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REPORT NUMBER: 214-CAL-01-4

**SAFETY COMPLIANCE TESTING FOR FMVSS 214
SIDE IMPACT PROTECTION
INDICANT**

CAMI AUTOMOTIVE, INC.
2001 CHEVROLET TRACKER
2-DOOR UTILITY VEHICLE

NHTSA NUMBER: C10104

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



November 7, 2000

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Compliance
400 Seventh Street, SW
Room 6115 (NSA-30)
Washington, DC 20590

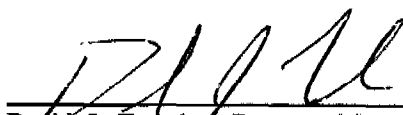
This Final Test Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-97-C-01033. This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufactures' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

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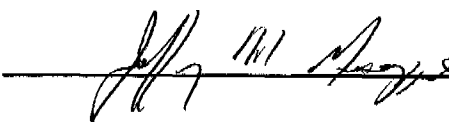
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16. Abstract A 55/28 kph 90° Side Impact (Moving Deformable Barrier) Indicant Test was conducted on the subject 2001 Chevrolet Tracker 2-Door Utility Vehicle. This test was performed at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-04, dated September 1, 1995). This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on November 7, 2000. The impact velocity of the Moving Deformable Barrier (MDB) was 62.6 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 385 mm at level 1. The test or target vehicle's performance is given below: <table border="0"> <thead> <tr> <th></th> <th align="center"><u>Front SID</u></th> <th></th> <th align="center"><u>Rear SID</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td align="center"><u>49</u></td> <td align="center">g's</td> <td align="center"><u>61</u></td> <td align="center">g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td align="center"><u>53</u></td> <td align="center">g's</td> <td align="center"><u>60</u></td> <td align="center">g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td align="center"><u>85</u></td> <td align="center">g's</td> <td align="center"><u>34</u></td> <td align="center">g's</td> </tr> <tr> <td>Thoracic Trauma Index (TTI):</td> <td align="center"><u>69</u></td> <td align="center">g's</td> <td align="center"><u>47</u></td> <td align="center">g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td align="center"><u>108</u></td> <td align="center">g's</td> <td align="center"><u>47</u></td> <td align="center">g's</td> </tr> </tbody> </table> 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.							<u>Front SID</u>		<u>Rear SID</u>		Left Upper Rib Acceleration:	<u>49</u>	g's	<u>61</u>	g's	Left Lower Rib Acceleration:	<u>53</u>	g's	<u>60</u>	g's	Lower Spine Acceleration:	<u>85</u>	g's	<u>34</u>	g's	Thoracic Trauma Index (TTI):	<u>69</u>	g's	<u>47</u>	g's	Pelvis Acceleration (PEV):	<u>108</u>	g's	<u>47</u>	g's
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17. Key Words Compliance Testing Side Impact Protection FMVSS 214 Side Impact Dummy (SID) New Car Assessment Program (NCAP)			18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Reference Division Room 5108 (NAD-52) 400 Seventh st., S.W. Washington, D.C. 20590 Telephone No. (202) 366-4946 ATTN: Robert Hornicle																																
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SECTION 1

PURPOSE AND TEST PROCEDURE

This Side Impact Indicant Test is part of the FMVSS 214 Side Impact Protection Compliance Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-97-C-01033. The purpose of this indicant test was to evaluate side impact protection in a 2001 Chevrolet Tracker 2-Door Utility Vehicle when tested at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-04, dated September 1, 1995).

SECTION 2

SUMMARY OF SIDE IMPACT TEST

This Side Impact Protection Indicant Test was performed at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-04, dated September 1, 1995).

A 2001 Chevrolet Tracker 2-Door Utility Vehicle was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 62.6 kph (38.9 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Veridian Engineering Transportation Sciences Center in Buffalo, New York on November 7, 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 OVSC Side Impact Laboratory Test Procedure. Both SIDs were certified prior to this test. The side impact test was documented by one real-time camera and 10 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SIDs were instrumented with the following accelerometers:

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

A summary of the side impact dummy (SID) configuration and verification test data can be found in Appendix C. A total of 49 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)	69	47
PEV (g)	108	47

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET 1

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2001 Chevrolet Tracker 2-Door Utility Vehicle
 Vehicle Body Color: Red VIN: 2CNBE18C716902518
 Vehicle NHTSA No.: C10104 Month & Year of Manufacture: 7/00
 Engine Data: 4 Cylinders; - CID; 2.0 Liters; - cc
 Engine Placement: - Longitudinal; or X Lateral
 Transmission: 5 Speed; X Manual; - Automatic; X Overdrive
 Final Drive: X Rear Wheel Drive; - Front Wheel Drive; - Four Wheel
 Odometer Reading 59 km
 Options: X A/C; X Power Steering; X Pwr.Brakes; - Pwr. Windows

DATA FROM TIRE PLACARD

Tire Pressure* (at capacity); 180 kPa FRONT
180 kPa REAR
 Recommended Tire Size: P195/75R15
 Tires on Test Vehicle: P195/75R15 ; Manufacturer: Goodyear
 Vehicle Capacity Data:
 Number of Occupants: 2 Front; 2 Rear; 0 3rd Seat; 4 Total
 Type of Front Seats: X Bucket; - Bench; - Split Bench
 Type of Front Seat Back: - Fixed; X Adjustable with X Lever or - Knob
 Vehicle Max Capacity Loading = 360 kg (A)
 No. of Occupants x 68.04 kg. = 272.2 kg (B)
 Vehicle Cargo Capacity = 87.8 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front	=	<u>312.5</u> kg	Left Rear	=	<u>291.0</u> kg
Right Front	=	<u>307.5</u> kg	Right Rear	=	<u>296.0</u> kg
TOTAL FRONT	=	<u>620.0</u> kg	TOTAL REAR	=	<u>587.0</u> kg
% of Total Weight	=	<u>51.4</u> %	% of Total Weight	=	<u>48.6</u> %
TOTAL WEIGHT	=	<u>1207.0</u> kg			

* Tire pressure used in test.

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Chevrolet TrackerNHTSA No. C10104CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:Total Test Vehicle Delivered Weight with Max. Fluids = 1207.0 kg (A)Maximum Cargo Carrying Capacity of Test Vehicle = 87.8 kg (B)Weight of instrumented Side Impact Dummies = 162.4 kg (C)TEST VEHICLE TARGET WEIGHT: = 1457.2 kg (A+B+C)FULLY LOADED TEST VEHICLE (UDVW + 2 SIDs + CARGO):Left Front = 369.5 kg Left Rear = 403.5 kgRight Front = 310.0 kg Right Rear = 385.0 kgTOTAL FRONT = 679.5 kg TOTAL REAR = 788.5 kg% of Total Weight = 46.3 % % of Total Weight = 53.7 %TOTAL TEST WEIGHT = 1468.0 kgAS TESTED WEIGHT OF TEST VEHICLE (2 SIDs + CARGO + EQUIPMENT & INSTRUMENTATION):Left Front = 372.0 kg Left Rear = 387.0 kgRight Front = 315.5 kg Right Rear = 373.5 kgTOTAL FRONT = 687.5 kg TOTAL REAR = 760.5 kg% of Total Weight = 47.5 % % of Total Weight = 52.5 %TOTAL TEST WEIGHT = 1448.0 kgTEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED:

Left Front 780 Right Front 780 Left Rear 784 Right Rear 791

FULLY LOADED:

Left Front 760 Right Front 770 Left Rear 746 Right Rear 733

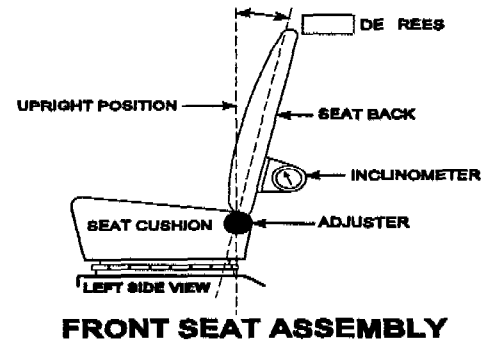
READY FOR TEST:

Left Front 762 Right Front 772 Left Rear 747 Right Rear 754Test Vehicle Wheelbase: 2220 millimetersC.G. = 1166.0 millimeters rearward of front wheel centerlineTOTAL VEHICLE LENGTH:Right Side = 3705 millimetersLeft Side = 3705 millimetersCenterline = 3770 millimeters

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2001 Chevrolet TrackerNHTSA No. C10104

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 TRACK POSITION: Place seat in seventh detent from foremost position (0)

Total Length of Adjustment Travel: 195 millimeters

Total Number of Adjustment Positions or Detents: 14

FRONT SEAT BACK ADJUSTMENT POSITION: 6th locked position from full upright position (#1)

Seat Back Torso Angle: 22 degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0 millimeters

Seat Back Adjustment Position: 20° (5th locked position)

ADJUSTABLE STEERING COLUMN POSITION: Not Adjustable

WINDOW POSITIONS: Left Front: Closed Left Rear: Closed

Right Front: Removed Right Rear: Removed

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

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

56 liters (Fuel Tank Usable Capacity)

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

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

Wheelbase = 2220 millimeters

Impact Point is 170 millimeters rearward of front axle centerline

(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 168 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2001 Chevrolet Tracker

Body Style: 2-Door Utility Vehicle

VIN: 2CNBE18C716902518

NHTSA No.: C10104

Test Date: November 7, 2000

Overall Length = 3770 millimeters; Overall Width = 1715 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front = 372.0 kg Left Rear = 387.0 kg

Right Front = 315.5 kg Right Rear = 373.5 kg

TOTAL FRONT = 687.5 kg TOTAL REAR = 760.5 kg

TOTAL VEHICLE WEIGHT 1448.0 kg

Wheelbase = 2220 millimeters

Longitudinal C.G. from Center of Front Axle = 1166.0 millimeters

Impact Angle with Respect to Impactor = 90 degrees

ACTUAL IMPACT POINT

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

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

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (324 mm above ground) = 385 millimeters

2. LEVEL 2 (668 mm above ground) = 358 millimeters

3. LEVEL 3 (705 mm above ground) = 353 millimeters

4. LEVEL 4 (929 mm above ground) = 262 millimeters

5. LEVEL 5 (1532 mm above ground) = 21 millimeters

Maximum Post-Test Intrusion = 385 millimeters

OCCUPANTS:

Front Passenger:

Rear Passenger:

Dummy Identification 015 016

Restraints Used 3-Point Safety Belt 3-Point Safety Belt

INSTRUMENTATION:

Number of Vehicle Data Channels: = 44

Number of Cameras: Onboard = 3

Offboard = 7

TOTAL = 10

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore, Inc. 054C0700-2 038C0600

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>62.6</u>	kph				

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	<u>65</u>	millimeters
2. Row B at Top of Bumper Level	=	<u>69</u>	millimeters
3. Row C at Mid Level	=	<u>68</u>	millimeters
4. Row D at Top of Stack Level	=	<u>120</u>	millimeters

INSTRUMENTATION:

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

POST-TEST OBSERVATIONS

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head:	<u>Back of the head to the right outside of the headrest and B-Pillar</u>	<u>Side of the head to the side curtain window.</u>
Upper Torso:	<u>Door Trim Panel</u>	<u>Interior Trim Panel</u>
Lower Torso:	<u>Door Trim Panel</u>	<u>Interior Trim Panel</u>
Left Knee:	<u>Door Trim Panel</u>	<u>Interior Trim Panel</u>
Right Knee:	<u>Left Knee</u>	<u>Left Knee</u>

DOOR OPENING:

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

MDB DISTANCE FROM TARGET IMPACT POINT:

<u>Vertical: 5 mm below</u>
<u>Horizontal: 2 mm forward</u>

ARM REST LOCATIONS:

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

SEAT MOVEMENT:

Front:	<u>Front seat cushion was moved inboard during the event.</u>
Rear:	<u>Rear seat cushion was moved inboard during the event</u>

GLAZING DAMAGE:

Windshield:	<u>Cracked along A-Pillar</u>
Window:	<u>Driver side window shattered during the impact</u>

PILLAR PERFORMANCE:

The A- and B-Pillars were moved inboard during the event with no visible tears or separations.

SILL SEPARATION:

There were no visible separations or tears

AIR BAG DEPLOYMENT STATUS:

	<u>DRIVER</u>	<u>FRONT PASSENGER</u>	<u>REAR PASSENGER</u>
<u>FRONT</u>	<u>Deployed</u>	<u>Deployed</u>	<u>N/A</u>
<u>SIDE</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

OTHER NOTABLE IMPACT EFFECTS:

The vehicle and barrier remained in contact throughout the event and at rest. The CG target location in still photography and high speed film is incorrect. The actual vehicle CG is located 158 mm rearward of the barrier C/L.

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

	Front Dummy ID# 015				Rear Dummy ID# 016			
	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	13.5	187.6	-24.4	92.4	3.9	49.3	-29.9	93.1
Lateral Y	18.9	95.4	-12.5	36.6	48.3	90.2	-8.3	48.1
Vertical Z	62.8	68.0	-9.9	49.1	60.7	80.2	-3.1	30.6
Resultant R	64.1	68.0	0.0	-14.3	78.1	82.9	0.0	-2.6
HIC	434.0				663.4			
RIB ACCELERATIONS:								
Upper Rib Lateral . . Y	49.2	50.6	-12.3	90.0	60.5	55.0	-4.1	101.9
Upper Rib Lateral . . Y(R)	57.8	50.7	-12.3	90.0	60.2	55.0	-4.5	101.9
Lower Rib Lateral . . Y	52.5	36.3	-12.6	68.8	59.7	55.0	-8.4	101.8
Lower Rib Lateral . . Y(R)	50.6	36.3	-13.2	68.8	57.8	55.0	-8.9	101.3
SPINE ACCELERATIONS:								
Lower Lateral Y	85.1	35.6	-15.0	60.7	33.9	58.8	-4.4	104.4
Lower Lateral Y(R)	85.2	35.6	-15.6	60.6	33.5	58.8	-4.5	105.0
PELVIC ACCELERATIONS:								
Lateral Y	108.3	31.3	-29.1	67.5	46.9	41.9	-5.4	121.2
Lateral Y(R)	107.4	31.3	-30.1	67.5	47.9	41.9	-5.5	121.2

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

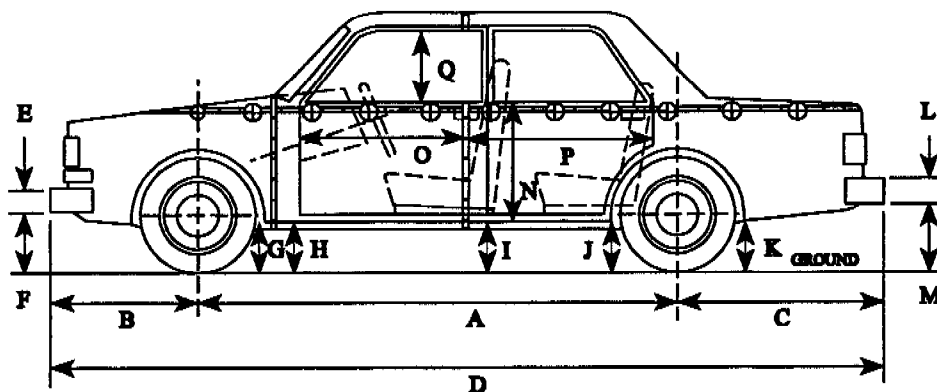
Note: Above data has been FIR filtered, Y(R) denotes redundant Y direction accelerometer.
 Head Accelerations are filtered at SAE Class 1000.

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



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	2220	2220	2177	-43
B	754	-	783	29
C	796	-	790	-6
D	3770	-	3750	-20
E	150	-	150	0
F	448	446	482	36
G	295	264	345	81
H	297	268	345	77
I	311	269	355	86
J1	285	239	293	54
J2	311	269	360	91
K	377	318	357	39
L	200	-	200	0
M	405	355	383	28
N	727	-	681	-46
O	493	-	480	-13
P	682	-	674	-8
Q	489	-	552	63
R	3705	-	3722	17
S	3705	-	3680	-25
T	1715	-	1450	-265

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

E&L = Bumper Thickness
J1 = To Pinch Weld

R = Right Side Length
J2 = To Sill

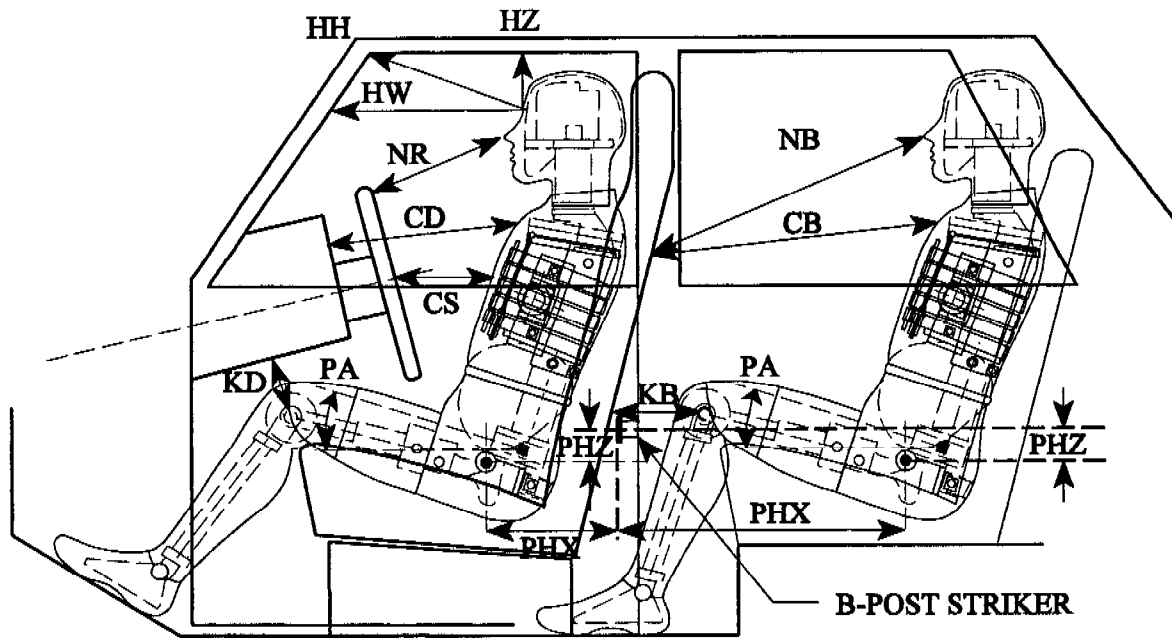
S = Left Side Length

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



LEFT SIDE VIEW

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

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

	DRIVER ID# <u>015</u>	LEFT REAR PASS. ID# <u>016</u>
HH	518	N/A
HW	726	N/A
HZ	233	195
NR/NB	489	508
CD/CB	615	414
CS	340	N/A
KDL(KDA°)/KBL(KDA°)	165 / (22°)	128 / (30°)
KDR(KBA°)/KBR(KBA°)	152 / (24°)	122 / (30°)
PA°	24.0°	24.0°
PHX	263	-545
PHZ	66	-6

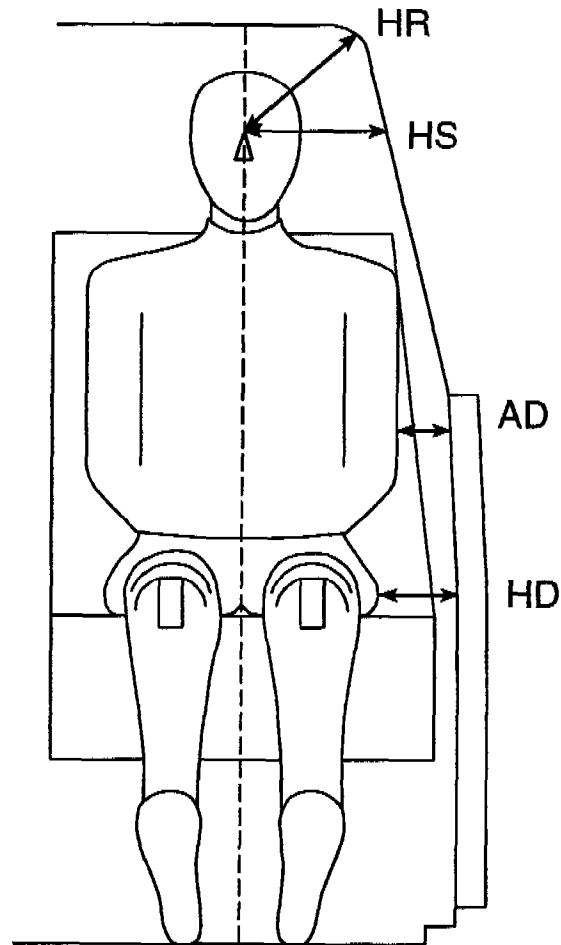
Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



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

	DRIVER ID # <u>015</u>		LEFT REAR PASS. ID # <u>016</u>	
HR	195		305	
HS	287		374	
AD*	LOWER: 94	UPPER: 84	LOWER: 278 (pocket)	UPPER: 169
HD	122		98	

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

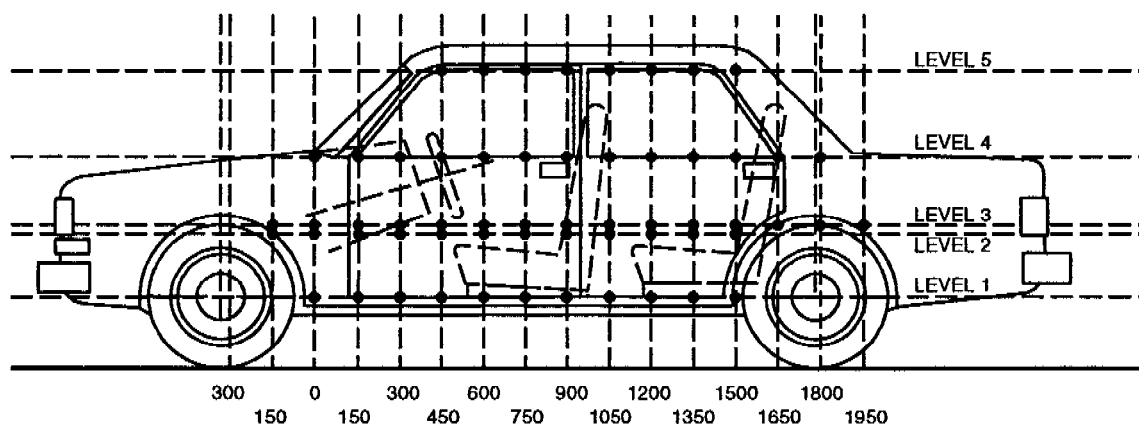
Upper measurement is taken laterally at the center of the upper rib accelerometer height from the SID arm segment to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



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 - 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>1532</u>	millimeters
Level 4 @ Window Sill	=	<u>929</u>	millimeters
Level 3 @ Mid Door	=	<u>705</u>	millimeters
Level 2 @ Occupant H-Point	=	<u>668</u>	millimeters
Level 1 @ Sill Top Height	=	<u>324</u>	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

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

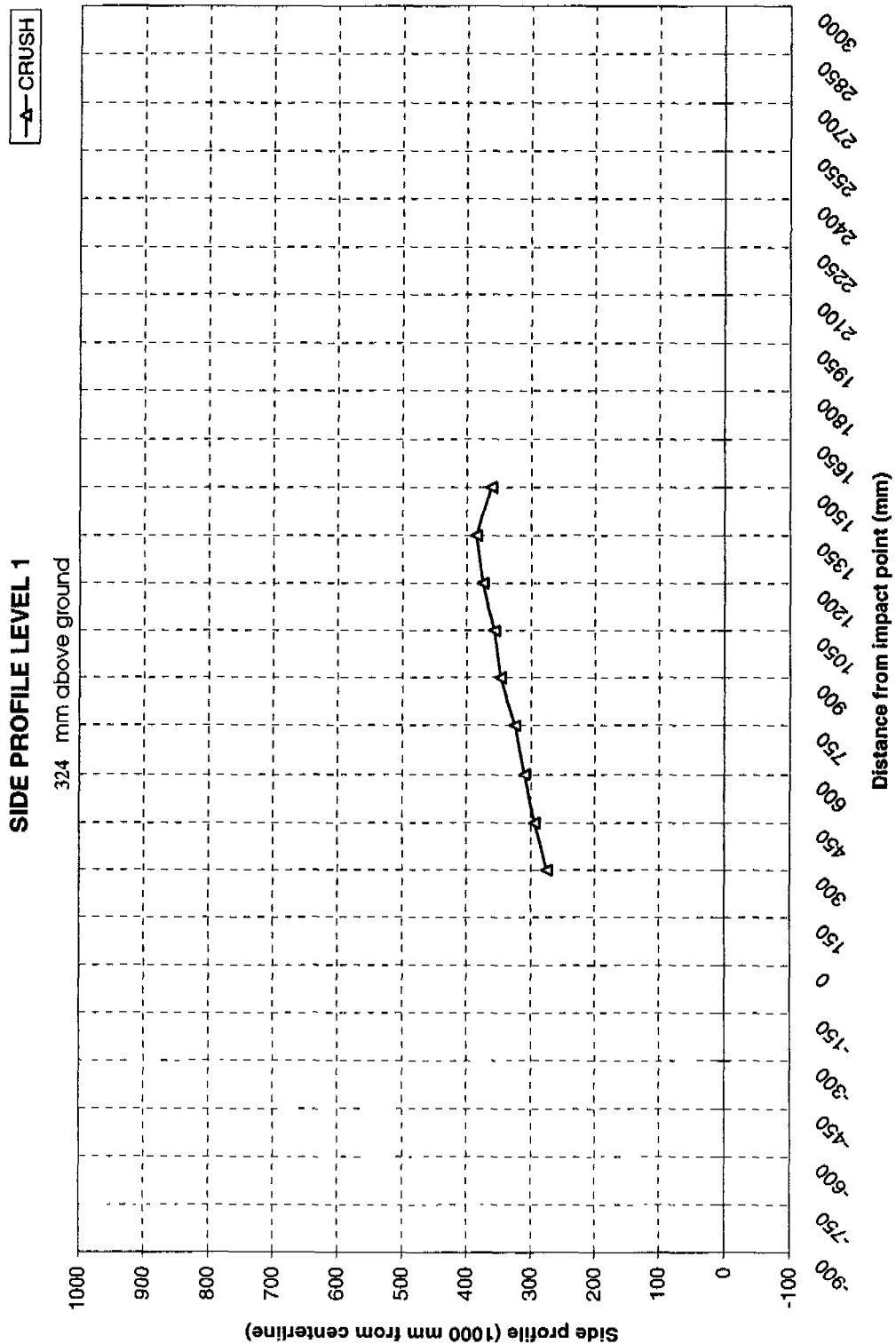
		DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																											
LEVEL	HEIGHT (mm)	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	
LEVEL 1 SIDE SILL	PRE	--	--	--	--	--	--	--	--	215	218	219	220	218	219	220	219	217	--	--	--	--	--	--	--	--	--	--	
	POST	--	--	--	--	--	--	--	--	490	512	529	545	566	576	595	604	579	--	--	--	--	--	--	--	--	--	--	
	CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	275	294	310	325	348	357	375	385	362	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
LEVEL 2 H POINT	PRE	--	--	209	--	--	--	--	172	176	179	180	177	176	175	175	176	178	175	175	--	--	--	--	186	203	--	--	
	POST	--	--	180	--	--	--	--	383	404	484	490	501	500	501	516	534	530	521	495	--	--	--	281	277	--	--		
	CRUSH	N/A	N/A	-29	N/A	N/A	N/A	N/A	211	228	305	310	324	324	326	341	358	352	346	320	N/A	N/A	N/A	95	74	N/A	N/A	N/A	
LEVEL 3 MID DOOR	PRE	--	--	217	--	--	--	--	171	175	182	185	184	183	183	184	183	180	175	171	--	--	--	172	183	197	--	--	
	POST	--	--	183	--	--	--	--	371	387	454	492	491	502	507	525	536	521	514	491	--	--	--	303	273	267	--	--	
	CRUSH	N/A	N/A	-34	N/A	N/A	N/A	N/A	200	212	272	307	307	319	324	341	353	341	339	320	N/A	N/A	N/A	131	90	70	N/A	N/A	
LEVEL 4 WINDOW SILL	PRE	--	--	314	271	249	232	220	212	209	205	202	199	197	196	184	175	192	196	194	194	193	200	205	219	--	--	--	
	POST	--	--	272	240	241	251	277	294	298	358	372	384	397	409	418	437	435	449	443	397	327	291	273	269	--	--	--	
	CRUSH	N/A	N/A	-42	-31	-8	19	57	82	89	153	170	185	200	213	234	262	243	253	249	203	134	91	68	50	N/A	N/A	N/A	
LEVEL 5 WINDOW TOP	PRE	--	--	--	--	--	--	--	--	--	--	--	--	448	424	418	419	413	411	421	423	421	419	--	--	--	--	--	
	POST	--	--	--	--	--	--	--	--	--	--	--	--	448	428	426	324	434	431	437	440	431	415	--	--	--	--	--	
	CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	4	8	-95	21	20	16	17	10	-4	N/A	N/A	N/A	N/A	N/A	

DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

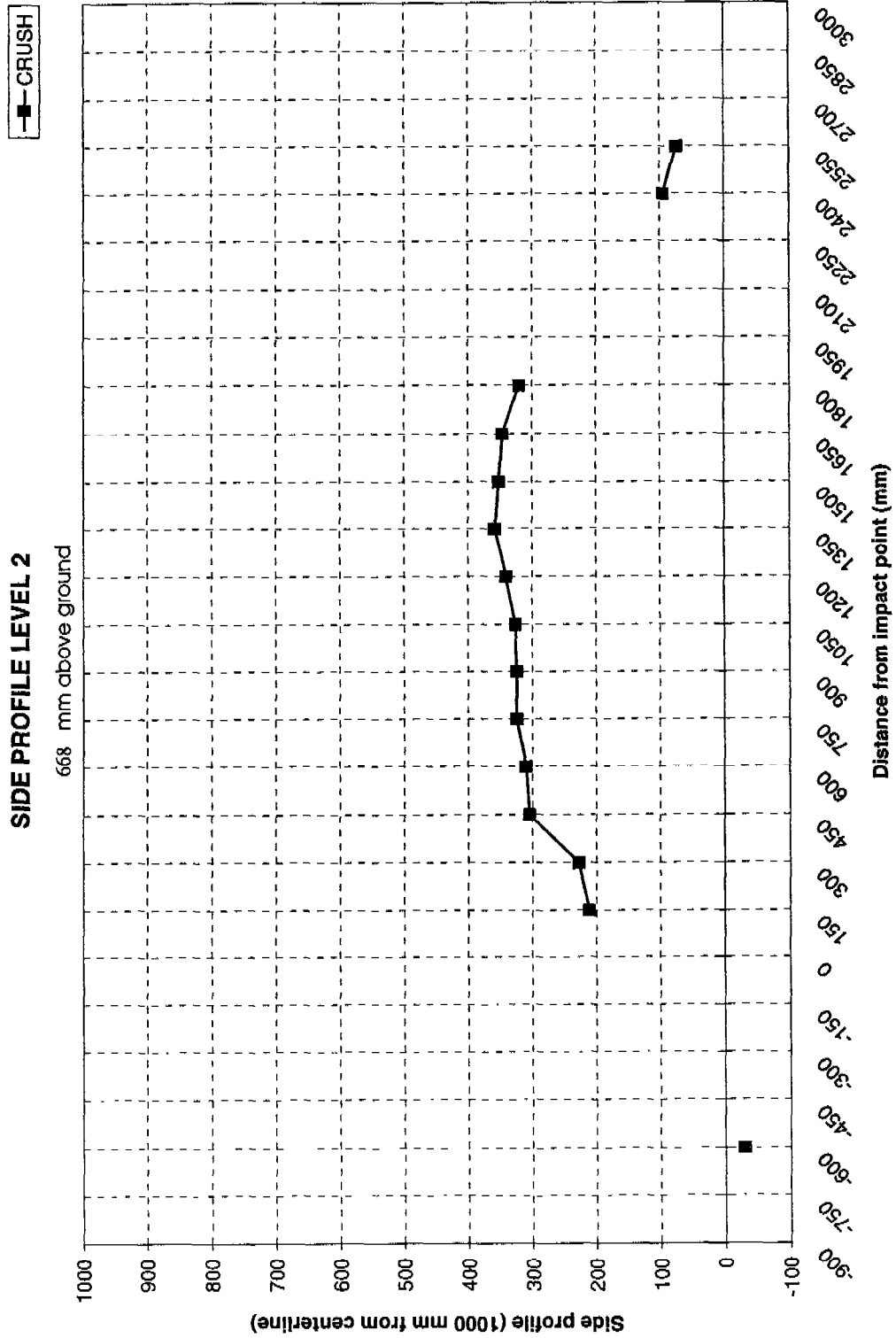


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

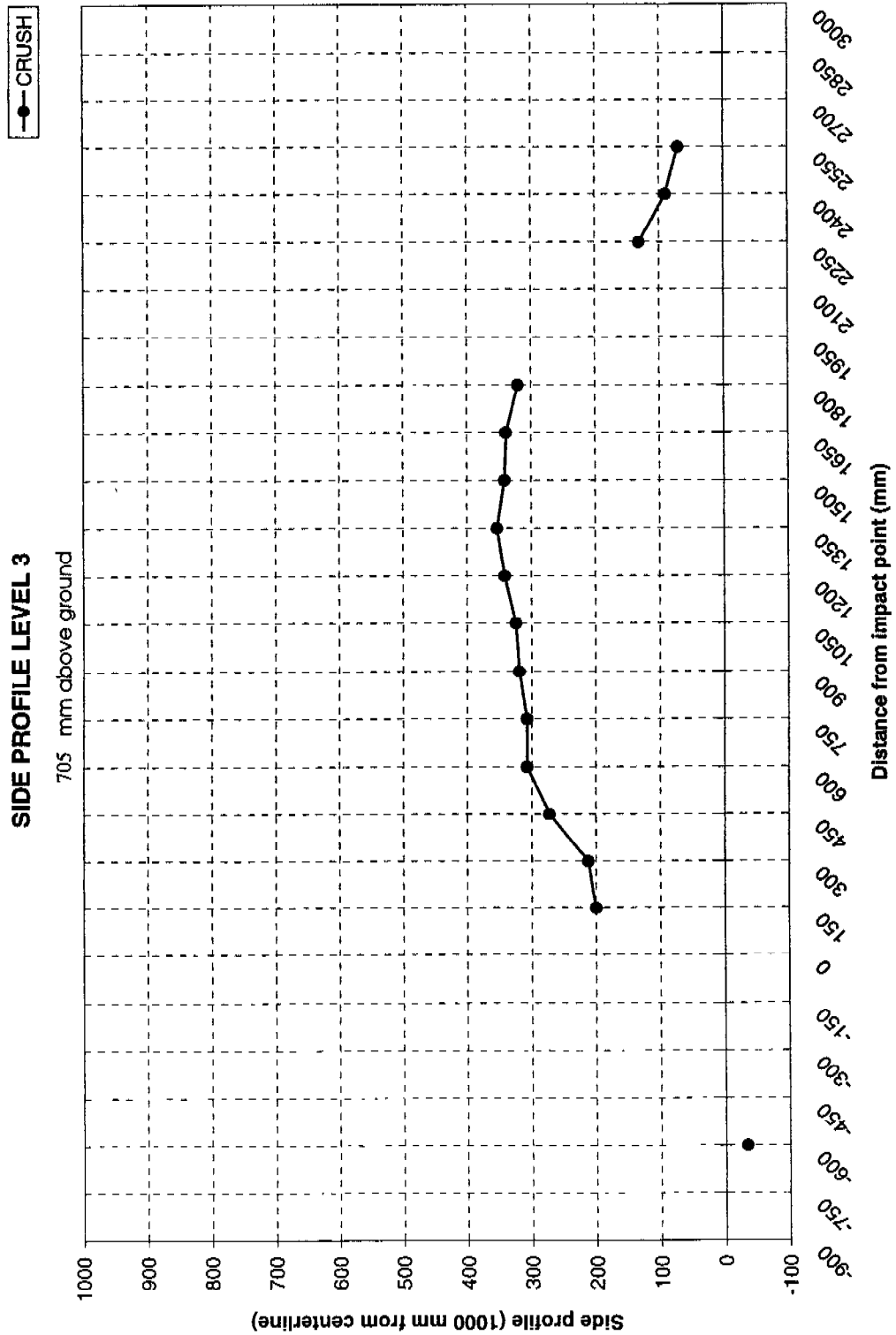


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

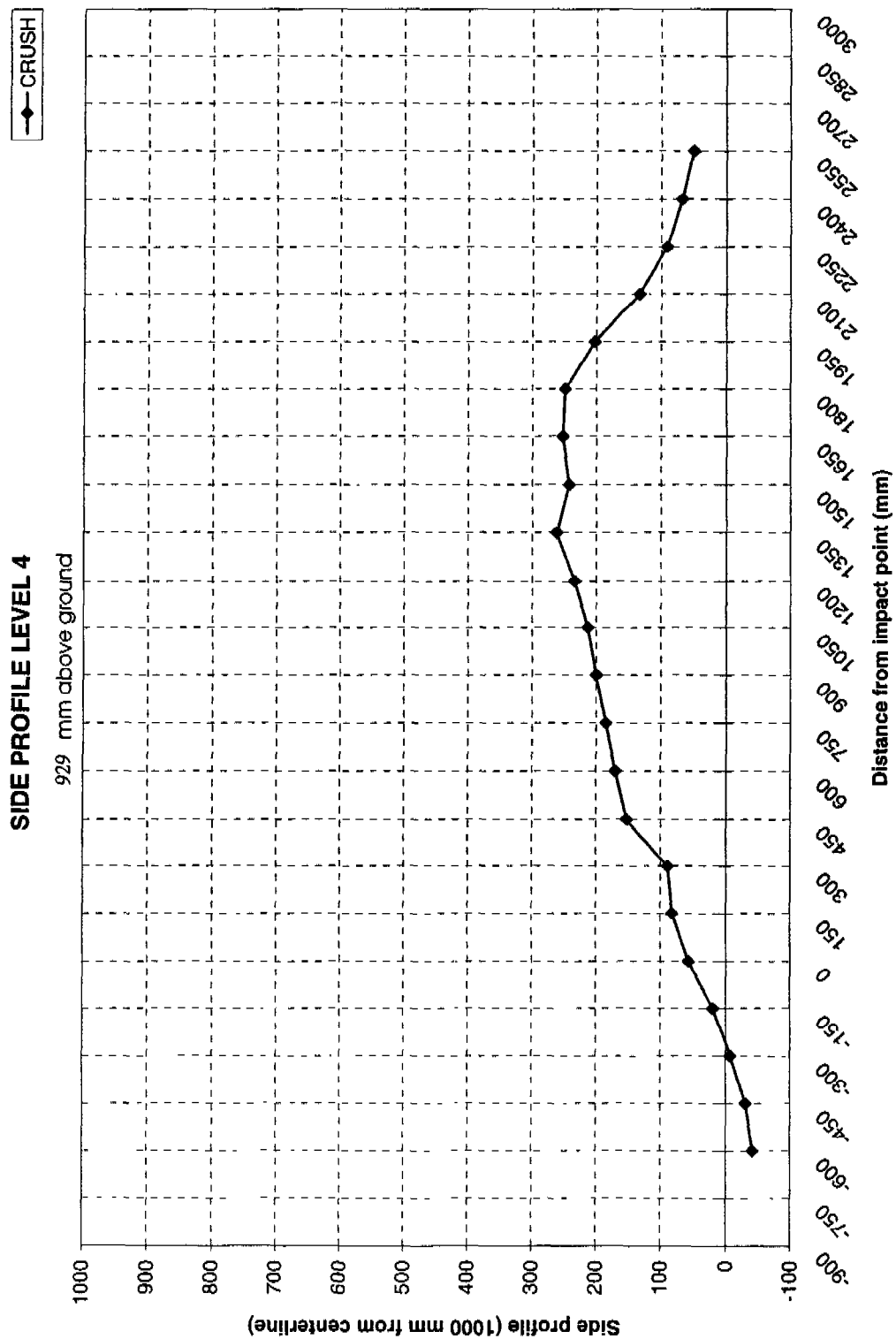


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

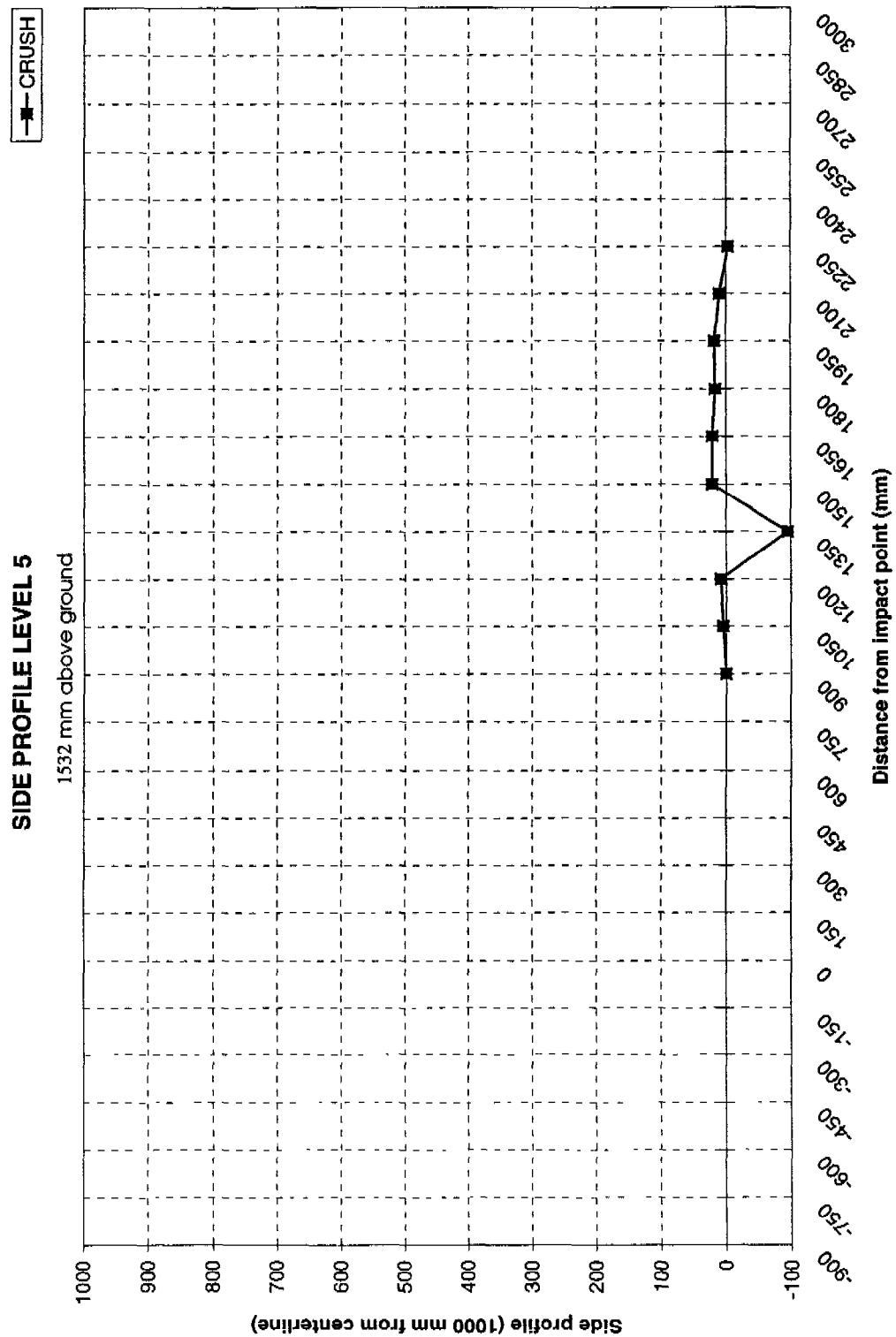


DATA SHEET 10 (continued)

VEHICLE EXTERIOR CRUSH PROFILES

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

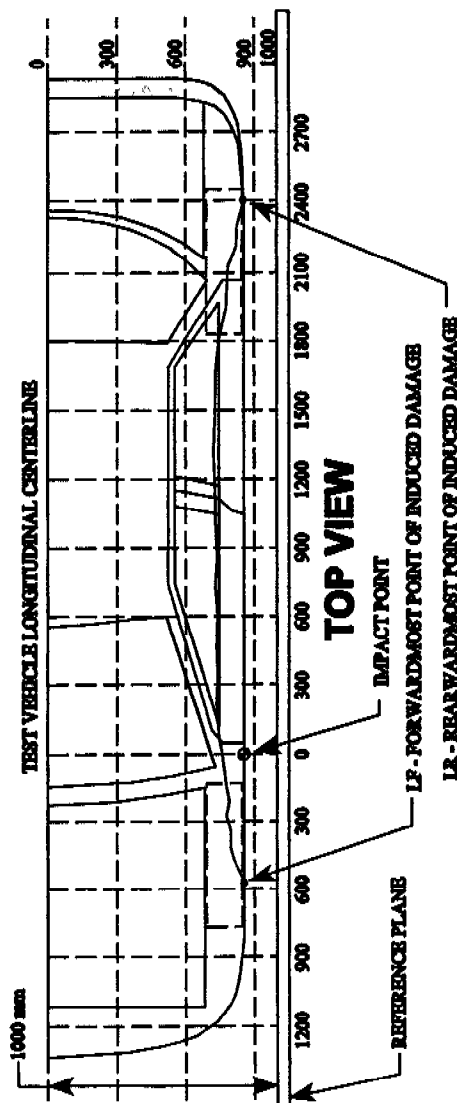


DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



MEASUREMENT CONVENTIONS:
Forward of the impact point (towards front of vehicle) is considered negative (—).
Rearward of the impact point (toward rearward 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	(LR = 2550 mm)	269	219	50
2	1990	378	194	184
3	1430	591	218	373
4	870	562	218	344
5	310	491	215	276
6	(LF = -250 mm)	244	243	1

DATA SHEET 12

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

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

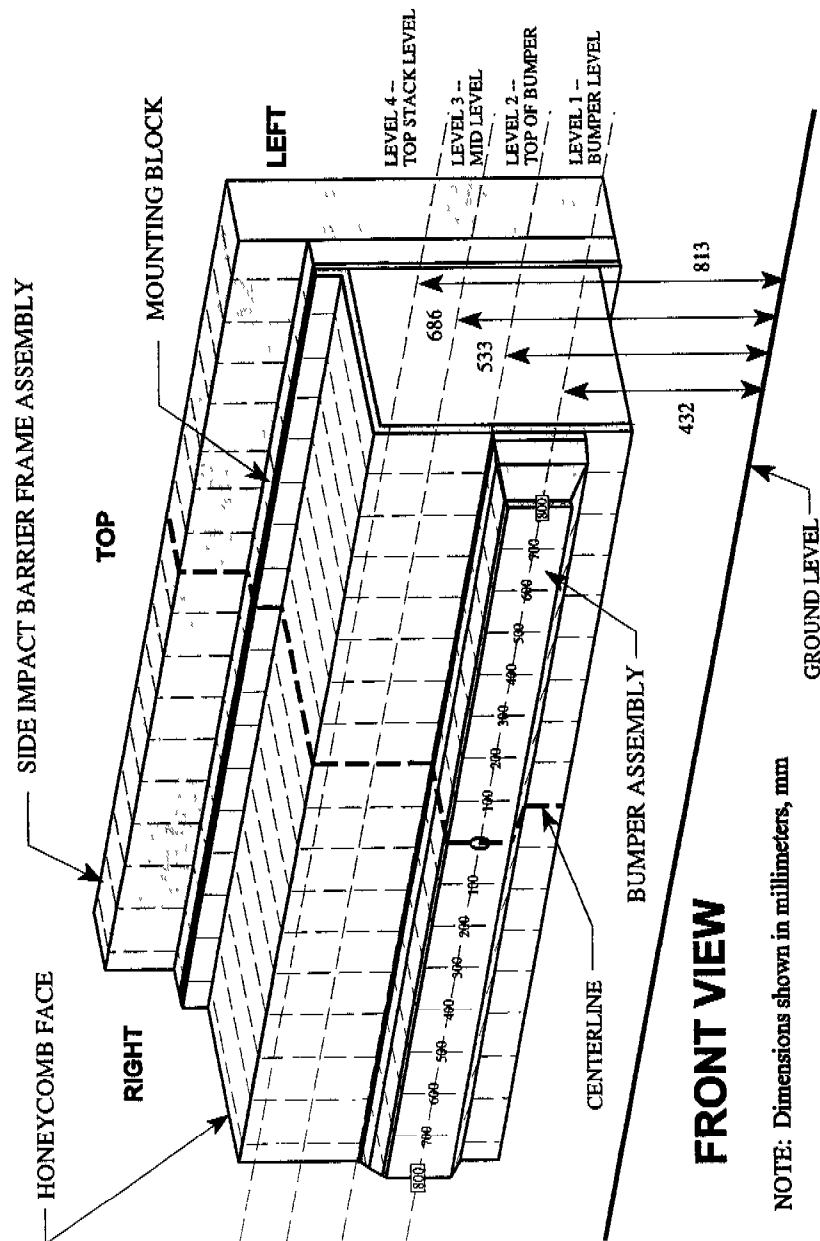
NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

		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	HEIGHT AT CL (mm)*																																
LEVEL 4 TOP STACK	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619															
	POST	694	697	683	653	628	623	623	625	625	628	632	644	673	717	732	728	739															
	CRUSH	75	78	64	34	9	4	4	6	6	9	13	25	54	98	113	109	120															
LEVEL 3 MID LEVEL	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619															
	POST	668	670	638	620	616	617	617	617	617	616	616	619	618	640	663	664	687															
	CRUSH	49	51	19	1	-3	-2	-2	-2	-2	-3	-3	0	-1	21	44	45	68															
LEVEL 2 TOP BUMPER	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619															
	POST	688	665	643	638	637	638	639	640	641	644	643	644	647	653	664	662	663															
	CRUSH	69	46	24	19	18	19	20	21	22	25	24	25	28	34	45	43	44															
LEVEL 1 MID BUMPER	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	518	519	535															
	POST	581	573	568	551	544	542	544	545	548	550	551	553	558	569	583	576	584															
	CRUSH	46	54	50	33	26	24	26	27	30	32	33	35	40	51	65	57	49															

*Heights measured above ground level.

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2001 Chevrolet Tracker



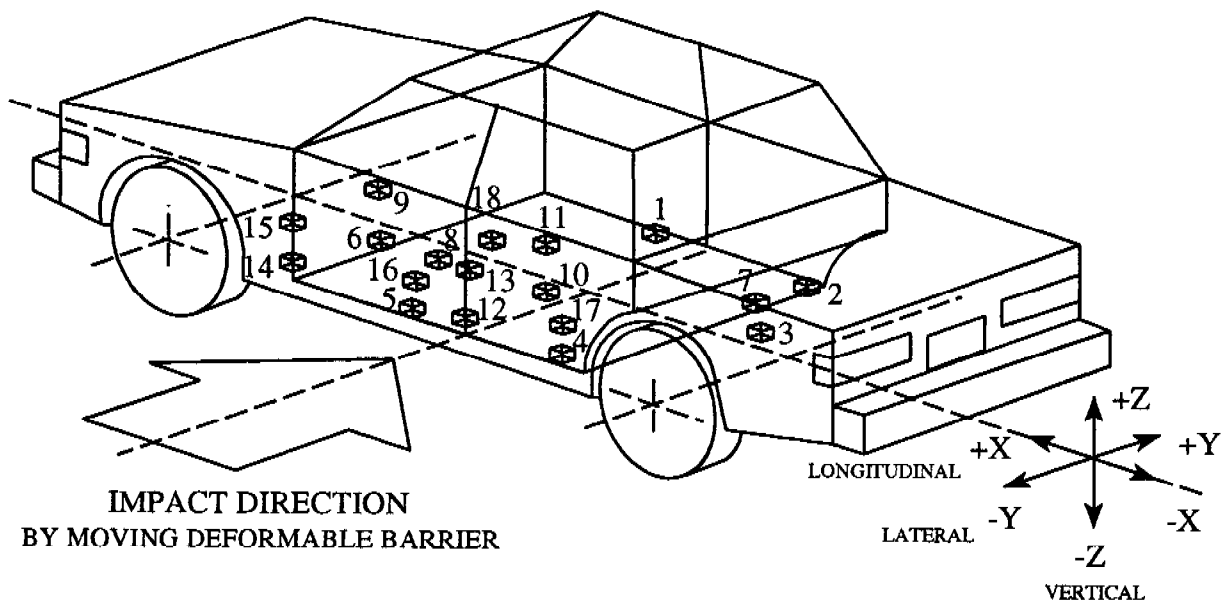
NOTE: Dimensions shown in millimeters, mm

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



- 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. C10104

Vehicle: 2001 Chevrolet Tracker

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)
1	Right Side Sill at Front Seat	2291	579	364	pos.	6.8	26.7	40.8	22.2	7.5	41.1	22.2
					neg.	-11.8	7.2	-6.3	65.1	-12.3	0.0	-11.8
2	Right Side Sill at Rear Seat	1661	637	364	pos.	6.5	27.3	31.4	24.1	7.6	32.6	24.4
					neg.	-12.2	7.3	-4.3	152.7	-14.1	0.0	-16.5
3	Rear Floorpan Above Axle	592	20	698	pos.	5.9	18.7	28.6	28.6	13.5	34.1	19.5
					neg.	-9.8	3.6	-2.8	100.4	-31.7	0.0	-15.4
4	Left Side Sill at Rear Seat	1657	-597	364	pos.	-	-	141.2	7.1	-	-	-
					neg.	-	-	-48.0	18.0	-	-	-
5	Left Side Sill at Front Seat	2310	-567	364	pos.	-	-	86.5	5.7	-	-	-
					neg.	-	-	-92.6	20.4	-	-	-
6	Left Front Door on Centerline	-	-	-	pos.	-	-	-	-	-	-	-
					neg.	-	-	-	-	-	-	-
7	Right Rear Occupant Compartment	1321	385	364	pos.	-	-	27.5	35.3	-	-	-
					neg.	-	-	-3.8	178.3	-	-	-
8	Midrear of Left Front Door	-	-	-	pos.	-	-	-	-	-	-	-
					neg.	-	-	-	-	-	-	-
9	Left Front Door Upper Centerline	-	-	-	pos.	-	-	-	-	-	-	-
					neg.	-	-	-	-	-	-	-
10	Midrear of Left Rear Door	-	-	-	pos.	-	-	-	-	-	-	-
					neg.	-	-	-	-	-	-	-
11	Left Rear Door Upper Centerline	-	-	-	pos.	-	-	-	-	-	-	-
					neg.	-	-	-	-	-	-	-

*Reference: X - Rear Bumper (+ Forward)

** Accelerometer was not requested by COTR.

Y - Vehicle Centerline (+ To Right)

Z - Ground Level (+ Up)

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

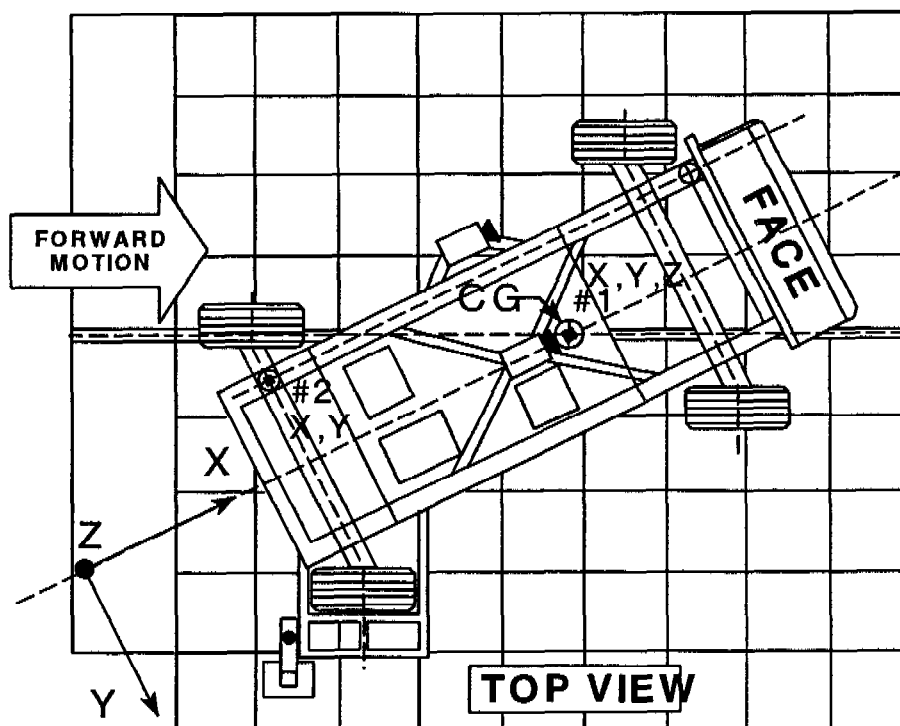
Accel. No.	Location	Coordinates (mm)±3			Lat. (y)			Vert. (z)			Resultant	
		mm			Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
		X*	Y*	Z*								
12	Left Lower B-Pillar	1397	-670	470	pos.	-	211.1	4.2	-	-	-	-
					neg.	-	-73.2	29.9	-	-	-	-
13	Left Middle B-Pillar	1351	-705	1093	pos.	-	127.5	6.6	-	-	-	-
					neg.	-	-46.2	33.1	-	-	-	-
14	Left Lower A-Pillar	1496	-717	672	pos.	-	134.5	28.0	-	-	-	-
					neg.	-	-95.4	20.7	-	-	-	-
15	Left Middle A-Pillar	1453	-567	1129	pos.	-	32.6	12.0	-	-	-	-
					neg.	-	-9.8	60.5	-	-	-	-
16	Front Seat Track	1546	-530	403	pos.	-	153.1	29.4	-	-	-	-
					neg.	-	-71.6	34.2	-	-	-	-
17	Rear Seat Track	637	-480	702	pos.	-	29.1	36.7	-	-	-	-
					neg.	-	-7.1	33.0	-	-	-	-
18	Vehicle CG	1611	0	693	pos.	28.4	35.2	15.0	42.8	28.7	59.1	28.5
					neg.	-25.0	-8.4	69.1	-32.3	9.9	0.0	-20.0

*Reference: X - Rear Bumper (+ Forward)

Y - Vehicle Centerline (+ To Right)

Z - Ground Level (+ Up)

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Chevrolet TrackerNHTSA No. C10104

Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal... X	1859	0	330	1.5	126.3	-21.1	38.6
	Lateral..... Y				1.3	67.4	-9.1	28.0
	Vertical..... Z				10.2	51.1	-11.8	67.9
	Resultant..... R				24.3	29.0	0.3	-1.8
2	Rear Frame Member							
	Longitudinal... X	386	-660	660	2.4	188.1	-20.4	38.4
	Lateral..... Y				4.8	27.4	-2.3	53.4

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Up)

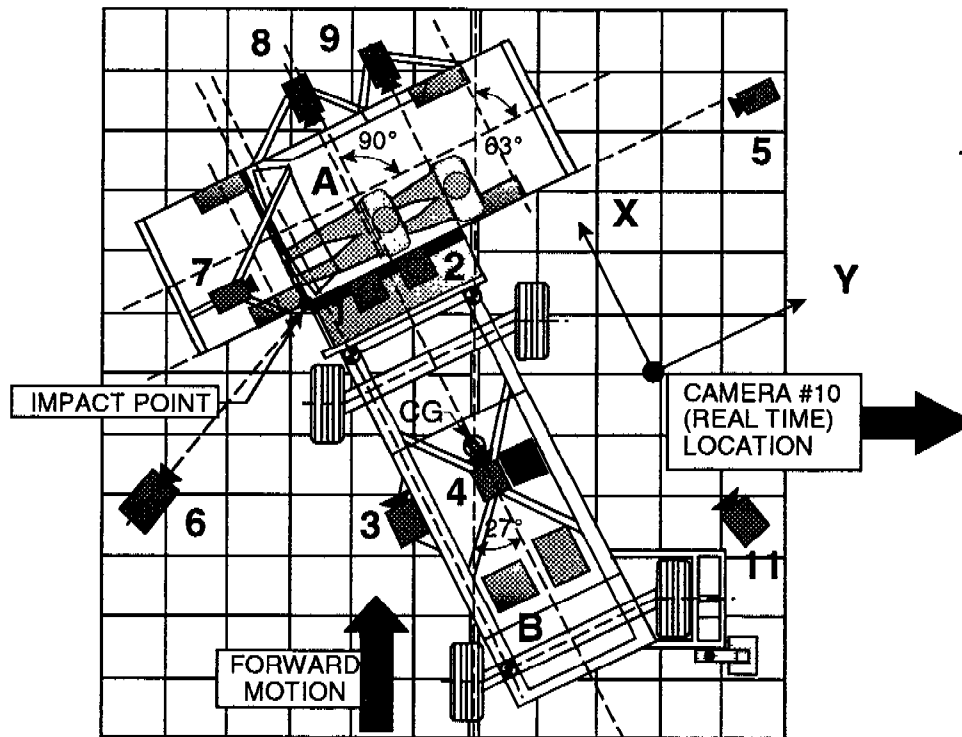
All measurements accurate to within ± 3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	372	913	4880	-90	8	1000
2	Overhead closeup view of impact plane	23	753	4880	-90	12.5	1000
3	MDB onboard closeup view of impact point	-1470	0	847	0	13	1000
4	MDB onboard view of driver dummy	-1140	838	1586	-17	7.5	1010
5	Right side ground level overall view	-35	9173	1100	-2	25	1000
6	Left side ground level overall view	-1880	-1622	1080	-6	13	1015
7	Test vehicle onboard driver front view	527	-20	1415	-15	13	890
8	Test vehicle onboard driver side view	1690	1090	1143	-7	8	1000
9	Test vehicle onboard passenger side view	1615	1975	1248	-10	8	1020
10	Real time film coverage of test	-	-	-	-	-	24

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

+X = Forward

+Y = To Right

+Z = Upward

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA No.: C10104

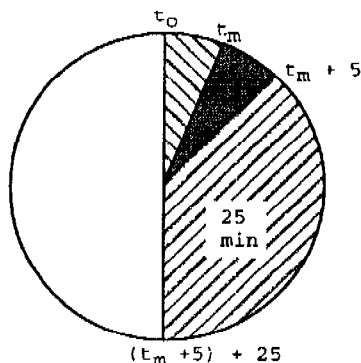
TEST DATE: November 7, 2000

Vehicle Mfgr./Make/Model : 2001 Chevrolet Tracker 2-Door Utility Vehicle

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)
- ☒ Side Impact Moving Deformable Barrier (62.6 kph)
contacting the driver side side
(driver/passenger)

FUEL SPILLAGE MEASUREMENT:



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

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

SOLVENT SPILLAGE DETAILS :

None

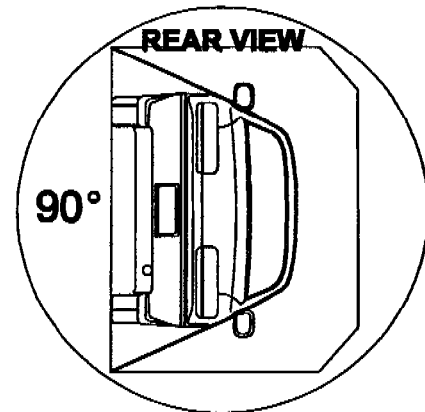
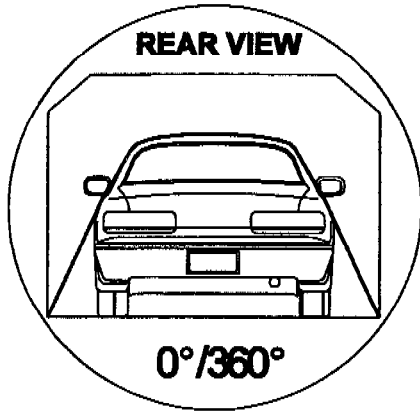
DATA SHEET 17

ROLLOVER DATA

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u> minutes <u>17</u> seconds
(Spec. Range = 1 to 3 minutes)	
FMVSS 301 Position Hold Time +	<u>5</u> minutes <u>0</u> seconds
TOTAL	<u>6</u> minutes <u>17</u> seconds
Next whole minute interval	<u>7</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

<u>142 g</u>	<u>28 g</u>	<u>28 g</u>	<u>28 g</u>
--------------	-------------	-------------	-------------

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

<u>0 g</u>	<u>0 g</u>	<u>0 g</u>	<u>N/A</u>
------------	------------	------------	------------

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

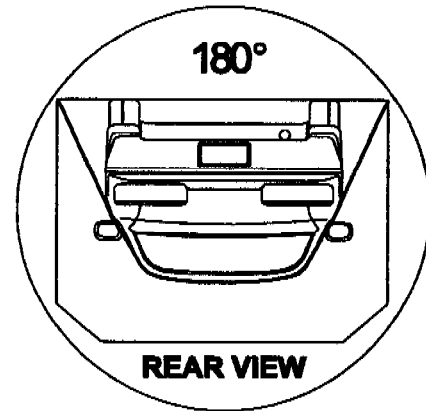
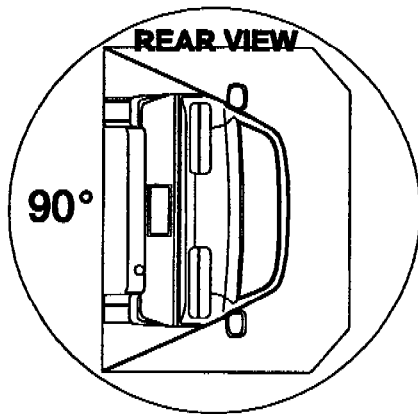
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u> minutes <u>01</u> seconds
(Spec. Range = 1 to 3 minutes)	
FMVSS 301 Position Hold Time +	<u>5</u> minutes <u>0</u> seconds
TOTAL	<u>6</u> minutes <u>1</u> seconds
Next whole minute interval	<u>7</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:

0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

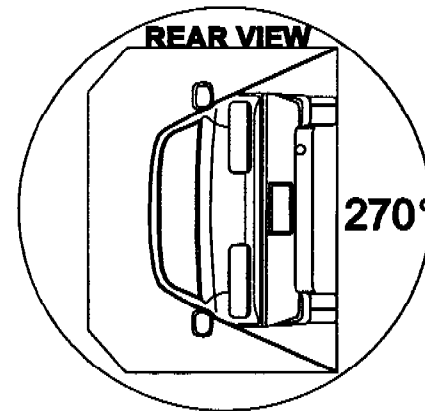
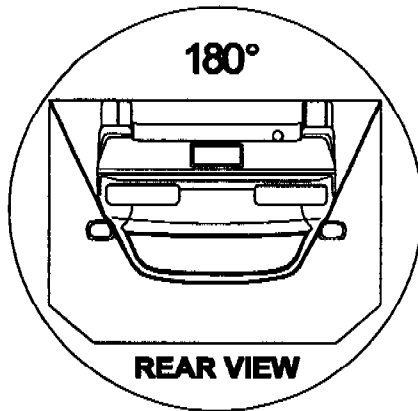
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 2001 Chevrolet Tracker

NHTSA No. C10104

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time	<u>1</u> minutes <u>02</u> seconds
(Spec. Range = 1 to 3 minutes)	
FMVSS 301 Position Hold Time +	<u>5</u> minutes <u>0</u> seconds
TOTAL	<u>6</u> minutes <u>2</u> seconds
Next whole minute interval	<u>7</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:

0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

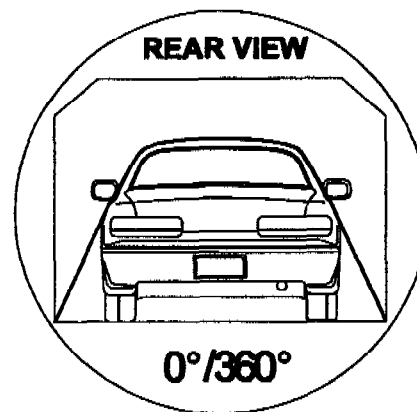
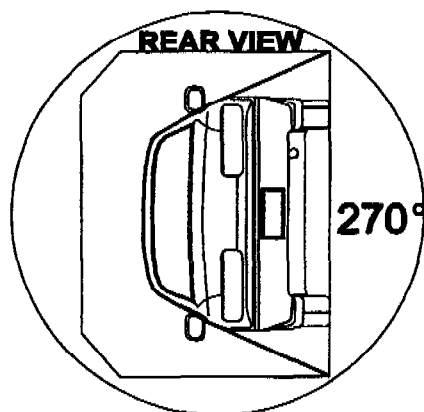
IV. SOLVENT SPILLAGE LOCATION(S) :

None

ROLLOVER DATA

Vehicle: 2001 Chevrolet TrackerNHTSA No. C10104

270 - 360 Degrees

I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time

1 minutes 12 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time +

5 minutes 0 seconds

TOTAL

6 minutes 12 seconds

Next whole minute interval

7 minutesII. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

0 g	0 g	0 g	N/A
-----	-----	-----	-----

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

IV. SOLVENT SPILLAGE LOCATION(S) :

None

APPENDIX A

PHOTOGRAPHS

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Figure A- 33	CLOSE-UP VIEW OF VEHICLE'S TIRE PLACARD LABEL	A- 35
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Figure A- 36	ROLLOVER 180 DEGREES	A- 38
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Figure A-1 PRE-TEST FRONTAL VIEW OF TEST VEHICLE



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



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



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



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



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

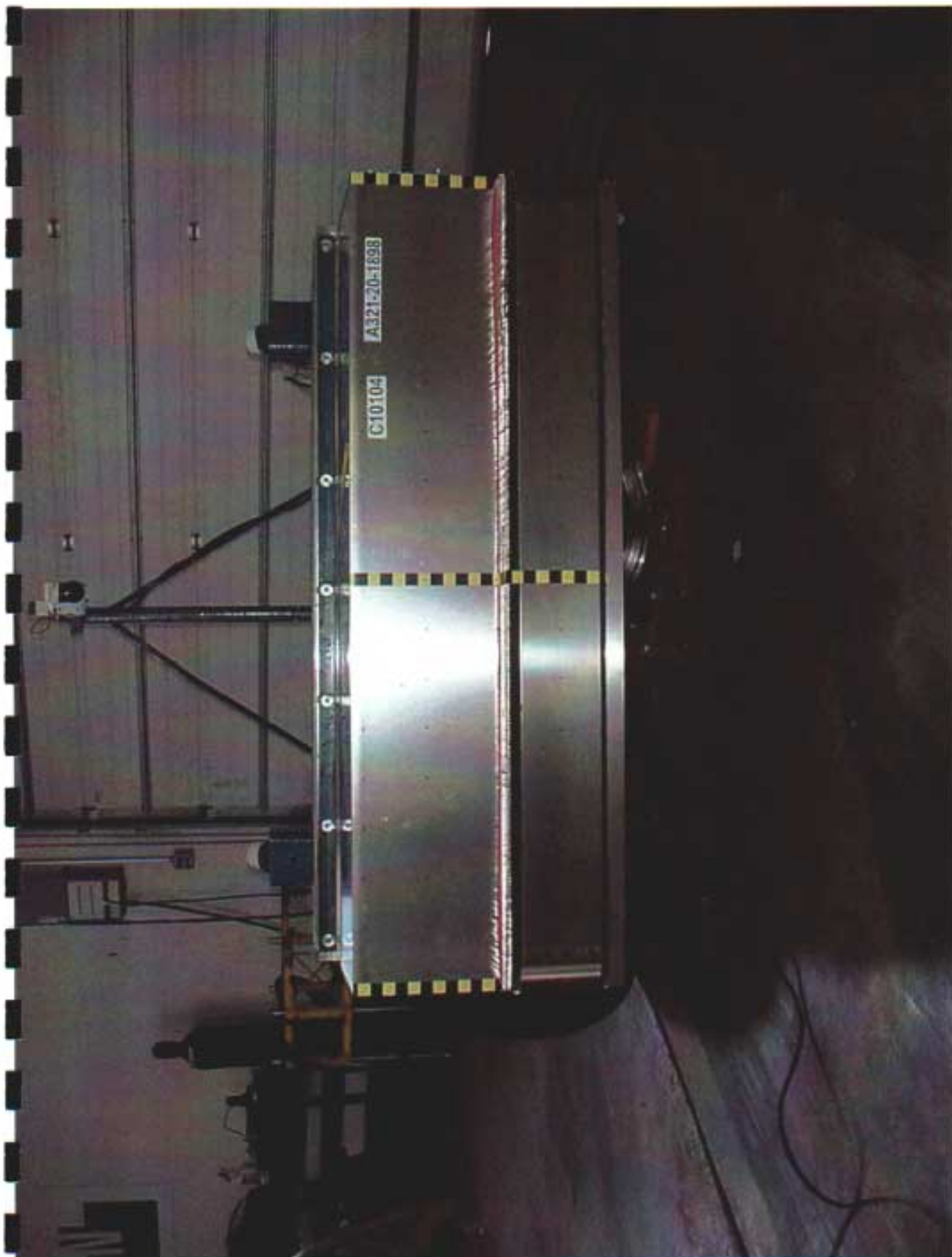


Figure A-7 PRE-TEST FRONTAL VIEW OF IMPACTOR FACE



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

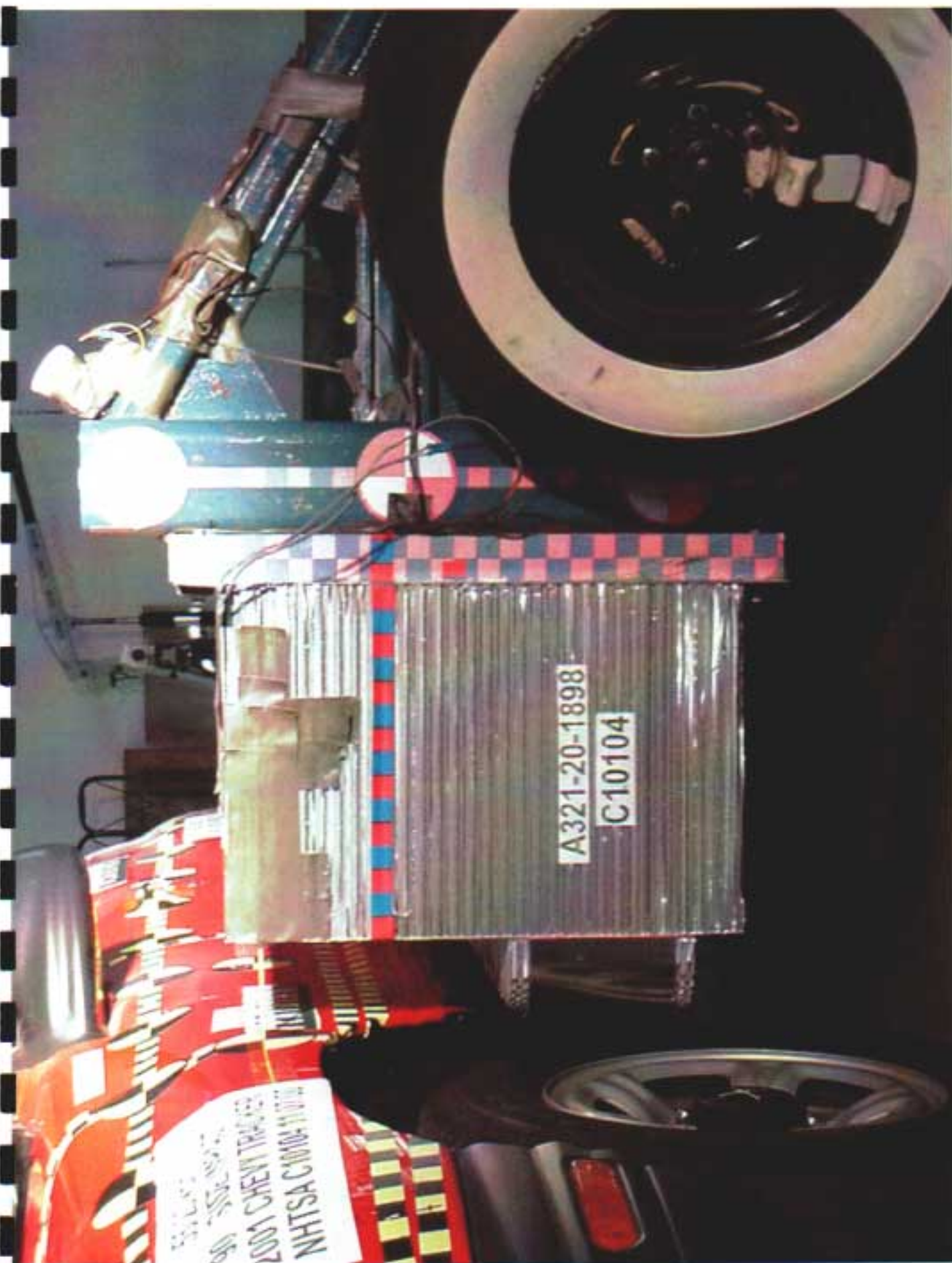


Figure A-9 PRE-TEST LEFT SIDE VIEW OF IMPACTOR FACE

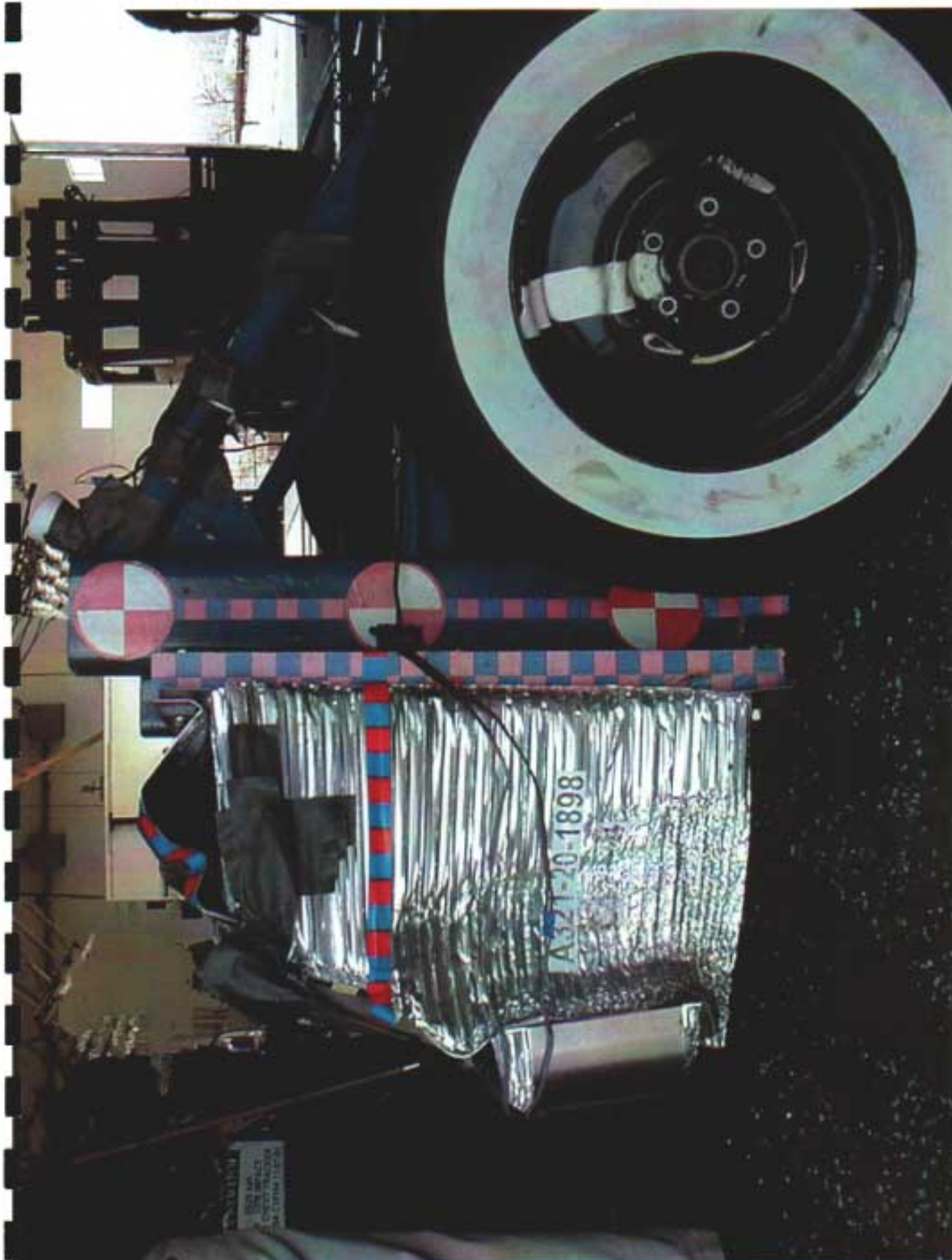


Figure A-10 POST-TEST LEFT SIDE VIEW OF IMPACTOR FACE



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



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



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

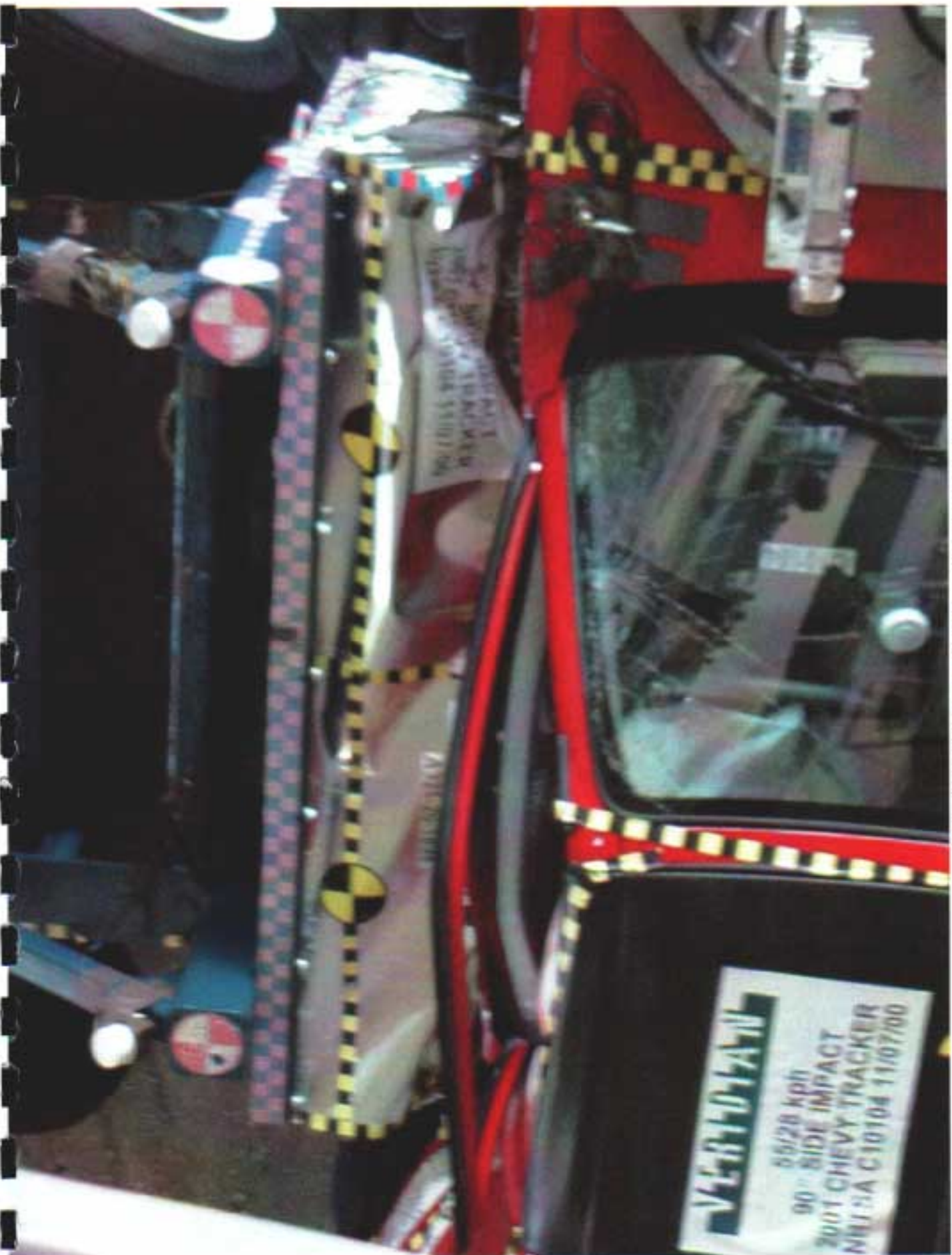


Figure A-14 POST-TEST TOP VIEW OF IMPACTOR FACE



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



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



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



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



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

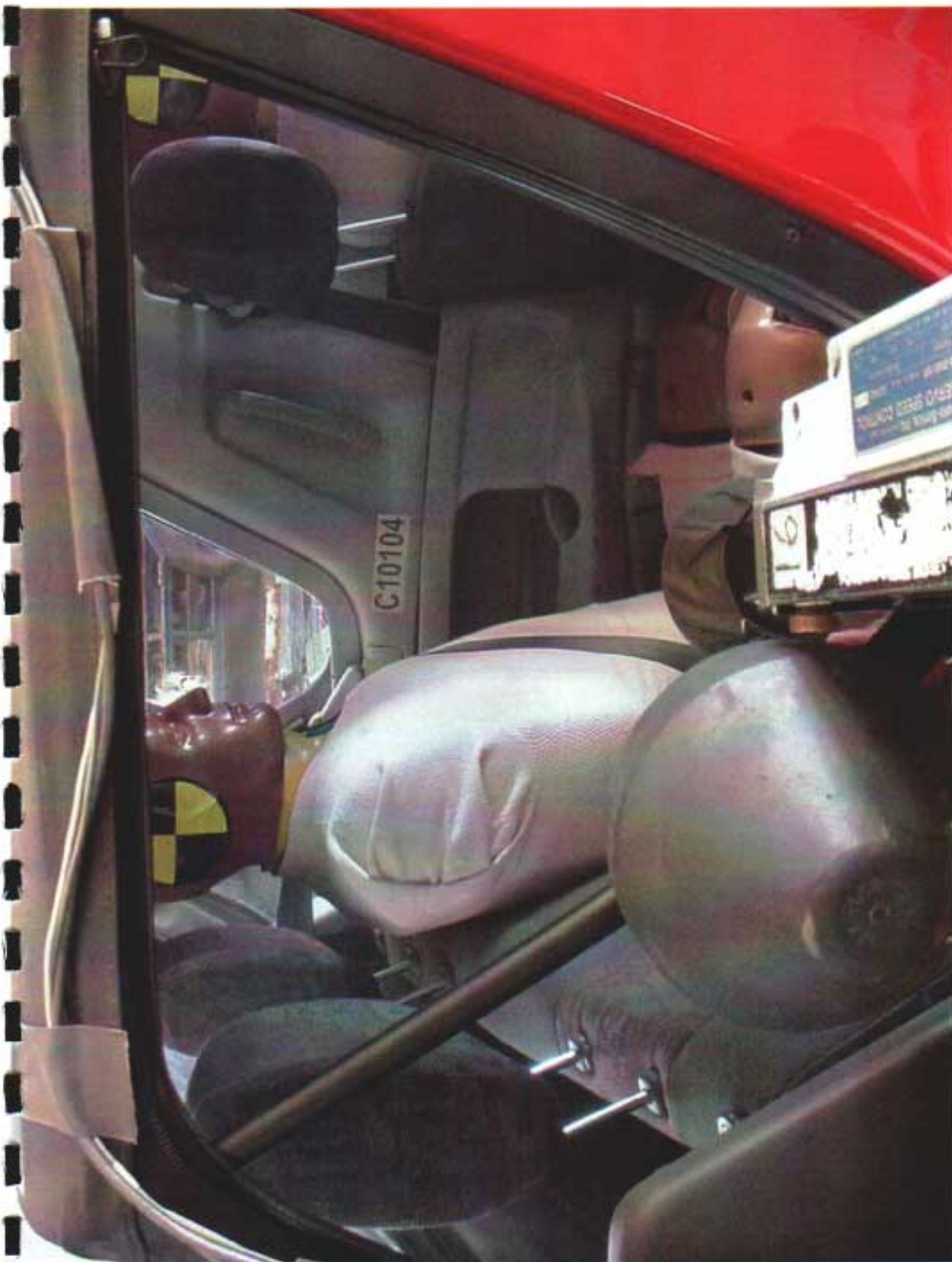


Figure A-20 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID



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



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



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



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



Figure A-25 PRE-TEST INTERIOR OF FRONT DOOR



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

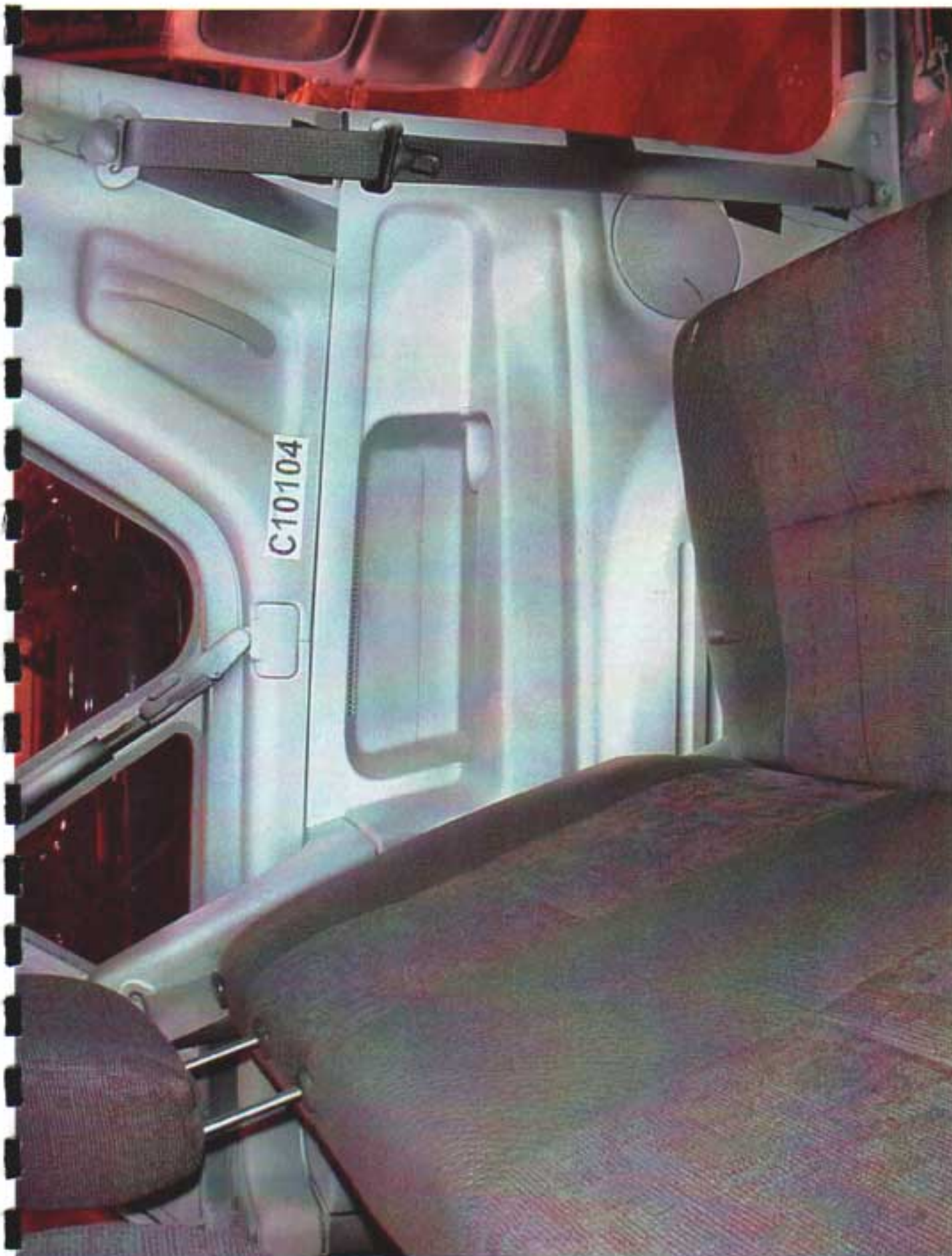


Figure A-27 PRE-TEST INTERIOR OF REAR PANEL

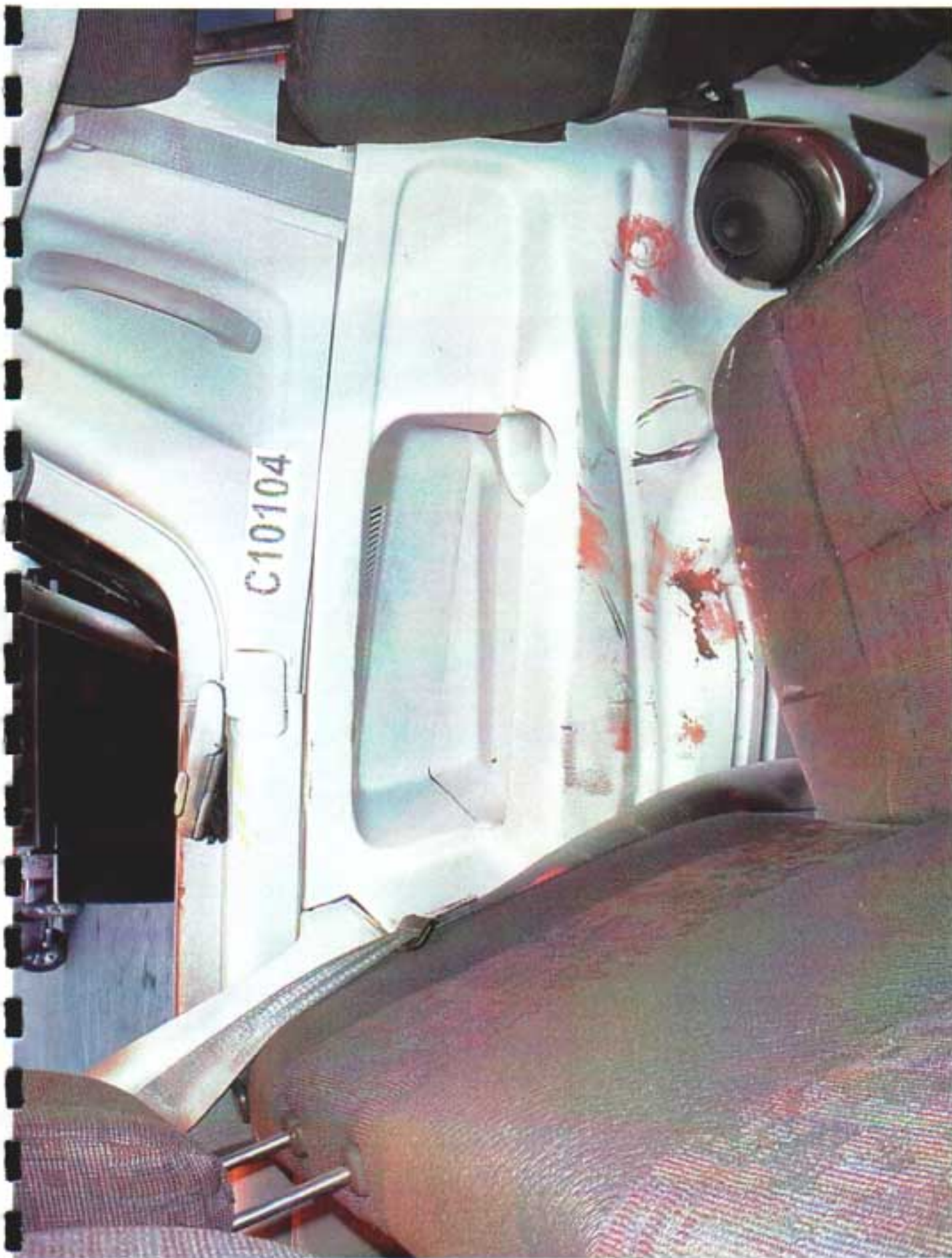


Figure A-28 POST-TEST INTERIOR OF REAR PANEL SHOWING SID IMPACT LOCATIONS



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

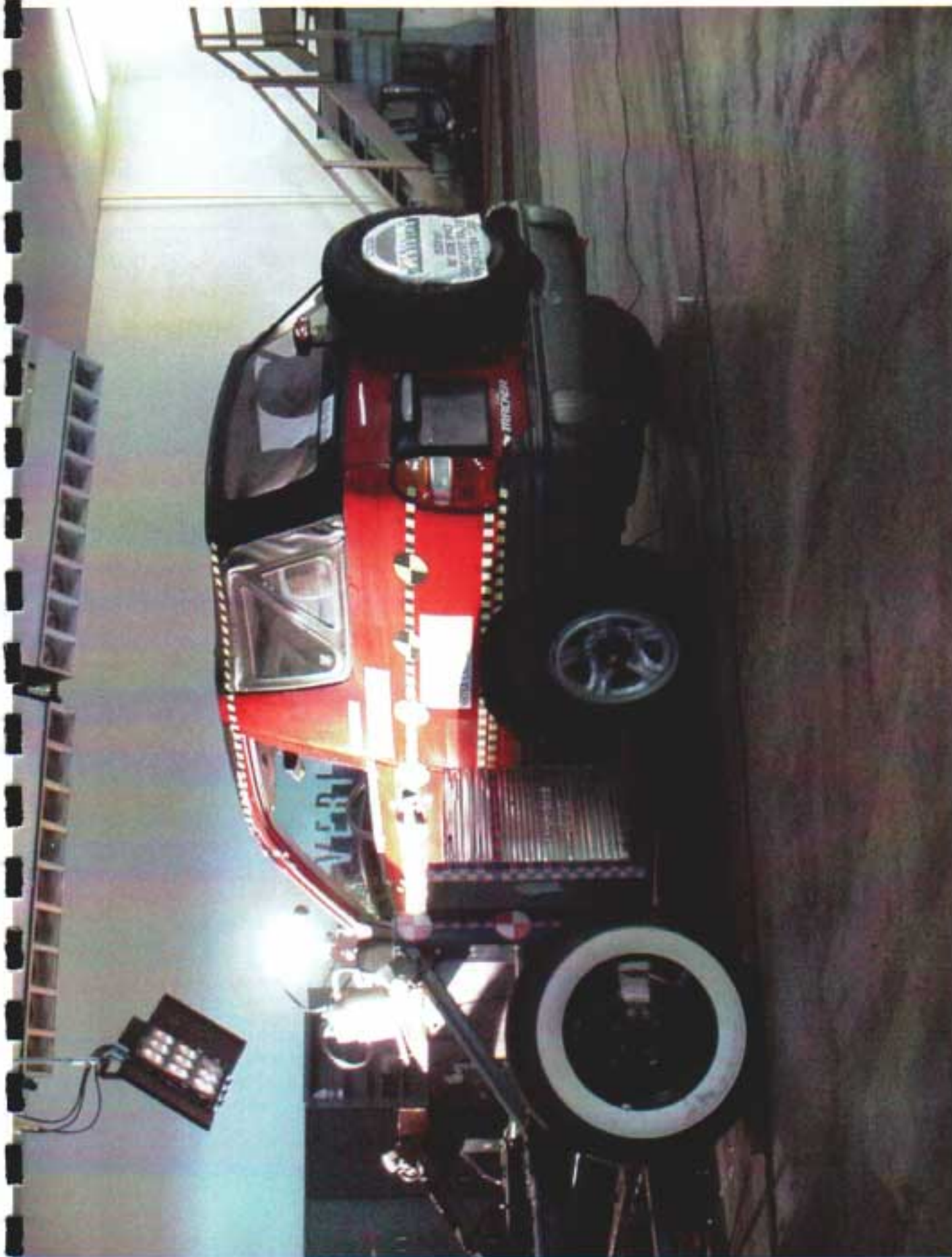


Figure A-30 PRE-TEST RIGHT SIDE VIEW OF MDB WITH IMPACTOR FACE IN POSITION



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

MFD. BY CAMI AUTOMOTIVE INC. CANADA

DATE	GVWR	GAWR FRT	GAWR RR
07/00	3483LB	1587LB	2050LB
	1580KG	720KG	930KG

TIRES: P195/75R15 (FRT&RR) RIMS: 15X5 1/2JJ (FRT&RR)
MAX COLD TIRE PRESS: 26 PSI (180KPA) FRT & RR
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S.
FEDERAL MOTOR VEHICLE SAFETY AND THEFT PREVENTION
STANDARDS IN EFFECT ON THE DATE OF
MANUFACTURE SHOWN ABOVE
2CNBE18C716902518
MULTIPURPOSE PASSENGER VEHICLE
THIS VEHICLE EQUIPPED FOR 794LB/360KG PAYLOAD.
SEE OWNER MANUAL FOR ADDITIONAL INFORMATION.

Y1L USA

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

CANADA
SAWR RR
050LB
30KG
(FR&RR)
RR
U.S.
PREVENTION
LOAD
MATION.
USA



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



Figure A-34 IMPACT PHOTO



Figure A-35 ROLLOVER 90 DEGREES



Figure A-36 ROLLOVER 180 DEGREES



Figure A-37 ROLLOVER 270 DEGREES

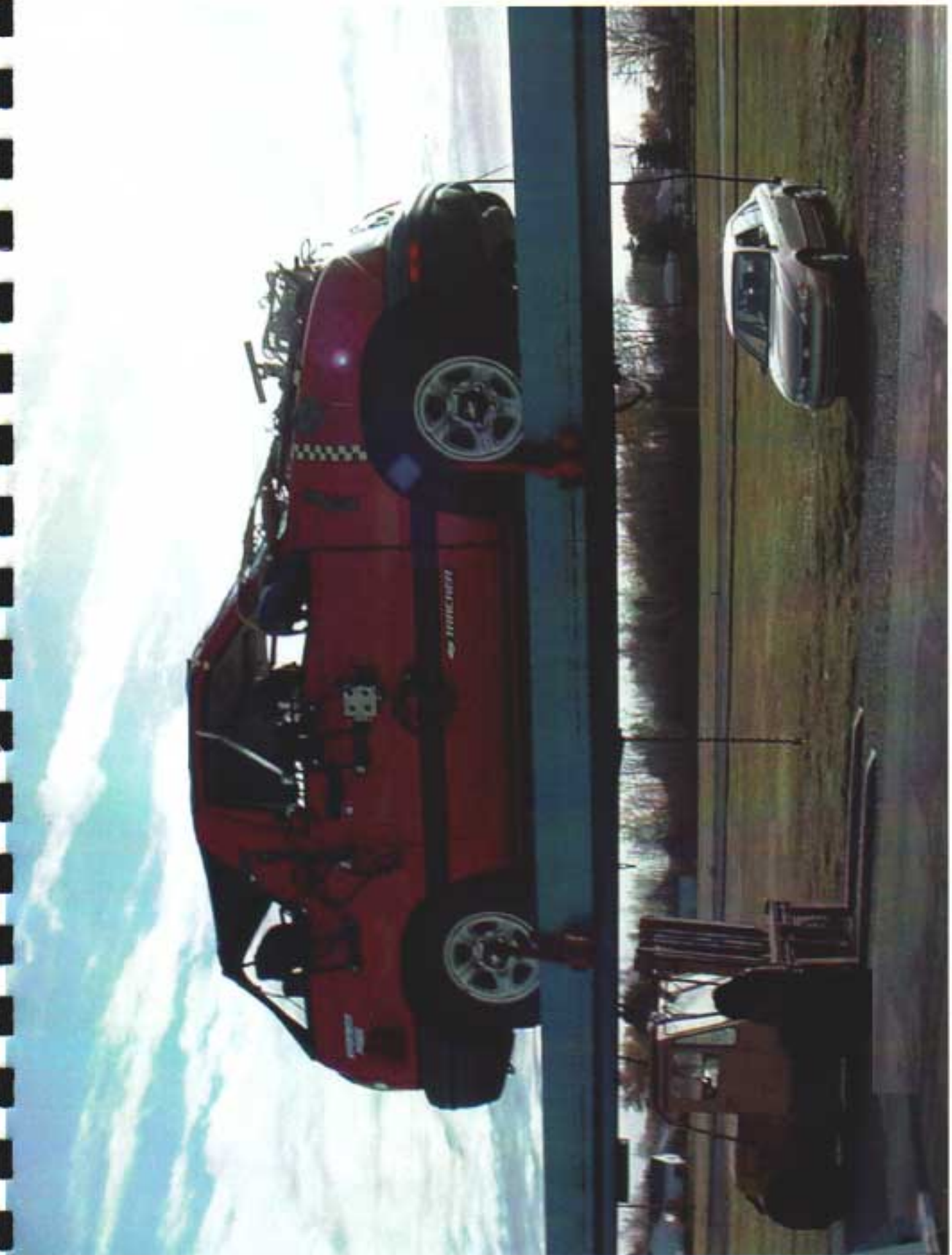


Figure A-38 ROLLOVER 360 DEGREES

APPENDIX B

VEHICLE, MDB AND SID RESPONSE DATA

TABLE OF DATA PLOTS

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION DATA - FILTER CLASS 1000 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 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) VELOCITY VS TIME	B- 21
17	PASSENGER HEAD (Y) ACCELERATION VS TIME	B- 22
18	PASSENGER HEAD (Y) VELOCITY VS TIME	B- 23
19	PASSENGER HEAD (Z) ACCELERATION VS TIME	B- 24
20	PASSENGER HEAD (Z) VELOCITY VS TIME	B- 25
21	PASSENGER HEAD RESULTANT VS TIME	B- 26
22	PASSENGER UPPER RIB (Y) 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	RIGHT REAR OCCUPANT COMPARTMENT (Y) ACCELERATION VS TIME	B- 69
65	RIGHT REAR OCCUPANT COMPARTMENT (Y) VELOCITY VS TIME	B- 70
66	LOWER B-POST (Y) ACCELERATION VS TIME	B- 71
67	LOWER B-POST (Y) VELOCITY VS TIME	B- 72
68	UPPER B-POST (Y) ACCELERATION VS TIME	B- 73
69	UPPER B-POST (Y) VELOCITY VS TIME	B- 74
70	LOWER A-POST (Y) ACCELERATION VS TIME	B- 75
71	LOWER A-POST (Y) VELOCITY VS TIME	B- 76
72	UPPER A-POST (Y) ACCELERATION VS TIME	B- 77
73	UPPER A-POST (Y) VELOCITY VS TIME	B- 78
74	FRONT SEAT TRACK (Y) ACCELERATION VS TIME	B- 79
75	FRONT SEAT TRACK (Y) VELOCITY VS TIME	B- 80
76	REAR SEAT TRACK (Y) ACCELERATION VS TIME	B- 81
77	REAR SEAT TRACK (Y) VELOCITY VS TIME	B- 82

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>
78	VEHICLE CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 83
79	VEHICLE CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 84
80	VEHICLE CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 85
81	VEHICLE CENTER OF GRAVITY (Y) VELOCITY ACCELERATION VS TIME	B- 86
82	VEHICLE CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 87
83	VEHICLE CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 88
84	VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 89

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>
85	MDB CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 90
86	MDB CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 91
87	MDB CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 92
88	MDB CENTER OF GRAVITY (Y) VELOCITY VS TIME	B- 93
89	MDB CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 94
90	MDB CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 95
91	MDB CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 96
92	MDB REAR (X) ACCELERATION VS TIME	B- 97
93	MDB REAR (X) VELOCITY VS TIME	B- 98
94	MDB REAR (Y) ACCELERATION VS TIME	B- 99
95	MDB REAR (Y) VELOCITY VS TIME	B- 100

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

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
96	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 101
97	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 102
98	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 103
99	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 104
100	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 105
101	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 106
102	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 107
103	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 108
104	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 109
105	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 110
106	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 111
107	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 112
108	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 113
109	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 114
110	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 115
111	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 116

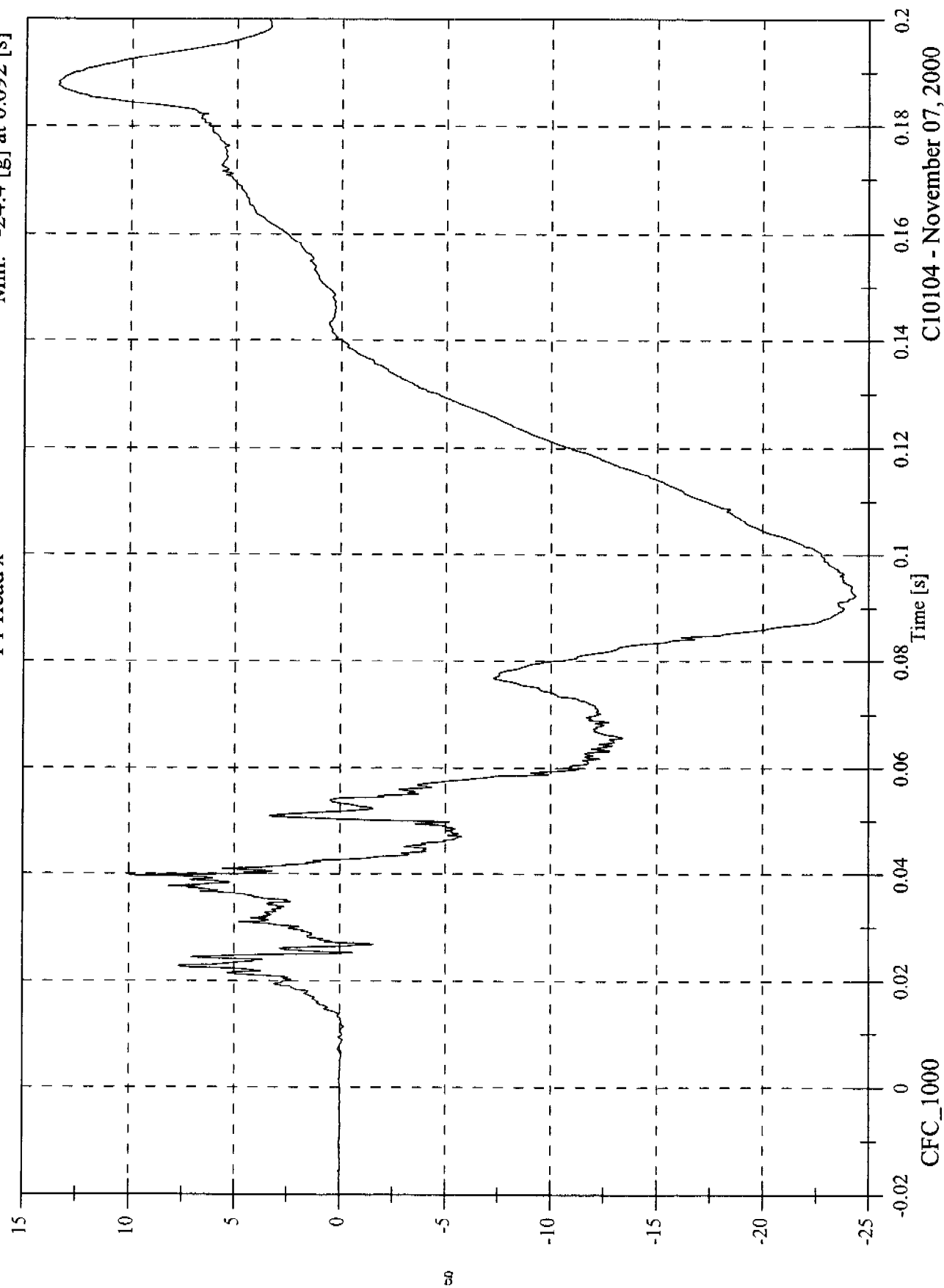
DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FIR FILTERED

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

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Head x

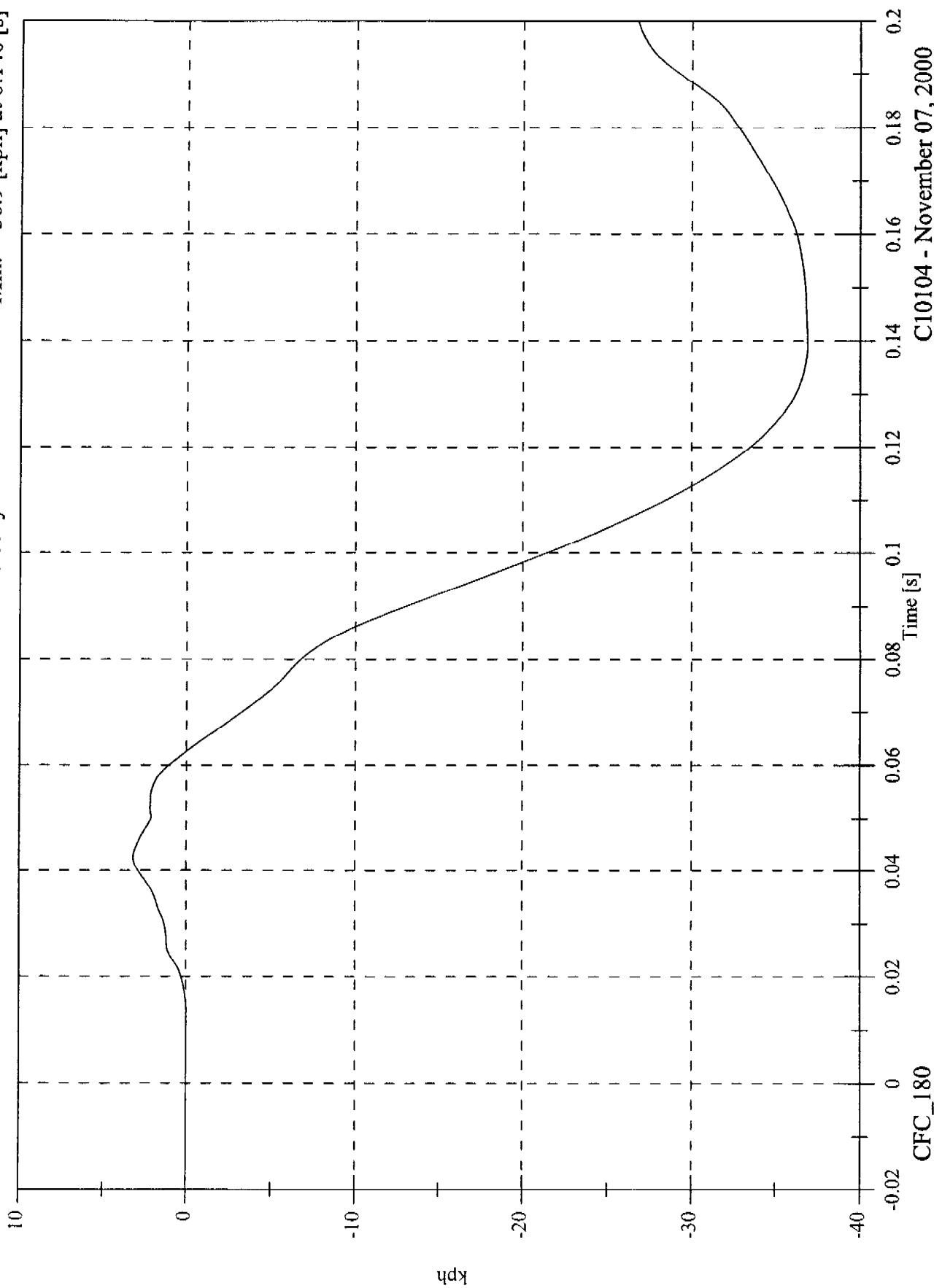
Max: 13.5 [g] at 0.188 [s]
Min: -24.4 [g] at 0.092 [s]



FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 3.2 [kph] at 0.043 [s]
Min: -36.9 [kph] at 0.140 [s]

PI Head x Velocity

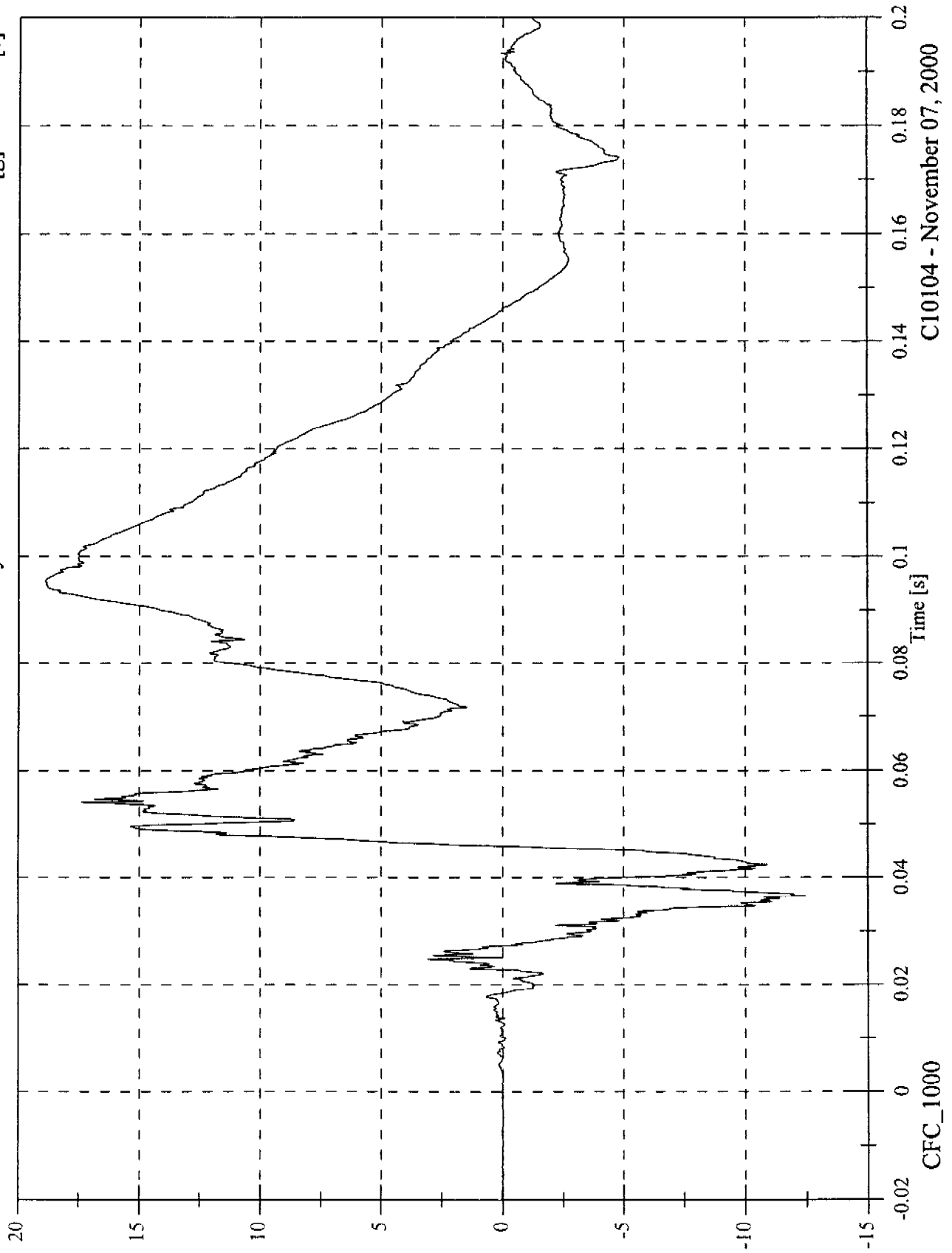


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 18.9 [g] at 0.095 [s]
Min: -12.5 [g] at 0.037 [s]

P1 Head y



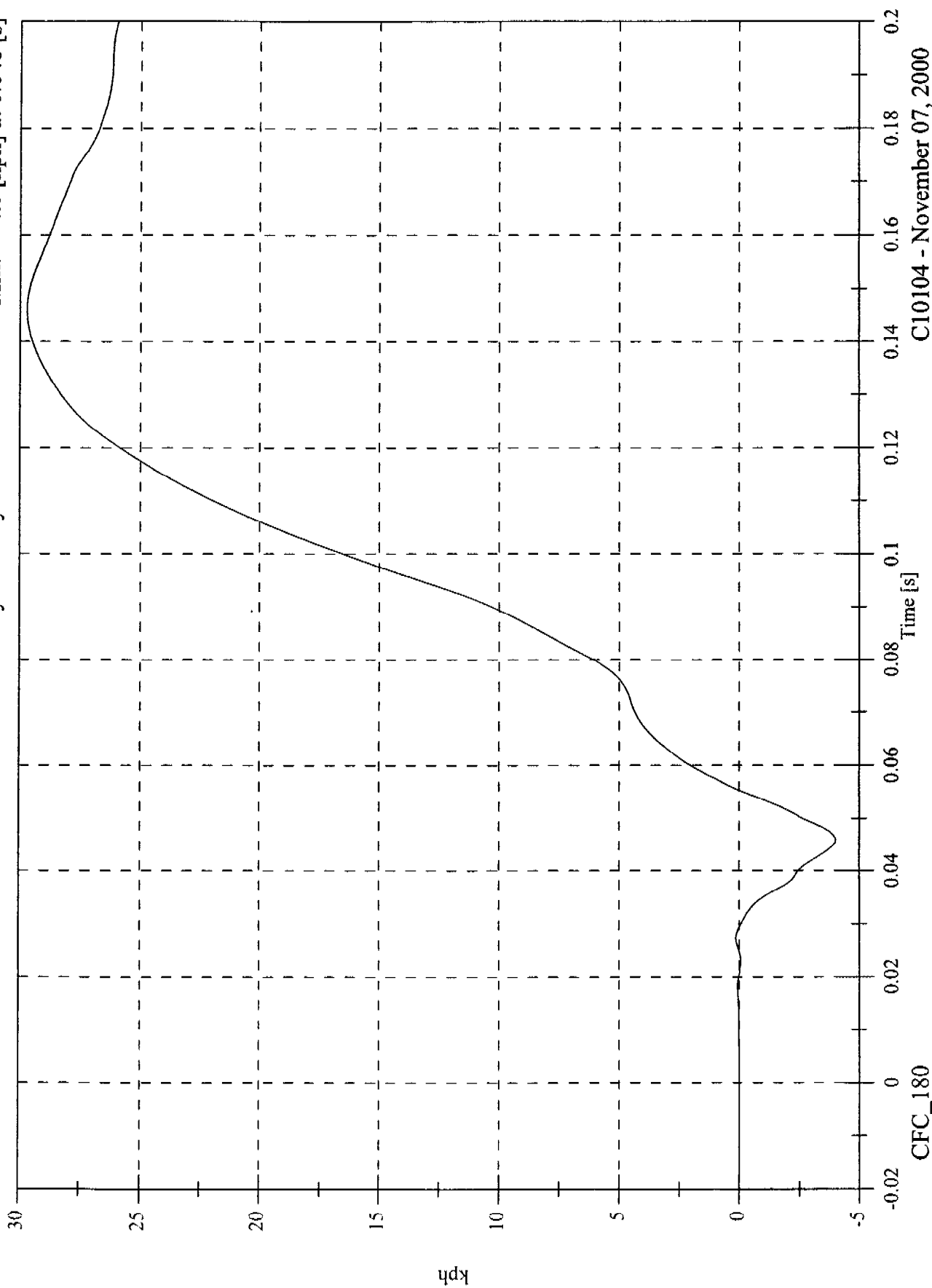
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Head y Velocity

Max: 29.7 [kph] at 0.146 [s]

Min: -4.0 [kph] at 0.046 [s]



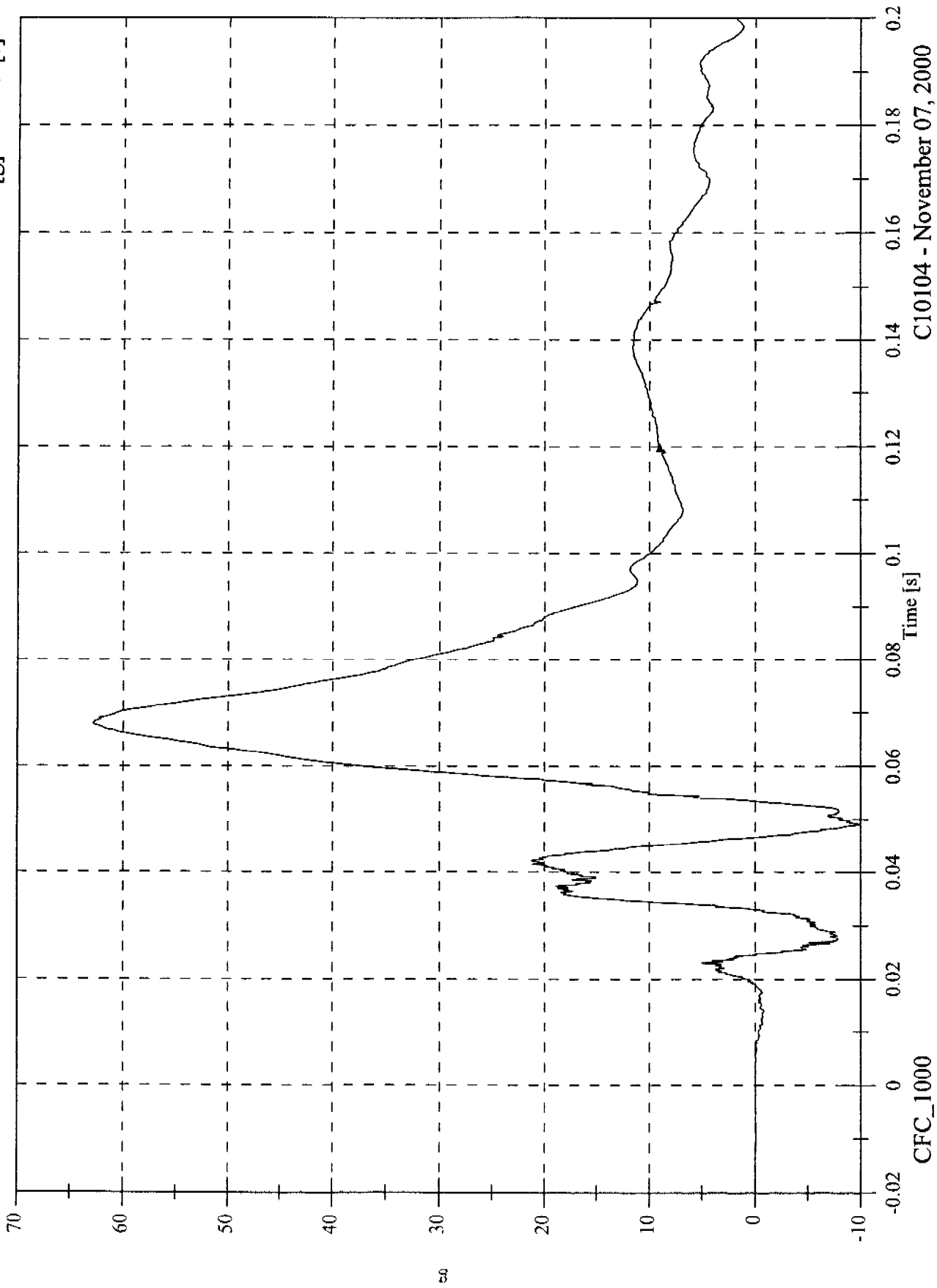
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 62.8 [g] at 0.068 [s]

Min: -9.9 [g] at 0.049 [s]

P1 Head z

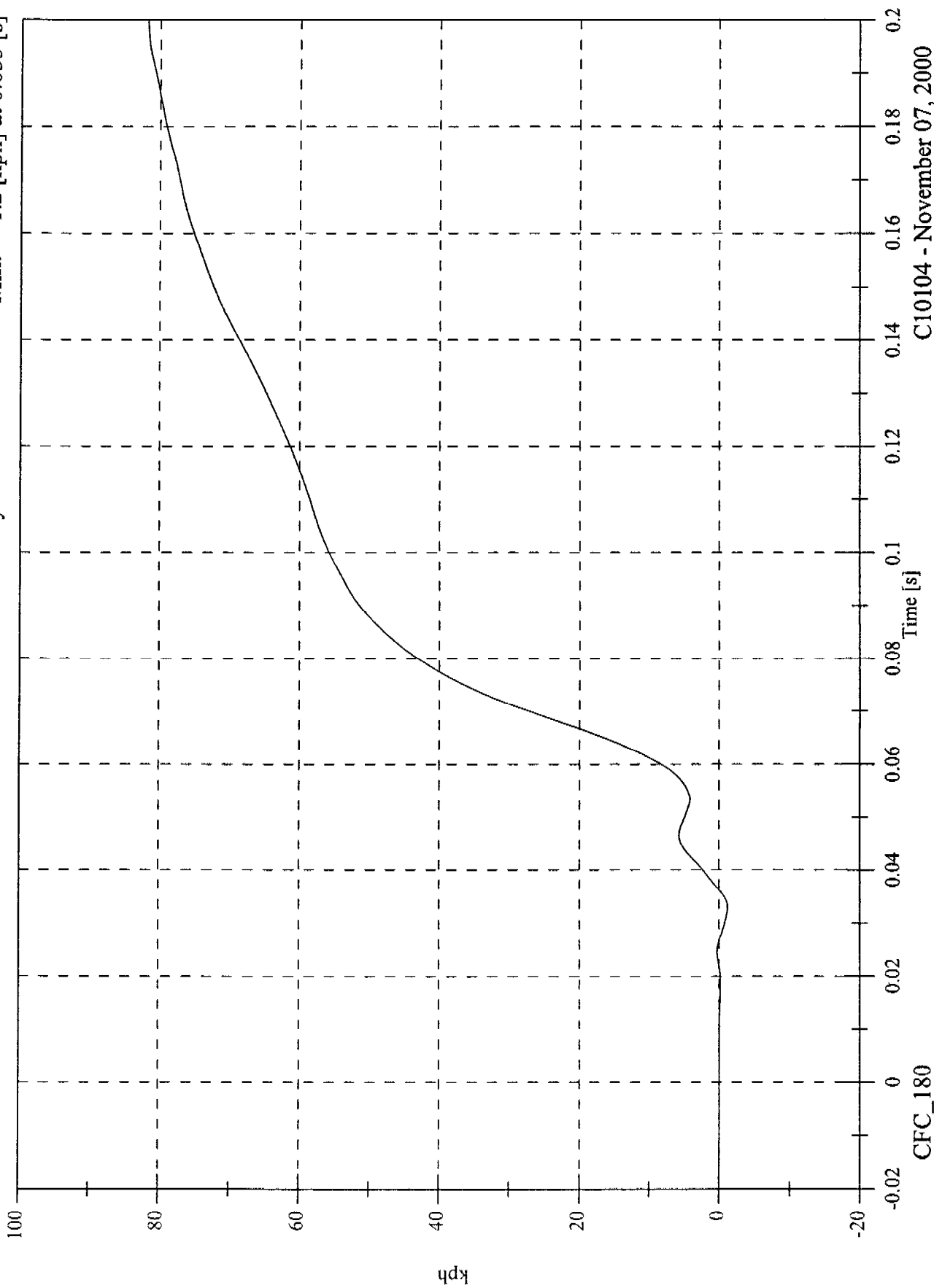


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Head z Velocity

Max: 81.8 [kph] at 0.200 [s]
Min: -1.2 [kph] at 0.033 [s]

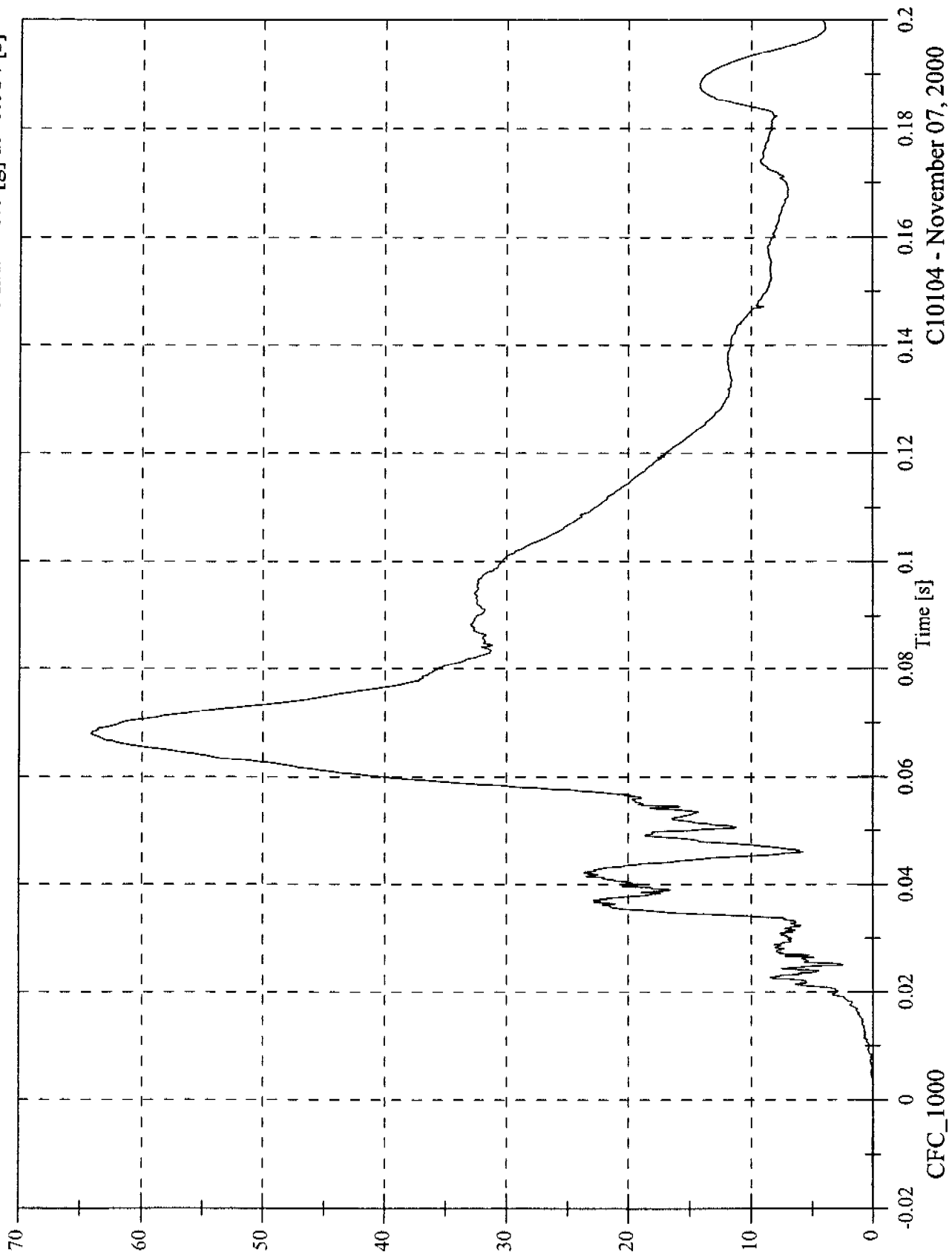


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Head Resultant

Max: 64.1 [g] at 0.068 [s]
Min: 0.0 [g] at -0.014 [s]

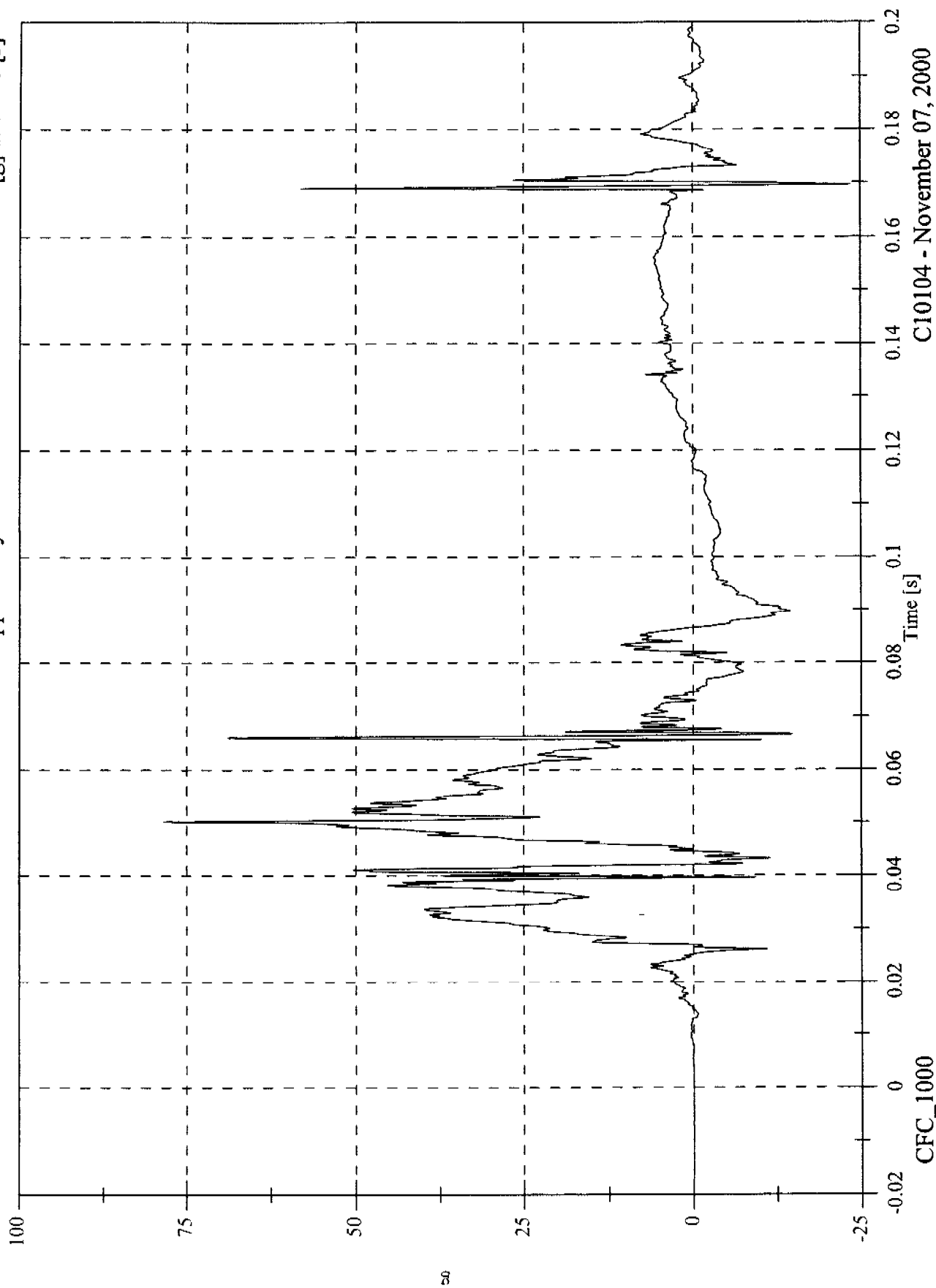


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Upper Rib y

Max: 78.4 [g] at 0.050 [s]
Min: -23.6 [g] at 0.170 [s]

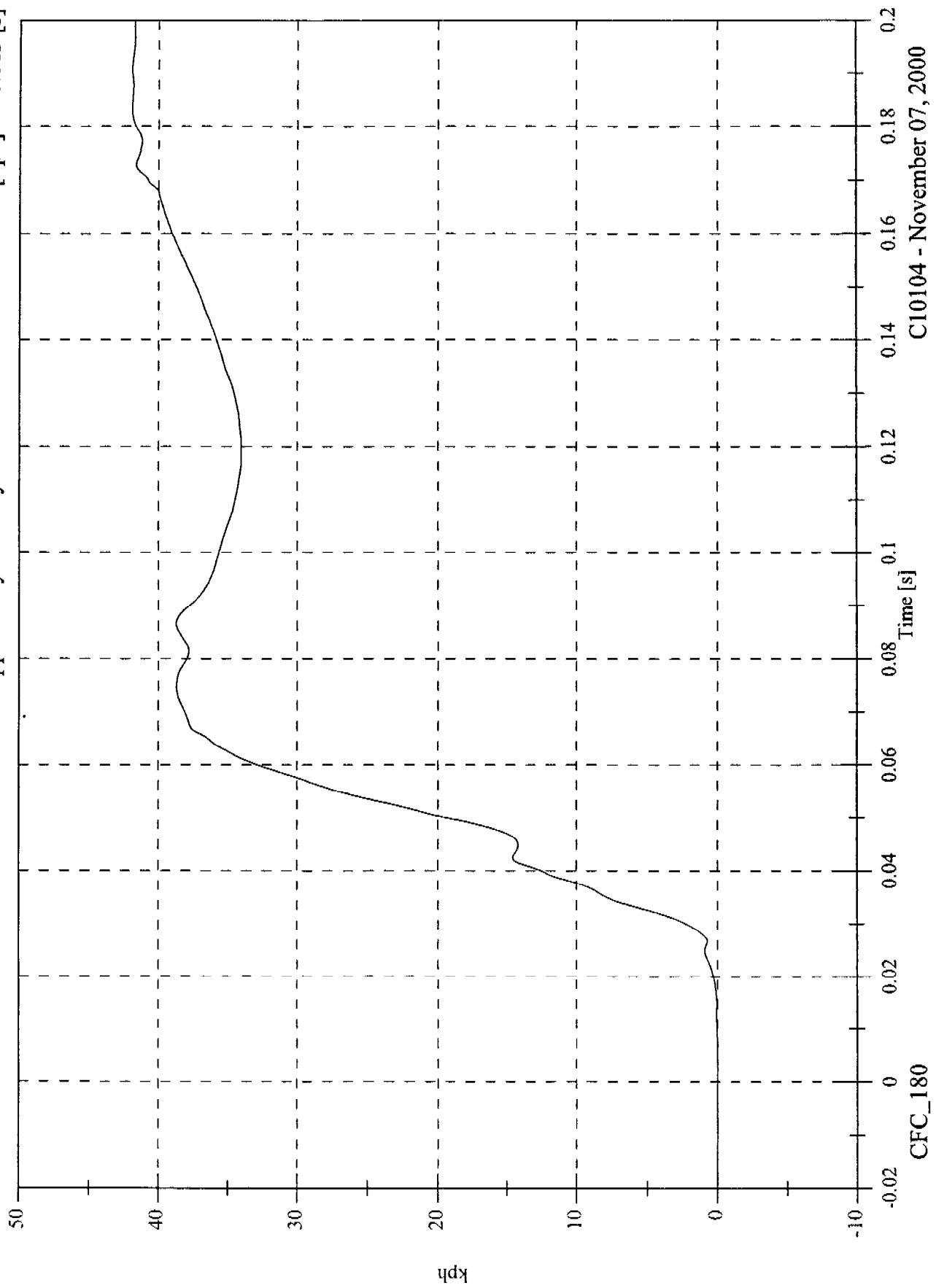


FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 41.9 [kph] at 0.191 [s]

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

P1 Upper Rib y Velocity

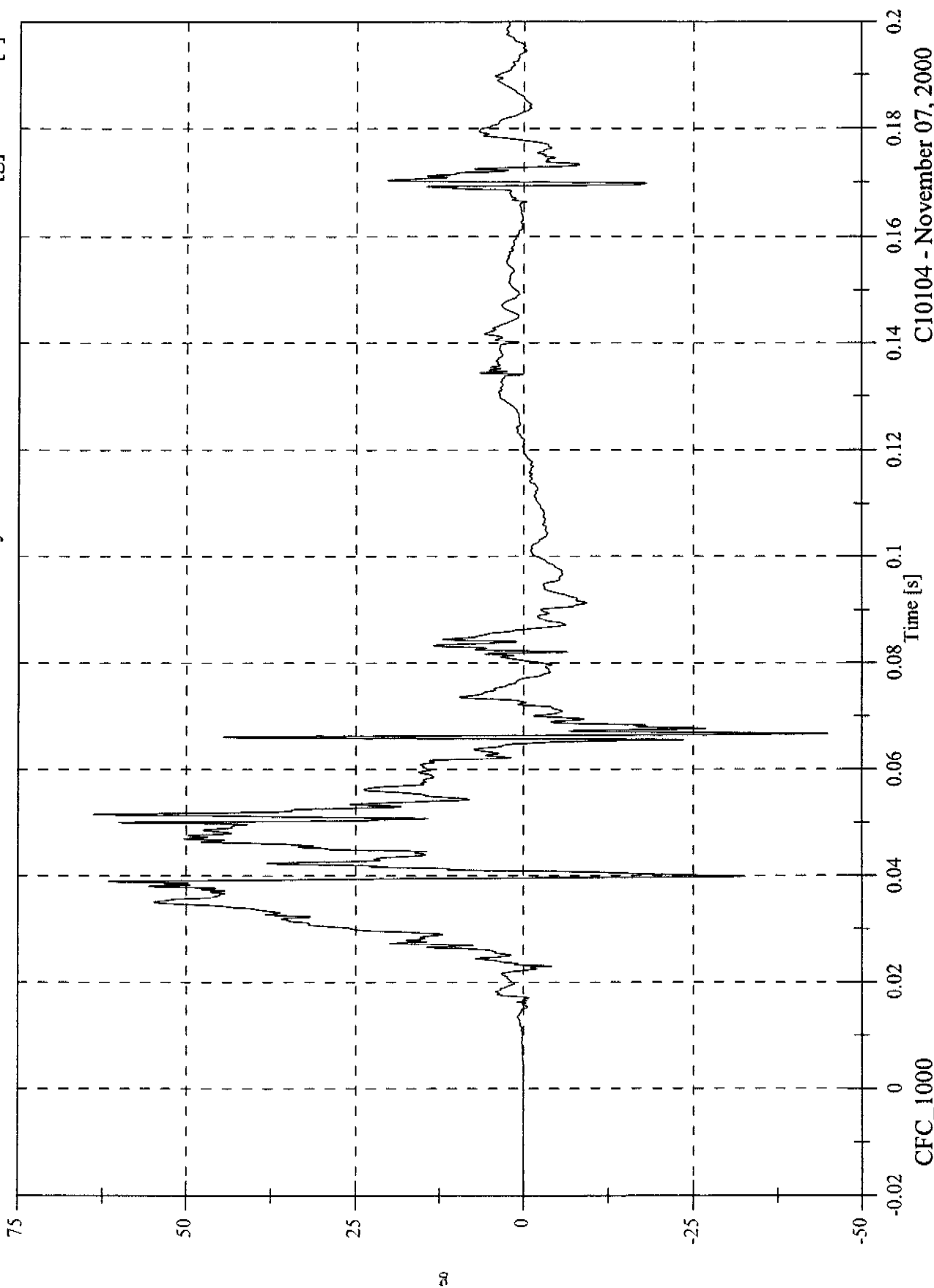


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Rib y

Max: 63.8 [g] at 0.051 [s]
Min: -45.0 [g] at 0.067 [s]

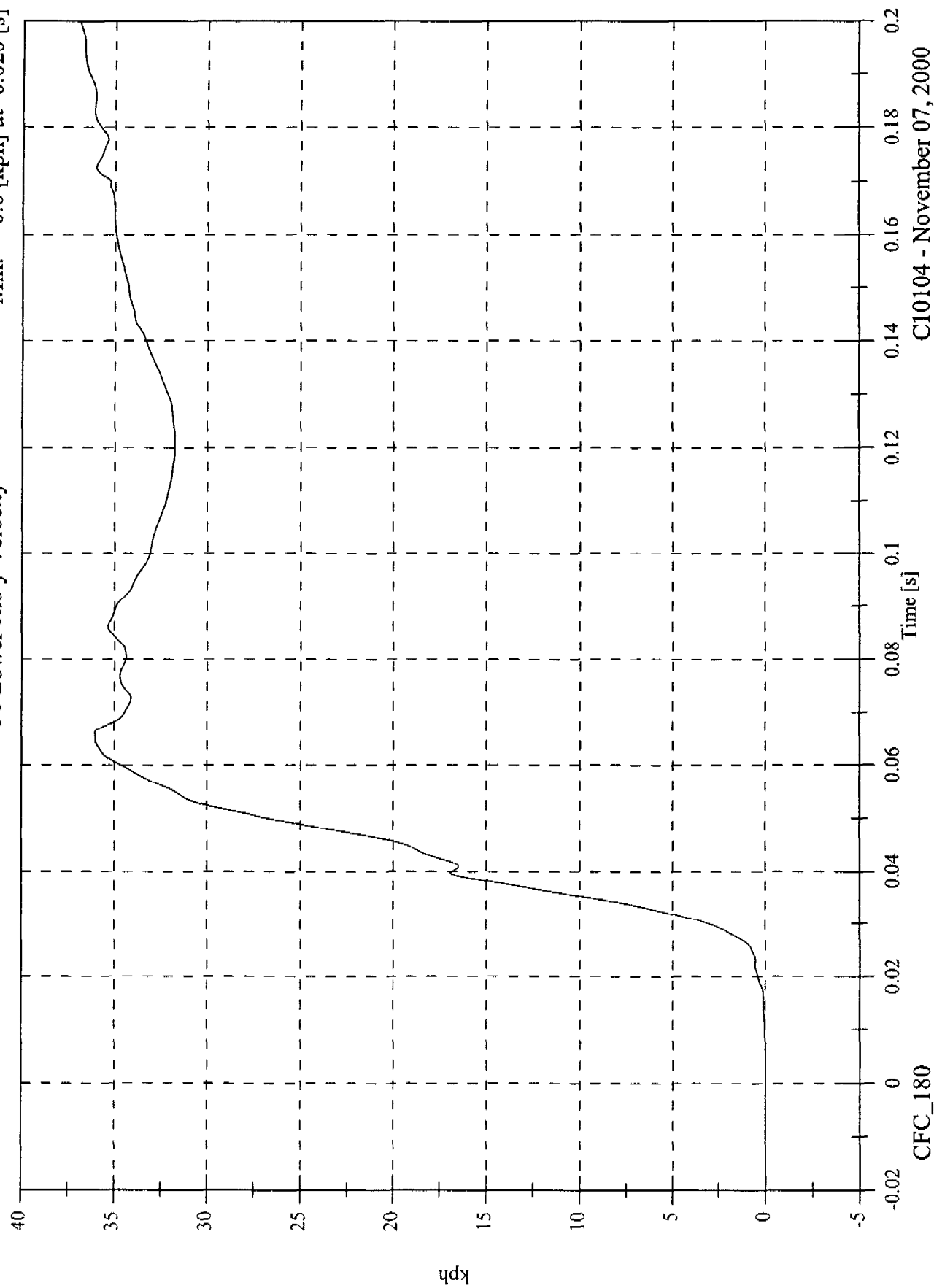


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Rib y Velocity

Max: 36.9 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

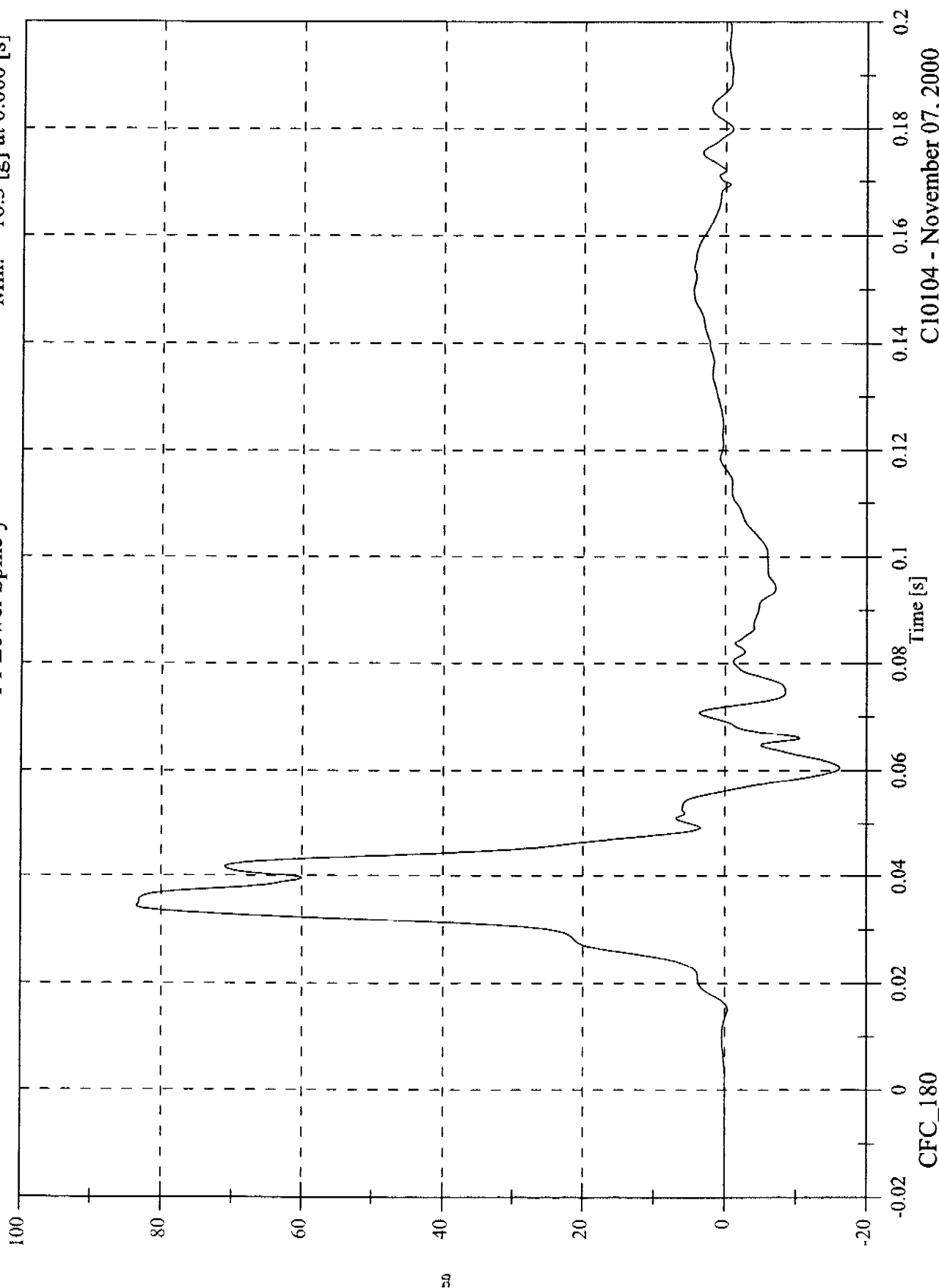


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Spine y

Max: 83.5 [g] at 0.034 [s]
Min: -16.3 [g] at 0.060 [s]



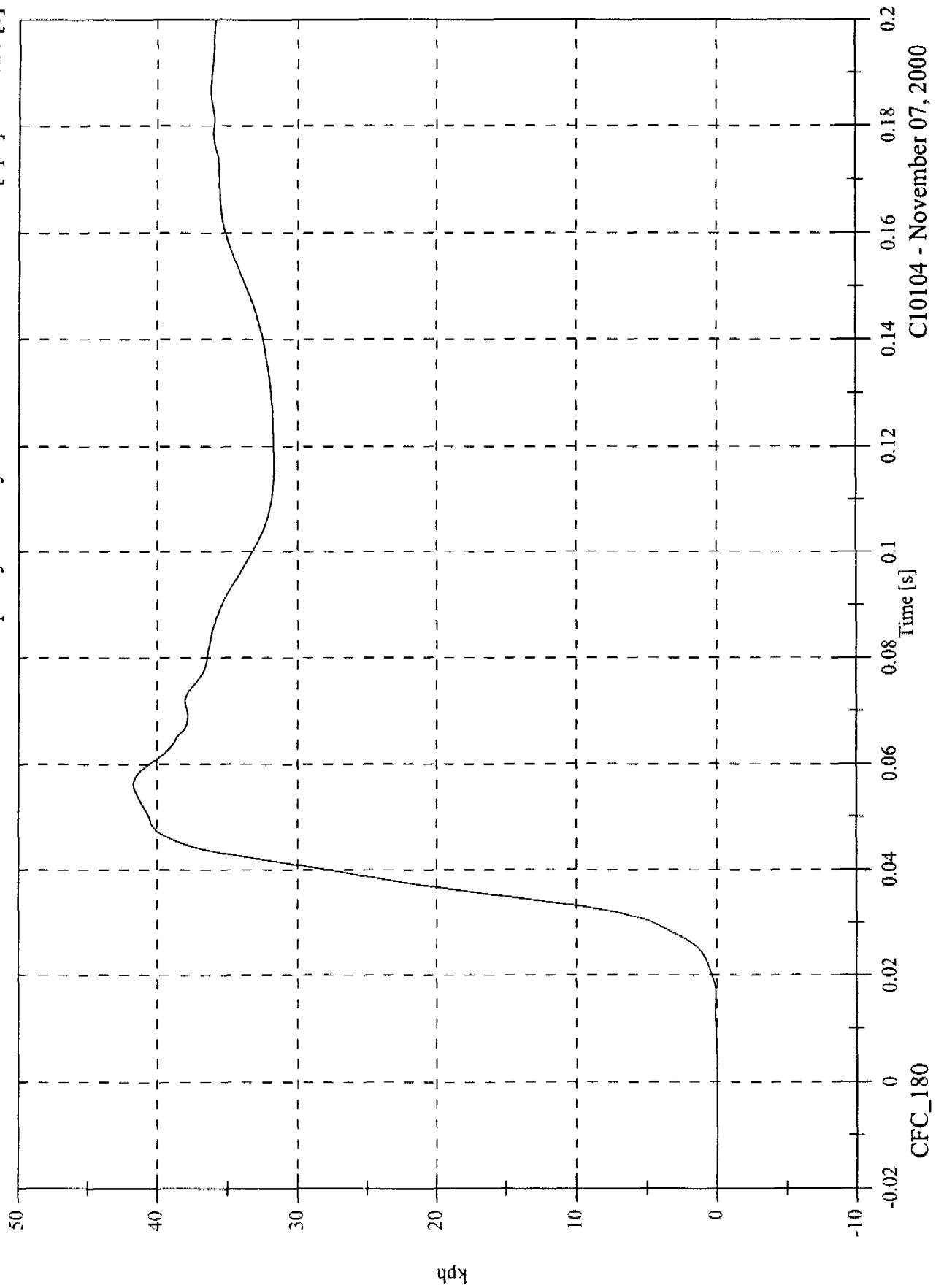
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 41.7 [kph] at 0.056 [s]

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

P1 Lower Spine y Velocity

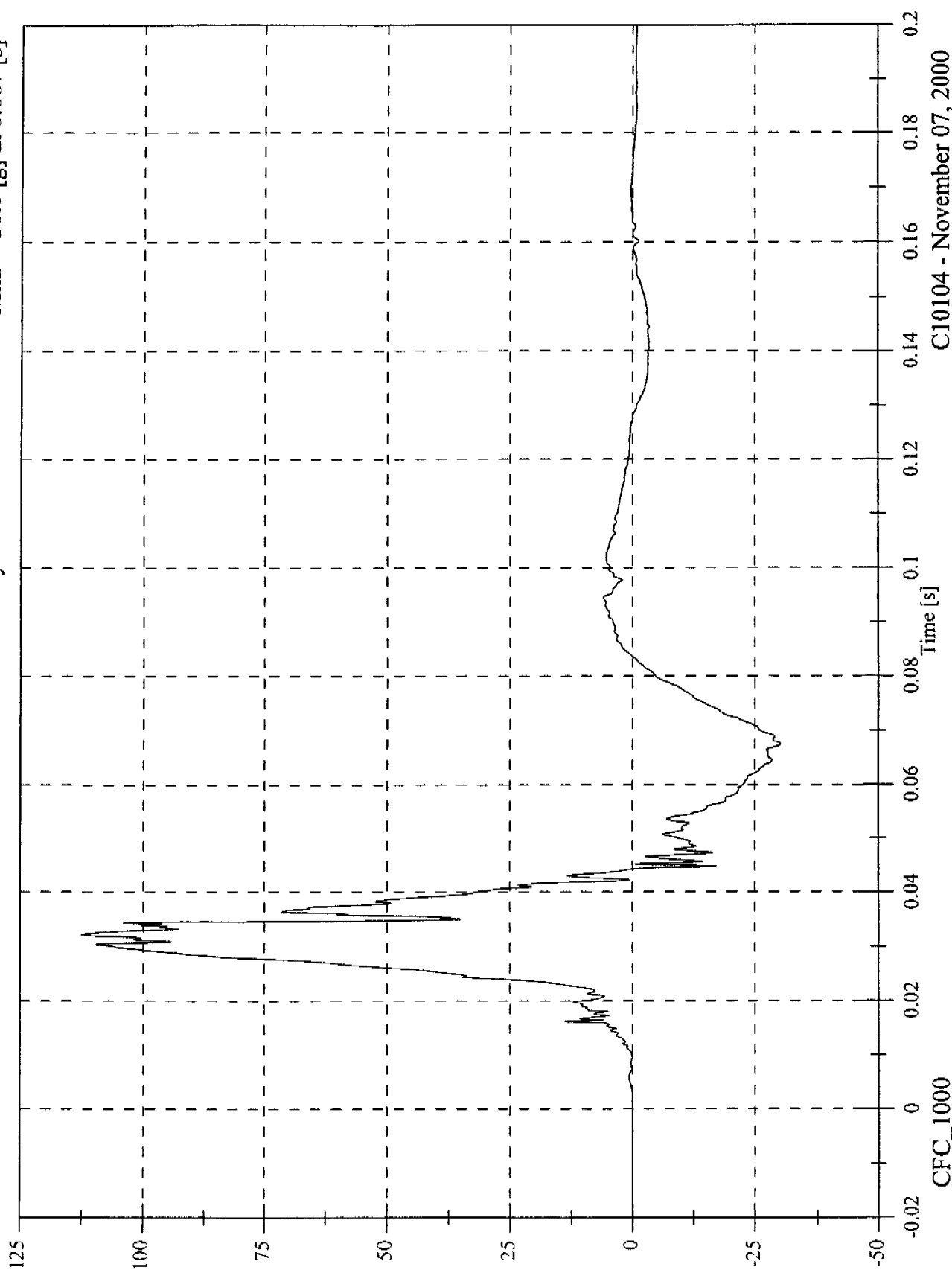


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Pelvic y

Max: 112.5 [g] at 0.032 [s]
Min: -30.1 [g] at 0.067 [s]

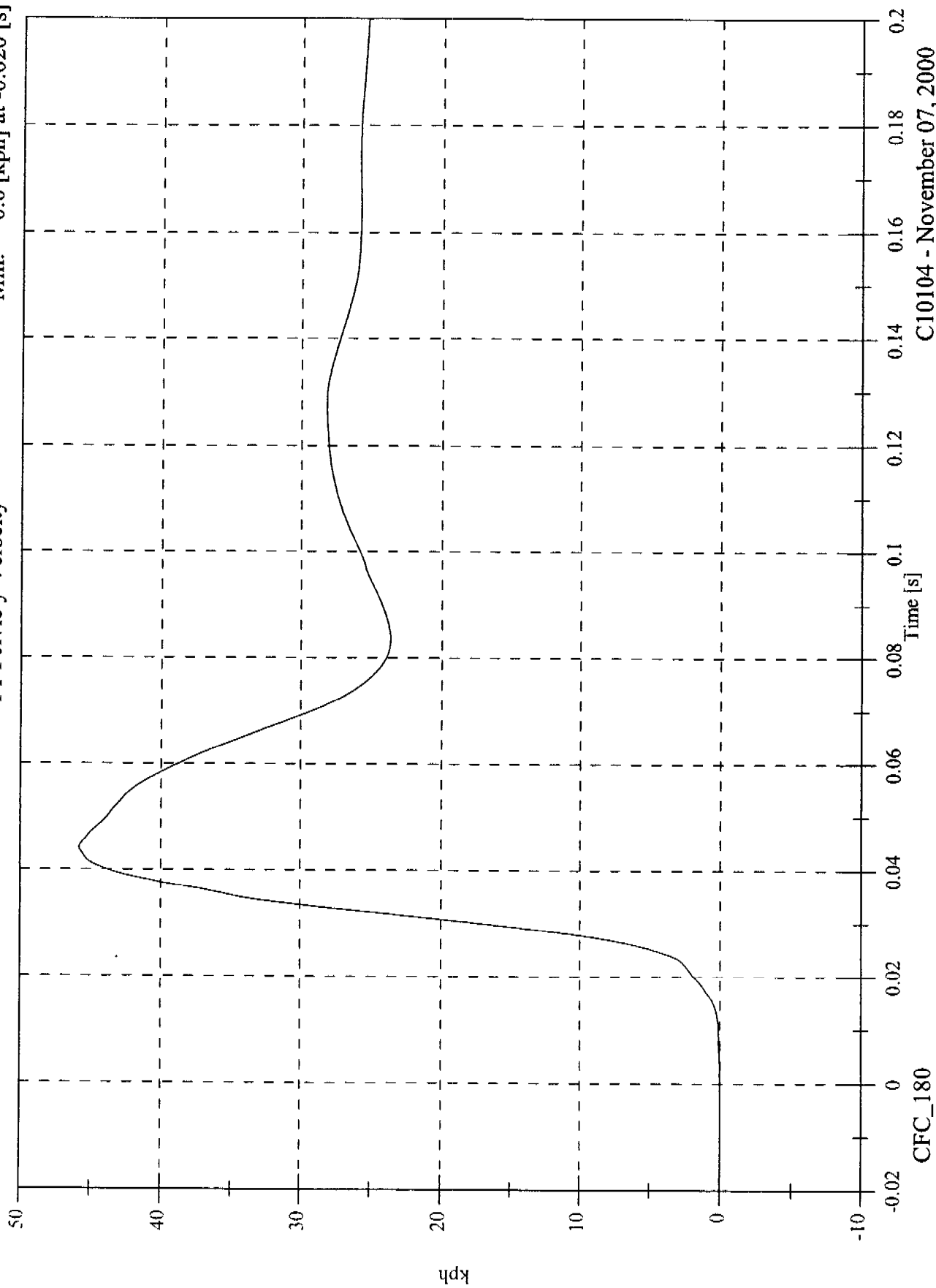


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 45.8 [kph] at 0.044 [s]
Min: -0.0 [kph] at -0.020 [s]

P1 Pelvic Velocity

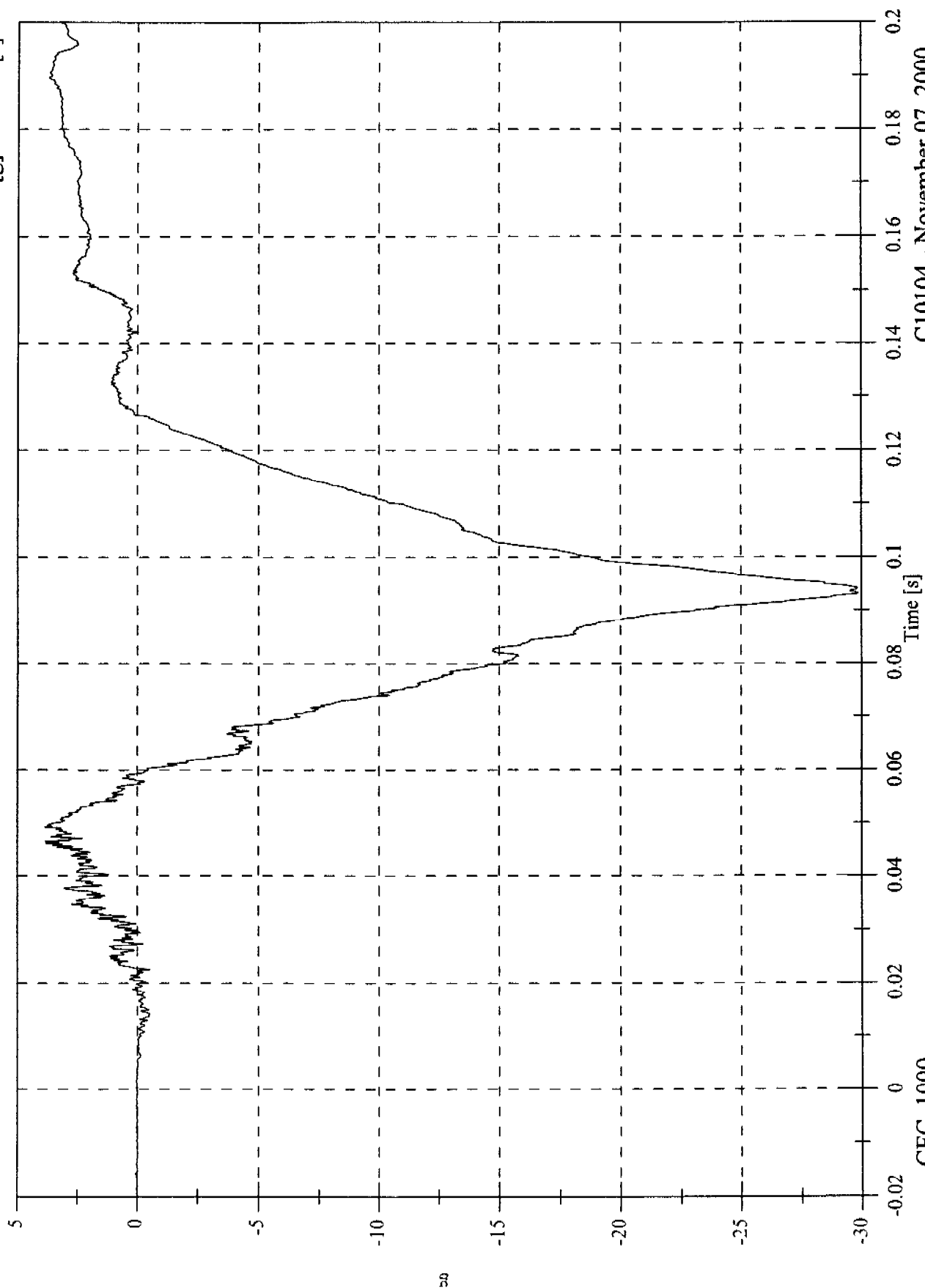


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Head x

Max: 3.9 [g] at 0.049 [s]
Min: -29.9 [g] at 0.093 [s]

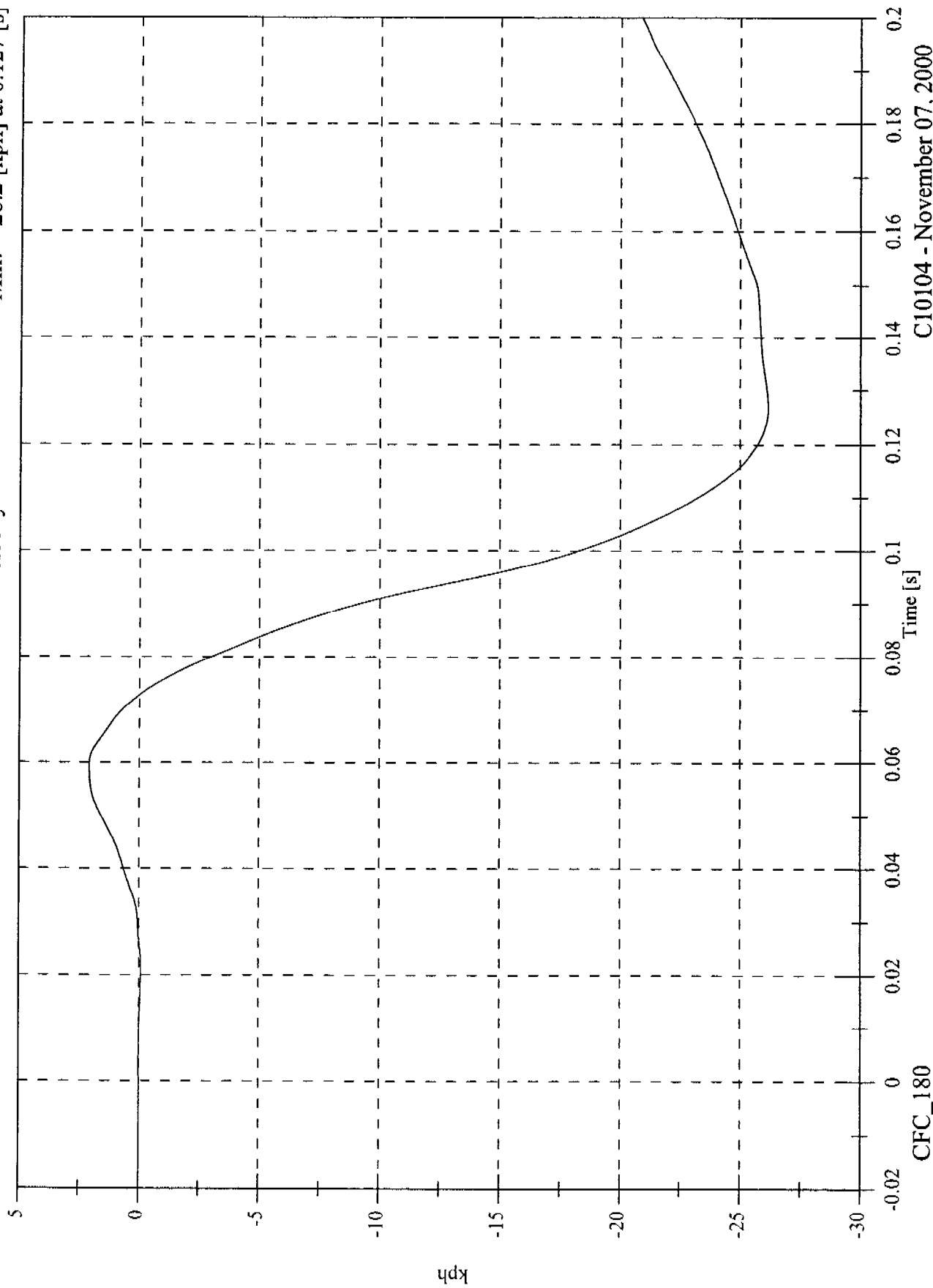


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 2.1 [kph] at 0.059 [s]
Min: -26.2 [kph] at 0.127 [s]

P4 Head x Velocity

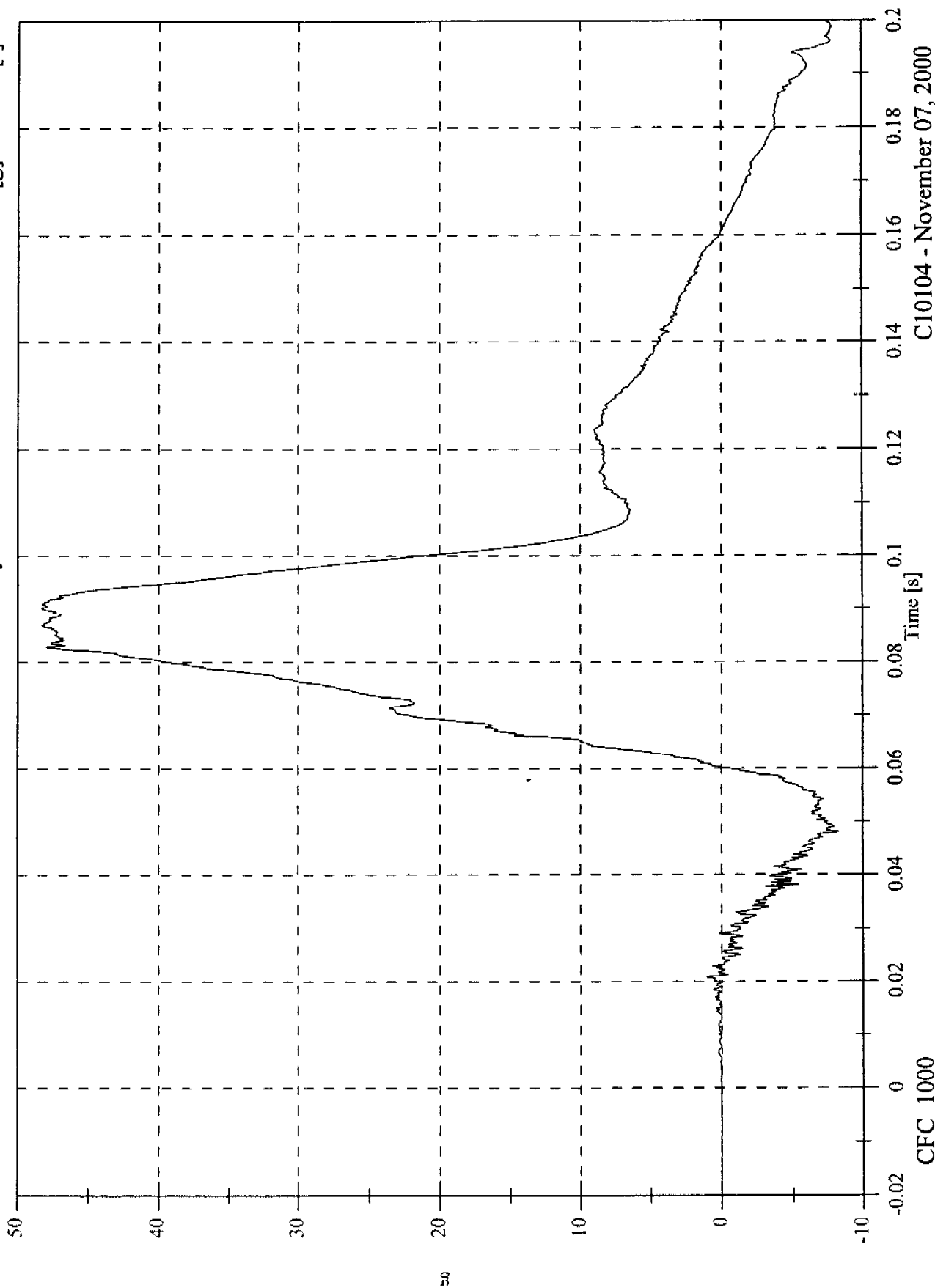


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 48.3 [g] at 0.090 [s]
 Min: -8.3 [g] at 0.048 [s]

P4 Head y

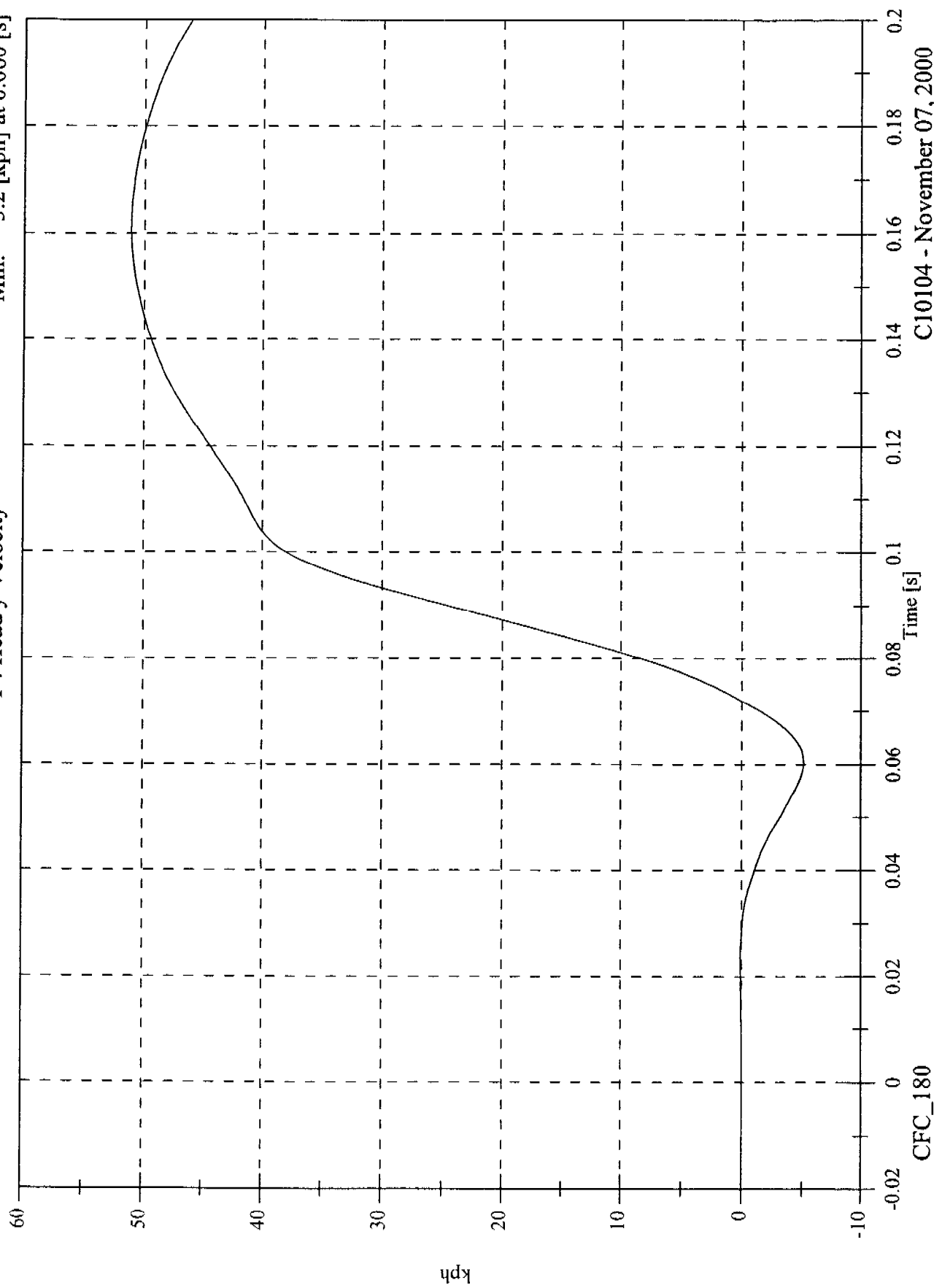


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Head y Velocity

Max: 51.1 [kph] at 0.161 [s]
Min: -5.2 [kph] at 0.060 [s]

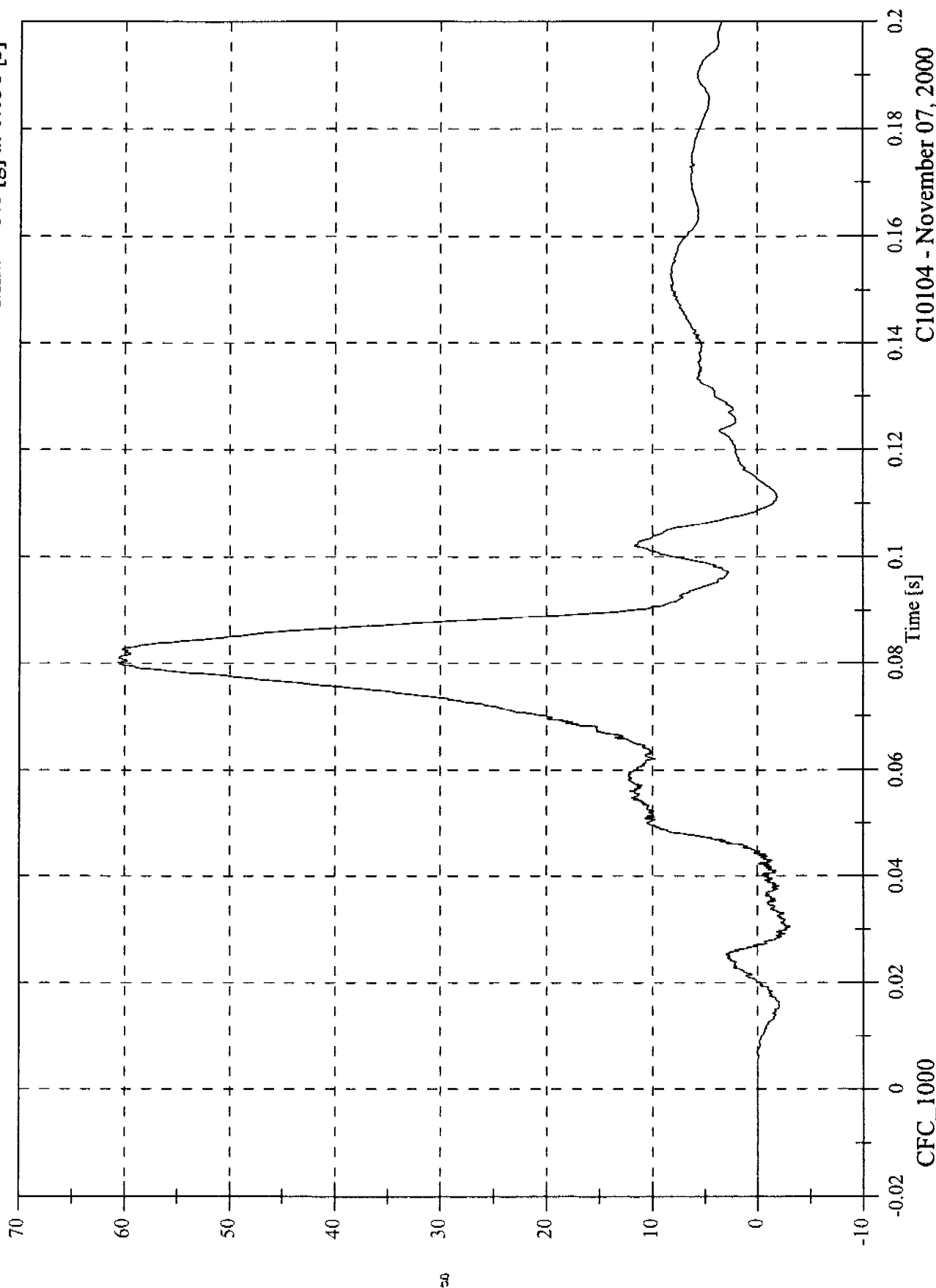


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 60.7 [g] at 0.080 [s]
Min: -3.1 [g] at 0.031 [s]

P4 Head z

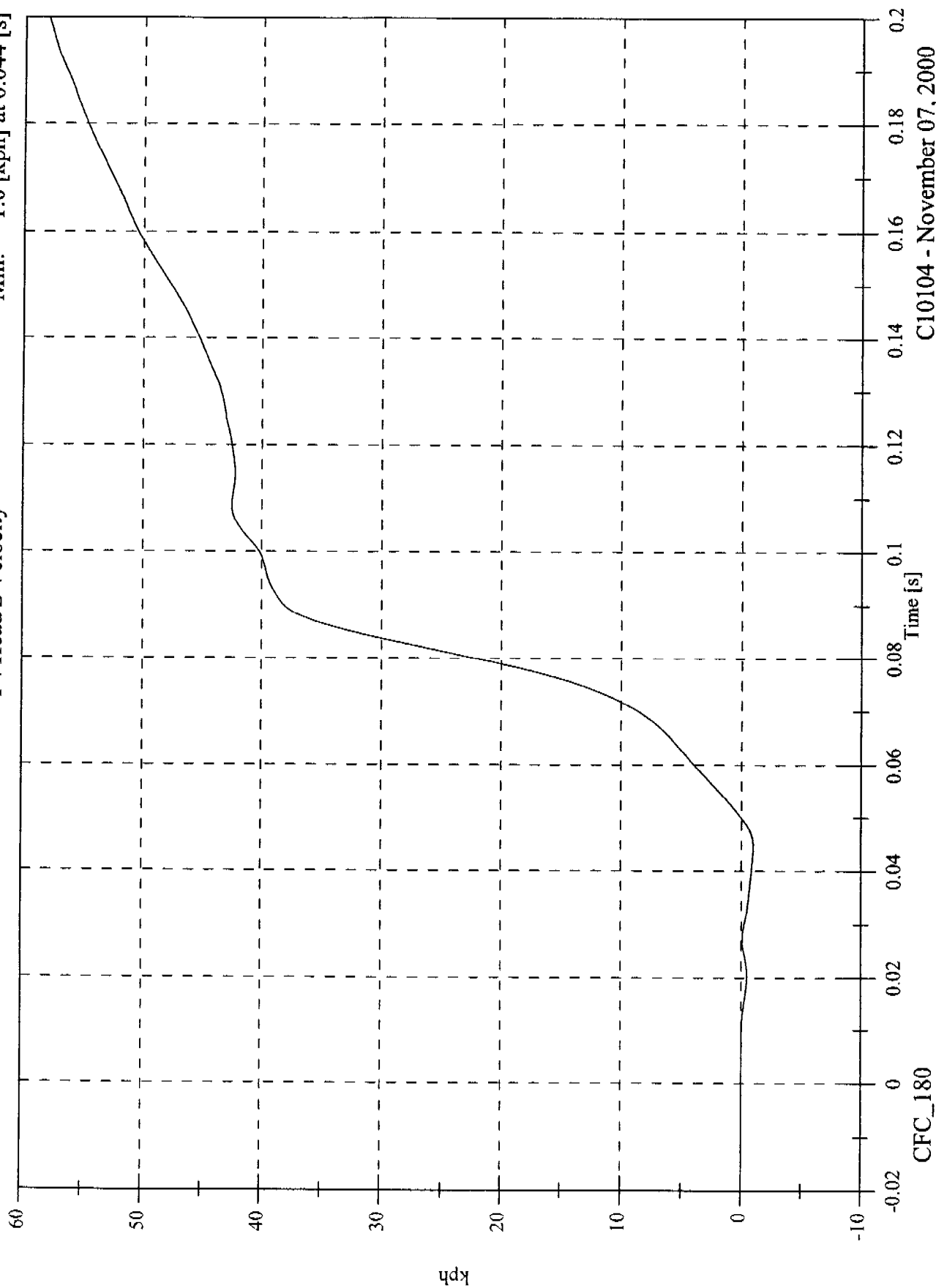


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 58.0 [kph] at 0.200 [s]
 Min: -1.0 [kph] at 0.044 [s]

P4 Head z Velocity

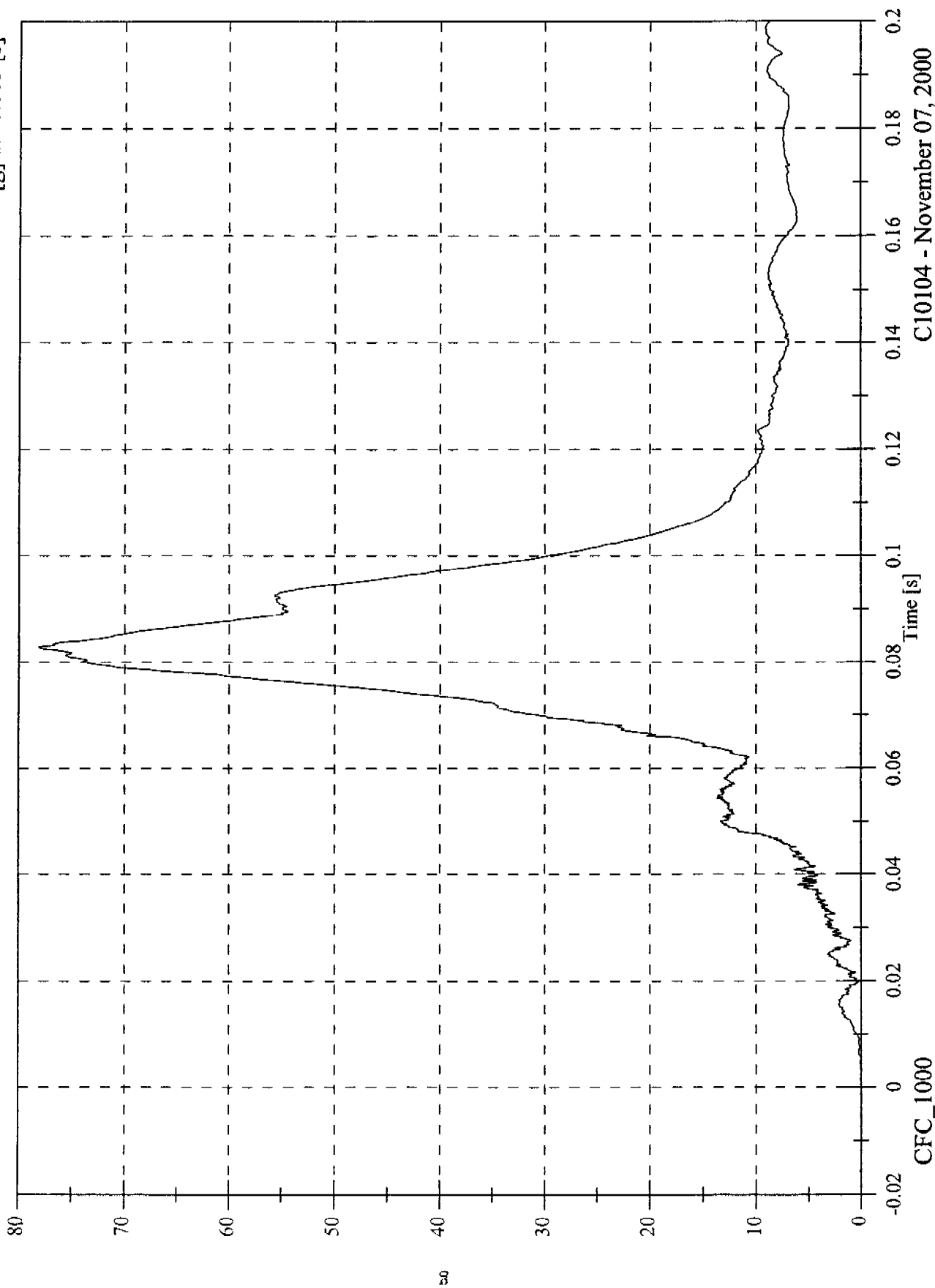


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Head Resultant

Max: 78.1 [g] at 0.083 [s]
Min: 0.0 [g] at -0.003 [s]

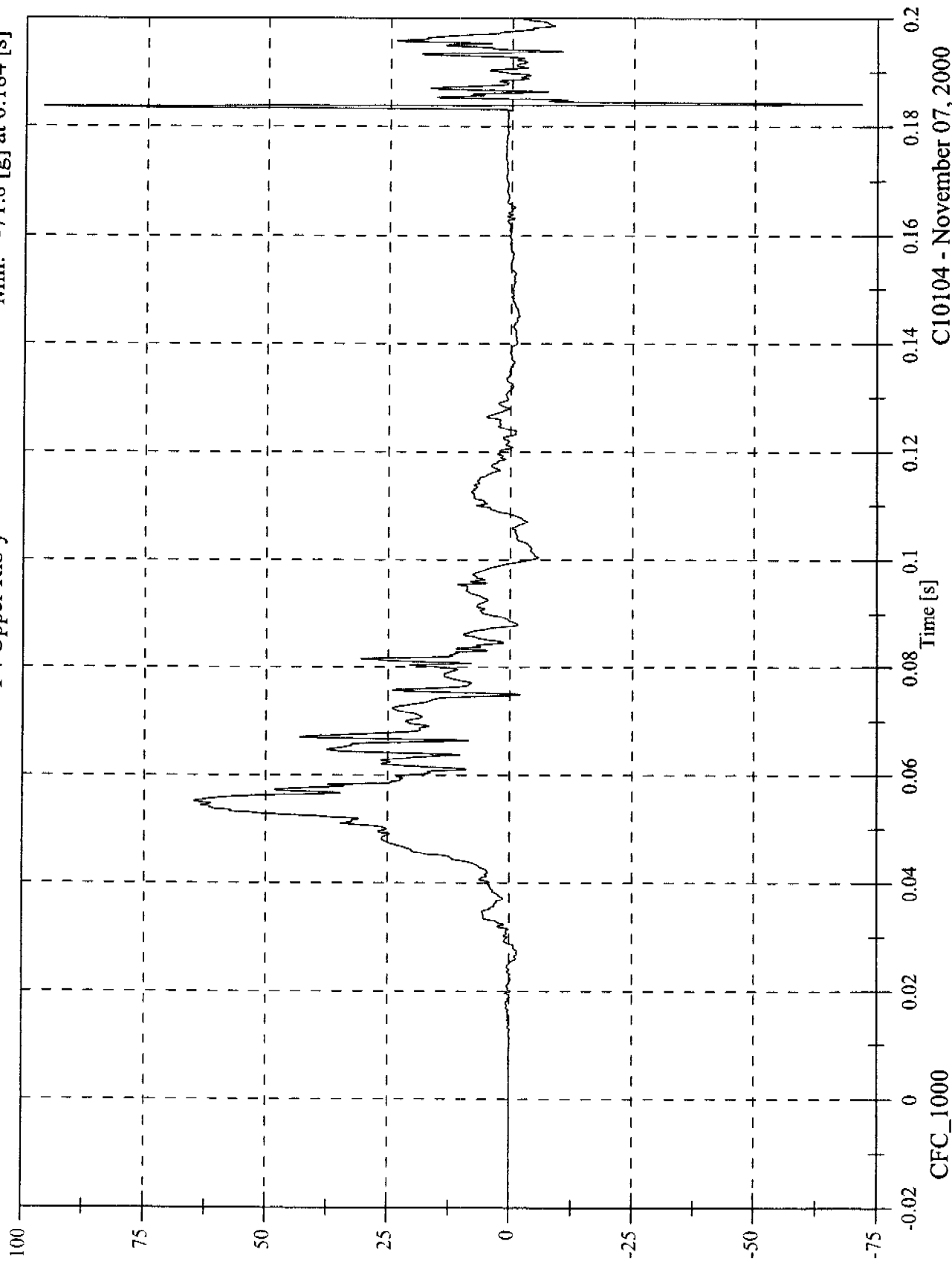


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Upper Rib y

Max: 96.3 [g] at 0.184 [s]
Min: -71.8 [g] at 0.184 [s]



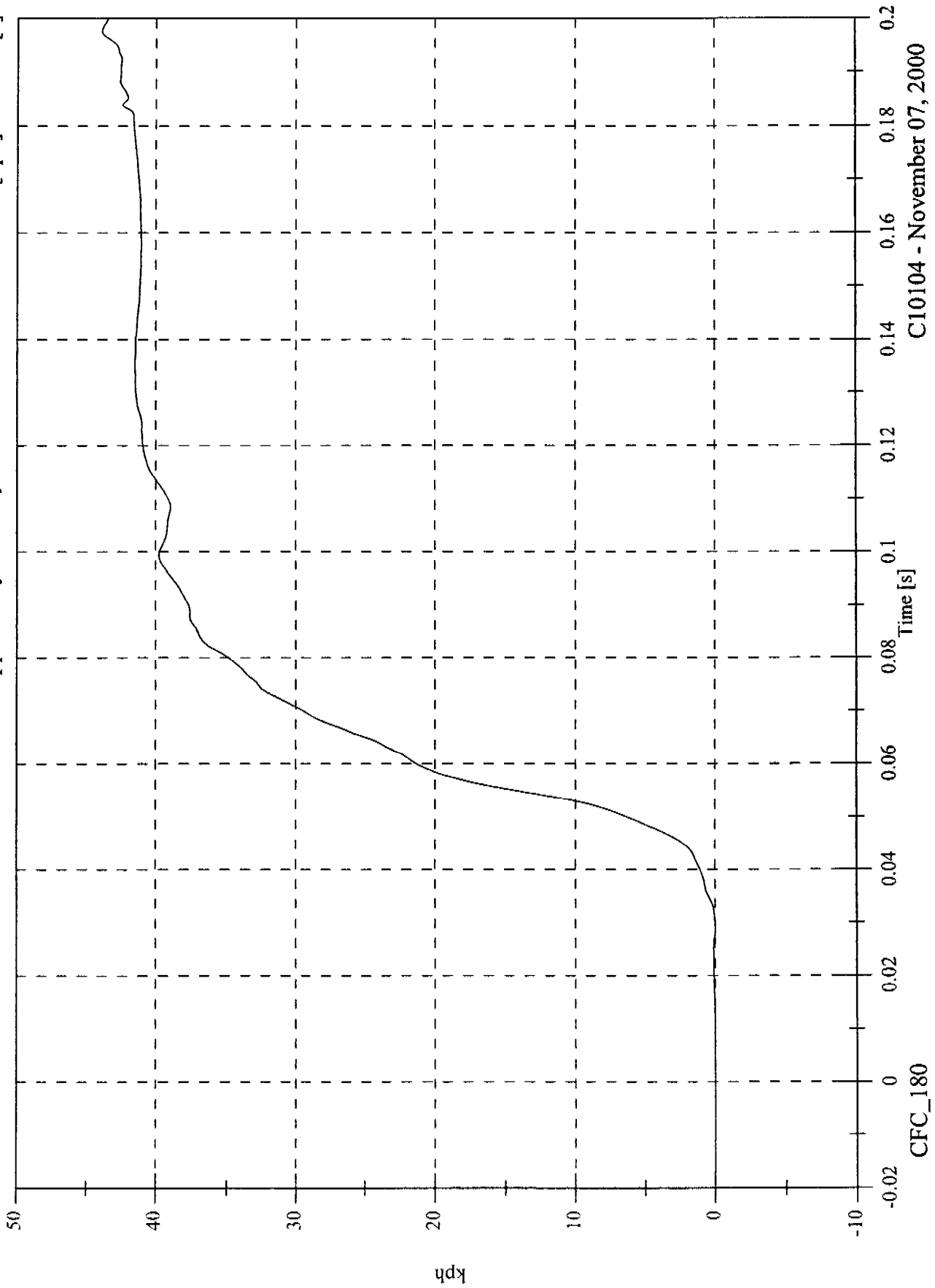
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Upper Rib y Velocity

Max: 43.9 [kph] at 0.198 [s]

Min: -0.0 [kph] at 0.029 [s]

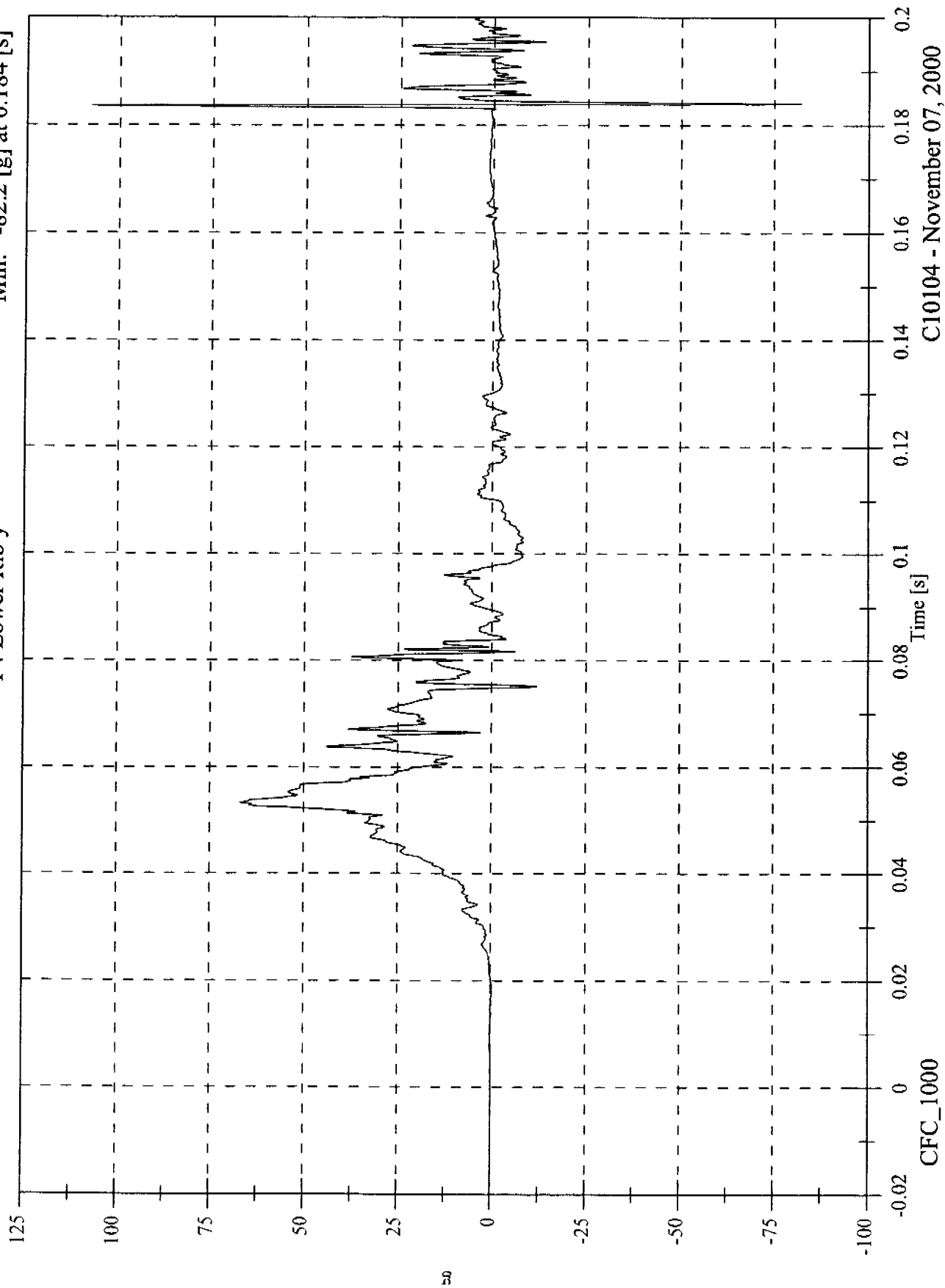


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Rib y

Max: 107.6 [g] at 0.184 [s]
Min: -82.2 [g] at 0.184 [s]

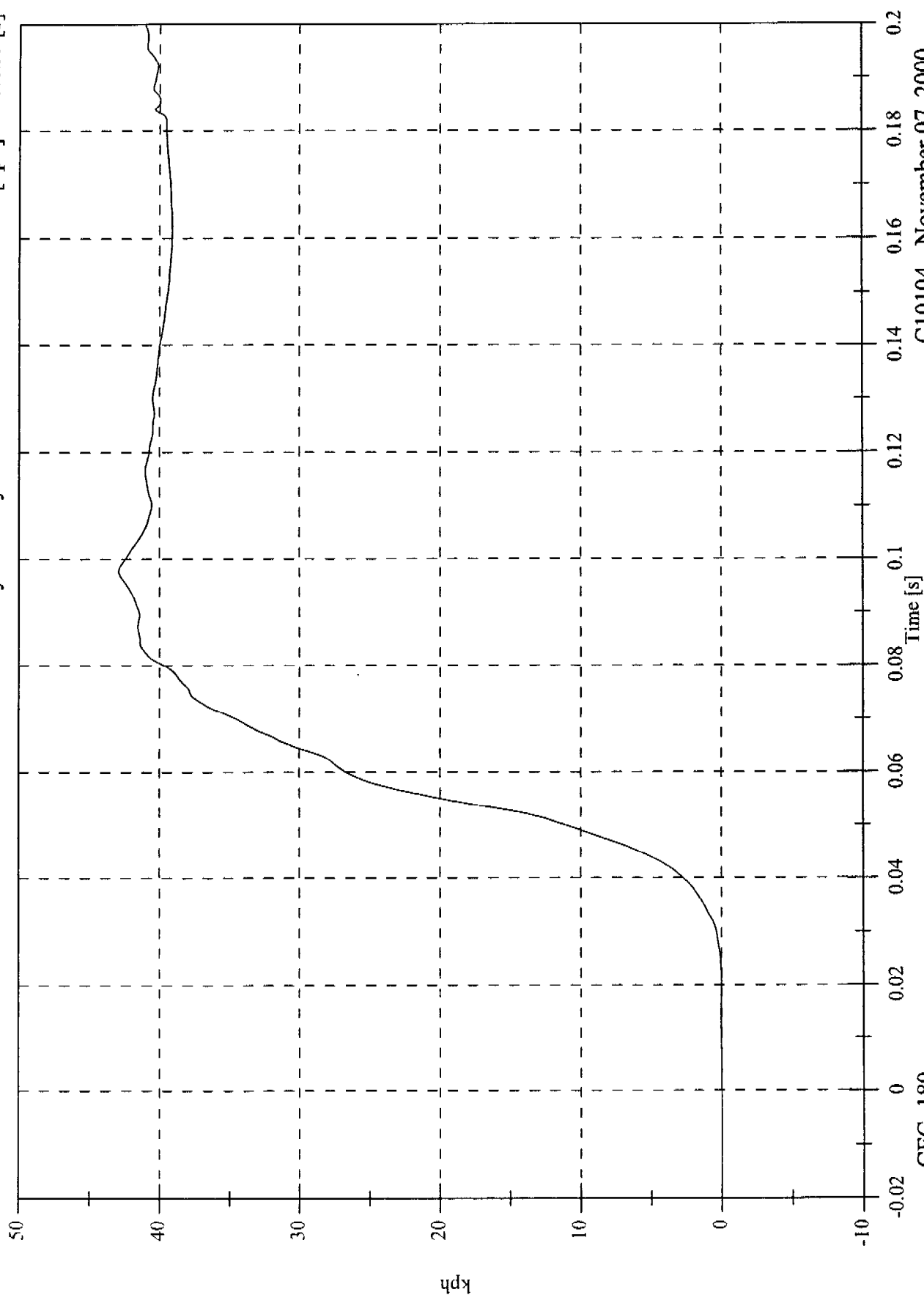


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Rib y Velocity

Max: 42.9 [kph] at 0.098 [s]
Min: -0.0 [kph] at -0.020 [s]

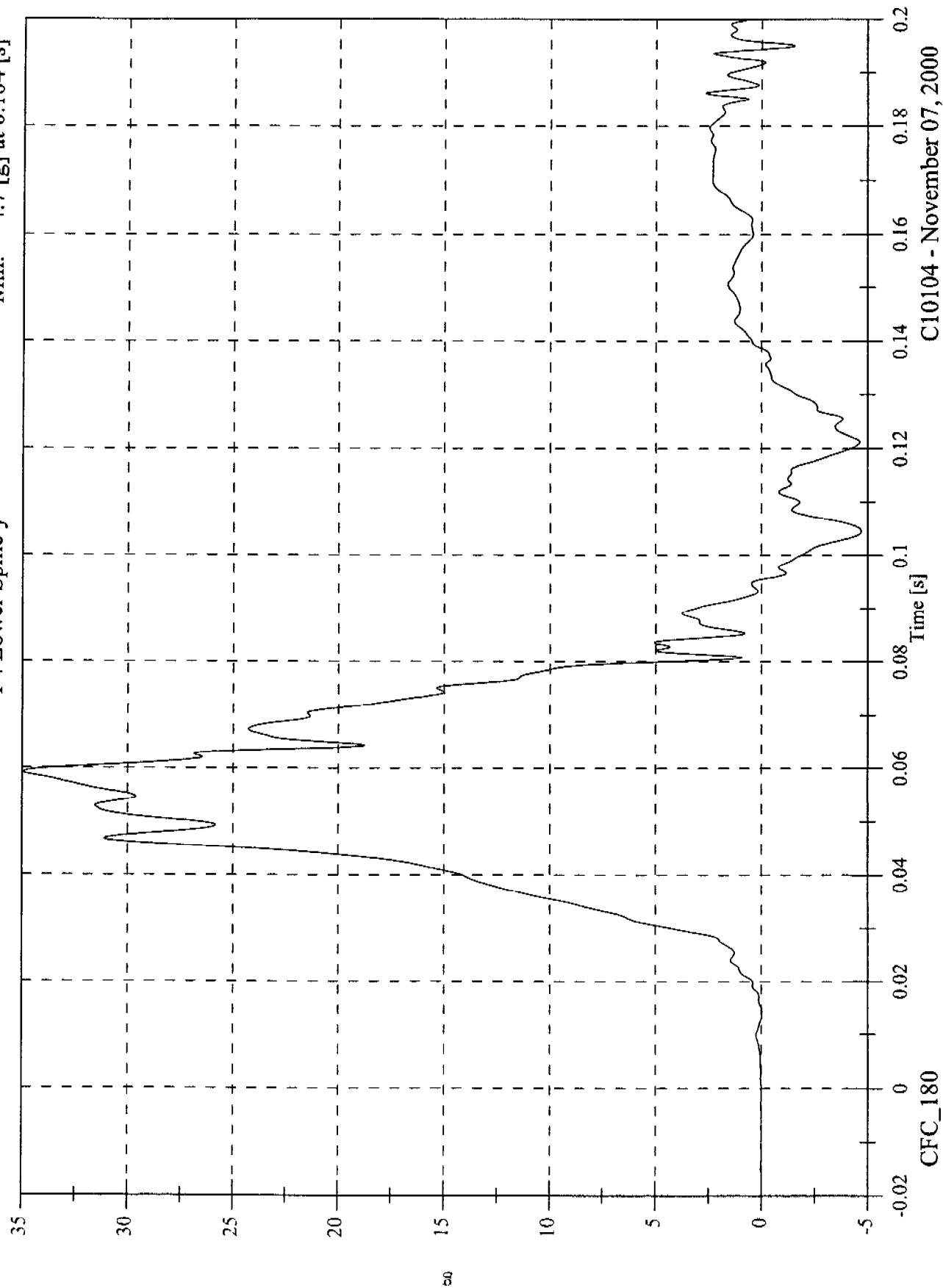


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Spine y

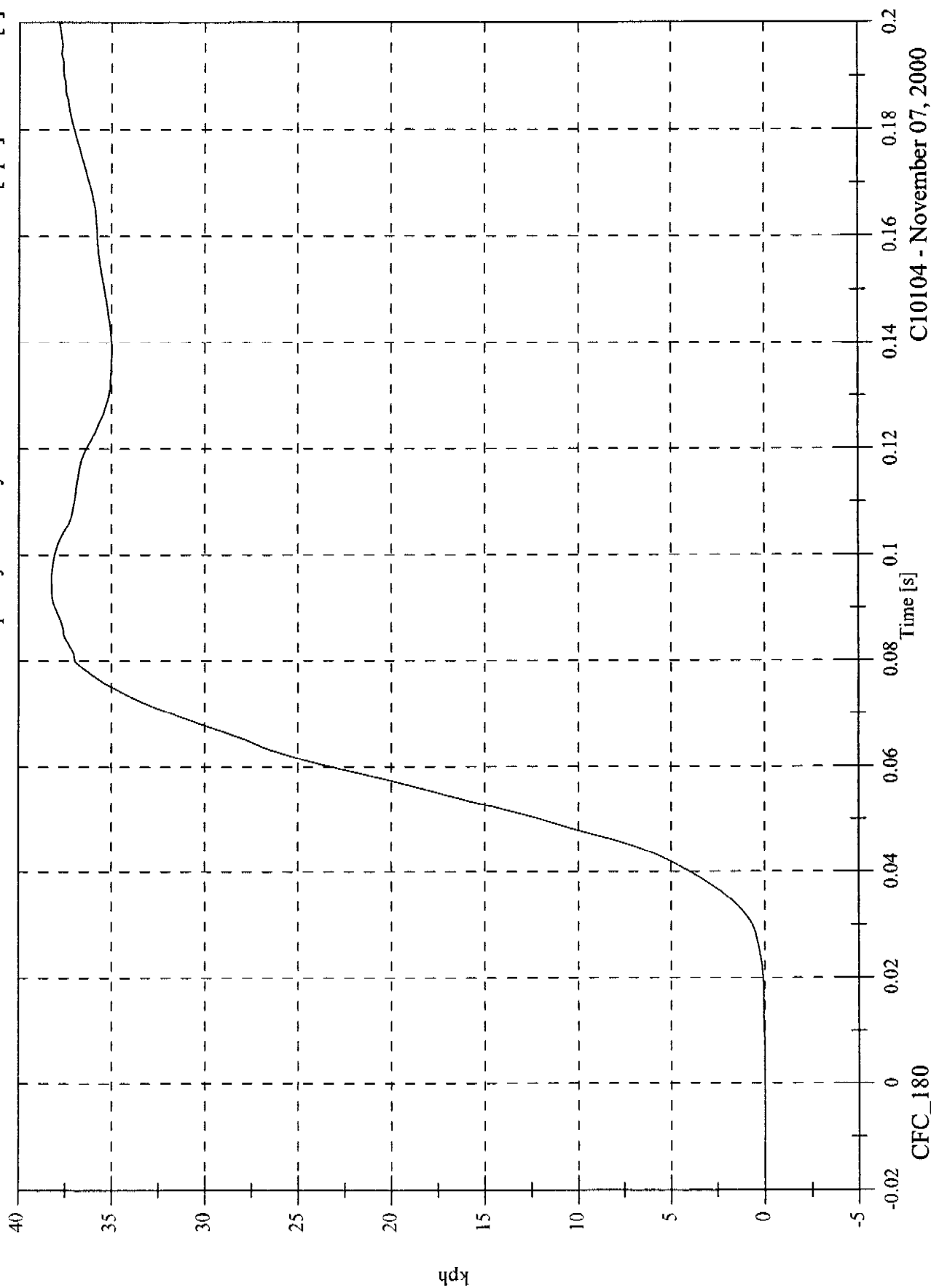
Max: 34.9 [g] at 0.059 [s]
Min: -4.7 [g] at 0.104 [s]



FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Spine y Velocity

Max: 38.2 [kph] at 0.096 [s]
Min: -0.0 [kph] at -0.020 [s]

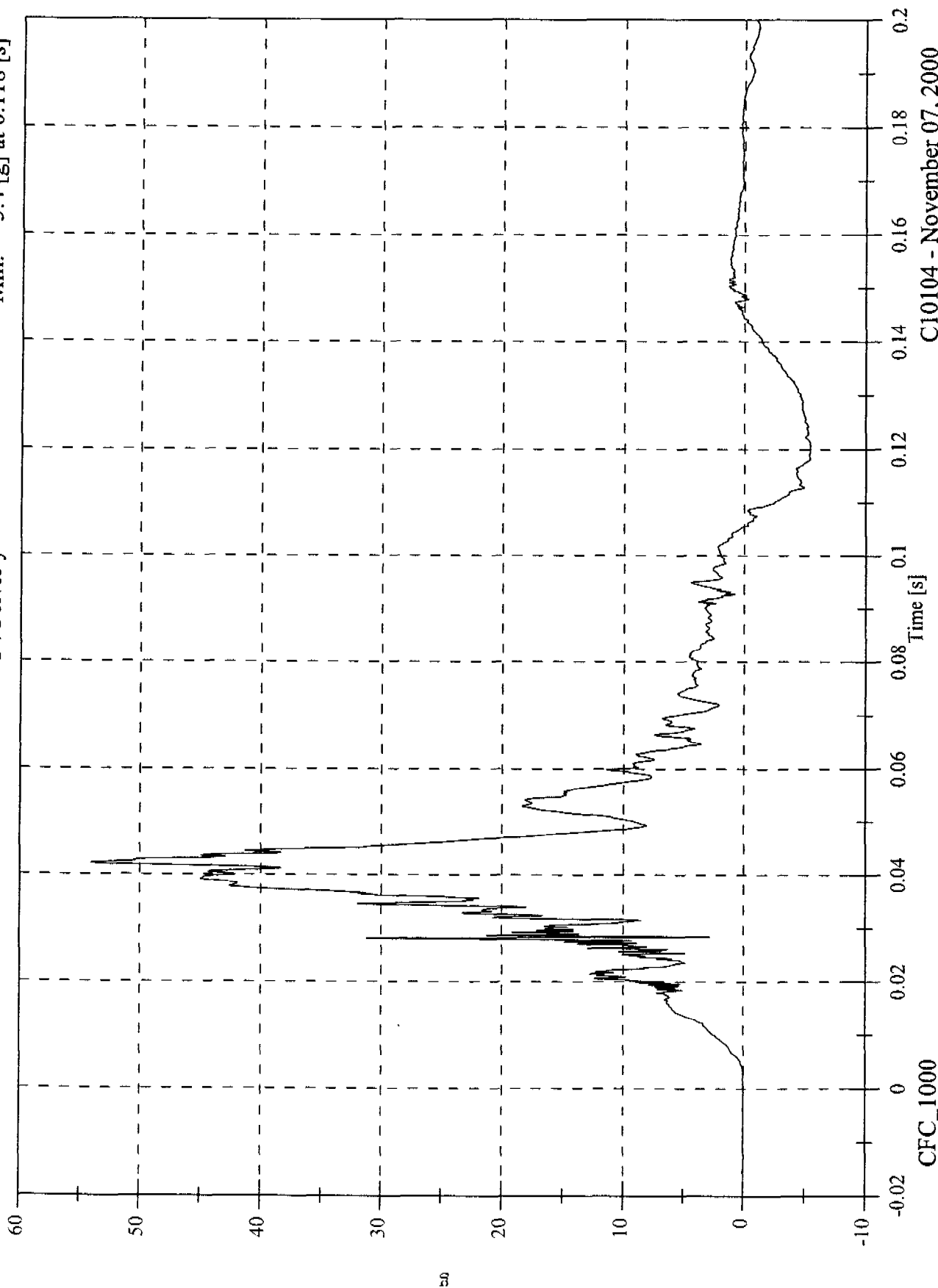


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Pelvic y

Max: 54.1 [g] at 0.042 [s]
Min: -5.4 [g] at 0.118 [s]

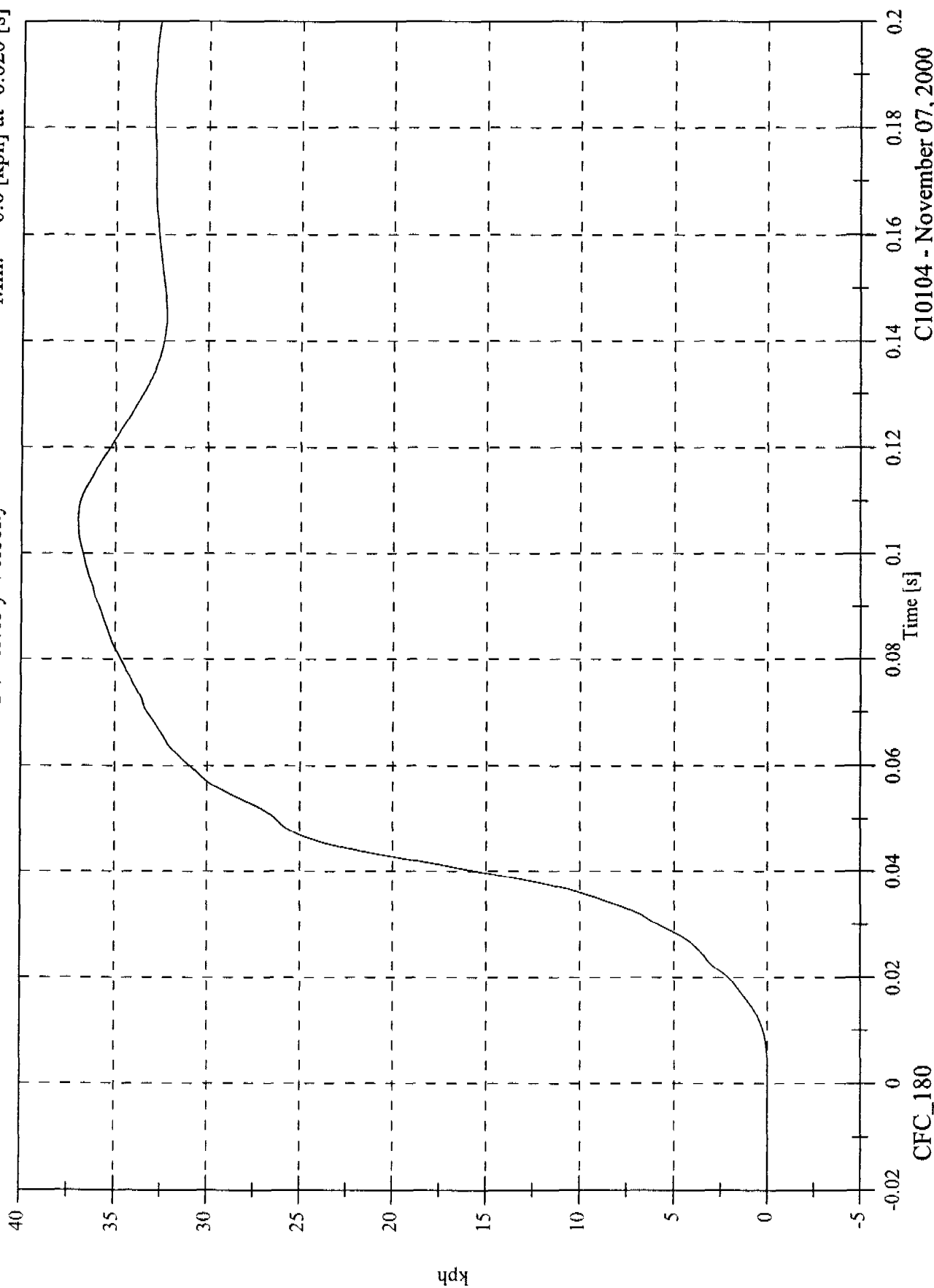


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Pelvic y Velocity

Max: 37.0 [kph] at 0.105 [s]
Min: -0.0 [kph] at -0.020 [s]

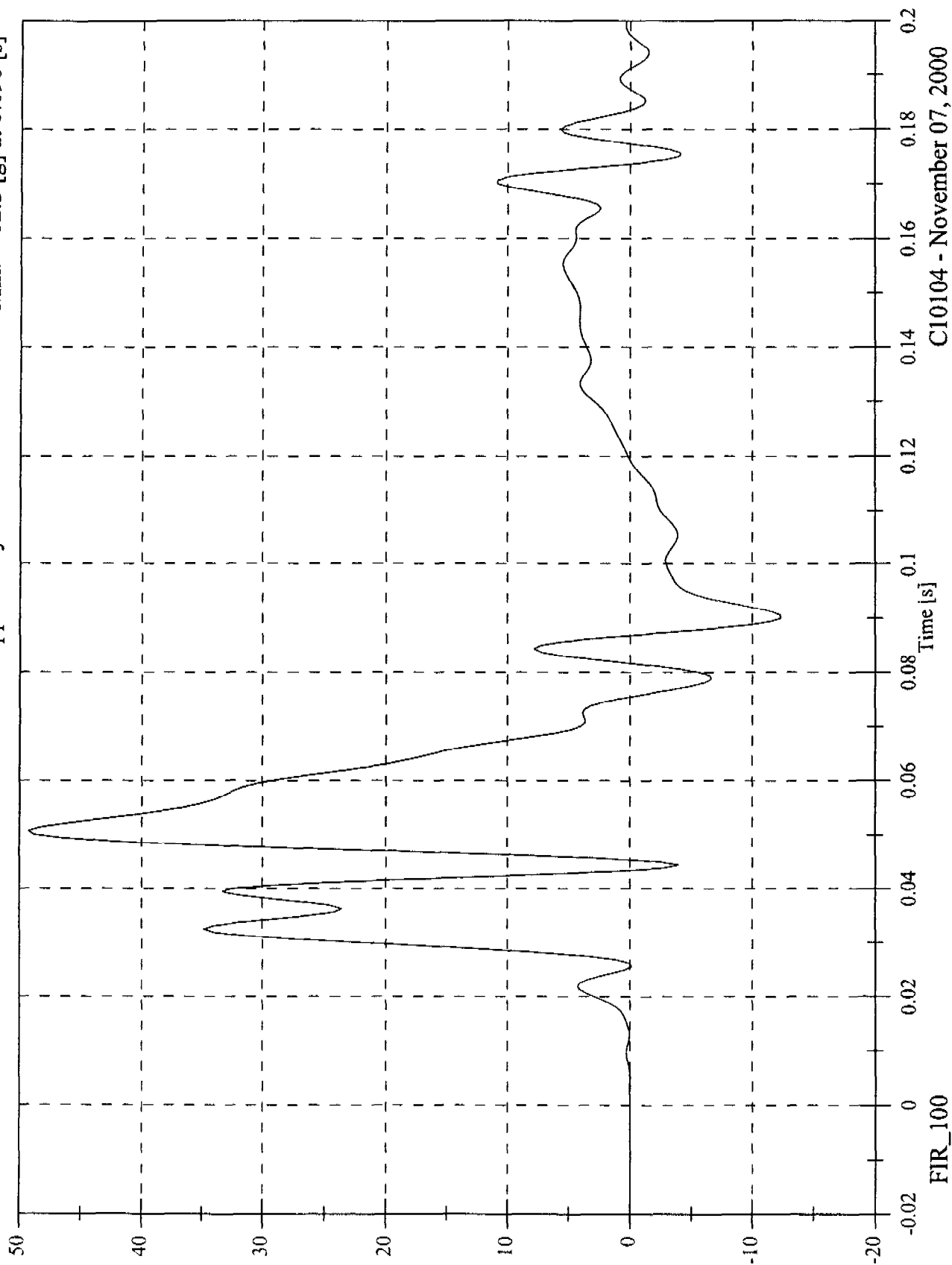


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 49.2 [g] at 0.051 [s]
Min: -12.3 [g] at 0.090 [s]

P1 Upper Rib y

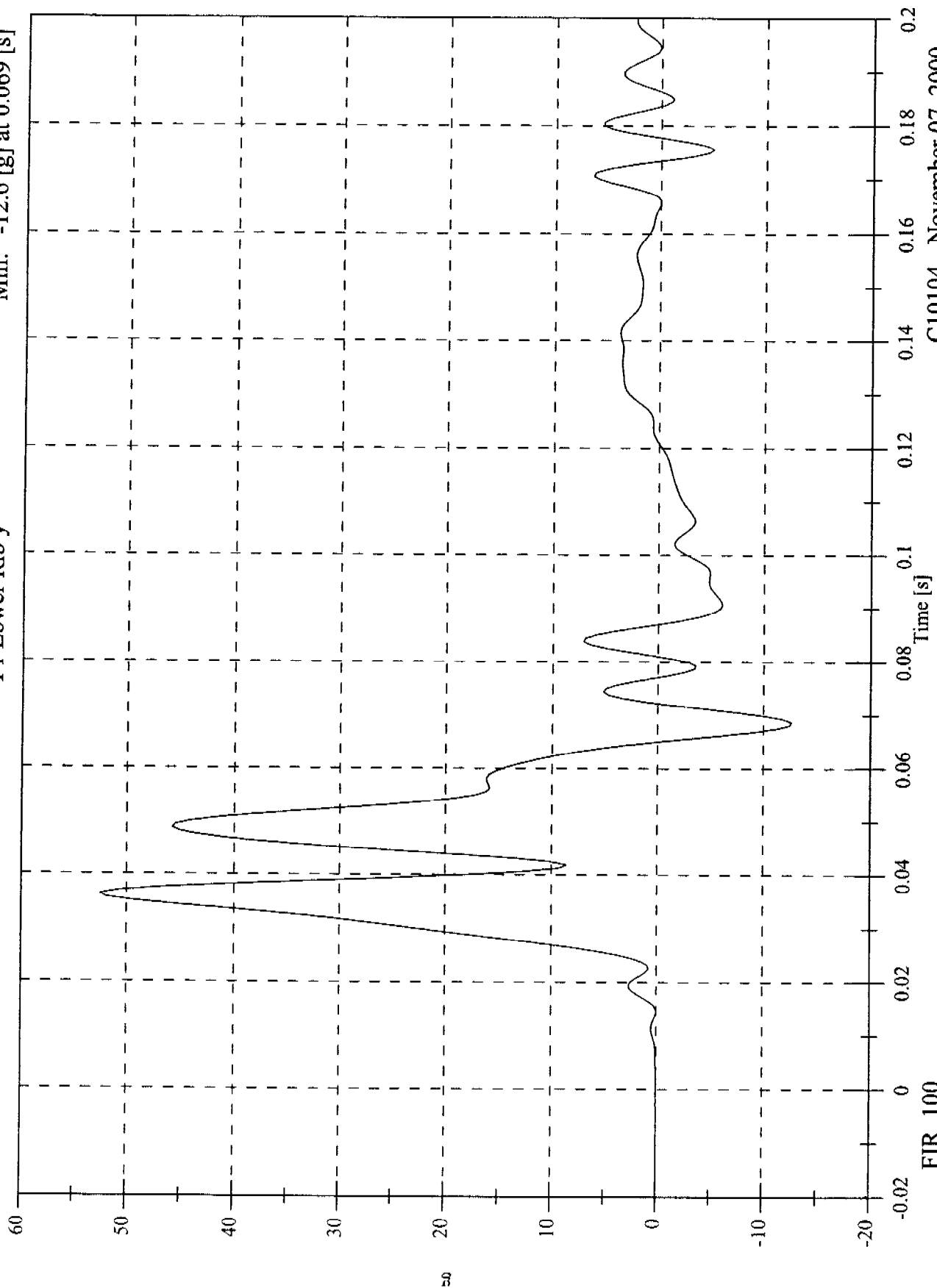


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Rib y

Max: 52.5 [g] at 0.036 [s]
Min: -12.6 [g] at 0.069 [s]

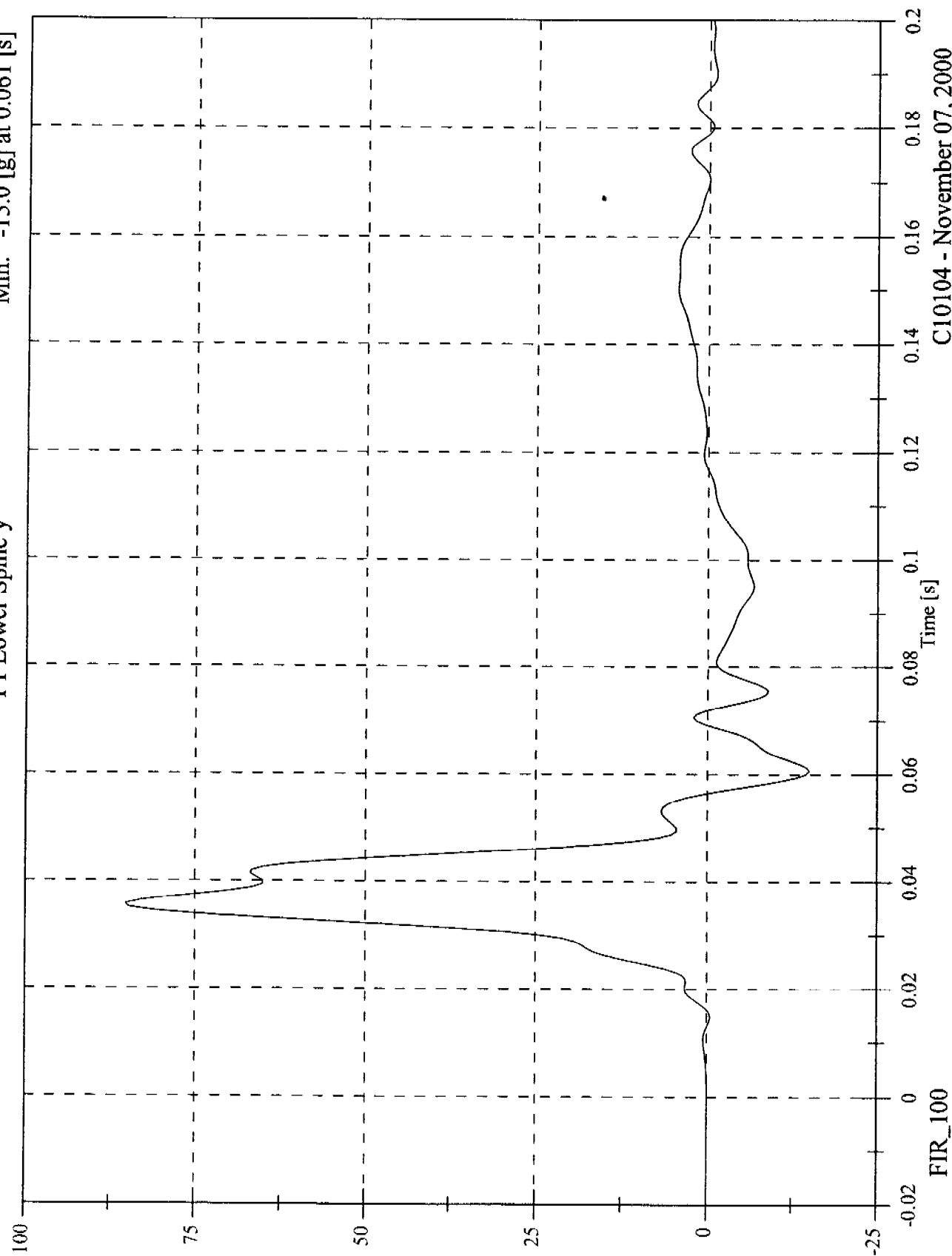


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 85.1 [g] at 0.036 [s]
Min: -15.0 [g] at 0.061 [s]

P1 Lower Spine y

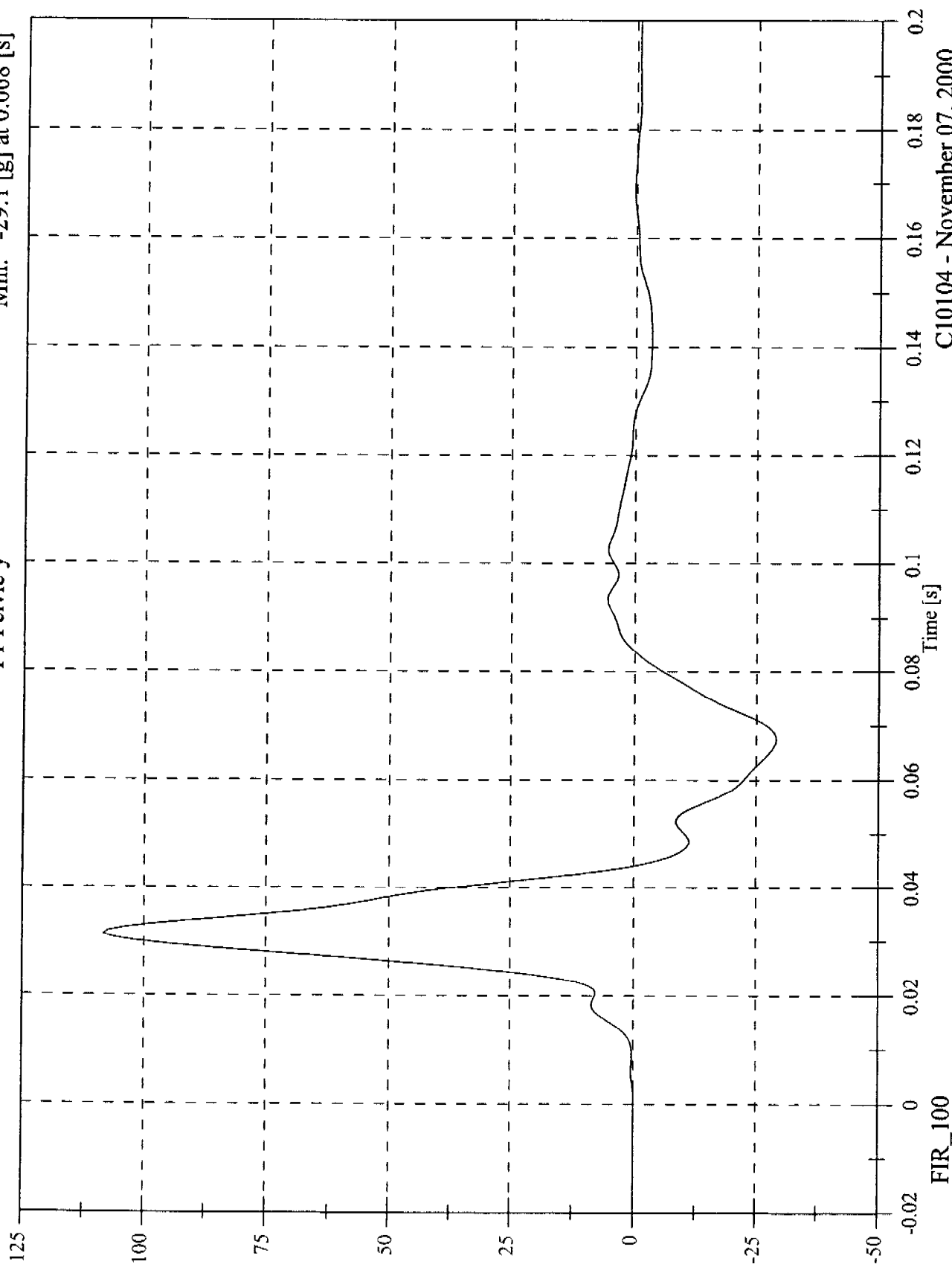


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 108.3 [g] at 0.031 [s]
Min: -29.1 [g] at 0.068 [s]

P1 Pelvic y

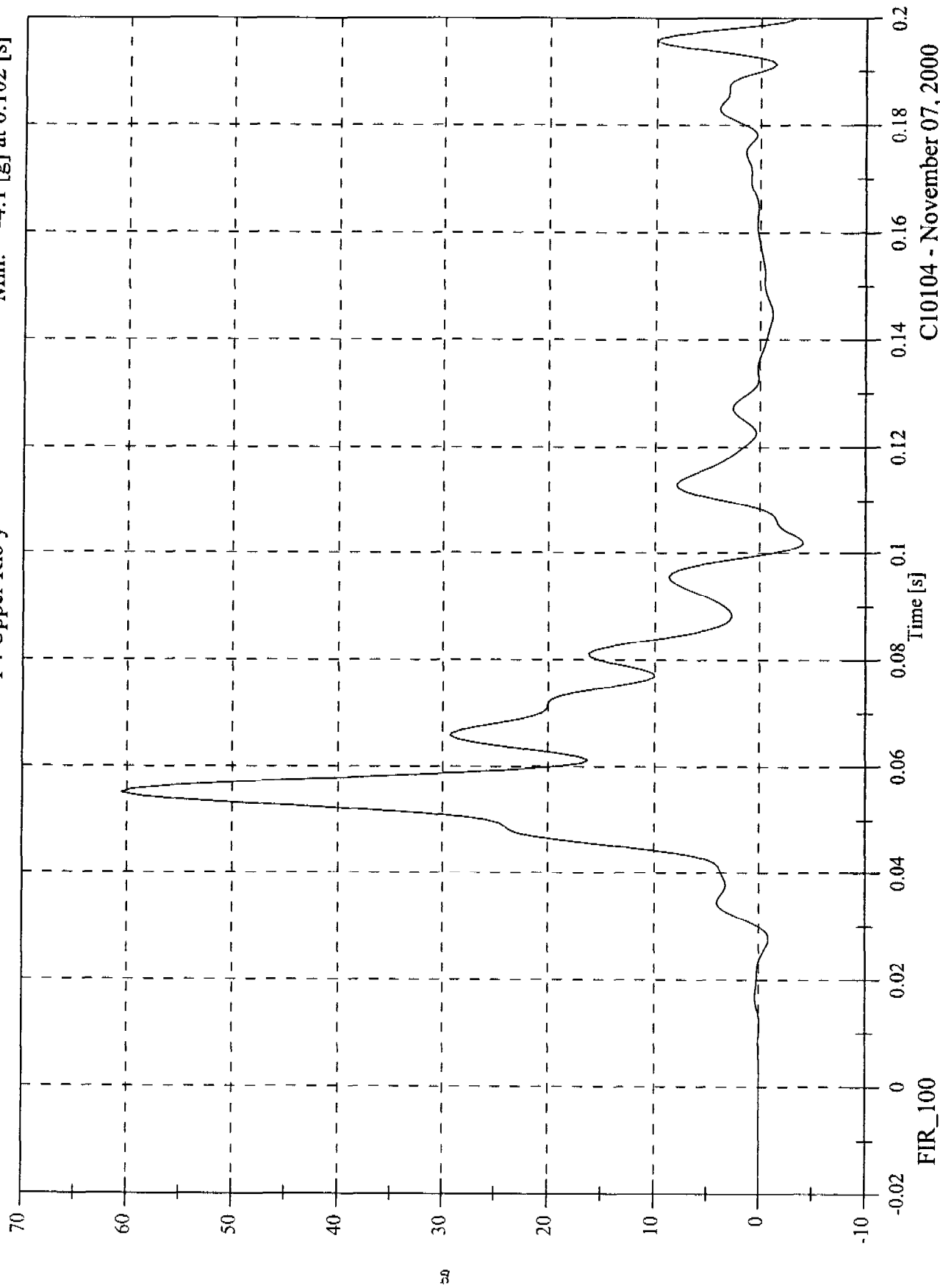


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Upper Rib y

Max: 60.5 [g] at 0.055 [s]
Min: -4.1 [g] at 0.102 [s]

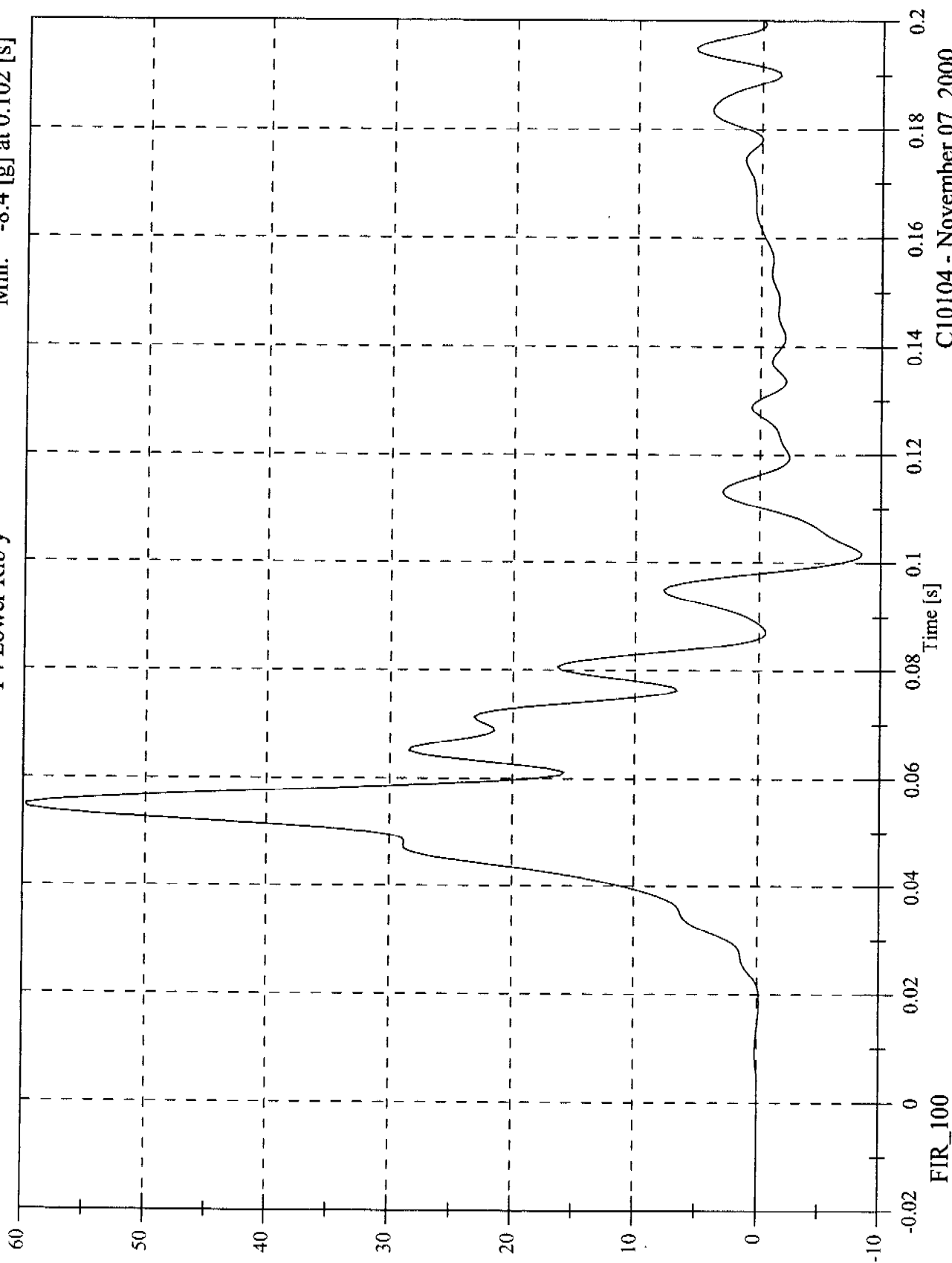


CI0104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Rib y

Max: 59.7 [g] at 0.055 [s]
Min: -8.4 [g] at 0.102 [s]

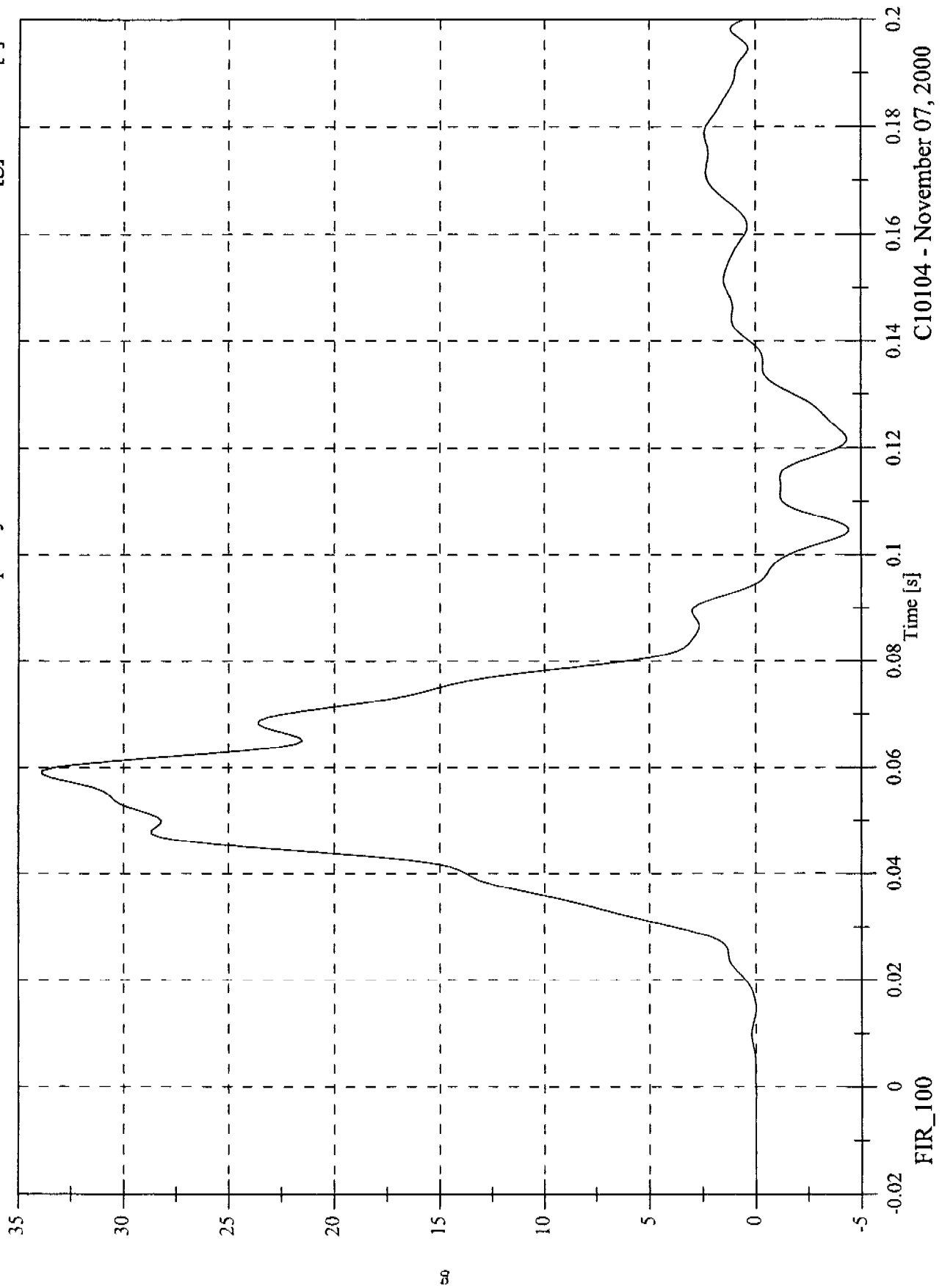


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Spine y

Max: 33.9 [g] at 0.059 [s]
Min: -4.4 [g] at 0.104 [s]

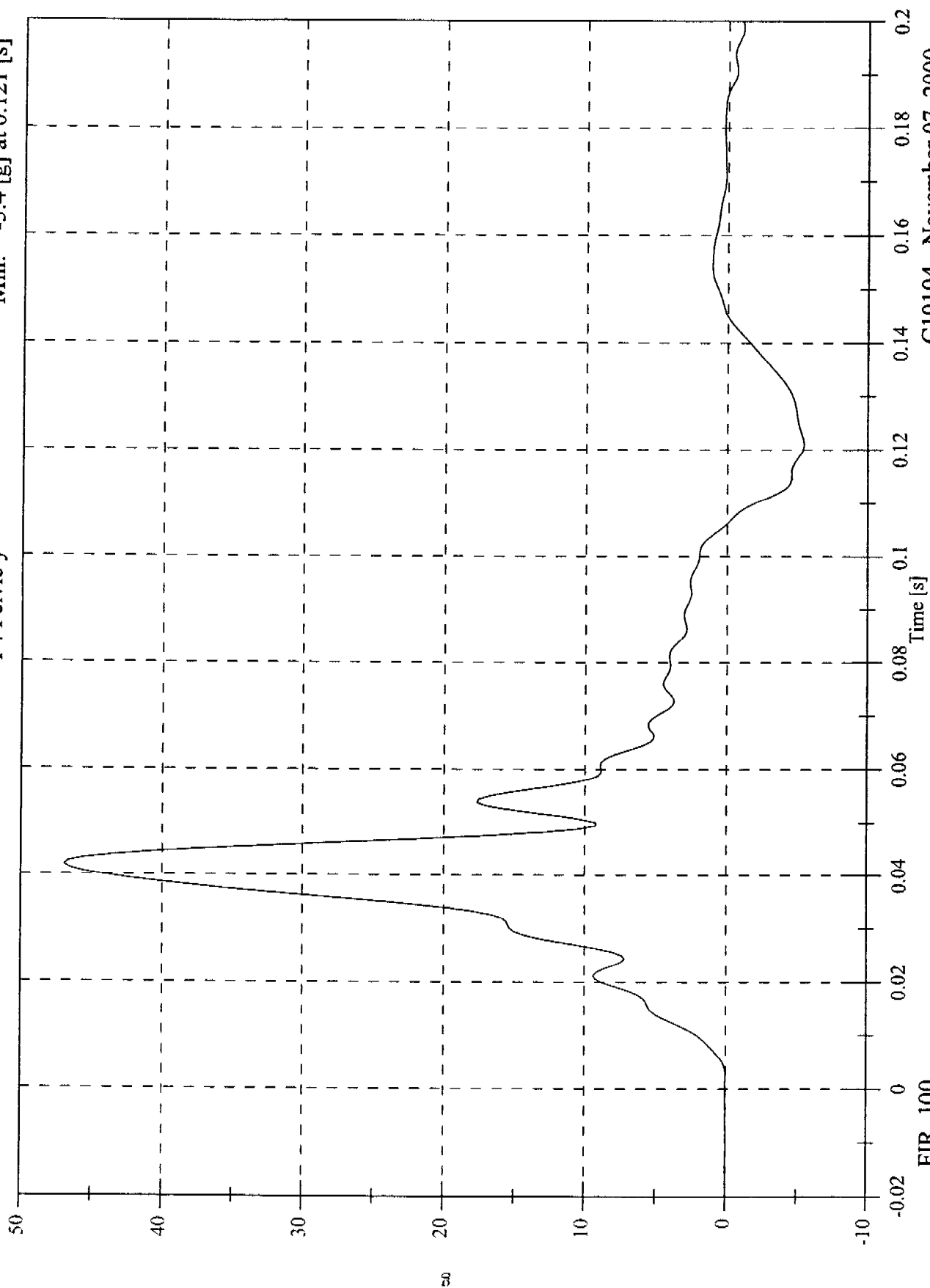


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 46.9 [g] at 0.042 [s]
 Min: -5.4 [g] at 0.121 [s]

P4 Pelvic y



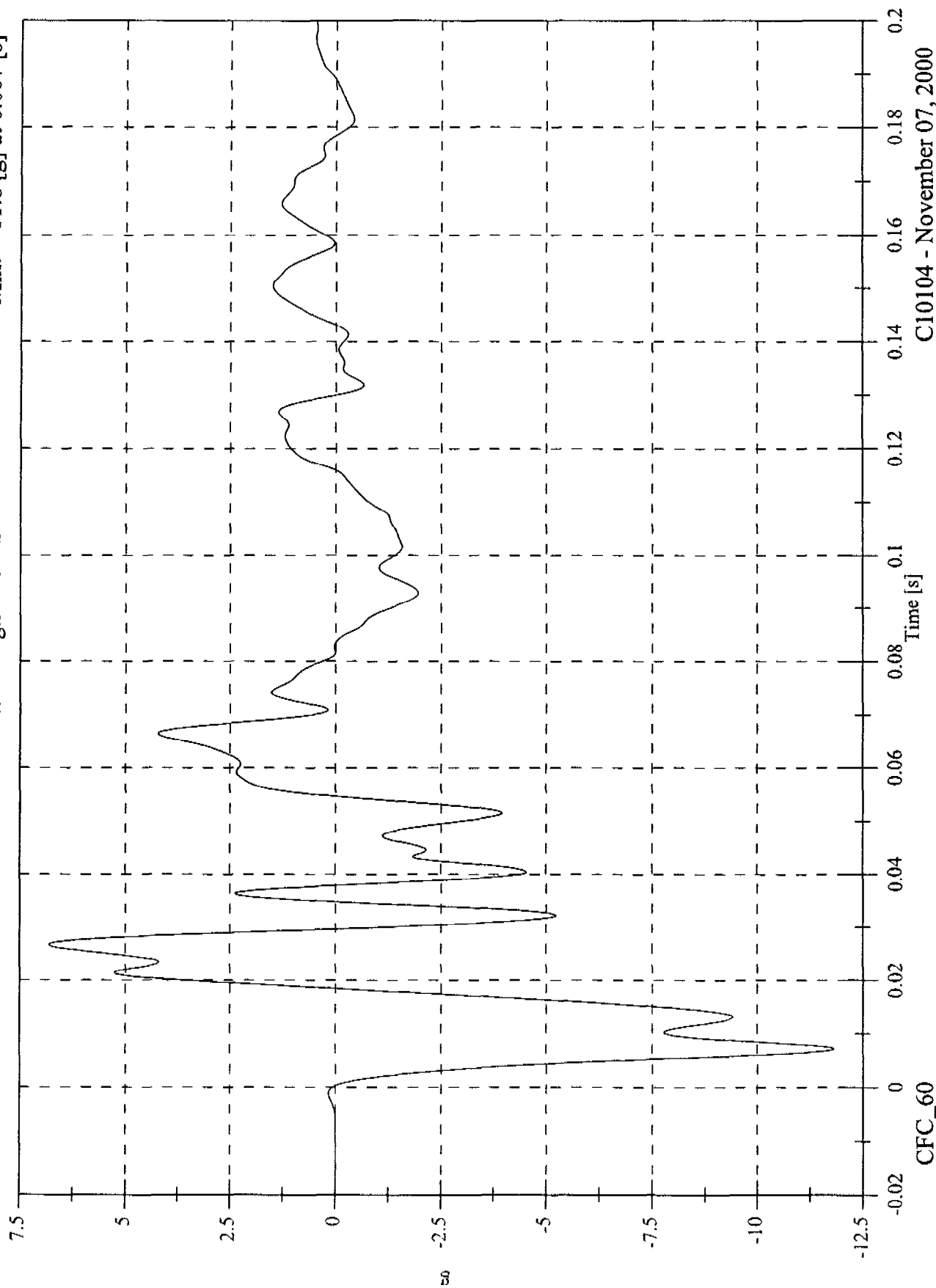
FIR_100

C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill X

Max: 6.8 [g] at 0.027 [s]
Min: -11.8 [g] at 0.007 [s]

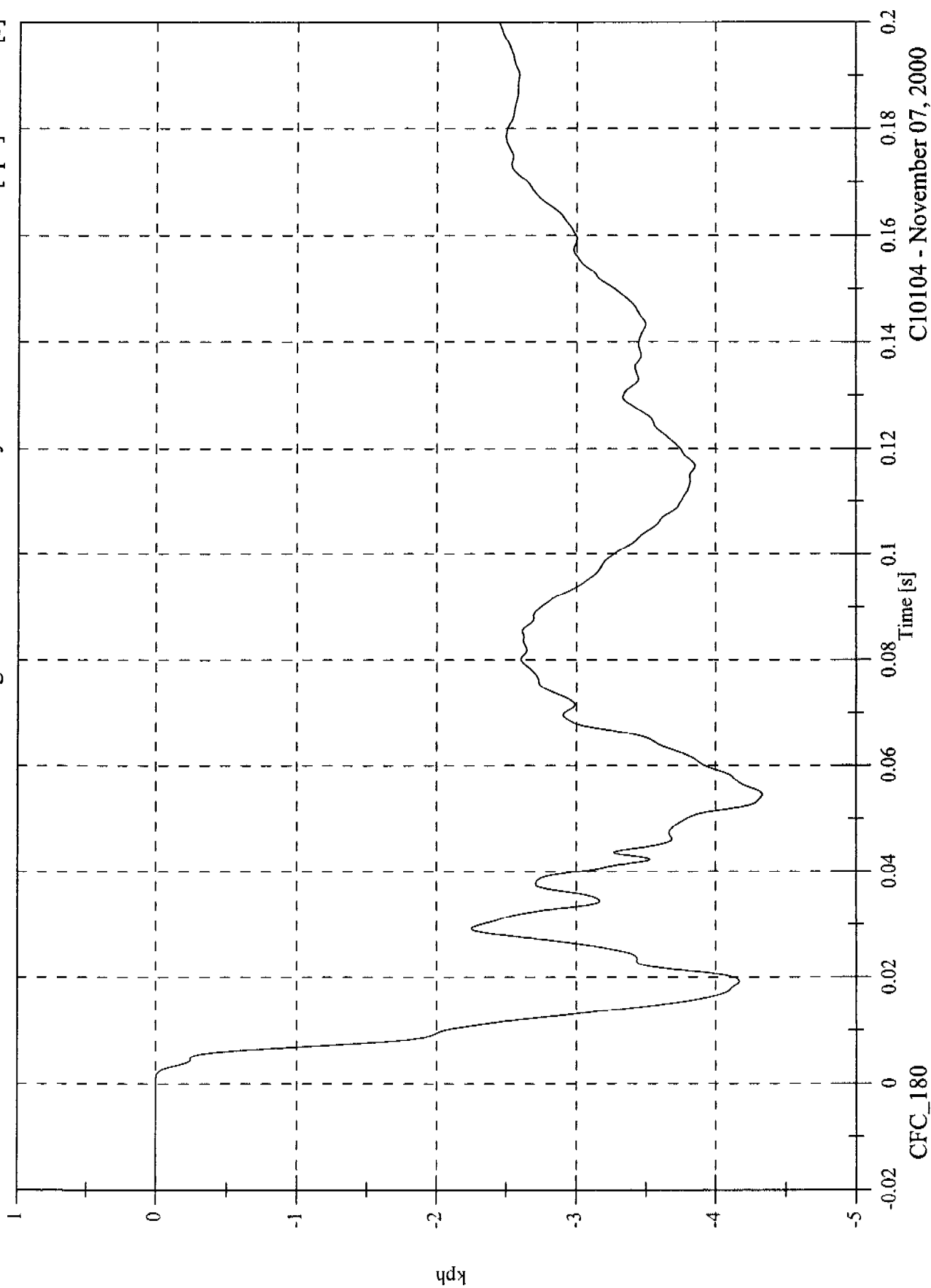


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill X Velocity

Max: 0.0 [kph] at -0.017 [s]
Min: -4.3 [kph] at 0.054 [s]

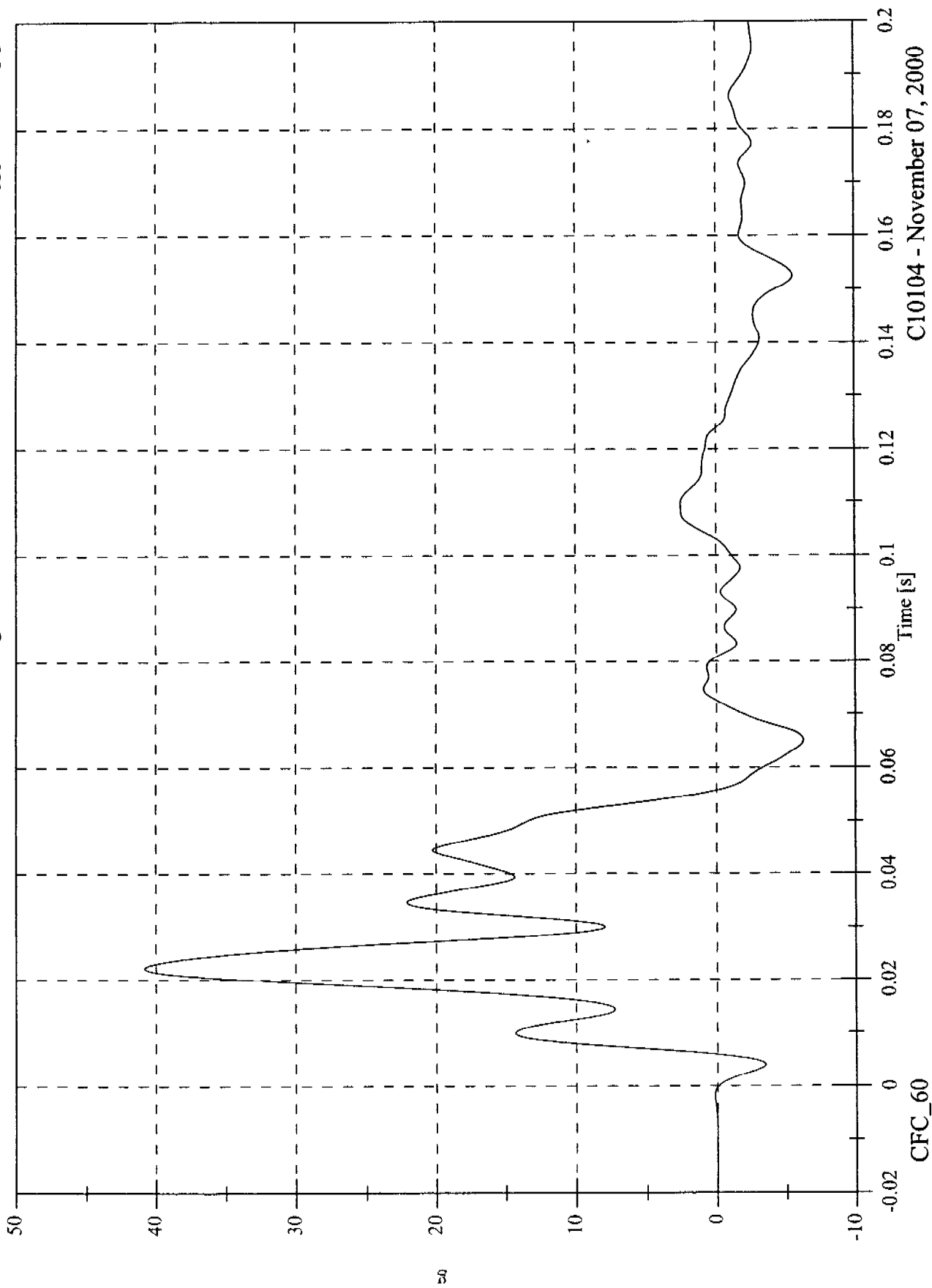


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill Y

Max: 40.8 [g] at 0.022 [s]
Min: -6.3 [g] at 0.065 [s]

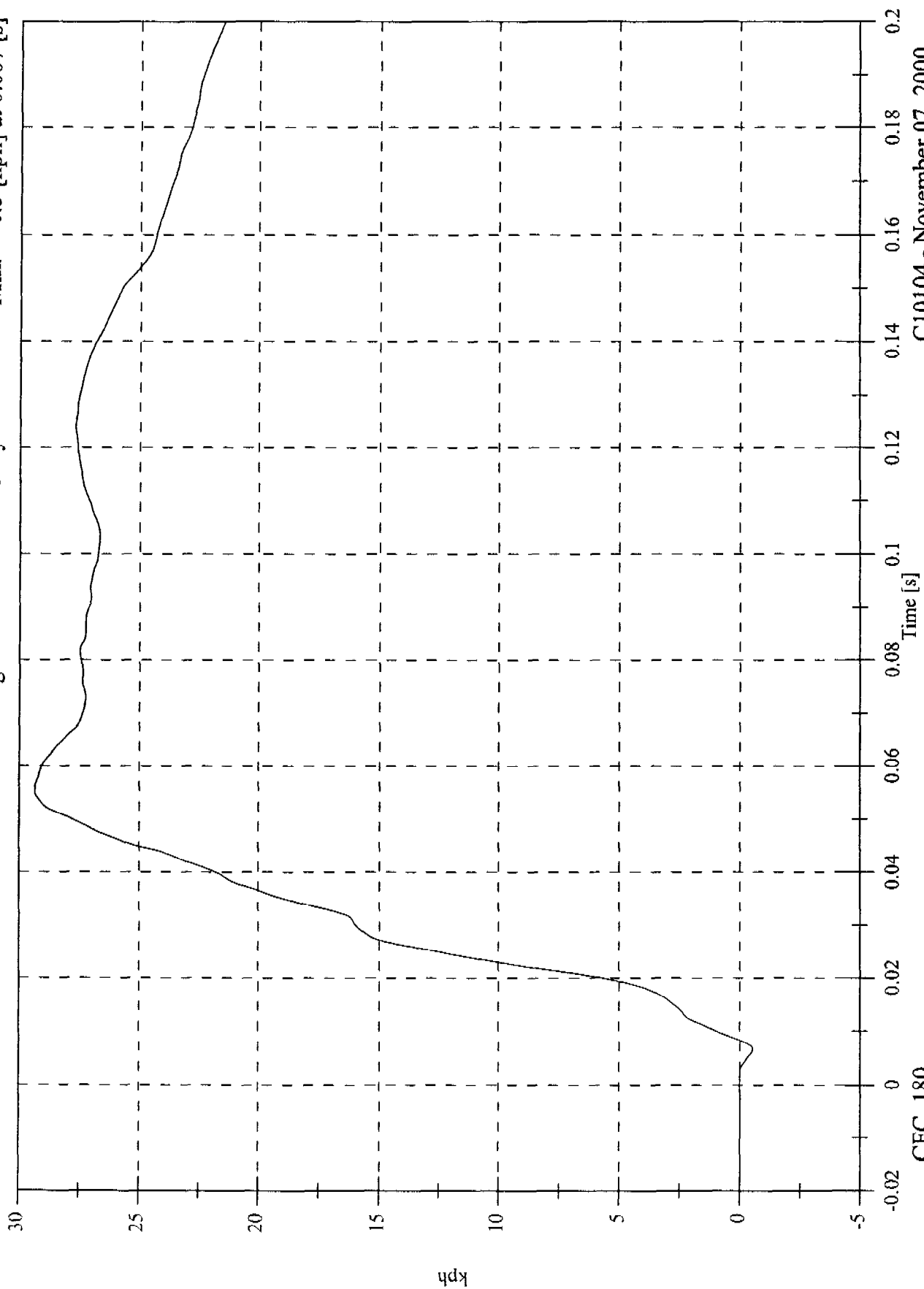


FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill Y Velocity

Max: 29.4 [kph] at 0.055 [s]

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



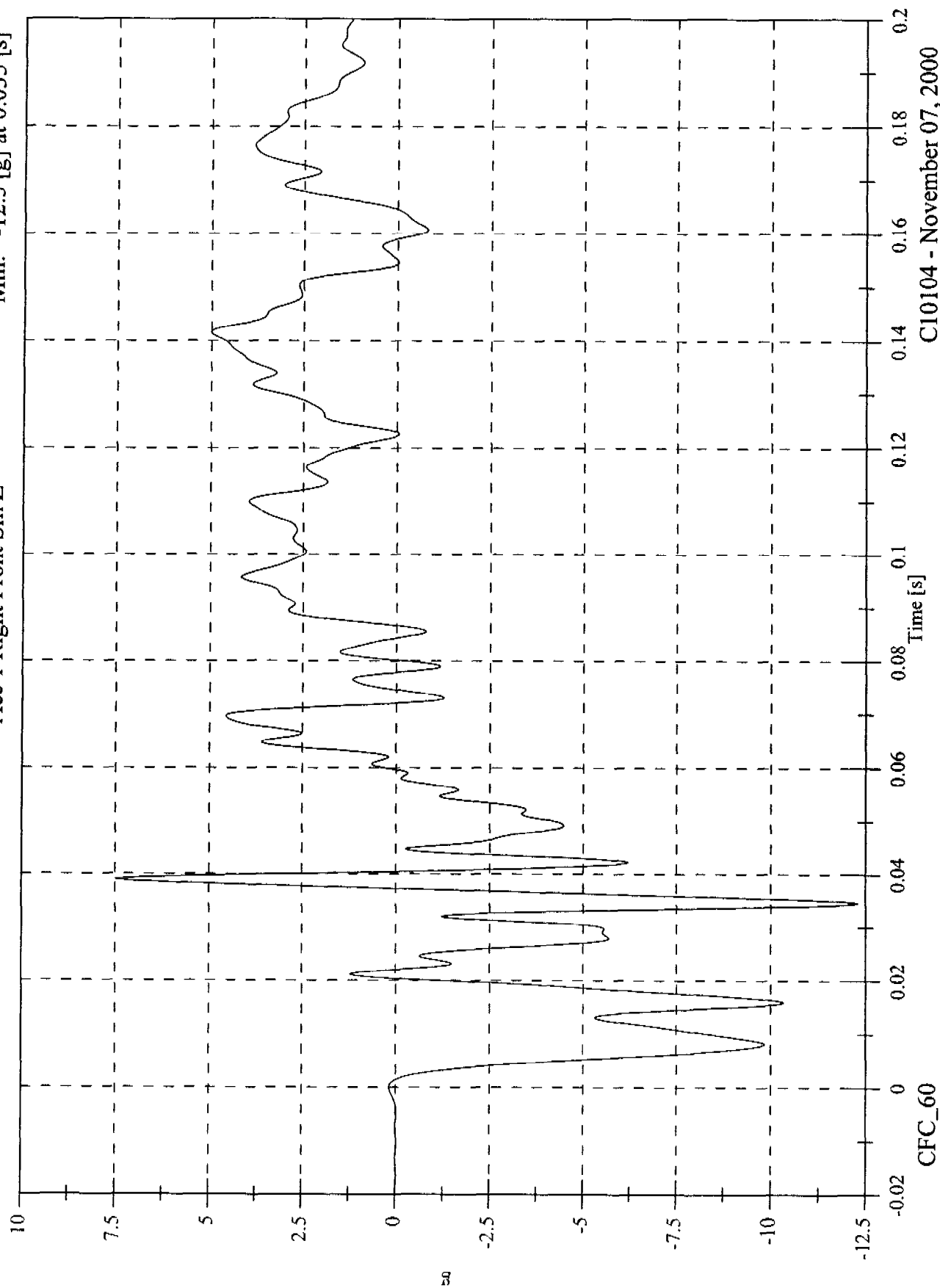
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill Z

Max: 7.5 [g] at 0.039 [s]

Min: -12.3 [g] at 0.035 [s]



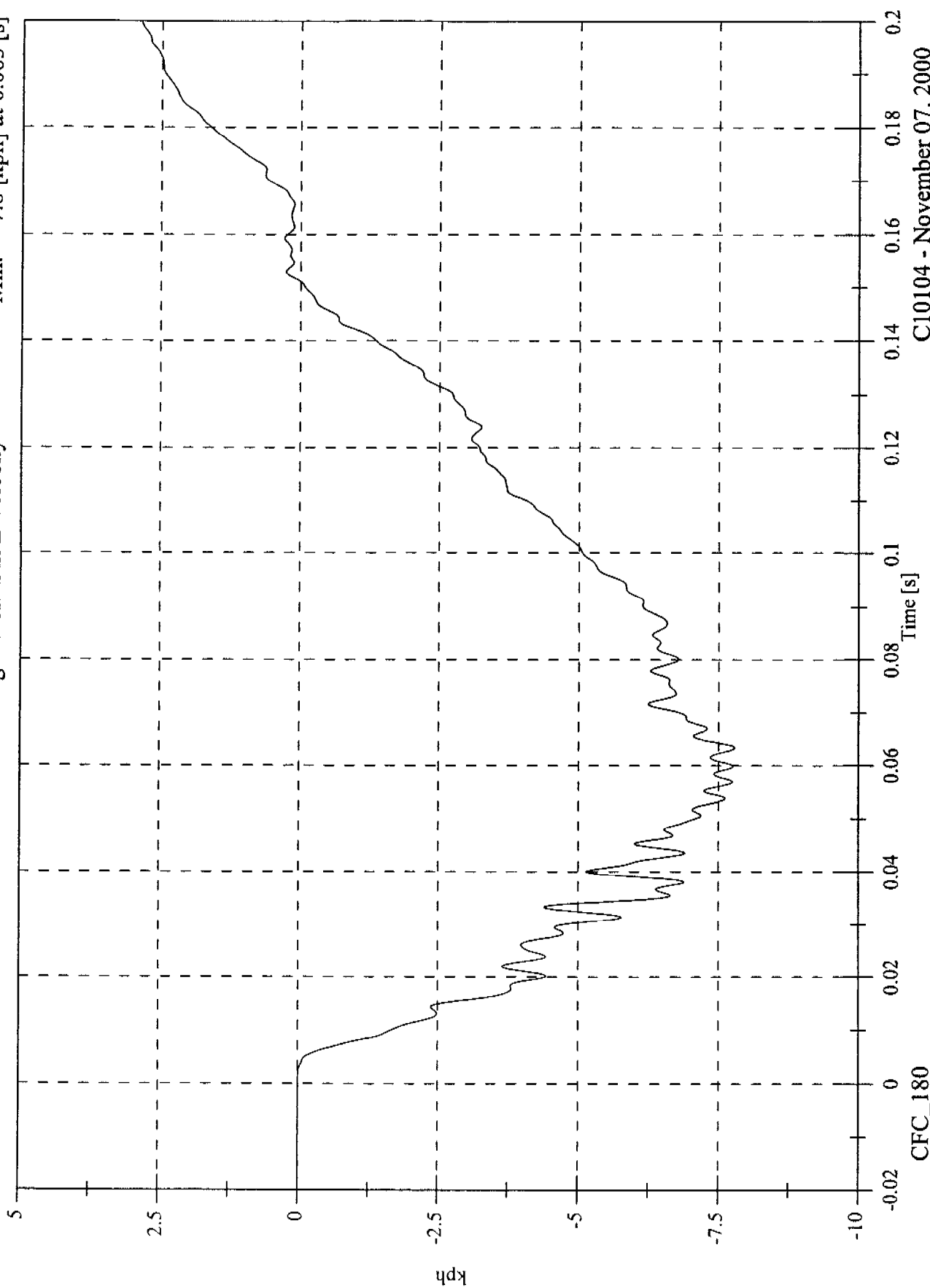
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill Z Velocity

Max: 2.9 [kph] at 0.200 [s]

Min: -7.8 [kph] at 0.063 [s]



CFC_180

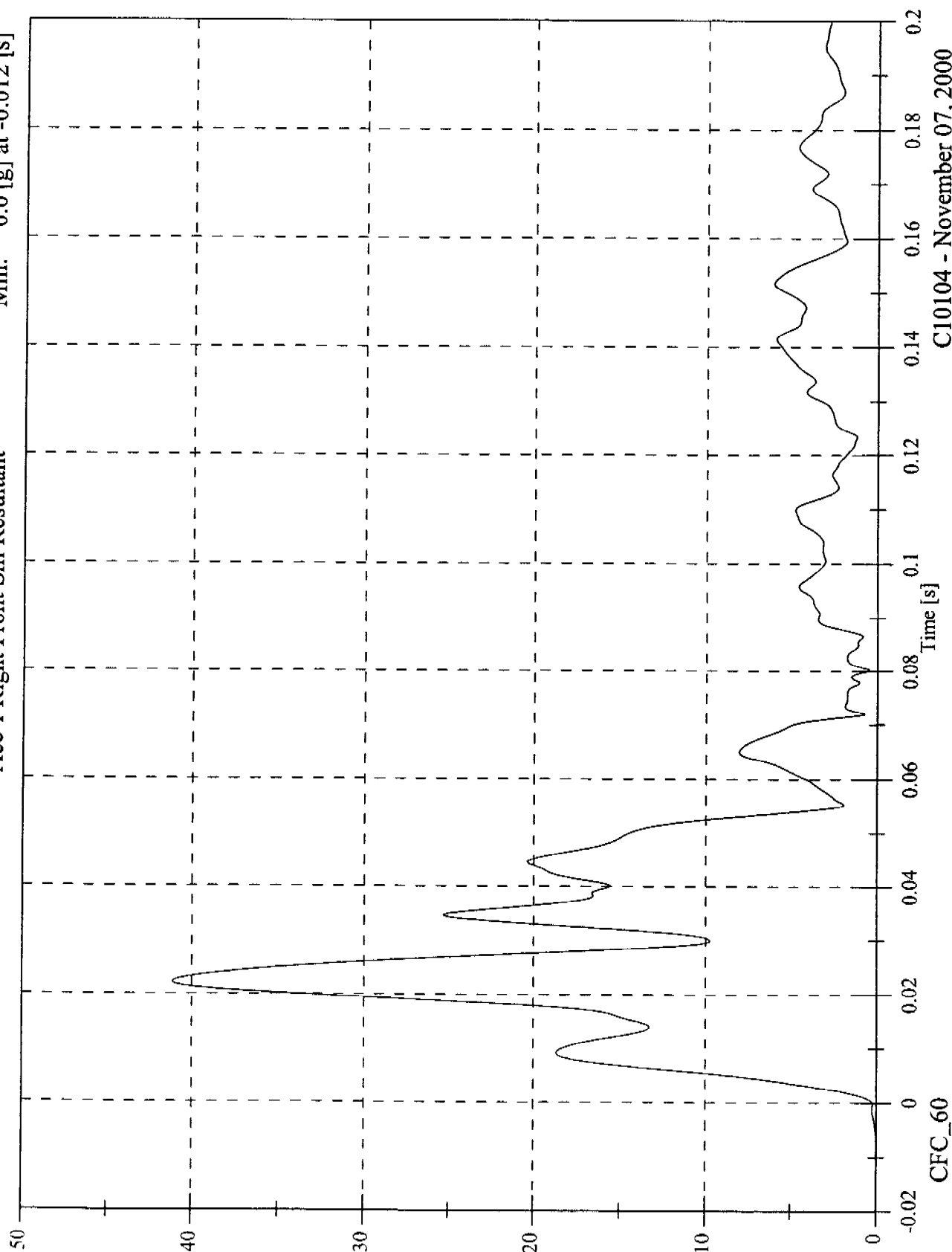
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 1 Right Front Sill Resultant

Max: 41.1 [g] at 0.022 [s]

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



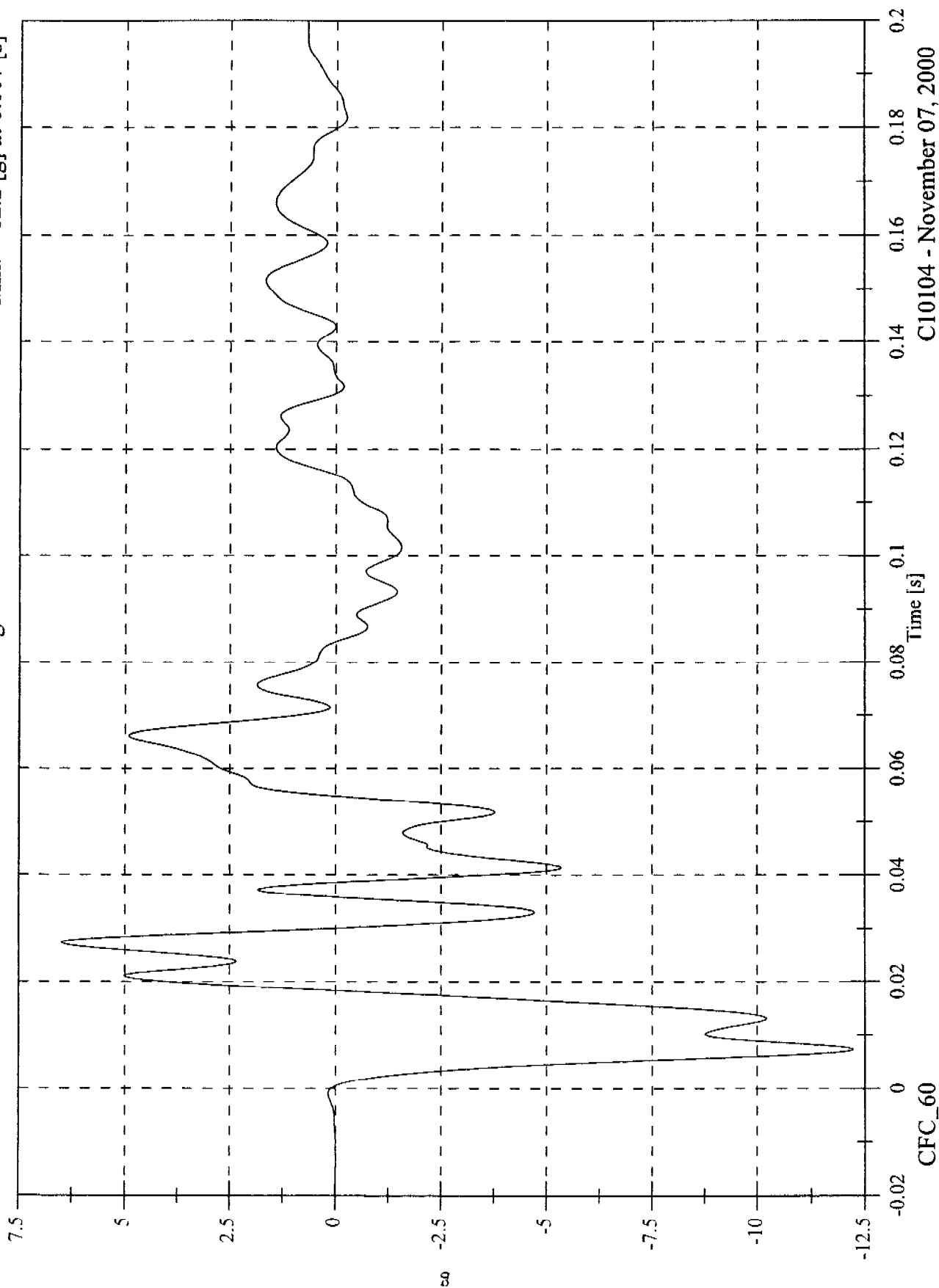
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill X

Max: 6.5 [g] at 0.027 [s]

Min: -12.2 [g] at 0.007 [s]



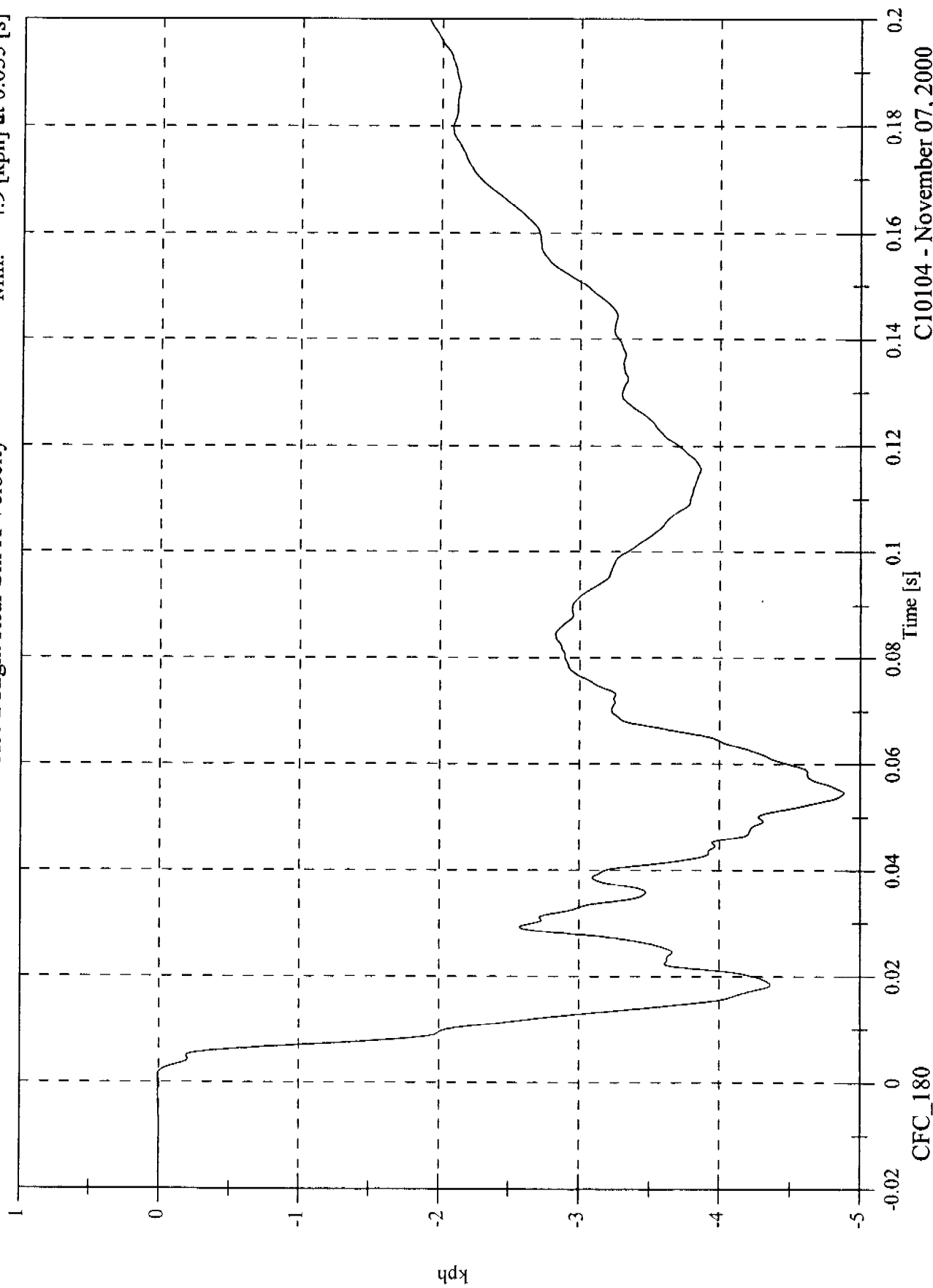
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill X Velocity

Max: 0.0 [kph] at 0.001 [s]

Min: -4.9 [kph] at 0.055 [s]



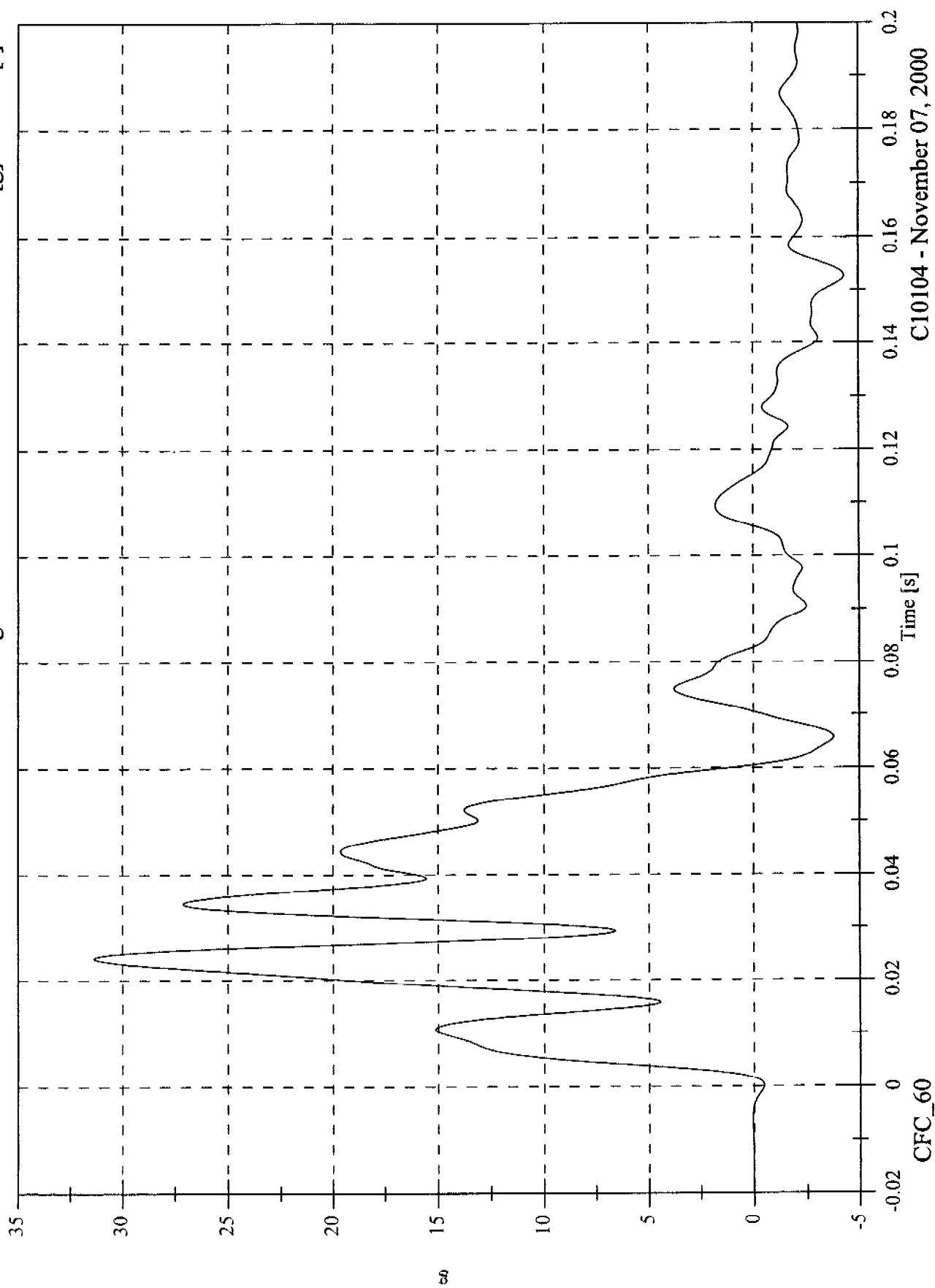
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill Y

Max: 31.4 [g] at 0.024 [s]

Min: -4.3 [g] at 0.153 [s]



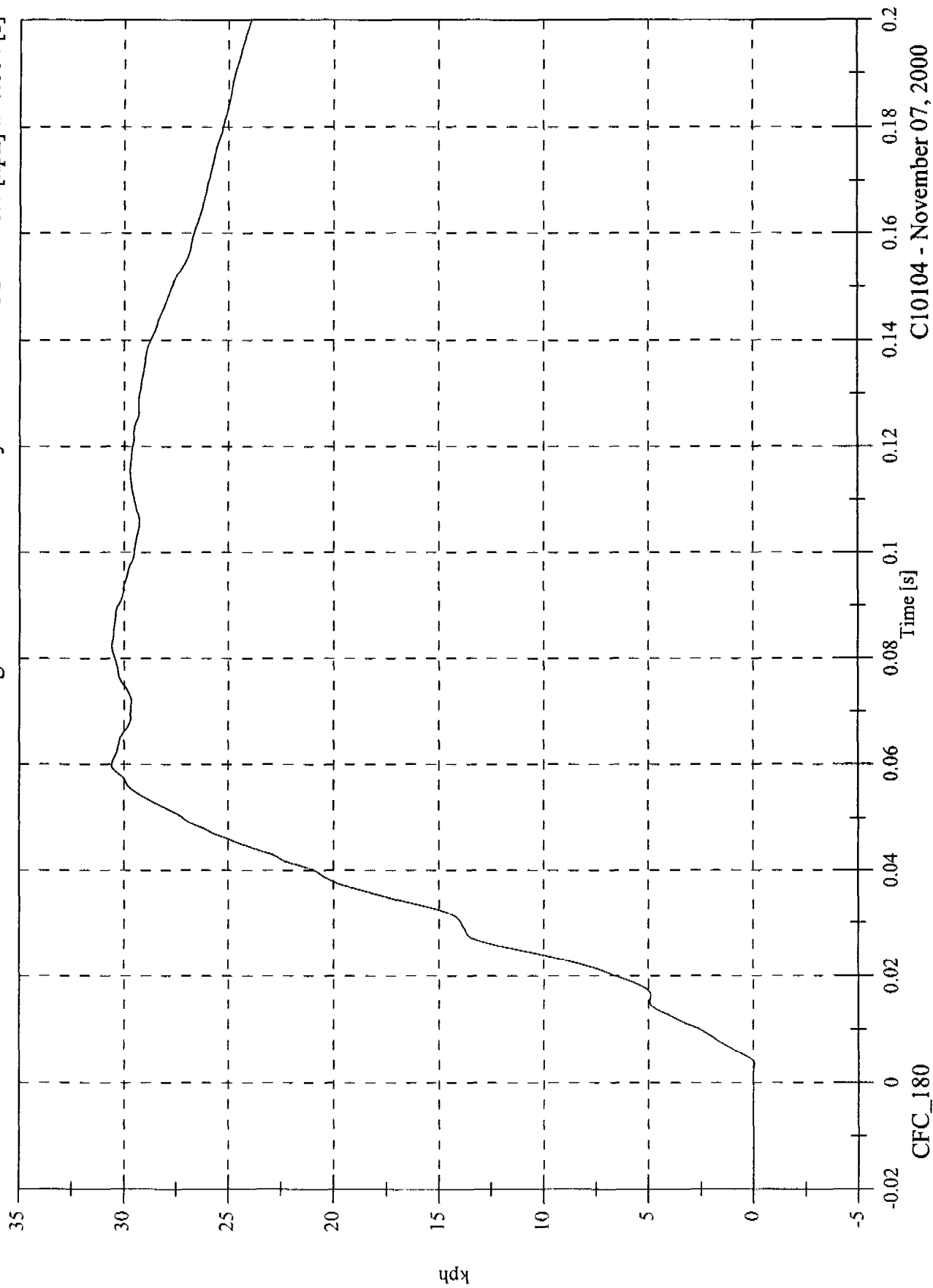
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill Y Velocity

Max: 30.6 [kph] at 0.060 [s]

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

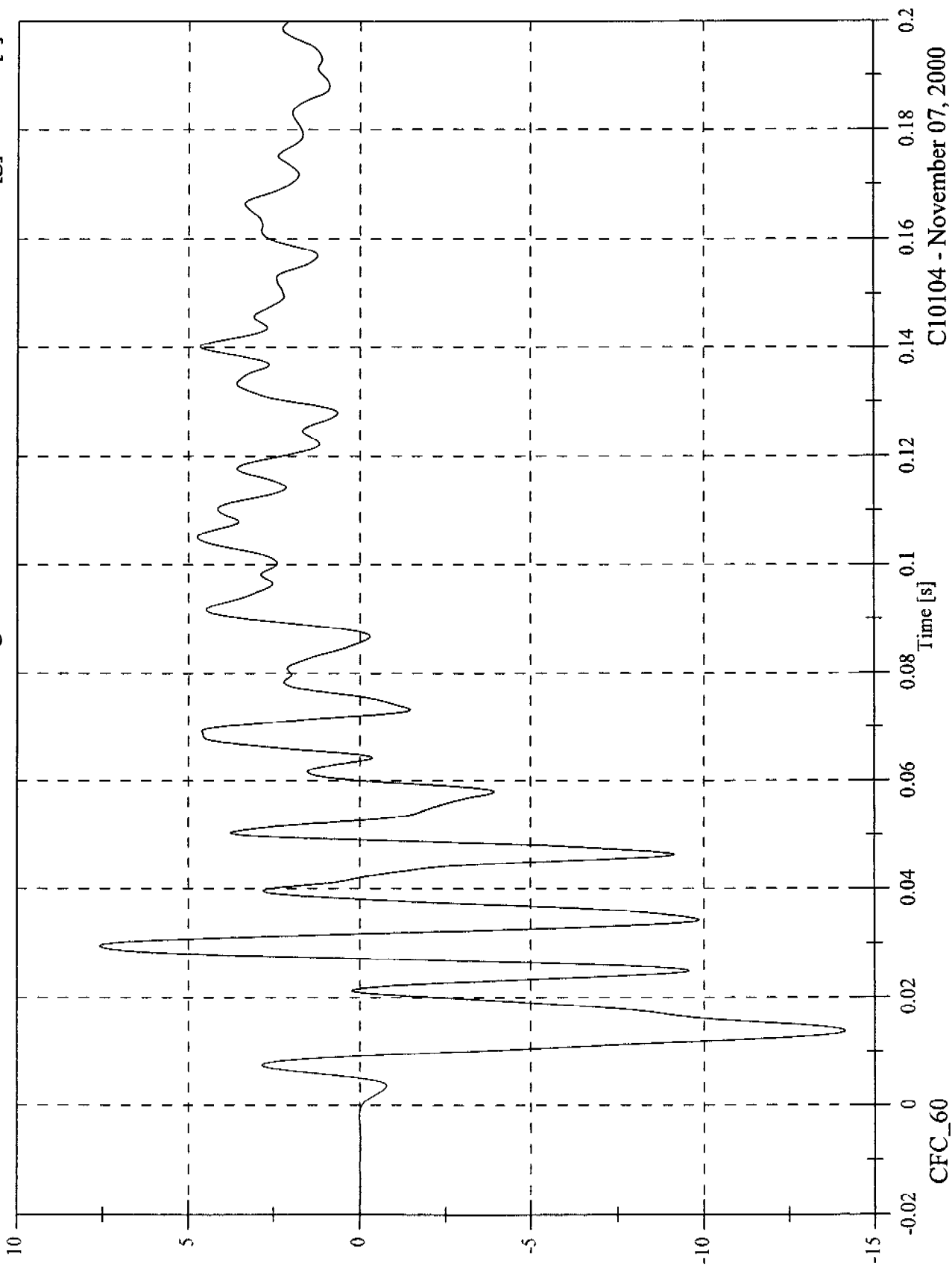


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill Z

Max: 7.6 [g] at 0.030 [s]
Min: -14.1 [g] at 0.014 [s]



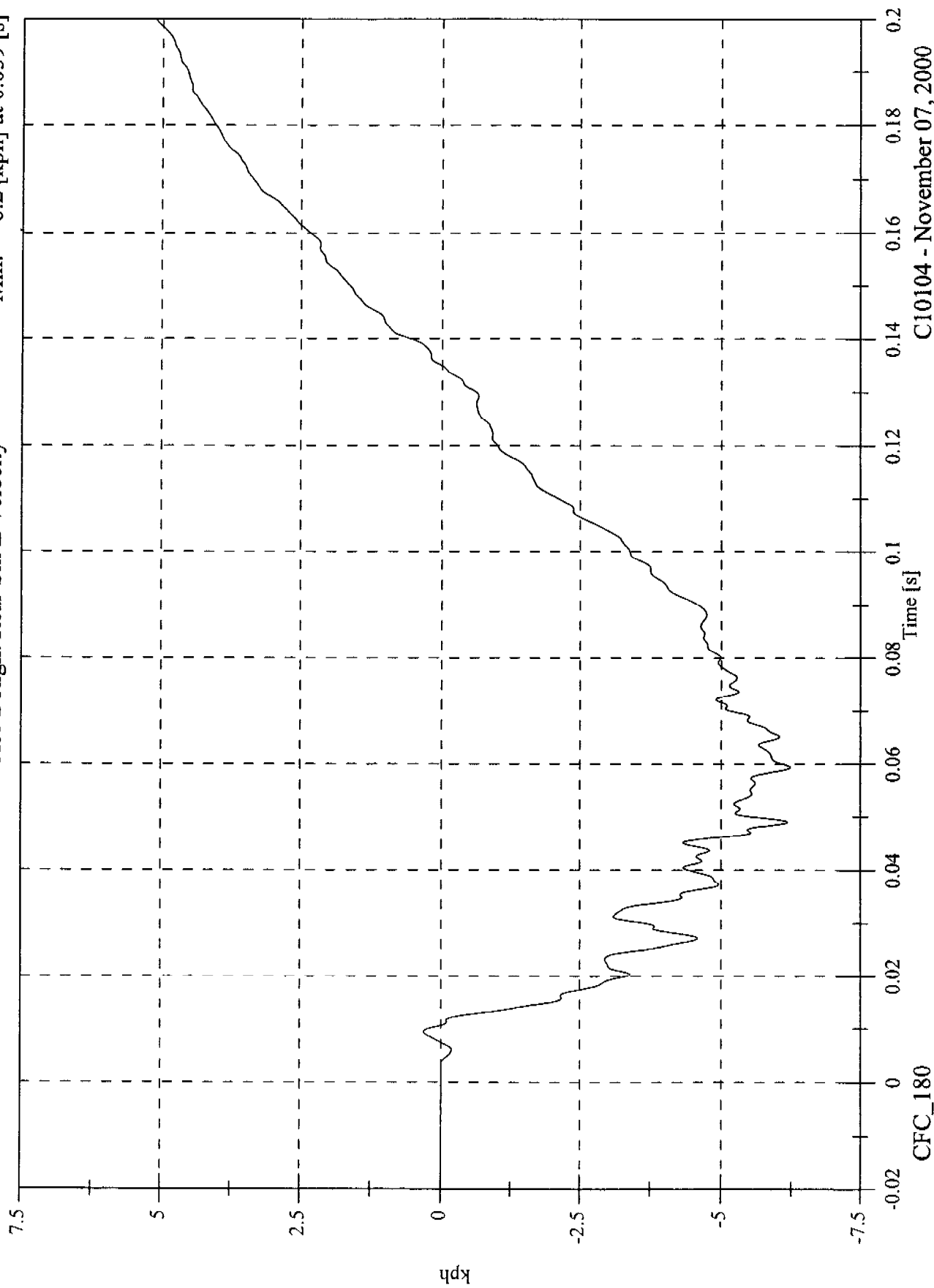
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill Z Velocity

Max: 5.1 [kph] at 0.200 [s]

Min: -6.2 [kph] at 0.059 [s]



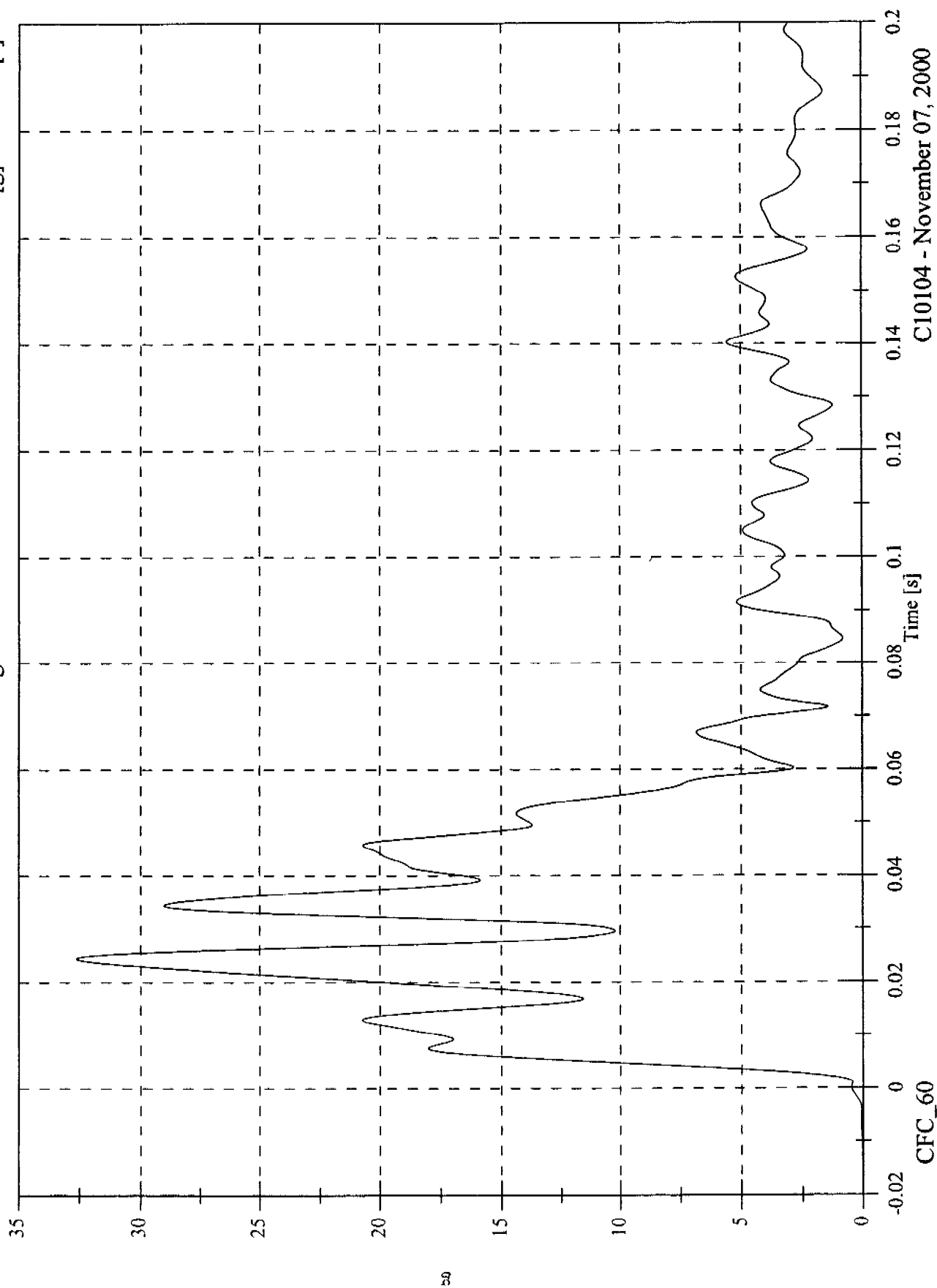
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 2 Right Rear Sill Resultant

Max: 32.6 [g] at 0.024 [s]

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



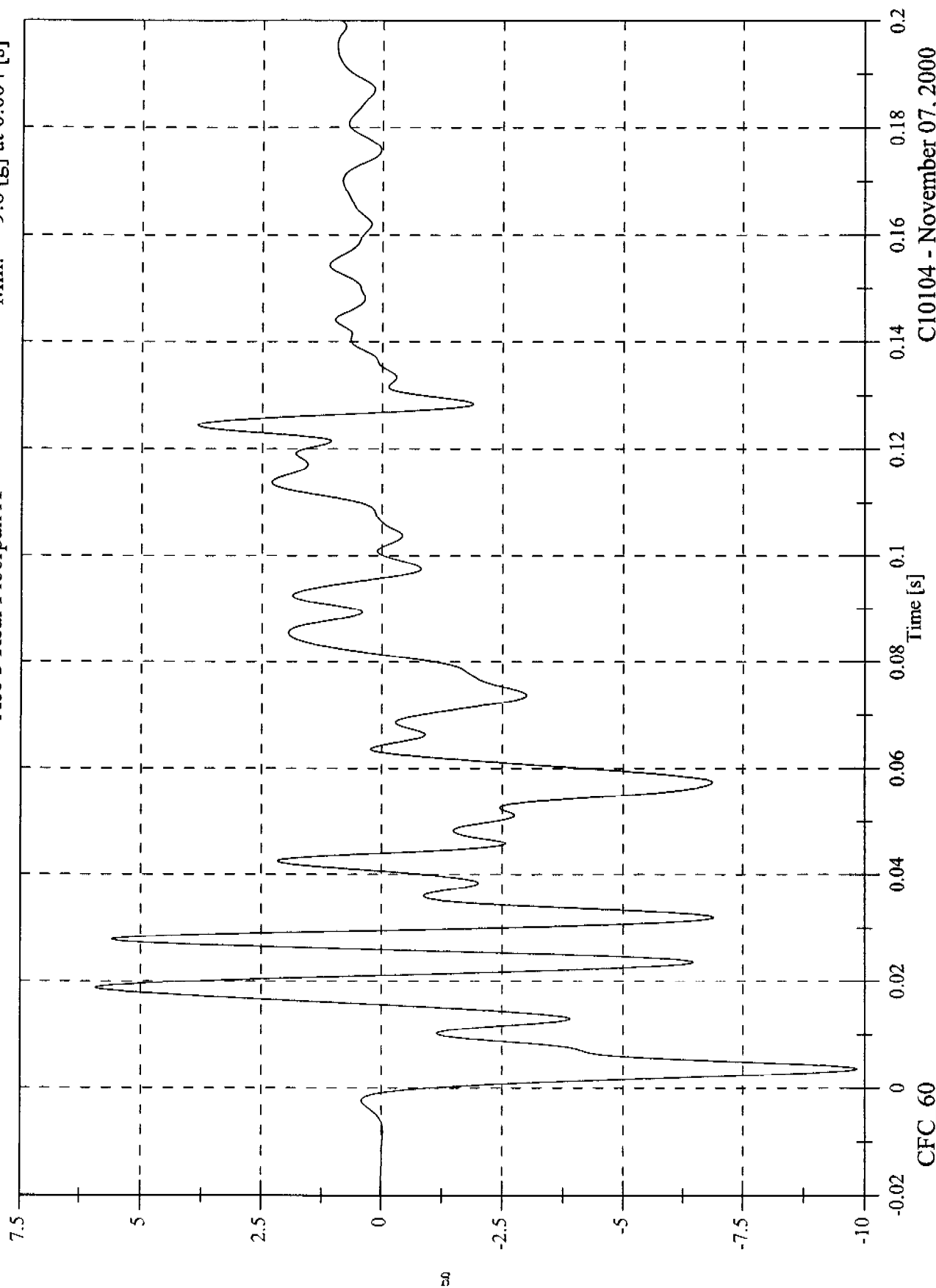
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 3 Rear Floorpan X

Max: 5.9 [g] at 0.019 [s]

Min: -9.8 [g] at 0.004 [s]



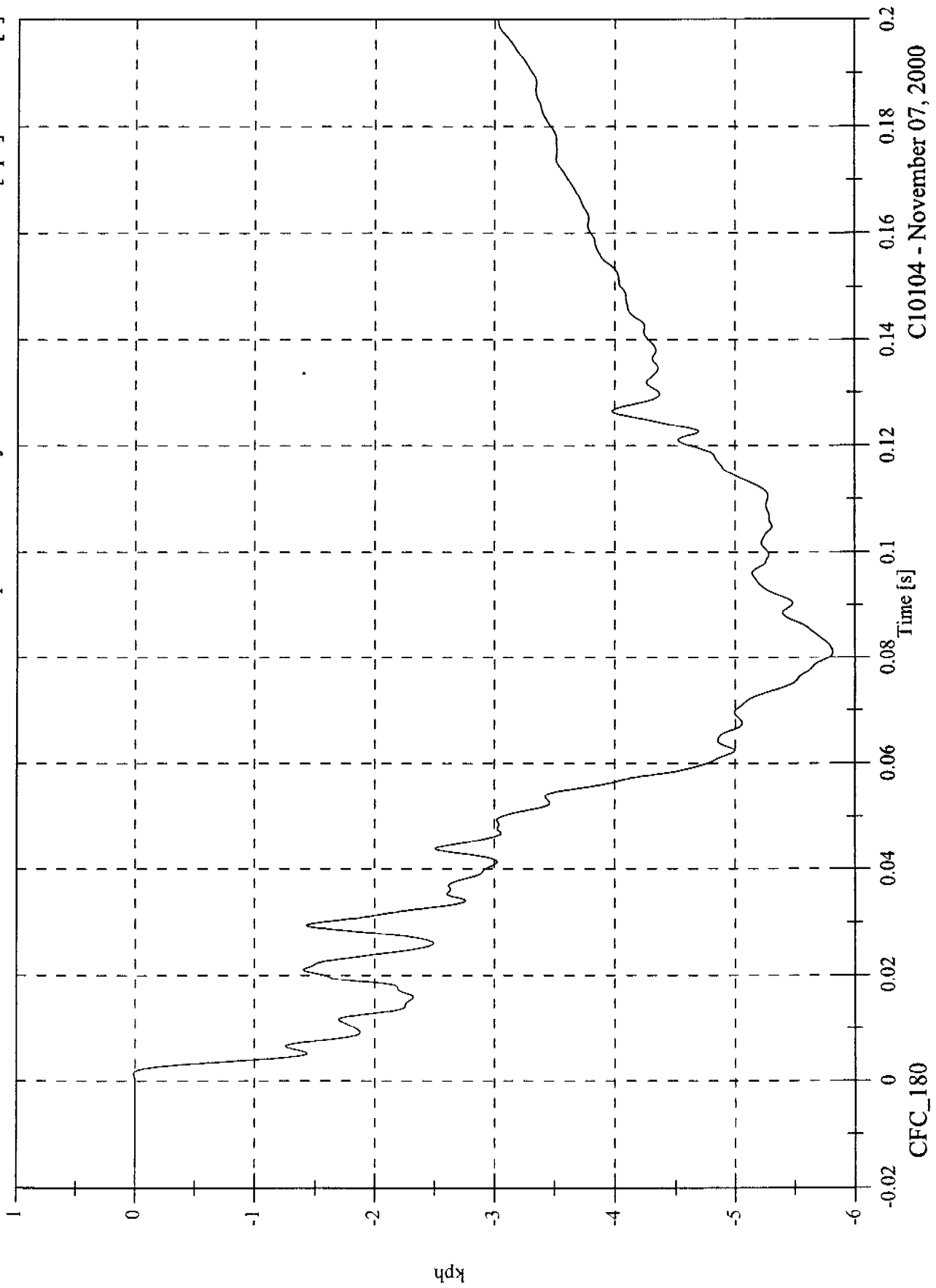
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 3 Rear Floorpan X Velocity

Max: 0.0 [kph] at 0.001 [s]

Min: -5.8 [kph] at 0.081 [s]

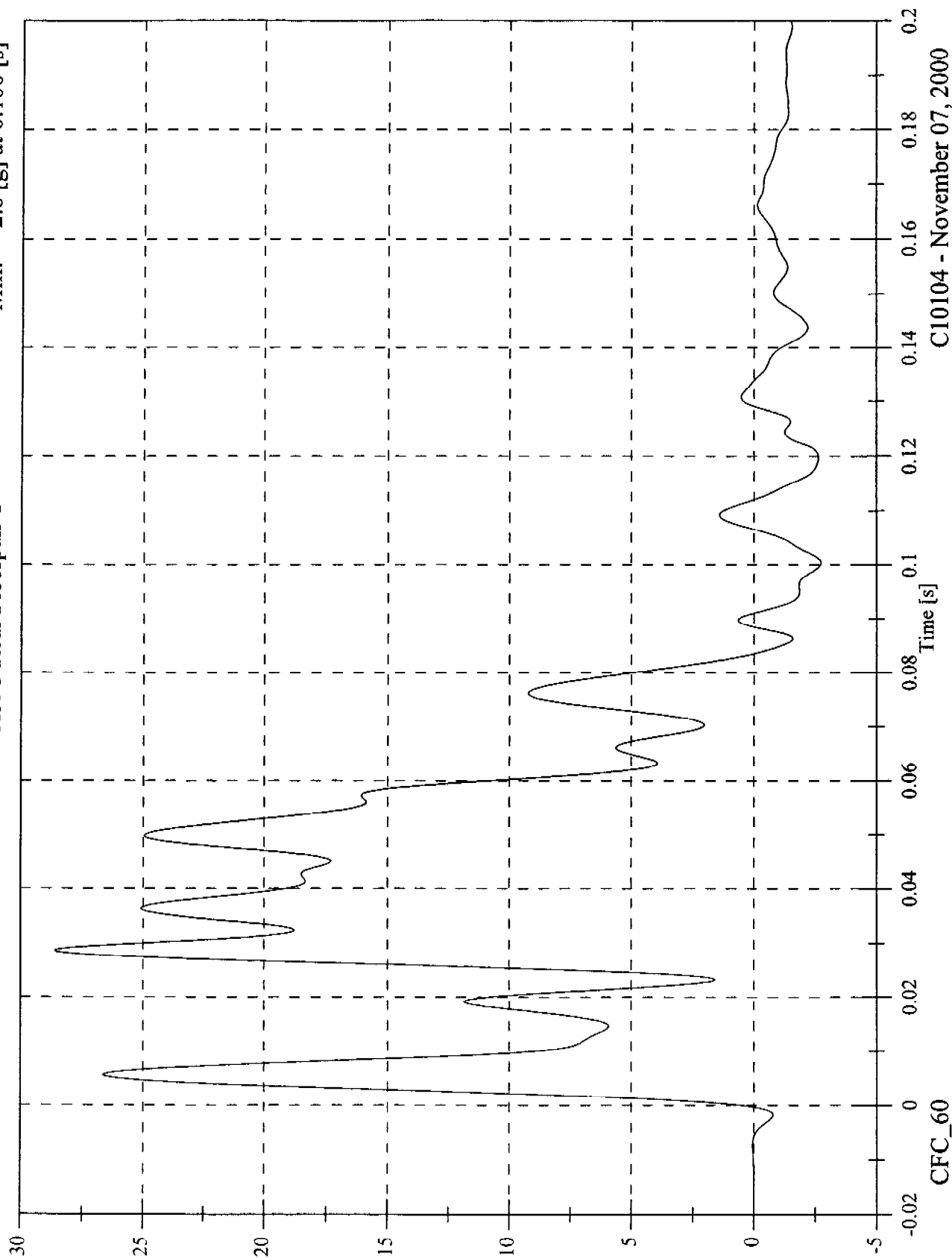


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 3 Rear Floorpan Y

Max: 28.6 [g] at 0.029 [s]
Min: -2.8 [g] at 0.100 [s]

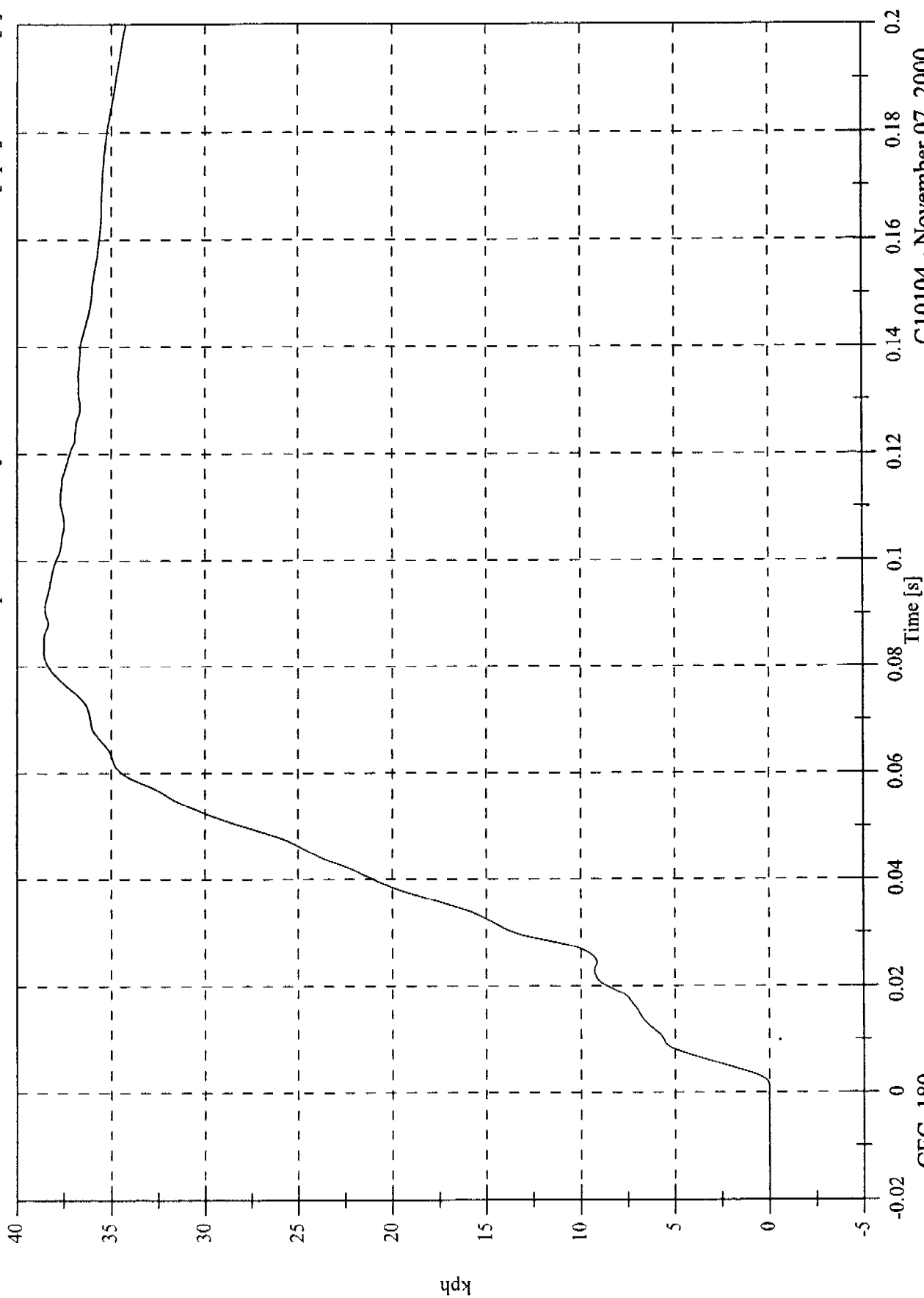


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 38.6 [kph] at 0.083 [s]
 Min: -0.0 [kph] at -0.020 [s]

Acc 3 Rear Floorpan Y Velocity



C10104 - November 07, 2000

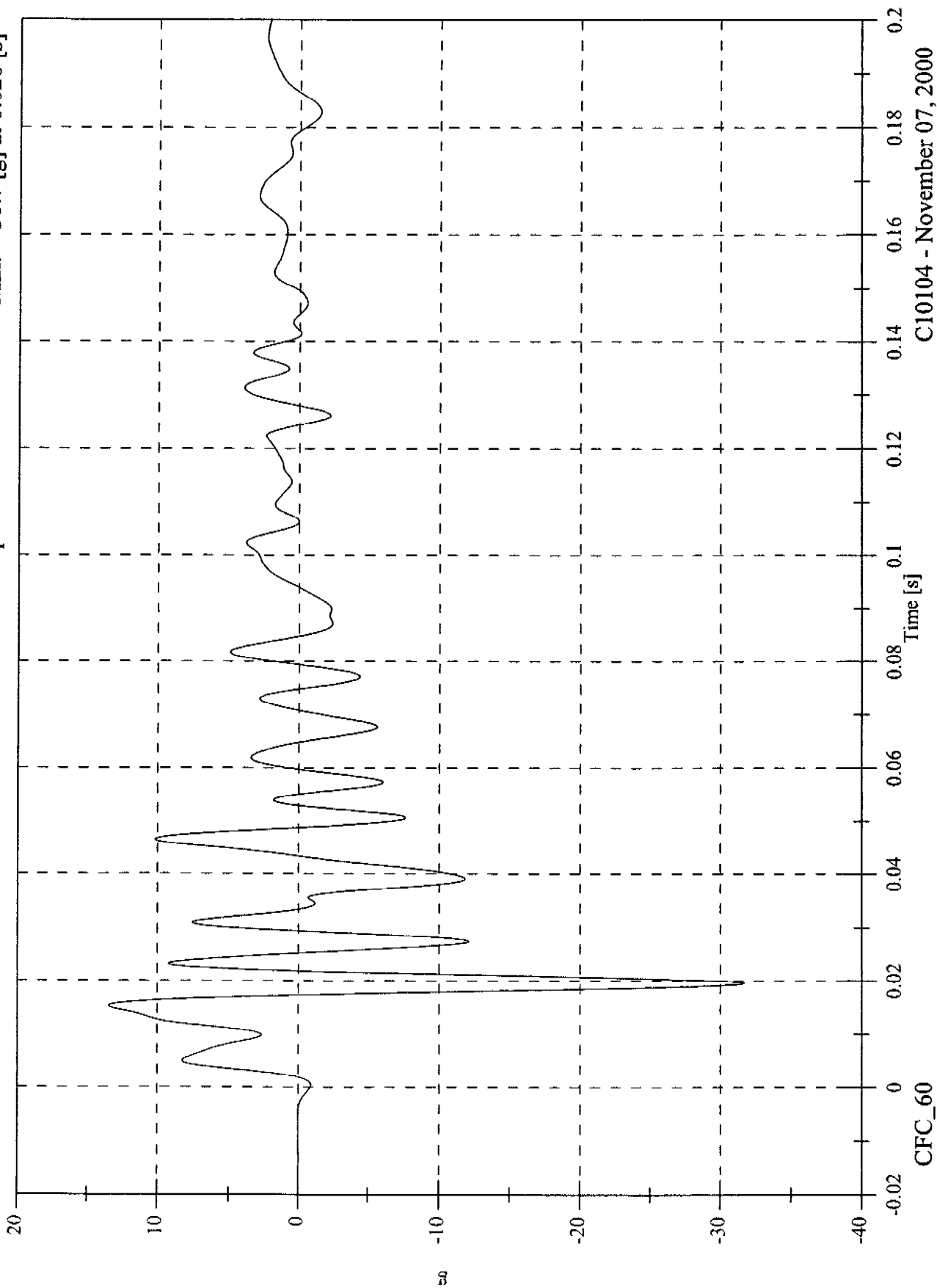
CFC_180

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 3 Rear Floorpan Z

Max: 13.5 [g] at 0.015 [s]

Min: -31.7 [g] at 0.020 [s]



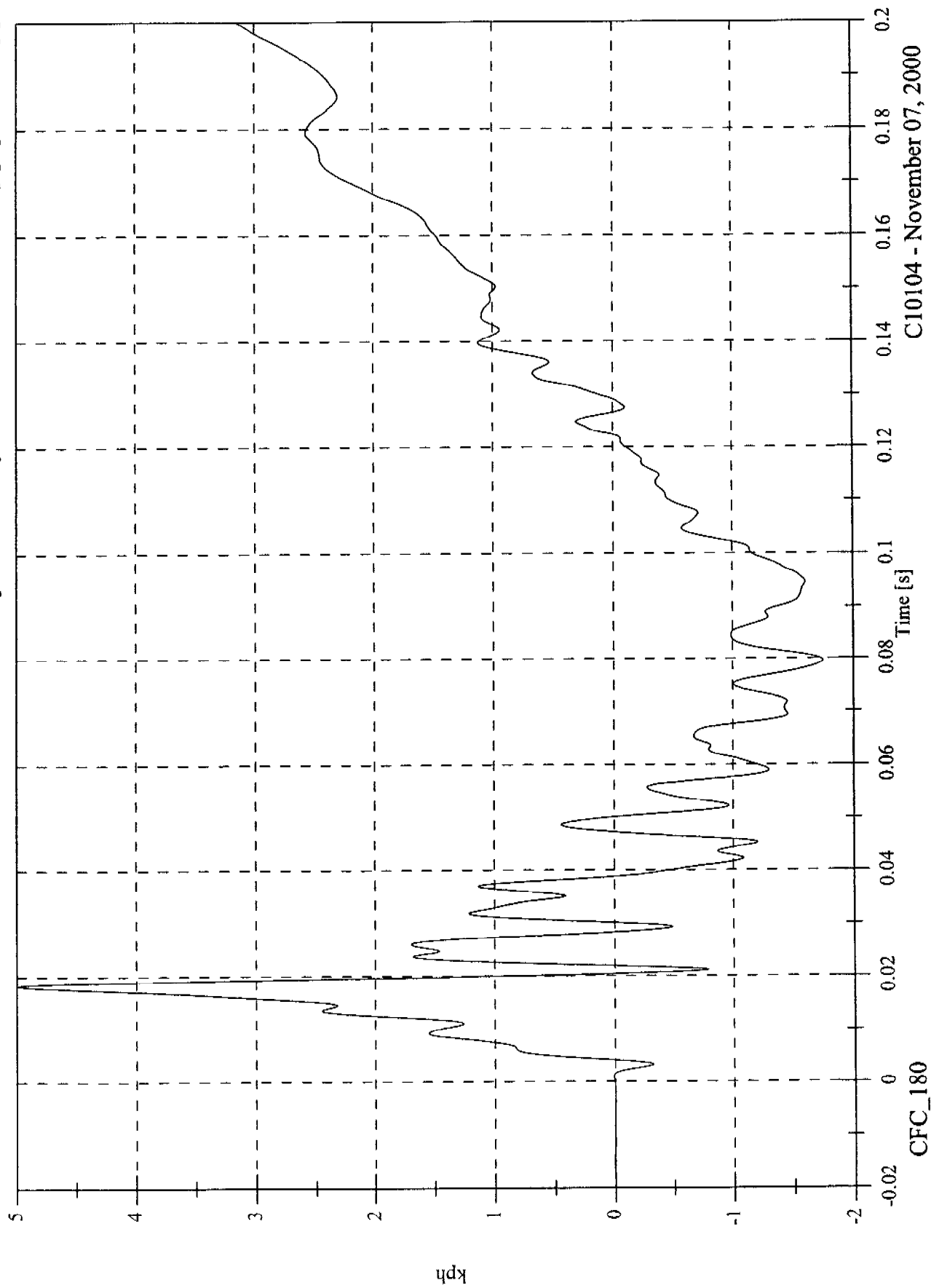
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 3 Rear Floorpan Z Velocity

Max: 5.0 [kph] at 0.018 [s]

Min: -1.8 [kph] at 0.080 [s]



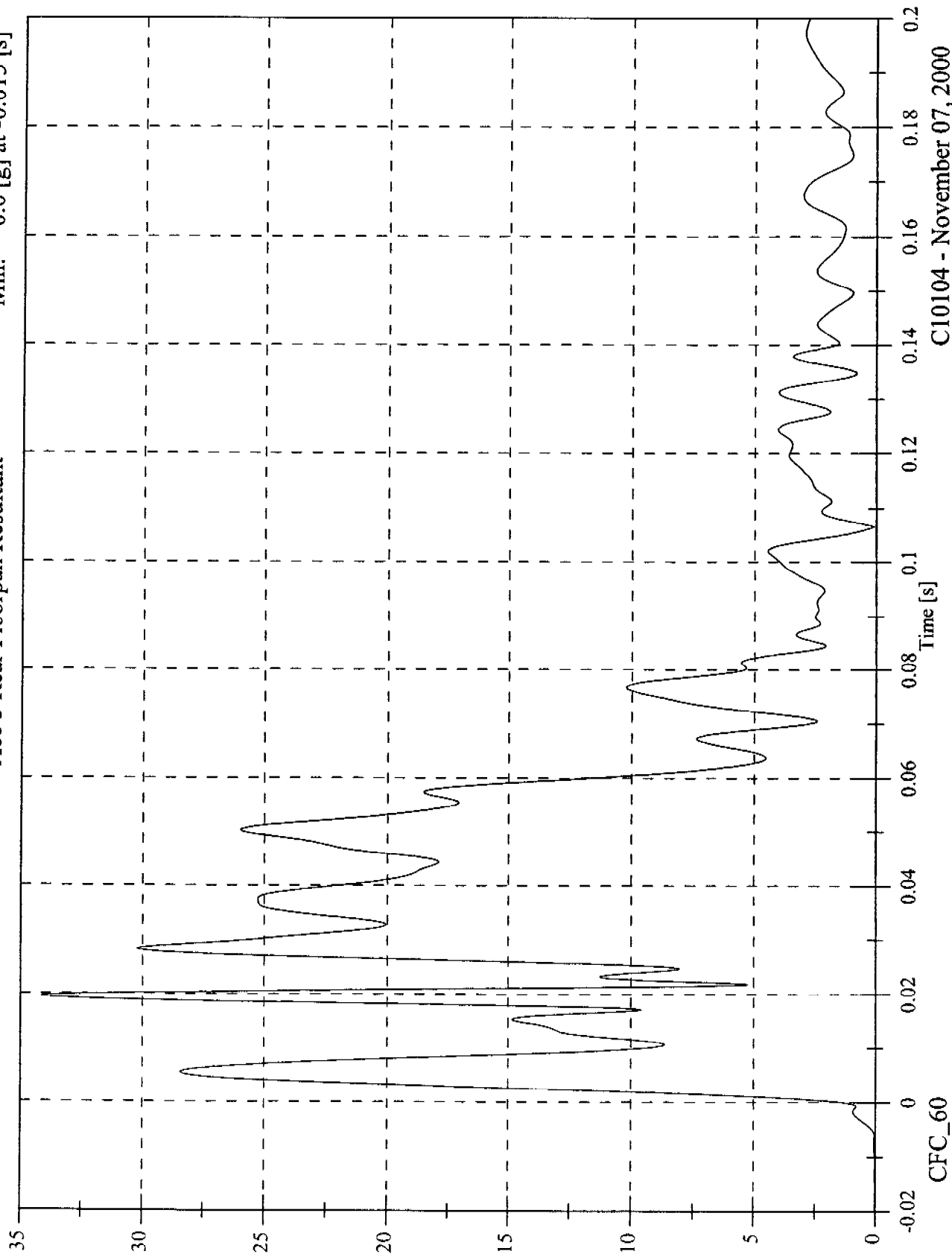
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 34.1 [g] at 0.020 [s]

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

Acc 3 Rear Floorpan Resultant



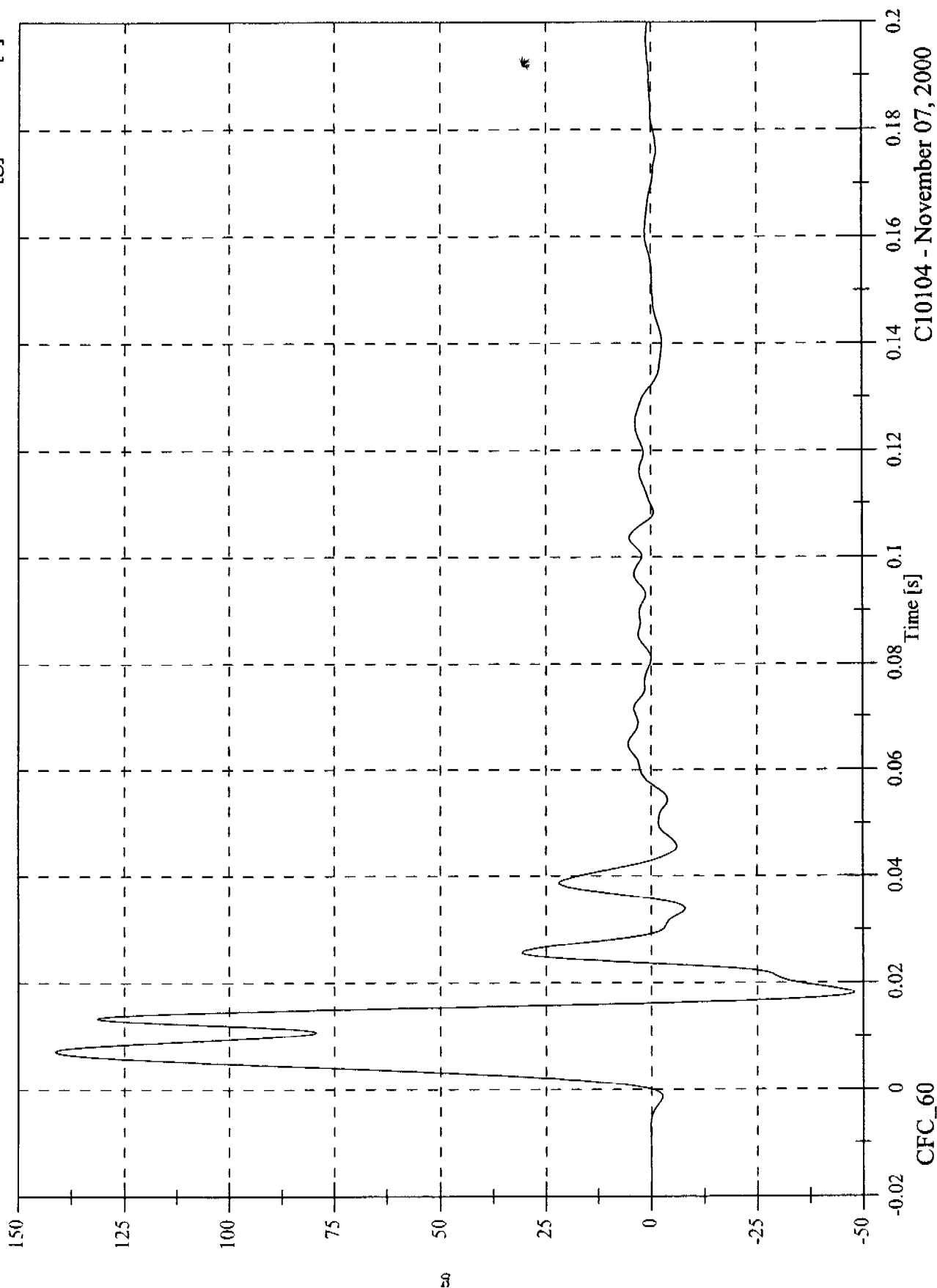
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 4 Left Rear Sill Y

Max: 141.2 [g] at 0.007 [s]

Min: -48.0 [g] at 0.018 [s]

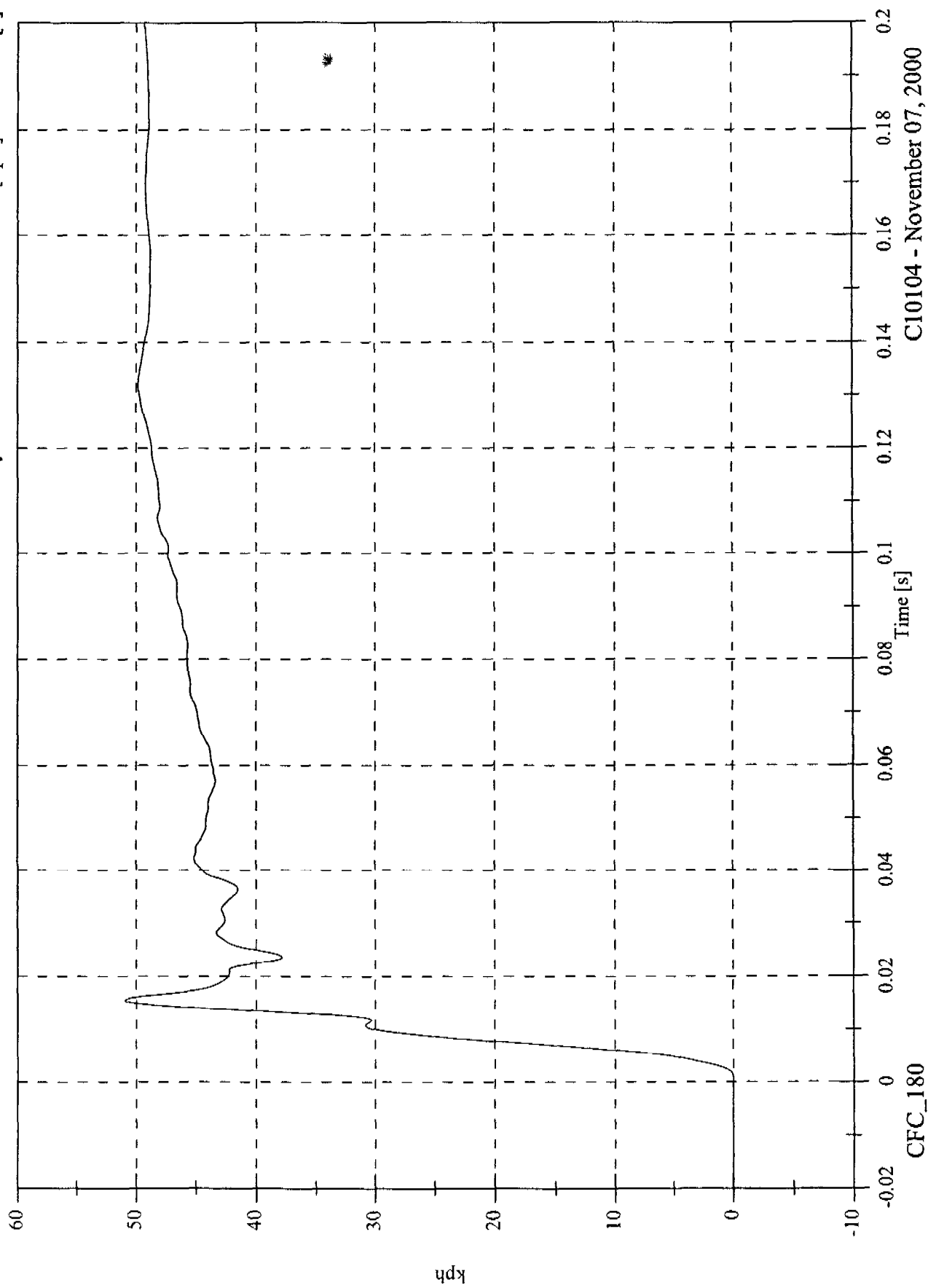


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 4 Left Rear Sill Y Velocity

Max: 51.0 [kph] at 0.016 [s]
Min: -0.0 [kph] at -0.020 [s]

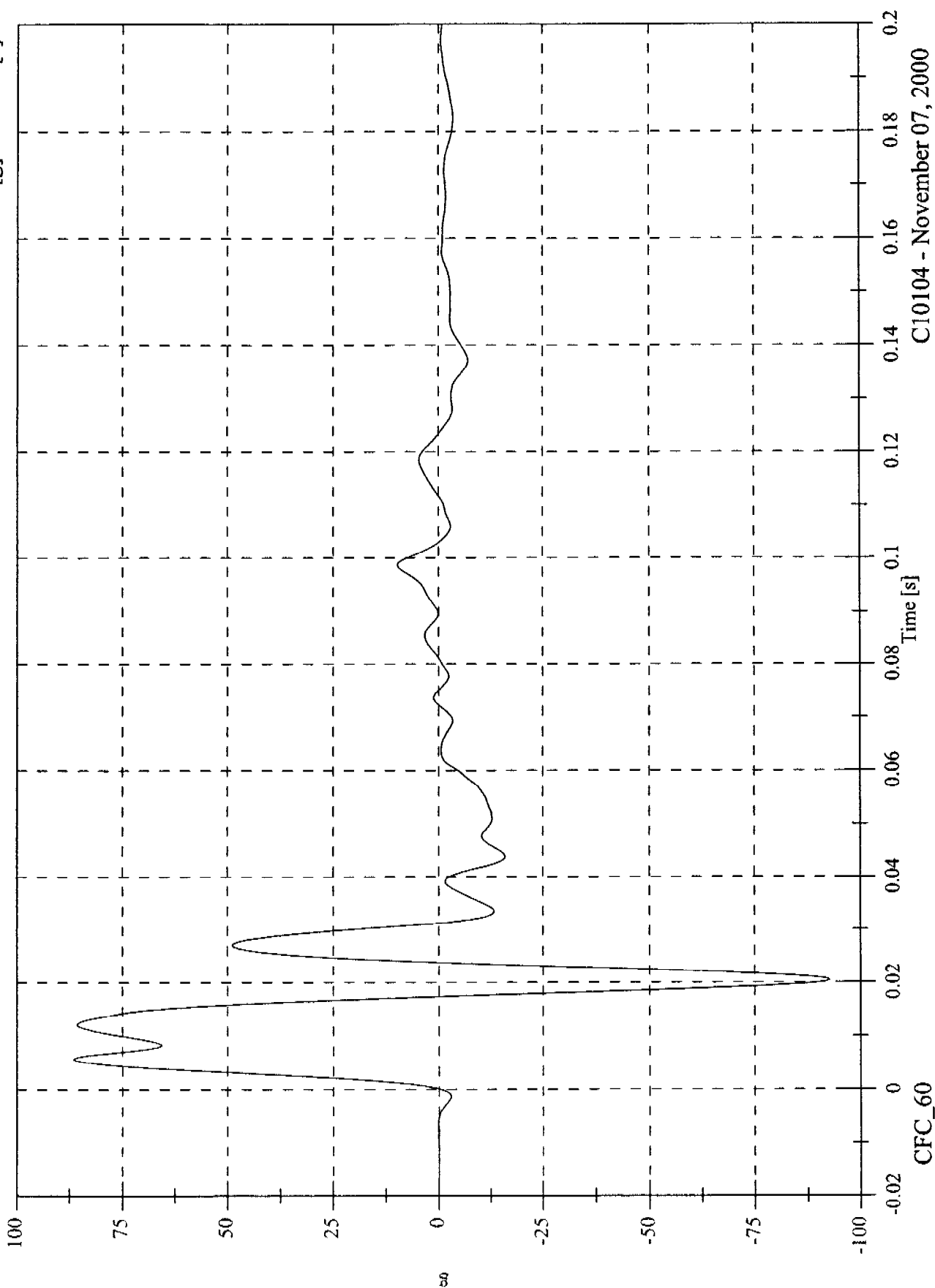


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 5 Left Front Sill Y

Max: 86.5 [g] at 0.006 [s]
Min: -92.6 [g] at 0.020 [s]



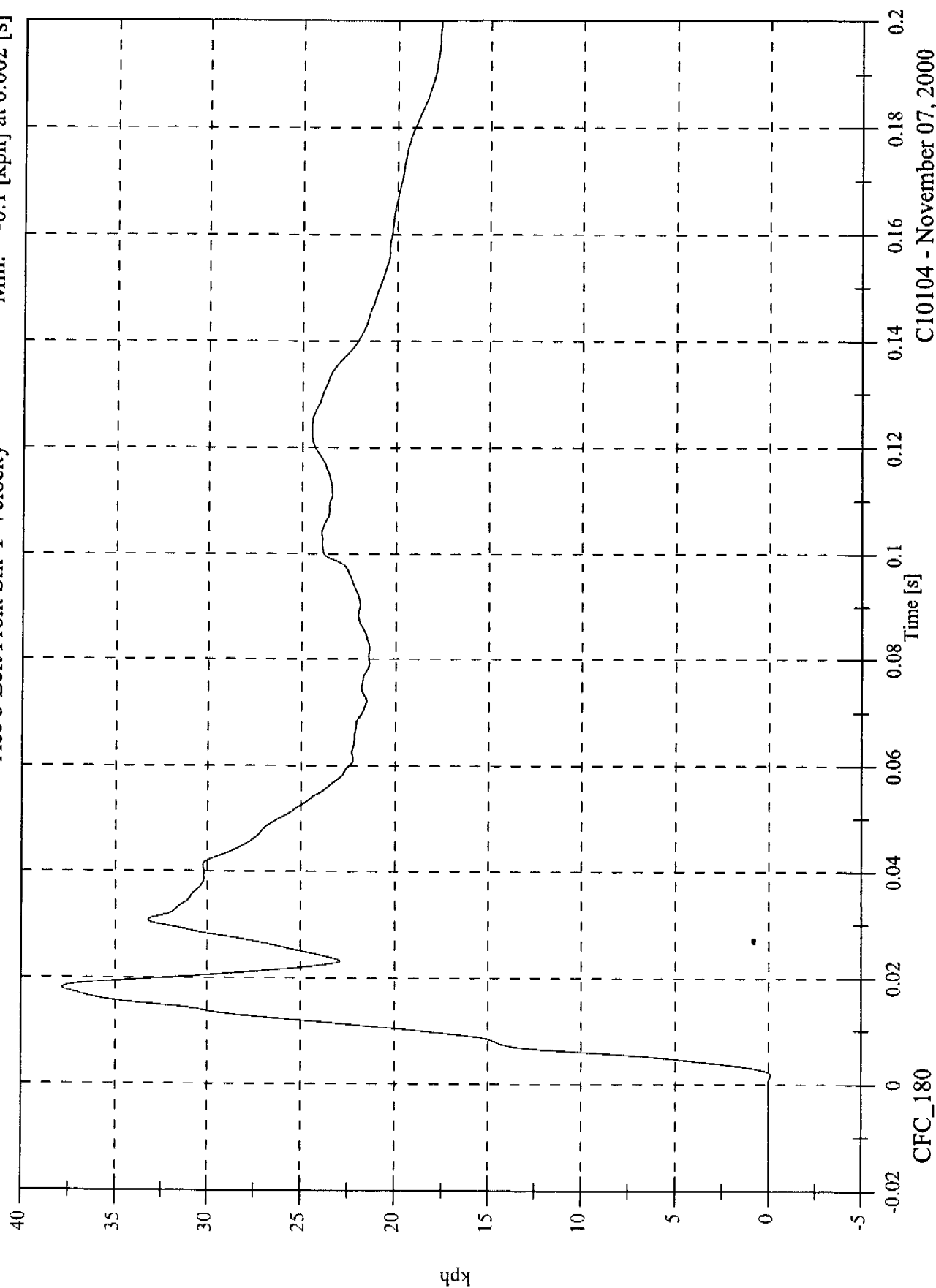
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 5 Left Front Sill Y Velocity

Max: 37.8 [kph] at 0.018 [s]

Min: -0.1 [kph] at 0.002 [s]

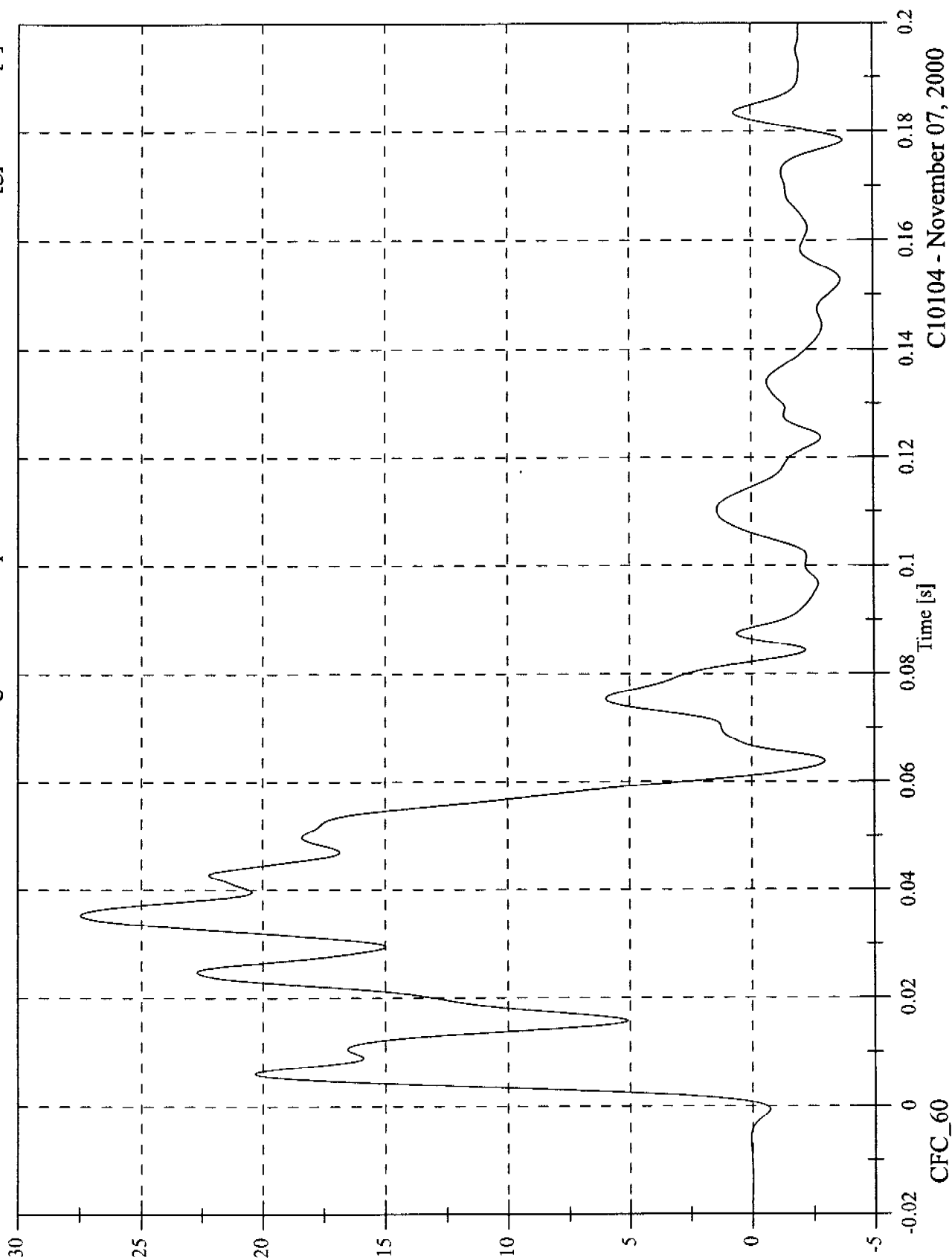


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 7 Right Rear Compartment Y

Max: 27.5 [g] at 0.035 [s]
Min: -3.8 [g] at 0.178 [s]



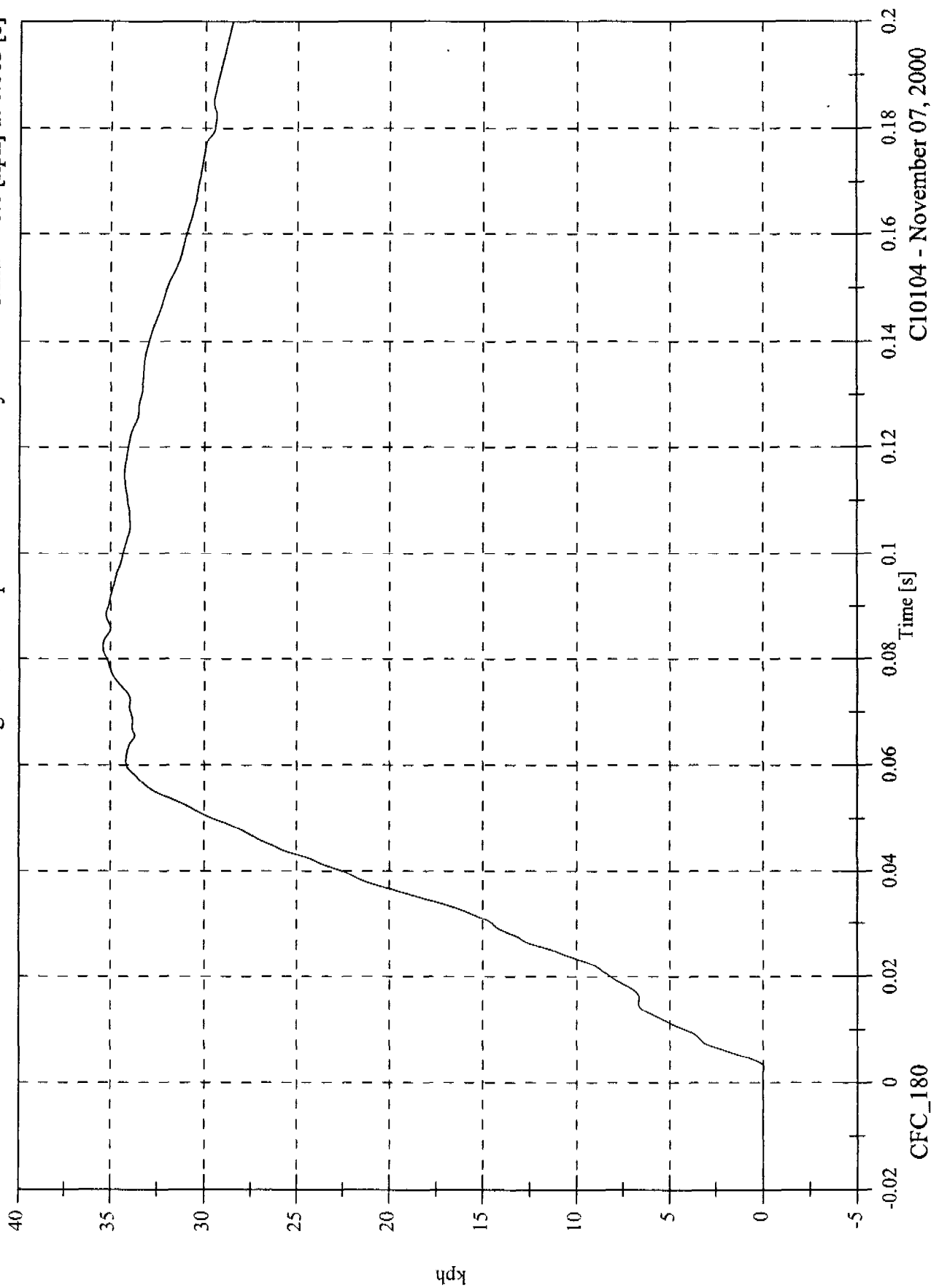
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 7 Right Rear Compartment Y Velocity

Max: 35.4 [kph] at 0.082 [s]

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



CFC_180

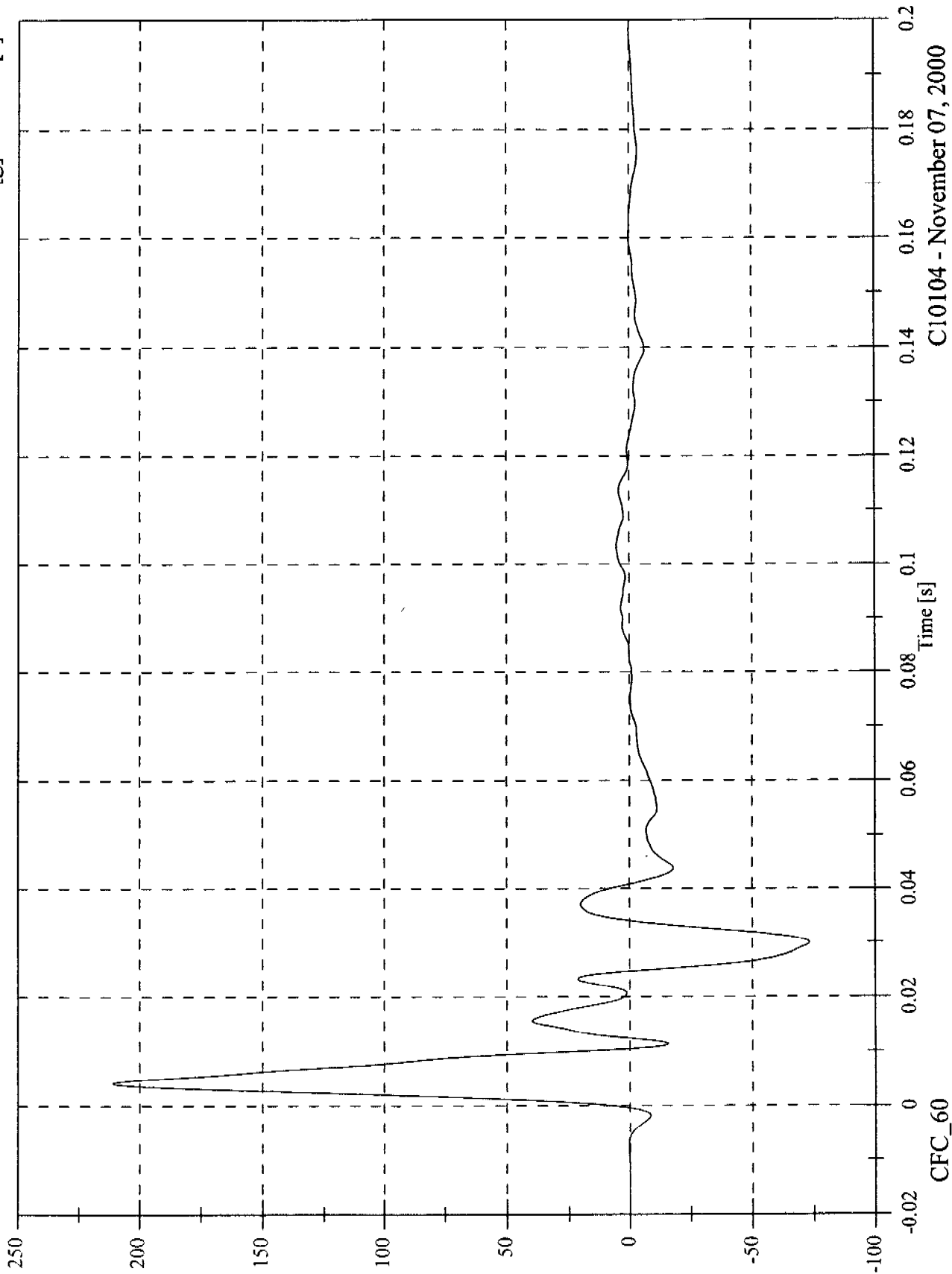
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 12 Left Lower B Post Y

Max: 211.1 [g] at 0.004 [s]

Min: -73.2 [g] at 0.030 [s]



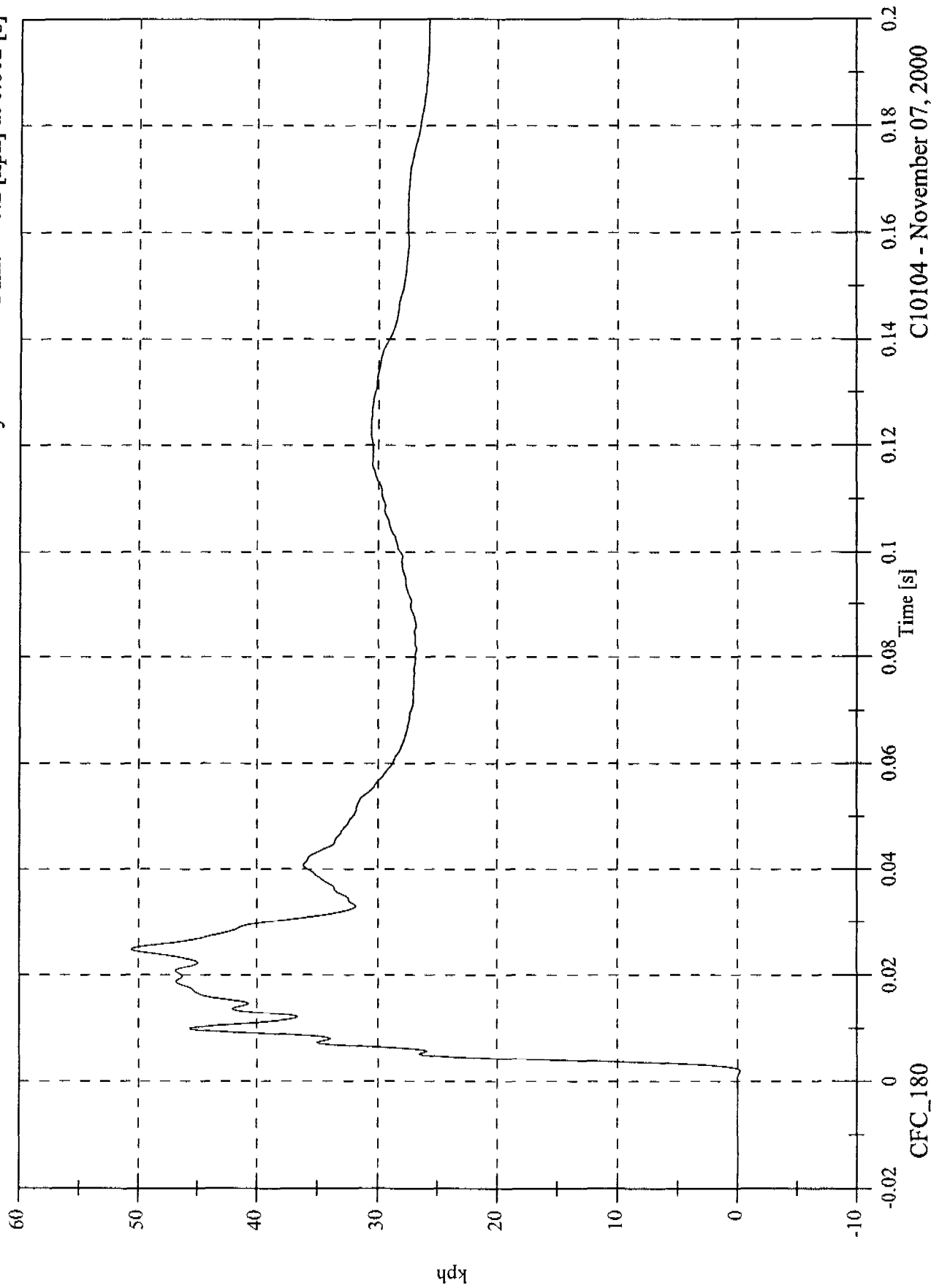
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 12 Left Lower B Post Y Velocity

Max: 50.6 [kph] at 0.025 [s]

Min: -0.2 [kph] at 0.002 [s]

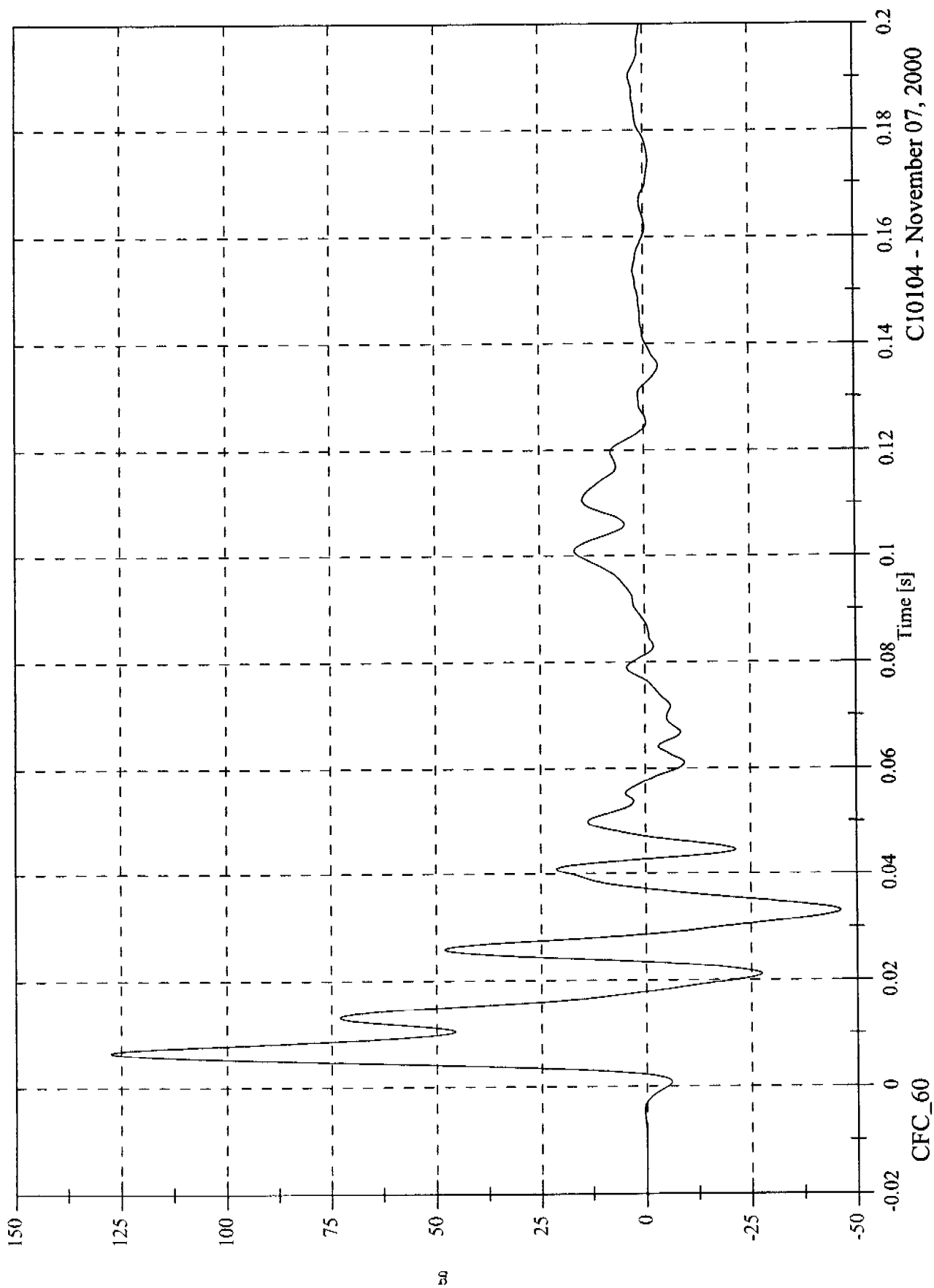


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 127.5 [g] at 0.007 [s]
 Min: -46.2 [g] at 0.033 [s]

Acc 13 Left Mid B Post Y

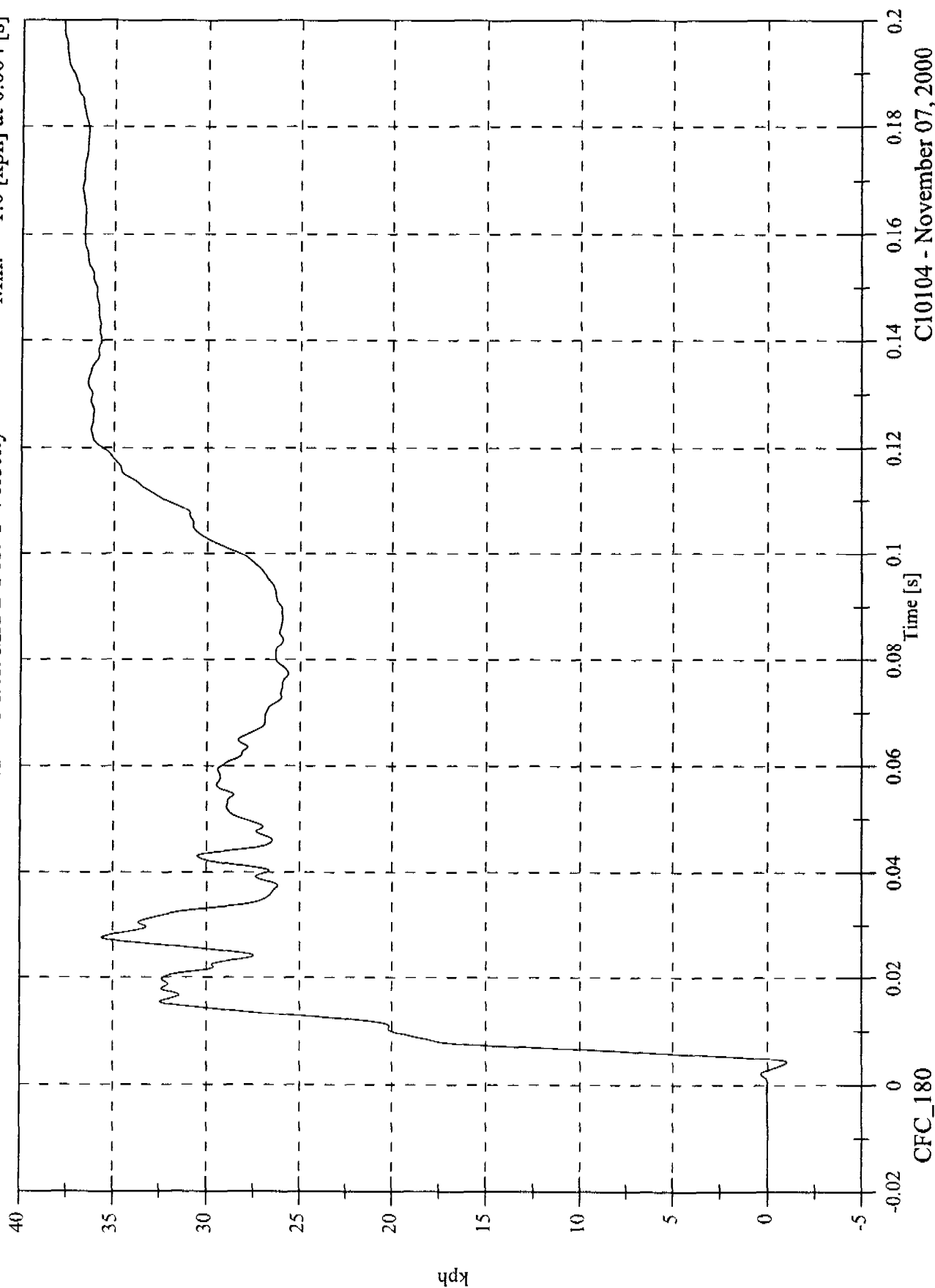


CI0104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 13 Left Mid B Post Y Velocity

Max: 37.8 [kph] at 0.200 [s]
Min: -1.0 [kph] at 0.004 [s]

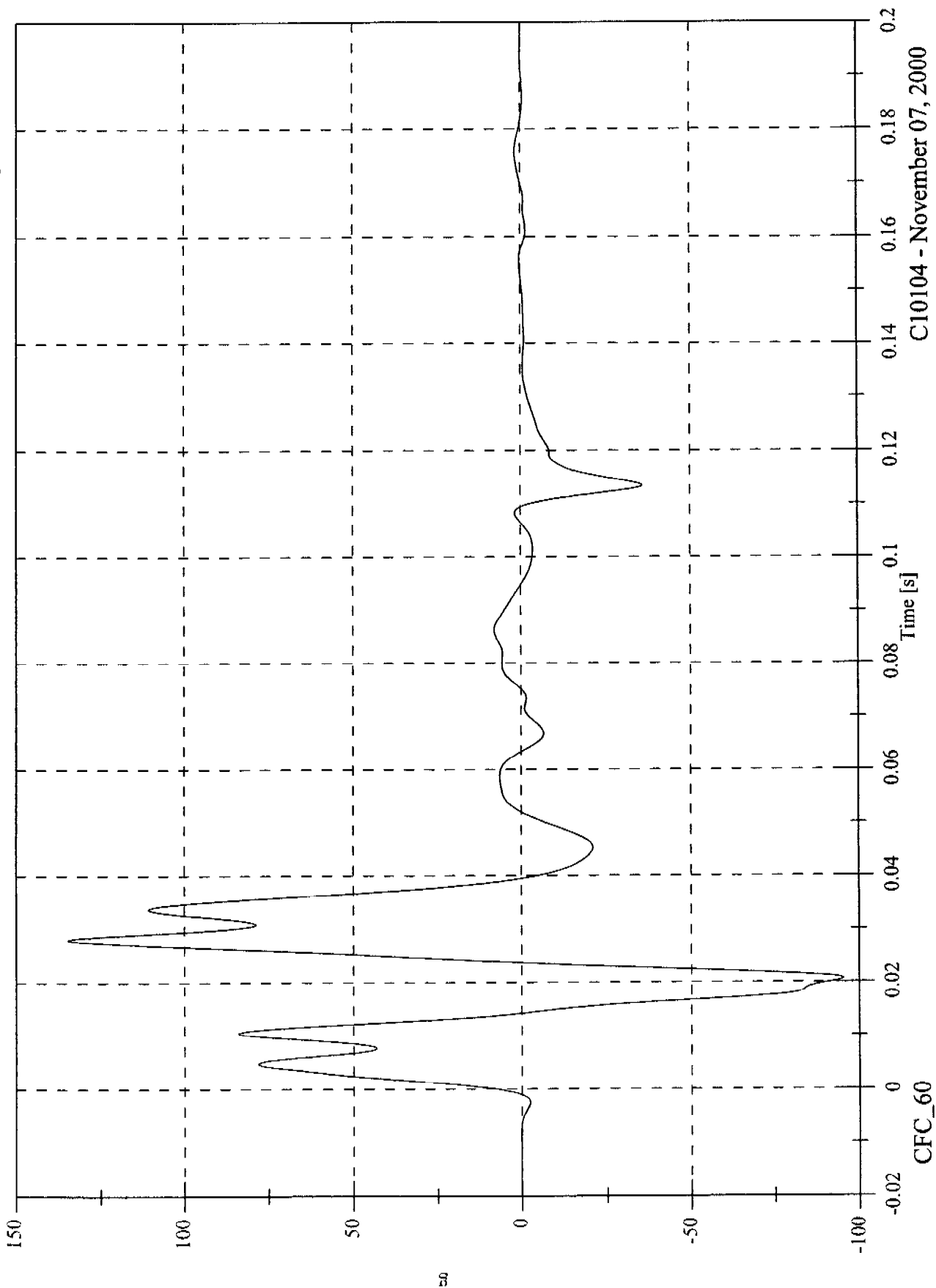


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 14 Left Lower A Post Y

Max: 134.5 [g] at 0.028 [s]
Min: -95.4 [g] at 0.021 [s]

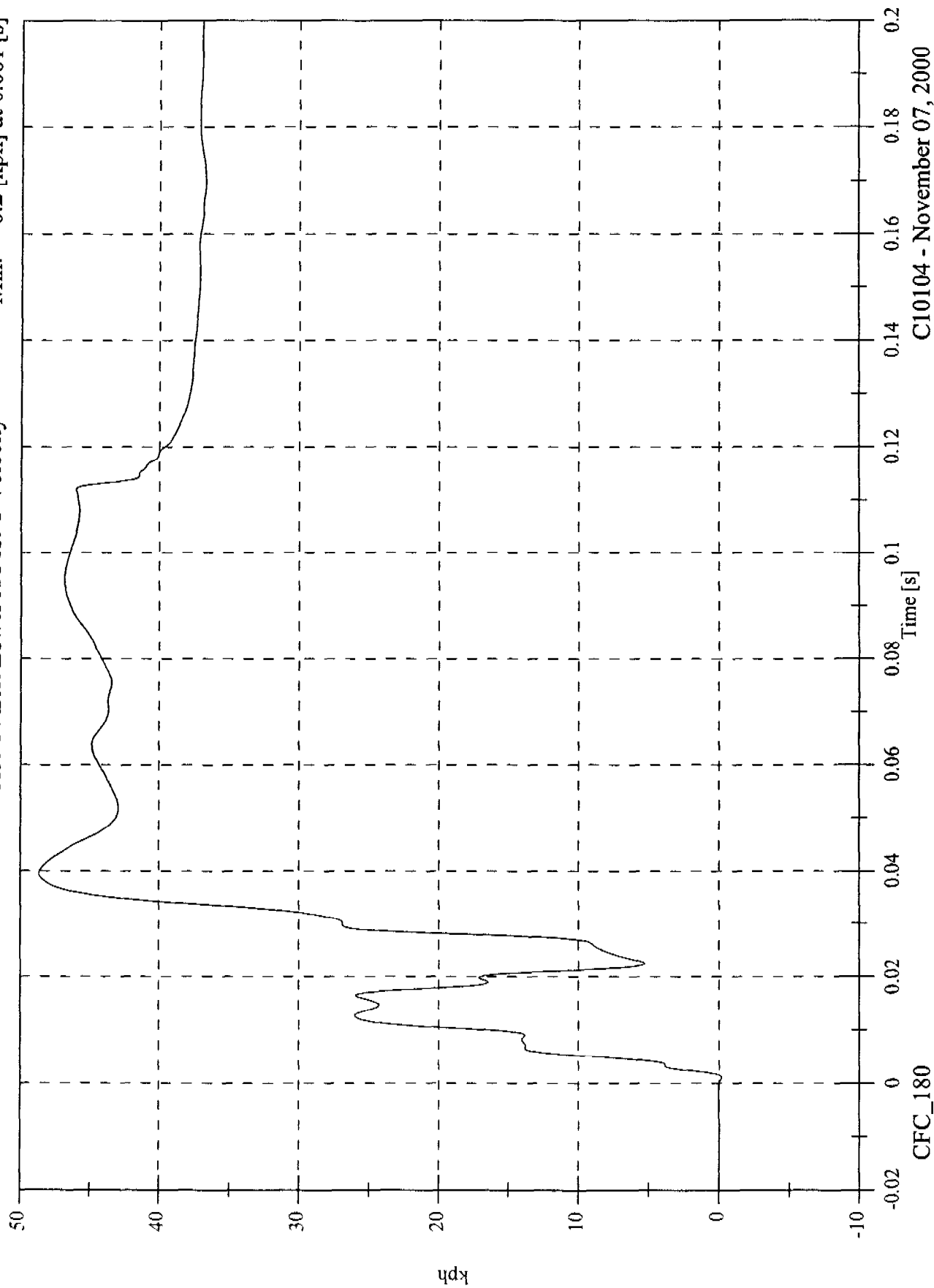


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 14 Left Lower A Post Y Velocity

Max: 48.7 [kph] at 0.039 [s]
Min: -0.2 [kph] at 0.001 [s]

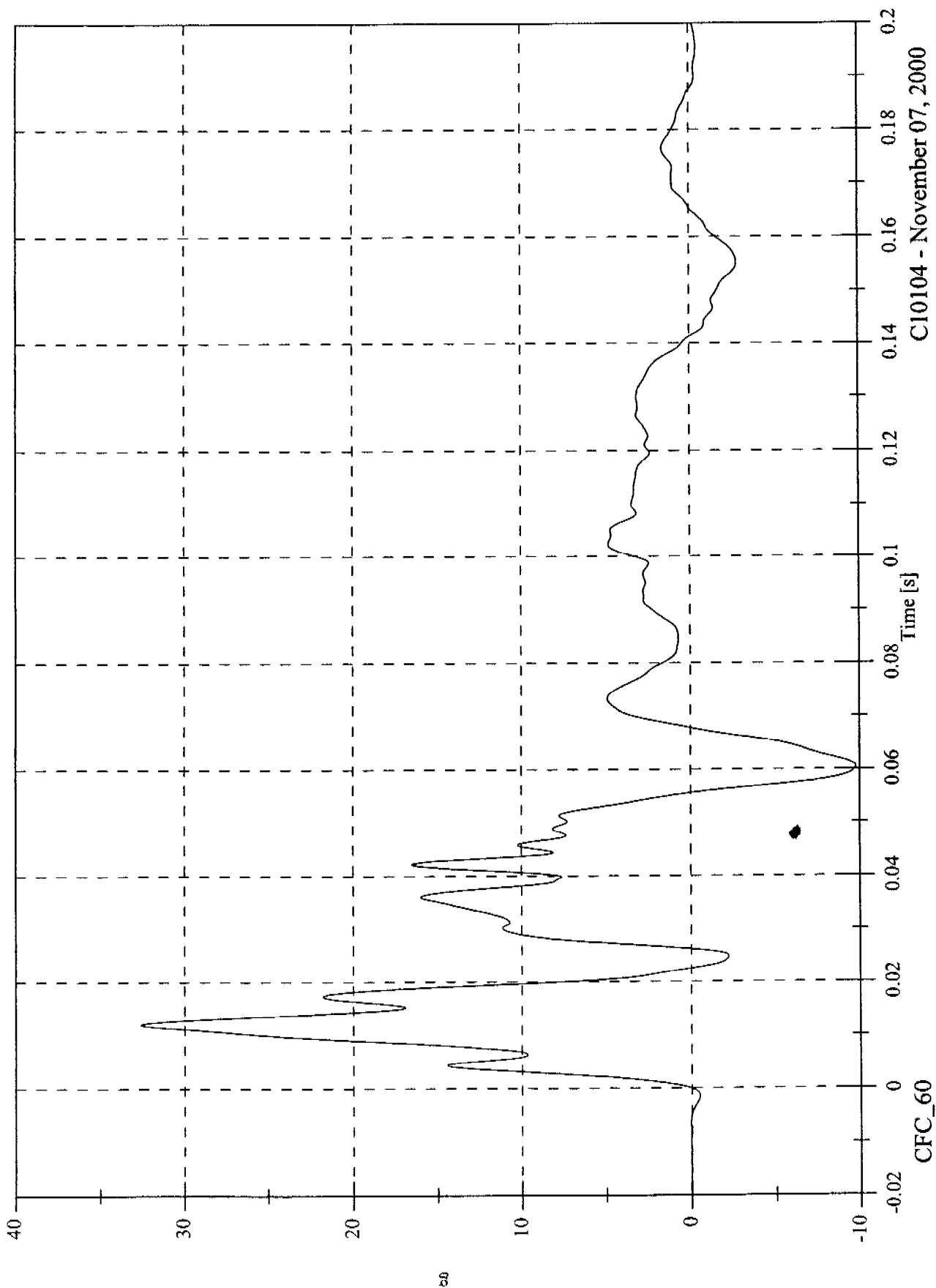


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 15 Left Mid A Post Y

Max: 32.6 [g] at 0.012 [s]
Min: -9.8 [g] at 0.061 [s]



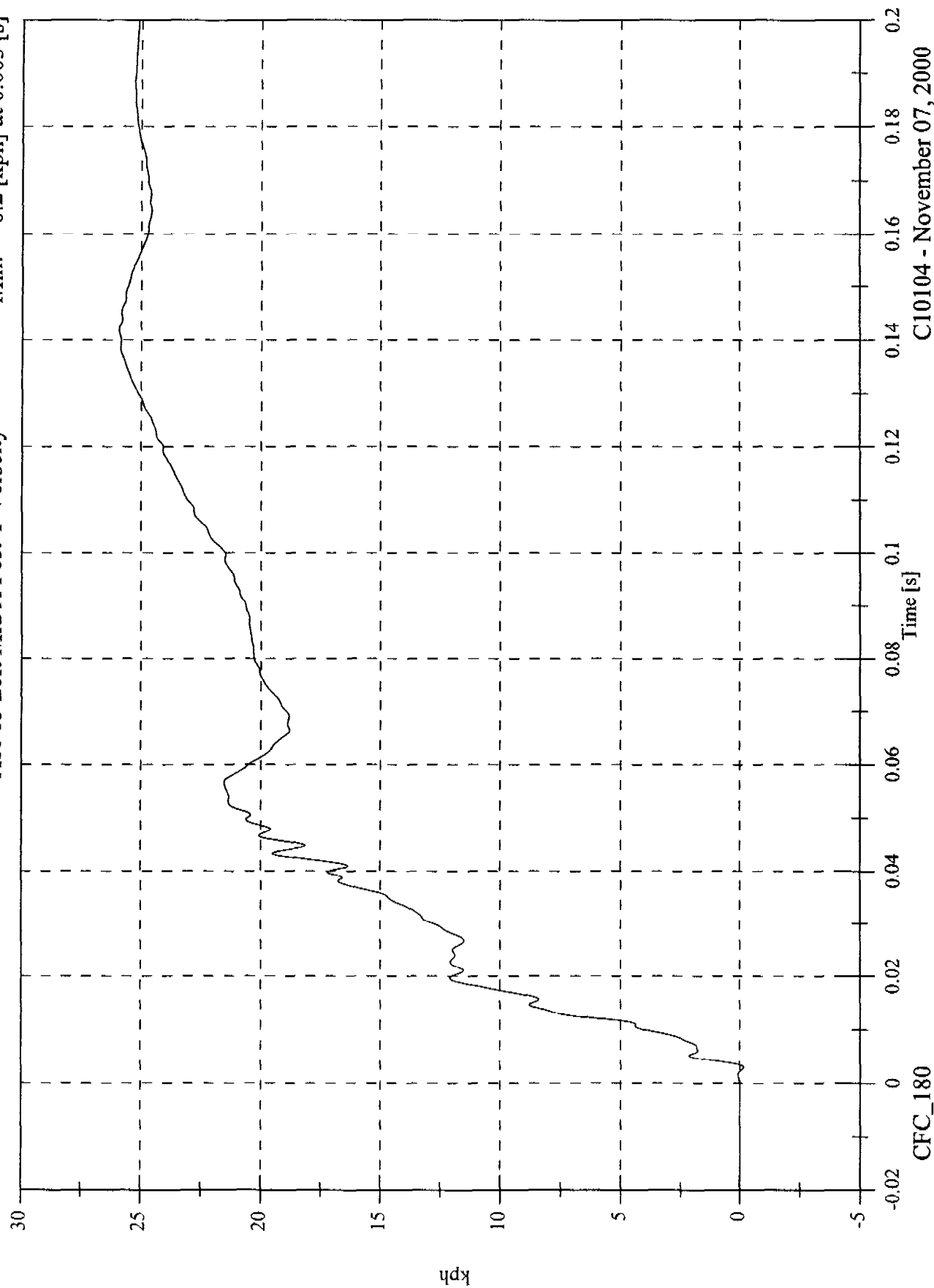
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 15 Left Mid A Post Y Velocity

Max: 25.9 [kph] at 0.142 [s]

Min: -0.2 [kph] at 0.003 [s]



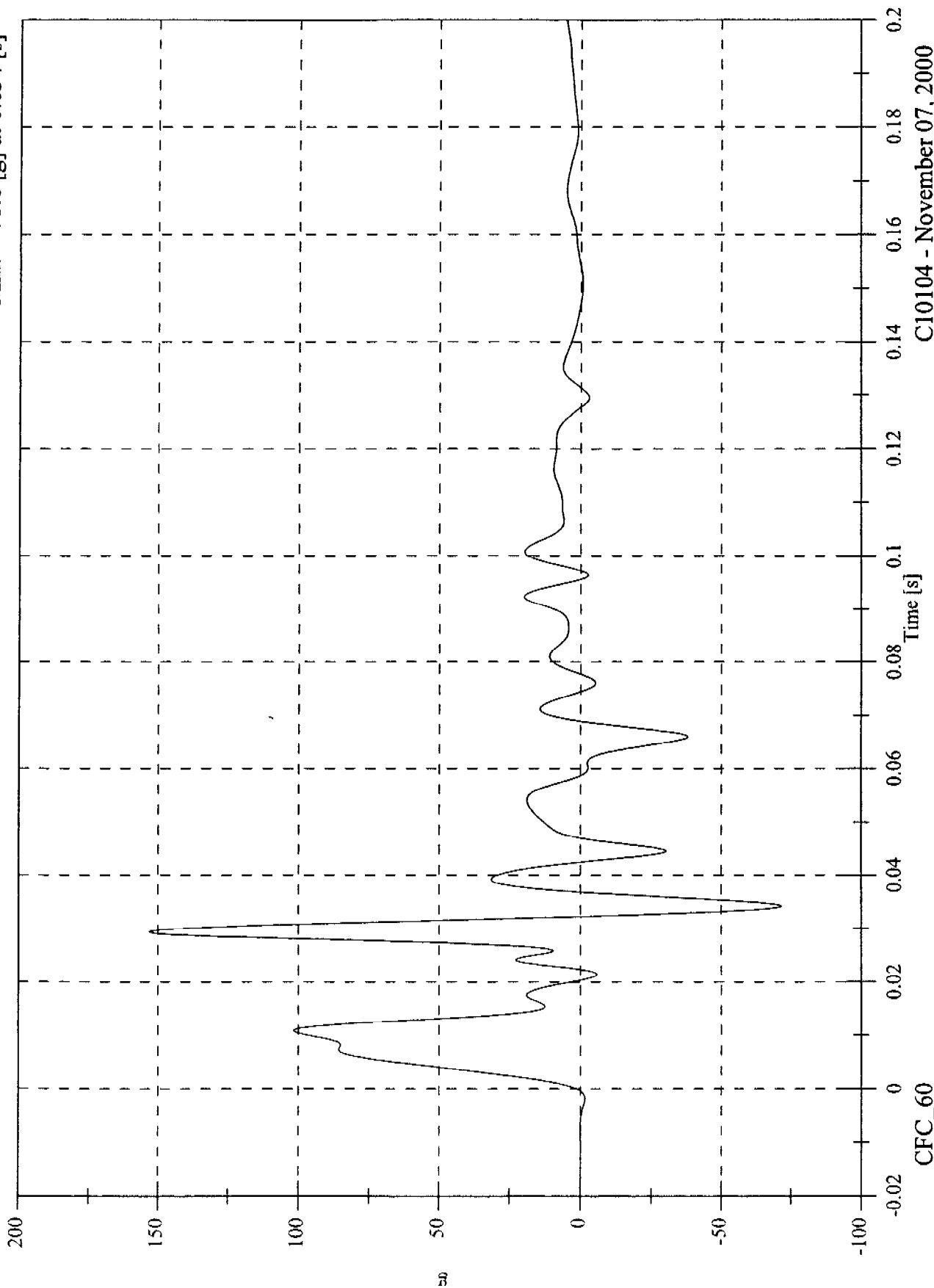
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 16 Front Seat Track Y

Max: 153.1 [g] at 0.029 [s]

Min: -71.6 [g] at 0.034 [s]

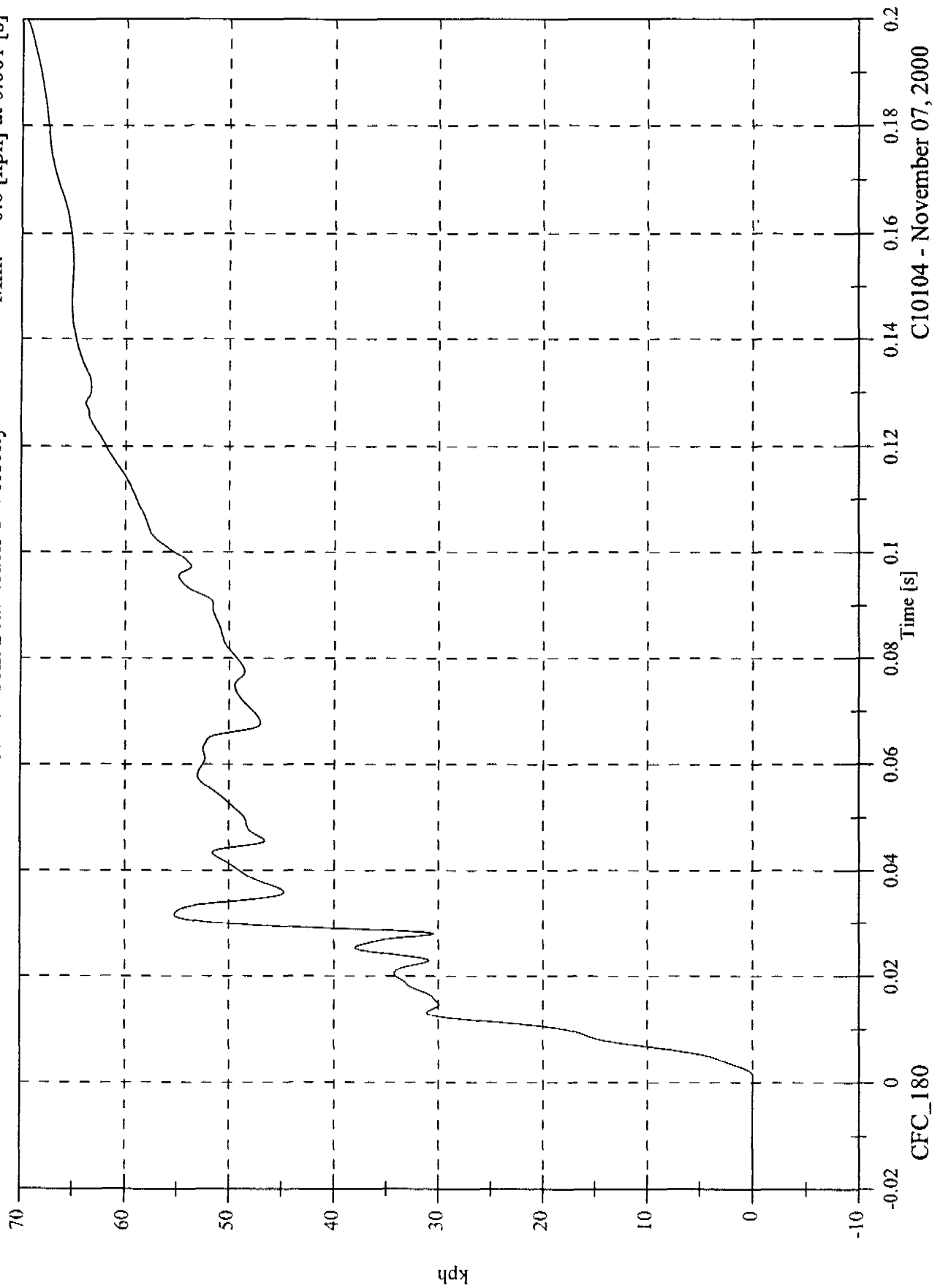


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 16 Front Seat Track Y Velocity

Max: 69.5 [kph] at 0.200 [s]
Min: -0.0 [kph] at 0.001 [s]



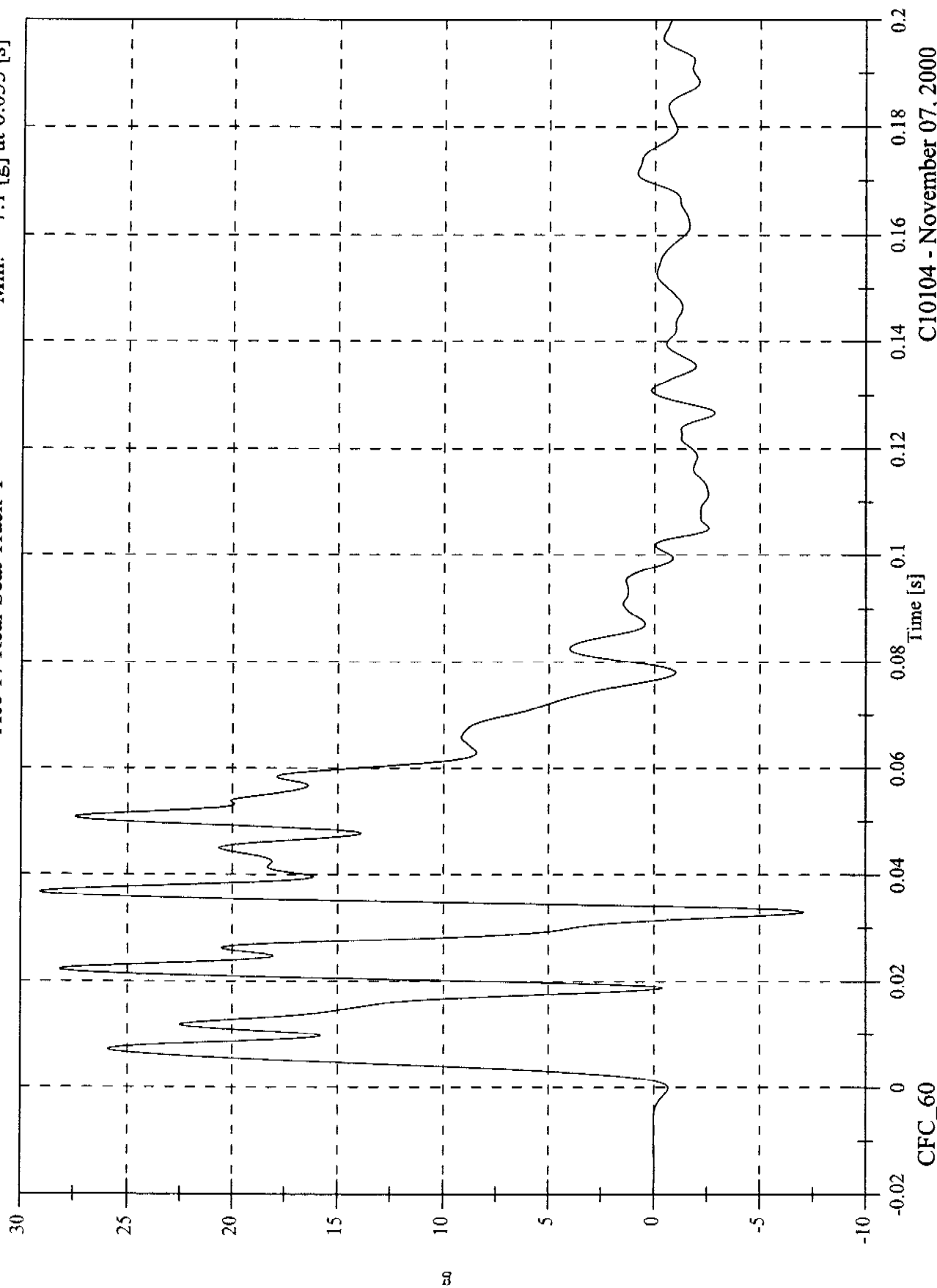
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 17 Rear Seat Track Y

Max: 29.1 [g] at 0.037 [s]

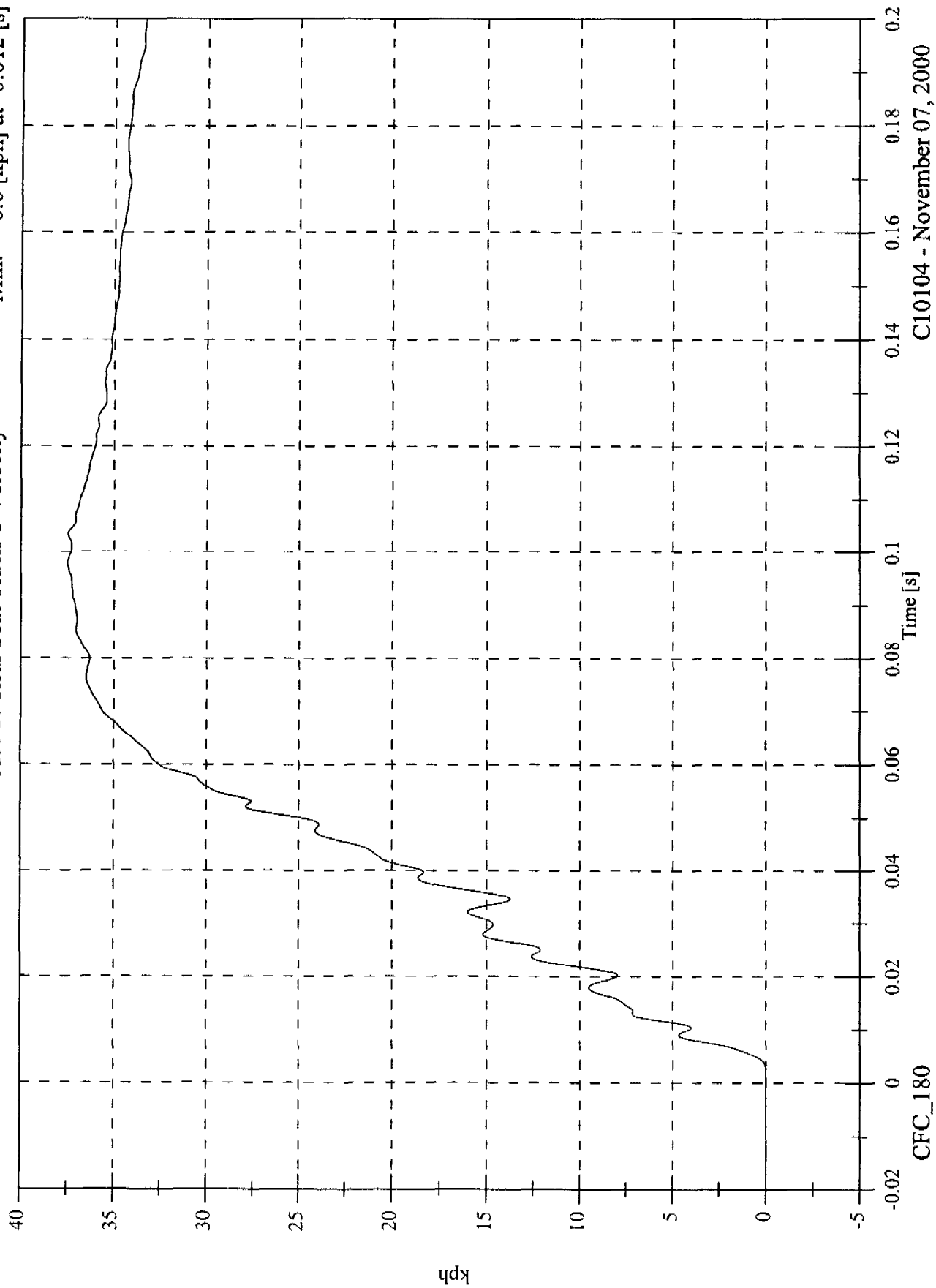
Min: -7.1 [g] at 0.033 [s]



FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 37.5 [kph] at 0.098 [s]
Min: -0.0 [kph] at -0.012 [s]

Acc 17 Rear Seat Track Y Velocity



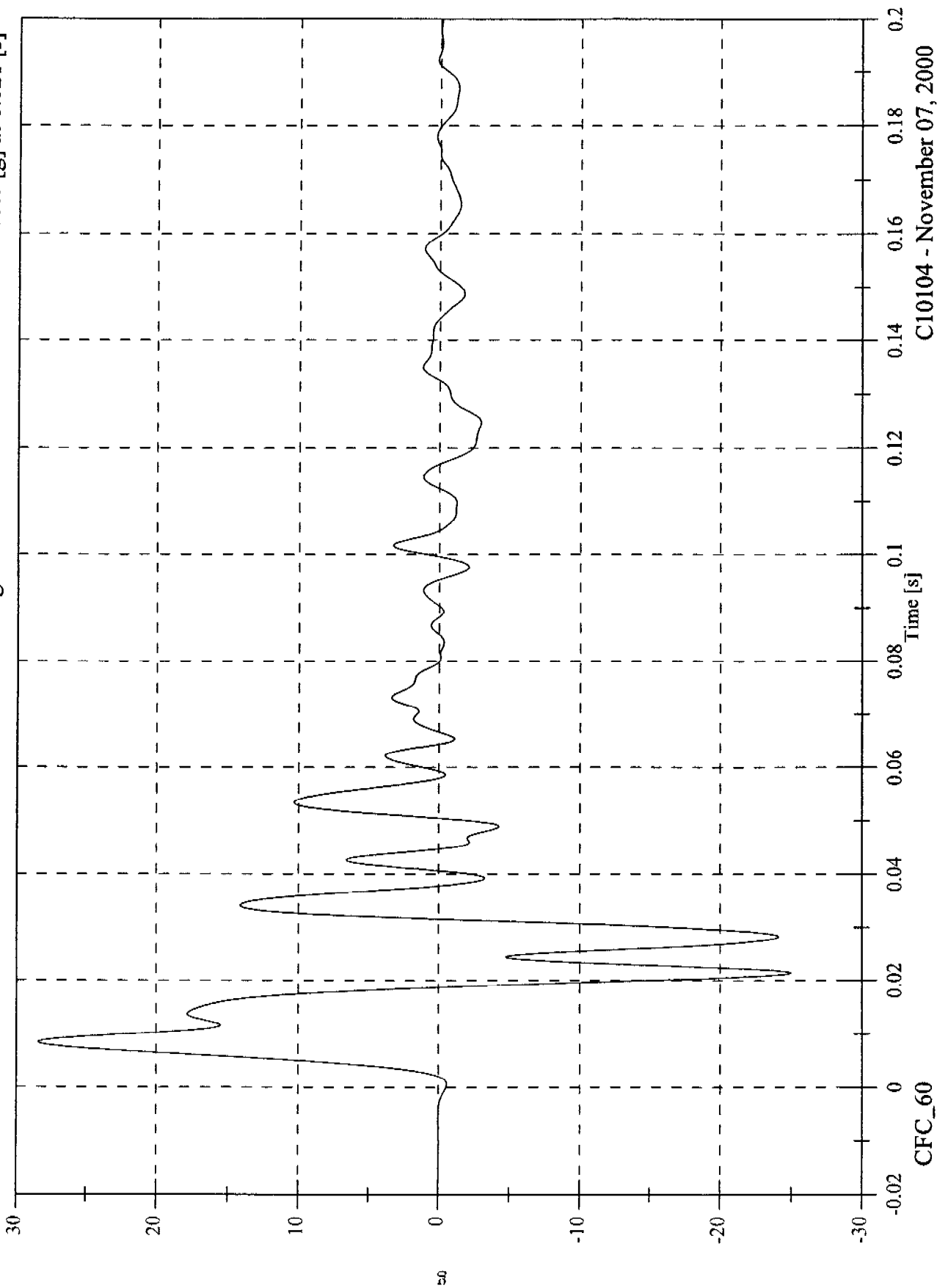
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG X

Max: 28.4 [g] at 0.008 [s]

Min: -25.0 [g] at 0.021 [s]

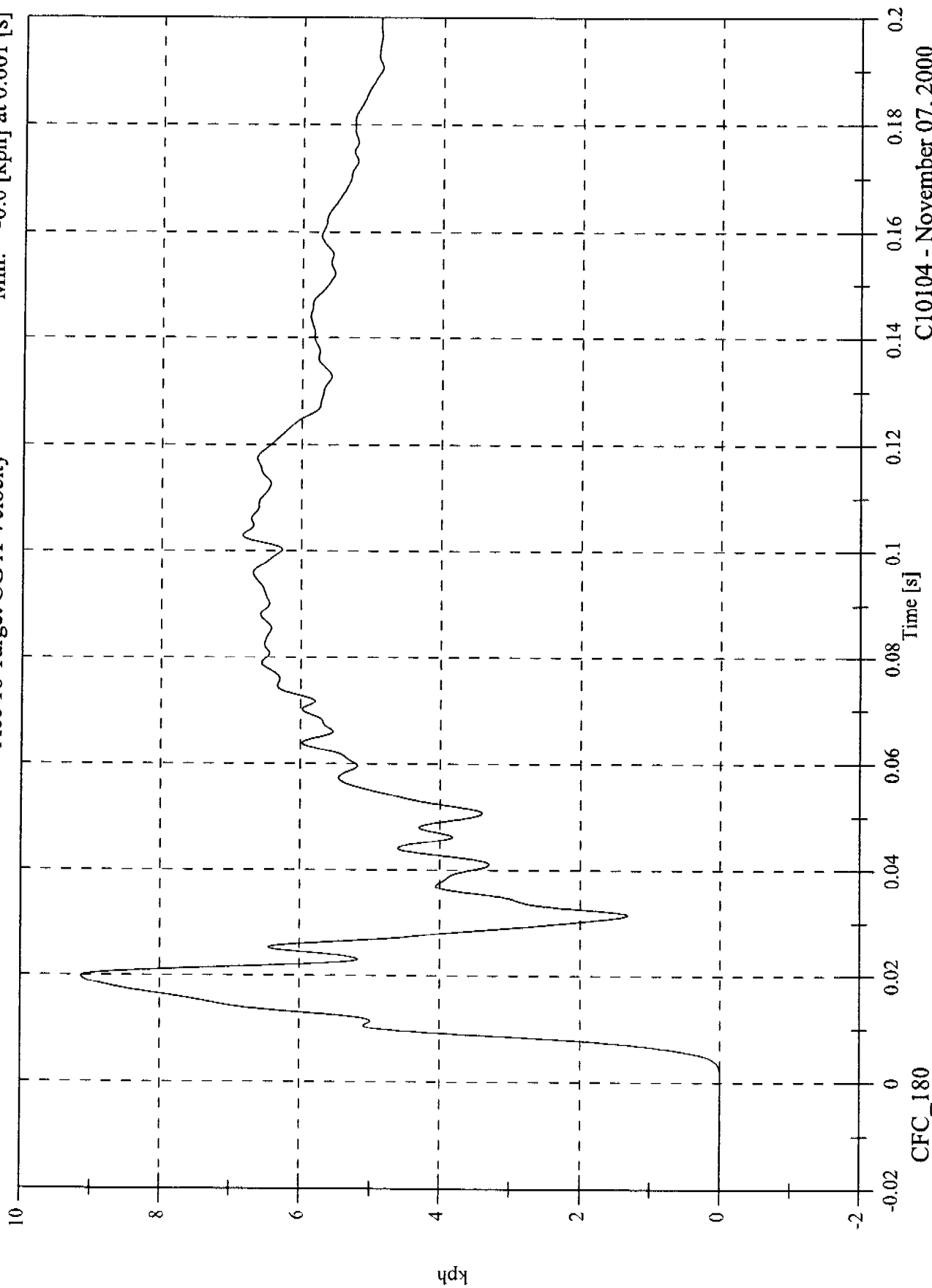


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG X Velocity

Max: 9.1 [kph] at 0.020 [s]
Min: -0.0 [kph] at 0.001 [s]

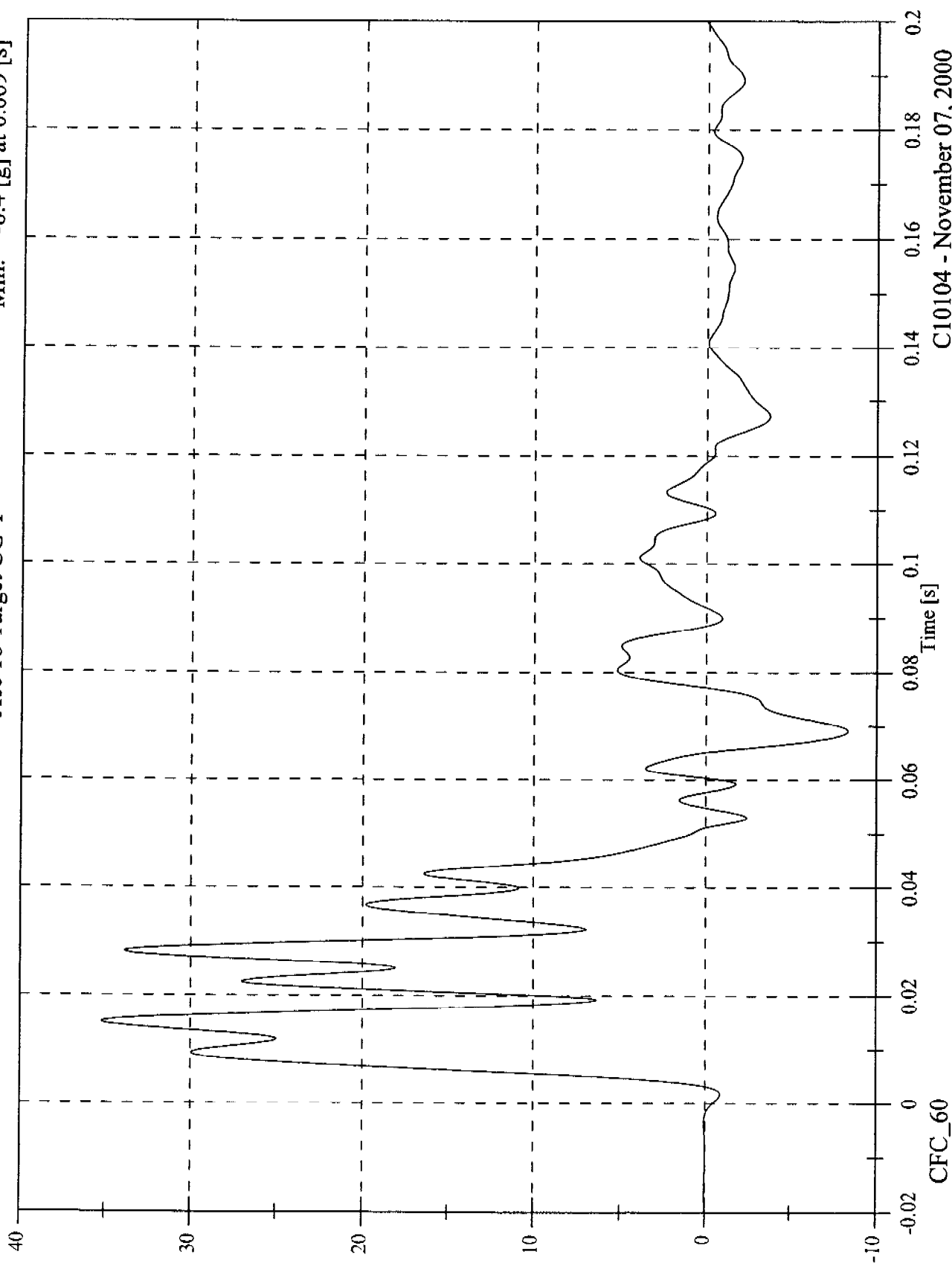


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG Y

Max: 35.2 [g] at 0.015 [s]
Min: -8.4 [g] at 0.069 [s]

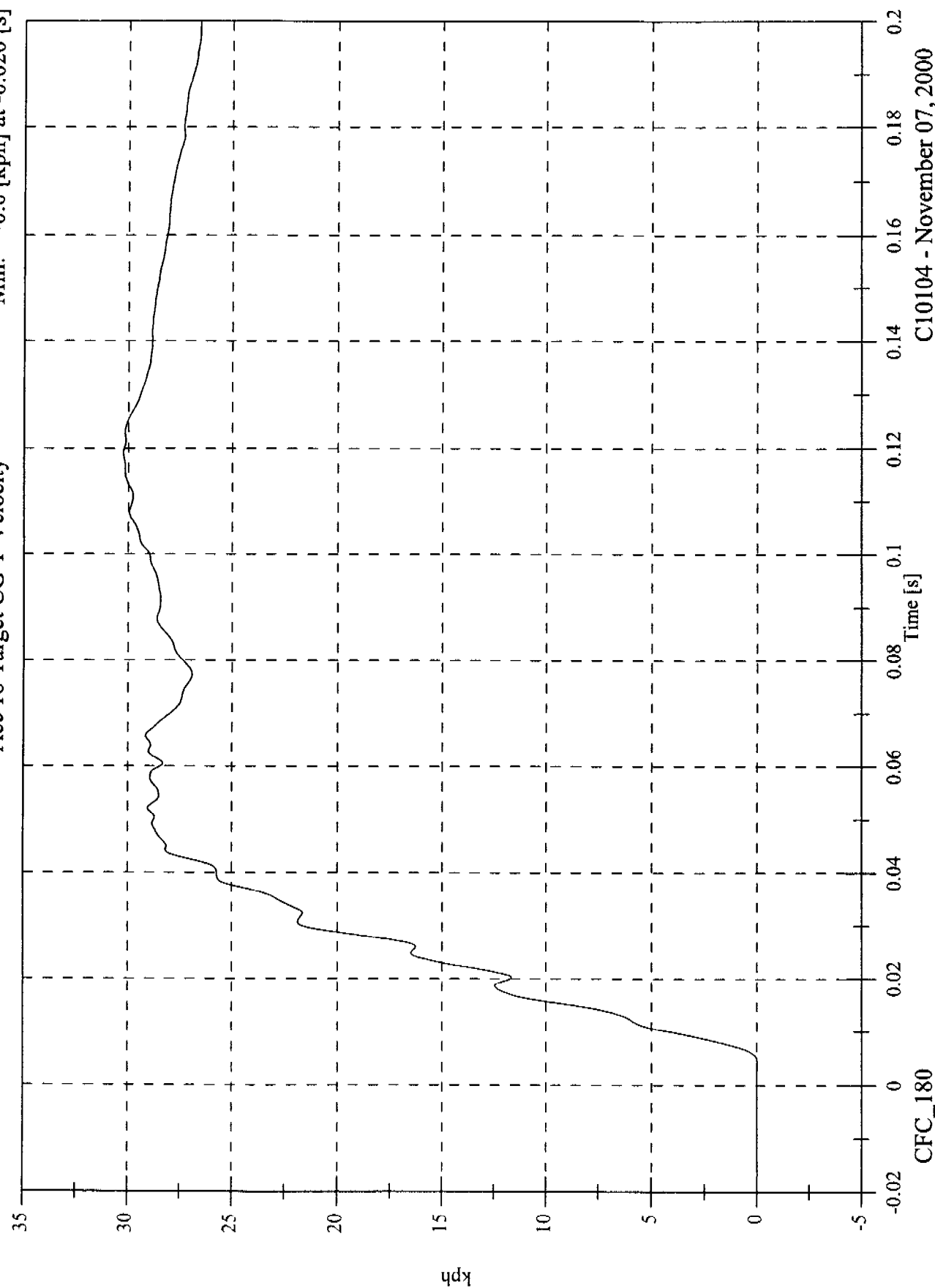


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG Y Velocity

Max: 30.2 [kph] at 0.119 [s]
Min: -0.0 [kph] at -0.020 [s]

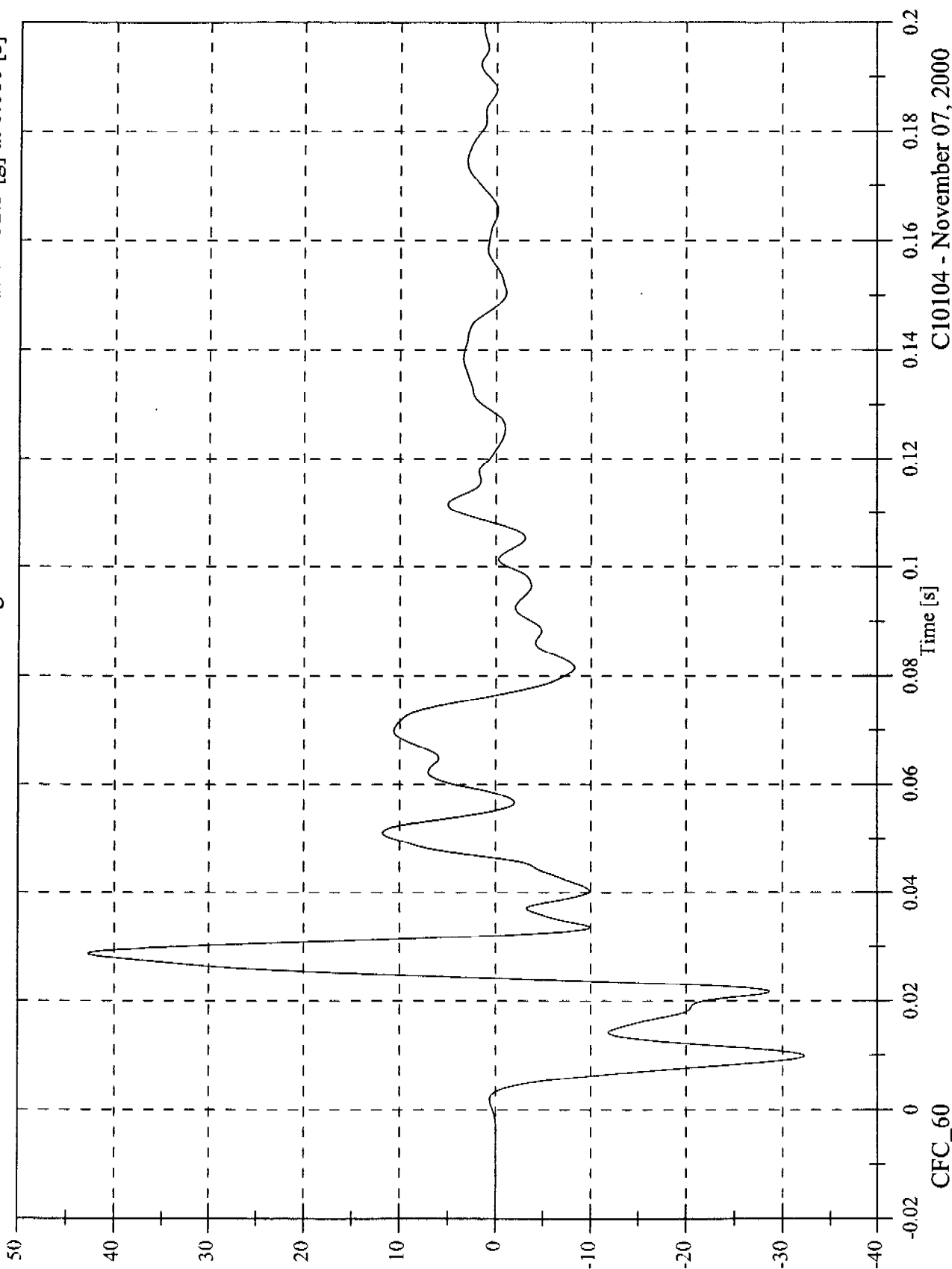


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG Z

Max: 42.8 [g] at 0.029 [s]
Min: -32.3 [g] at 0.010 [s]

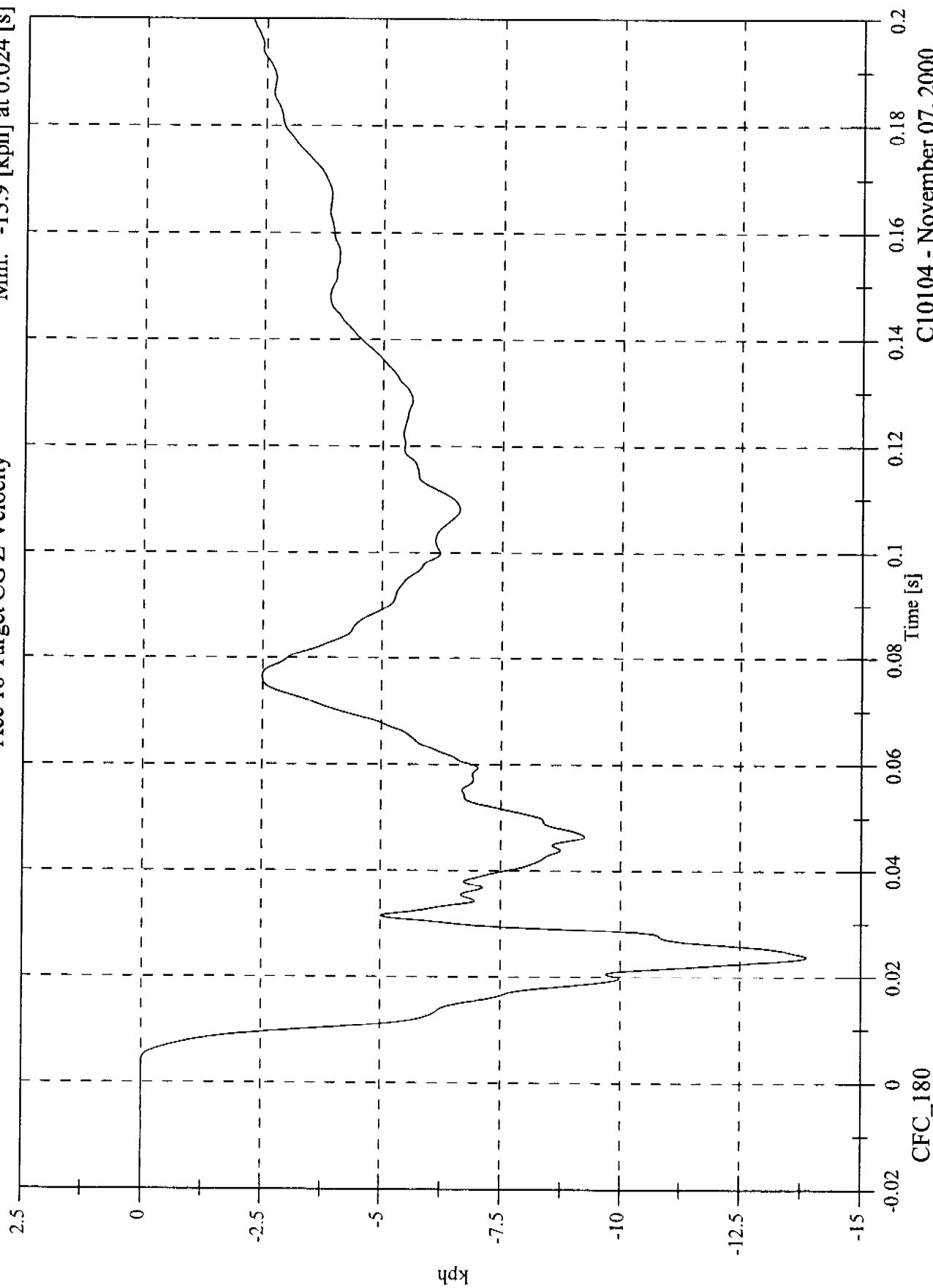


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG Z Velocity

Max: 0.0 [kph] at 0.003 [s]
Min: -13.9 [kph] at 0.024 [s]

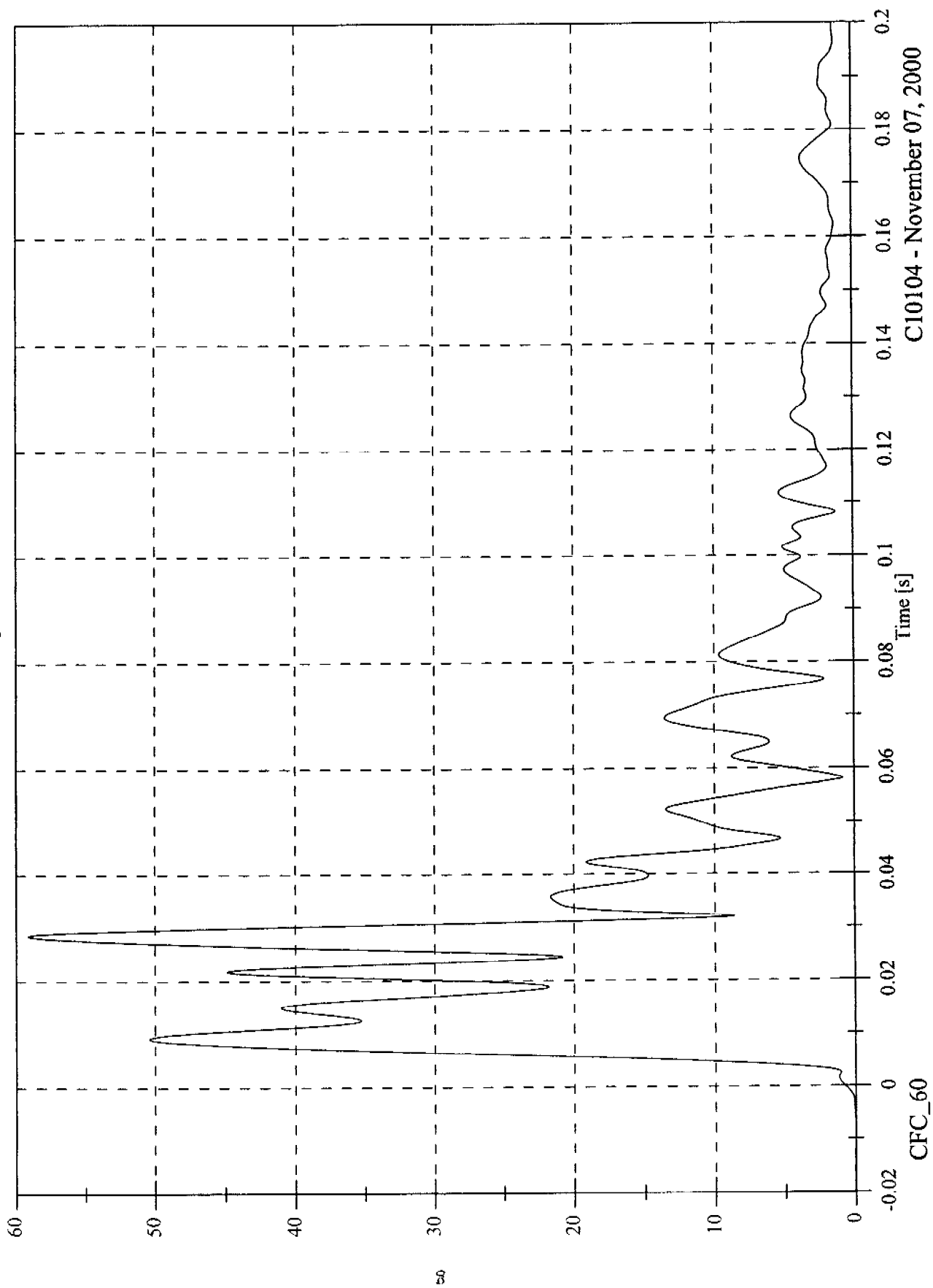


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Acc 18 Target CG Resultant

Max: 59.1 [g] at 0.029 [s]
Min: 0.0 [g] at -0.020 [s]

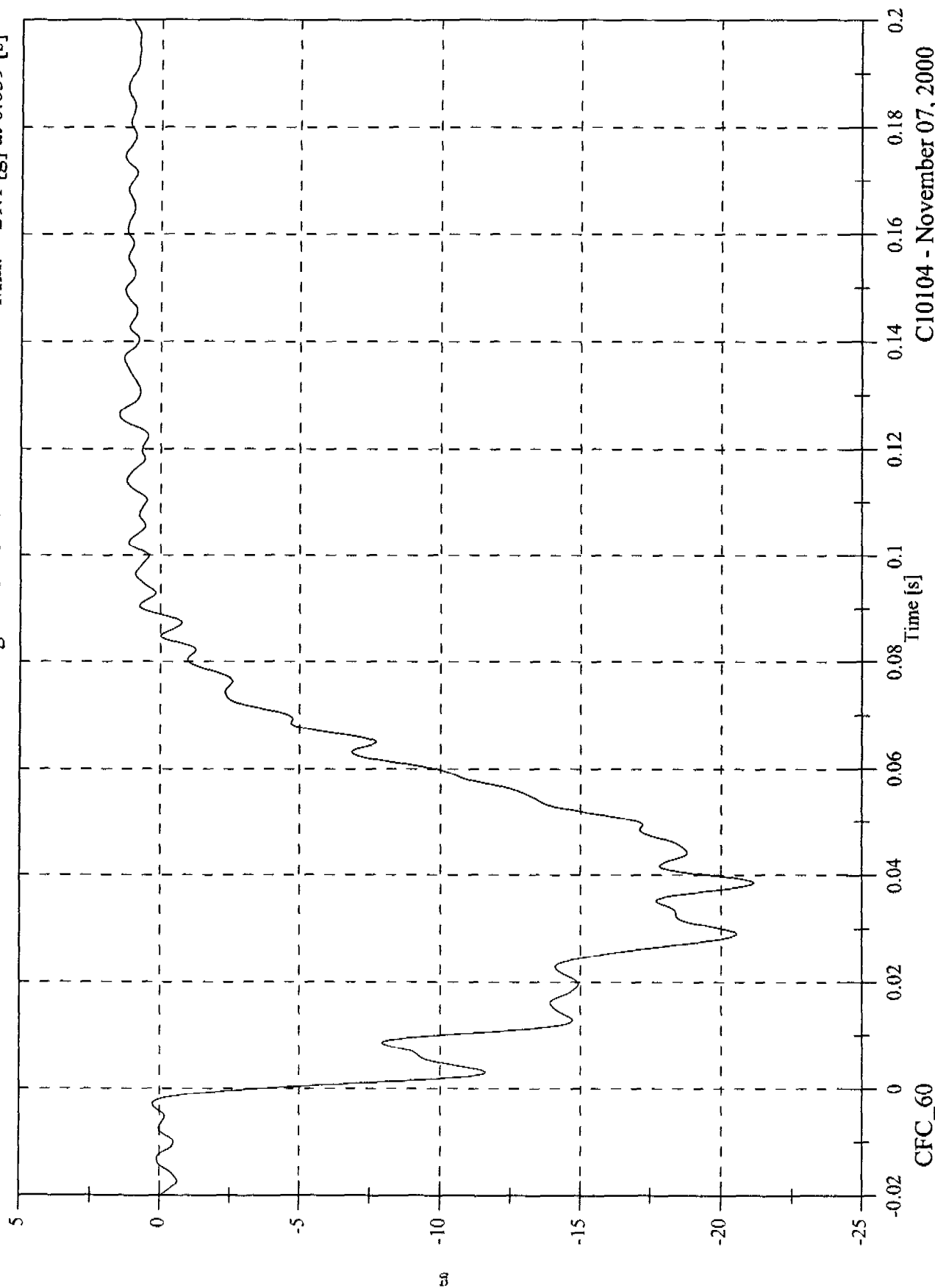


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier CG X

Max: 1.5 [g] at 0.126 [s]
Min: -21.1 [g] at 0.039 [s]

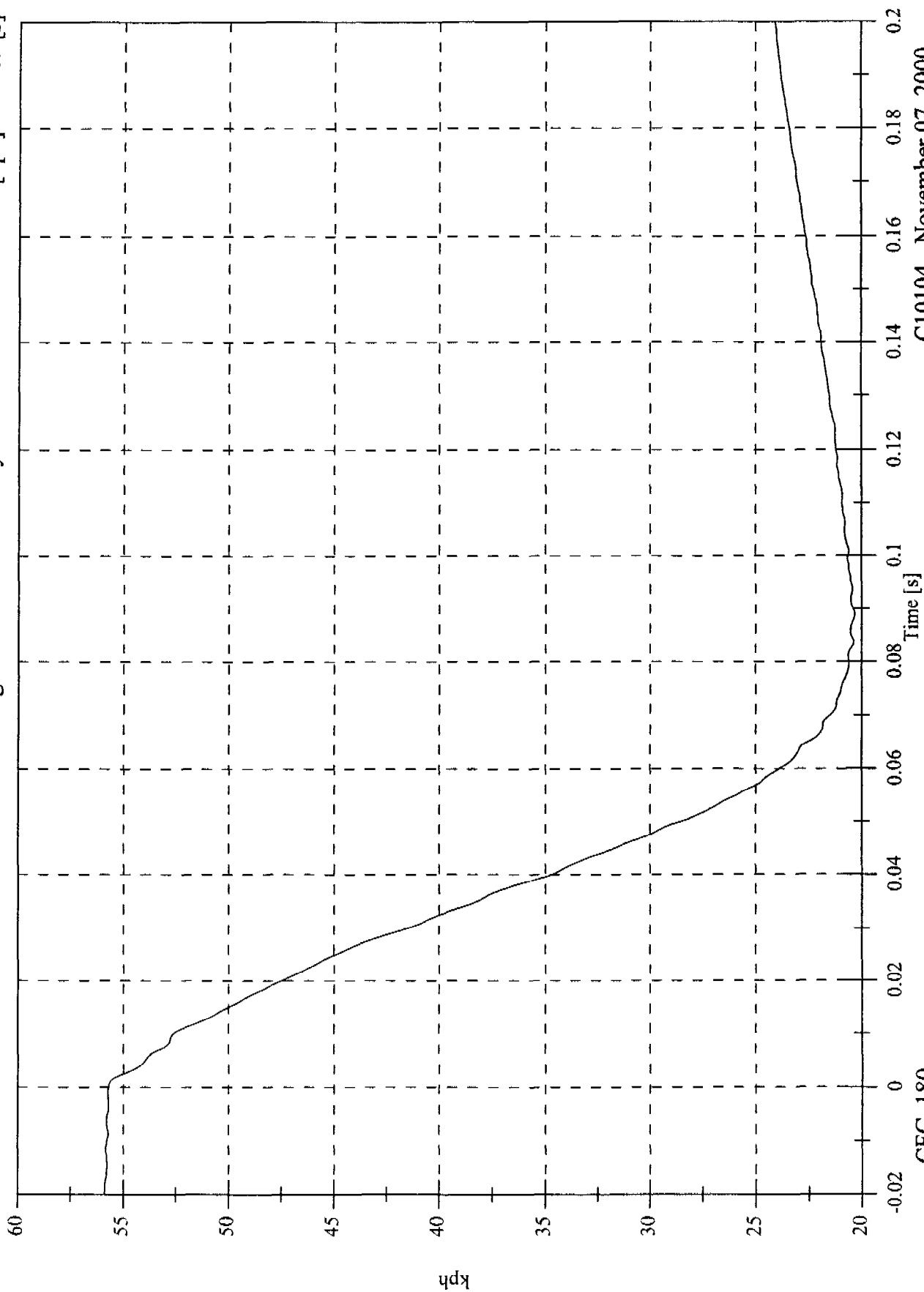


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 55.9 [kph] at -0.020 [s]
Min: 20.3 [kph] at 0.089 [s]

Moving Barrier CG X Velocity

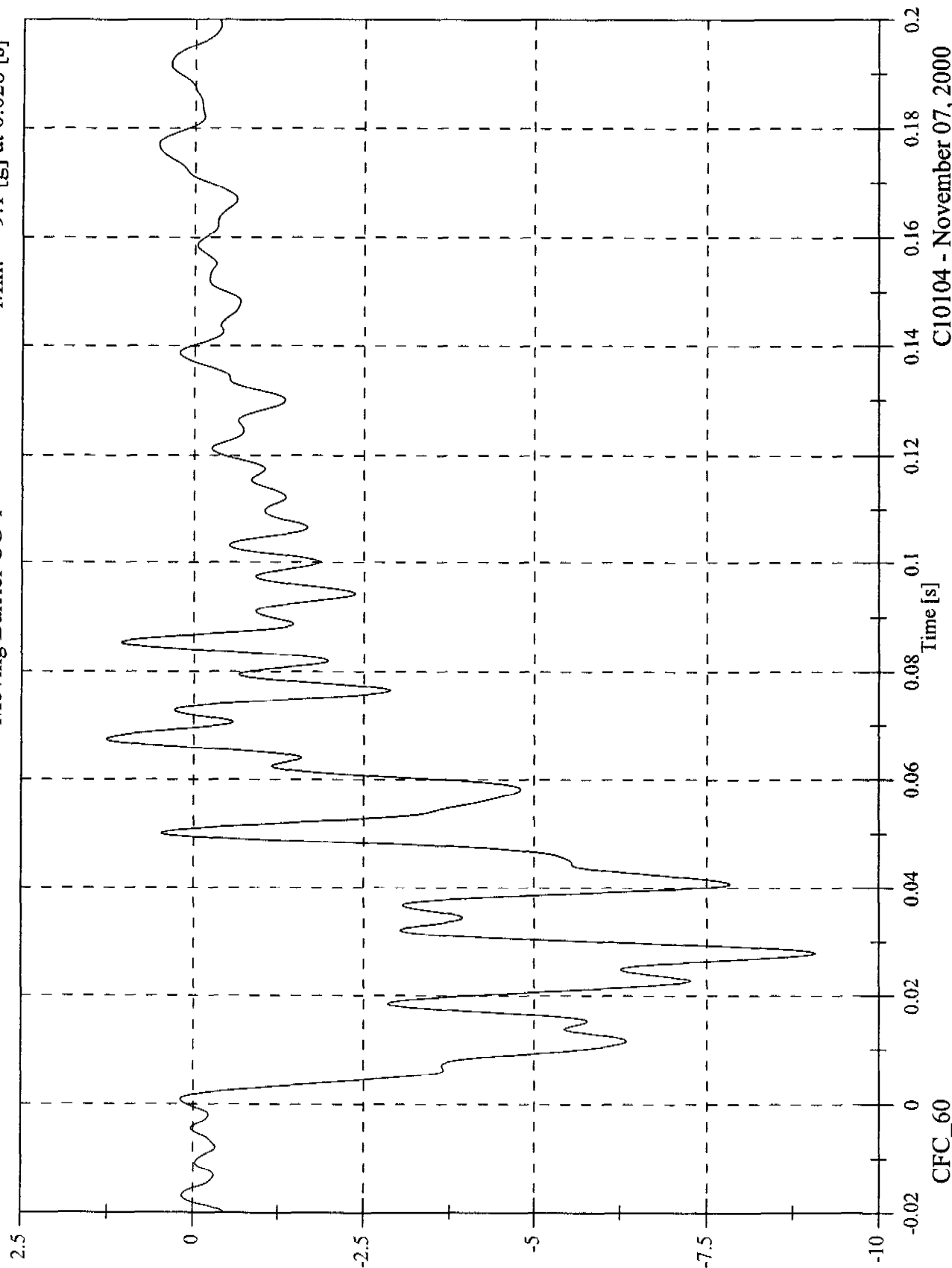


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier CG Y

Max: 1.3 [g] at 0.067 [s]
Min: -9.1 [g] at 0.028 [s]

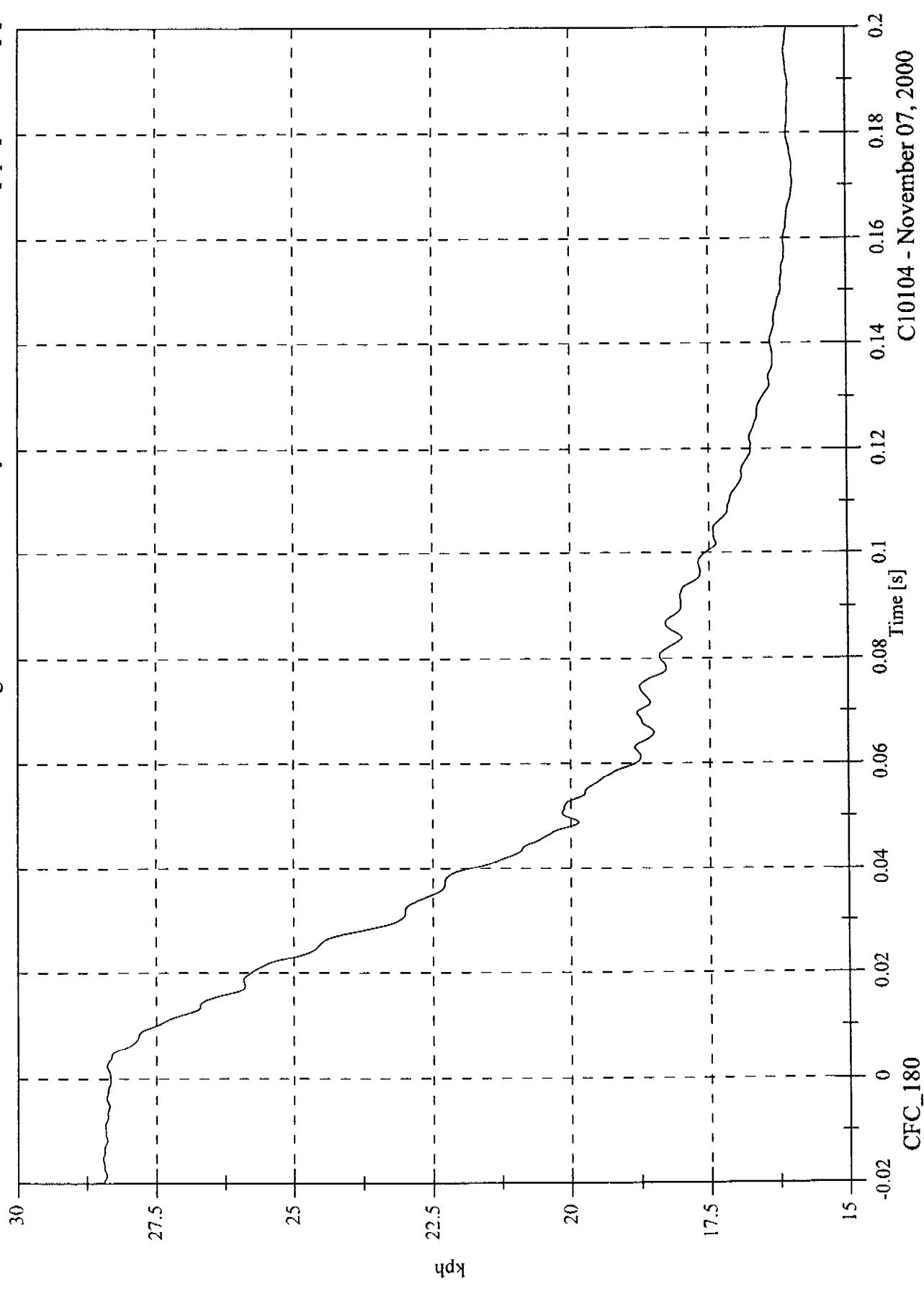


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier CG Y Velocity

Max: 28.5 [kph] at -0.015 [s]
Min: 16.0 [kph] at 0.171 [s]

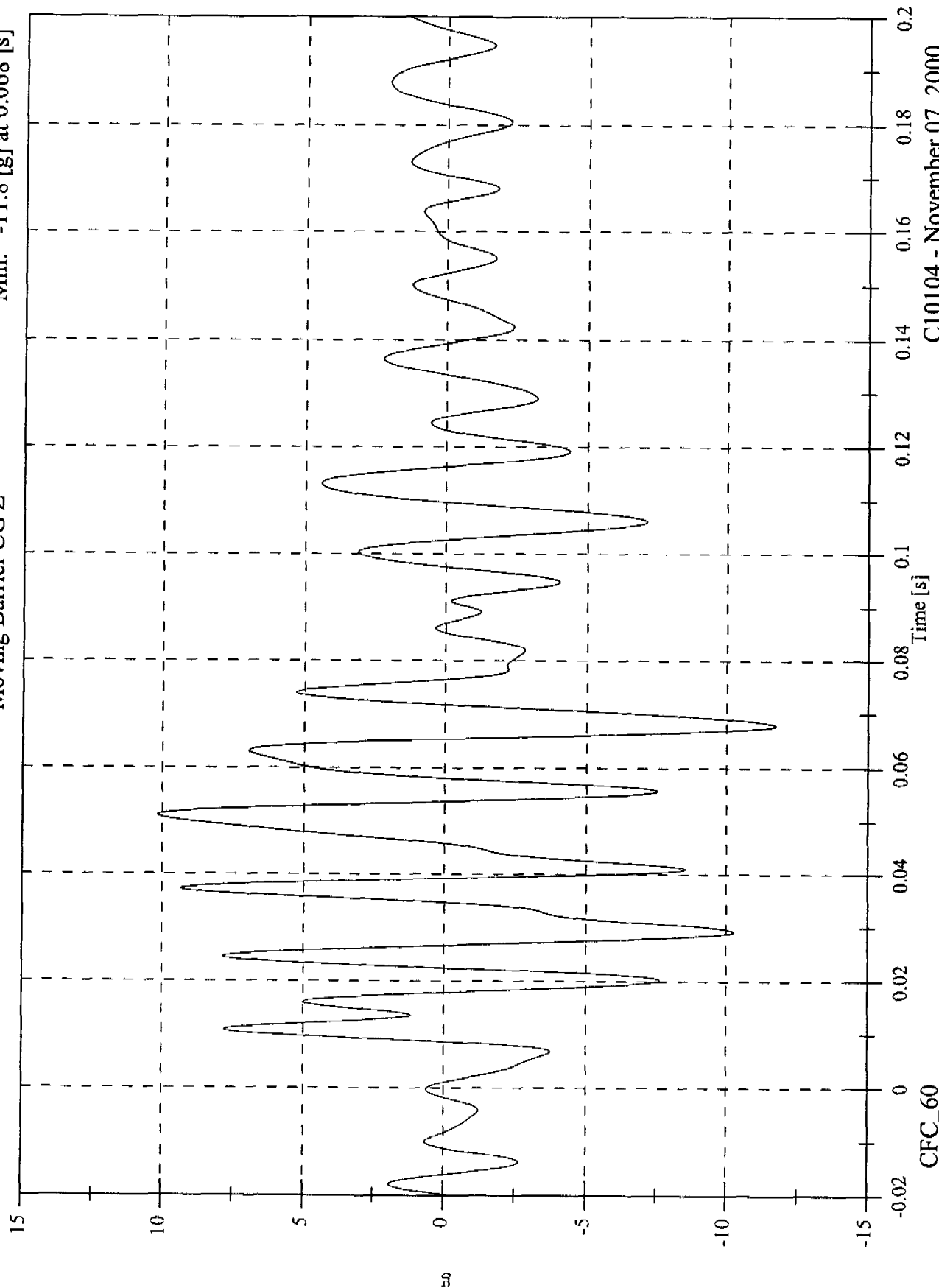


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier CG Z

Max: 10.2 [g] at 0.051 [s]
Min: -11.8 [g] at 0.068 [s]

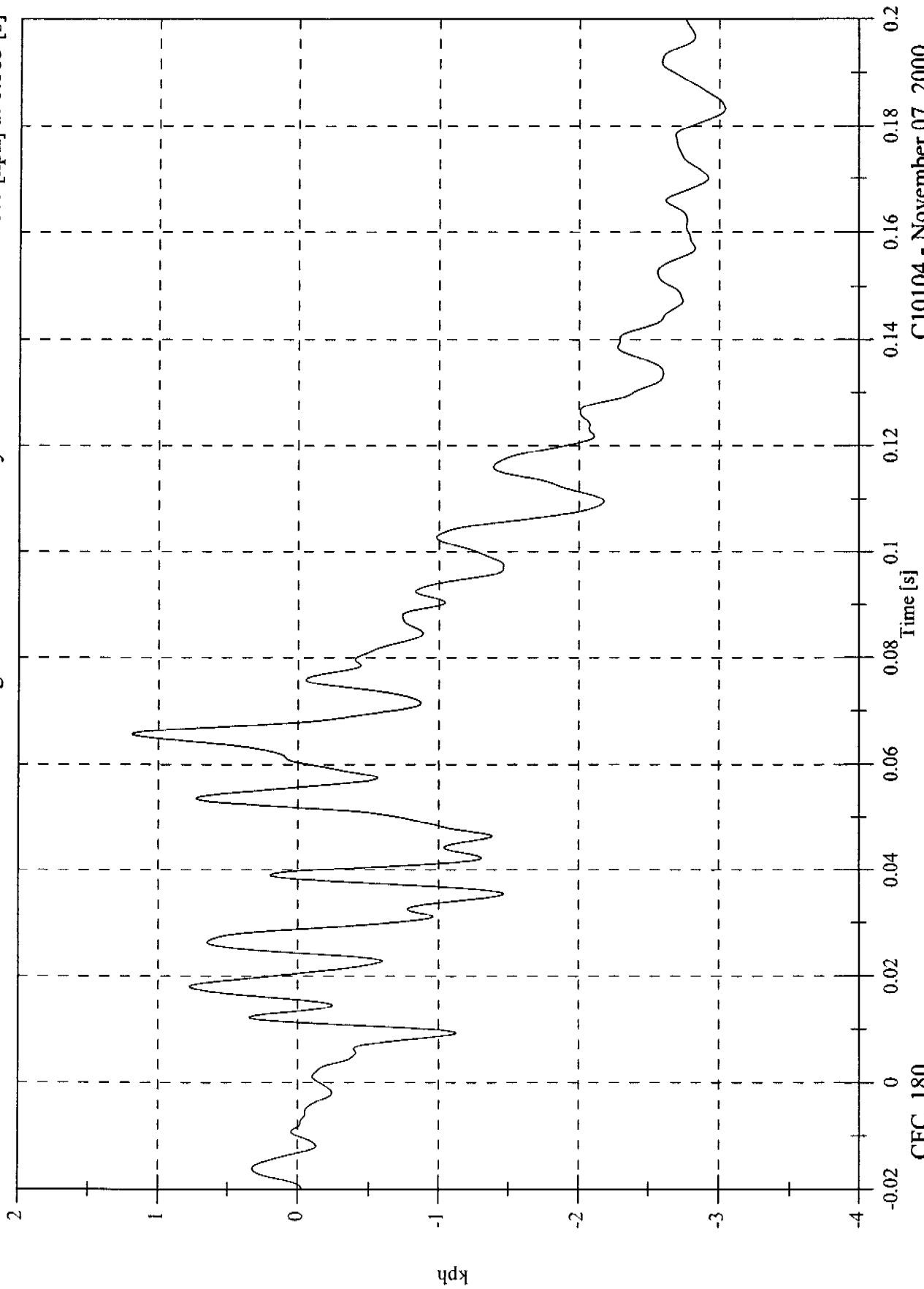


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier CG Z Velocity

Max: 1.2 [kph] at 0.066 [s]
Min: -3.0 [kph] at 0.183 [s]



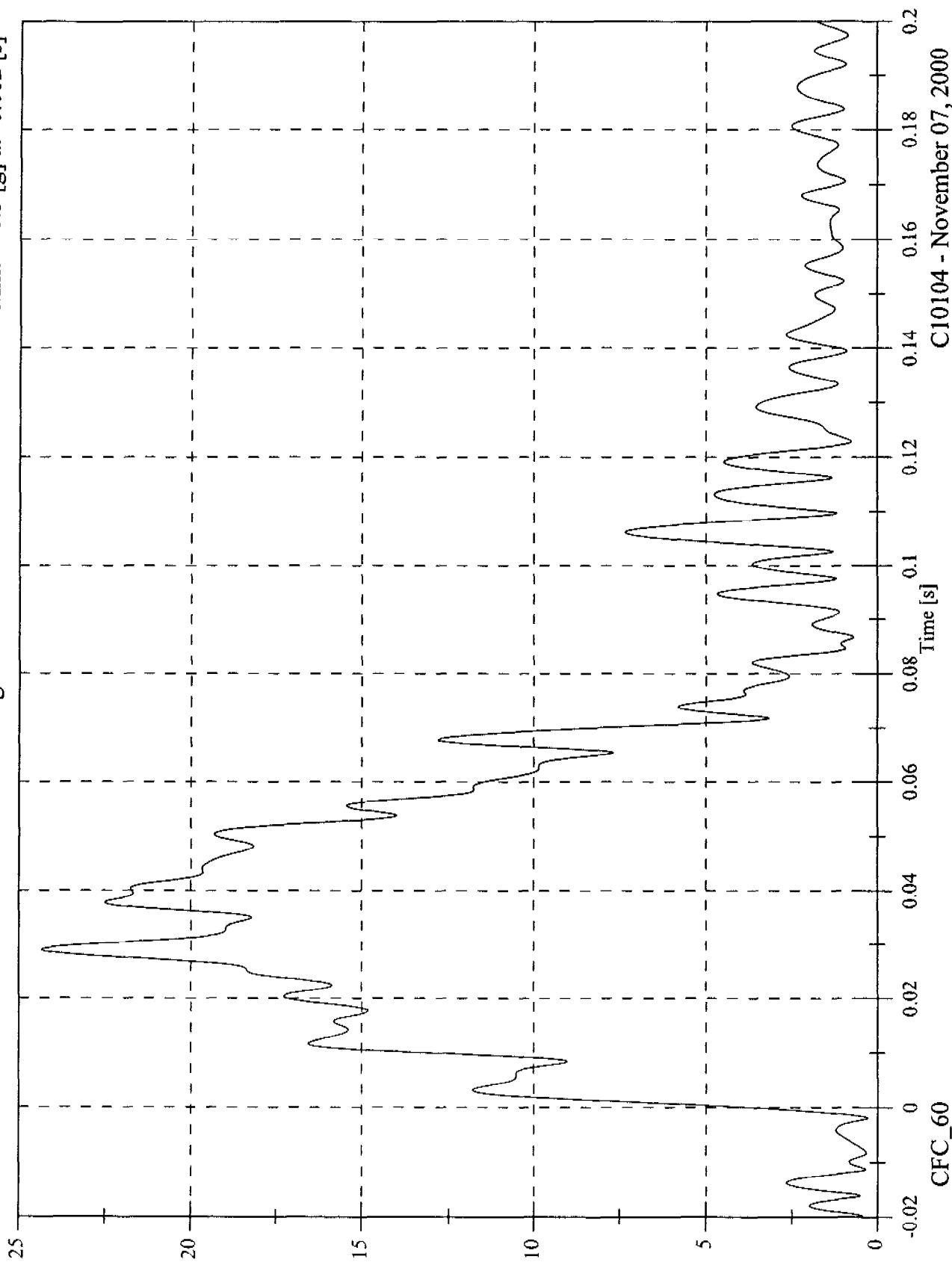
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier CG Resultant

Max: 24.3 [g] at 0.029 [s]

Min: 0.3 [g] at -0.002 [s]

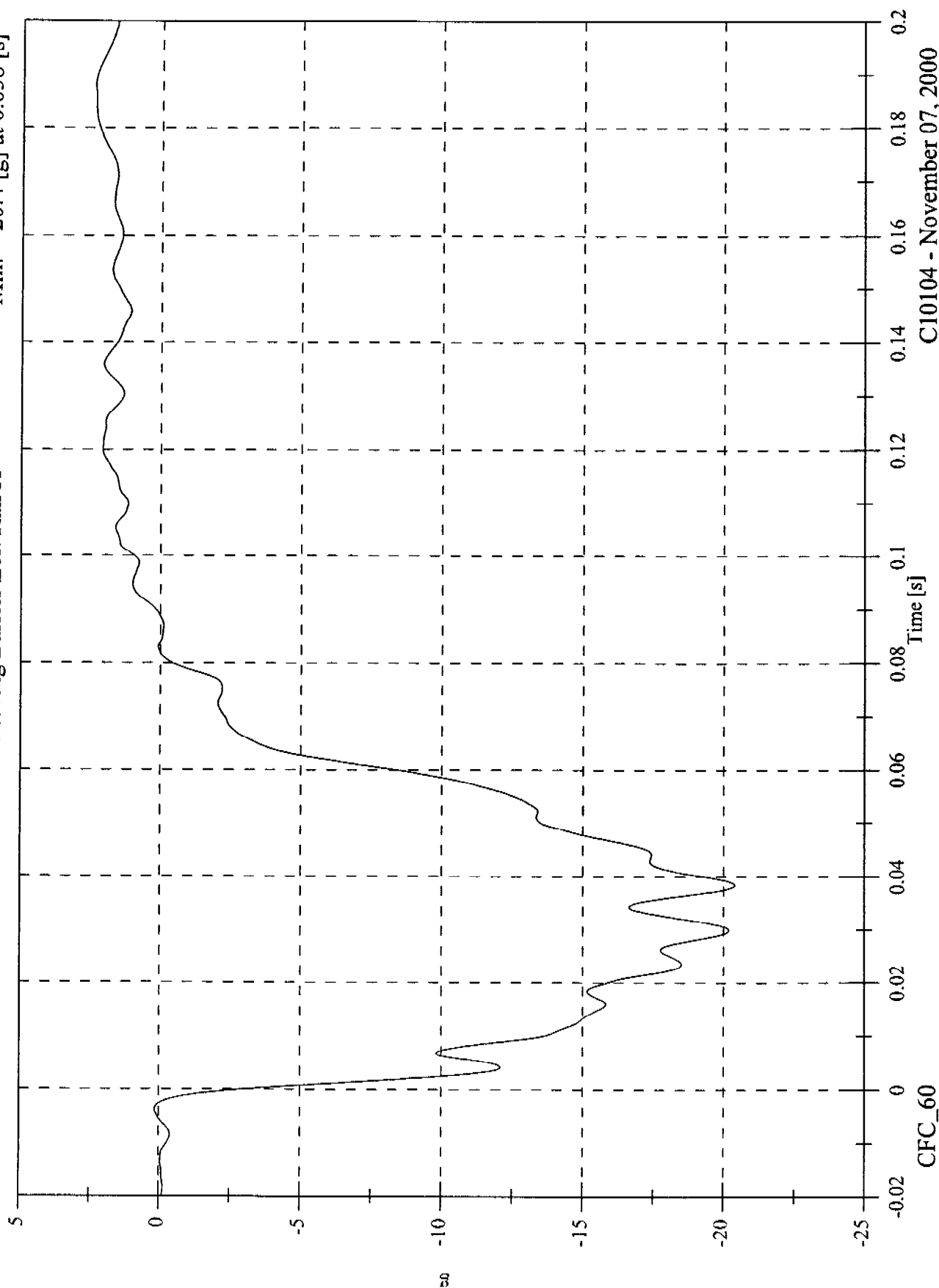


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier Left Rail X

Max: 2.4 [g] at 0.188 [s]
Min: -20.4 [g] at 0.038 [s]

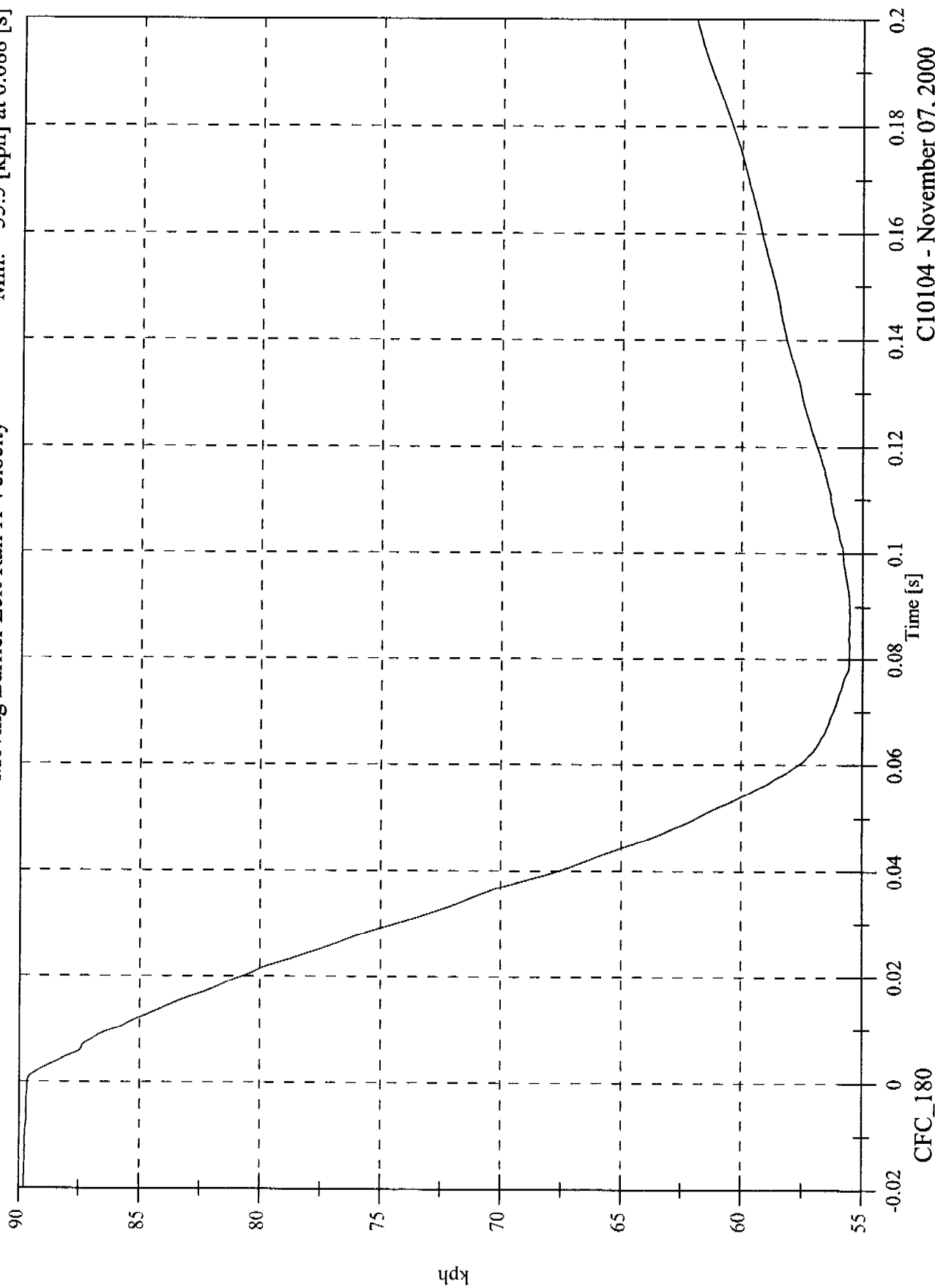


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Moving Barrier Left Rail X Velocity

Max: 89.8 [kph] at -0.019 [s]
 Min: 55.5 [kph] at 0.088 [s]

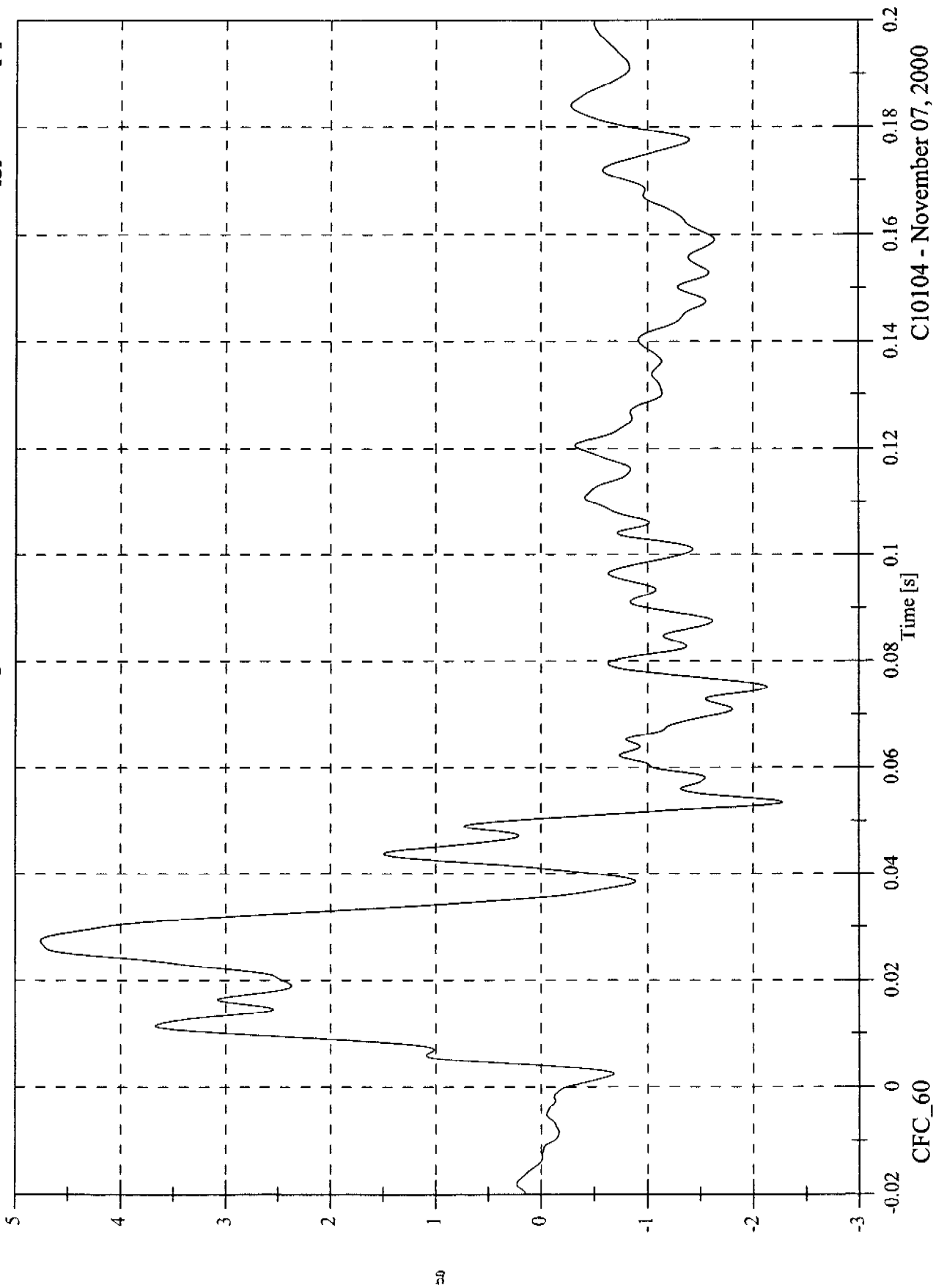


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FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 4.8 [g] at 0.027 [s]
Min: -2.3 [g] at 0.053 [s]

Moving Barrier Left Rail Y



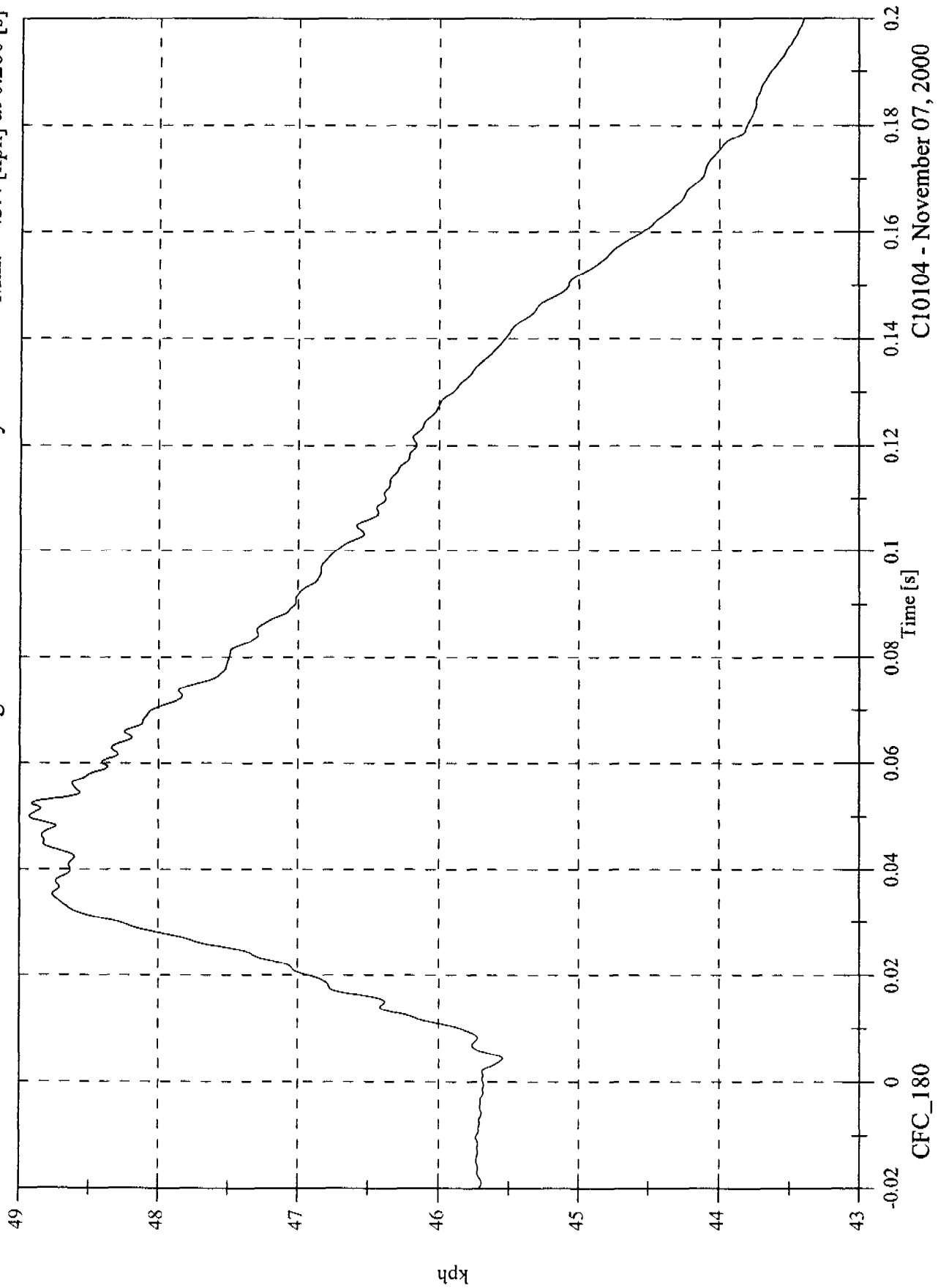
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 48.9 [kph] at 0.050 [s]

Min: 43.4 [kph] at 0.200 [s]

Moving Barrier Left Rail Y Velocity

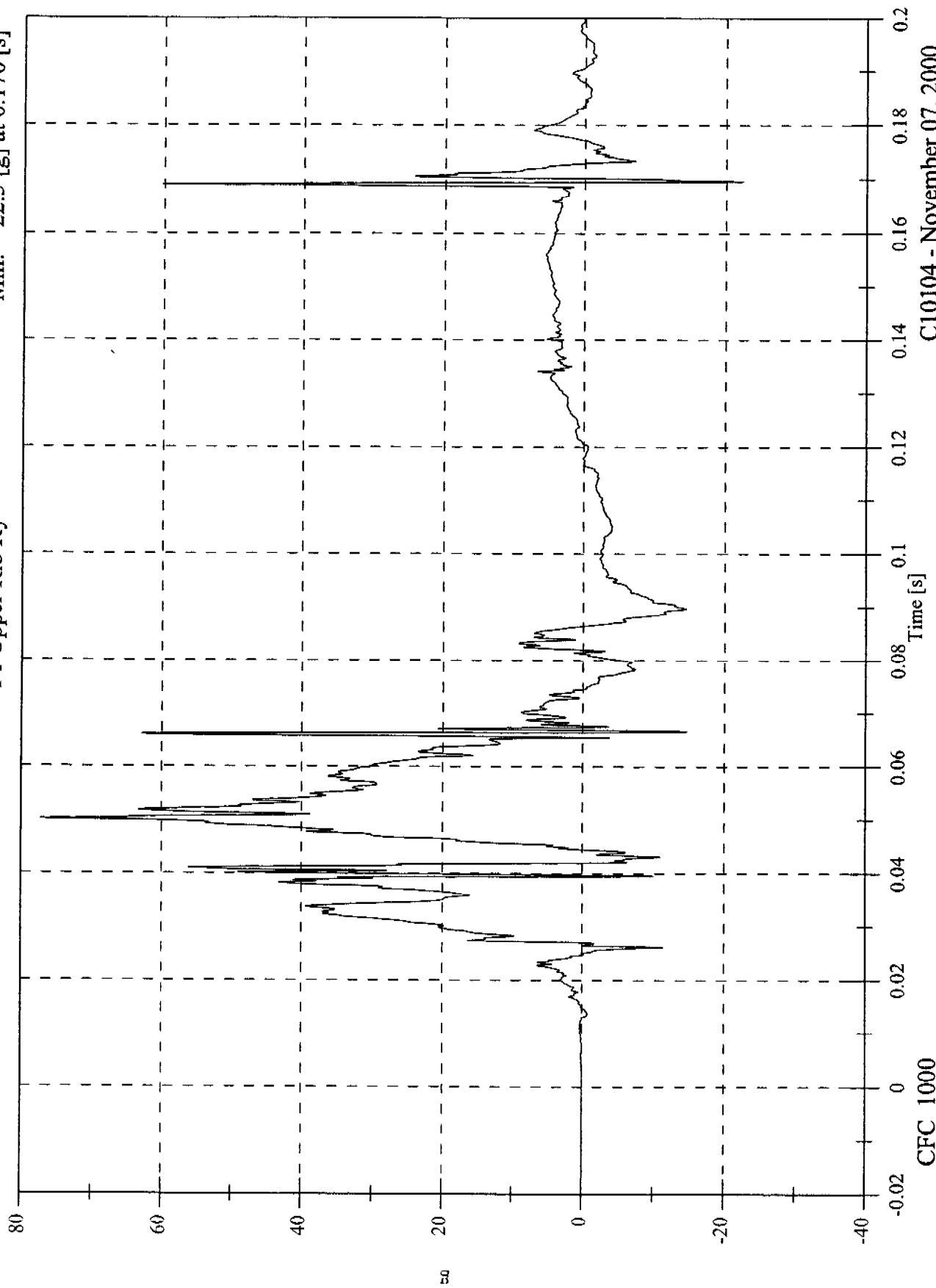


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Upper Rib Ry

Max: 77.2 [g] at 0.050 [s]
Min: -22.5 [g] at 0.170 [s]

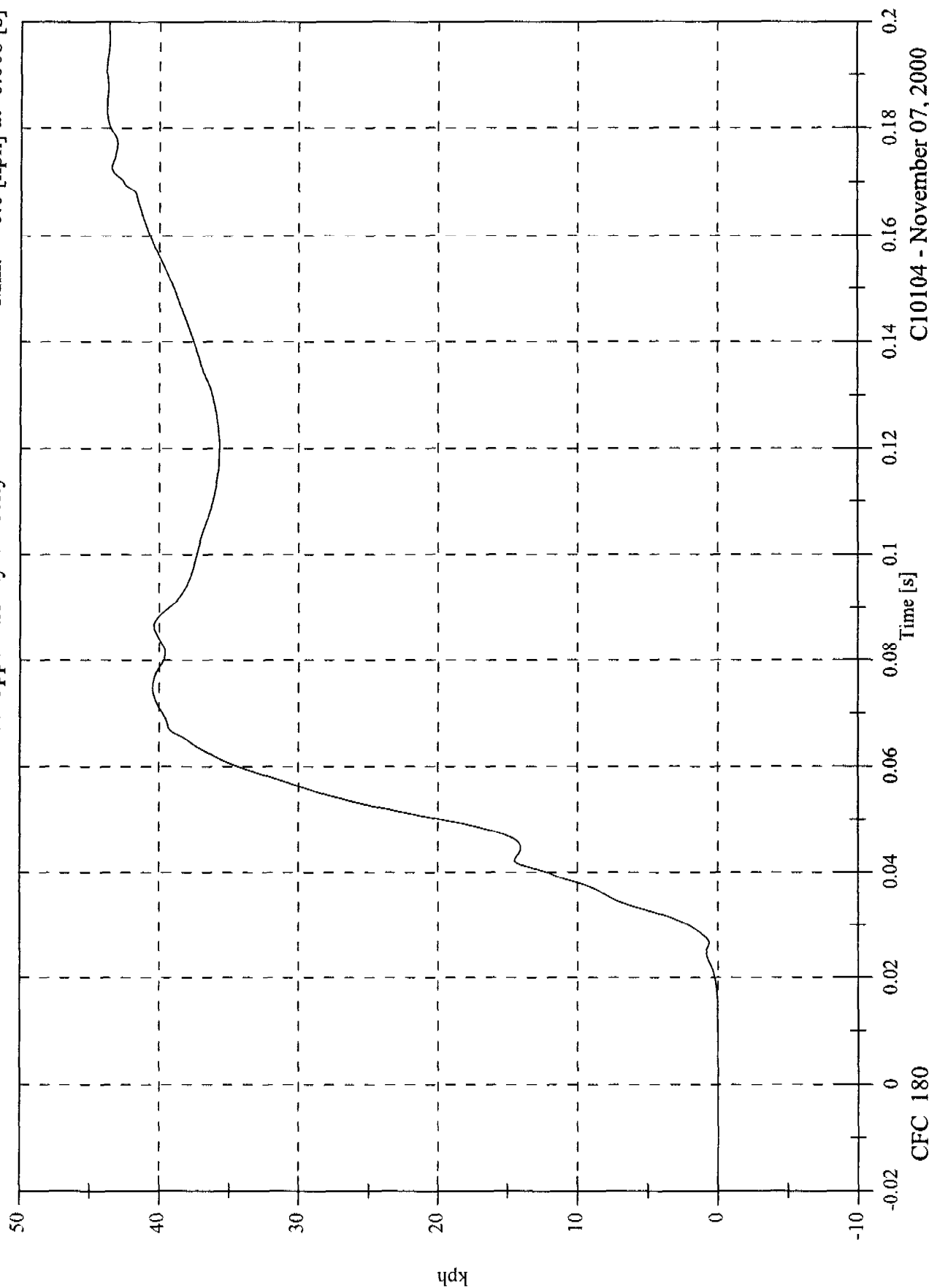


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Upper Rib Ry Velocity

Max: 43.8 [kph] at 0.191 [s]
Min: -0.0 [kph] at -0.008 [s]

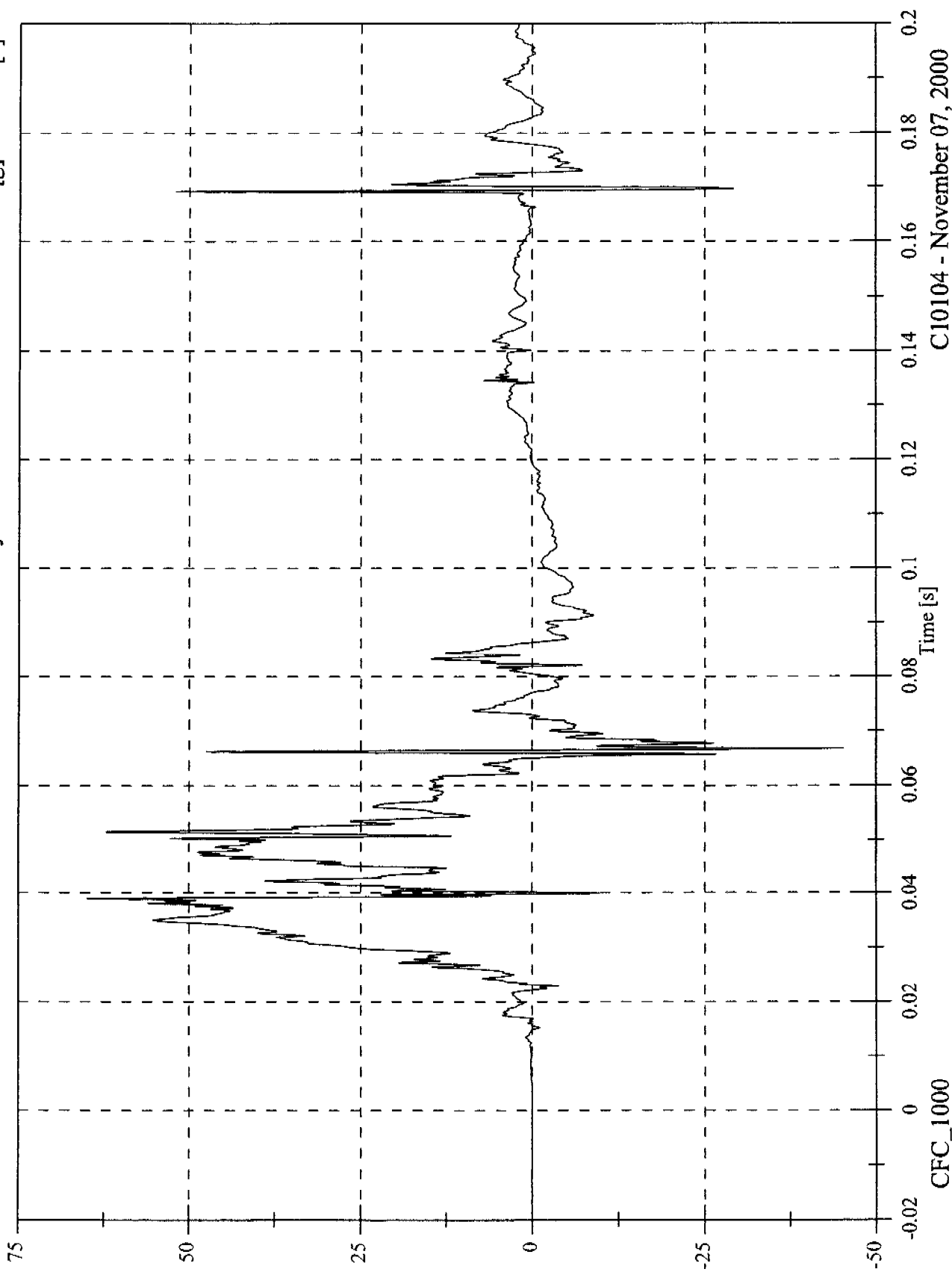


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Rib Ry

Max: 64.9 [g] at 0.039 [s]
Min: -45.3 [g] at 0.067 [s]

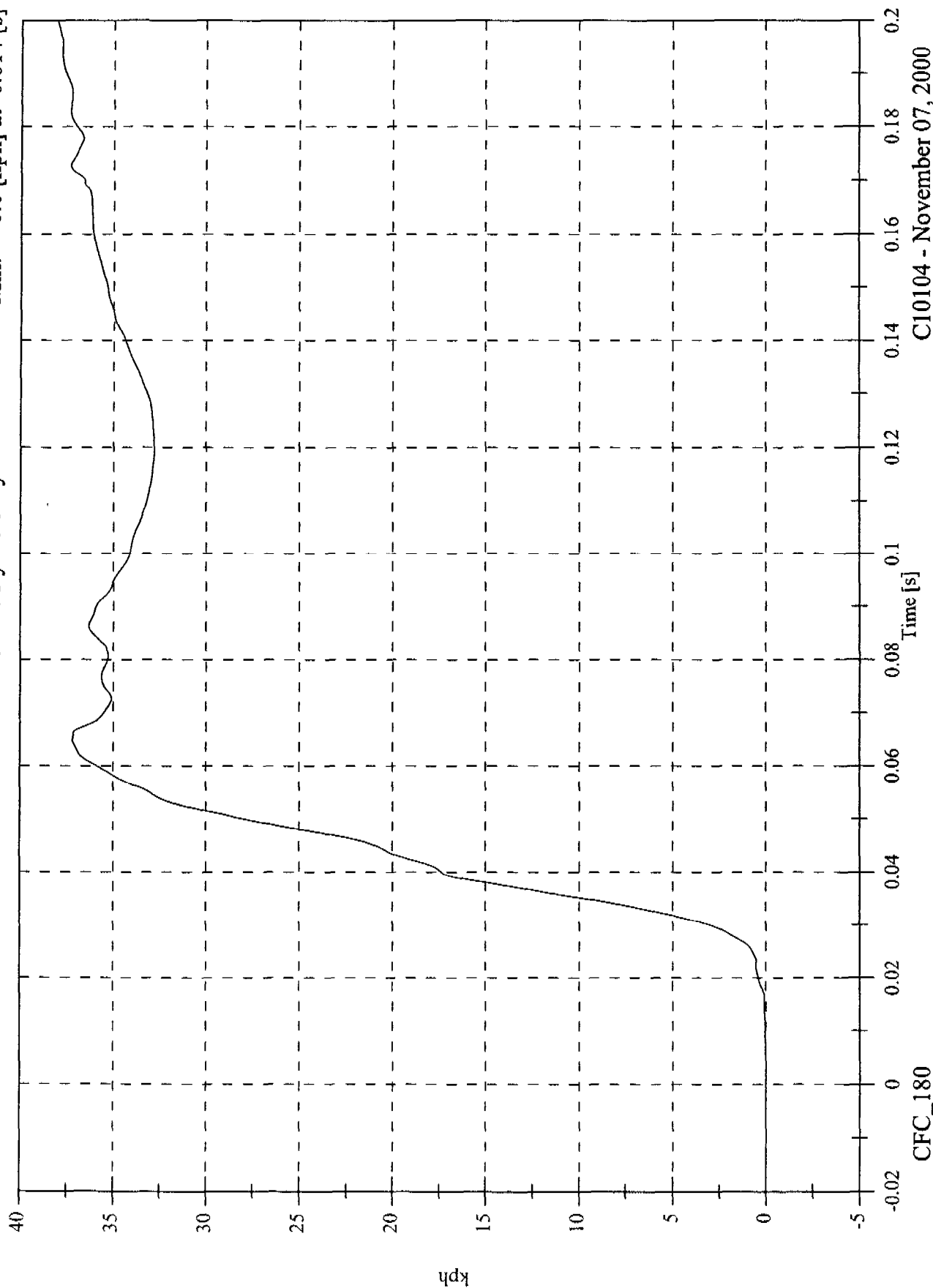


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Rib Ry Velocity

Max: 38.1 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.014 [s]

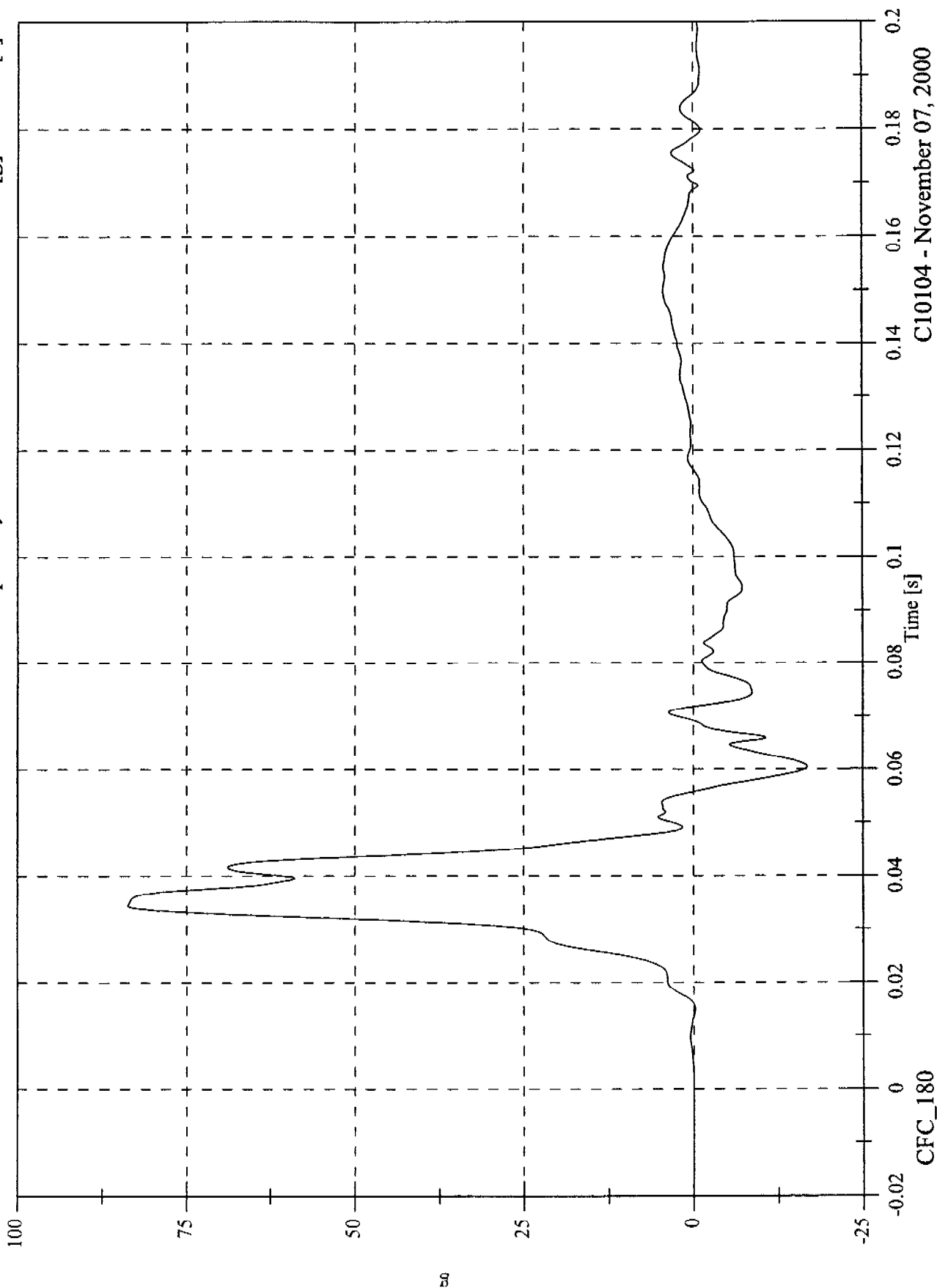


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Spine Ry

Max: 83.7 [g] at 0.034 [s]
Min: -16.9 [g] at 0.060 [s]

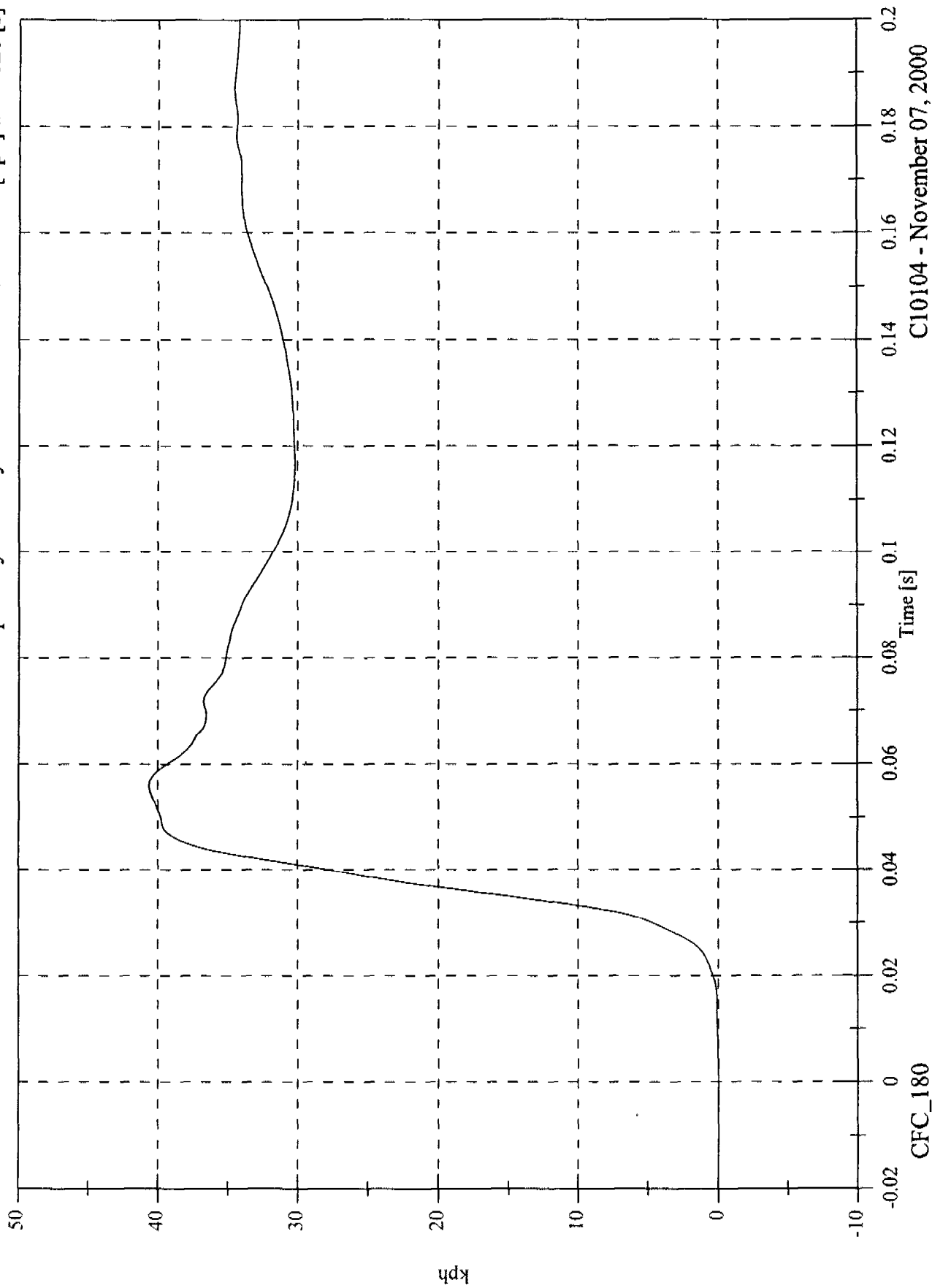


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Spine Ry Velocity

Max: 40.6 [kph] at 0.056 [s]
Min: -0.0 [kph] at -0.020 [s]

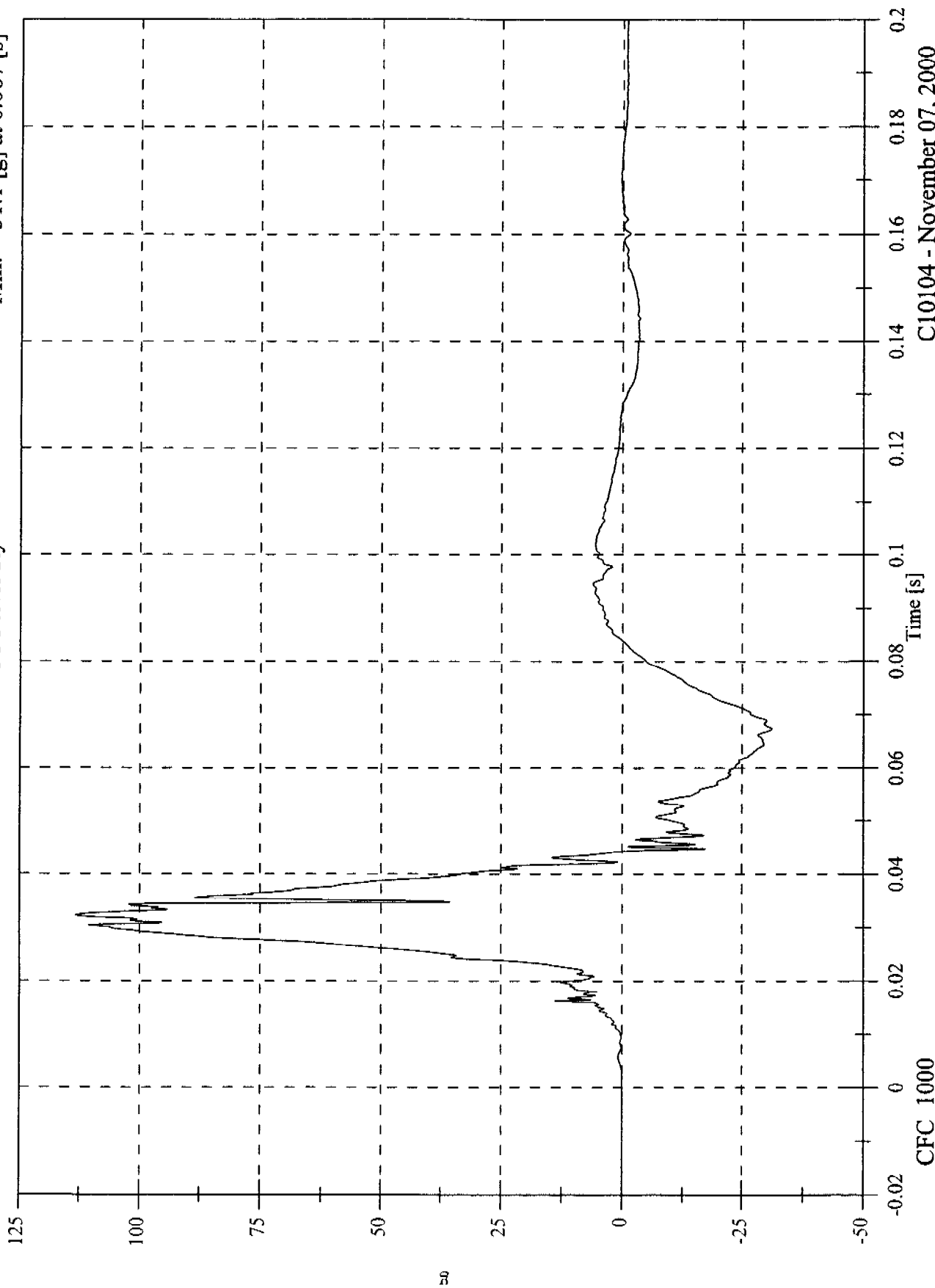


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Pelvic Ry

Max: 113.2 [g] at 0.032 [s]
Min: -31.1 [g] at 0.067 [s]

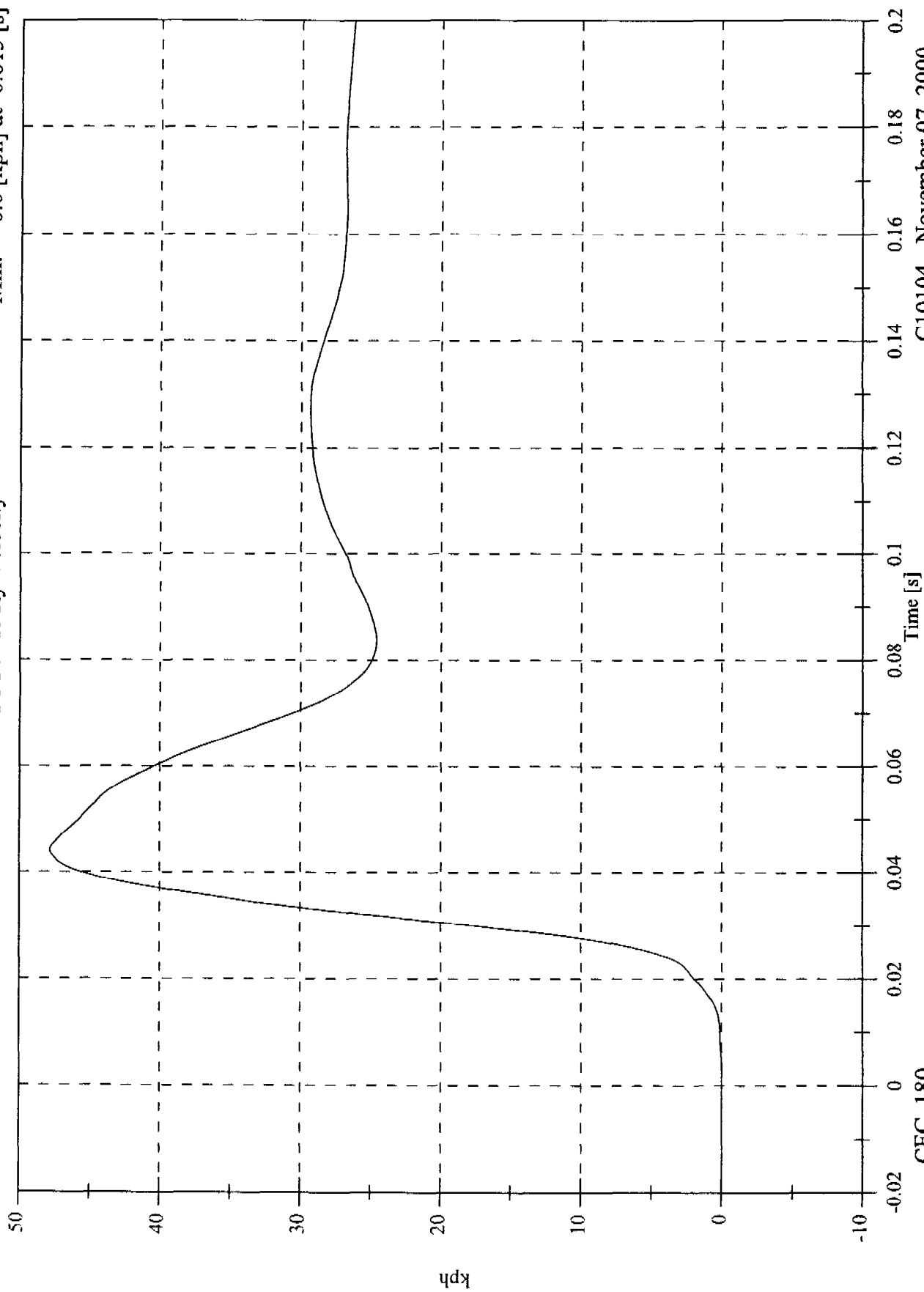


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 47.8 [kph] at 0.044 [s]
Min: -0.0 [kph] at -0.015 [s]

P1 Pelvic Ry Velocity



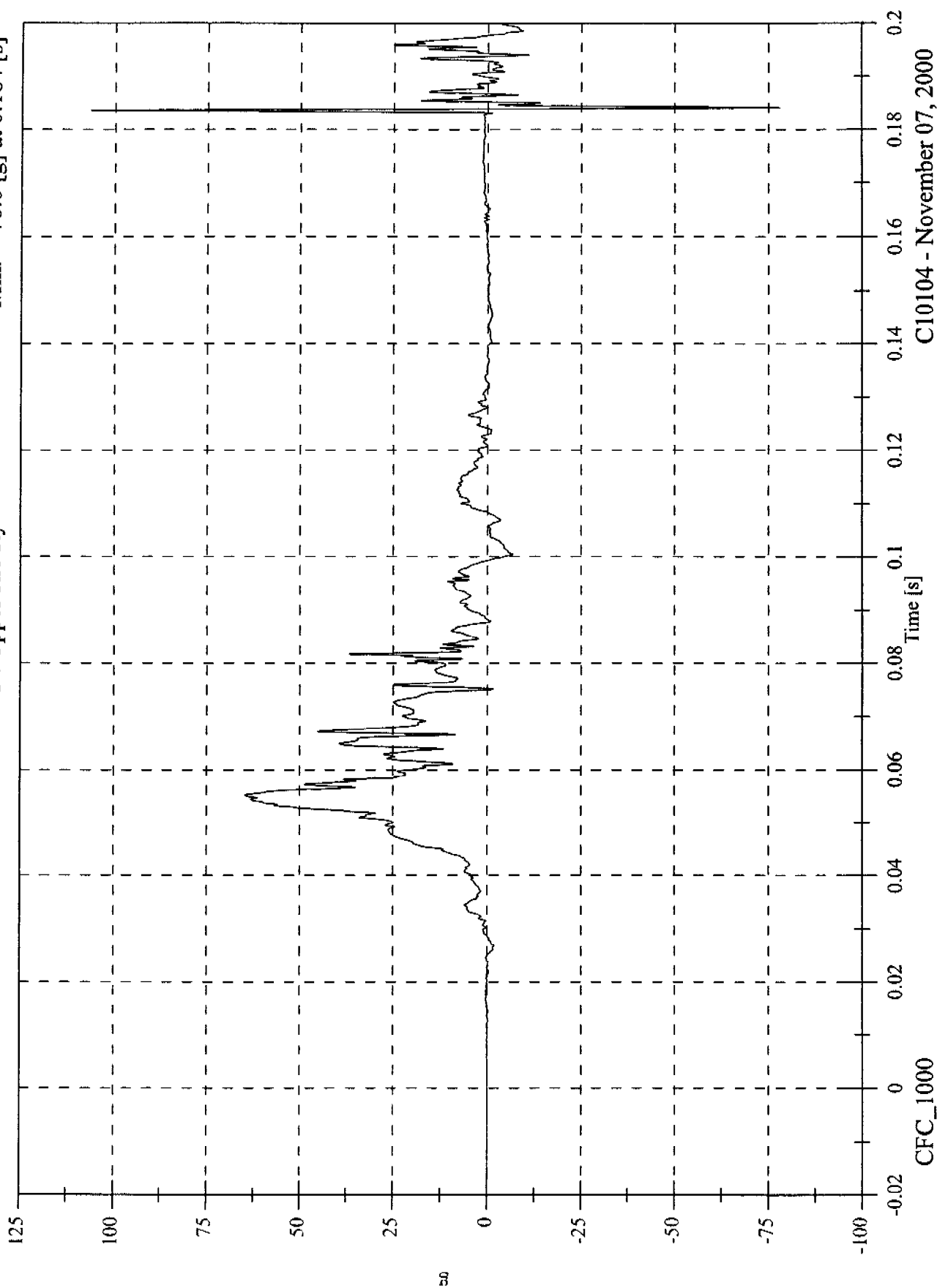
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Upper Rib Ry

Max: 106.5 [g] at 0.184 [s]

Min: -78.0 [g] at 0.184 [s]



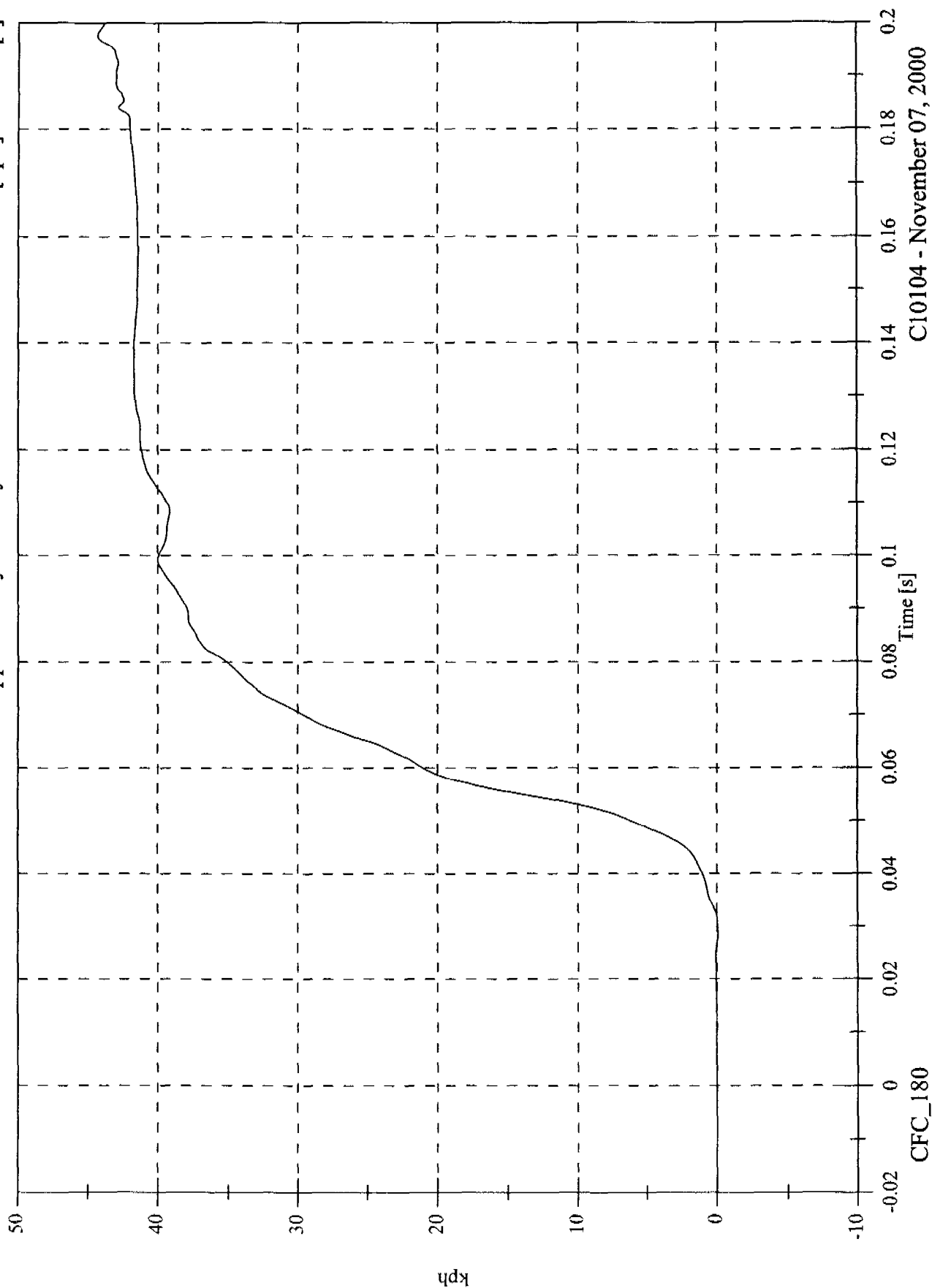
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Upper Rib Ry Velocity

Max: 44.3 [kph] at 0.198 [s]

Min: -0.1 [kph] at 0.029 [s]

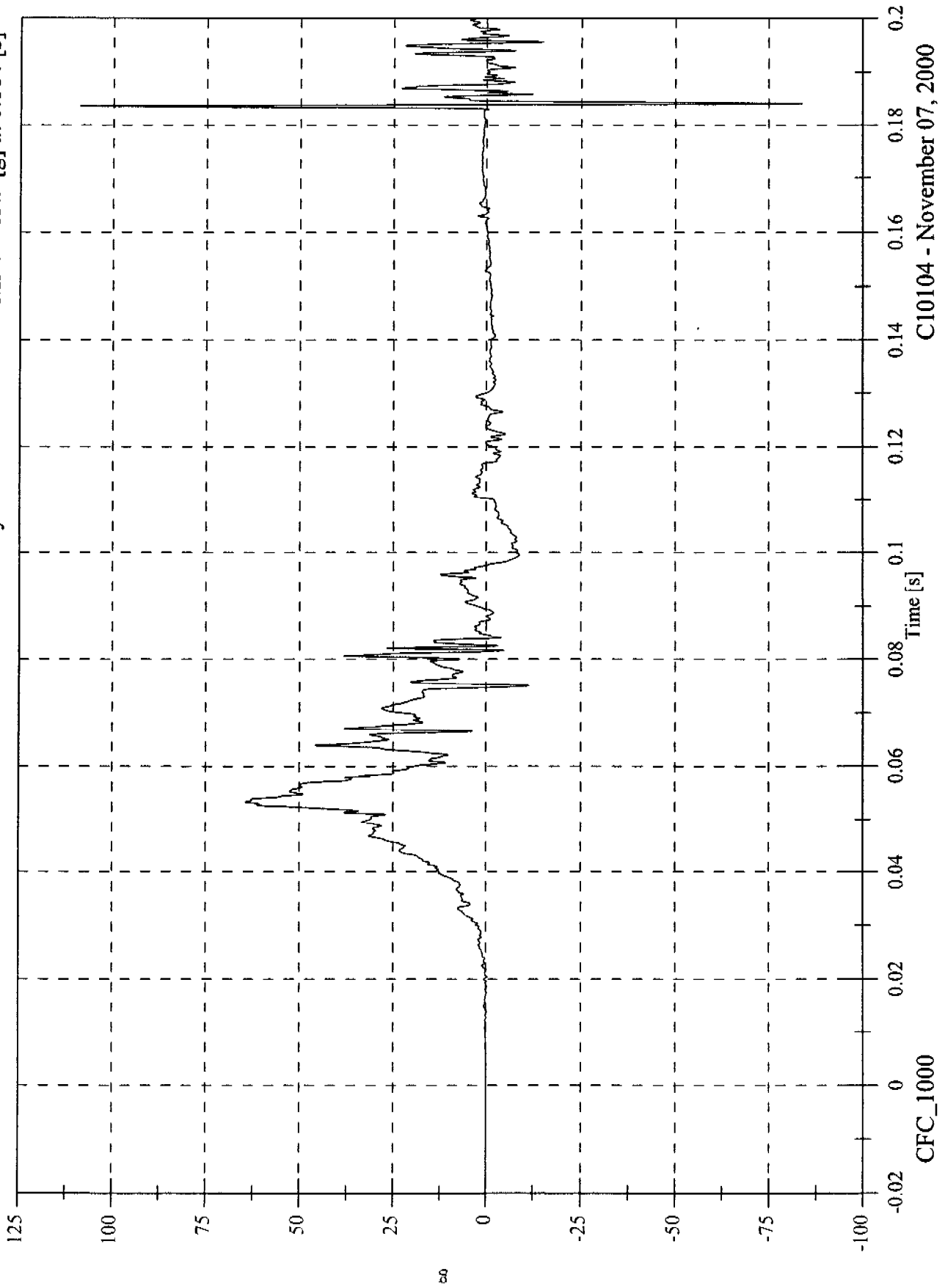


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Rib Ry

Max: 109.0 [g] at 0.184 [s]
Min: -83.9 [g] at 0.184 [s]

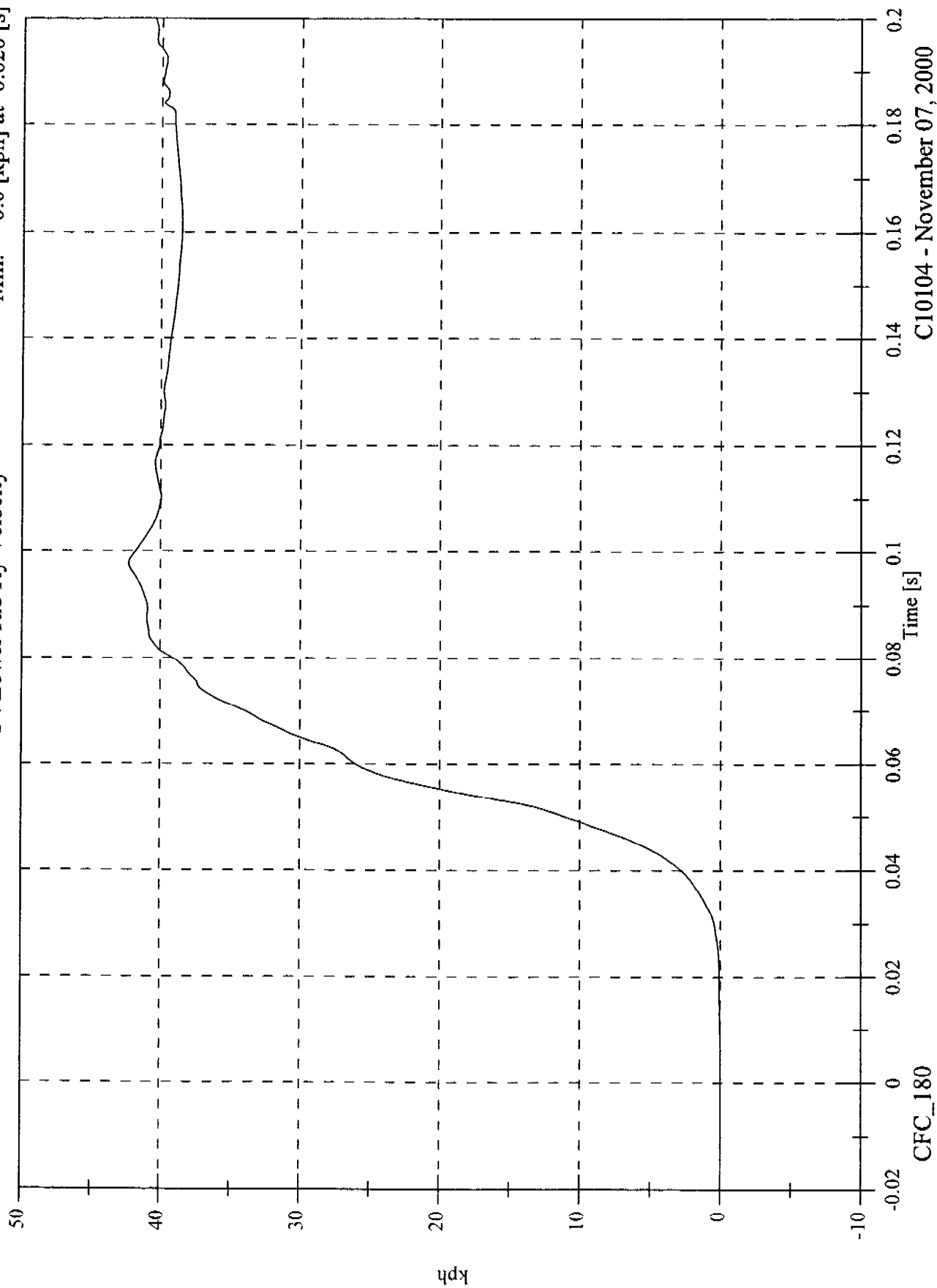


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Rib Ry Velocity

Max: 42.3 [kph] at 0.098 [s]
Min: -0.0 [kph] at -0.020 [s]

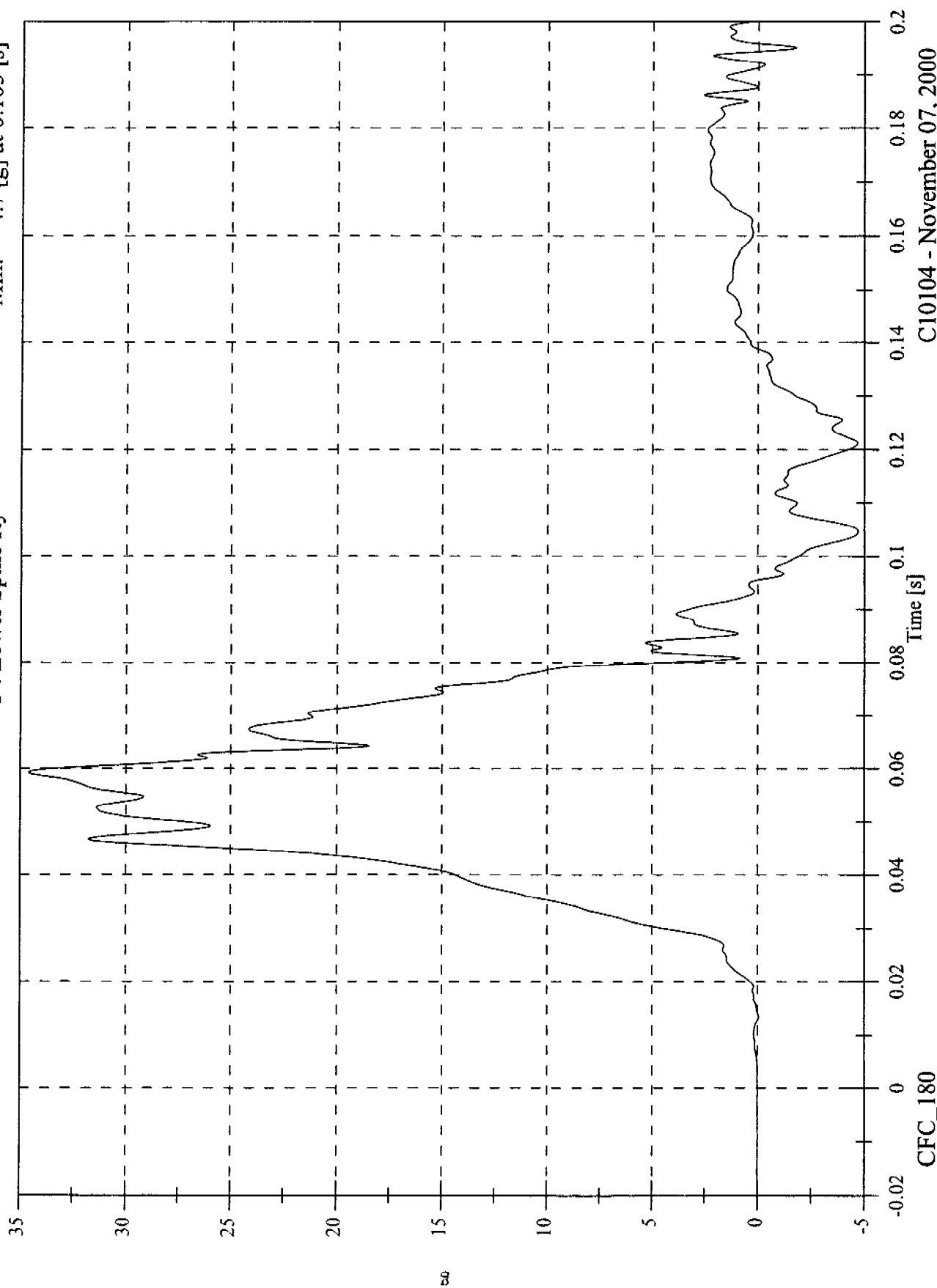


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Spine Ry

Max: 34.6 [g] at 0.059 [s]
Min: -4.7 [g] at 0.105 [s]

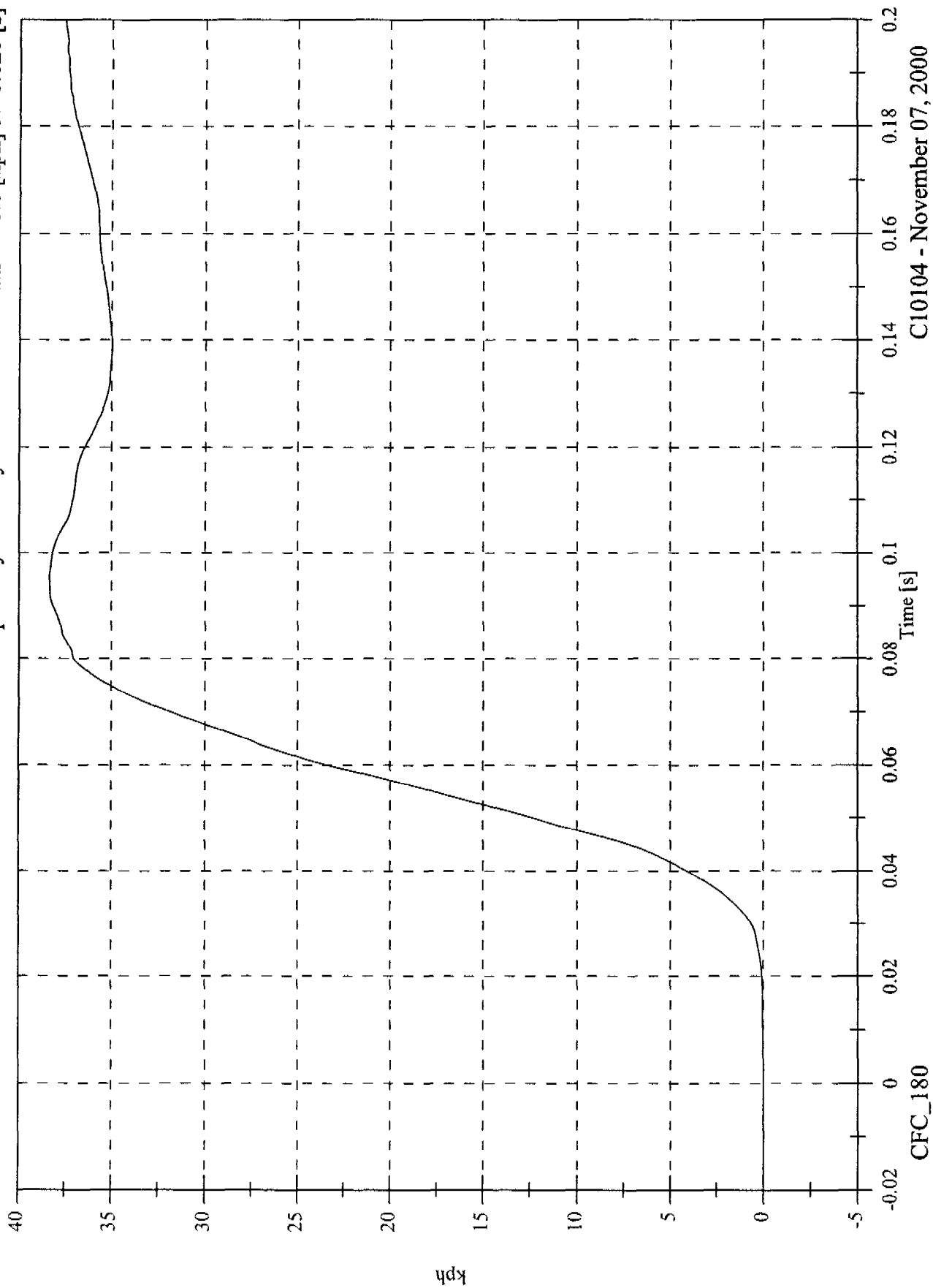


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Spine Ry Velocity

Max: 38.3 [kph] at 0.095 [s]
Min: -0.0 [kph] at -0.020 [s]

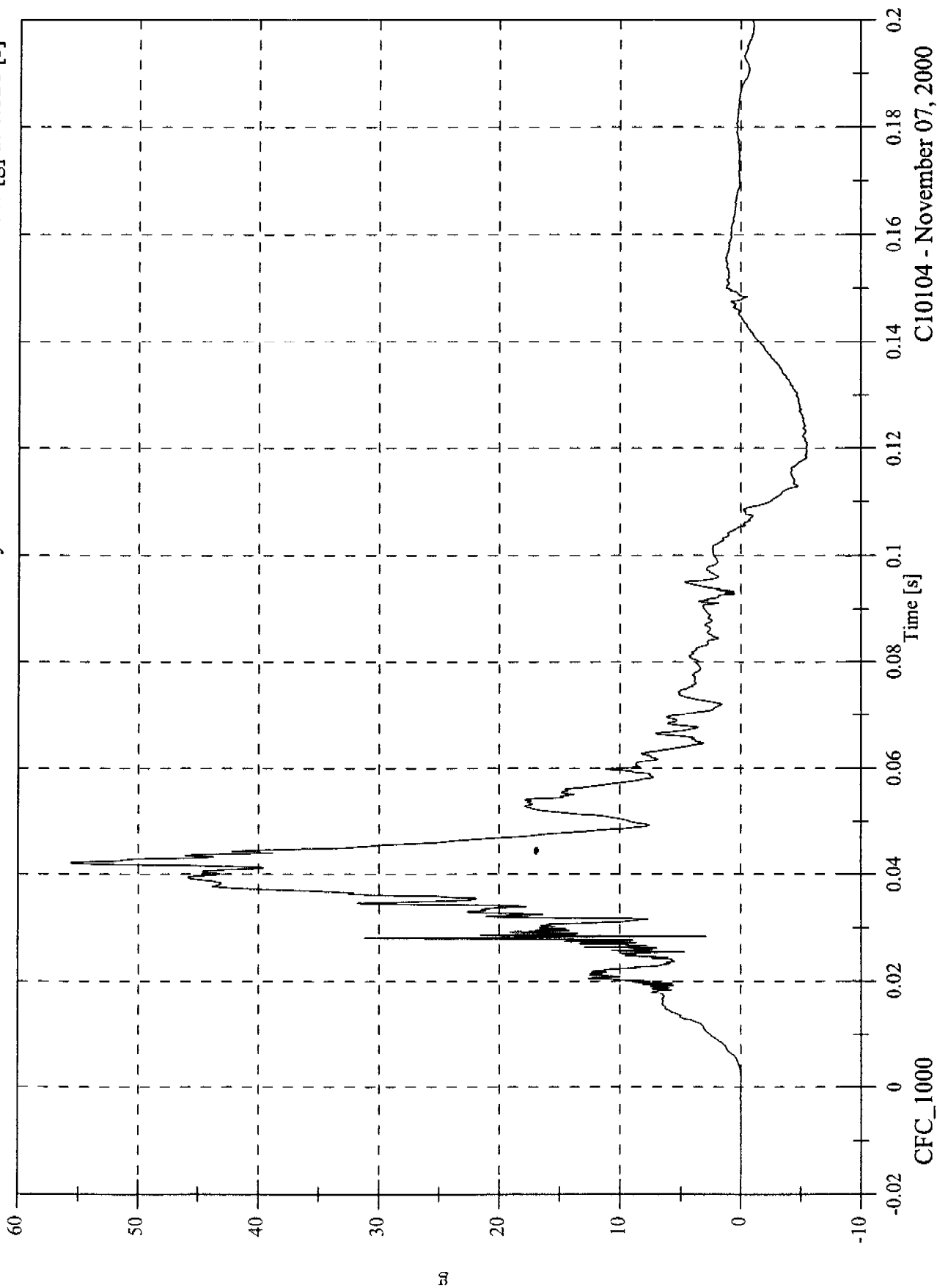


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 55.7 [g] at 0.042 [s]
 Min: -5.6 [g] at 0.121 [s]

P4 Pelvic Ry



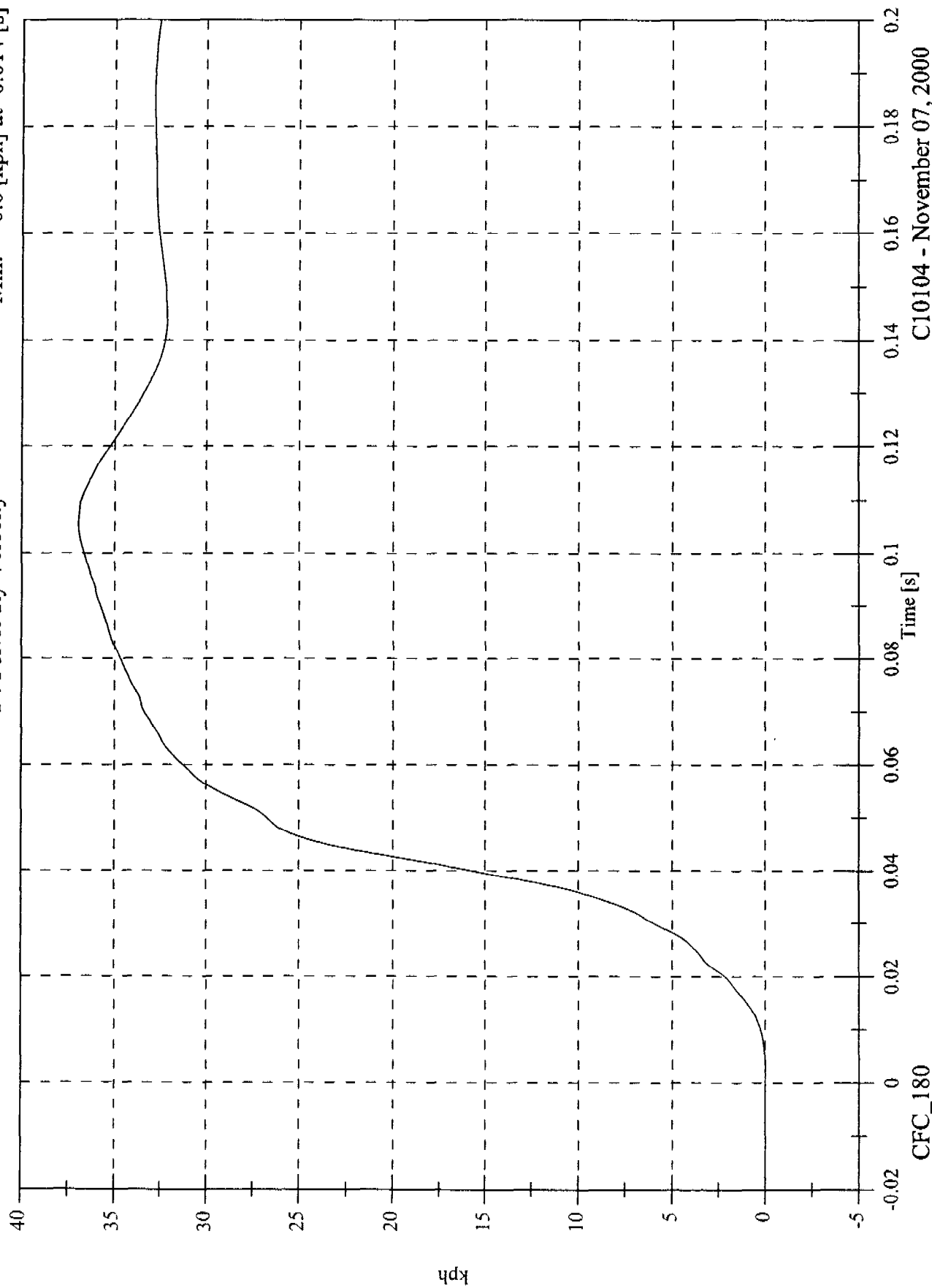
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 36.9 [kph] at 0.105 [s]

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

P4 Pelvic Ry Velocity

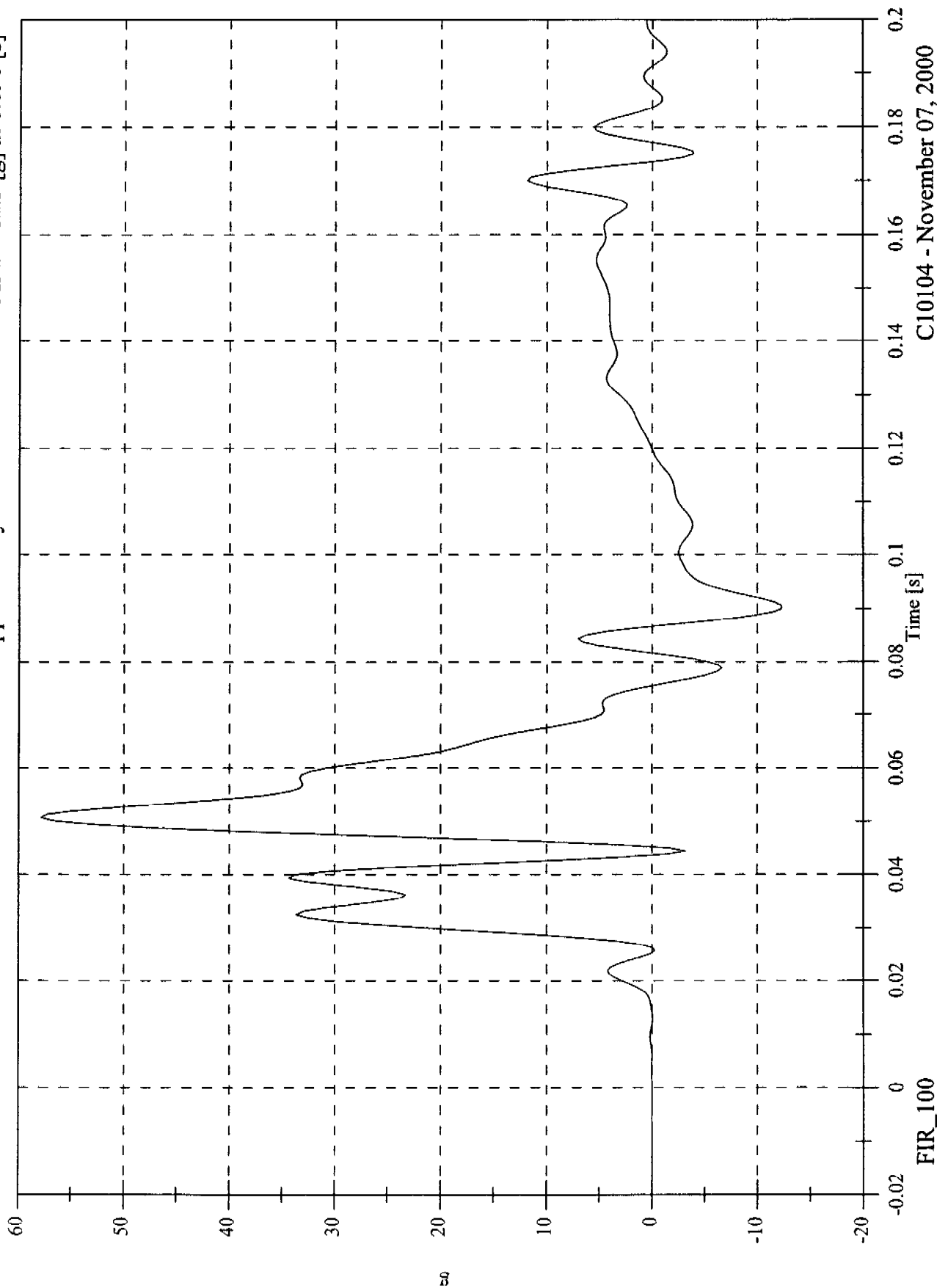


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Upper Rib Ry

Max: 57.8 [g] at 0.051 [s]
Min: -12.3 [g] at 0.090 [s]

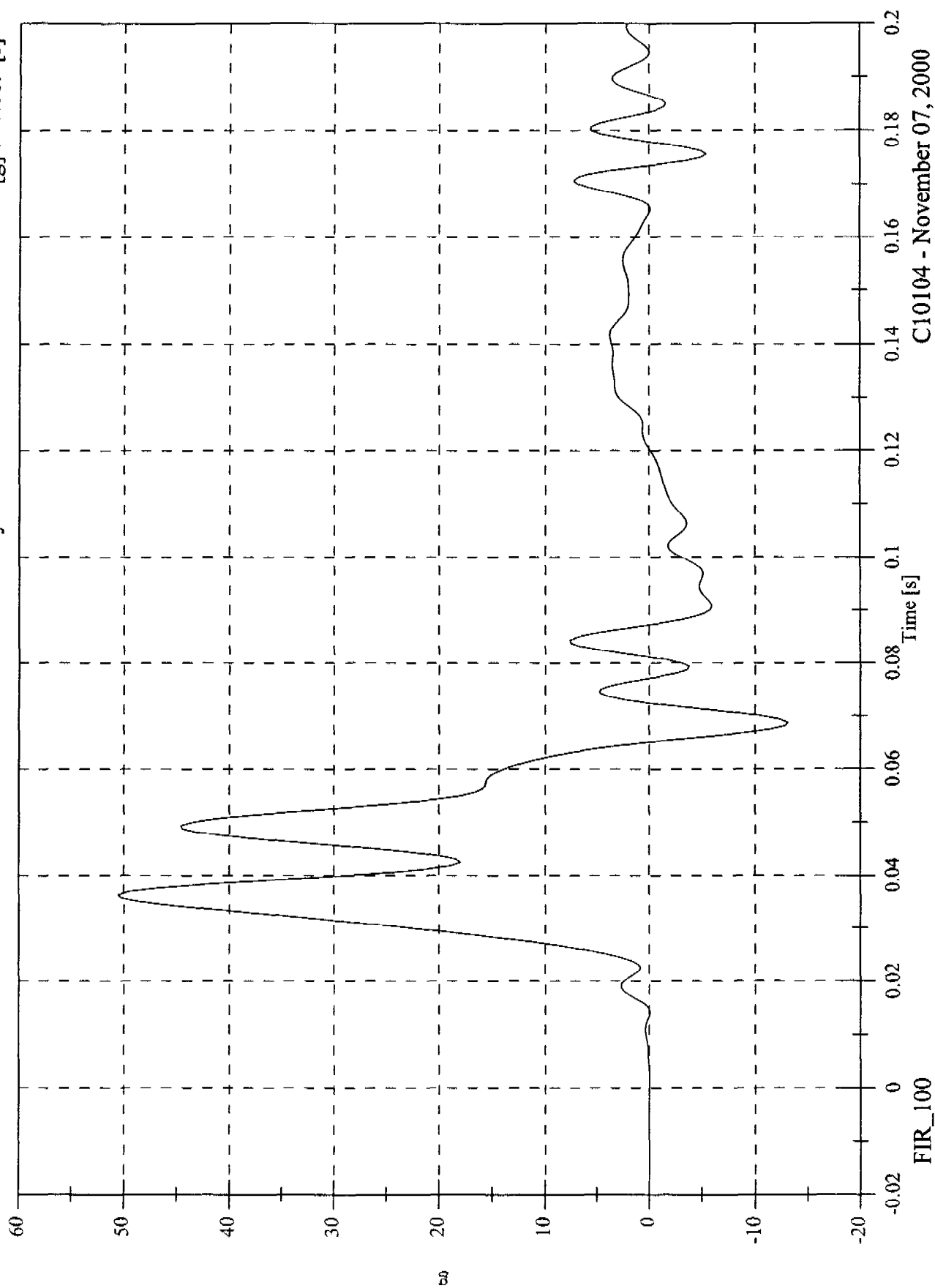


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Rib Ry

Max: 50.6 [g] at 0.036 [s]
Min: -13.2 [g] at 0.069 [s]



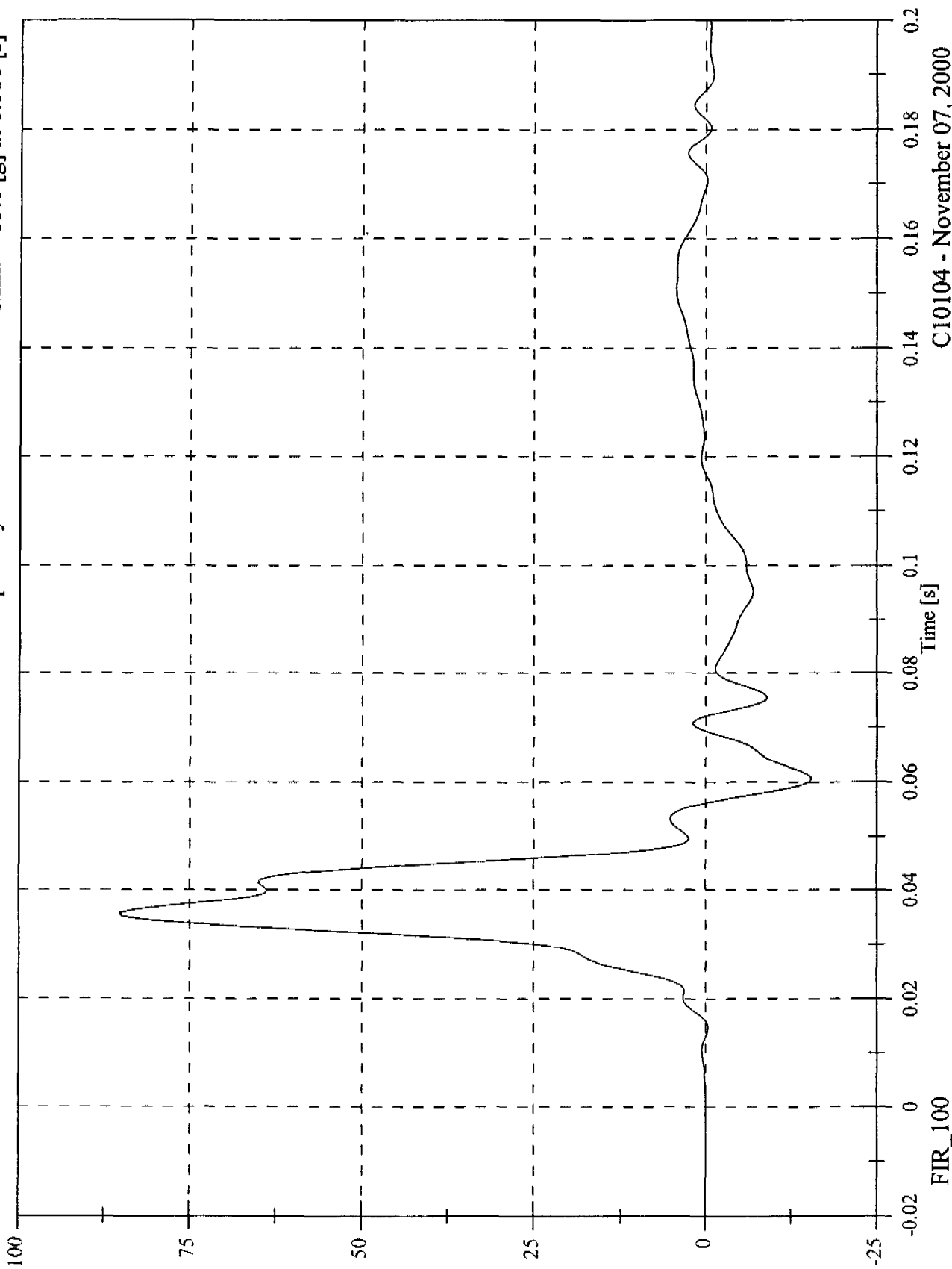
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Lower Spine Ry

Max: 85.2 [g] at 0.036 [s]

Min: -15.6 [g] at 0.061 [s]

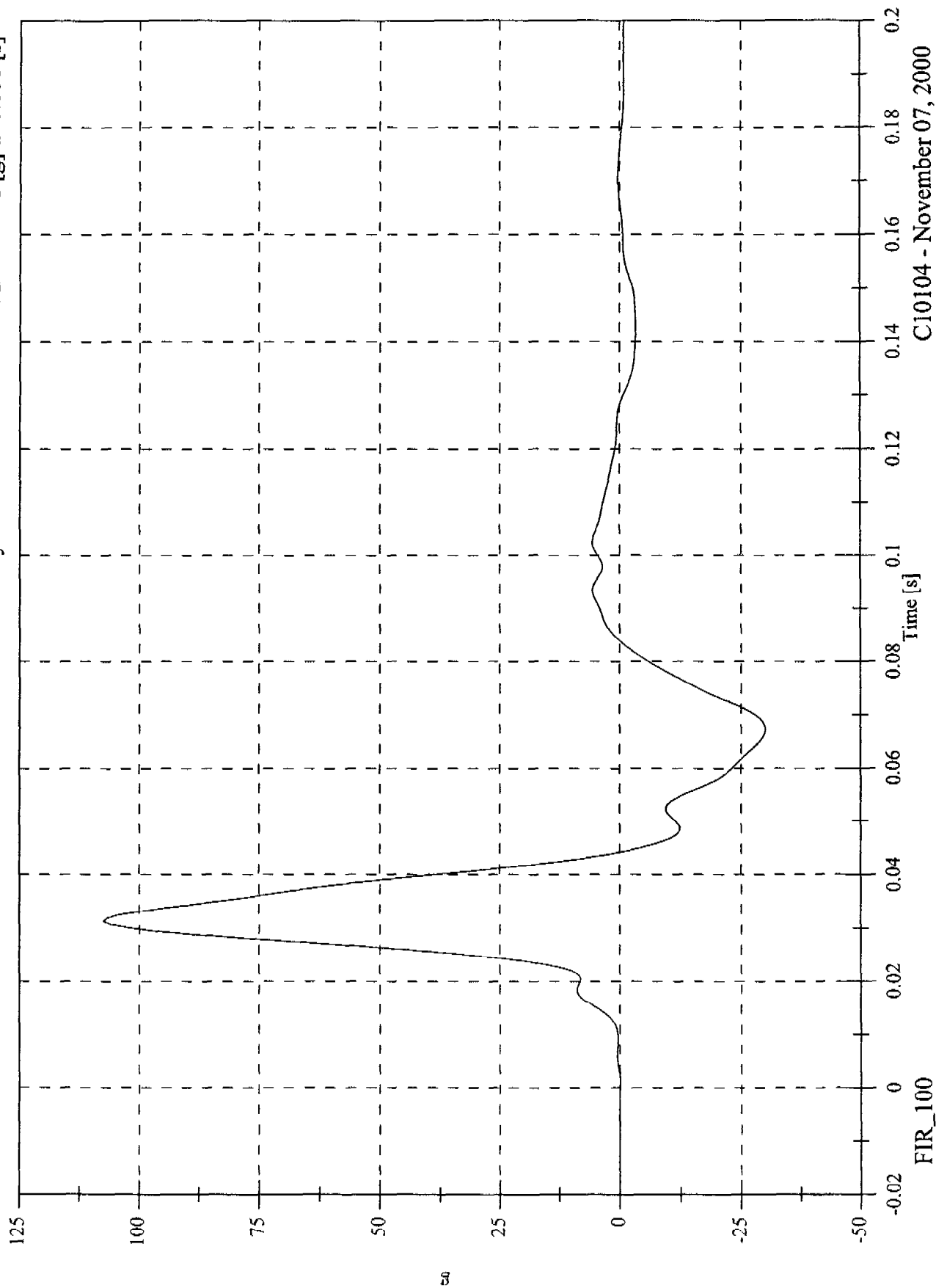


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P1 Pelvic Ry

Max: 107.4 [g] at 0.031 [s]
Min: -30.1 [g] at 0.068 [s]

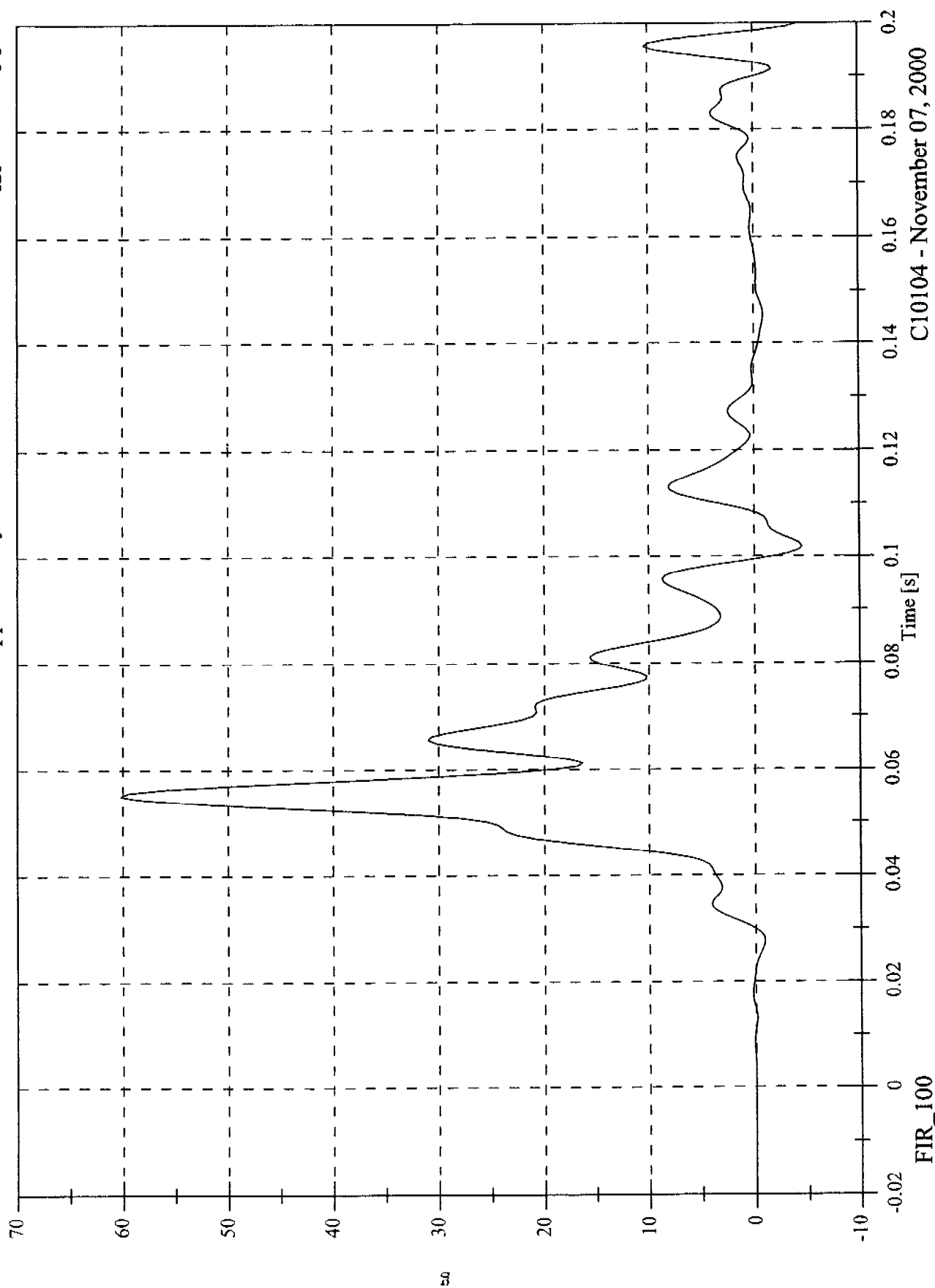


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

Max: 60.2 [g] at 0.055 [s]
Min: -4.5 [g] at 0.102 [s]

P4 Upper Rib Ry

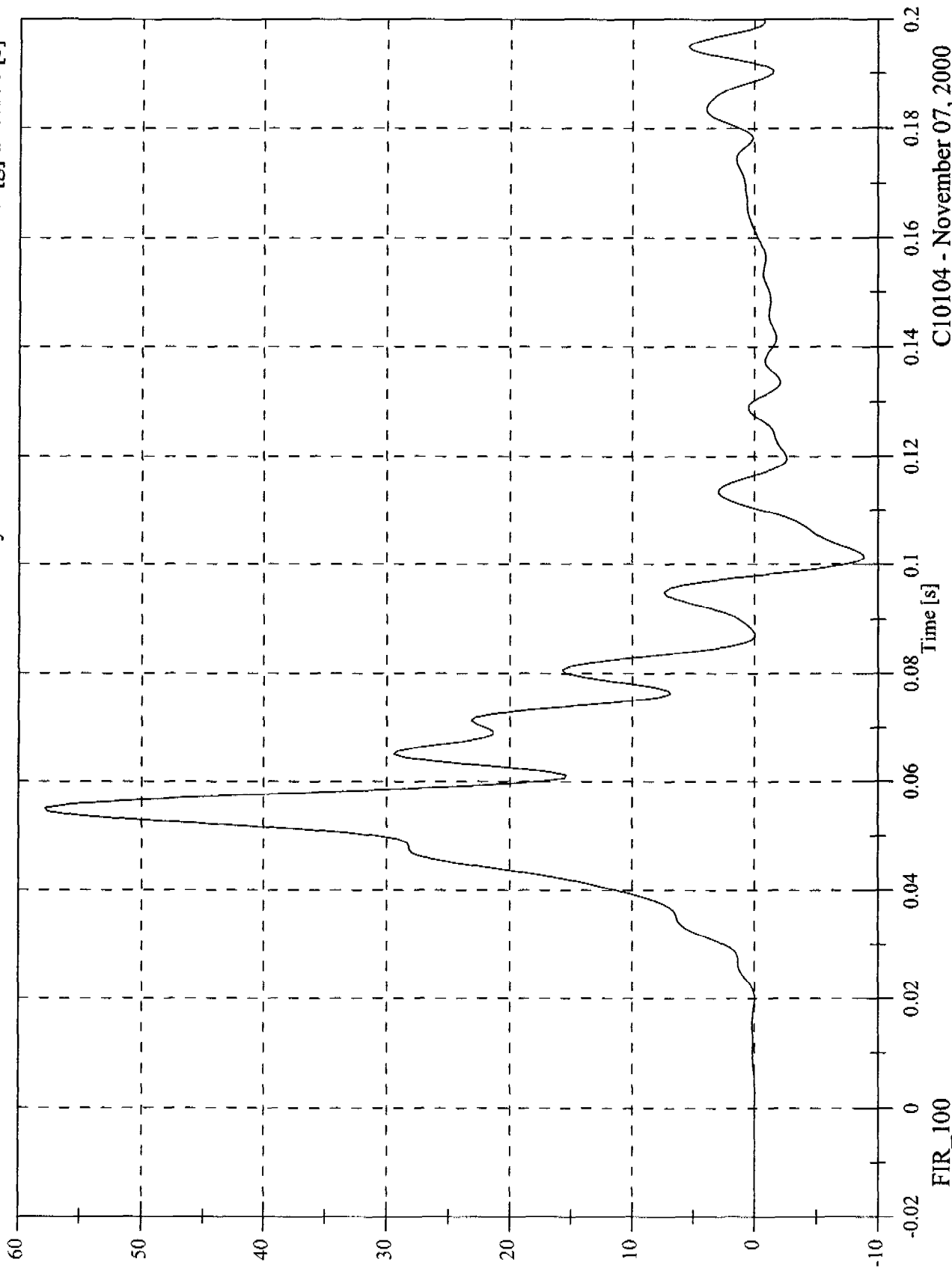


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Rib Ry

Max: 57.8 [g] at 0.055 [s]
Min: -8.9 [g] at 0.101 [s]



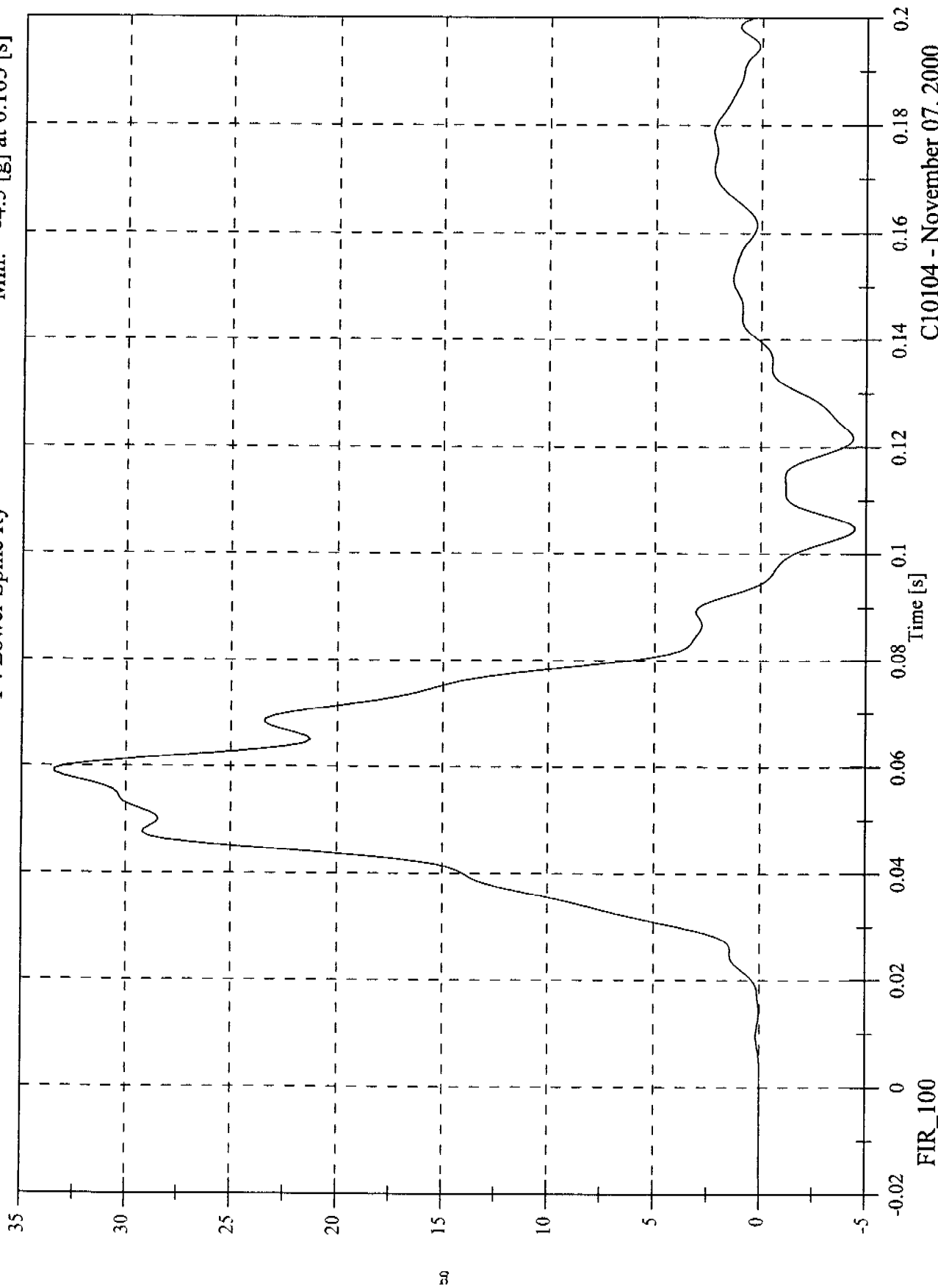
C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Lower Spine Ry

Max: 33.5 [g] at 0.059 [s]

Min: -4.5 [g] at 0.105 [s]

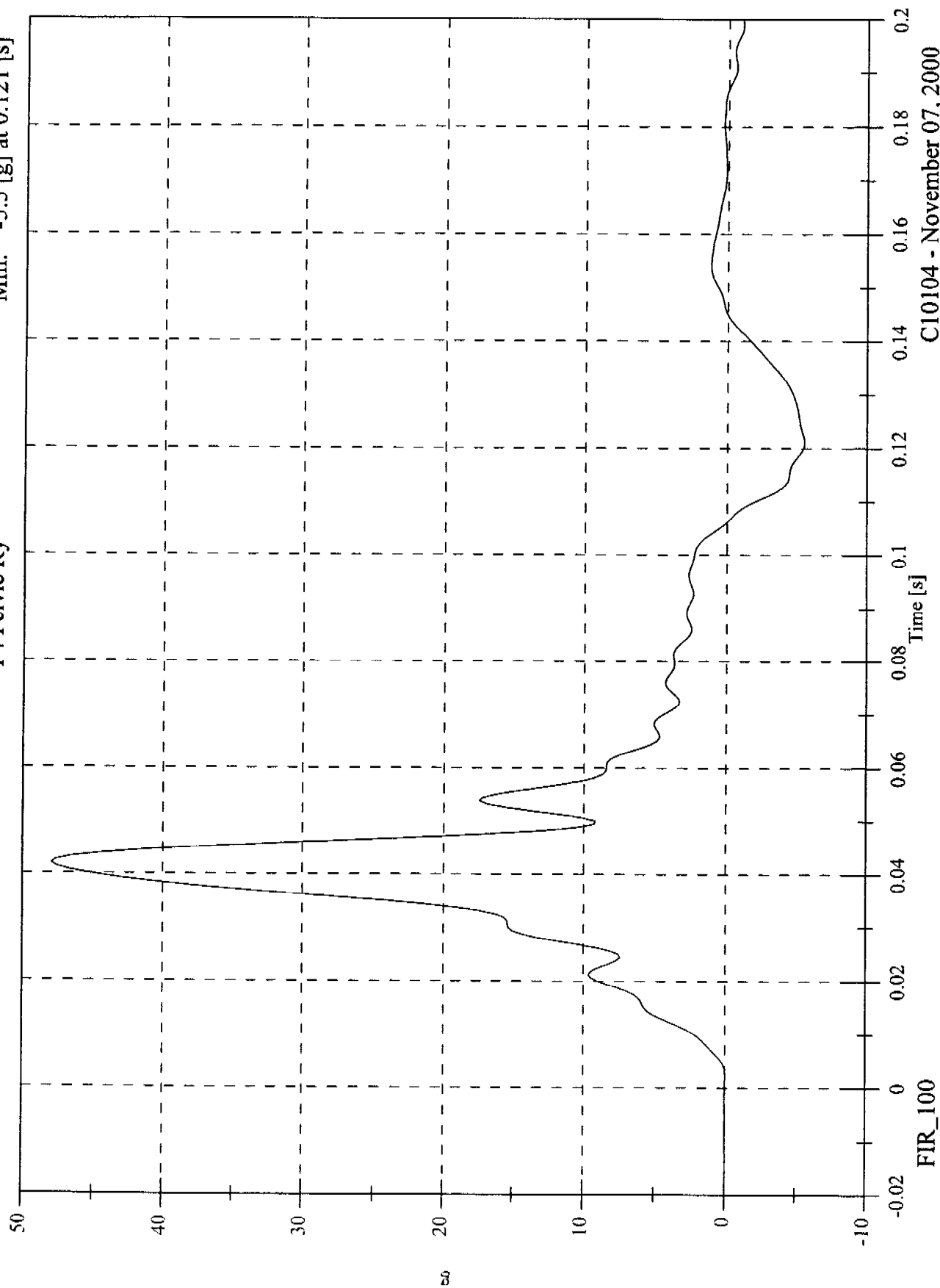


C10104 - November 07, 2000

FMVSS 214D Test #4 - 2001 Chevrolet Tracker

P4 Pelvic Ry

Max: 47.9 [g] at 0.042 [s]
Min: -5.5 [g] at 0.121 [s]



C10104 - November 07, 2000

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID PRE & POST TEST CALIBRATION

CONFIGURED FOR LEFT SIDE IMPACT

Date: October 19, 2000; November 30, 2000

Sequential Test Number:

1.3

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID NO.: 015		SID NO.: 016	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	902	902	902	902
RH- Rib Height (mm)	501 - 521	511	511	512	513
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	236	239	239	239
KV- Knee Pivot from Back Line (mm)	511 - 526	521	521	526	526
SW- Knee Pivot to Floor (mm)	490 - 505	493	493	494	495
HW- Hip Width (mm)	356 - 391	372	373	366	366
THORAX IMPACTS					
TEMPERATURE (°C)	18.9 - 25.5	20.0	21.7	20.0	21.7
RELATIVE HUMIDITY (%)	10 - 70	30	31	30	32
PROBE SPEED (m/s)	4.27 - 4.33	4.30	4.28	4.29	4.30
UPPER RIB (g's)	37 - 46	39.1	42.6	38.7	38.6
LOWER RIB (g's)	37 - 46	40.4	40.2	38.7	40.7
LOWER SPINE (g's)	15 - 22	21.8	21.7	20.8	21.1
PELVIS IMPACT					
TEMPERATURE (°C)	18.9 - 25.5	21.0	21.7	20.0	21.7
RELATIVE HUMIDITY (%)	10 - 70	32	31	30	32
PROBE SPEED (m/s)	4.27 - 4.33	4.28	4.27	4.29	4.29
PELVIS (g's)	40 - 60	45.2	41.2	48.8	41.8

REMARKS: None

CALIBRATION TEST RESULTS
PRE-TEST

SID NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: October 19, 2000 Laboratory Technician: B. Swiecicki

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

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: October 16, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	372

REMARKS: None

THORACIC SHOCK ABSORBER TESTS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1.3
Date: April 19, 2000 Laboratory Technician: B. Swiecicki

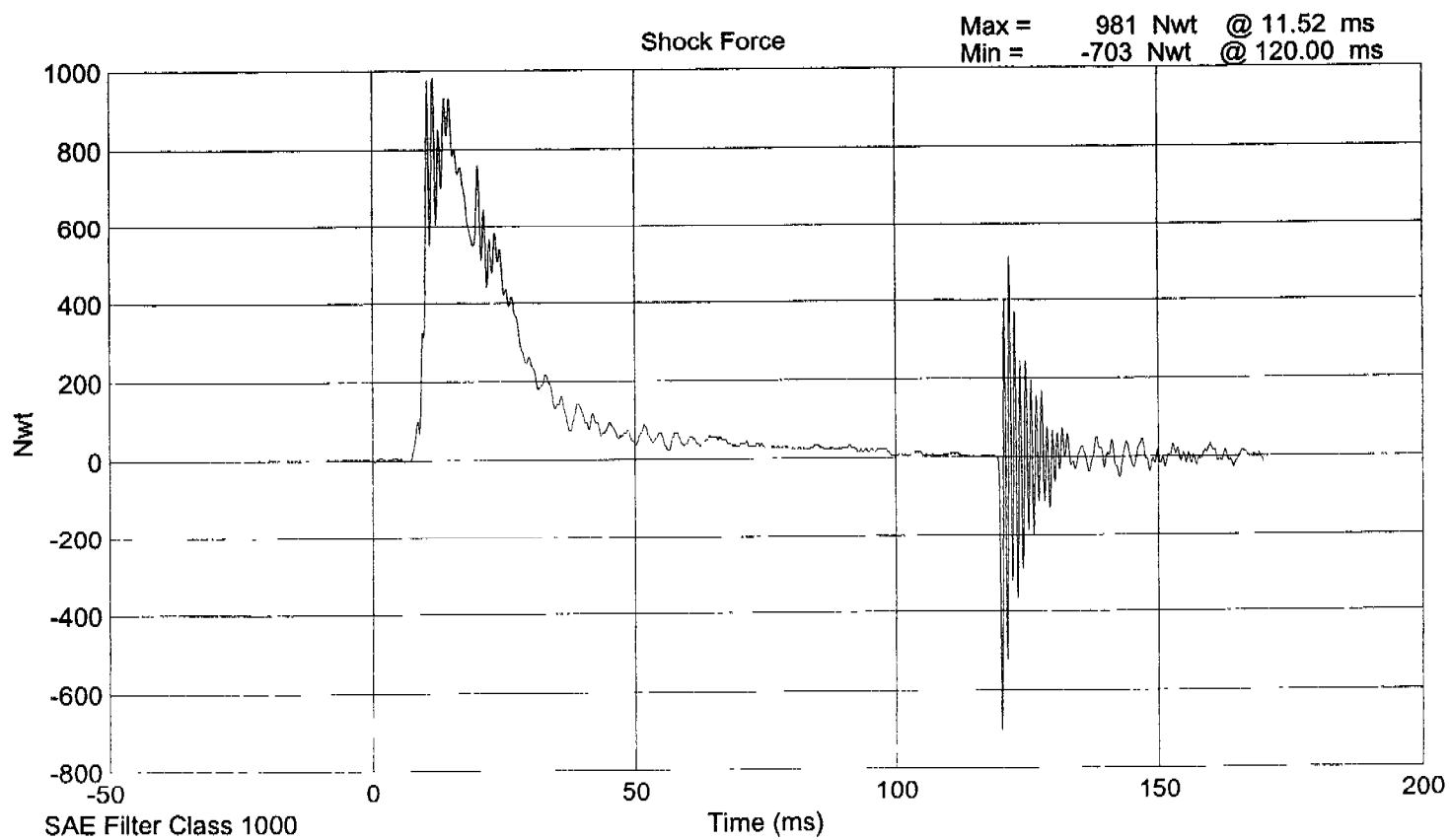
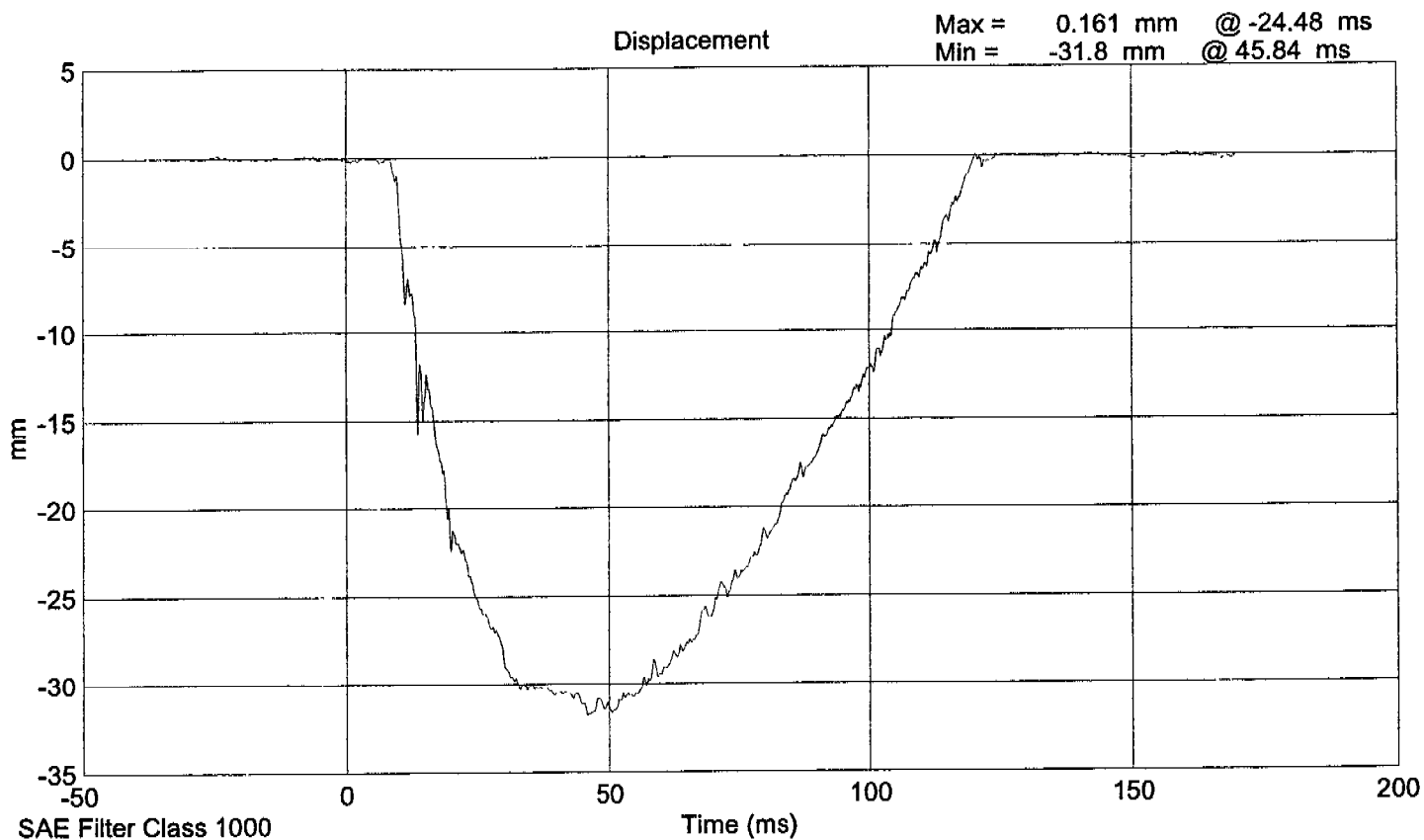
DAMPER IDENTIFICATION: 015

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	981.2
	DISPLACEMENT (mm)	30 - 35	31.8
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1849.4
	DISPLACEMENT (mm)	32 - 37	34.7
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3925.0
	DISPLACEMENT (mm)	33 - 40	35.1

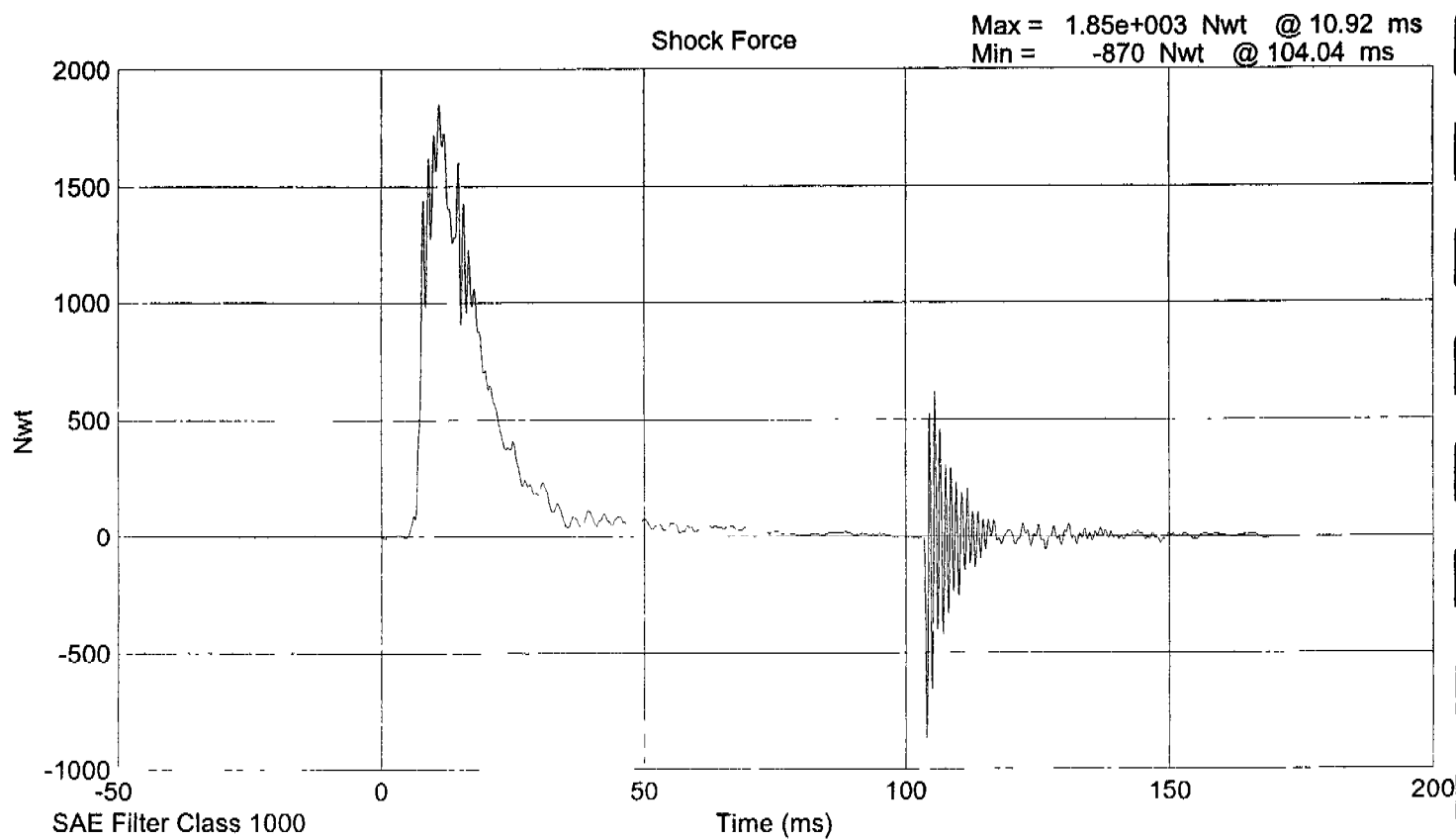
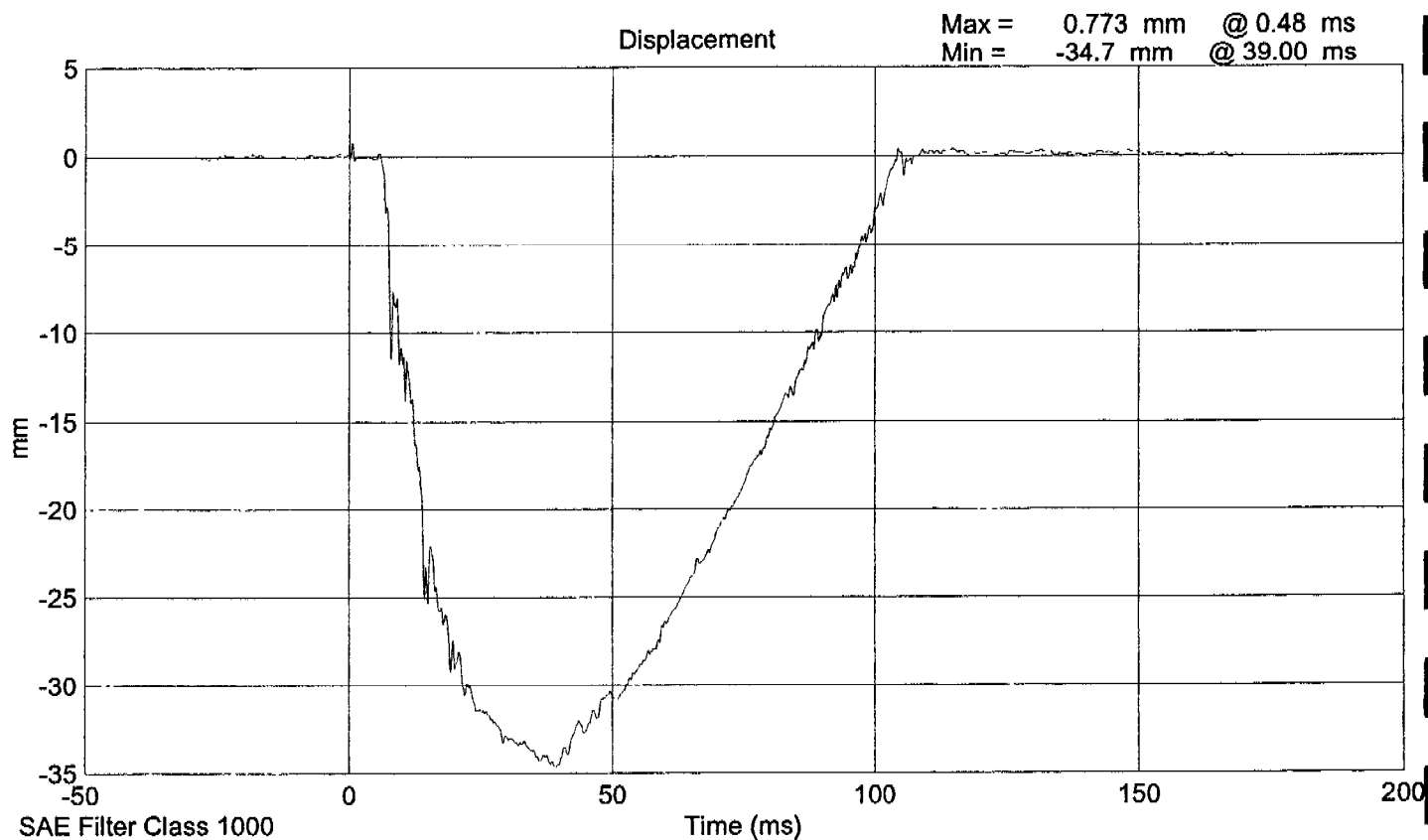
DAMPER SETTING: 5

REMARKS: None

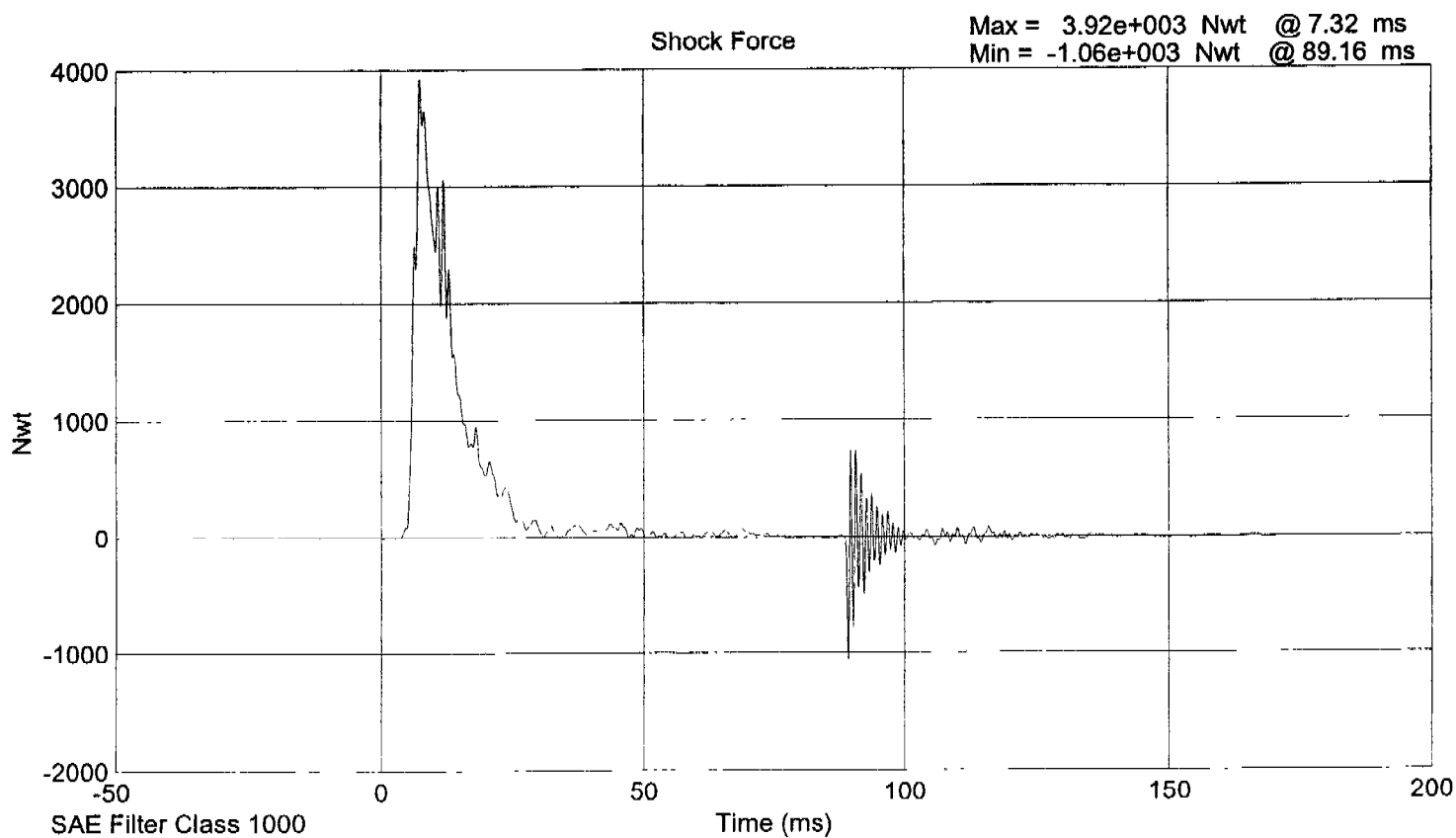
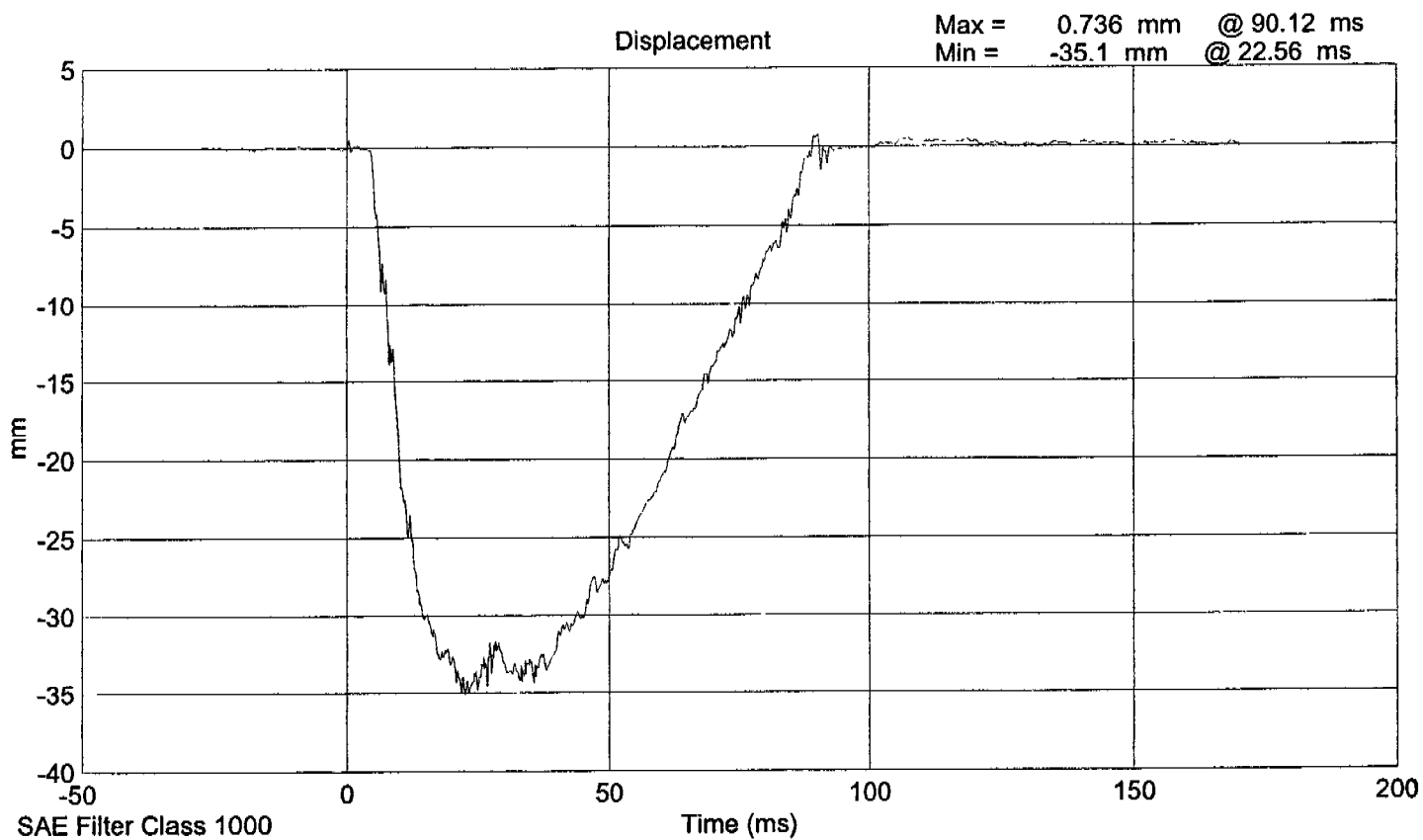
SID 015 Shock Absorber Impact Test @ 3.048 m/s



SID 015 Shock Absorber Impact Test @ 4.572 m/s



SID 015 Shock Absorber Impact Test @ 6.096 m/s



**LATERAL THORAX IMPACT TEST
PRE-TEST**

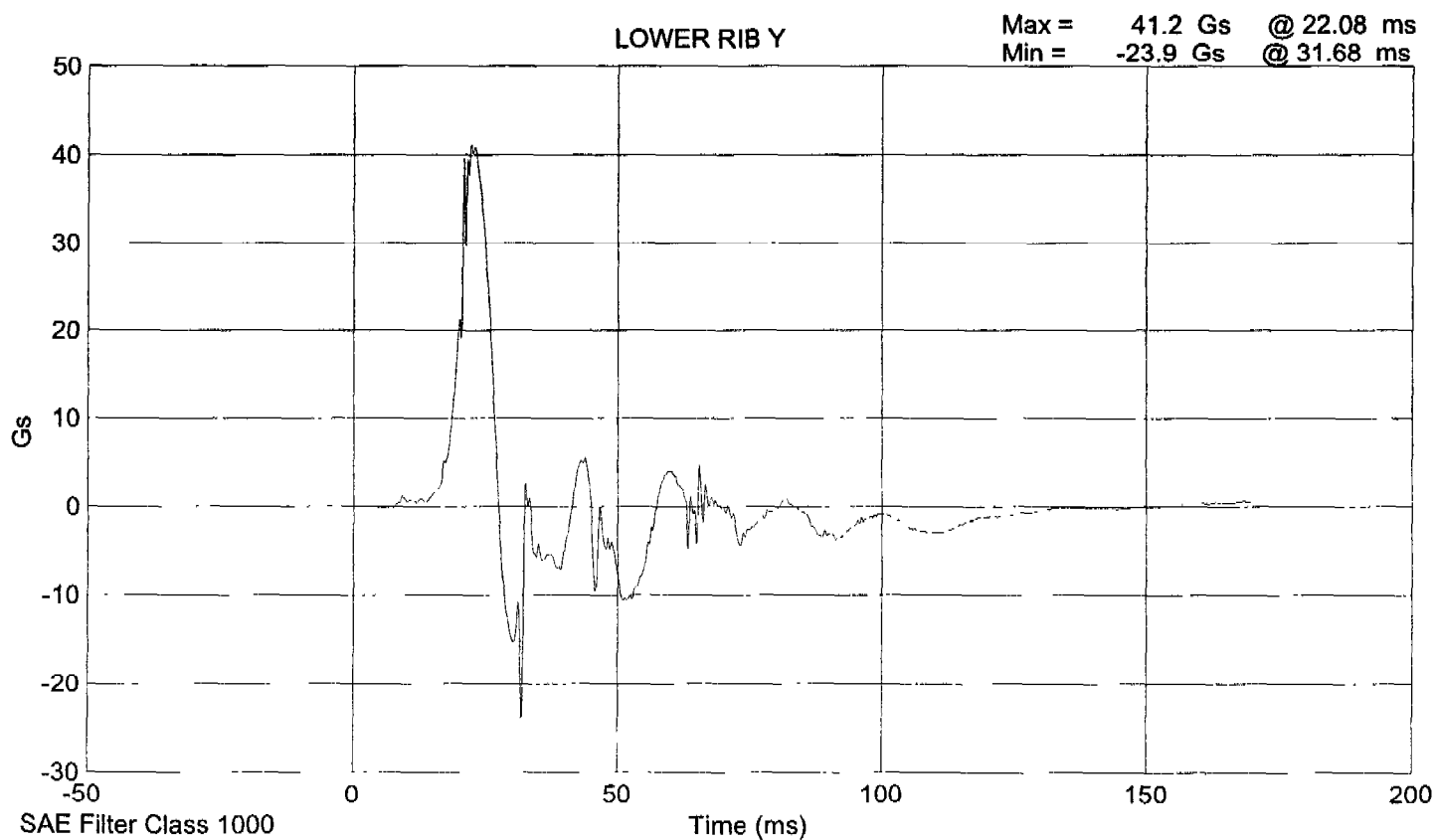
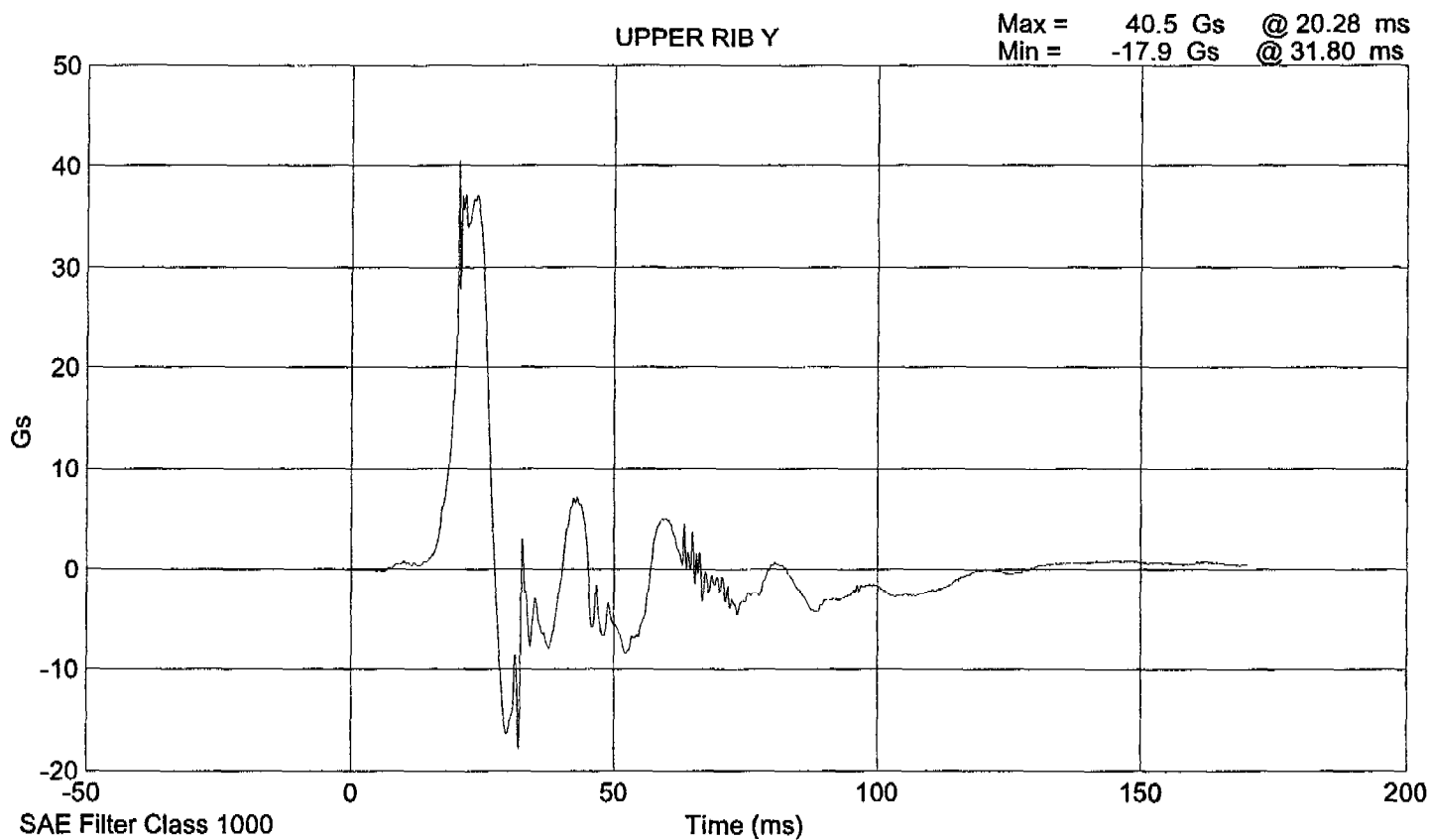
CONFIGURED FOR LEFT SIDE IMPACT

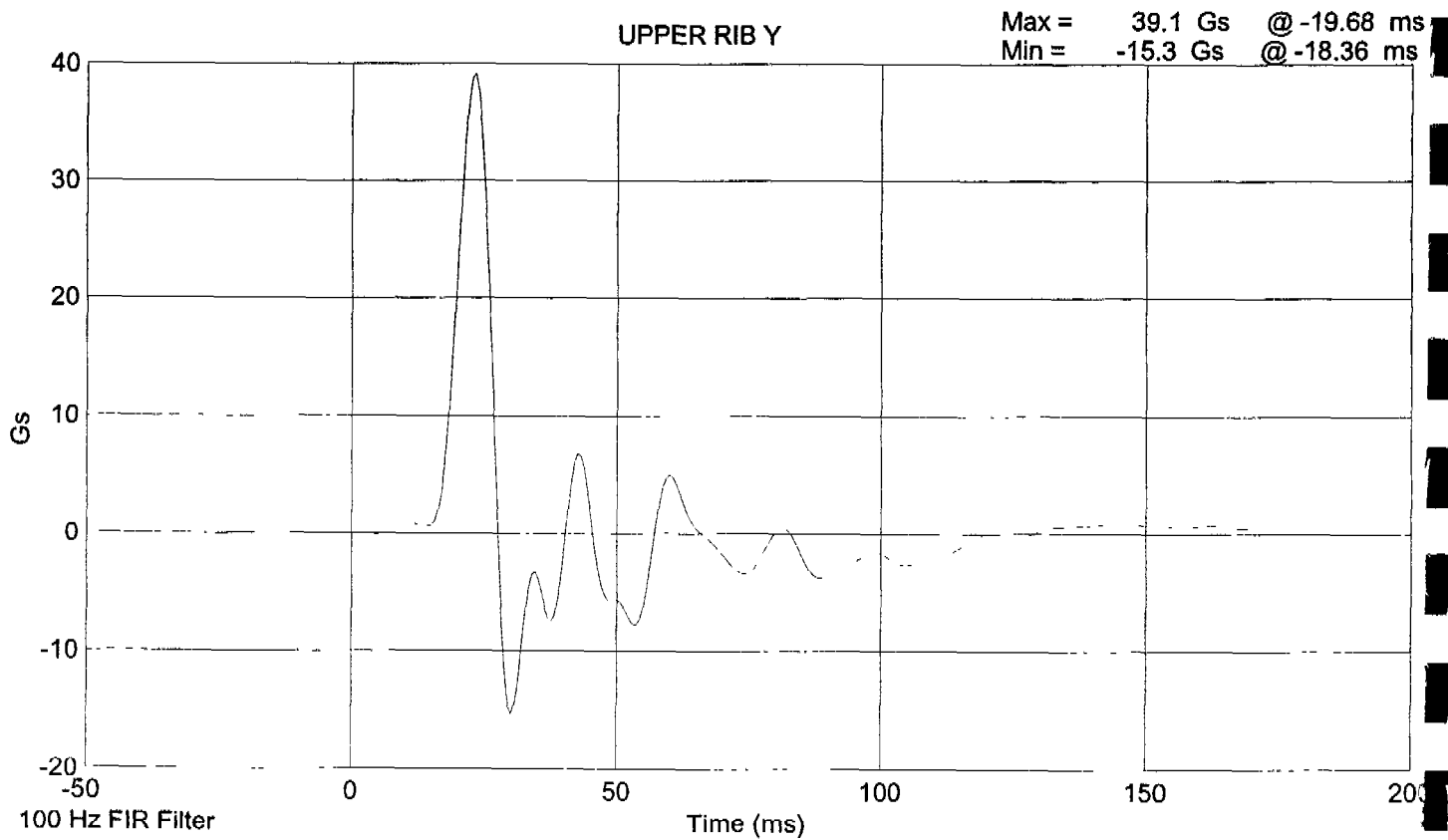
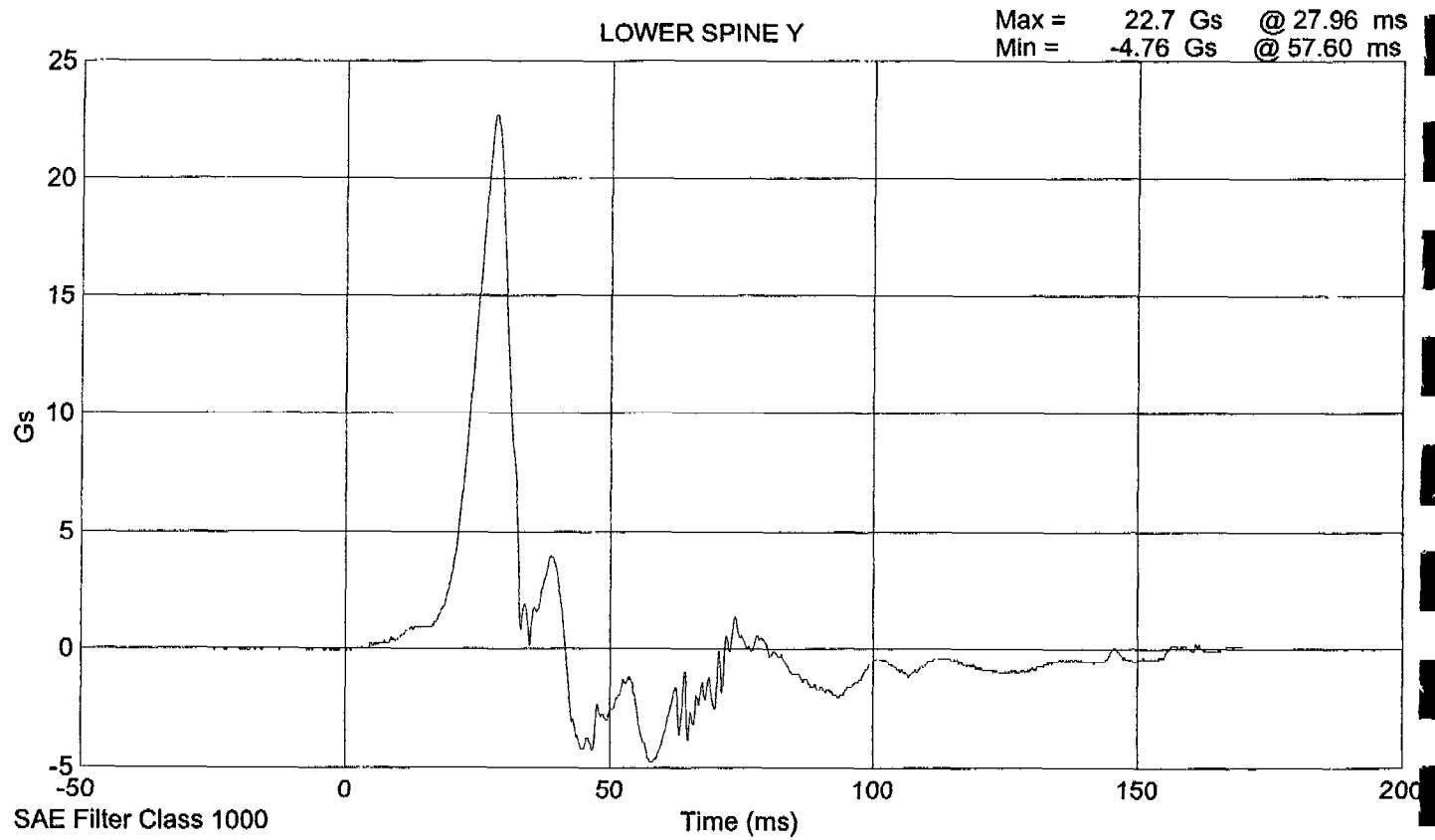
SID Serial No.: 015 Sequential Test Number: 1
Date: October 13, 2000 Laboratory Technician: B. Swiecicki

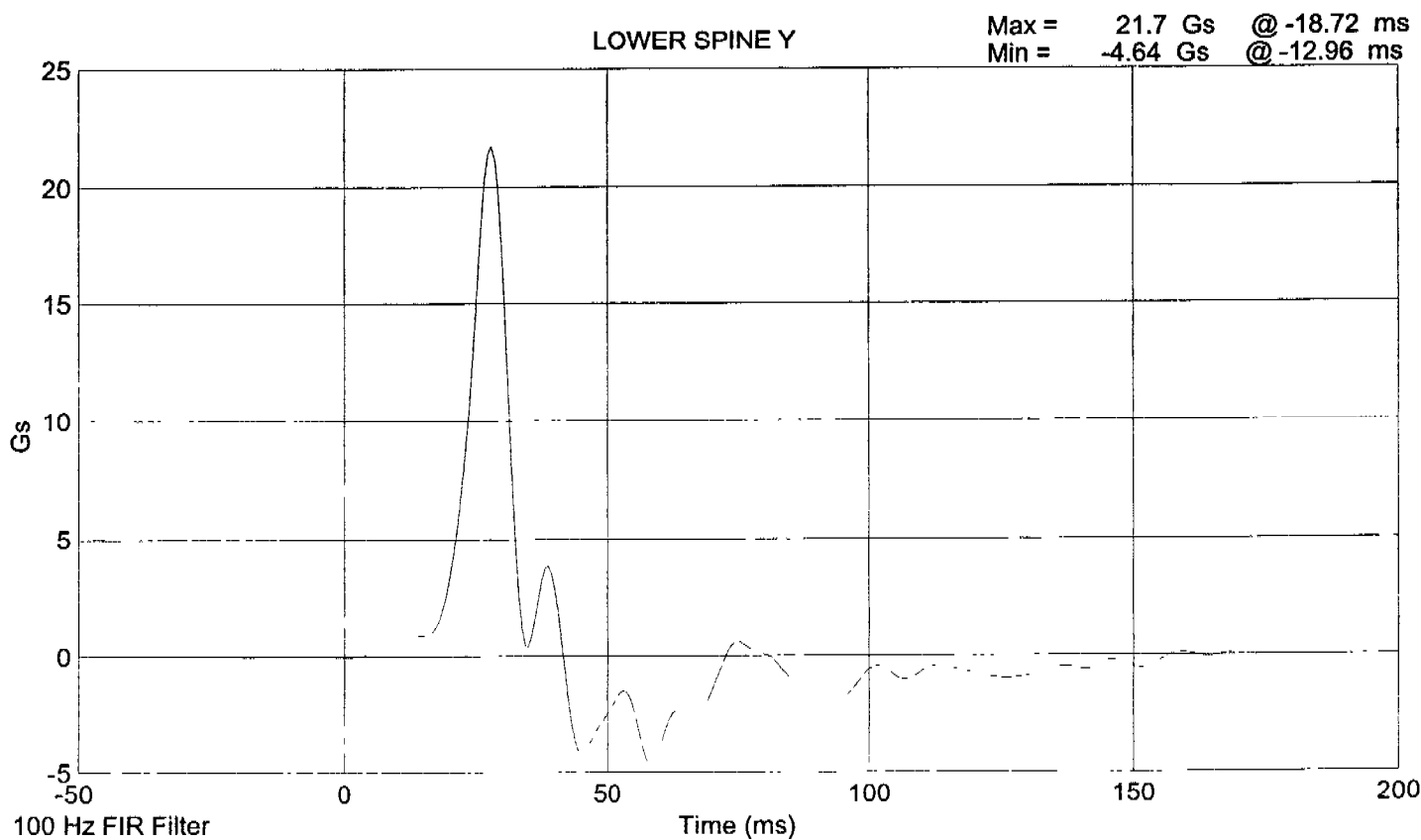
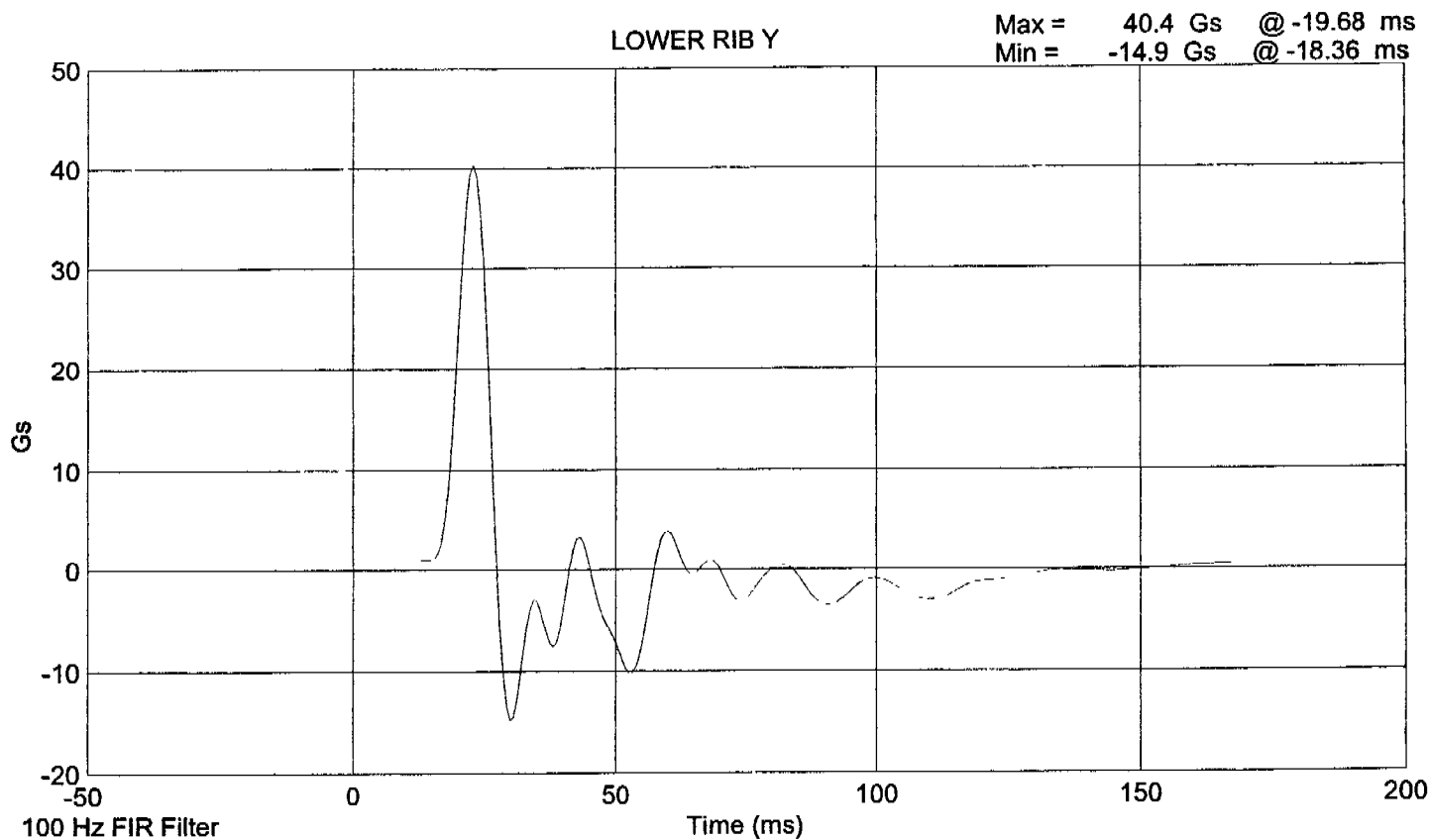
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	39.07
LOWER RIB (g's)	37 - 46	40.38
LOWER SPINE (g's)	15 - 22	21.75

REMARKS: None

SID 015 Thorax Impact Test @ 4.3007 m/s







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

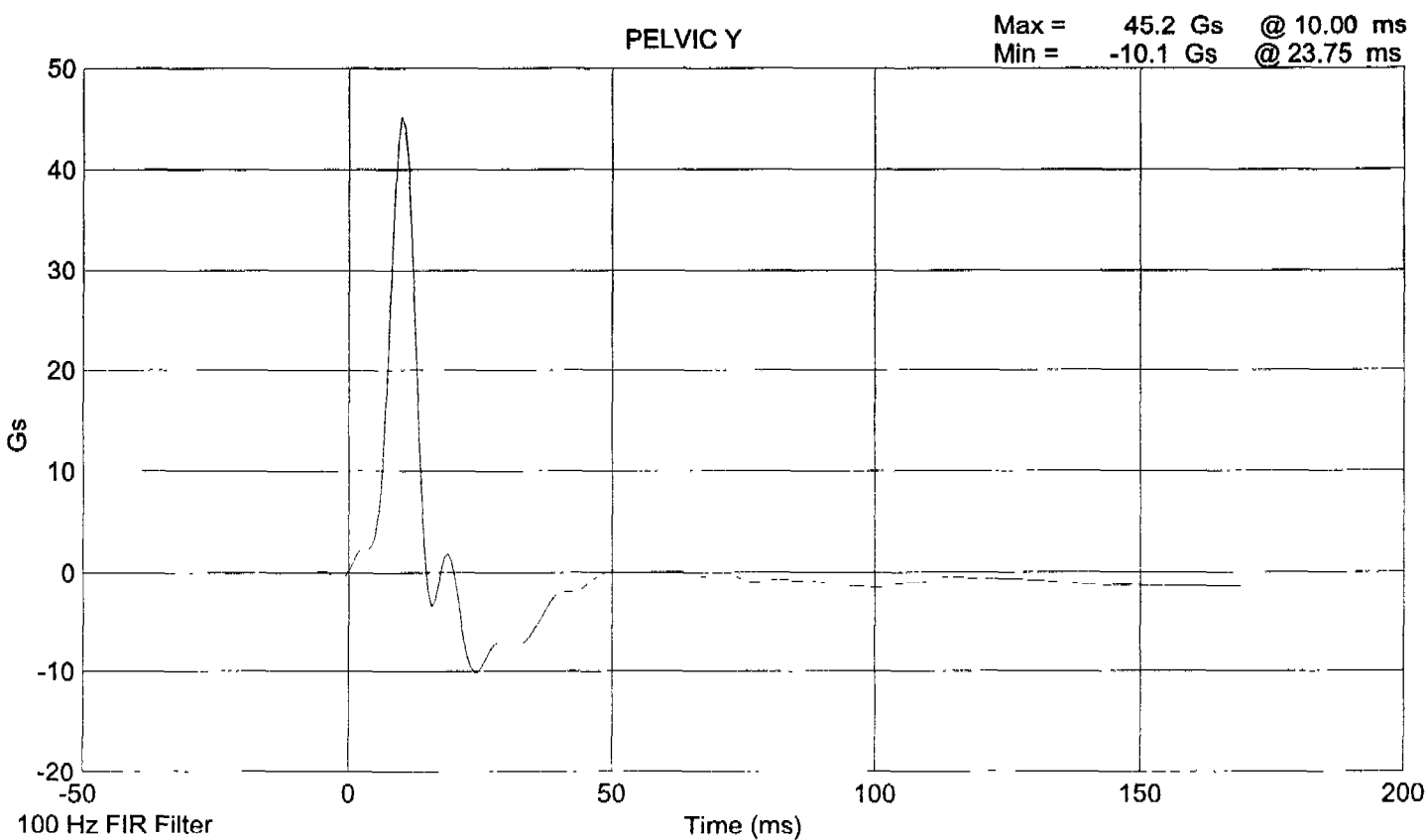
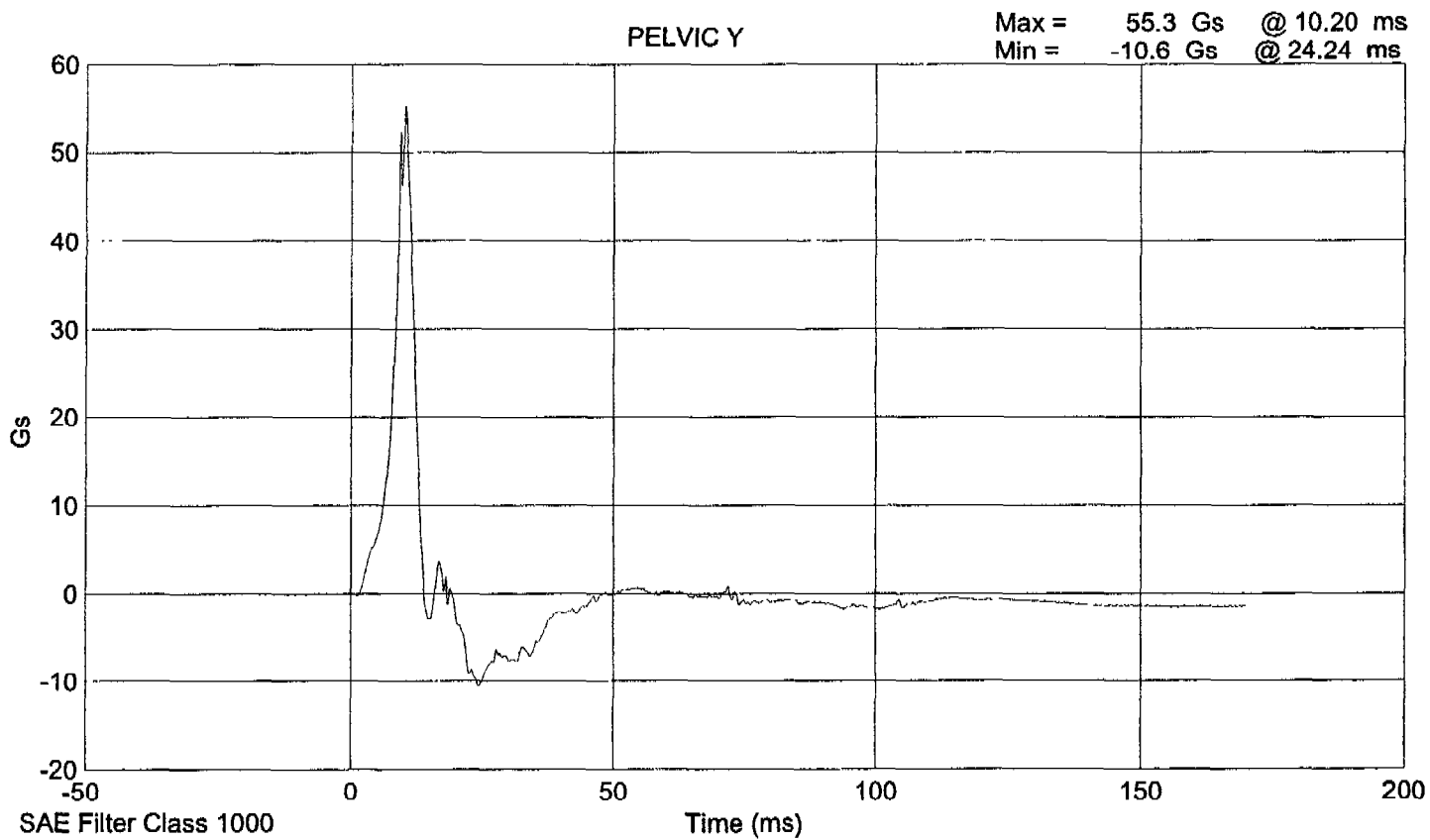
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: October 19, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.0
RELATIVE HUMIDITY (%)	10 - 70	32
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	45.16

REMARKS: None

SID 015 Pelvic Impact Test @ 4.2794 m/s



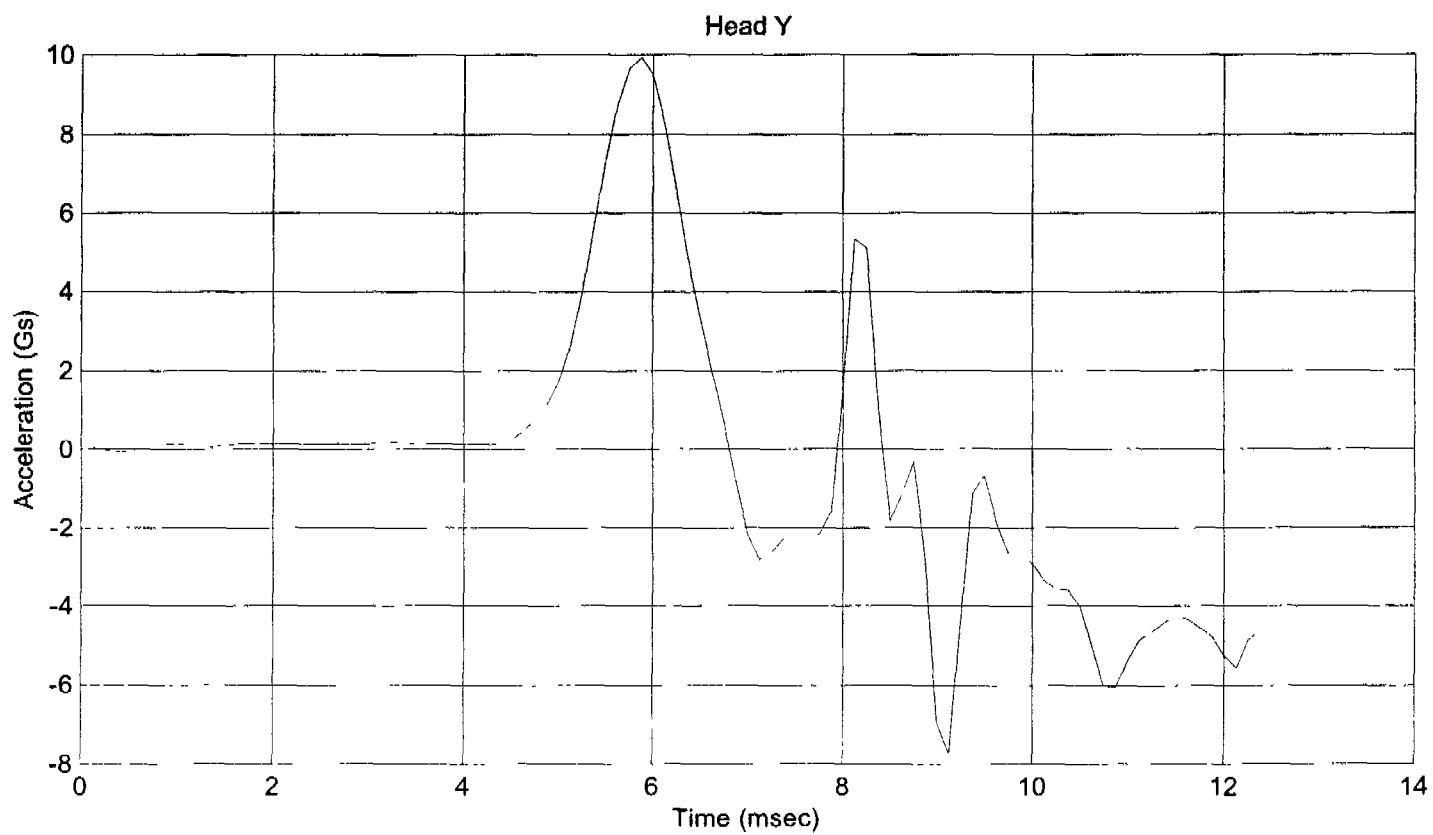
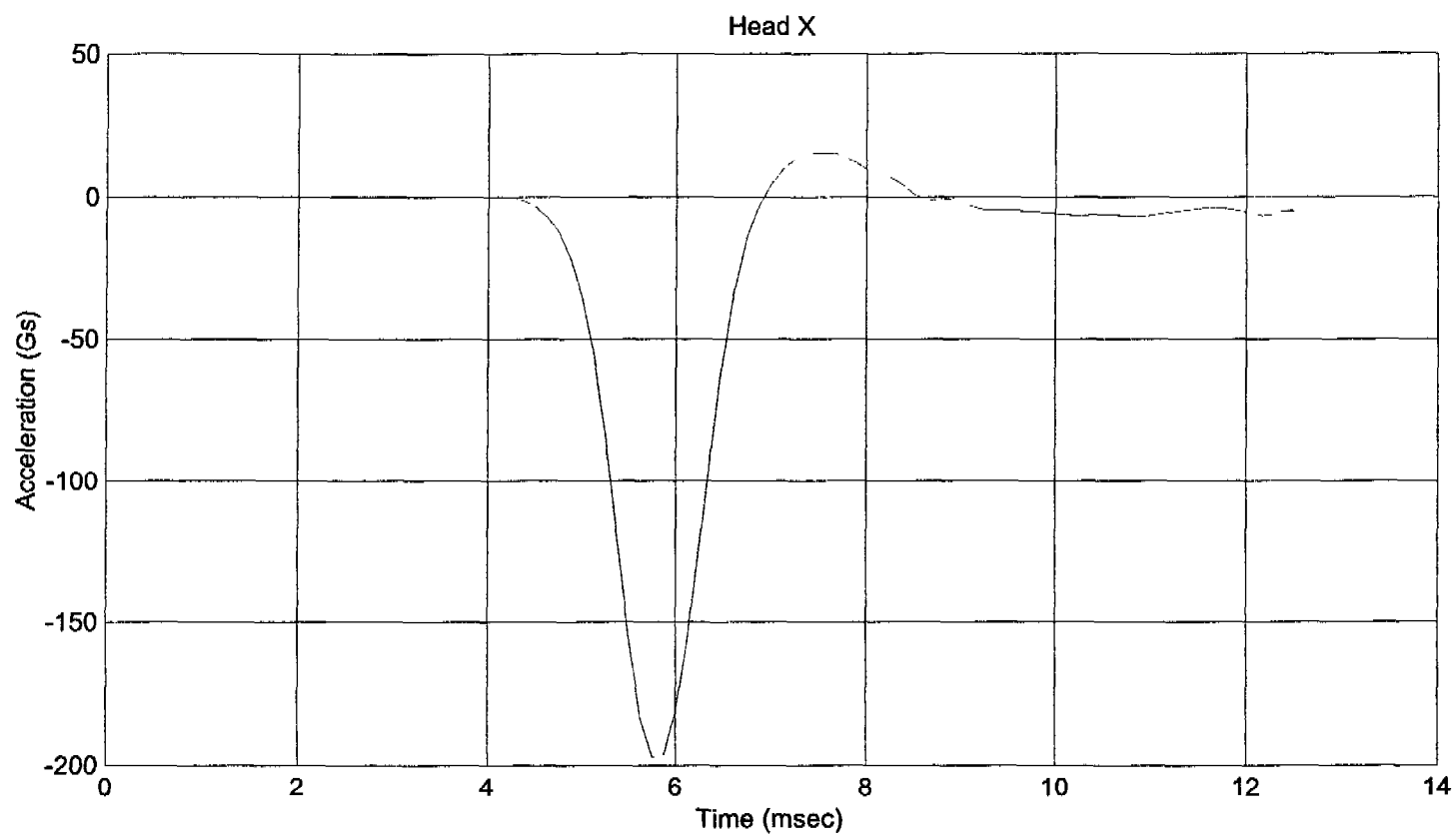
HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

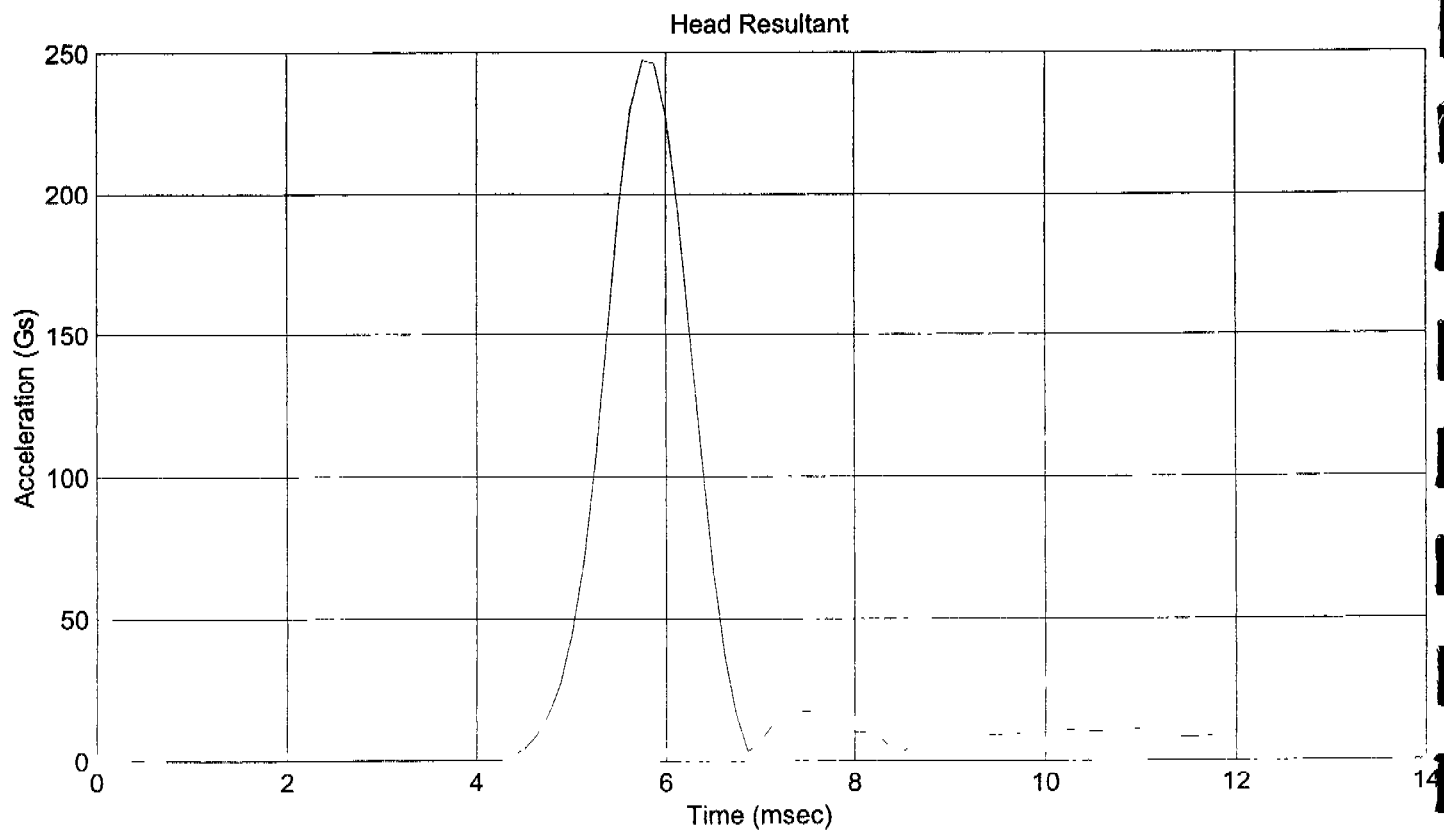
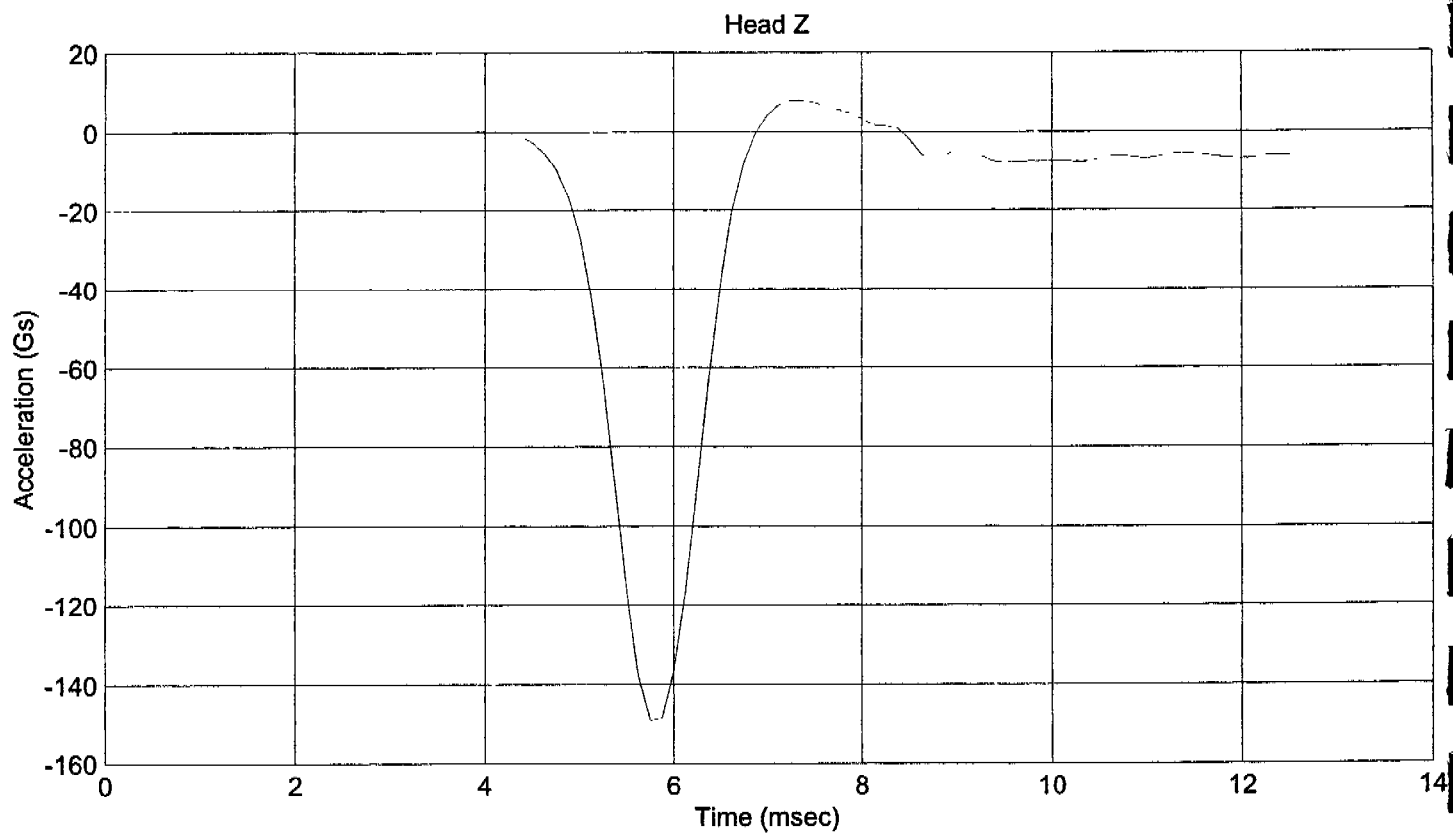
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: October 10, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	247.30
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	7.03
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

REMARKS: None





ABDOMINAL COMPRESSION TEST**PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACTSID Serial No.: 015
Date: October 16, 2000Sequential Test Number: 1
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	32
FORCE @ 13 mm (N)	104 - 162	115.7
FORCE @ 19 mm (N)	163 - 221	178.37
FORCE @ 25 mm (N)	222 - 280	258.00
FORCE @ 33 mm (N)	325 - 391	382.55

REMARKS: None

Dummy S/N 15

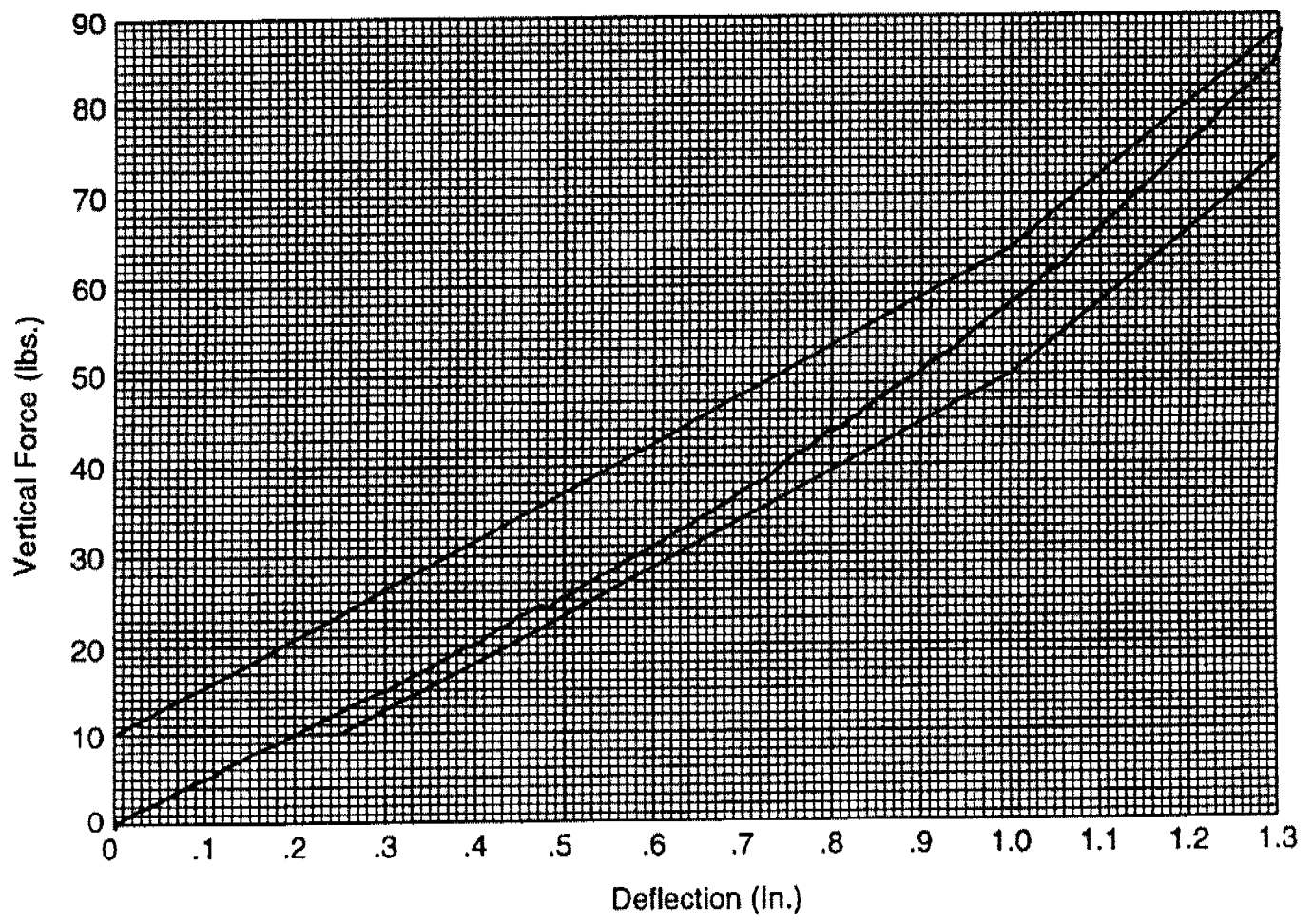
W/A _____

Date 10-16-2000

Performed By BS

Temp. 70°

Humidity 32%



Hybrid II
Abdomen Static Press

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

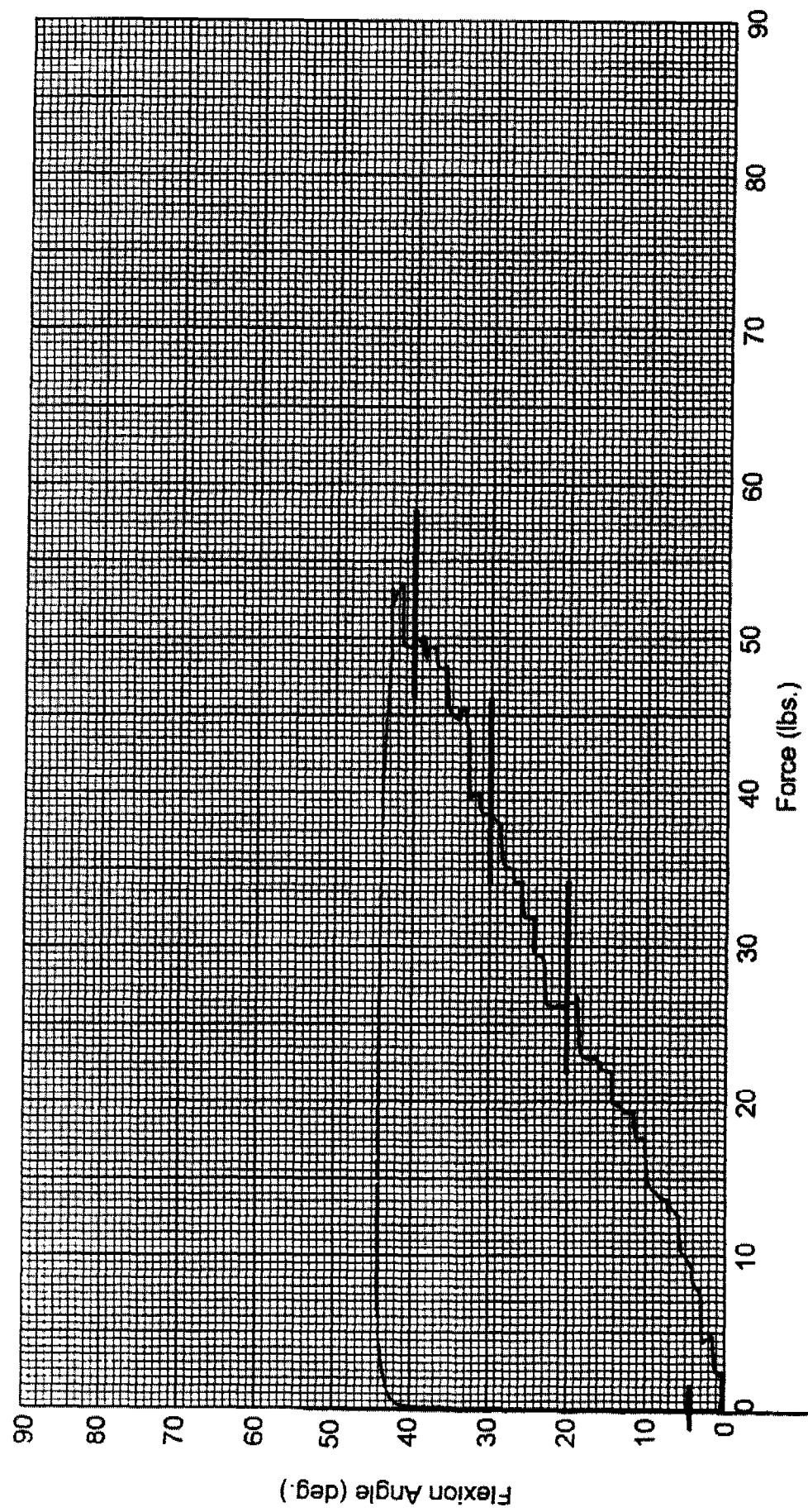
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: October 16, 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	117.88
FORCE @ 30° (N)	151.2 - 204.6	171.25
FORCE @ 40° (N)	204.6 - 258	220.19
RETURN ANGLE	12° max.	4°

REMARKS: None

Dummy S/N 15
W/A 10
Date 10-16-2000
Performed By [Signature]
Temp. 71°
Humidity 31%



Hybrid II Lumbar Spin Flexion Test

FM-052-CERT-005-R00

PC32/D52 ISO Forms

PRE-TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015

Sequential Test Number:

1

Date: October 16, 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
PRE-TEST**

SID NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: October 16, 2000 Laboratory Technician: B. Swiecicki

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

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: October 16, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	512
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	526
KV- Knee Pivot to Floor (mm)	490 - 505	494
HW- Hip Width (mm)	356 - 391	366

REMARKS: None

THORACIC SHOCK ABSORBER TESTS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1.3
Date: April 19, 2000 Laboratory Technician: B. Swiecicki

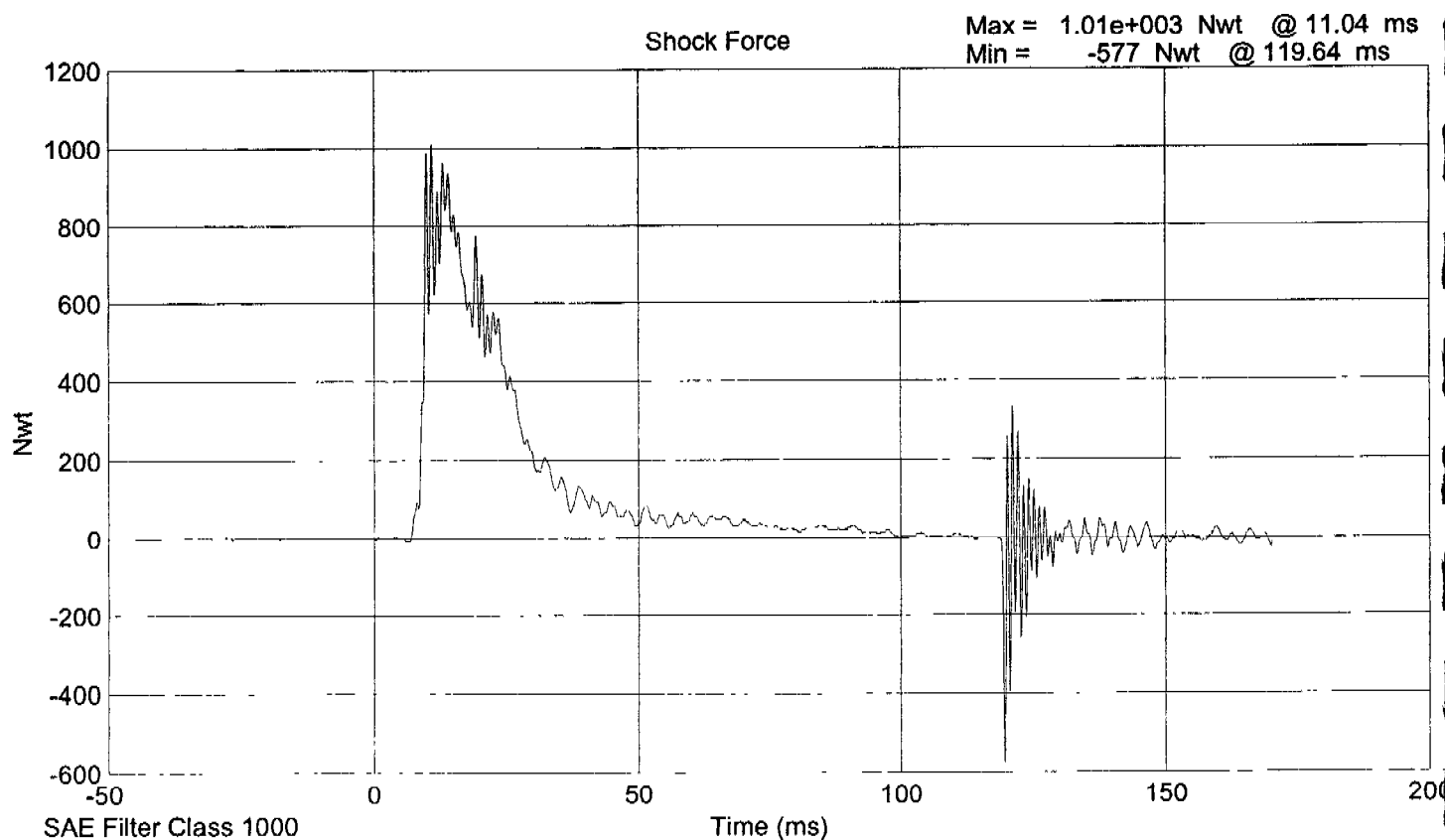
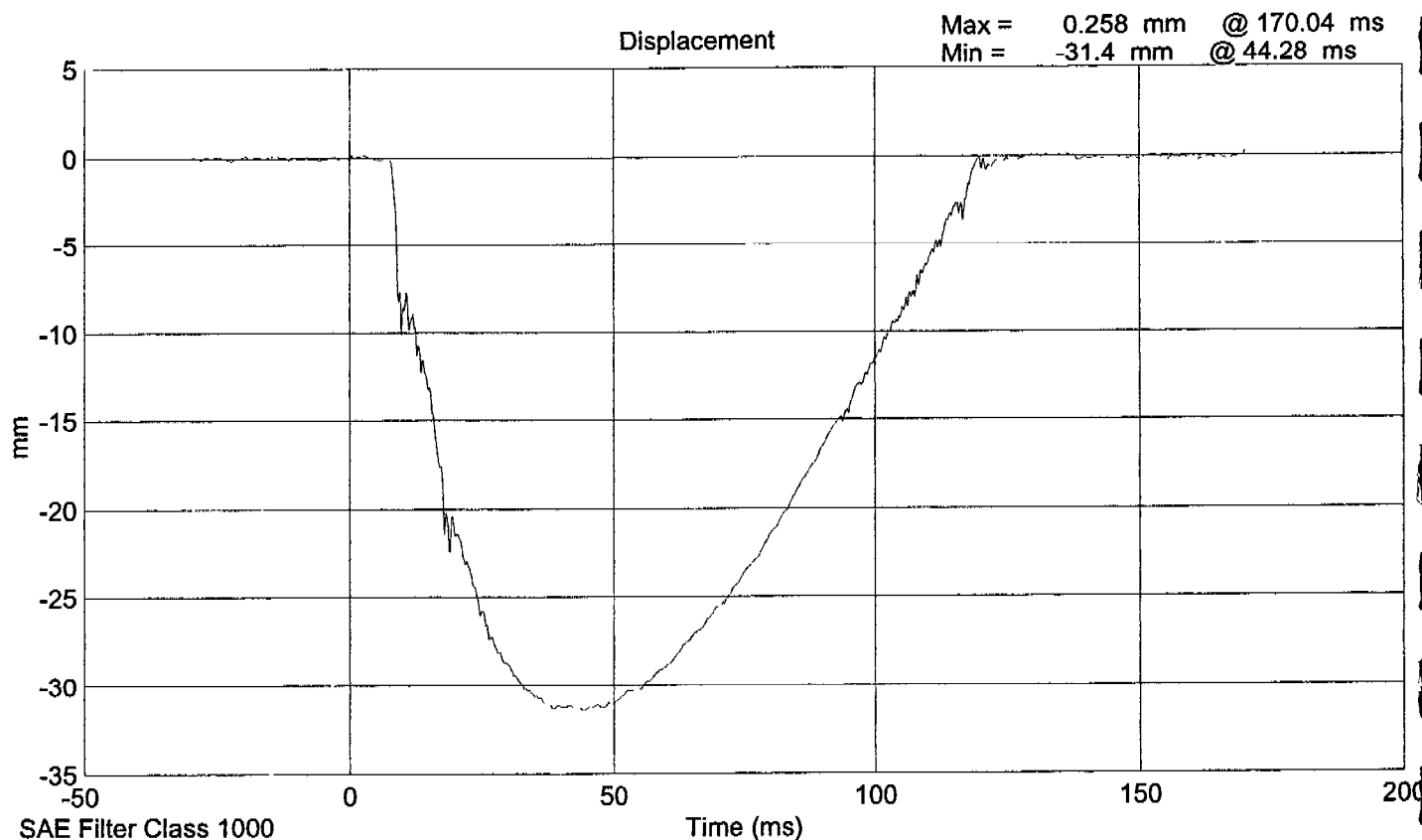
DAMPER IDENTIFICATION: 016

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	1010.8
	DISPLACEMENT (mm)	30 - 35	31.4
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1821.6
	DISPLACEMENT (mm)	32 - 37	34.5
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	3946.4
	DISPLACEMENT (mm)	33 - 40	37.1

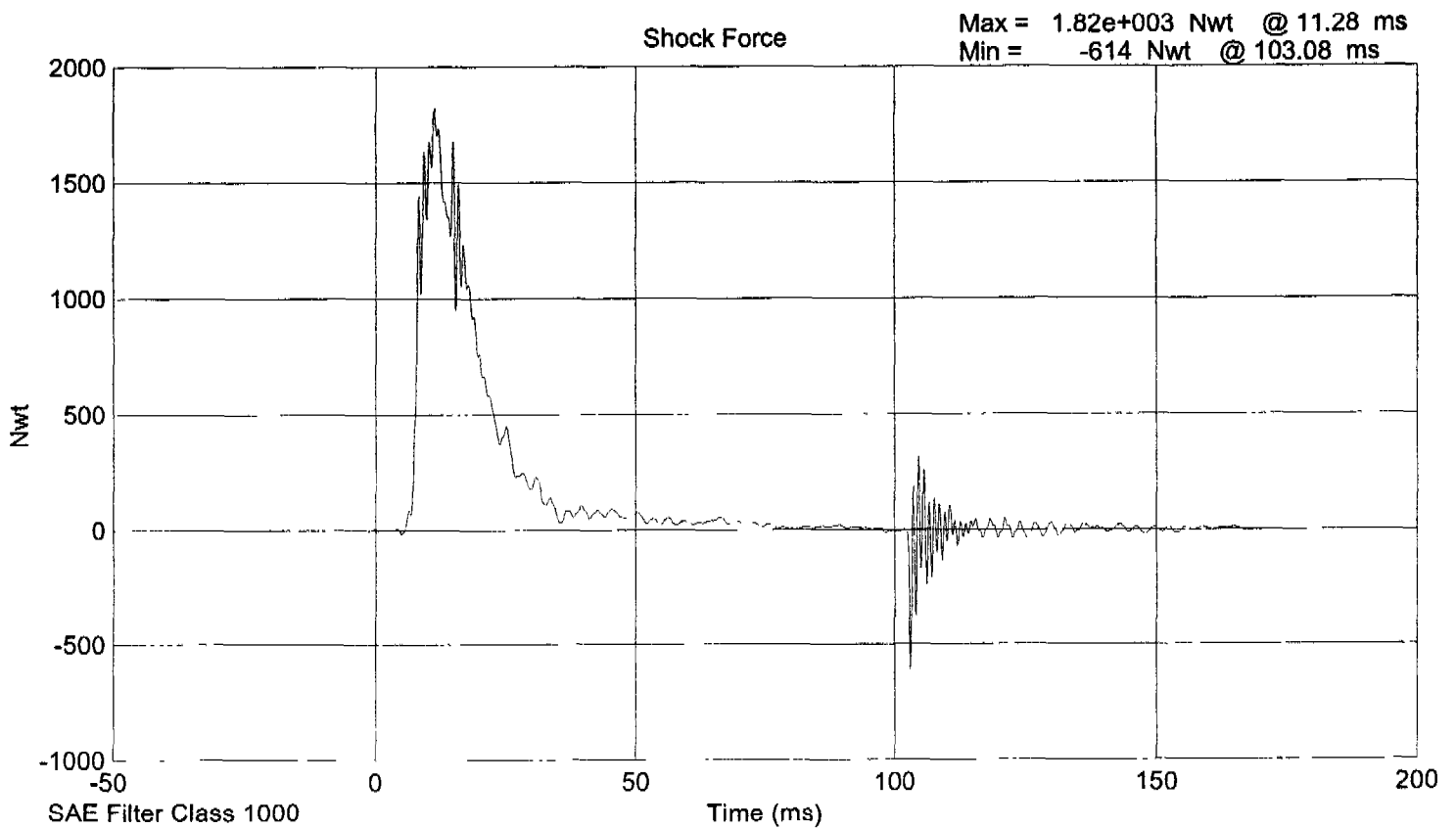
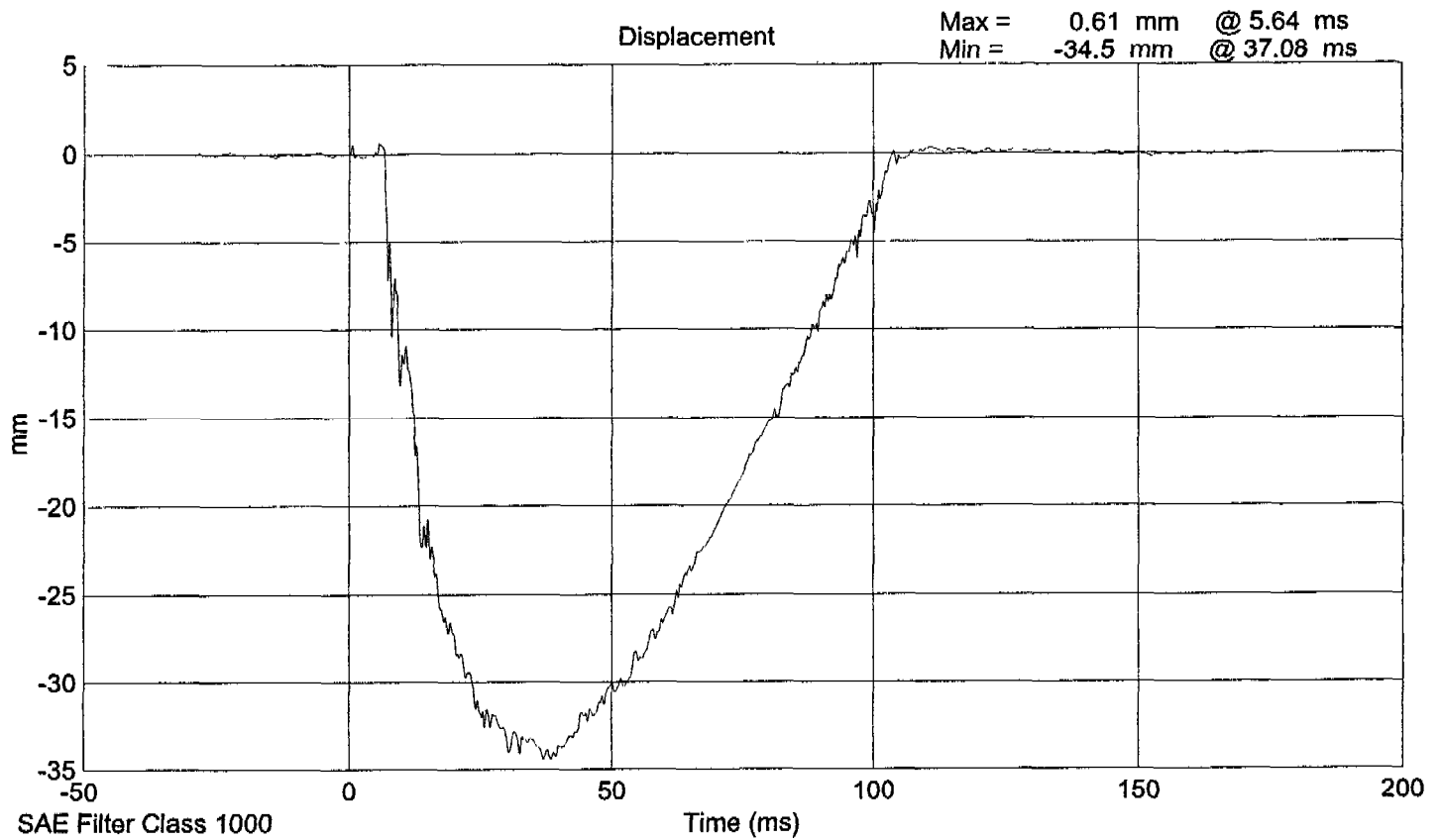
DAMPER SETTING: 5

REMARKS: None

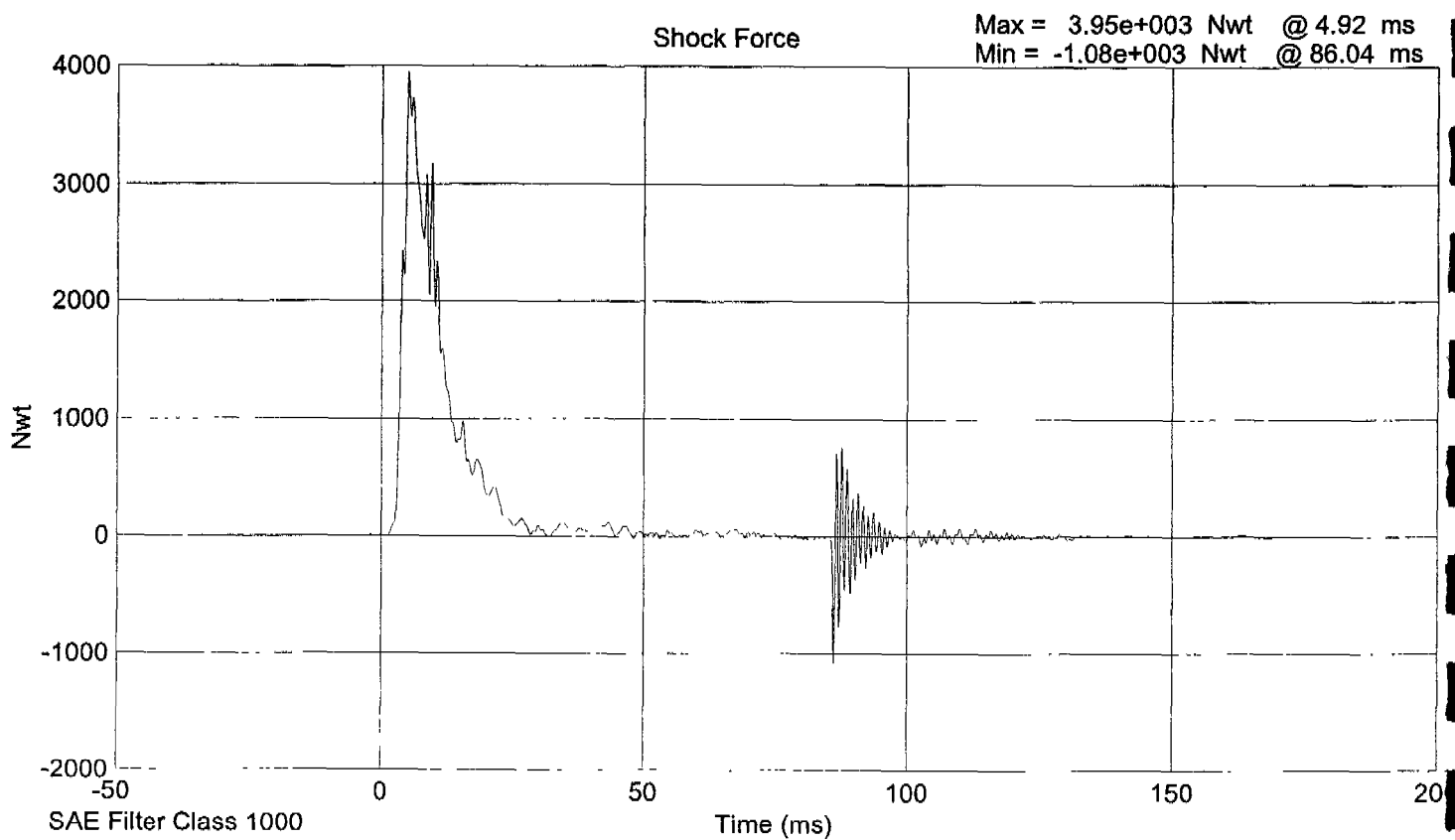
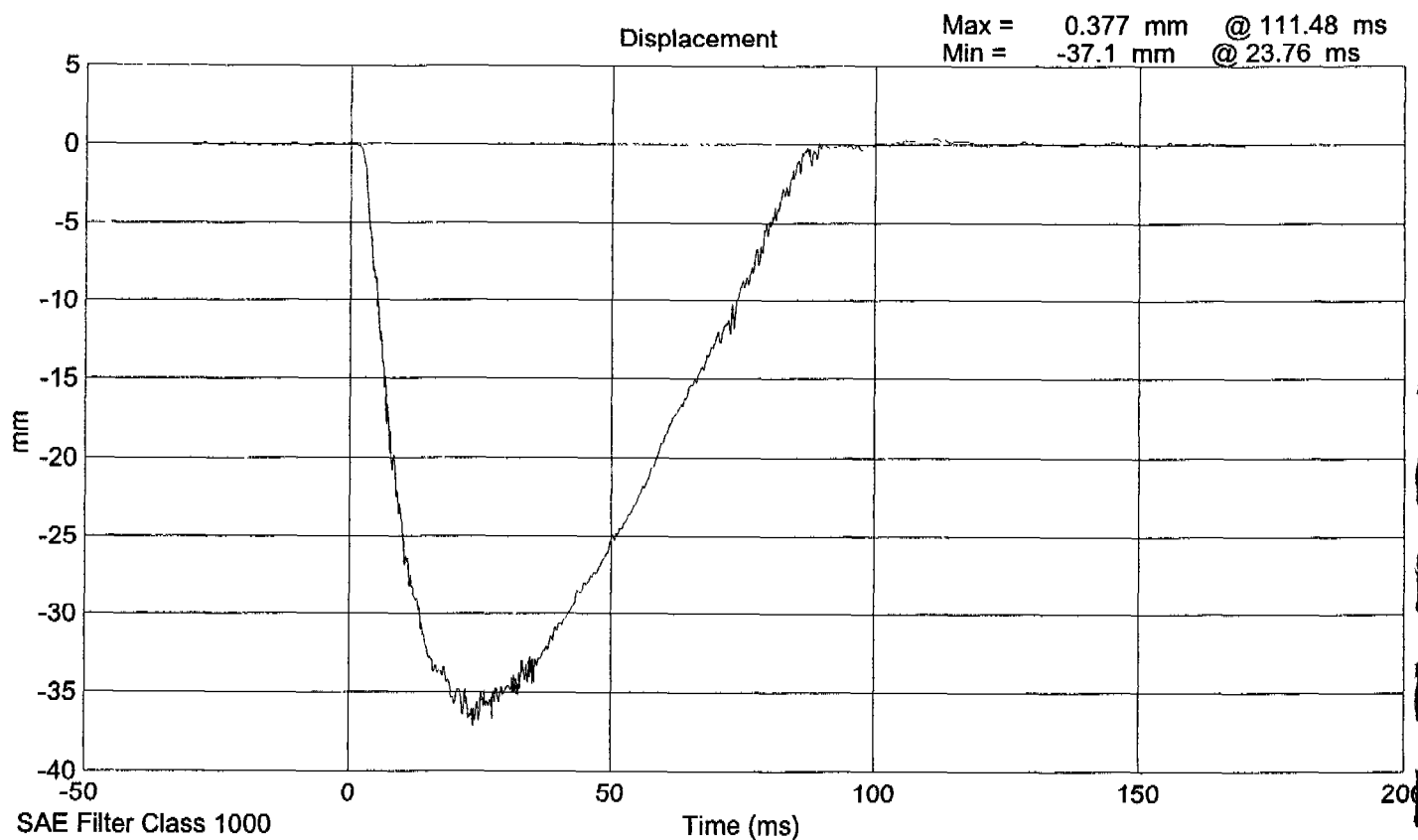
SID 016 Shock Absorber Impact Test @ 3.048 m/s



SID 016 Shock Absorber Impact Test @ 4.572 m/s



SID 016 Shock Absorber Impact Test @ 6.096 m/s



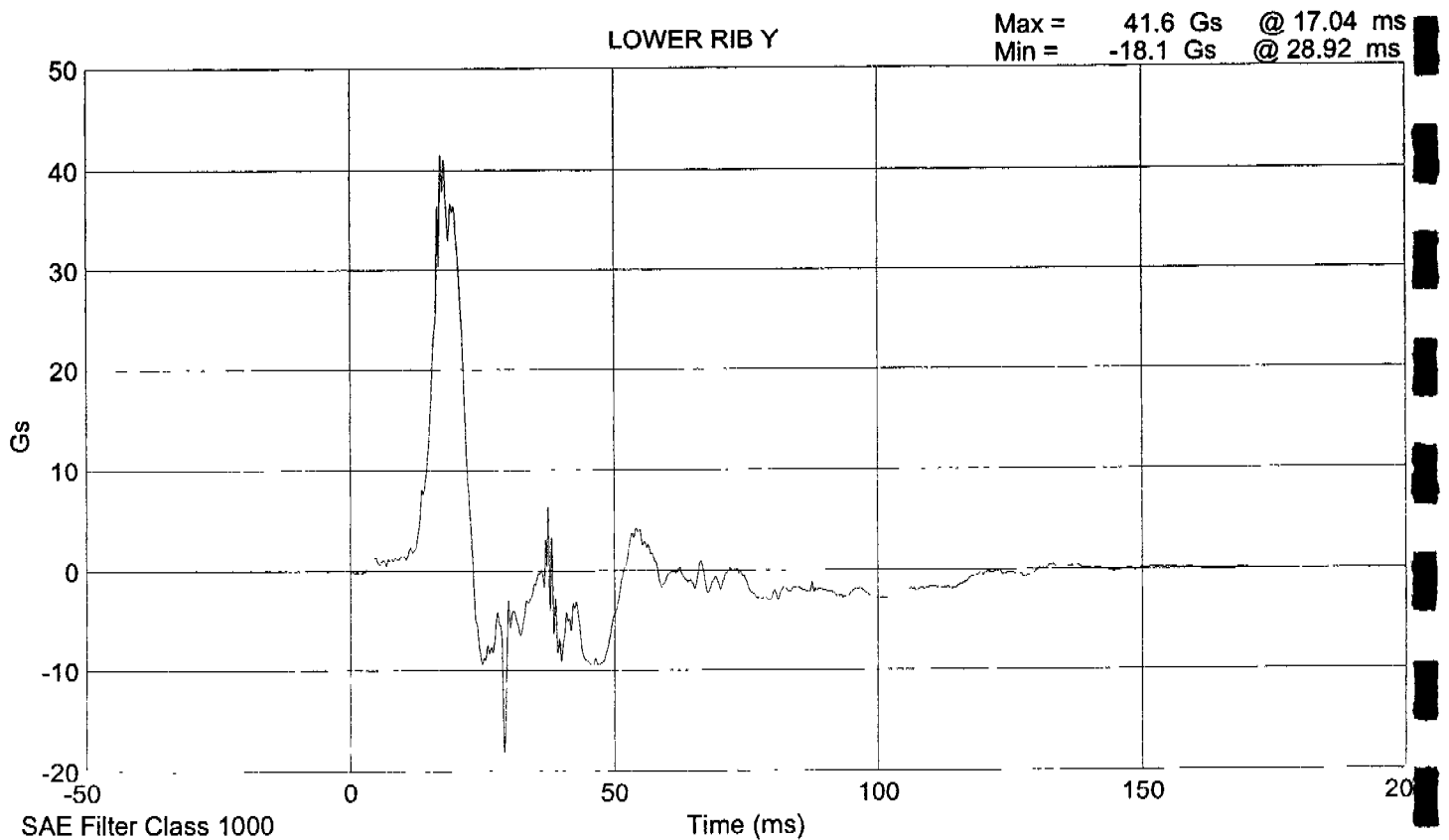
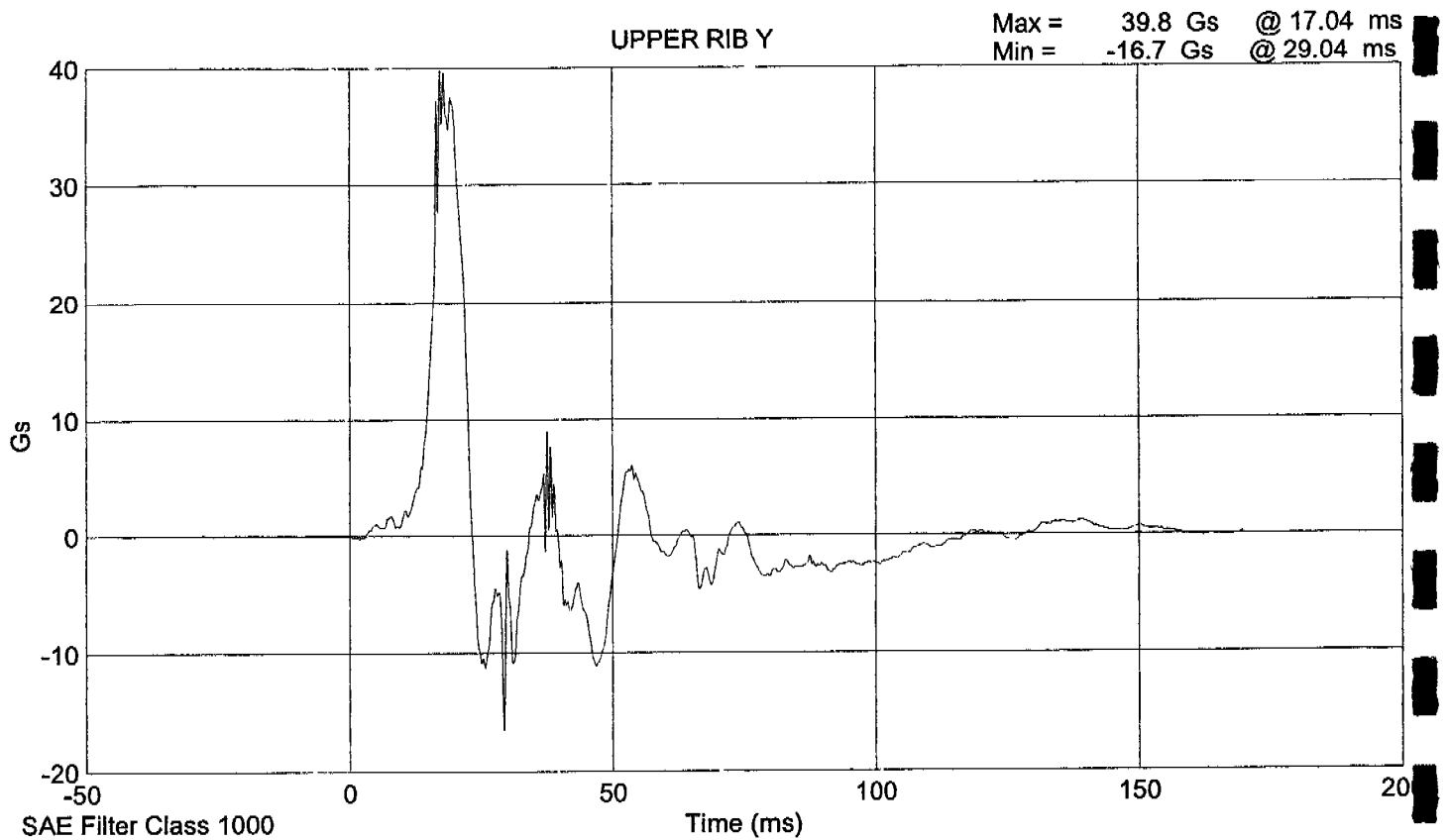
**LATERAL THORAX IMPACT TEST
PRE-TEST**

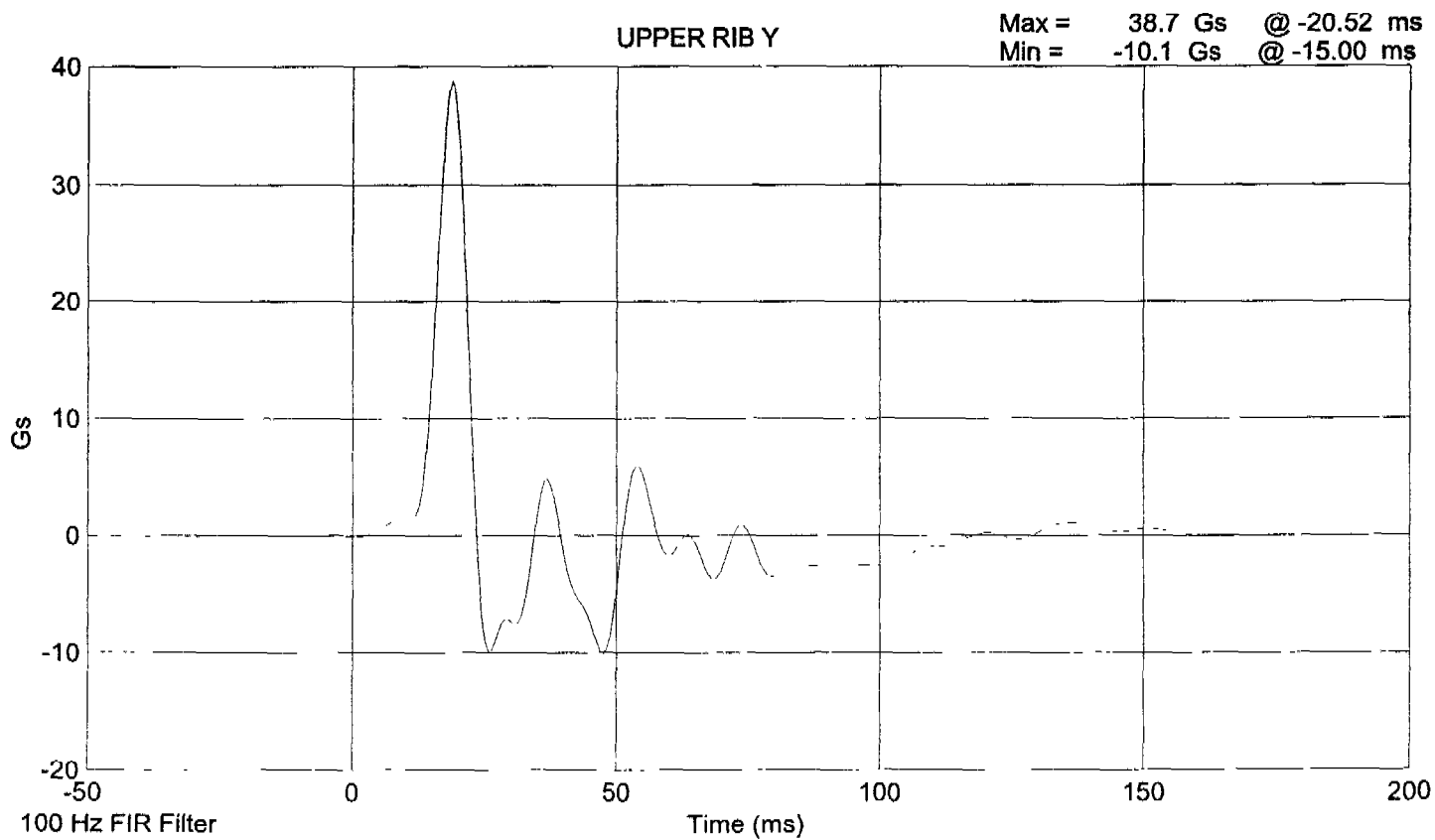
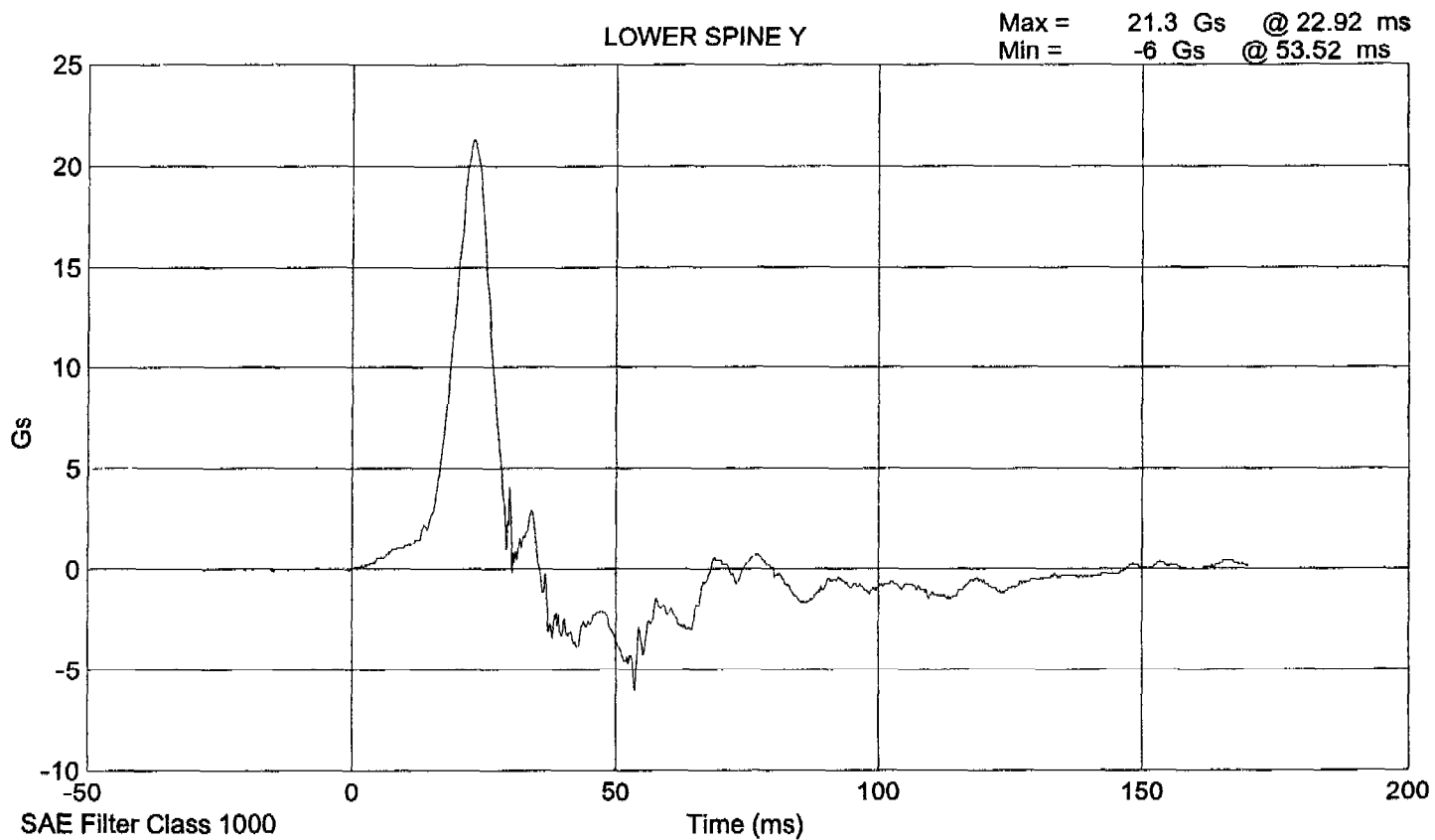
CONFIGURED FOR LEFT SIDE IMPACT

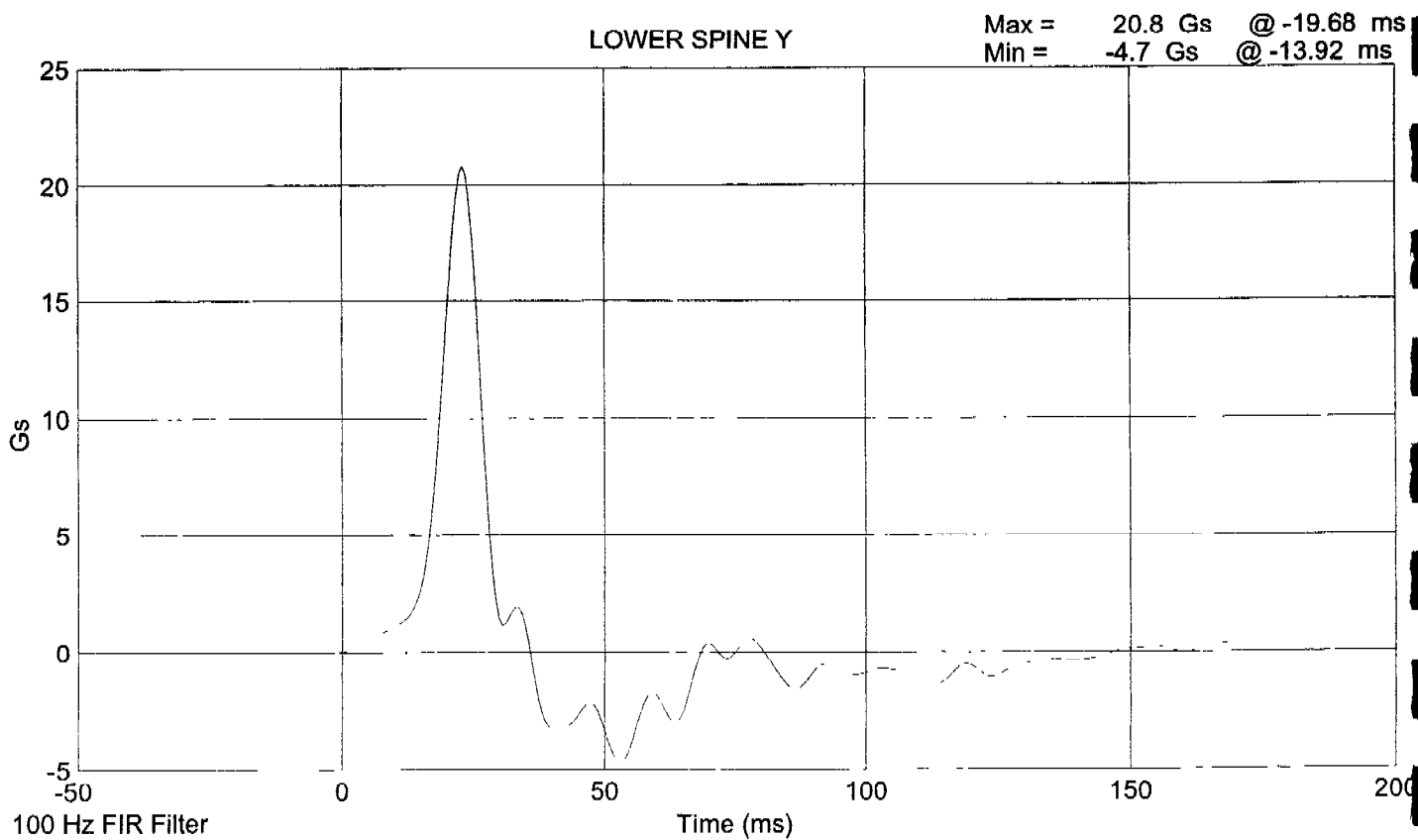
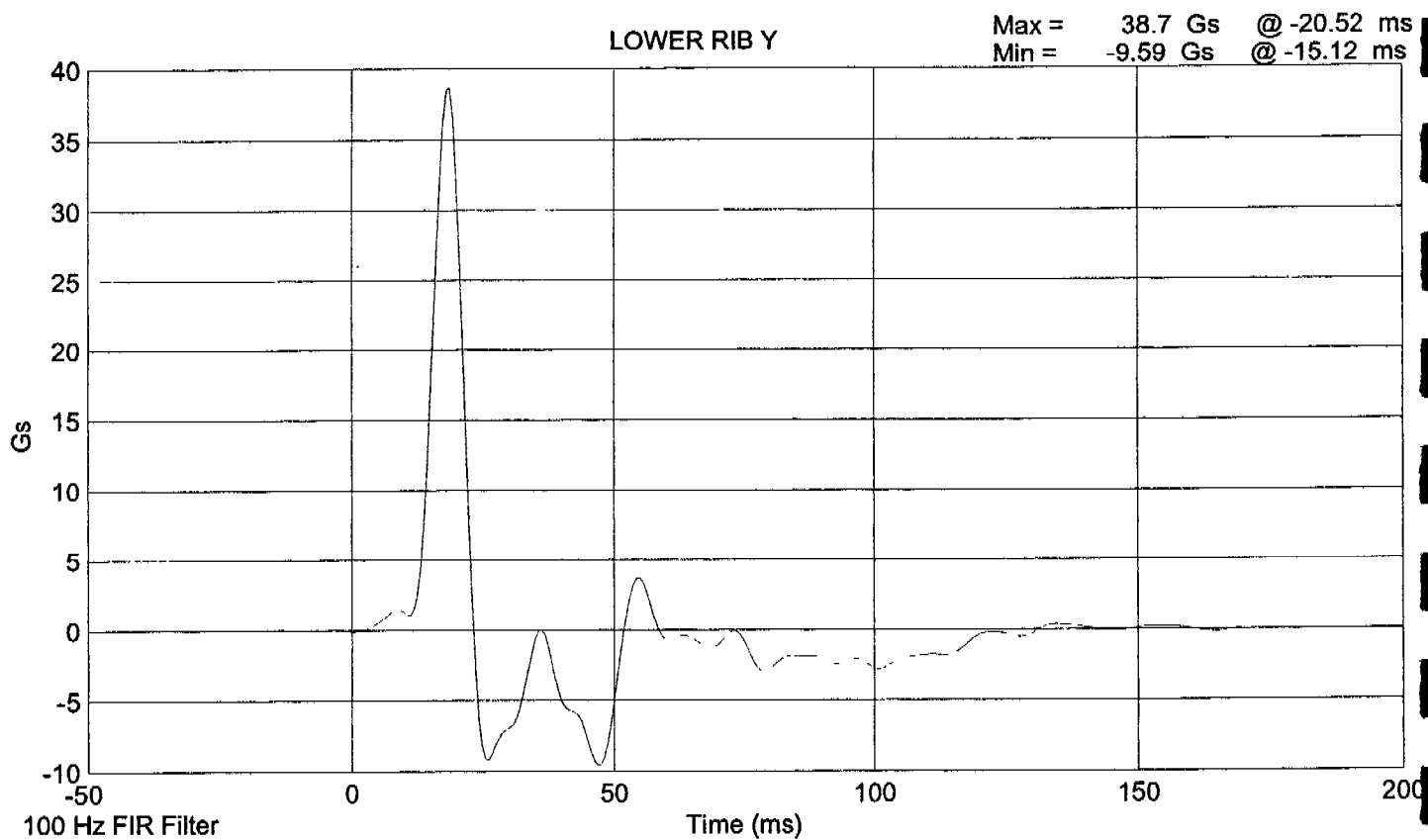
SID Serial No.: 016 Sequential Test Number: 1
Date: October 13, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	38.72
LOWER RIB (g's)	37 - 46	38.72
LOWER SPINE (g's)	15 - 22	20.81

REMARKS: None







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

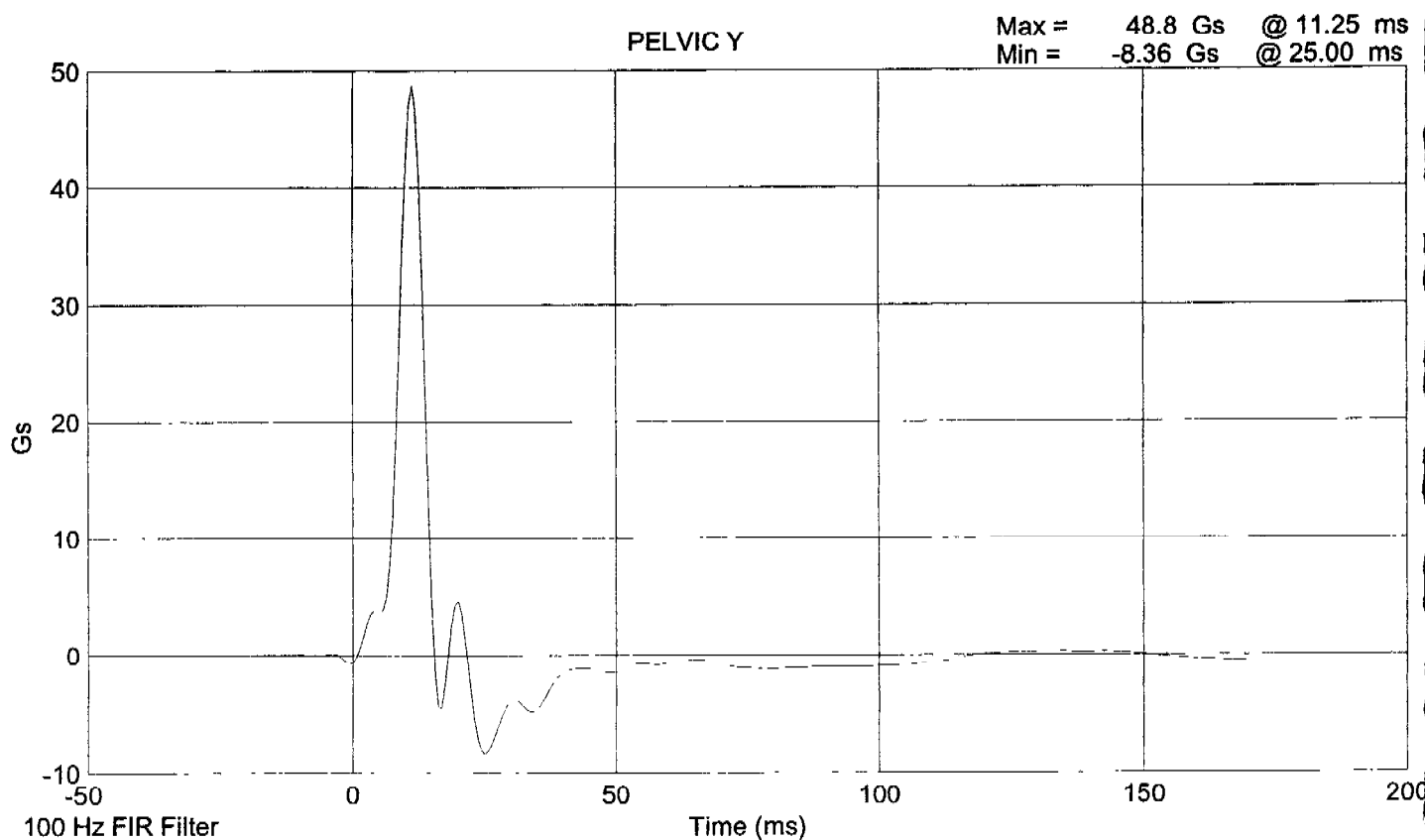
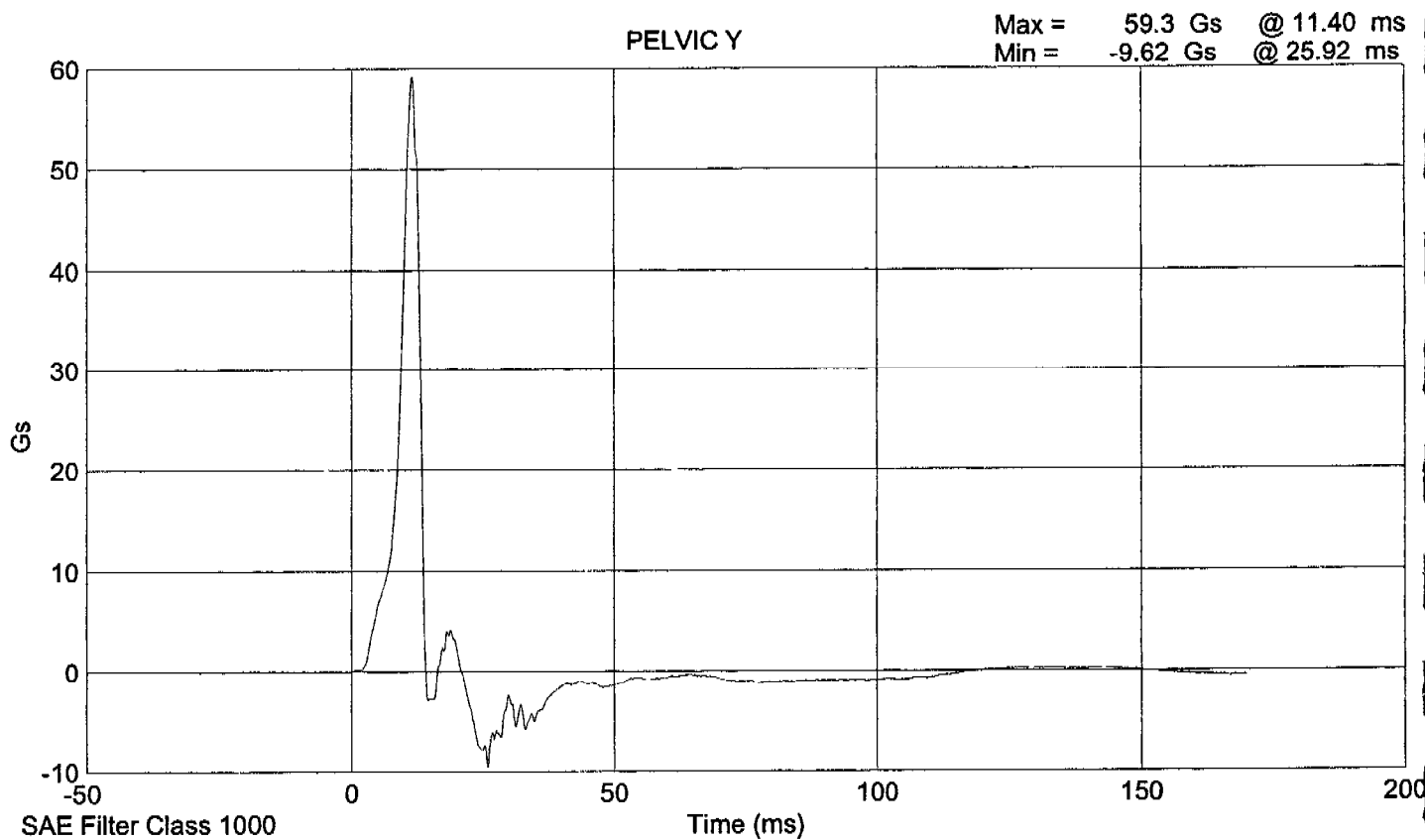
SID Serial No.: 016
Date: October 13, 2000

Sequential Test Number: 1
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20
RELATIVE HUMIDITY (%)	10 - 70	30
PROBE SPEED (m/s)	4.27 - 4.33	4.29
PELVIS ACCELERATION (g's)	40 - 60	48.76

REMARKS: None

SID 016 Pelvic Impact Test @ 4.2855 m/s



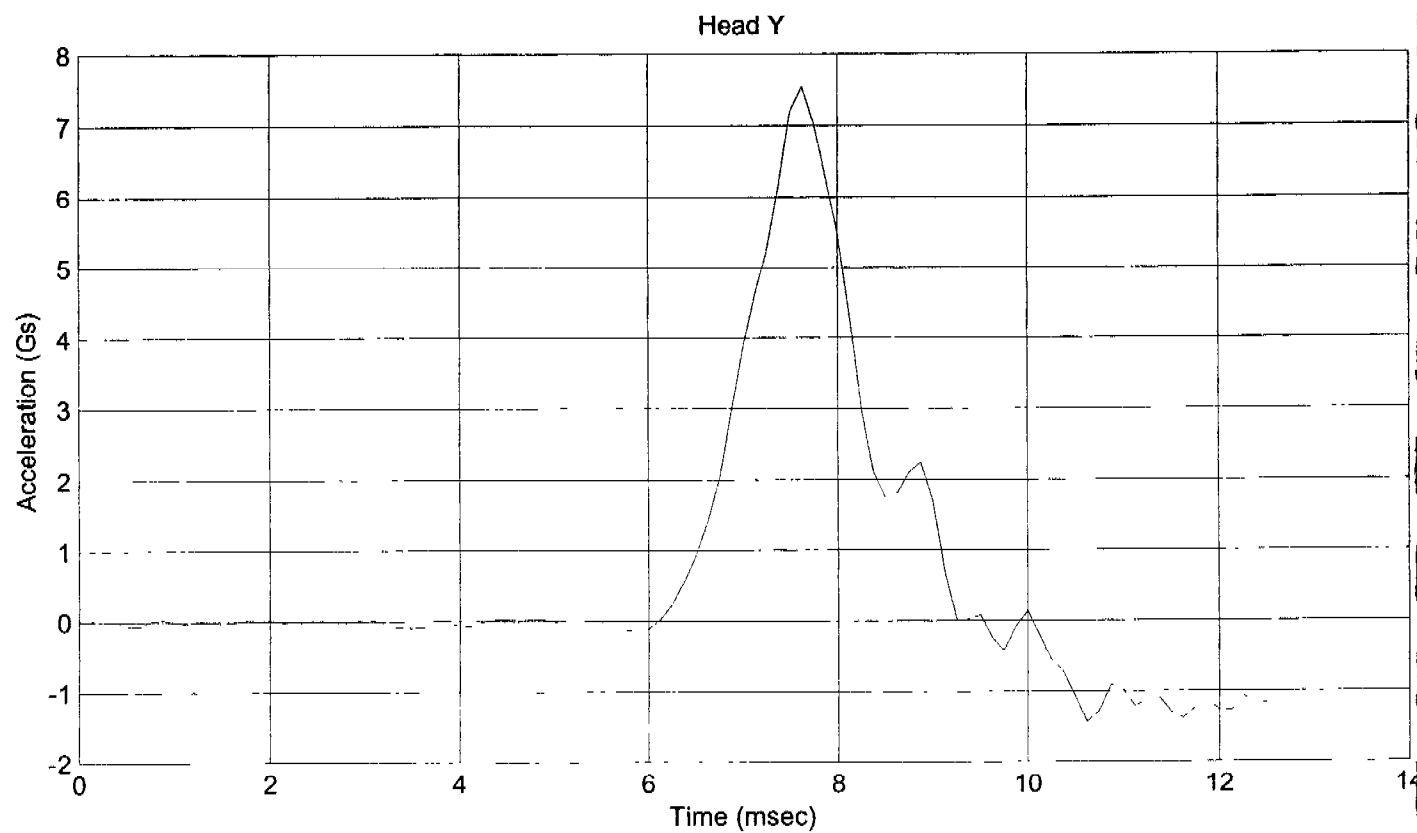
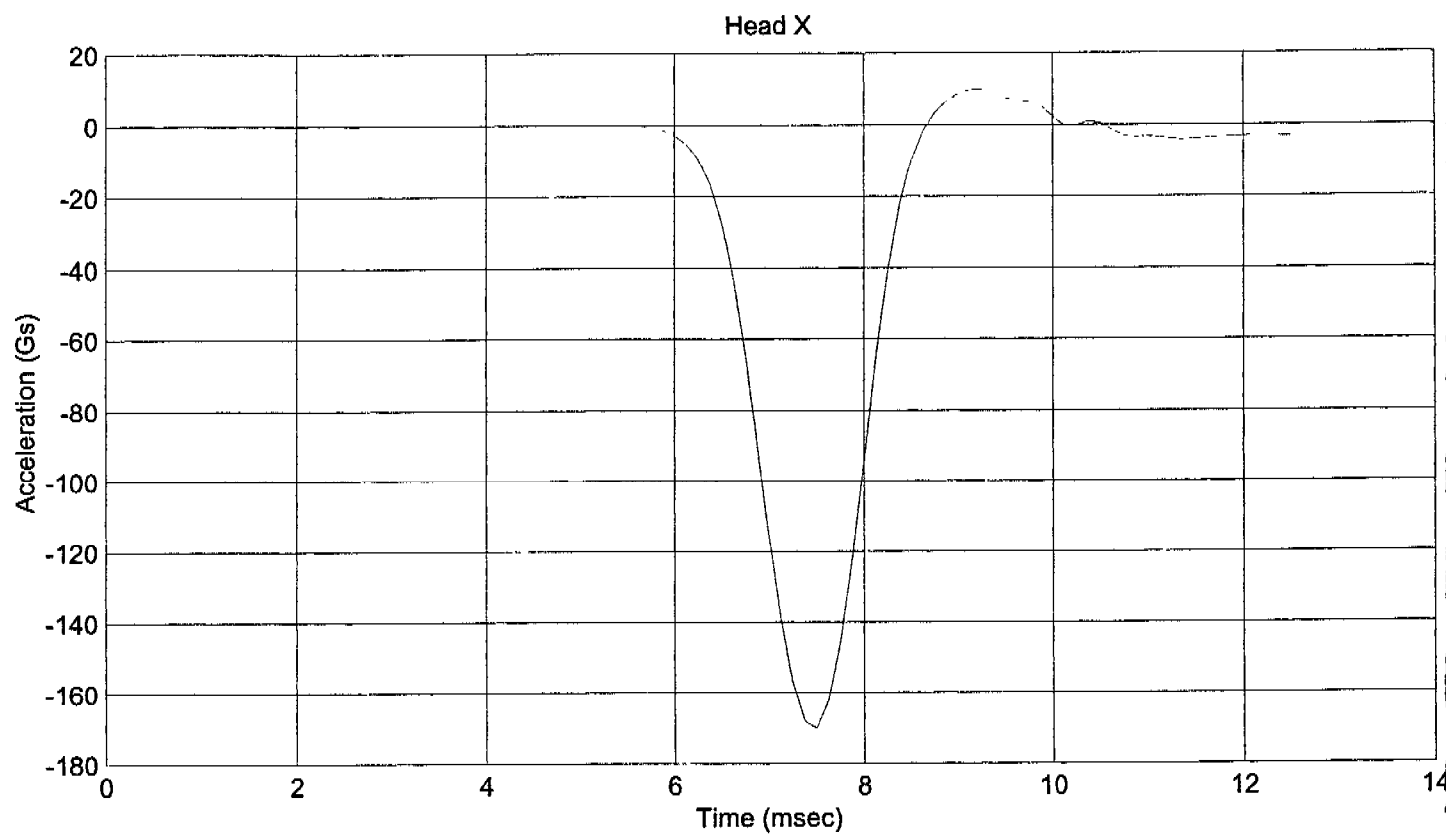
HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

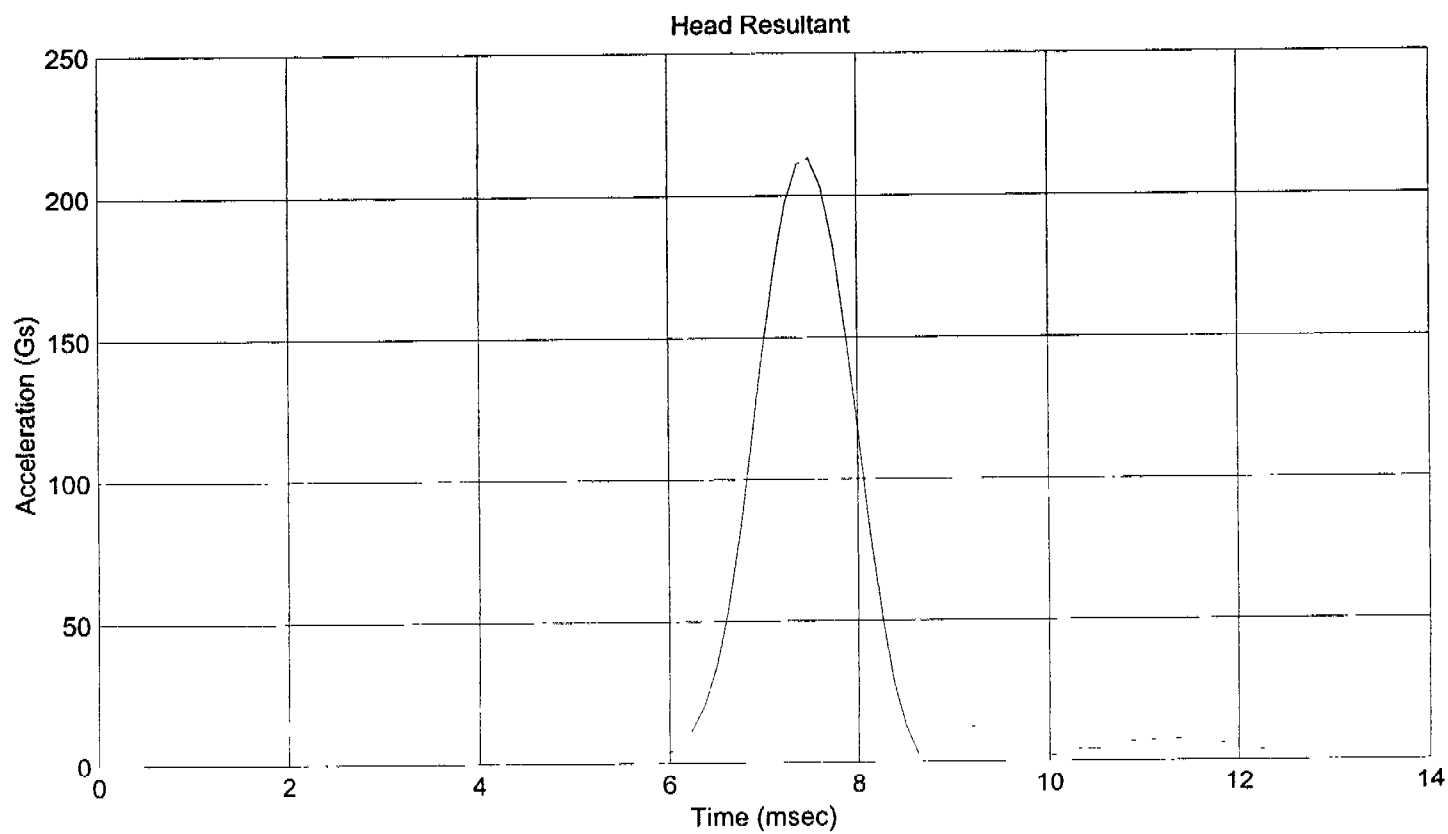
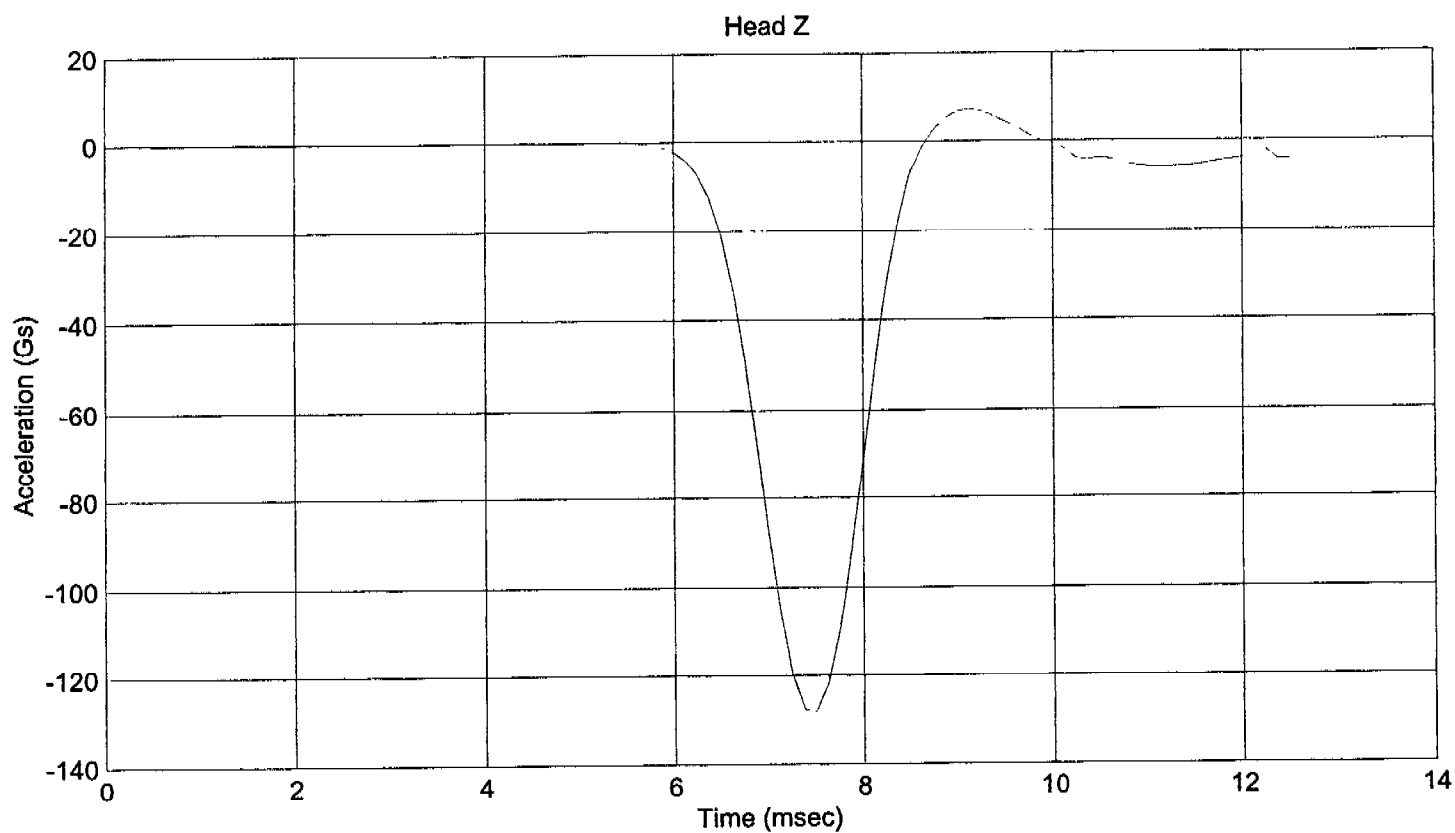
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: October 10, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20.1
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	213.03
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	5.77
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.25

REMARKS: None





ABDOMINAL COMPRESSION TEST**PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACTSID Serial No.: 016

Sequential Test Number:

1Date: October 16, 2000

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	32
FORCE @ 13 mm (N)	104 - 162	111.2
FORCE @ 19 mm (N)	163 - 221	173.93
FORCE @ 25 mm (N)	222 - 280	249.10
FORCE @ 33 mm (N)	325 - 391	380.32

REMARKS: None

Dummy S/N 16

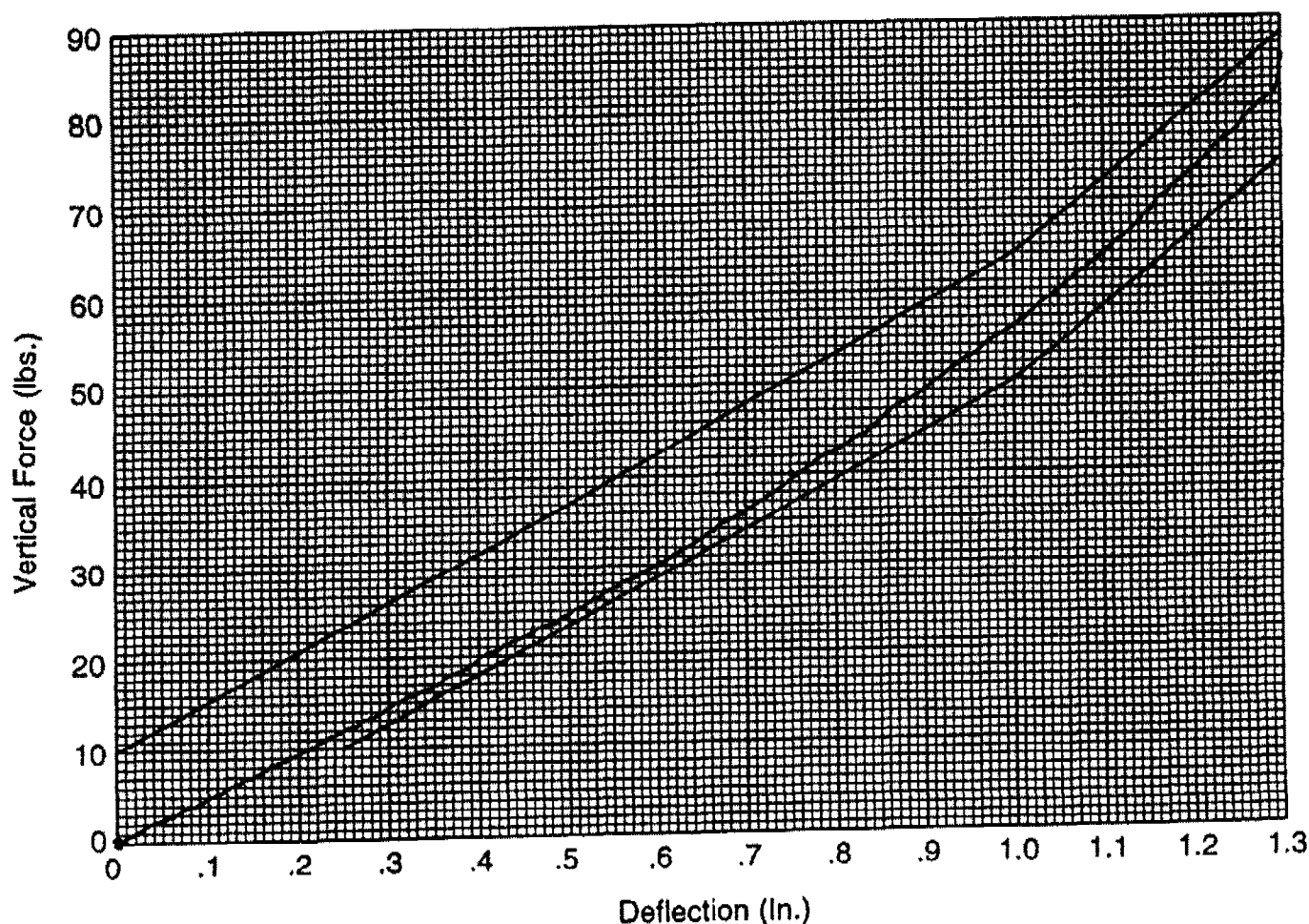
W/A _____

Date 10-16-2000

Performed By [Signature]

Temp. 70 °

Humidity 32 %



Hybrid II
Abdomen Static Press

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

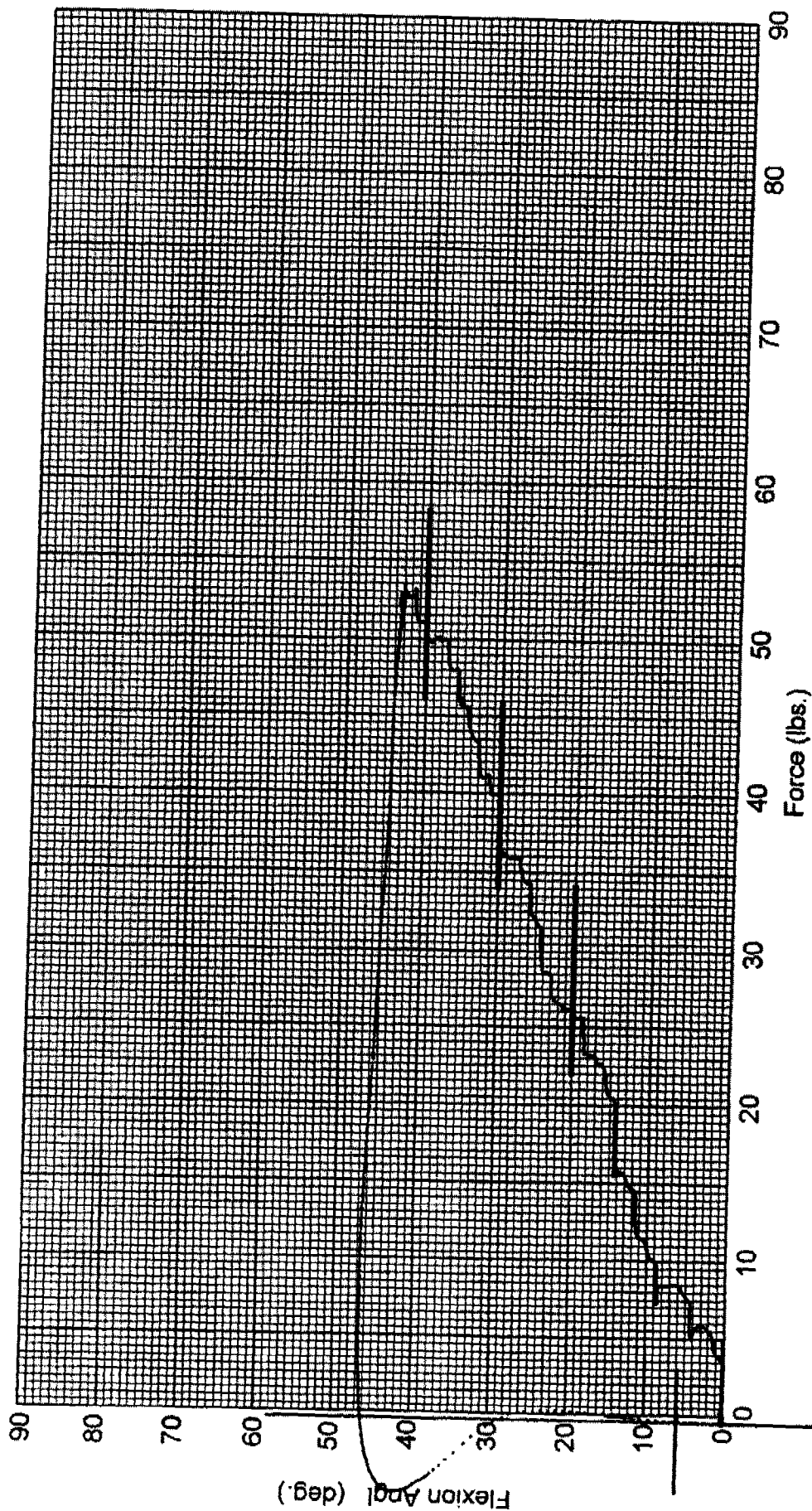
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: October 16, 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	113.43
FORCE @ 30° (N)	151.2 - 204.6	177.93
FORCE @ 40° (N)	204.6 - 258	226.86
RETURN ANGLE	12° max.	6°

REMARKS: None

Dummy S/N 16
WIA _____
Date 10-16-2000
Performed By BR
Temp. 71°
Humidity 31%



Hybrid II Lumbar Spine Flexion Test

FM-052-CERT-005-R00

PC32/D52 ISO Forme

PRE-TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016

Sequential Test Number:

1

Date: October 16, 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.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: November 30, 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.: 015
Date: November 30, 2000

Sequential Test Number: 1
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
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	373

REMARKS: None

**LATERAL THORAX IMPACT TEST
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015

Sequential Test Number: 1

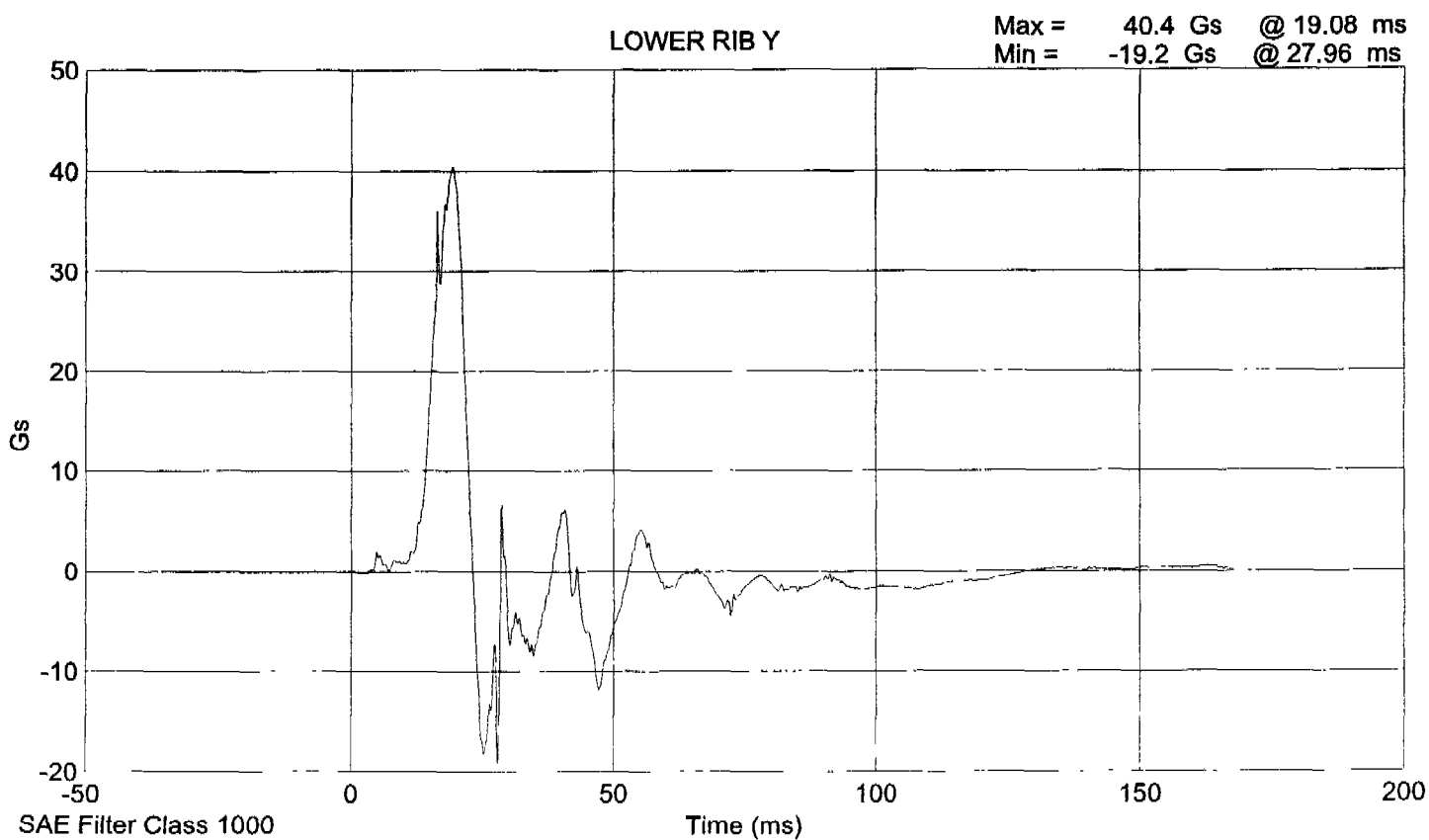
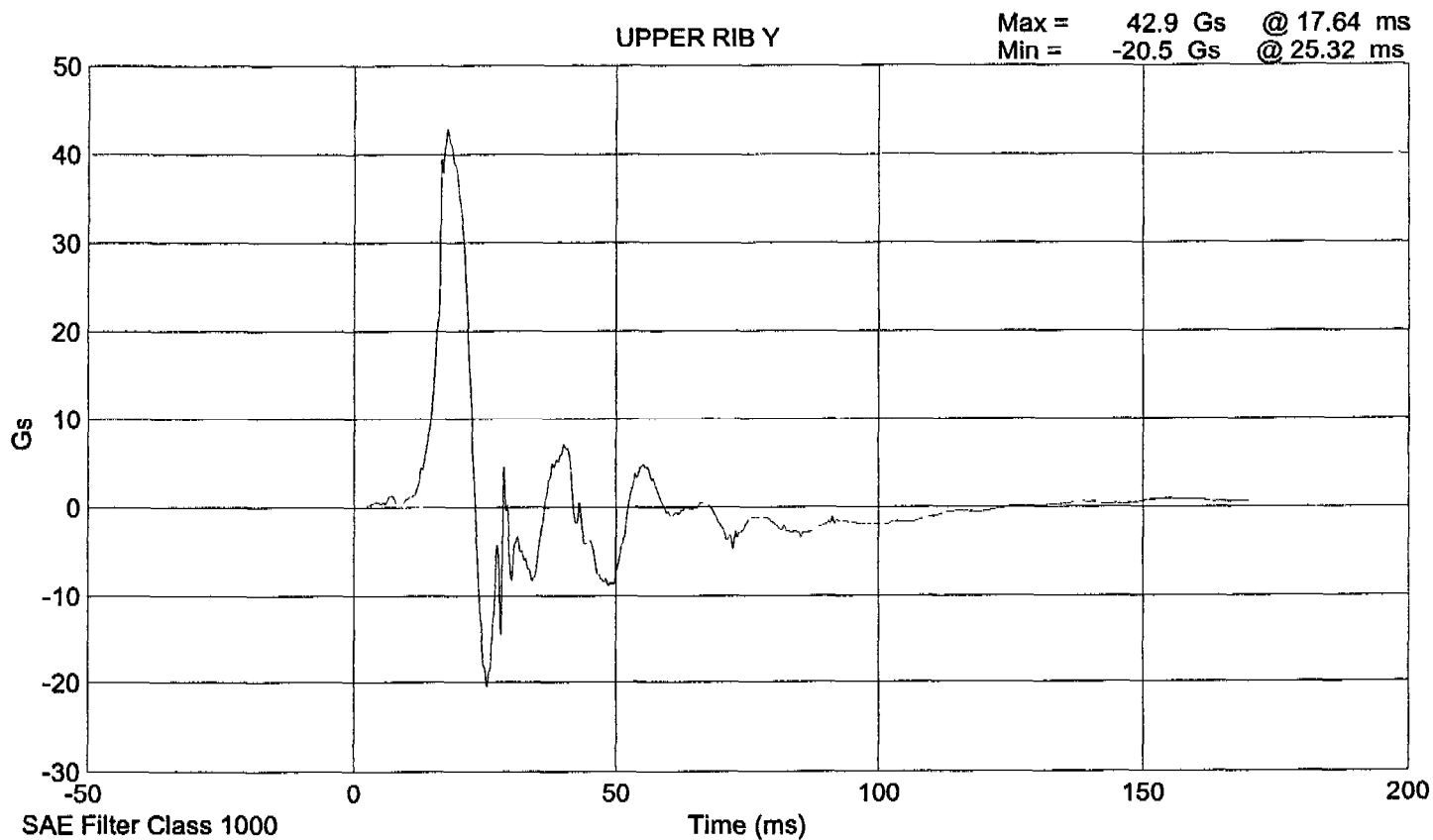
Date: November 30, 2000

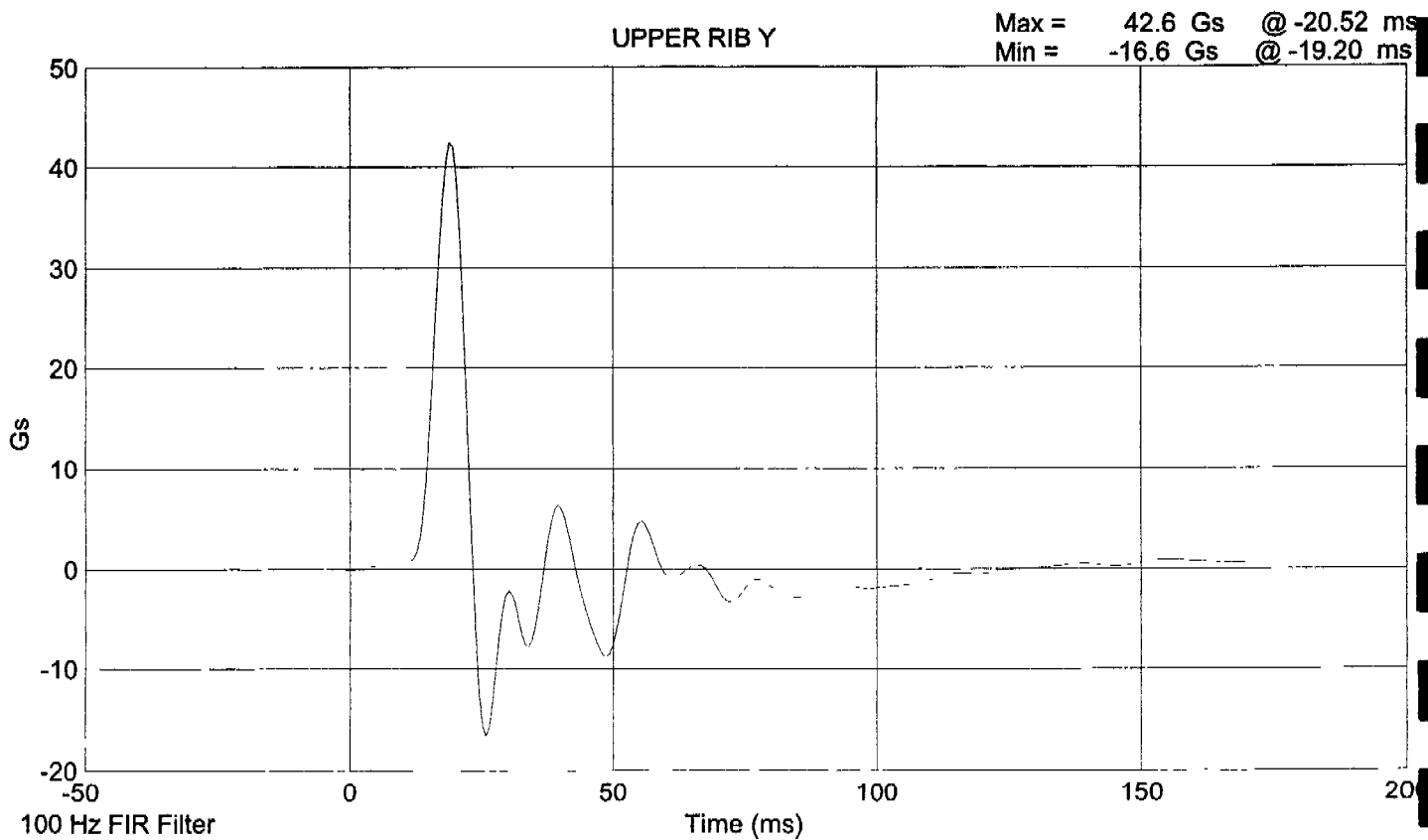
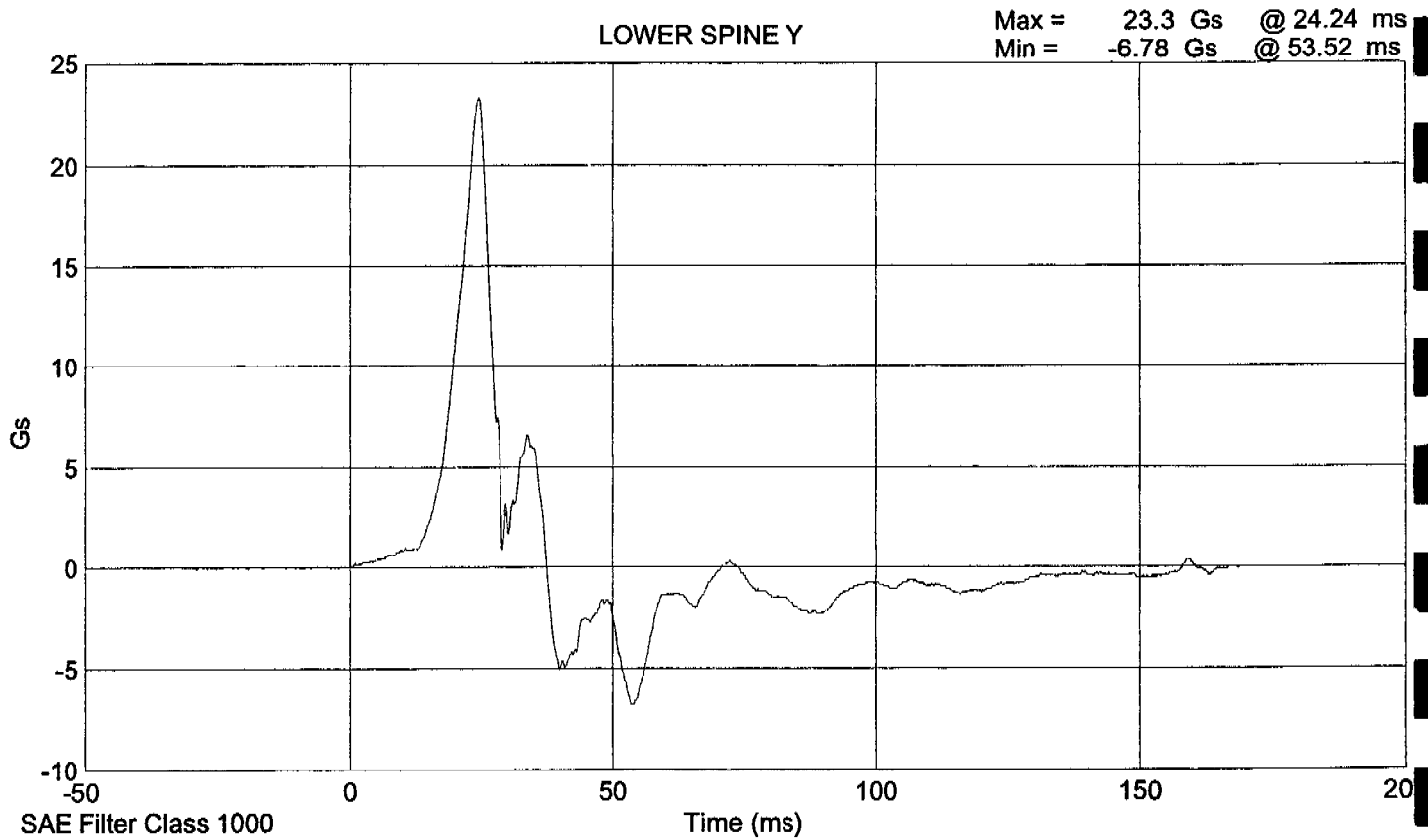
Laboratory Technician: B. Swiecicki

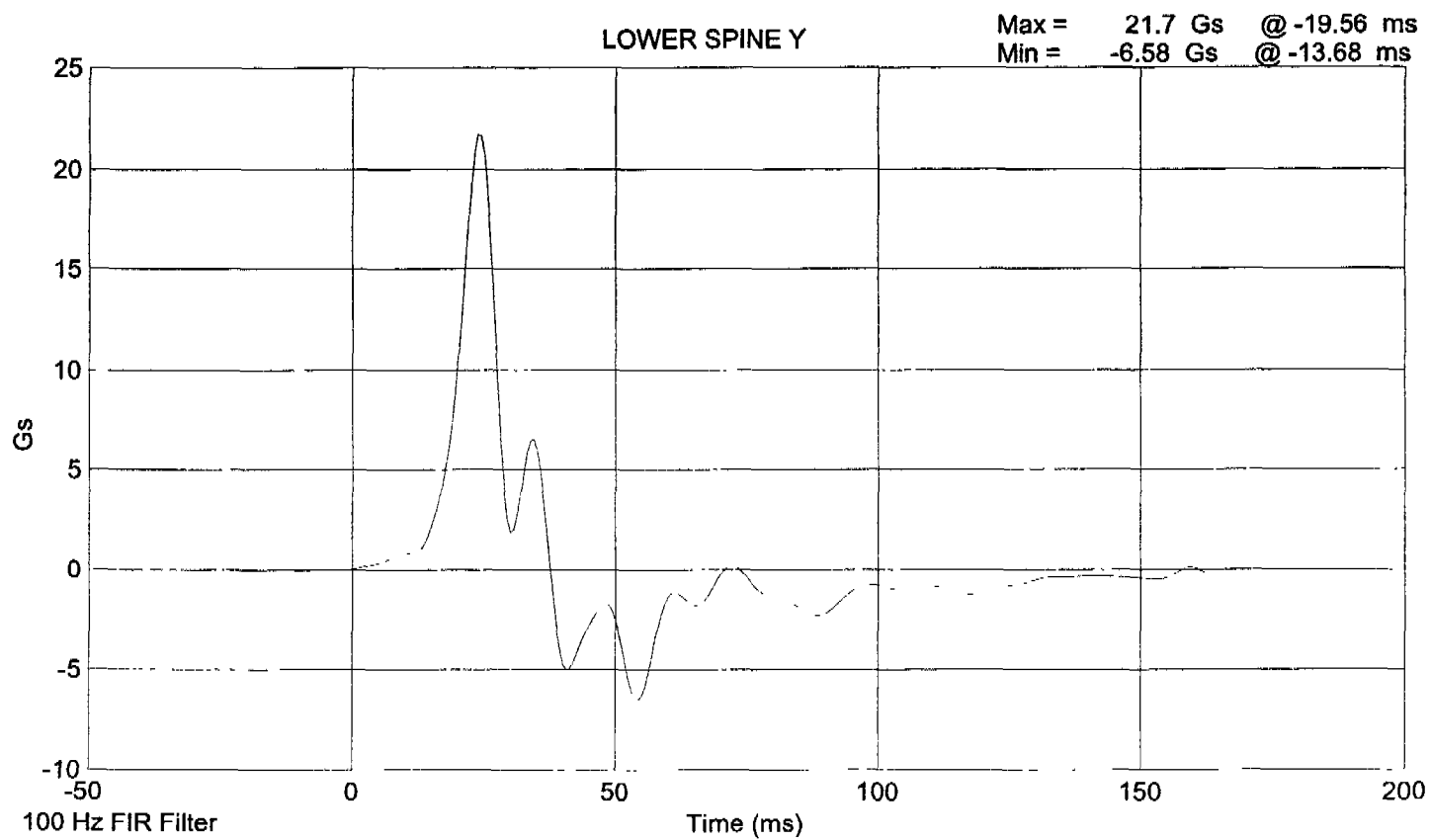
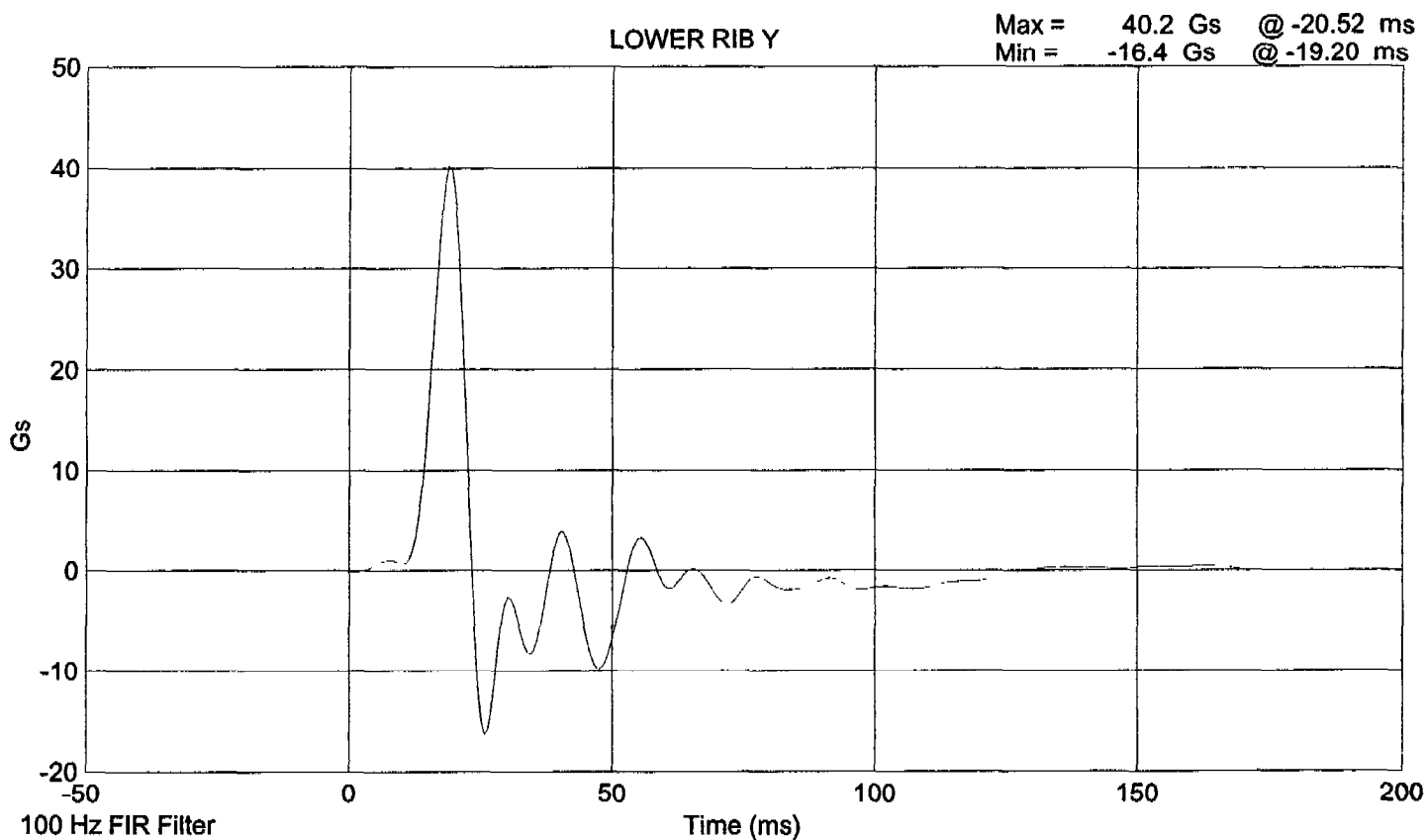
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.28
UPPER RIB (g's)	37 - 46	42.56
LOWER RIB (g's)	37 - 46	40.23
LOWER SPINE (g's)	15 - 22	21.72

REMARKS: None

SID 015 Thorax Impact Test @ 4.2824 m/s







**LATERAL PELVIS IMPACT TEST
POST TEST**

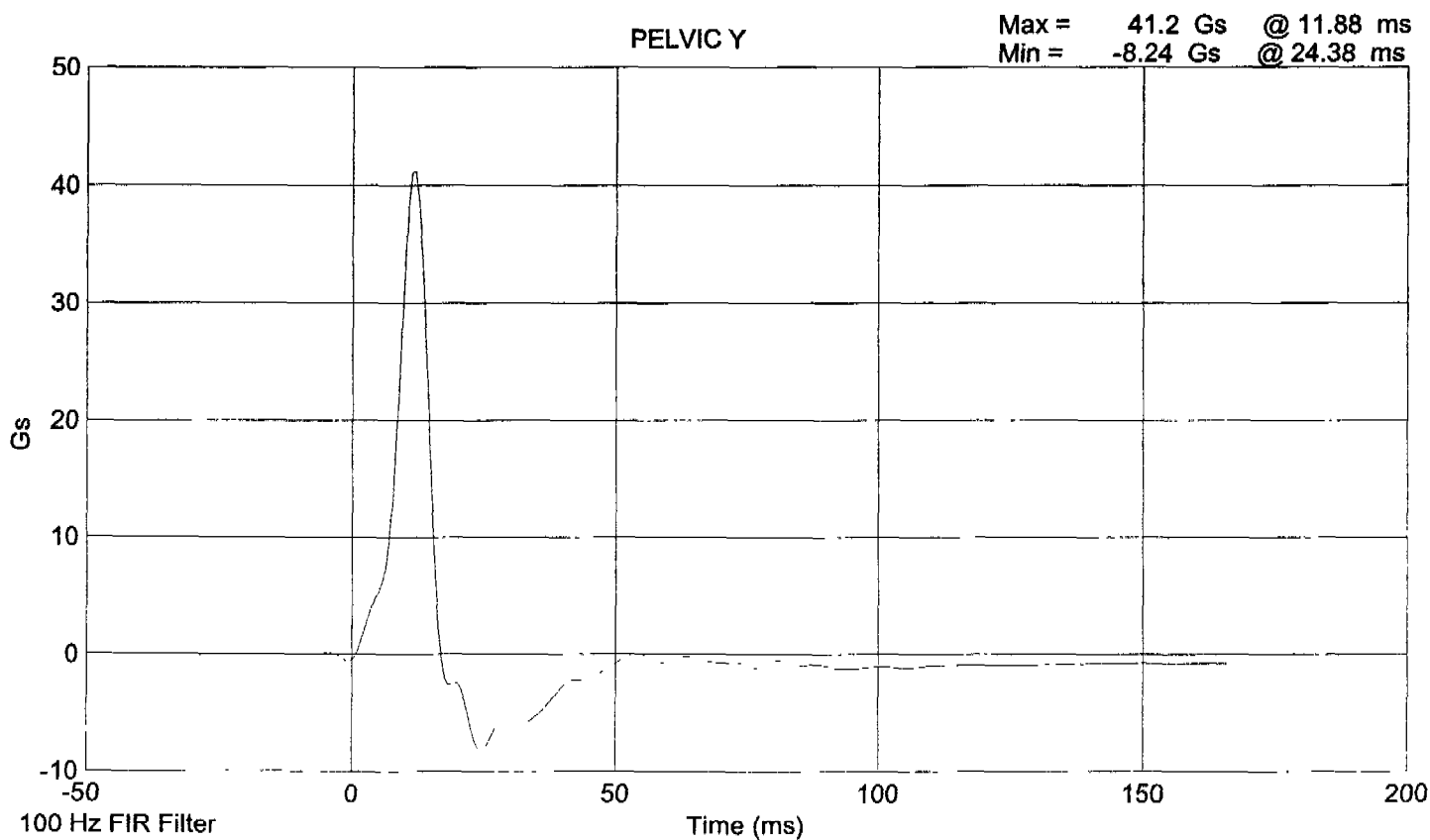
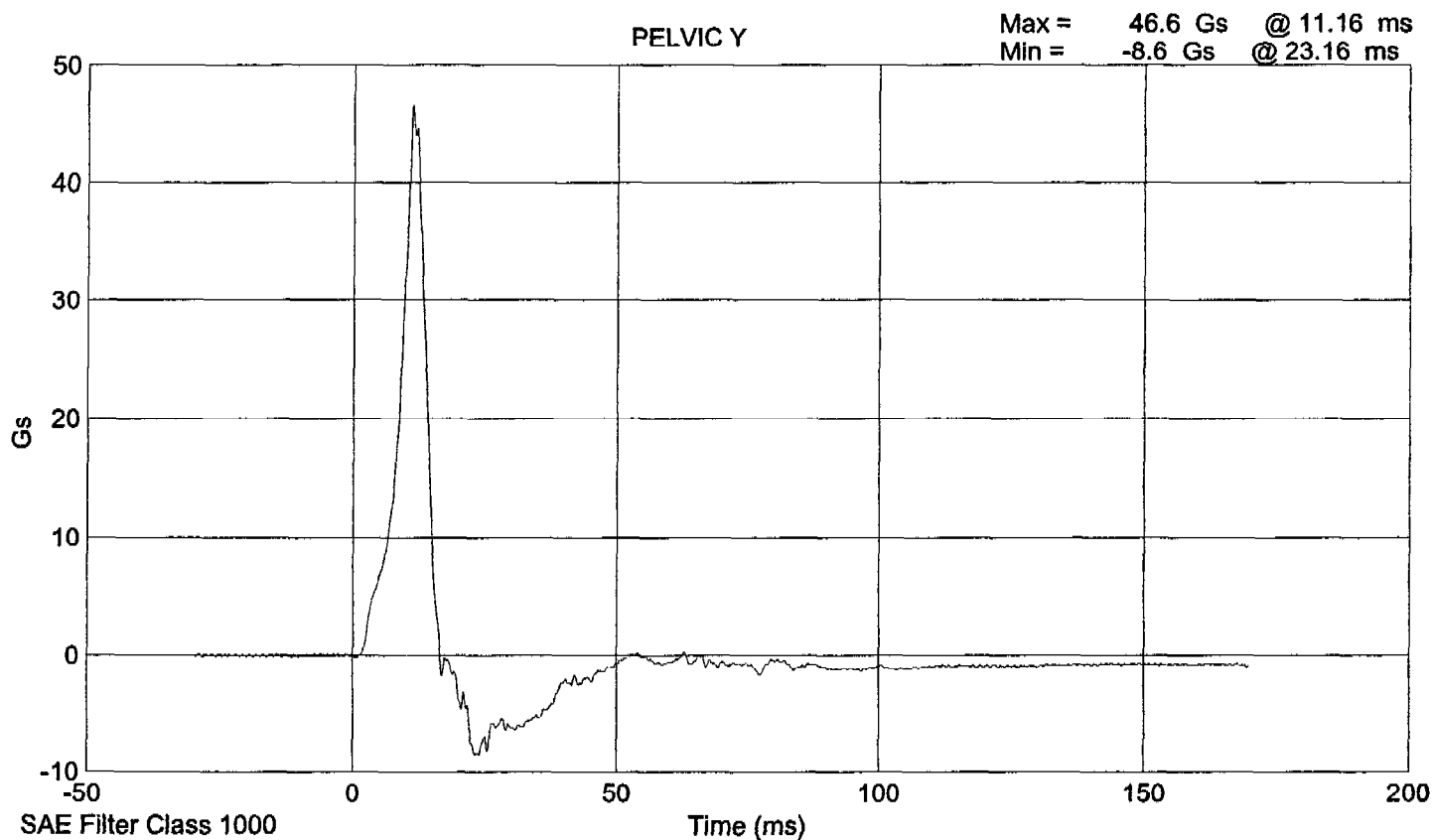
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: November 30, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PROBE SPEED (m/s)	4.27 - 4.33	4.27
PELVIS ACCELERATION (g's)	40 - 60	41.18

REMARKS: None

SID 015 Pelvic Impact Test @ 4.2702 m/s



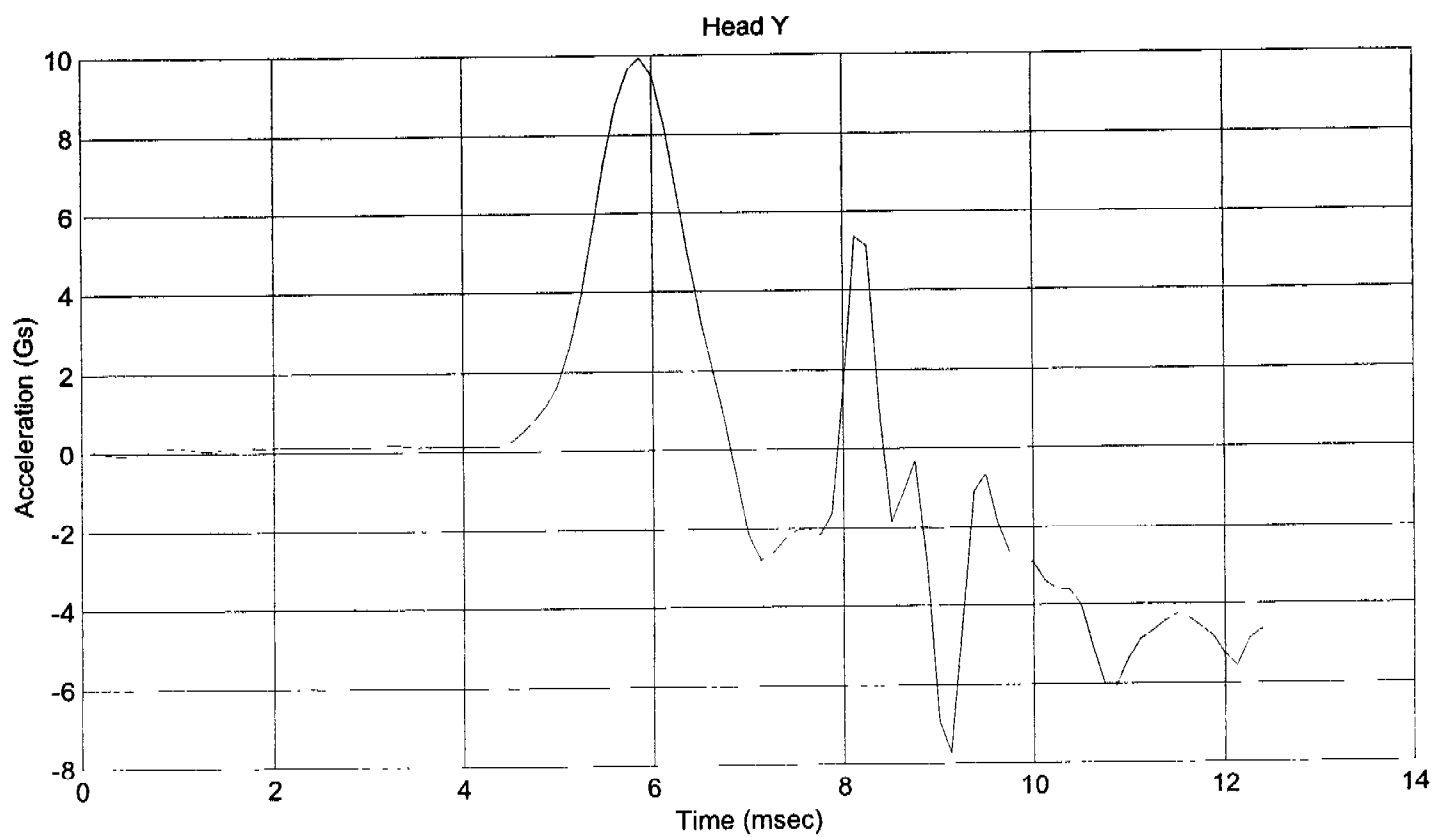
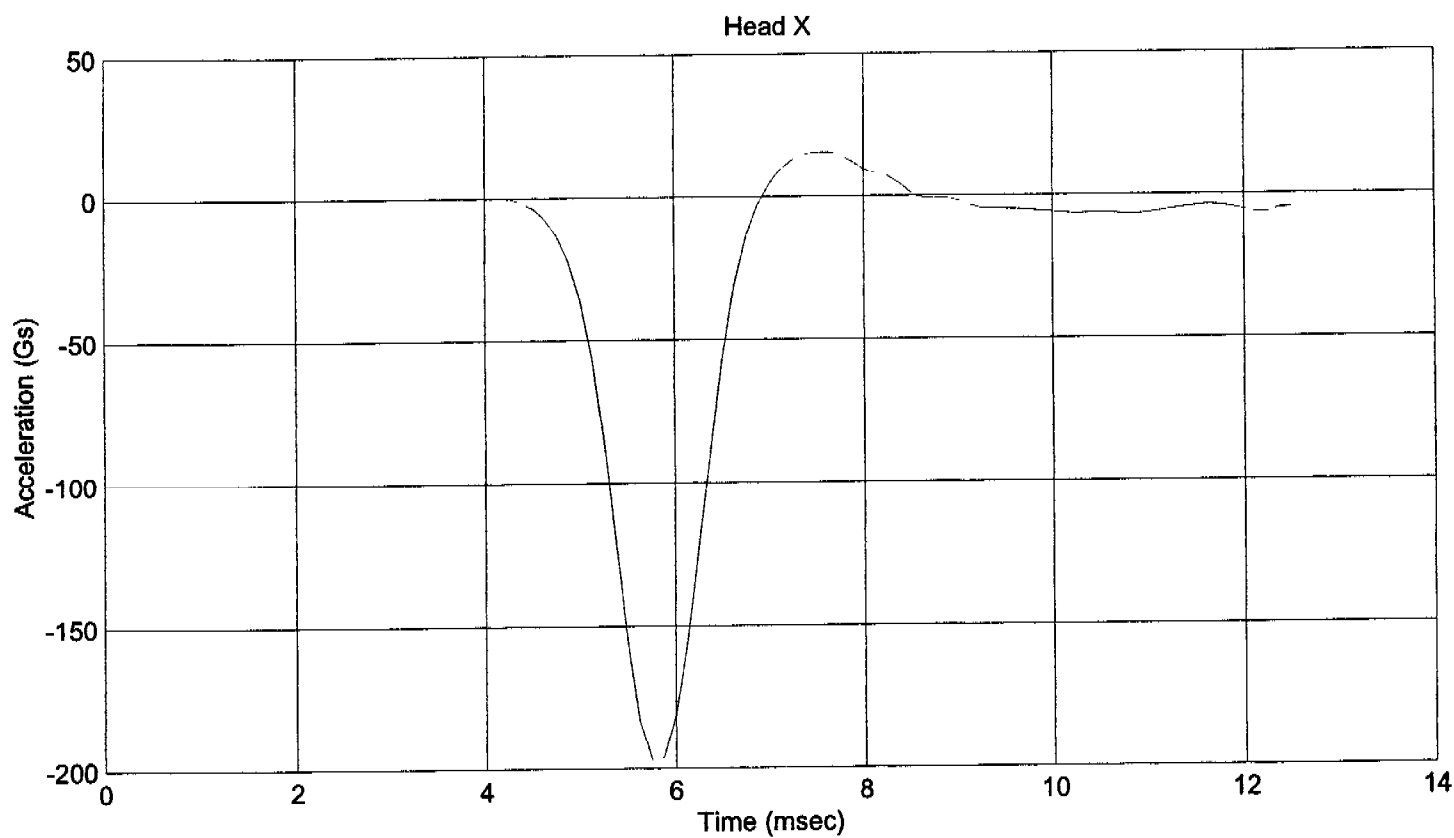
HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

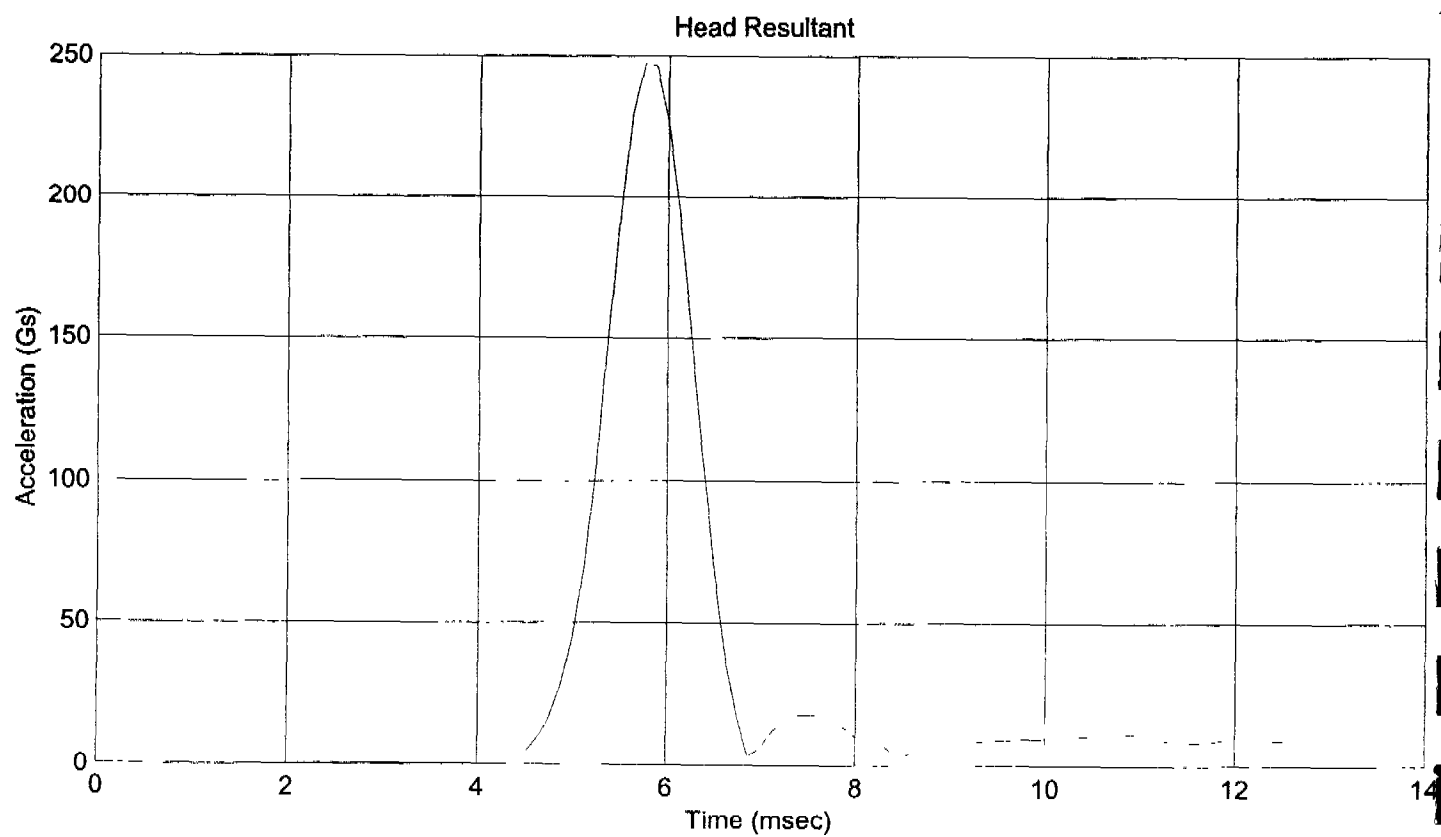
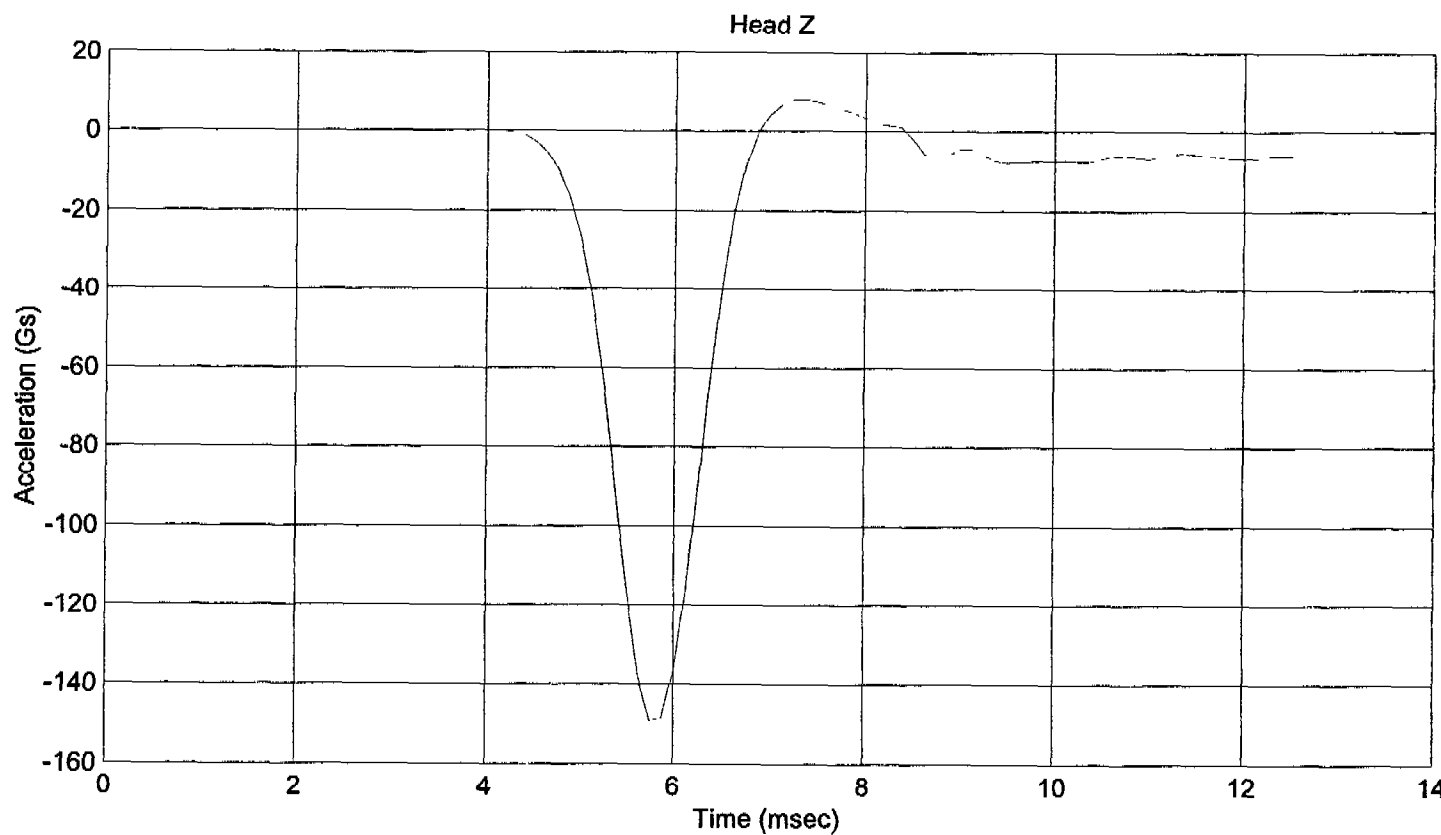
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: November 29, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	247.30
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	9.93
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

REMARKS: None





ABDOMINAL COMPRESSION TEST**POST TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: November 30, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	111
FORCE @ 19 mm (N)	163 - 221	173
FORCE @ 25 mm (N)	222 - 280	245
FORCE @ 33 mm (N)	325 - 391	351

REMARKS: None

Dummy S/N 015

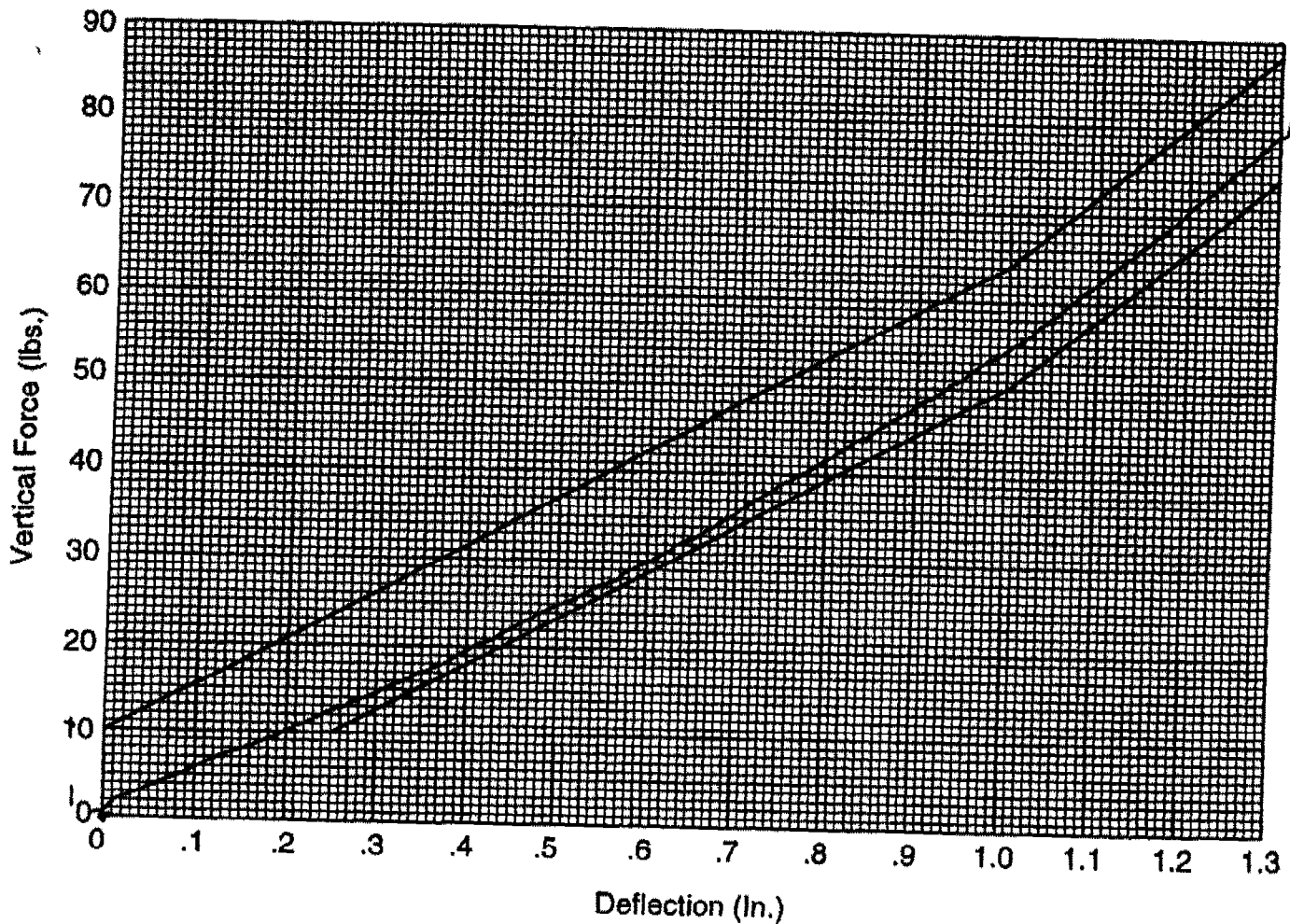
W/A _____

Date 11-30-2000

Performed By [Signature]

Temp. 78°

Humidity 31%



Hybrid II
Abdomen Static Press

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

CONFIGURED FOR LEFT SIDE IMPACT

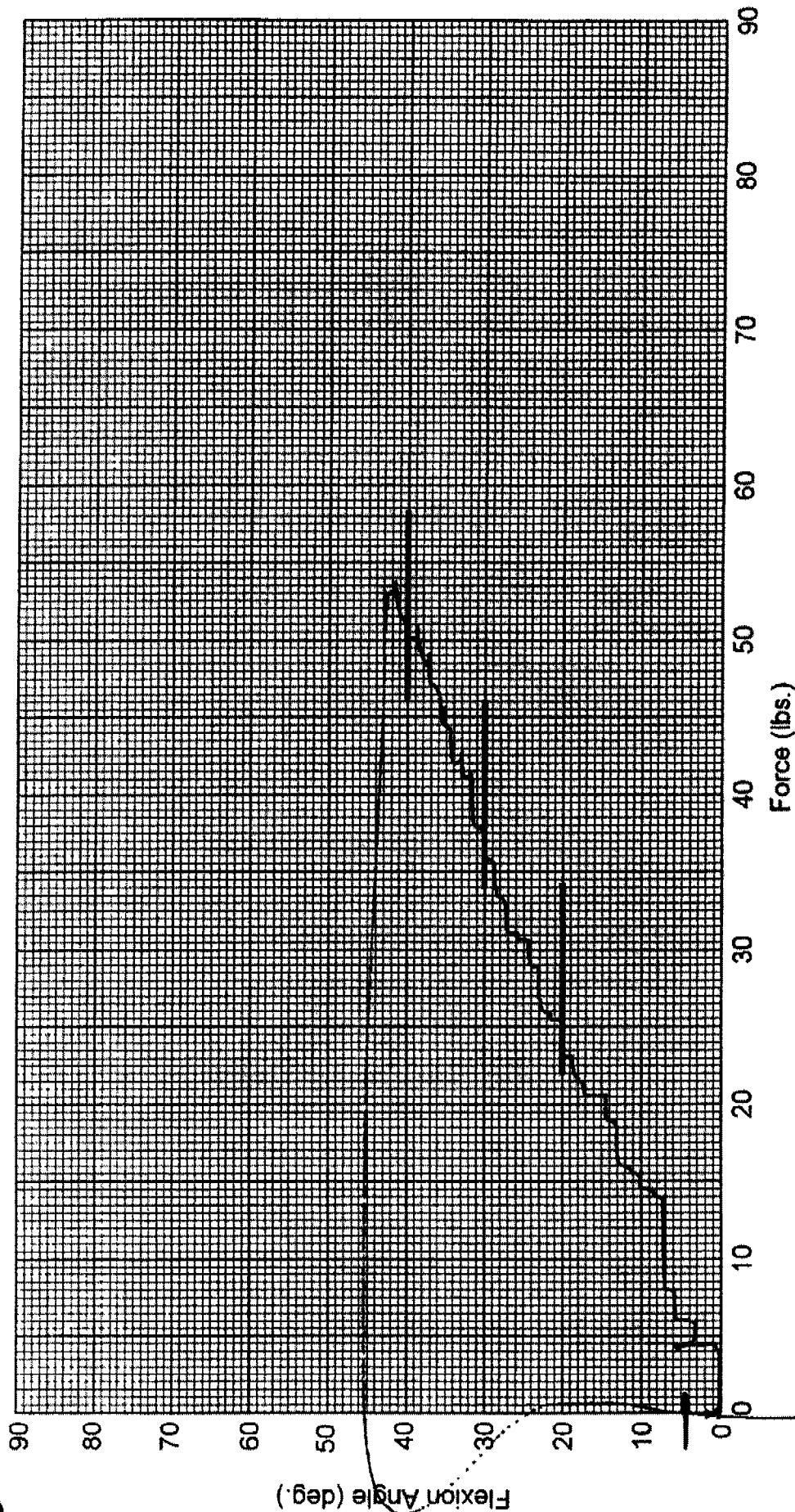
SID Serial No.: 015 Sequential Test Number: 1
Date: November 30, 2000 Laboratory Technician: B. Swiecicki

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	105
FORCE @ 30° (N)	151.2 - 204.6	162
FORCE @ 40° (N)	204.6 - 258	225
RETURN ANGLE	12° max.	4.5°

REMARKS: None

ORIGINAL

Dummy S/N 015
W/A _____
Date 11-30-2000
Performed By BS
Temp. 71°
Humidity 31%



Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015

Sequential Test Number: 1

Date: November 30, 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.: 016

CONFIGURED FOR LEFT SIDE IMPACT

CALIBRATION TEST RESULTS SUMMARY
POST TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: December 5, 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.: 016 Sequential Test Number: 1
Date: December 5, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	526
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	366

REMARKS: None

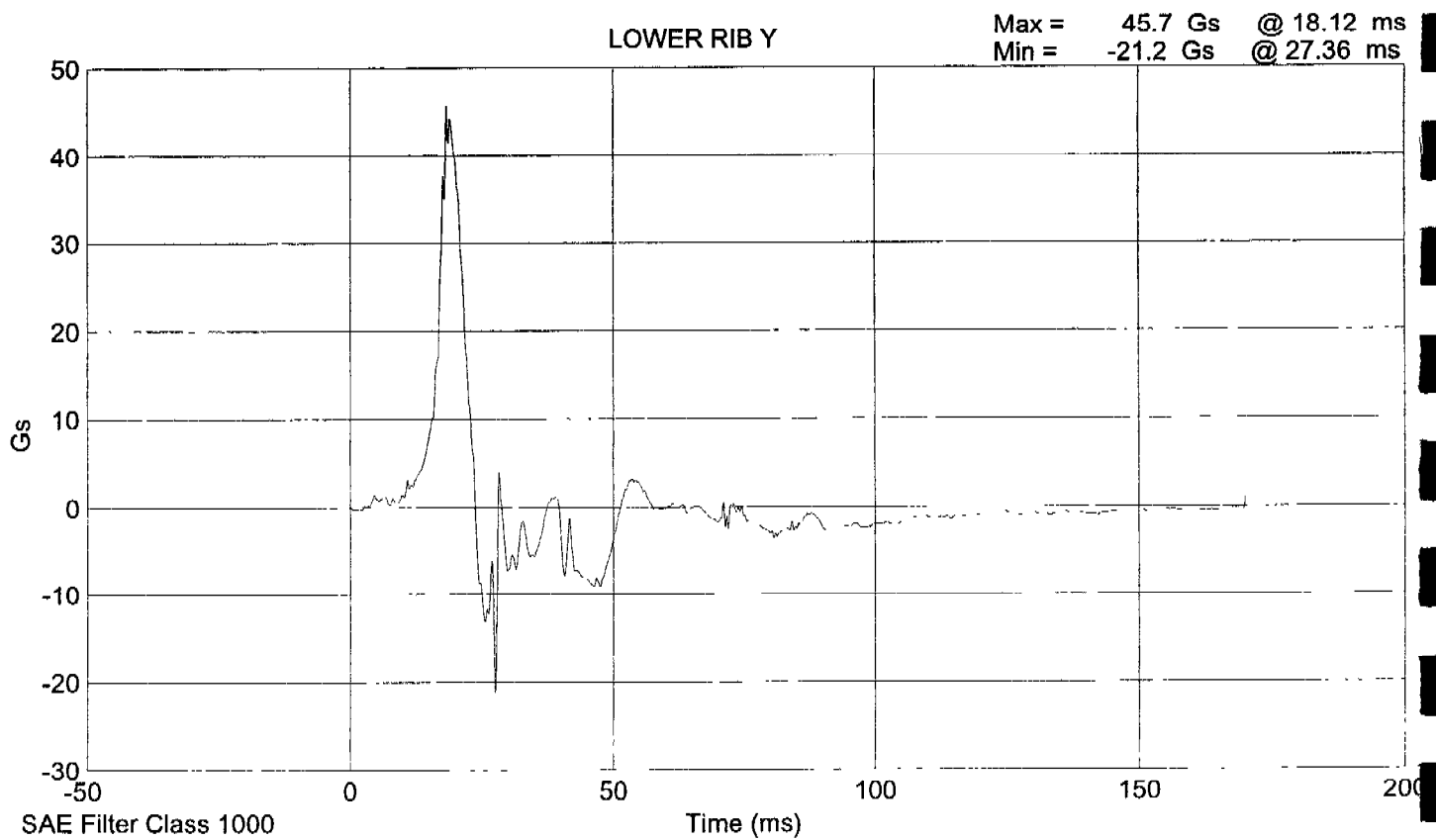
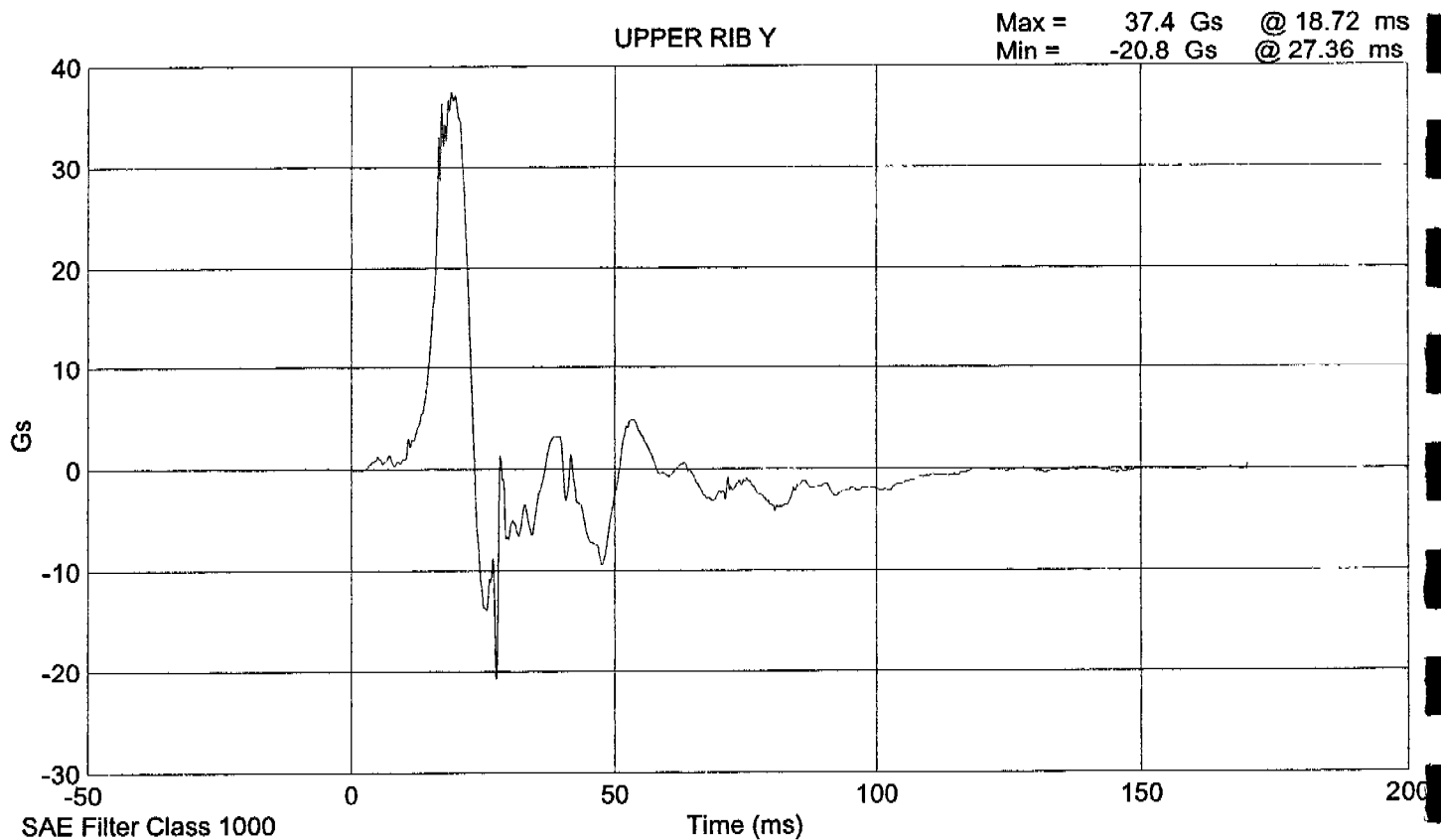
**LATERAL THORAX IMPACT TEST
POST TEST**

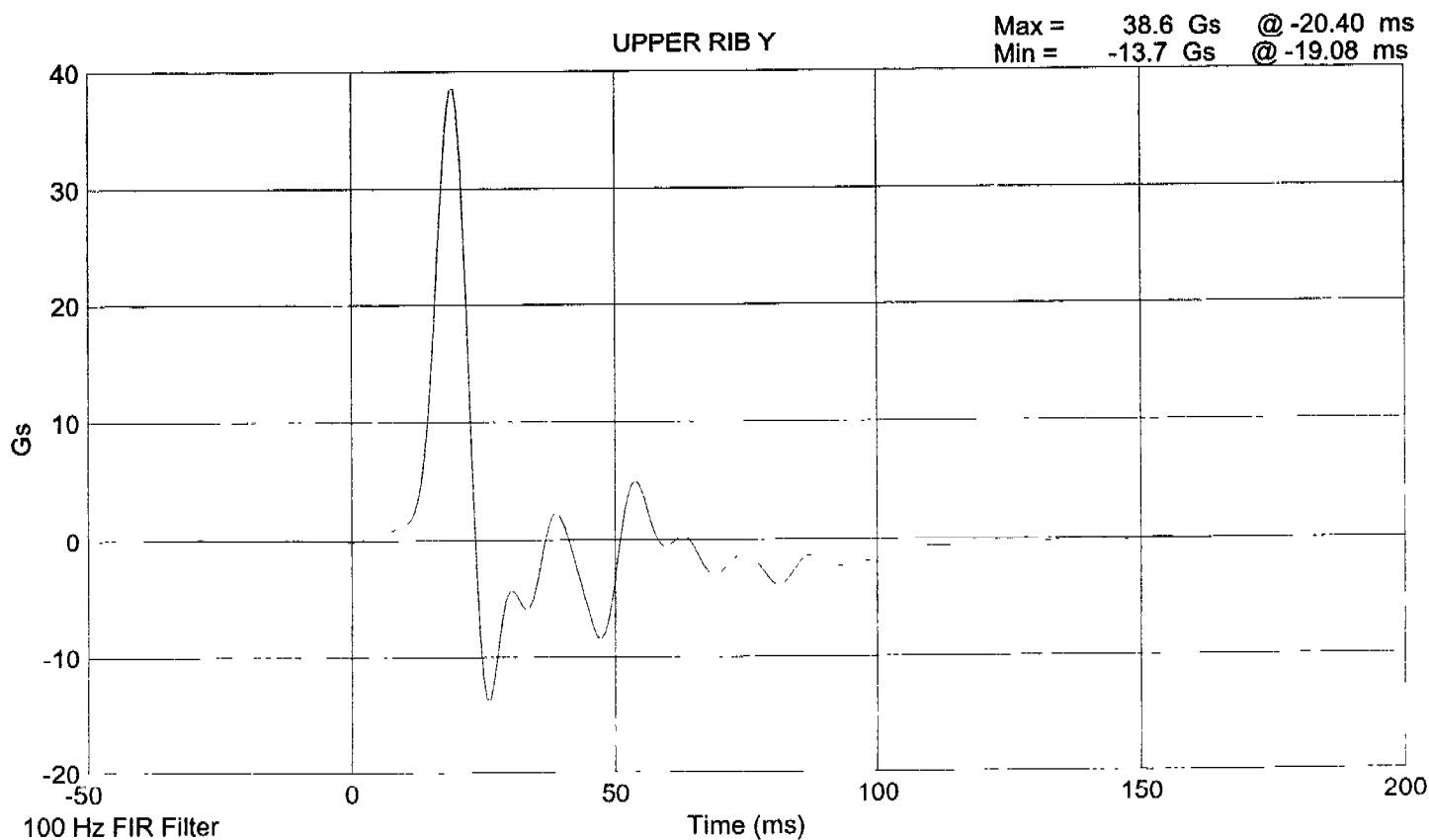
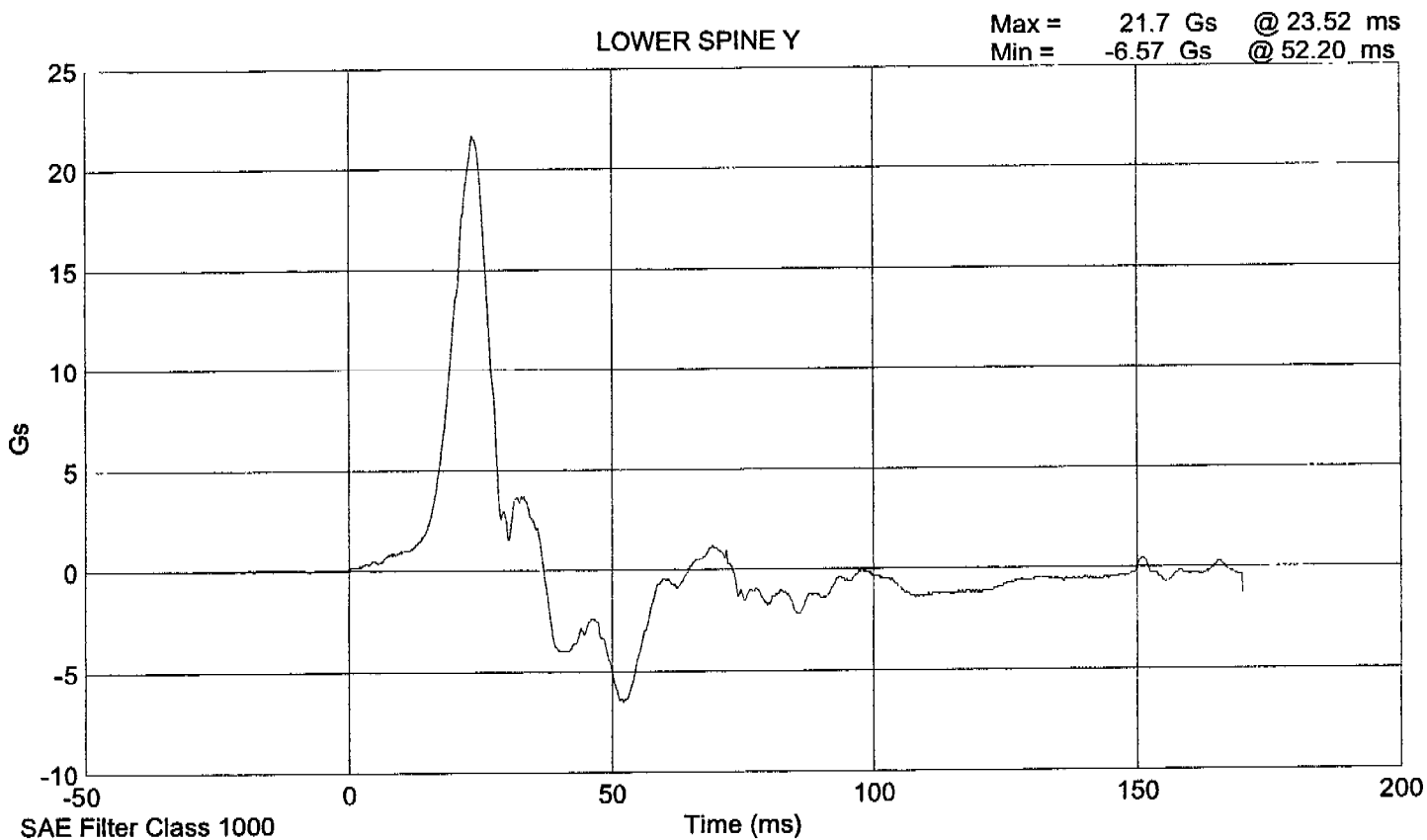
CONFIGURED FOR LEFT SIDE IMPACT

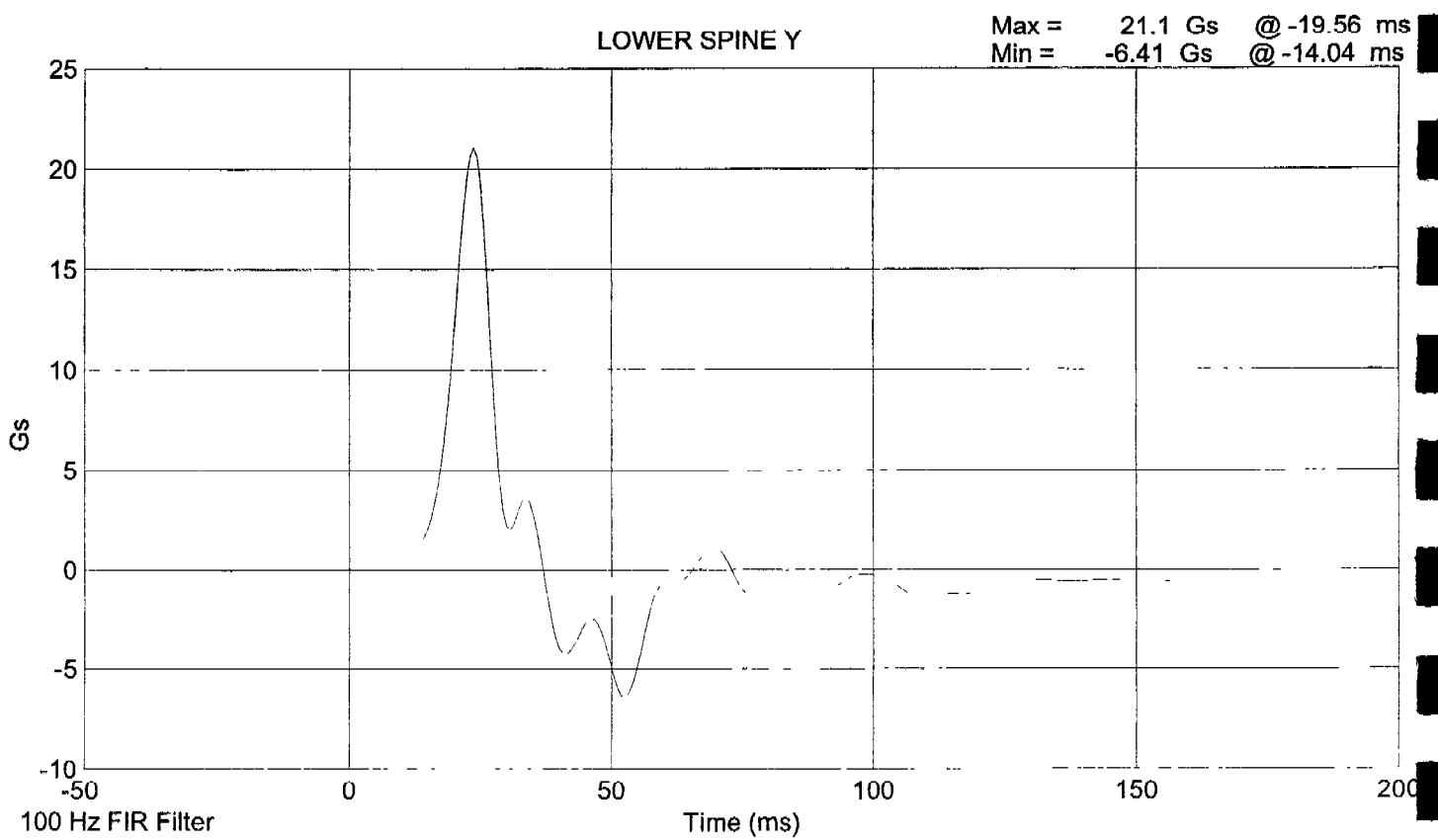
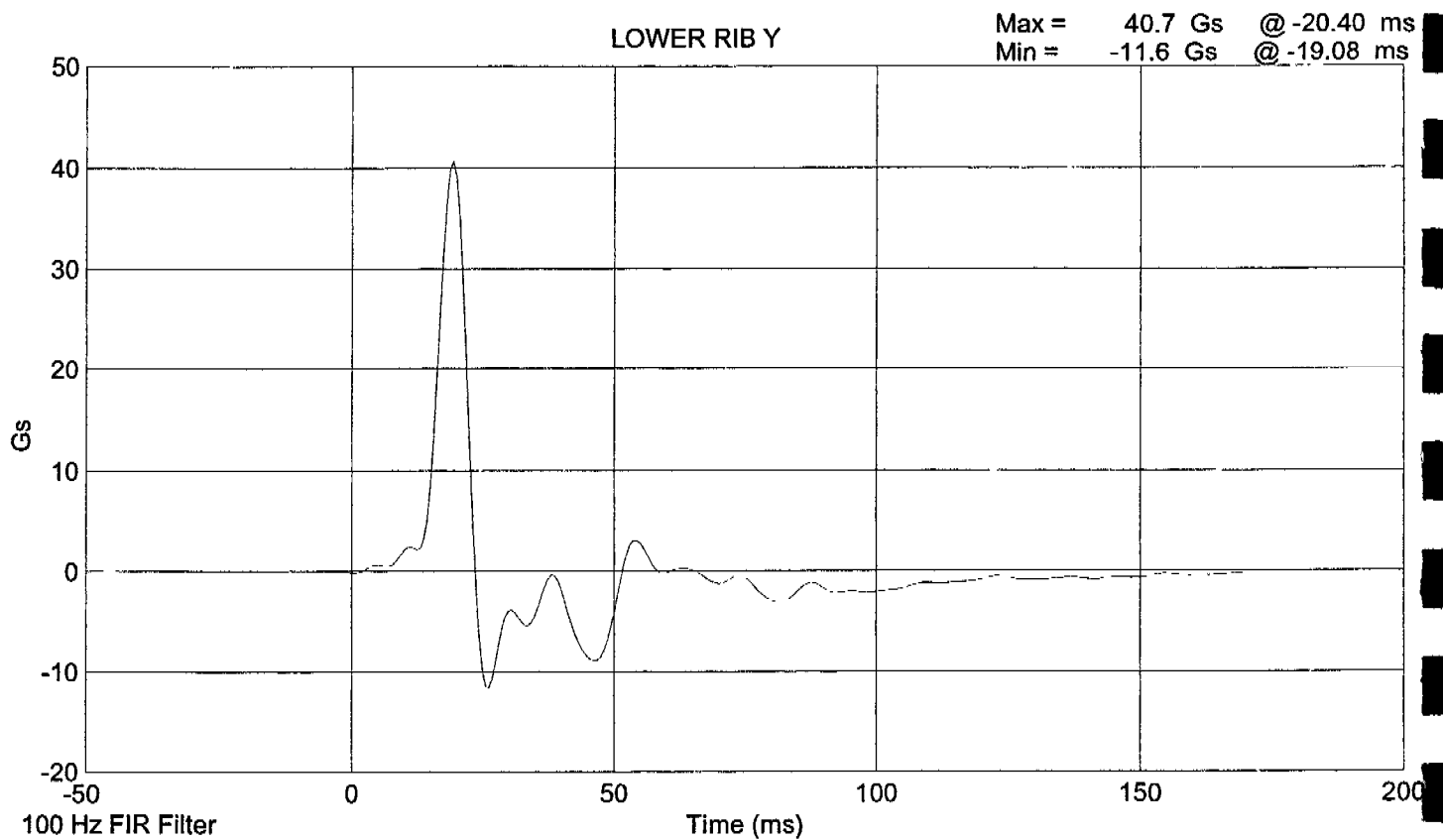
SID Serial No.: 016 Sequential Test Number: 1
Date: December 5, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	38.60
LOWER RIB (g's)	37 - 46	40.72
LOWER SPINE (g's)	15 - 22	21.08

REMARKS: None







**LATERAL PELVIS IMPACT TEST
POST TEST**

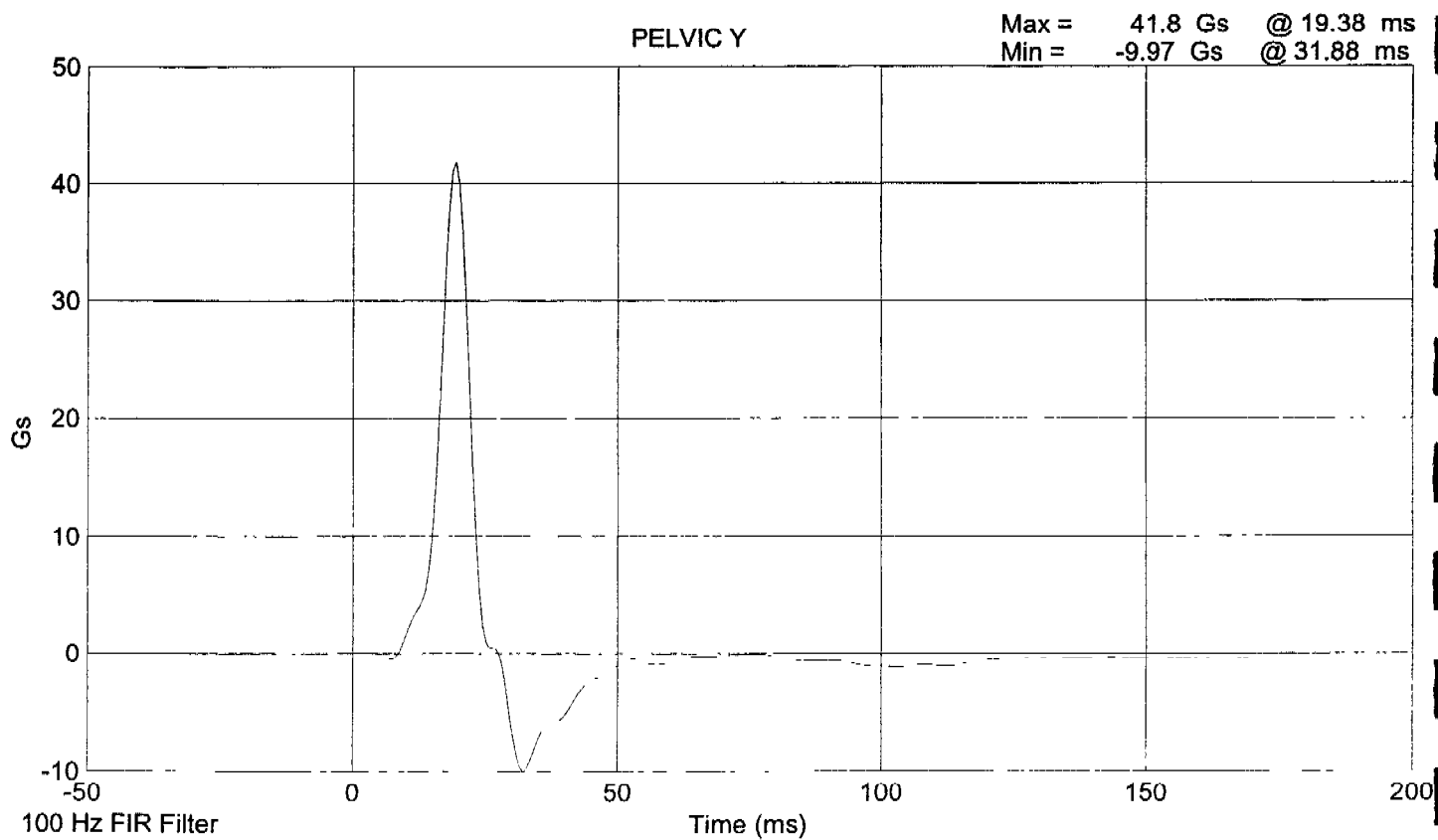
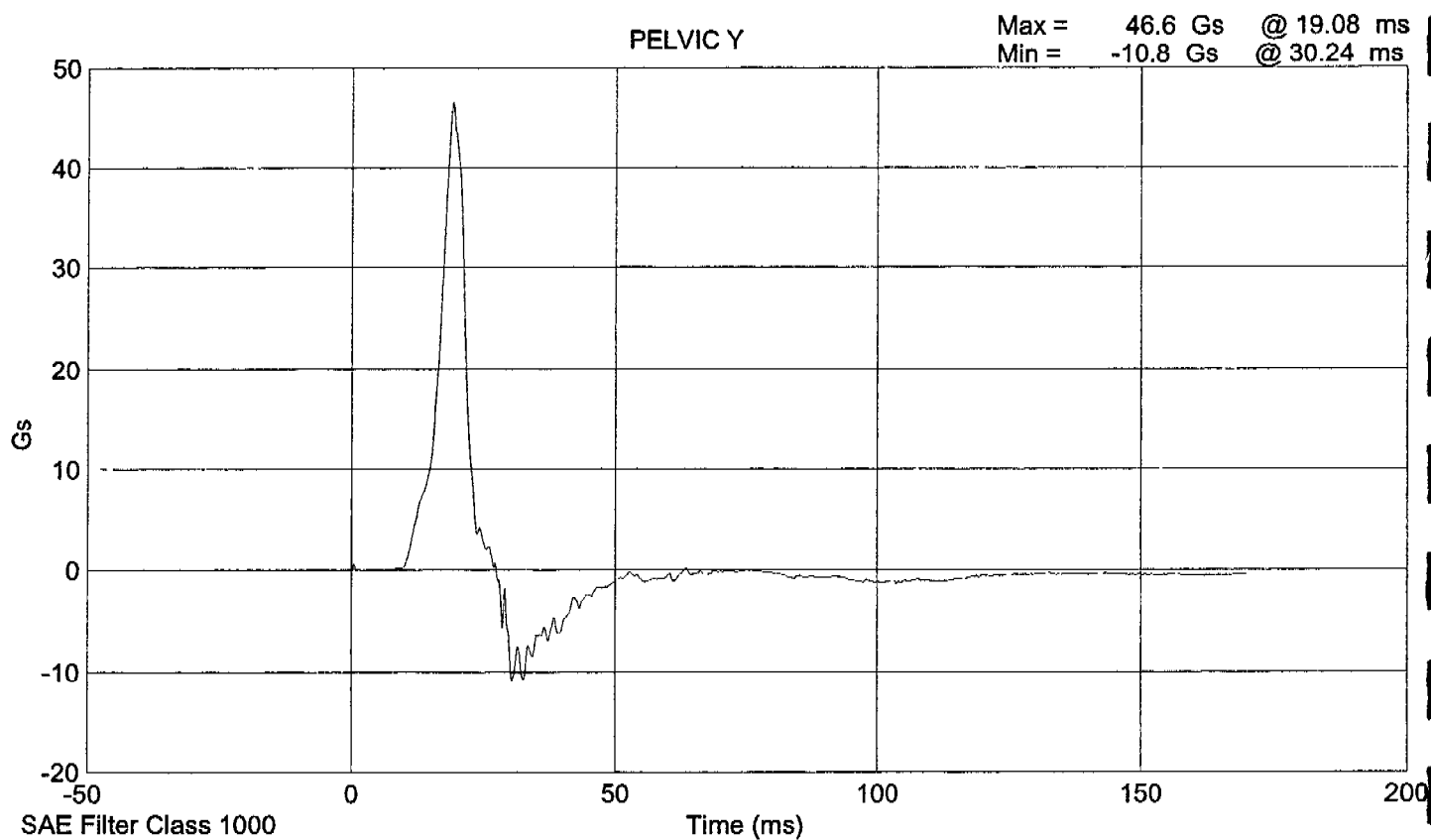
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: December 5, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32
PROBE SPEED (m/s)	4.27 - 4.33	4.29
PELVIS ACCELERATION (g's)	40 - 60	41.76

REMARKS: None

SID 016 Pelvic Impact Test @ 4.2946 m/s



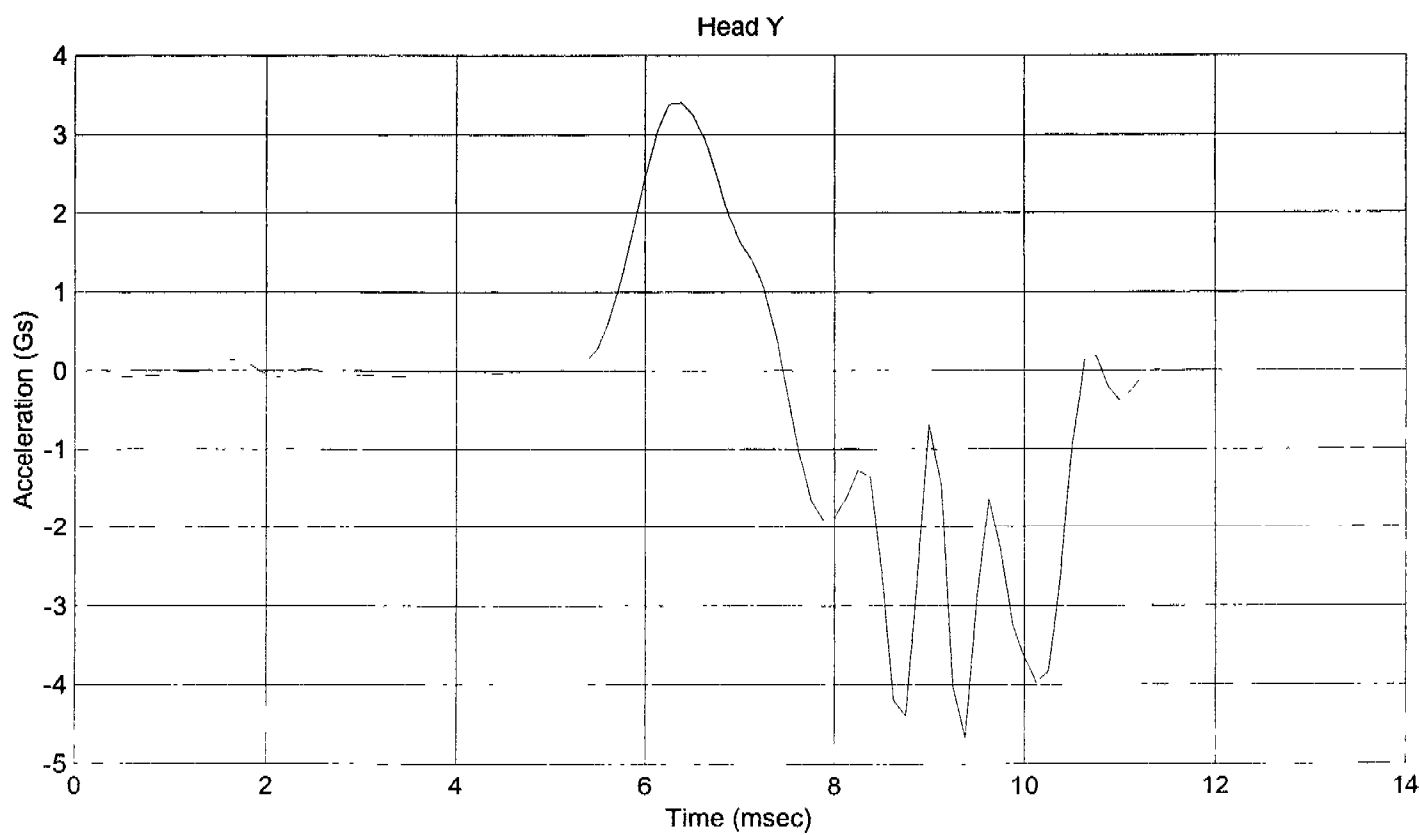
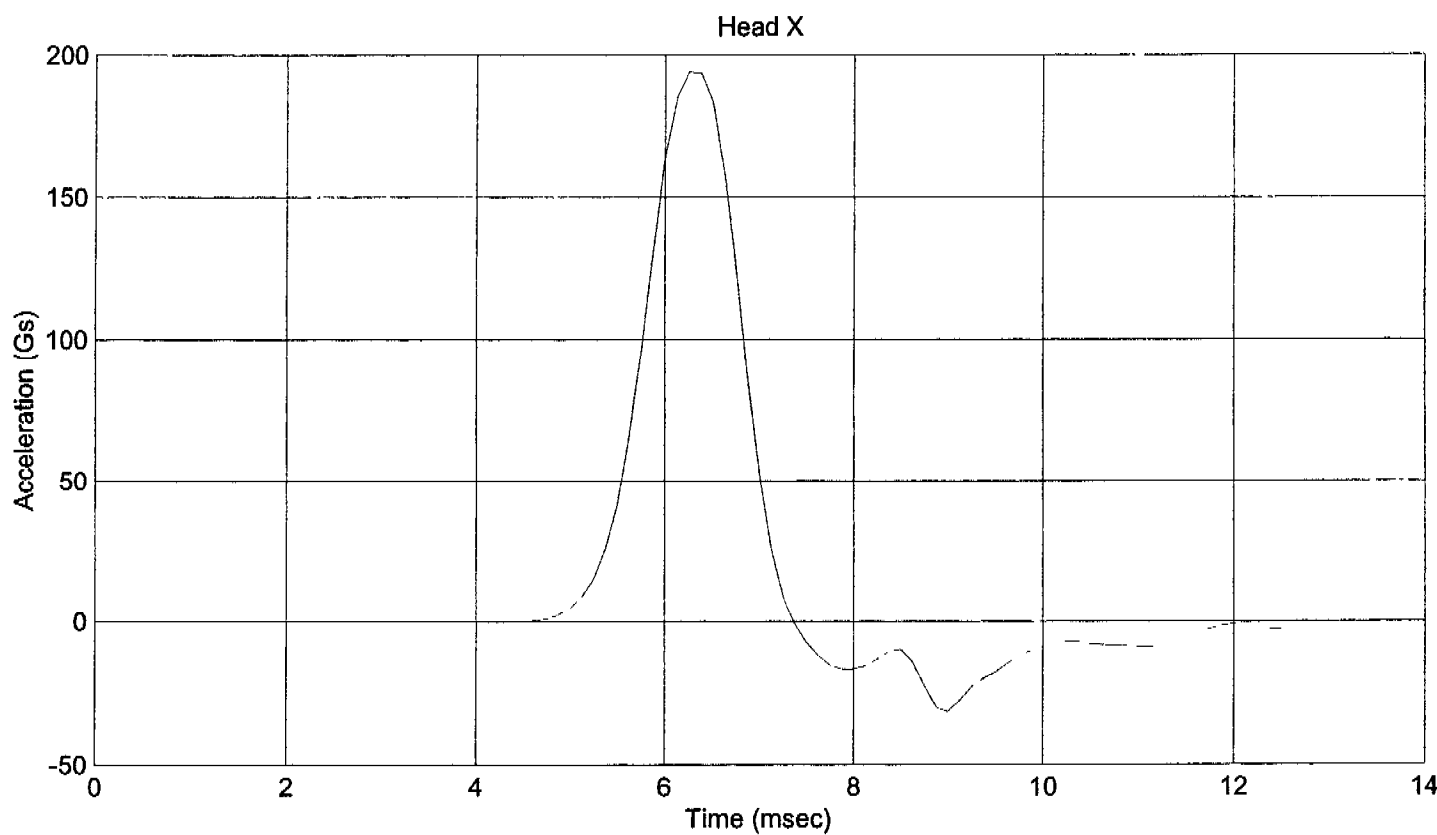
HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

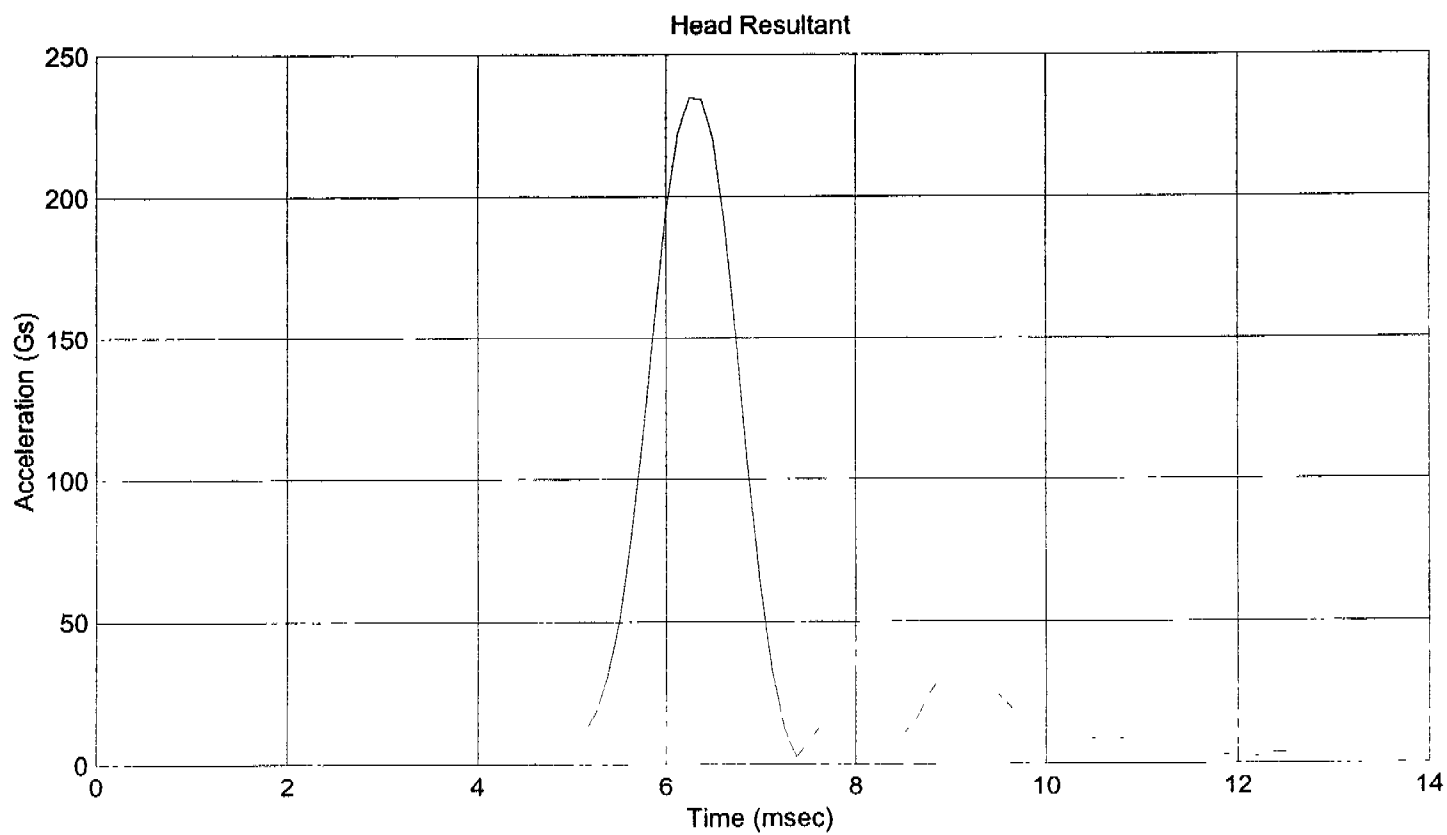
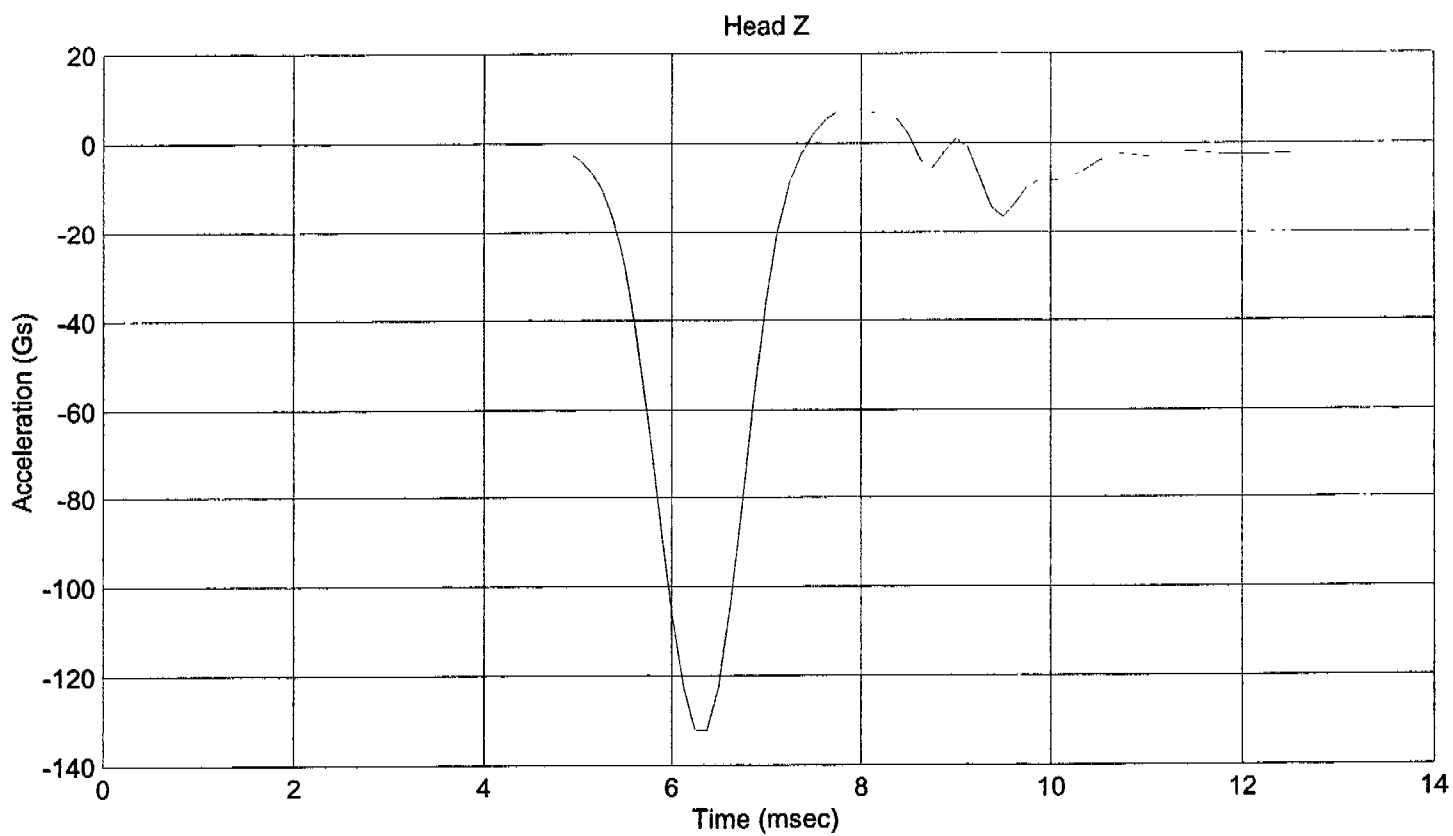
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: December 1, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	234.81
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	4.67
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.12

REMARKS: None





ABDOMINAL COMPRESSION TEST**POST TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACTSID Serial No.: 016Sequential Test Number: 1Date: December 5, 2000Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32
FORCE @ 13 mm (N)	104 - 162	118
FORCE @ 19 mm (N)	163 - 221	178
FORCE @ 25 mm (N)	222 - 280	258
FORCE @ 33 mm (N)	325 - 391	385

REMARKS: None

Dummy S/N 016

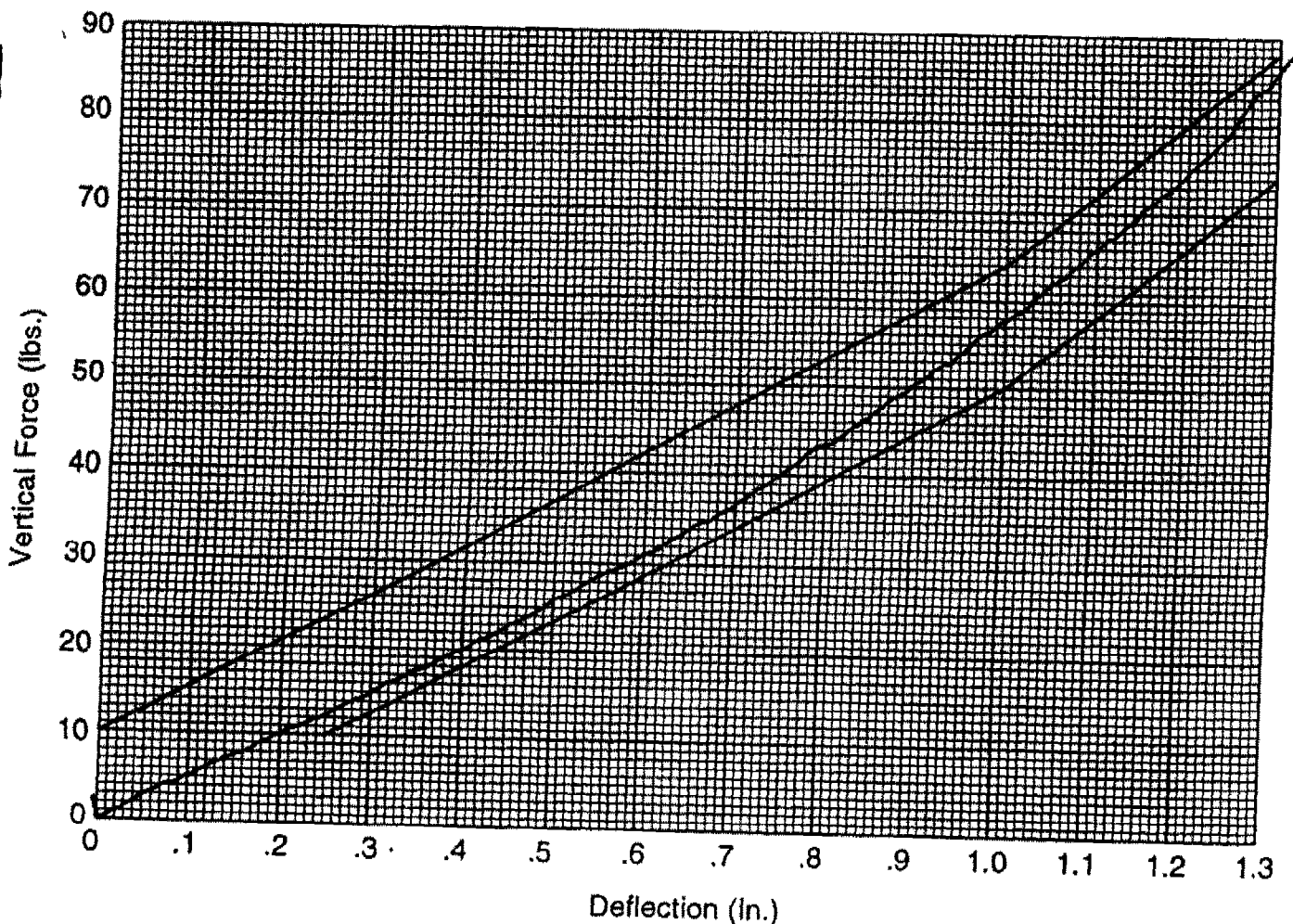
W/A _____

Date 12-5-2000

Performed By [Signature]

Temp. 71°

Humidity 32%



Hybrid II
Abdomen Static Press

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

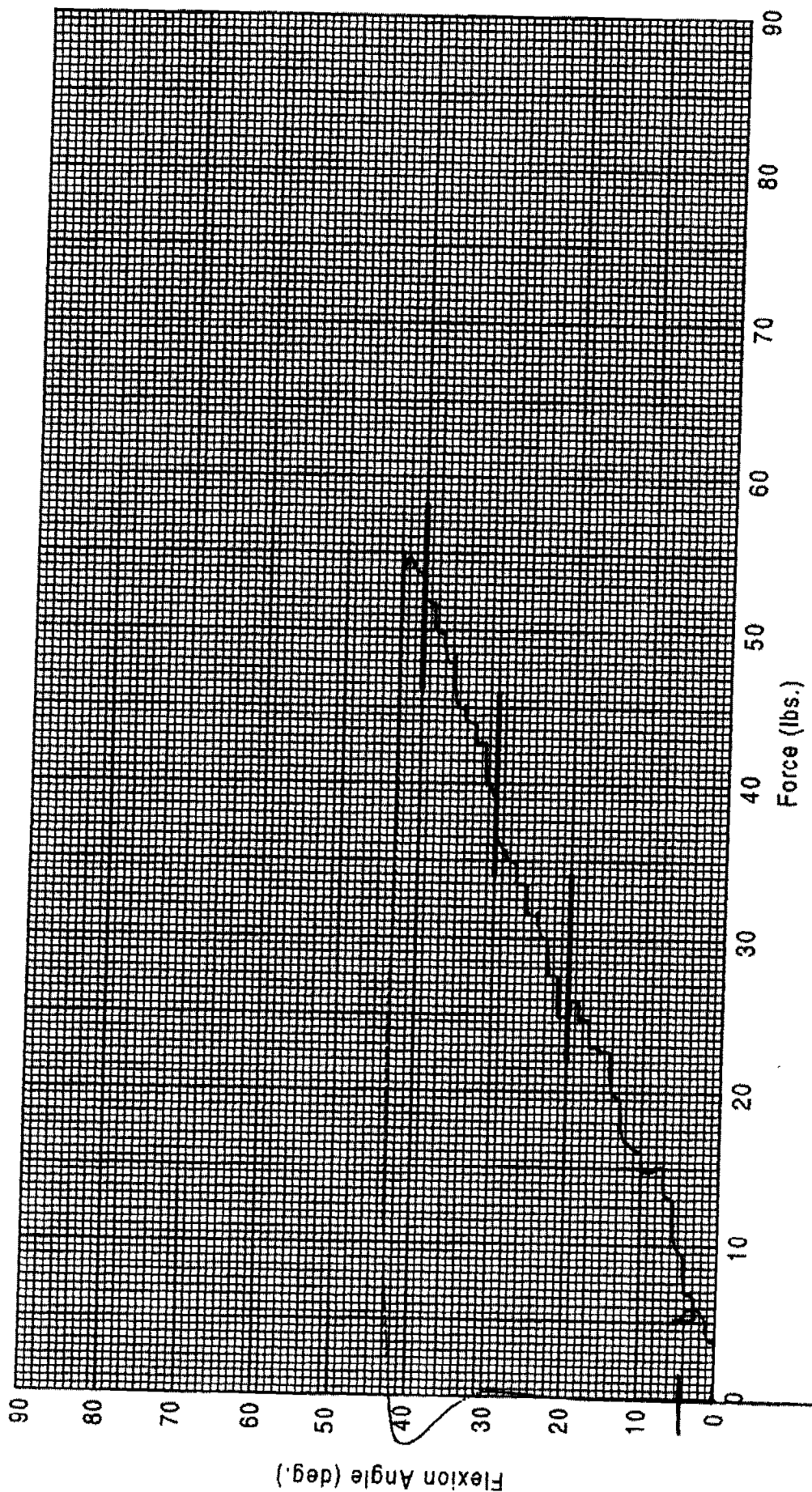
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: December 5, 2000 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	32
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	116
FORCE @ 30° (N)	151.2 - 204.6	160
FORCE @ 40° (N)	204.6 - 258	231
RETURN ANGLE	12° max.	4.5°

REMARKS: None

Dummy S/N 016
W/A _____
Date 12-5-2000
Performed By [Signature]
Temp. 71°
Humidity 32%



Hybrid II Lumbar Spine Flexion Test

FM-052-CERT-005-R00

POST TEST DUMMY INSPECTION LIST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016

Sequential Test Number: _____

Date: _____

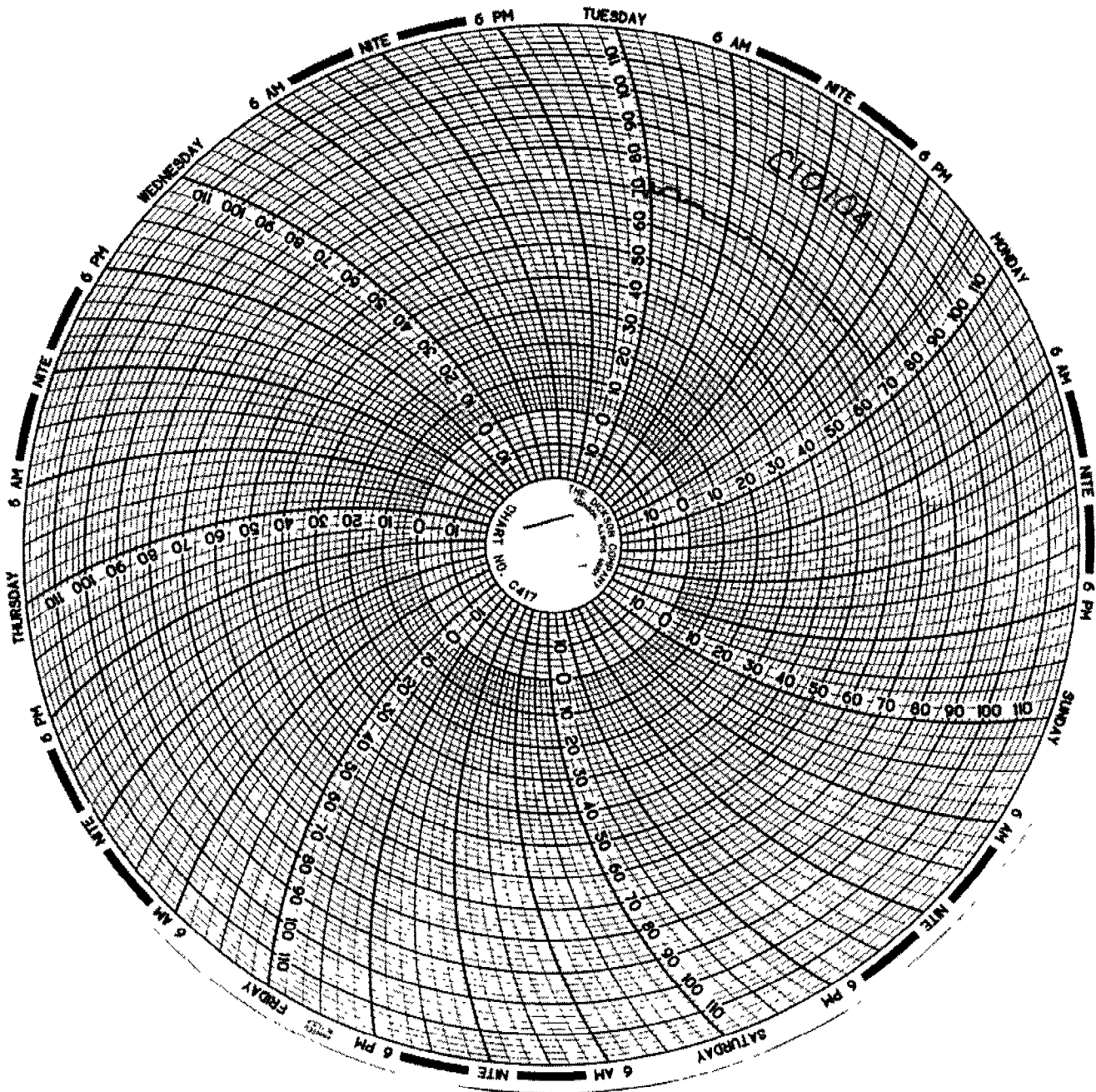
Laboratory Technician: _____

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

TEMPERATURE TRACE



APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

SID INSTRUMENTATION

FRONT SID NO.: 015			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD (X)	AC-J33030	ENDEVCO	21-Jun-00
HEAD (Y)	AC-J33032	ENDEVCO	19-Jun-00
HEAD (Z)	AC-J33021	ENDEVCO	19-Jun-00
UPPER RIB (Y)	AC-P16862	ENDEVCO	7-Sep-00
LOWER RIB (Y)	AC-P16656	ENDEVCO	7-Sep-00
LOWER SPINE (Y)	AC-P16866	ENDEVCO	6-Sep-00
PELVIS (Y)	AC-P16676	ENDEVCO	7-Sep-00
UPPER RIB REDUNDANT (Y)	AC-P16949	ENDEVCO	7-Sep-00
LOWER RIB REDUNDANT (Y)	AC-P16645	ENDEVCO	7-Sep-00
LOWER SPINE REDUNDANT (Y)	AC-P16823	ENDEVCO	13-Sep-00
PELVIS REDUNDANT (Y)	AC-P16843	ENDEVCO	7-Sep-00

REAR SID NO.: 016			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD (X)	AC-P13331	ENDEVCO	26-May-00
HEAD (Y)	AC-P13356	ENDEVCO	26-May-00
HEAD (Z)	AC-P13323	ENDEVCO	26-May-00
UPPER RIB (Y)	AC-P16587	ENDEVCO	6-Sep-00
LOWER RIB (Y)	AC-P15747	ENDEVCO	6-Sep-00
LOWER SPINE (Y)	AC-P16576	ENDEVCO	6-Sep-00
PELVIS (Y)	AC-P16583	ENDEVCO	6-Sep-00
UPPER RIB REDUNDANT (Y)	AC-P16585	ENDEVCO	6-Sep-00
LOWER RIB REDUNDANT (Y)	AC-P14438	ENDEVCO	5-Sep-00
LOWER SPINE REDUNDANT (Y)	AC-P15534	ENDEVCO	6-Sep-00
PELVIS REDUNDANT (Y)	AC-P15526	ENDEVCO	6-Sep-00

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-ACC06	ENDEVCO	8-Sep-00
RIGHT FRONT SILL (Y)	AC-B11351	ENDEVCO	8-Sep-00
RIGHT FRONT SILL (Z)	AC-B10481	ENDEVCO	8-Sep-00
RIGHT REAR SILL (X)	AC-J31026	ENDEVCO	21-Sep-00
RIGHT REAR SILL (Y)	AC-J32831	ENDEVCO	6-Jul-00
RIGHT REAR SILL (Z)	AC-APA30	ENDEVCO	6-Jul-00
REAR FLOORPAN ABOVE AXLE (X)	AC-J27941	ENDEVCO	31-Aug-00
REAR FLOORPAN ABOVE AXLE (Y)	AC-B11073	ENDEVCO	7-Sep-00
REAR FLOORPAN ABOVE AXLE (Z)	AC-B10954	ENDEVCO	7-Sep-00
LEFT REAR SILL (Y)	AC-D82	ICS	17-Aug-00
LEFT FRONT SILL (Y)	AC-Y112	ICS	25-Aug-00
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-D36	ICS	14-Aug-00
LOWER LEFT B- PILLAR (Y)	AC-A14077	ENDEVCO	7-Aug-00
MIDDLE LEFT B-PILLAR (Y)	AC-J18400	ENDEVCO	28-Sep-00
LOWER LEFT A-PILLAR (Y)	AC-B10951	ENDEVCO	28-Sep-00
UPPER LEFT A-PILLAR (Y)	AC-BA80	ENDEVCO	28-Sep-00
FRONT SEAT TRACK (Y)	AC-BA65	ENDEVCO	31-Aug-00
REAR SEAT TRACK (Y)	AC-AY60	ENDEVCO	7-Jun-00
VEHICLE CG (X)	AC-AP064	ENDEVCO	18-Sep-00
VEHICLE CG (Y)	AC-BB14	ENDEVCO	18-Sep-00
VEHICLE CG (Z)	AC-B10955	ENDEVCO	18-Sep-00
MDB CG (X)	AC-CL60	ENDEVCO	31-Aug-00
MDB CG (Y)	AC-CJ54	ENDEVCO	31-Aug-00
MDB CG (Z)	AC-GK12	ENDEVCO	31-Aug-00
MDB REAR FRAME MEMBER (X)	AC-CX05	ENDEVCO	31-Aug-00
MDB REAR FRAME MEMBER (Y)	AC-A27F	ENDEVCO	31-Aug-00

REMARKS: None