REPORT NO. MCW-DOT-214-D3

NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING

DAIMLERCHRYSLER CORPORATION
2001 DODGE DAKOTA SPORT
QUAD CAB PICKUP TRUCK

NHTSA NUMBER: M1 0304

MCW TEST NUMBER: 01SN02

MEDICAL COLLEGE OF WISCONSIN
5000 WEST NATIONAL AVENUE
MILWAUKEE, WI 53295

January 31, 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 5313
Washington, DC 20590

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Acceptance Date: _____

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7. Author(s) Michael Schlick, John Humm		**8. Performing Organization Report No.** 01SN02
9. Performing Organization Name and Address Medical College of Wisconsin 5000 W. National Avenue Milwaukee, WI 53295		**10. Work Unit No.** **11. Contract or Grant No.** DTNH22-01-D-02003
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards 400 Seventh St., S.W. Room 5313 Washington, D.C. 20590		**13. Type of Report and Period Covered** Final Test Report **14. Sponsoring Agency Code** NPS-10
15. Supplementary Notes		

16. Abstract

A 55/28 km/h 90° Impact Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2001 Dodge Dakota Quad Cab in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for generation of consumer information on vehicle side crash protection. This test was conducted at the Medical College of Wisconsin Vehicle Crashworthiness Lab in Milwaukee, Wisconsin, on January 31, 2001.

The impact velocity of the Moving Deformable Barrier (MDB) was 61.5 km/h, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 21° C. The target vehicle post-test maximum crush was 243 mm at Level 1. The test vehicle's performance follows:

	DRIVER	**PASSENGER**
Left Upper Rib Acceleration G	**36**	**36**
Left Lower Rib Acceleration G	**32**	**41**
Lower Spine Acceleration G	**35**	**39**
Thoracic Trauma Index TTI	**35**	**40**
Pelvis Acceleration G	**50**	**39**

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

17. Key Words New Car Assessment Program (NCAP) Side Impact MDB Side Impact Dummy (SID) NHTSA No. M1 0304		**18. Distribution Statement** Copies of this report are available from: National Highway Traffic Safety Administration Technical Reference Division, Room 5108(NAD-52) 400 Seventh Street, S.W. Washington, D.C. 20590	
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SECTION 1

PURPOSE AND TEST PROCEDURE

This side impact test was part of the FY01 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-01-D-02003. The purpose of this test was to evaluate side impact protection of a 2001 Dodge Dakota Sport Quad Cab P/U. This side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated May 1999.

The Medical College of Wisconsin does not endorse or certify products. The manufacturer's name appears solely for identification purposes only.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 2001 Dodge Dakota Sport Quad Cab P/U was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) that was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 61.5 km/h (38.2 mph). The target vehicle was stationary and positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Medical College of Wisconsin in Milwaukee, Wisconsin, on January 31, 2001. Pre- and post-test photographs of the test vehicle, the MDB, and the side impact dummies (SIDs) are included in Appendix A.

Two restrained Side Impact Dummies (SIDs) were placed in the driver and left rear designated seating positions, according to instructions specified in the OCWS Side Impact Laboratory Test Procedure, dated May 1999. The side impact event was documented by nine high-speed cameras and one real-time camera. Camera locations and other pertinent camera information can be found in this report.

The SIDs were instrumented with the following accelerometers.

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

Appendix B contains the vehicle, MDB, and dummy response data traces. A summary of the side impact dummy (SID) configuration and performance verification test data is shown in Appendix C. Dummy and vehicle calibration data can be found in Appendix D of this report.

The following table summarizes the results of this test.

Injury Criteria	Front SID	Rear SID
TTI (G)	35	40
PELVIS (G)	50	39

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET NO. 1

GENERAL VEHICLE TEST PARAMETER DATA

TEST VEHICLE INFORMATION

Year/ Make/ Model/ Body Style	2001 Dodge Dakota Sport Quad Cab P/U							
Vehicle NHTSA NO.	M1 0304			VIN	1B7GG2AN31S123877			
Vehicle Body Color	Silver			Build Date	August 2000			
Engine Data	8	Cylinders	-	CID	4.7	Liter	-	cc
Placement	X	Longitudinal		Lateral				
Transmission	4	Speed		Manual	X	Automatic		Overdrive
Final Drive		Rear Wheel Drive		Front Wheel Drive	X	Four Wheel Drive		
Odometer Reading	229 Miles	Date	January 22, 2001					
Options	X	A/C	X	Power Steering	X	Power Brakes	X	Power Windows
	X	Cruise Control	X	Tilt Wheel	X	Power Locks		

DATA FROM TIRE PLACARD:

Tire Pressure (at Capacity)	30	PSI Front	
	32	PSI Rear	
Recommended Tire Size	P235-75R-15XL		
Tires on Test Vehicle	P265-70R-16	Manufacturer	GOODYEAR

VEHICLE CAPACITY DATA:

Number of Occupants:	3	Front	3	Rear	-	3rd Seat	6	Total		
Type of Front Seats		Bucket		Bench	40/20/40	Split Bench				
Type of Front Seat Back		Fixed	X	Adjustable w/	X	Lever		Knob		
Vehicle Max Capacity Loading			530	kg	(A)					
No. of Occupants X 68.04 kg			408.2	kg	(B)					
Cargo Capacity (A) – (B)			121.8	kg						

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front	=	629	kg	Left Rear	=	450	kg
Right Front	=	594	kg	Right Rear	=	460	kg
TOTAL FRONT	=	1223	kg	TOTAL REAR	=	910	kg
% Total Weight	=	57.3	%	%Total Weight	=	42.7	%
TOTAL WEIGHT	=	2133	kg				

DATA SHEET 1 (continued)

GENERAL VEHICLE TEST PARAMETER DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NHTSA No. M1 0304

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max Fluids	=	2133	kg	(A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	122	kg	(B)
Weight of (2) instrumented Side Impact Dummies	=	161	kg	(C)
TEST VEHICLE TARGET WEIGHT	=	2416	kg	(A+B+C)

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

Left Front	=	684	kg	Left Rear	=	573	kg
Right Front	=	598	kg	Right Rear	=	561	kg
TOTAL FRONT	=	1282	kg	TOTAL REAR	=	1134	kg
% Total Weight	=	53.1	%	%Total Weight	=	46.9	%
TOTAL WEIGHT	=	2416	kg				

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

Left Front	=	674	kg	Left Rear	=	565	kg
Right Front	=	606	kg	Right Rear	=	564	kg
TOTAL FRONT	=	1280	kg	TOTAL REAR	=	1129	kg
% Total Weight	=	53.1	%	%Total Weight	=	46.9	%
TOTAL WEIGHT	=	2409	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED

Left Front	1027	Right Front	1010	Left Rear	1082	Right Rear	1065

FULLY LOADED

Left Front	1021	Right Front	1004	Left Rear	1044	Right Rear	1032

AS TESTED

Left Front	1022	Right Front	1005	Left Rear	1045	Right Rear	1032

Test Vehicle Wheelbase 3328 mm

As Tested CG = 1561 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

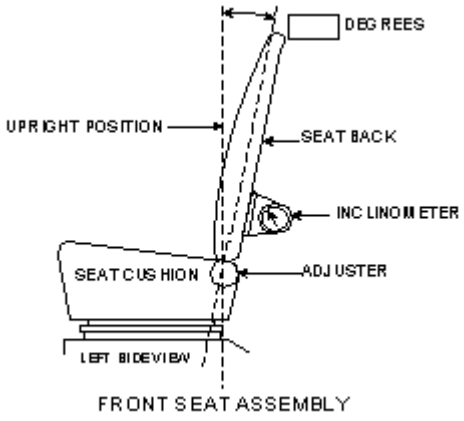
Right Side	=	5290	mm
Left Side	=	5290	mm
Centerline	=	5455	mm

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

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



FRONT SEAT CUSHION PLACEMENT: Position seat at 110 mm rearward of full forward position

Total Length of Adjustment Travel			220 mm
Total Number of Detents	23	Test Position	12

FRONT SEAT BACK ADJUSTMENT:

Seat Back Angle: 14° measured from seat back frame above bend in frame

SECOND POSITION SEAT:

Total Length Fore/Aft Adjustment	Fixed
Seat Back Adjustment Position	Fixed

ADJUSTABLE STEERING COLUMN POSITION:

Placed in 1st locked position below mid-angle position

WINDOW POSITIONS:

Left Front	DOWN	Right Front	UP
Left Rear	DOWN	Right Rear	UP

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel System usable Capacity	90.8 L	
Test Volume	86.3 L	95% usable capacity

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

Wheelbase	3328 mm	
Impact Point is	508 mm rearward	of front axle centerline
Actual Impact Point is	545 mm rearward	of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY

VEHICLE IDENTIFICATION:

Year/Make/Model/Body Style	2001 Dodge Dakota Sport Quad Cab P/U		
Body Color	Silver	VIN	1B7GG2AN31S123877
NHTSA No.	M1 0304	Test Date	31 January 2001
Overall Length	5455 mm	Overall Width	1824 mm

VEHICLE TEST WEIGHT (Pre-Test):

Left Front	=	674	kg	Left Rear	=	565	kg
Right Front	=	606	kg	Right Rear	=	564	kg
TOTAL FRONT	=	1280	kg	TOTAL REAR	=	1129	kg
% Total Weight	=	53.1	%	%Total Weight	=	46.9	%
TOTAL WEIGHT	=	2409	kg				

Wheelbase	=	3328 mm
Longitudinal CG from Center of Front Axle	=	1561 mm
Impact Angle with Respect to Impactor	=	90°

ACTUAL IMPACT POINT

Actual Impact Point is 37 mm rearward of nominal impact reference line (lateral)

Actual Impact Point is 8 mm below nominal impact line (vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1	(453 mm above ground)	=	243	mm
2. LEVEL 2	(same as Level 3)	=	N/a	mm
3. LEVEL 3	(834 mm above ground)	=	165	mm
4. LEVEL 4	(1210 mm above ground)	=	73	mm
5. LEVEL 5	(1676 mm above ground)	=	46	mm

Maximum Post-Test intrusion at Level 1 is 243 mm

OCCUPANTS	Left Front Passenger	Left Rear Passenger
Dummy Identification	056	058
Restraints Used	3-Point Seat Belt	3-Point Seat Belt

INSTRUMENTATION:

Number of Vehicle Data Channels		43
Number of Cameras	Onboard	3
	Off board	4
	MDB	2
	TOTAL	9

DATA SHEET NO. 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascor 097A1200-1 001B1200

POSITION OF IMPACT (MDB) ON TOW SYSTEM

Crabbed 27° to the left

MDB DETAILS:

Overall Width of Framework Carriage	=	1250 mm
Overall Length of MDB (incl. honeycomb impact face)	=	4116 mm
Wheelbase of Framework Carriage	=	2578 mm
Tread of Framework Carriage (Front & Rear)	=	1880 mm
C.G. Location Rearward of Front Axle	=	1109.3 mm
C.G. Location From Center Line	=	-1.9 mm
C.G. Location Above Ground Level	=	477.2 mm

MDB WEIGHT:

Left Front	=	495.2	kg	Left Rear	=	184.8	kg
Right Front	=	278	kg	Right Rear	=	399.2	kg
TOTAL FRONT	=	773.2	kg	TOTAL REAR	=	584	kg
% Total Weight	=	57.0	%	%Total Weight	=	43.0	%
TOTAL WEIGHT	=	1357.2	kg				

MDB IMPACT:

Impact Angle (MDB C/L to Target Vehicle)		90°	
Impact Speed	Primary	61.6 km/h	38.3 mph
	Secondary	61.5 km/h	38.2 mph
	Radar	61.6 km/h	38.3 mph
	On-Board	61.6 km/h	38.3 mph

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Center of Bumper	=	151	mm
2. Row B Top of Bumper	=	151	mm
3. Row C Mid-Level	=	155	mm
4. Row D Top of Stack	=	100	mm

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET NO. 4

POST-TEST OBSERVATIONS

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

VISIBLE DUMMY CONTACT POINTS:

	LEFT FRONT SID	LEFT REAR SID
Head	Top of head to left side header	Top of head to left side header and left window trim; bottom of head to C-pillar
Upper Torso	Upper torso to left upper front door panel	Upper torso to left upper rear door panel
Lower Torso	Lower torso to left front arm rest	Lower torso to left rear arm rest
Left Knee	Left knee to left lower door panel	None
Right Knee	None	None

DOOR OPENING:

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

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal 38 mm rearward Vertical 8 mm downward

ARM REST LOCATIONS:

Front	233 mm below window opening
Rear	188 mm below window opening

SEAT MOVEMENT:

Front	Seat crush 17 mm; Seat back crush 8 mm
Rear	Seat crush 7 mm; Seat back crush 0 mm

GLAZING DAMAGE

Windshield	Lower left side of windshield cracked during impact
Window	None

PILLAR PERFORMANCE:

None noted

SILL SEPARATION

None noted

AIRBAG DEPLOYMENT STATUS:

	DRIVER	FRONT PASSENGER	REAR PASSENGER
FRONT	Did not deploy	Did not deploy	N/A
SIDE	N/A	N/A	N/A

OTHER NOTABLE IMPACT EFFECTS:

None noted

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

	Front Dummy ID 056 Accelerations				Rear Dummy ID 058 Accelerations			
	Max		Min		Max		Min	
	G's	msec	G's	msec	G's	msec	G's	msec
HEAD ACCELERATIONS								
Longitudinal (X)	15.9	77.8	-1.6	32.9	27.4	92.7	-86.0	174.5
Lateral (Y)	61.4	77.9	-4.7	43.6	51.4	91.0	-22.4	174.4
Vertical (Z)	13.1	85.8	-68.3	78.0	27.7	76.6	-52.6	92.6
Resultant (R)	92.8	78.0	-	-	89.9	174.5	-	-
HIC	231	-	-	-	174	-	-	-
RIB ACCELERATIONS								
Upper Rib Lateral (Y)	35.9	58.1	-5.0	124.4	36.5	65.6	-5.1	126.2
Upper Rib Lateral (Y_R)	35.2	58.1	-4.9	123.7	36.2	65.6	-5.1	126.2
Lower Rib Lateral (Y)	31.7	55.0	-5.7	104.4	41.4	55.0	-4.8	131.9
Lower Rib Lateral (Y_R)	32.0	55.0	-5.7	104.4	41.0	55.0	-5.5	113.7
SPINE ACCELERATIONS								
Lower Lateral (Y)	34.7	40.6	-7.5	123.7	38.5	57.5	-8.4	81.9
Lower Lateral (Y_R)	34.6	40.6	-7.3	123.7	37.8	57.5	-8.3	81.9
PELVIS ACCELERATIONS								
Lateral (Y)	50.2	37.5	-9.3	78.8	39.4	52.5	-8.5	83.8
Lateral (Y_R)	49.7	37.5	-8.9	78.8	38.3	52.5	-8.1	83.8

REFERENCE:

Positive Direction -	Anterior/Posterior	+(X) = posterior
	Lateral	+(Y)= right
	Superior/Inferior	+(Z)= superior
Negative Direction	Anterior/Posterior	-(X) = anterior
	Lateral	-(Y)= left
	Superior/Inferior	-(Z)= inferior

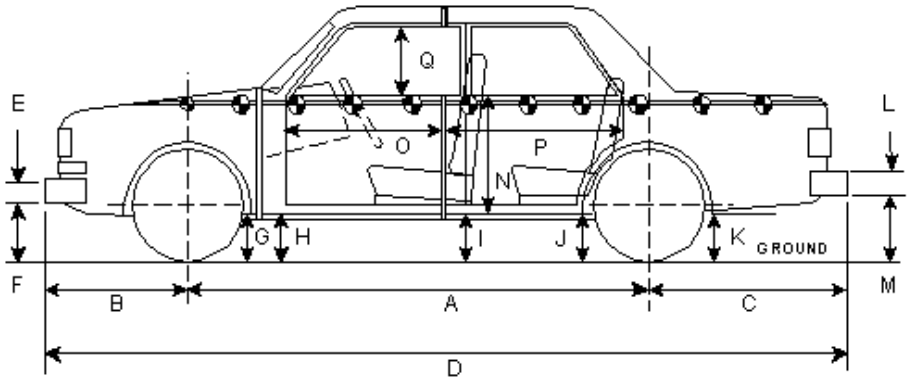
(As described in Side NCAP Test Procedure Manual dated May 1999)

All the above data (except head accelerations) has been filtered using FIR (Version 1.0; July 16, 1990)
Head Accelerations have been filtered at SAE Class 1000
Y_R denotes redundant Y-direction accelerometer

DATA SHEET 6

VEHICLE PRE- AND POST- MEASUREMENTS

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



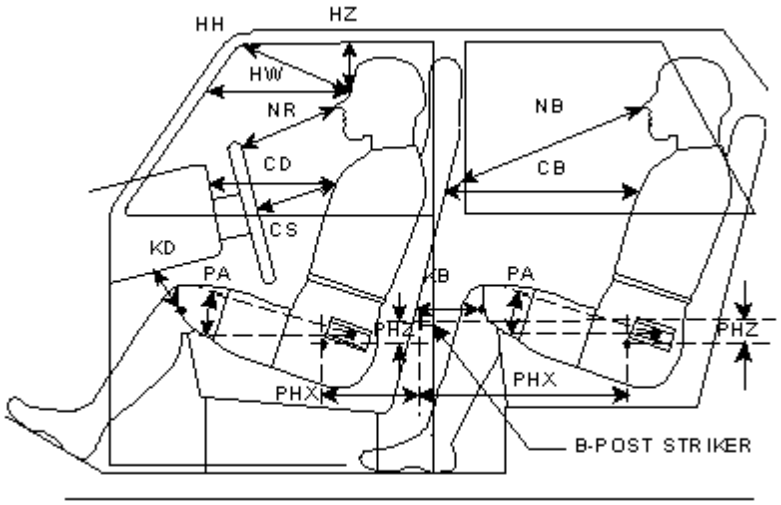
LEFT SIDE VIEW

	PRE-TEST As delivered	PRE-TEST As Tested	POST-TEST	Δ CHANGE
A	3328	-	3236	-92
B	731	-	735	4
C	1231	-	1224	-7
D	5455	-	5402	-53
E	325	-	326	1
F	370	370	364	-6
G	488	470	472	2
H	468	451	485	34
I	479	453	484	31
J1	450	415	424	9
J2	512	474	492	18
K	526	484	550	66
L	188	-	188	0
M	513	465	491	26
N	768	-	422	-346
O	1161	-	1128	-33
P	870	-	842	-28
Q	418	-	418	0
R	5290	-	5295	5
S	5290	-	5195	-95
T	1824	-	1603	-221

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



LEFT SIDE VIEW

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

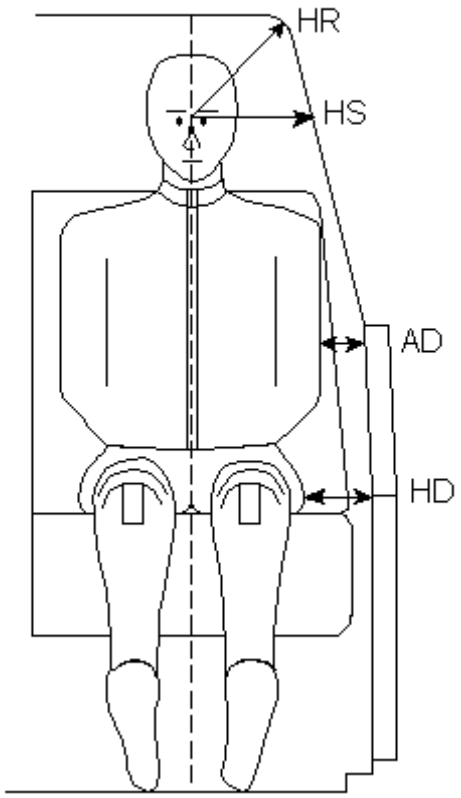
	DRIVER ID# 056	LEFT REAR PASSENGER ID# 058
HH	381	N/A
HW	585	N/A
HZ	187	168
NR/NB	381	526
CD/CB	485	523
CS	285	N/A
KDL(KDA°)/KBL(KDA°)	165/20°	251/12°
KDR(KDA°)/KBR(KDA°)	175/24°	221/16°
PA°	24°	23°
PHX	168	175
PHZ	-43	-97

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

DATASHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



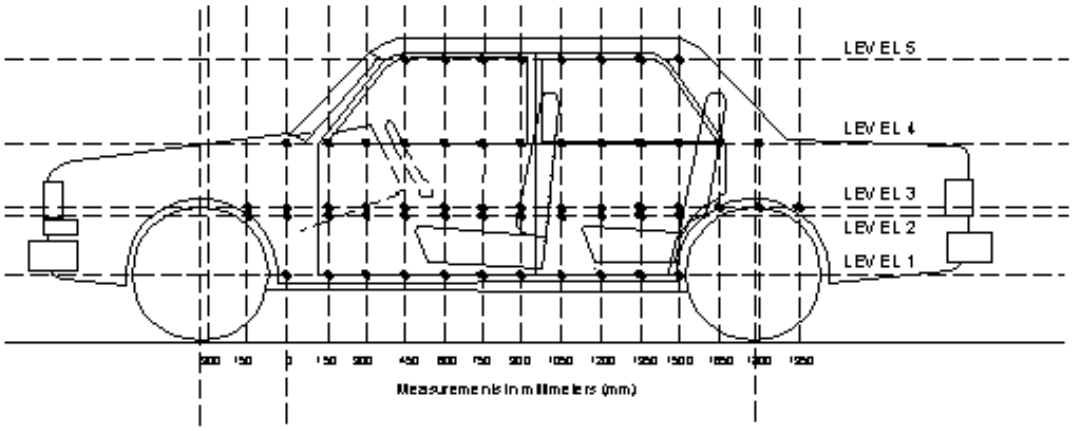
NOTE: All dimensions are in millimeters with tolerance of ±3 mm

	DRIVER ID# 056		LEFT REAR PASSENGER ID# 058	
HR	166		146	
HS	302		307	
AD	Upper 154	Lower 40	Upper 77	Lower 90
HD	170		180	

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



LEFT SIDE VIEW

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 as shown

Level 5 @ Window Top	1676 mm
Level 4 @ Window Sill	1210 mm
Level 3 @ Mid-Door	834 mm
Level 2 @ Occupant H-Point	N/a – Same as Mid-Door
Level 1 @ Axle Centerline or Sill Top Height	453 mm

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES – ALL LEVELS

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

Note: All Dimensions are in millimeters with a tolerance of ±3 mm

			DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																											
	HEIGHT		-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	453	PRE-	-	-	-	-	-	-	-	336	356	354	353	351	347	347	361	346	343	342	338	336	338	336	-	-	-	-	-
		POST-	-	-	-	-	-	-	-	396	489	534	549	560	560	556	557	570	586	583	524	429	249	232	-	-	-	-	-
		CRUSH	-	-	-	-	-	-	-	40	133	180	196	209	213	209	196	224	243	241	186	93	-89	-104	-	-	-	-	-
LEVEL2		PRE-	**LEVEL 2 OCCUPANT H-POINT AND LEVEL 3 MID-DOOR ARE THE SAME FOR THE 2001 DODGE DAKOTA SPORT**																											
		POST-																												
		CRUSH																												
LEVEL 3	834	PRE-	-		-	-	-	-	280	279	279	279	281	285	292	293	290	287	285	282	280	279	281	265	234					
		POST-	-	-	-	-	-	-	225	310	344	367	387	405	430	455	455	442	426	412	399	386	202	174	131					
		CRUSH	-	-	-	-	-	-	-55	31	65	88	106	120	138	162	165	155	141	130	119	107	-79	-91	-103					
LEVEL 4	1210	PRE-	-	-	475	453	434	418	406	396	*	383	380	378	375	372	368	366	363	361	358	358	**	354	352	348	345	343	340
		POST-	-	-	317	306	298	297	300	297	*	327	345	365	385	405	441	422	399	376	357	371	**	276	273	266	261	256	256
		CRUSH	-	-	-158	-147	-136	-121	-106	-99	*	-56	-35	-13	10	33	73	56	36	15	-1	13	**	-78	-79	-82	-84	-87	-84
LEVEL 5	1676	PRE-	-	-	-	-	-	-	-	-	-	-	618	614	618	618	620	620	619	619	618	615	615	-	-	-	-	-	-
		POST-	-	-	-	-	-	-	-	-	-	-	567	577	589	602	611	620	634	642	650	655	661	-	-	-	-	-	-
		CRUSH	-	-	-	-	-	-	-	-	-	-	-51	-37	-29	-16	-9	0	15	23	32	40	46	-	-	-	-	-	-

			DISTANCE FROM IMPACT			
	HEIGHT		3150	3300	3450	3600
LEVEL 1	453	PRE-	-	-	-	-
		POST-	-	-	-	-
		CRUSH	-	-	-	-
LEVEL2		PRE-	**LEVEL 2 OCCUPANT H-POINT AND LEVEL 3 MID-DOOR ARE THE SAME FOR THE 2001 DODGE DAKOTA SPORT**			
		POST-				
		CRUSH				
LEVEL 3	834	PRE-		237	243	252
		POST-		114	119	126
		CRUSH		-123	-124	-126
LEVEL 4	1210	PRE-	337	336	334	332
		POST-	247	242	237	235
		CRUSH	-90	-94	-97	-97
LEVEL 5	1676	PRE-	-	-	-	-
		POST-	-	-	-	-
		CRUSH	-	-	-	-

* Data not recorded at 300-mm line at Level 4 due to rear view mirror

** Data not recorded at 2100-mm line at Level 4 due to gap in frame at the bed of truck

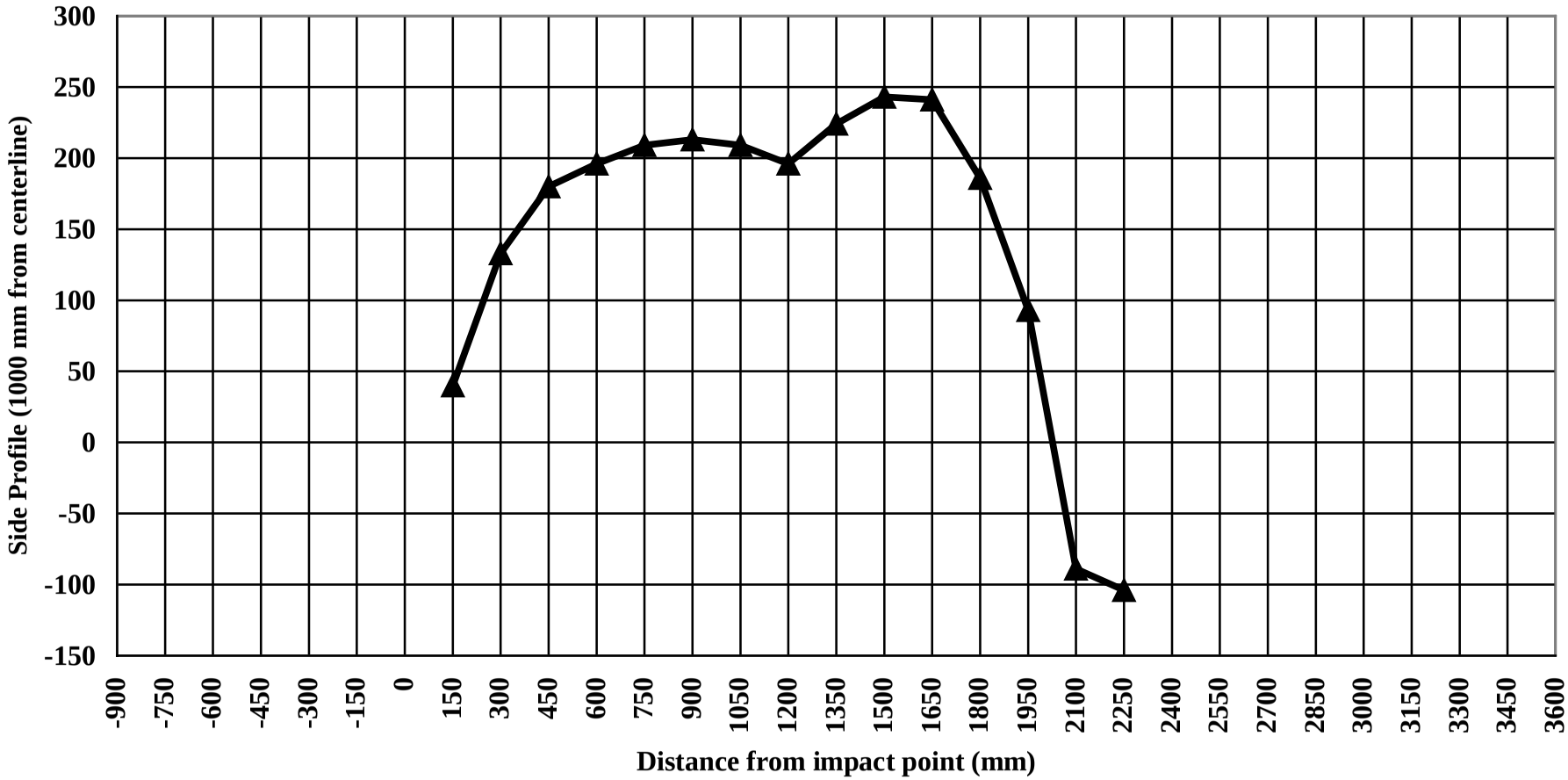
DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

SIDE PROFILE LEVEL 1

453 mm above ground



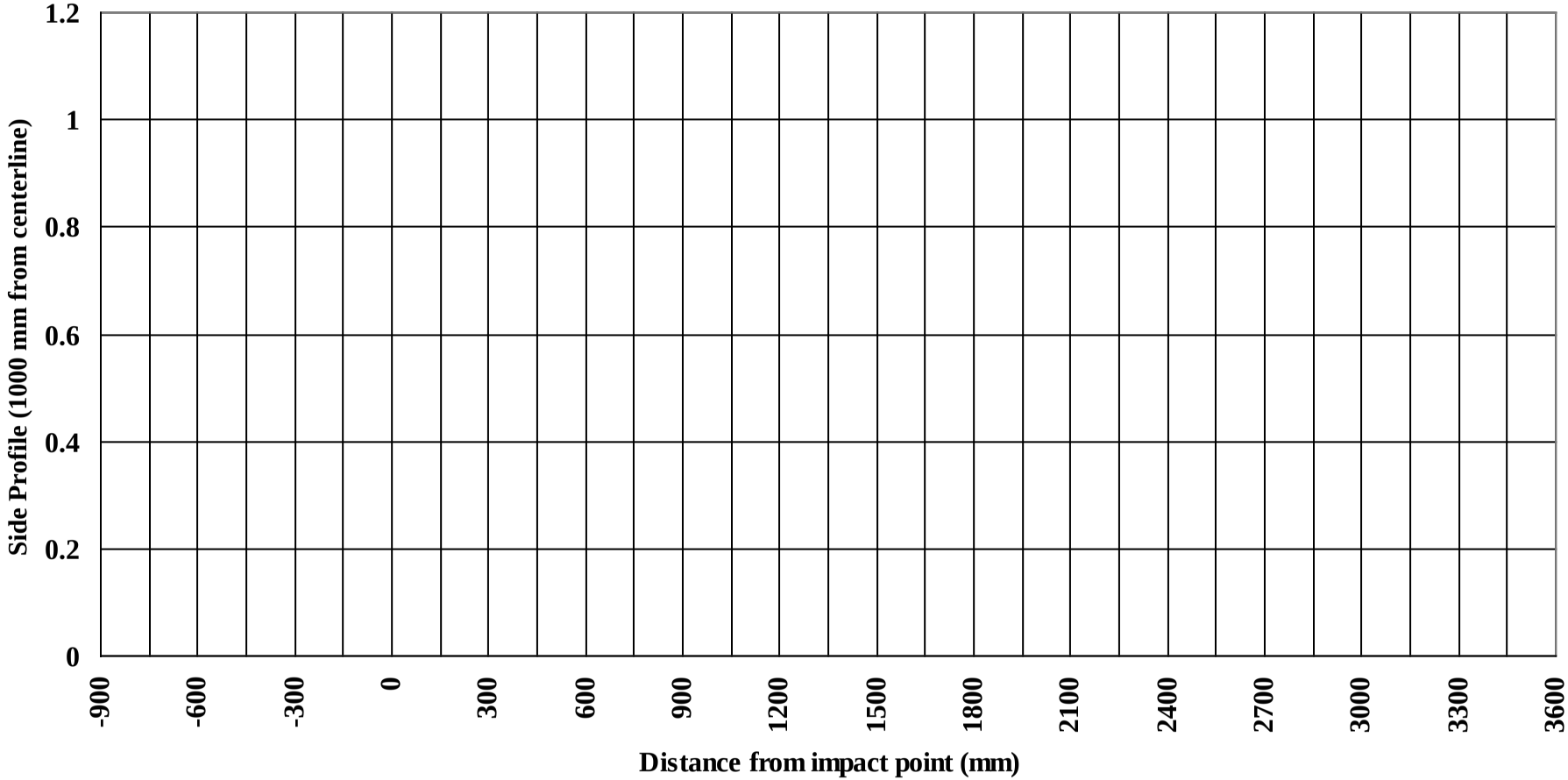
DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

SIDE PROFILE LEVEL 2 -

NOTE: LEVELS 2 AND 3 OVERLAP ON 2001 DODGE DAKOTA SPC



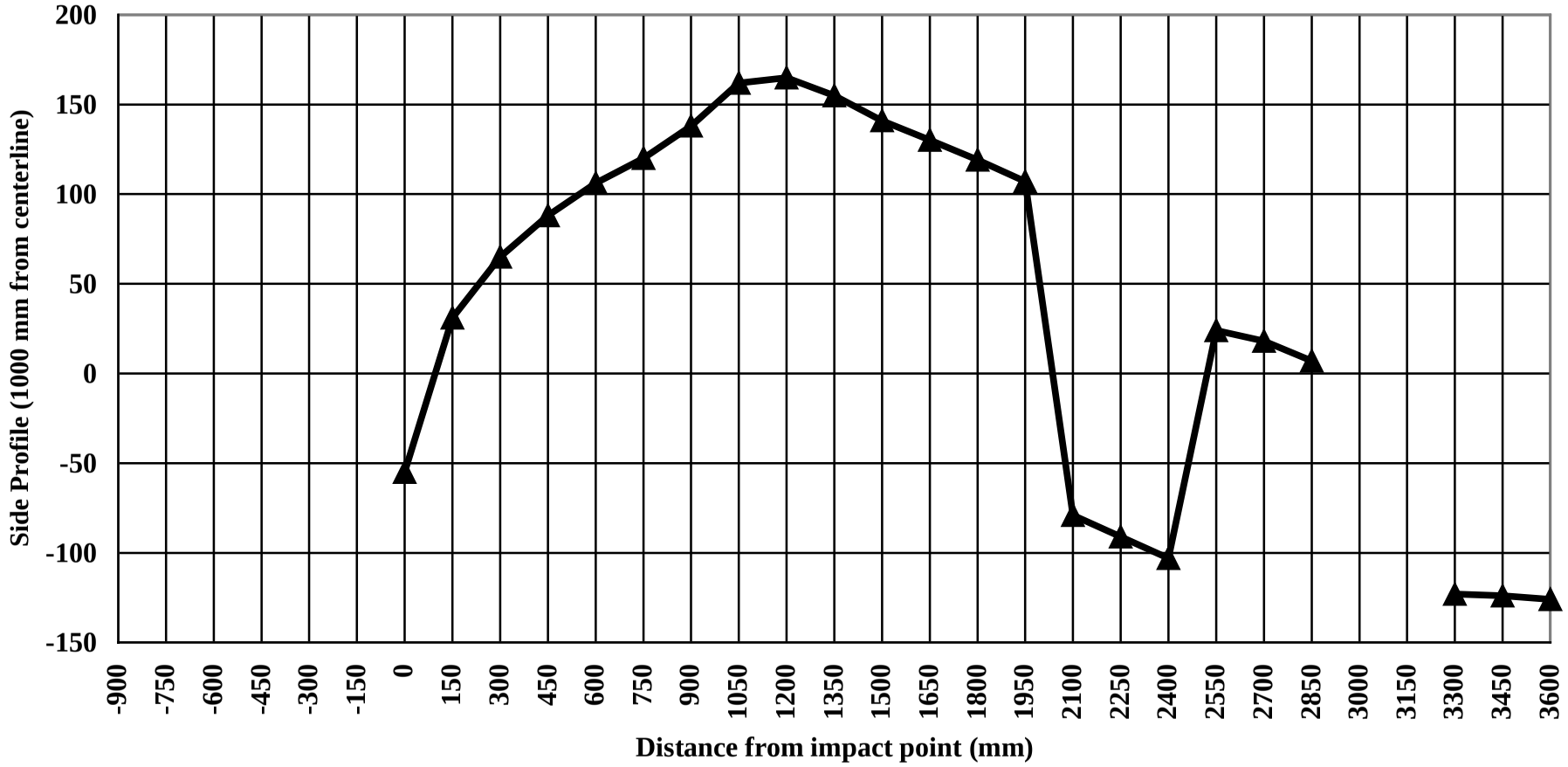
DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

SIDE PROFILE LEVEL 3

834 mm above ground



DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

SIDE PROFILE LEVEL 4

1210 mm above ground

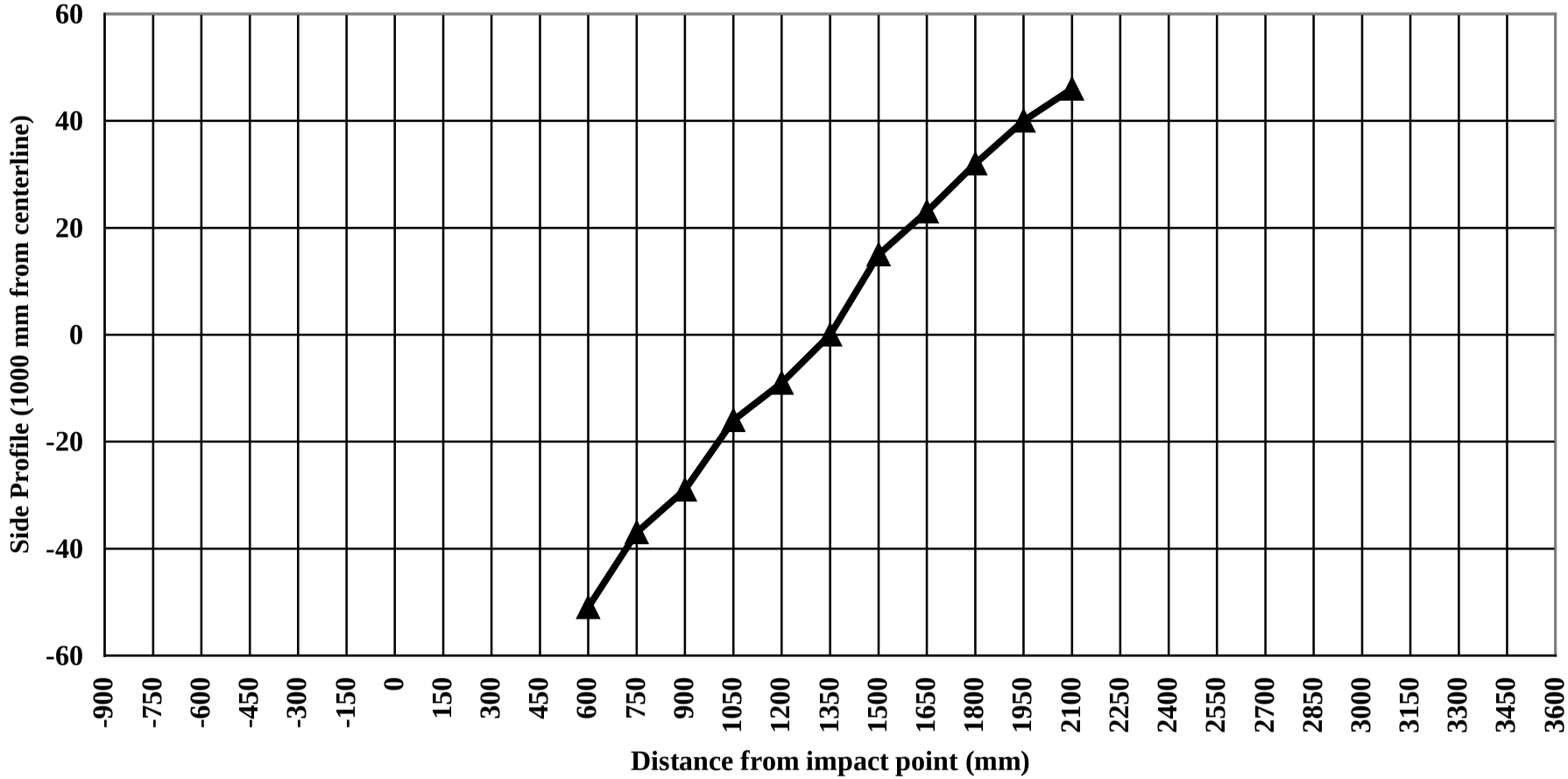
DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

SIDE PROFILE LEVEL 5

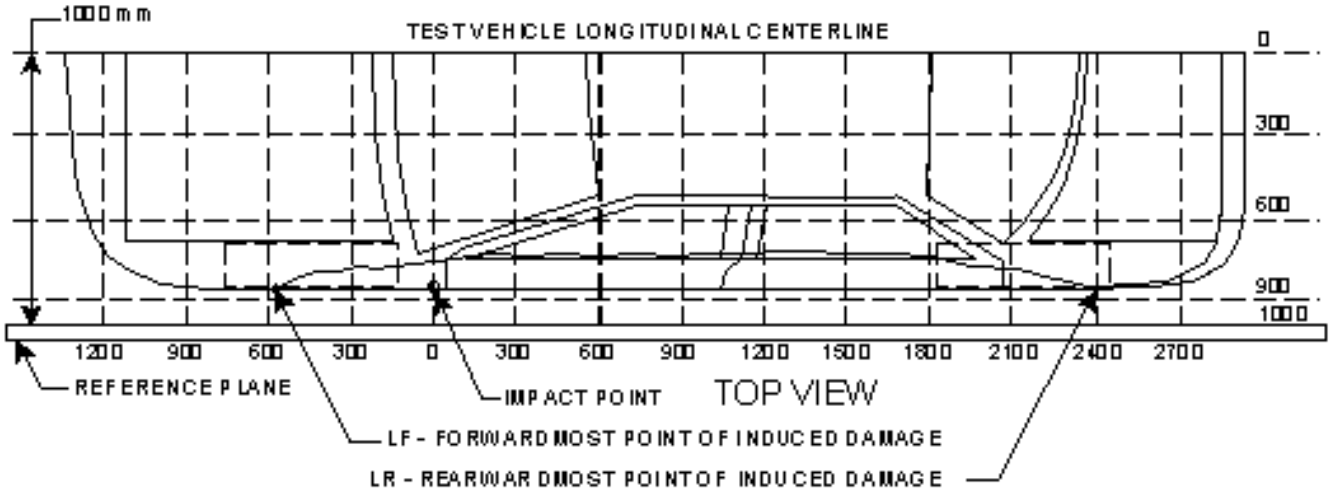
1676 mm above ground



DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



DPD MEASUREMENTS (mm)		POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1	-150	305	305	0
2	330	534	292	242
3	810	563	270	293
4	1290	568	260	308
5	1770	557	240	317
6	2250	231	231	0

DATA SHEET 12

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

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

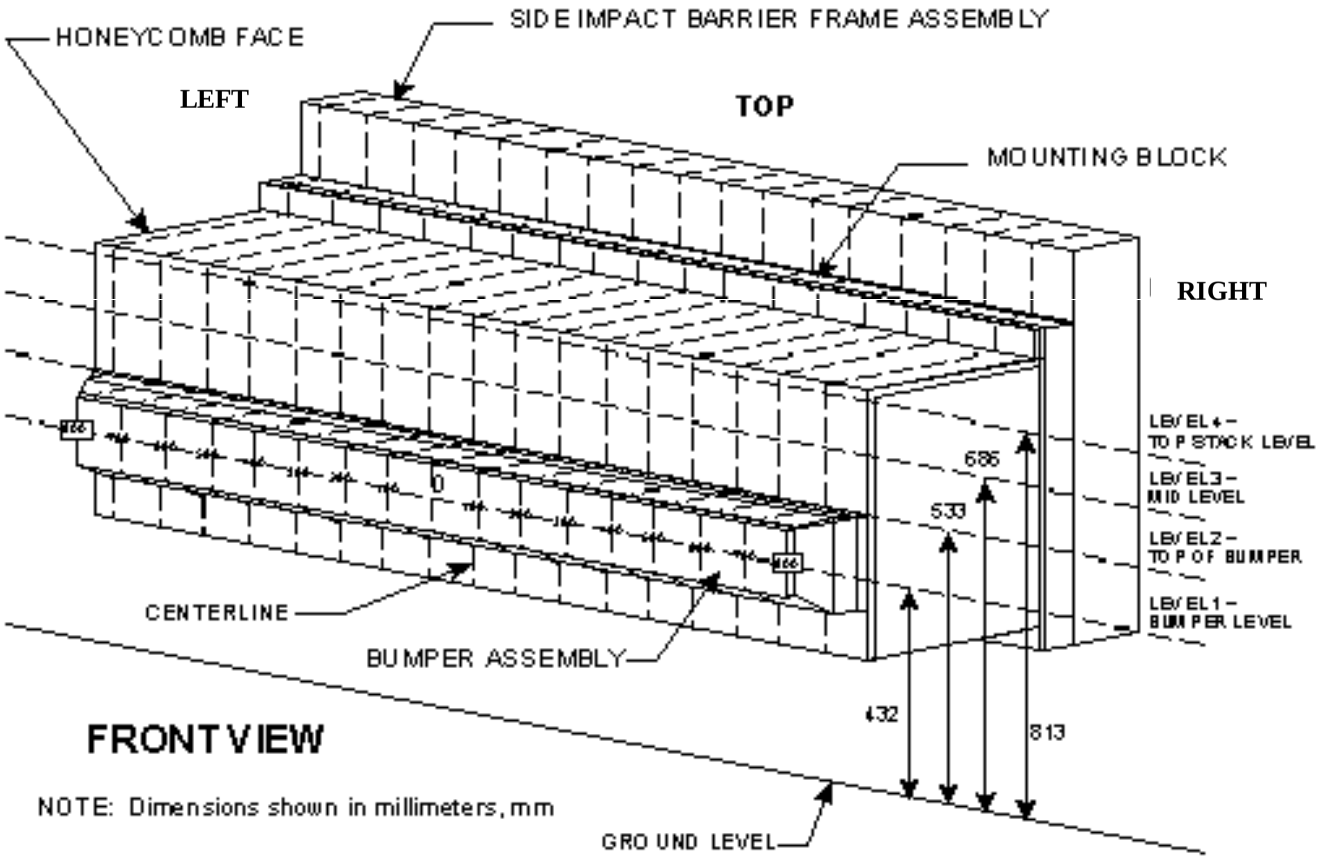
Note: All Dimensions are in millimeters with a tolerance of ±3 mm

LEVEL	HEIGHT AT CL (mm)		DISTANCE LEFT OF CENTER									DISTANCE RIGHT OF CENTER							
			800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	810	PRE-	576	576	576	576	576	576	575	576	576	545	576	576	577	577	577	578	578
		POST-	699	663	642	631	619	611	604	653	637	605	653	634	643	659	679	701	729
		CRUSH	123	87	66	55	43	35	29	77	61	60	77	58	66	82	102	123	151
LEVEL 3 MID-LEVEL	685	PRE-	574	574	574	574	574	574	574	574	574	574	574	575	575	575	575	576	576
		POST-	667	612	597	590	586	585	585	654	612	592	640	614	599	611	631	647	727
		CRUSH	93	38	23	16	12	11	11	80	38	18	66	39	24	36	56	71	151
LEVEL 2 TOP BUMPER	560	PRE-	571	571	571	571	571	571	571	572	572	571	572	572	572	572	572	572	572
		POST-	634	625	624	622	621	620	621	626	623	622	627	617	618	598	621	669	727
		CRUSH	63	54	53	51	50	49	50	54	51	51	55	45	46	26	49	97	155
LEVEL 1 MID-BUMPER	432	PRE-	480	467	467	467	467	467	468	468	468	468	468	468	468	469	469	470	480
		POST-	533	512	505	504	502	501	501	510	506	502	506	505	505	506	516	541	580
		CRUSH	53	45	38	37	35	34	33	42	38	34	38	37	37	37	47	71	100

DATA SHEET 12 (continued)

STATIC CRUSH OF IMPACTOR FACE

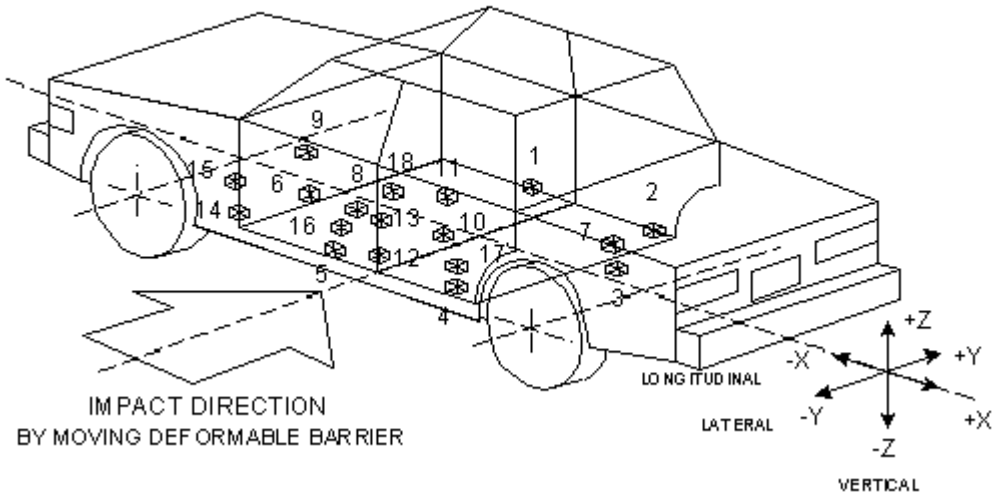
Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



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

DATASHEET 13

VEHICLE ACCELEROMETER LOCATIONS AND SUMMARY DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

Location		Coordinates			Longitudinal (X)				Lateral (Y)				Vertical (Z)				Resultant	
		X mm	Y mm	Z mm	Max		Min		Max		Min		Max		Min		Max	
					G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec
1	Right Side Sill at Front Seat	1880	815	410	4.6	78.7	-3.6	29.8	28.9	25.6	-7.61	70.8	11.3	22.2	-4.3	75.8	29.8	25.4
2	Right Side Sill at Rear Seat	2920	816	415	5.0	73.9	-4.5	32.6	44.0	10.2	-13.4	70.2	11.8	19.7	-7.7	44.7	44.4	10.1
3	Rear Floorpan Above Axle	4085	-5	810	6.6	81.4	-4.1	54.1	14.0	72.1	-2.3	172.1	15.8	30.6	-8.8	51.2	18.5	30.6
4	Left Side Sill at Rear Seat	1880	-817	411					124.4	7.6	-52.4	34.6						
5	Left Side Sill at Front Seat	2917	-810	405					209.1	6.8	-105.3	18.5						
6	Left Front Door on Centerline	*	*	*					*	*	*	*						
7	Right Rear Occupant Compartment	2980	311	700					45.8	9.5	-18.5	70.1						
8	Midrear of Left Front Door	*	*	*					*	*	*	*						
9	Left Front Door Upper Centerline	*	*	*					*	*	*	*						
10	Midrear of Left Rear Door	*	*	*					*	*	*	*						

Axis Origin X – Front Bumper
Y – Vehicle Centerline
Z – Test Surface
(As described in Side NCAP Test Procedure Manual dated May 1999)

Axis Orientation +(X) Rearward
+(Y) Right
+(Z) Up

*Accelerometer not requested

DATASHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND SUMMARY DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

Location		Coordinates			Longitudinal (X)				Lateral (Y)				Vertical (Z)				Resultant	
		X mm	Y mm	Z mm	Max		Min		Max		Min		Max		Min		Max	
					G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec
11	Left Rear Door Upper Centerline	*	*	*					*	*	*	*						
12	Left Lower B-Pillar	2431	-745	765					146.3	13.8	-66.1	25.5						
13	Left Middle B-Pillar	2435	-752	1075					138.5	14.2	-25.4	21.2						
14	Left Lower A-Pillar	1320	-740	760					54.0	8.5	-20.9	30.6						
15	Left Middle A-Pillar	1319	-735	1070					50.4	20.6	-12.5	31.8						
16	Front Seat Track	2035	-535	660					58.4	18.9	-32.4	32.4						
17	Rear Seat Track	3170	580	720					31.4	10.2	-12.7	70.6						
18	Vehicle CG	2154	-10	680	8.4	7.8	-6.1	20.3	43.8	7.8	-8.9	43.4	54.3	14.3	-41.0	39.8	54.9	14.2

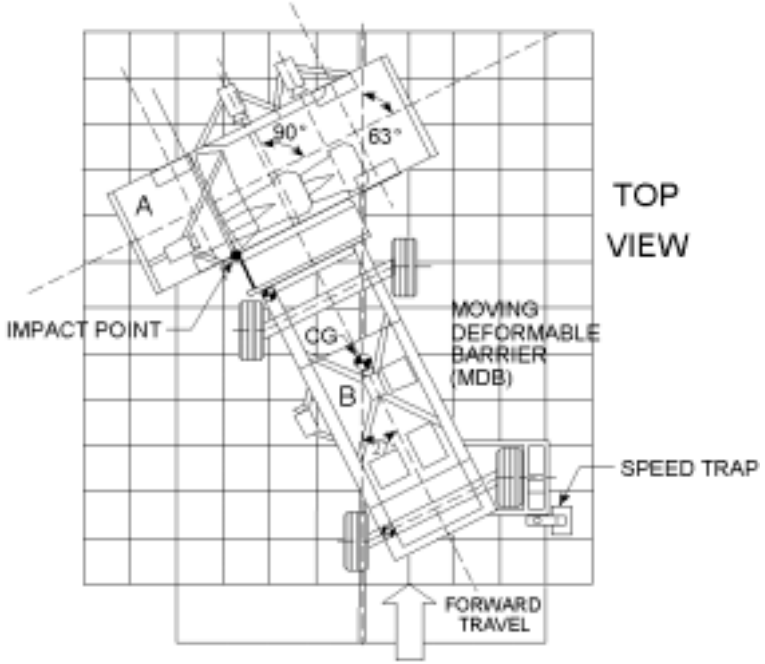
Axis Origin X – Front Bumper
Y – Vehicle Centerline
Z – Test Surface
(As described in Side NCAP Test Procedure Manual dated May 1999)

Axis Orientation +(X) Rearward
+(Y) Right
+(Z) Up

*Accelerometer not requested

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY



Location		Coordinates			Longitudinal (X)				Lateral (Y)				Vertical (Z)				Resultant	
		X	Y	Z	Max		Min		Max		Min		Max		Min		Max	
		mm	mm	mm	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec
1	MDB Center of Gravity	1113	-1	311	26.4	31.8	-3.2	95.8	7.9	5.6	-13.5	35.3	11.3	80.3	-15.7	17.0	27.6	31.8
2	MDB Rear Frame Member	2812	-614	585	3.8	36.3	-2.2	149.1	1.8	147.3	-20.2	39.0						

Axis Origin X – Front Bumper
Y – Vehicle Centerline
Z – Test Surface

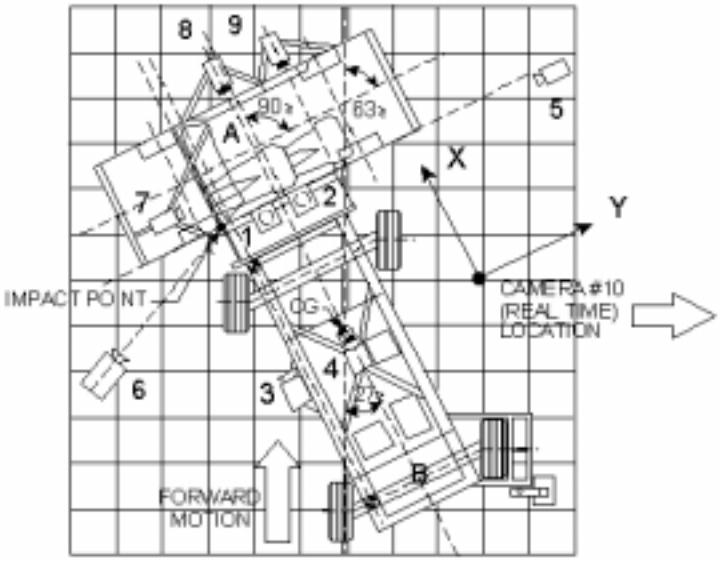
Axis Orientation +(X) Rearward
+(Y) Right
+(Z) Up

(As described in Side NCAP Test Procedure Manual dated May 1999)

DATA SHEET 15

HIGH-SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



Camera No.	View	Coordinates (mm)*			Angle wrt Horiz.	Lens (mm)	Film Speed (fps)
		X	Y	Z			
1	Overhead view of test vehicle	795	1381	5622	-90	7	1000
2	Overhead close-up view of impact plane	154	685	5622	-90	12	1000
3	MDB onboard close-up view of impact point	-2321	0	756	0	13	1000
4	MDB onboard view of driver dummy	-2321	960	1320	-7	13	1000
5	Right side ground level overall view	832	12344	1462	-4	45	1000
6	Left side ground level overall view	-958	-4216	392	-6	25	1000
7	Test vehicle onboard driver front view	665	-244	1289	-18	10	1000
8	Test vehicle onboard driver side view	1724	736	1220	-2	10	1000
9	Test vehicle onboard passenger side view	1693	1732	1218	-2	10	1000
10	Real-time film coverage of test	-	-	-	-	-	-

* Reference: (from point of impact)
+ X = Forward
+ Y = To Right
+ Z = Upward

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

FUEL SYSTEM INTEGRITY DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304

TEST REQUIREMENTS:

Drain the test vehicle's fuel system and operate the engine until the fuel system is dry. Add Stoddard solvent, which has been dyed purple, until 92-94% of the stated usable capacity is reached. Operate the engine to assure the Stoddard solvent is present throughout the entire fuel system.

TEST VEHICLE IMPACT TYPE: Side impacting Moving Deformable Barrier contacting the driver side.

FUEL SPILLAGE MEASUREMENT:

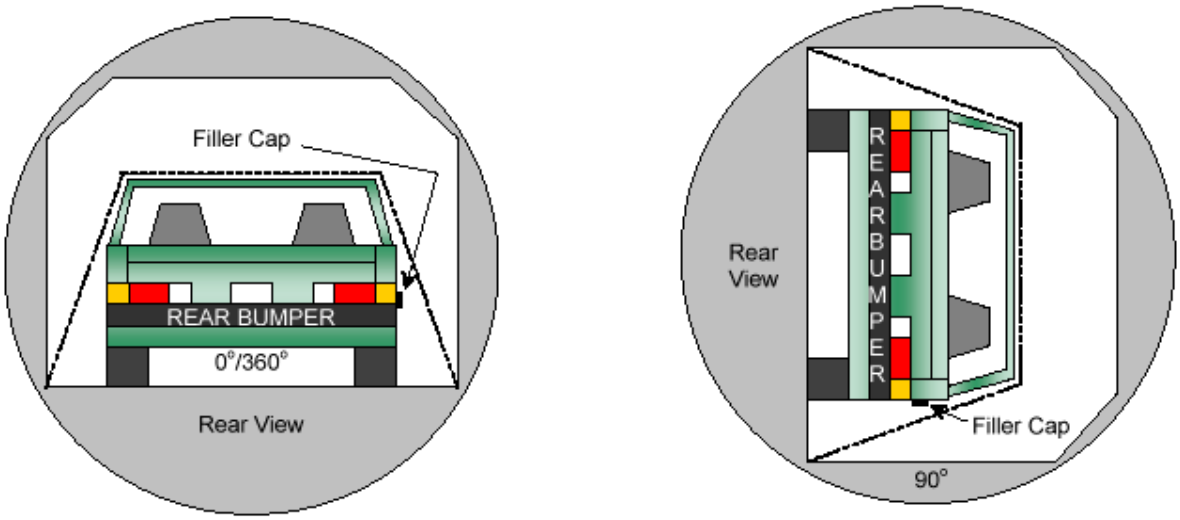
POST IMPACT TEST	TEST RESULTS	MAXIMUM ALLOWABLE
1. From impact until vehicle motion ceases	0	29.6 ml
2. For 5 minute period after vehicle motion ceases	0	147.9 ml
3. For next 25 minutes	0	29.6 ml / 1 min.

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17

ROLLOVER DATA

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



0° TO 90°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	1	minutes	4	seconds
(Spec Range =1 to 3 minutes)				
FMVSS 301 Position Hold Time	5	minutes	0	seconds
TOTAL	6	minutes	4	seconds
Next whole minute interval	7	minutes		

FUEL SPILLAGE MEASUREMENT:

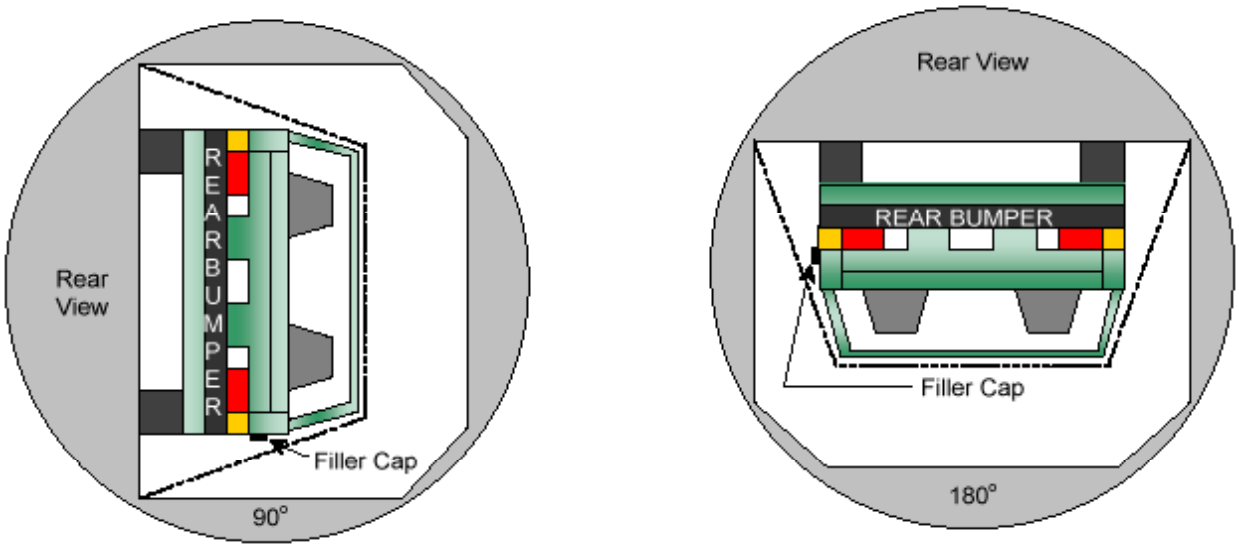
0° TO 90° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	147.9 ml.
2. Sixth Minute From Onset of Rotation	0	29.6 ml.
3. Seventh Minute From Onset of Rotation	0	29.6 ml
4. Eighth Minute if Required	N/a	29.6 ml

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17 (continued)

ROLLOVER VEHICLE

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



90° TO 180°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	1	minutes	5	seconds
(Spec Range =1 to 3 minutes)				
FMVSS 301 Position Hold Time	5	minutes	3	seconds
TOTAL	6	minutes	8	seconds
Next whole minute interval	7	minutes		

FUEL SPILLAGE MEASUREMENT:

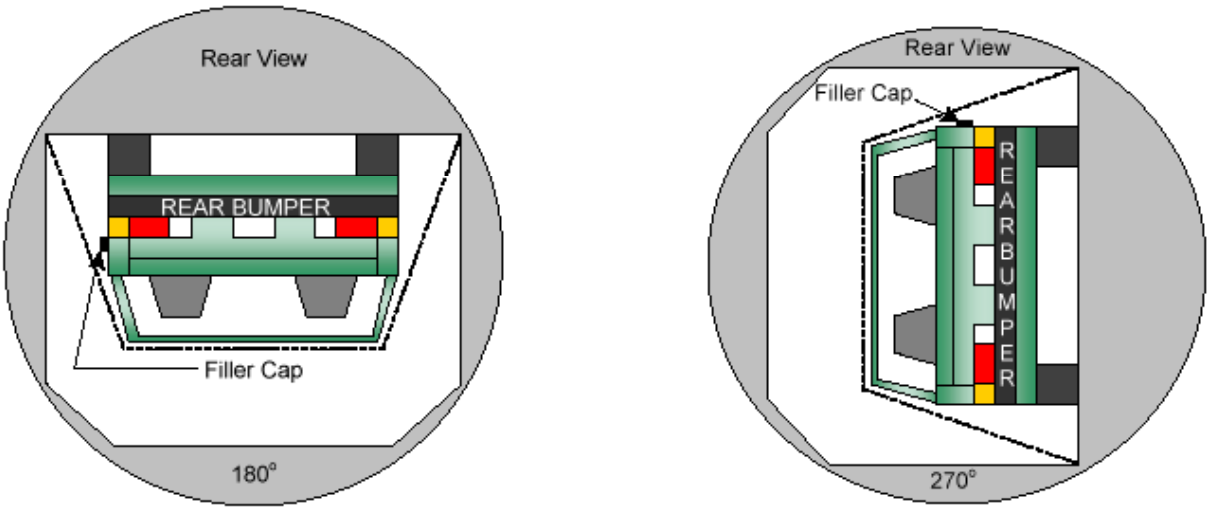
90° TO 180° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	147.9 ml.
2. Sixth Minute From Onset of Rotation	0	29.6 ml.
3. Seventh Minute From Onset of Rotation	0	29.6 ml
4. Eighth Minute if Required	N/a	29.6 ml

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17 (continued)

ROLLOVER VEHICLE

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



180° TO 270°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

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

FUEL SPILLAGE MEASUREMENT:

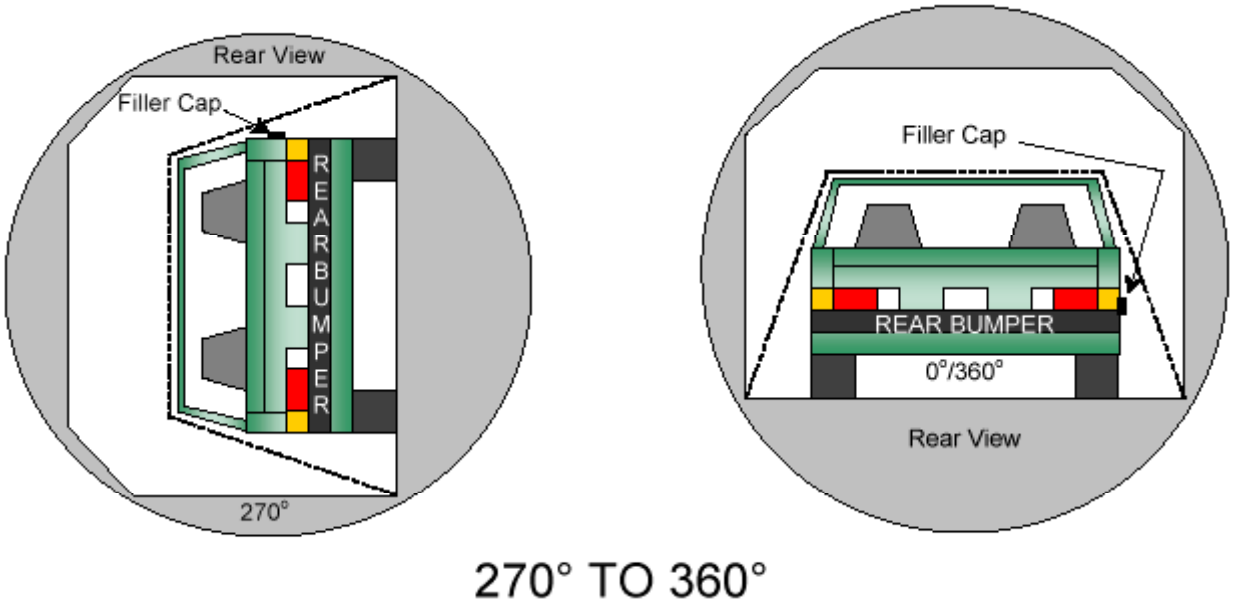
180° TO 270° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	147.9 ml.
2. Sixth Minute From Onset of Rotation	0	29.6 ml.
3. Seventh Minute From Onset of Rotation	0	29.6 ml
4. Eighth Minute From Onset of Rotation	N/a	29.6 ml

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17 (continued)

ROLLOVER VEHICLE

Vehicle: 2001 Dodge Dakota Sport Quad Cab P/U NTHSA No. M1 0304



DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	1	minutes	4	seconds
(Spec Range =1 to 3 minutes)				
FMVSS 301 Position Hold Time	5	minutes	0	seconds
TOTAL	6	minutes	4	seconds
Next whole minute interval	7	minutes		

FUEL SPILLAGE MEASUREMENT:

270° TO 360° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	147.9 ml.
2. Sixth Minute From Onset of Rotation	0	29.6 ml.
3. Seventh Minute From Onset of Rotation	0	29.6 ml
4. Eighth Minute if Required	N/a	29.6 ml

FUEL SPILLAGE LOCATION(S): None

APPENDIX A

PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

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

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

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

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

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

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

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

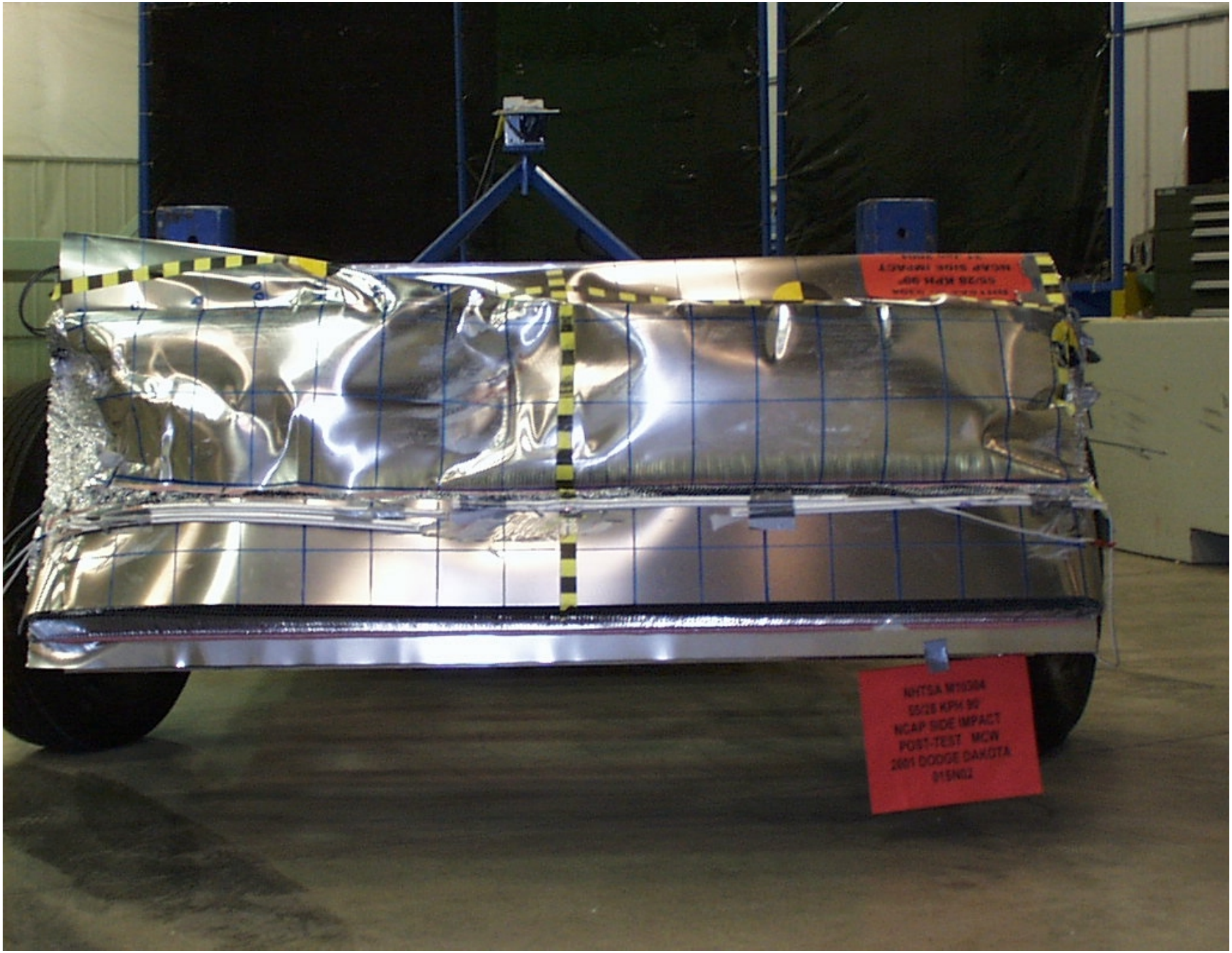


Figure A-8 POST-TEST FRONTAL VIEW OF IMPACTOR FACE

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

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

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

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

Figure A-13 PRE-TEST OVERHEAD VIEW OF ALIGNED MDB AND VEHICLE

Figure A-14 POST-TEST OVERHEAD VIEW OF MDB AND VEHICLE

Figure A-15 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID

Figure A-16 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID

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

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

Figure A-19 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID

Figure A-20 POST-TEST LEFT OCCUPANT VIEW OF FRONT SID

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

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

Figure A-23 PRE-TEST INTERIOR OF FRONT DOOR

Figure A-24 POST-TEST INTERIOR OF FRONT DOOR SHOWING SID IMPACT LOCATIONS

Figure A-25 PRE-TEST INTERIOR OF REAR DOOR

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

Figure A-27 PRE-TEST LEFT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION

Figure A-28 PRE-TEST RIGHT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION

Figure A-29 POST-TEST CLOSE-UP VIEW OF IMPACT POINT TARGET

Figure A-30 CLOSE-UP VIEW OF VEHICLE CERTIFICAITON LABEL AND TIRE PLACARD

Figure A-31 IMPACT PHOTO

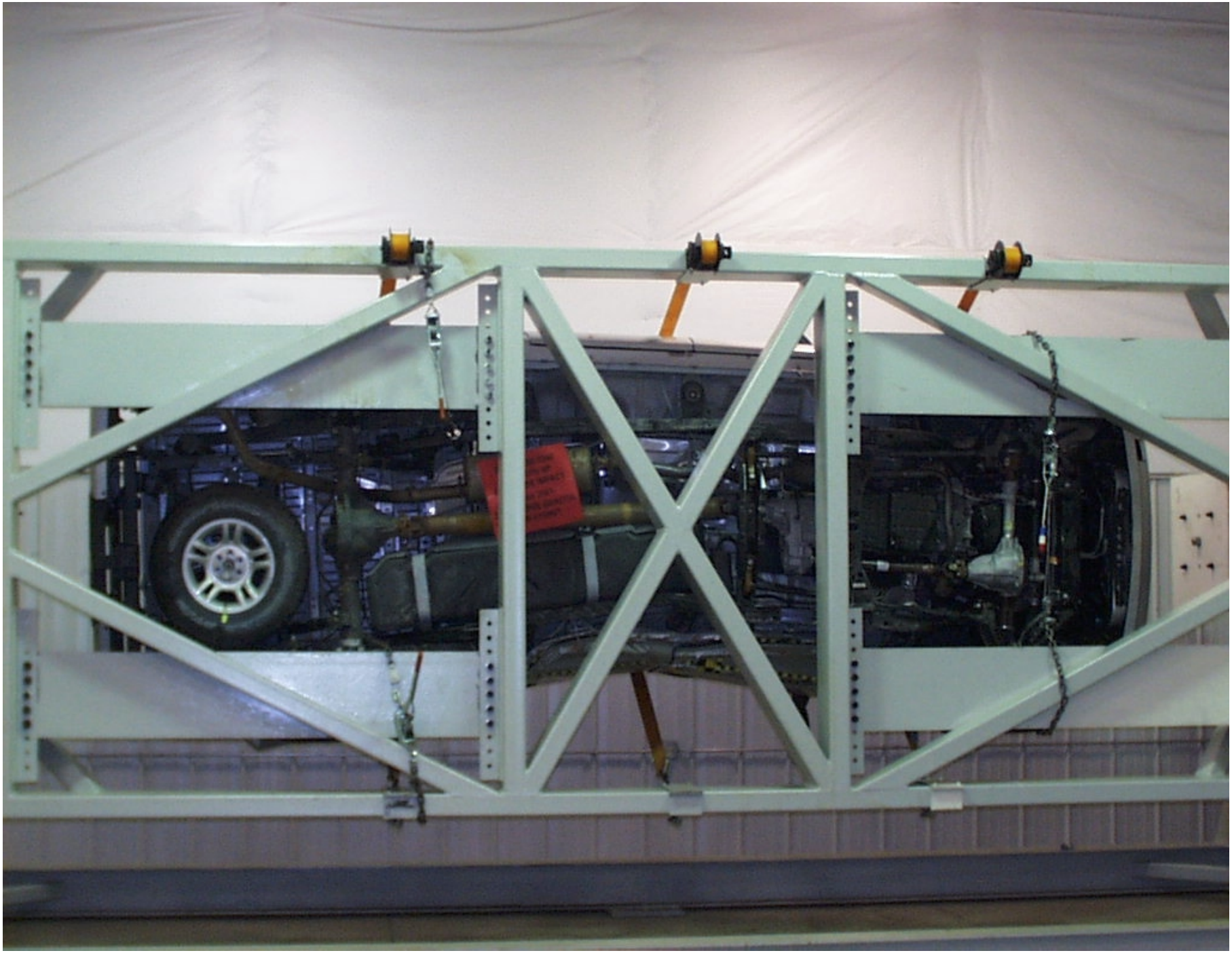


Figure A-32 ROLLOVER 90 DEGREES

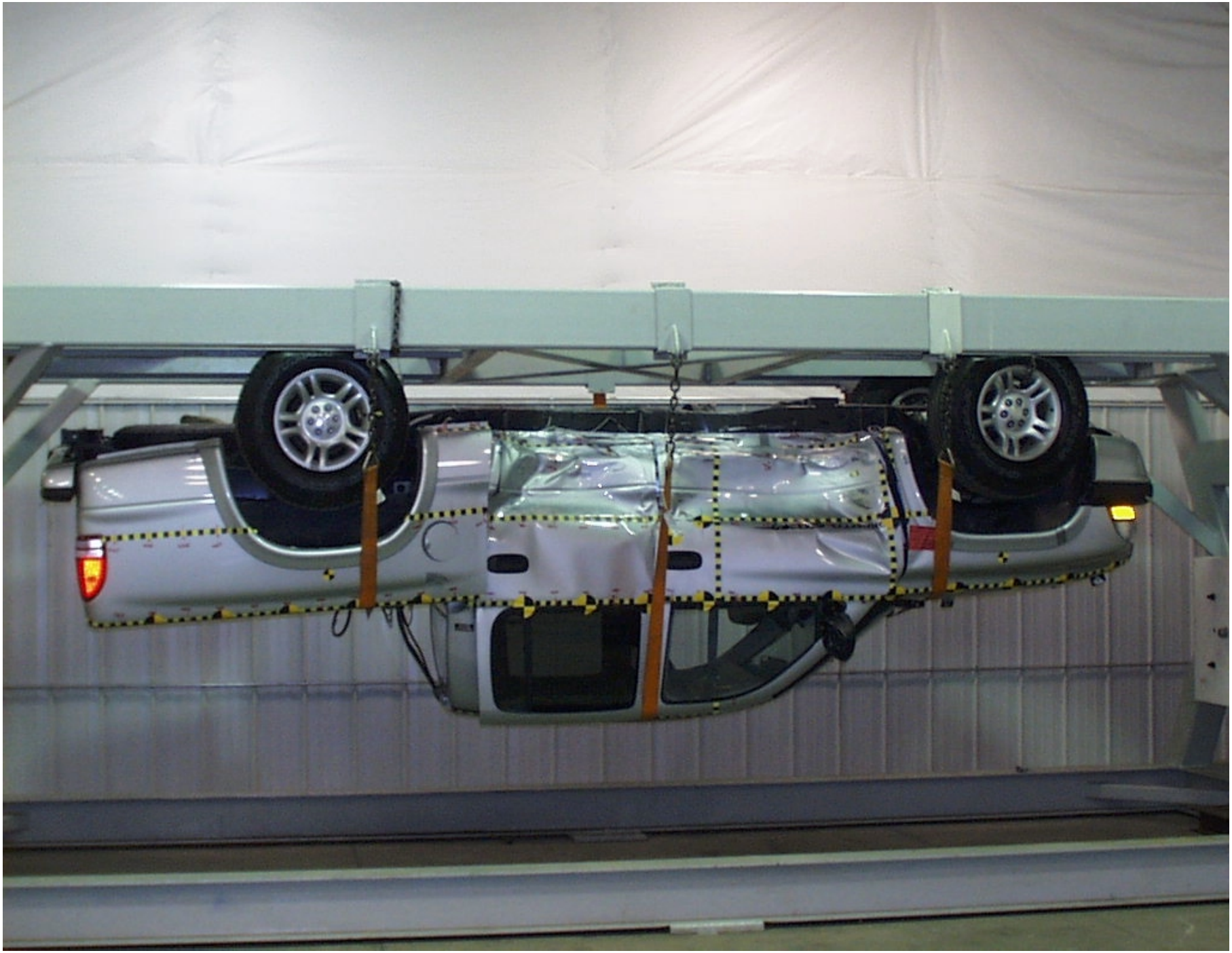


Figure A-33 ROLLOVER 180 DEGREES

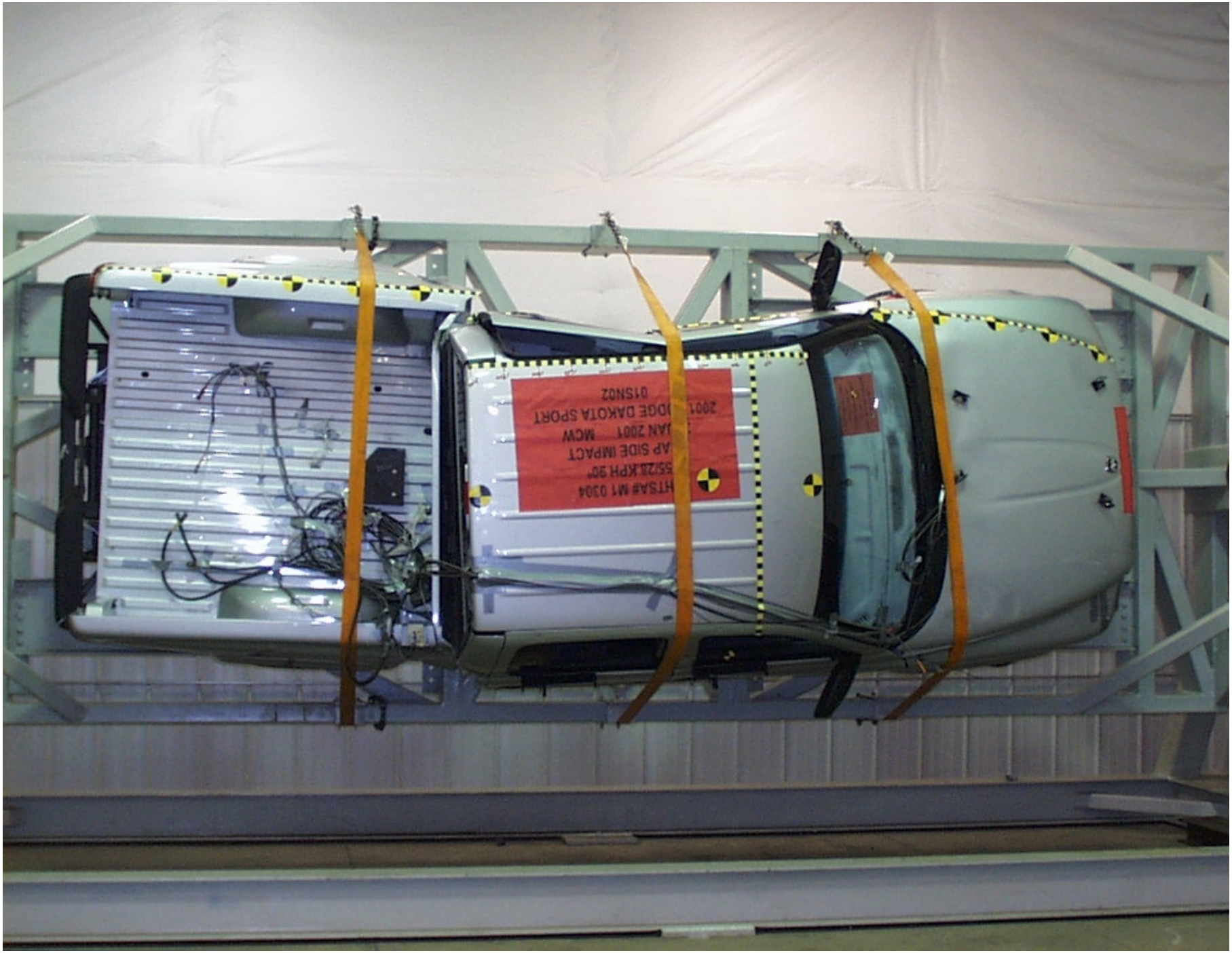


Figure A-34 ROLLOVER 270 DEGREES

Figure A-35 ROLLOVER 360 DEGREES

APPENDIX B

VEHICLE, MDB, AND SID RESPONSE DATA

TABLE OF CONTENTS

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

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION DATA – FIR FILTERED

TEST VEHICLE INSTRUMENTATION PLOTS

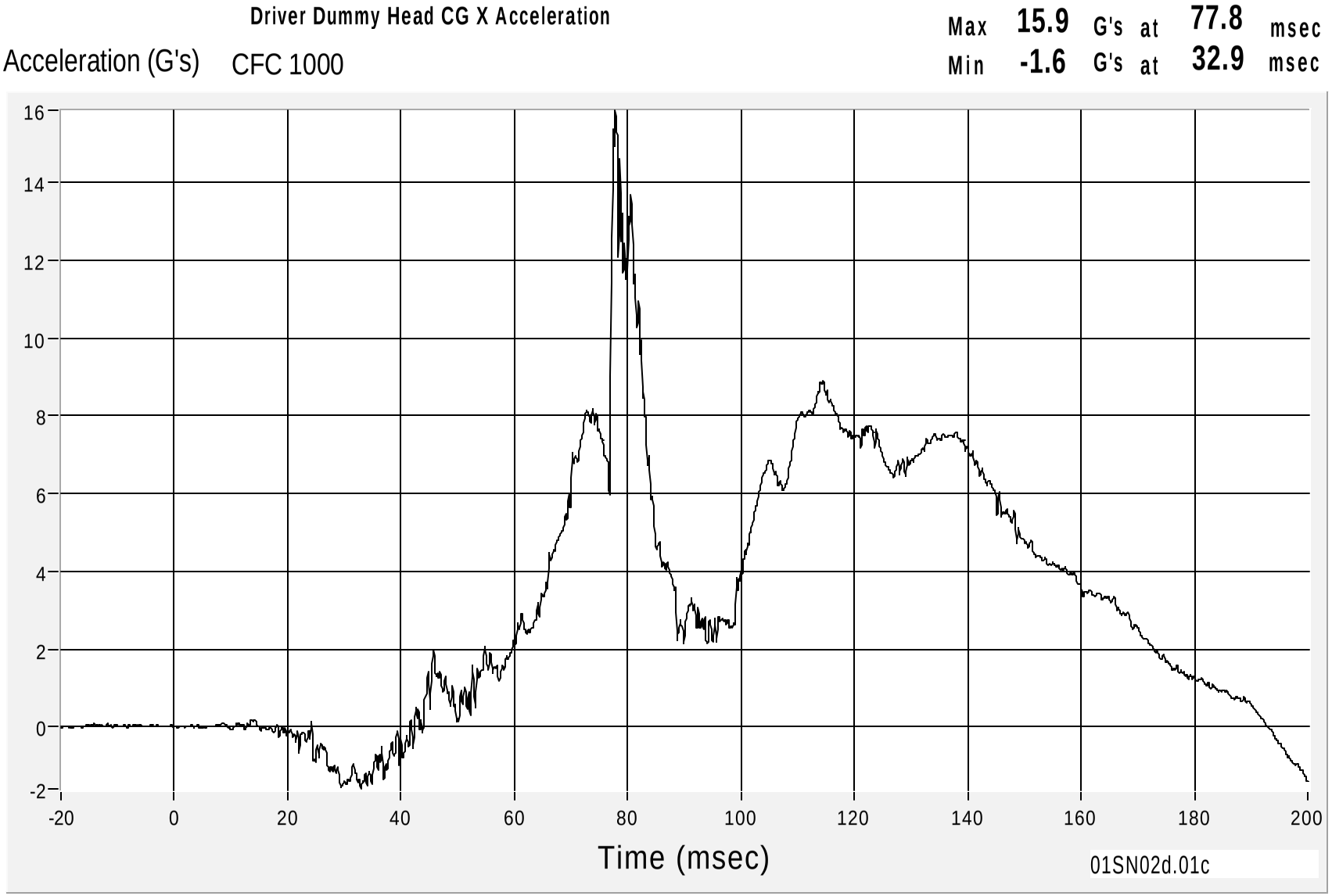
ACCELERATION DATA – FILTER CLASS 60

INTEGRATION DATA – FILTER CLASS 180

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

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

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOT (REDUNDANT)
ACCELERATION DATA – FIR FILTERED



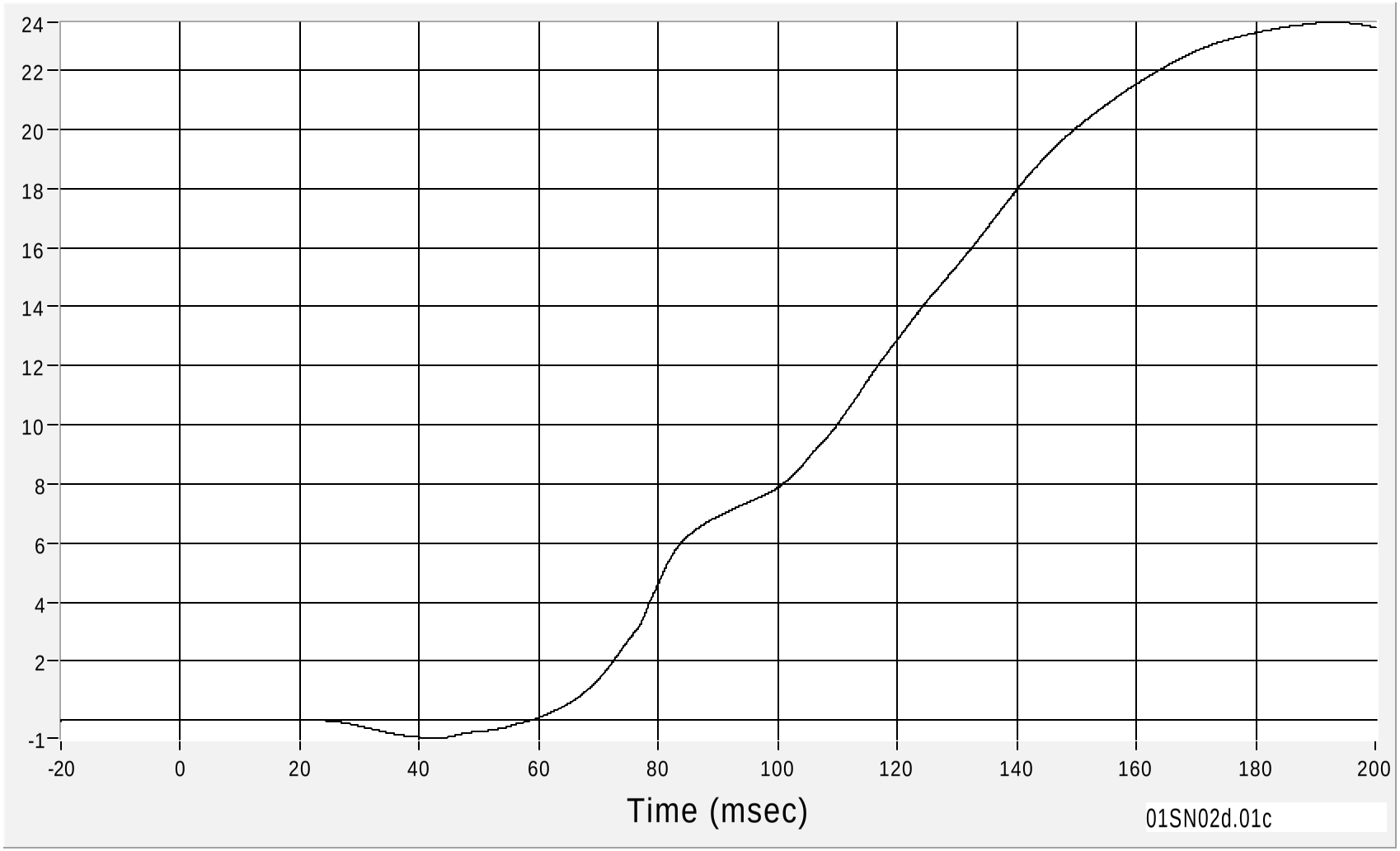
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Head CG X Velocity

Max 23.6 kph at 193.0 msec
Min -0.6 kph at 42.3 msec

Velocity (kph) CFC 180

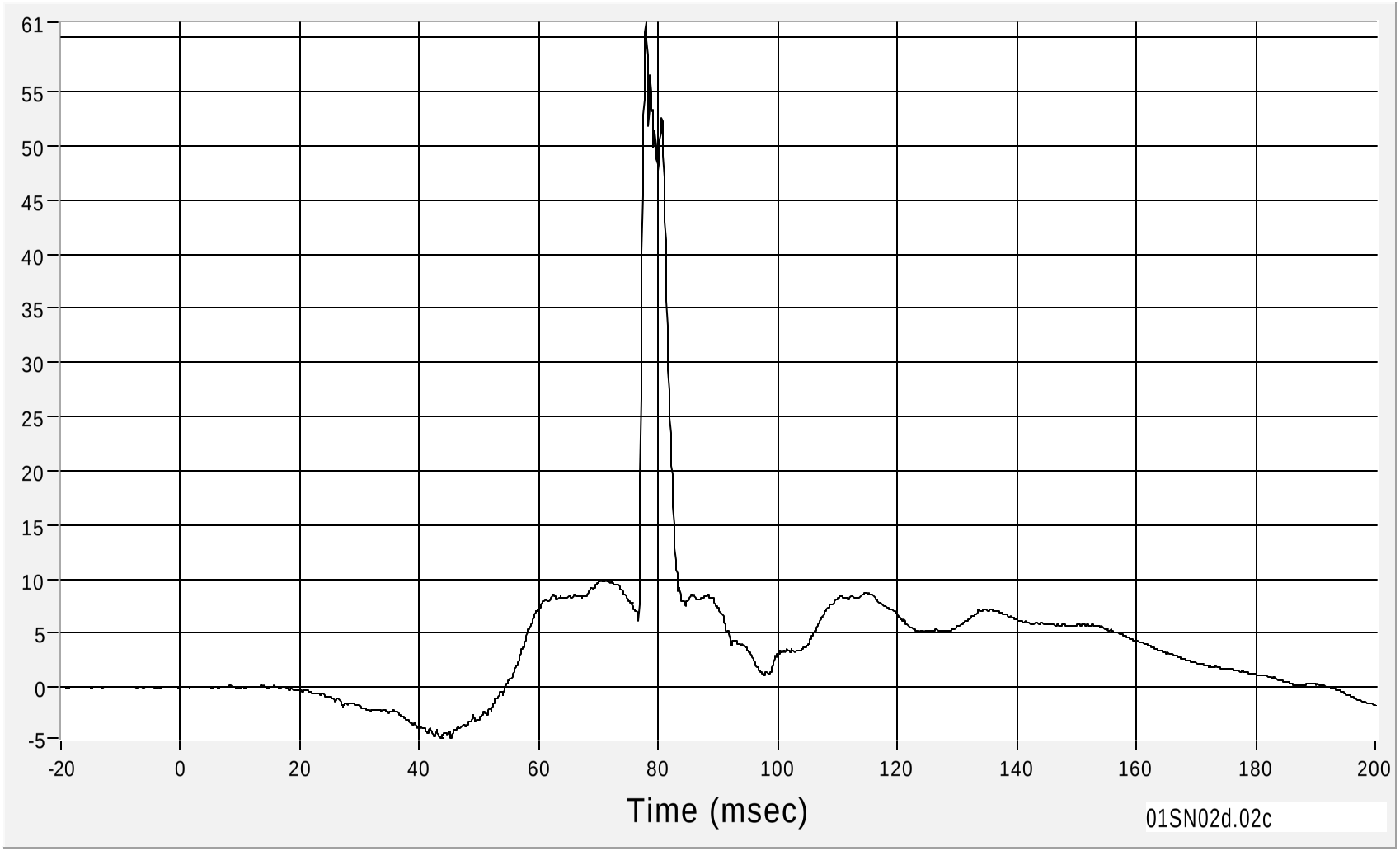


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

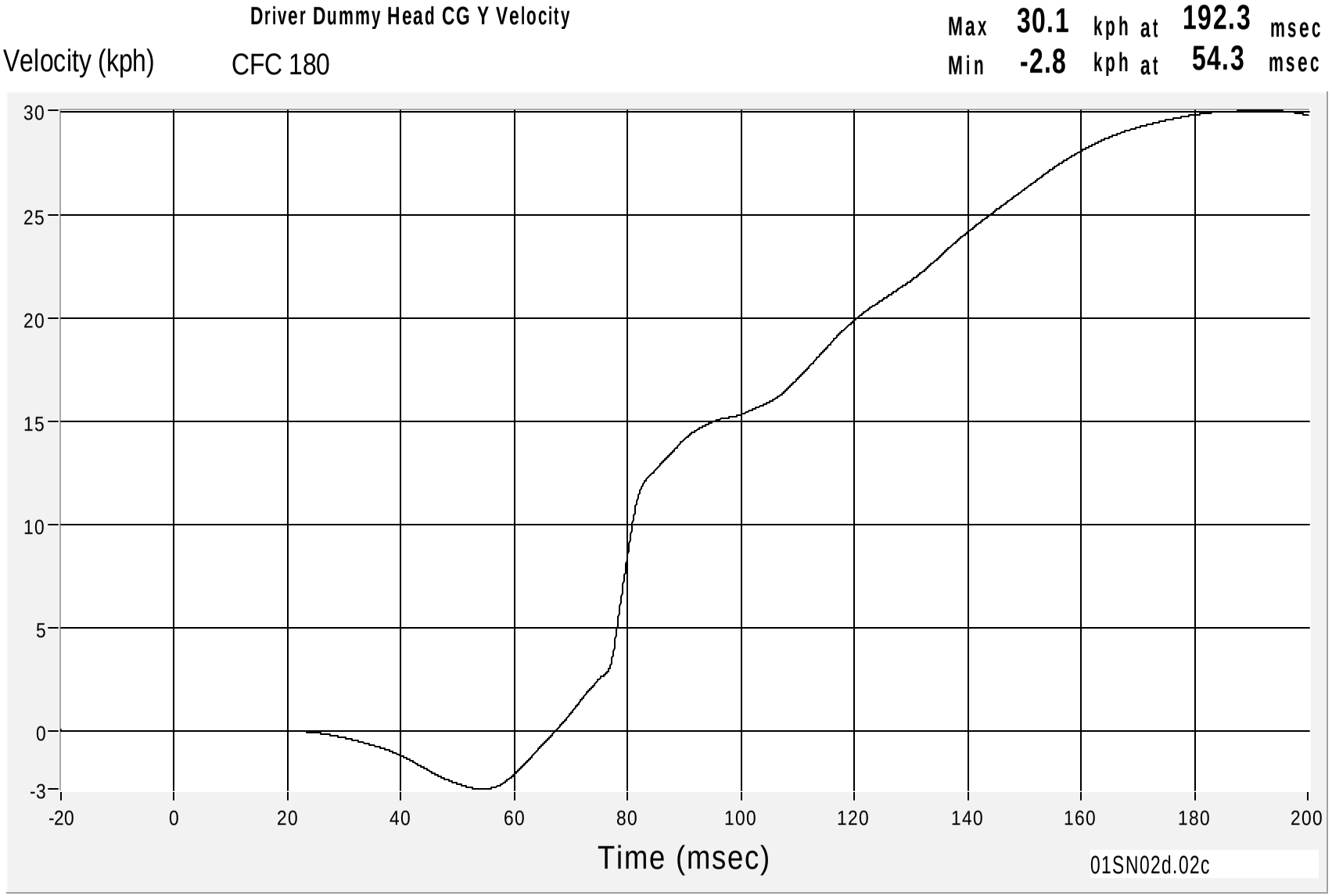
Driver Dummy Head CG Y Acceleration

Max 61.4 G's at 77.9 msec
Min -4.7 G's at 43.6 msec



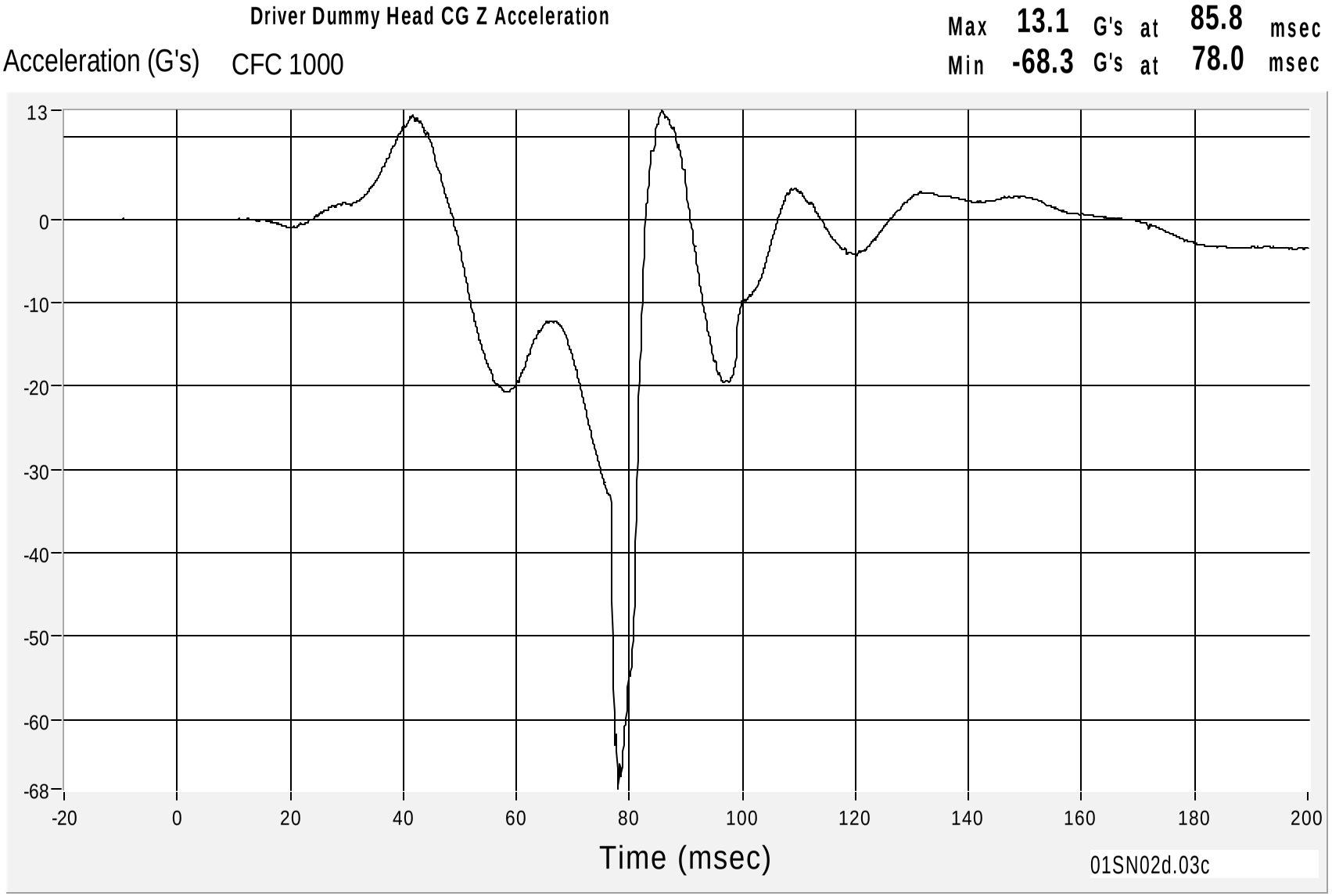
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

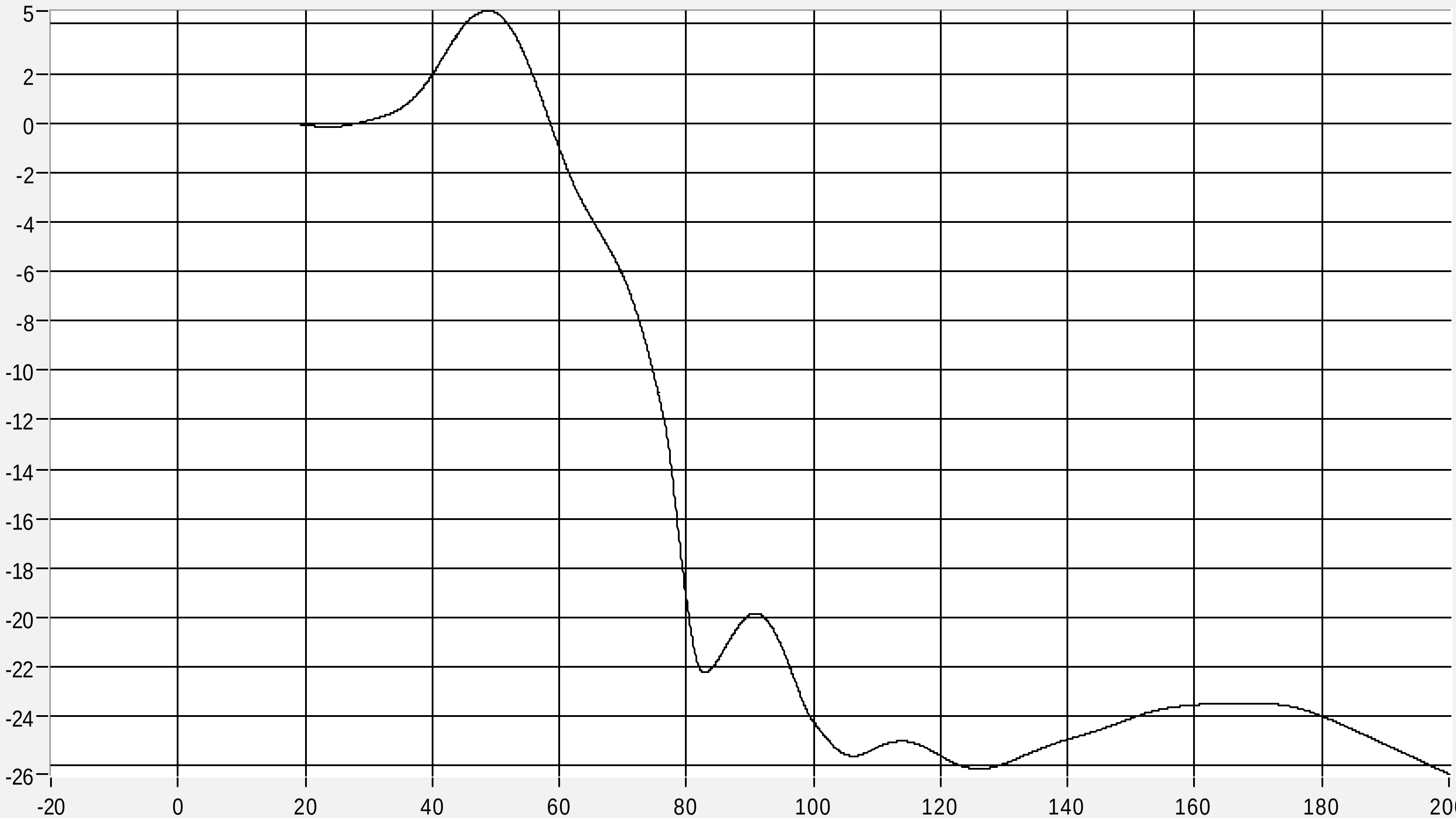
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Driver Dummy Head CG Z Velocity

Velocity (kph) CFC 180

Max 4.5 kph at 48.8 msec
Min -26.3 kph at 199.9 msec



01SN02 - 2001 Dodge Dakota Sport

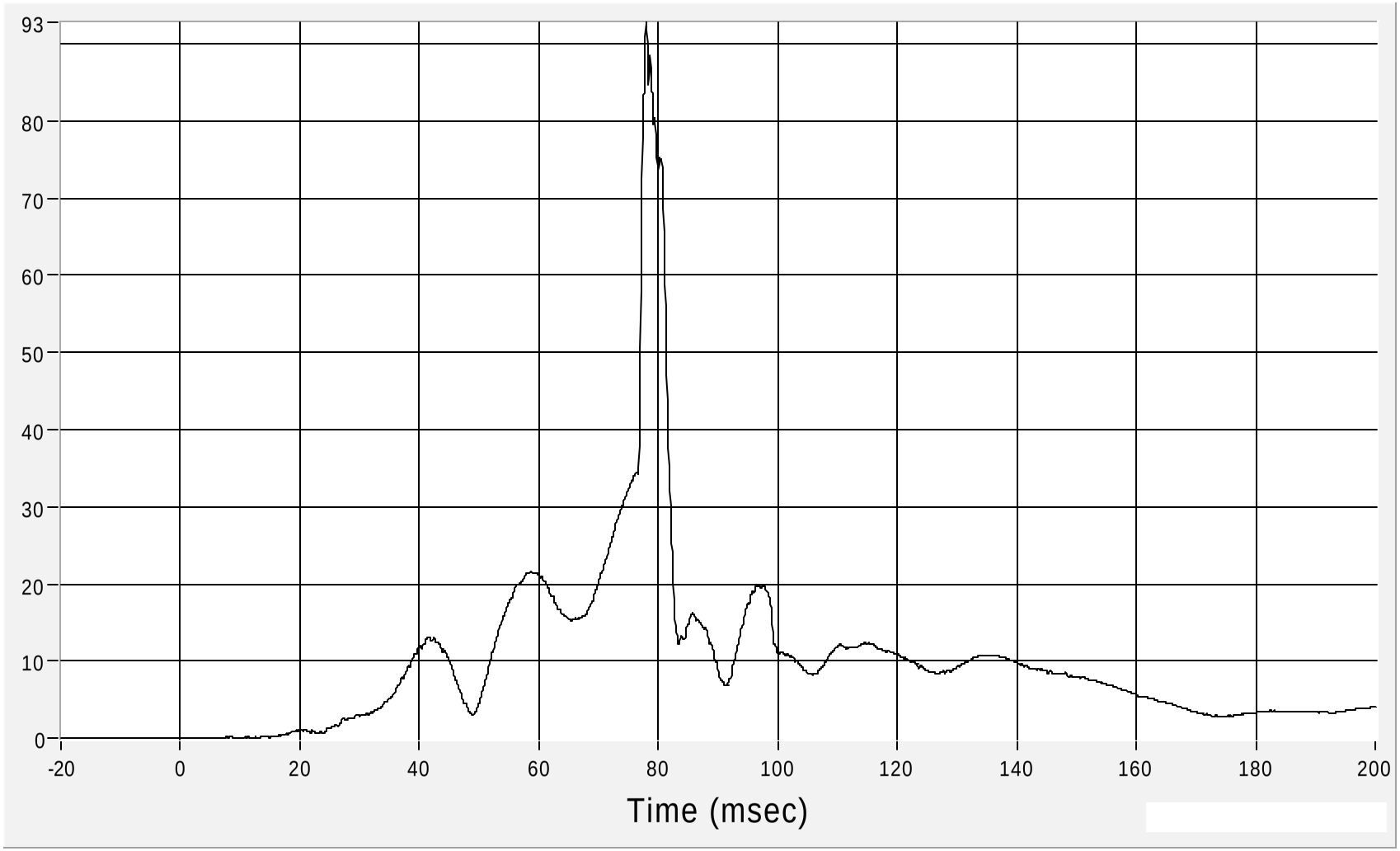
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Head CG - Resultant

Max 92.8 G's at 78.0 msec
Min 0.0 G's at -4.6 msec

Acceleration (G's) CFC 1000

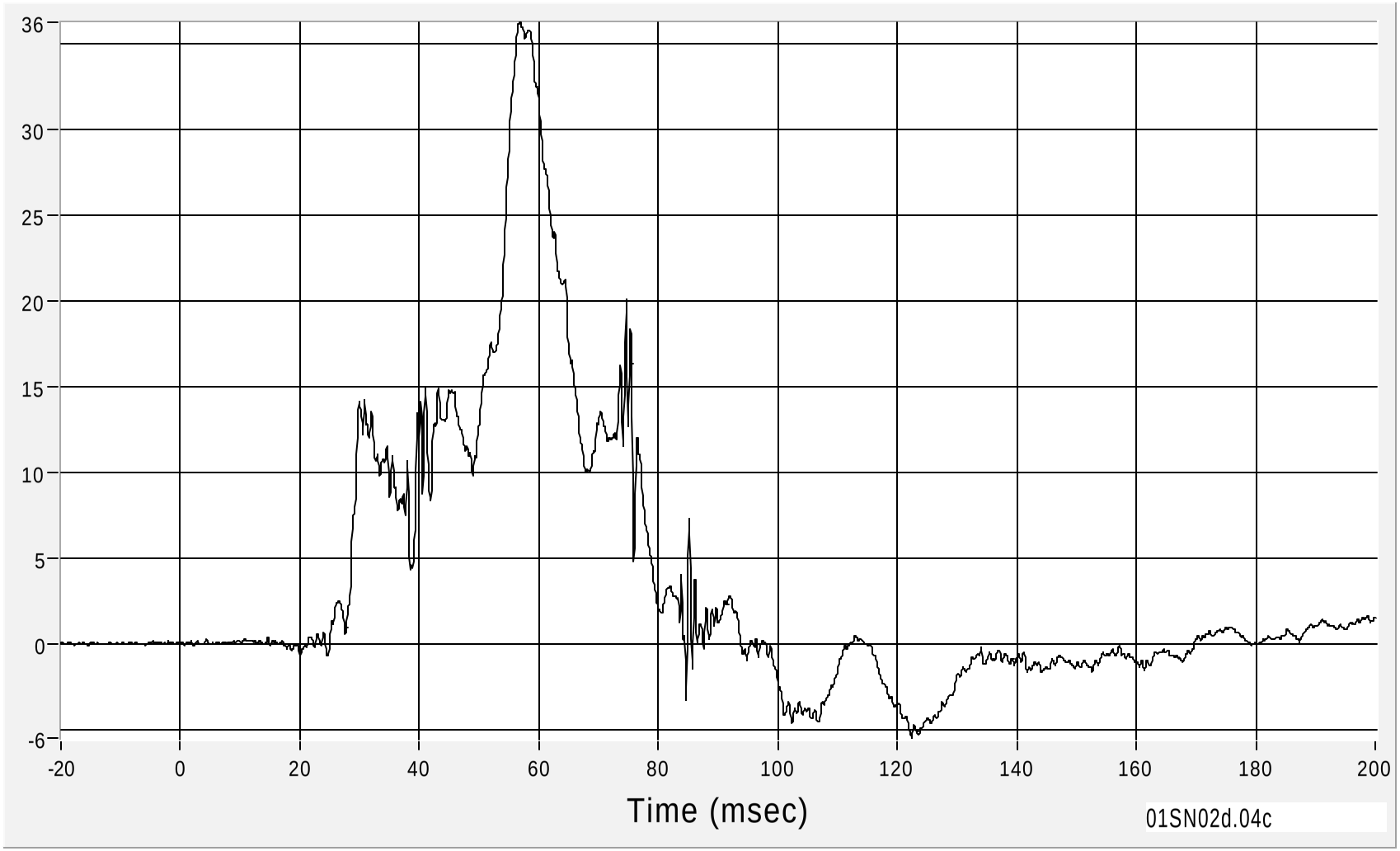


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Upper Rib Y Acceleration

Max 36.2 G's at 56.9 msec
Min -5.5 G's at 122.4 msec



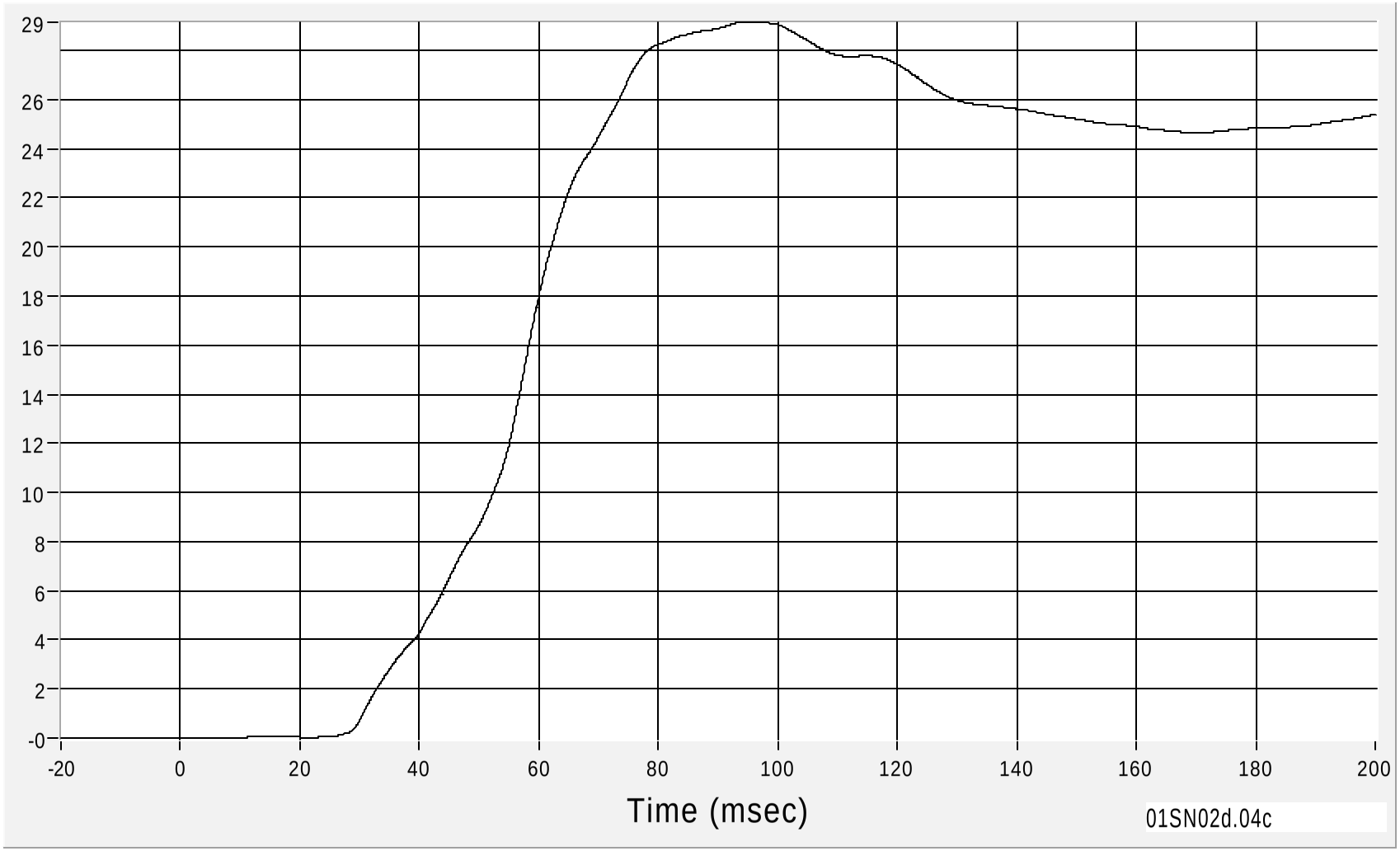
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Upper Rib Y Velocity

Max 29.1 kph at 93.9 msec
Min 0.0 kph at -15.0 msec

Velocity (kph) CFC 180

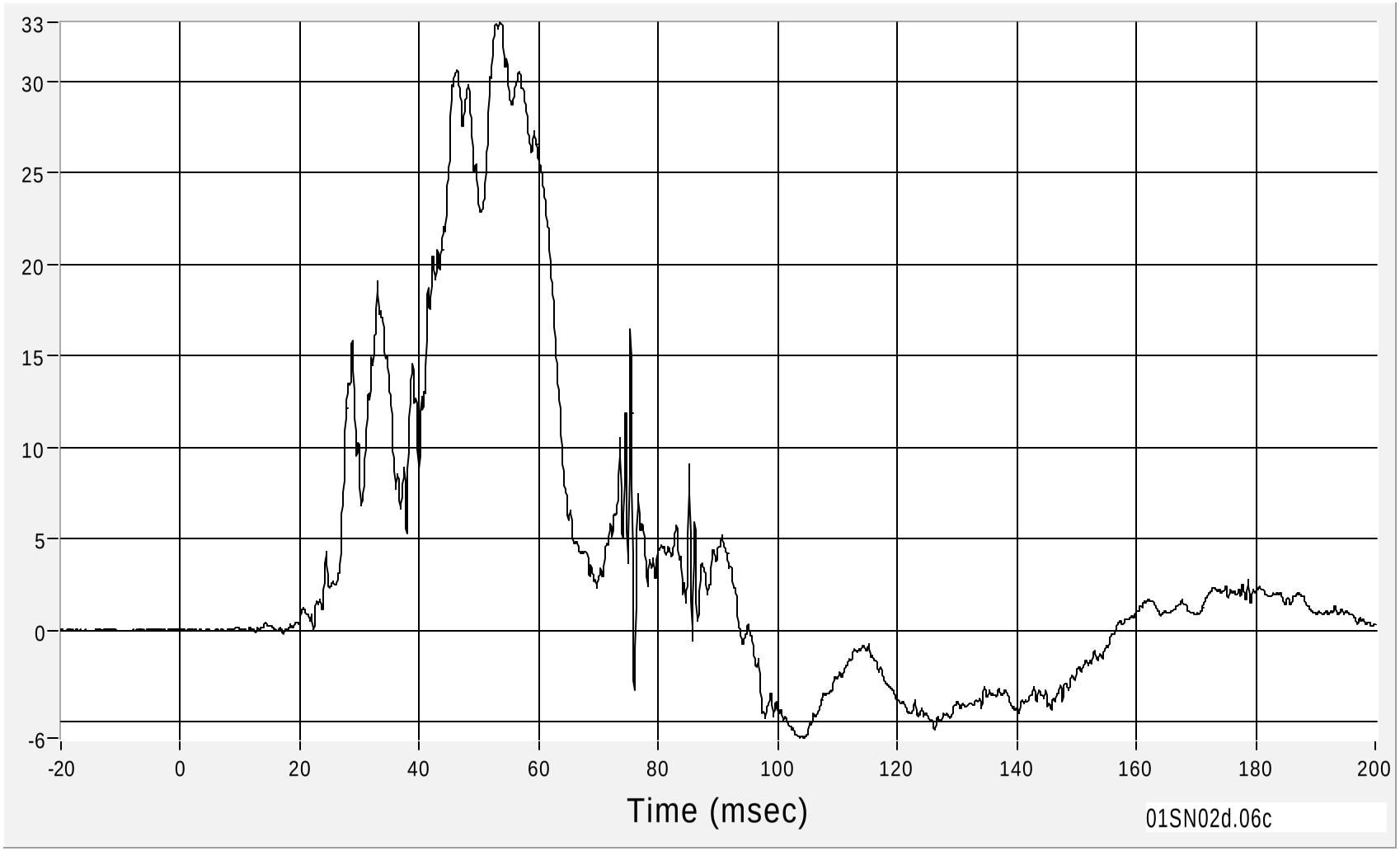


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

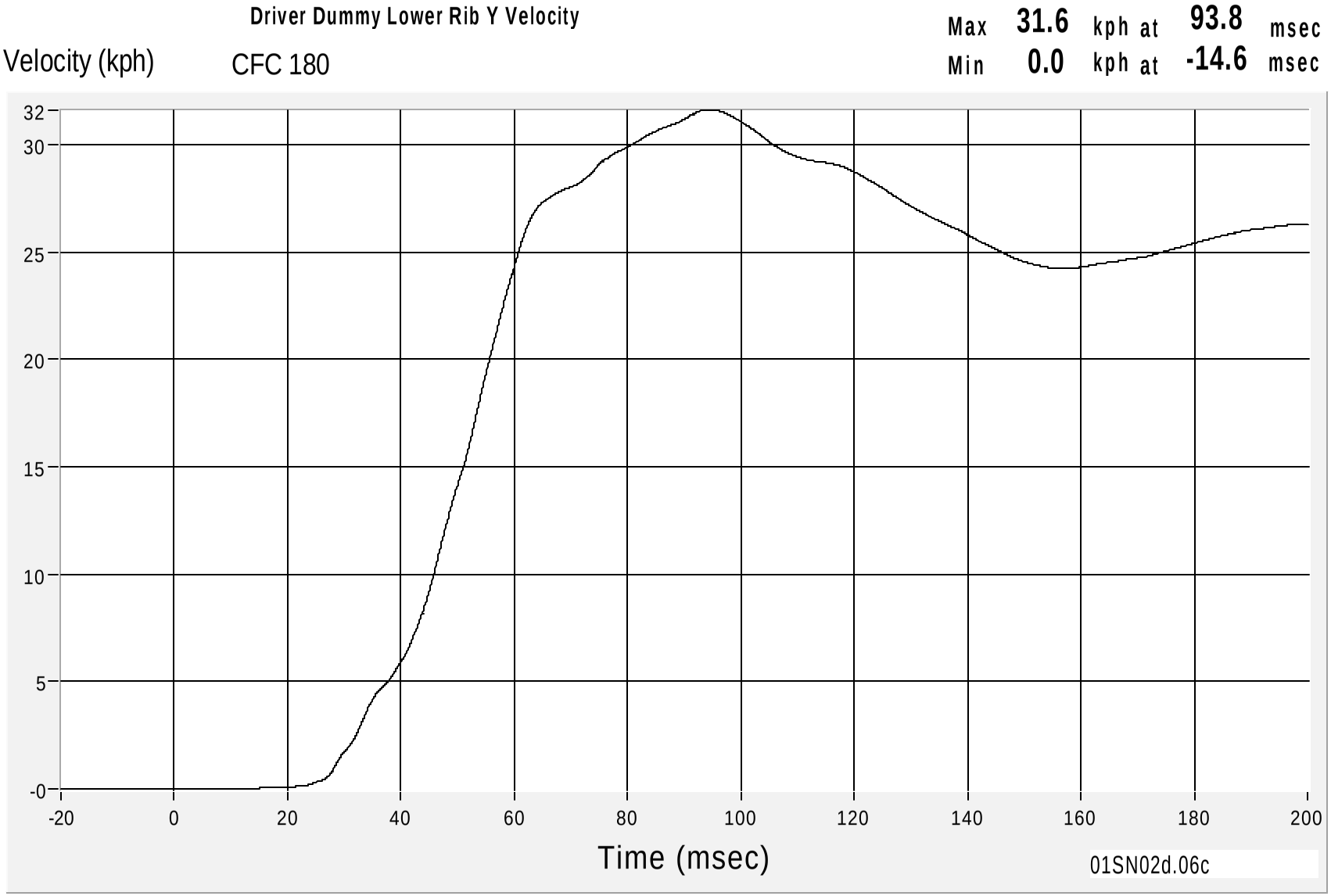
Driver Dummy Lower Rib Y Acceleration

Max 33.2 G's at 53.4 msec
Min -5.9 G's at 104.3 msec



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

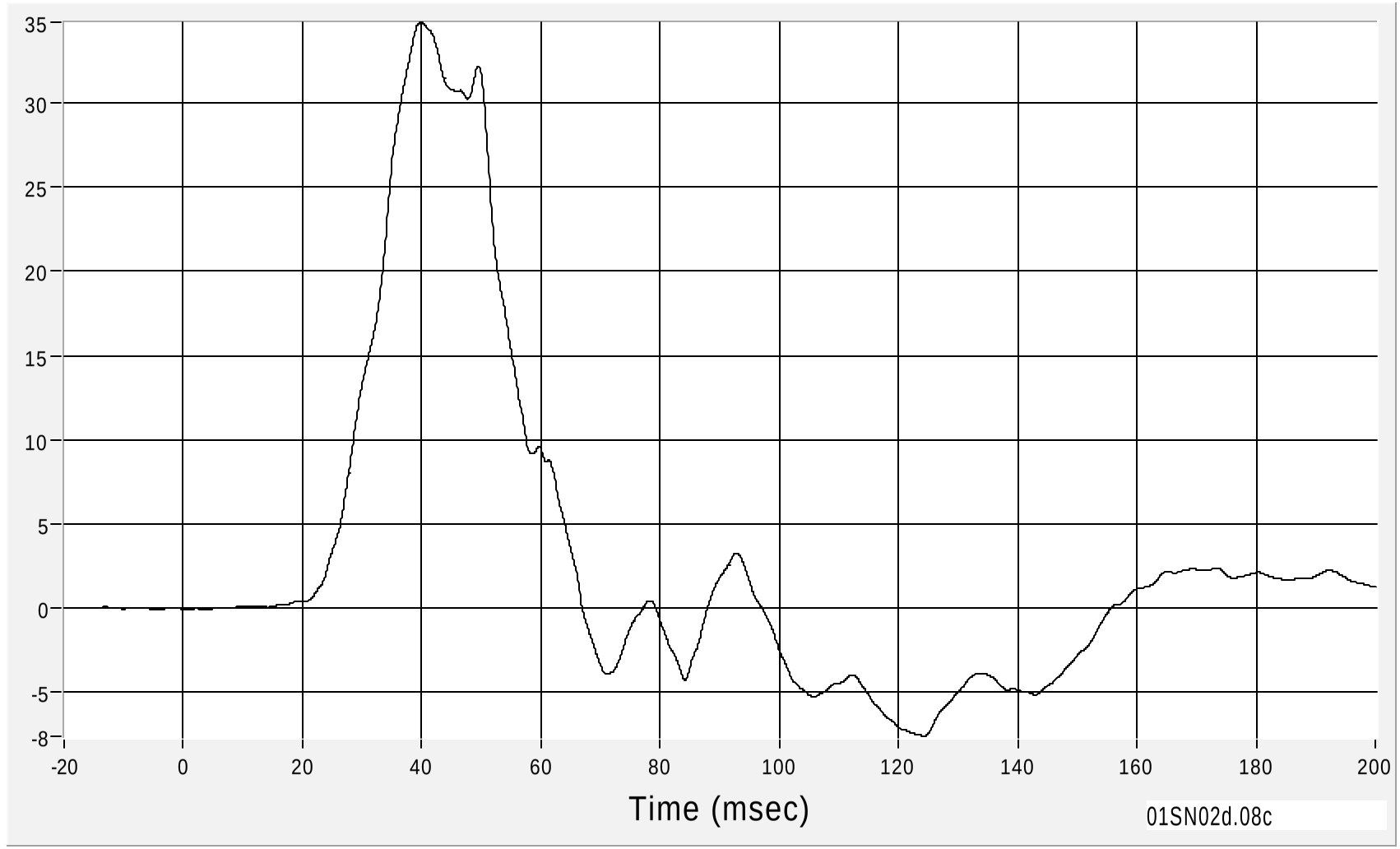
31 January 2001

Medical College of Wisconsin

Vehicle Crashworthiness Lab

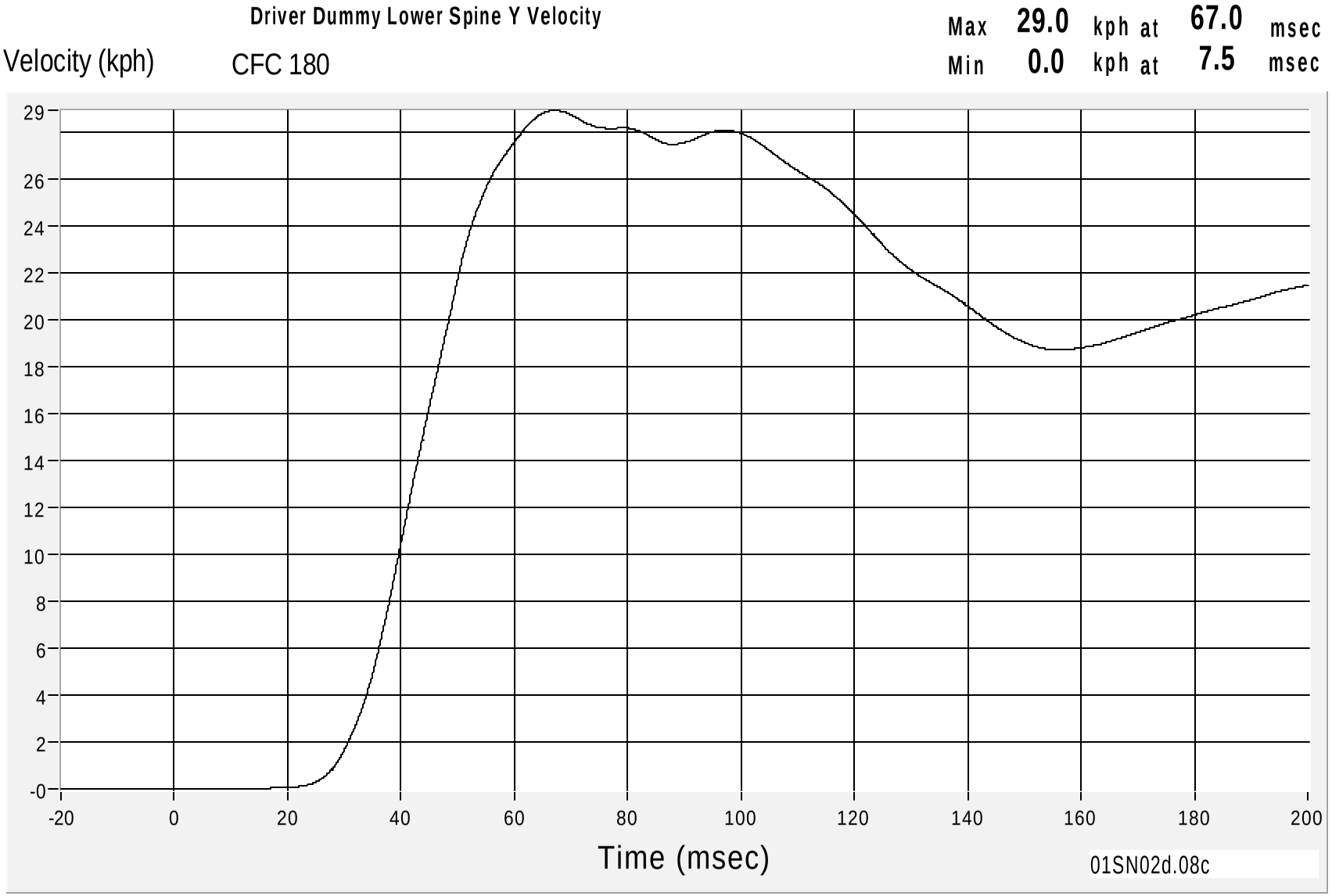
Driver Dummy Lower Spine Y Acceleration

Max **34.8** G's at **39.8** msec
Min **-7.6** G's at **124.2** msec



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

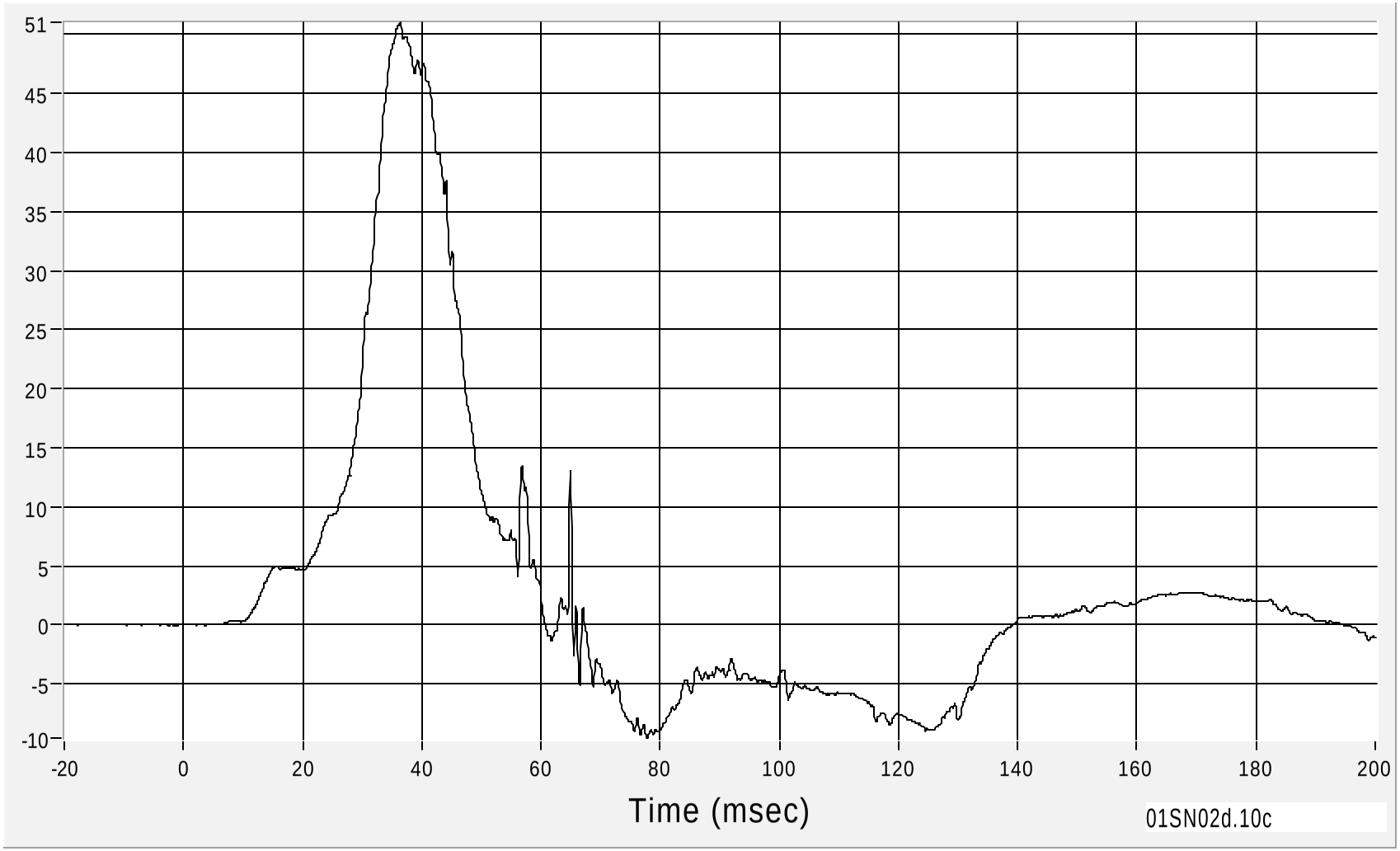
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Driver Dummy Pelvis Y Acceleration

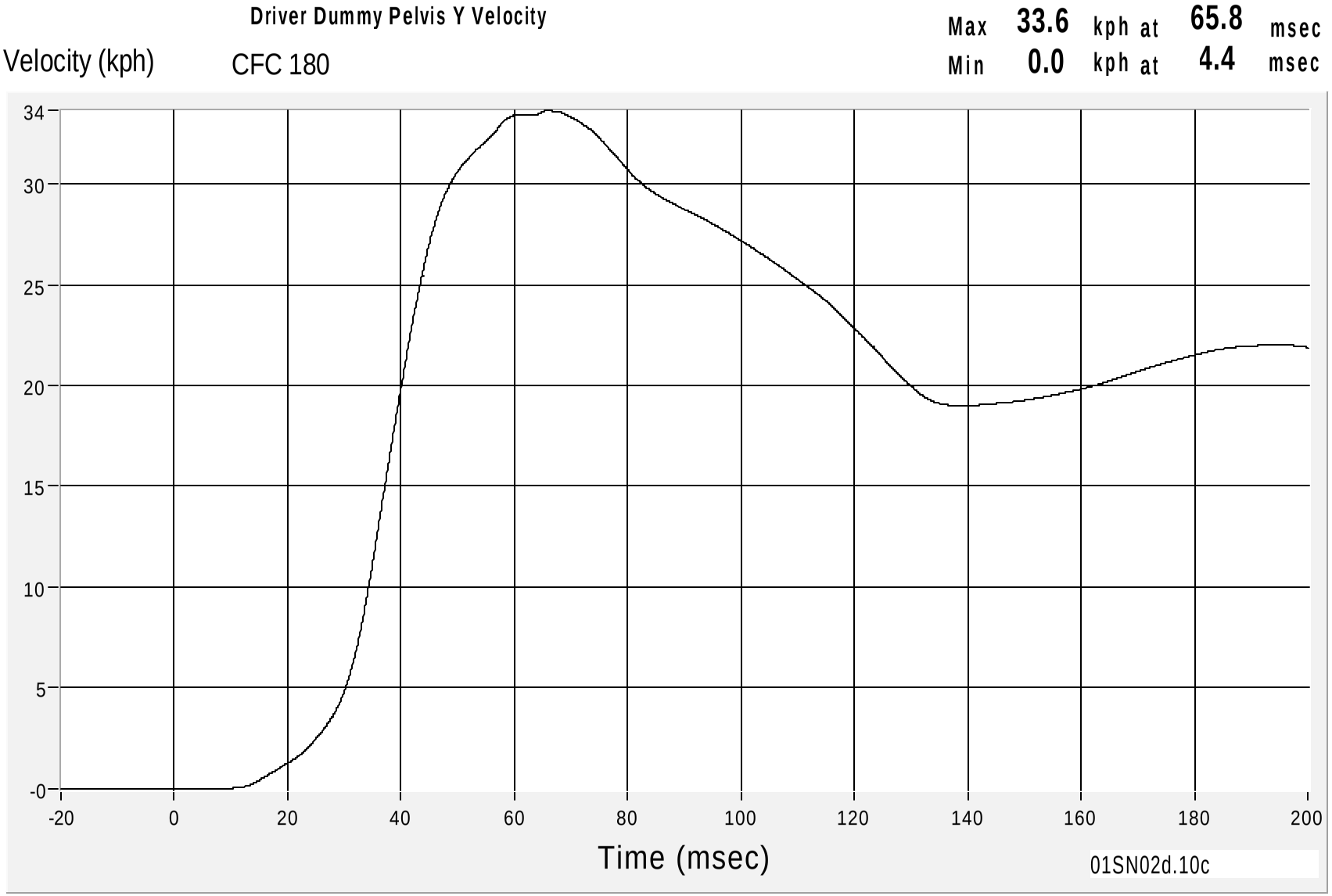
Max **51.0** G's at **36.4** msec
Min **-9.6** G's at **77.8** msec

Acceleration (G's) CFC 1000



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

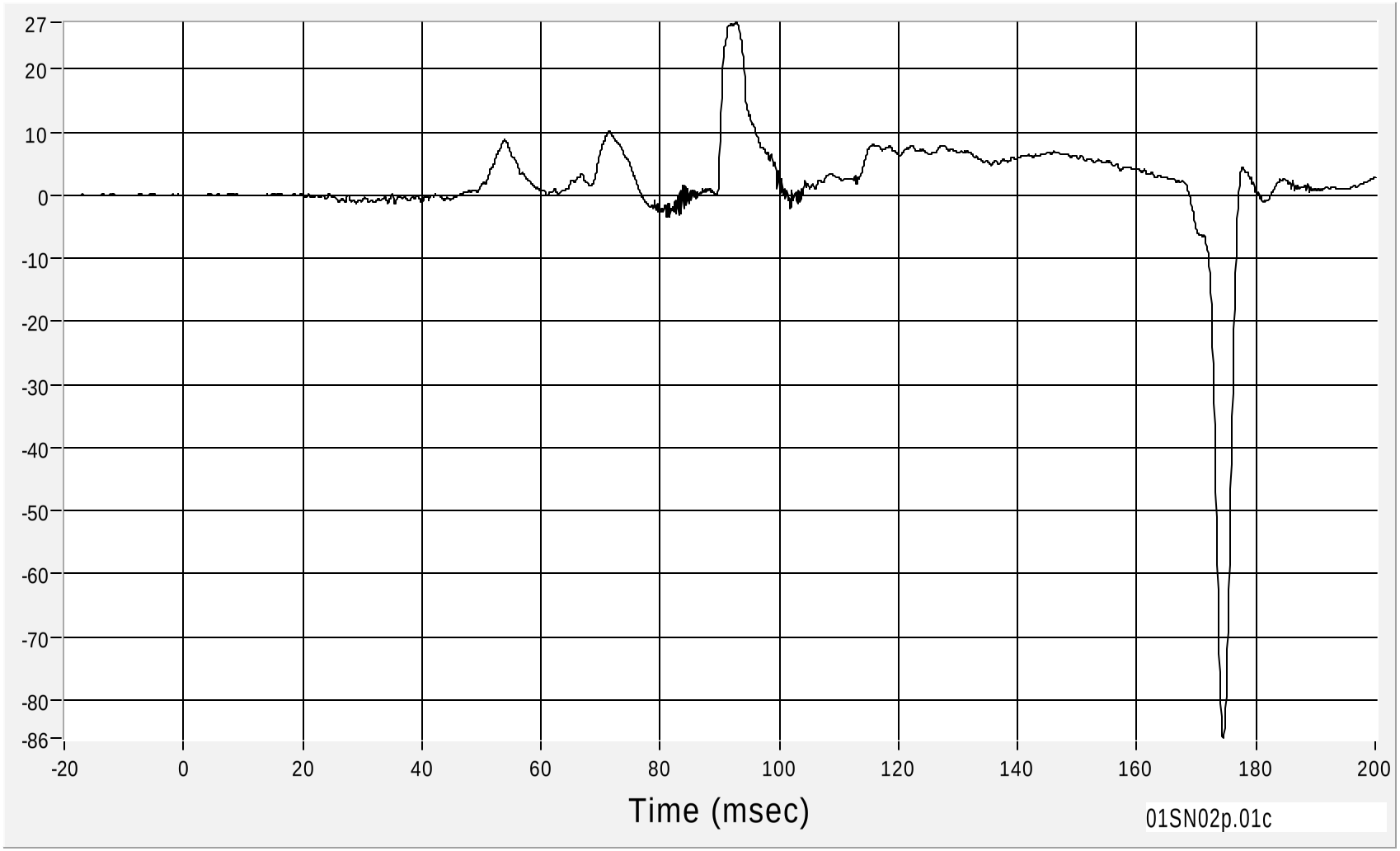
31 January 2001

Medical College of Wisconsin

Vehicle Crashworthiness Lab

Passenger Dummy Head CG X Acceleration

Max **27.4** G's at **92.7** msec
Min **-86.0** G's at **174.5** msec

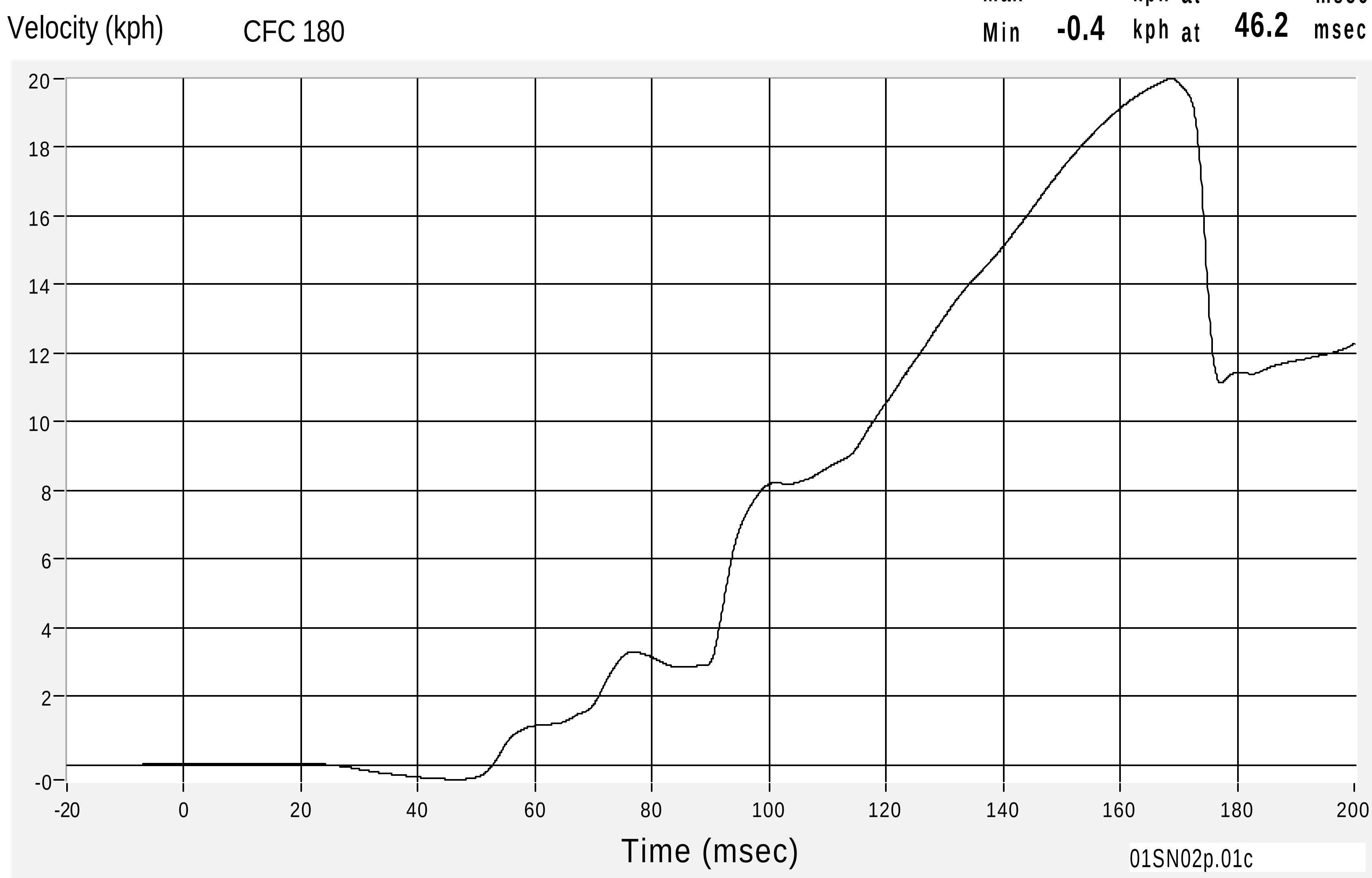


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Head CG X Velocity

Max **20.0** kph at **168.7** msec
Min **-0.4** kph at **46.2** msec



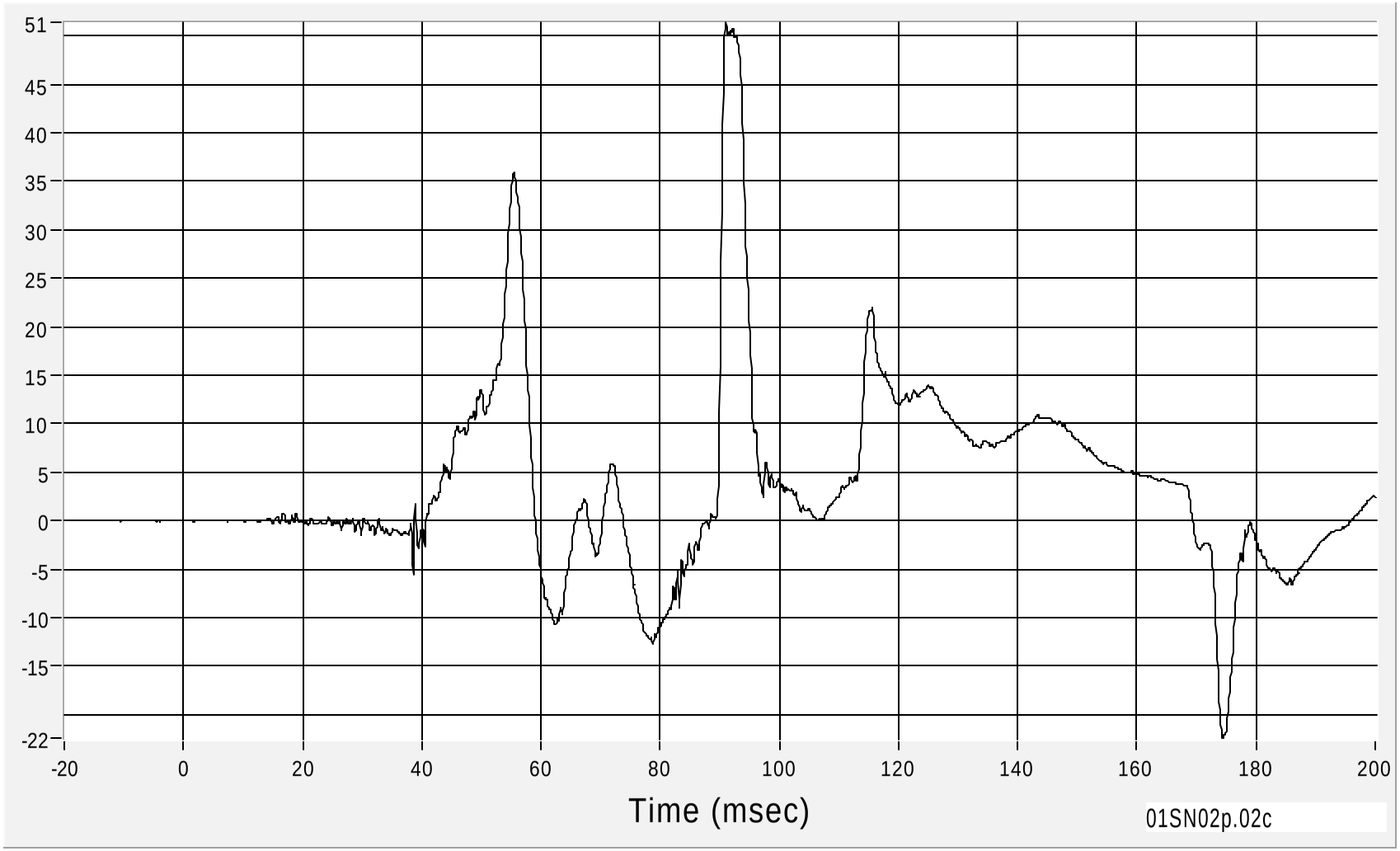
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Head CG Y Acceleration

Max **51.4** G's at **91.0** msec
Min **-22.4** G's at **174.4** msec

Acceleration (G's) CFC 1000



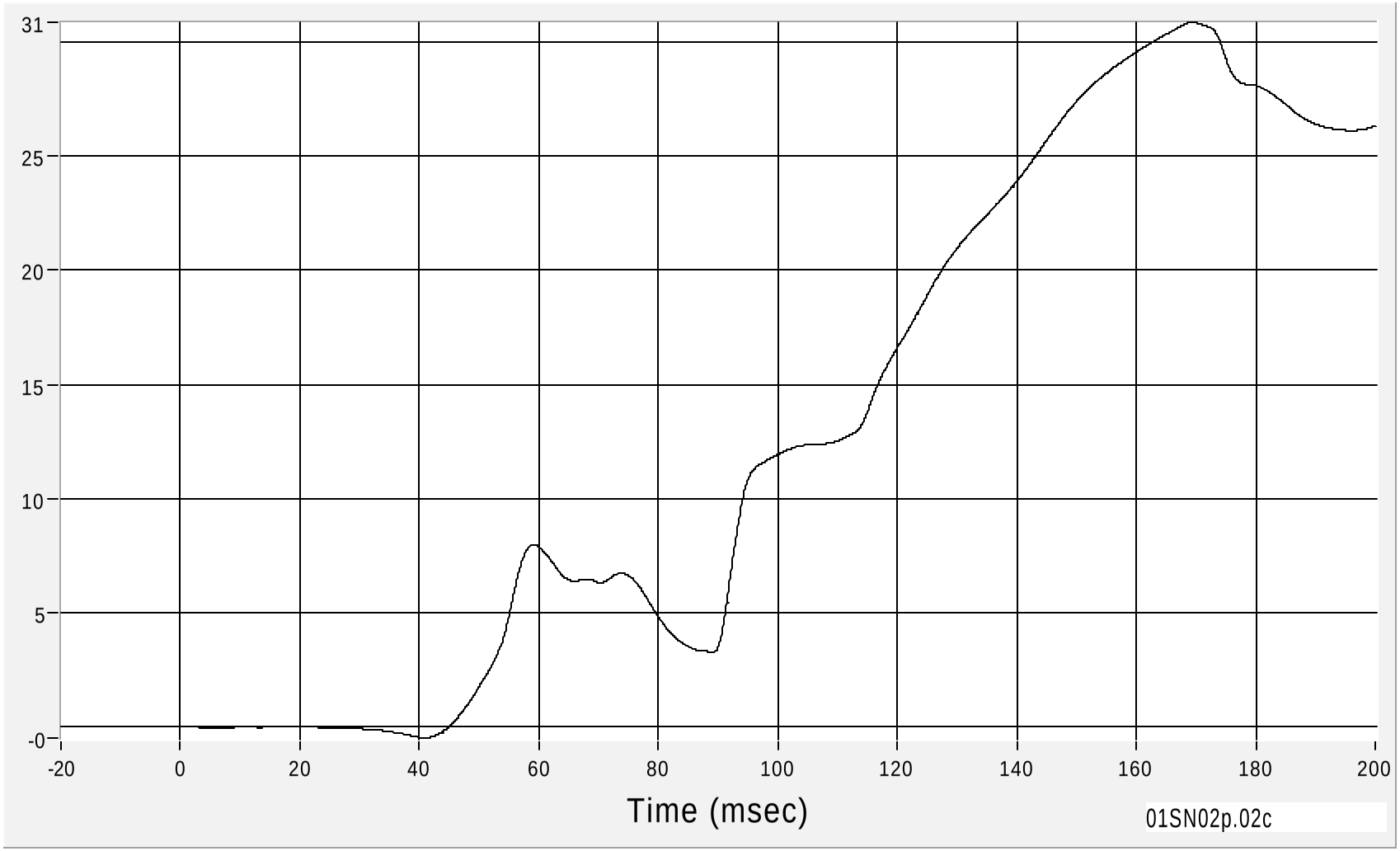
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Head CG Y Velocity

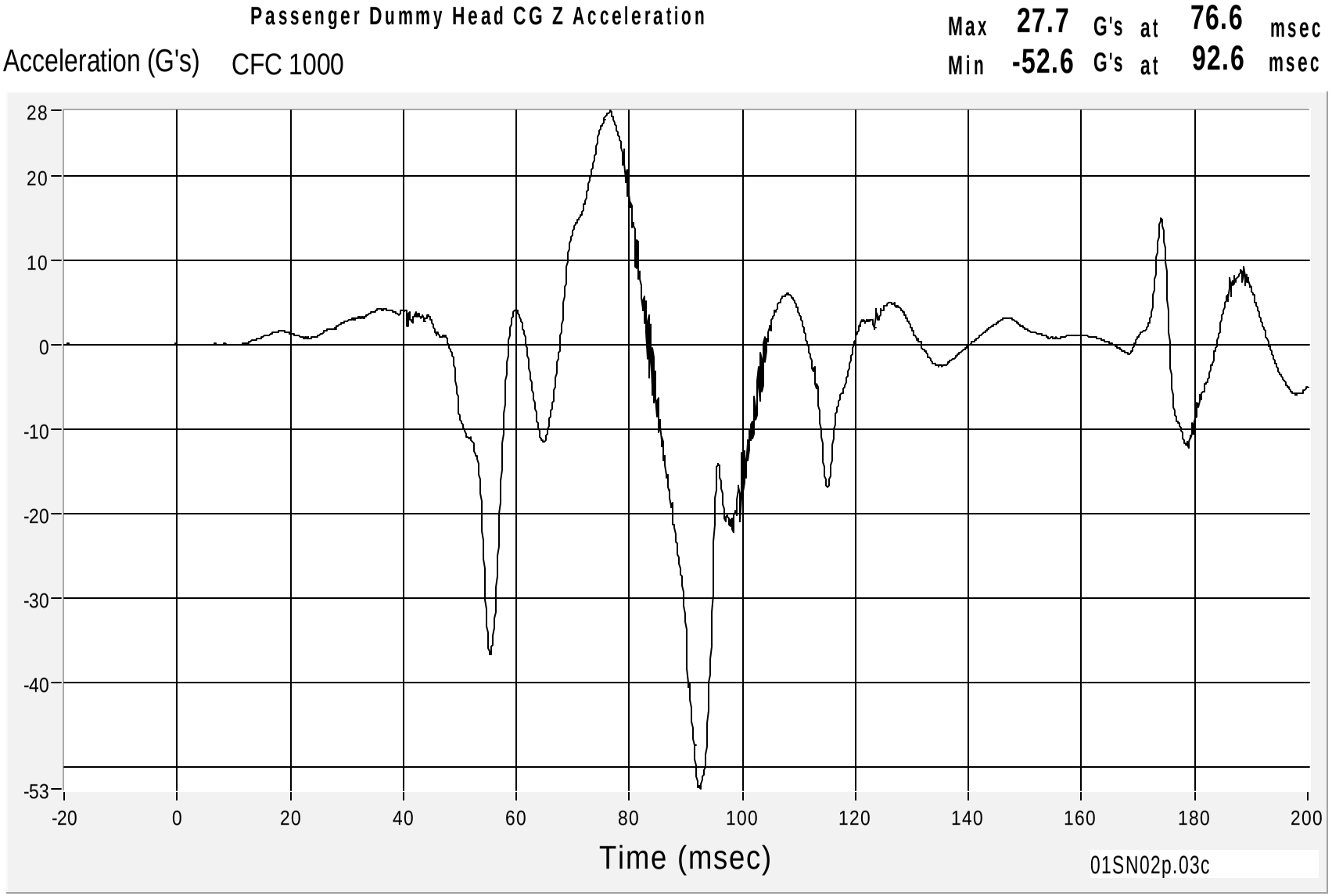
Max 30.9 kph at 169.4 msec
Min -0.5 kph at 40.8 msec

Velocity (kph) CFC 180



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

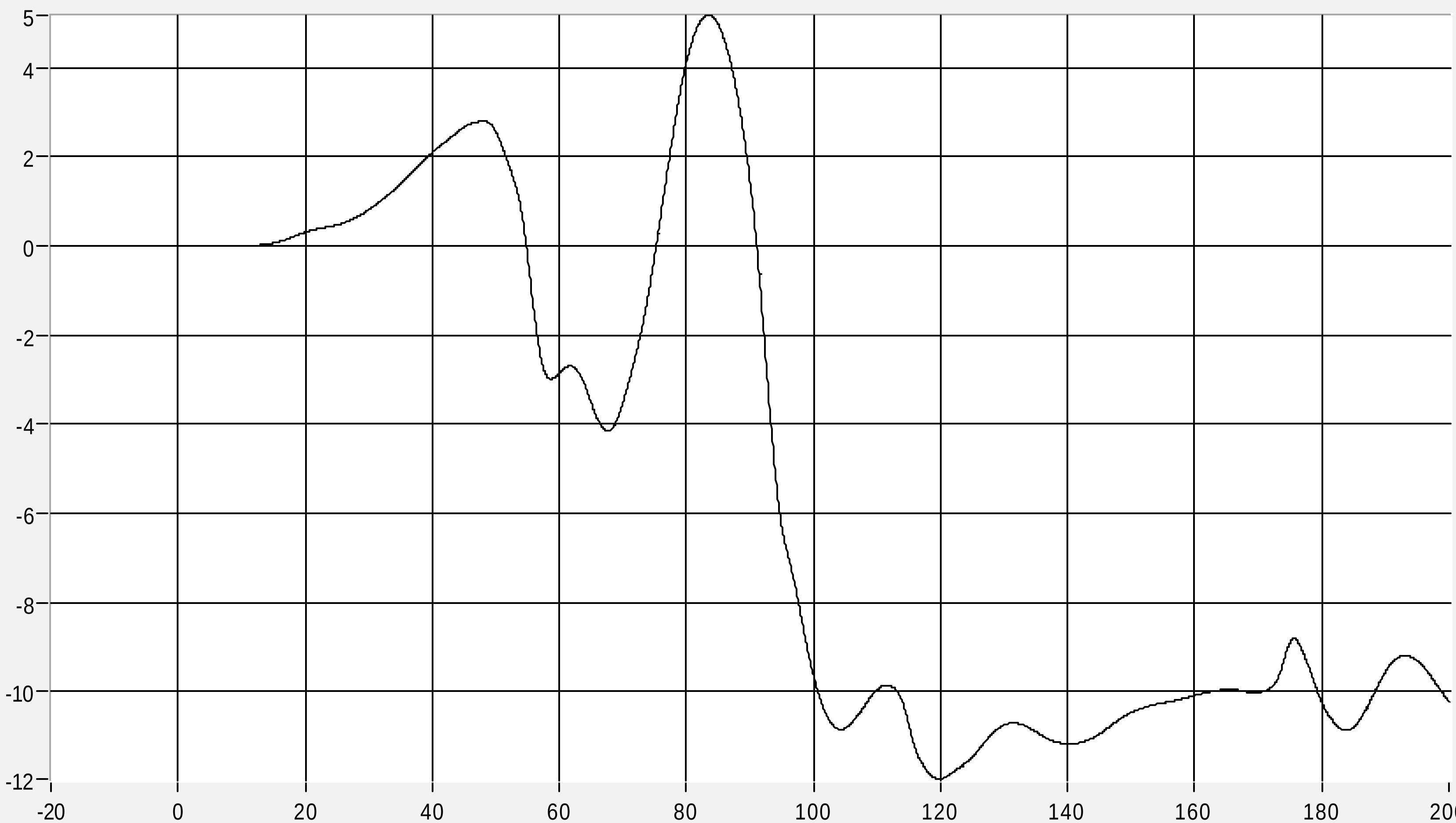
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Passenger Dummy Head CG Z Velocity

Velocity (kph) CFC 180

Max 5.2 kph at 83.4 msec
Min -12.0 kph at 119.8 msec



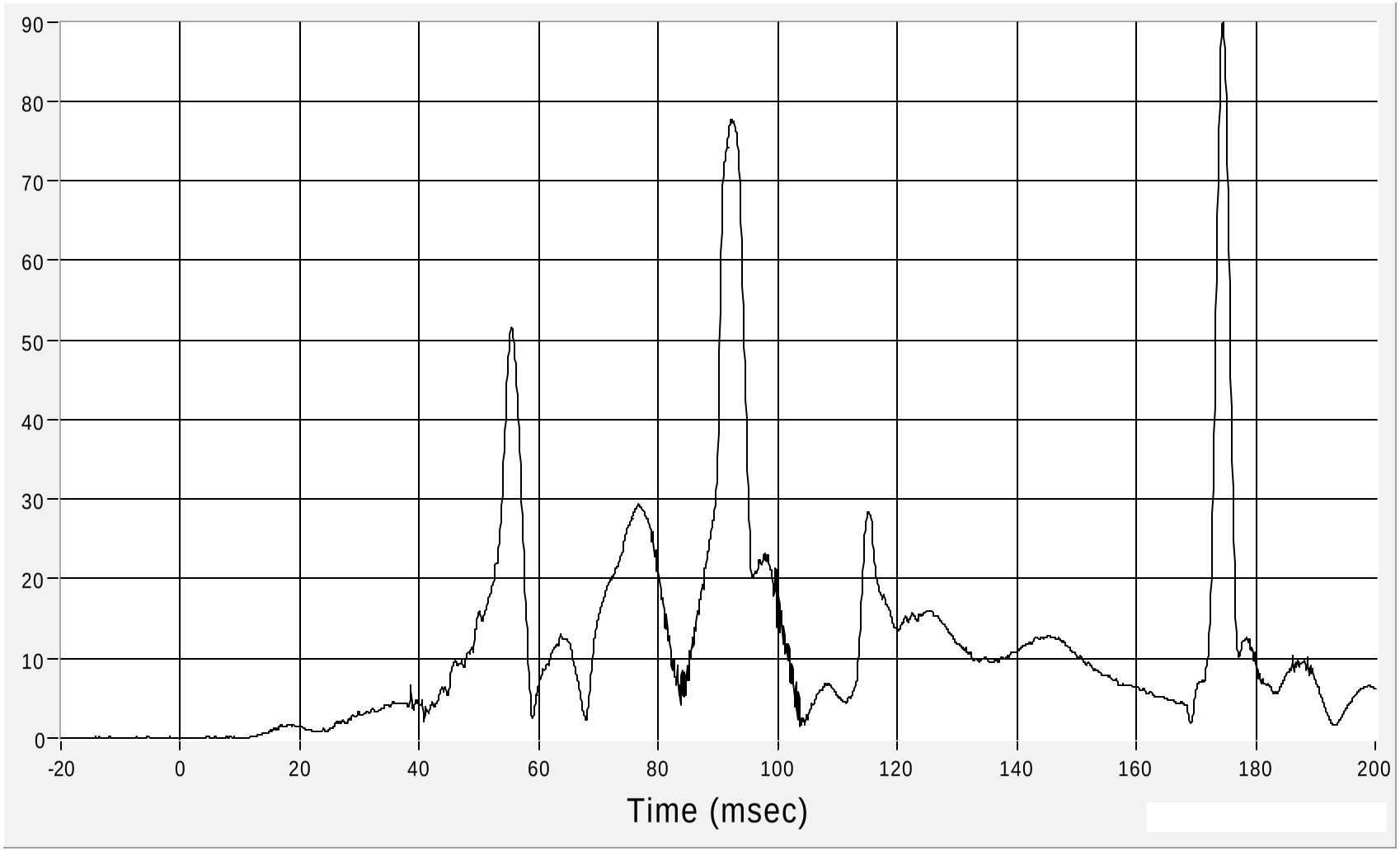
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Head CG - Resultant

Max **89.9** G's at **174.5** msec
Min **0.0** G's at **10.7** msec

Acceleration (G's) CFC 1000



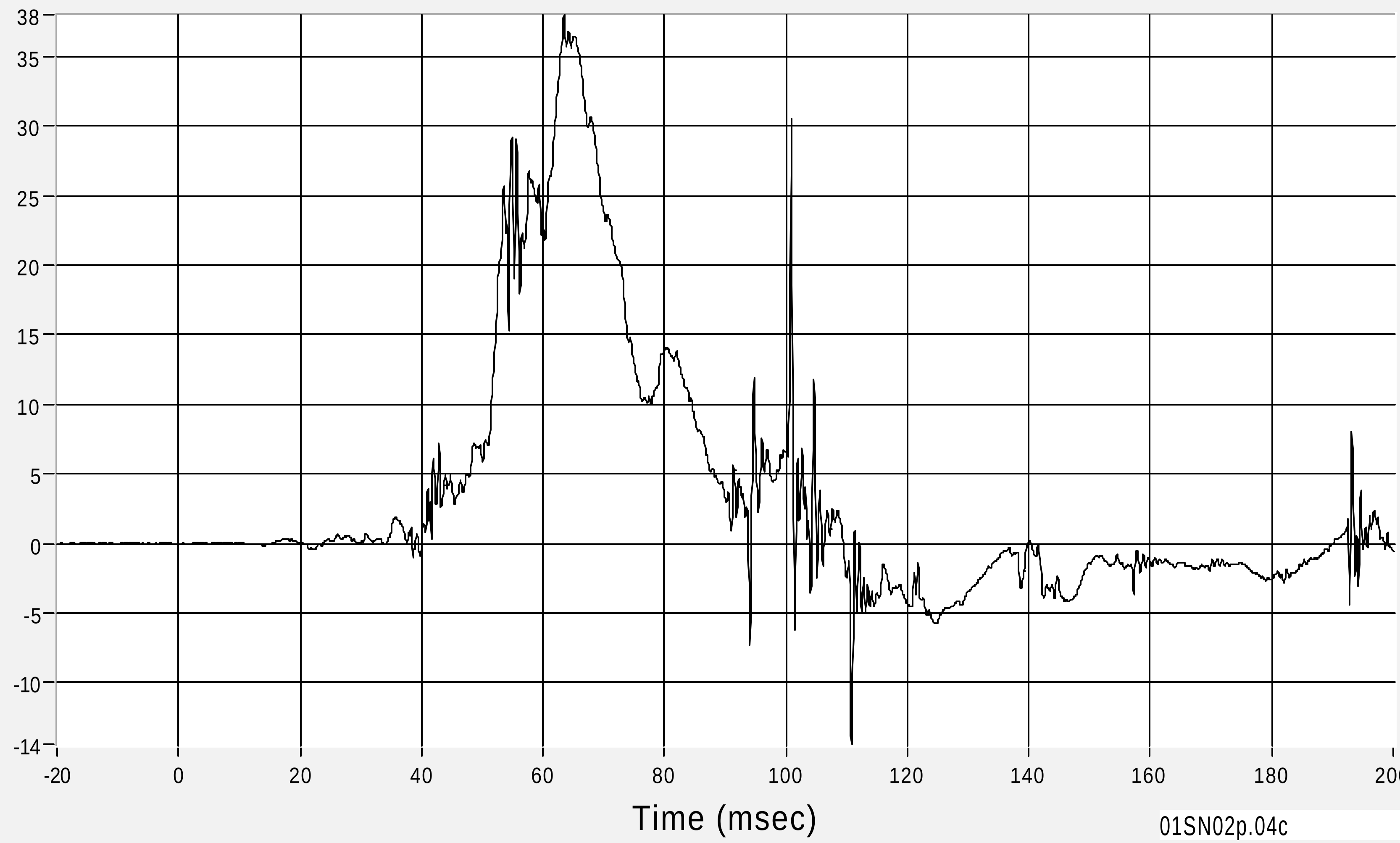
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Upper Rib Y Acceleration

Acceleration (G's) CFC 1000

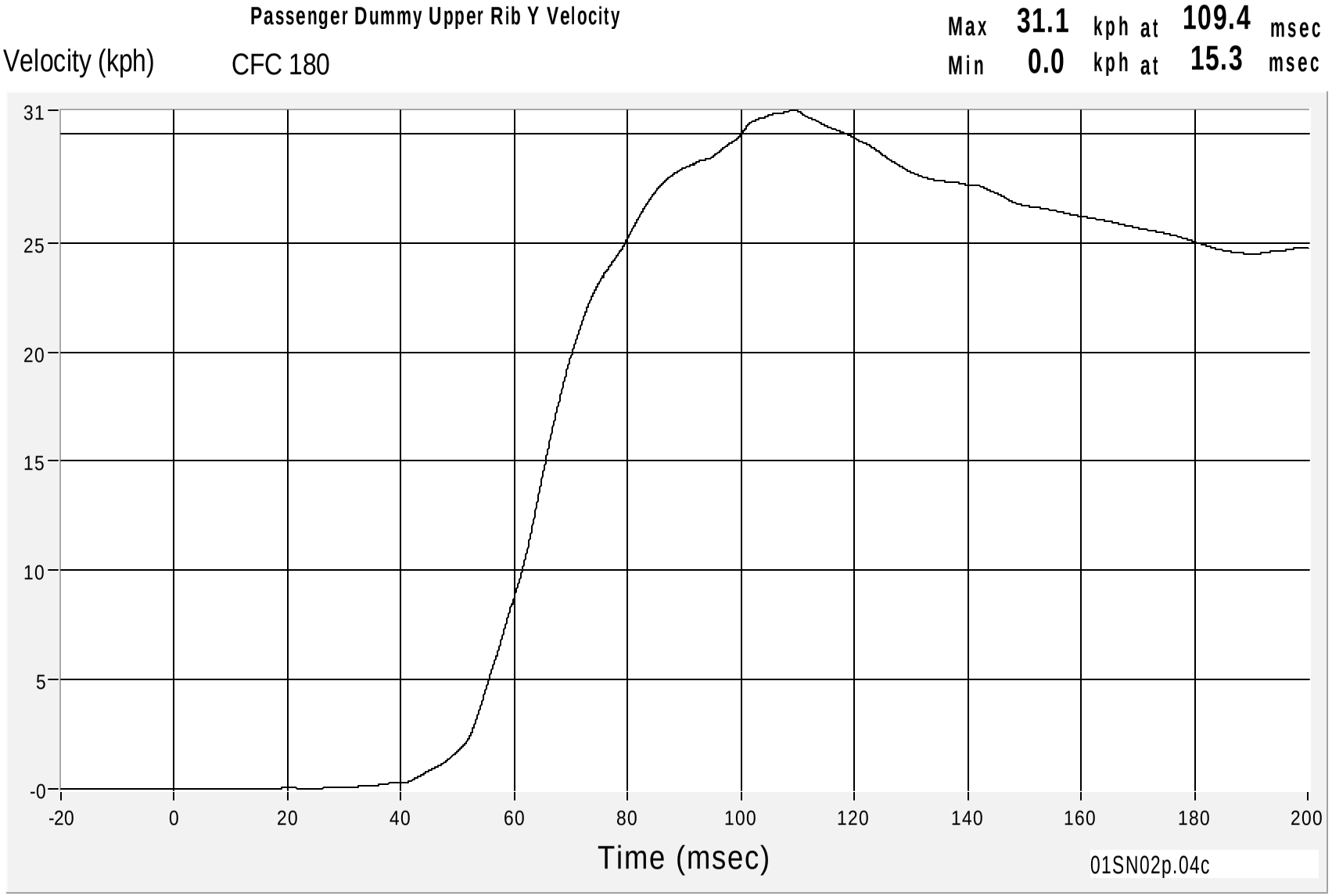
Max **38.0** G's at **63.4** msec
Min **-14.5** G's at **110.8** msec



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

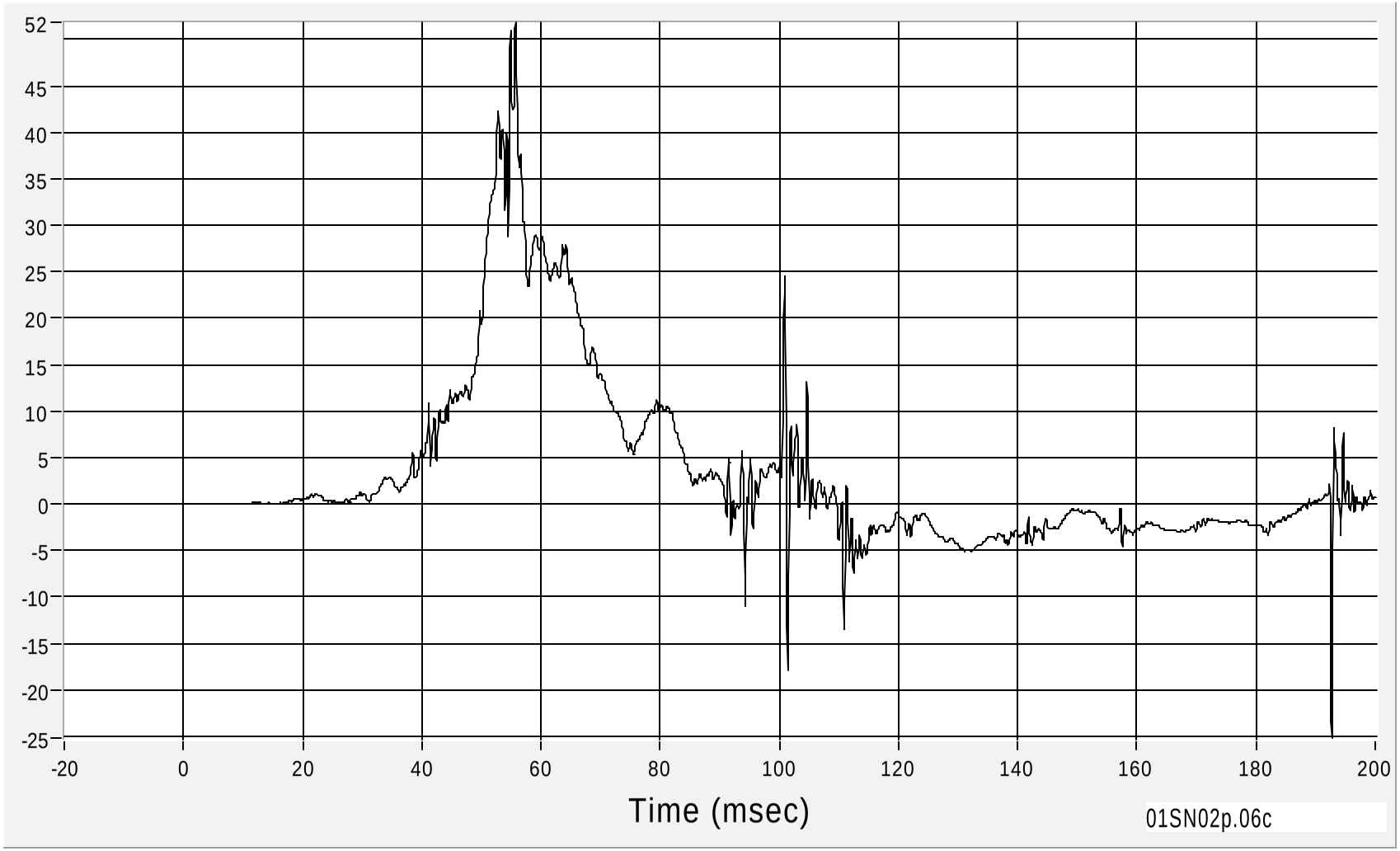


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

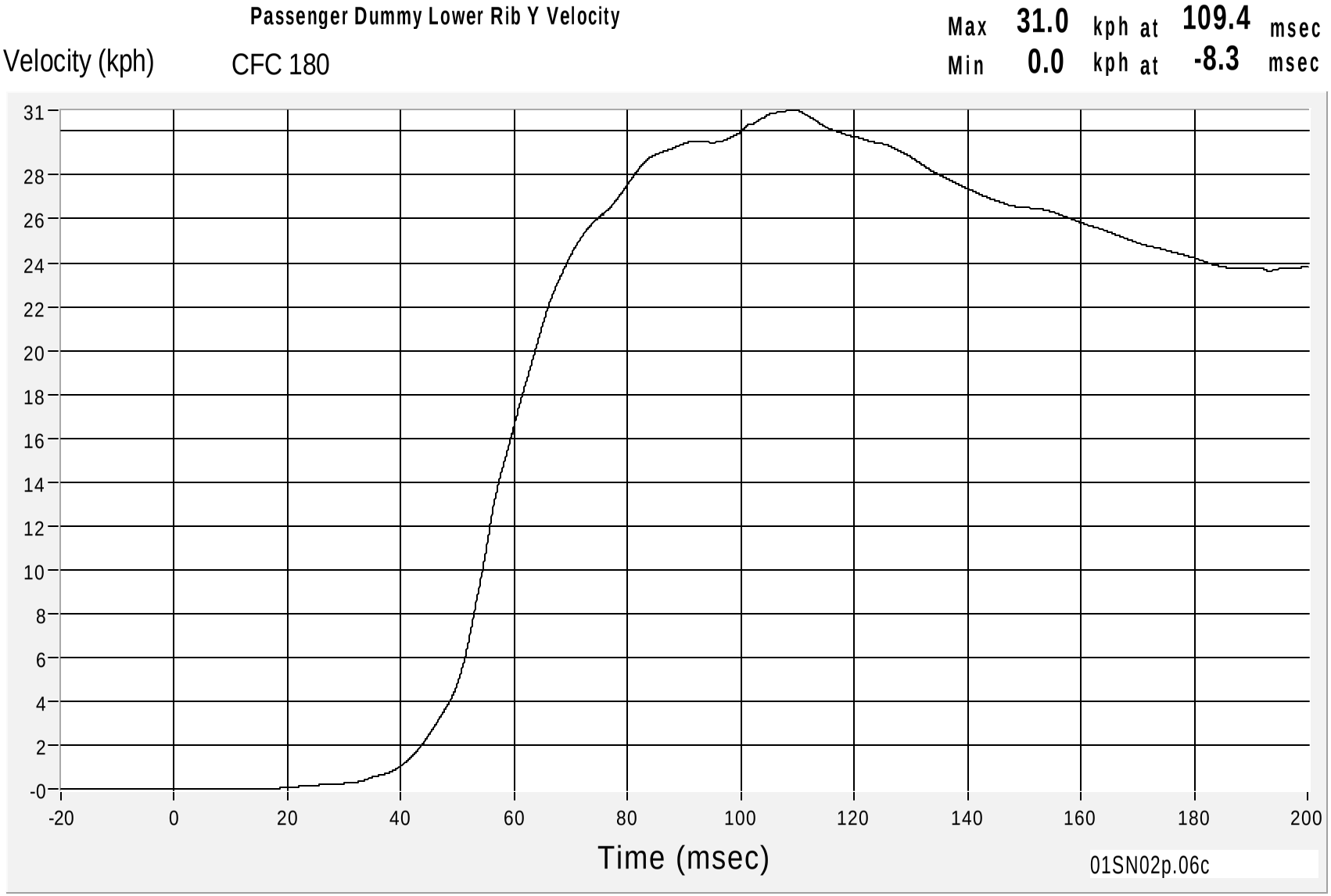
Passenger Dummy Lower Rib Y Acceleration

Max 51.9 G's at 55.8 msec
Min -25.2 G's at 192.7 msec



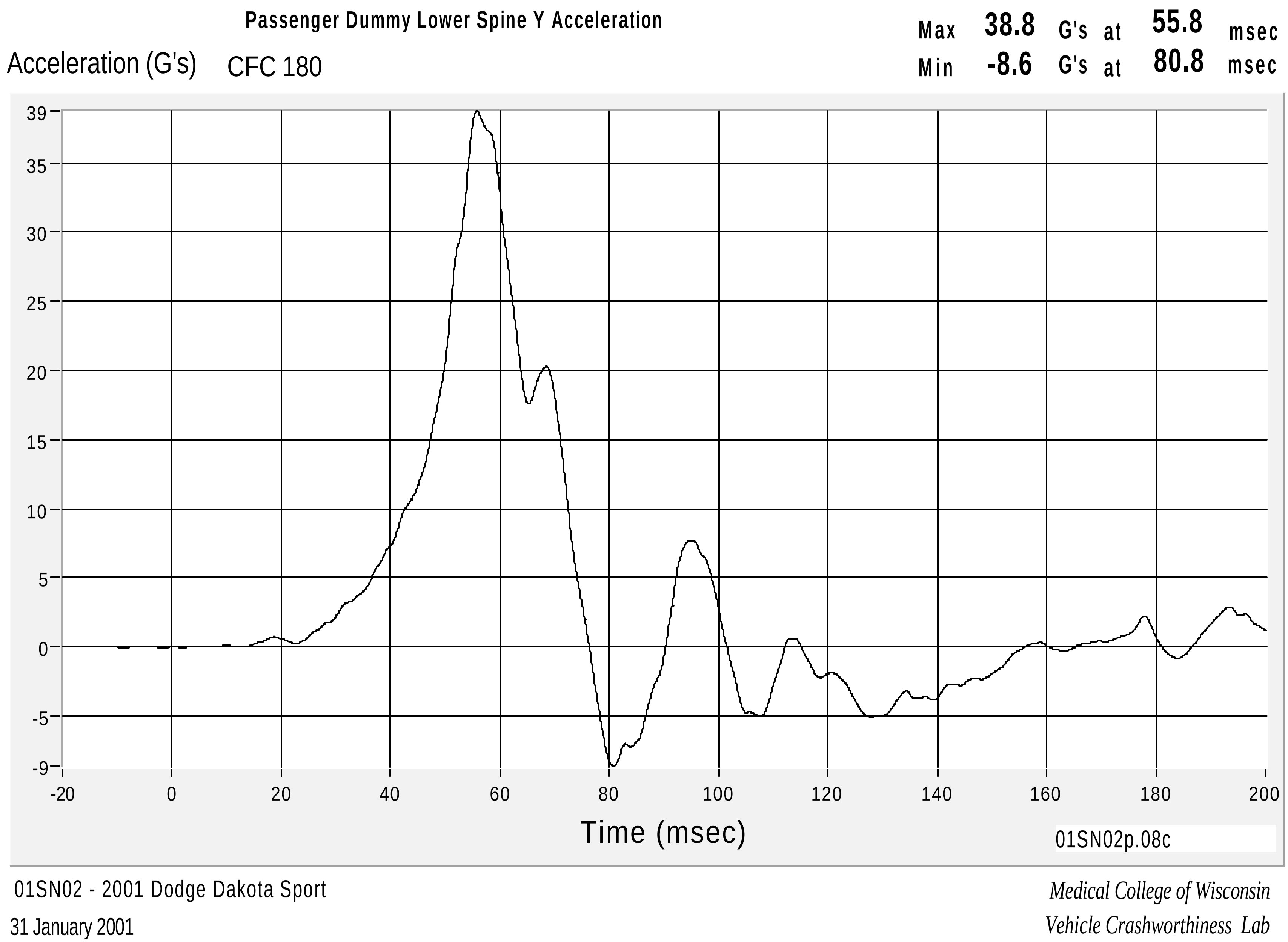
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

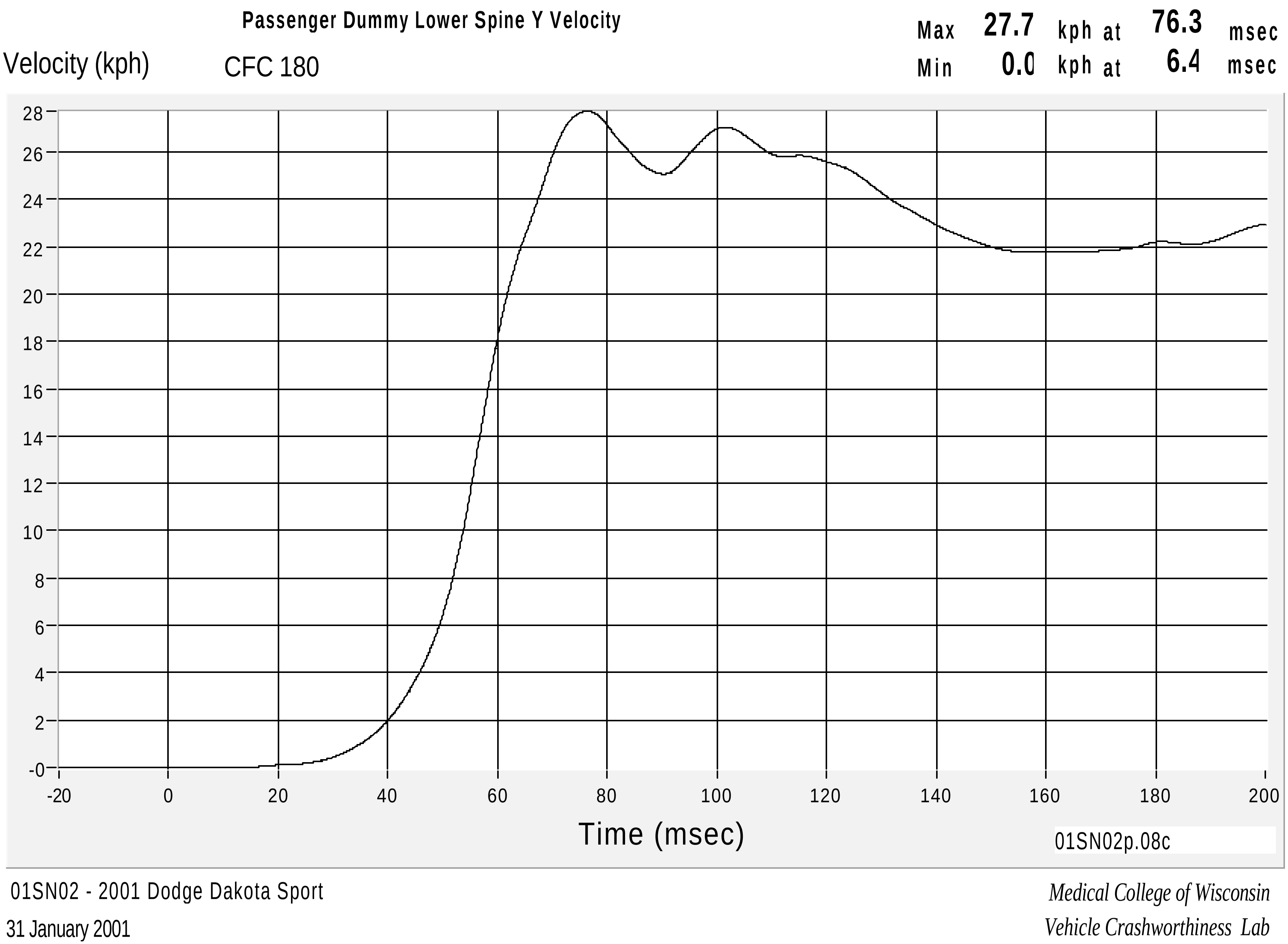
Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

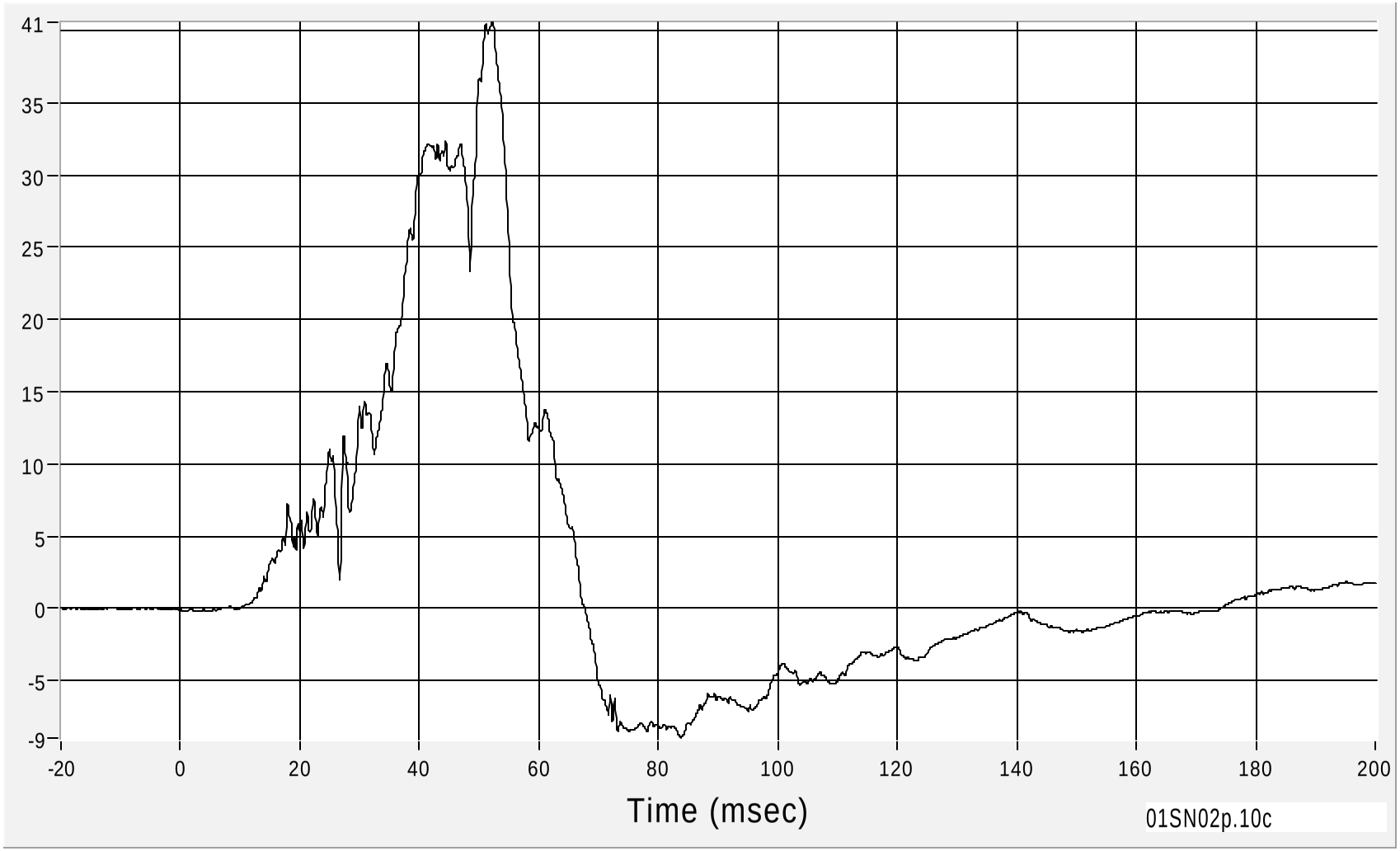

Passenger Dummy Lower Spine Y Acceleration
Acceleration (G's)
CFC 180
Max 38.8 G's at 55.8 msec
Min -8.6 G's at 80.8 msec
39
35
30
25
20
15
10
5
0
-5
-9
-20
0
20
40
60
80
100
120
140
160
180
200
Time (msec)
01SN02p.08c
01SN02 - 2001 Dodge Dakota Sport
31 January 2001
Medical College of Wisconsin
Vehicle Crashworthiness Lab


Passenger Dummy Lower Spine Y Velocity
Velocity (kph)
CFC 180
Max 27.7 kph at 76.3 msec
Min 0.0 kph at 6.4 msec
28
26
24
22
20
18
16
14
12
10
8
6
4
2
-0
-20
0
20
40
60
80
100
120
140
160
180
200
Time (msec)
01SN02p.08c
01SN02 - 2001 Dodge Dakota Sport
31 January 2001
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Pelvis Y Acceleration

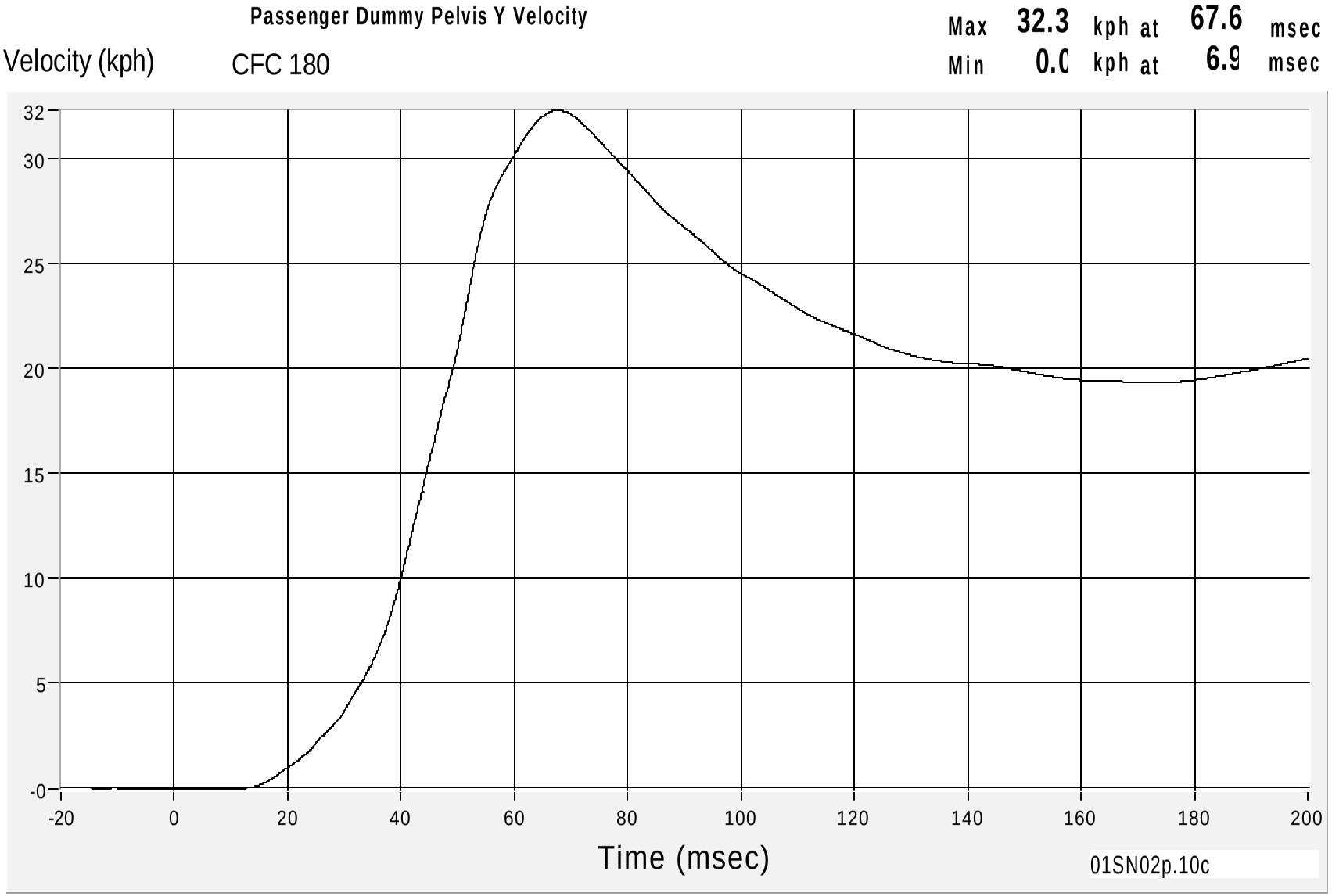
Max **40.6** G's at **52.2** msec
Min **-9.0** G's at **83.8** msec

Acceleration (G's) CFC 1000



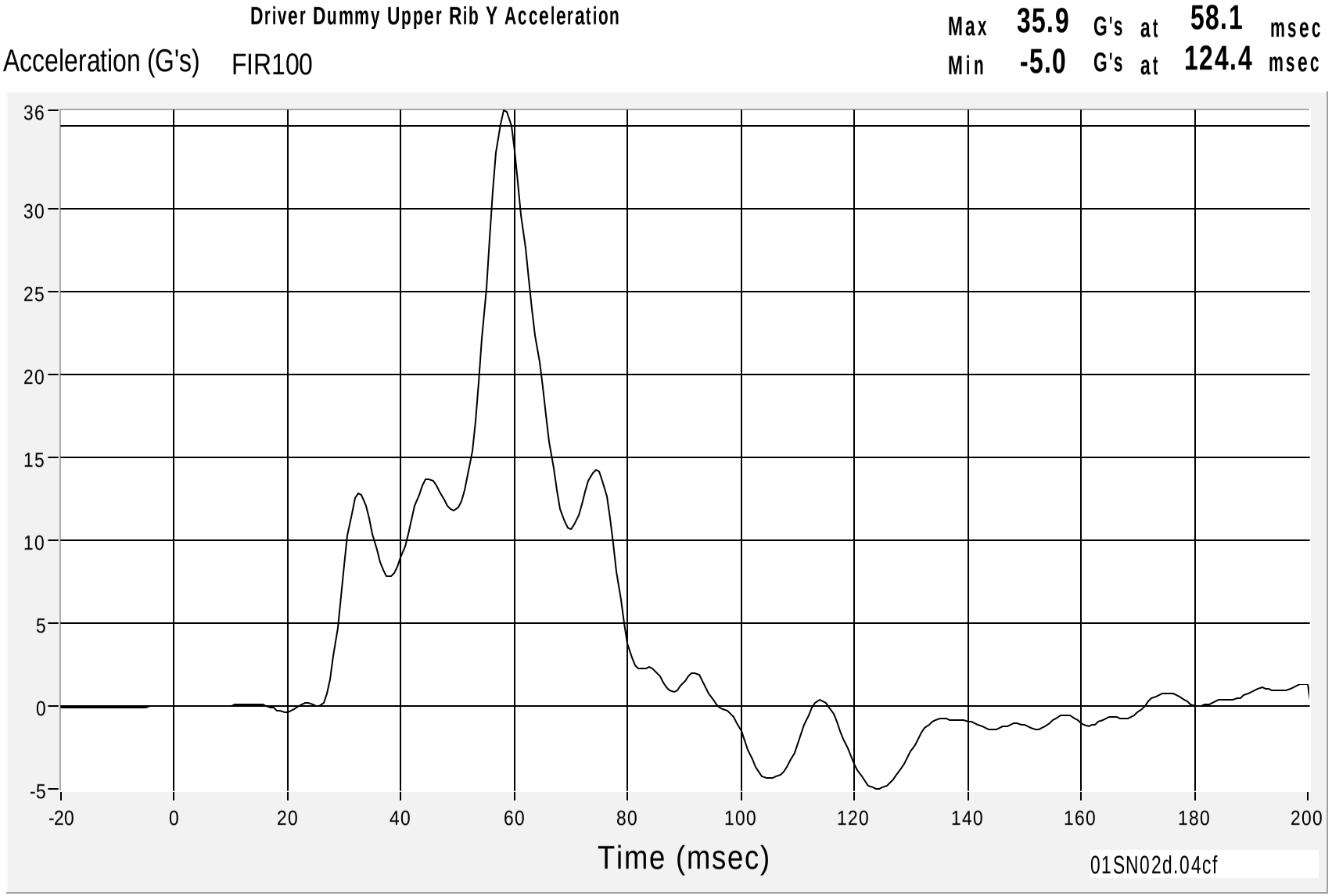
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



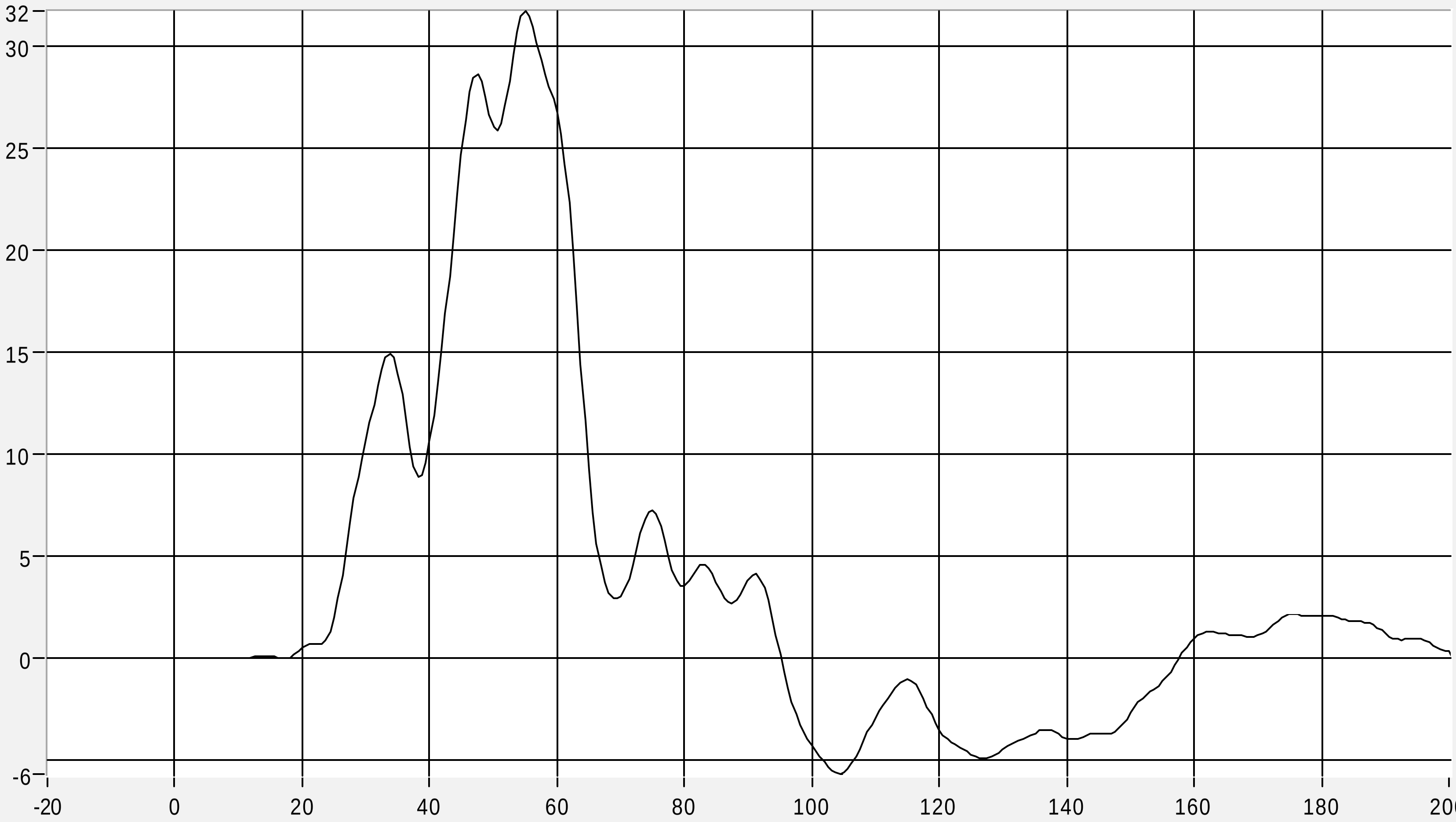
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Lower Rib Y Acceleration

Acceleration (G's) FIR100

Max **31.7** G's at **55.0** msec
Min **-5.7** G's at **104.4** msec

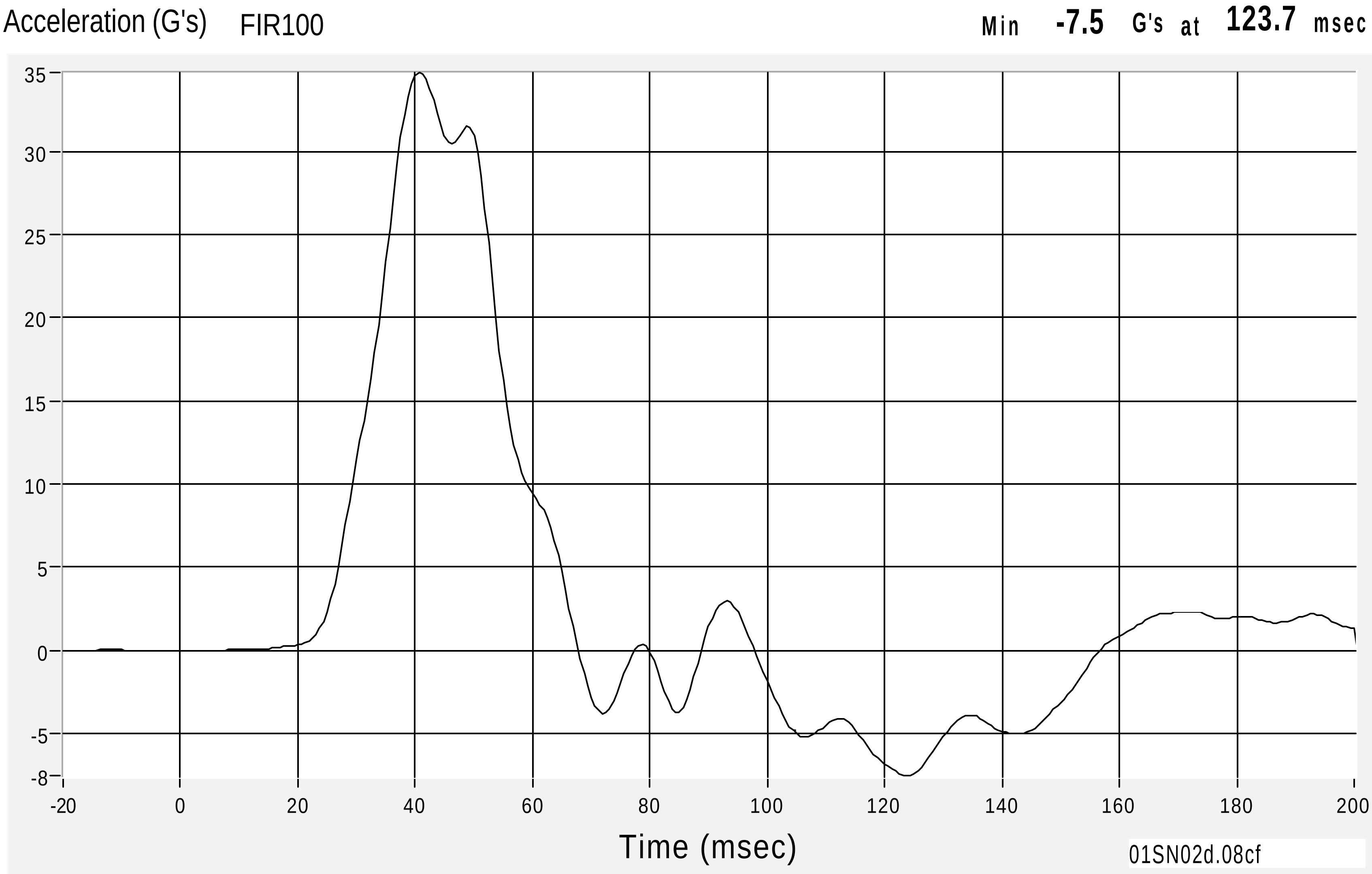


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Lower Spine Y Acceleration

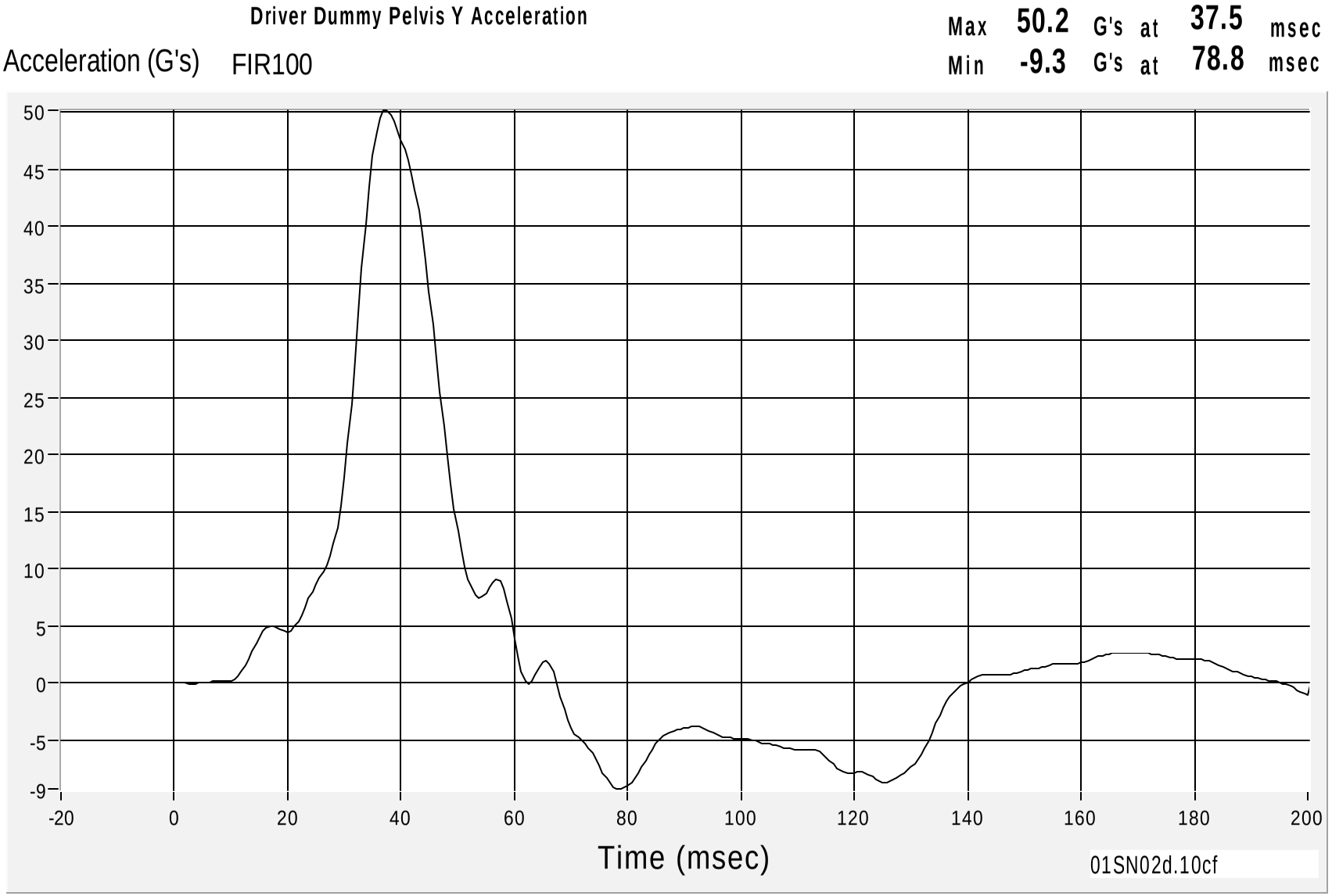
Max **34.7** G's at **40.6** msec
Min **-7.5** G's at **123.7** msec



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

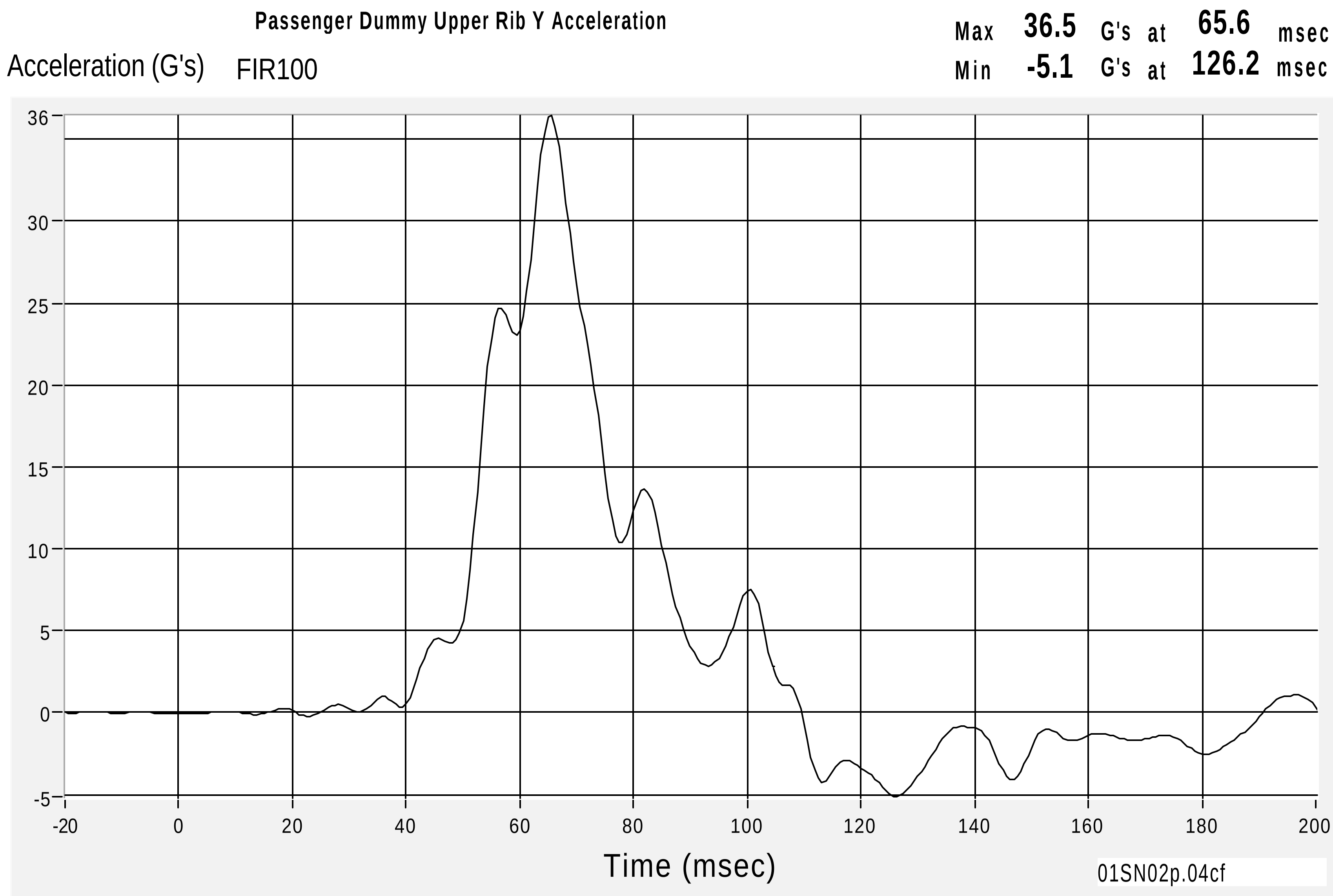


01SN02 - 2001 Dodge Dakota Sport

31 January 2001

Medical College of Wisconsin

Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

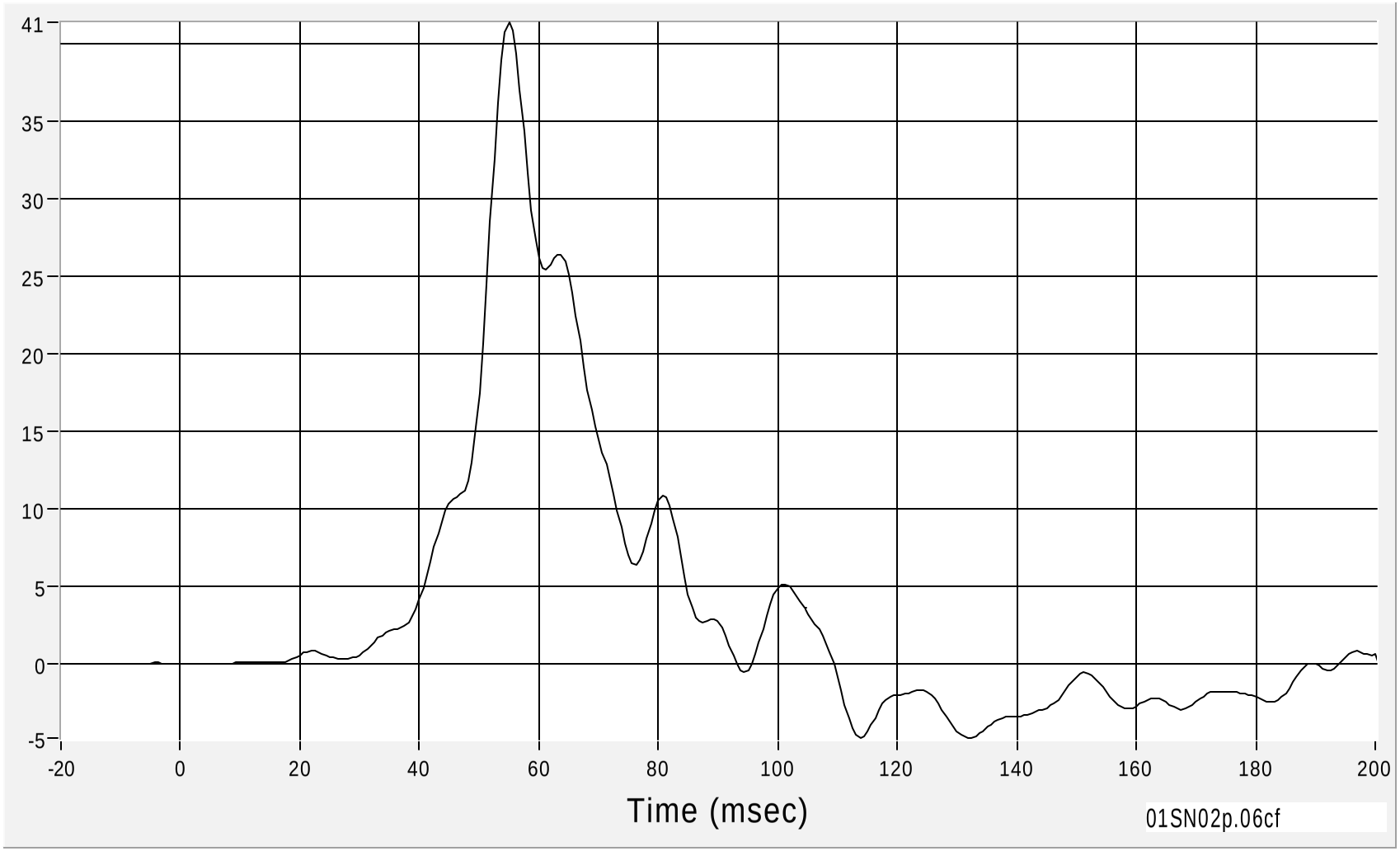
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Passenger Dummy Lower Rib Y Acceleration

Max 41.4 G's at 55.0 msec
Min -4.8 G's at 131.9 msec

Acceleration (G's) FIR100



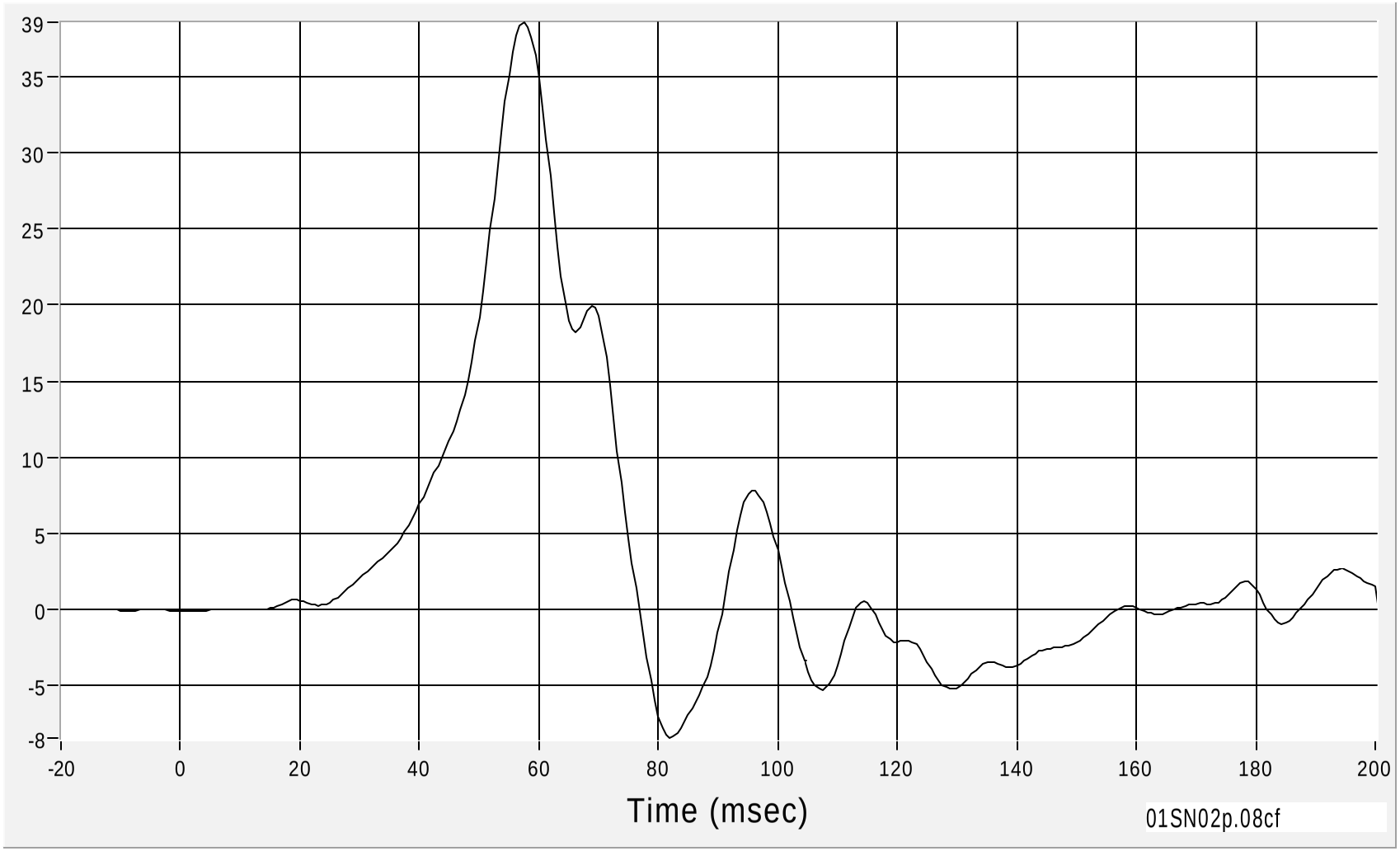
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Lower Spine Y Acceleration

Max **38.5** G's at **57.5** msec
Min **-8.4** G's at **81.9** msec

Acceleration (G's) FIR100



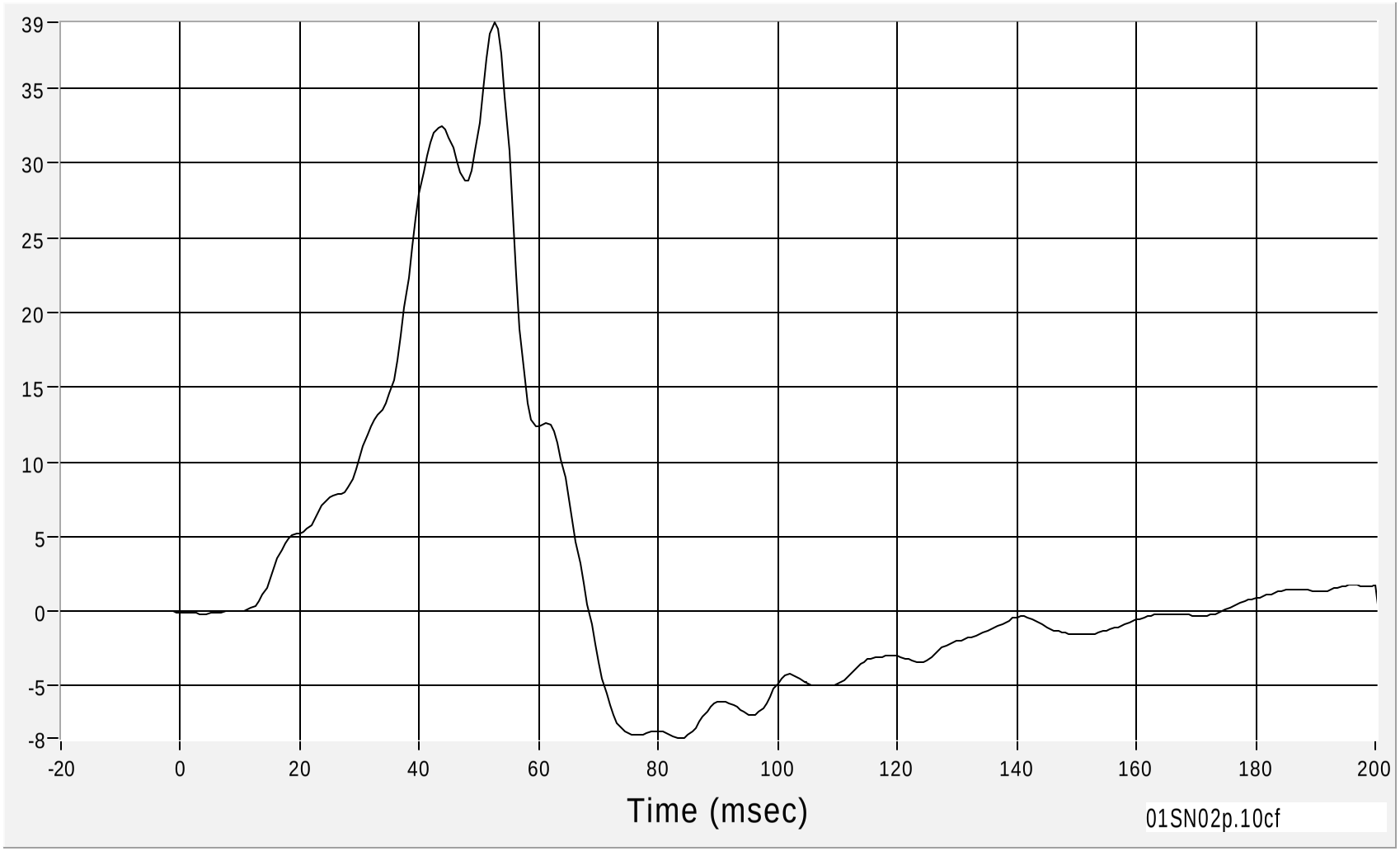
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Pelvis Y Acceleration

Max **39.4** G's at **52.5** msec
Min **-8.5** G's at **83.8** msec

Acceleration (G's) FIR100



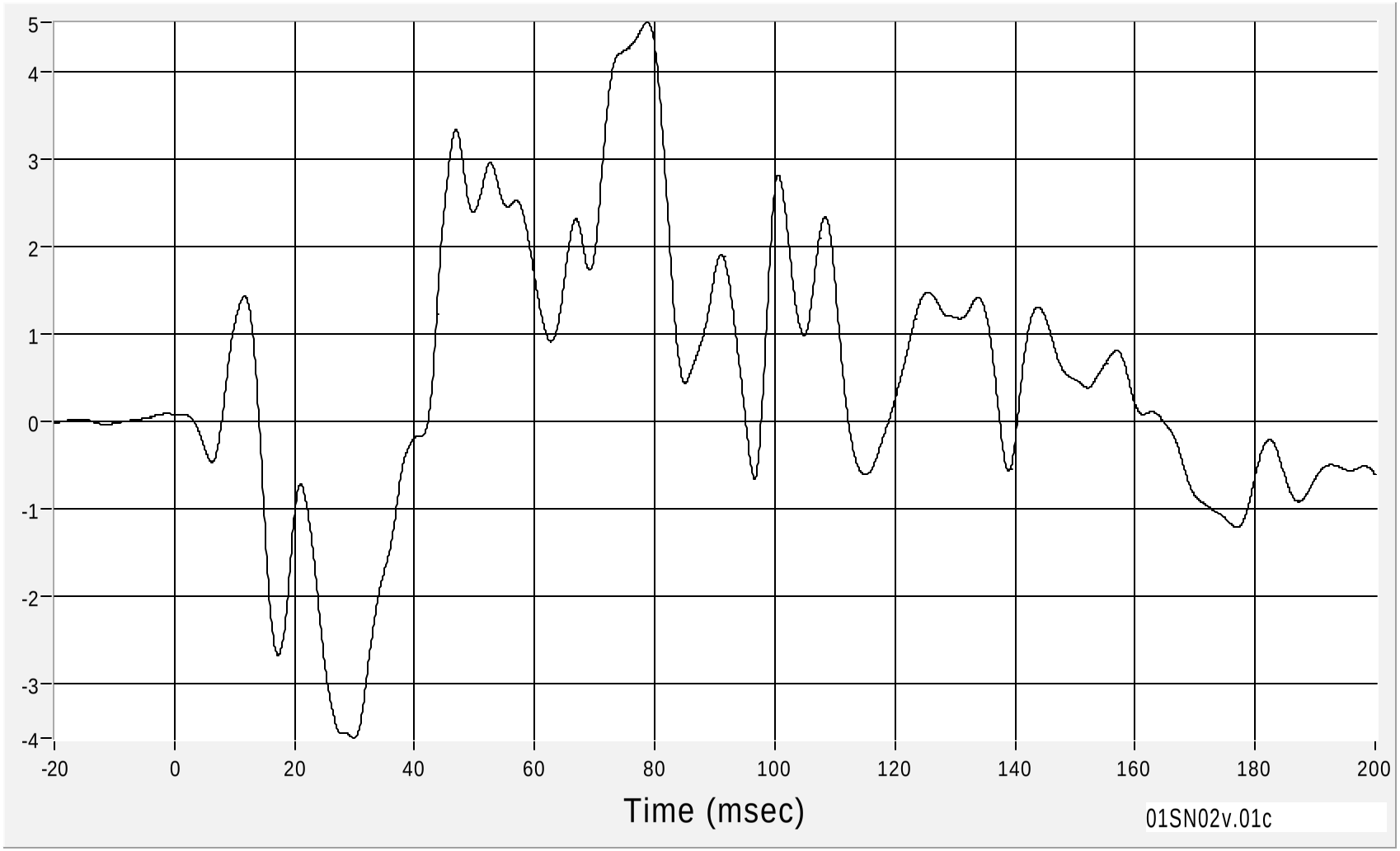
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat X Acceleration

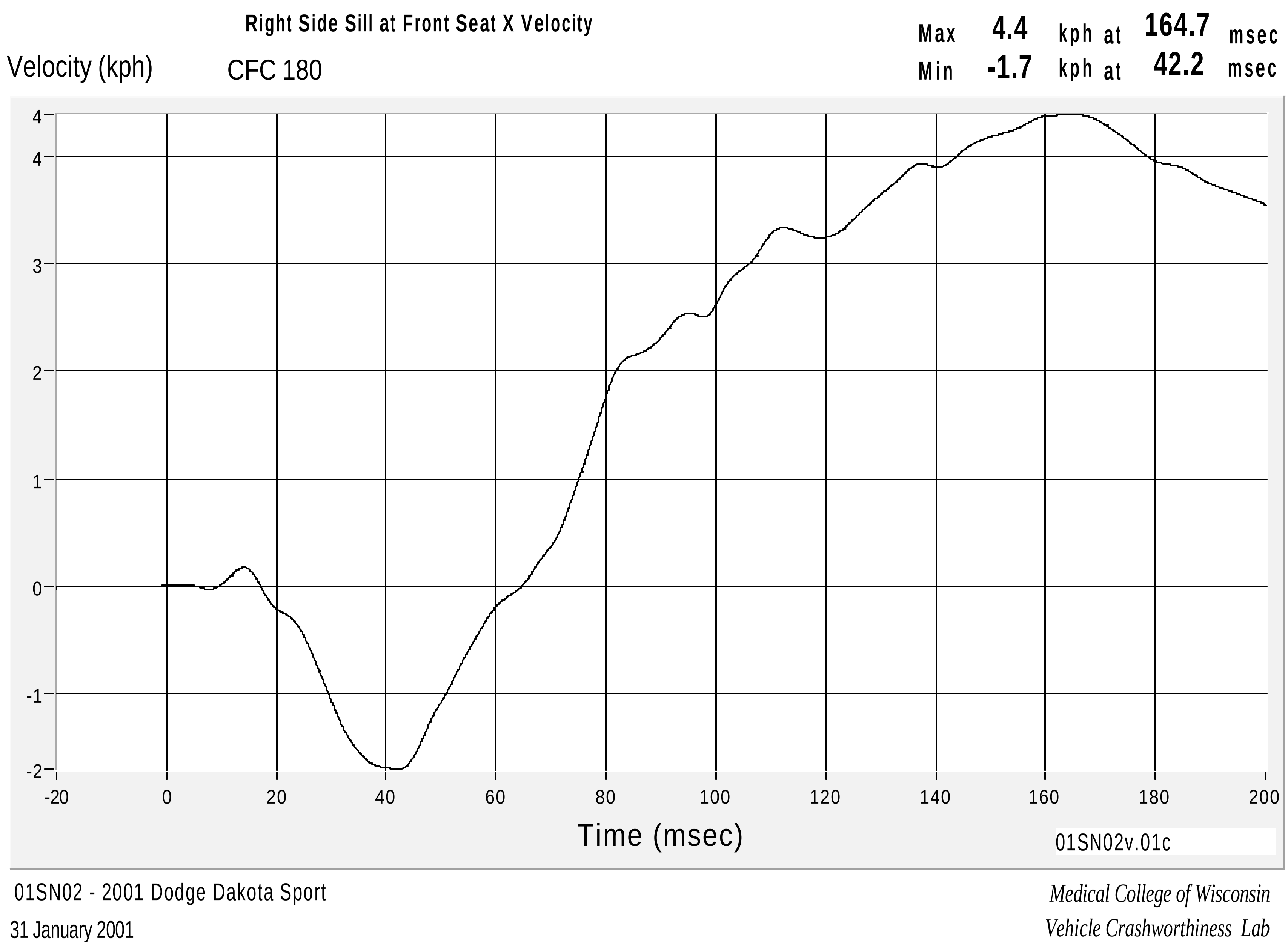
Max 4.6 G's at 78.7 msec
Min -3.6 G's at 29.8 msec

Acceleration (G's) CFC 60



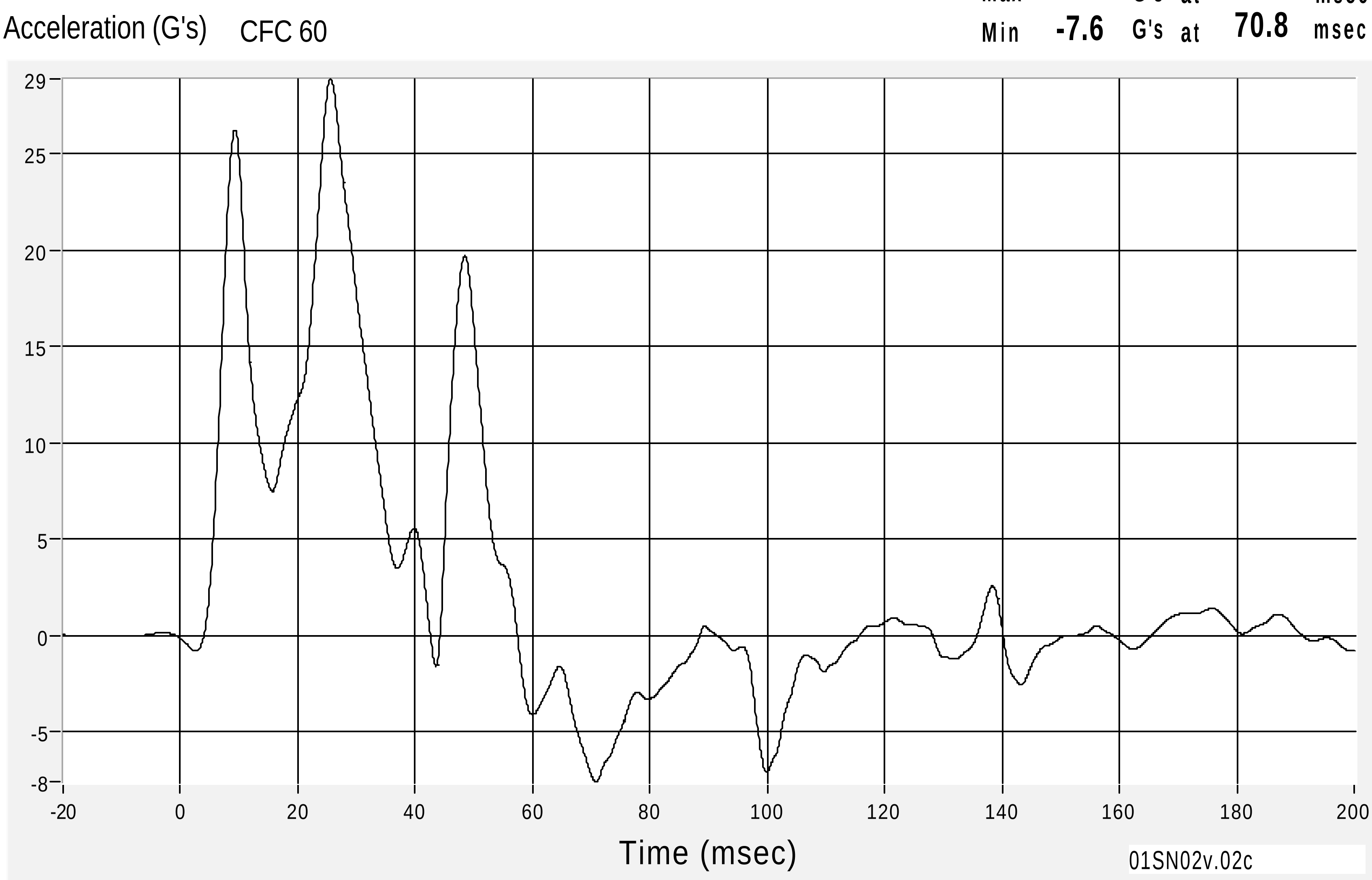
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab


Right Side Sill at Front Seat X Velocity
Velocity (kph)
CFC 180
Max 4.4 kph at 164.7 msec
Min -1.7 kph at 42.2 msec
4
4
3
2
1
0
-1
-2
-20
0
20
40
60
80
100
120
140
160
180
200
Time (msec)
01SN02v.01c
01SN02 - 2001 Dodge Dakota Sport
31 January 2001
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat Y Acceleration

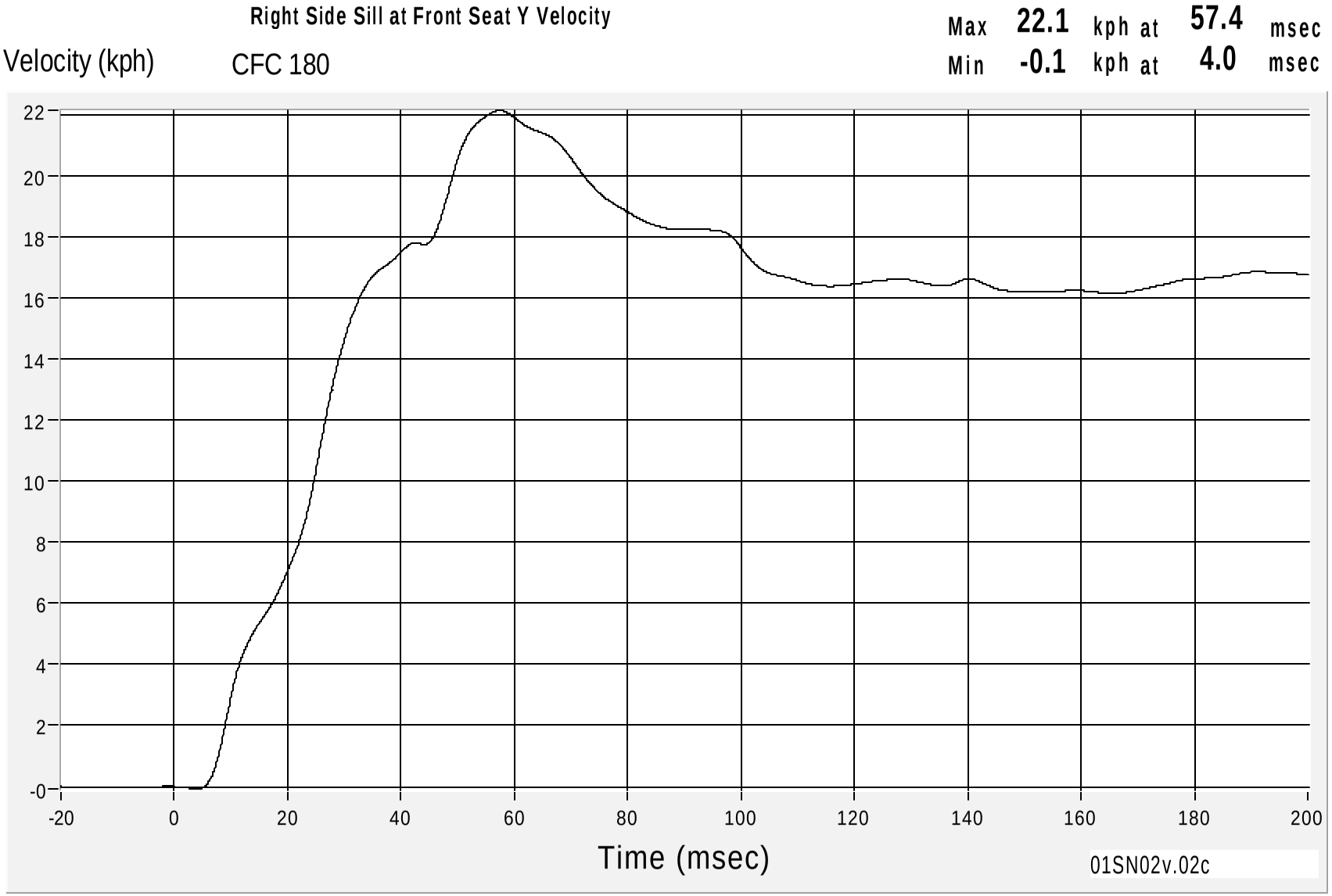
Max **28.9** G's at **25.6** msec
Min **-7.6** G's at **70.8** msec



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



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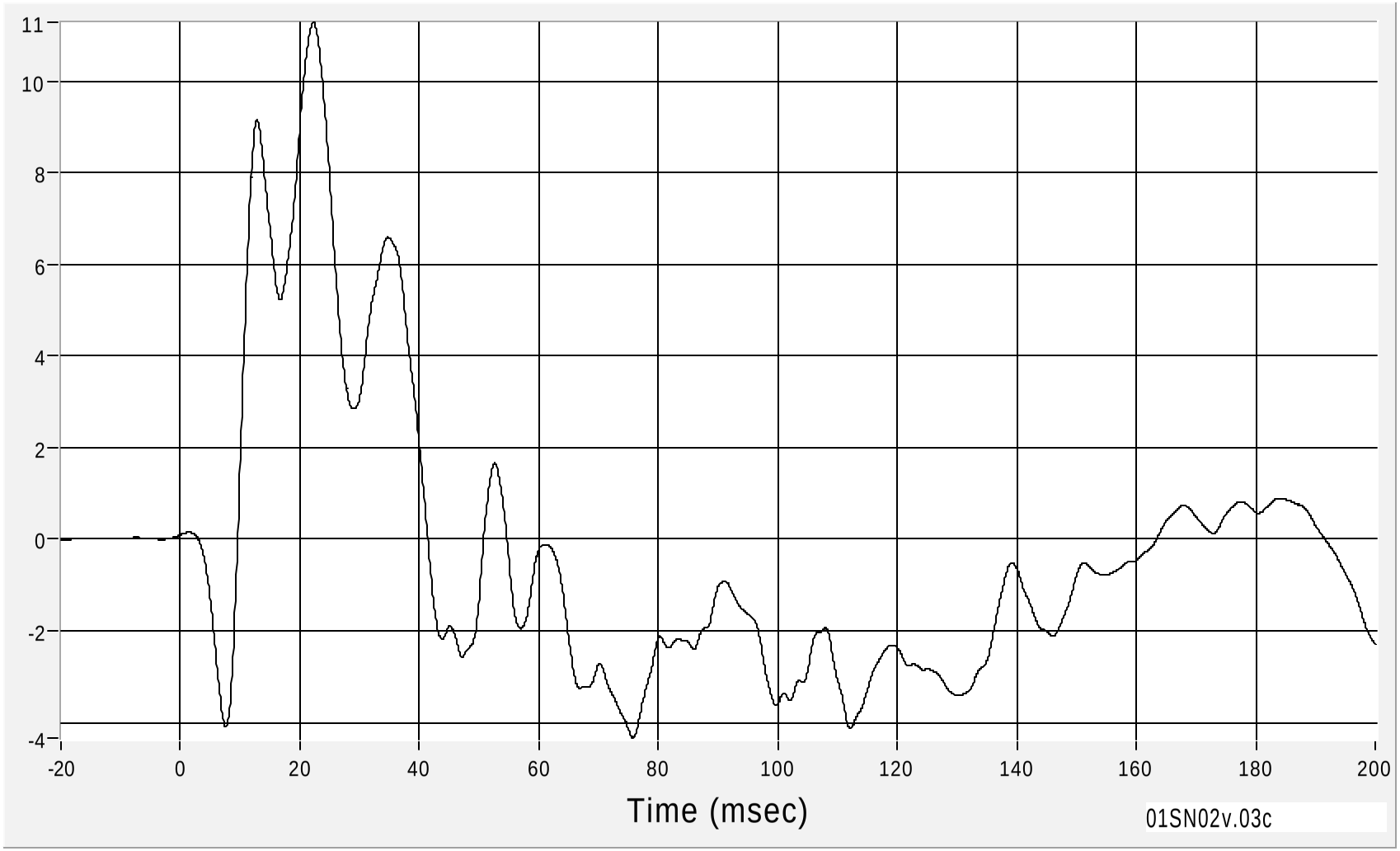
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat Z Acceleration

Max 11.3 G's at 22.2 msec
Min -4.3 G's at 75.8 msec



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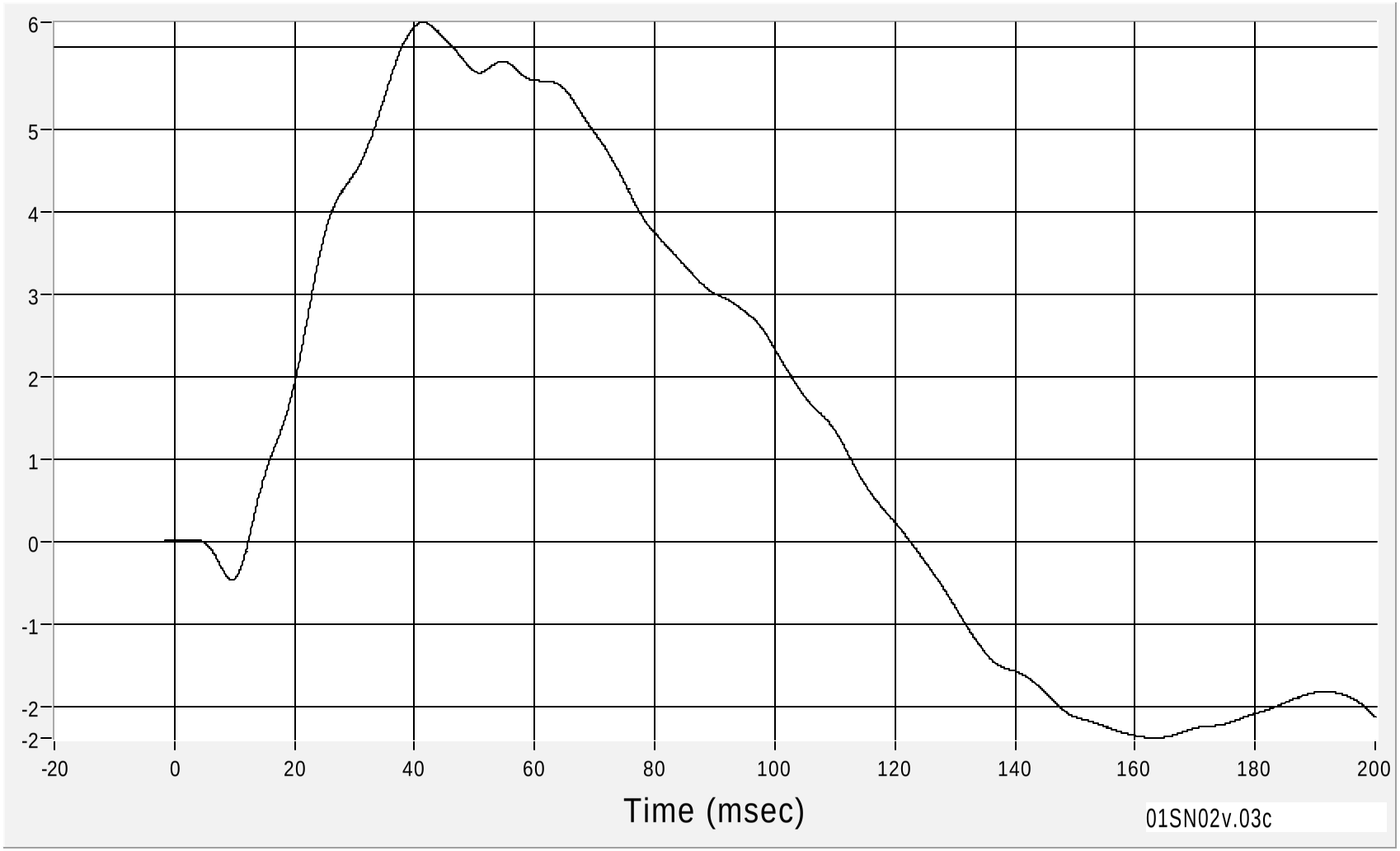
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat Z Velocity

Max 6.3 kph at 41.4 msec
Min -2.4 kph at 163.4 msec

Velocity (kph) CFC 180



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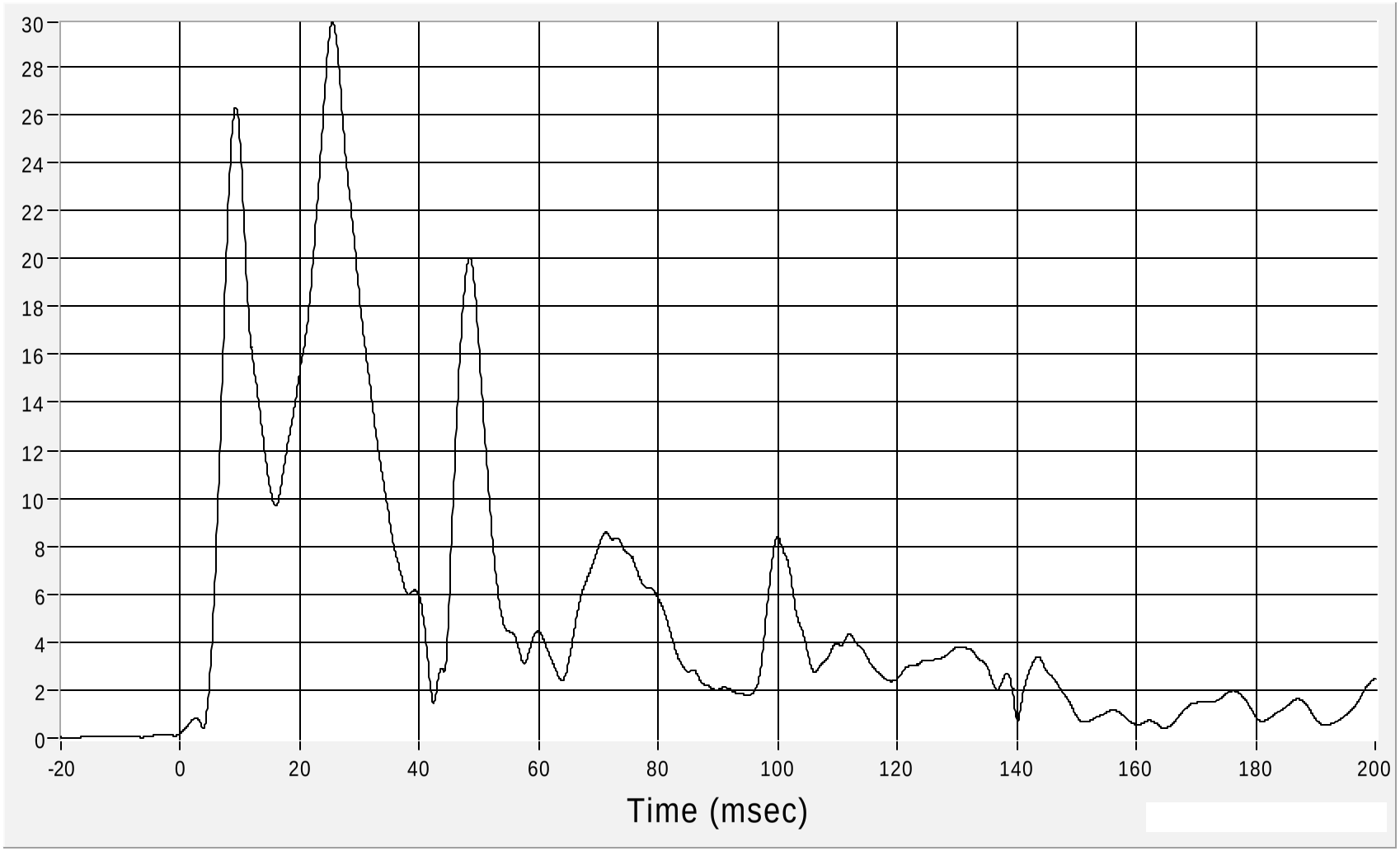
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat - Resultant

Max 29.8 G's at 25.4 msec
Min 0.0 G's at -6.4 msec

Acceleration (G's) CFC 60



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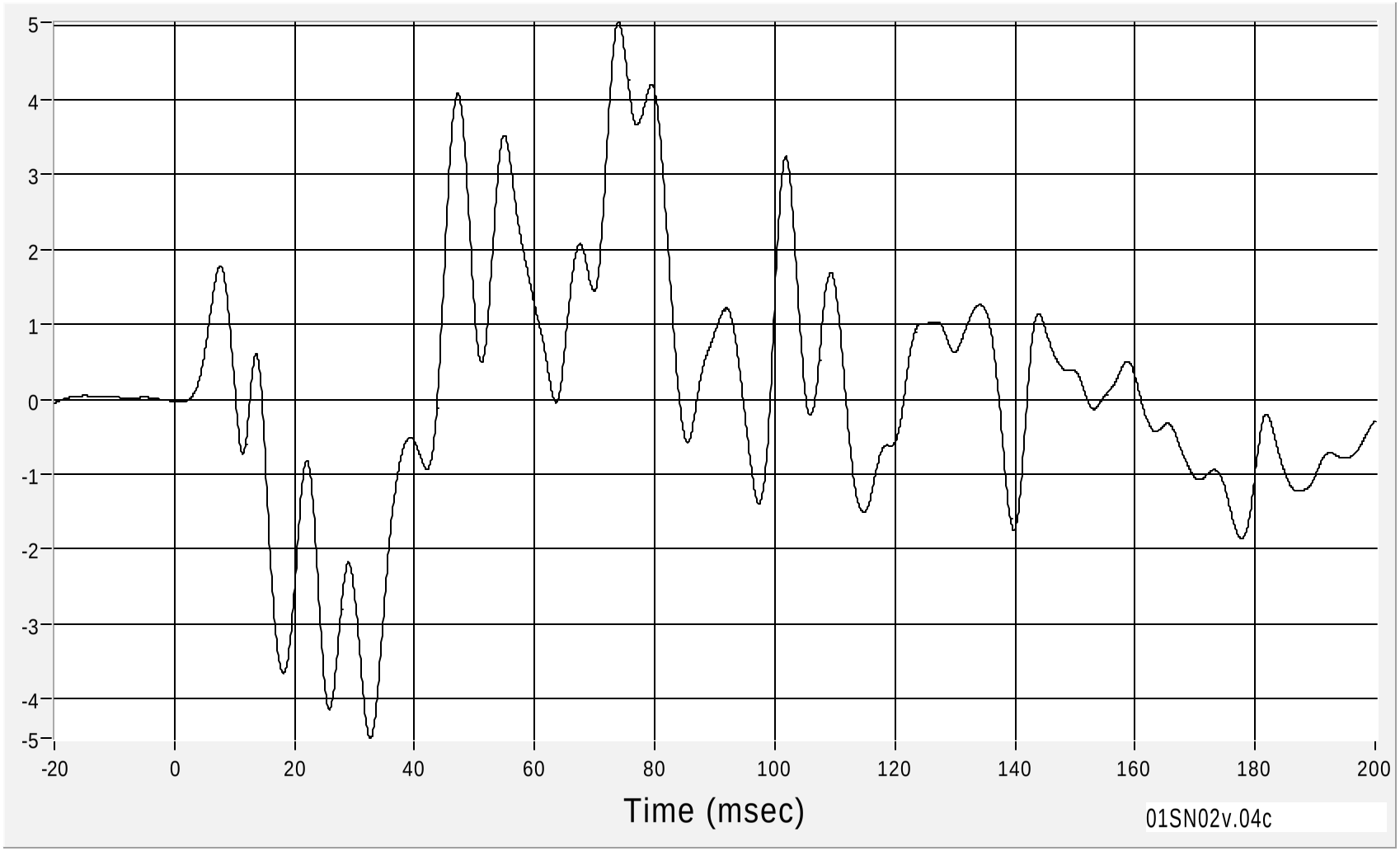
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat X Acceleration

Max 5.0 G's at 73.9 msec
Min -4.5 G's at 32.6 msec



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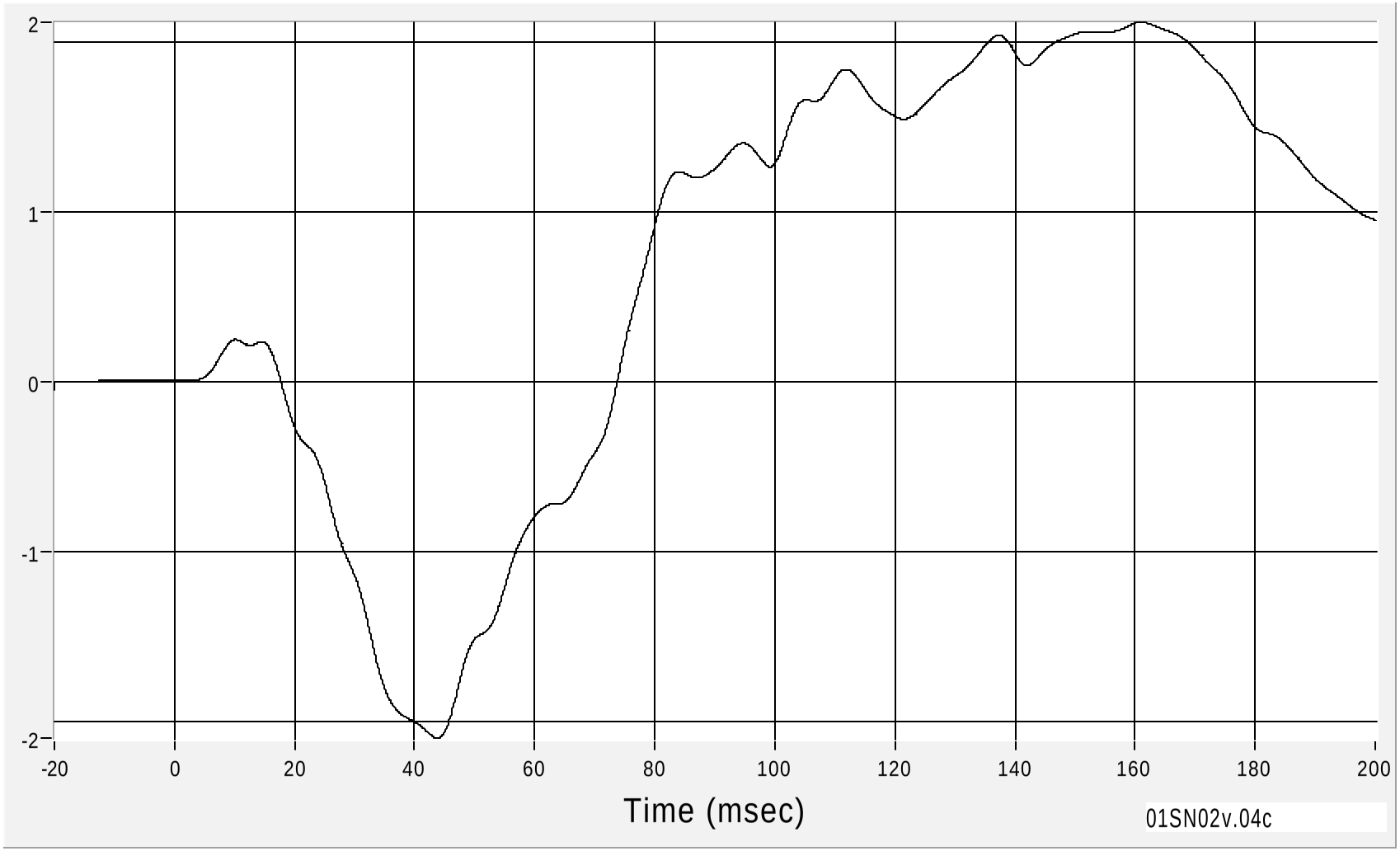
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat X Velocity

Max 2.1 kph at 161.0 msec
Min -2.1 kph at 43.8 msec

Velocity (kph) CFC 180



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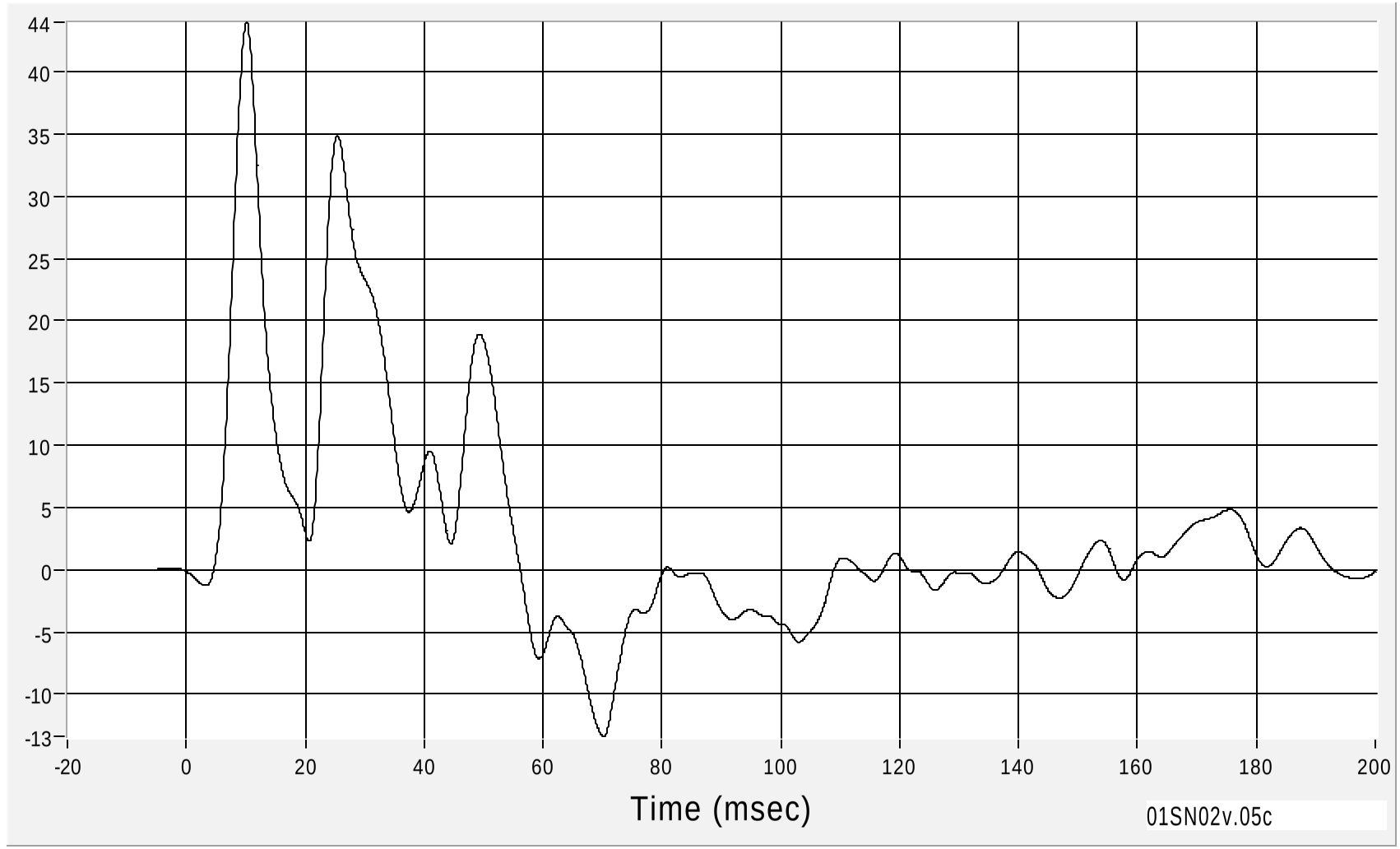
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat Y Acceleration

Max 44.0 G's at 10.2 msec
Min -13.4 G's at 70.2 msec



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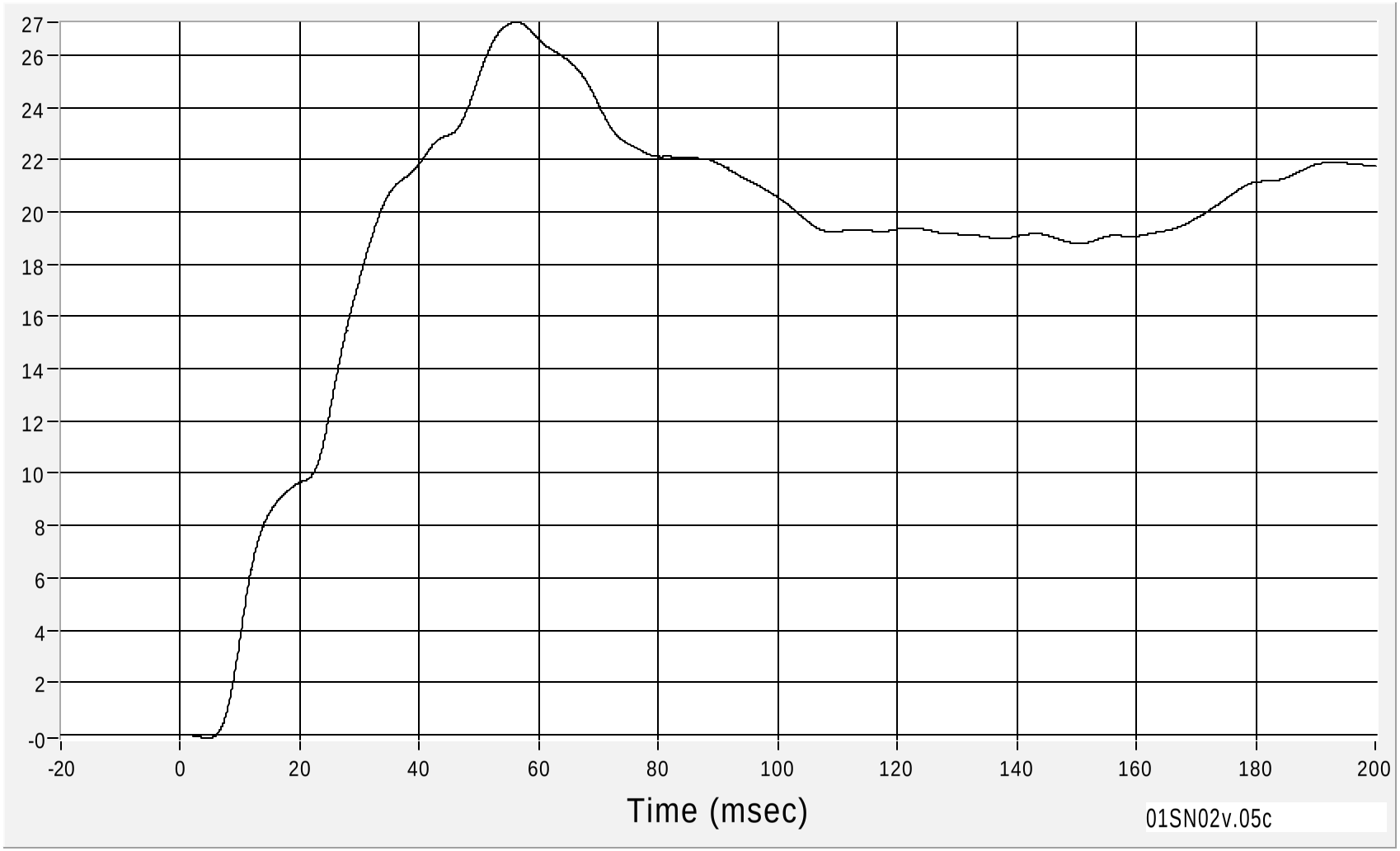
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat Y Velocity

Max 27.2 kph at 56.2 msec
Min -0.1 kph at 4.6 msec

Velocity (kph) CFC 180



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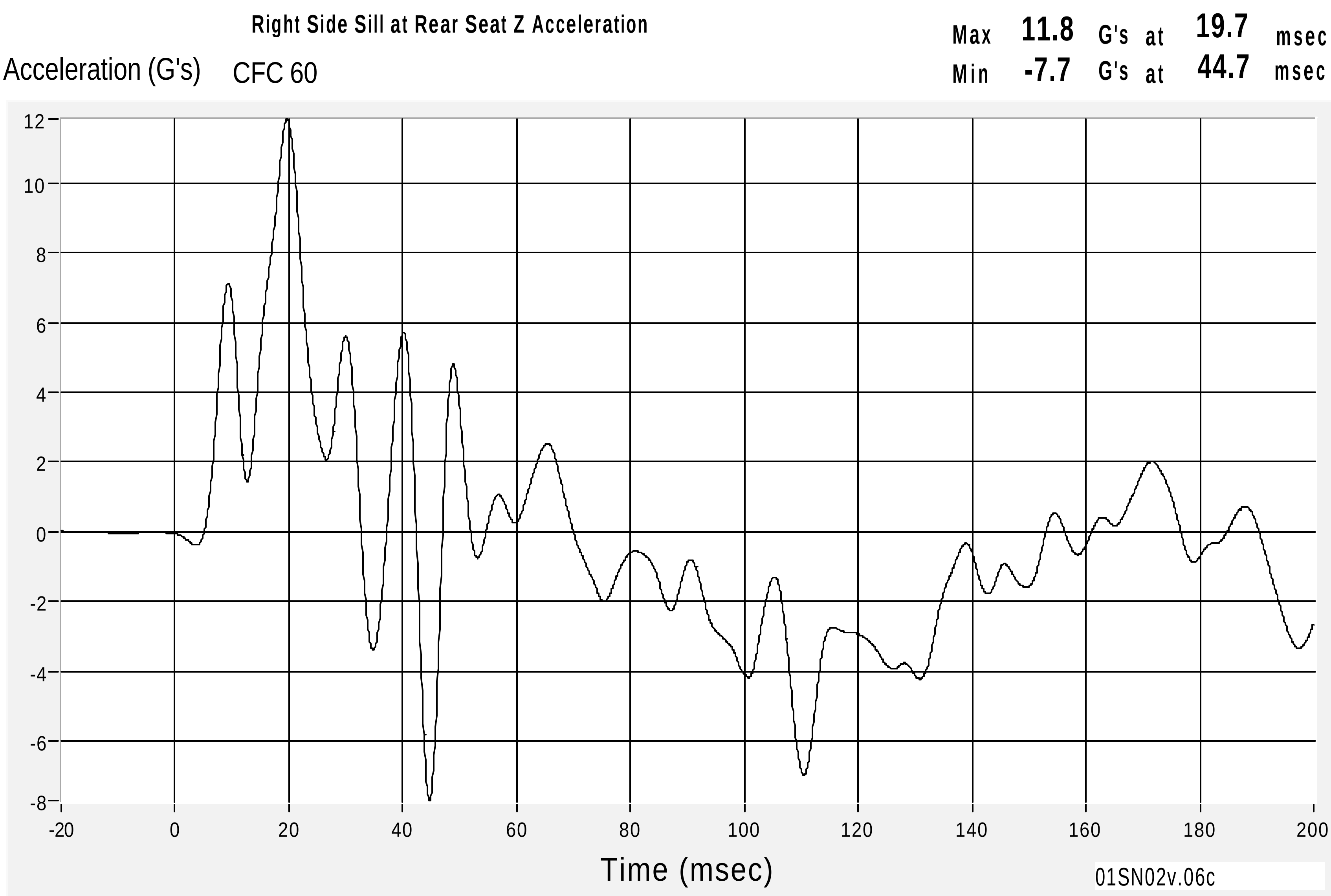
Right Side Sill at Rear Seat Z Acceleration



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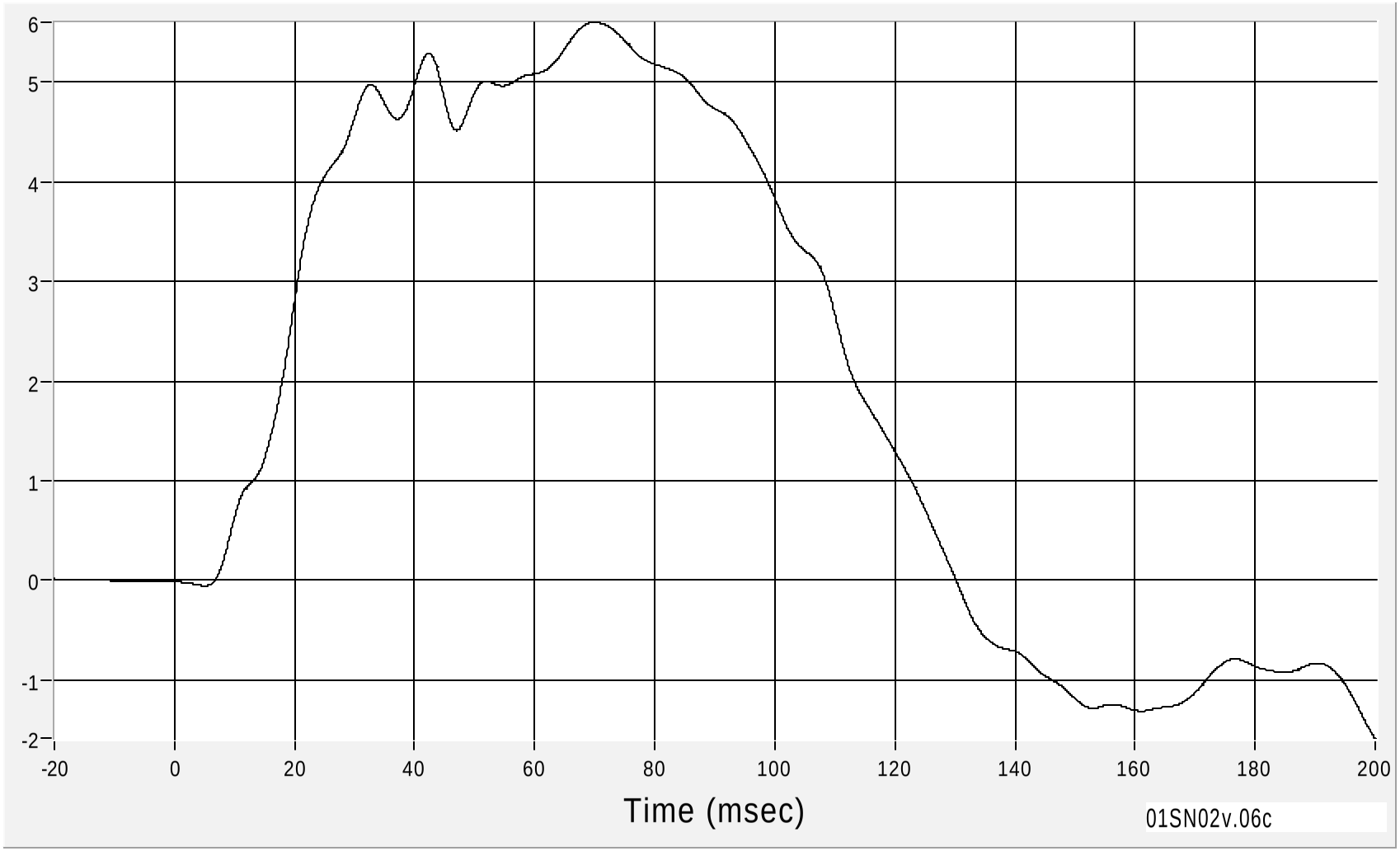
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat Z Velocity

Max 5.6 kph at 70.0 msec
Min -1.6 kph at 199.9 msec



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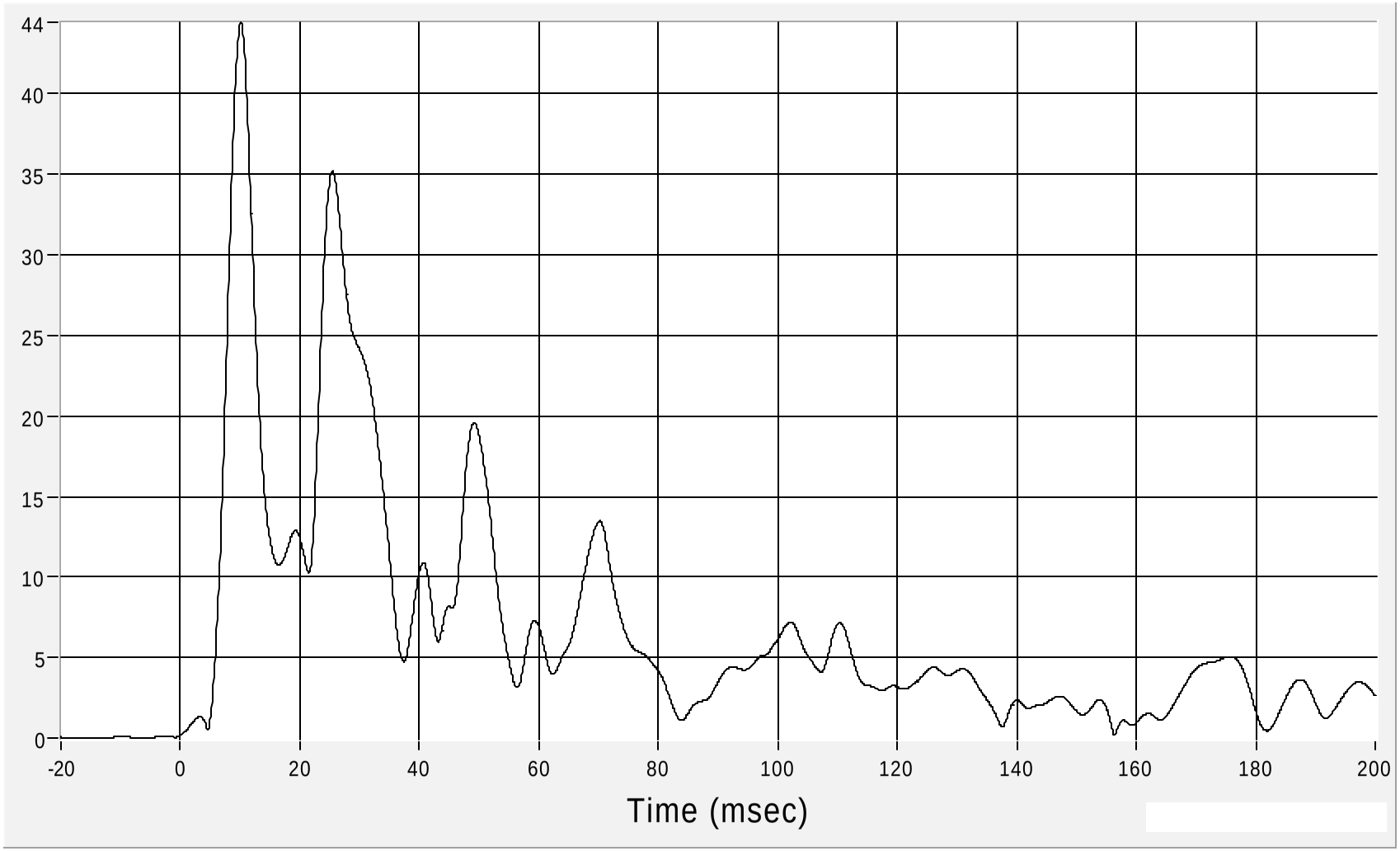
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat - Resultant

Max 44.4 G's at 10.1 msec
Min 0.0 G's at -5.3 msec

Acceleration (G's) CFC 60



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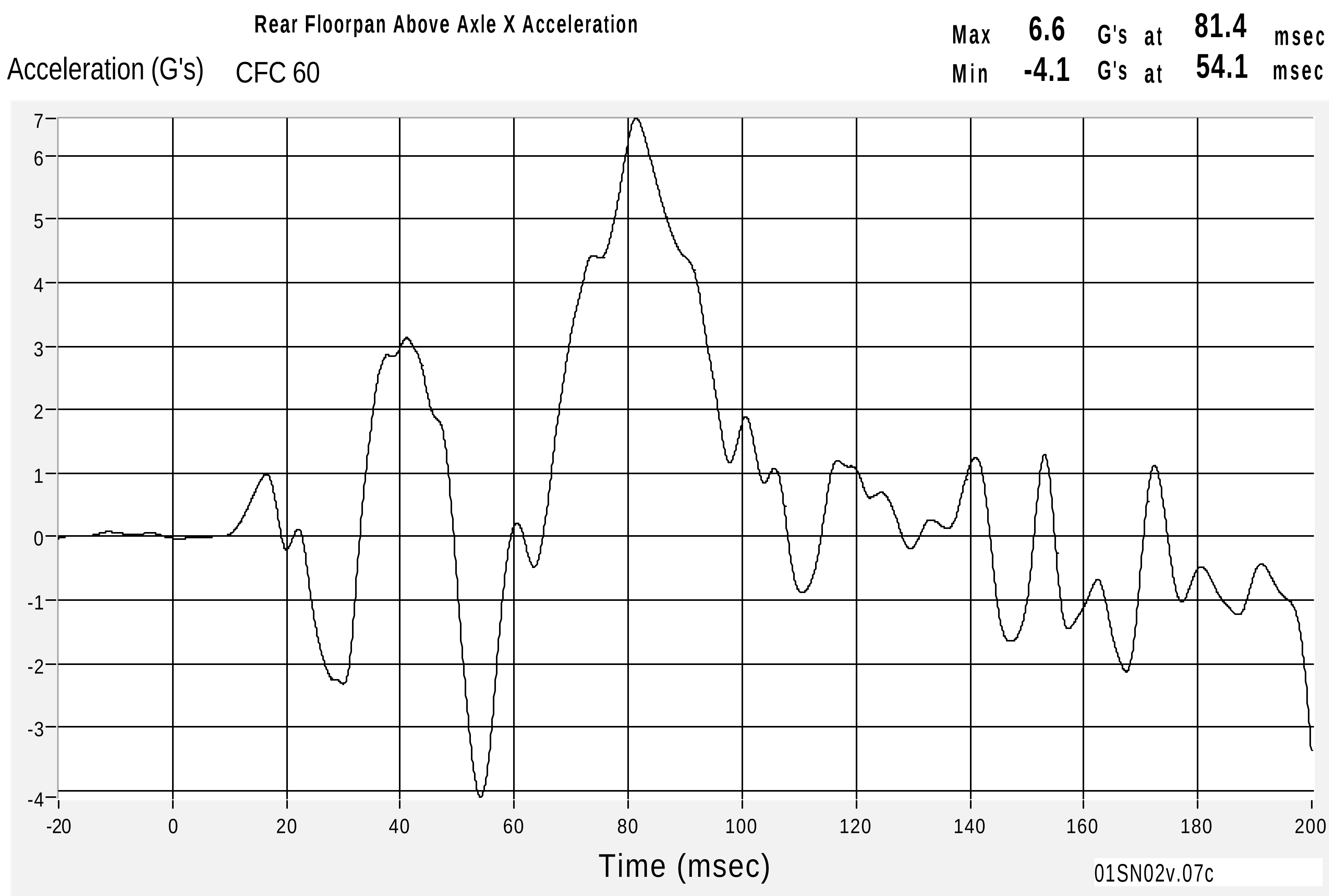
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



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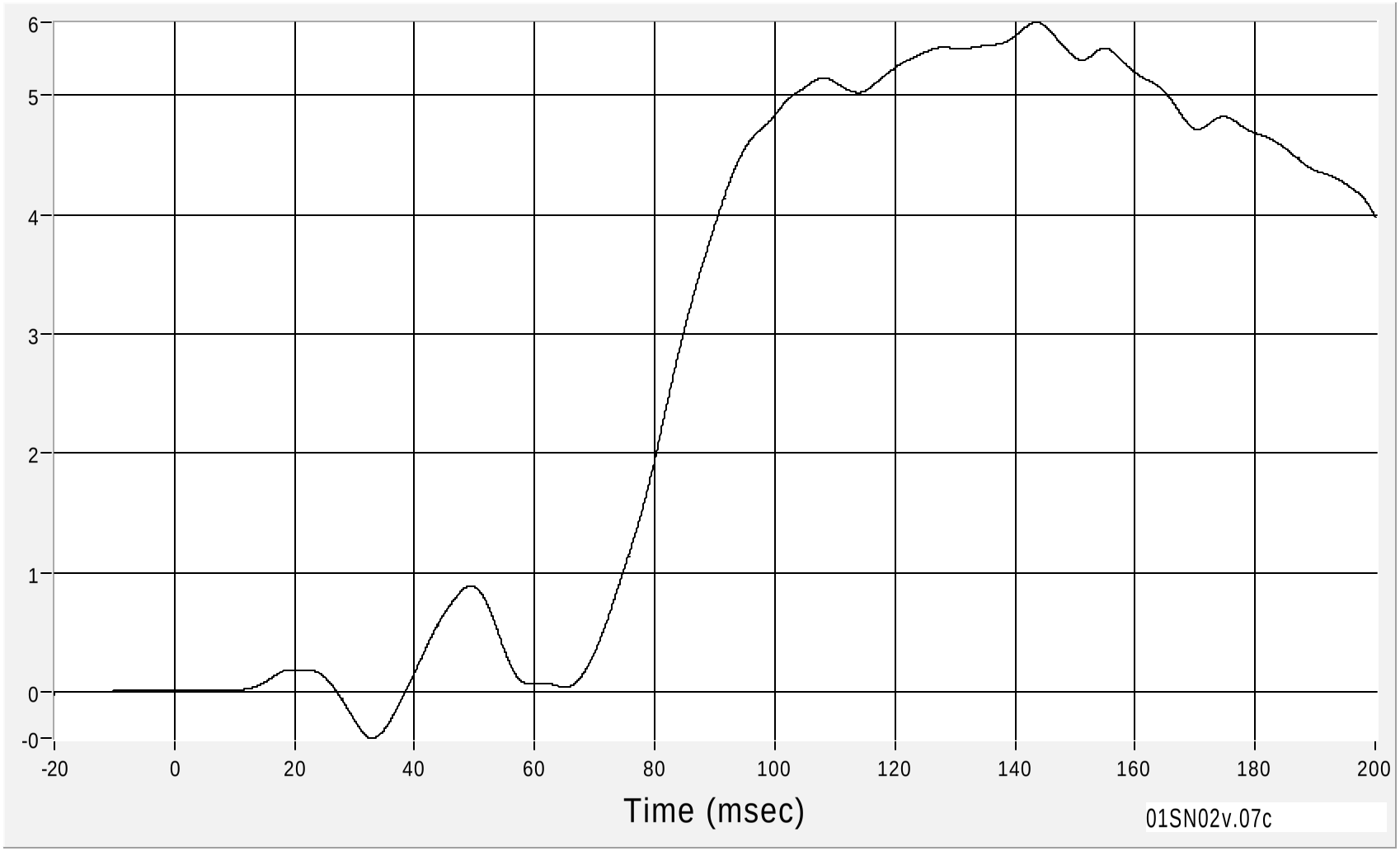
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle X Velocity

Velocity (kph) CFC 180

Max 5.6 kph at 143.5 msec
Min -0.4 kph at 32.9 msec



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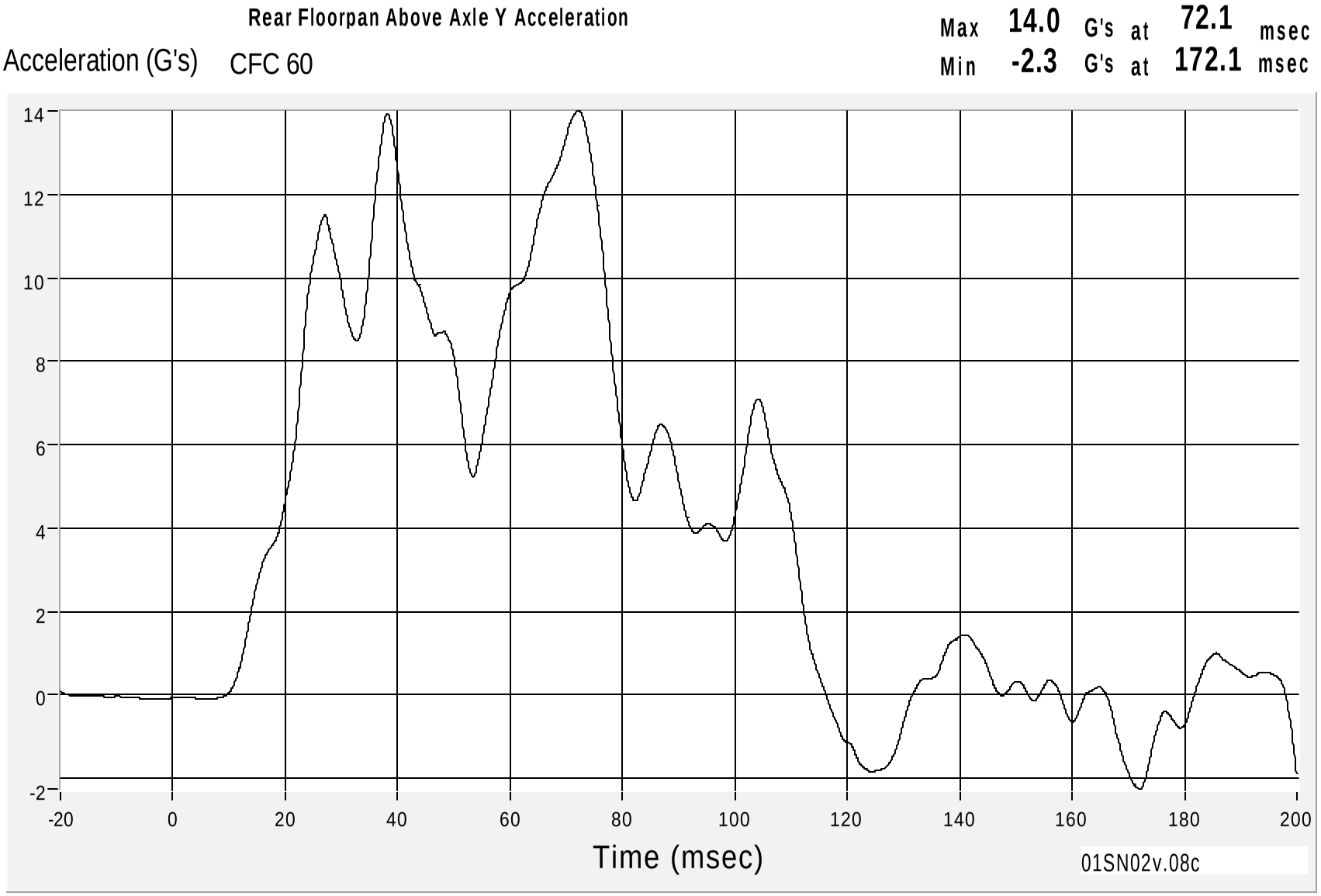
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



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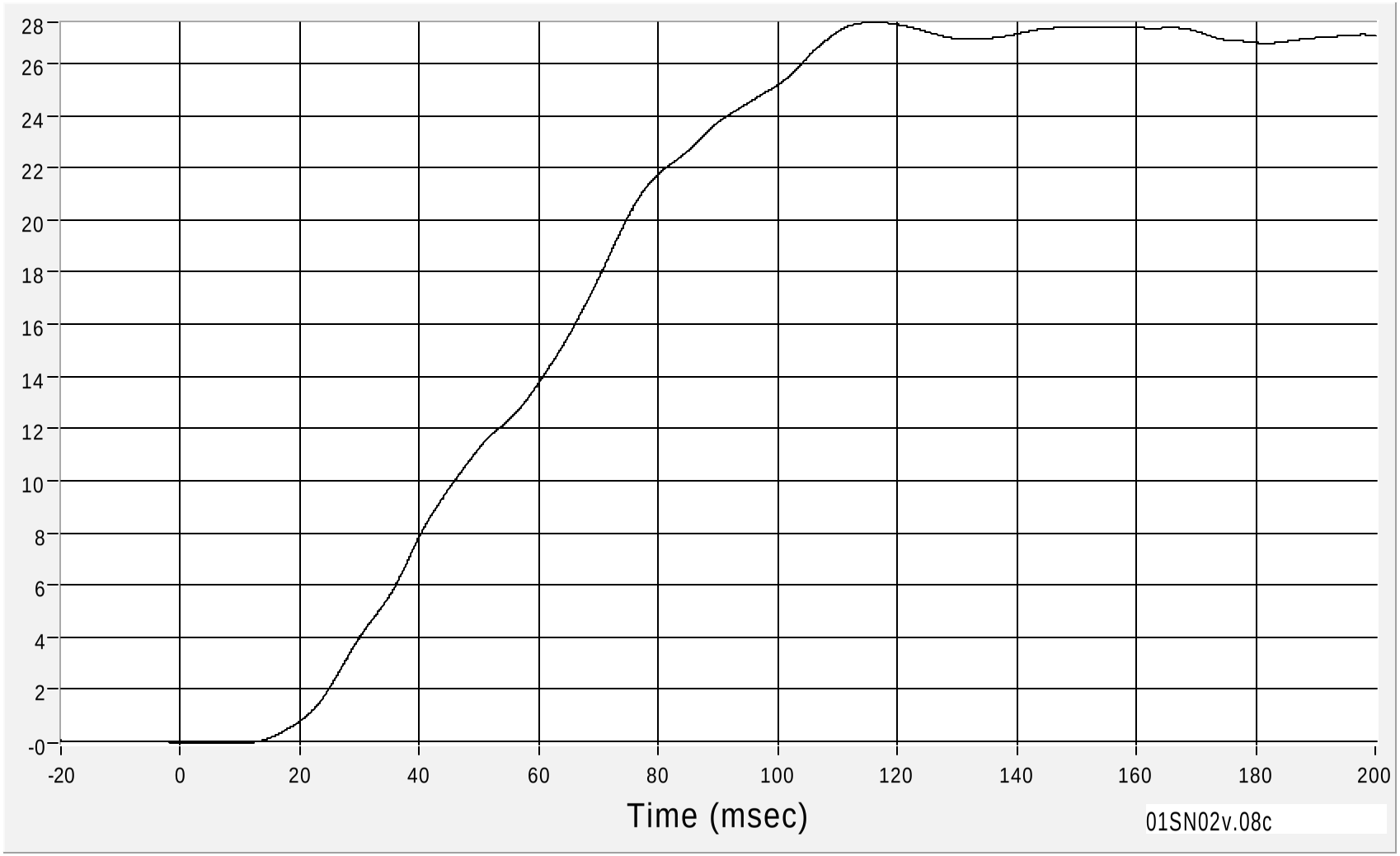
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle Y Velocity

Max 27.6 kph at 116.2 msec
Min -0.1 kph at 9.6 msec



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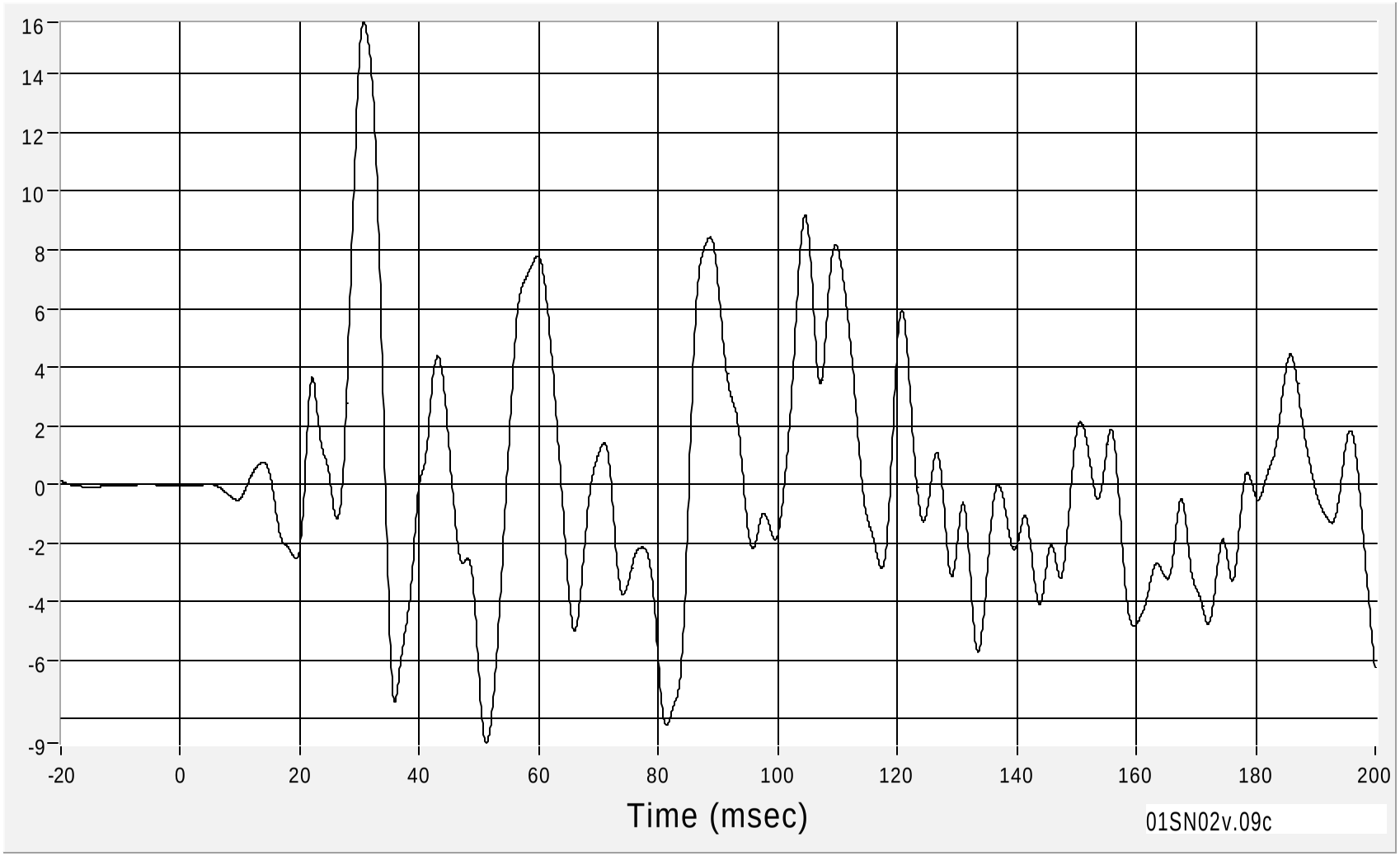
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle Z Acceleration

Max 15.8 G's at 30.6 msec
Min -8.8 G's at 51.2 msec



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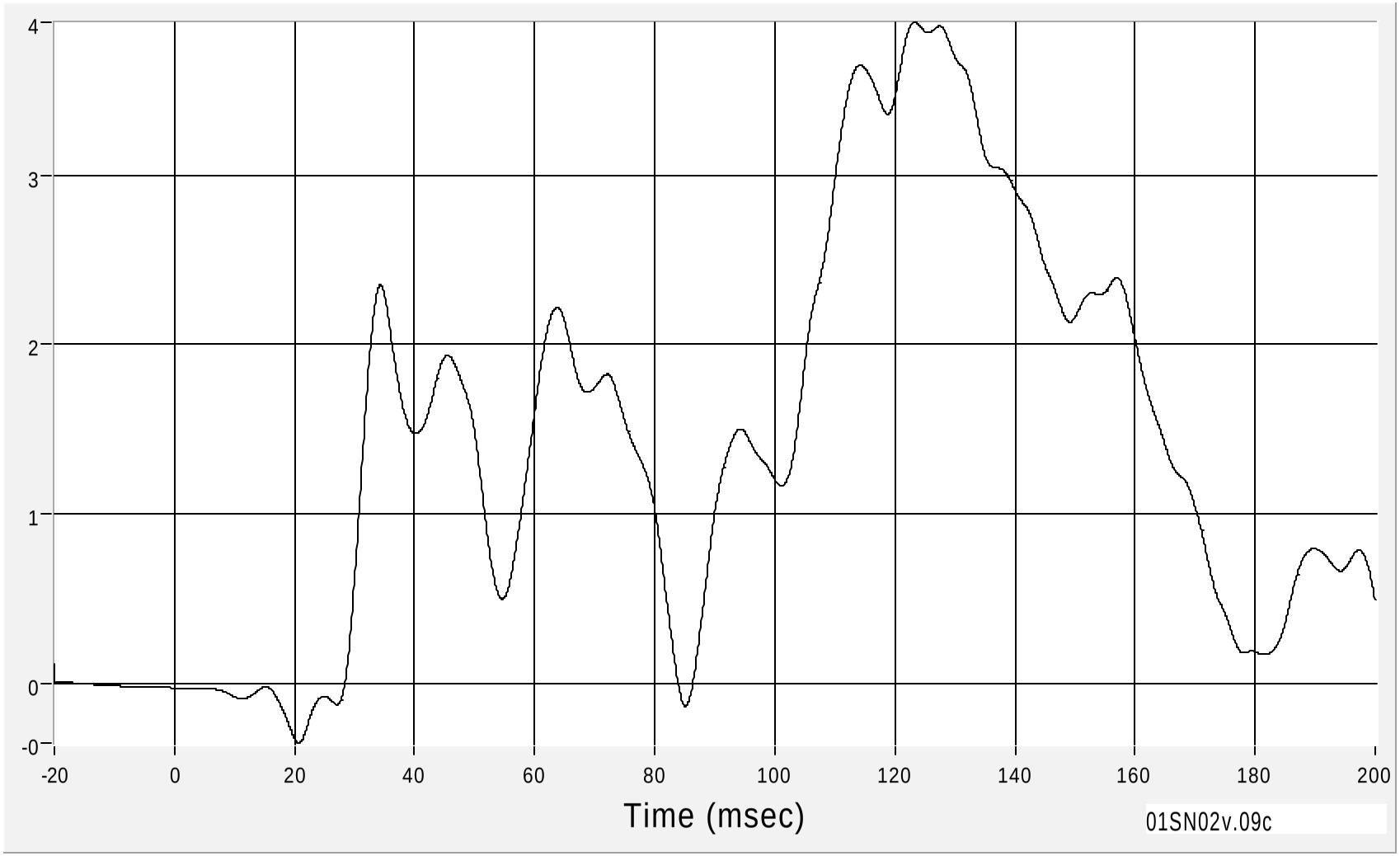
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle Z Velocity

Velocity (kph) CFC 180

Max 3.9 kph at 123.3 msec
Min -0.4 kph at 20.7 msec



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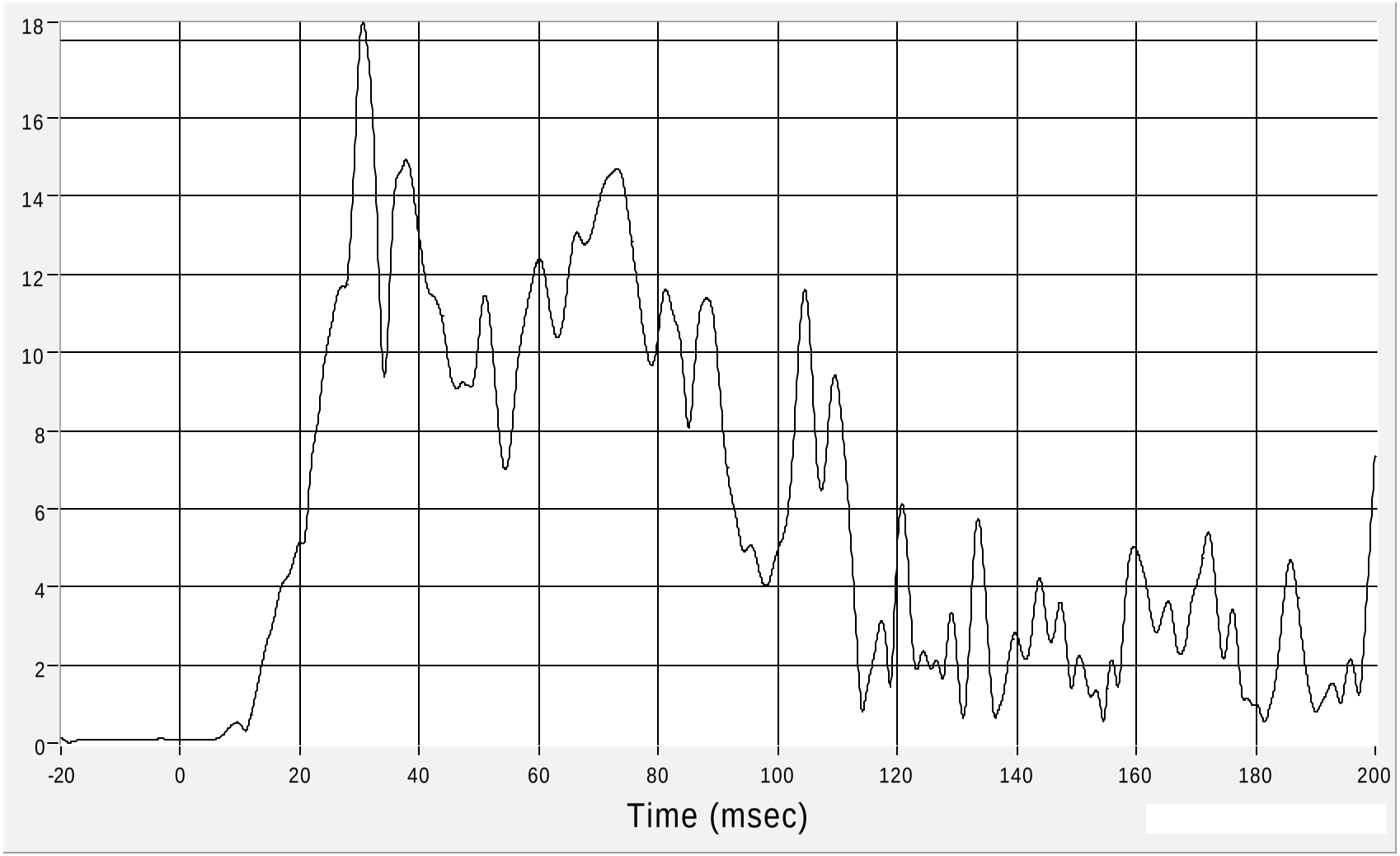
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle - Resultant

Max 18.5 G's at 30.6 msec
Min 0.1 G's at -7.3 msec

Acceleration (G's) CFC 60



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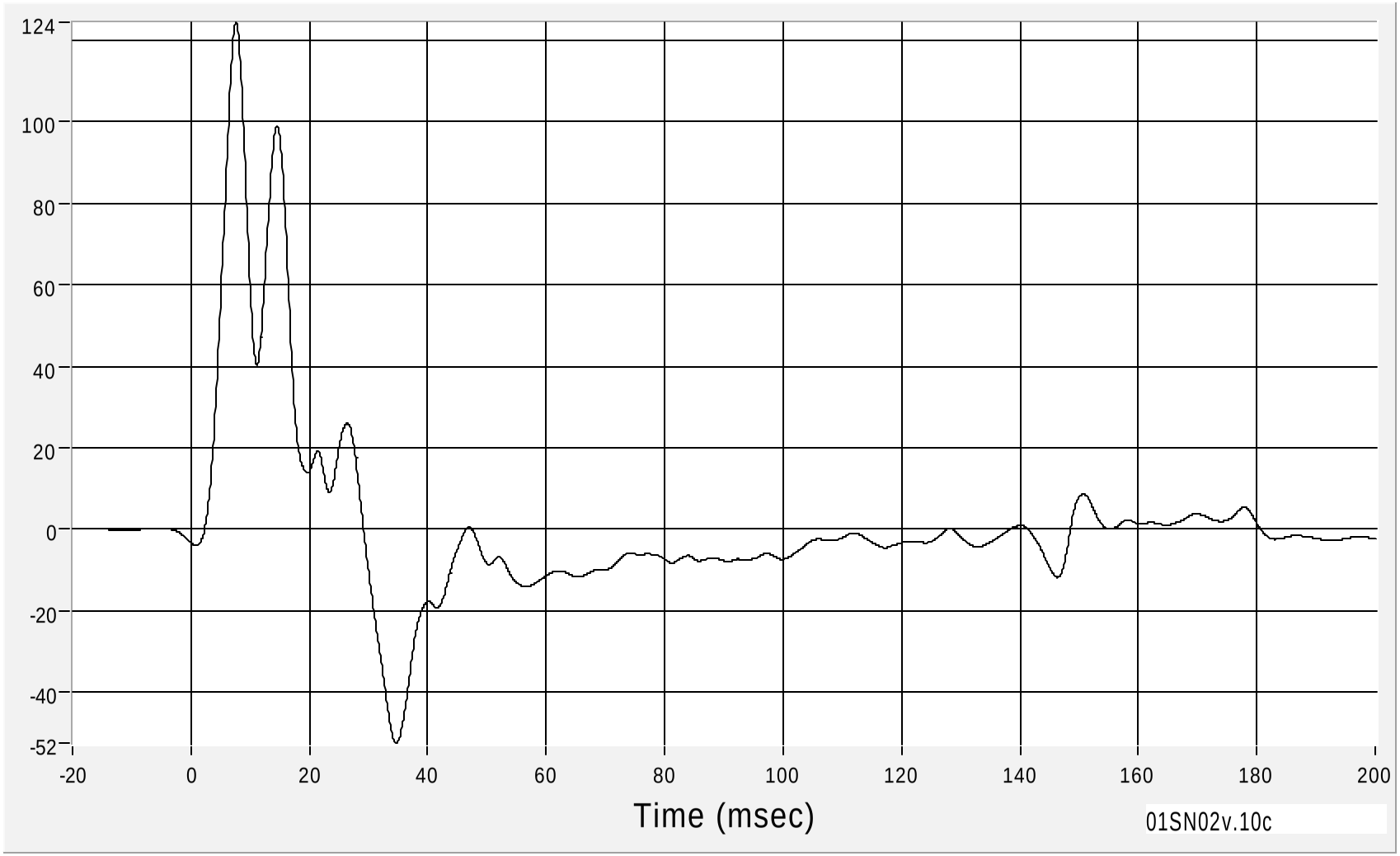
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Side Sill at Rear Seat Y Acceleration

Max 124.4 G's at 7.6 msec
Min -52.4 G's at 34.6 msec



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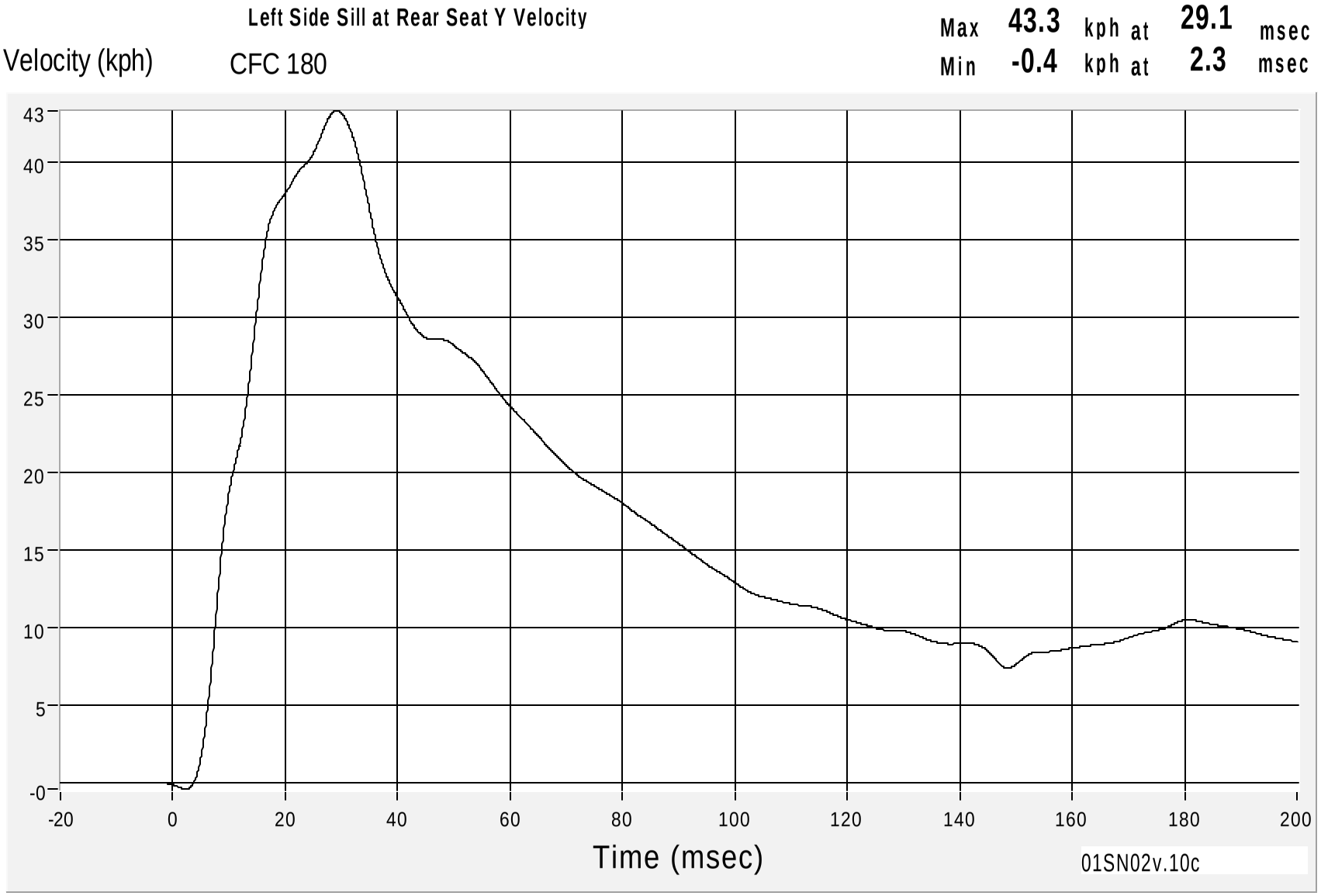
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



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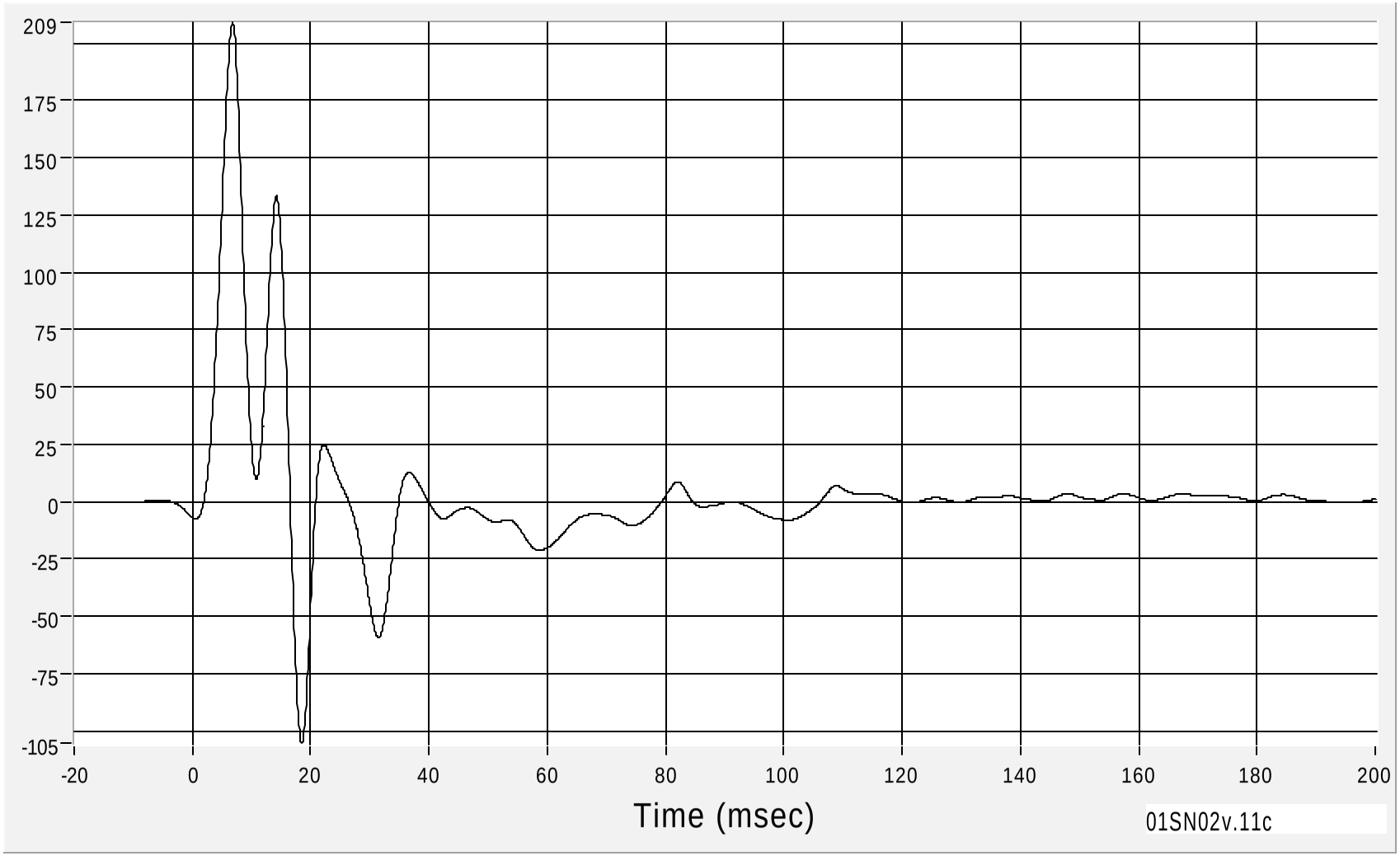
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Left Side Sill at Front Seat Y Acceleration

Max 209.1 G's at 6.8 msec
Min -105.3 G's at 18.5 msec



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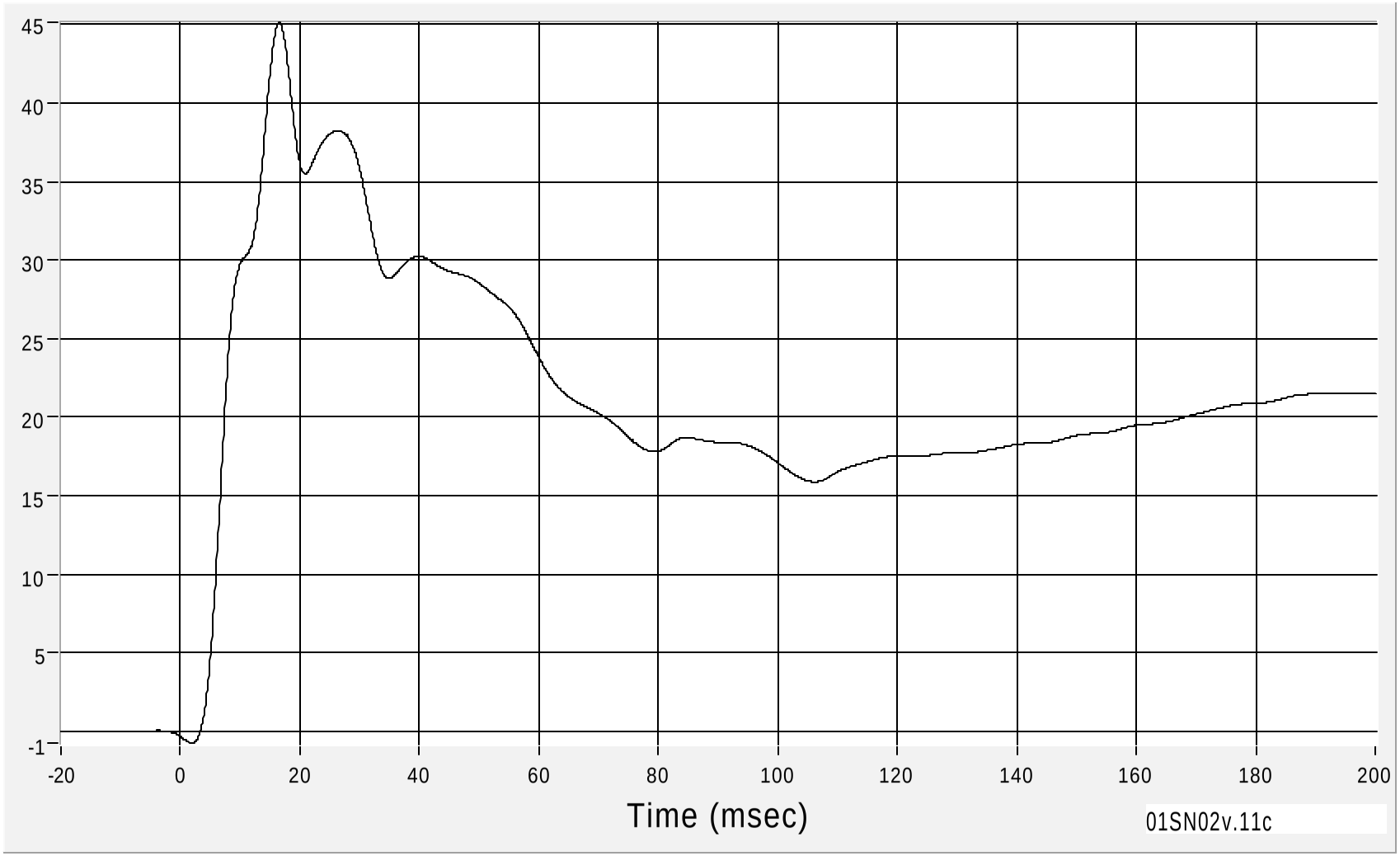
Vehicle Crashworthiness Lab

Left Side Sill at Front Seat Y Velocity

Max 45.1 kph at 16.5 msec
Min -0.8 kph at 1.9 msec

Velocity (kph)

CFC 180



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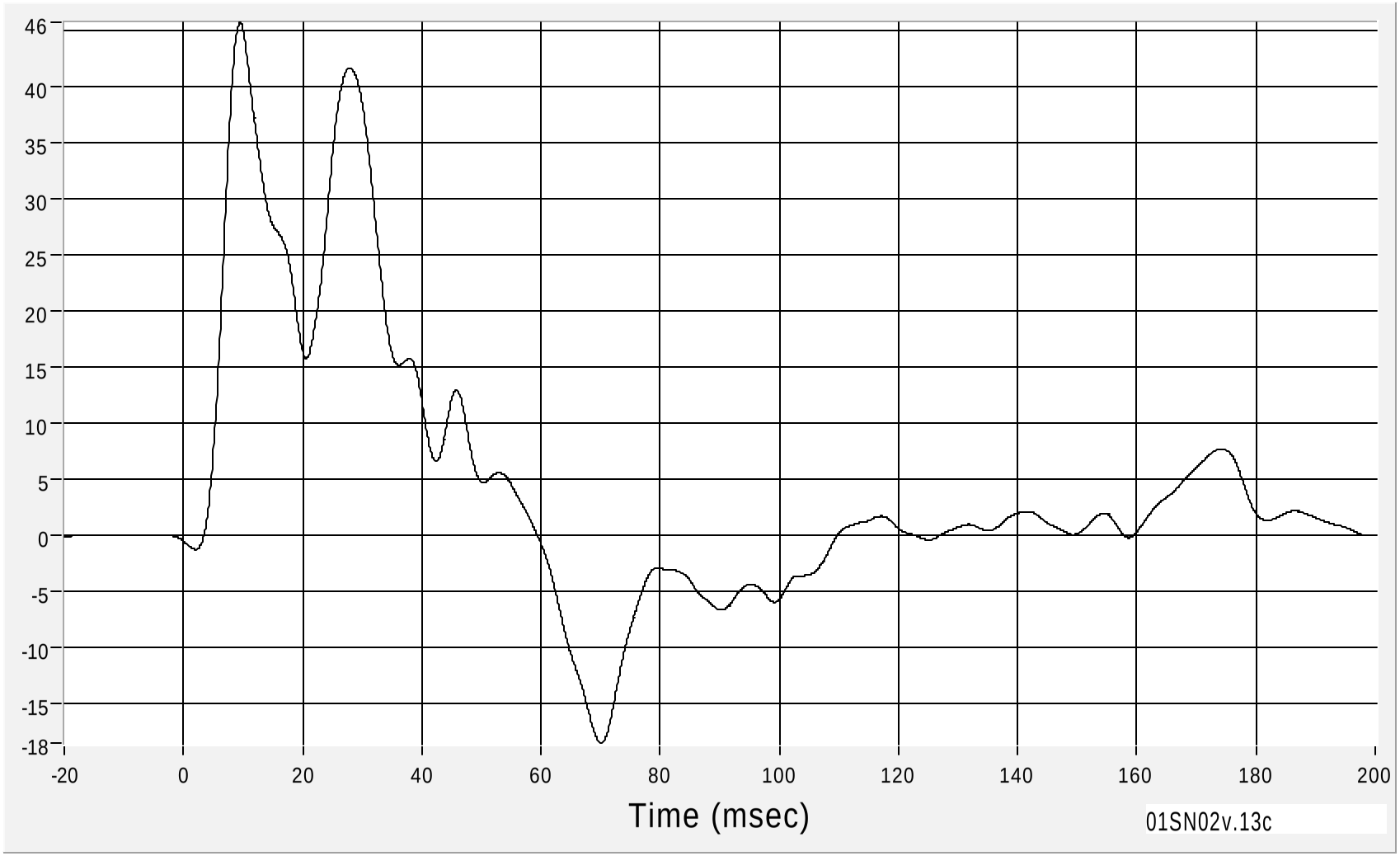
Vehicle Crashworthiness Lab

Right Rear Occupant Compartment Y Acceleration

Max **45.8** G's at **9.5** msec
Min **-18.5** G's at **70.1** msec

Acceleration (G's) CFC 60



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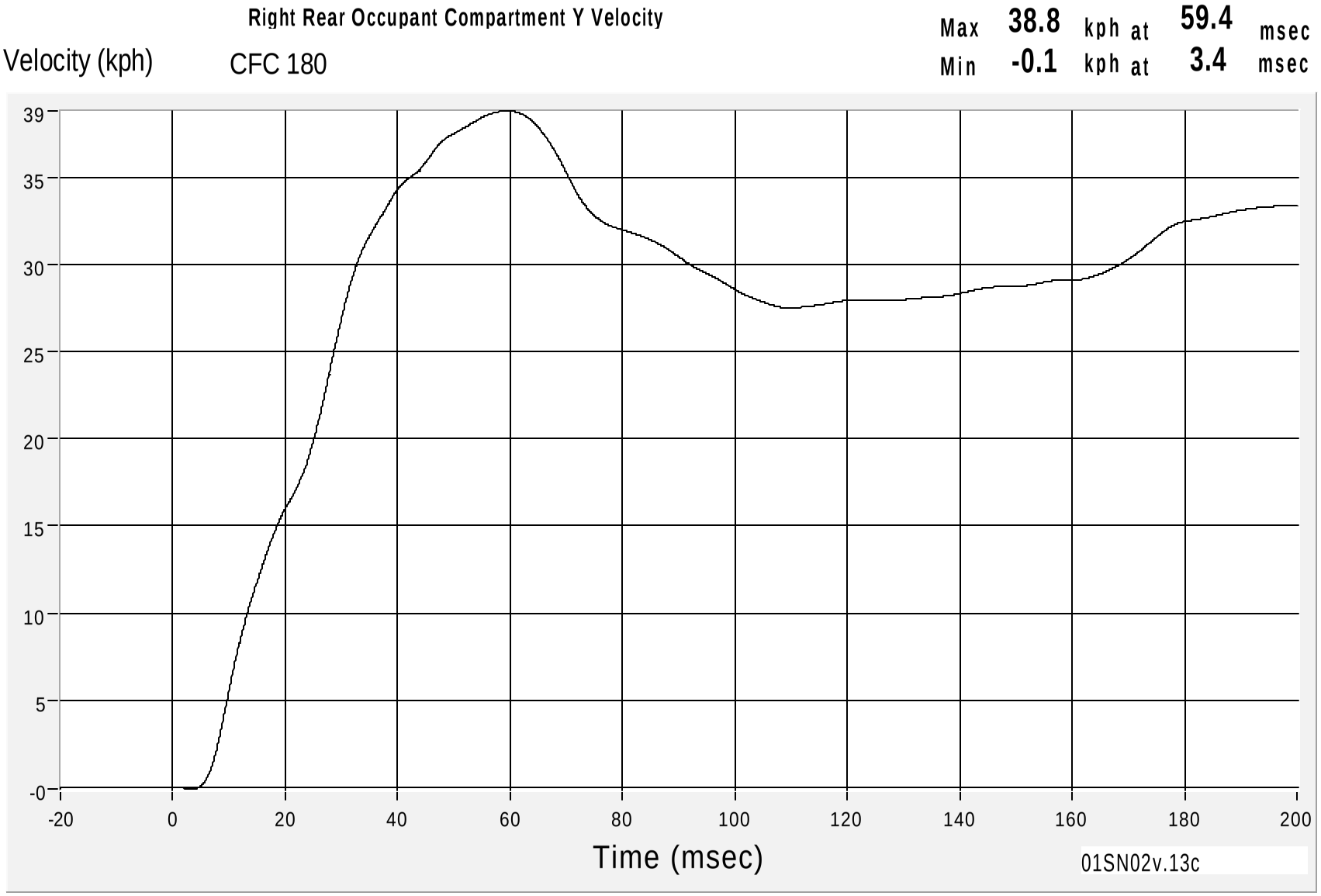
Medical College of Wisconsin
Vehicle Crashworthiness Lab



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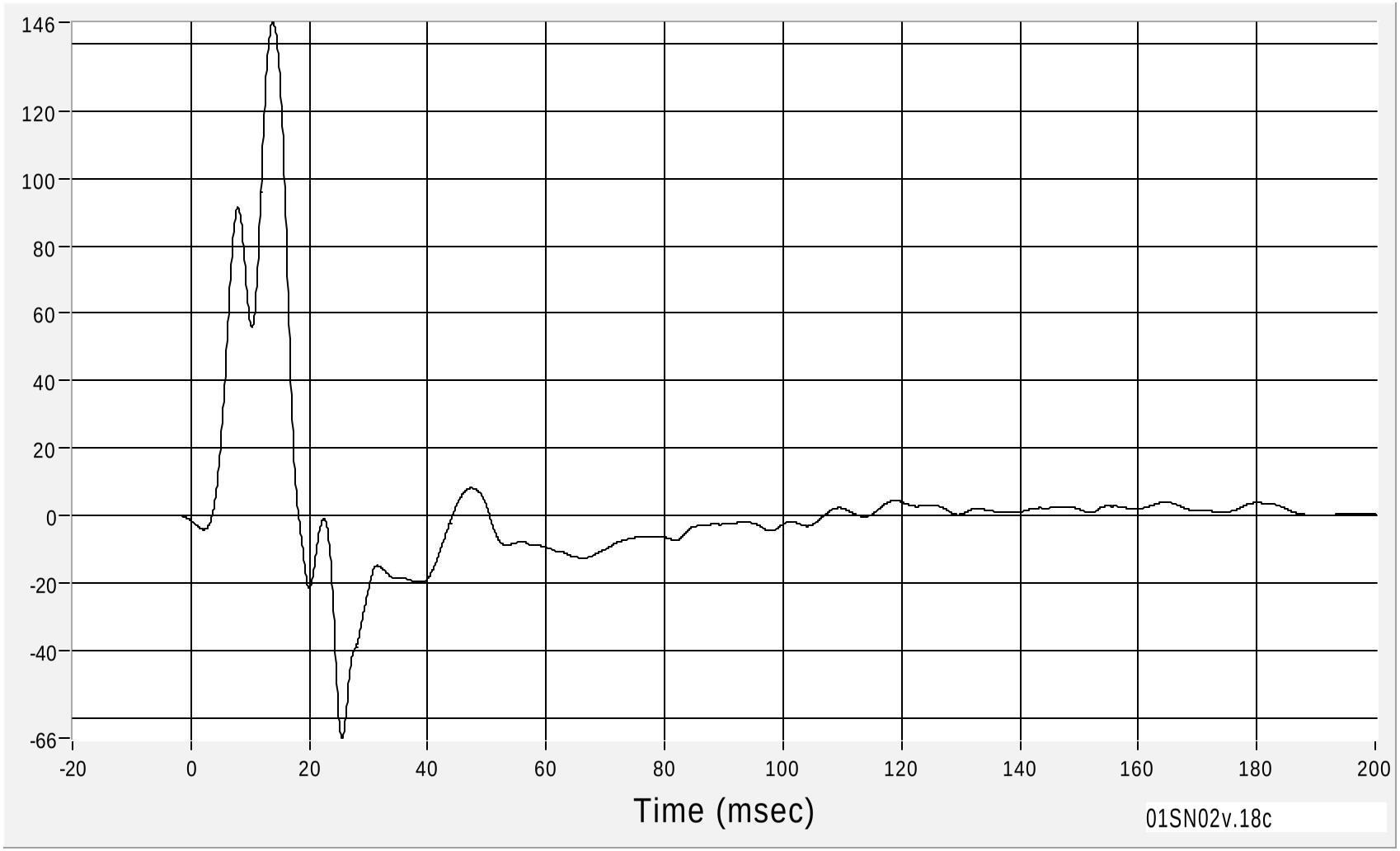
Vehicle Crashworthiness Lab

Lower B-Pillar Y Acceleration

Max **146.3** G's at **13.8** msec
Min **-66.1** G's at **25.5** msec



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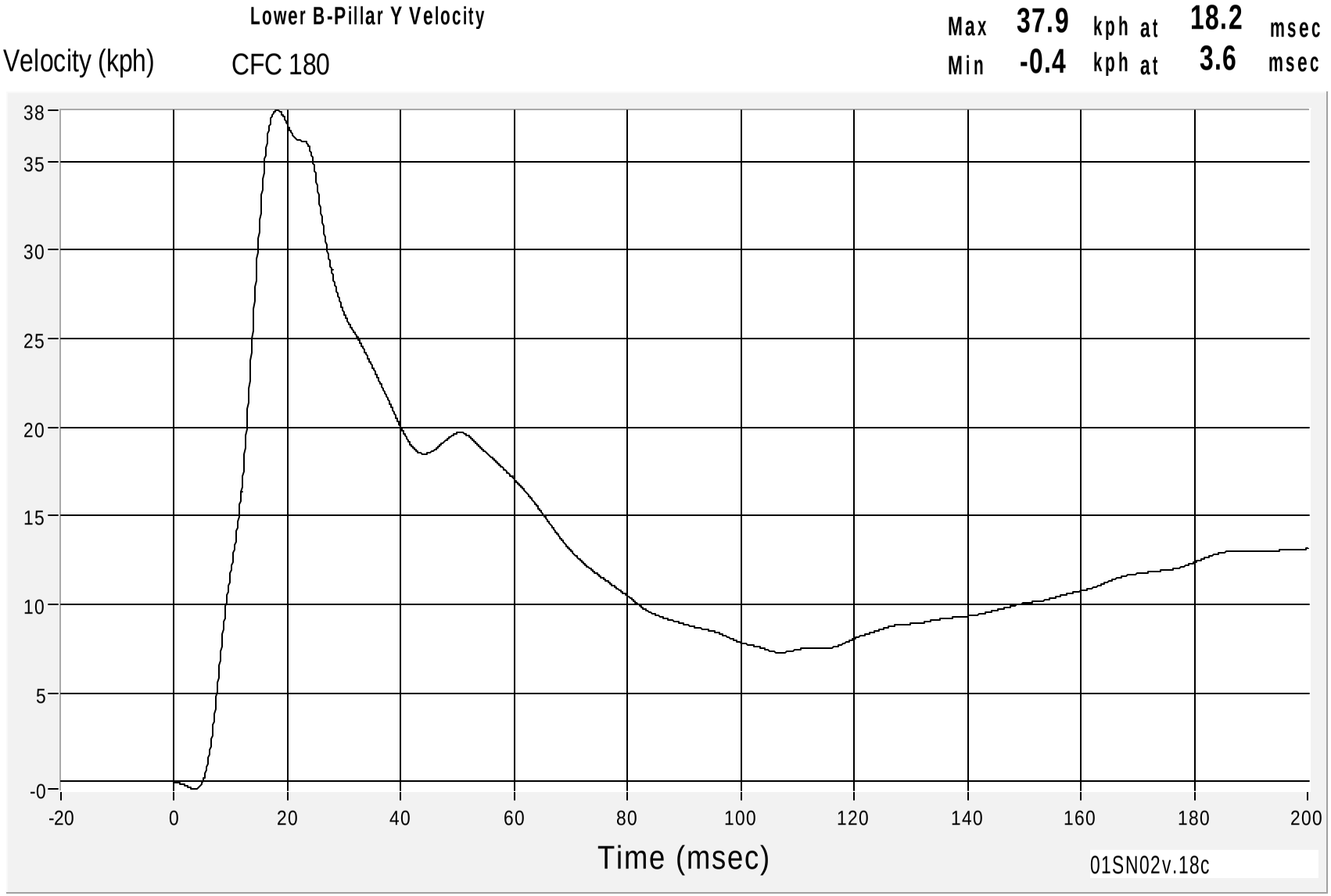
Vehicle Crashworthiness Lab



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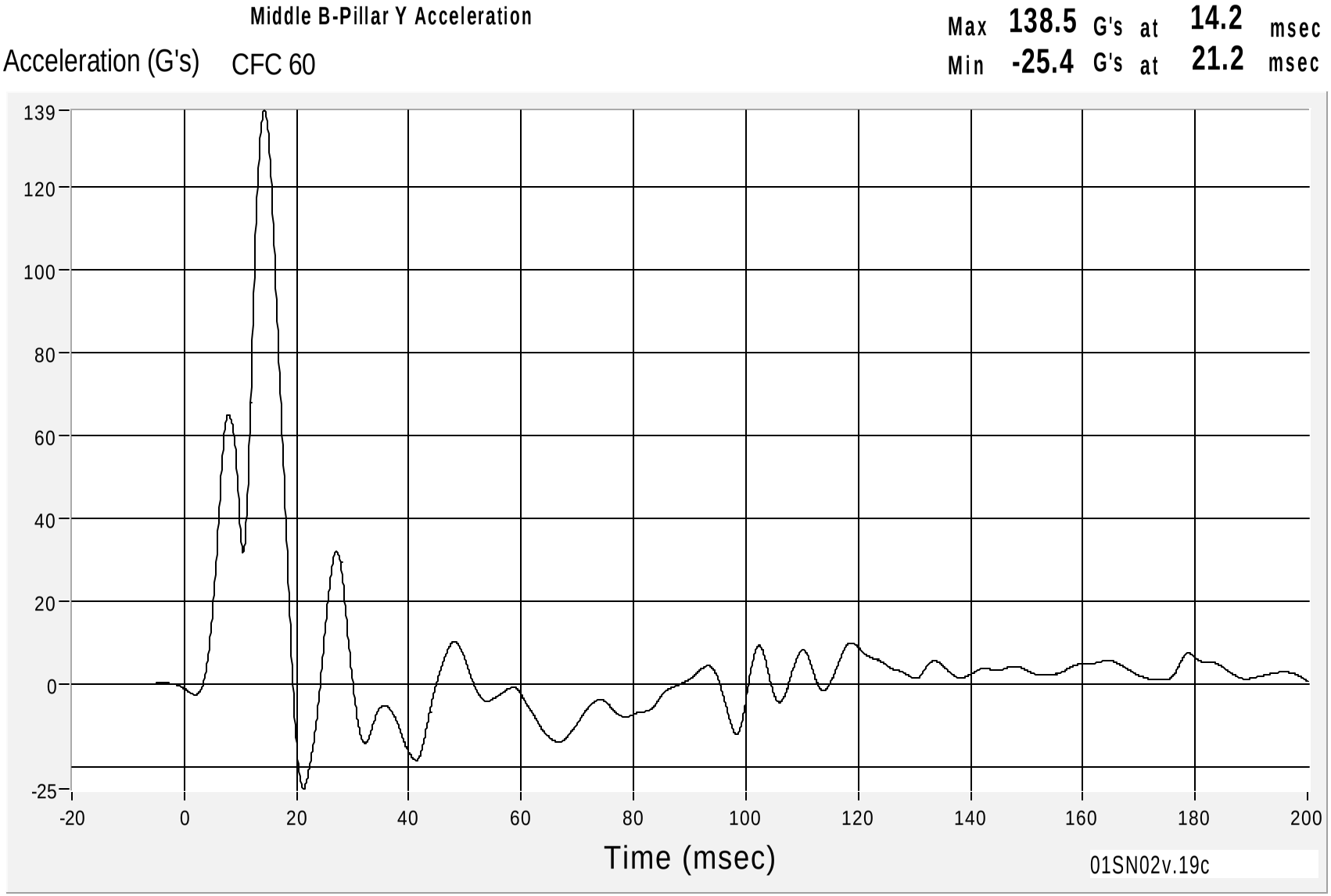
Vehicle Crashworthiness Lab



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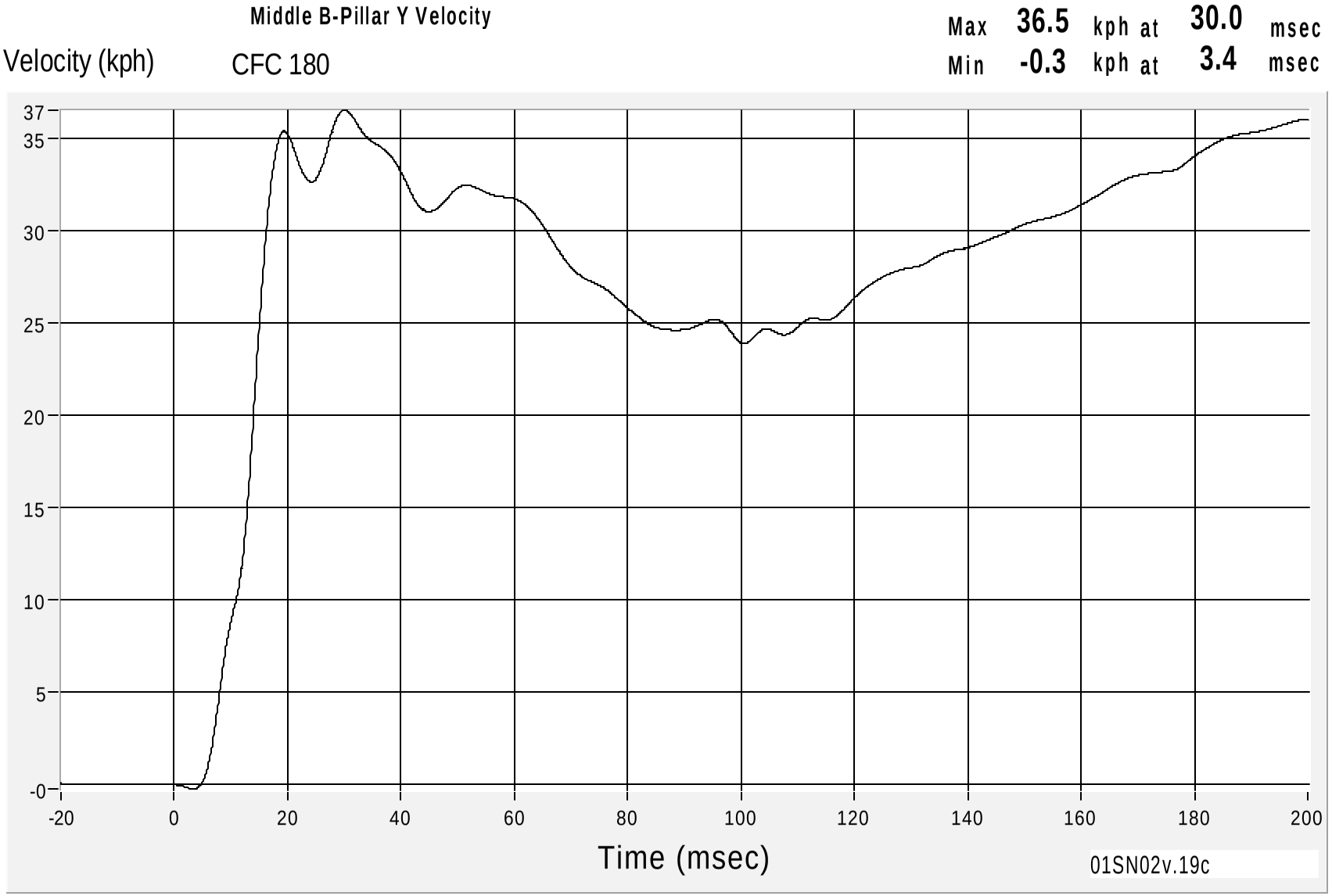

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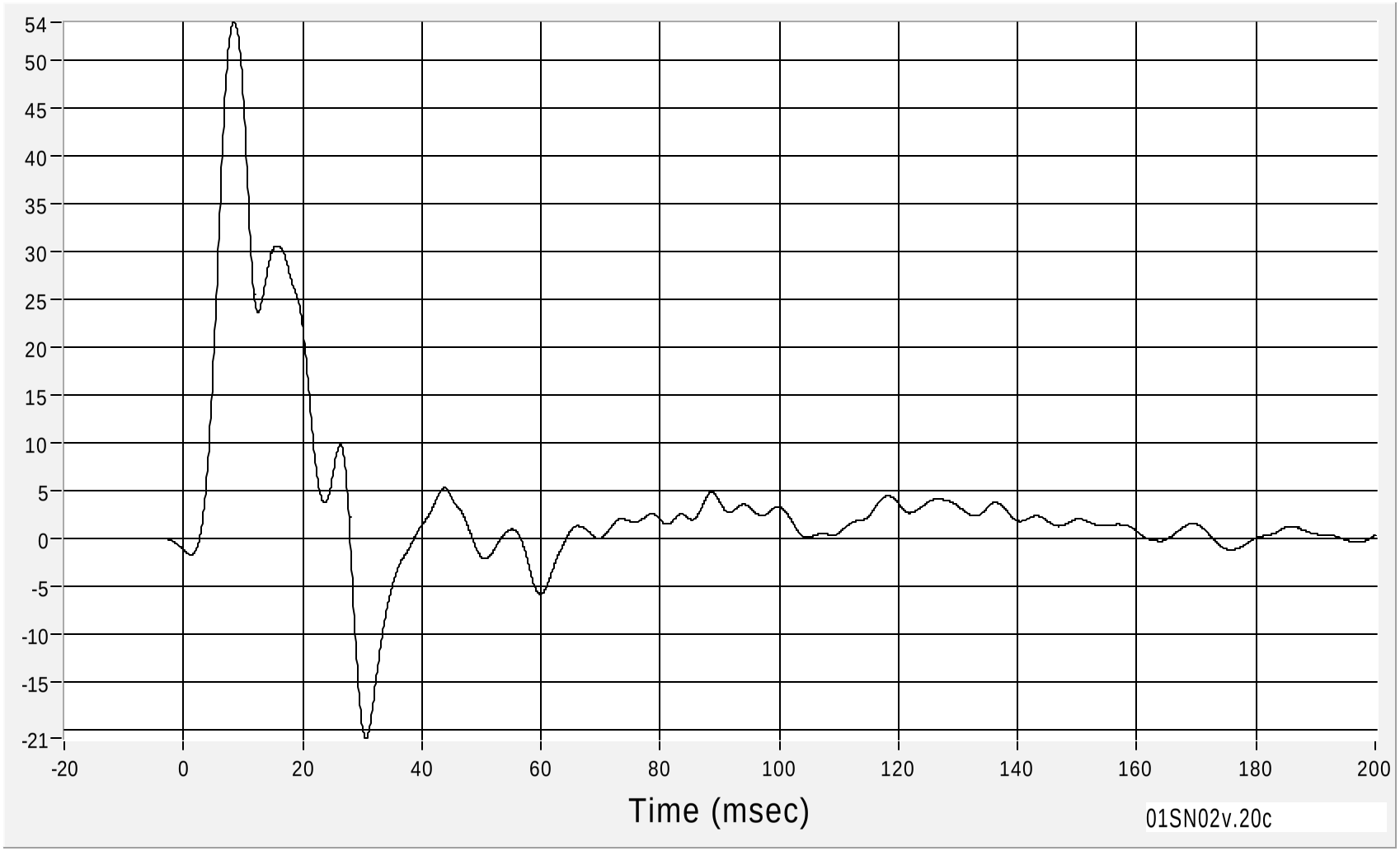
Vehicle Crashworthiness Lab

Lower A-Pillar Y Acceleration

Max 54.0 G's at 8.5 msec
Min -20.9 G's at 30.6 msec



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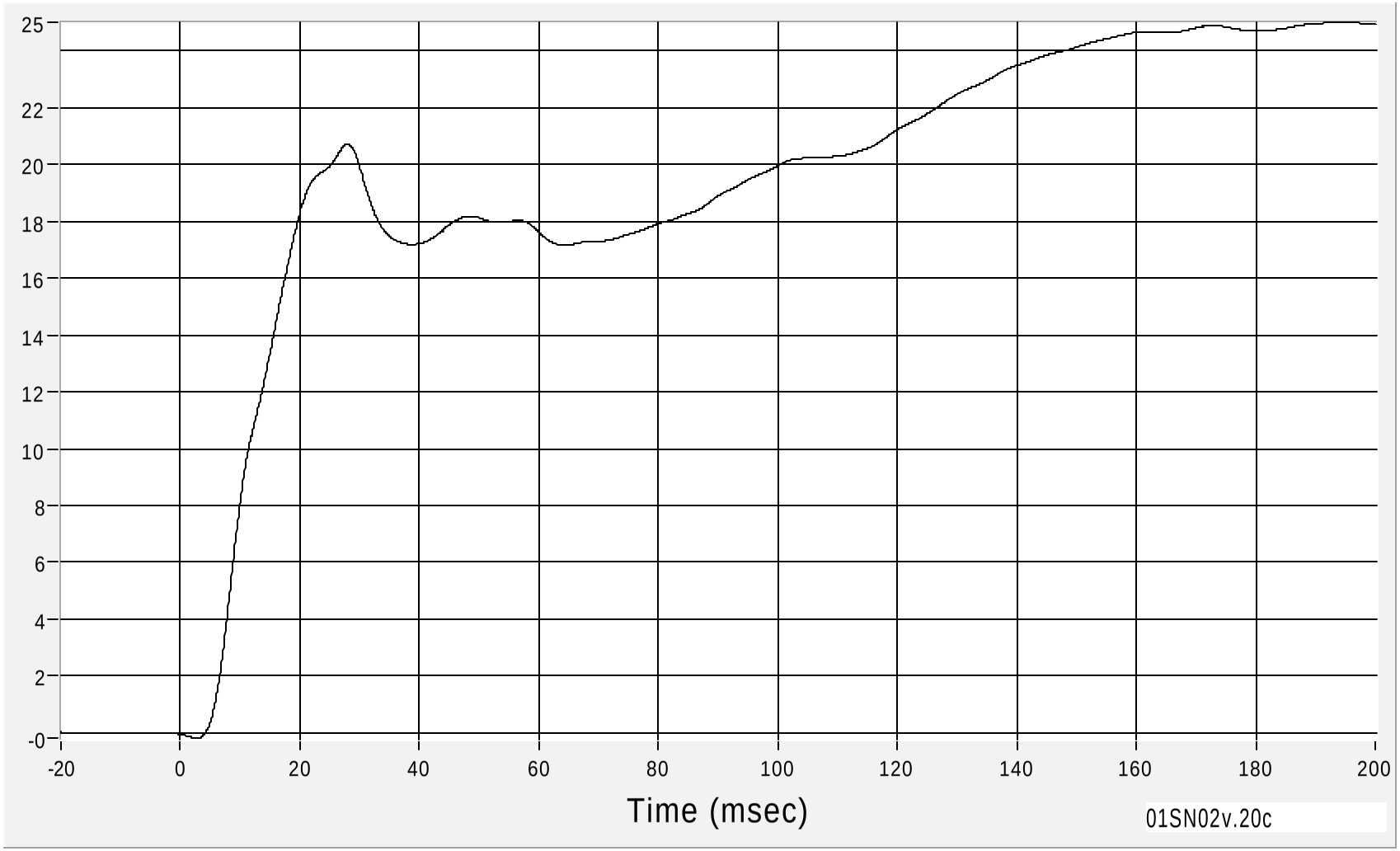
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Lower A-Pillar Y Velocity

Max 25.0 kph at 194.3 msec
Min -0.2 kph at 2.7 msec

Velocity (kph) CFC 180



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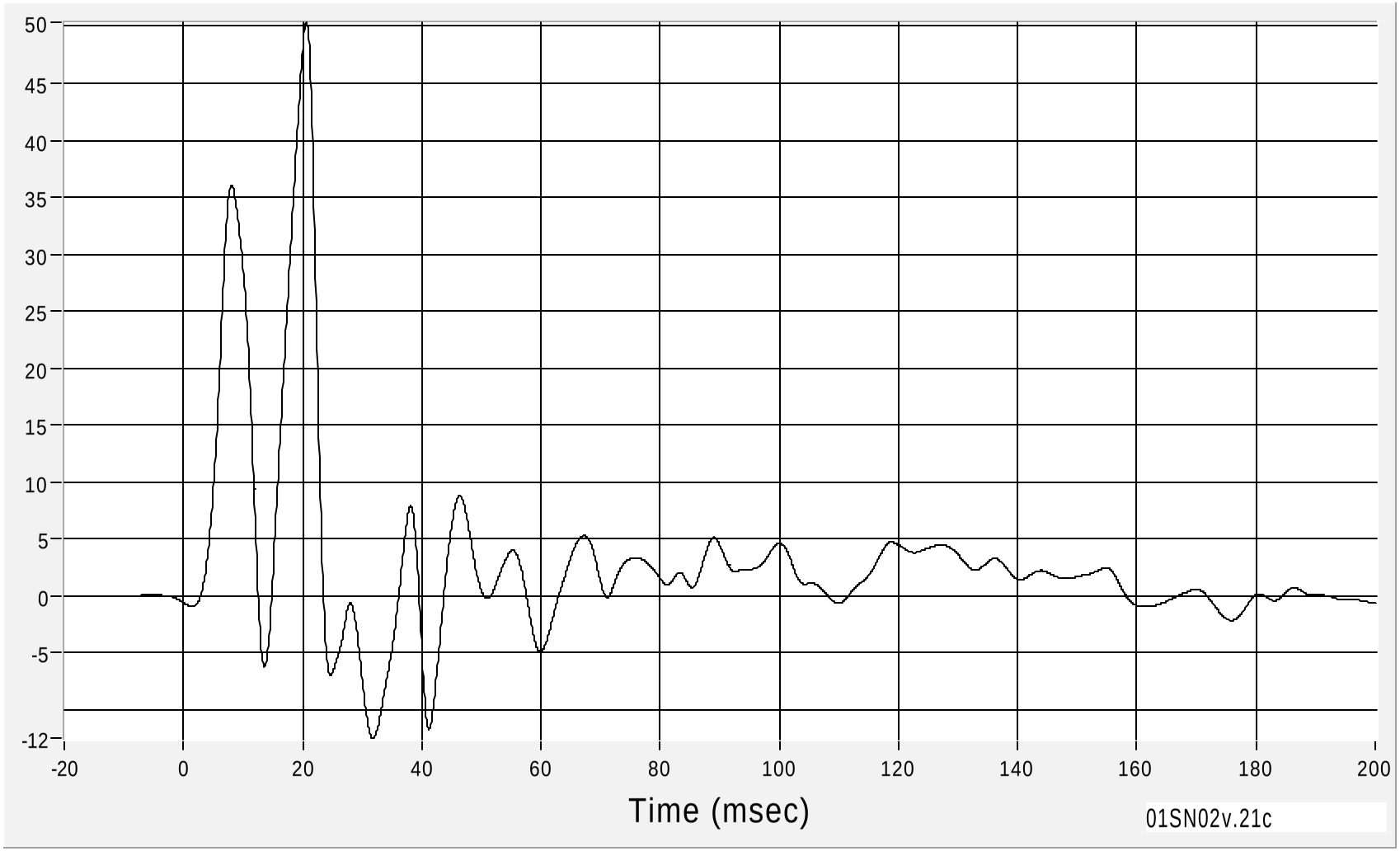
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Middle A-Pillar Y Acceleration

Max **50.4** G's at **20.6** msec
Min **-12.5** G's at **31.8** msec

Acceleration (G's) CFC 60



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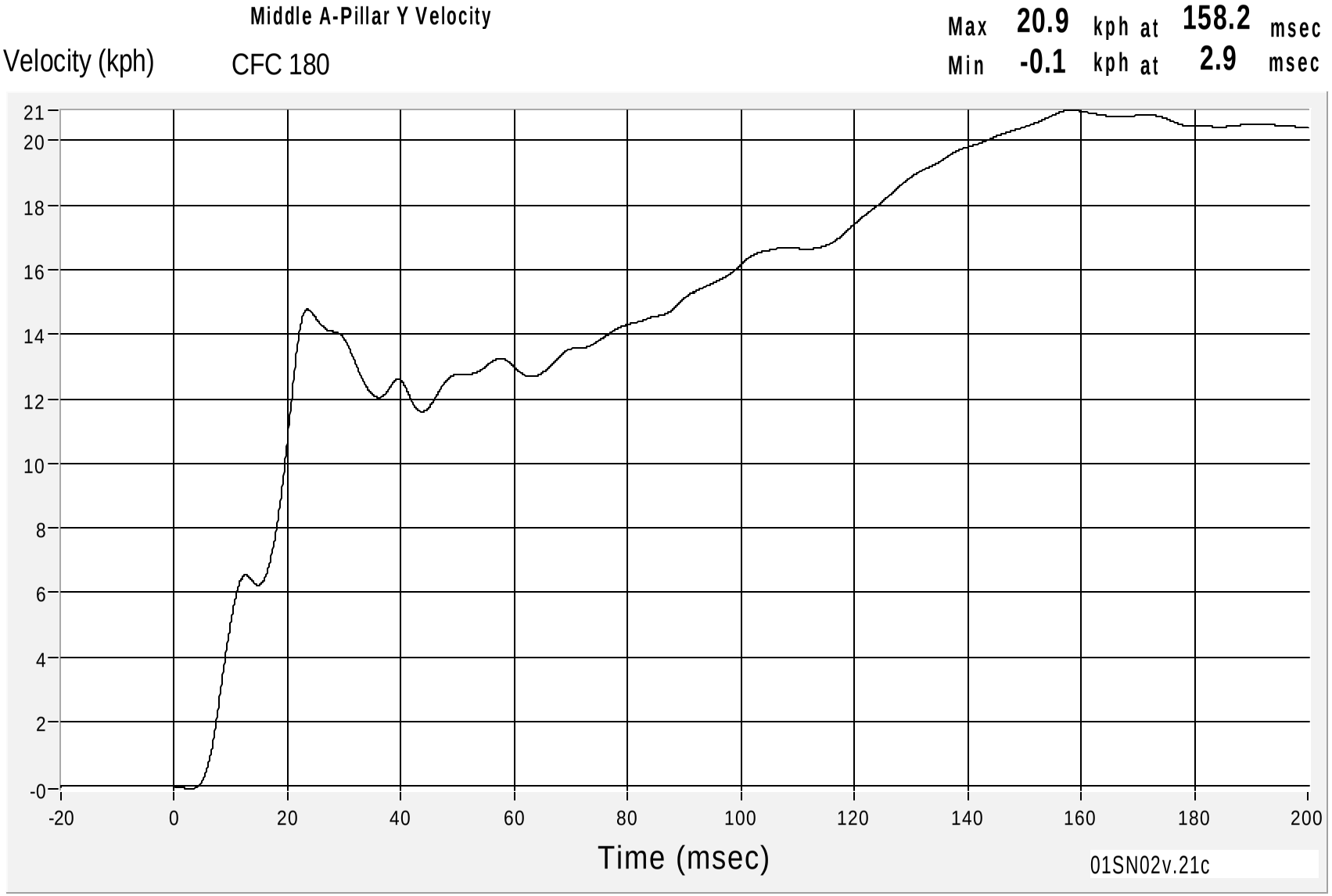
Medical College of Wisconsin
Vehicle Crashworthiness Lab



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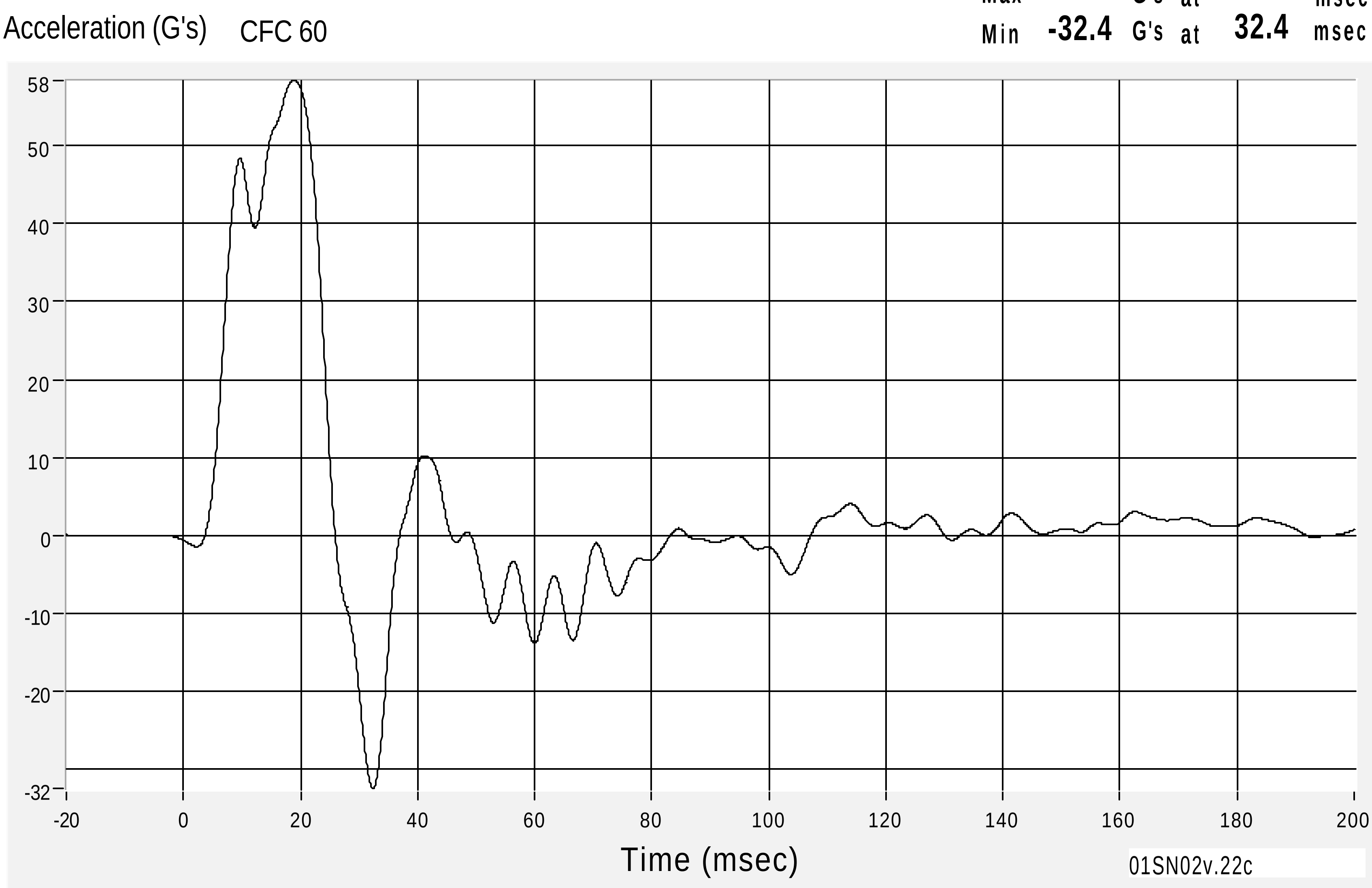
Vehicle Crashworthiness Lab

Front Seat Track Y Acceleration

Max **58.4** G's at **18.9** msec
Min **-32.4** G's at **32.4** msec



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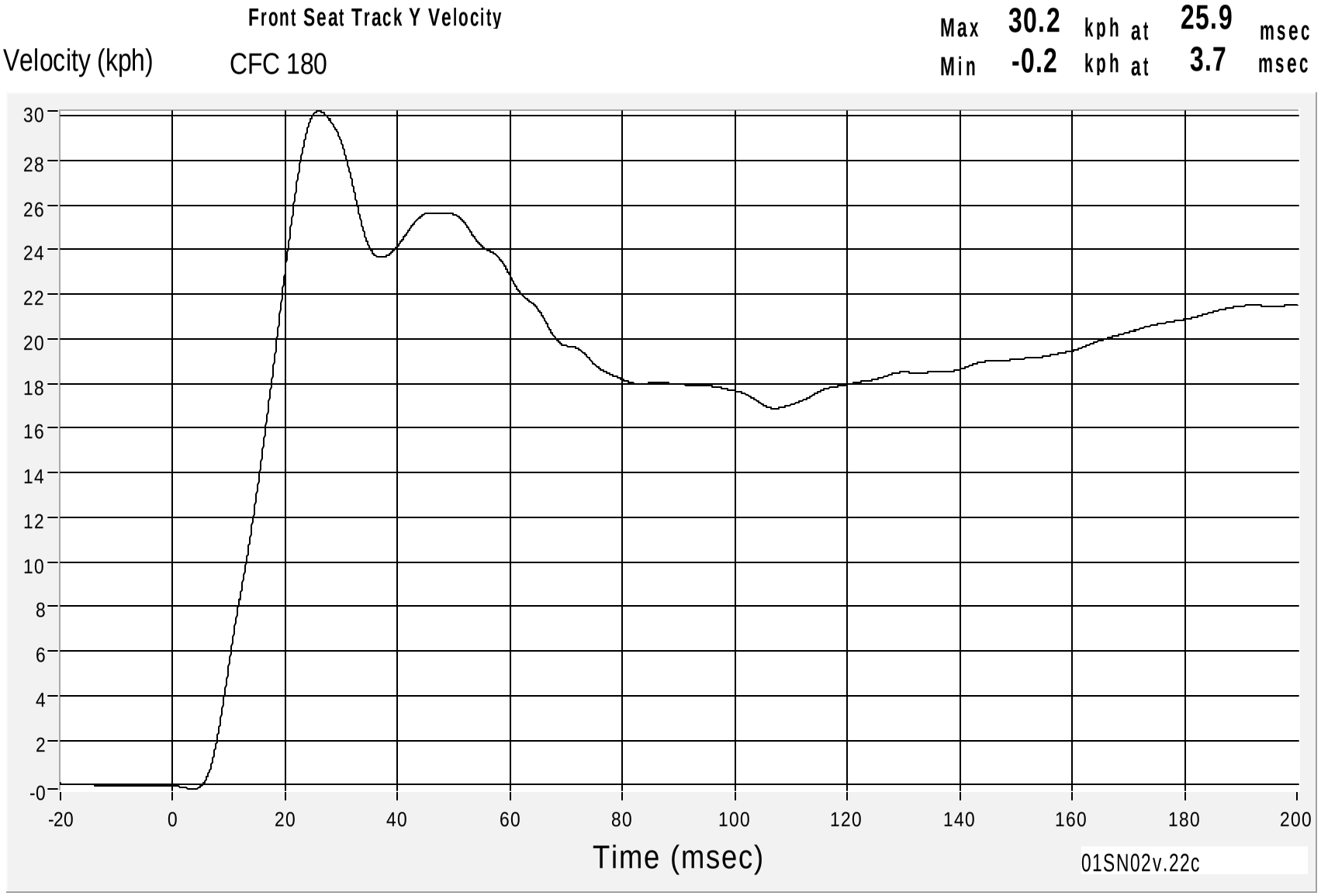
Vehicle Crashworthiness Lab



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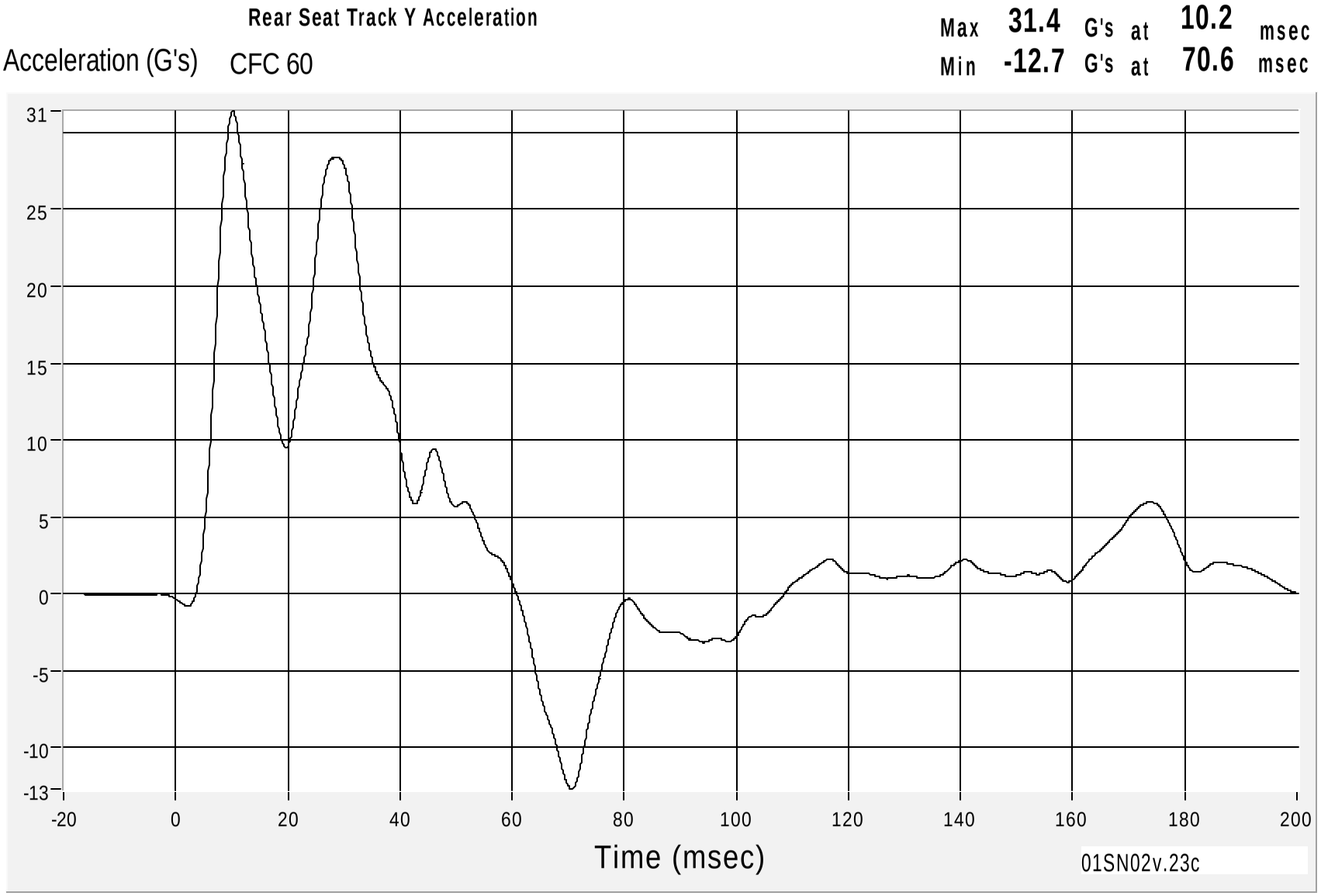
Medical College of Wisconsin
Vehicle Crashworthiness Lab



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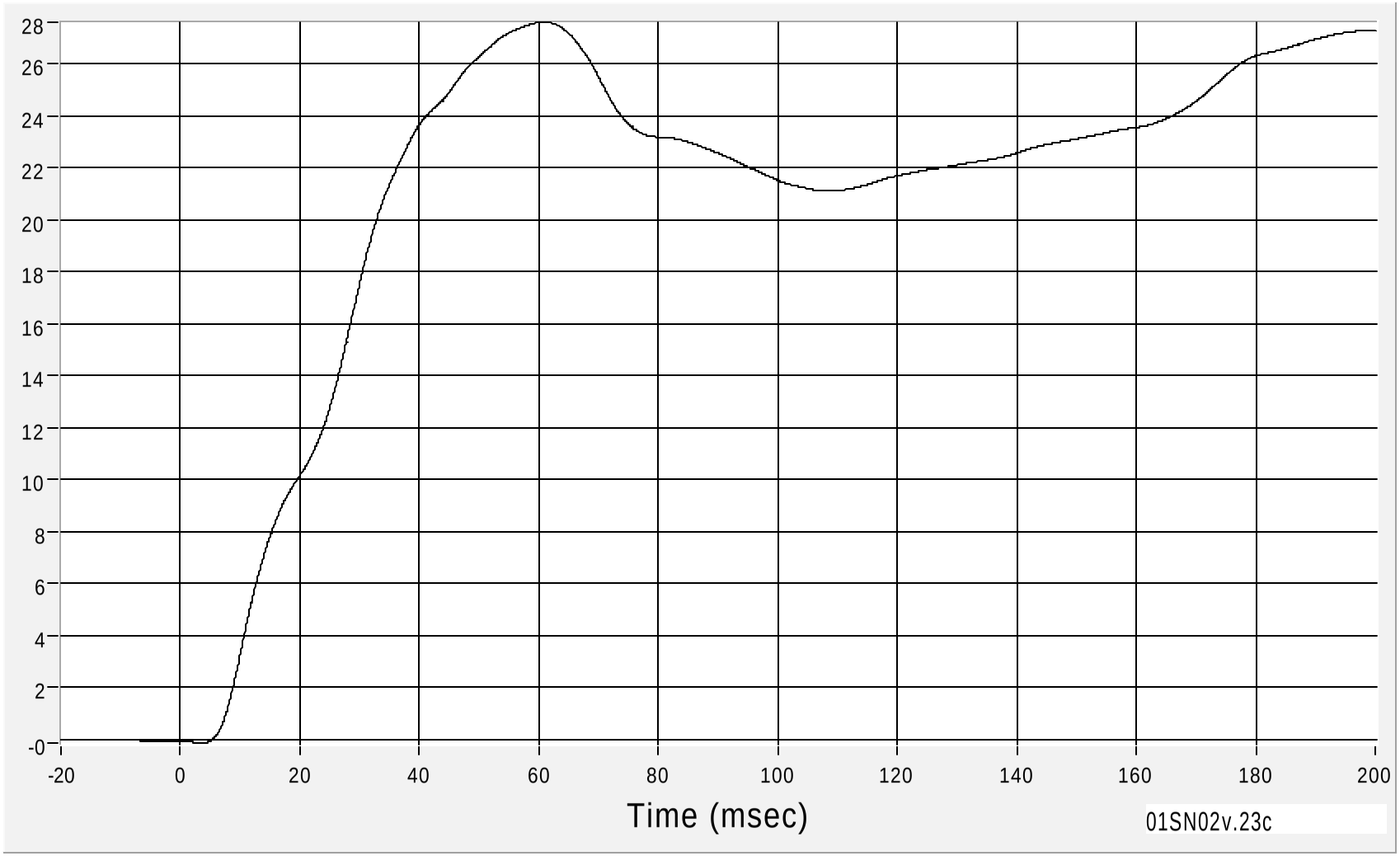
Vehicle Crashworthiness Lab

Rear Seat Track Y Velocity

Velocity (kph) CFC 180

Max 27.6 kph at 60.8 msec
Min -0.1 kph at 3.6 msec



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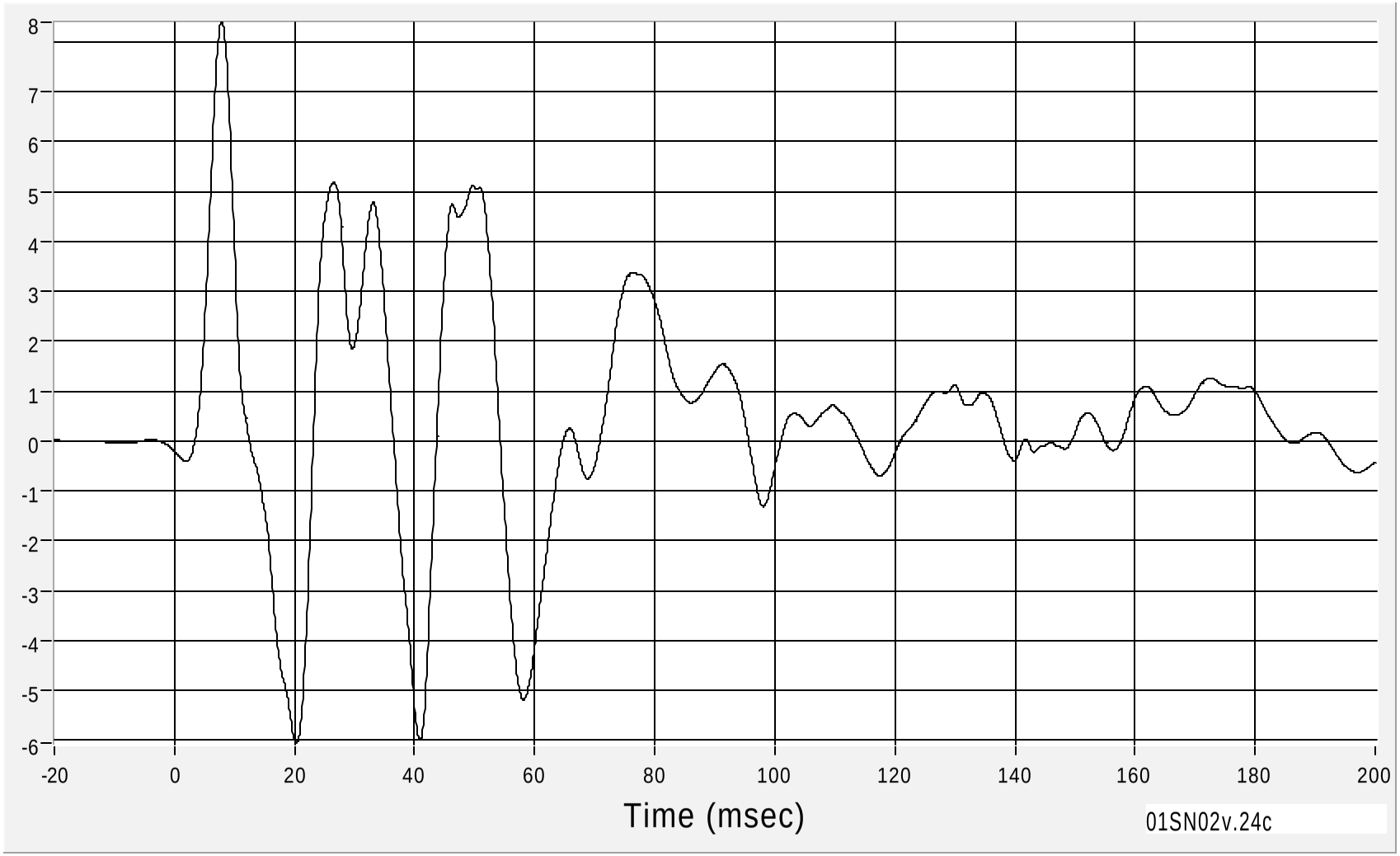
Vehicle Crashworthiness Lab

Vehicle Center of Gravity X Acceleration

Max 8.4 G's at 7.8 msec
Min -6.1 G's at 20.3 msec

Acceleration (G's) CFC 60



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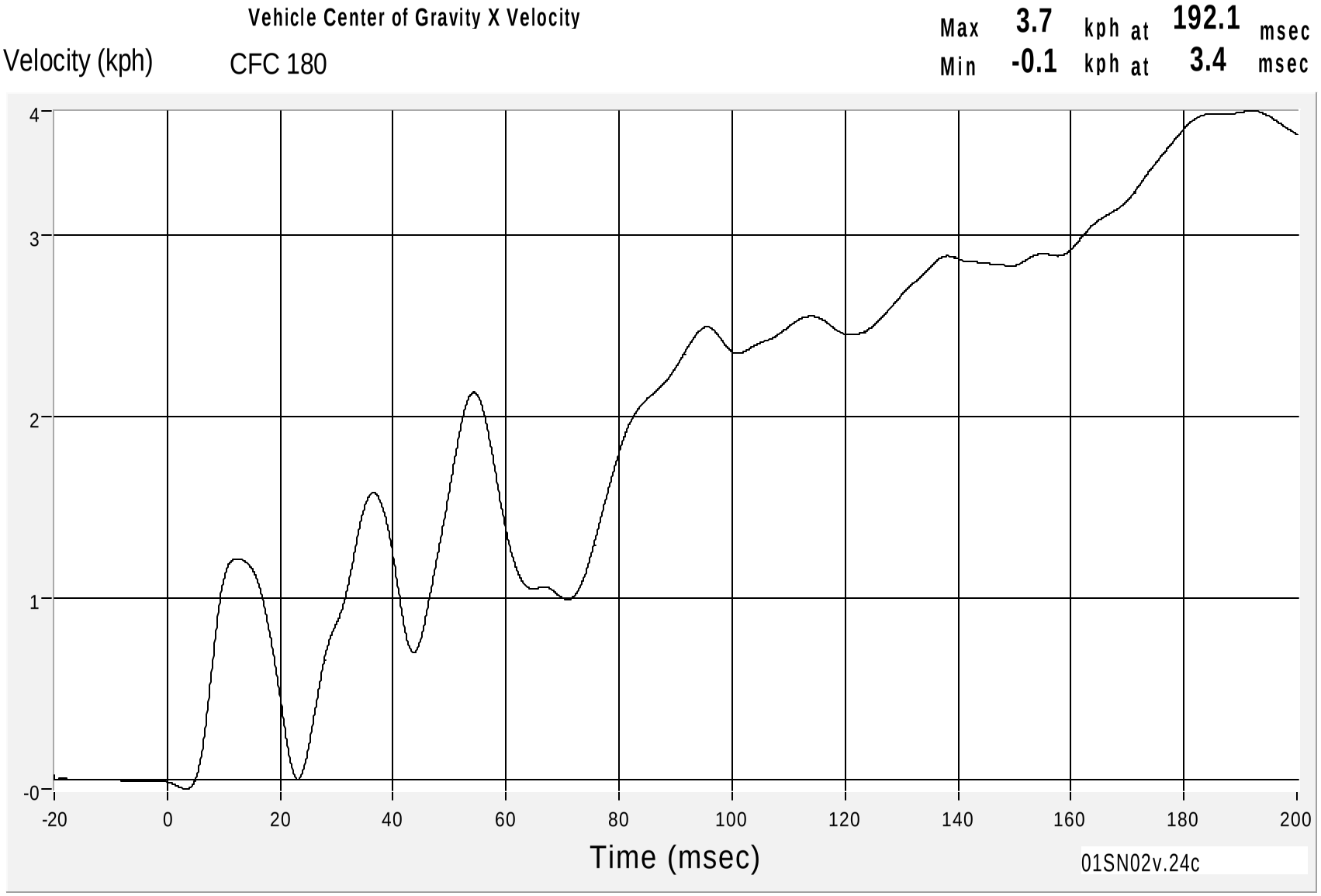
Medical College of Wisconsin
Vehicle Crashworthiness Lab



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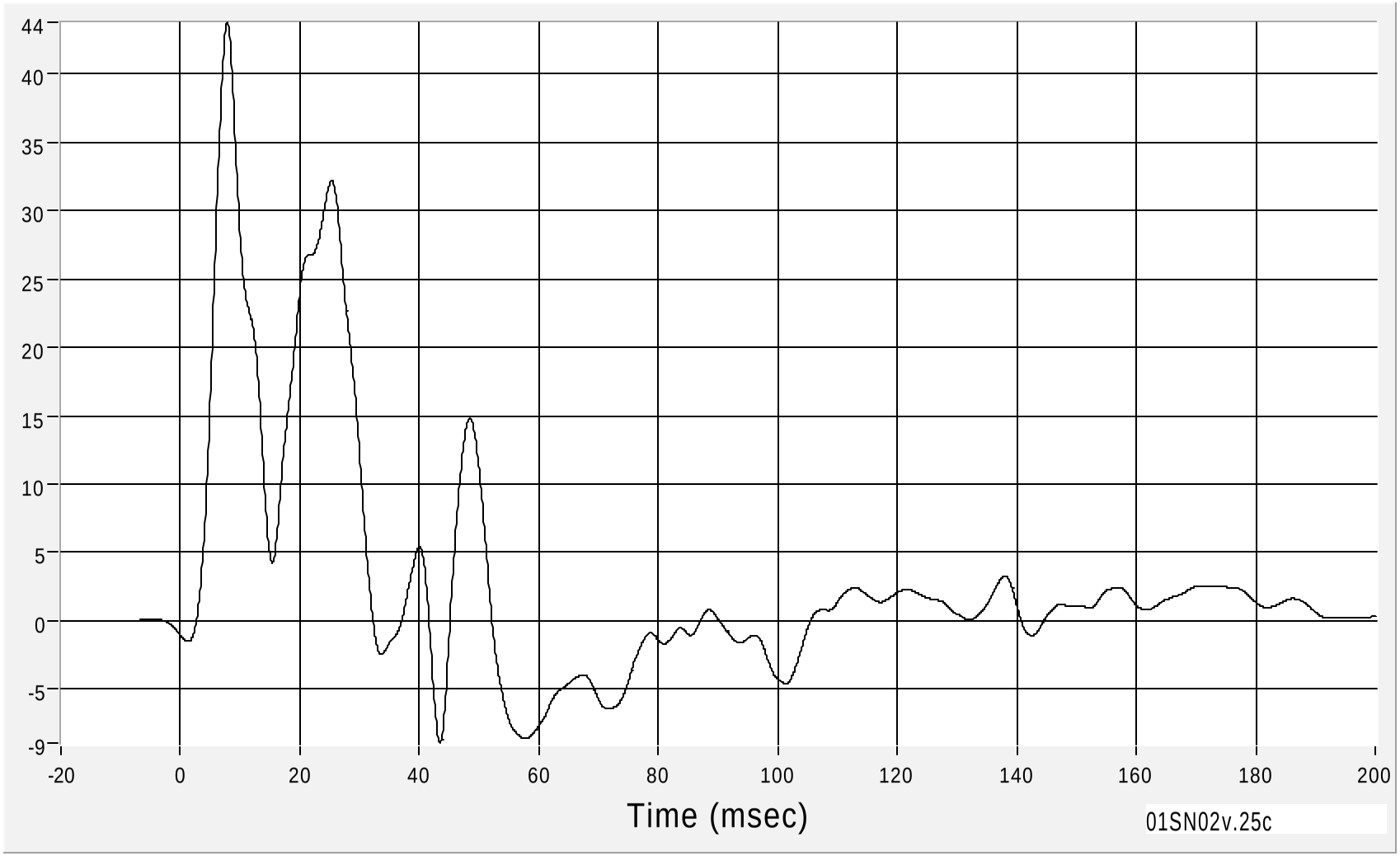
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Vehicle Center of Gravity Y Acceleration

Max 43.8 G's at 7.8 msec
Min -8.9 G's at 43.4 msec

Acceleration (G's) CFC 60



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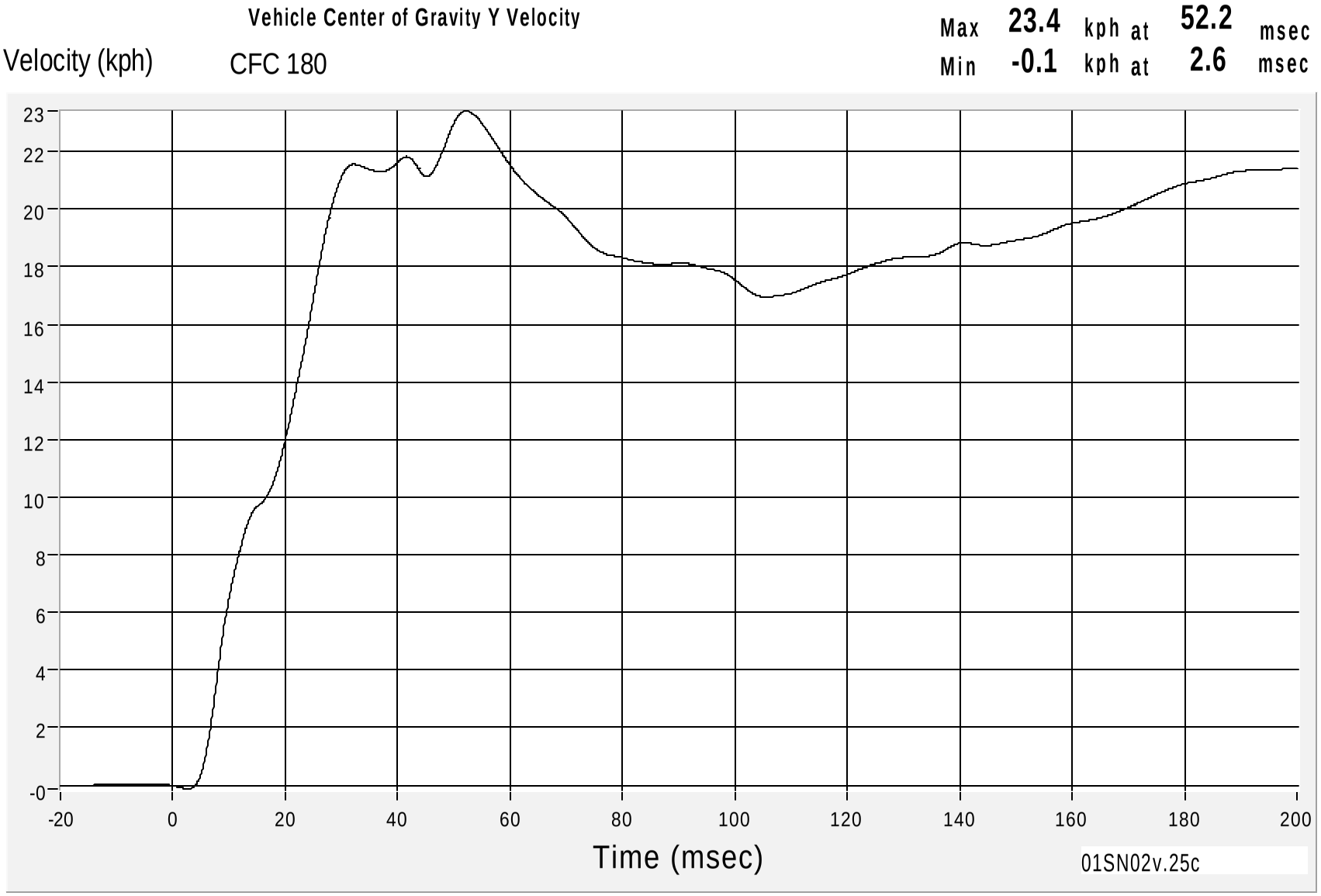
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



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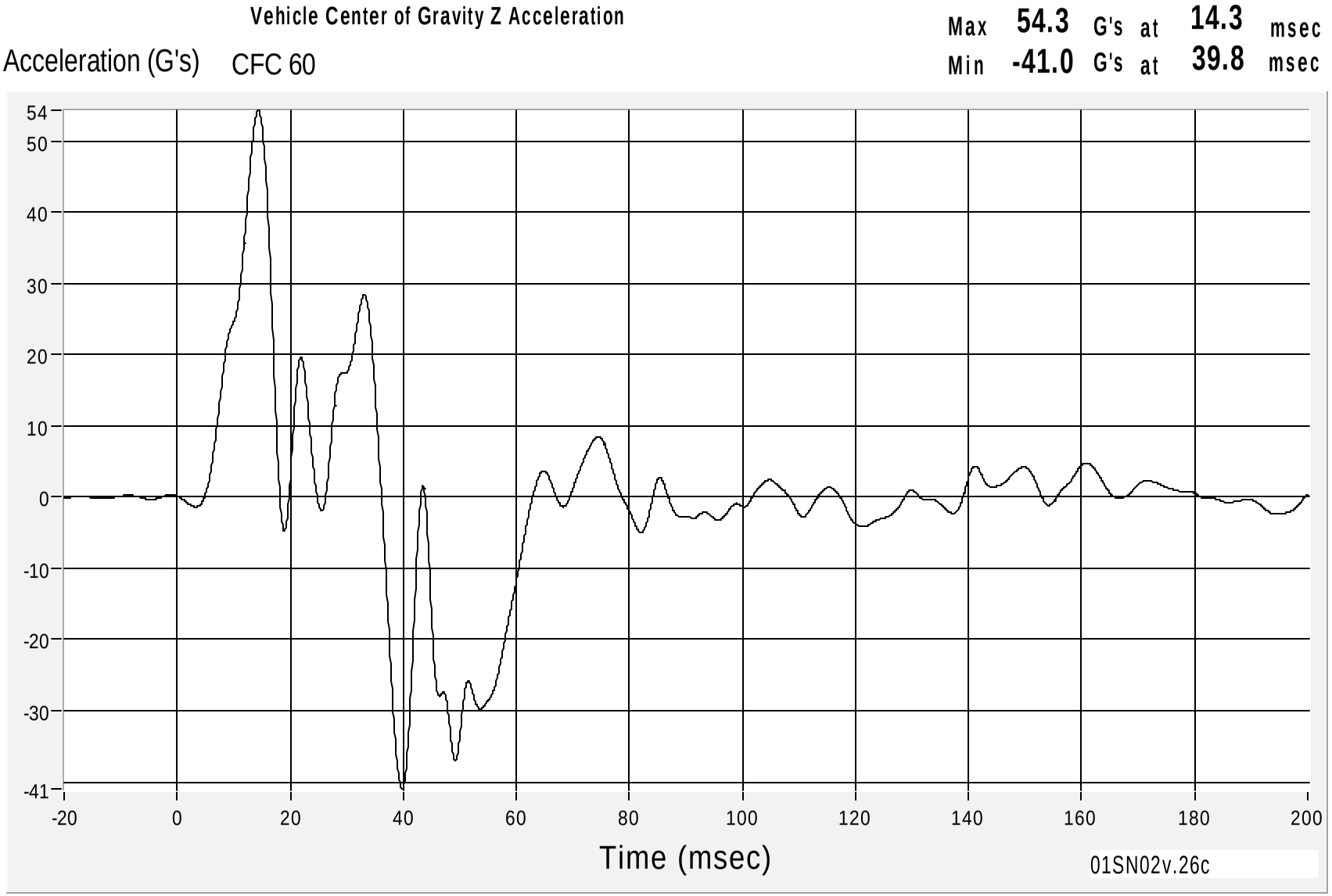
31 January 2001

Medical College of Wisconsin

Vehicle Crashworthiness Lab



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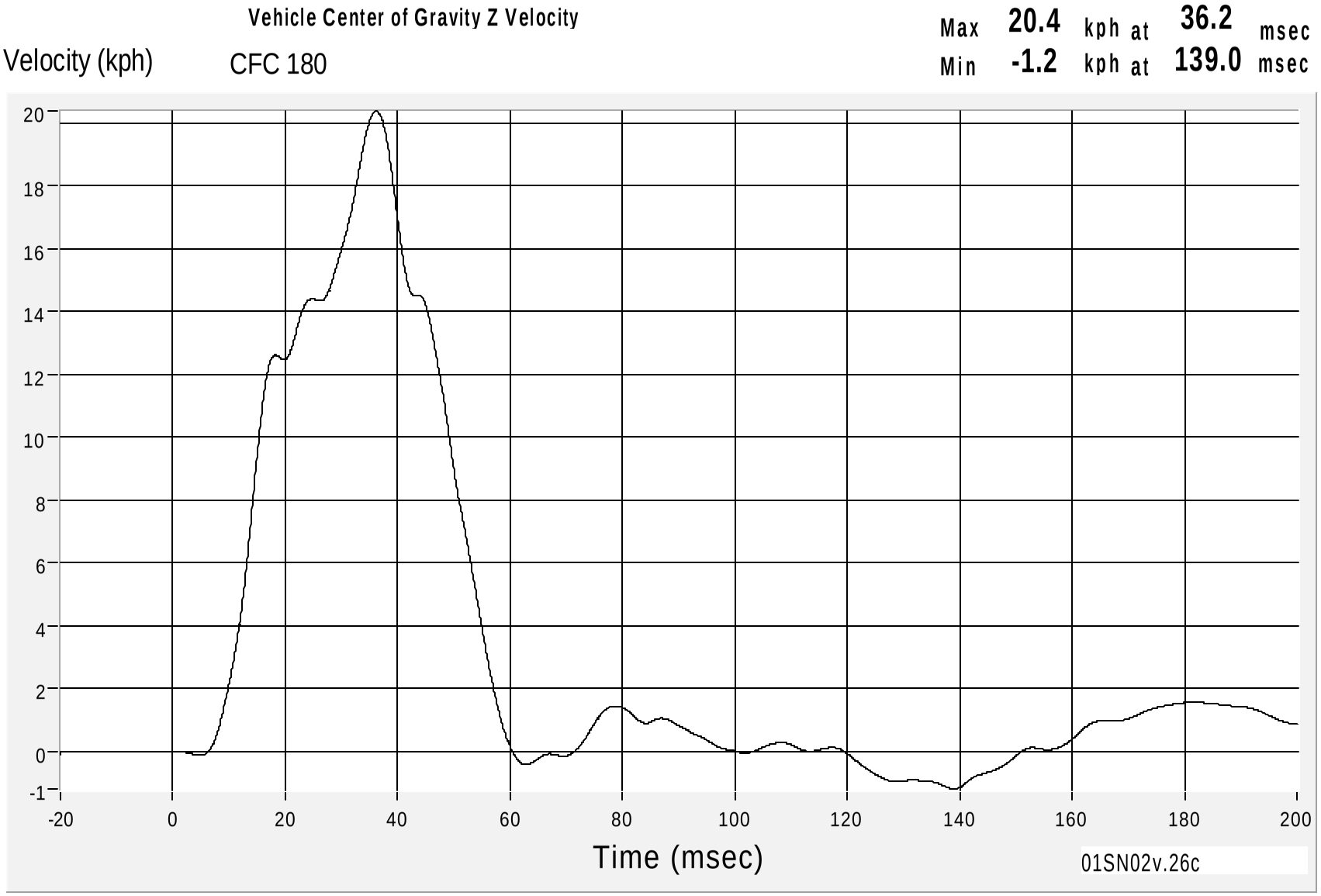
Medical College of Wisconsin

Vehicle Crashworthiness Lab



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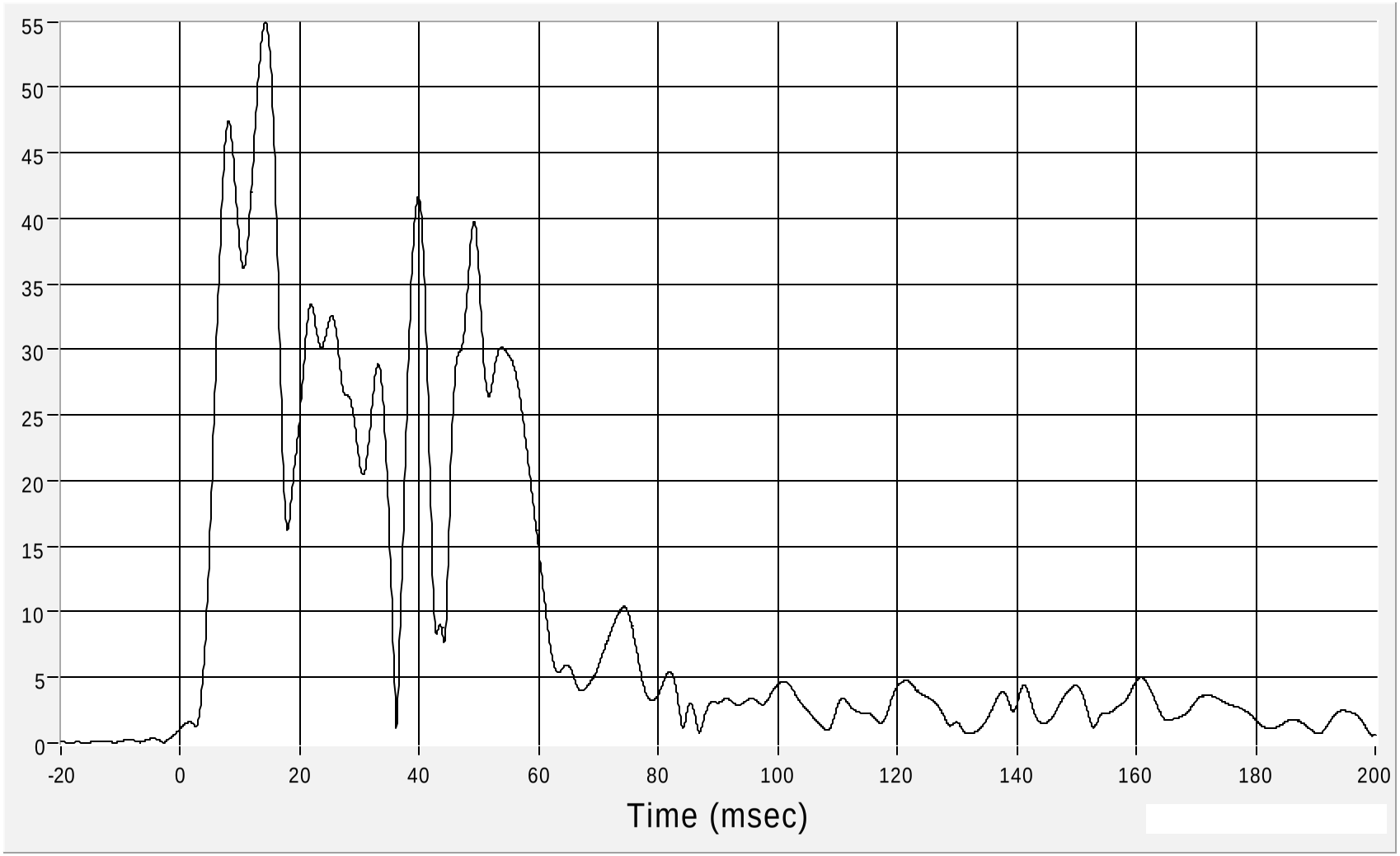
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Vehicle Center of Gravity - Resultant

Max 54.9 G's at 14.2 msec
Min 0.0 G's at -2.8 msec

Acceleration (G's) CFC 60



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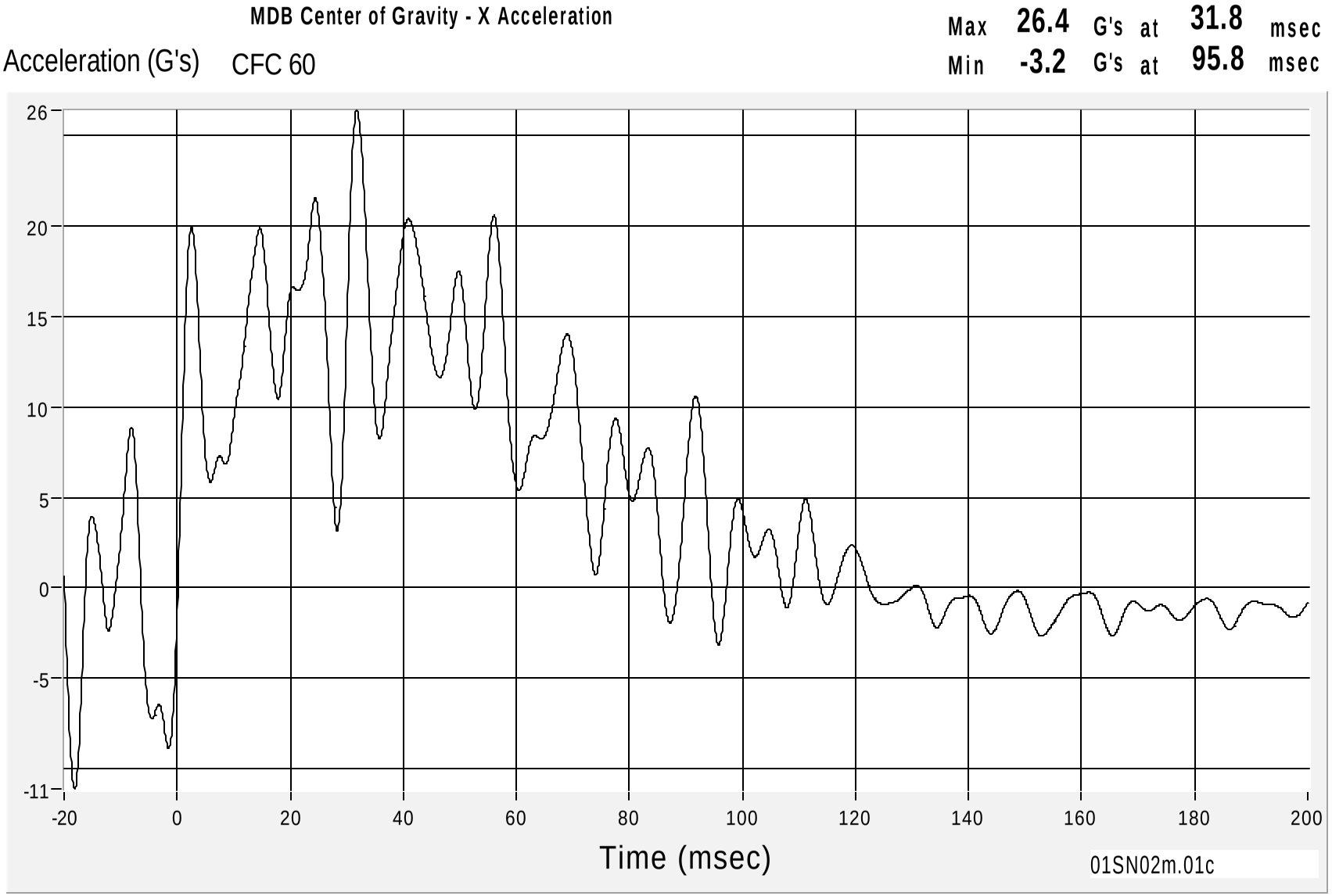
Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

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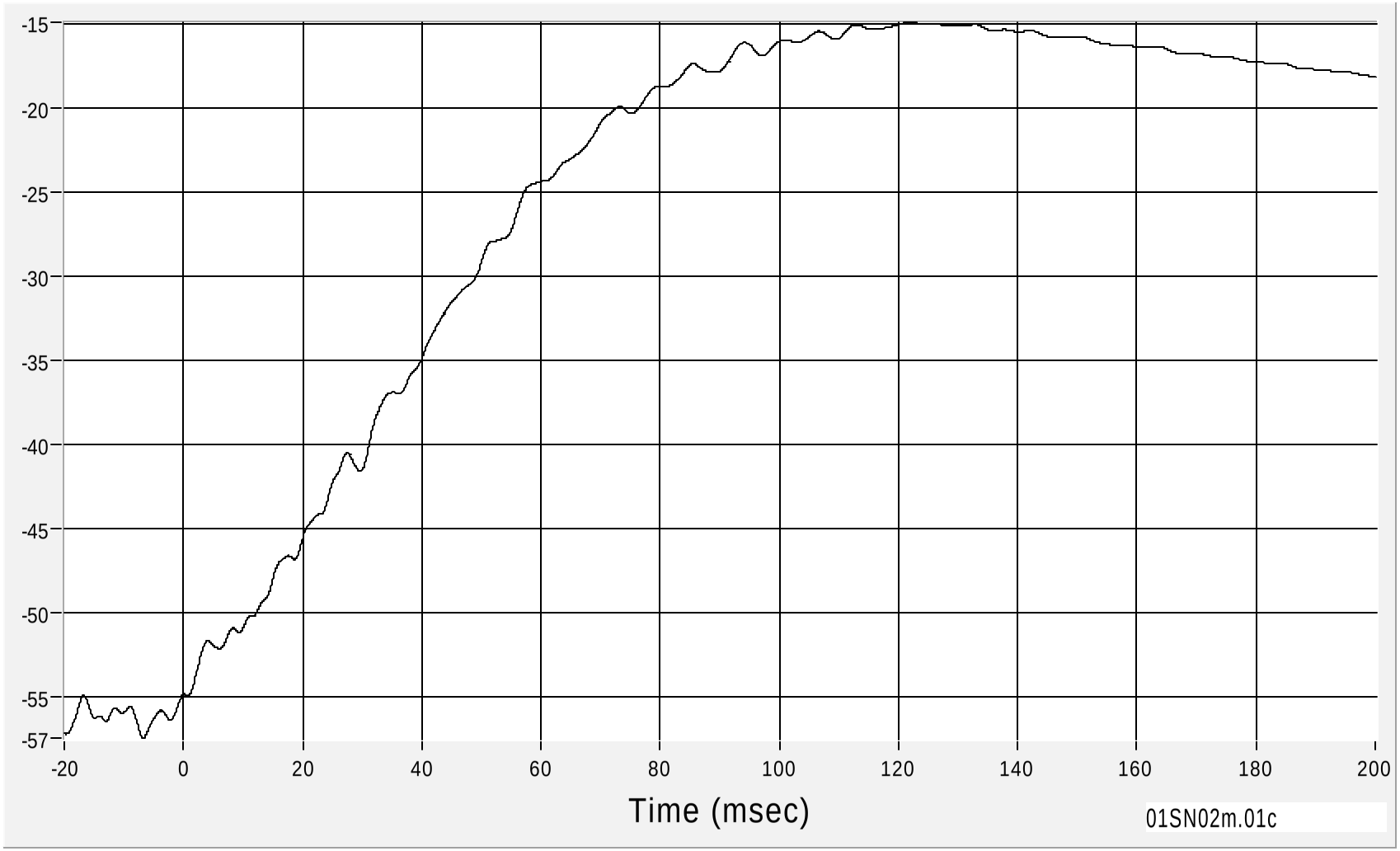
Vehicle Crashworthiness Lab

MDB Center of Gravity - X Velocity

Velocity (KPH) CFC 180

Max -14.9 kph at 122.2 msec
Min -55.0 kph at 0.6 msec



01SN02 - 2001 Dodge Dakota Sport
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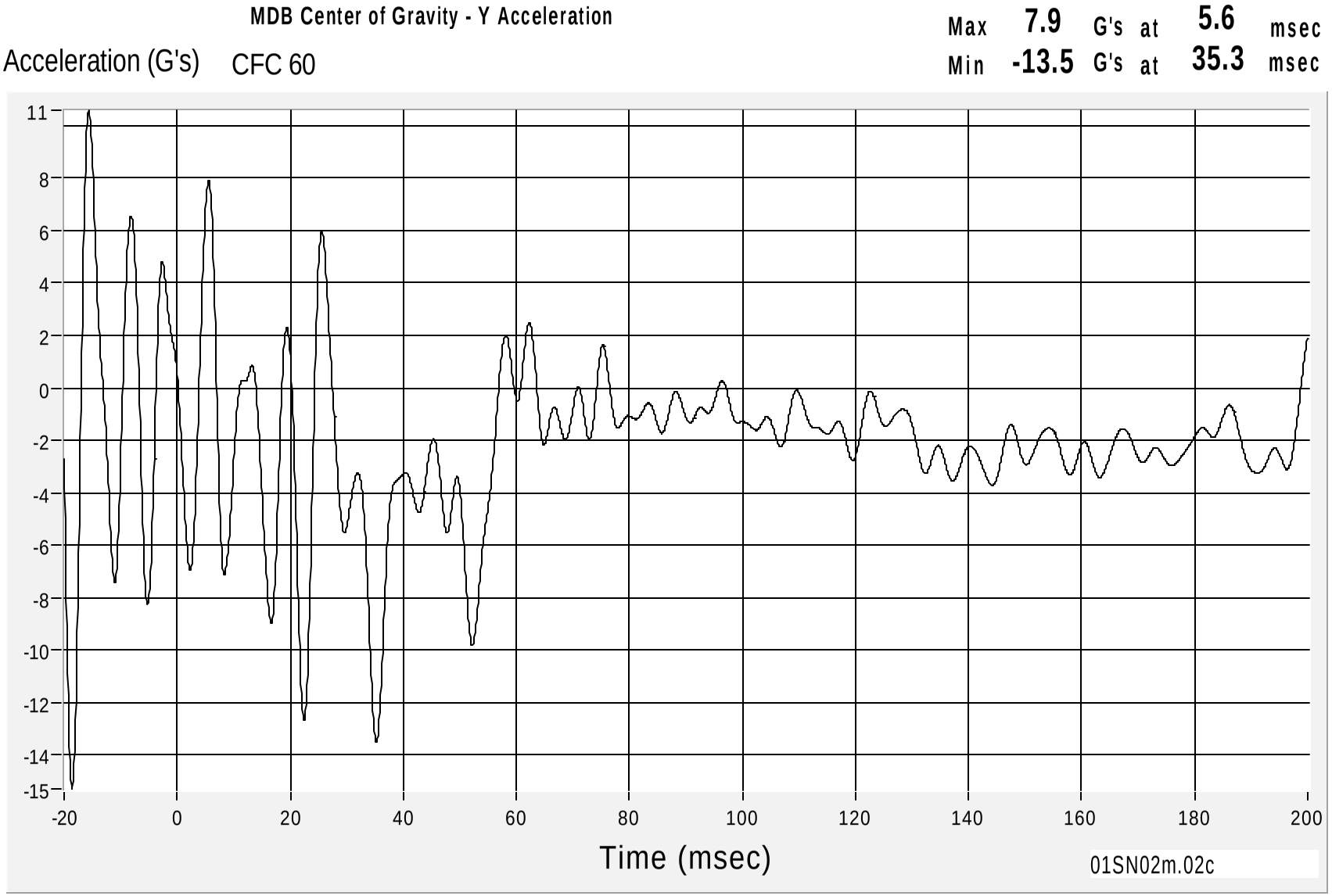
Vehicle Crashworthiness Lab



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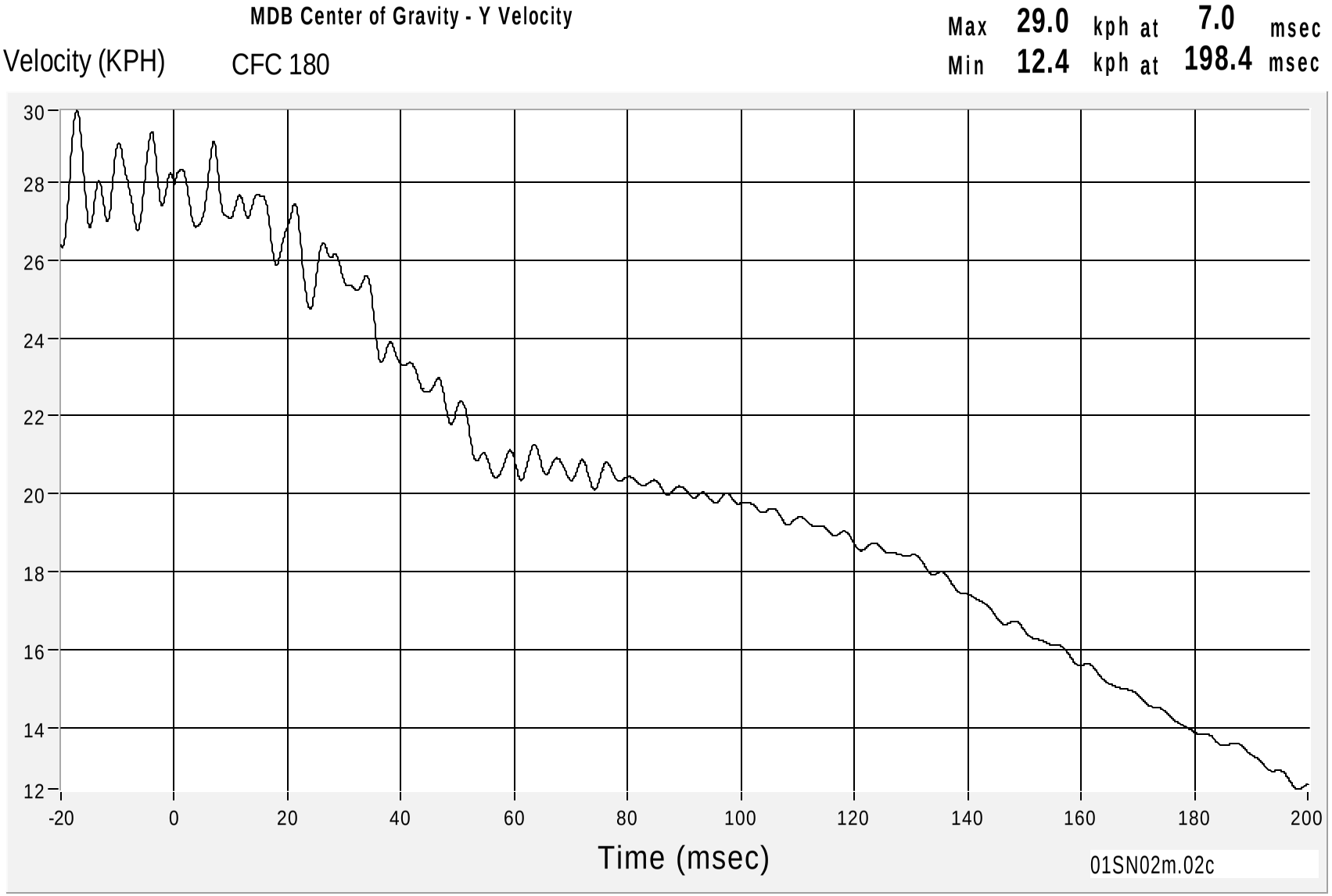
Vehicle Crashworthiness Lab



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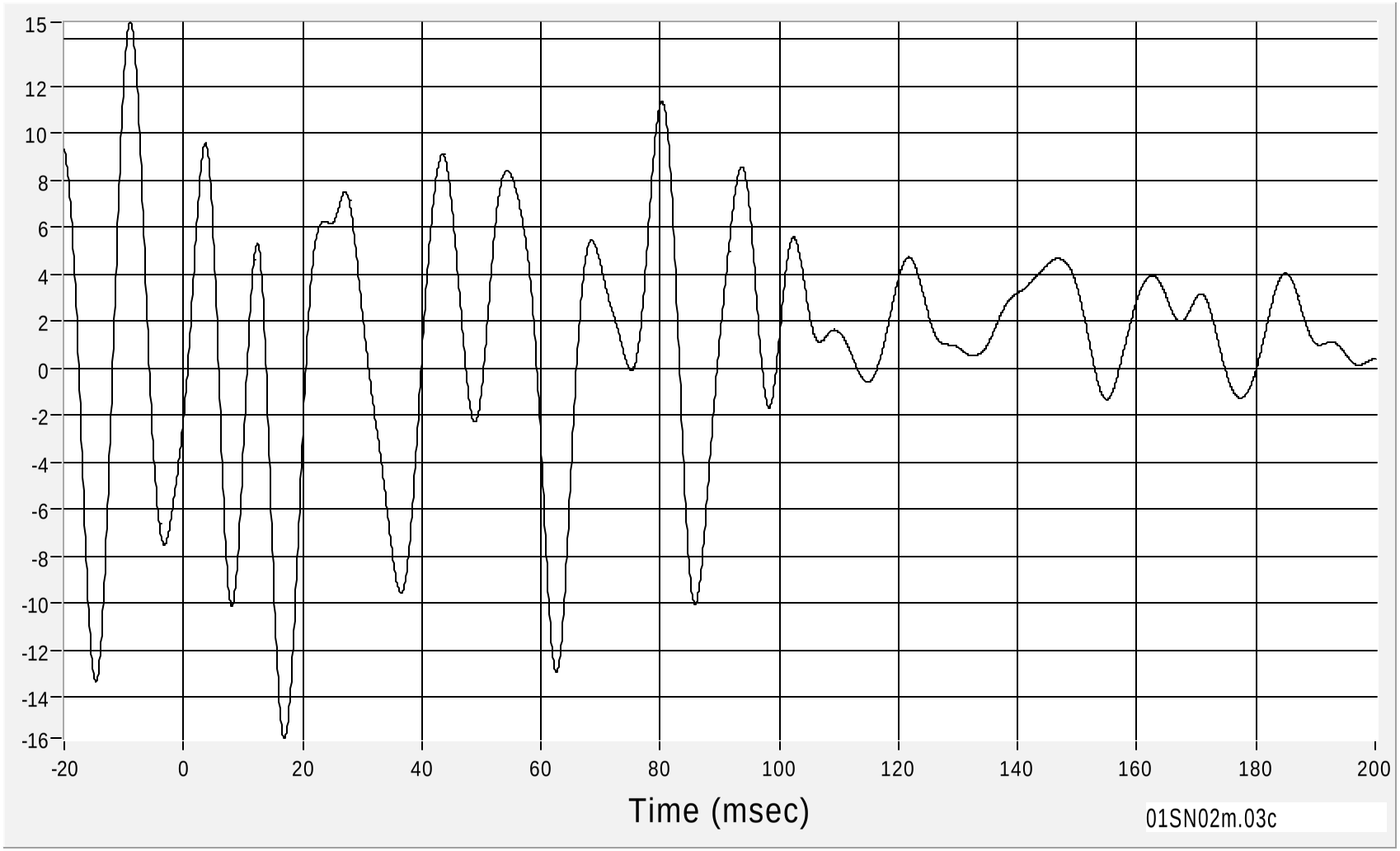
MDB Center of Gravity - Z Acceleration

Max 11.3 G's at 80.3 msec
Min -15.7 G's at 17.0 msec

Acceleration (G's) CFC 60



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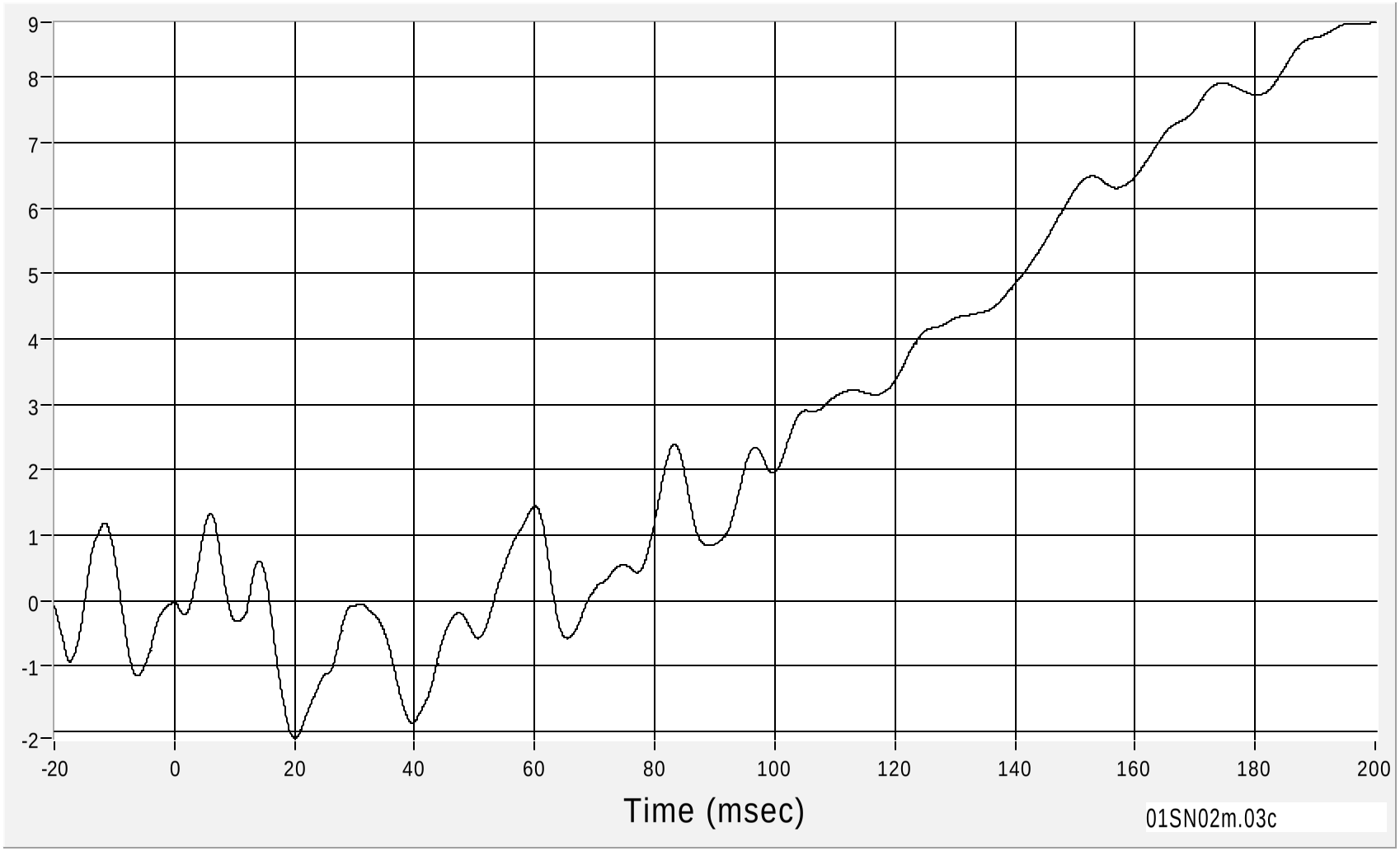
Vehicle Crashworthiness Lab

MDB Center of Gravity - Z Velocity

Velocity (KPH) CFC 180

Max 8.8 kph at 199.9 msec
Min -2.1 kph at 20.1 msec



01SN02 - 2001 Dodge Dakota Sport

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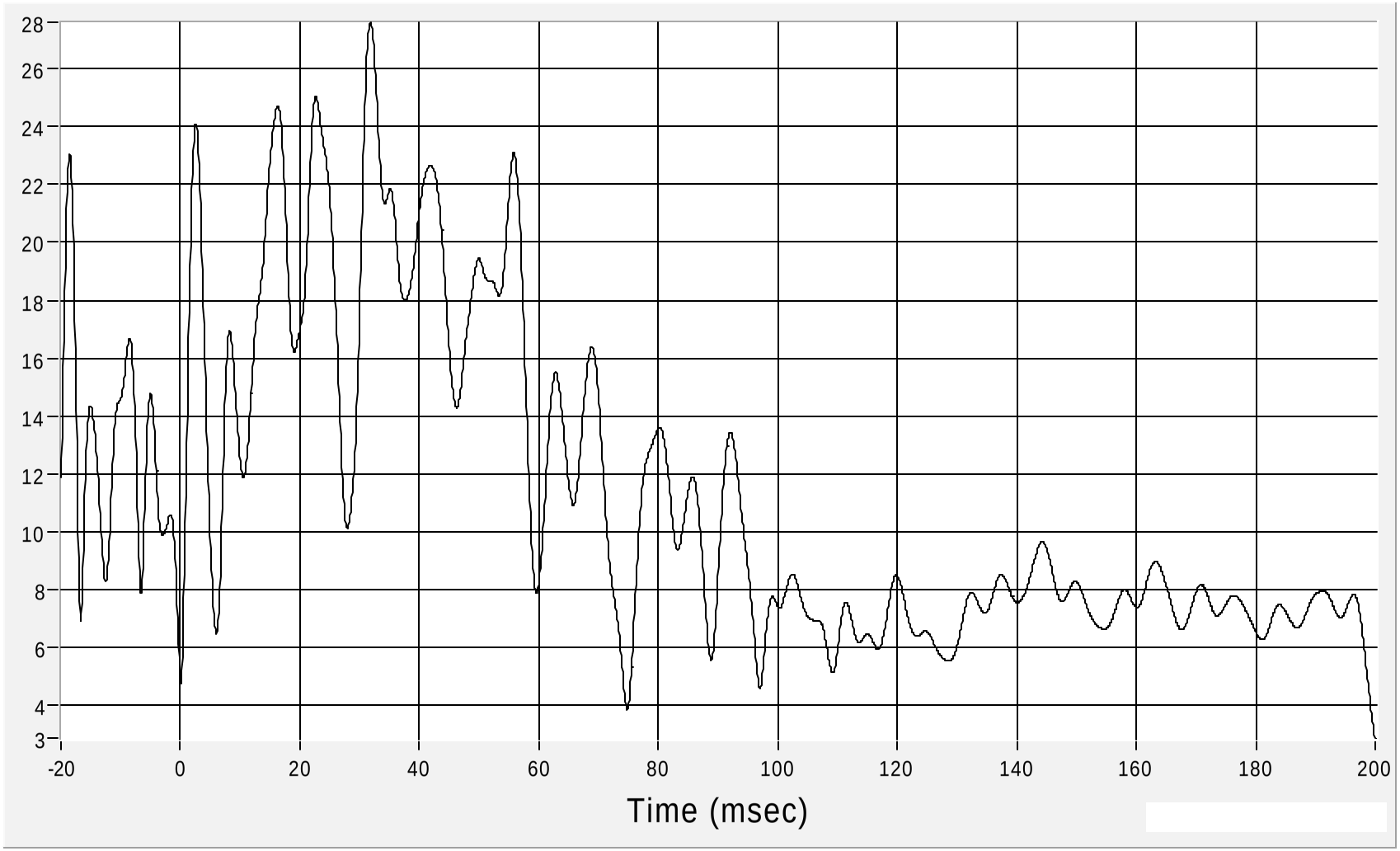
Vehicle Crashworthiness Lab

MDB Center of Gravity Resultant Acceleration

Max 27.6 G's at 31.8 msec
Min 2.9 G's at 199.9 msec



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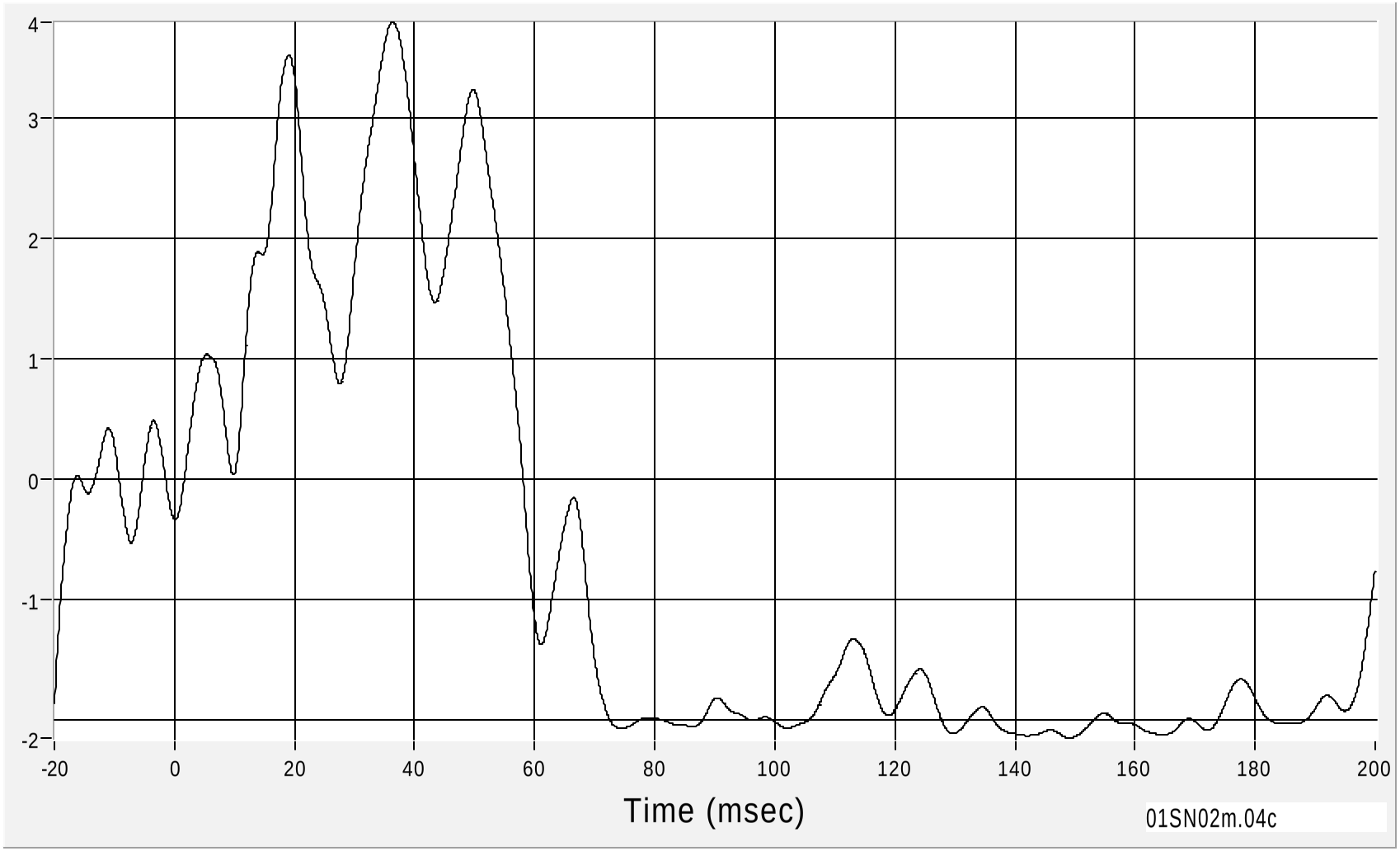
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Rear Axle - X Acceleration

Max 3.8 G's at 36.3 msec
Min -2.2 G's at 149.1 msec

Acceleration (G's) CFC 60



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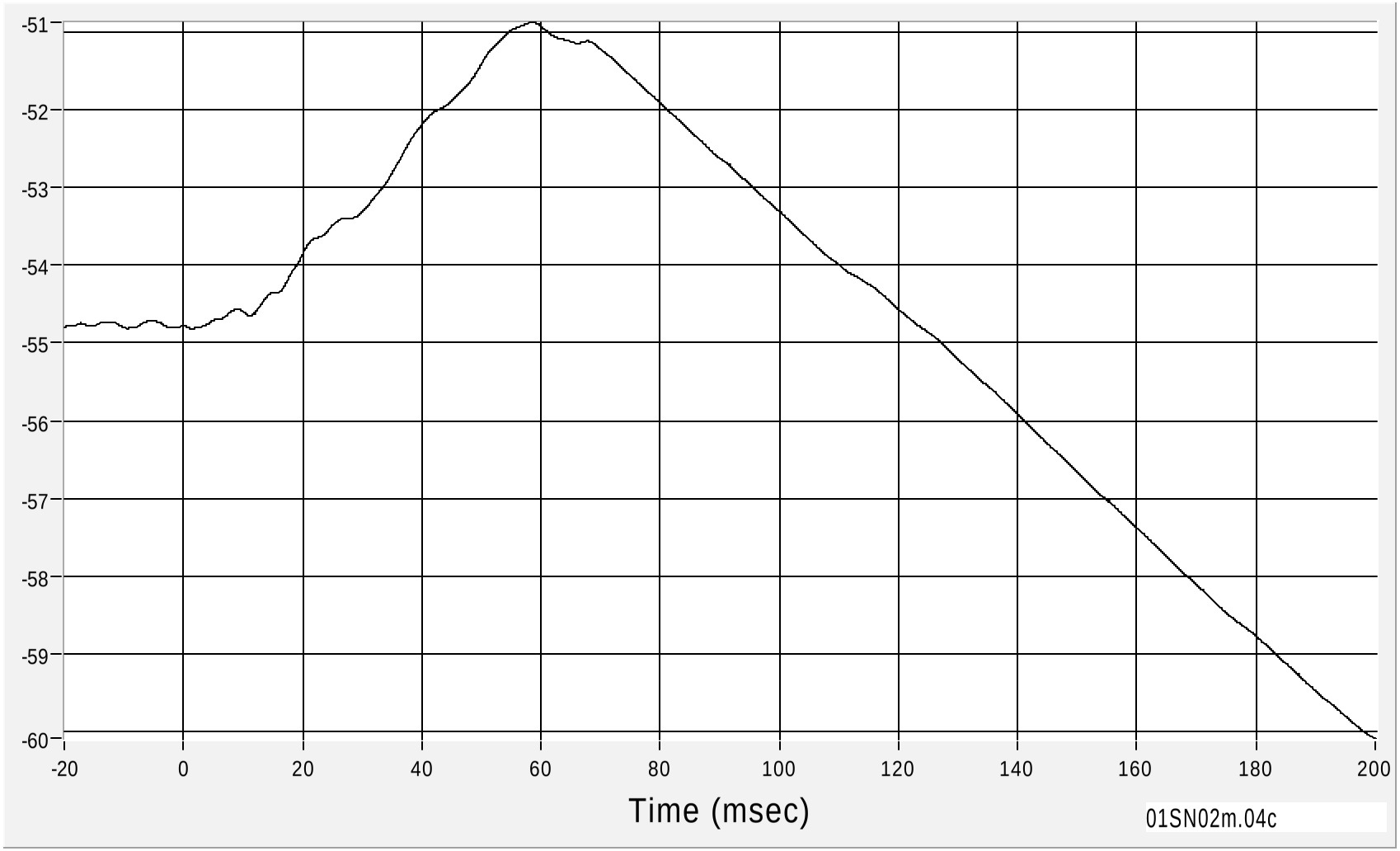
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Rear Axle - X Velocity

Velocity (KPH) CFC 180

Max -50.9 kph at 58.6 msec
Min -60.1 kph at 199.9 msec



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31 January 2001

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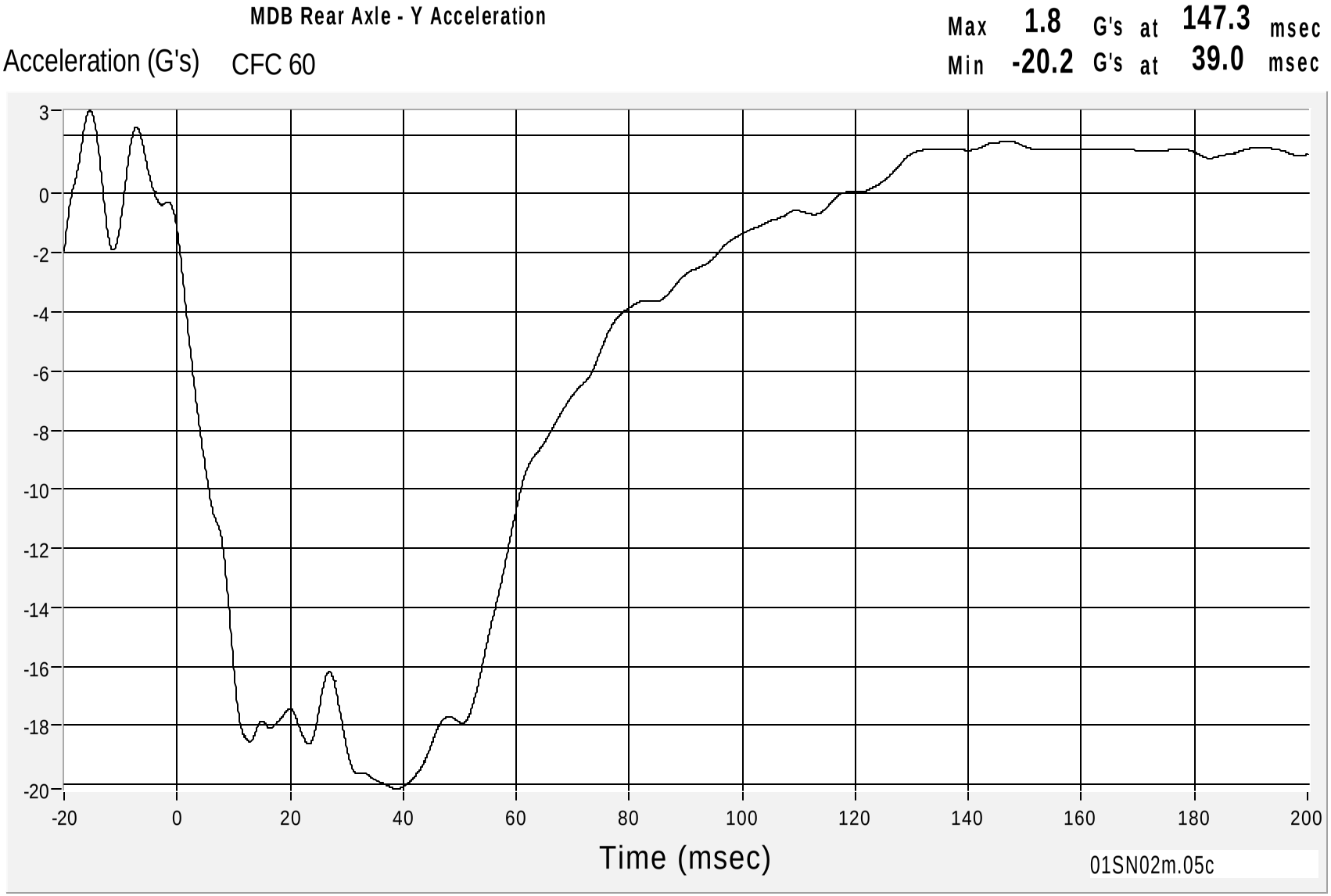
Vehicle Crashworthiness Lab



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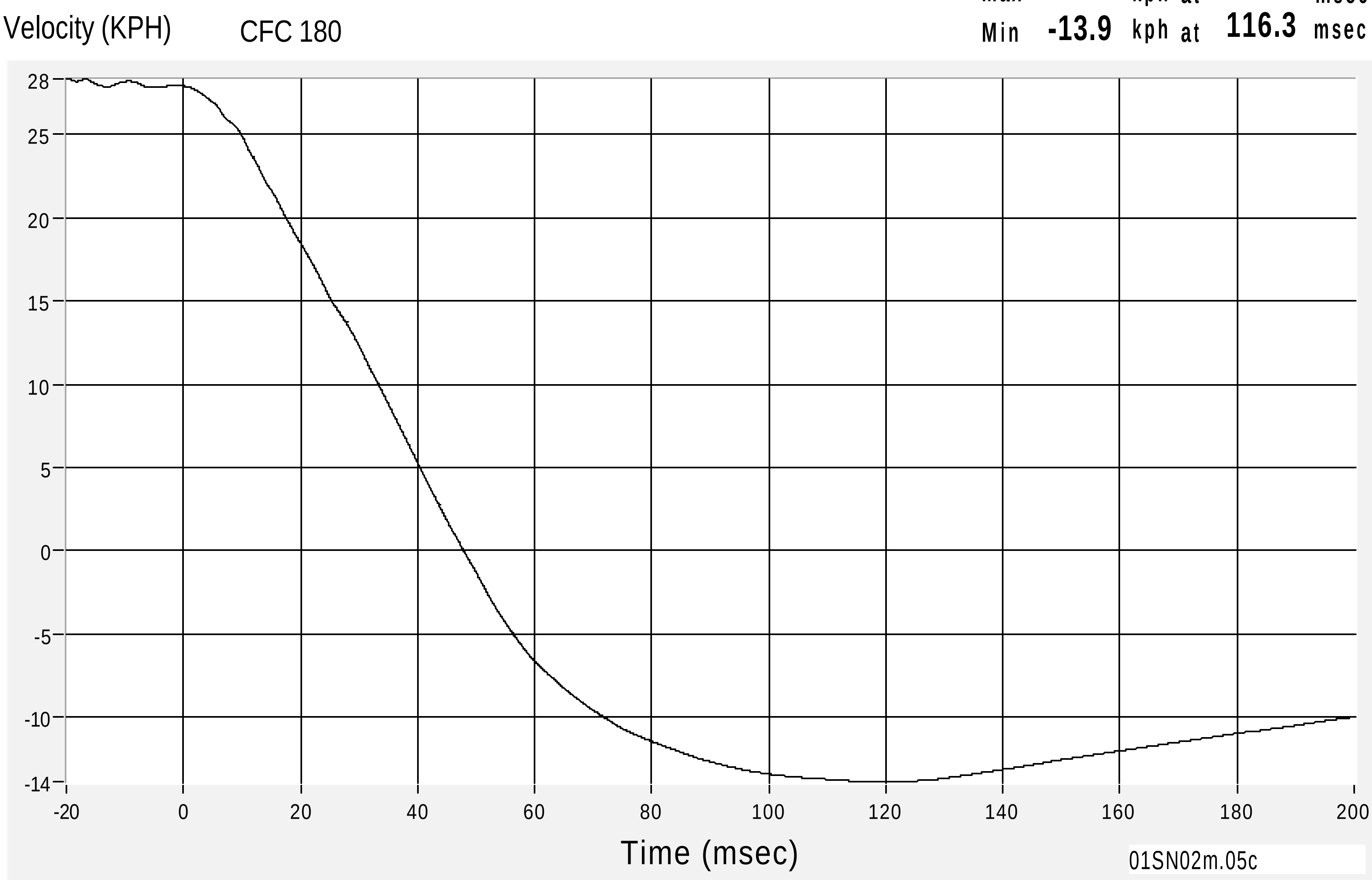
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Rear Axle - Y Velocity

Max 27.9 kph at 0.1 msec
Min -13.9 kph at 116.3 msec



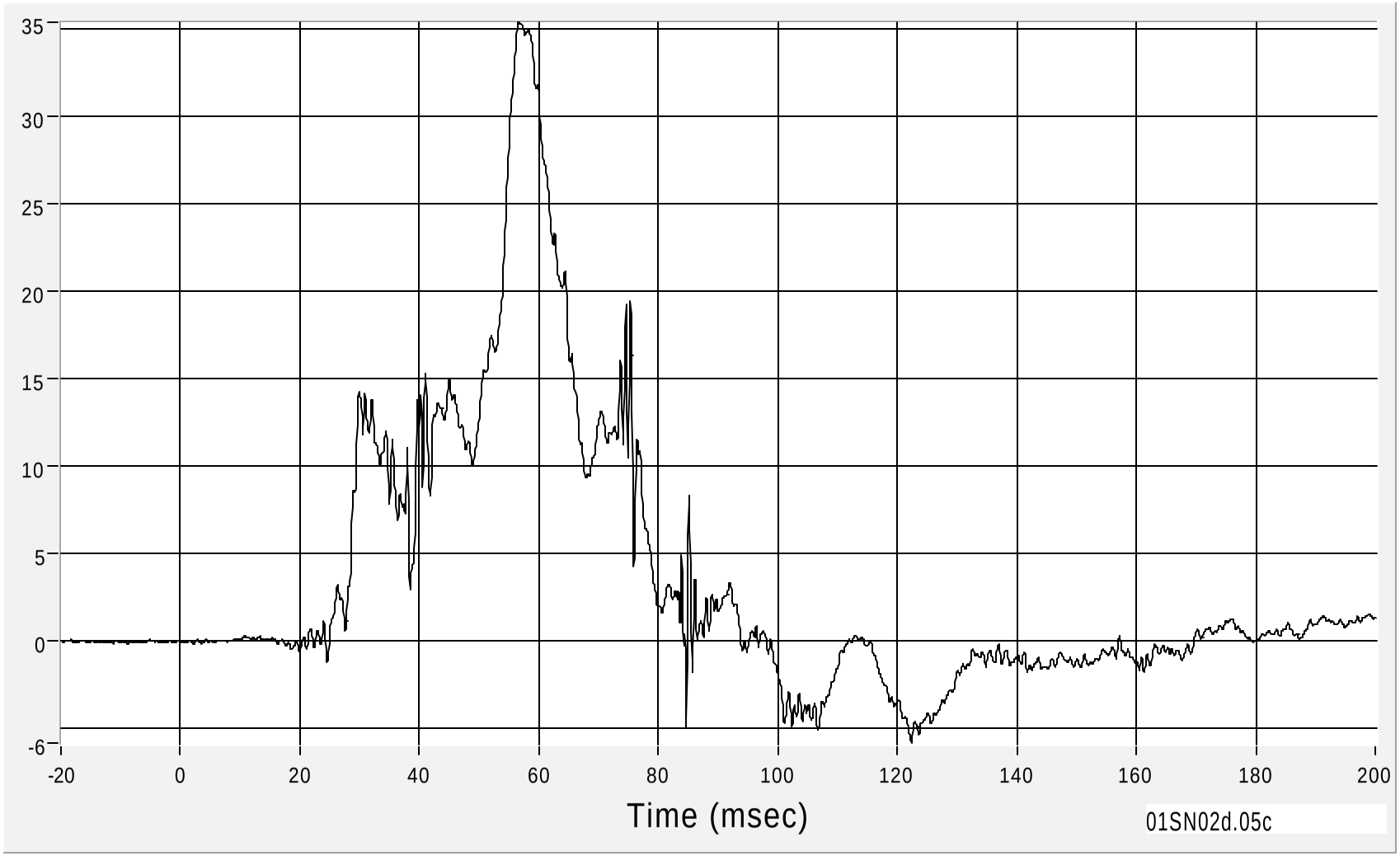
01SN02 - 2001 Dodge Dakota Sport

31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Upper Rib Y Acceleration - Redundant

Max 35.4 G's at 56.6 msec
Min -5.8 G's at 122.4 msec

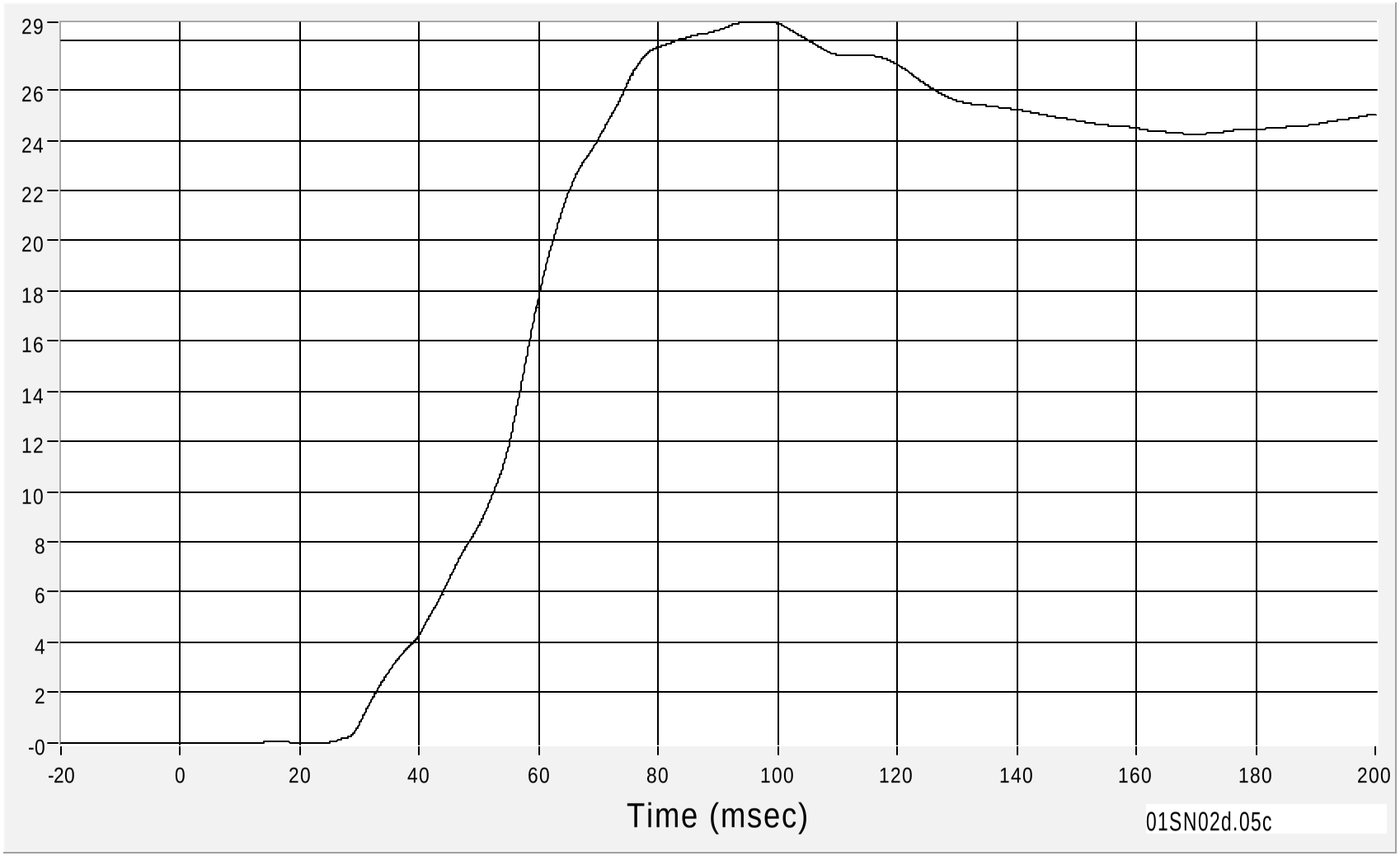


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Upper Rib Y Velocity - Redundant

Max 28.7 kph at 98.2 msec
Min 0.0 kph at 4.2 msec

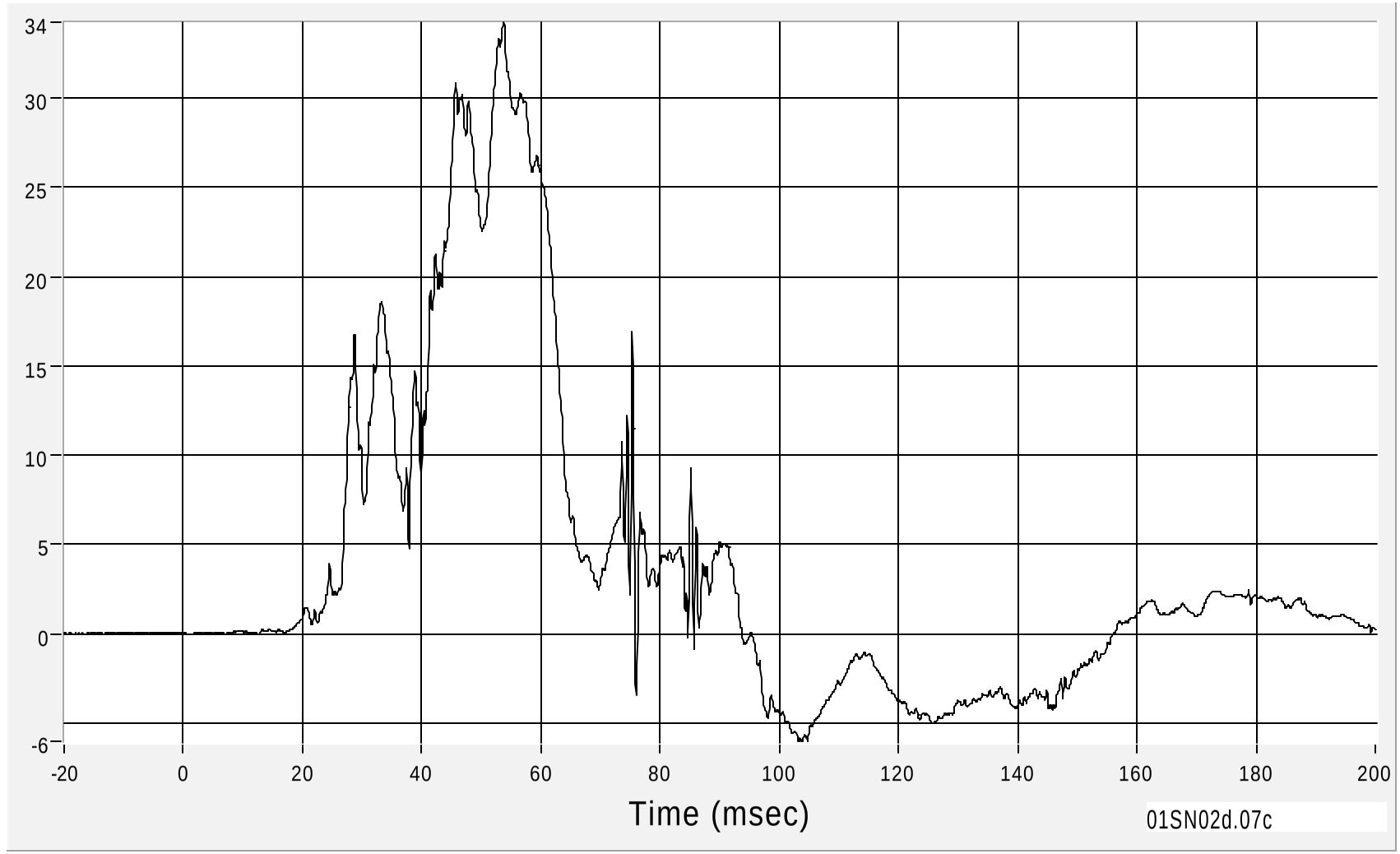


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

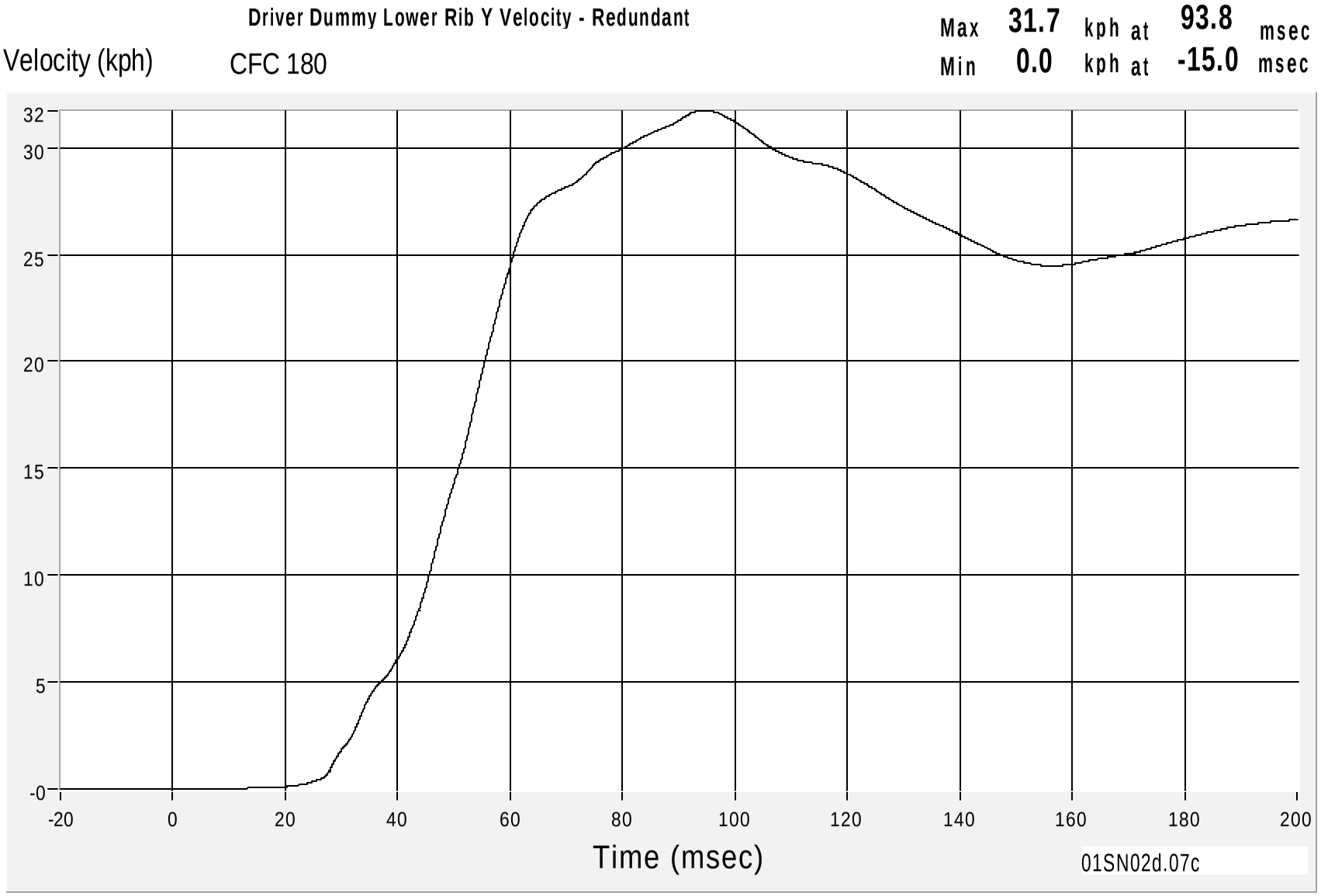
Driver Dummy Lower Rib Y Acceleration - Redundant

Max 34.3 G's at 53.8 msec
Min -6.0 G's at 103.8 msec



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

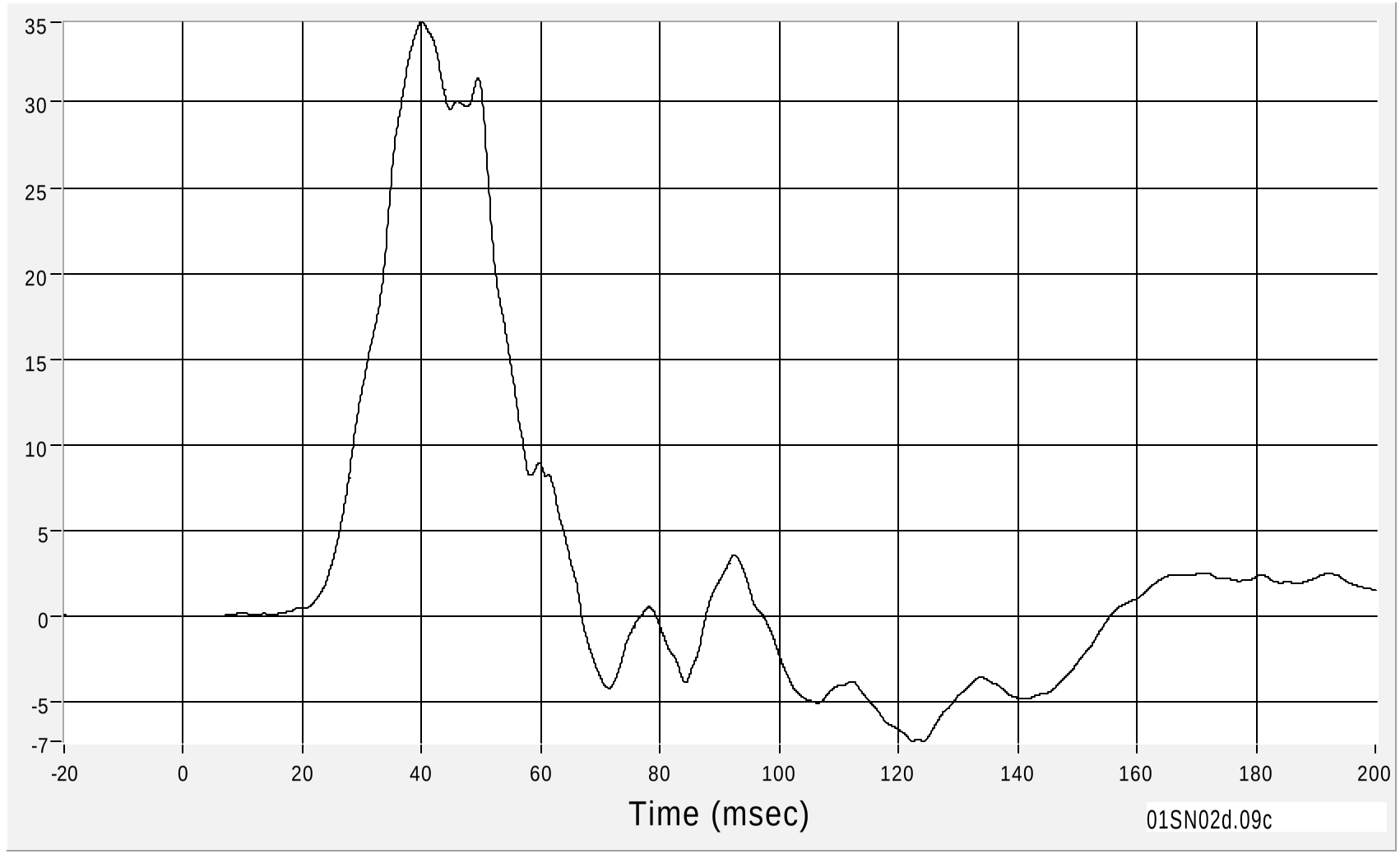


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Lower Spine Y Acceleration - Redundant

Max 34.7 G's at 40.0 msec
Min -7.3 G's at 124.2 msec



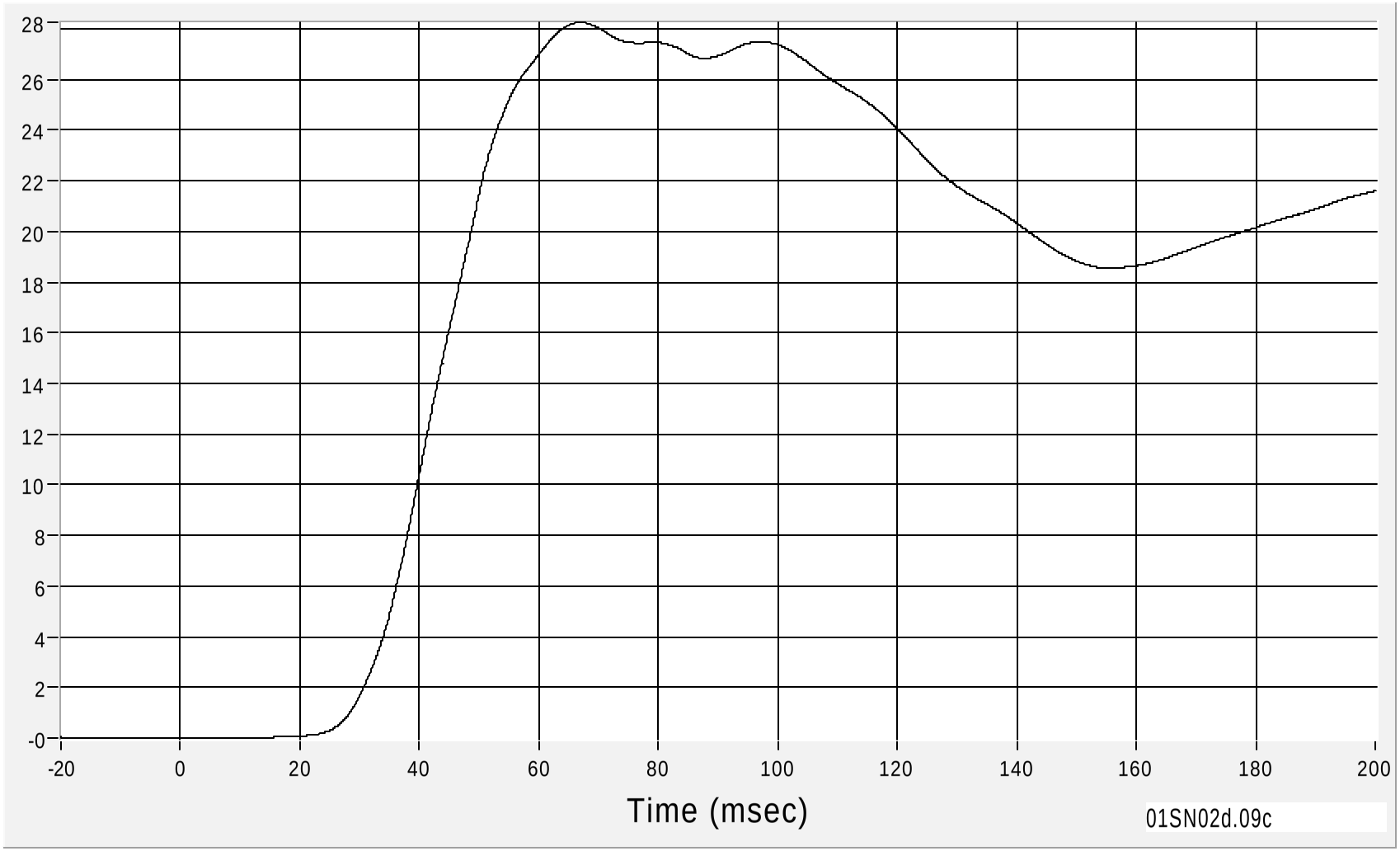
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Lower Spine Y Velocity - Redundant

Max **28.3** kph at **66.8** msec
Min **0.0** kph at **5.5** msec

Velocity (kph) CFC 180

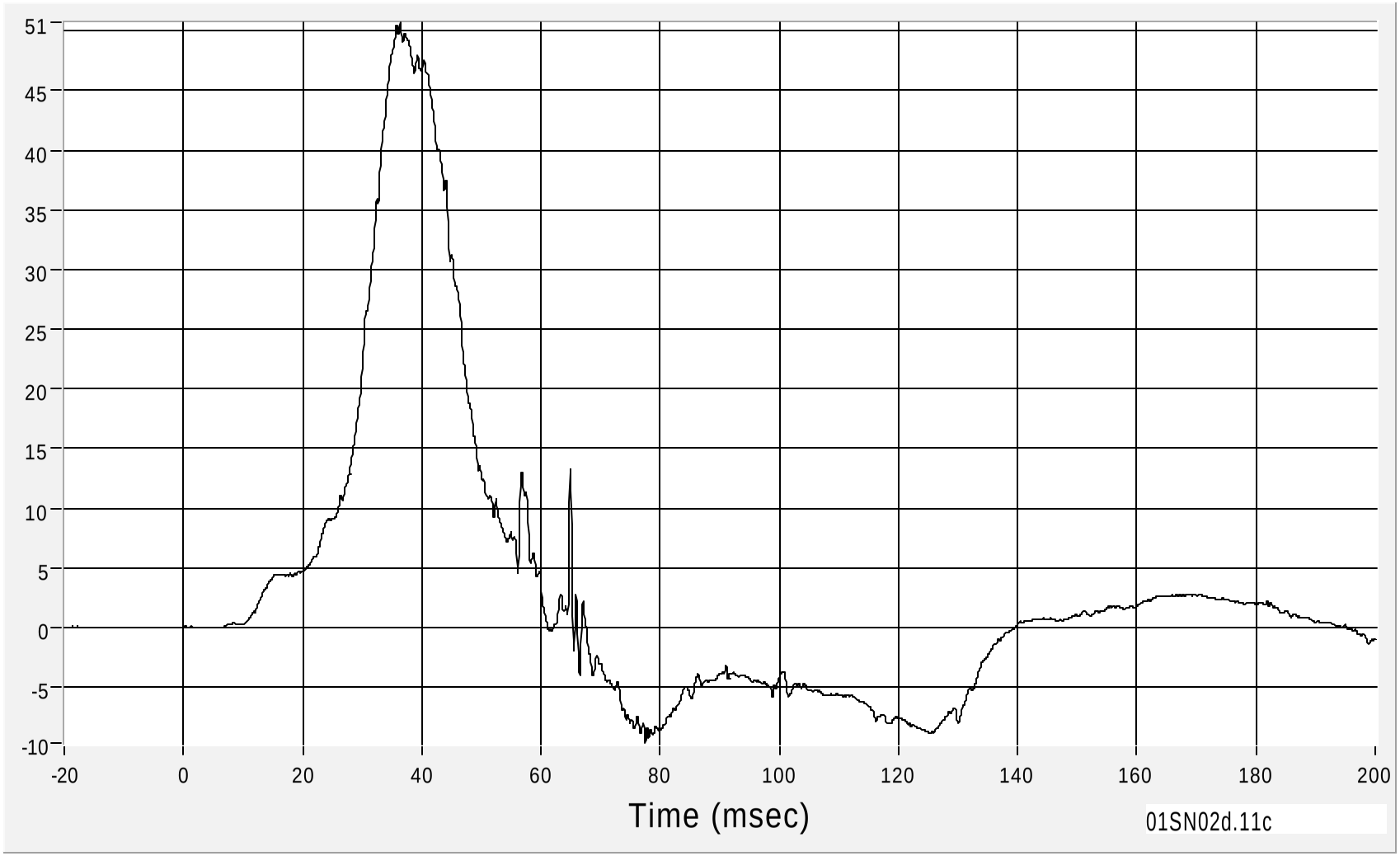


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Pelvis Y Acceleration - Redundant

Max 50.7 G's at 36.4 msec
Min -9.7 G's at 77.5 msec



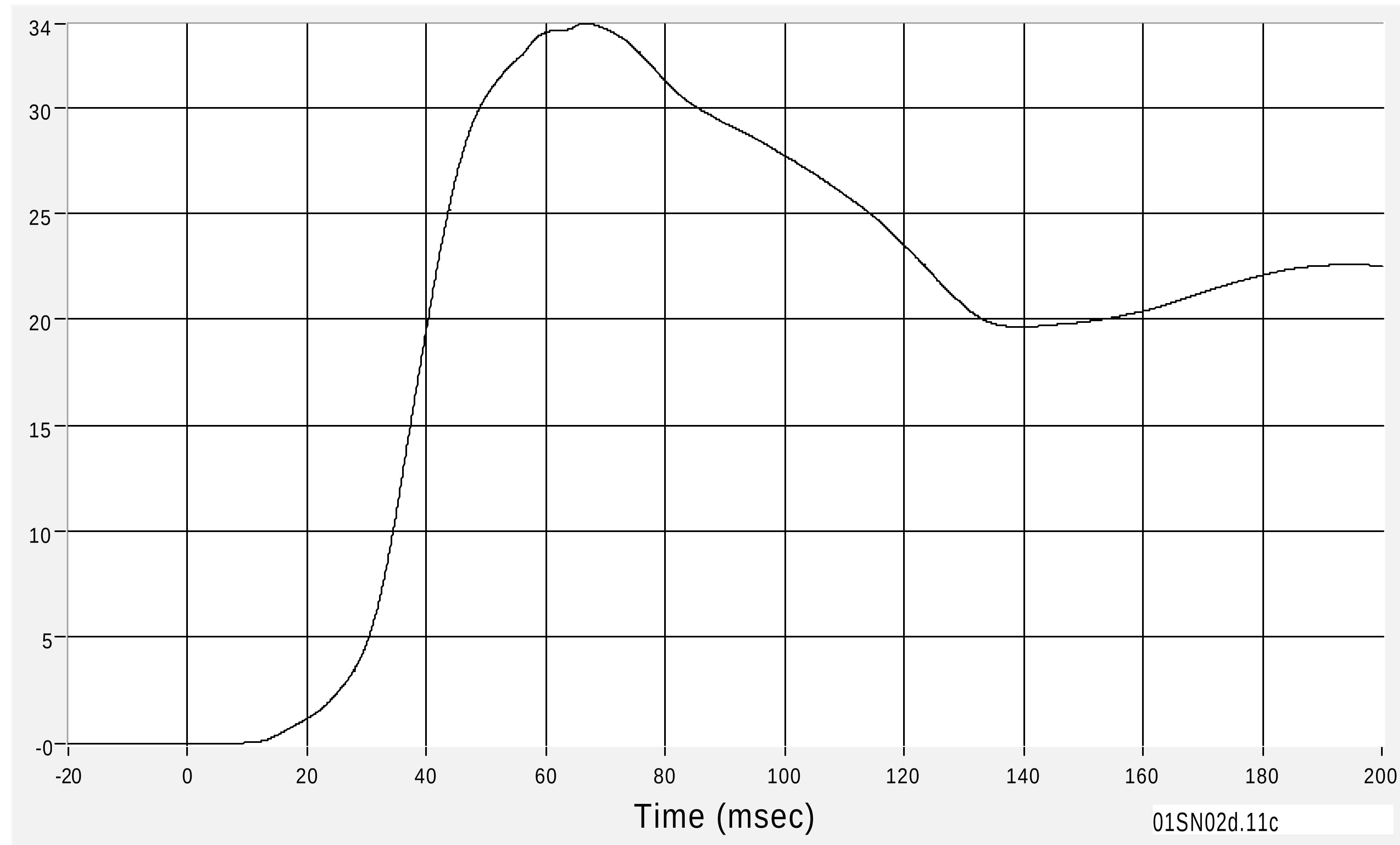
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Pelvis Y Velocity - Redundant

CFC 180

Max	34.0	kph	at	66.2	msec
Min	0.0	kph	at	-0.9	msec



01SN02 - 2001 Dodge Dakota Sport

31 January 2001

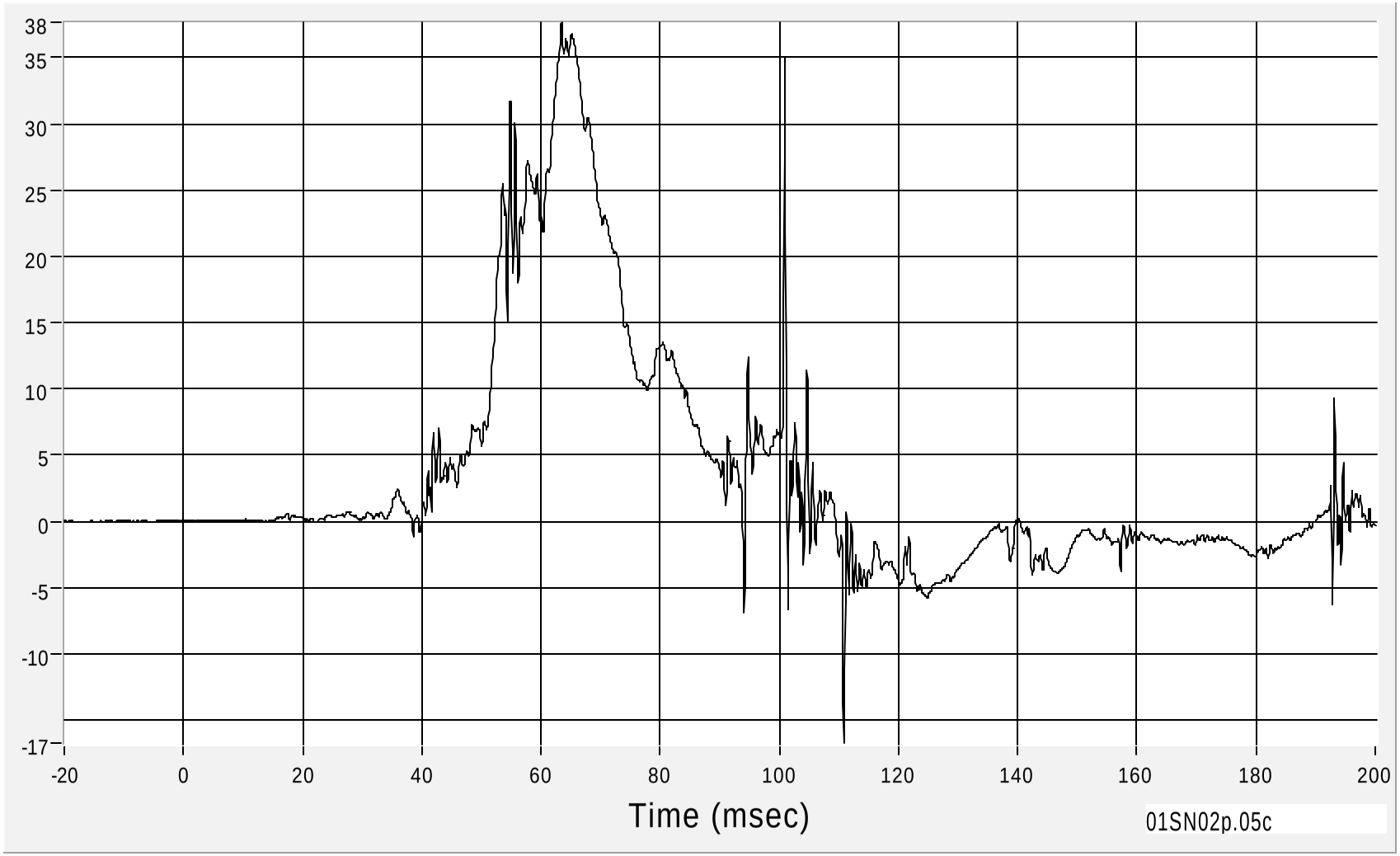
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Passenger Dummy Upper Rib Y Acceleration - Redundant

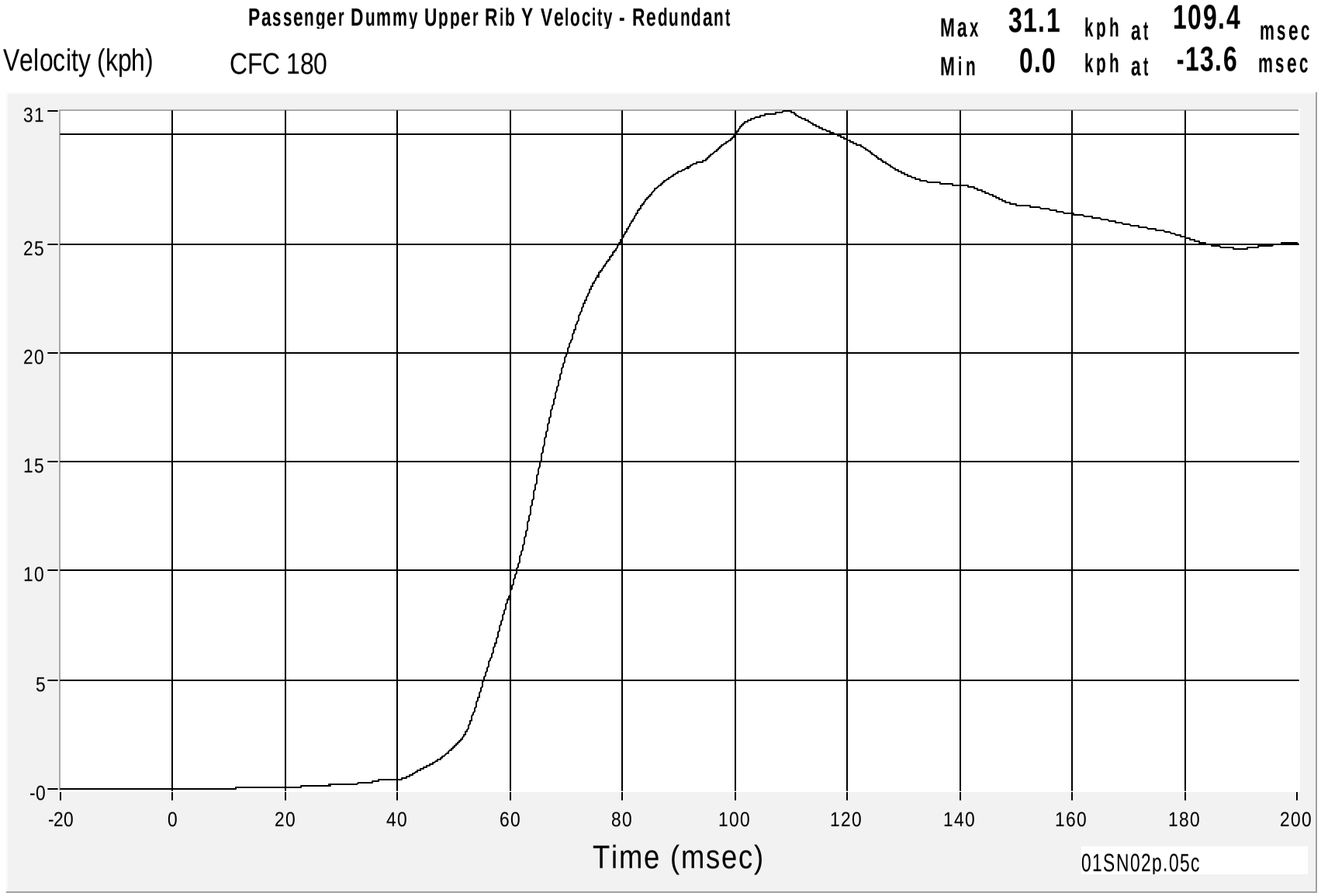
Max 37.7 G's at 63.4 msec
Min -16.7 G's at 110.8 msec

Acceleration (G's) CFC 1000



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



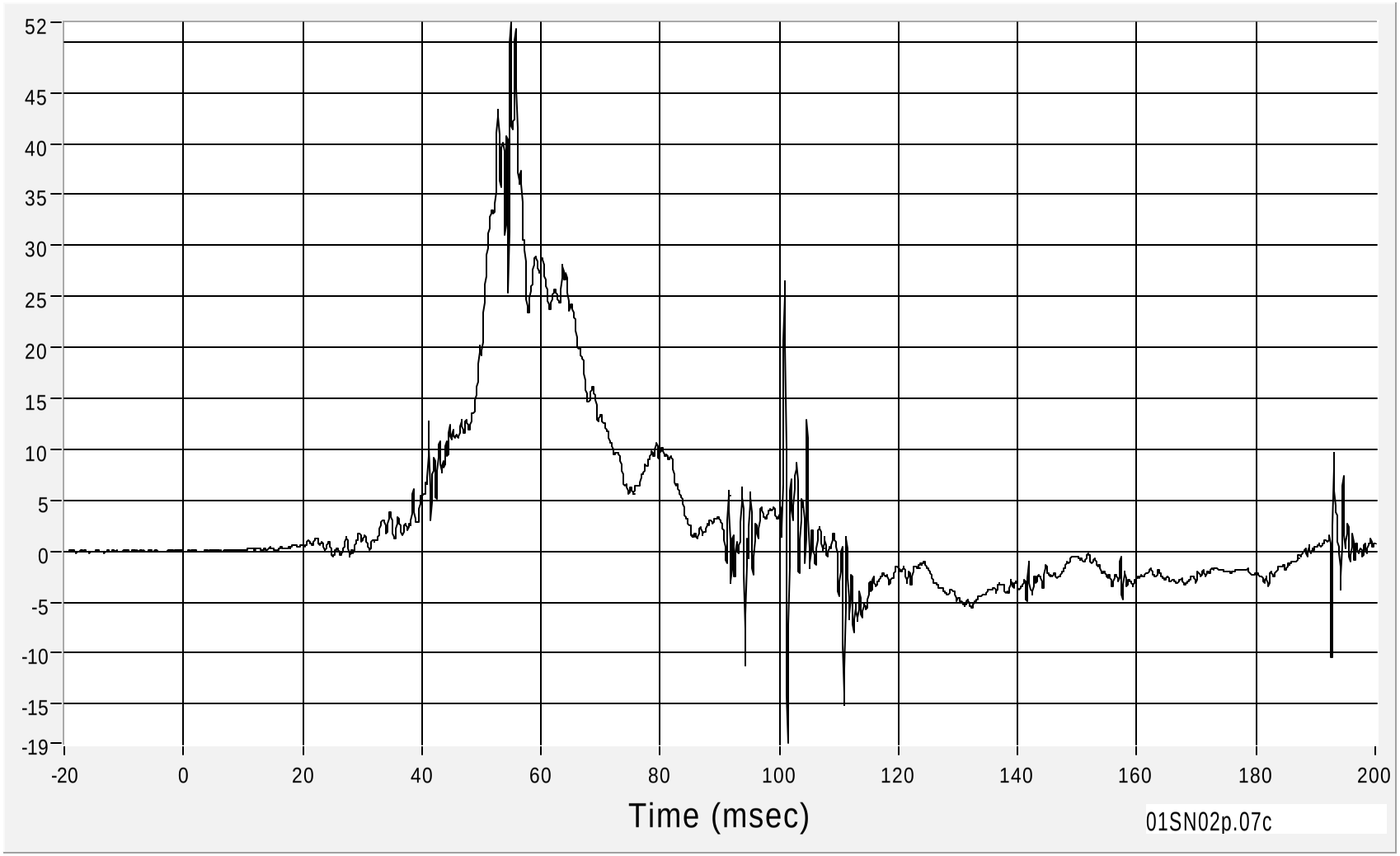
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Lower Rib Y Acceleration - Redundant

Max **51.9** G's at **54.9** msec
Min **-18.8** G's at **101.4** msec

Acceleration (G's) CFC 1000



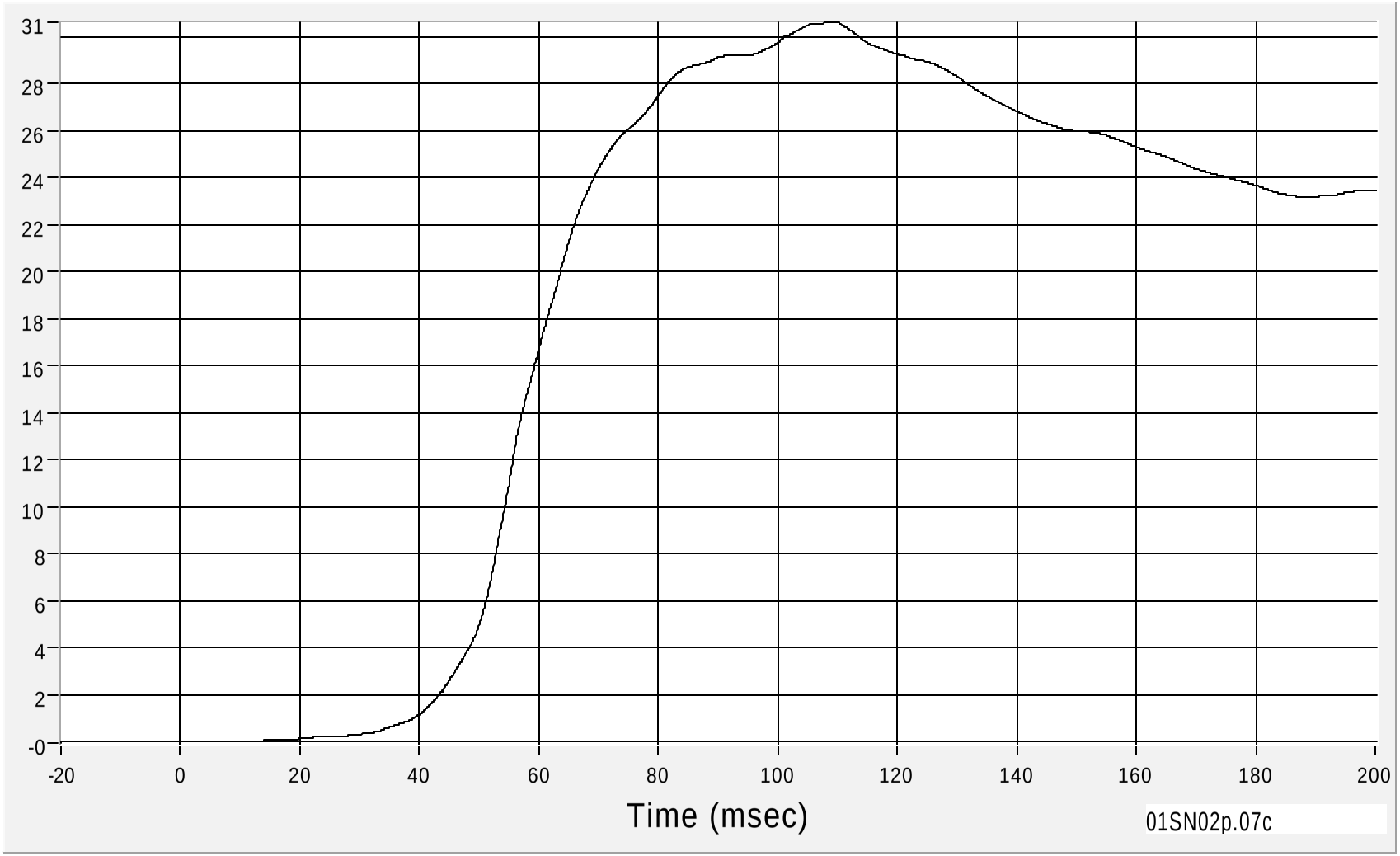
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Lower Rib Y Velocity - Redundant

Max 30.6 kph at 109.4 msec
Min 0.0 kph at -12.3 msec

Velocity (kph) CFC 180

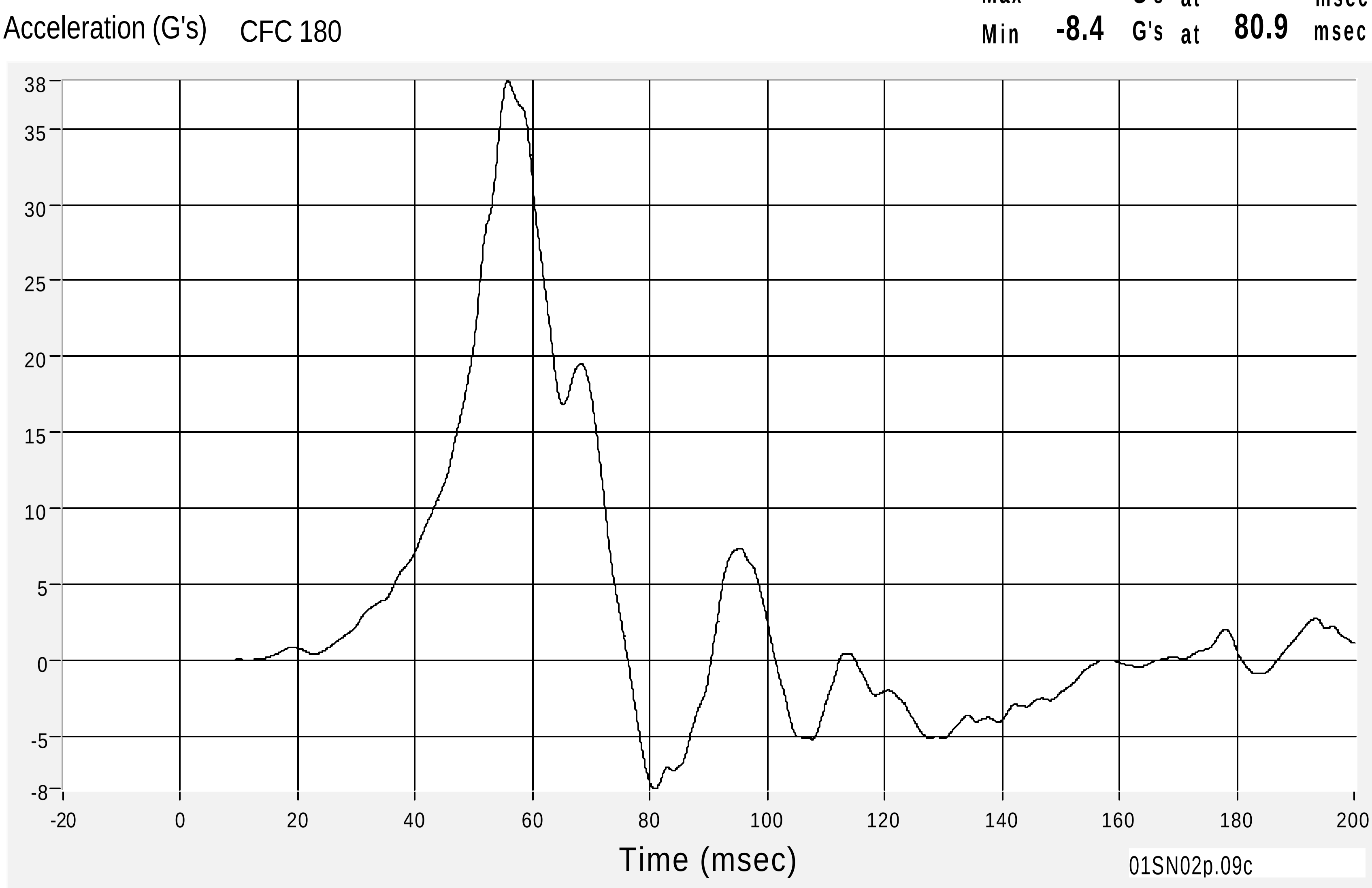


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Lower Spine Y Acceleration - Redundant

Max **38.2** G's at **55.8** msec
Min **-8.4** G's at **80.9** msec



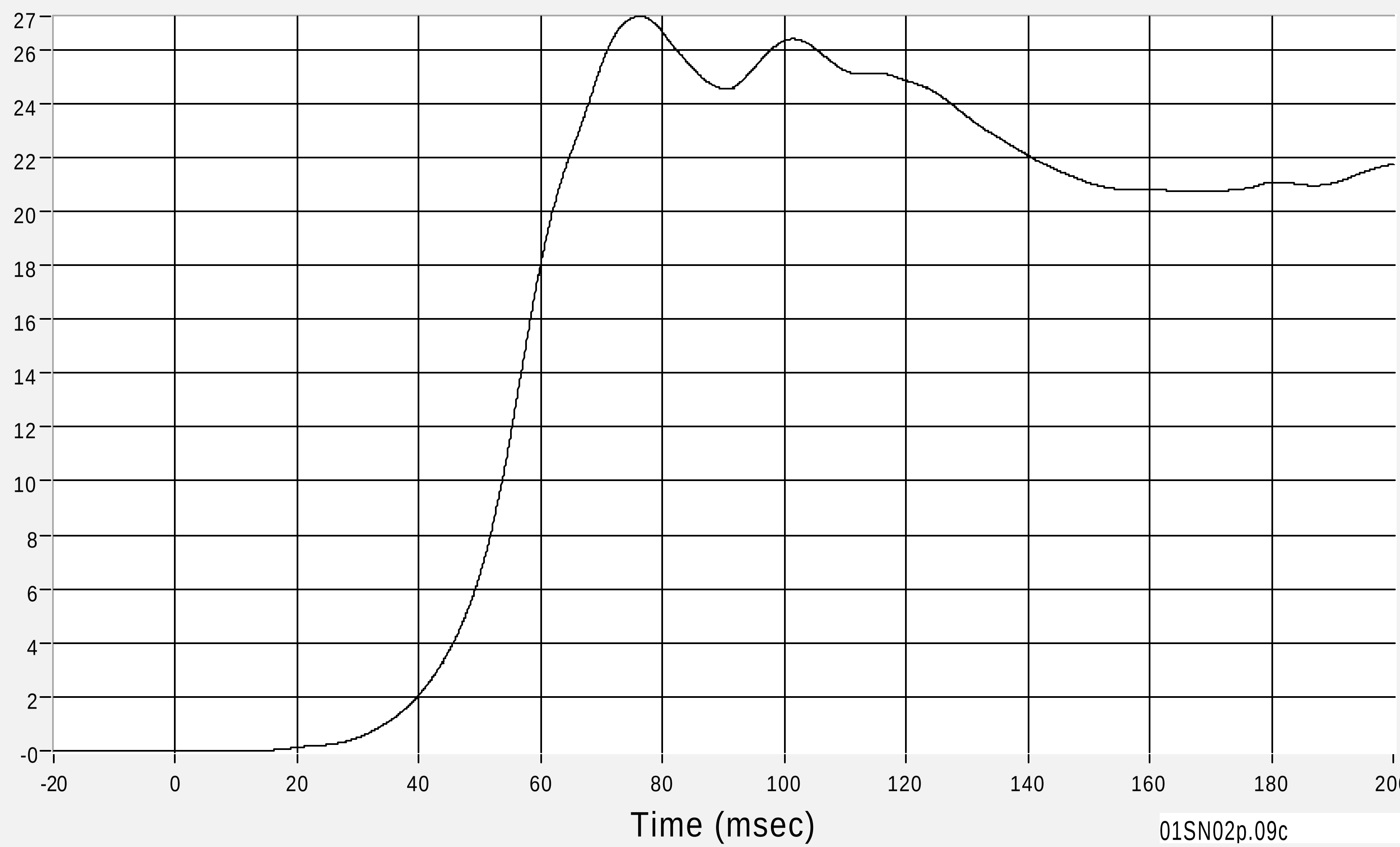
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Lower Spine Y Velocity - Redundant

Velocity (kph) CFC 180

Max 27.2 kph at 76.2 msec
Min 0.0 kph at -4.2 msec



01SN02 - 2001 Dodge Dakota Sport

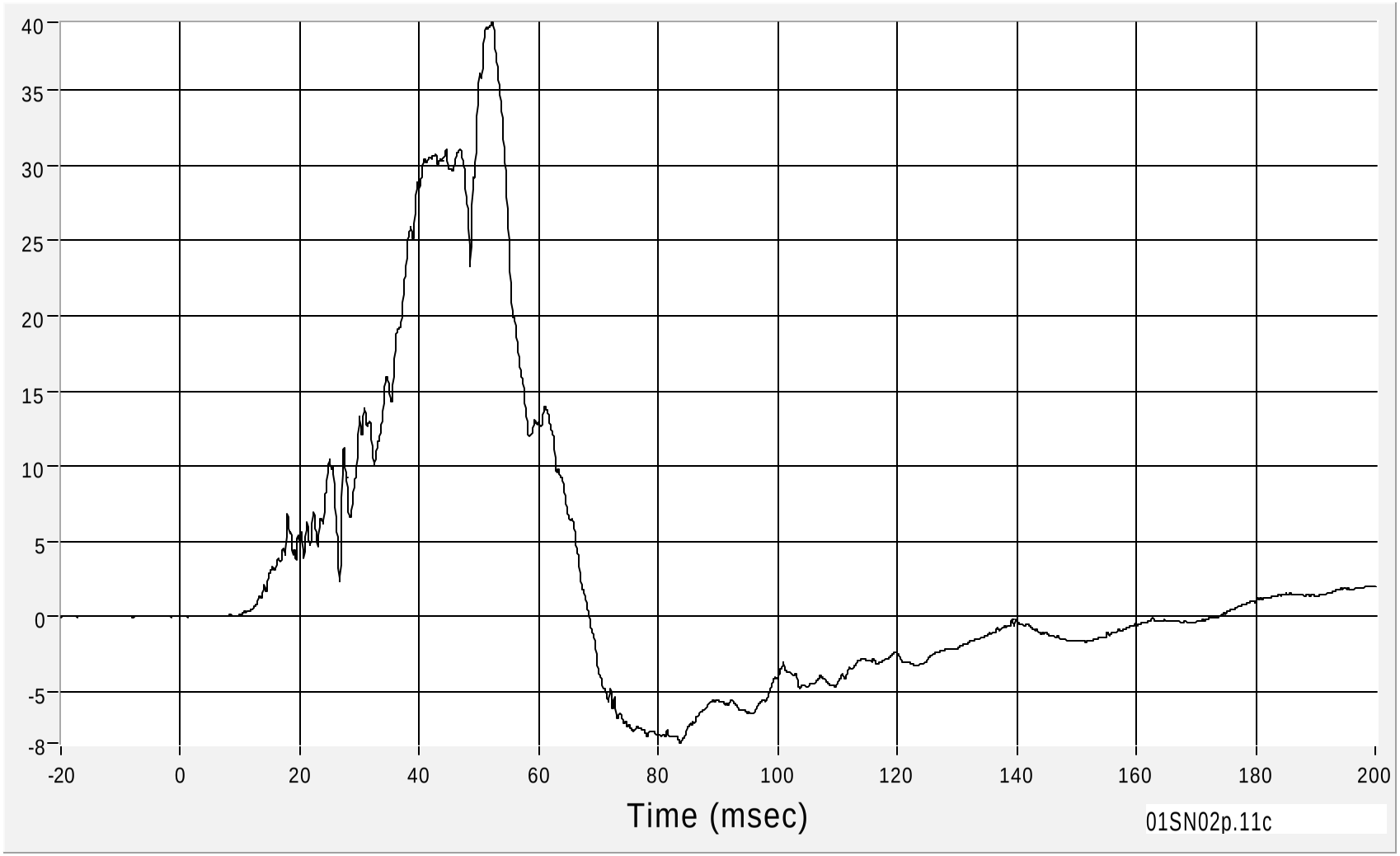
31 January 2001

Medical College of Wisconsin

Vehicle Crashworthiness Lab

Passenger Dummy Pelvis Y Acceleration - Redundant

Max 39.5 G's at 52.2 msec
Min -8.4 G's at 83.6 msec



01SN02 - 2001 Dodge Dakota Sport
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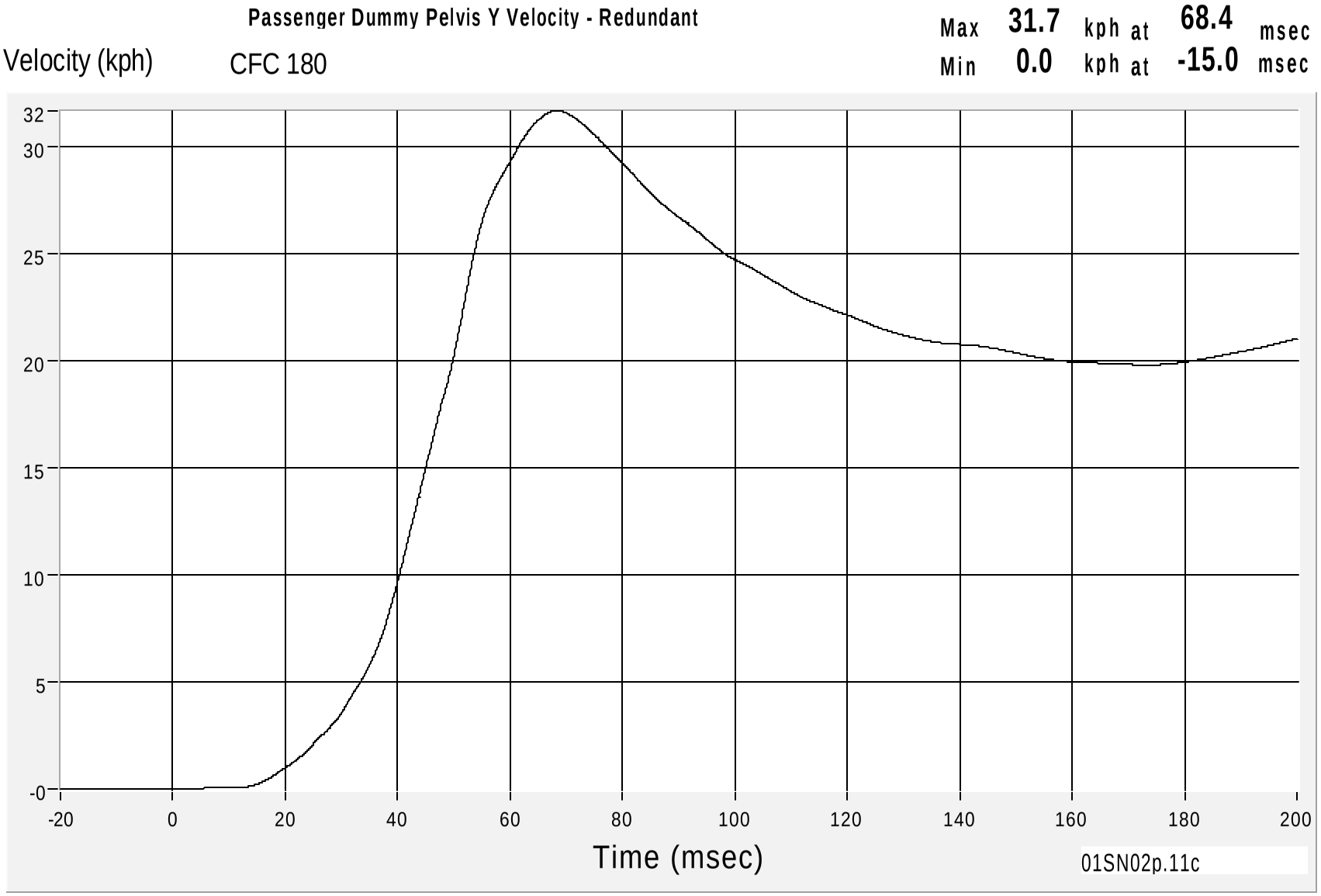
Medical College of Wisconsin
Vehicle Crashworthiness Lab



01SN02 - 2001 Dodge Dakota Sport

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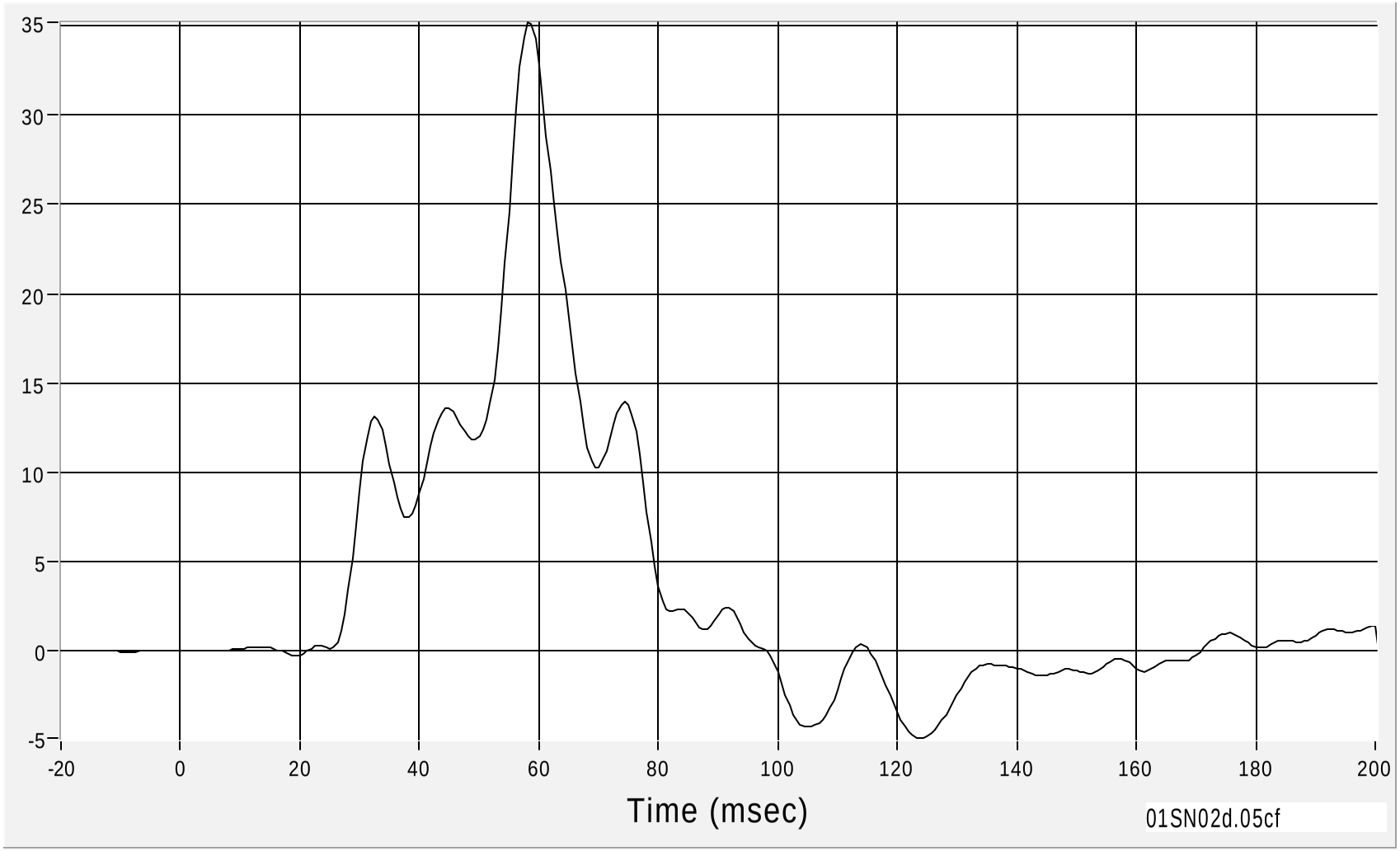
Medical College of Wisconsin

Vehicle Crashworthiness Lab

Driver Dummy Upper Rib Y Acceleration - Redundant

Max 35.2 G's at 58.1 msec
Min -4.9 G's at 123.7 msec

Acceleration (G's) FIR100



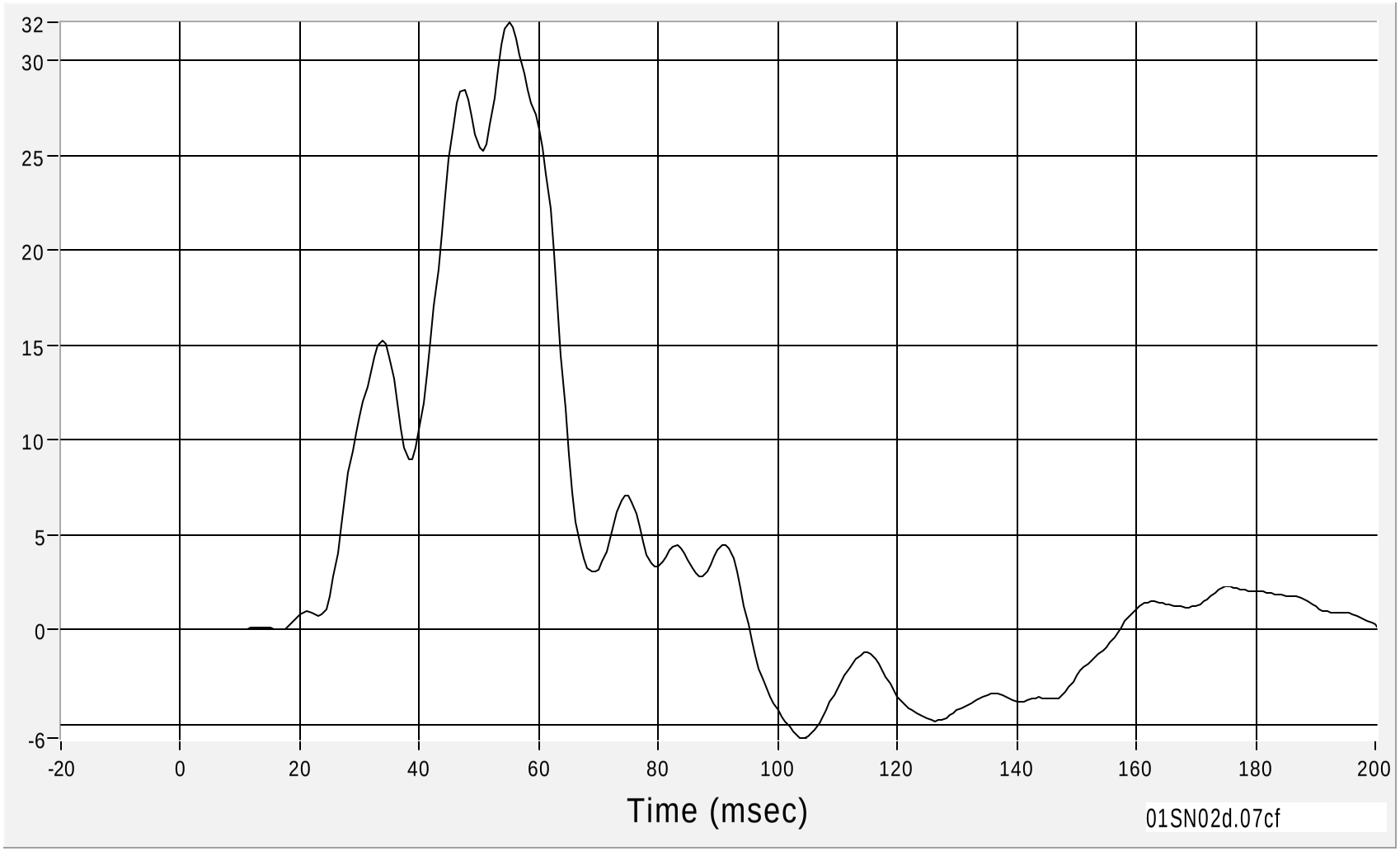
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Lower Rib Y Acceleration - Redundant

Max 32.0 G's at 55.0 msec
Min -5.7 G's at 104.4 msec

Acceleration (G's) FIR100



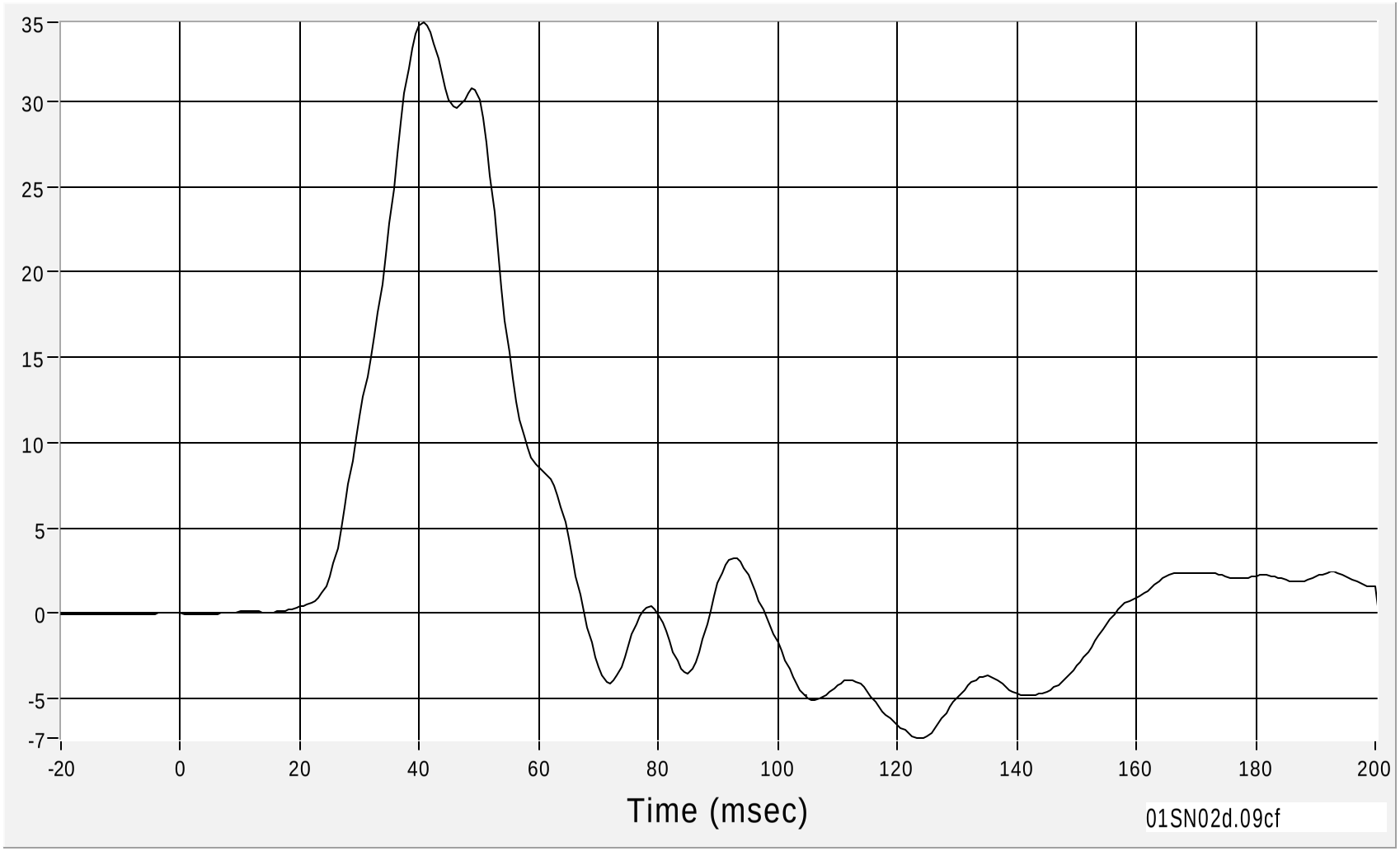
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Lower Spine Y Acceleration - Redundant

Max 34.6 G's at 40.6 msec
Min -7.3 G's at 123.7 msec

Acceleration (G's) FIR100

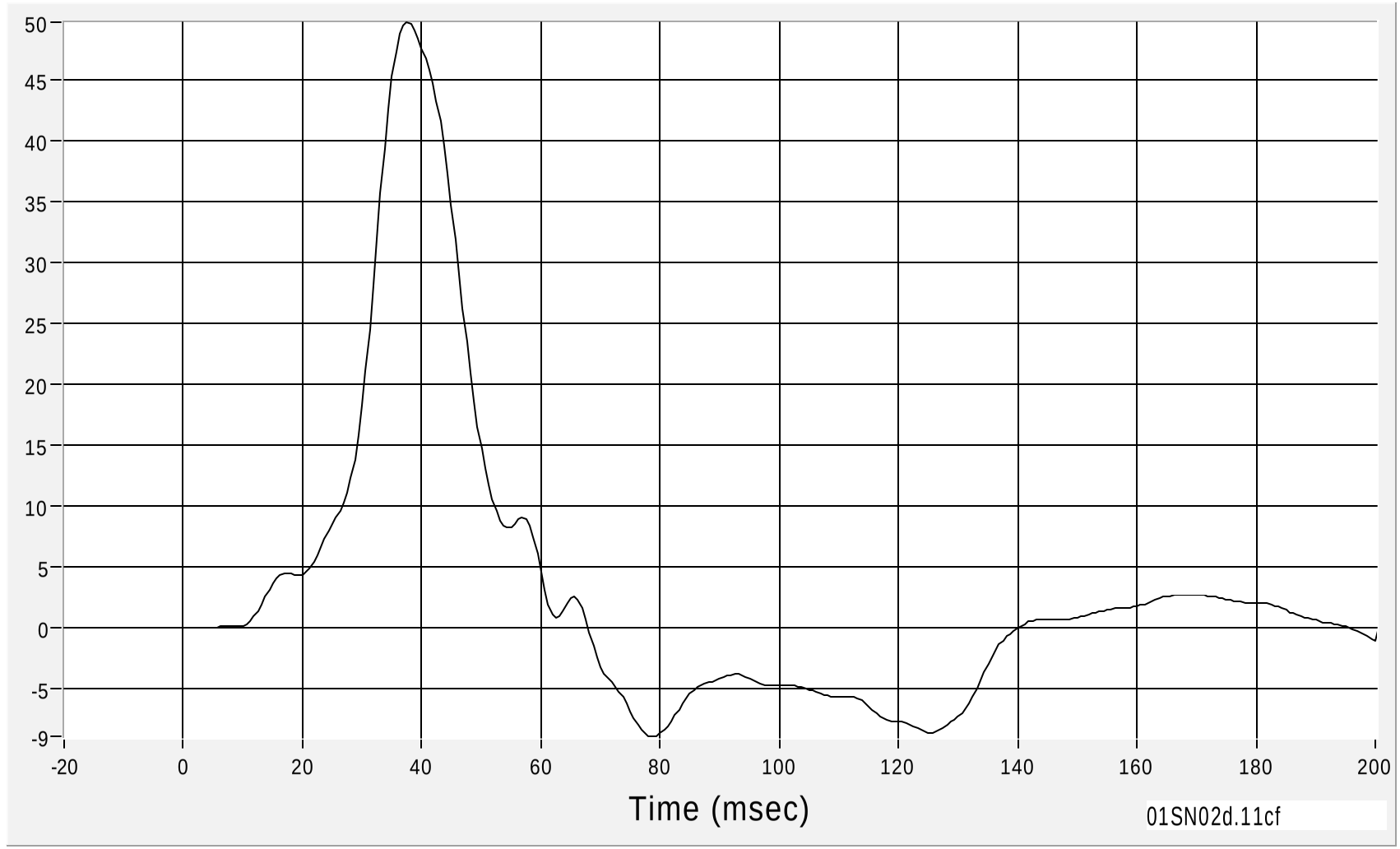


01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Dummy Pelvis Y Acceleration - Redundant

Max 49.7 G's at 37.5 msec
Min -8.9 G's at 78.8 msec



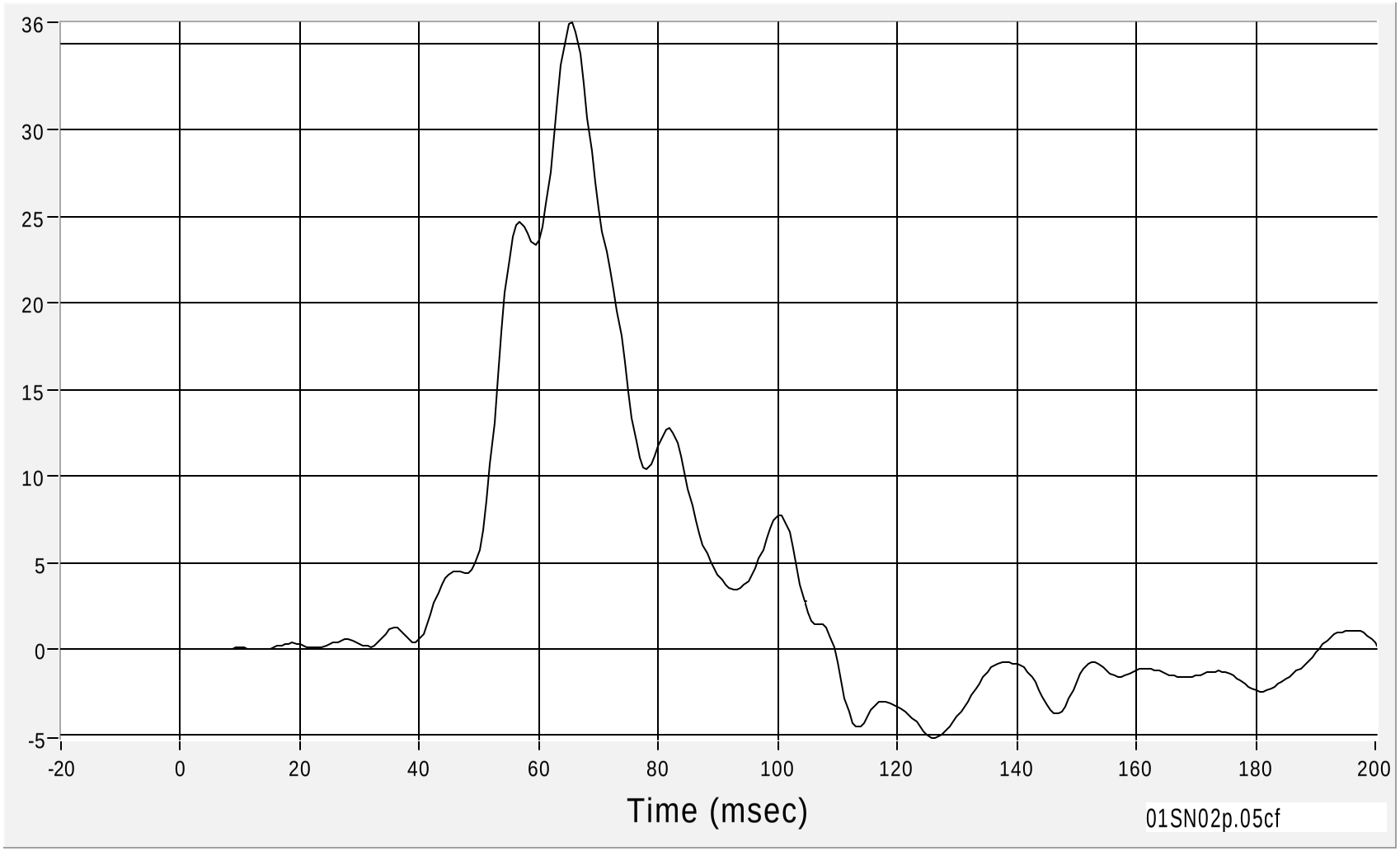
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Upper Rib Y Acceleration - Redundant

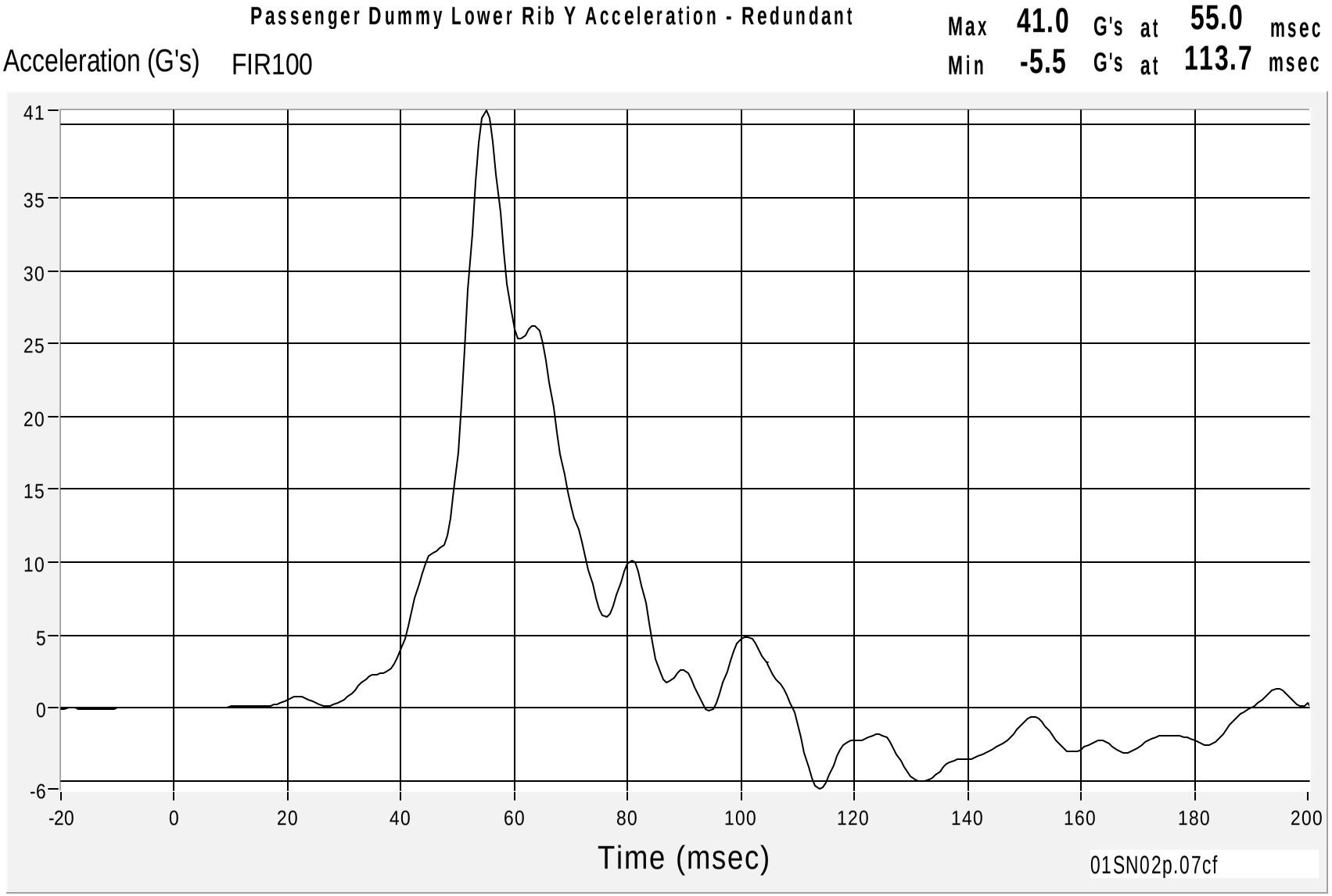
Max **36.2** G's at **65.6** msec
Min **-5.1** G's at **126.2** msec

Acceleration (G's) FIR100



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab



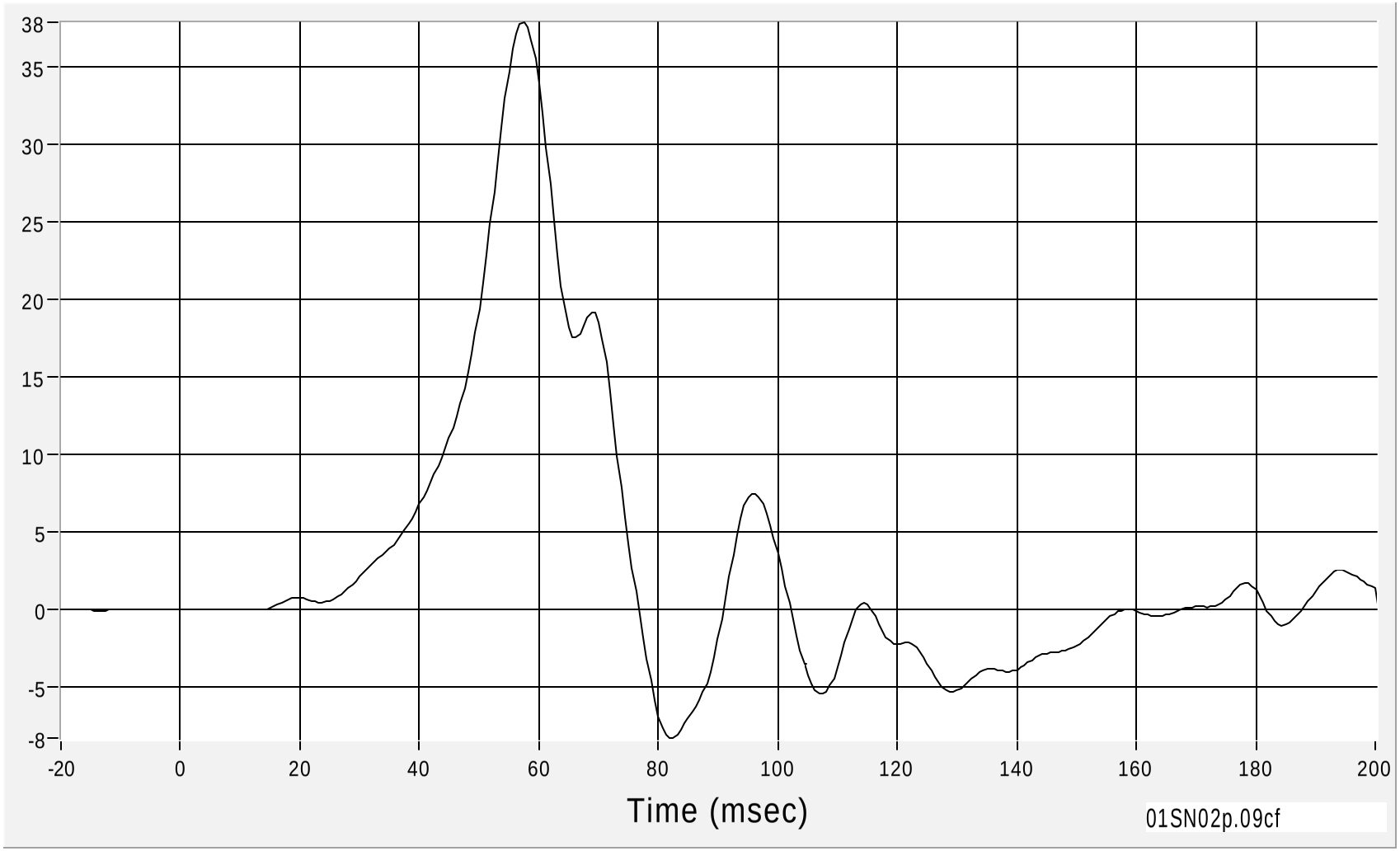
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Lower Spine Y Acceleration - Redundant

Max 37.8 G's at 57.5 msec
Min -8.3 G's at 81.9 msec

Acceleration (G's) FIR100



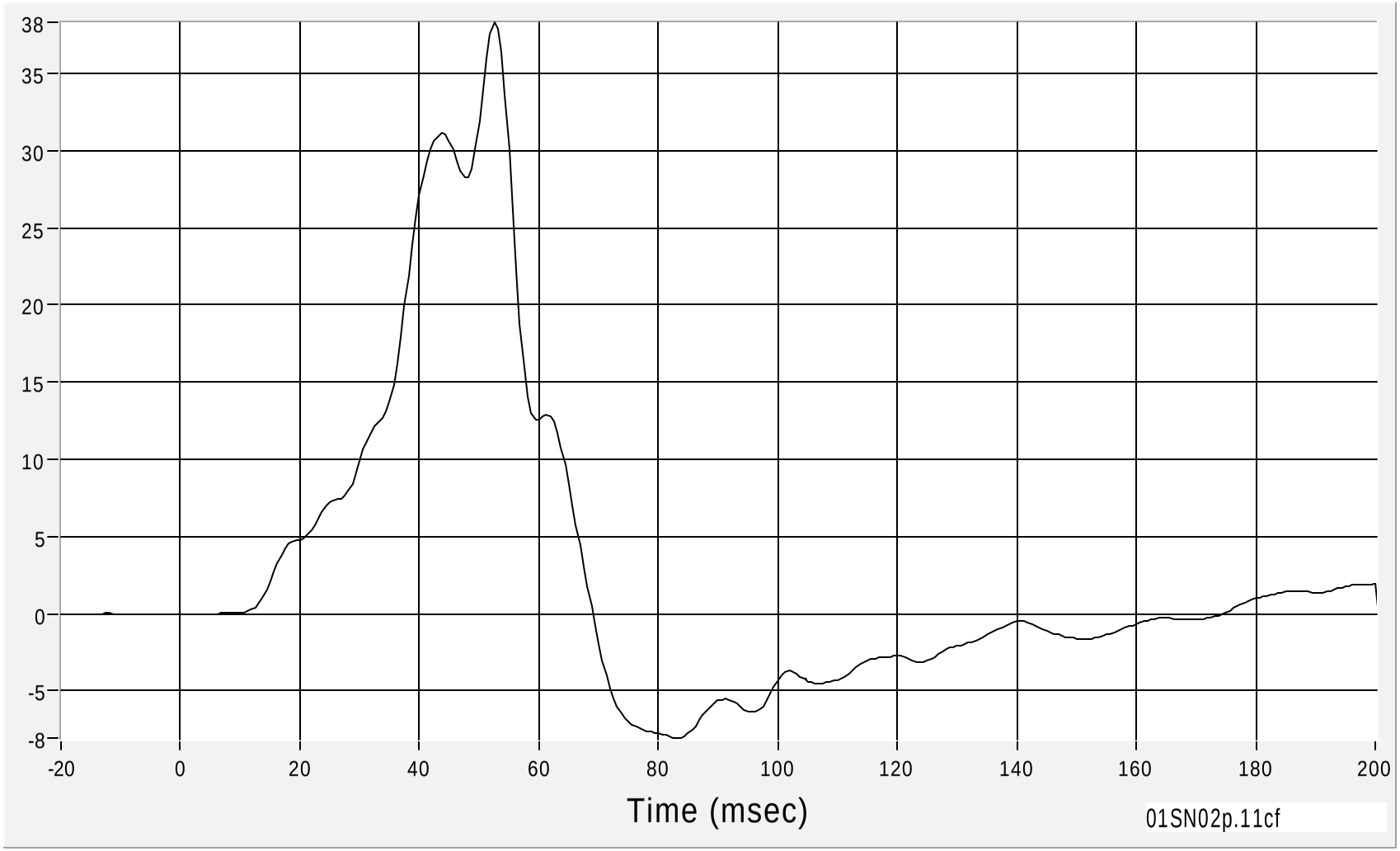
01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Dummy Pelvis Y Acceleration - Redundant

Max 38.3 G's at 52.5 msec
Min -8.1 G's at 83.1 msec

Acceleration (G's) FIR100



01SN02 - 2001 Dodge Dakota Sport
31 January 2001

Medical College of Wisconsin
Vehicle Crashworthiness Lab

APPENDIX C

SID CONFIGURATION AND VERIFICATION RESULTS

TABLE OF CONTENTS

VERIFICATION TEST RESULTS SUMMARY
PRE AND POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial Number 056 Test Sequences 02 and 03

TEST	PRE		POST	
	COMMENTS	BY	COMMENTS	BY
EXTERNAL DIMENSIONS	Passed all requirements	John Humm and Michael Schlick	Passed all requirements	John Humm and Michael Schlick
THORACIC SHOCK ABSORBER TEST	Passed all requirements	John Humm	-	-
LATERAL THORAX IMPACT TEST	Passed all requirements	John Humm and Michael Schlick	Passed all requirements	John Humm and Michael Schlick
LATERAL PELVIS IMPACT TEST	Passed all requirements	John Humm and Michael Schlick	Passed all requirements	John Humm and Michael Schlick

SID Serial Number 058 Test Sequences 02 and 03

TEST	PRE		POST	
	COMMENTS	BY	COMMENTS	BY
EXTERNAL DIMENSIONS	Passed all requirements	John Humm and Michael Schlick	Passed all requirements	John Humm and Michael Schlick
THORACIC SHOCK ABSORBER TEST	Passed all requirements	John Humm	-	-
LATERAL THORAX IMPACT TEST	Passed all requirements	John Humm and Michael Schlick	Passed all requirements	John Humm and Michael Schlick
LATERAL PELVIS IMPACT TEST	Passed all requirements	John Humm and Michael Schlick	Passed all requirements	John Humm and Michael Schlick

SUMMARY
SID PRE AND POST VERIFICATION

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial Number 056 and 058 Test Sequences 02 and 03

TEST PARAMETER	SPECIFICATION	056		058	
		PRE	POST	PRE	POST
MEASUREMENTS					
Date	-	1/20/2001	2/5/2001	1/20/2001	2/5/2001
Sequential Test Number	-	02	03	02	03
Temperature (°C)	18.9-25.5	20.5	21.0	20.5	21.0
Relative Humidity (%)	10-70	35	32	35	32
SH – Seated Height (mm)	889-909	899	904	897	898
RH – Rib Height (mm)	501-521	515	512	515	515
HP – Hip Pivot Height (mm)	99	99	99	99	99
RD – Rib From Back Line (mm)	229-241	235	233	234	234
KH – Knee Pivot from Back Line (mm)	511-526	521	525	521	521
KV – Knee Pivot to Floor (mm)	490-505	494	494	500	498
HW – Hip Width (mm)	356-391	373	375	382	381
THORAX IMPACTS					
Date	-	1/20/2001	2/5/2001	1/20/2001	2/5/2001
Sequential Test Number	-	02	03	02	03
Temperature (°C)	18.9-25.5	20.5	21.0	20.5	21.0
Relative Humidity (%)	10-70	35	32	35	32
Probe Speed (m/s)	4.21-4.33	4.21	4.23	4.22	4.22
Upper Rib Acceleration (G)	37-46	41.8	44.7	44.4	44.5
Lower Rib Acceleration (G)	37-46	39.7	43.7	44.7	45.4
Lower Spine Acceleration (G)	15-22	18.2	20.1	20.0	20.5
PELVIS IMPACTS					
Date	-	1/20/2001	2/5/2001	1/20/2001	2/5/2001
Sequential Test Number	-	02	03	02	03
Temperature (°C)	18.9-25.5	20.5	21.0	20.5	21.0
Relative Humidity (%)	10-70	35	32	35	32
Probe Speed (m/s)	4.21-4.33	4.24	4.25	4.22	4.22
Pelvis Acceleration (G)	40-60	47.7	53.0	47.6	47.0
THORACIC SHOCK ABSORBER					
Shock Absorber ID Number	-	486	-	03130164	-
Damper Setting	1-10	6	-	5	-
Date	-	12/26/2000	-	12/26/2000	-
Sequential Test Number	-	01	-	01	-
Temperature	18.9-25.5	21.0	-	21.0	-
Relative Humidity	10-70	35	-	35	-
Probe Speed (m/s) Low	3.05	3.05	-	3.05	-
Force (N)	836 – 1125	999	-	965	-
Displacement (mm)	30 – 35	32.1	-	33.4	-
Probe Speed (m/s) Middle	4.27	4.27	-	4.27	-
Force (N)	1730 – 2099	1972	-	2076	-
Displacement (mm)	32 – 37	34.8	-	36.5	-
Probe Speed (m/s) High	6.10	6.10	-	6.10	-
Force (N)	3741 – 4448	4031	-	4130	-
Displacement (mm)	33 - 40	36.7	-	39.1	-

DUMMY INSPECTION LIST
PRE AND POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial Number 056 and 058 Test Sequences 02 and 03

		SID 056		SID 058	
		PRE	POST	PRE	POST
	Date	1/20/2001	2/5/2001	1/20/2001	2/5/2001
	Performed By	John Humm	John Humm	John Humm	John Humm
PART	INSPECTION				
Skin	Visual	Passed	Passed	Passed	Passed
Head	Visual, Ballast, Accelerometer Mount	Passed	Passed	Passed	Passed
Neck	Visual and Palpated, Cable Torque	Passed	Passed	Passed	Passed
Spine Box	Visual, Ballast, Weldment, Accelerometer Mount	Passed	Passed	Passed	Passed
Rib Cage	Visual, Palpated, Measured, Stiffness	Passed	Passed	Passed	Passed
Sternum	Visual	Passed	Passed	Passed	Passed
Lumbar Spine	Visual	Passed	Passed	Passed	Passed
Abdomen	Visual	Passed	Passed	Passed	Passed
Pelvis	Visual, Palpated, Accelerometer Mount	Passed	Passed	Passed	Passed
Upper Legs	Visual	Passed	Passed	Passed	Passed
Knees	Visual, Stops, Inserts	Passed	Passed	Passed	Passed
Lower Legs	Visual, Range of Motion	Passed	Passed	Passed	Passed
Ankles	Visual, Range of Motion	Passed	Passed	Passed	Passed
Feet	Visual, Range of Motion	Passed	Passed	Passed	Passed
Joints	1 to 2 G Range	Passed	Passed	Passed	Passed
Other					

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

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SID INSTRUMENTATION

FRONT SID NO. 056

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD X	J32800	ENDEVCO	10/24/2000
HEAD Y	J32565	ENDEVCO	10/24/2000
HEAD Z	J32567	ENDEVCO	10/24/2000
UPPER RIB	J35981	ENDEVCO	10/3/2000
LOWER RIB	J22318	ENDEVCO	10/24/2000
LOWER SPINE	J36616	ENDEVCO	10/3/2000
PELVIS	J32566	ENDEVCO	10/24/2000
UPPER RIB REDUNDANT	J18553	ENDEVCO	10/24/2000
LOWER RIB REDUNDANT	J35768	ENDEVCO	10/24/2000
LOWER SPINE REDUNDANT	J35940	ENDEVCO	10/3/2000
PELVIS REDUNDANT	J32662	ENDEVCO	10/24/2000

REAR SID NO. 058

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD X	J21552	ENDEVCO	6/11/2000
HEAD Y	J22189	ENDEVCO	6/11/2000
HEAD Z	J21551	ENDEVCO	5/10/2000
UPPER RIB	J36614	ENDEVCO	10/3/2000
LOWER RIB	J36018	ENDEVCO	10/3/2000
LOWER SPINE	J36659	ENDEVCO	10/3/2000
PELVIS	J36031	ENDEVCO	10/3/2000
UPPER RIB REDUNDANT	J35849	ENDEVCO	10/3/2000
LOWER RIB REDUNDANT	J35937	ENDEVCO	10/3/2000
LOWER SPINE REDUNDANT	J36603	ENDEVCO	10/3/2000
PELVIS REDUNDANT	J34364	ENDEVCO	10/24/2000

VEHICLE INSTRUMENTATION

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL X	98F98A28-Q02	ENTRAN	1/19/2001
RIGHT FRONT SILL Y	J32665	ENDEVCO	1/19/2001
RIGHT FRONT SILL Z	J21342	ENDEVCO	1/19/2001
RIGHT REAR SILL X	93B18-V19	ENTRAN	1/26/2001
RIGHT REAR SILL Y	J35641	ENDEVCO	1/19/2001
RIGHT REAR SILL Z	J36617	ENDEVCO	1/19/2001
REAR FLOORPAN ABOVE AXLE X	98G98E11-K02	ENTRAN	1/24/2001
REAR FLOORPAN ABOVE AXLE Y	98G98E07-Z09	ENTRAN	1/24/2001
REAR FLOORPAN ABOVE AXLE Z	98G98D22-Z04	ENTRAN	1/24/2001
LEFT REAR SILL Y	98L98L10-N10	ENTRAN	11/27/2000
LEFT FRONT SILL Y	98G98E11-S14	ENTRAN	11/27/2000
LEFT FRONT DOOR CENTERLINE Y	N/a	N/a	N/a
RIGHT REAR OCCUPANT COMP Y	J21505	ENDEVCO	1/19/2001
MID-REAR OF LEFT FRONT DOOR Y	N/a	N/a	N/a
LEFT FRONT DOOR UPPER C/L Y	N/a	N/a	N/a
MID-REAR OF LEFT REAR DOOR Y	N/a	N/a	N/a
LEFT REAR DOOR UPPER C/L Y	N/a	N/a	N/a
LOWER LEFT B-PILLAR Y	98F98E11-K07	ENTRAN	1/26/2001
UPPER LEFT B-PILLAR Y	98F98H14-F53	ENTRAN	1/26/2001
LOWER LEFT A-PILLAR Y	J21466	ENDEVCO	1/23/2001
UPPER LEFT A-PILLAR Y	98F98B28-N06	ENTRAN	11/27/2000
FRONT SEAT TRACK Y	94G94J06-G07	ENTRAN	11/27/2000
REAR SEAT TRACK Y	J34385	ENDEVCO	10/24/2000
VEHICLE CG X	J35695	ENDEVCO	1/19/2001
VEHICLE CG Y	J35932	ENDEVCO	1/19/2001
VEHICLE CG Z	J21693	ENDEVCO	1/19/2001

MDB INSTRUMENTATION

MDB CG X	98F98D06-F06	ENTRAN	6/01/2000
MDB CG Y	98F98C27-B04	ENTRAN	6/01/2000
MDB CG Z	98F98E11-K10	ENTRAN	6/01/2000
MDB REAR FRAME MEMBER X	B12853	ENDEVCO	6/01/2000
MDB REAR FRAME MEMBER Y	B13038	ENDEVCO	6/01/2000