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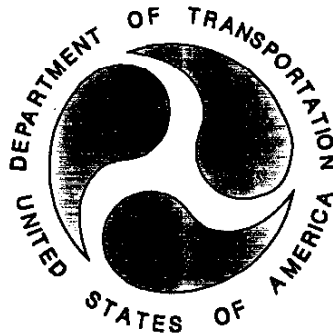
**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

DAIMLERCHRYSLER CORPORATION
2000 DODGE CARAVAN
MPV

NHTSA NUMBER: MY0303

VERIDIAN ENGINEERING TEST NUMBER: 8506-11

VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
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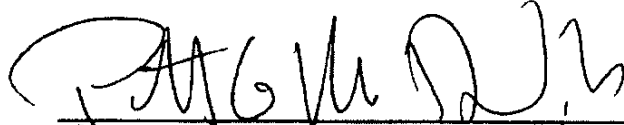
January 6, 2000

FINAL REPORT

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

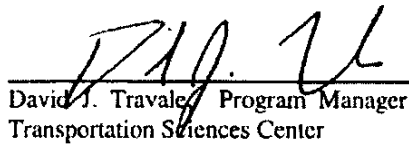
This Final Test Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-98-C-02001. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The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

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January 31, 2000

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Accepted By:



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				14. Sponsoring Agency Code NPS-10																															
15. Supplementary Notes																																			
16. Abstract <p>A 55/28 kph 90° Impact Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2000 Dodge Caravan MPV in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the generation of consumer information on vehicle side crash protection. This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on January 6, 2000.</p> <p>The impact velocity of the Moving Deformable Barrier (MDB) was 61.48 kph, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21 °C. The target vehicle post-test maximum crush was 422 mm at level 2.</p> <p>The test or target vehicle's performance is given below:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>Front SID</u></th> <th style="width: 10%;"></th> <th style="width: 15%; text-align: center;"><u>Rear SID</u></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td style="text-align: center;">37</td> <td style="text-align: center;">g's</td> <td style="text-align: center;">45</td> <td style="text-align: center;">g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td style="text-align: center;">37</td> <td style="text-align: center;">g's</td> <td style="text-align: center;">45</td> <td style="text-align: center;">g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td style="text-align: center;">64</td> <td style="text-align: center;">g's</td> <td style="text-align: center;">63</td> <td style="text-align: center;">g's</td> </tr> <tr> <td>Thoracic Trauma Index (TTI):</td> <td style="text-align: center;">50</td> <td style="text-align: center;">g's</td> <td style="text-align: center;">54</td> <td style="text-align: center;">g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td style="text-align: center;">71</td> <td style="text-align: center;">g's</td> <td style="text-align: center;">116</td> <td style="text-align: center;">g's</td> </tr> </tbody> </table> <p>The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.</p>							<u>Front SID</u>		<u>Rear SID</u>		Left Upper Rib Acceleration:	37	g's	45	g's	Left Lower Rib Acceleration:	37	g's	45	g's	Lower Spine Acceleration:	64	g's	63	g's	Thoracic Trauma Index (TTI):	50	g's	54	g's	Pelvis Acceleration (PEV):	71	g's	116	g's
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17. Key Words New Car Assessment Program (NCAP) Side Impact MDB Side Impact Dummy (SID)			18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Reference Division Room 5108 (NAD-52) 400 Seventh St., S.W. Washington, D.C. 20590 Telephone No. (202) 366-4946 ATTN: Robert Hornicle																																
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TABLE OF CONTENTS

<u>Section</u>		<u>Page No.</u>
1	PURPOSE AND TEST PROCEDURE	1-1
2	SUMMARY OF SIDE IMPACT TEST	2-1
3	VEHICLE TEST DATA	3-1
	Data Sheet 1 - General Vehicle Test Parameter Data	3-2
	Data Sheet 2 - Test Vehicle Summary of Results	3-5
	Data Sheet 3 - Moving Deformable Barrier (MDB) Summary	3-6
	Data Sheet 4 - Post Test Observations	3-7
4	OCCUPANT AND VEHICLE INFORMATION	4-1
	Data Sheet 5 - SID Instrumentation Data	4-2
	Data Sheet 6 - Vehicle Pre- And Post Test Measurements	4-3
	Data Sheet 7 - SID Longitudinal Clearance Dimensions	4-4
	Data Sheet 8 - SID Lateral Clearance Dimensions	4-5
	Data Sheet 9 - Vehicle Side Measurements	4-6
	Data Sheet 10 - Vehicle Exterior Crush Profiles - All Levels	4-7
	Data Sheet 11 - Vehicle Damage Profile Distances	4-13
	Data Sheet 12 - Exterior Static Crush For Impactor Face	4-14
	Data Sheet 13 - Test Vehicle Accelerometer Locations And Data Summary	4-16
	Data Sheet 14 - MDB Accelerometer Locations and Data Summary	4-19
	Data Sheet 15 - High Speed Camera Locations and Data	4-20
5	VEHICLE FUEL SYSTEM INTEGRITY	5-1
	Data Sheet 16 - FMVSS 301 Fuel System Integrity Data	5-2
	Data Sheet 17 - FMVSS 301 Rollover Data	5-3
APPENDIX A	PHOTOGRAPHS	A-1
APPENDIX B	VEHICLE, MDB AND SID RESPONSE DATA	B-1
APPENDIX C	SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA	C-1
APPENDIX D	TEST EQUIPMENT LIST AND CALIBRATION INFORMATION	D-1

SECTION 1

PURPOSE AND TEST PROCEDURE

This side impact test is part of the FY2000 New Car Assessment Program Side Impact Protection sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-98-C-02001. The purpose of this test was to generate comparative side impact performance in a 2000 Dodge Caravan MPV. The test was conducted in accordance with the Office of Crashworthiness Standards's Laboratory Test Procedure dated July, 1997.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 2000 Dodge Caravan MPV was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 61.48 kph (38.2 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Veridian Engineering Transportation Sciences Center in Buffalo, New York on January 6, 2000. Pre- and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SIDs) are included in Appendix A.

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

The SIDs were instrumented with the following accelerometers:

1. Left Upper Rib (LUR) uniaxial and redundant accelerometer (Y-direction)
2. Left Lower Rib (LLR) uniaxial and redundant accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial and redundant accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial and redundant accelerometer (Y-direction)
5. Head triaxial accelerometers (X-, Y- and Z-direction)

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

The following table summarizes the results of the test.

Injury Criteria	Front SID	Rear SID
TTI (g)	50	54
PEV (g)	71	116

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max. Fluids	=	<u>1658.5</u>	kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	<u>45.7</u>	kg (B)
Weight of 2 instrumented Side Impact Dummies	=	<u>162.4</u>	kg (C)
TEST VEHICLE TARGET WEIGHT:	=	<u>1866.6</u>	kg (A+B+C)

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

Left Front	=	<u>570.5</u>	kg	Left Rear	=	<u>427.5</u>	kg
Right Front	=	<u>474.0</u>	kg	Right Rear	=	<u>405.0</u>	kg
TOTAL FRONT	=	<u>1044.5</u>	kg	TOTAL REAR	=	<u>832.5</u>	kg
% of Total Weight	=	<u>55.6</u>	%	% of Total Weight =	=	<u>44.4</u>	%
TOTAL TEST WEIGHT	=	<u>1877.0</u>	kg				

AS TESTED WEIGHT OF TEST VEHICLE (2 SIDs + CARGO + EQUIPMENT & INSTRUMENTATION):

Left Front	=	<u>562.5</u>	kg	Left Rear	=	<u>421.0</u>	kg
Right Front	=	<u>476.5</u>	kg	Right Rear	=	<u>399.0</u>	kg
TOTAL FRONT	=	<u>1039.0</u>	kg	TOTAL REAR	=	<u>820.0</u>	kg
% of Total Weight	=	<u>55.9</u>	%	% of Total Weight =	=	<u>44.1</u>	%
TOTAL TEST WEIGHT	=	<u>1859.0</u>	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED:

Left Front	<u>761</u>	Right Front	<u>768</u>	Left Rear	<u>771</u>	Right Rear	<u>776</u>
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FULLY LOADED:

Left Front	<u>747</u>	Right Front	<u>762</u>	Left Rear	<u>744</u>	Right Rear	<u>758</u>
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READY FOR TEST:

Left Front	<u>750</u>	Right Front	<u>765</u>	Left Rear	<u>754</u>	Right Rear	<u>760</u>
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Test Vehicle Wheelbase: 2883 millimeters

C.G. = 1271.7 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side	=	<u>4602</u>	millimeters
Left Side	=	<u>4601</u>	millimeters
Centerline	=	<u>4695</u>	millimeters

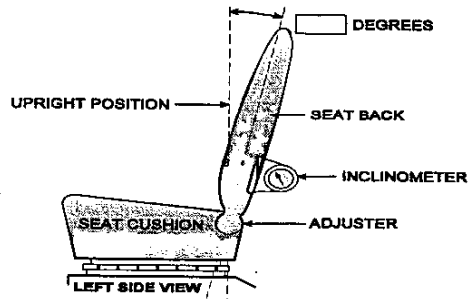
DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

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



FRONT SEAT ASSEMBLY

FRONT SEAT CUSHION PLACEMENT: Place in mid-position; detent 11, 110 mm rearward of full forward

Total Length of Adjustment Travel: 220 millimeters

Total Number of Adjustment Positions or Detents: 23

FRONT SEAT BACK ADJUSTMENT POSITION: Recline seat 4° from full upright measured 55 mm above pivot

Seat Back Torso Angle: N/A degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0 millimeters

Seat Back Adjustment Position: Fixed

ADJUSTABLE STEERING COLUMN POSITION: Fixed

WINDOW POSITIONS: Left Front: Closed

Left Rear: Fixed

Right Front: Removed

Right Rear: Removed

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

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

75.7 liters (Fuel Tank Usable Capacity)

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

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

Wheelbase = 2883 millimeters

Impact Point is 502 millimeters rearward of front axle centerline

(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 496 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2000 Dodge Caravan

Body Style: MPV

VIN: 2B4FP25B5YR530409

NHTSA No.: MY0303

Test Date: January 6, 2000

Overall Length = 4695 millimeters; Overall Width = 1916 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front	=	<u>562.5</u> kg	Left Rear	=	<u>421.0</u> kg
Right Front	=	<u>476.5</u> kg	Right Rear	=	<u>399.0</u> kg
TOTAL FRONT	=	<u>1039.0</u> kg	TOTAL REAR	=	<u>820.0</u> kg
TOTAL VEHICLE WEIGHT		<u>1859.0</u> kg			
Wheelbase	=	<u>2883</u> millimeters			
Longitudinal C.G. from Center of Front Axle	=	<u>1271.7</u> millimeters			
Impact Angle with Respect to Impactor	=	<u>90</u> degrees			

ACTUAL IMPACT POINT

Actual Impact Point is 6 mm forward of nominal impact ref. line (Lateral)
 Actual Impact Point is 2 mm above nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (	<u>313</u> mm above ground)	=	<u>329</u> millimeters
2. LEVEL 2 (	<u>751</u> mm above ground)	=	<u>422</u> millimeters
3. LEVEL 3 (	<u>636</u> mm above ground)	=	<u>422</u> millimeters
4. LEVEL 4 (	<u>942</u> mm above ground)	=	<u>355</u> millimeters
5. LEVEL 5 (	<u>1627</u> mm above ground)	=	<u>17</u> millimeters
Maximum Post-Test Intrusion	=	<u>422</u> millimeters	

OCCUPANTS:

	<u>Front Passenger:</u>	<u>Rear Passenger:</u>
Dummy Identification	<u>027</u>	<u>268</u>
Restraints Used	<u>Seatbelt</u>	<u>Seatbelt</u>

INSTRUMENTATION:

Number of Vehicle Data Channels:	=	<u>49</u>
Number of Cameras:	Onboard	= <u>3</u>
	Offboard	= <u>8</u>
	TOTAL	= <u>11</u>

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore, Inc. 031B1199-3 013C1099 2814

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

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

MDB WEIGHT:

Left Front	=	<u>409.5</u>	kg	Left Rear	=	<u>281.5</u>	kg
Right Front	=	<u>372.5</u>	kg	Right Rear	=	<u>299.0</u>	kg
TOTAL FRONT =		<u>782.0</u>	kg	TOTAL REAR =		<u>580.5</u>	kg
TOTAL MDB WEIGHT =		<u>1362.5</u>	kg				
Impact Angle (MDB C/L to Target Vehicle C/L)	=	<u>90</u>	degrees				
Impact Speed	=	<u>61.48</u>	kph				

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	<u>113</u>	millimeters
2. Row B at Top of Bumper Level	=	<u>70</u>	millimeters
3. Row C at Mid Level	=	<u>100</u>	millimeters
4. Row D at Top of Stack Level	=	<u>146</u>	millimeters

INSTRUMENTATION:

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

POST-TEST OBSERVATIONS

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head:	<u>The side of the face to the left shoulder.</u>	<u>The back of the head to the C-pillar; The side of the face to the left shoulder.</u>
Upper Torso:	<u>Door Panel Trim</u>	<u>Rear Panel Trim</u>
Lower Torso:	<u>Door Panel Trim</u>	<u>Rear Panel Trim</u>
Left Knee:	<u>Door Panel Trim</u>	<u>Rear Panel Trim</u>
Right Knee:	<u>Left Knee</u>	<u>Left Knee</u>

DOOR OPENING:

	<u>LEFT DOOR</u>	<u>RIGHT DOOR</u>
Front:	<u>Closed/Inoperable</u>	<u>Closed/Operable</u>
Rear:	<u>Not Applicable</u>	<u>Closed/Operable</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

Vertical: 6 mm forward
Horizontal: 2 mm above

ARM REST LOCATIONS:

Front: Moved inboard and rotated upward
Rear: Moved inboard

SEAT MOVEMENT:

Front: Moved inboard and rotated upward
Rear: Seat cushion was moved inboard

GLAZING DAMAGE:

Windshield: Cracked at center and near left A-pillar
Window: Rear side windows shattered on impact; left front window fell out of vehicle on impact.

PILLAR PERFORMANCE:

No visible tears or separation; A- and B-pillars were moved inboard during the event.

SILL SEPARATION:

Sill began to separate at left rear wheel well

AIR BAG DEPLOYMENT STATUS:

	DRIVER	FRONT PASSENGER	REAR PASSENGER
FRONT	No	No	N/A
SIDE	N/A	N/A	N/A

OTHER NOTABLE IMPACT EFFECTS:

Rear impact point indicated 9 mm forward and 11 mm above; The vehicle leaked fuel at impact; The fuel filler neck separated from the fuel tank and stoddard solvent poured out. A post-test rollover was not performed.
The MDB was still in contact with the vehicle after the event.

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

	Front Dummy ID# 027				Rear Dummy ID# 268			
	Pos. Direction		Neg. Direction		Pos. Direction		Neg. Direction	
	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
HEAD ACCELERATIONS:								
Longitudinal X	5.5	177.0	-13.7	88.9	34.9	201.1	-13.1	69.5
Lateral Y	26.9	60.1	-8.3	158.7	30.6	71.9	-11.8	205.3
Vertical Z	46.0	69.1	-6.9	36.3	40.4	80.6	-8.1	206.6
Resultant R	48.5	68.8	0.0	-59.0	44.1	79.9	0.0	-79.1
HIC	225.9				229.1			
RIB ACCELERATIONS:								
Upper Rib Lateral . . Y	36.7	54.4	-11.7	95.6	44.9	62.5	-8.6	33.7
Upper Rib Lateral . . Y(R)	35.3	40.0	-12.5	95.6	47.7	53.1	-12.7	31.9
Lower Rib Lateral . . Y	36.9	38.2	-9.0	159.3	45.2	53.2	-9.8	31.9
Lower Rib Lateral . . Y(R)	37.9	38.1	-10.0	159.4	42.6	61.9	-9.8	33.7
SPINE ACCELERATIONS:								
Lower Lateral Y	63.5	40.7	-8.1	113.7	62.6	50.0	-8.8	75.6
Lower Lateral Y(R)	64.4	40.7	-8.2	65.0	62.0	50.0	-9.2	75.0
PELVIC ACCELERATIONS:								
Lateral Y	70.8	38.1	-10.7	65.7	115.6	44.4	-14.2	66.3
Lateral Y(R)	70.8	38.1	-11.0	66.3	128.7	44.4	-15.4	66.3

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

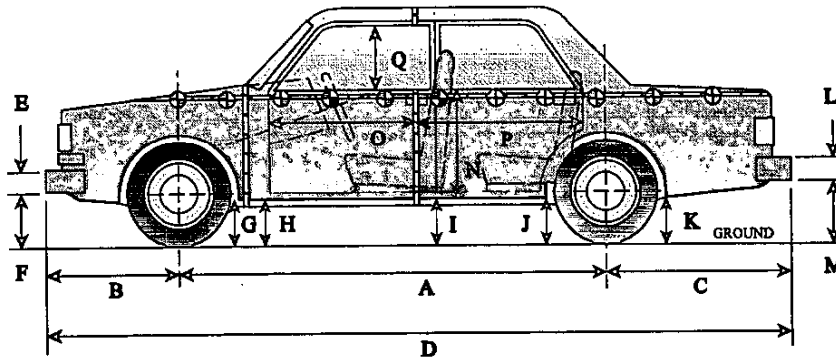
Note: Above data has been FIR filtered, Y(R) denotes redundant Y direction accelerometer.
 Head Accelerations are filtered at SAE Class 1000.

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



LEFT SIDE VIEW

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

	PRE-TEST (as delivered)	PRE-TEST (as tested)	POST-TEST (as tested)	Δ CHANGE
A	2883	-	2870	-13
B	920	-	930	10
C	892	-	880	-12
D	4695	-	4680	-15
E	170	-	170	0
F	394	387	430	43
G	291	270	297	27
H	300	279	360	81
I	315	287	407	120
J1	255	222	380	158
J2	308	280	330	50
K	332	295	302	7
L	168	-	168	0
M	358	325	328	3
N	770	-	610	-160
O	895	-	871	-24
P	1163	-	1110	-53
Q	605	-	621	16
R	4602	-	4602	0
S	4601	-	4555	-46
T	1916	-	1610	-306

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

E&L = Bumper Thickness
J1 = To Pinch Weld

R = Right Side Length
J2 = To Sill

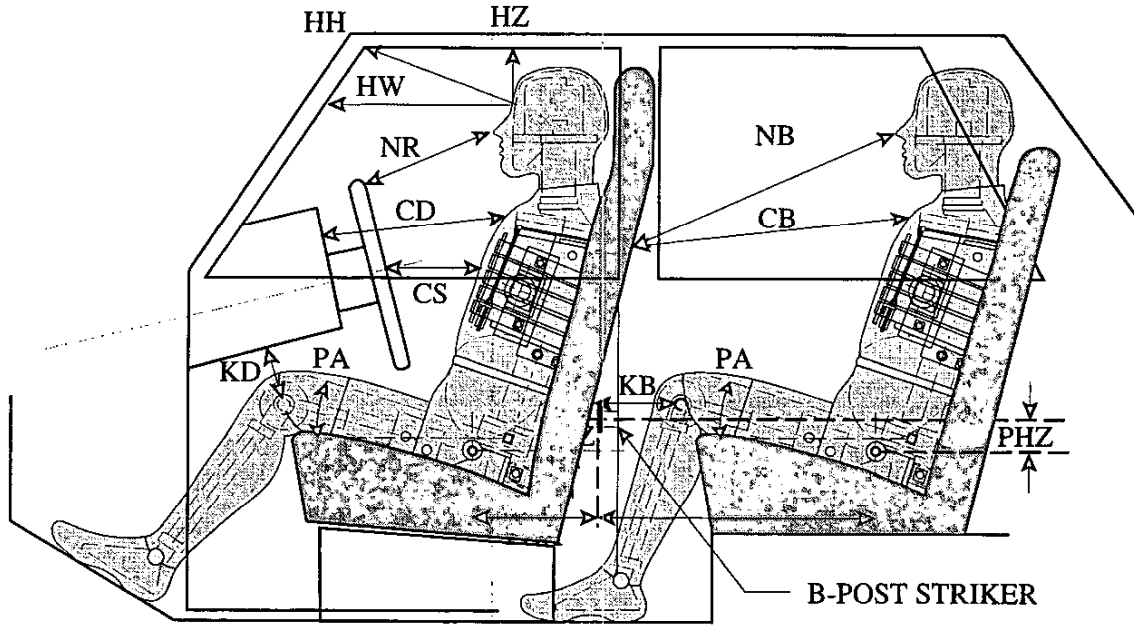
S = Left Side Length

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



LEFT SIDE VIEW

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

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

	DRIVER ID# 027	LEFT REAR PASS. ID# 268
HH	306	N/A
HW	579	N/A
HZ	170	215
NR/NB	364	660 at Shoulder Level
CD/CB	518	583
CS	233	N/A
KDL(KDA°)/KBL(KDA°)	183 / (25°)	235 / (19°)
KDR(KBA°)/KBR(KBA°)	182 / (22°)	235 / (18°)
PA°	25.0 °	23.5 °
PHX	246	645
PHZ	-7	40

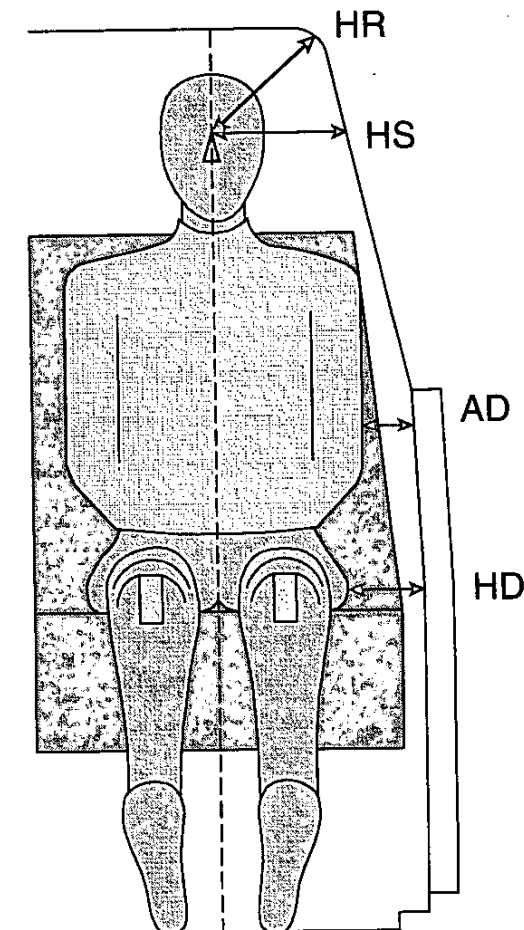
Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



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

	DRIVER ID # 027		LEFT REAR PASS. ID # 268	
HR	208		256	
HS	325		400	
AD*	LOWER: 130	UPPER: 203**	LOWER: 183	UPPER: 253**
HD	158		150	

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

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

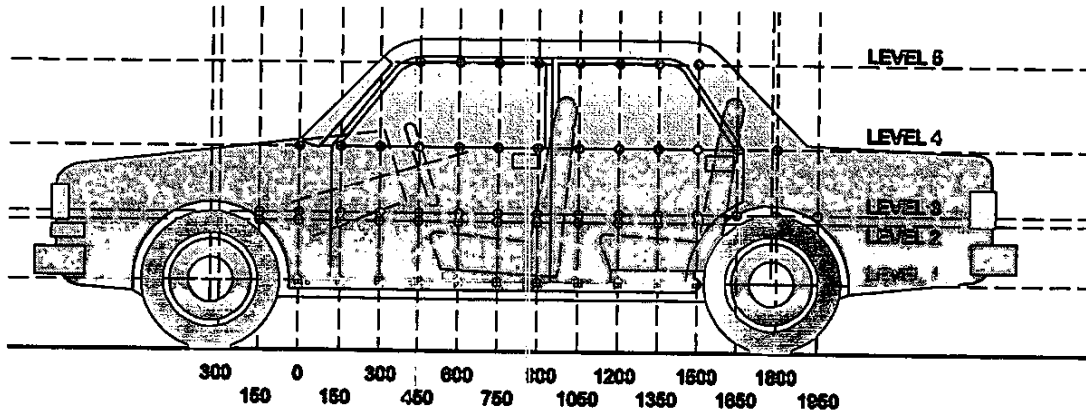
** To Side Glass

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



LEFT SIDE VIEW

NOTE: All measurements are in millimeters (mm)

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

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

Level 5 @ Window Top	=	<u>1627</u>	millimeters
Level 4 @ Window Sill	=	<u>942</u>	millimeters
Level 3 @ Mid Door	=	<u>636</u>	millimeters
Level 2 @ Occupant H-Point	=	<u>751</u>	millimeters
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>313</u>	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

NHTSA No. MY0303

Vehicle: 2000 Dodge Caravan

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

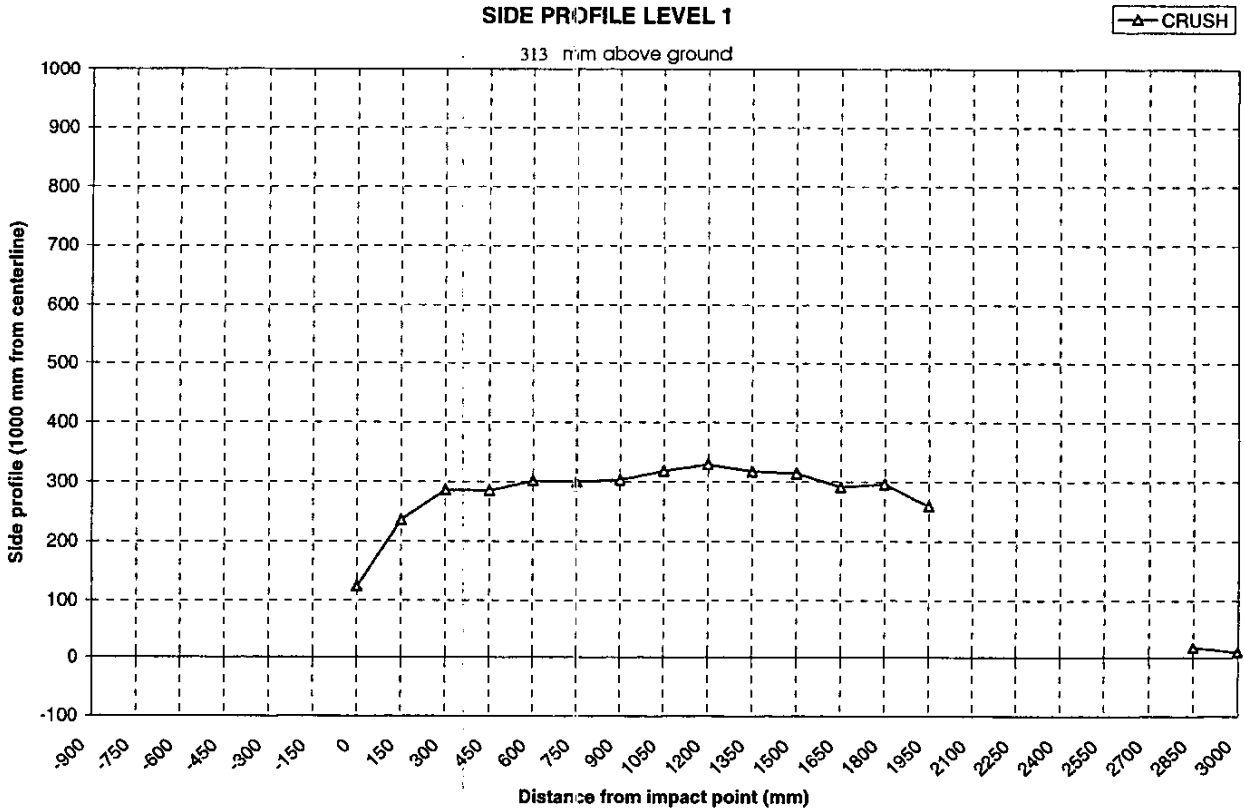
LEVEL	HEIGHT (mm)	DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																																
		-900	-750	-600	-450	-300	-150	0	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000						
LEVEL 1	313																																	
SIDE																																		
SILL																																		
LEVEL 2	751																																	
H																																		
POINT																																		
LEVEL 3	636																																	
MID																																		
DOOR																																		
LEVEL 4	942																																	
WINDOW																																		
SILL																																		
LEVEL 5	1627																																	
WINDOW																																		
TOP																																		

DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2000 Dodge Caravan

NHTSA No. No.

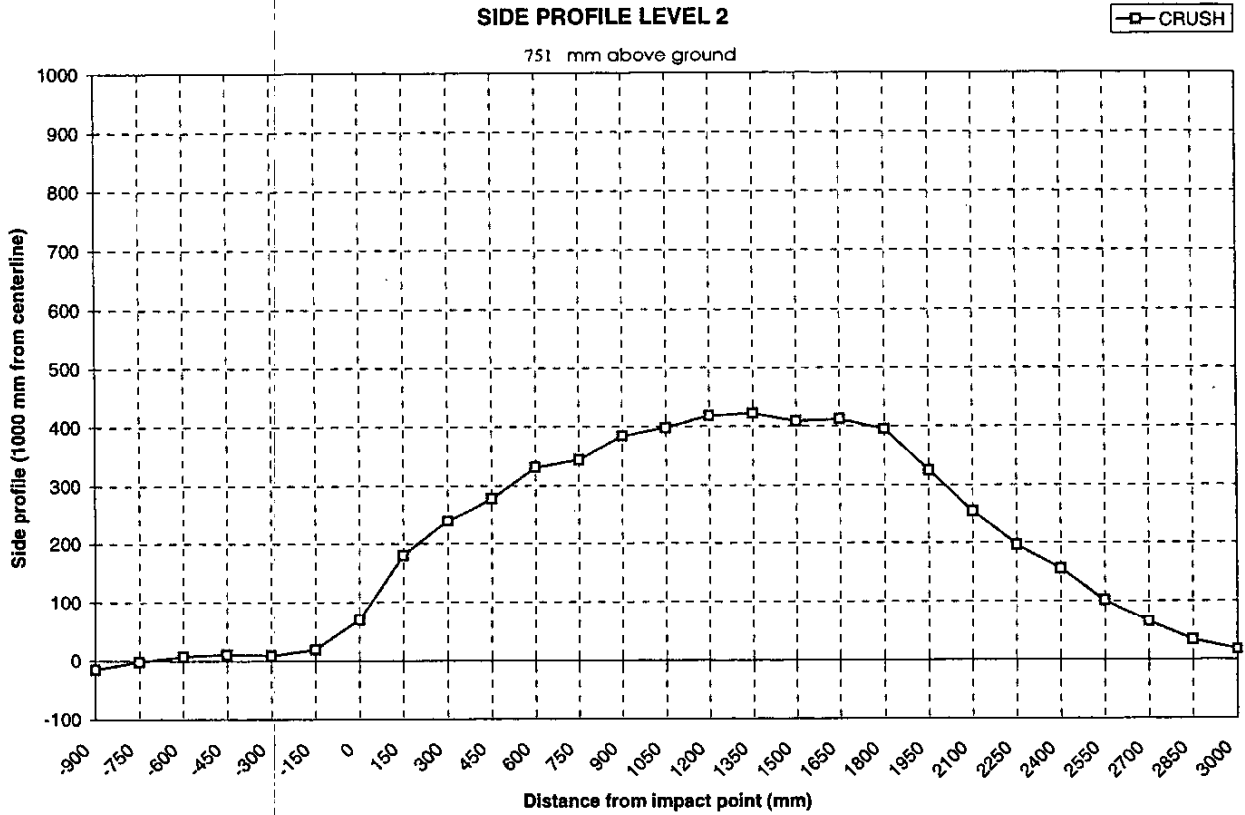


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

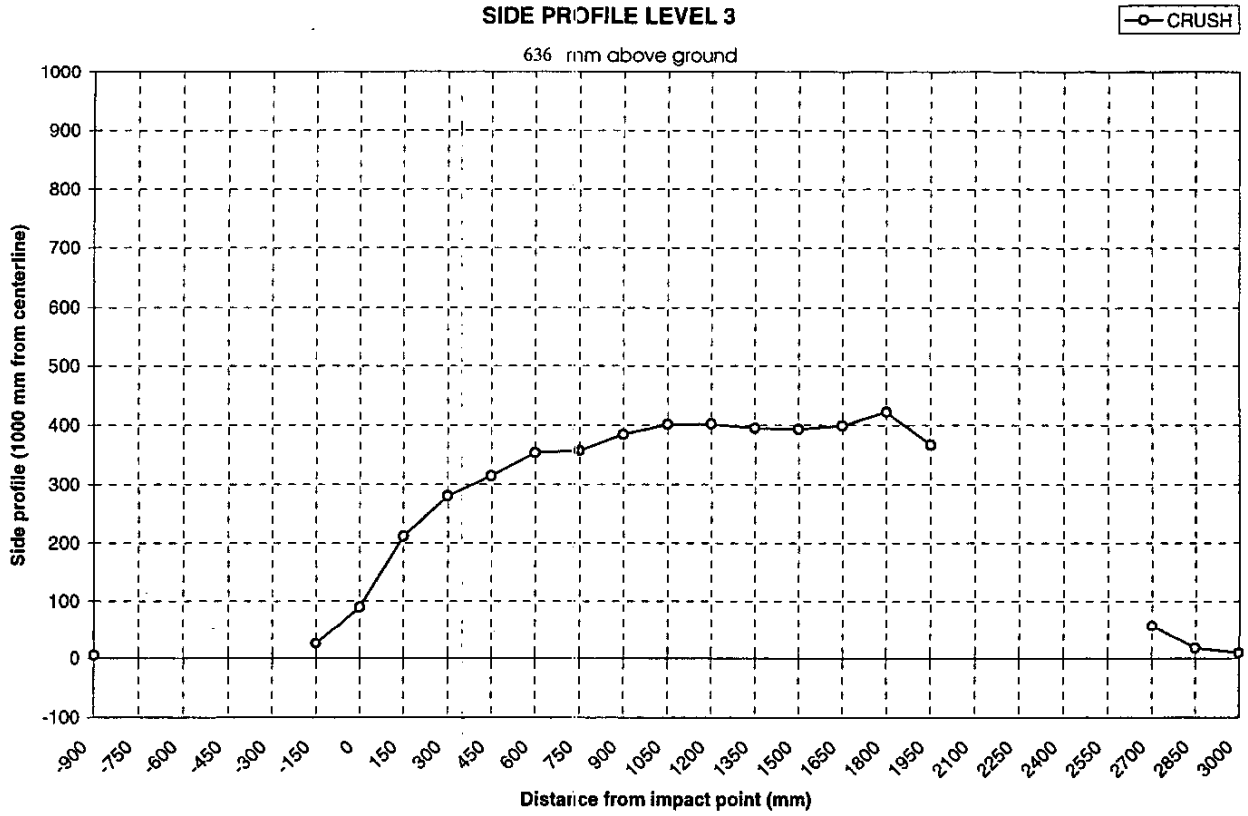


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

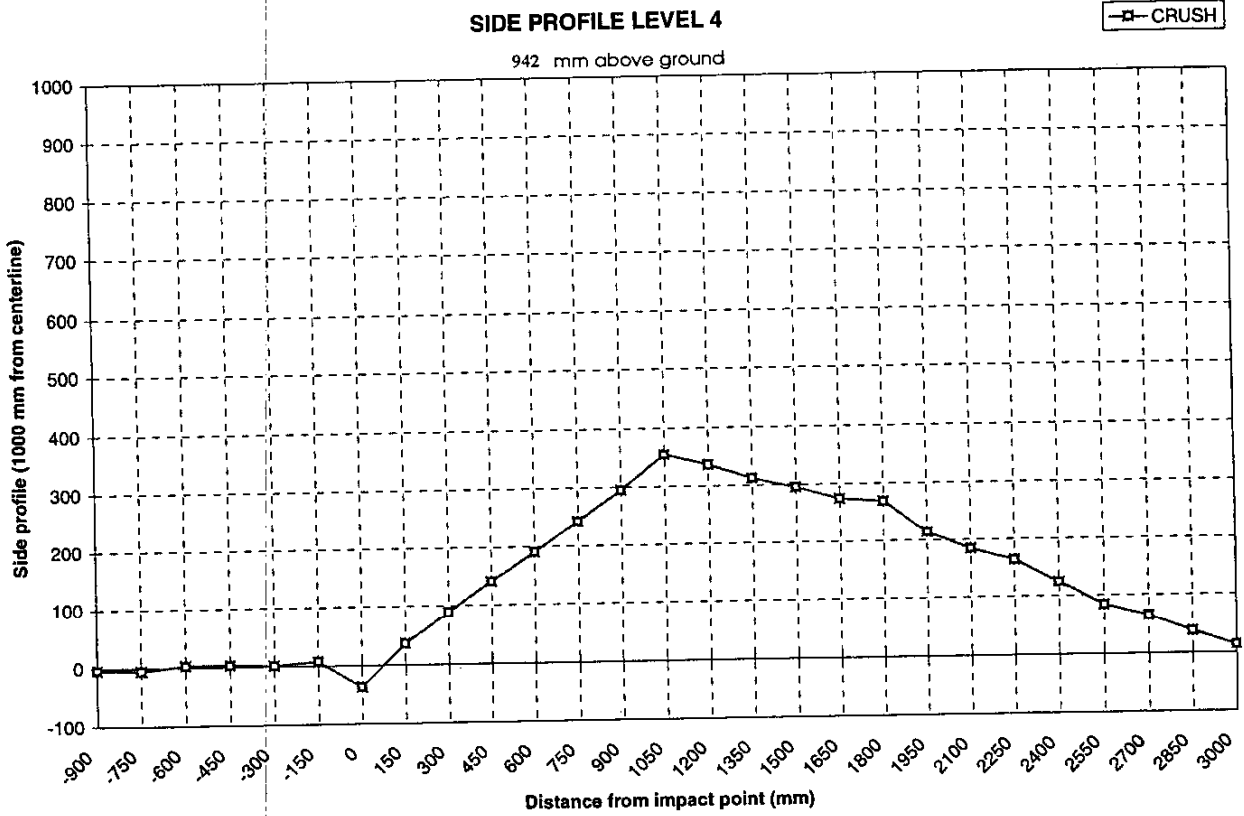


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

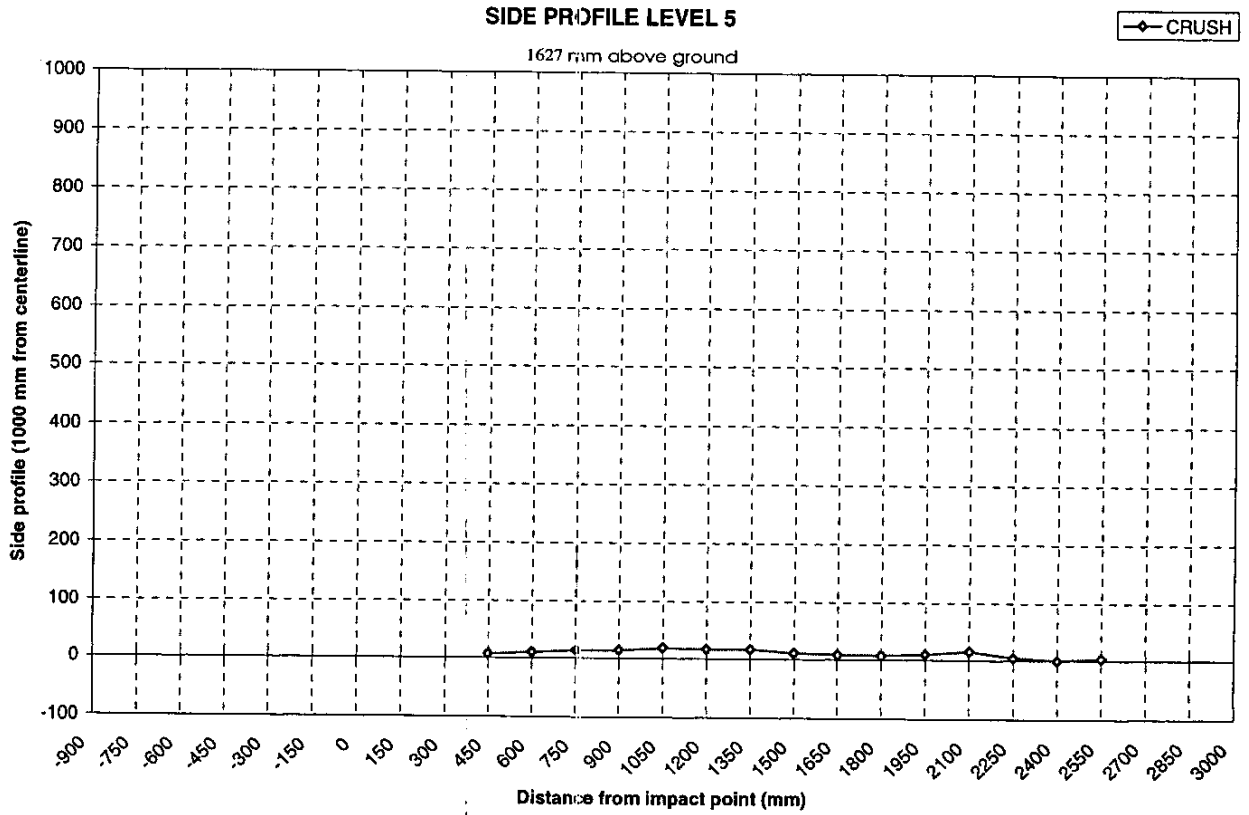


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

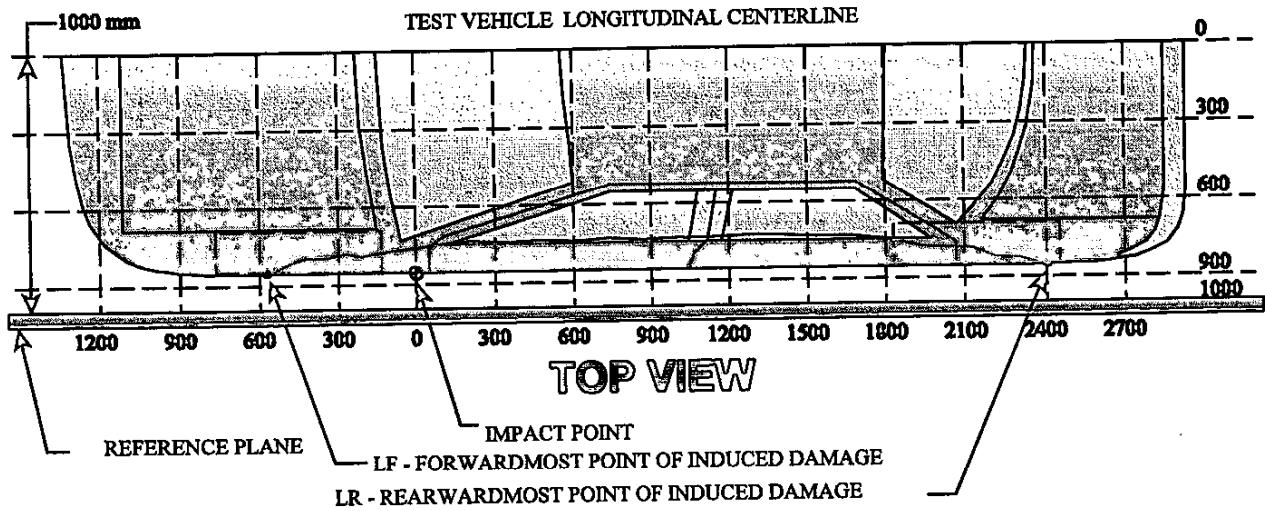


DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



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

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

DPD MEASUREMENTS	POST TEST (mm)	PRETEST (mm)	STATIC CRUSH (mm)
1 (LF = -150 mm)	107	82	25
2 460	380	64	316
3 1070	458	57	401
4 1680	457	48	409
5 2290	230	45	185
6 (LR = 2900 mm)	137	108	29

DATA SHEET 12

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

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

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

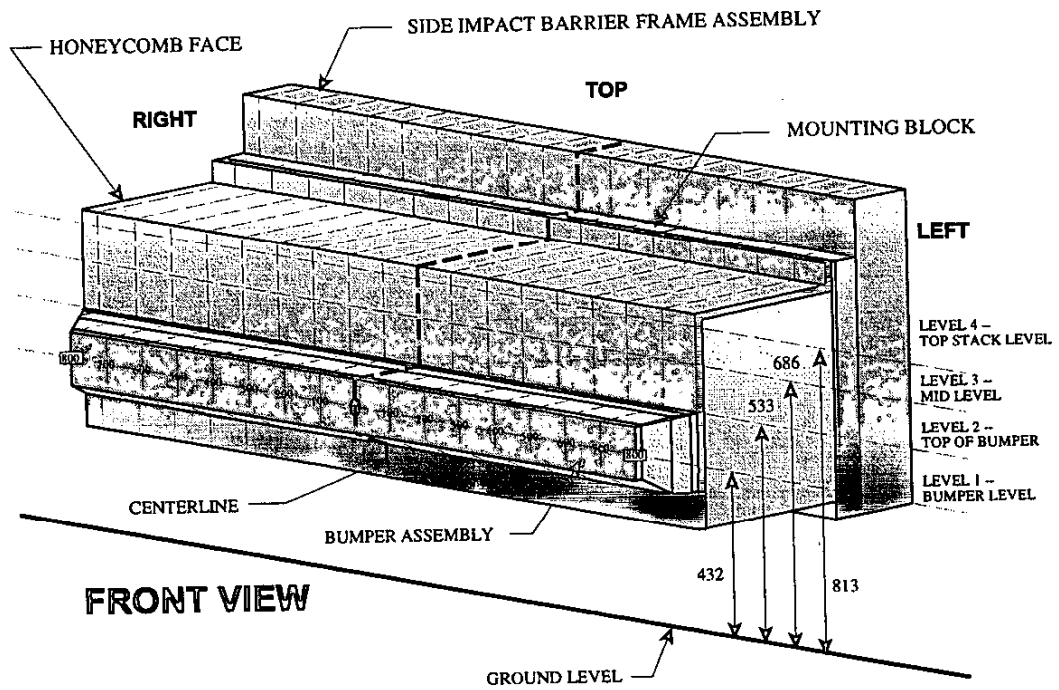
LEVEL	HEIGHT AT CL (mm)*		DISTANCE RIGHT OF CENTER (mm)								DISTANCE LEFT OF CENTER (mm)								
			800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
LEVEL 4	813	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
TOP		POST	710	667	651	640	633	628	630	635	639	648	651	665	684	707	731	765	
STACK		CRUSH	91	48	32	21	14	9	9	11	16	20	29	32	46	65	88	112	146
LEVEL 3	686	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
MID		POST	632	632	631	632	633	627	623	621	627	630	633	640	645	659	681	719	
LEVEL		CRUSH	13	13	12	13	14	8	4	2	8	11	6	14	21	26	40	62	100
LEVEL 2	533	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
TOP		POST	681	669	664	661	659	656	657	660	662	664	668	669	672	672	681	689	
BUMPER		CRUSH	62	50	45	42	40	37	37	38	41	43	45	49	50	53	53	62	70
LEVEL 1	432	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	518	519	535
MID		POST	648	629	614	604	598	590	587	584	584	580	580	579	576	578	580	593	
BUMPER		CRUSH	113	110	96	86	80	72	69	66	66	62	62	61	58	60	61	61	58

DATA SHEET 12 (continued)

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



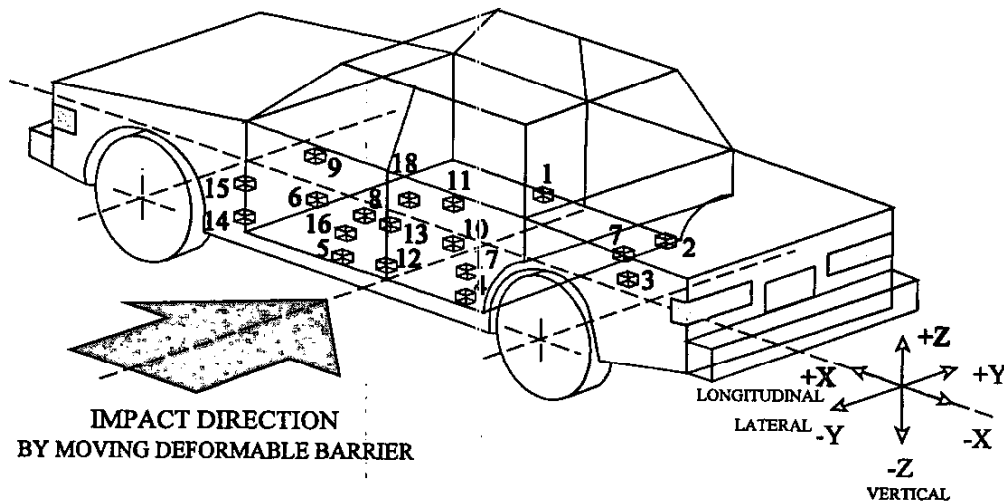
NOTE: Dimensions are shown in millimeters, mm

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



- 1-Right Side Sill @ Front Seat
- 2-Right Side Sill @ Rear Seat
- 3-Rear Floorpan Above Axle
- 4-Left Side Sill @ Rear Seat
- 5-Left Side Sill @ Front Seat
- 6-Left Front Door on Centerline
- 7-Right Rear Occupant Compartment
- 8-Midrear of Left Front Door
- 9-Left Front Door Upper Centerline

- 10-Midrear of Left Rear Door
- 11-Left Rear Door Upper Centerline
- 12-Left Lower B-Pillar
- 13-Left Middle B-Pillar
- 14-Left Lower A-Pillar
- 15-Left Middle A-Pillar
- 16-Front Seat Track
- 17-Rear Seat Track
- 18-Vehicle CG

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

NHTSA No. MY0303

Vehicle: 2000 Dodge Caravan

Accel. No.	Location	Coordinates (mm)±3			Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		mm			Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
		X*	Y*	Z*								
1	Right Side Sill at Front Seat	2990	699	526	pos. 4.4 neg. -4.0	16.7 68.8	21.3 -2.9	28.7 158.3	5.4 -8.6	102.1 18.4	22.6 0.0	28.7 -27.9
2	Right Side Sill at Rear Seat	1870	717	526	pos. 4.1 neg. -5.8	17.0 68.3	24.9 -3.1	28.5 158.0	7.2 -10.5	41.3 29.2	26.9 0.0	28.7 -70.0
3	Rear Floorpan Above Axle	1038	314	526	pos. 7.3 neg. -4.0	261.6 67.0	21.8 -2.2	30.2 157.3	34.2 -33.7	274.9 267.7	34.6 0.0	274.9 -78.3
4	Left Side Sill at Rear Seat	1870	-690	526	pos. - neg. -	- -	A A	A A	- -	- -	- -	- -
5	Left Side Sill at Front Seat	2990	-699	526	pos. - neg. -	- -	B B	B B	- -	- -	- -	- -
6	Left Front Door on Centerline	3080	-827	966	pos. - neg. -	- -	60.6 -94.5	35.6 10.1	- -	- -	- -	- -
7	Right Rear Occupant Compartment	2090	425	526	pos. - neg. -	- -	26.4 -3.3	28.4 157.8	- -	- -	- -	- -
8	Midrear of Left Front Door	2490	-825	966	pos. - neg. -	- -	108.6 -89.0	7.6 70.4	- -	- -	- -	- -
9	Left Front Door Upper Centerline	2870	-821	1151	pos. - neg. -	- -	100.5 -51.1	15.4 62.8	- -	- -	- -	- -
10	Midrear of Left Rear Door	1410	-758	1118	pos. - neg. -	- -	151.1 -97.7	13.9 43.7	- -	- -	- -	- -
11	Left Rear Door Upper Centerline	1850	-693	1171	pos. - neg. -	- -	147.2 -61.7	13.9 44.1	- -	- -	- -	- -

*Reference: X - Rear Bumper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Up)
A - Data not accurate after 9 ms B - Data not accurate after 19 ms

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

Accel. No.	Location	Coordinates (mm)±3			Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
12	Left Lower B-Pillar	2380	-685	671	-	-	165.5	4.7	-	-	-	-
					pos.	-	-140.8	17.9	-	-	-	-
13	Left Middle B-Pillar	2362	-729	875	-	-	89.5	15.4	-	-	-	-
					pos.	-	-70.7	23.5	-	-	-	-
14	Left Lower A-Pillar	3375	-790	806	-	-	100.3	64.9	-	-	-	-
					pos.	-	-25.7	317.2	-	-	-	-
15	Left Middle A-Pillar	3815	-684	960	-	-	11.4	57.5	-	-	-	-
					pos.	-	-2.0	121.8	-	-	-	-
16	Front Seat Track	2492	-610	598	-	-	134.2	24.7	-	-	-	-
					pos.	-	-41.8	31.4	-	-	-	-
17	Rear Seat Track	1643	-296	568	-	-	72.5	33.7	-	-	-	-
					pos.	-	-26.9	42.7	-	-	-	-
18	Vehicle CG	2496	0	526	3.1	66.7	34.0	27.5	**	**	34.7	27.5
					neg.	30.4	-3.9	35.3	**	**	0.0	-55.2

*Reference: X - Rear Bumper (+ Forward)

Y - Vehicle Centerline (+ To Right)

Z - Ground Level (+ Up)

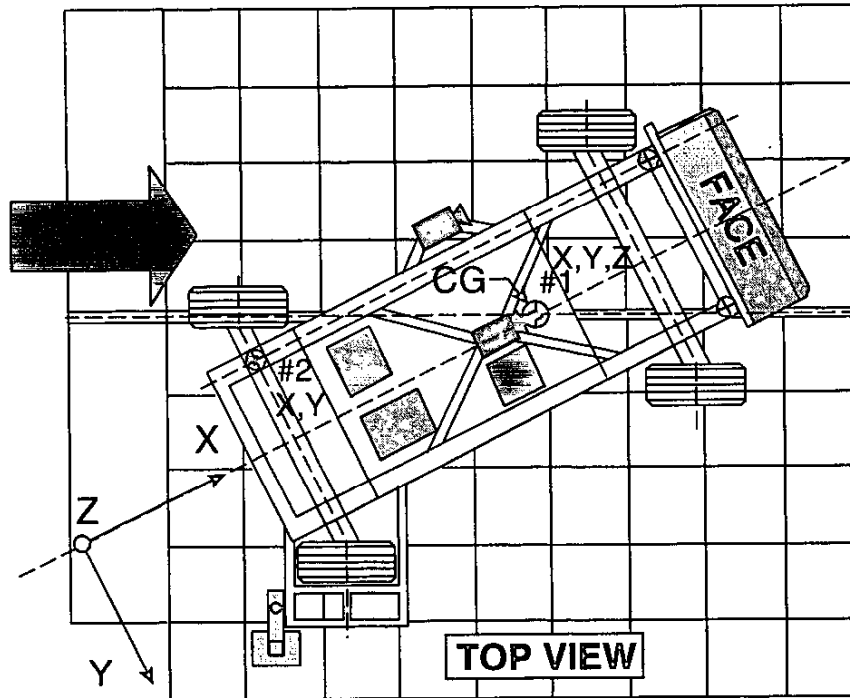
** Data is not accurate after 90 ms.

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal... X				1.3	130.5	-18.3	44.1
	Lateral..... Y	1859	0	330	1.1	62.9	-24.7	499.9
	Vertical..... Z				21.8	499.9	-9.4	28.5
	Resultant..... R				33.0	499.9	0.1	-71.5
2	Rear Frame Member							
	Longitudinal... X	386	-660	660	2.0	114.0	-19.2	45.6
	Lateral..... Y				3.1	24.9	-2.4	69.2

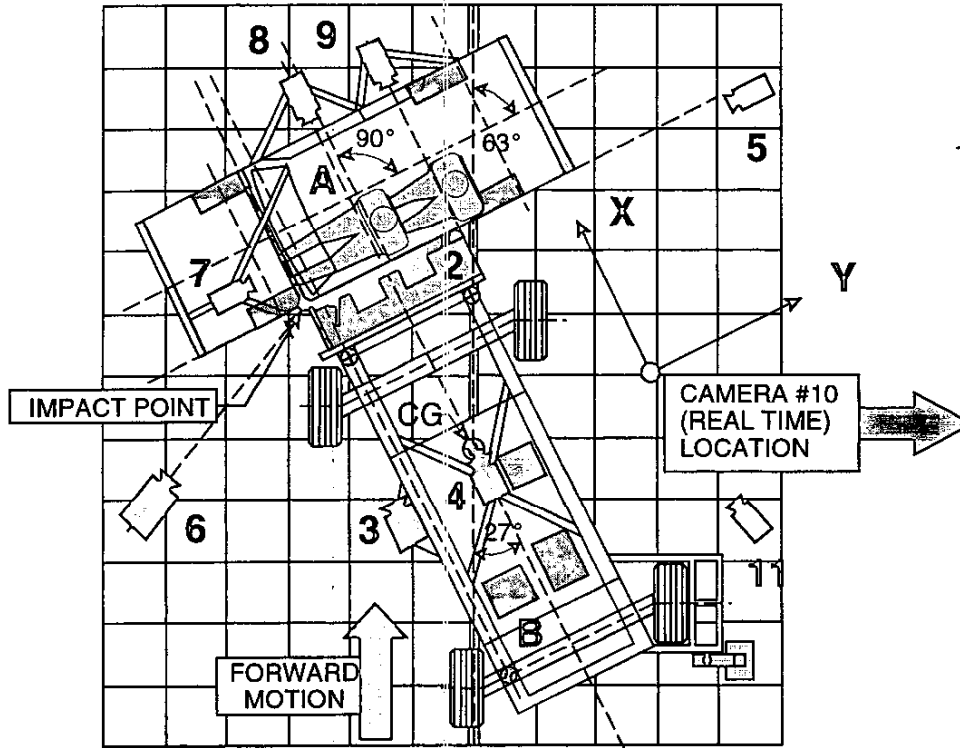
*Reference: X = Rear Bumper (+ Forward)
 Y = Vehicle Centerline (+ To Right)
 Z = Ground Level (+ Up)
 All measurements accurate to within ±3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	120	860	4880	-90	8	1030
2	Overhead closeup view of impact plane	309	937	4880	-90	12.5	1020
3	MDB onboard closeup view of impact point	1470	0	847	0	13	1020
4	MDB onboard view of driver dummy	1140	838	1586	-17	7.5	N/A**
5	Right side ground level overall view	-277	9352	1035	-2	25	1030
6	Left side ground level overall view	-1859	-1626	1038	-6	13	1020
7	Test vehicle onboard driver front view	445	-750	1362	-2	13	910
8	Test vehicle onboard driver side view	1810	640	1092	-5	8	1030
9	Test vehicle onboard passenger side view	1840	1515	1110	-4	8	1010
10	Real time film coverage of test	-	-	-	-	-	24
11	Secondary Impact Point View	-4071	3696	1180	-3	25	1000

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

+X = Forward; +Y = To Right; +Z = Upward

N.T. - Indicates no timing

** Film broke at impact.

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

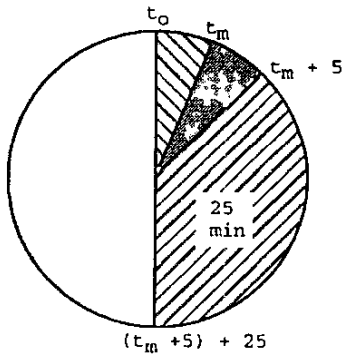
FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA No.: MY0303 TEST DATE: January 6, 2000
 Vehicle Mfg./Make/Model : 2000 Dodge Caravan MPV

TEST VEHICLE IMPACT TYPE :

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

FUEL SPILLAGE MEASUREMENT:



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

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

SOLVENT SPILLAGE DETAILS :

*Stoddard solvent poured from fuel tank and fuel filler neck connection which completely separated during the event. The 142 g allowable limit was exceeded. A post-test rollover was not performed.

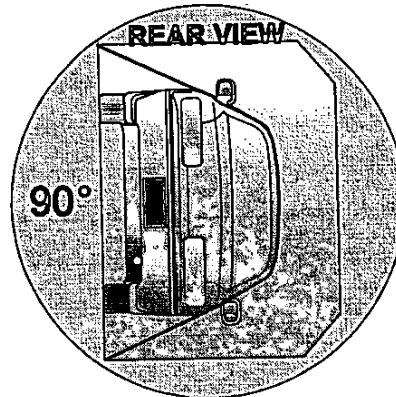
DATA SHEET 17

ROLLOVER DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u> N/A </u> minutes	<u> N/A </u> seconds
(Spec. Range = 1 to 3 minutes)		
FMVSS 301 Position Hold Time +	<u> 5 </u> minutes	<u> 0 </u> seconds
TOTAL	<u> 5 </u> minutes	<u> N/A </u> seconds
Next whole minute interval	<u> 6 </u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

N/A

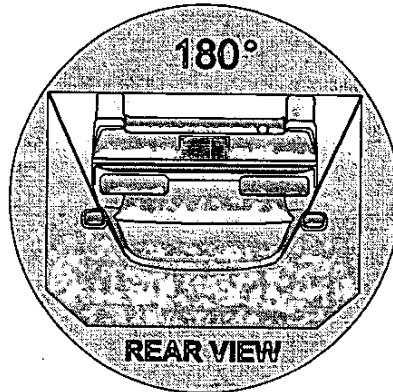
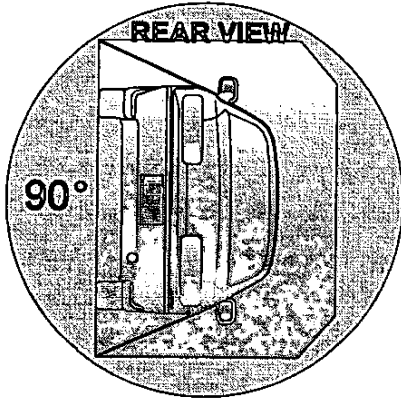
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u> N/A </u> minutes	<u> N/A </u> seconds
FMVSS 301 Position Hold Time +	<u> 5 </u> minutes	<u> 0 </u> seconds
TOTAL	<u> 5 </u> minutes	<u> N/A </u> seconds
Next whole minute interval	<u> 6 </u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

N/A

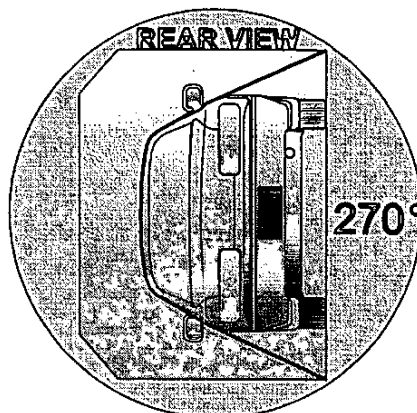
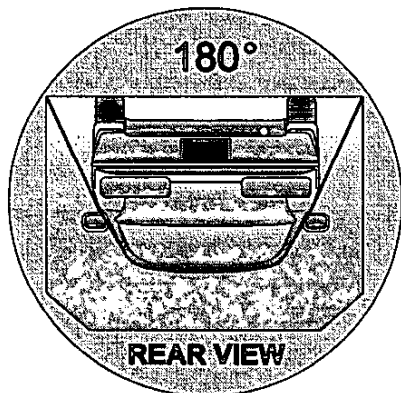
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u> N/A </u> minutes	<u> N/A </u> seconds
FMVSS 301 Position Hold Time +	<u> 5 </u> minutes	<u> 0 </u> seconds
TOTAL	<u> 5 </u> minutes	<u> N/A </u> seconds
Next whole minute interval	<u> 6 </u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

N/A

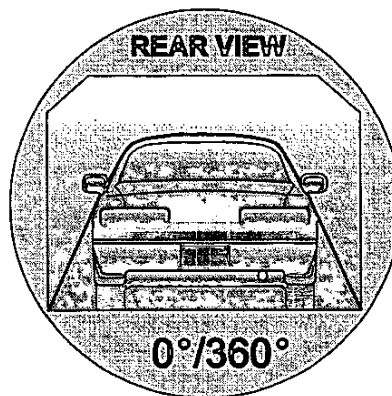
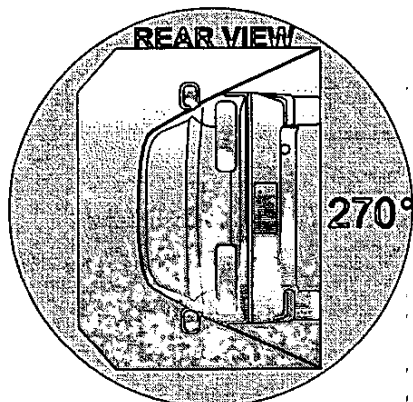
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2000 Dodge Caravan

NHTSA No. MY0303

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time (Spec. Range = 1 to 3 minutes)	<u> N/A </u> minutes	<u> N/A </u> seconds
FMVSS 301 Position Hold Time +	<u> 5 </u> minutes	<u> 0 </u> seconds
TOTAL	<u> 5 </u> minutes	<u> N/A </u> seconds
Next whole minute interval	<u> 6 </u> minutes	

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

142 g	28 g	28 g	28 g
-------	------	------	------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

N/A	N/A	N/A	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

N/A

APPENDIX A

PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

<u>Figure</u>	<u>Photograph Title</u>	<u>Page</u>
Figure A- 1	PRE-TEST FRONTAL VIEW OF TEST VEHICLE	A- 3
Figure A- 2	POST-TEST FRONTAL VIEW OF TEST VEHICLE	A- 4
Figure A- 3	PRE-TEST REAR VIEW OF TEST VEHICLE	A- 5
Figure A- 4	POST-TEST REAR VIEW OF TEST VEHICLE	A- 6
Figure A- 5	PRE-TEST IMPACTED SIDE VIEW OF TEST VEHICLE	A- 7
Figure A- 6	POST-TEST IMPACTED SIDE VIEW OF TEST VEHICLE	A- 8
Figure A- 7	PRE-TEST FRONTAL VIEW OF IMPACTOR FACE	A- 9
Figure A- 8	POST-TEST FRONTAL VIEW OF IMPACTOR FACE	A- 10
Figure A- 9	PRE-TEST LEFT SIDE VIEW OF IMPACTOR FACE	A- 11
Figure A- 10	POST-TEST LEFT SIDE VIEW OF IMPACTOR FACE	A- 12
Figure A- 11	PRE-TEST RIGHT SIDE VIEW OF IMPACTOR FACE	A- 13
Figure A- 12	POST-TEST RIGHT SIDE VIEW OF IMPACTOR FACE	A- 14
Figure A- 13	PRE-TEST TOP VIEW OF IMPACTOR FACE	A- 15
Figure A- 14	POST-TEST TOP VIEW OF IMPACTOR FACE	A- 16
Figure A- 15	PRE-TEST OVERHEAD VIEW OF ALIGNED MDB AND VEHICLE	A- 17
Figure A- 16	POST-TEST OVERHEAD VIEW OF MDB AND VEHICLE	A- 18
Figure A- 17	PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID	A- 19
Figure A- 18	POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID	A- 20
Figure A- 19	PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID	A- 21
Figure A- 20	POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID	A- 22
Figure A- 21	PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID	A- 23
Figure A- 22	POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID	A- 24
Figure A- 23	PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID	A- 25
Figure A- 24	POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID	A- 26
Figure A- 25	PRE-TEST INTERIOR OF FRONT DOOR	A- 27
Figure A- 26	POST-TEST INTERIOR OF FRONT DOOR SHOWING SID IMPACT LOCATIONS	A- 28
Figure A- 27	PRE-TEST INTERIOR OF REAR DOOR	A- 29
Figure A- 28	POST-TEST INTERIOR OF REAR DOOR SHOWING SID IMPACT LOCATIONS	A- 30
Figure A- 29	PRE-TEST LEFT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION	A- 31
Figure A- 30	PRE-TEST RIGHT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION	A- 32
Figure A- 31	POST-TEST CLOSE-UP VIEW OF IMPACT POINT TARGET	A- 33
Figure A- 32	CLOSE-UP VIEW OF VEHICLE'S CERTIFICATION LABEL	A- 34
Figure A- 33	CLOSE-UP VIEW OF VEHICLE'S TIRE PLACARD LABEL	A- 35
Figure A- 34	IMPACT PHOTO	A- 36

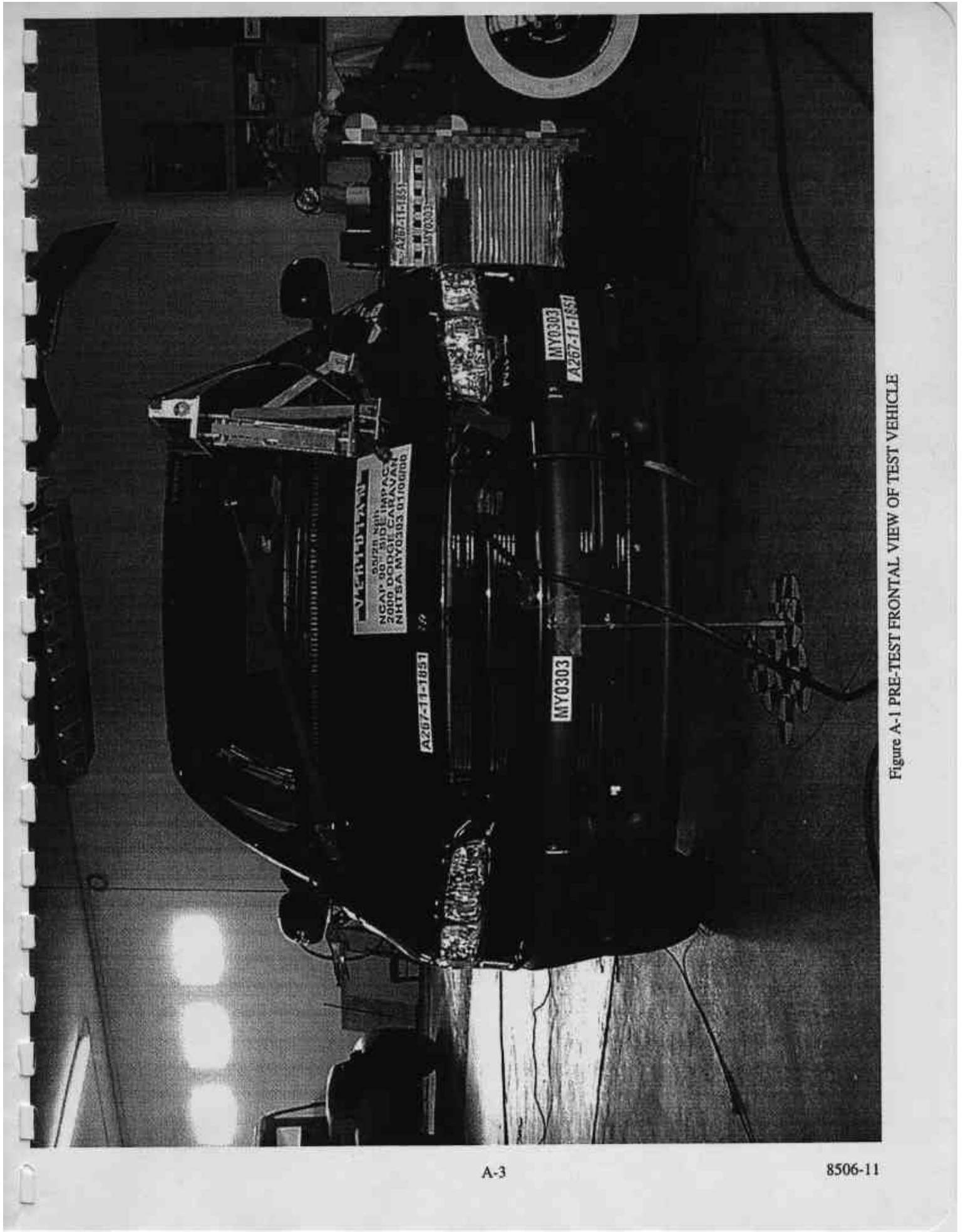


Figure A-1 PRE-TEST FRONTAL VIEW OF TEST VEHICLE

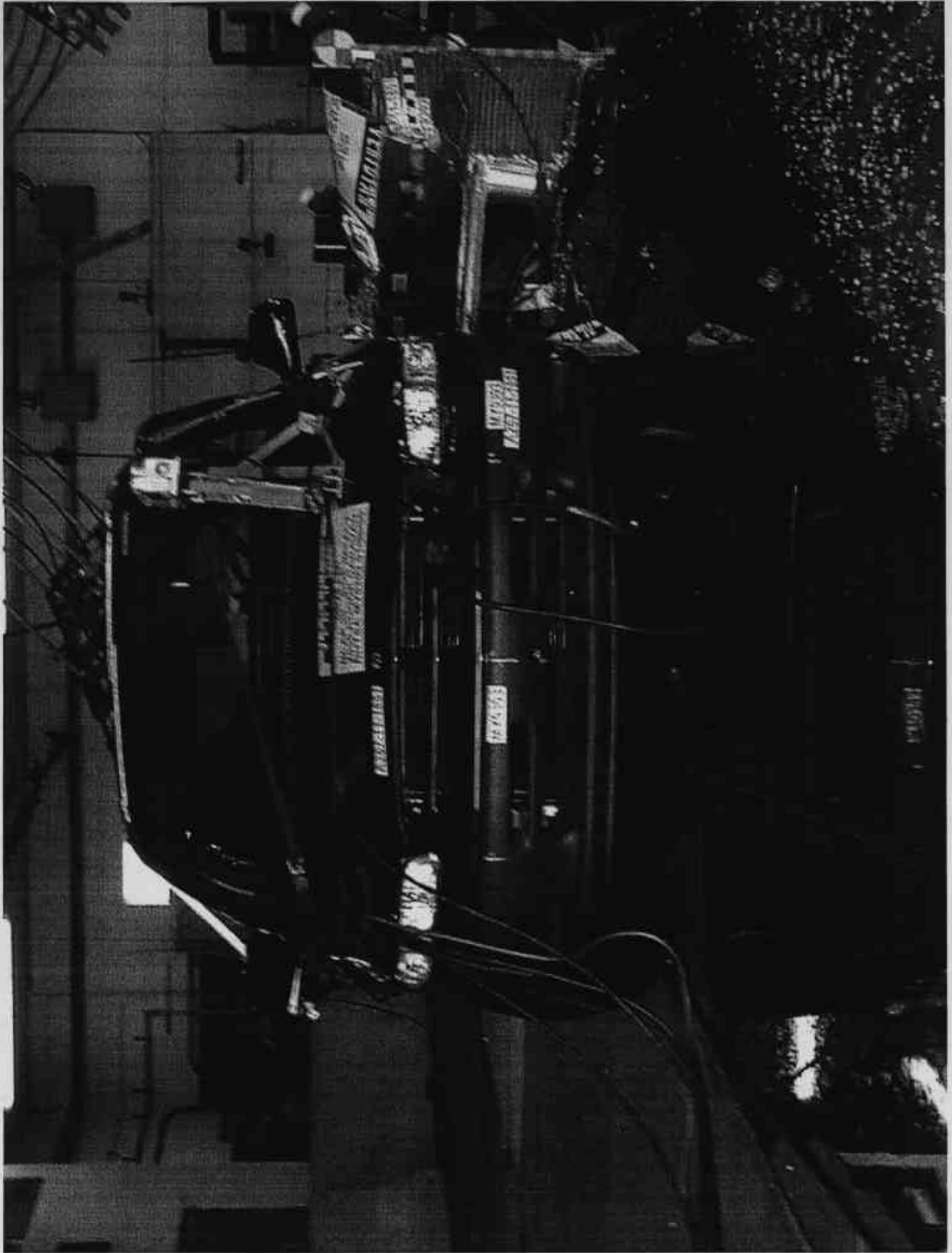


Figure A-2 POST-TEST FRONTAL VIEW OF TEST VEHICLE

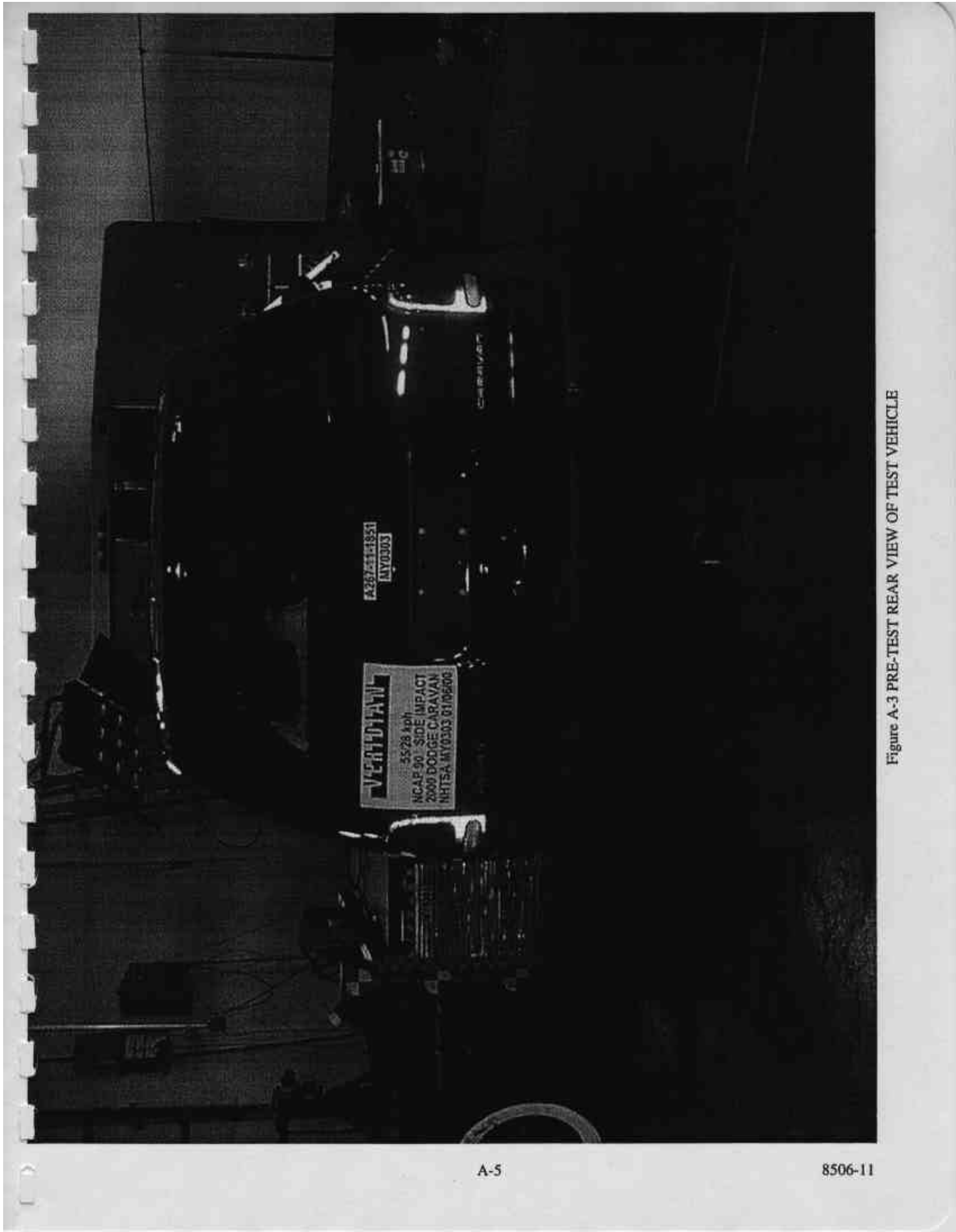


Figure A-3 PRE-TEST REAR VIEW OF TEST VEHICLE

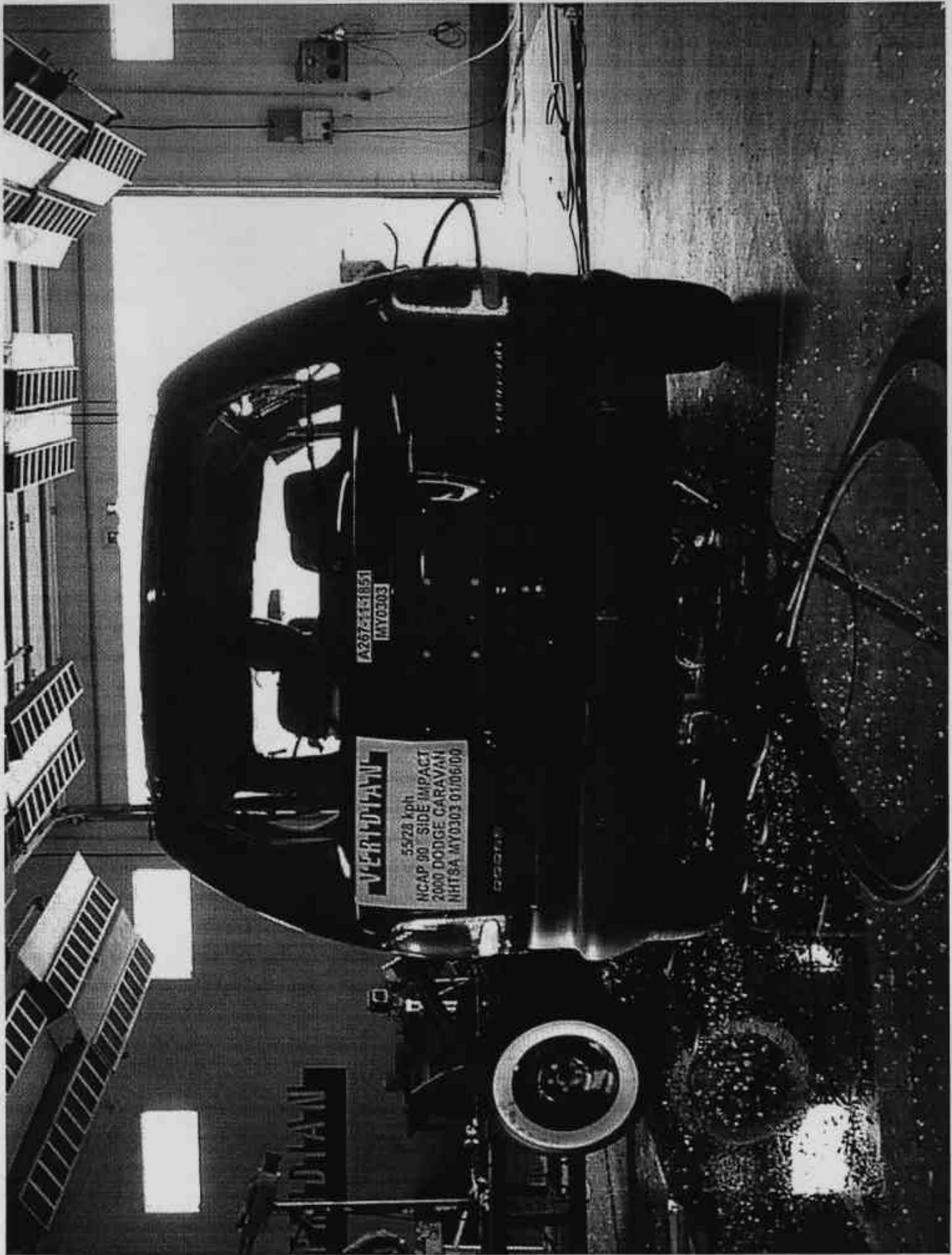


Figure A-4 POST-TEST REAR VIEW OF TEST VEHICLE

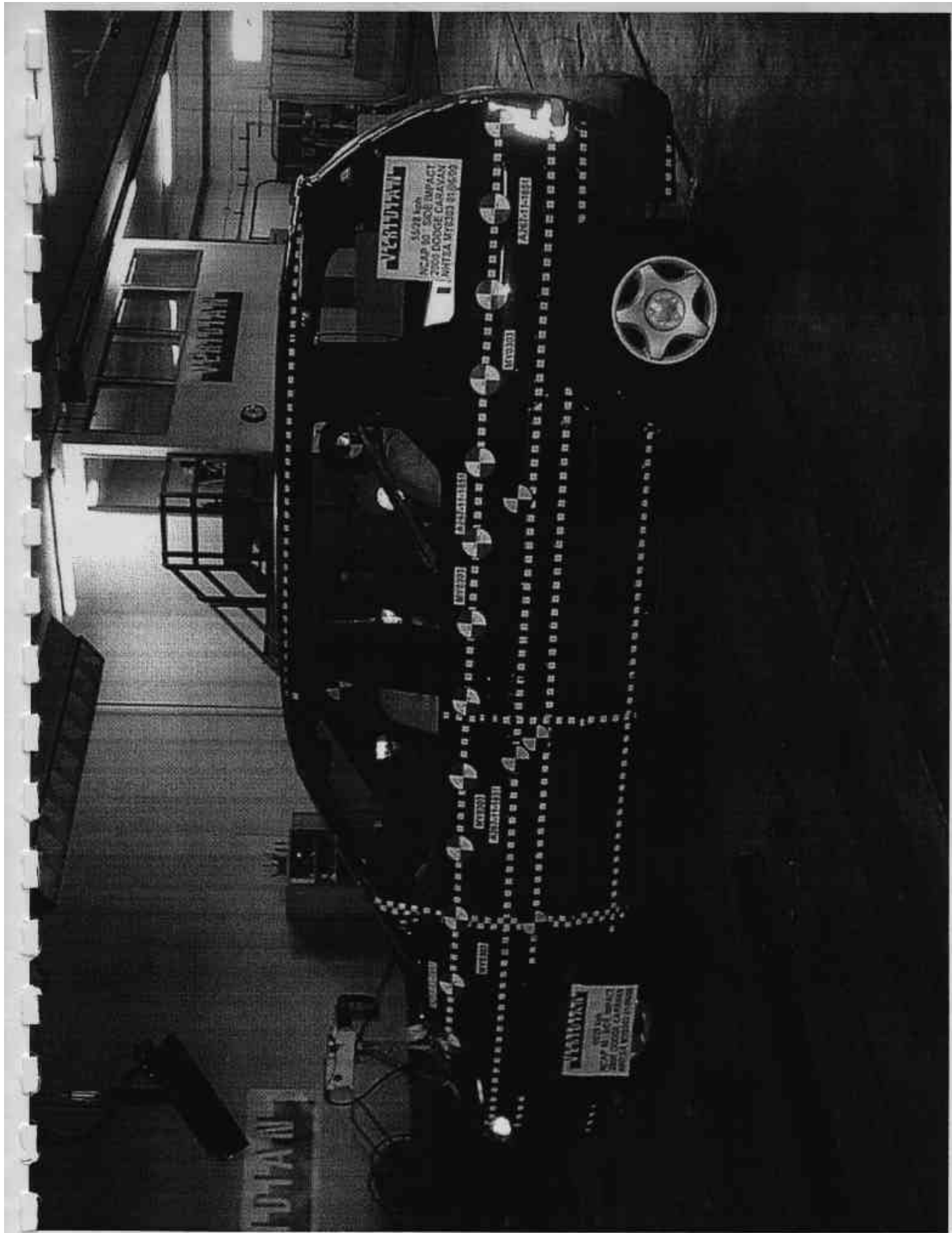


Figure A-5 PRE-TEST IMPACTED SIDE VIEW OF TEST VEHICLE

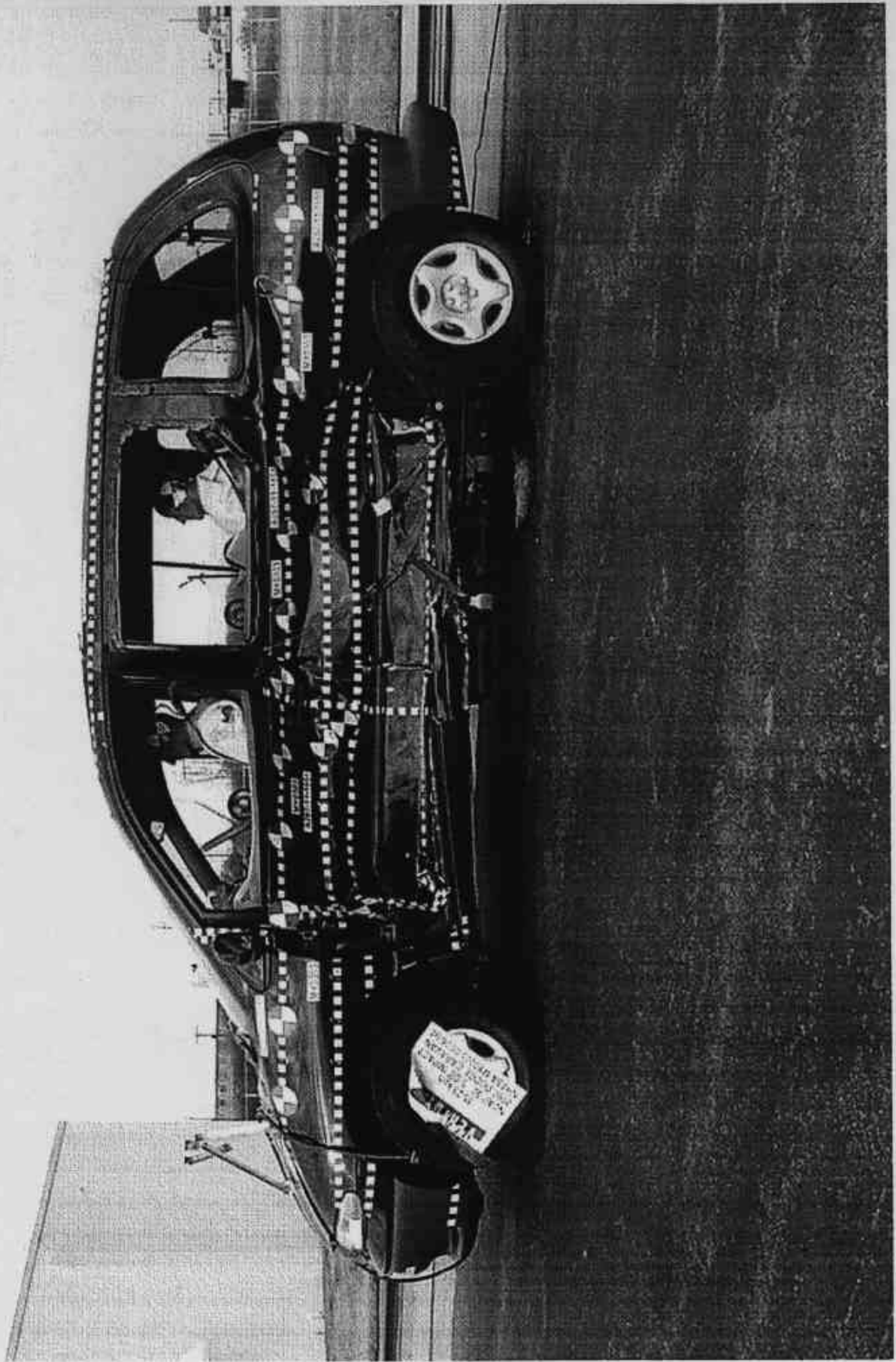


Figure A-6 POST-TEST IMPACTED SIDE VIEW OF TEST VEHICLE



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

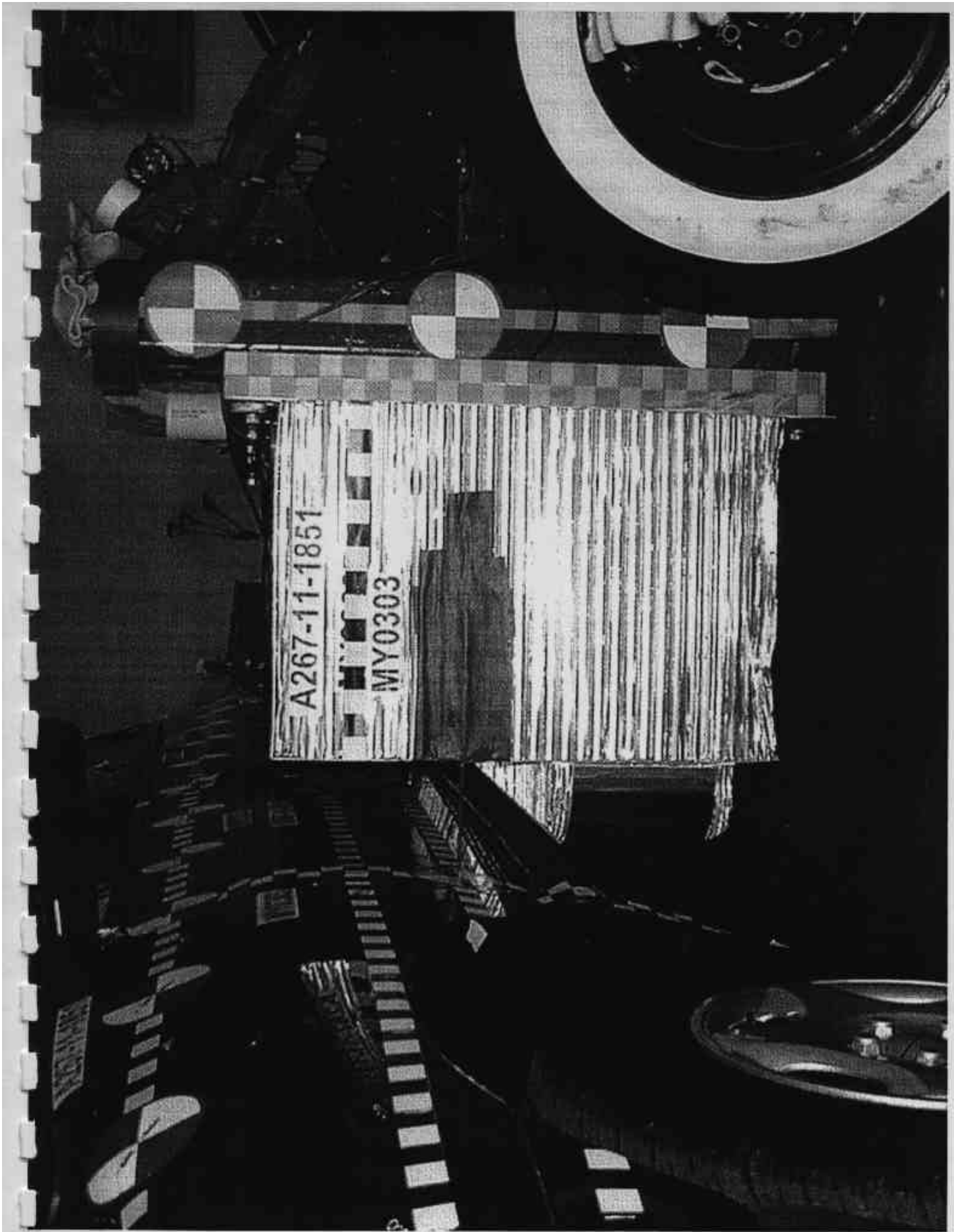


Figure A-9 PRE-TEST LEFT SIDE VIEW OF IMPACTOR FACE



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

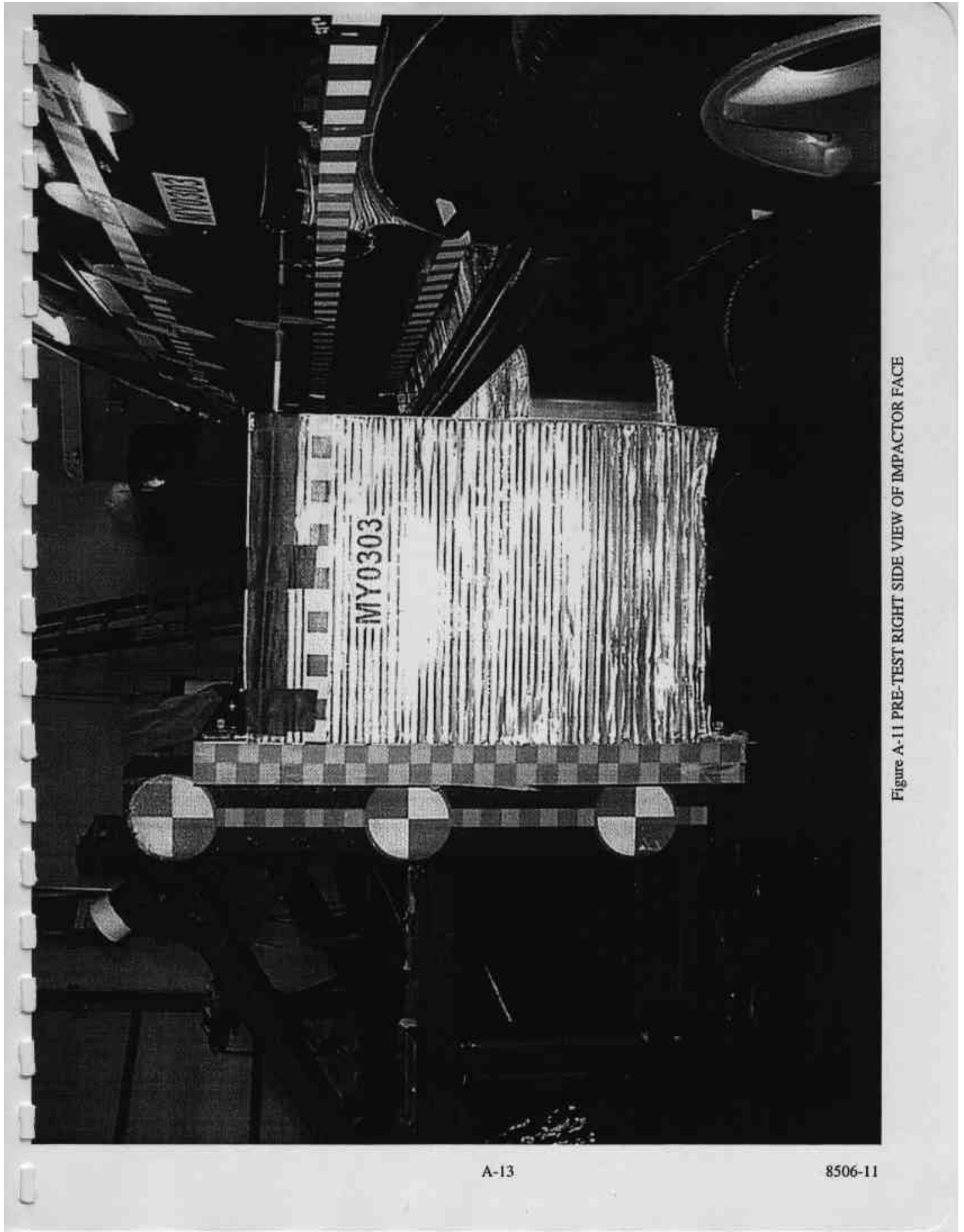


Figure A-11 PRE-TEST RIGHT SIDE VIEW OF IMPACTOR FACE



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

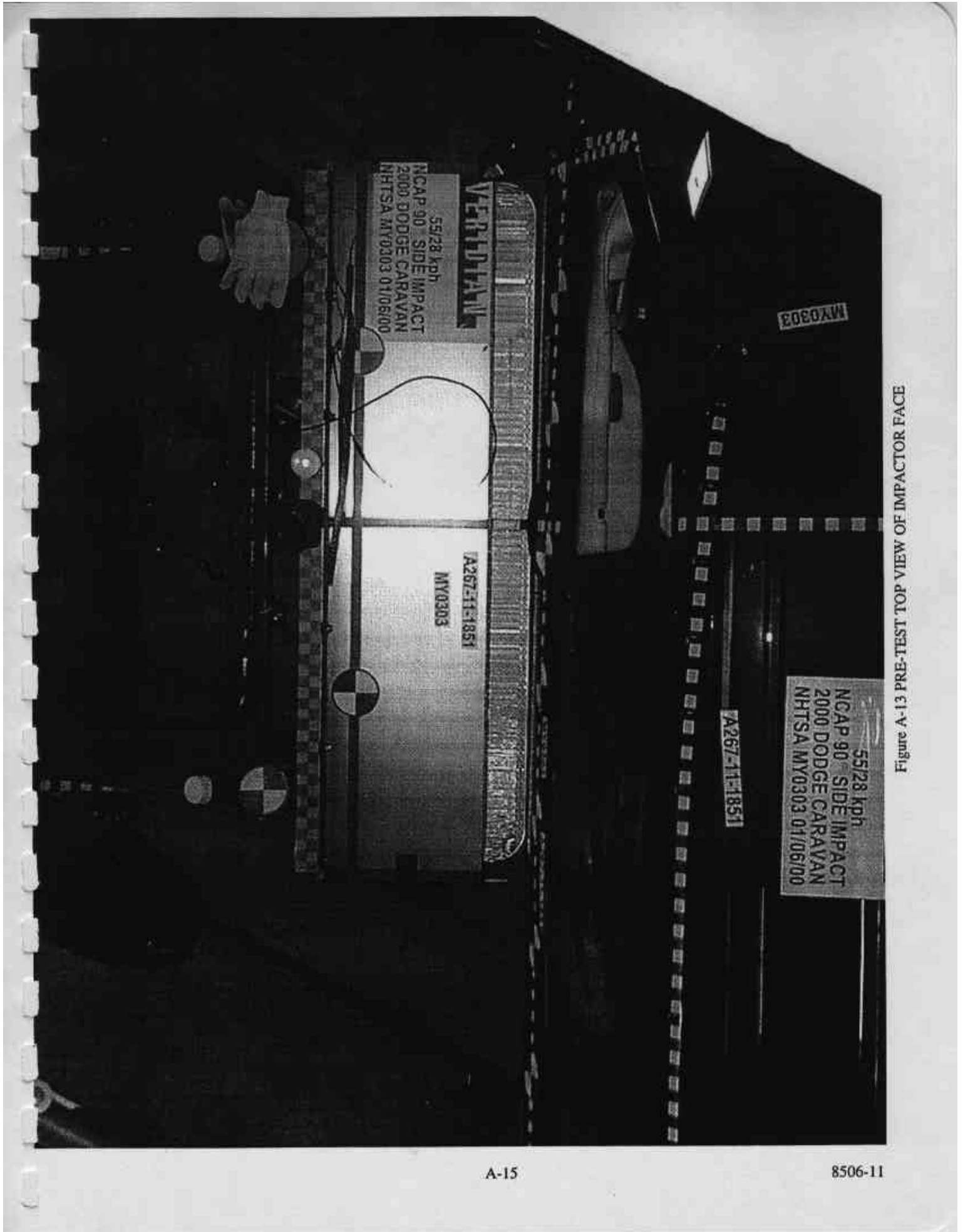


Figure A-13 PRE-TEST TOP VIEW OF IMPACTOR FACE

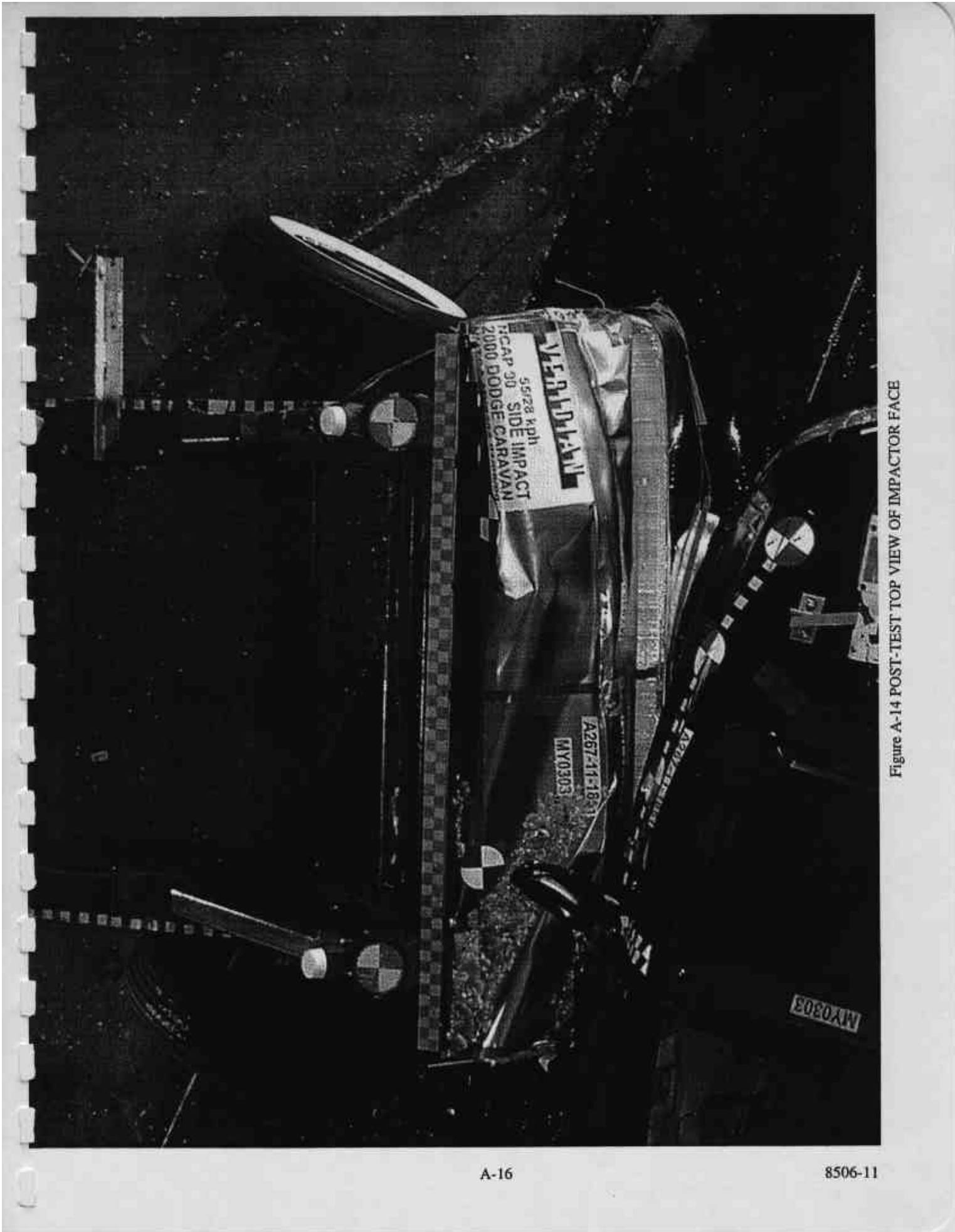


Figure A-14 POST-TEST TOP VIEW OF IMPACTOR FACE



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

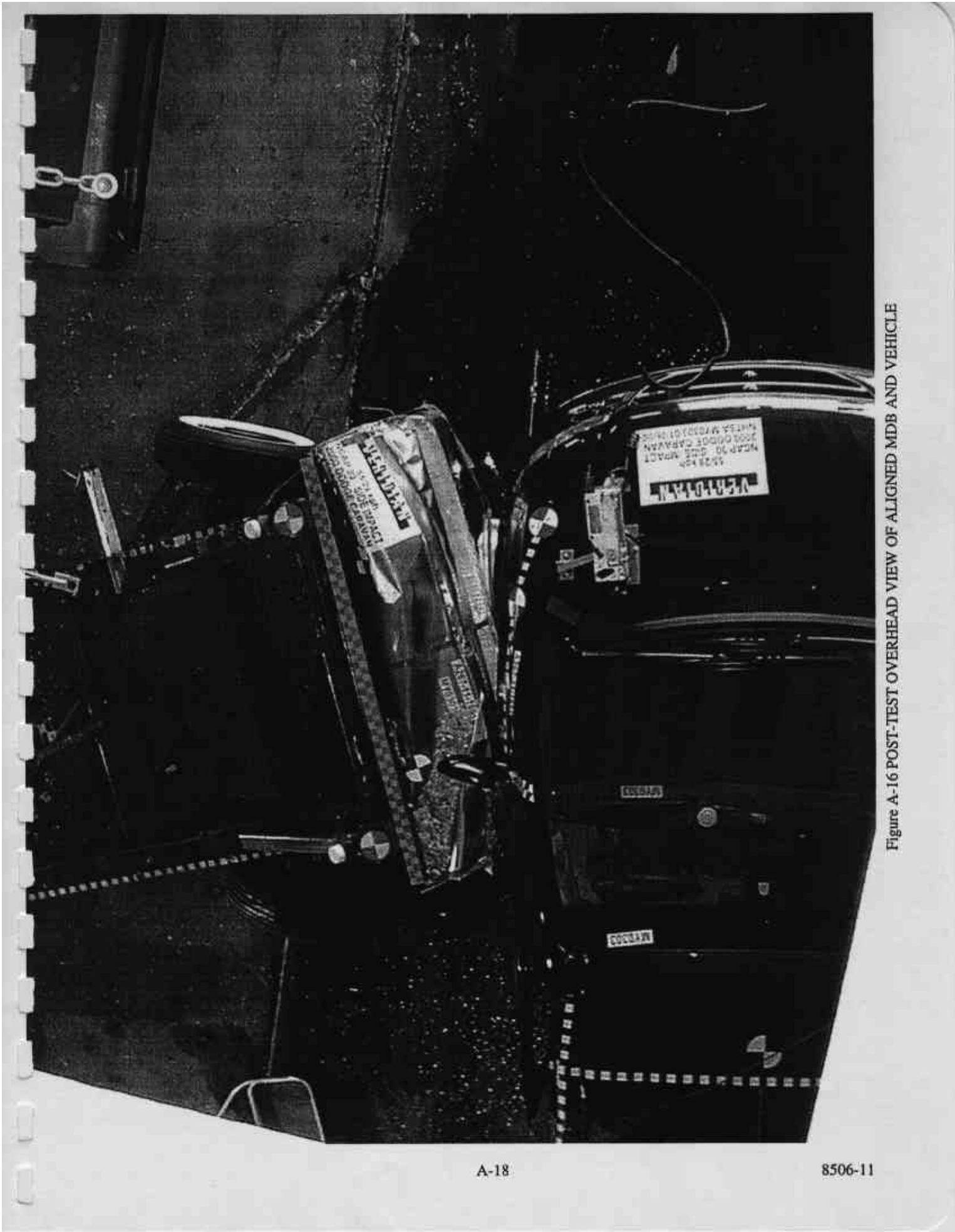


Figure A-16 POST-TEST OVERHEAD VIEW OF ALIGNED MDB AND VEHICLE

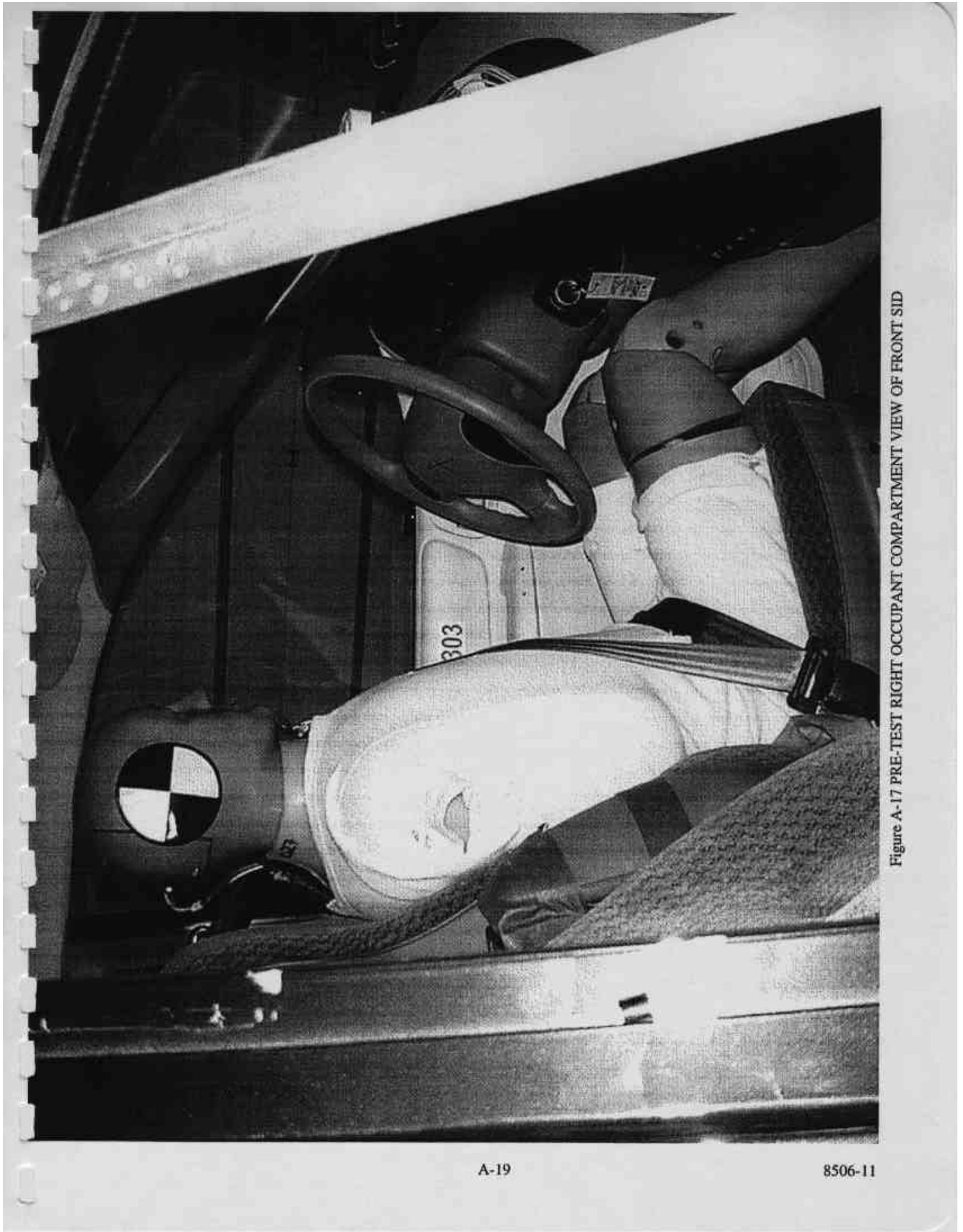


Figure A-17 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID

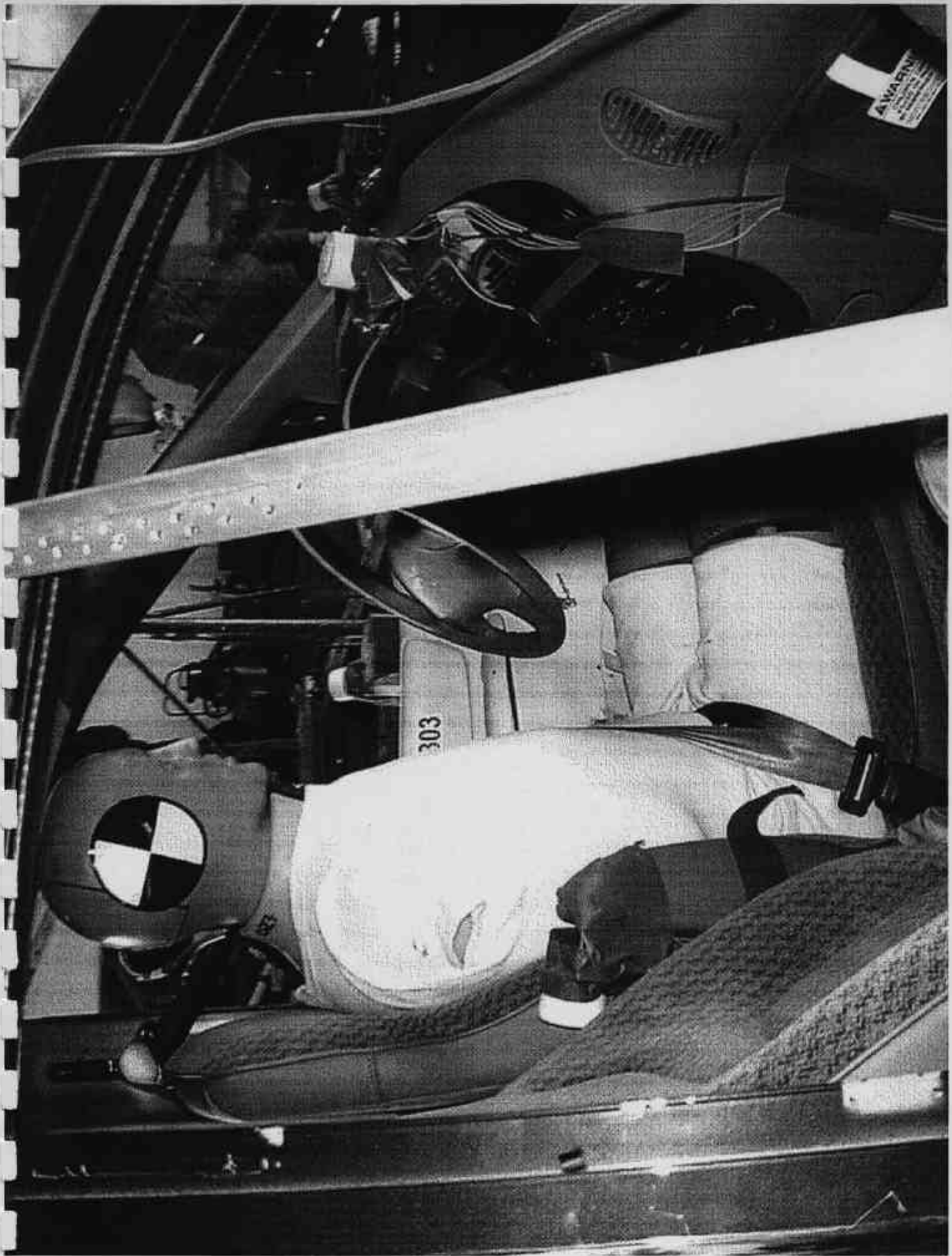


Figure A-18 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID

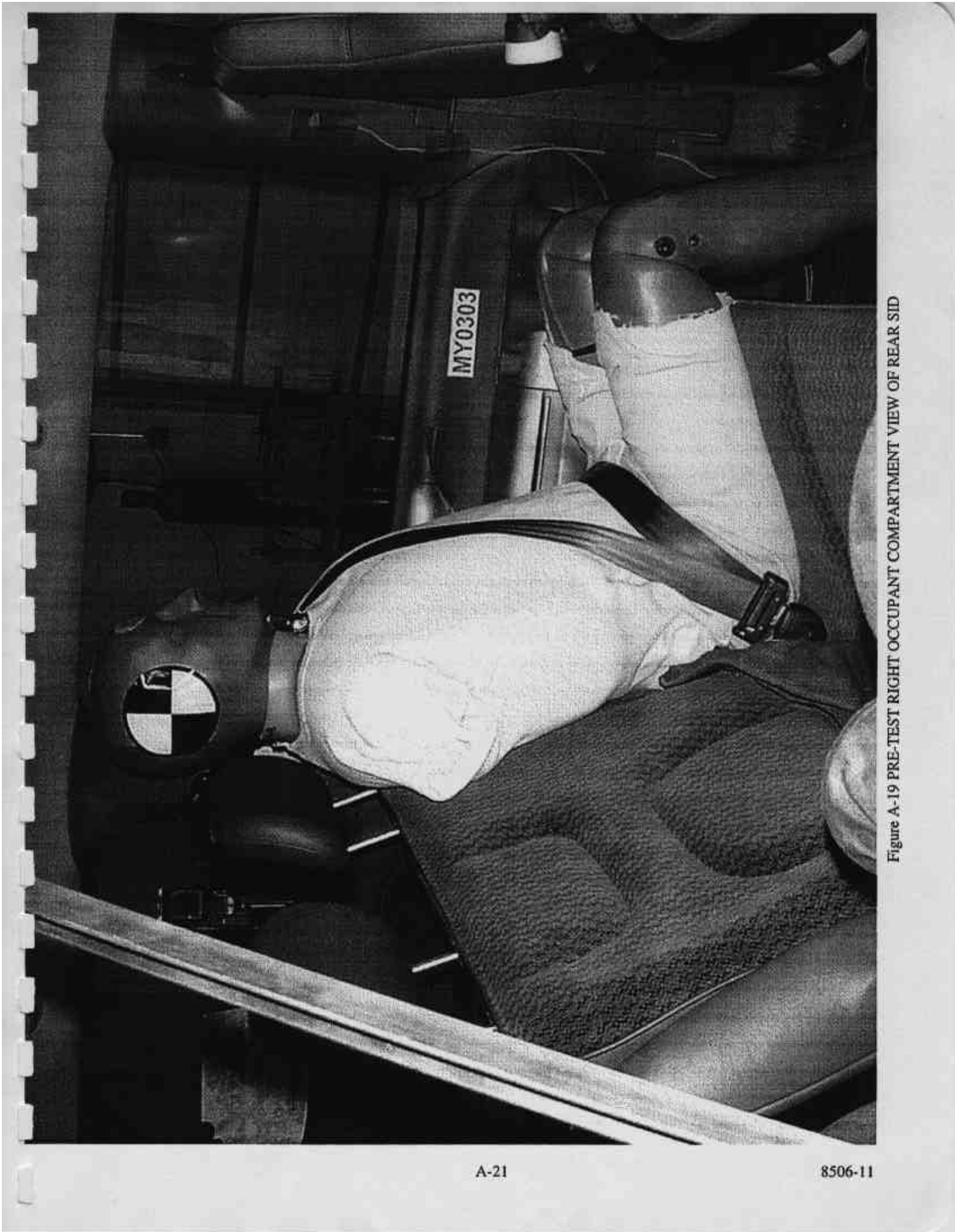


Figure A-19 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID



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



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

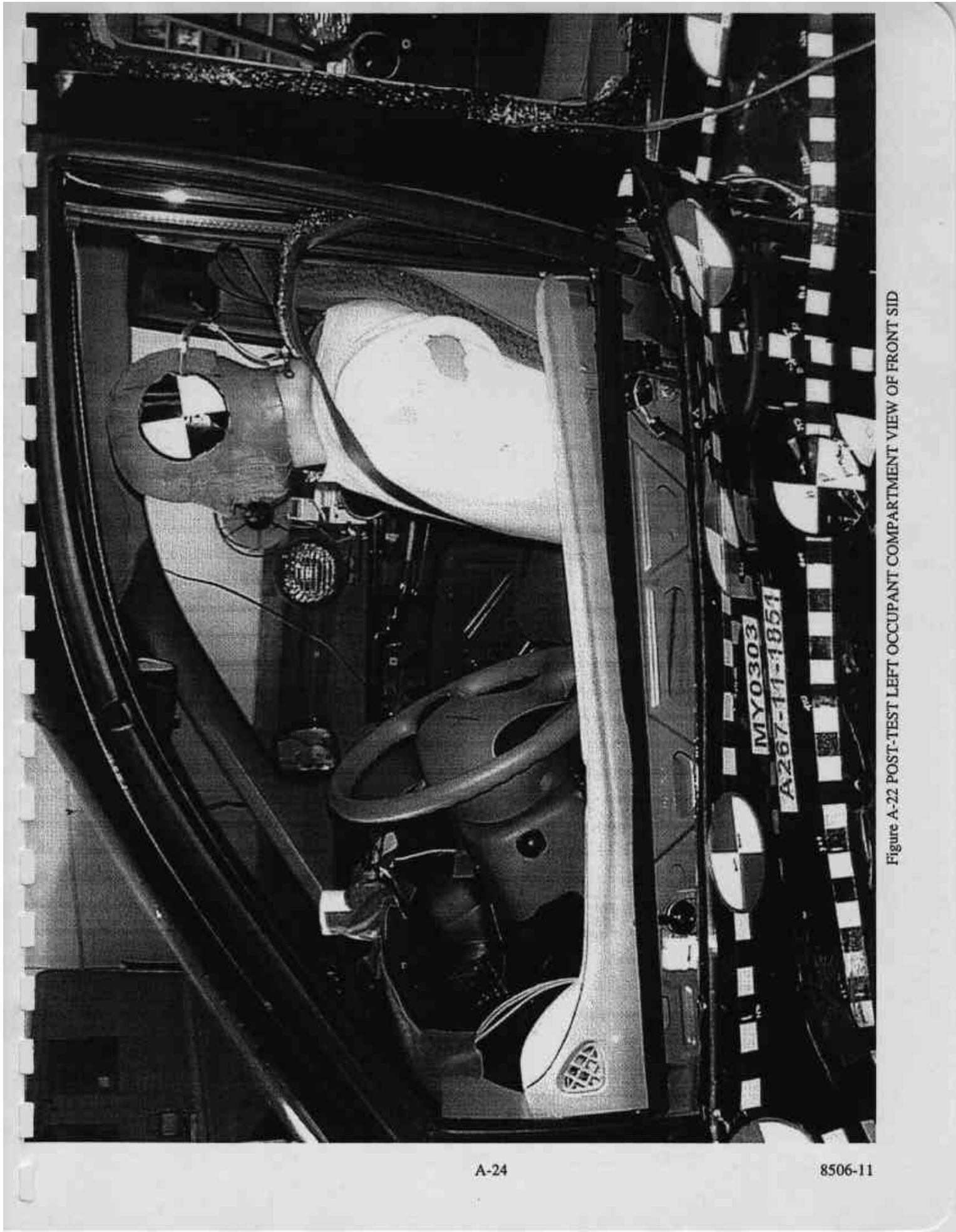


Figure A-22 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID

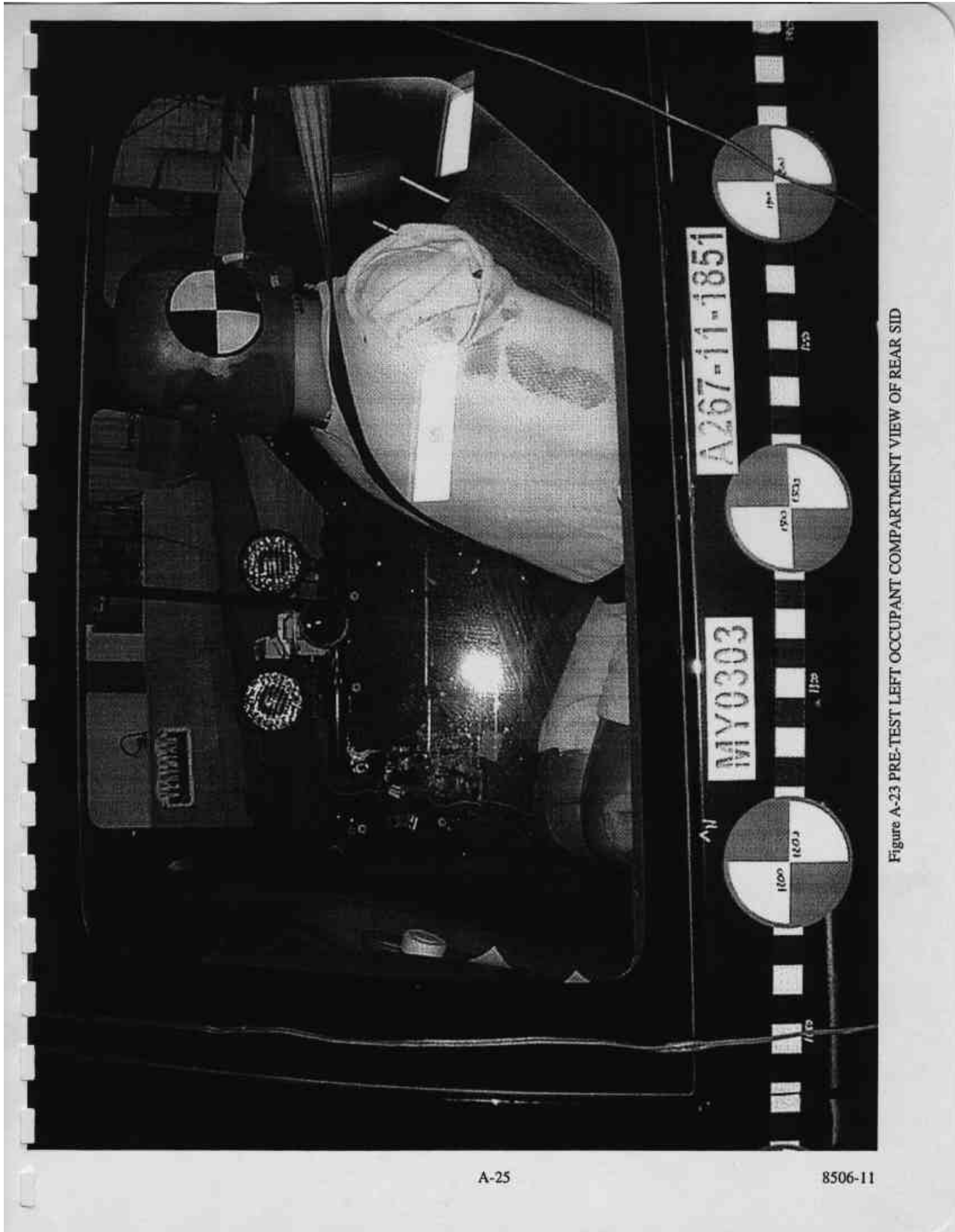


Figure A-23 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID

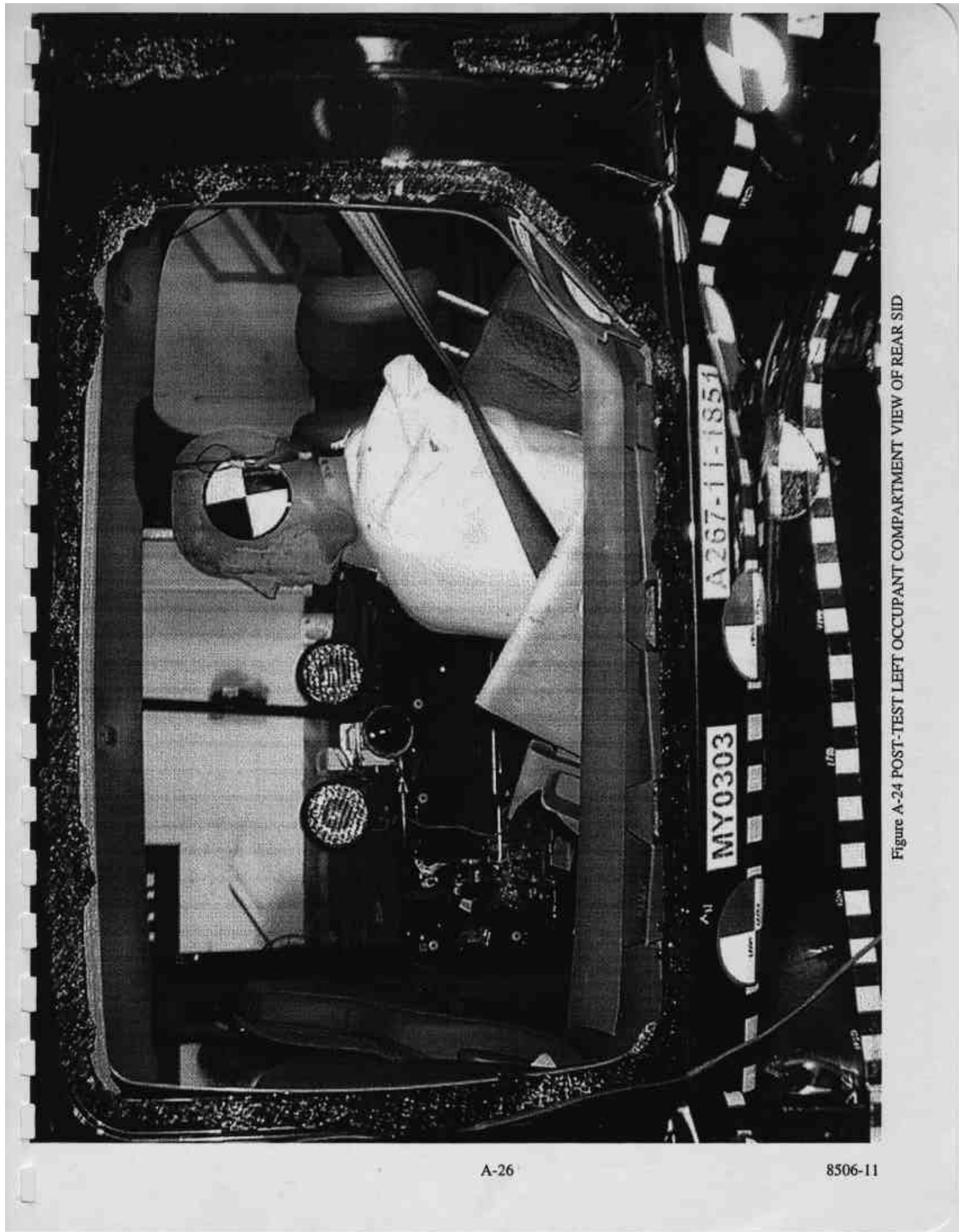


Figure A-24 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID

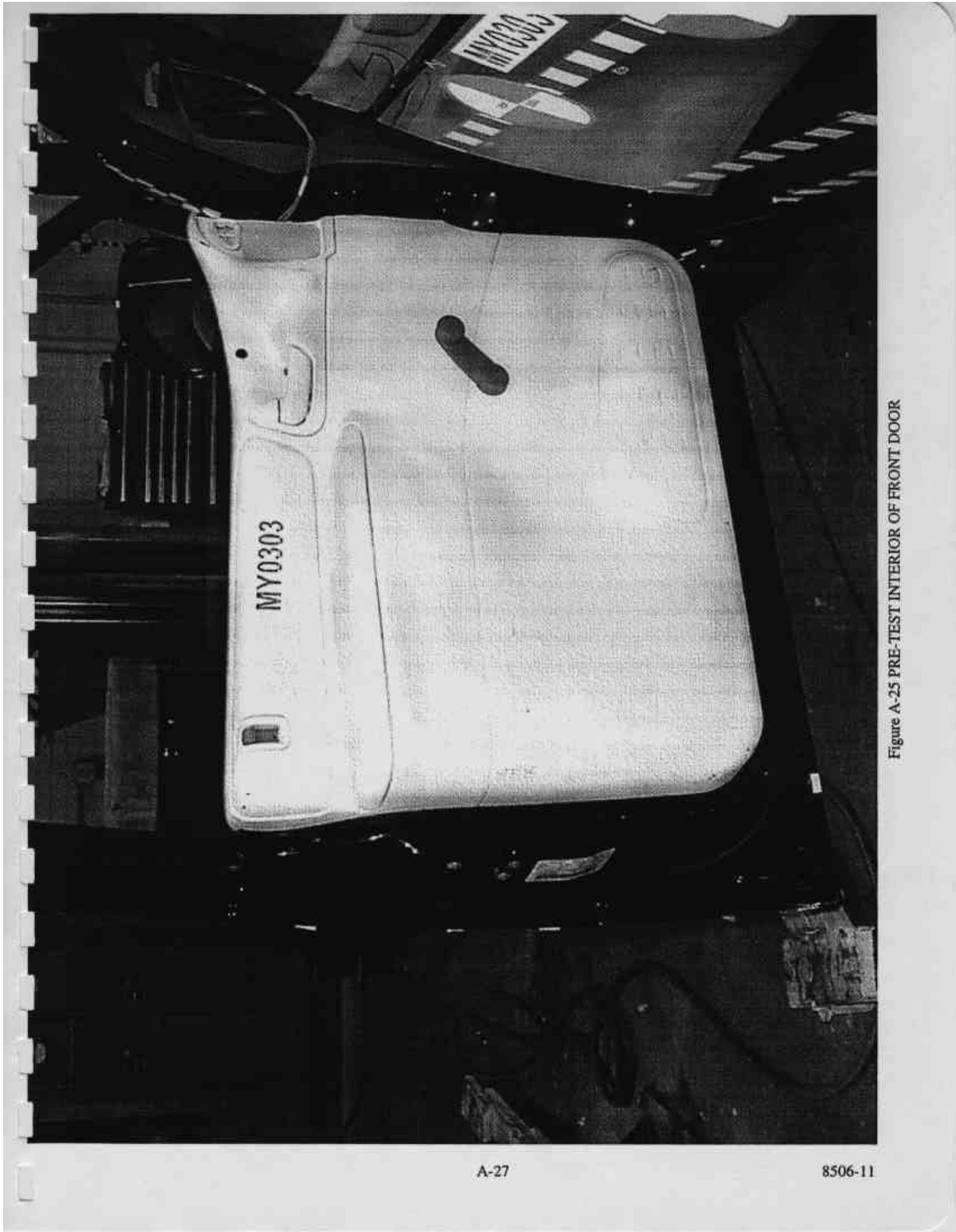


Figure A-25 PRE-TEST INTERIOR OF FRONT DOOR



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

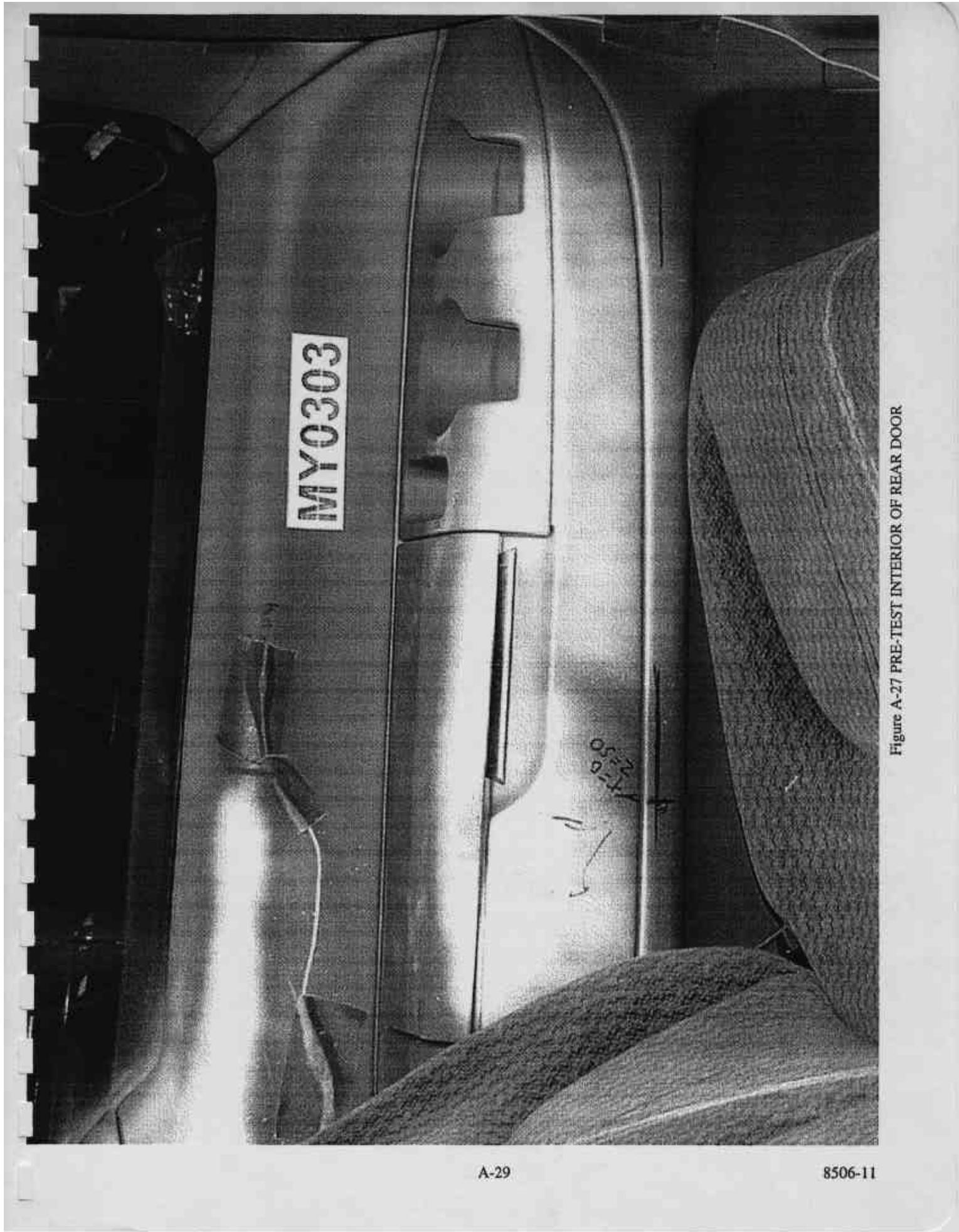


Figure A-27 PRE-TEST INTERIOR OF REAR DOOR

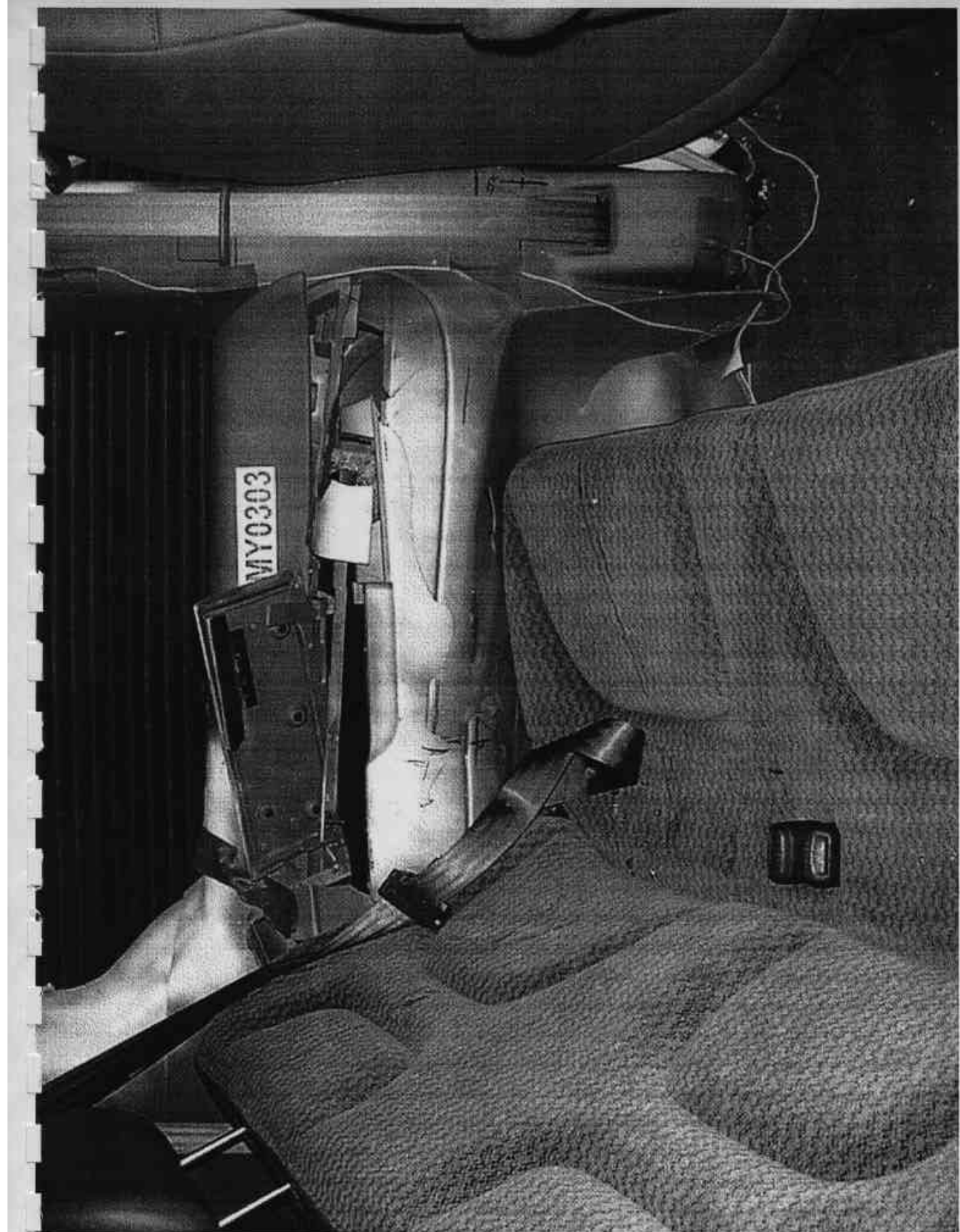


Figure A-28 POST-TEST INTERIOR OF REAR DOOR SHOWING SID IMPACT LOCATIONS

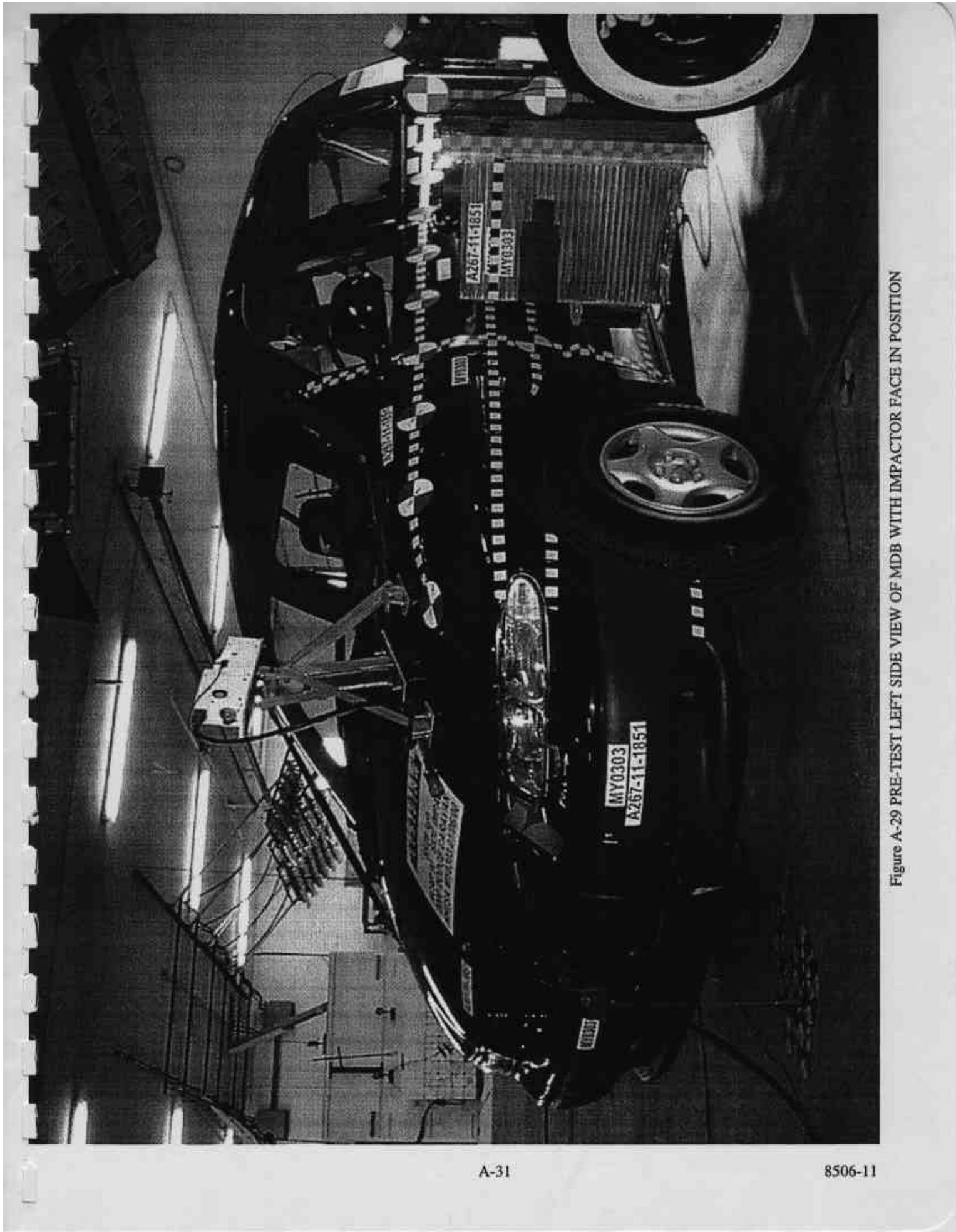


Figure A-29 PRE-TEST LEFT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION

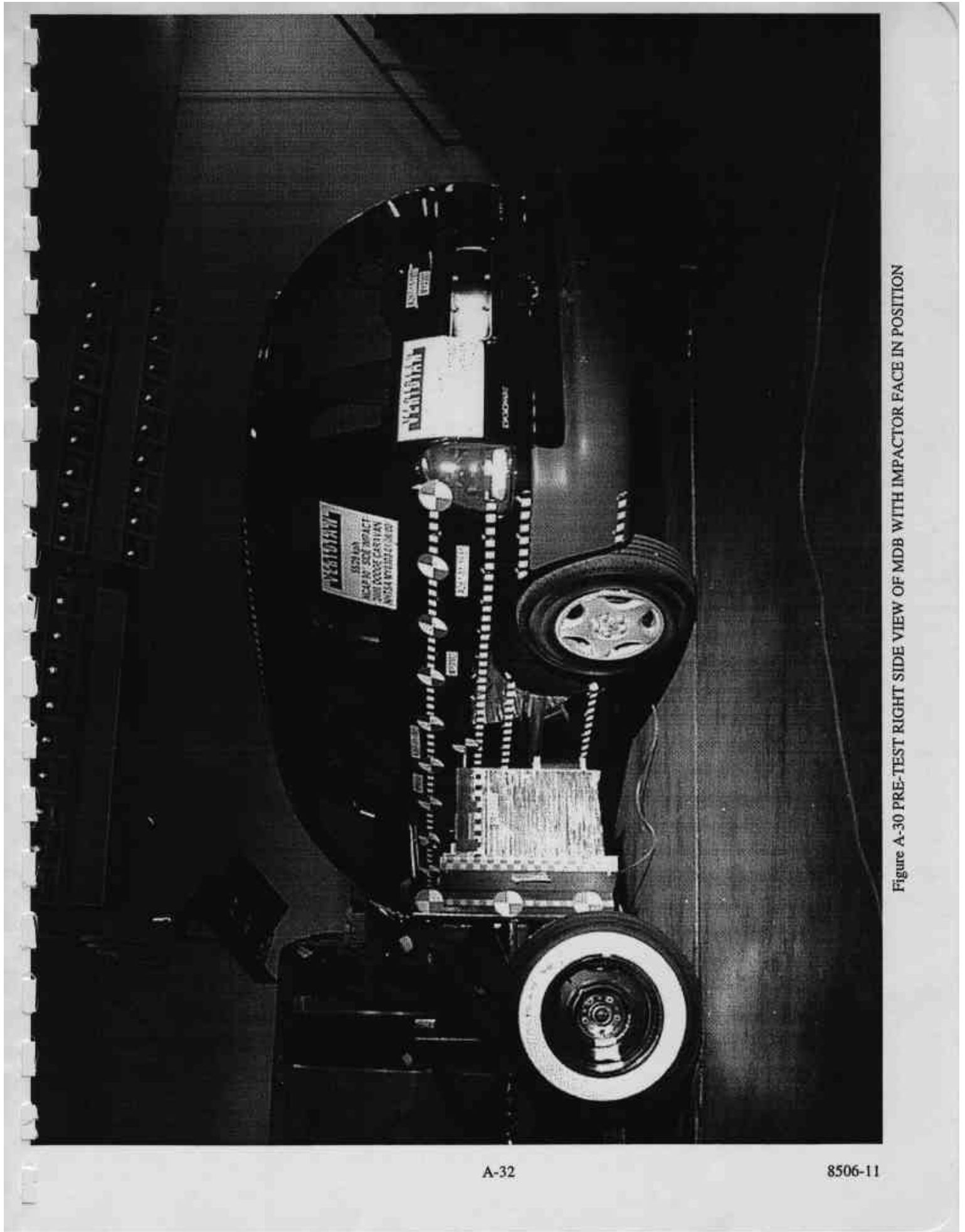


Figure A-30 PRE-TEST RIGHT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION

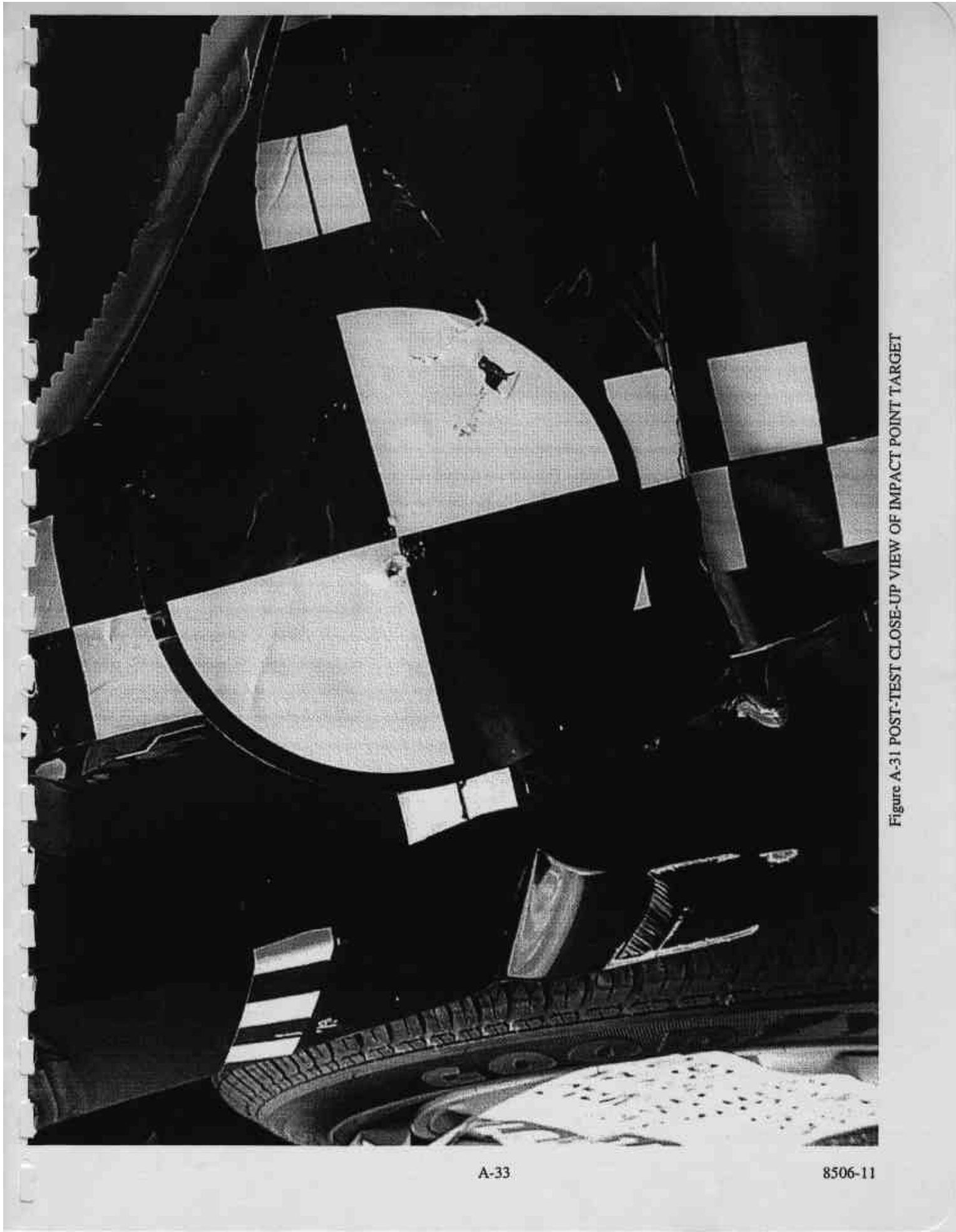


Figure A-31 POST-TEST CLOSE-UP VIEW OF IMPACT POINT TARGET

VED BY DAIMLERCHRYSLER DATE OF MFG 0402
 CORPORATION 8-99 2288 (G) (25200 LB)

FOUR FRONT	WITH TIRES	RIMS AT	COLD
1203 (G) (2650 LB)	P205/75R14	14X6	241 KPA(35 PSI)
FOUR REAR	WITH TIRES	RIMS AT	COLD
1192 (G) (2600 LB)	P205/75R14	14X6	241 KPA(35 PSI)

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

VIN: 2B4FP25B5YR32429 TYPE: MPV SINGLE X DRAL



11201 195CA DT:027 VEHICLE MADE IN CANADA TRM1503 4648565

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

AIR BAG SYSTEMS MAINTENANCE INSTRUCTIONS

THIS VEHICLE IS EQUIPPED WITH A FRONT OCCUPANT SUPPLEMENTAL RESTRAINT SYSTEM (SRS/AIR BAG). PLEASE REFER TO THE OWNERS MANUAL FOR DETAILS ON SYSTEM OPERATION. WARNING - THE AIR BAG SYSTEM IS DESIGNED TO BE MAINTENANCE FREE HOWEVER IF THE "AIR BAG" LIGHT DOES NOT COME ON MOMENTARILY WHEN IGNITION IS TURNED ON OR COMES ON OR FLASHES WHILE DRIVING, THE SYSTEM MUST BE SERVICED PROMPTLY BY AN AUTHORIZED DEALER.

RECOMMENDED COLD TIRE INFLATION PRESSURE	
FRONT	35 psi 240 kPa
REAR	35 psi 240 kPa

MINIMUM TIRE SIZE	
STANDARD LOAD	P205/75R14
PRINTED IN USA	4472549

VEHICLE CAPACITY
1150LB/522kg

SEATING CAPACITY

SEAT POSITION	PASS	5	PASS
1ST SEAT	2	2	
END SEAT	2	3	
3RD SEAT	3		

SEE OWNERS MANUAL FOR OPTIONAL TIRES, HIGH SPEED OPERATION AND ADDITIONAL DATA.

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

APPENDIX B

VEHICLE, MDB AND SID RESPONSE DATA

TABLE OF DATA PLOTS

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

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

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION DATA - FIR FILTERED

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

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

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

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

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

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

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

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

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

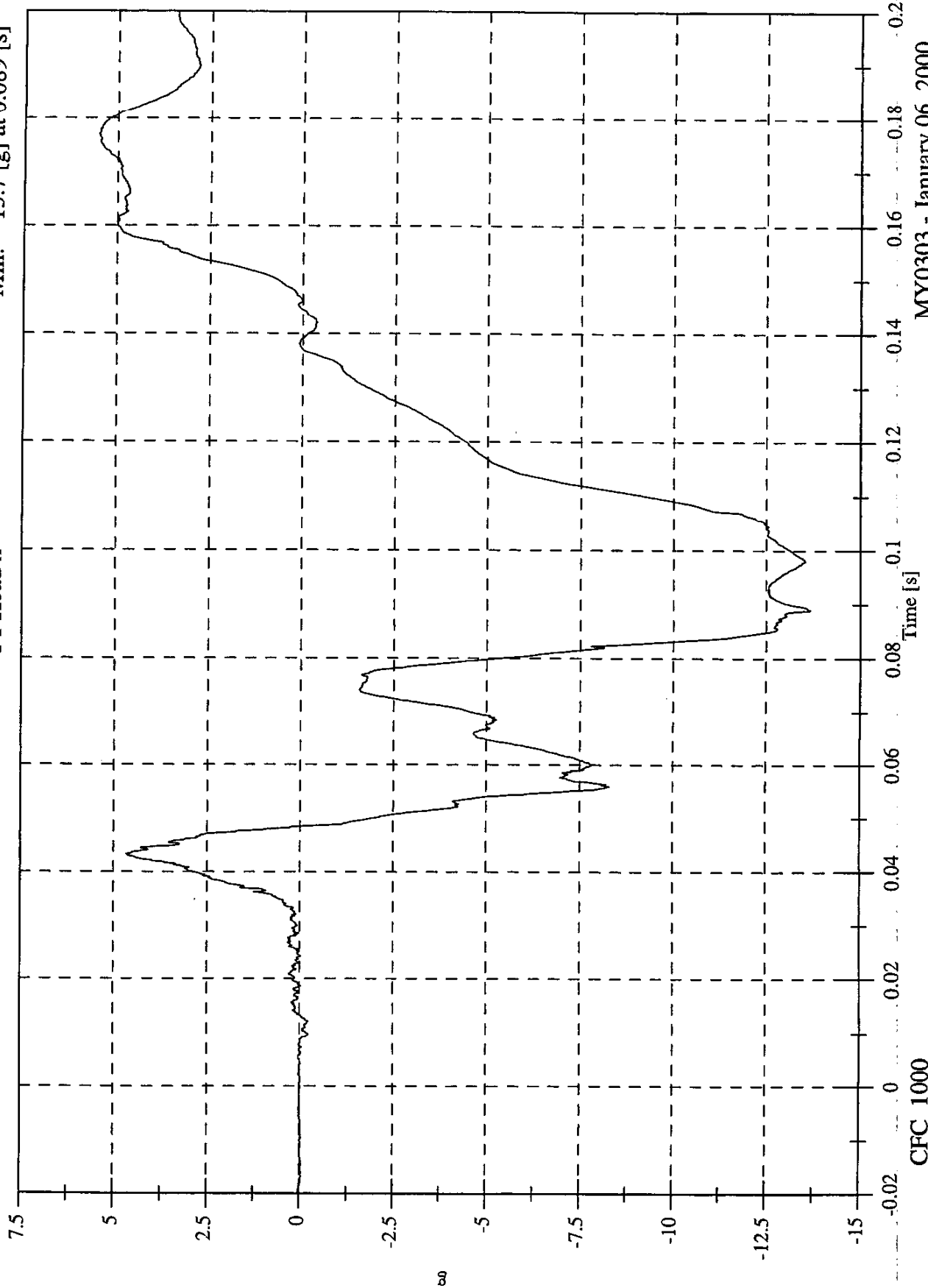
**DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FIR FILTERED**

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

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 5.5 [g] at 0.177 [s]
Min: -13.7 [g] at 0.089 [s]

P1 Head x



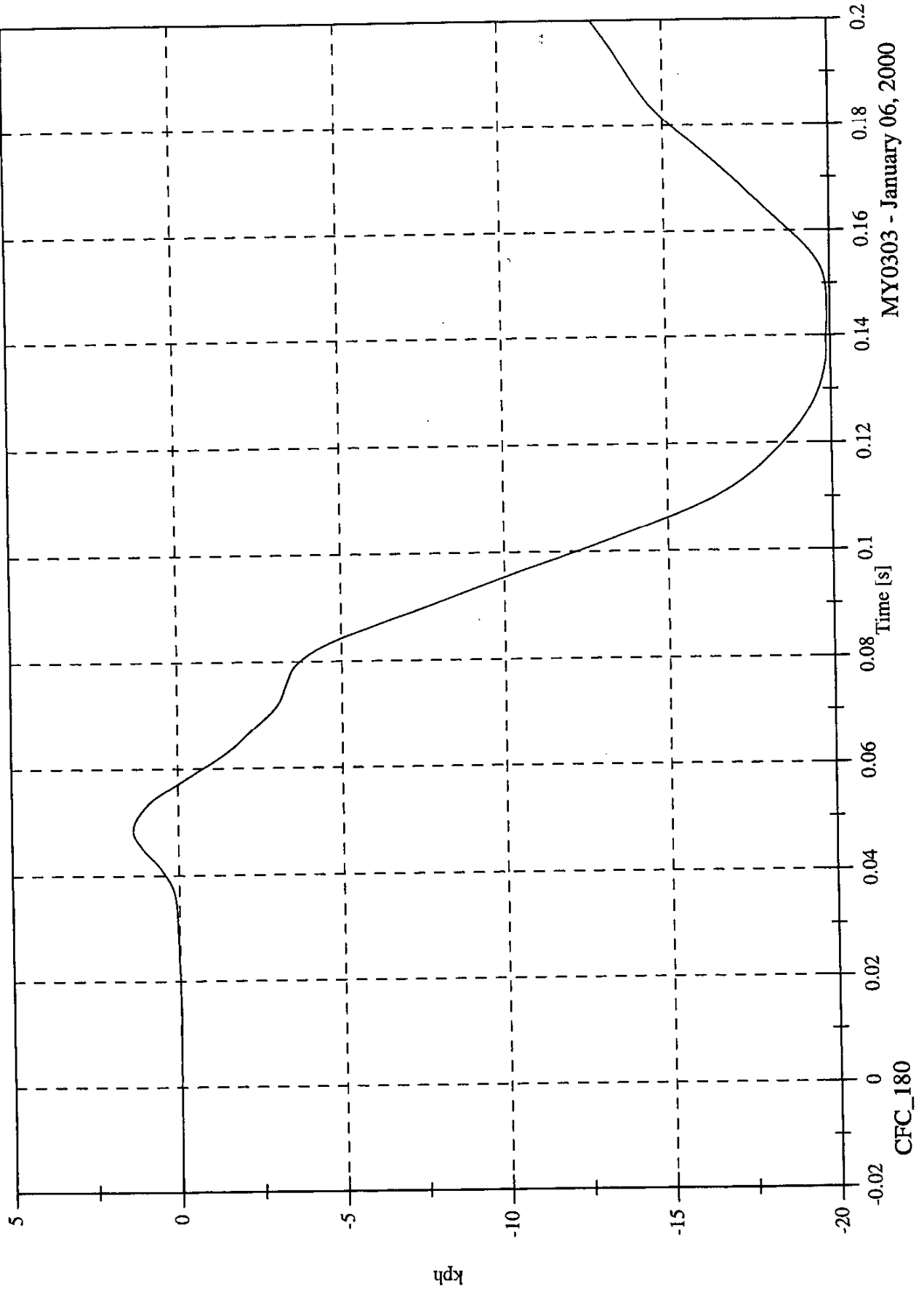
MY0303 - January 06, 2000

CFC_1000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 1.4 [kph] at 0.048 [s]
Min: -19.9 [kph] at 0.144 [s]

P1 Head x Velocity



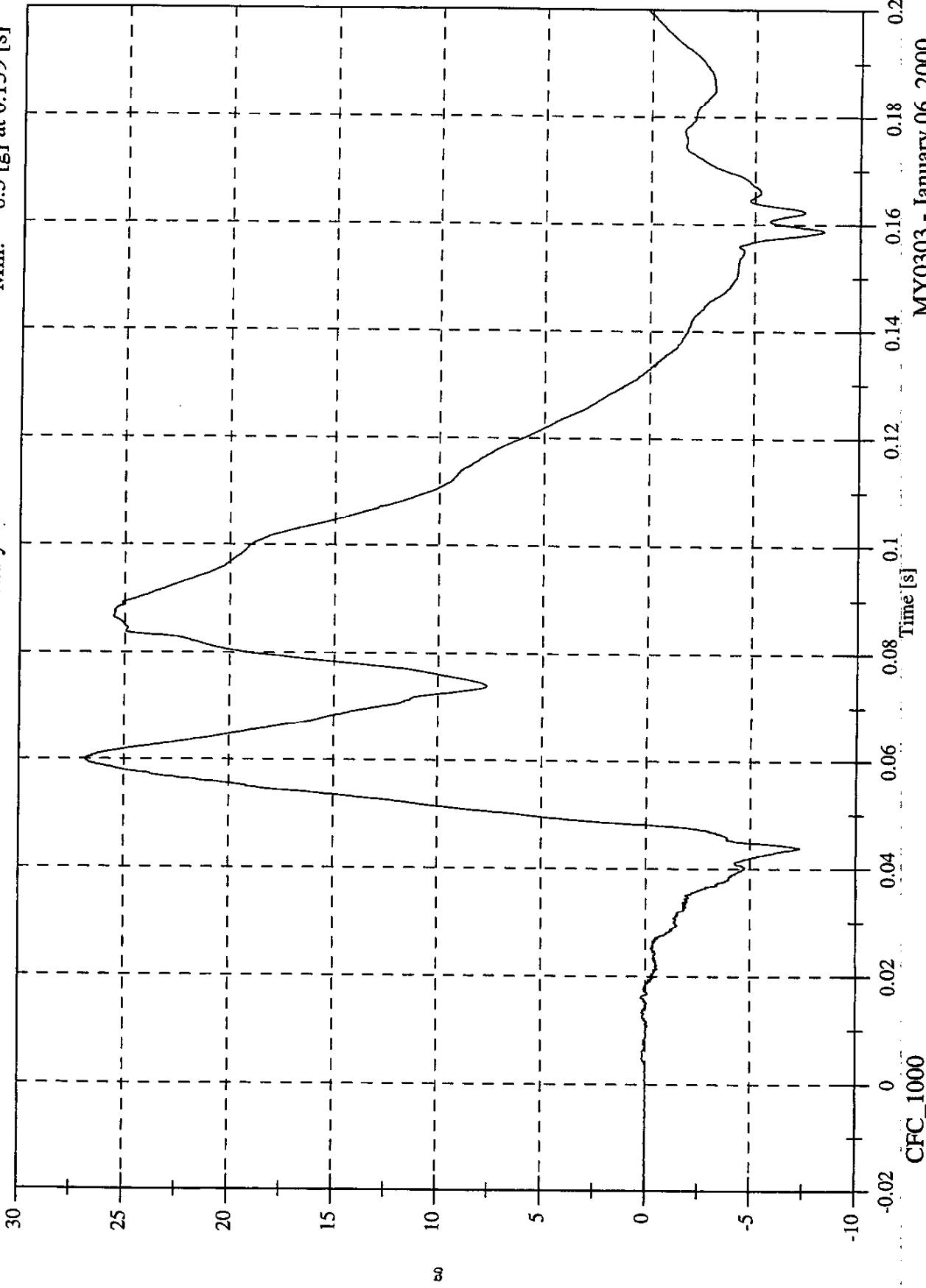
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 26.9 [g] at 0.060 [s]
Min: -8.3 [g] at 0.159 [s]

P1 Head y

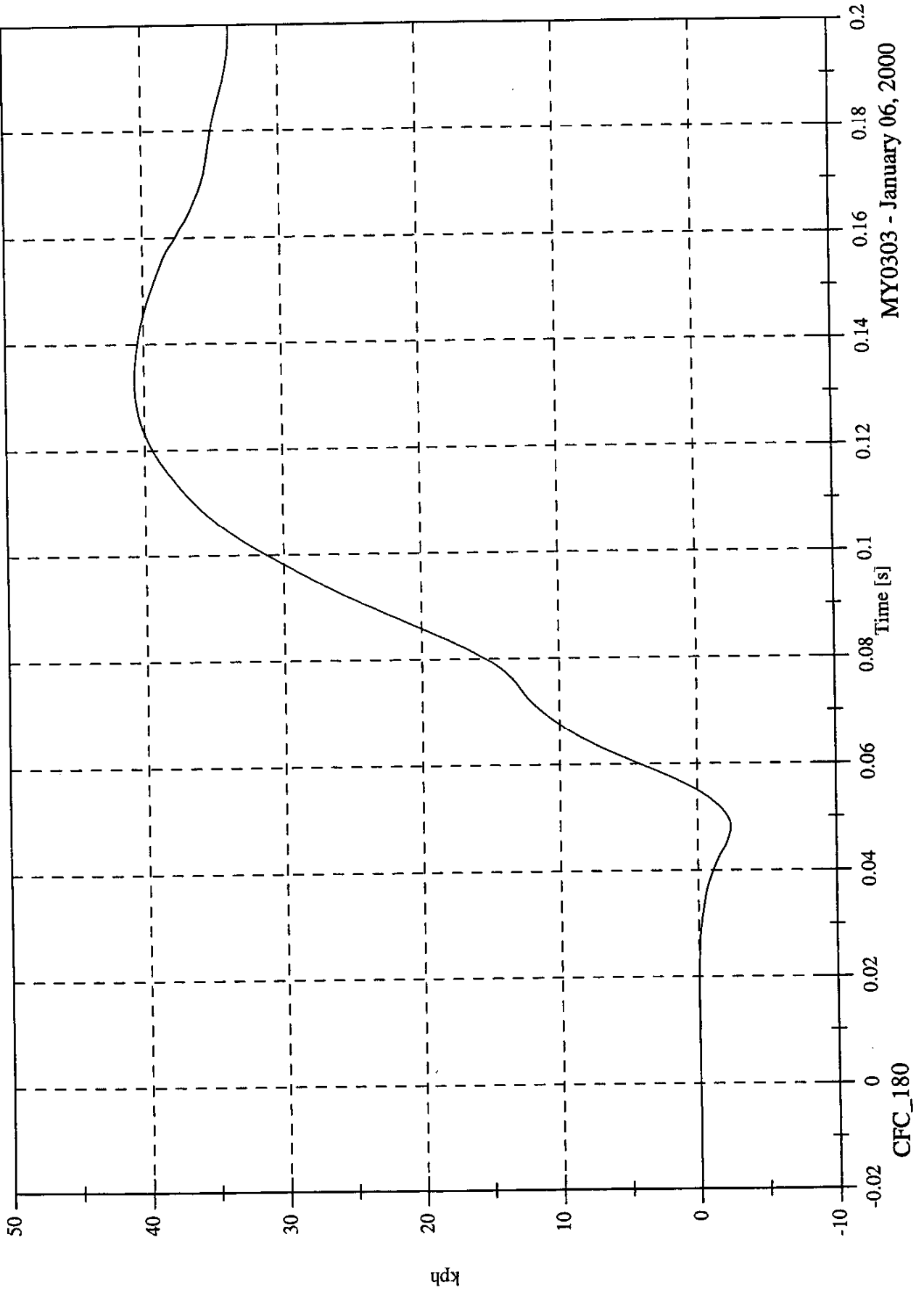


CFC_1000

MY0303 - January 06, 2000

Max: 40.7 [kph] at 0.133 [s]
Min: -2.4 [kph] at 0.048 [s]

P1 Head y Velocity



MY0303 - January 06, 2000

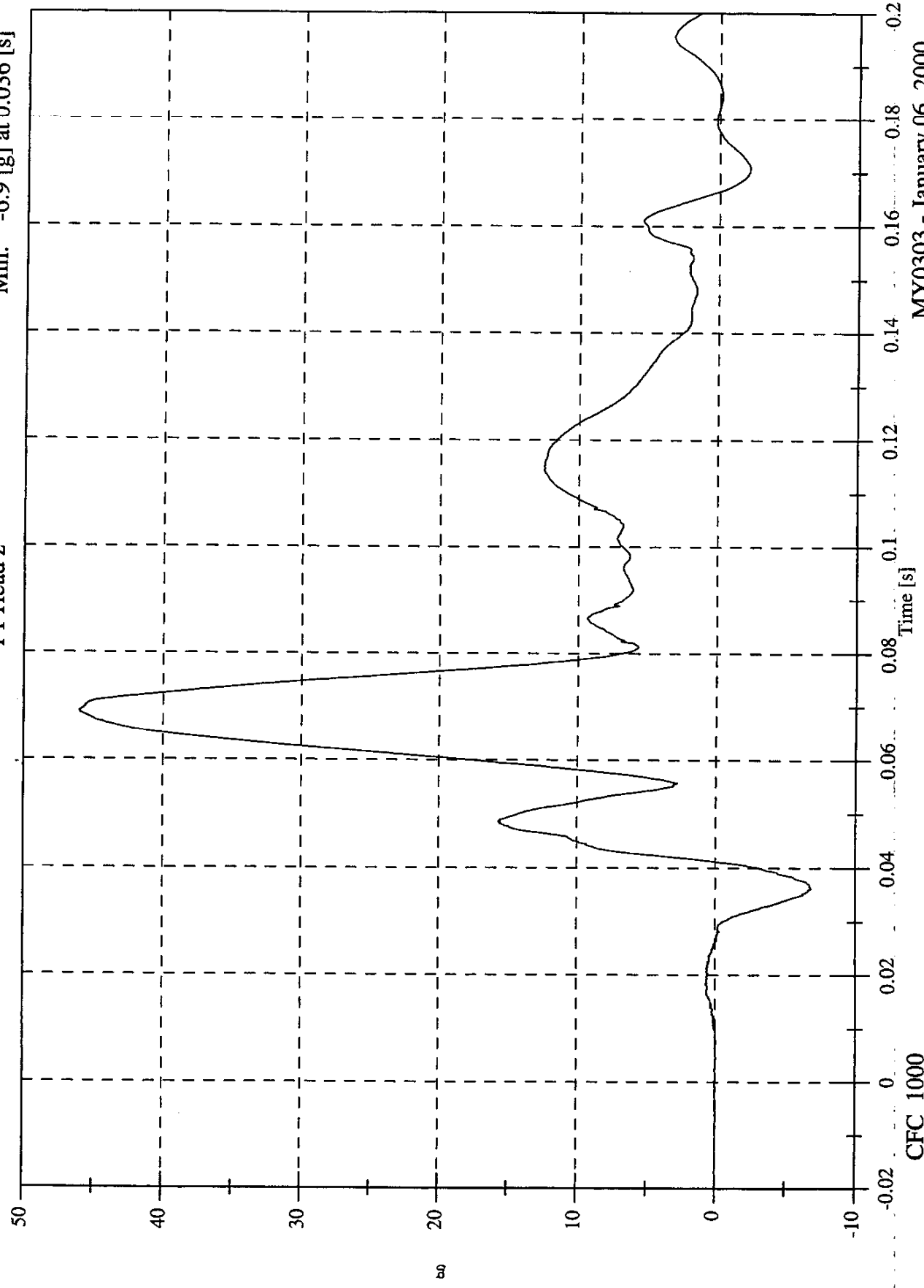
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 46.0 [g] at 0.069 [s]
Min: -6.9 [g] at 0.036 [s]

P1 Head z



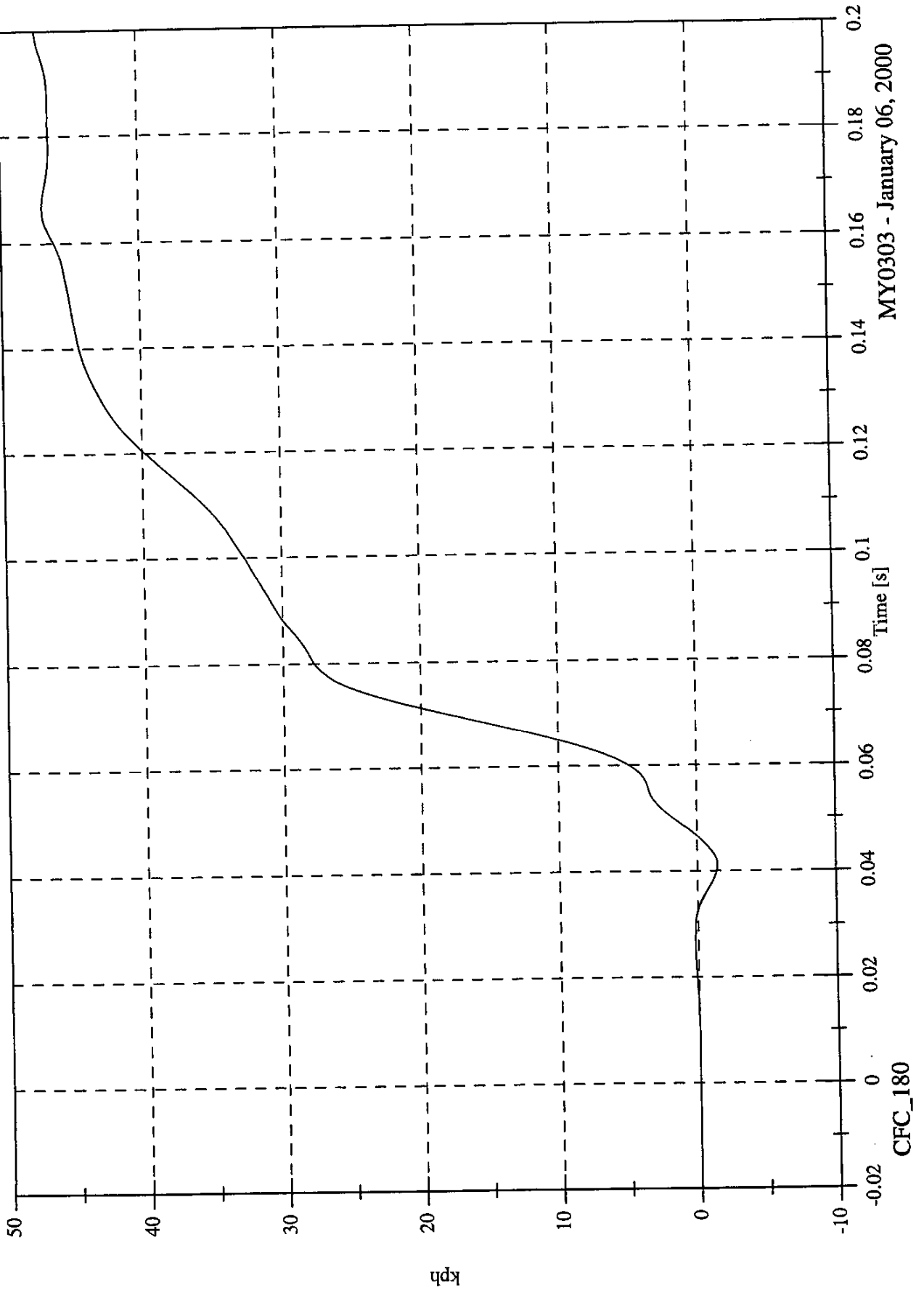
MY0303 - January 06, 2000

CFC_1000

Max: 47.4 [kph] at 0.200 [s]
Min: -1.5 [kph] at 0.041 [s]

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Head z Velocity



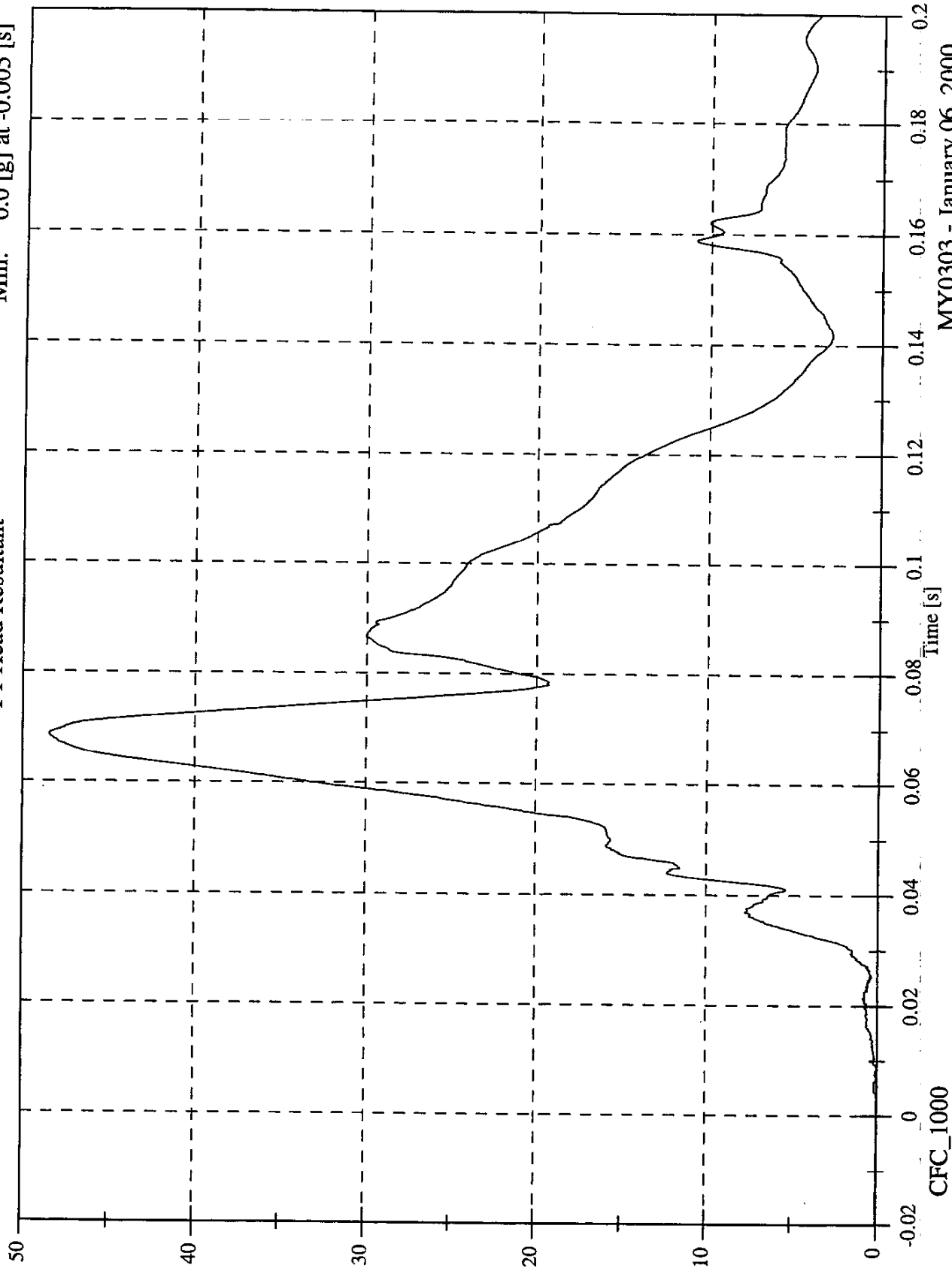
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 48.5 [g] at 0.069 [s]
Min: 0.0 [g] at -0.005 [s]

P1 Head Resultant



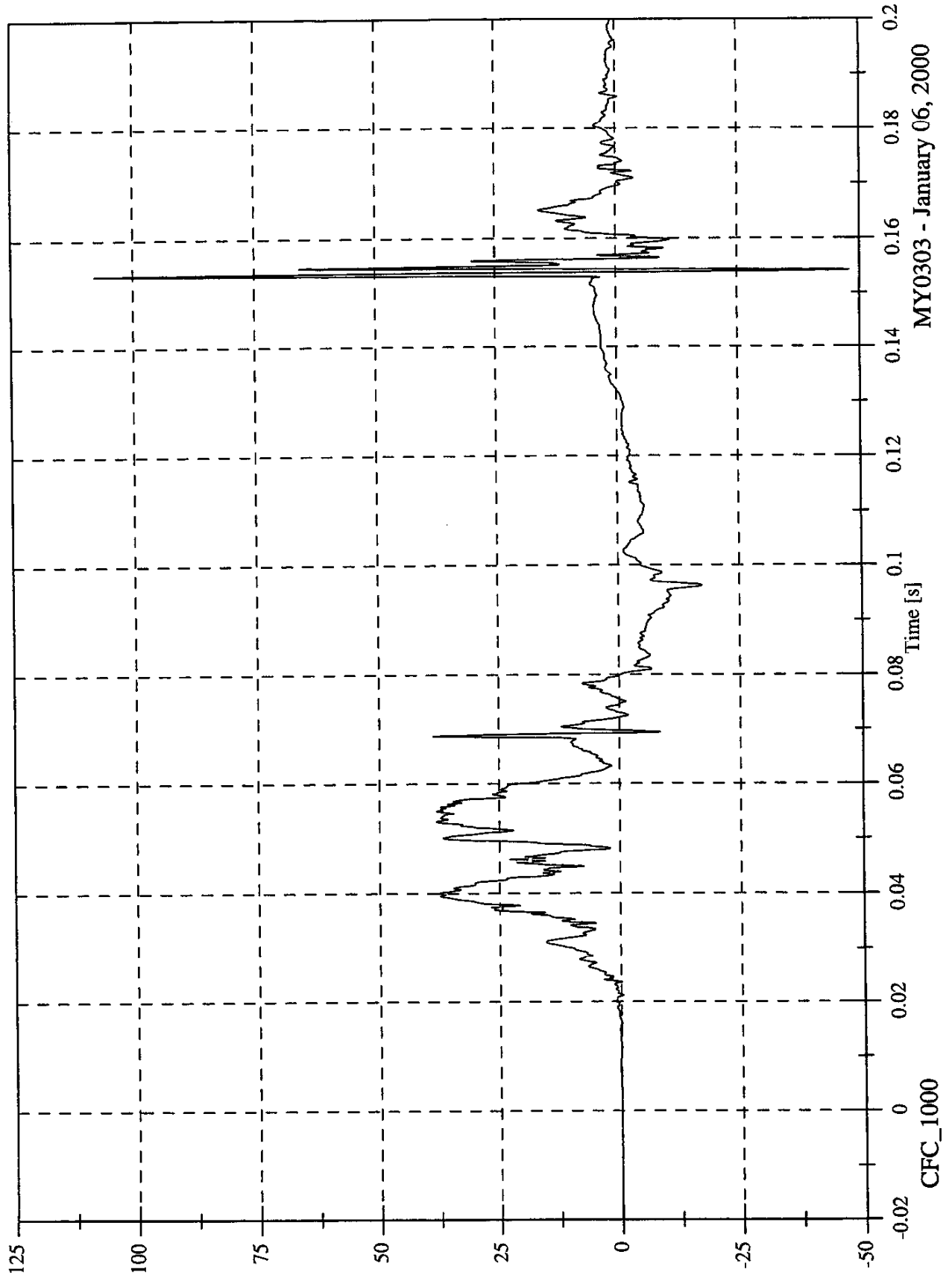
CFC_1000

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Upper Rib y

Max: 107.9 [g] at 0.153 [s]
Min: -47.9 [g] at 0.154 [s]

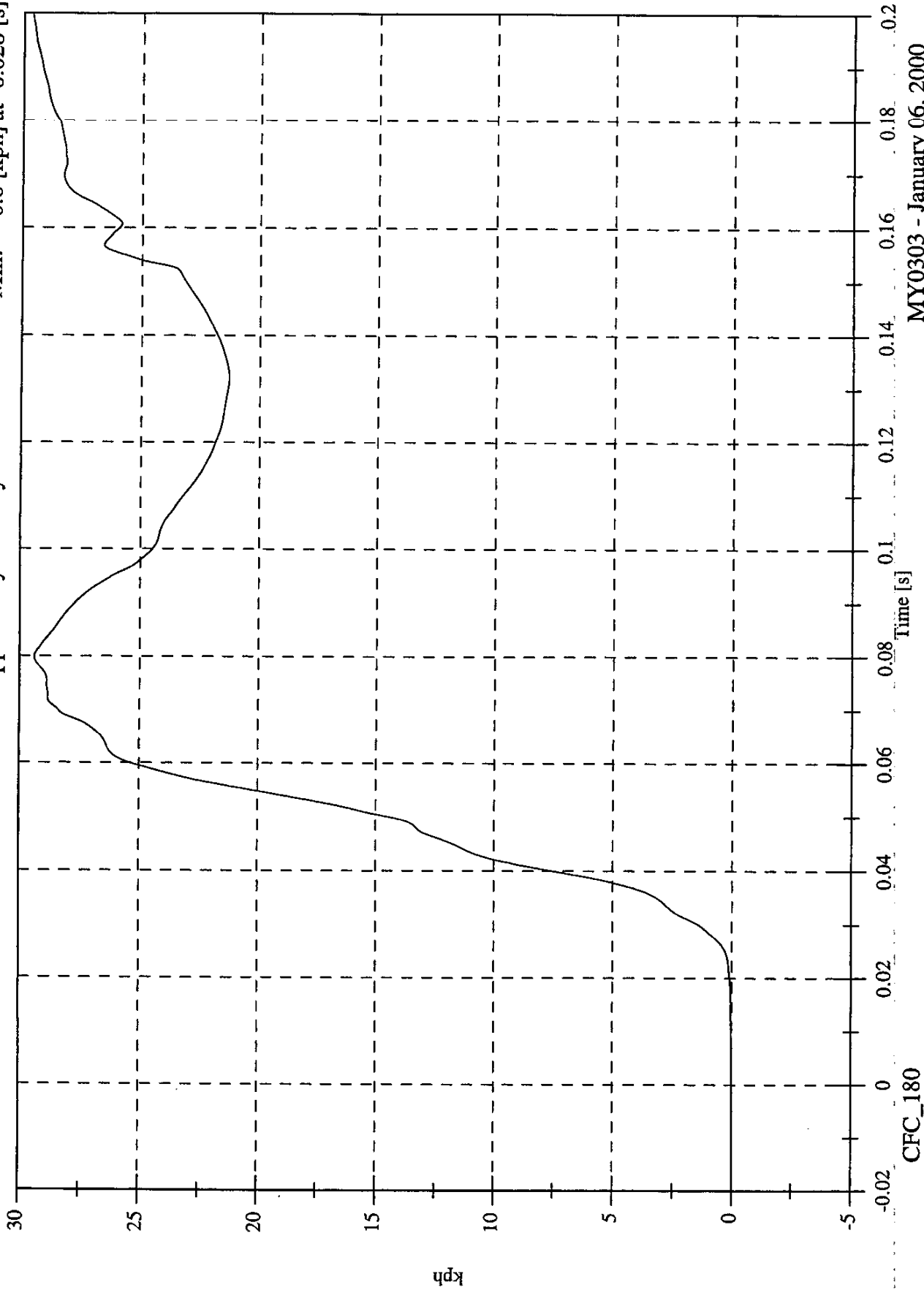


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 29.6 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

P1 Upper Rib y Velocity



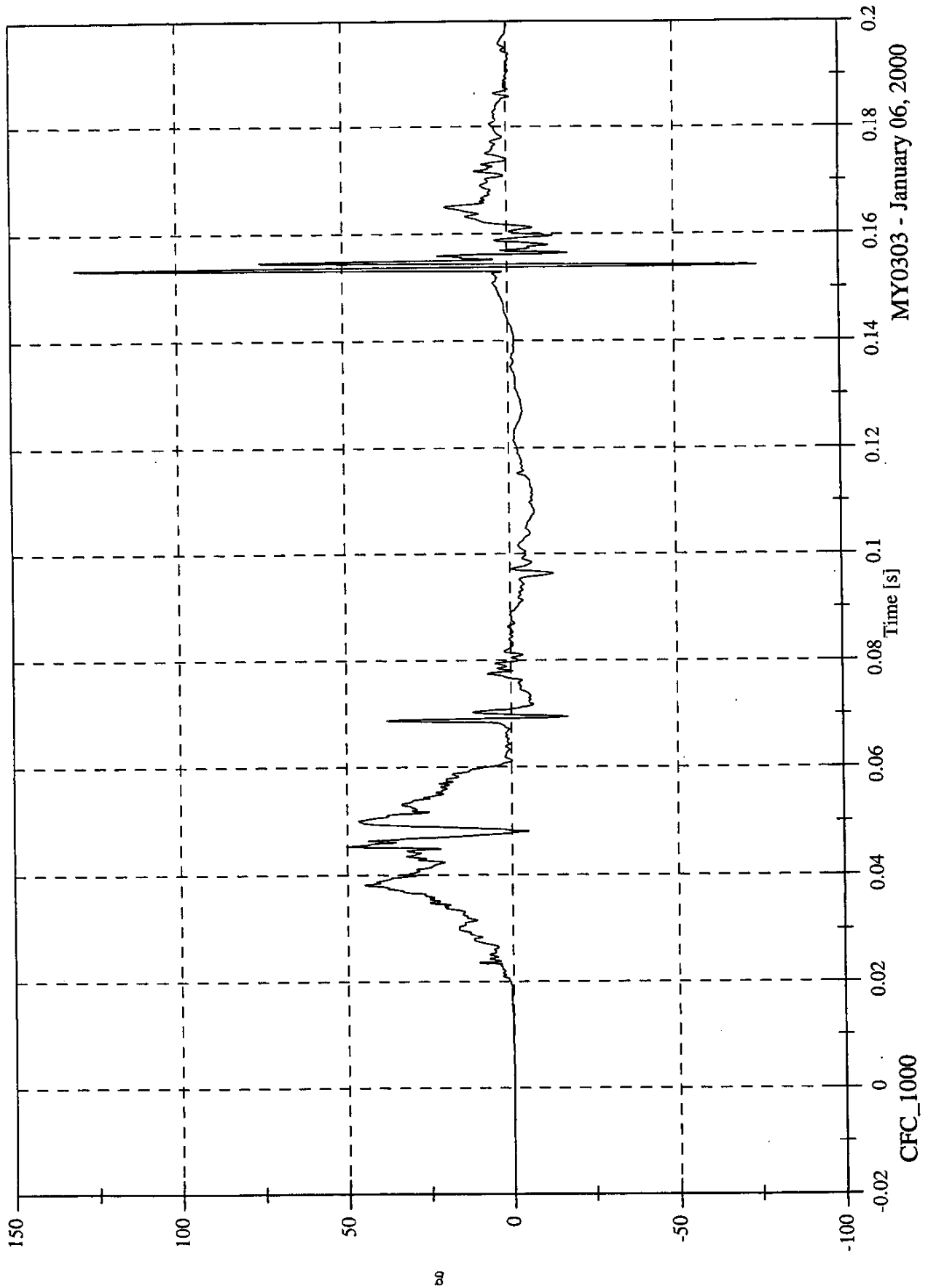
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Lower Rib Y

Max: 130.7 [g] at 0.153 [s]
Min: -75.3 [g] at 0.154 [s]

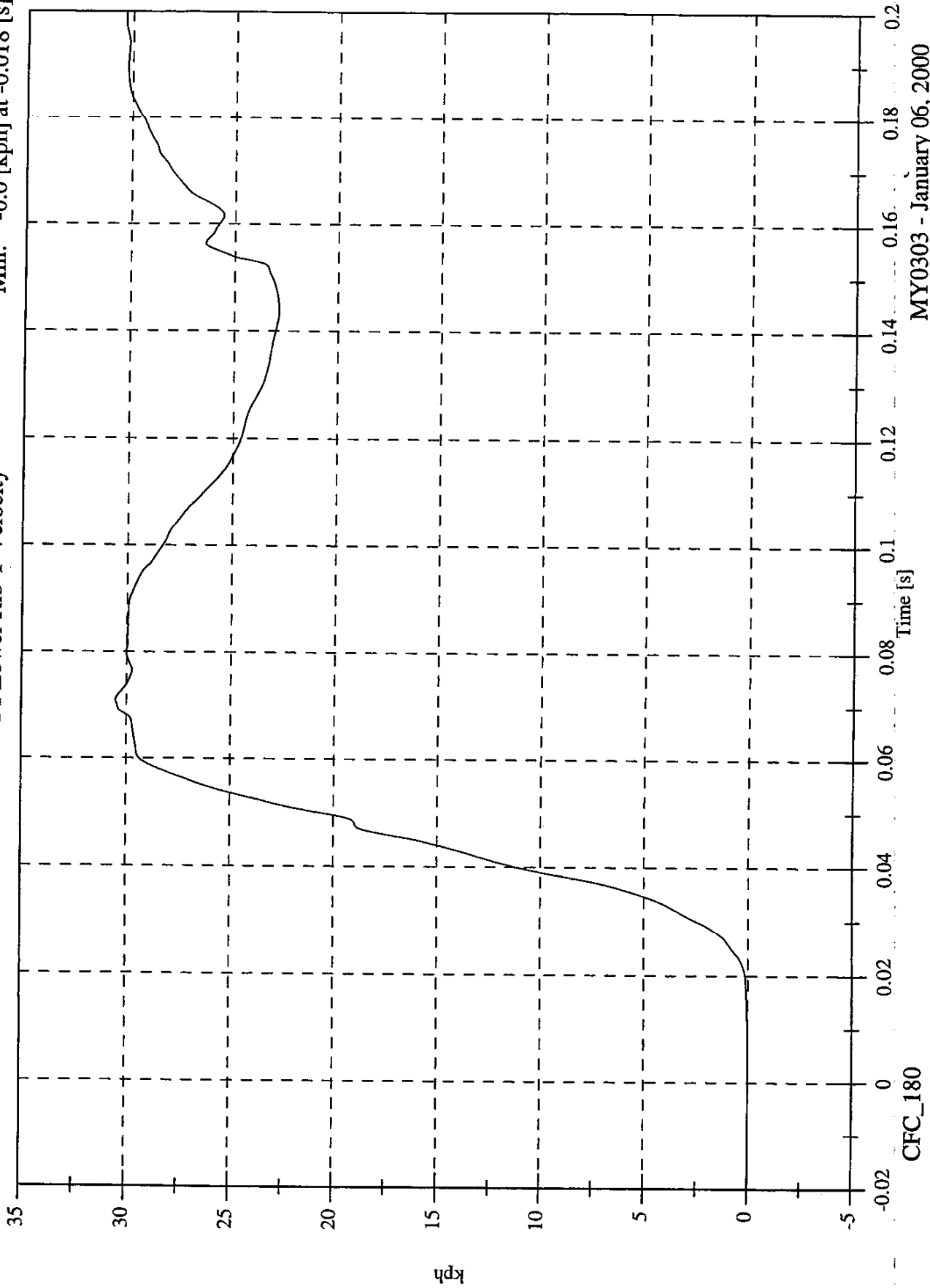


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 30.5 [kph] at 0.071 [s]
Min: -0.0 [kph] at -0.018 [s]

P1 Lower Rib Y Velocity



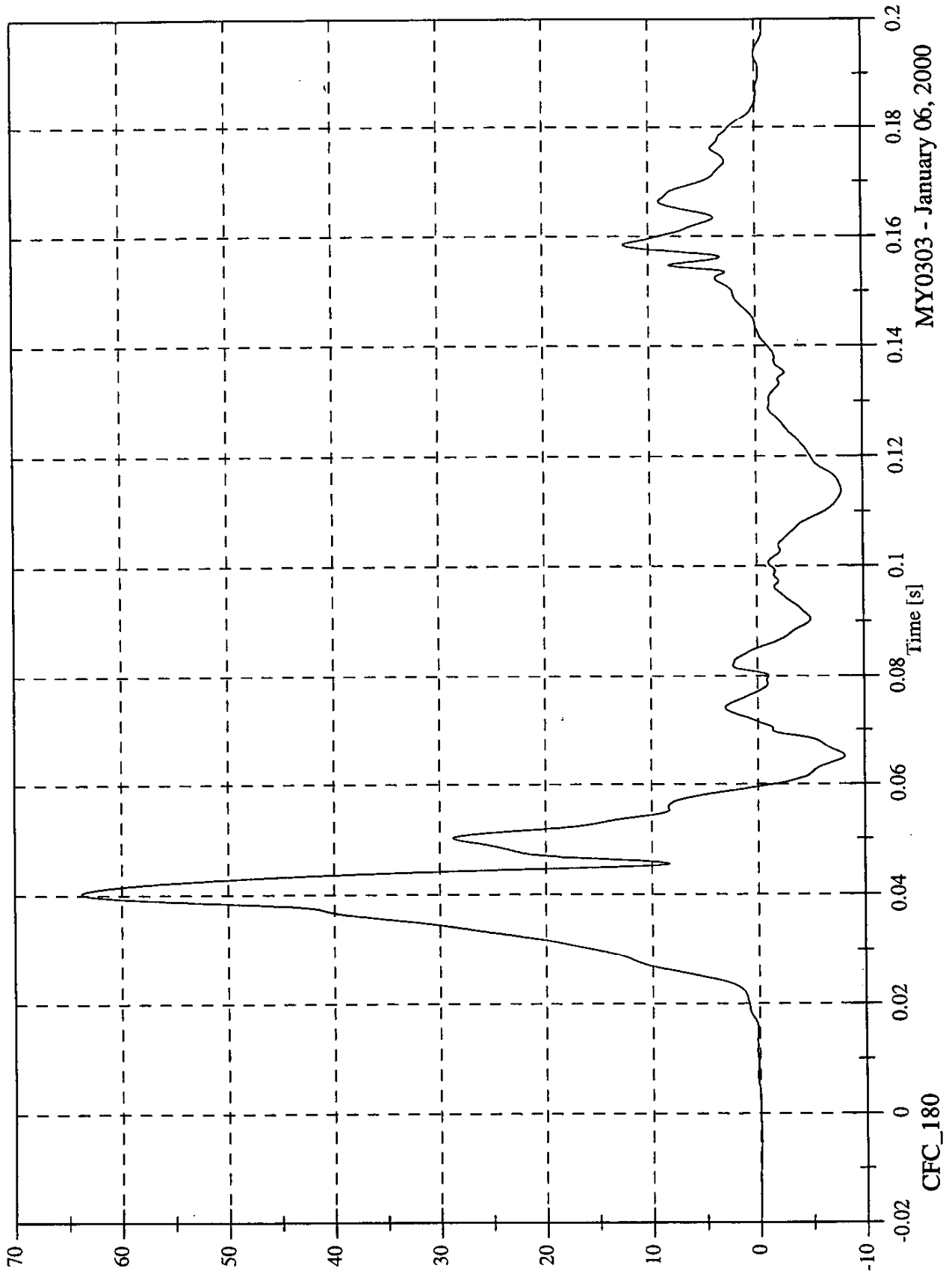
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Lower Spine y

Max: 63.8 [g] at 0.040 [s]
Min: -8.1 [g] at 0.065 [s]



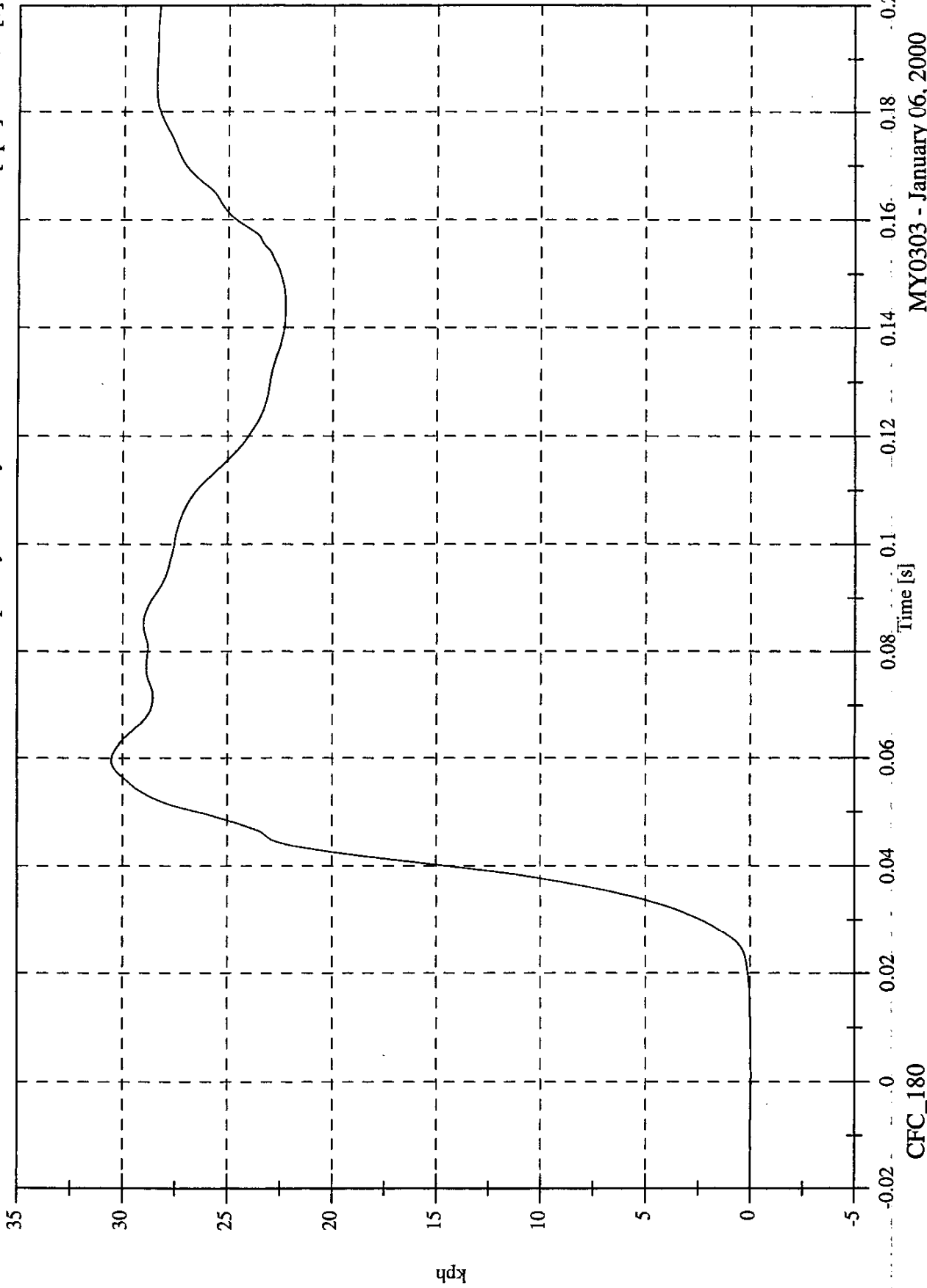
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 30.5 [kph] at 0.060 [s]

Min: -0.0 [kph] at 0.004 [s]

P1 Lower Spine y Velocity



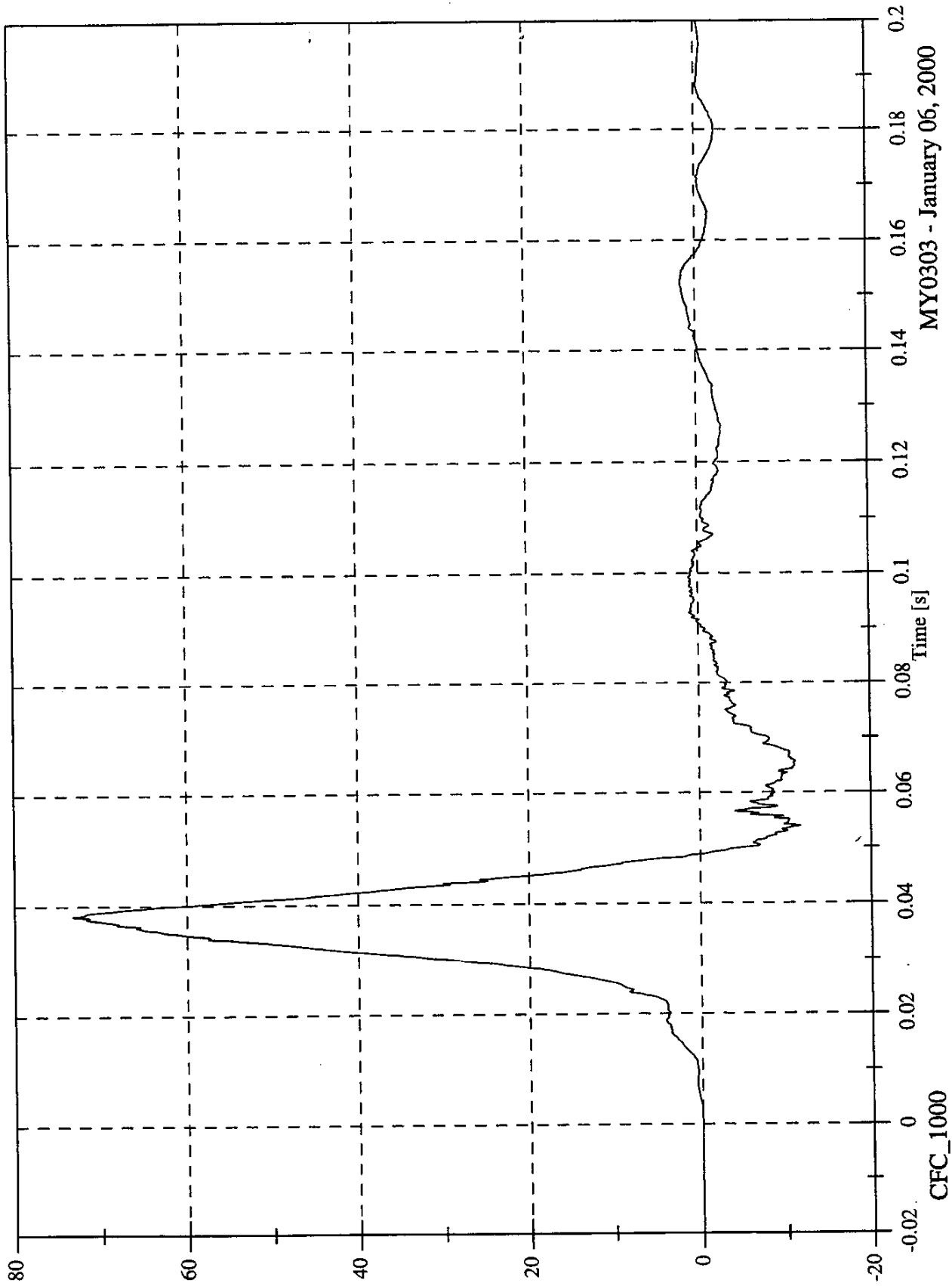
MY0303 - January 06, 2000

CFC_180

Max: 73.3 [g] at 0.038 [s]
Min: -11.8 [g] at 0.054 [s]

P1 Pelvic Y

SNCAP Test# 6 - 2000 Dodge Caravan

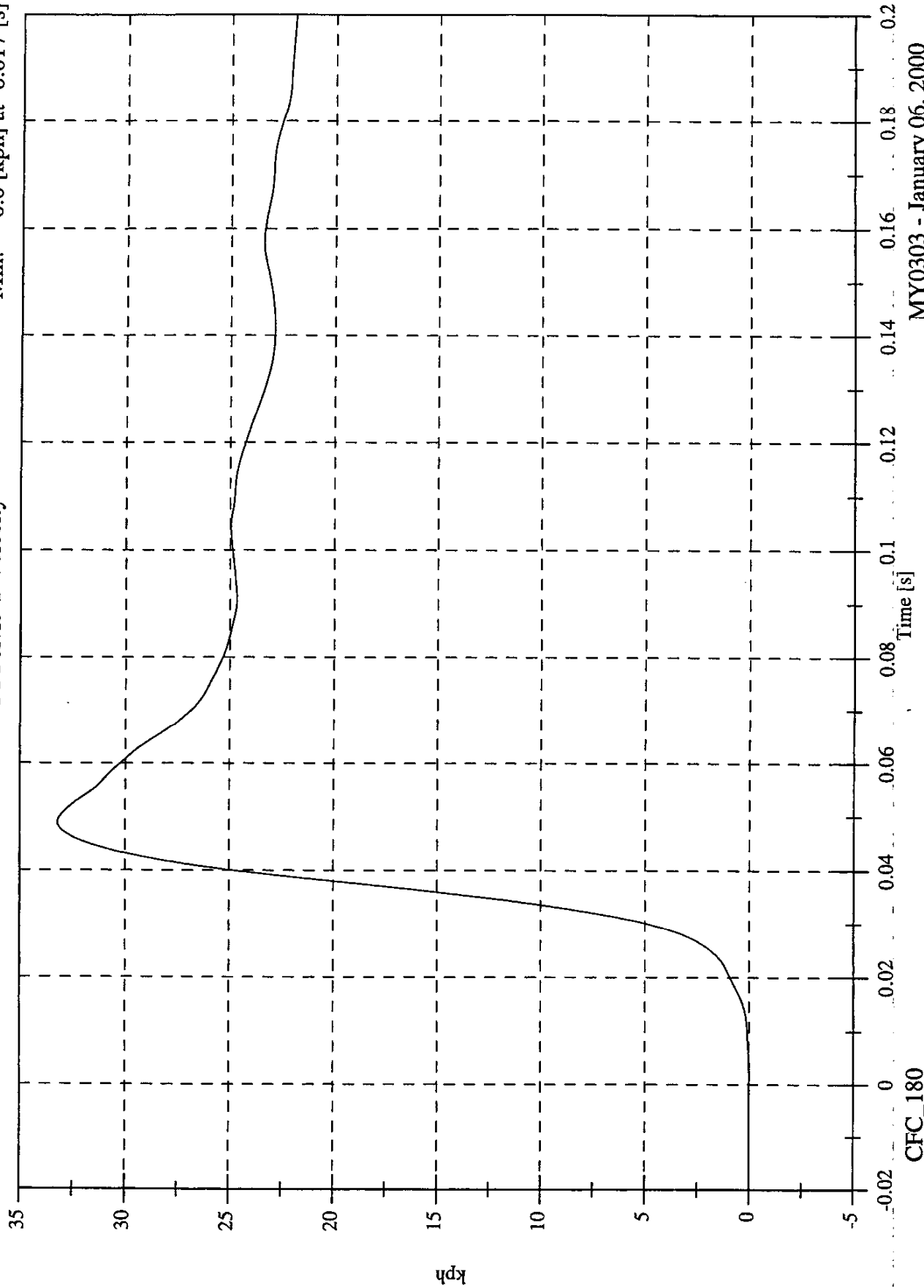


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 33.2 [kph] at 0.049 [s]
Min: -0.0 [kph] at -0.017 [s]

P1 Pelvic Y Velocity



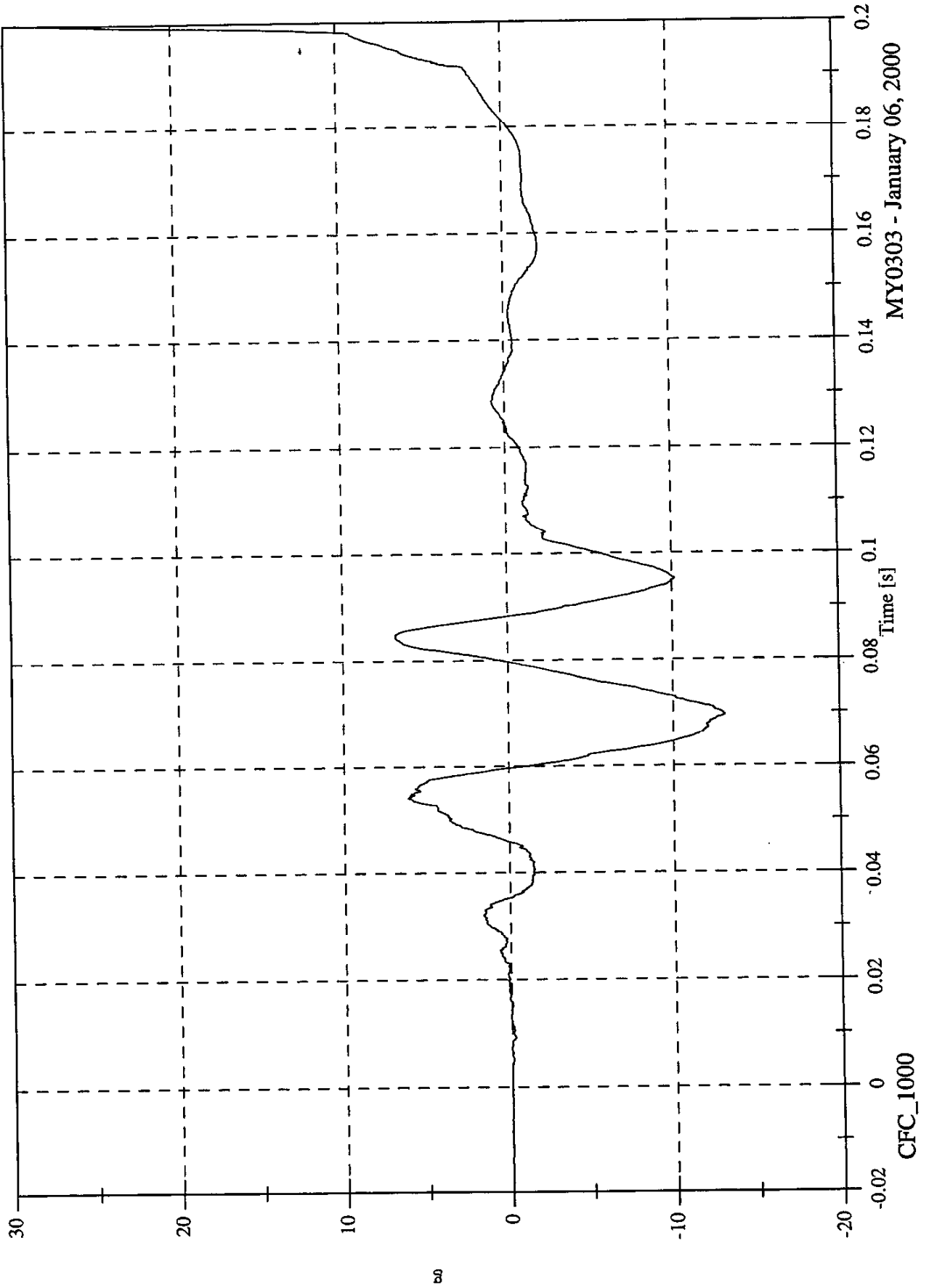
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Head x

Max: 28.1 [g] at 0.200 [s]
Min: -13.1 [g] at 0.070 [s]

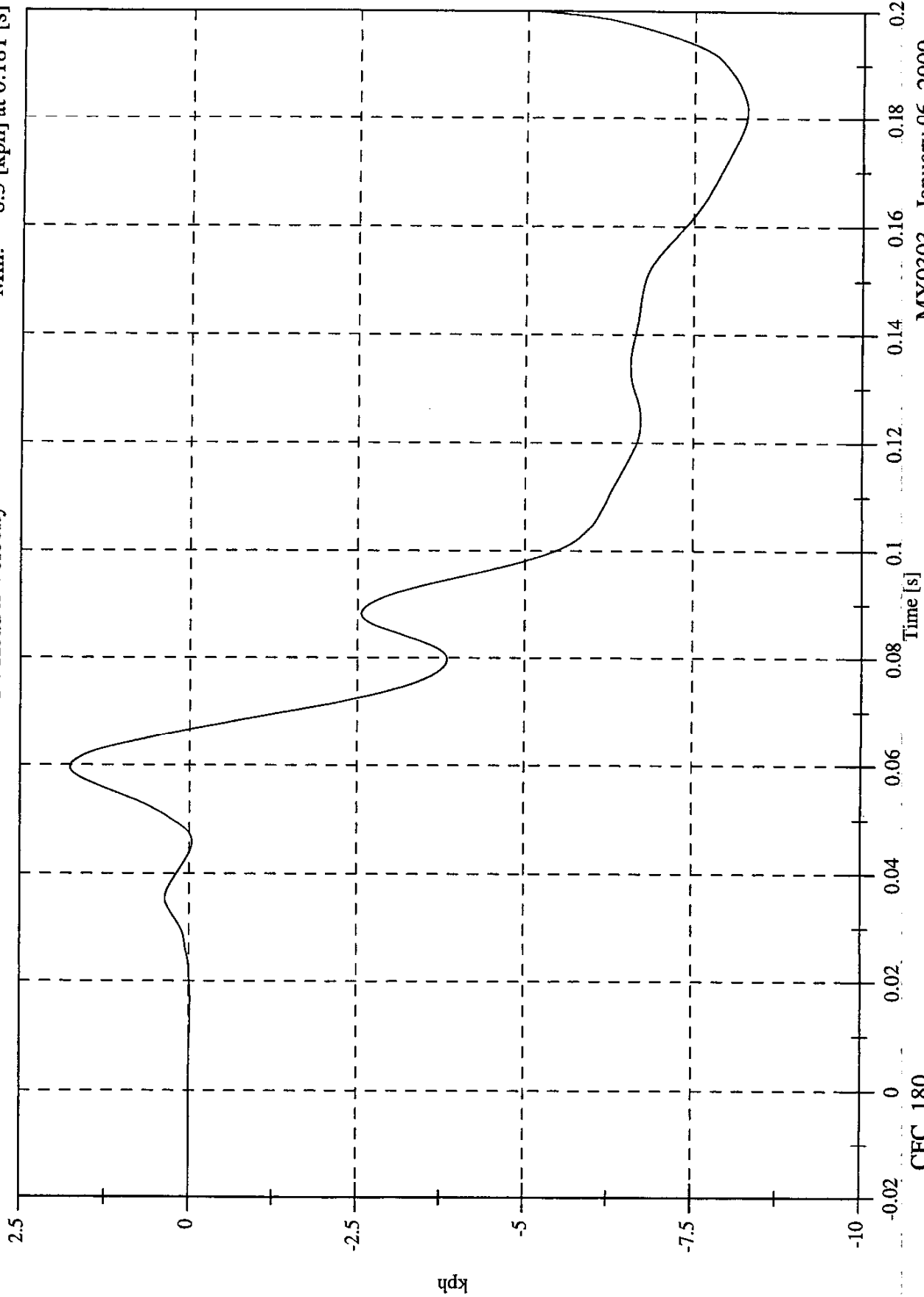


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 1.8 [kph] at 0.060 [s]
Min: -8.3 [kph] at 0.181 [s]

P4 Head x Velocity



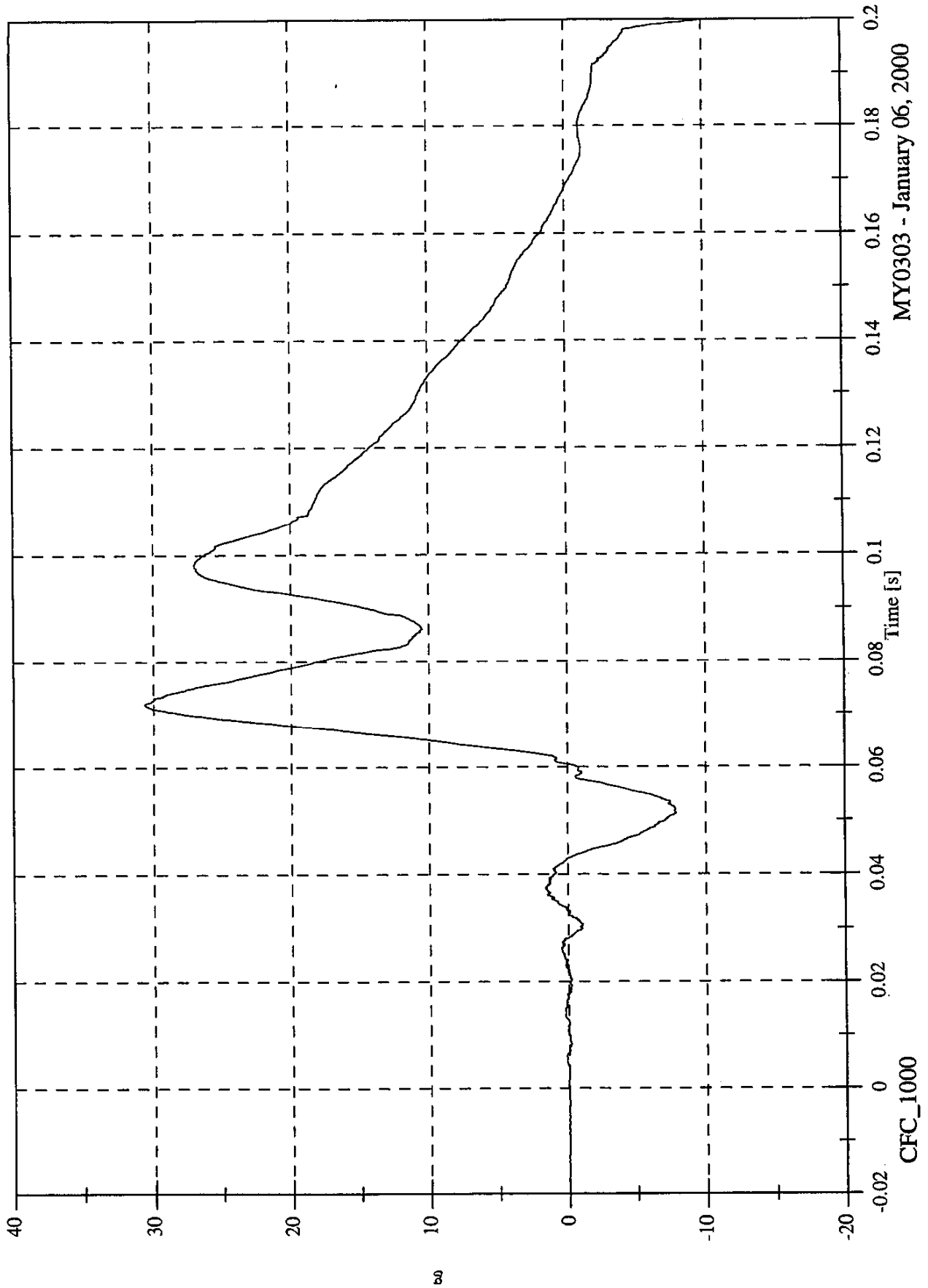
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 30.6 [g] at 0.072 [s]
Min: -10.2 [g] at 0.200 [s]

P4 Head y



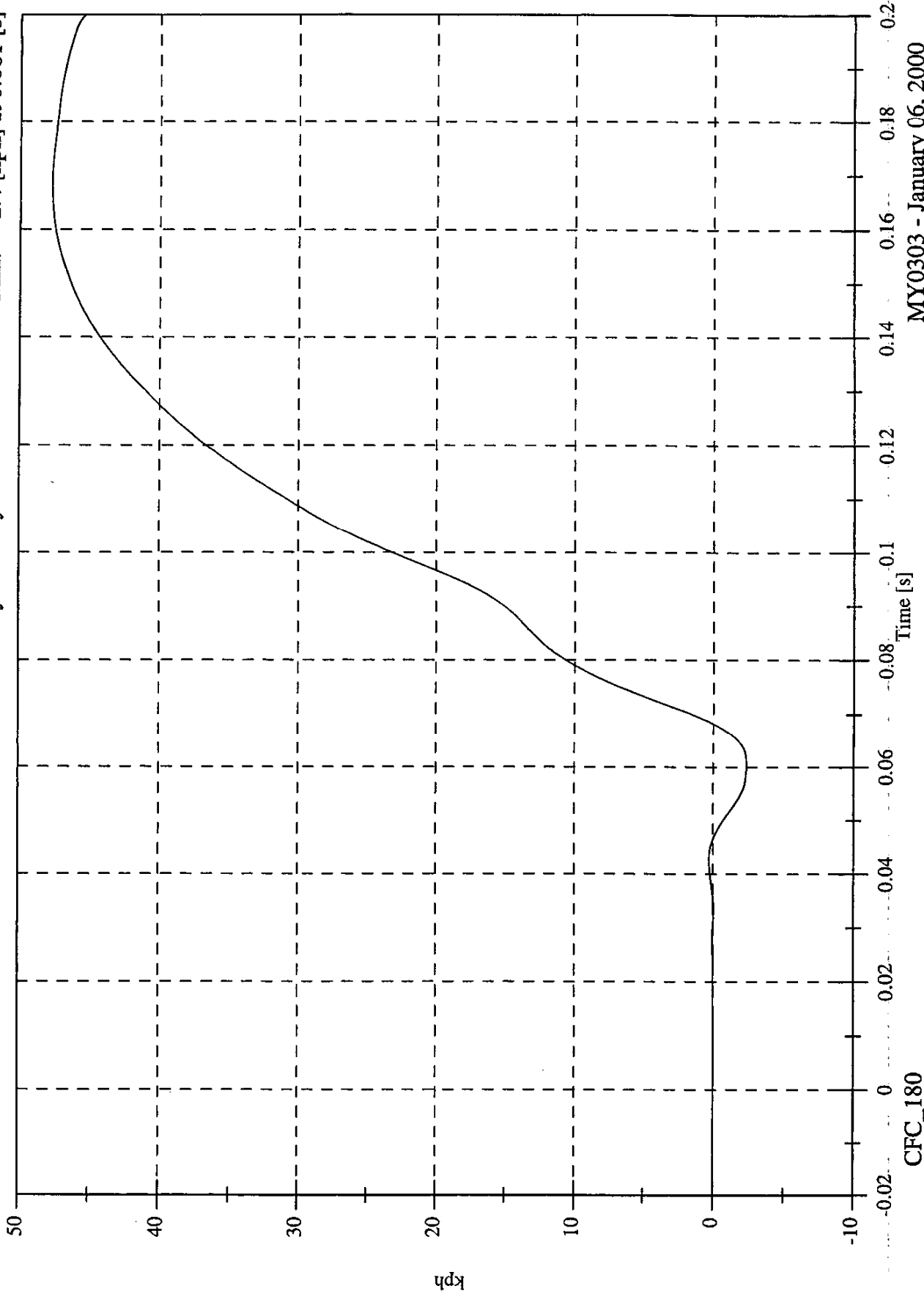
MY0303 - January 06, 2000

CFC_1000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 47.7 [kph] at 0.168 [s]
Min: -2.4 [kph] at 0.061 [s]

P4 Head y Velocity



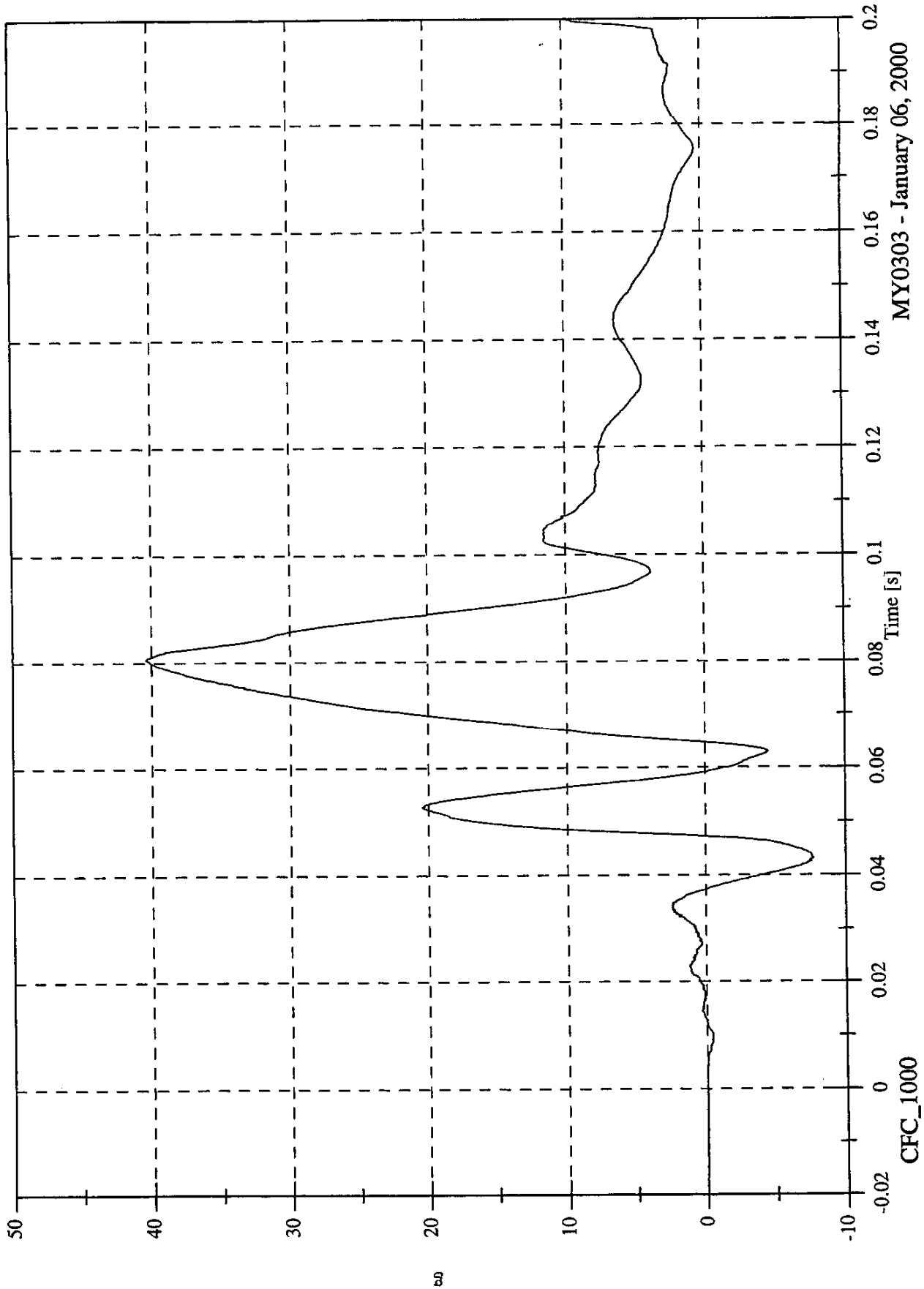
CFC_180

8506-11

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 40.4 [g] at 0.081 [s]
Min: -7.7 [g] at 0.043 [s]

P4 Head z

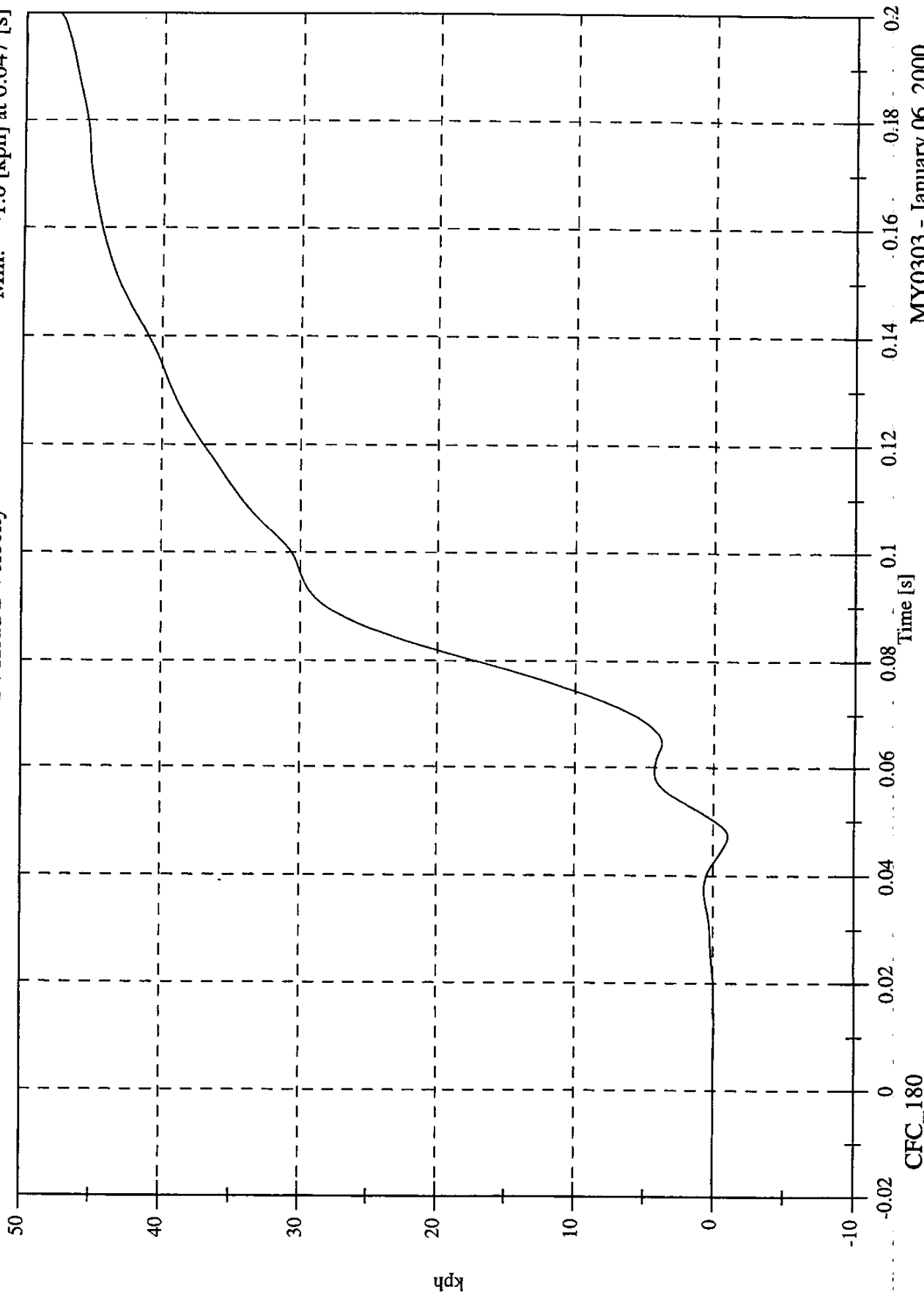


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 47.5 [kph] at 0.200 [s]
Min: -1.0 [kph] at 0.047 [s]

P4 Head z Velocity



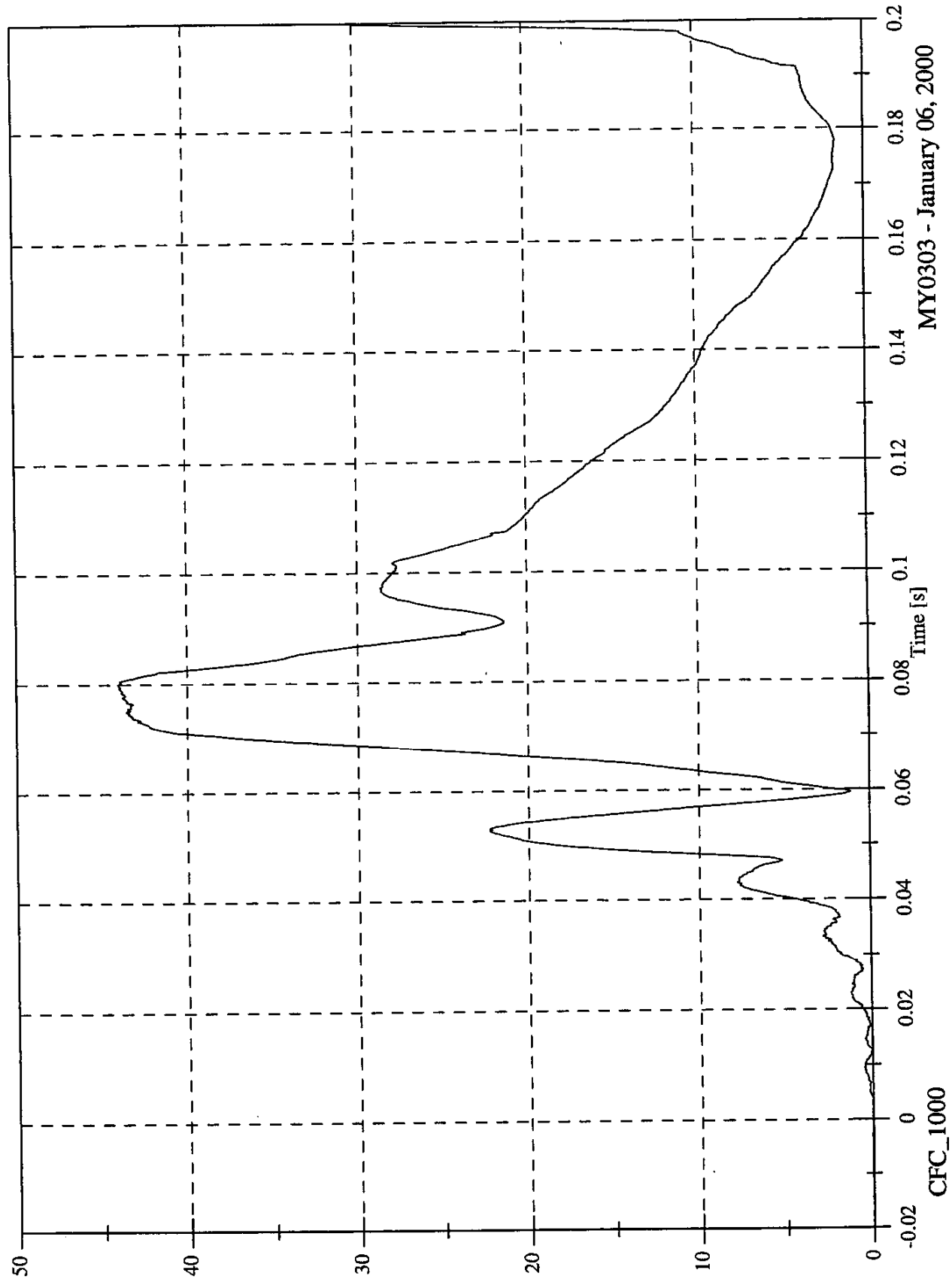
CFC_180

MY0303 - January 06, 2000

Max: 44.1 [g] at 0.080 [s]
Min: 0.0 [g] at -0.016 [s]

P4 Head Resultant

SNCAP Test# 6 - 2000 Dodge Caravan

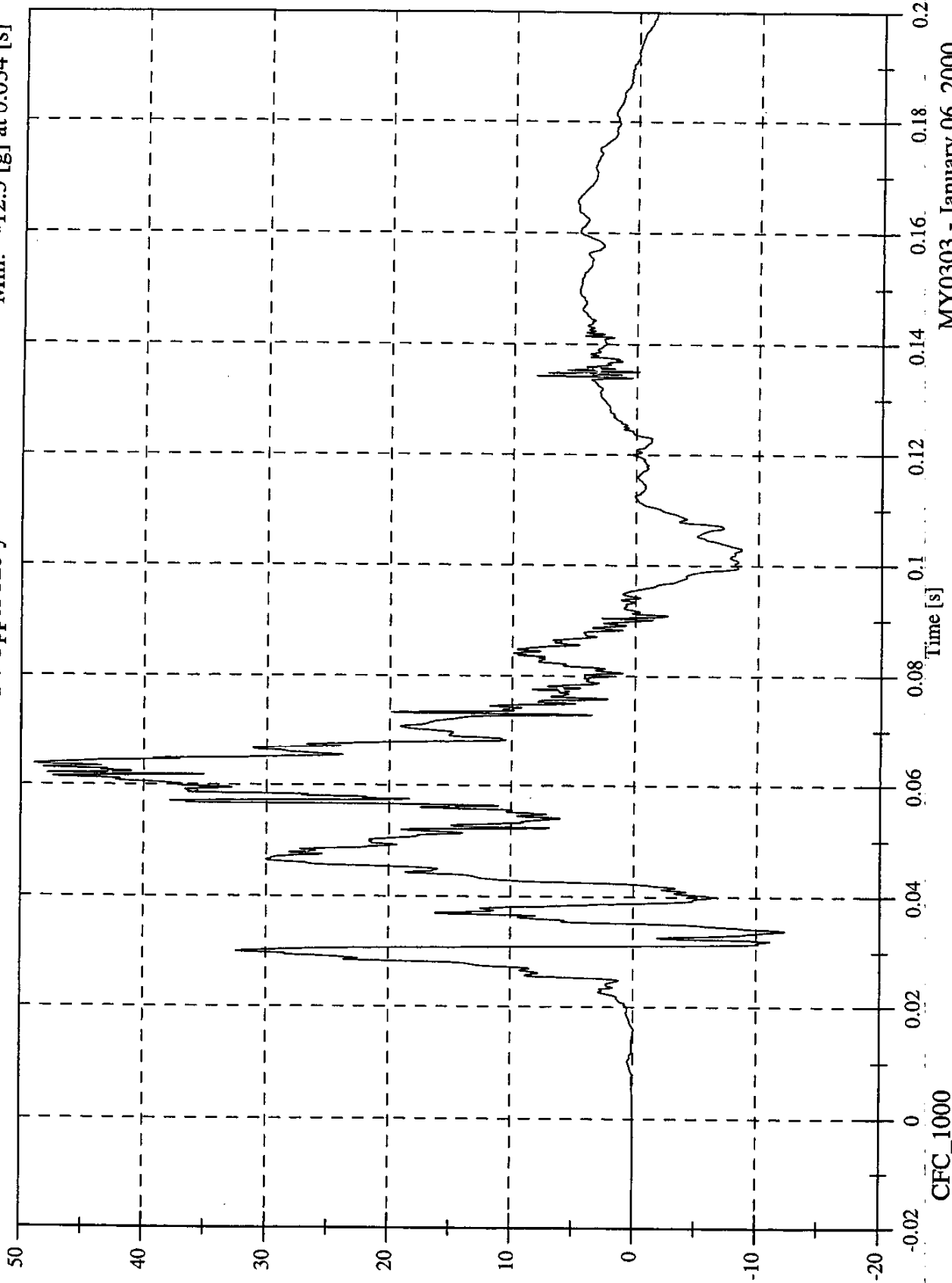


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 48.9 [g] at 0.064 [s]
Min: -12.3 [g] at 0.034 [s]

P4 Upper Rib y

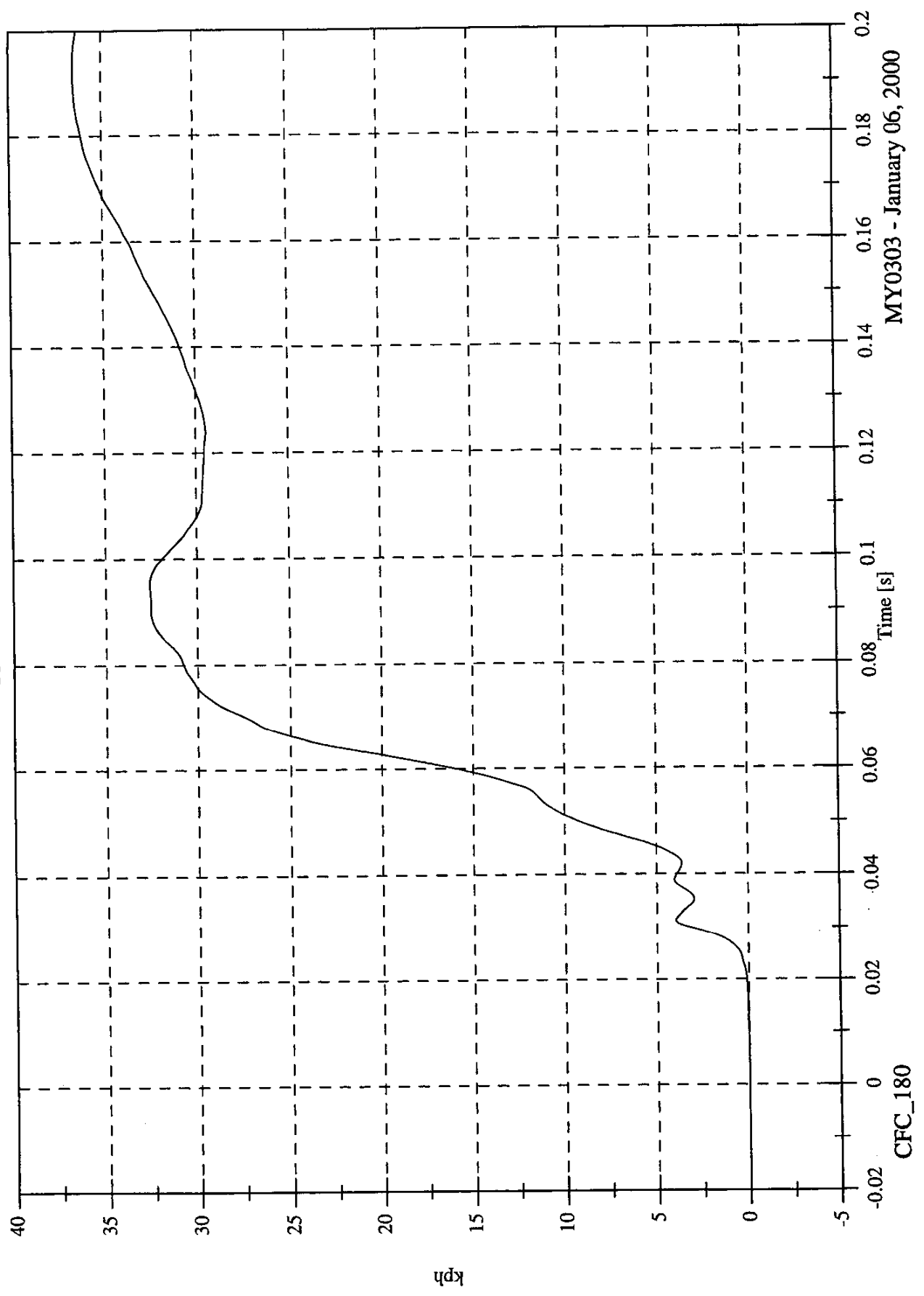


MY0303 - January 06, 2000

CFC_1000

SNCAP Test# 6 - 2000 Dodge Caravan
P4 Upper Rib y Velocity

Max: 36.5 [kph] at 0.193 [s]
Min: -0.0 [kph] at -0.020 [s]

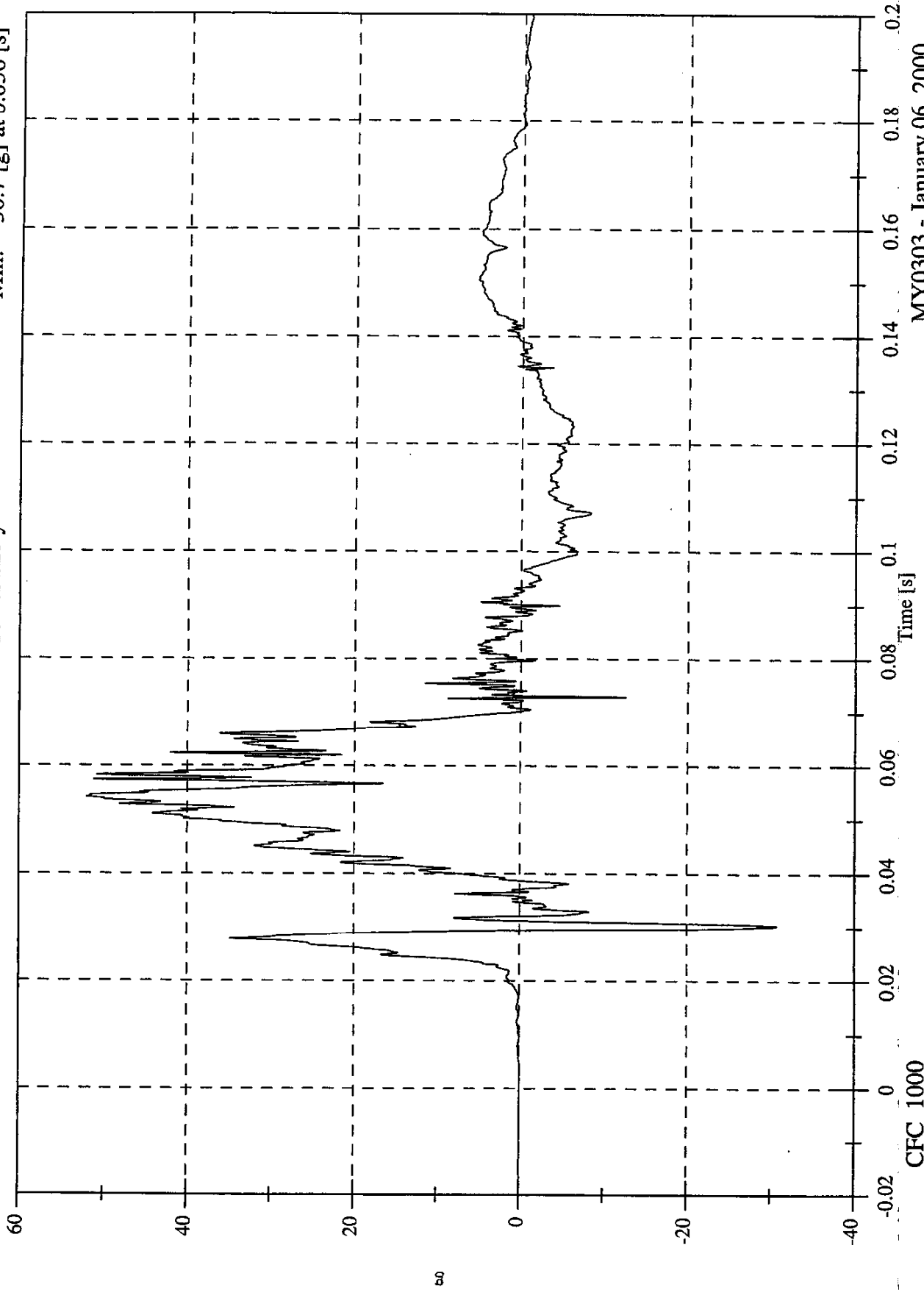


CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 52.0 [g] at 0.054 [s]
Min: -30.7 [g] at 0.030 [s]

P4 Lower Rib y



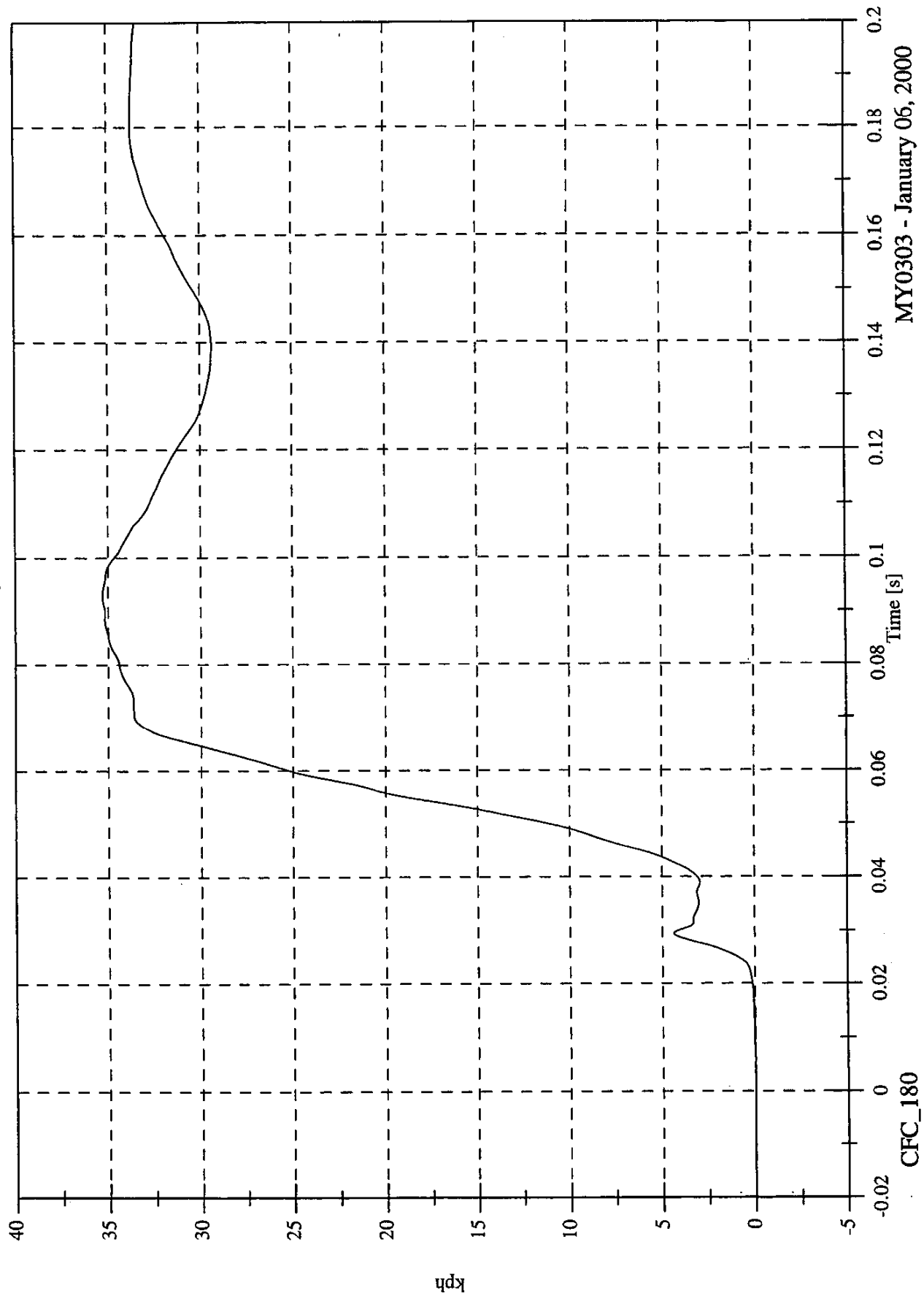
CFC_1000

MY0303 - January 06, 2000

Max: 35.3 [kph] at 0.093 [s]
Min: -0.0 [kph] at -0.020 [s]

P4 Lower Rib y Velocity

SNCAP Test# 6 - 2000 Dodge Caravan



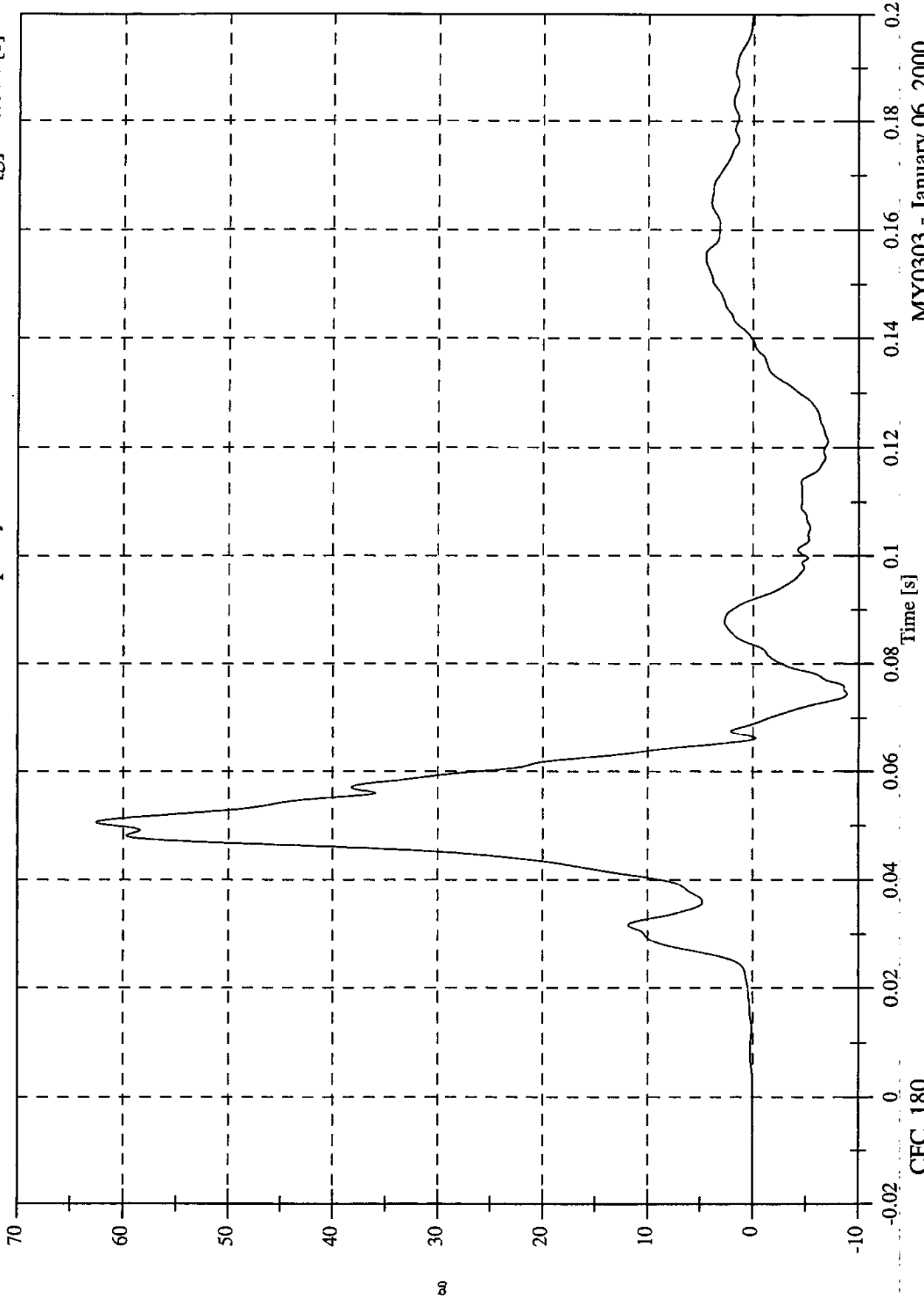
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 62.6 [g] at 0.051 [s]
Min: -8.9 [g] at 0.074 [s]

P4 Lower Spine y



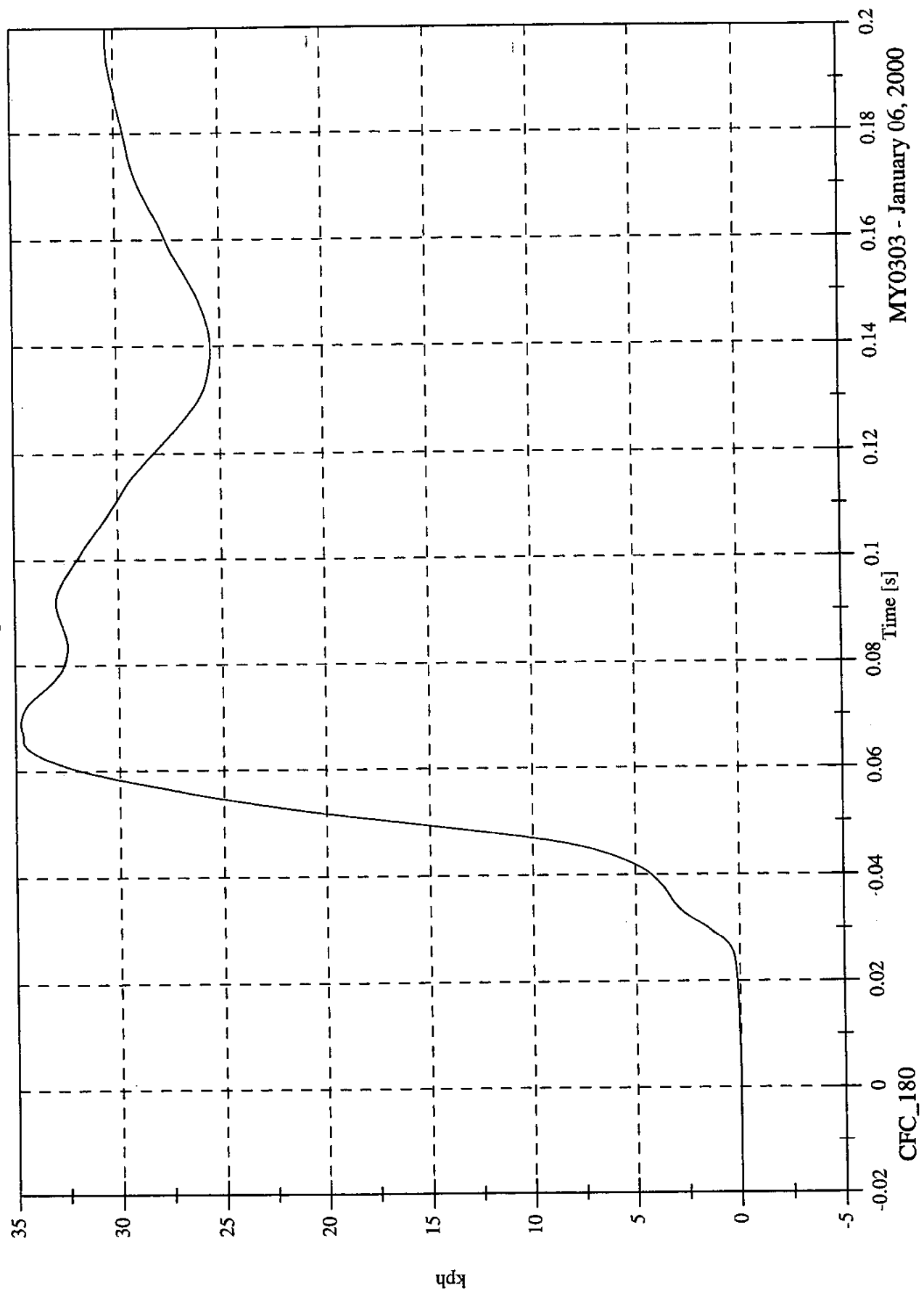
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 34.7 [kph] at 0.069 [s]
Min: -0.0 [kph] at -0.020 [s]

P4 Lower Spine y Velocity



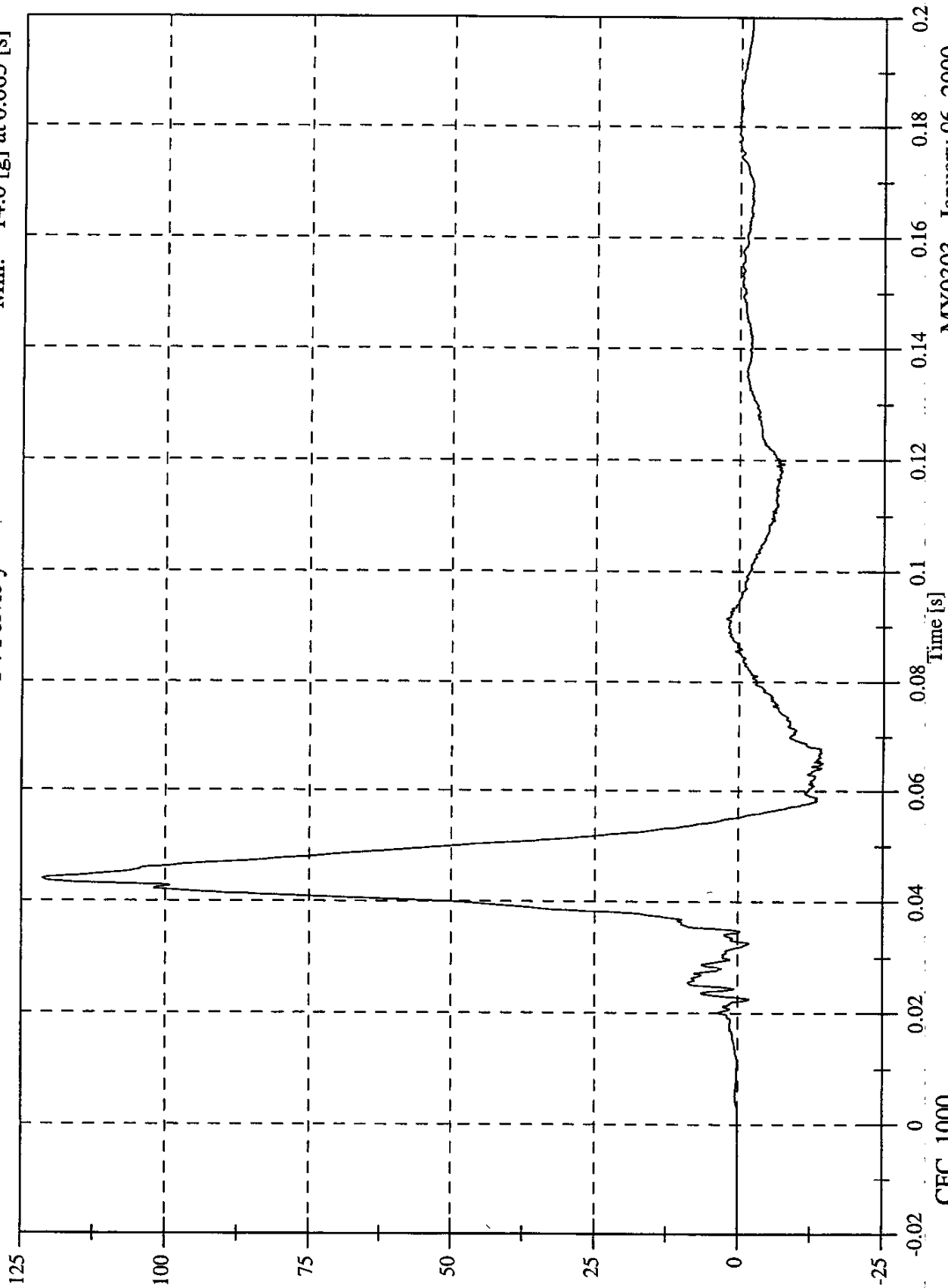
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 121.3 [g] at 0.044 [s]
Min: -14.6 [g] at 0.065 [s]

P4 Pelvic y

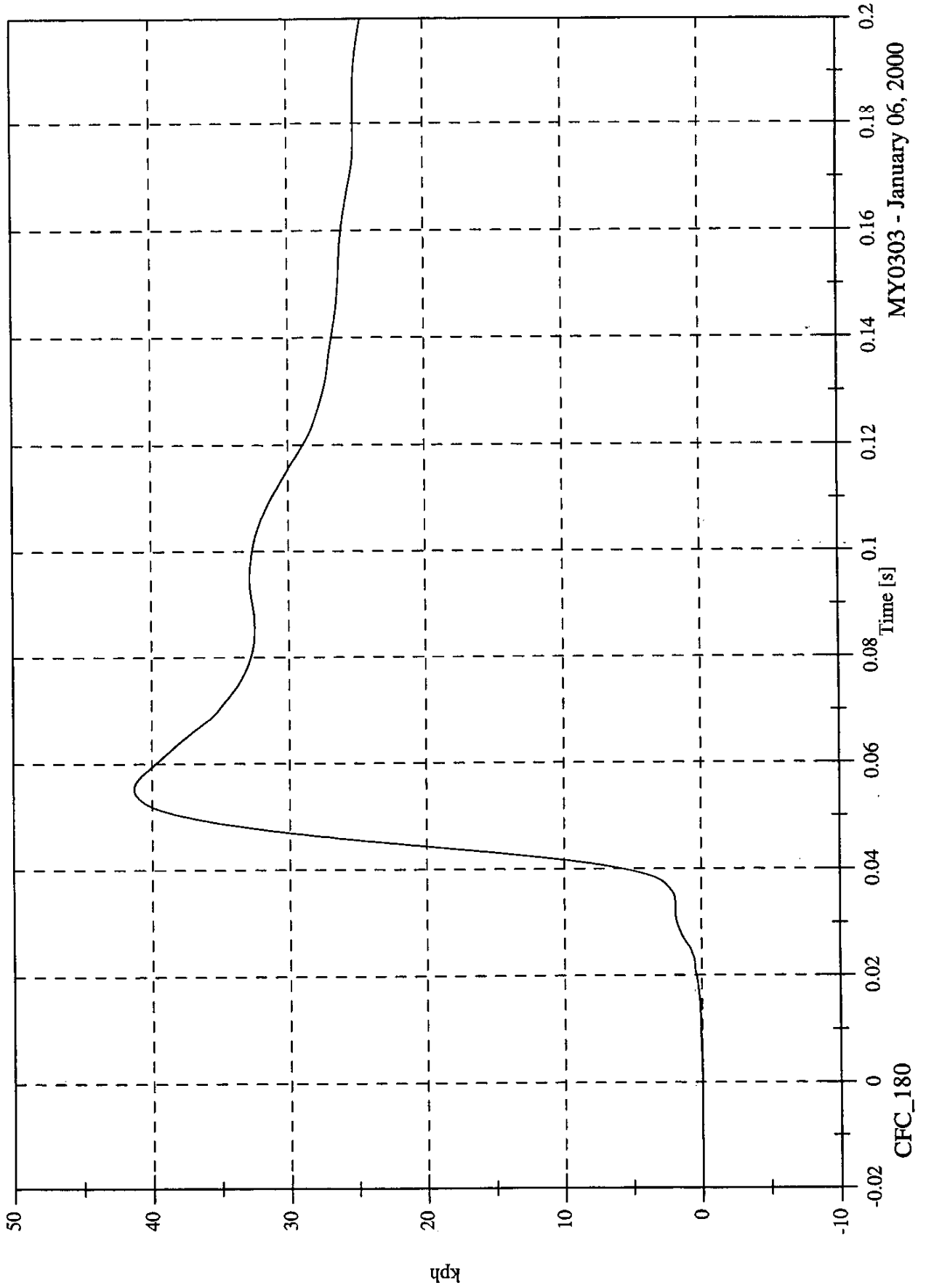


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 41.3 [kph] at 0.055 [s]
Min: -0.0 [kph] at -0.020 [s]

P4 Pelvic y Velocity



MY0303 - January 06, 2000

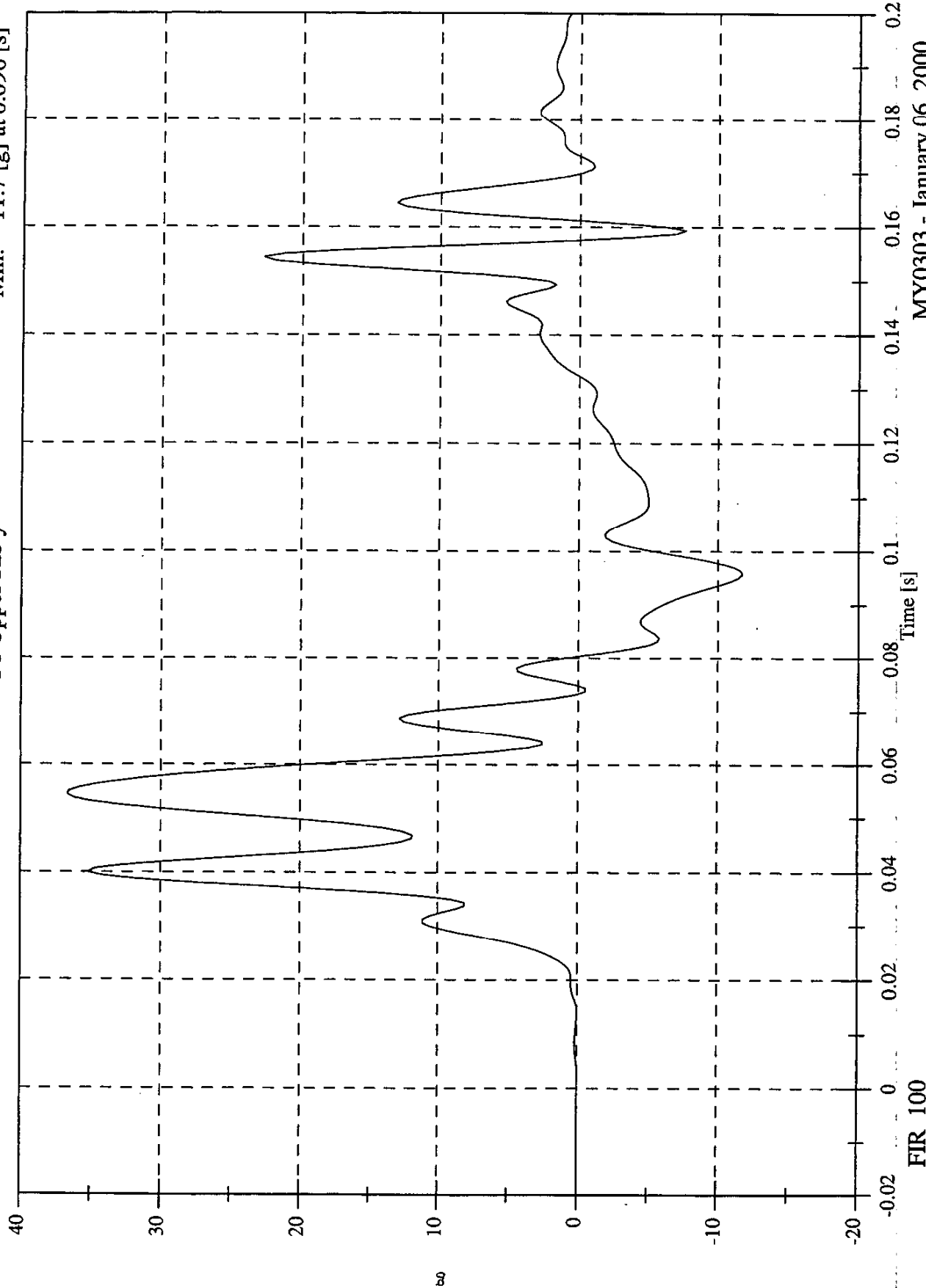
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Upper Rib y

Max: 36.7 [g] at 0.054 [s]

Min: -11.7 [g] at 0.096 [s]

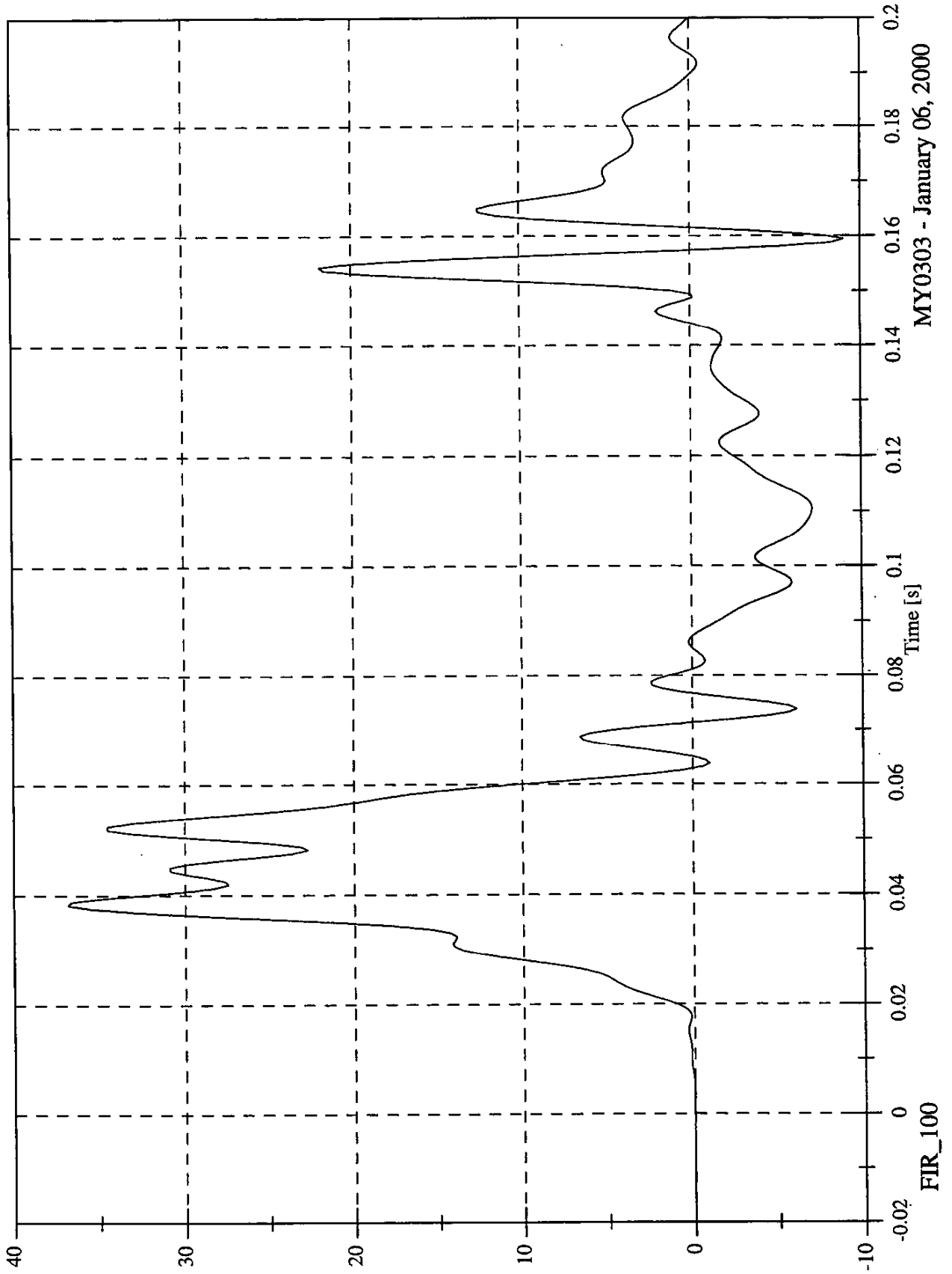


FIR_100
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Lower Rib Y

Max: 36.9 [g] at 0.038 [s]
Min: -9.0 [g] at 0.159 [s]

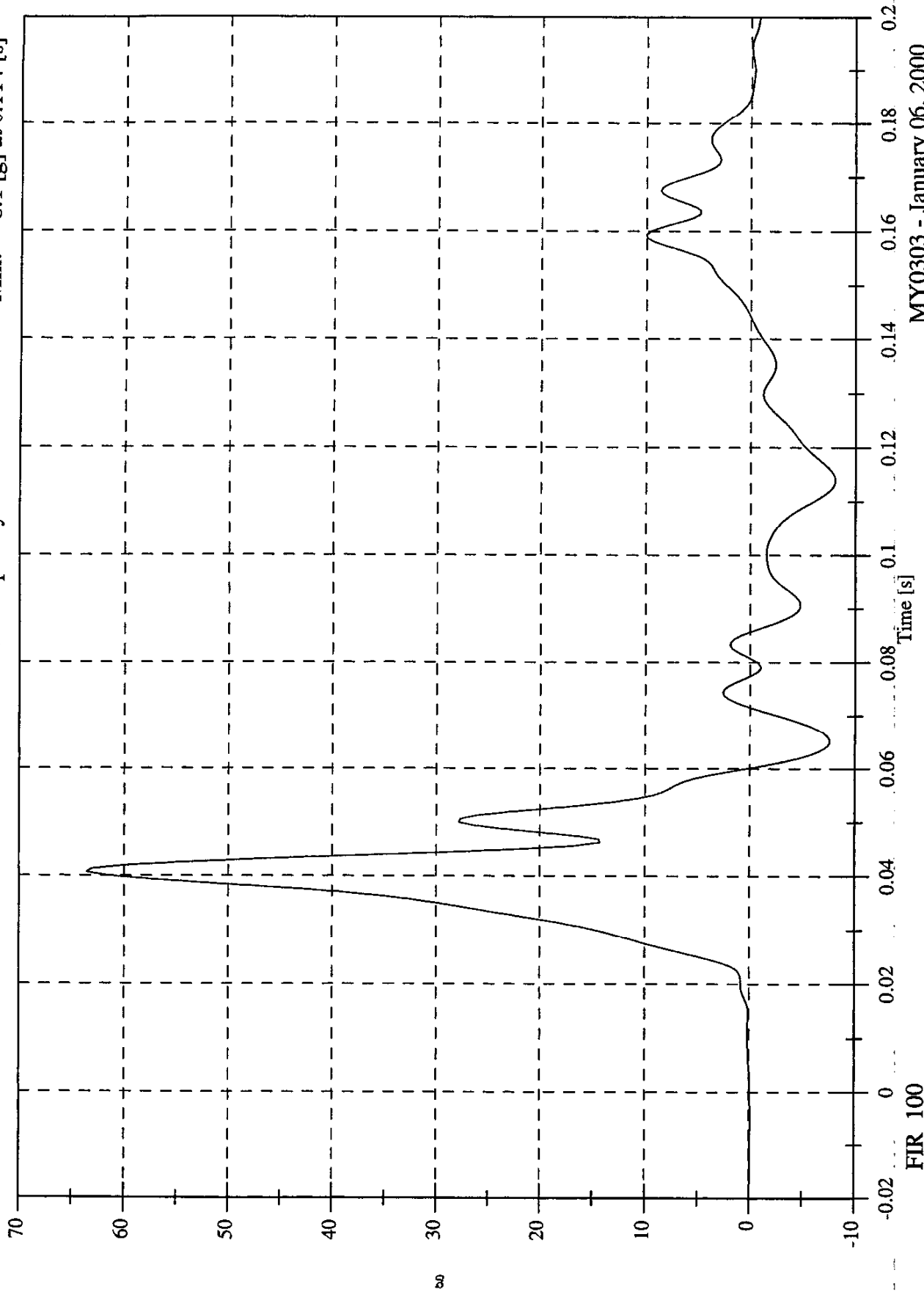


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 63.5 [g] at 0.041 [s]
Min: -8.1 [g] at 0.114 [s]

P1 Lower Spine y

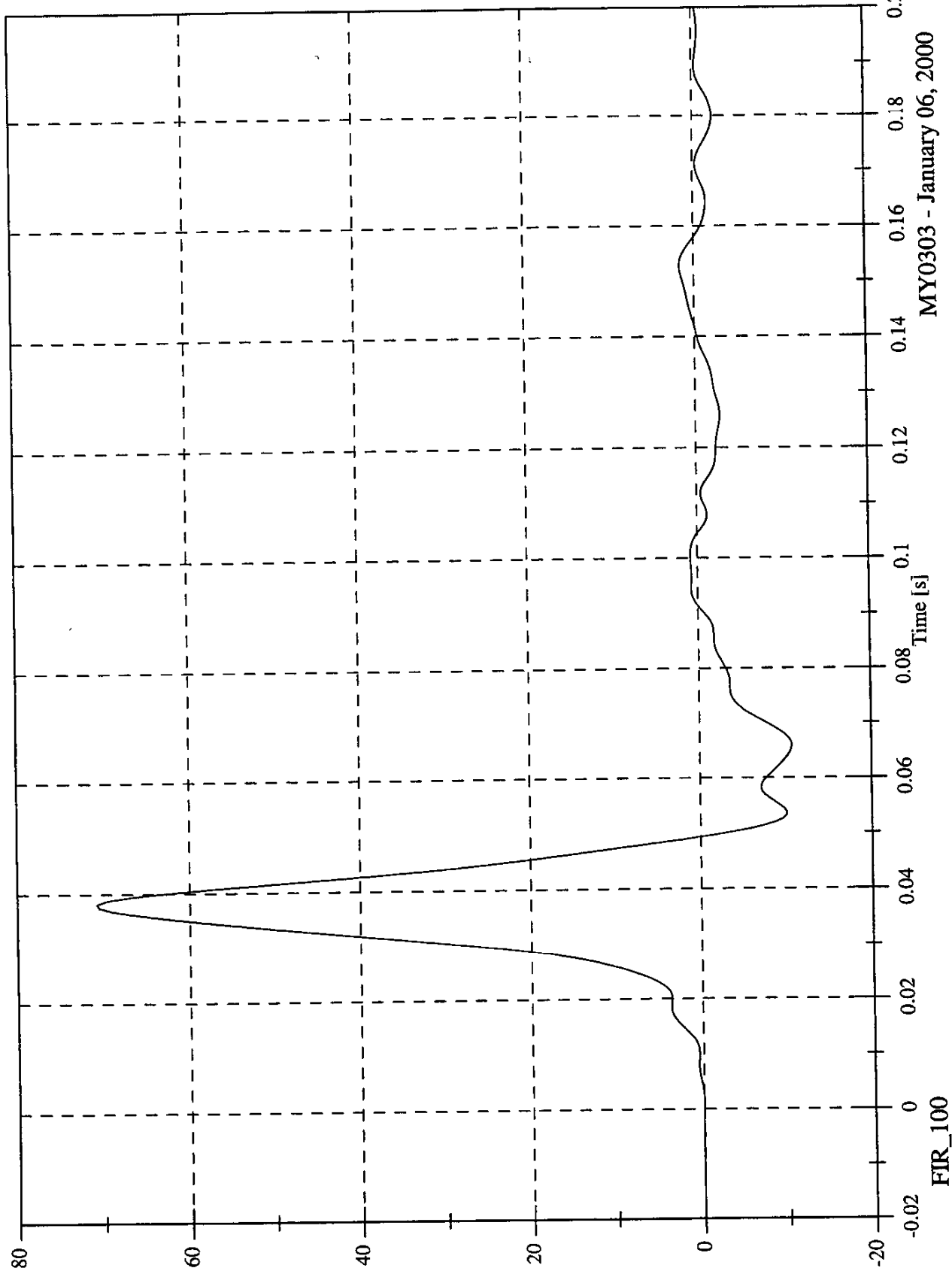


FIR_100
MY0303 - January 06, 2000

Max: 70.8 [g] at 0.038 [s]
Min: -10.7 [g] at 0.066 [s]

P1 Pelvic Y

SNCAP Test# 6 - 2000 Dodge Caravan

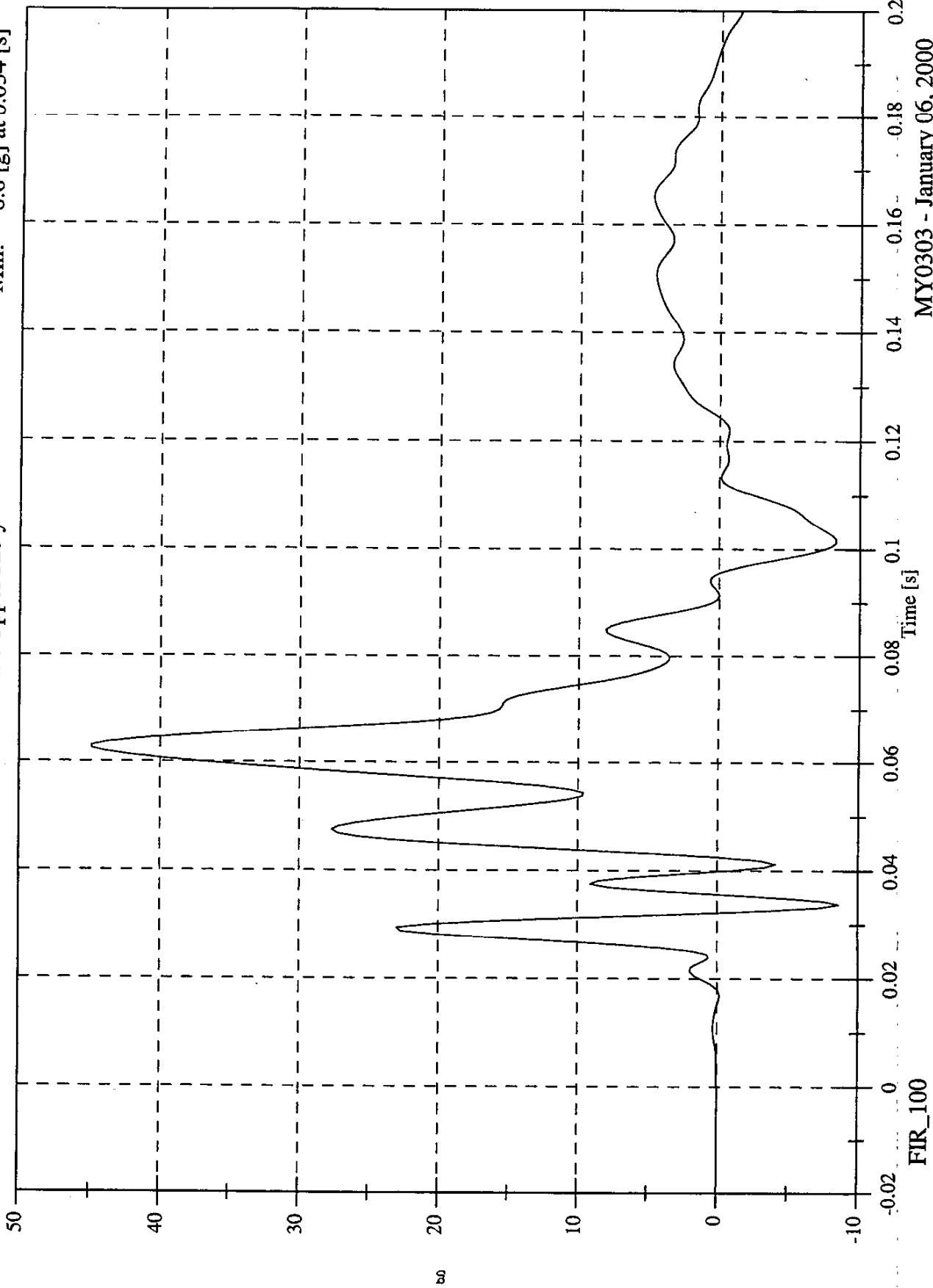


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 44.9 [g] at 0.063 [s]
Min: -8.6 [g] at 0.034 [s]

P4 Upper Rib y



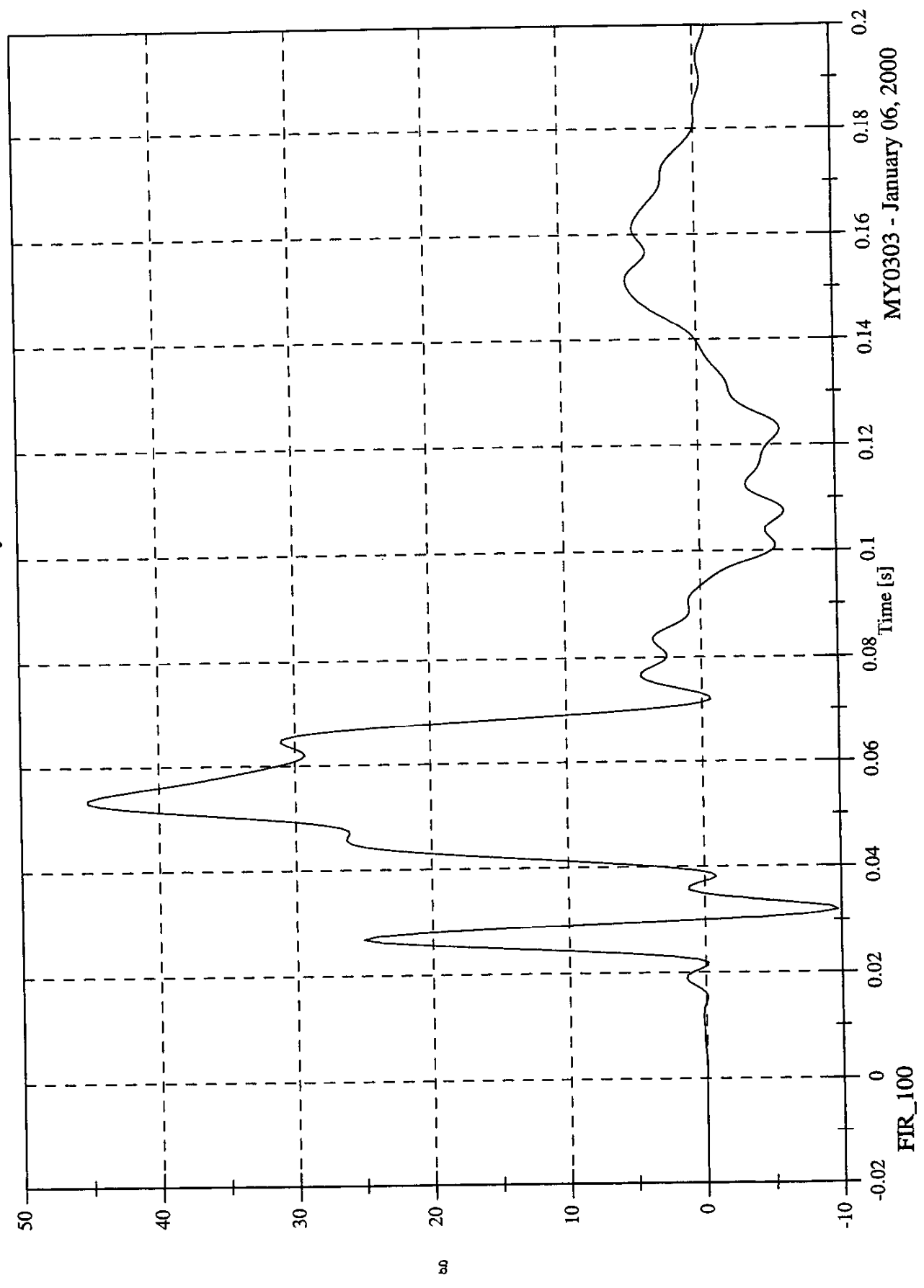
MY0303 - January 06, 2000

FIR_100

Max: 45.2 [g] at 0.053 [s]
Min: -9.8 [g] at 0.032 [s]

P4 Lower Rib y

SNCAP Test# 6 - 2000 Dodge Caravan



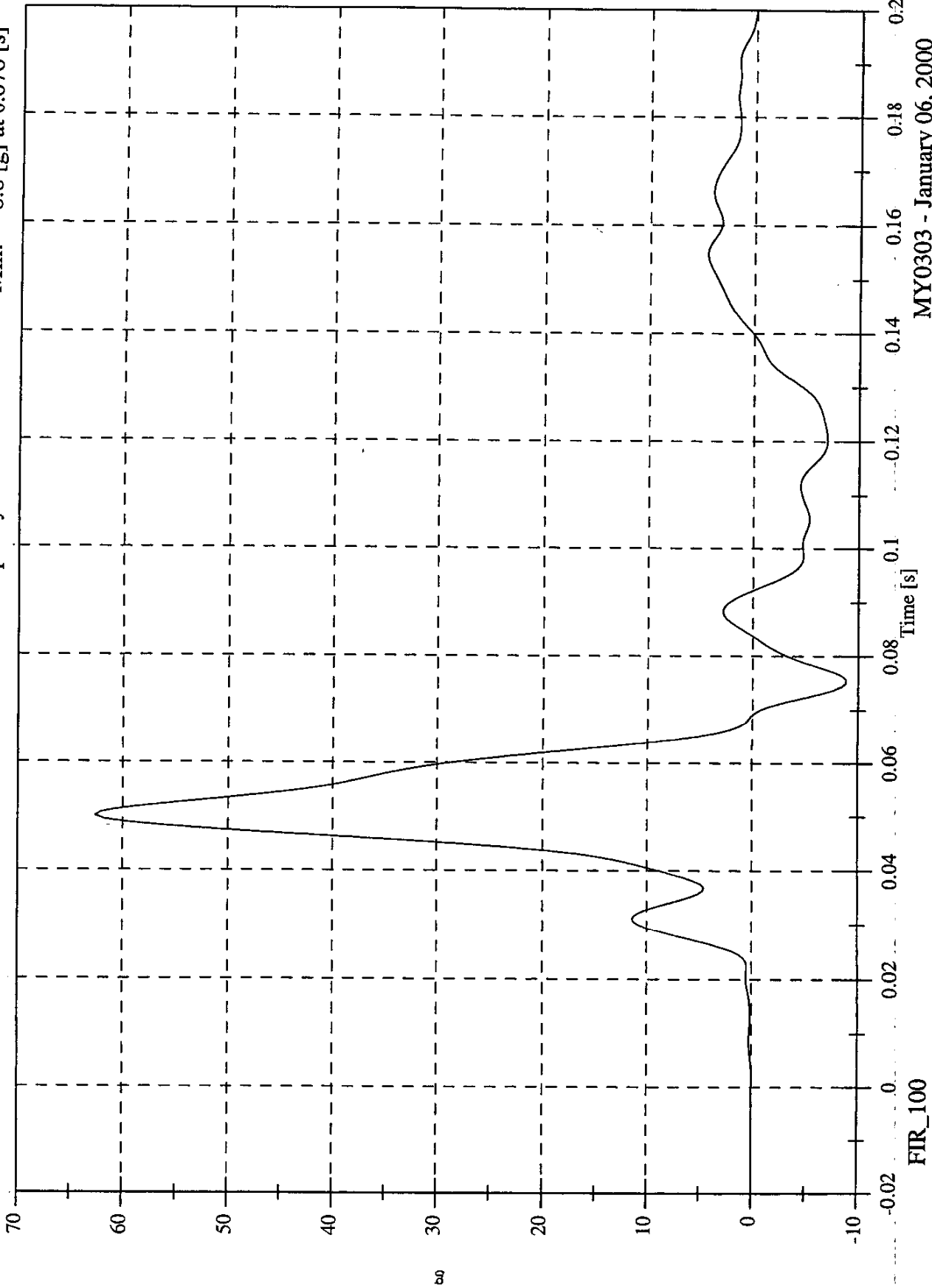
MY0303 - January 06, 2000

FIR_100

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Lower Spine y

Max: 62.6 [g] at 0.050 [s]
Min: -8.8 [g] at 0.076 [s]



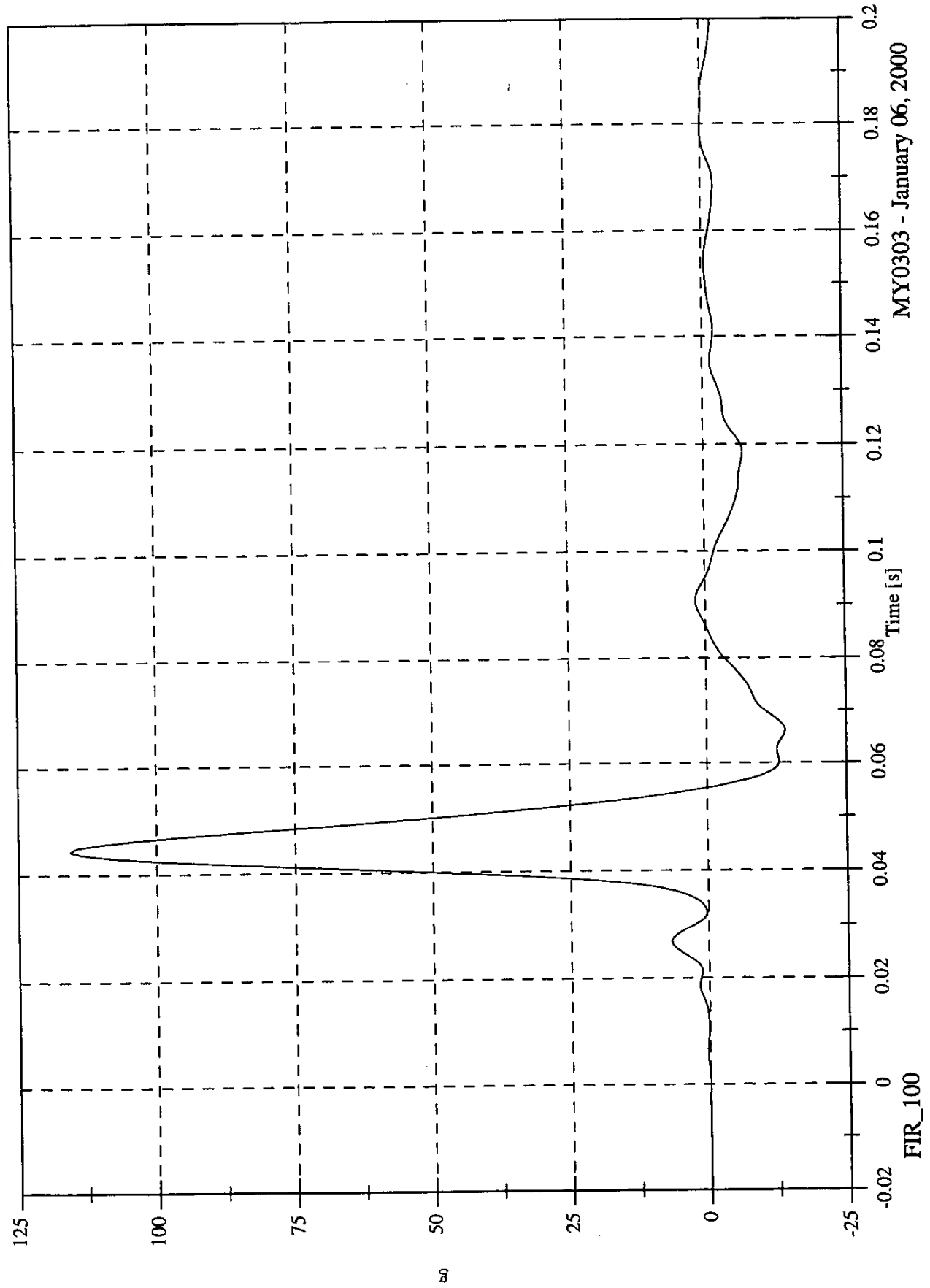
MY0303 - January 06, 2000

FIR_100

Max: 115.6 [g] at 0.044 [s]
Min: -14.2 [g] at 0.066 [s]

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Pelvic y

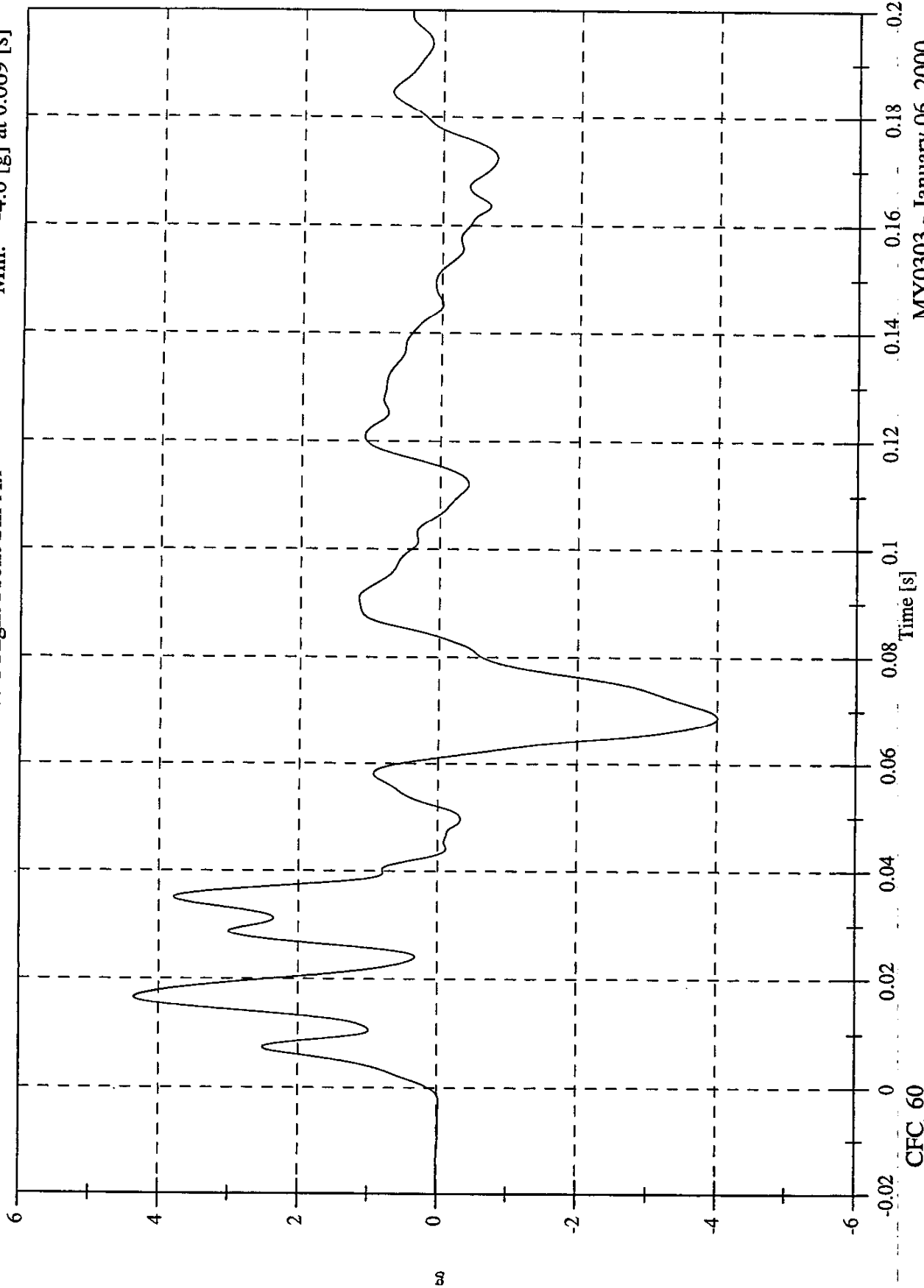


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 4.4 [g] at 0.017 [s]
Min: -4.0 [g] at 0.069 [s]

Acc 1 Right Front Sill Ax



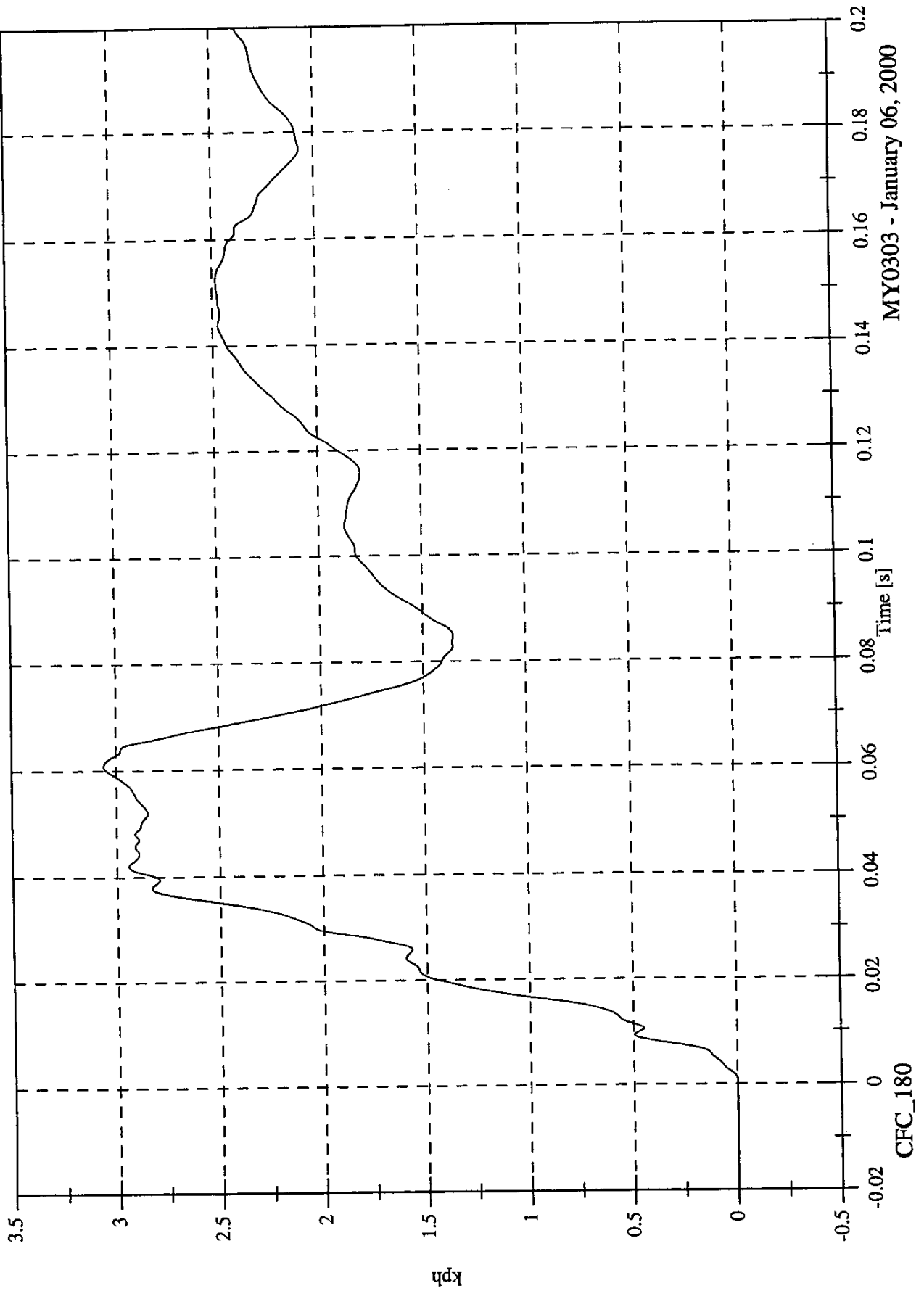
MY0303 - January 06, 2000

CFC_60

Max: 3.1 [kph] at 0.061 [s]
Min: -0.0 [kph] at 0.000 [s]

Acc 1 Right Front Sill Ax Velocity

SNCAP Test# 6 - 2000 Dodge Caravan



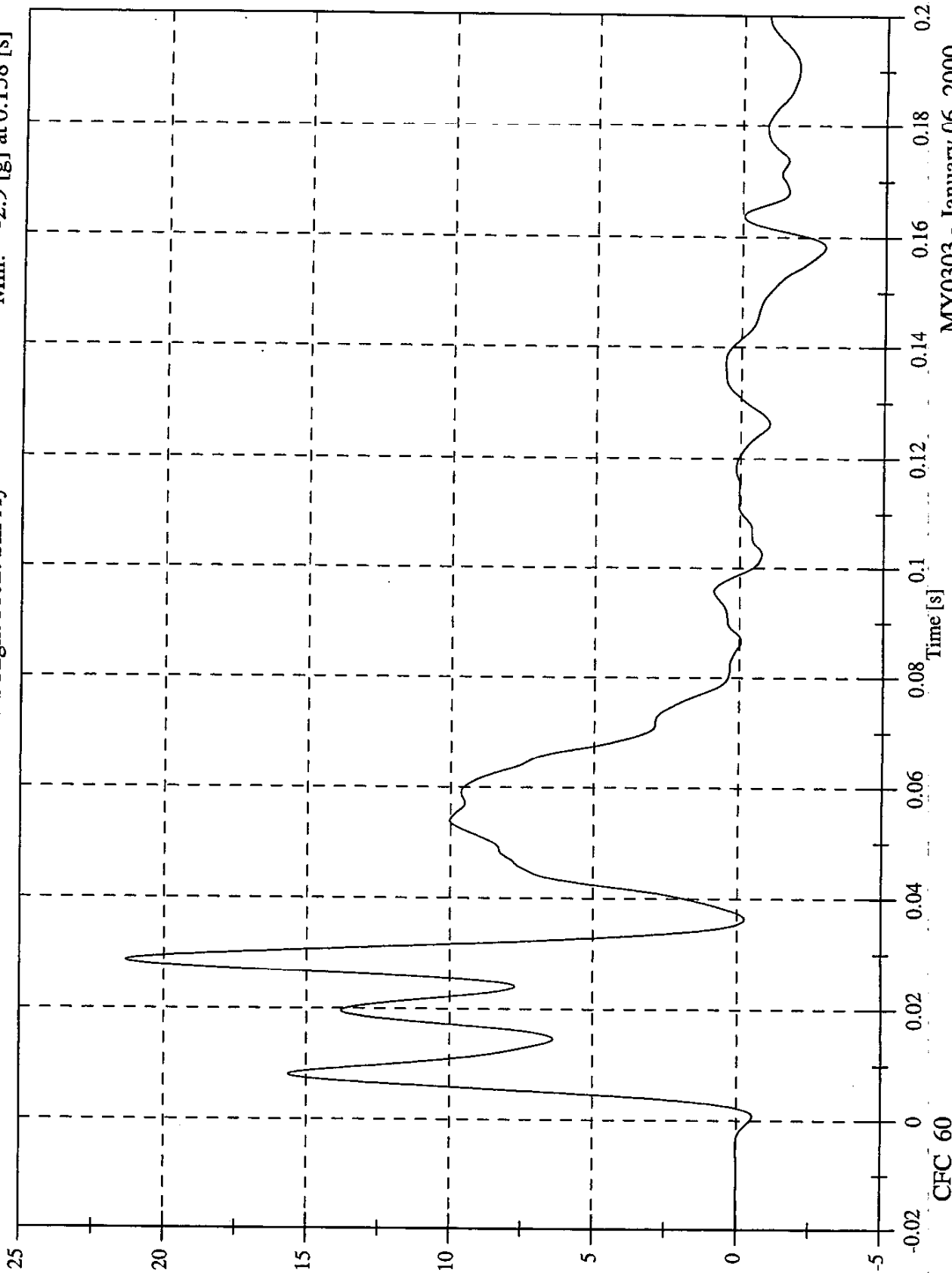
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 21.3 [g] at 0.029 [s]
Min: -2.9 [g] at 0.158 [s]

Acc 1 Right Front Sill Ay

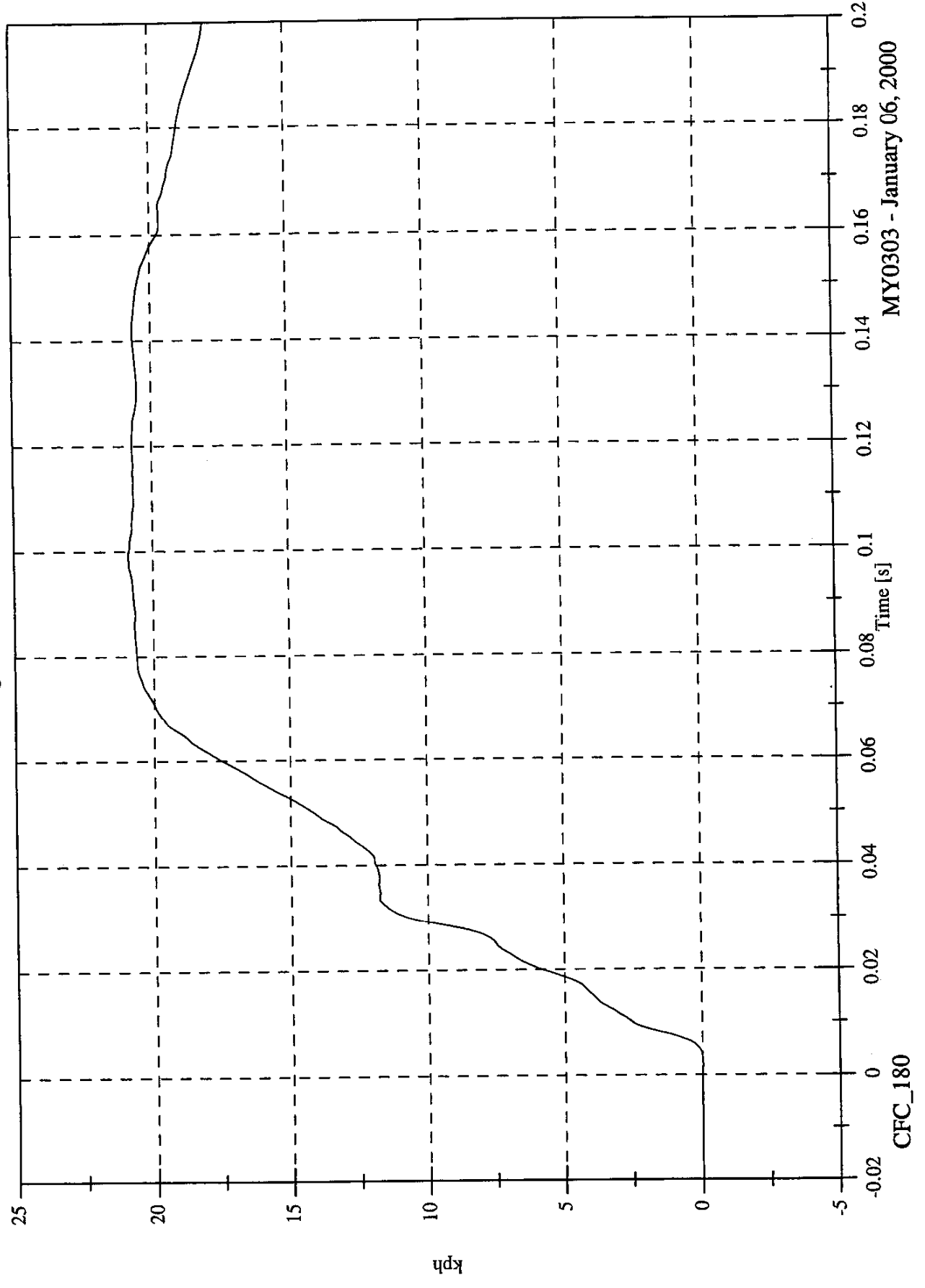


MY0303 - January 06, 2000

Max: 20.9 [kph] at 0.099 [s]
Min: -0.0 [kph] at 0.002 [s]

Acc 1 Right Front Sill Ay Velocity

SNCAP Test# 6 - 2000 Dodge Caravan



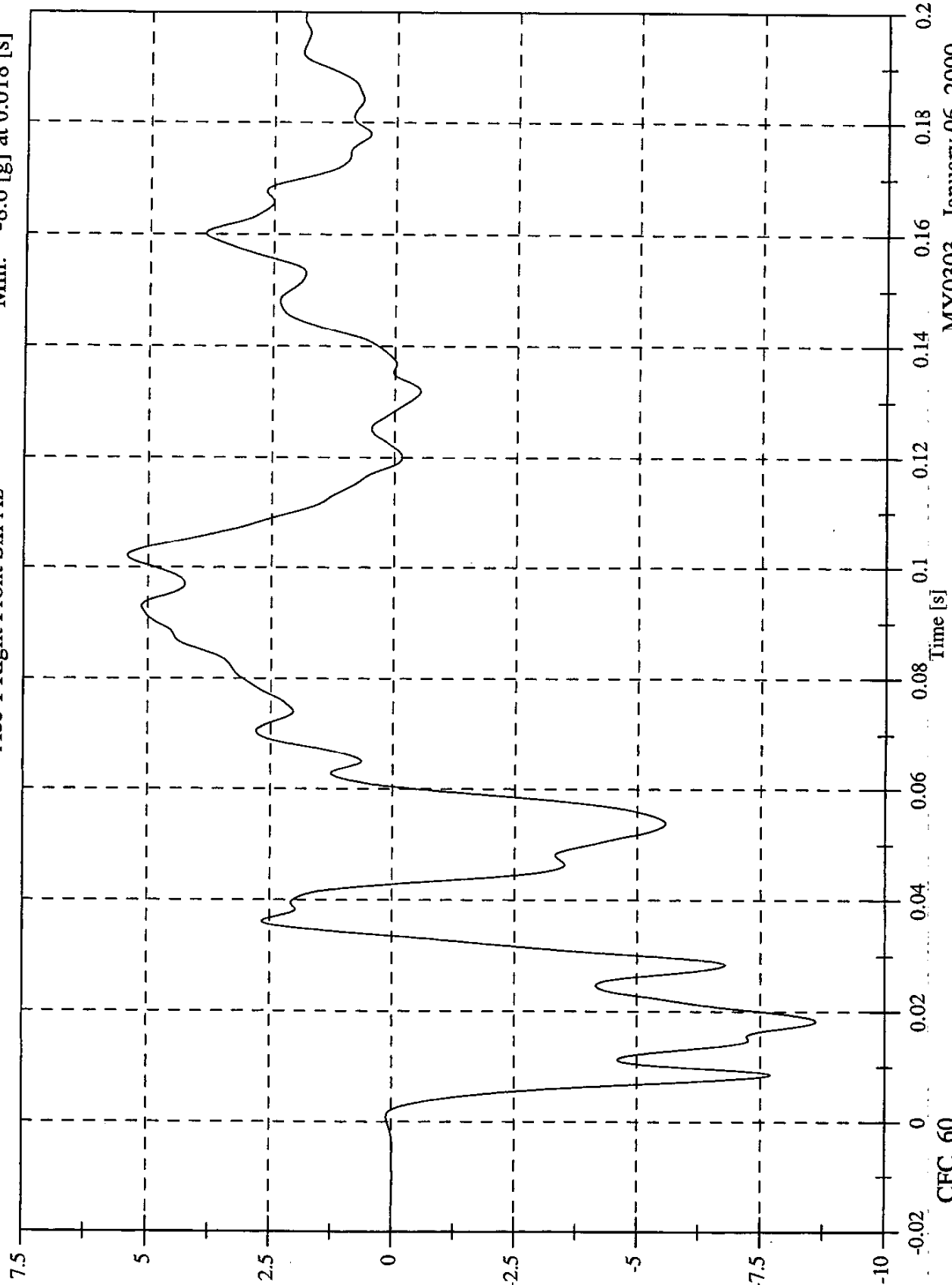
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 5.4 [g] at 0.102 [s]
Min: -8.6 [g] at 0.018 [s]

Acc 1 Right Front Sill Az



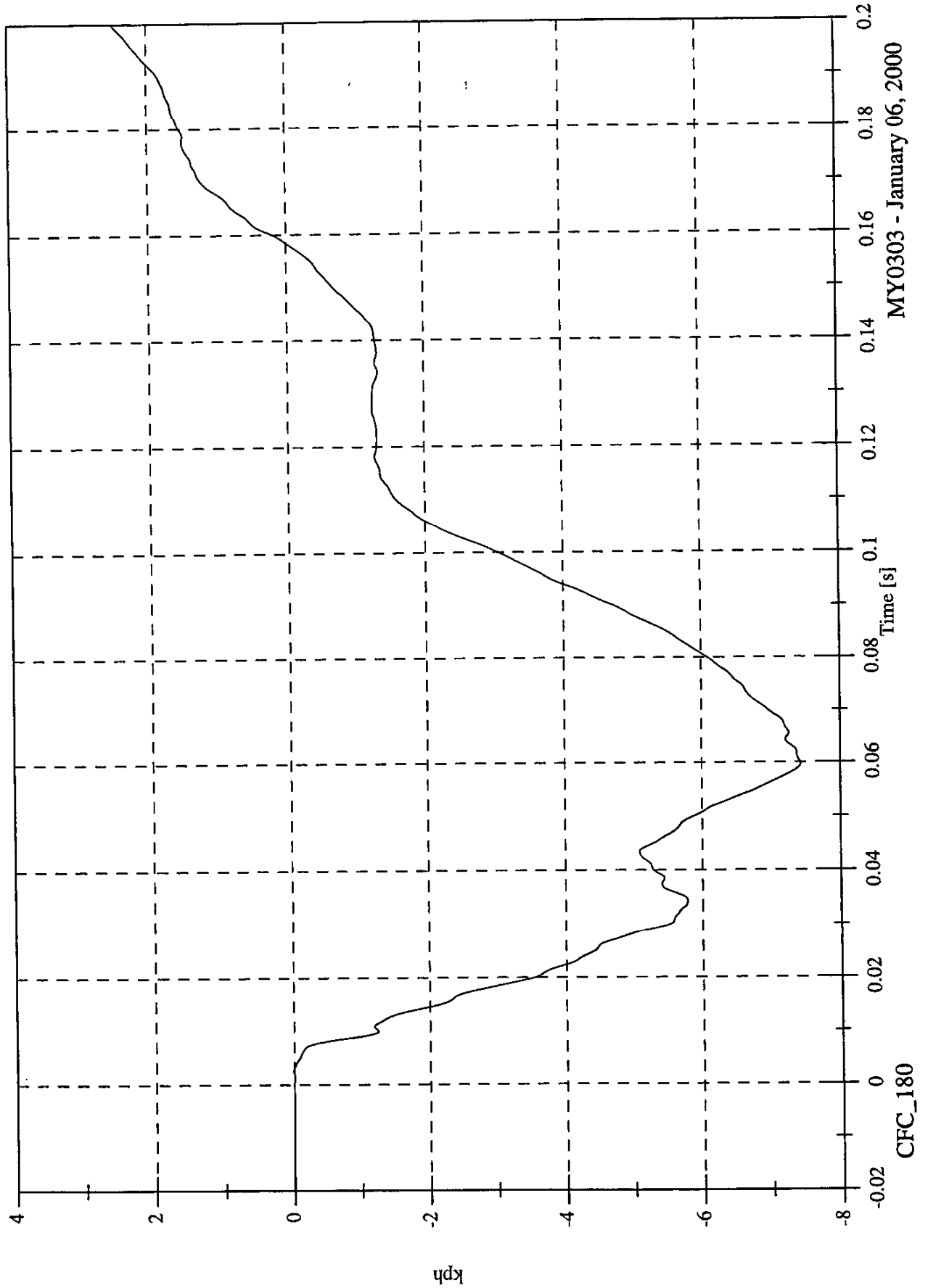
CFC_60

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 2.5 [kph] at 0.200 [s]
Min: -7.4 [kph] at 0.060 [s]

Acc 1 Right Front Sill Az Velocity

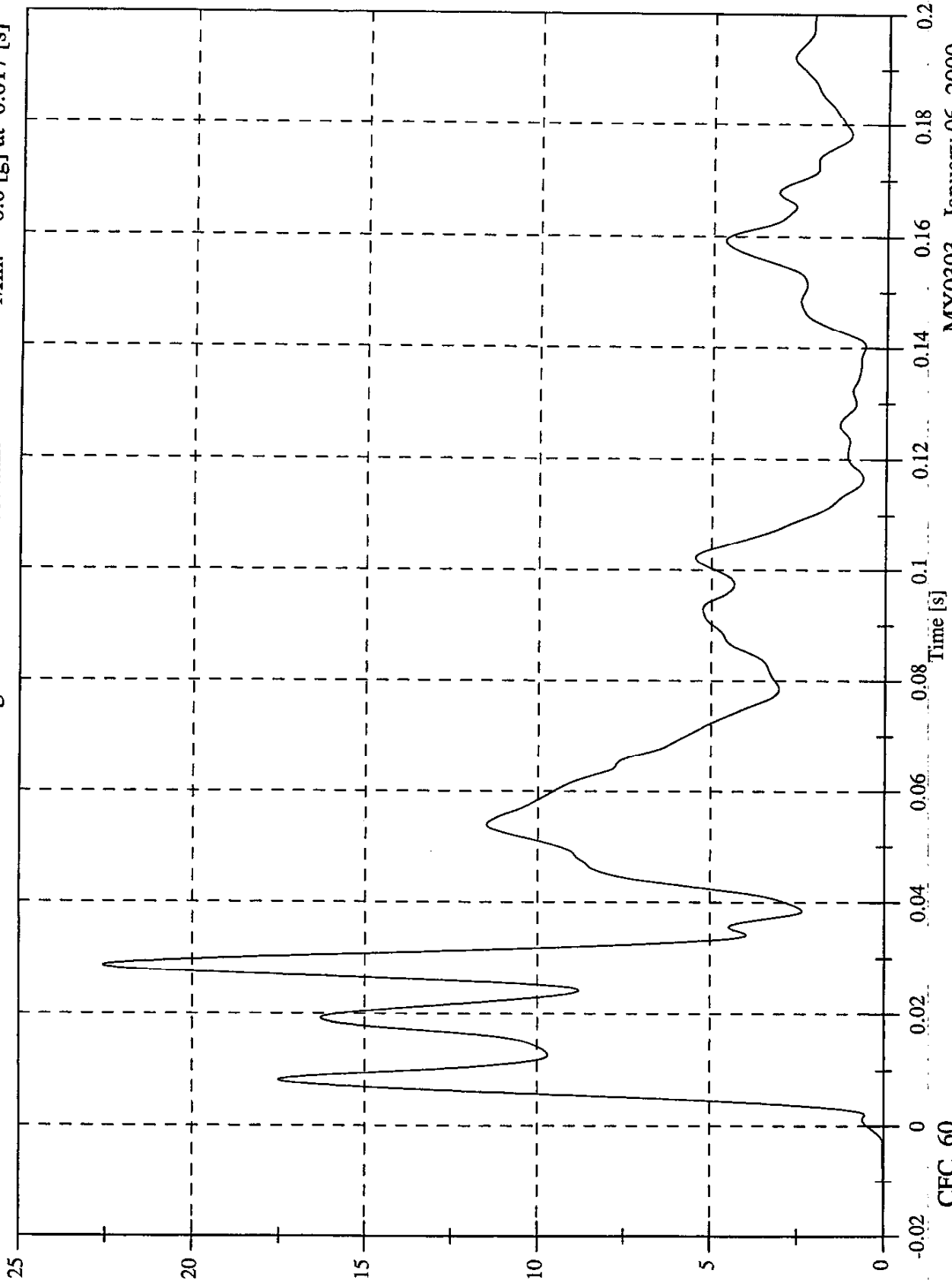


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 22.6 [g] at 0.029 [s]
Min: 0.0 [g] at -0.017 [s]

Acc 1 Right Front Sill A Resultant

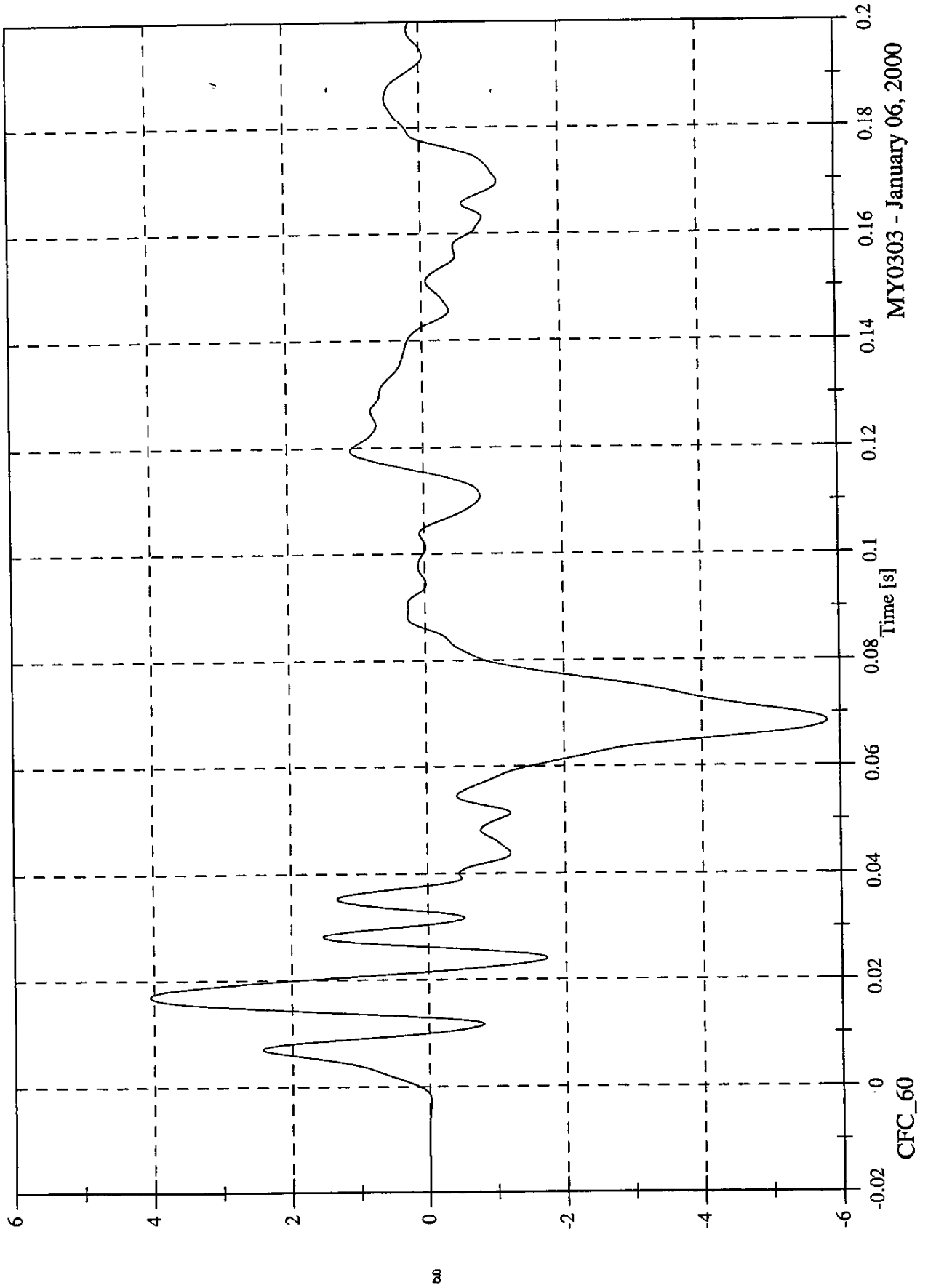


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 4.1 [g] at 0.017 [s]
Min: -5.8 [g] at 0.068 [s]

Acc 2 Right Rear Sill Ax

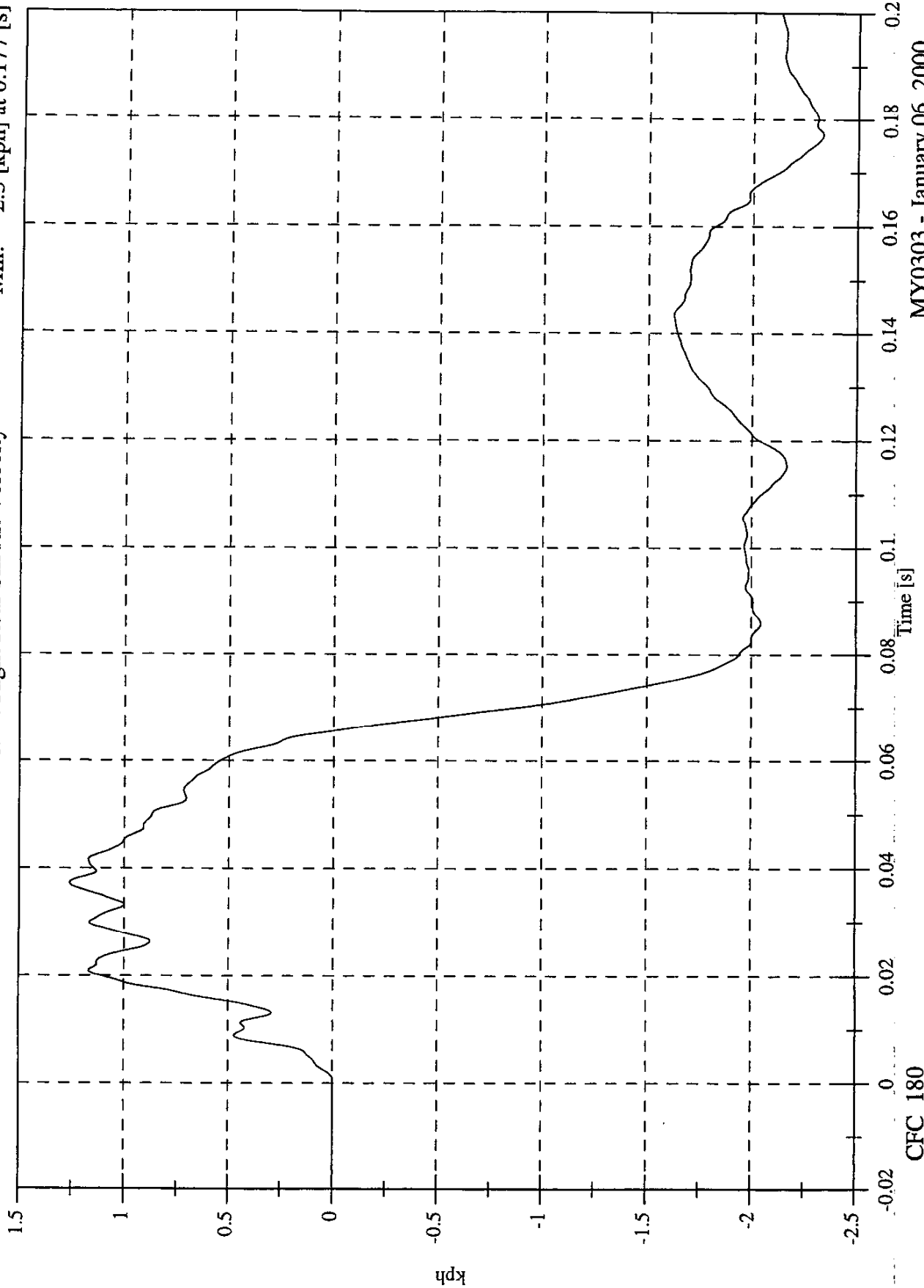


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 1.3 [kph] at 0.037 [s]
Min: -2.3 [kph] at 0.177 [s]

Acc 2 Right Rear Sill Ax Velocity



MY0303 - January 06, 2000

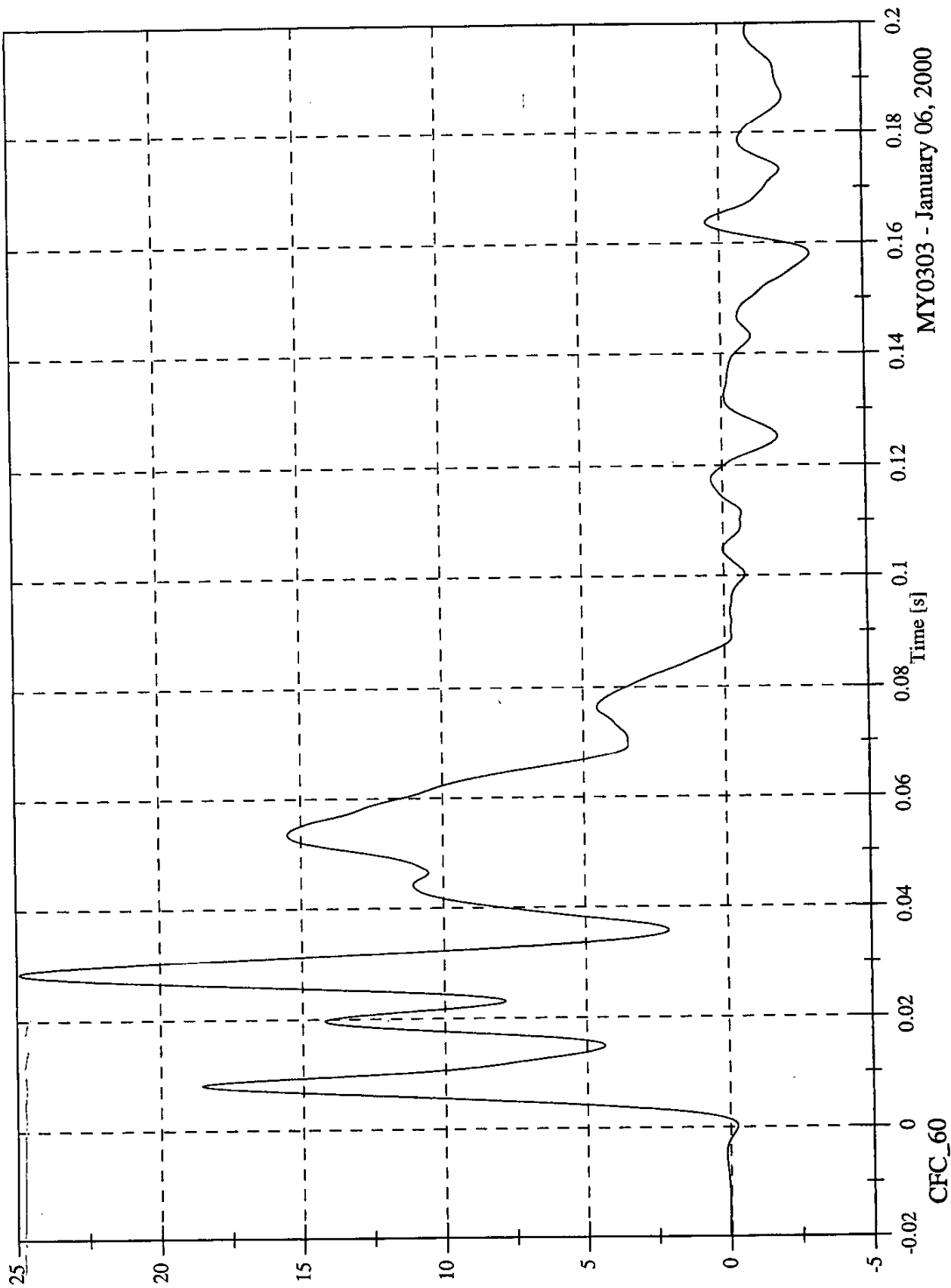
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 2 Right Rear Sill Ay

Max: 24.9 [g] at 0.028 [s]

Min: -3.1 [g] at 0.158 [s]

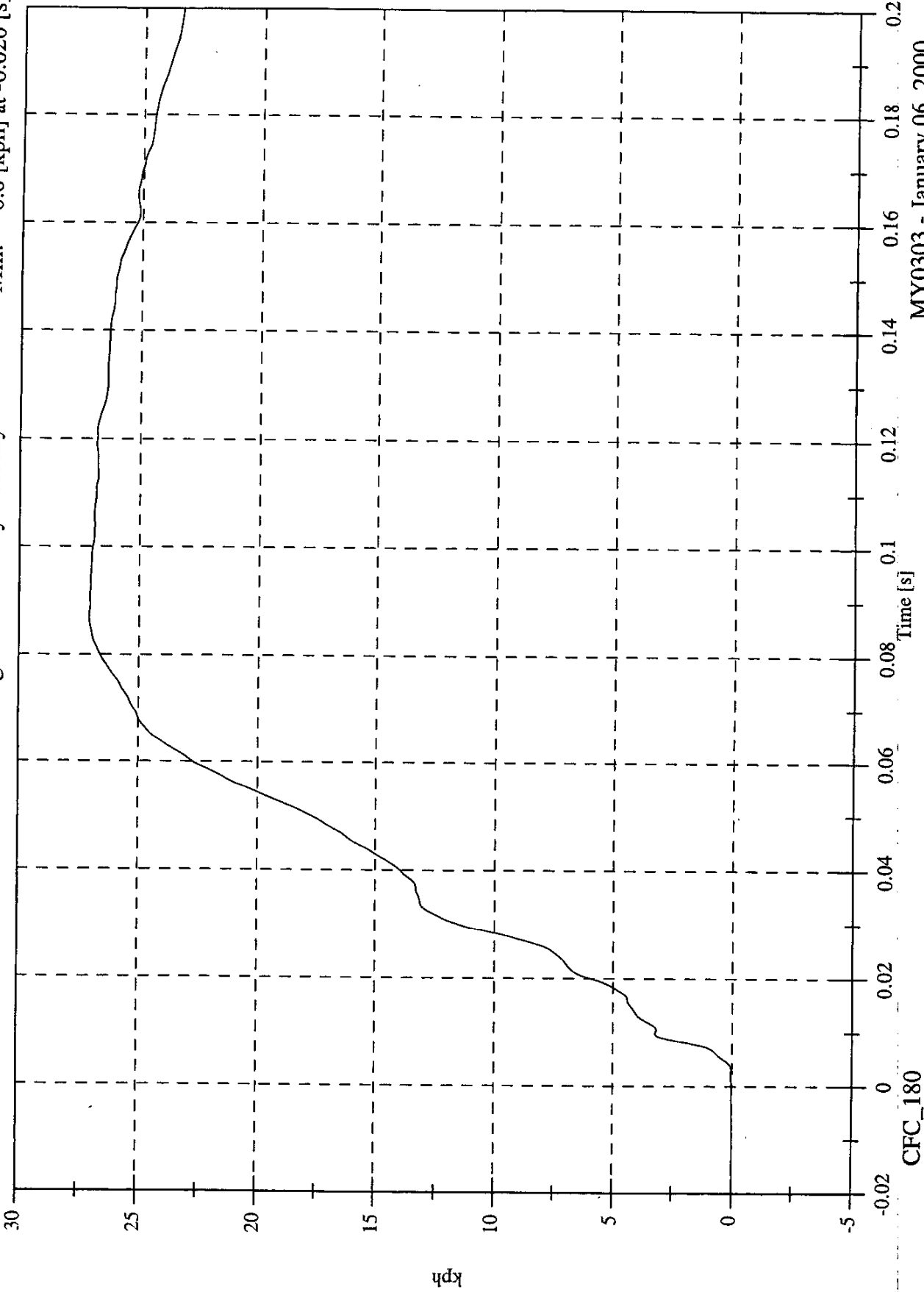


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 27.1 [kph] at 0.087 [s]
Min: -0.0 [kph] at -0.020 [s]

Acc 2 Right Rear Sill Ay Velocity

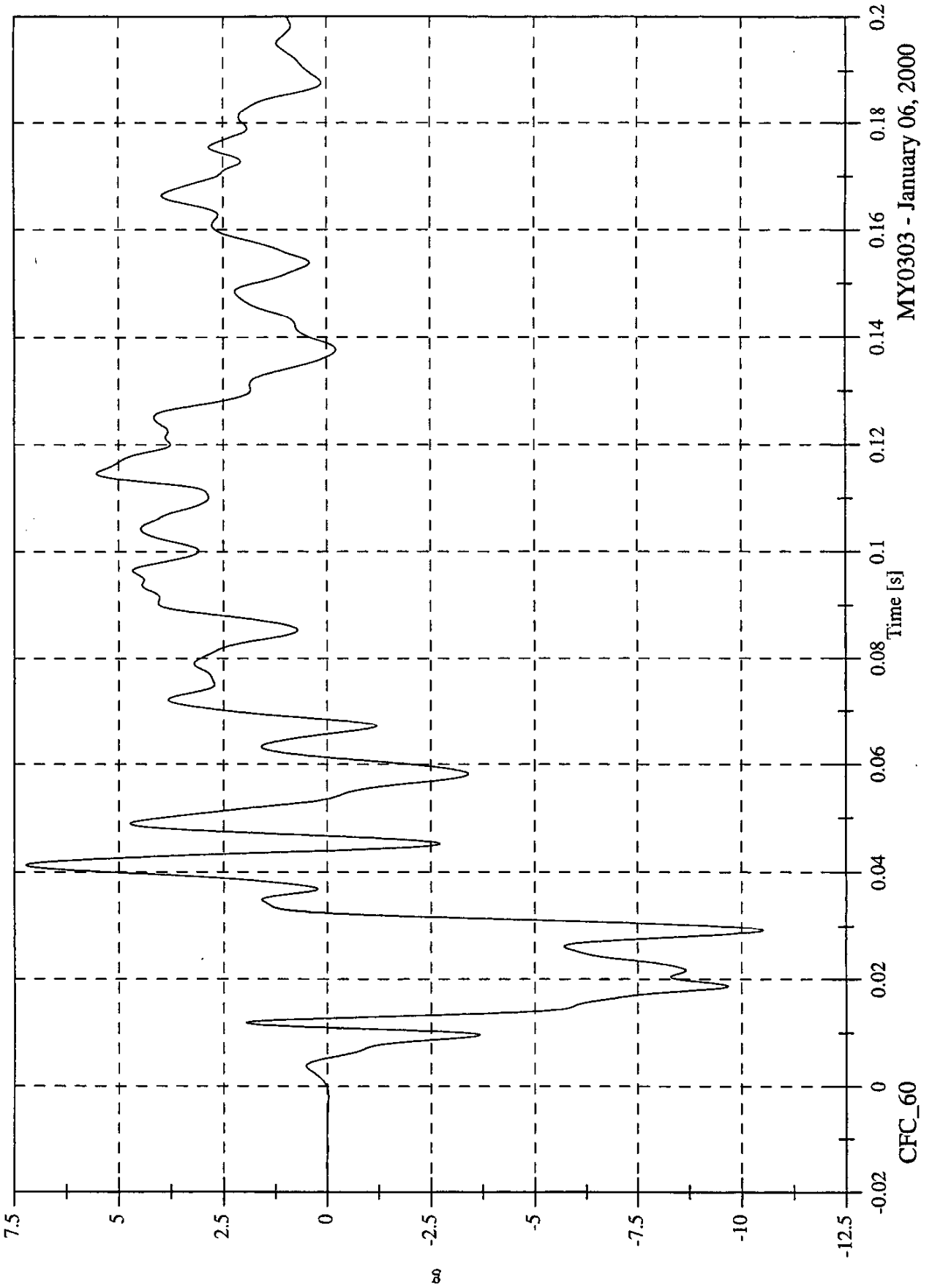


CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 2 Right Rear Sill Az

Max: 7.2 [g] at 0.041 [s]
Min: -10.5 [g] at 0.029 [s]



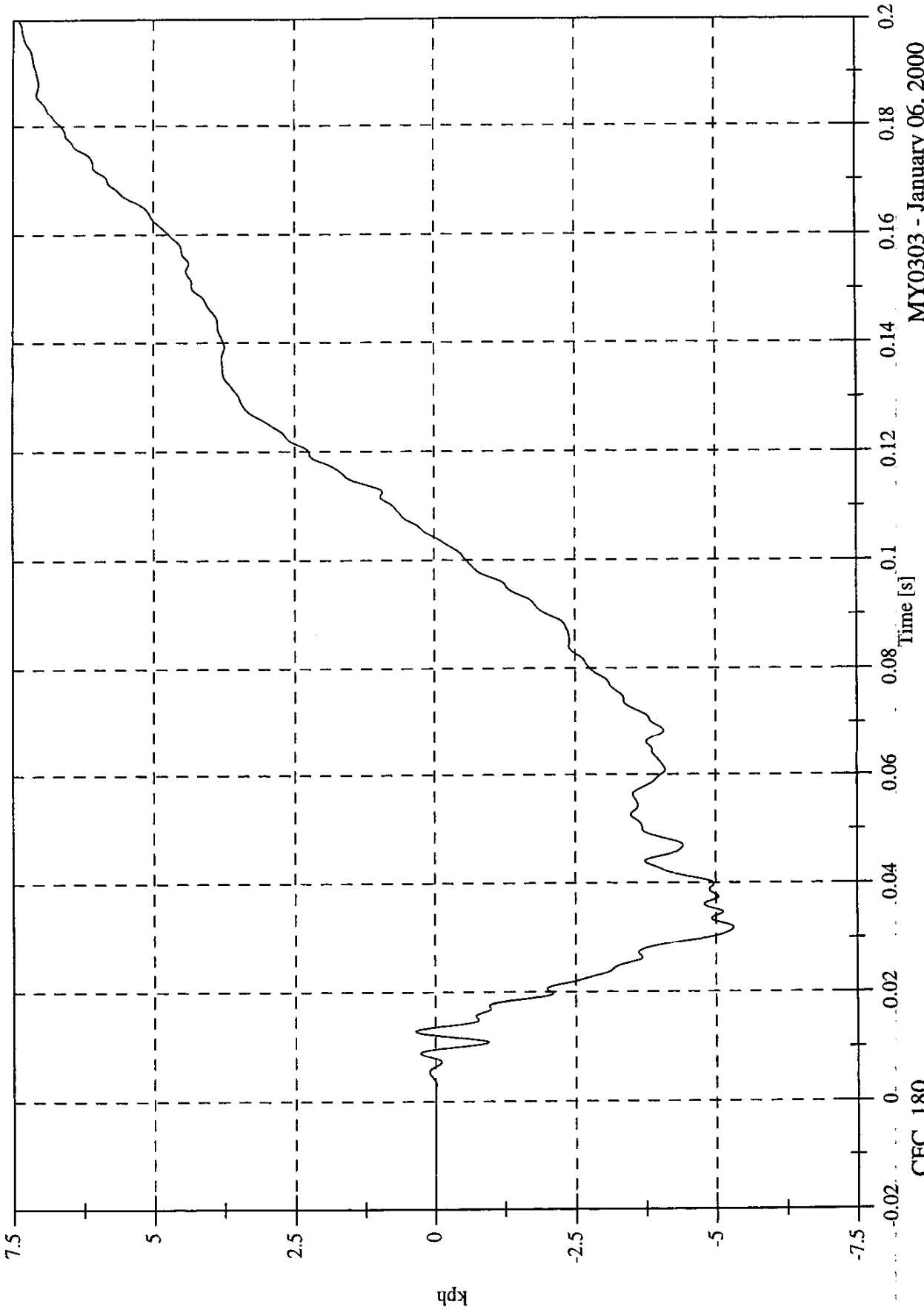
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 7.4 [kph] at 0.200 [s]
Min: -5.3 [kph] at 0.032 [s]

Acc 2 Right Rear Sill Az Velocity



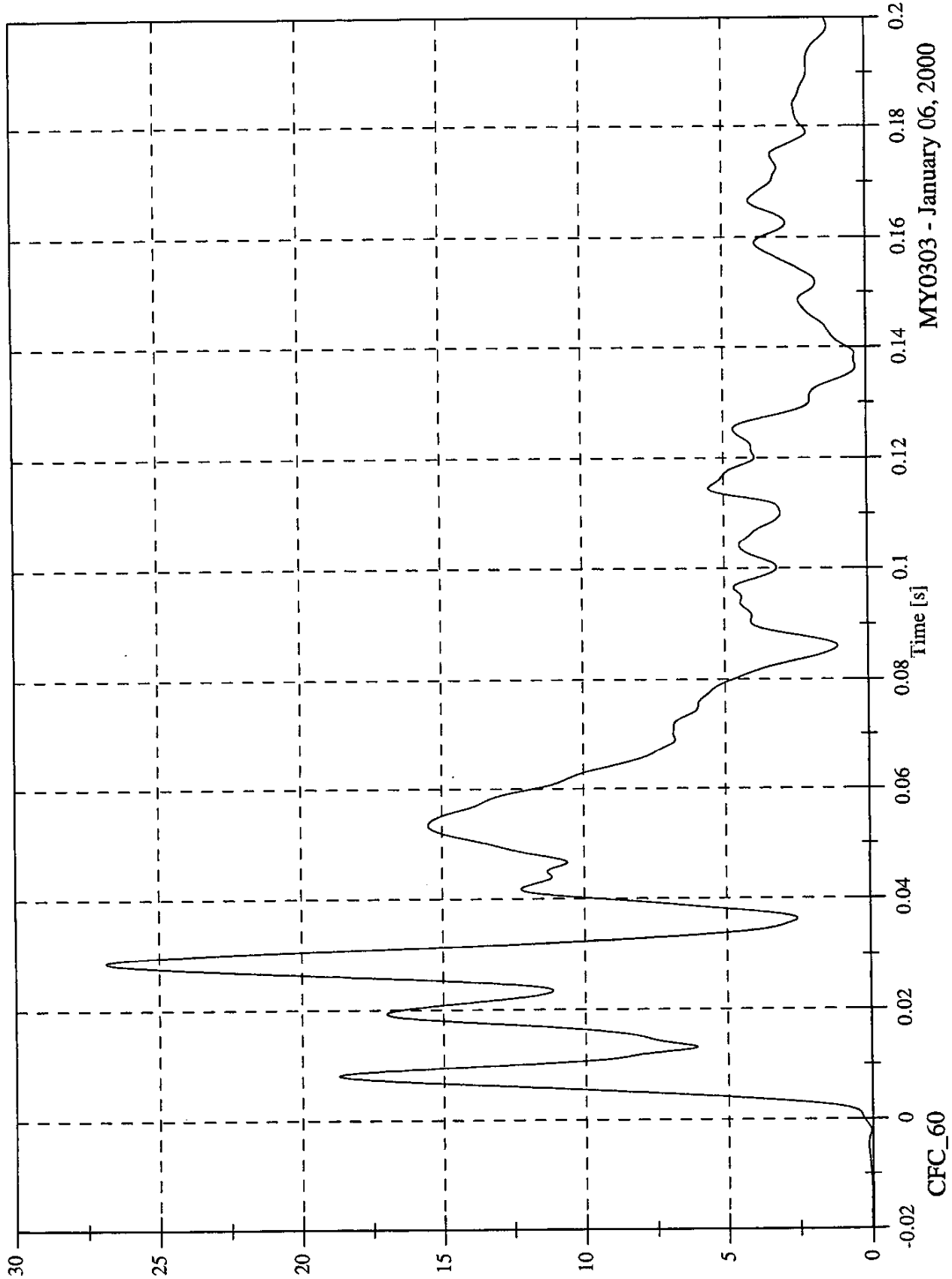
CFC_180



SNCAP Test# 6 - 2000 Dodge Caravan

Max: 26.9 [g] at 0.029 [s]
Min: 0.0 [g] at -0.013 [s]

Acc 2 Right Rear Sill A Resultant



MY0303 - January 06, 2000

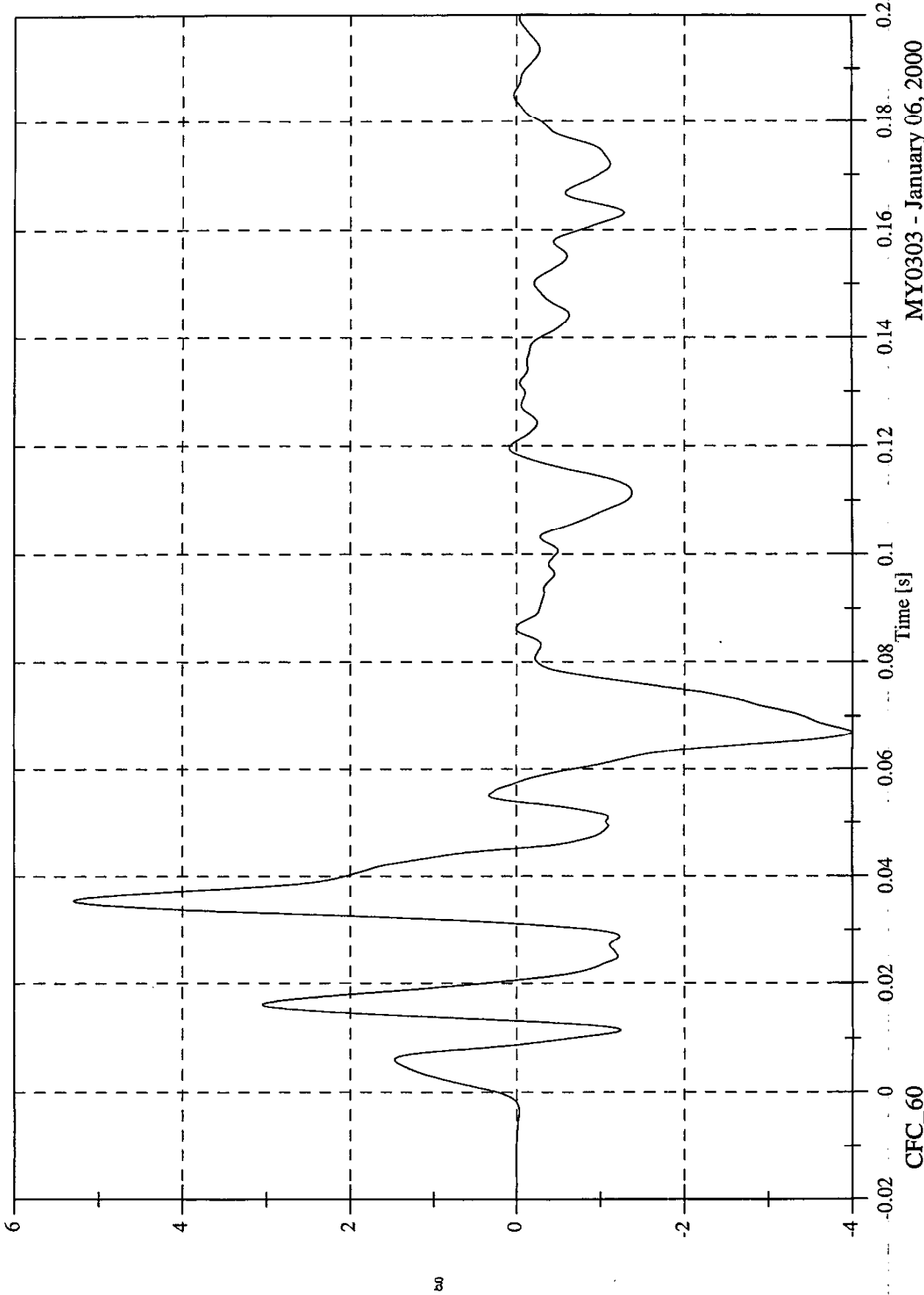
CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 3 Rear Floorpan AX

Max: 5.3 [g] at 0.035 [s]

Min: -4.0 [g] at 0.067 [s]



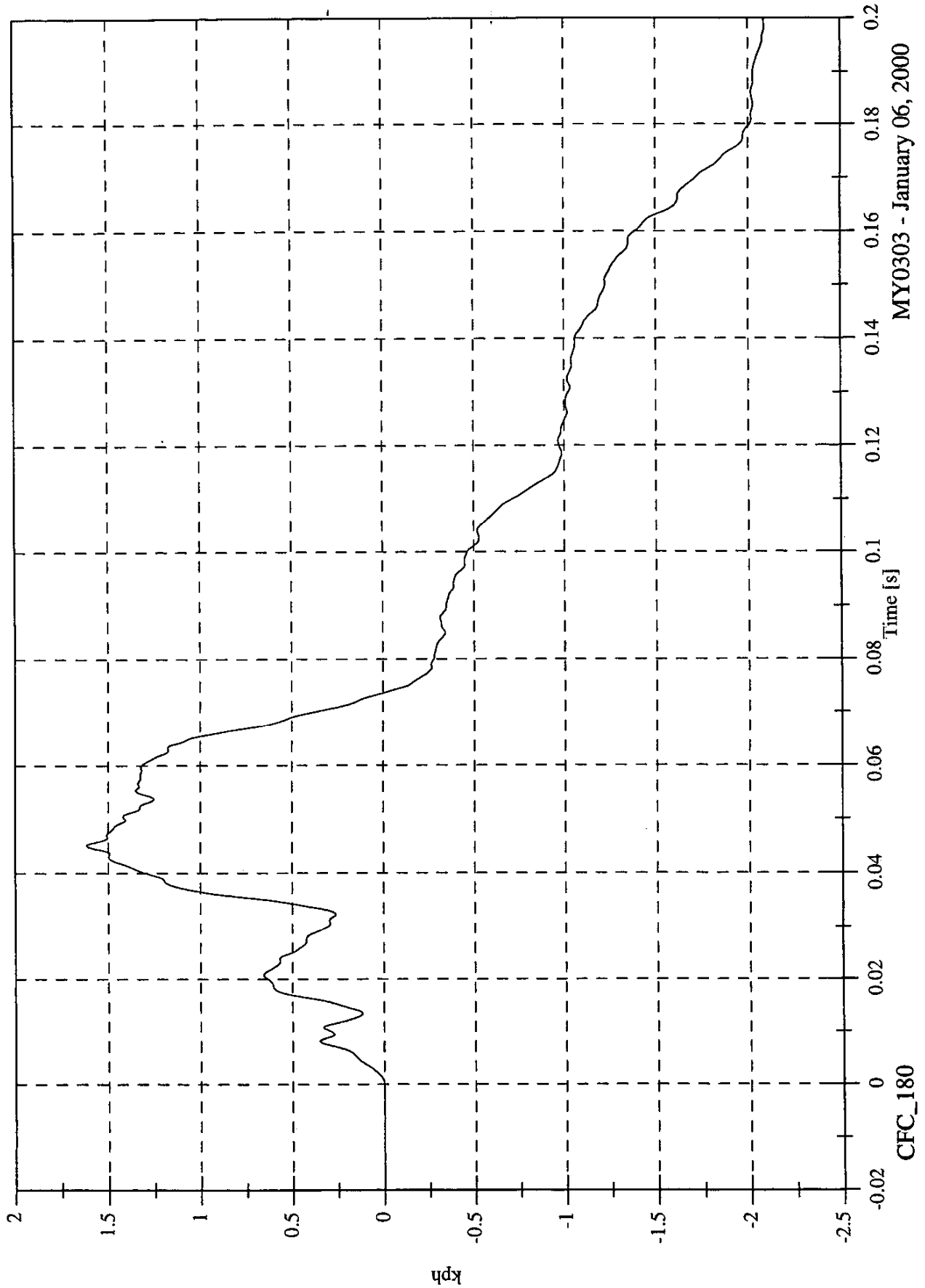
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 1.6 [kph] at 0.045 [s]
Min: -2.1 [kph] at 0.198 [s]

Acc 3 Rear Floorpan AX Velocity



MY0303 - January 06, 2000

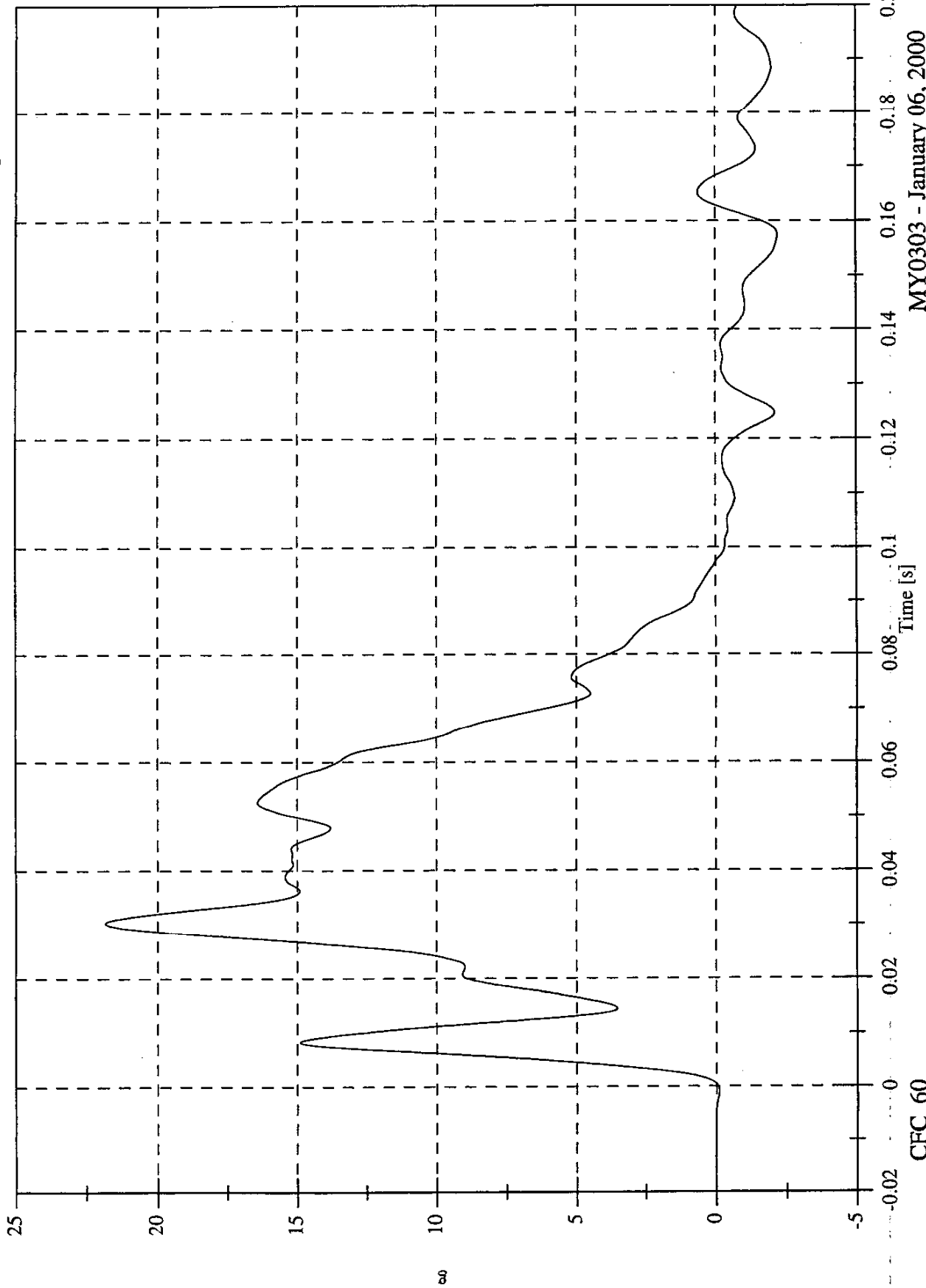
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 3 Rear Floorpan AY

Max: 21.8 [g] at 0.030 [s]

Min: -2.2 [g] at 0.157 [s]



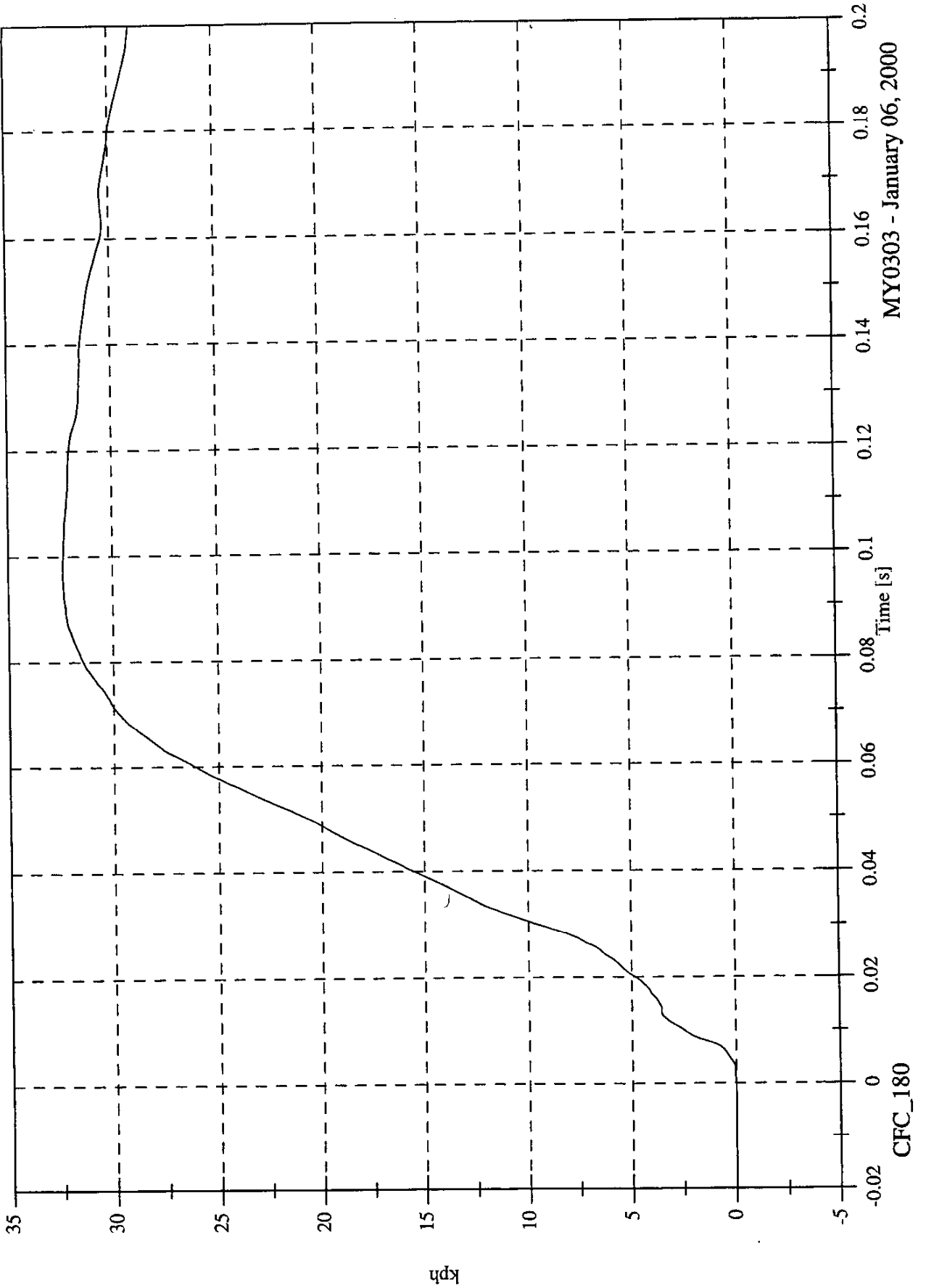
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 32.4 [kph] at 0.098 [s]
Min: -0.0 [kph] at -0.020 [s]

Acc 3 Rear Floorpan AY Velocity



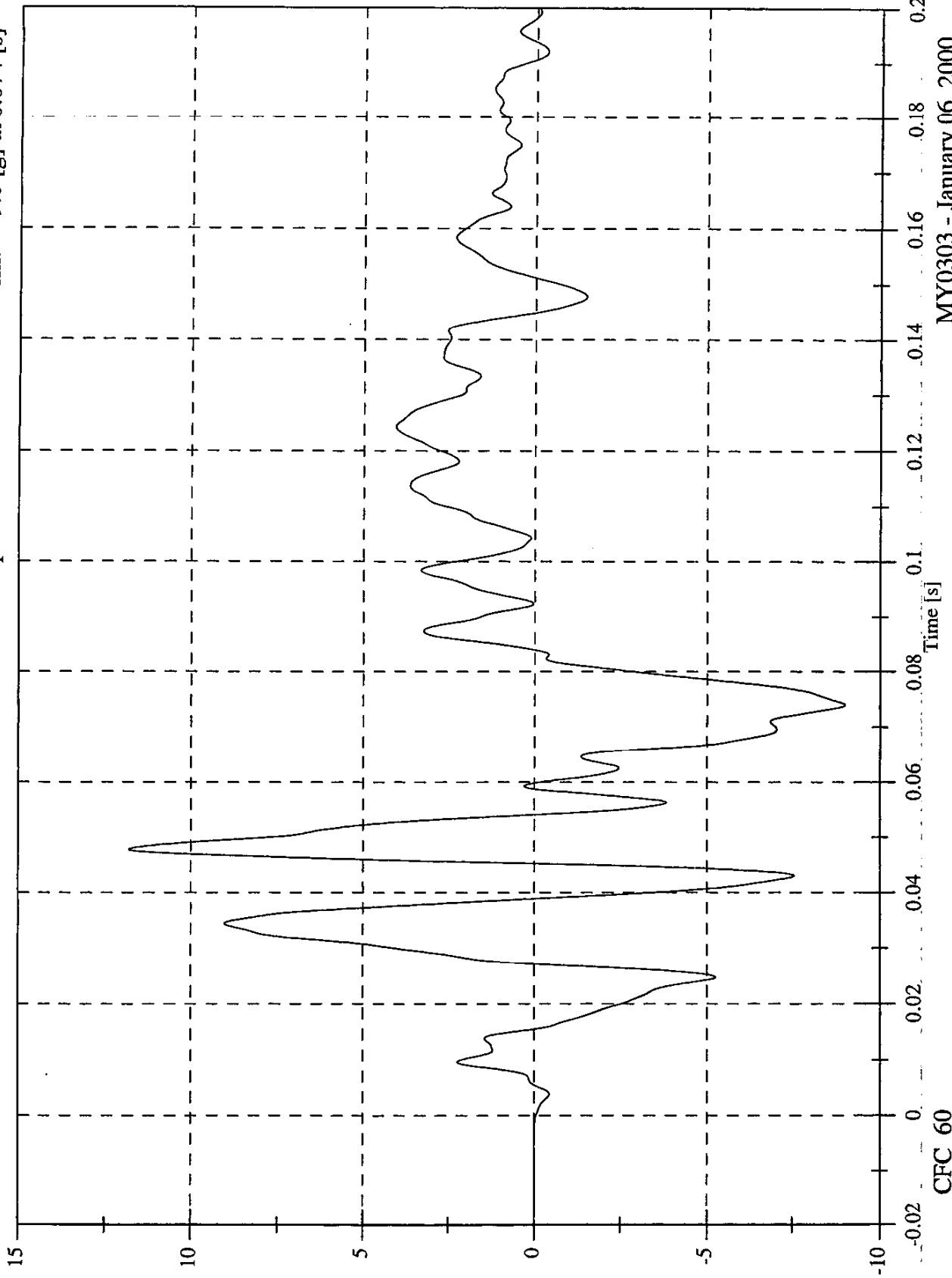
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 11.8 [g] at 0.048 [s]
Min: -9.0 [g] at 0.074 [s]

Acc 3 Rear Floorpan Az



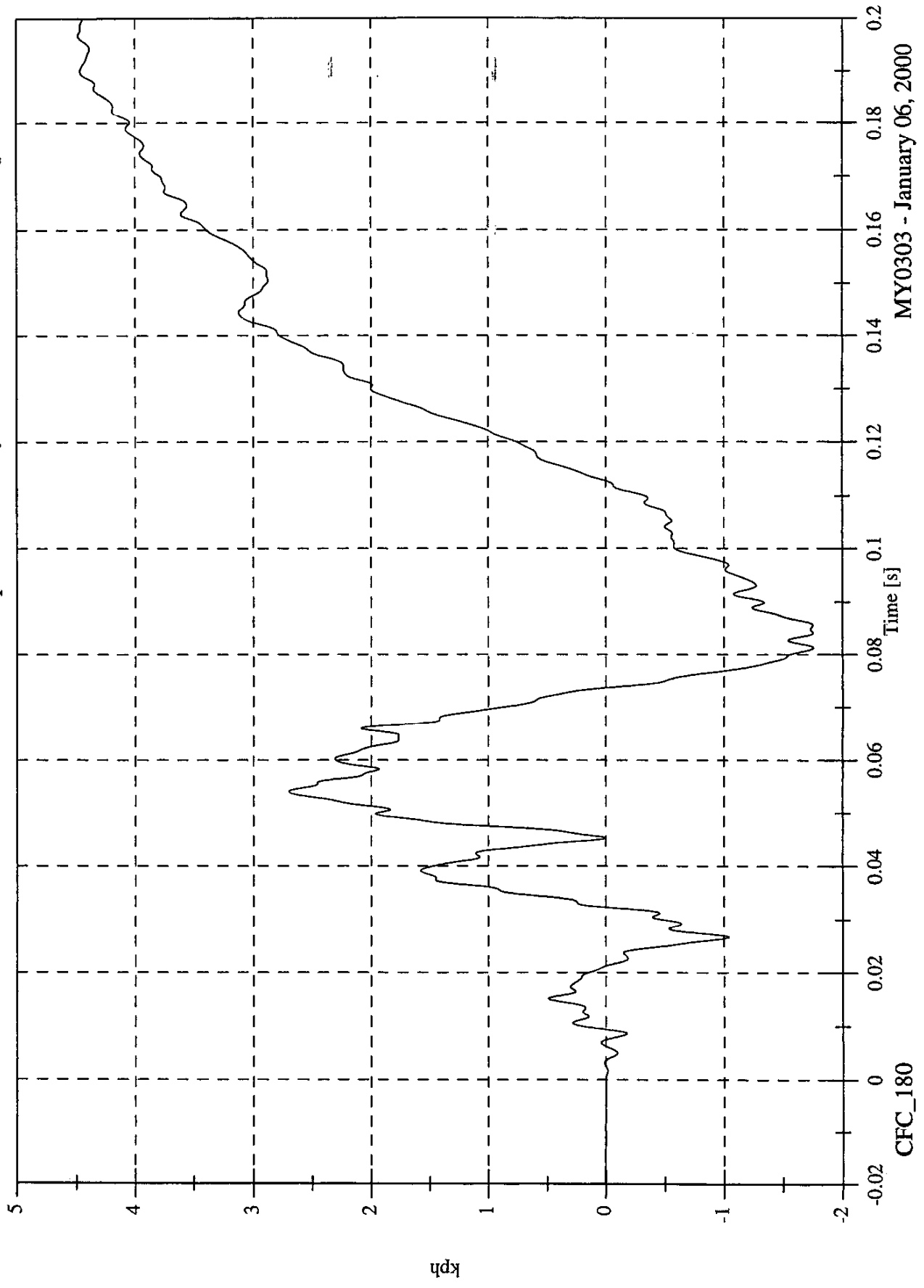
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 4.5 [kph] at 0.197 [s]
Min: -1.8 [kph] at 0.081 [s]

Acc 3 Rear Floorpan Az Velocity



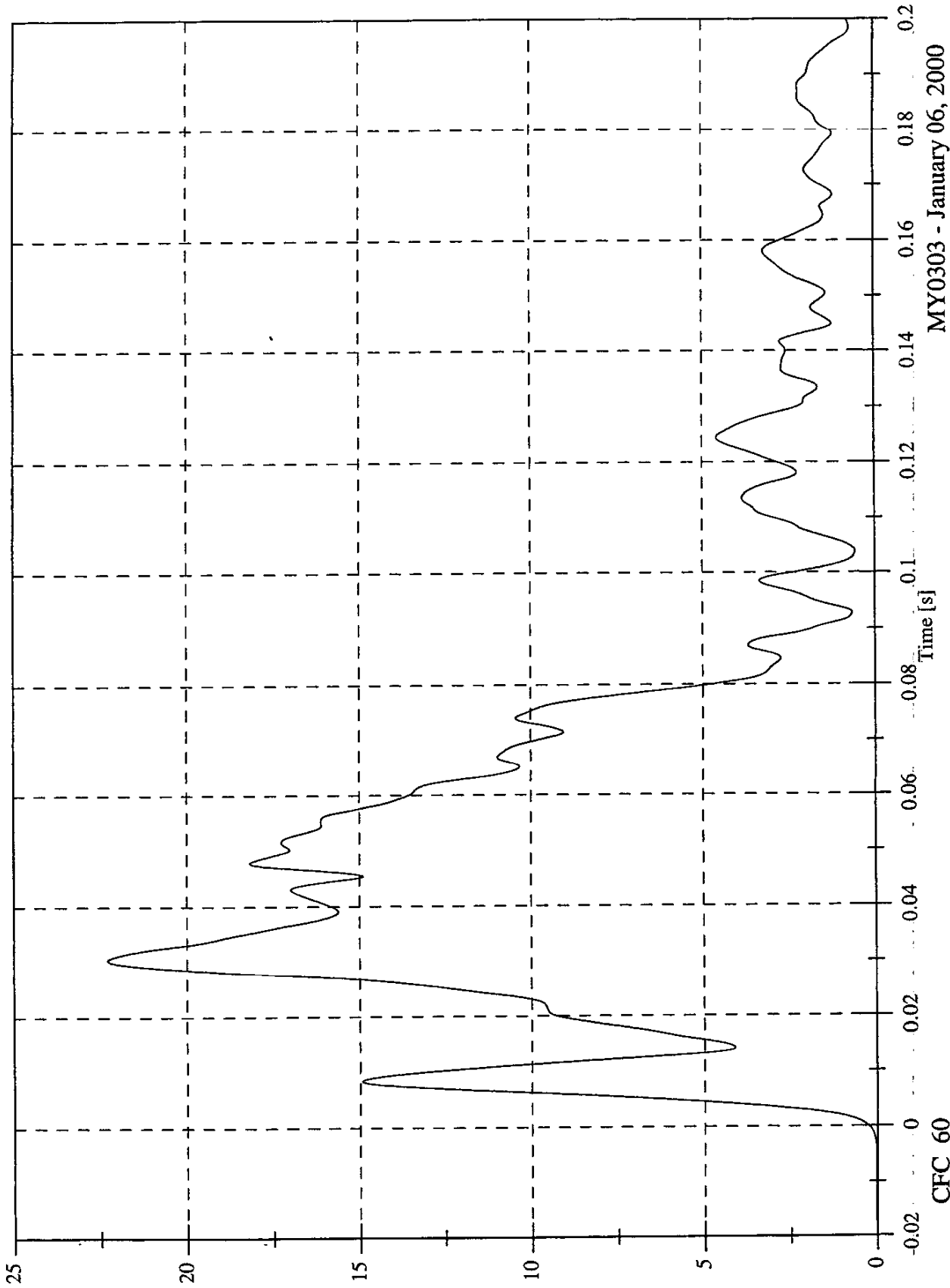
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 22.3 [g] at 0.030 [s]
Min: 0.0 [g] at -0.019 [s]

Acc 3 Rear Floorpan A Resultant



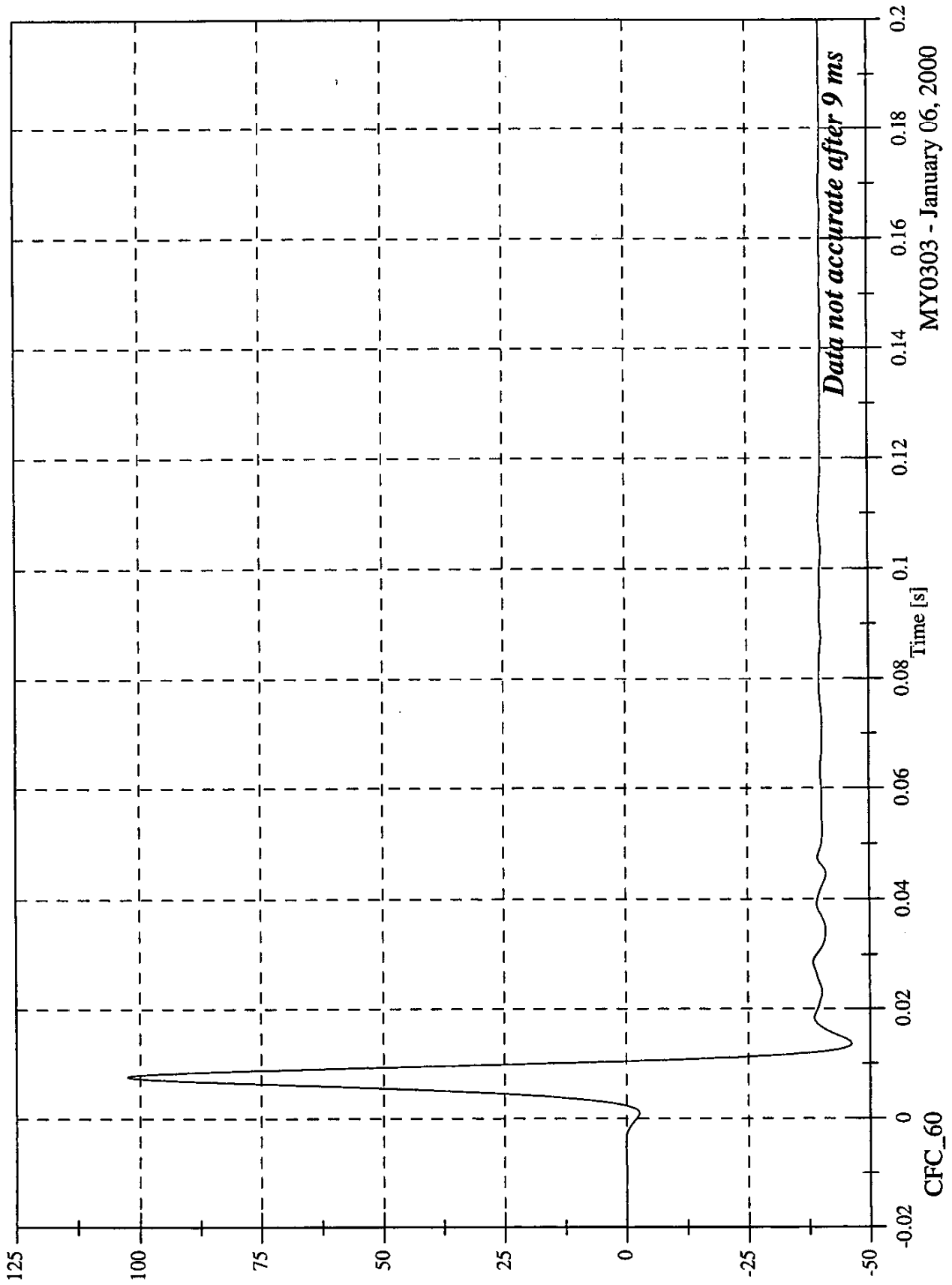
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 102.4 [g] at 0.008 [s]
Min: -46.2 [g] at 0.014 [s]

Acc 4 Left Rear Sill Ay



Data not accurate after 9 ms

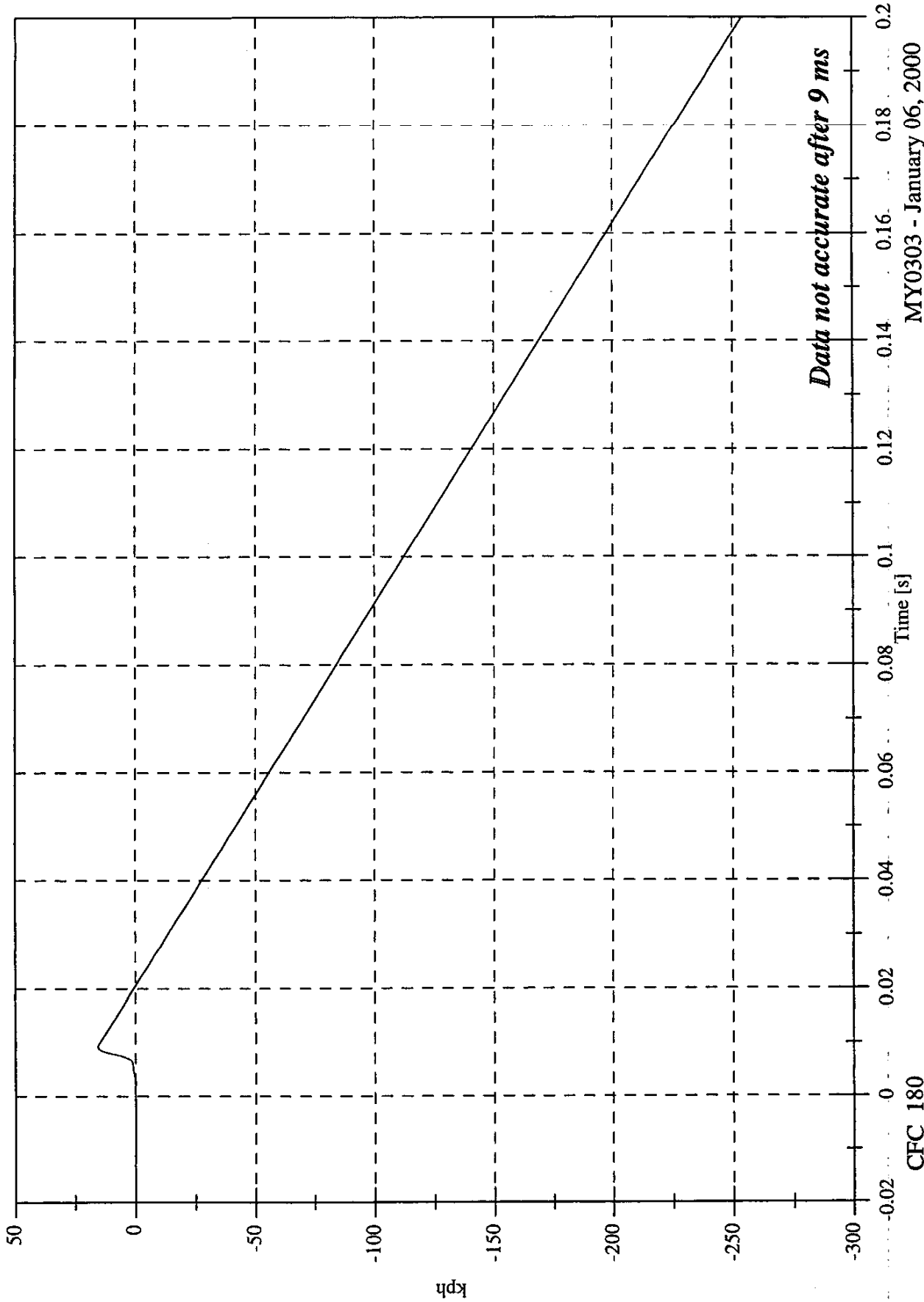
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 4 Left Rear Sill Ay Velocity

Max: 15.6 [kph] at 0.009 [s]

Min: -254.0 [kph] at 0.200 [s]



Data not accurate after 9 ms

MY0303 - January 06, 2000

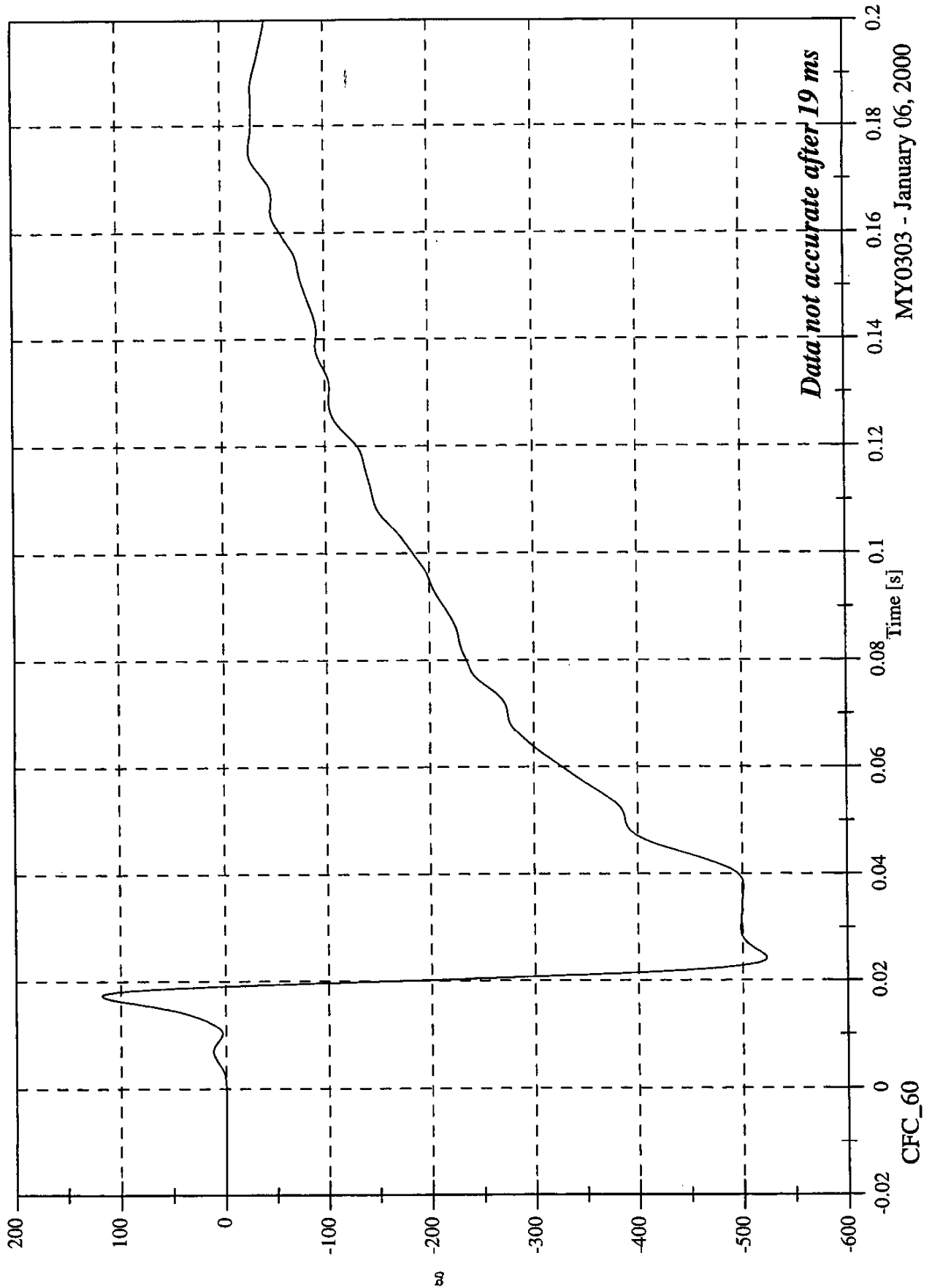
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 5 Left Front Sill Ay

Max: 117.5 [g] at 0.017 [s]

Min: -523.1 [g] at 0.024 [s]



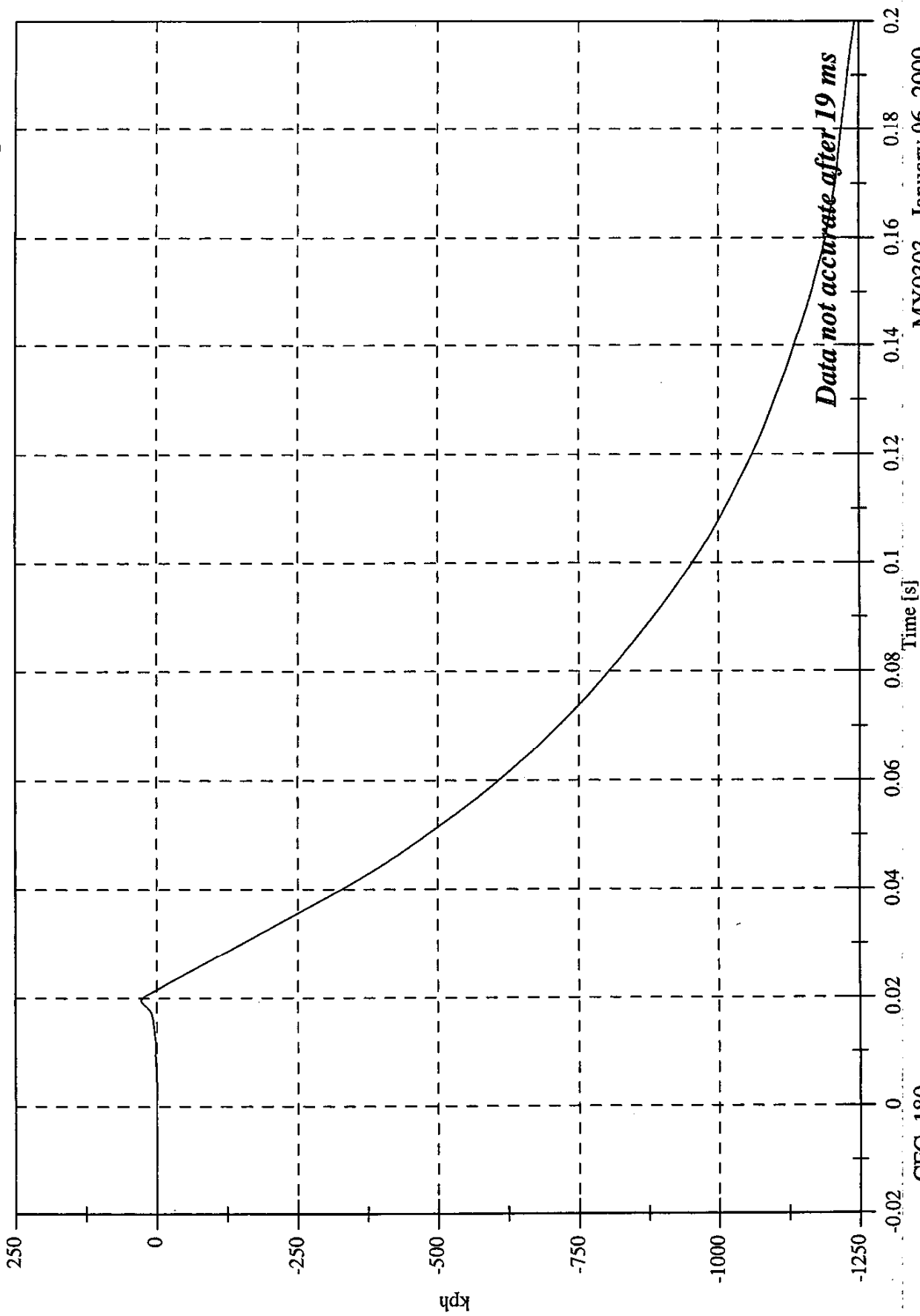
Data not accurate after 19 ms

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 5 Left Front Sill Ay Velocity

Max: 26.9 [kph] at 0.020 [s]
Min: -1242.2 [kph] at 0.200 [s]



MY0303 - January 06, 2000

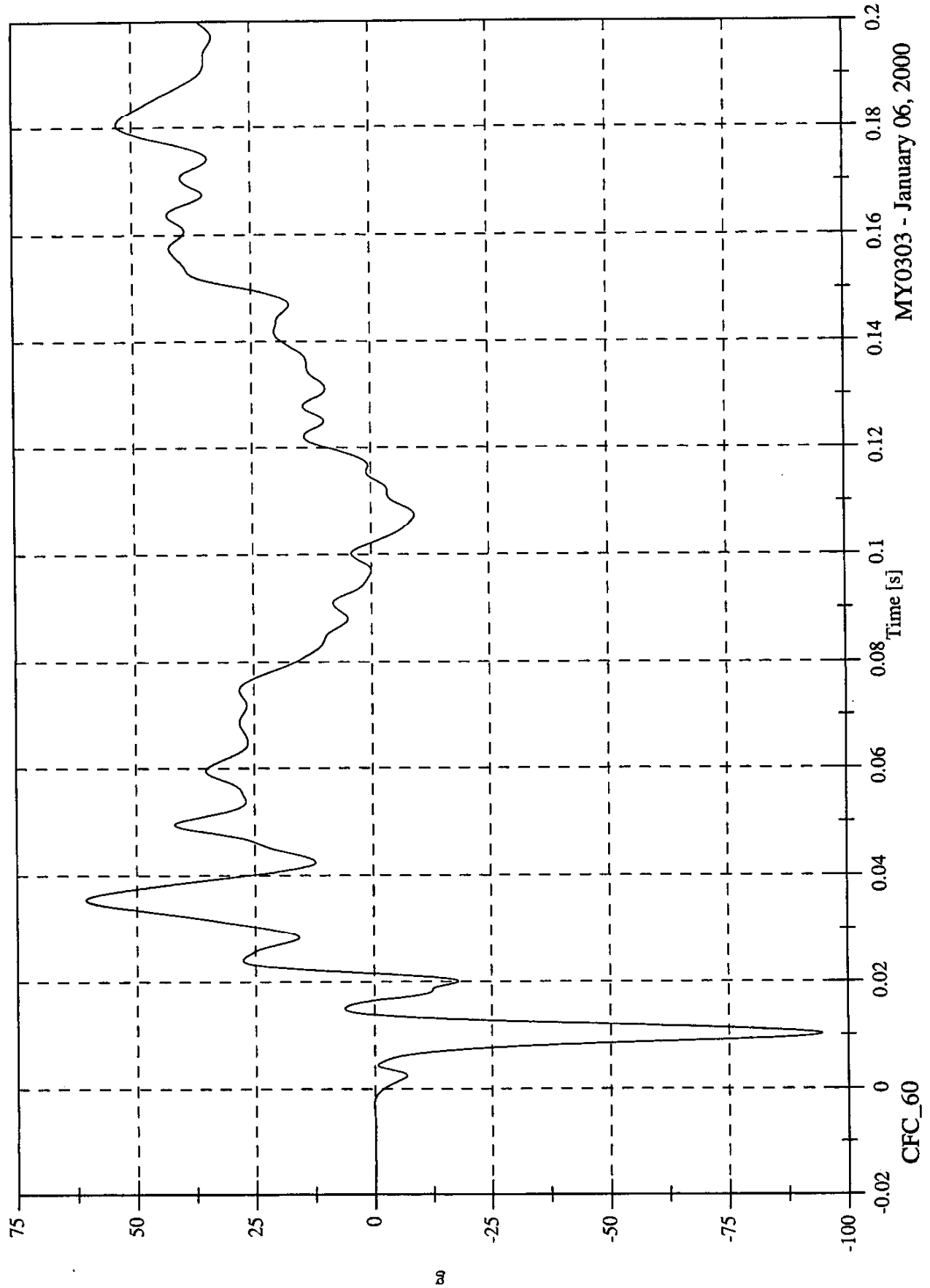
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 60.6 [g] at 0.036 [s]

Min: -94.5 [g] at 0.010 [s]

Acc 6 Left Front Door C/L Ay



MY0303 - January 06, 2000

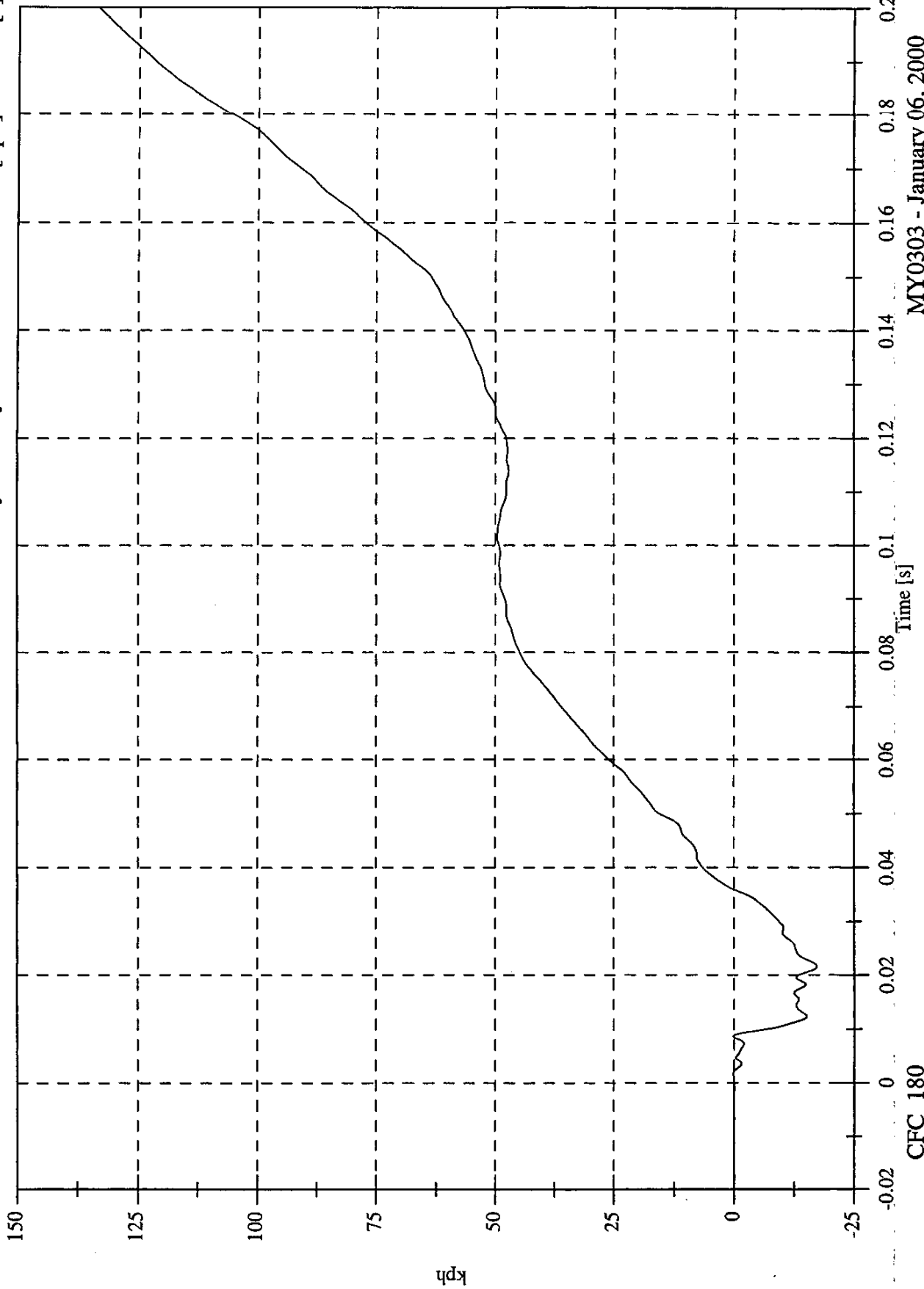
CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 133.5 [kph] at 0.200 [s]

Min: -17.3 [kph] at 0.022 [s]

Acc 6 Left Front Door C/L Ay Velocity



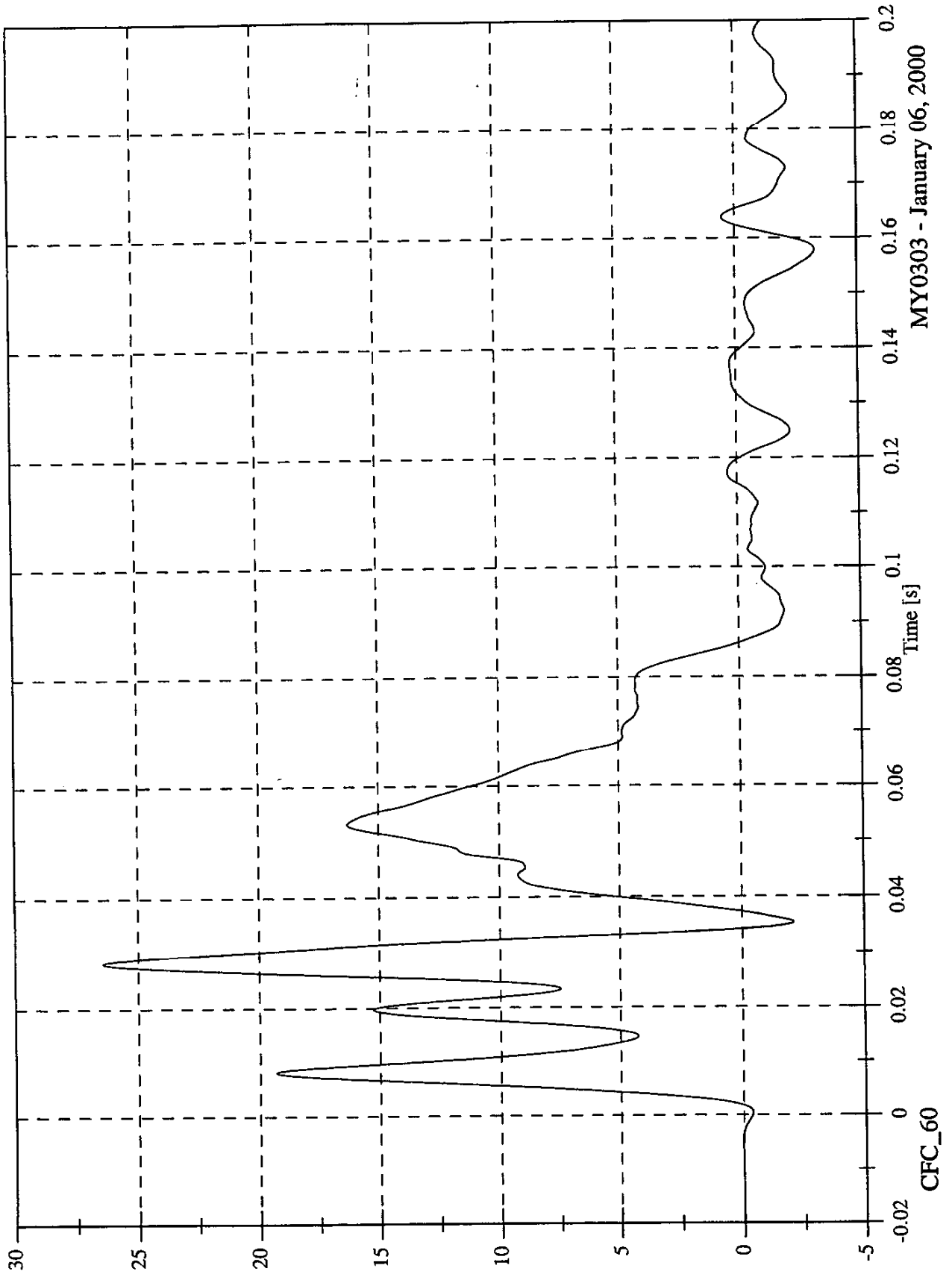
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 26.4 [g] at 0.028 [s]
Min: -3.3 [g] at 0.158 [s]

Acc 7 Right Rear Compartment Ay



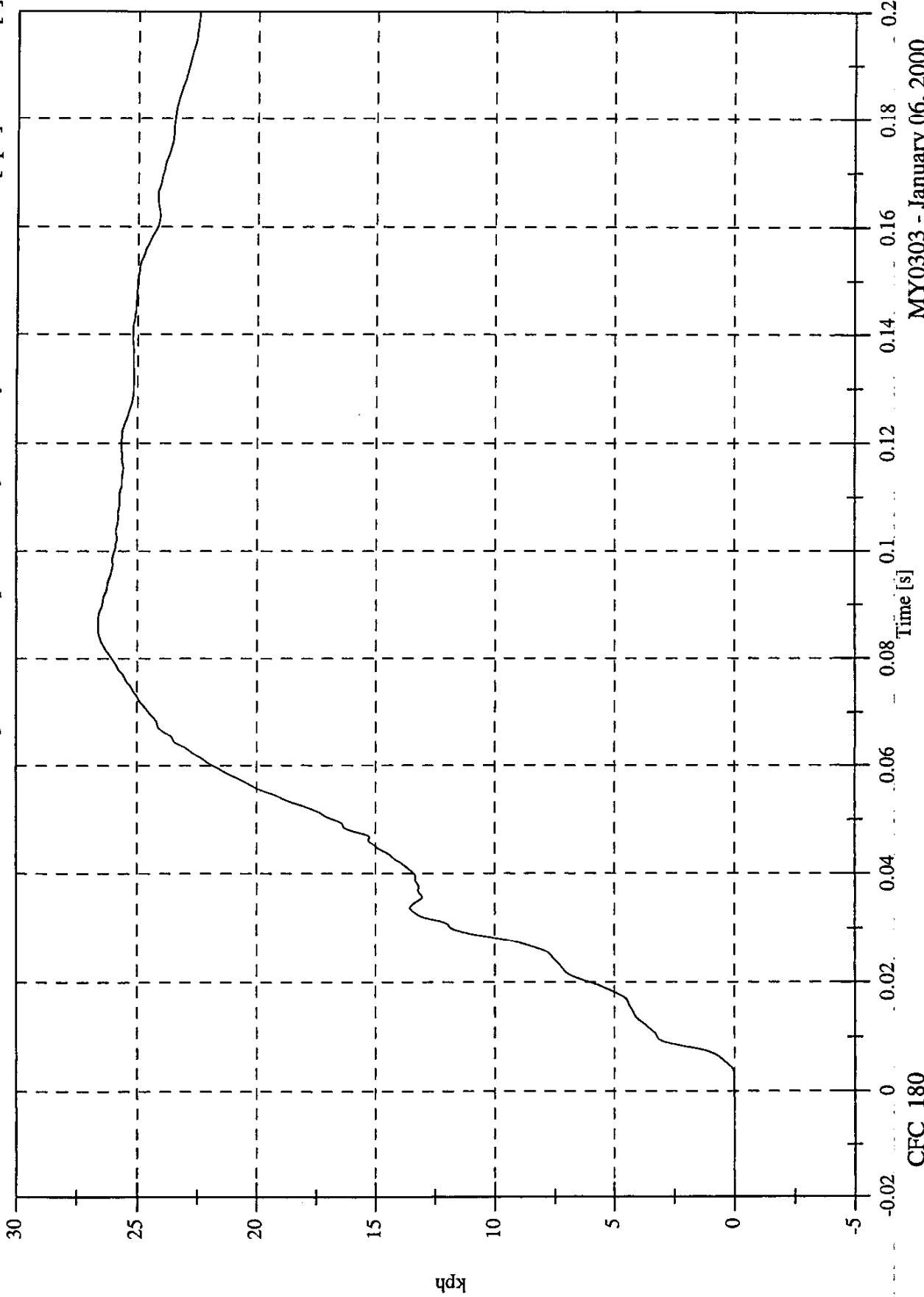
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 26.6 [kph] at 0.085 [s]

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

Acc 7 Right Rear Compartment Ay Velocity



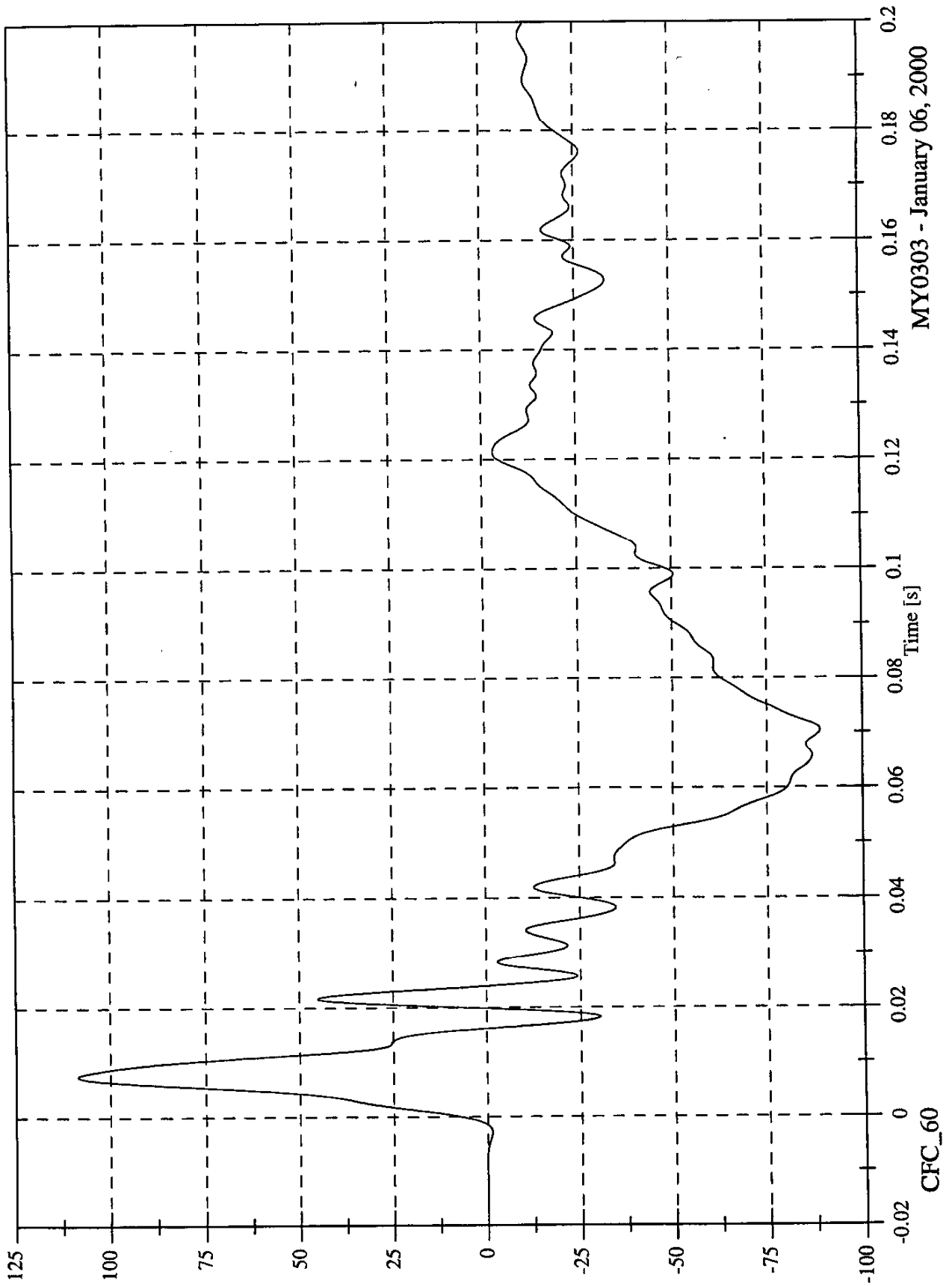
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 108.6 [g] at 0.008 [s]
Min: -89.0 [g] at 0.070 [s]

Acc 8 Left Front Door Midrear Ay

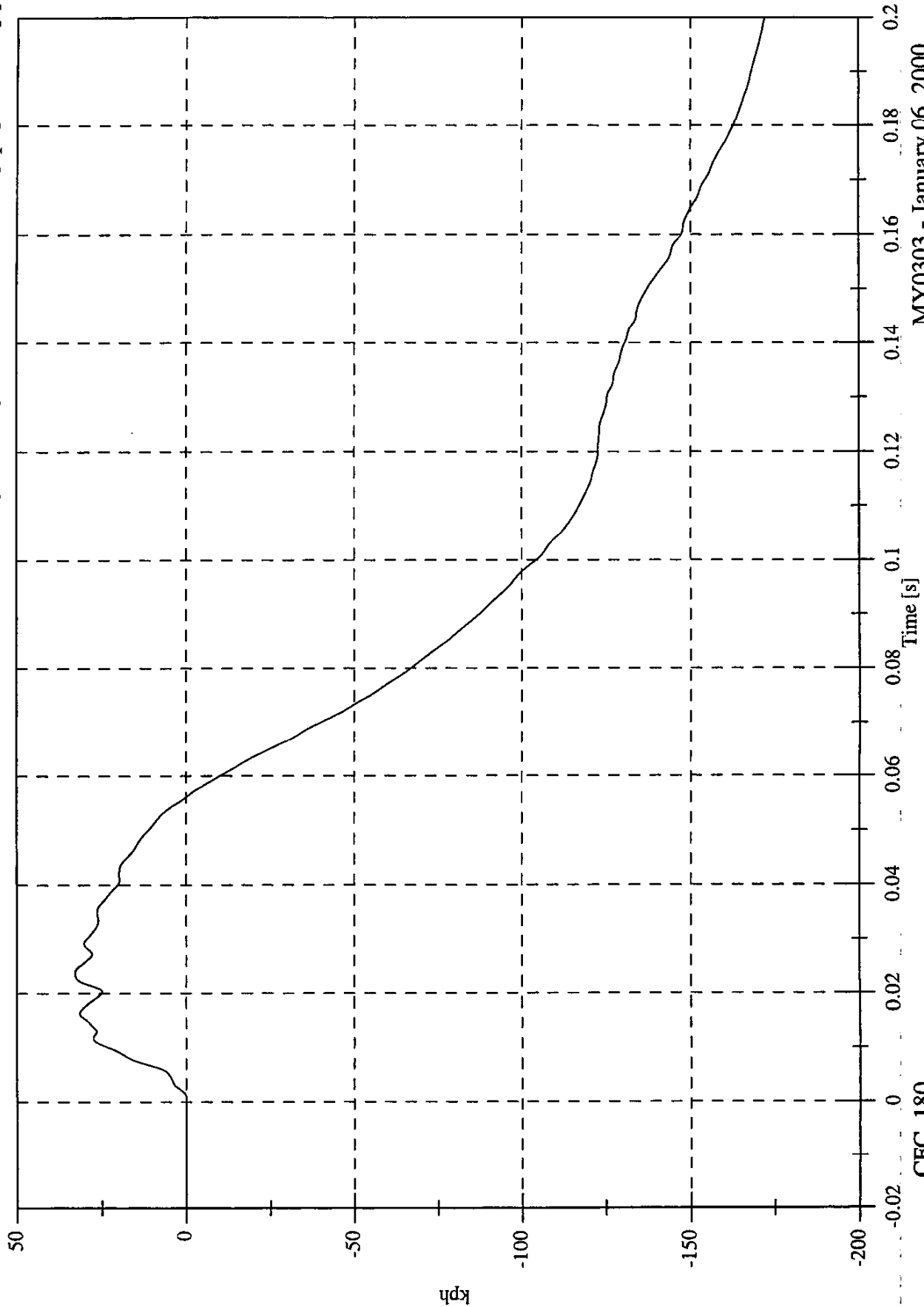


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 32.9 [kph] at 0.024 [s]
Min: -172.2 [kph] at 0.200 [s]

Acc 8 Left Front Door Midrear Ay Velocity

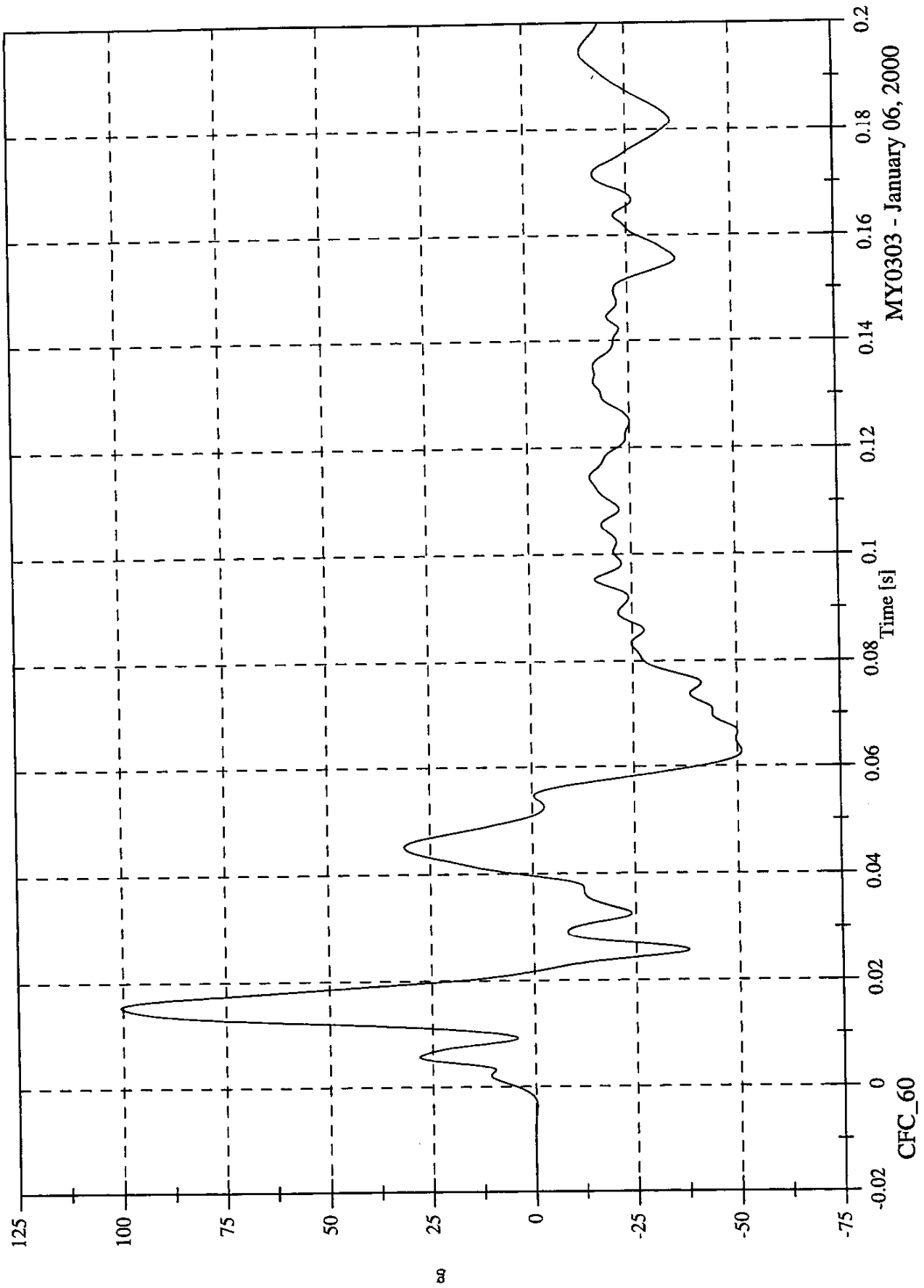


MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan
Acc 9 Left Front Door Upper C/L Ay

Max: 100.5 [g] at 0.015 [s]
Min: -51.1 [g] at 0.063 [s]



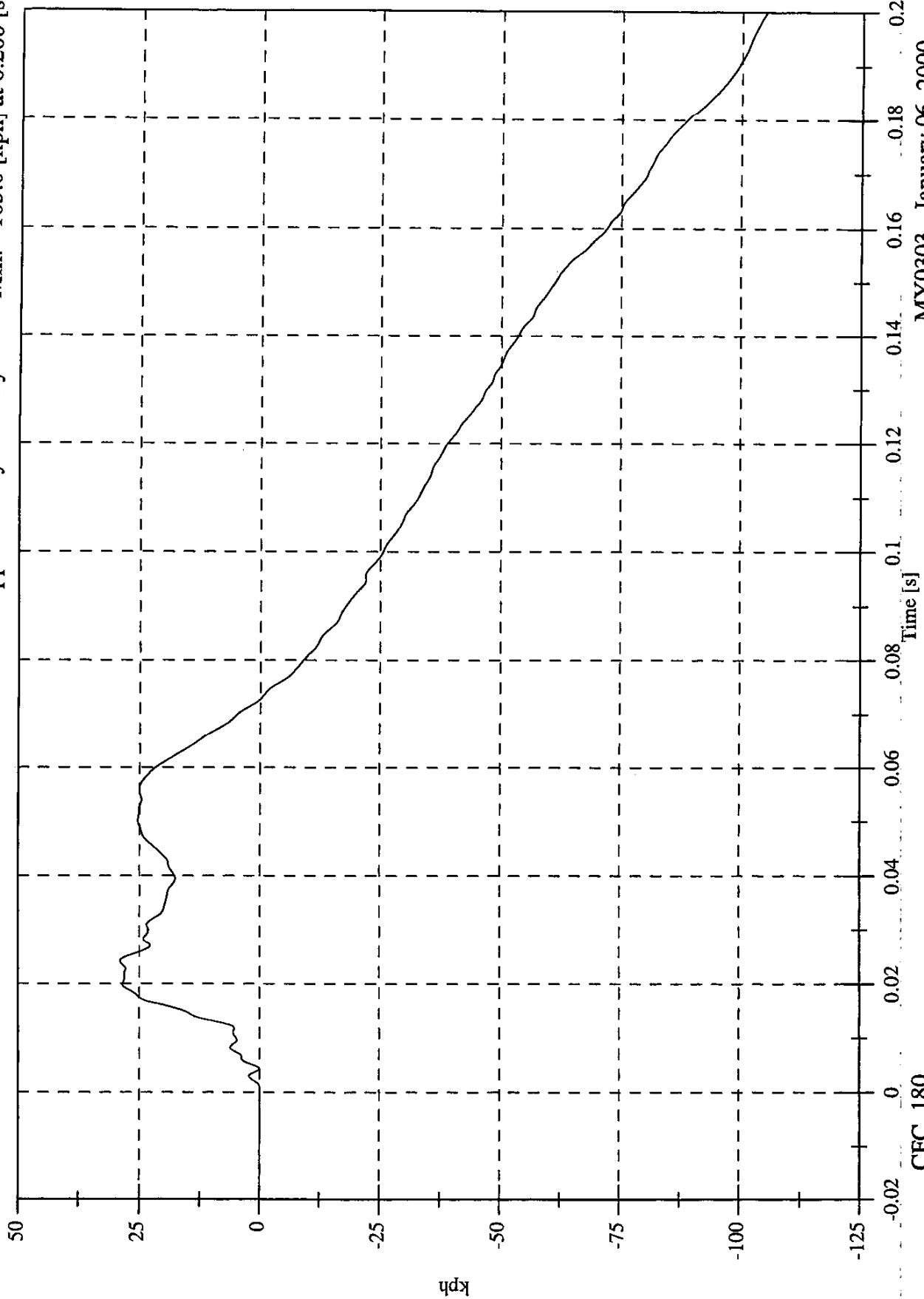
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 28.9 [kph] at 0.024 [s]

Min: -105.0 [kph] at 0.200 [s]

Acc 9 Left Front Door Upper C/L Ay Velocity



MY0303 - January 06, 2000

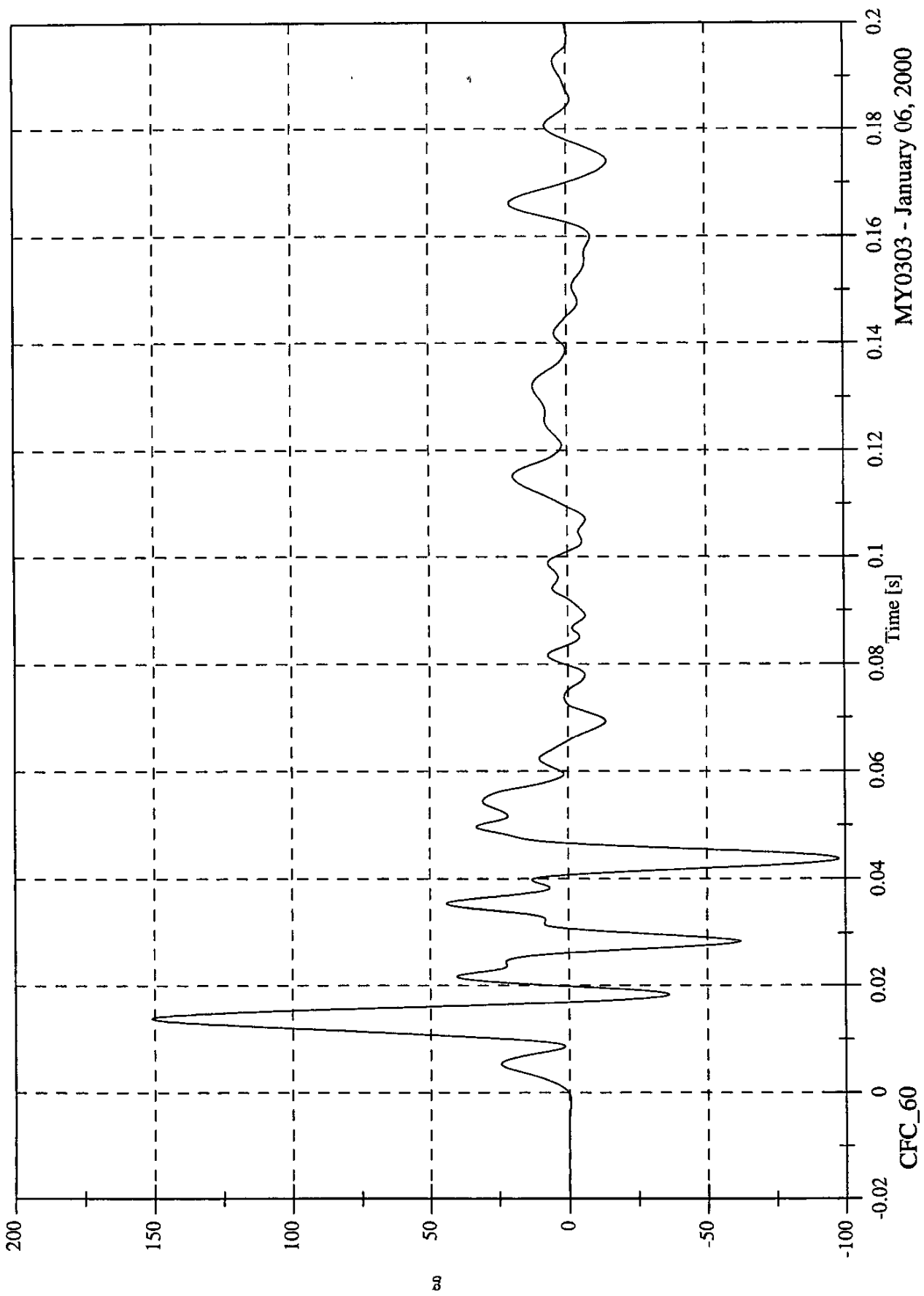
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 151.1 [g] at 0.014 [s]

Min: -97.7 [g] at 0.044 [s]

Acc 10 Left Rear Door Midrear Ay



MY0303 - January 06, 2000

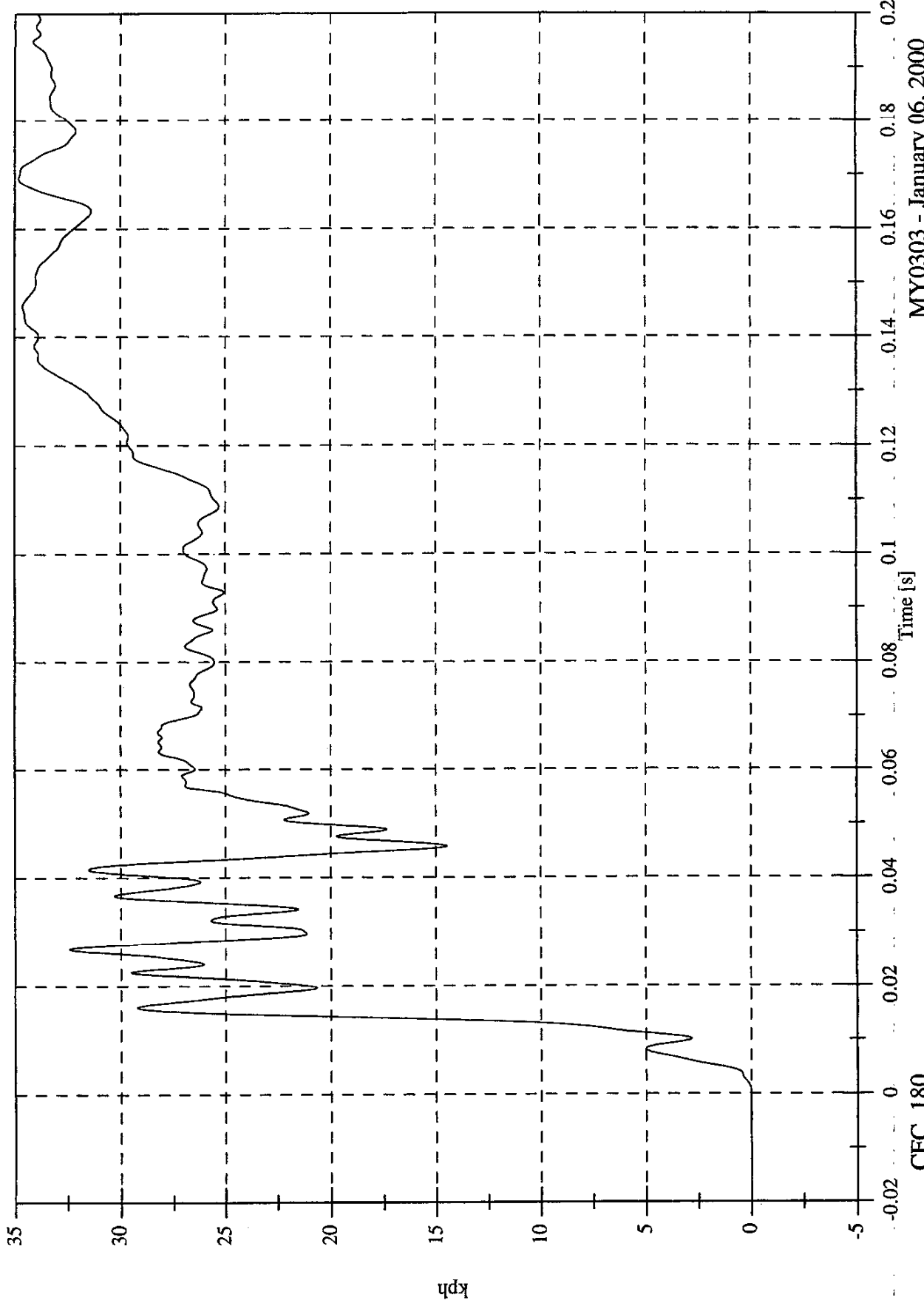
CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 34.8 [kph] at 0.169 [s]

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

Acc 10 Left Rear Door Midrear Ay Velocity



CFC_180

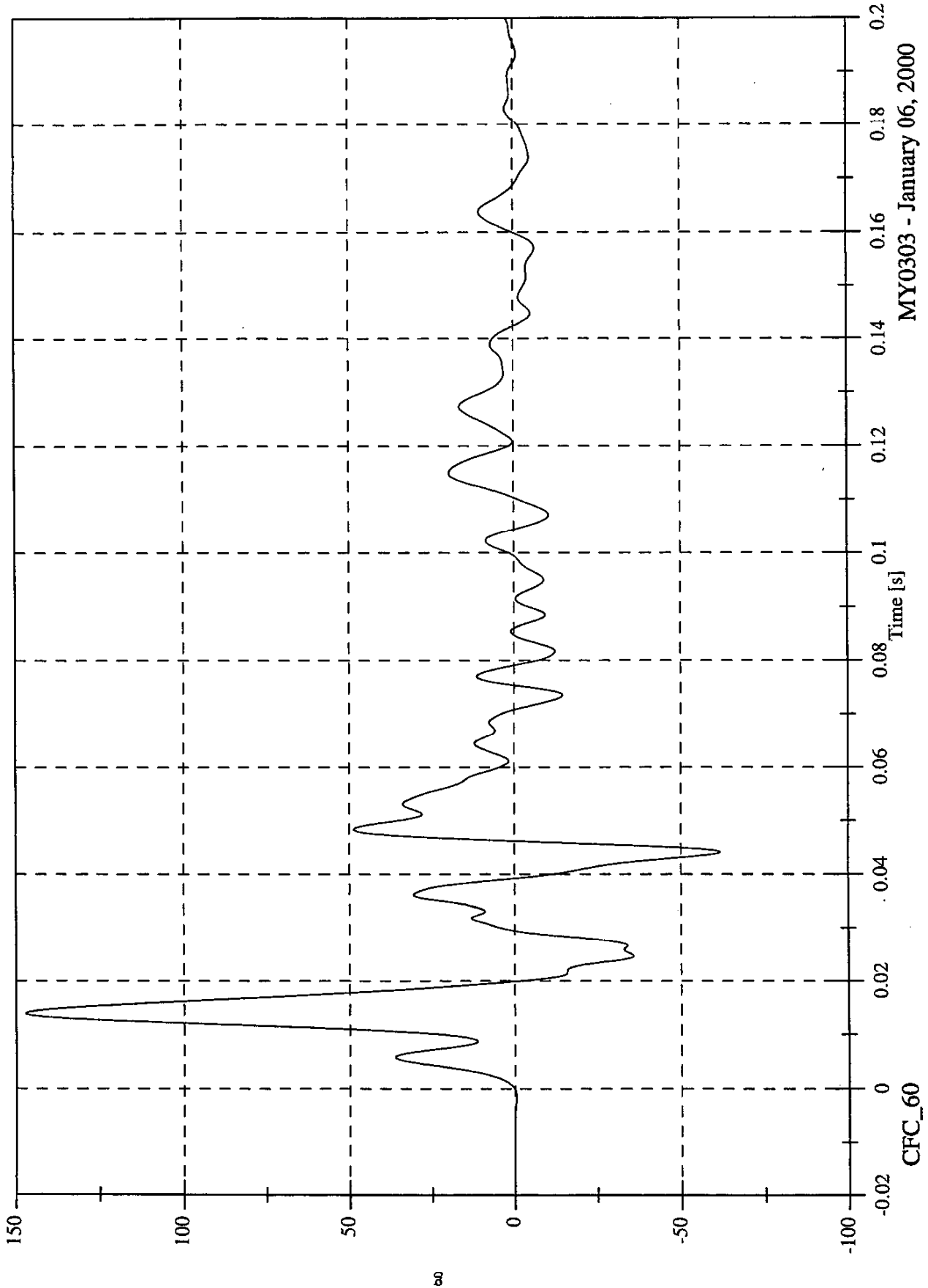
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 11 Left Rear Door Upper C/L Ay

Max: 147.2 [g] at 0.014 [s]

Min: -61.7 [g] at 0.044 [s]



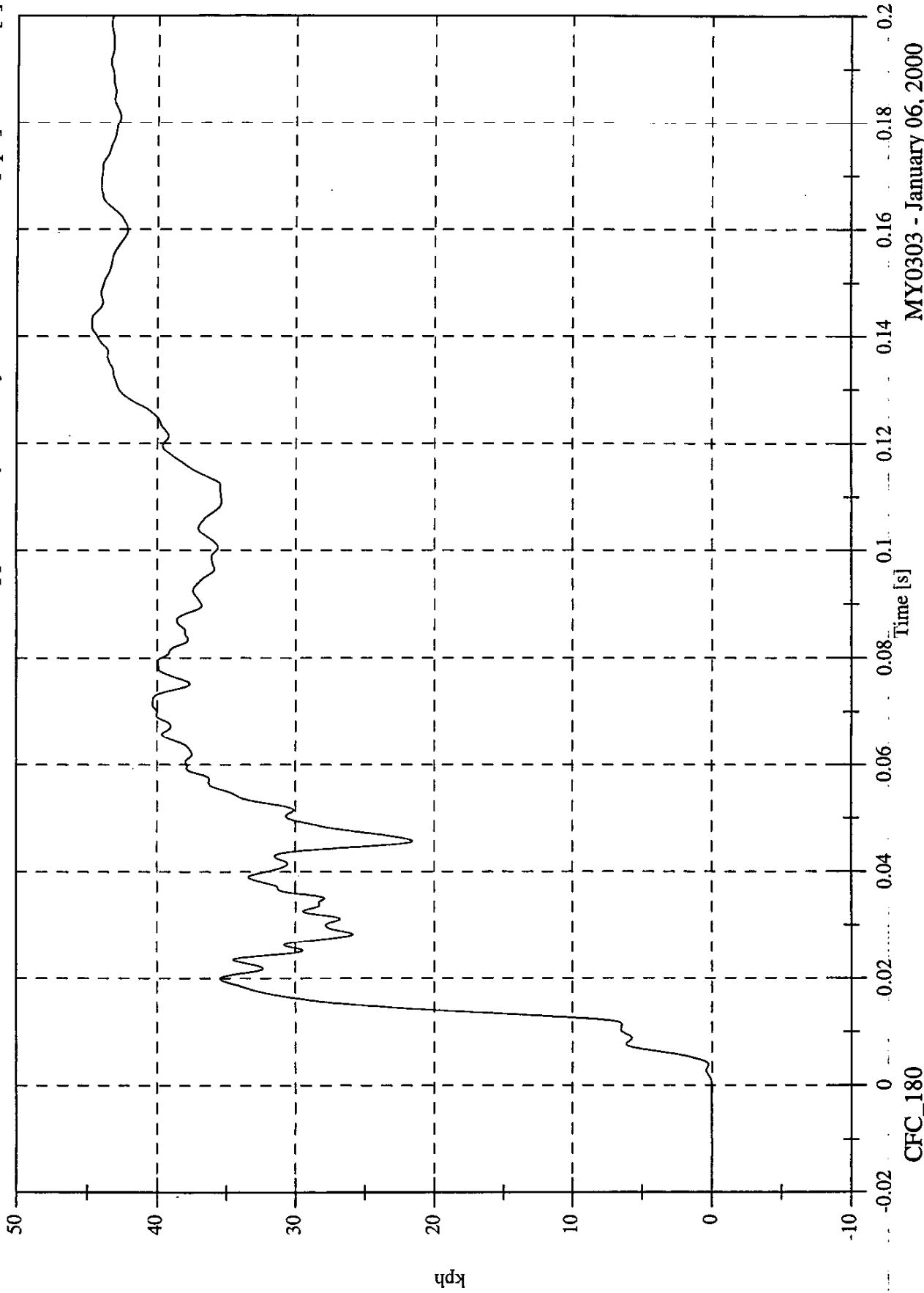
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 44.7 [kph] at 0.142 [s]
Min: -0.0 [kph] at -0.020 [s]

Acc 11 Left Rear Door Upper C/L Ay Velocity



CFC_180

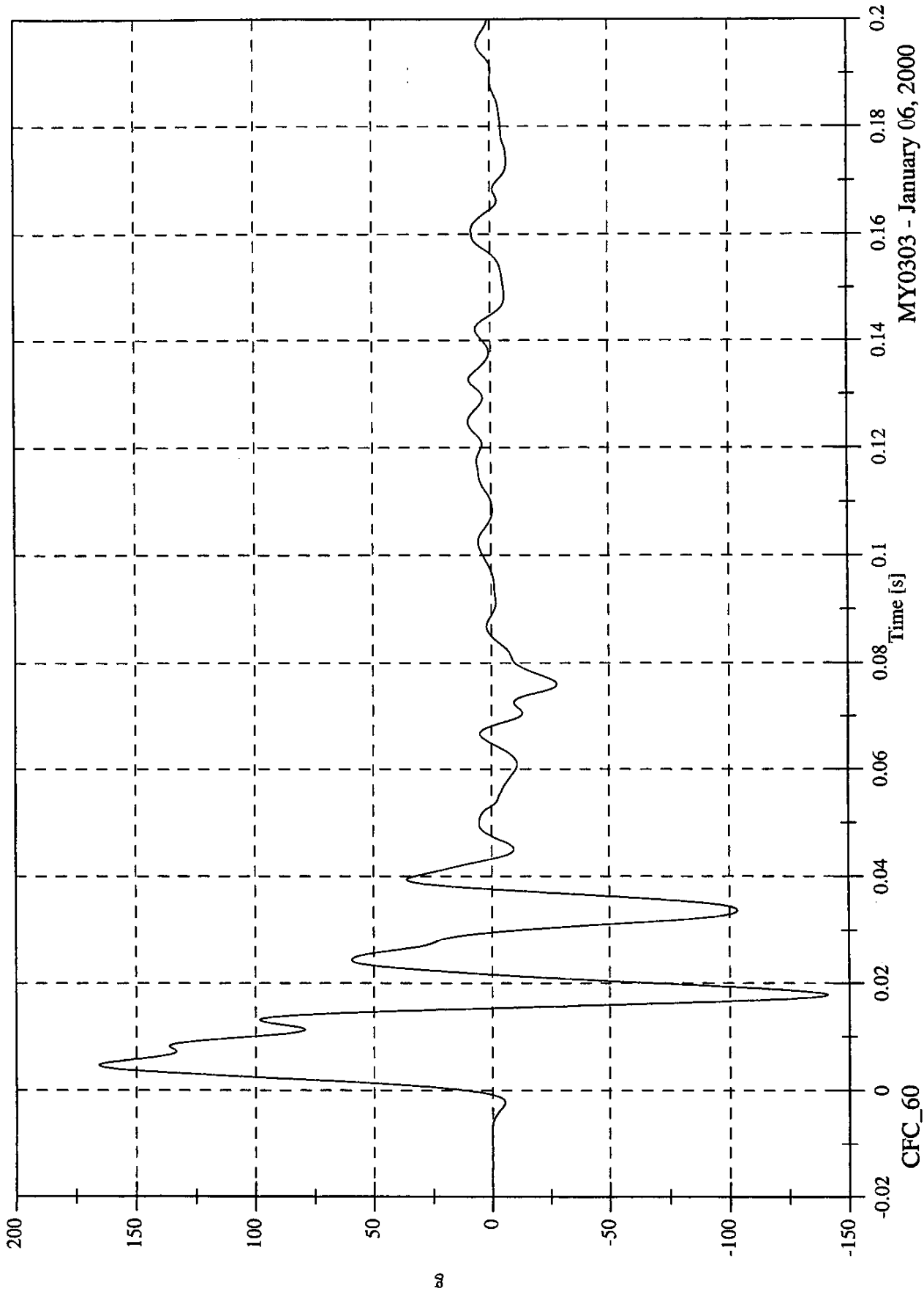
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 12 Left Lower B Post Ay

Max: 165.5 [g] at 0.005 [s]

Min: -140.8 [g] at 0.018 [s]



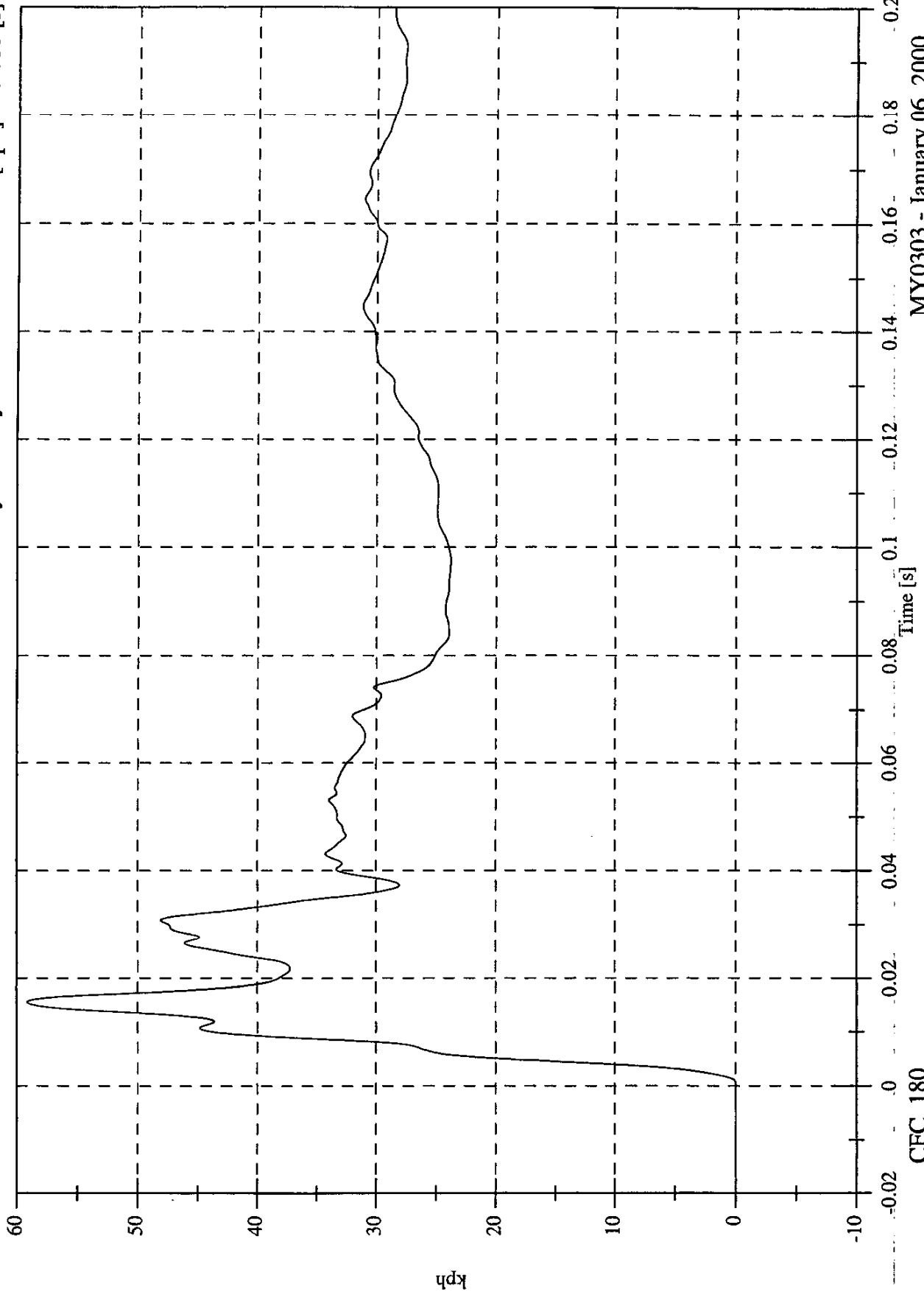
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 59.1 [kph] at 0.016 [s]

Min: -0.0 [kph] at 0.000 [s]

Acc 12 Left Lower B Post Ay Velocity



MY0303 - January 06, 2000

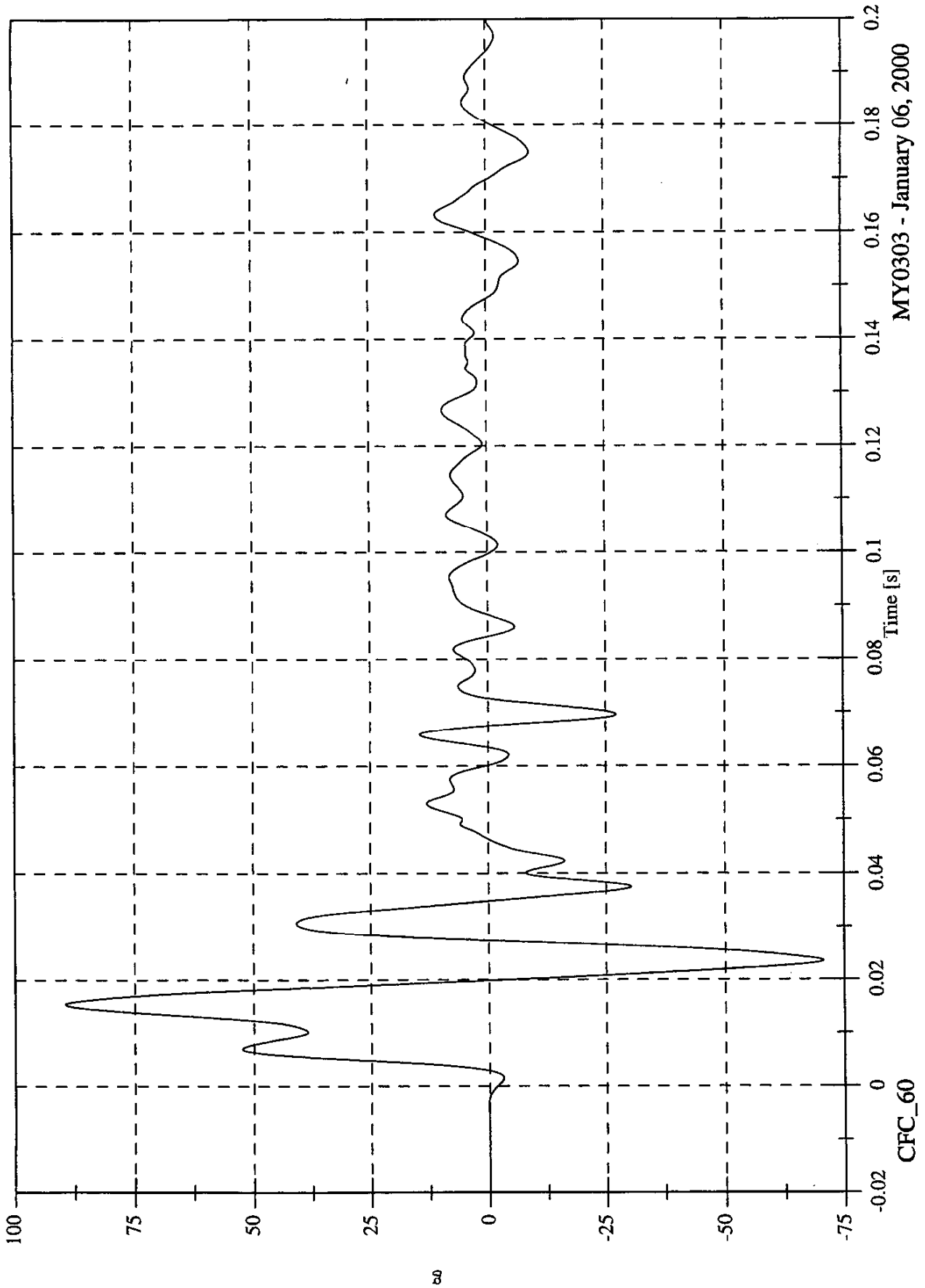
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Acc 13 Left Mid B Post Ay

Max: 89.5 [g] at 0.015 [s]

Min: -70.7 [g] at 0.023 [s]



MY0303 - January 06, 2000

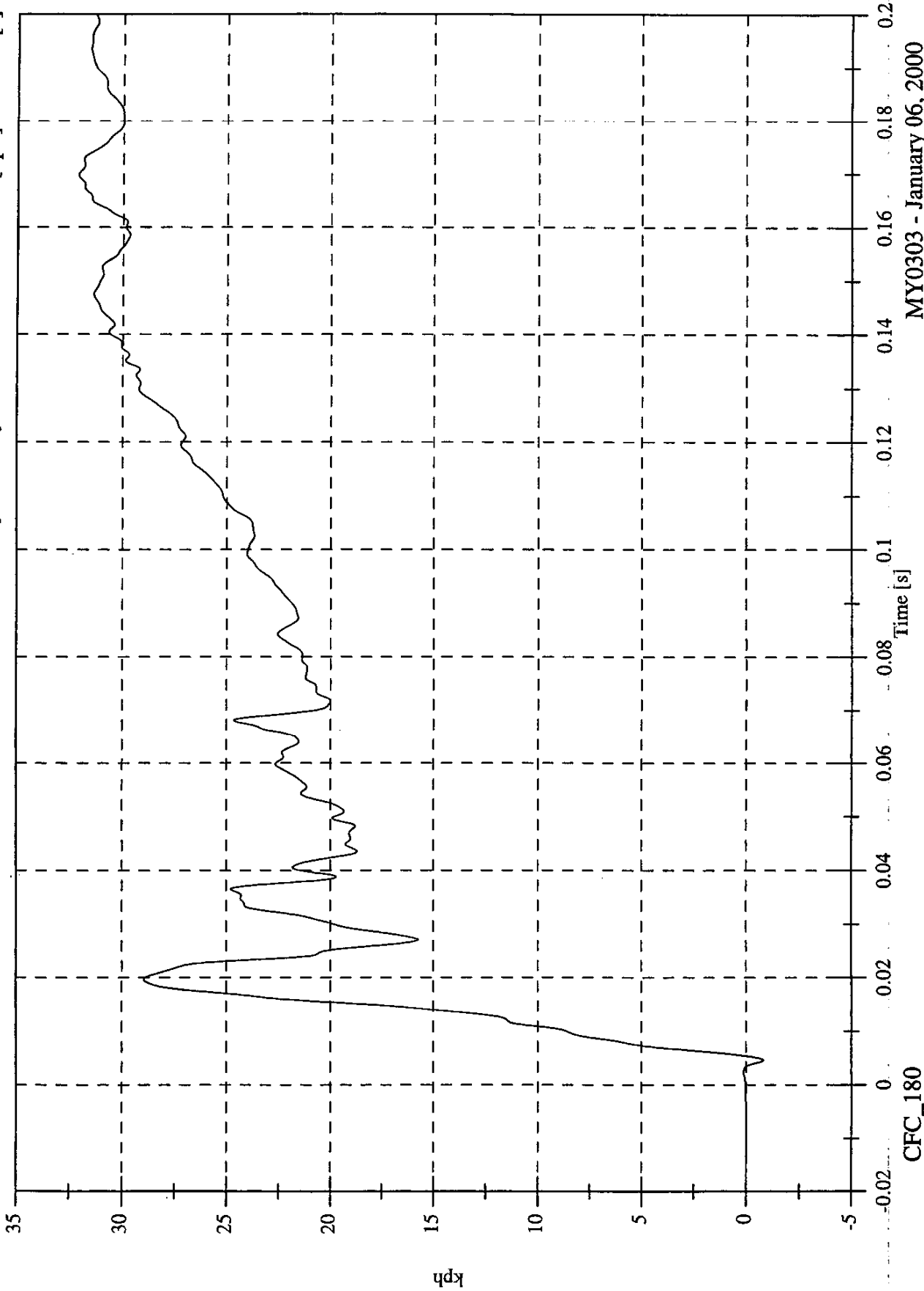
CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 32.1 [kph] at 0.170 [s]

Min: -0.8 [kph] at 0.005 [s]

Acc 13 Left Mid B Post Ay Velocity



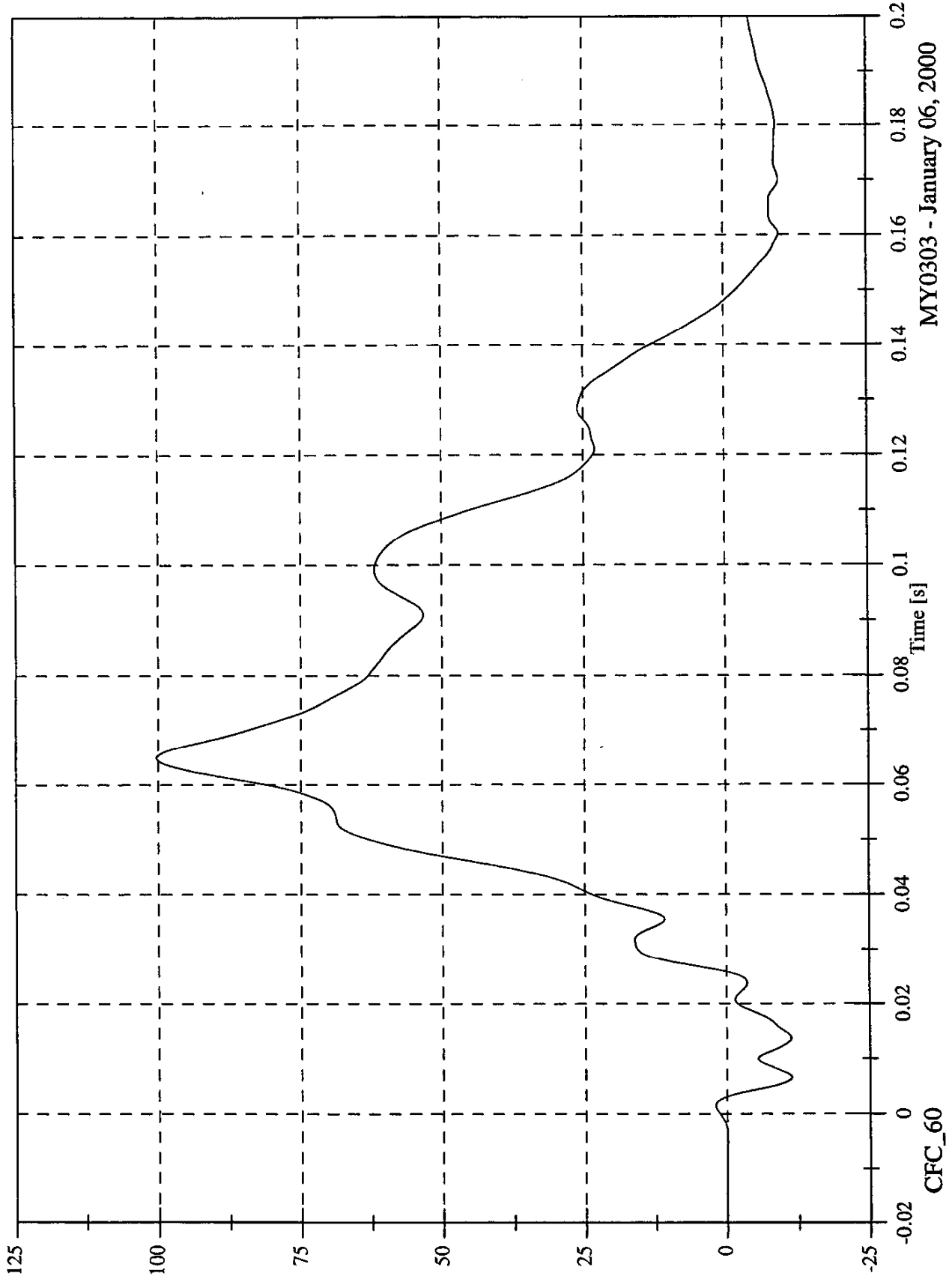
CFC_180

8506-11

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 100.3 [g] at 0.065 [s]
Min: -11.3 [g] at 0.007 [s]

Acc 14 Left Lower A Post Ay



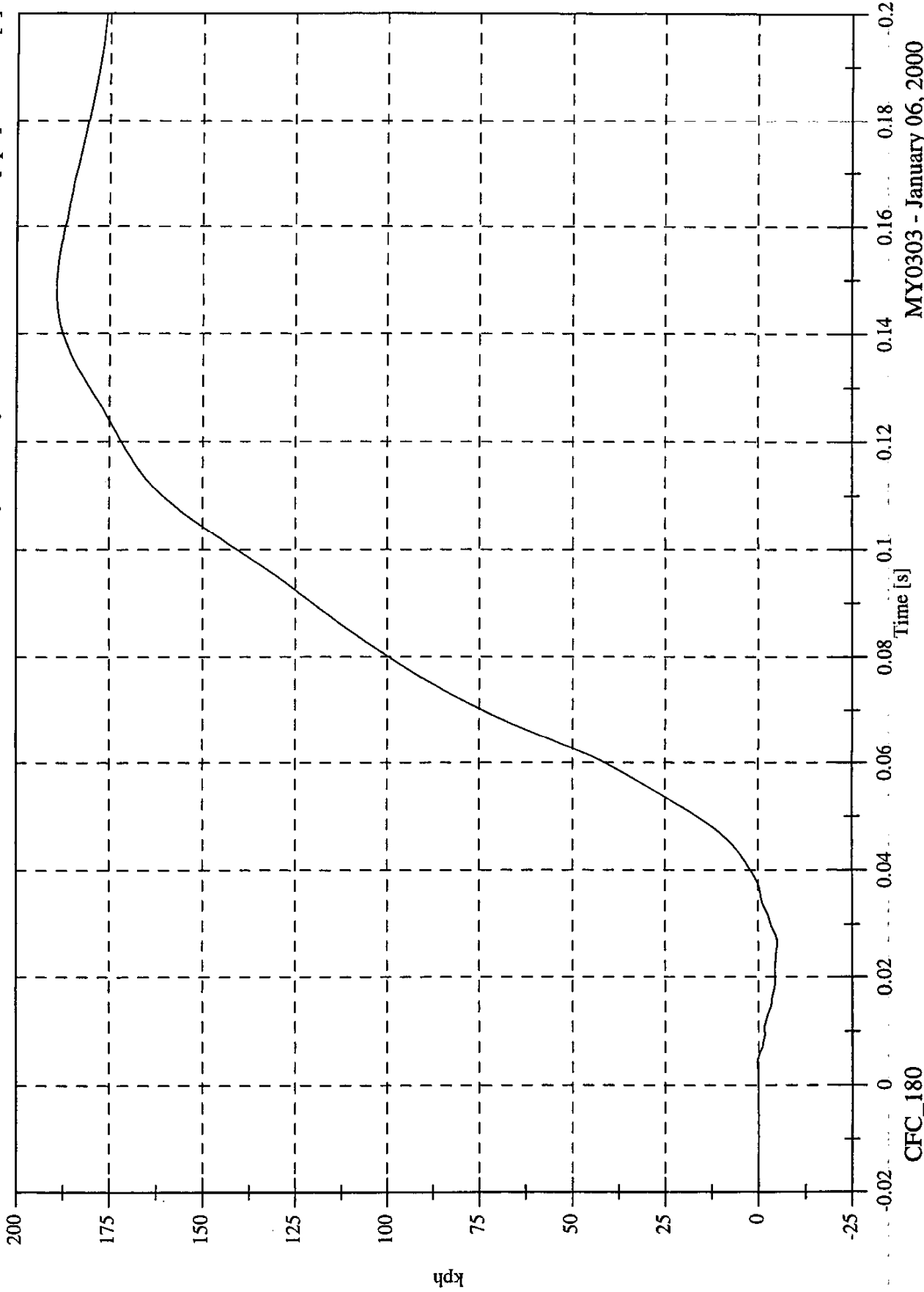
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 189.3 [kph] at 0.149 [s]

Min: -5.1 [kph] at 0.026 [s]

Acc 14 Left Lower A Post Ay Velocity



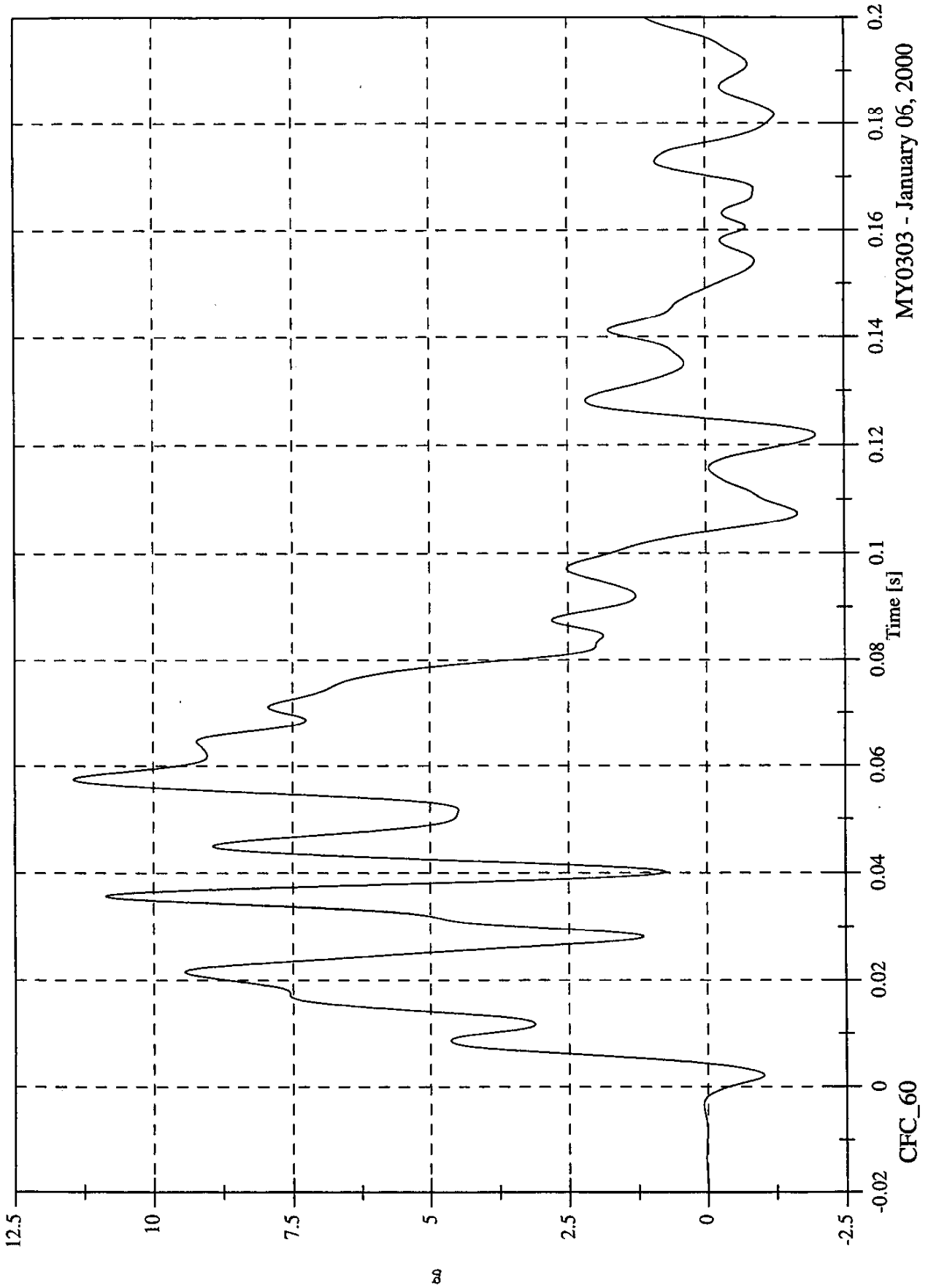
CFC_180

8506-11

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 11.4 [g] at 0.058 [s]
Min: -2.0 [g] at 0.122 [s]

Acc 15 Left Mid A Post Ay



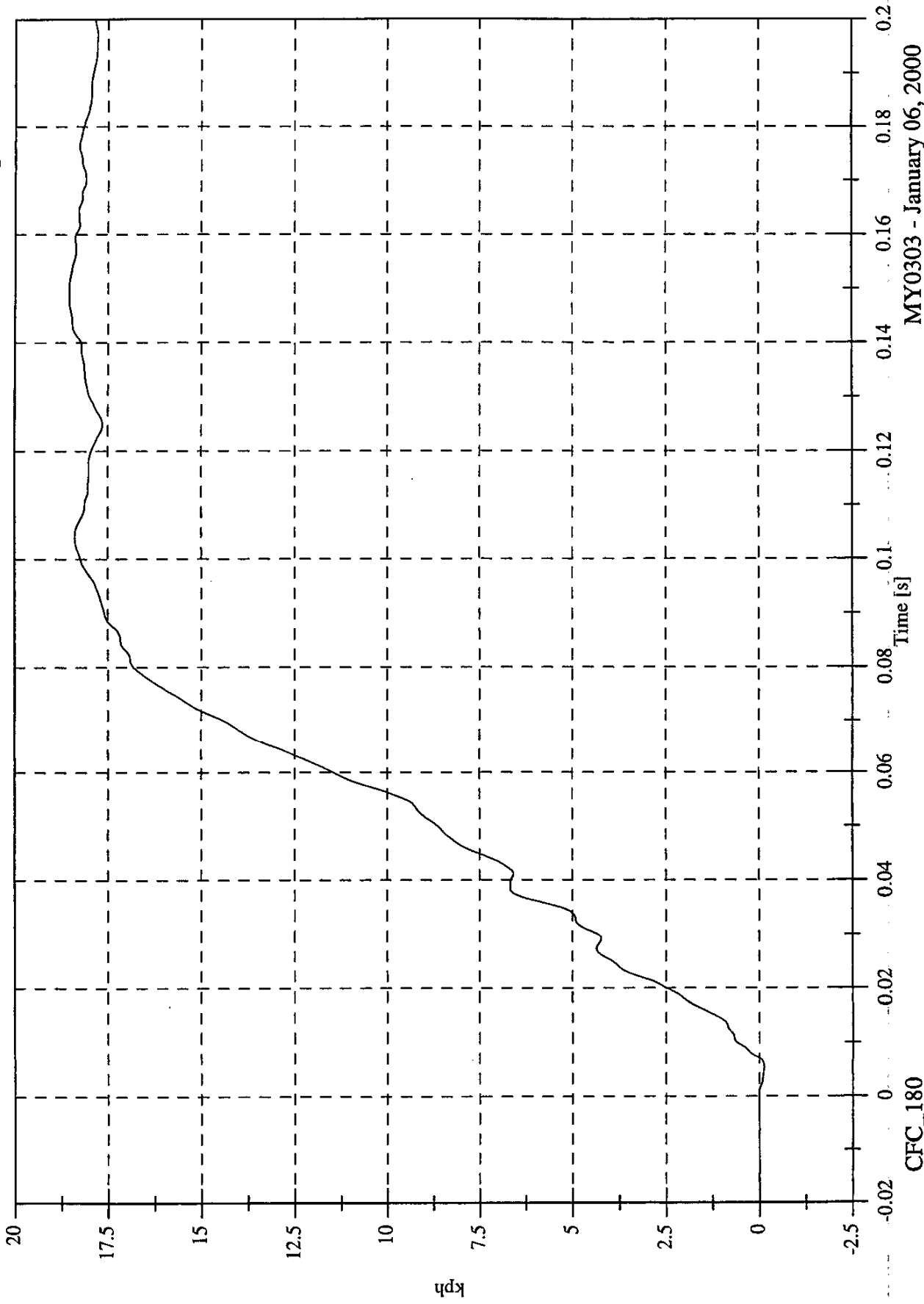
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 18.6 [kph] at 0.148 [s]

Min: -0.1 [kph] at 0.005 [s]

Acc 15 Left Mid A Post Ay Velocity



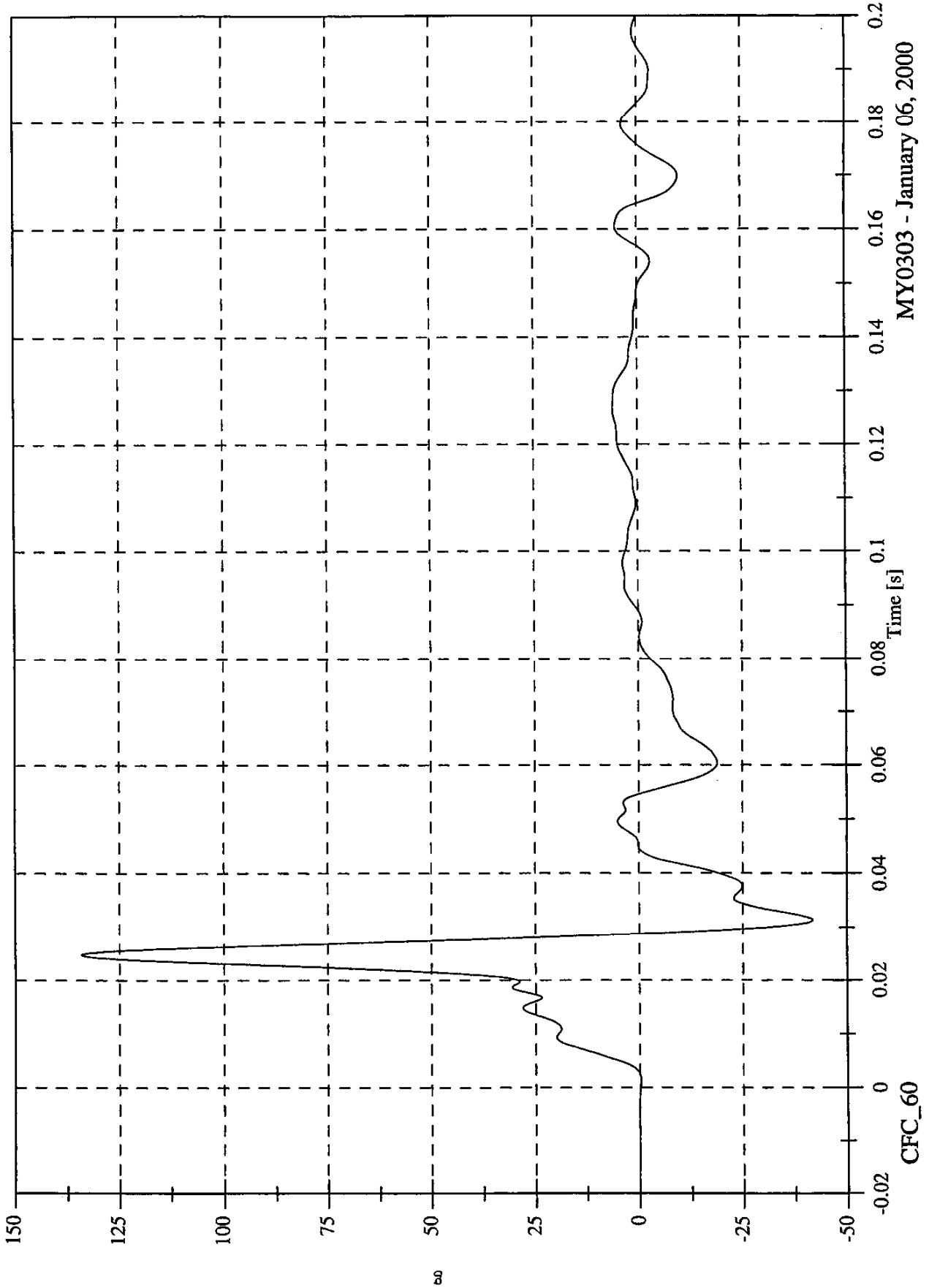
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 134.2 [g] at 0.025 [s]
Min: -41.8 [g] at 0.031 [s]

Acc 16 Front Seat Track Ay



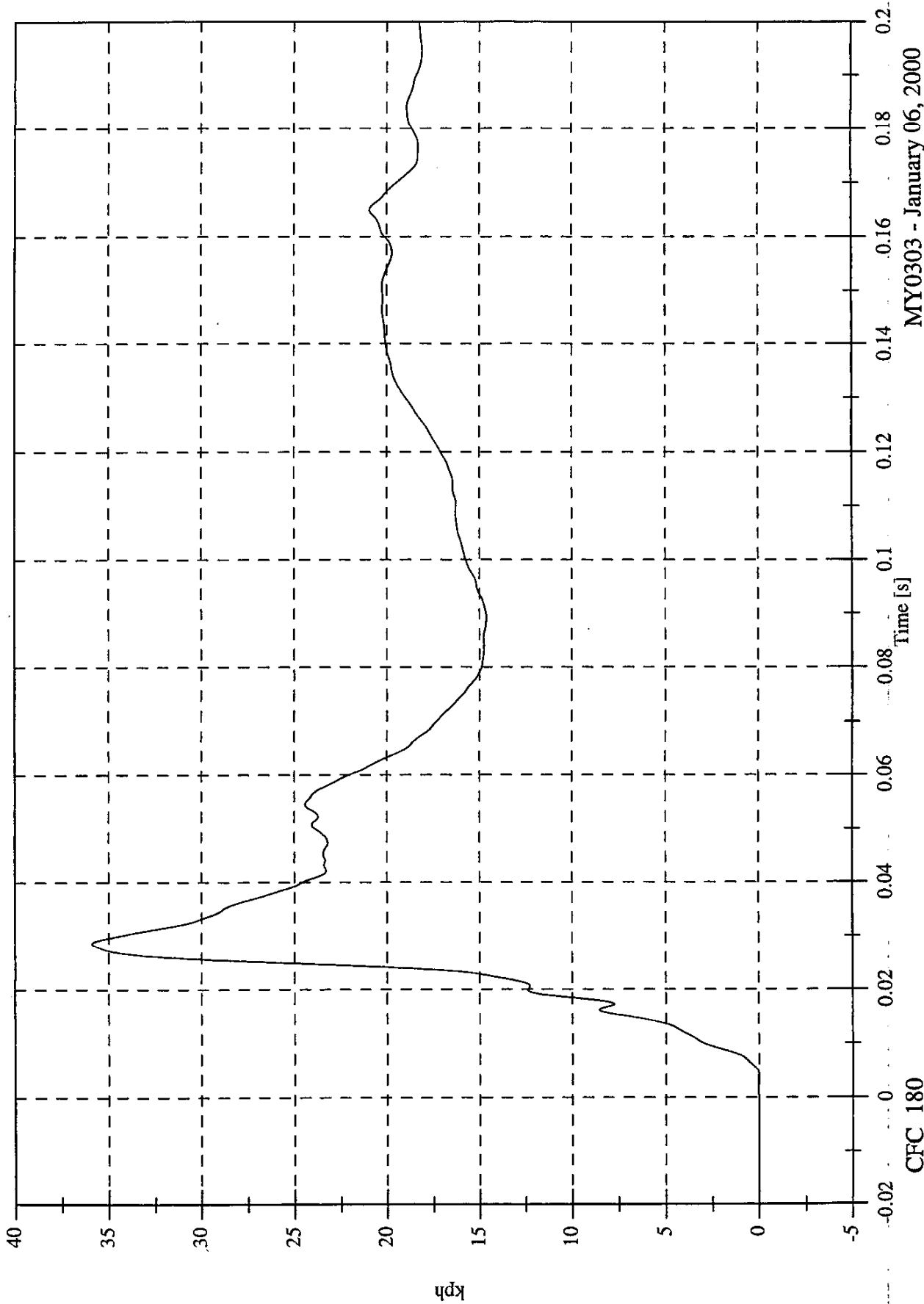
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 35.9 [kph] at 0.029 [s]

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

Acc 16 Front Seat Track Ay Velocity



MY0303 - January 06, 2000

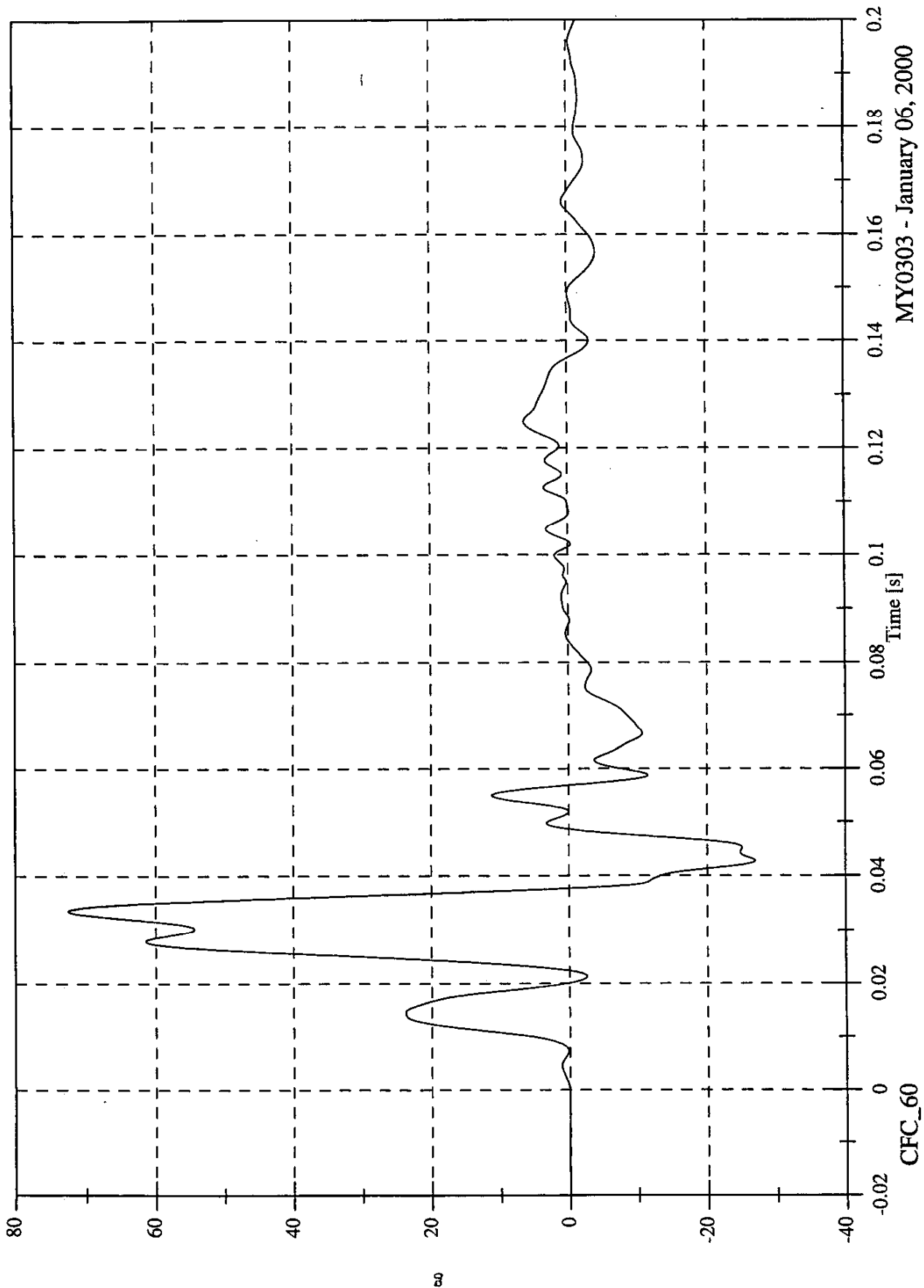
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 72.5 [g] at 0.034 [s]

Min: -26.9 [g] at 0.043 [s]

Acc 17 Rear Seat Track Ay



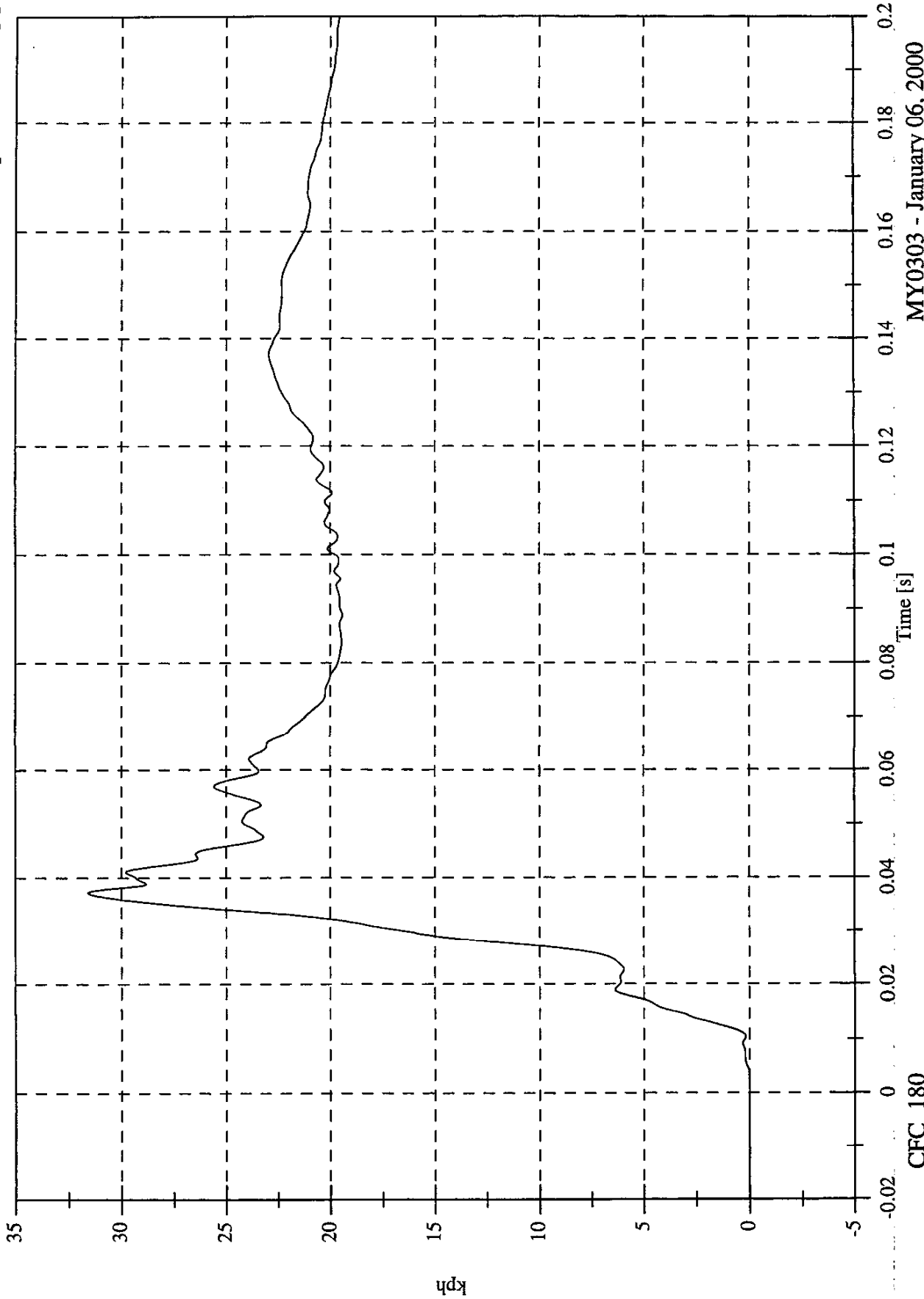
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 31.6 [kph] at 0.037 [s]
Min: -0.0 [kph] at -0.017 [s]

Acc 17 Rear Seat Track Ay Velocity



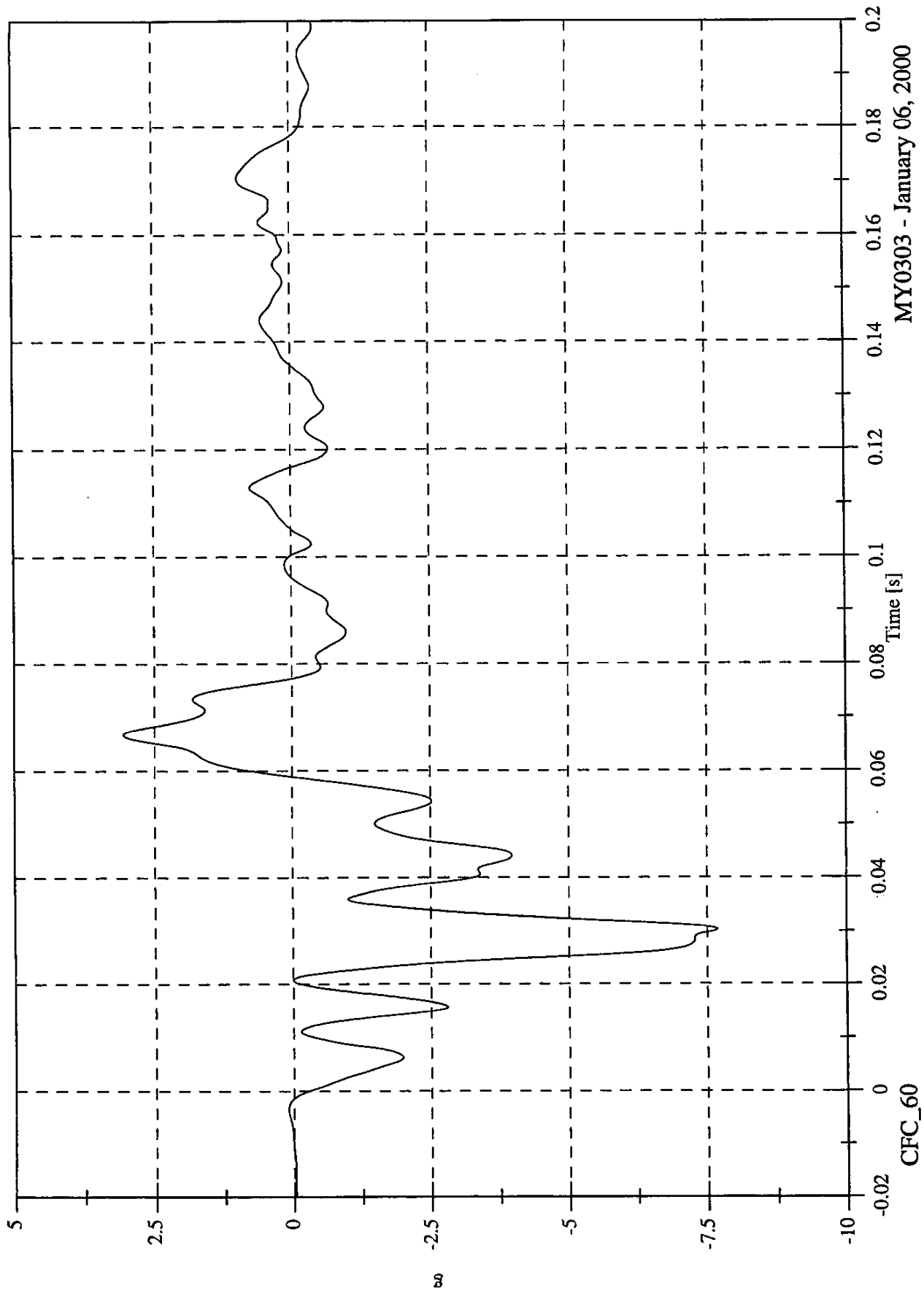
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 3.1 [g] at 0.067 [s]
Min: -7.7 [g] at 0.030 [s]

Acc 18 Target CG Ax

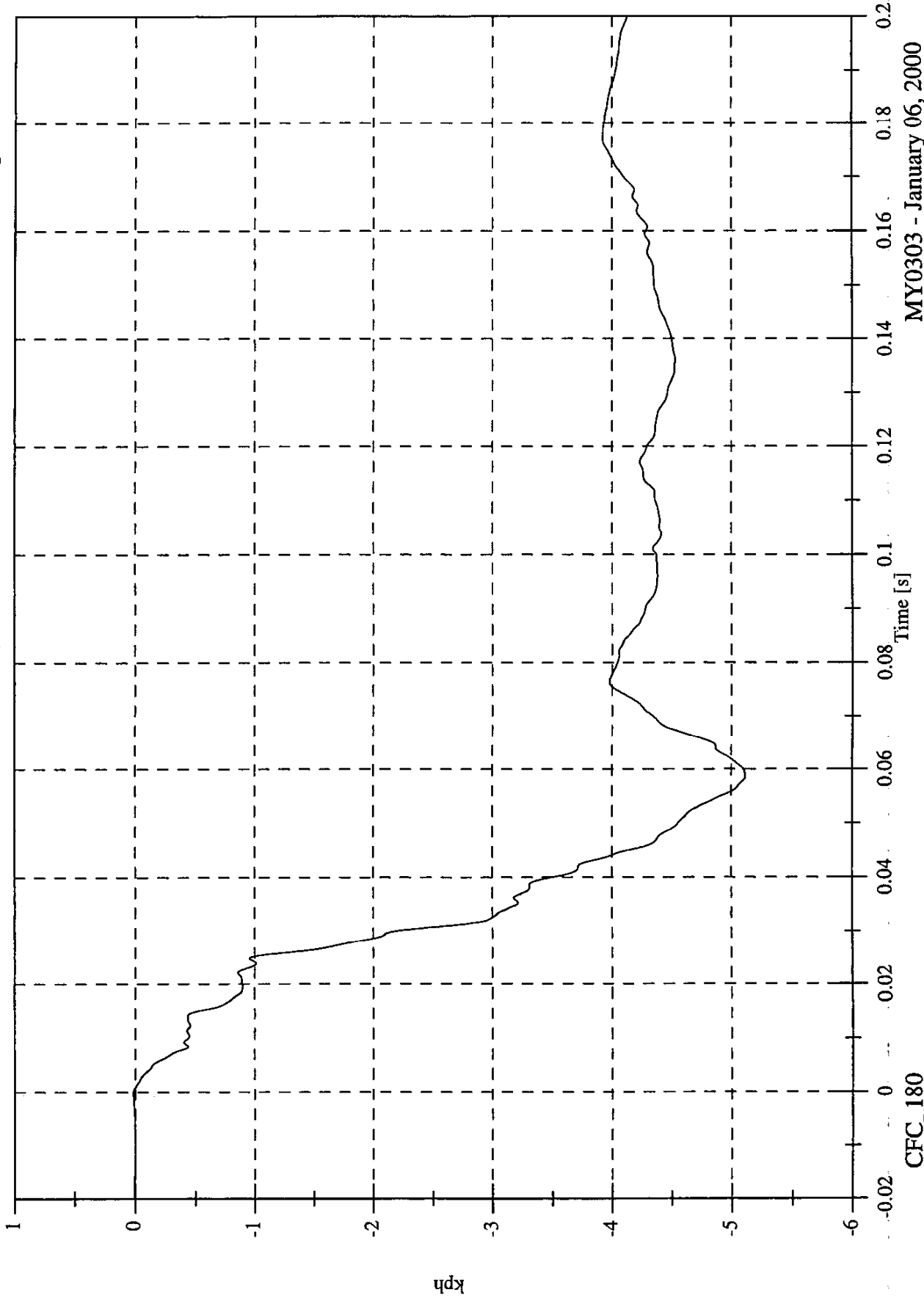


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 0.0 [kph] at -0.000 [s]
Min: -5.1 [kph] at 0.059 [s]

Acc 18 Target CG Ax Velocity



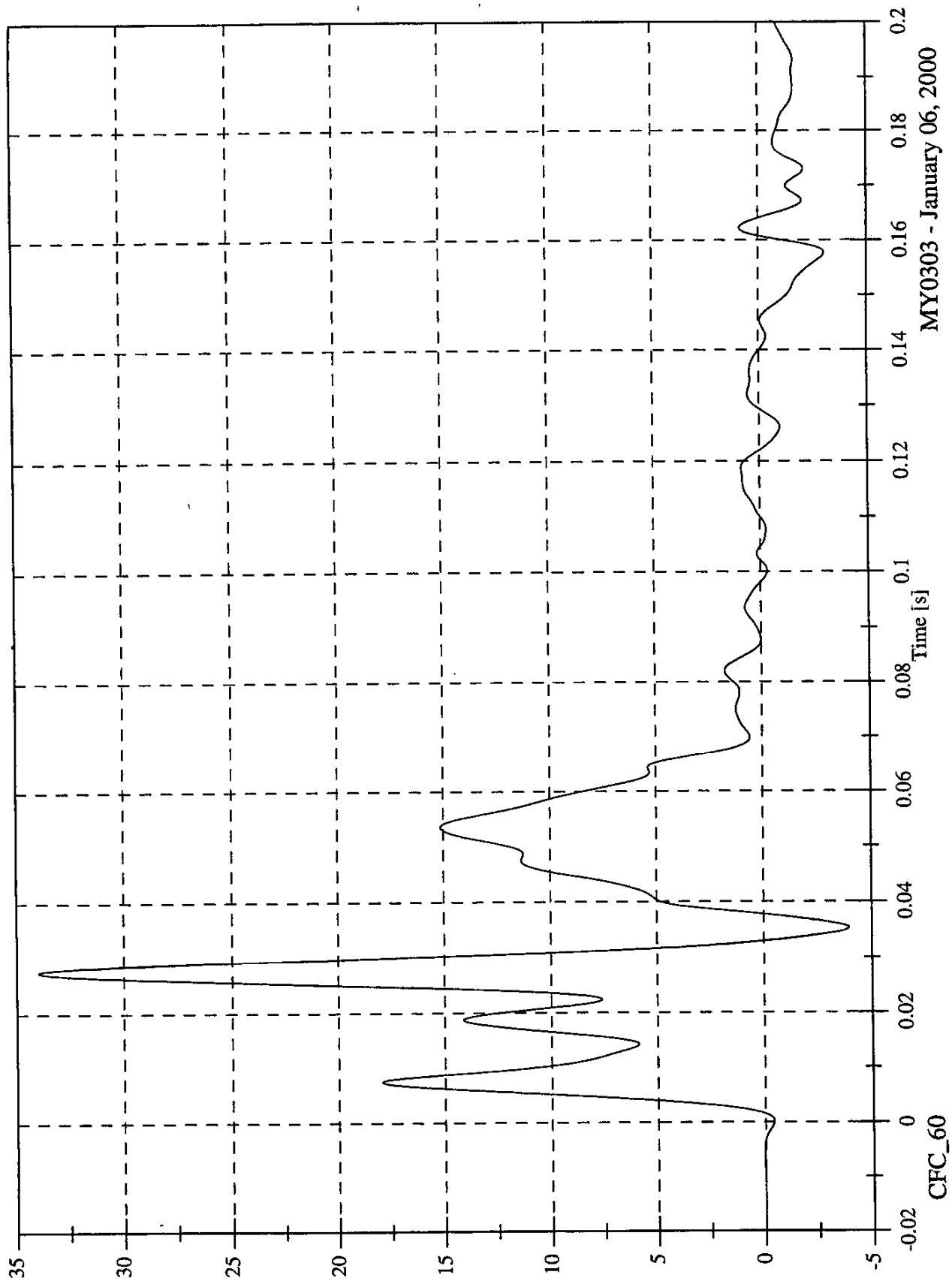
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 34.0 [g] at 0.028 [s]
Min: -3.9 [g] at 0.035 [s]

Acc 18 Target CG Ay



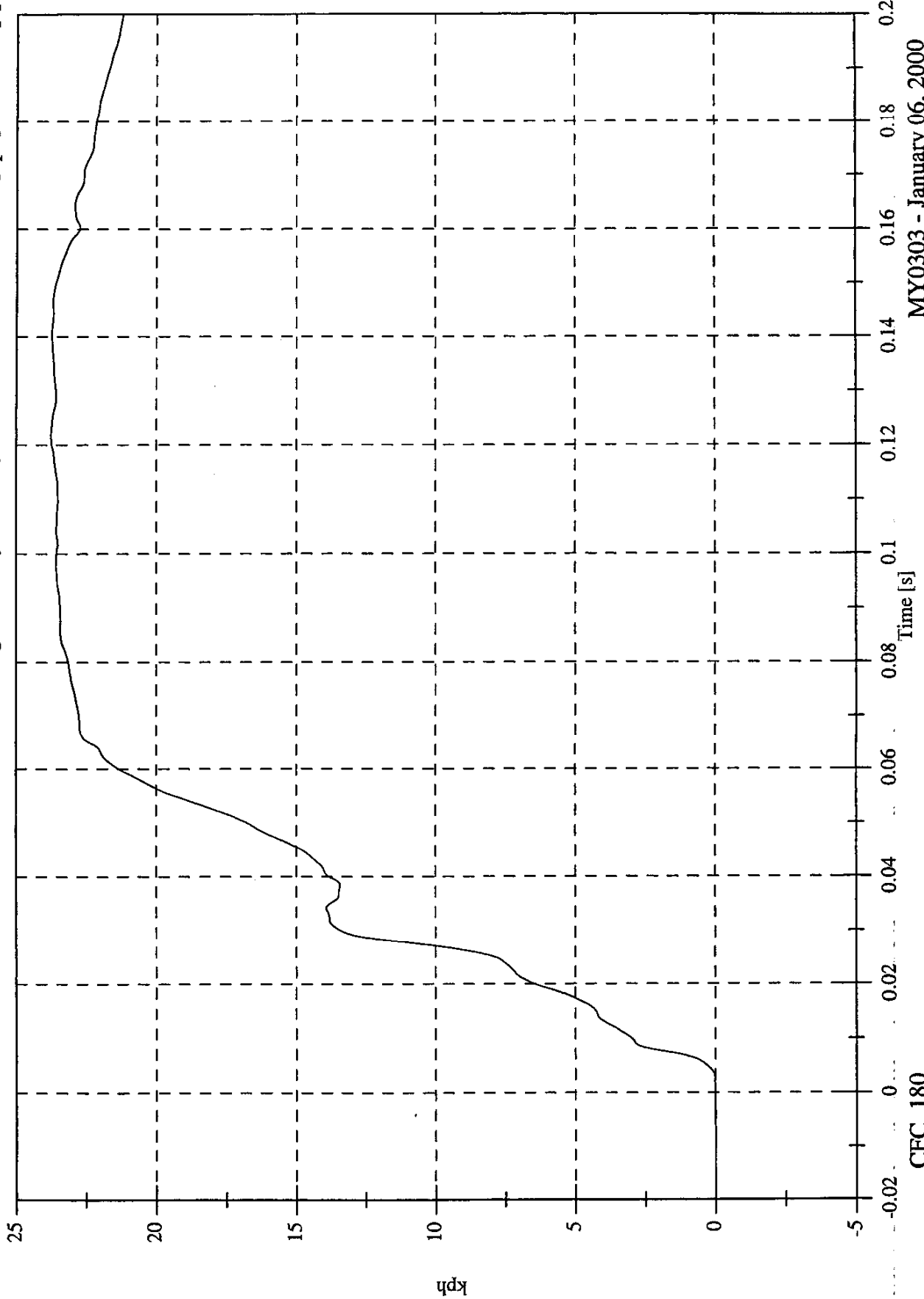
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 23.8 [kph] at 0.122 [s]
Min: -0.0 [kph] at -0.014 [s]

Acc 18 Target CG Ay Velocity



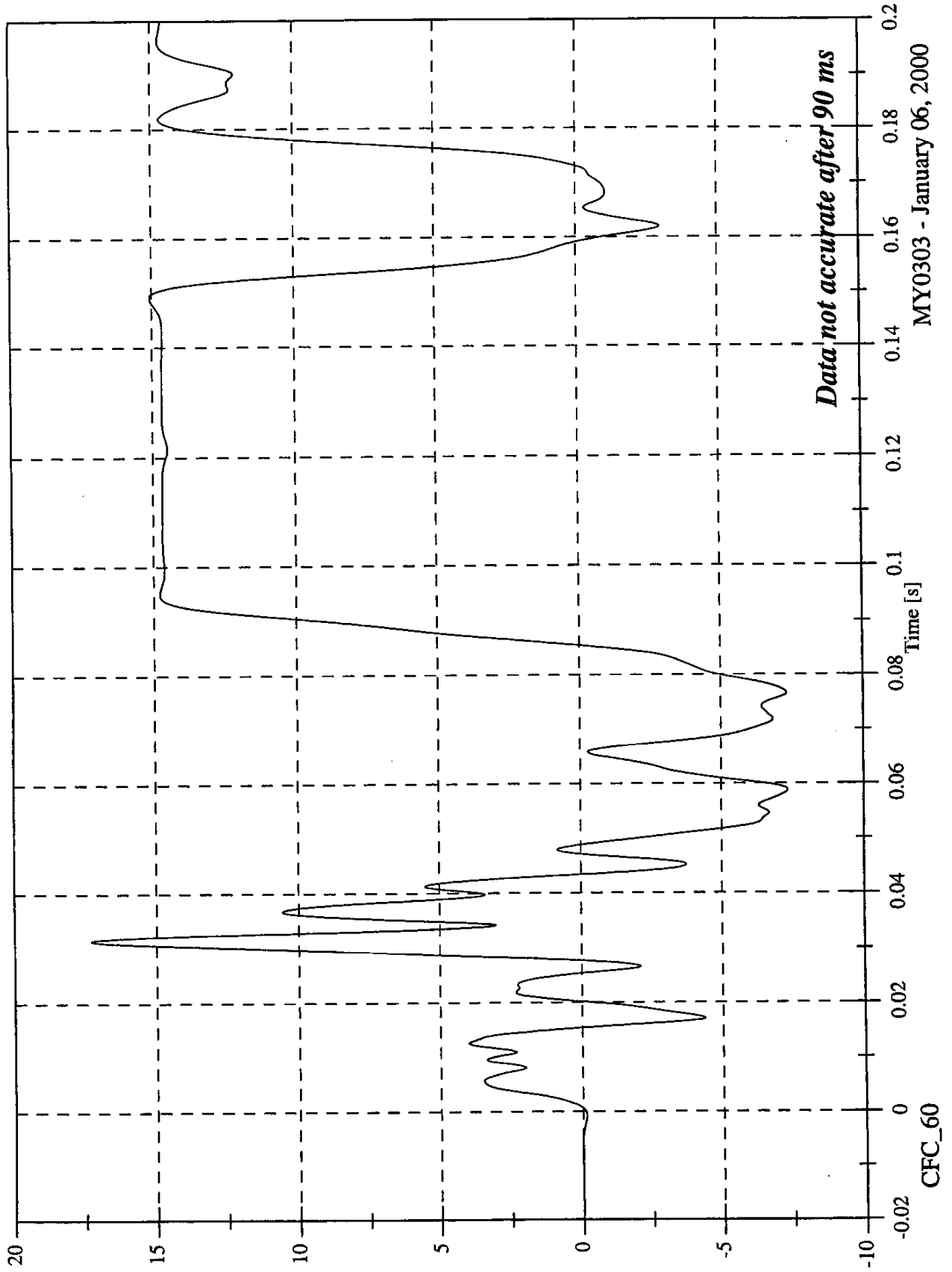
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 17.3 [g] at 0.032 [s]
Min: -7.4 [g] at 0.059 [s]

Acc 18 Target CG Az

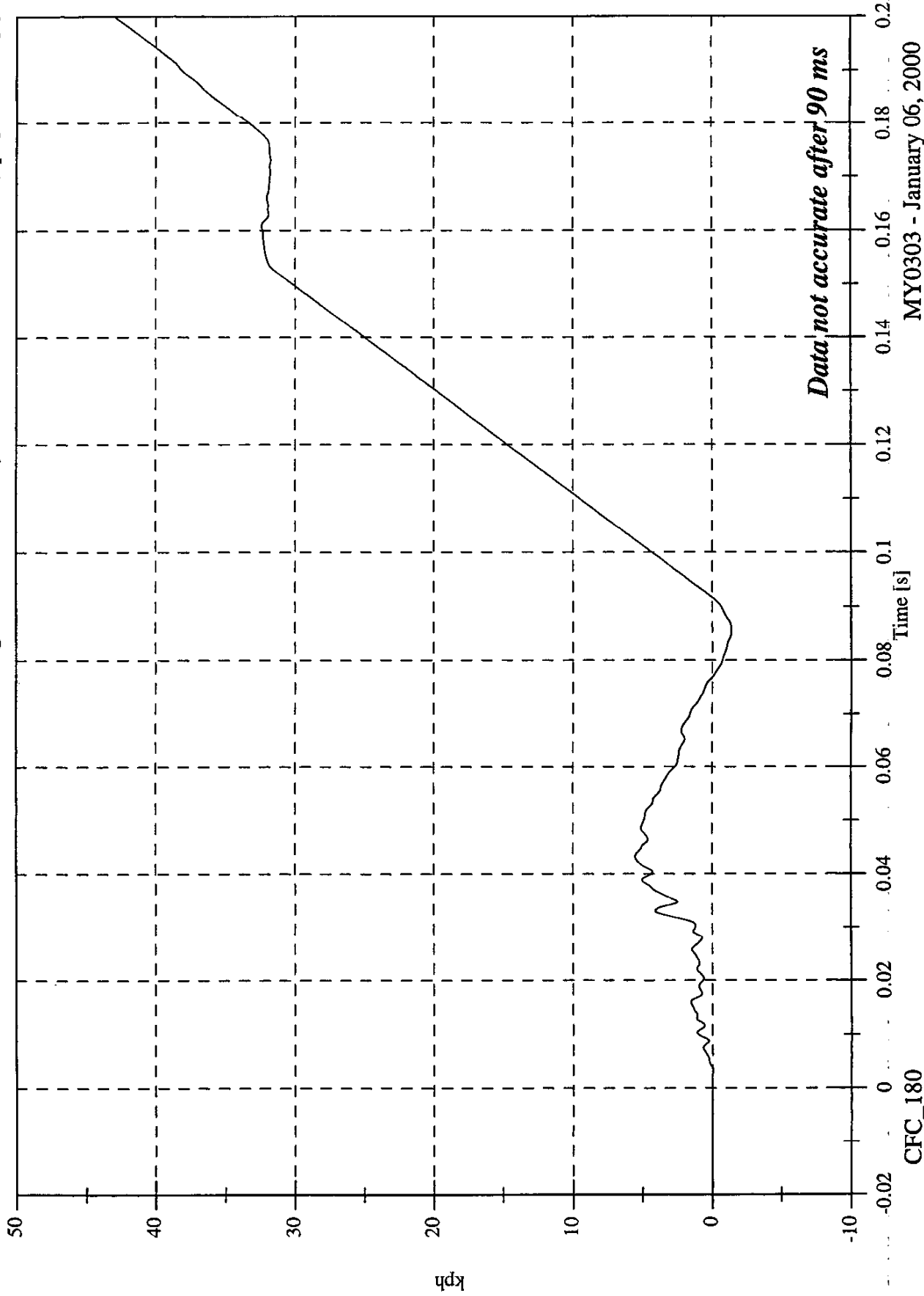


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 43.0 [kph] at 0.200 [s]
Min: -1.4 [kph] at 0.085 [s]

Acc 18 Target CG Az Velocity



Data not accurate after 90 ms

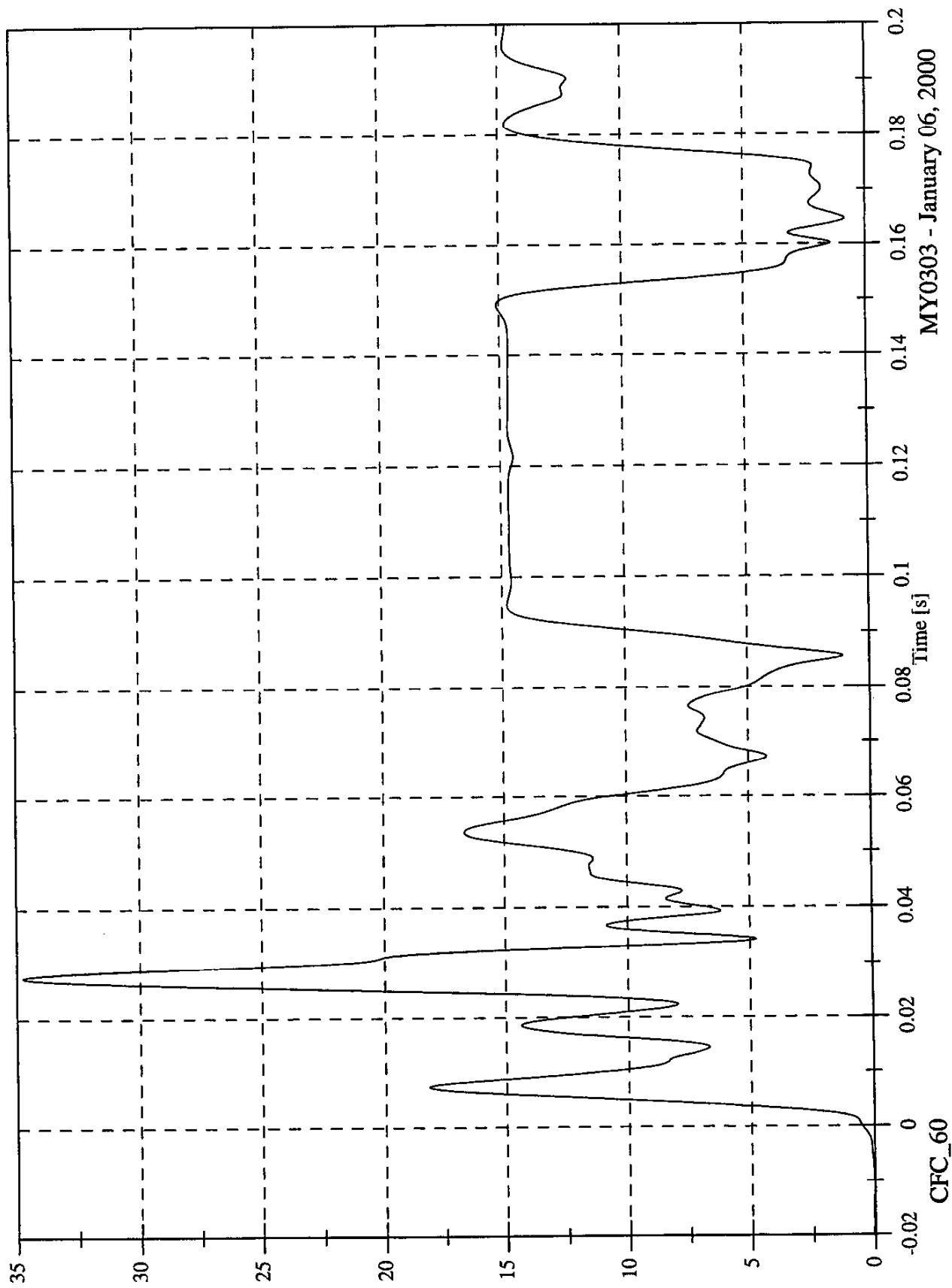
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 34.7 [g] at 0.028 [s]
Min: 0.0 [g] at -0.011 [s]

Acc 18 Target CG A Resultant

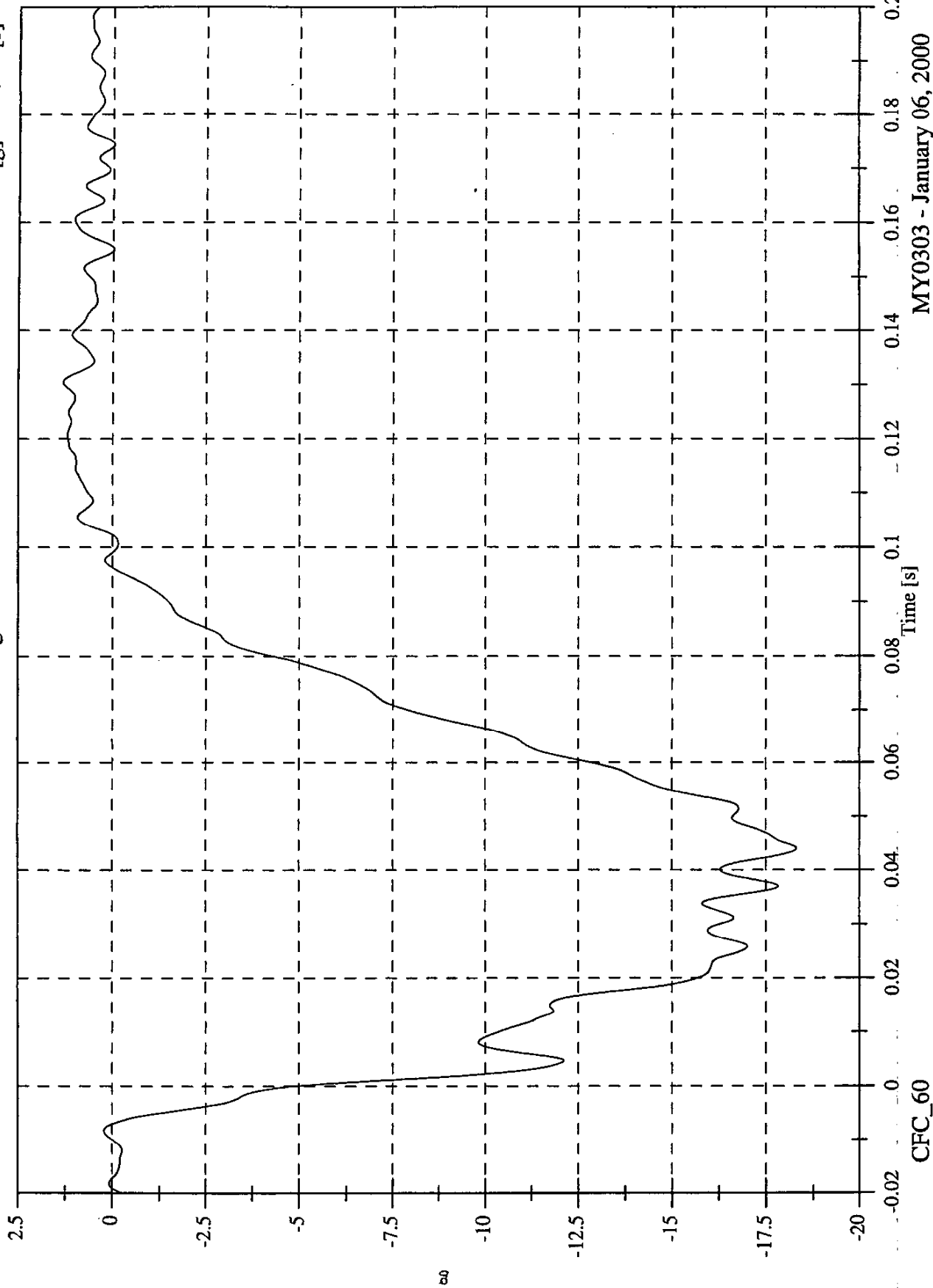


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 1.3 [g] at 0.130 [s]
Min: -18.3 [g] at 0.044 [s]

Moving Barrier CG X



MY0303 - January 06, 2000

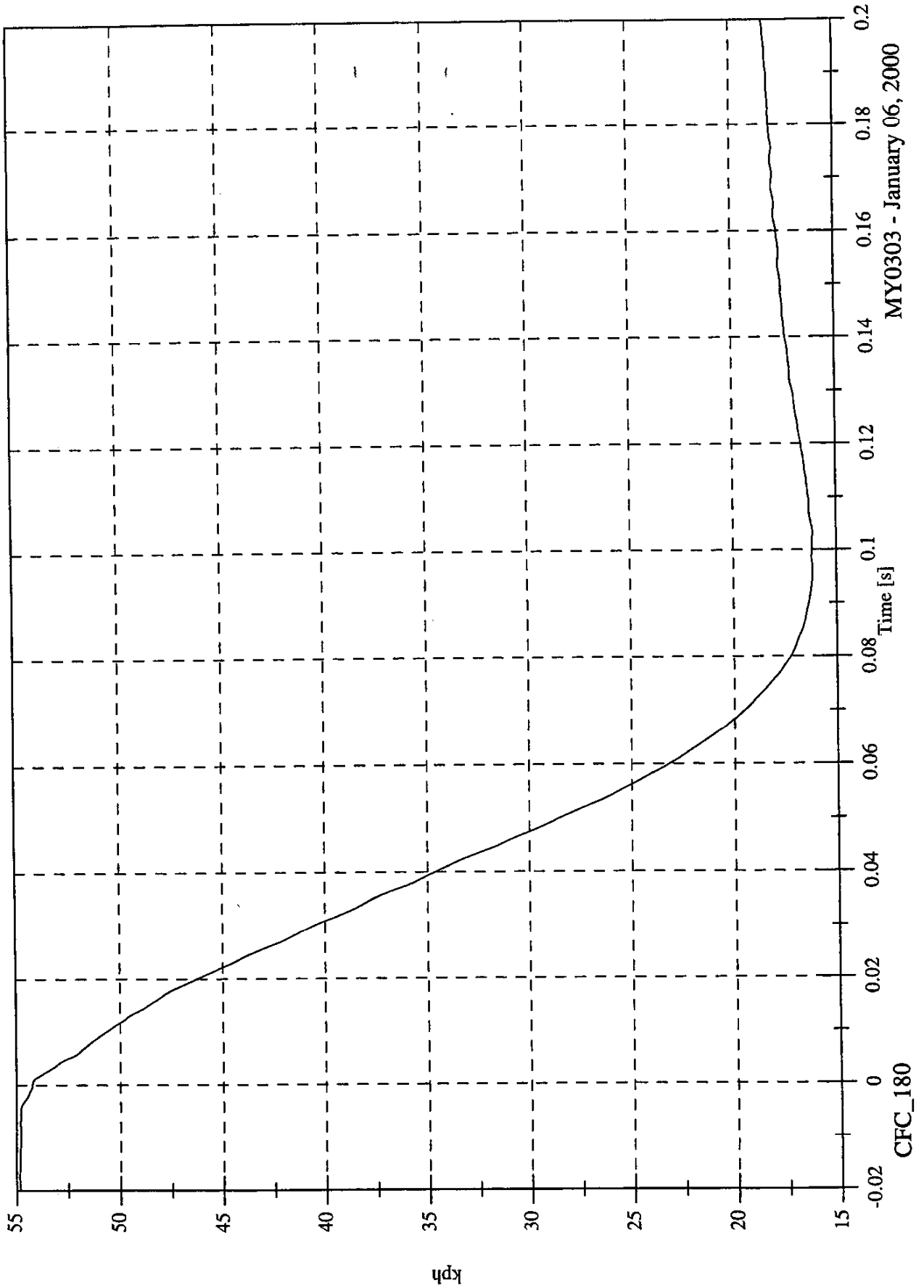
CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 54.9 [kph] at -0.017 [s]

Min: 16.2 [kph] at 0.103 [s]

Moving Barrier CG X Velocity



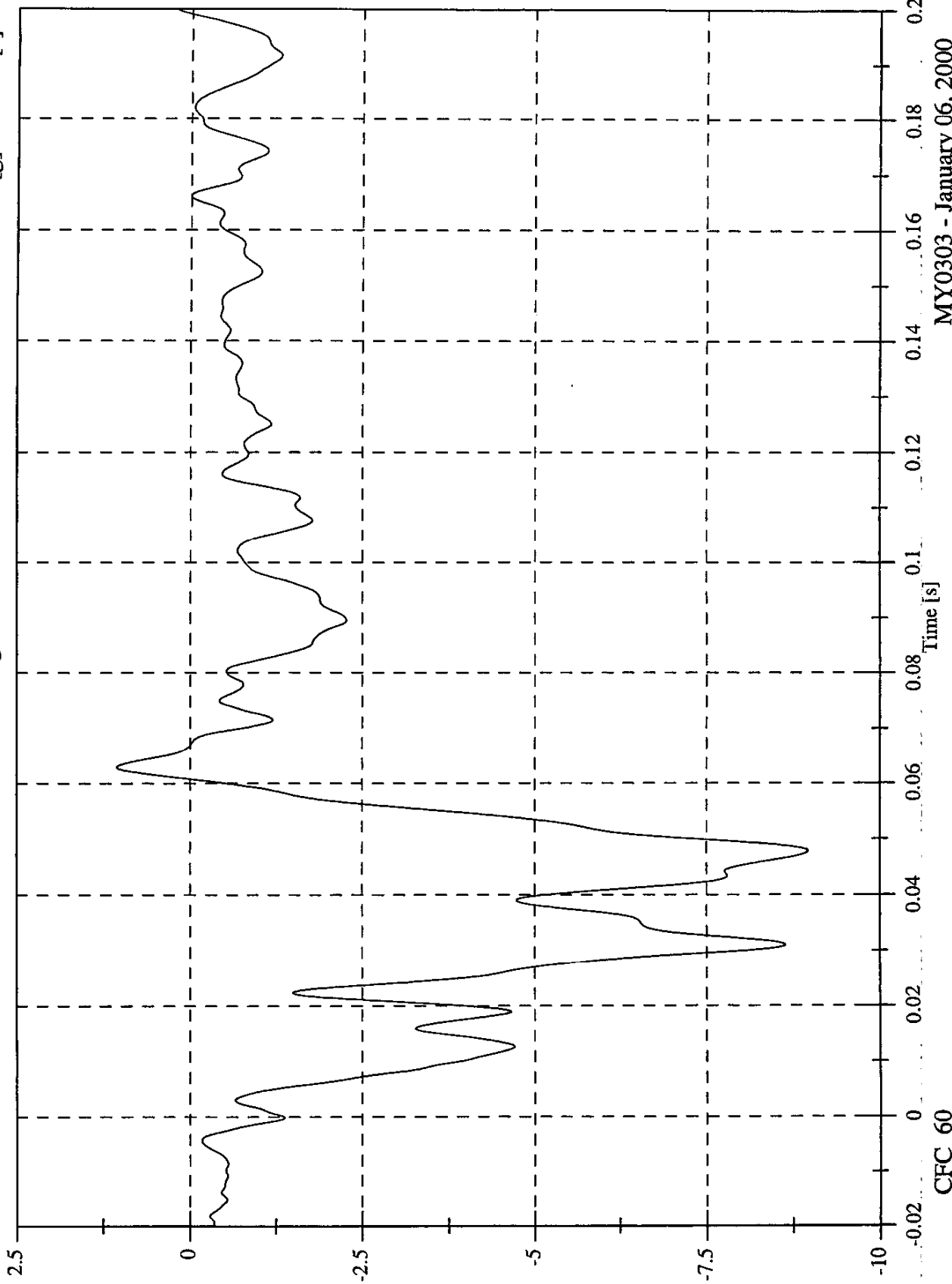
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 1.1 [g] at 0.063 [s]
Min: -9.0 [g] at 0.048 [s]

Moving Barrier CG Y



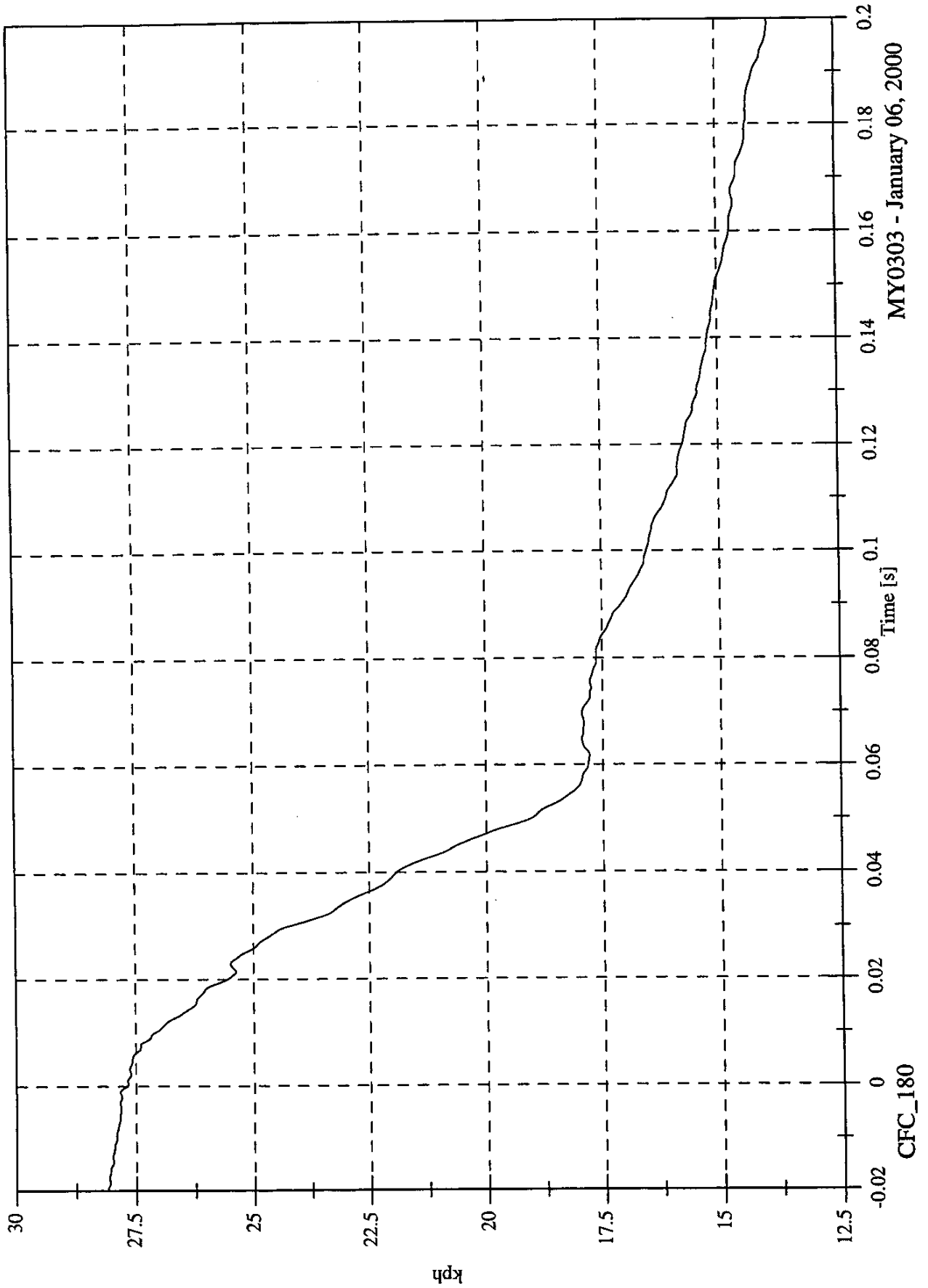
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 28.1 [kph] at -0.020 [s]
Min: 13.9 [kph] at 0.199 [s]

Moving Barrier CG Y Velocity



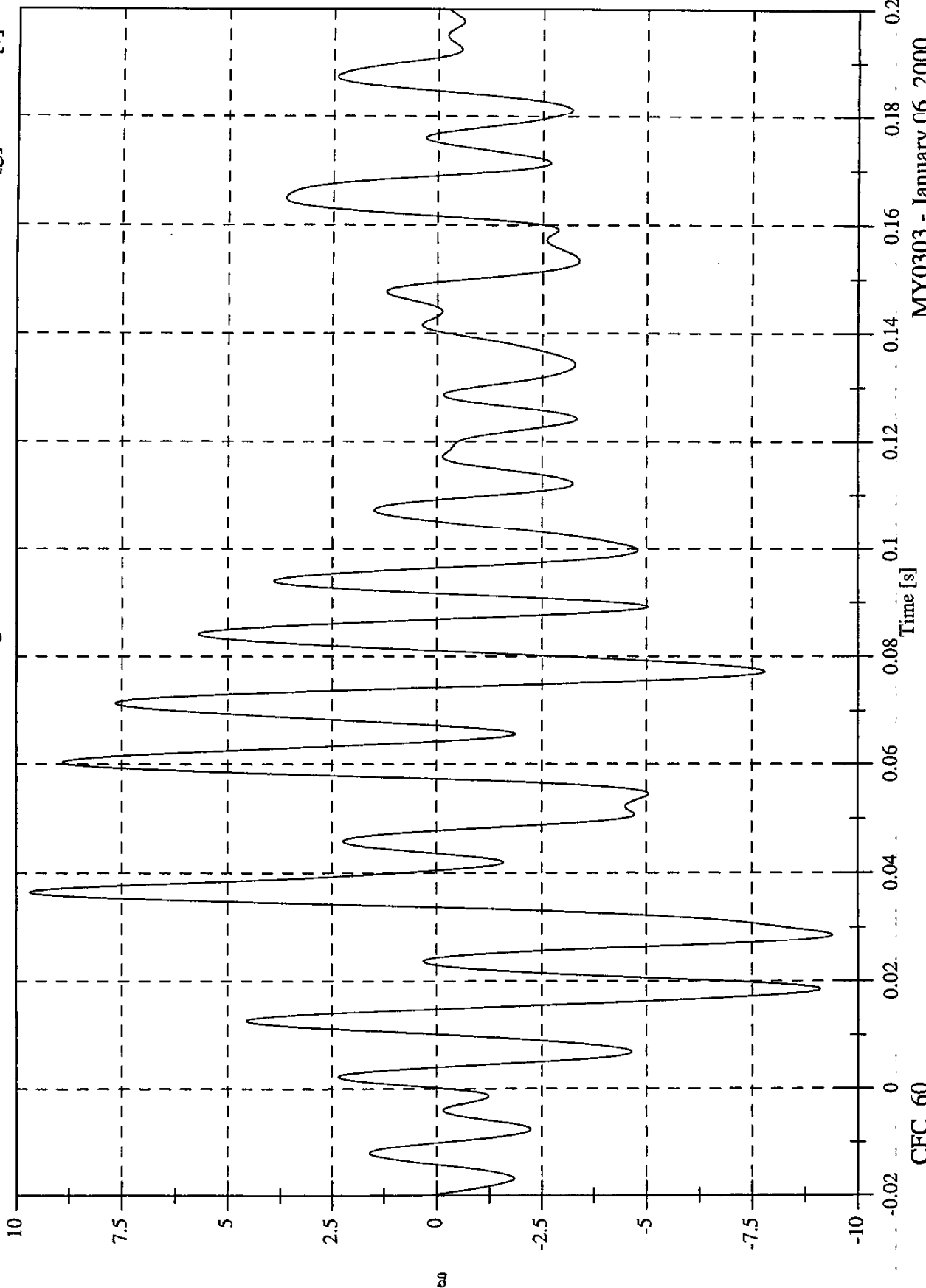
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 9.7 [g] at 0.037 [s]
Min: -9.4 [g] at 0.029 [s]

Moving Barrier CG Z



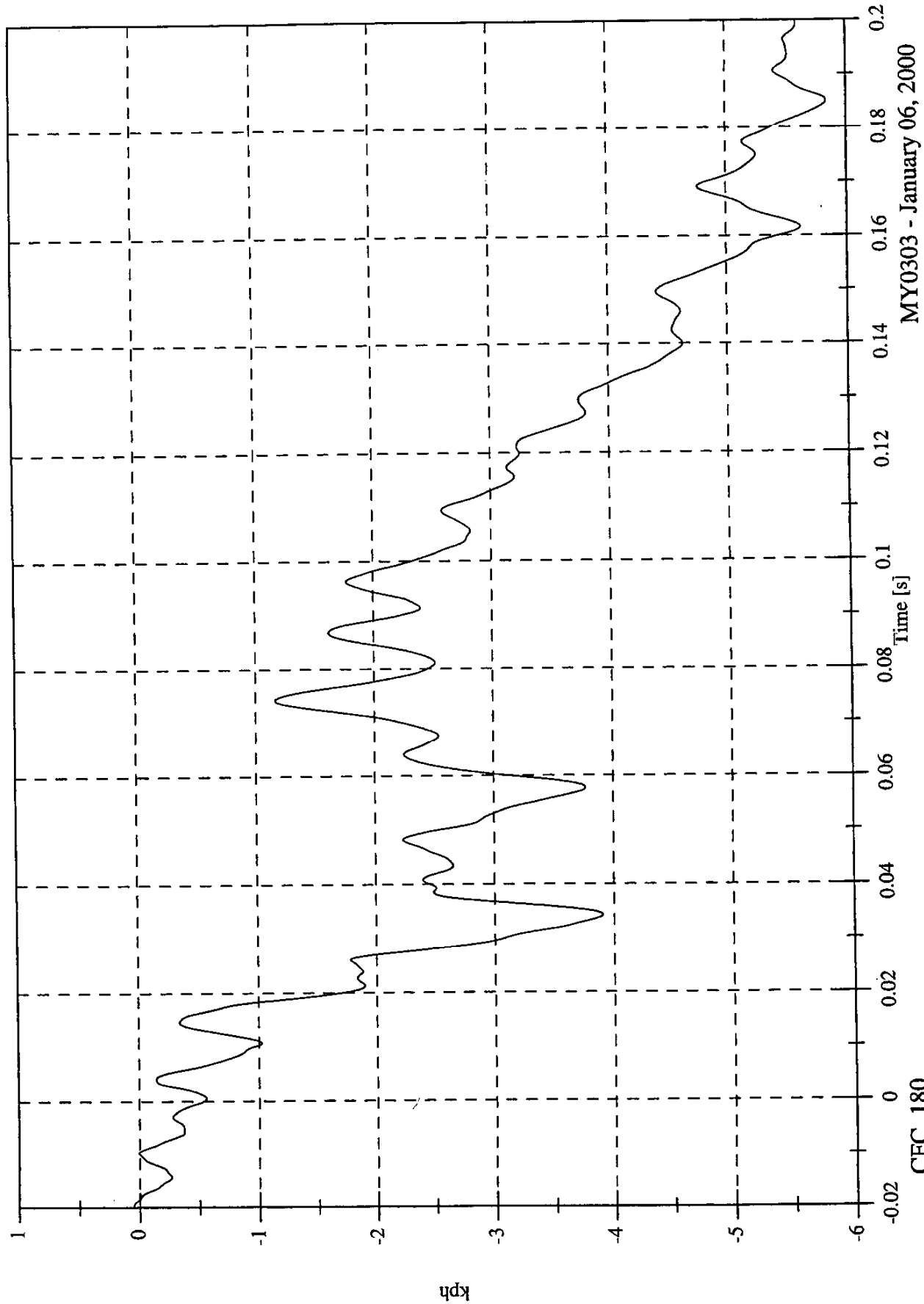
CFC_60

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 0.0 [kph] at -0.020 [s]
Min: -5.8 [kph] at 0.185 [s]

Moving Barrier CG Z Velocity



MY0303 - January 06, 2000

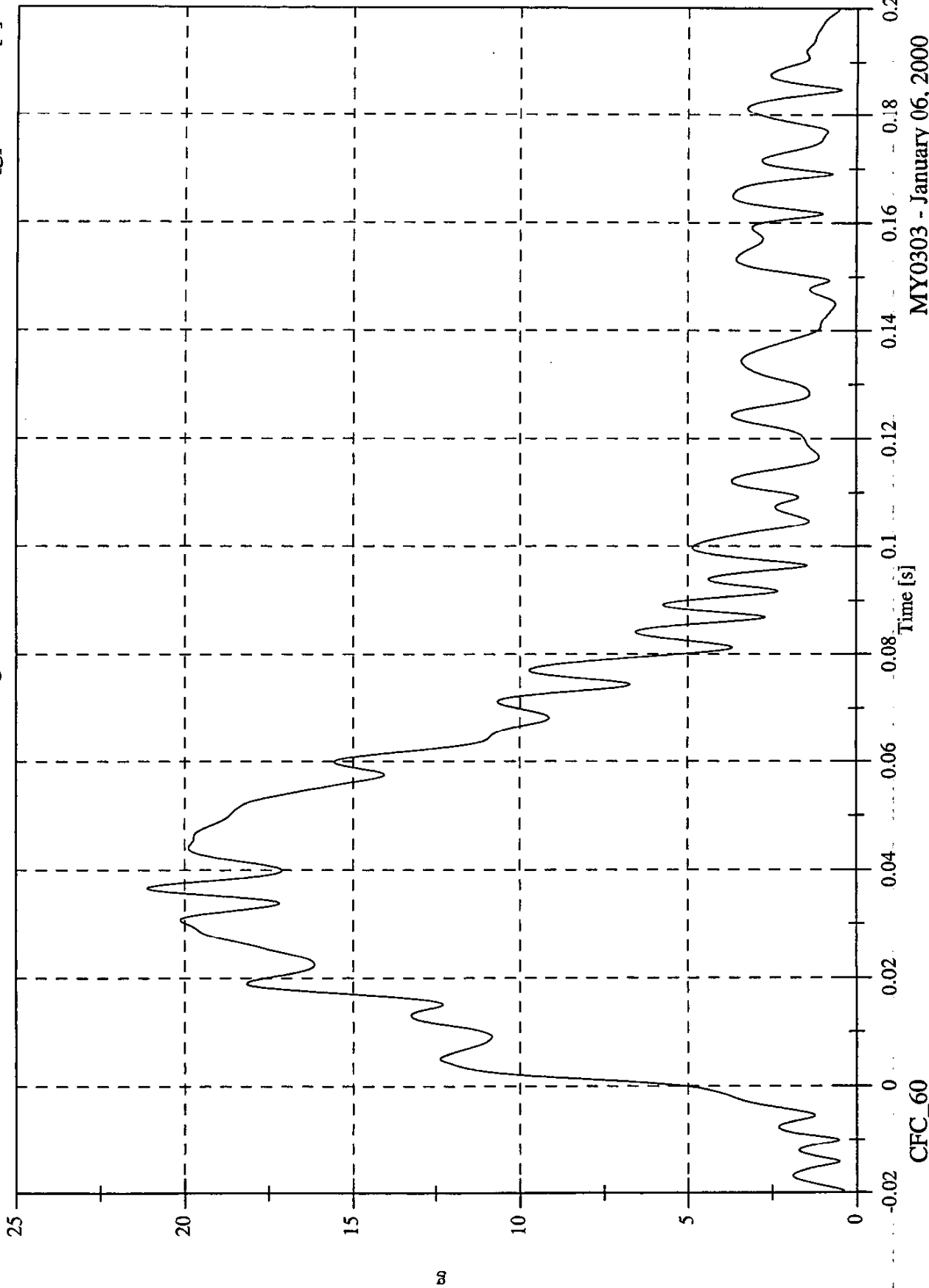
CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 21.1 [g] at 0.037 [s]

Min: 0.4 [g] at -0.020 [s]

Moving Barrier CG Resultant



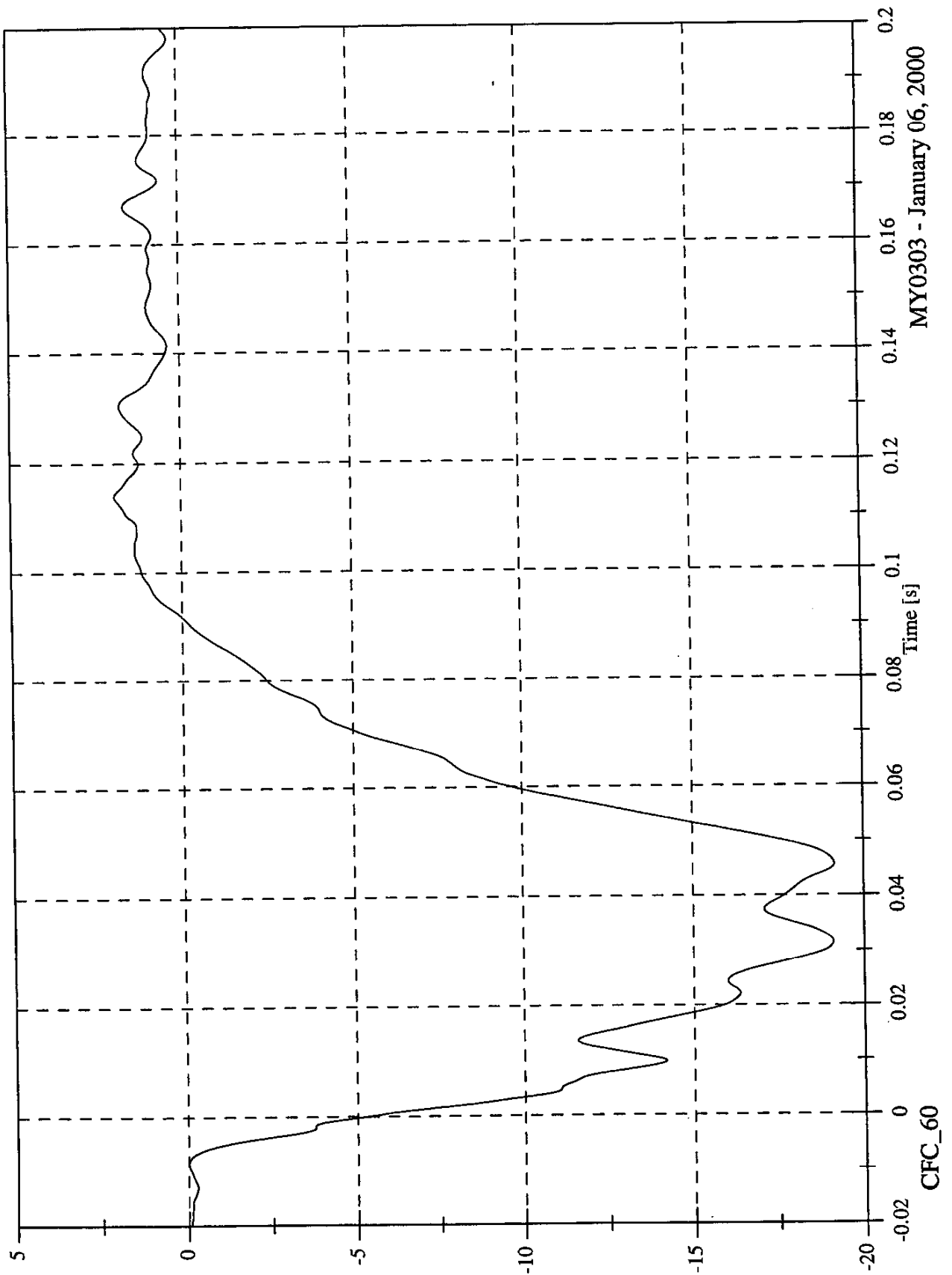
MY0303 - January 06, 2000

CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Moving Barrier Left Rail X

Max: 2.0 [g] at 0.114 [s]
Min: -19.2 [g] at 0.046 [s]



MY0303 - January 06, 2000

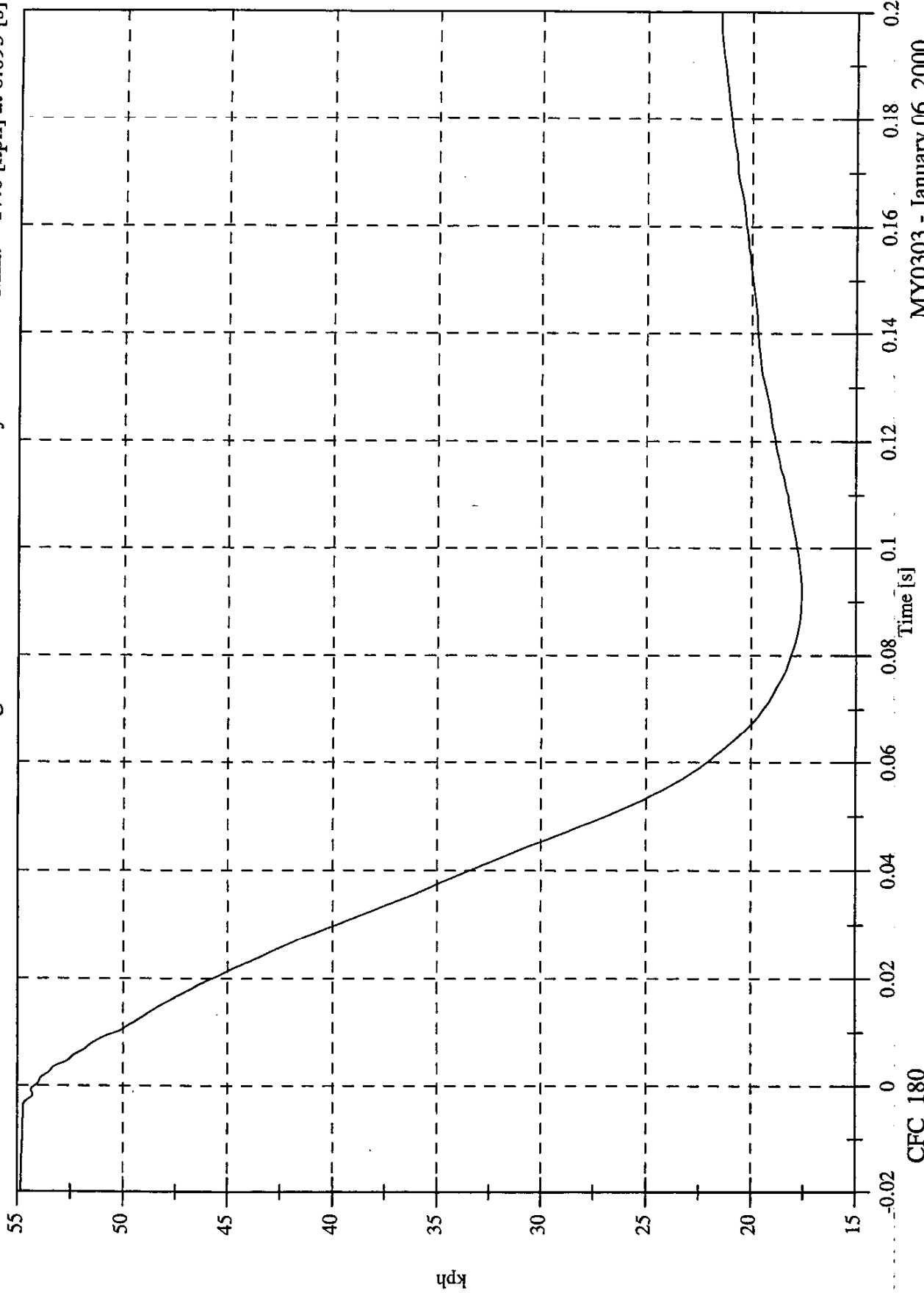
CFC_60

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 54.8 [kph] at -0.019 [s]

Min: 17.6 [kph] at 0.093 [s]

Moving Barrier Left Rail X Velocity



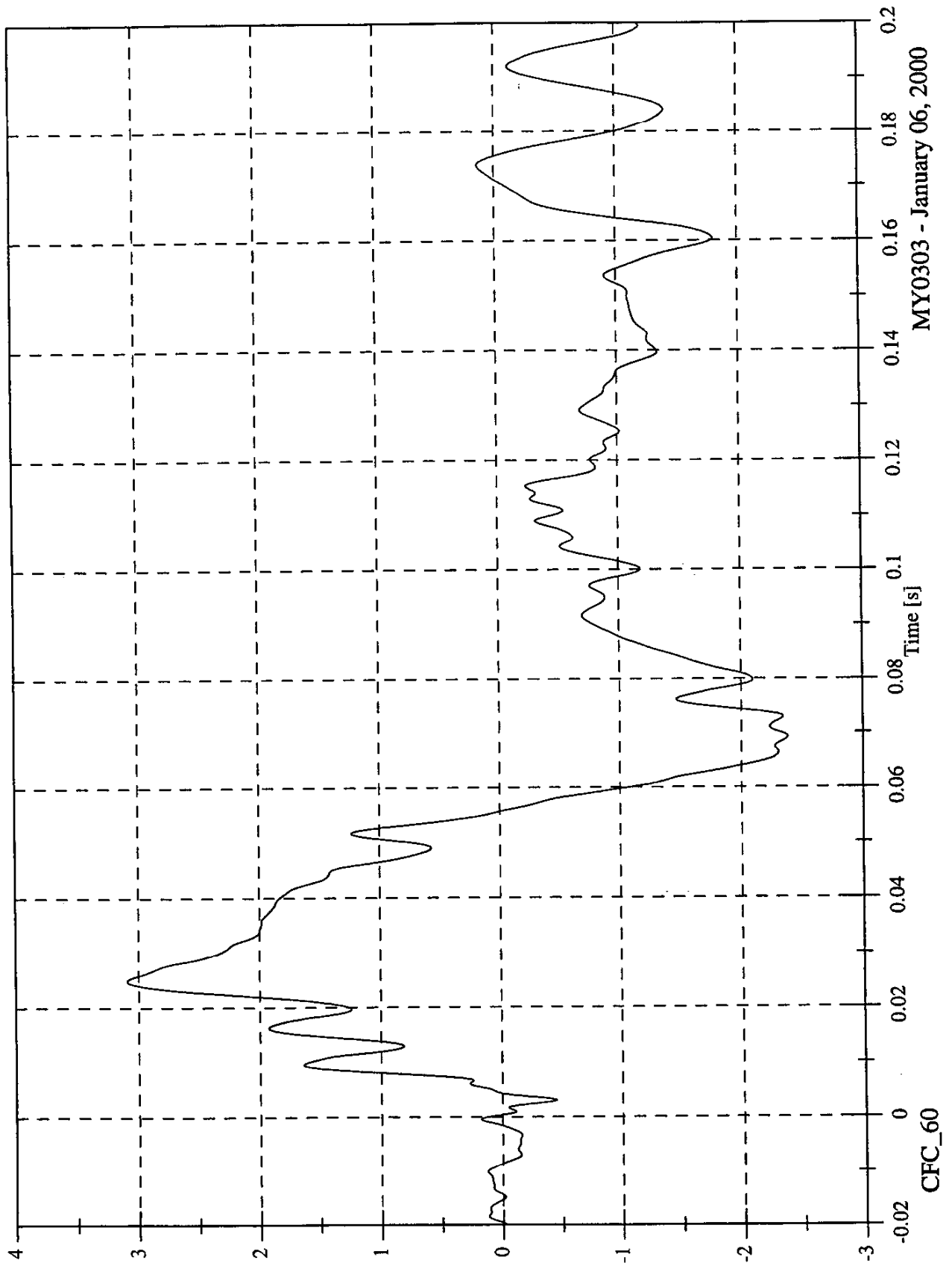
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 3.1 [g] at 0.025 [s]
Min: -2.4 [g] at 0.069 [s]

Moving Barrier Left Rail Y

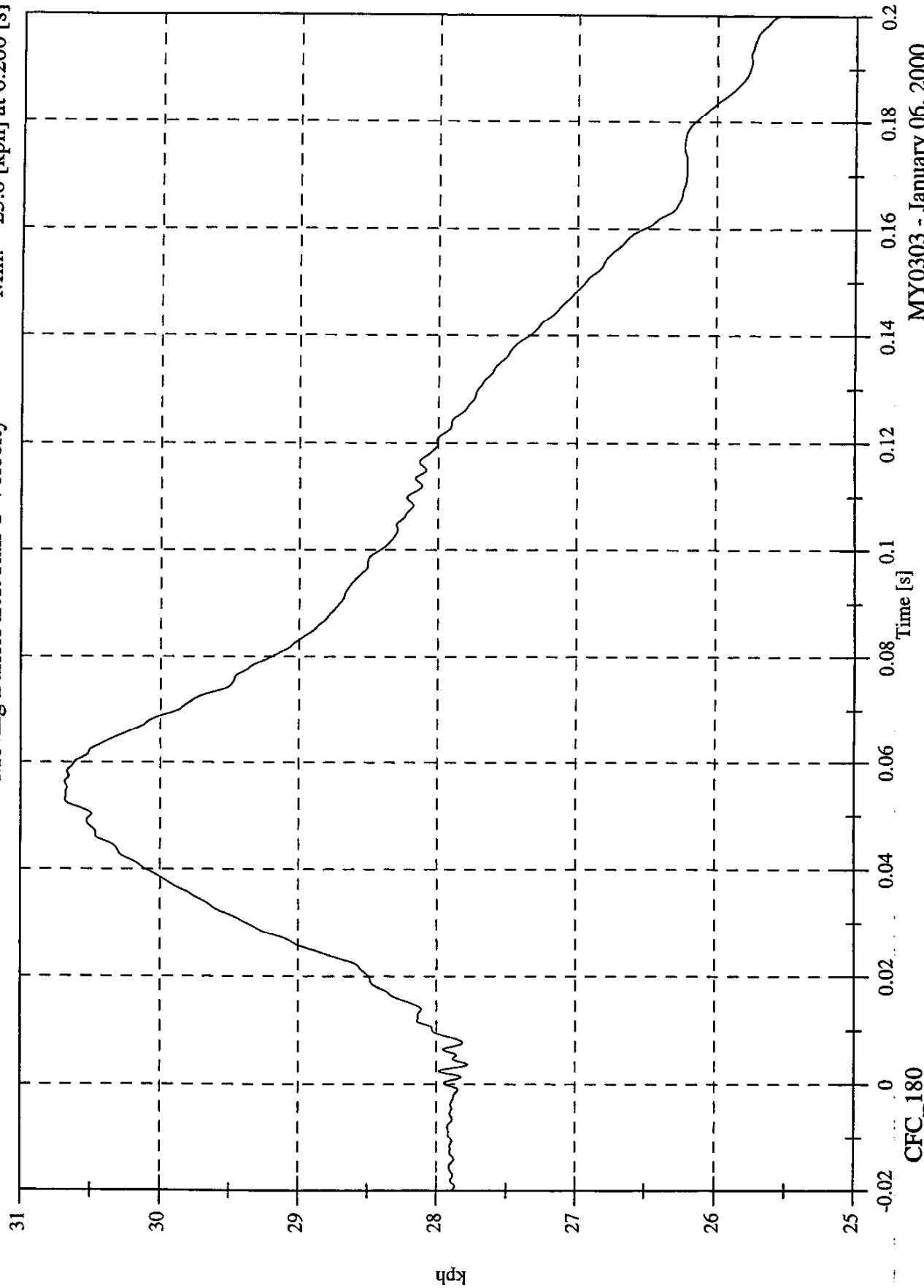


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 30.7 [kph] at 0.056 [s]
Min: 25.6 [kph] at 0.200 [s]

Moving Barrier Left Rail Y Velocity



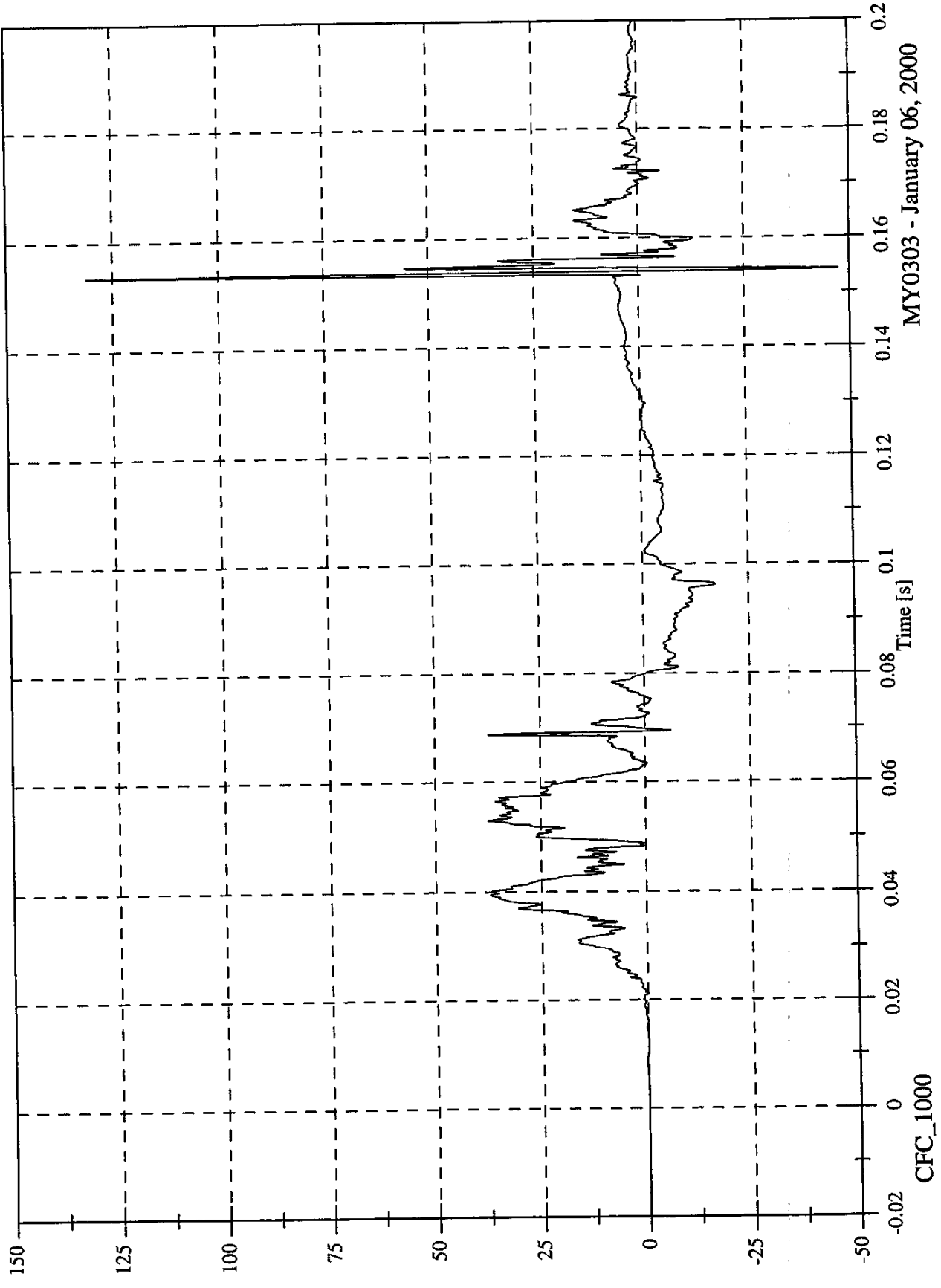
CFC_180



SNCAP Test# 6 - 2000 Dodge Caravan

P1 Upper Rib Ry

Max: 131.0 [g] at 0.154 [s]
Min: -47.3 [g] at 0.154 [s]

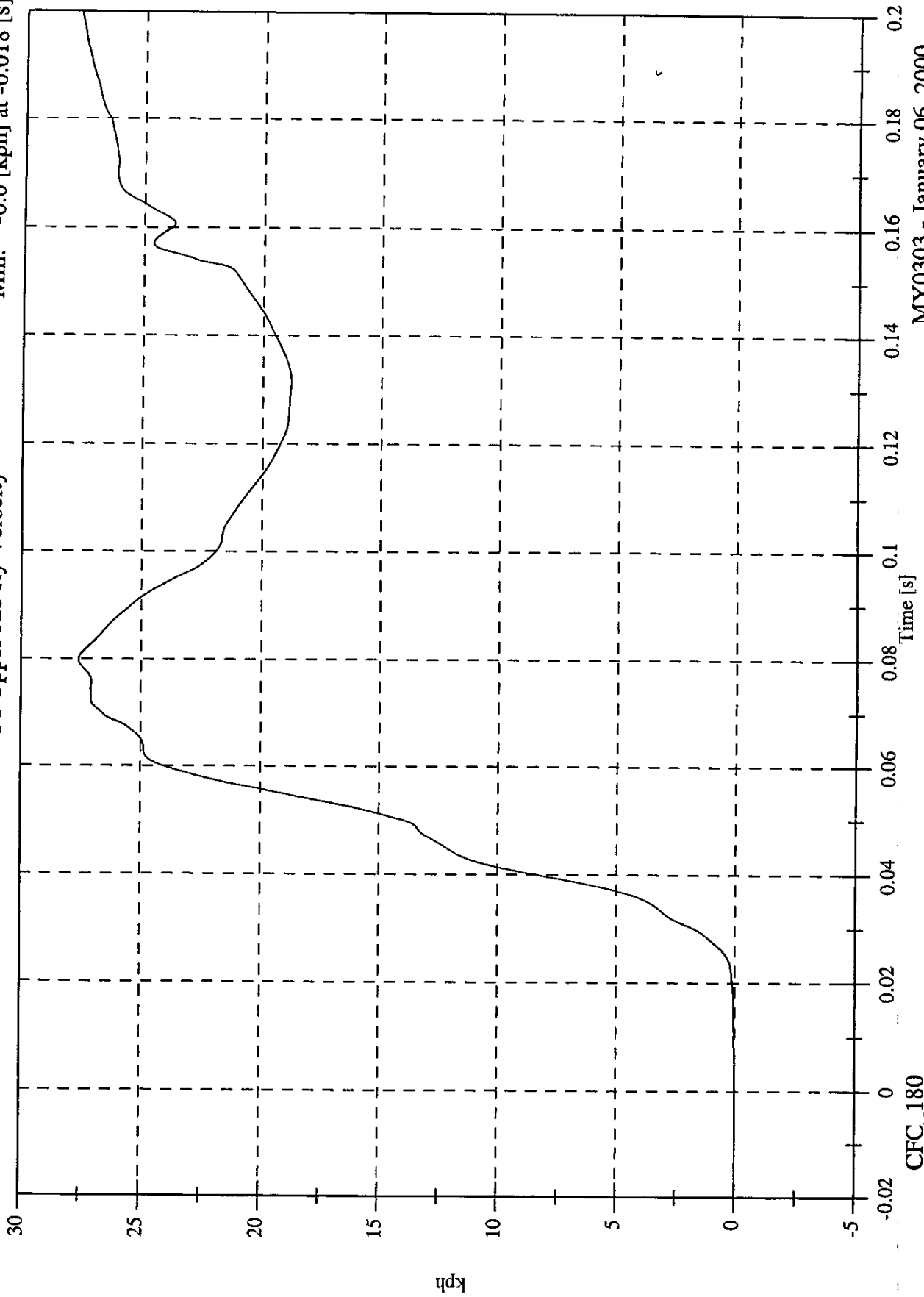


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 27.7 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.018 [s]

P1 Upper Rib Ry Velocity

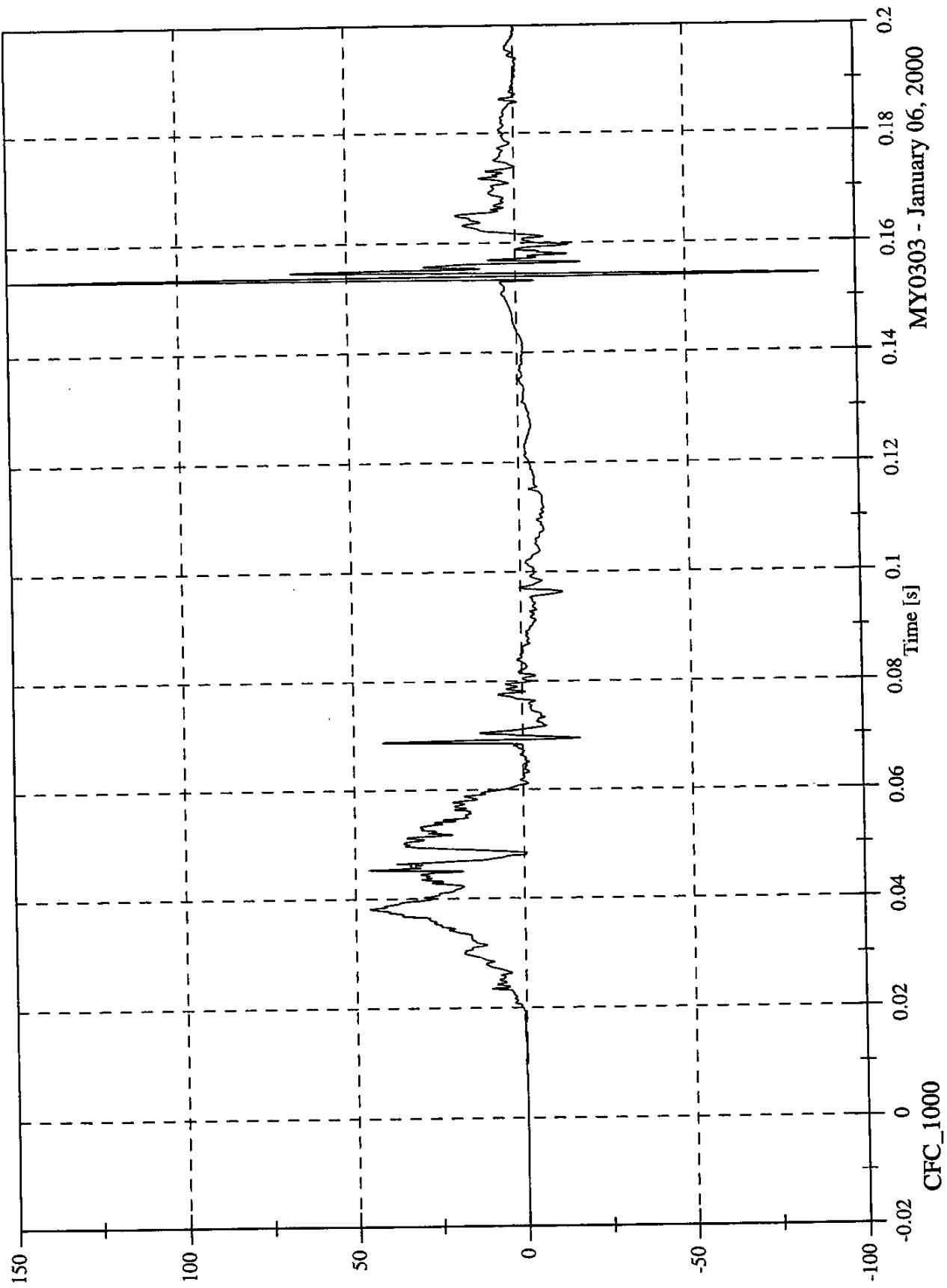


CFC_180
MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P1 Lower Rib Ry

Max: 149.8 [g] at 0.154 [s]
Min: -89.3 [g] at 0.154 [s]

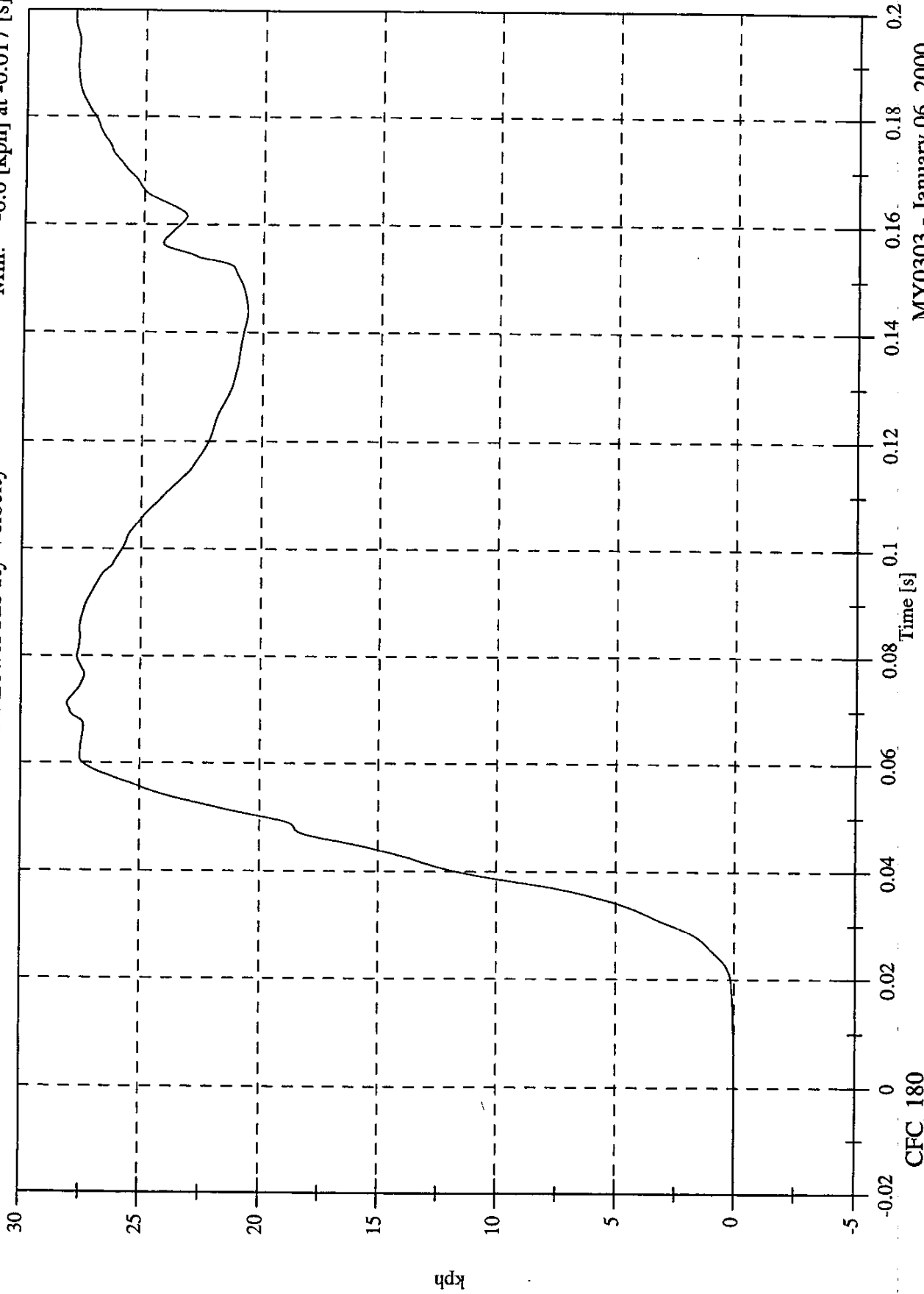


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 28.1 [kph] at 0.071 [s]
Min: -0.0 [kph] at -0.017 [s]

P1 Lower Rib Ry Velocity

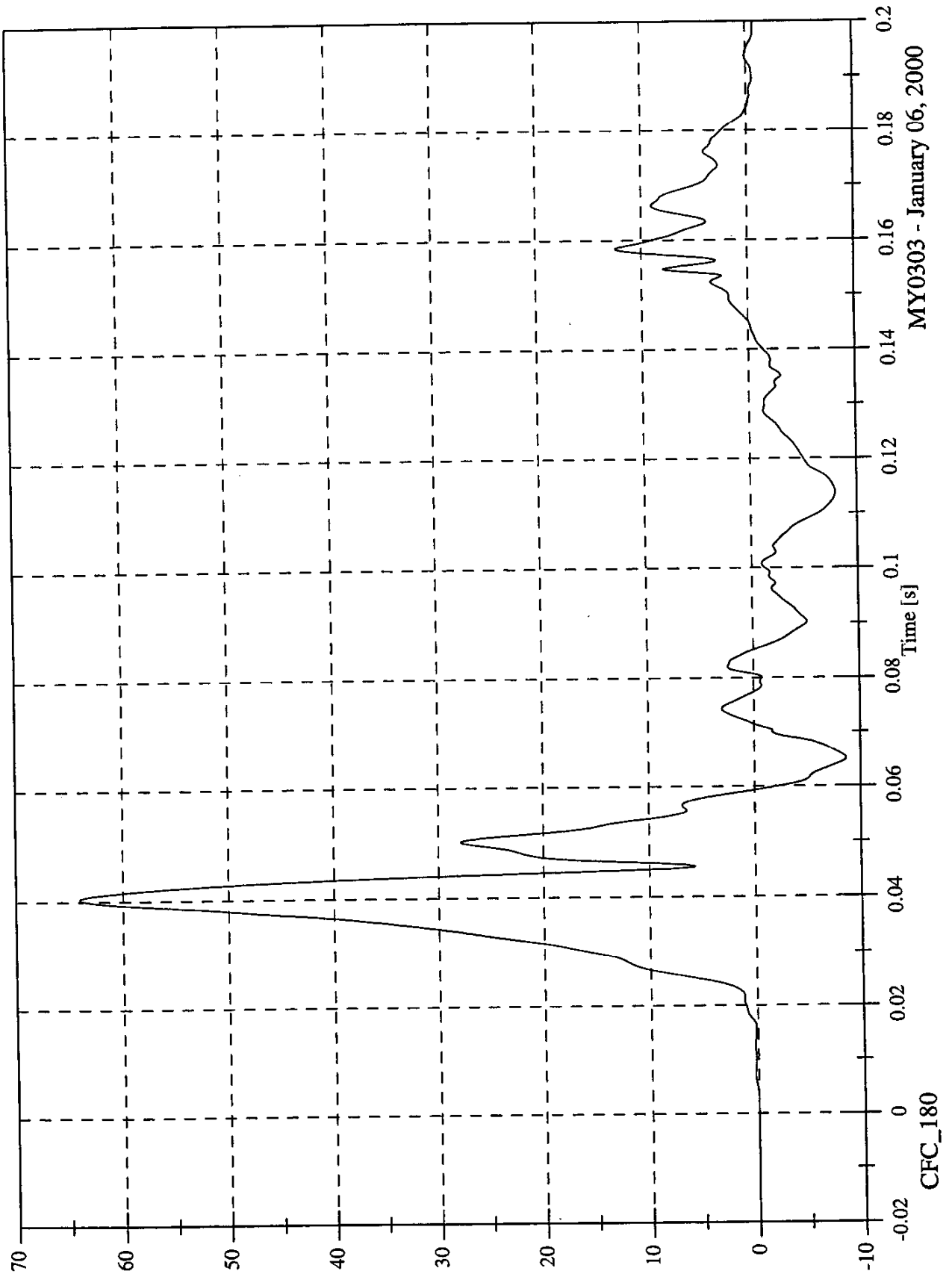


CFC_180
MY0303 - January 06, 2000

Max: 64.1 [g] at 0.040 [s]
Min: -8.7 [g] at 0.065 [s]

P1 Lower Spine Ry

SNCAP Test# 6 - 2000 Dodge Caravan



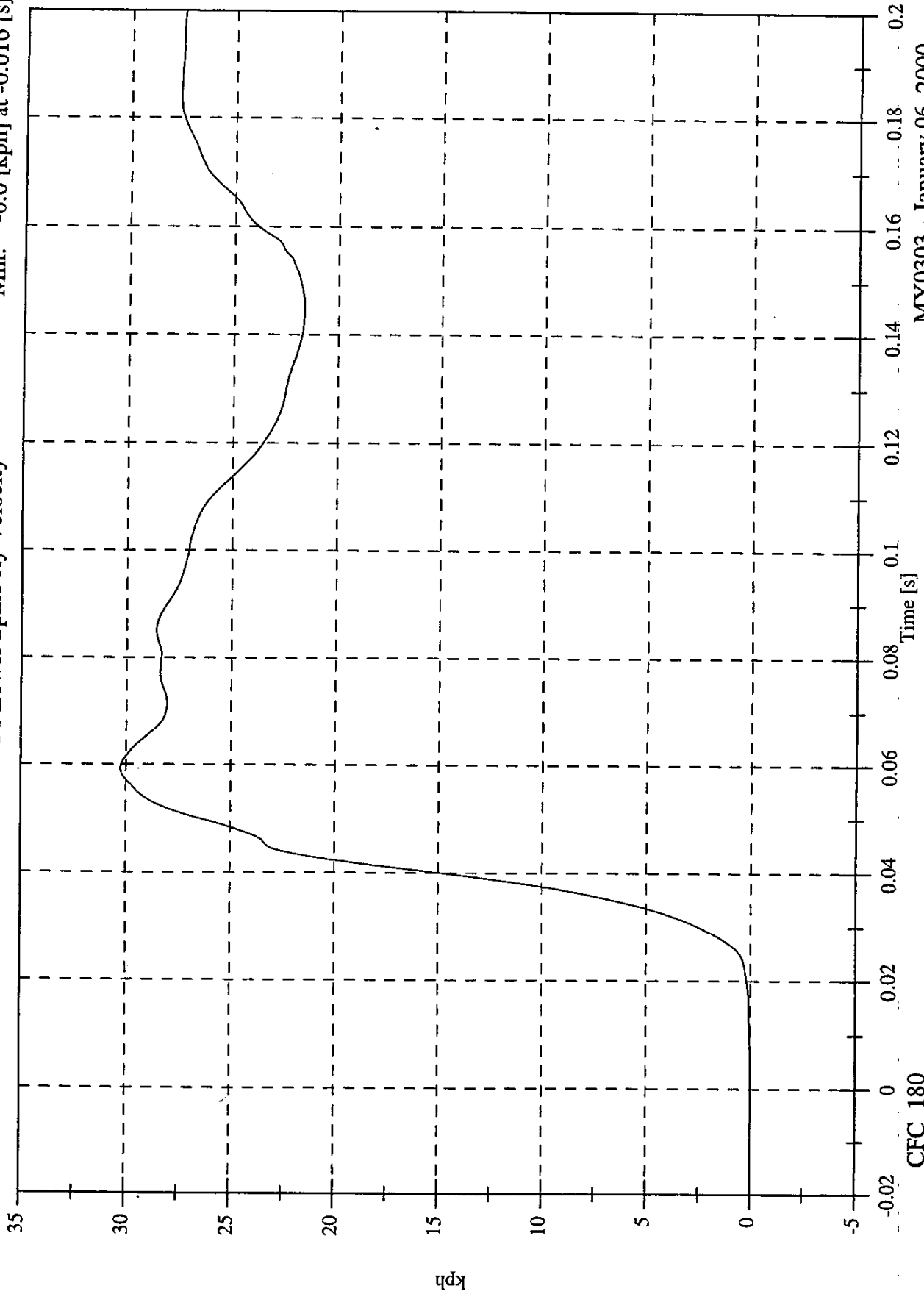
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 30.3 [kph] at 0.059 [s]
Min: -0.0 [kph] at -0.016 [s]

P1 Lower Spine Ry Velocity



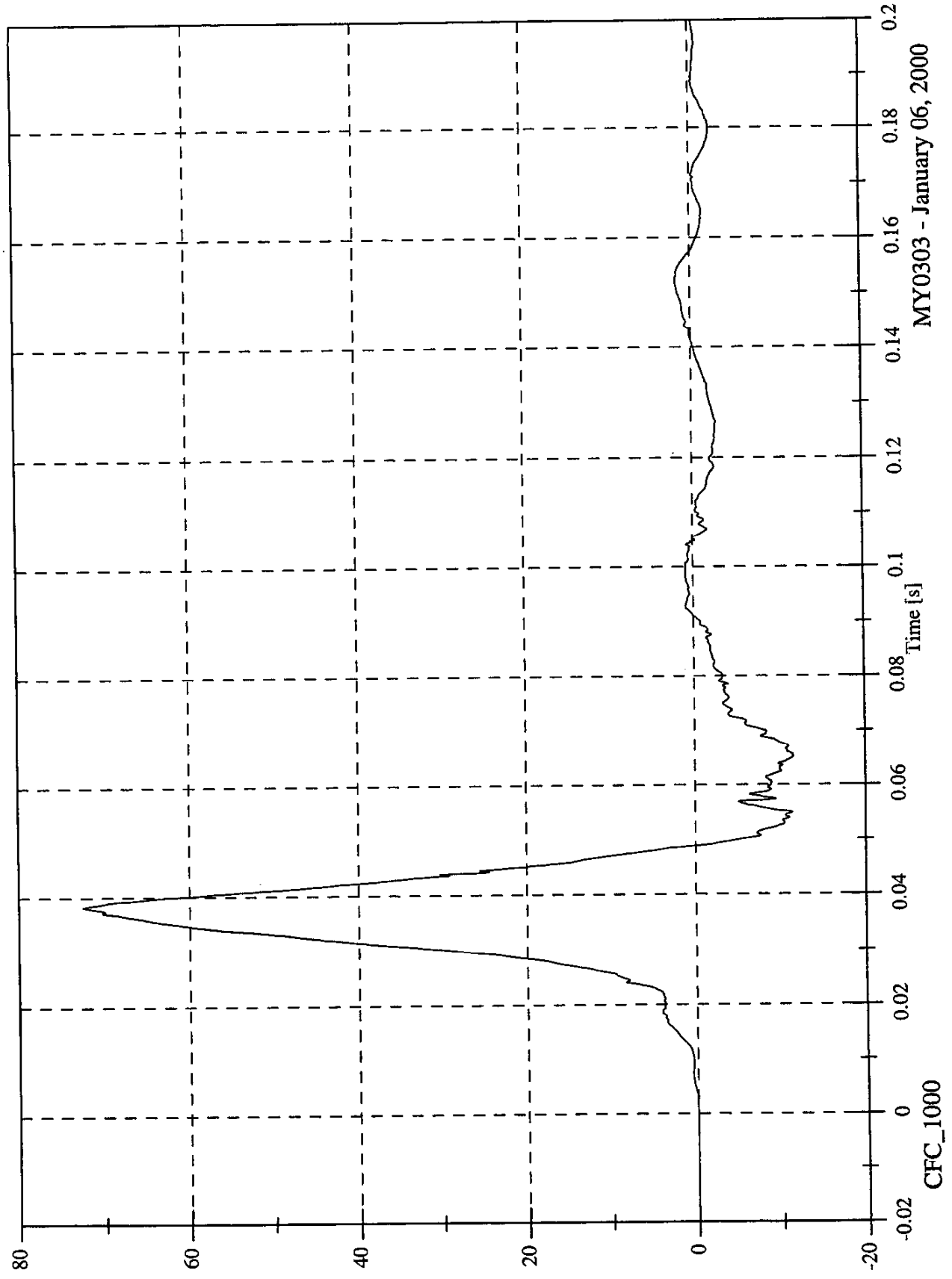
MY0303 - January 06, 2000

CFC_180

Max: 72.5 [g] at 0.038 [s]
Min: -11.6 [g] at 0.065 [s]

P1 Pelvic Ry

SNCAP Test# 6 - 2000 Dodge Caravan

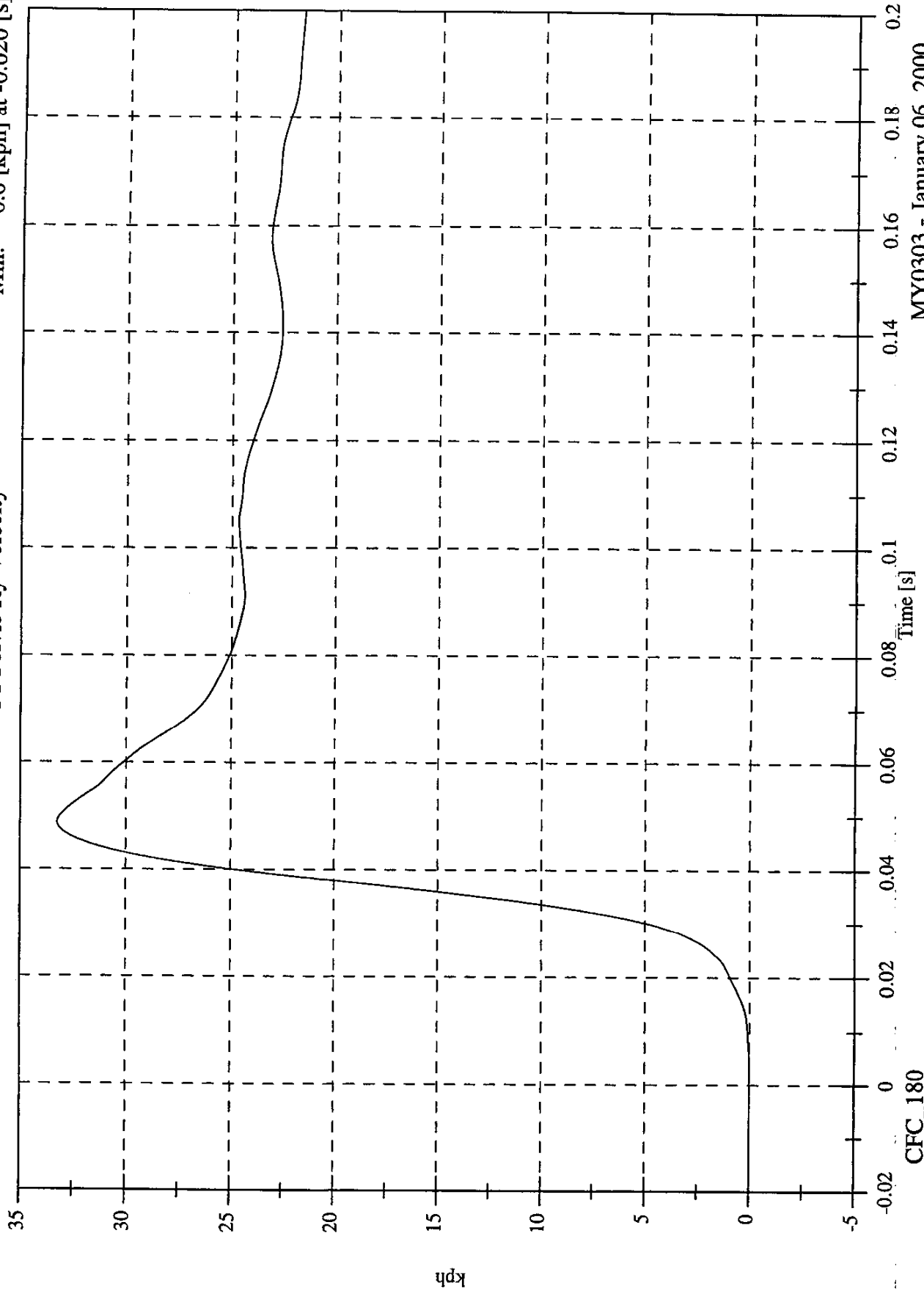


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 33.2 [kph] at 0.049 [s]
Min: -0.0 [kph] at -0.020 [s]

P1 Pelvic Ry Velocity

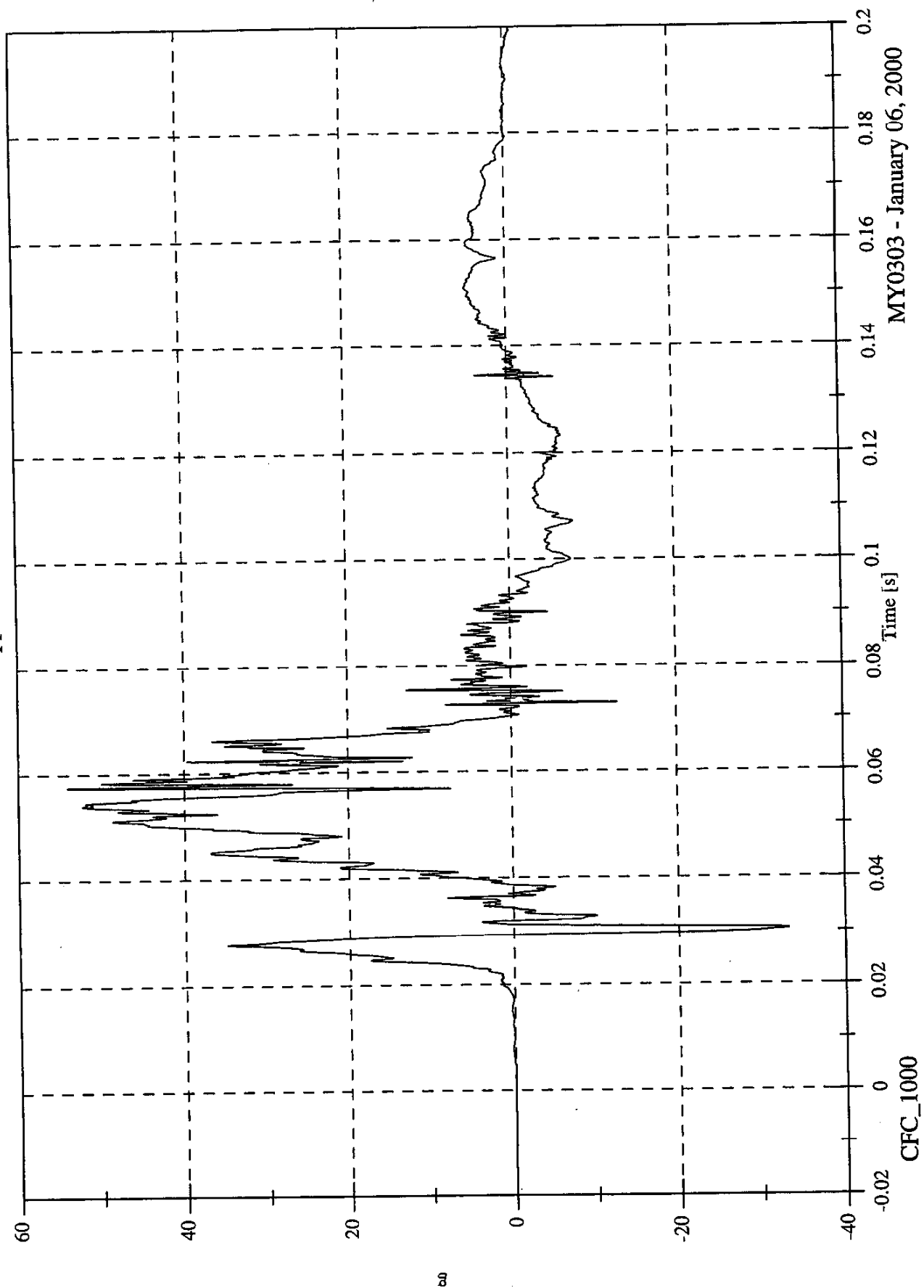


CFC_180

Max: 54.1 [g] at 0.057 [s]
Min: -33.2 [g] at 0.030 [s]

P4 Upper Rib Ry

SNCAP Test# 6 - 2000 Dodge Caravan

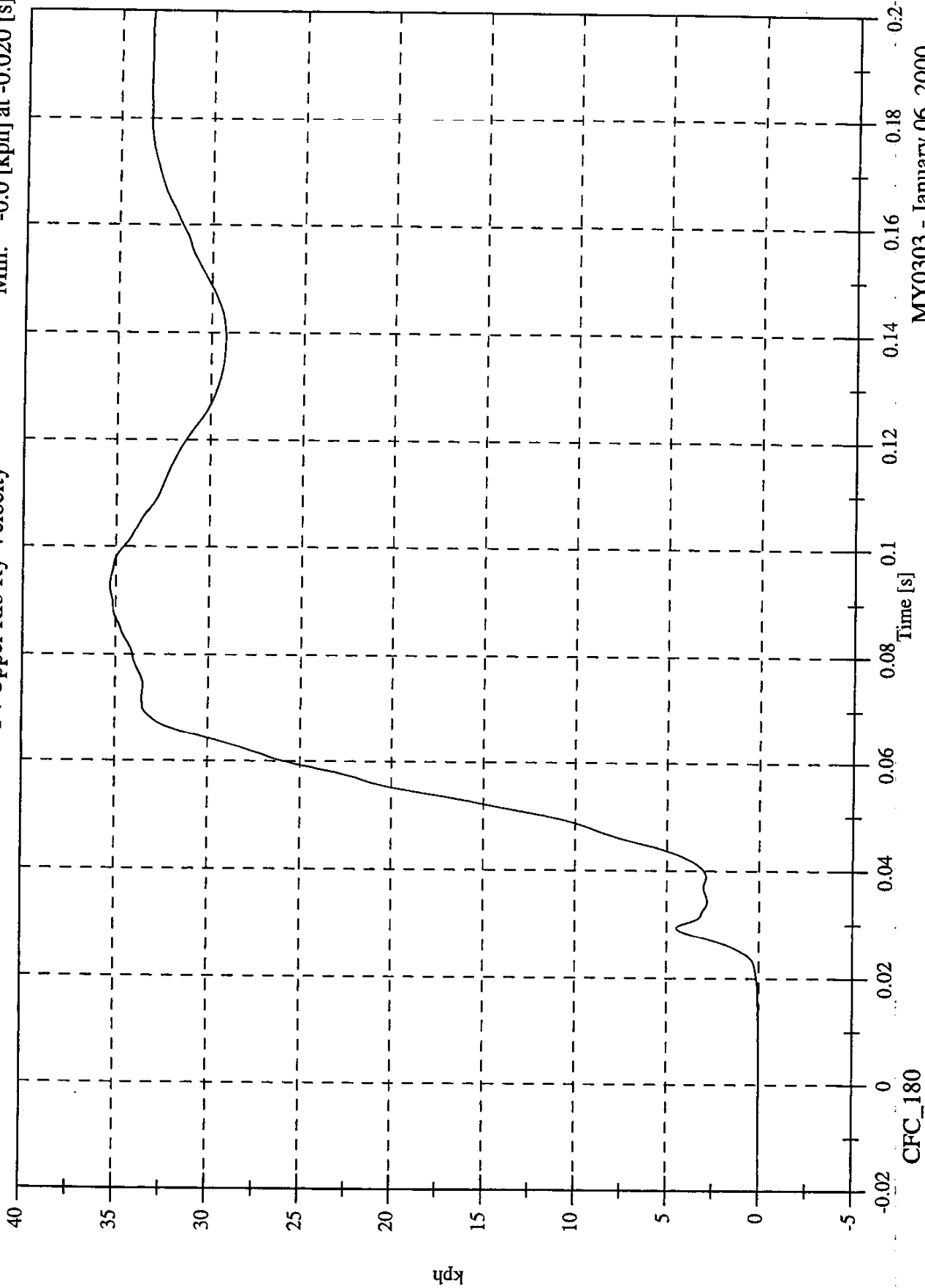


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 35.3 [kph] at 0.093 [s]
Min: -0.0 [kph] at -0.020 [s]

P4 Upper Rib Ry Velocity



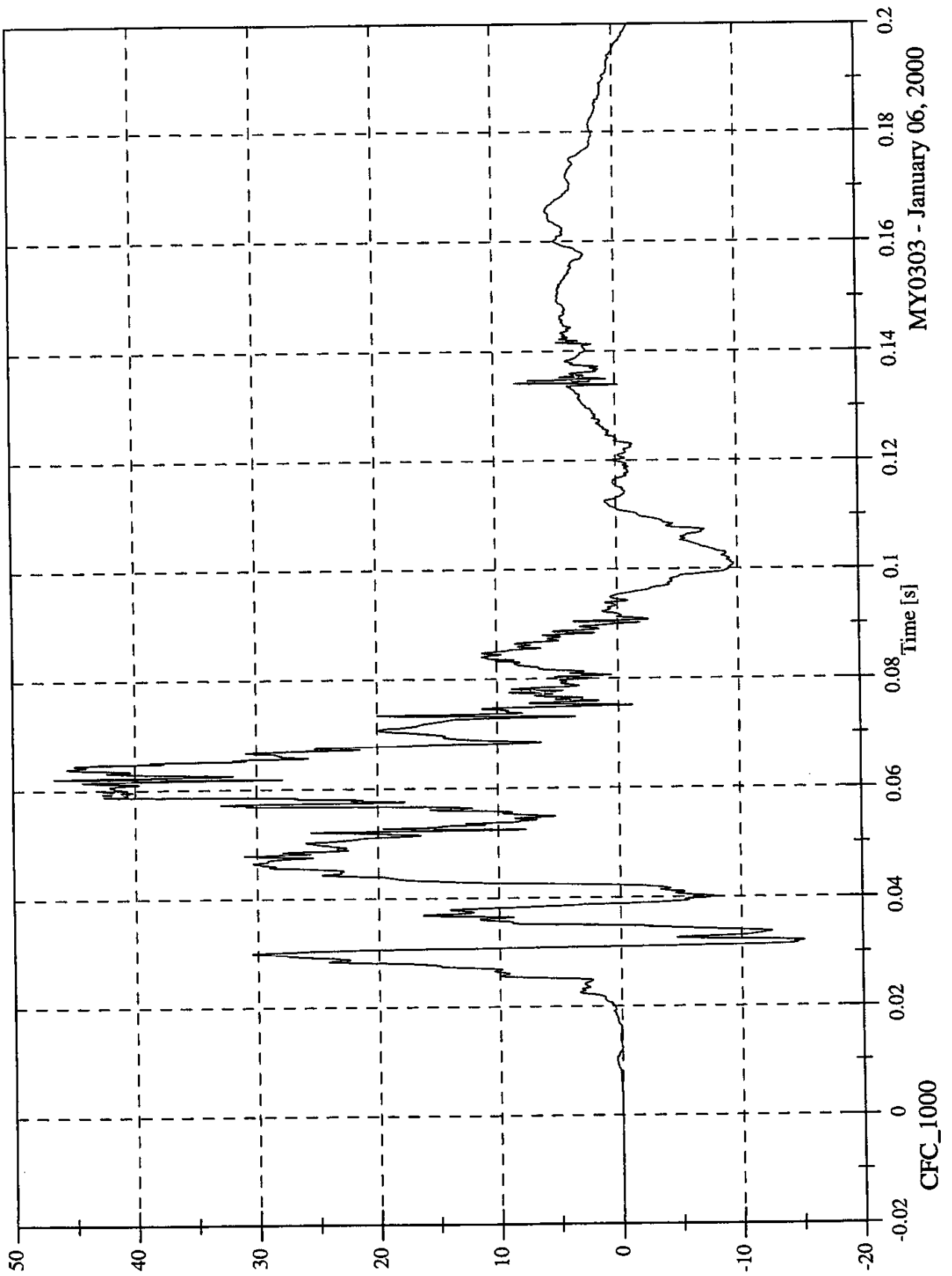
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Lower Rib Ry

Max: 46.6 [g] at 0.062 [s]
Min: -15.2 [g] at 0.032 [s]

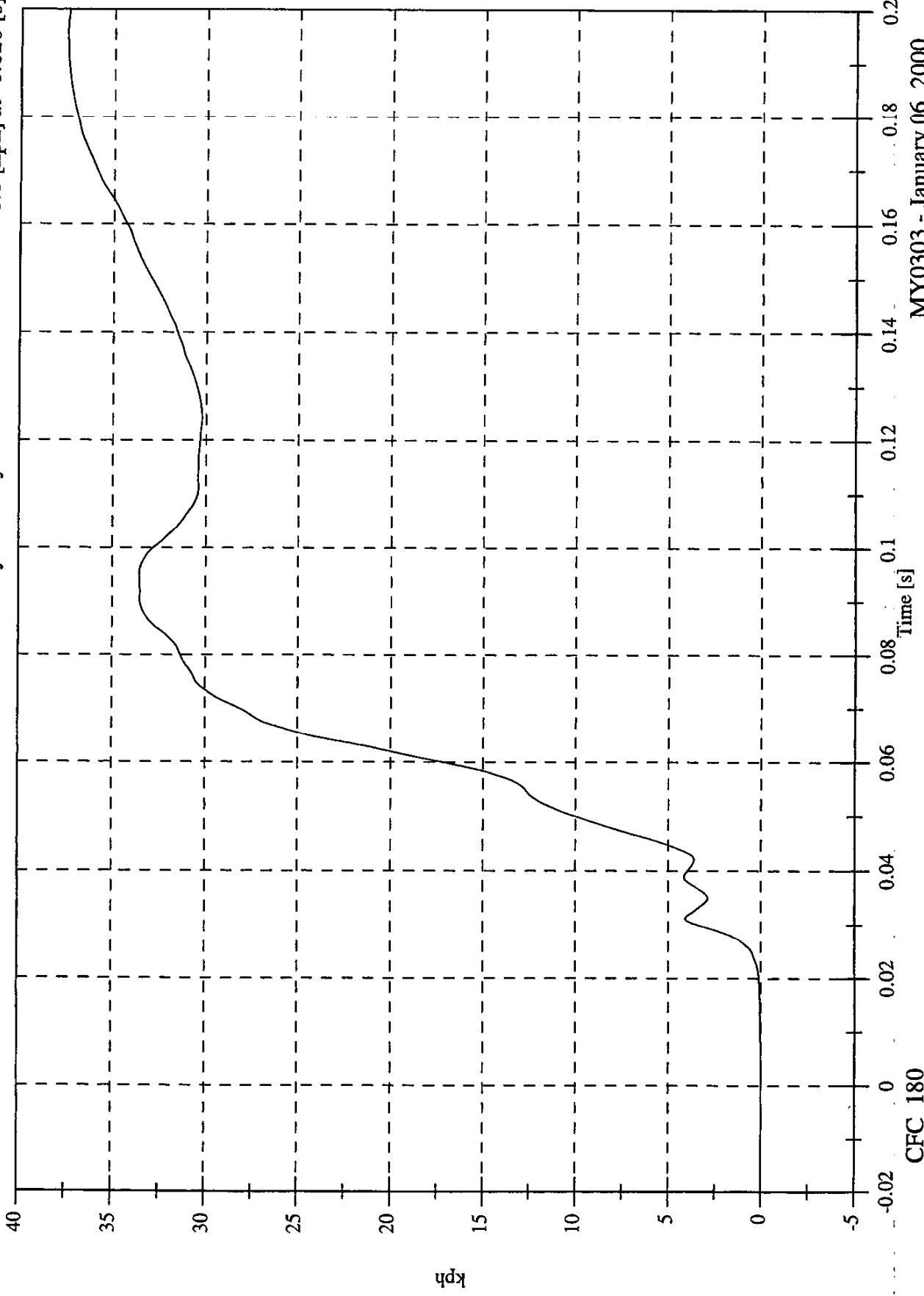


MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 37.5 [kph] at 0.195 [s]
Min: -0.0 [kph] at -0.020 [s]

P4 Lower Rib Ry Velocity



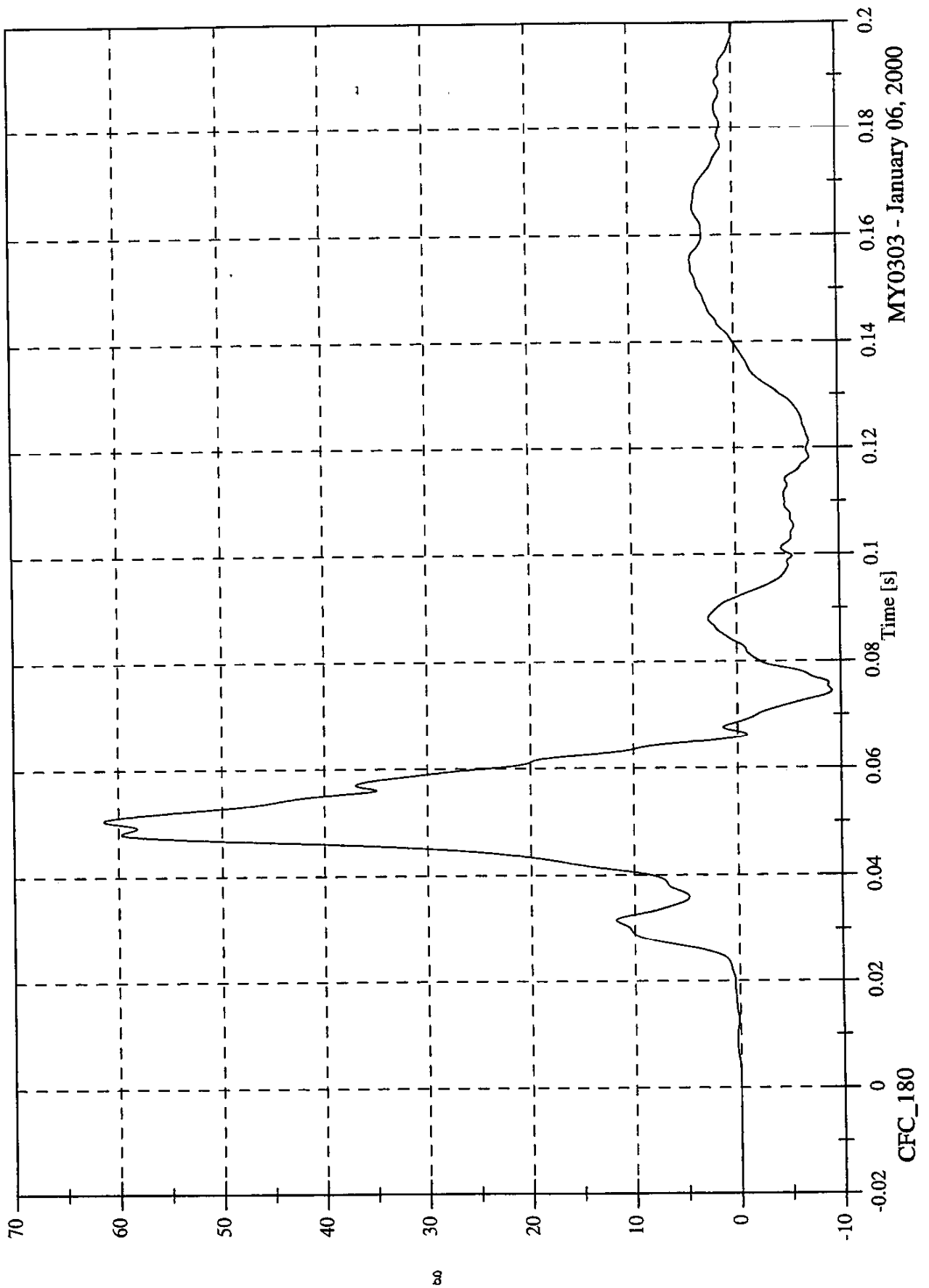
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Lower Spine Ry

Max: 61.4 [g] at 0.051 [s]
Min: -9.1 [g] at 0.074 [s]



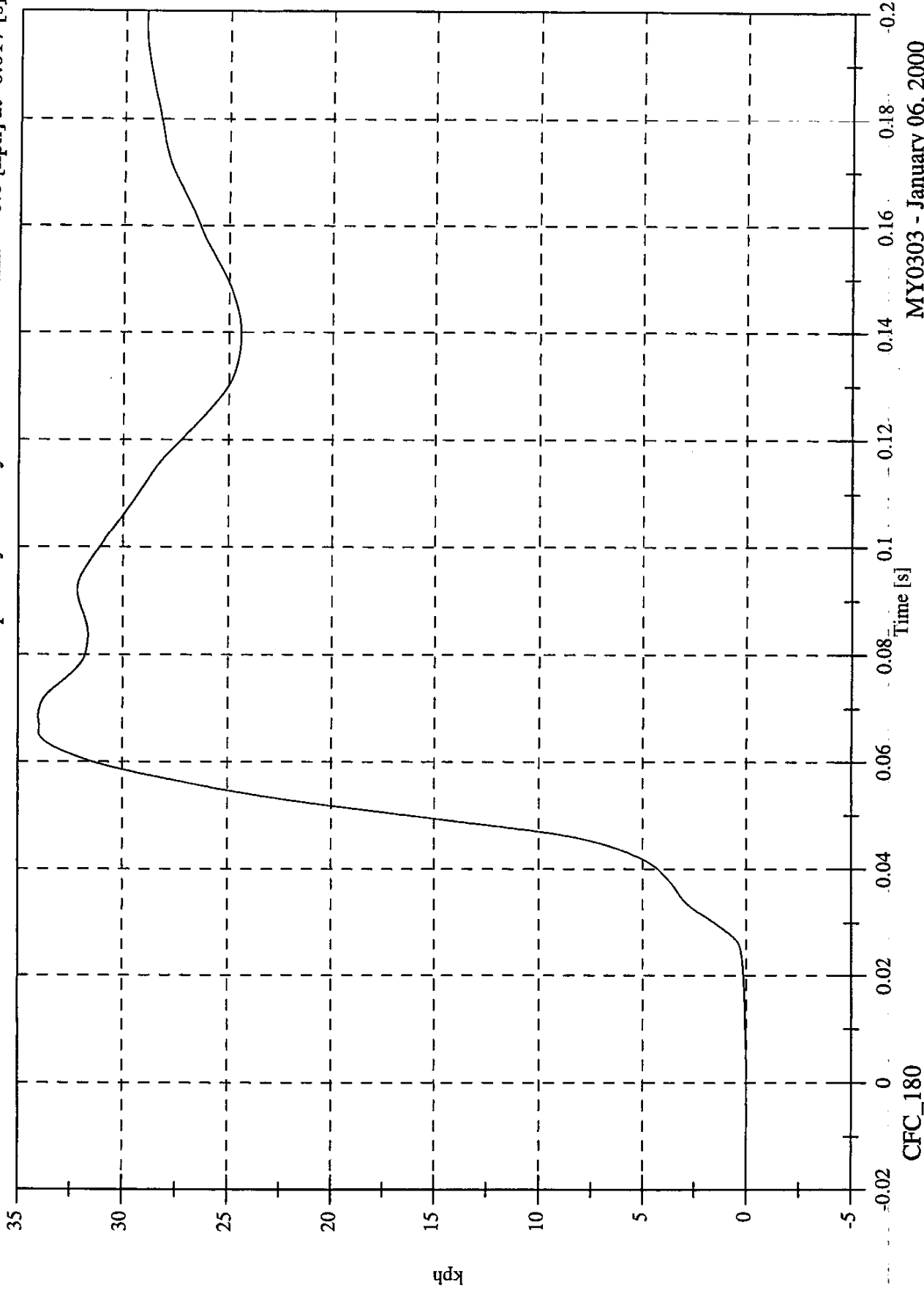
MY0303 - January 06, 2000

CFC_180

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 34.0 [kph] at 0.069 [s]
Min: -0.0 [kph] at -0.017 [s]

P4 Lower Spine Ry Velocity



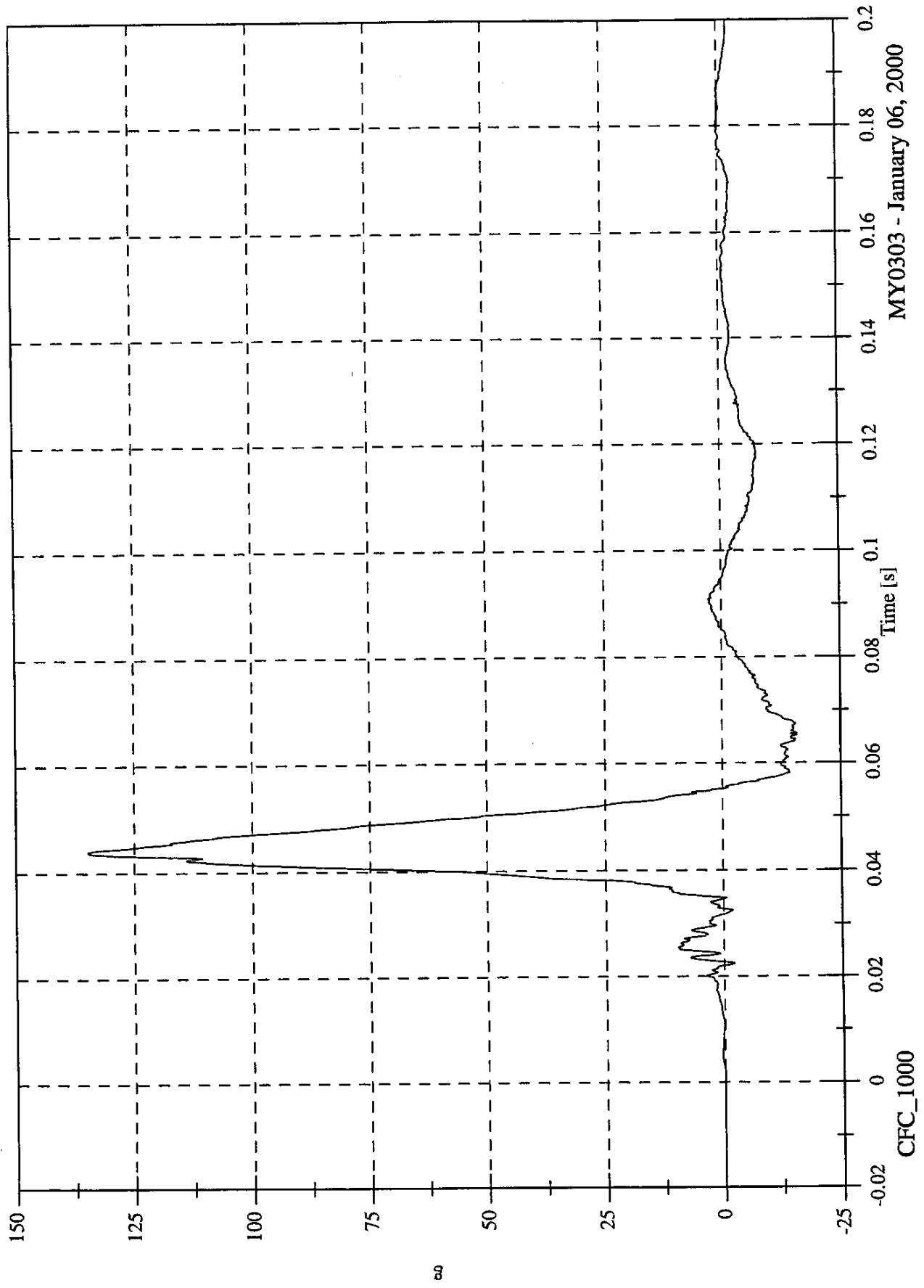
CFC_180

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 134.8 [g] at 0.044 [s]
Min: -15.9 [g] at 0.066 [s]

P4 Pelvic Ry



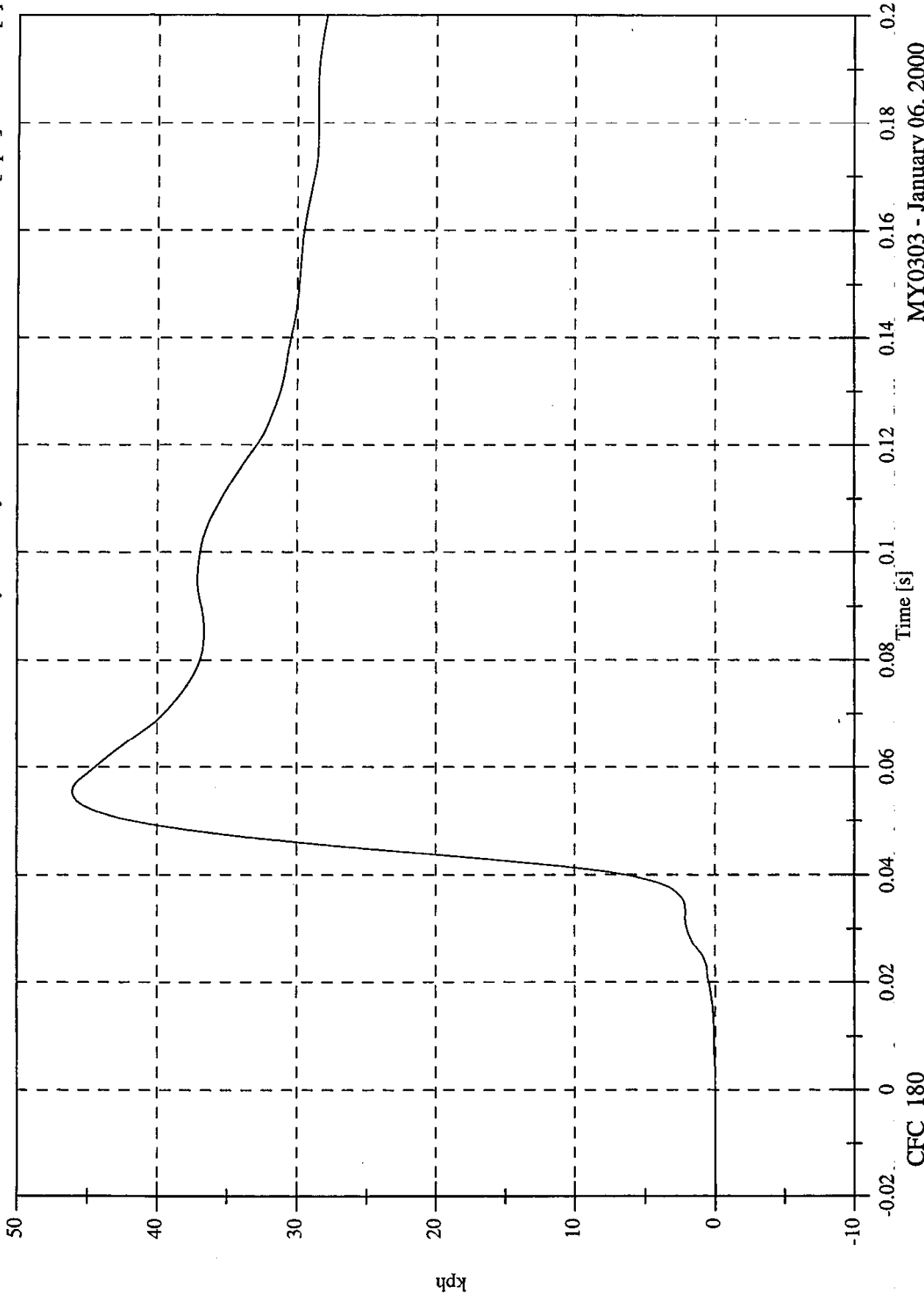
MY0303 - January 06, 2000

CFC_1000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 46.1 [kph] at 0.055 [s]
Min: -0.0 [kph] at -0.020 [s]

P4 Pelvic Ry Velocity



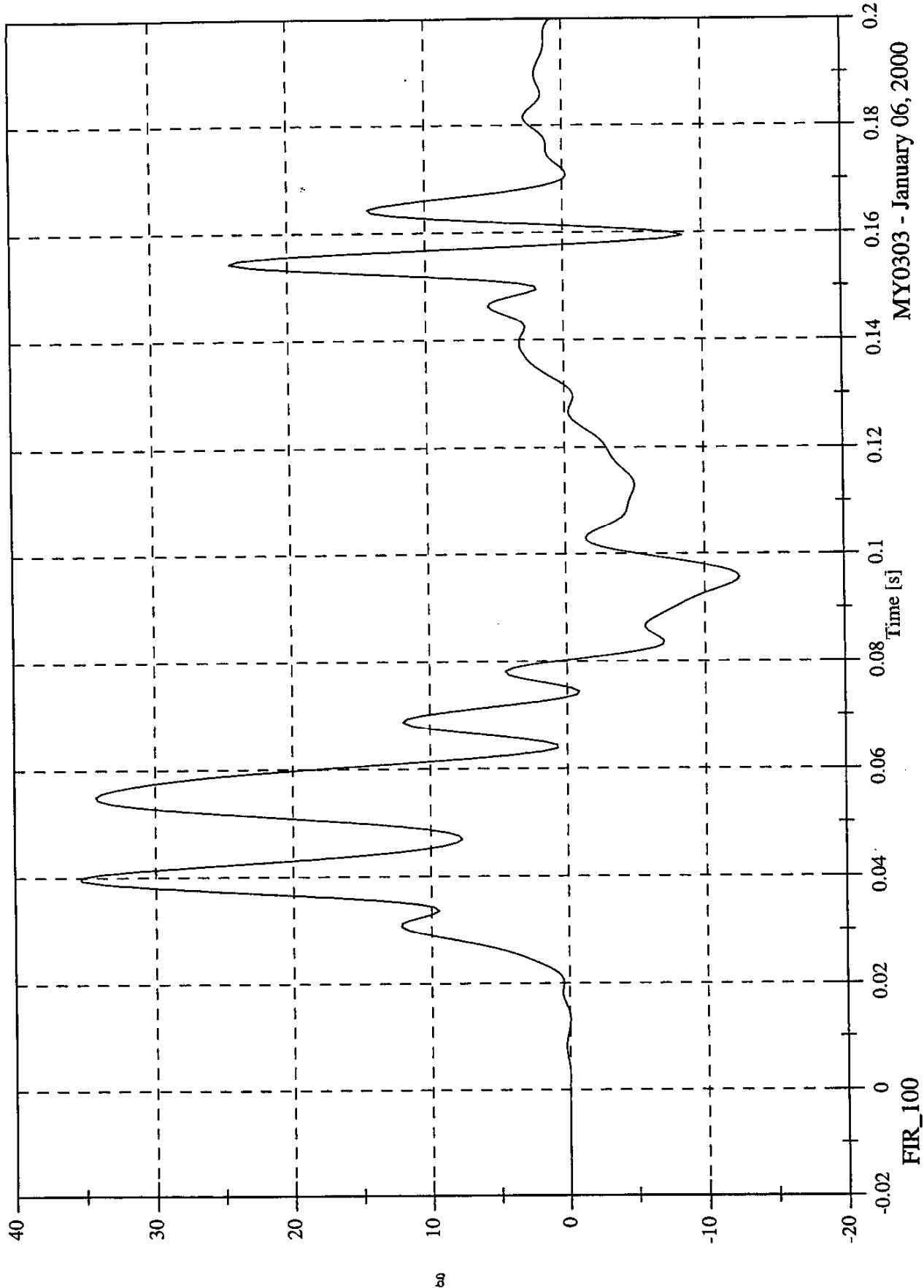
CFC_180

MY0303 - January 06, 2000

Max: 35.3 [g] at 0.040 [s]
Min: -12.5 [g] at 0.096 [s]

P1 Upper Rib Ry

SNCAP Test# 6 - 2000 Dodge Caravan



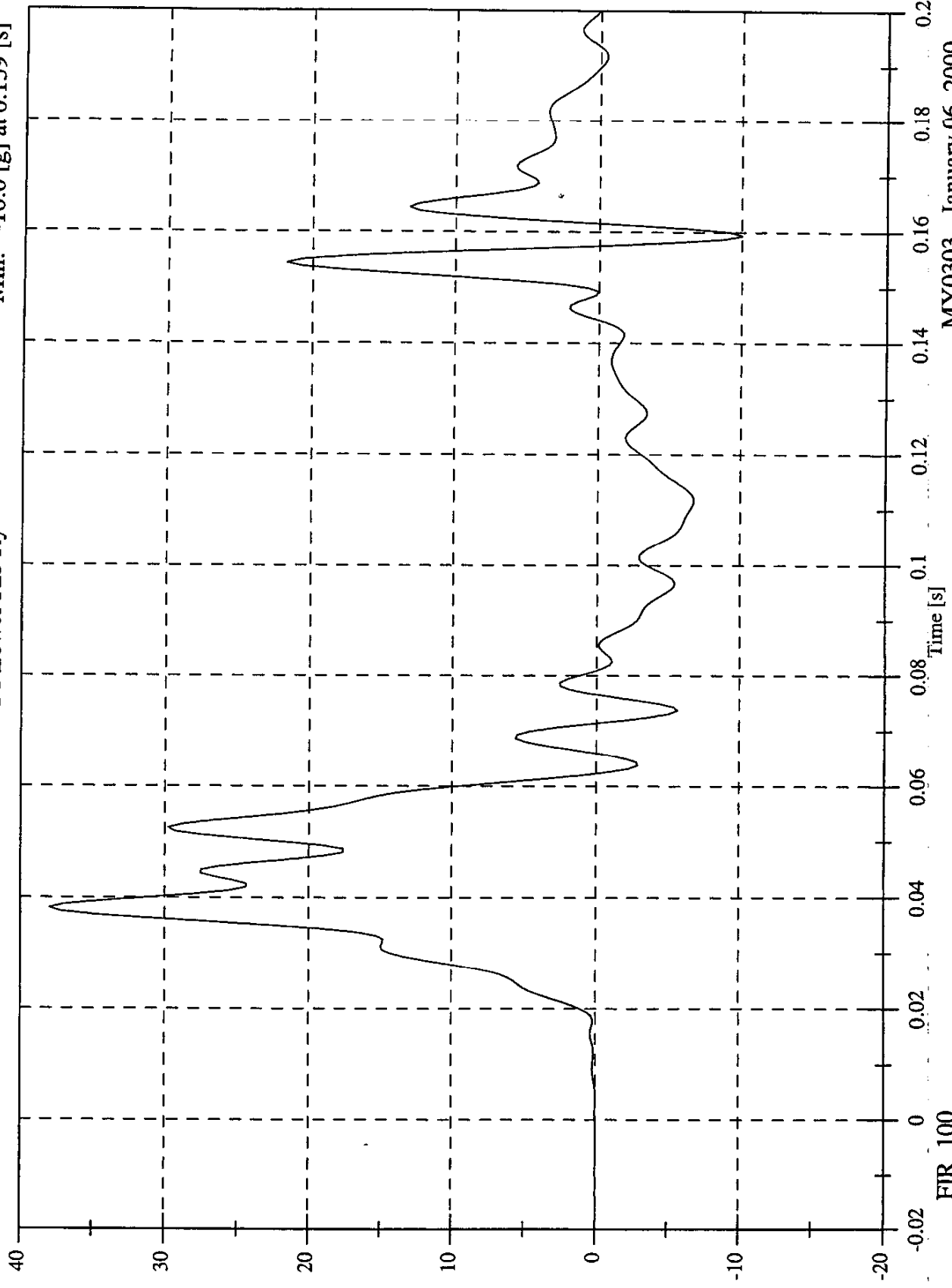
MY0303 - January 06, 2000

FIR_100

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 37.9 [g] at 0.038 [s]
Min: -10.0 [g] at 0.159 [s]

P1 Lower Rib Ry



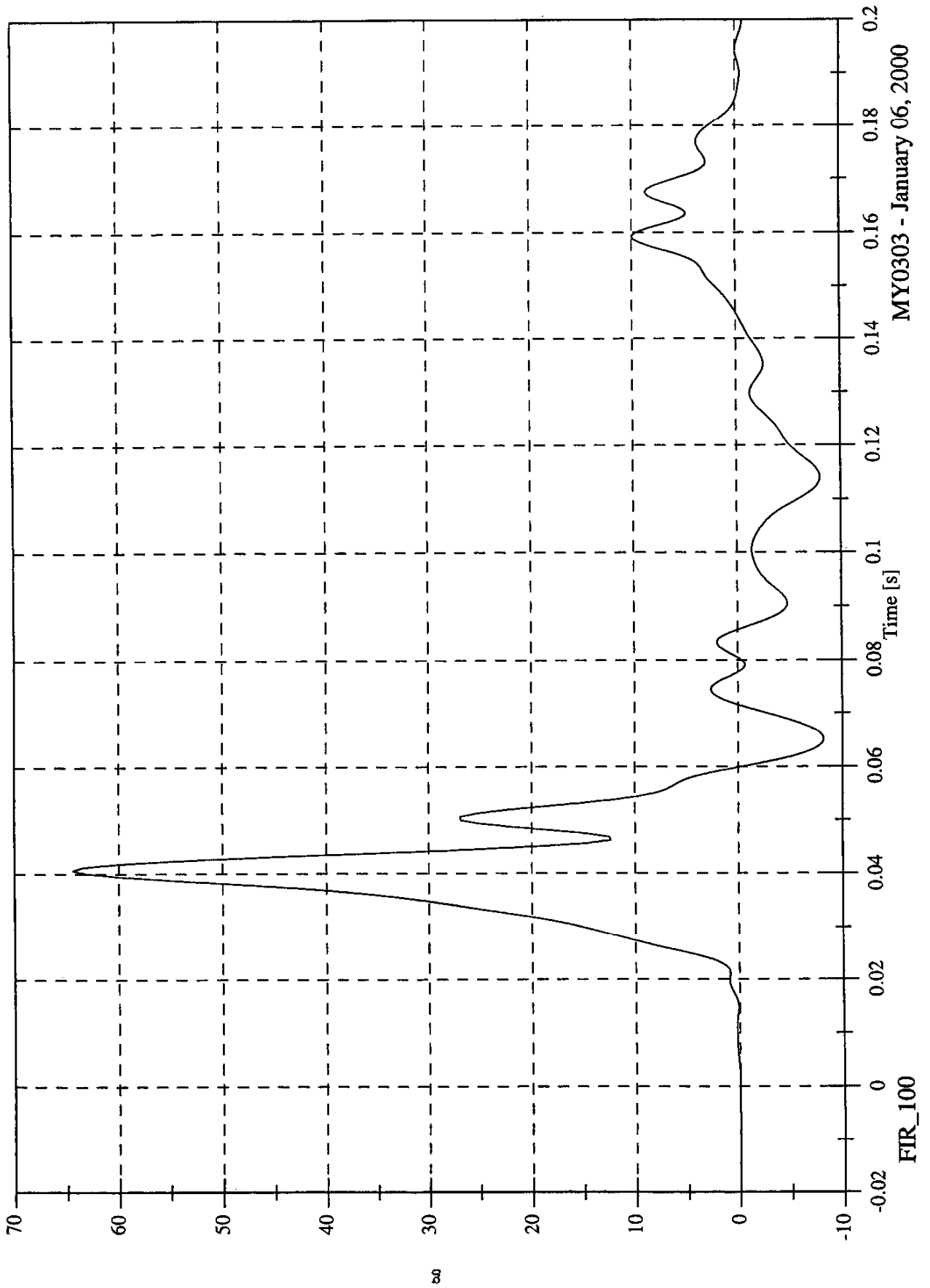
FIR_100

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 64.4 [g] at 0.041 [s]
Min: -8.2 [g] at 0.065 [s]

P1 Lower Spine Ry



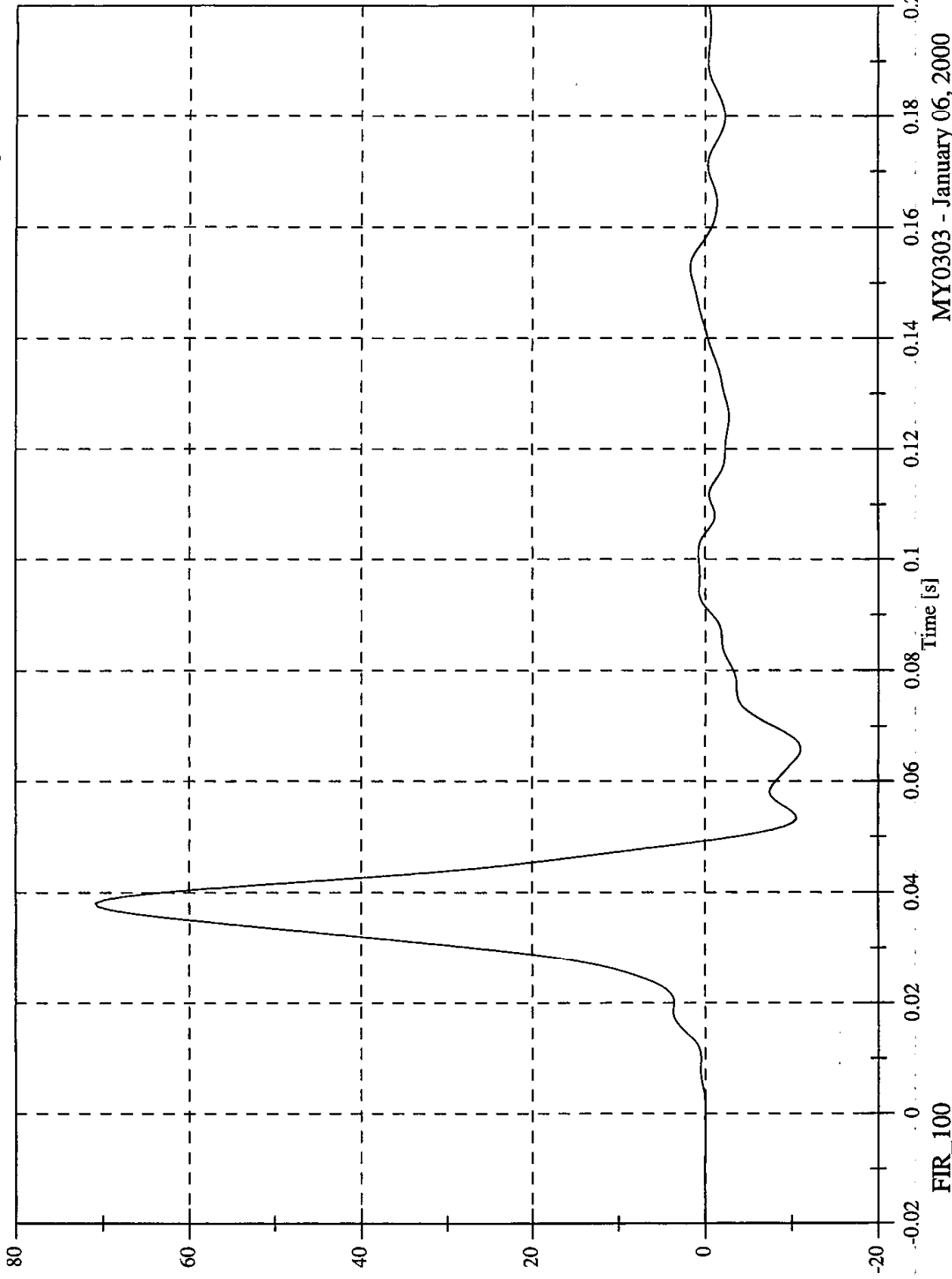
MY0303 - January 06, 2000

FIR_100

SNCAP Test# 6 - 2000 Dodge Caravan

Max: 70.8 [g] at 0.038 [s]
Min: -11.0 [g] at 0.066 [s]

P1 Pelvic Ry



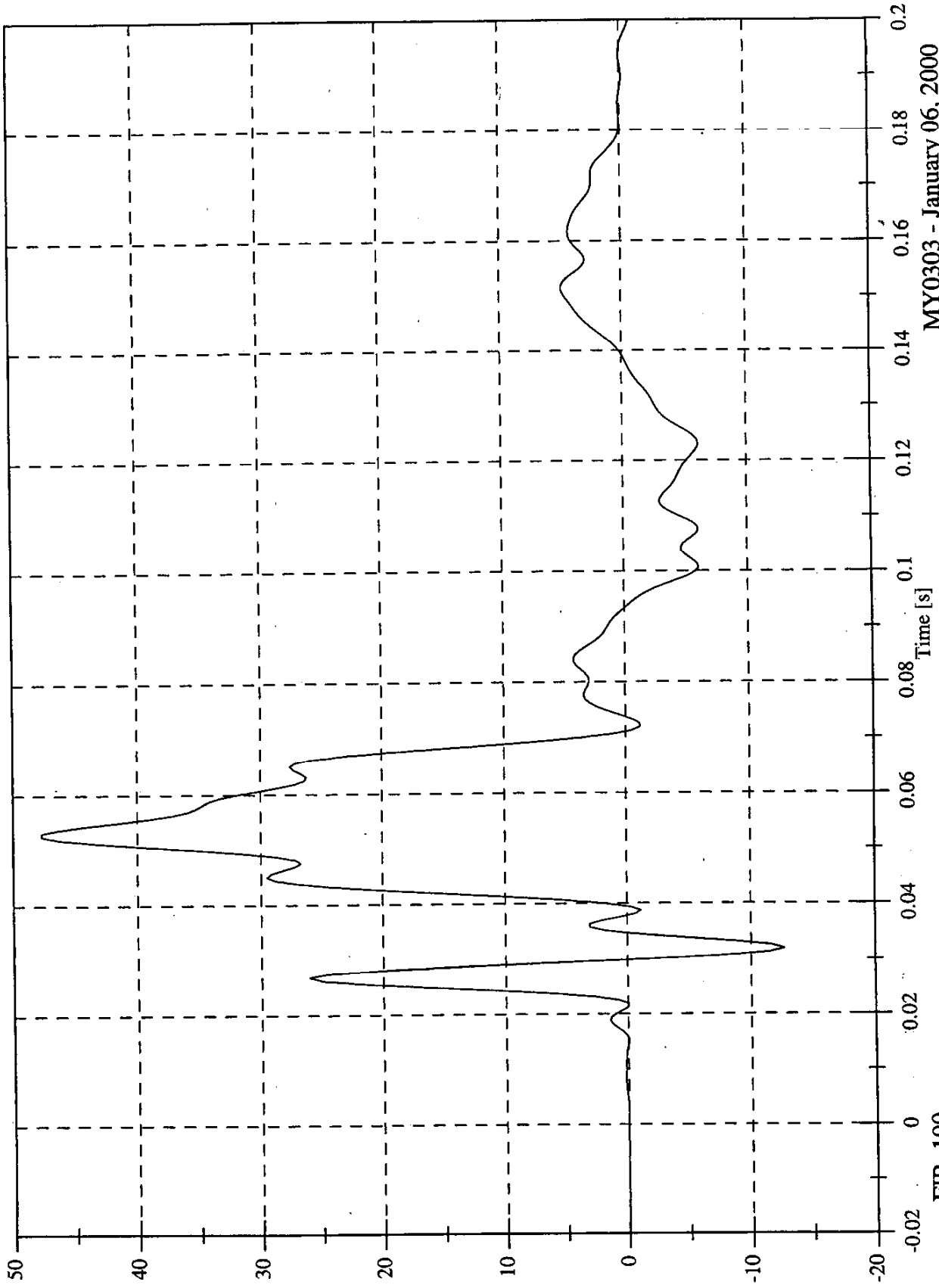
FIR_100

MY0303 - January 06, 2000

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Upper Rib Ry

Max: 47.7 [g] at 0.053 [s]
Min: -12.7 [g] at 0.032 [s]



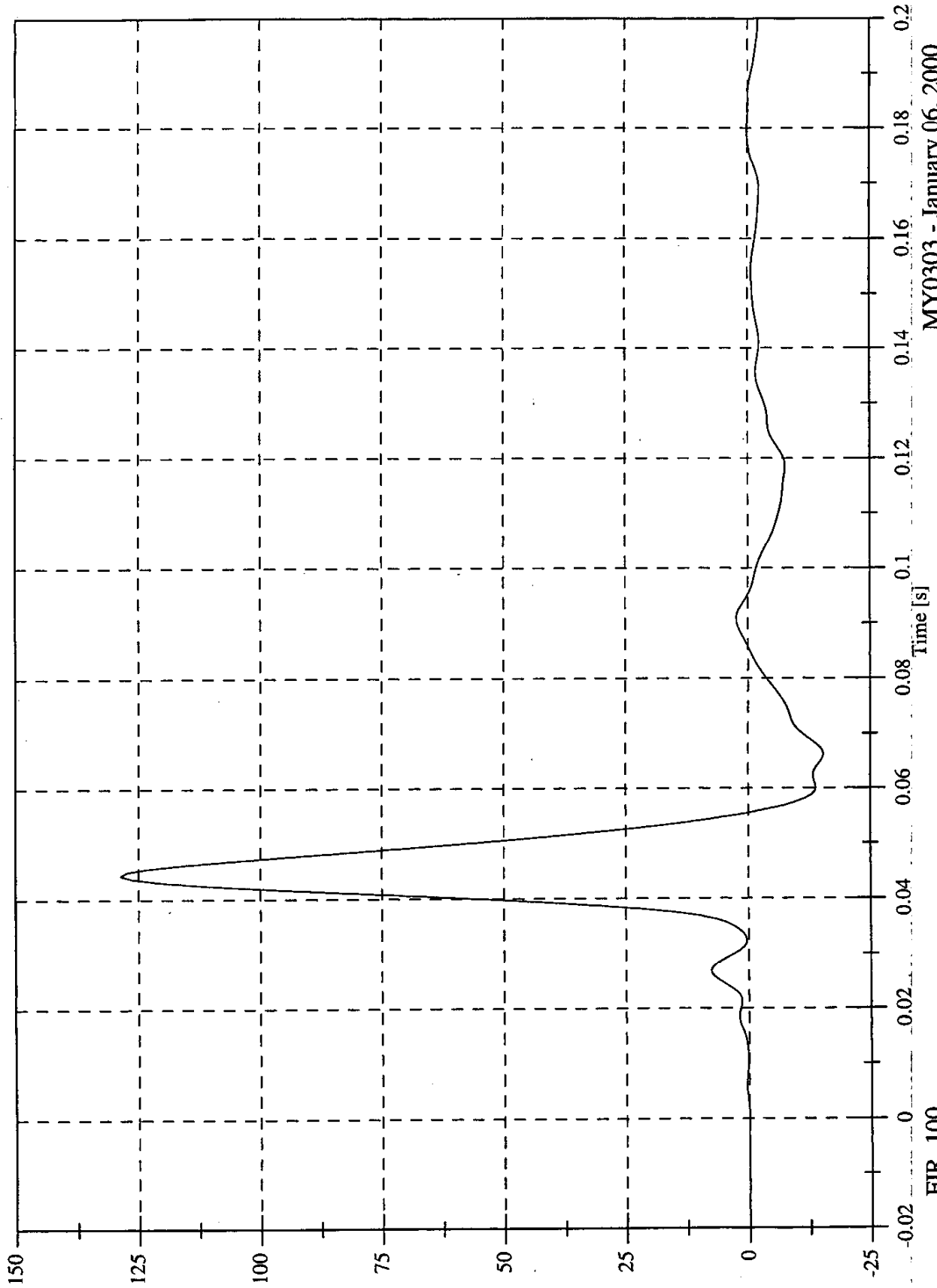
MY0303 - January 06, 2000

FIR_100

SNCAP Test# 6 - 2000 Dodge Caravan

P4 Pelvic Ry

Max: 128.7 [g] at 0.044 [s]
Min: -15.4 [g] at 0.066 [s]



MY0303 - January 06, 2000

FIR_100

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID PRE & POST TEST CALIBRATION
CONFIGURED FOR LEFT SIDE IMPACT

Date: January 4, 2000; January 27, 2000

Sequential Test Number:

3,5; 1,1

Laboratory Technician:

B. Swiecicki; M. Kilgallon

TEST PARAMETER	SPECIFICATION	SID NO.: 027		SID NO.: 268	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	897	907	902	899
RH- Rib Height (mm)	501 - 521	513	518	506	513
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	236	236	236	235
KV- Knee Pivot from Back Line (mm)	511 - 526	521	518	521	518
SW- Knee Pivot to Floor (mm)	490 - 505	498	493	493	495
HW- Hip Width (mm)	356 - 391	366	368	368	376
THORAX IMPACTS					
TEMPERATURE (°C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	30	30	30	30
PROBE SPEED (m/s)	4.27 - 4.33	4.30	4.29	4.32	4.27
UPPER RIB (g's)	37 - 46	42.8	42.6	44.7	42.4
LOWER RIB (g's)	37 - 46	42.5	43.3	42.2	40.3
LOWER SPINE (g's)	15 - 22	21.1	21.1	21.2	21.2
PELVIS IMPACT					
TEMPERATURE (°C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	30	30	30	30
PROBE SPEED (m/s)	4.27 - 4.33	4.30	4.30	4.28	4.31
PELVIS (g's)	40 - 60	50.0	50.2	43.7	40.7

REMARKS: None

**CALIBRATION TEST RESULTS
PRE-TEST**

SID NO.: 027

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027
Date: January 4, 2000

Sequential Test Number: _____
Laboratory Technician: M. Kilgallon

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

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 3
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	897
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	498
HW- Hip Width (mm)	356 - 391	366

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1.3
Date: September 30, 1999 Laboratory Technician: B. Swiecicki

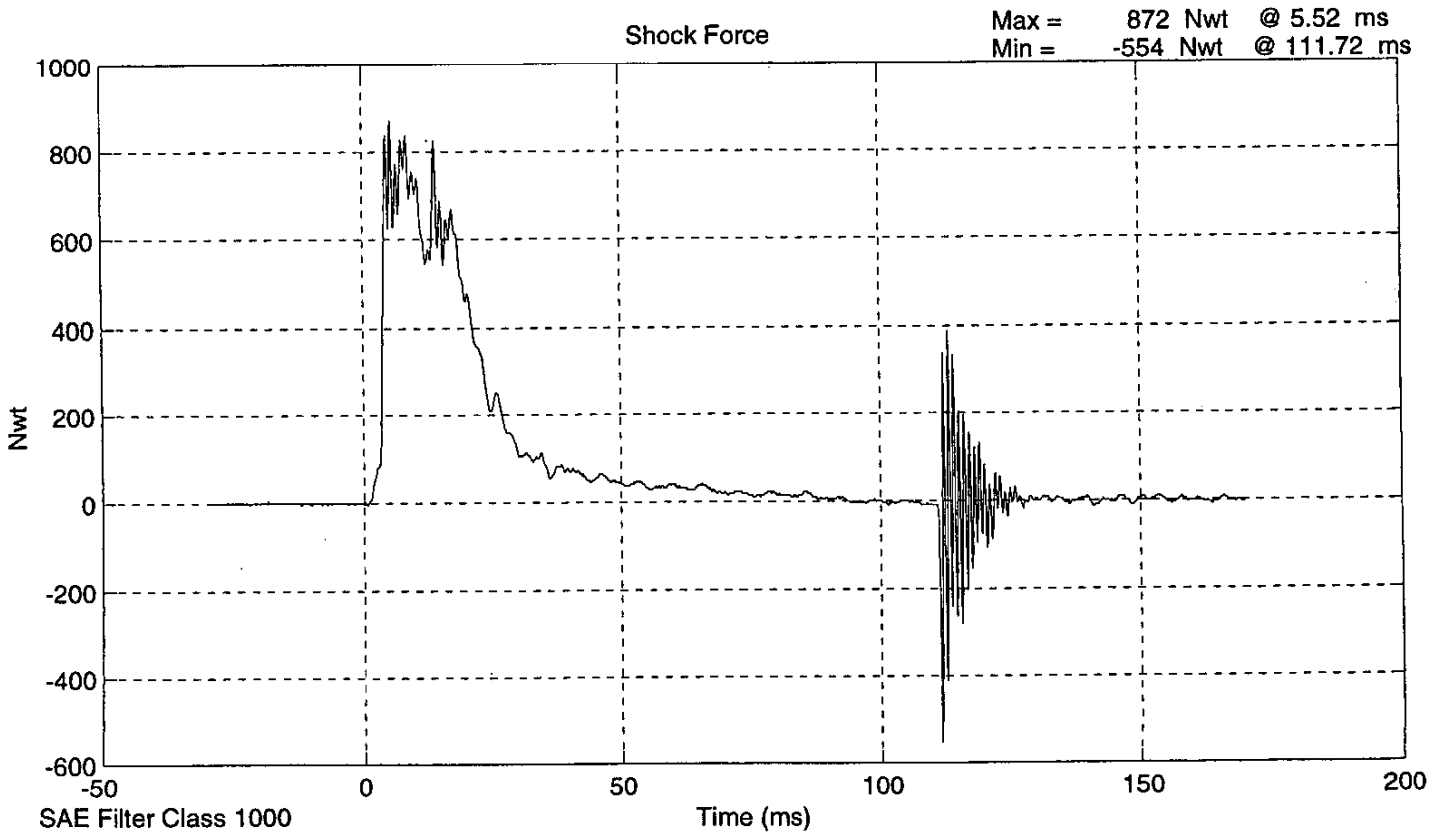
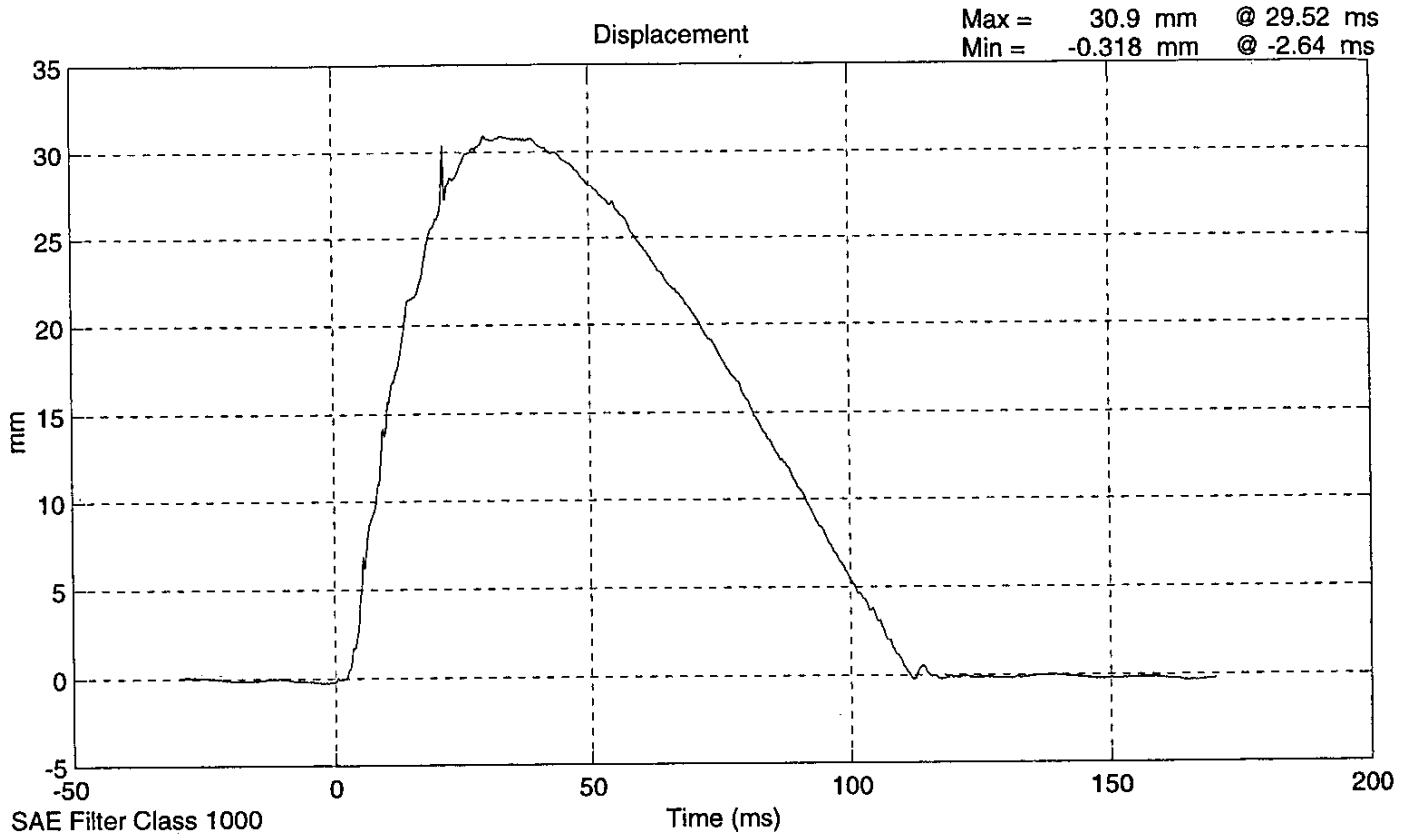
DAMPER IDENTIFICATION: 027

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)		10 - 70	30
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	871.5
	DISPLACEMENT (mm)	30 - 35	30.9
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1751.7
	DISPLACEMENT (mm)	32 - 37	33.9
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3758
	DISPLACEMENT (mm)	33 - 40	36.6

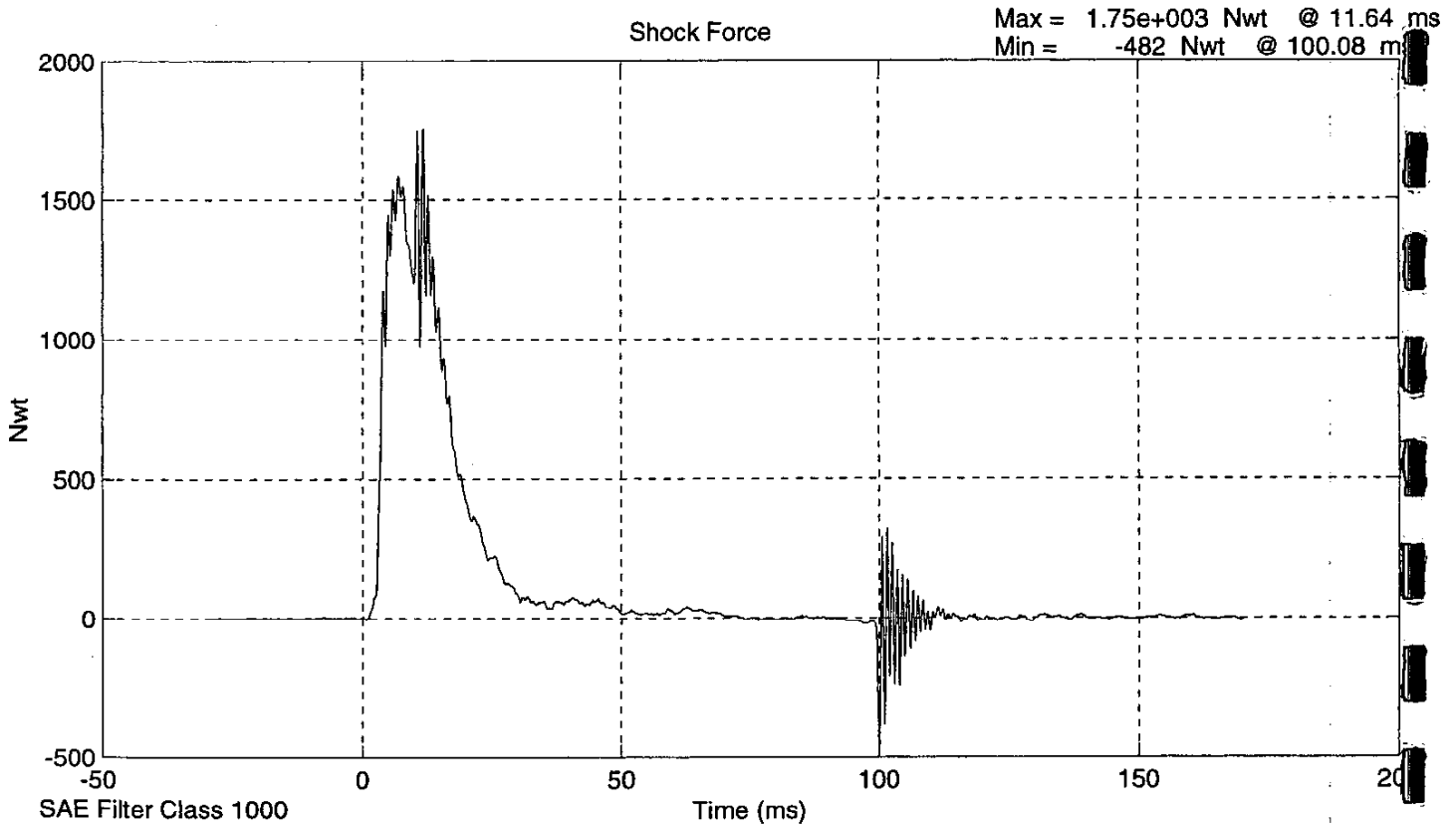
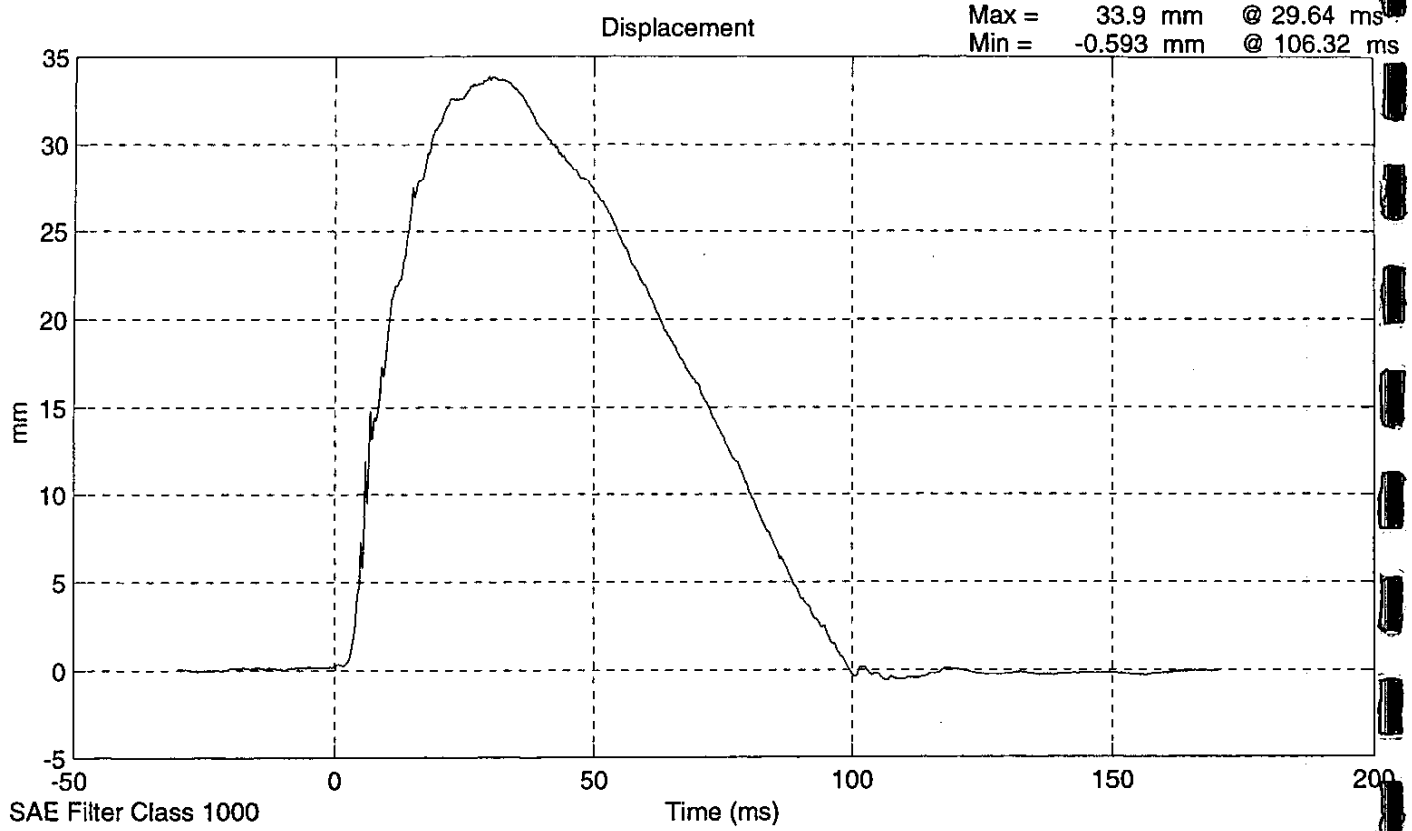
DAMPER SETTING: 5

REMARKS: None

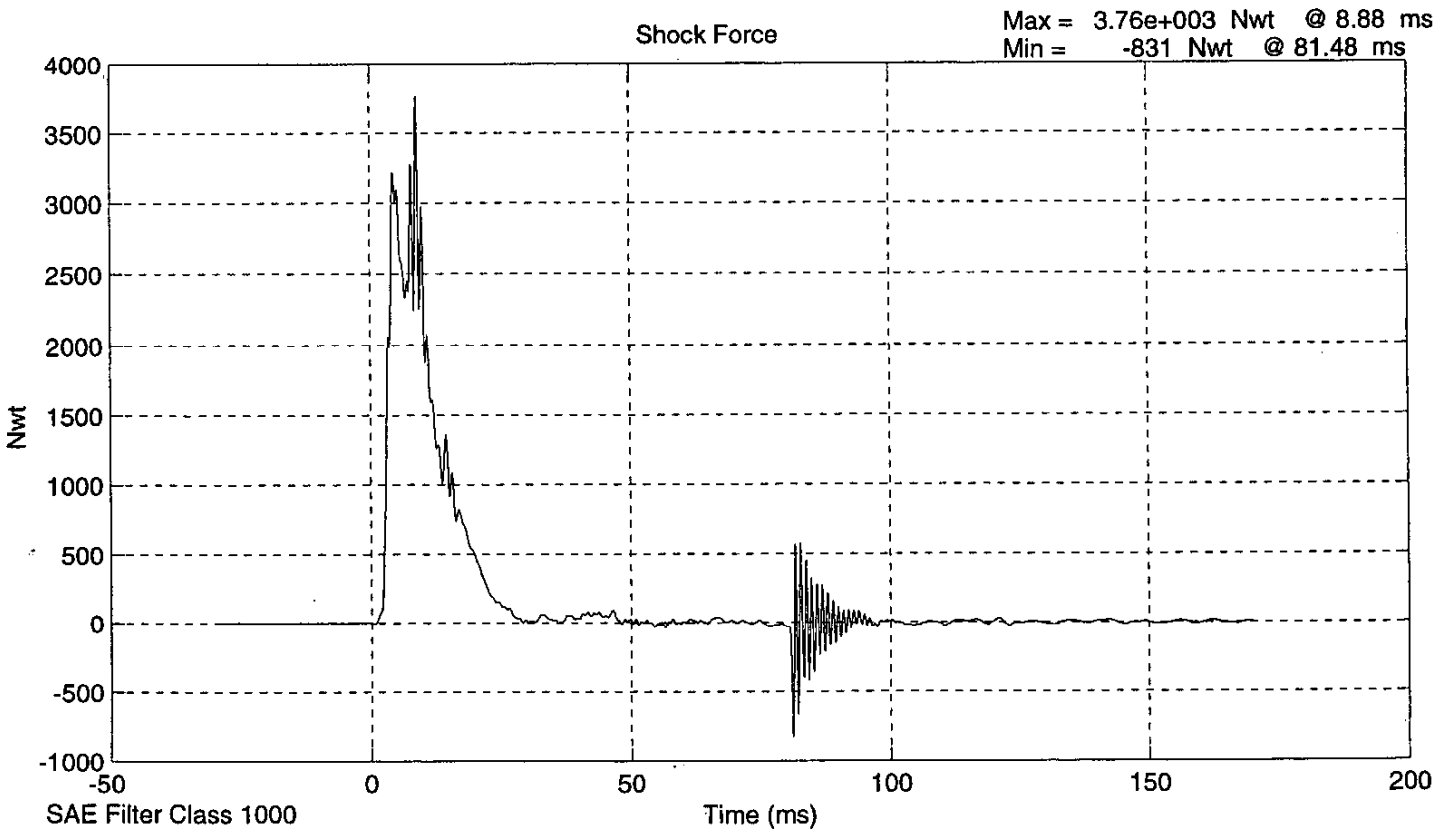
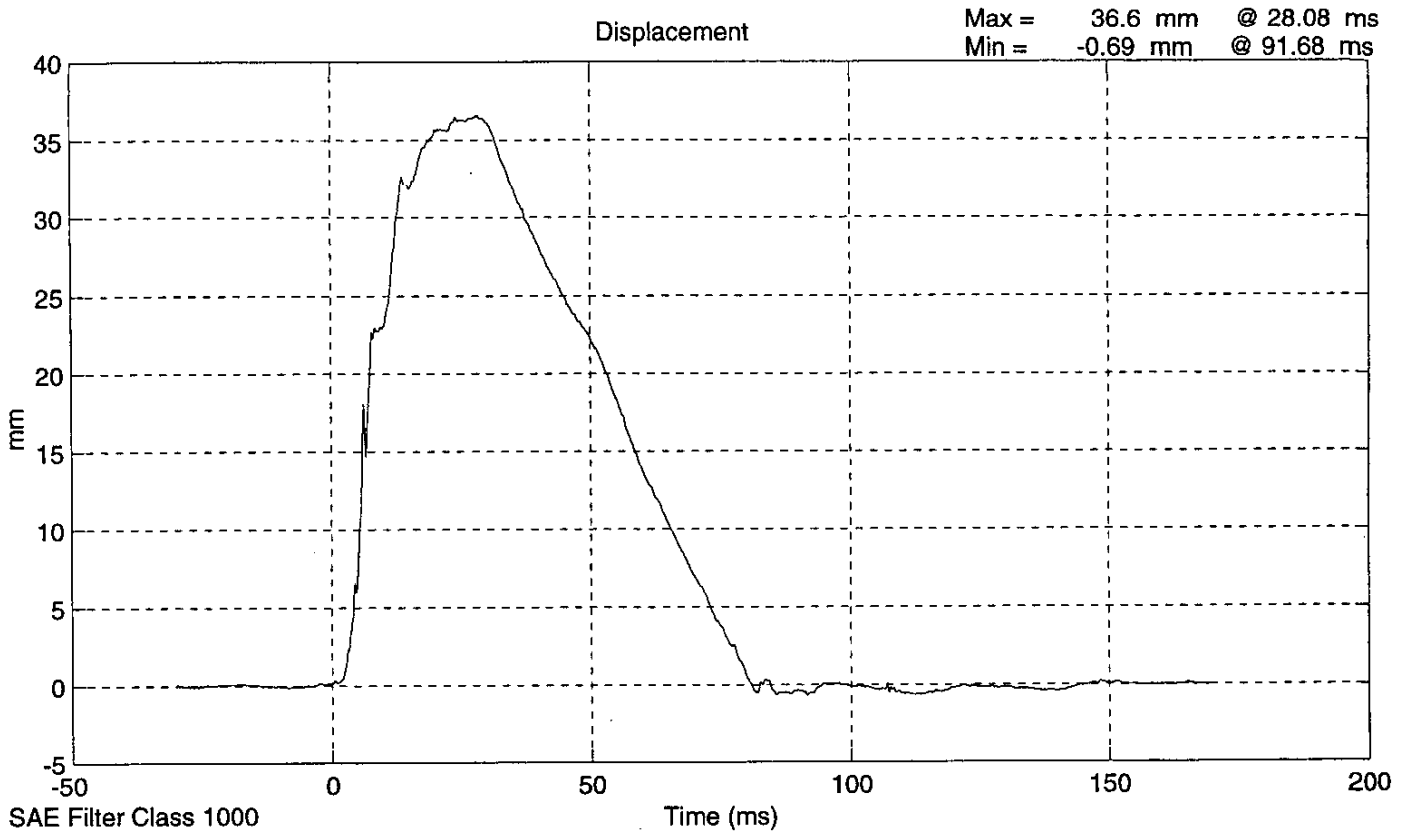
SID Shock Absorber Impact Test 027 @ 3.048 m/s



SID Shock Absorber Impact Test 027 @ 4.2672 m/s



SID Shock Absorber Impact Test 027 @ 6.096 m/s



LATERAL THORAX IMPACT TEST
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 3
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

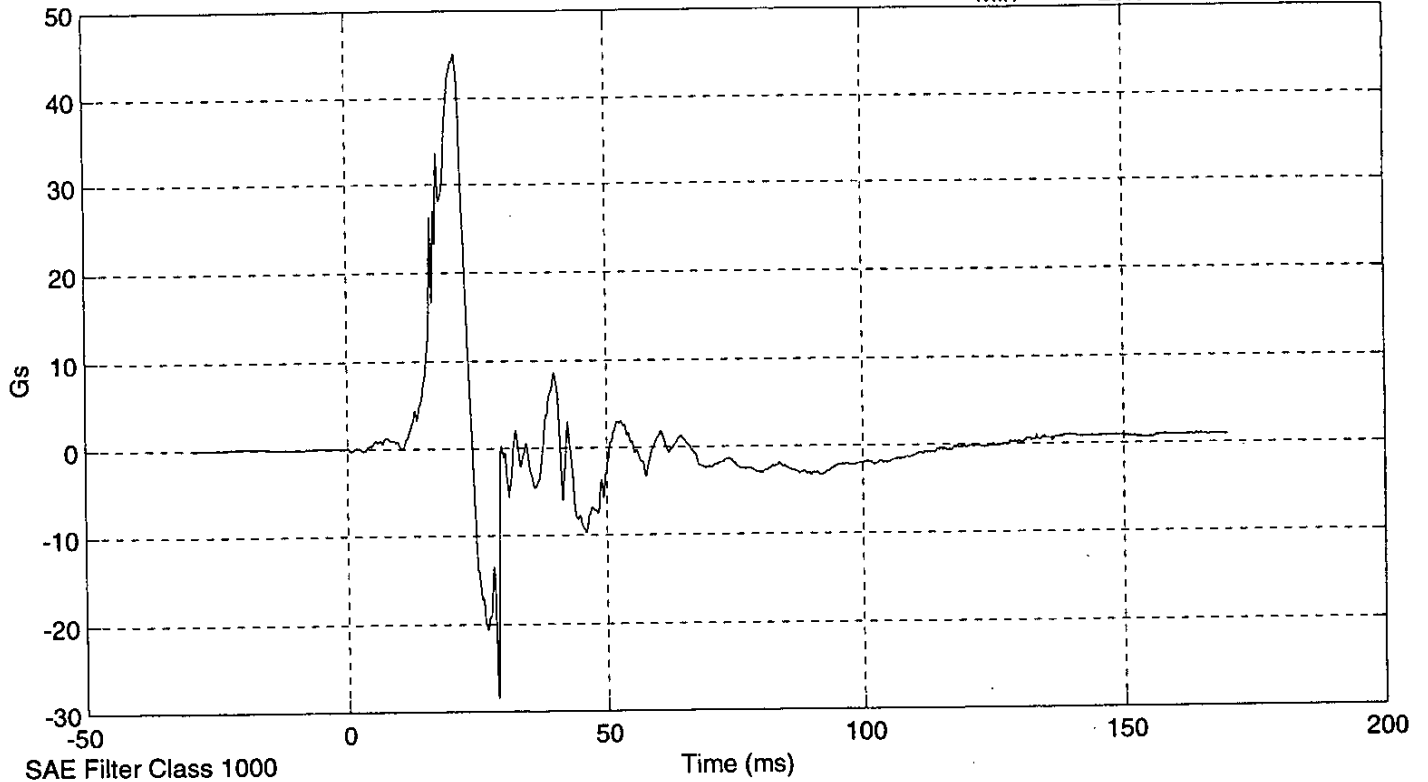
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	42.8
LOWER RIB (g's)	37 - 46	42.5
LOWER SPINE (g's)	15 - 22	21.1

REMARKS: None

SID 027 Thorax Impact Test @ 4.3099 m/s

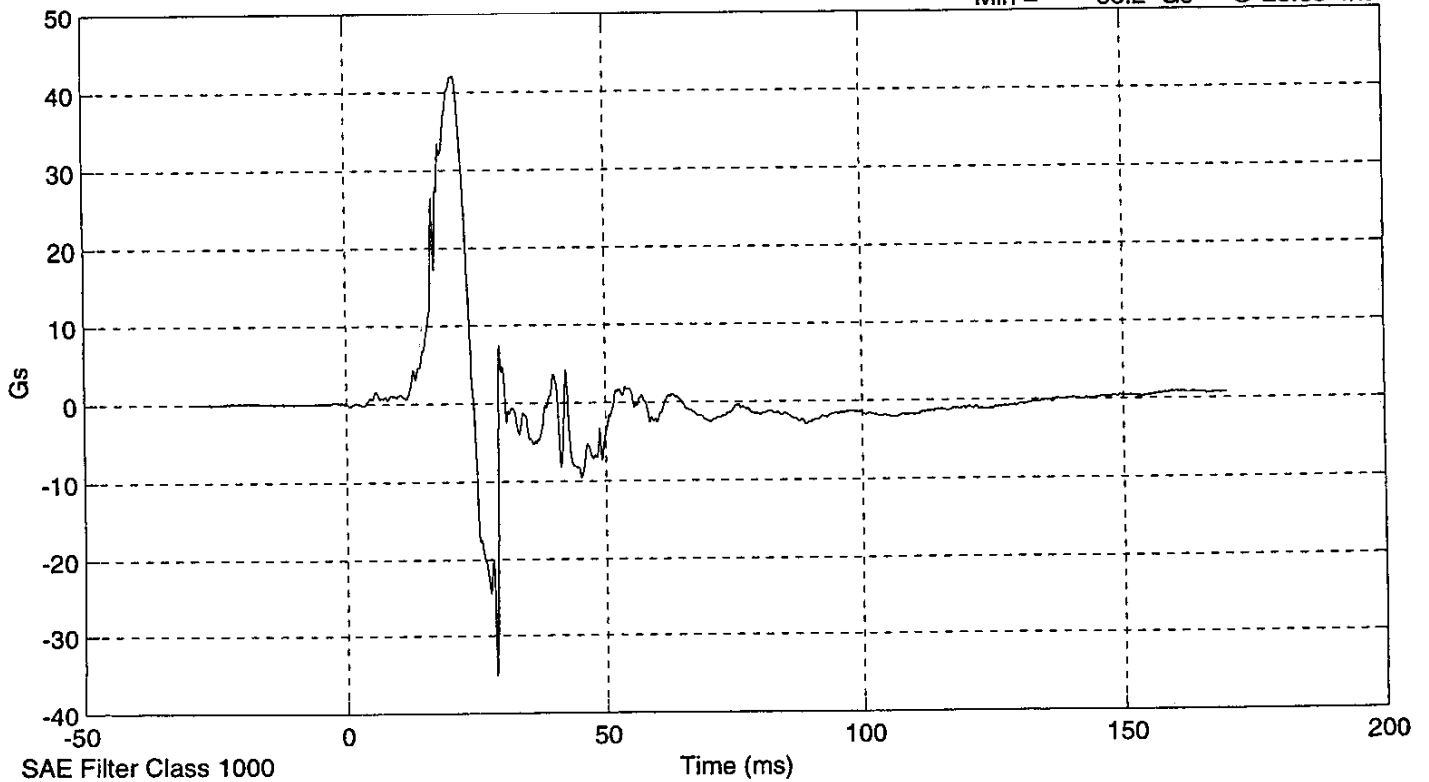
UPPER RIB Y

Max = 45.1 Gs @ 21.12 ms
Min = -28.5 Gs @ 28.80 ms



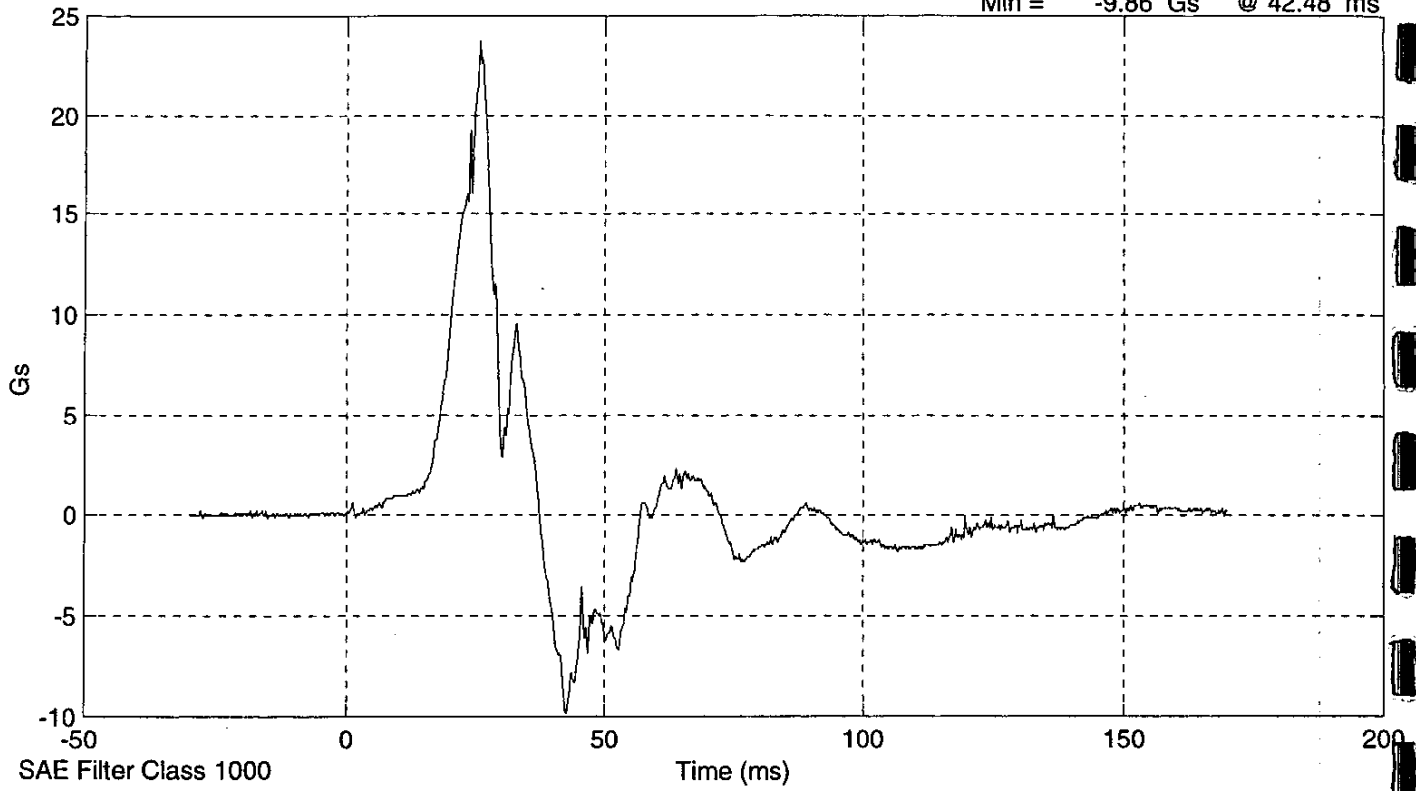
LOWER RIB Y

Max = 42.1 Gs @ 21.12 ms
Min = -35.2 Gs @ 28.68 ms



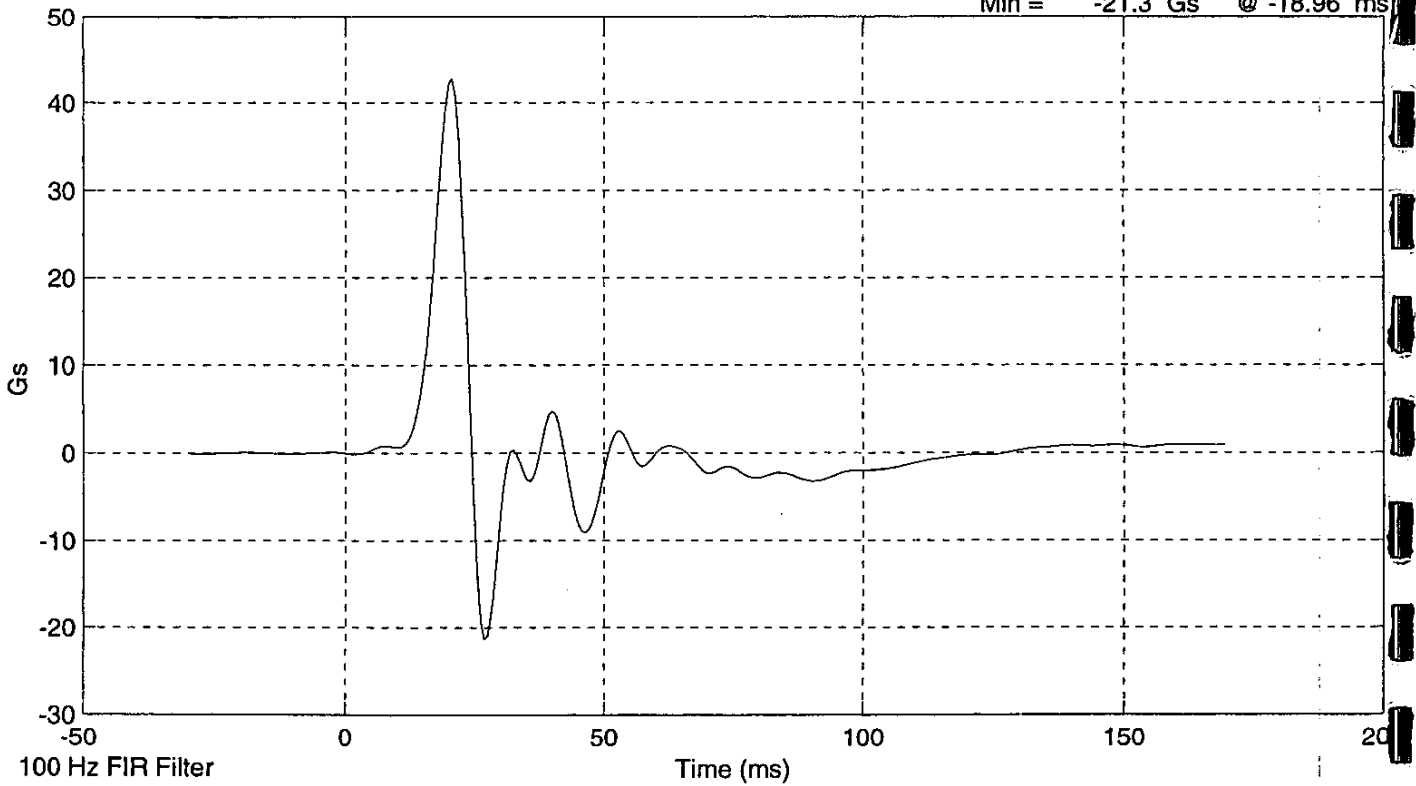
LOWER SPINE Y

Max = 23.8 Gs @ 25.68 ms
Min = -9.86 Gs @ 42.48 ms



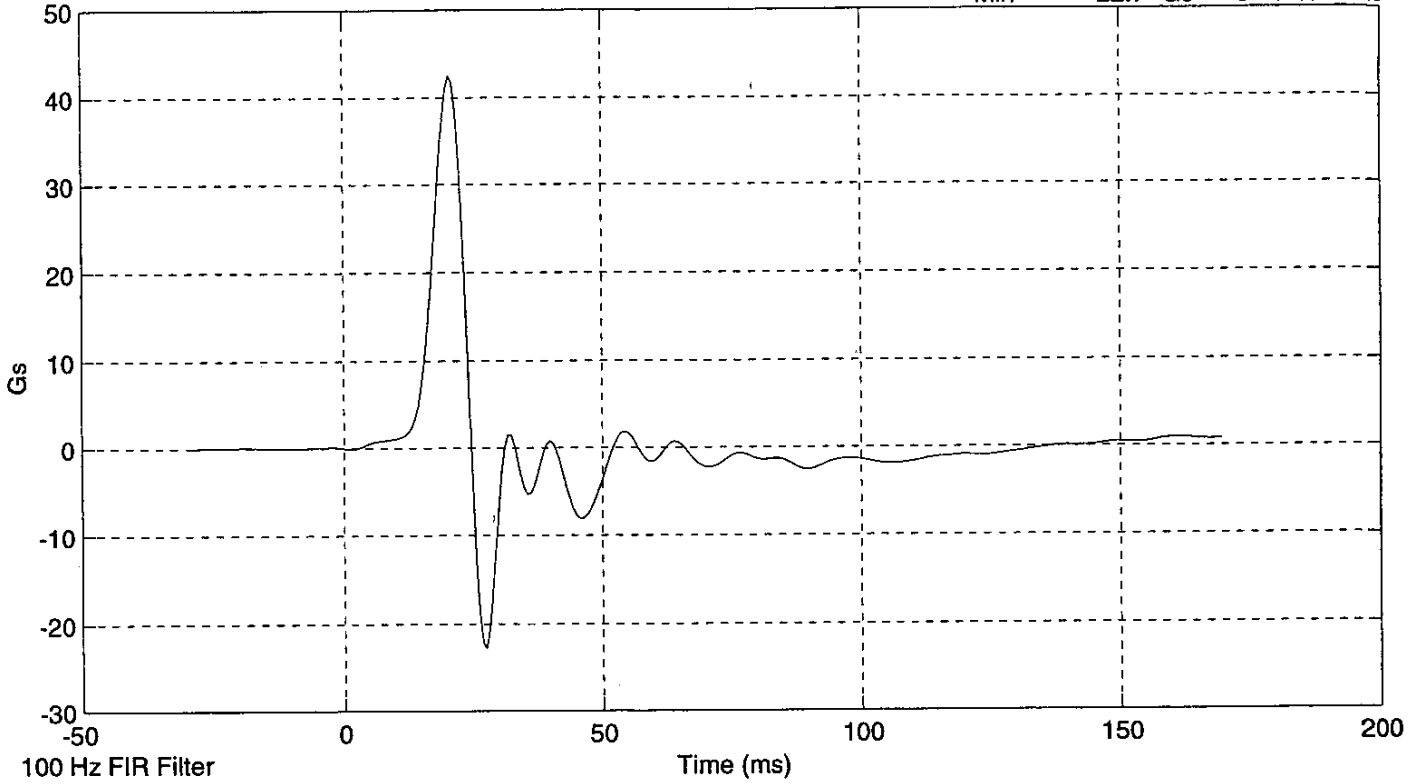
UPPER RIB Y

Max = 42.8 Gs @ -20.16 ms
Min = -21.3 Gs @ -18.96 ms



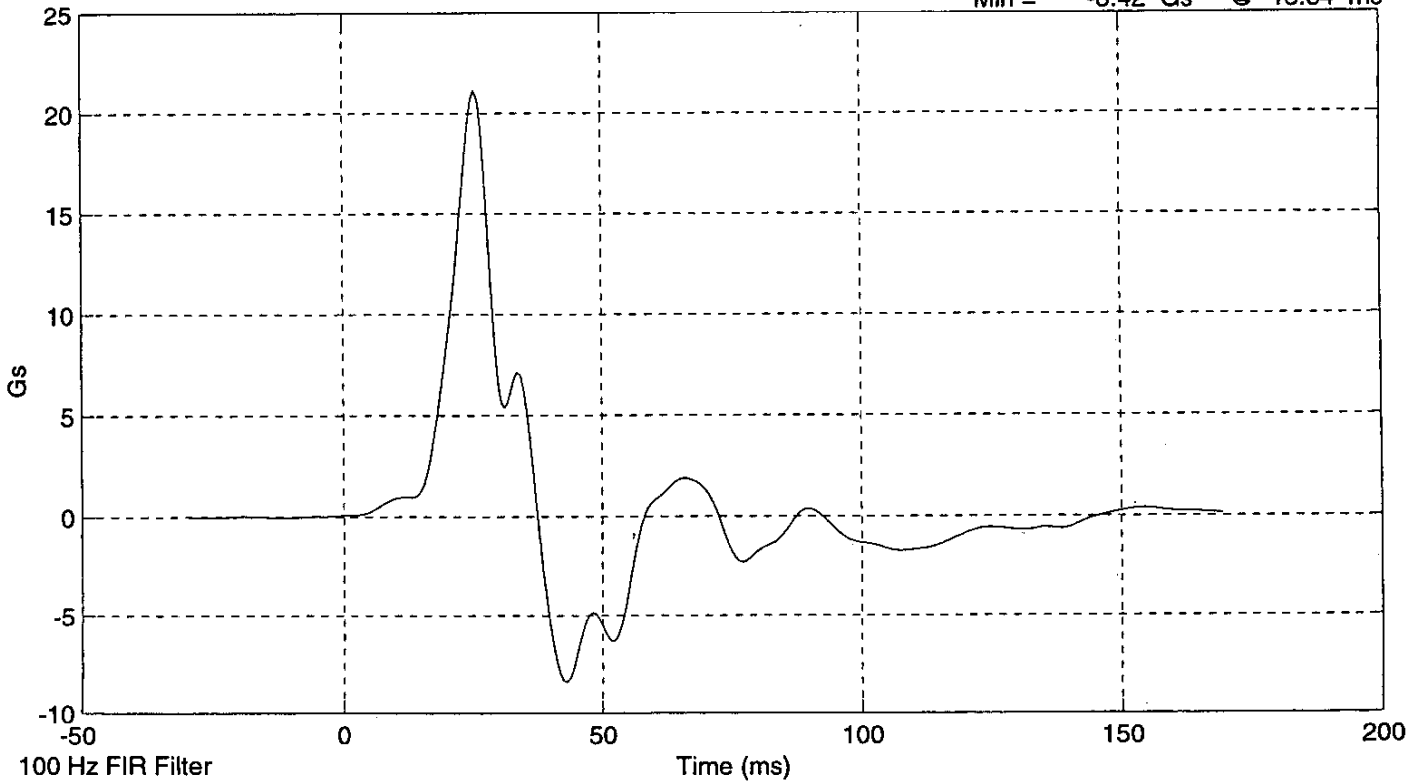
LOWER RIB Y

Max = 42.5 Gs @ -20.16 ms
Min = -22.7 Gs @ -18.84 ms



LOWER SPINE Y

Max = 21.1 Gs @ -19.20 ms
Min = -8.42 Gs @ -15.84 ms



LATERAL PELVIS IMPACT TEST
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

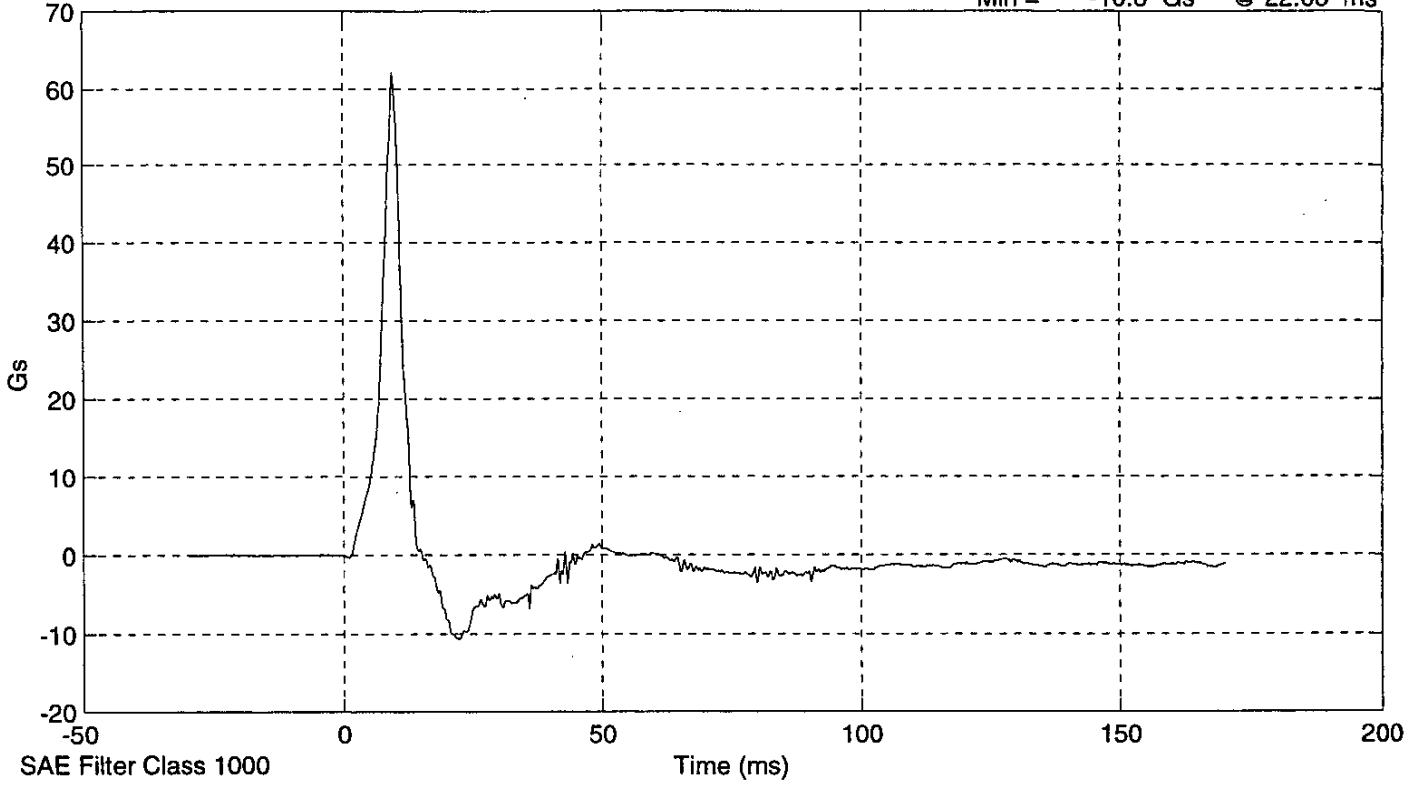
SID Serial No.: 027 Sequential Test Number: 3
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.30
PELVIS ACCELERATION (g's)	40 - 60	50.0

REMARKS: None

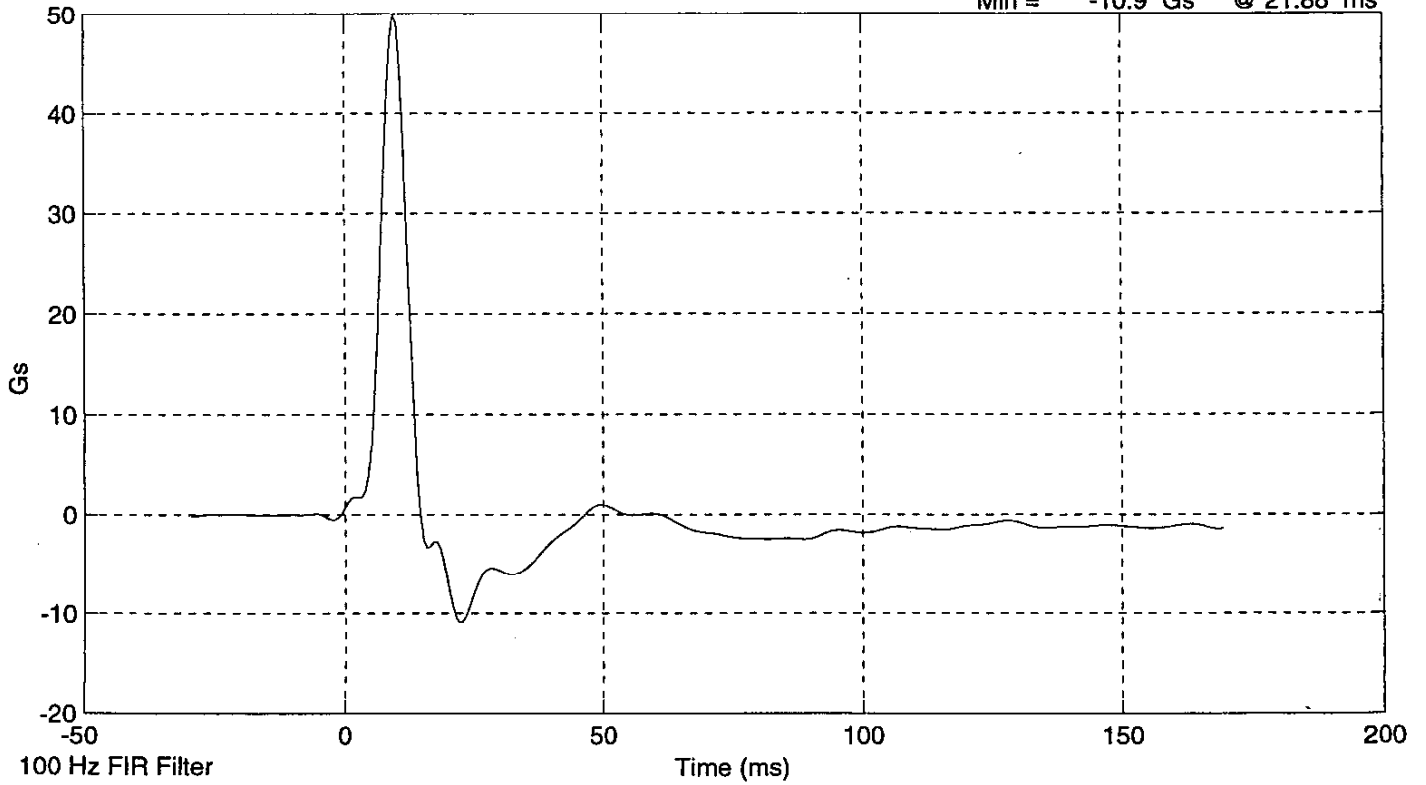
PELVIC Y

Max = 62 Gs @ 9.36 ms
Min = -10.6 Gs @ 22.08 ms



PELVIC Y

Max = 50 Gs @ 9.38 ms
Min = -10.9 Gs @ 21.88 ms



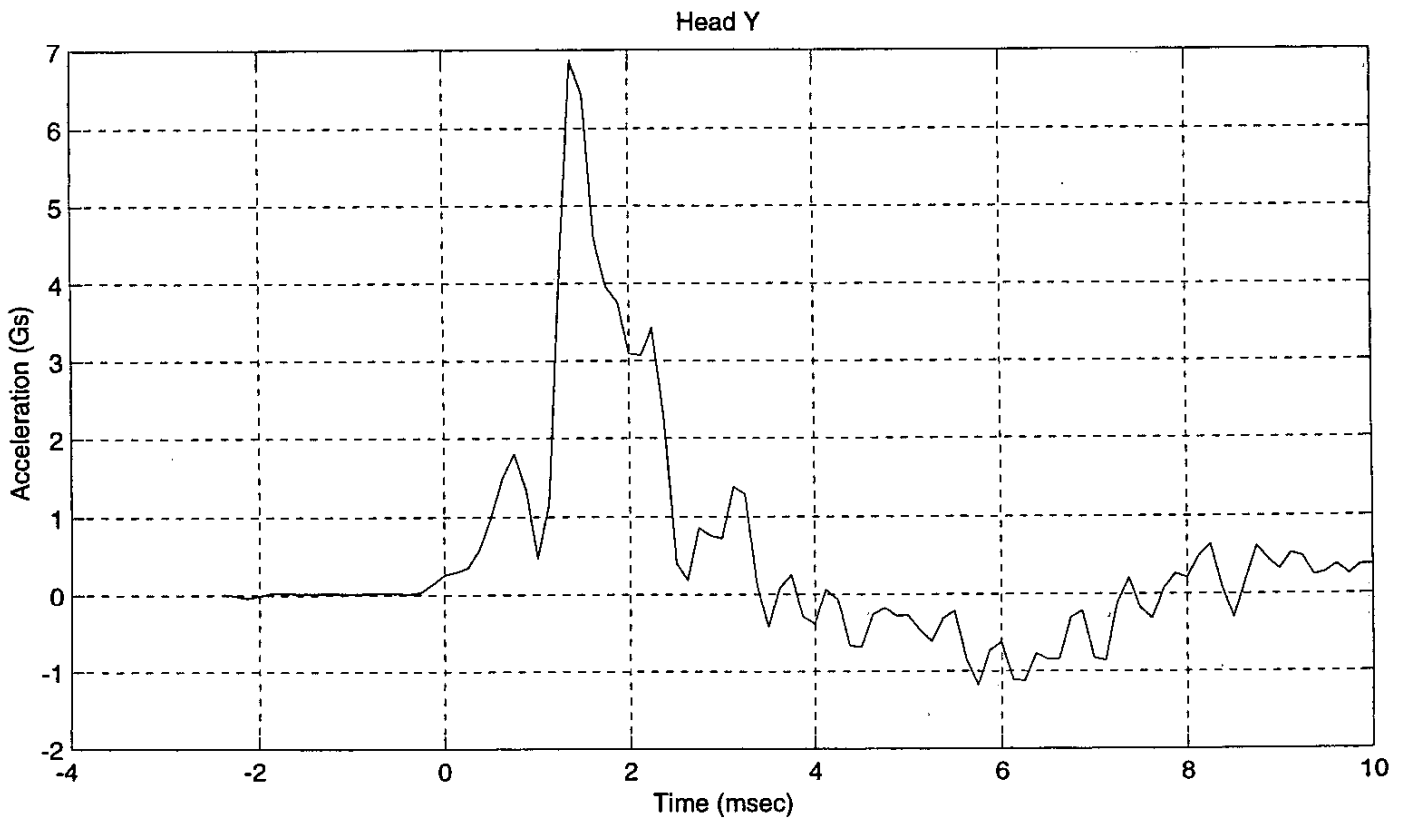
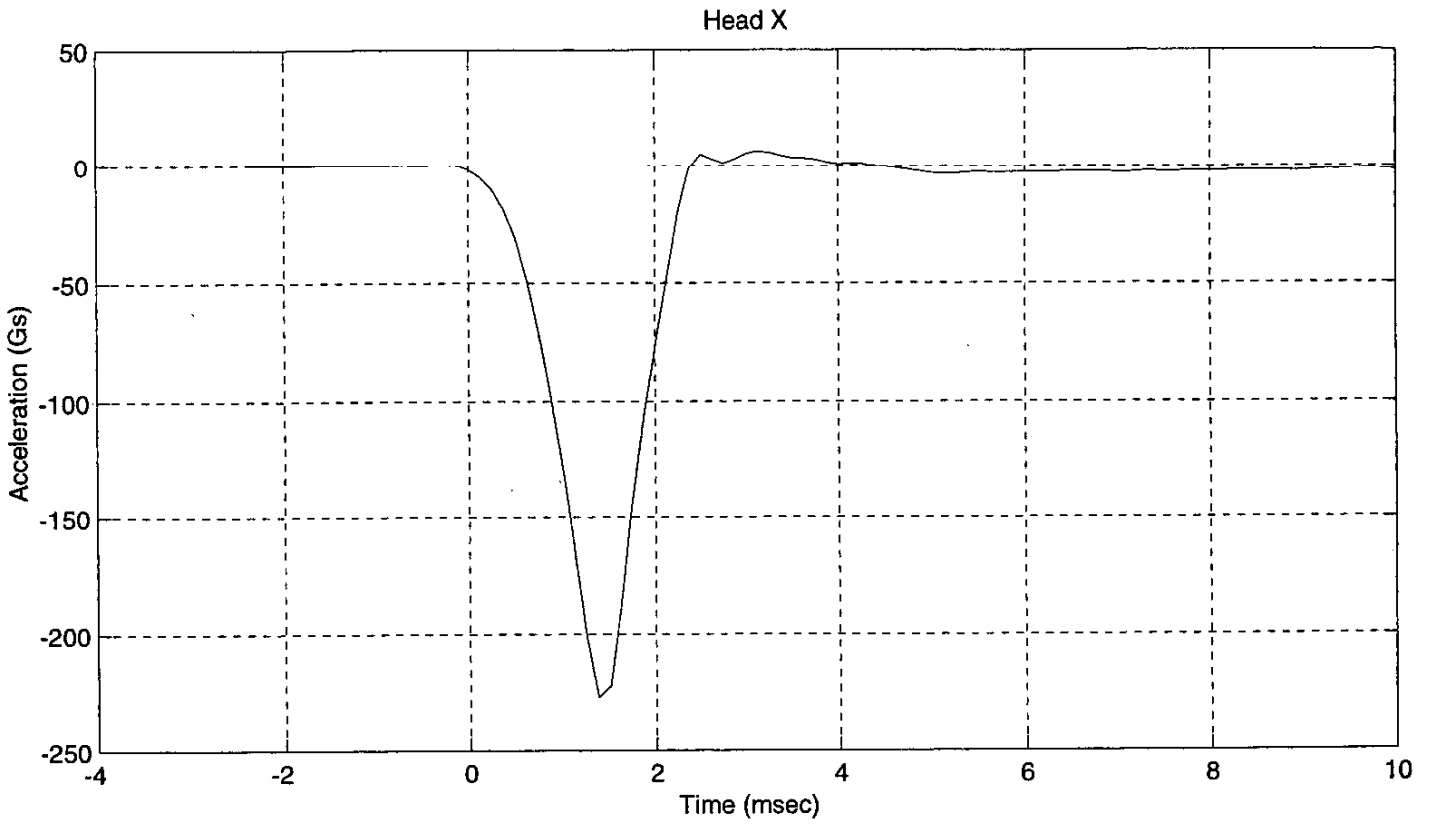
HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

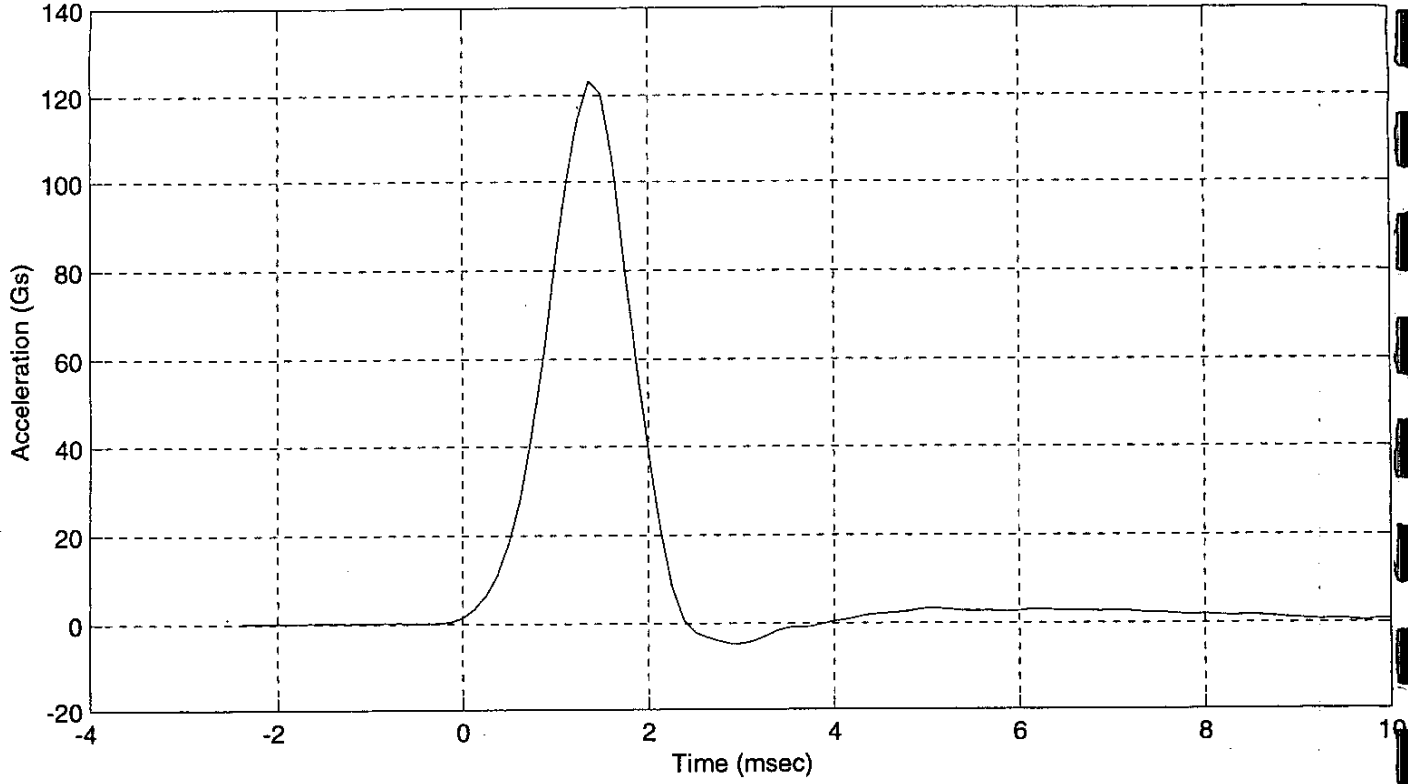
SID Serial No.: 027 Sequential Test Number: 3
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	258.48
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	6.87
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

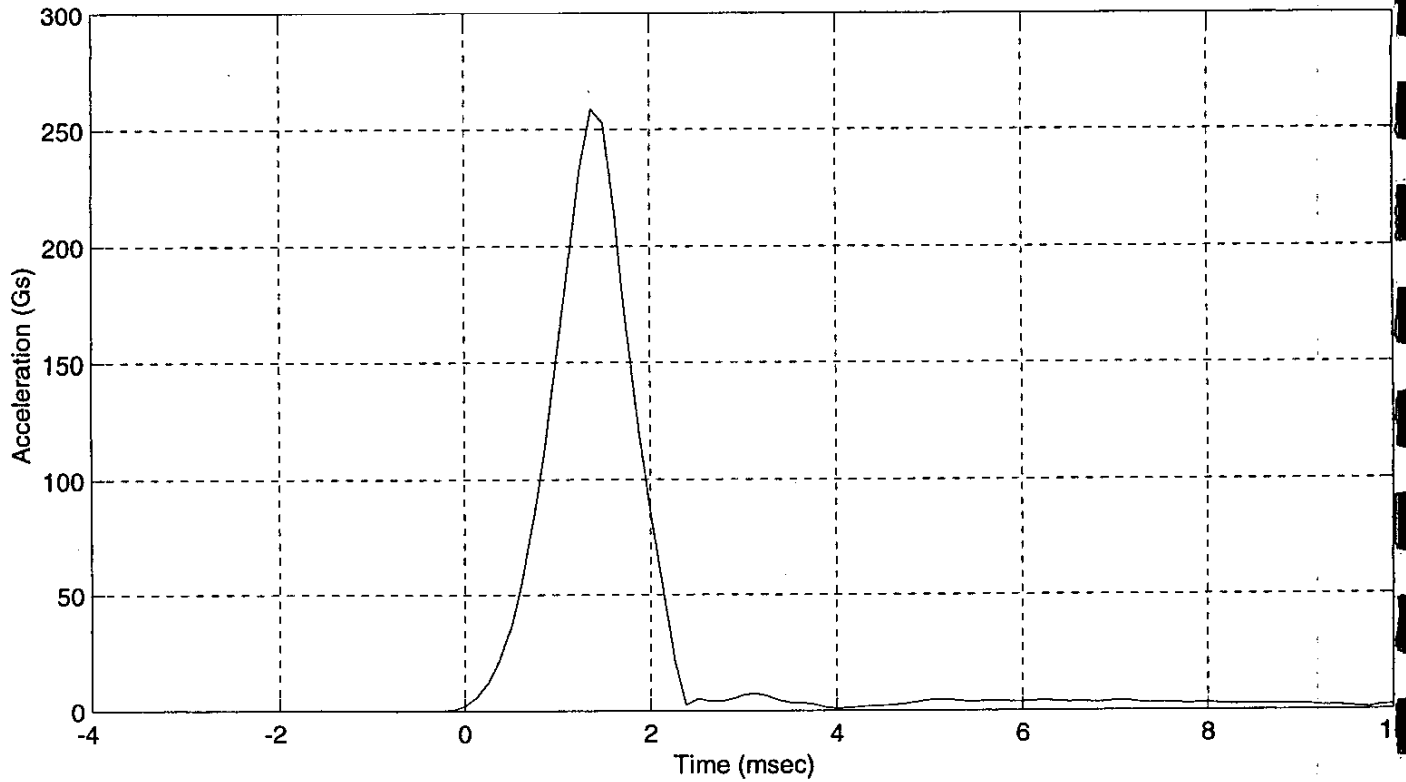
REMARKS: None



Head Z



Head Resultant



**ABDOMINAL COMPRESSION TEST
PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027
Date: January 4, 2000

Sequential Test Number: 3
Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
FORCE @ 13 mm (N)	104 - 162	117.9
FORCE @ 19 mm (N)	163 - 221	182.4
FORCE @ 25 mm (N)	222 - 280	235.8
FORCE @ 33 mm (N)	325 - 391	389.2

REMARKS: None

Dummy S/N 027

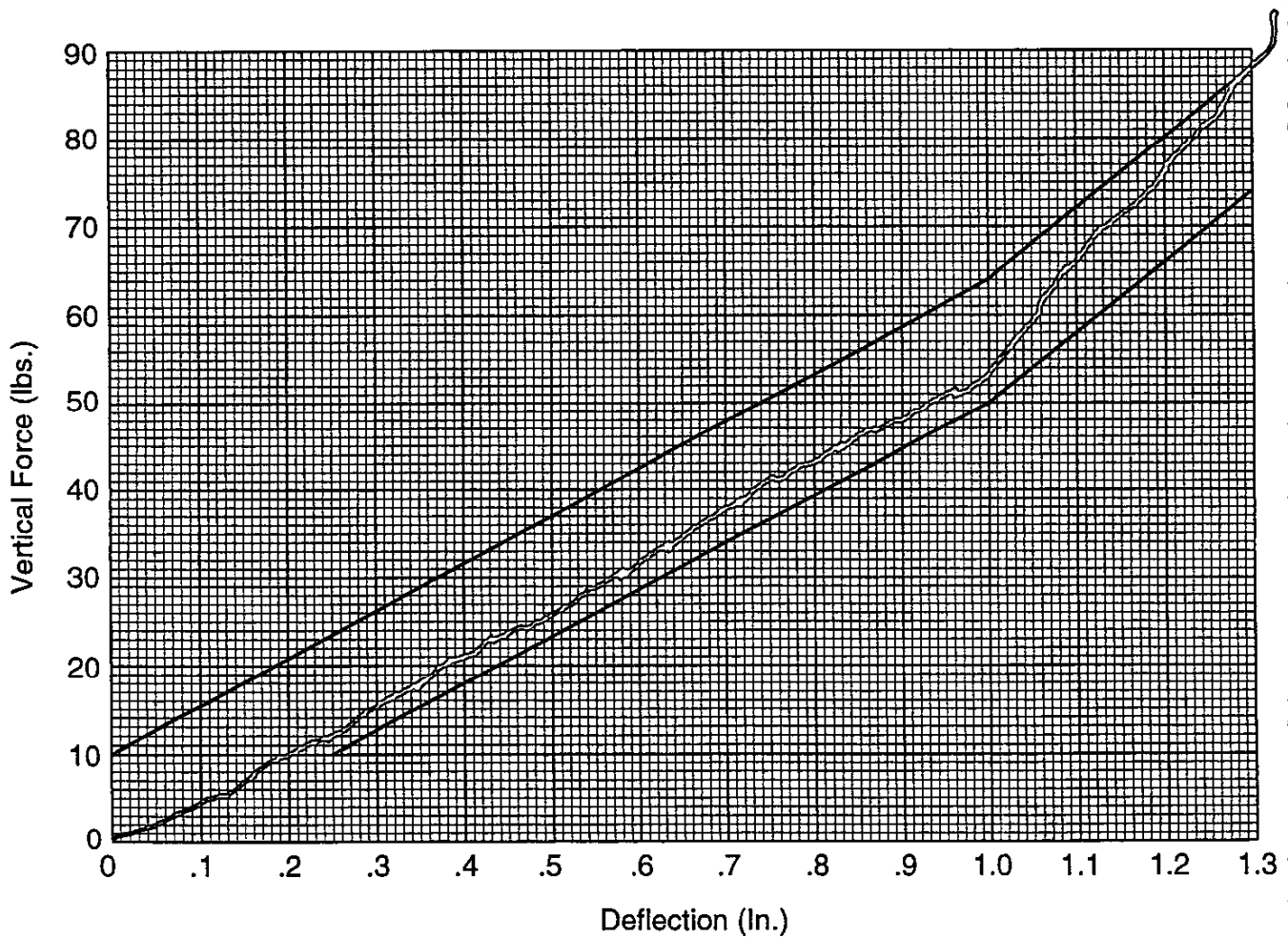
W/A _____

Date 1-4-2000

Performed By MJK

Temp. 70°

Humidity 30%



**Hybrid II
Abdomen Static Press**

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

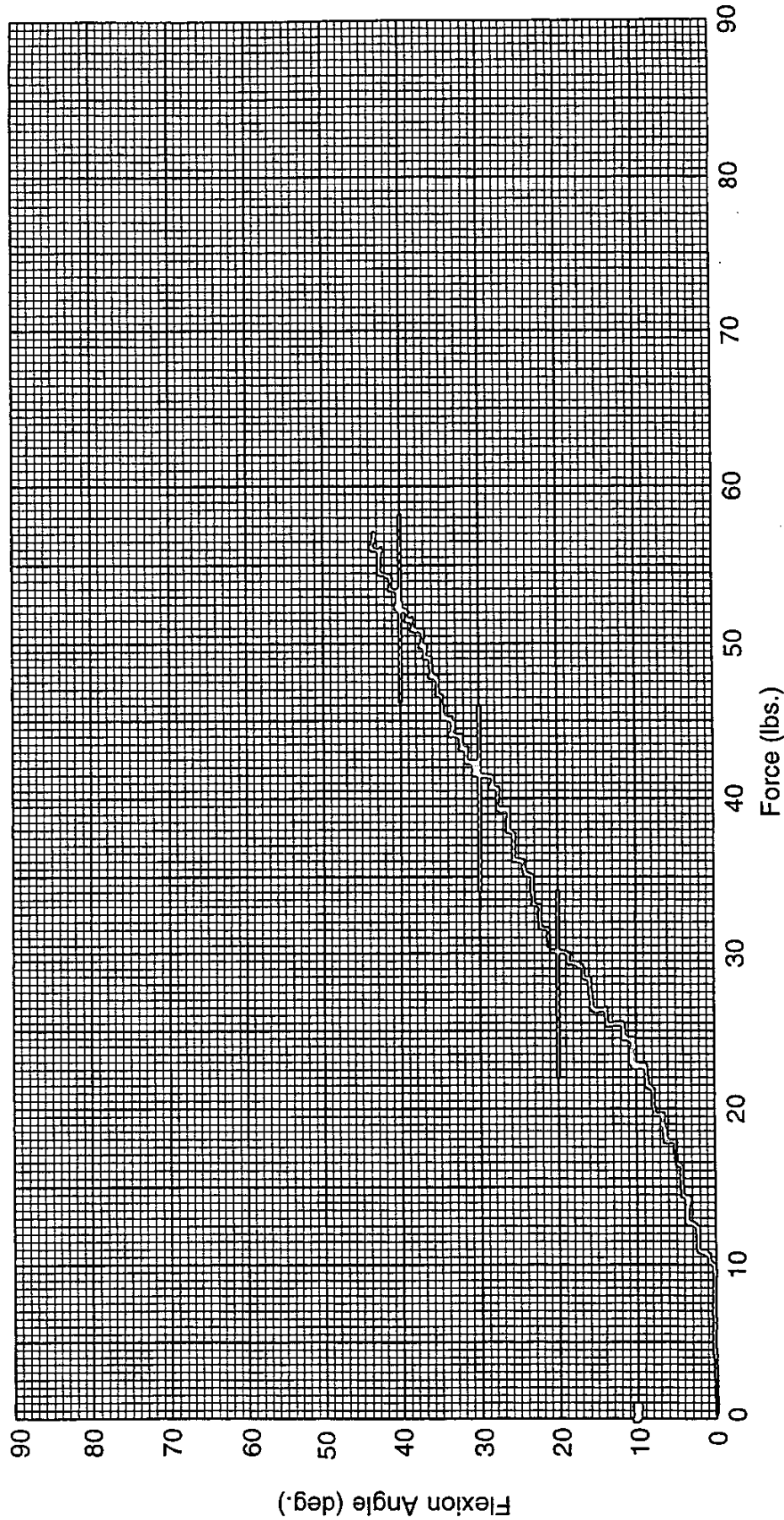
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 3
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	133.4
FORCE @ 30° (N)	151.2 - 204.6	184.6
FORCE @ 40° (N)	204.6 - 258	233.5
RETURN ANGLE	12° max.	10

REMARKS: None

Dummy S/N 027
W/A _____
Date 1-4-2000
Performed By MJK
Temp. 70°
Humidity 30%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 3
 Date: January 4, 2000 Laboratory Technician: M. Kilgallon

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

REMARKS: None

**CALIBRATION TEST RESULTS
PRE-TEST**

SID NO.: 268

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 5
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

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

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 5
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	506
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	368

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1.5
Date: August 27, 1999 Laboratory Technician: B. Swiecicki

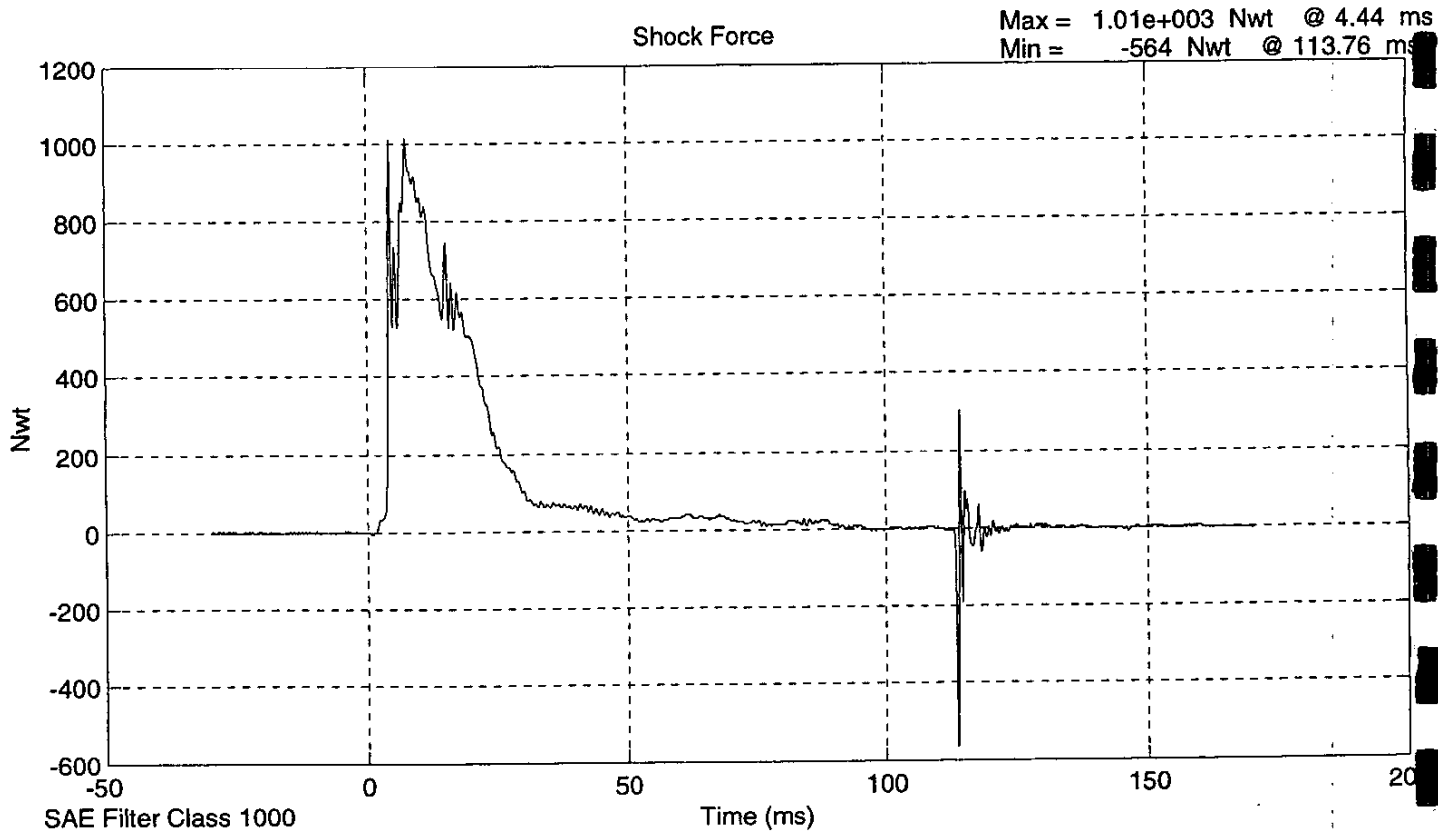
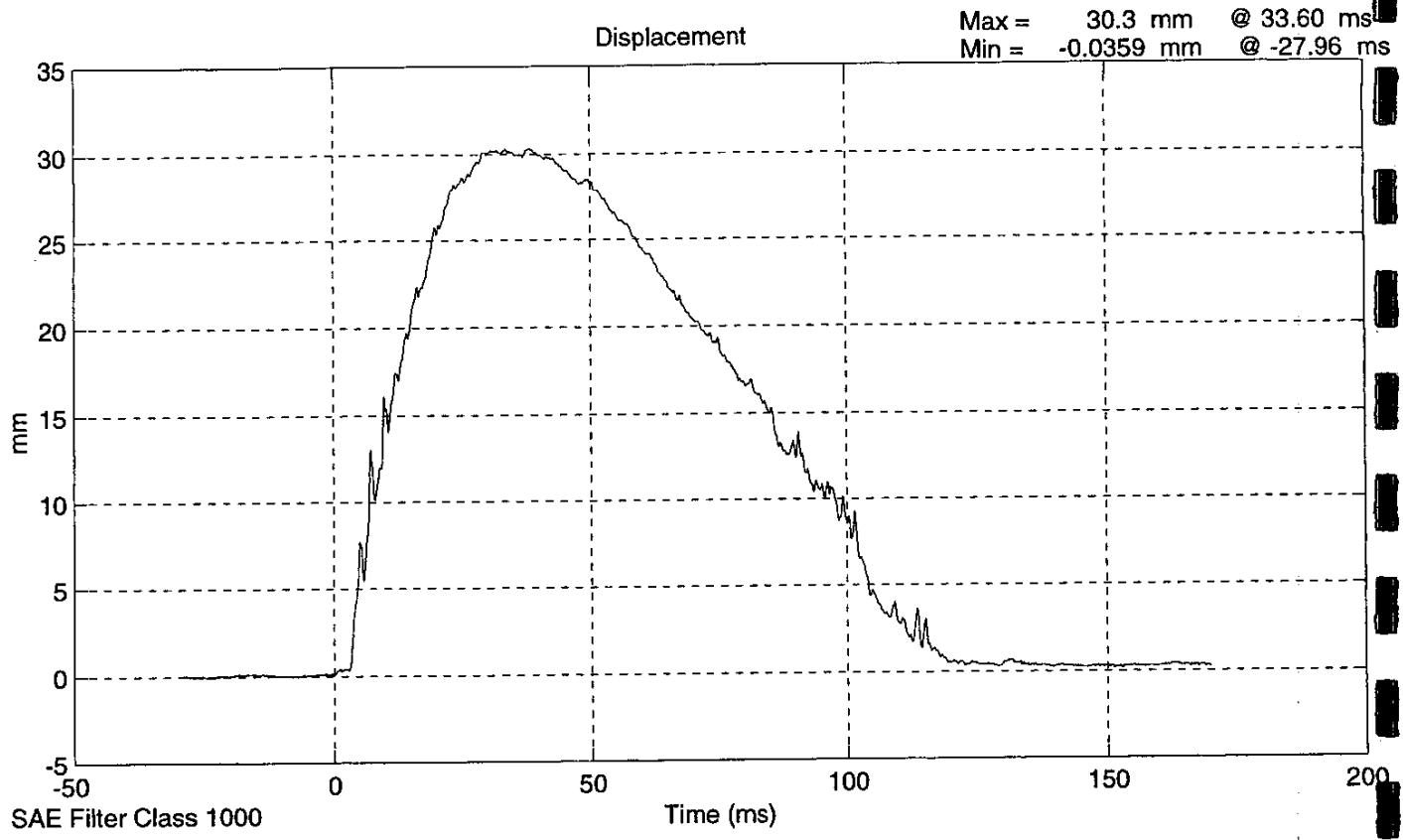
DAMPER IDENTIFICATION: 268

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	30
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	1011
	DISPLACEMENT (mm)	30 - 35	30
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1942
	DISPLACEMENT (mm)	32 - 37	34
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3931
	DISPLACEMENT (mm)	33 - 40	36

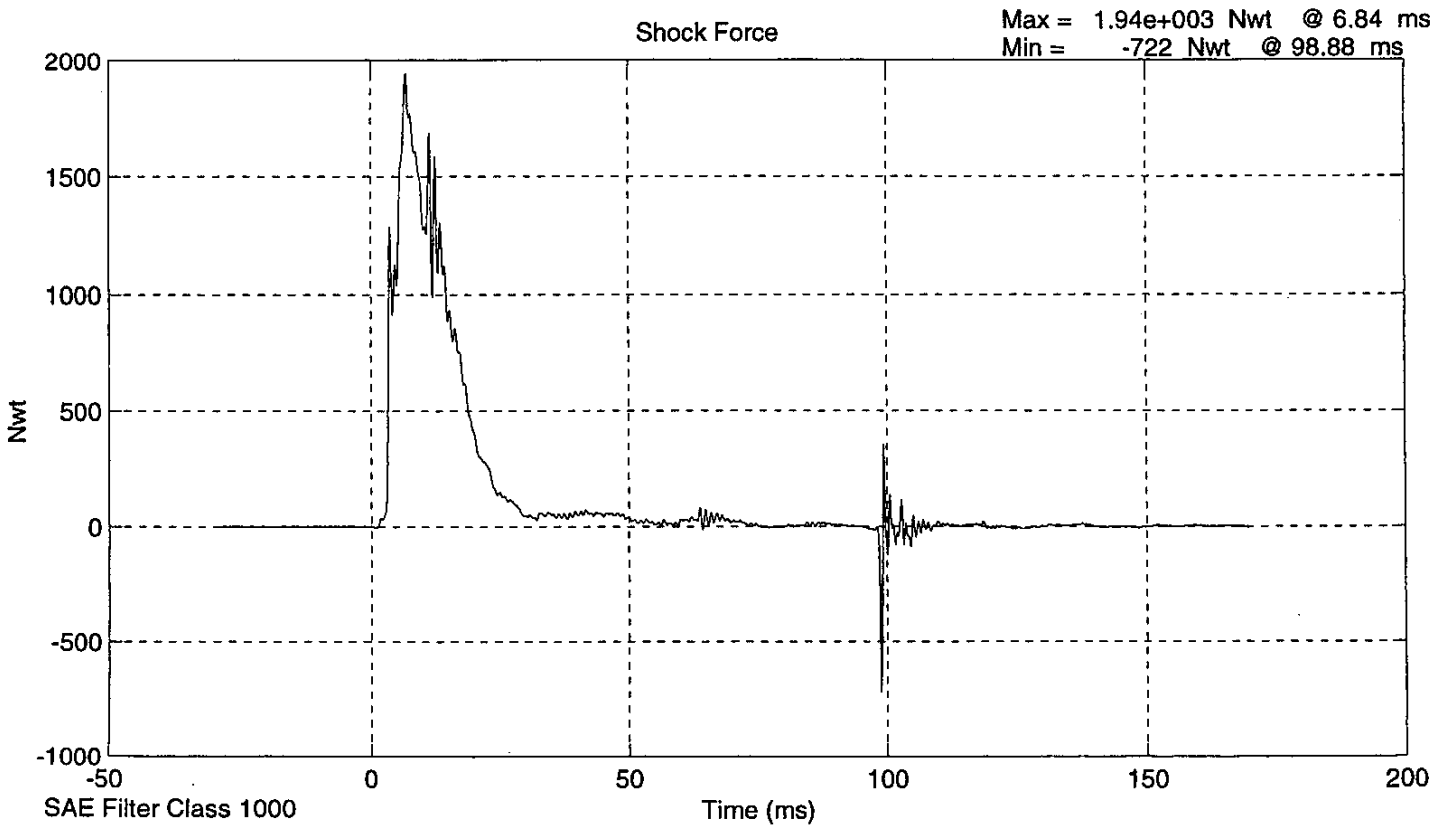
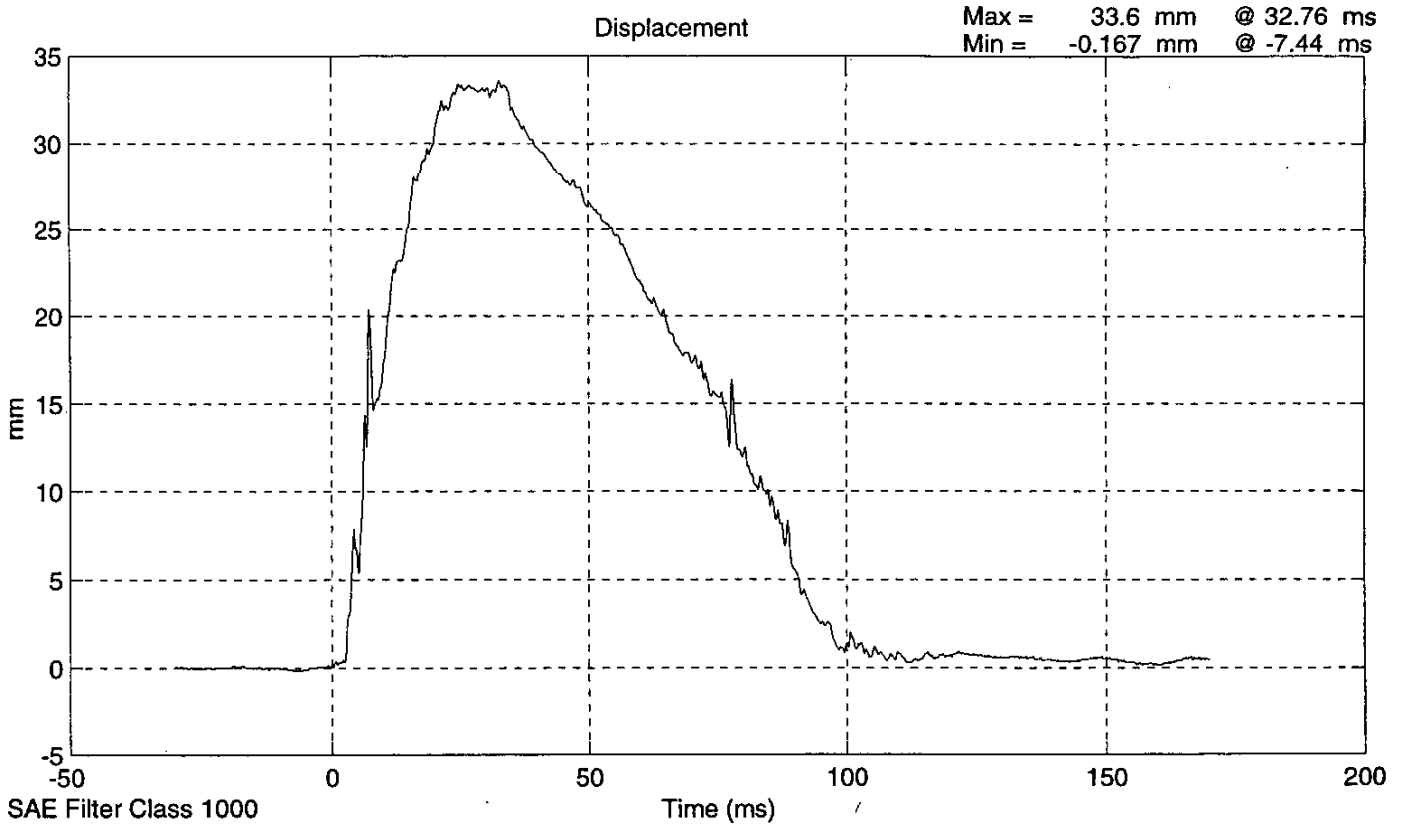
DAMPER SETTING: 5

REMARKS: None

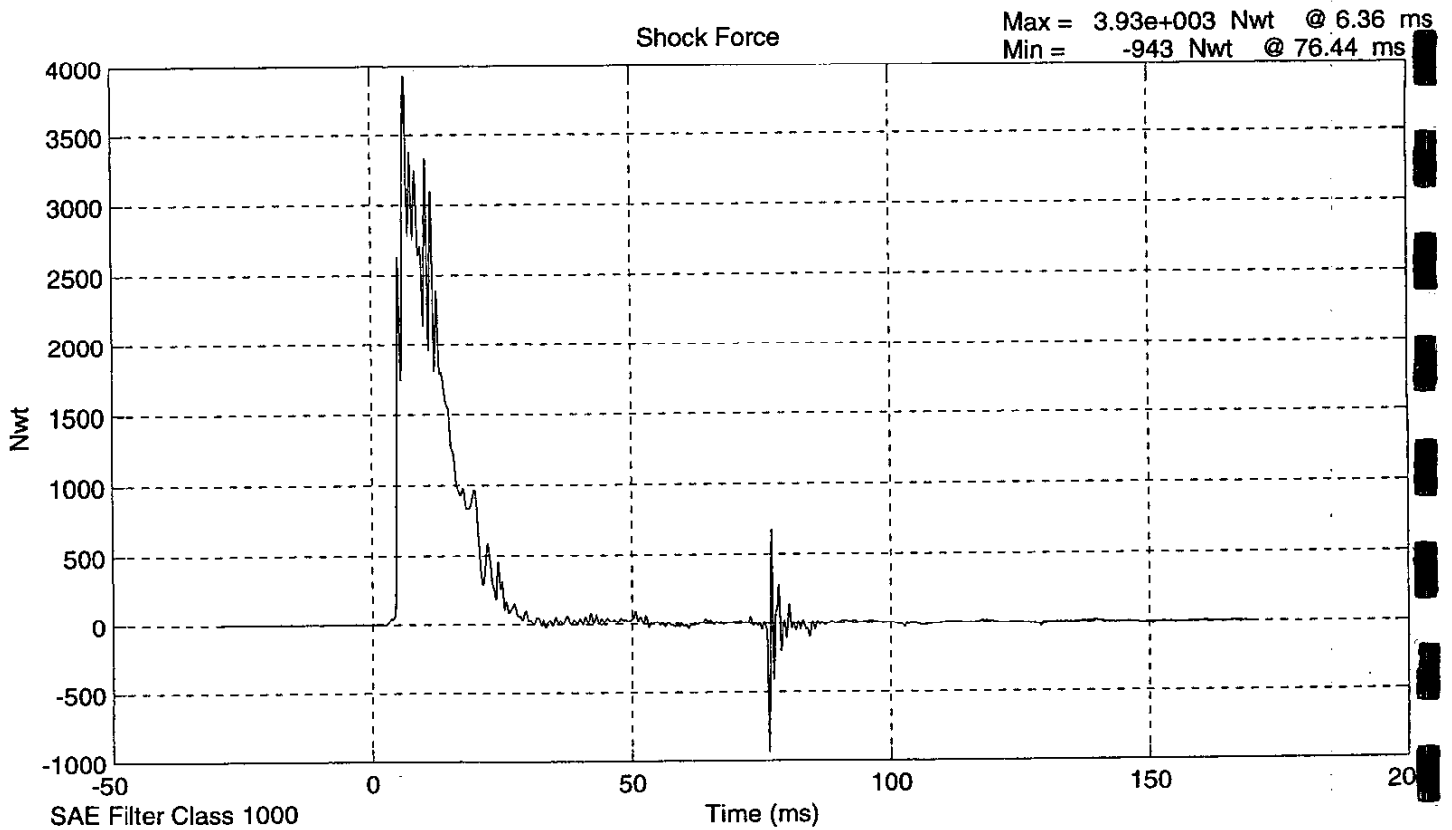
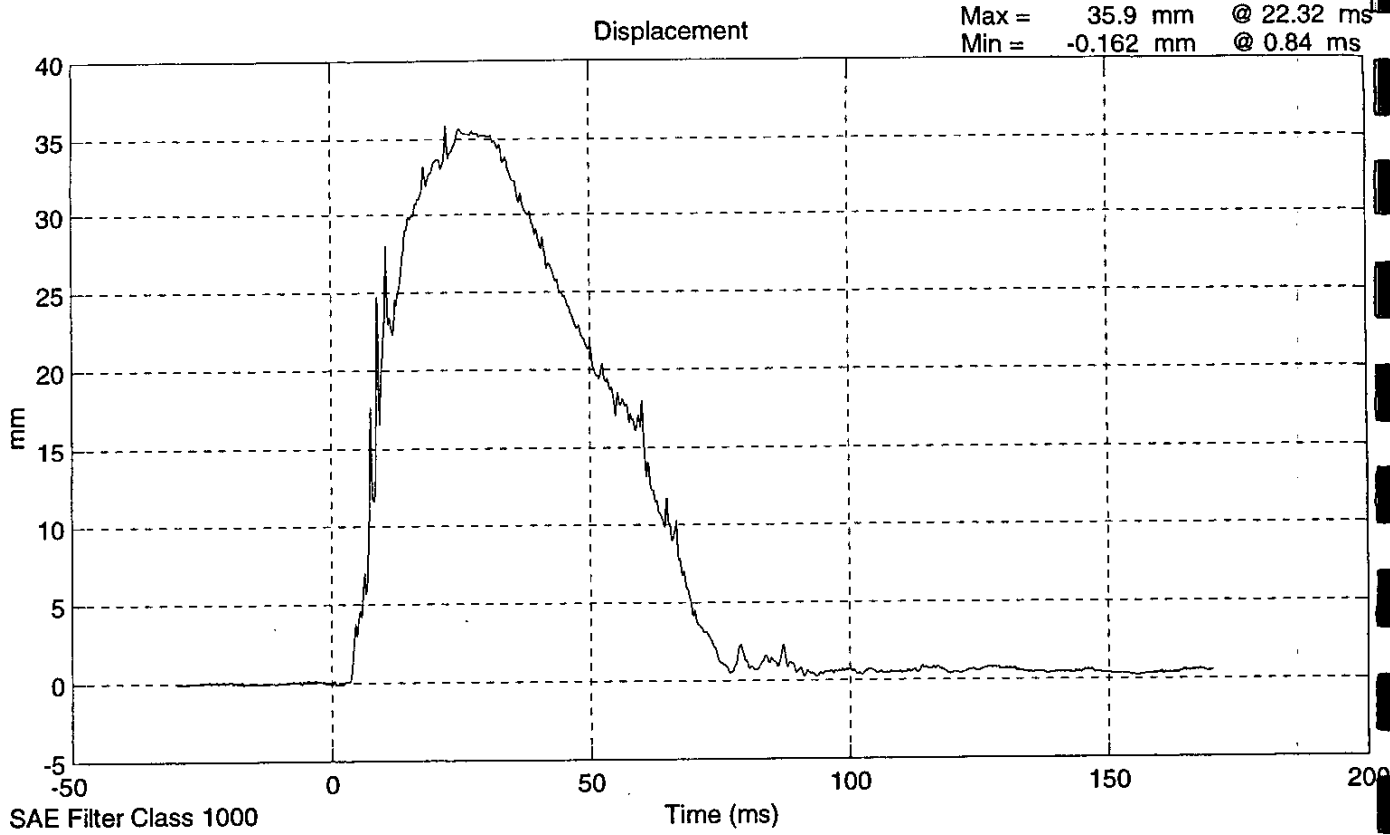
SID Shock Absorber Impact Test 268 @ 3.048 m/s



SID Shock Absorber Impact Test 268 @ 4.2672 m/s



SID Shock Absorber Impact Test 268 @ 6.096 m/s



LATERAL THORAX IMPACT TEST
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

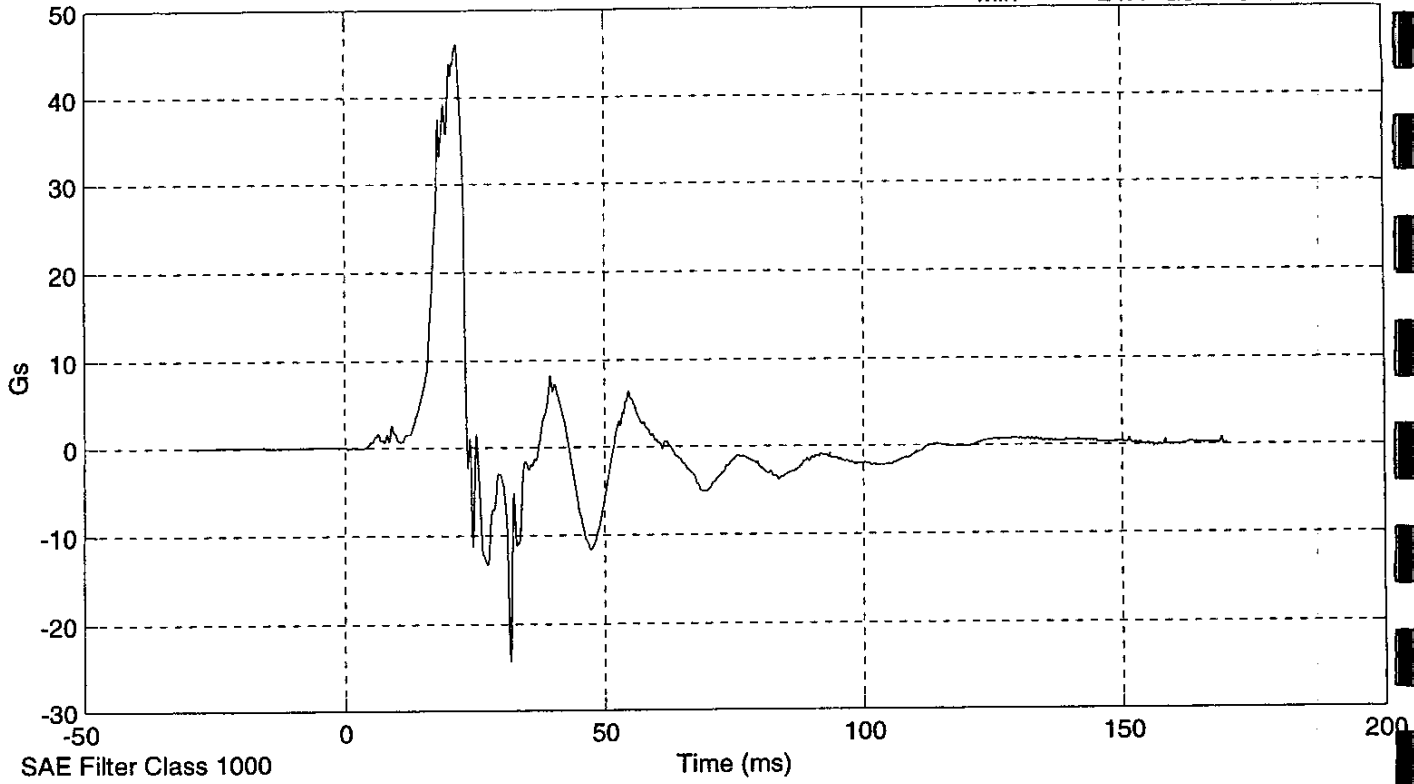
SID Serial No.: 268 Sequential Test Number: 5
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.32
UPPER RIB (g's)	37 - 46	44.7
LOWER RIB (g's)	37 - 46	42.2
LOWER SPINE (g's)	15 - 22	21.2

REMARKS: None

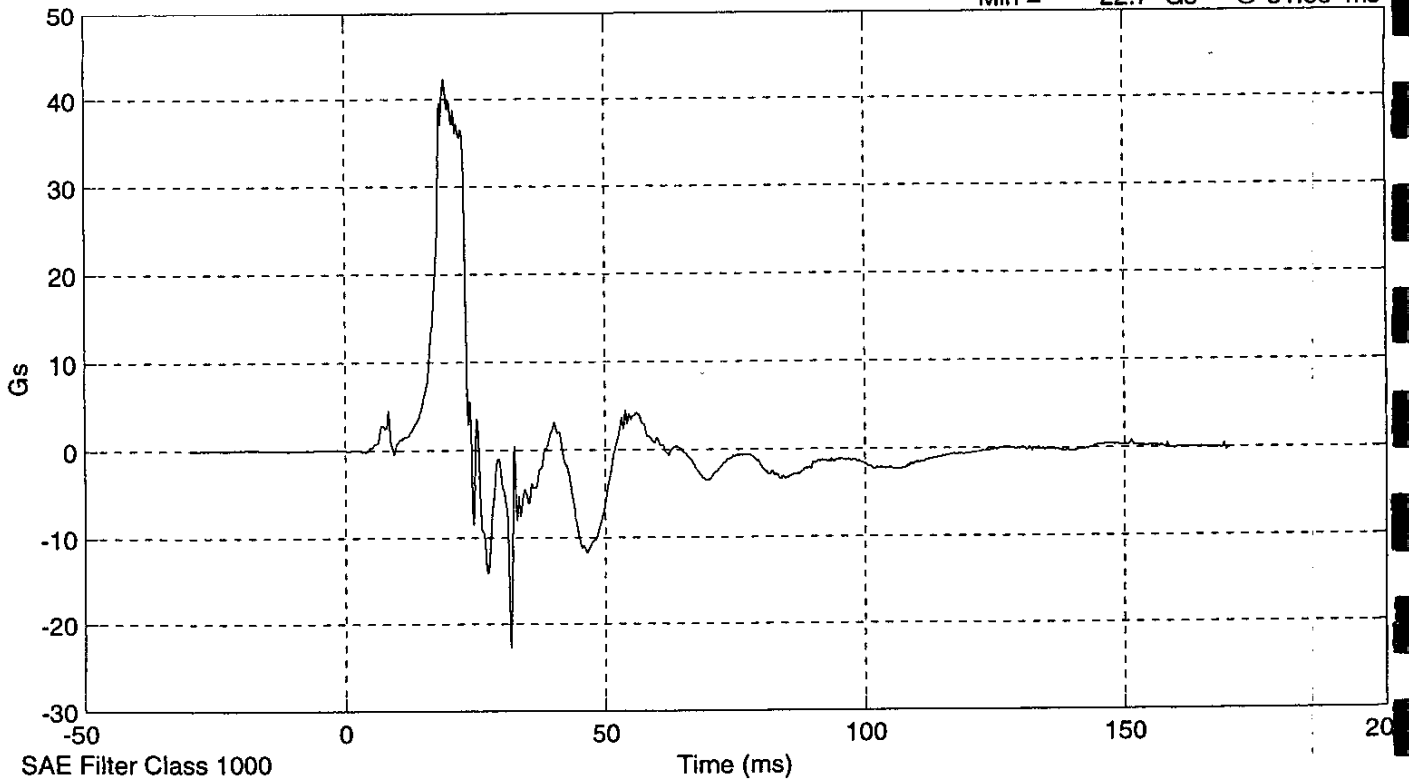
UPPER RIB Y

Max = 46.1 Gs @ 21.48 ms
Min = -24.4 Gs @ 31.68 ms



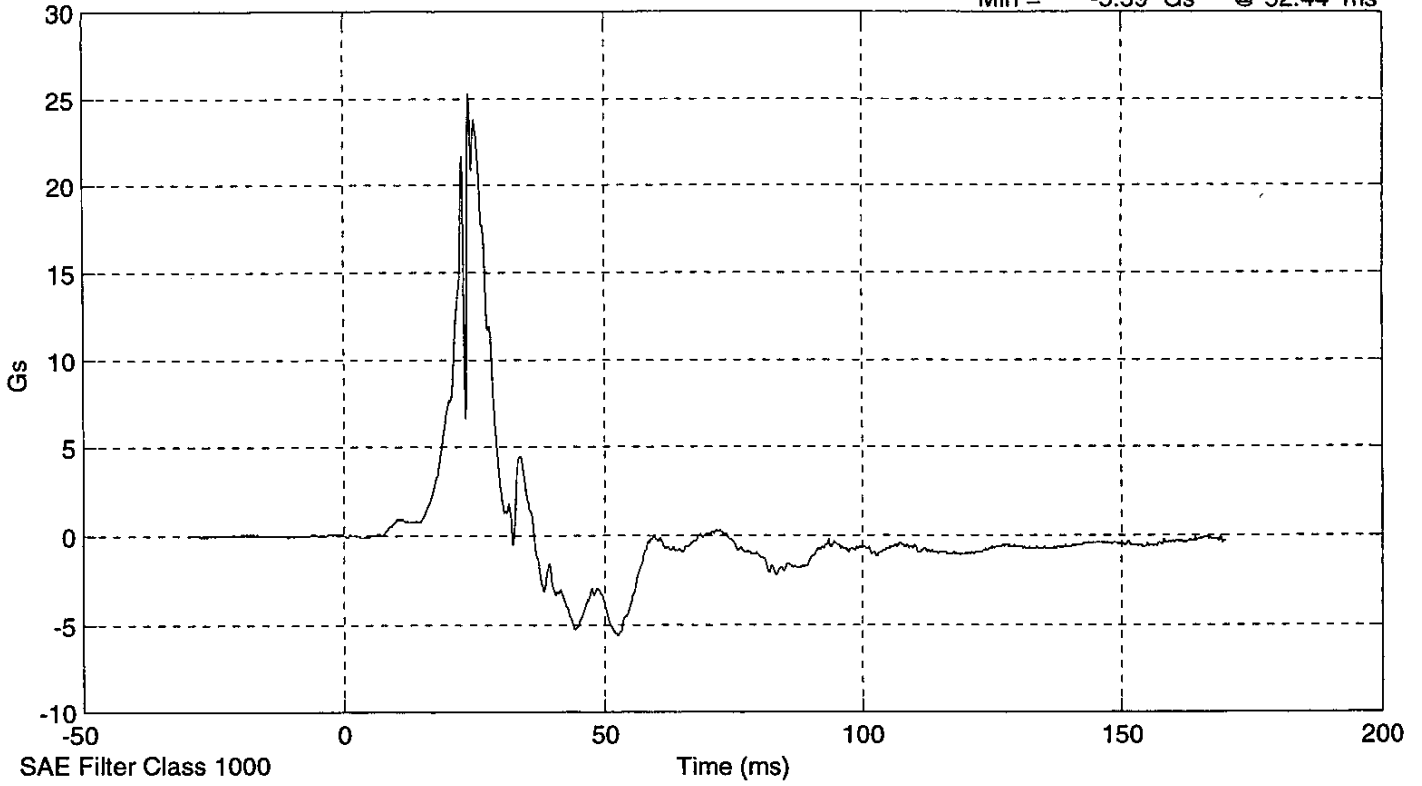
LOWER RIB Y

Max = 42.3 Gs @ 18.96 ms
Min = -22.7 Gs @ 31.68 ms



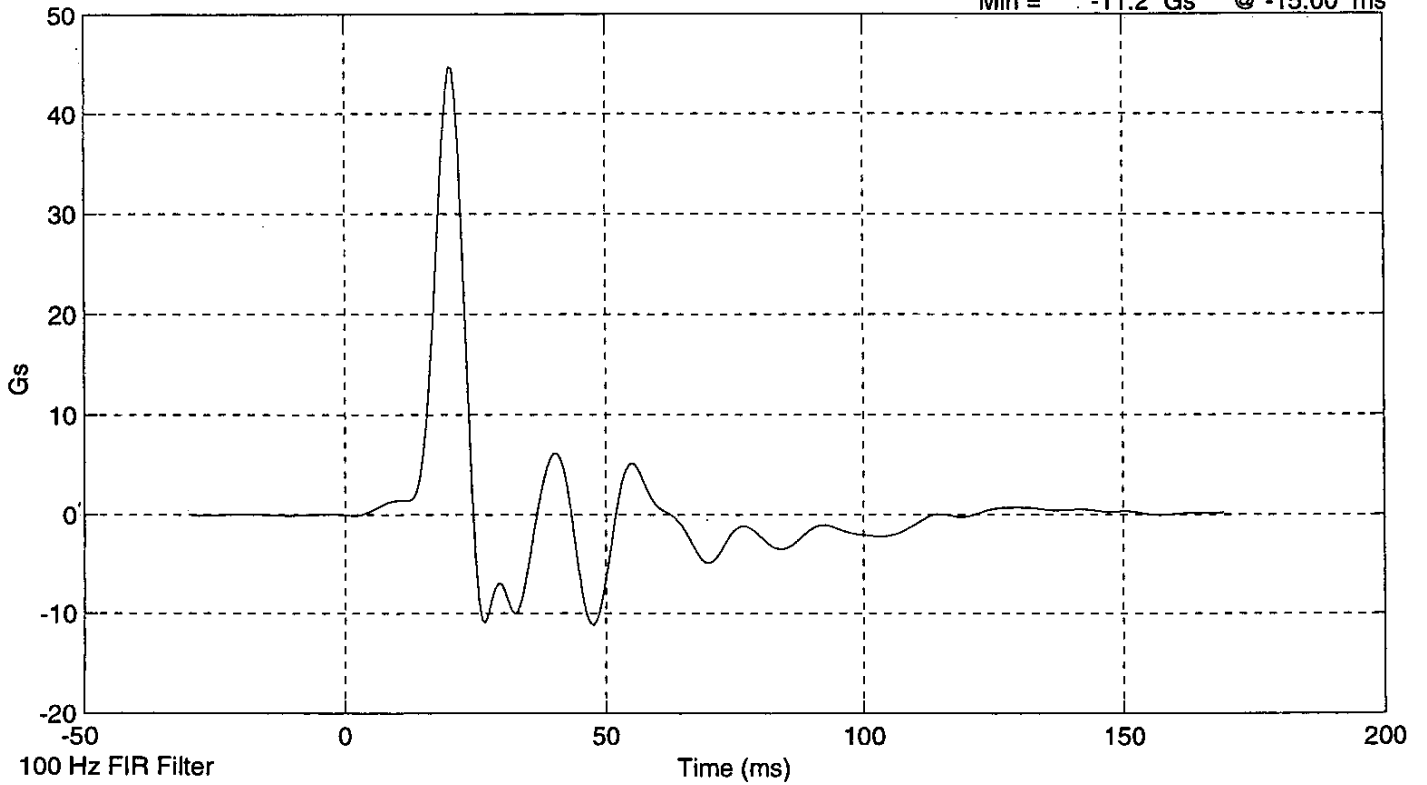
LOWER SPINE Y

Max = 25.3 Gs @ 24.00 ms
Min = -5.59 Gs @ 52.44 ms



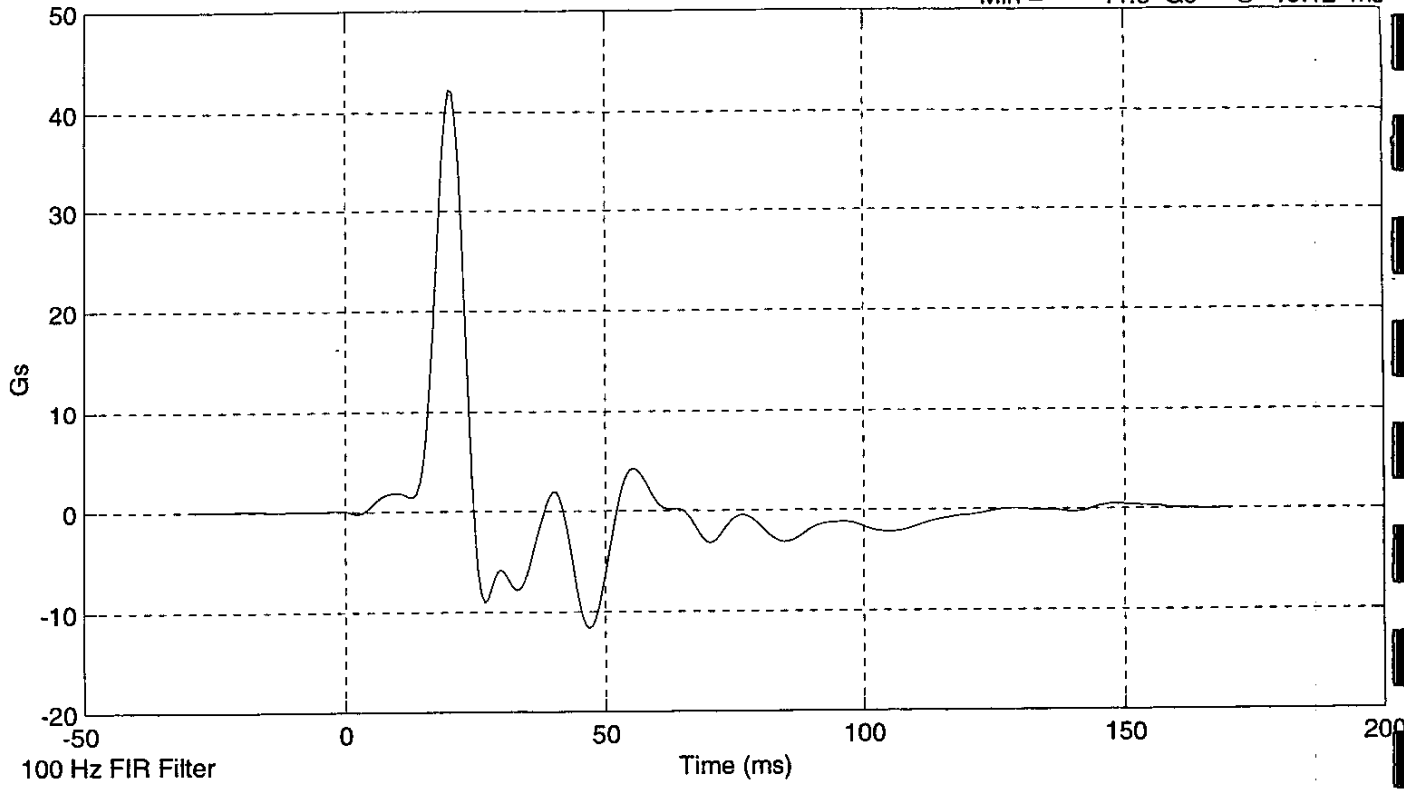
UPPER RIB Y

Max = 44.7 Gs @ -20.28 ms
Min = -11.2 Gs @ -15.00 ms



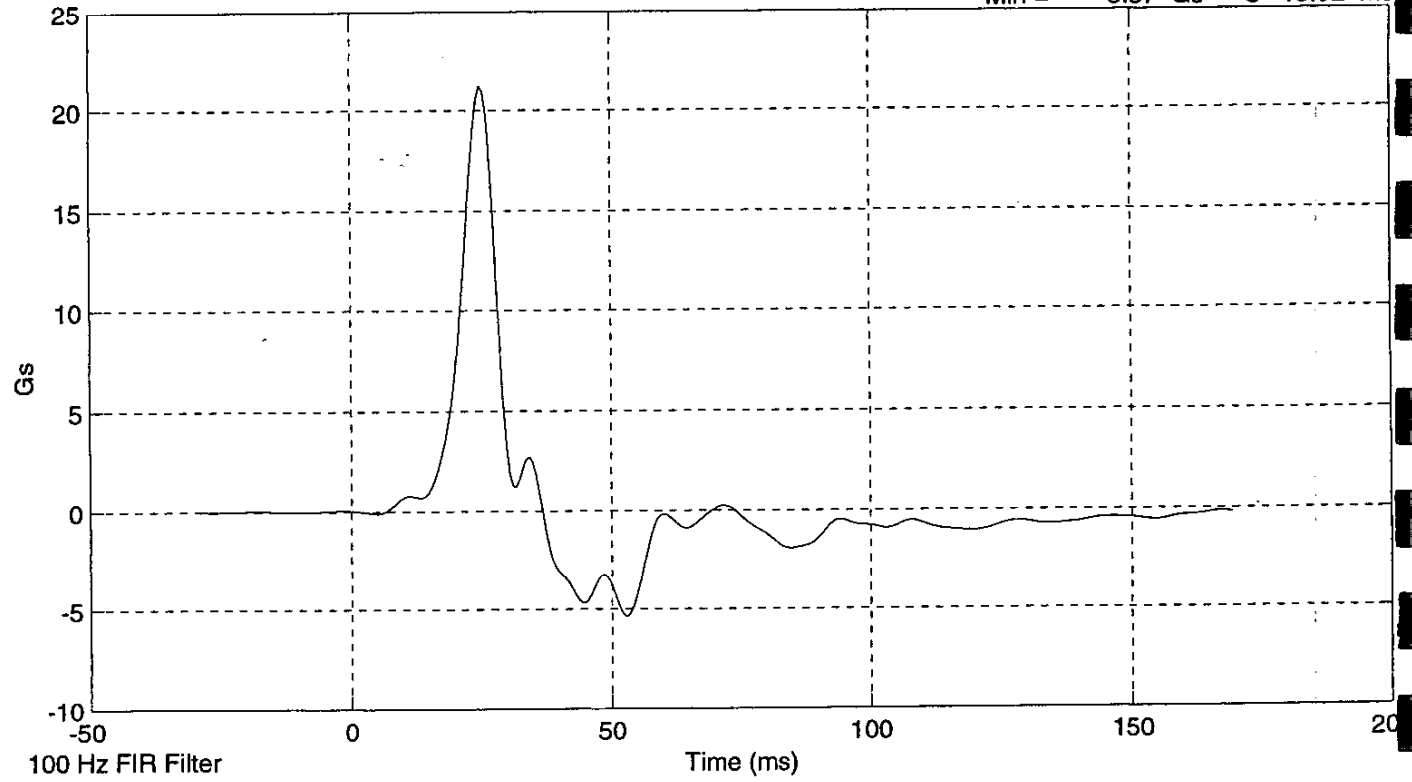
LOWER RIB Y

Max = 42.2 Gs @ -20.28 ms
Min = -11.6 Gs @ -15.12 ms



LOWER SPINE Y

Max = 21.2 Gs @ -19.32 ms
Min = -5.37 Gs @ -13.92 ms



LATERAL PELVIS IMPACT TEST
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268

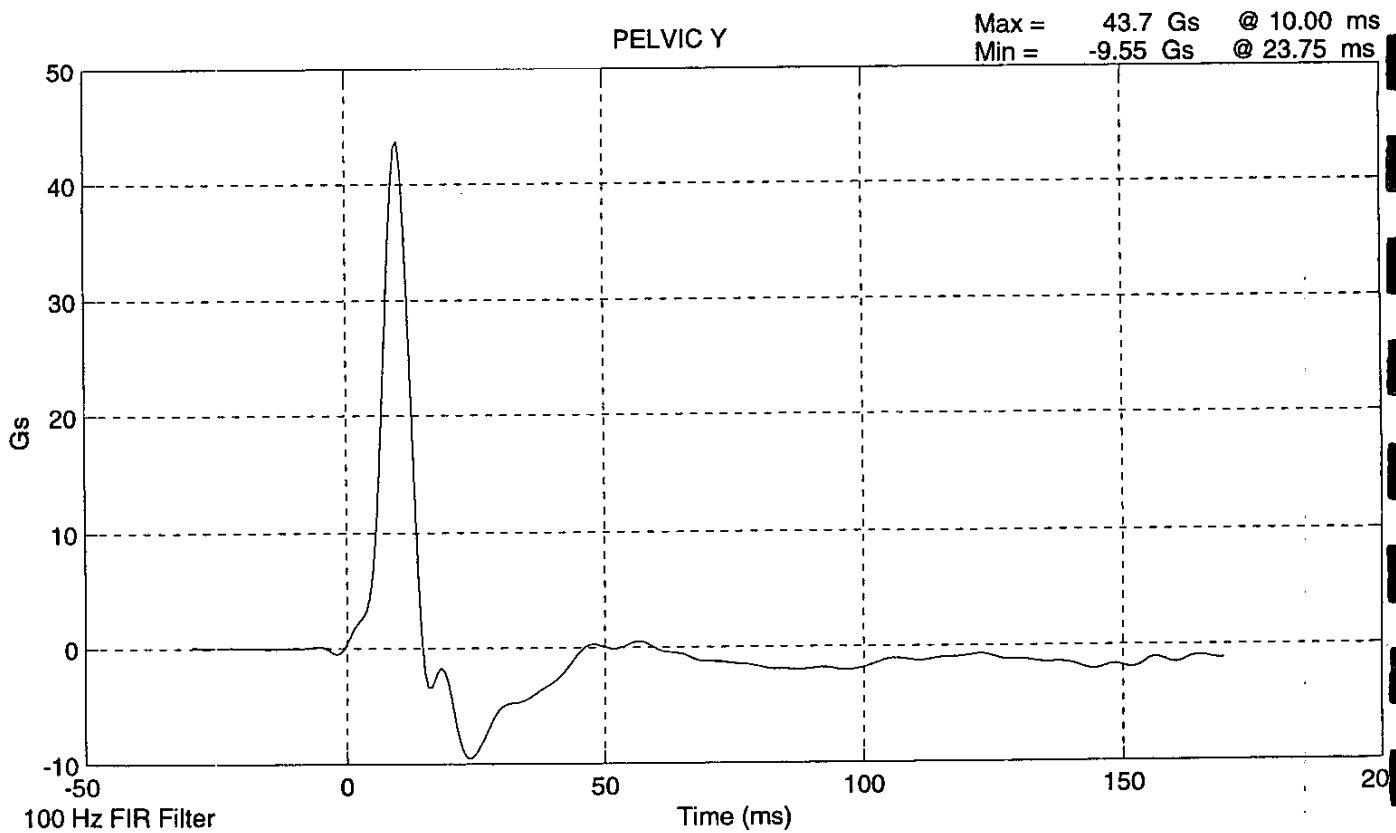
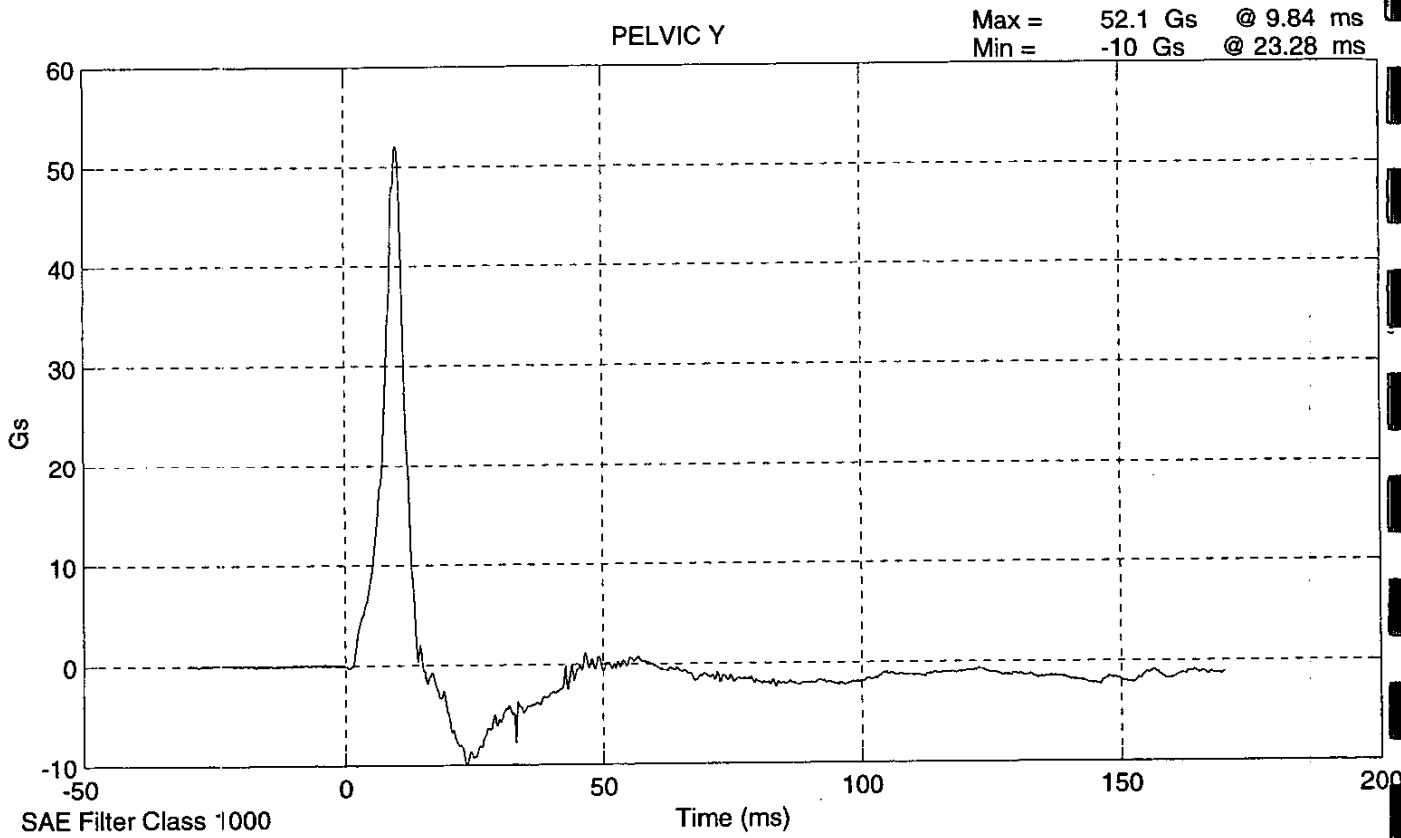
Sequential Test Number: 5

Date: January 4, 2000

Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	43.7

REMARKS: None



HEAD DROP TEST

PRE-TEST

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

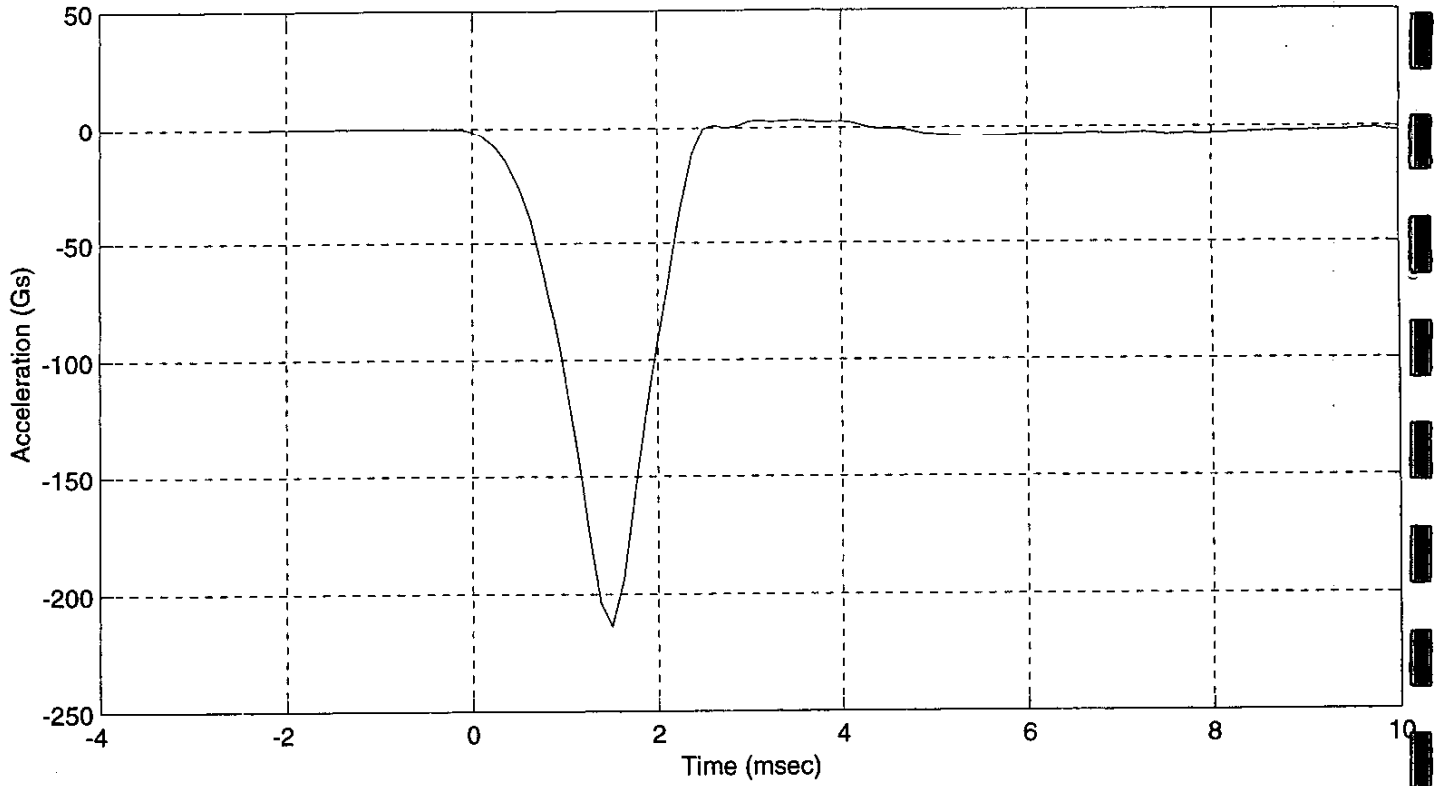
SID Serial No.: 268
Date: January 4, 2000

Sequential Test Number: 5
Laboratory Technician: M. Kilgallon

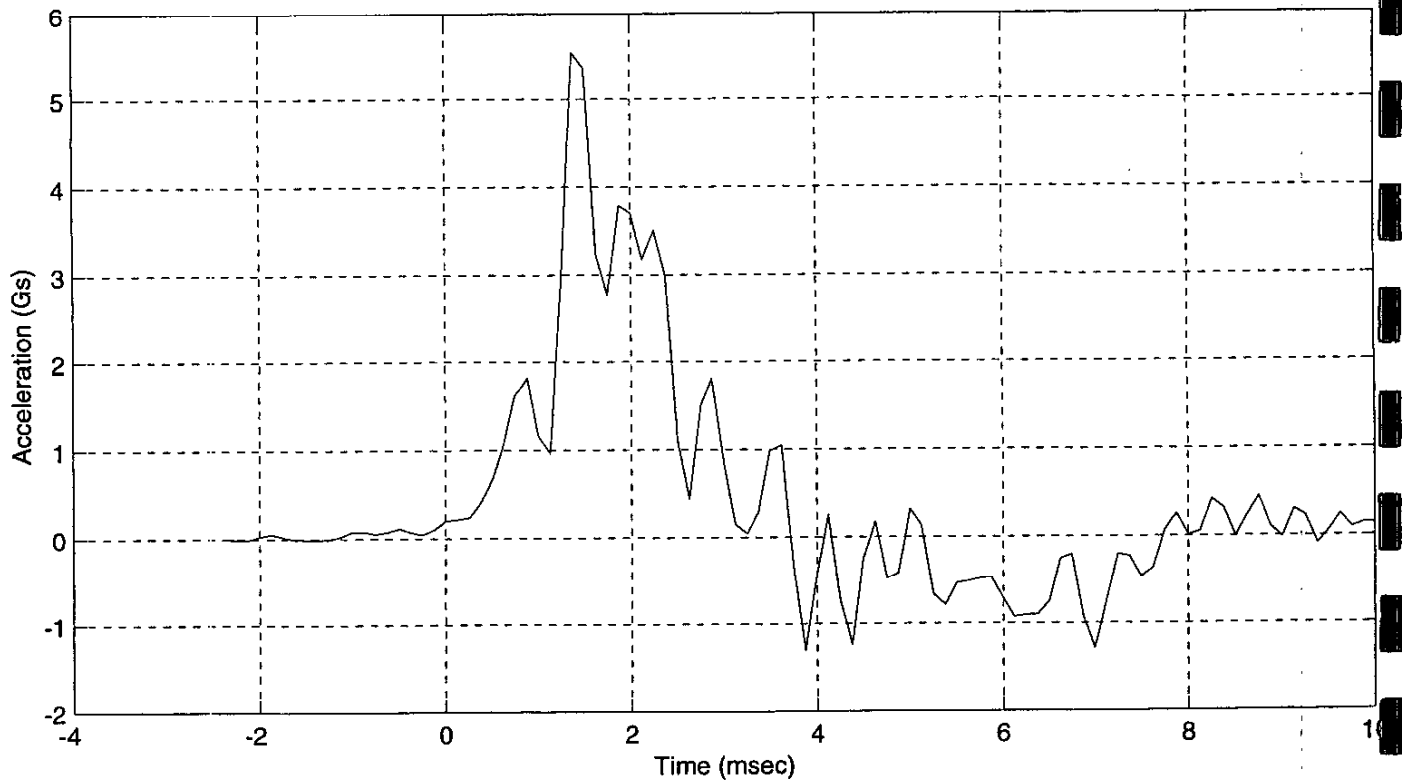
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	258.18
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	5.54
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

REMARKS: None

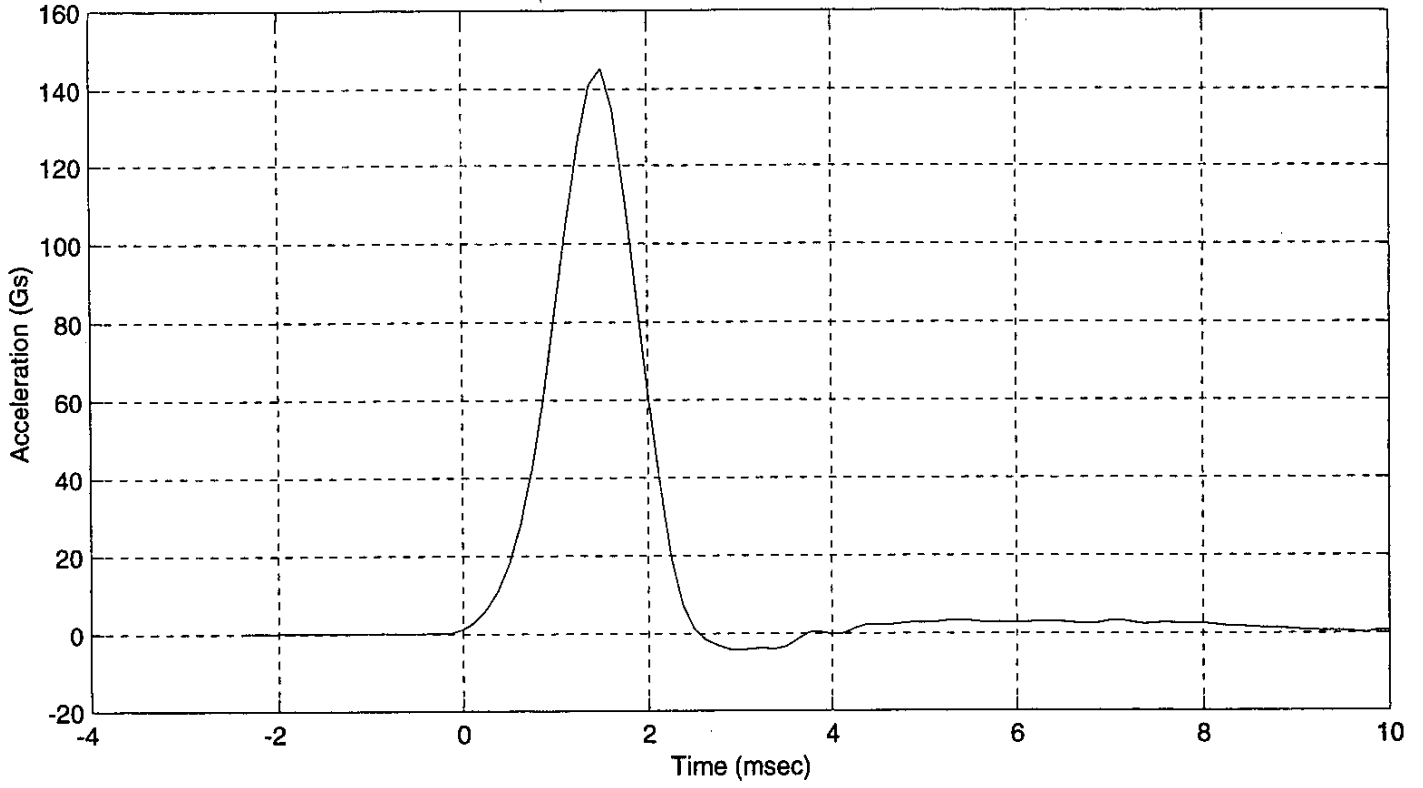
Head X



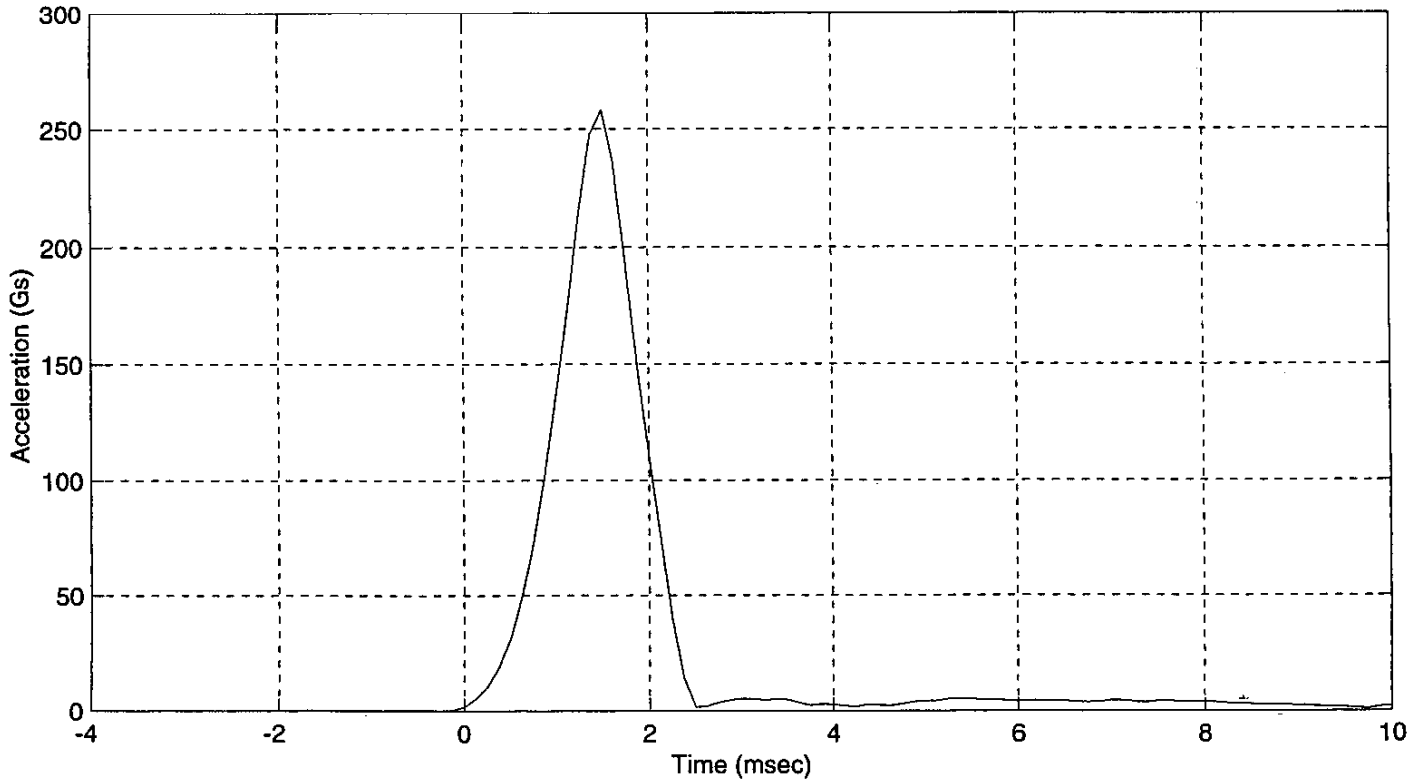
Head Y



Head Z



Head Resultant



ABDOMINAL COMPRESSION TEST

PRE-TEST

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 5
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
FORCE @ 13 mm (N)	104 - 162	113.4
FORCE @ 19 mm (N)	163 - 221	177.9
FORCE @ 25 mm (N)	222 - 280	266.9
FORCE @ 33 mm (N)	325 - 391	387.0

REMARKS: None

Dummy S/N 268

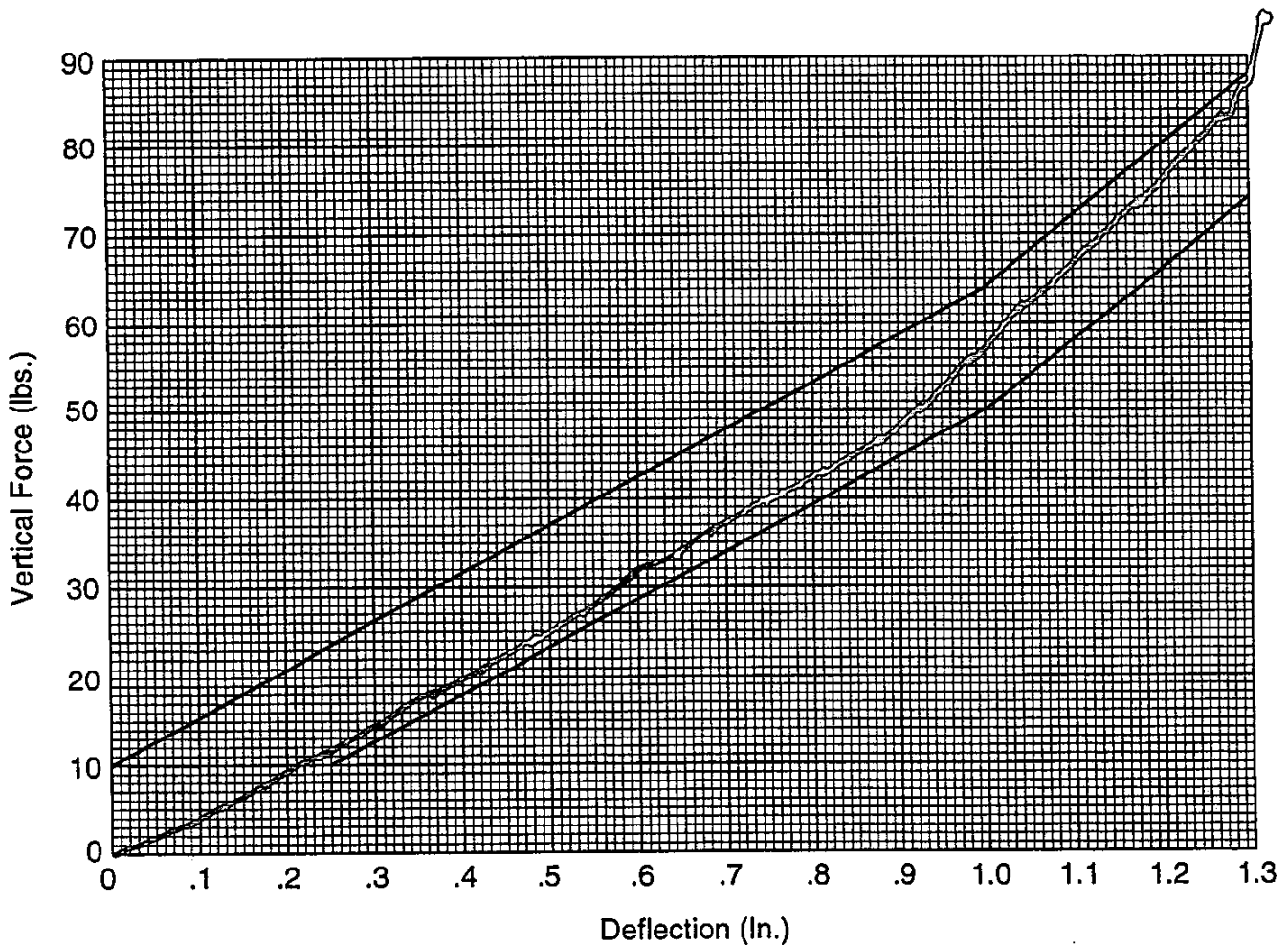
W/A _____

Date 1-4-2000

Performed By MJK

Temp. 70°

Humidity 30%



Hybrid II
Abdomen Static Press

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

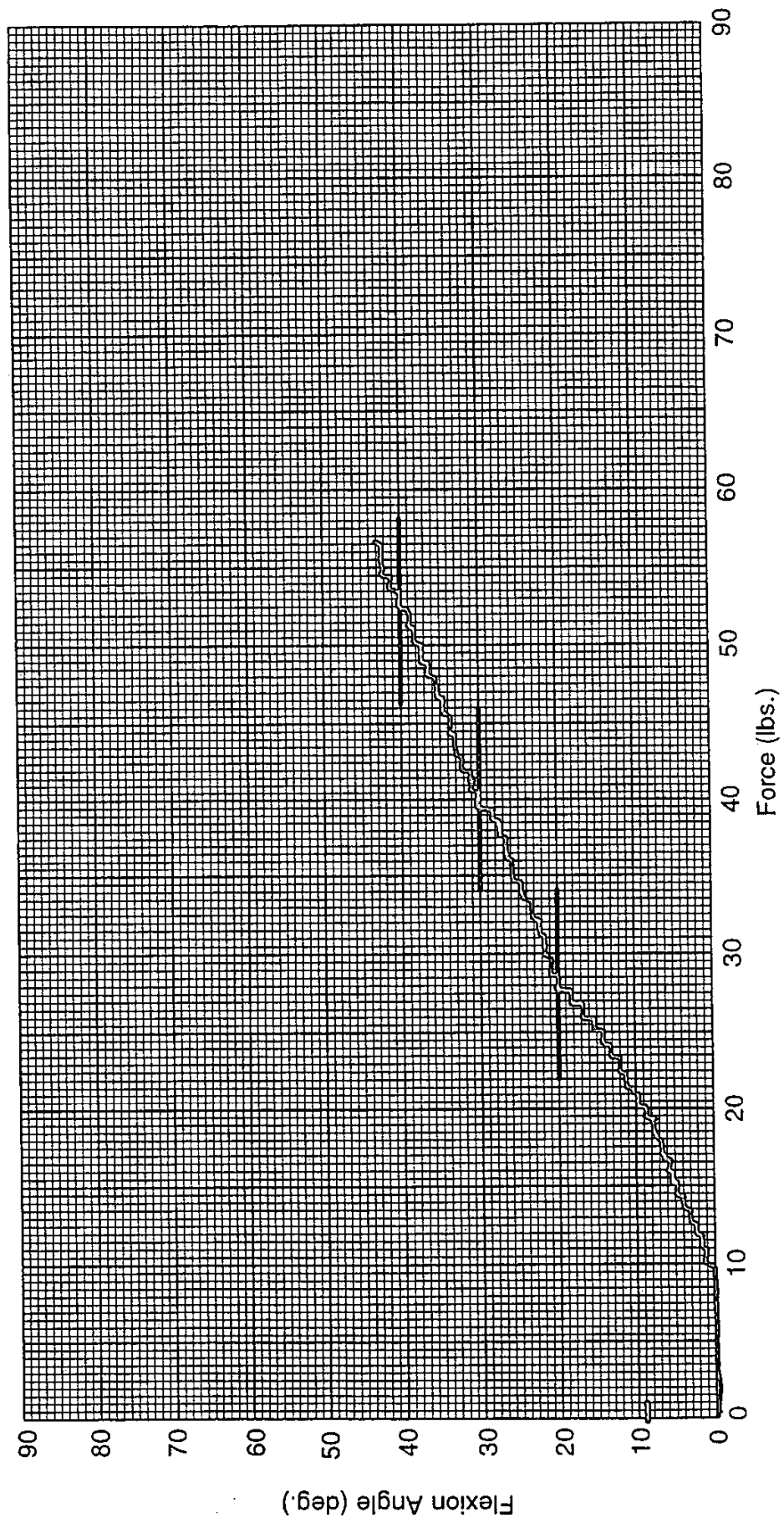
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 5
Date: January 4, 2000 Laboratory Technician: M. Kilgallon

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	123.4
FORCE @ 30° (N)	151.2 - 204.6	175.7
FORCE @ 40° (N)	204.6 - 258	233.5
RETURN ANGLE	12° max.	9

REMARKS: None

Dummy S/N 268
 W/A _____
 Date 1-4-2000
 Performed By MJK
 Temp. 70°
 Humidity 30%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 5
 Date: January 4, 2000 Laboratory Technician: M. Kilgallon

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

REMARKS: None

**CALIBRATION TEST RESULTS
POST TEST**

SID NO.: 027

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1

Date: January 27, 2000 Laboratory Technician: B. Swiecicki

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

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: January 26, 2000 Laboratory Technician: B. Swiecicki

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

REMARKS: None

LATERAL THORAX IMPACT TEST
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

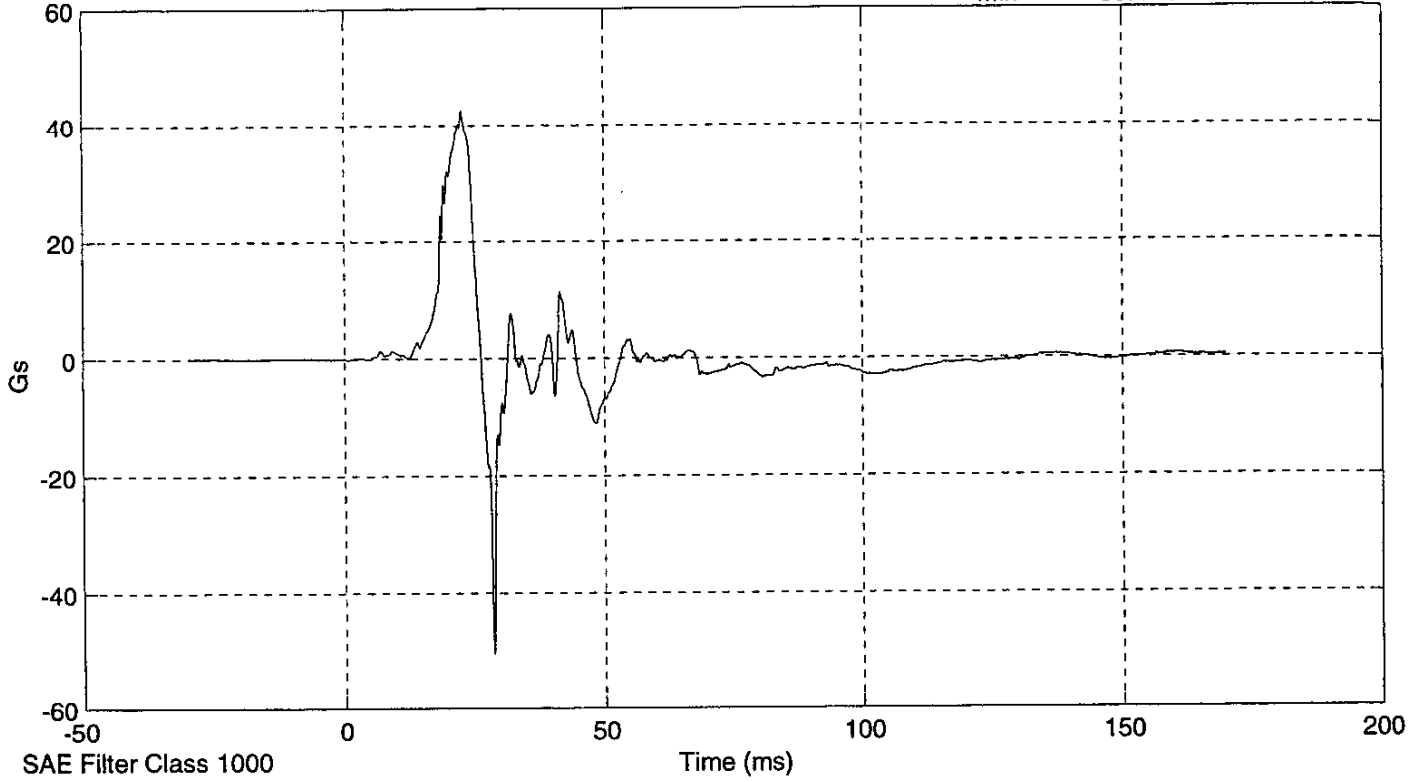
SID Serial No.: 027 Sequential Test Number: 1
Date: January 27, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	42.6
LOWER RIB (g's)	37 - 46	43.3
LOWER SPINE (g's)	15 - 22	20.9

REMARKS: None

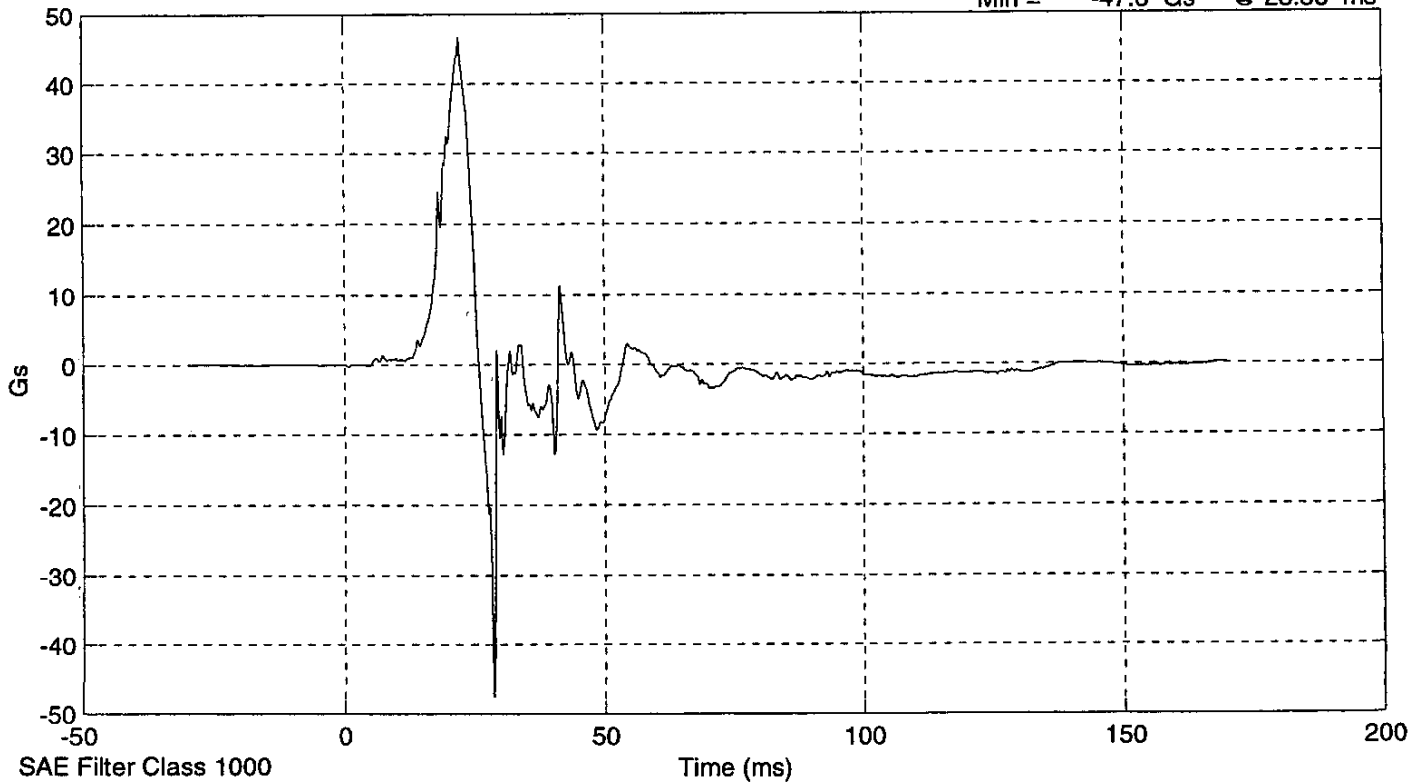
UPPER RIB Y

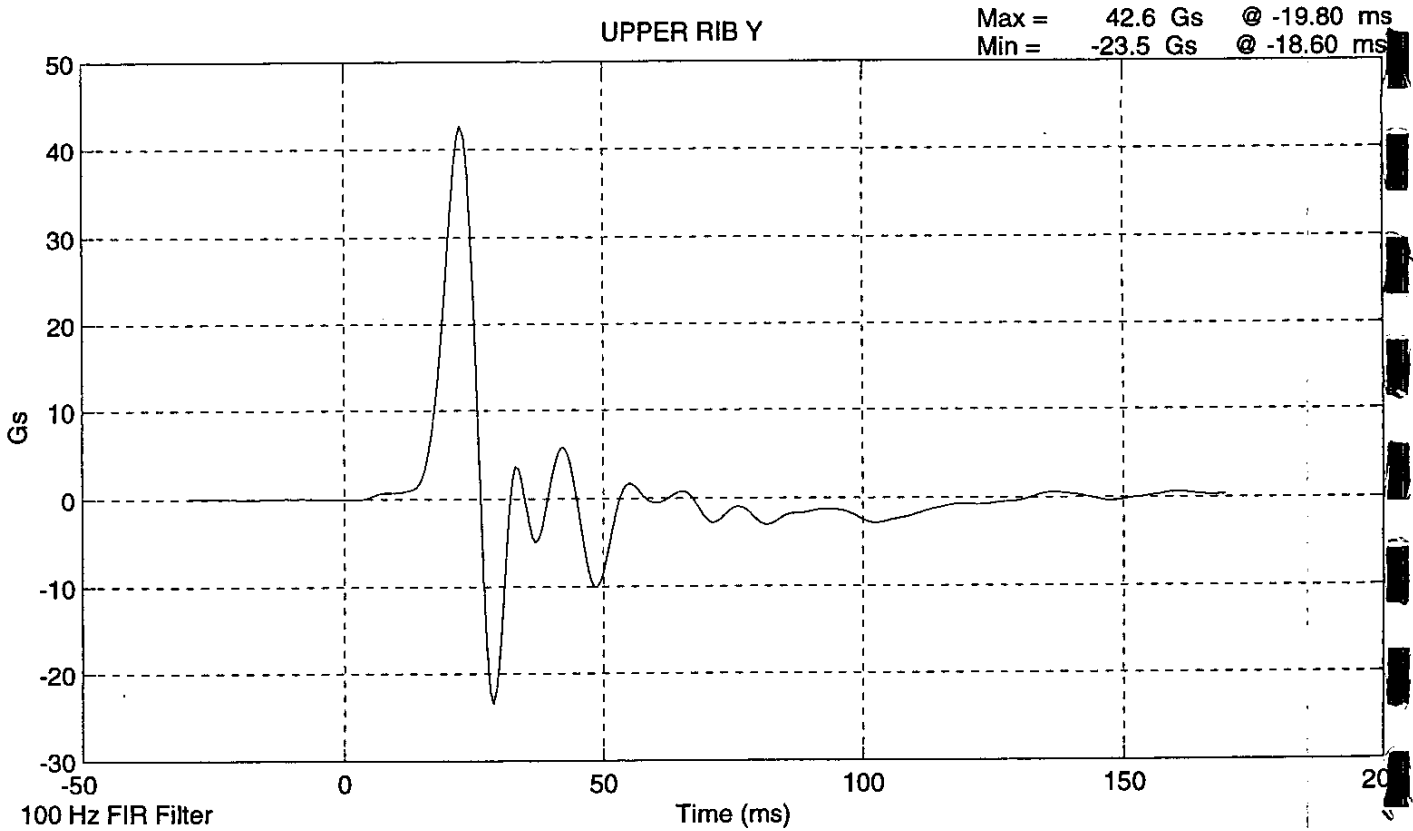
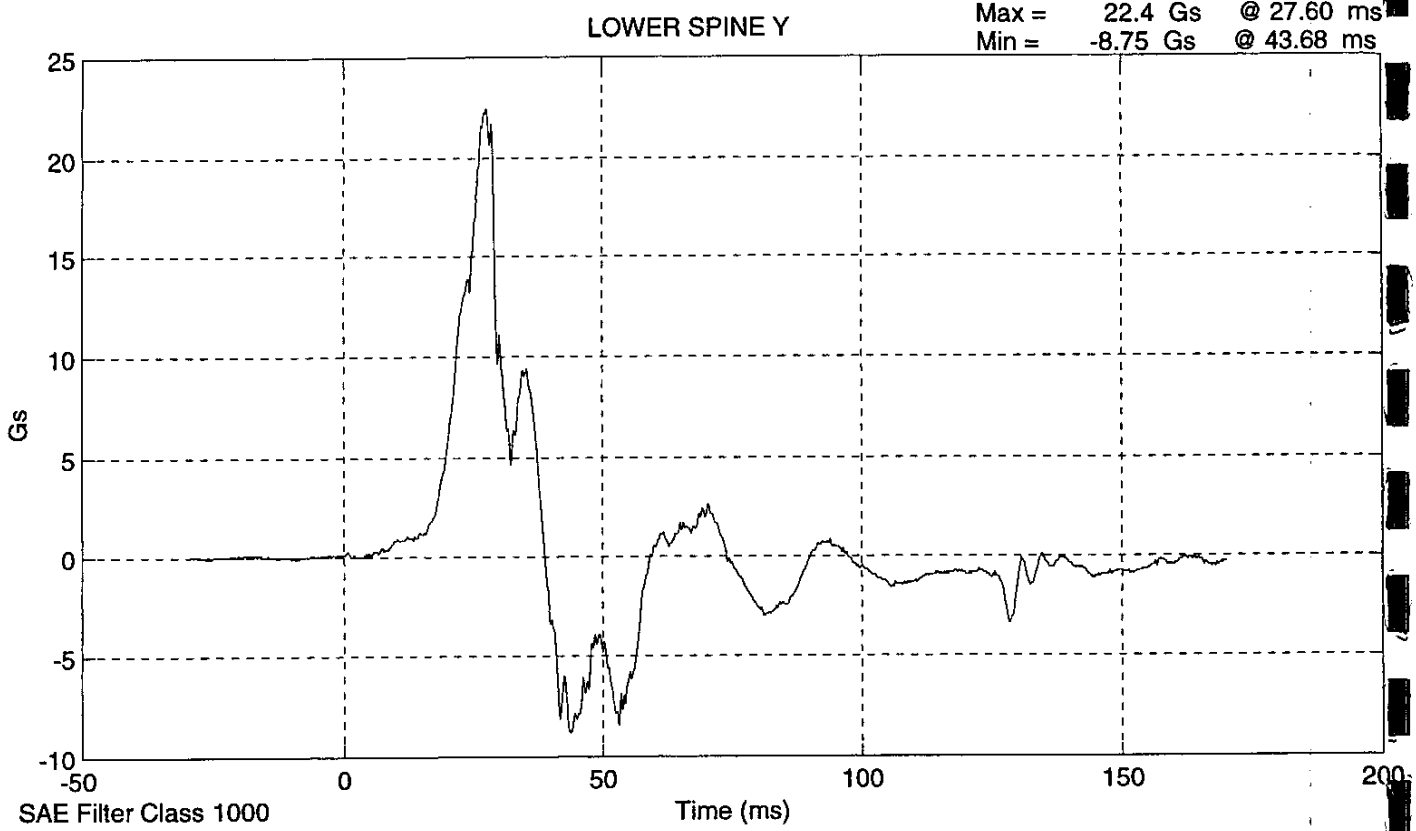
Max = 42.5 Gs @ 22.68 ms
Min = -50.4 Gs @ 28.68 ms



LOWER RIB Y

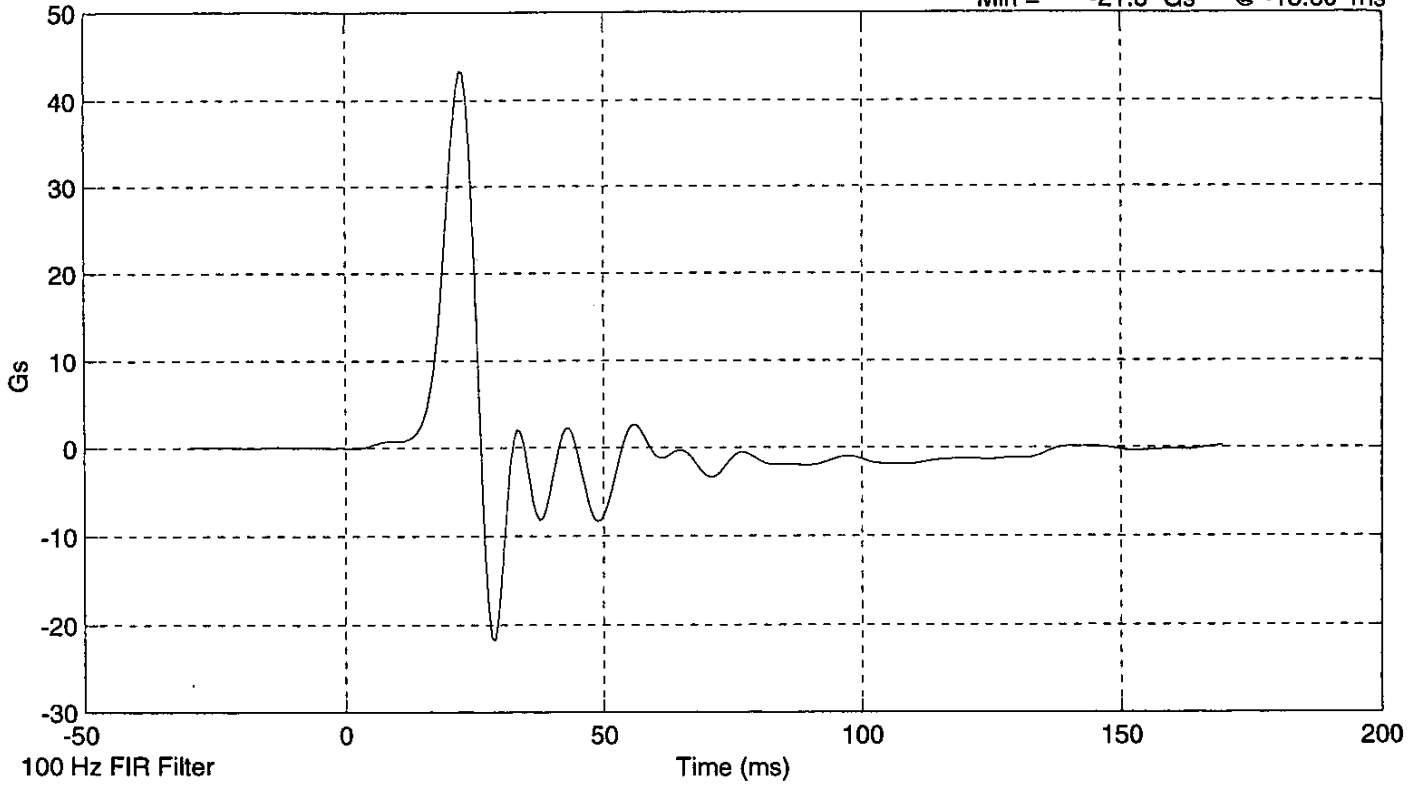
Max = 46.5 Gs @ 22.20 ms
Min = -47.6 Gs @ 28.56 ms





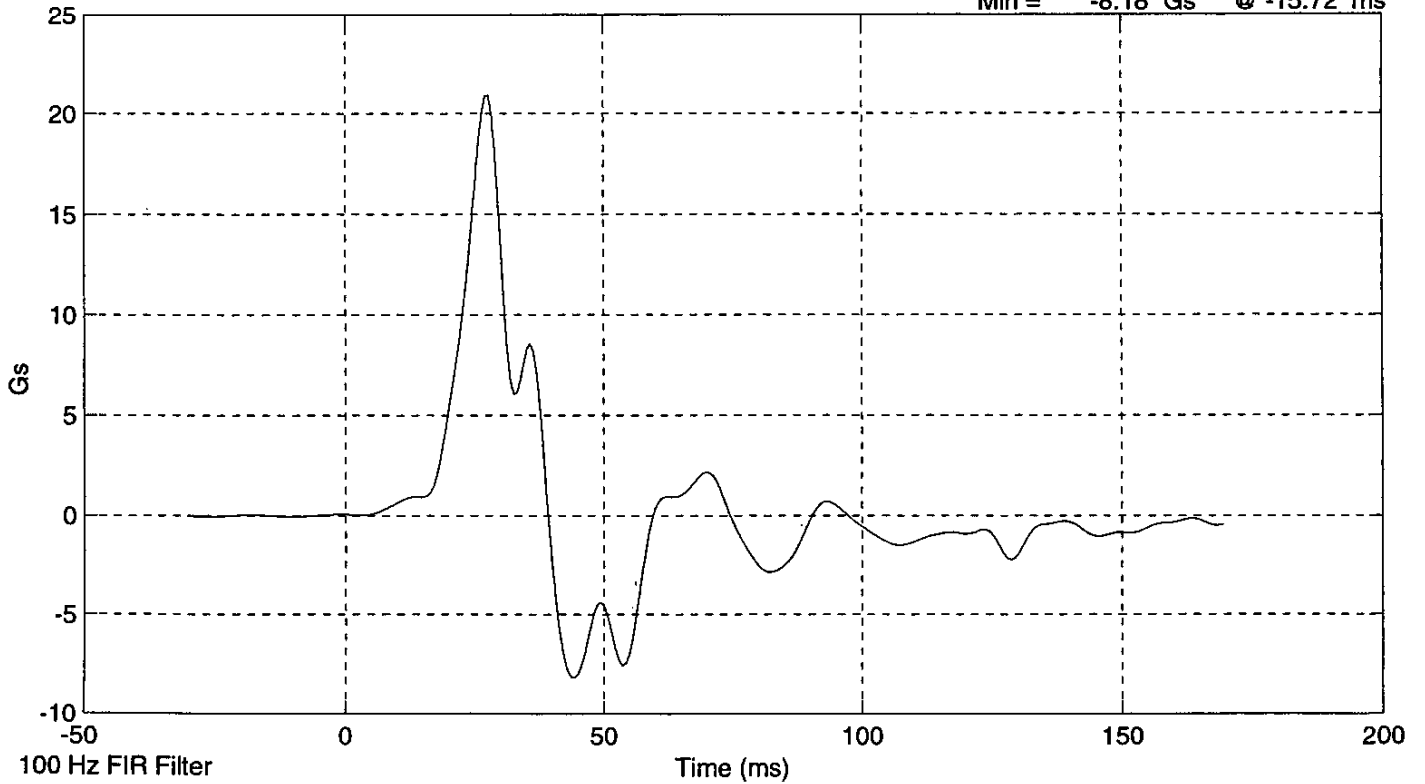
LOWER RIB Y

Max = 43.3 Gs @ -19.92 ms
Min = -21.8 Gs @ -18.60 ms



LOWER SPINE Y

Max = 20.9 Gs @ -18.84 ms
Min = -8.18 Gs @ -15.72 ms



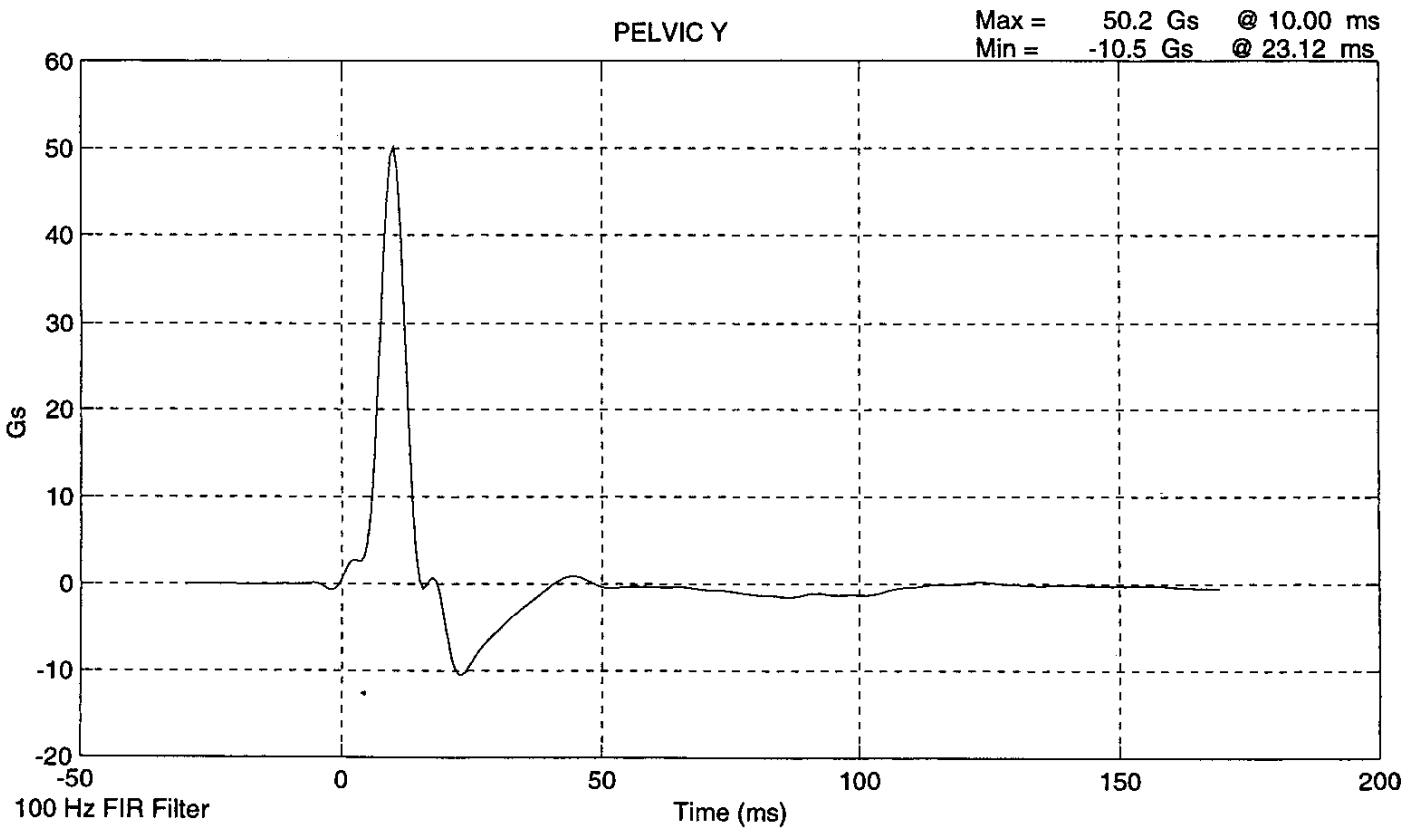
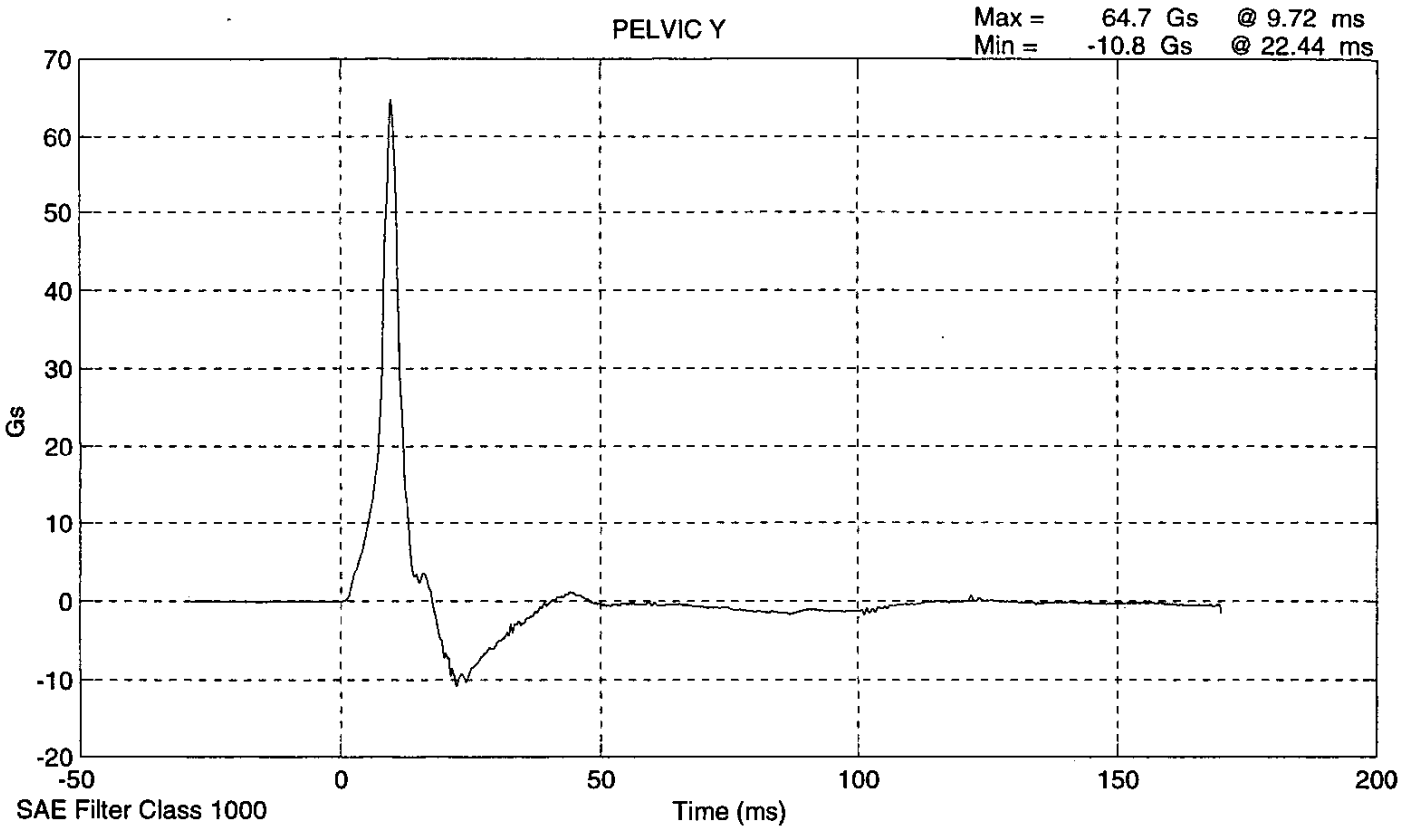
LATERAL PELVIS IMPACT TEST
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: January 27, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.30
PELVIS ACCELERATION (g's)	40 - 60	50.2

REMARKS: None



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

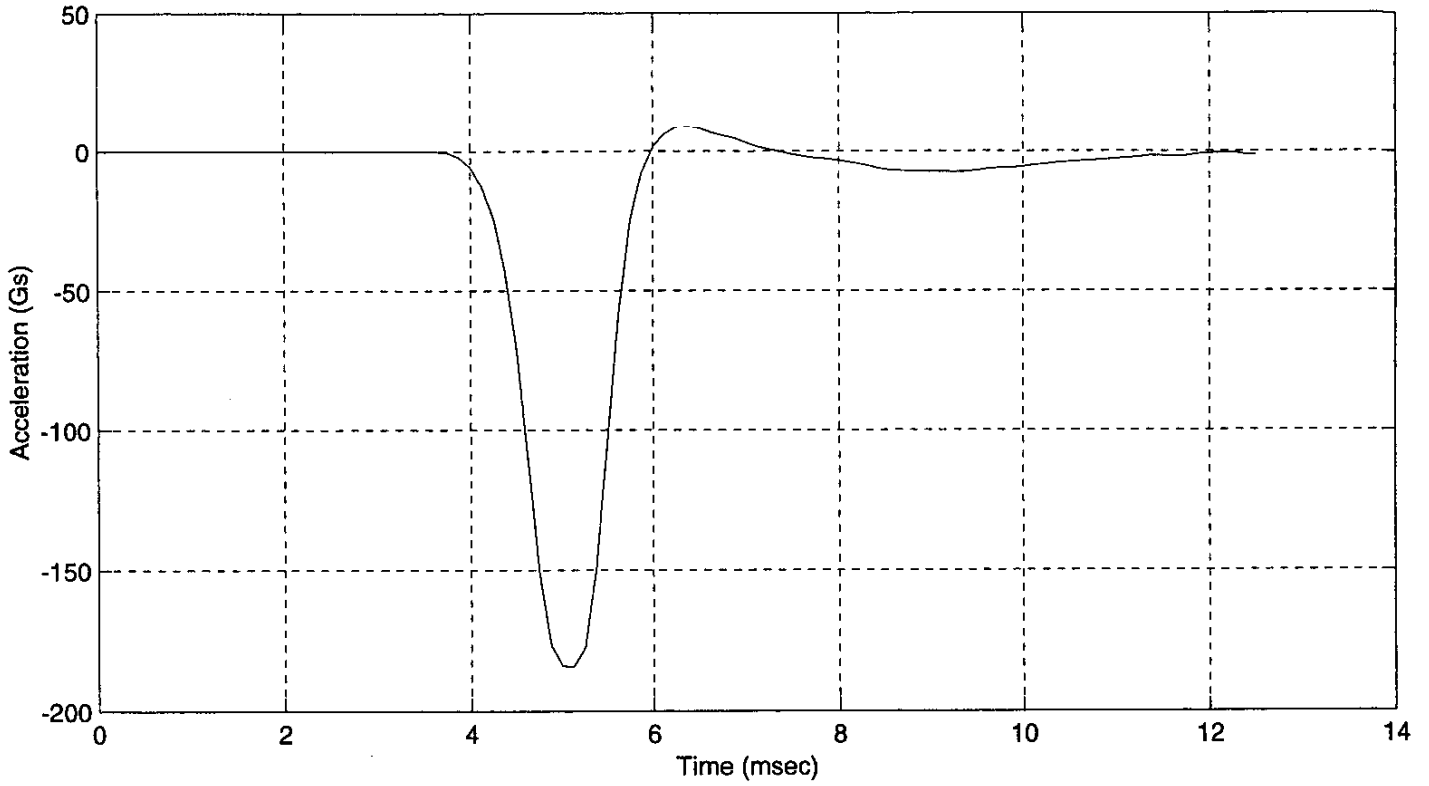
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: January 22, 2000 Laboratory Technician: B. Swiecicki

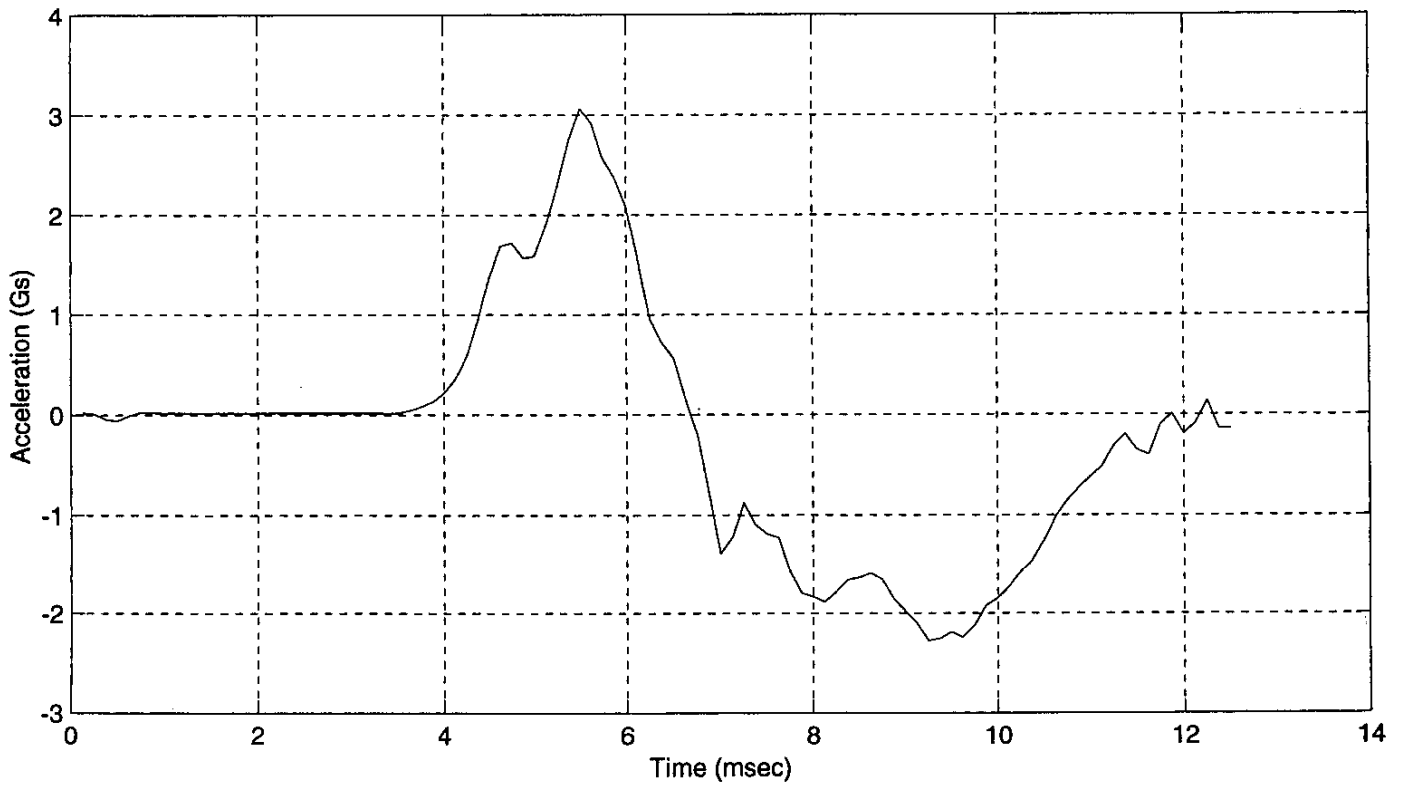
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	33
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	259.33
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	3.06
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

REMARKS: None

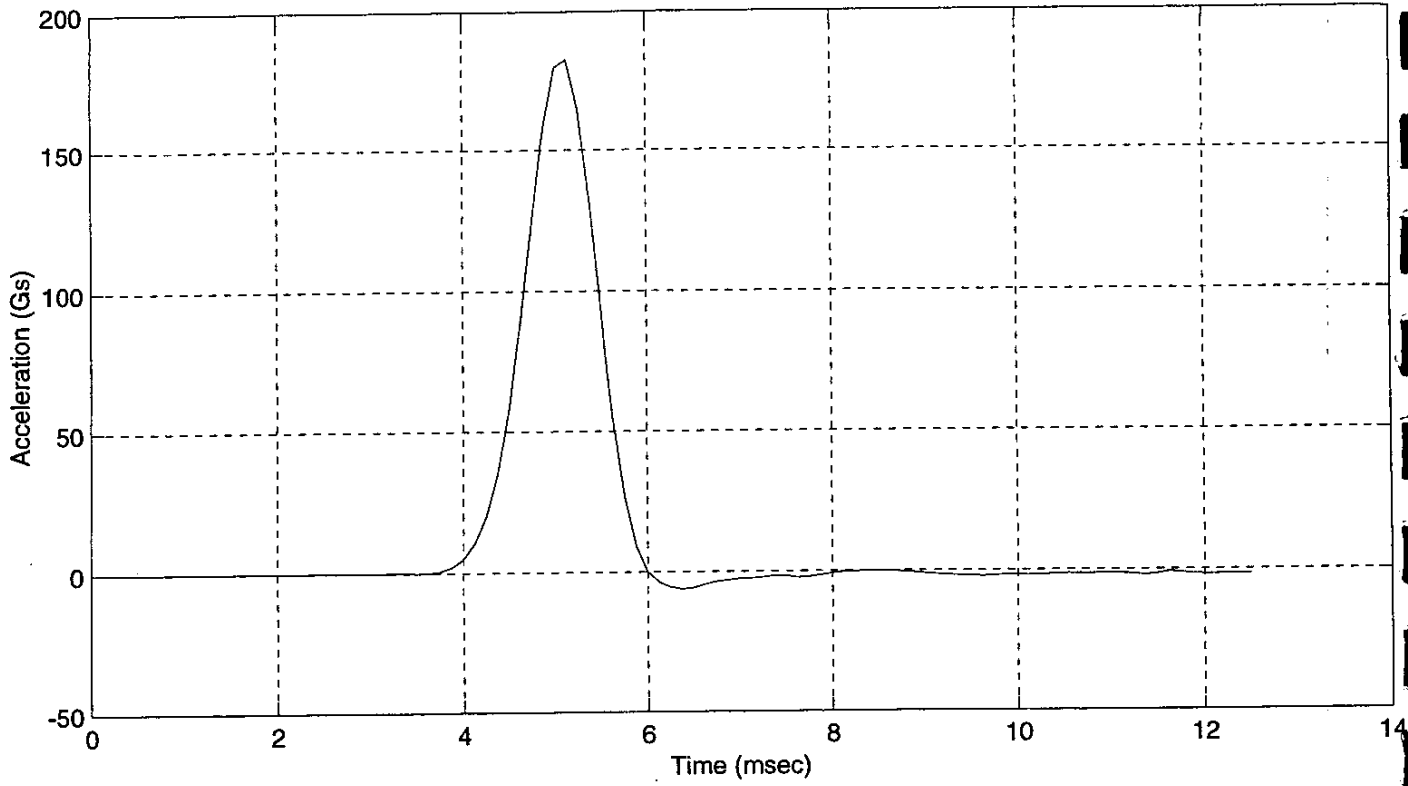
Head X



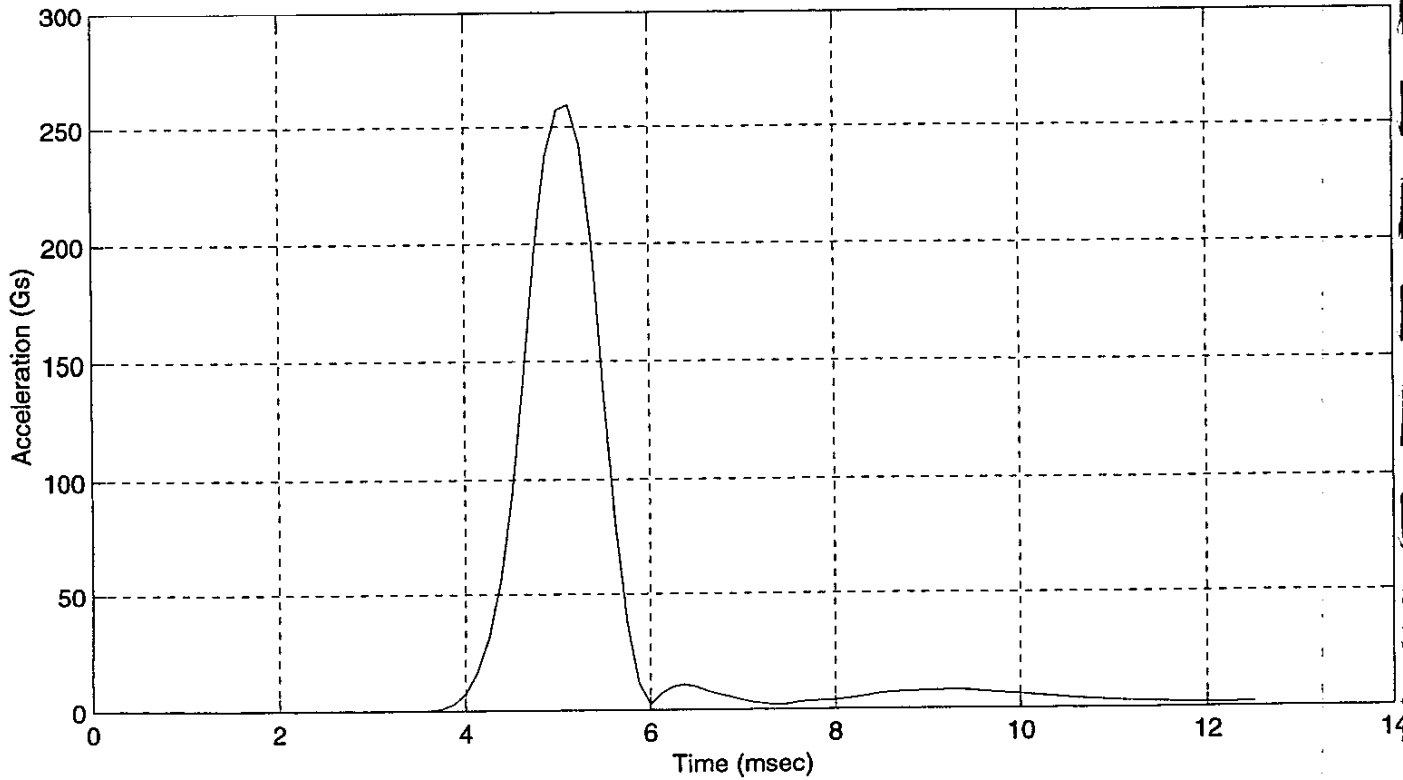
Head Y



Head Z



Head Resultant



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

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: January 26, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	106.8
FORCE @ 19 mm (N)	163 - 221	182.4
FORCE @ 25 mm (N)	222 - 280	249.1
FORCE @ 33 mm (N)	325 - 391	358.1

REMARKS: None

Dummy S/N 27

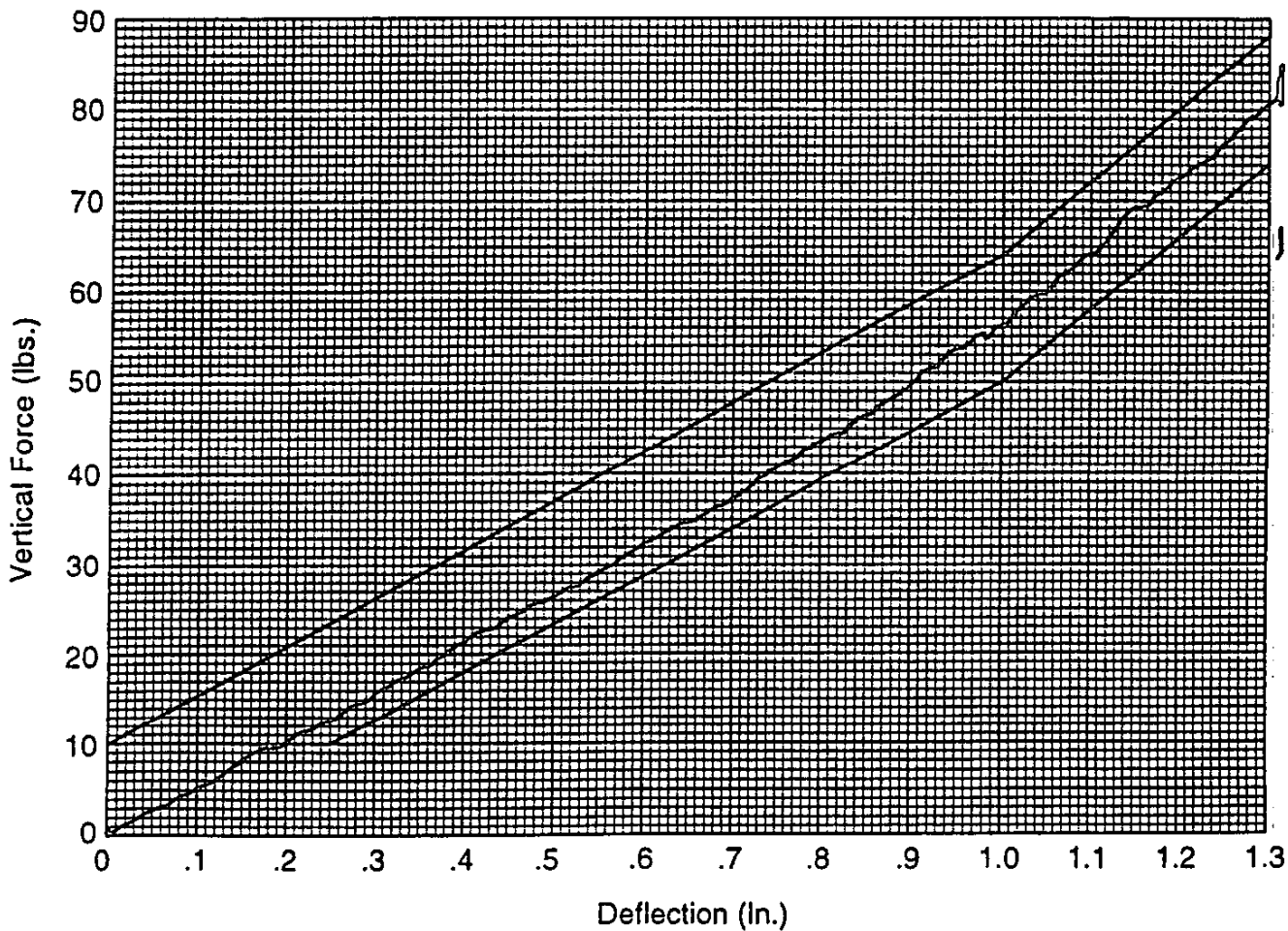
W/A _____

Date 1-26-2000

Performed By BS

Temp. 70°

Humidity 31%



Hybrid II
Abdomen Static Press

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

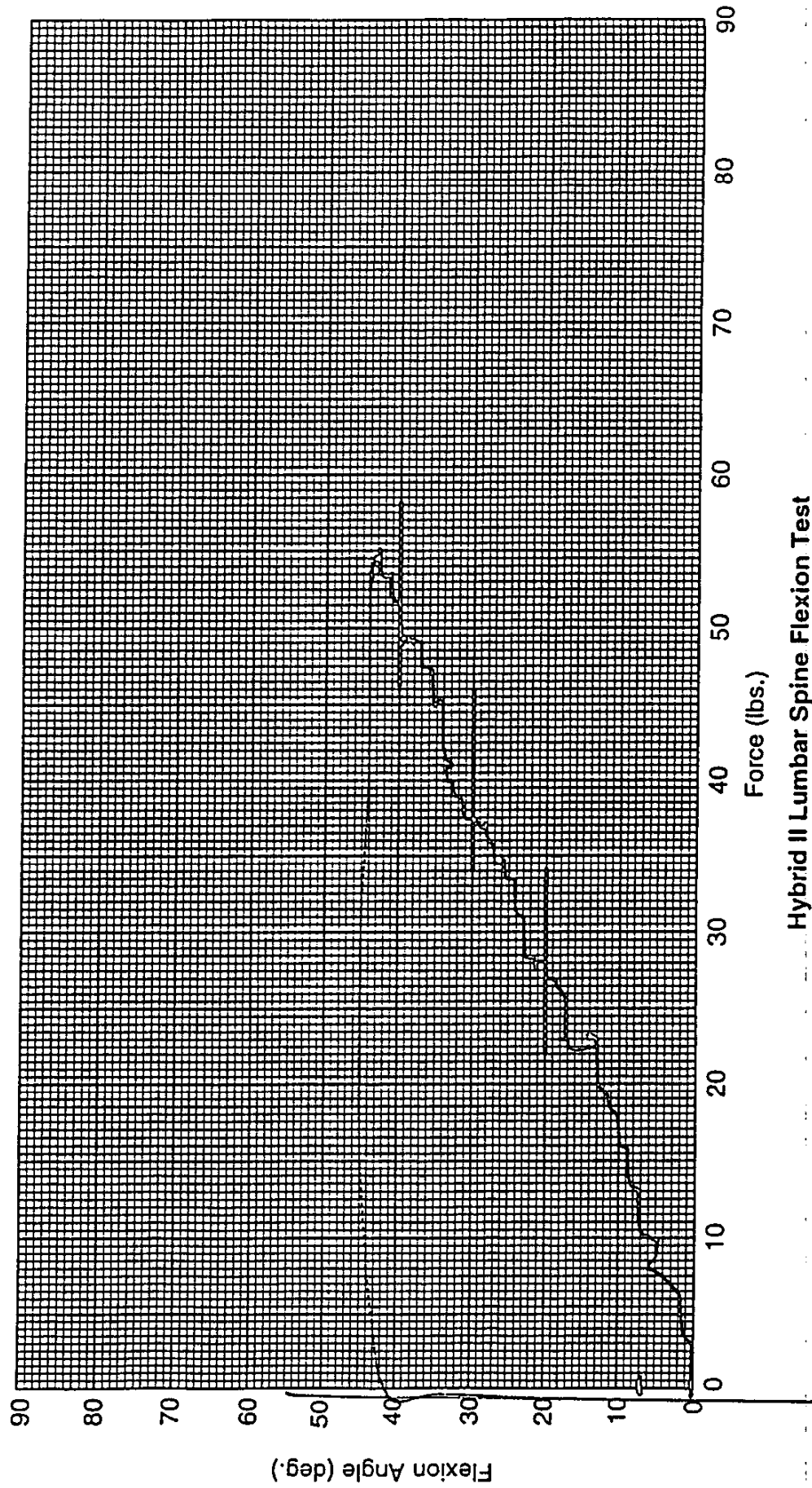
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
Date: January 26, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	120.1
FORCE @ 30° (N)	151.2 - 204.6	166.8
FORCE @ 40° (N)	204.6 - 258	220.2
RETURN ANGLE	12° max.	7

REMARKS: None

Dummy S/N 027
W/A _____
Date 1-26-2000
Performed By BD
Temp. 71°
Humidity 31%



Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 027 Sequential Test Number: 1
 Date: January 26, 2000 Laboratory Technician: B. Swiecicki

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

REMARKS: None

**CALIBRATION TEST RESULTS
POST TEST**

SID NO.: 268

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
Date: January 27, 2000 Laboratory Technician: B. Swiecicki

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

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
Date: January 26, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	235
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	376

REMARKS: None

LATERAL THORAX IMPACT TEST
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
Date: January 27, 2000 Laboratory Technician: B. Swiecicki

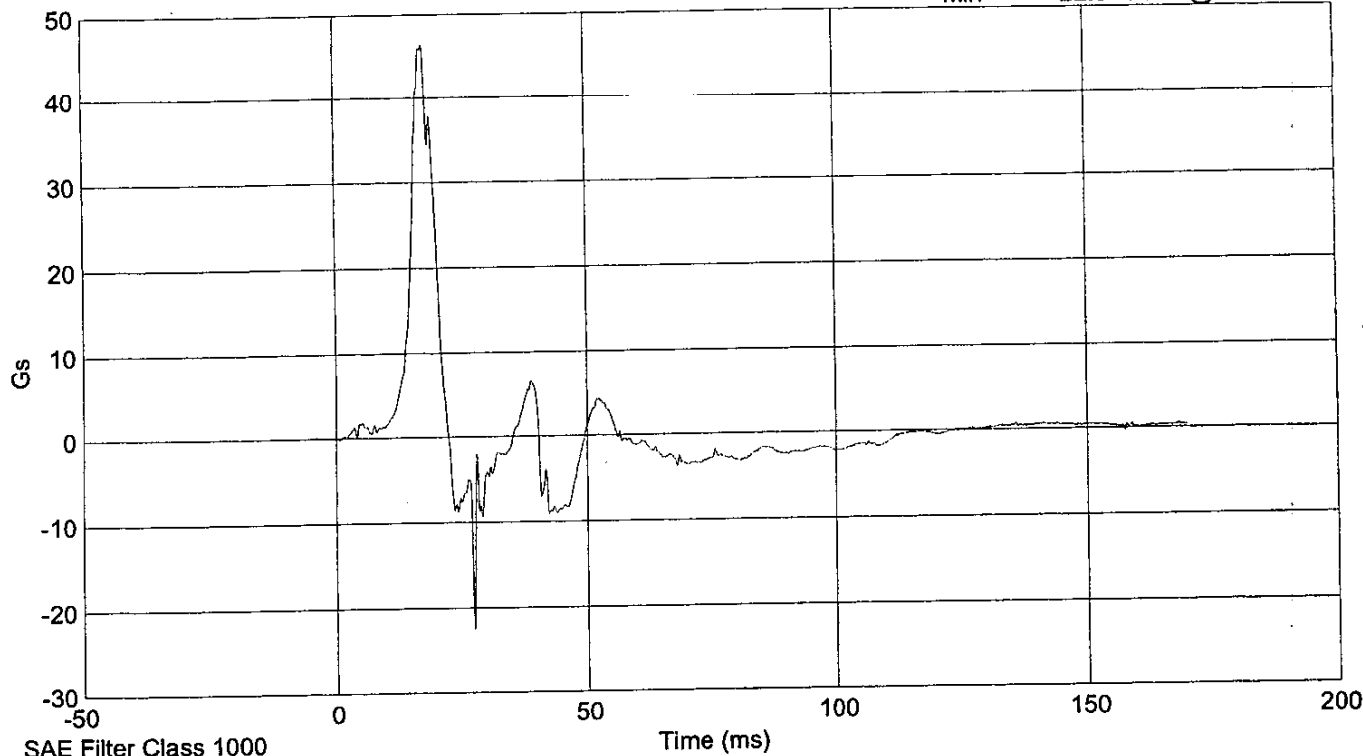
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.27
UPPER RIB (g's)	37 - 46	42.4
LOWER RIB (g's)	37 - 46	40.3
LOWER SPINE (g's)	15 - 22	21.2

REMARKS: None

SID 268 Thorax Impact Test @ 4.2733 m/s

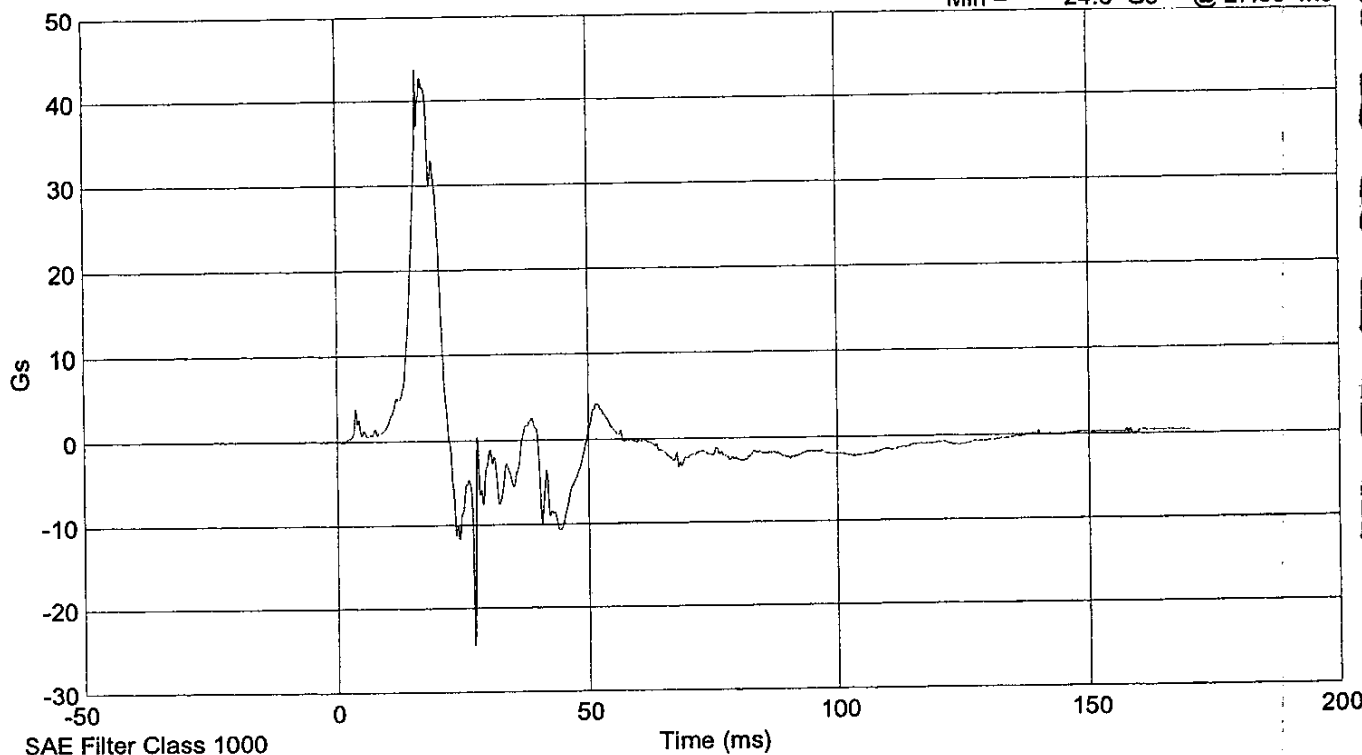
UPPER RIB Y

Max = 46.5 Gs @ 17.64 ms
Min = -22.5 Gs @ 27.36 ms

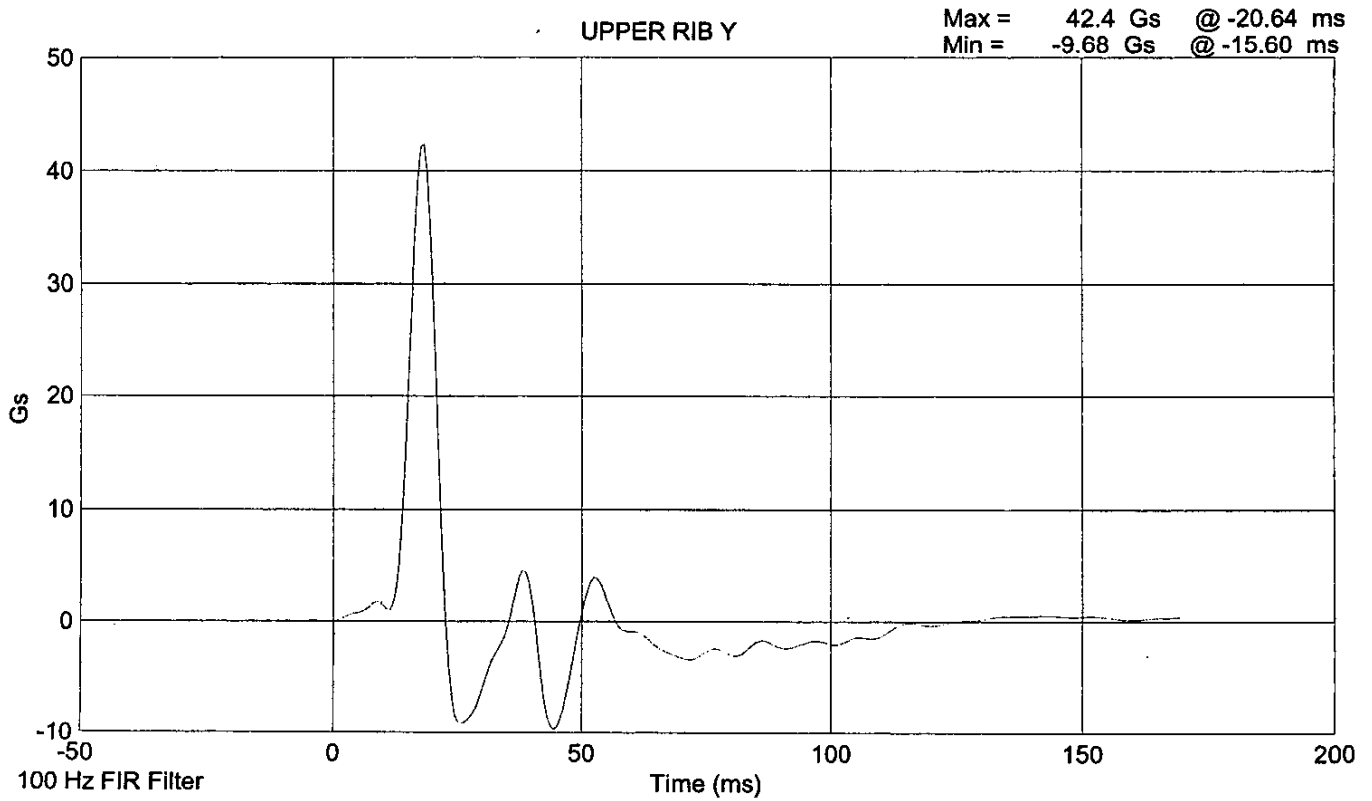
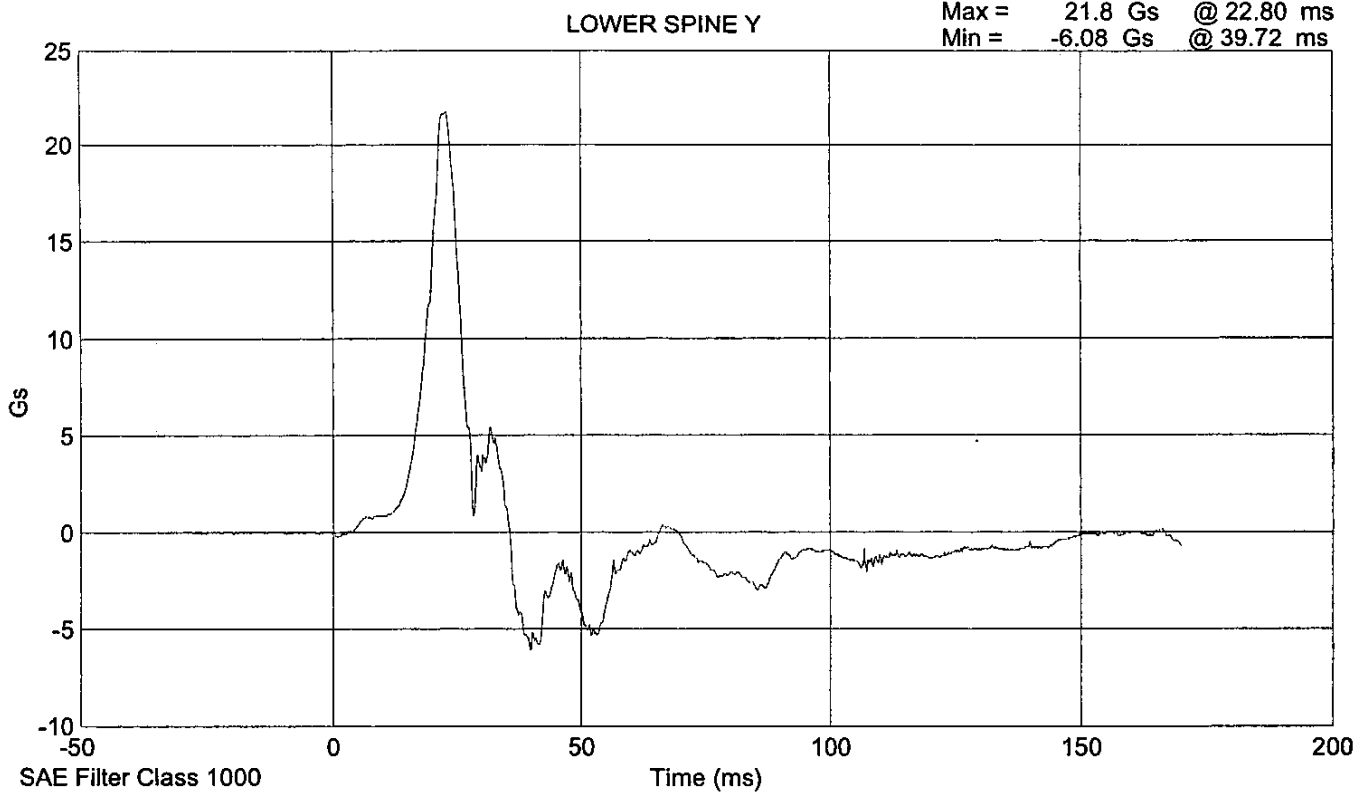


LOWER RIB Y

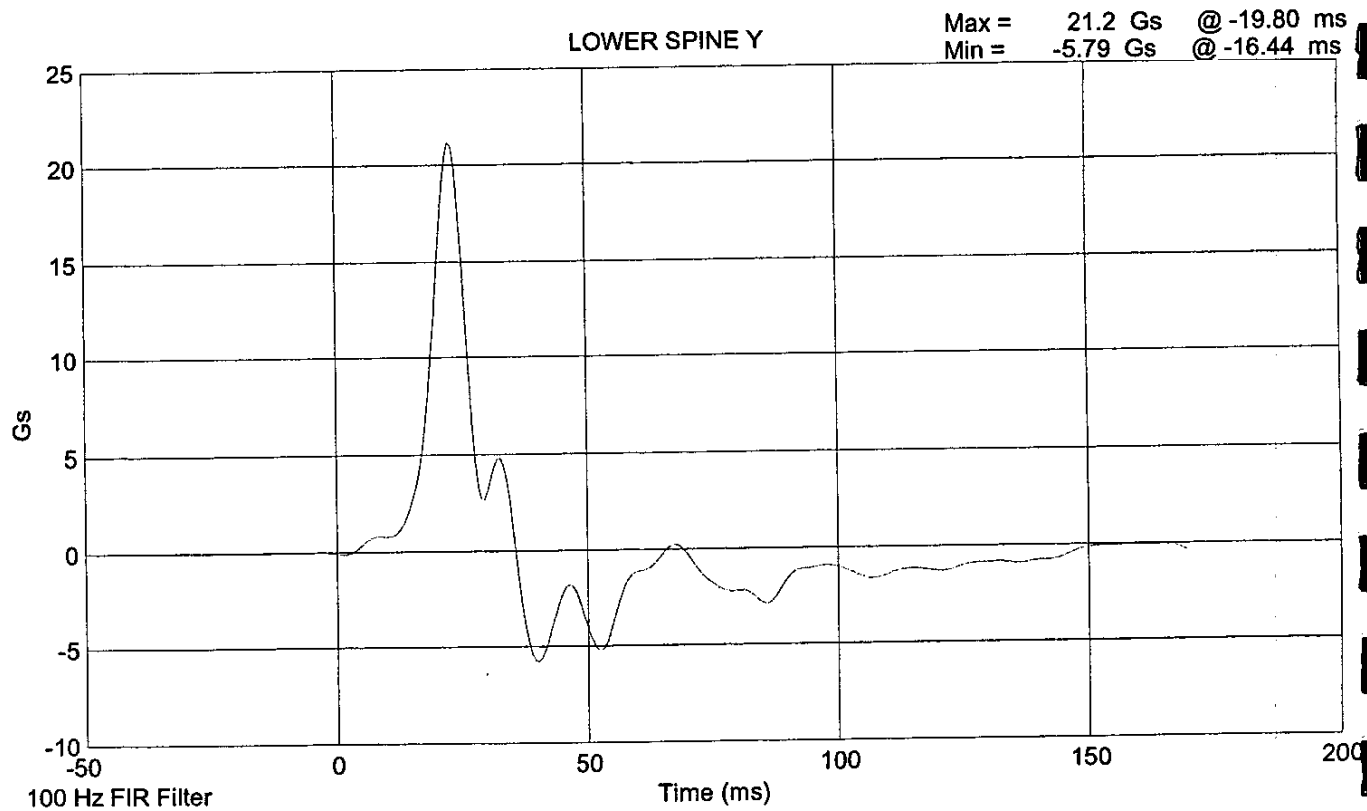
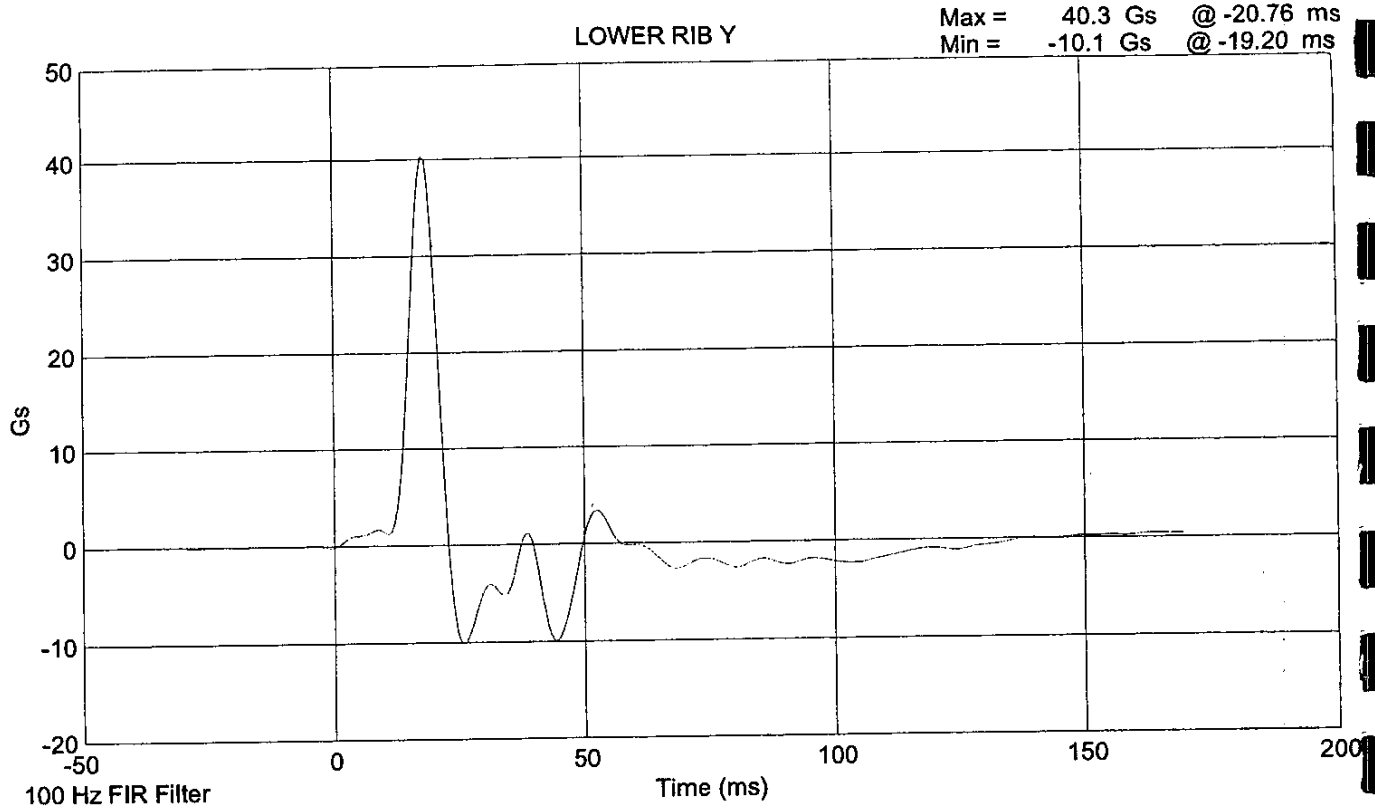
Max = 43.7 Gs @ 15.96 ms
Min = -24.5 Gs @ 27.36 ms



SID 268 Thorax Impact Test @ 4.2733 m/s



SID 268 Thorax Impact Test @ 4.2733 m/s



LATERAL PELVIS IMPACT TEST
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

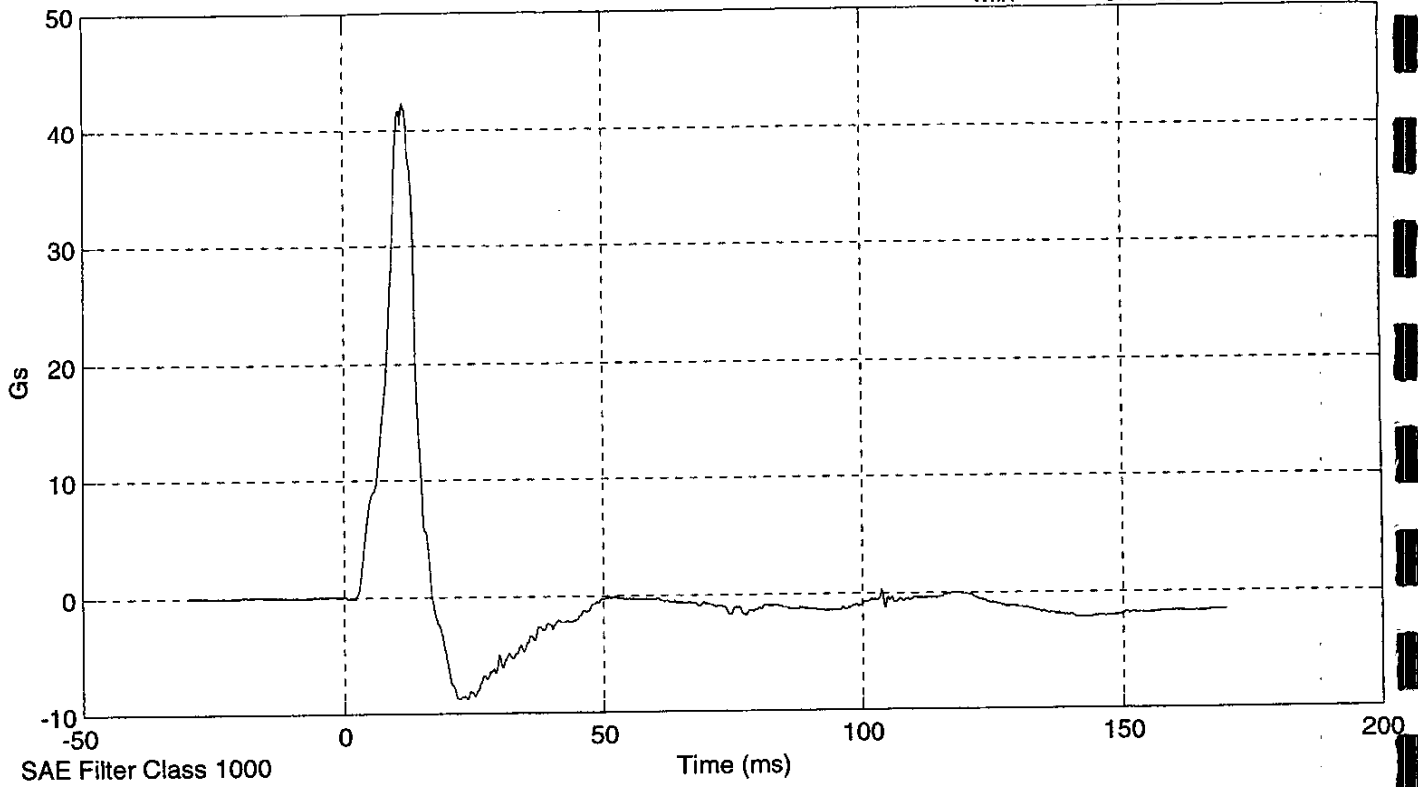
SID Serial No.: 268 Sequential Test Number: 1
Date: January 27, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.31
PELVIS ACCELERATION (g's)	40 - 60	40.7

REMARKS: None

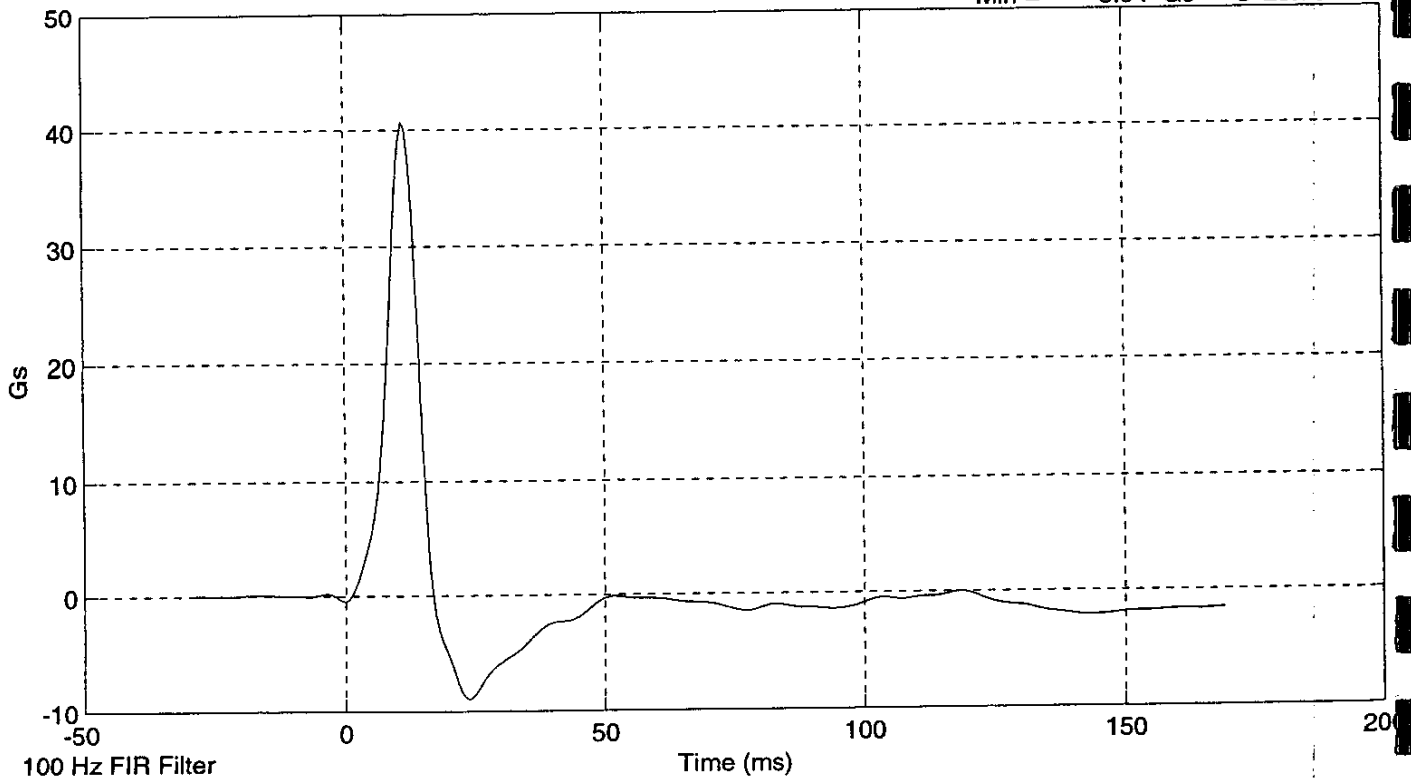
PELVIC Y

Max = 42.3 Gs @ 11.52 ms
Min = -8.7 Gs @ 21.96 ms



PELVIC Y

Max = 40.7 Gs @ 11.25 ms
Min = -8.94 Gs @ 23.75 ms



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

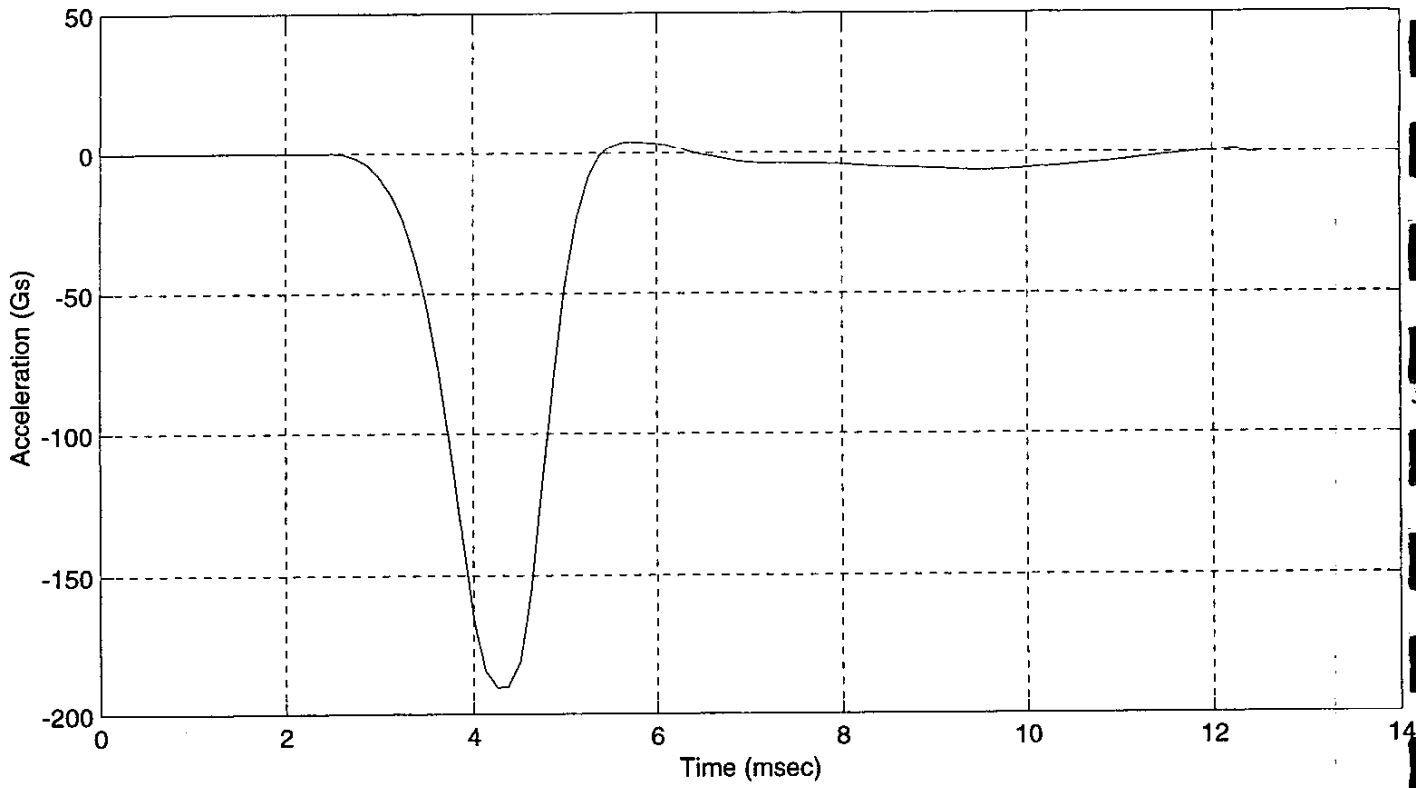
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
Date: January 25, 2000 Laboratory Technician: B. Swiecicki

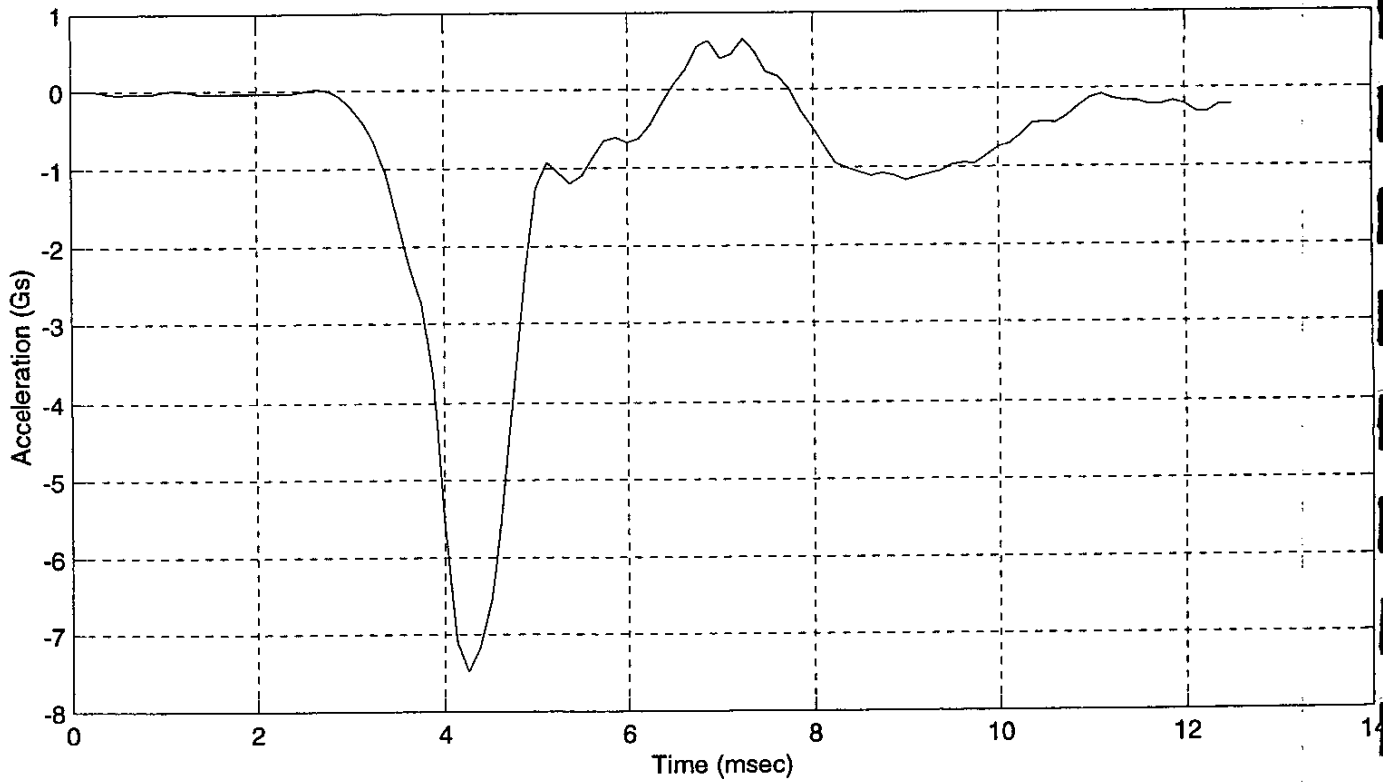
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	30
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	235.64
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	7.49
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.25

REMARKS: None

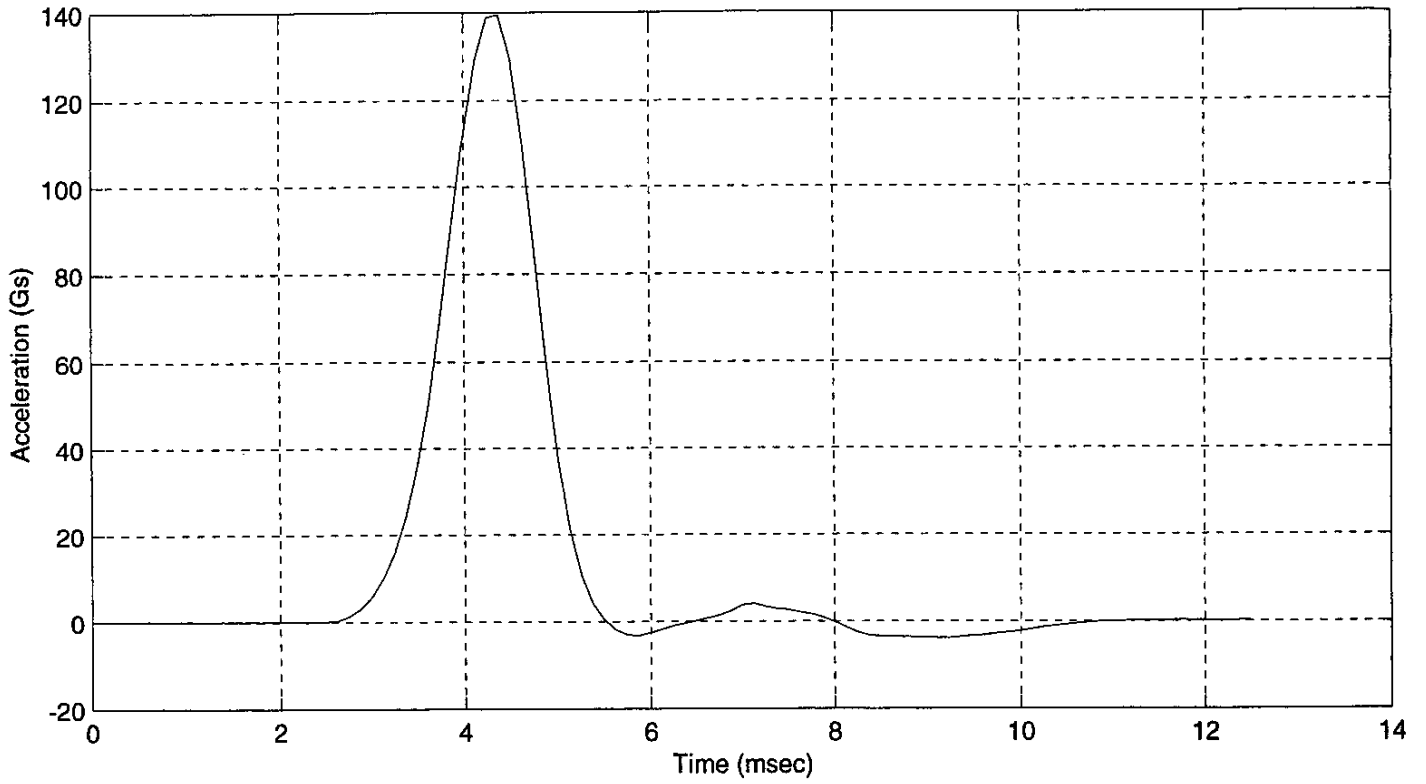
Head X



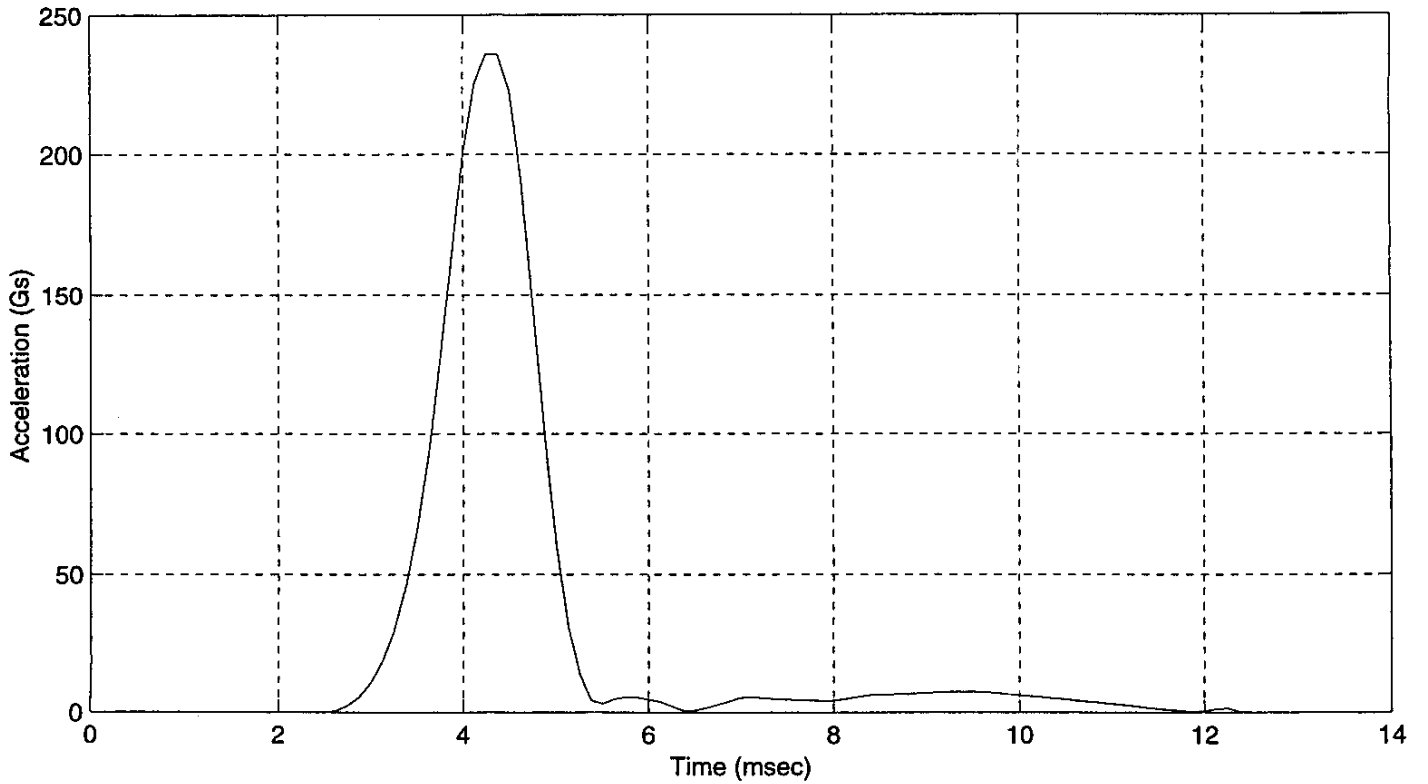
Head Y



Head Z



Head Resultant



**ABDOMINAL COMPRESSION TEST
POST TEST**

(Test not required for SID certification)

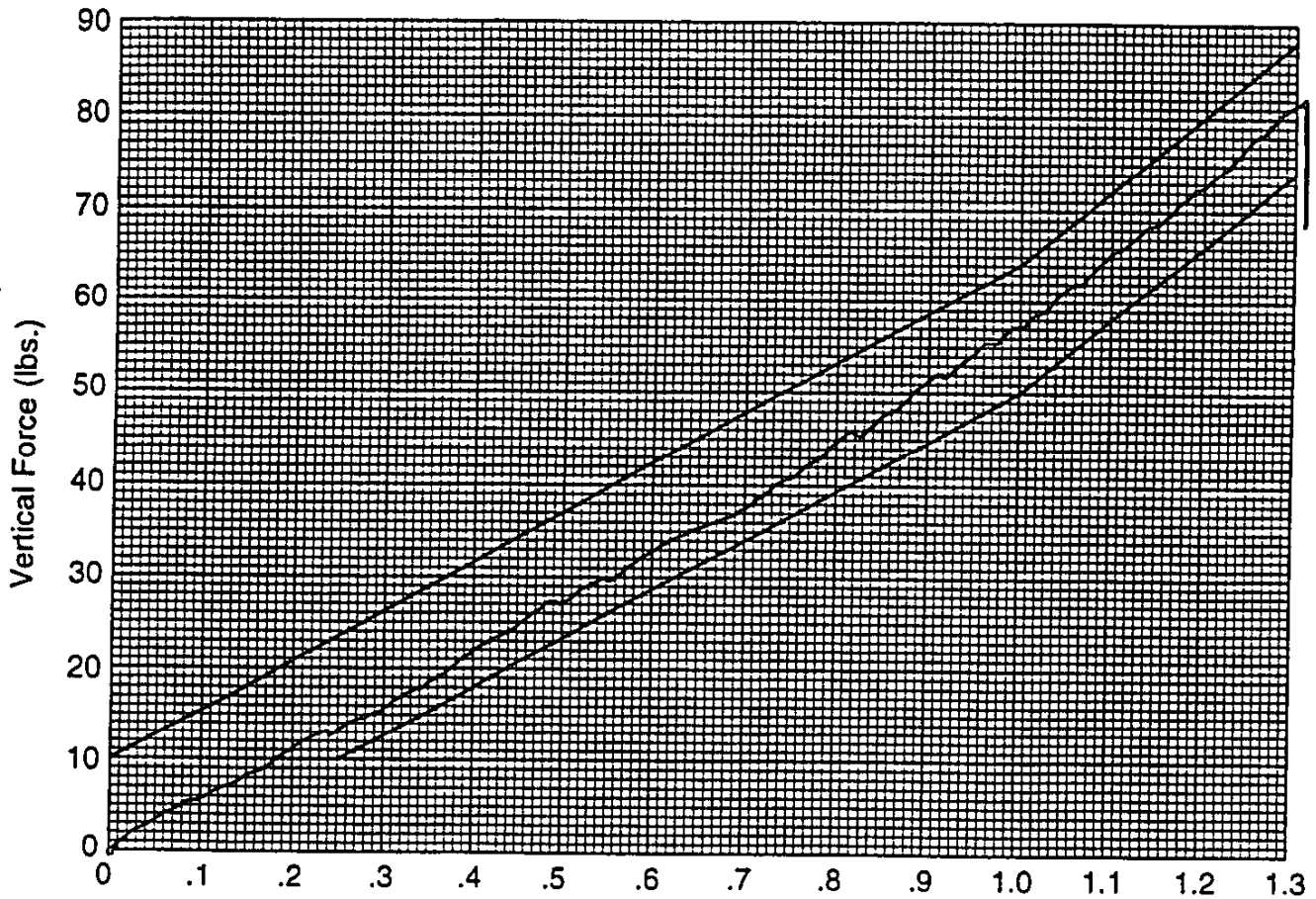
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
Date: January 26, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	124.6
FORCE @ 19 mm (N)	163 - 221	182.4
FORCE @ 25 mm (N)	222 - 280	253.5
FORCE @ 33 mm (N)	325 - 391	362.5

REMARKS: None

Dummy S/N 268
W/A _____
Date 1-26-2000
Performed By [Signature]
Temp. 70°
Humidity 31%



Hybrid II
Abdomen Static Press

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

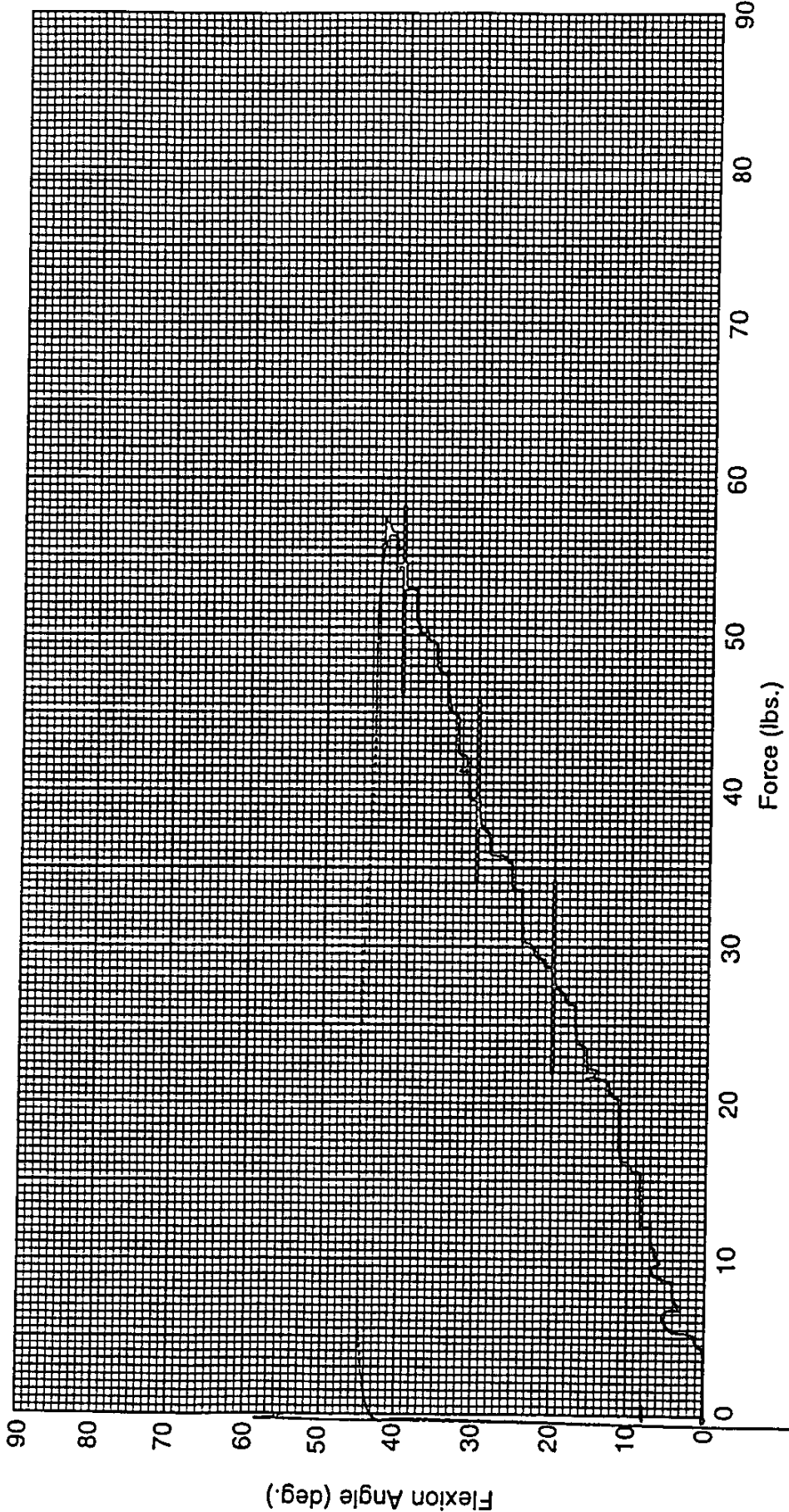
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
Date: January 26, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	122.3
FORCE @ 30° (N)	151.2 - 204.6	166.8
FORCE @ 40° (N)	204.6 - 258	235.8
RETURN ANGLE	12° max.	8

REMARKS: None

Dummy S/N 268
 W/A _____
 Date 1-26-2000
 Performed By [Signature]
 Temp. 71°
 Humidity 31%



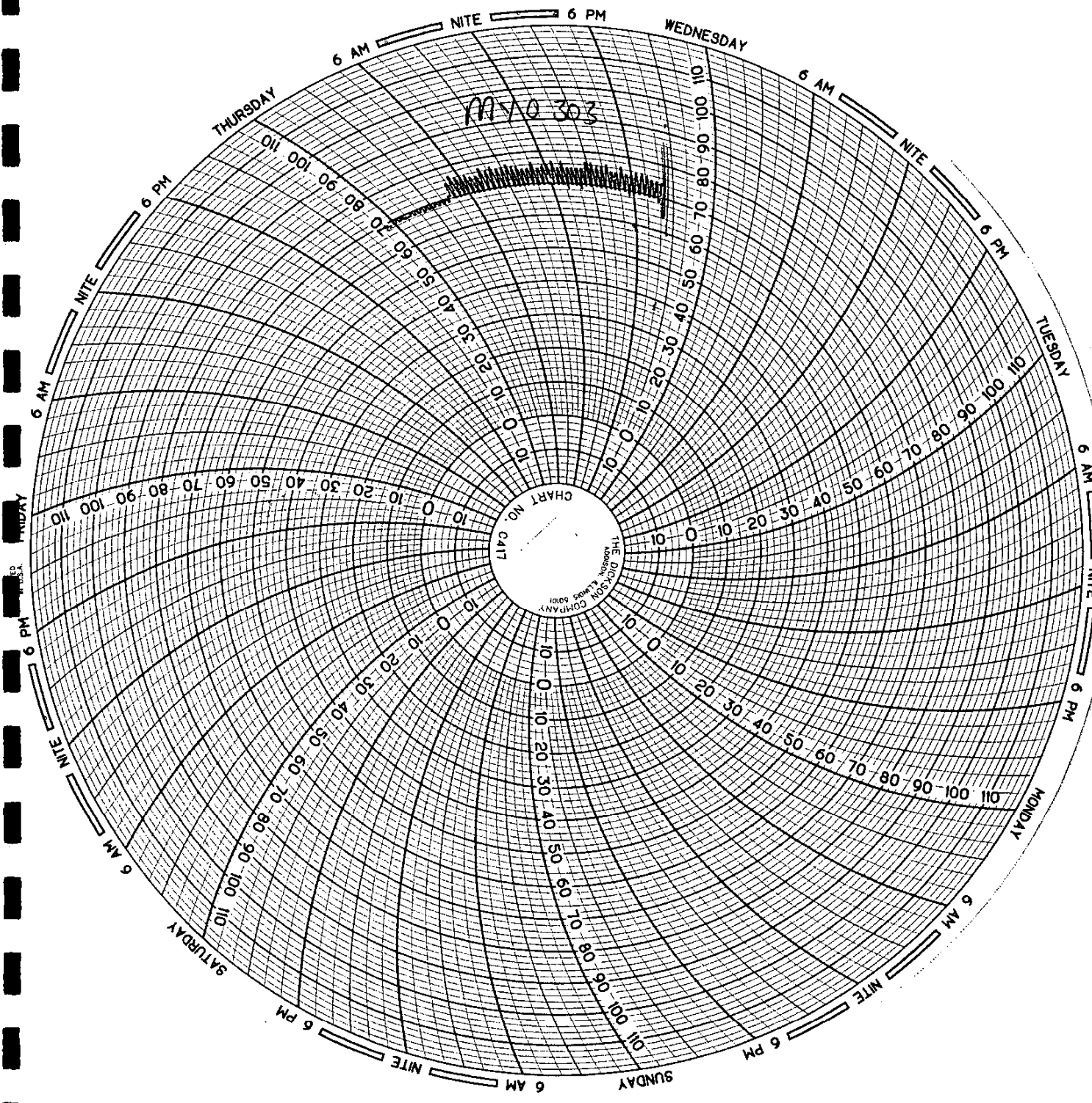
Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 268 Sequential Test Number: 1
 Date: _____ Laboratory Technician: B. Swiecicki

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

REMARKS: None



1170303

CHART NO. 6417
THE DISK RECORD COMPANY
1000 KENNEDY BLVD. 60601

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

SID INSTRUMENTATION

FRONT SID NO.: 027			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD X	AC-EL79	ENDEVCO	10-Sep-99
HEAD Y	AC-CF82	ENDEVCO	10-Sep-99
HEAD Z	AC-AD395	ENDEVCO	10-Sep-99
UPPER RIB	AC-A14342	ENDEVCO	9-Dec-99
LOWER RIB	AC-A14246	ENDEVCO	9-Dec-99
LOWER SPINE	AC-A14261	ENDEVCO	9-Dec-99
PELVIS	AC-A14358	ENDEVCO	9-Dec-99
UPPER RIB REDUNDANT	AC-A13599	ENDEVCO	8-Dec-99
LOWER RIB REDUNDANT	AC-A13883	ENDEVCO	8-Dec-99
LOWER SPINE REDUNDANT	AC-A14131	ENDEVCO	8-Dec-99
PELVIS REDUNDANT	AC-A14314	ENDEVCO	8-Dec-99

REAR SID NO.: 268			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD X	AC-APBF4	ENDEVCO	3-Jan-00
HEAD Y	AC-A13926	ENDEVCO	9-Dec-99
HEAD Z	AC-A13565	ENDEVCO	9-Dec-99
UPPER RIB	AC-A12776	ENDEVCO	9-Dec-99
LOWER RIB	AC-AL6C4	ENDEVCO	10-Sep-99
LOWER SPINE	AC-GD52	ENDEVCO	12-Nov-99
PELVIS	AC-AH5M9	ENDEVCO	10-Sep-99
UPPER RIB REDUNDANT	AC-A14381	ENDEVCO	8-Dec-99
LOWER RIB REDUNDANT	AC-A14510	ENDEVCO	8-Dec-99
LOWER SPINE REDUNDANT	AC-A14307	ENDEVCO	8-Dec-99
PELVIS REDUNDANT	AC-A14126	ENDEVCO	8-Dec-99

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-ACC06	ENDEVCO	27-Sep-99
RIGHT FRONT SILL (Y)	AC-B11351	ENDEVCO	27-Sep-99
RIGHT FRONT SILL (Z)	AC-B10481	ENDEVCO	27-Sep-99
RIGHT REAR SILL (X)	AC-APIA2	ENDEVCO	24-Sep-99
RIGHT REAR SILL (Y)	AC-B11073	ENDEVCO	24-Sep-99
RIGHT REAR SILL (Z)	AC-B10954	ENDEVCO	24-Sep-99
REAR FLOORPAN ABOVE AXLE (X)	AC-D41	ICS	16-Sep-99
REAR FLOORPAN ABOVE AXLE (Y)	AC-D40	ICS	16-Sep-99
REAR FLOORPAN ABOVE AXLE (Z)	AC-D52	ICS	16-Sep-99
LEFT REAR SILL (Y)	AC-D85	ICS	8-Dec-99
LEFT FRONT SILL (Y)	AC-X26	ICS	1-Sep-99
LEFT FRONT DOOR CENTERLINE (Y)	AC-BA80	ENDEVCO	24-Sep-99
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-D69	ICS	1-Sep-99
MID REAR OF LEFT FRONT DOOR (Y)	AC-AY03	ENDEVCO	24-Sep-99
LEFT FRONT DOOR UPPER CL (Y)	AC-BB51	ENDEVCO	3-Jan-00
MID REAR OF LEFT REAR DOOR (Y)	AC-D03	ENTRAN	3-Sep-99
LEFT REAR DOOR UPPER CL (Y)	AC-AC7W8	ENDEVCO	6-Dec-99
LOWER LEFT B- PILLAR (Y)	AC-B10951	ENDEVCO	7-Oct-99
MIDDLE LEFT B-PILLAR (Y)	AC-J18400	ENDEVCO	24-Sep-99
LOWER LEFT A-PILLAR (Y)	AC-BA65	ENDEVCO	3-Sep-99
UPPER LEFT A-PILLAR (Y)	AC-D31	ICS	14-Sep-99
FRONT SEAT TRACK (Y)	AC-J18436	ENDEVCO	7-Oct-99
REAR SEAT TRACK (Y)	AC-J18515	ENDEVCO	3-Sep-99
VEHICLE CG (X)	AC-J18649	ENDEVCO	24-Sep-99
VEHICLE CG (Y)	AC-J18622	ENDEVCO	24-Sep-99
VEHICLE CG (Z)	AC-APBB6	ENDEVCO	24-Sep-99
MDB CG (X)	AC-CL60	ENDEVCO	4-Jan-00
MDB CG (Y)	AC-CJ54	ENDEVCO	4-Jan-00
MDB CG (Z)	AC-GK12	ENDEVCO	4-Jan-00
MDB REAR FRAME MEMBER (X)	AC-CX05	ENDEVCO	4-Jan-00
MDB REAR FRAME MEMBER (Y)	AC-A27F	ENDEVCO	4-Jan-00

REMARKS: None

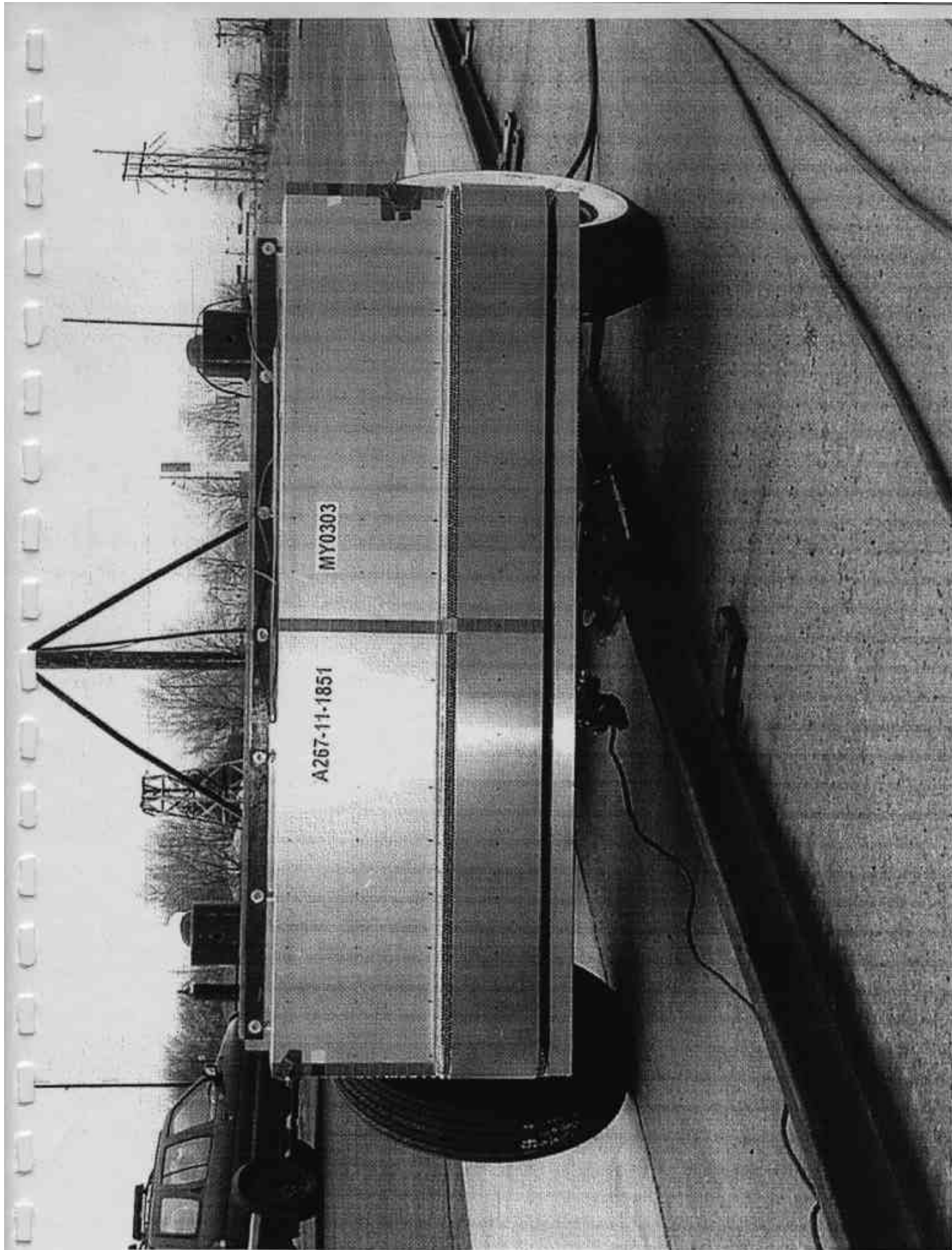


Figure A-7 PRE-TEST FRONTAL VIEW OF IMPACTOR FACE

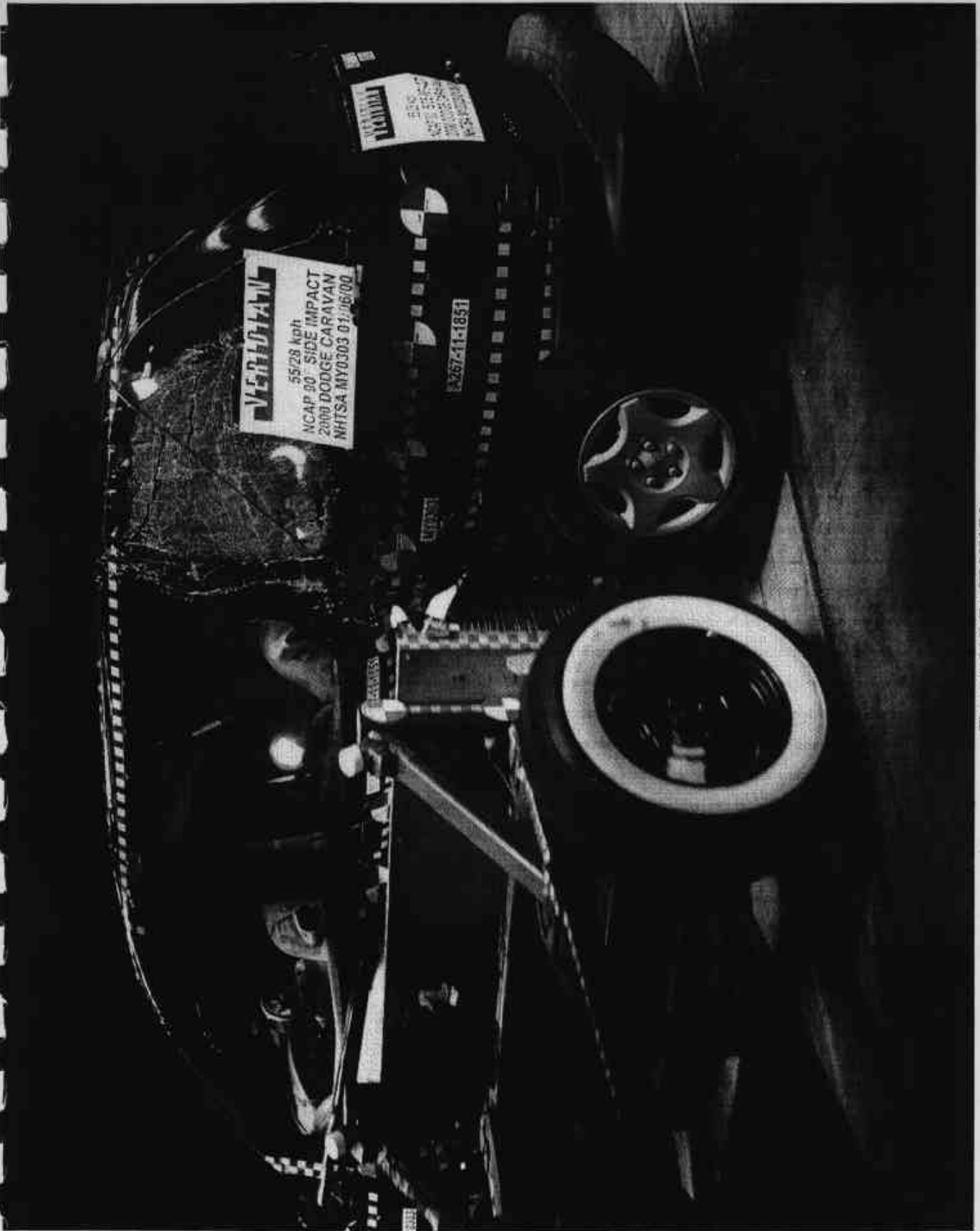


Figure A-34 IMPACT PHOTO