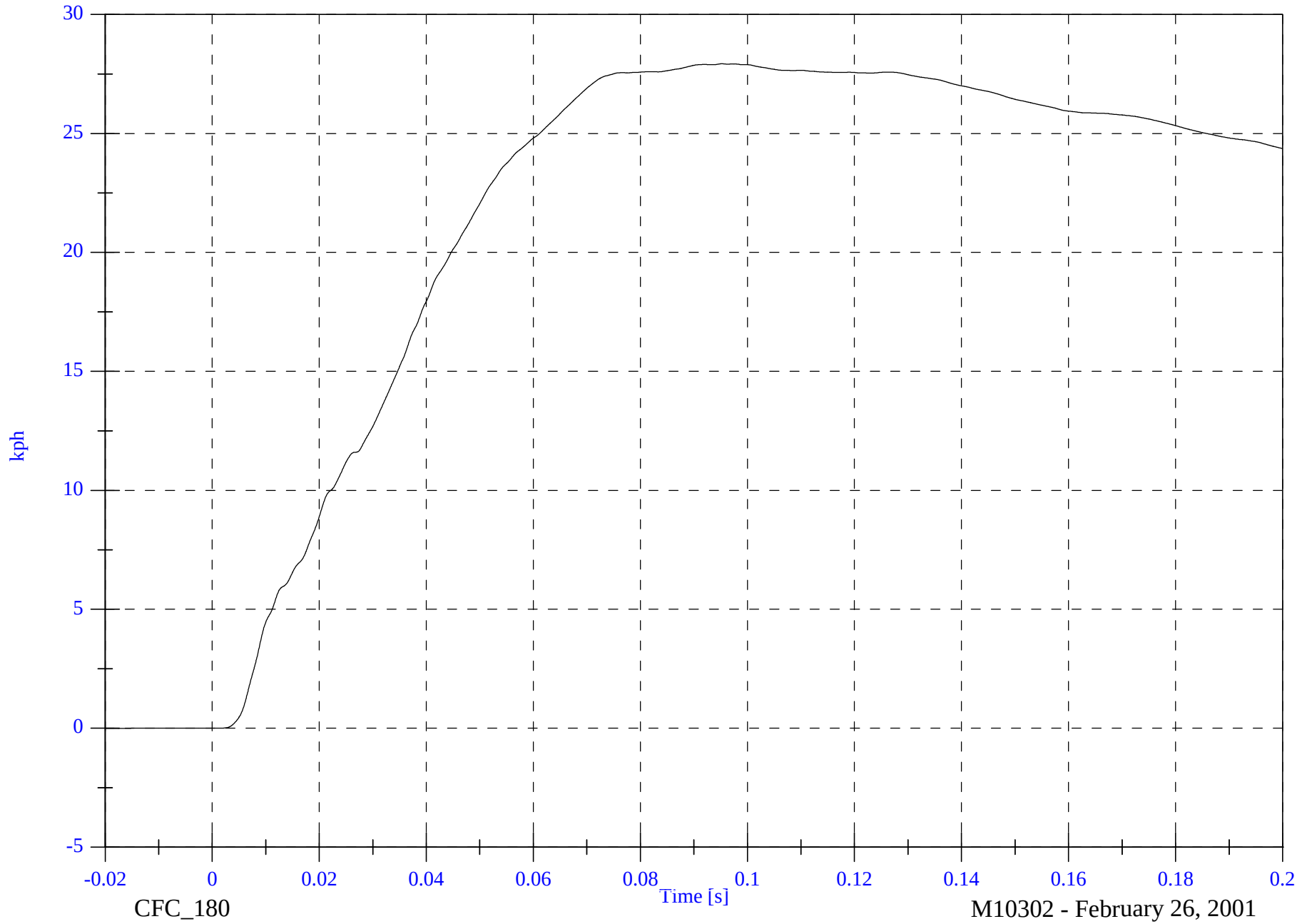
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A2 Right Rear Sill Y Velocity

Max: 27.9 [kph] at 0.095 [s]

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



B-54

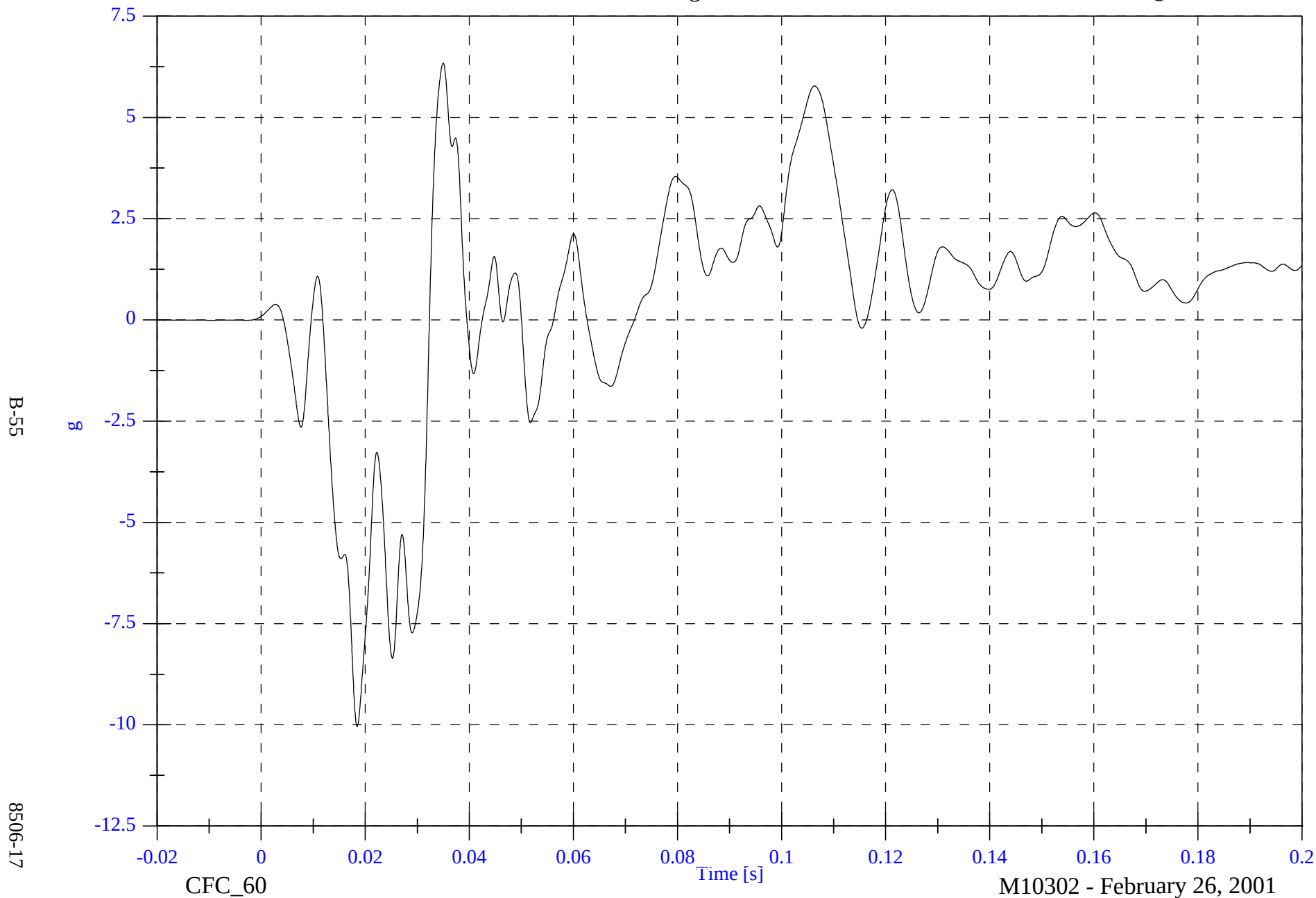
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A2 Right Rear Sill Z

Max: 6.3 [g] at 0.035 [s]

Min: -10.0 [g] at 0.018 [s]

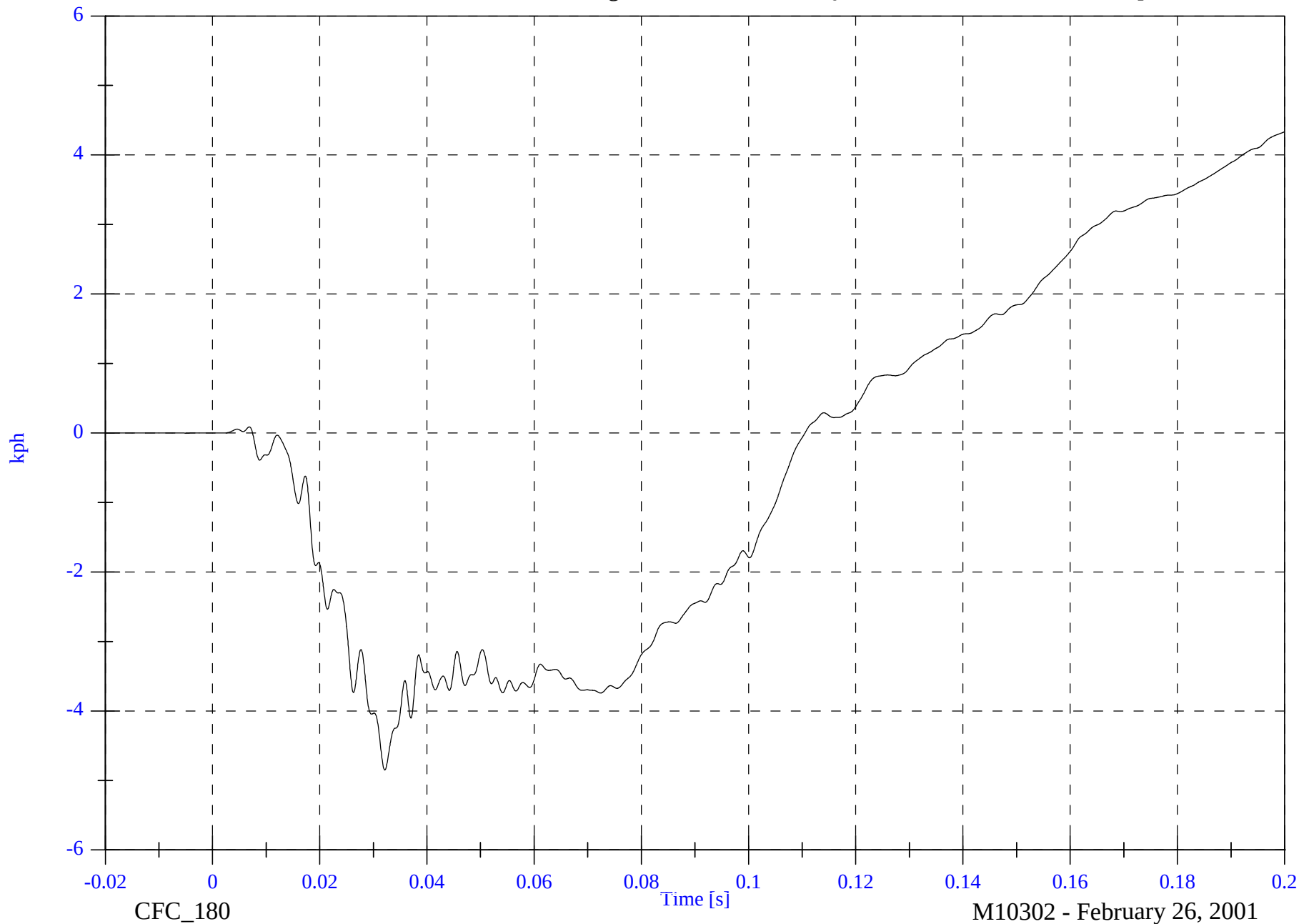


SNCAP Test #17 - 2001 Dodge Caravan

A2 Right Rear Sill Z Velocity

Max: 4.3 [kph] at 0.200 [s]

Min: -4.9 [kph] at 0.032 [s]



B-56

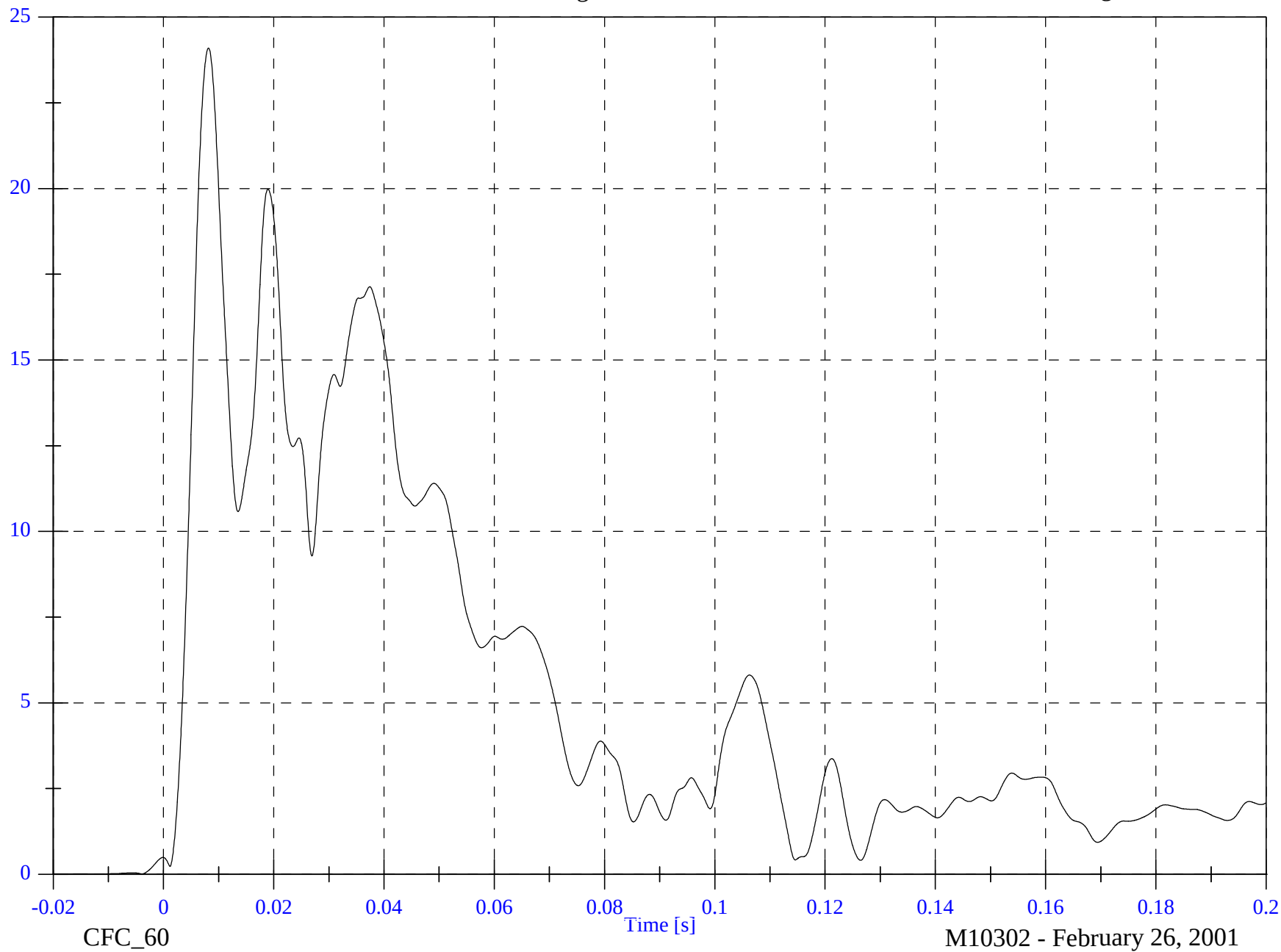
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A2 Right Rear Sill Resultant

Max: 24.1 [g] at 0.008 [s]

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



B-57

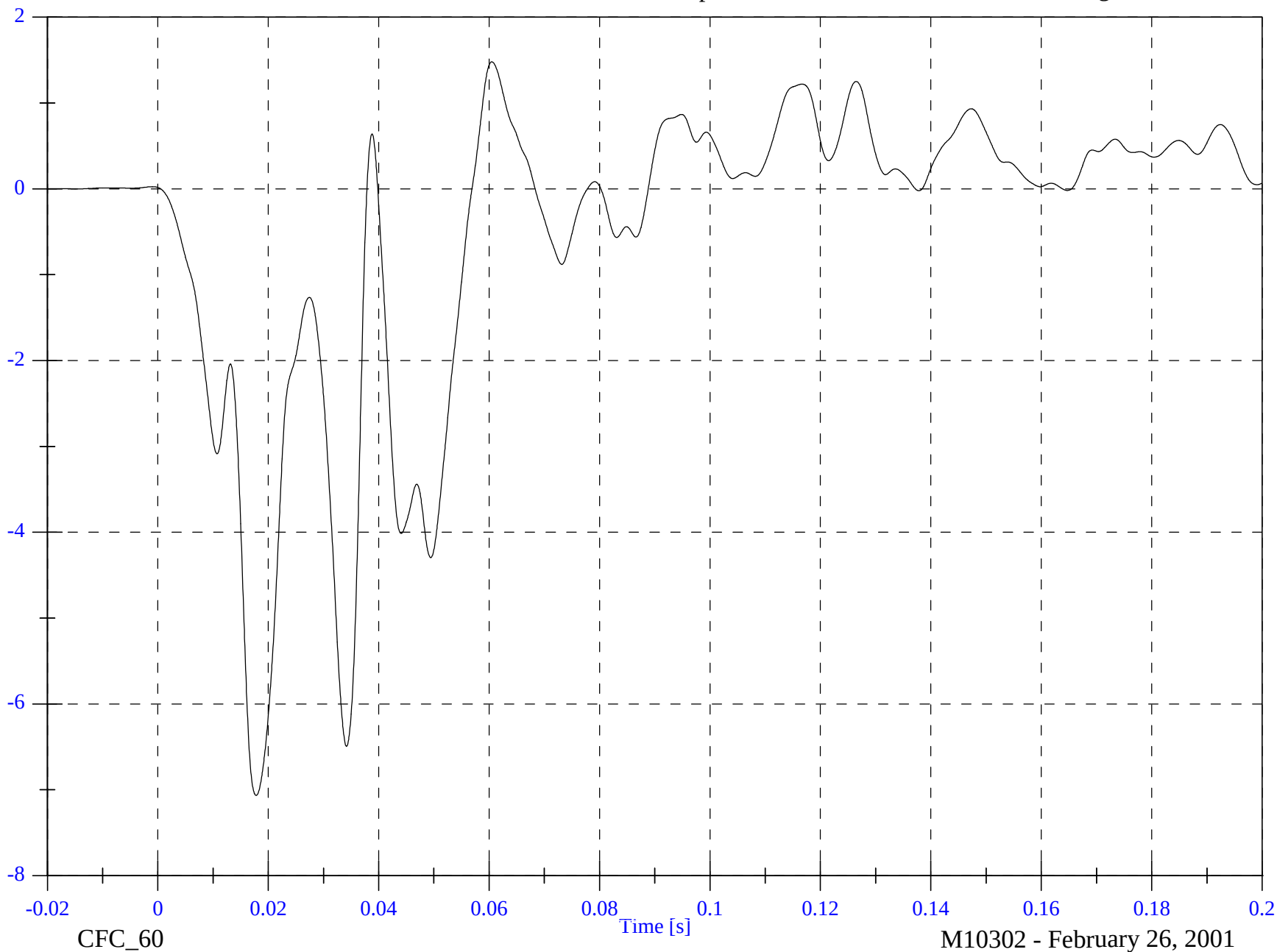
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A3 Rear Floorpan X

Max: 1.5 [g] at 0.061 [s]

Min: -7.1 [g] at 0.018 [s]



B-58

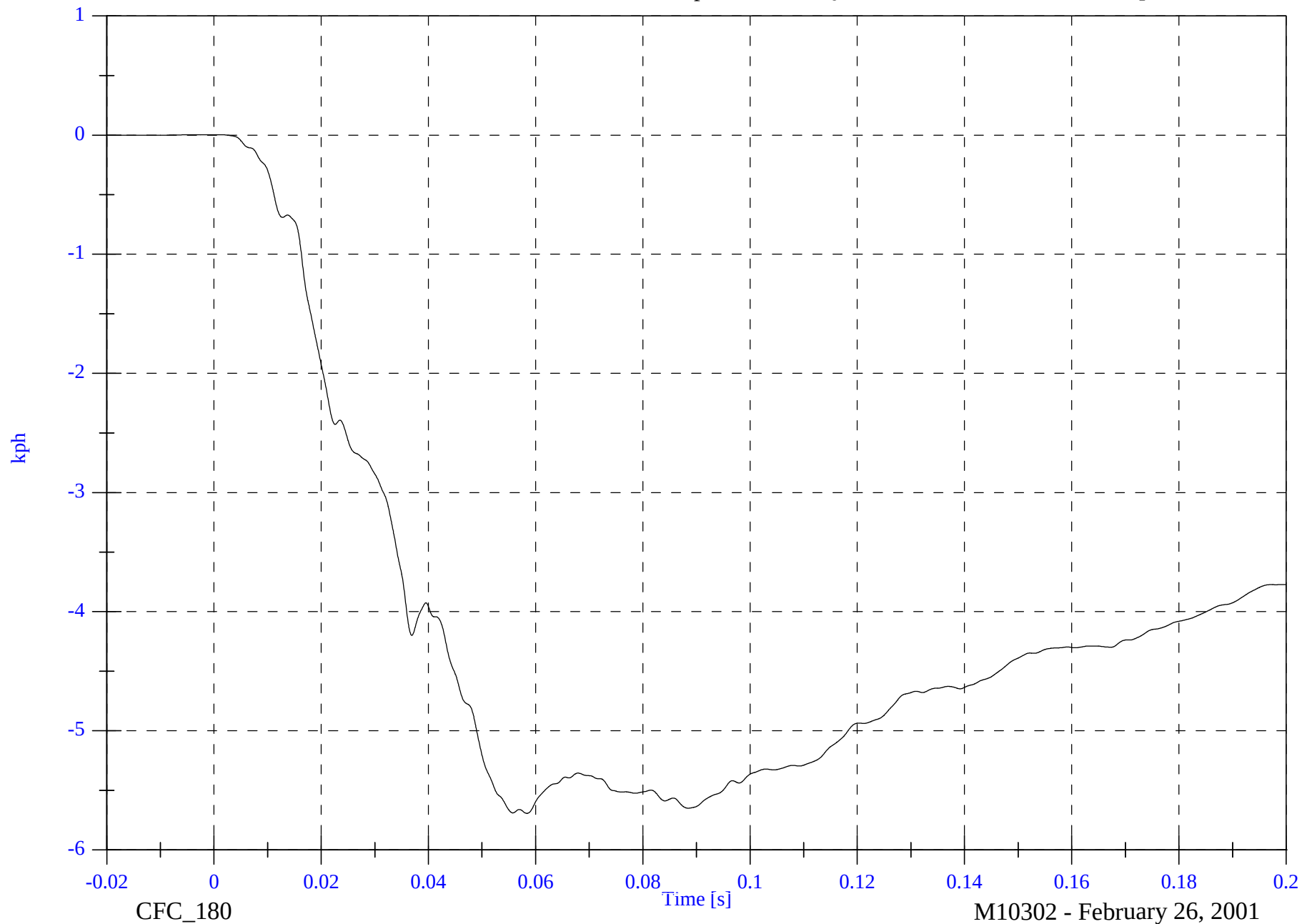
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A3 Rear Floorpan X Velocity

Max: 0.0 [kph] at 0.001 [s]

Min: -5.7 [kph] at 0.058 [s]



B-59

8506-17

CFC_180

M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

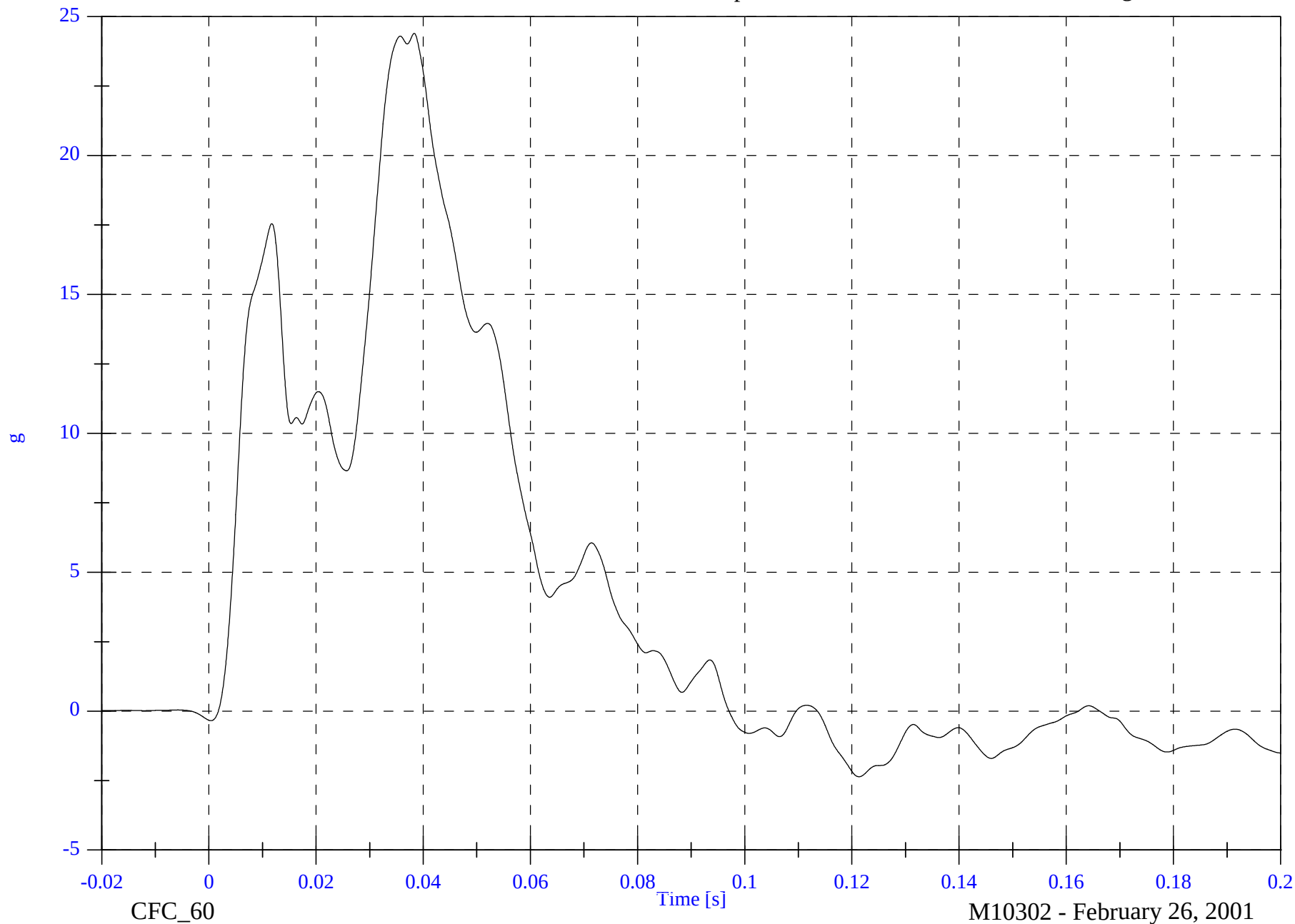
A3 Rear Floorpan Y

Max: 24.4 [g] at 0.038 [s]

Min: -2.4 [g] at 0.121 [s]

B-60

8506-17

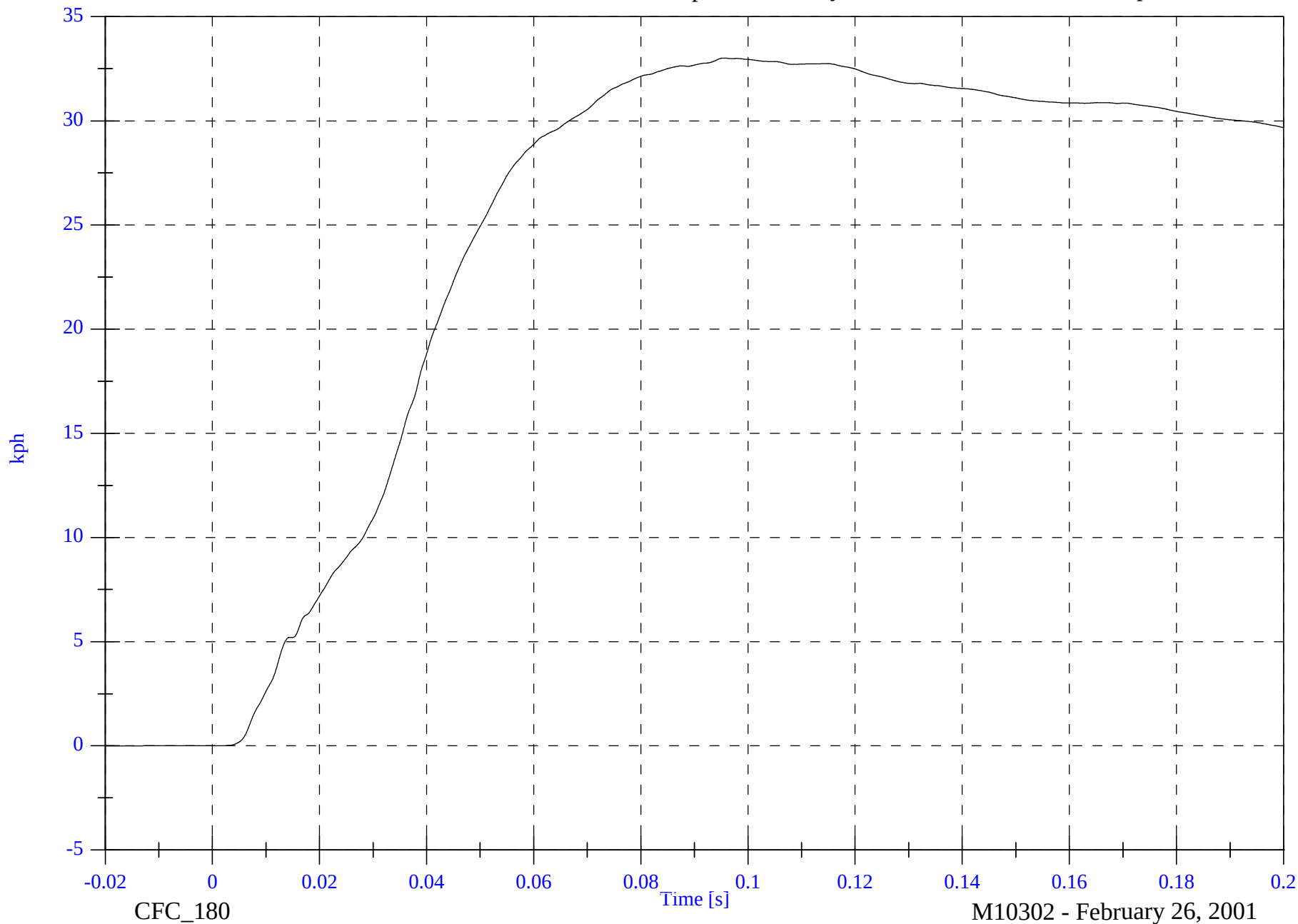


SNCAP Test #17 - 2001 Dodge Caravan

A3 Rear Floorpan Y Velocity

Max: 33.0 [kph] at 0.095 [s]

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



B-61

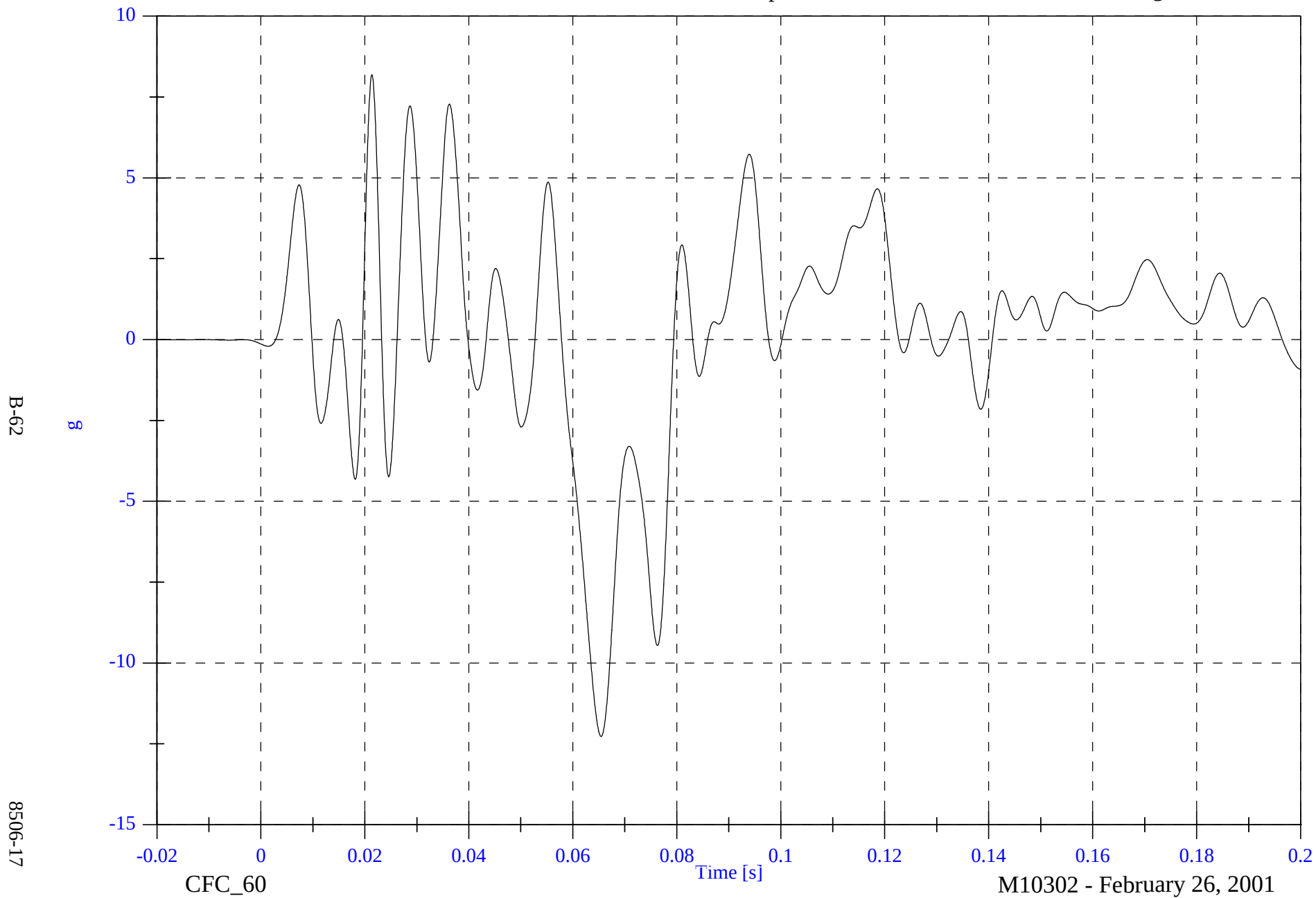
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A3 Rear Floorplan Z

Max: 8.2 [g] at 0.021 [s]

Min: -12.3 [g] at 0.065 [s]



SNCAP Test #17 - 2001 Dodge Caravan

A3 Rear Floorplan Z Velocity

Max: 2.8 [kph] at 0.196 [s]

Min: -2.7 [kph] at 0.079 [s]

B-63

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

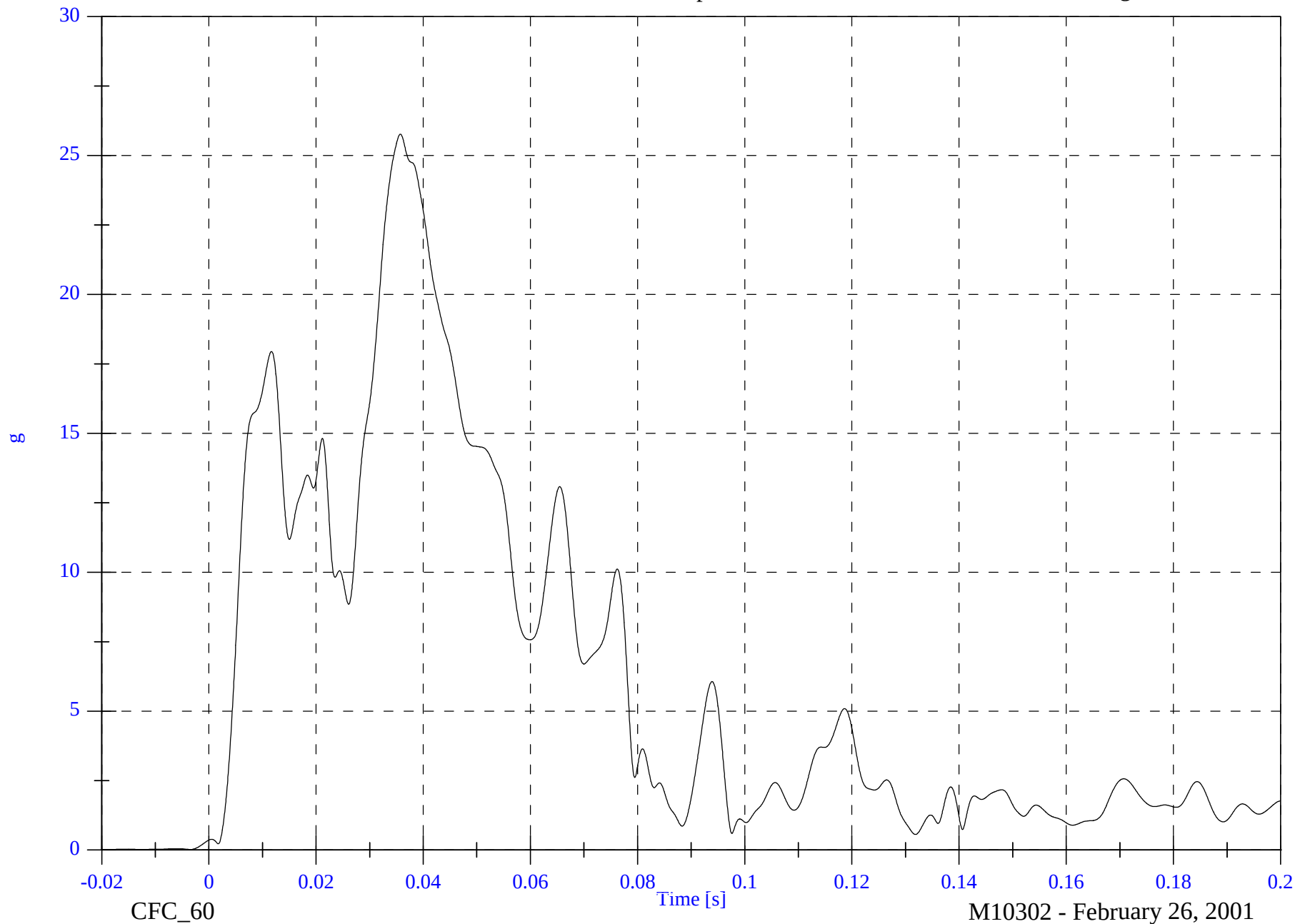
A3 Rear Floorpan Resultant

Max: 25.8 [g] at 0.036 [s]

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

B-64

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

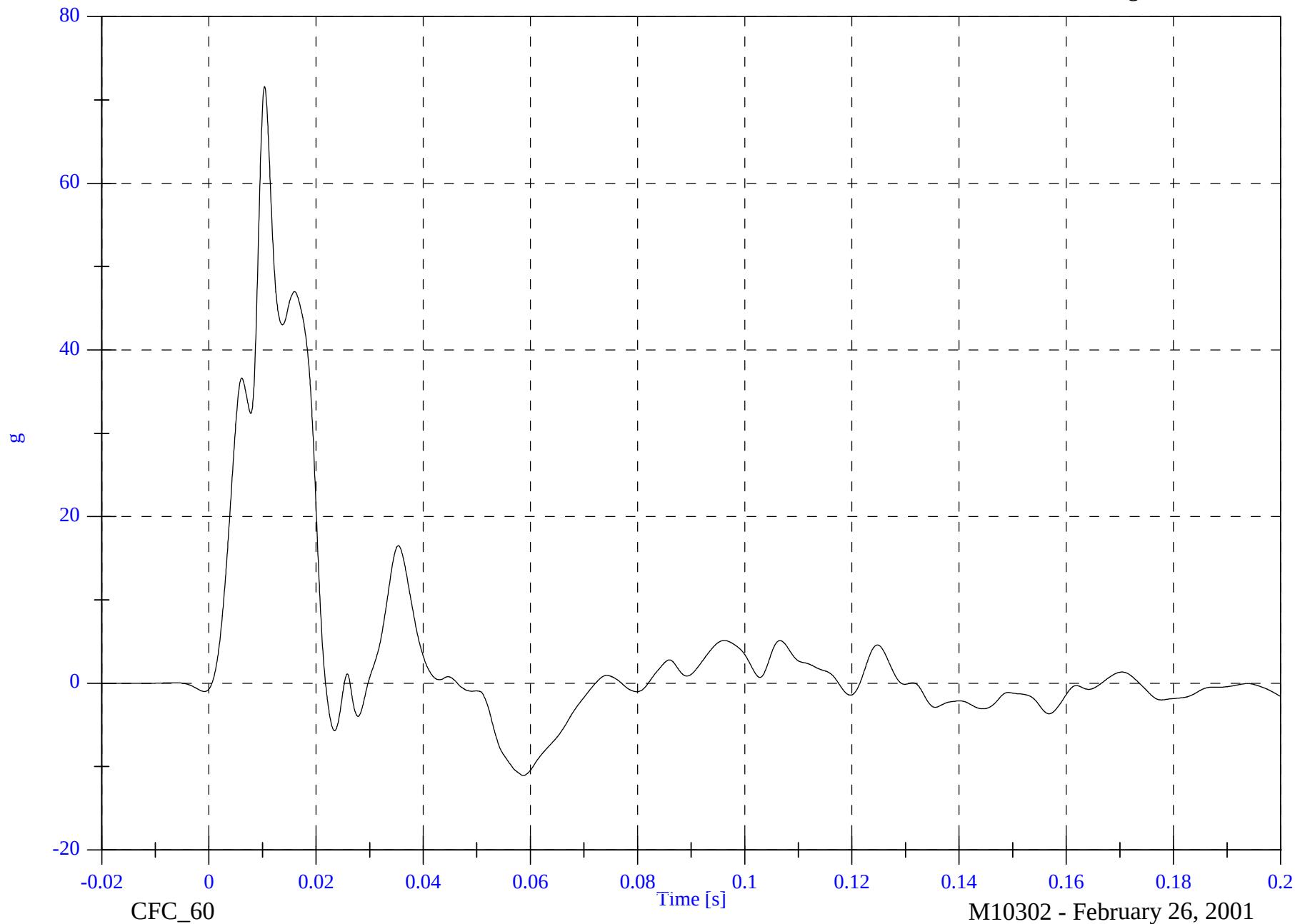
A4 Left Rear Sill Y

Max: 71.6 [g] at 0.010 [s]

Min: -11.1 [g] at 0.059 [s]

B-65

8506-17

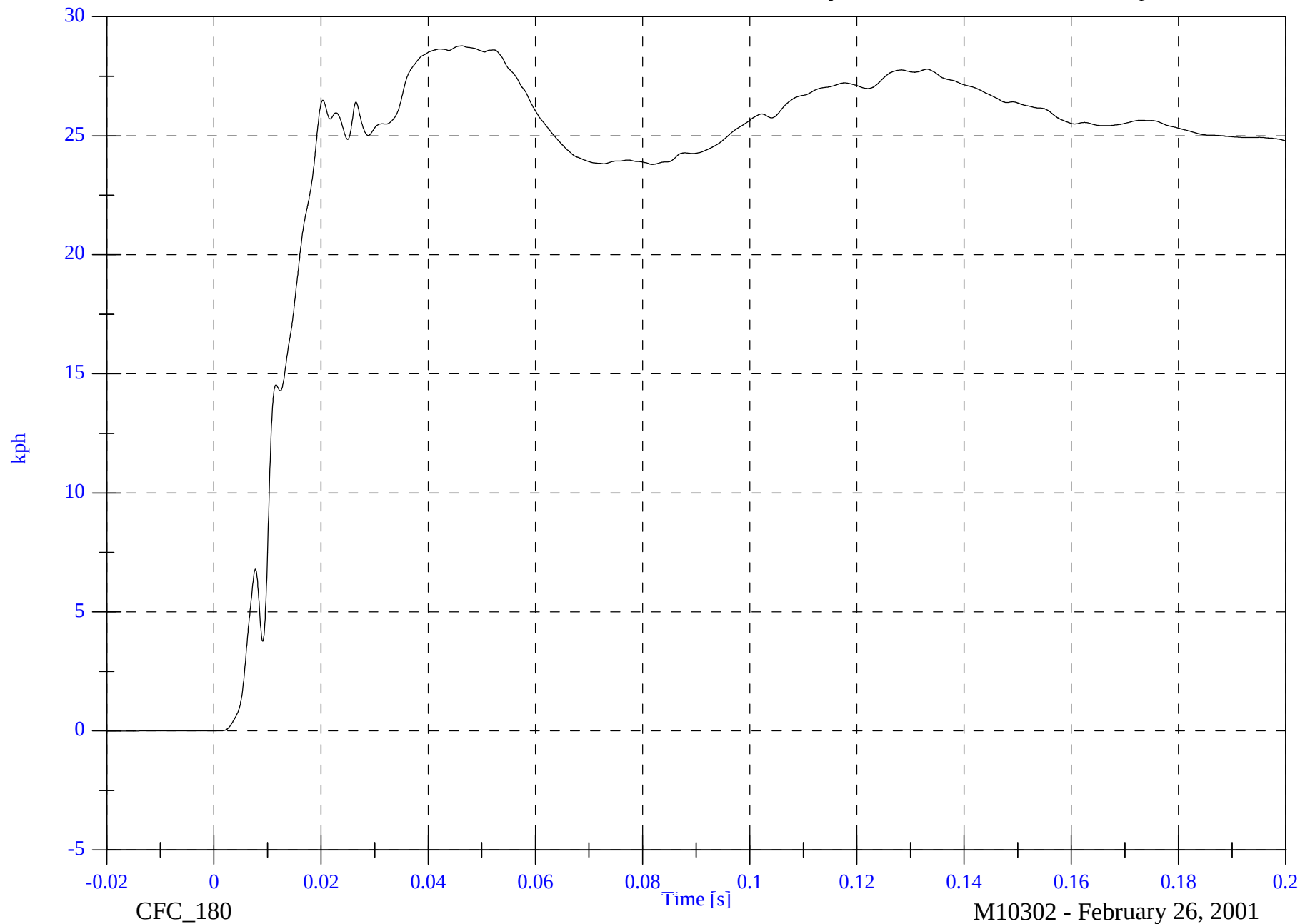


SNCAP Test #17 - 2001 Dodge Caravan

A4 Left Rear Sill Y Velocity

Max: 28.8 [kph] at 0.046 [s]

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



B-66

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

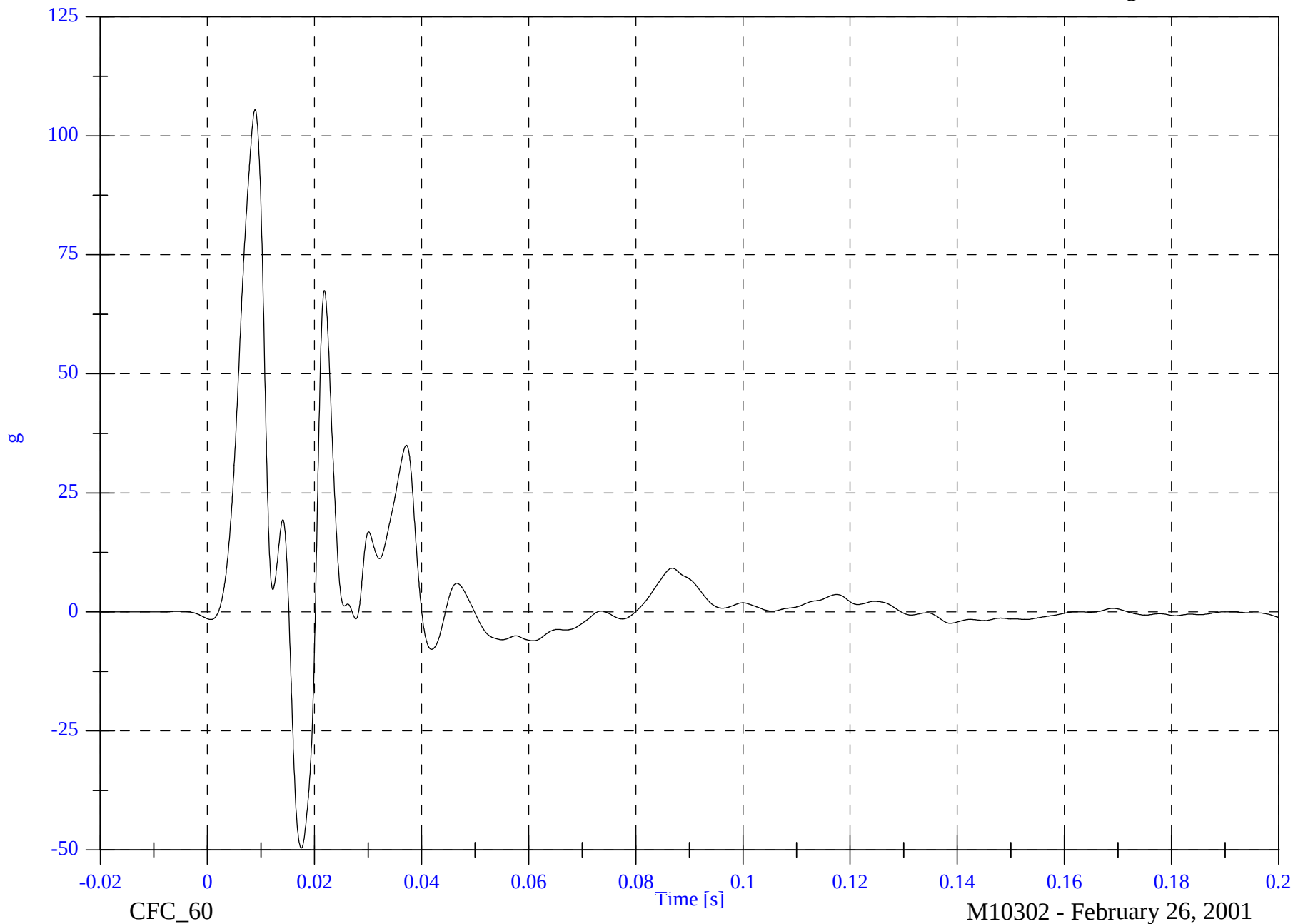
A5 Left Front Sill Y

Max: 105.5 [g] at 0.009 [s]

Min: -49.6 [g] at 0.018 [s]

B-67

8506-17

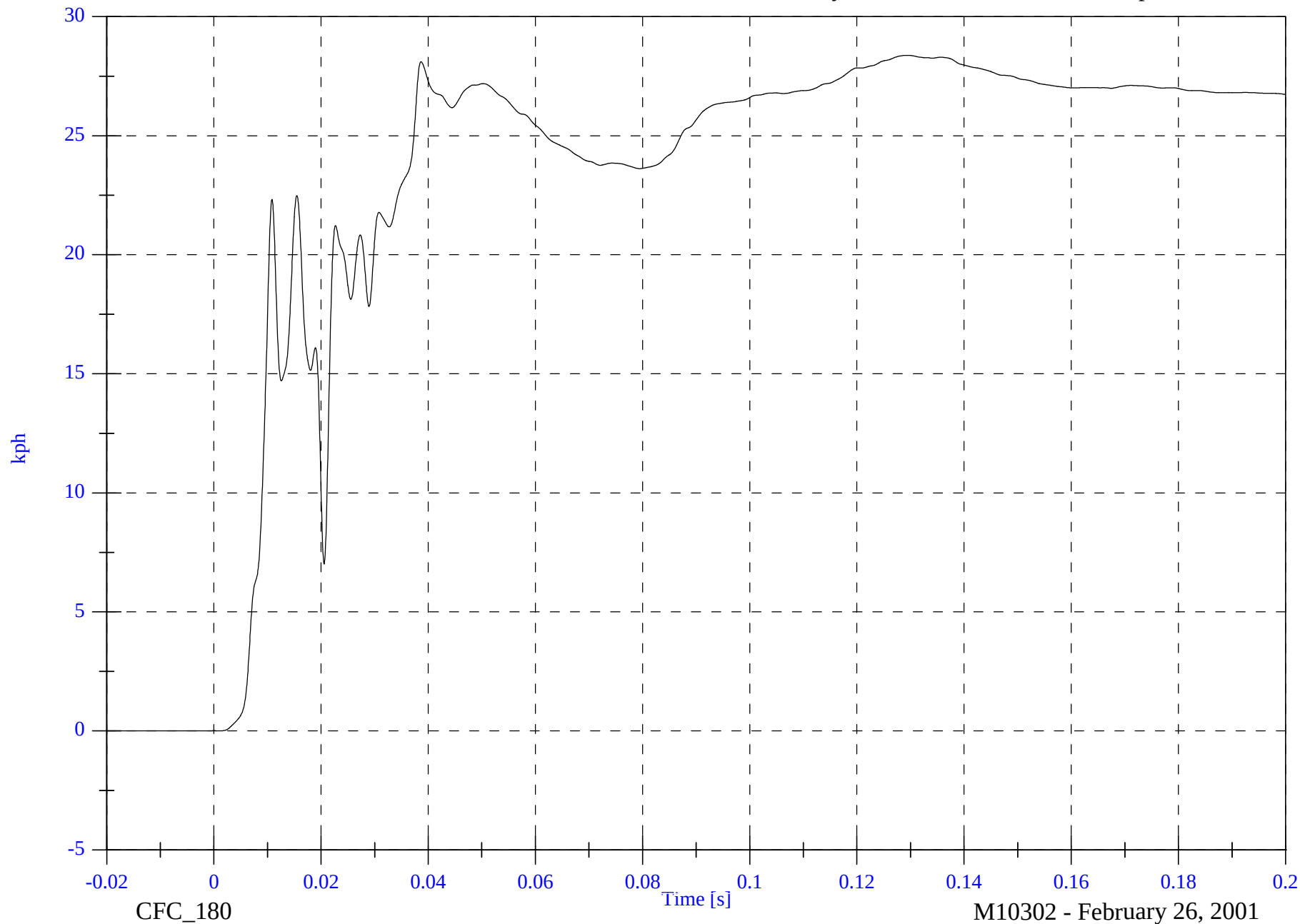


SNCAP Test #17 - 2001 Dodge Caravan

A5 Left Front Sill Y Velocity

Max: 28.4 [kph] at 0.129 [s]

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



B-68

8506-17

SNCAP Test #17 - 2001 Dodge Caravan

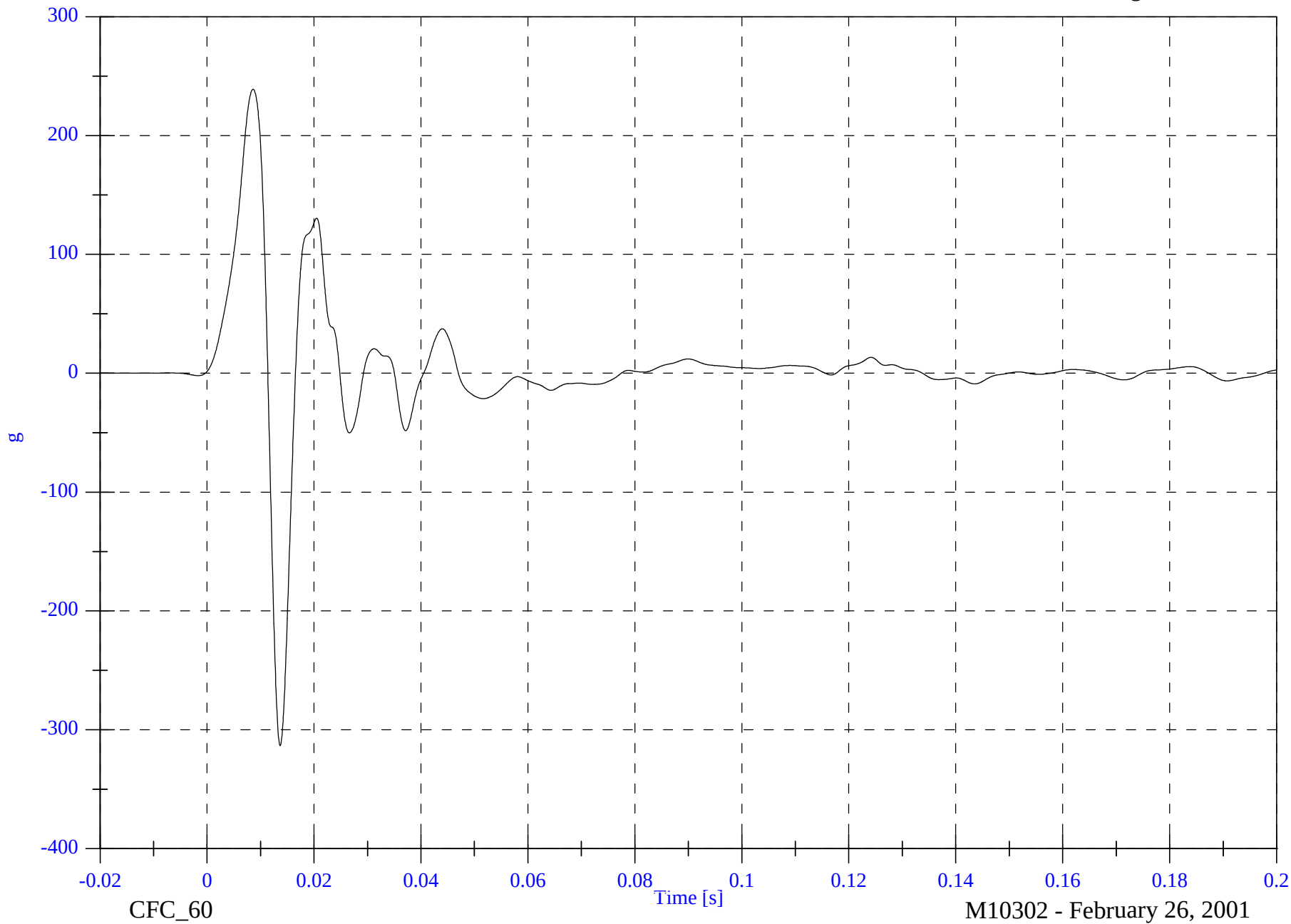
A6 Left Front Door CL Y

Max: 238.9 [g] at 0.009 [s]

Min: -313.3 [g] at 0.014 [s]

B-69

8506-17



SNCAP Test #17 - 2001 Dodge Caravan

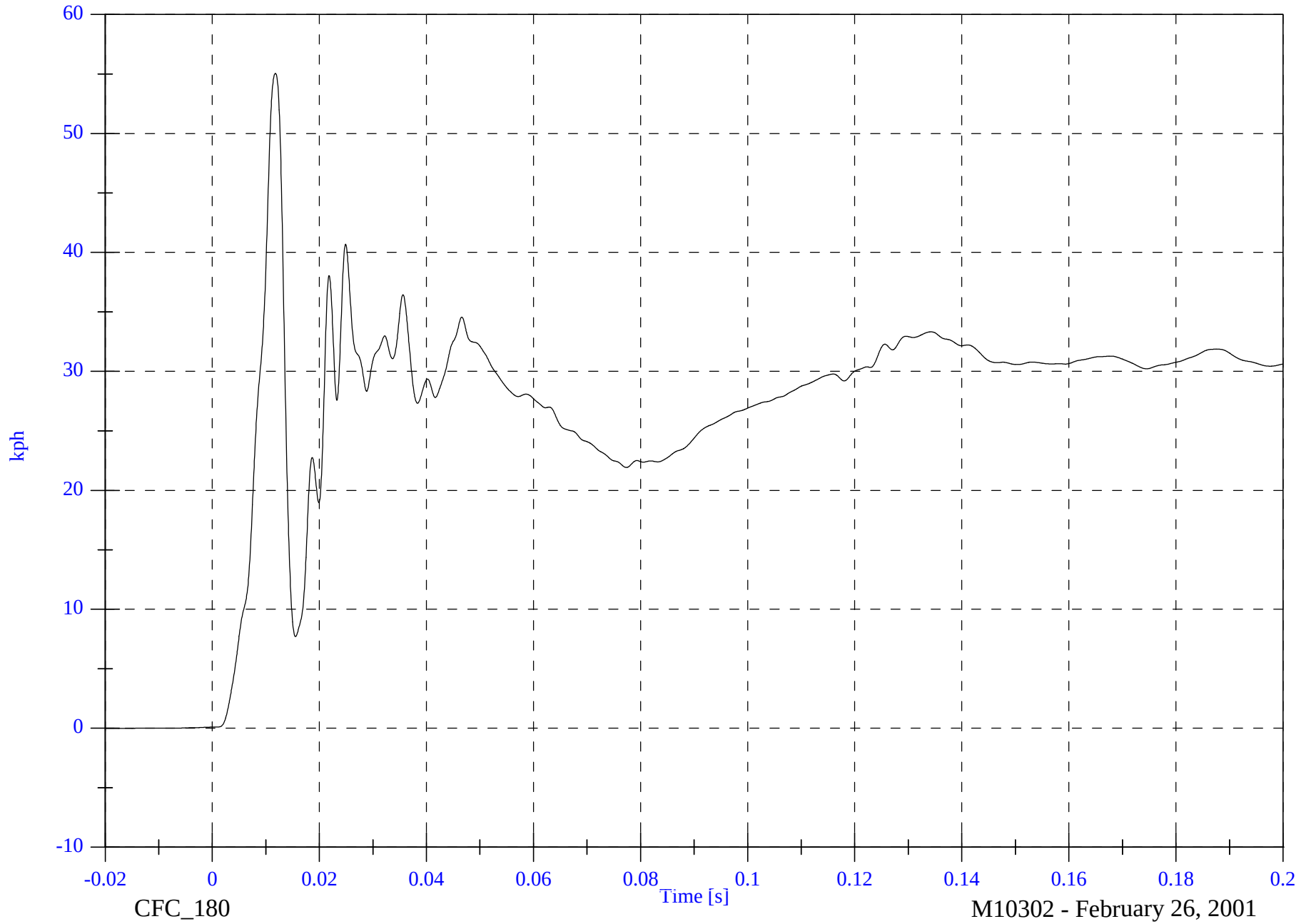
A6 Left Front Door CL Y Velocity

Max: 55.1 [kph] at 0.012 [s]

Min: -0.0 [kph] at -0.016 [s]

B-70

8506-17

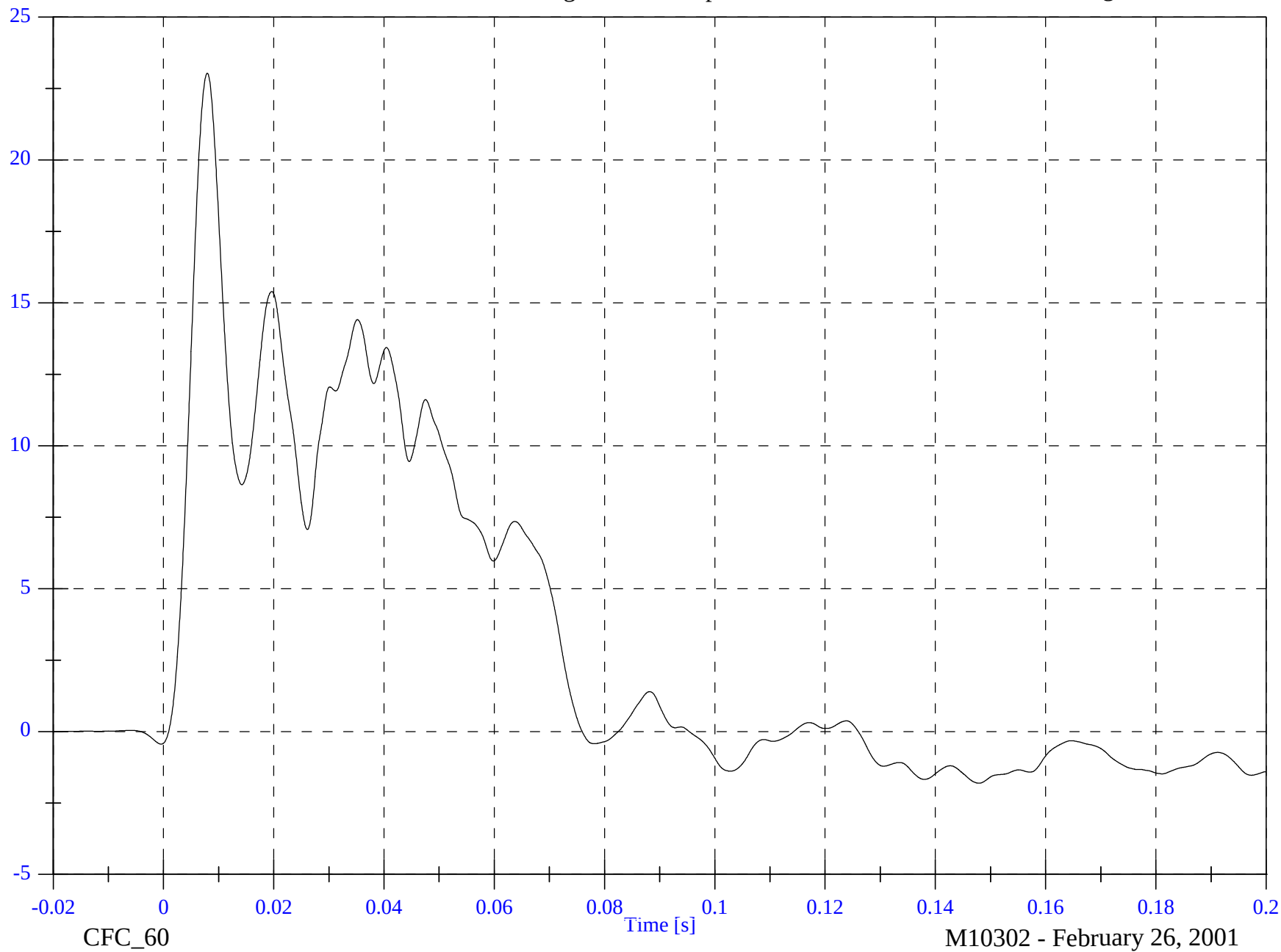


SNCAP Test #17 - 2001 Dodge Caravan

A7 Right Rear Compartment Y

Max: 23.0 [g] at 0.008 [s]

Min: -1.8 [g] at 0.148 [s]



B-71

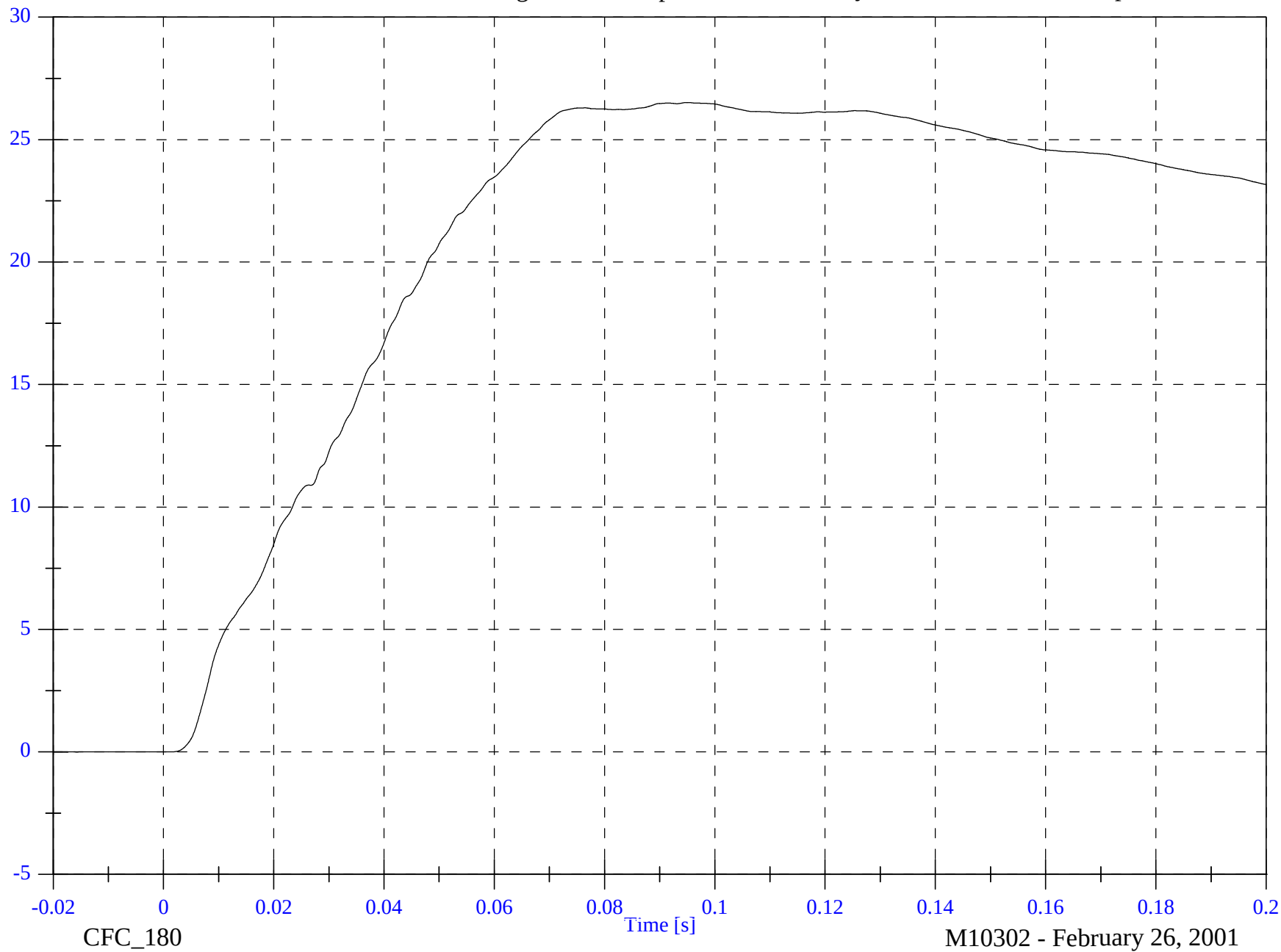
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A7 Right Rear Compartment Y Velocity

Max: 26.5 [kph] at 0.095 [s]

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



B-72

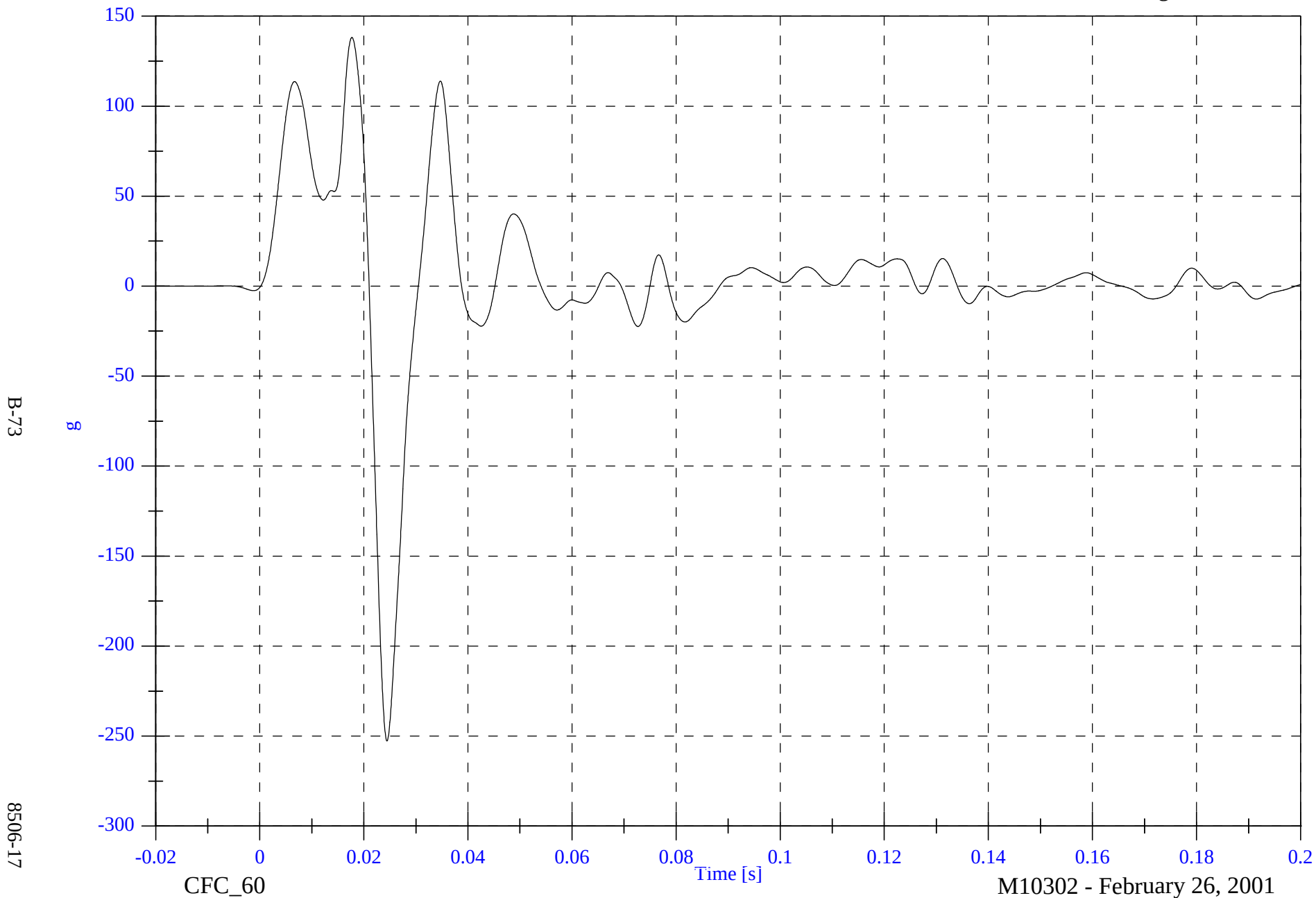
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A8 Left Front Door Midrear Y

Max: 138.2 [g] at 0.018 [s]

Min: -252.7 [g] at 0.024 [s]



SNCAP Test #17 - 2001 Dodge Caravan

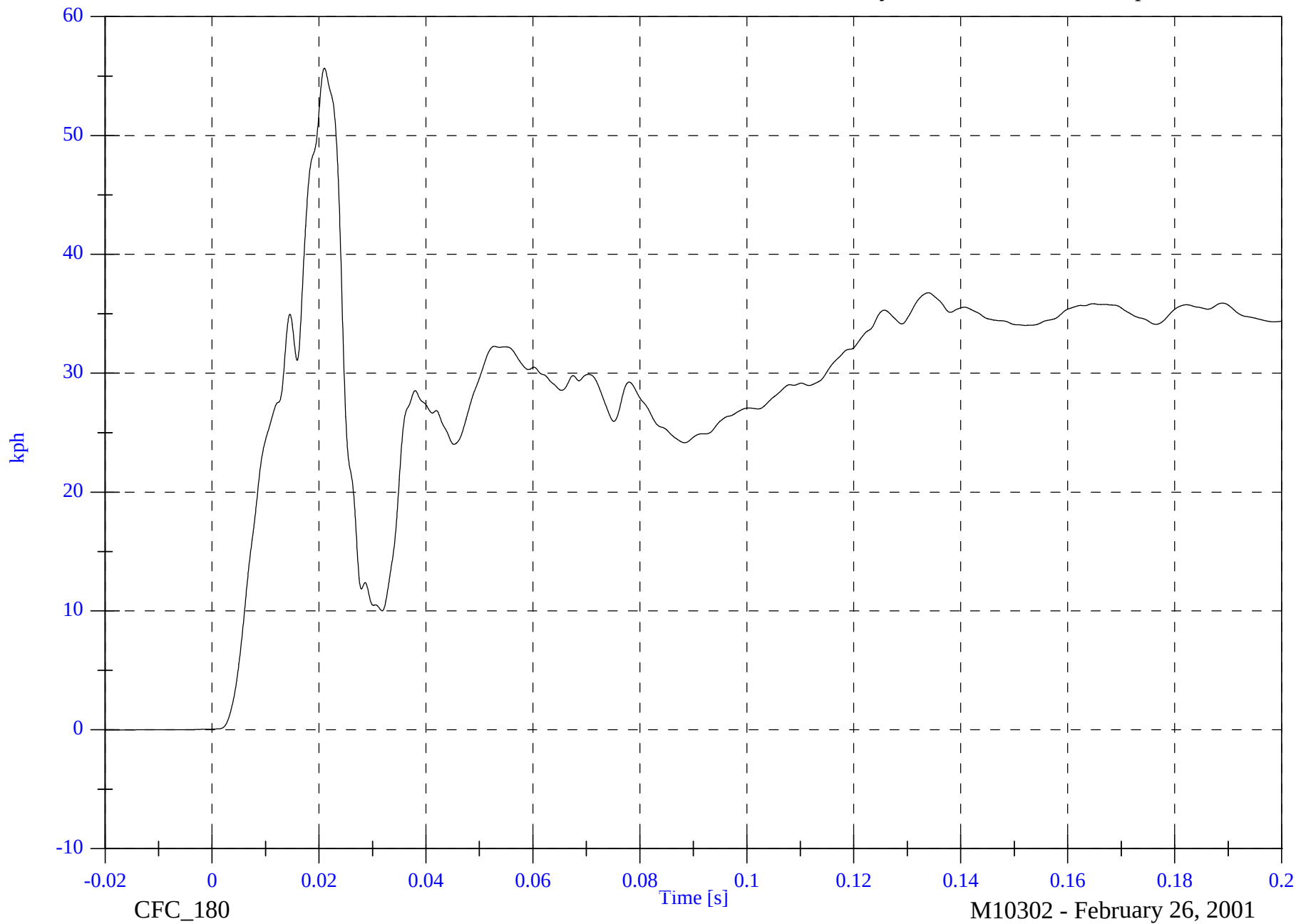
A8 Left Front Door Midrear Y Velocity

Max: 55.7 [kph] at 0.021 [s]

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

B-74

8506-17

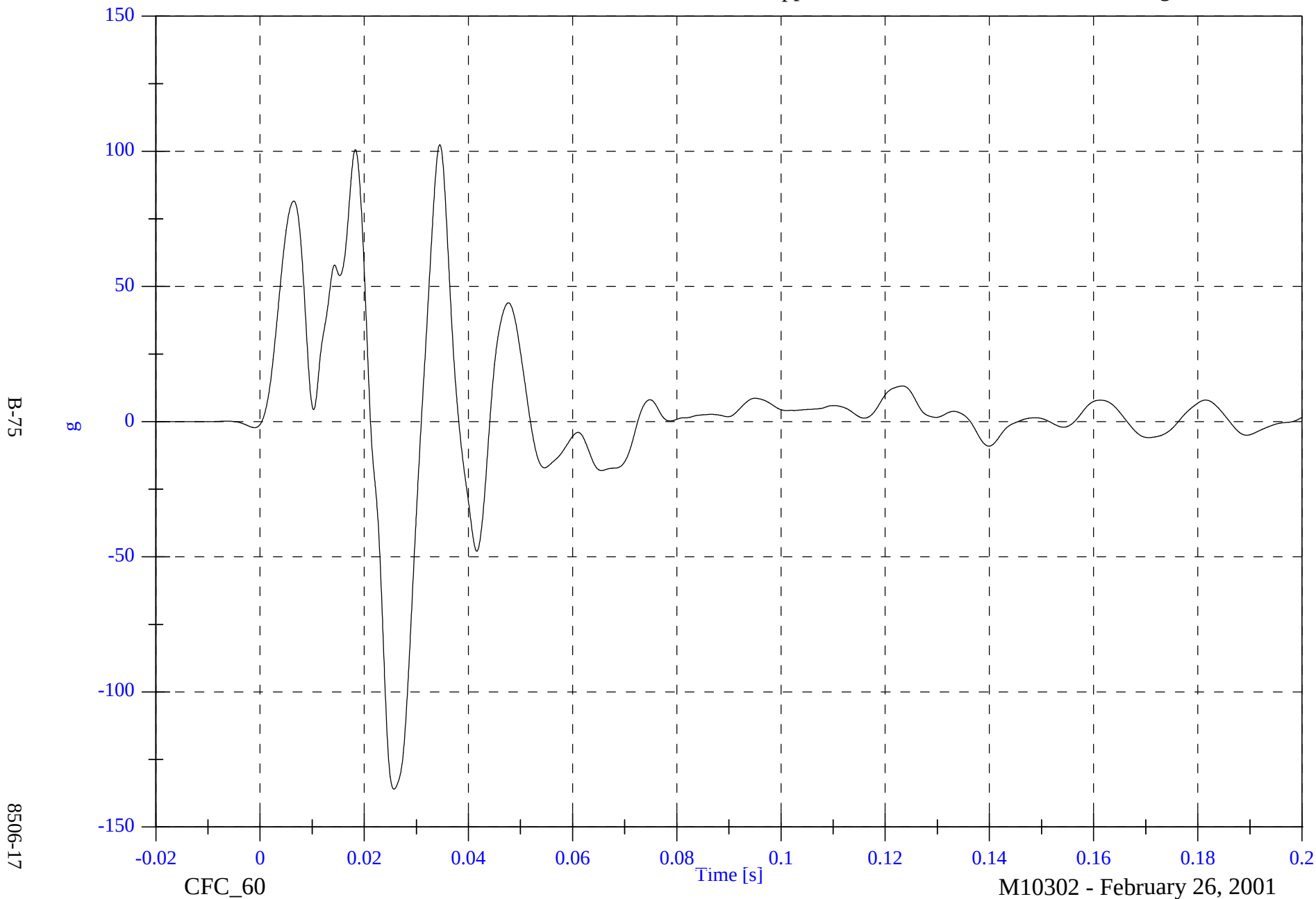


SNCAP Test #17 - 2001 Dodge Caravan

A9 Left Front Door Upper C/L Y

Max: 102.5 [g] at 0.035 [s]

Min: -136.0 [g] at 0.026 [s]



8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A9 Left Front Door Upper C/L Y Velocity

Max: 38.6 [kph] at 0.021 [s]

Min: -0.0 [kph] at 0.002 [s]



B-76

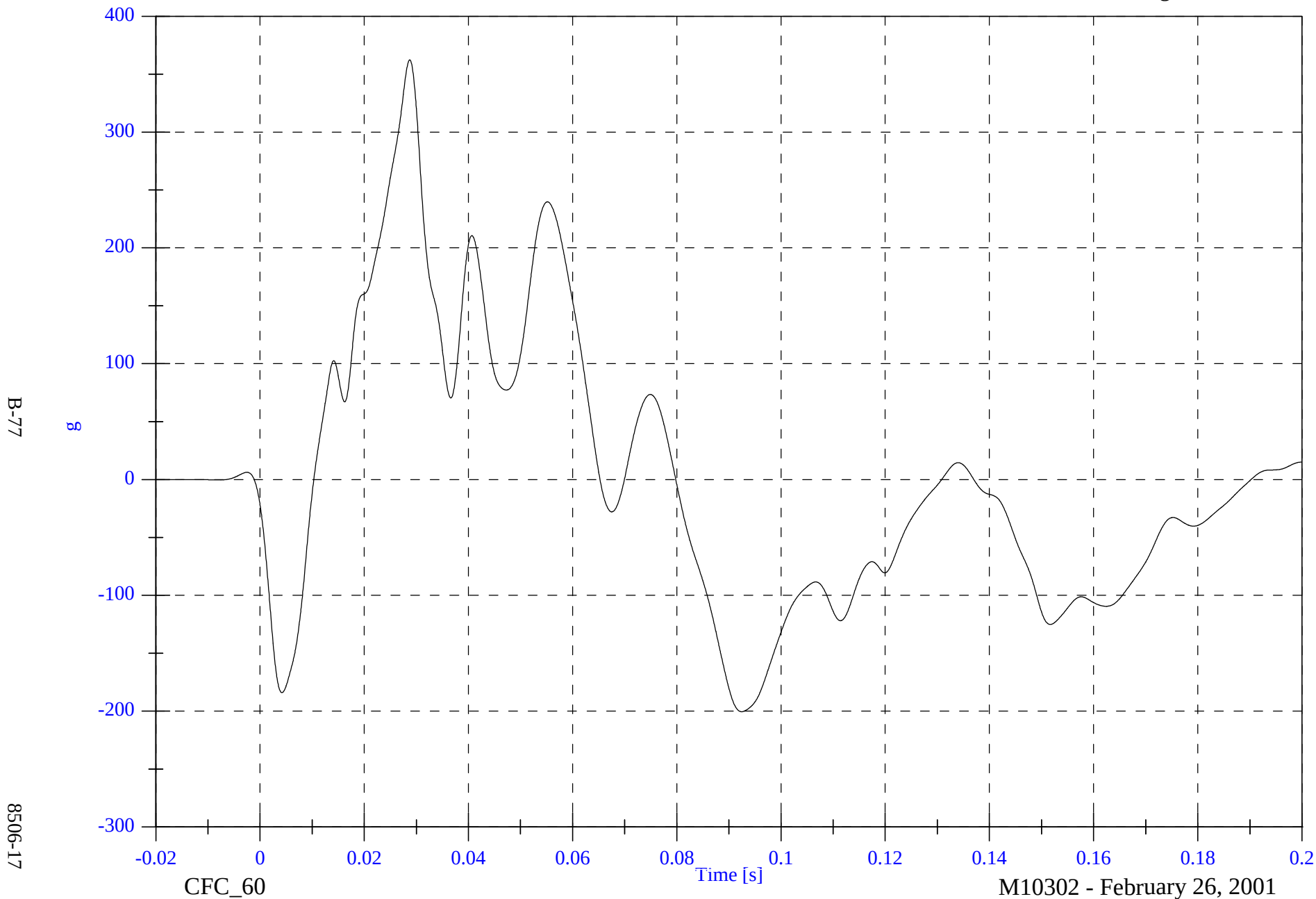
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A10 Left Rear Door Midrear Y

Max: 362.4 [g] at 0.029 [s]

Min: -200.5 [g] at 0.092 [s]



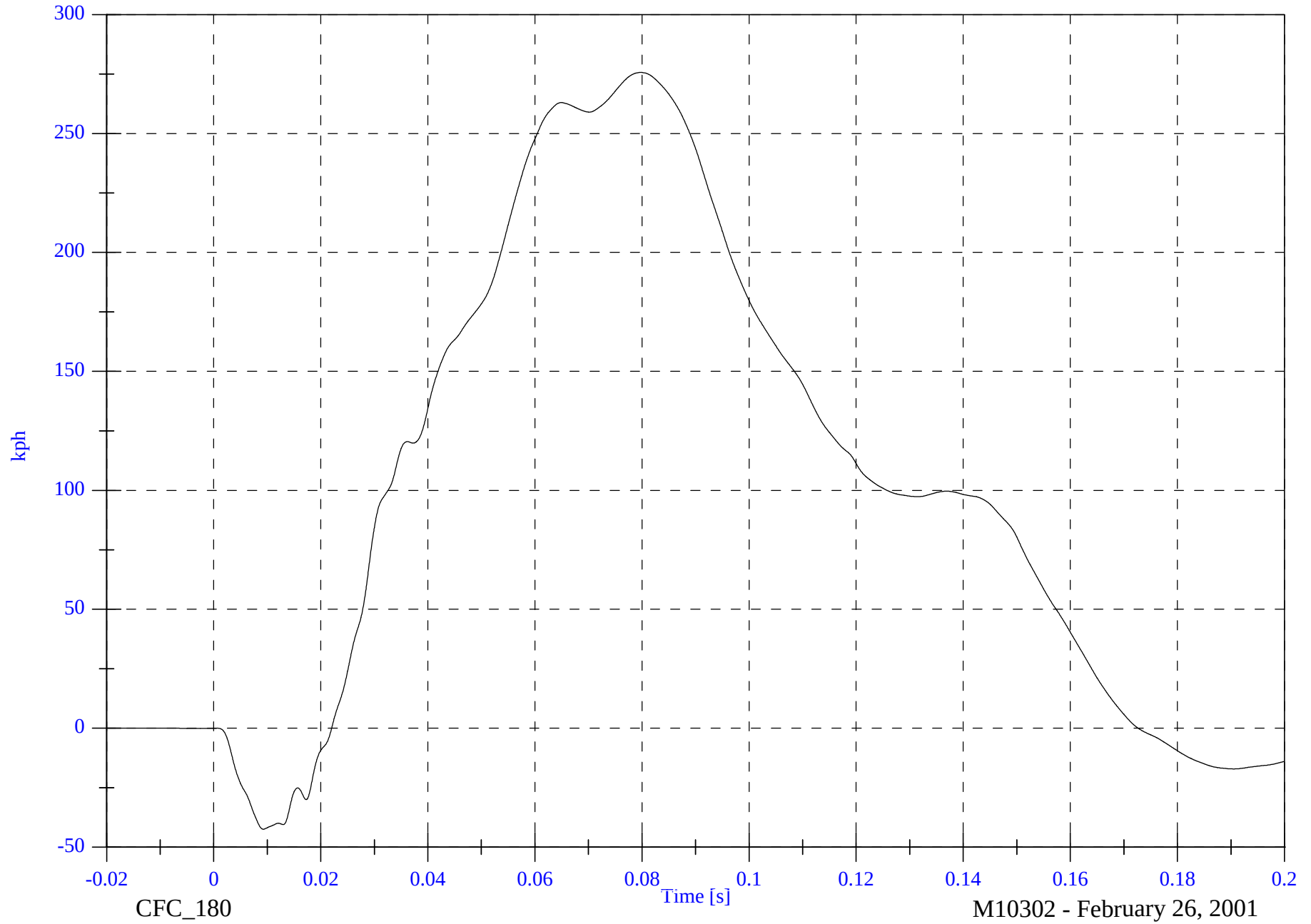
8506-17

SNCAP Test #17 - 2001 Dodge Caravan

A10 Left Rear Door Midrear Y Velocity

Max: 275.7 [kph] at 0.080 [s]

Min: -42.4 [kph] at 0.009 [s]



B-78

8506-17

CFC_180

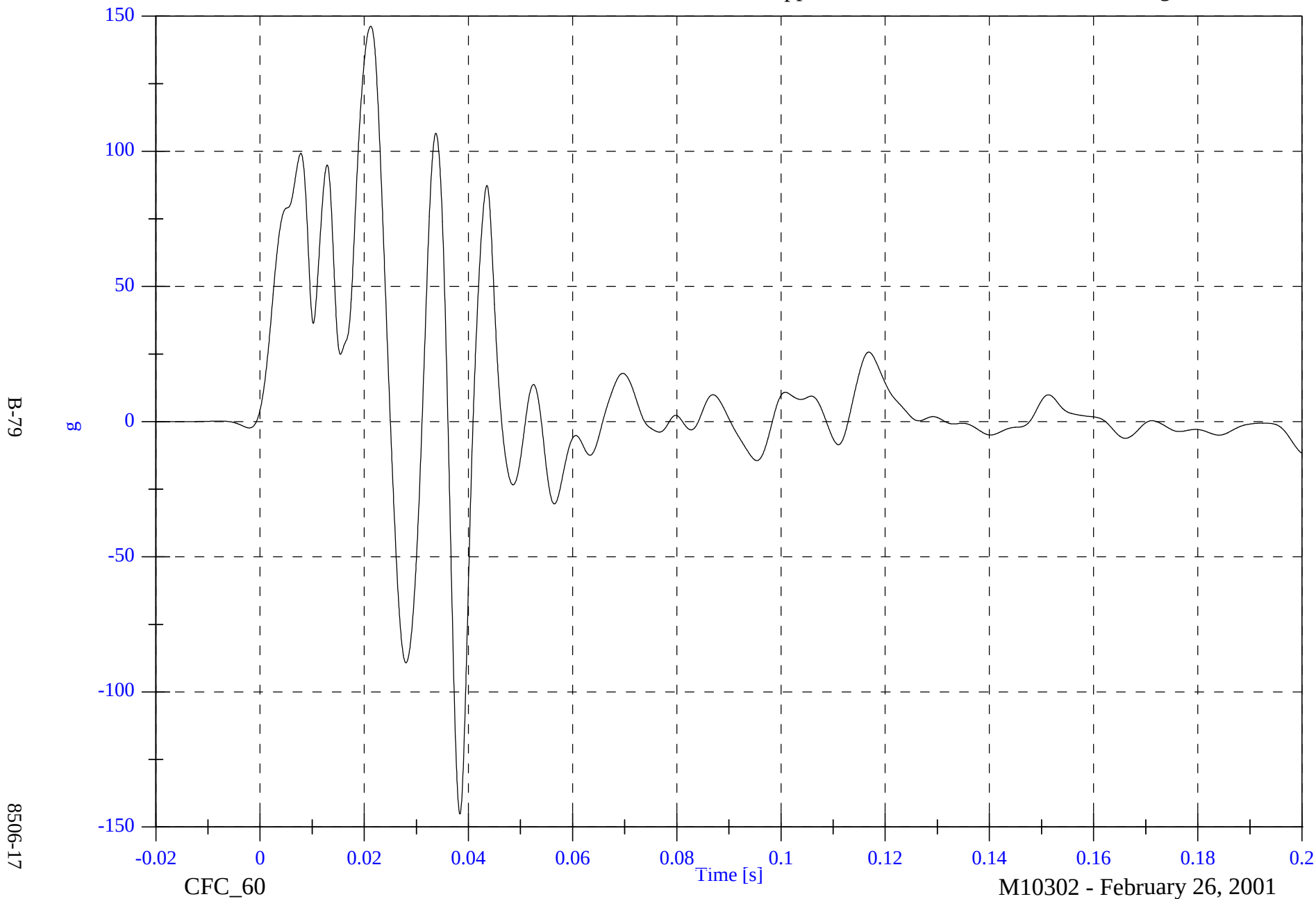
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

A11 Left Rear Door Upper C/L Y

Max: 146.3 [g] at 0.021 [s]

Min: -145.2 [g] at 0.038 [s]

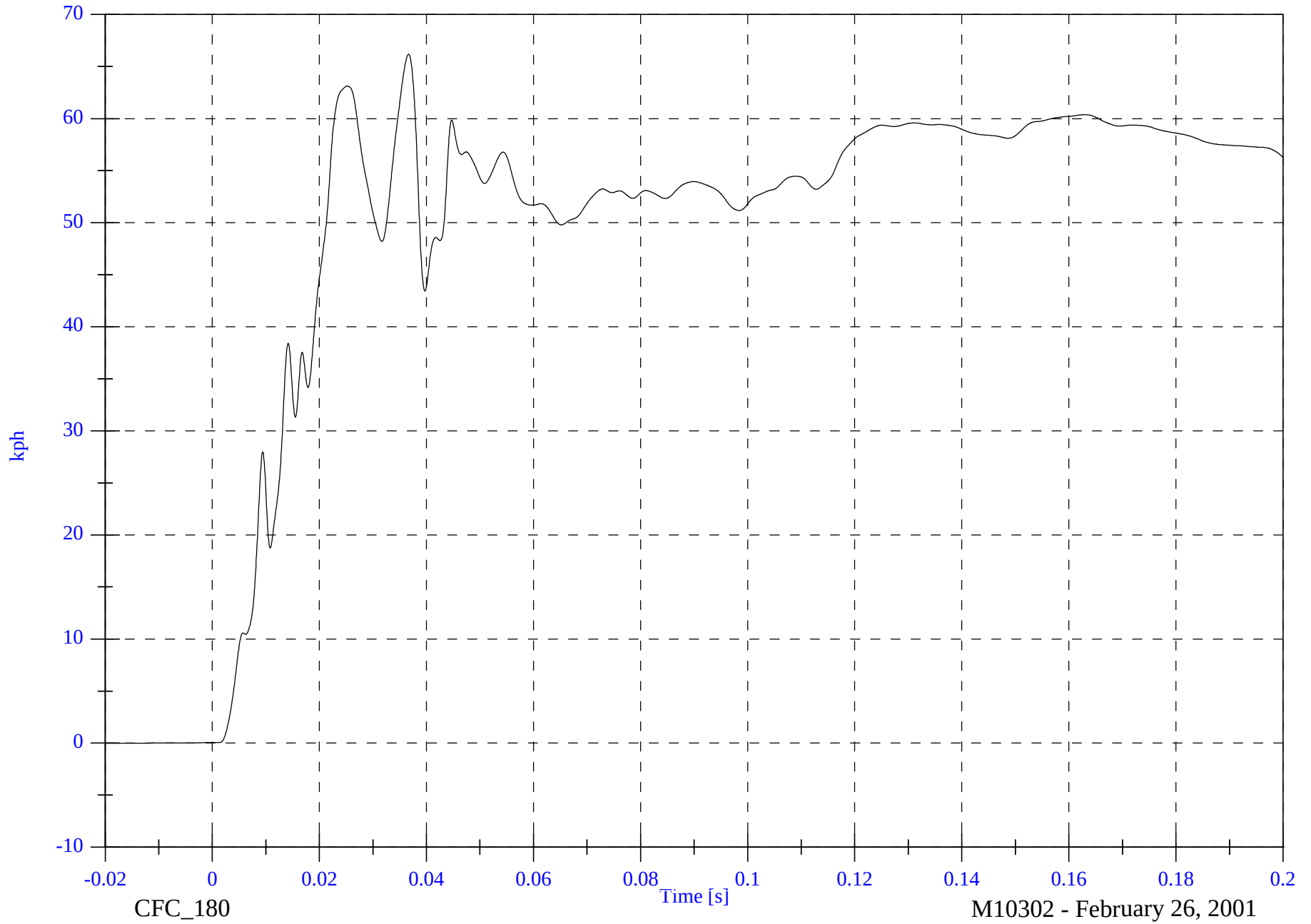


SNCAP Test #17 - 2001 Dodge Caravan

A11 Left Rear Door Upper C/L Y Velocity

Max: 66.2 [kph] at 0.037 [s]

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



B-80

8506-17

CFC_180

Time [s]

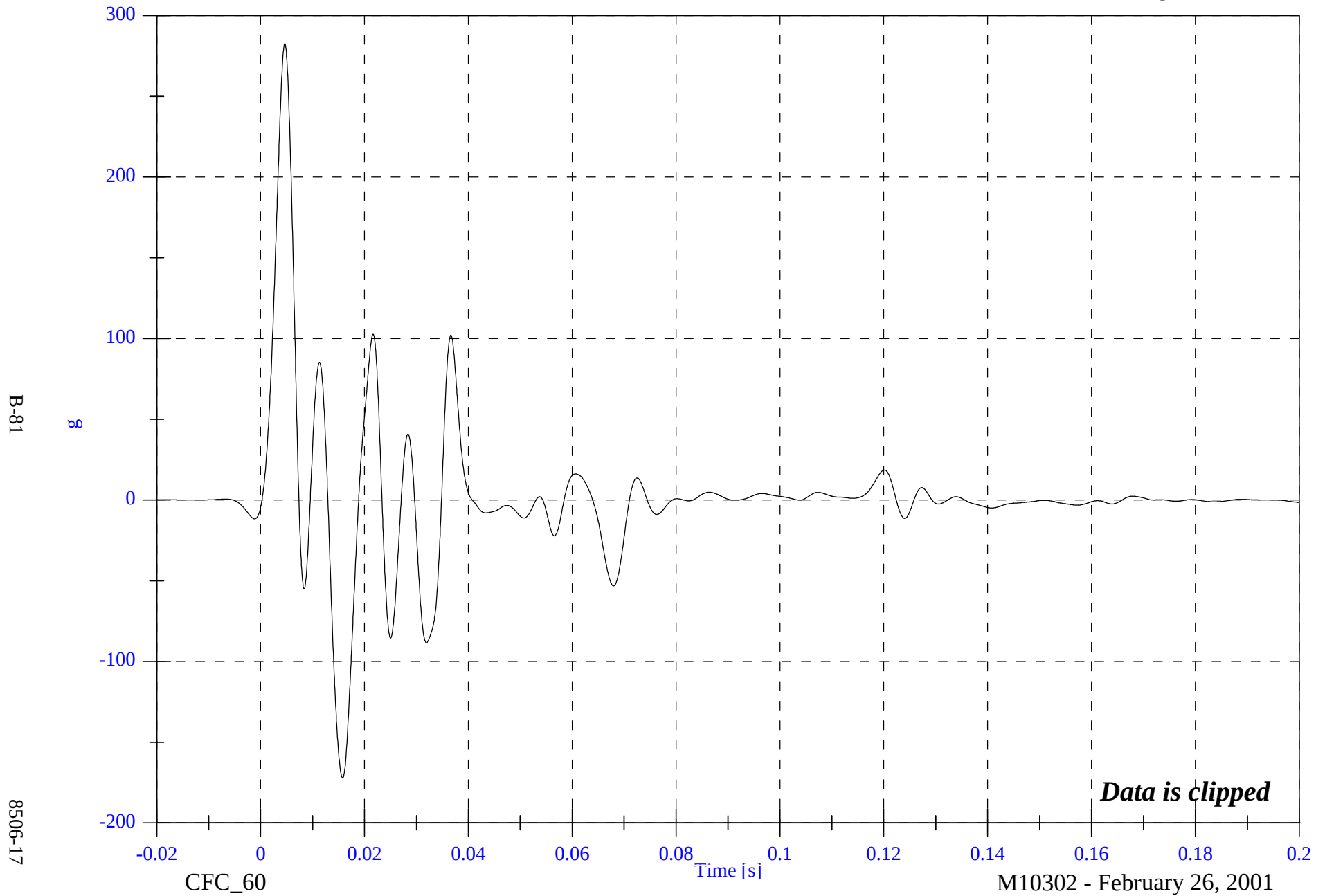
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

A12 Left Lower B Post Y

Max: 282.7 [g] at 0.005 [s]

Min: -172.2 [g] at 0.016 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

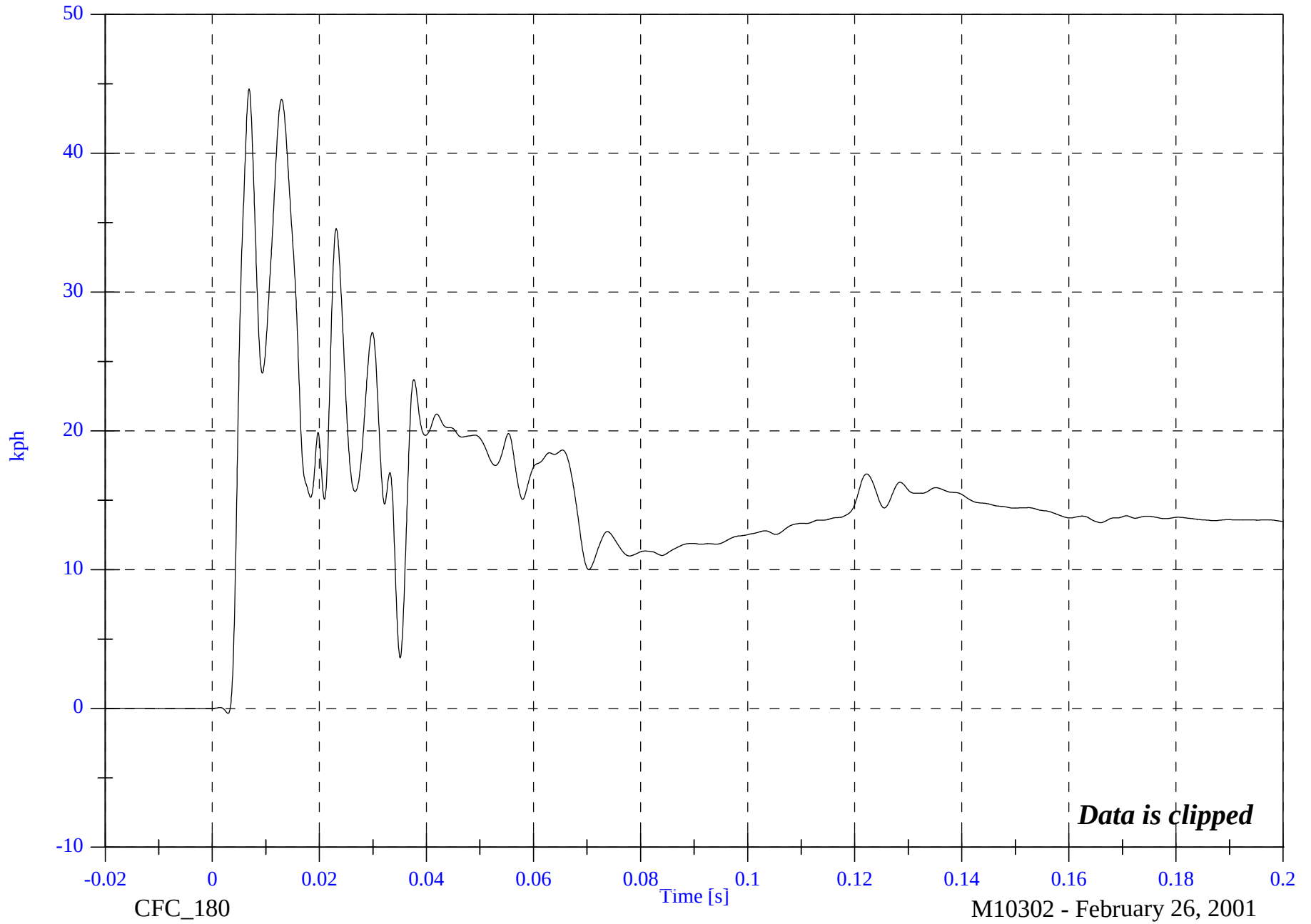
A12 Left Lower B Post Y Velocity

Max: 44.6 [kph] at 0.007 [s]

Min: -0.4 [kph] at 0.003 [s]

B-82

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SNCAP Test #17 - 2001 Dodge Caravan

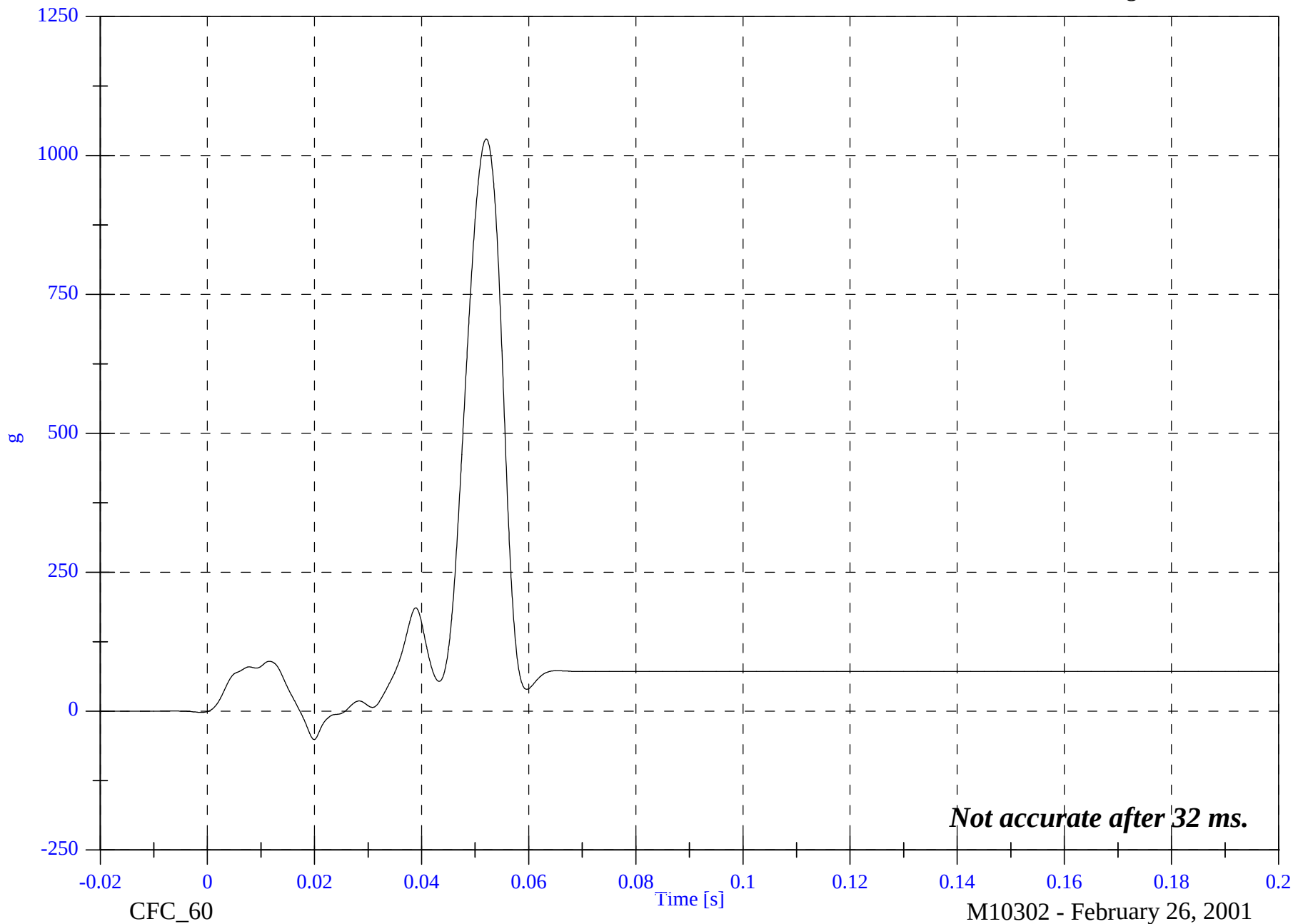
A13 Left Mid B Post Y

Max: 1029.7 [g] at 0.052 [s]

Min: -51.2 [g] at 0.020 [s]

B-83

8506-17

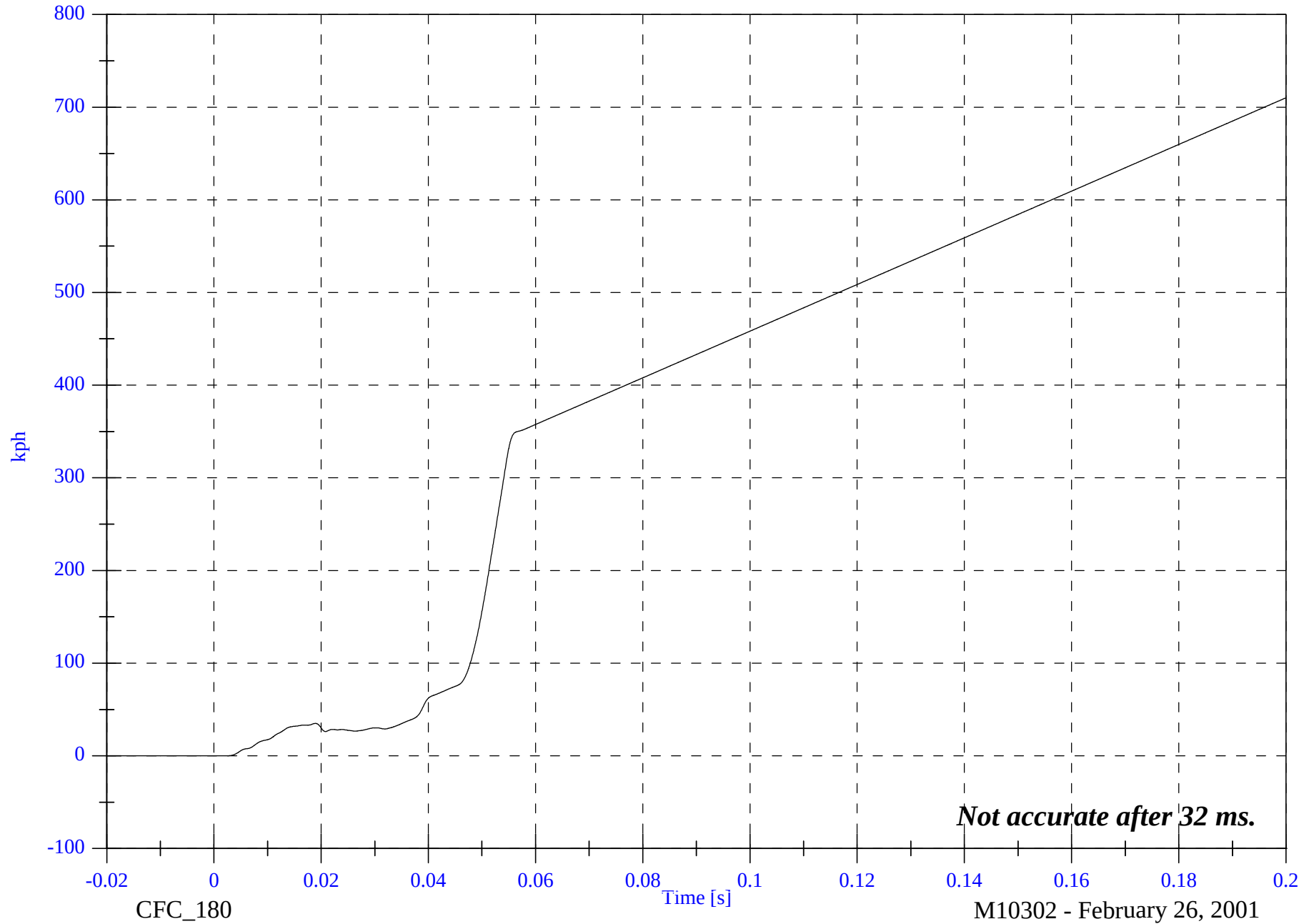


SNCAP Test #17 - 2001 Dodge Caravan

A13 Left Mid B Post Y Velocity

Max: 710.0 [kph] at 0.200 [s]

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



B-84

8506-17

CFC_180

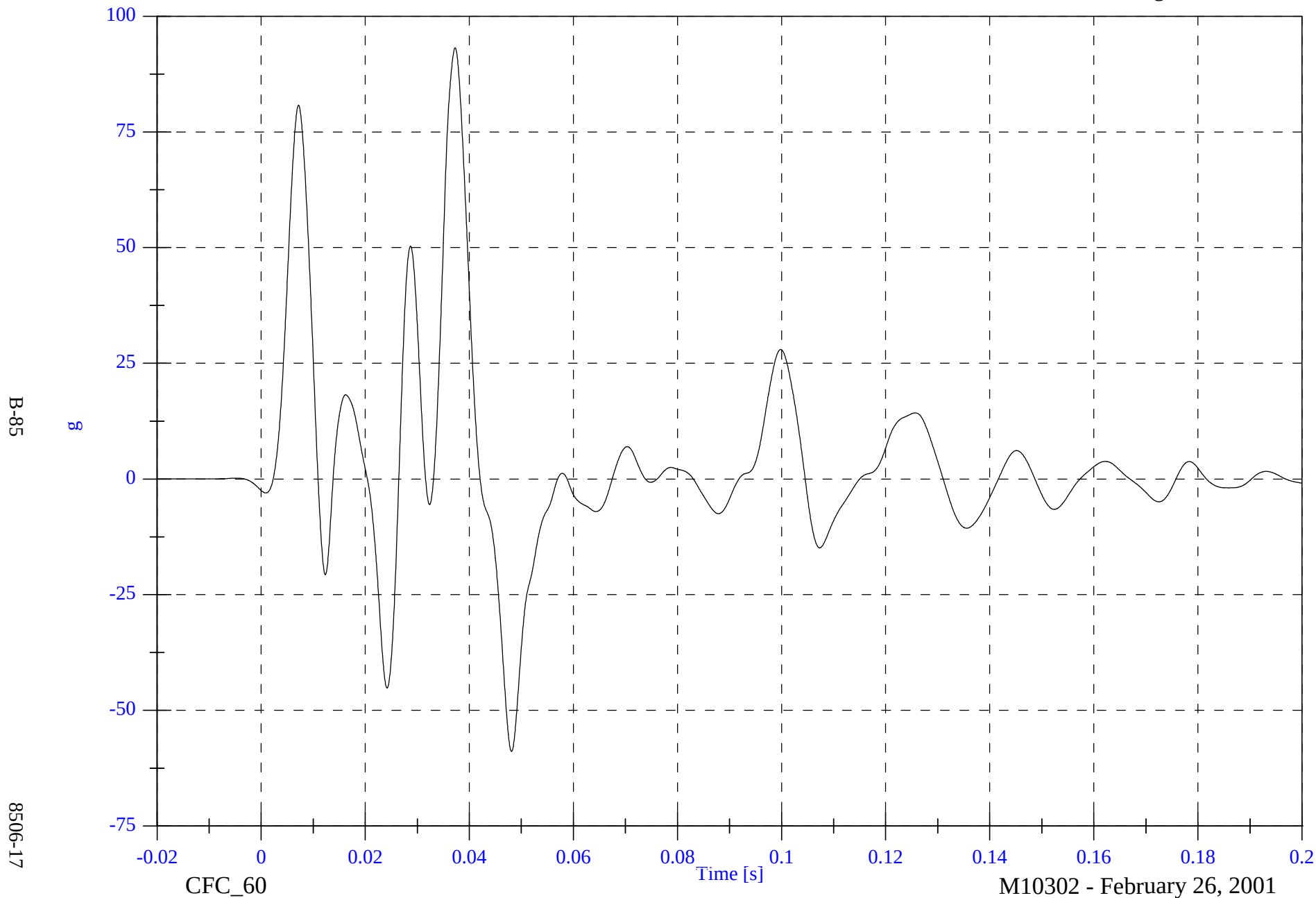
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

A14 Left Lower A Post Y

Max: 93.2 [g] at 0.037 [s]

Min: -58.9 [g] at 0.048 [s]

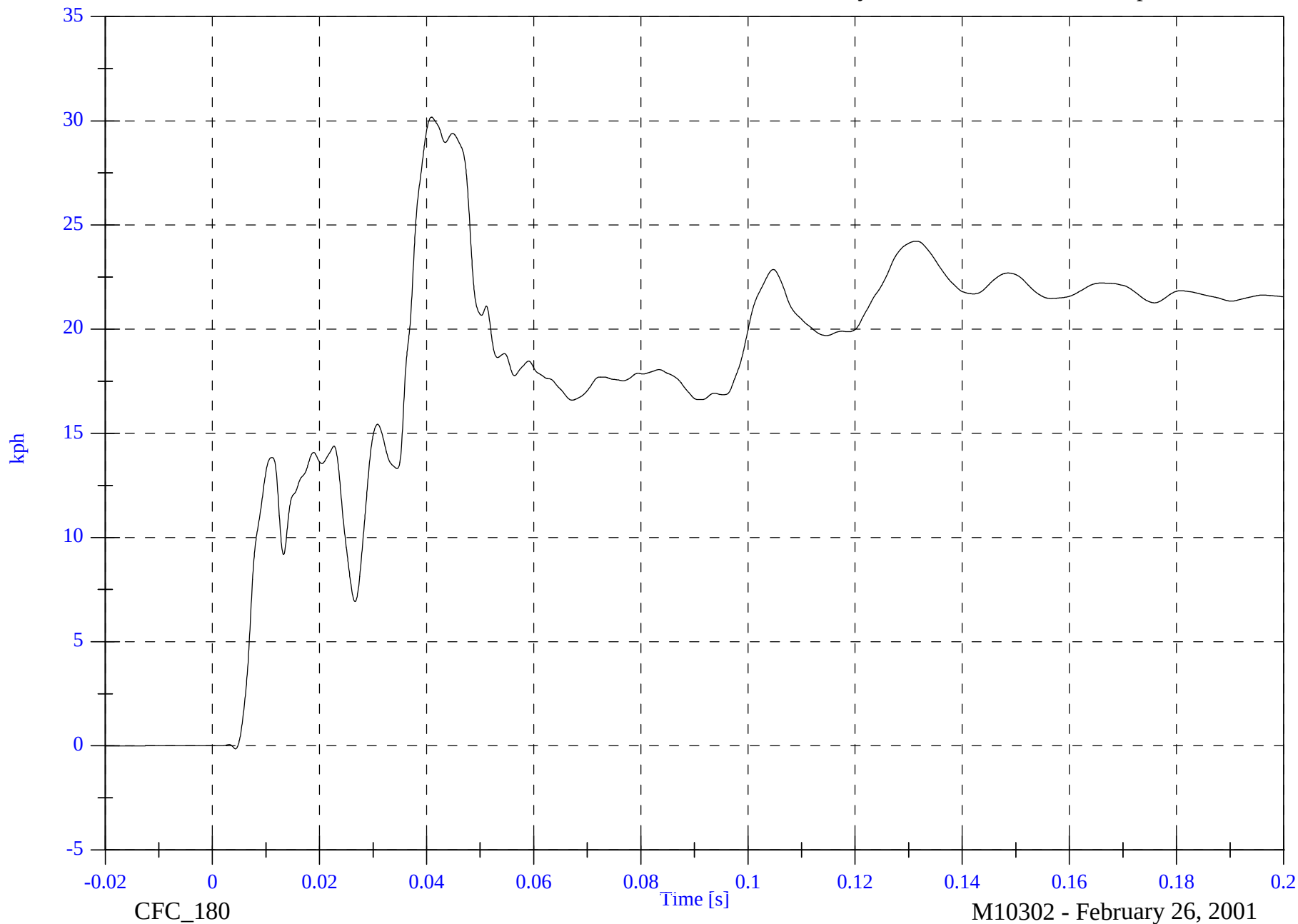


SNCAP Test #17 - 2001 Dodge Caravan

A14 Left Lower A Post Y Velocity

Max: 30.2 [kph] at 0.041 [s]

Min: -0.1 [kph] at 0.004 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

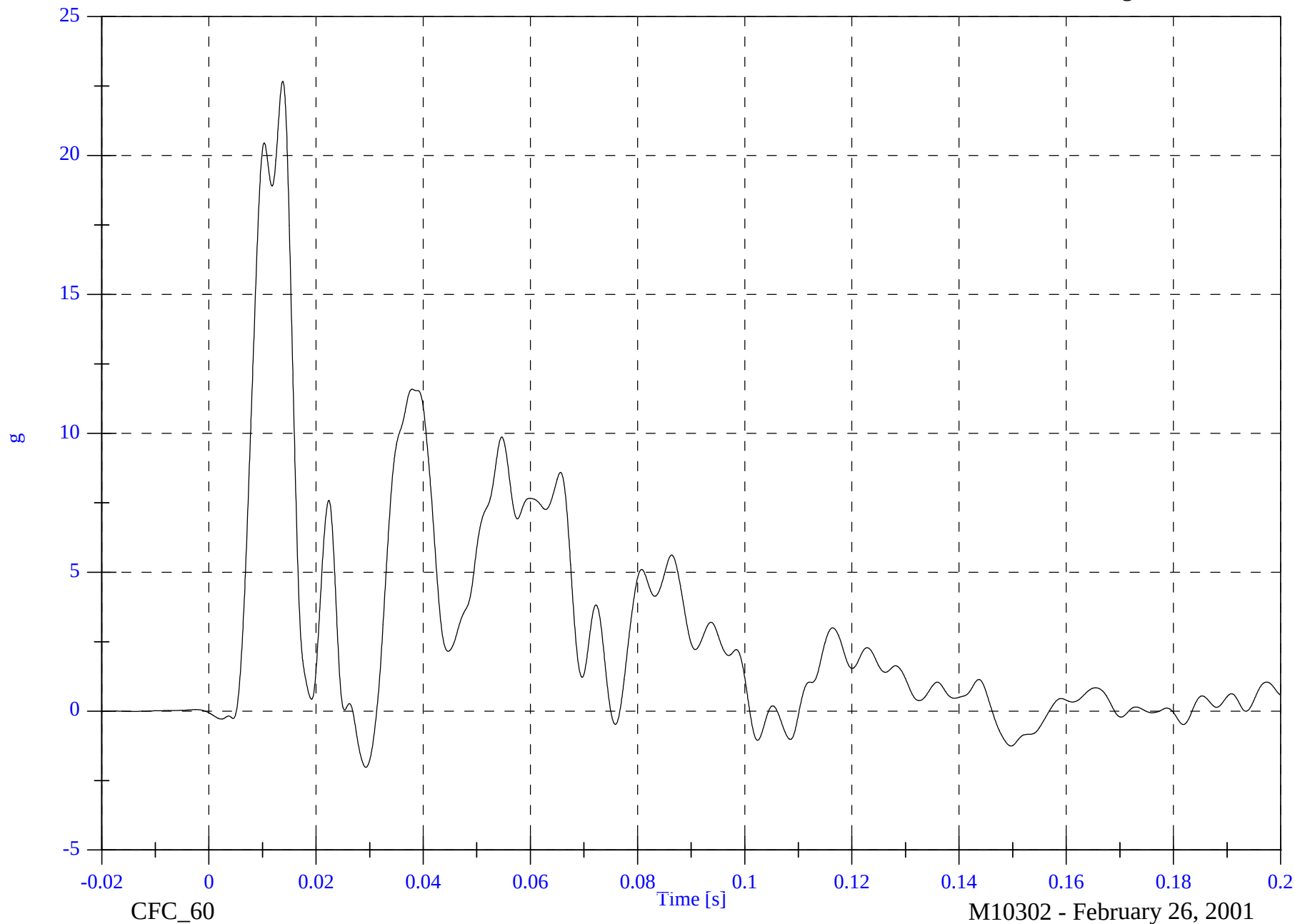
A15 Left Mid A Post Y

Max: 22.7 [g] at 0.014 [s]

Min: -2.0 [g] at 0.029 [s]

B-87

8506-17

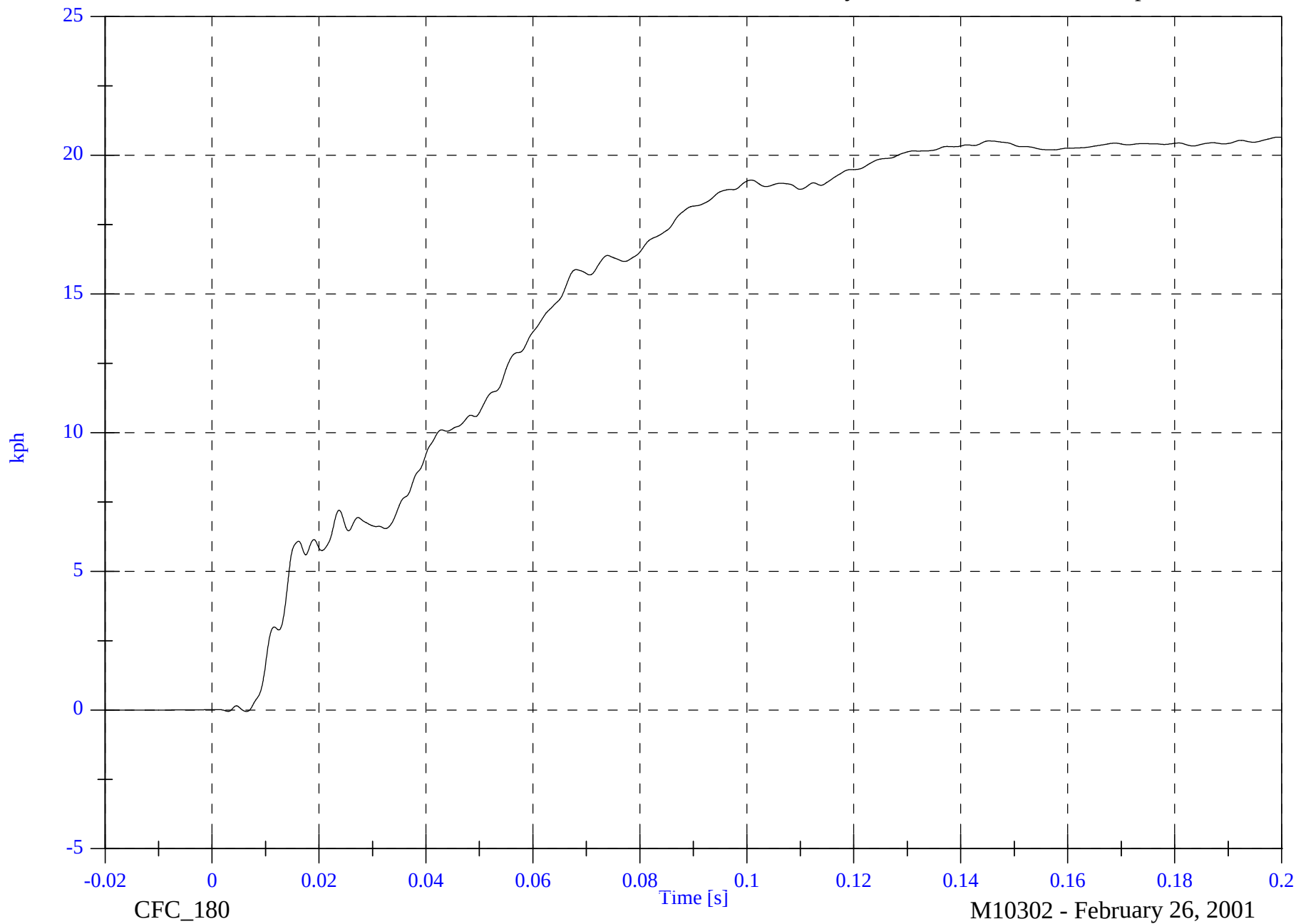


SNCAP Test #17 - 2001 Dodge Caravan

A15 Left Mid A Post Y Velocity

Max: 20.7 [kph] at 0.199 [s]

Min: -0.1 [kph] at 0.006 [s]



B-88

8506-17

CFC_180

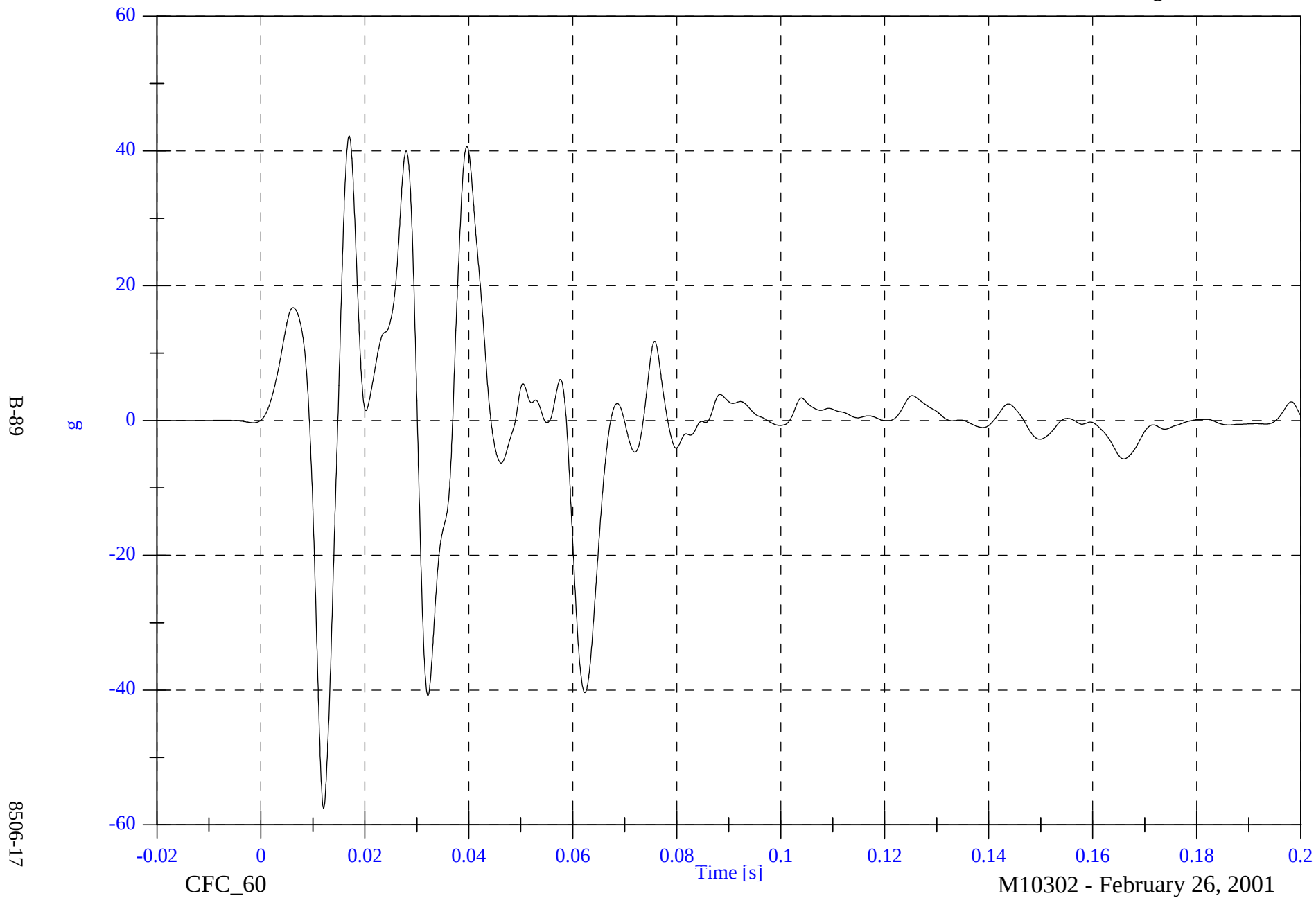
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

A16 Front Seat Track Y

Max: 42.2 [g] at 0.017 [s]

Min: -57.6 [g] at 0.012 [s]



SNCAP Test #17 - 2001 Dodge Caravan

A16 Front Seat Track Y Velocity

Max: 9.4 [kph] at 0.030 [s]

Min: -4.6 [kph] at 0.016 [s]

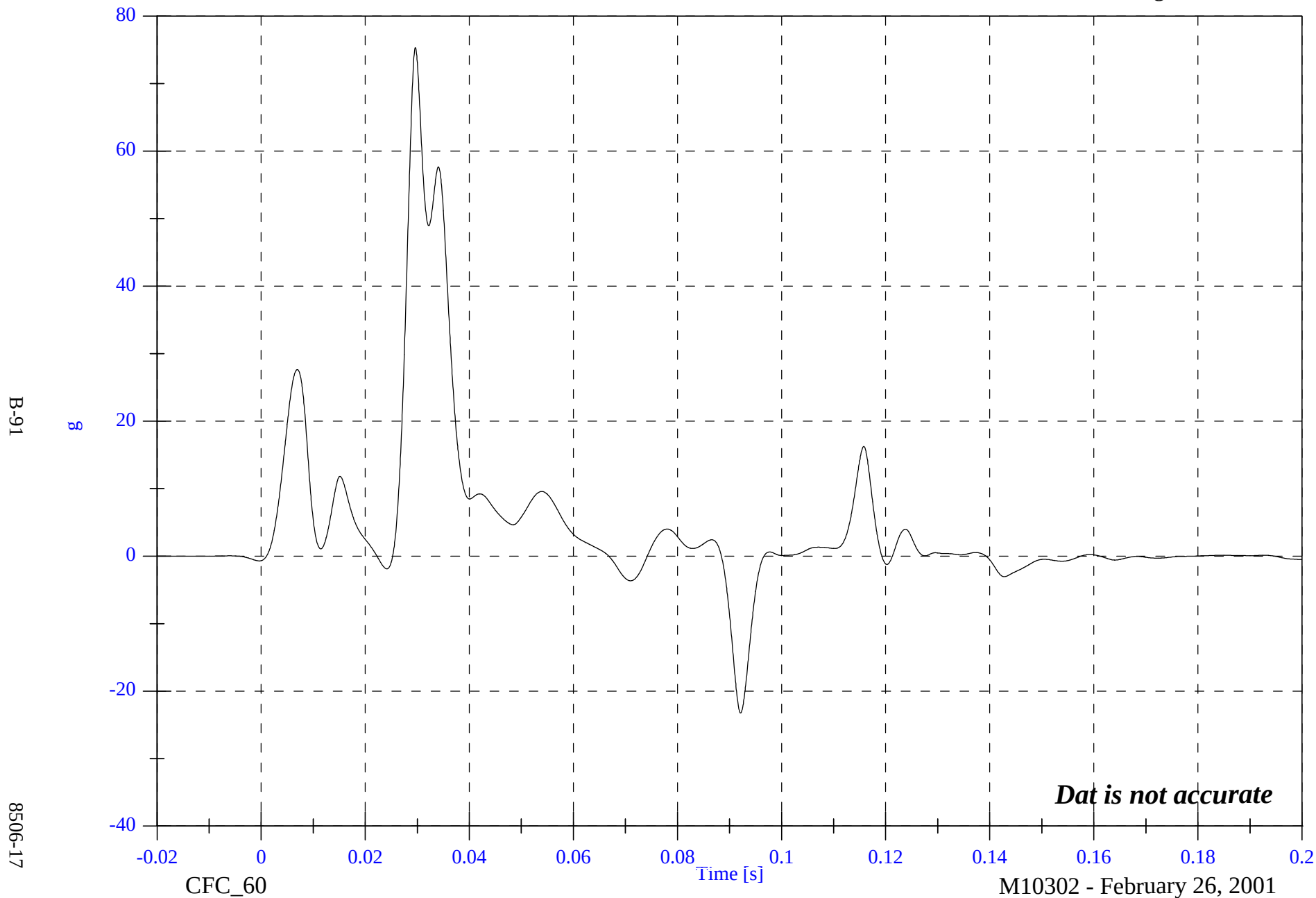


SNCAP Test #17 - 2001 Dodge Caravan

A17 Rear Seat Track Y

Max: 75.3 [g] at 0.030 [s]

Min: -23.2 [g] at 0.092 [s]

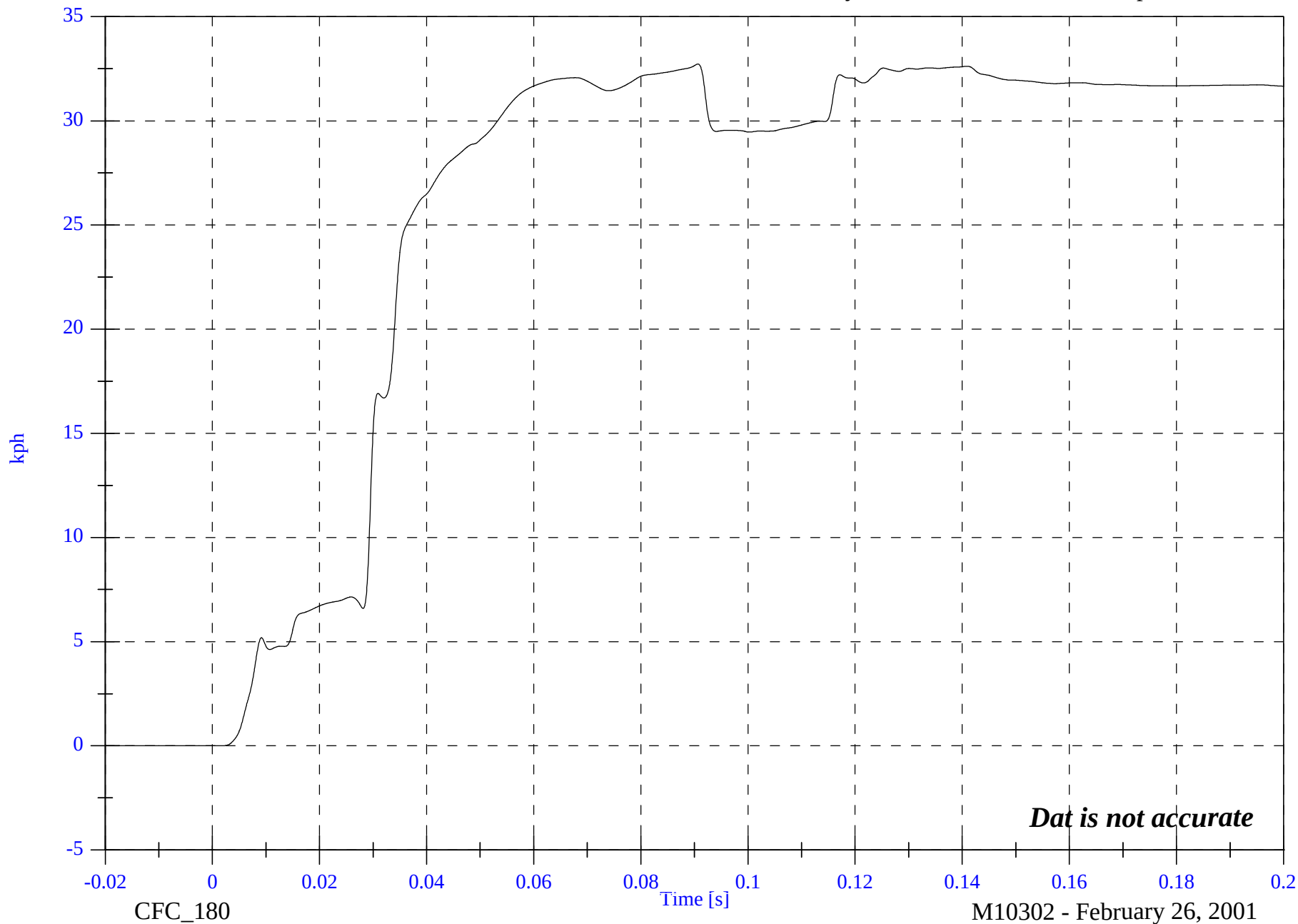


SNCAP Test #17 - 2001 Dodge Caravan

A17 Rear Seat Track Y Velocity

Max: 32.7 [kph] at 0.091 [s]

Min: -0.0 [kph] at -0.014 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

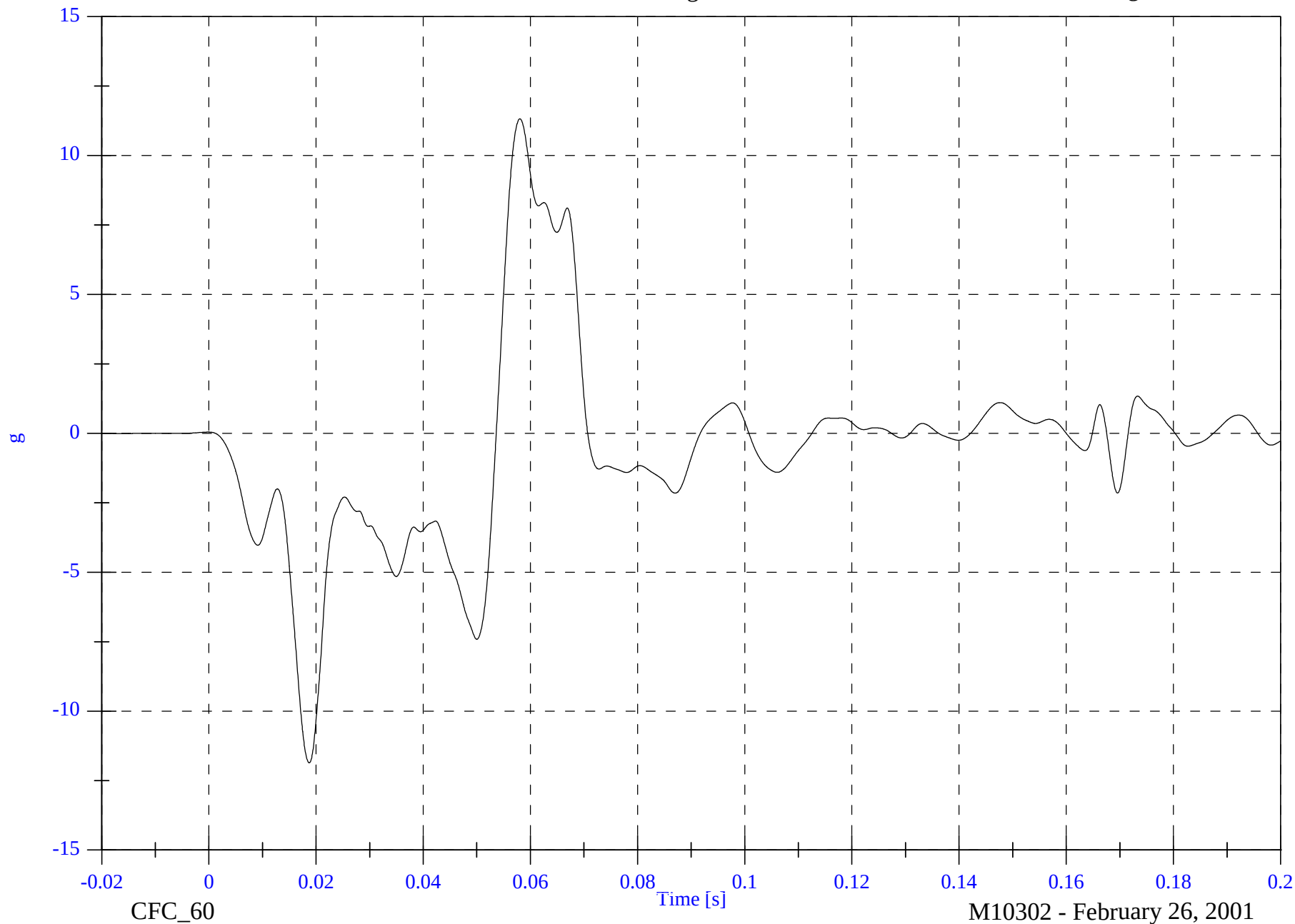
A18 Target CG X

Max: 11.3 [g] at 0.058 [s]

Min: -11.9 [g] at 0.019 [s]

B-93

8506-17

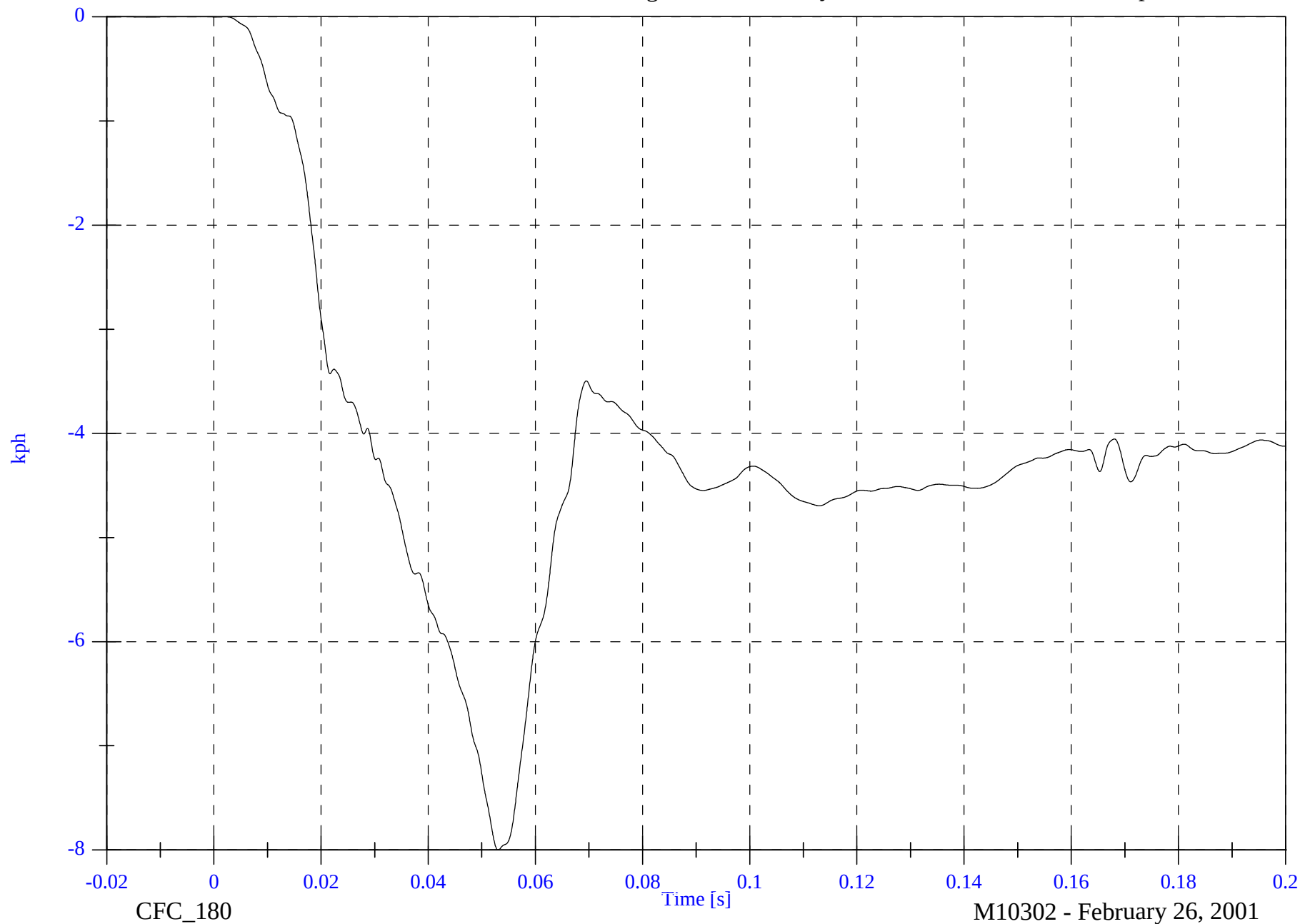


SNCAP Test #17 - 2001 Dodge Caravan

A18 Target CG X Velocity

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

Min: -8.0 [kph] at 0.053 [s]



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CFC_180

Time [s]

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SNCAP Test #17 - 2001 Dodge Caravan

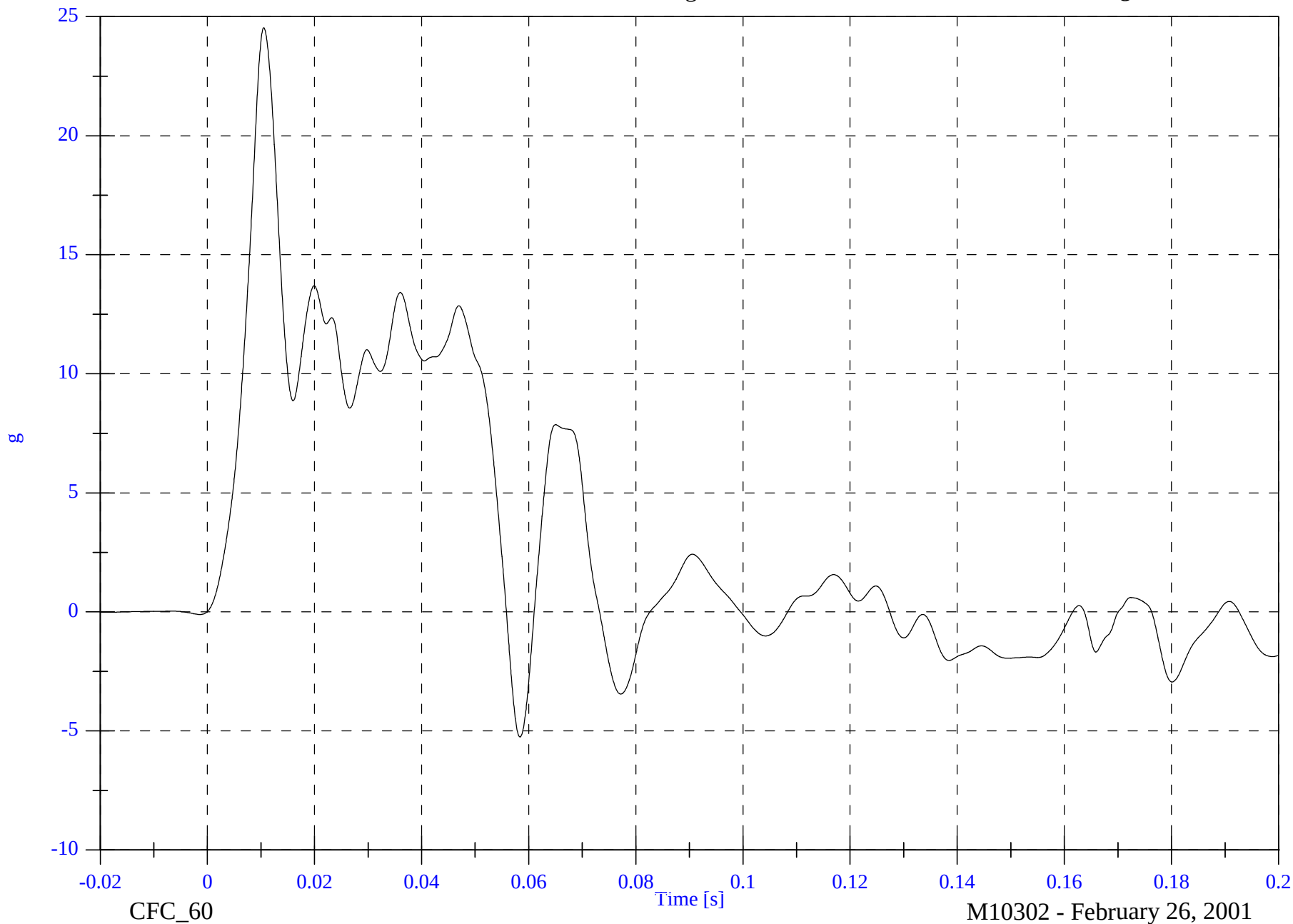
A18 Target CG Y

Max: 24.5 [g] at 0.011 [s]

Min: -5.3 [g] at 0.058 [s]

B-95

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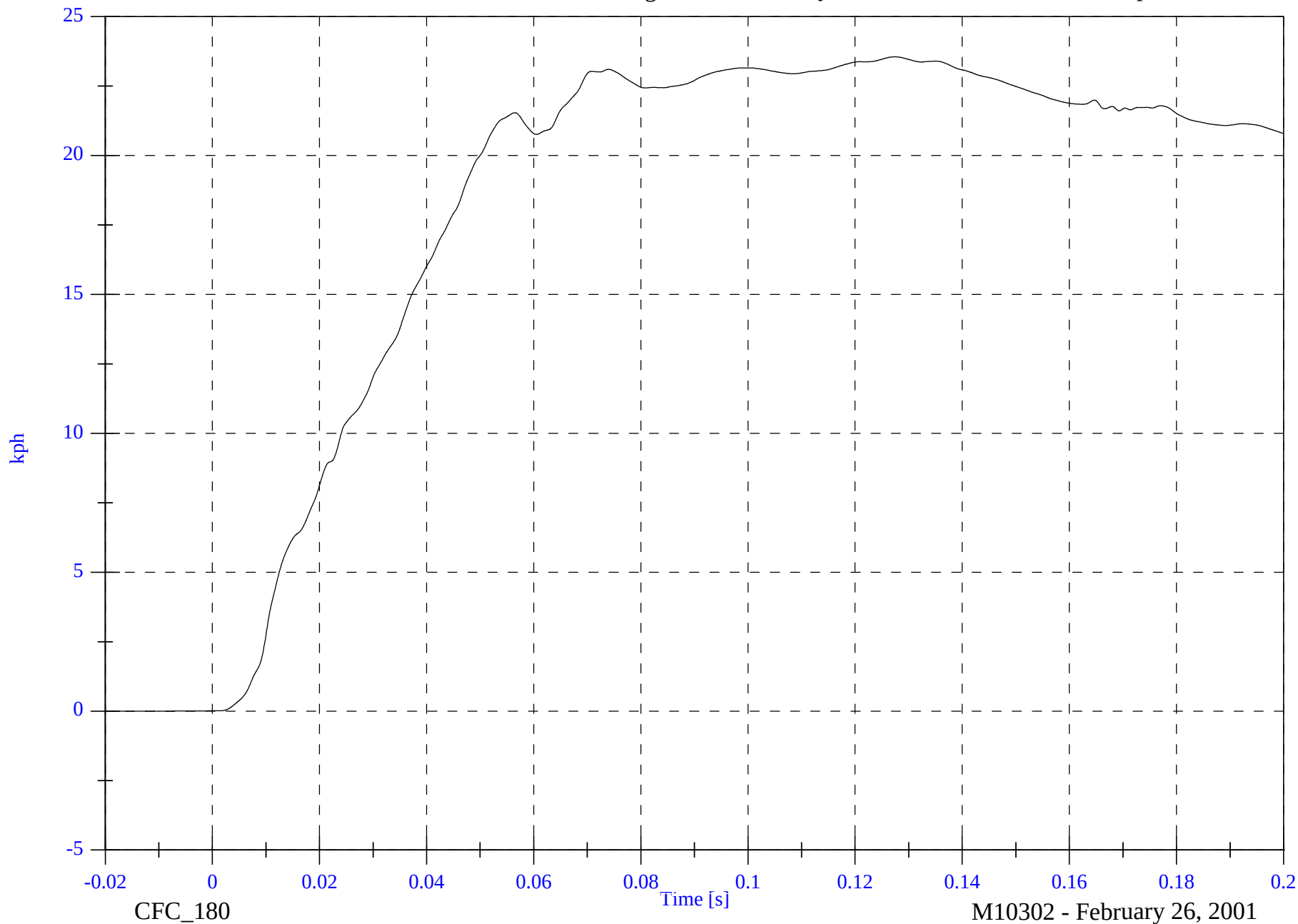


SNCAP Test #17 - 2001 Dodge Caravan

A18 Target CG Y Velocity

Max: 23.6 [kph] at 0.127 [s]

Min: -0.0 [kph] at -0.016 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

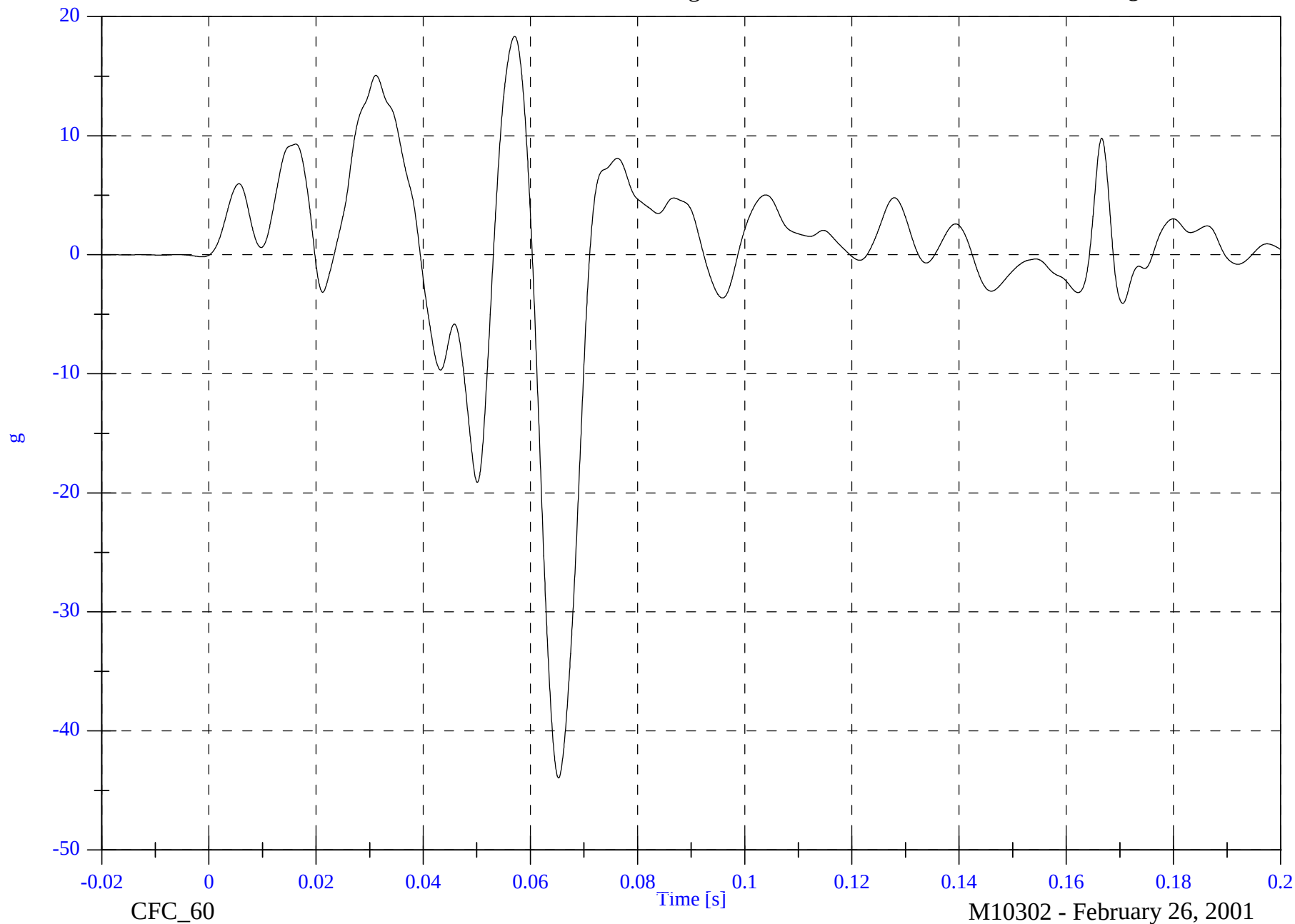
A18 Target CG Z

Max: 18.3 [g] at 0.057 [s]

Min: -44.0 [g] at 0.065 [s]

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SNCAP Test #17 - 2001 Dodge Caravan

A18 Target CG Z Velocity

Max: 8.1 [kph] at 0.039 [s]

Min: -3.5 [kph] at 0.070 [s]

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SNCAP Test #17 - 2001 Dodge Caravan

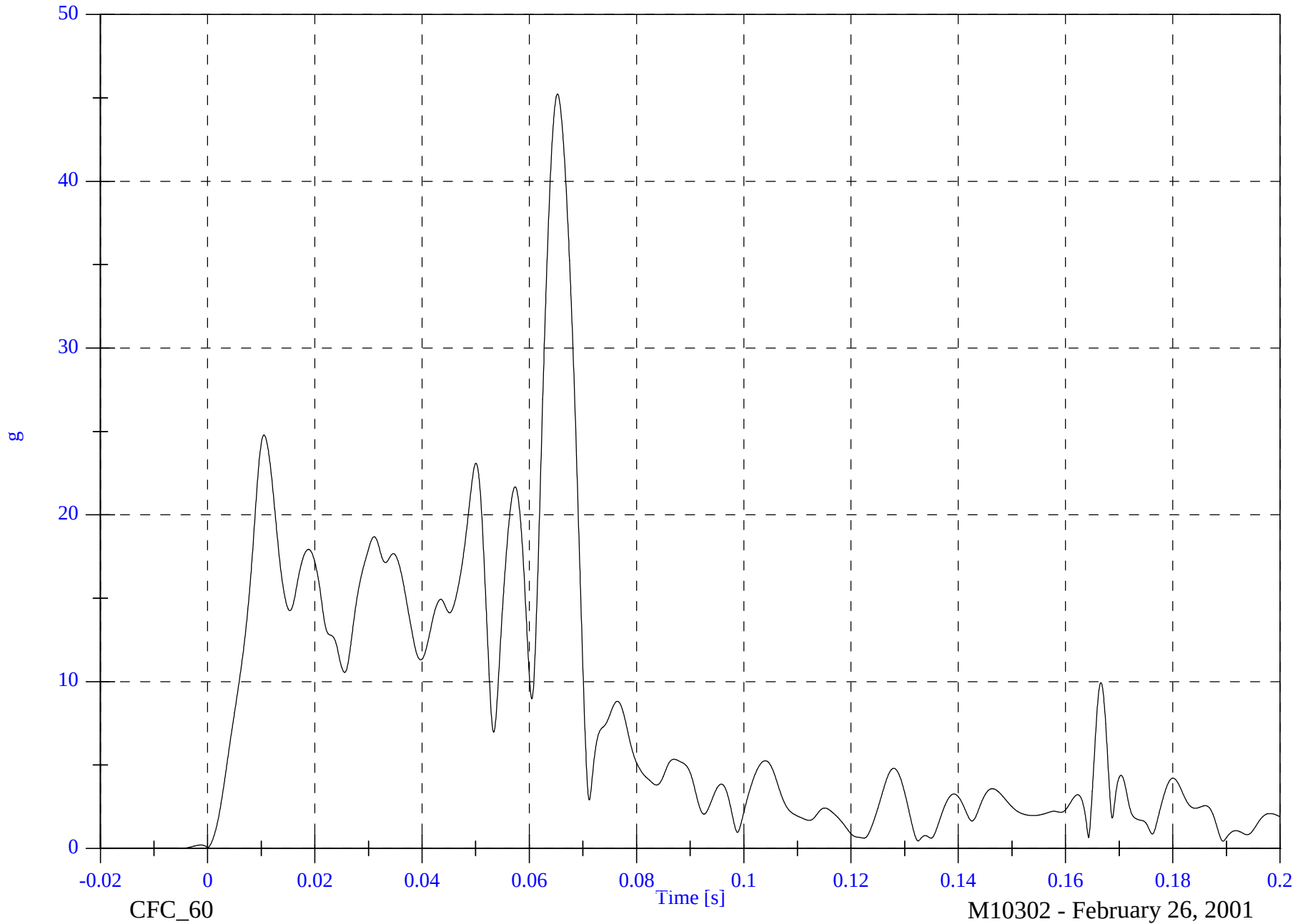
A18 Target CG Resultant

Max: 45.2 [g] at 0.065 [s]

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

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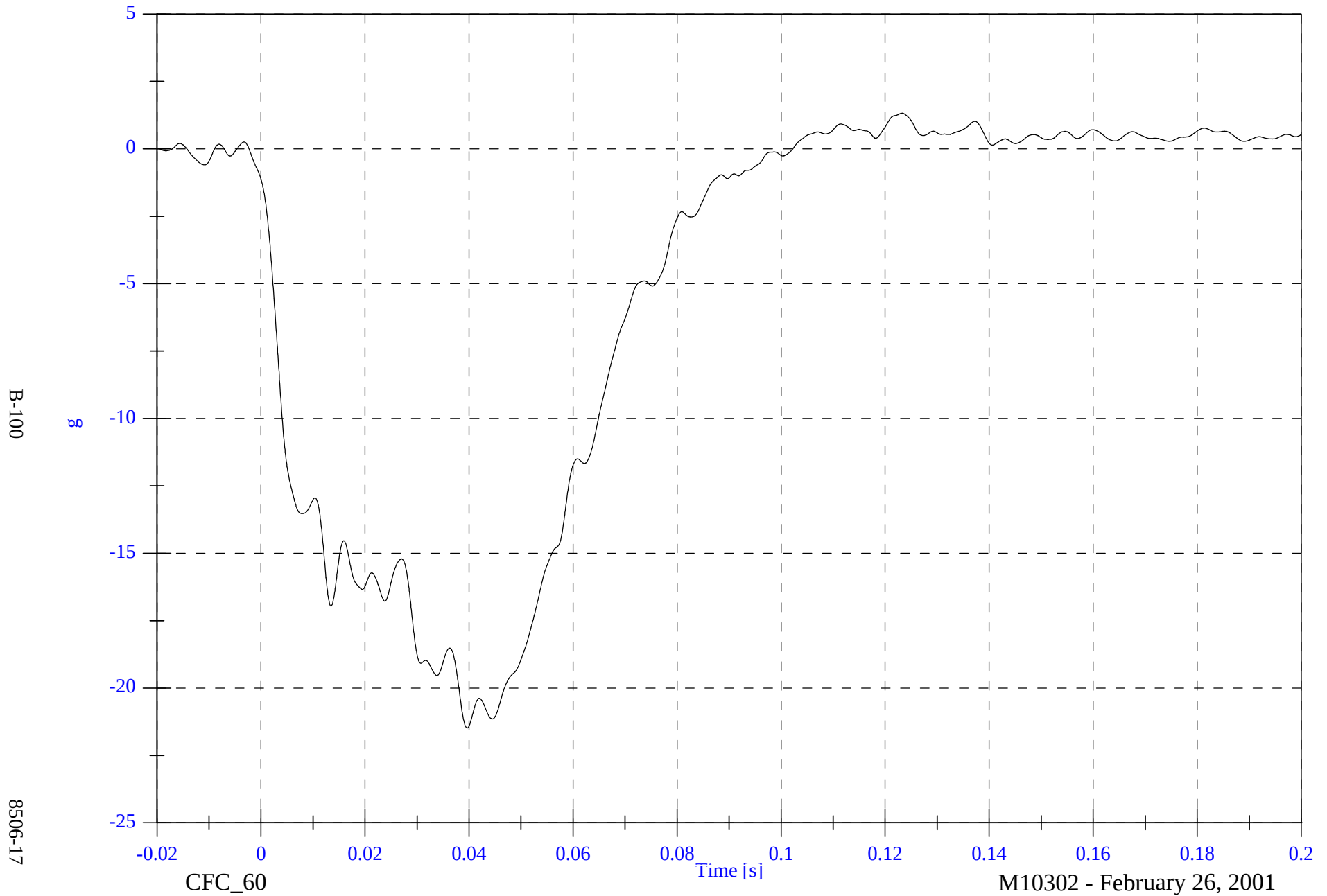


SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier CG X

Max: 1.3 [g] at 0.123 [s]

Min: -21.5 [g] at 0.040 [s]

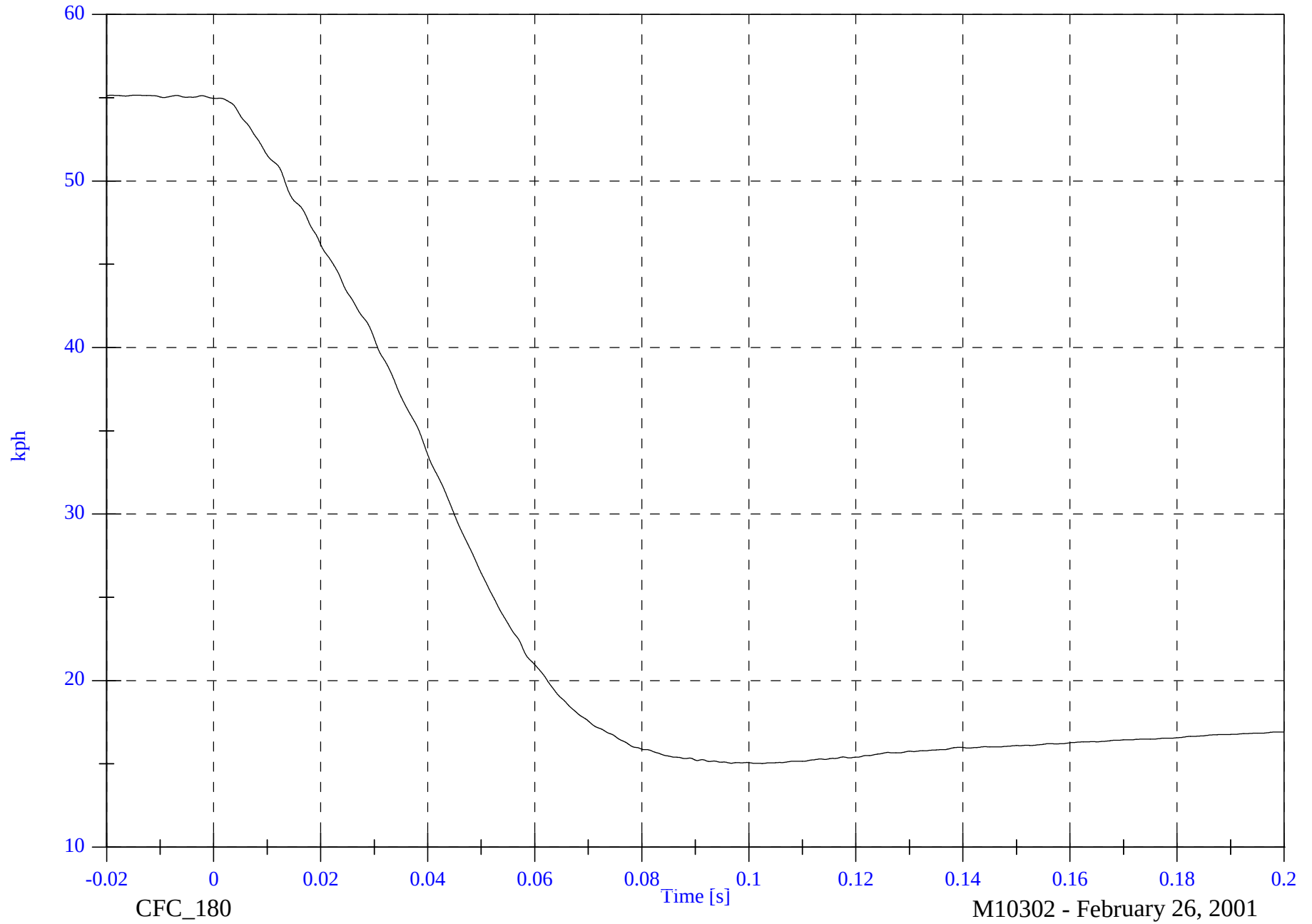


SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier CG X Velocity

Max: 55.2 [kph] at -0.014 [s]

Min: 15.0 [kph] at 0.102 [s]



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CFC_180

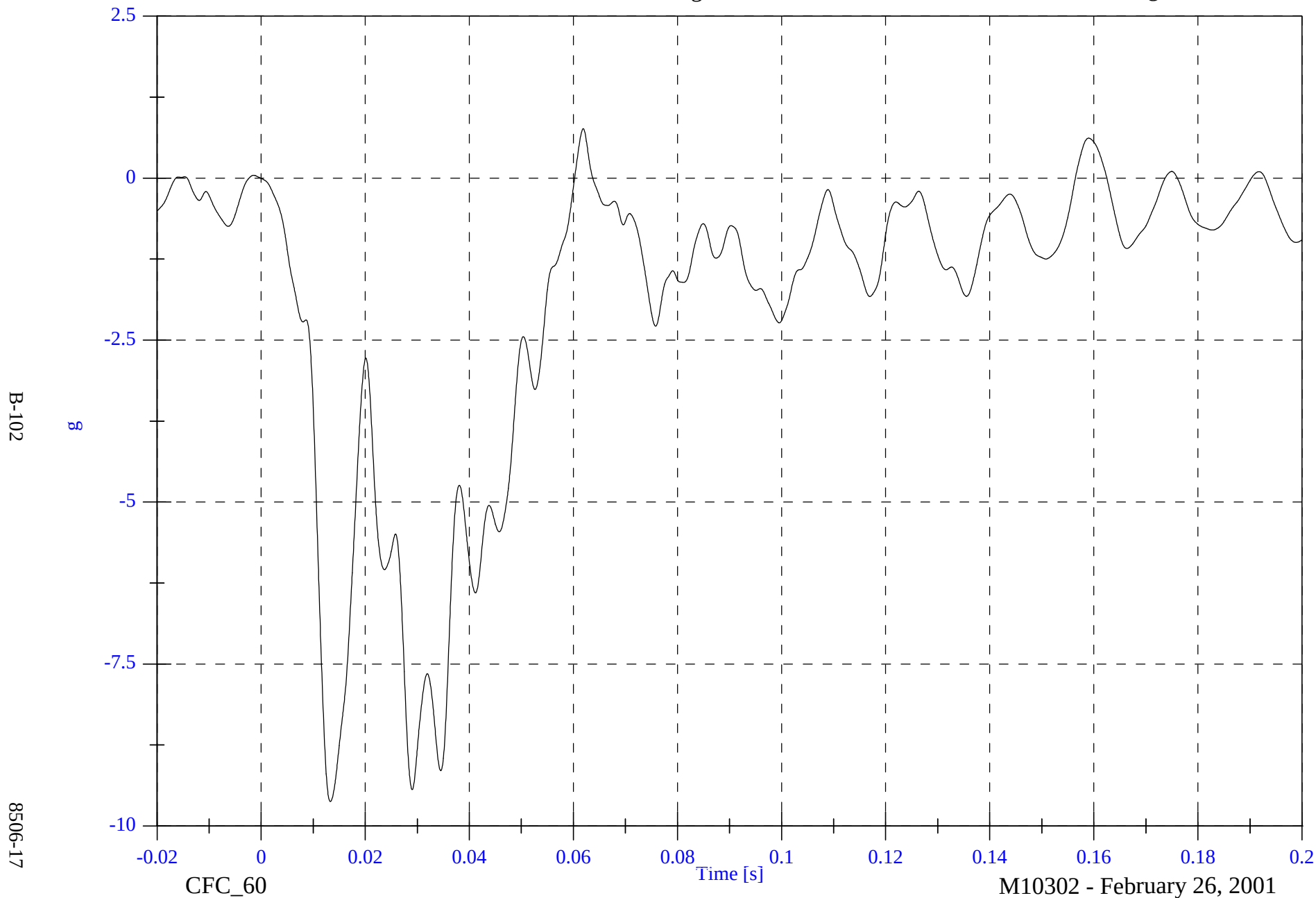
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier CG Y

Max: 0.8 [g] at 0.062 [s]

Min: -9.6 [g] at 0.013 [s]

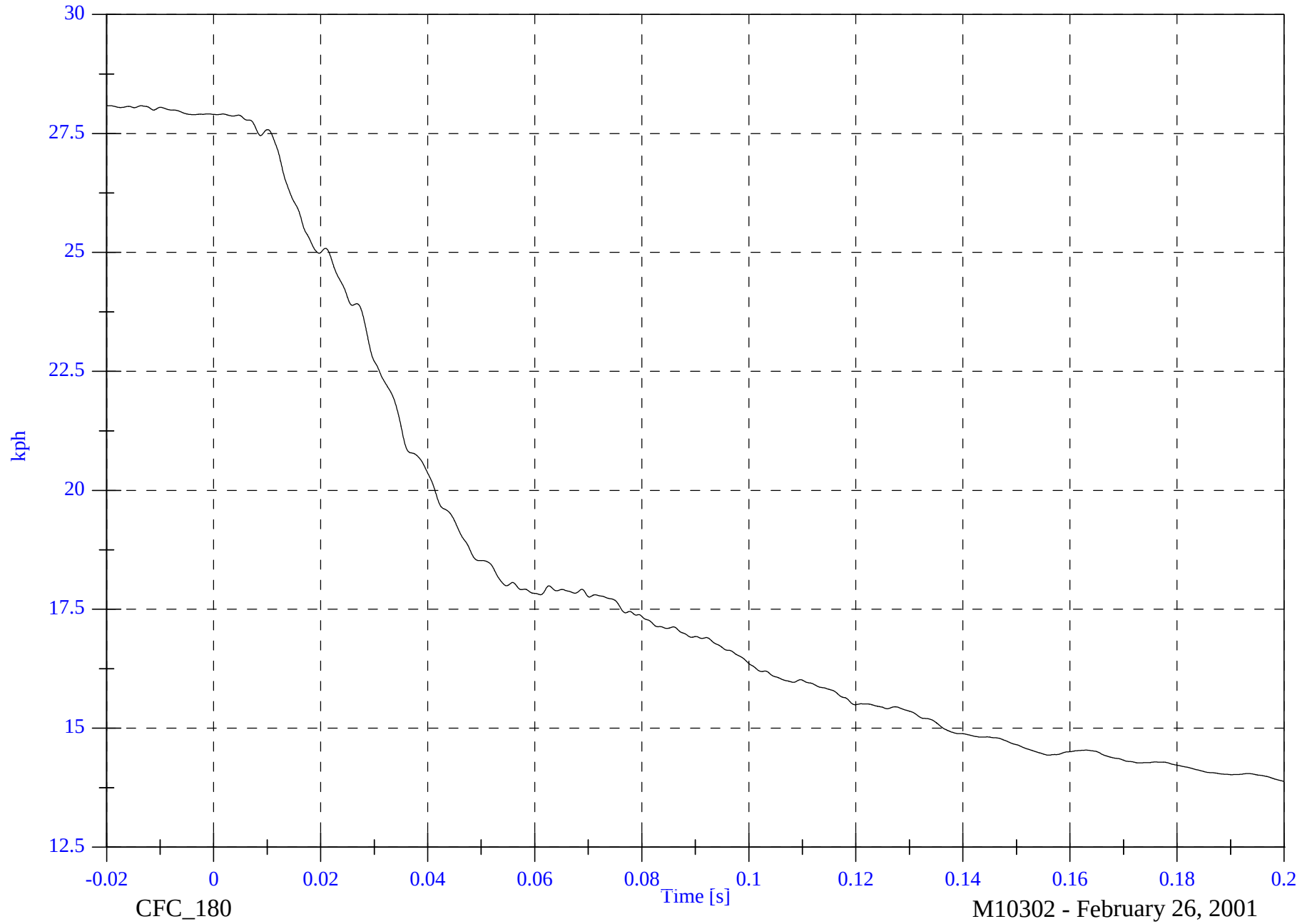


SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier CG Y Velocity

Max: 28.1 [kph] at -0.020 [s]

Min: 13.9 [kph] at 0.200 [s]



B-103

8506-17

CFC_180

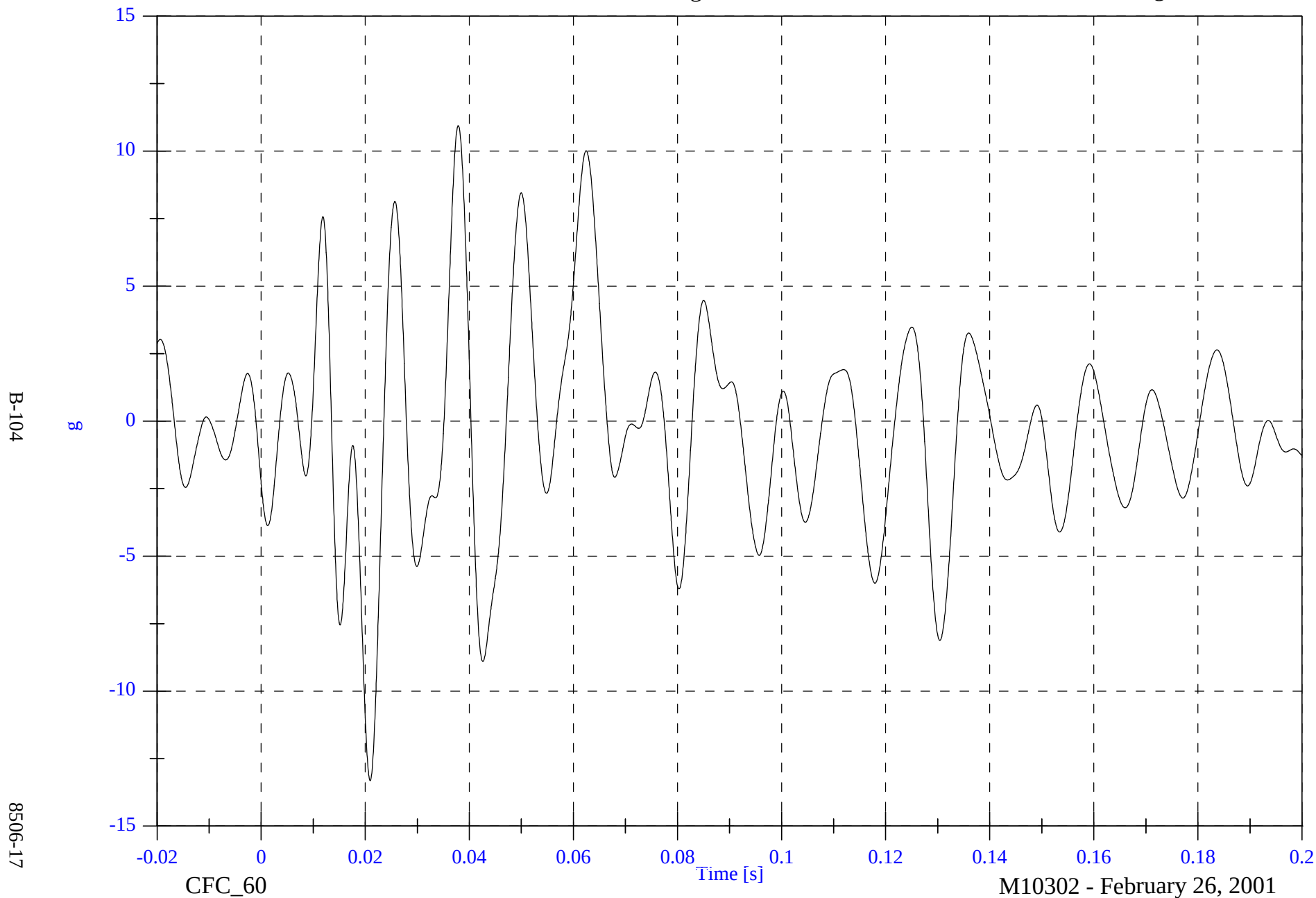
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier CG Z

Max: 10.9 [g] at 0.038 [s]

Min: -13.3 [g] at 0.021 [s]

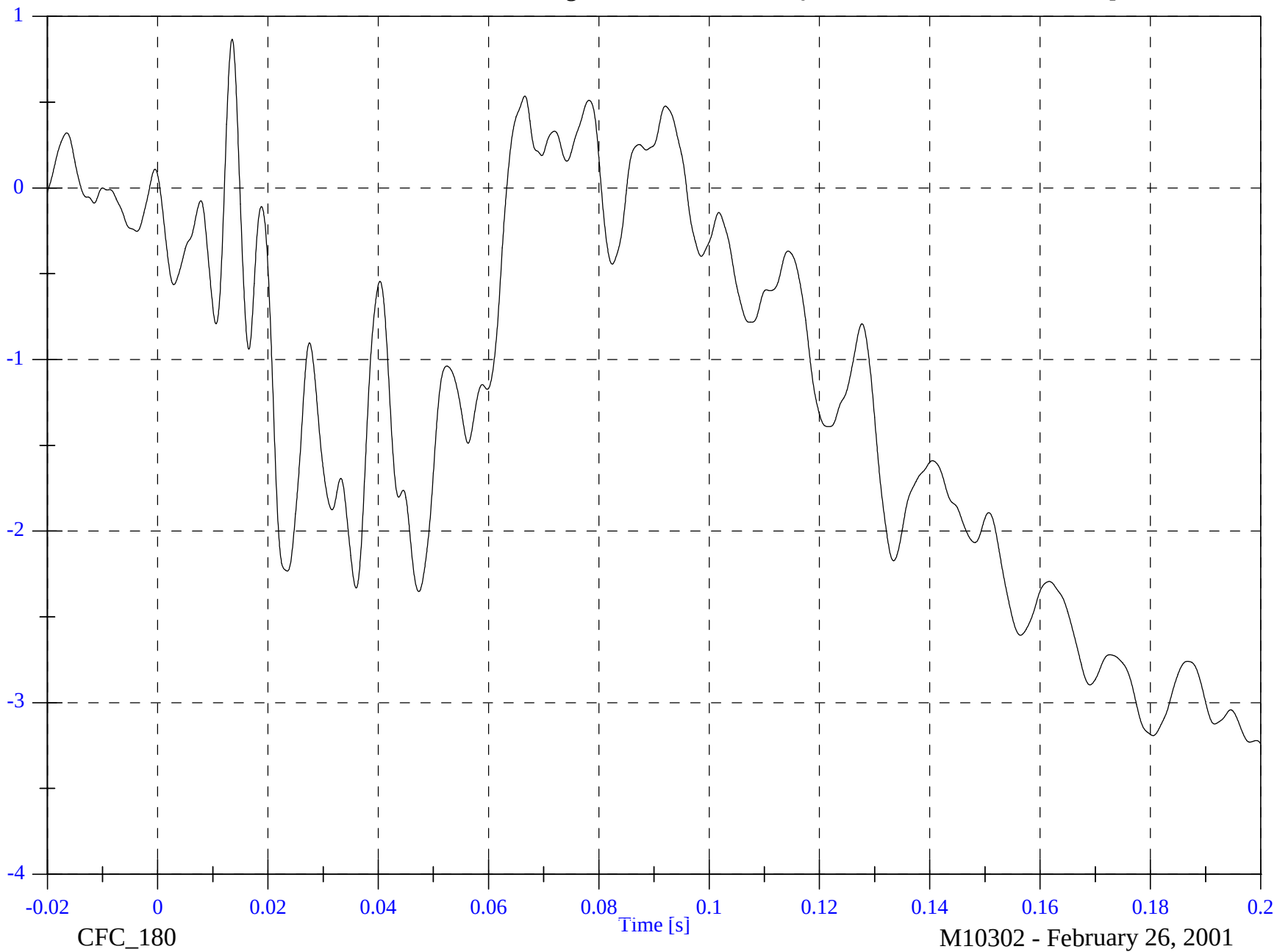


SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier CG Z Velocity

Max: 0.9 [kph] at 0.014 [s]

Min: -3.2 [kph] at 0.200 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

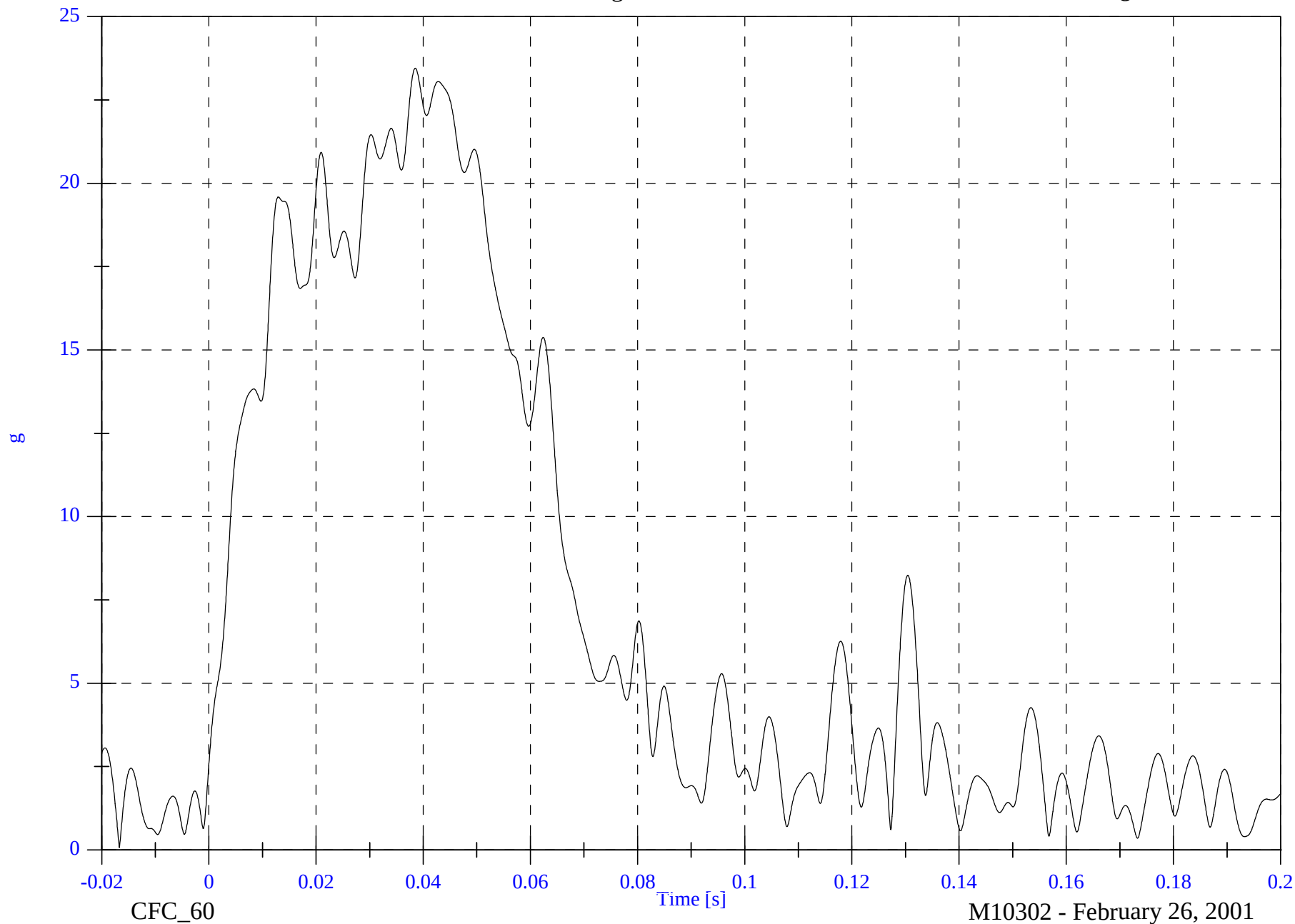
Moving Barrier CG Resultant

Max: 23.5 [g] at 0.038 [s]

Min: 0.1 [g] at -0.017 [s]

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8506-17



SNCAP Test #17 - 2001 Dodge Caravan

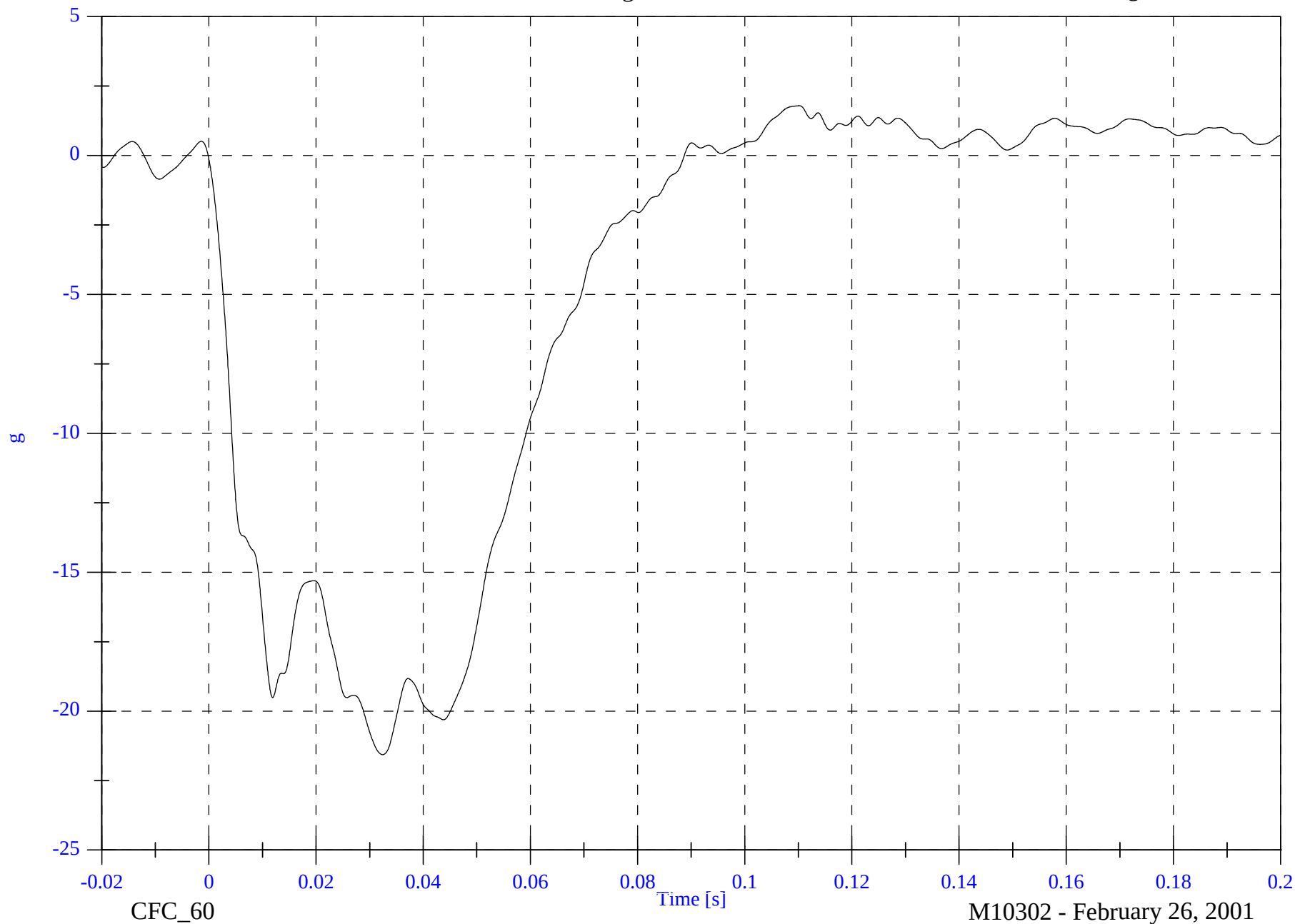
Moving Barrier Left Rail X

Max: 1.8 [g] at 0.110 [s]

Min: -21.6 [g] at 0.032 [s]

B-107

8506-17

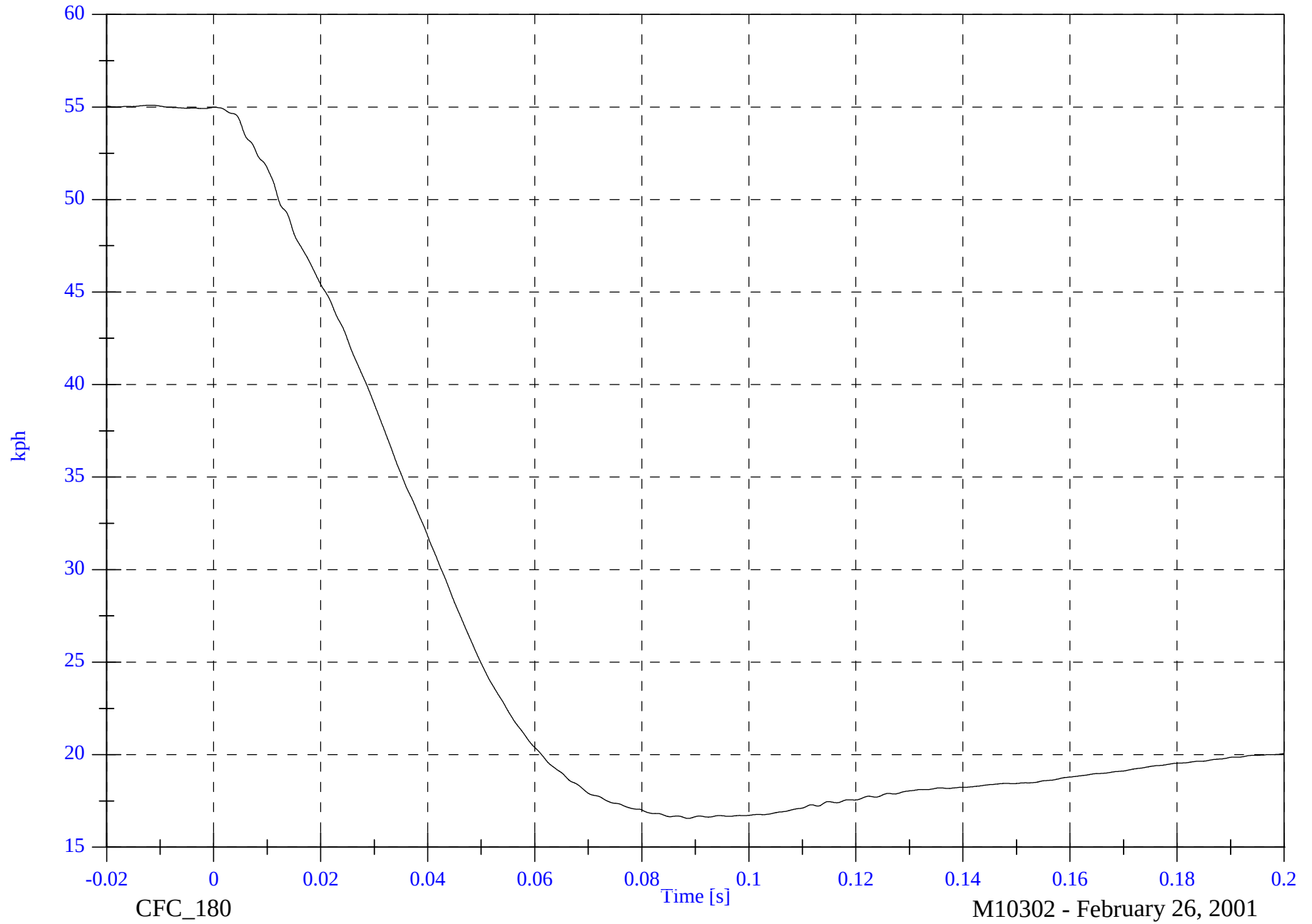


SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier Left Rail X Velocity

Max: 55.1 [kph] at -0.011 [s]

Min: 16.6 [kph] at 0.089 [s]



B-108

8506-17

CFC_180

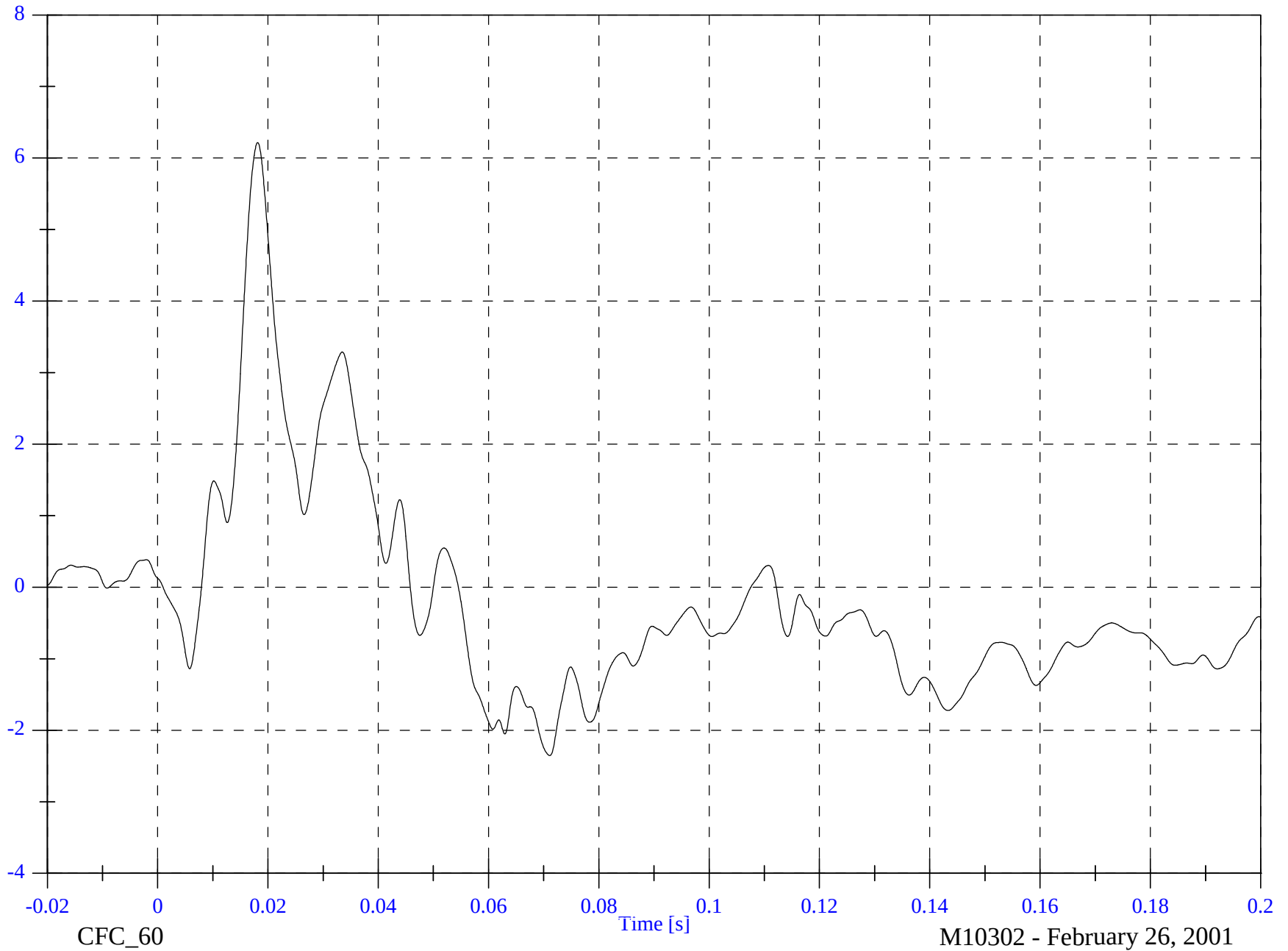
M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier Left Rail Y

Max: 6.2 [g] at 0.018 [s]

Min: -2.4 [g] at 0.071 [s]



B-109

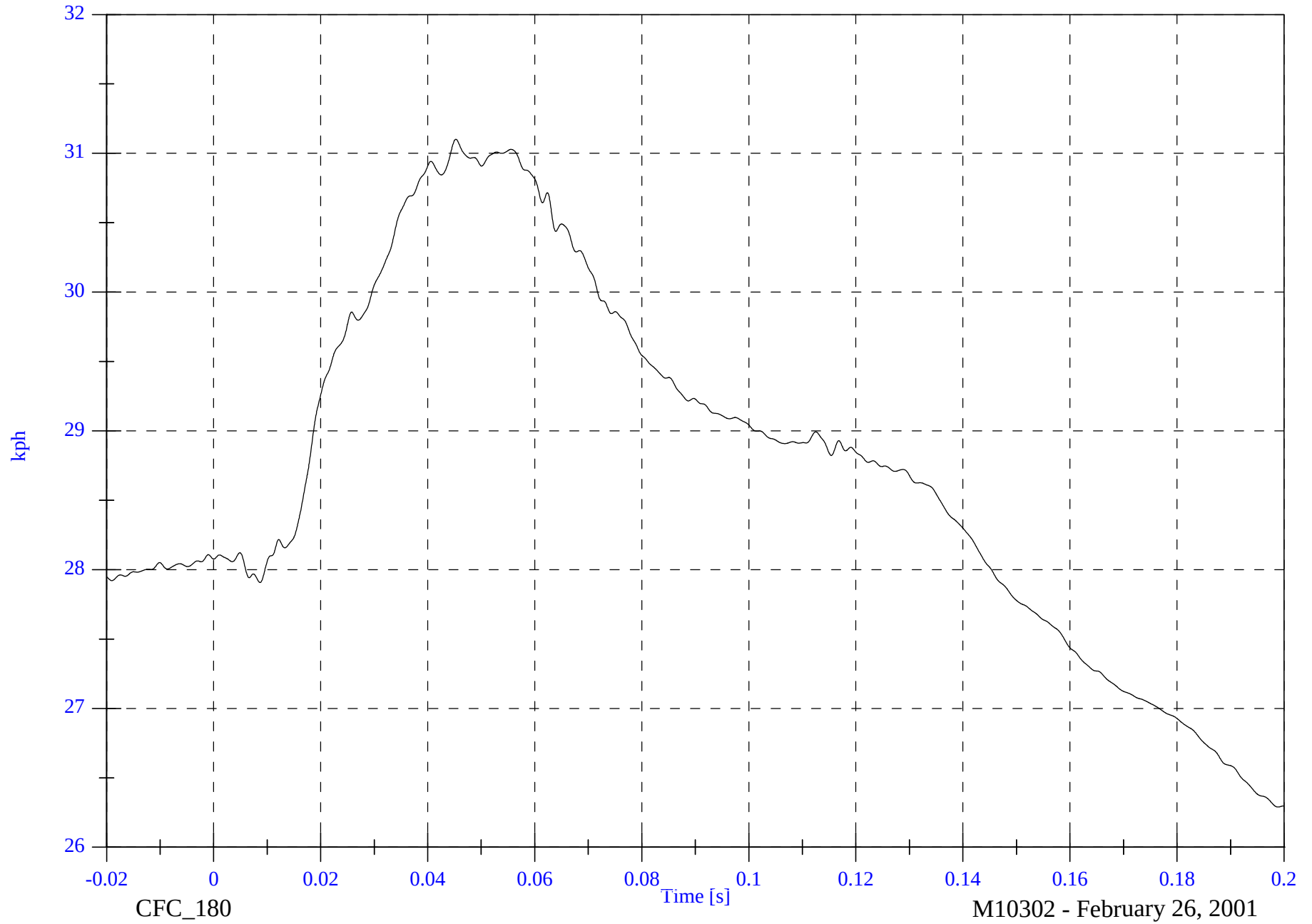
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SNCAP Test #17 - 2001 Dodge Caravan

Moving Barrier Left Rail Y Velocity

Max: 31.1 [kph] at 0.045 [s]

Min: 26.3 [kph] at 0.199 [s]



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CFC_180

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SNCAP Test #17 - 2001 Dodge Caravan

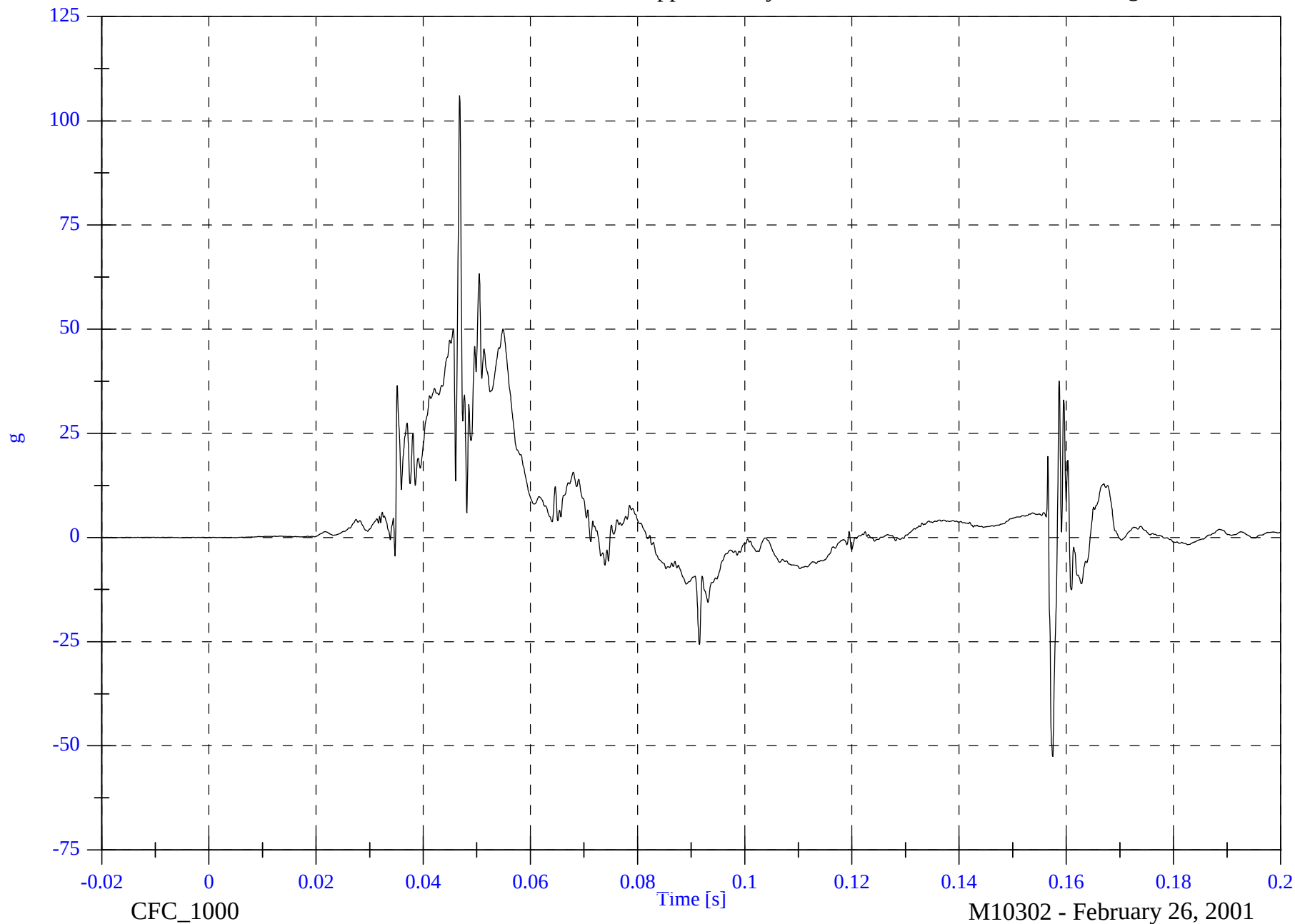
P1 Upper Rib Ry

Max: 106.1 [g] at 0.047 [s]

Min: -52.6 [g] at 0.158 [s]

B-111

8506-17

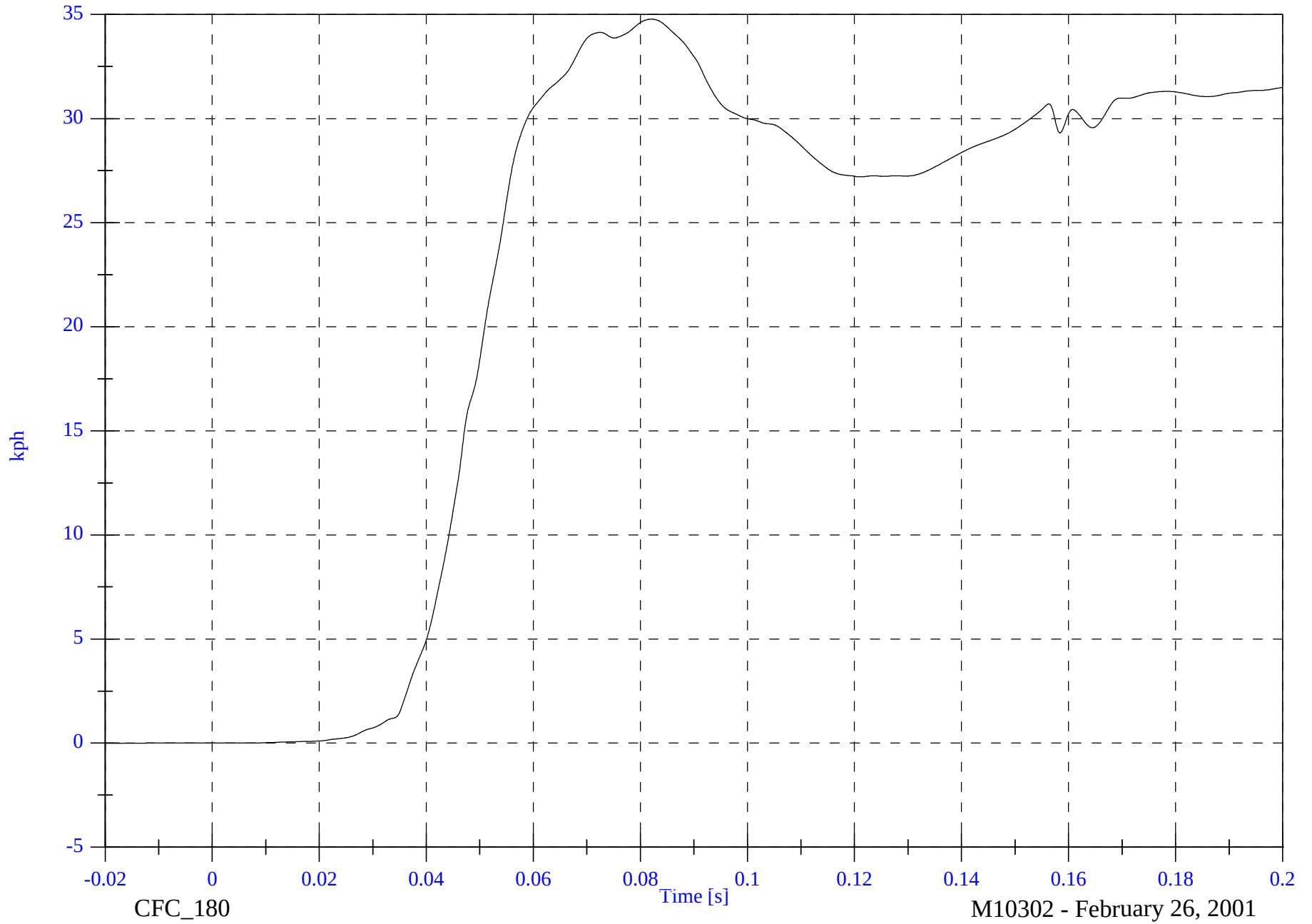


SNCAP Test #17 - 2001 Dodge Caravan

P1 Upper Rib Ry Velocity

Max: 34.8 [kph] at 0.082 [s]

Min: -0.0 [kph] at -0.016 [s]



B-112

8506-17

CFC_180

M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

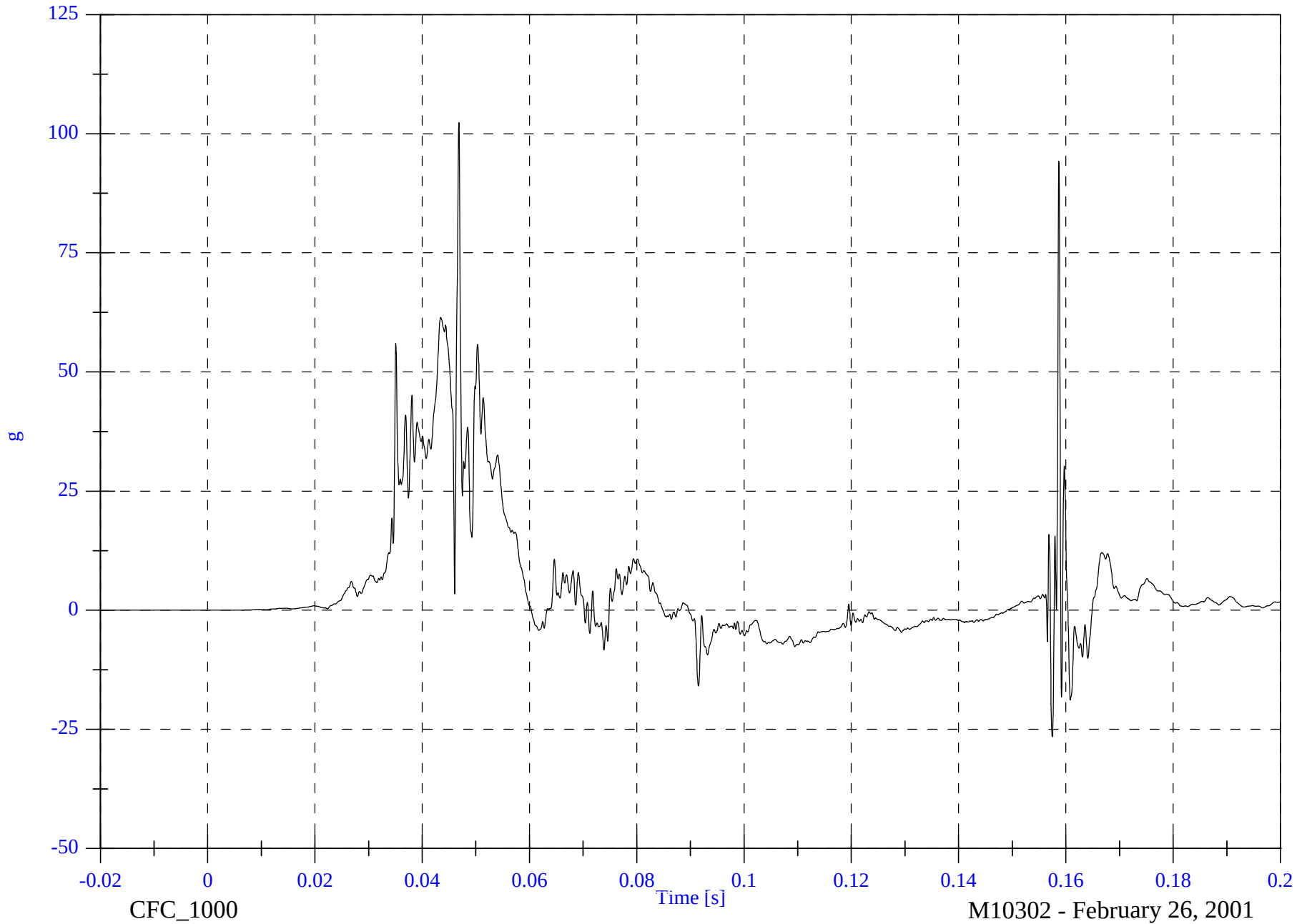
P1 Lower Rib Ry

Max: 102.3 [g] at 0.047 [s]

Min: -26.5 [g] at 0.158 [s]

B-113

8506-17

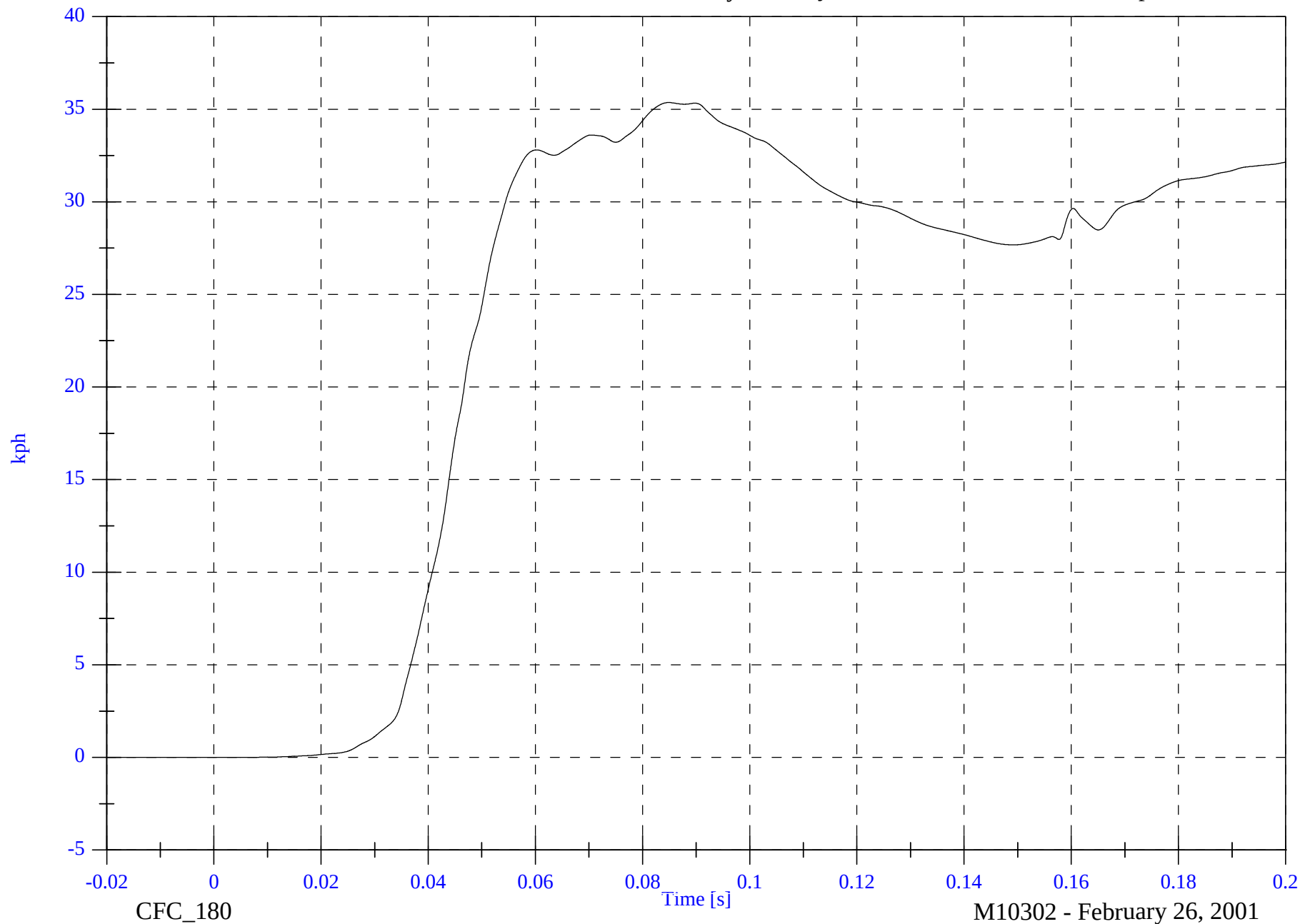


SNCAP Test #17 - 2001 Dodge Caravan

P1 Lower Rib Ry Velocity

Max: 35.4 [kph] at 0.085 [s]

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



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SNCAP Test #17 - 2001 Dodge Caravan

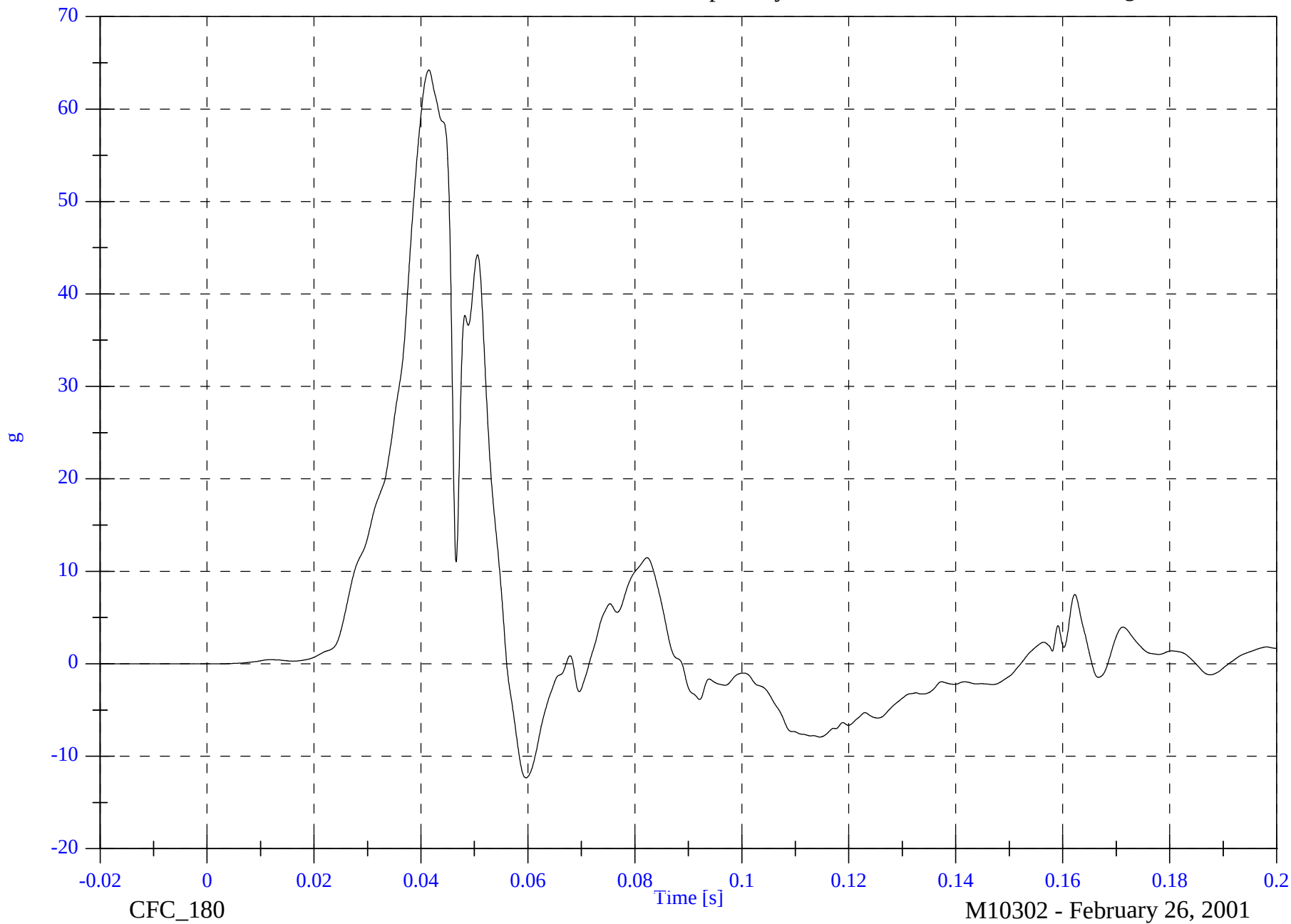
P1 Lower Spine Ry

Max: 64.2 [g] at 0.042 [s]

Min: -12.3 [g] at 0.060 [s]

B-115

8506-17

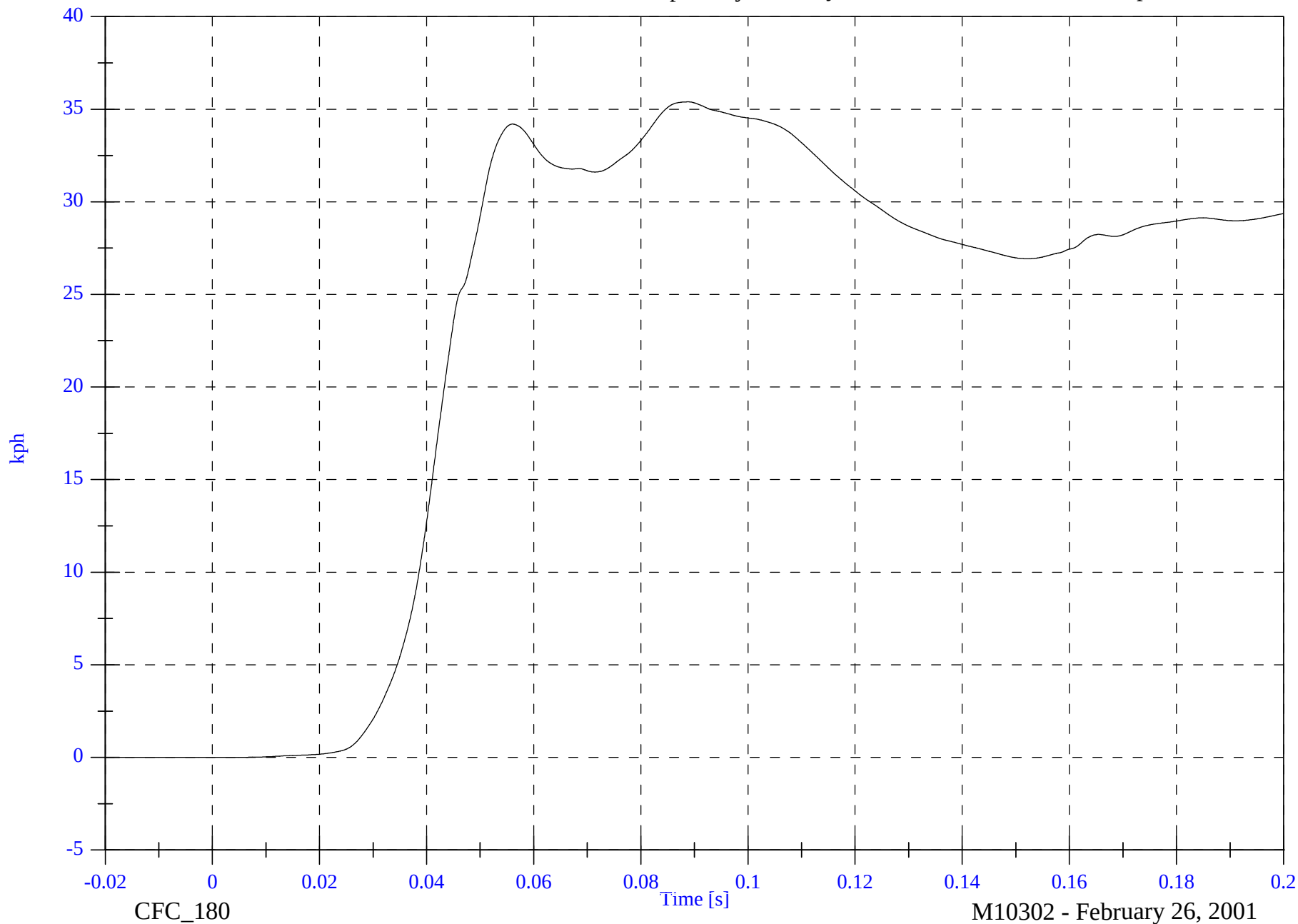


SNCAP Test #17 - 2001 Dodge Caravan

P1 Lower Spine Ry Velocity

Max: 35.4 [kph] at 0.089 [s]

Min: -0.0 [kph] at -0.016 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

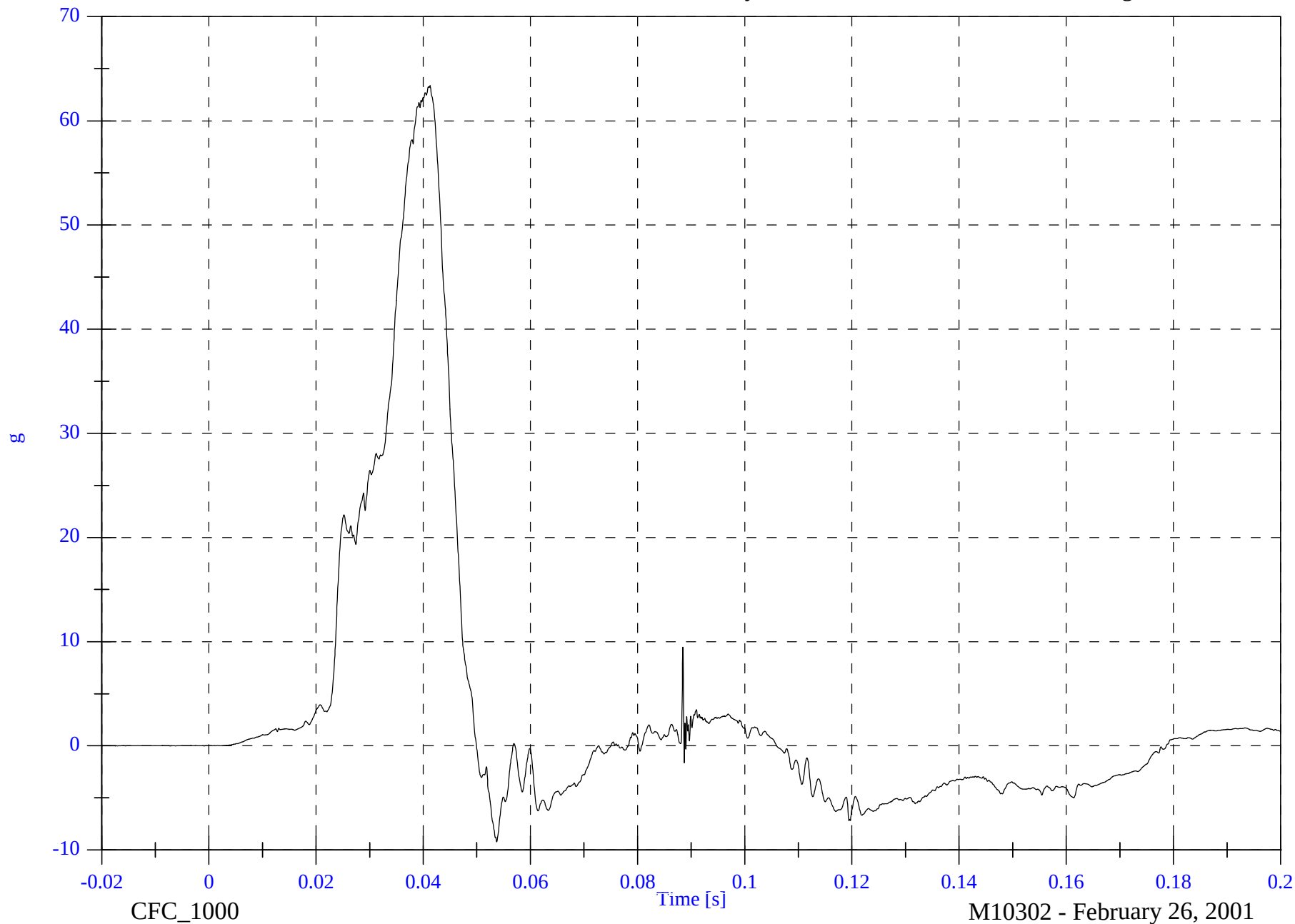
P1 Pelvic Ry

Max: 63.4 [g] at 0.041 [s]

Min: -9.2 [g] at 0.054 [s]

B-117

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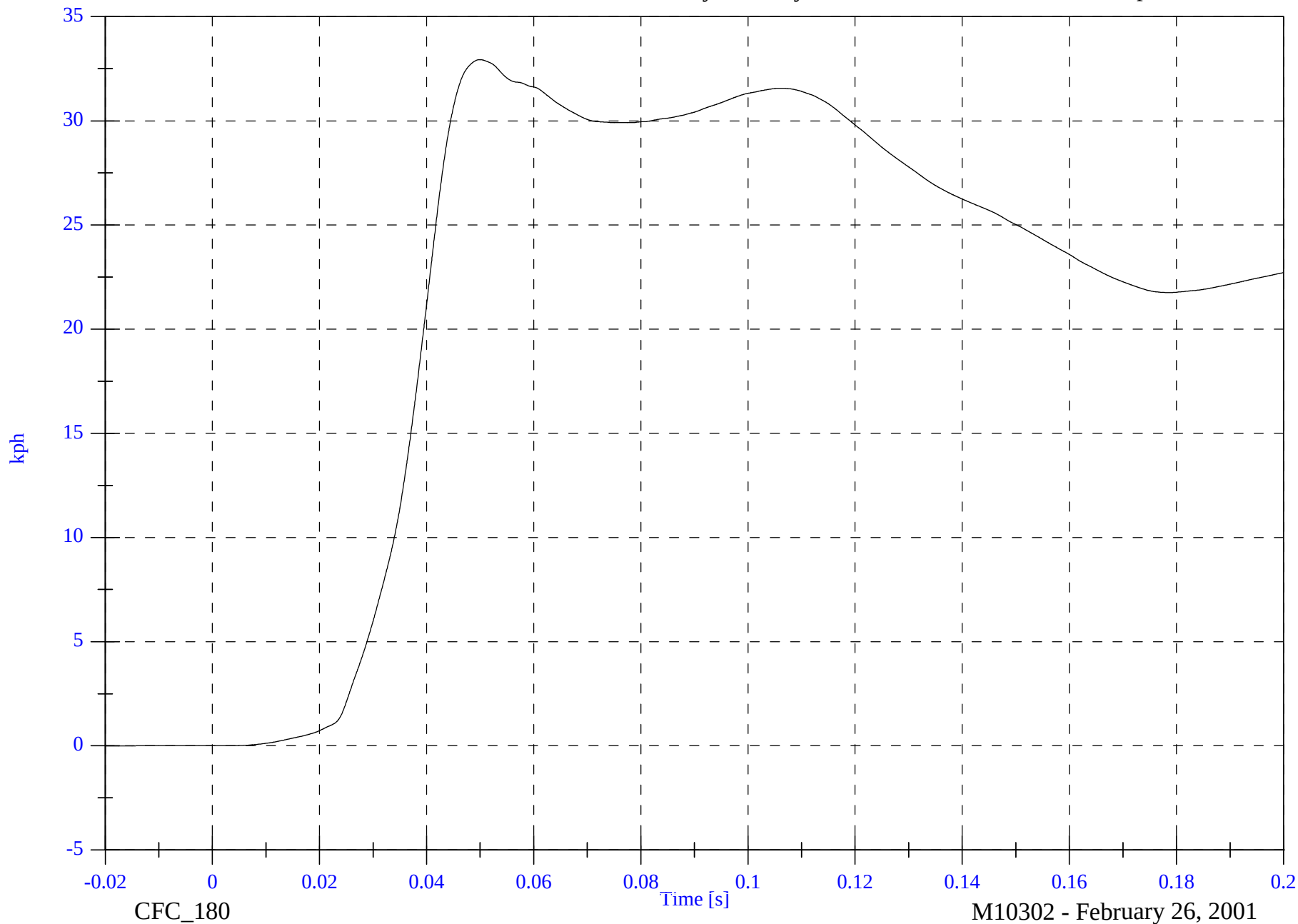


SNCAP Test #17 - 2001 Dodge Caravan

P1 Pelvic Ry Velocity

Max: 32.9 [kph] at 0.050 [s]

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



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SNCAP Test #17 - 2001 Dodge Caravan

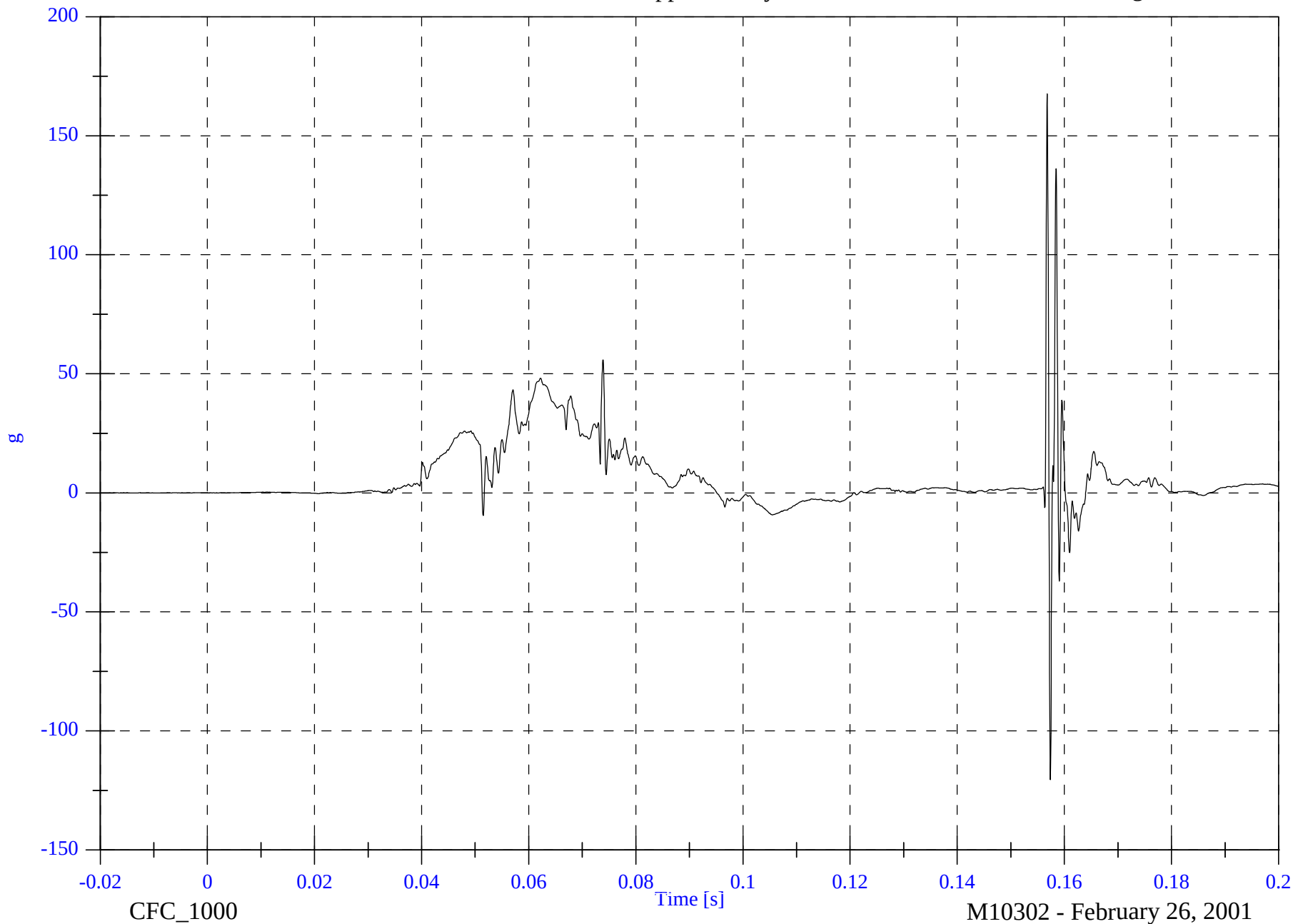
P4 Upper Rib Ry

Max: 167.5 [g] at 0.157 [s]

Min: -120.6 [g] at 0.157 [s]

B-119

8506-17

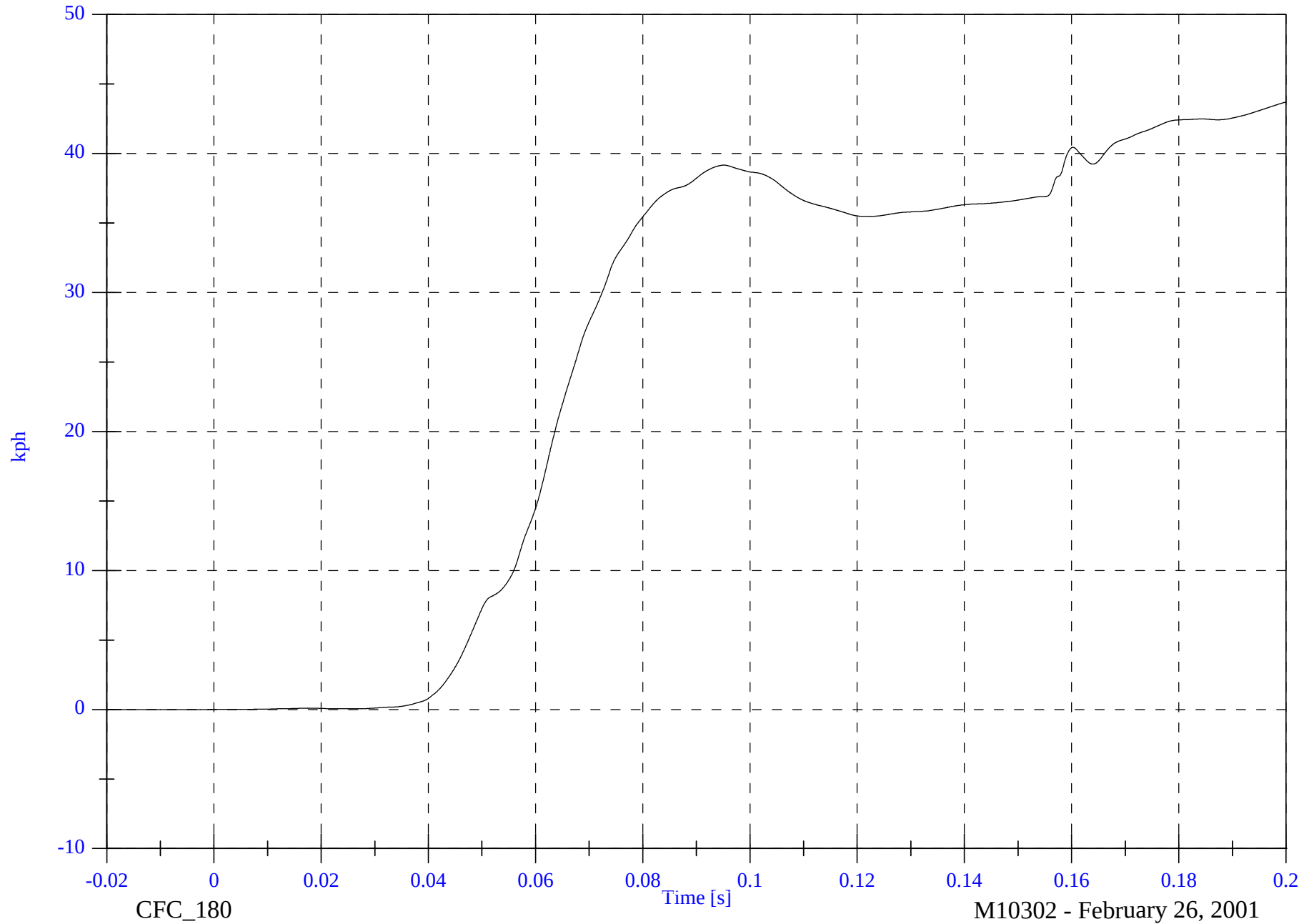


SNCAP Test #17 - 2001 Dodge Caravan

P4 Upper Rib Ry Velocity

Max: 43.7 [kph] at 0.200 [s]

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



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CFC_180

M10302 - February 26, 2001

SNCAP Test #17 - 2001 Dodge Caravan

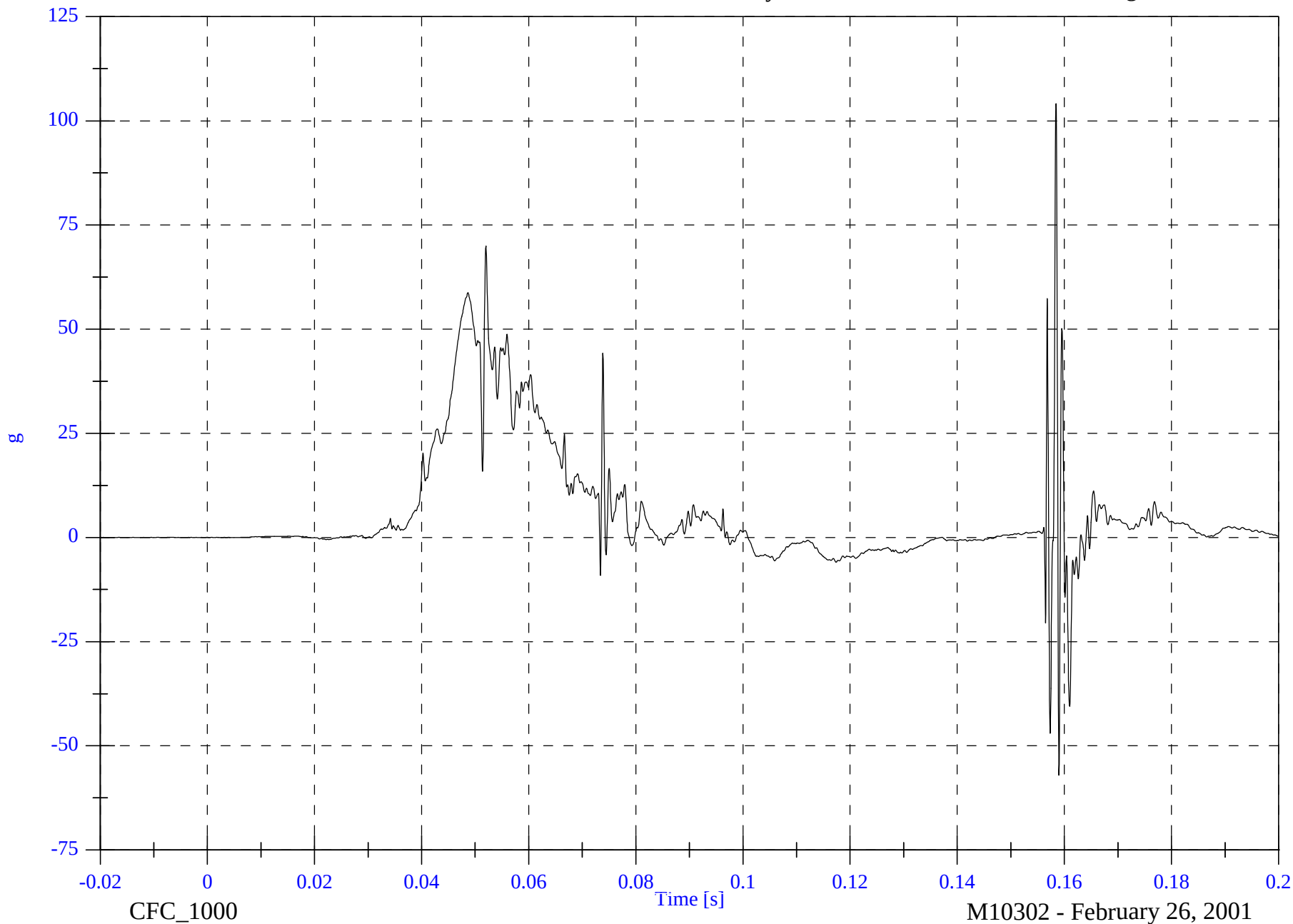
P4 Lower Rib Ry

Max: 104.2 [g] at 0.158 [s]

Min: -57.1 [g] at 0.159 [s]

B-121

8506-17

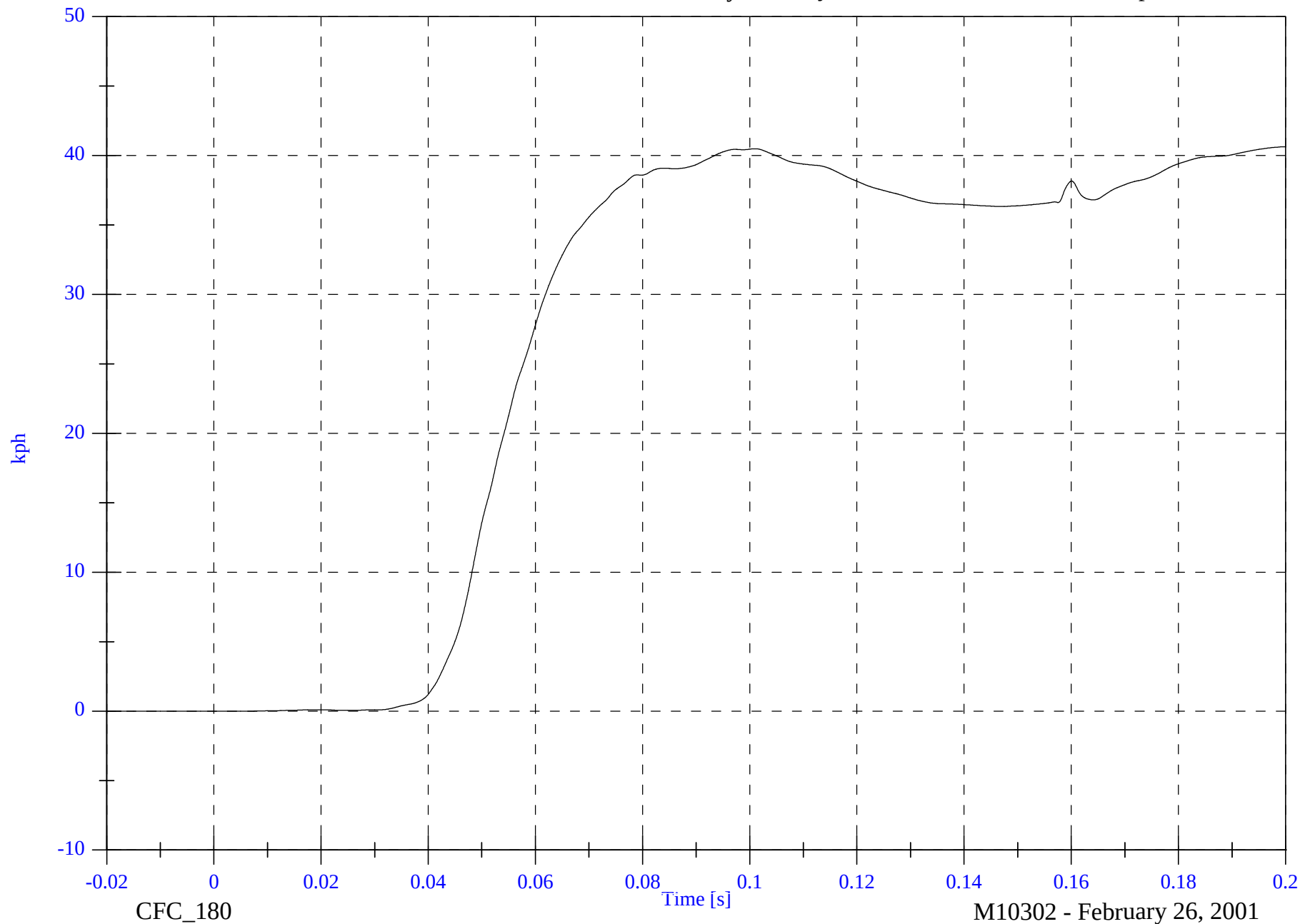


SNCAP Test #17 - 2001 Dodge Caravan

P4 Lower Rib Ry Velocity

Max: 40.6 [kph] at 0.200 [s]

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



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SNCAP Test #17 - 2001 Dodge Caravan

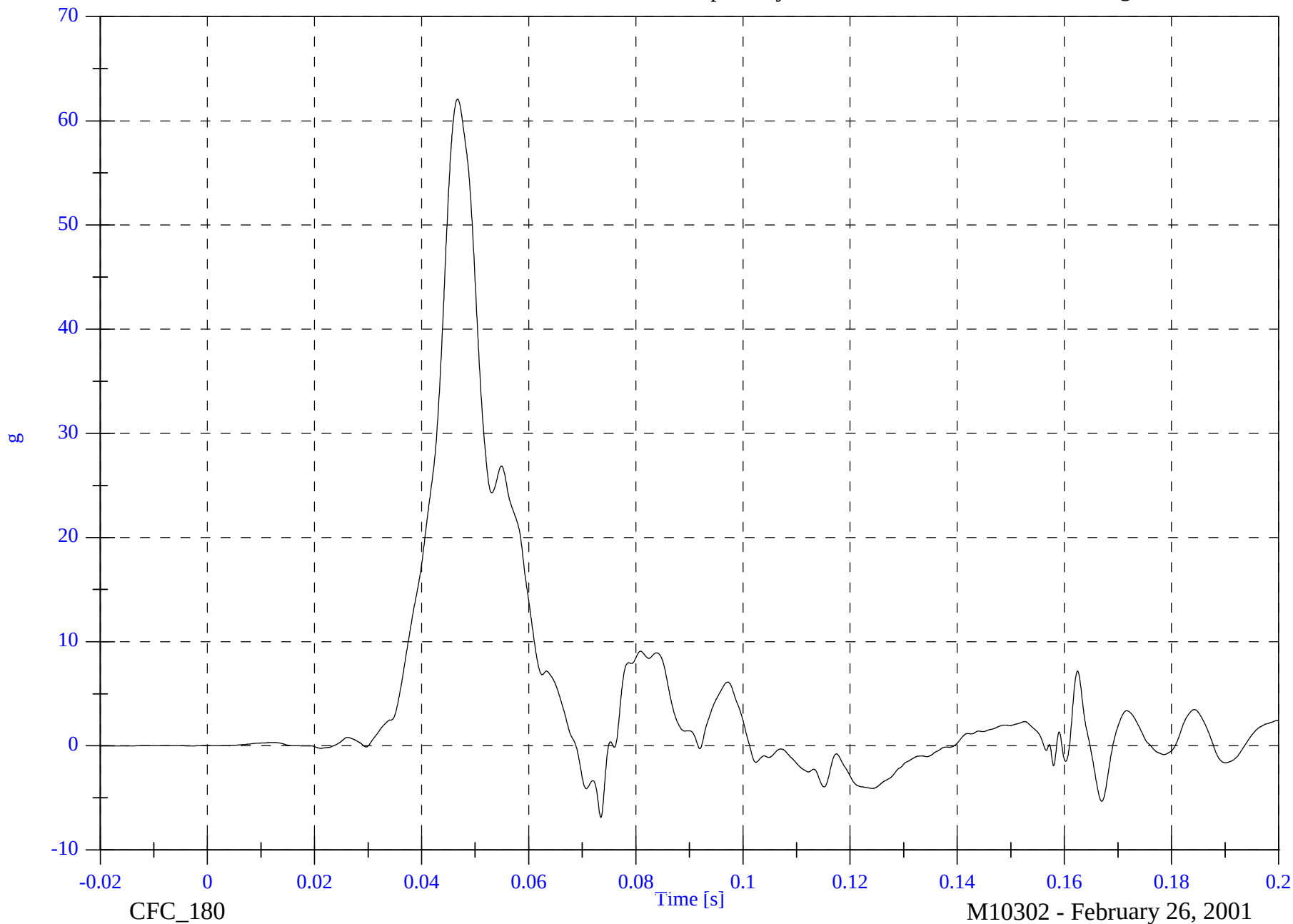
P4 Lower Spine Ry

Max: 62.1 [g] at 0.047 [s]

Min: -6.9 [g] at 0.073 [s]

B-123

8506-17

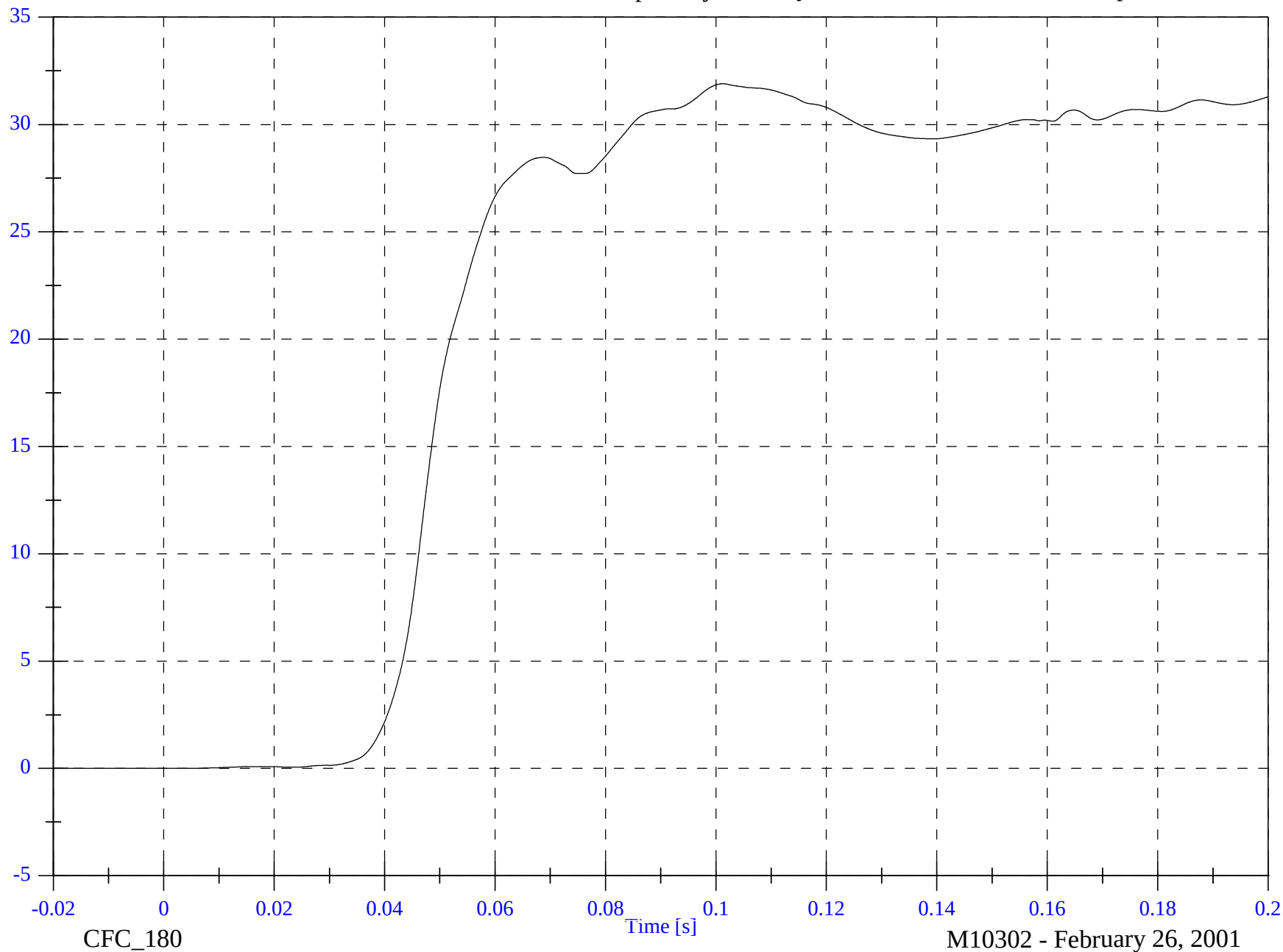


SNCAP Test #17 - 2001 Dodge Caravan

P4 Lower Spine Ry Velocity

Max: 31.9 [kph] at 0.101 [s]

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



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SNCAP Test #17 - 2001 Dodge Caravan

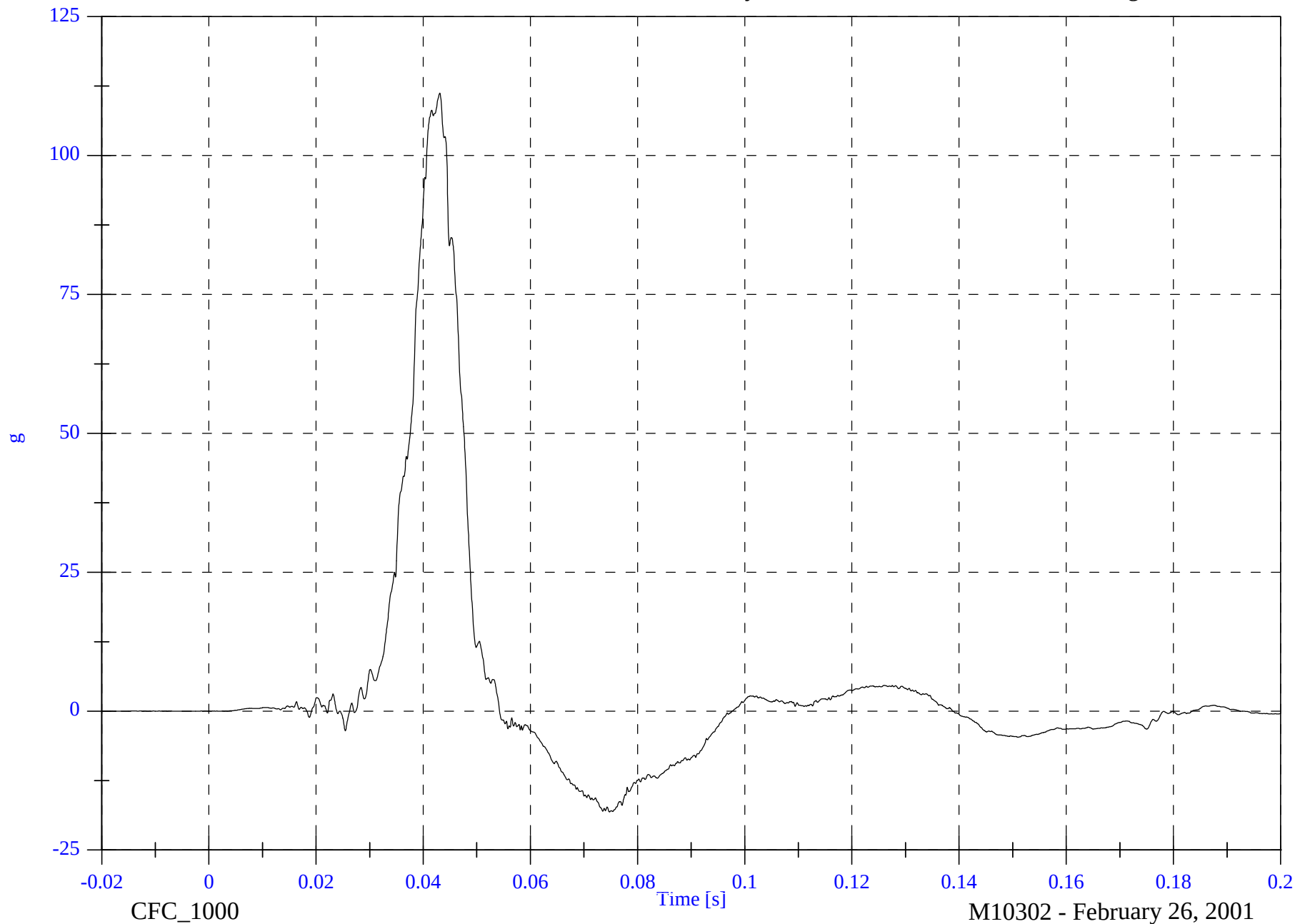
P4 Pelvic Ry

Max: 111.3 [g] at 0.043 [s]

Min: -18.2 [g] at 0.075 [s]

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8506-17

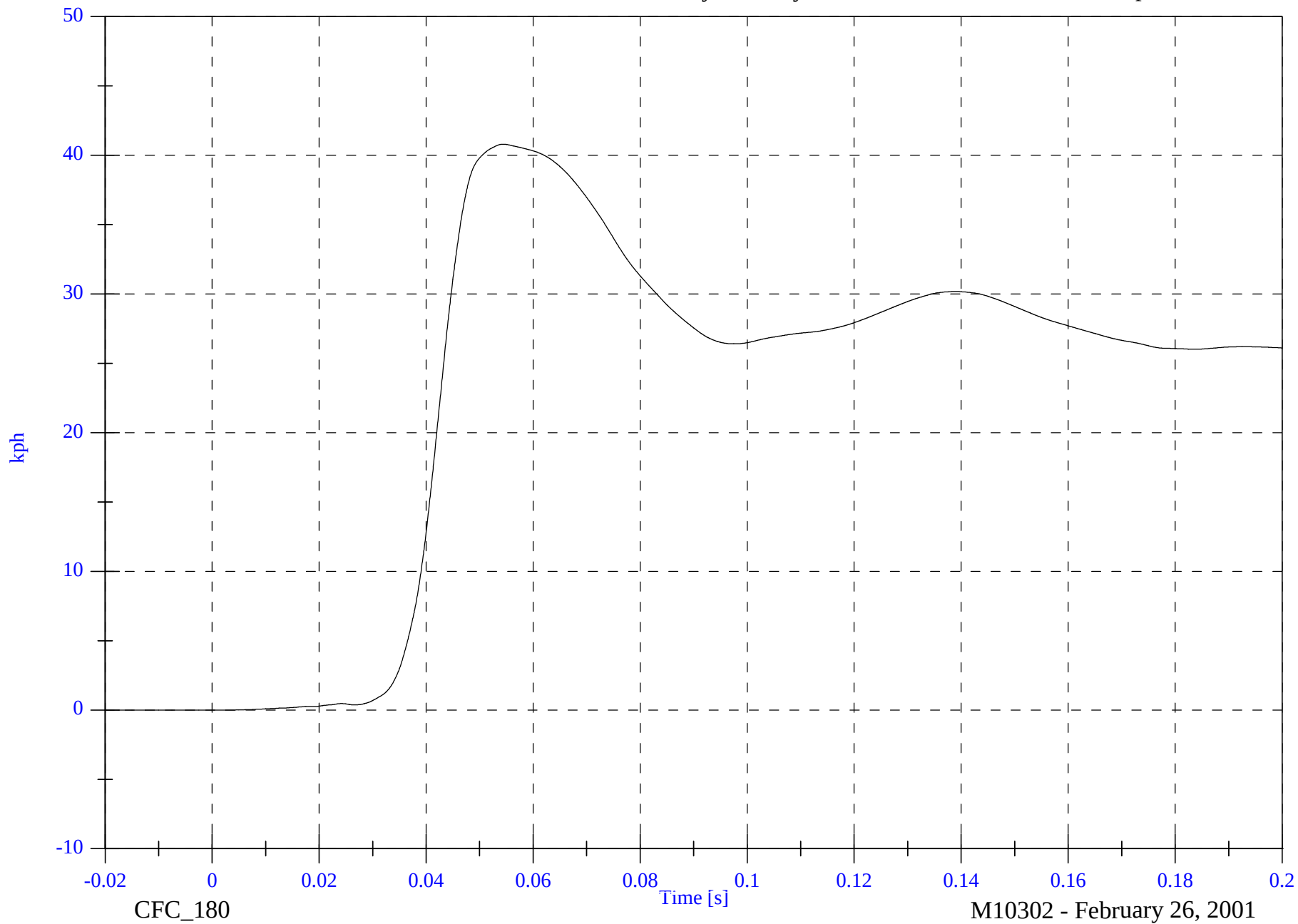


SNCAP Test #17 - 2001 Dodge Caravan

P4 Pelvic Ry Velocity

Max: 40.8 [kph] at 0.054 [s]

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



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SNCAP Test #17 - 2001 Dodge Caravan

P1 Upper Rib Ry

Max: 46.3 [g] at 0.046 [s]

Min: -14.4 [g] at 0.093 [s]



SNCAP Test #17 - 2001 Dodge Caravan

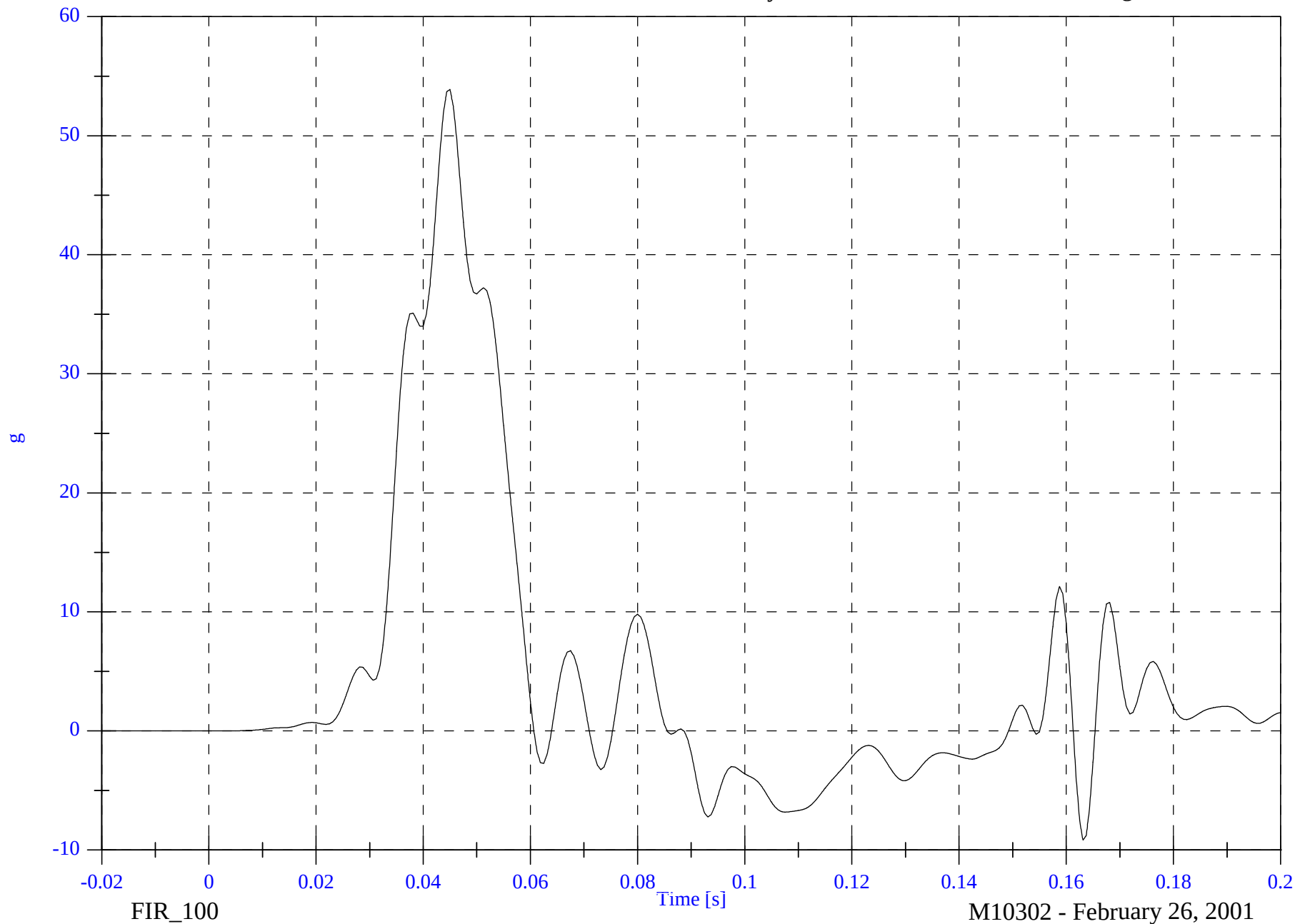
P1 Lower Rib Ry

Max: 53.9 [g] at 0.045 [s]

Min: -9.2 [g] at 0.163 [s]

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8506-17

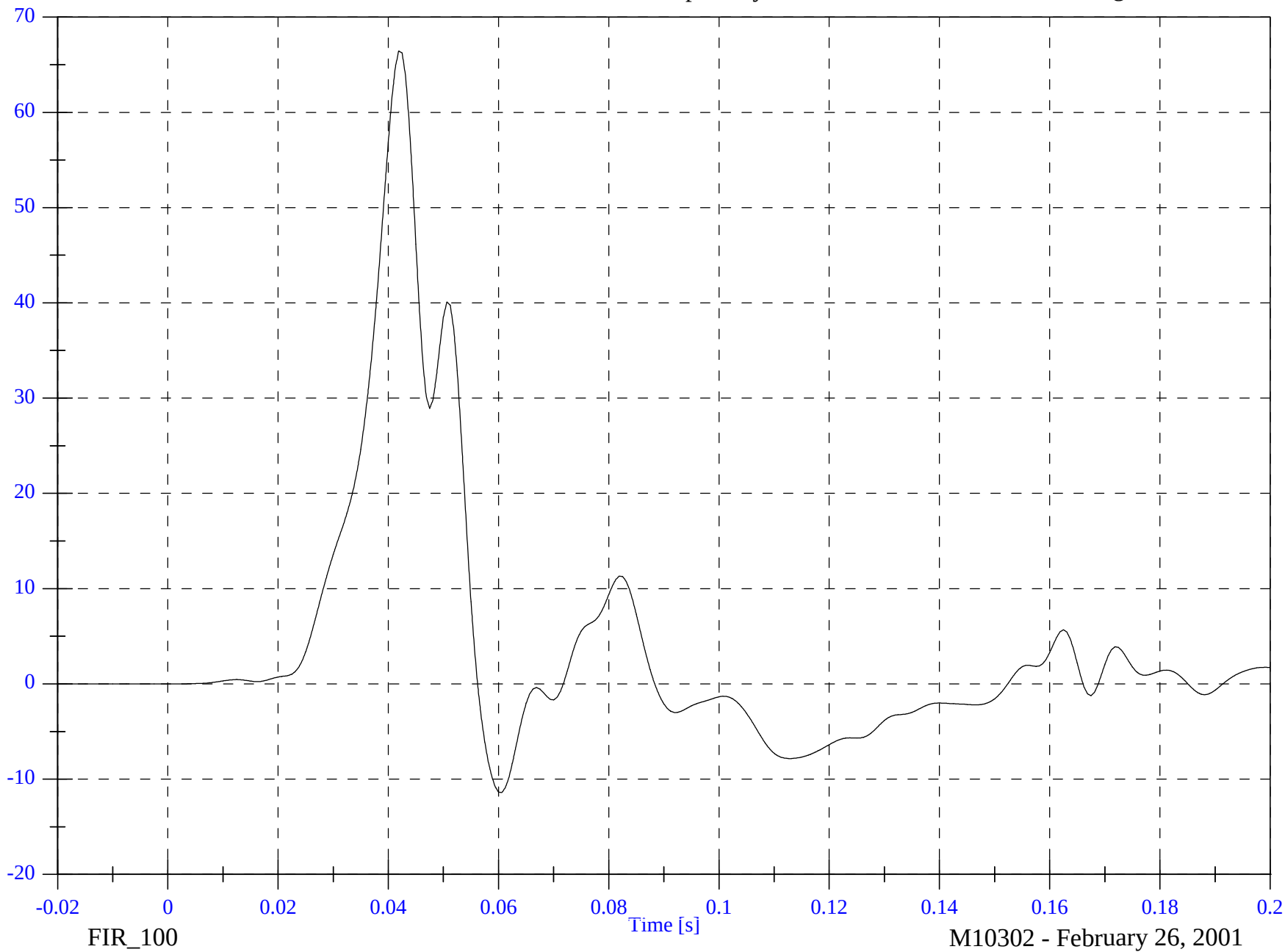


SNCAP Test #17 - 2001 Dodge Caravan

P1 Lower Spine Ry

Max: 66.4 [g] at 0.042 [s]

Min: -11.4 [g] at 0.061 [s]



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SNCAP Test #17 - 2001 Dodge Caravan

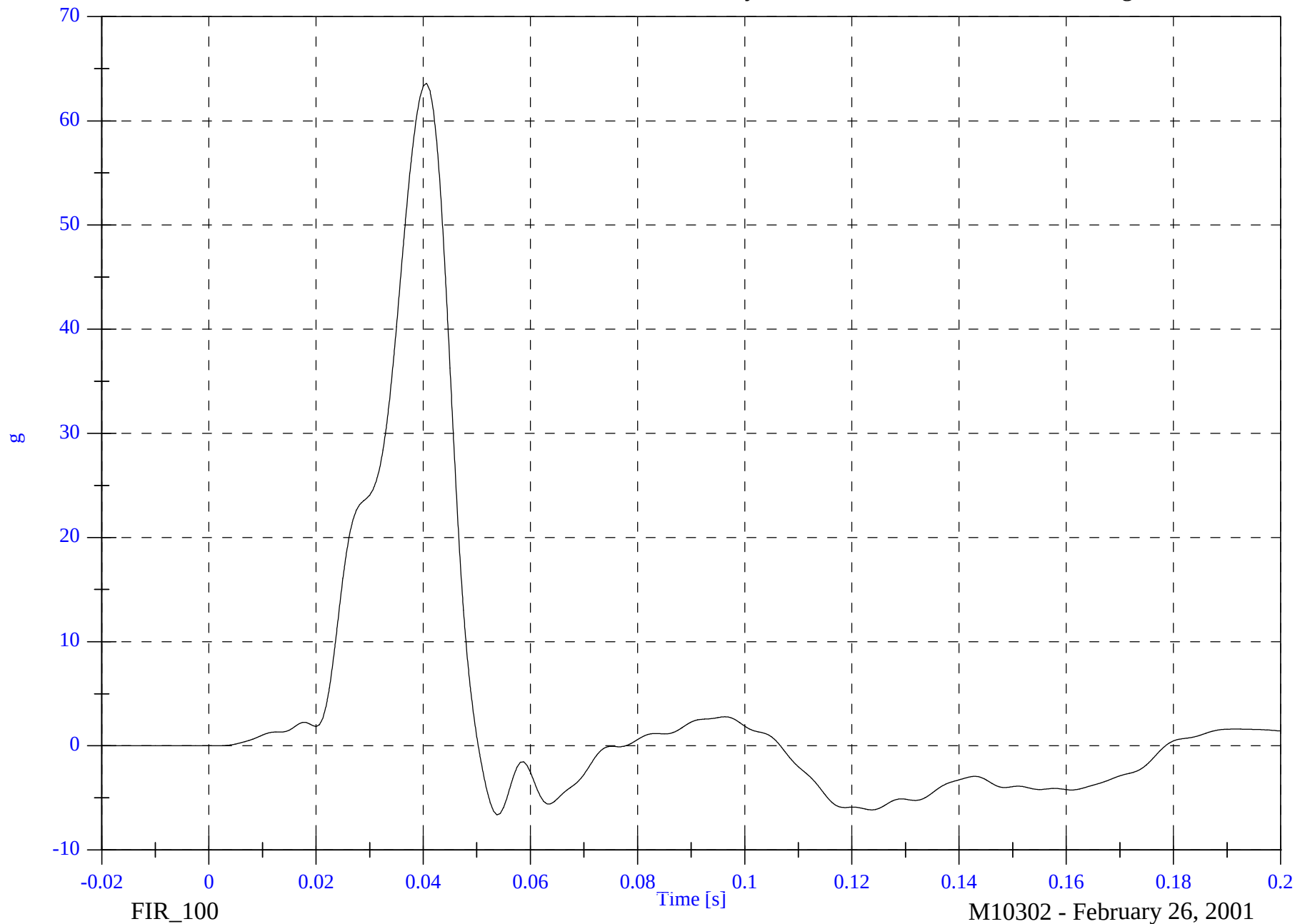
P1 Pelvic Ry

Max: 63.6 [g] at 0.041 [s]

Min: -6.6 [g] at 0.054 [s]

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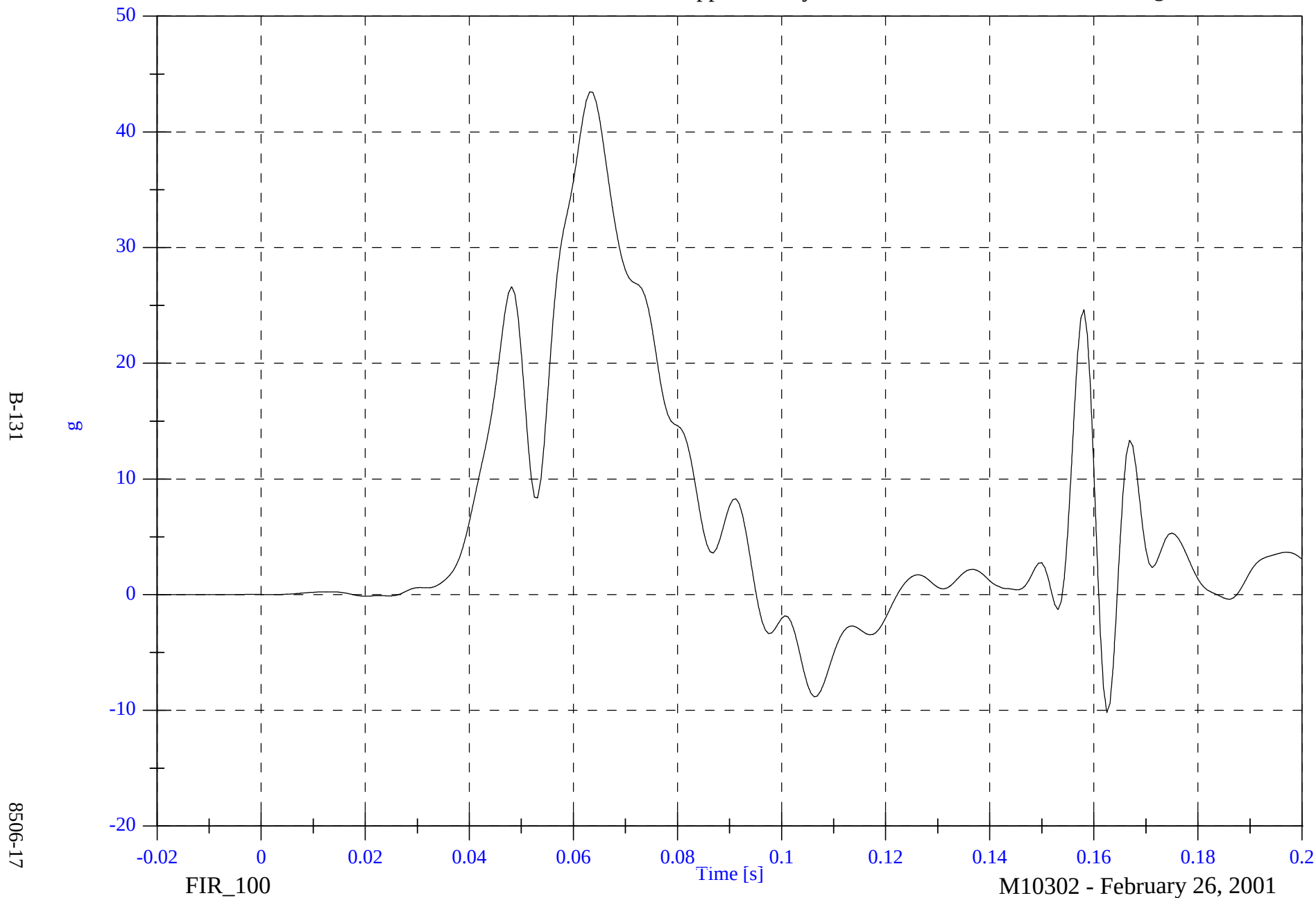


SNCAP Test #17 - 2001 Dodge Caravan

P4 Upper Rib Ry

Max: 43.5 [g] at 0.063 [s]

Min: -10.2 [g] at 0.162 [s]



SNCAP Test #17 - 2001 Dodge Caravan

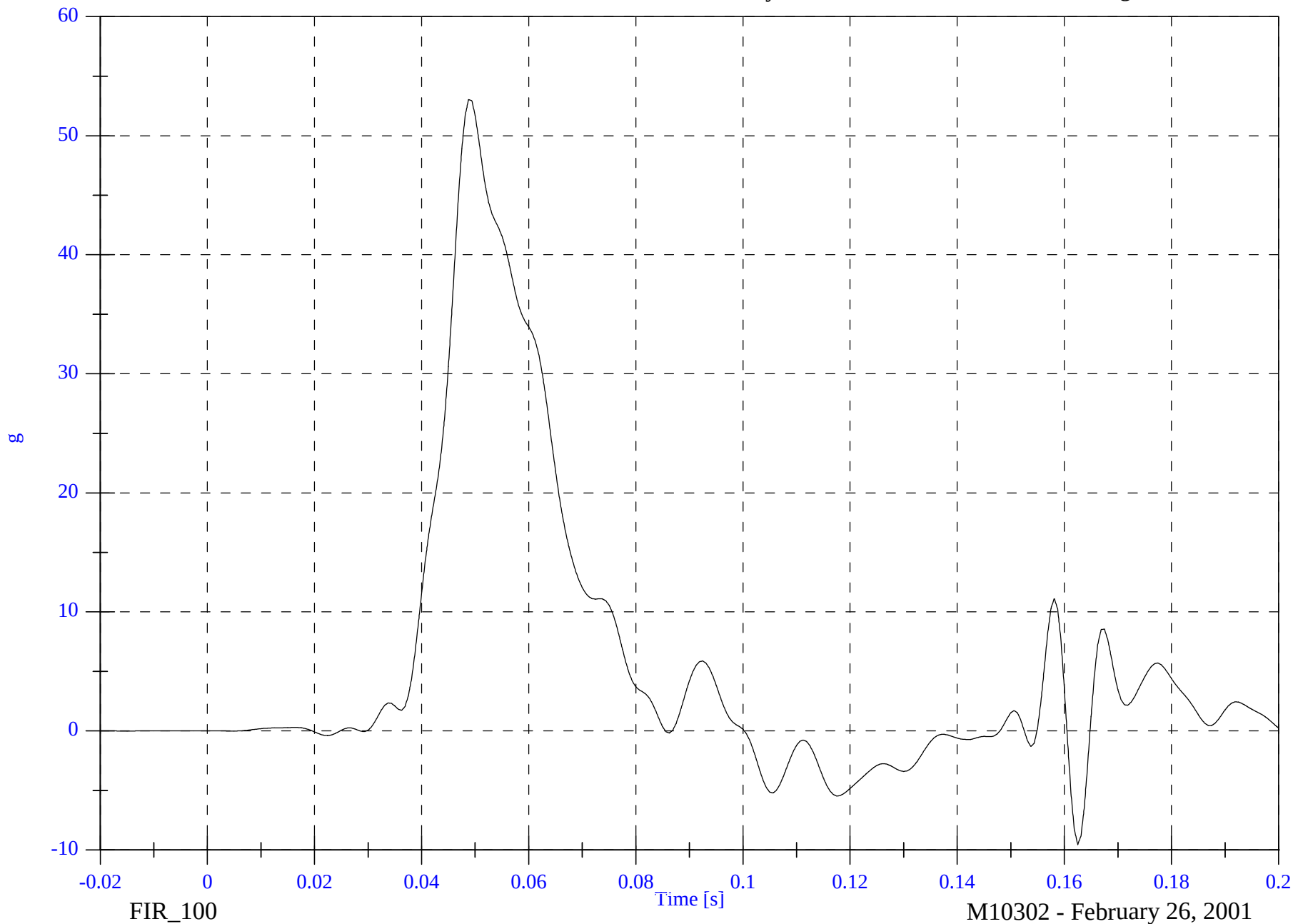
P4 Lower Rib Ry

Max: 53.0 [g] at 0.049 [s]

Min: -9.6 [g] at 0.162 [s]

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SNCAP Test #17 - 2001 Dodge Caravan

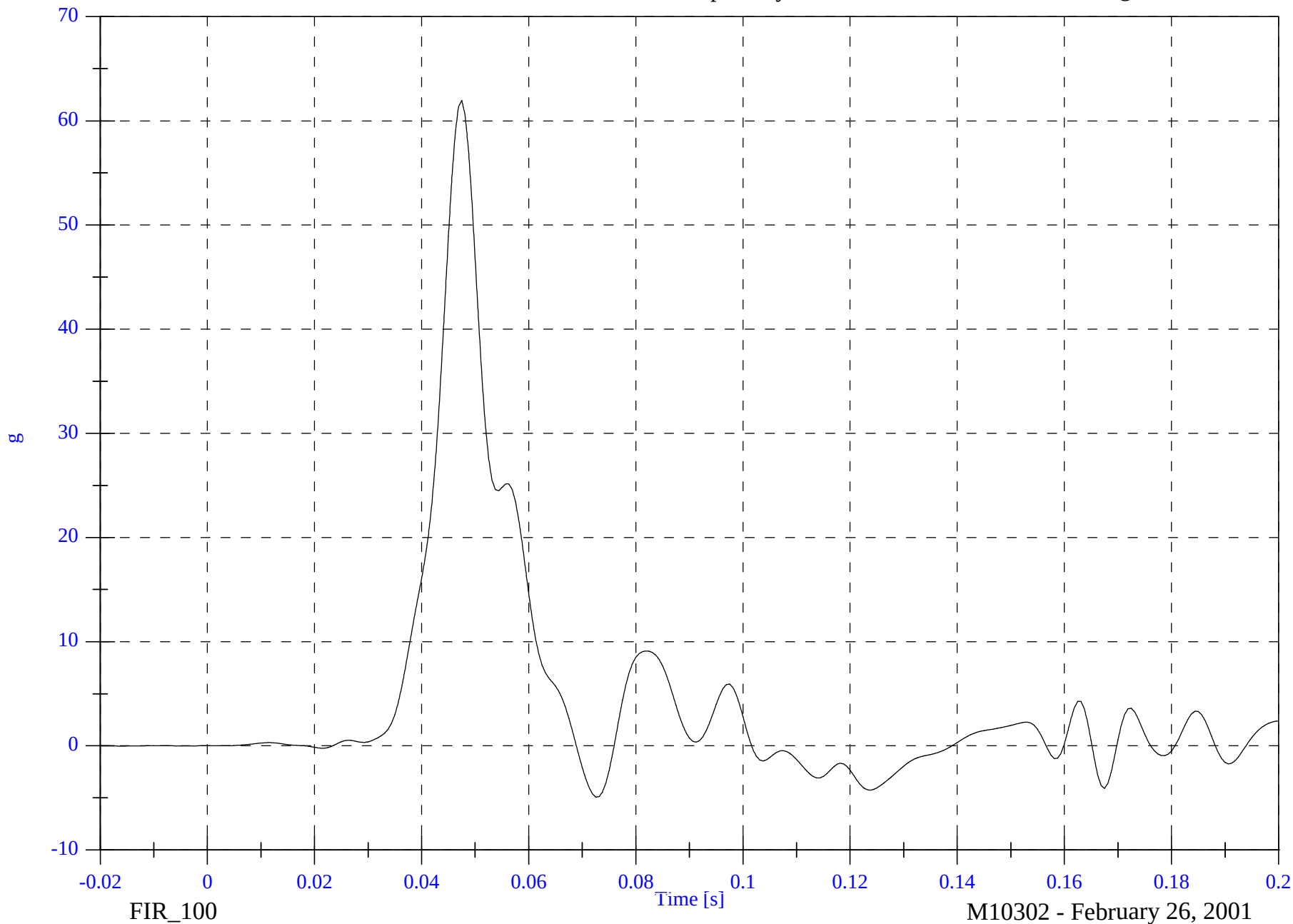
P4 Lower Spine Ry

Max: 62.0 [g] at 0.047 [s]

Min: -4.9 [g] at 0.072 [s]

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SNCAP Test #17 - 2001 Dodge Caravan

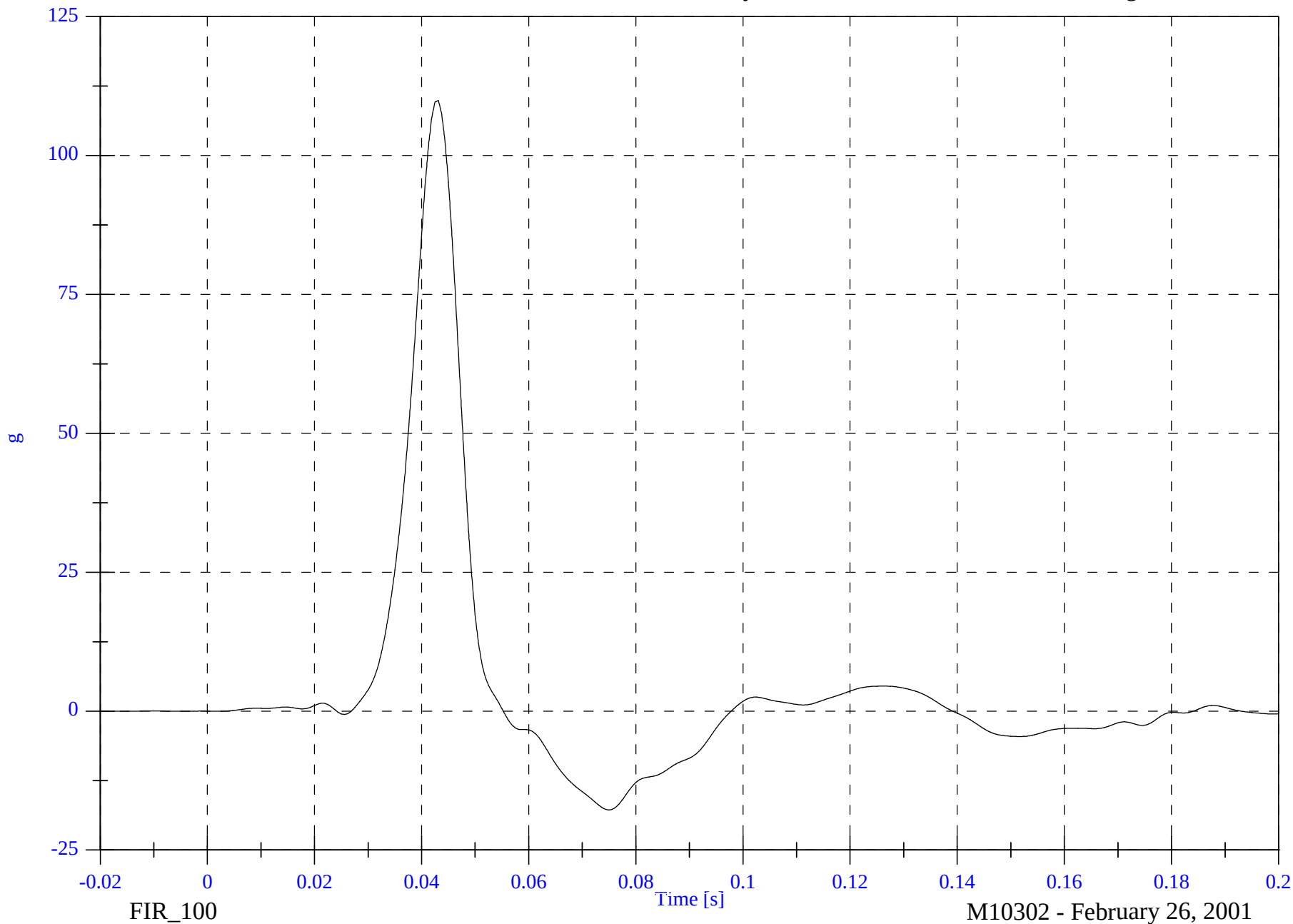
P4 Pelvic Ry

Max: 109.9 [g] at 0.043 [s]

Min: -17.8 [g] at 0.075 [s]

B-134

8506-17



APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID PRE & POST TEST CALIBRATION

CONFIGURED FOR LEFT SIDE IMPACT

Date: February 15, 2001; March 1, 2001 Sequential Test Number: 1,2; 3,4
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID NO.: 013		SID NO.: 268	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	900	899	899	899
RH- Rib Height (mm)	501 - 521	511	511	513	513
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	495	495
HW- Hip Width (mm)	356 - 391	376	377	378	380
THORAX IMPACTS					
TEMPERATURE (EC)	18.9 - 25.5	21.7	21.7	21.7	21.7
RELATIVE HUMIDITY (%)	10 - 70	31	31	32	32
PROBE SPEED (m/s)	4.27 - 4.33	4.29	4.32	4.29	4.33
UPPER RIB (g's)	37 - 46	39.7	37.8	42.5	41.9
LOWER RIB (g's)	37 - 46	40.3	40.2	41.3	39.5
LOWER SPINE (g's)	15 - 22	20.9	21.7	20.2	20.8
PELVIS IMPACT					
TEMPERATURE (EC)	18.9 - 25.5	21.7	21.7	21.7	21.7
RELATIVE HUMIDITY (%)	10 - 70	32	32	31	32
PROBE SPEED (m/s)	4.27 - 4.33	4.28	4.27	4.28	4.32
PELVIS (g's)	40 - 60	43.4	44.3	41.0	45.5

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: February 15, 2001 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: February 15, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	900
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	376

REMARKS: None

THORACIC SHOCK ABSORBER TESTS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: February 14, 2001 Laboratory Technician: B. Swiecicki

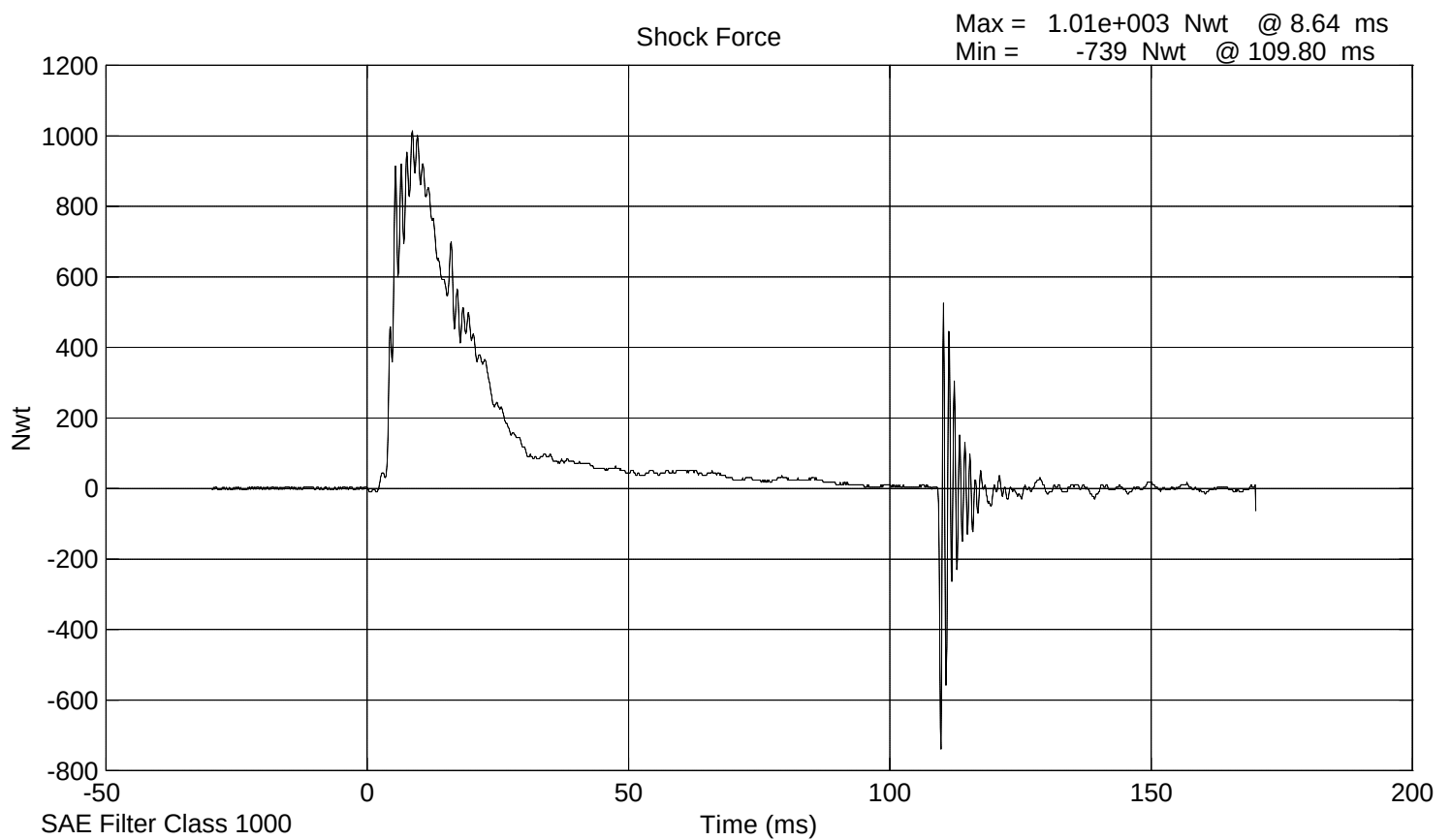
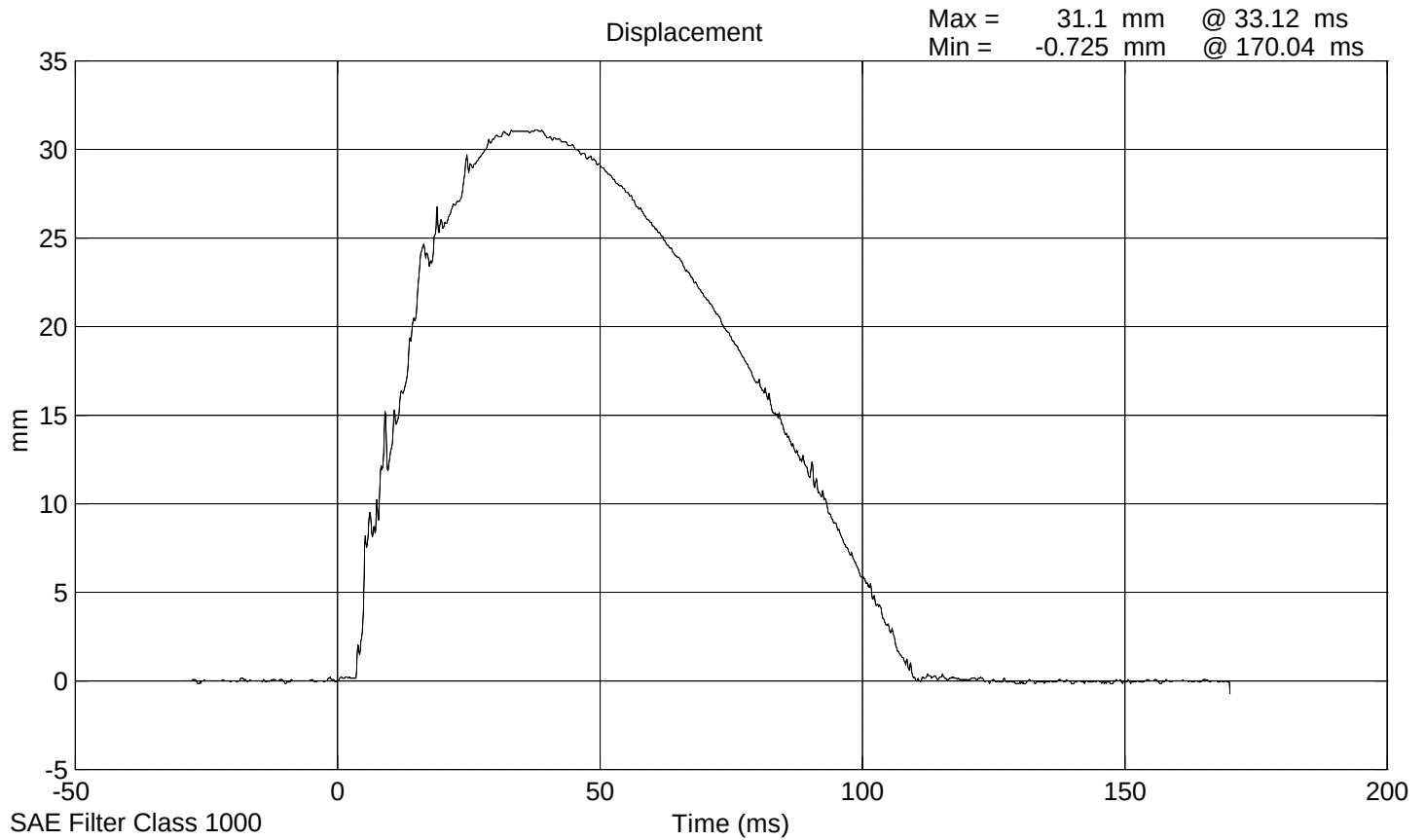
DAMPER IDENTIFICATION: 013

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)		18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)		10 - 70	31.0
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	1014.5
	DISPLACEMENT (mm)	30 - 35	31.1
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1932.2
	DISPLACEMENT (mm)	32 - 37	34.7
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3908.4
	DISPLACEMENT (mm)	33 - 40	38.2

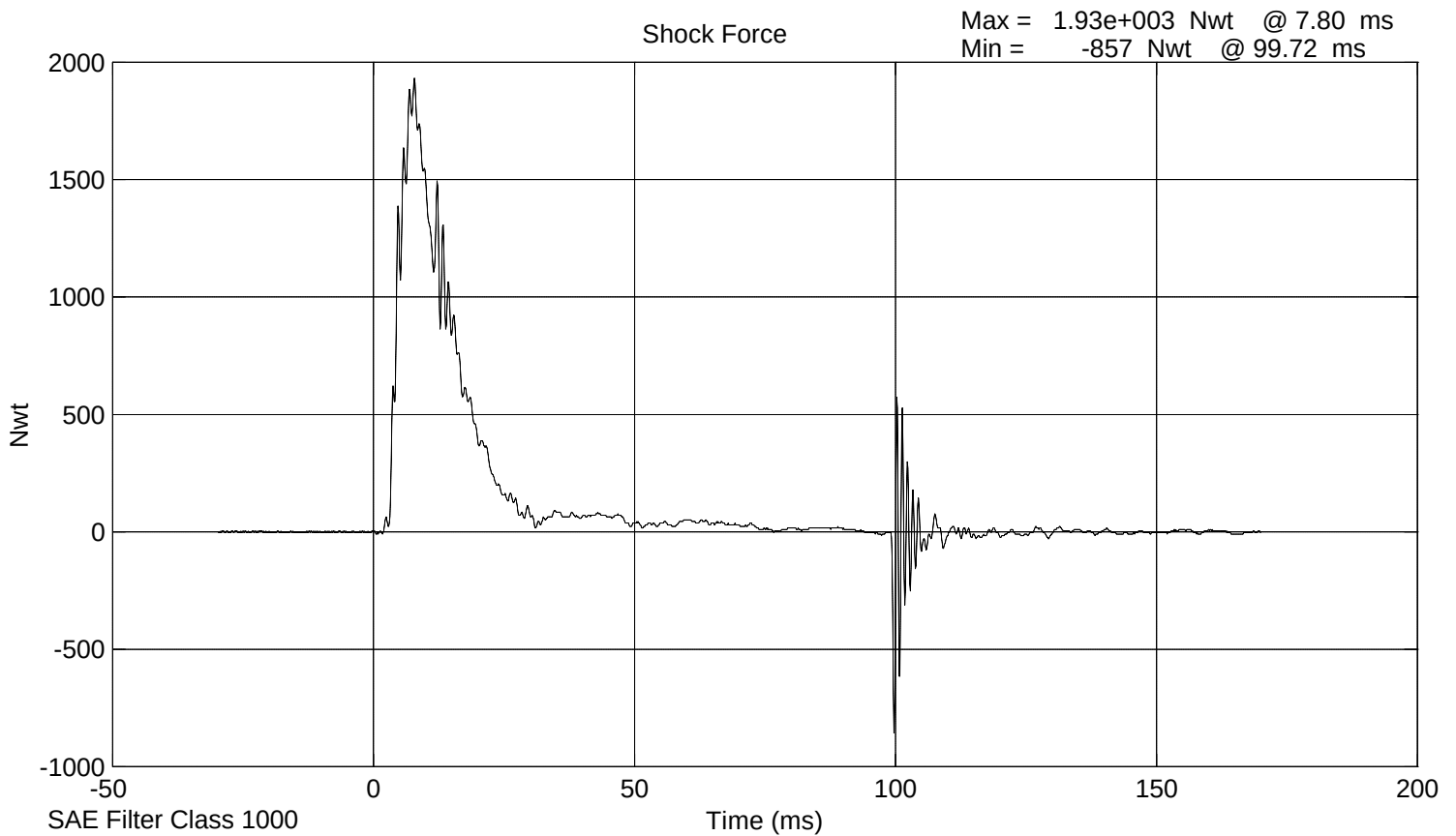
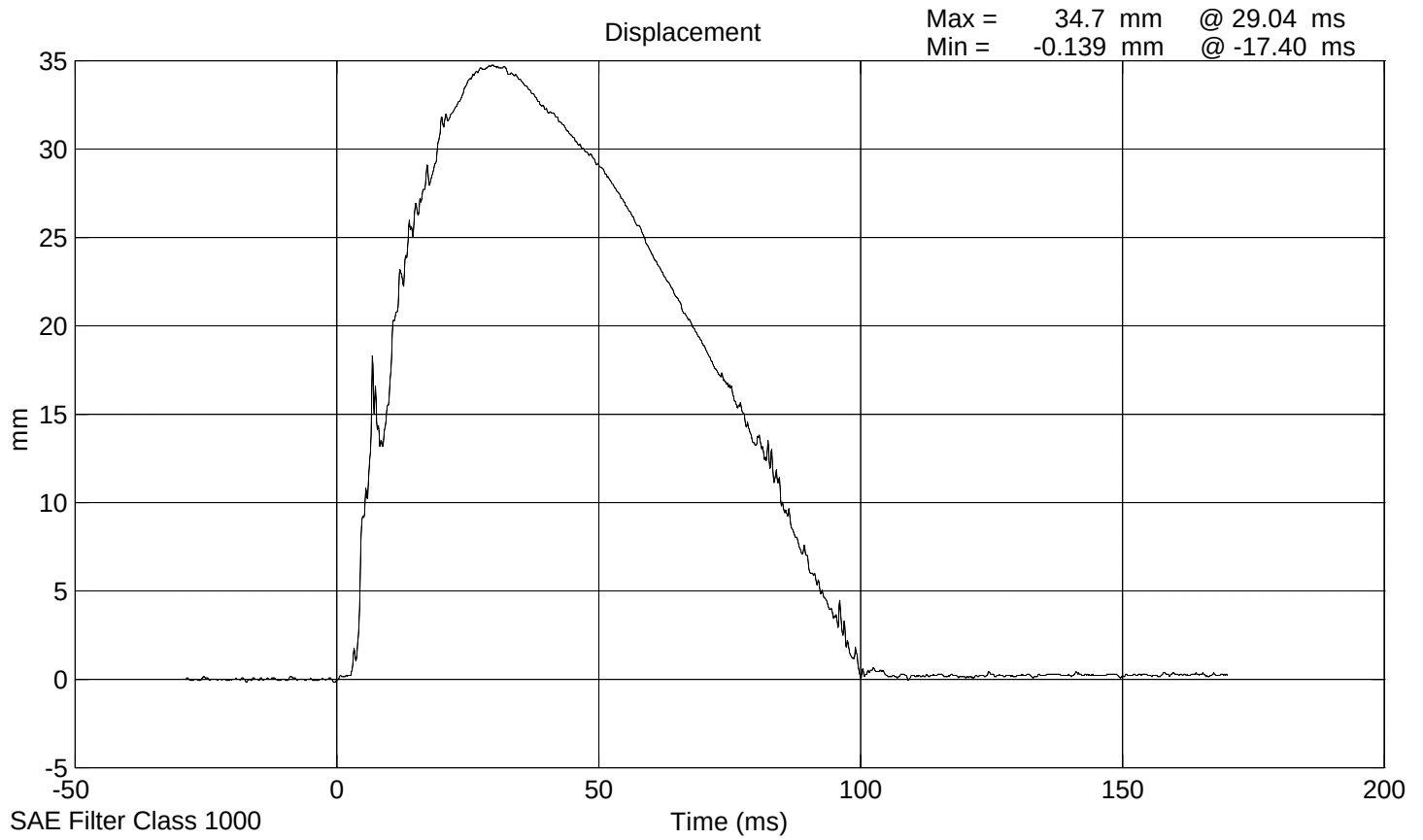
DAMPER SETTING: 5

REMARKS: None

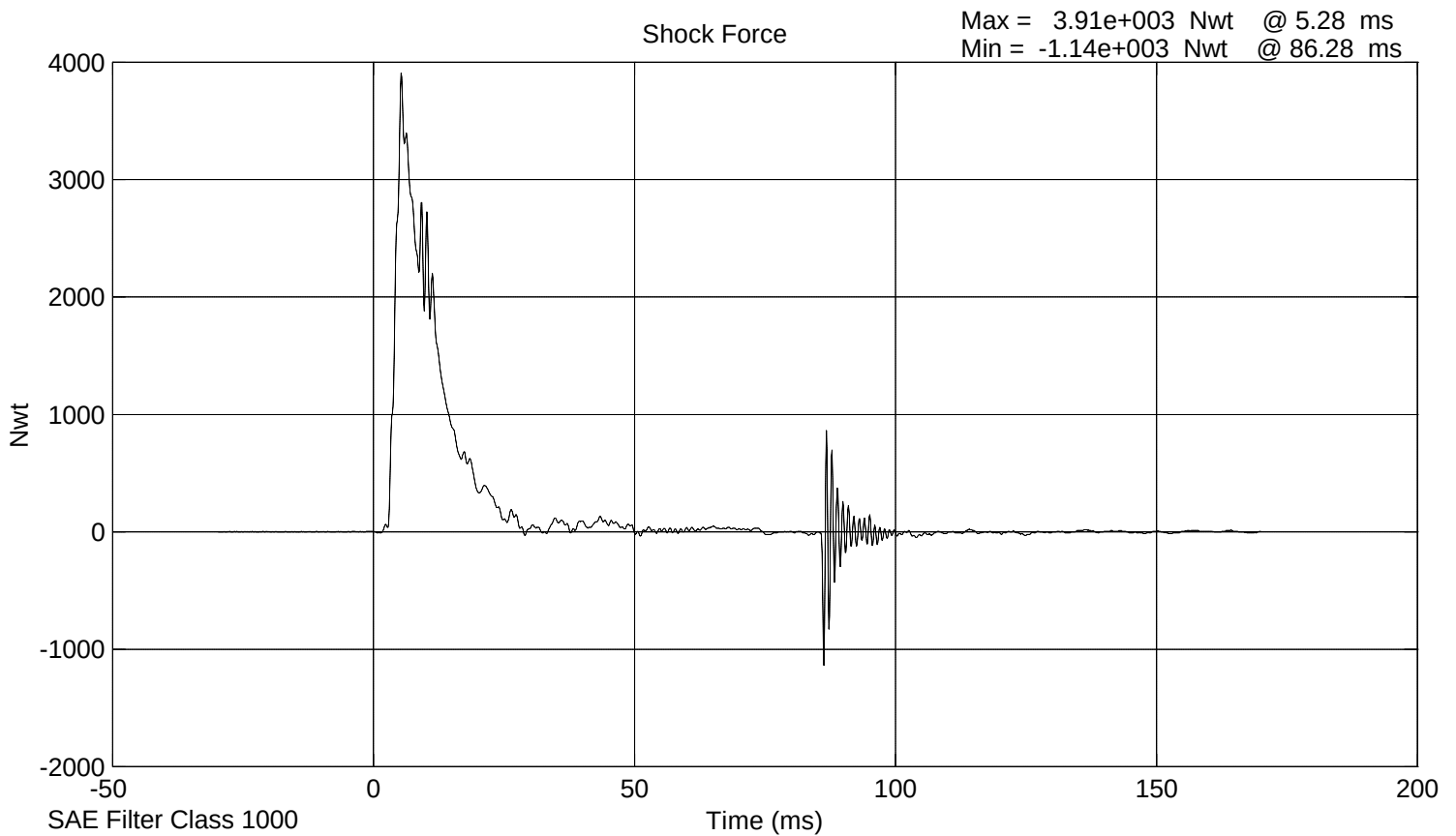
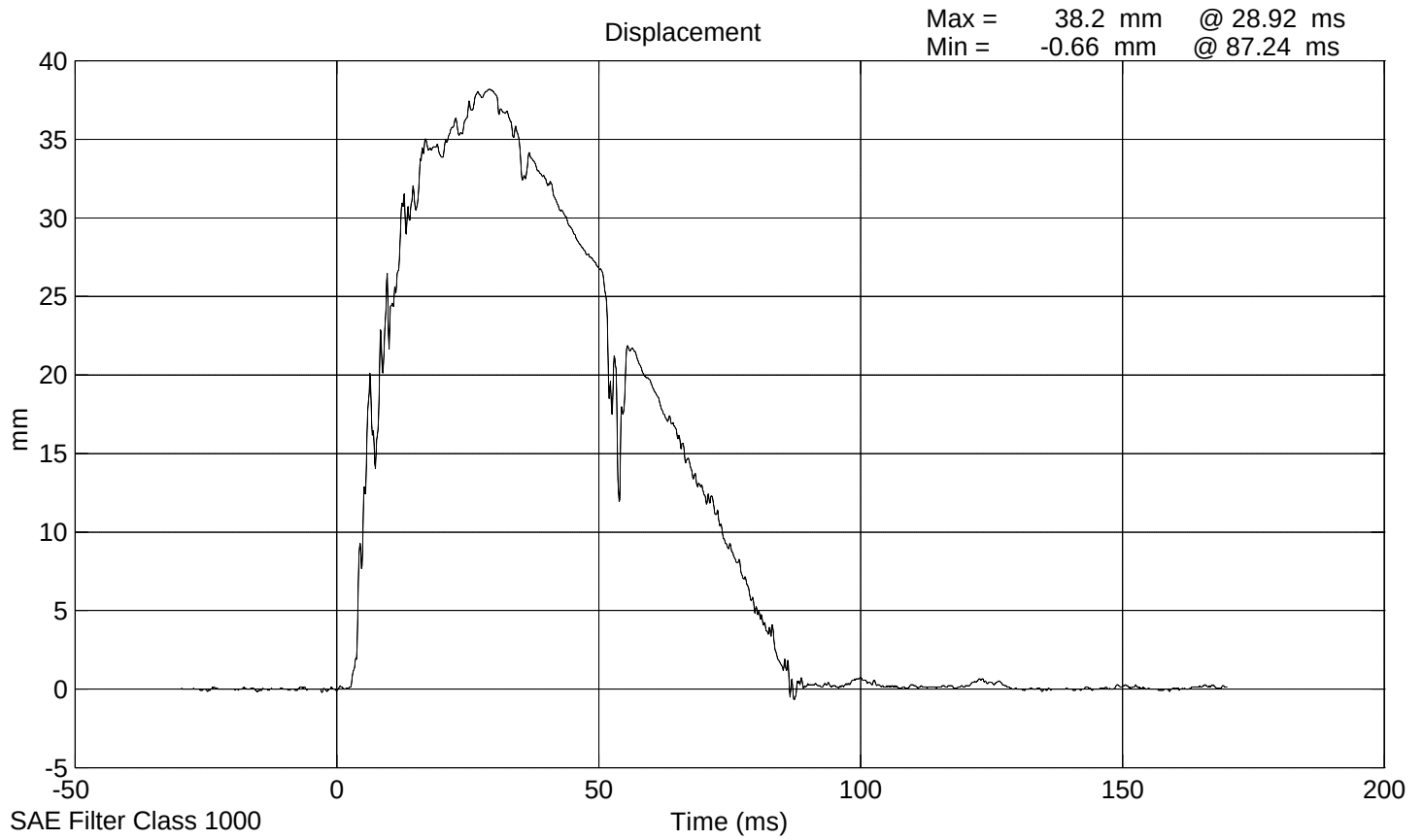
SID 013 Shock Absorber Impact Test @ 3.048 m/s



SID 013 Shock Absorber Impact Test @ 4.2672 m/s



SID 013 Shock Absorber Impact Test @ 6.096 m/s



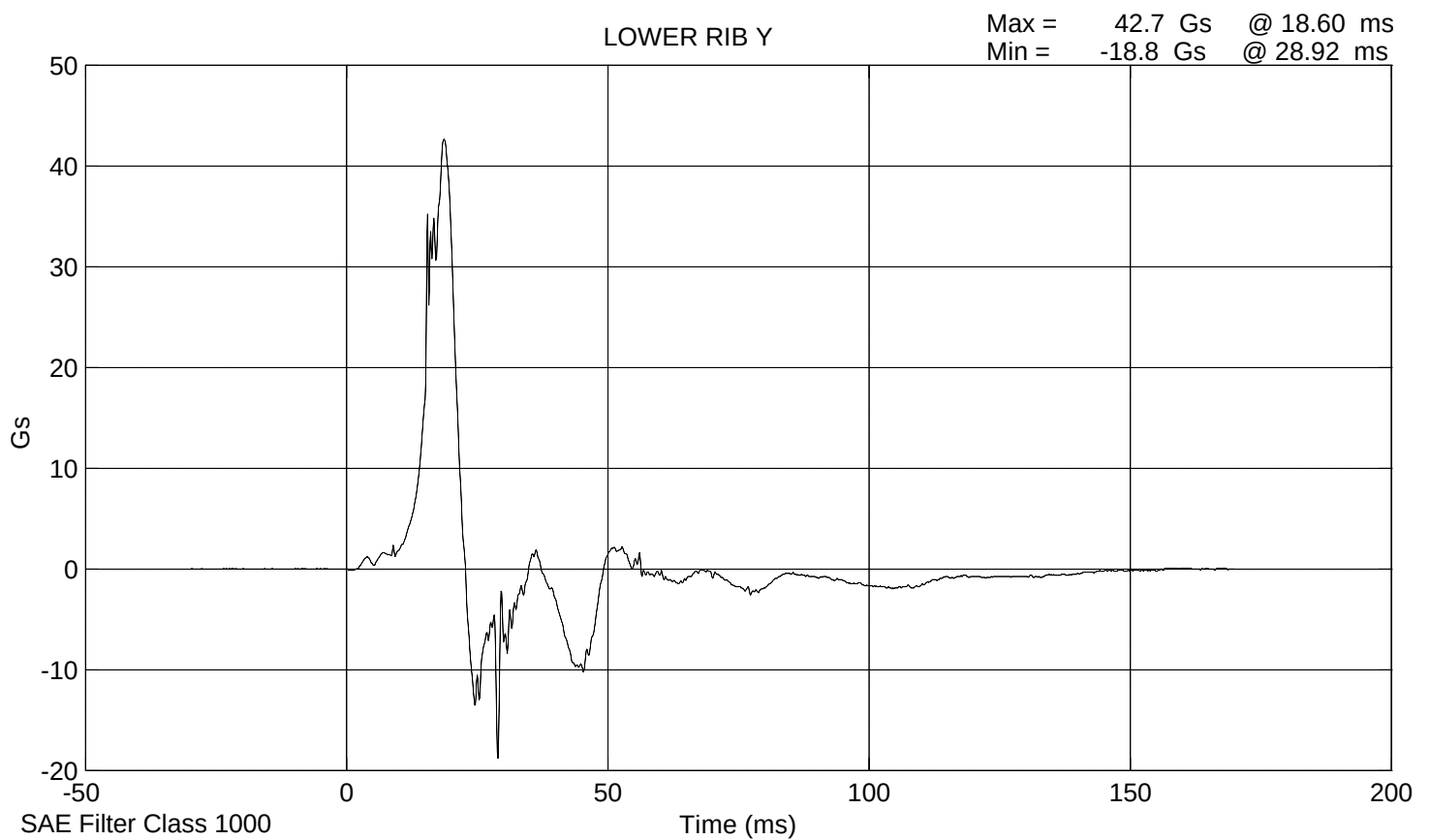
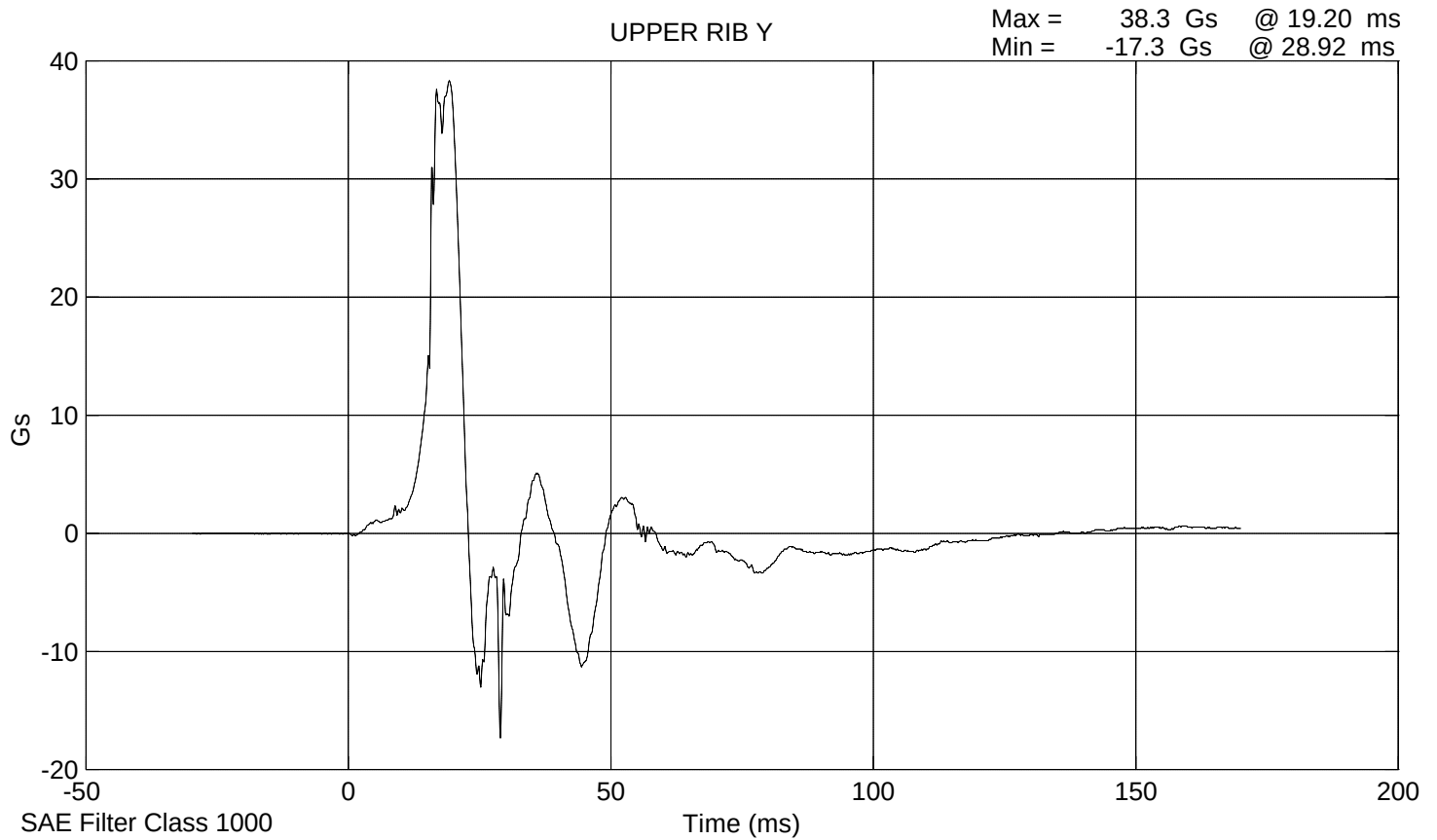
**LATERAL THORAX IMPACT TEST
PRE-TEST**

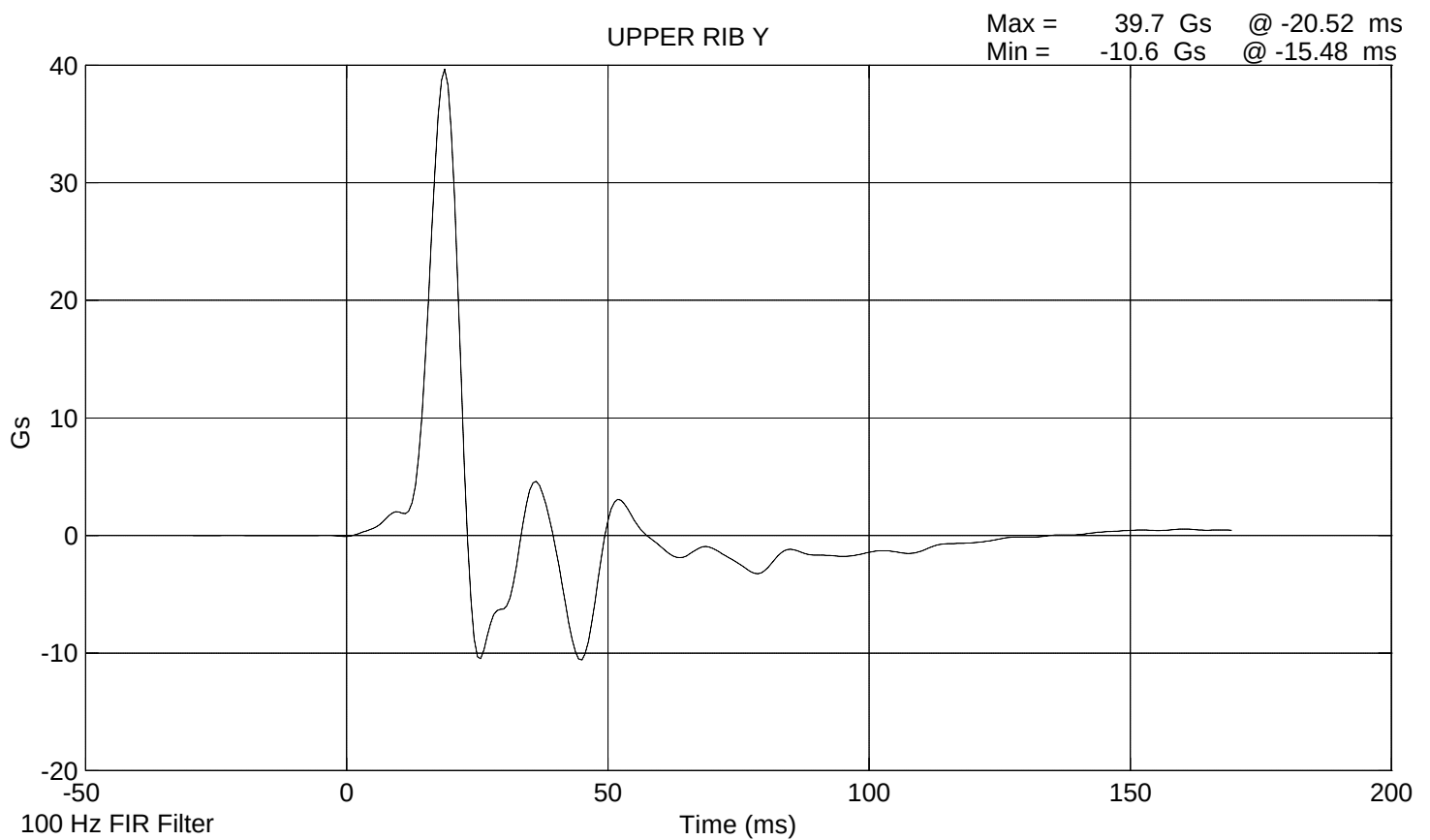
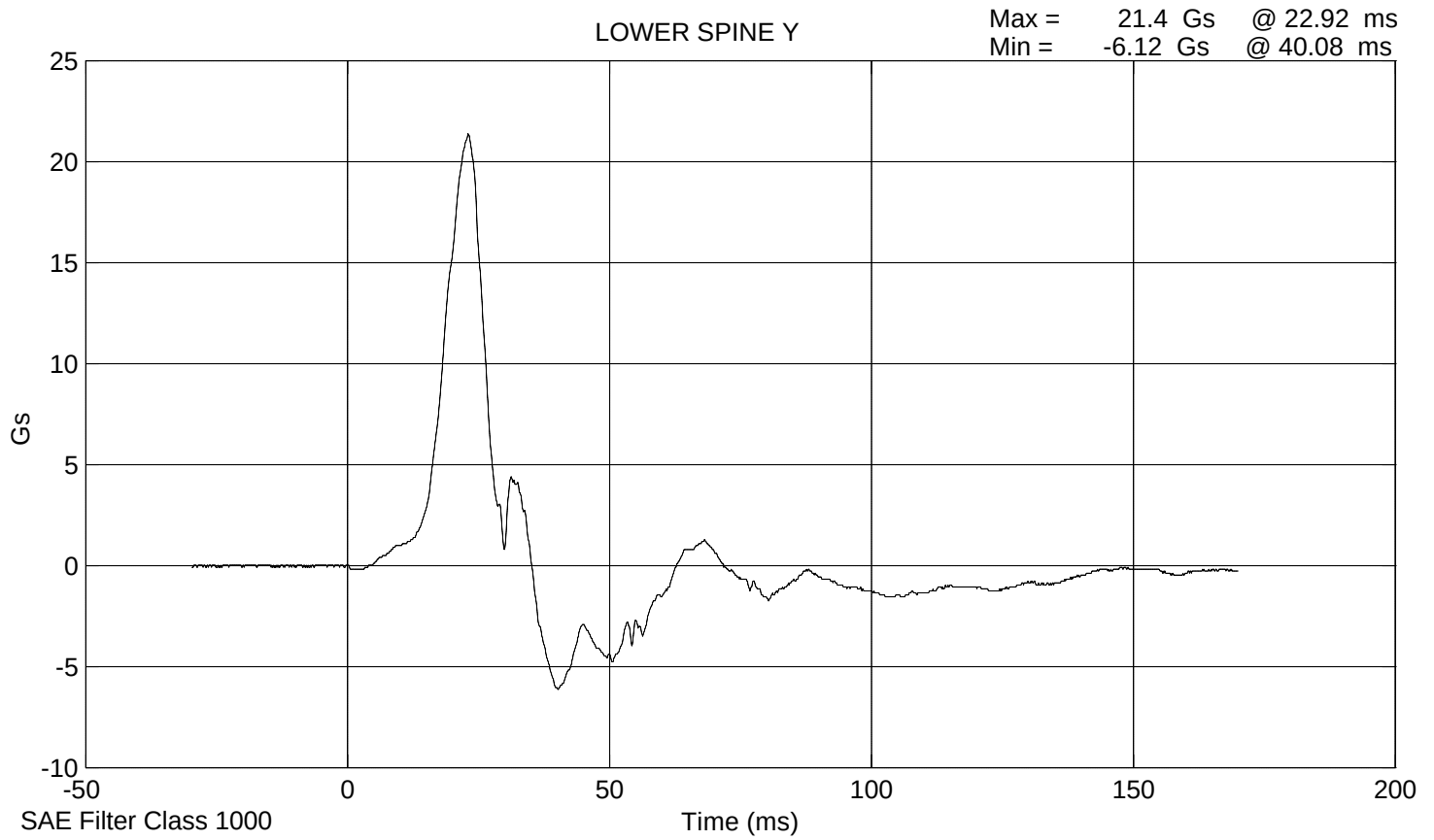
CONFIGURED FOR LEFT SIDE IMPACT

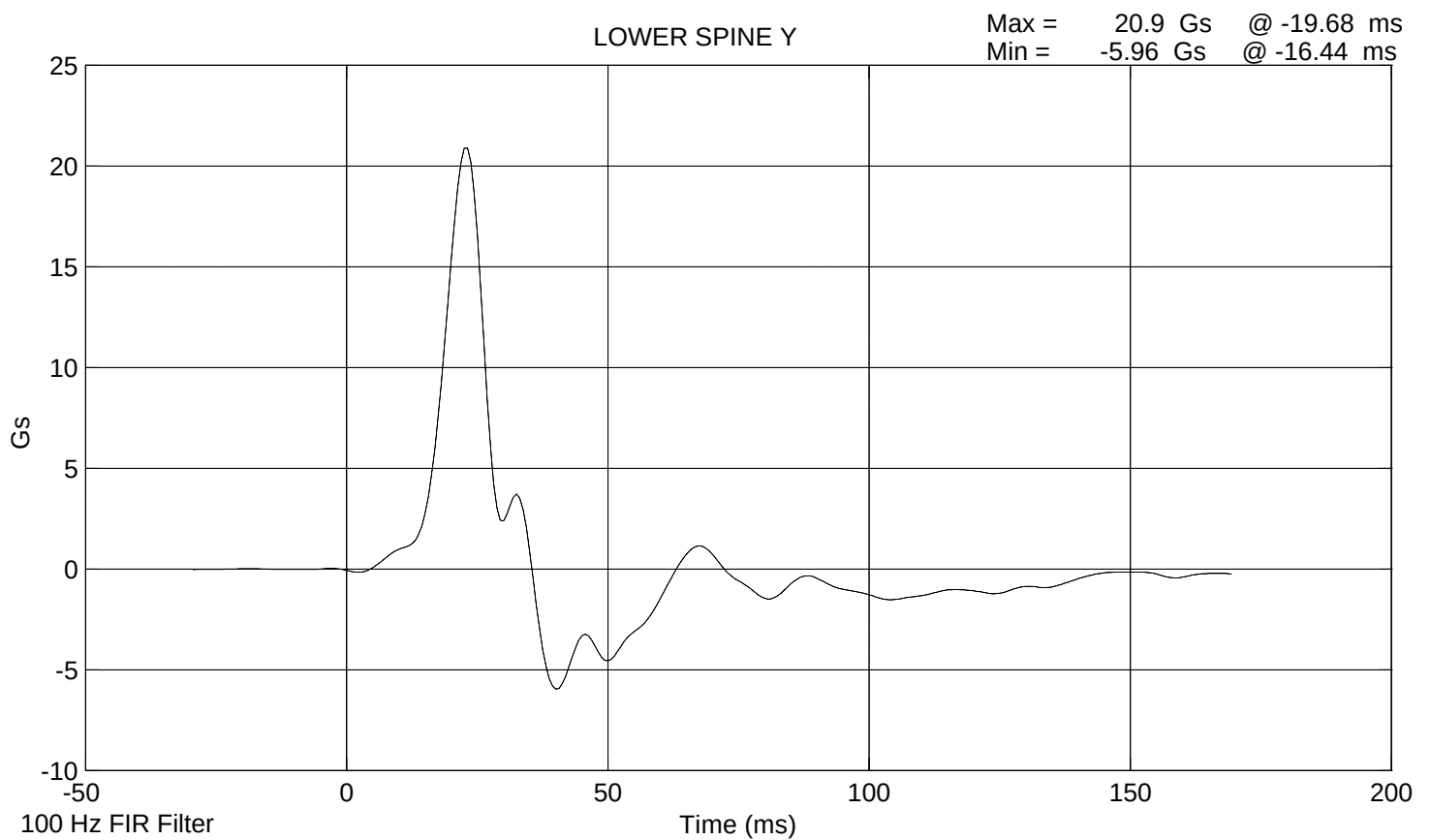
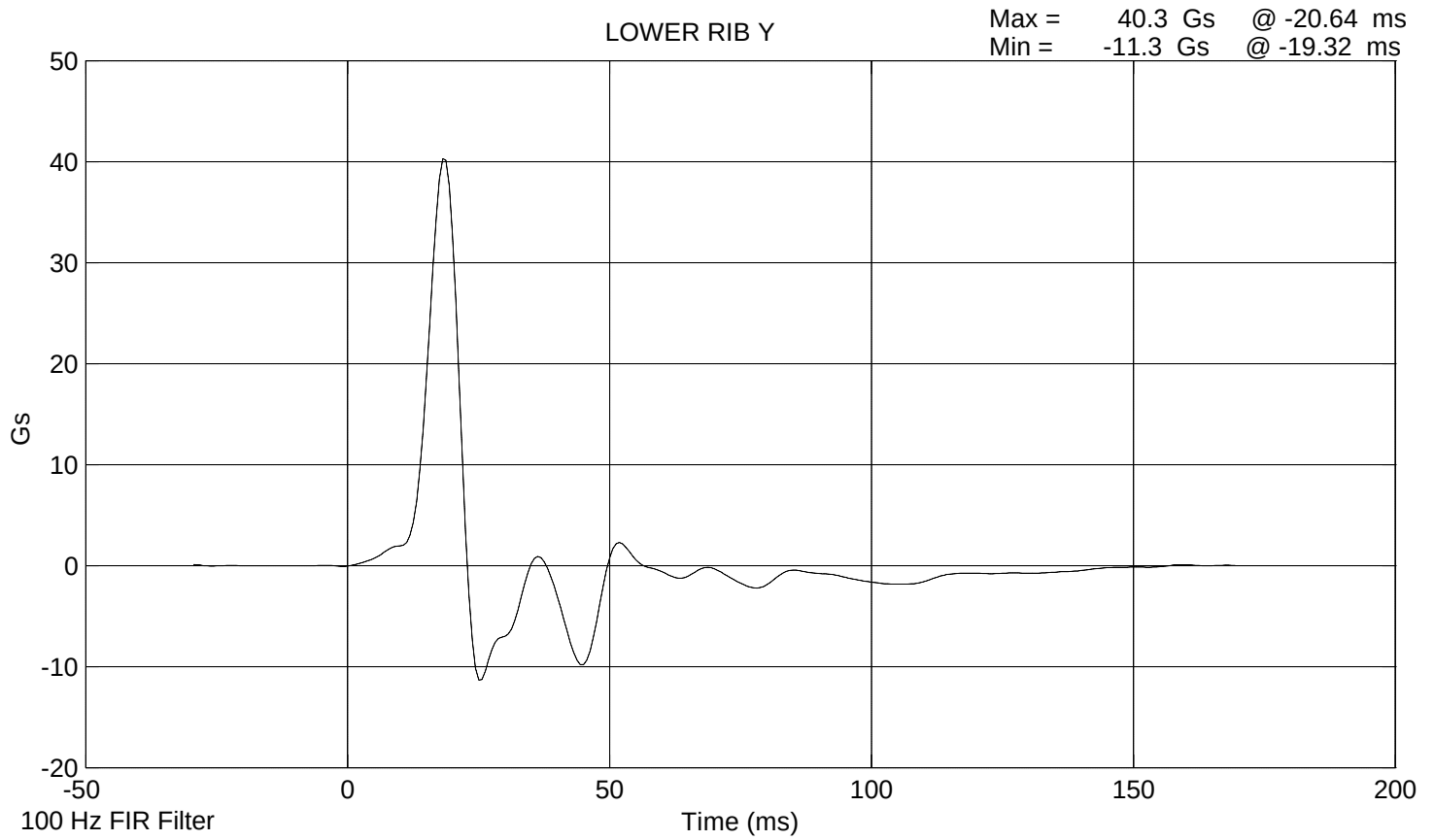
SID Serial No.: 013 Sequential Test Number: 1
Date: February 17, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	39.67
LOWER RIB (g's)	37 - 46	40.31
LOWER SPINE (g's)	15 - 22	20.89

REMARKS: None







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

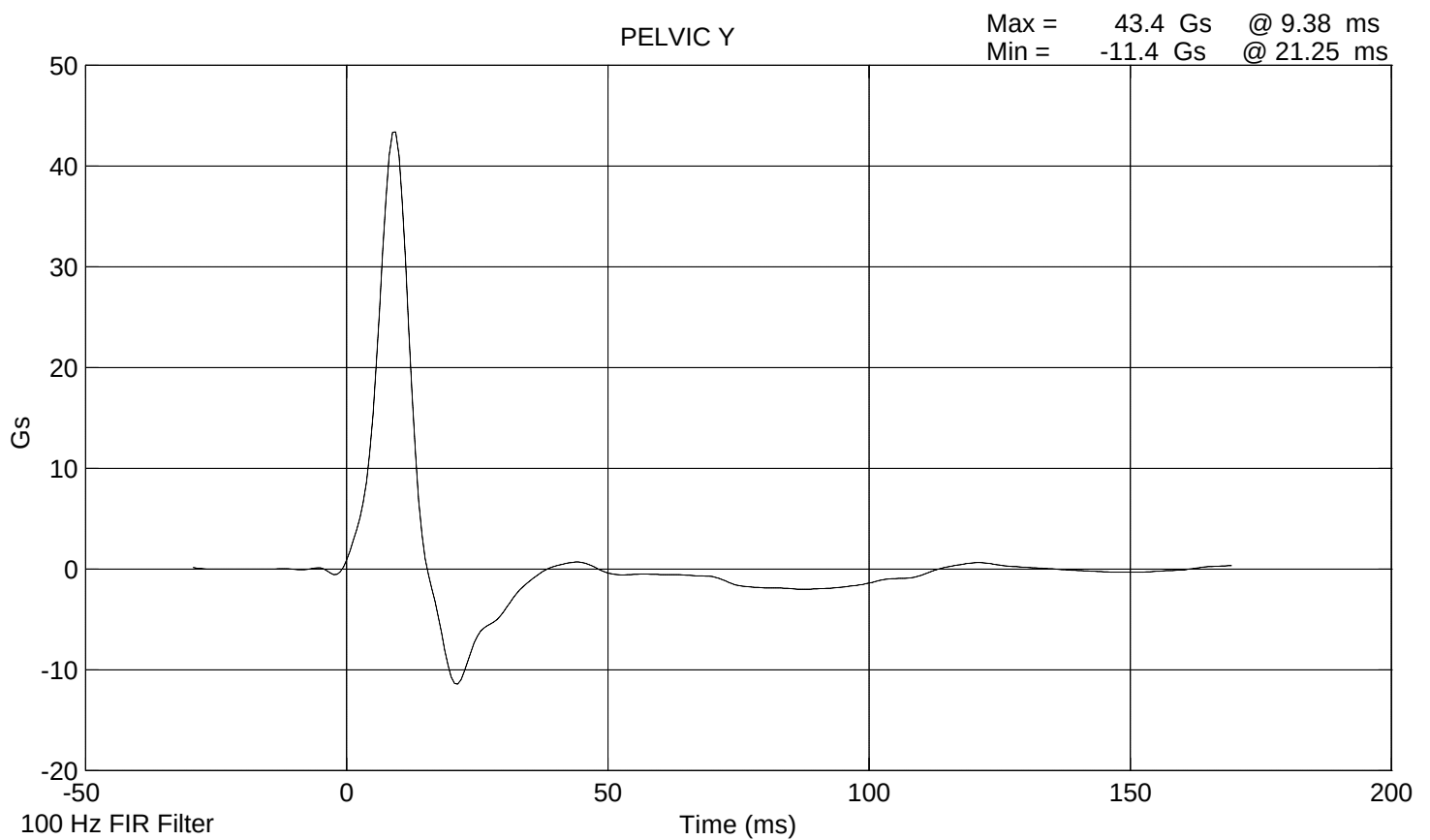
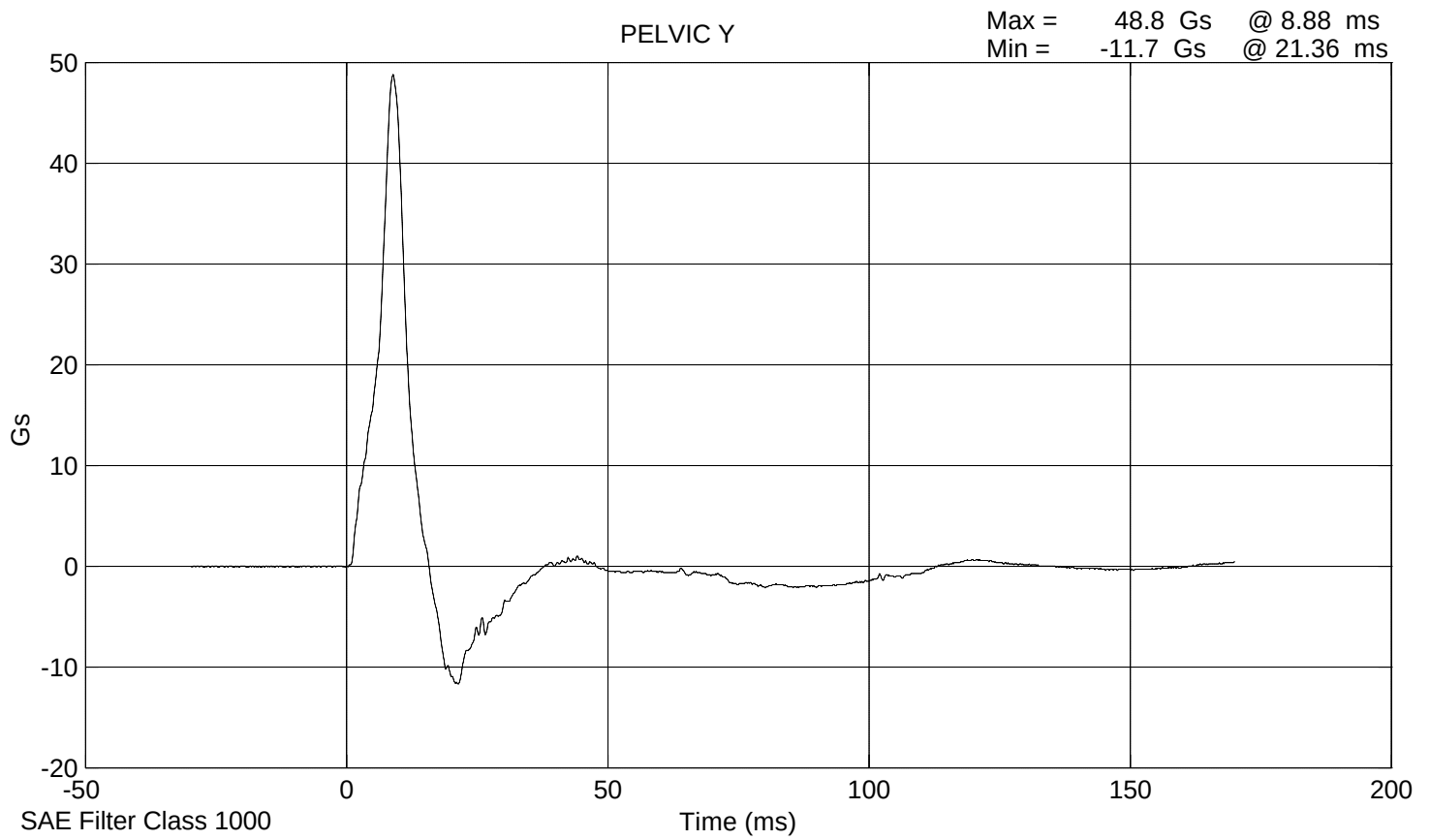
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: February 15, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32.0
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	43.38

REMARKS: None

SID 013 Pelvic Impact Test @ 4.2824 m/s



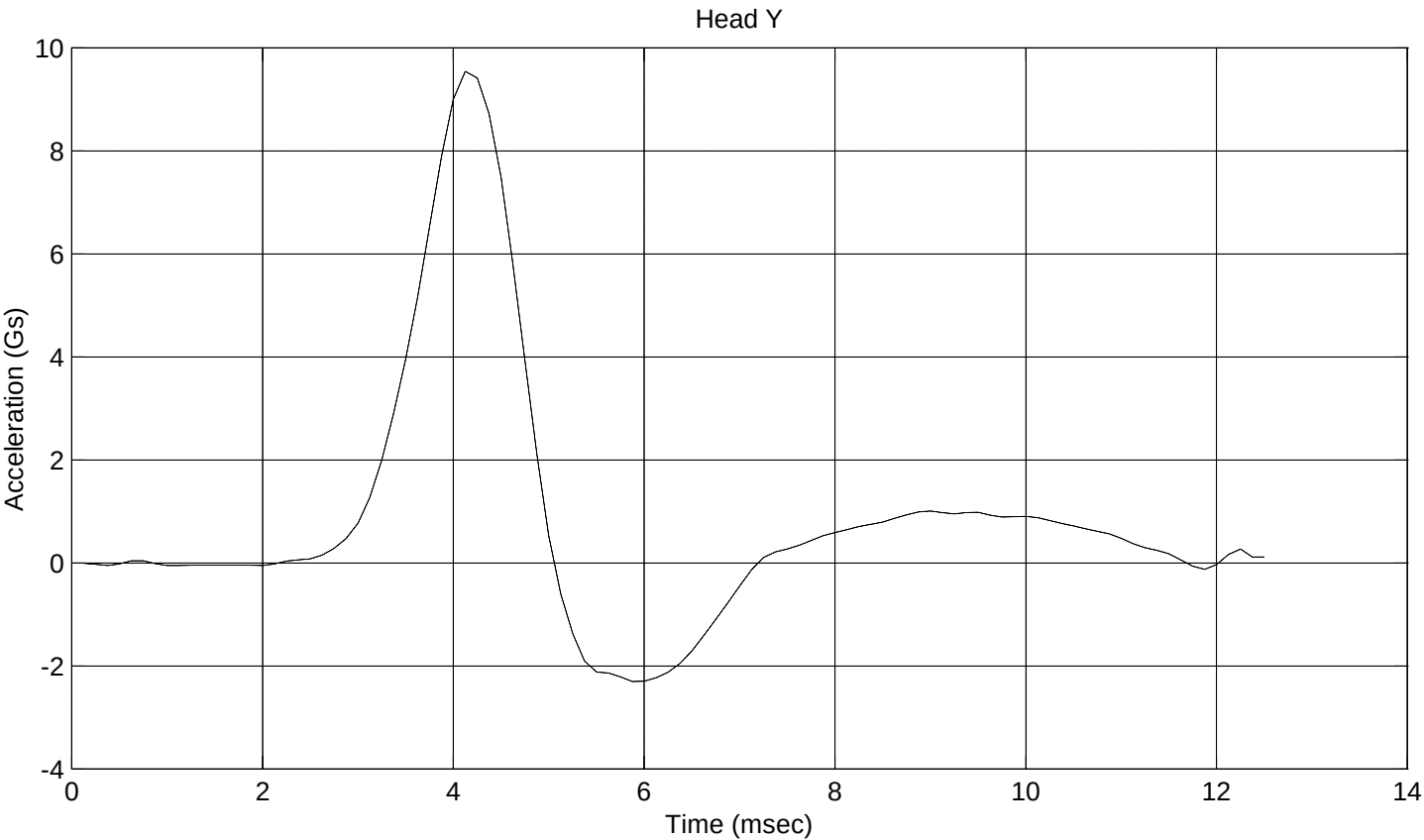
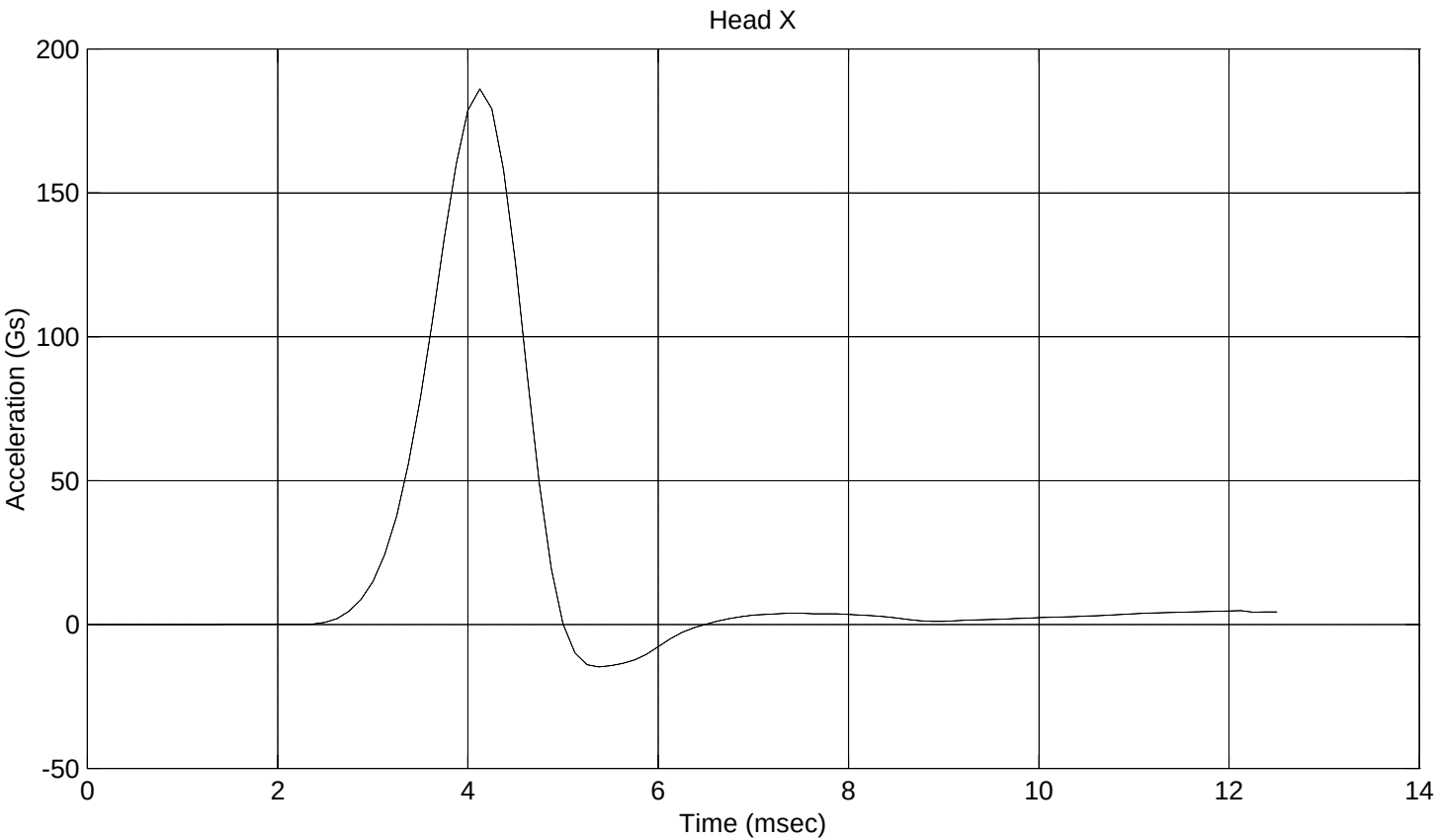
HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

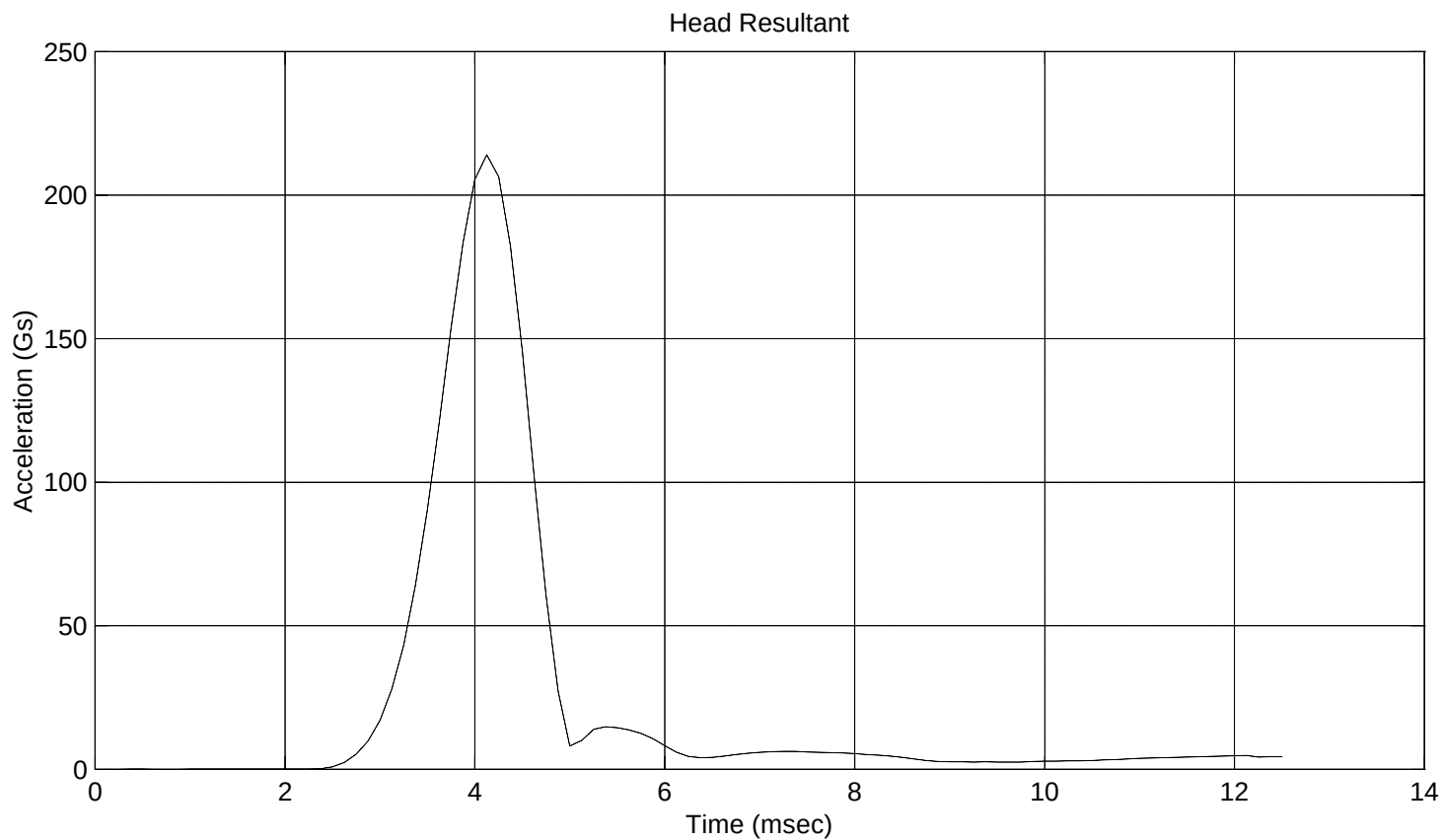
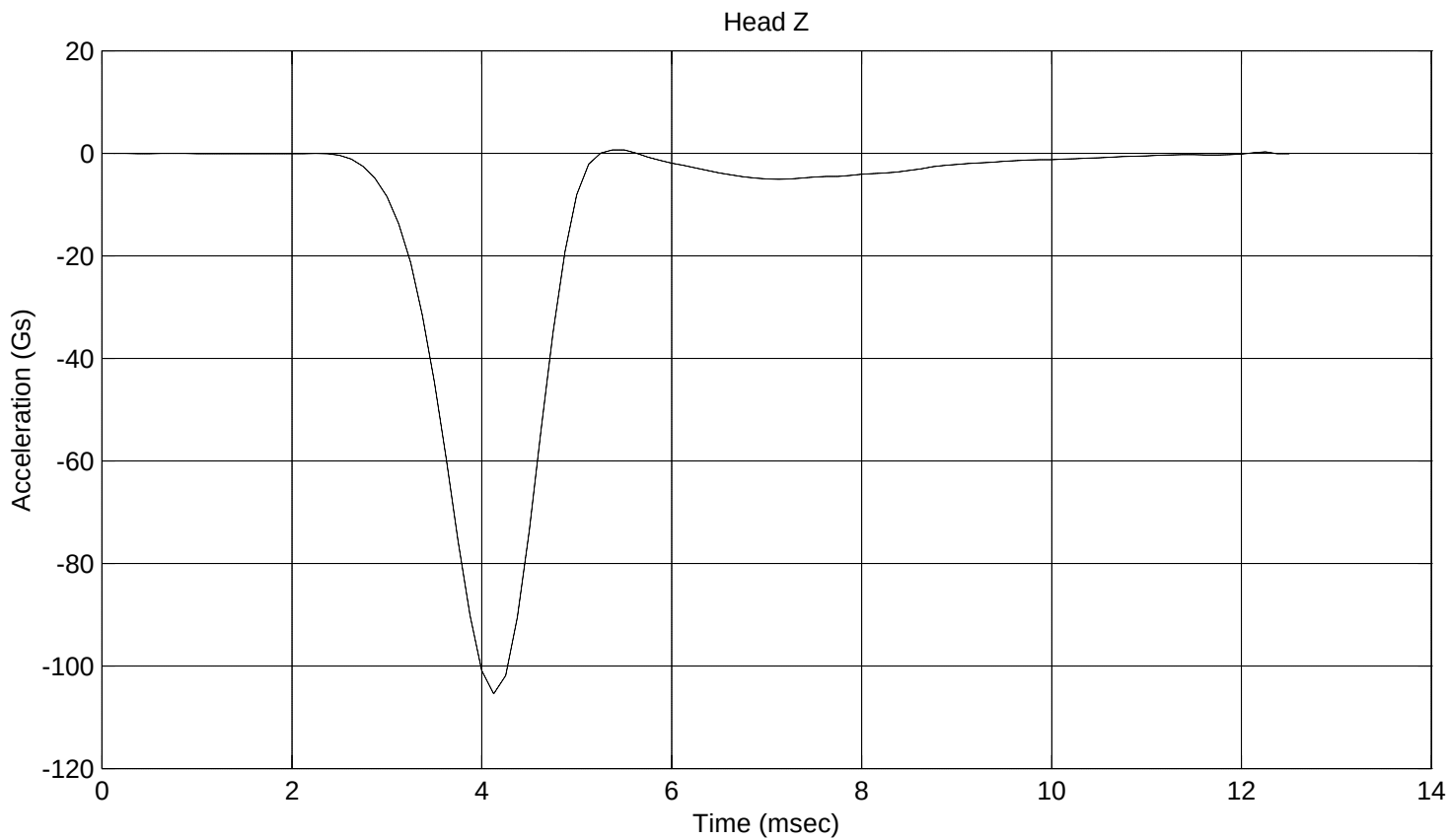
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: February 14, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	214.10
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	9.54
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

REMARKS: None





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: February 15, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
FORCE @ 13 mm (N)	104 - 162	115.7
FORCE @ 19 mm (N)	163 - 221	173.5
FORCE @ 25 mm (N)	222 - 280	249.1
FORCE @ 33 mm (N)	325 - 391	360.3

REMARKS: None

Dummy S/N 013

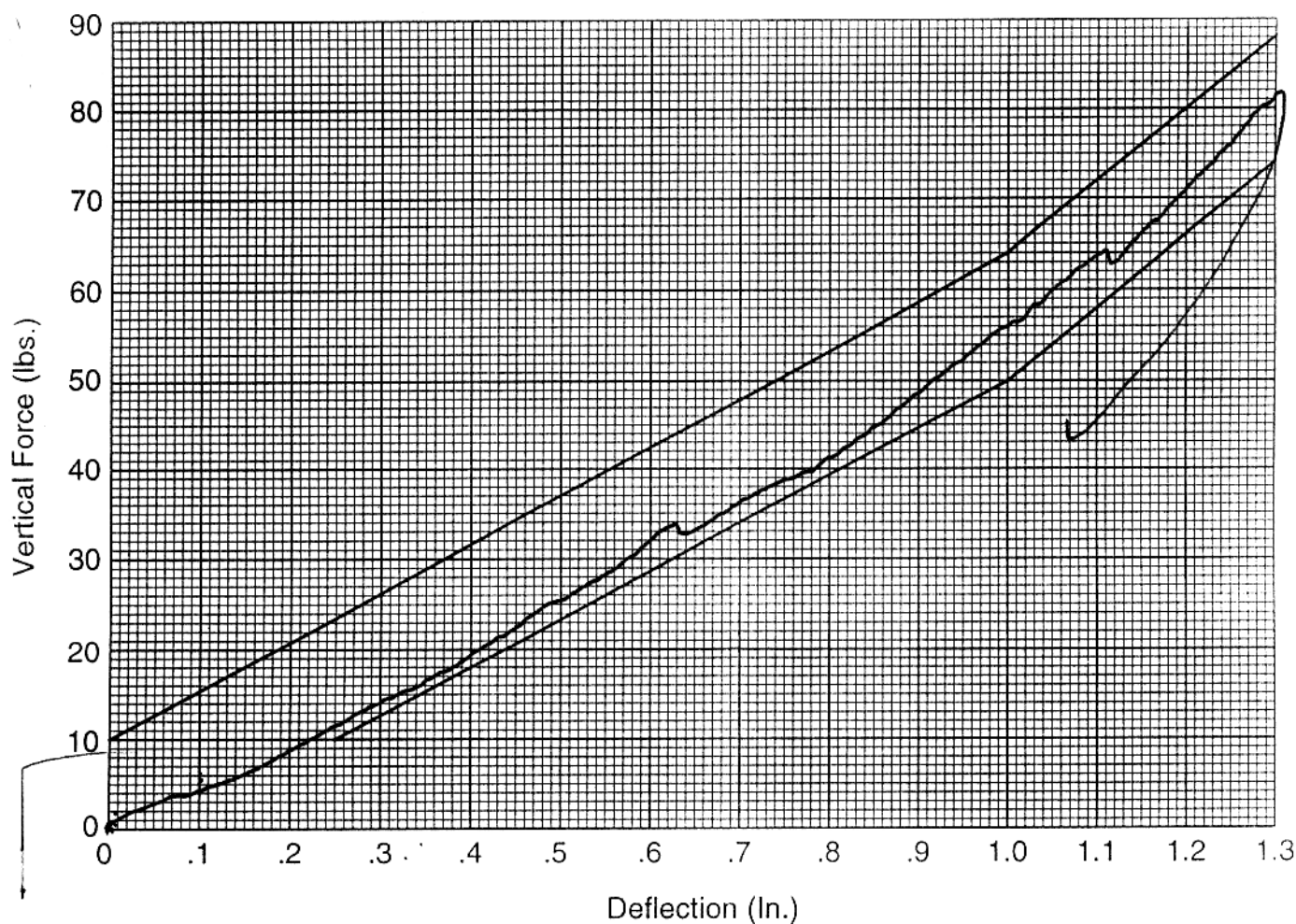
W/A _____

Date 2-15-2001

Performed By [Signature]

Temp. 71°

Humidity 31%



**Hybrid II
Abdomen Static Press**

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

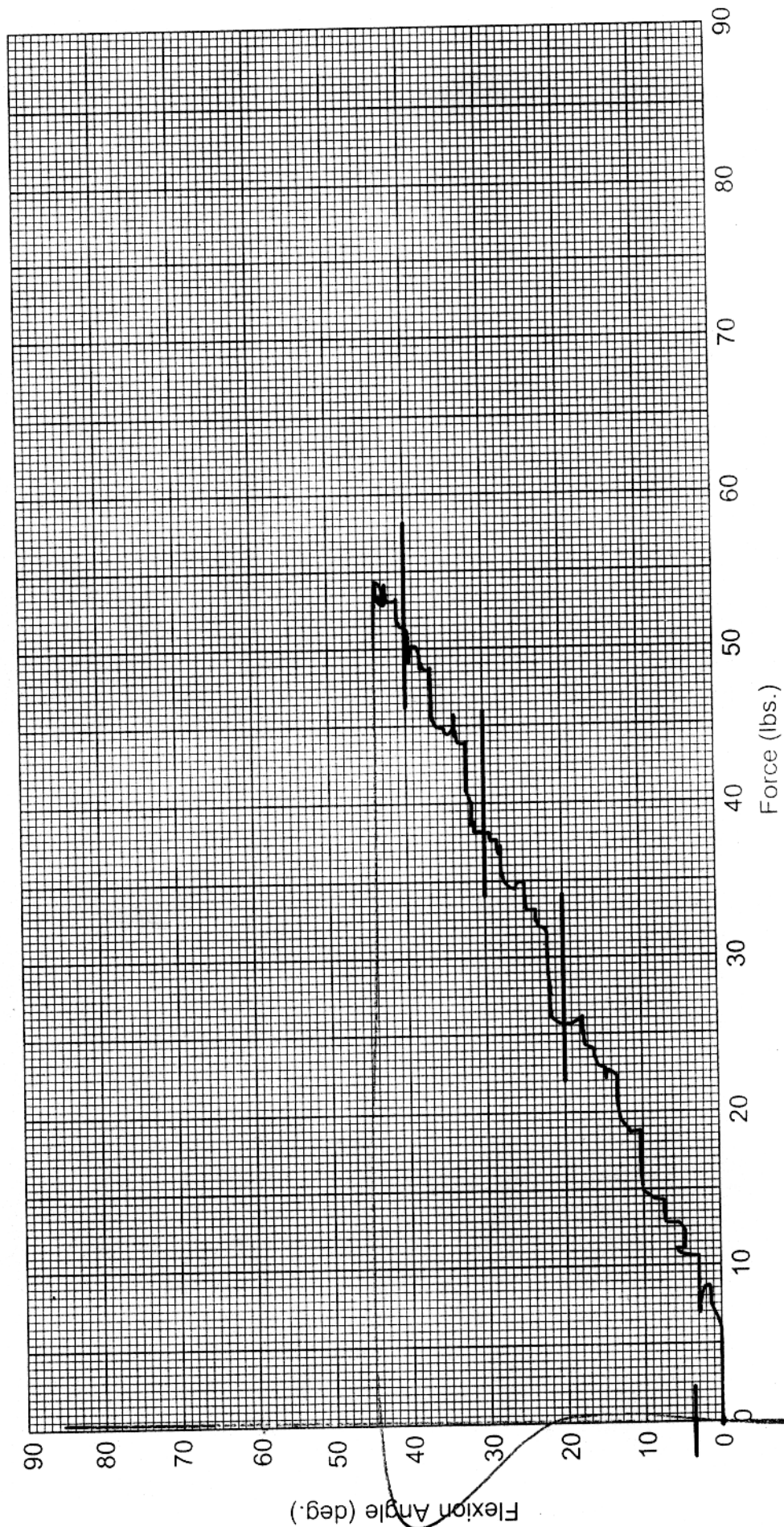
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 1
Date: February 15, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
FORCE @ 0E (N)	0 - 26.7	0
FORCE @ 20E (N)	97.8 - 151.2	113.4
FORCE @ 30E (N)	151.2 - 204.6	169.0
FORCE @ 40E (N)	204.6 - 258	229.1
RETURN ANGLE	12E max.	3.5E

REMARKS: None

Dummy S/N 013
 W/A _____
 Date 2-15-2001
 Performed By [Signature]
 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: February 15, 2001 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.: 268

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 3
Date: February 15, 2001 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.: 268 Sequential Test Number: 3
Date: February 14, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
RH- Rib Height (mm)	502 - 520	513
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	495
HW- Hip Width (mm)	356 - 391	378

REMARKS: None

THORACIC SHOCK ABSORBER TESTS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 3
Date: April 19, 2000 Laboratory Technician: B. Swiecicki

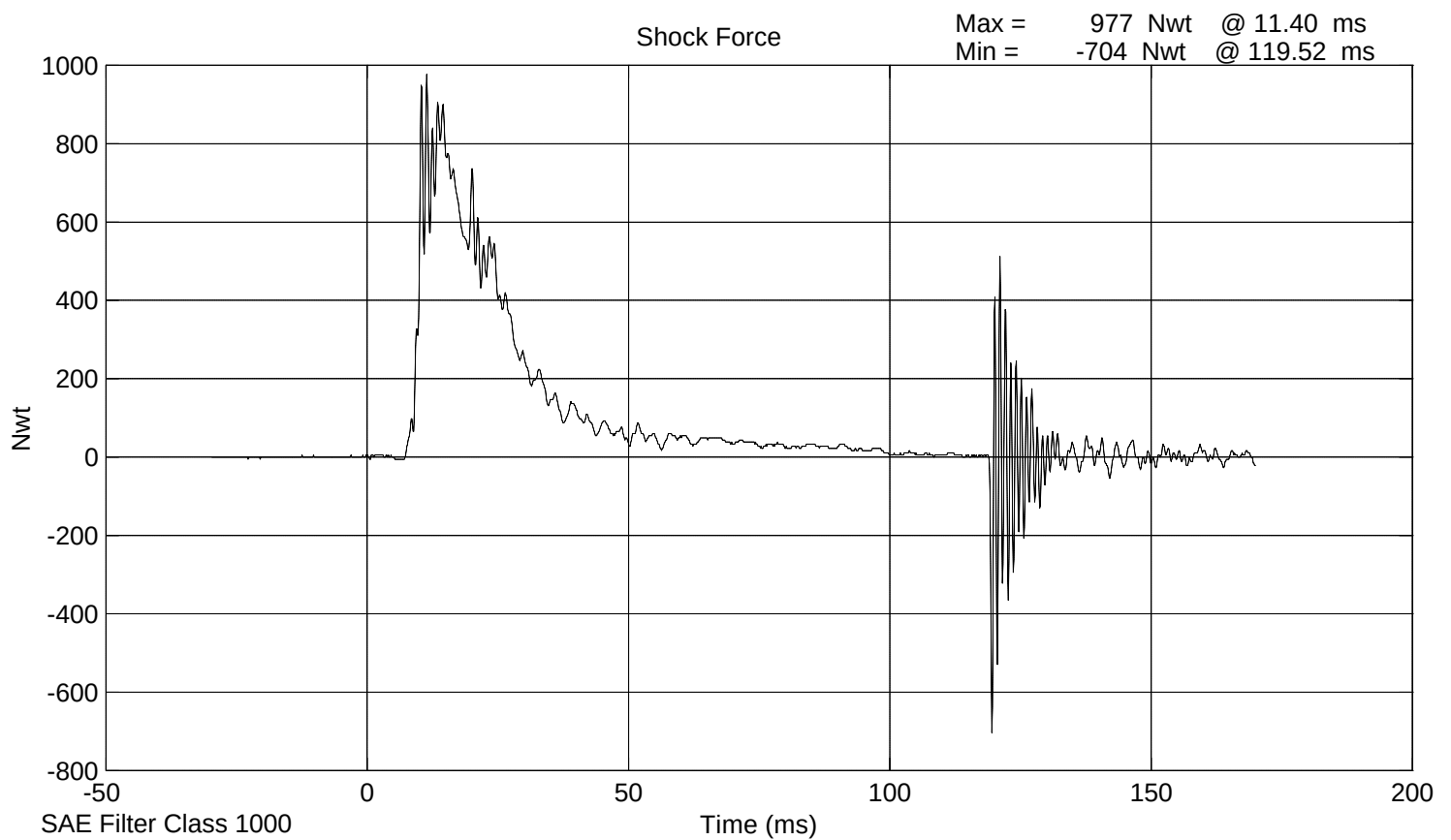
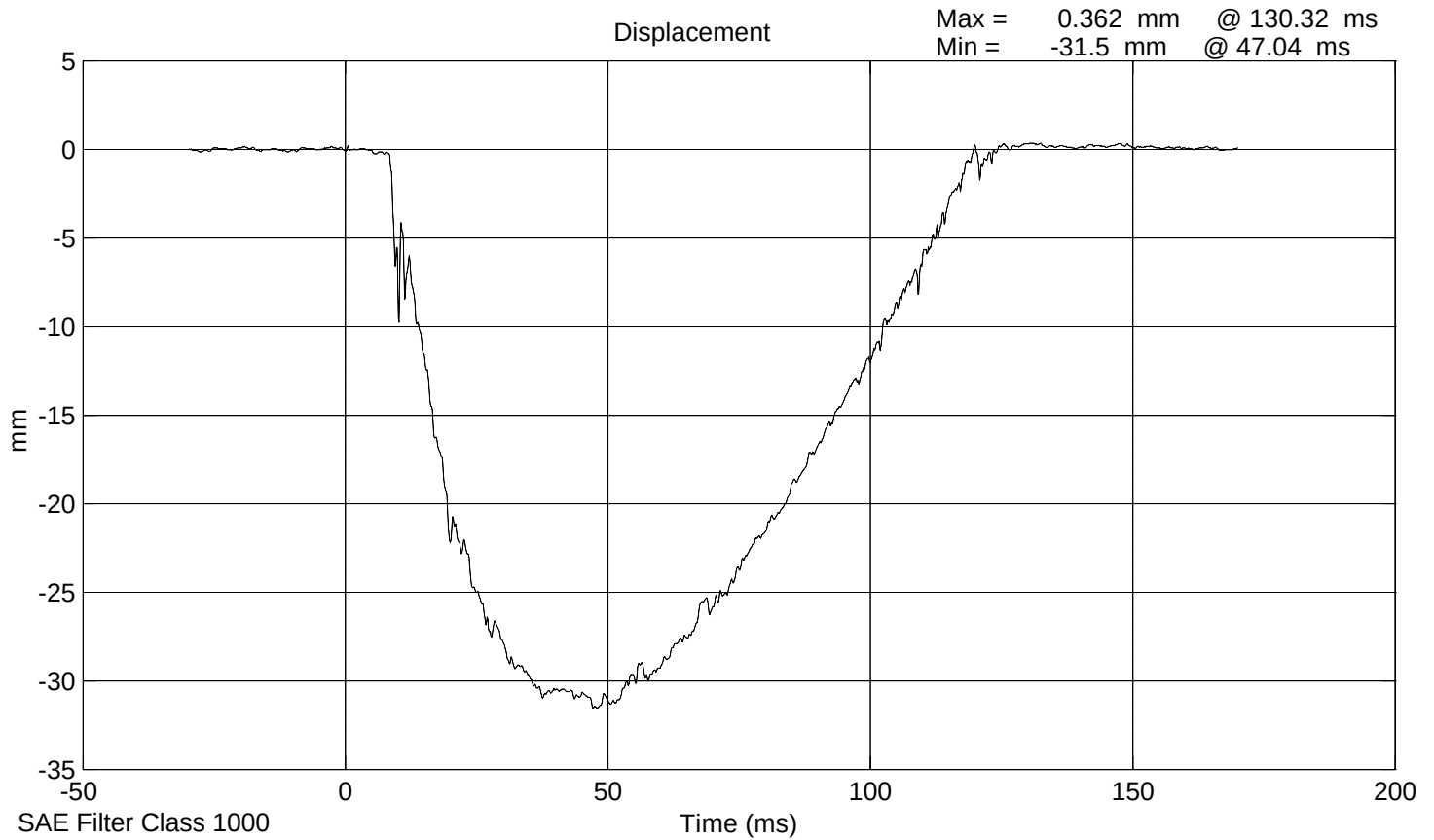
DAMPER IDENTIFICATION: 268

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)		18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)		10 - 70	31
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	976.7
	DISPLACEMENT (mm)	30 - 35	31.5
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1811.0
	DISPLACEMENT (mm)	32 - 37	34.7
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3872.7
	DISPLACEMENT (mm)	33 - 40	35.3

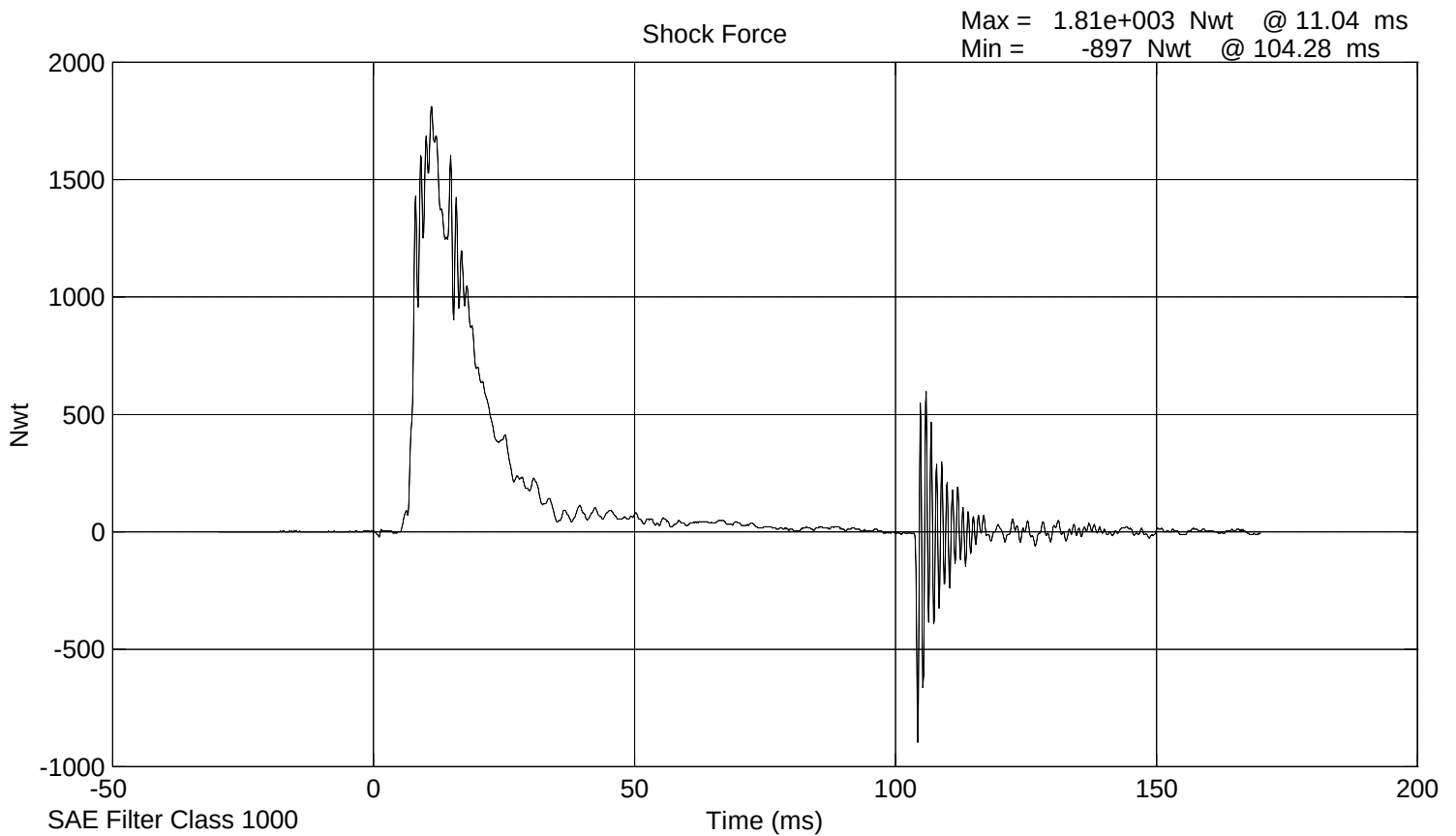
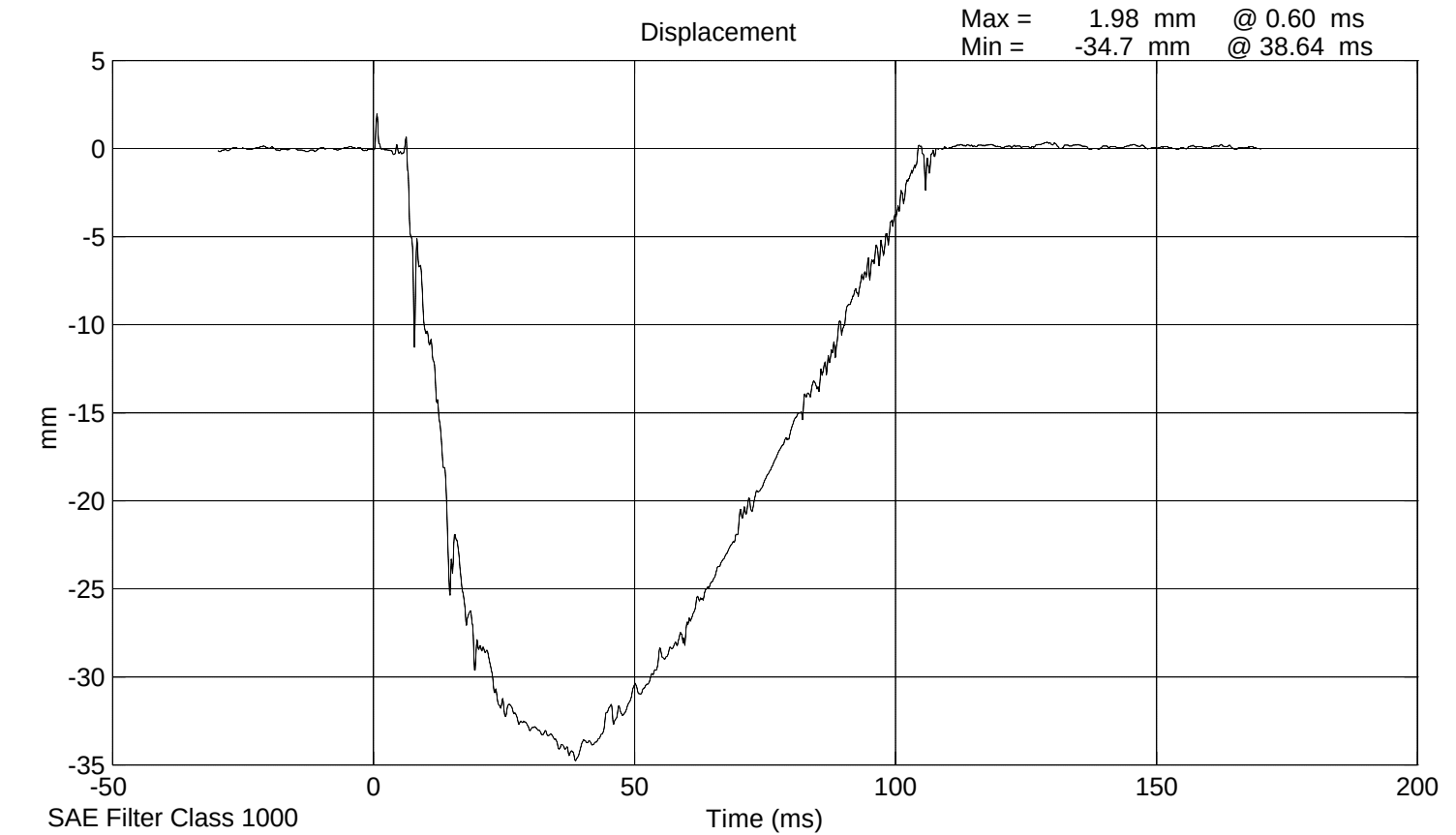
DAMPER SETTING: 5

REMARKS: None

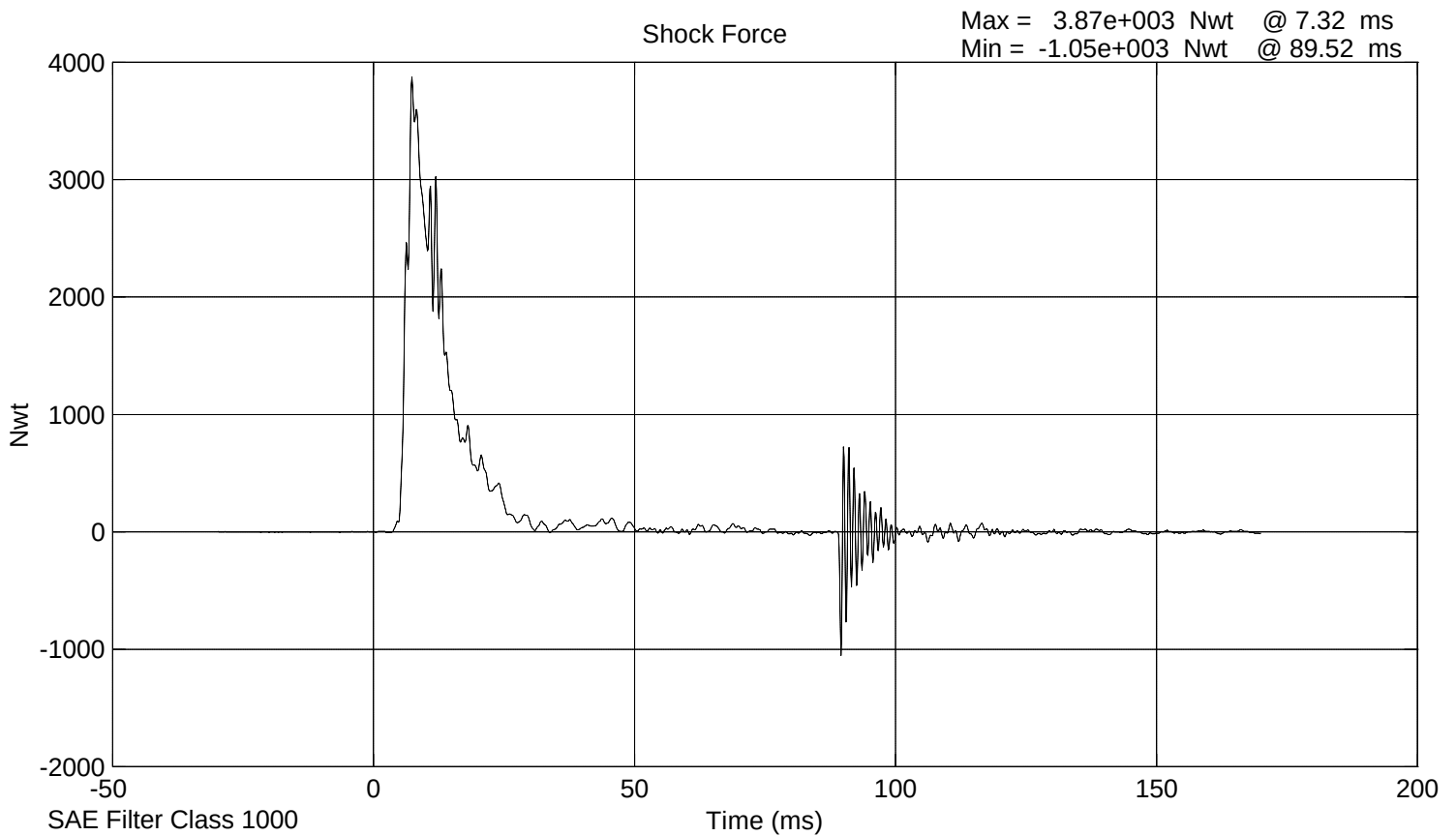
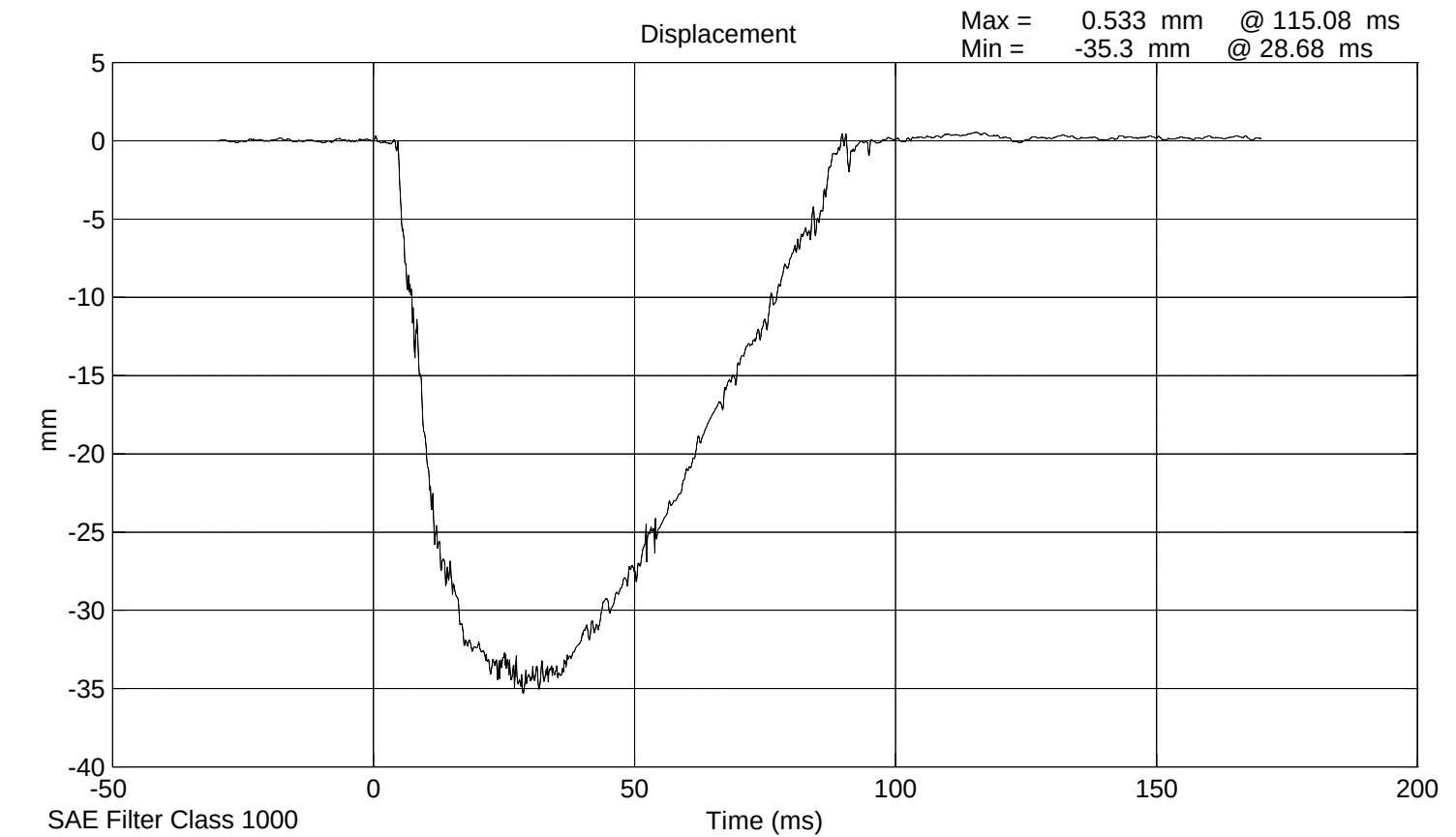
SID 268 Shock Absorber Impact Test @ 3.048 m/s



SID 268 Shock Absorber Impact Test @ 4.572 m/s



SID 268 Shock Absorber Impact Test @ 6.096 m/s



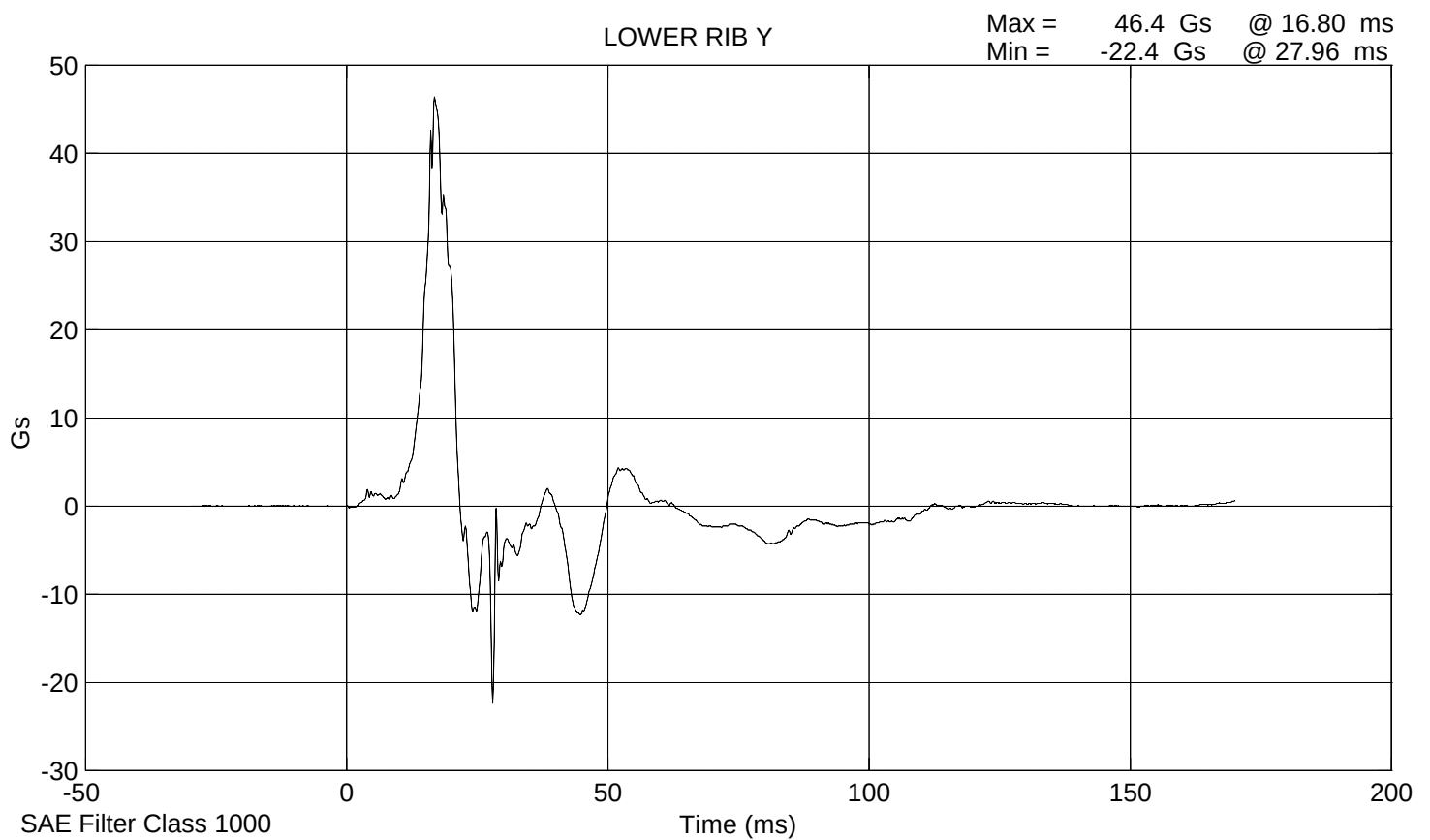
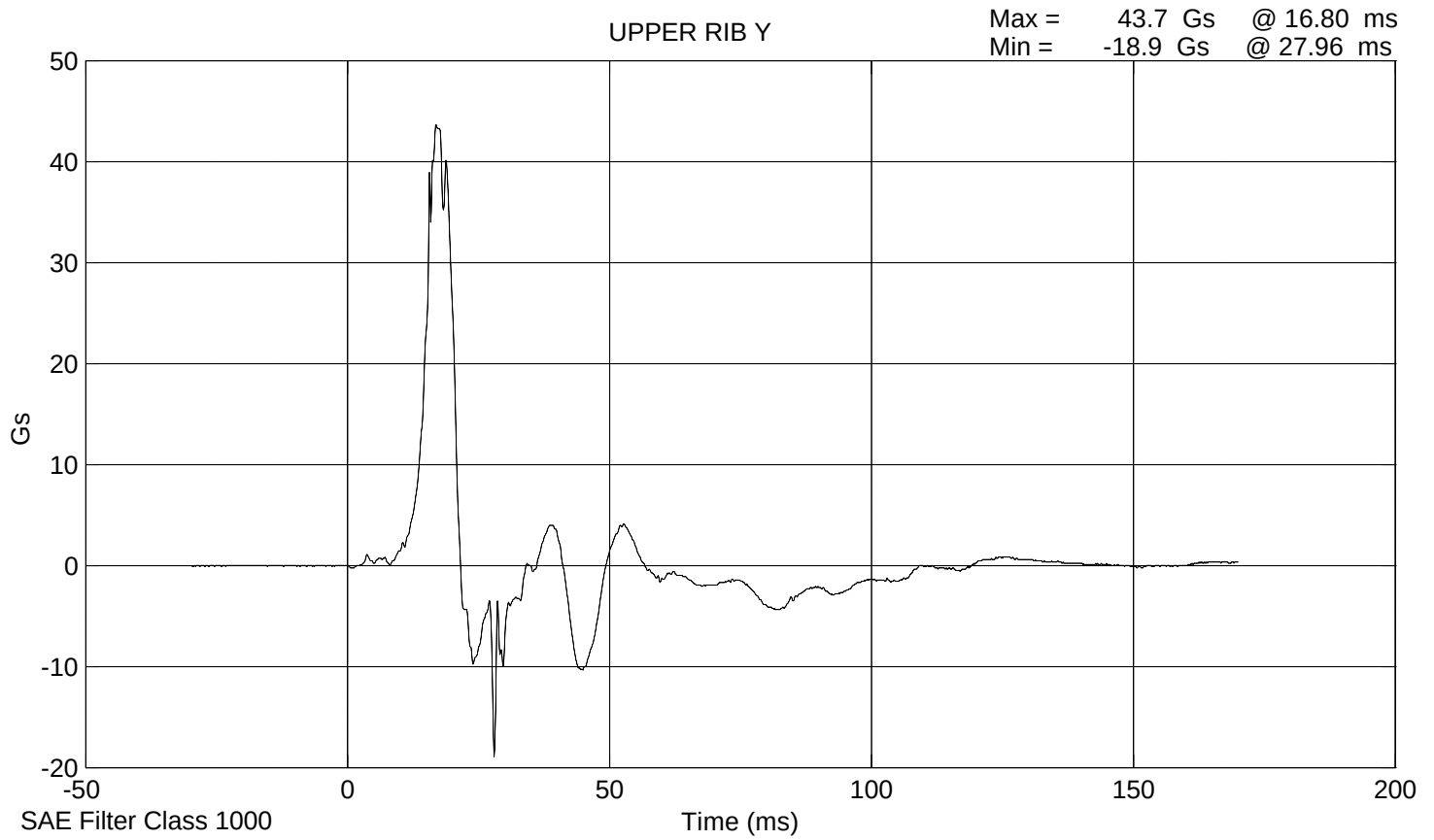
**LATERAL THORAX IMPACT TEST
PRE-TEST**

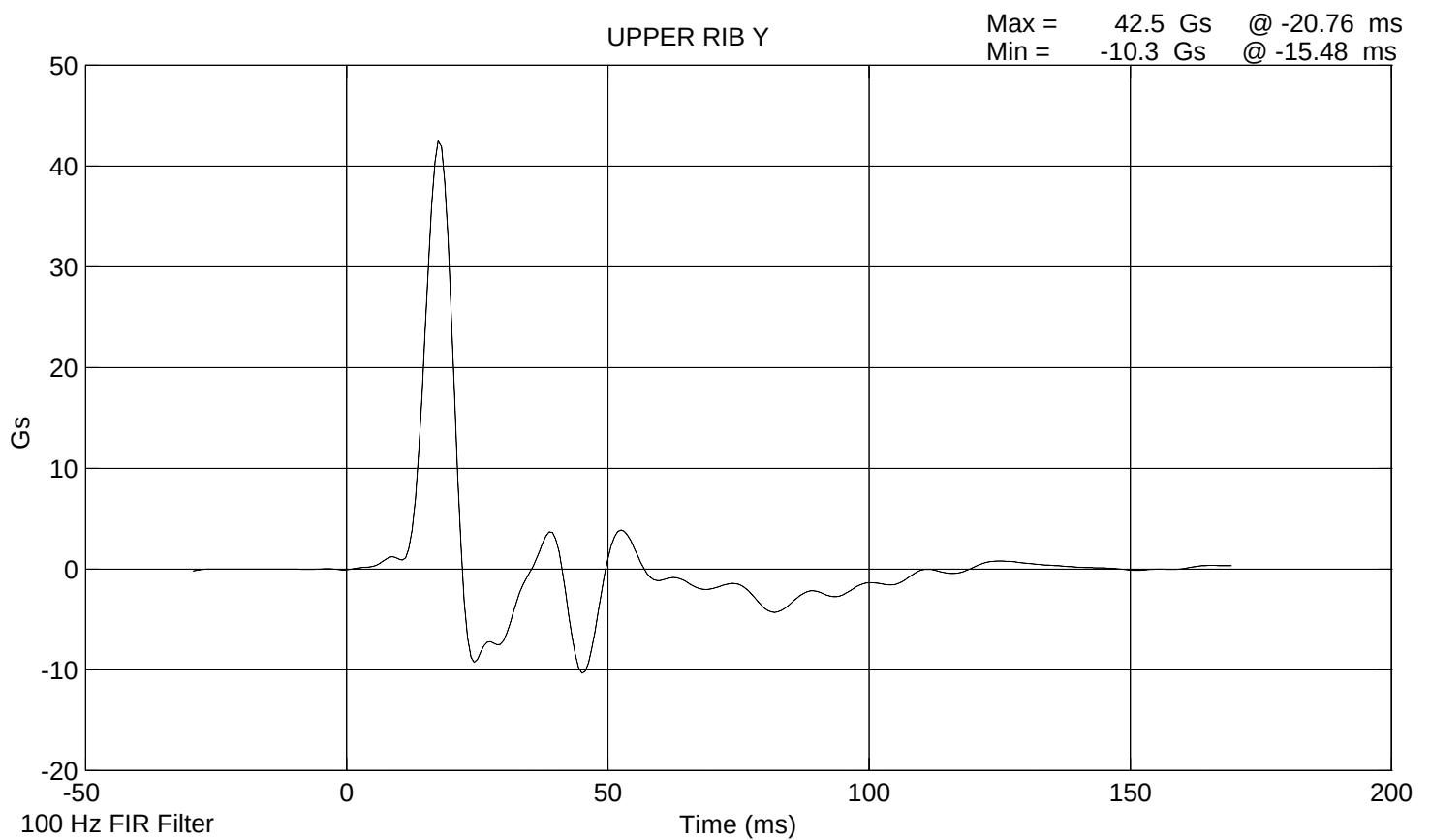
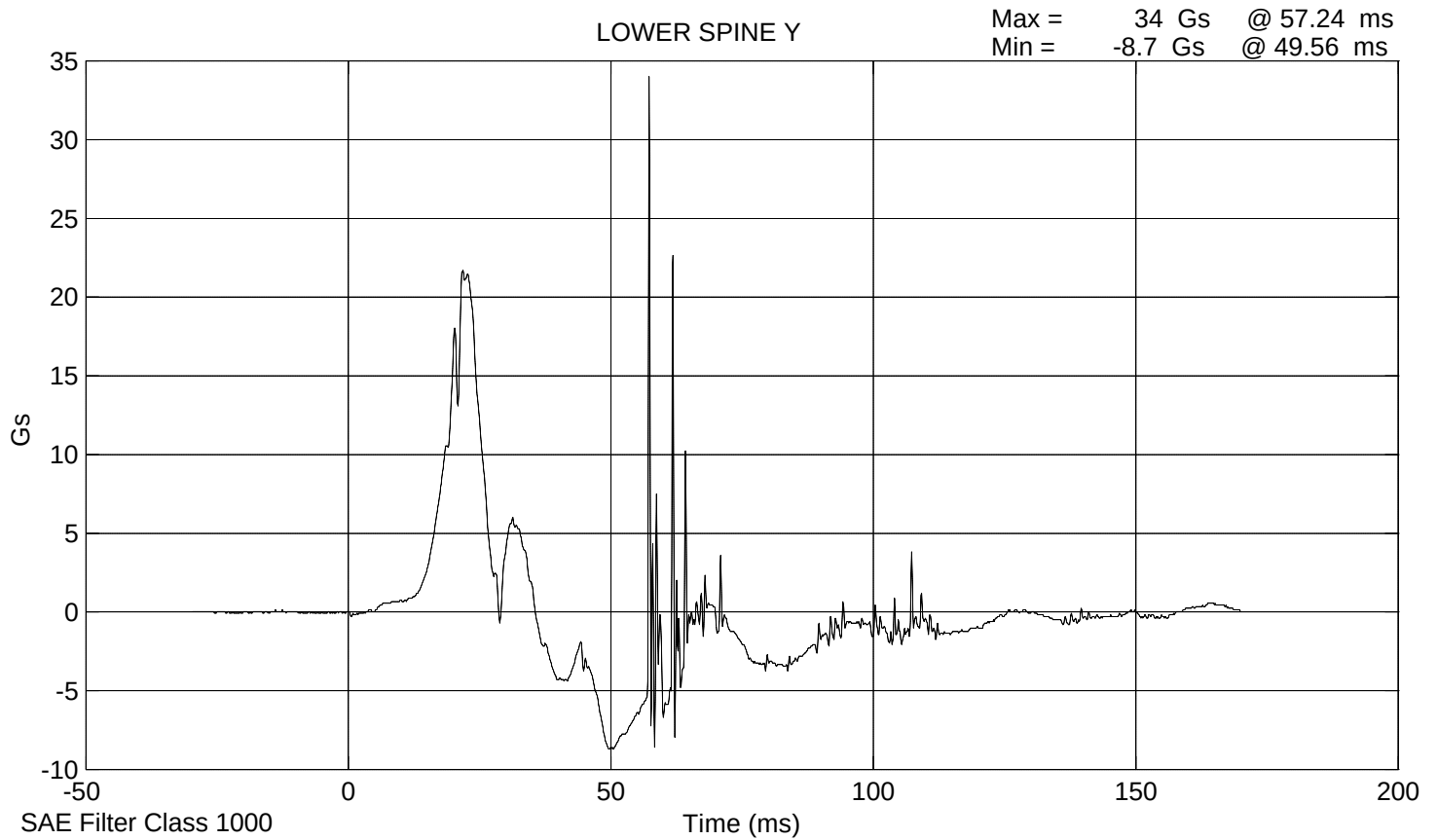
CONFIGURED FOR LEFT SIDE IMPACT

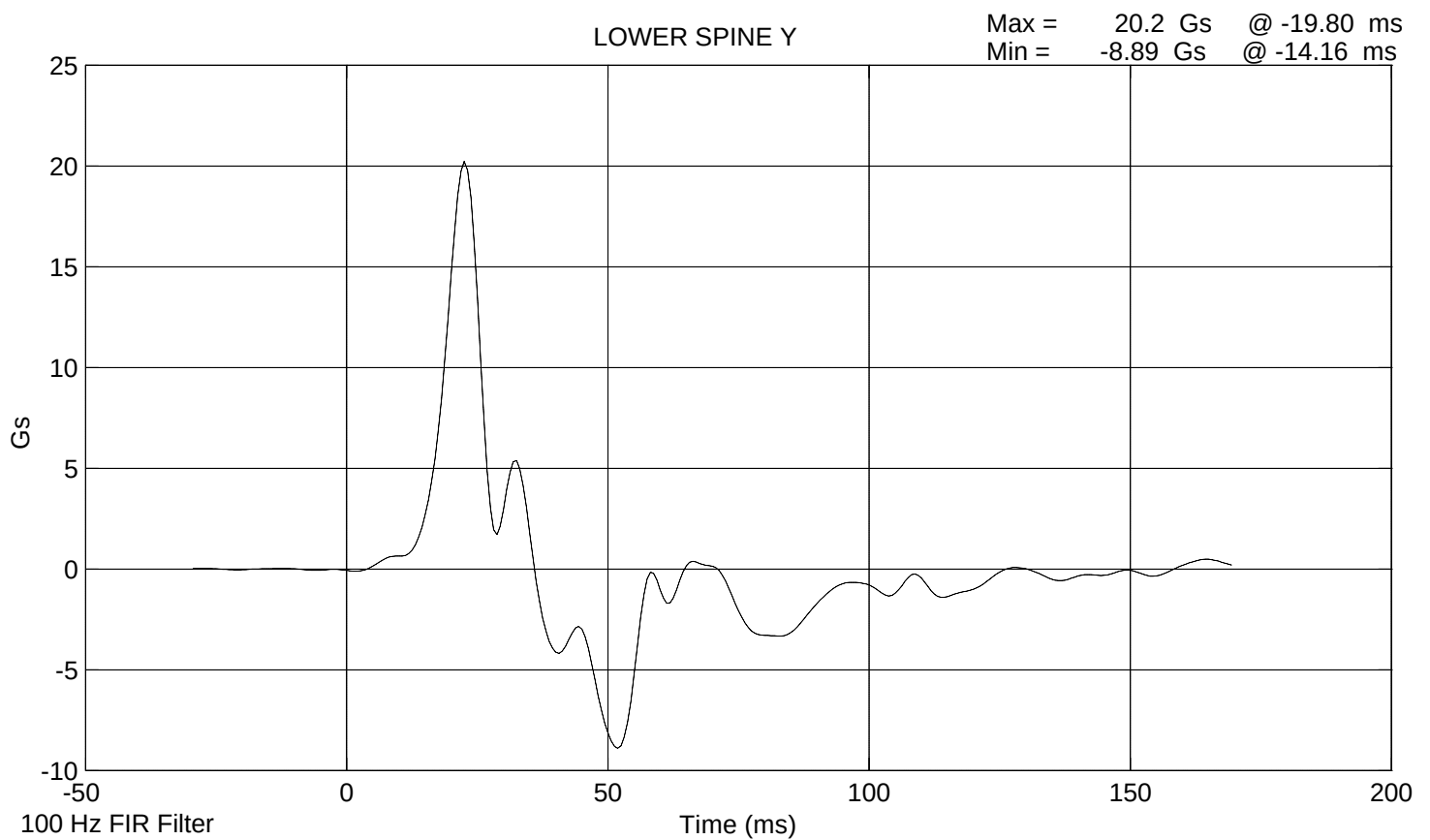
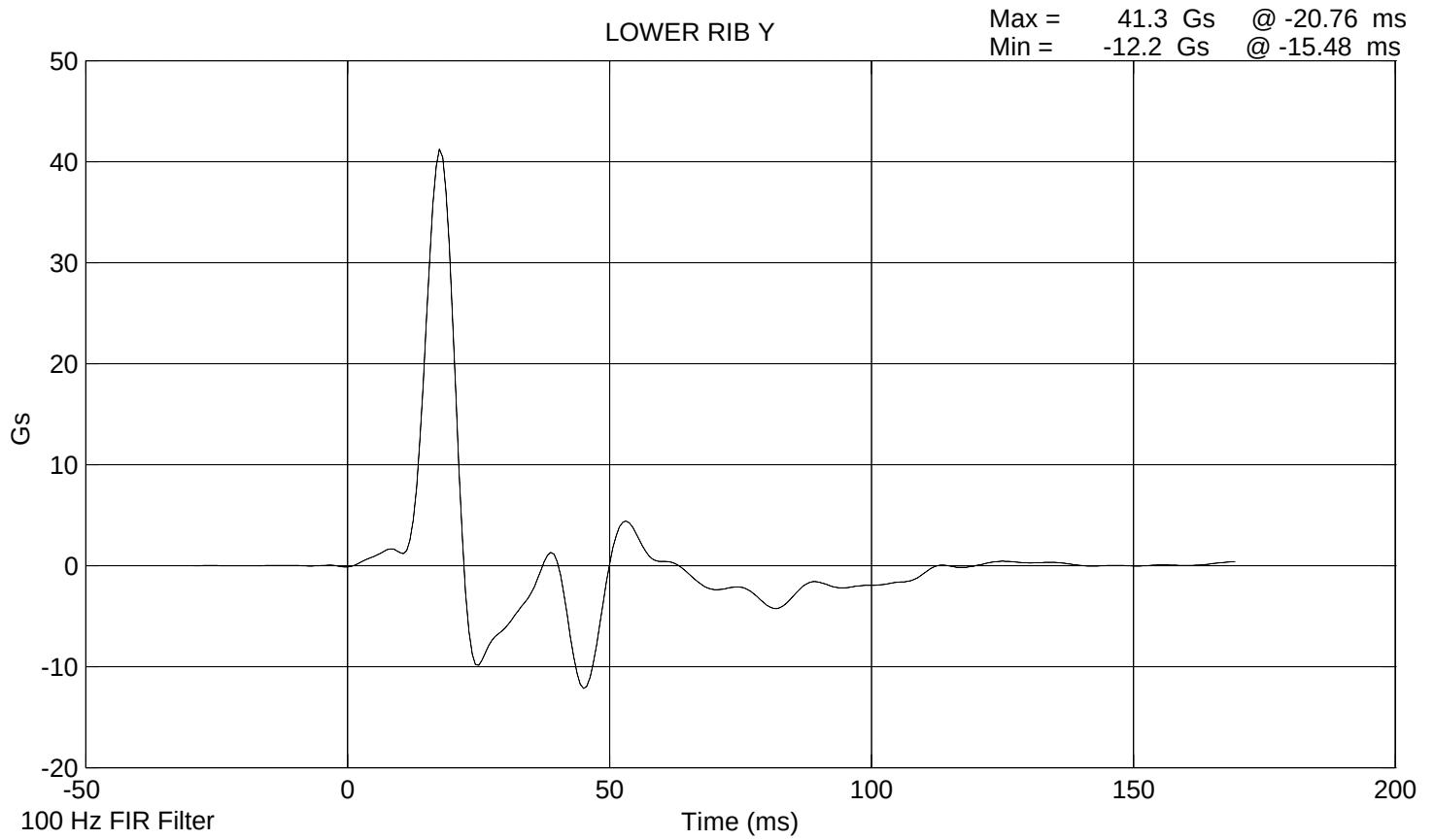
SID Serial No.: 268 Sequential Test Number: 3
Date: February 15, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32.0
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	42.50
LOWER RIB (g's)	37 - 46	41.26
LOWER SPINE (g's)	15 - 22	20.22

REMARKS: None







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

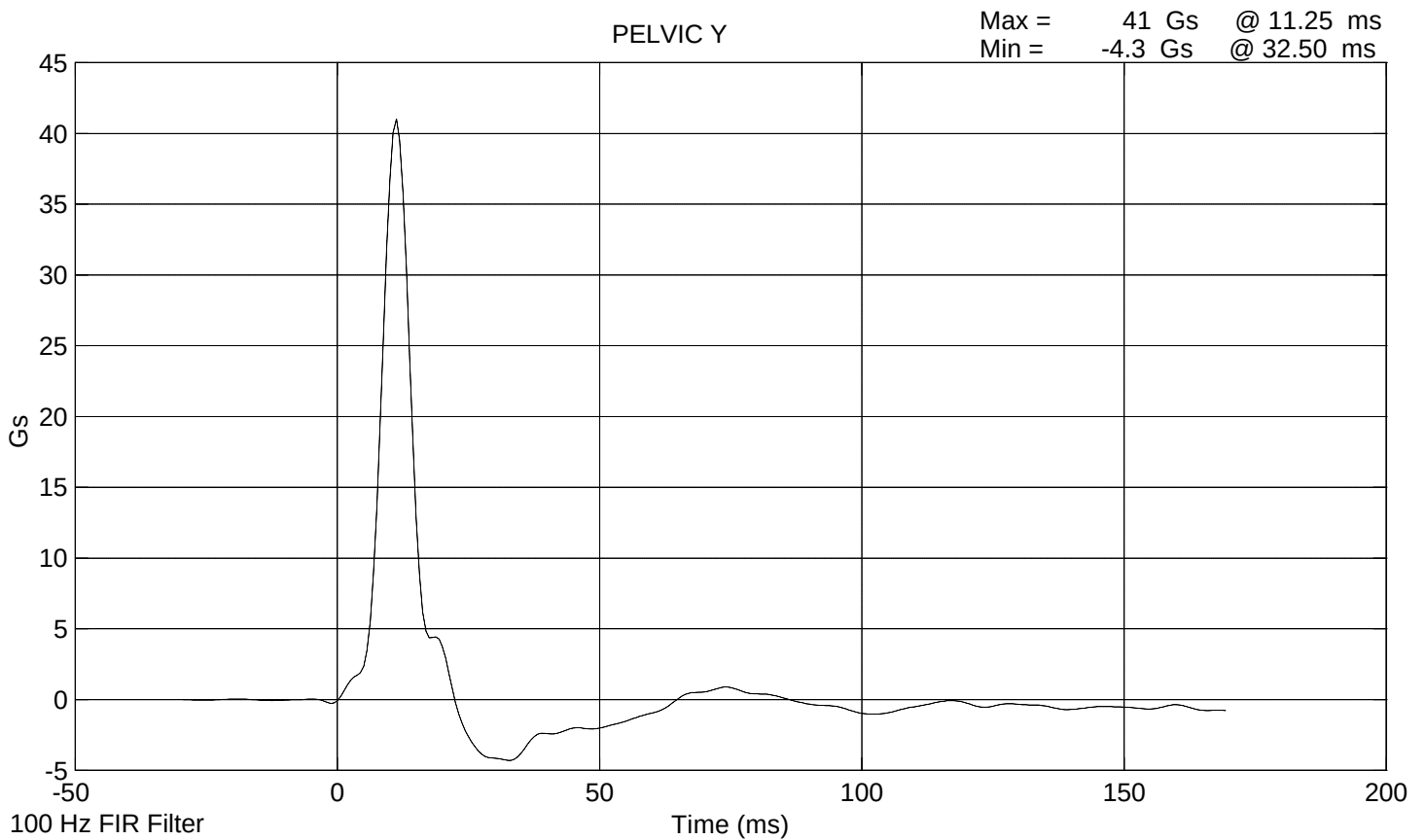
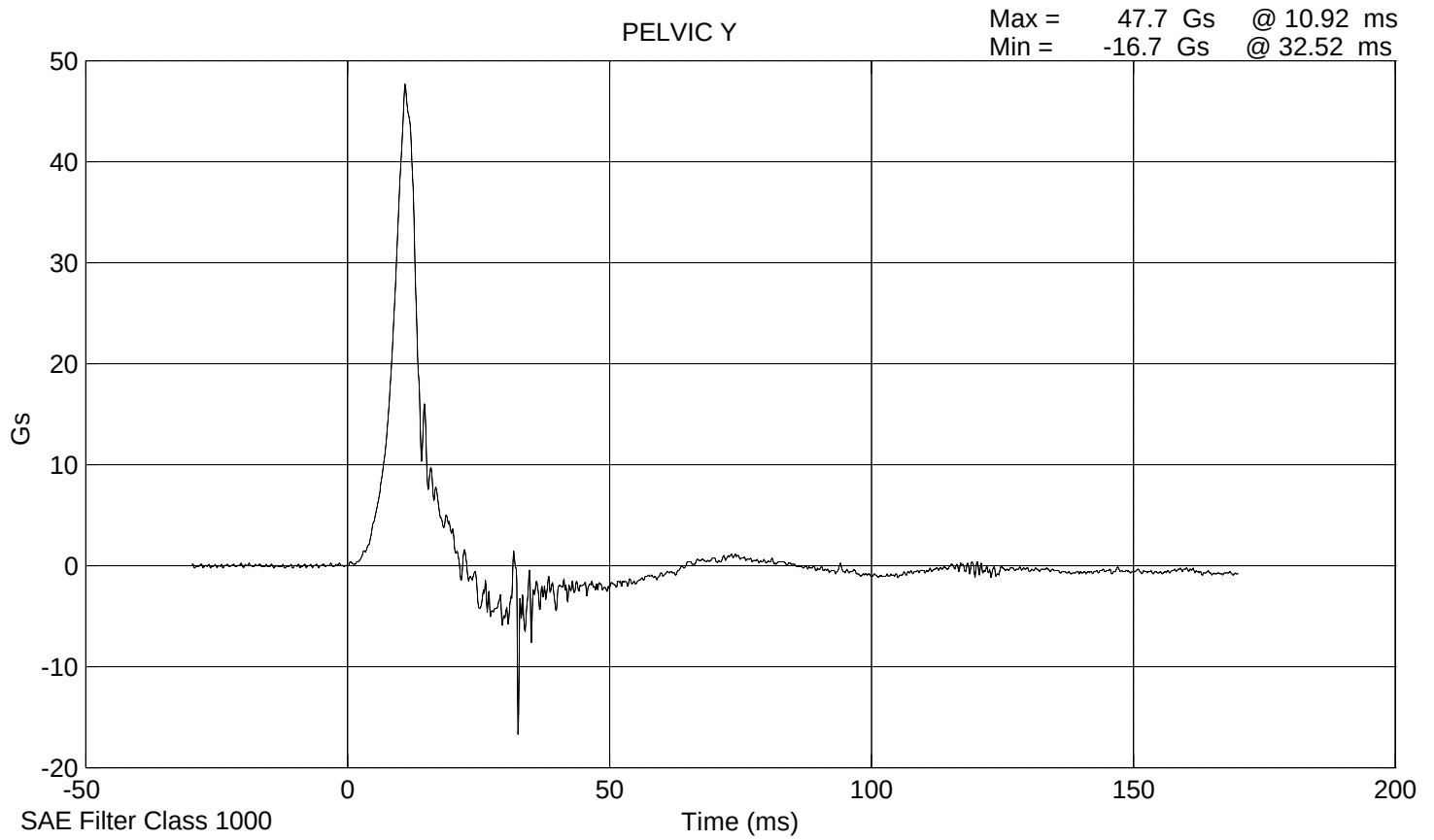
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 3
Date: February 21, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	41.02

REMARKS: None

SID 268 Pelvic Impact Test @ 4.2824 m/s



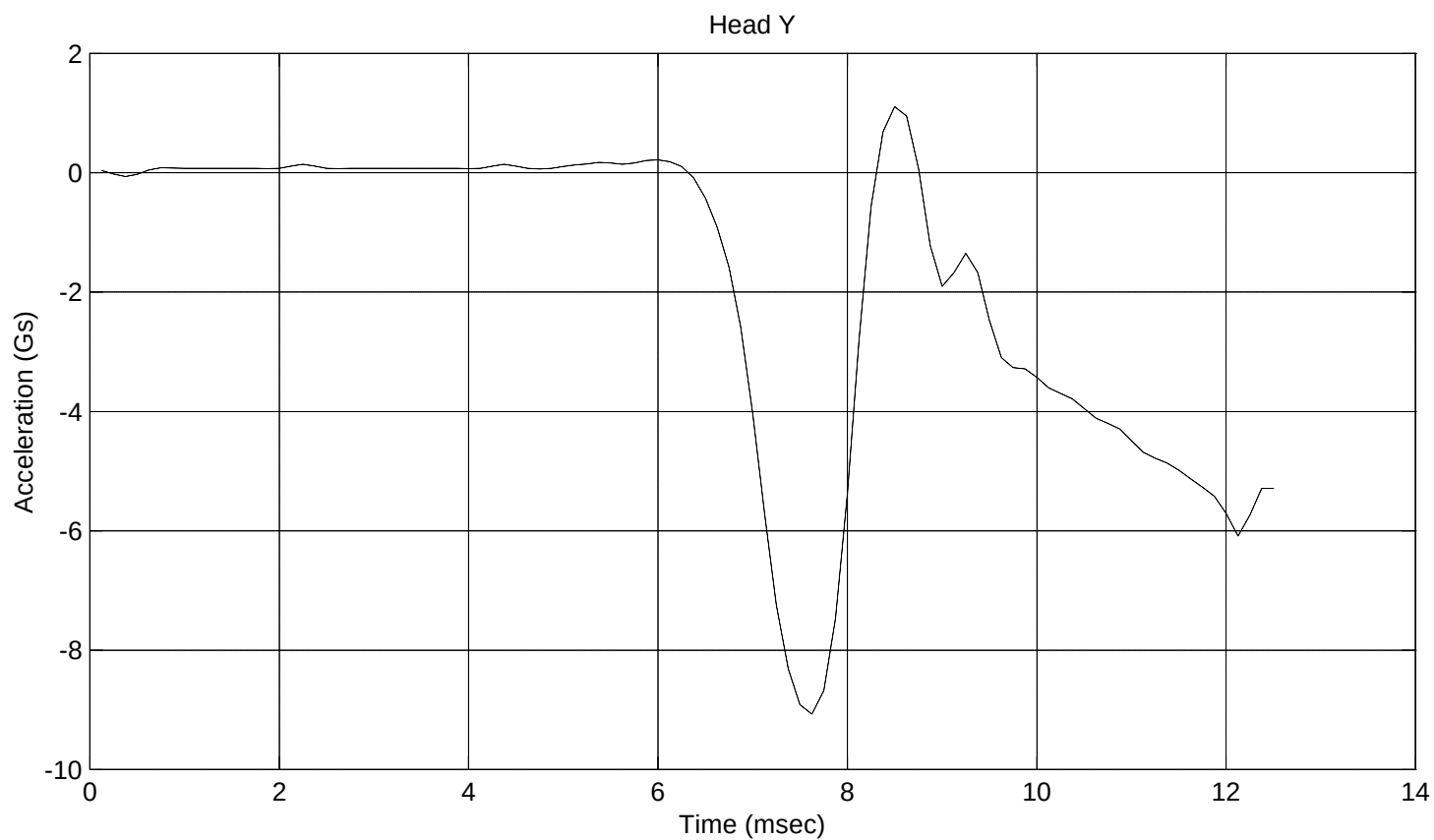
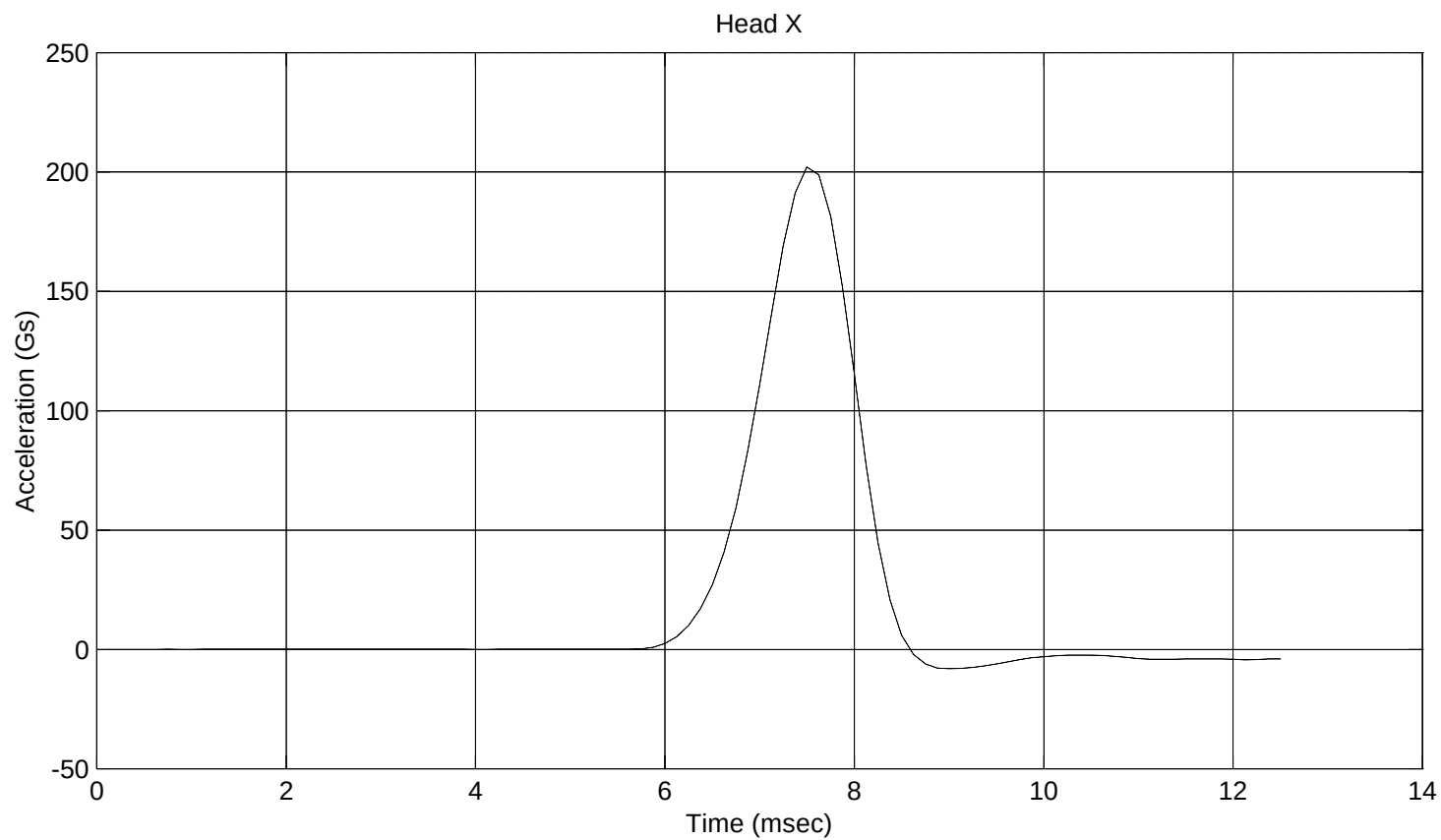
HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

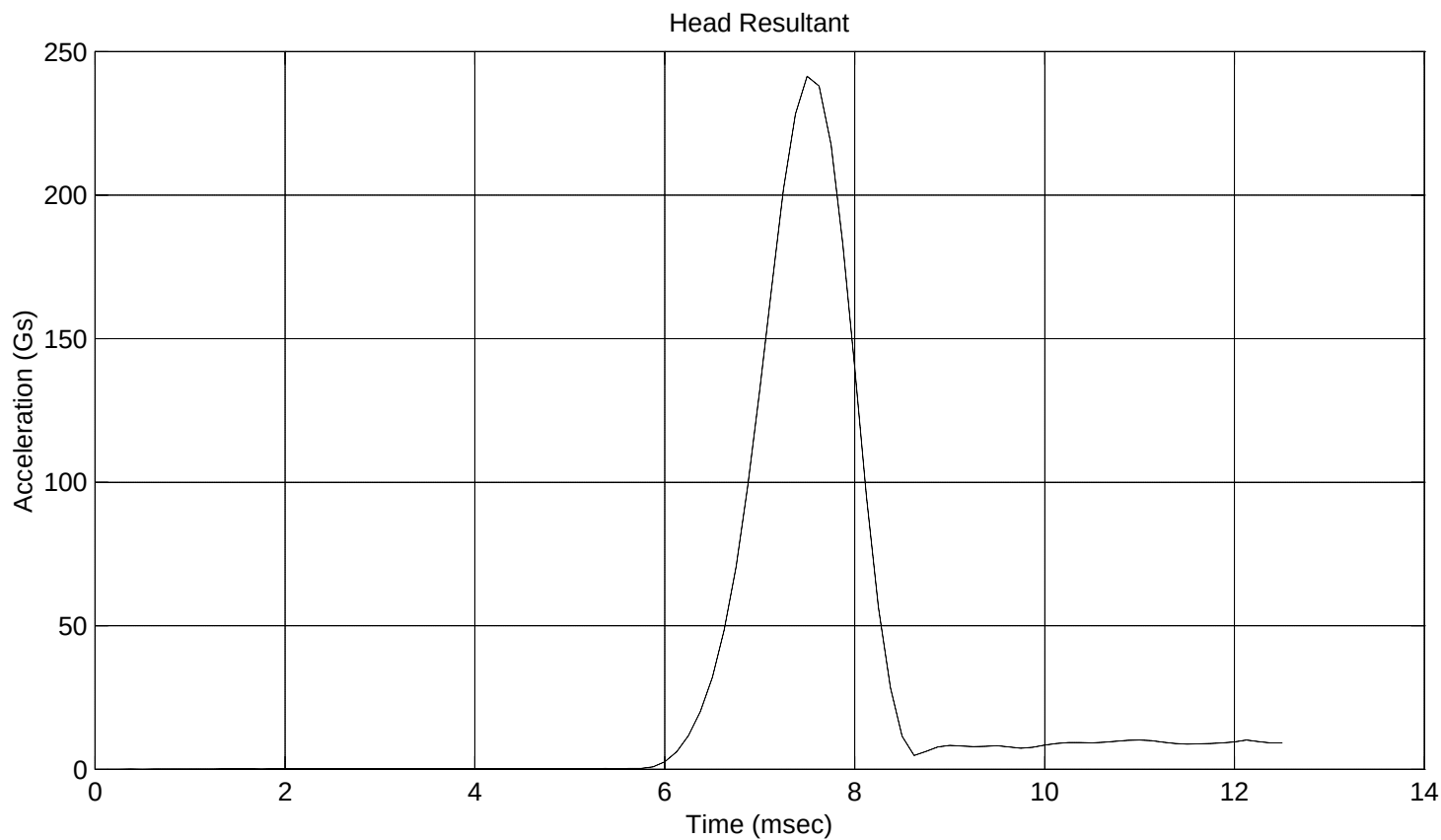
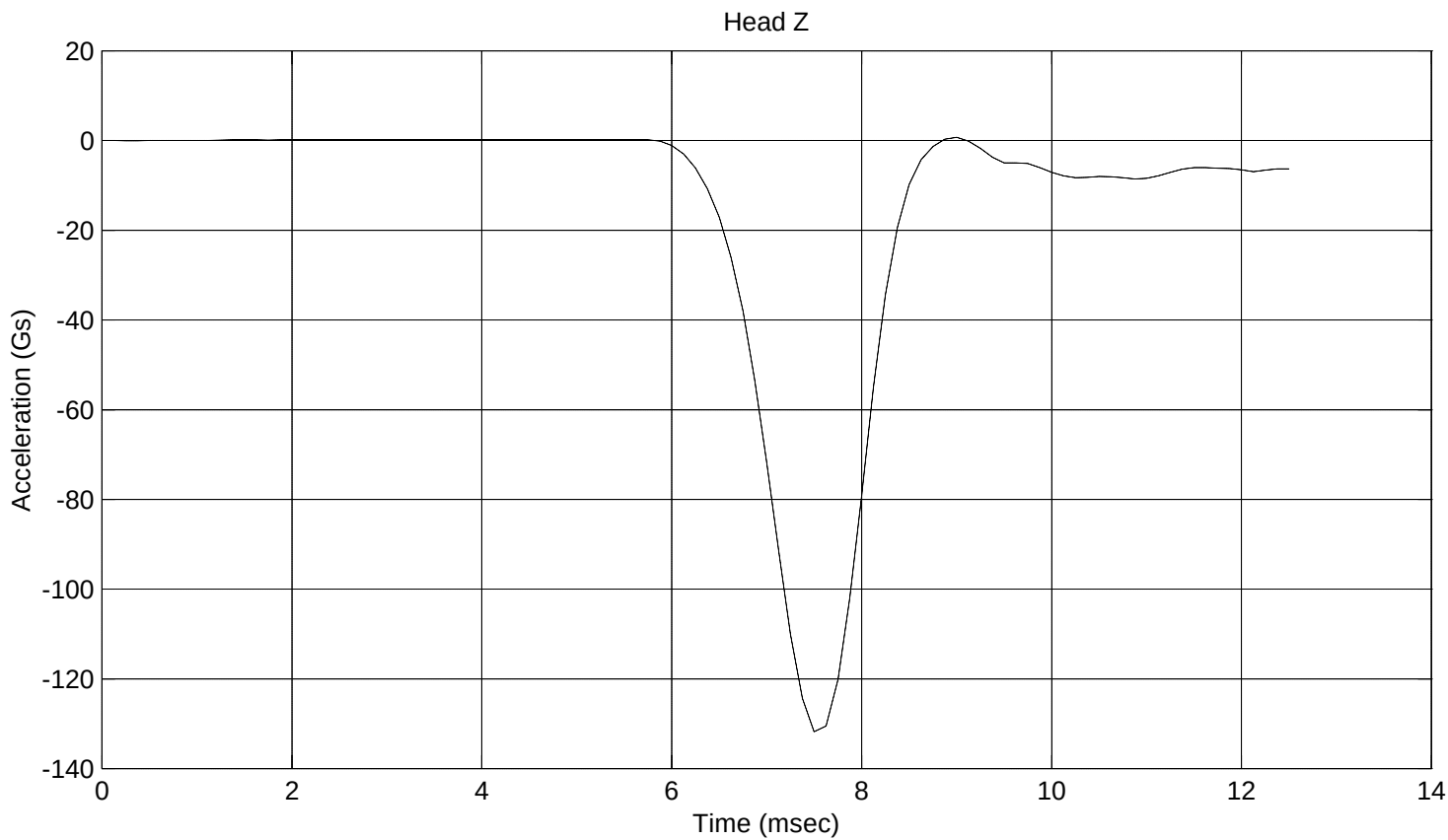
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 3
Date: February 14, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	214.44
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	9.07
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.25

REMARKS: None





ABDOMINAL COMPRESSION TEST**PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACTSID Serial No.: 268Sequential Test Number: 3Date: February 15, 2001Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
FORCE @ 13 mm (N)	104 - 162	120.1
FORCE @ 19 mm (N)	163 - 221	175.7
FORCE @ 25 mm (N)	222 - 280	258.0
FORCE @ 33 mm (N)	325 - 391	369.6

REMARKS: None

Dummy S/N 268

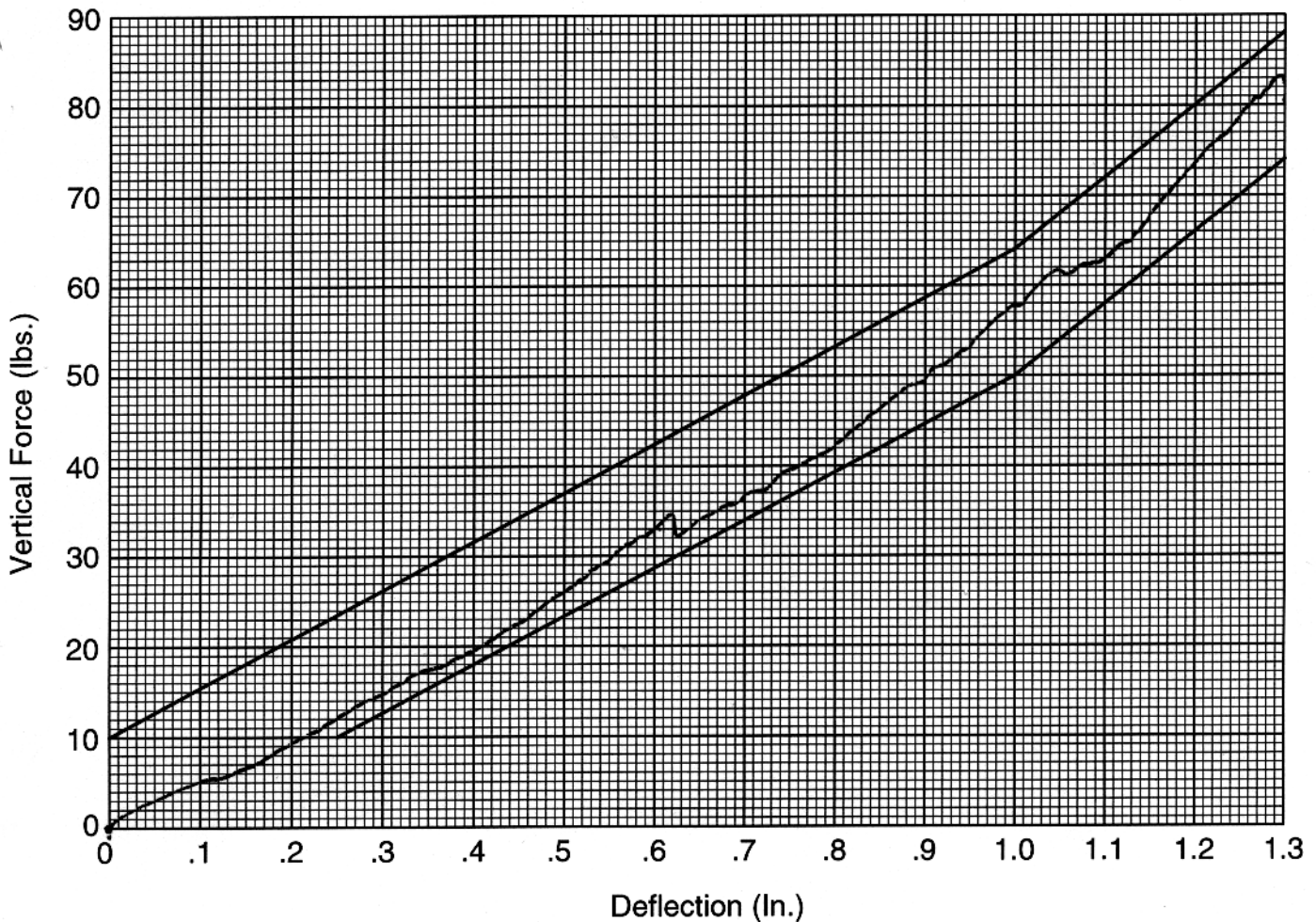
W/A _____

Date 2-15-2001

Performed By BZ

Temp. 71°

Humidity 31%



**Hybrid II
Abdomen Static Press**

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

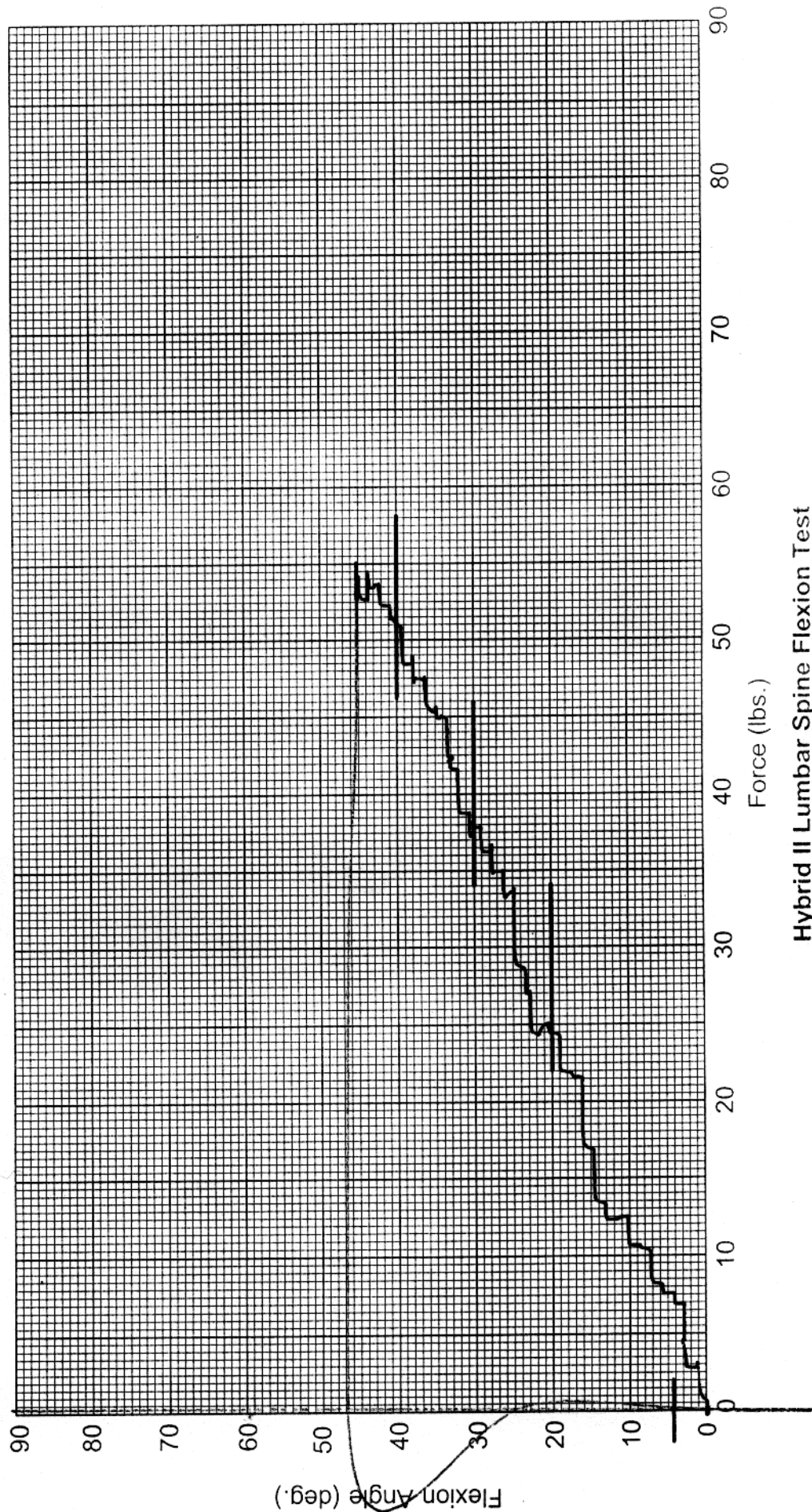
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 3
Date: February 15, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
FORCE @ 0E (N)	0 - 26.7	0
FORCE @ 20E (N)	97.8 - 151.2	109.0
FORCE @ 30E (N)	151.2 - 204.6	169.0
FORCE @ 40E (N)	204.6 - 258	226.9
RETURN ANGLE	12E max.	4.1E

REMARKS: None

Dummy S/N 268
 W/A _____
 Date 2-15-2001
 Performed By [Signature]
 Temp. 71
 Humidity 31%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 3
Date: February 15, 2001 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: 2
Date: March 1, 2001 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: 2
Date: March 1, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
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	377

REMARKS: None

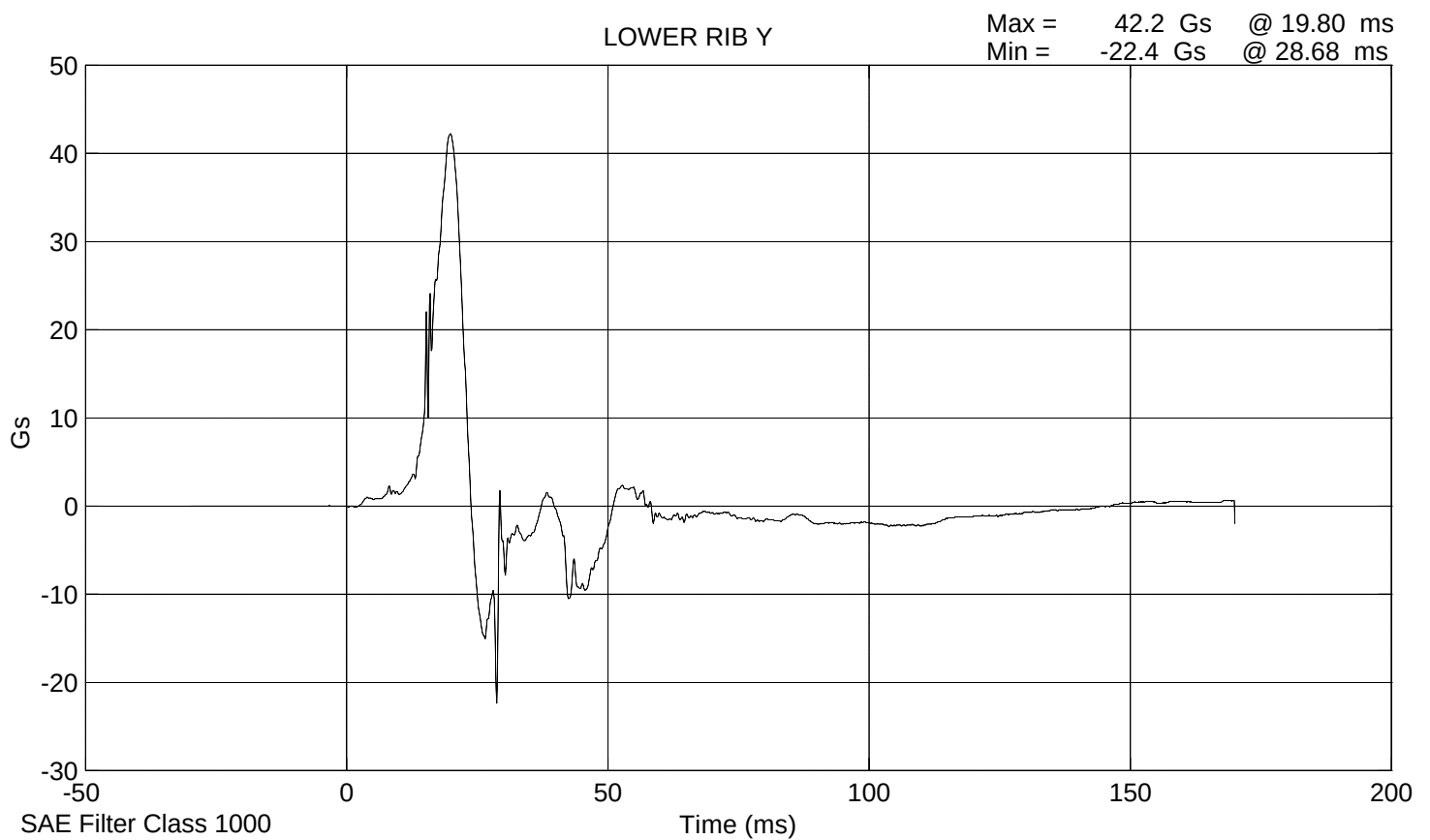
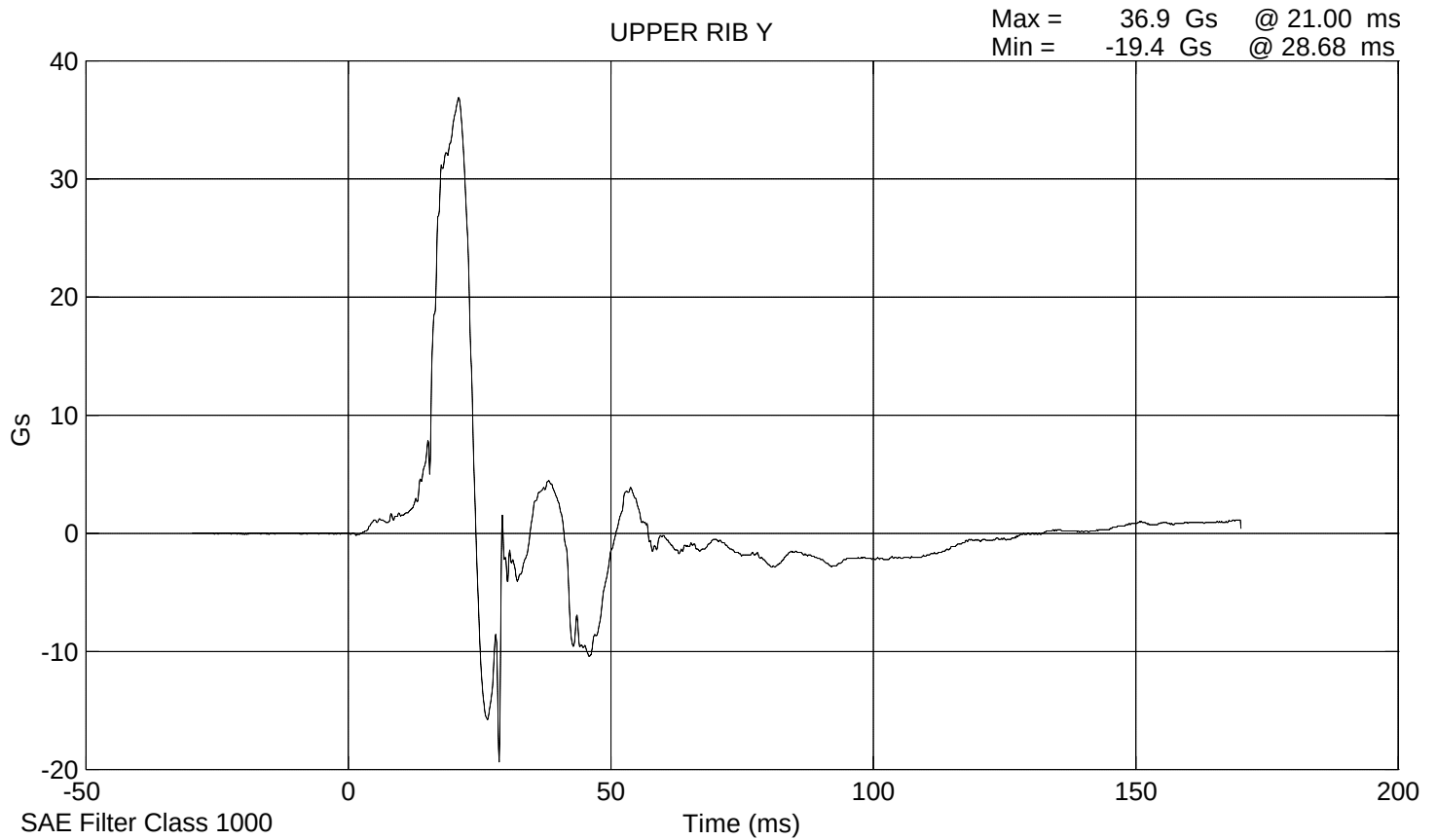
**LATERAL THORAX IMPACT TEST
POST TEST**

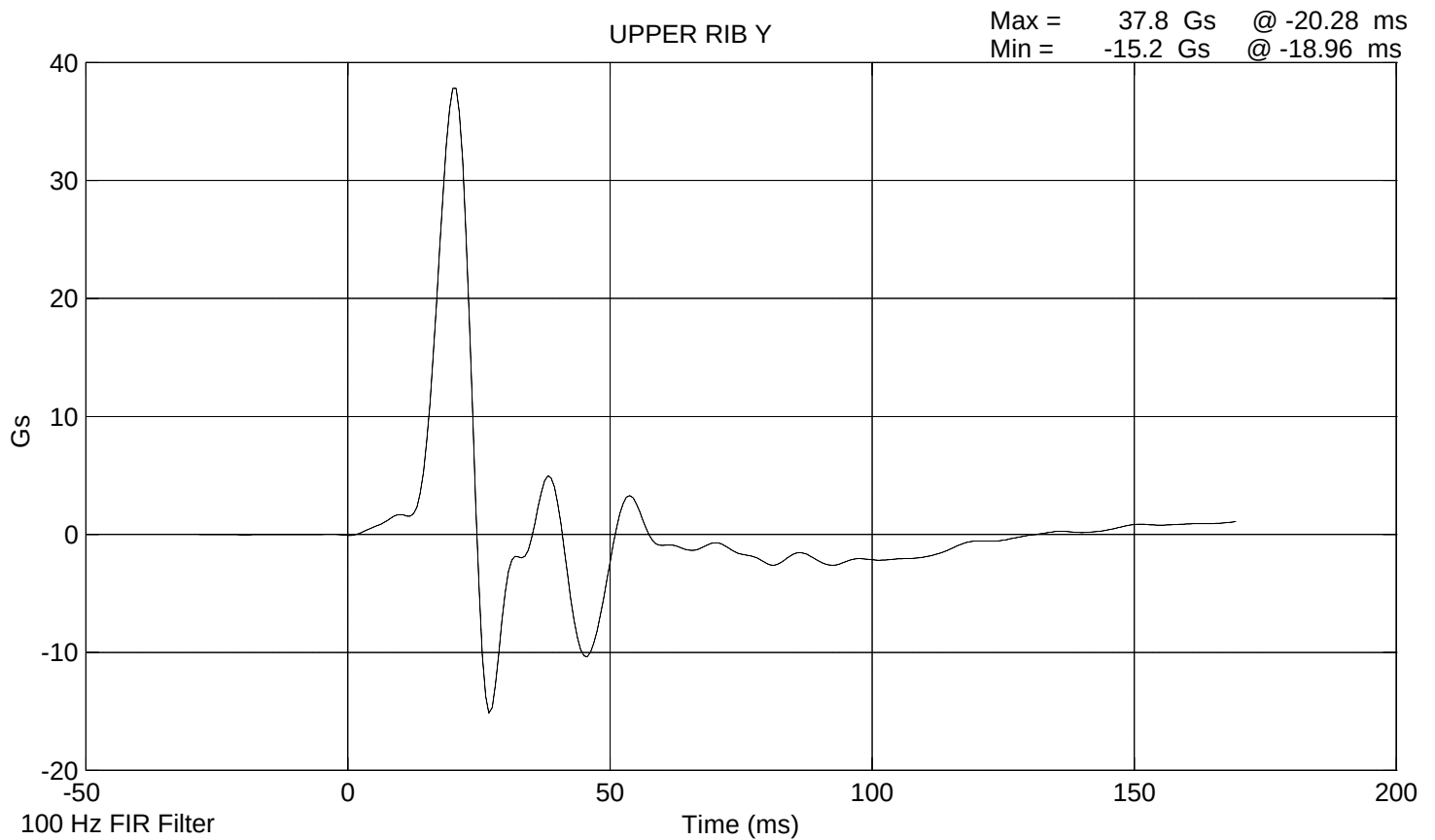
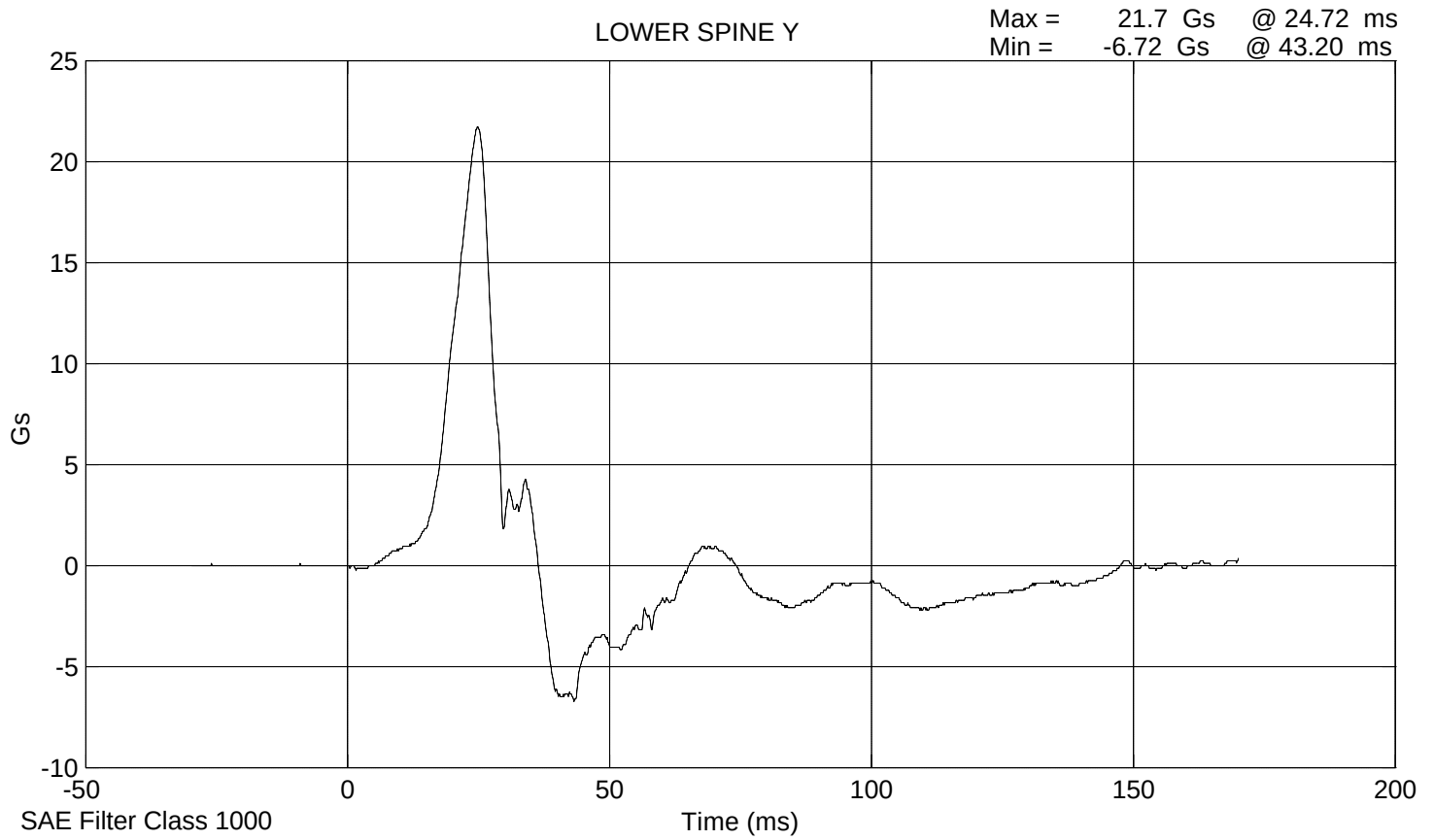
CONFIGURED FOR LEFT SIDE IMPACT

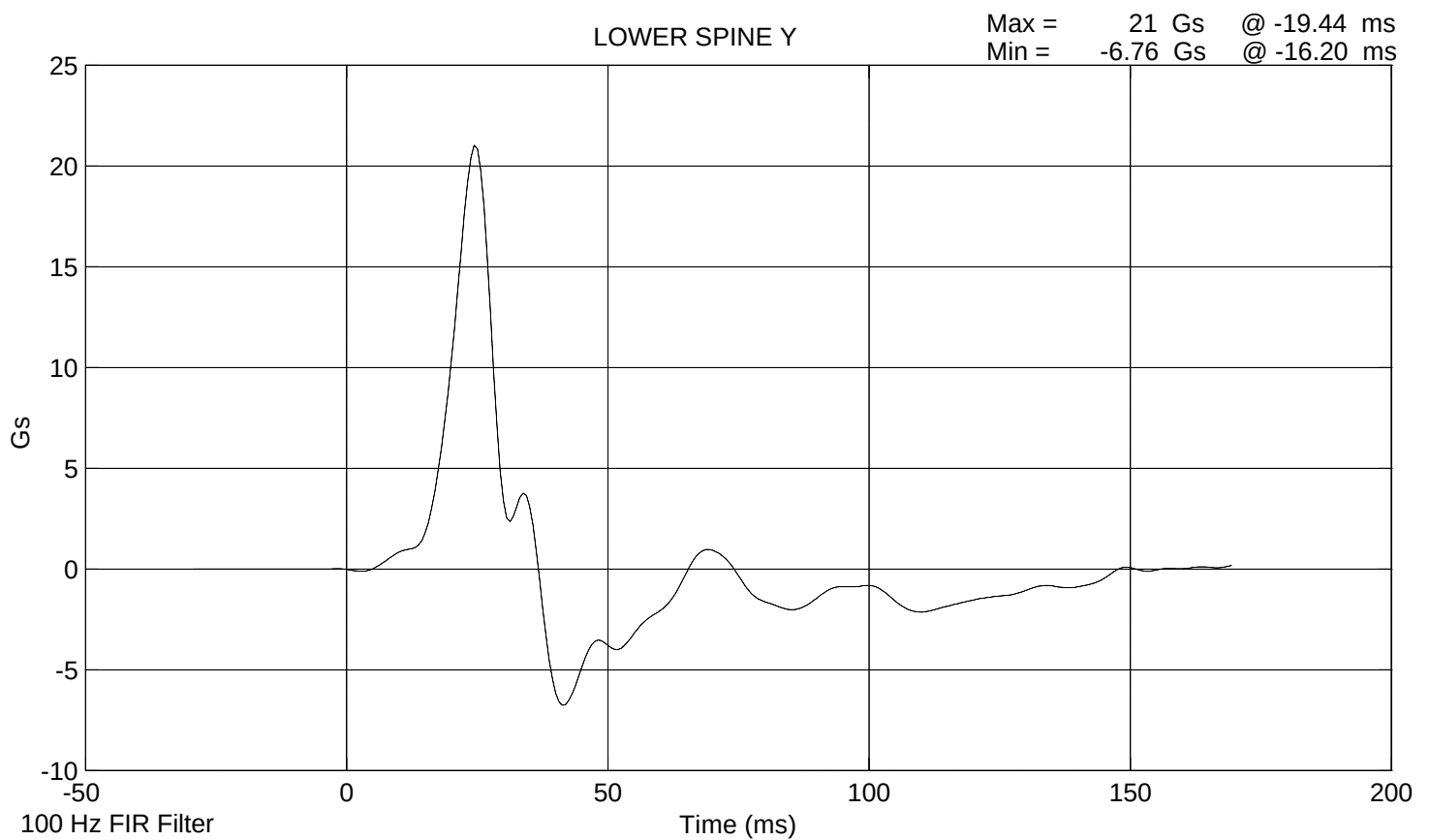
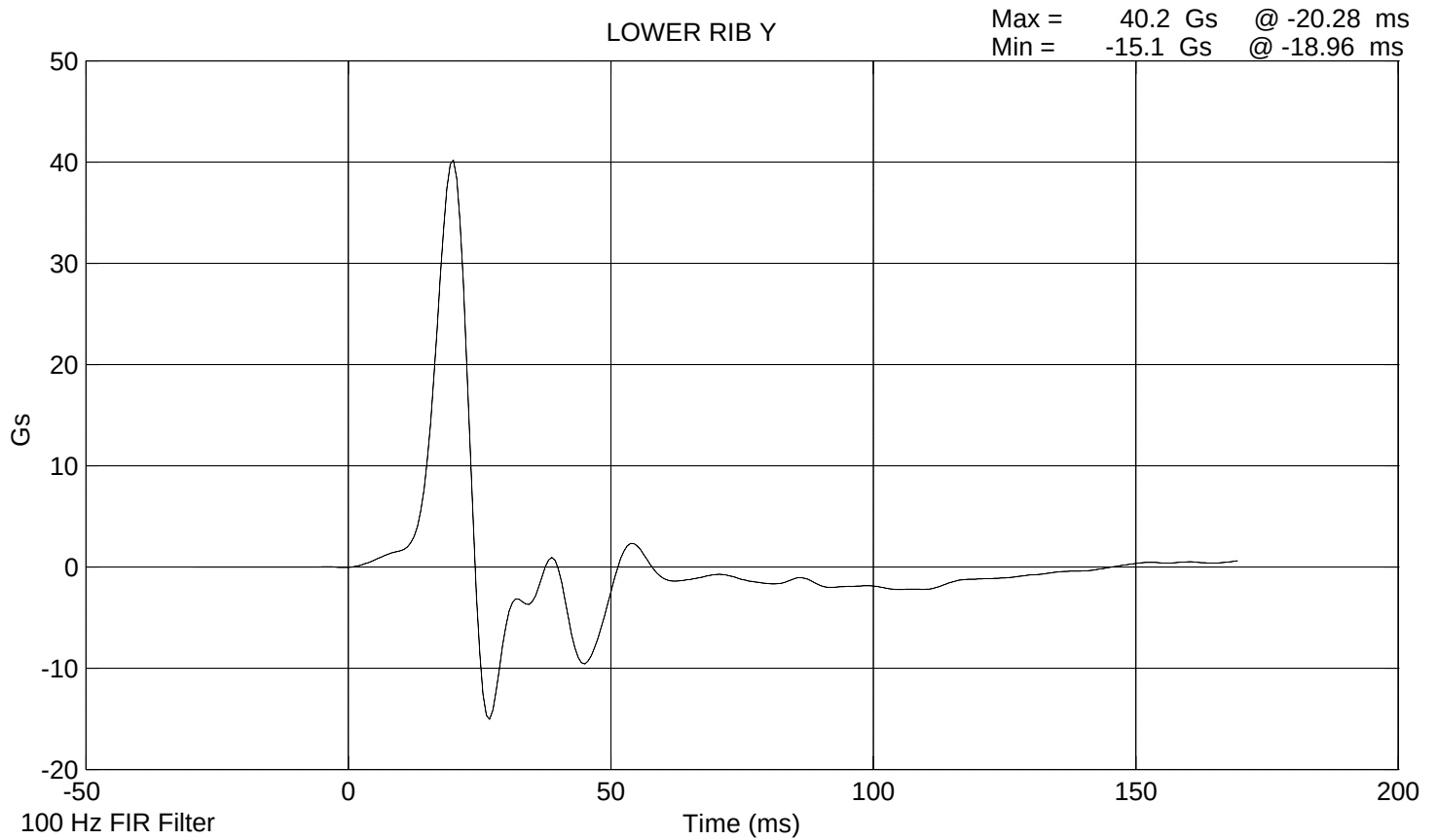
SID Serial No.: 013 Sequential Test Number: 2
Date: February 28, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PROBE SPEED (m/s)	4.27 - 4.33	4.32
UPPER RIB (g's)	37 - 46	37.82
LOWER RIB (g's)	37 - 46	40.21
LOWER SPINE (g's)	15 - 22	21.03

REMARKS: None







**LATERAL PELVIS IMPACT TEST
POST TEST**

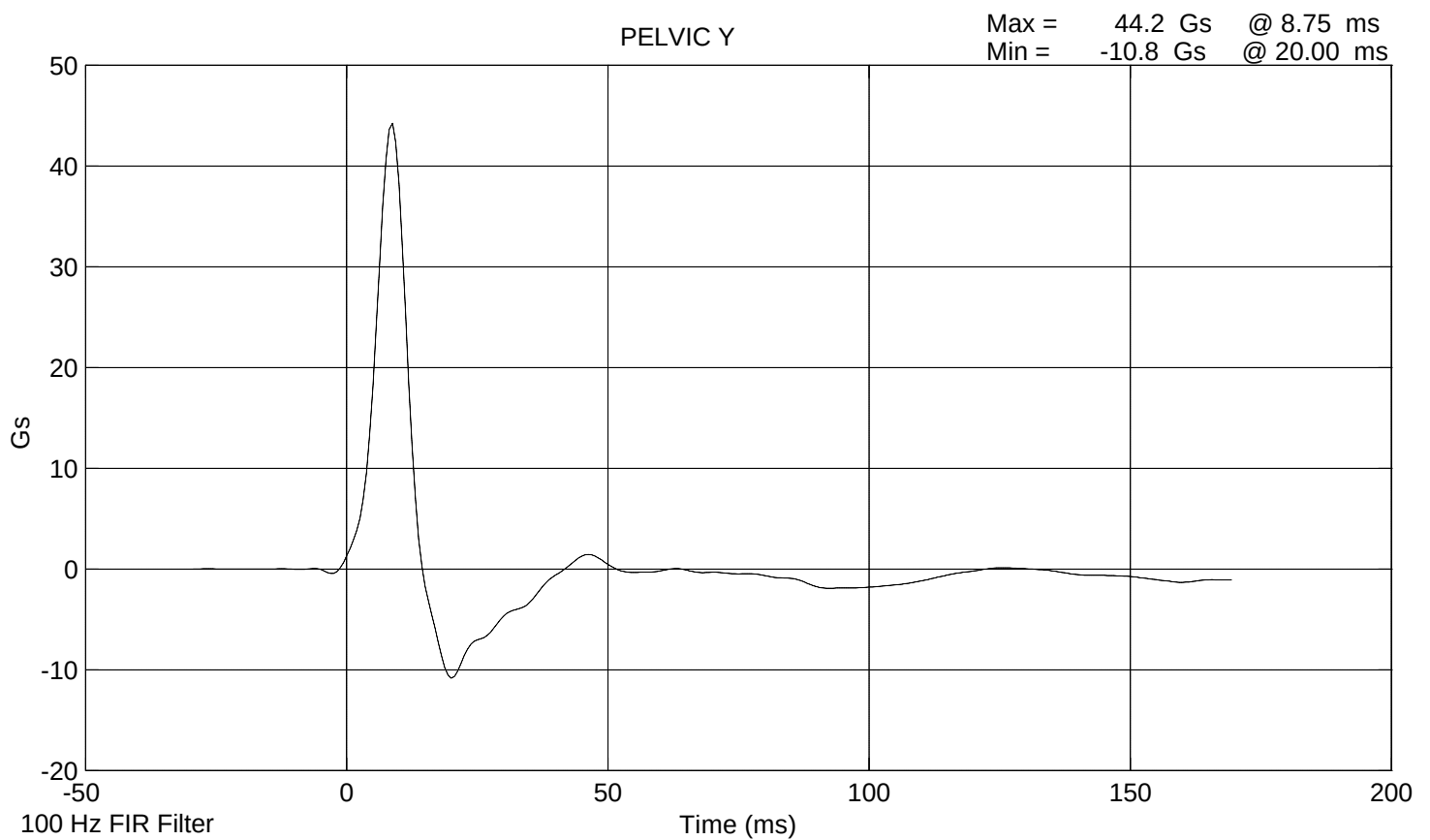
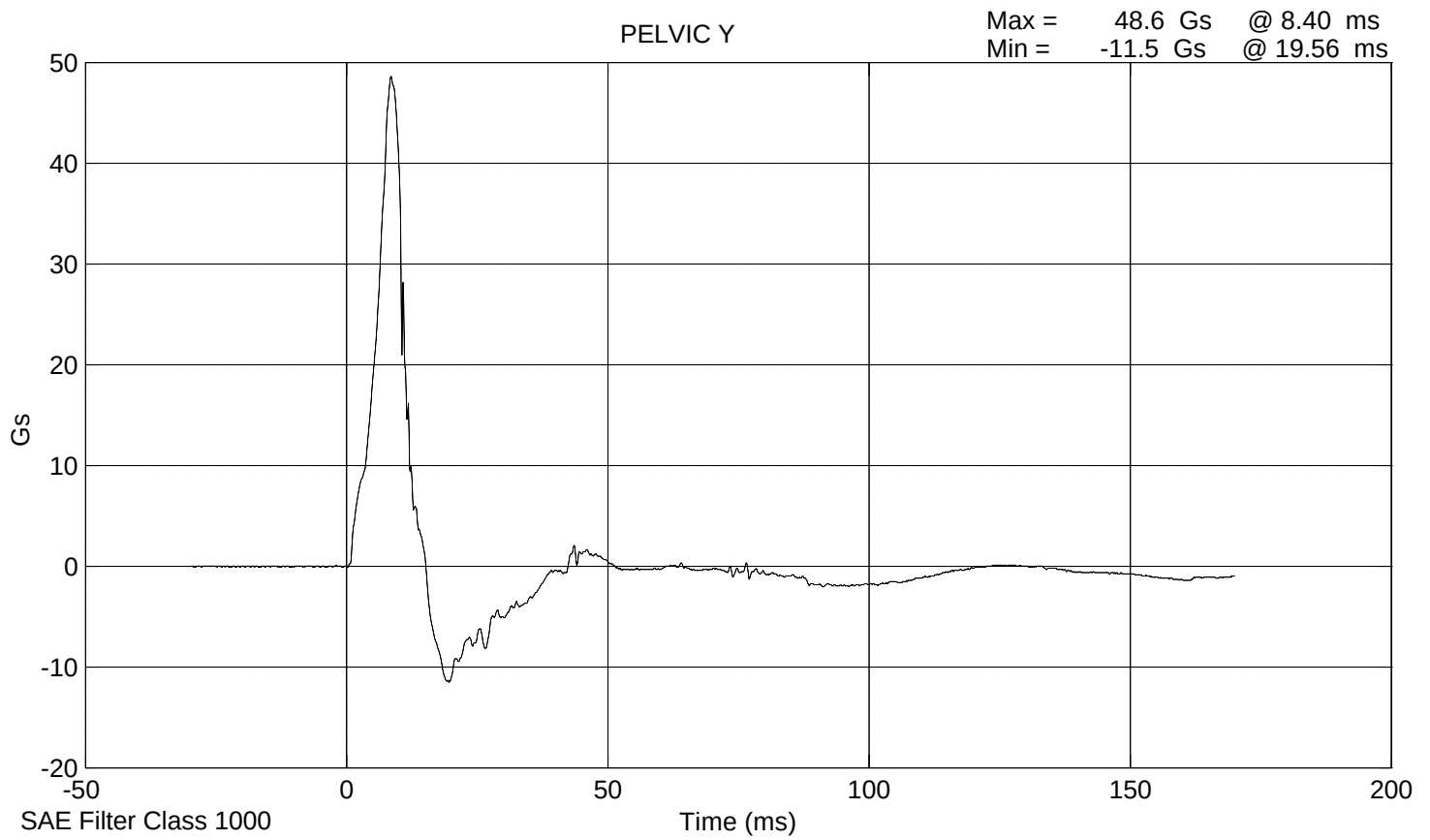
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 2
Date: March 1, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32.0
PROBE SPEED (m/s)	4.27 - 4.33	4.27
PELVIS ACCELERATION (g's)	40 - 60	44.25

REMARKS: None

SID 013 Pelvic Impact Test @ 4.2702 m/s



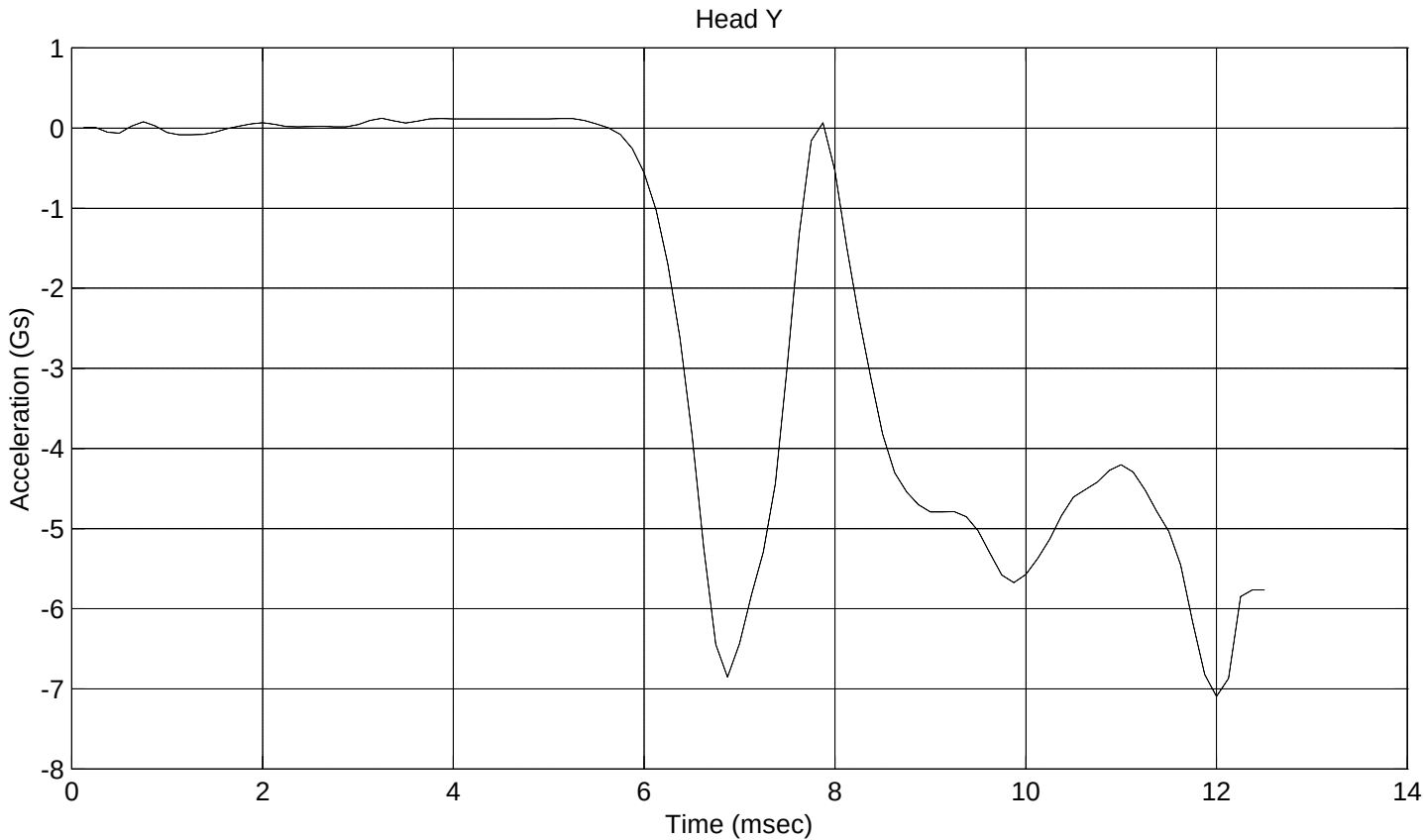
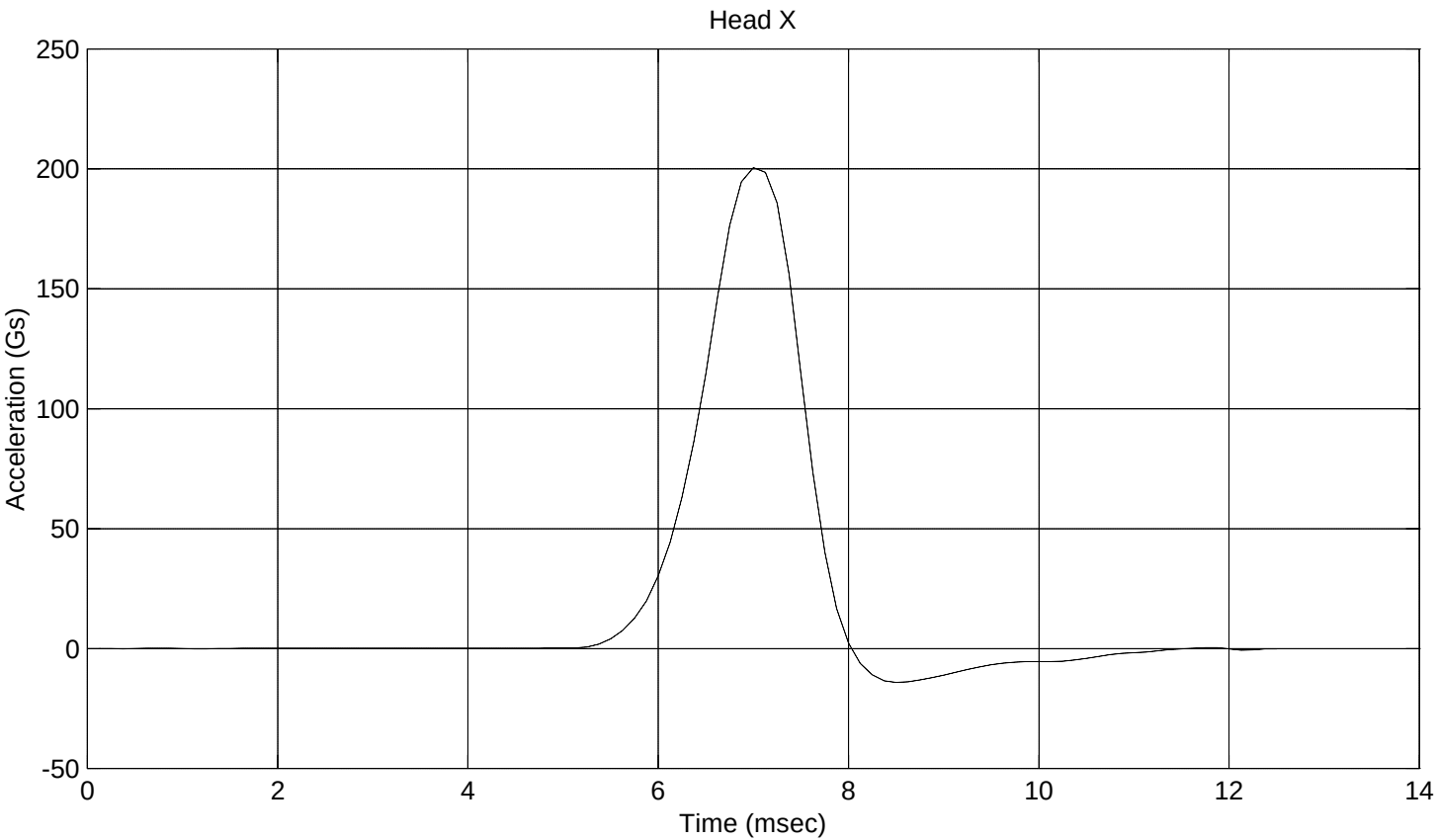
HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

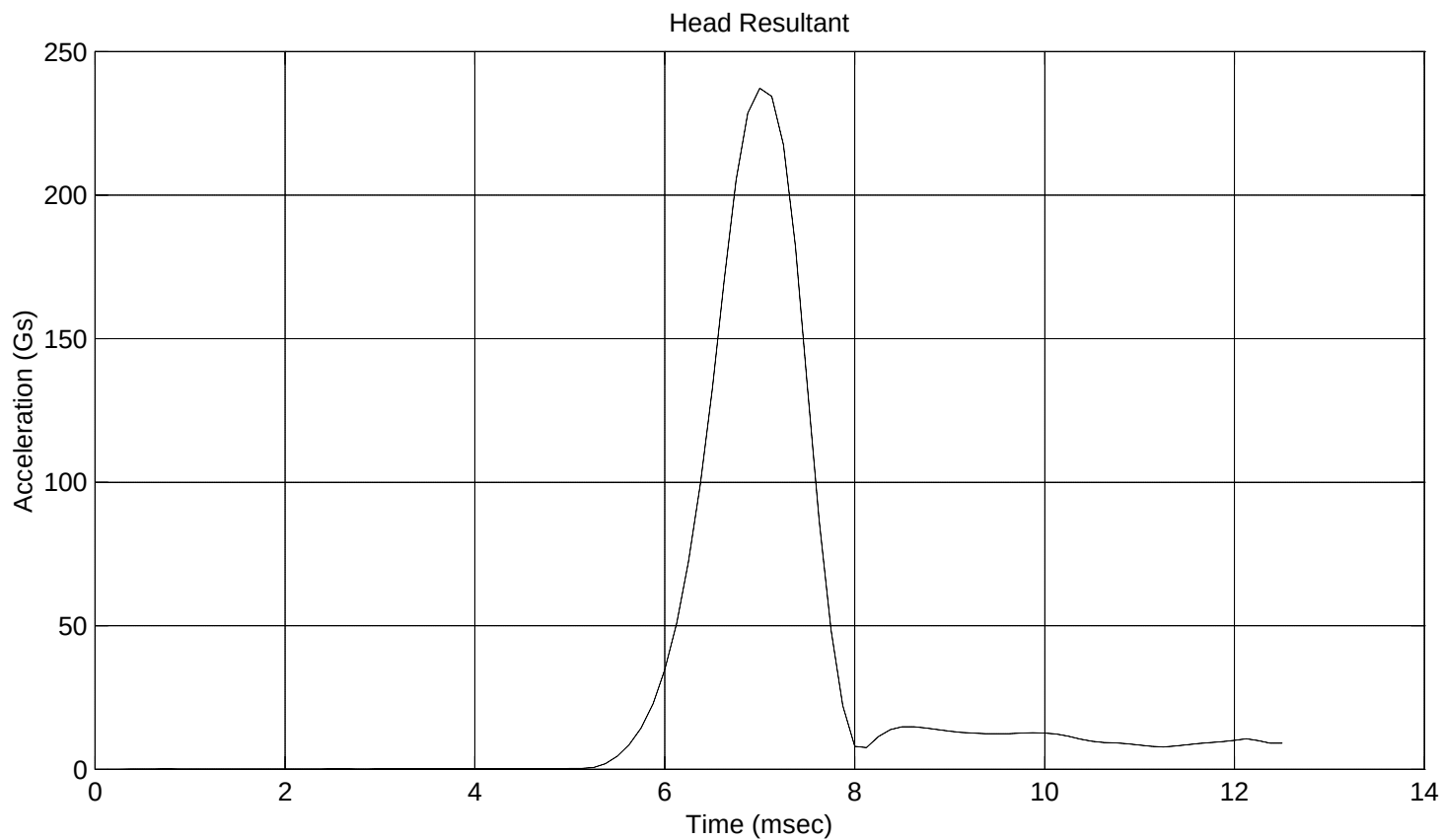
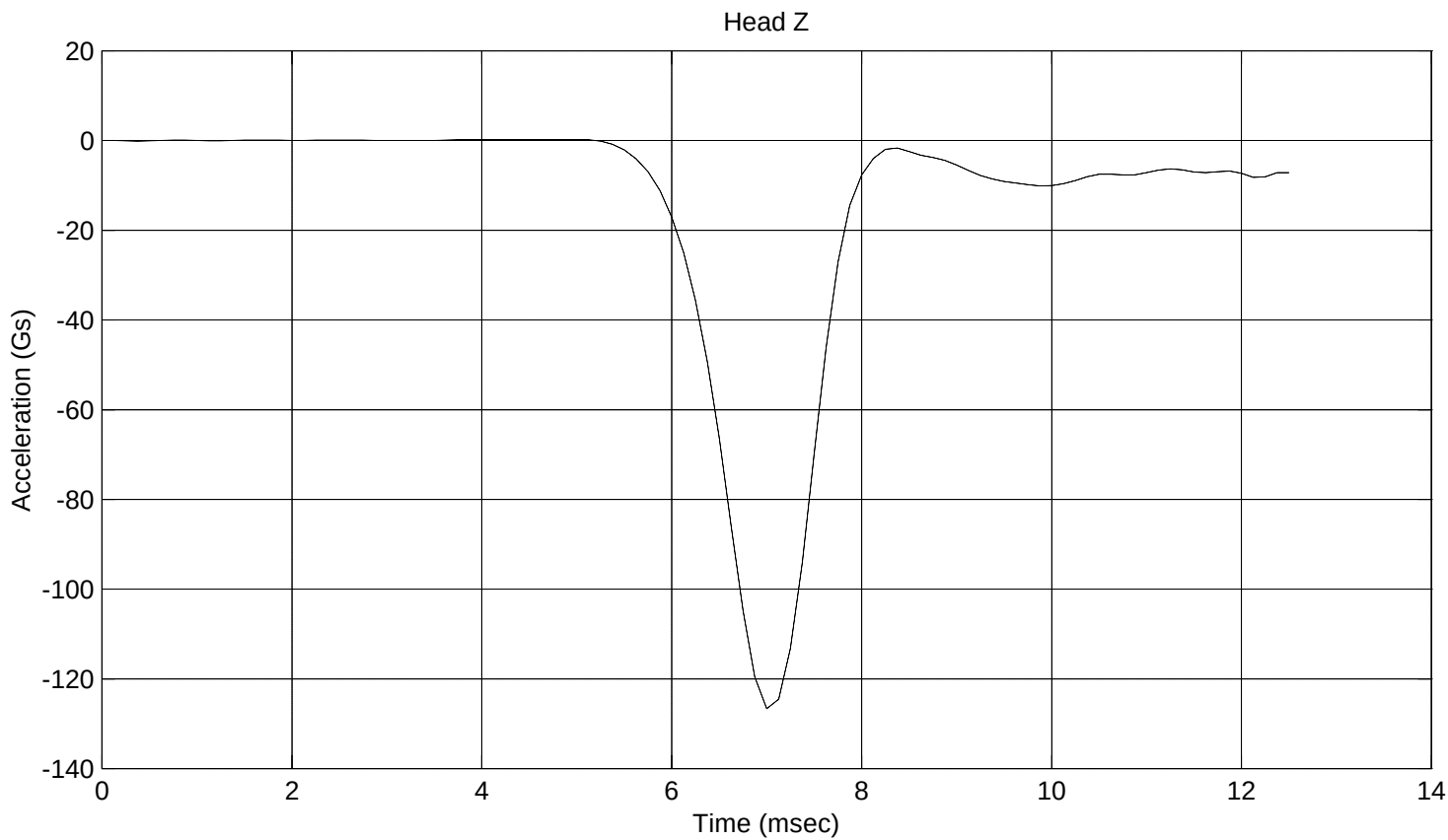
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 2
Date: February 27, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	237.24
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	7.10
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.25

REMARKS: None





ABDOMINAL COMPRESSION TEST**POST TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACTSID Serial No.: 013Sequential Test Number: 2Date: March 1, 2001Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	32.0
FORCE @ 13 mm (N)	104 - 162	111.2
FORCE @ 19 mm (N)	163 - 221	173.5
FORCE @ 25 mm (N)	222 - 280	245.5
FORCE @ 33 mm (N)	325 - 391	355.9

REMARKS: None

Dummy S/N 013

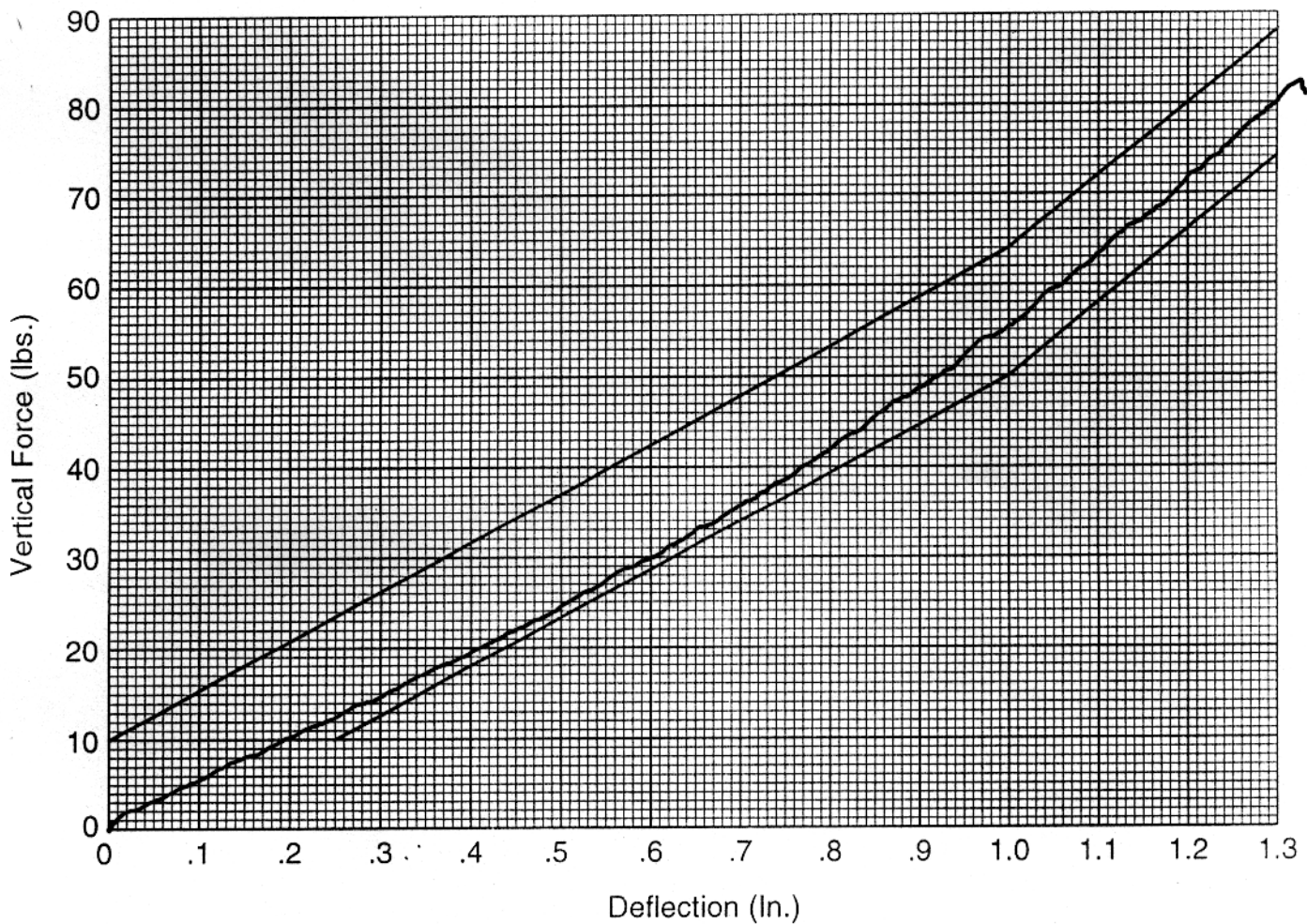
W/A _____

Date 3-1-2001

Performed By [Signature]

Temp. 70°

Humidity 32%



Hybrid II
Abdomen Static Press

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

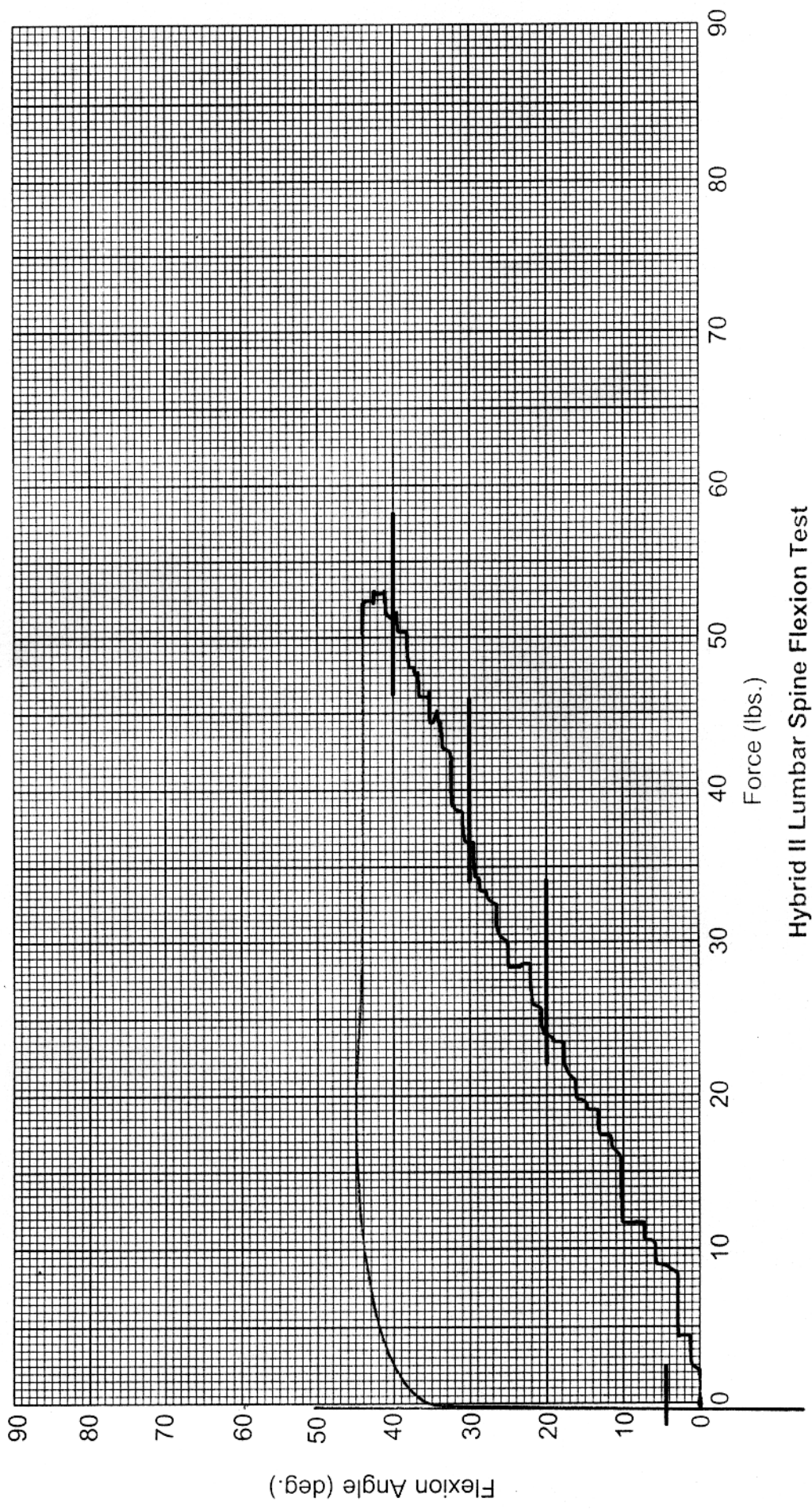
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 2
Date: March 1, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	32.0
FORCE @ 0E (N)	0 - 26.7	0
FORCE @ 20E (N)	97.8 - 151.2	109.0
FORCE @ 30E (N)	151.2 - 204.6	162.4
FORCE @ 40E (N)	204.6 - 258	228.0
RETURN ANGLE	12E max.	4.3E

REMARKS: None

Dummy S/N 013
W/A _____
Date 3-1-2001
Performed By [Signature]
Temp. 70°
Humidity 32%



Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 013 Sequential Test Number: 2
 Date: March 1, 2001 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.: 268

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 4
Date: March 1, 2001 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.: 268 Sequential Test Number: 4
Date: March 1, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
RH- Rib Height (mm)	502 - 520	513
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	495
HW- Hip Width (mm)	356 - 391	380

REMARKS: None

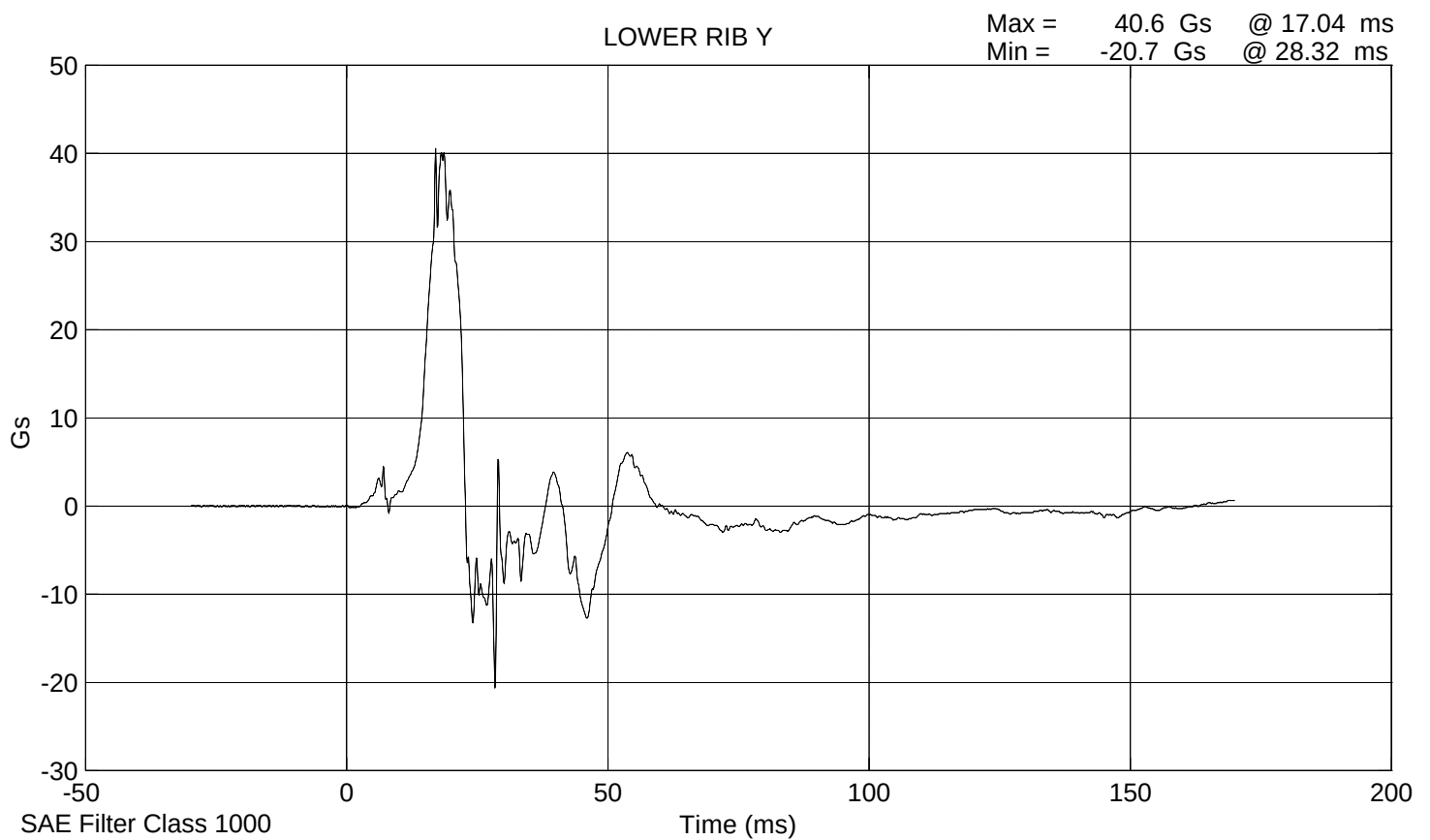
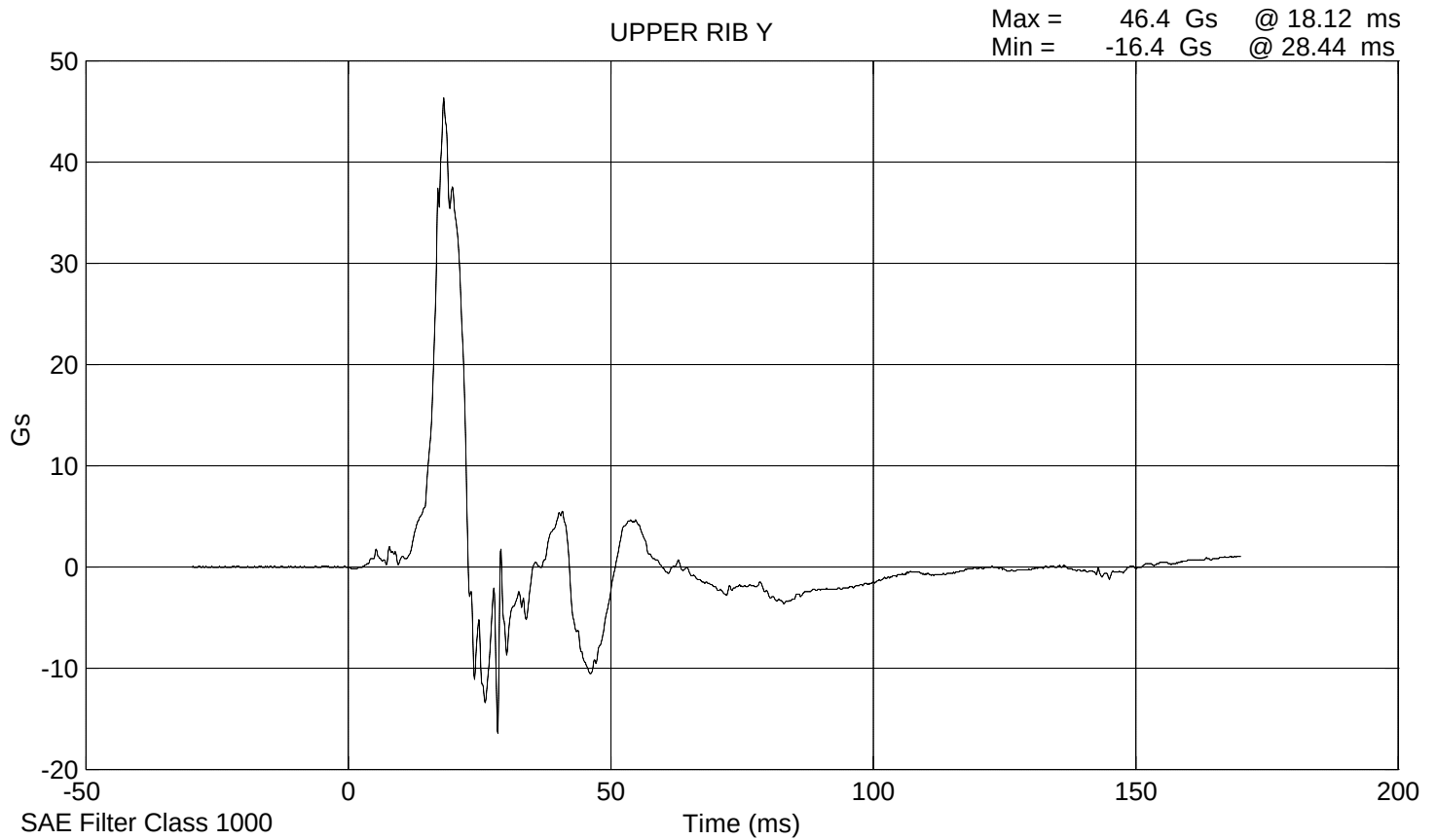
**LATERAL THORAX IMPACT TEST
POST TEST**

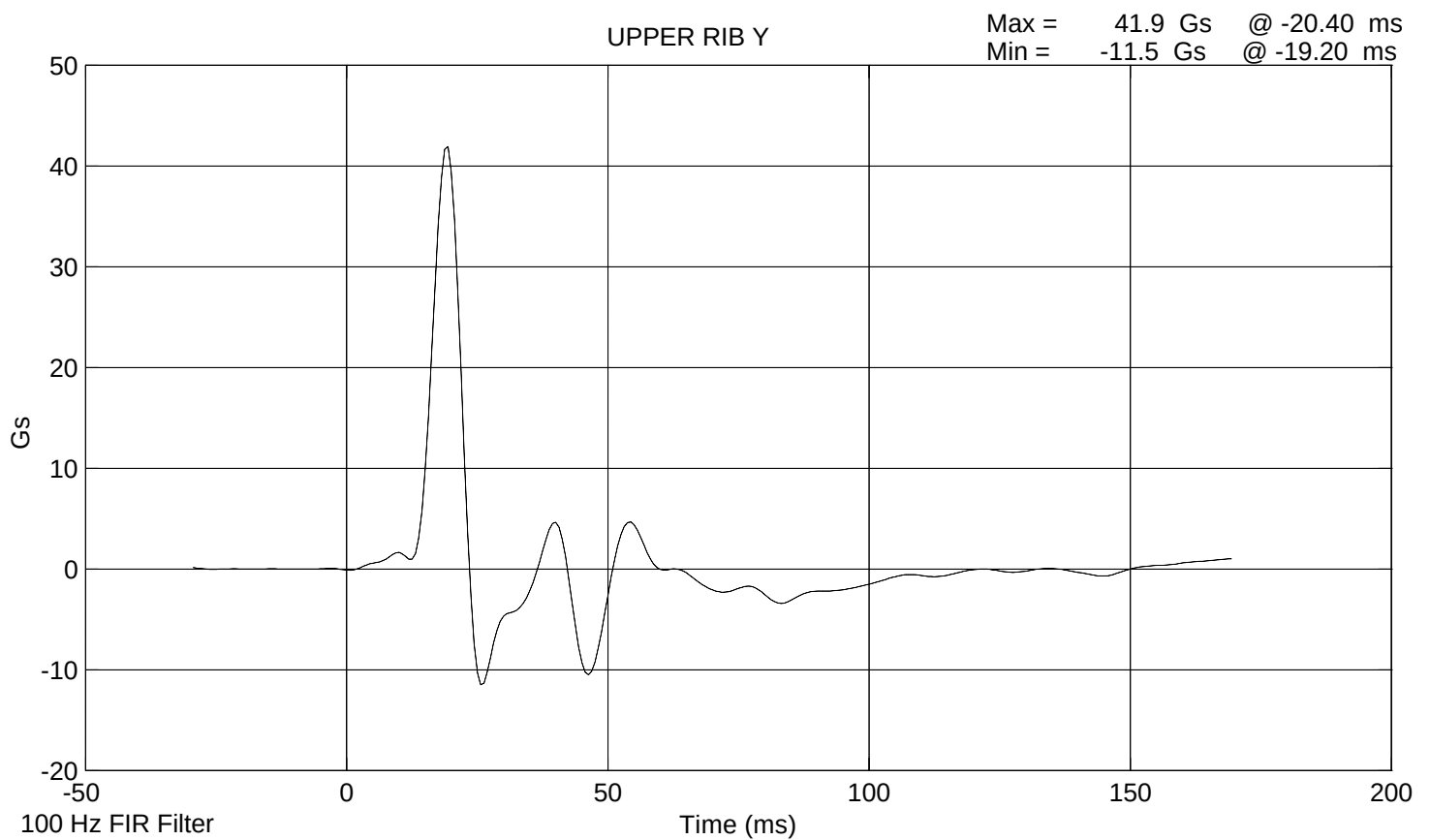
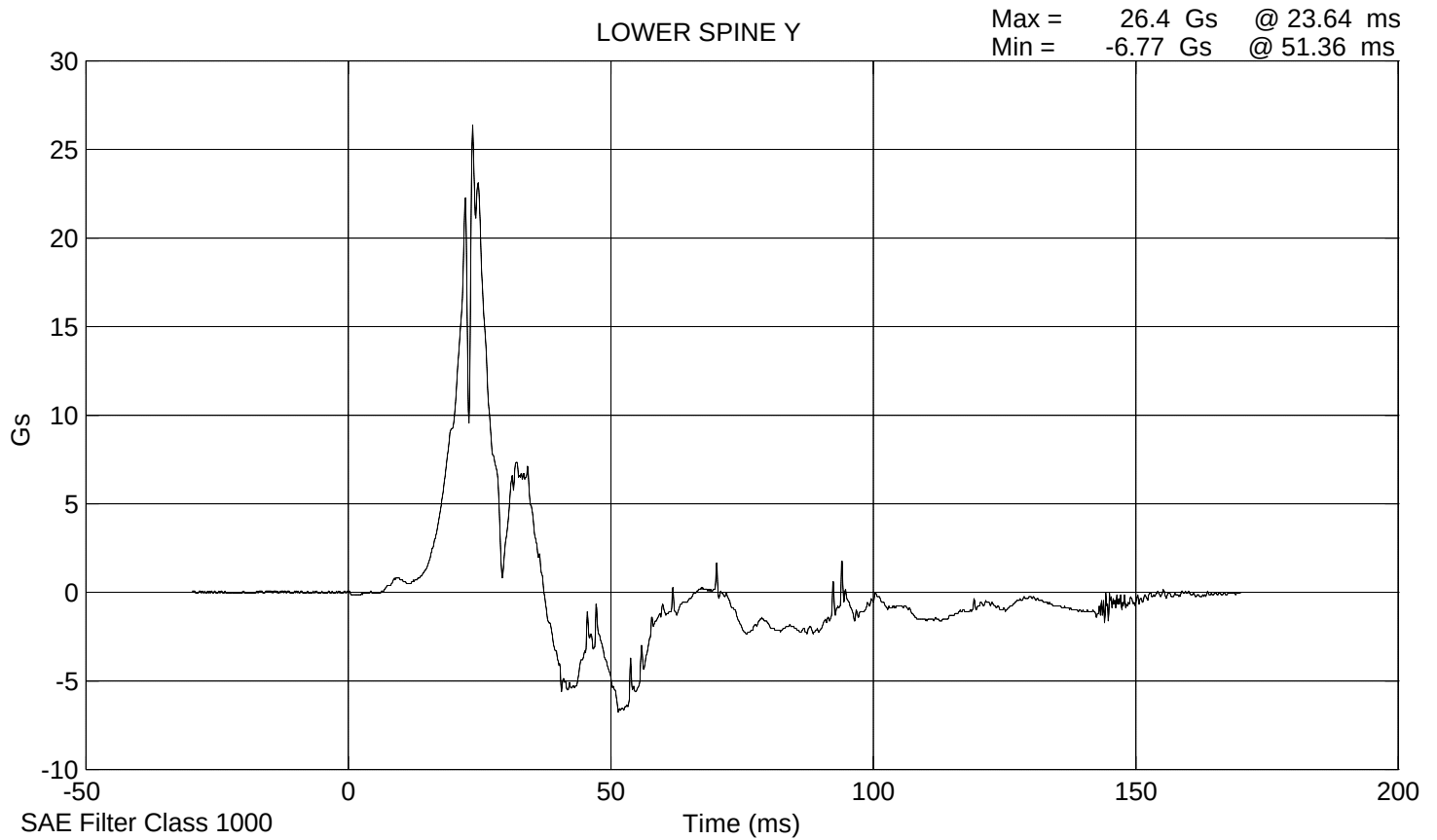
CONFIGURED FOR LEFT SIDE IMPACT

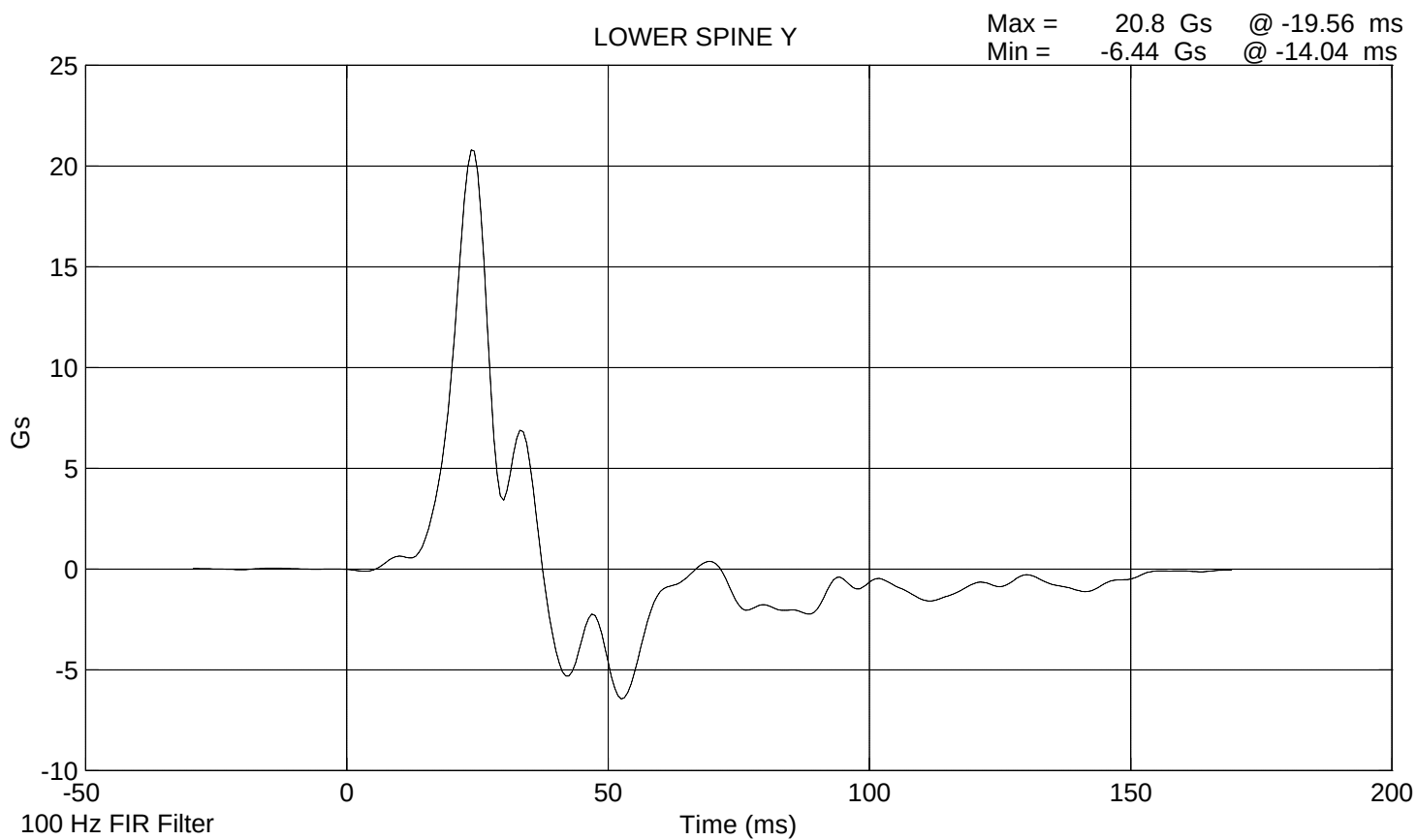
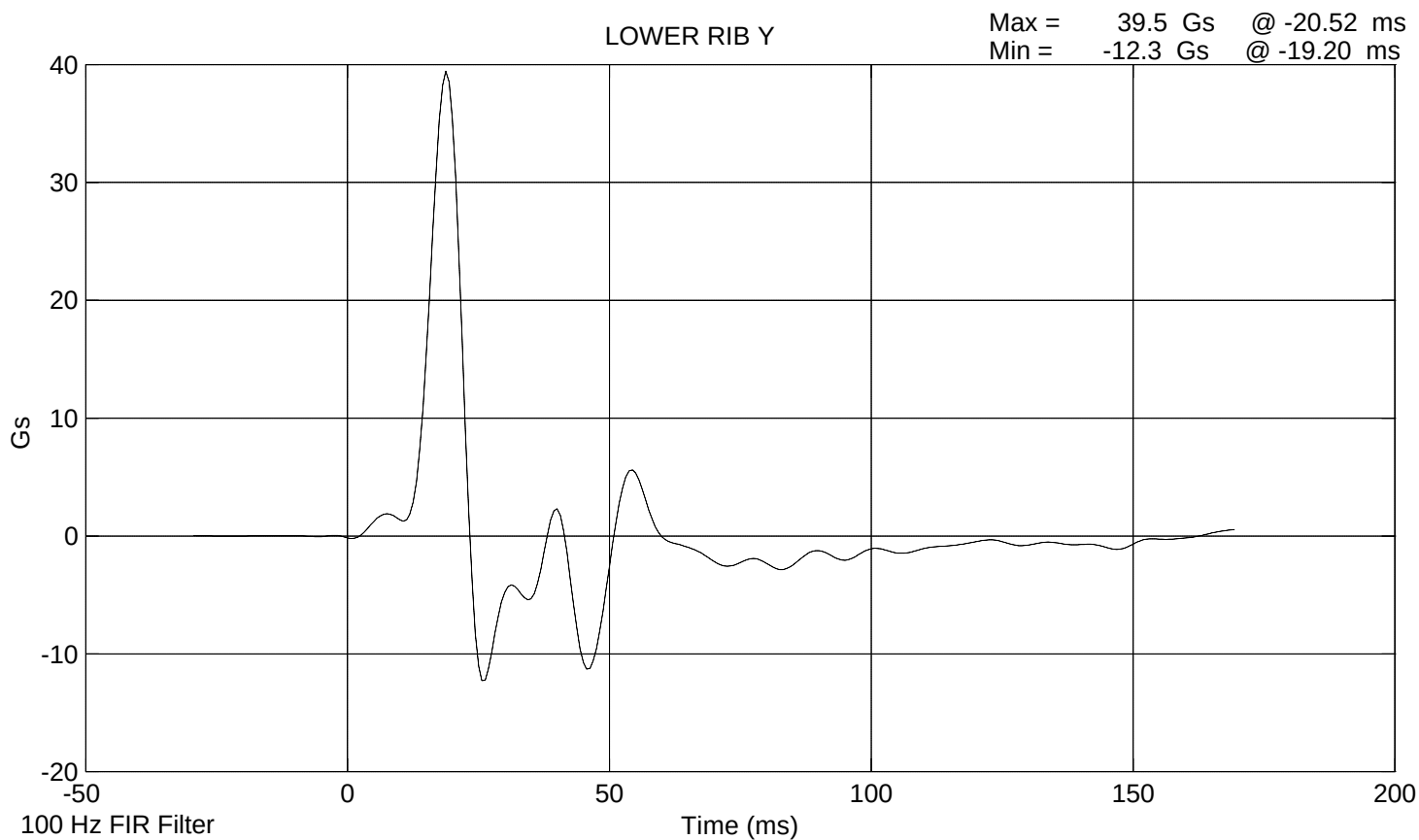
SID Serial No.: 268 Sequential Test Number: 4
Date: February 28, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32.0
PROBE SPEED (m/s)	4.27 - 4.33	4.33
UPPER RIB (g's)	37 - 46	41.93
LOWER RIB (g's)	37 - 46	39.45
LOWER SPINE (g's)	15 - 22	20.80

REMARKS: None







**LATERAL PELVIS IMPACT TEST
POST TEST**

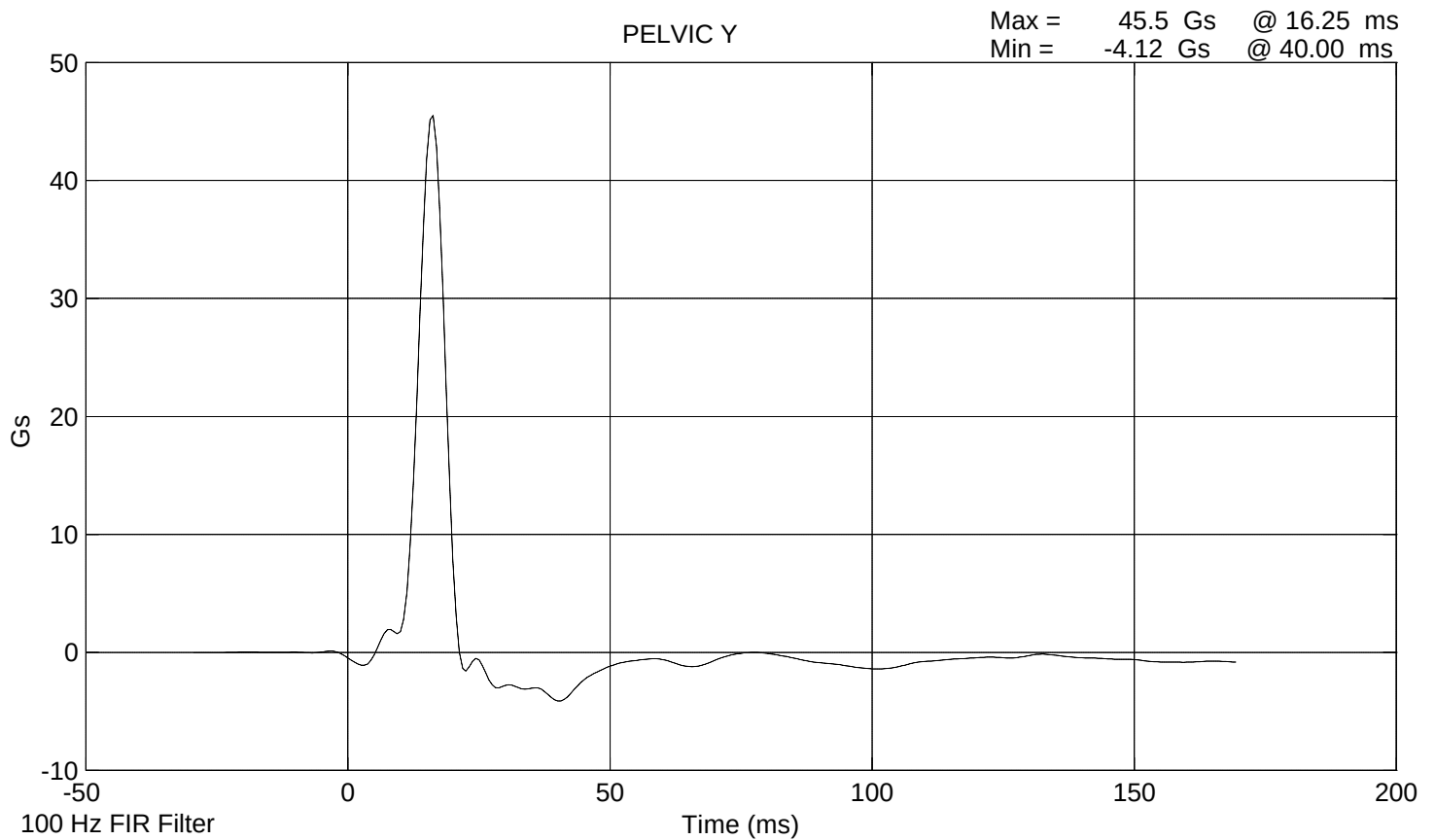
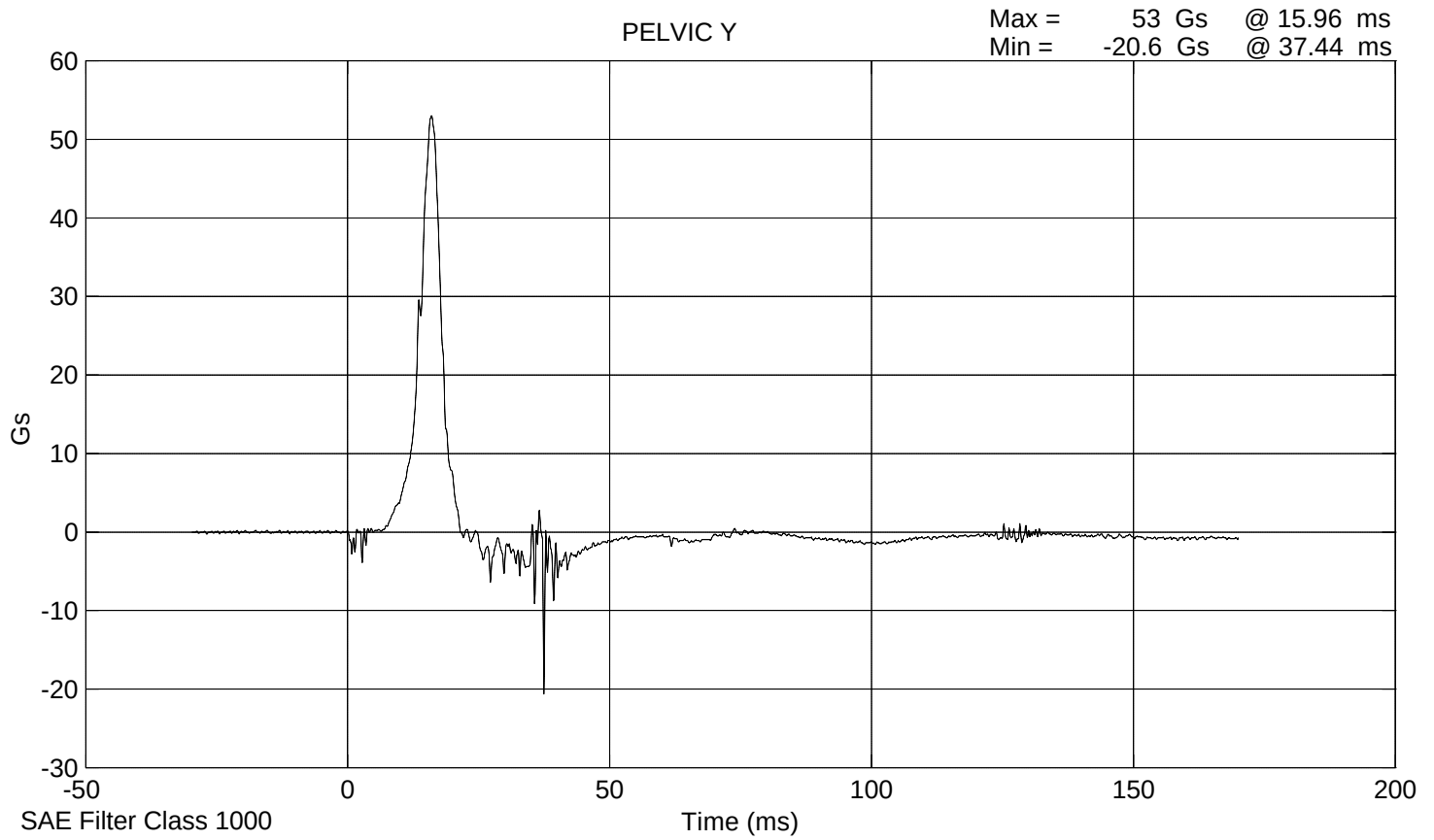
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 4
Date: February 28, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32.0
PROBE SPEED (m/s)	4.27 - 4.33	4.32
PELVIS ACCELERATION (g's)	40 - 60	45.53

REMARKS: None

SID 268 Pelvic Impact Test @ 4.319 m/s



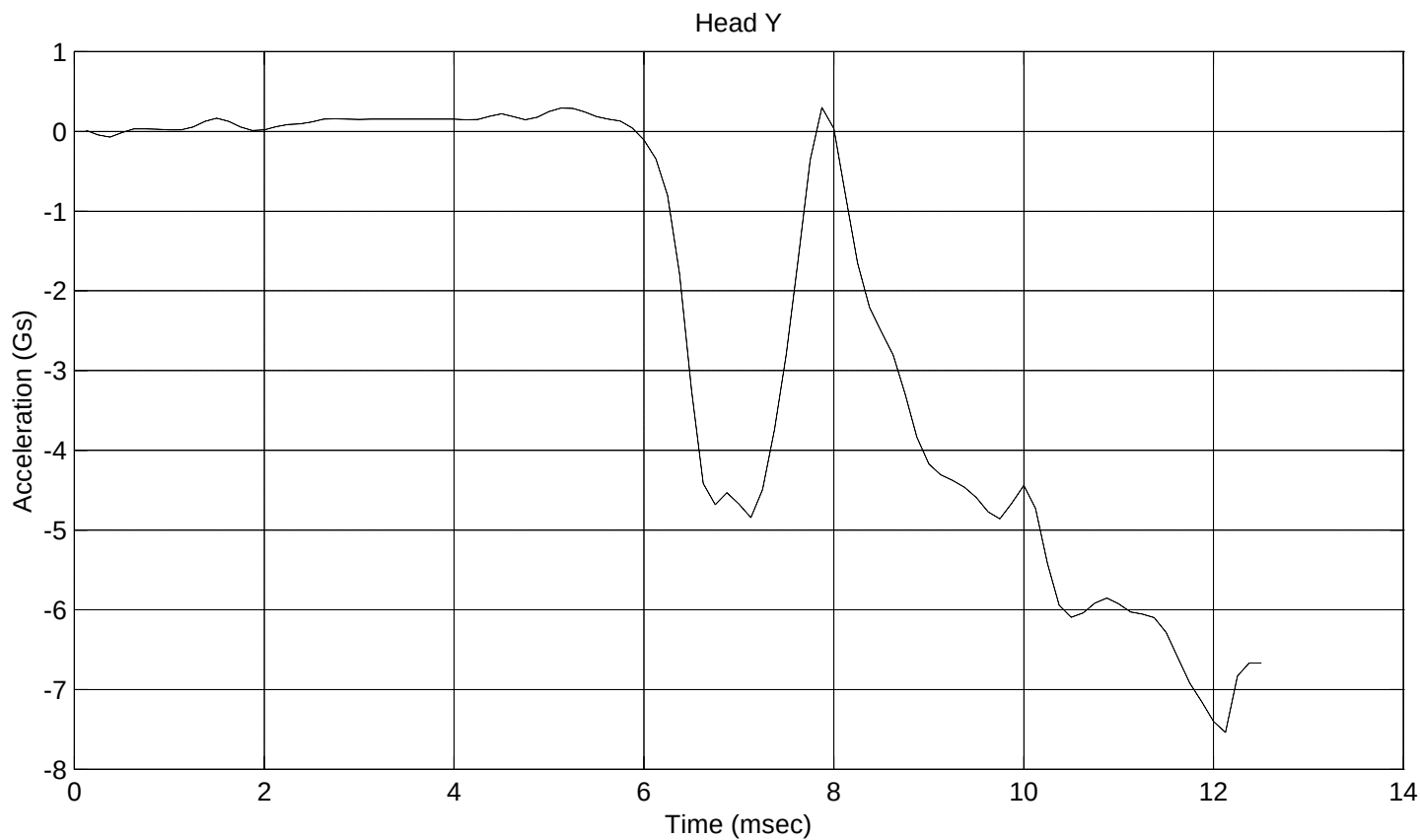
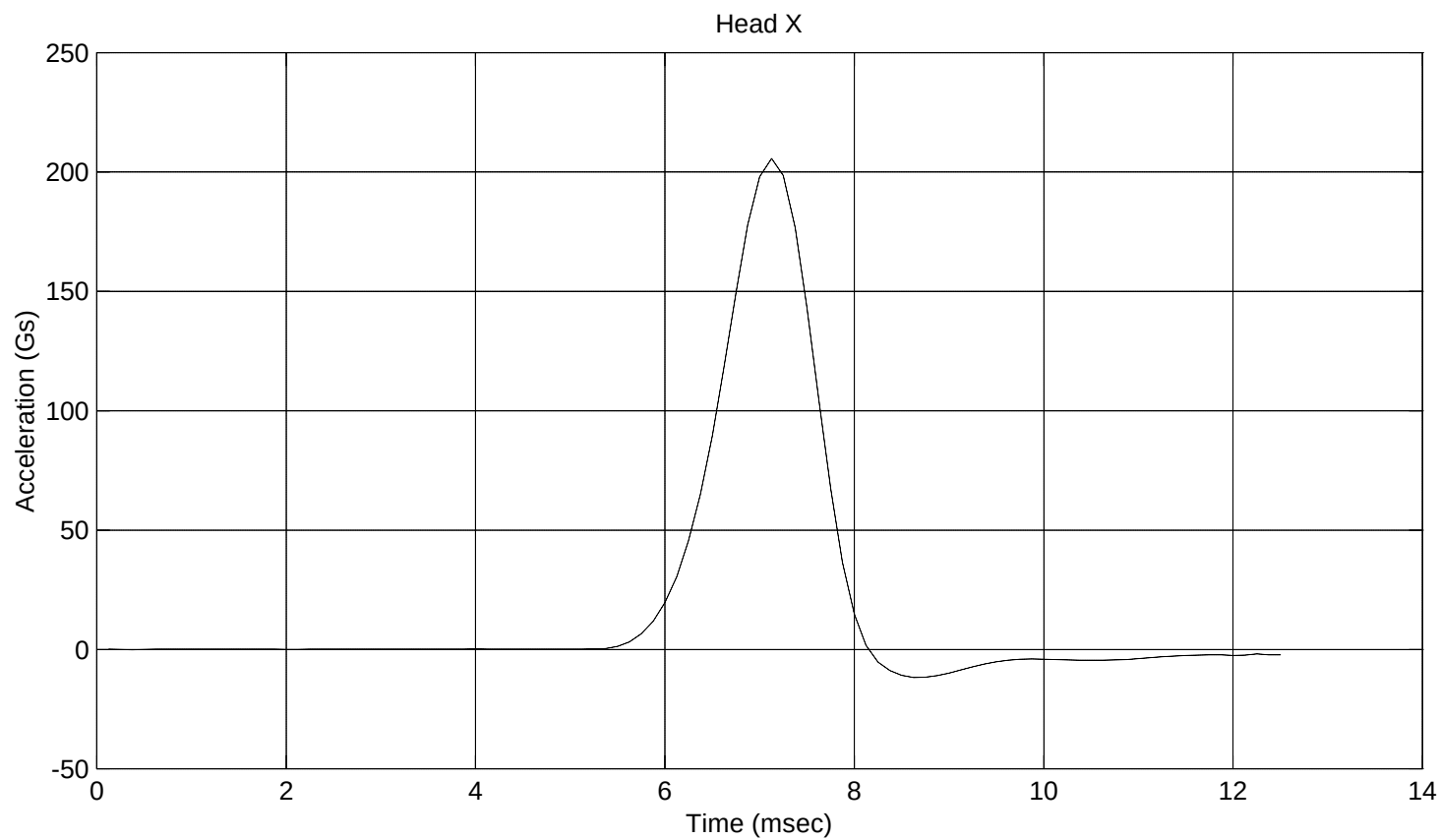
HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

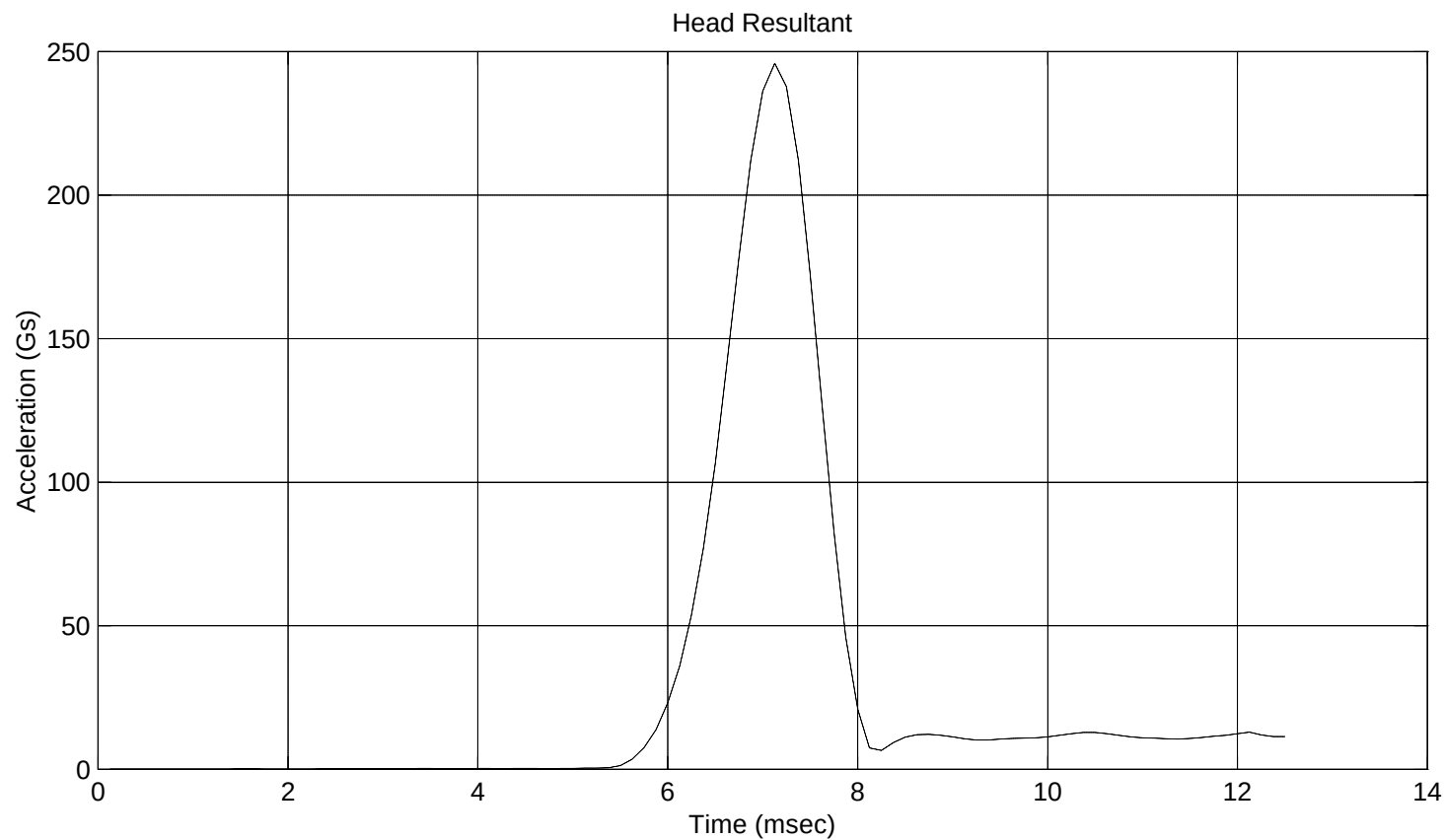
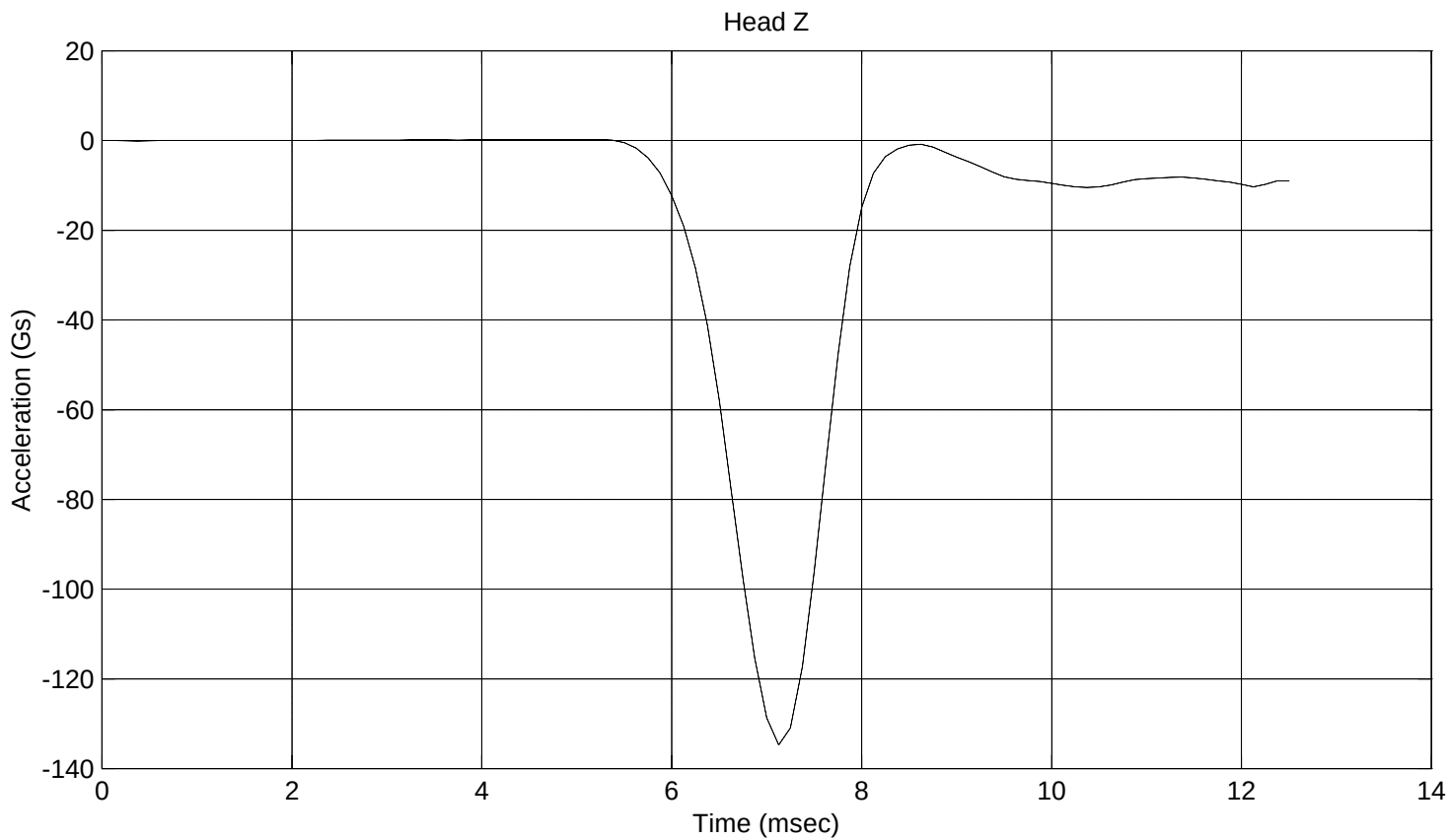
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 4
Date: February 27, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31.0
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	245.92
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	7.54
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.25

REMARKS: None





ABDOMINAL COMPRESSION TEST
POST TEST

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 4
Date: March 1, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	32.0
FORCE @ 13 mm (N)	104 - 162	120.1
FORCE @ 19 mm (N)	163 - 221	180.2
FORCE @ 25 mm (N)	222 - 280	258.0
FORCE @ 33 mm (N)	325 - 391	387.0

REMARKS: None

Dummy S/N 268

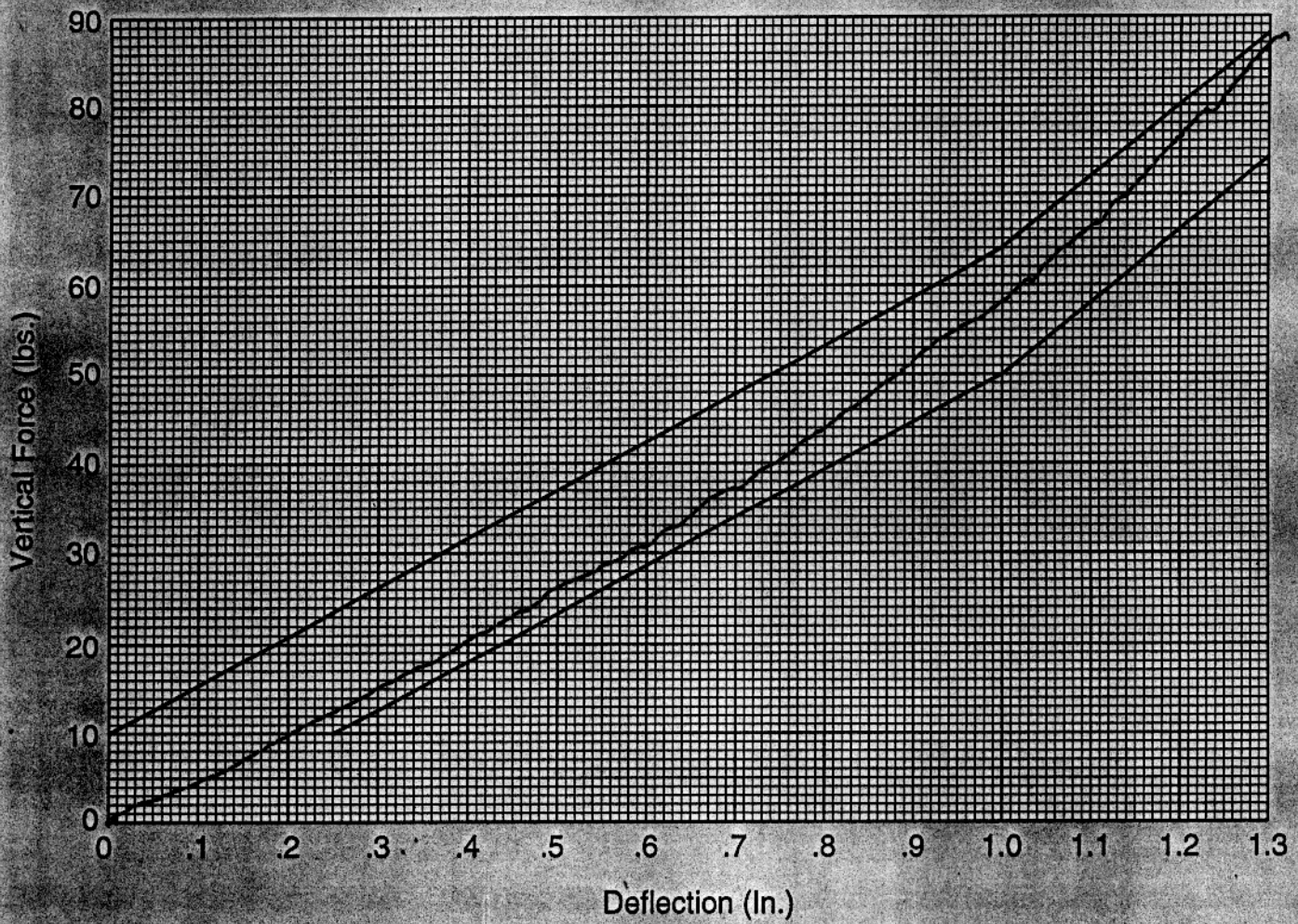
W/A _____

Date 3-1-2001

Performed By BD

Temp. 70°

Humidity 32%



Hybrid II
Abdomen Static Press

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

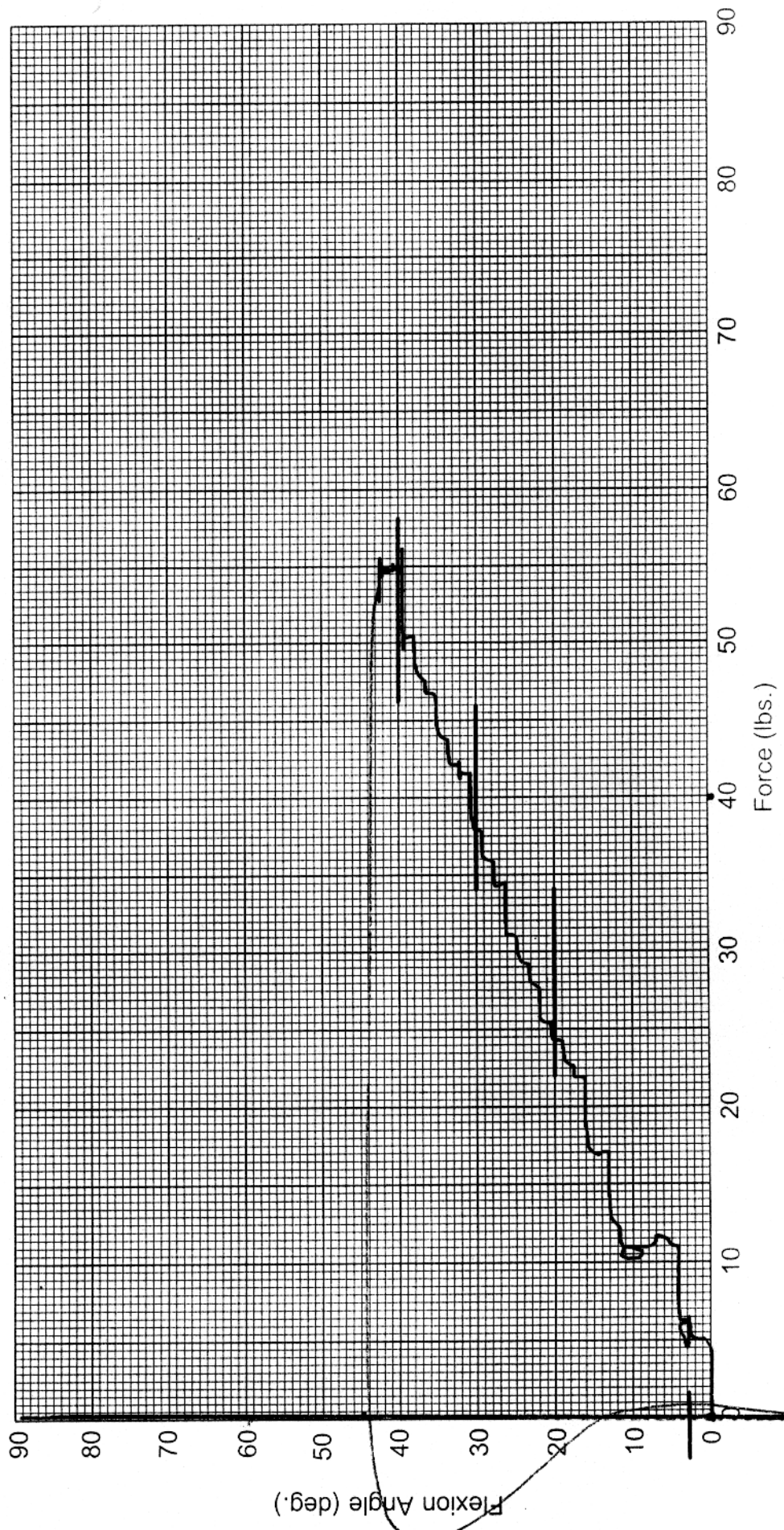
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 4
Date: March 1, 2001 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (EC)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	32.0
FORCE @ 0E (N)	0 - 26.7	0
FORCE @ 20E (N)	97.8 - 151.2	108.5
FORCE @ 30E (N)	151.2 - 204.6	169.0
FORCE @ 40E (N)	204.6 - 258	244.7
RETURN ANGLE	12E max.	2.9E

REMARKS: None

Dummy S/N 268
 W/A _____
 Date 3-1-2001
 Performed By [Signature]
 Temp. 70°
 Humidity 32%



Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST

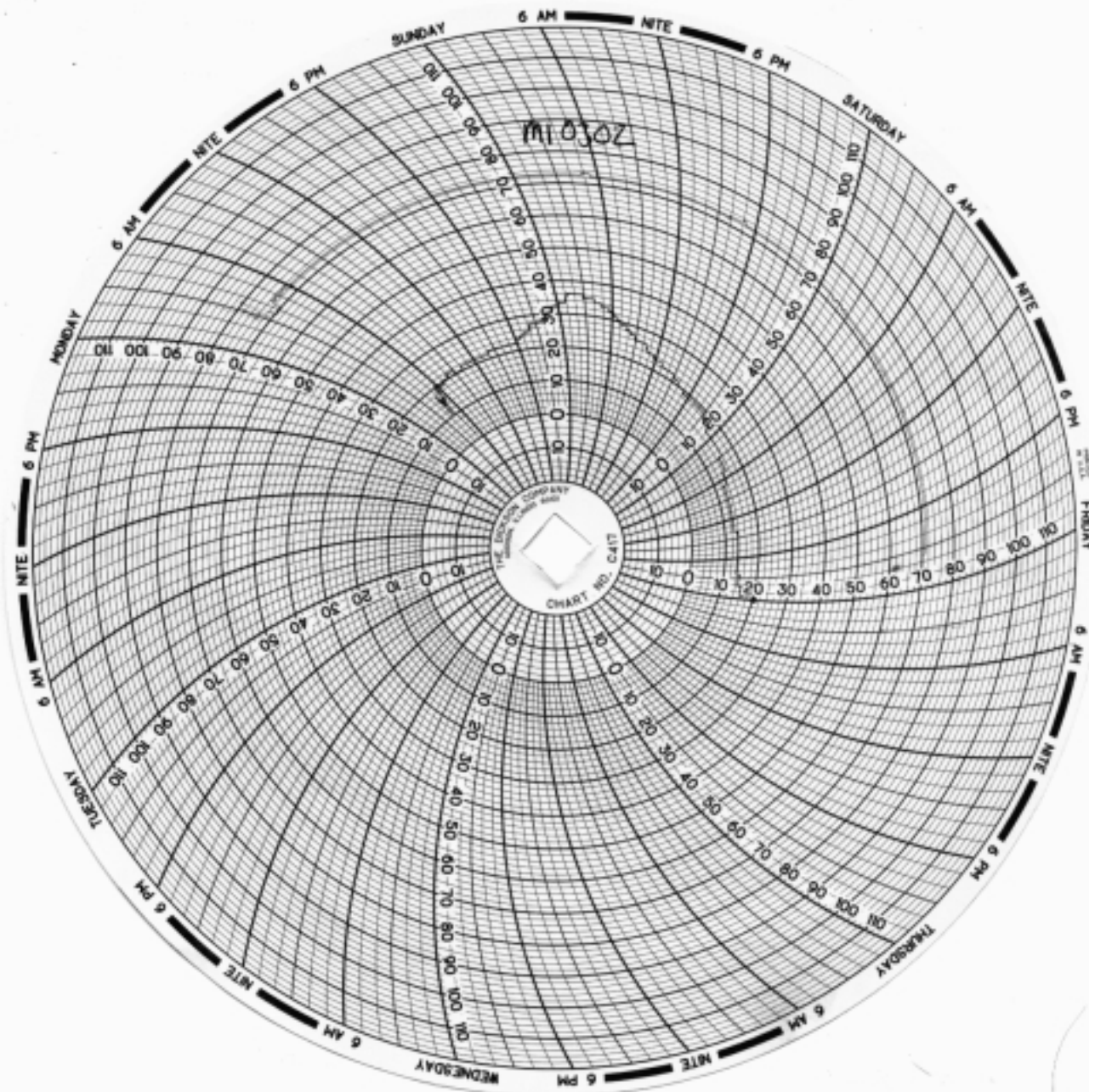
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 4
 Date: March 1, 2001 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	13-Sep-00
HEAD AY	AC-P17255	ENDEVCO	14-Sep-00
HEAD AZ	AC-P17145	ENDEVCO	14-Sep-00
UPPER RIB	AC-P16761	ENDEVCO	14-Sep-00
LOWER RIB	AC-P17131	ENDEVCO	14-Sep-00
LOWER SPINE	AC-P15736	ENDEVCO	14-Sep-00
PELVIS	AC-P16628	ENDEVCO	14-Sep-00
UPPER RIB REDUNDANT	AC-P17247	ENDEVCO	14-Sep-00
LOWER RIB REDUNDANT	AC-P16616	ENDEVCO	13-Sep-00
LOWER SPINE REDUNDANT	AC-P17288	ENDEVCO	14-Sep-00
PELVIS REDUNDANT	AC-P16575	ENDEVCO	14-Sep-00

	REAR SID NO.: 268		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-J32186	ENDEVCO	04-Sep-00
HEAD AY	AC-J32098	ENDEVCO	04-Sep-00
HEAD AZ	AC-J32383	ENDEVCO	04-Sep-00
UPPER RIB	AC-P14388	ENDEVCO	15-Sep-00
LOWER RIB	AC-P17236	ENDEVCO	13-Sep-00
LOWER SPINE	AC-J31060	ENDEVCO	30-Nov-00
PELVIS	AC-J33032	ENDEVCO	16-Jan-01
UPPER RIB REDUNDANT	AC-P12587	ENDEVCO	15-Sep-00
LOWER RIB REDUNDANT	AC-P16625	ENDEVCO	21-Nov-00
LOWER SPINE REDUNDANT	AC-J31050	ENDEVCO	30-Nov-00
PELVIS REDUNDANT	AC-P16593	ENDEVCO	13-Sep-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-J33021	ENDEVCO	16-Jan-01
RIGHT FRONT SILL (Y)	AC-J33030	ENDEVCO	16-Jan-01
RIGHT FRONT SILL (Z)	AC-J27941	ENDEVCO	15-Feb-01
RIGHT REAR SILL (X)	AC-B11407	ENDEVCO	14-Feb-01
RIGHT REAR SILL (Y)	AC-B10827	ENDEVCO	14-Feb-01
RIGHT REAR SILL (Z)	AC-B11408	ENDEVCO	14-Feb-01
REAR FLOORPAN ABOVE AXLE (X)	AC-J32174	ENDEVCO	05-Sep-00
REAR FLOORPAN ABOVE AXLE (Y)	AC-J32143	ENDEVCO	30-Nov-00
REAR FLOORPAN ABOVE AXLE (Z)	AC-J32838	ENDEVCO	30-Nov-00
LEFT REAR SILL (Y)	AC-D77	ICS	15-Feb-01
LEFT FRONT SILL (Y)	AC-X86	ICS	15-Feb-01
LEFT FRONT DOOR CENTERLINE (Y)	AC-B11073	ENDEVCO	15-Feb-01
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-D61	ICS	15-Feb-01
MID REAR OF LEFT FRONT DOOR (Y)	AC-B10954	ENDEVCO	15-Feb-01
LEFT FRONT DOOR UPPER CL (Y)	AC-A14433	ENDEVCO	15-Feb-01
MID REAR OF LEFT REAR DOOR (Y)	AC-A14312	ENDEVCO	12-Jan-01
LEFT REAR DOOR UPPER CL (Y)	AC-P16964	ENDEVCO	13-Sep-00
LOWER LEFT B- PILLAR (Y)	AC-AP1A2	ENDEVCO	10-Dec-00
MIDDLE LEFT B-PILLAR (Y)	AC-D03	ENTRAN	15-Feb-01
LOWER LEFT A-PILLAR (Y)	AC-A13883	ENDEVCO	27-Nov-00
UPPER LEFT A-PILLAR (Y)	AC-BA80	ENDEVCO	28-Sep-00
FRONT SEAT TRACK (Y)	AC-A13513	ENDEVCO	12-Jan-01
REAR SEAT TRACK (Y)	AC-D32	ICS	15-Feb-01
VEHICLE CG (X)	AC-AP064	ENDEVCO	18-Sep-00
VEHICLE CG (Y)	AC-BB14	ENDEVCO	18-Sep-00
VEHICLE CG (Z)	AC-B10955	ENDEVCO	18-Sep-00
MDB CG (X)	AC-CL60	ENDEVCO	31-Aug-00
MDB CG (Y)	AC-CJ54	ENDEVCO	31-Aug-00
MDB CG (Z)	AC-GK12	ENDEVCO	31-Aug-00
MDB REAR FRAME MEMBER (X)	AC-CX05	ENDEVCO	31-Aug-00
MDB REAR FRAME MEMBER (Y)	AC-A27F	ENDEVCO	31-Aug-00

REMARKS: None