Report Number: 214-TRC-03-014

Safety Compliance Testing For FMVSS 214

Side Impact Protection

Indicant

Mazda Motors

2004 Mazda RX8 4-door

NHTSA Number: C45403

Transportation Research Center Inc.

10820 State Route 347

P. O. Box B-67

East Liberty, OH 43319

Test Date: January 30, 2004

Final Report: February 12, 2004

U. S. Department Of Transportation

National Highway Traffic Safety Administration

Enforcement

Office of Vehicle Safety Compliance

400 Seventh Street, S. W.

Room No. 6111 (NVS-220)

Washington, DC 20590

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Report Approved By: _____

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Transportation Research Center Inc.

Approval Date: 2/12/04

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16. Abstract

This 56/28 km/h 90° Impact (Moving Deformable Barrier) Compliance Test was conducted on the subject vehicle, a 2004 Mazda RX8 4-door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-214D-06 (except the test was conducted 8 km/h (5 mph) faster than the standard specifies) to determine FMVSS 214 Side Impact Protection compliance. This test was conducted by Transportation Research Center Inc. in East Liberty, Ohio, on January 30, 2004.

The impact velocity of the Moving Deformable Barrier (MDB) was 62.1 km/h, and the ambient temperature at the struck (Driver's side) side of the target vehicle at the time of impact was 21° C. The target vehicle's post-test maximum crush was 290 mm at Level 3.

The test or target vehicle's performance is given below (with FIR filter):

	Front SID HIII		Rear SID HIII	
Left Upper Rib Acceleration:	46.0	g's	55.2	g's
Left Lower Rib Acceleration:	48.1	g's	60.1	g's
Lower Spine Acceleration:	68.8	g's	69.1	g's
Thoracic Trauma Index, (TTI):	58.4	g's	64.6	g's
Pelvis Acceleration (PEV):	64.9	g's	52.9	g's

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

17. Key Words	18. Distribution Statement
Compliance Testing Side Impact Protection FMVSS 214 Side Impact Dummy (SID HIII)	Copies of this report are available from: NHTSA Technical Information Services (TIS) Room 5108 (NPO-230), 400 Seventh Street, S.W. Washington, DC 20590 Telephone No. (202) 366-4946 Attn: Robert Hornicle

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Table of Contents

Section	Description	Page No.
1	Purpose and Test Procedure	1-1
2	Summary of Side Impact Test	2-1
3	Summary of Test Results	3-1
	Data Sheet 1 - General Vehicle Test Parameter Data	3-2
	Data Sheet 2 - Test Vehicle Summary of Results	3-6
	Data Sheet 3 - Moving Deformable Barrier (MDB) Summary	3-7
	Data Sheet 4 - Post-Test Observations	3-8
4	Occupant and Vehicle Information	4-1
	Data Sheet 5 - SID HIII Instrumentation Data	4-2
	Data Sheet 6 - Vehicle Pre-Test And Post-Test Measurements	4-4
	Data Sheet 7 - SID HIII Longitudinal Clearance Dimensions	4-5
	Data Sheet 8 - SID HIII Lateral Clearance Dimensions	4-6
	Data Sheet 9 - Vehicle Side Measurements	4-7
	Data Sheet 10 - Vehicle Exterior Crush Profiles - All Levels	4-8
	Data Sheet 11 - Vehicle Damage Profile Distances	4-10
	Data Sheet 12 - Exterior Static Crush For Impactor Face	4-11
	Data Sheet 13 - Test Vehicle Accelerometer Locations and Data Summary	4-21
	Data Sheet 14 - MDB Accelerometer Locations and Data Summary	4-25
	Data Sheet 15 - High-Speed Camera Locations and Data	4-26
5	Vehicle Fuel System Integrity	5-1
	Data Sheet 16 - FMVSS 301 Fuel System Integrity Data	5-2
	Data Sheet 17 - FMVSS 301 Rollover Data	5-3
Appendix A	Photographs	A-1
Appendix B	Data Plots	B-1
Appendix C	SID HIII Configuration and Performance Verification Data	C-1
Appendix D	Test Equipment List and Calibration Information	D-1

Section 1

Purpose and Test Procedure

This side impact test is part of the FMVSS 214 Side Impact Protection Compliance Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-02-D-11114. The purpose of this test was to evaluate side impact protection in a 2004 Mazda RX8 4-door. The test was conducted in accordance with the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 2001) (except the test was conducted 8 km/h (5 mph) faster than the standard specifies).

Section 2

Summary of Side Impact Test

A 2004 Mazda RX8 4-door was impacted on the 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 62.1 km/h (38.6 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 Transportation Research Center Inc. in East Liberty, Ohio on January 30, 2004. Pre-test and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SID HIIIs) are included in Appendix A.

Two restrained Side Impact Dummies (SID HIIIs) 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 (TP-214D-06, dated July 2001). Both SID HIII dummies were certified prior to this test. The side impact test was documented by one real-time camera and 9 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SID HIIIs were instrumented with the following accelerometers:

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

A summary of the side impact dummy (SID HIII) configuration and verification test data can be found in Appendix C. A total of seventy (70) channels of data were recorded. Appendix B contains the vehicle, MDB, and dummy response data traces.

The following tables summarize the results of the test:

Injury Criteria	Front SID HIII	Rear SID HIII
TTI (g)	58.4	64.6
PEV (g)	64.9	52.9

Head Injury Criteria (HIC)

Injury Criteria	Front SID HIII	Rear SID HIII
HIC	282	710
t_1 (ms)	31.44	39.76
t_2 (ms)	60.32	49.52
Average Acceleration t_1 - t_2 (g)	39.4	87.8

HIC is as defined in FMVSS 208. The maximum time interval t_1 to t_2 is 36 ms.

Neck Injury Criteria

Maximum Values	Front SID HIII	Rear SID HIII
Neck X-axis Force (N)	-641	597
Neck Y-axis Force (N)	512	-1399
Neck Z-axis Force (N)	828	-1937
Moment About X-axis (Nm)[1]	-59.8	-82.0
Moment About Y-axis (Nm)	-63.1	22.9
Moment About Z-axis (Nm)	45.4	7.0

[1] Calculated about the occipital condyle with the following formula: $M_{occ} = M_x + 0.01778F_y$.

Data Acquisition Explanations

The following Y-axis acceleration channels recorded intermittent data spikes throughout the test. The velocity was also affected.

Vehicle left lower A-pillar channel, LLAYG1
Vehicle left driver seat track channel, LFTYG1
Vehicle left middle A-pillar channel, LMAYG1

The vehicle's left side sill at front seat Y-axis acceleration channel, LFSYG1, recorded intermittent data spikes throughout the test. The velocity and displacement were also affected.

The vehicle's right side sill at rear seat X-axis acceleration channel, RRSXG1, lost its signal at approximately 20 milliseconds and recorded no useful data after that. The velocity and calculated resultant were also affected.

The moving deformable barrier's center of gravity X-axis acceleration channel, BCGXG1, recorded no useful data throughout the test. The velocity and calculated resultant were also affected.

The moving deformable barrier's left side contact switch channel, MDBL1, did not record an event signal during the test.

Section 3

Summary of Test Results

Data Sheet 1

General Test Vehicle Parameter Data

Test Vehicle Information:

Vehicle Year/Make/Model: 2004 Mazda RX8

Vehicle Body Style/Color: 4-door/Silver VIN: JM1FE17N740117759

Vehicle NHTSA No.: C45403 Build Date: 09/03

Engine Data: 4 Cylinders; ____ CID; 1.3 Liters; ____ cc

Placement: X Longitudinal; or - Lateral; or - Horizontal

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

Final Drive: X RWD; - FWD; - Four-Wheel Drive

Odometer Reading: 92 miles

Options: X A/C; X Power steering; X Pwr. brakes; X Power windows

Data From Vehicle's Tire Placard:

Tire Pressure (at capacity)* 220 kPa Front; 220 kPa Rear

Recommended Tire Size: 225/55R16

Tires on Test Vehicle: 225/55R16 Manufacturer: Bridgestone, Potenza

Vehicle Capacity Data:

Number of Occupants: 2 Front; 2 Rear; N/A 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 = 308 kg (A)

No. of Occupants x 68.04 kg. = 272 kg (B)

Vehicle Cargo Capacity (A-B) = 36 kg

Test Vehicle Delivered Weight With Maximum Fluids:

Left Front	=	352.5 kg	Left Rear	=	326.5 kg
Right Front	=	355.0 kg	Right Rear	=	322.0 kg
Total Front	=	707.5 kg	Total Rear	=	648.5 kg
Front % of Total Weight	=	52.2 %	Rear % of Total Weight	=	47.8 %
Total Weight	=	1356.0 kg			

* Tire pressure used in test.

Data Sheet 1 (continued)

General Test Vehicle Parameter Data

Calculation Of Vehicle's Target Test Weight:

Total Test Vehicle Delivered Weight With Max. Fluids = 1356.0 kg (A)

Maximum Cargo Carrying Capacity of Test Vehicle = 36.0 kg (B)

Weight of Instrumented Side Impact Dummies (2 X 84.0 kg) = 168.0 kg (C)

Test Vehicle Target Weight: = 1560 kg (A+B+C)

Fully Loaded Test Vehicle (UDW + 2 SID HIII s + Cargo):

Left Front	=	398.5 kg	Left Rear	=	418.0 kg
Right Front	=	355.5 kg	Right Rear	=	380.5 kg
Total Front	=	754.0 kg	Total Rear	=	798.5 kg
Front % of Total Weight	=	48.6 %	Rear % of Total Weight	=	51.4 %
Total Weight	=	1552.5 kg			

As Tested Weight of Test Vehicle (2 SID HIII s + Cargo + Equipment & Instrumentation):

Left Front	=	397.2 kg	Left Rear	=	400.2 kg
Right Front	=	370.8 kg	Right Rear	=	384.6 kg
Total Front	=	768.0 kg	Total Rear	=	784.8 kg
Front % of Total Weight	=	49.5 %	Rear % of Total Weight	=	50.5 %
Total Weight	=	1552.8 kg			

Test Vehicle Attitude (all dimensions in millimeters):

As Delivered		Fully Loaded		Ready For Test	
Right Front	704	Right Front	690	Right Front	691
Left Front	705	Left Front	685	Left Front	688
Right Rear	705	Right Rear	655	Right Rear	670
Left Rear	707	Left Rear	655	Left Rear	659

Test Vehicle Wheelbase: 2700 mm

C.G. = 1364 mm rearward of front wheel centerline

Total Vehicle Length:

Right Side = 4195 mm

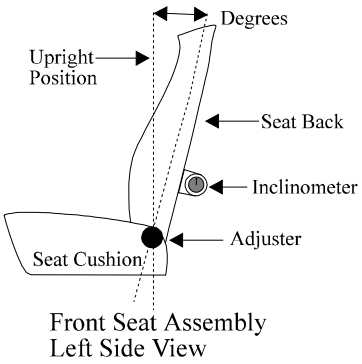
Left Side = 4160 mm

Centerline = 4415 mm

Data Sheet 1 (continued)

General Test Vehicle Parameter Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



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

Front Seat Cushion Placement: 12th latch position from the most forward position

Total Length of Fore/Aft Adjustment Travel: 230 mm

Total Number of Adjustment Positions or Detents: 24

Front Seat Back Adjustment Position: The seat back was adjusted to the 2.4 degrees at head restraint

Seat Back Angle: 2.4 degrees measured at the head restraint

Second Position Seat Placement: Fixed

Total Length Of Fore/Aft Adjustment Travel: N/A mm

Seat Back Adjustment Position: The seat back was not adjustable

Adjustable Steering Column Position: Middle of geometric range of travel

Window Positions:

Right Front: Open Right Rear: Open

Left Front: Closed Left Rear: Closed

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

Data Sheet 1 (continued)

General Test Vehicle Parameter Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

Amount of Stoddard Solvent In Fuel Tank:

55.3 liters (fuel tank usable capacity)[1]

50.7 liters used in test (92% - 94% of fuel tank usable capacity)

Location of Impact Point On Test Vehicle Side To Be Impacted:

Wheelbase = 2700 millimeters

Intended impact point is 410 millimeters rearward of front axle centerline

(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 428 millimeters rearward of front axle centerline

[1] Useable capacity based on measured fill volume. Manufacturer's stated capacity of 60.2 liters could not be obtained.

Data Sheet 2

Test Vehicle Summary of Results

Vehicle Year/Make/Model: 2004/Mazda/RX8

Body Style: 4-door VIN: JM1FE17N740117759

NHTSA No.: C45403 Build Date: 09/03

Test Date: 01/30/04

Vehicle Overall Length = 4415 mm Overall Width = 1760 mm

Vehicle Test Weight (Pre-Test):

Left Front	= 397.2 kg		Left Rear	= 400.2	kg
Right Front	= 370.8 kg		Right Rear	= 384.6	kg
Total Front	= 768.0 kg		Total Rear	= 784.8	kg
Total Weight	= 1552.8 kg				
Wheelbase	= 2700 mm				

Longitudinal C.G. From Center Of Front Axle = 1364 mm

Impact Angle With Respect To Impactor = 90 degrees

Impact Point:

Actual Impact Point is 18 mm right of nominal impact ref. line (Lateral)

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

Maximum Exterior Static Crush:

1. Level 1 (250 mm above ground) = 139 mm
2. Level 2 (433 mm above ground) = 273 mm
3. Level 3 (623 mm above ground) = 290 mm
4. Level 4 (890 mm above ground) = 213 mm
5. Level 5 (1300 mm above ground) = 52 mm

Maximum Post-Test Intrusion = 290 mm

Occupants:	Front Passenger	Rear Passenger
Dummy Identification	SID-HIII #055	SID-HIII #059
Restraints Used	3-pt. seatbelt, side curtain airbag, side torso airbag	3-pt. seatbelt, side curtain airbag

Instrumentation:

Number of Vehicle Data Channels: = 21

Number of Cameras: Onboard = 3 Offboard = 8 Total = 11

Data Sheet 3

Moving Deformable Barrier(MDB) Summary

MDB Face Manufacturer And Serial Number:

Plascore, 114B1003, 015A1103

Position Of Impactor (MDB) On Monorail:

Crabbed 27° to the left

MDB Specifications:

Overall Width of Framework Carriage	=	1251	mm
Overall Length of MDB (Incl. honeycomb impact face)	=	4014	mm
Wheelbase of Framework Carriage	=	2591	mm
Track of Framework Carriage (Front & Rear)	=	1881	mm
C.G. Location Rearward of Front Axle	=	1100	mm

MDB Weight:

Left Front	=	399.6	kg	Left Rear	=	275.0	kg
Right Front	=	383.4	kg	Right Rear	=	302.8	kg
Total Front	=	783.0	kg	Total Rear	=	577.8	kg
Total MDB Weight	=	1360.8	kg				

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

Impact Speed = 62.1 km/h

Maximum Static Crush of Honeycomb Impact Face:

1. Row A at Center of Bumper Level	=	139	millimeters
2. Row B at Top of Bumper Level	=	84	millimeters
3. Row C at Mid Level	=	114	millimeters
4. Row D at Top of Stack Level	=	113	millimeters

Instrumentation:

Number of MDB Data Channels = 5

Data Sheet 4

Post-Test Observations

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

Visible Dummy Contact Points:

	Left Front SID HIII	Left Rear SID HIII
Head:	Side curtain airbag, side header	C-pillar, side header
Upper Torso:	Torso airbag	Interior panel
Lower Torso:	Torso airbag	Interior panel
Left Knee:	Door panel	Door panel
Right Knee:	None	None

Door Opening:

	Left Side	Right Side
Front:	Jammed and latched	Easy
Rear:	Jammed and latched	Easy

MDB Distance From Target Impact Point:

Vertical: 5 mm up from target

Horizontal: 18 mm right from target

Arm Rest Locations:

Front: 321 mm below the bottom of the window

Rear: 306 mm below the bottom of the window

Seat Movement:

Front: None

Rear: None

Glazing Damage:

Windshield: Broken along driver's A-pillar

Window: Both side windows were broken

Pillar Separation: No

Sill Separation: No

Other Notable Impact Effects:

None

Section 4

Occupant and Vehicle Information

Data Sheet 5

SID HIII Instrumentation Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

TEST NUMBER: 040130 DRIVER DUMMY SERIAL NUMBER: 055

	POSITIVE DIRECTION		NEGATIVE DIRECTION	
HEAD ACCELERATION				
LONGITUDINAL	6.6 g	@ 244.1 ms	26.5 g	@ 48.5 ms
LATERAL	44.8 g	@ 45.4 ms	9.7 g	@ 157.8 ms
VERTICAL	19.7 g	@ 40.5 ms	9.2 g	@ 55.3 ms
RESULTANT	51.3 g	@ 46.6 ms		
HIC 36	282 from 31.4 to 60.3			
HEAD REDUNDANT ACCELERATION				
LONGITUDINAL	6.5 g	@ 242.4 ms	24.3 g	@ 48.4 ms
LATERAL	46.7 g	@ 45.3 ms	9.6 g	@ 157.4 ms
VERTICAL	19.8 g	@ 40.5 ms	8.8 g	@ 55.3 ms
RESULTANT	52.2 g	@ 46.5 ms		
HIC 36	291 from 31.5 to 59.9 ms			
NECK FORCE				
X-AXIS SHEAR	95.9 N	@ 210.9 ms	641.2 N	@ 47.5 ms
Y-AXIS SHEAR	511.9 N	@ 44.1 ms	396.5 N	@ 157.4 ms
Z-AXIS AXIAL	827.6 N	@ 39.8 ms	592.6 N	@ 55.4 ms
NECK MOMENT				
ABOUT X-AXIS	6.9 N-m	@ 104.8 ms	66.3 N-m	@ 33.0 ms
ABOUT Y-AXIS	48.6 N-m	@ 75.0 ms	63.1 N-m	@ 48.7 ms
ABOUT Z-AXIS	45.4 N-m	@ 66.7 ms	16.3 N-m	@ 163.8 ms
OCCIPITAL COND	5.9 N-m	@ 104.2 ms	59.8 N-m	@ 32.8 ms
LEFT UPPER RIB ACCELERATION				
LATERAL (P)	46.0 g	@ 23.8 ms	12.7 g	@ 73.8 ms
LATERAL (R)	45.8 g	@ 23.8 ms	12.4 g	@ 73.8 ms
LEFT LOWER RIB ACCELERATION				
LATERAL (P)	48.1 g	@ 29.4 ms	12.2 g	@ 70.0 ms
LATERAL (R)	47.3 g	@ 29.4 ms	11.3 g	@ 58.1 ms
TTI d (P)	58.4			
TTI d (R)	57.7			
LOWER SPINE ACCELERATION				
LATERAL (P)	68.8 g	@ 23.1 ms	26.6 g	@ 61.9 ms
LATERAL (R)	68.1 g	@ 23.1 ms	27.1 g	@ 61.9 ms
PELVIS ACCELERATION				
LATERAL (P)	64.9 g	@ 21.9 ms	28.3 g	@ 46.3 ms
LATERAL (R)	64.9 g	@ 21.9 ms	28.3 g	@ 46.3 ms

POSITIVE DIRECTION		NEGATIVE DIRECTION	
LONGITUDINAL:	FORWARD	LONGITUDINAL:	REARWARD
LATERAL:	RIGHTWARD	LATERAL:	LEFTWARD
VERTICAL:	DOWNWARD	VERTICAL:	UPWARD

Data Sheet 5 (Continued)

SID HIII Instrumentation Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

TEST NUMBER: 040130 PASSENGER DUMMY SERIAL NUMBER: 059

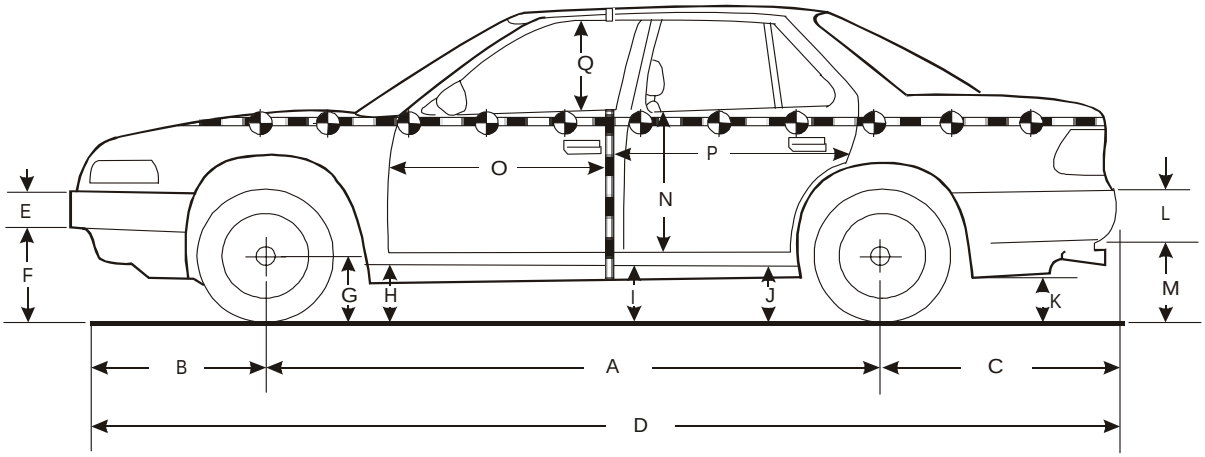
	POSITIVE DIRECTION		NEGATIVE DIRECTION	
HEAD ACCELERATION				
LONGITUDINAL	3.5 g	@ 59.2 ms	26.1 g	@ 44.1 ms
LATERAL	109.6 g	@ 42.9 ms	8.3 g	@ 59.3 ms
VERTICAL	21.2 g	@ 43.0 ms	42.3 g	@ 51.5 ms
RESULTANT	113.8 g	@ 42.9 ms		
HIC36	710 from 39.8 to 49.5 ms			
HEAD REDUNDANT ACCELERATION				
LONGITUDINAL	3.4 g	@ 59.2 ms	25.4 g	@ 44.1 ms
LATERAL	110.3 g	@ 42.9 ms	8.5 g	@ 59.8 ms
VERTICAL	22.1 g	@ 43.0 ms	42.5 g	@ 51.5 ms
RESULTANT	114.5 g	@ 42.9 ms		
HIC36	716 from 39.8 to 49.4 ms			
NECK FORCE				
X-AXIS SHEAR	597.3 N	@ 47.4 ms	125.5 N	@ 88.2 ms
Y-AXIS SHEAR	96.1 N	@ 40.7 ms	1399.4 N	@ 48.8 ms
Z-AXIS AXIAL	342.5 N	@ 40.1 ms	1936.8 N	@ 47.4 ms
NECK MOMENT				
ABOUT X-AXIS	24.4 N-m	@ 93.8 ms	78.5 N-m	@ 43.0 ms
ABOUT Y-AXIS	22.9 N-m	@ 53.0 ms	8.0 N-m	@ 66.6 ms
ABOUT Z-AXIS	7.0 N-m	@ 89.0 ms	20.0 N-m	@ 57.2 ms
OCCIPITAL COND	22.0 N-m	@ 94.0 ms	82.0 N-m	@ 43.4 ms
LEFT UPPER RIB ACCELERATION				
LATERAL (P)	55.2 g	@ 36.3 ms	7.8 g	@ 113.7 ms
LATERAL (R)	55.0 g	@ 36.3 ms	7.6 g	@ 113.7 ms
LEFT LOWER RIB ACCELERATION				
LATERAL (P)	60.1 g	@ 38.1 ms	13.0 g	@ 61.9 ms
LATERAL (R)	58.0 g	@ 37.5 ms	13.3 g	@ 61.9 ms
TTI d (P)	64.6			
TTI d (R)	63.2			
LOWER SPINE ACCELERATION				
LATERAL (P)	69.1 g	@ 41.2 ms	12.6 g	@ 67.5 ms
LATERAL (R)	68.3 g	@ 41.2 ms	12.9 g	@ 67.5 ms
PELVIS ACCELERATION				
LATERAL (P)	52.5 g	@ 32.5 ms	4.9 g	@ 77.5 ms
LATERAL (R)	52.6 g	@ 32.5 ms	4.9 g	@ 77.5 ms

POSITIVE DIRECTION		NEGATIVE DIRECTION	
LONGITUDINAL:	FORWARD	LONGITUDINAL:	REARWARD
LATERAL:	RIGHTWARD	LATERAL:	LEFTWARD
VERTICAL:	DOWNWARD	VERTICAL:	UPWARD

Data Sheet 6

Vehicle Pre-Test And Post-Test Measurements

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



Left Side View

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

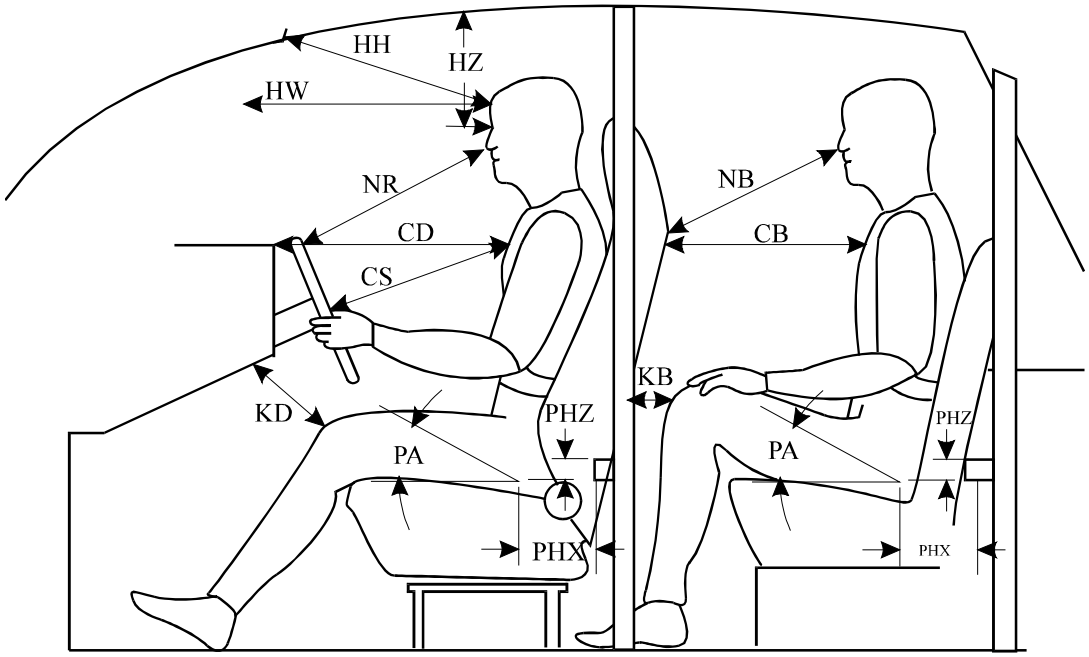
	Pre-Test (as delivered)	Pre-Test (as tested)	Post-Test (as tested)	Change
A	2700	2700	2679	21
B	800	800	800	0
C	915	915	915	0
D	4415	4415	4405	10
E	160	160	160	0
F	433	N/A	442	-9
G	318	318	318	0
H	264	N/A	277	-13
I	238	N/A	271	-33
J1	157	N/A	120	37
J2	221	N/A	210	11
K	275	N/A	235	40
L	230	230	230	0
M	470	N/A	420	50
N	723	723	670	53
O	635	635	615	20
P	1071	1071	966	105
Q	350	350	342	8
R	4195	4195	4202	-7
S	4160	4160	4122	38
T	1295	1295	1108	187

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

Data Sheet 7

SID HIII Longitudinal Clearance Dimensions

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



Left Side View

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

Measurement	Driver SID HIII # 055	Left Rear Pass. SID HIII # 059
HH	325	N/A
HW	504	N/A
HZ	142	142
NR/NB	421	488
CD/CB	497	469
CS	342	N/A
KDL(KDA°)/KBL(KBA°)	93/(27.4°)	63/(22.2°)
KDR(KDA°)/KBR(KBA°)	79/(27.7°)	63/(22.7°)
PA°	24.9°	N/A[1]
PHX	231	470
PHZ	163	132

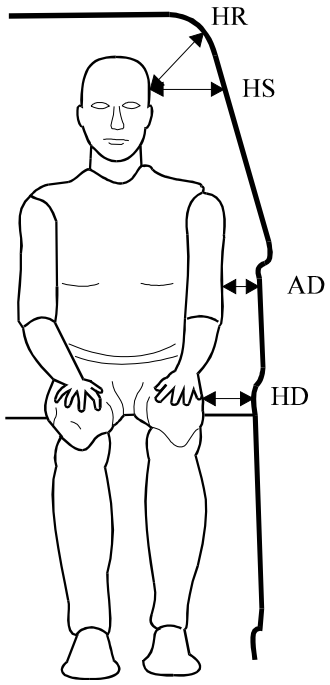
Note: 2-door vehicle shown. Rear dummy PHX and PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

[1] Could not be measured while dummy was seated.

Data Sheet 8

SID HIII Lateral Clearance Dimensions

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



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

Measurement	Driver SID HIII # 055	Left Rear Pass. SID HIII # 059
HR	171	161
HS[1]	293	211
AD*	Lower: 127 Upper: 104	Lower: 107 Upper: 94
HD	145	182

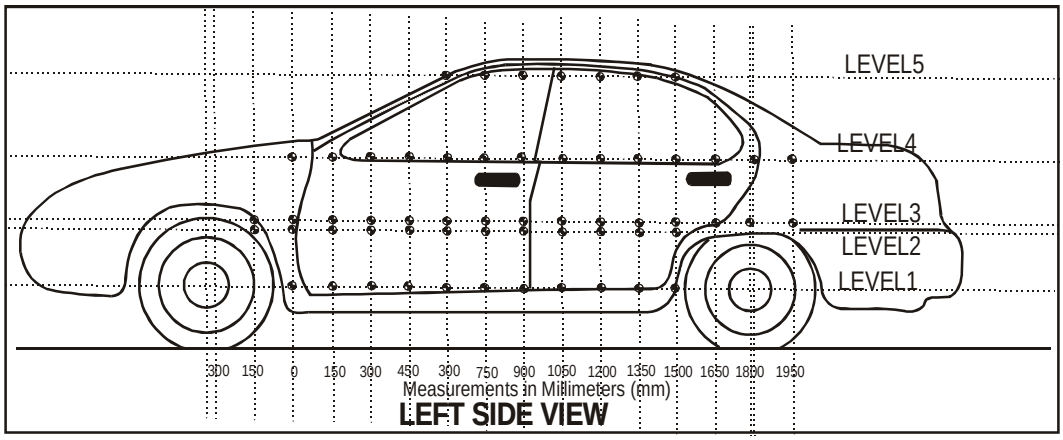
* Lower measurement is taken laterally at center of the lower rib accelerometer height from the SID HIII arm segment to the closest part of the vehicle side.
Upper measurement is taken laterally at center of the upper rib accelerometer height from the SID HIII arm segment to the closest part of the vehicle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

[1] Rear passenger HS measurement was taken to the C-pillar.

Data Sheet 9

Vehicle Side Measurements

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



Level 5 - Window Top
Level 4 - Window Sill
Level 3 - Mid-Door
Level 2 - Occupant H-Point
Level 1 - Axle Centerline Height or Sill Top Height

Measurements Are Taken When The Vehicle Is In The "As Tested" Configuration.

Measurements along the vertical 750 mm line shown above:

Level 5 @ Window Top	=	1300	mm
Level 4 @ Window Sill	=	890	mm
Level 3 @ Mid Door	=	623	mm
Level 2 @ Occupant H-Point	=	433	mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	250	mm

Data Sheet 10

Vehicle Exterior Crush Profiles - All Levels

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

Location	Height		(mm) From Impact Point													
			-1200	-1050	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750
Level 1 Side Sill	250	Pre	---	---	---	---	---	---	---	---	640	657	653	650	653	653
		Post	---	---	---	---	---	---	---	---	653	724	768	766	770	771
		Crush	---	---	---	---	---	---	---	---	13	67	115	116	117	118
Level 2 H-Point	433	Pre	---	---	---	---	---	---	---	---	625	652	640	636	635	635
		Post	---	---	---	---	---	---	---	---	682	802	870	881	885	889
		Crush	---	---	---	---	---	---	---	---	57	150	230	245	250	254
Level 3 Mid-Door	623	Pre	---	---	---	---	---	---	---	613	641	640	633	627	620	620
		Post	---	---	---	---	---	---	---	647	690	790	822	826	848	860
		Crush	---	---	---	---	---	---	---	34	49	150	189	199	228	240
Level 4 Window Sill	890	Pre	---	---	---	865	850	835	822	805	790	775	760	755	733	730
		Post	---	---	---	874	860	852	835	821	808	809	832	815	818	825
		Crush	---	---	---	9	10	17	13	16	18	34	72	60	85	95
Level 5 Window Top	1300	Pre	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		Post	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		Crush	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Data Sheet 10 (Continued)

Vehicle Exterior Crush Profiles - All Levels

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

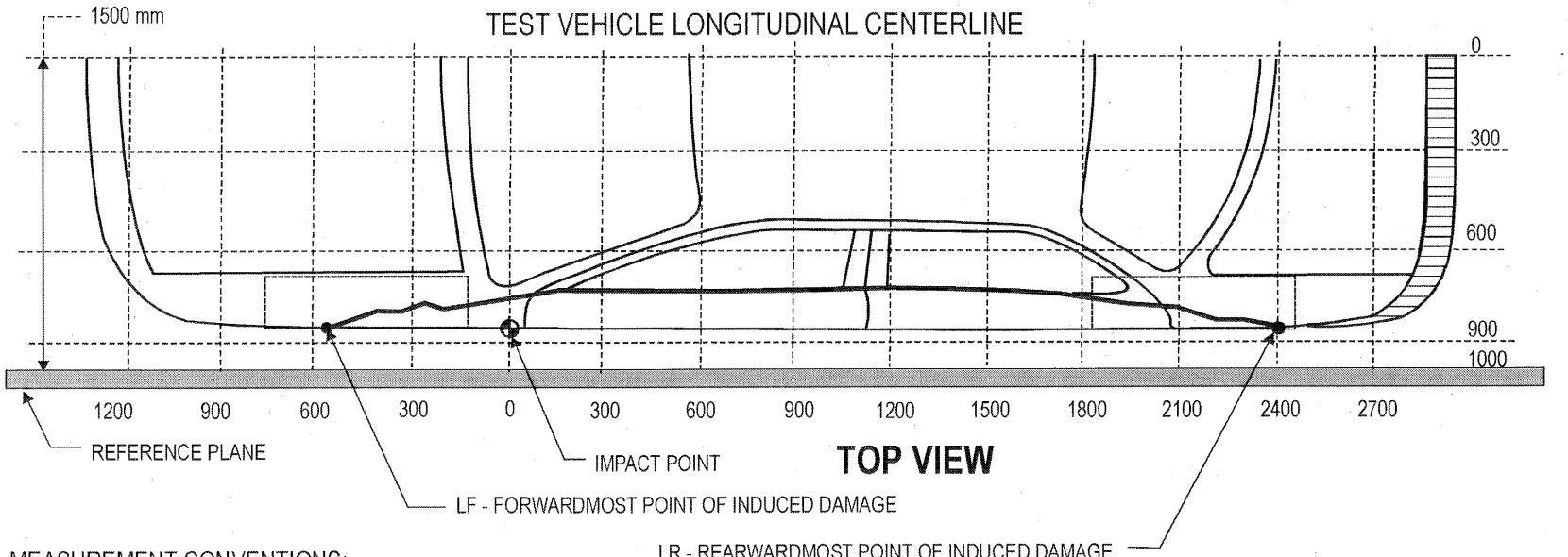
Location	Height		(mm) From Impact Point												
			900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700
Level 1 Side Sill	250	Pre	646	647	647	650	651	660	661	---	---	---	---	---	---
		Post	778	780	785	789	787	779	728	---	---	---	---	---	---
		Crush	132	133	138	139	136	119	67	---	---	---	---	---	---
Level 2 H-Point	433	Pre	633	633	632	635	640	650	653	---	---	---	---	---	647
		Post	894	898	902	908	887	895	847	---	---	---	---	---	---
		Crush	261	265	270	273	247	245	194	---	---	---	---	---	---
Level 3 Mid-Door	623	Pre	618	617	615	617	617	624	630	625	---	---	---	619	677
		Post	871	875	856	853	875	914	852	769	---	---	---	---	---
		Crush	253	258	241	236	258	290	222	144	---	---	---	---	---
Level 4 Window Sill	890	Pre	723	715	710	707	698	700	700	703	705	711	720	734	750
		Post	832	837	848	873	904	913	864	803	776	752	749	756	752
		Crush	109	122	138	166	206	213	164	100	71	41	29	22	2
Level 5 Window Top	1300	Pre	984	972	965	965	952	953	958	968	985	---	---	---	---
		Post	1005	997	997	999	1004	998	994	994	1009	---	---	---	---
		Crush	21	25	32	34	52	45	36	26	24	---	---	---	---

Data Sheet 11

Vehicle Damage Profile Distances

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

NOTE: All measurements are in millimeters (mm) and should be accurate to plus or minus 3mm.



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

DPD Measurements	Post-Test (mm)	Pre-Test (mm)	Static Crush (mm)
6: LF = -150 mm (Level 3)	647	613	34
5: 300 mm (Level 2)	870	640	230
4: 750 mm (Level 2)	889	635	254
3: 1200 mm (Level 2)	902	632	270
2: 1650 mm (Level 3)	914	624	290
1: LR = 2100 mm (Level 4)	776	705	71

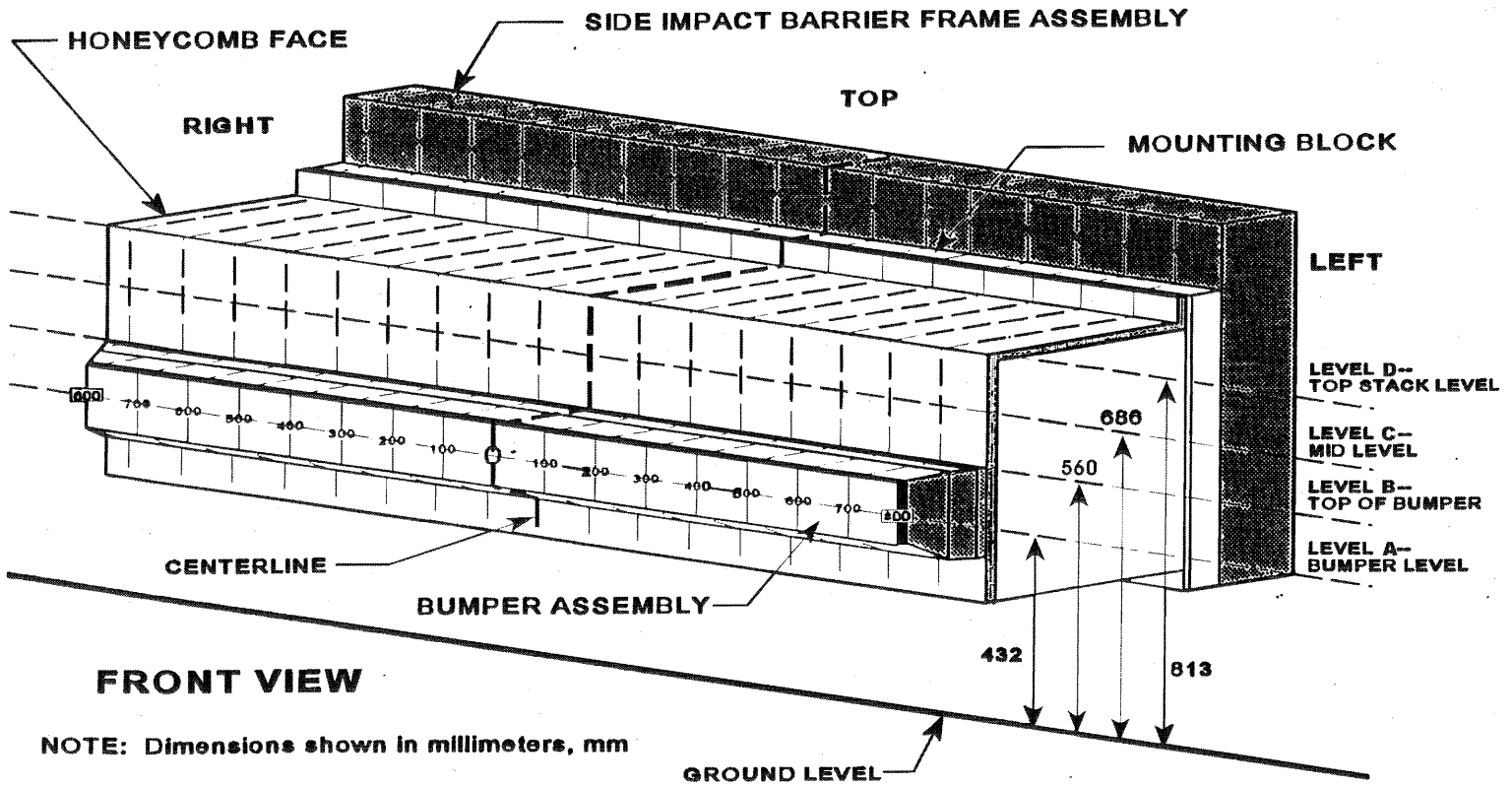
Full length of induced damage was 2250 mm.

Data Sheet 12

Exterior Static Crush For Impactor Face

(Grid as looking at MDB from front)

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

		Distance Right of Center (mm)									Distance Left of Center (mm)							
Location	Height At CL	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
Top Stack Level - Level D	812	-26	13	11	5	-9	-2	-3	-4	-8	-12	-17	-23	-33	-43	-53	-84	-113
Mid Level Level C	683	-39	-6	-5	-10	-24	-21	-18	-19	-17	-17	-21	-23	-28	-34	-51	-97	-114
Top Bumper Level - Level B	558	-82	-70	-67	-60	-45	-37	-34	-37	-41	-42	-46	-48	-52	-58	-62	-72	-84
Mid Bumper Level - Level A	432	-139	-128	-123	-124	-106	-90	-82	-82	-84	-86	-88	-91	-93	-97	-109	-125	-131

All measurements are in millimeters and have a tolerance of ± 3mm.

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

Deformable Barrier Face Profile

NHTSA No.: C45403

Level D - Top Stack

Pre-Test

Index	Xmm	Ymm	Zmm
1	-381	799	-36
2	-380	698	-36
3	-380	598	-36
4	-381	498	-37
5	-381	398	-38
6	-381	298	-38
7	-381	198	-39
8	-381	98	-40
9	-382	-2	-40
10	-382	-103	-40
11	-382	-202	-41
12	-382	-303	-42
13	-383	-402	-43
14	-383	-502	-43
15	-383	-603	-44
16	-382	-702	-44
17	-383	-803	-45

Post-Test

Index	Xmm	Ymm	Zmm
1	-355	761	-85
2	-393	674	-88
3	-391	574	-84
4	-386	474	-80
5	-372	376	-76
6	-379	276	-74
7	-378	176	-71
8	-378	76	-68
9	-374	-25	-63
10	-370	-125	-59
11	-365	-225	-56
12	-359	-325	-52
13	-350	-424	-49
14	-340	-523	-45
15	-330	-624	-41
16	-298	-717	-38
17	-270	-813	-39

Difference

Index	Xmm	Ymm	Zmm
1	-26	37	50
2	13	24	52
3	11	24	48
4	5	24	44
5	-9	23	38
6	-2	22	36
7	-3	22	33
8	-4	22	28
9	-8	22	23
10	-12	22	19
11	-17	22	15
12	-23	22	10
13	-33	22	6
14	-43	22	2
15	-53	21	-3
16	-84	15	-6
17	-113	10	-6

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C45403

Level C - Mid Level

Pre-Test

Index	Xmm	Ymm	Zmm
18	-380	800	-163
19	-380	700	-164
20	-381	600	-164
21	-380	500	-165
22	-381	400	-166
23	-381	301	-166
24	-381	199	-168
25	-382	99	-168
26	-382	0	-169
27	-382	-100	-169
28	-383	-201	-170
29	-382	-301	-170
30	-383	-401	-171
31	-383	-500	-172
32	-383	-600	-172
33	-384	-699	-172
34	-384	-799	-173

Post-Test

Index	Xmm	Ymm	Zmm
18	-342	760	-214
19	-375	671	-214
20	-376	571	-211
21	-370	471	-208
22	-356	372	-203
23	-360	273	-200
24	-363	172	-197
25	-363	71	-193
26	-365	-28	-190
27	-365	-128	-186
28	-362	-229	-183
29	-360	-329	-179
30	-356	-429	-175
31	-349	-528	-172
32	-332	-627	-168
33	-287	-714	-166
34	-269	-812	-160

Difference

Index	Xmm	Ymm	Zmm
18	-39	40	51
19	-6	29	50
20	-5	29	47
21	-10	29	43
22	-24	28	37
23	-21	28	33
24	-18	28	29
25	-19	28	25
26	-17	28	21
27	-17	28	17
28	-21	28	13
29	-23	28	9
30	-28	28	5
31	-34	28	0
32	-51	26	-4
33	-97	15	-7
34	-114	13	-13

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

Deformable Barrier Face Profile Cont'd.

Level B - Top of Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
35	-380	800	-291
36	-381	701	-291
37	-381	601	-291
38	-381	501	-292
39	-381	401	-292
40	-381	301	-293
41	-381	201	-294
42	-382	101	-294
43	-382	0	-294
44	-382	-100	-295
45	-383	-200	-296
46	-382	-301	-296
47	-383	-401	-296
48	-384	-501	-298
49	-384	-601	-298
50	-384	-701	-299
51	-384	-801	-299

Post-Test

Index	Xmm	Ymm	Zmm
35	-299	757	-324
36	-311	666	-319
37	-314	567	-316
38	-321	467	-316
39	-337	369	-323
40	-344	268	-321
41	-347	168	-318
42	-345	68	-311
43	-341	-32	-308
44	-340	-133	-303
45	-337	-233	-299
46	-335	-334	-295
47	-331	-434	-291
48	-326	-534	-287
49	-321	-633	-285
50	-312	-733	-287
51	-301	-832	-275

Difference

Index	Xmm	Ymm	Zmm
35	-82	43	33
36	-70	35	29
37	-67	34	25
38	-60	34	25
39	-45	32	31
40	-37	33	28
41	-34	33	24
42	-37	33	17
43	-41	32	14
44	-42	33	8
45	-46	33	3
46	-48	33	-1
47	-52	33	-5
48	-58	33	-10
49	-62	33	-13
50	-72	32	-11
51	-84	31	-24

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C45403

Level A - Mid Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
52	-471	805	-414
53	-485	707	-417
54	-486	607	-417
55	-486	507	-417
56	-486	407	-419
57	-486	307	-419
58	-487	207	-419
59	-487	107	-420
60	-487	7	-420
61	-487	-93	-421
62	-487	-193	-421
63	-487	-293	-422
64	-487	-394	-423
65	-487	-493	-423
66	-487	-594	-424
67	-488	-694	-425
68	-480	-792	-427

Post-Test

Index	Xmm	Ymm	Zmm
52	-333	759	-451
53	-357	664	-457
54	-363	564	-456
55	-362	464	-452
56	-380	366	-452
57	-397	267	-452
58	-404	167	-449
59	-405	67	-446
60	-403	-33	-442
61	-401	-132	-439
62	-399	-233	-435
63	-397	-332	-432
64	-394	-433	-429
65	-390	-532	-425
66	-379	-633	-419
67	-363	-731	-414
68	-350	-829	-411

Difference

Index	Xmm	Ymm	Zmm
52	-139	45	37
53	-128	43	40
54	-123	43	38
55	-124	43	35
56	-106	41	34
57	-90	40	33
58	-82	40	31
59	-82	40	26
60	-84	40	22
61	-86	40	18
62	-88	40	14
63	-91	40	10
64	-93	40	6
65	-97	40	1
66	-109	39	-5
67	-125	37	-11
68	-131	37	-17

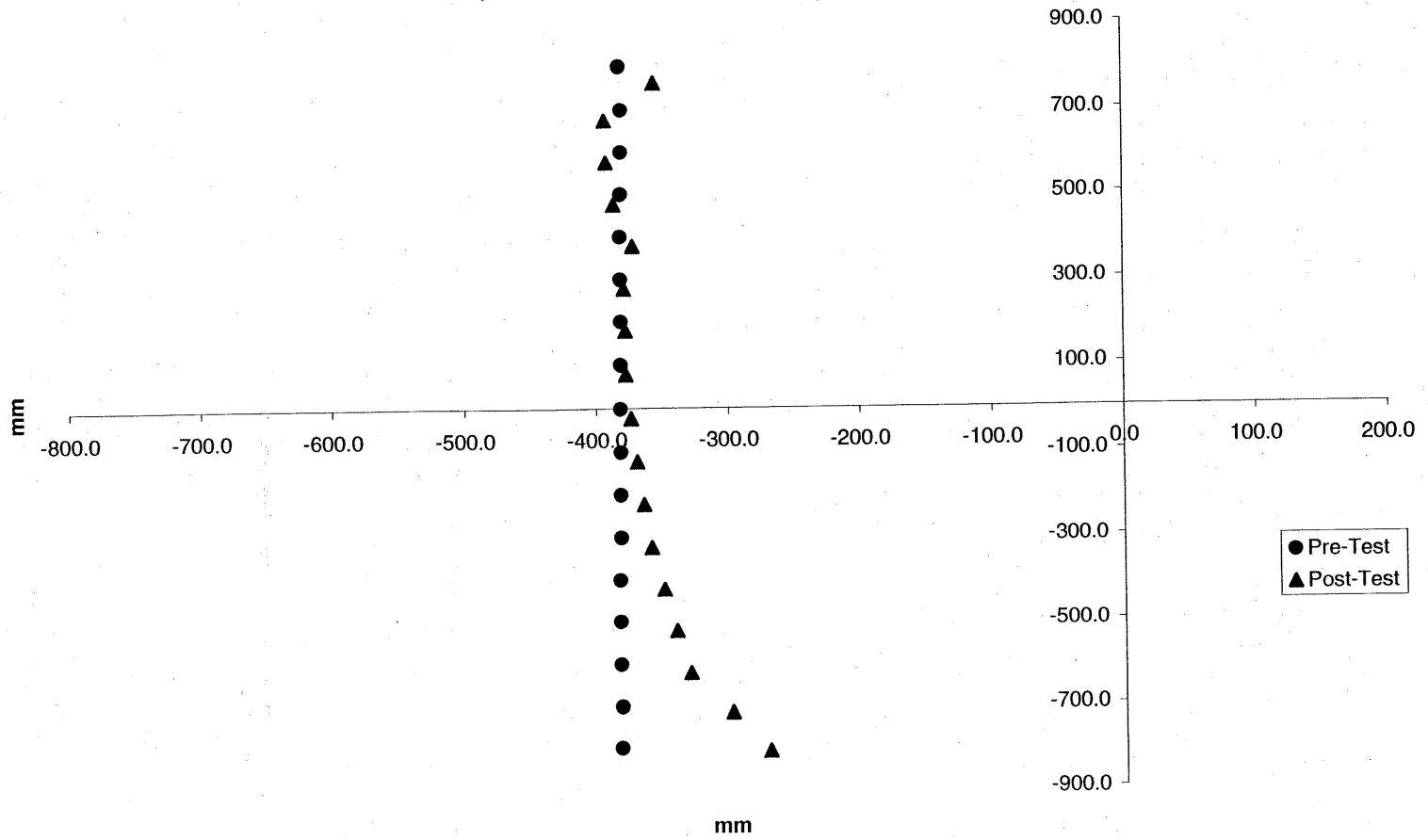
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

Level D - Deformable Barrier Face Profile 1-17



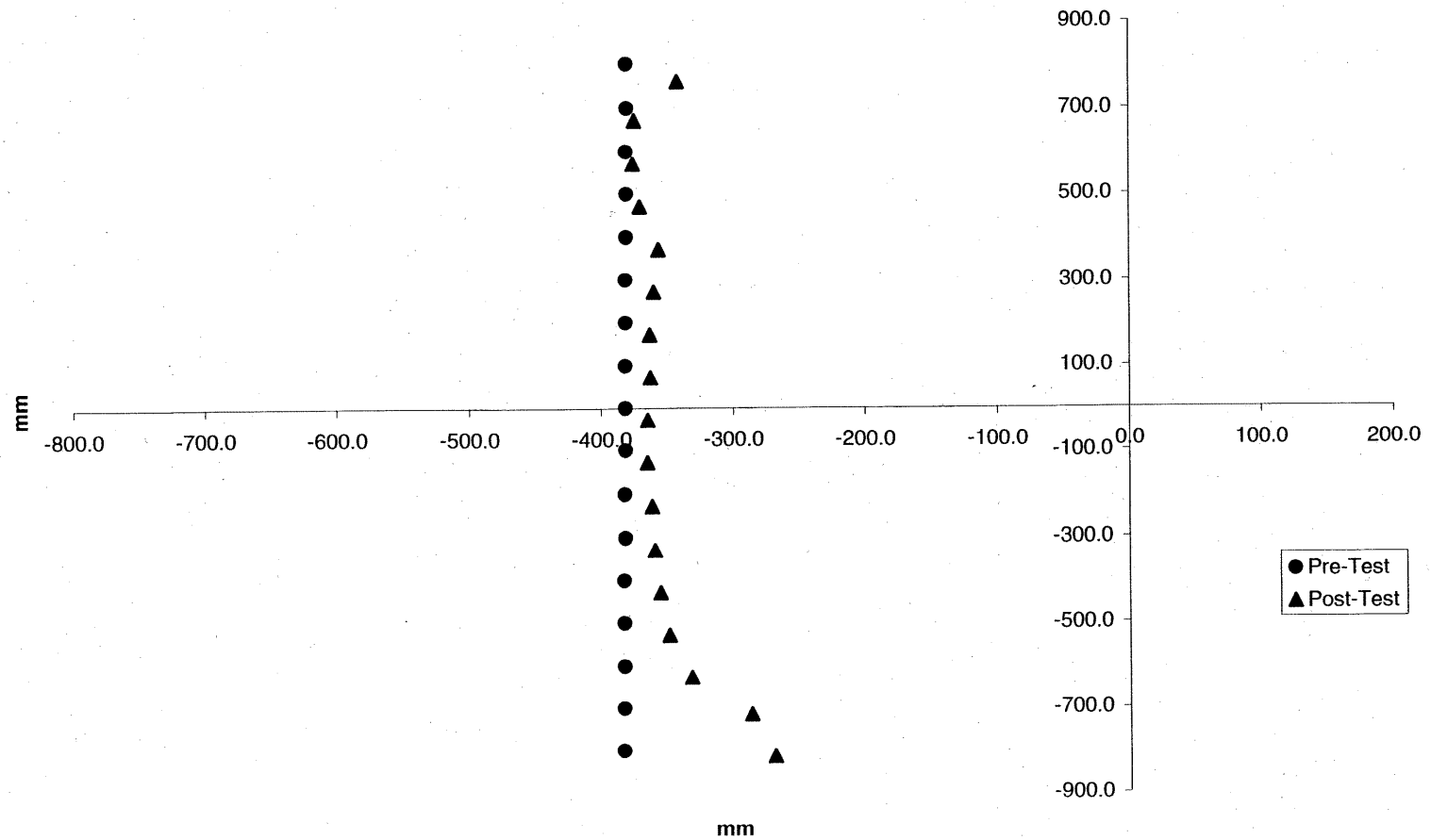
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

Level C - Deformable Barrier Face Profile 18-34



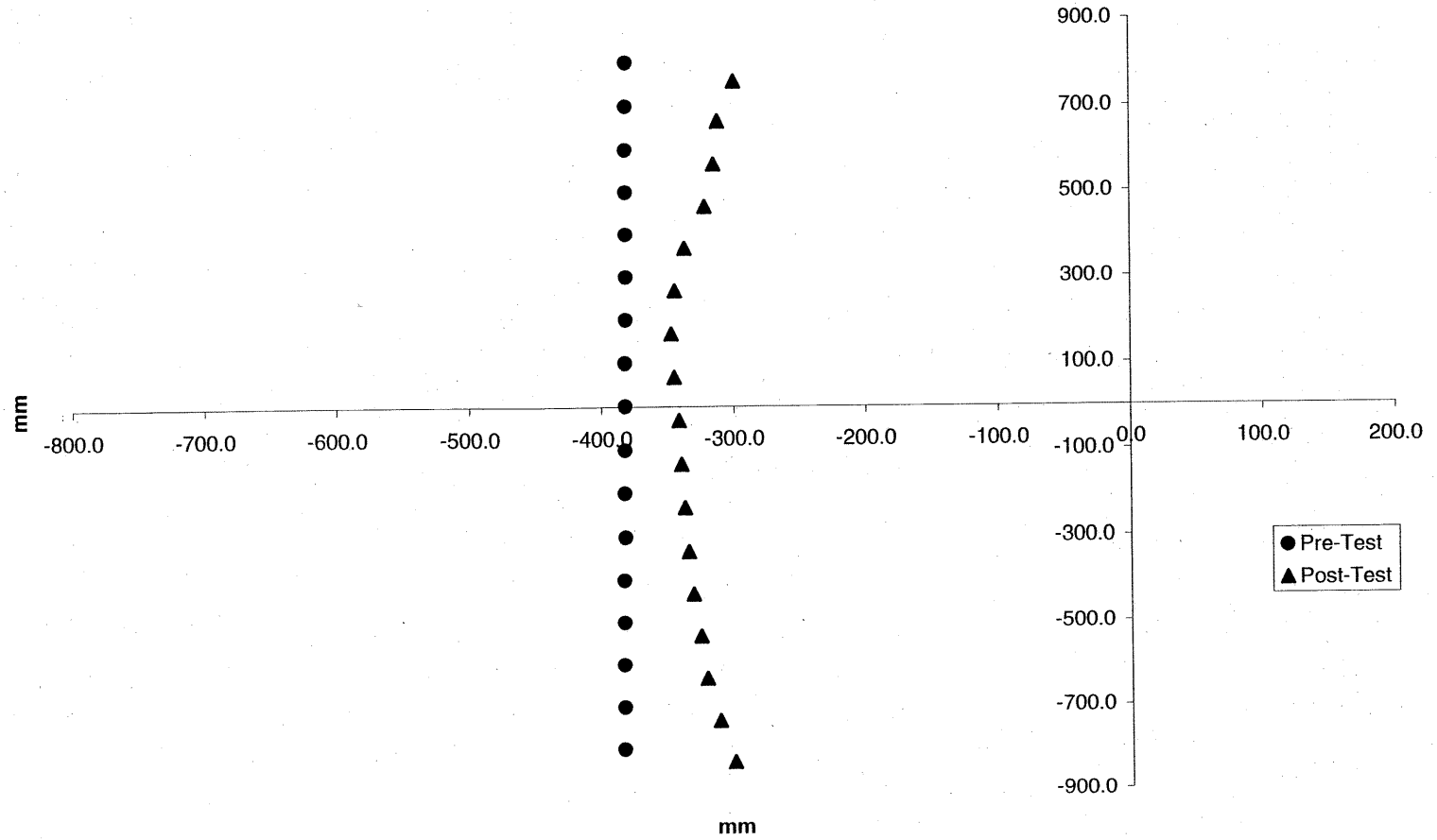
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

Level B - Deformable Barrier Face Profile 35-51



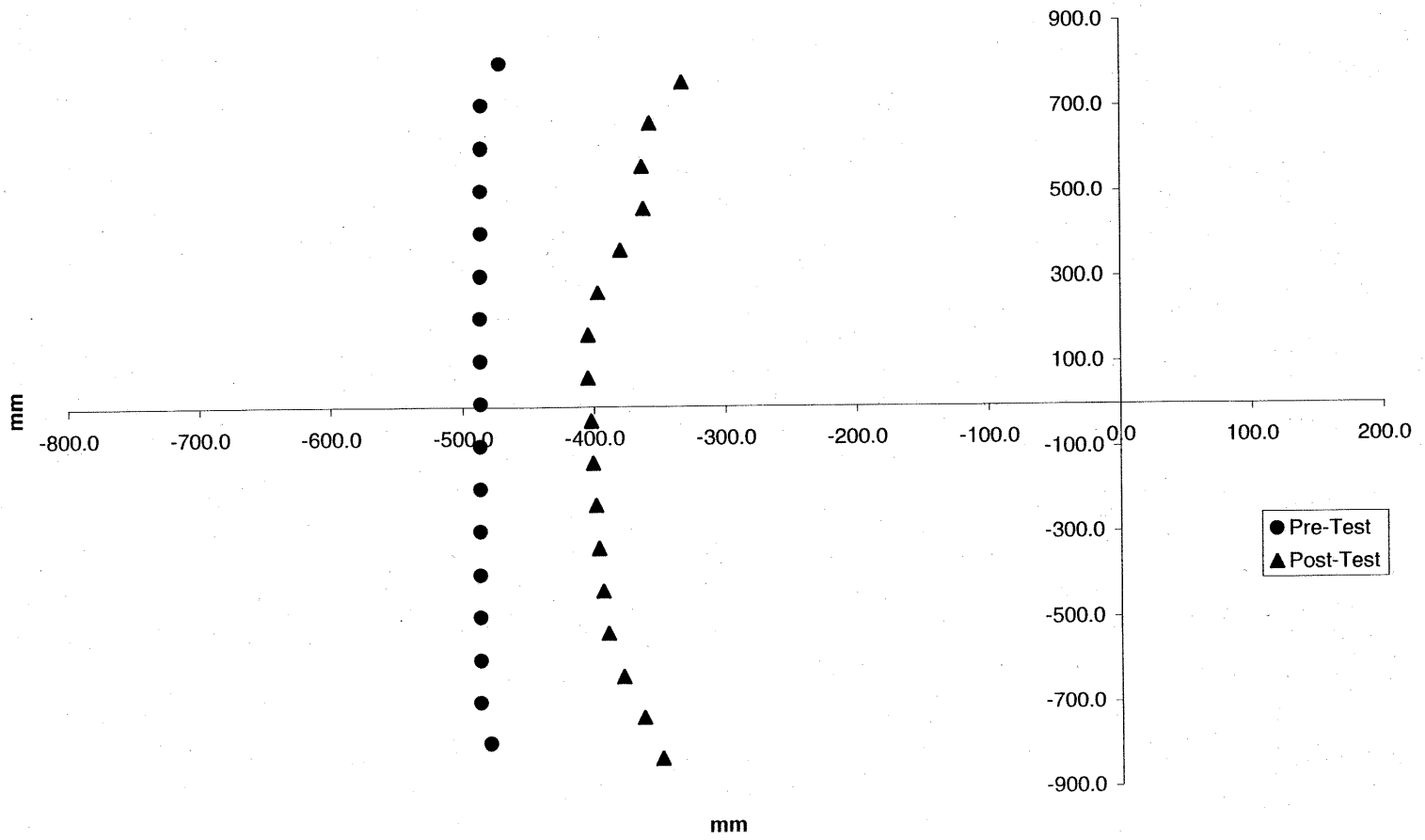
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda RX8 4-door

NHTSA No.: C45403

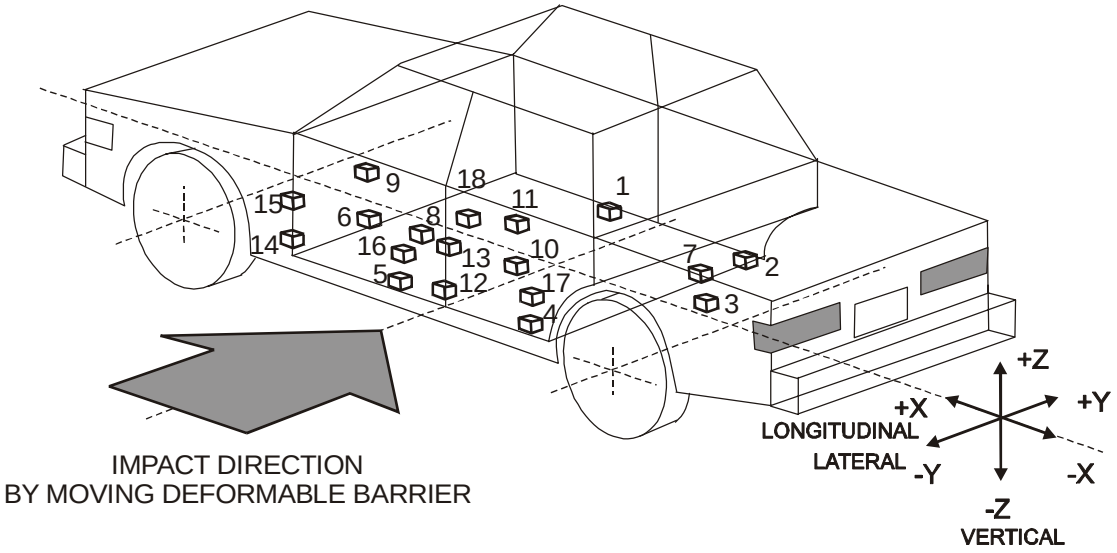
Level A - Deformable Barrier Face Profile 52-68



Data Sheet 13

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



1-Right Front Side Sill
2-Right Side Sill at Rear Seat
3-Rear Floorpan above Axle
4-Left Side Sill at Rear Seat
5-Left Front Side Sill
6-Left Front Door on Centerline
7-Right Rear Occupant Compartment
8-Left Front Door Mid Rear
9-Left Front Door Upper Centerline
10-Left Rear Door Mid Rear
11-Left Rear Door Upper Centerline
12-Left Side Lower B-pillar
13-Left Side Middle B-pillar
14-Left Side Lower A-pillar
15-Left Side Middle A-pillar
16-Left Side Front Seat Track at H-point
17-Left Rear Seat Track at H-point
18-Vehicle Center of Gravity

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

TEST NUMBER: 040130

No.	LOCATION	X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
1	RIGHT SIDE SILL AT FRONT SEAT	2758 mm	642 mm	-268 mm				
	LONGITUDINAL				4.6 g	@ 51.5 ms	6.0 g	@ 17.8 ms
	LATERAL				21.1 g	@ 18.1 ms	1.7 g	@ 174.3 ms
	VERTICAL				3.8 g	@ 27.8 ms	6.4 g	@ 10.3 ms
	RESULTANT				22.0 g	@ 18.1 ms		
2	RIGHT SIDE SILL AT REAR SEAT	1785 mm	642 mm	-259 mm				
	LONGITUDINAL[1]				---	---	---	---
	LATERAL				26.0 g	@ 40.7 ms	14.5 g	@ 36.4 ms
	VERTICAL				6.1 g	@ 29.2 ms	6.1 g	@ 53.8 ms
	RESULTANT[1]				---	---		
3	REAR FLOORPAN ABOVE AXLE	905 mm	0 mm	-545 mm				
	LONGITUDINAL				3.6 g	@ 47.7 ms	8.5 g	@ 17.0 ms
	LATERAL				26.6 g	@ 33.4 ms	1.5 g	@ 211.4 ms
	VERTICAL				14.3 g	@ 15.8 ms	15.5 g	@ 12.7 ms
	RESULTANT				27.0 g	@ 33.3 ms		
4	LEFT SIDE SILL AT REAR SEAT	1792 mm	-642 mm	-246 mm				
	LATERAL				94.4 g	@ 7.3 ms	27.4 g	@ 22.5 ms

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

TEST NUMBER: 040130 No. LOCATION	X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
5 LEFT SIDE SILL AT FRONT SEAT LATERAL[1]	2695 mm	-642 mm	-245 mm	40.1 g	@ 19.3 ms	57.5 g	@ 23.7 ms
7 RIGHT REAR OCCUPANT COMPARTMENT LATERAL	1745 mm	519 mm	-302 mm	22.5 g	@ 6.4 ms	1.6 g	@ 176.2 ms
12 LEFT LOWER B-POST LATERAL	1965 mm	-760 mm	-454 mm	146.4 g	@ 4.6 ms	68.1 g	@ 11.8 ms
13 LEFT MIDDLE B-POST LATERAL	1900 mm	-755 mm	-719 mm	344.5 g	@ 3.8 ms	58.9 g	@ 22.4 ms
14 LEFT LOWER A-POST LATERAL[1]	2945 mm	-760 mm	-482 mm	175.6 g	@ 4.4 ms	75.5 g	@ 11.1 ms
15 LEFT MIDDLE A-POST LATERAL[1]	2945 mm	-750 mm	-694 mm	14.4 g	@ 13.0 ms	87.5 g	@ 3.0 ms
16 LEFT FRONT SEAT TRACK LATERAL[1]	2175 mm	-600 mm	-205 mm	114.5 g	@ 12.5 ms	57.8 g	@ 18.0 ms
17 LEFT REAR SEAT TRACK LATERAL	1392 mm	-650 mm	-240 mm	62.9 g	@ 15.0 ms	13.3 g	@ 44.8 ms

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

TEST NUMBER: 040130

No.	LOCATION	X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
18	VEHICLE CENTER OF GRAVITY	2305 mm	0 mm	-605 mm				
	LONGITUDINAL				7.8 g	@ 49.7 ms	11.8 g	@ 17.8 ms
	LATERAL				40.3 g	@ 17.8 ms	19.7 g	@ 24.8 ms
	VERTICAL				12.9 g	@ 24.1 ms	9.1 g	@ 30.5 ms
	RESULTANT				42.7 g	@ 17.8 ms		

REFERENCE: X: + FORWARD FROM REAR BUMPER
Y: + RIGHTWARD FROM VEHICLE CENTERLINE
Z: + DOWNWARD FROM GROUND LEVEL

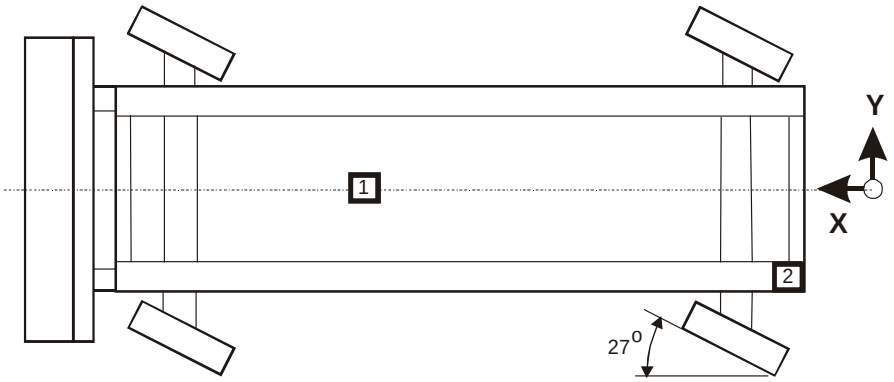
For acceleration data sign convention see Report Sign Convention in Appendix D.

[1] See DATA ACQUISITION EXPLANATIONS on page 2-3

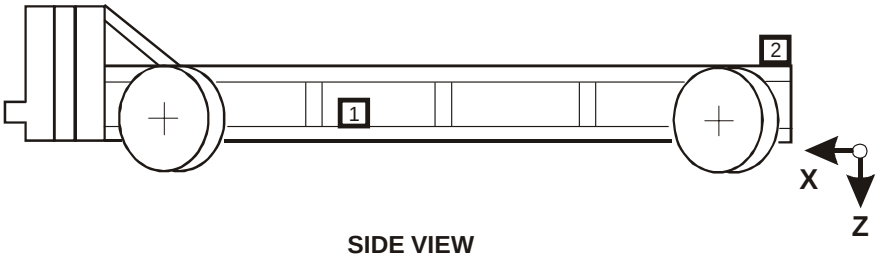
Data Sheet 14

MDB Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



TOP VIEW



SIDE VIEW

Accel. No.	Location		Coordinates (millimeters) X*	Y*	Z*	Positive Direction Max. (g)	Time (ms)	Negative Direction Max. (g)	Time (ms)
1	MDB Center of Gravity		1855	0	-520				
	Longitudinal[1]	X				----	----	----	----
	Lateral	Y				1.6	57.3	10.2	28.6
	Vertical	Z				3.2	38.6	5.1	33.0
	Resultant[1]	R				----	----		
2	Rear Frame Member		412	-677	-625				
	Longitudinal	X				1.7	107.8	26.0	29.3
	Lateral	Y				5.1	17.4	2.7	58.2

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Down)

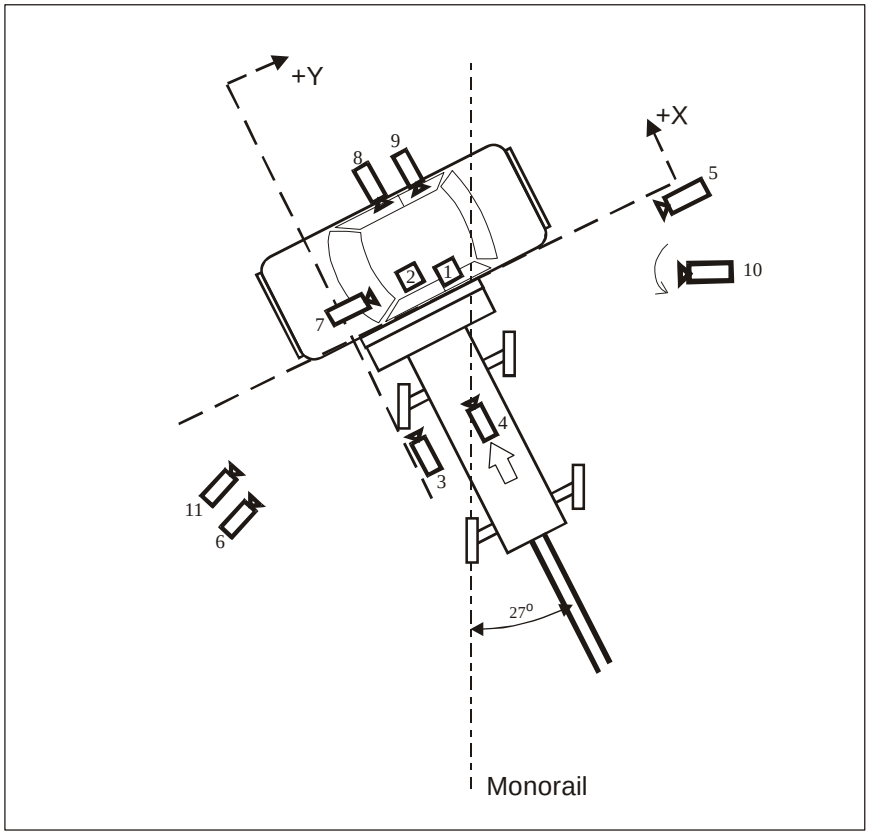
All measurements accurate to within ±3 mm.

[1] See Data Acquisition Explanations

Data Sheet 15

High-Speed Camera Locations and Data Summary

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403



Camera Number	Location	Location, mm X	Y	Z	Angle (deg.)	Lens (mm)	Speed (fps)
1	Overhead wide[1]	250	2150	-5750	-77.5	8.5	N/A
2	Overhead tight	370	1800	-5750	-85.5	17	1000
3	Onboard MDB left side[2]	-1750	-40	-720	-0.1	13	N/A
4	Onboard MDB center	-2480	830	-1353	-5.5	25	1000
5	Right side of MDB	-540	12150	-1300	-0.3	13	1000
6	Left side of MDB	-2670	-8350	-950	-1.0	13	1020
7	Onboard vehicle front	530	390	-1100	-6.4	8	1010
8	Onboard side front door	1000	1540	-1080	-13	8	997
9	Onboard side rear door	1660	1540	-1060	-6.6	8	1007
10	Digital overall event	-2700	-8360	-990	-2.3	13	1000
11	Real-time Panning-Video	N/A	N/A	N/A	N/A	Zoom	30

+X: Forward (referenced to MDB) from impact point
+Y: Rightward (referenced to MDB) from impact point
+Z: Downward from ground level

[1] Camera did not run
[2] Film broke during test; not useable

Section 5

Vehicle Fuel System Integrity

Data Sheet 16

FMVSS 301 Fuel System Integrity Data

NHTSA No.: C45403 Test Date: 01/30/04

Vehicle Year/Make/Model/Body Style: 2004 Mazda RX8 4-door

****

Test Vehicle Impact Type :

_____	Frontal (48.28 km/h)
_____	Oblique (48.28 km/h) with ____° barrier face first contacting the (driver/passenger) side
_____	Rear Moving Barrier (48.28 km/h)
_____	Lateral Moving Barrier (32.19 km/h)
X	Side Impact Moving Deformable Barrier contacting the Driver's side

Fuel Spillage Measurement:

	Actual	Maximum Allowed
1. From impact until vehicle motion ceases	0 g	28 g
2. For five-minute period after vehicle motion ceases	0 g	142 g
3. For next 25 minutes.	0 g	28 g/1 minute

Solvent Spillage Details :

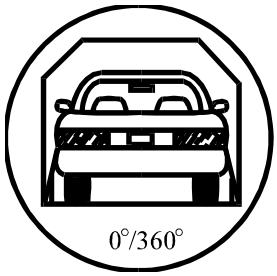
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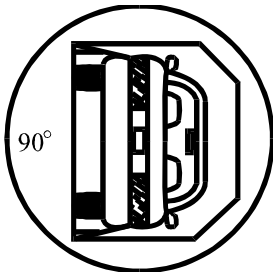
Data Sheet 17

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

0 - 90 Degrees





1. Determination of Solvent Collection Time Period:

Rollover Fixture 90° Rotation Time	1	minutes	30	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
Total	6	minutes	30	seconds
Next whole minute interval	7	minutes		

2. 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

3. Actual Test Vehicle Solvent Spillage:

0 g	0 g	0 g	N/A

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

4. Solvent Spillage Location(s):

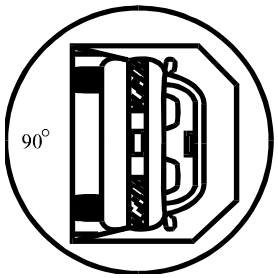
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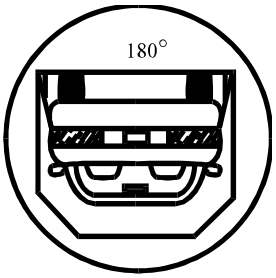
Data Sheet 17 (Continued)

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

90 - 180 Degrees





1. Determination of Solvent Collection Time Period:

Rollover Fixture 90° Rotation Time	1	minutes	30	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
Total	6	minutes	30	seconds
Next whole minute interval	7	minutes		

2. 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

3. Actual Test Vehicle Solvent Spillage:

0 g	0 g	0 g	N/A

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

4. Solvent Spillage Location(s):

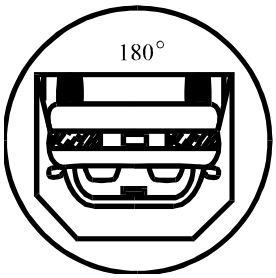
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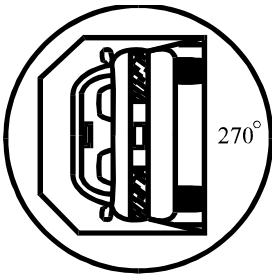
Data Sheet 17 (Continued)

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

180 - 270 Degrees





1. Determination of Solvent Collection Time Period:

Rollover Fixture 90° Rotation Time	1	minutes	30	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
Total	6	minutes	30	seconds
Next whole minute interval	7	minutes		

2. 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

3. Actual Test Vehicle Solvent Spillage:

0 g	0 g	0 g	N/A

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

4. Solvent Spillage Location(s):

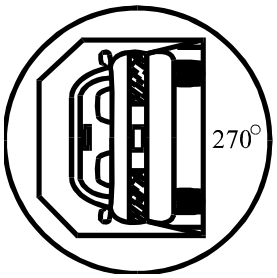
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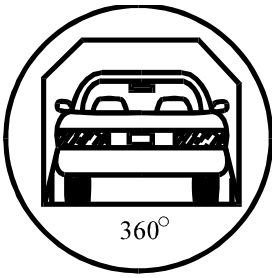
Data Sheet 17 (Continued)

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda RX8 4-door NHTSA No.: C45403

270 - 360 Degrees





1. Determination Of Solvent Collection Time Period:

Rollover Fixture 90° Rotation Time	1	minutes	30	seconds
(Spec. Range = 1 to 3 minutes)				
FMVSS 301 Position Hold Time +	5	minutes	0	seconds
Total	6	minutes	30	seconds
Next whole minute interval	7	minutes		

2. 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

3. Actual Test Vehicle Solvent Spillage:

0 g	0 g	0 g	N/A

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

4. Solvent Spillage Location(s):

None

Appendix A

Photographs

List of Photographs

Figure	Description	Page
Figure A-1	Pre-Test Front View of Test Vehicle	A-4
Figure A-2	Post-Test Front View of Test Vehicle	A-5
Figure A-3	Pre-Test Impacted Side View of Test Vehicle	A-6
Figure A-4	Post-Test Impacted Side View of Test Vehicle	A-7
Figure A-5	Pre-Test Rear View of Test Vehicle	A-8
Figure A-6	Post-Test Rear View of Test Vehicle	A-9
Figure A-7	Pre-Test Frontal View of Impactor Face	A-10
Figure A-8	Post-Test Frontal View of Impactor Face	A-11
Figure A-9	Pre-Test Left Side View of Impactor Face	A-12
Figure A-10	Post-Test Left Side View of Impactor Face	A-13
Figure A-11	Pre-Test Right Side View of Impactor Face	A-14
Figure A-12	Post-Test Right Side View of Impactor Face	A-15
Figure A-13	Pre-Test Top View of Impactor Face	A-16
Figure A-14	Post-Test Top View of Impactor Face	A-17
Figure A-15	Pre-Test View of MDB Showing Contact Switches in Place	A-18
Figure A-16	Pre-Test Overhead View of MDB Aligned with Vehicle	A-19
Figure A-17	Pre-Test Right Occupant Compartment View of Front SID HIII	A-20
Figure A-18	Post-Test Right Occupant Compartment View of Front SID HIII	A-21
Figure A-19	Pre-Test Right Occupant Compartment View of Rear SID HIII	A-22
Figure A-20	Post-Test Right Occupant Compartment View of Rear SID HIII	A-23
Figure A-21	Pre-Test Left View of Front SID HIII - View 1	A-24
Figure A-22	Post-Test Left View of Front SID HIII - View 1	A-25
Figure A-23	Pre-Test Left View of Front SID HIII - View 2	A-26
Figure A-24	Pre-Test Left View of Front SID HIII - View 3	A-27
Figure A-25	Pre-Test View of Front SID HIII and Door Clearance	A-28
Figure A-26	Post-Test View of Front SID HIII and Door Clearance	A-29
Figure A-27	Pre-Test Left View of Rear SID HIII - View 1	A-30
Figure A-28	Pre-Test Left View of Rear SID HIII - View 2	A-31

List of Photographs, Cont'd.

Figure	Description	Page
Figure A-29	Pre-Test Interior of Front Door	A-32
Figure A-30	Post-Test Interior of Front Door Showing SID HIII Impact Locations	A-33
Figure A-31	Post-Test Front SID HIII Contact - View 1	A-34
Figure A-32	Post-Test Front SID HIII Contact - View 2	A-35
Figure A-33	Post-Test Front SID HIII Contact - View 3	A-36
Figure A-34	Pre-Test Interior of Rear Door	A-37
Figure A-35	Post-Test Interior of Rear Panel Showing SID HIII Impact Locations	A-38
Figure A-36	Post-Test Rear SID HIII Contact - View 1	A-39
Figure A-37	Post-Test Rear SID HIII Contact - View 2	A-40
Figure A-38	Pre-Test Left Side View of MDB With Impactor Face in Position	A-41
Figure A-39	Pre-Test Primary Impact Point View	A-42
Figure A-40	Post-Test Primary Impact Point View	A-43
Figure A-41	Pre-Test Right Side View of MDB With Impactor Face in Position	A-44
Figure A-42	Pre-Test Secondary Impact Point View	A-45
Figure A-43	Post-Test Secondary Impact Point View	A-46
Figure A-44	Vehicle Certification Label View	A-47
Figure A-45	Vehicle Recommended Tire Pressure Label View	A-48
Figure A-46	Impact Event	A-49
Figure A-47	Pre-Test Fuel Cap	A-50
Figure A-48	Post-Test Fuel Cap	A-51
Figure A-49	FMVSS 301 Rollover View at 90°	A-52
Figure A-50	FMVSS 301 Rollover View at 180°	A-53
Figure A-51	FMVSS 301 Rollover View at 270°	A-54
Figure A-52	FMVSS 301 Rollover View at 360°	A-55
Figure A-53	Pre-Test Ballast Location - View 1	A-56
Figure A-54	Pre-Test Ballast Location - View 2	A-57



Figure A-1 Pre-Test Front View of Test Vehicle



Figure A-2 Post-Test Front View of Test Vehicle



Figure A-3 Pre-Test Impacted Side View of Test Vehicle



Figure A-4 Post-Test Impacted Side View of Test Vehicle



Figure A-5 Pre-Test Rear View of Test Vehicle



Figure A-6 Post-Test Rear 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

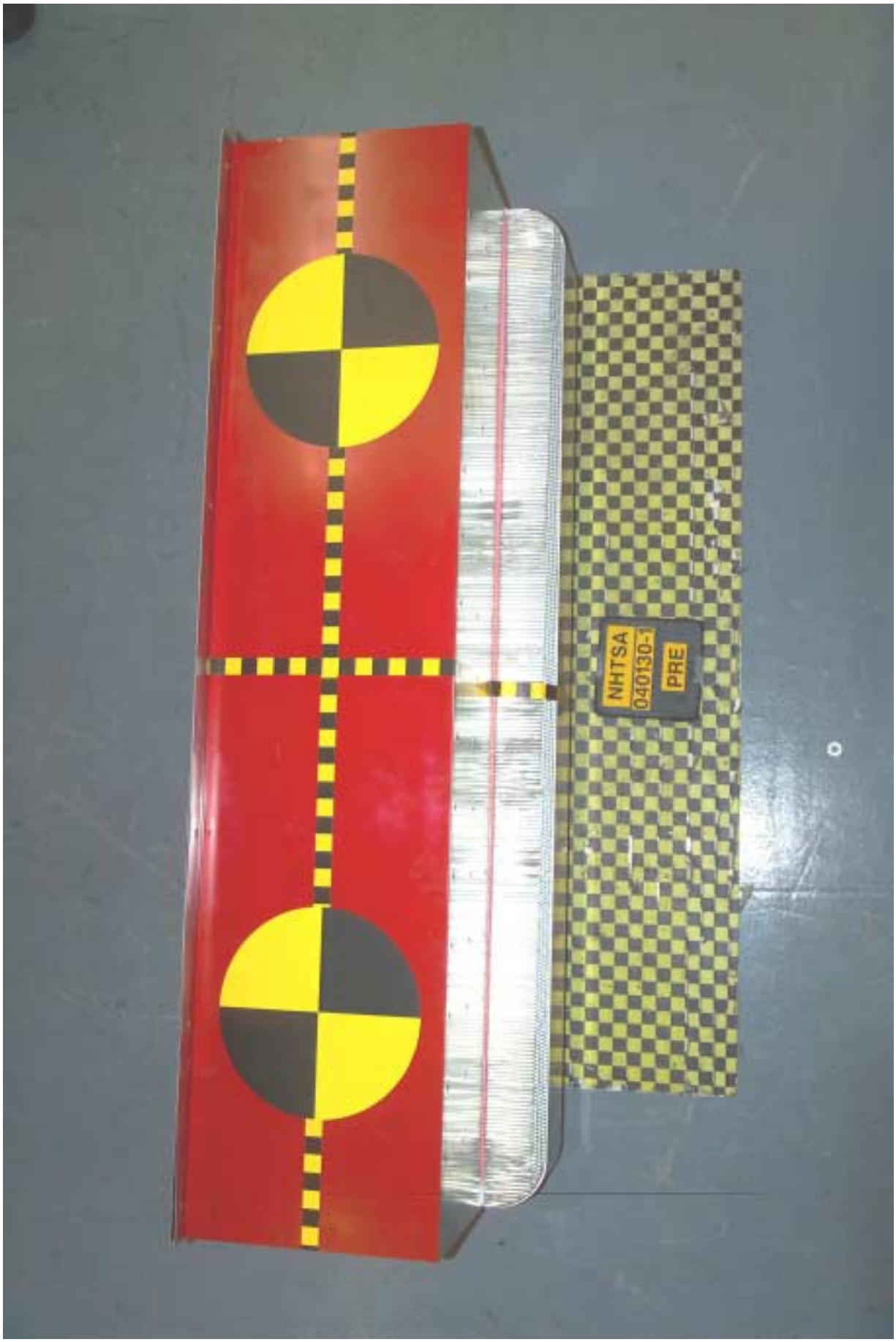


Figure A-13 Pre-Test Top View of Impactor Face



Figure A-14 Post-Test Top View of Impactor Face



Figure A-15 Pre-Test View of MDB Showing Contact Switches in Place



Figure A-16 Pre-Test Overhead View of MDB Aligned with Vehicle



Figure A-17 Pre-Test Right Occupant Compartment View of Front SID HIII



Figure A-18 Post-Test Right Occupant Compartment View of Front SID HIII



Figure A-19 Pre-Test Right Occupant Compartment View of Rear SID HIII



Figure A-20 Post-Test Right Occupant Compartment View of Rear SID HIII



Figure A-21 Pre-Test View of Front SID HIII - View 1



Figure A-22 Post-Test View of Front SID HIII - View 1



Figure A-23 Pre-Test Left View of Front SID HIII - View 2



Figure A-24 Pre-Test Left View of Front SID HIII - View 3



Figure A-25 Pre-Test View of Front SID HIII and Door Clearance



Figure A-26 Post-Test View of Front SID HIII and Door Clearance



Figure A-27 Pre-Test Left View of Rear SID HIII - View 1



Figure A-28 Pre-Test Left View of Rear SID HIII - View 2



Figure A-29 Pre-Test Interior of Front Door

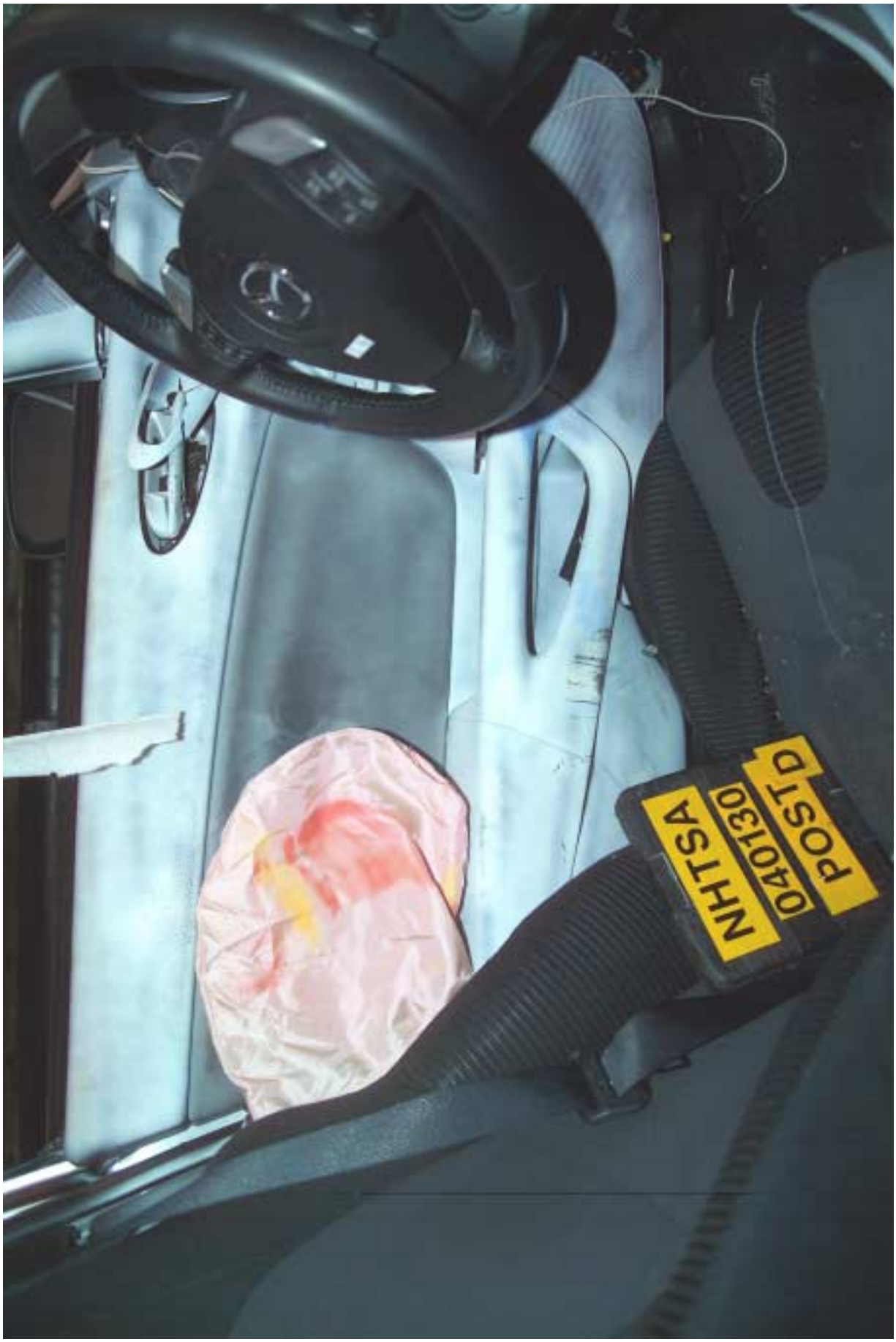


Figure A-30 Post-Test Interior of Front Door Showing SID HIII Impact Locations



Figure A-31 Post-Test Front SID HIII Contact - View 1



Figure A-32 Post-Test Front SID HIII Contact - View 2



Figure A-33 Post-Test Front SID HIII Contact - View 3



Figure A-34 Pre-Test Interior of Rear Door



Figure A-35 Post-Test Interior of Rear Panel Showing SID HIII Impact Locations

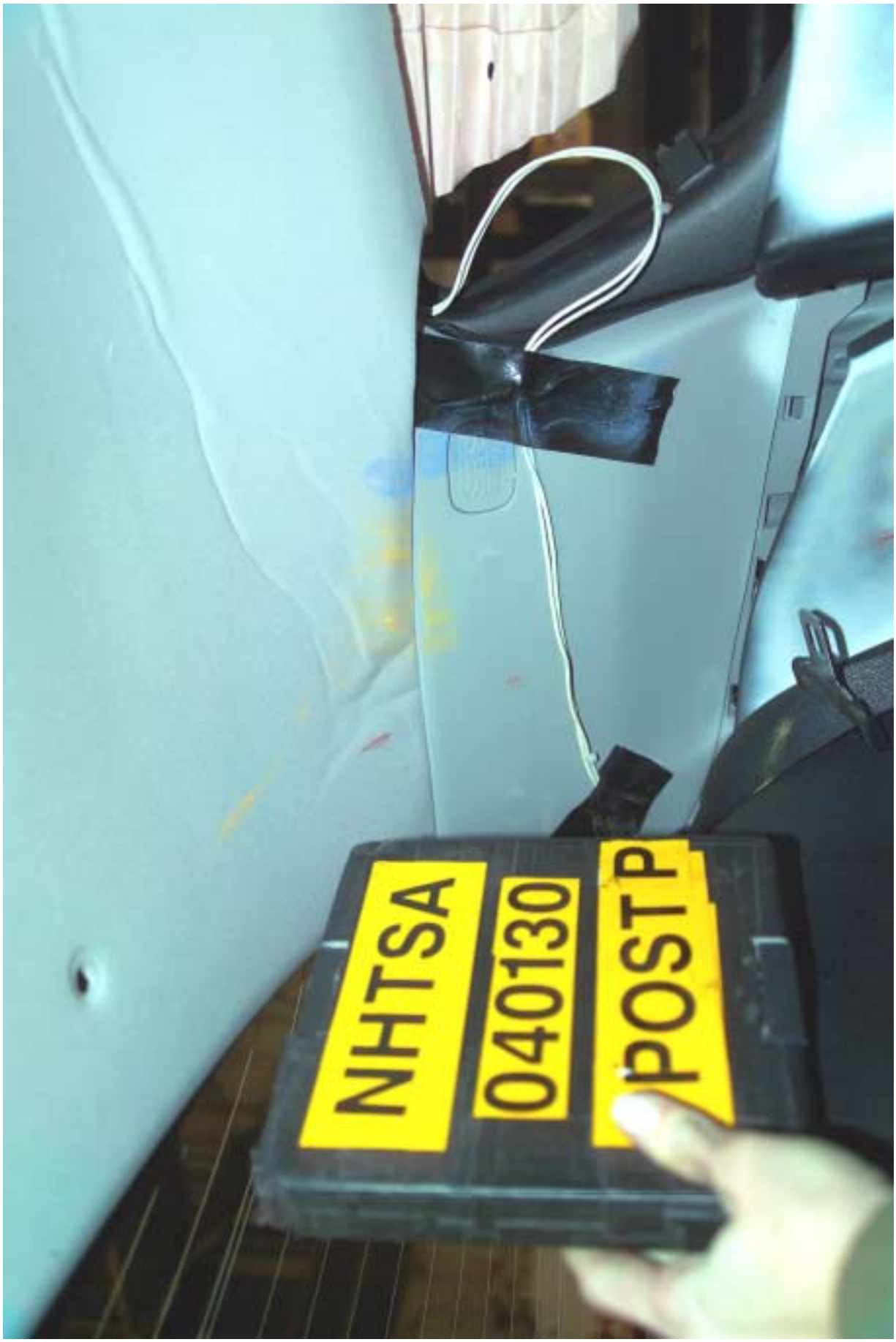


Figure A-36 Post-Test Rear SID HIII Contact - View 1



Figure A-37 Post-Test Rear SID HIII Contact - View 2



Figure A-38 Pre-Test Left Side View of MDB With Impactor Face in Position

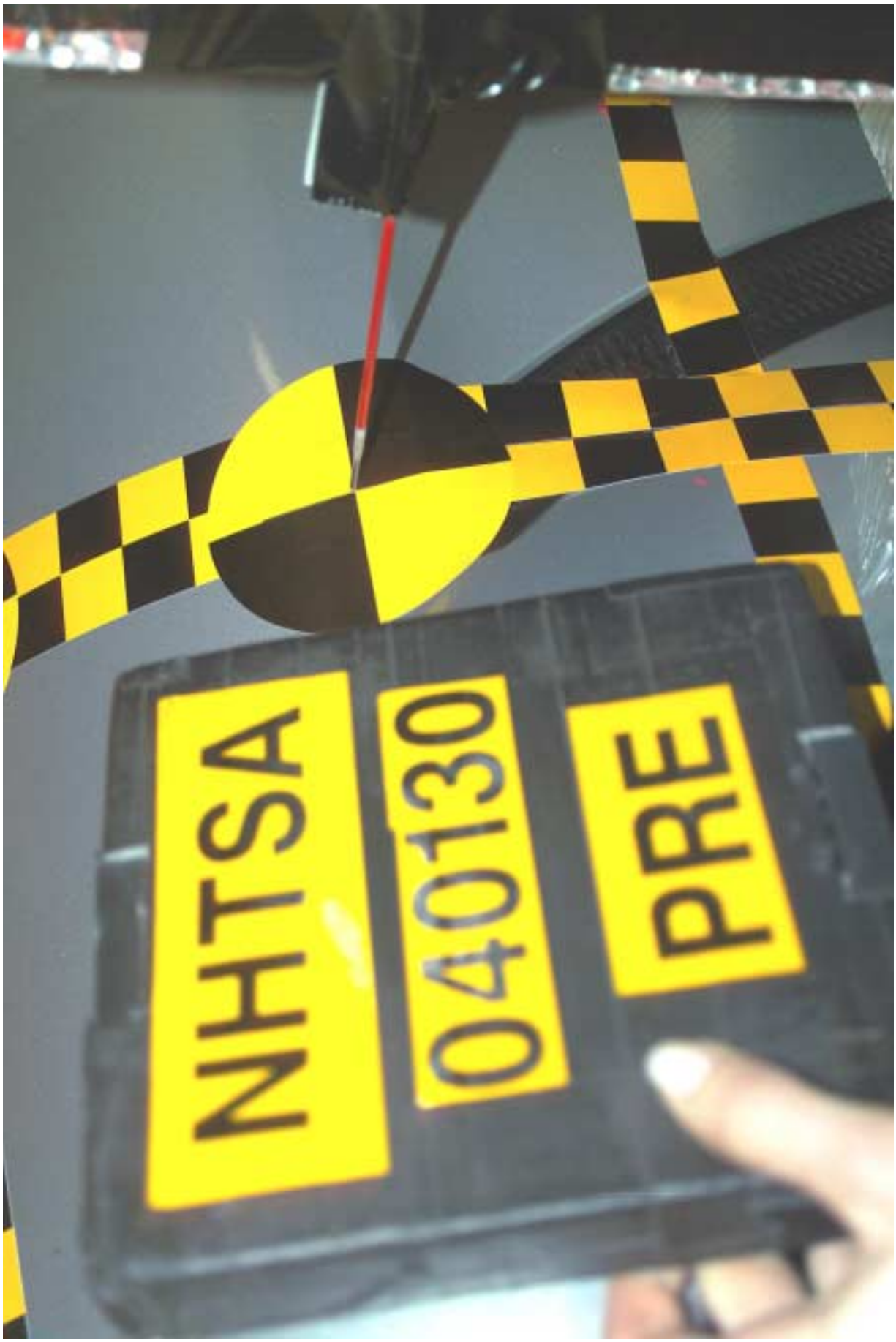


Figure A-39 Pre-Test Primary Impact Point View



Figure A-40 Post-Test Primary Impact Point View



Figure A-41 Pre-Test Right Side View of MDB With Impactor Face in Position



Figure A-42 Pre-Test Secondary Impact Point View



Figure A-43 Post-Test Secondary Impact Point View



Figure A-44 Vehicle Certification Label View



Figure A-45 Vehicle Recommended Tire Pressure Label View



Figure A-46 Impact Event



Figure A-47 Pre-Test Fuel Cap



Figure A-48 Post-Test Fuel Cap



Figure A-49 FMVSS 301 Rollover View at 90°



Figure A-50 FMVSS 301 Rollover View at 180°

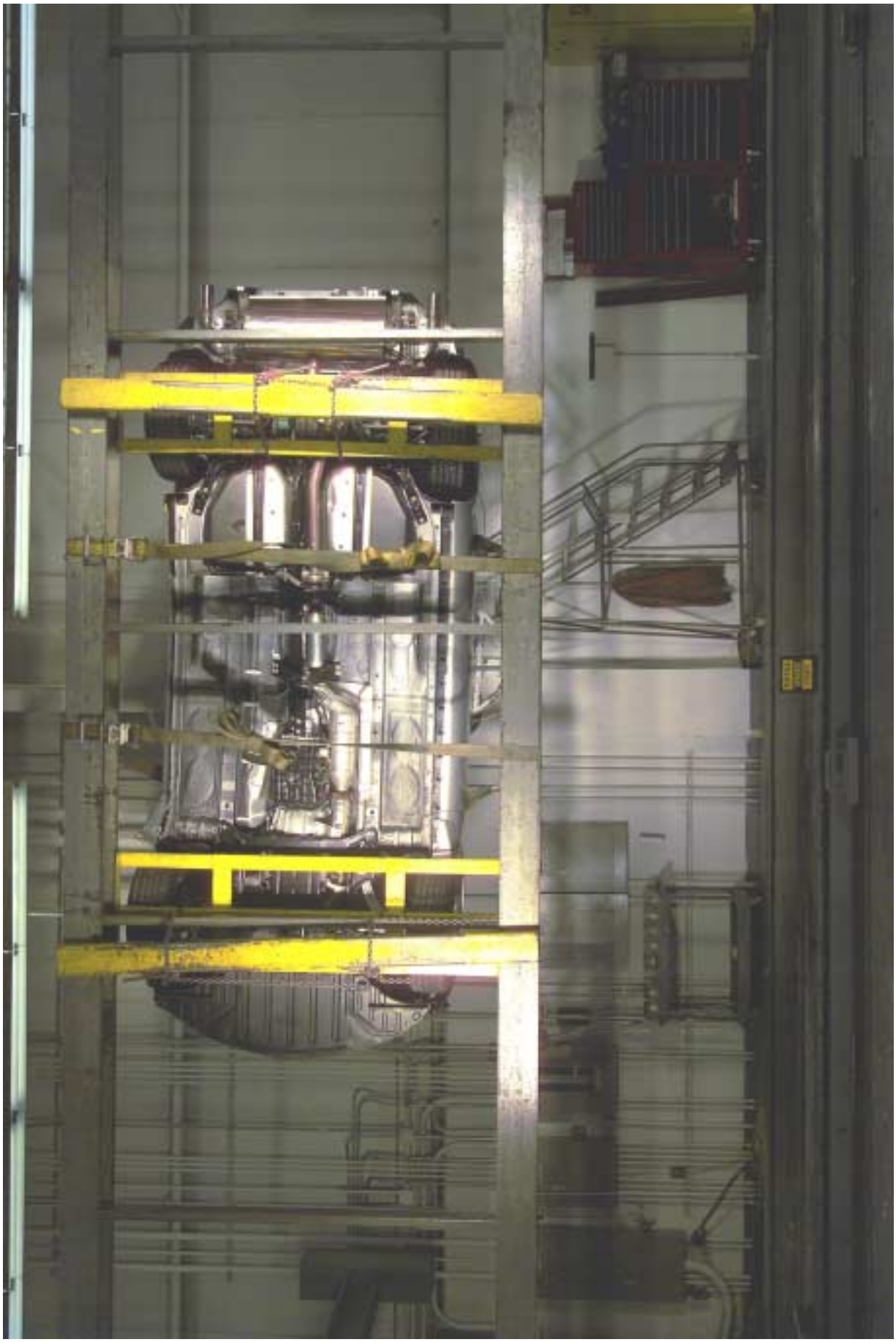


Figure A-51 FMVSS 301 Rollover View at 270°



Figure A-52 FMVSS 301 Rollover View at 360°



Figure A-53 Pre-Test Ballast Location - View 1



Figure A-54 Pre-Test Ballast Location - View 2

Appendix B

Data Plots

Table of Data Plots

Driver and Passenger Dummy Instrumentation Plots

Acceleration Data - Filter Class 1000

Integration Data - Filter Class 180

Force Data - Filter Class 1000

Moment Data - Filter Class 600

Contact Data - Filter Class 1000

Plot No.	Data Plot Title	Page
1	Driver Head X-Axis Acceleration	B-11
2	Driver Head X-Axis Velocity	B-12
3	Driver Head Y-Axis Acceleration	B-13
4	Driver Head Y-Axis Velocity	B-14
5	Driver Head Z-Axis Acceleration	B-15
6	Driver Head Z-Axis Velocity	B-16
7	Driver Head Resultant Acceleration	B-17
8	Driver Neck X-Axis Shear Force	B-18
9	Driver Neck Y-Axis Shear Force	B-19
10	Driver Neck Z-Axis Axial Force	B-20
11	Driver Neck Moment about X Axis	B-21
12	Driver Neck Moment about Y Axis	B-22
13	Driver Neck Moment about Z Axis	B-23
14	Driver Neck Occipital Condyle Moment about X Axis	B-24
15	Driver Upper Rib Y-Axis Acceleration	B-25
16	Driver Upper Rib Y-Axis Velocity	B-26
17	Driver Lower Rib Y-Axis Acceleration	B-27
18	Driver Lower Rib Y-Axis Velocity	B-28
19	Driver Lower Spine Y-Axis Acceleration	B-29
20	Driver Lower Spine Y-Axis Velocity	B-30
21	Driver Pelvis Y-Axis Acceleration	B-31
22	Driver Pelvis Y-Axis Velocity	B-32

Table of Data Plots (Continued)

Driver and Passenger Dummy Instrumentation Plots (Continued)

Acceleration Data - Filter Class 1000

Integration Data - Filter Class 180

Force Data - Filter Class 1000

Moment Data - Filter Class 600

Contact Data - Filter Class 1000

Plot No.	Data Plot Title	Page
23	Left Rear Passenger Head X-Axis Acceleration	B-33
24	Left Rear Passenger Head X-Axis Velocity	B-34
25	Left Rear Passenger Head Y-Axis Acceleration	B-35
26	Left Rear Passenger Head Y-Axis Velocity	B-36
27	Left Rear Passenger Head Z-Axis Acceleration	B-37
28	Left Rear Passenger Head Z-Axis Velocity	B-38
29	Left Rear Passenger Head Resultant Acceleration	B-39
30	Left Rear Passenger Neck X-Axis Shear Force	B-40
31	Left Rear Passenger Neck Y-Axis Shear Force	B-41
32	Left Rear Passenger Neck Z-Axis Axial Force	B-42
33	Left Rear Passenger Neck Moment about X Axis	B-43
34	Left Rear Passenger Neck Moment about Y Axis	B-44
35	Left Rear Passenger Neck Moment about Z Axis	B-45
36	Left Rear Passenger Neck Occipital Condyle Moment about X Axis	B-46
37	Left Rear Passenger Upper Rib Y-Axis Acceleration	B-47
38	Left Rear Passenger Upper Rib Y-Axis Velocity	B-48
39	Left Rear Passenger Lower Rib Y-Axis Acceleration	B-49
40	Left Rear Passenger Lower Rib Y-Axis Velocity	B-50
41	Left Rear Passenger Lower Spine Y-Axis Acceleration	B-51
42	Left Rear Passenger Lower Spine Y-Axis Velocity	B-52
43	Left Rear Passenger Pelvis Y-Axis Acceleration	B-53
44	Left Rear Passenger Pelvis Y-Axis Velocity	B-54
45	Left Rear Passenger Shoulder Contact Switch	B-55
46	Left Rear Passenger Pelvis Contact Switch	B-56

Table of Data Plots (Continued)

Driver and Passenger Dummy Redundant Instrumentation Plots

Acceleration Data - Filter Class 1000 - Redundant

Integration Data - Filter Class 180 - Redundant

Plot No.	Data Plot Title	Page
47	Driver Head X-Axis Redundant Acceleration	B-58
48	Driver Head X-Axis Redundant Velocity	B-59
49	Driver Head Y-Axis Redundant Acceleration	B-60
50	Driver Head Y-Axis Redundant Velocity	B-61
51	Driver Head Z-Axis Redundant Acceleration	B-62
52	Driver Head Z-Axis Redundant Velocity	B-63
53	Driver Head Resultant Redundant Acceleration	B-64
54	Driver Upper Rib Y-Axis Redundant Acceleration	B-65
55	Driver Upper Rib Y-Axis Redundant Velocity	B-66
56	Driver Lower Rib Y-Axis Redundant Acceleration	B-67
57	Driver Lower Rib Y-Axis Redundant Velocity	B-68
58	Driver Lower Spine Y-Axis Redundant Acceleration	B-69
59	Driver Lower Spine Y-Axis Redundant Velocity	B-70
60	Driver Pelvis Y-Axis Redundant Acceleration	B-71
61	Driver Pelvis Y-Axis Redundant Velocity	B-72
62	Left Rear Passenger Head X-Axis Redundant Acceleration	B-73
63	Left Rear Passenger Head X-Axis Redundant Velocity	B-74
64	Left Rear Passenger Head Y-Axis Redundant Acceleration	B-75
65	Left Rear Passenger Head Y-Axis Redundant Velocity	B-76
66	Left Rear Passenger Head Z-Axis Redundant Acceleration	B-77
67	Left Rear Passenger Head Z-Axis Redundant Velocity	B-78
68	Left Rear Passenger Head Resultant Redundant Acceleration	B-79
69	Left Rear Passenger Upper Rib Y-Axis Redundant Acceleration	B-80
70	Left Rear Passenger Upper Rib Y-Axis Redundant Velocity	B-81

Table of Data Plots (Continued)

Driver and Passenger Dummy Redundant Instrumentation Plots (Continued)

Acceleration Data - Filter Class 1000 - Redundant

Integration Data - Filter Class 180 - Redundant

Plot No.	Data Plot Title	Page
71	Left Rear Passenger Lower Rib Y-Axis Redundant Acceleration	B-82
72	Left Rear Passenger Lower Rib Y-Axis Redundant Velocity	B-83
73	Left Rear Passenger Lower Spine Y-Axis Redundant Acceleration	B-84
74	Left Rear Passenger Lower Spine Y-Axis Redundant Velocity	B-85
75	Left Rear Passenger Pelvis Y-Axis Redundant Acceleration	B-86
76	Left Rear Passenger Pelvis Y-Axis Redundant Velocity	B-87

Table of Data Plots (Continued)

Test Vehicle Instrumentation Plots

Acceleration Data - Filter Class 60

Integration Data - Filter Class 180

Plot No.	Data Plot Title	Page
77	Right Side Sill at Front Seat X-Axis Acceleration	B-89
78	Right Side Sill at Front Seat X-Axis Velocity	B-90
79	Right Side Sill at Front Seat Y-Axis Acceleration	B-91
80	Right Side Sill at Front Seat Y-Axis Velocity	B-92
81	Right Side Sill at Front Seat Z-Axis Acceleration	B-93
82	Right Side Sill at Front Seat Z-Axis Velocity	B-94
83	Right Side Sill at Front Seat Resultant Acceleration	B-95
84	Right Side Sill at Rear Seat X-Axis Acceleration	B-96
85	Right Side Sill at Rear Seat X-Axis Velocity	B-97
86	Right Side Sill at Rear Seat Y-Axis Acceleration	B-98
87	Right Side Sill at Rear Seat Y-Axis Velocity	B-99
88	Right Side Sill at Rear Seat Z-Axis Acceleration	B-100
89	Right Side Sill at Rear Seat Z-Axis Velocity	B-101
90	Right Side Sill at Rear Seat Resultant Acceleration	B-102
91	Rear Floorpan Above Axle X-Axis Acceleration	B-103
92	Rear Floorpan Above Axle X-Axis Velocity	B-104
93	Rear Floorpan Above Axle Y-Axis Acceleration	B-105
94	Rear Floorpan Above Axle Y-Axis Velocity	B-106
95	Rear Floorpan Above Axle Z-Axis Acceleration	B-107
96	Rear Floorpan Above Axle Z-Axis Velocity	B-108
97	Rear Floorpan Above Axle Resultant Acceleration	B-109
98	Left Side Sill at Front Seat Y-Axis Acceleration	B-110
99	Left Side Sill at Front Seat Y-Axis Velocity	B-111
100	Left Side Sill at Front Seat Y-Axis Displacement	B-112

Table of Data Plots (Continued)

Test Vehicle Instrumentation Plots (Continued)

Acceleration Data - Filter Class 60

Integration Data - Filter Class 180

Plot No.	Data Plot Title	Page
101	Left Side Sill at Rear Seat Y-Axis Acceleration	B-113
102	Left Side Sill at Rear Seat Y-Axis Velocity	B-114
103	Left Side Sill at Rear Seat Y-Axis Displacement	B-115
104	Right Rear Occupant Compartment Y-Axis Acceleration	B-116
105	Right Rear Occupant Compartment Y-Axis Velocity	B-117
106	Right Rear Occupant Compartment Y-Axis Displacement	B-118
107	Left Lower A-Post Y-Axis Acceleration	B-119
108	Left Lower A-Post Y-Axis Velocity	B-120
109	Left Middle A-Post Y-Axis Acceleration	B-121
110	Left Middle A-Post Y-Axis Velocity	B-122
111	Left Lower B-Post Y-Axis Acceleration	B-123
112	Left Lower B-Post Y-Axis Velocity	B-124
113	Left Middle B-Post Y-Axis Acceleration	B-125
114	Left Middle B-Post Y-Axis Velocity	B-126
115	Left Front Seat Track Y-Axis Acceleration	B-127
116	Left Front Seat Track Y-Axis Velocity	B-128
117	Left Rear Seat Track Y-Axis Acceleration	B-129
118	Left Rear Seat Track Y-Axis Velocity	B-130
119	Vehicle Center of Gravity X-Axis Acceleration	B-131
120	Vehicle Center of Gravity X-Axis Velocity	B-132
121	Vehicle Center of Gravity Y-Axis Acceleration	B-133
122	Vehicle Center of Gravity Y-Axis Velocity	B-134
123	Vehicle Center of Gravity Z-Axis Acceleration	B-135
124	Vehicle Center of Gravity Z-Axis Velocity	B-136
125	Vehicle Center of Gravity Resultant Acceleration	B-137

Table of Data Plots (Continued)

MDB Instrumentation Plots

Acceleration Data - Filter Class 60

Integration Data - Filter Class 180

Plot No.	Data Plot Title	Page
126	MDB Center of Gravity X-Axis Acceleration	B-139
127	MDB Center of Gravity X-Axis Velocity	B-140
128	MDB Center of Gravity Y-Axis Acceleration	B-141
129	MDB Center of Gravity Y-Axis Velocity	B-142
130	MDB Center of Gravity Z-Axis Acceleration	B-143
131	MDB Center of Gravity Z-Axis Velocity	B-144
132	MDB Center of Gravity Resultant Acceleration	B-145
133	MDB Left Rear X-Axis Acceleration	B-146
134	MDB Left Rear X-Axis Velocity	B-147
135	MDB Left Rear Y-Axis Acceleration	B-148
136	MDB Left Rear Y-Axis Velocity	B-149
137	MDB Right Side Contact Switch	B-150
138	MDB Left Side Contact Switch	B-151

Table of Data Plots (Continued)

Driver and Passenger Dummy Instrumentation Plots

Acceleration Data - FIR Filtered

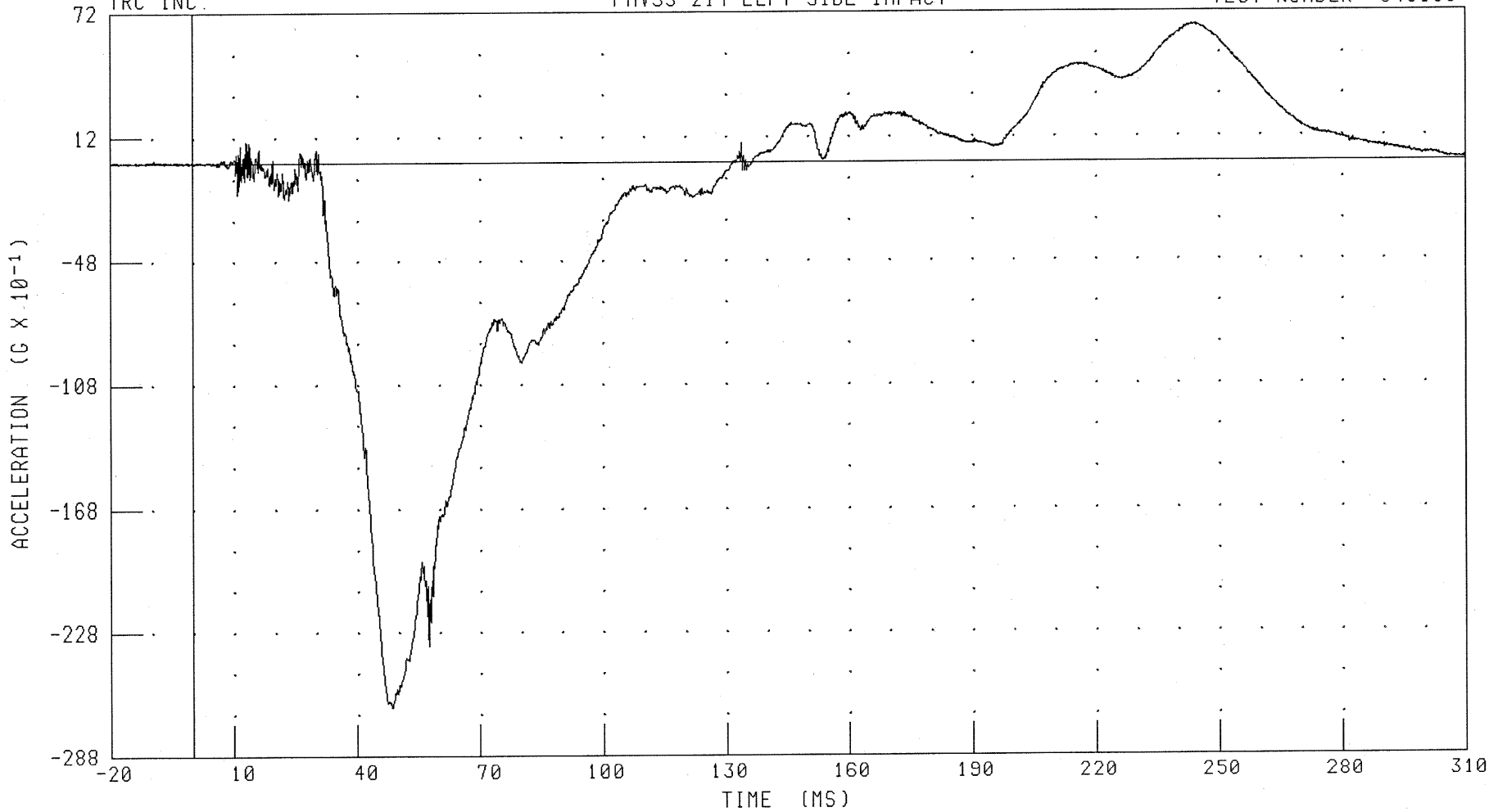
Plot No.	Data Plot Title	Page
139	Driver Upper Rib Y-Axis Acceleration	B-153
140	Driver Lower Rib Y-Axis Acceleration	B-154
141	Driver Lower Spine Y-Axis Acceleration	B-155
142	Driver Pelvis Y-Axis Acceleration	B-156
143	Left Rear Passenger Upper Rib Y-Axis Acceleration	B-157
144	Left Rear Passenger Lower Rib Y-Axis Acceleration	B-158
145	Left Rear Passenger Lower Spine Y-Axis Acceleration	B-159
146	Left Rear Passenger Pelvis Y-Axis Acceleration	B-160
147	Driver Upper Rib Y-Axis Redundant Acceleration	B-161
148	Driver Lower Rib Y-Axis Redundant Acceleration	B-162
149	Driver Lower Spine Y-Axis Redundant Acceleration	B-163
150	Driver Pelvis Y-Axis Redundant Acceleration	B-164
151	Left Rear Passenger Upper Rib Y-Axis Redundant Acceleration	B-165
152	Left Rear Passenger Lower Rib Y-Axis Redundant Acceleration	B-166
153	Left Rear Passenger Lower Spine Y-Axis Redundant Acceleration	B-167
154	Left Rear Passenger Pelvis Y-Axis Redundant Acceleration	B-168

Driver and Passenger Dummy Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD X-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



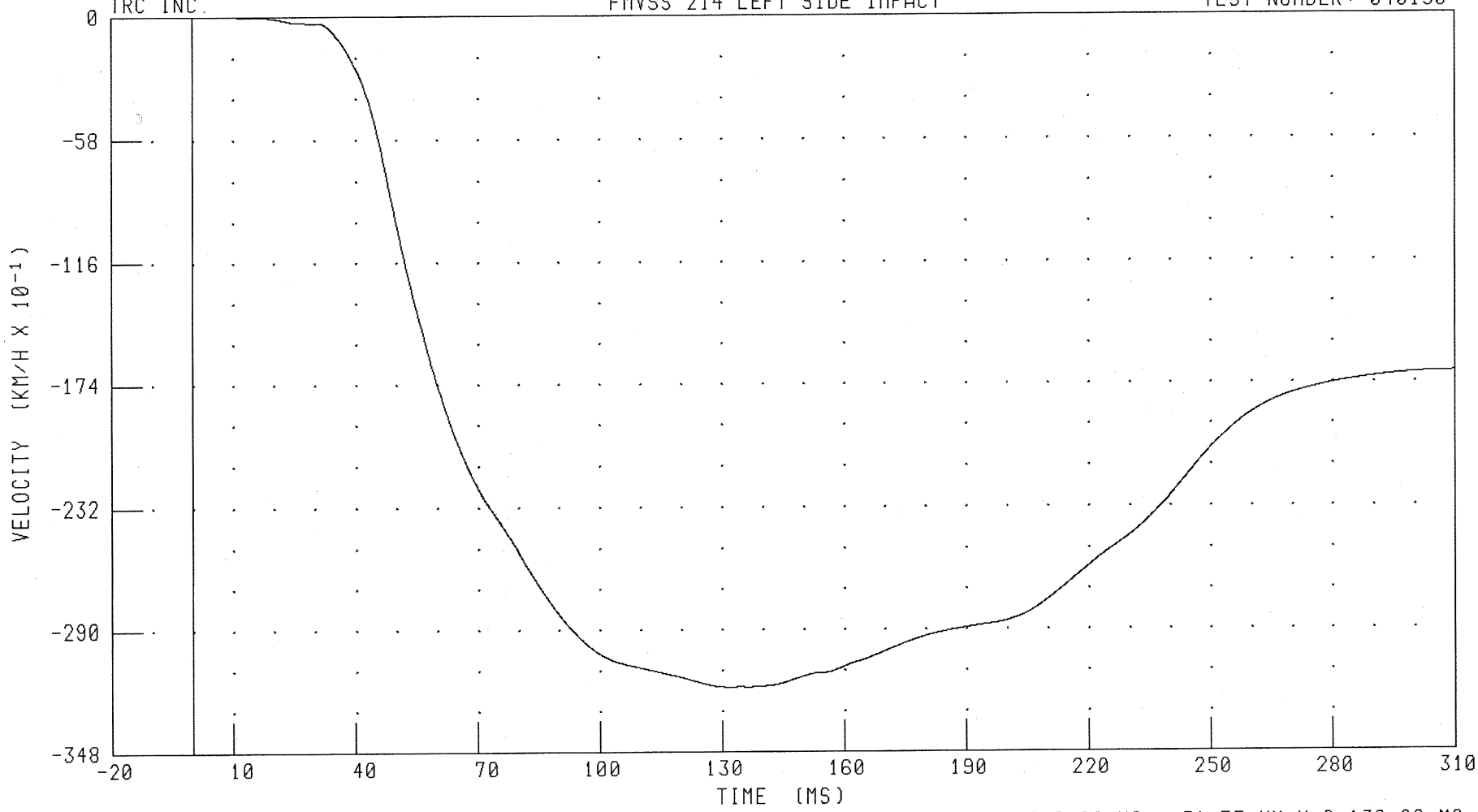
CHANNEL: HEDXG1 FILTER: CH. CLASS 1000 PEAK DATA: 6.56 G @ 244.08 MS; -26.48 G @ 48.48 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD X-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



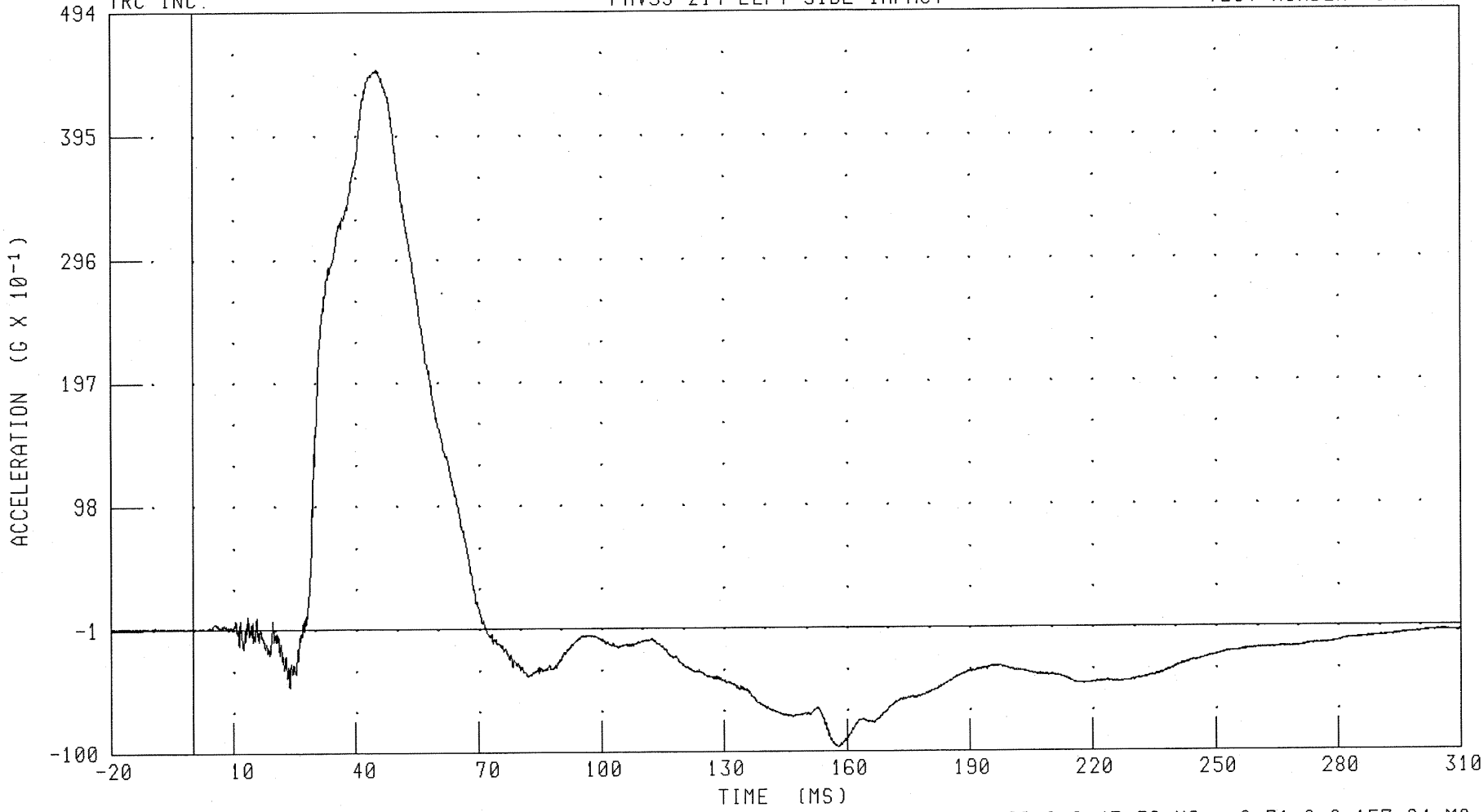
CHANNEL: HEDXV1 FILTER: CH. CLASS 180 PEAK DATA: 0.00 KM/H @ 0.00 MS; -31.75 KM/H @ 132.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

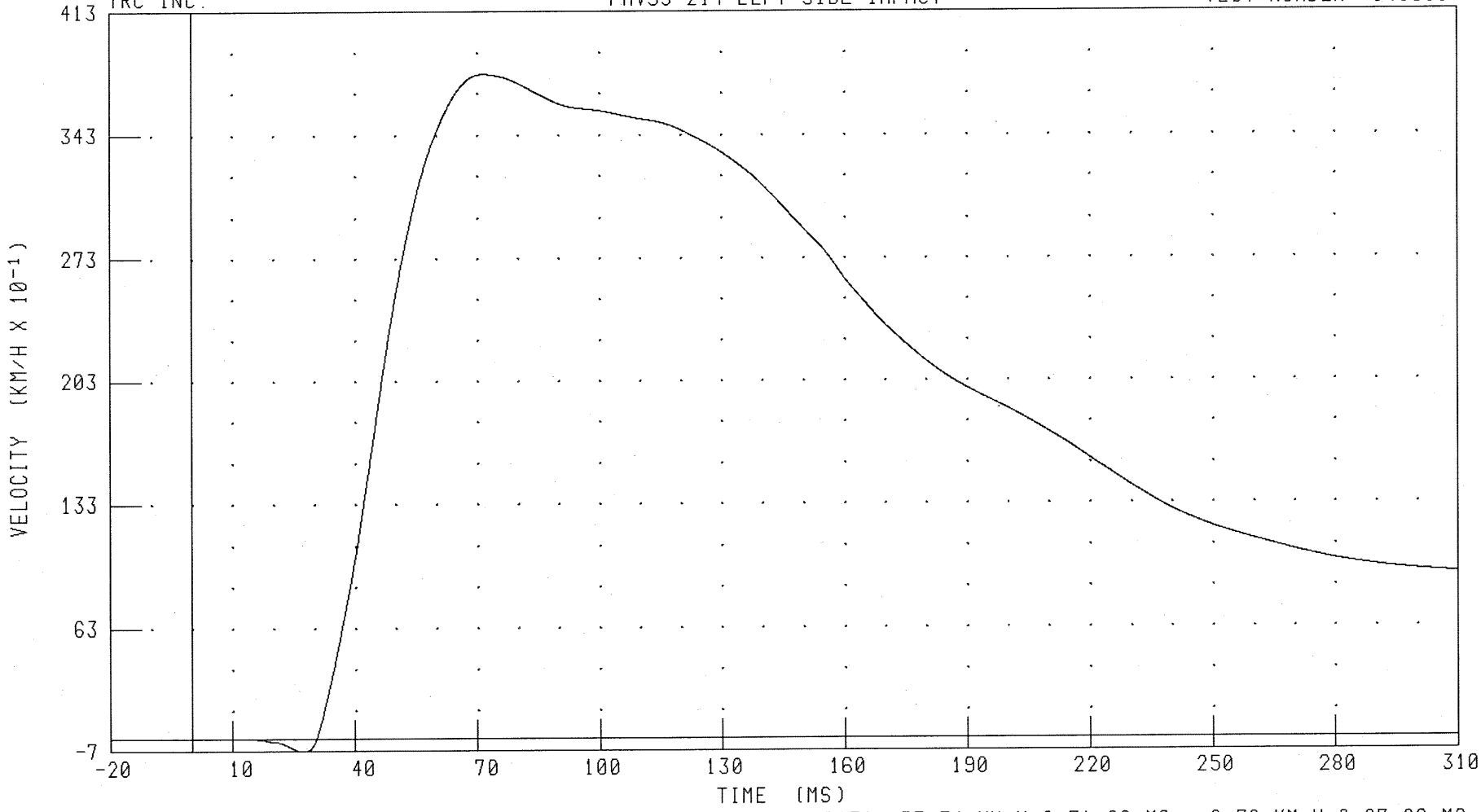


CHANNEL: HEDYG1 FILTER: CH. CLASS 1000 PEAK DATA: 44.80 G @ 45.36 MS; -9.71 G @ 157.84 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: HEDYV1 FILTER: CH. CLASS 180

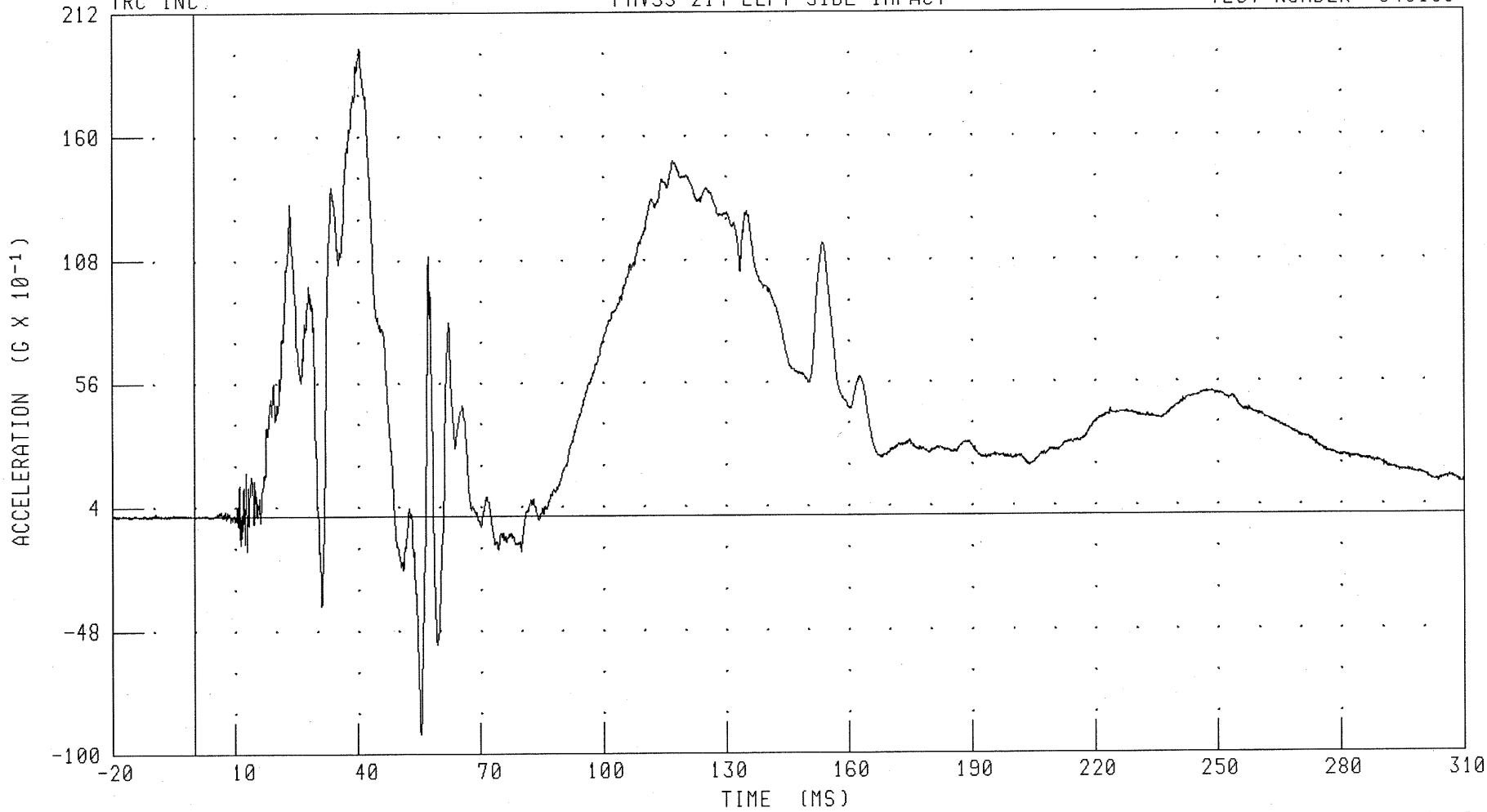
PEAK DATA: 37.74 KM/H @ 71.60 MS; -0.72 KM/H @ 27.28 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD Z-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



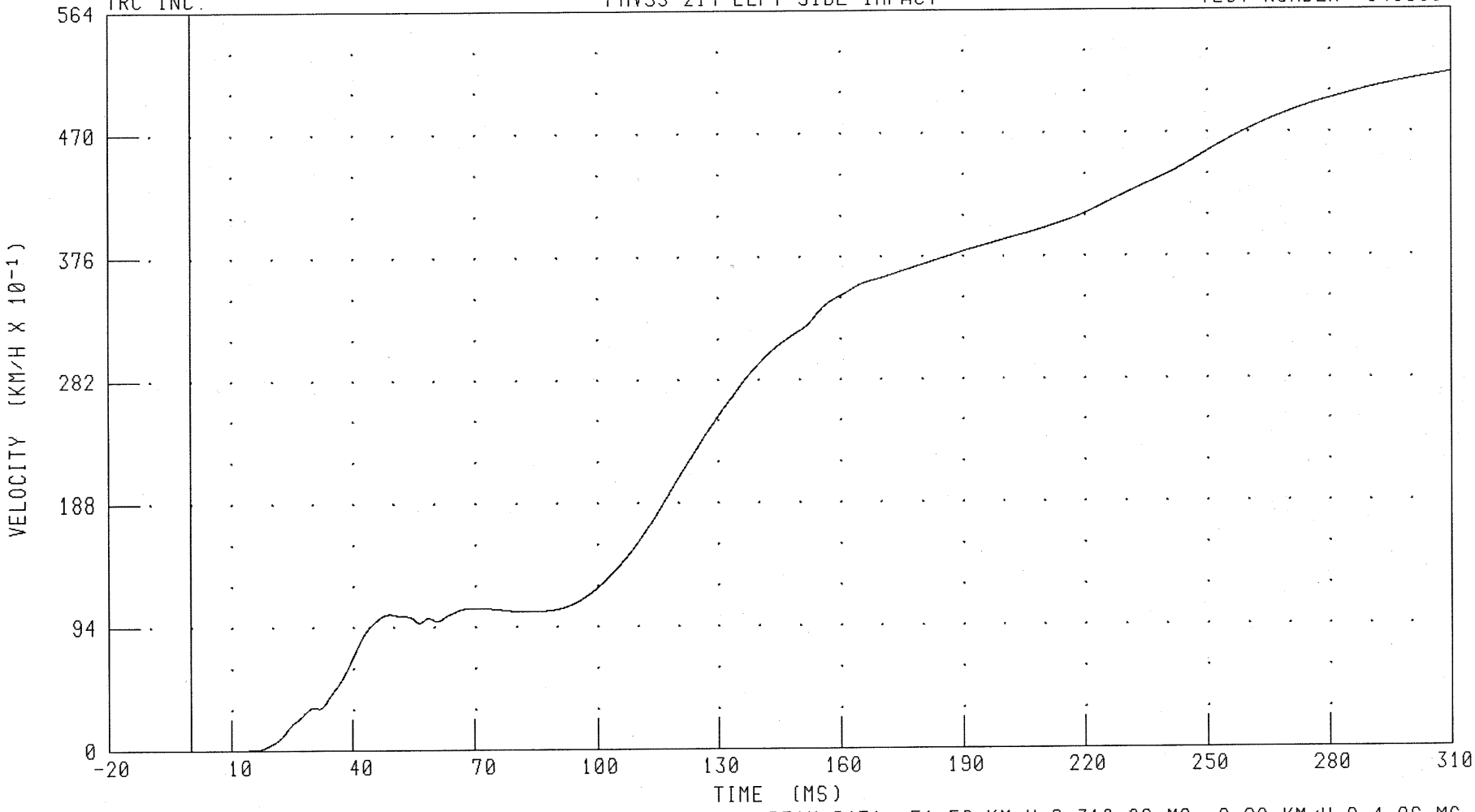
CHANNEL: HEDZG1 FILTER: CH. CLASS 1000 PEAK DATA: 19.71 G @ 40.48 MS; -9.19 G @ 55.28 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD Z-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



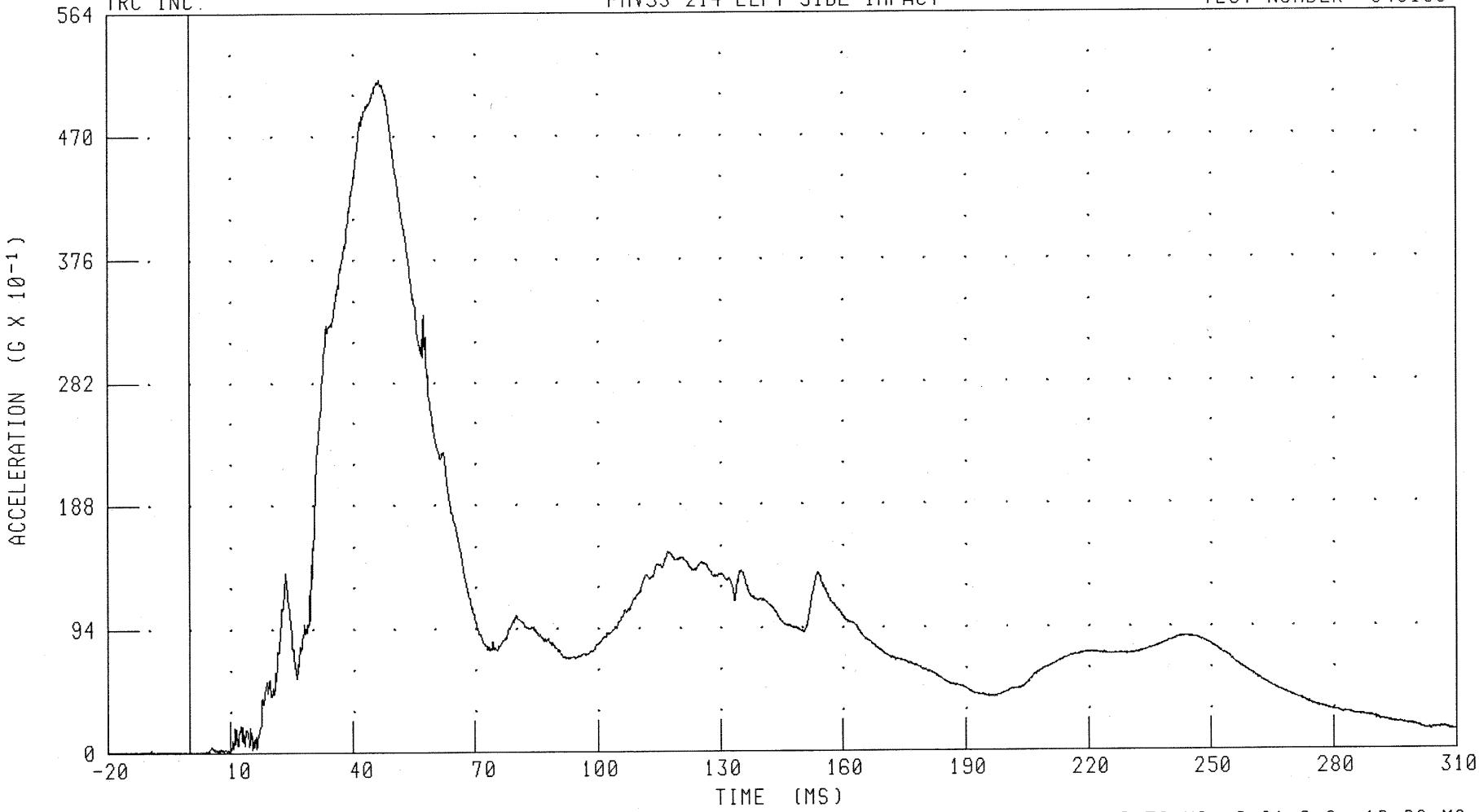
CHANNEL: HEDZV1 FILTER: CH. CLASS 180 PEAK DATA: 51.50 KM/H @ 310.00 MS; 0.00 KM/H @ 4.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD RESULTANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

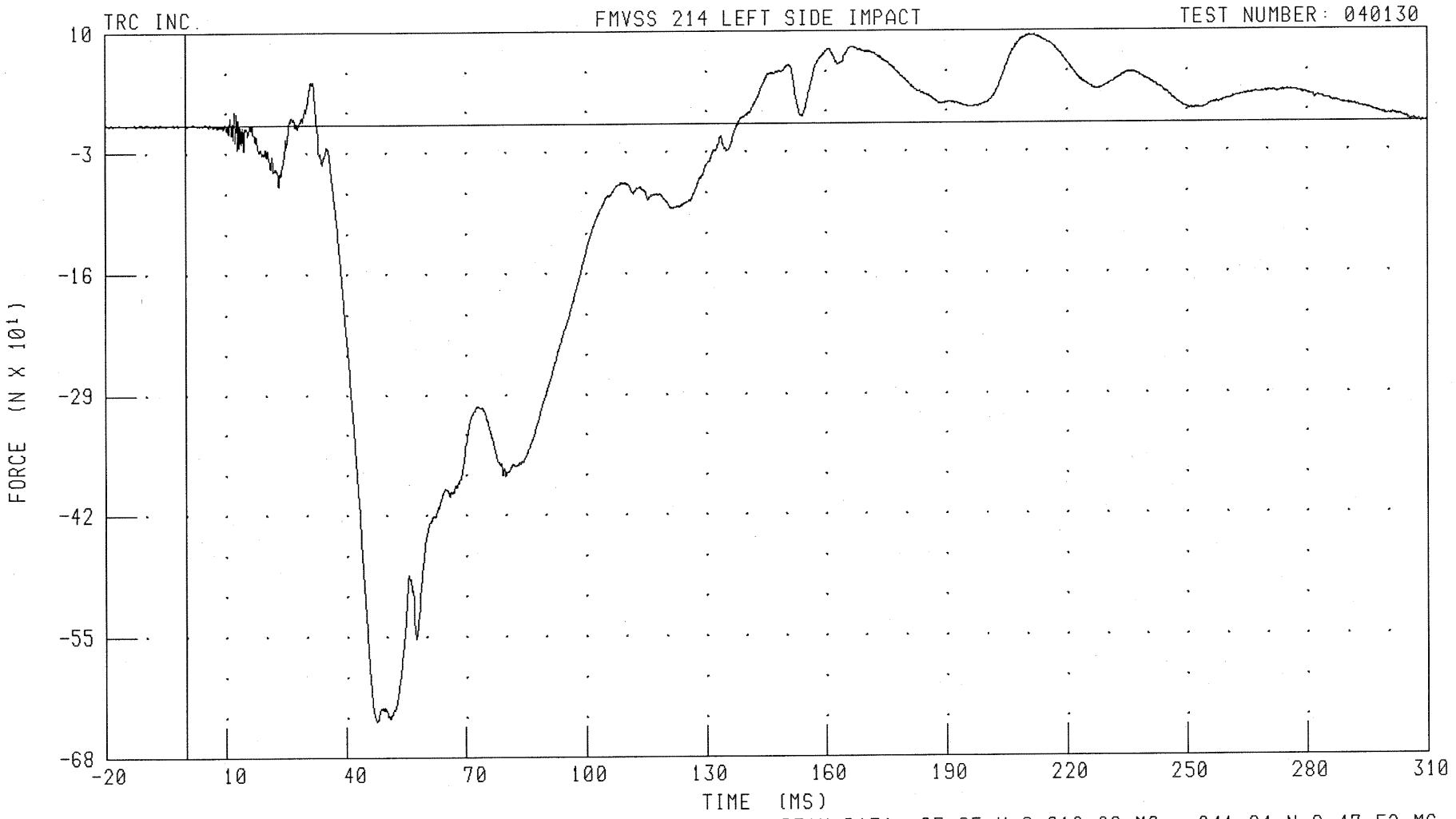


CHANNEL: HEDRG1 FILTER: CH. CLASS 1000 PEAK DATA: 51.34 G @ 46.56 MS; 0.01 G @ -19.60 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK X-AXIS SHEAR FORCE



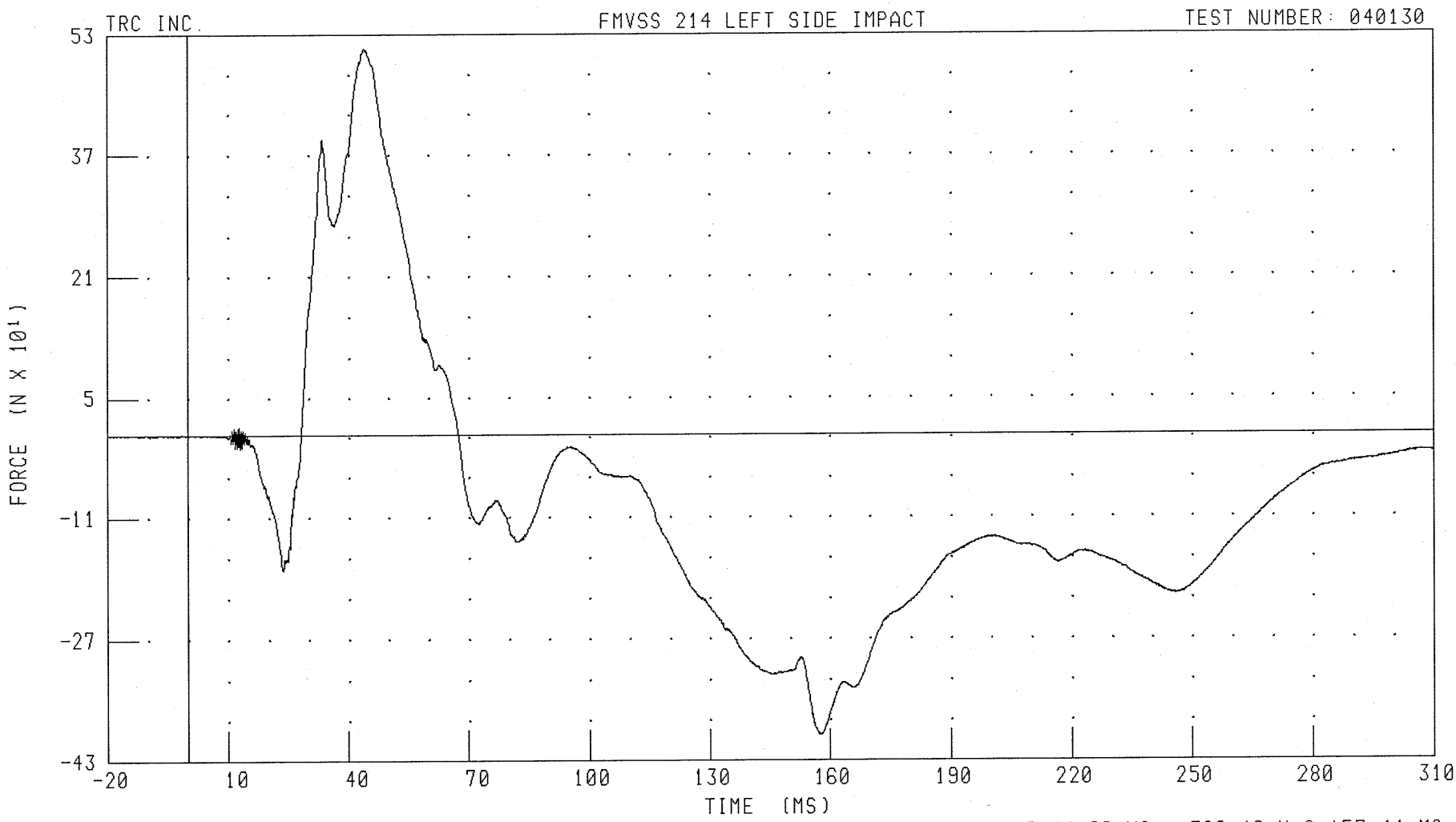
CHANNEL: NEKXF1 FILTER: CH. CLASS 1000

PEAK DATA: 95.95 N @ 210.88 MS; -641.24 N @ 47.52 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK Y-AXIS SHEAR FORCE



CHANNEL: NEKYF1 FILTER: CH. CLASS 1000

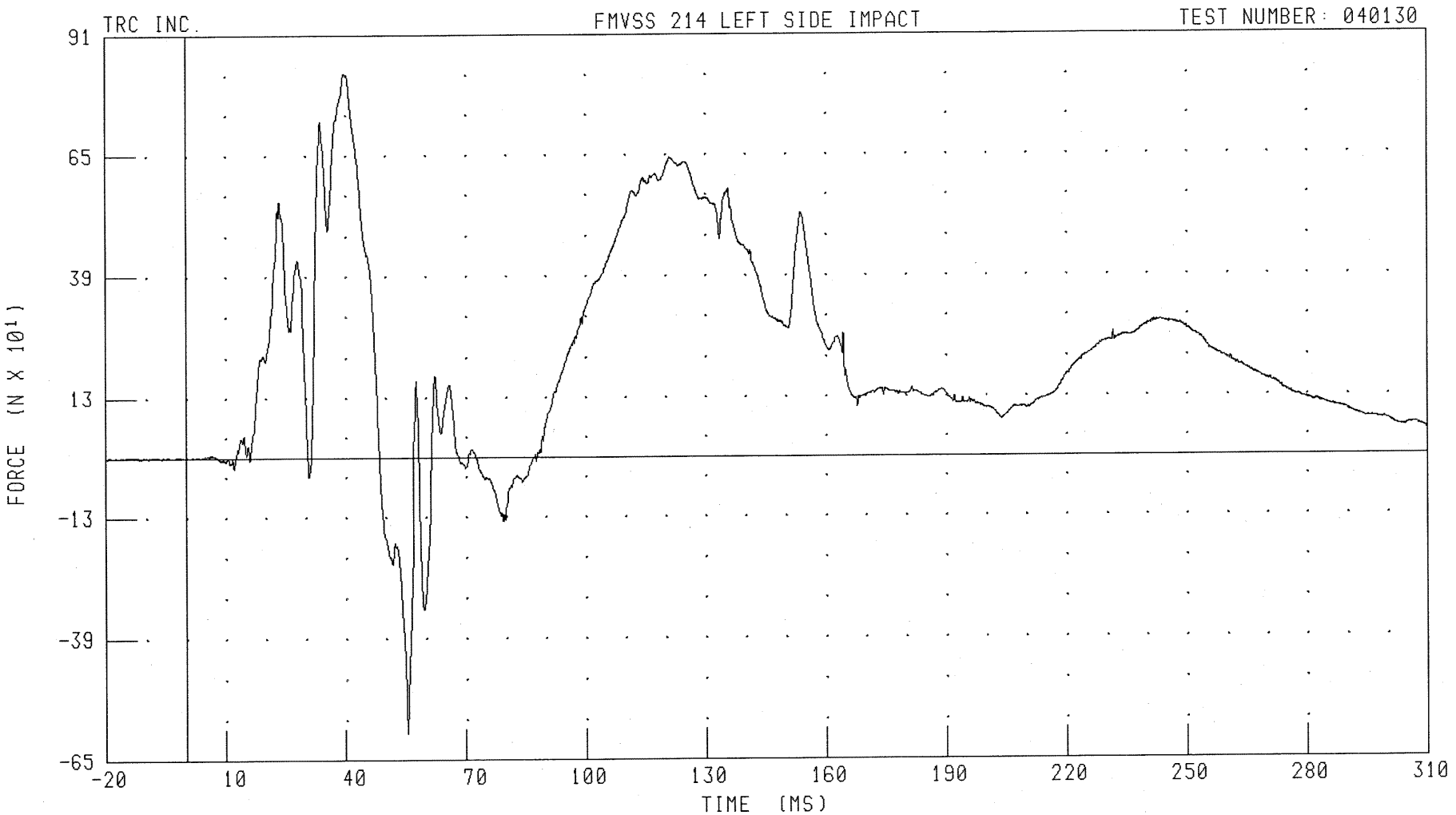
PEAK DATA: 511.90 N @ 44.08 MS; -396.46 N @ 157.44 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK Z-AXIS AXIAL FORCE

FMVSS 214 LEFT SIDE IMPACT



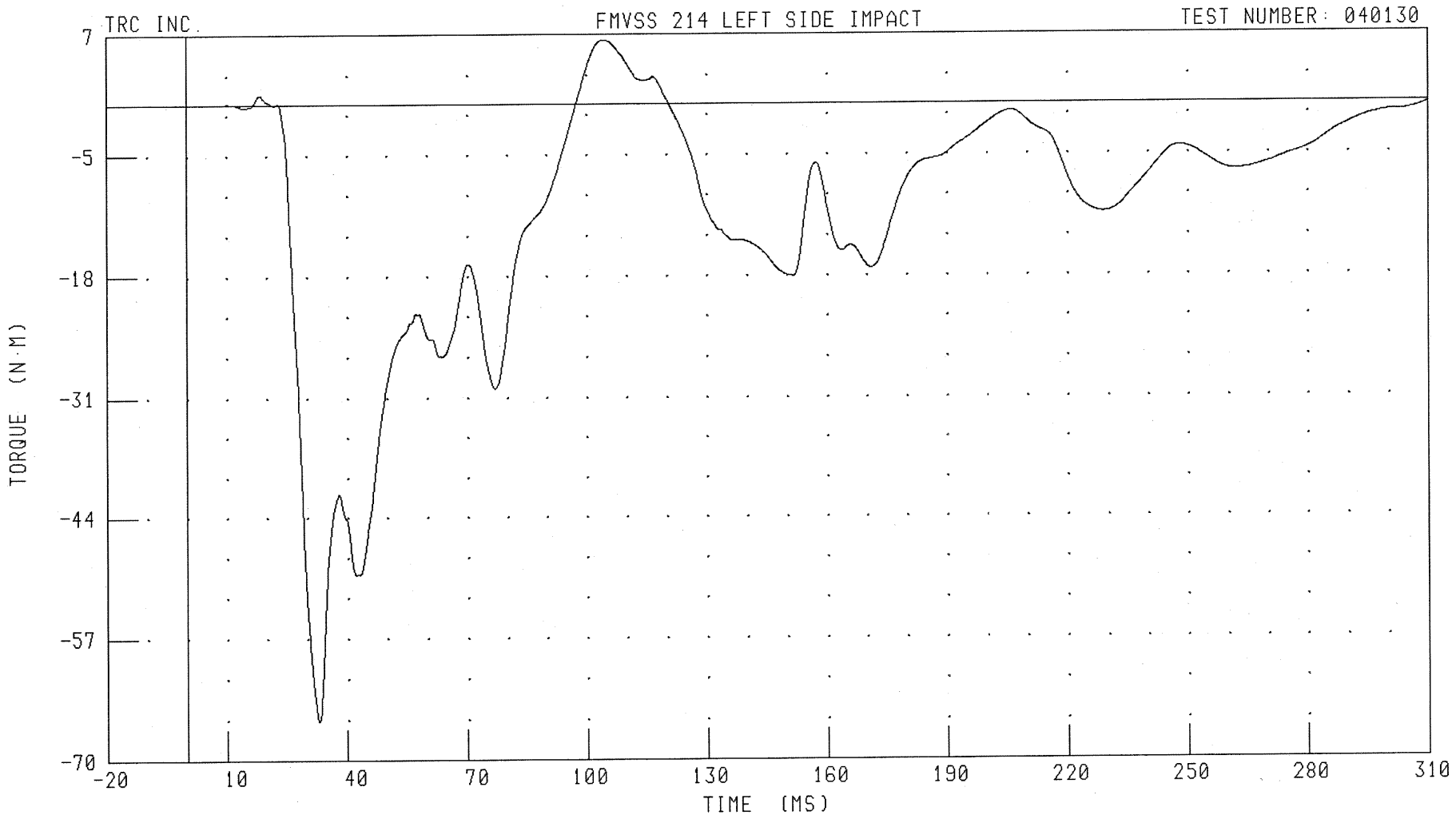
CHANNEL: NEKZF1 FILTER: CH. CLASS 1000

PEAK DATA: 827.58 N @ 39.76 MS; -592.65 N @ 55.36 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK MOMENT ABOUT X AXIS



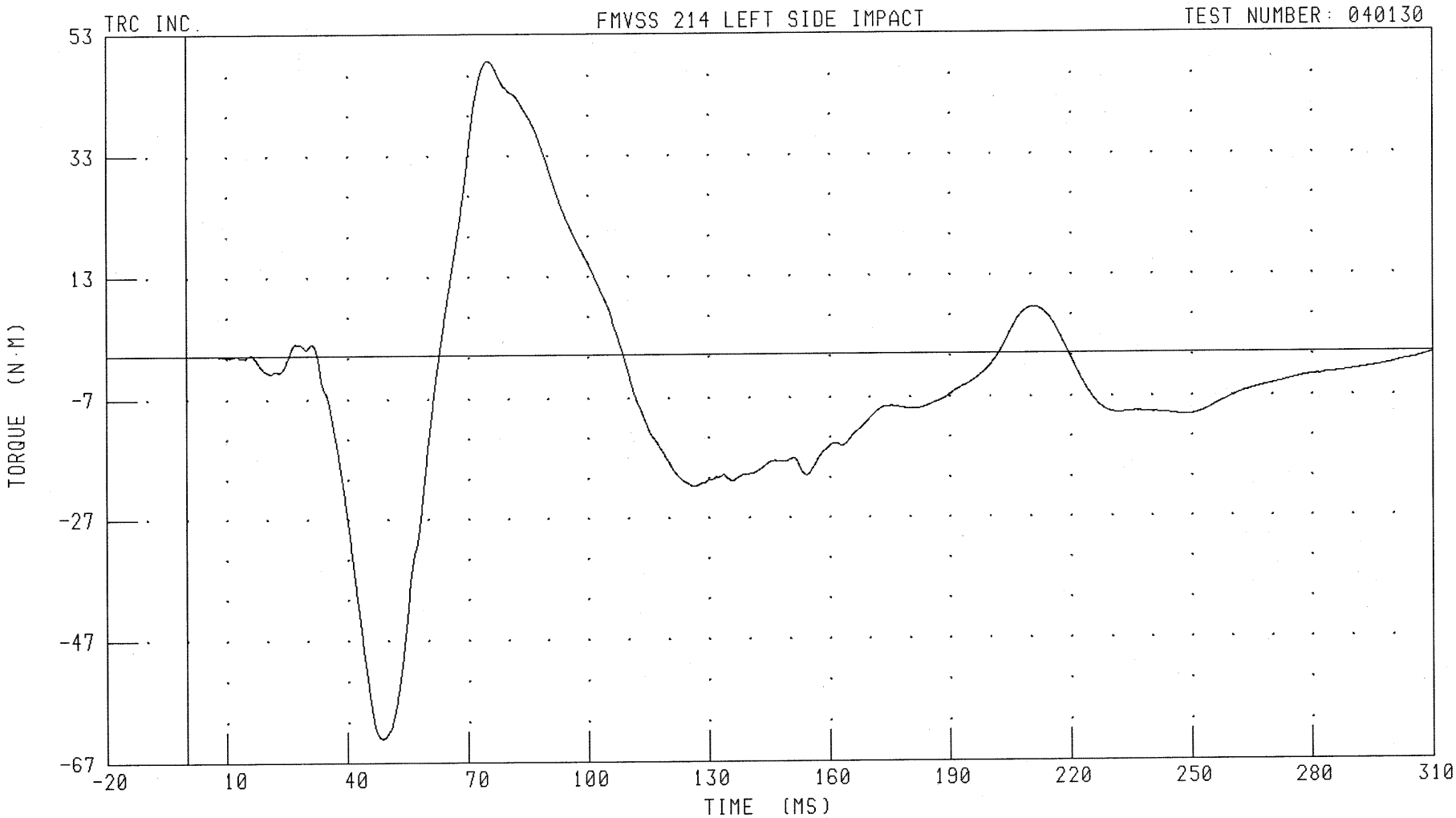
CHANNEL: NEKXM1 FILTER: CH. CLASS 600

PEAK DATA: 6.87 N·M @ 104.80 MS; -66.30 N·M @ 32.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK MOMENT ABOUT Y AXIS



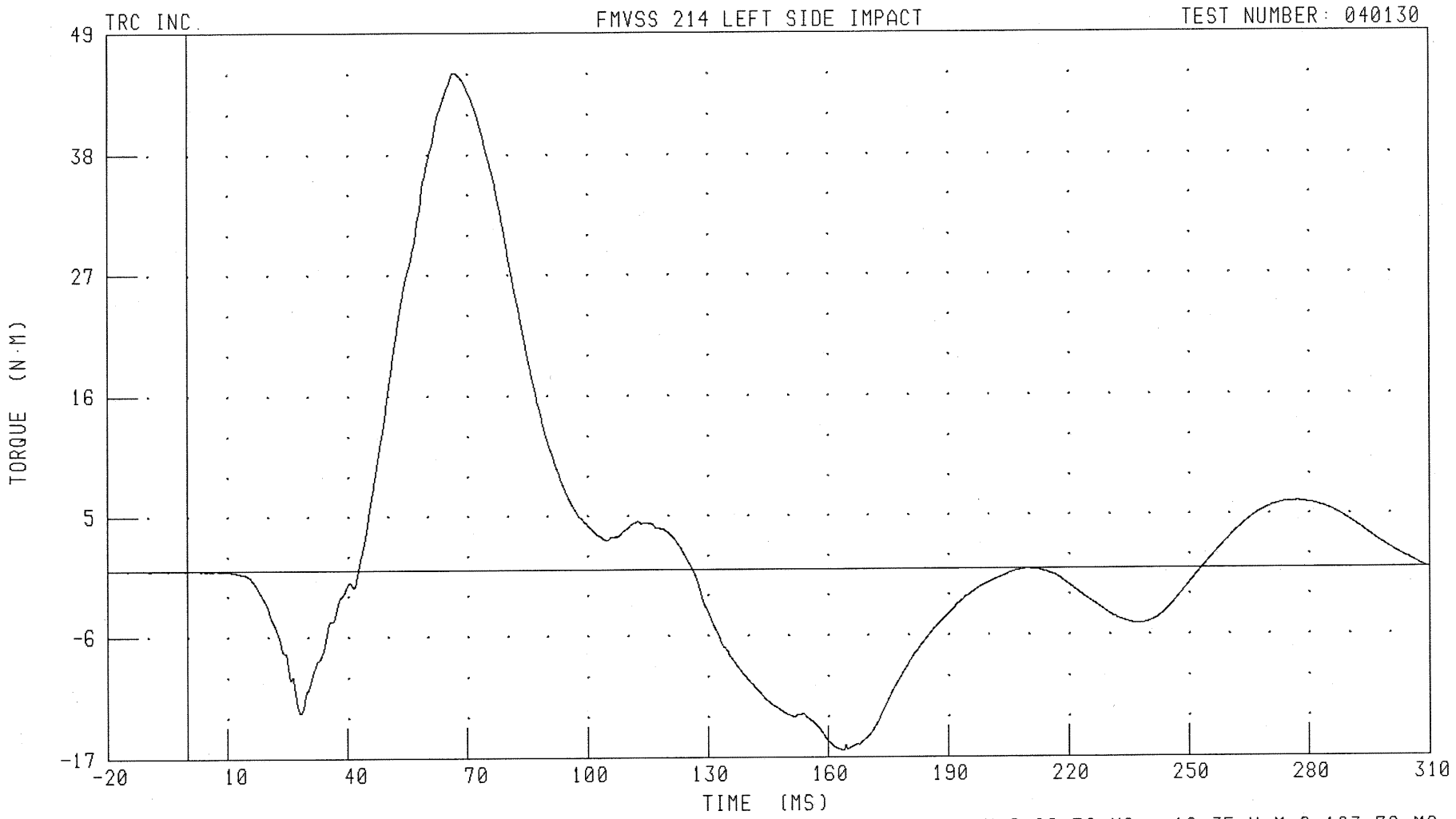
CHANNEL: NEKYM1 FILTER: CH. CLASS 600

PEAK DATA: 48.60 N-M @ 74.96 MS; -63.05 N-M @ 48.72 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK MOMENT ABOUT Z AXIS



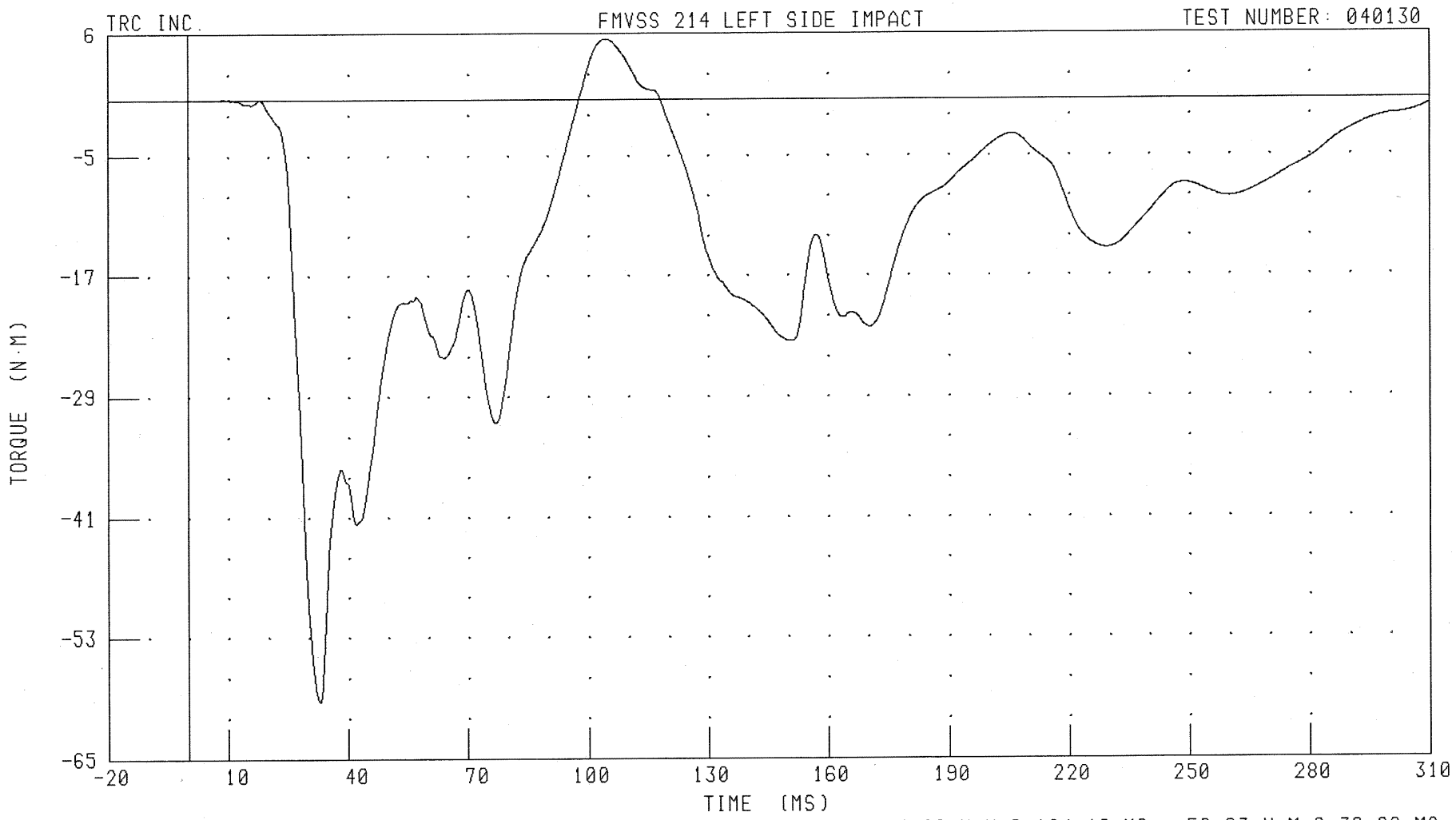
CHANNEL: NEKZM1 FILTER: CH. CLASS 600

PEAK DATA: 45.42 N-M @ 66.72 MS; -16.35 N-M @ 163.76 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER NECK OCCIPITAL CONDYLE MOMENT ABOUT X AXIS



CHANNEL: NKOXM1 FILTER: CH. CLASS 600

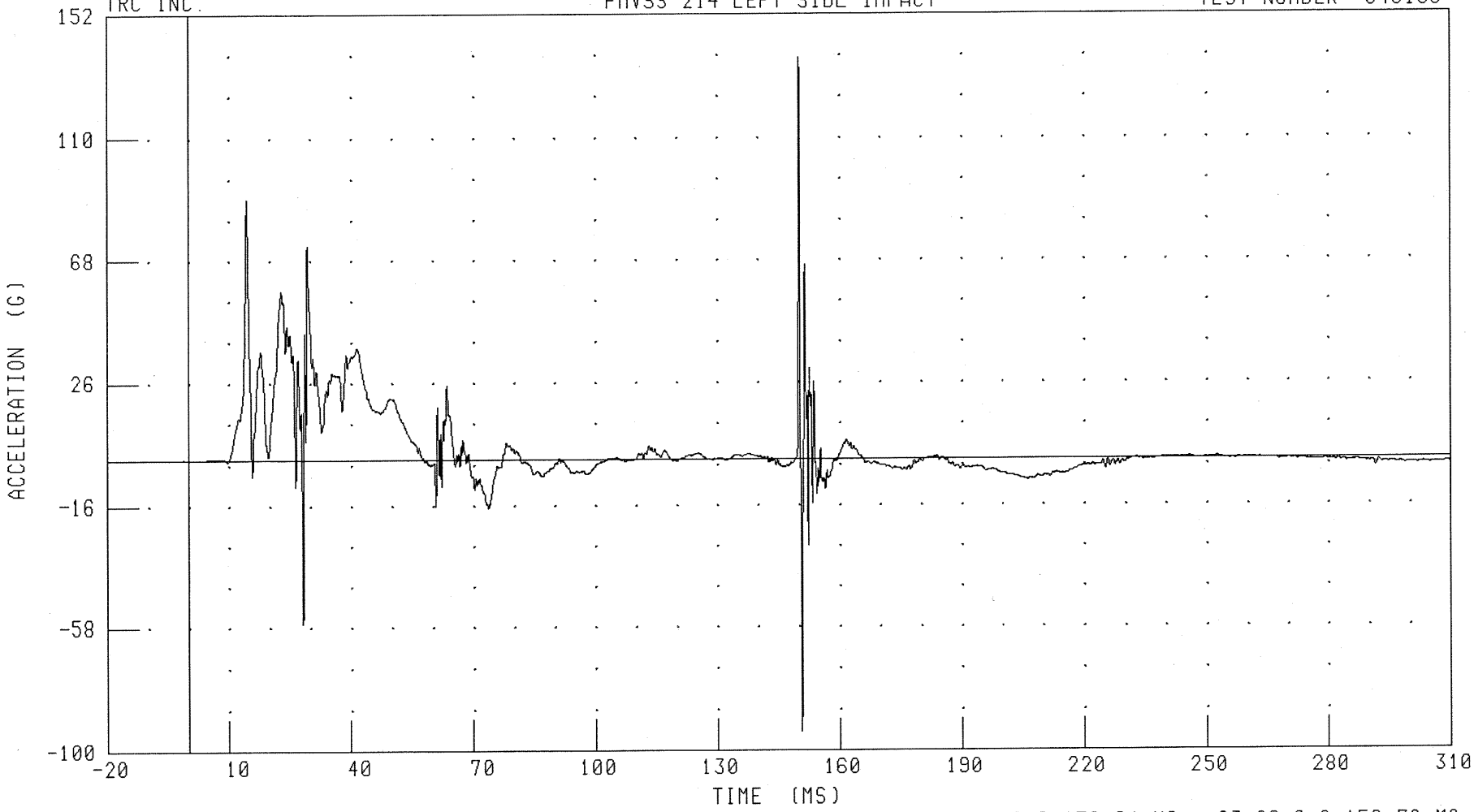
PEAK DATA: 5.92 N·M @ 104.16 MS; -59.83 N·M @ 32.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER UPPER RIB Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

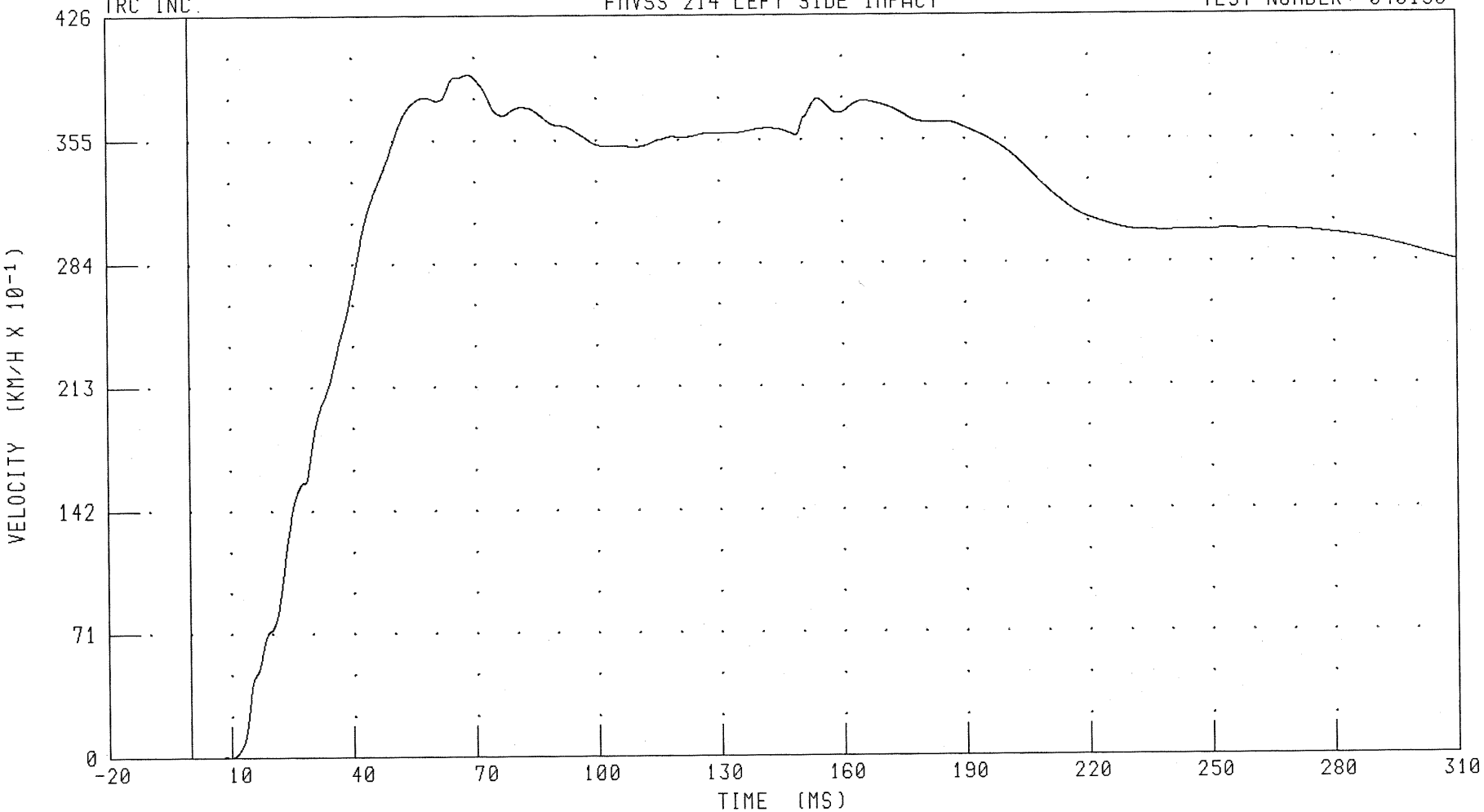


CHANNEL: LURYG1 FILTER: CH. CLASS 1000 PEAK DATA: 137.15 G @ 150.24 MS; -93.60 G @ 150.72 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER UPPER RIB Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



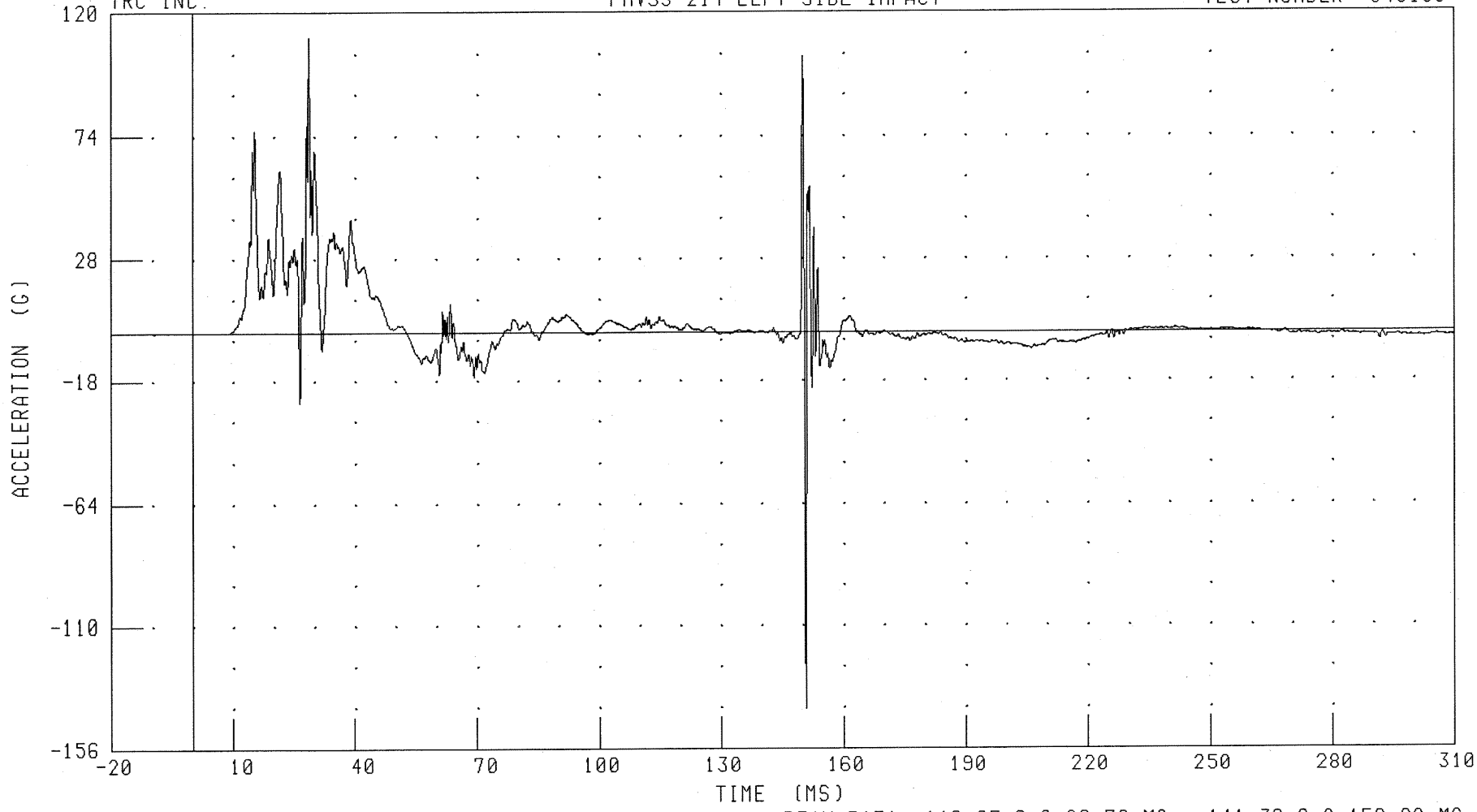
CHANNEL: LURYV1 FILTER: CH. CLASS 180 PEAK DATA: 39.24 KM/H @ 68.64 MS; 0.00 KM/H @ 0.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER RIB Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

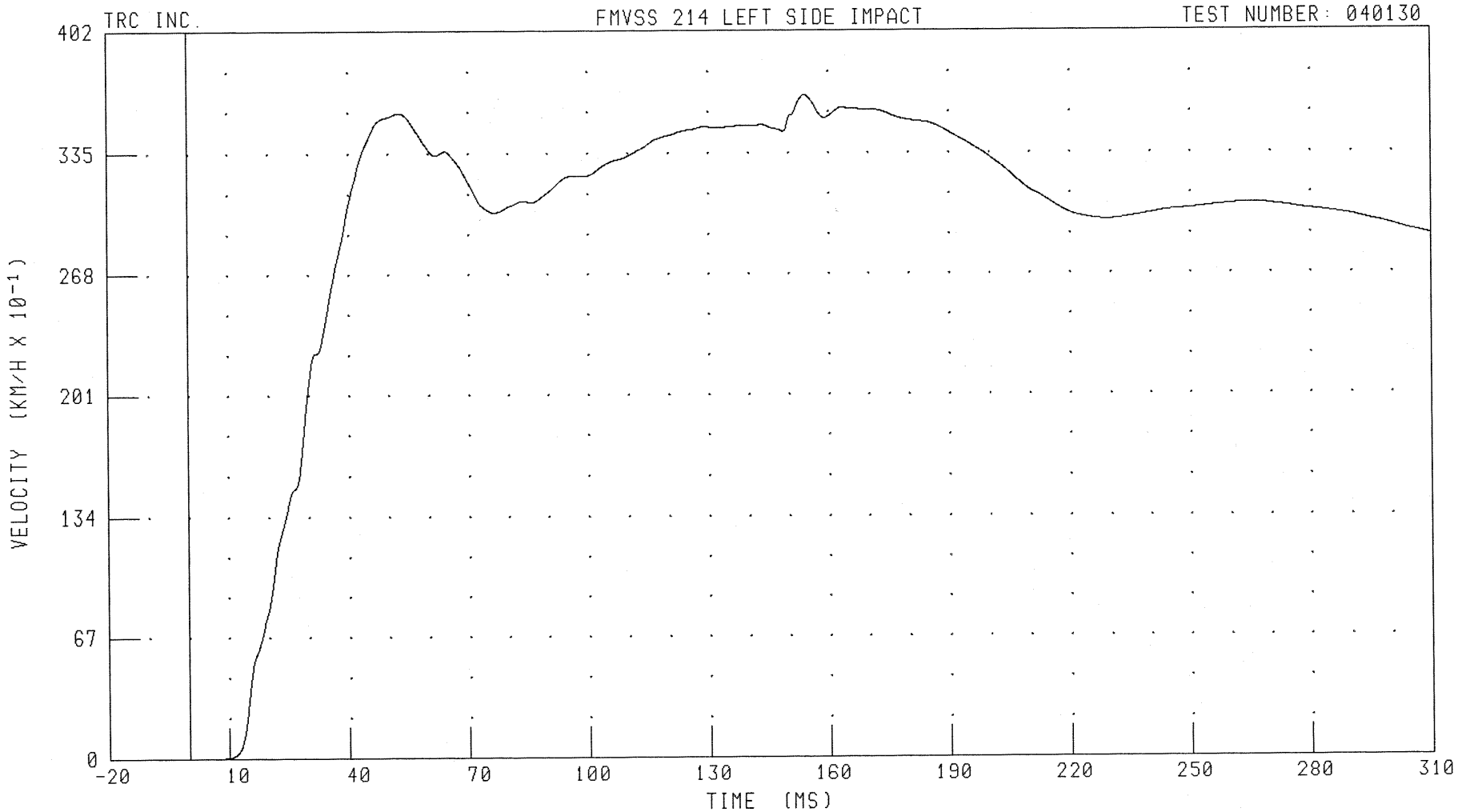


CHANNEL: LLRYG1 FILTER: CH. CLASS 1000 PEAK DATA: 110.67 G @ 28.72 MS; -141.30 G @ 150.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER RIB Y-AXIS VELOCITY



CHANNEL: LLRYV1 FILTER: CH. CLASS 180

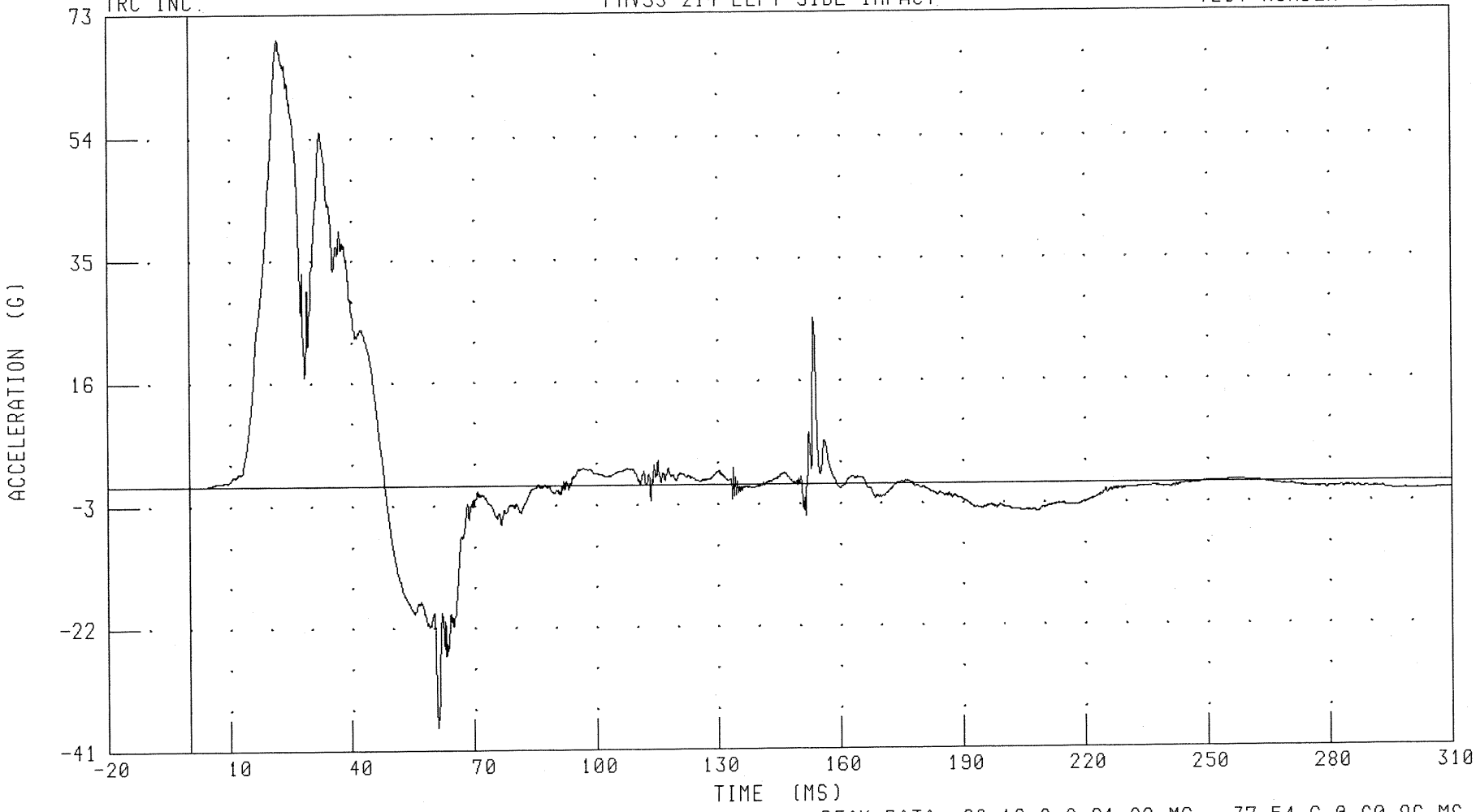
PEAK DATA: 36.66 KM/H @ 154.24 MS; 0.00 KM/H @ 0.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER SPINE Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



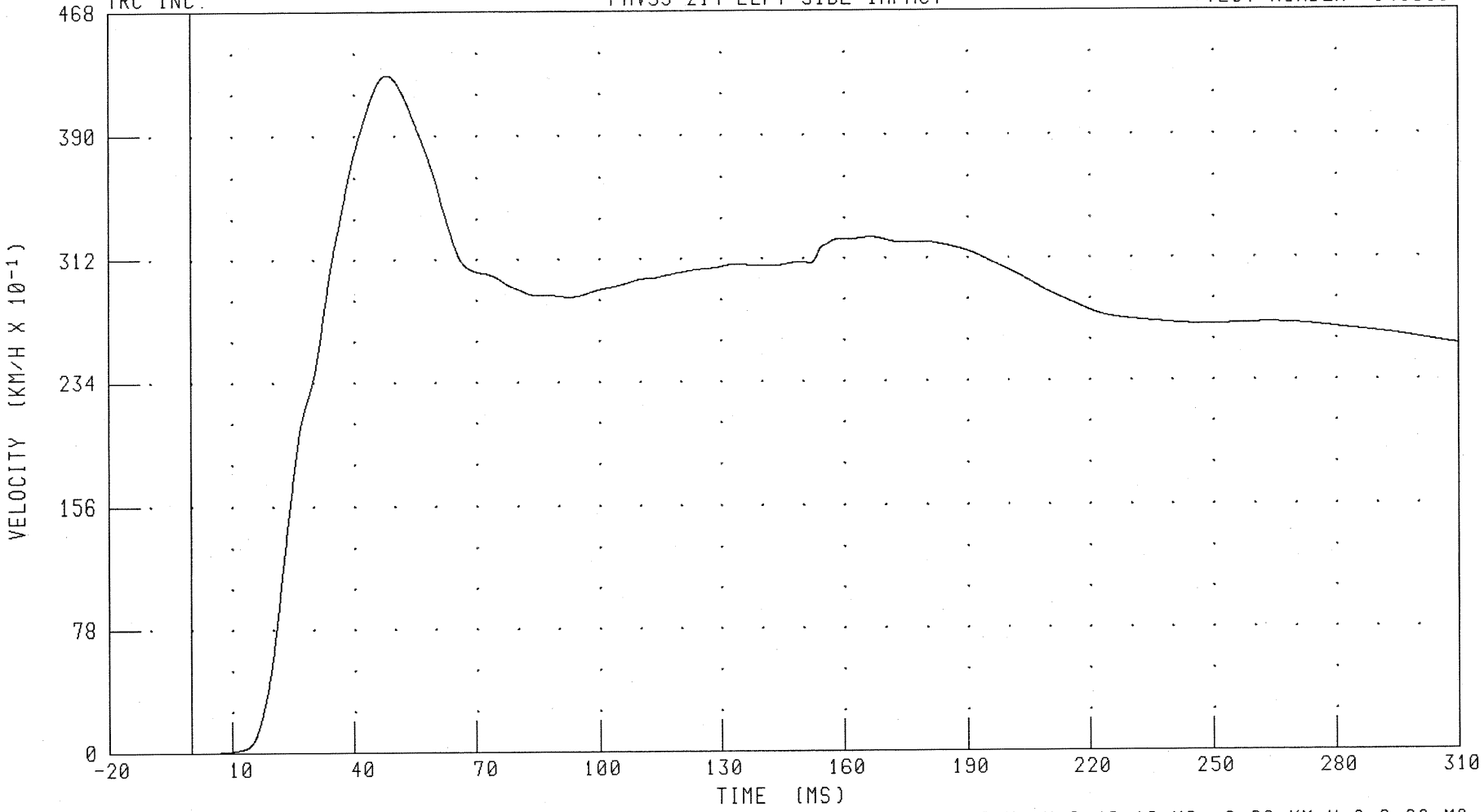
CHANNEL: T12YG1 FILTER: CH. CLASS 1000 PEAK DATA: 69.19 G @ 21.92 MS; -37.54 G @ 60.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER SPINE Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: T12YV1 FILTER: CH. CLASS 180

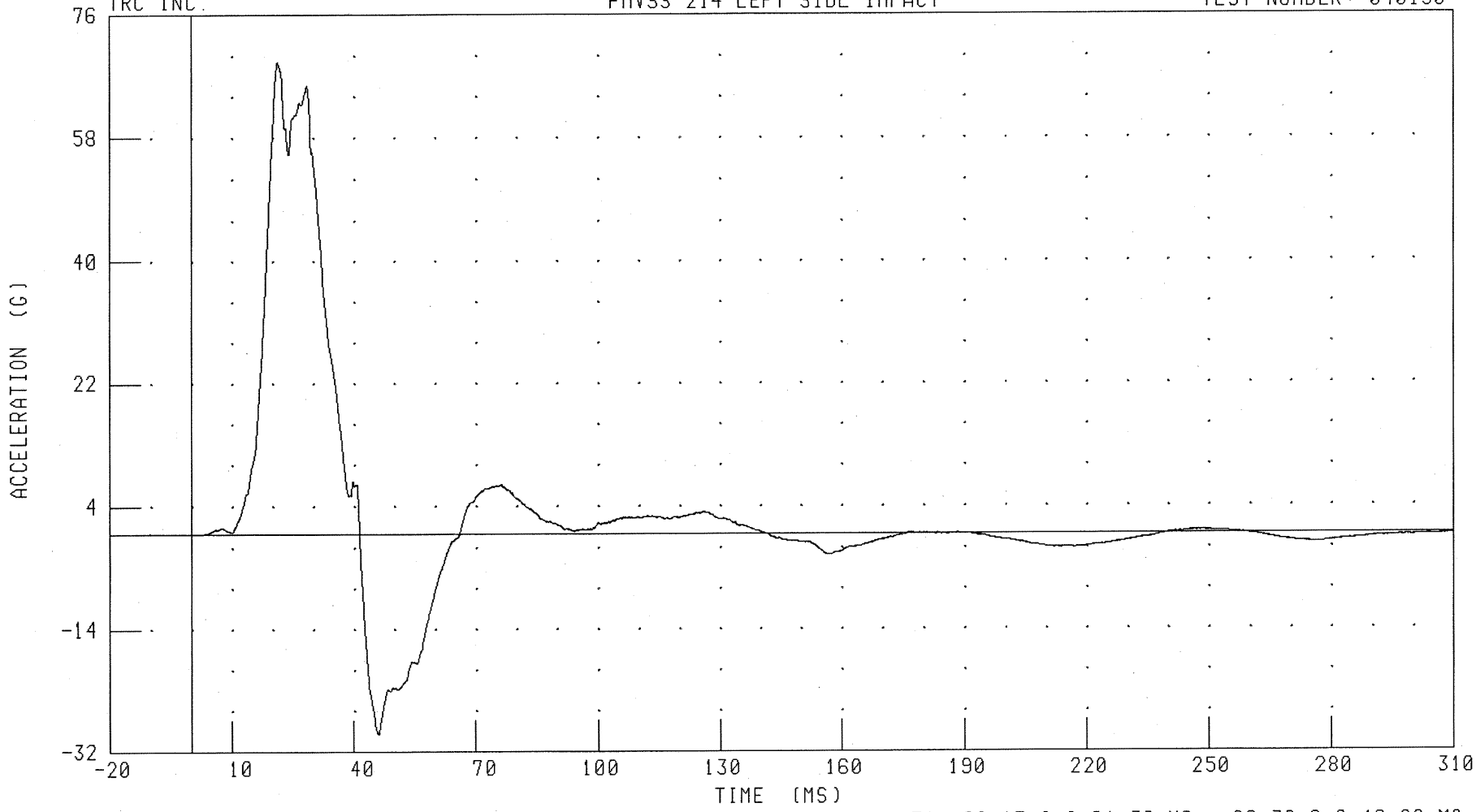
PEAK DATA: 42.82 KM/H @ 48.16 MS; 0.00 KM/H @ 0.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER PELVIS Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



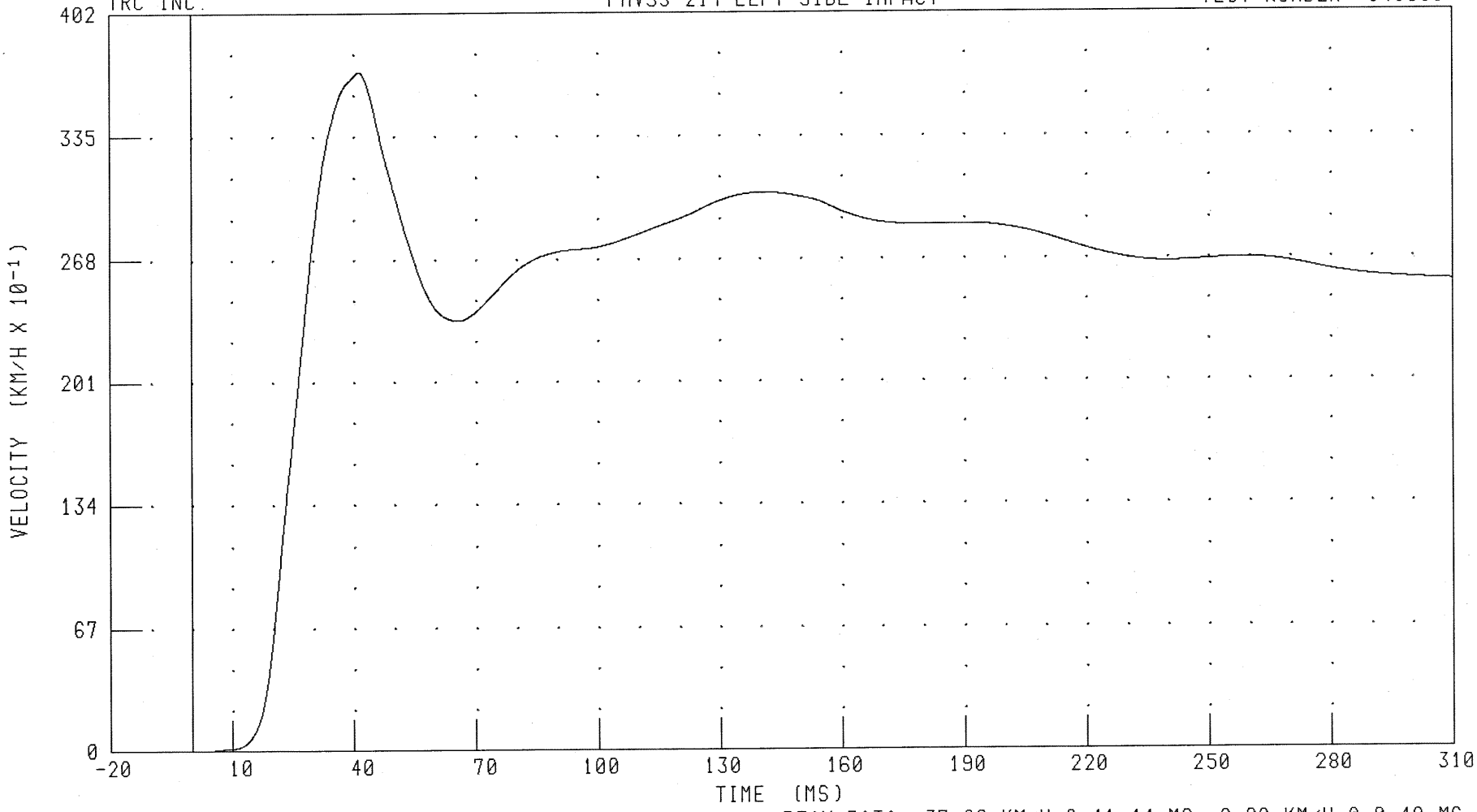
CHANNEL: PEVYG1 FILTER: CH. CLASS 1000 PEAK DATA: 69.17 G @ 21.36 MS; -29.38 G @ 46.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER PELVIS Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



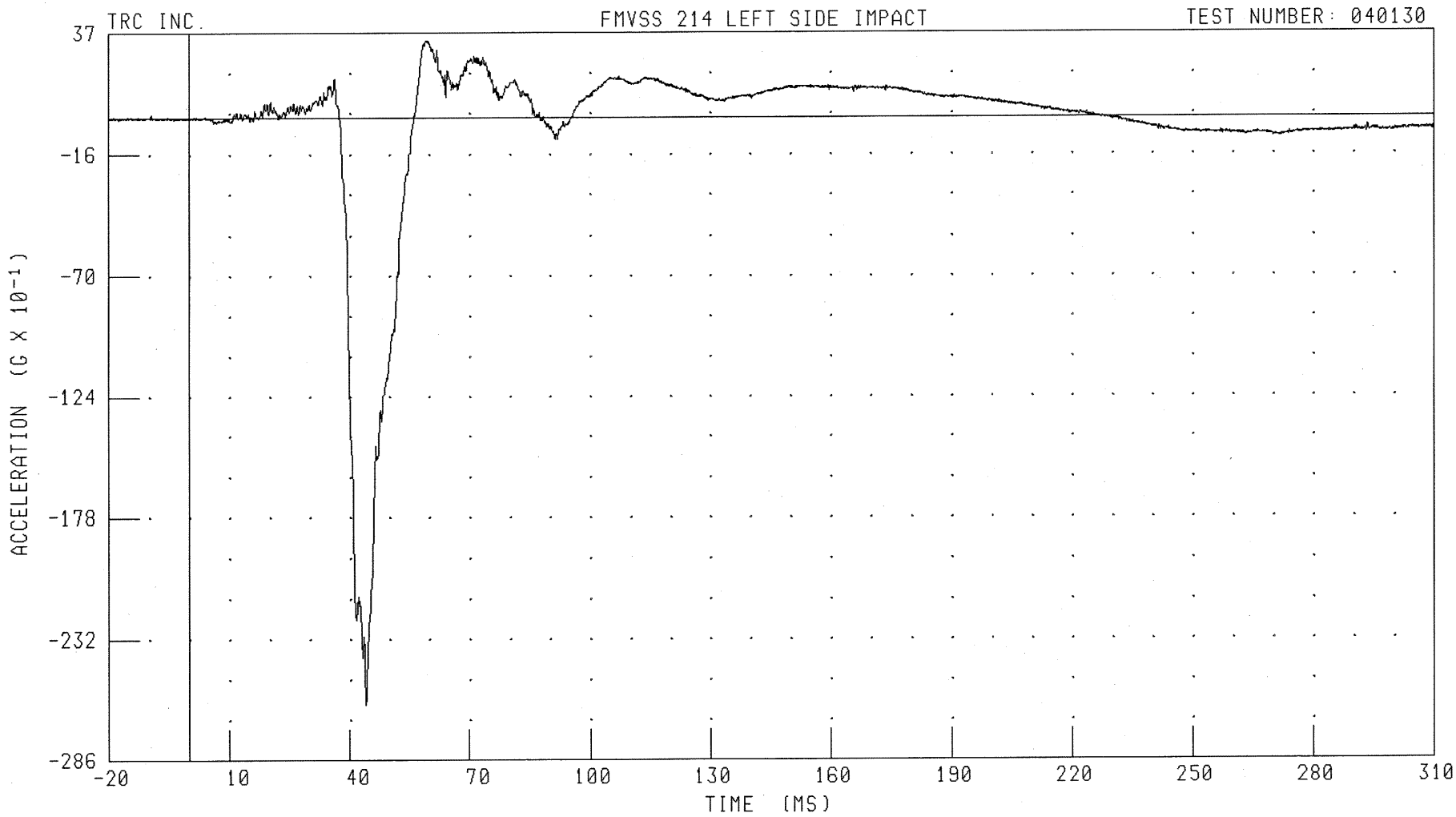
CHANNEL: PEVYV1 FILTER: CH. CLASS 180

PEAK DATA: 37.00 KM/H @ 41.44 MS; 0.00 KM/H @ 0.48 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD X-AXIS ACCELERATION

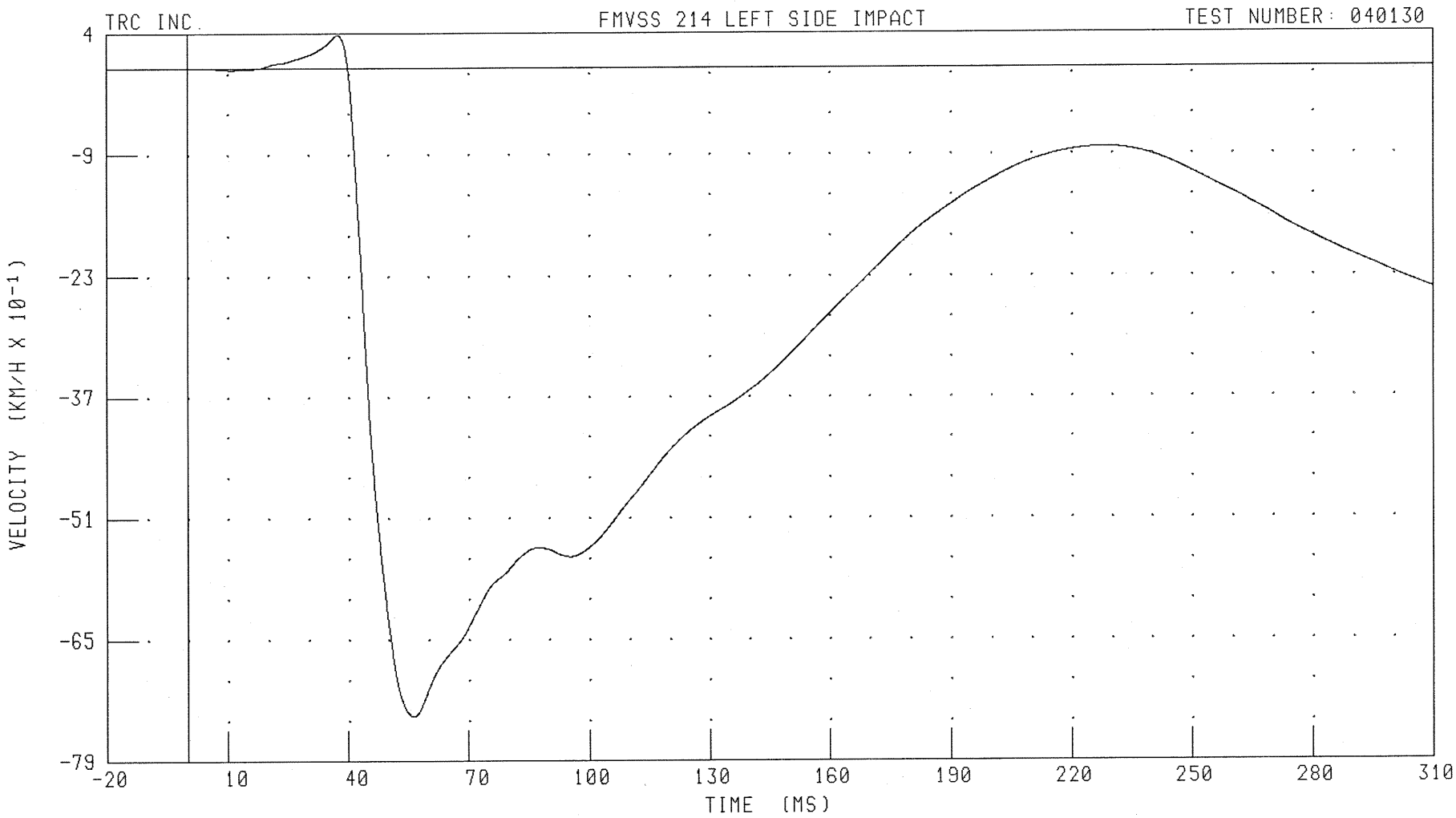


CHANNEL: HEDXG4 FILTER: CH. CLASS 1000 PEAK DATA: 3.46 G @ 59.20 MS; -26.15 G @ 44.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD X-AXIS VELOCITY



CHANNEL: HEDXV4 FILTER: CH. CLASS 180

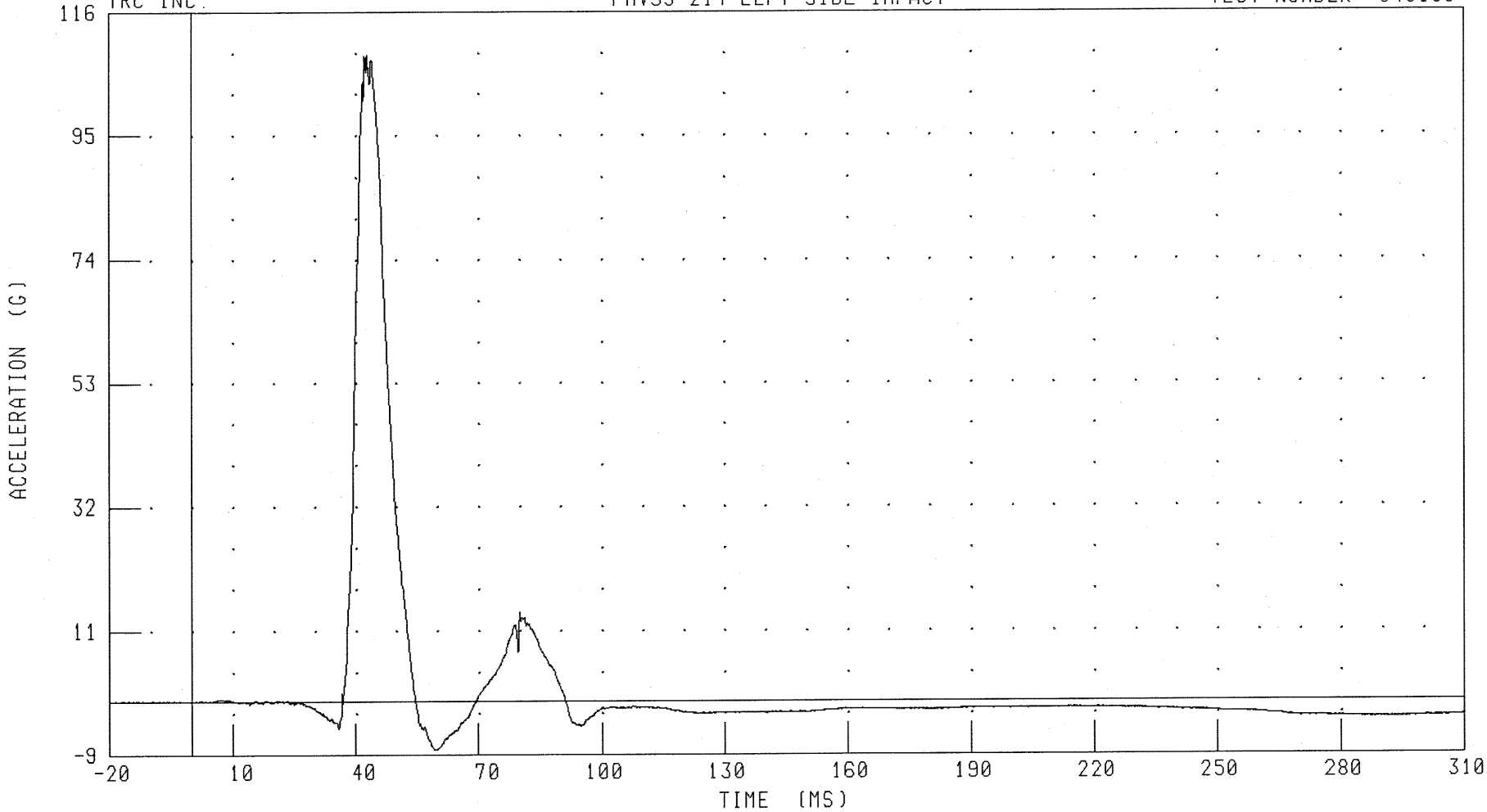
PEAK DATA: 0.38 KM/H @ 37.44 MS; -7.48 KM/H @ 56.24 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

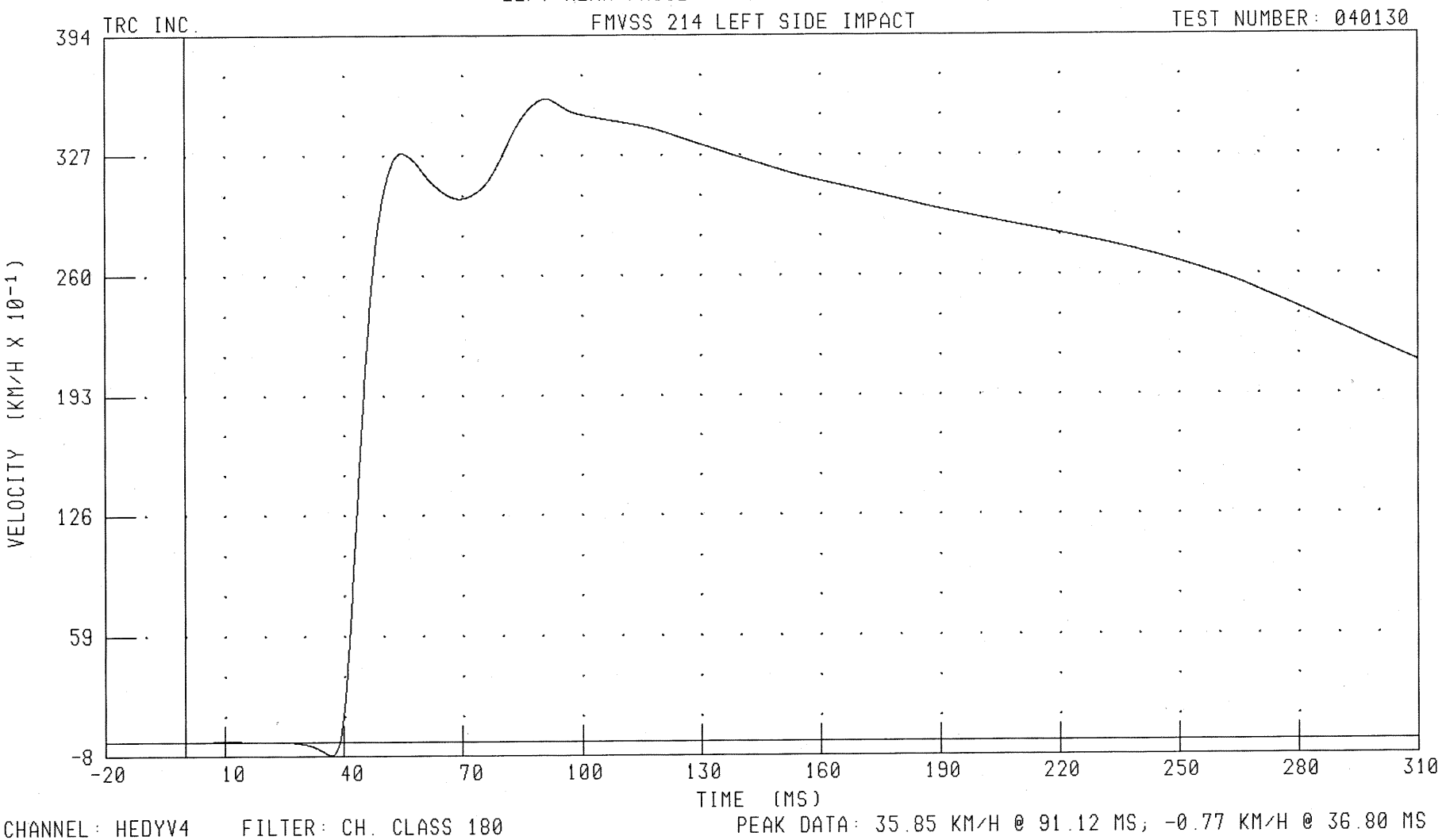


CHANNEL: HEDYG4 FILTER: CH. CLASS 1000 PEAK DATA: 109.61 G @ 42.88 MS; -8.29 G @ 59.28 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Y-AXIS VELOCITY

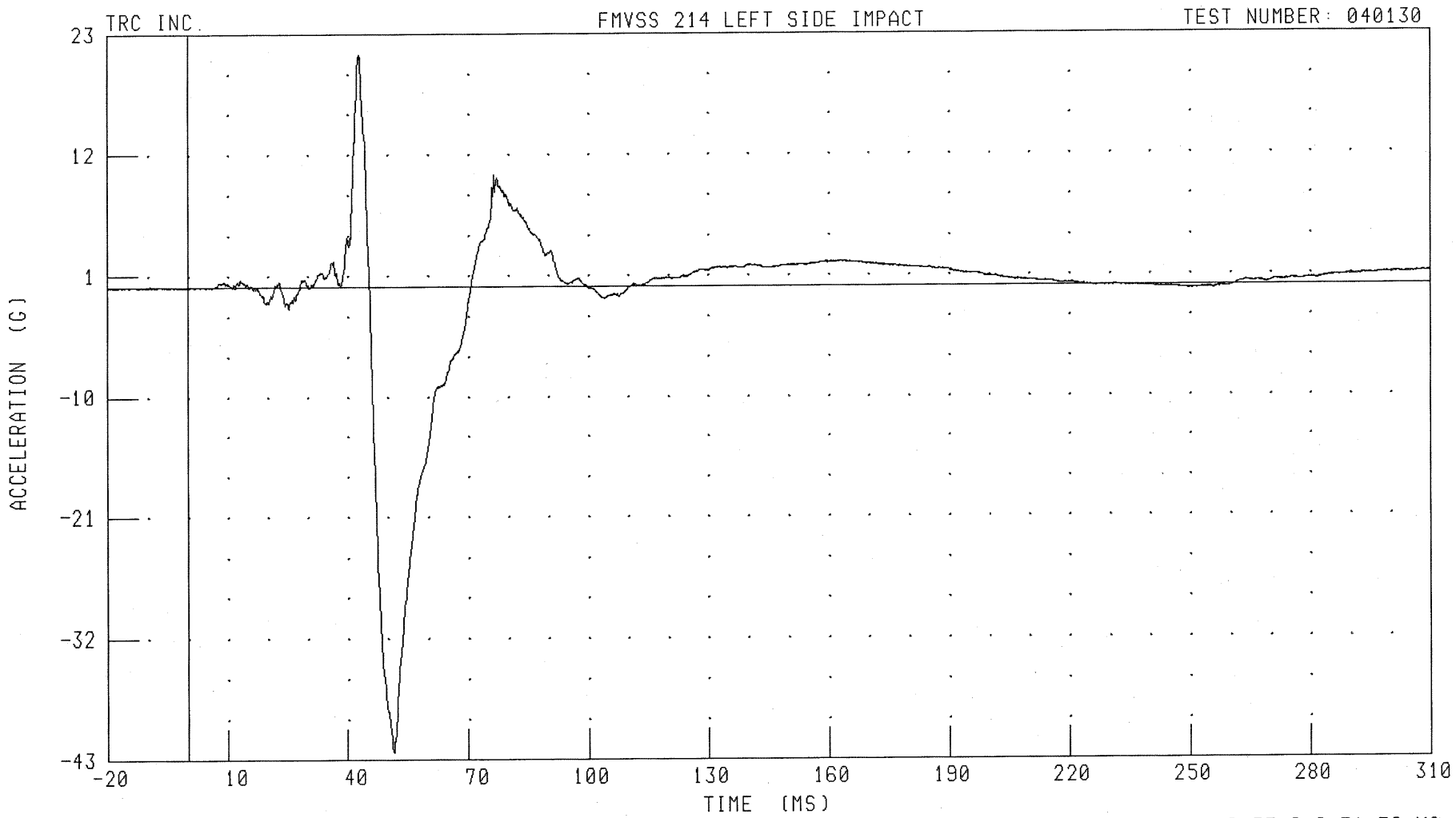


CHANNEL: HEDYV4 FILTER: CH. CLASS 180 PEAK DATA: 35.85 KM/H @ 91.12 MS; -0.77 KM/H @ 36.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Z-AXIS ACCELERATION



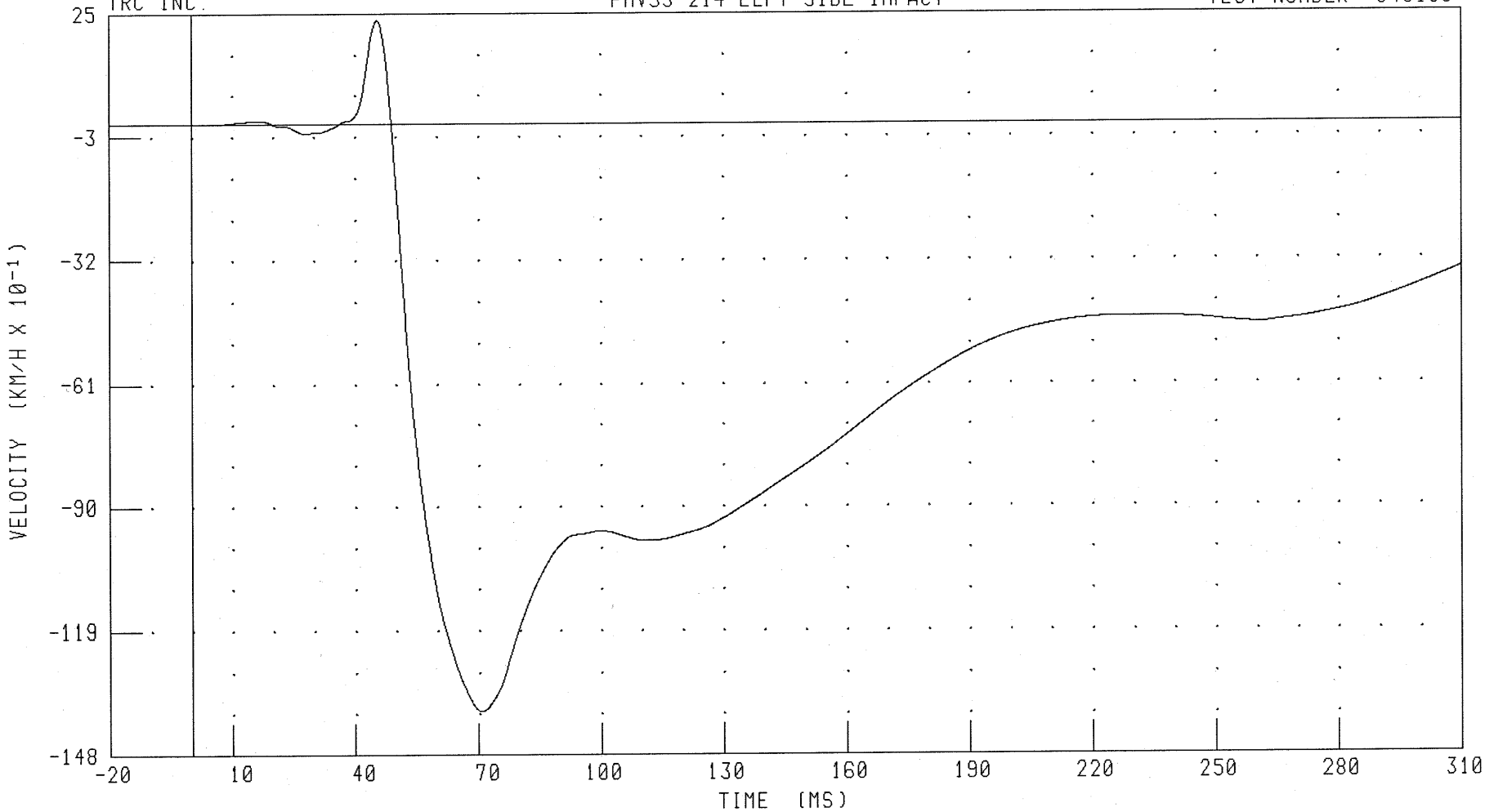
CHANNEL: HEDZG4 FILTER: CH. CLASS 1000 PEAK DATA: 21.17 G @ 43.04 MS; -42.35 G @ 51.52 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Z-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

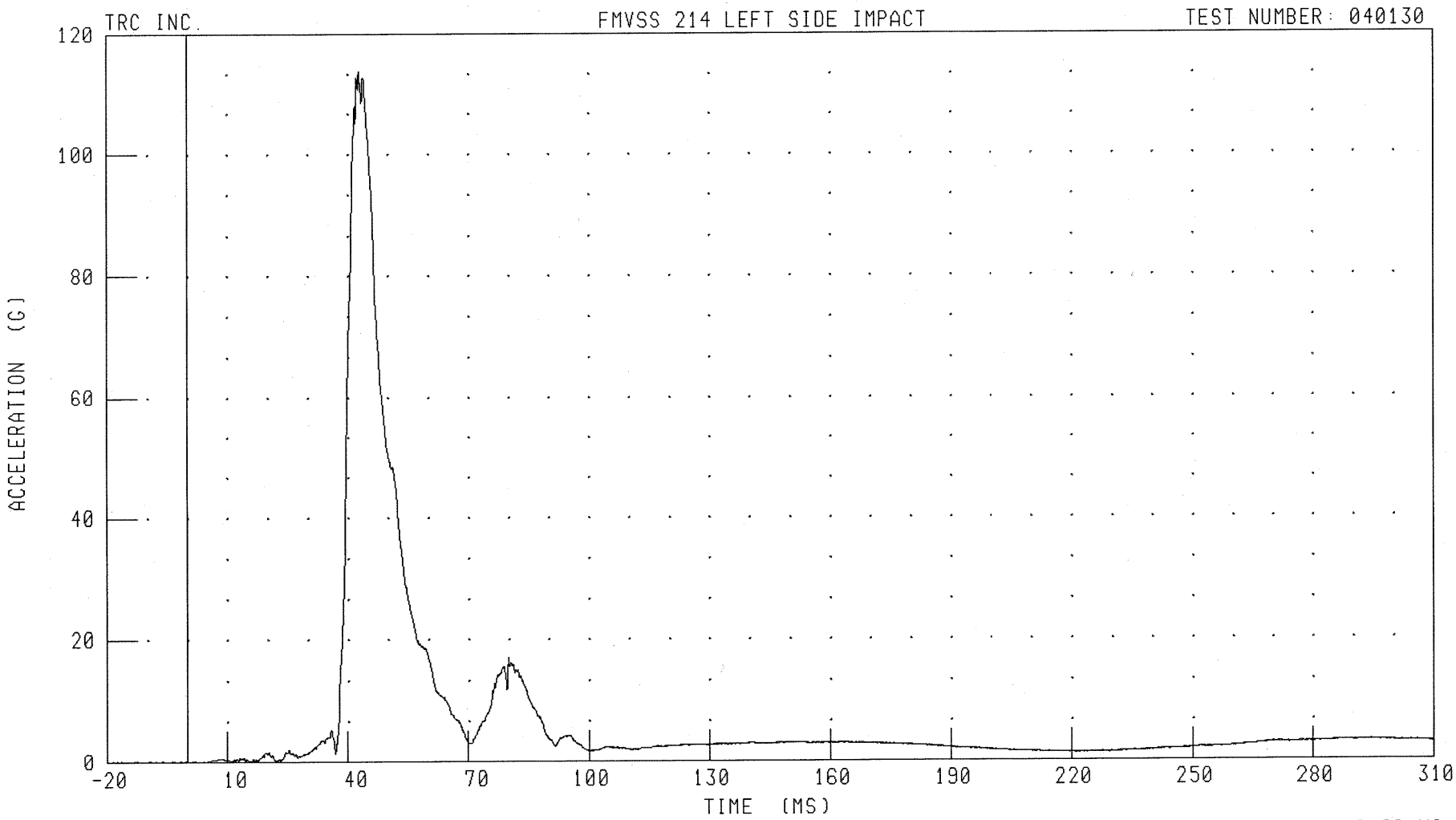


CHANNEL: HEDZV4 FILTER: CH. CLASS 180

PEAK DATA: 2.45 KM/H @ 45.52 MS; -13.78 KM/H @ 70.72 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD RESULTANT ACCELERATION

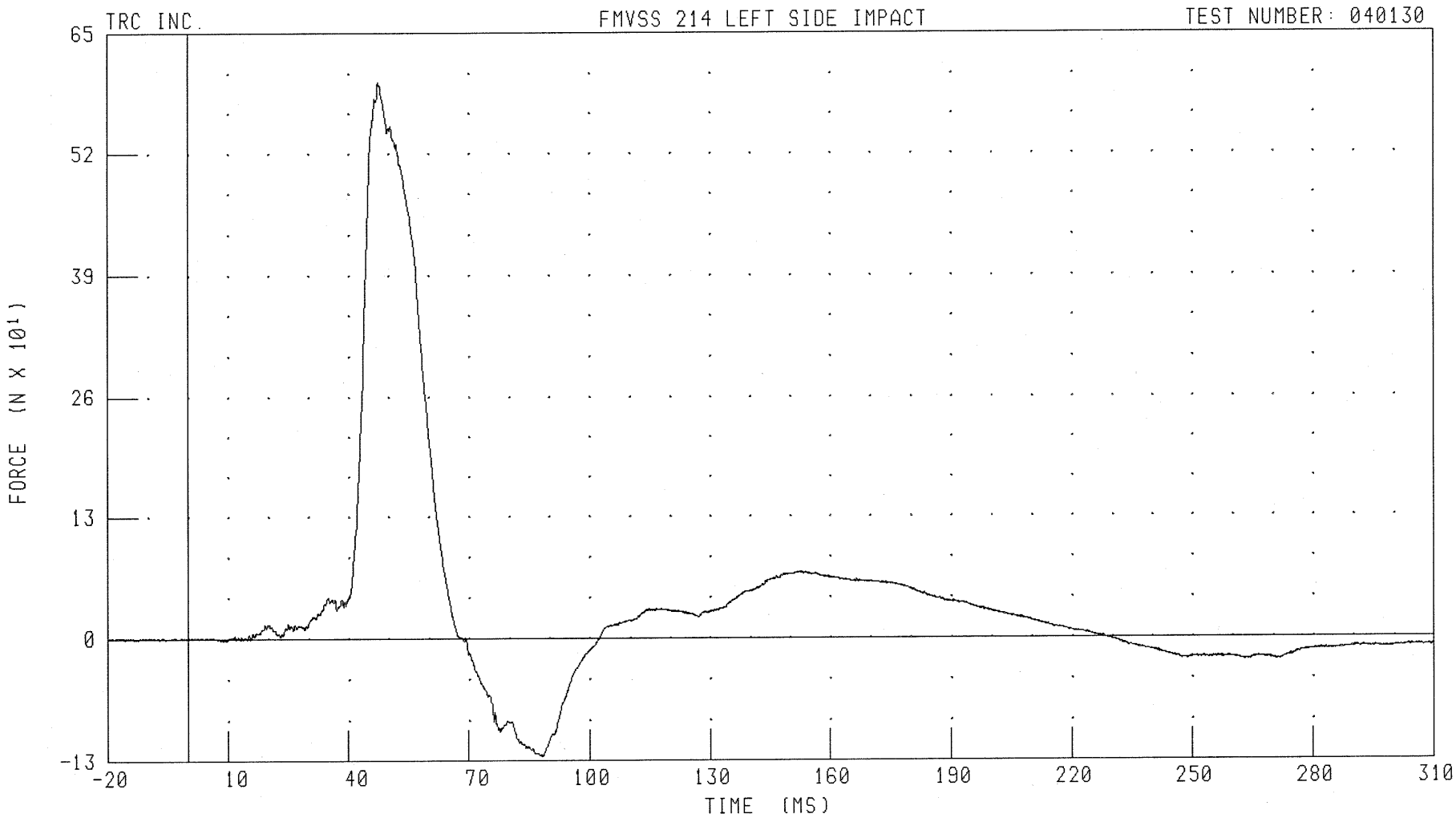


CHANNEL: HEDRG4 FILTER: CH. CLASS 1000 PEAK DATA: 113.85 G @ 42.88 MS; 0.01 G @ -19.92 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER NECK X-AXIS SHEAR FORCE



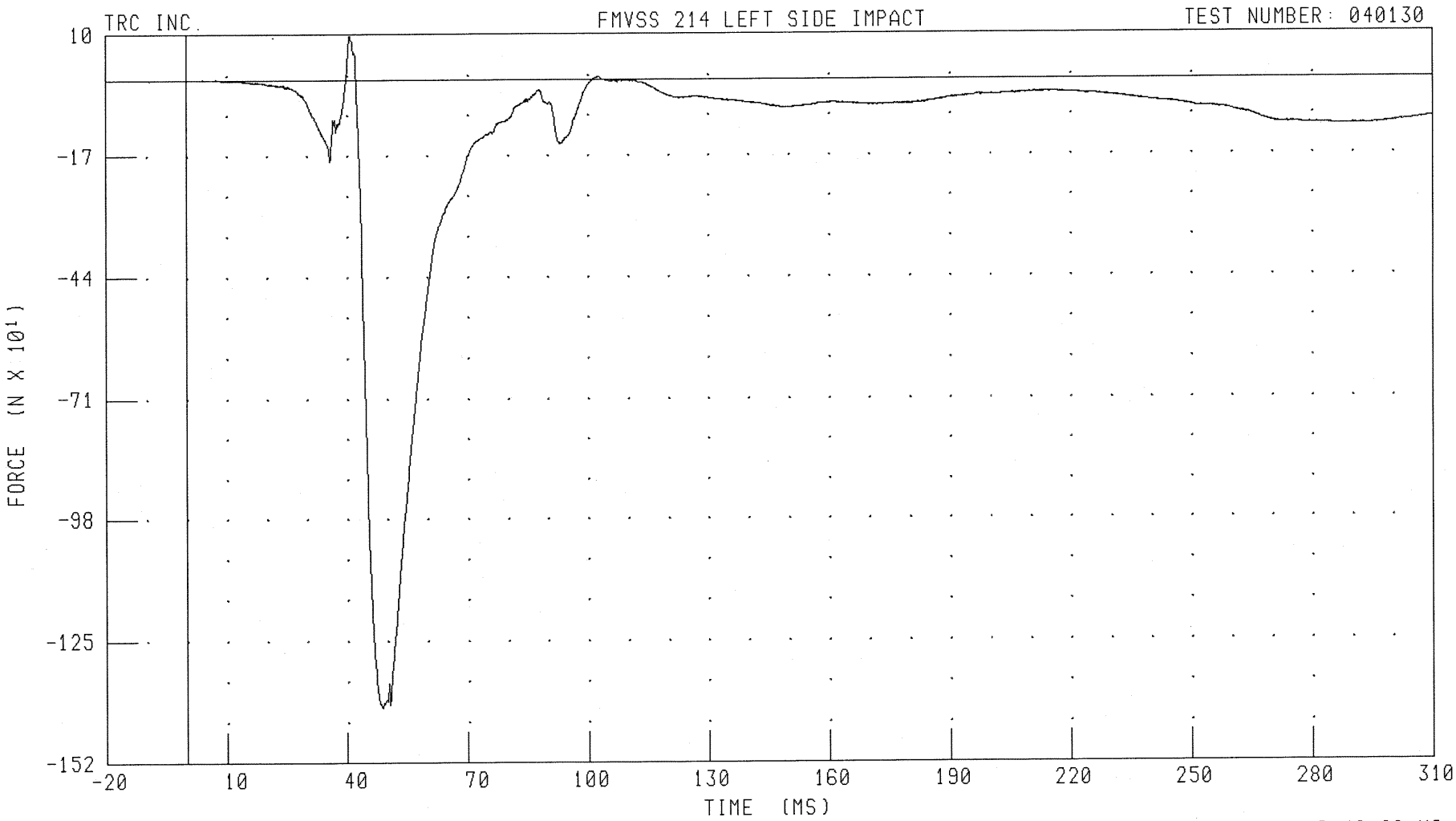
CHANNEL: NEKXF4 FILTER: CH. CLASS 1000

PEAK DATA: 597.30 N @ 47.44 MS; -125.48 N @ 88.24 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER NECK Y-AXIS SHEAR FORCE



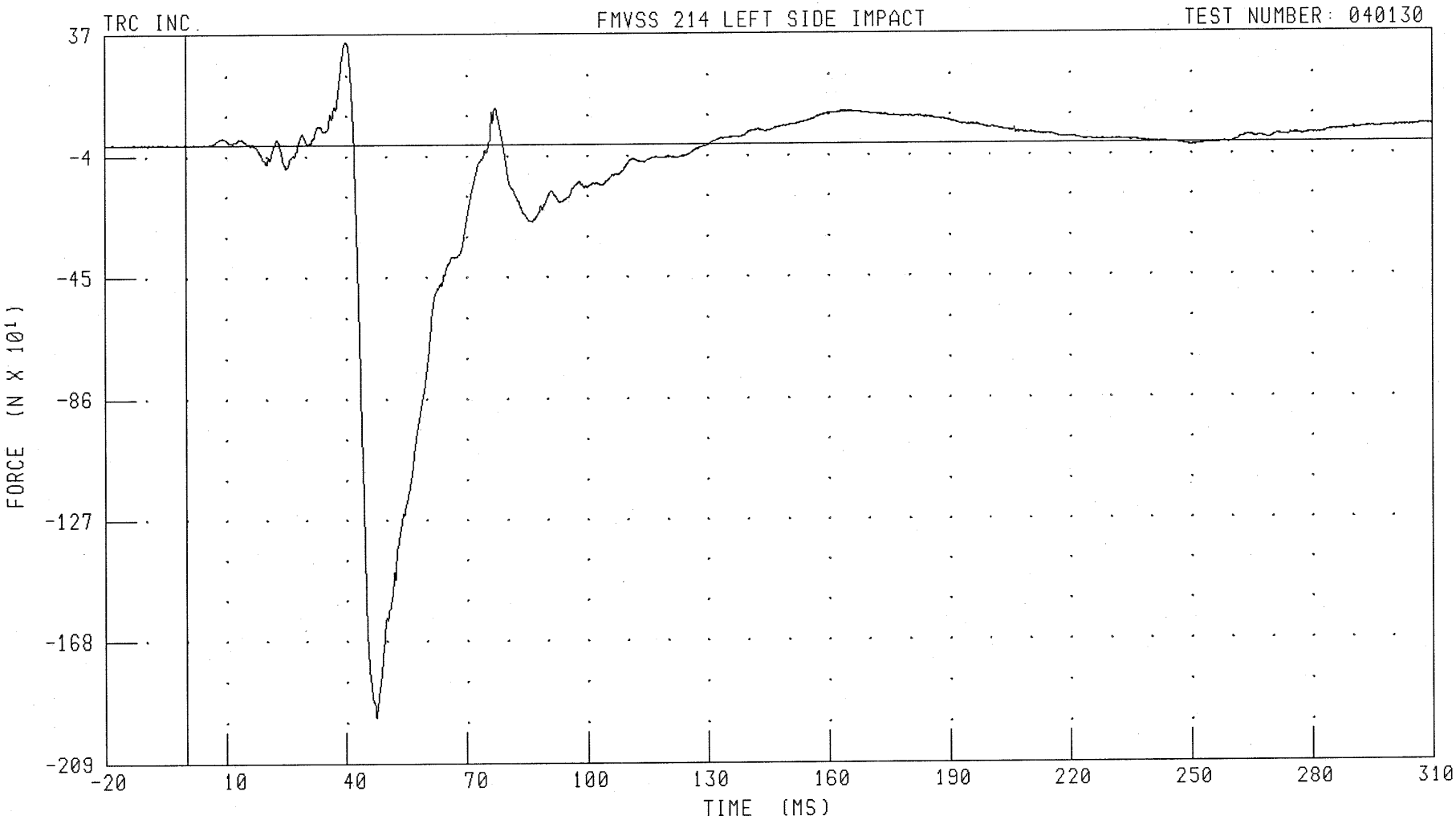
CHANNEL: NEKYF4 FILTER: CH. CLASS 1000

PEAK DATA: 96.10 N @ 40.72 MS; -1399.42 N @ 48.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER NECK Z-AXIS AXIAL FORCE

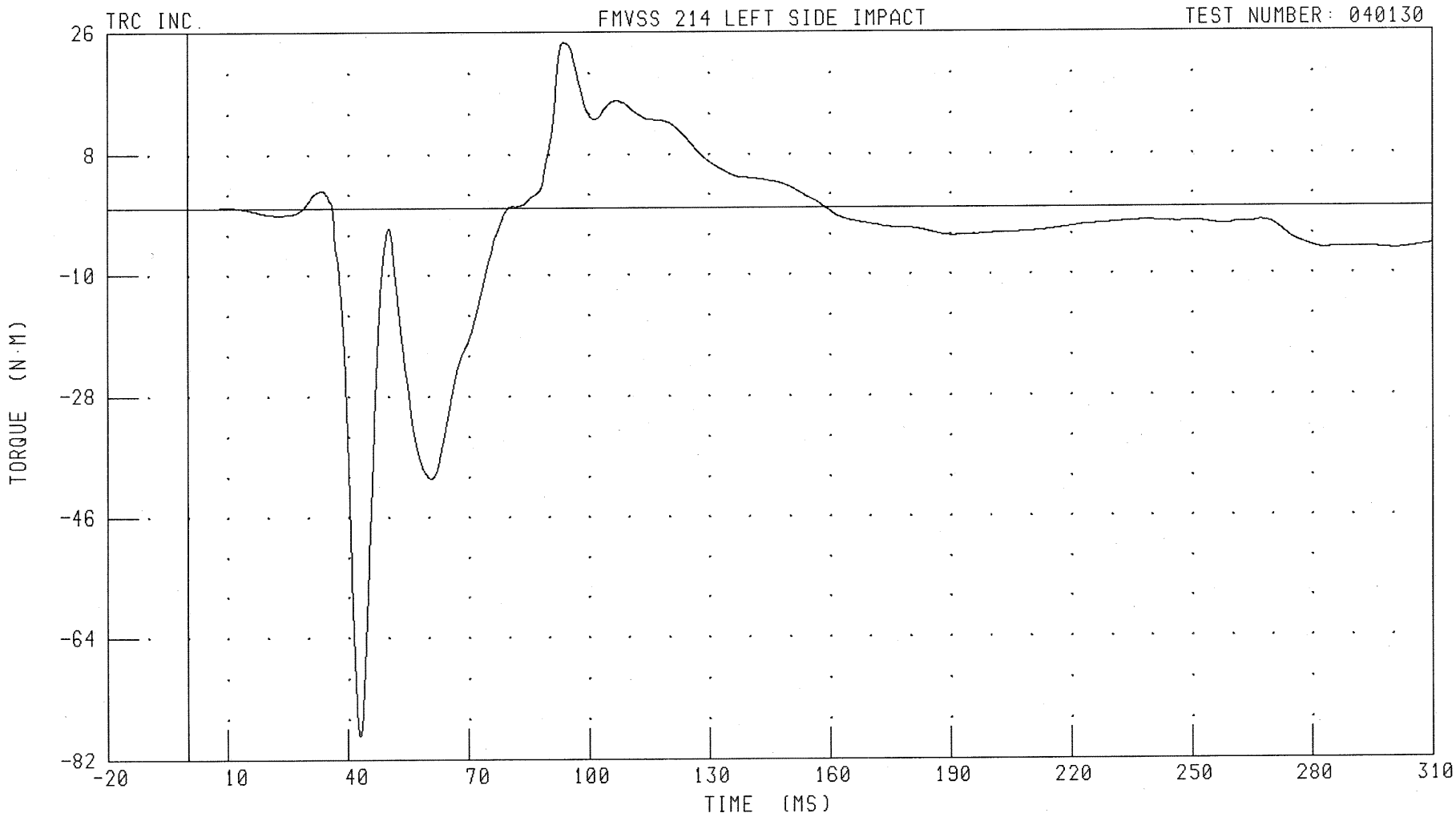


CHANNEL: NEKZF4 FILTER: CH. CLASS 1000

PEAK DATA: 342.47 N @ 40.08 MS; -1936.82 N @ 47.44 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER NECK MOMENT ABOUT X AXIS

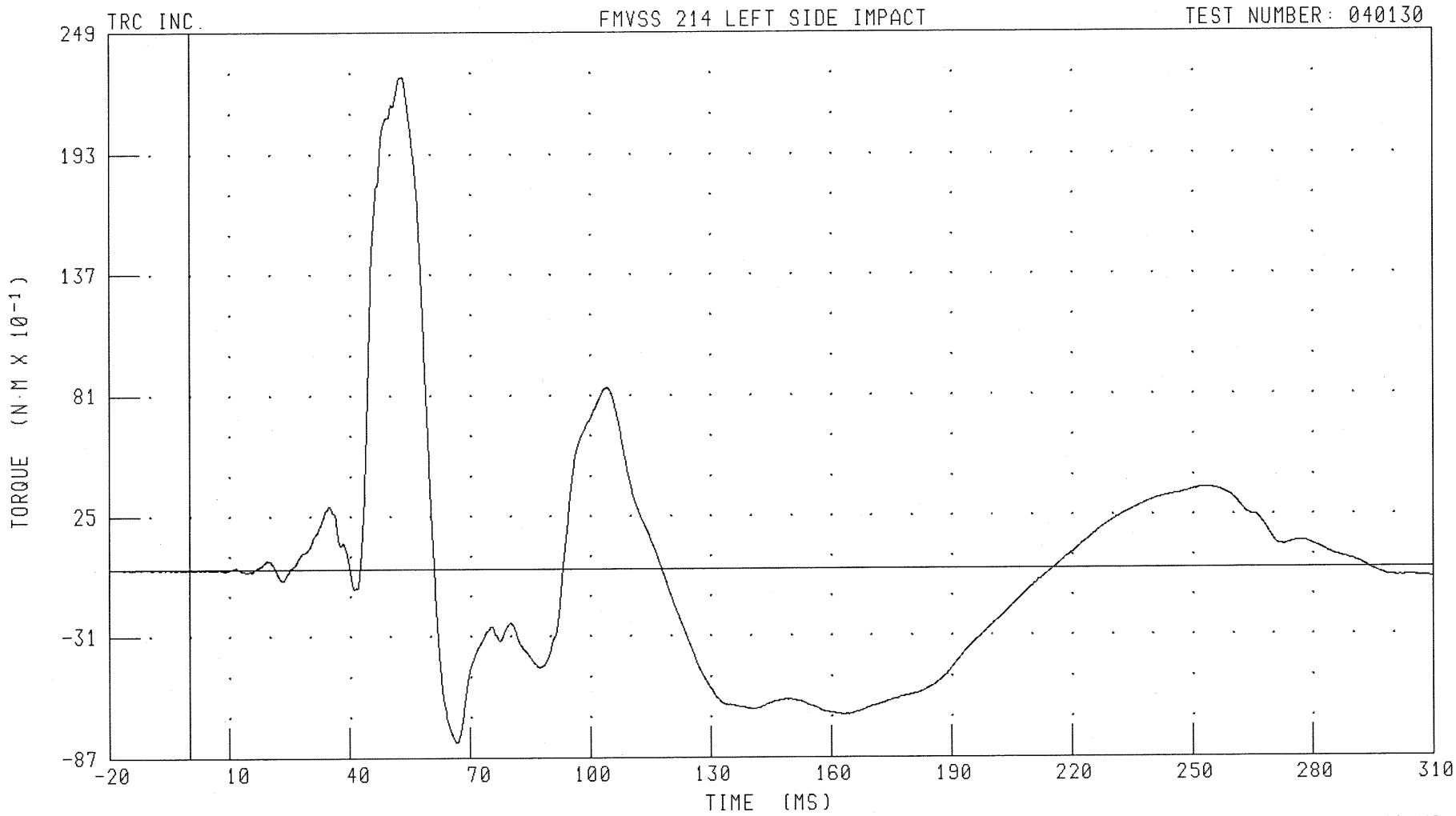


CHANNEL: NEKXM4 FILTER: CH. CLASS 600 PEAK DATA: 24.44 N·M @ 93.84 MS; -78.52 N·M @ 42.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER NECK MOMENT ABOUT Y AXIS

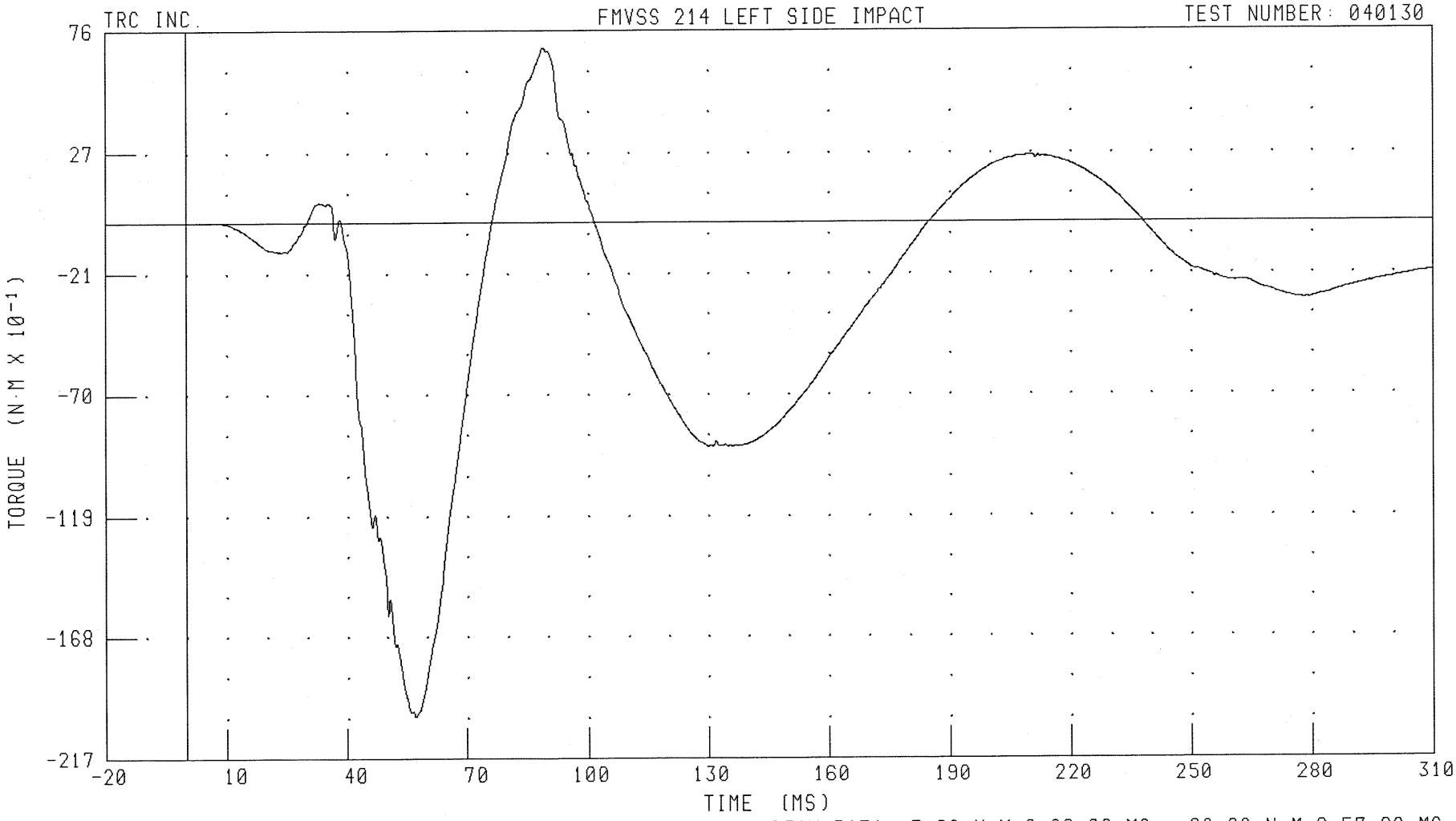


CHANNEL: NEKYM4 FILTER: CH. CLASS 600

PEAK DATA: 22.86 N·M @ 53.04 MS; -7.99 N·M @ 66.56 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER NECK MOMENT ABOUT Z AXIS



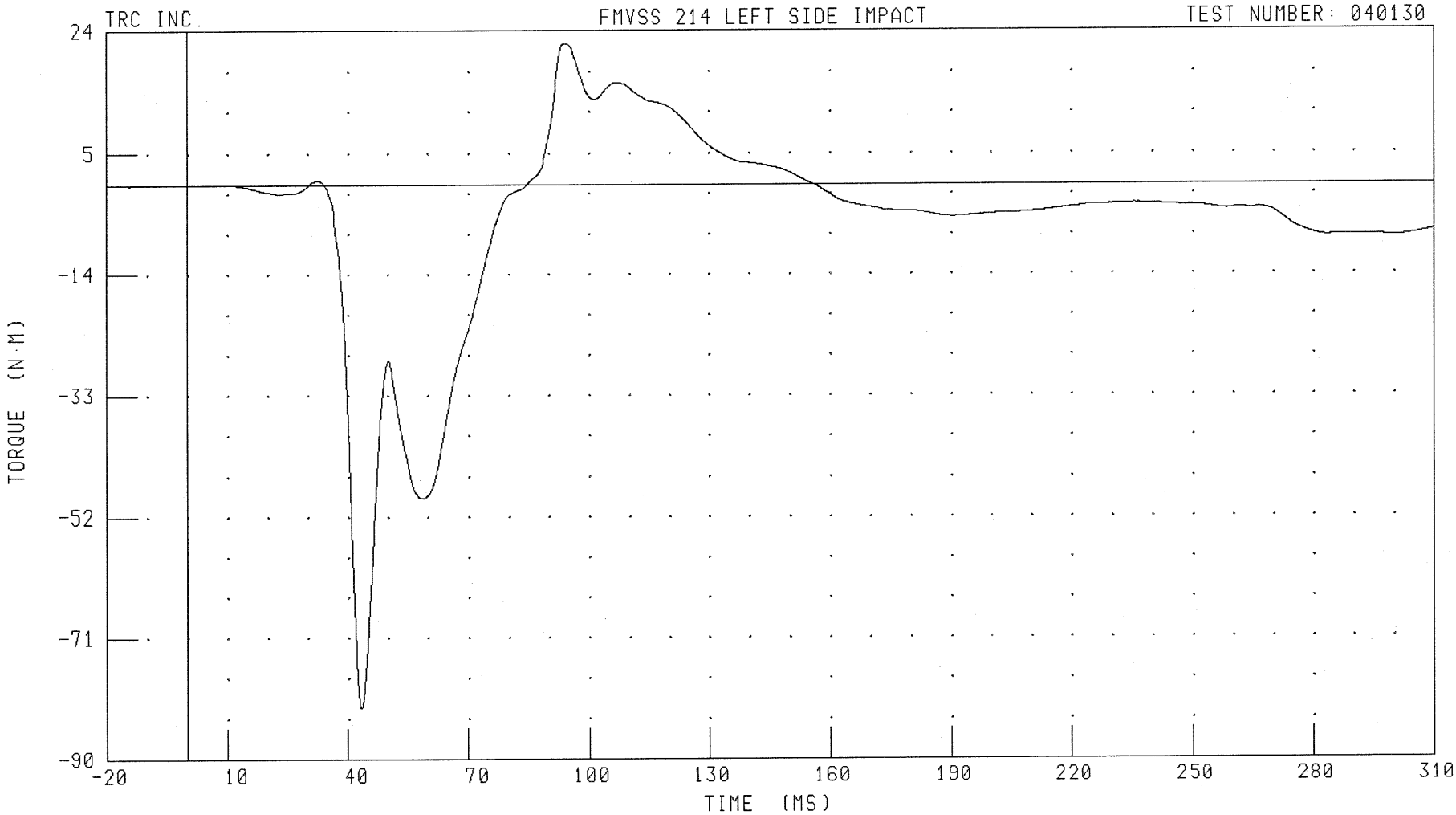
CHANNEL: NEKZM4 FILTER: CH. CLASS 600

PEAK DATA: 7.02 N·M @ 88.96 MS; -20.00 N·M @ 57.20 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT X AXIS



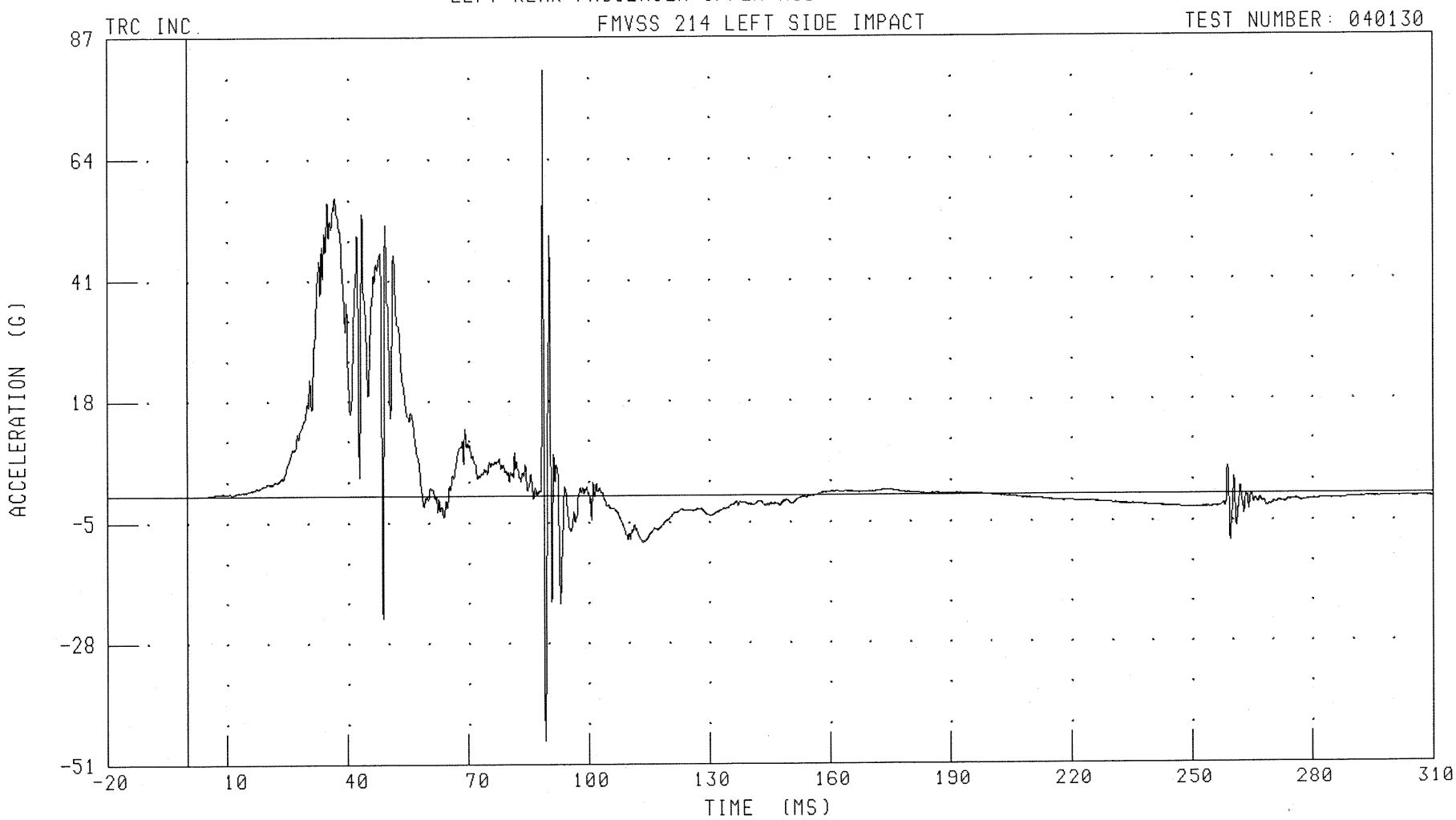
CHANNEL: NKOXM4 FILTER: CH. CLASS 600

PEAK DATA: 22.00 N·M @ 94.00 MS; -82.02 N·M @ 43.44 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

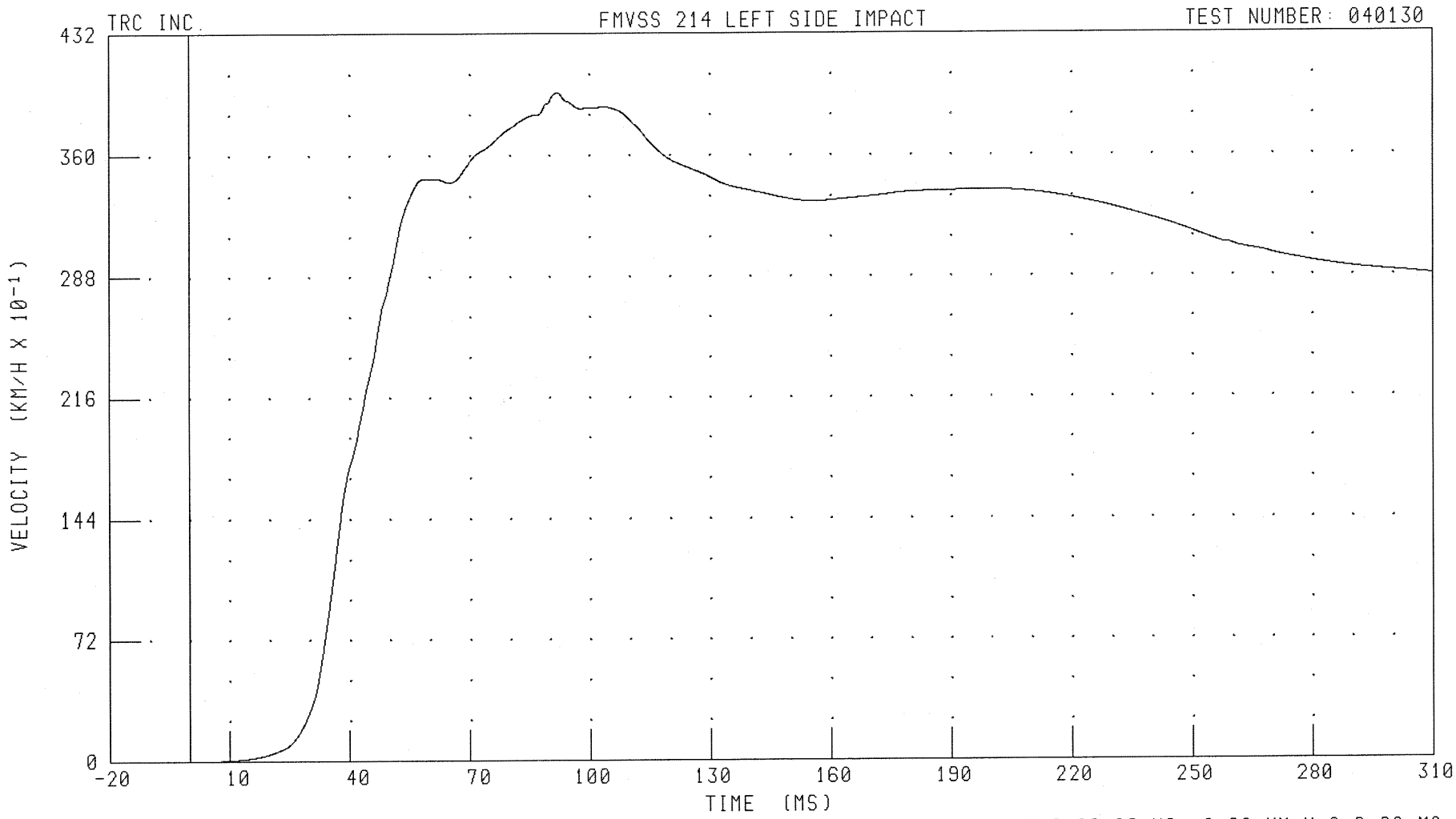
LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION



CHANNEL: LURYG4 FILTER: CH. CLASS 1000

PEAK DATA: 80.75 G @ 88.64 MS; -46.52 G @ 89.12 MS

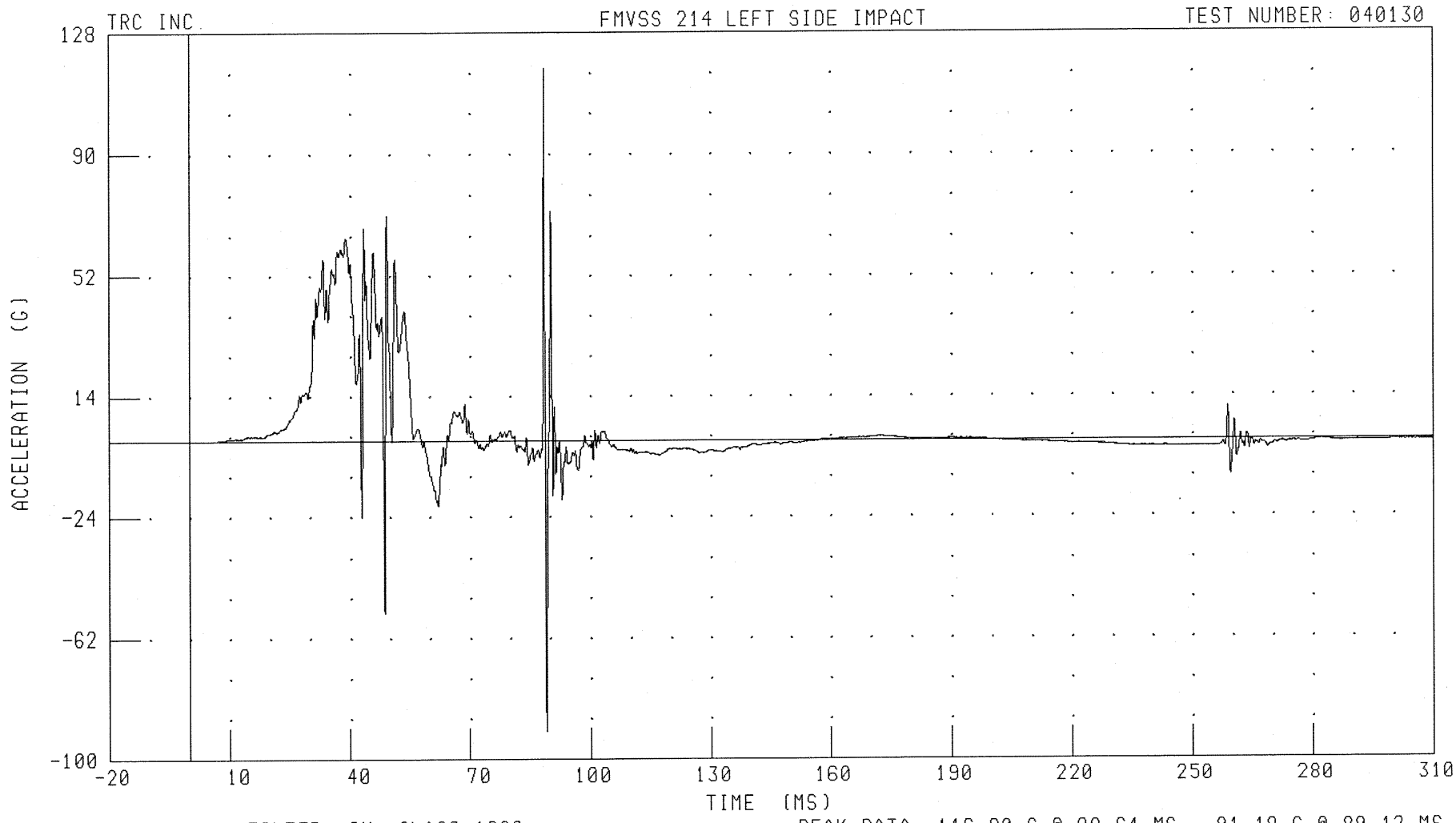
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER UPPER RIB Y-AXIS VELOCITY



CHANNEL: LURYV4 FILTER: CH. CLASS 180 PEAK DATA: 39.69 KM/H @ 92.08 MS; 0.00 KM/H @ 0.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION



CHANNEL: LLRYG4 FILTER: CH. CLASS 1000

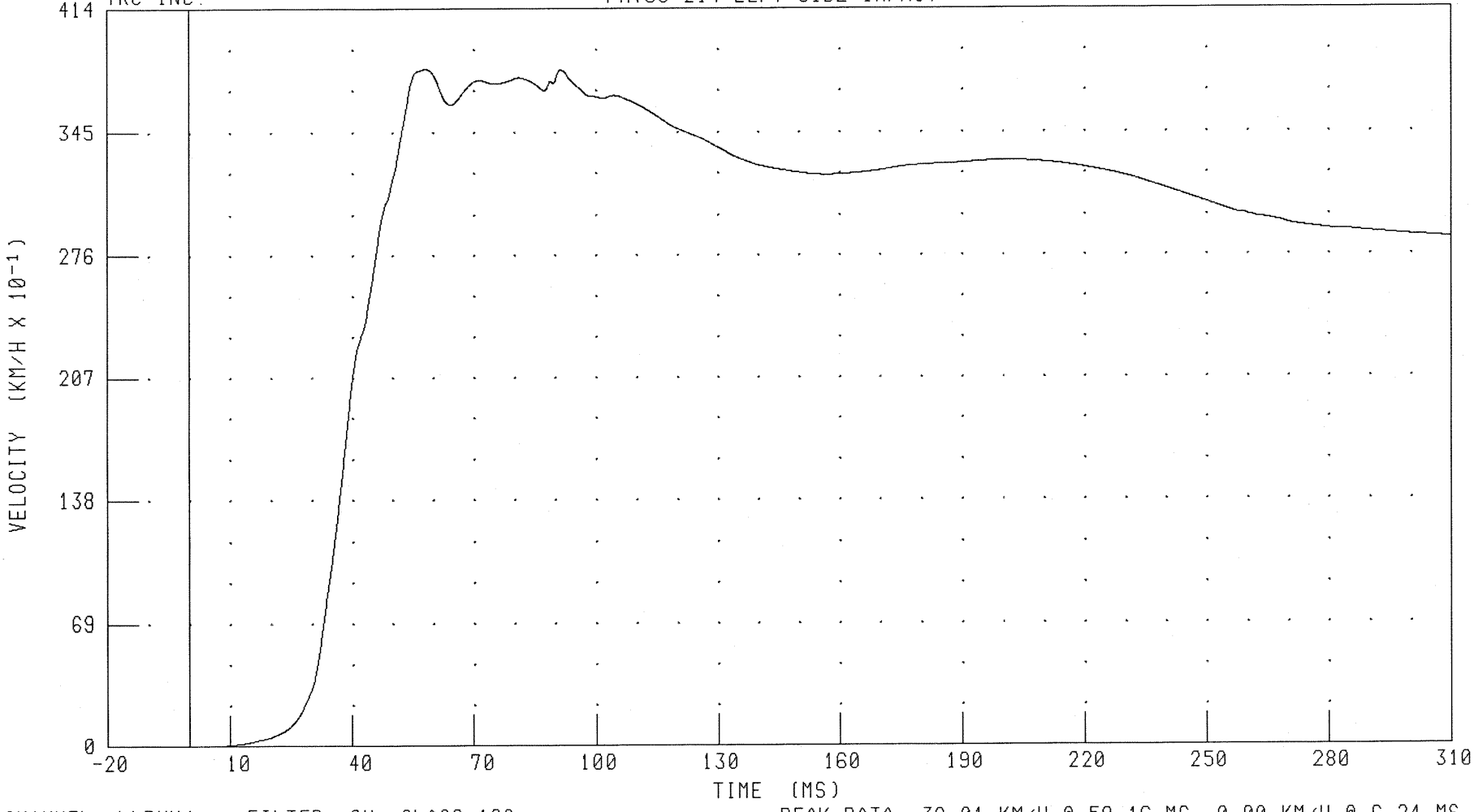
PEAK DATA: 116.80 G @ 88.64 MS; -91.18 G @ 89.12 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER LOWER RIB Y-AXIS VELOCITY

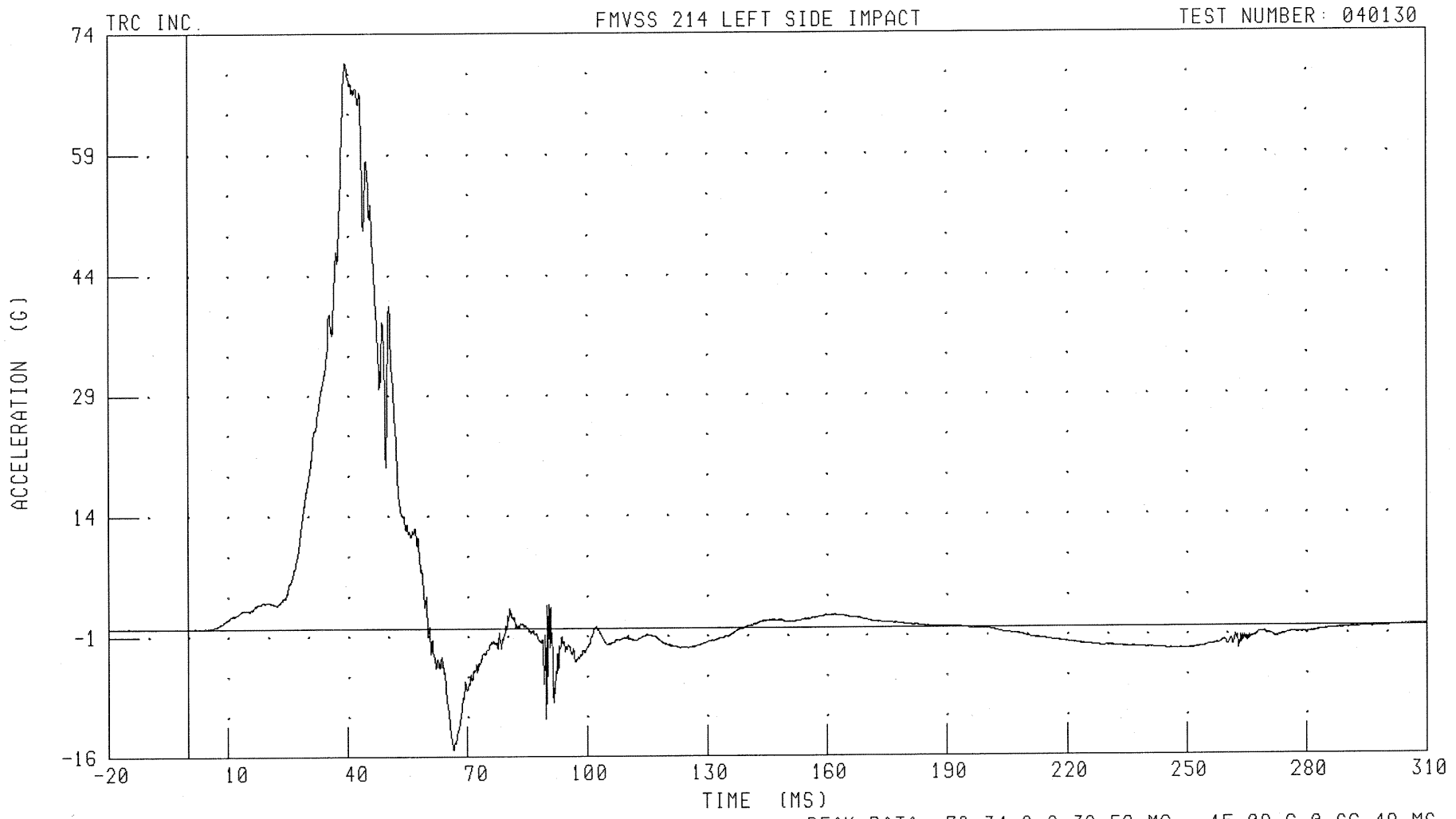
TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: LLRYV4 FILTER: CH. CLASS 180

PEAK DATA: 38.01 KM/H @ 58.16 MS; 0.00 KM/H @ 6.24 MS

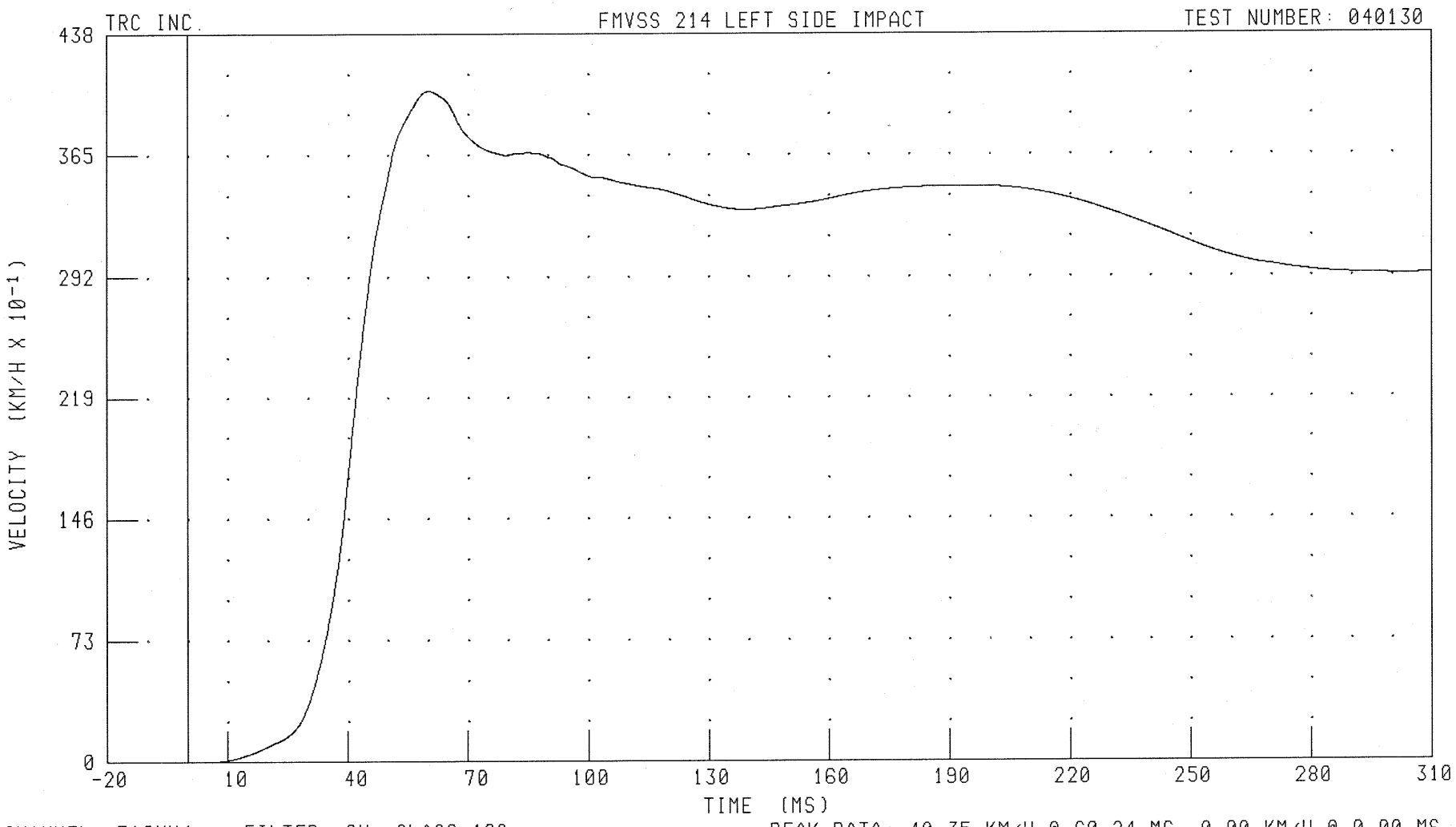
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION



CHANNEL: T12YG4 FILTER: CH. CLASS 1000 PEAK DATA: 70.34 G @ 39.52 MS; -15.08 G @ 66.48 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER LOWER SPINE Y-AXIS VELOCITY



CHANNEL: T12YV4 FILTER: CH. CLASS 180

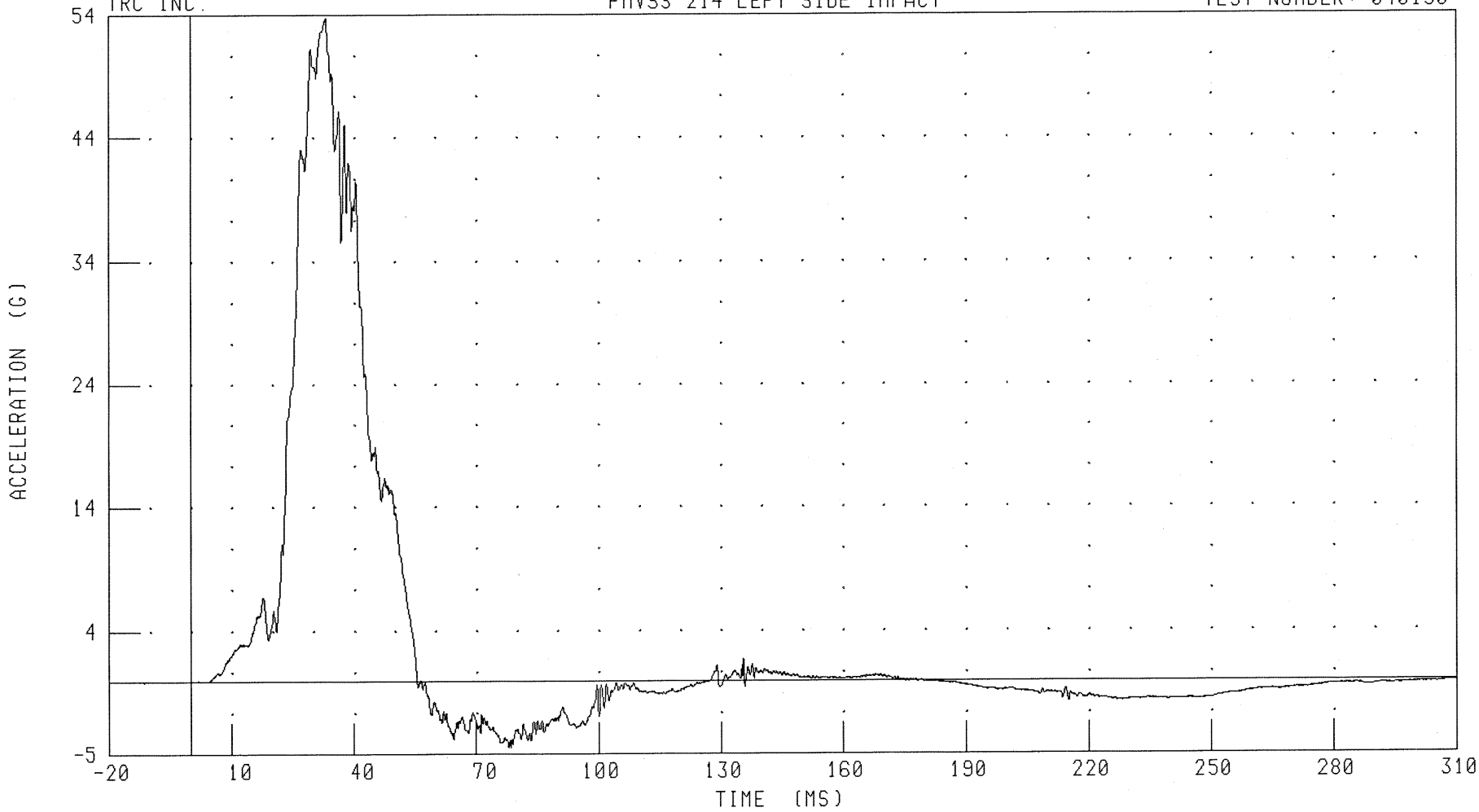
PEAK DATA: 40.35 KM/H @ 60.24 MS; 0.00 KM/H @ 0.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



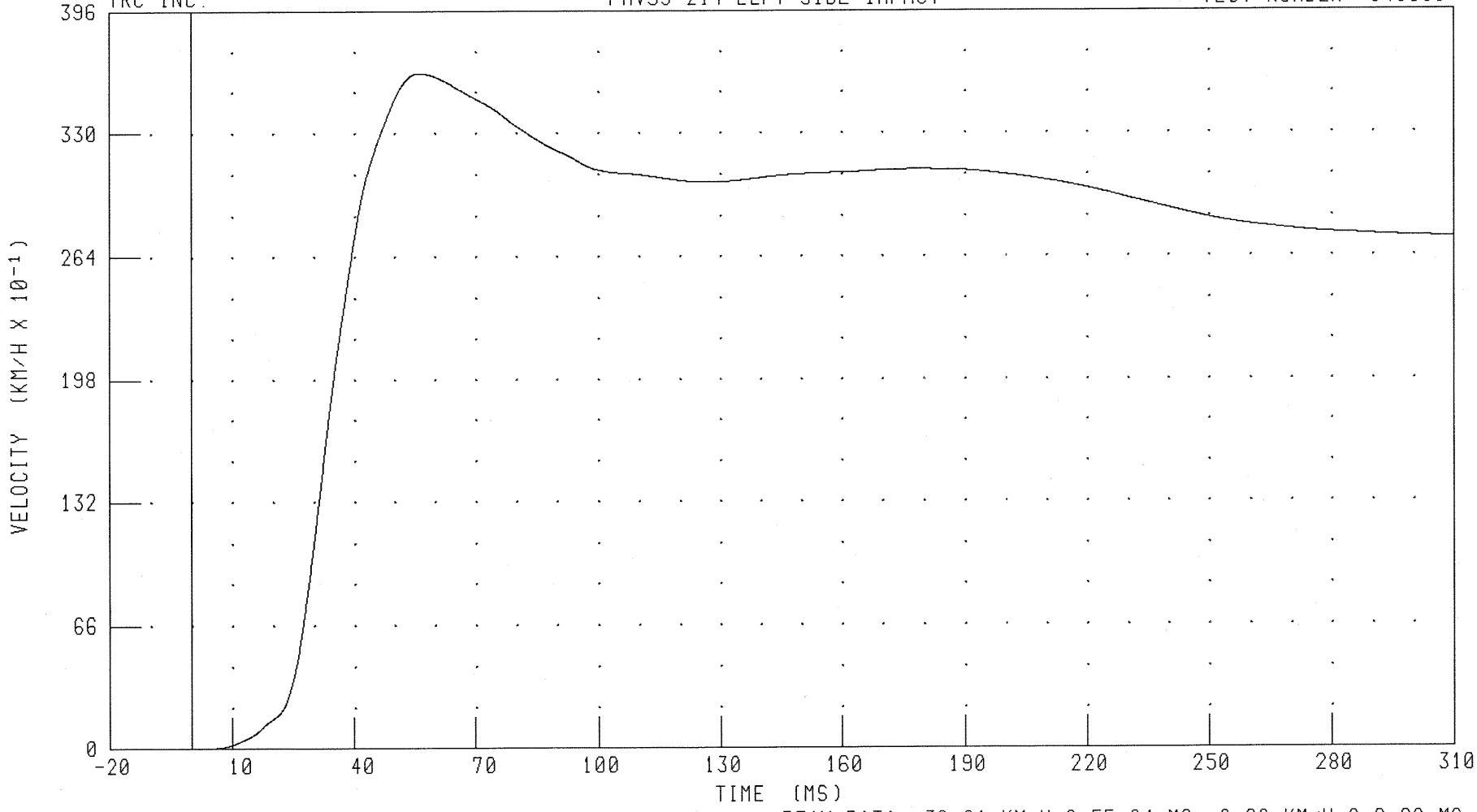
CHANNEL: PEVYG4 FILTER: CH. CLASS 1000 PEAK DATA: 53.84 G @ 33.20 MS; -5.42 G @ 78.48 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER PELVIS Y-AXIS VELOCITY

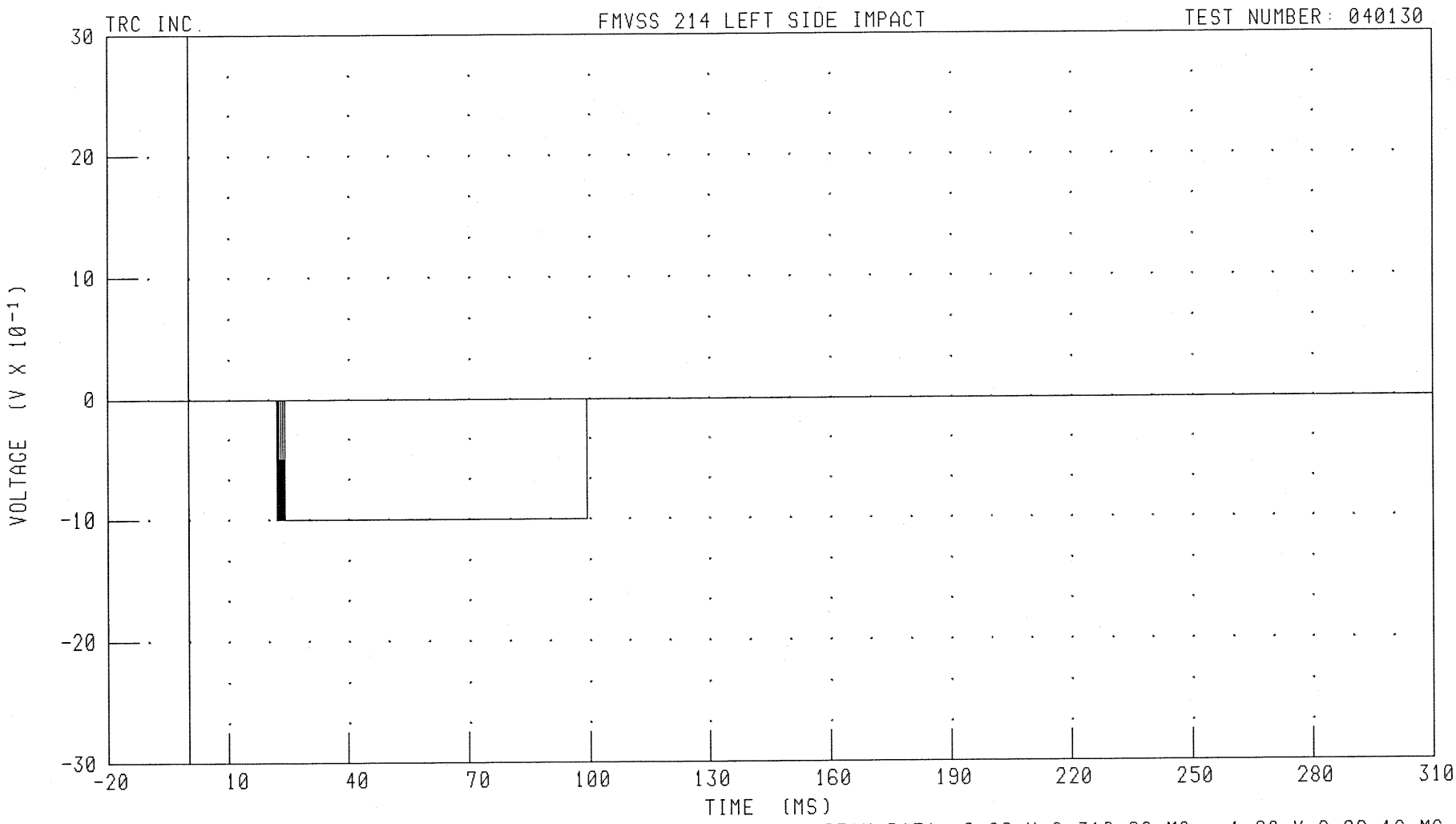
TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: PEVYV4 FILTER: CH. CLASS 180 PEAK DATA: 36.21 KM/H @ 55.84 MS; 0.00 KM/H @ 0.00 MS

040130

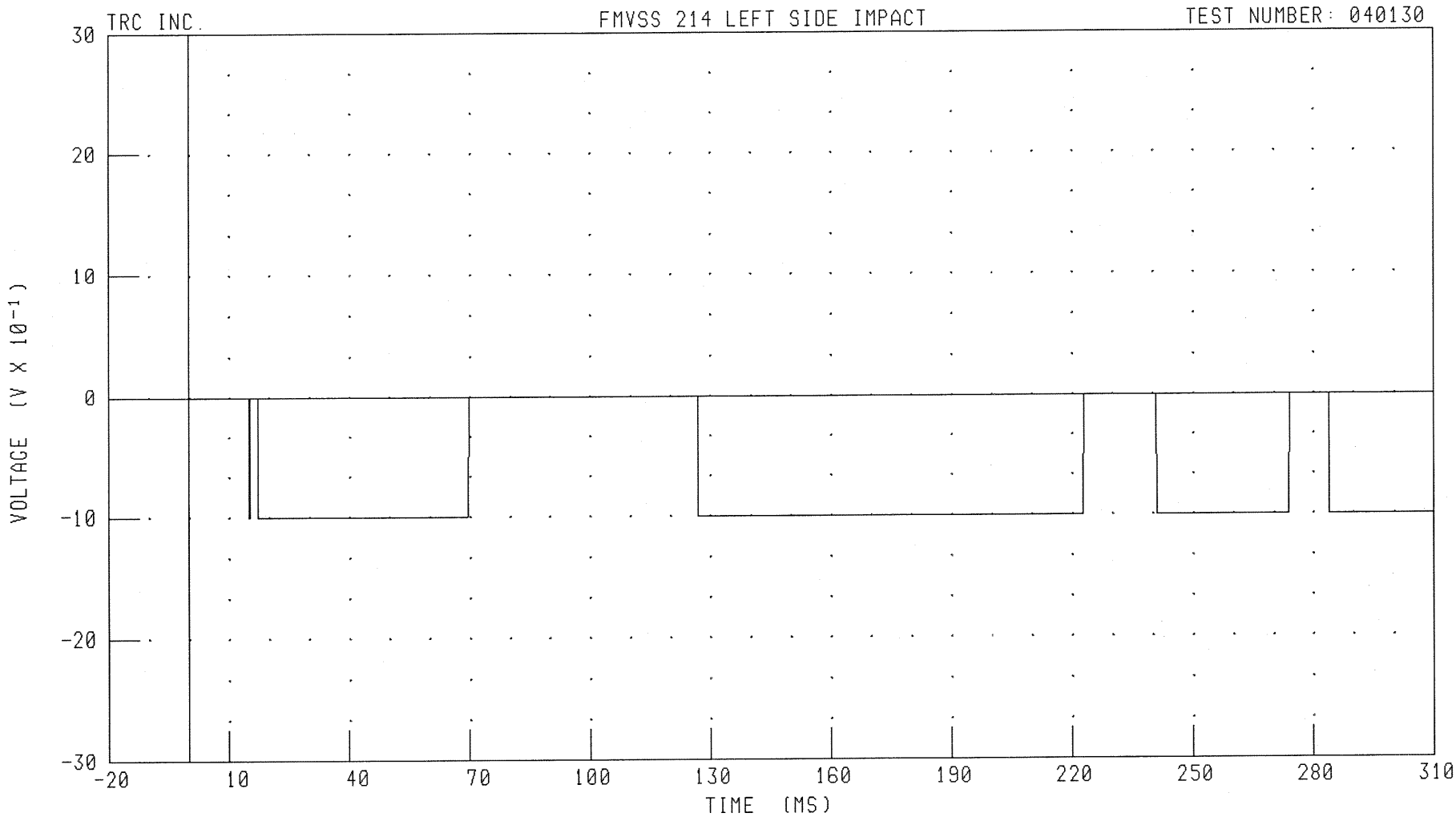
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER SHOULDER CONTACT SWITCH



CHANNEL: SHLET4 FILTER: CH. CLASS 1000 PEAK DATA: 0.00 V @ 310.00 MS; -1.00 V @ 22.16 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER PELVIS CONTACT SWITCH



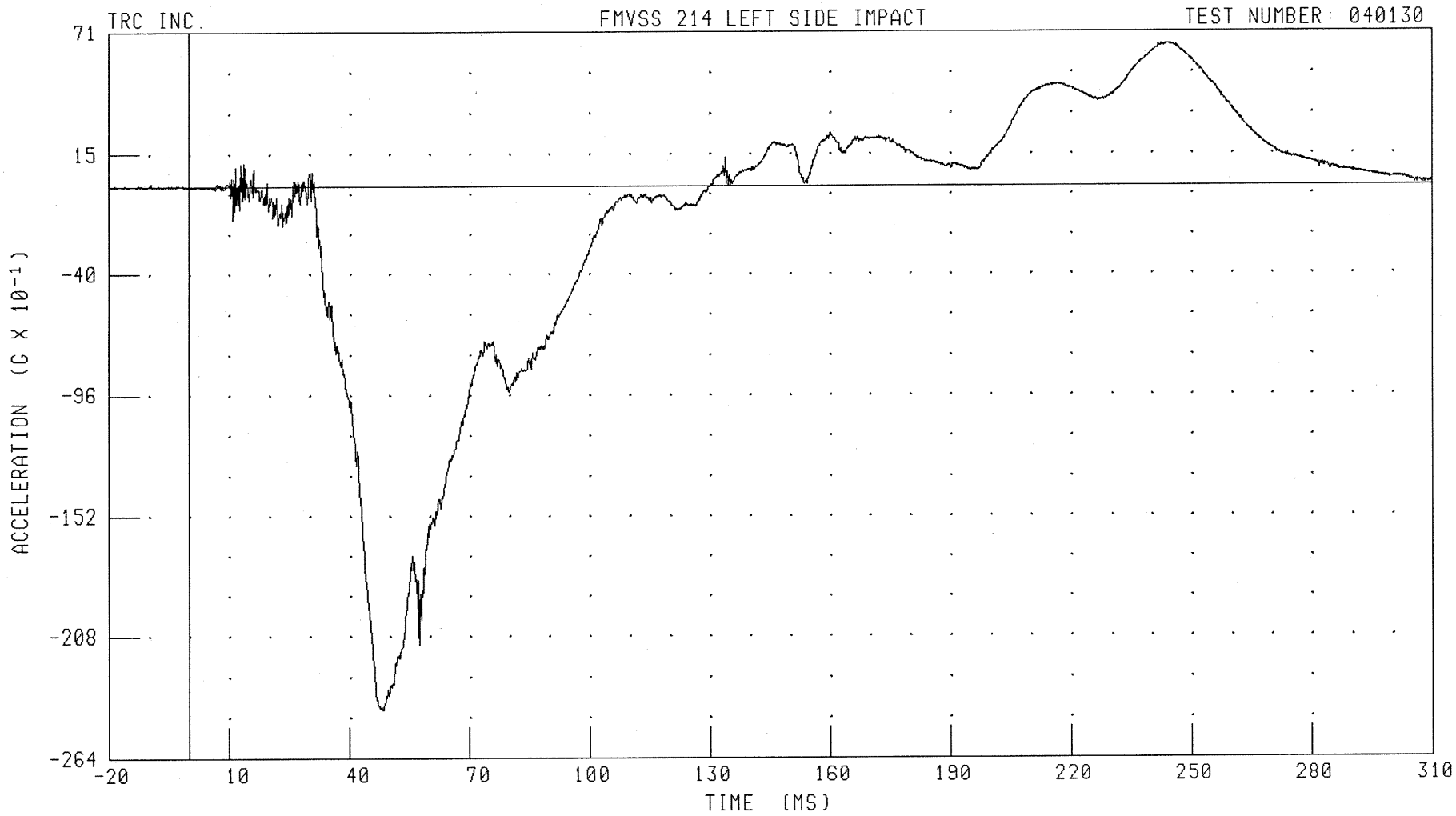
CHANNEL: PEVET4 FILTER: CH. CLASS 1000 PEAK DATA: 0.00 V @ -20.00 MS; -1.00 V @ 15.12 MS

040130

Driver and Passenger Dummy Redundant Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD X-AXIS REDUNDANT ACCELERATION



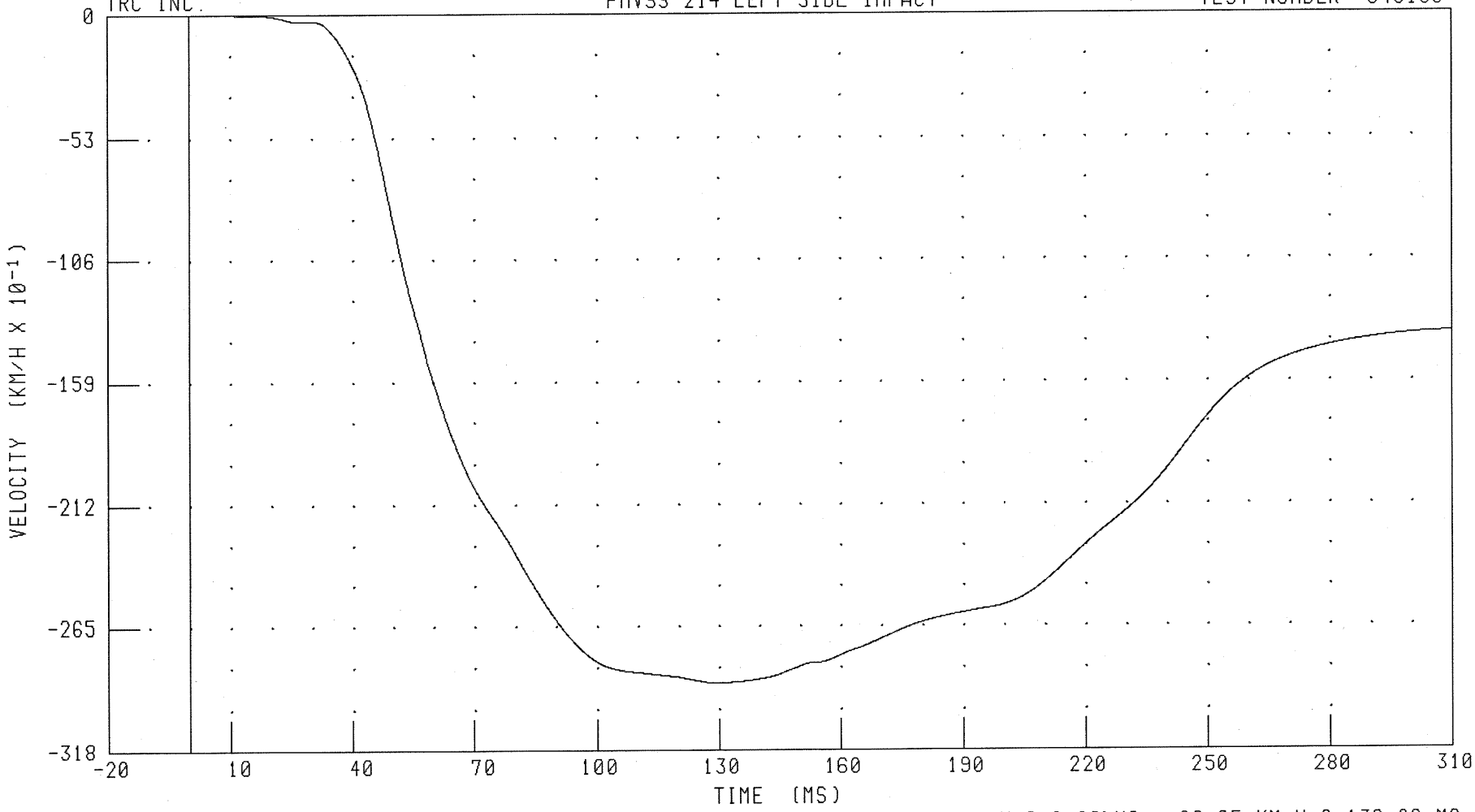
CHANNEL: HEDXR1 FILTER: CH. CLASS 1000 PEAK DATA: 6.52 G @ 242.40 MS; -24.28 G @ 48.40 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD X-AXIS REDUNDANT VELOCITY

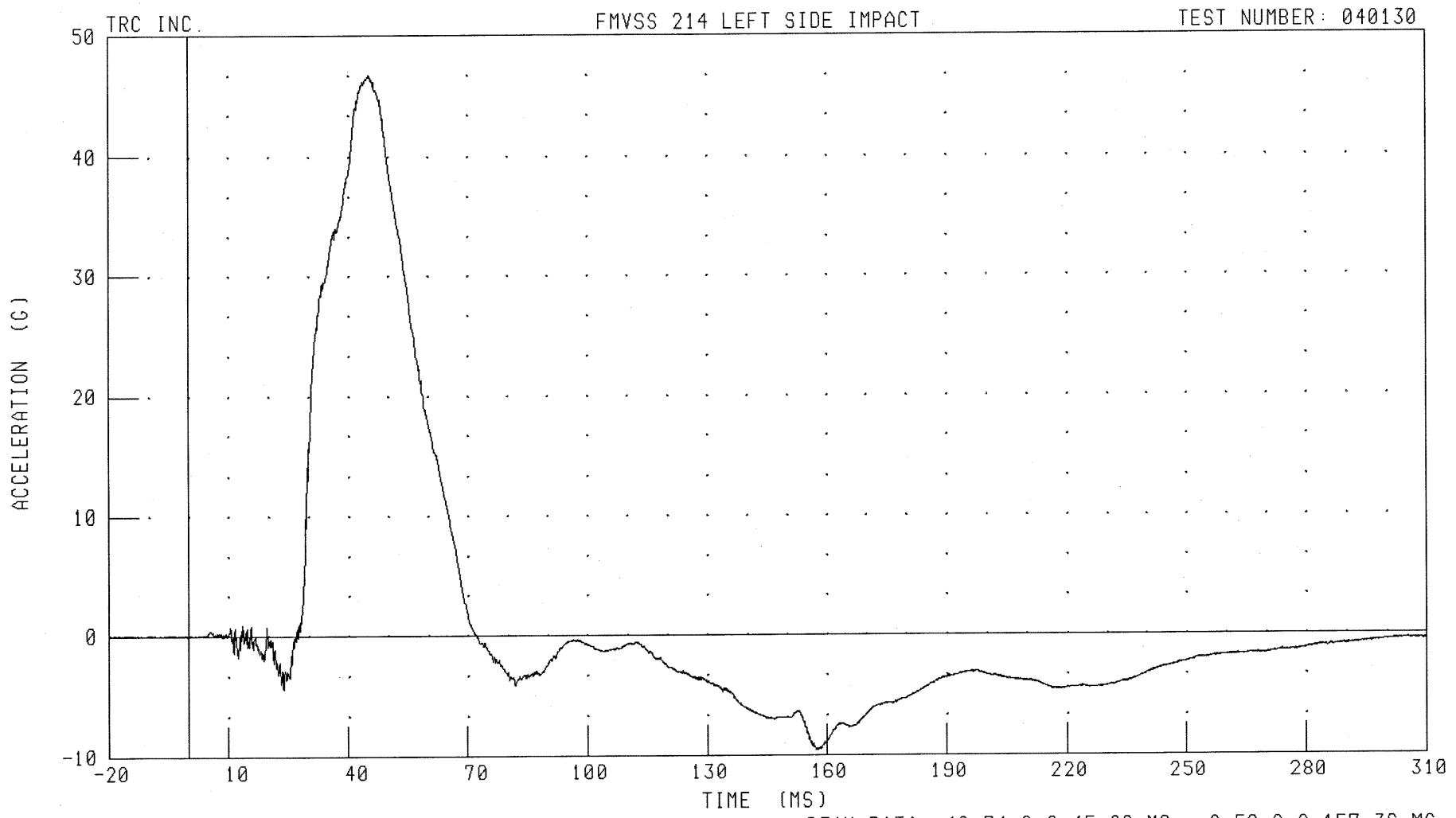
TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: HEDXVI FILTER: CH. CLASS 180 PEAK DATA: 0.00 KM/H @ 0.00 MS; -28.95 KM/H @ 130.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
DRIVER HEAD Y-AXIS REDUNDANT ACCELERATION



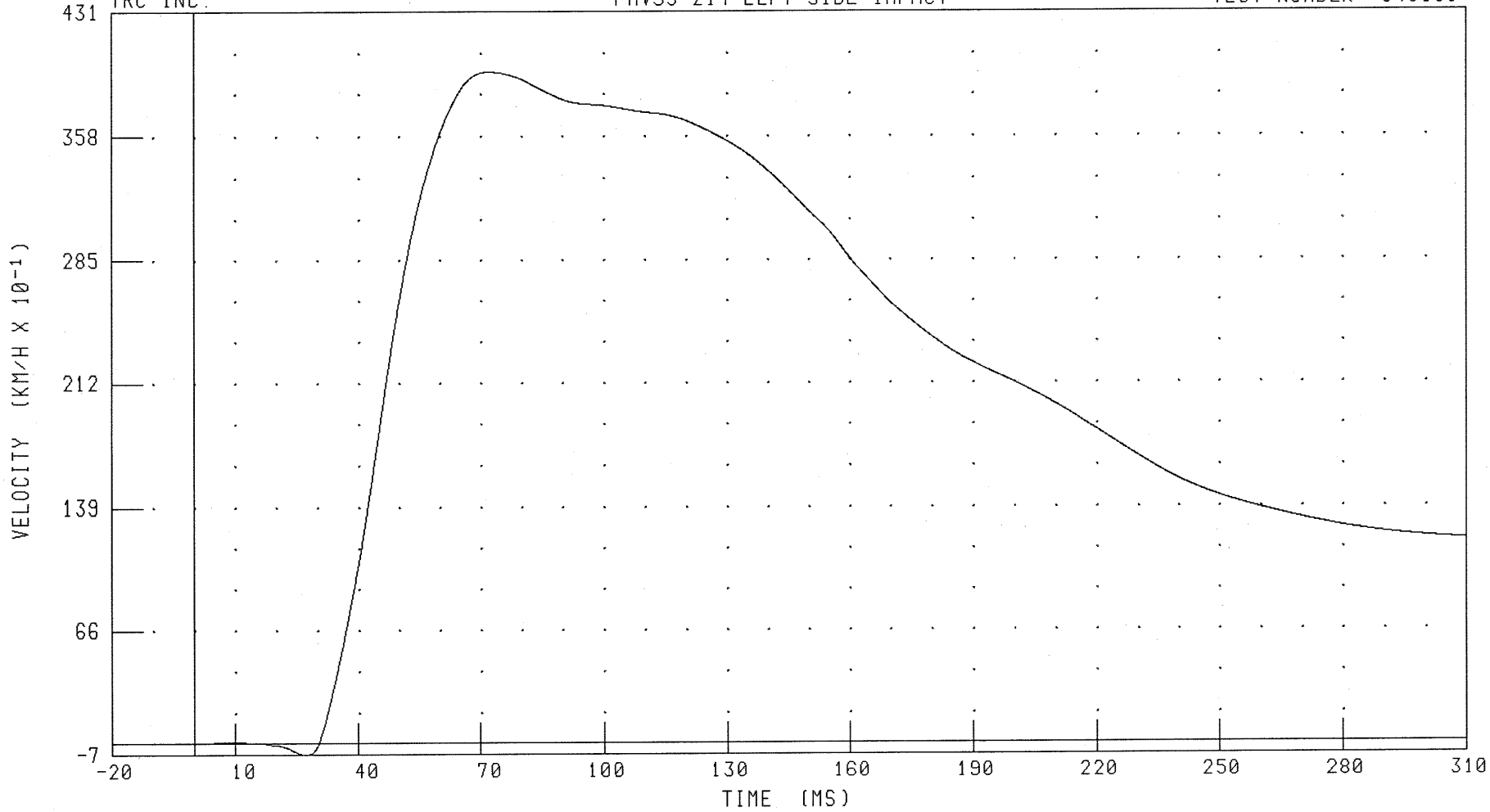
CHANNEL: HEDYR1 FILTER: CH. CLASS 1000 PEAK DATA: 46.74 G @ 45.28 MS; -9.56 G @ 157.36 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD Y-AXIS REDUNDANT VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



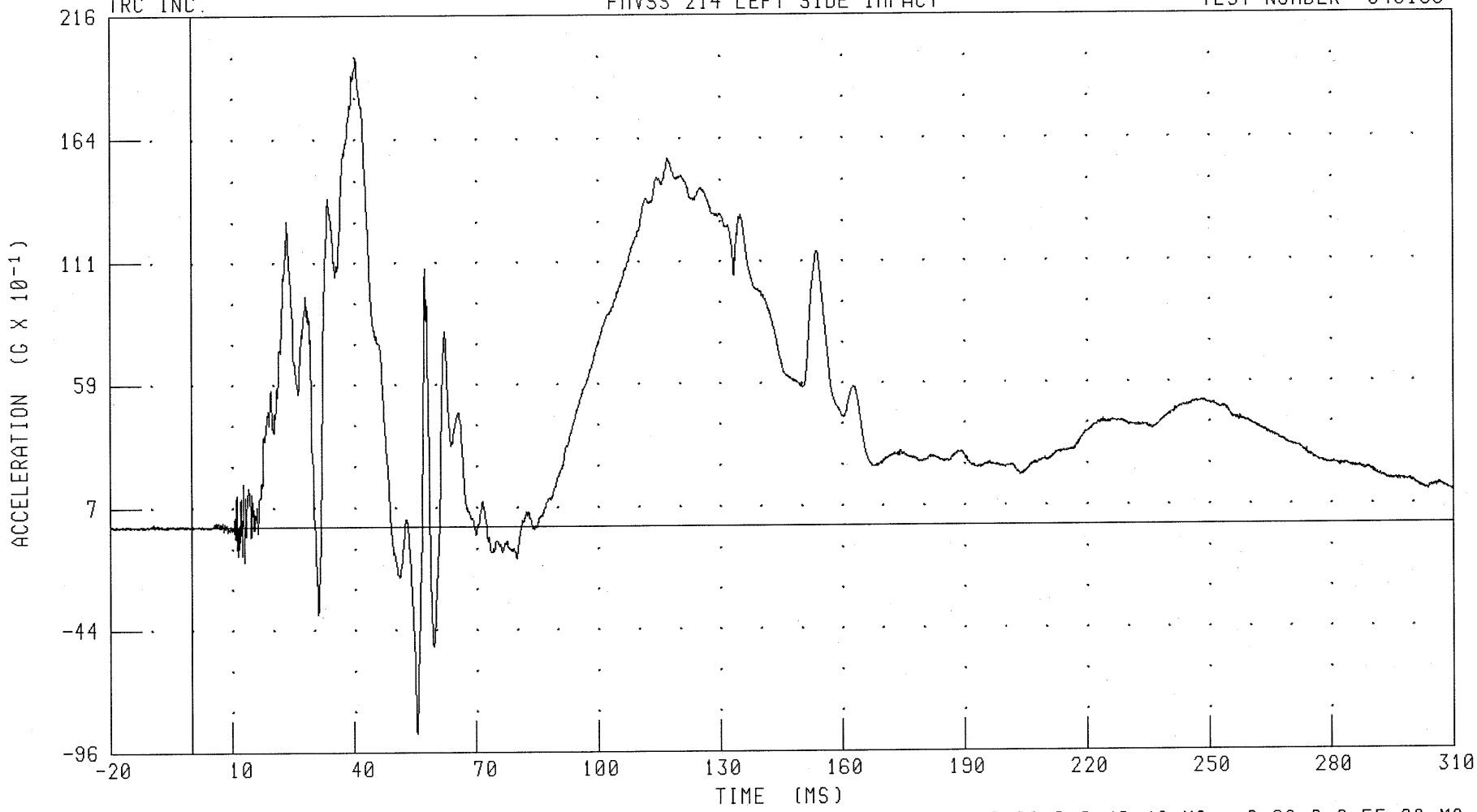
CHANNEL: HEDYVI FILTER: CH. CLASS 180 PEAK DATA: 39.57 KM/H @ 72.08 MS; -0.70 KM/H @ 27.12 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

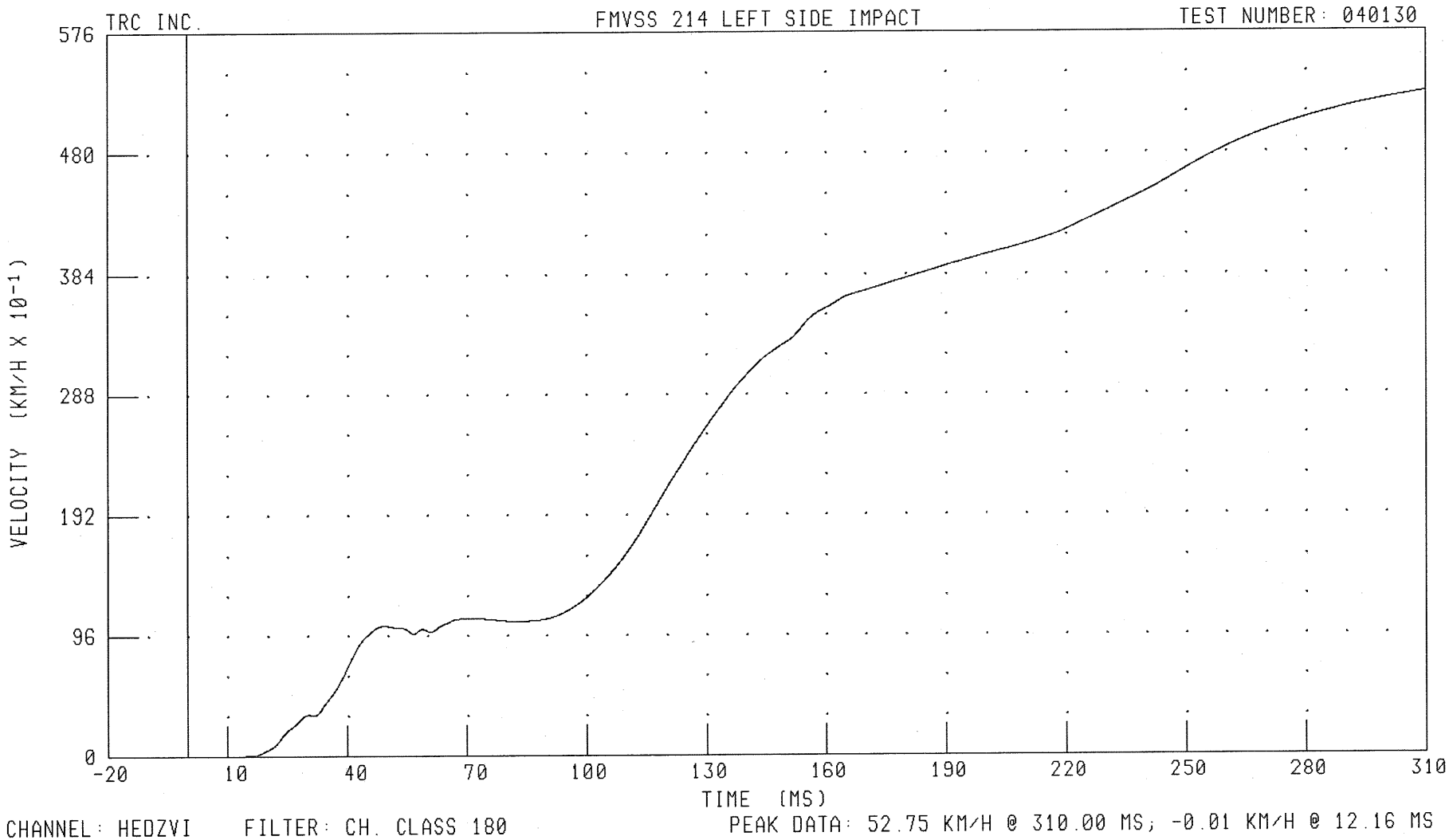
DRIVER HEAD Z-AXIS REDUNDANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: HEDZR1 FILTER: CH. CLASS 1000 PEAK DATA: 19.82 G @ 40.48 MS; -8.80 G @ 55.28 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
DRIVER HEAD Z-AXIS REDUNDANT VELOCITY



CHANNEL: HEDZVI FILTER: CH. CLASS 180

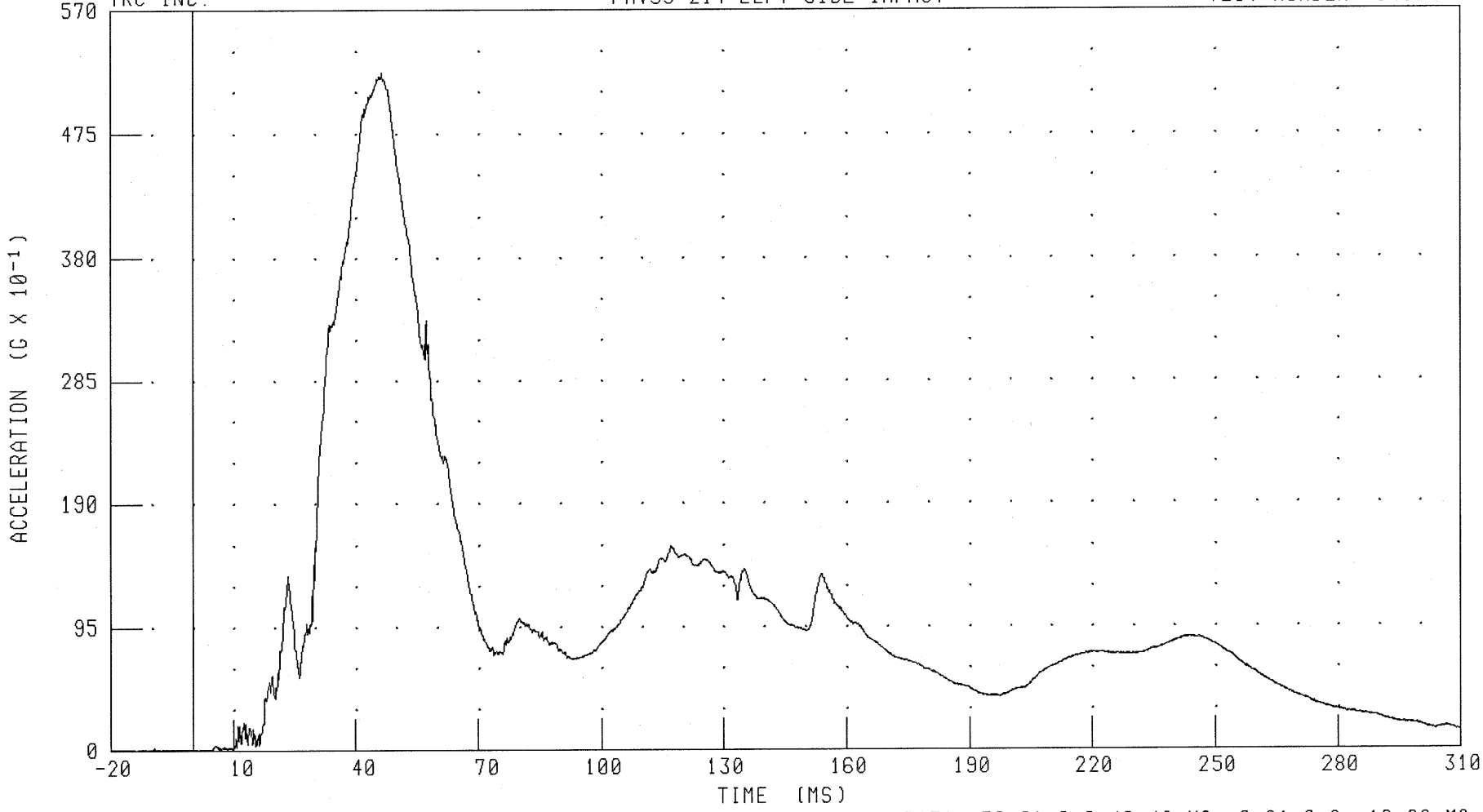
PEAK DATA: 52.75 KM/H @ 310.00 MS; -0.01 KM/H @ 12.16 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER HEAD RESULTANT REDUNDANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



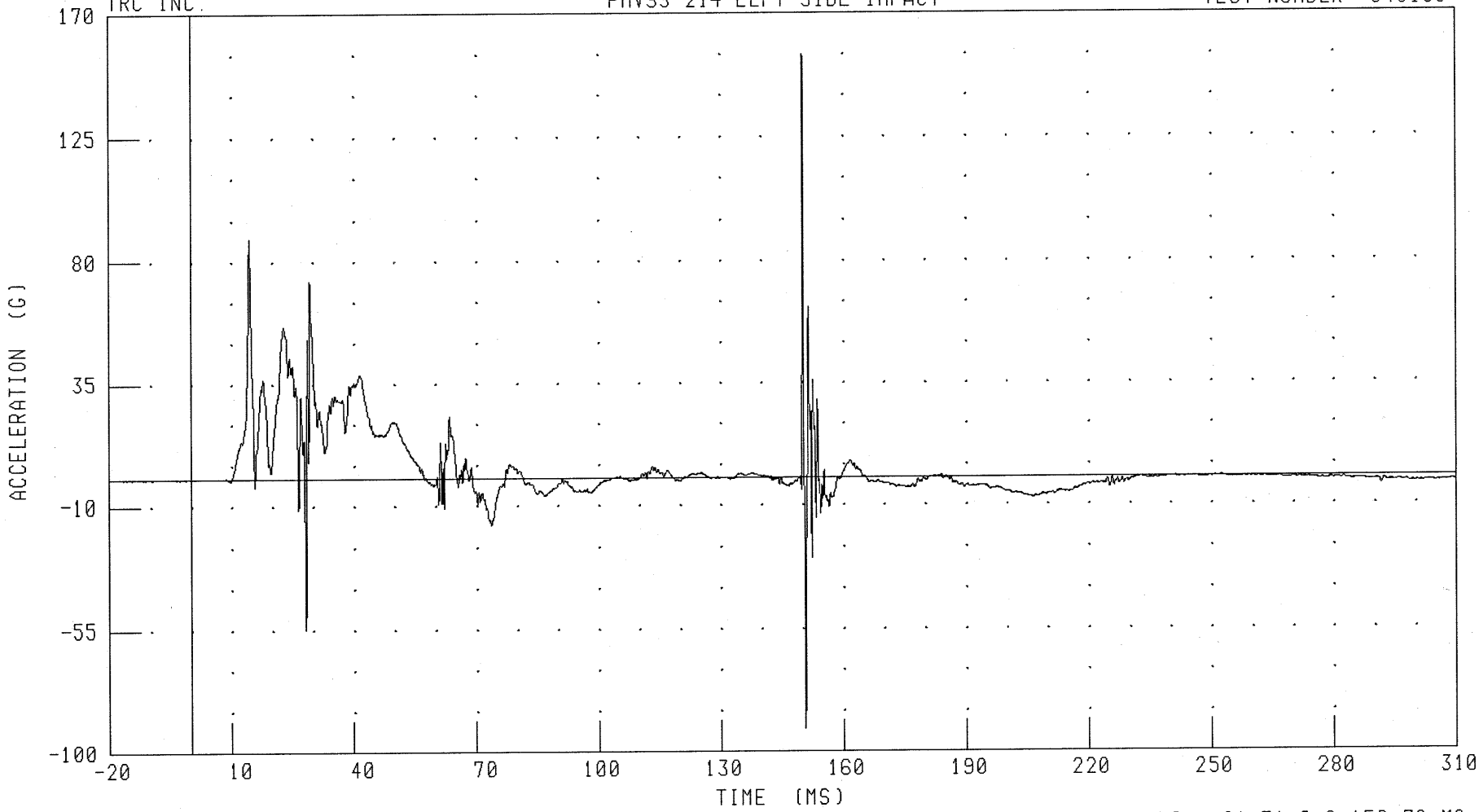
CHANNEL: HEDRR1 FILTER: CH. CLASS 1000 PEAK DATA: 52.21 G @ 46.48 MS; 0.01 G @ -19.28 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

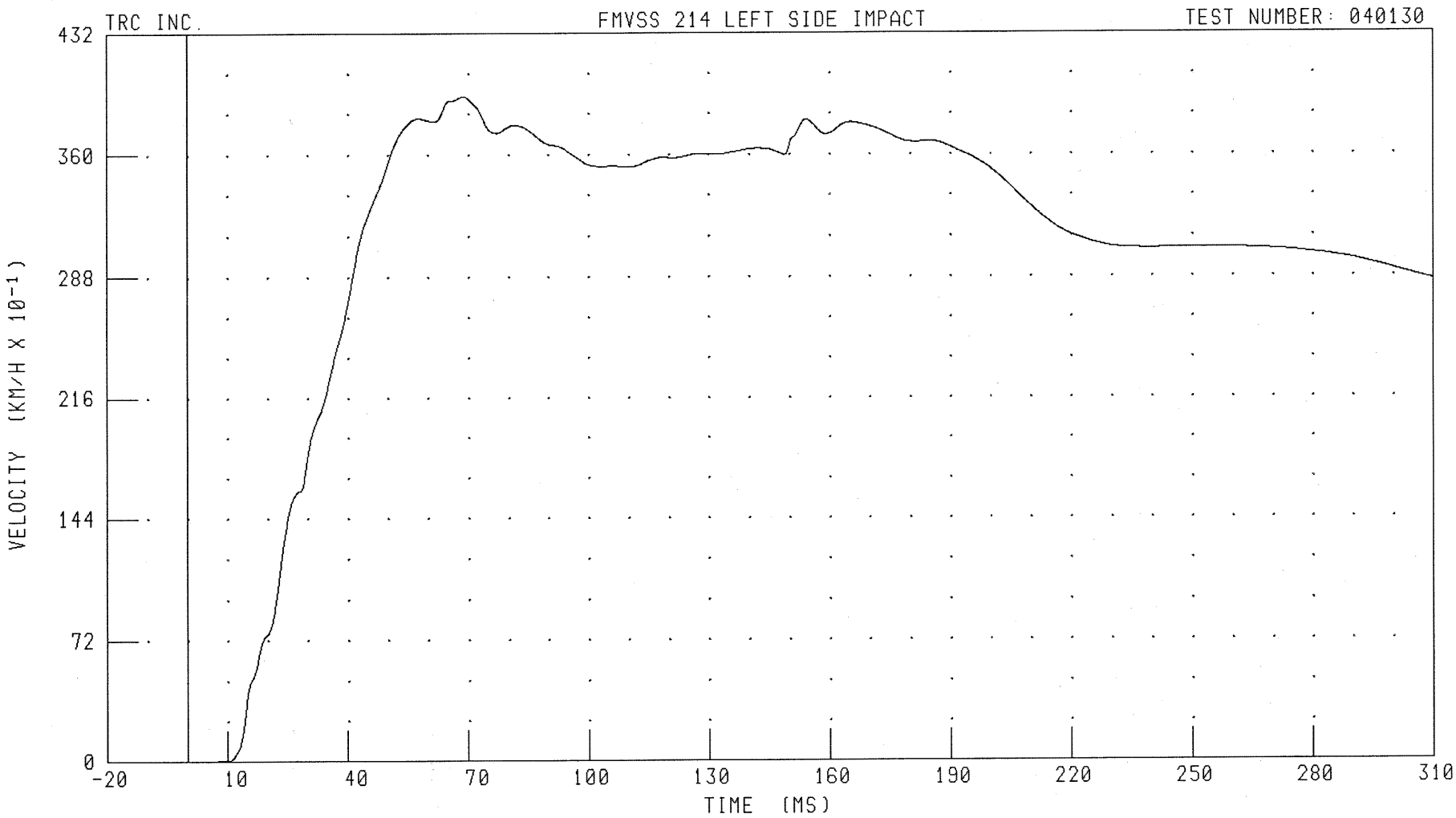


CHANNEL: LURYR1 FILTER: CH. CLASS 1000

PEAK DATA: 154.99 G @ 150.24 MS; -91.51 G @ 150.72 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
DRIVER UPPER RIB Y-AXIS REDUNDANT VELOCITY

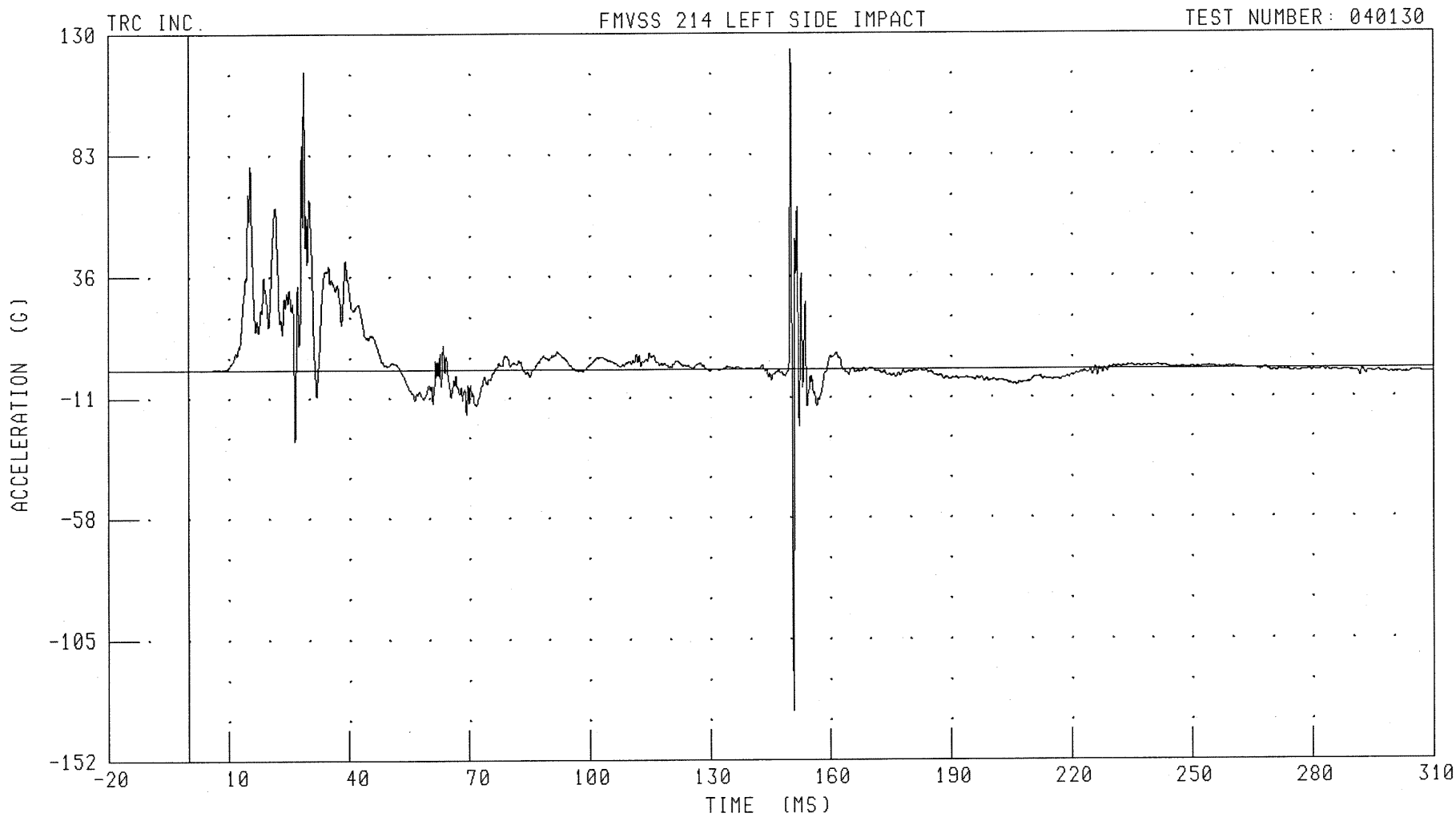


CHANNEL: LURYVI FILTER: CH. CLASS 180 PEAK DATA: 39.43 KM/H @ 68.88 MS; 0.00 KM/H @ 1.60 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION



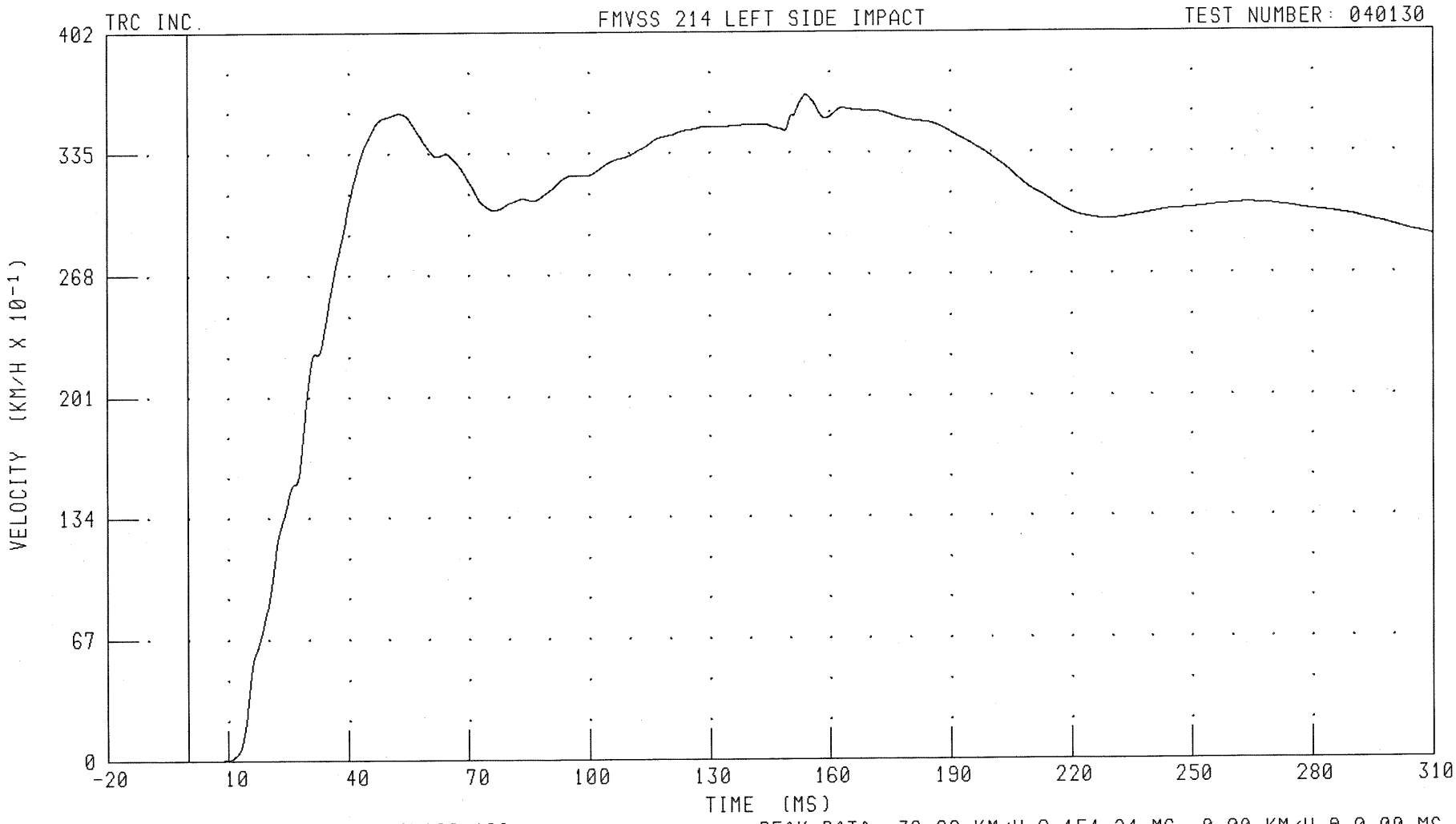
CHANNEL: LLRYR1 FILTER: CH. CLASS 1000

PEAK DATA: 123.80 G @ 150.24 MS; -132.82 G @ 150.88 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER RIB Y-AXIS REDUNDANT VELOCITY

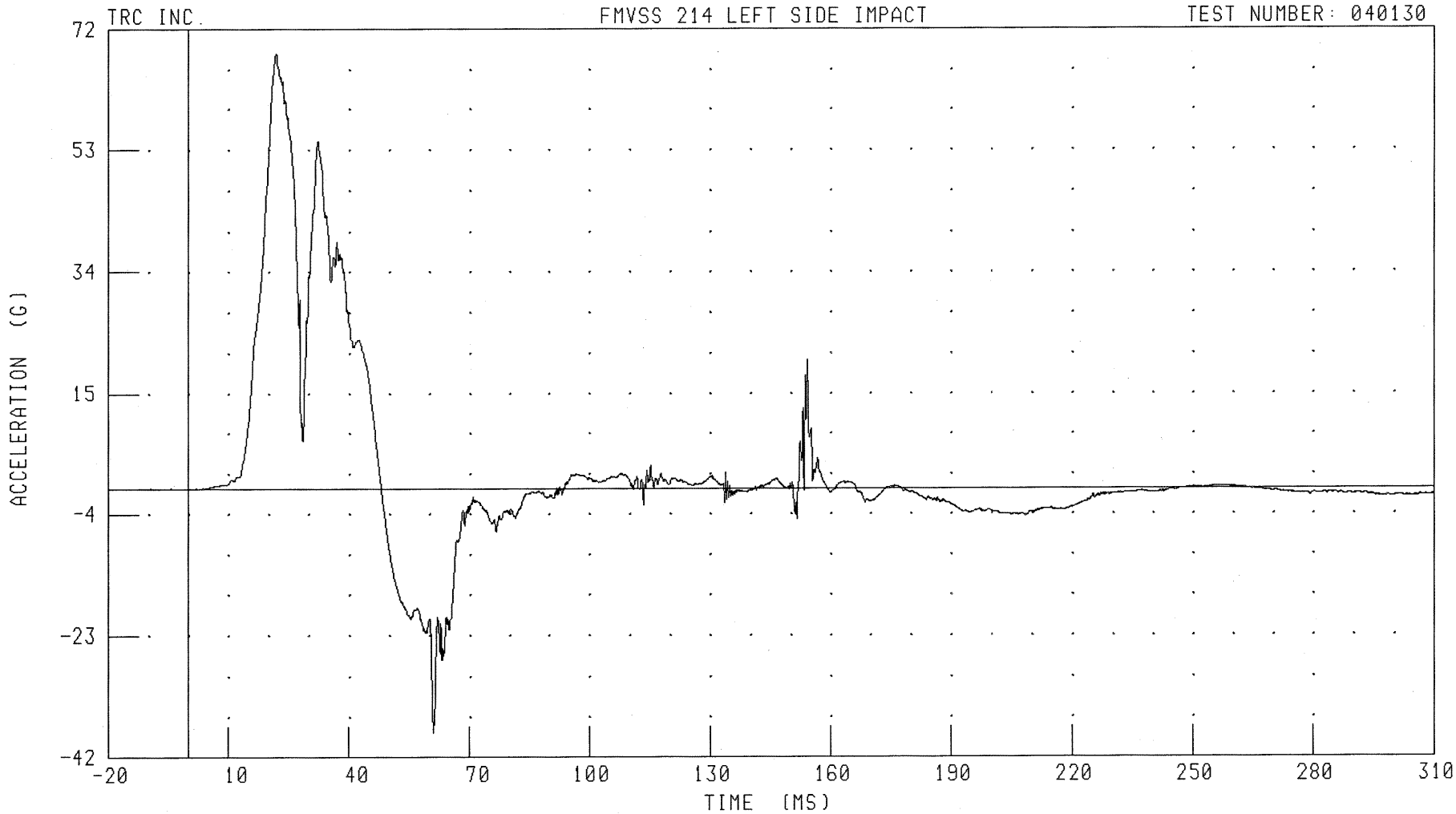


CHANNEL: LLRYVI FILTER: CH. CLASS 180

PEAK DATA: 36.68 KM/H @ 154.24 MS; 0.00 KM/H @ 0.00 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

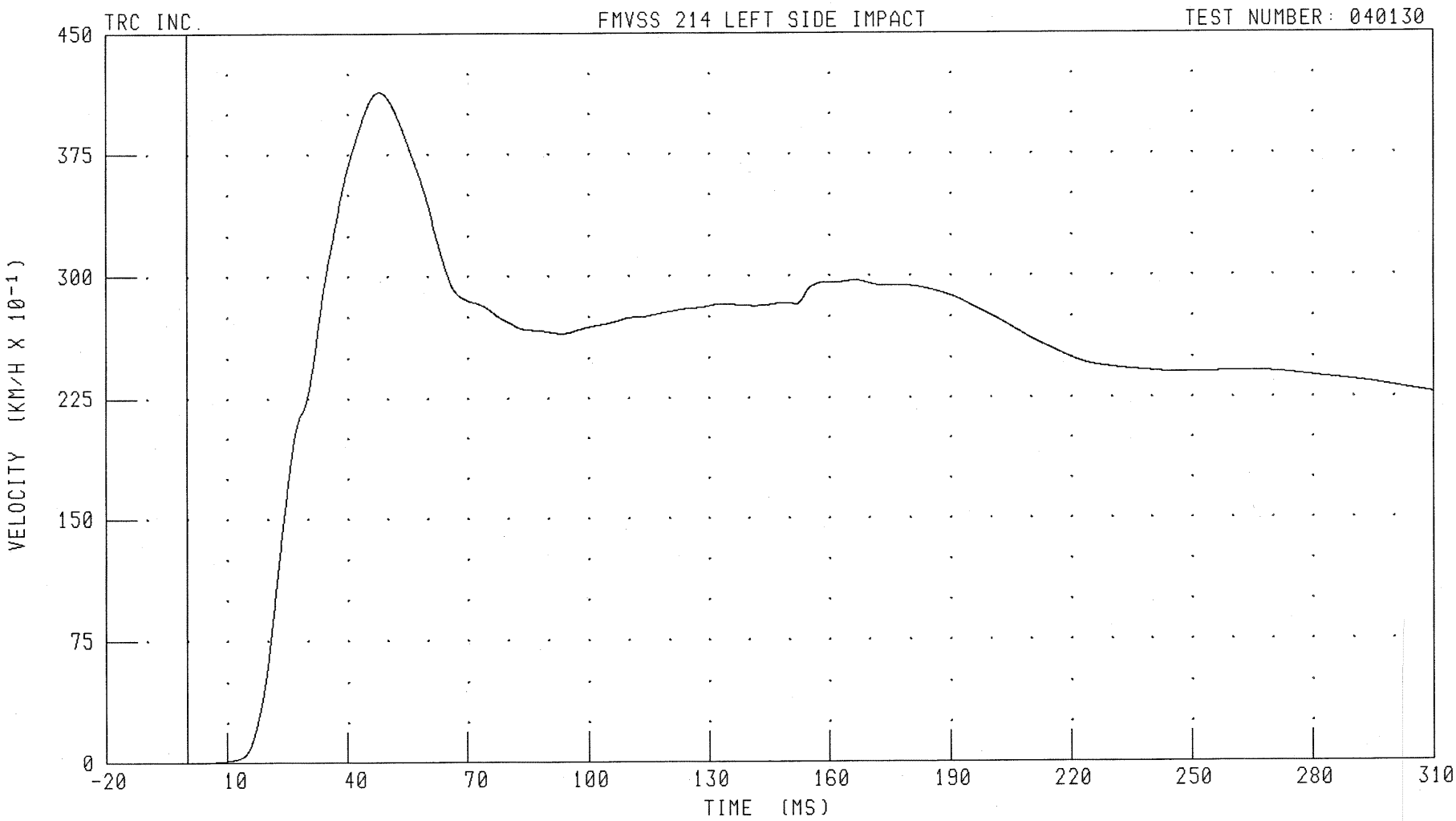


CHANNEL: T12YR1 FILTER: CH. CLASS 1000 PEAK DATA: 68.20 G @ 21.92 MS; -38.22 G @ 60.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

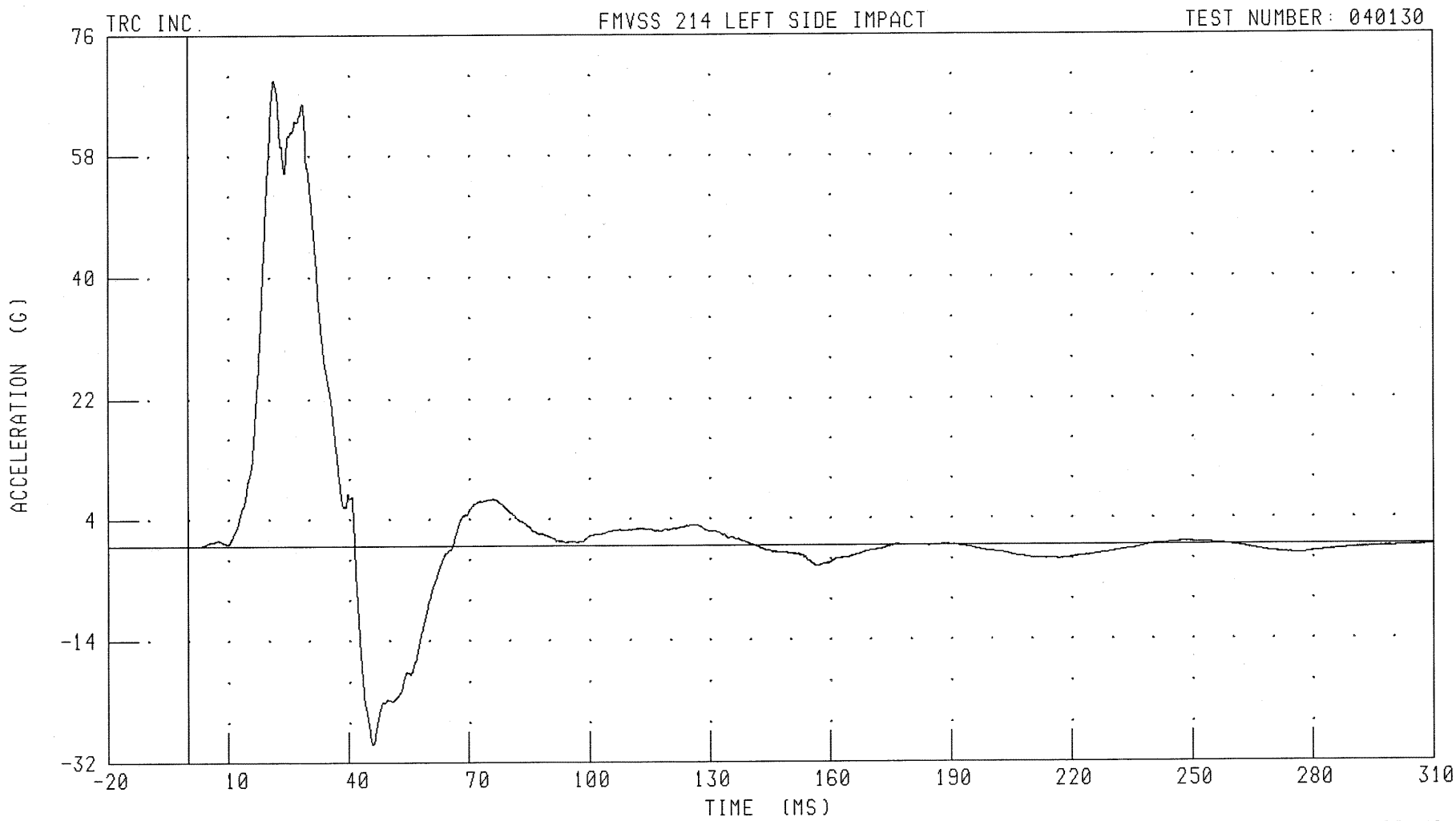


CHANNEL: T12YVI FILTER: CH. CLASS 180

PEAK DATA: 41.38 KM/H @ 48.00 MS; 0.00 KM/H @ 0.64 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION

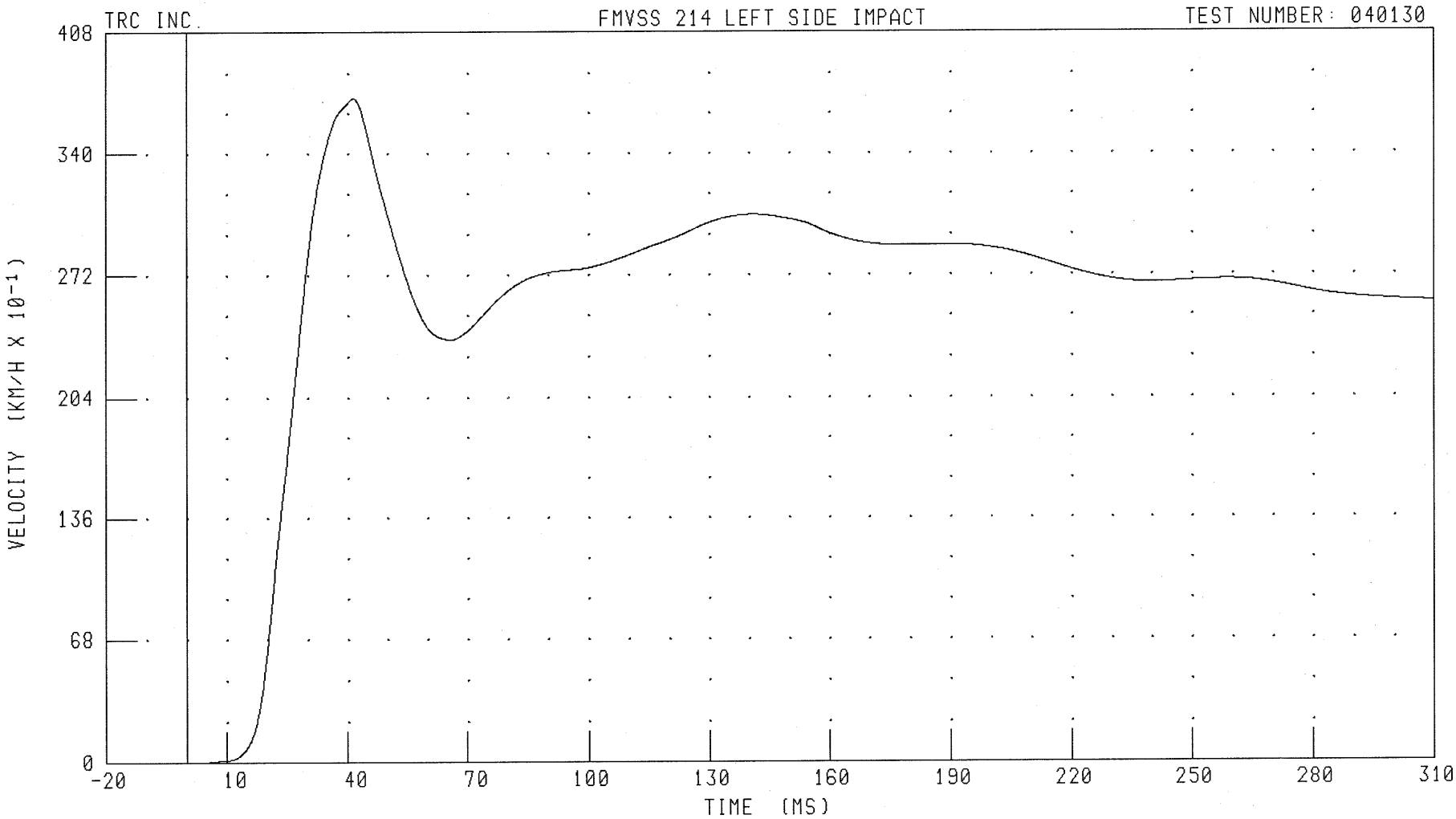


CHANNEL: PEVYR1 FILTER: CH. CLASS 1000 PEAK DATA: 69.28 G @ 21.28 MS; -29.31 G @ 46.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER PELVIS Y-AXIS REDUNDANT VELOCITY



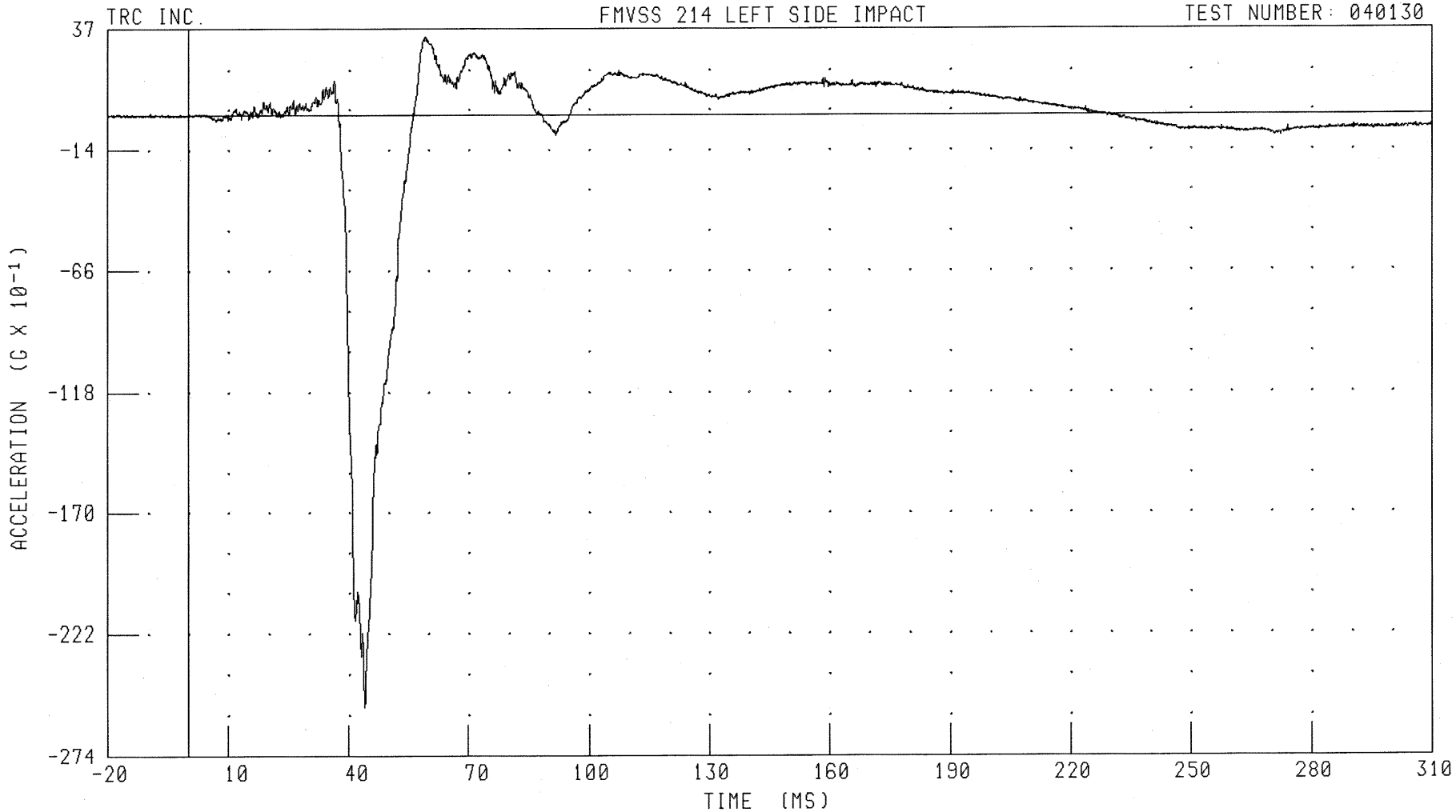
CHANNEL: PEVYVI FILTER: CH. CLASS 180

PEAK DATA: 37.12 KM/H @ 41.44 MS; 0.00 KM/H @ 0.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD X-AXIS REDUNDANT ACCELERATION

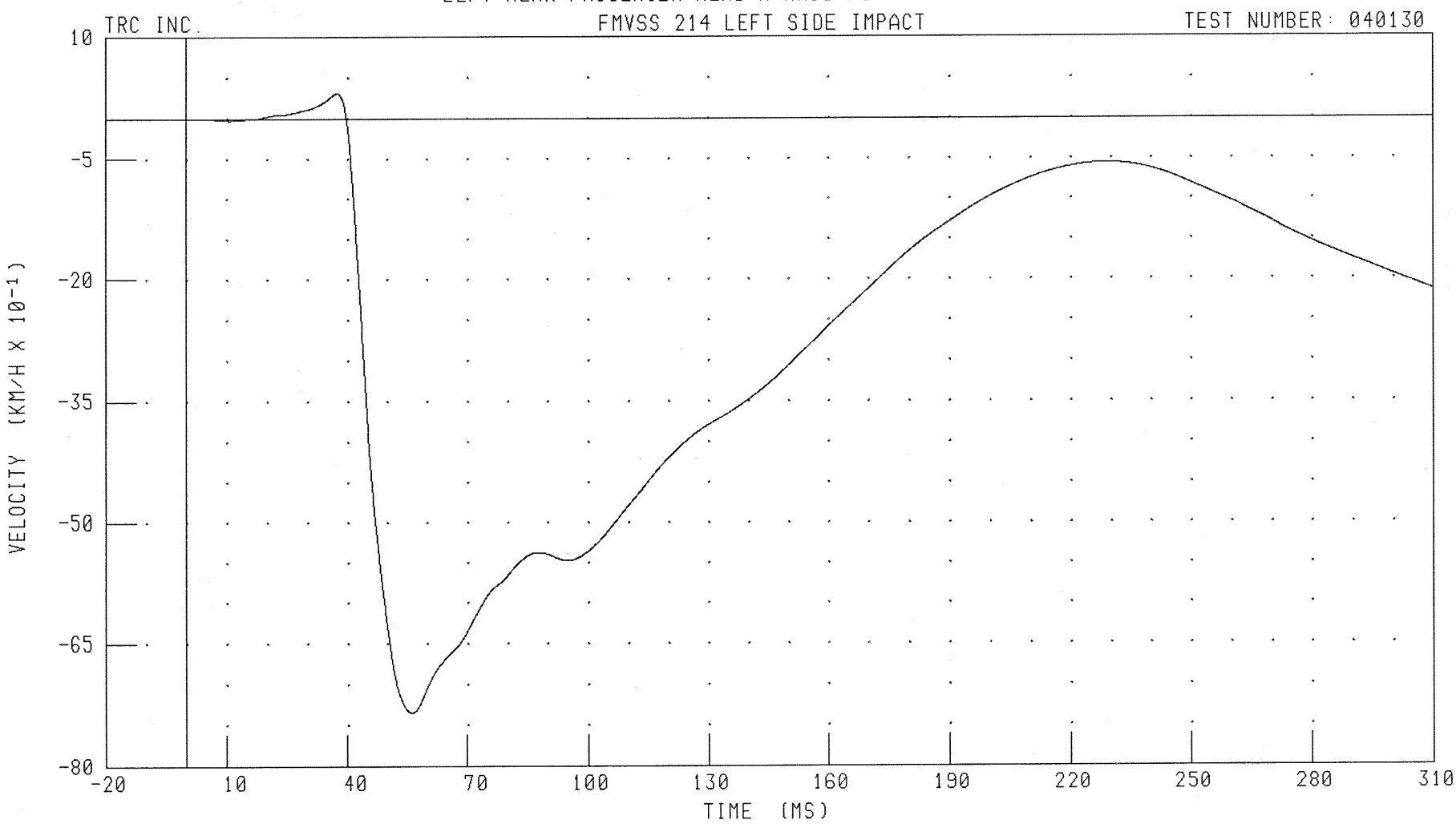


CHANNEL: HEDXR4 FILTER: CH. CLASS 1000 PEAK DATA: 3.37 G @ 59.20 MS; -25.43 G @ 44.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD X-AXIS REDUNDANT VELOCITY



CHANNEL: HEDXVJ FILTER: CH. CLASS 180

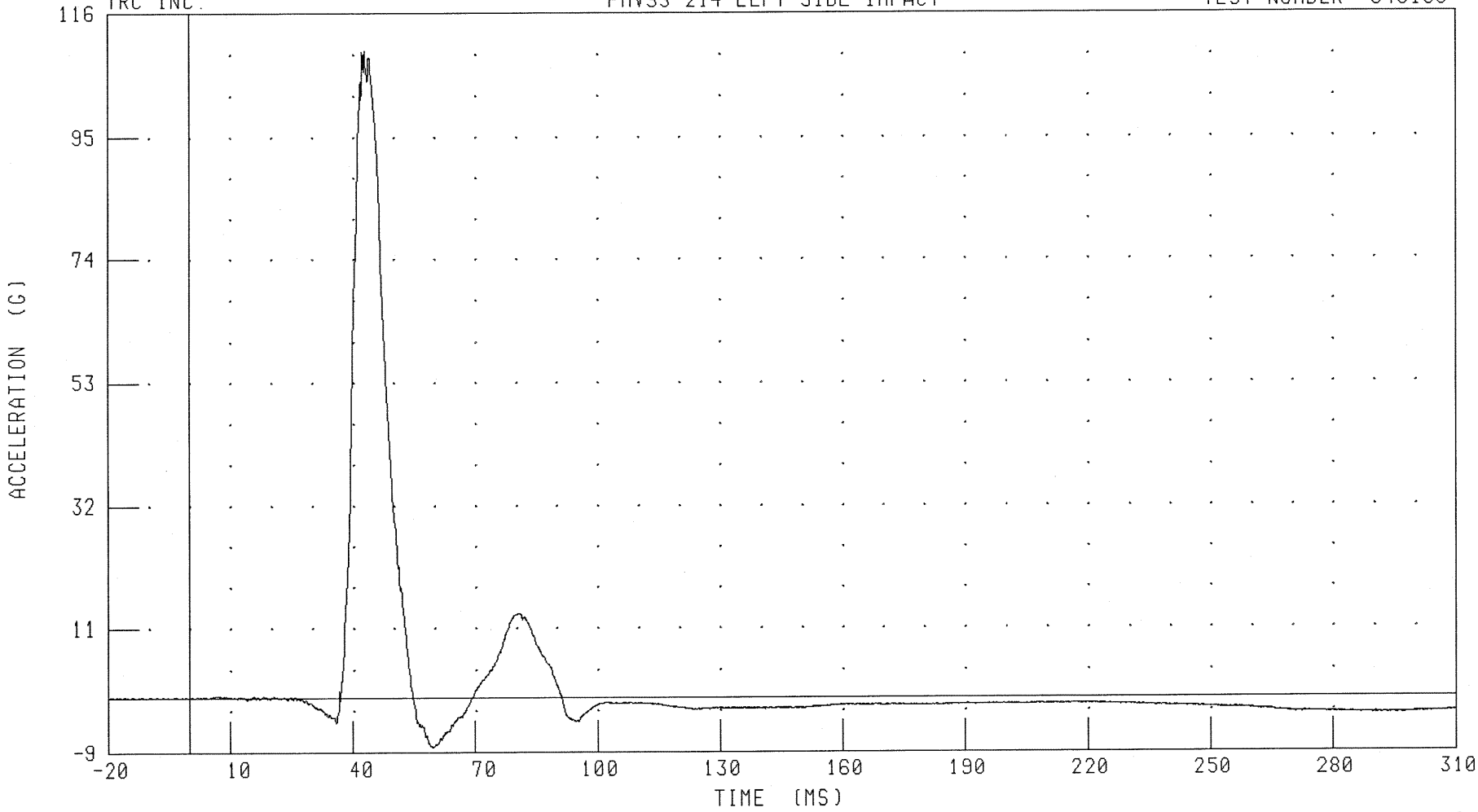
PEAK DATA: 0.31 KM/H @ 37.44 MS; -7.35 KM/H @ 56.24 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Y-AXIS REDUNDANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



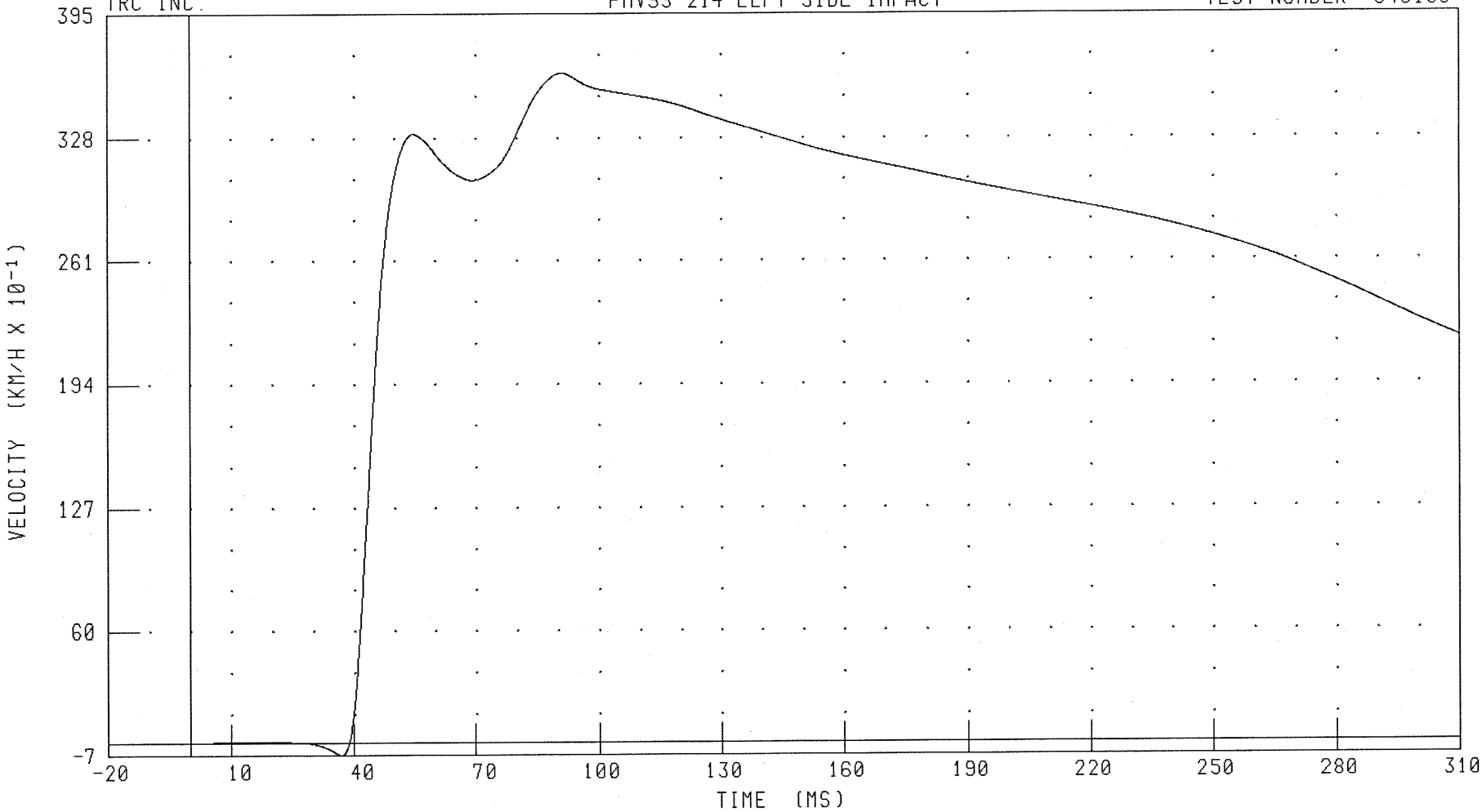
CHANNEL: HEDYR4 FILTER: CH. CLASS 1000 PEAK DATA: 110.27 G @ 42.88 MS; -8.49 G @ 59.76 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Y-AXIS REDUNDANT VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

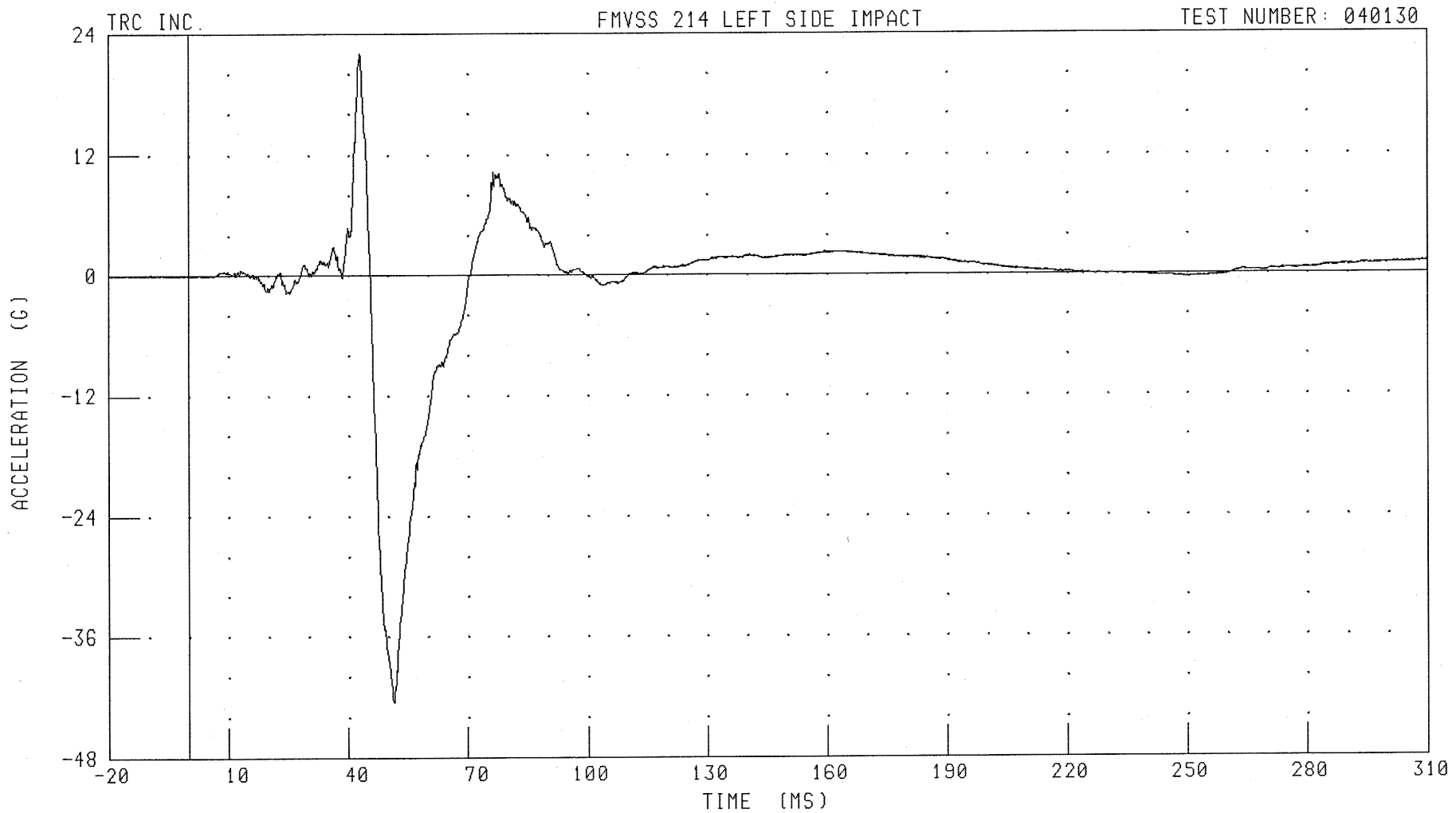


CHANNEL: HEDYVJ FILTER: CH. CLASS 180 PEAK DATA: 36.28 KM/H @ 91.12 MS; -0.69 KM/H @ 36.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Z-AXIS REDUNDANT ACCELERATION



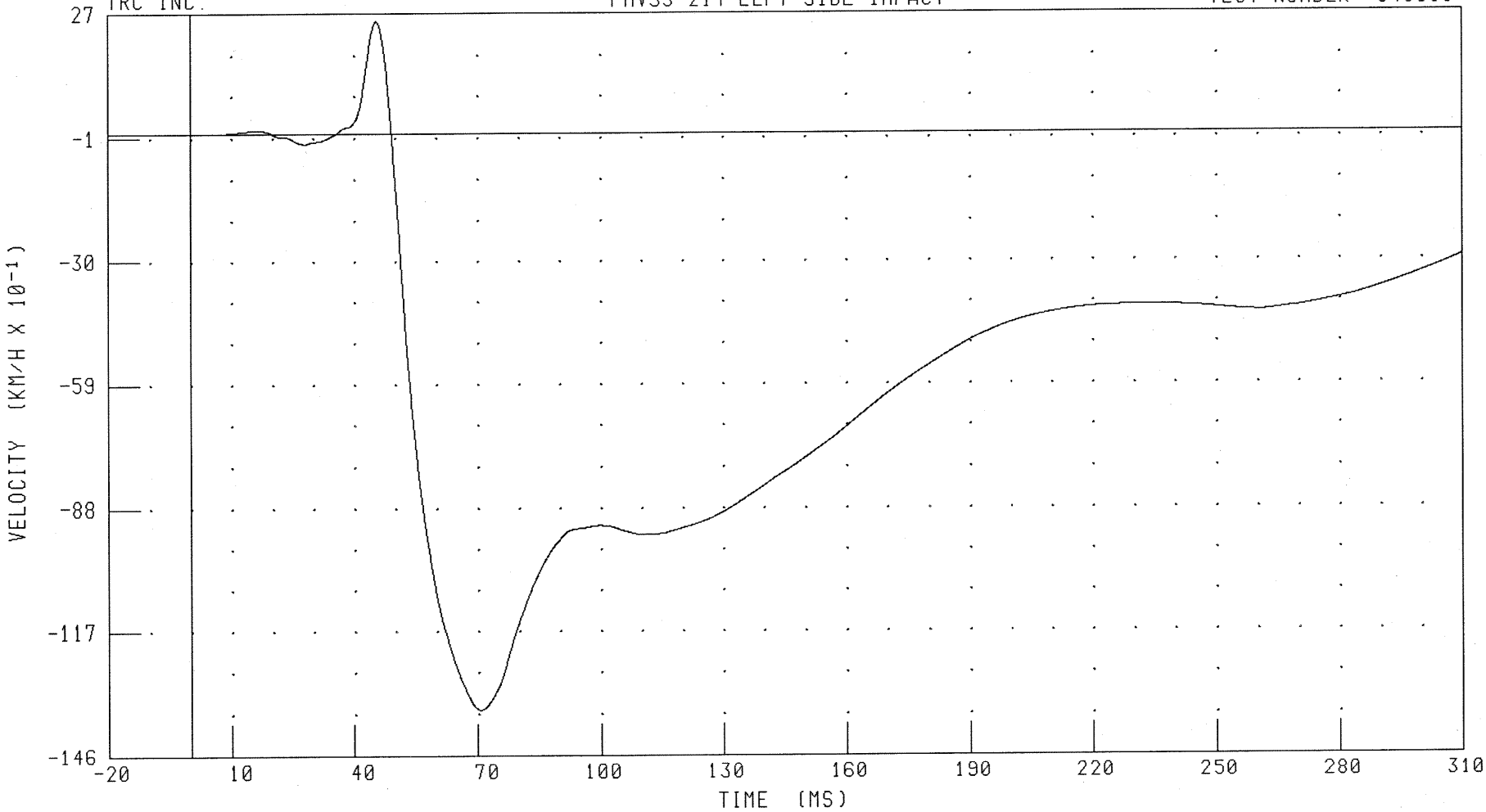
CHANNEL: HEDZR4 FILTER: CH. CLASS 1000 PEAK DATA: 22.10 G @ 43.04 MS; -42.52 G @ 51.52 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD Z-AXIS REDUNDANT VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

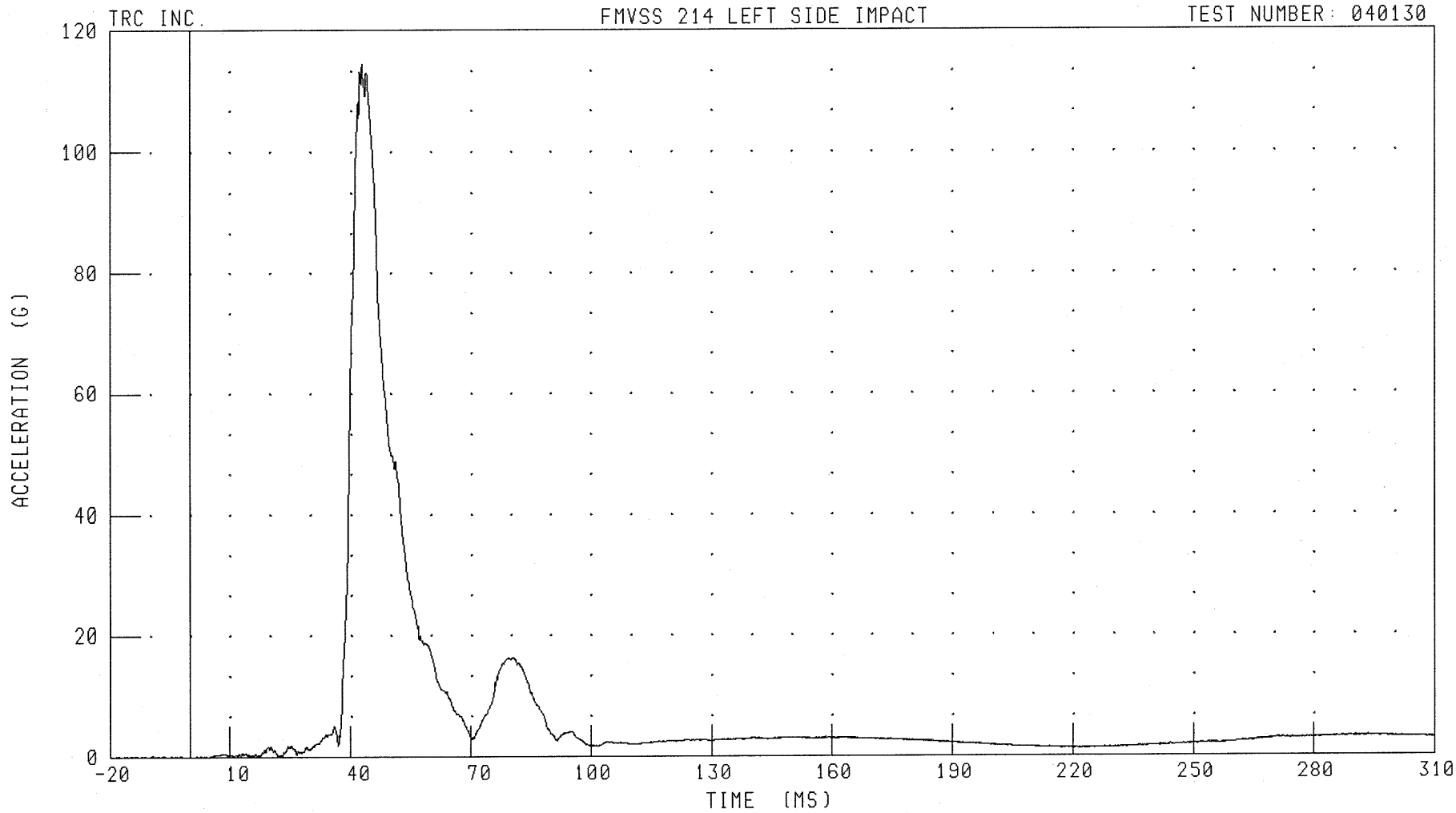


CHANNEL: HEDZVJ FILTER: CH. CLASS 180

PEAK DATA: 2.62 KM/H @ 45.60 MS; -13.54 KM/H @ 70.64 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER HEAD RESULTANT REDUNDANT ACCELERATION

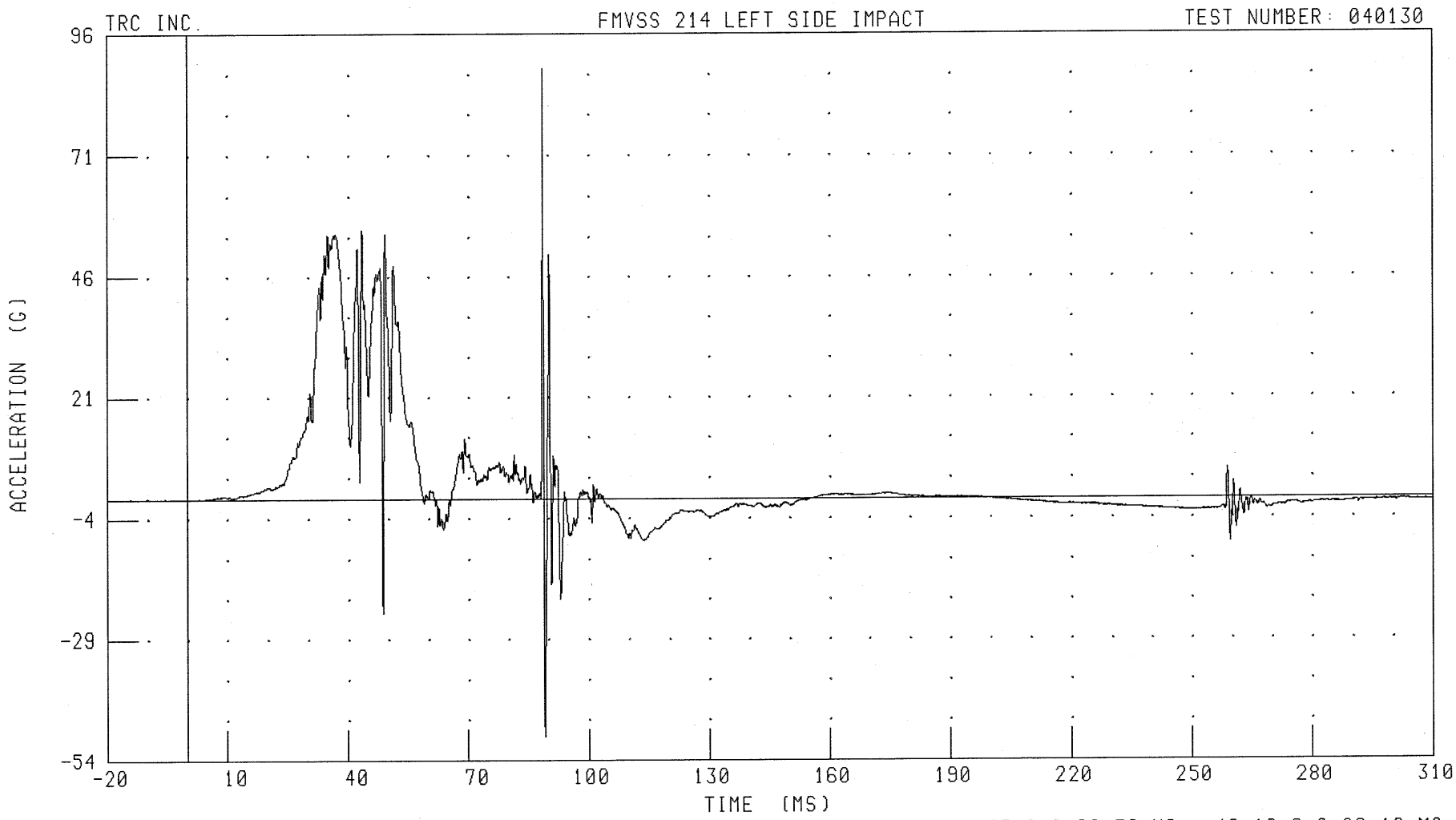


CHANNEL: HEDRR4 FILTER: CH. CLASS 1000

PEAK DATA: 114.46 G @ 42.88 MS; 0.01 G @ -18.72 MS

040130

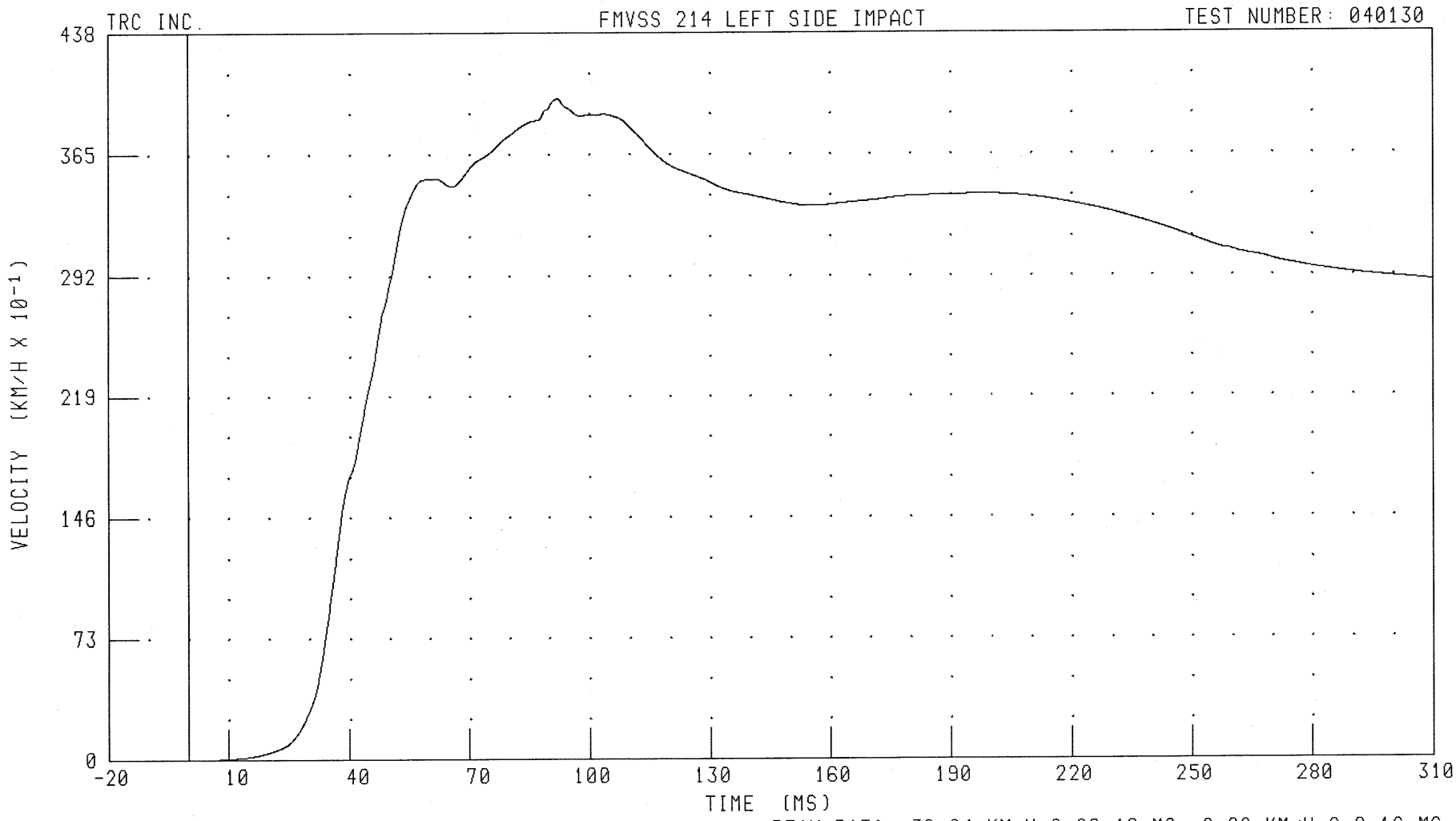
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION



CHANNEL: LURYR4 FILTER: CH. CLASS 1000 PEAK DATA: 88.75 G @ 88.72 MS; -49.18 G @ 89.12 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT VELOCITY

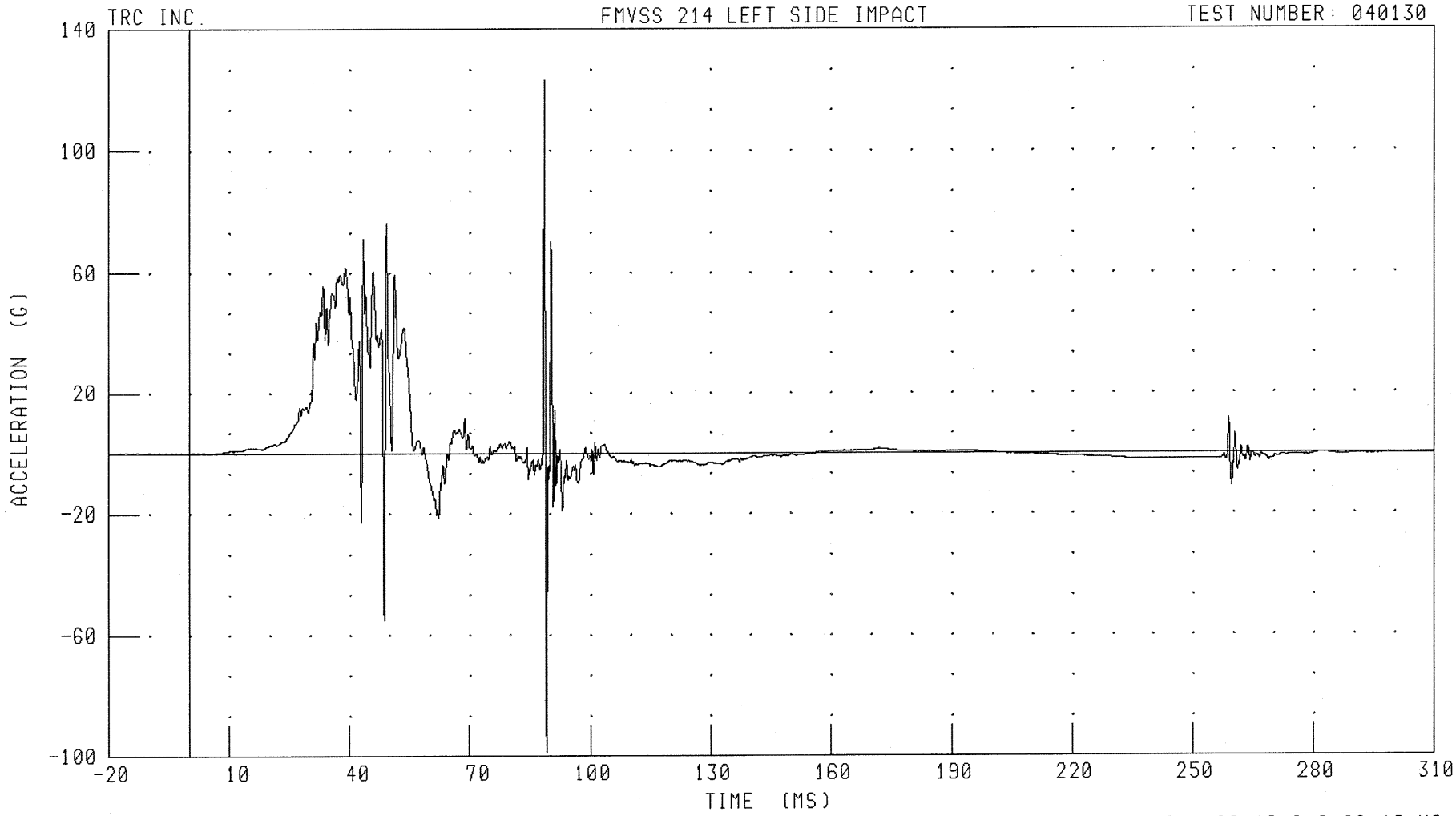


CHANNEL: LURYVJ FILTER: CH. CLASS 180

PEAK DATA: 39.84 KM/H @ 92.16 MS; 0.00 KM/H @ 0.16 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

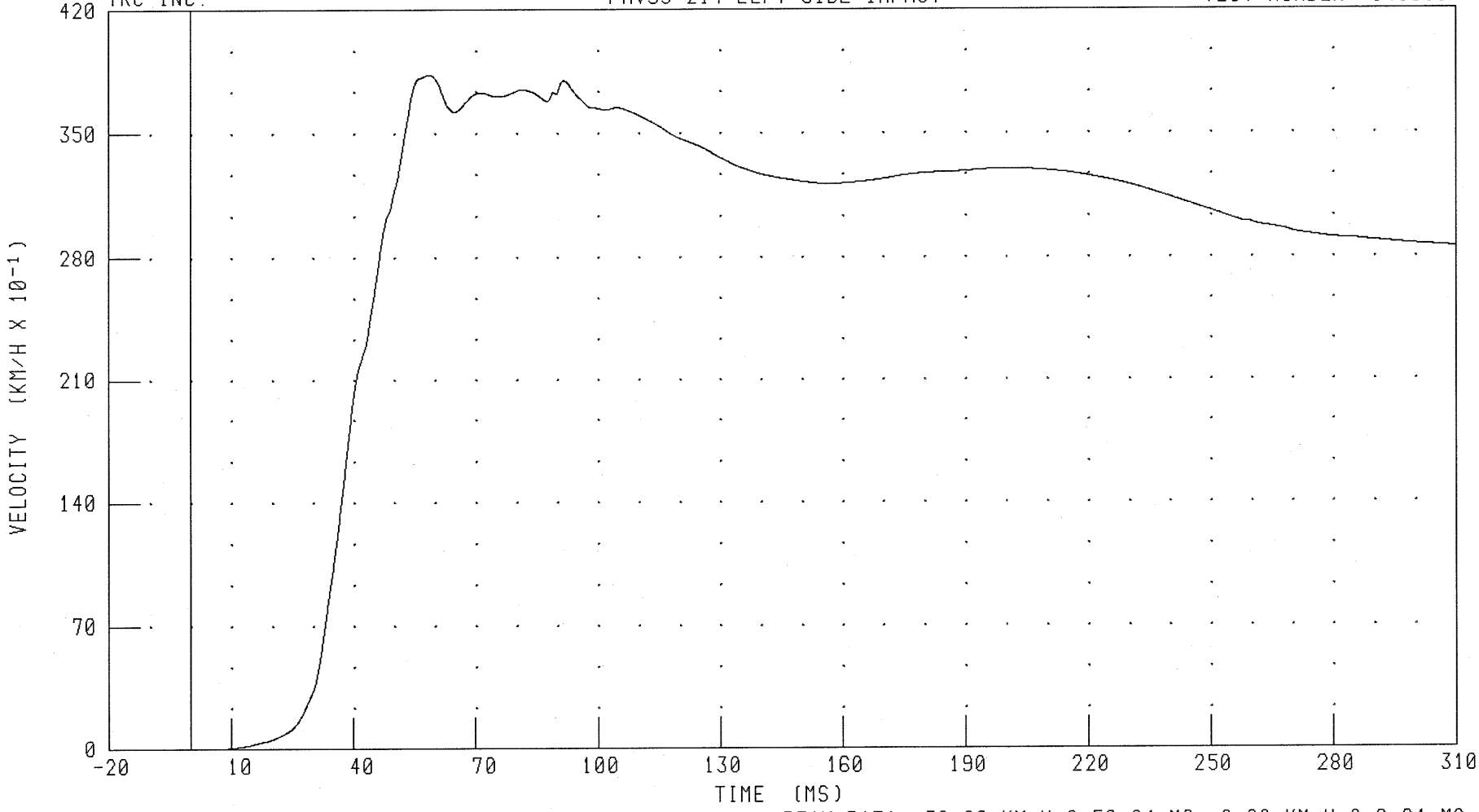


CHANNEL: LLRYR4 FILTER: CH. CLASS 1000 PEAK DATA: 123.27 G @ 88.64 MS; -99.16 G @ 89.12 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

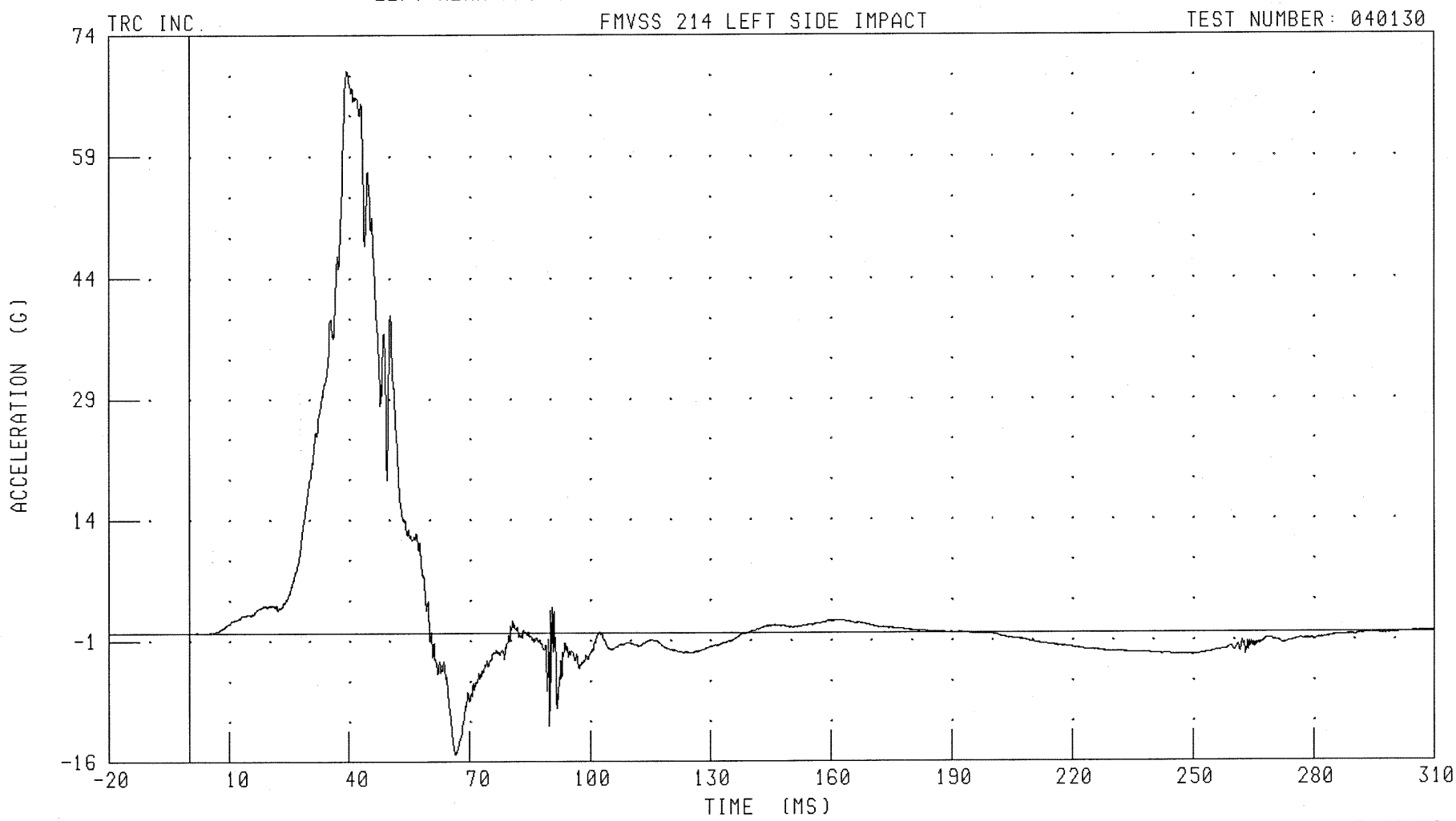


CHANNEL: LLRYVJ FILTER: CH. CLASS 180 PEAK DATA: 38.29 KM/H @ 58.64 MS; 0.00 KM/H @ 6.24 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

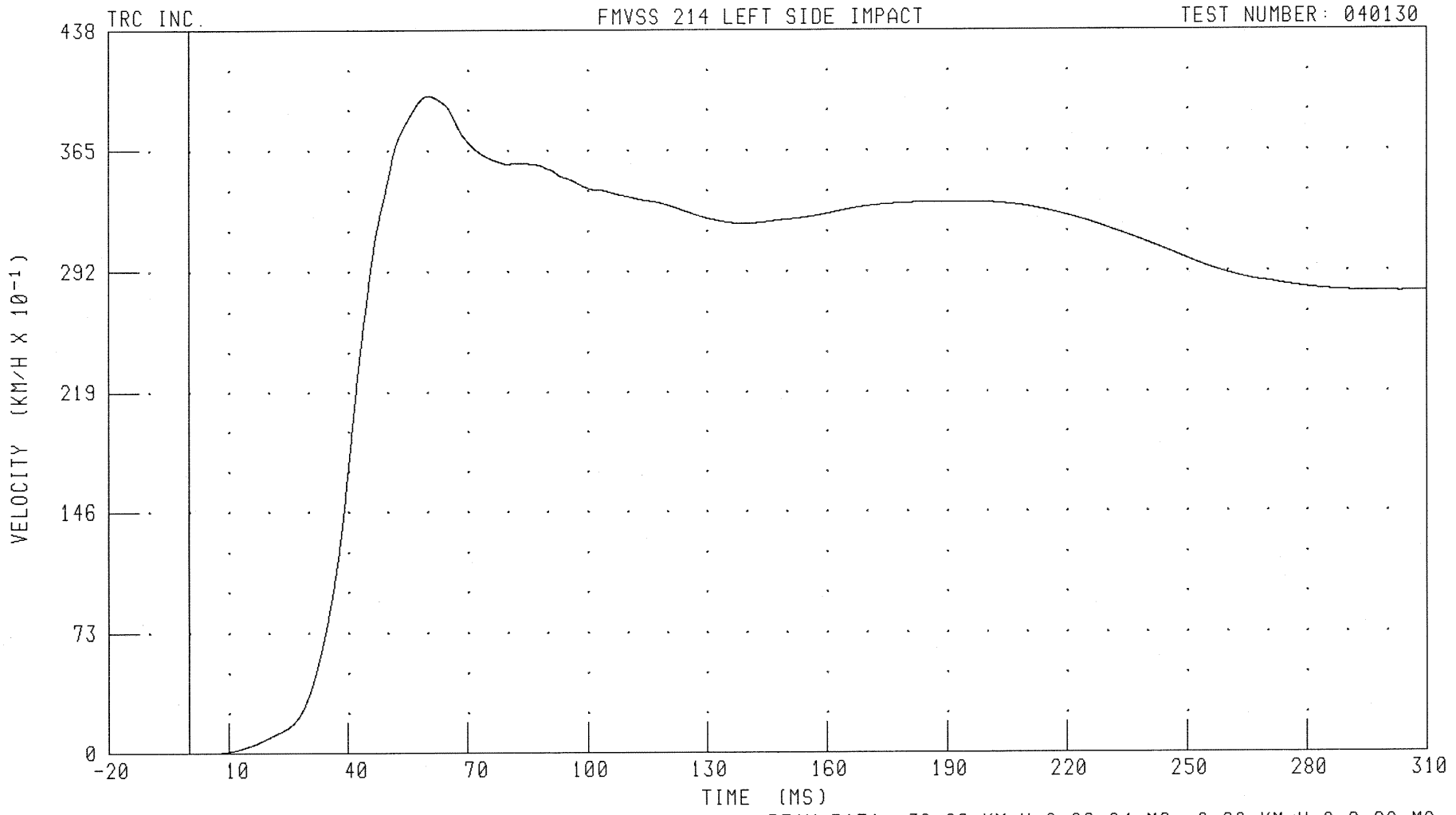
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION



CHANNEL: T12YR4 FILTER: CH. CLASS 1000 PEAK DATA: 69.60 G @ 39.44 MS; -15.18 G @ 66.40 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

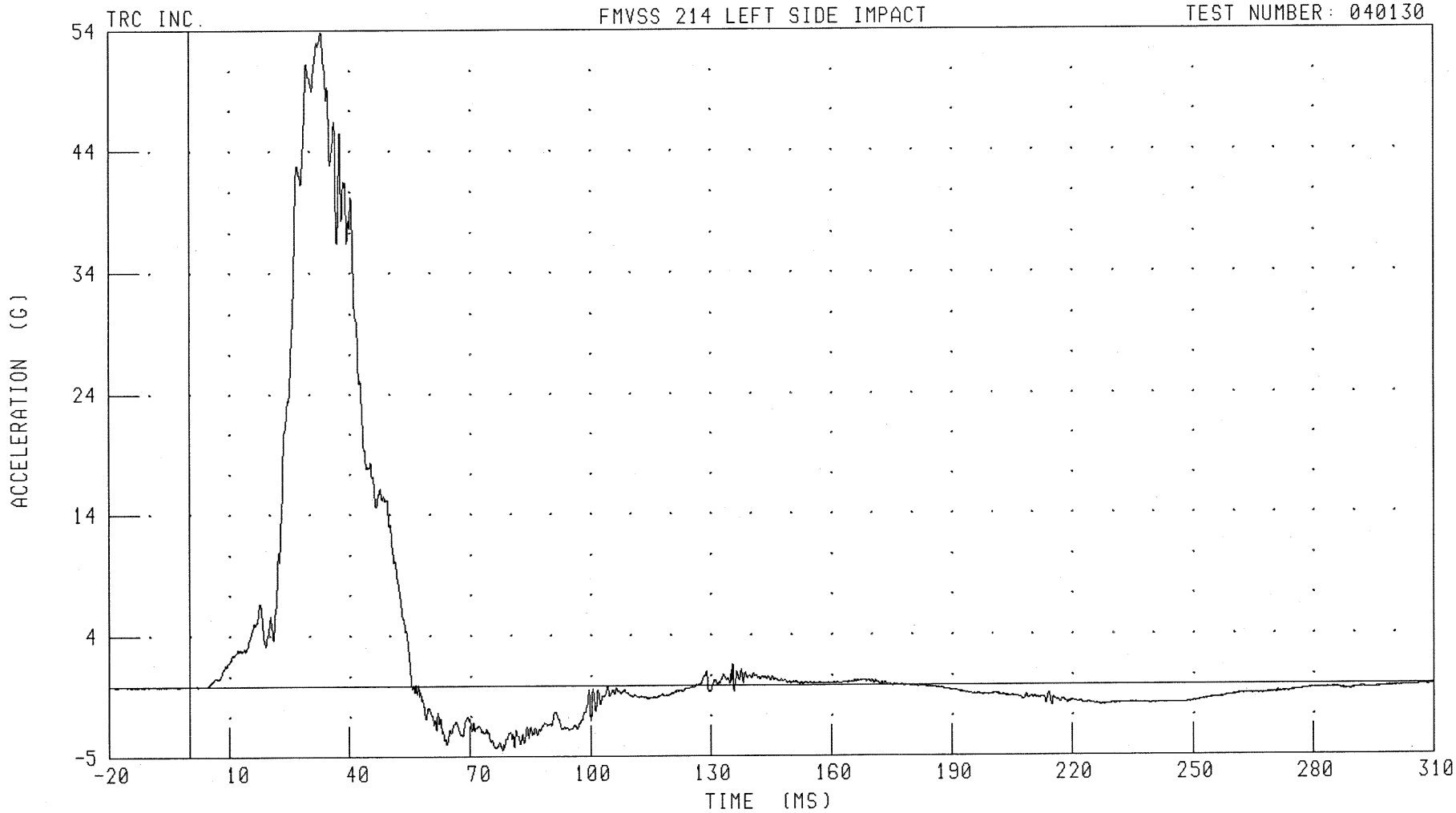


CHANNEL: T12YVJ FILTER: CH. CLASS 180 PEAK DATA: 39.82 KM/H @ 60.24 MS; 0.00 KM/H @ 0.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

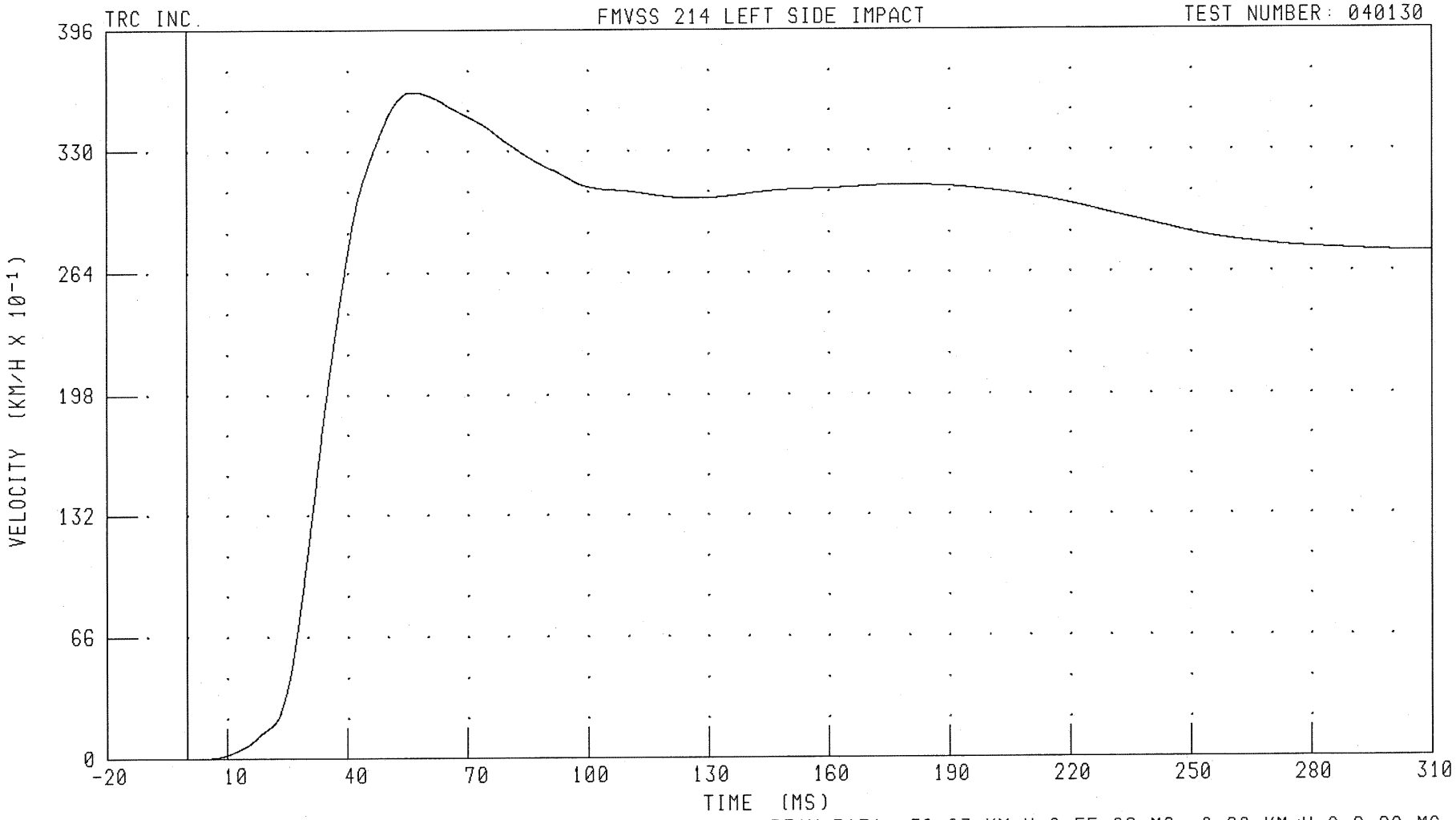
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION



CHANNEL: PEVYR4 FILTER: CH. CLASS 1000 PEAK DATA: 54.03 G @ 33.12 MS; -5.34 G @ 78.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT VELOCITY



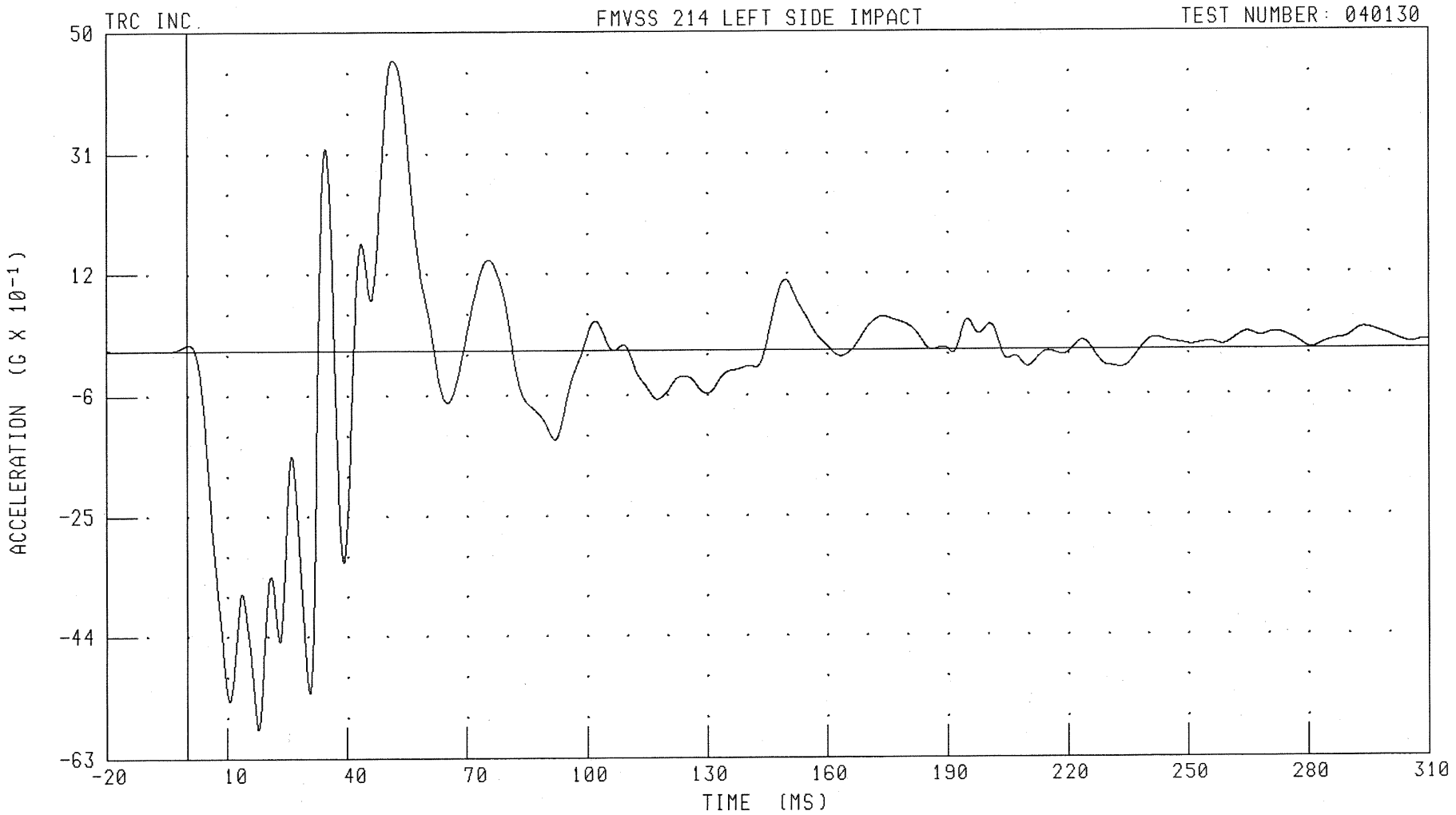
CHANNEL: PEVYVJ FILTER: CH. CLASS 180 PEAK DATA: 36.23 KM/H @ 55.92 MS; 0.00 KM/H @ 0.00 MS

040130

Test Vehicle Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT SIDE SILL AT FRONT SEAT X-AXIS ACCELERATION

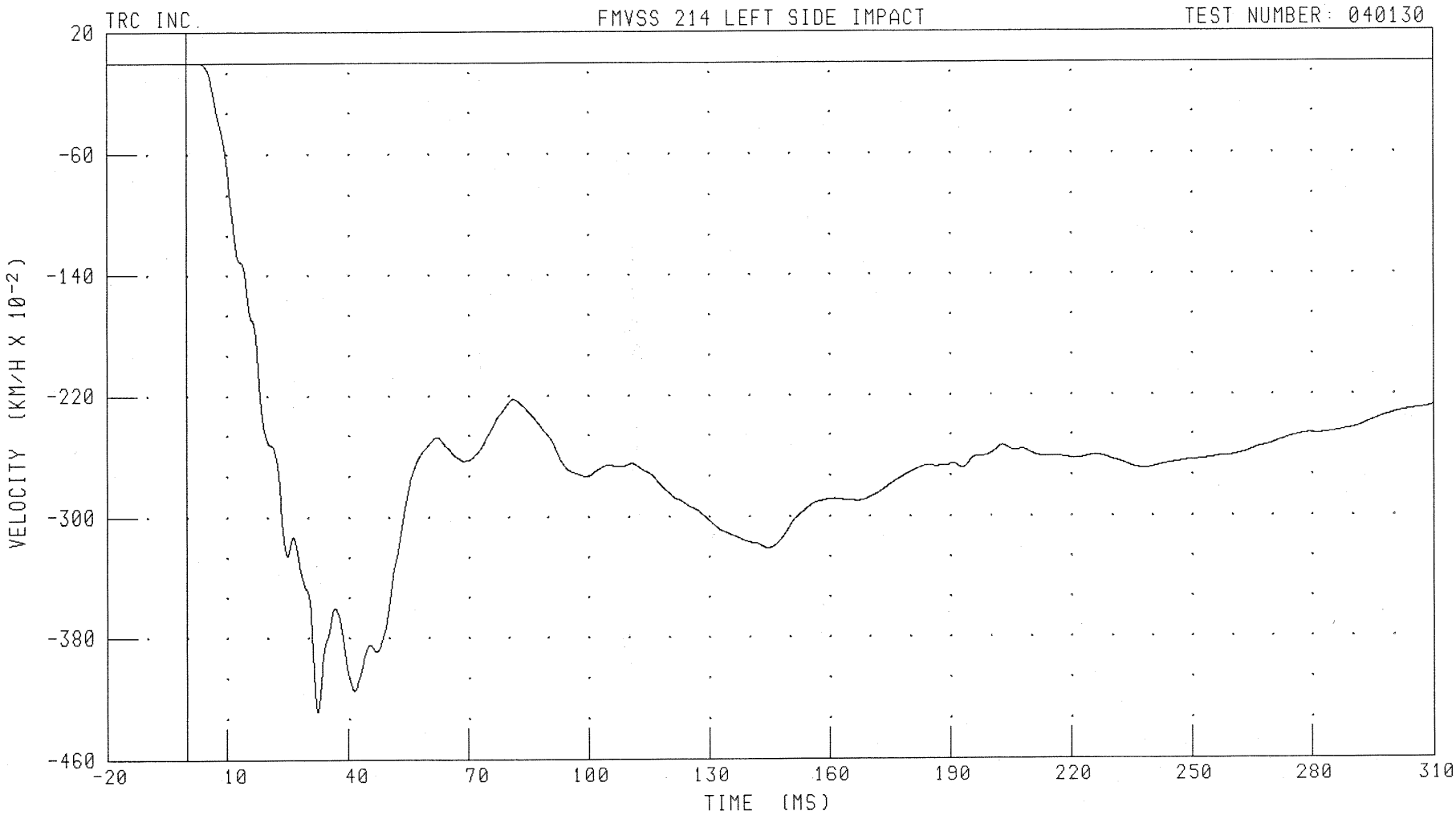


CHANNEL: RFSXG1 FILTER: CH. CLASS 60 PEAK DATA: 4.55 G @ 51.52 MS; -5.96 G @ 17.76 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT SIDE SILL AT FRONT SEAT X-AXIS VELOCITY



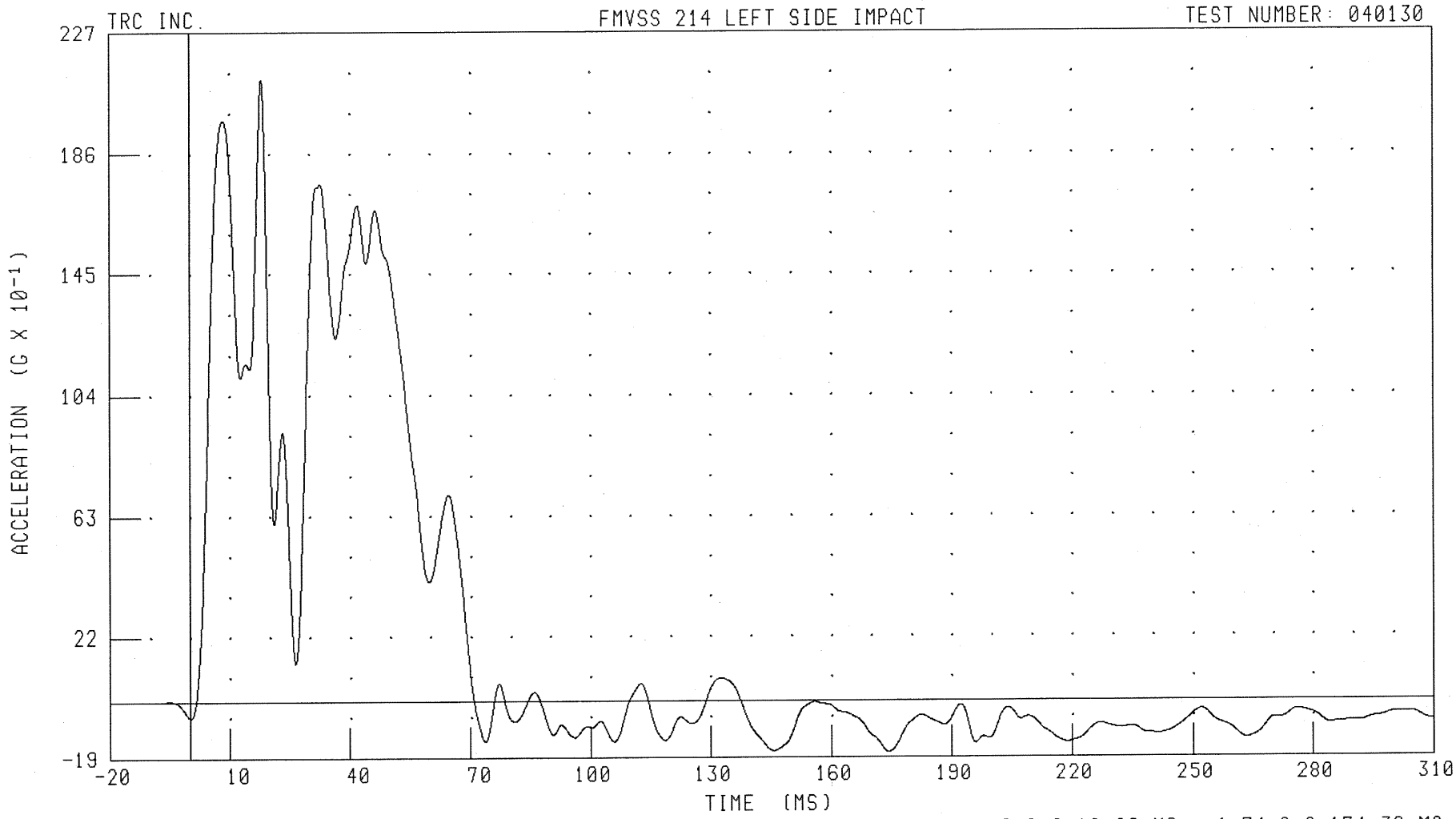
CHANNEL: RFSXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.00 KM/H @ 1.52 MS; -4.29 KM/H @ 32.40 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

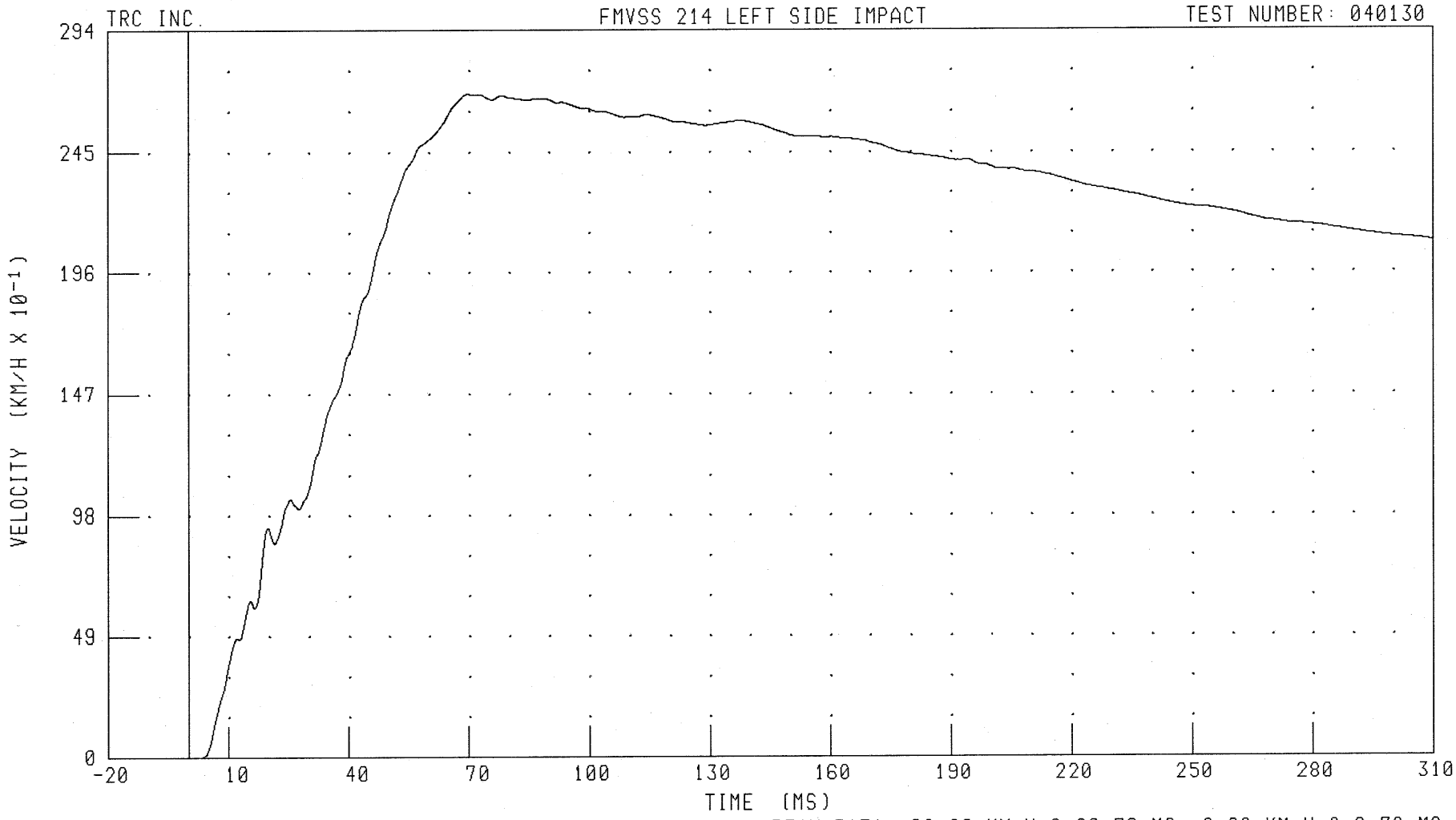
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION



CHANNEL: RFSYG1 FILTER: CH. CLASS 60 PEAK DATA: 21.12 G @ 18.08 MS; -1.74 G @ 174.32 MS

040130

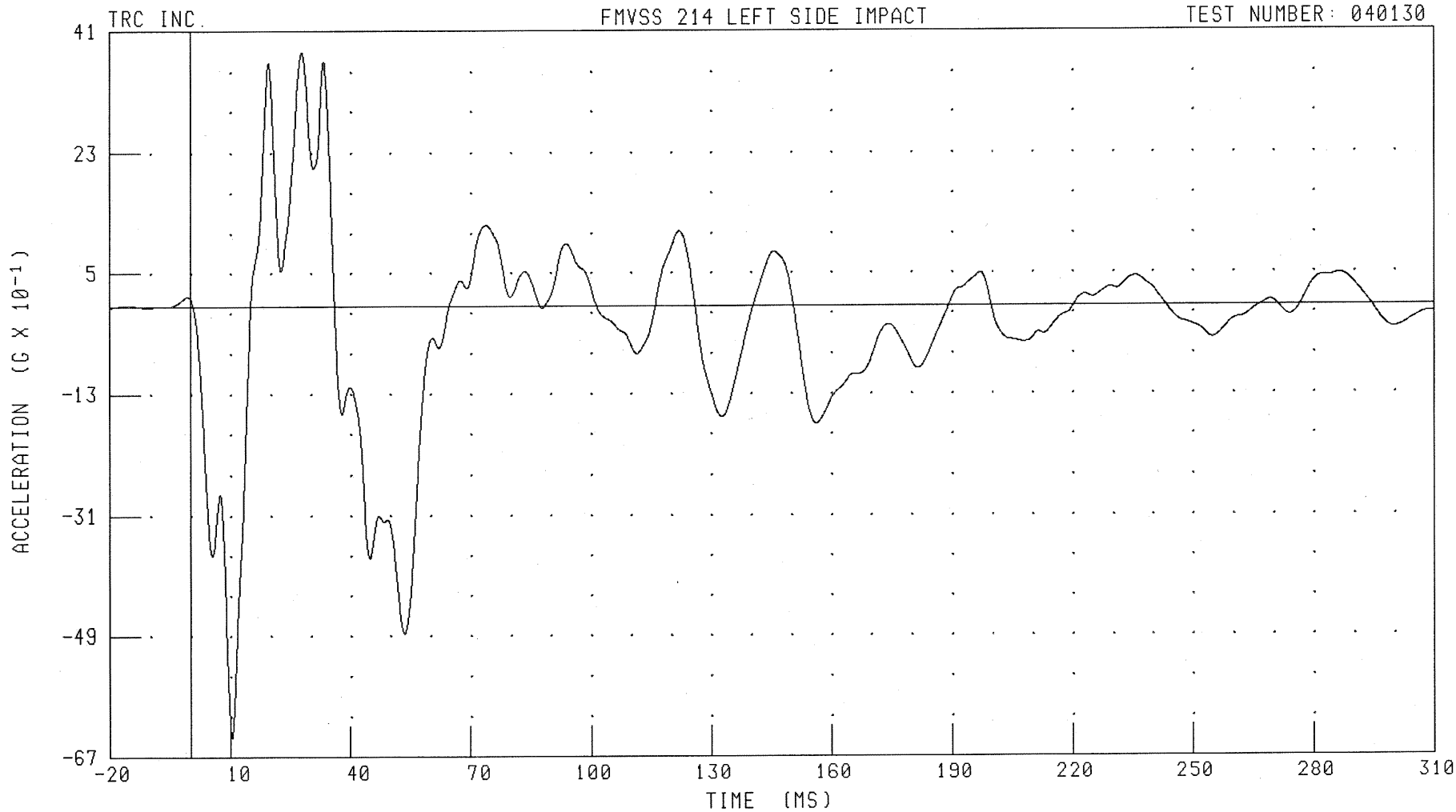
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY



040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

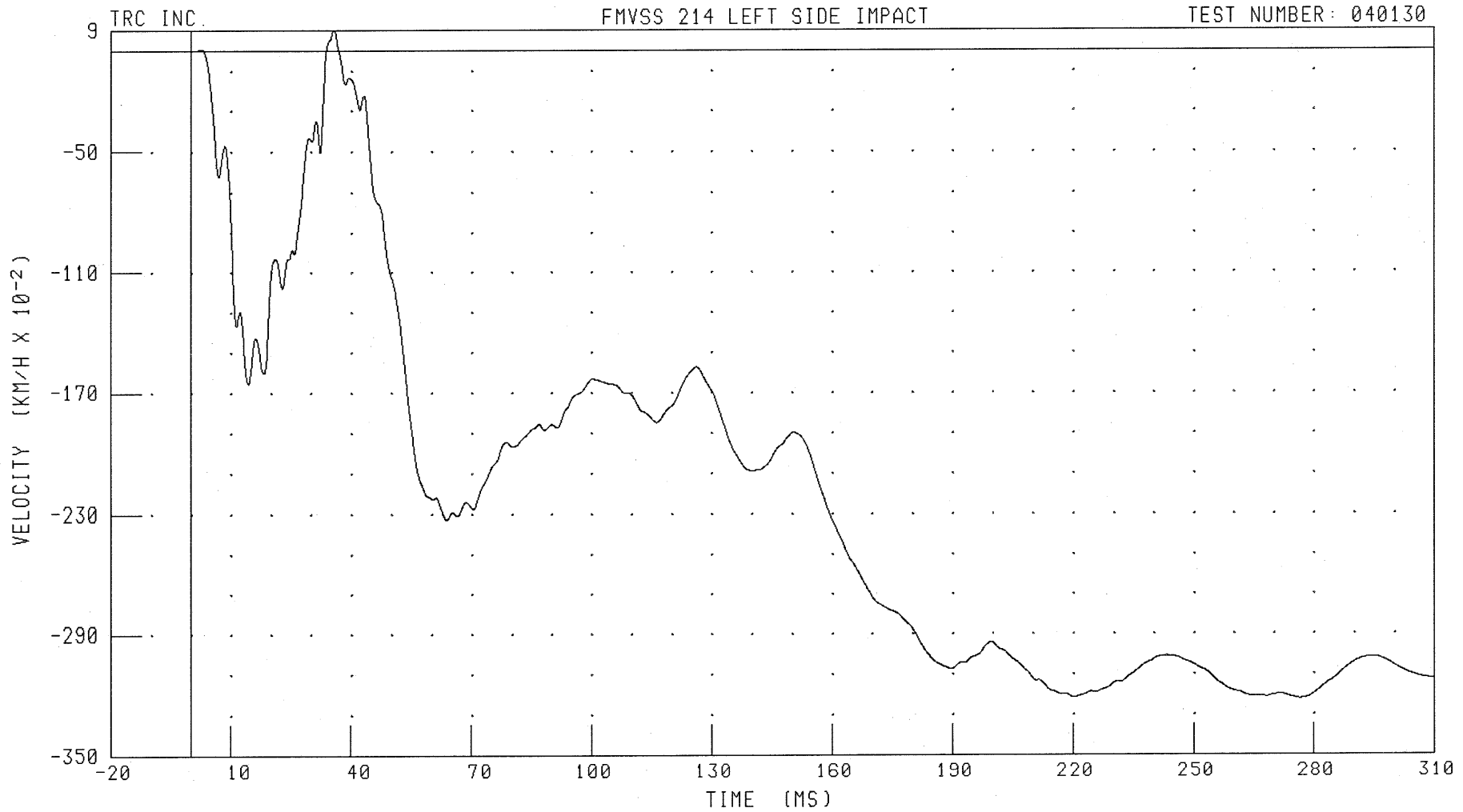
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS ACCELERATION



CHANNEL: RFSZG1 FILTER: CH. CLASS 60 PEAK DATA: 3.79 G @ 27.84 MS; -6.41 G @ 10.32 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS VELOCITY

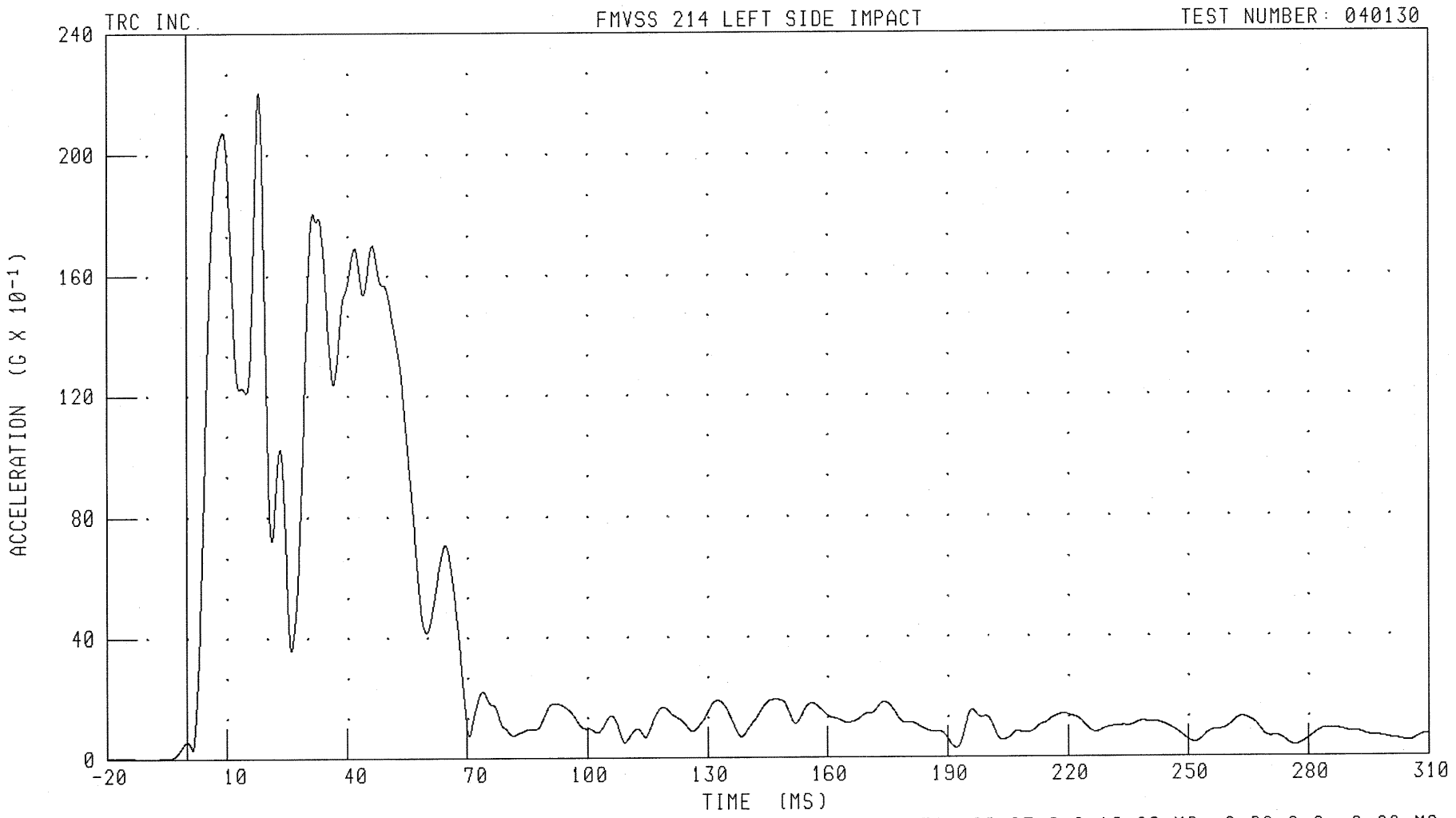


CHANNEL: RFSZV1 FILTER: CH. CLASS 180 PEAK DATA: 0.11 KM/H @ 35.84 MS; -3.22 KM/H @ 276.64 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

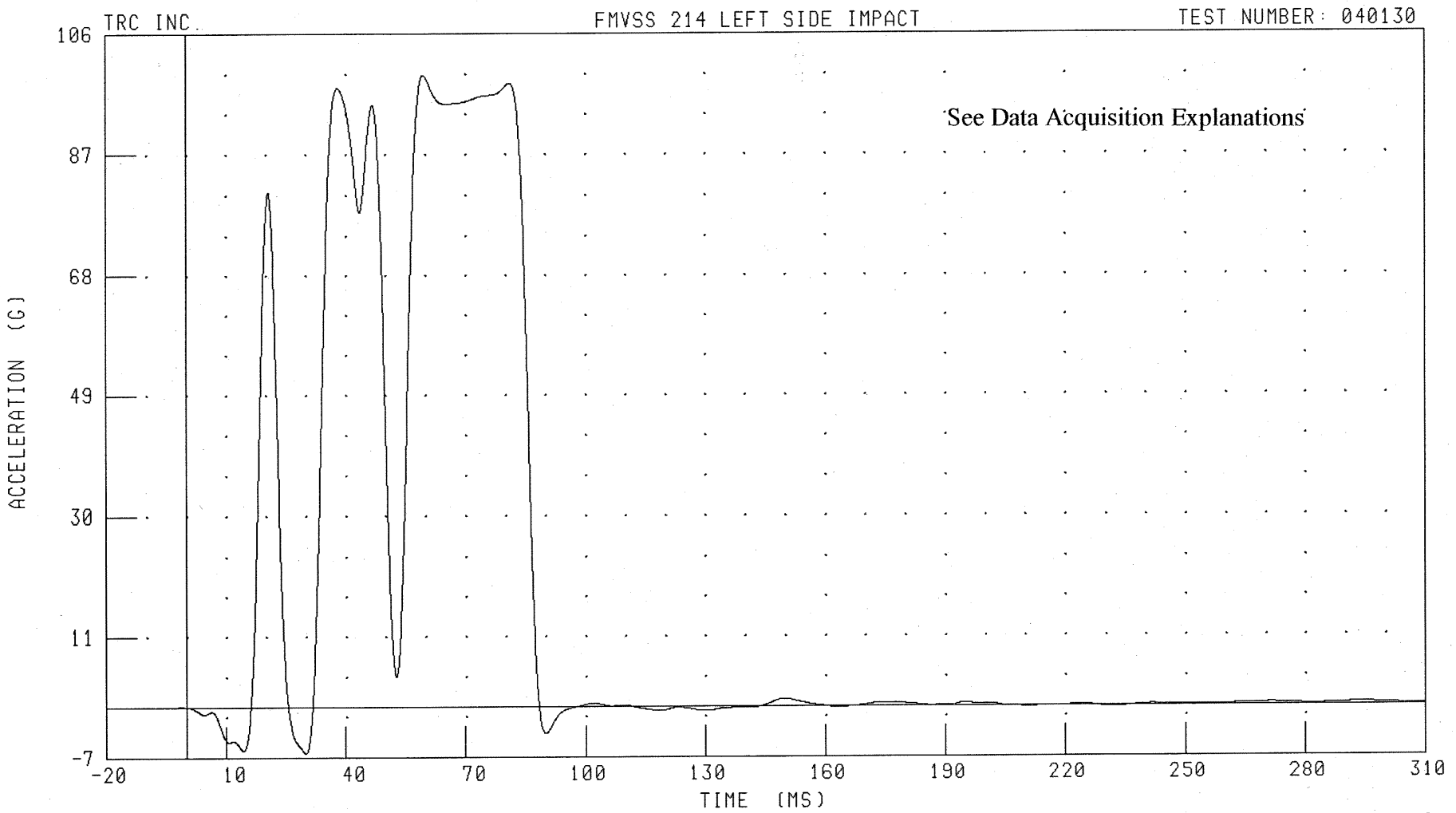


CHANNEL: RFSRG1 FILTER: CH. CLASS 60

PEAK DATA: 22.03 G @ 18.08 MS; 0.00 G @ -8.80 MS

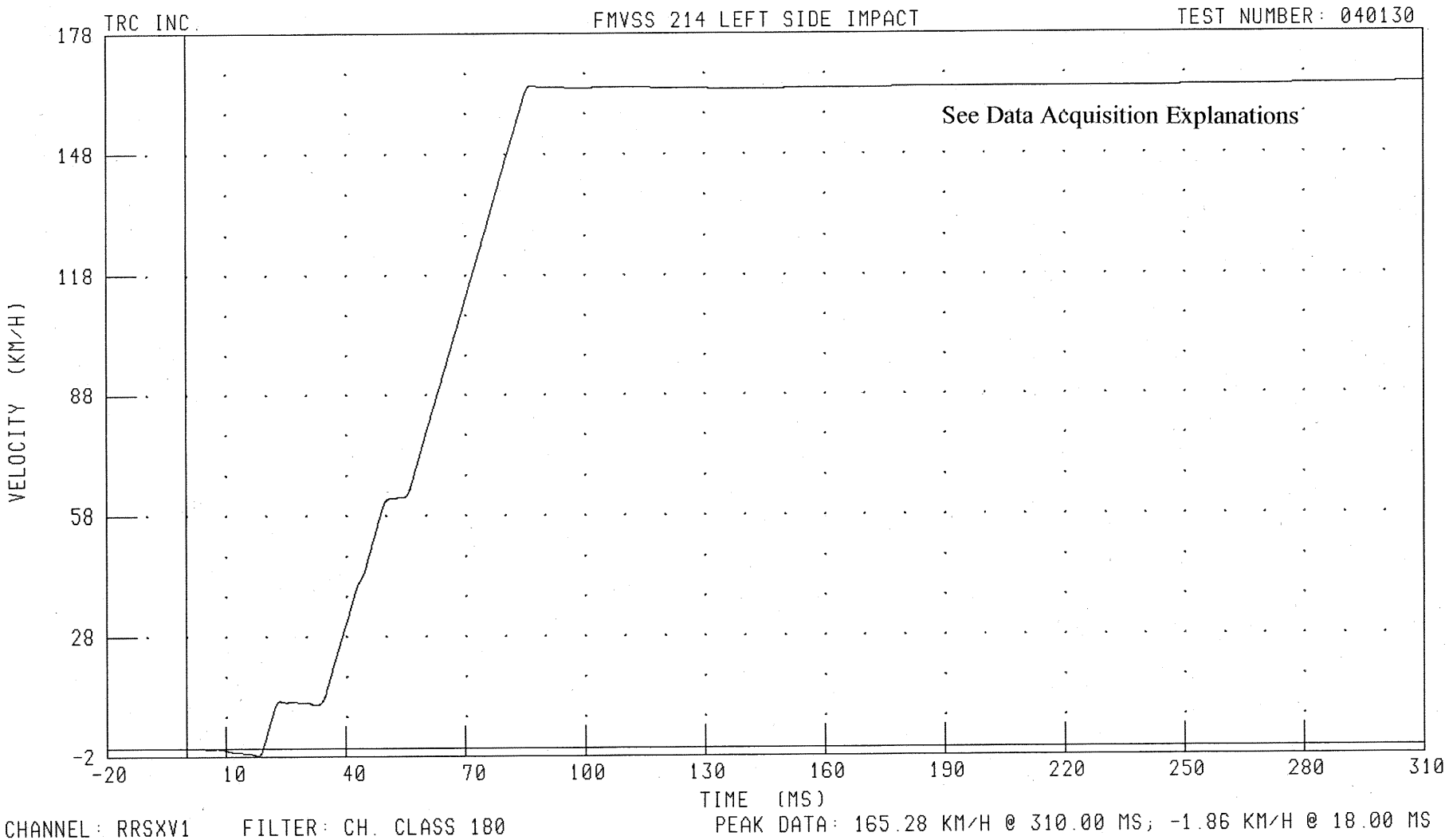
040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT SIDE SILL AT REAR SEAT X-AXIS ACCELERATION



040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT SIDE SILL AT REAR SEAT X-AXIS VELOCITY

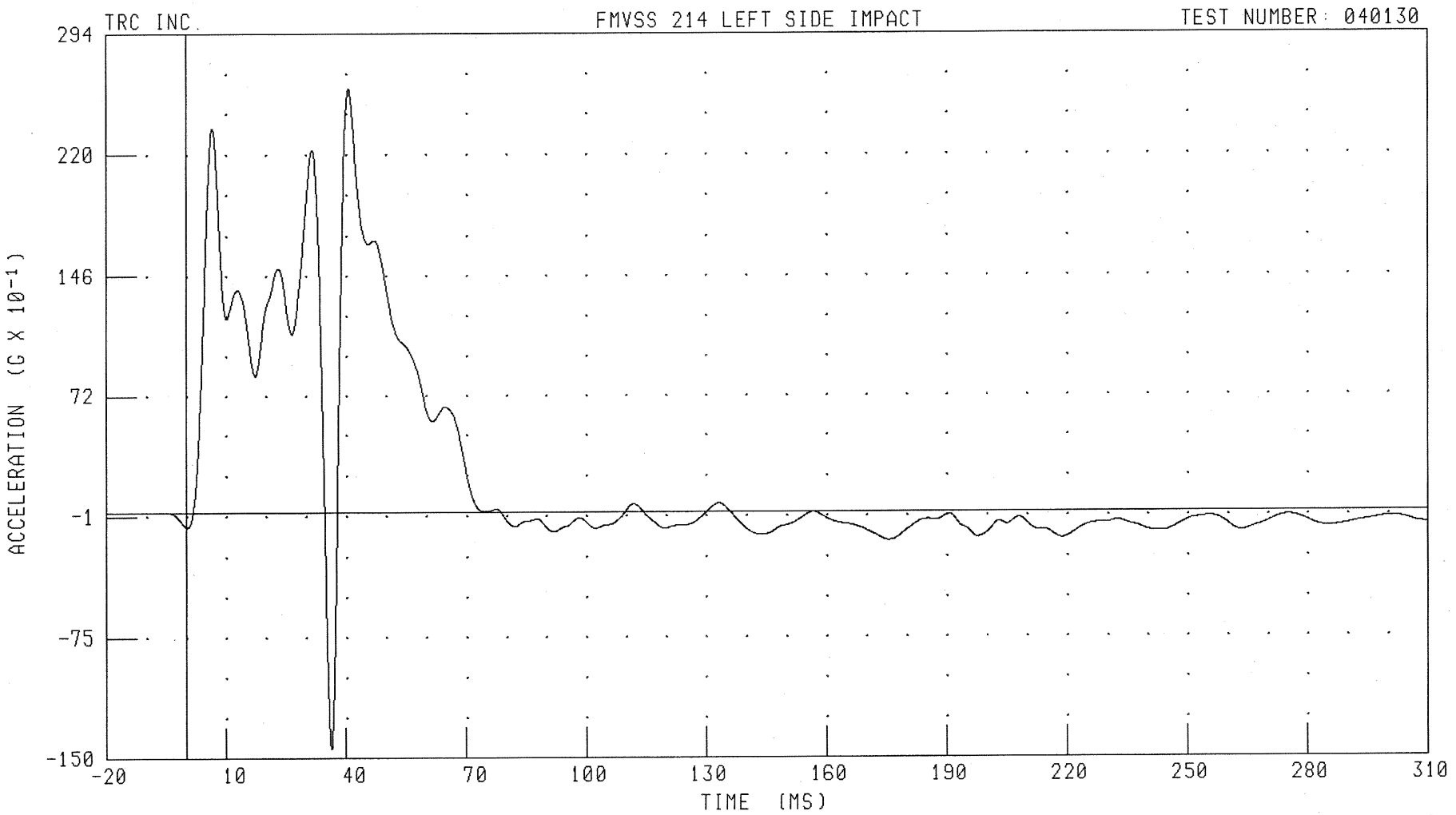


CHANNEL: RRSXV1 FILTER: CH. CLASS 180
PEAK DATA: 165.28 KM/H @ 310.00 MS; -1.86 KM/H @ 18.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION

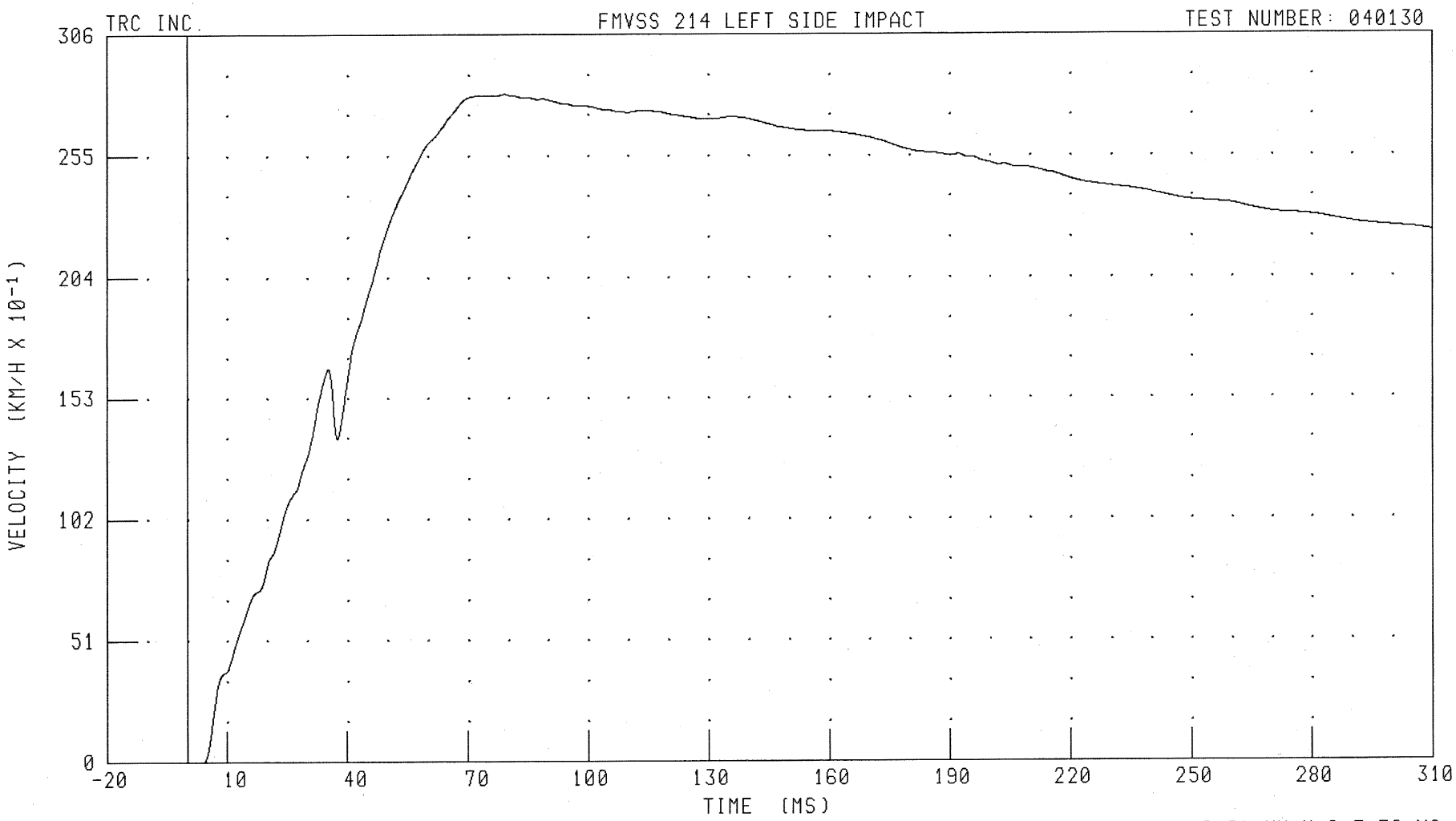


CHANNEL: RRSYG1 FILTER: CH. CLASS 60

PEAK DATA: 26.00 G @ 40.72 MS; -14.46 G @ 36.40 MS

040130

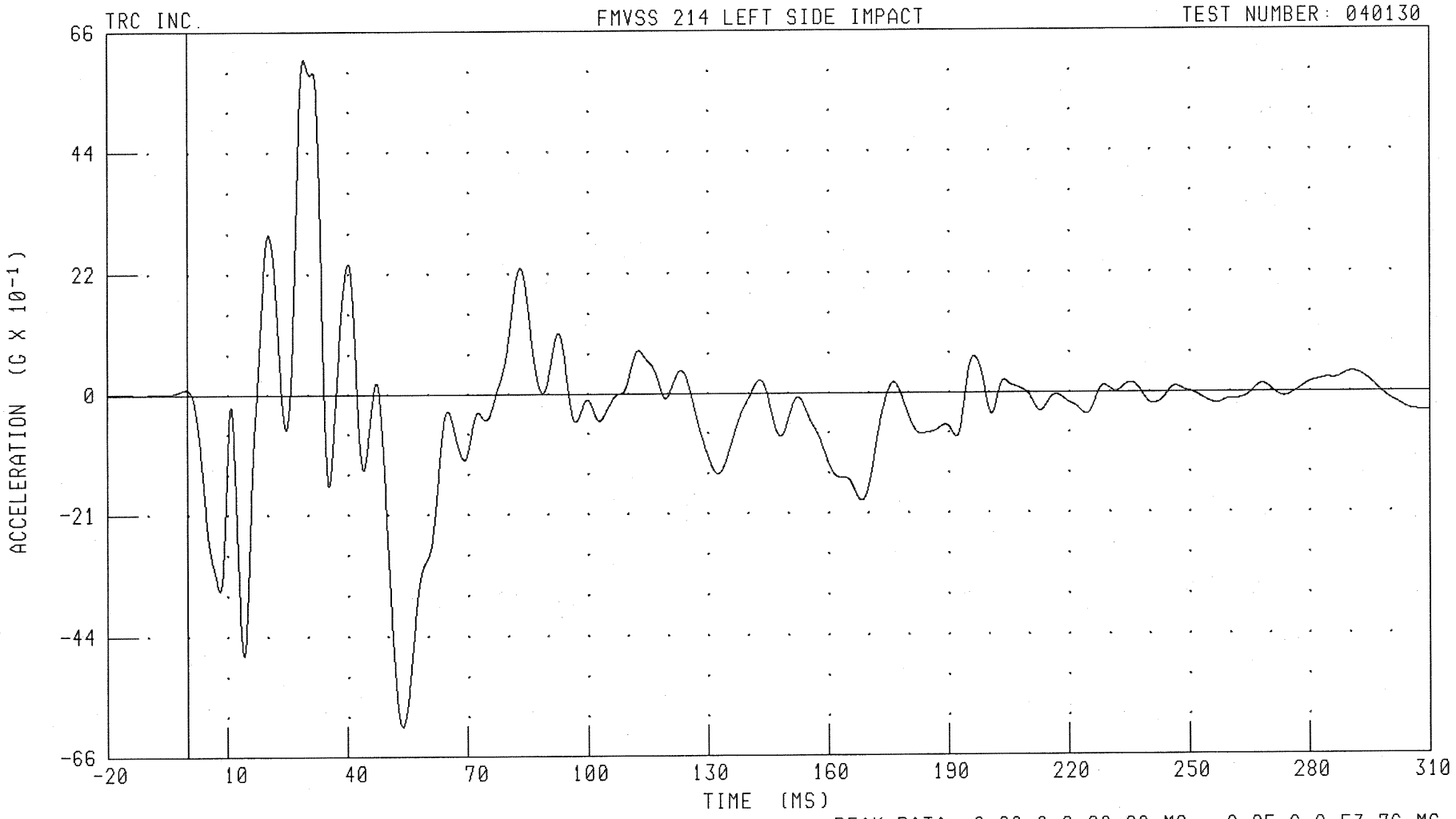
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY



040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT SIDE SILL AT REAR SEAT Z-AXIS ACCELERATION

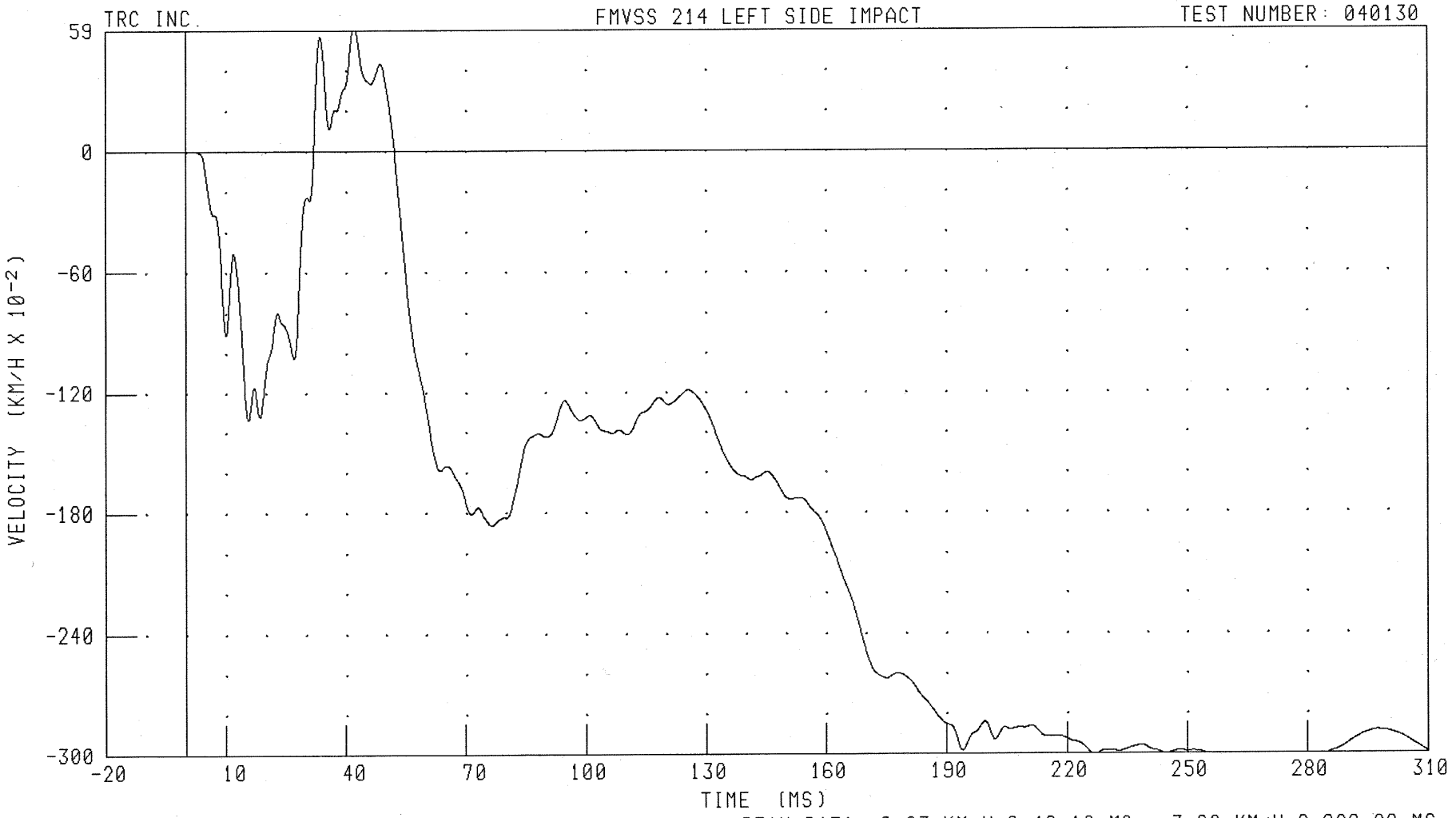


CHANNEL: RRSZG1 FILTER: CH. CLASS 60

PEAK DATA: 6.09 G @ 29.20 MS; -6.05 G @ 53.76 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT SIDE SILL AT REAR SEAT Z-AXIS VELOCITY



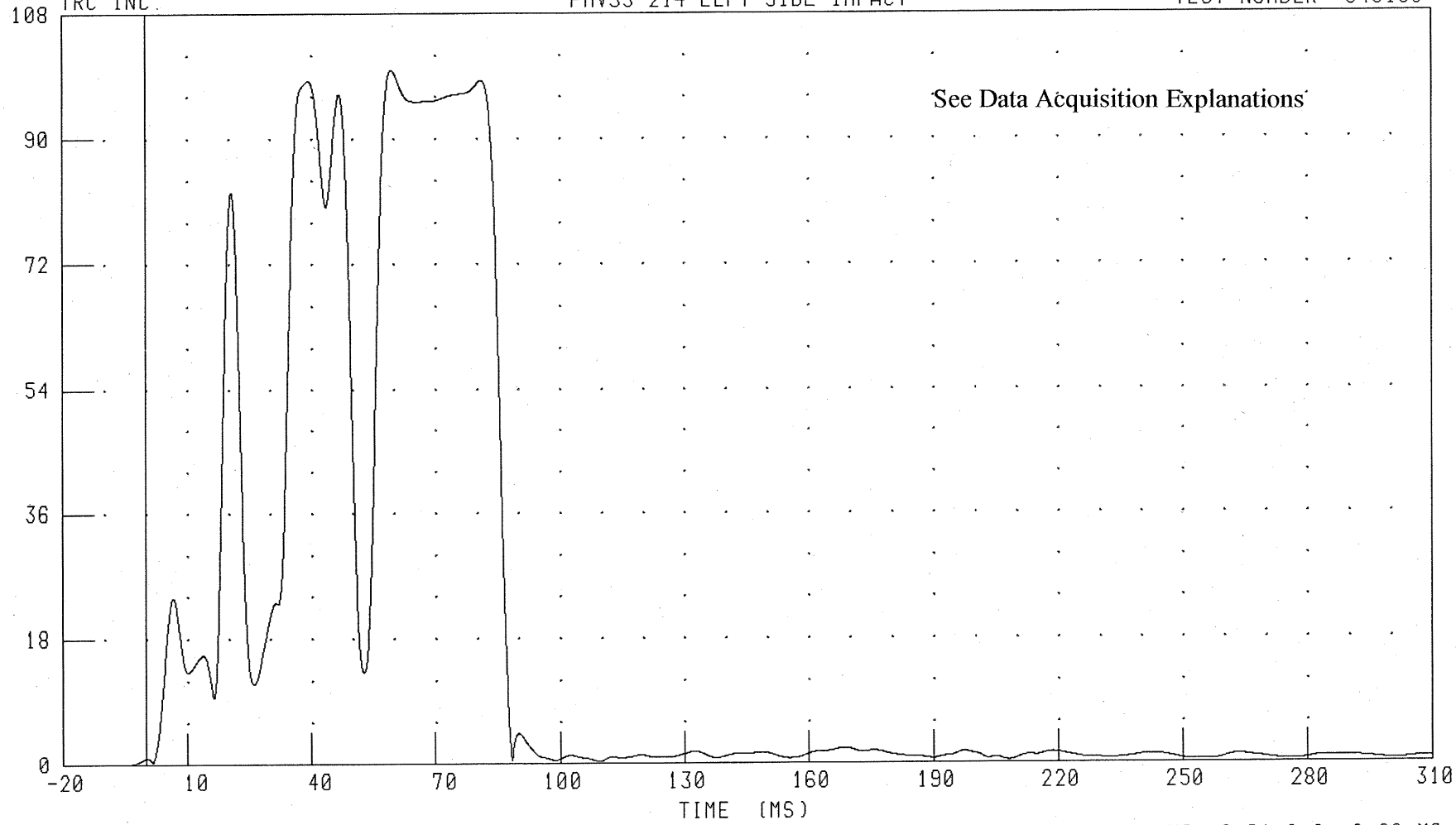
CHANNEL: RRSZV1 FILTER: CH. CLASS 180
PEAK DATA: 0.63 KM/H @ 42.16 MS; -3.06 KM/H @ 266.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

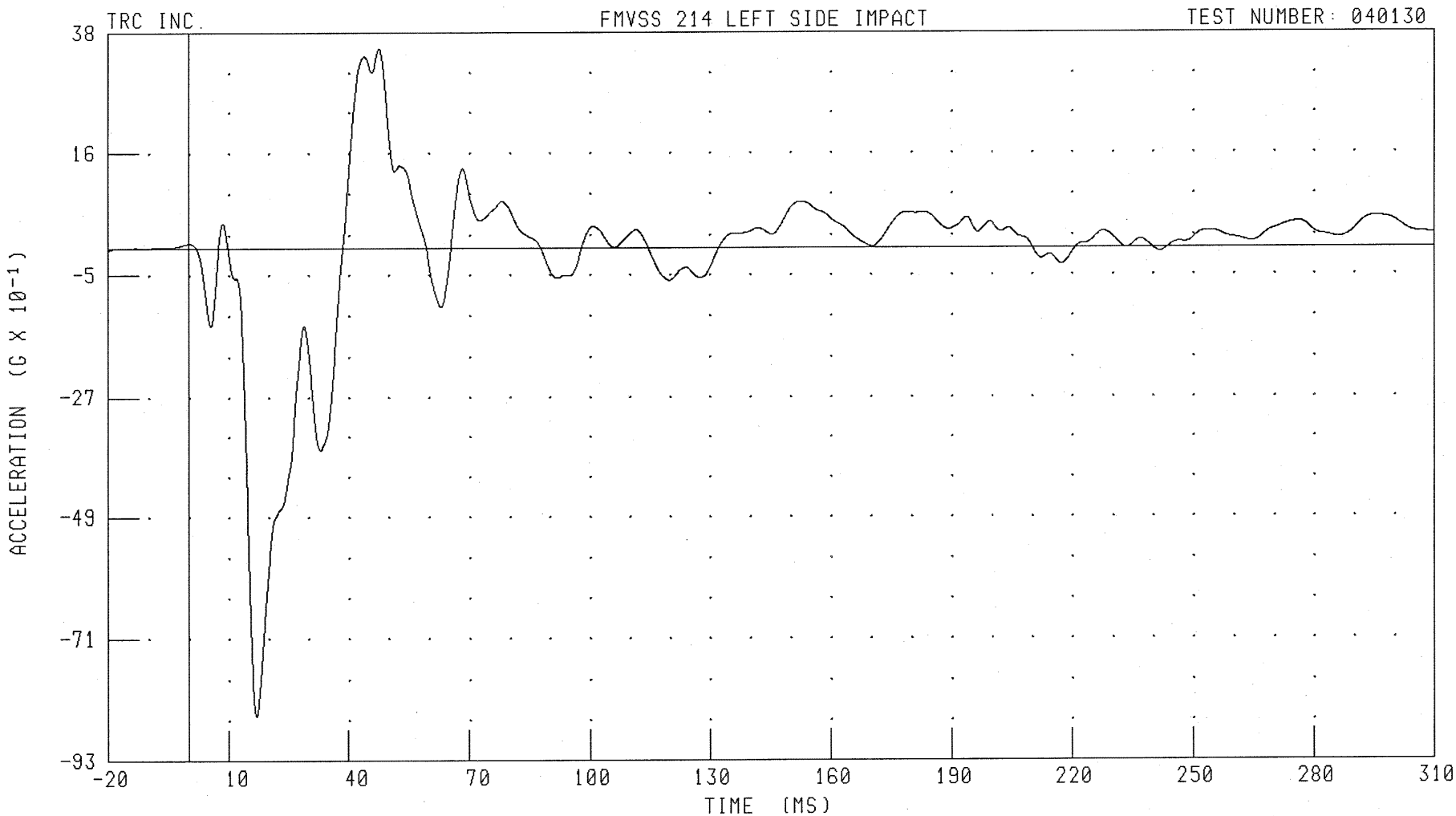


CHANNEL: RRSRG1 FILTER: CH. CLASS 60 PEAK DATA: 99.88 G @ 59.52 MS; 0.01 G @ -9.68 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE X-AXIS ACCELERATION

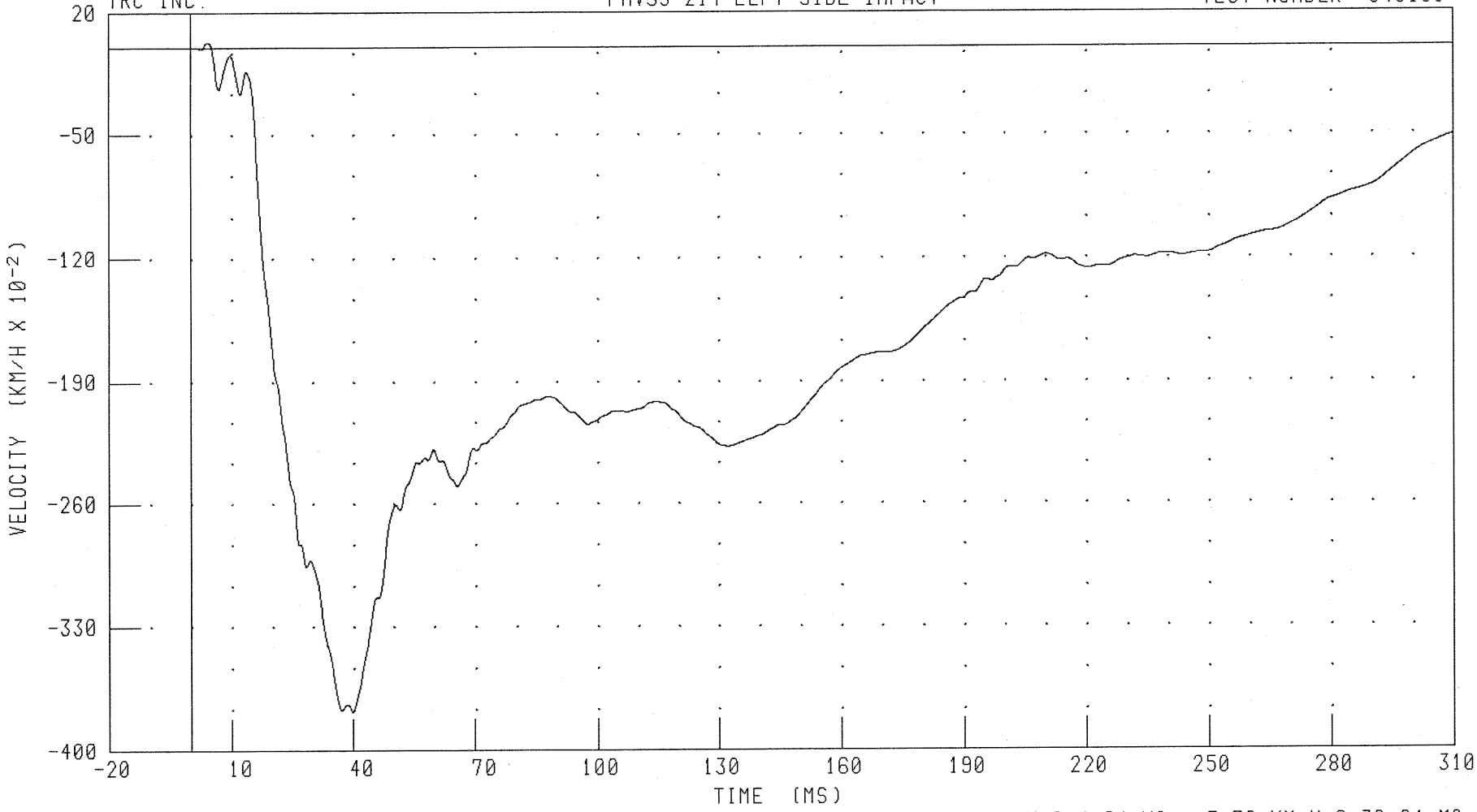


CHANNEL: RDKXG1 FILTER: CH. CLASS 60 PEAK DATA: 3.61 G @ 47.68 MS; -8.49 G @ 16.96 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE X-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

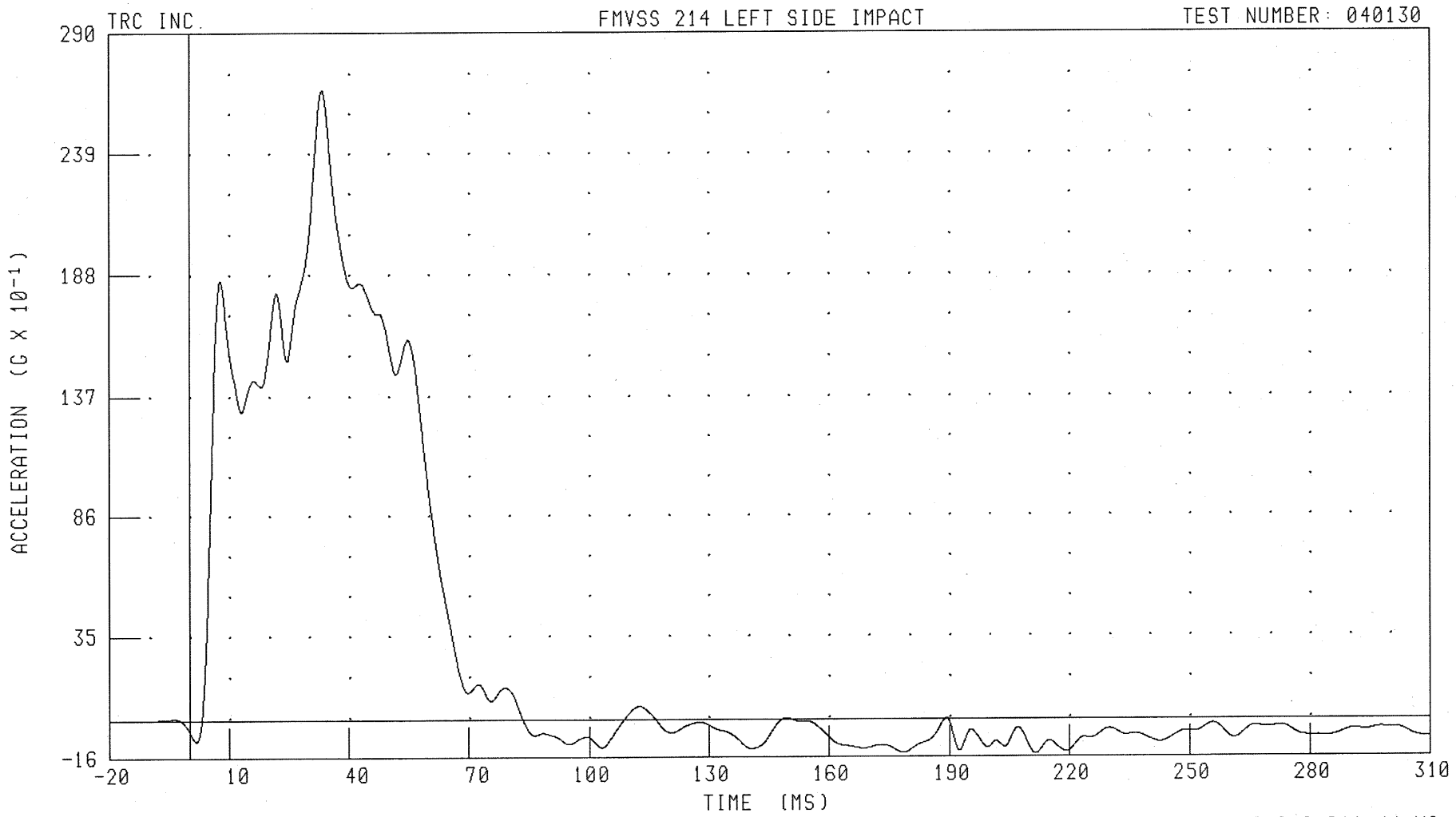


CHANNEL: RDKXV1 FILTER: CH. CLASS 180 PEAK DATA: 0.03 KM/H @ 4.24 MS; -3.78 KM/H @ 39.84 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE Y-AXIS ACCELERATION



CHANNEL: RDKYG1 FILTER: CH. CLASS 60

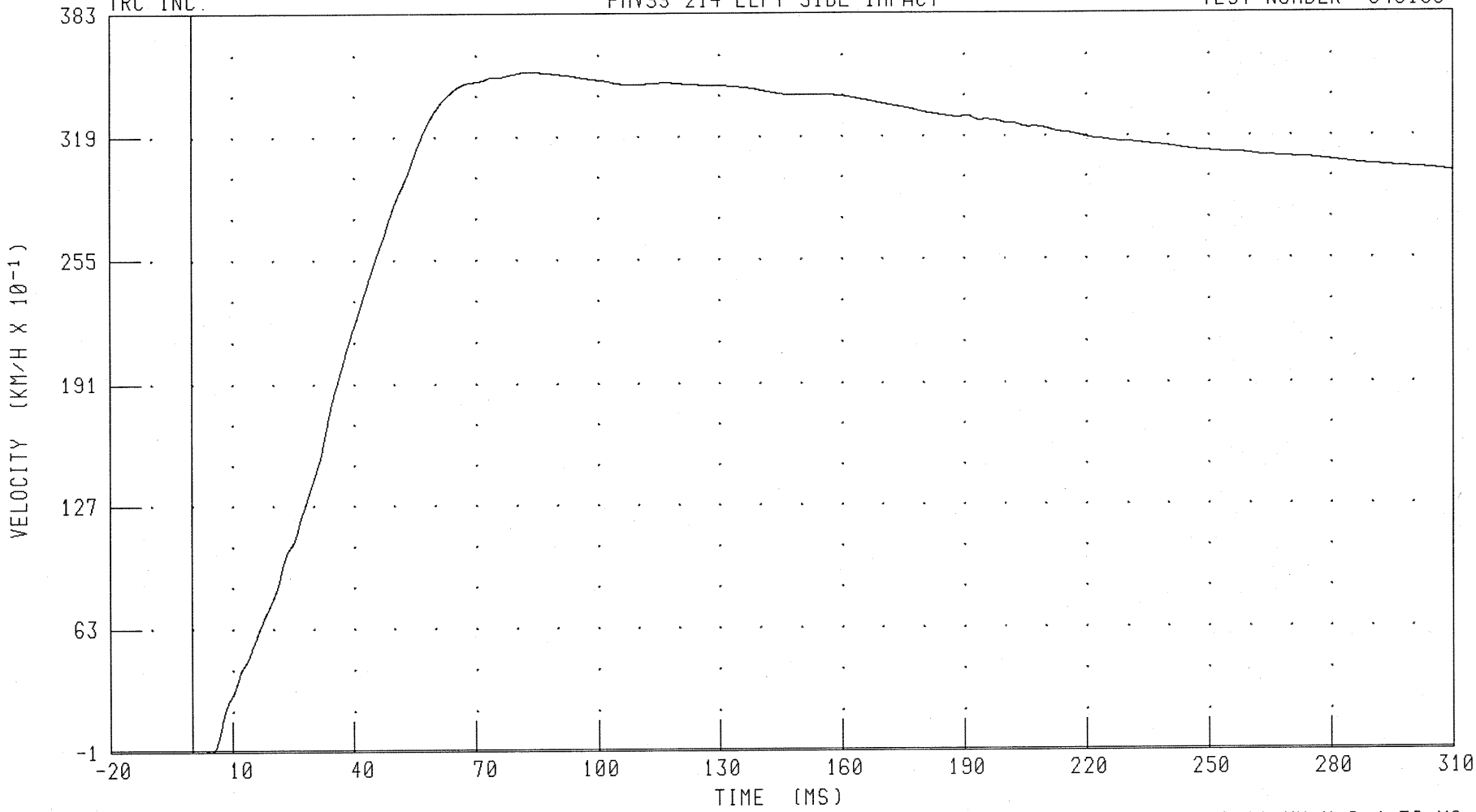
PEAK DATA: 26.61 G @ 33.36 MS; -1.49 G @ 211.44 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



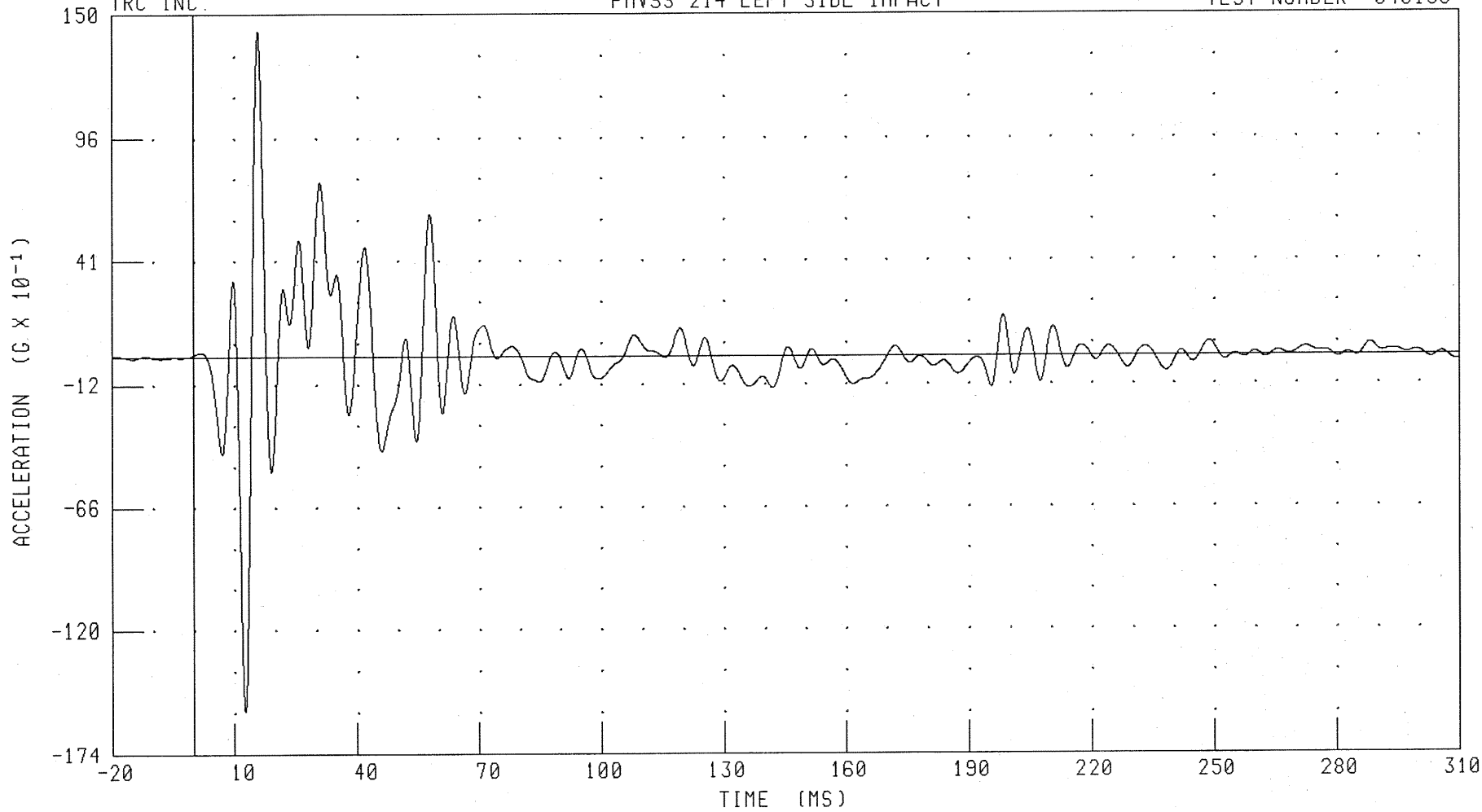
CHANNEL: RDKYV1 FILTER: CH. CLASS 180 PEAK DATA: 35.30 KM/H @ 82.56 MS; -0.11 KM/H @ 4.72 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE Z-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

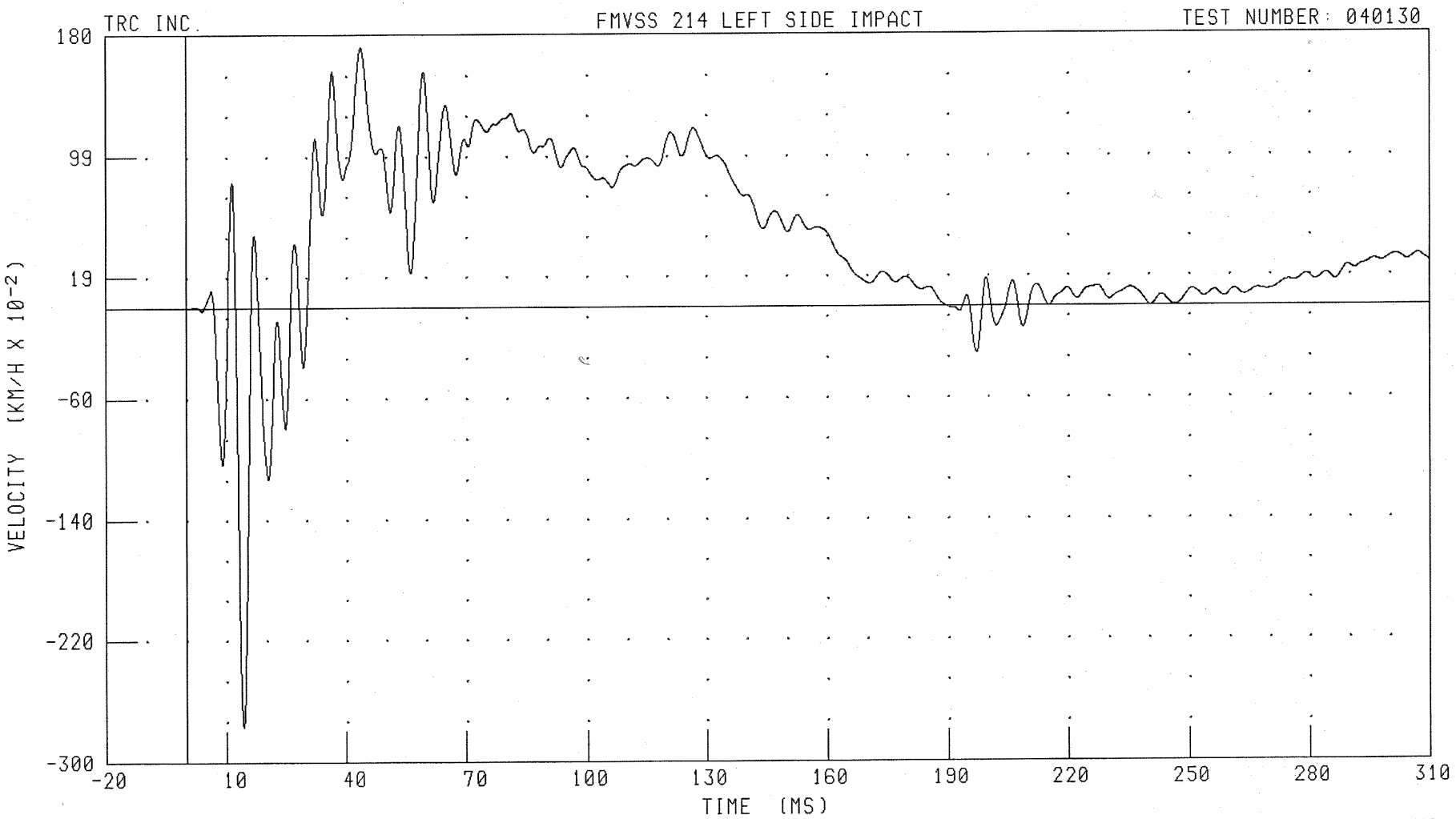


CHANNEL: RDKZG1 FILTER: CH. CLASS 60 PEAK DATA: 14.26 G @ 15.84 MS; -15.54 G @ 12.72 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE Z-AXIS VELOCITY



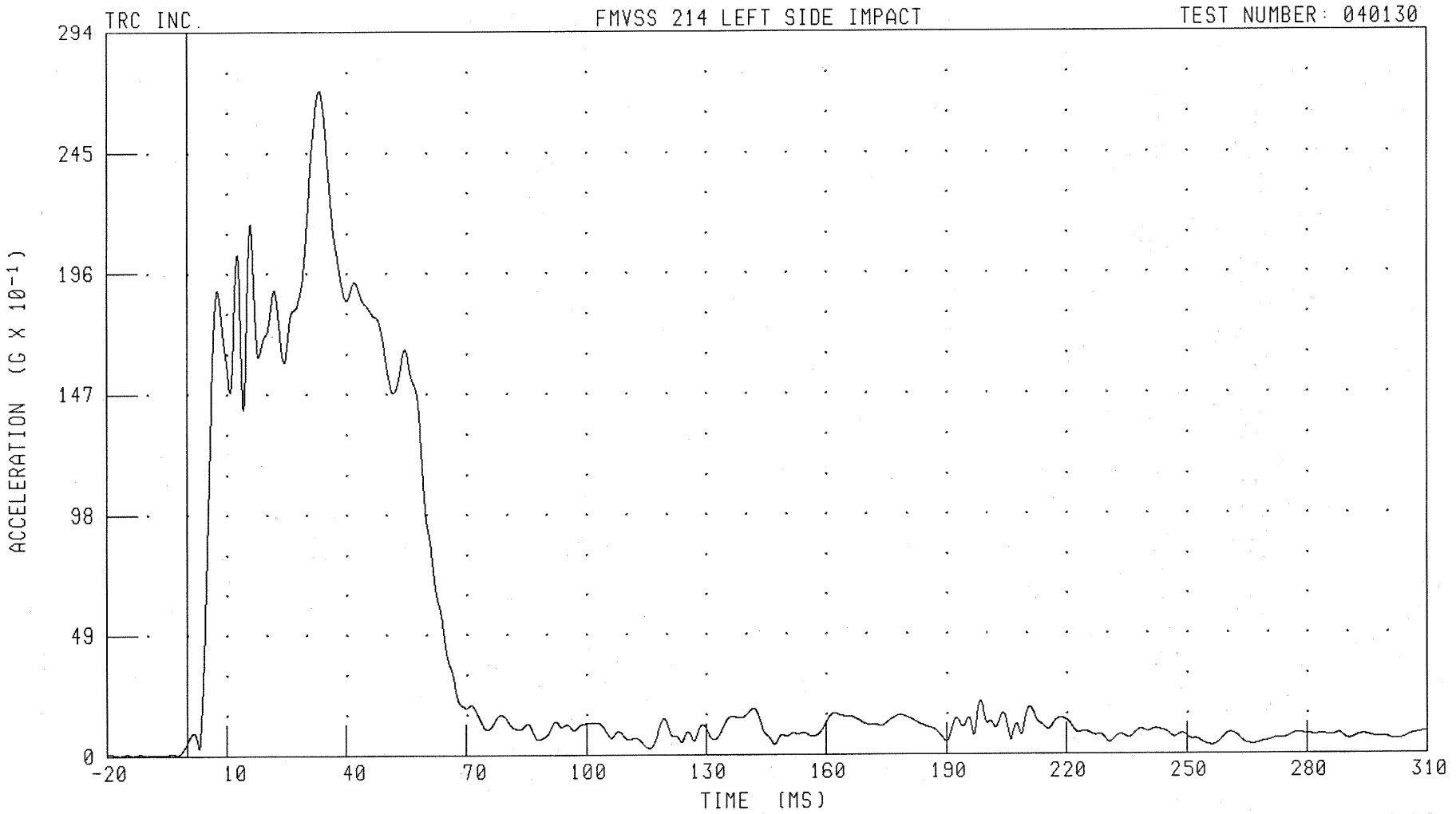
CHANNEL: RDKZV1 FILTER: CH. CLASS 180

PEAK DATA: 1.72 KM/H @ 43.76 MS; -2.77 KM/H @ 14.24 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

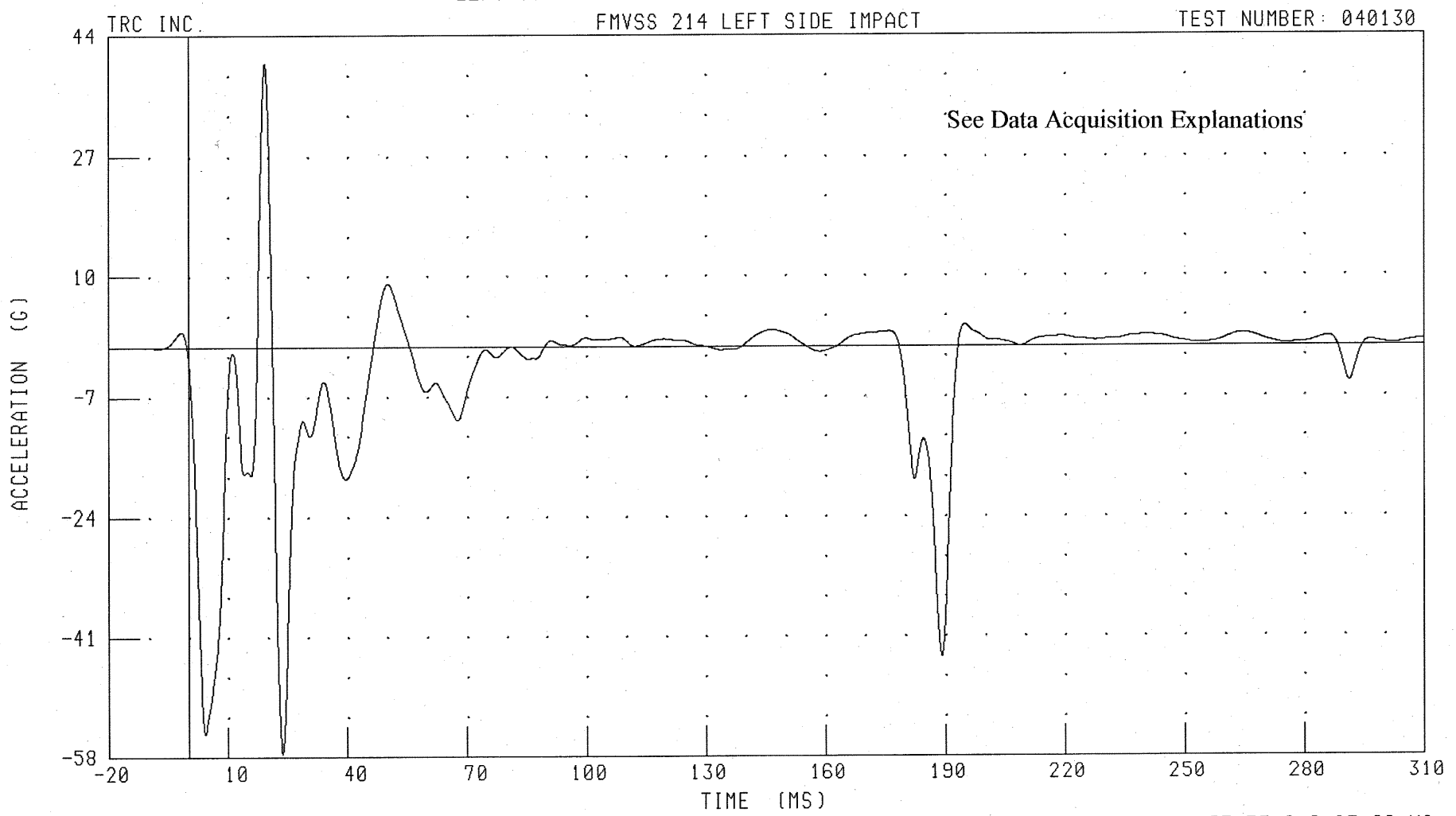


CHANNEL: RDKRG1 FILTER: CH. CLASS 60

PEAK DATA: 27.01 G @ 33.28 MS; 0.01 G @ -16.80 MS

040130

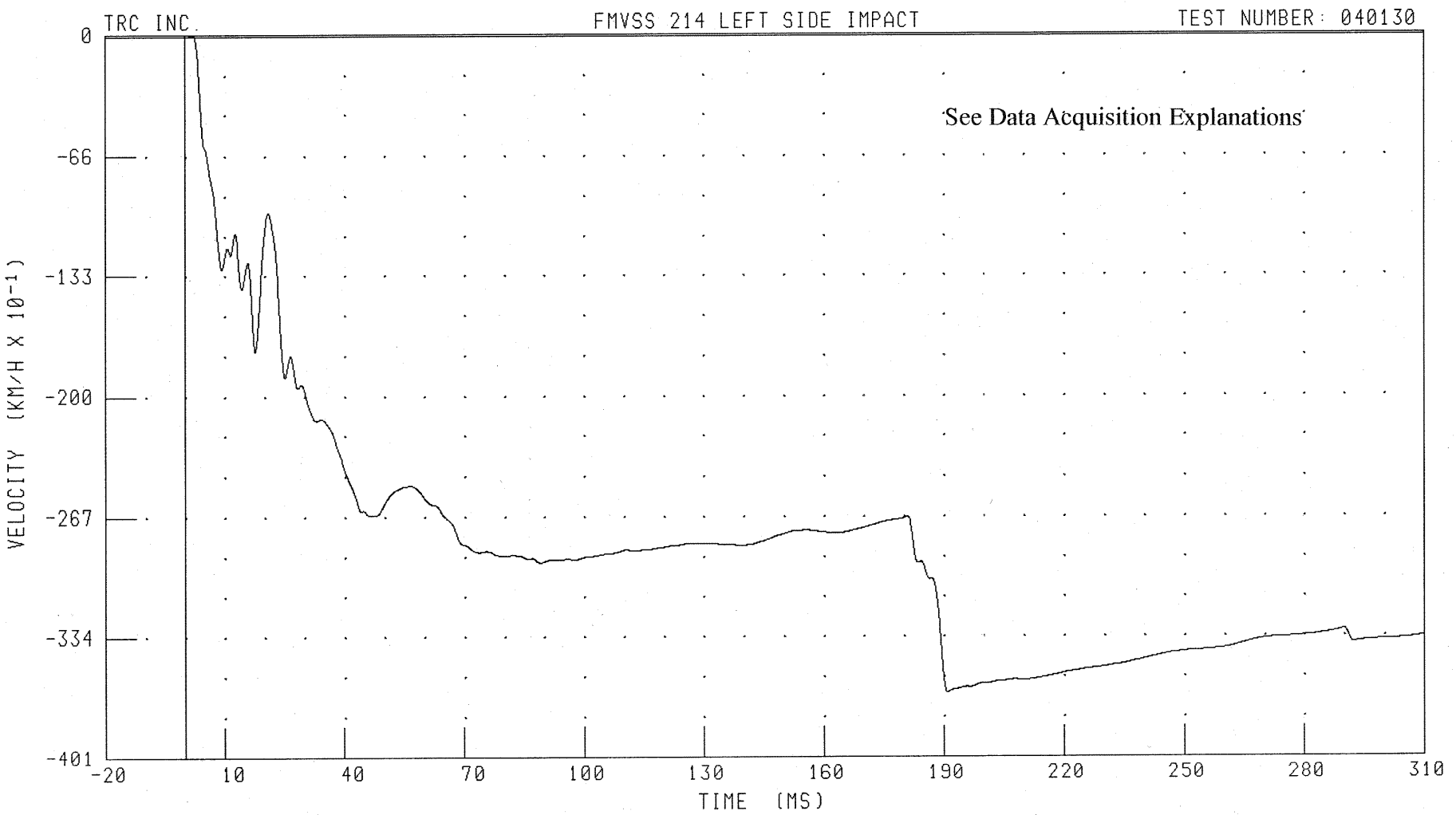
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION



CHANNEL: LFSYG1 FILTER: CH. CLASS 60 PEAK DATA: 40.13 G @ 19.28 MS; -57.55 G @ 23.68 MS

040130

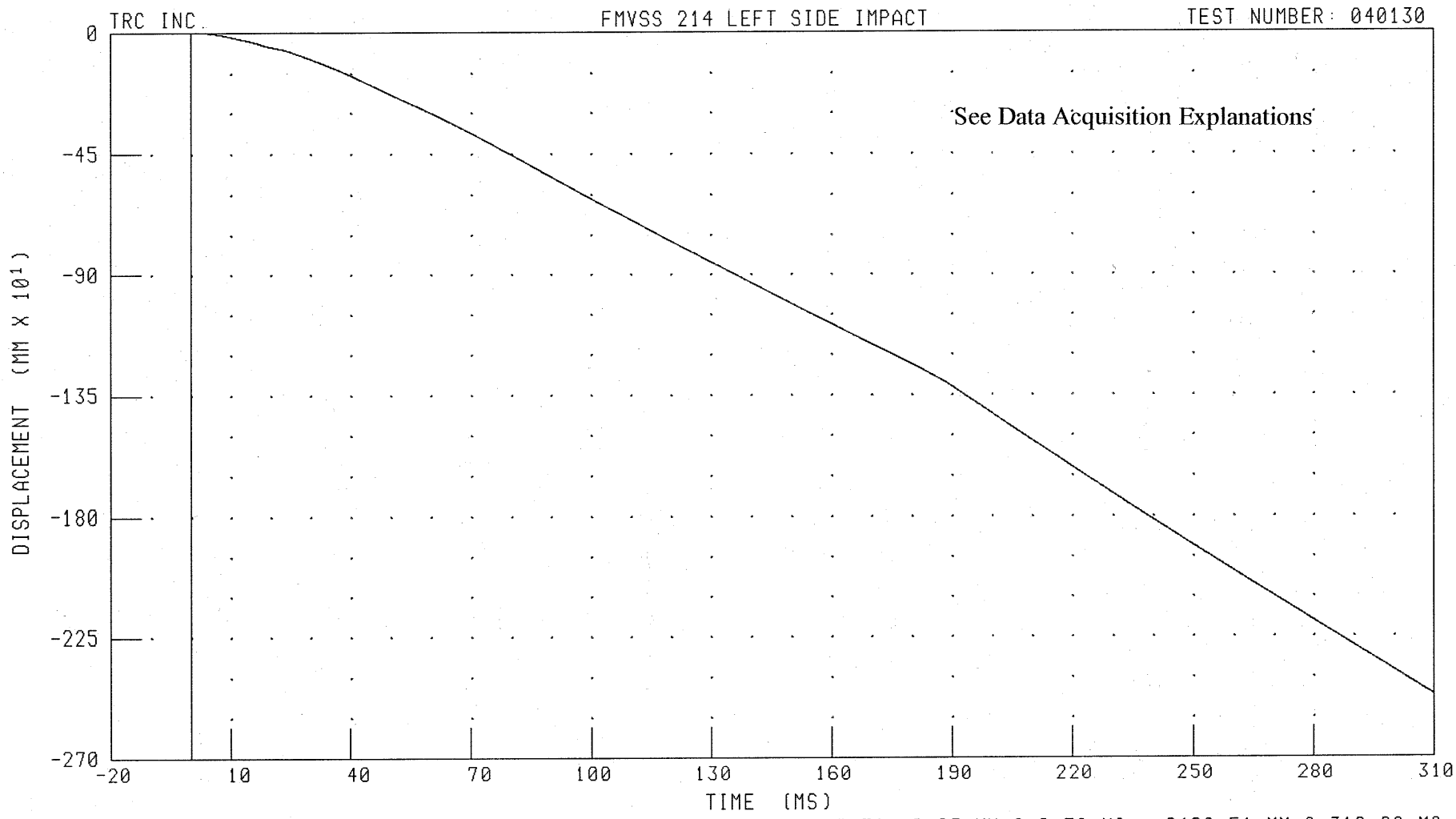
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY



CHANNEL: LFSYV1 FILTER: CH. CLASS 180 PEAK DATA: 0.09 KM/H @ 1.84 MS; -36.54 KM/H @ 190.96 MS

040130

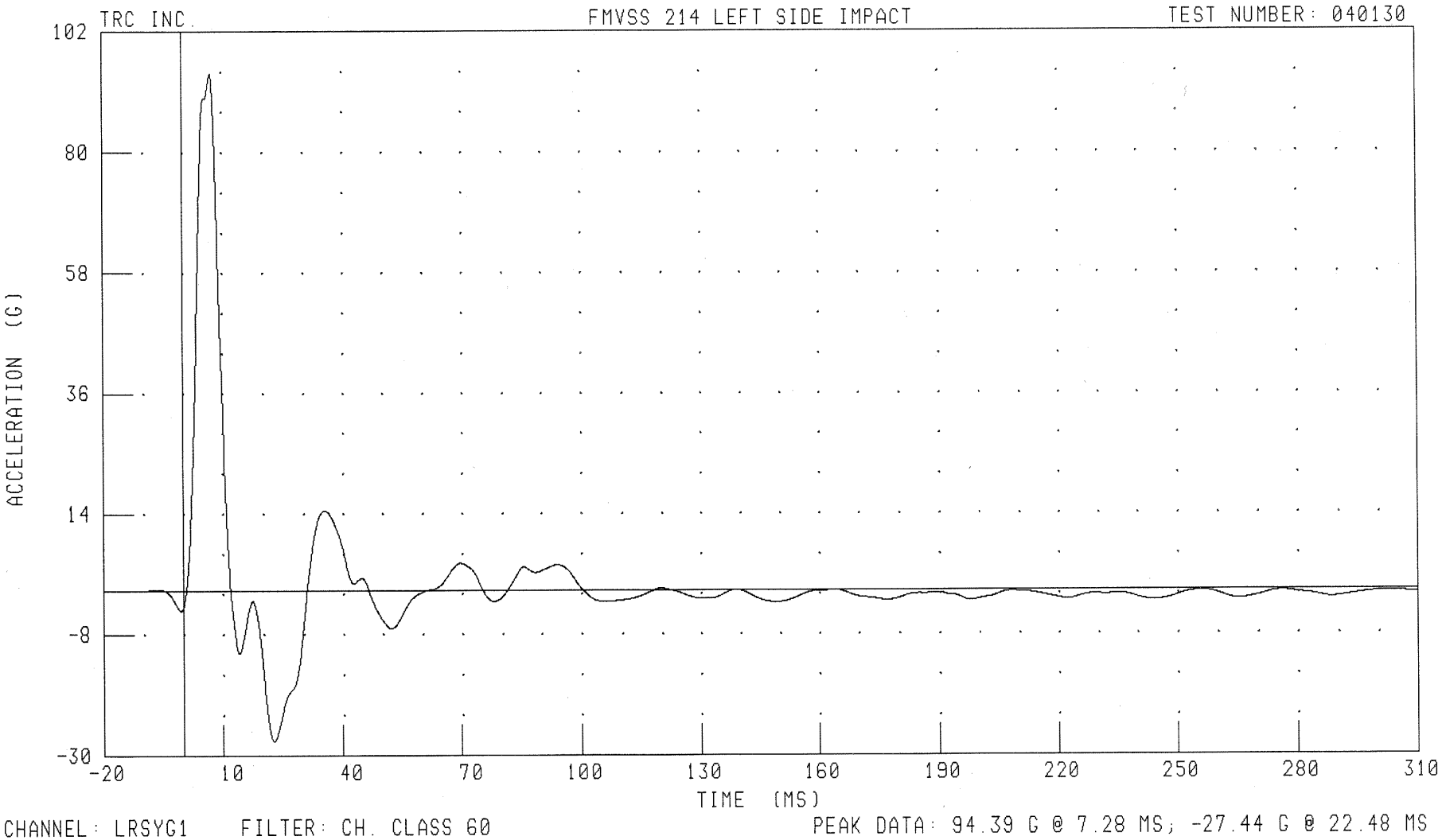
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT SIDE SILL AT FRONT SEAT Y-AXIS DISPLACEMENT



CHANNEL: LFSYD1 FILTER: CH. CLASS 180 PEAK DATA: 0.03 MM @ 2.32 MS; -2469.51 MM @ 310.00 MS

040130

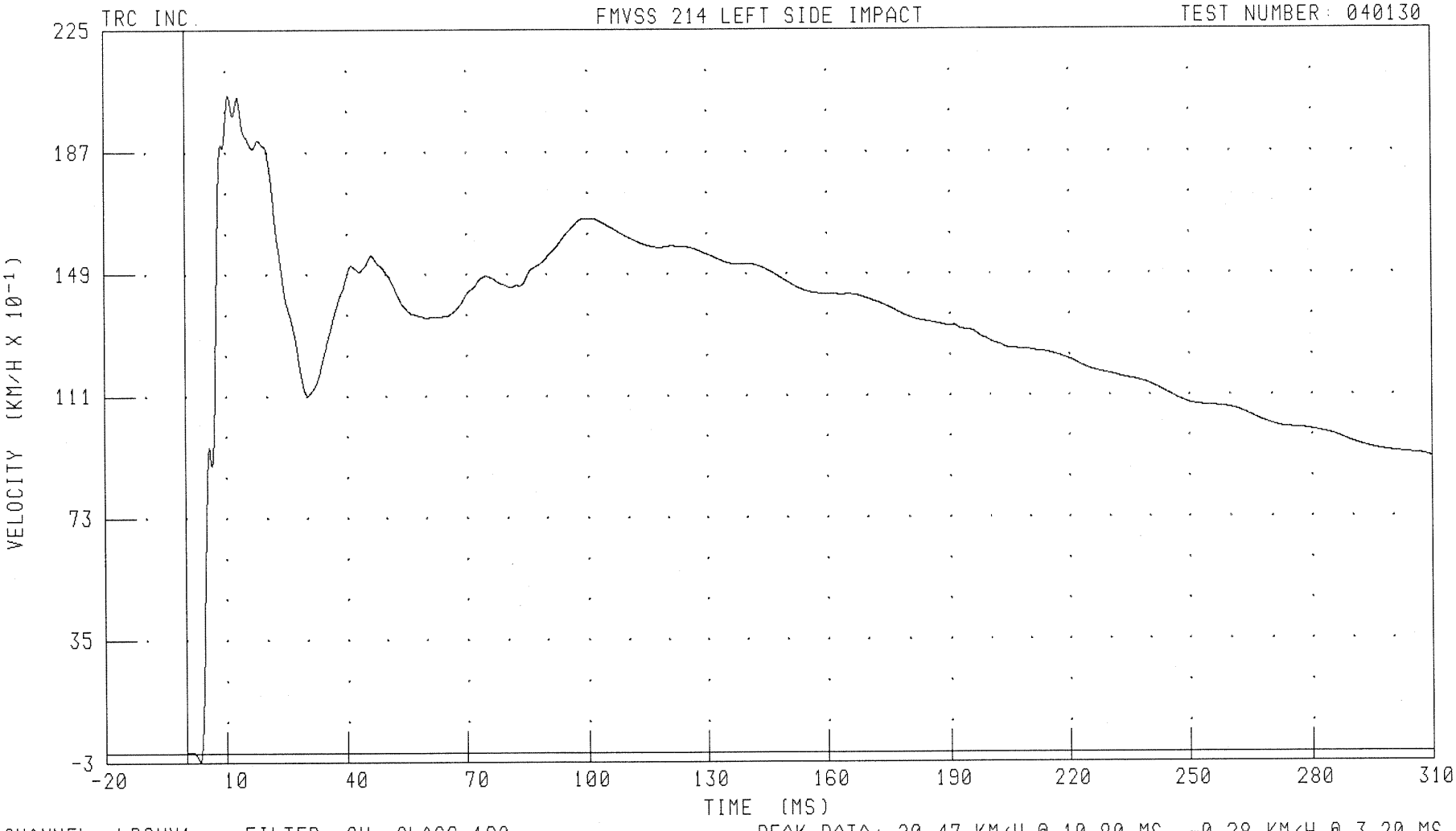
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION



040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

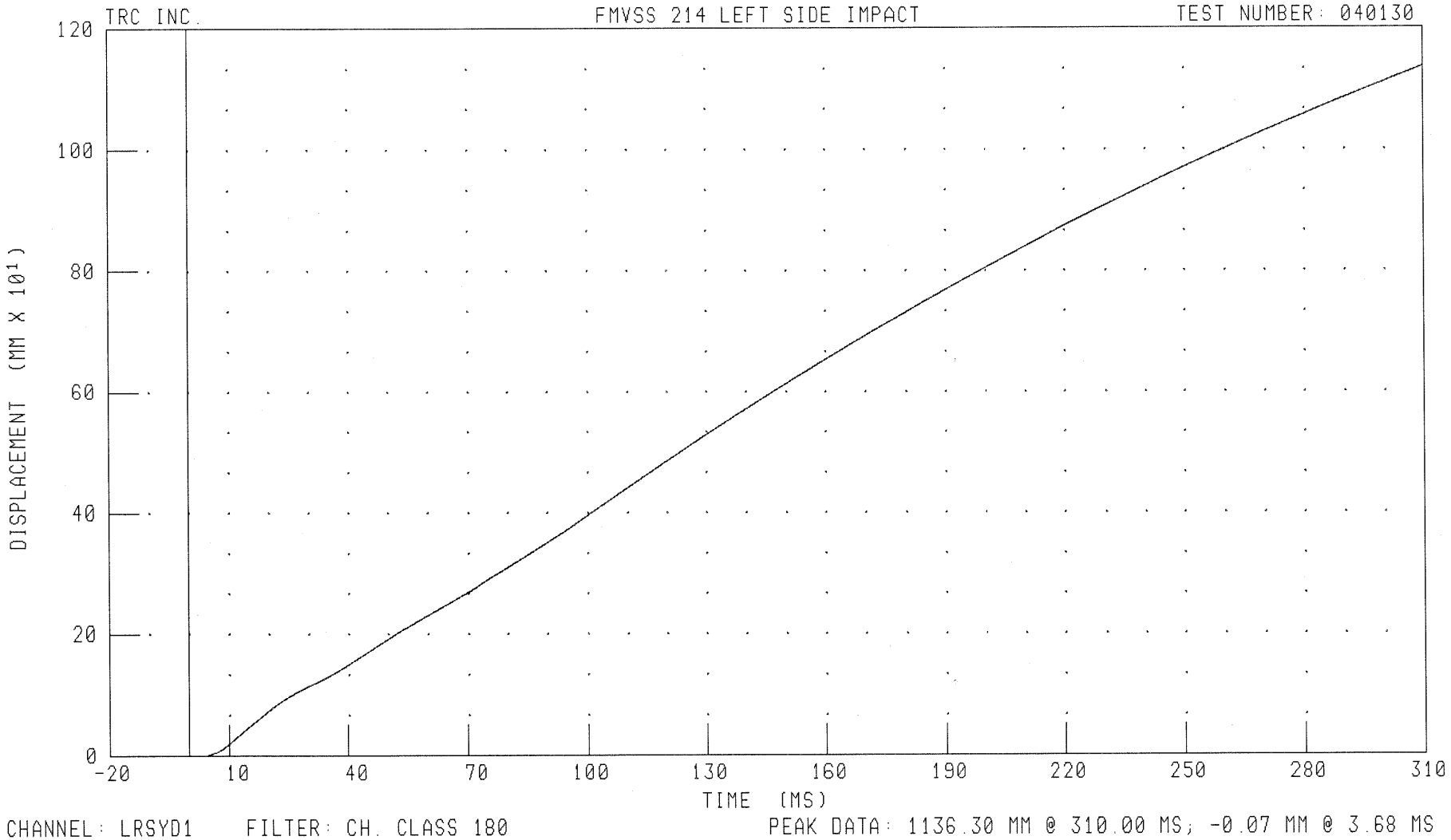
LEFT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY



CHANNEL: LRSYV1 FILTER: CH. CLASS 180 PEAK DATA: 20.47 KM/H @ 10.80 MS; -0.28 KM/H @ 3.20 MS

040130

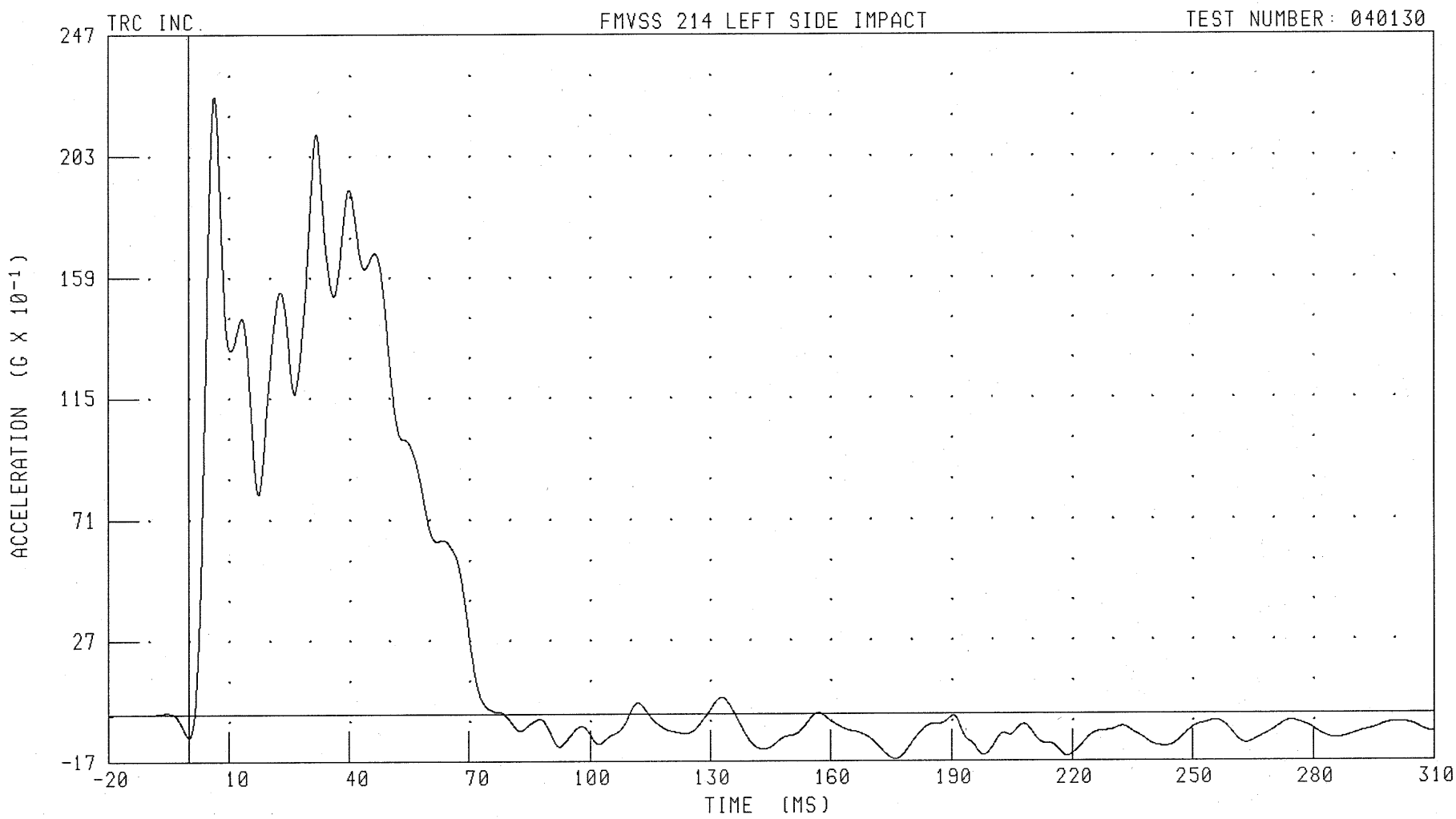
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
LEFT SIDE SILL AT REAR SEAT Y-AXIS DISPLACEMENT



CHANNEL: LRSYD1 FILTER: CH. CLASS 180 PEAK DATA: 1136.30 MM @ 310.00 MS; -0.07 MM @ 3.68 MS

040130

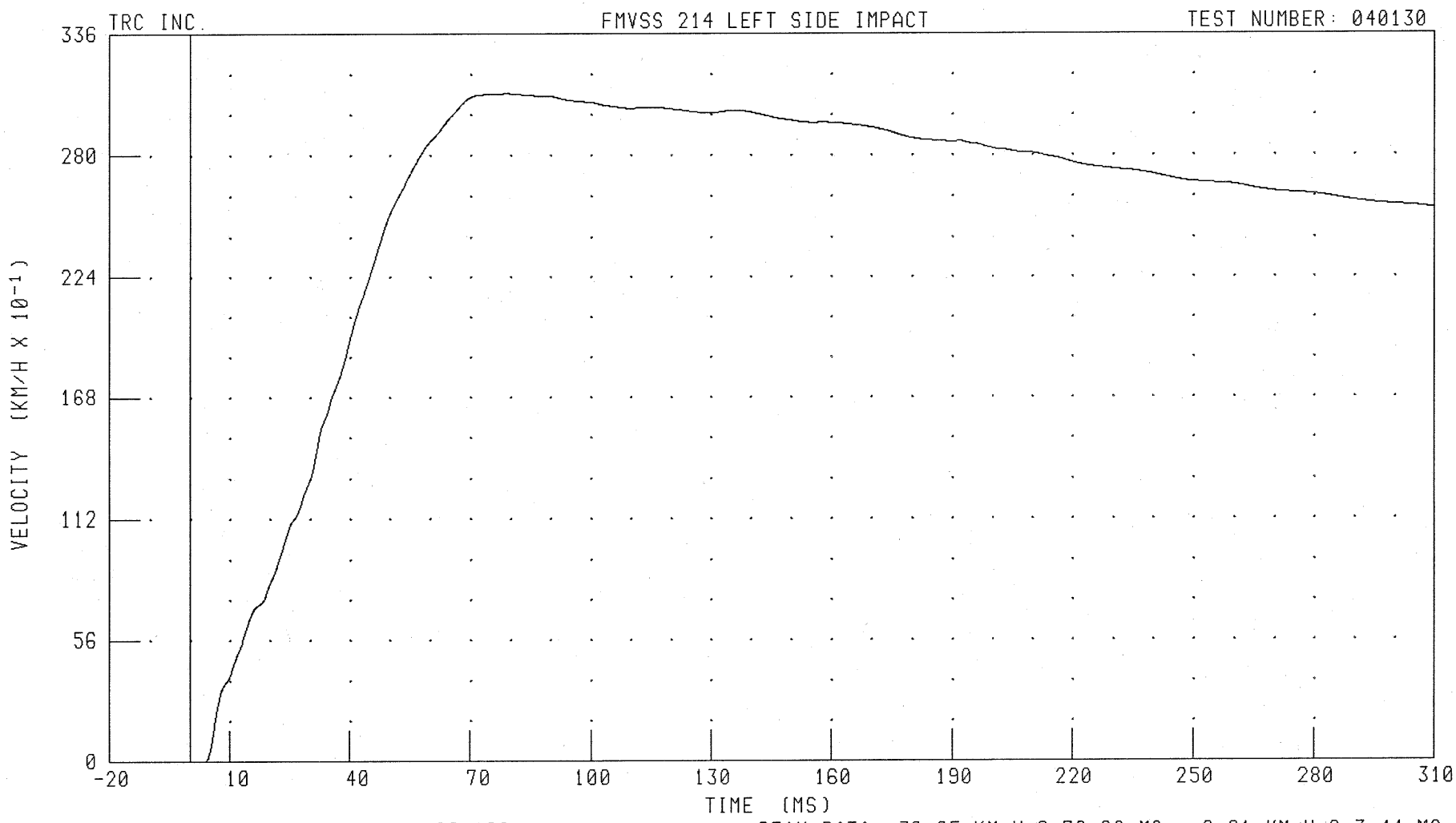
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS ACCELERATION



CHANNEL: RRTYG1 FILTER: CH. CLASS 60 PEAK DATA: 22.45 G @ 6.40 MS; -1.63 G @ 176.16 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS VELOCITY



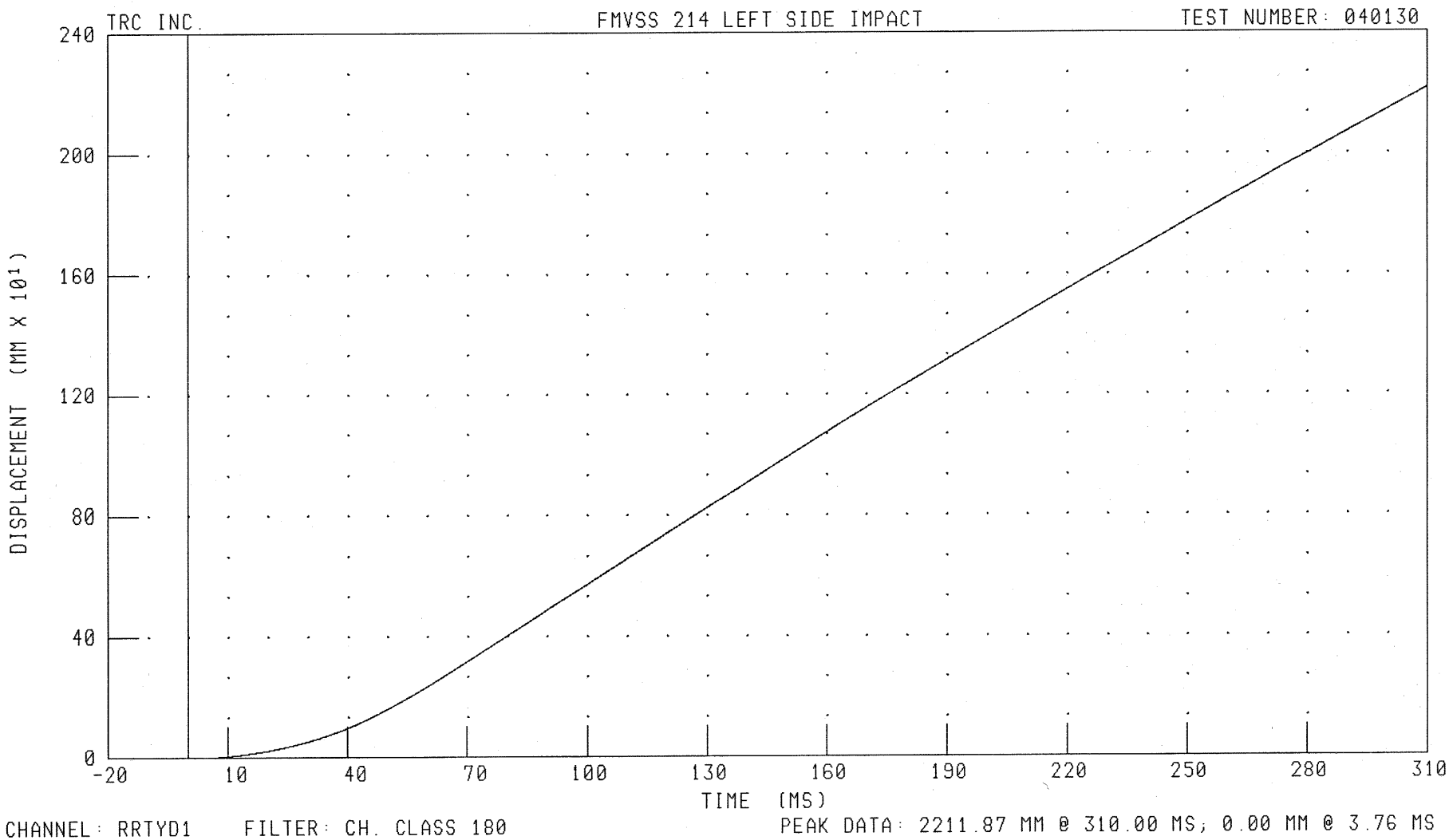
CHANNEL: RRTYV1 FILTER: CH. CLASS 180

PEAK DATA: 30.85 KM/H @ 78.96 MS; -0.01 KM/H @ 3.44 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS DISPLACEMENT

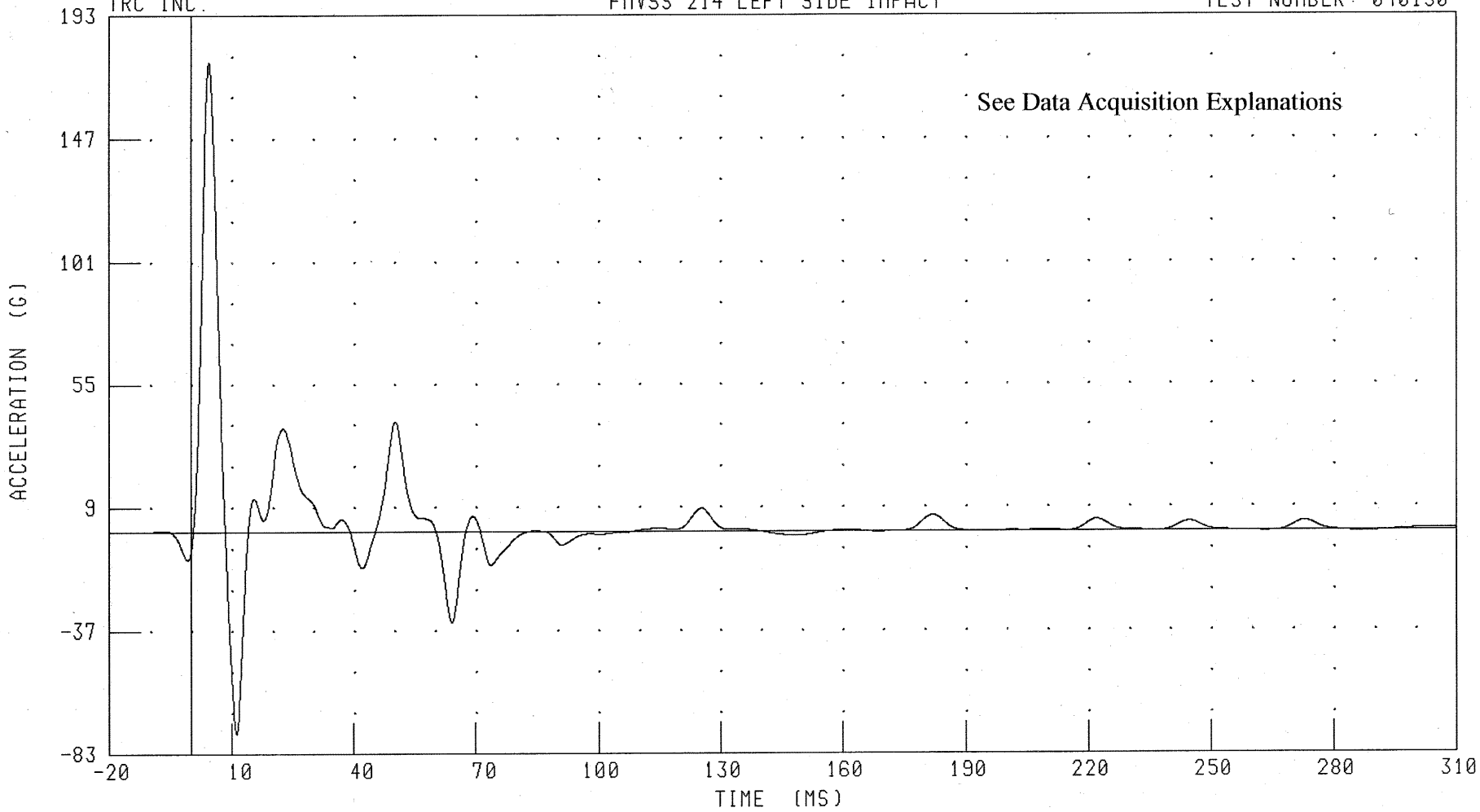


040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT LOWER A-POST Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



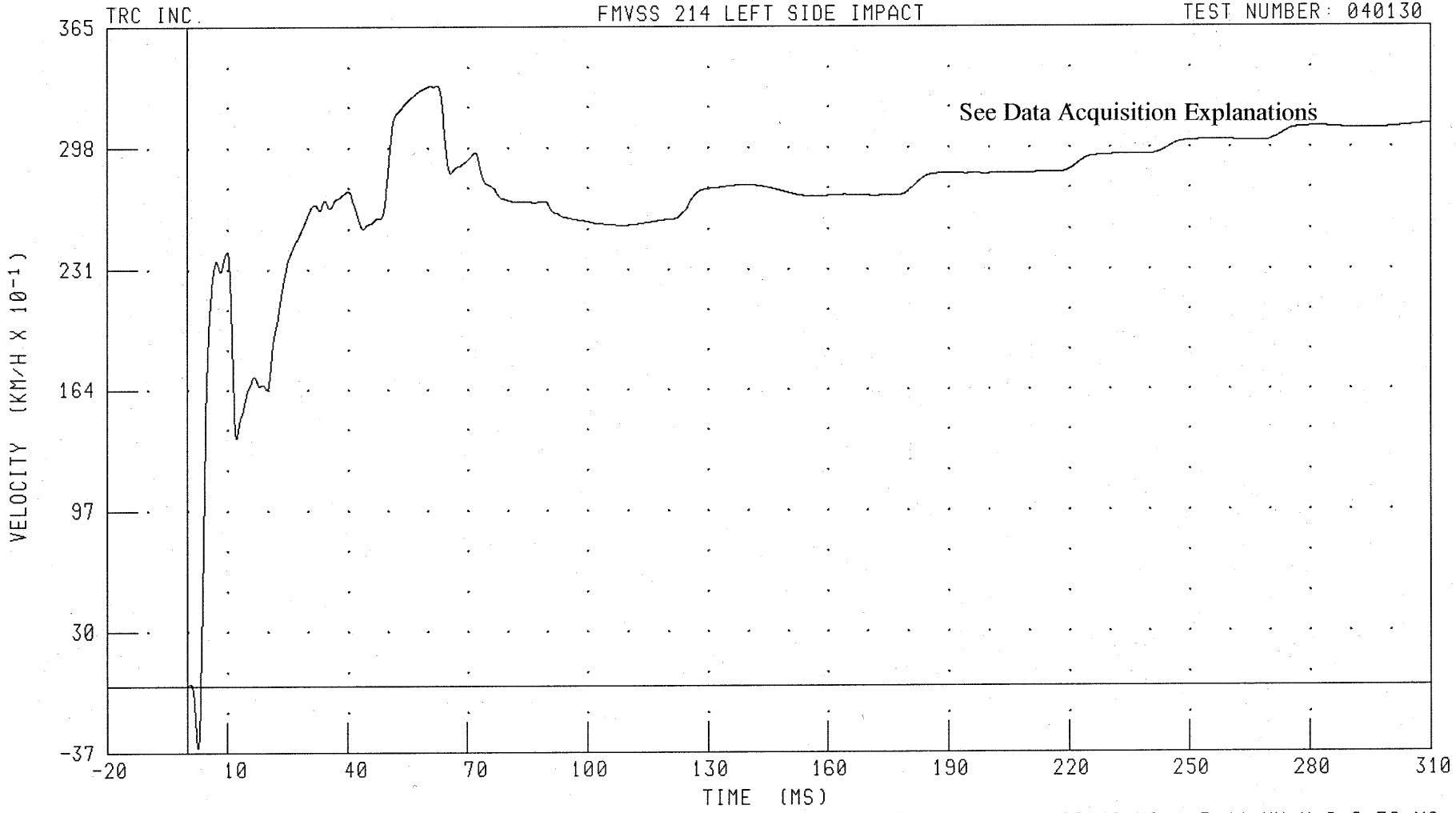
CHANNEL: LLAYG1 FILTER: CH. CLASS 60 PEAK DATA: 175.61 G @ 4.40 MS; -75.46 G @ 11.12 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT LOWER A-POST Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

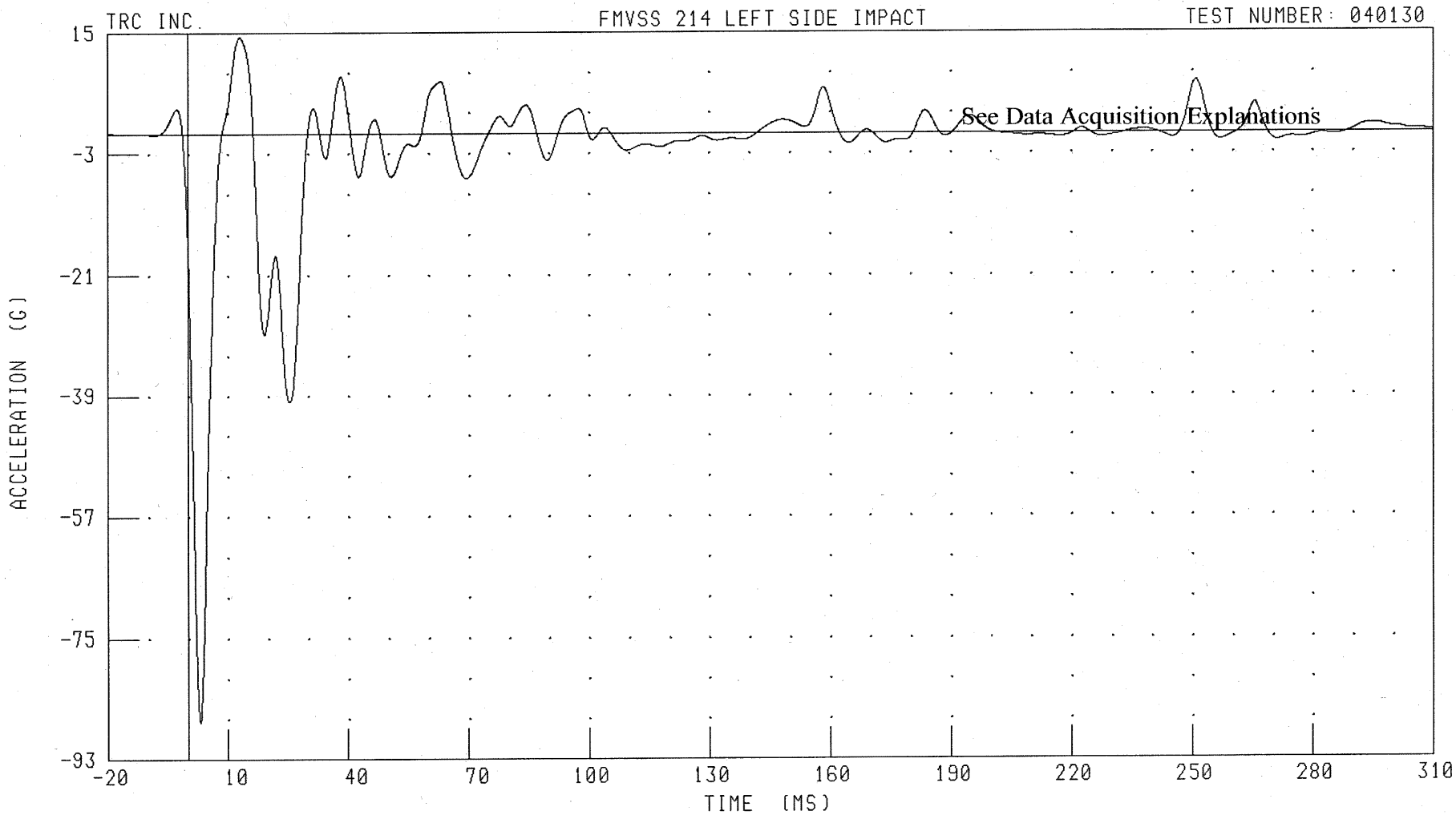


CHANNEL: LLAYV1 FILTER: CH. CLASS 180 PEAK DATA: 33.24 KM/H @ 62.48 MS; -3.44 KM/H @ 2.72 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT MIDDLE A-POST Y-AXIS ACCELERATION



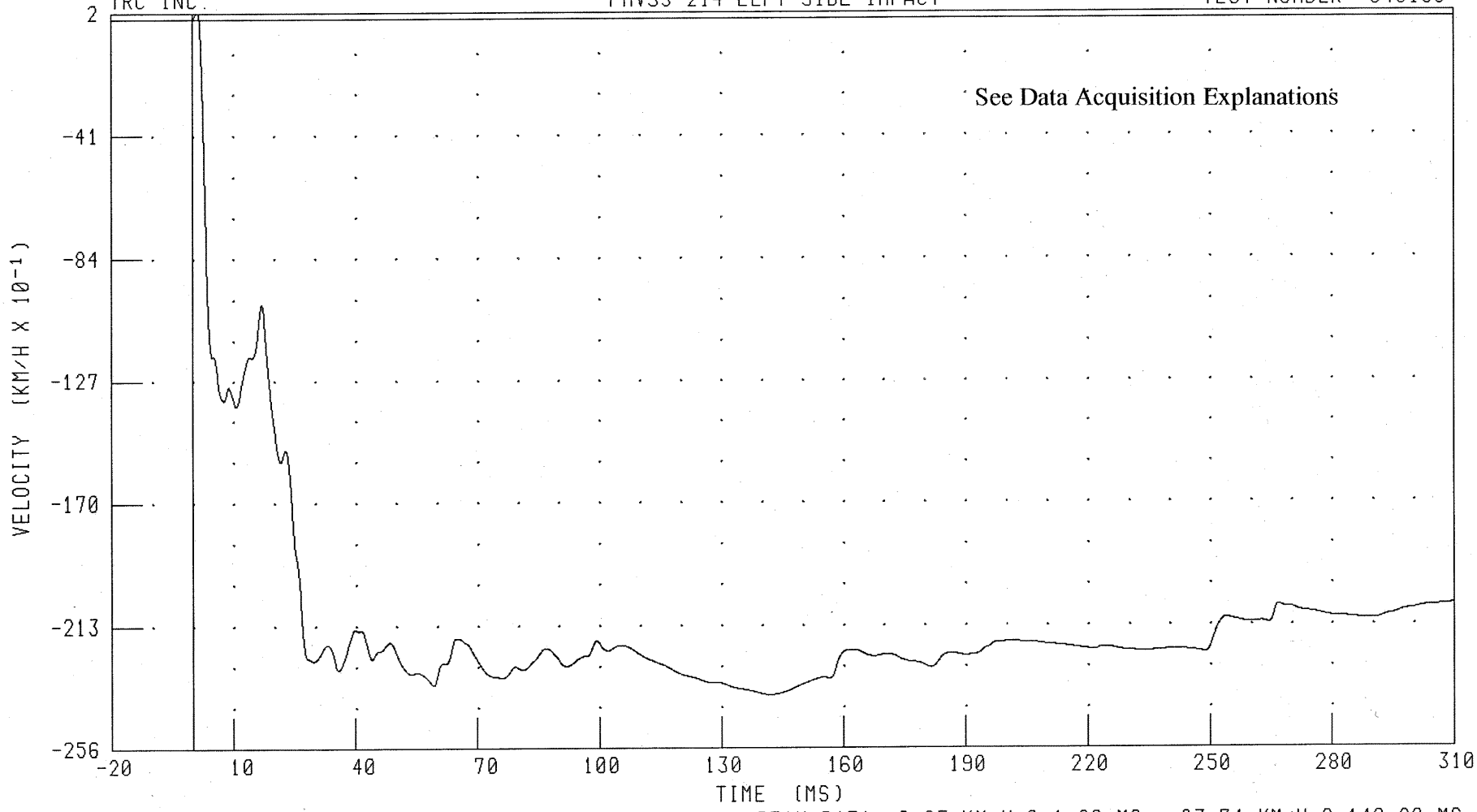
CHANNEL: LMAYG1 FILTER: CH. CLASS 60 PEAK DATA: 14.36 G @ 13.04 MS; -87.49 G @ 3.04 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT MIDDLE A-POST Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



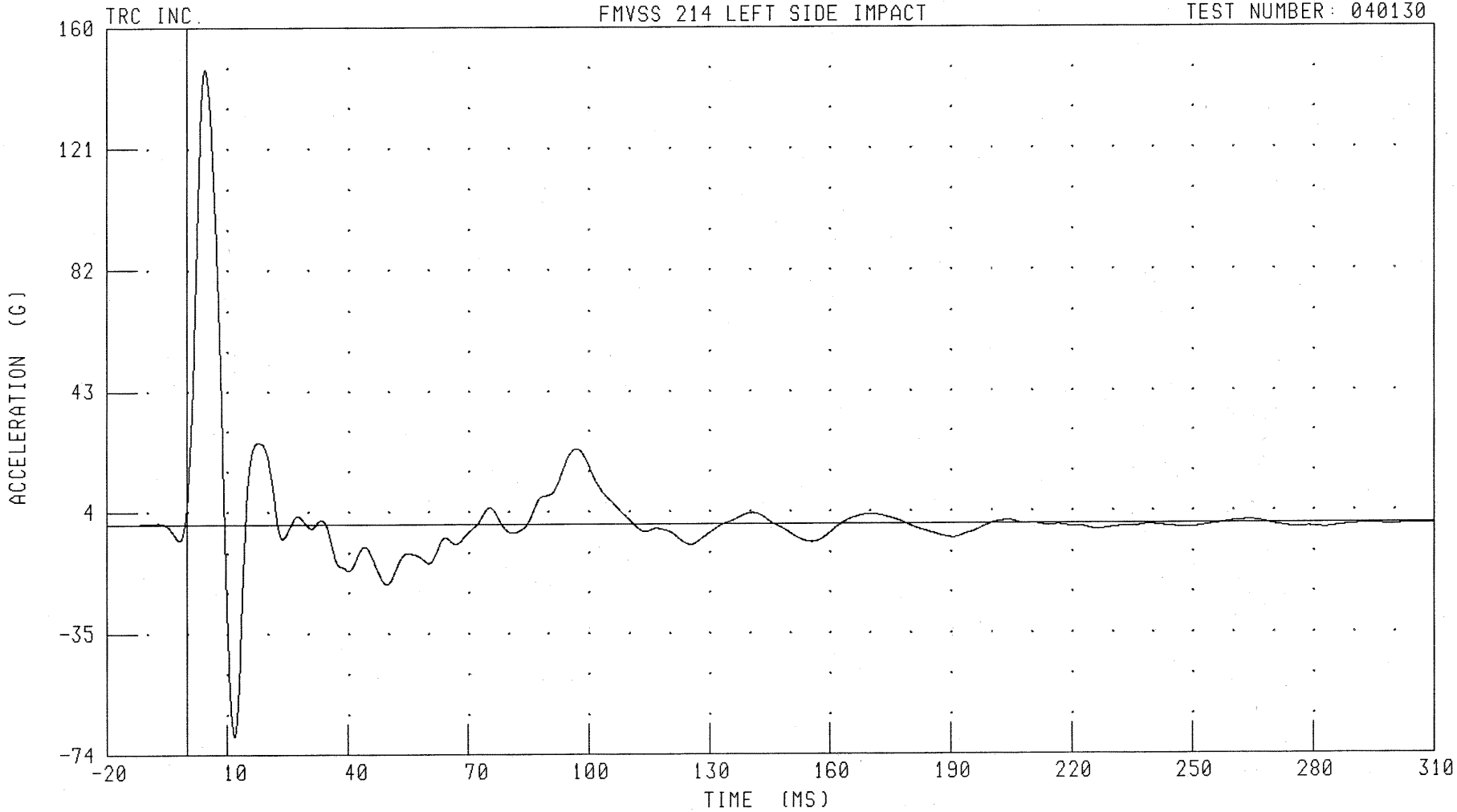
CHANNEL: LMAYV1 FILTER: CH. CLASS 180 PEAK DATA: 0.25 KM/H @ 1.20 MS; -23.74 KM/H @ 142.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT LOWER B-POST Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

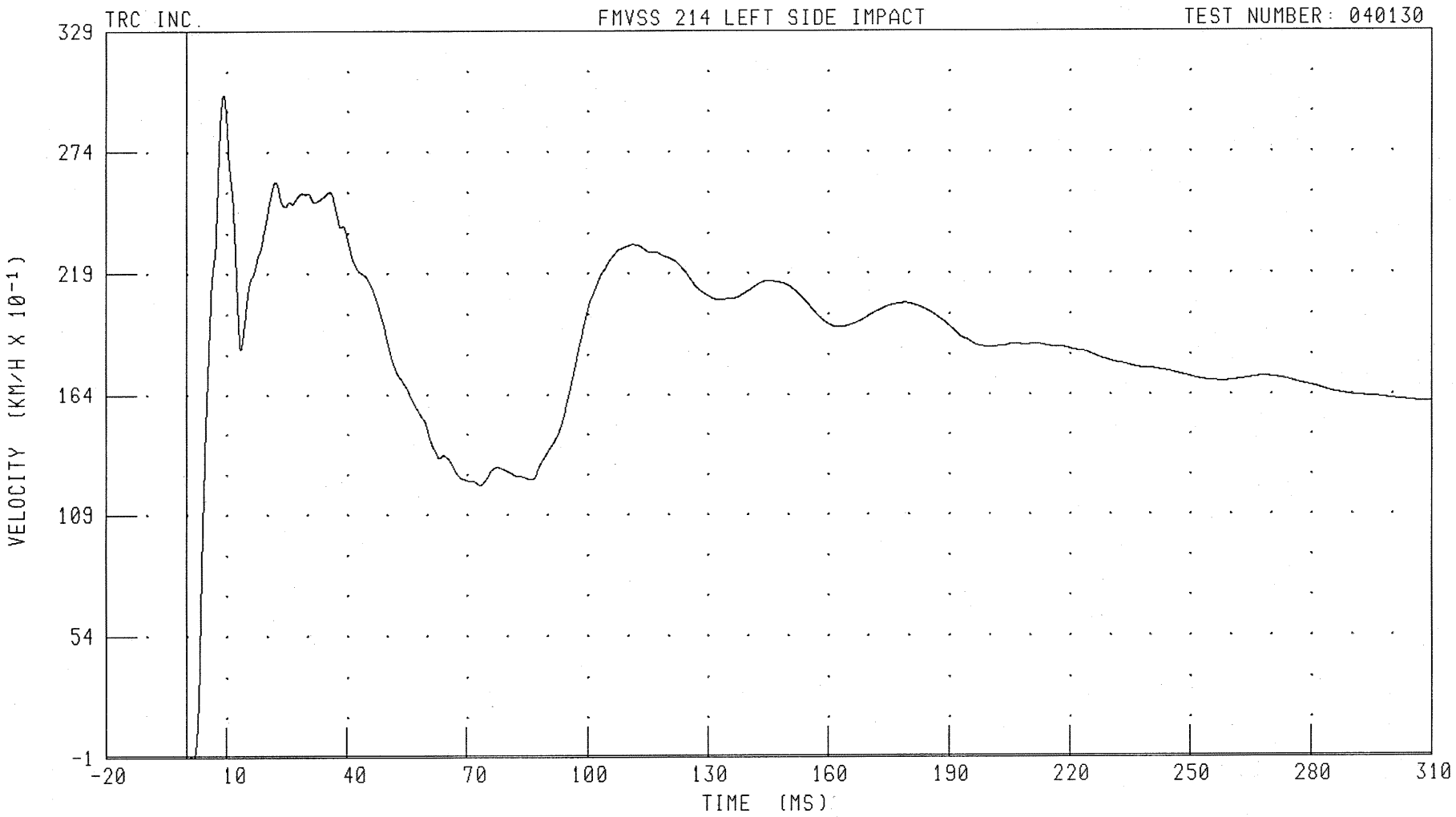


CHANNEL: LLBYG1 FILTER: CH. CLASS 60 PEAK DATA: 146.43 G @ 4.56 MS; -68.07 G @ 11.84 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT LOWER B-POST Y-AXIS VELOCITY

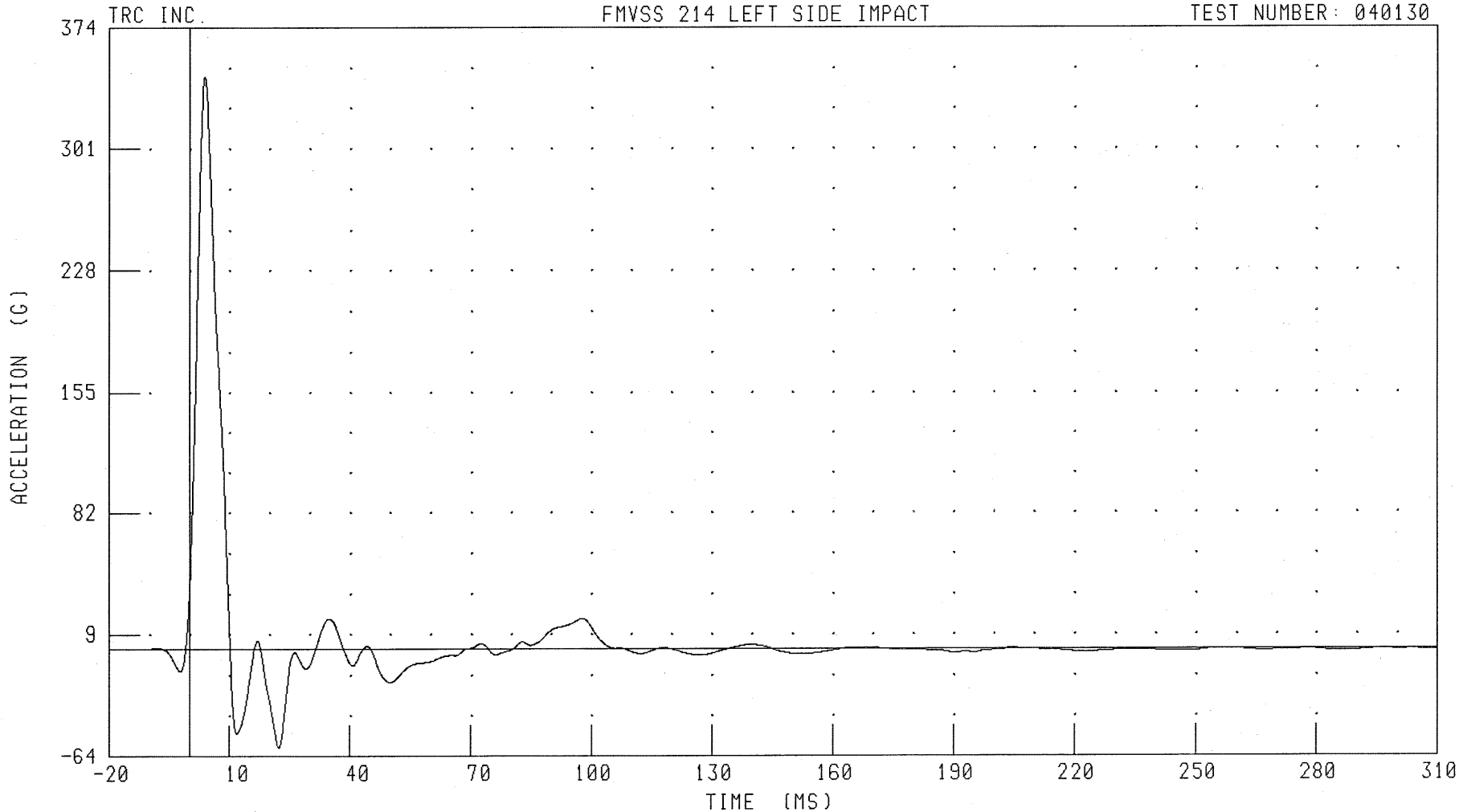


CHANNEL: LLBYV1 FILTER: CH. CLASS 180 PEAK DATA: 29.97 KM/H @ 9.28 MS; -0.13 KM/H @ 1.76 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT MIDDLE B-POST Y-AXIS ACCELERATION

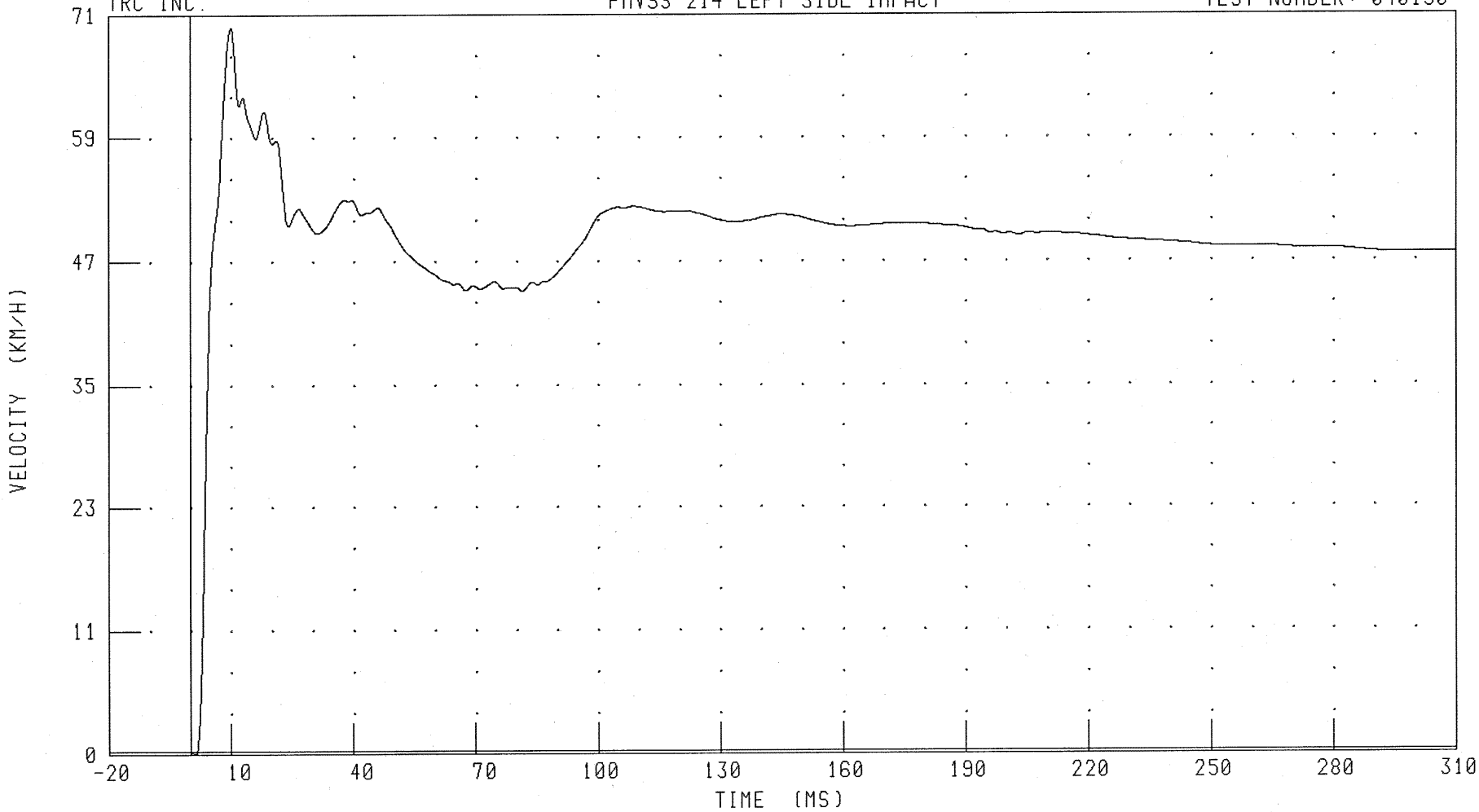


CHANNEL: LMBYG1 FILTER: CH. CLASS 60 PEAK DATA: 344.54 G @ 3.84 MS; -58.92 G @ 22.40 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT MIDDLE B-POST Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

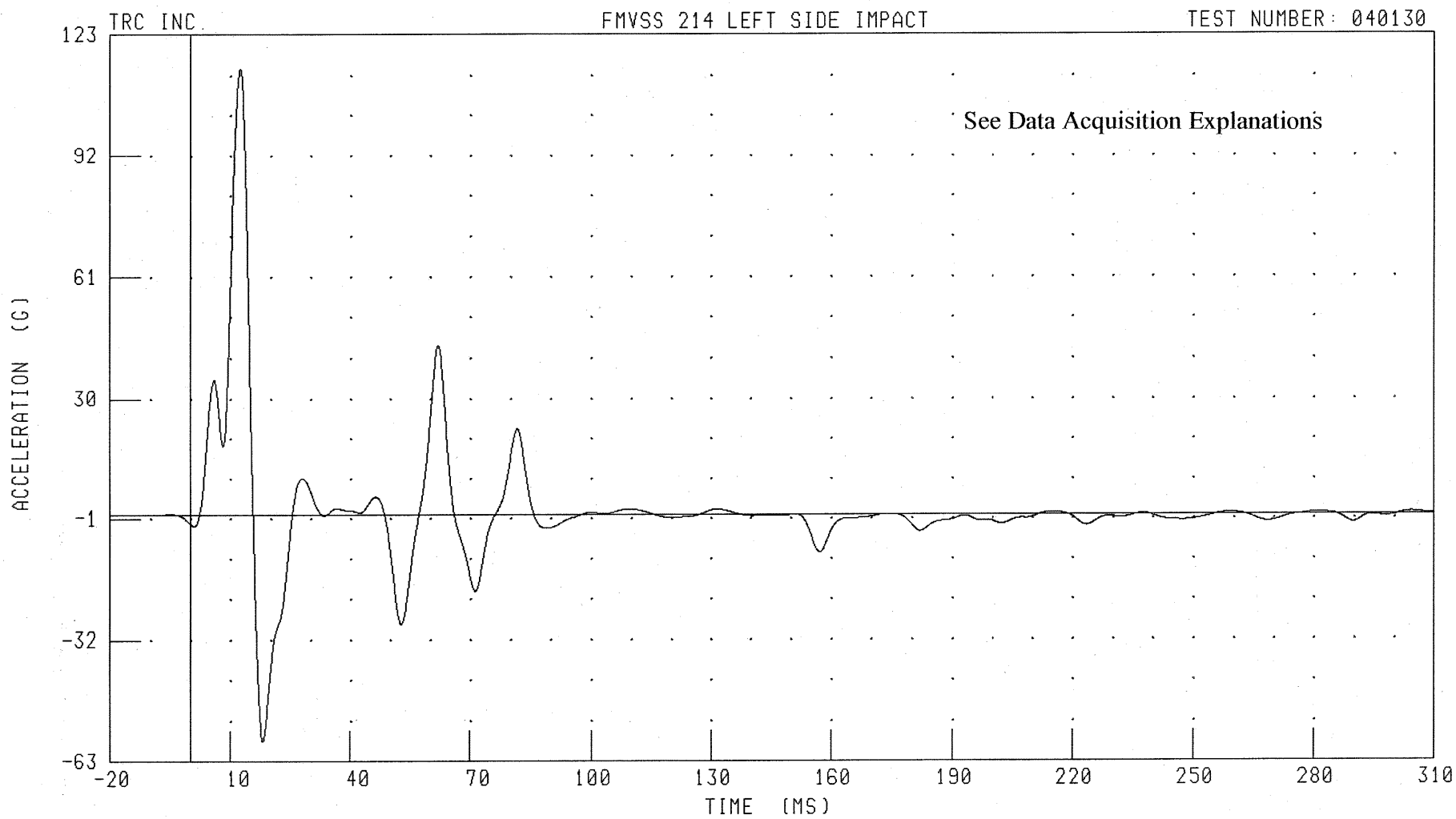


CHANNEL: LMBYV1 FILTER: CH. CLASS 180 PEAK DATA: 70.54 KM/H @ 10.00 MS; -0.28 KM/H @ 1.12 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT FRONT SEAT TRACK Y-AXIS ACCELERATION



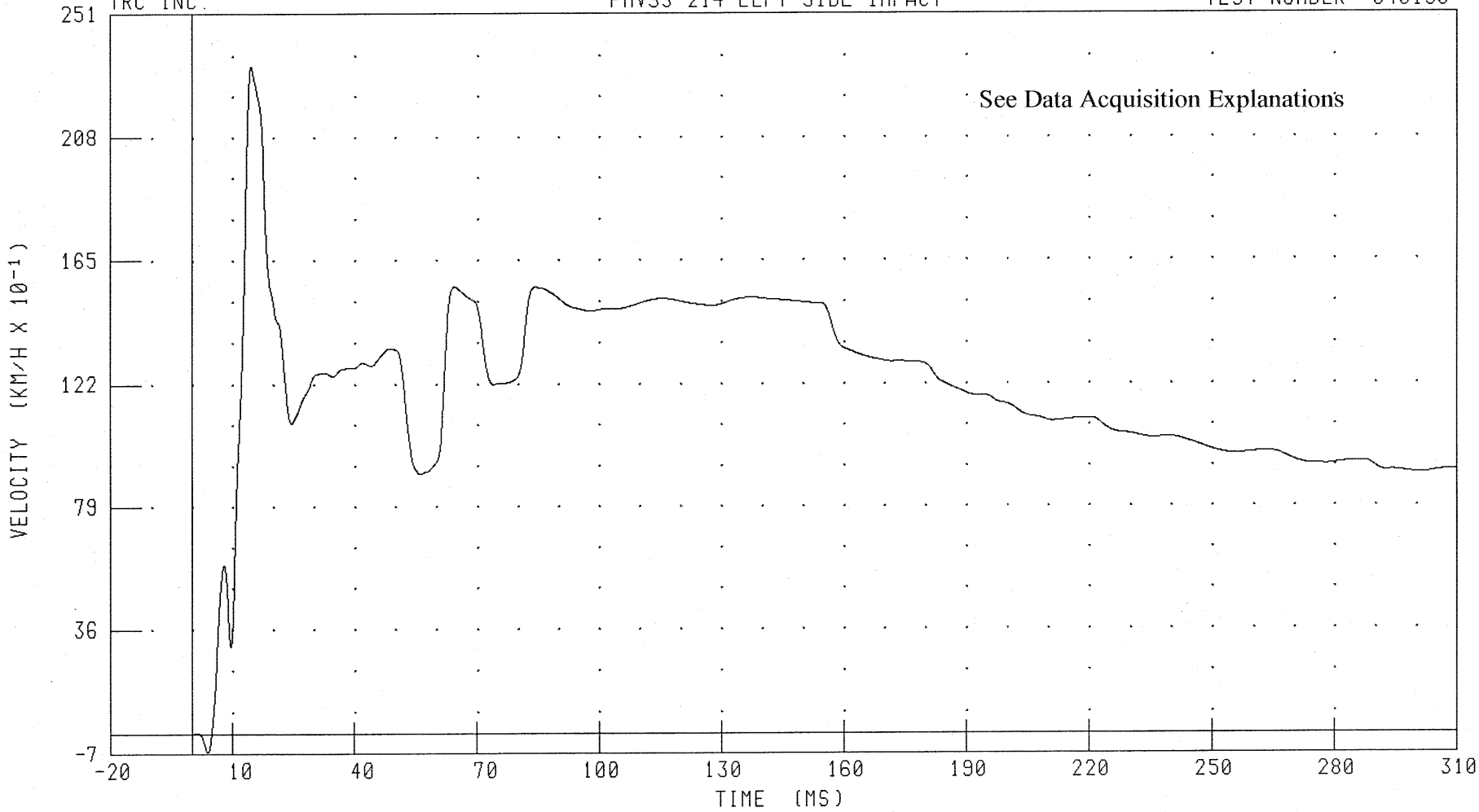
CHANNEL: LFTYG1 FILTER: CH. CLASS 60 PEAK DATA: 114.47 G @ 12.48 MS; -57.82 G @ 18.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT FRONT SEAT TRACK Y-AXIS VELOCITY

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

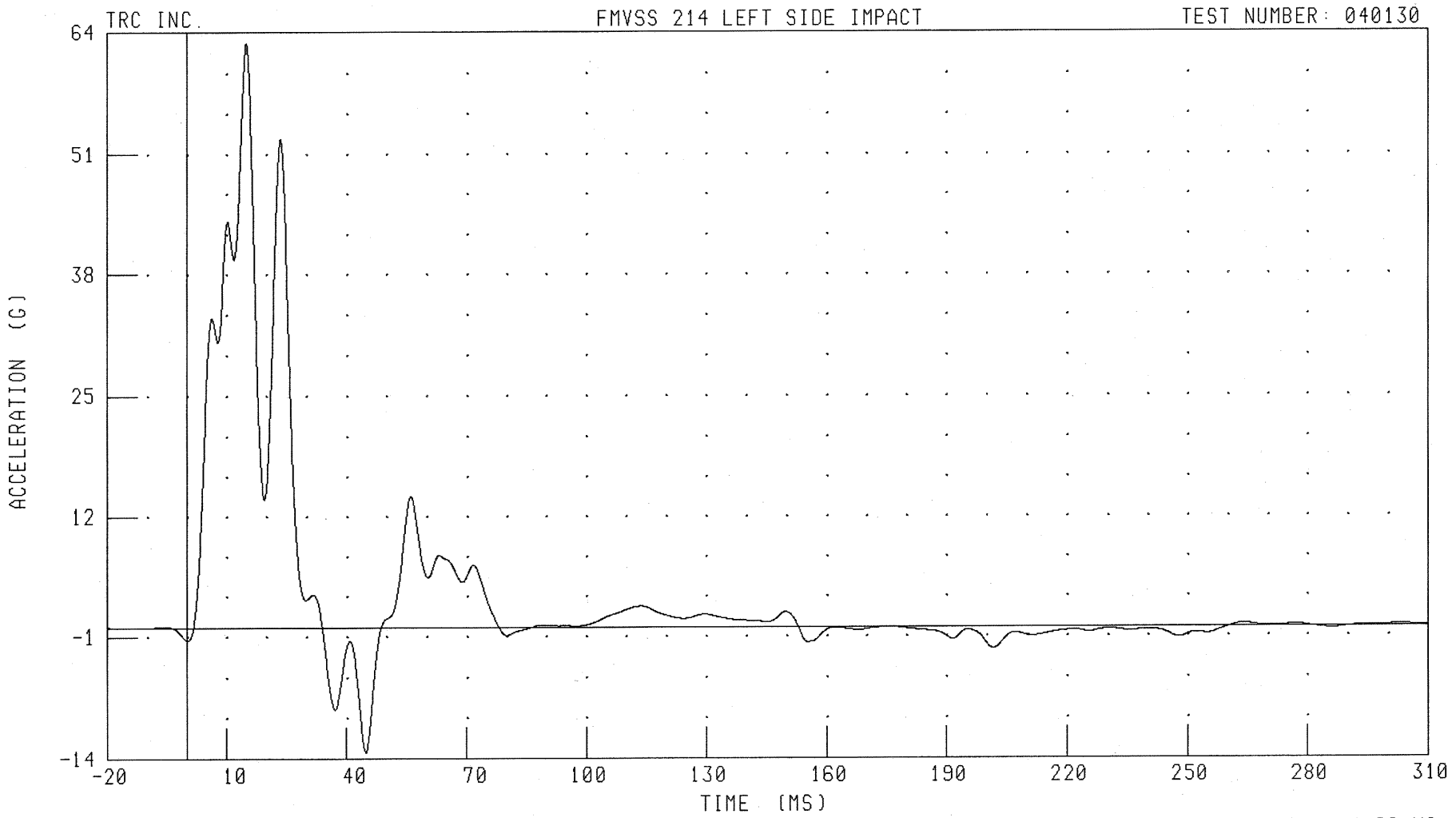


CHANNEL: LFTYV1 FILTER: CH. CLASS 180 PEAK DATA: 23.30 KM/H @ 14.56 MS; -0.64 KM/H @ 3.84 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR SEAT TRACK Y-AXIS ACCELERATION

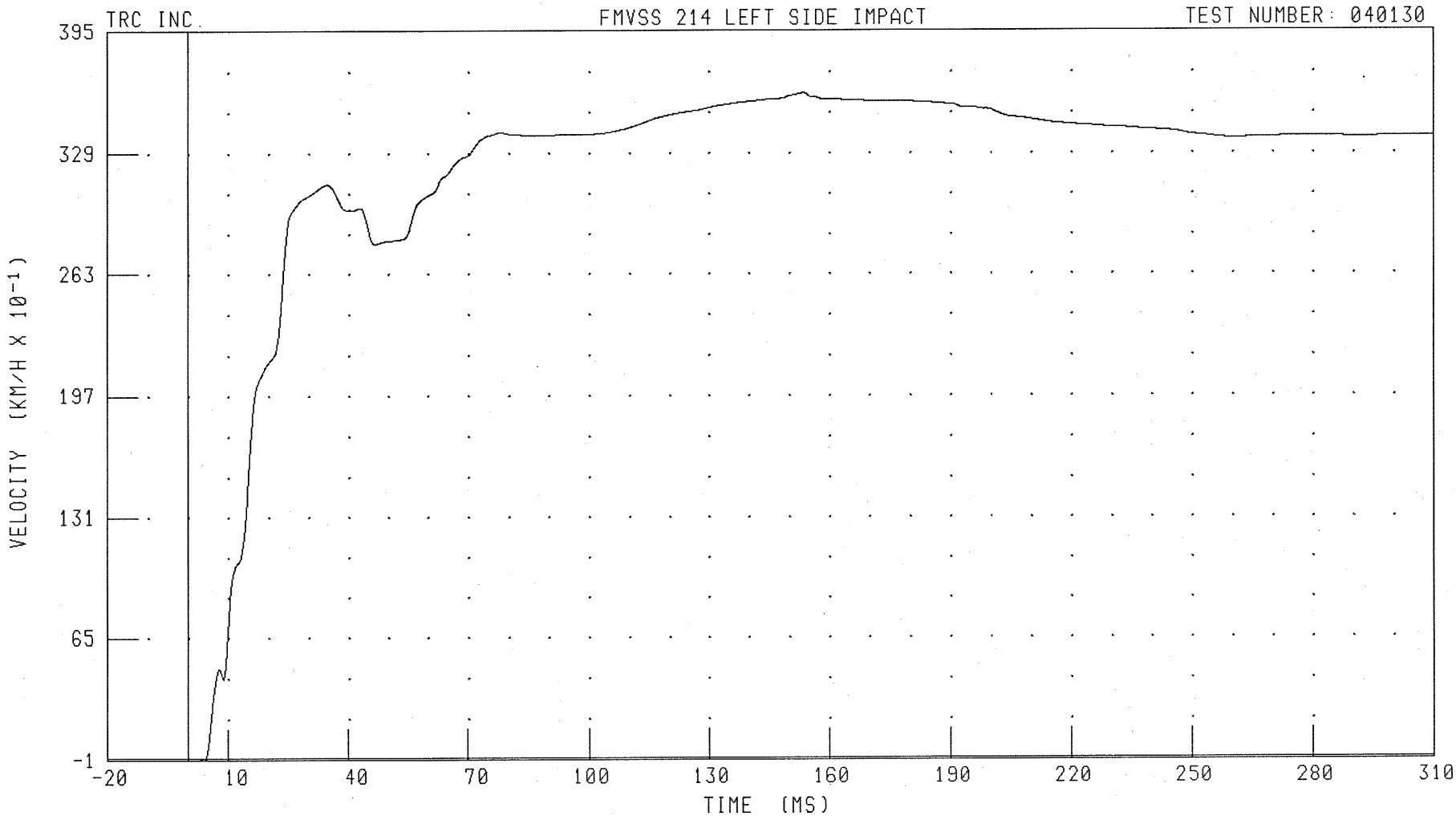


CHANNEL: LRTYG1 FILTER: CH. CLASS 60 PEAK DATA: 62.87 G @ 15.04 MS; -13.31 G @ 44.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR SEAT TRACK Y-AXIS VELOCITY

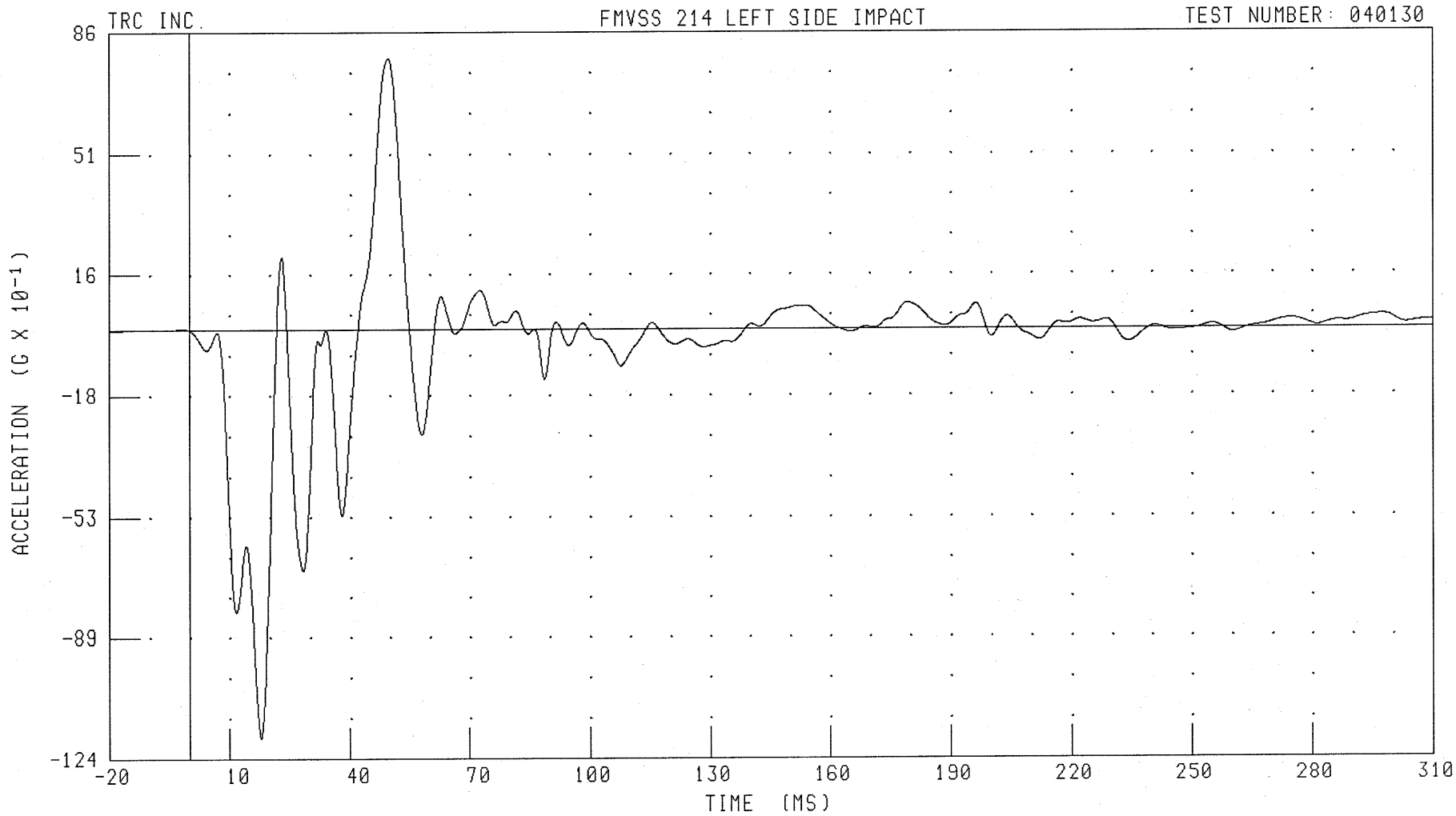


CHANNEL: LRTYV1 FILTER: CH. CLASS 180

PEAK DATA: 36.14 KM/H @ 153.60 MS; -0.11 KM/H @ 4.08 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

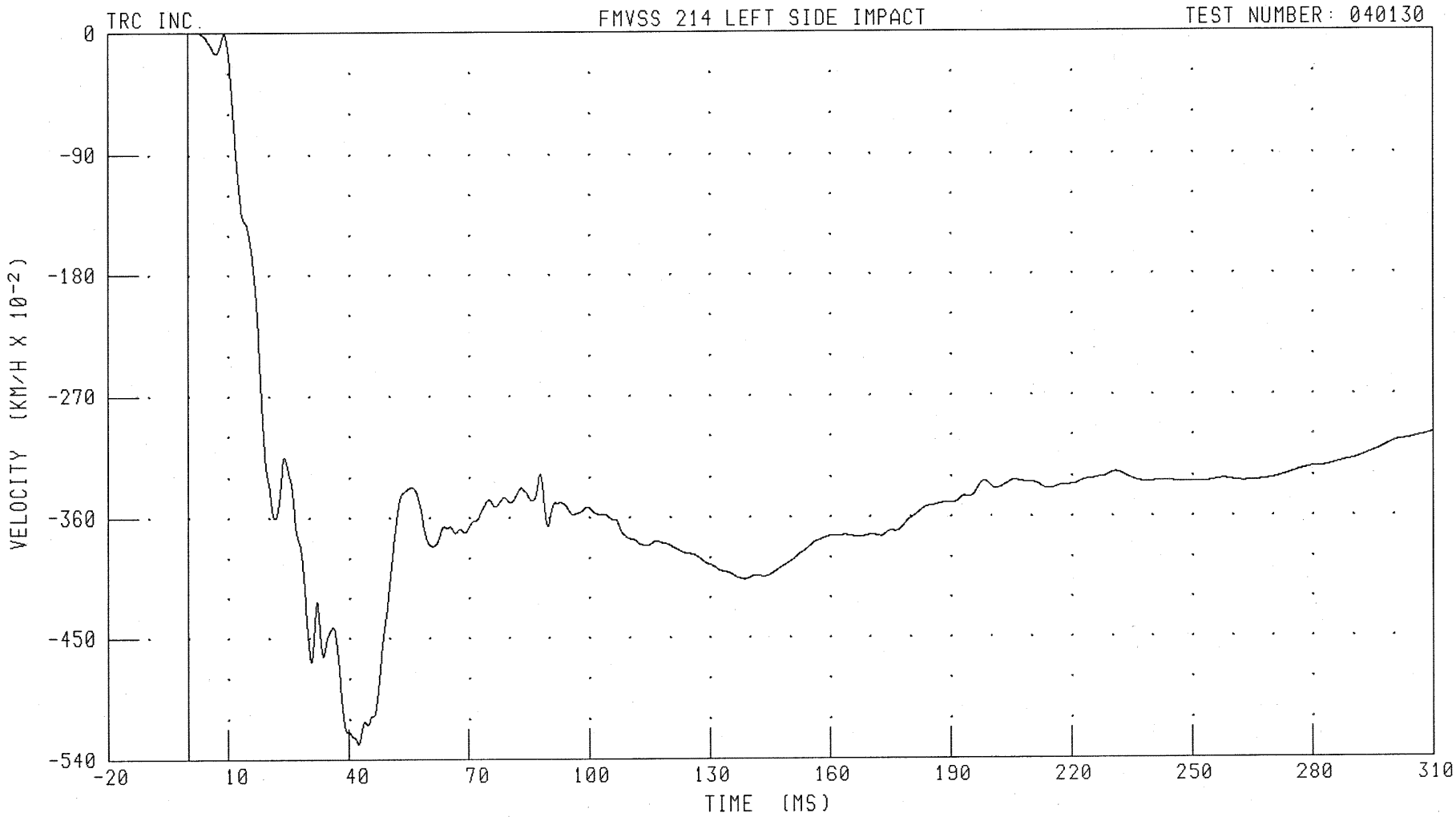


CHANNEL: VCGXG1 FILTER: CH. CLASS 60 PEAK DATA: 7.84 G @ 49.68 MS; -11.80 G @ 17.84 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

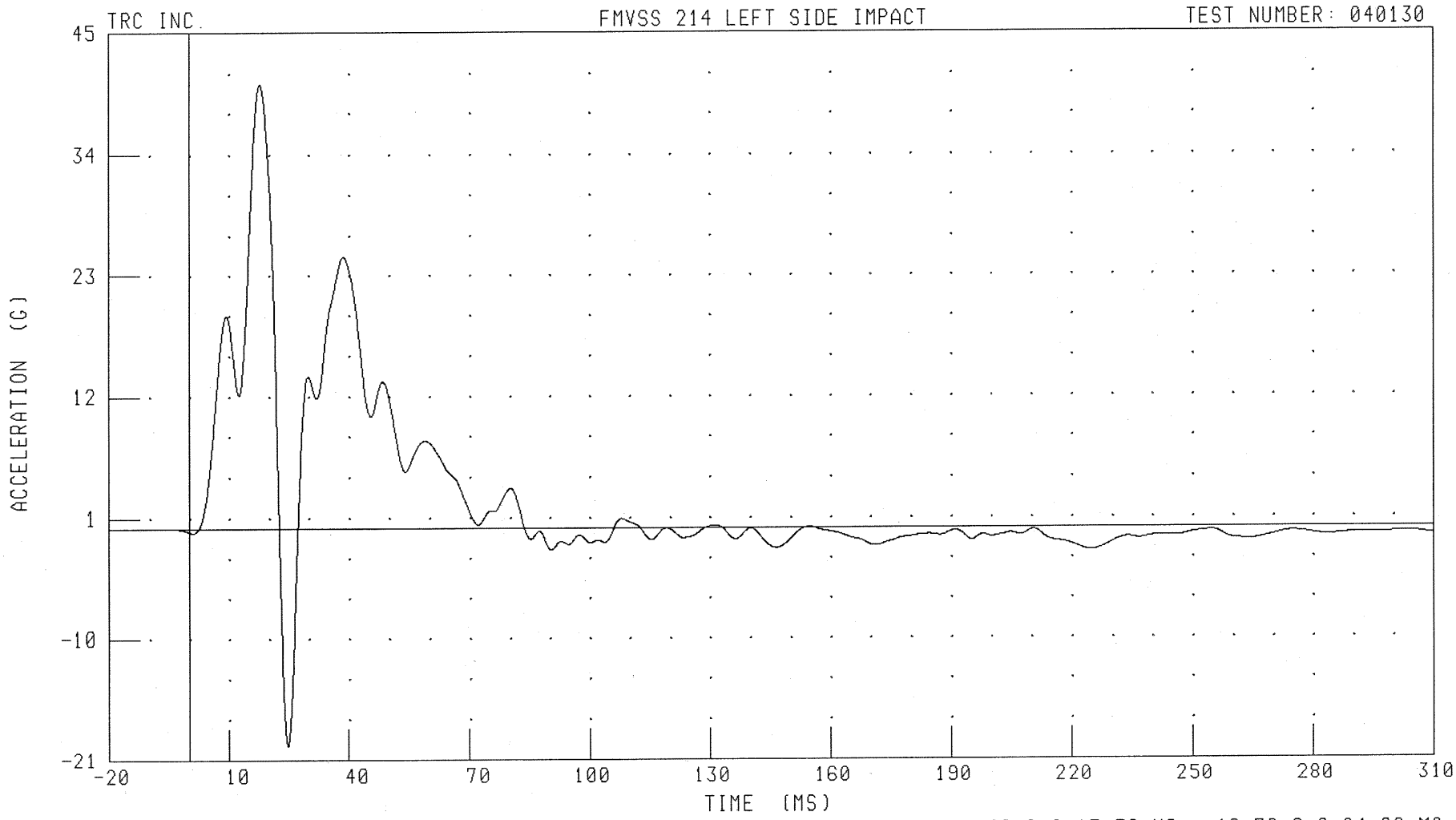


CHANNEL: VCGXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.00 KM/H @ 1.92 MS; -5.28 KM/H @ 42.32 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

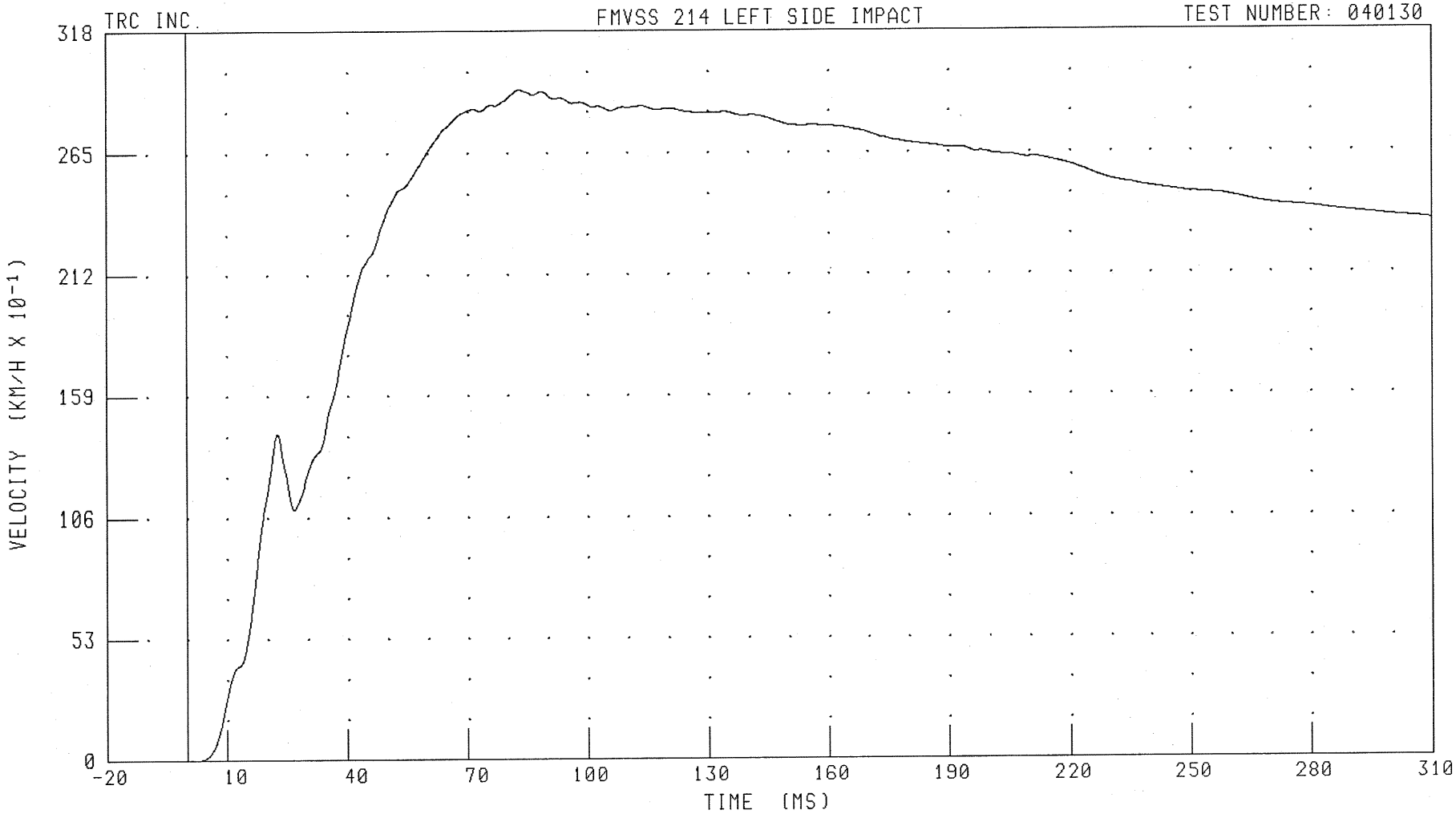


CHANNEL: VCGYG1 FILTER: CH. CLASS 60 PEAK DATA: 40.32 G @ 17.76 MS; -19.72 G @ 24.80 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

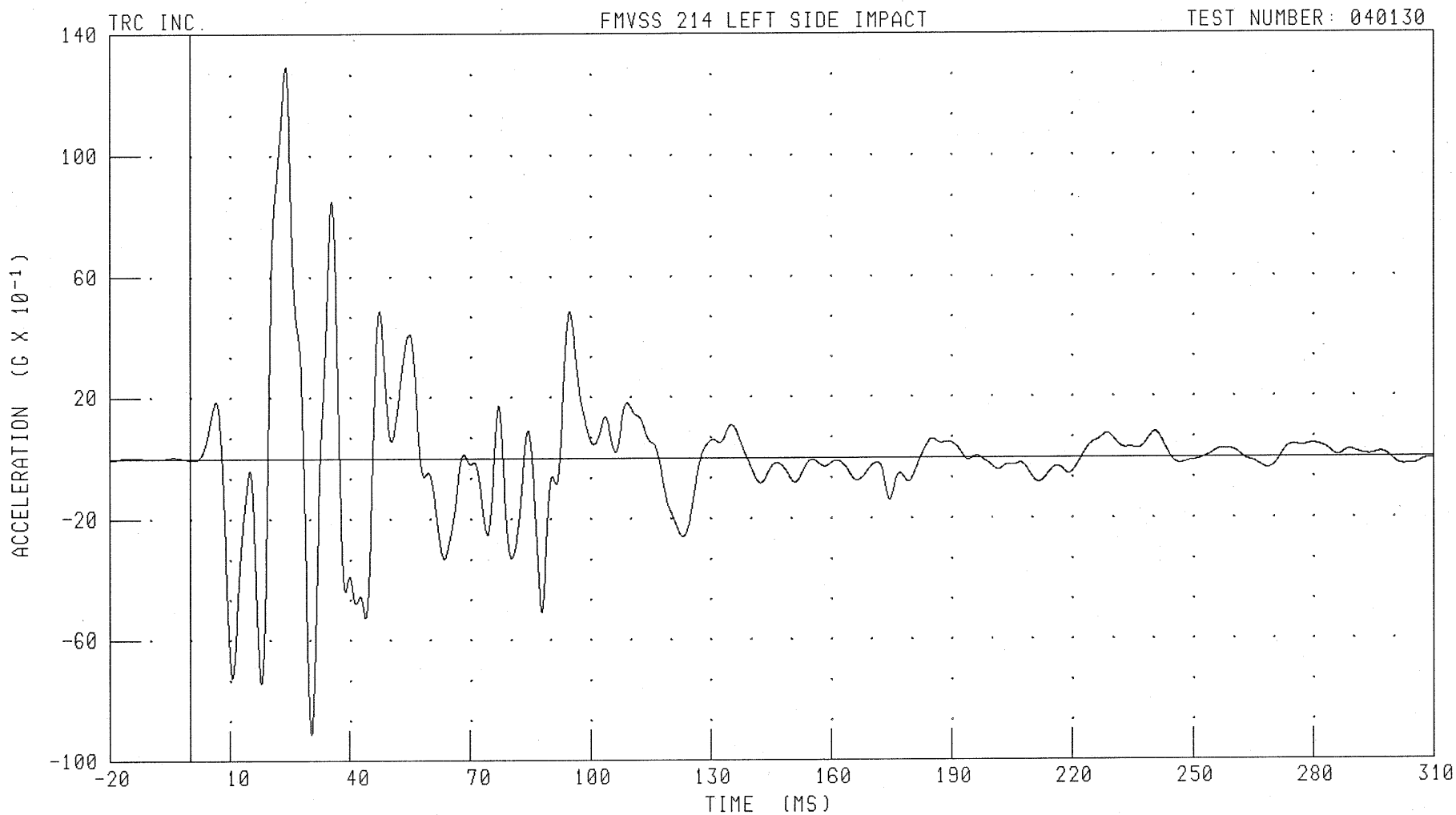


CHANNEL: VCGYV1 FILTER: CH. CLASS 180

PEAK DATA: 29.25 KM/H @ 83.04 MS; 0.00 KM/H @ 0.16 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

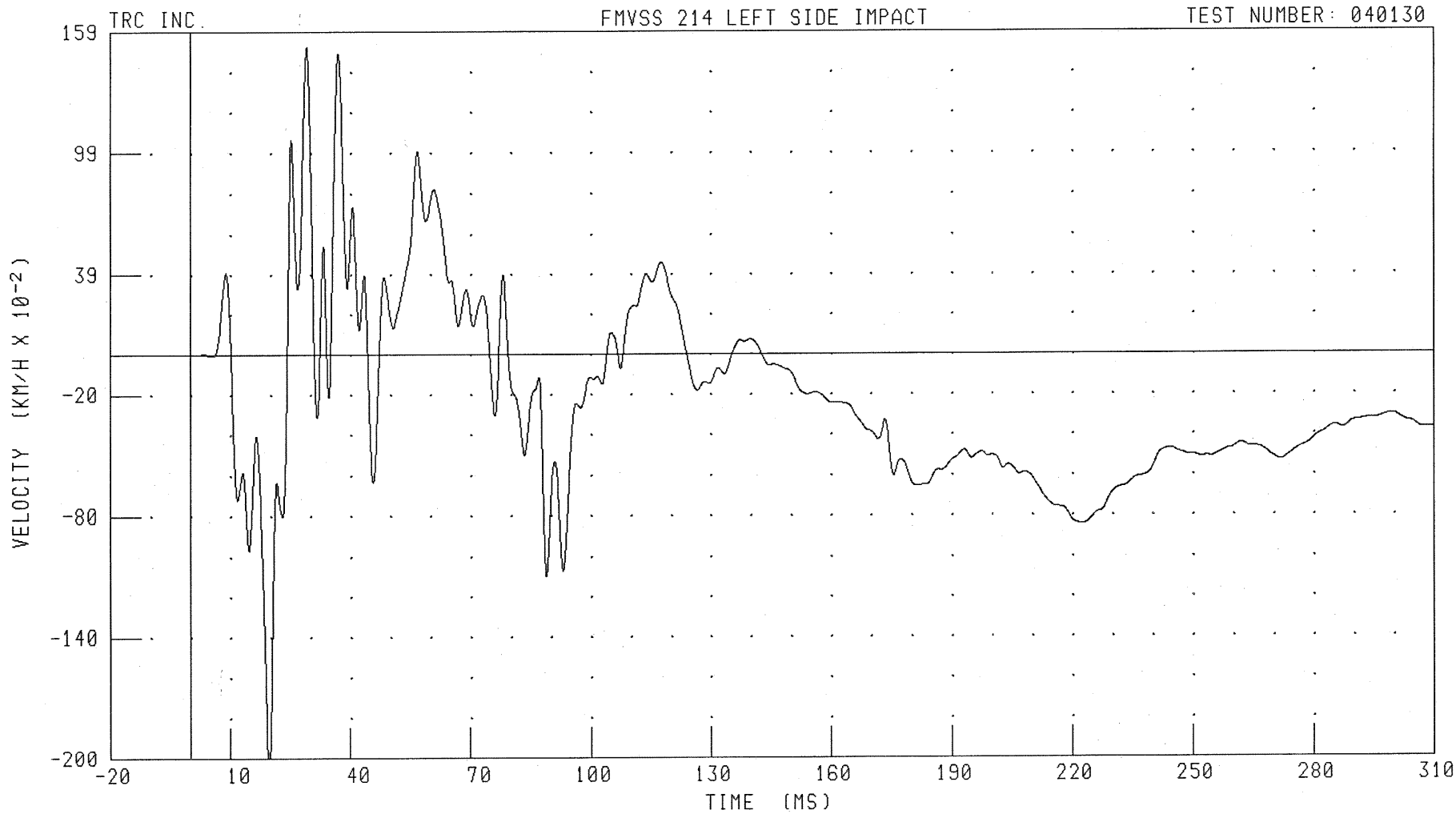


CHANNEL: VCGZG1 FILTER: CH. CLASS 60 PEAK DATA: 12.91 G @ 24.08 MS; -9.13 G @ 30.48 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY



CHANNEL: VCGZV1 FILTER: CH. CLASS 180

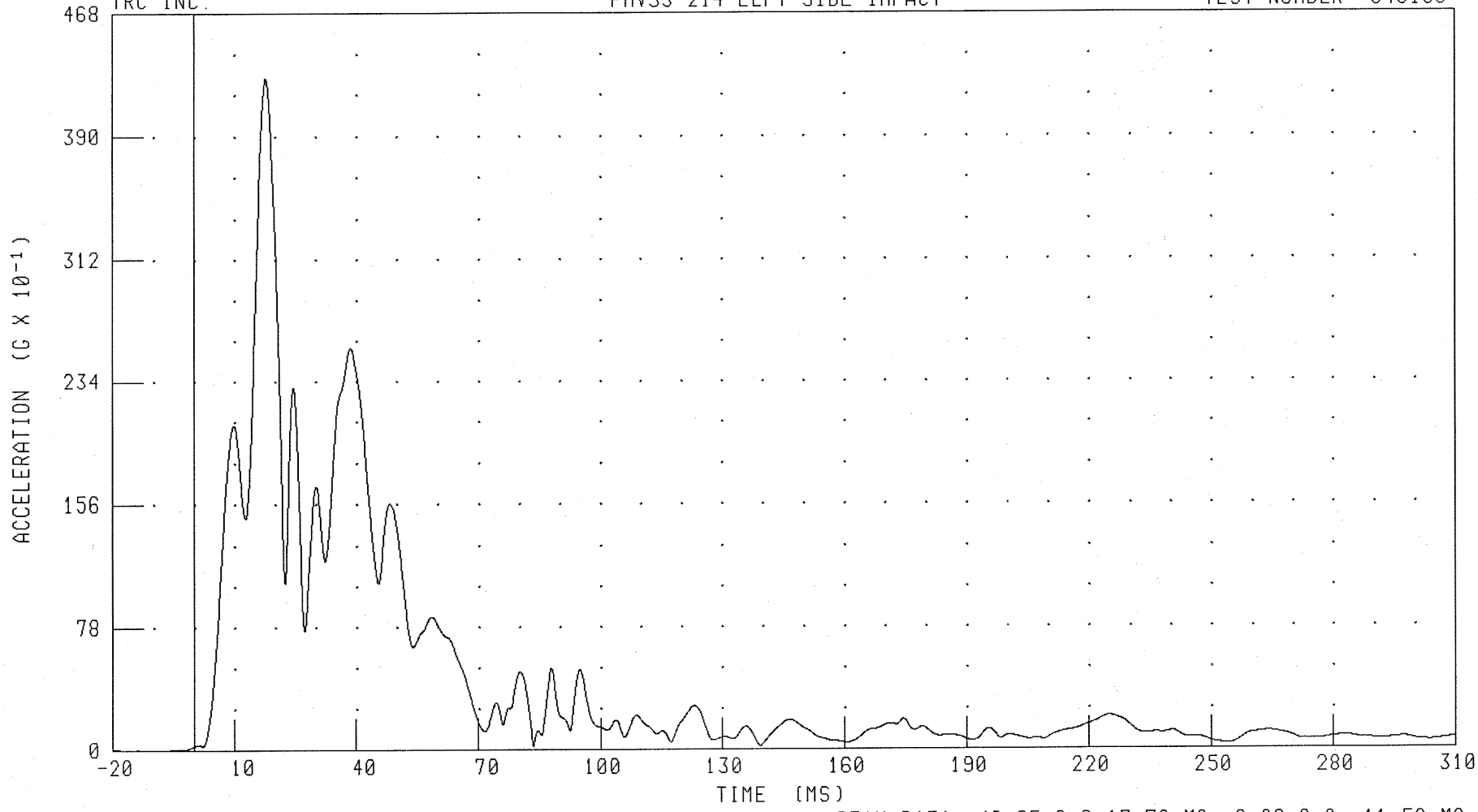
PEAK DATA: 1.52 KM/H @ 29.12 MS; -2.07 KM/H @ 19.60 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

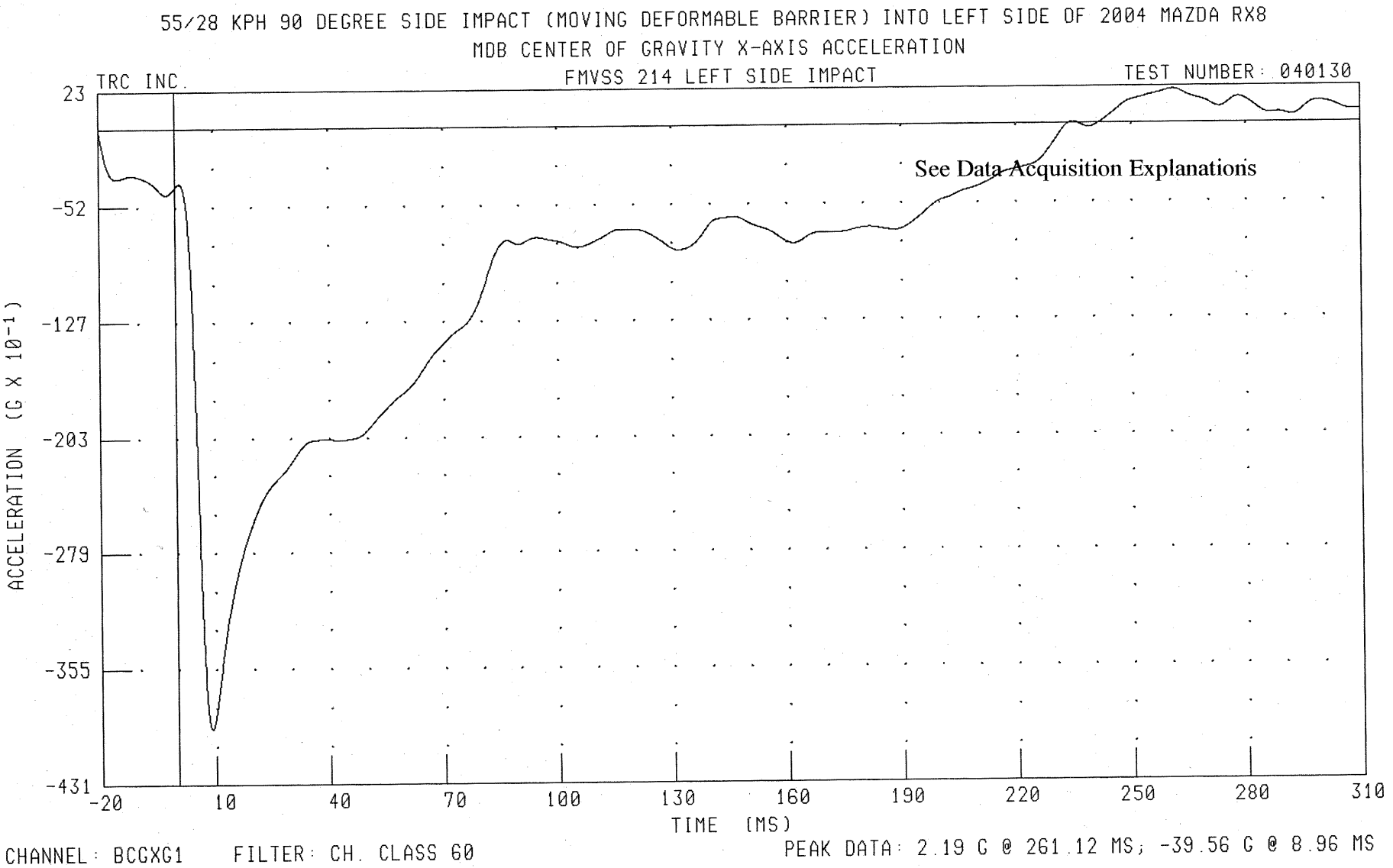
TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: VCGRG1 FILTER: CH. CLASS 60 PEAK DATA: 42.65 G @ 17.76 MS; 0.00 G @ -11.52 MS

040130

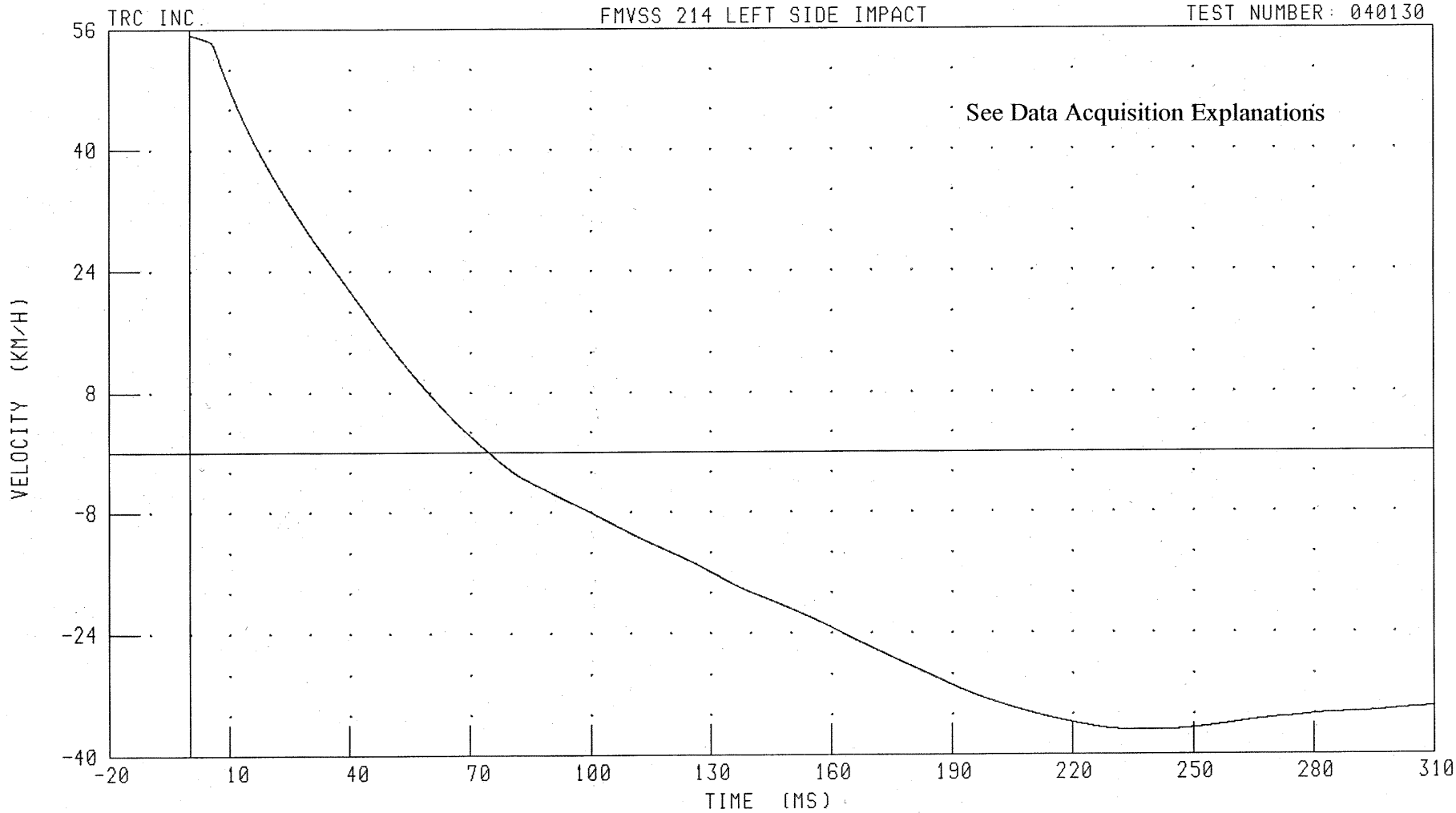
MDB Instrumentation Plots


55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8
MDB CENTER OF GRAVITY X-AXIS ACCELERATION
FMVSS 214 LEFT SIDE IMPACT
TRC INC.
TEST NUMBER: 040130
See Data Acquisition Explanations
ACCELERATION (G X 10⁻¹)
23
-52
-127
-203
-279
-355
-431
-20
10
40
70
100
130
160
190
220
250
280
310
TIME (MS)
CHANNEL: BCGXG1
FILTER: CH. CLASS 60
PEAK DATA: 2.19 G @ 261.12 MS; -39.56 G @ 8.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB CENTER OF GRAVITY X-AXIS VELOCITY



CHANNEL: BCGXV1 FILTER: CH. CLASS 180

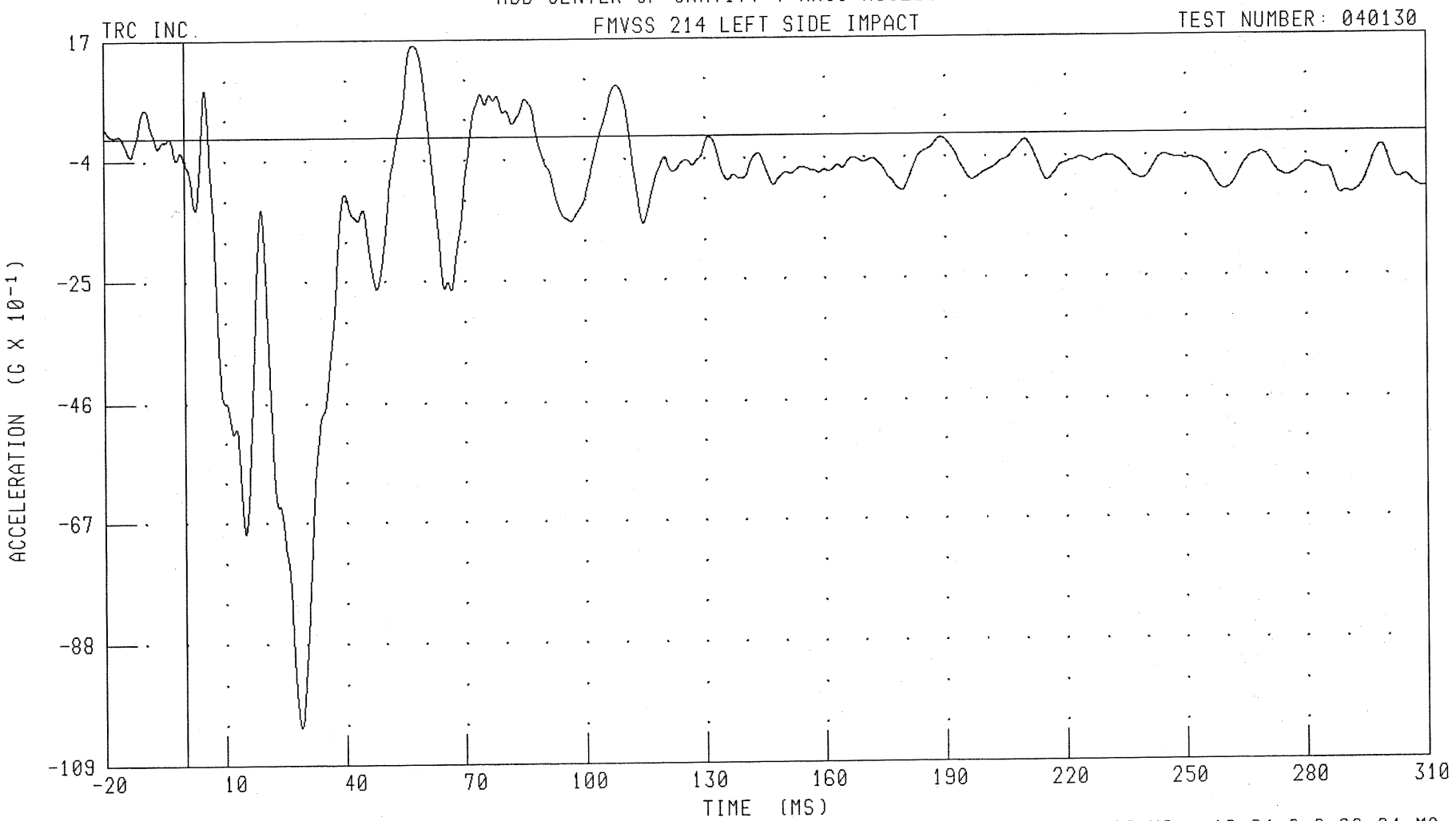
PEAK DATA: 55.30 KM/H @ 0.00 MS; -36.76 KM/H @ 241.20 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB CENTER OF GRAVITY Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT



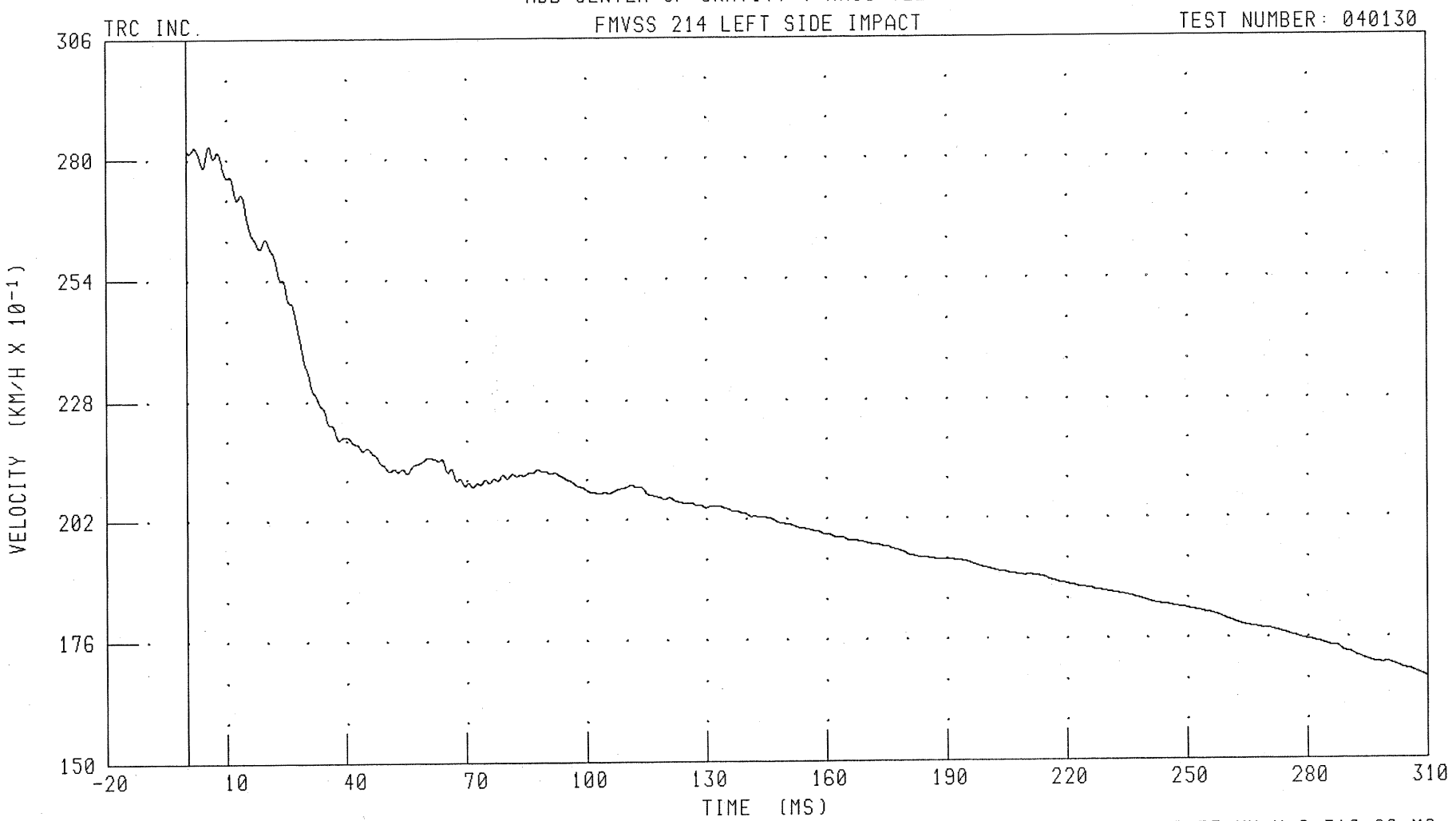
CHANNEL: BCGYG1 FILTER: CH. CLASS 60

PEAK DATA: 1.60 G @ 57.28 MS; -10.24 G @ 28.64 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB CENTER OF GRAVITY Y-AXIS VELOCITY



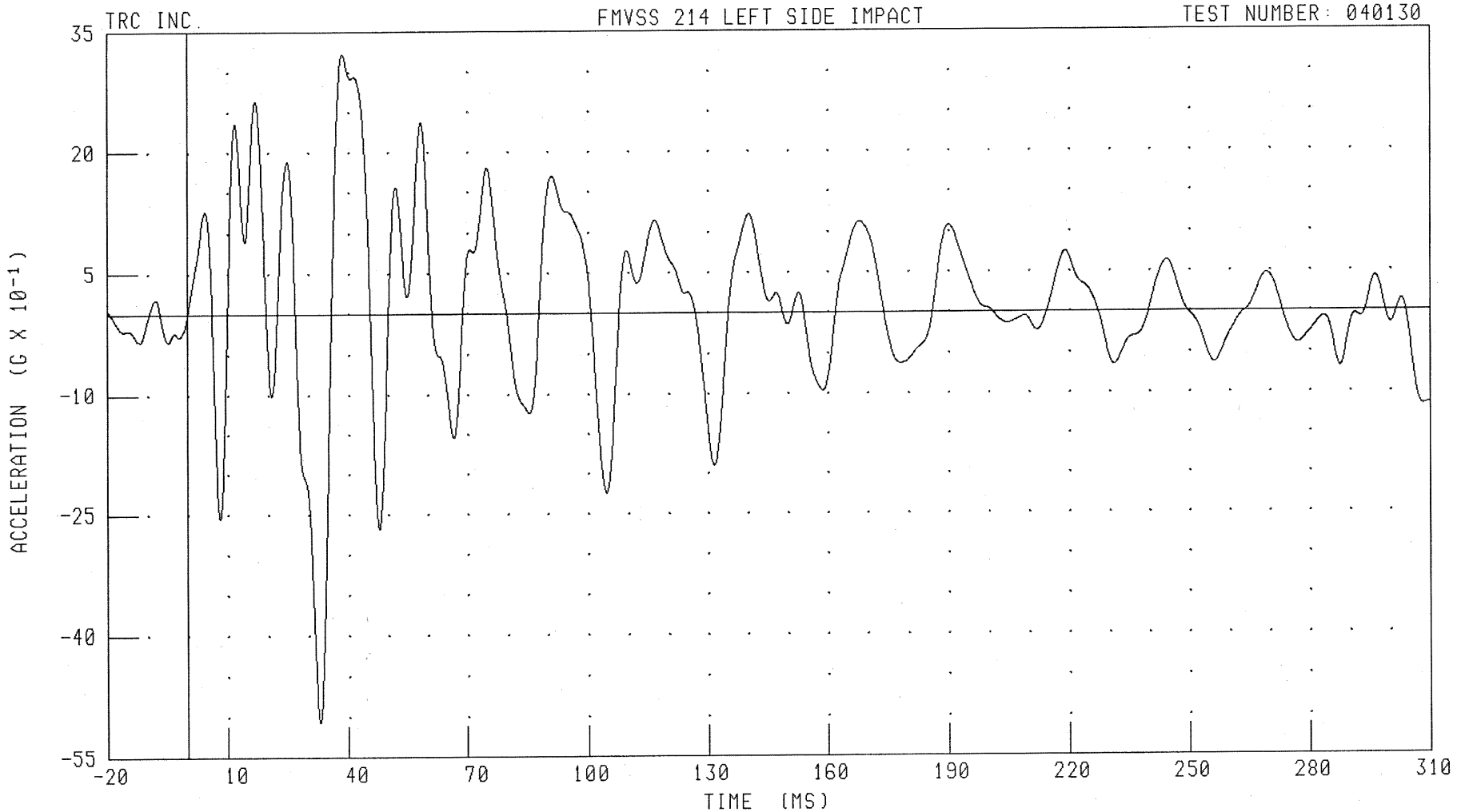
CHANNEL: BCGYV1 FILTER: CH. CLASS 180

PEAK DATA: 28.29 KM/H @ 5.68 MS; 16.75 KM/H @ 310.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB CENTER OF GRAVITY Z-AXIS ACCELERATION



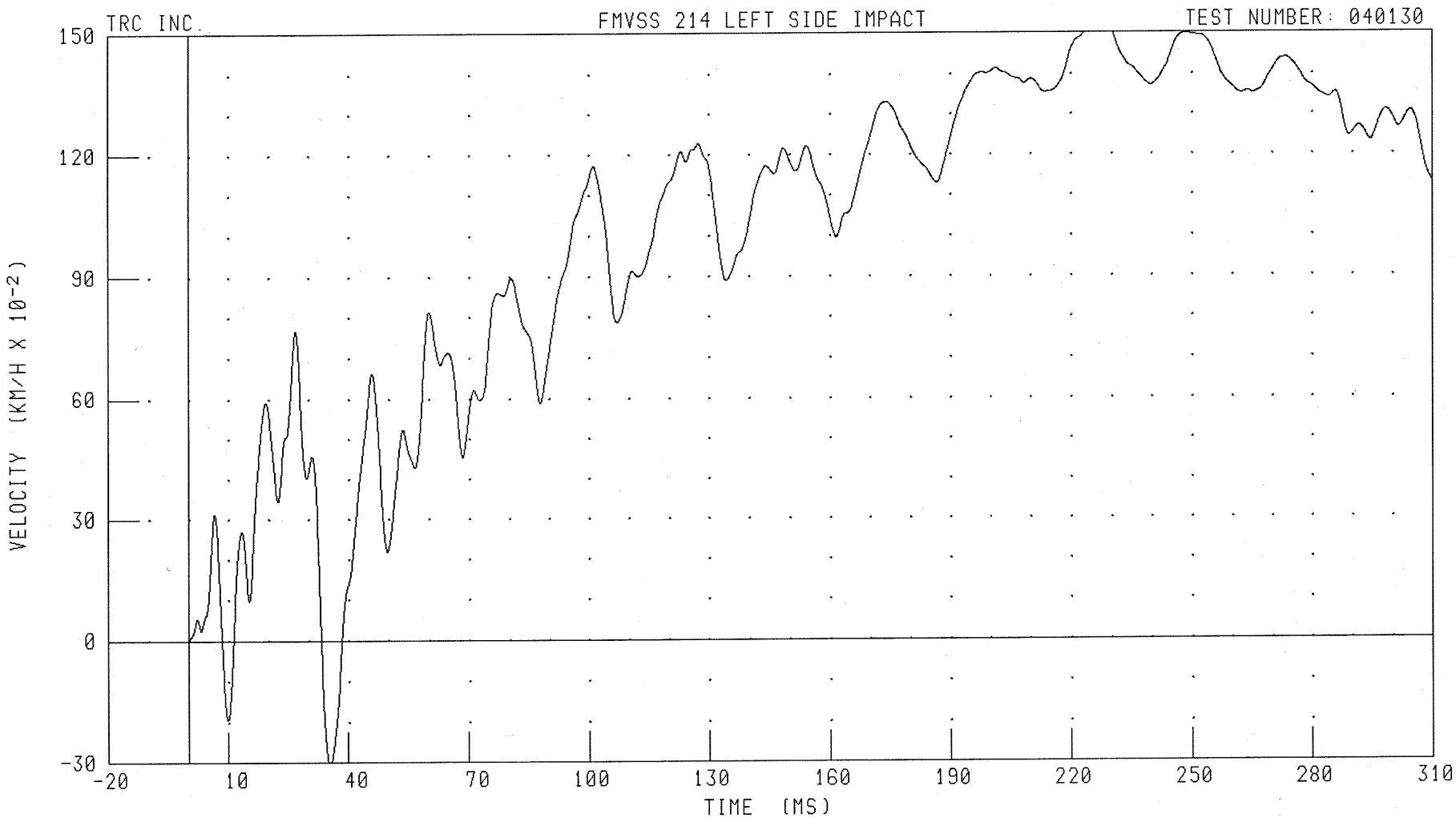
CHANNEL: BCGZG1 FILTER: CH. CLASS 60

PEAK DATA: 3.22 G @ 38.64 MS; -5.08 G @ 32.96 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB CENTER OF GRAVITY Z-AXIS VELOCITY



CHANNEL: BCGZV1 FILTER: CH. CLASS 180

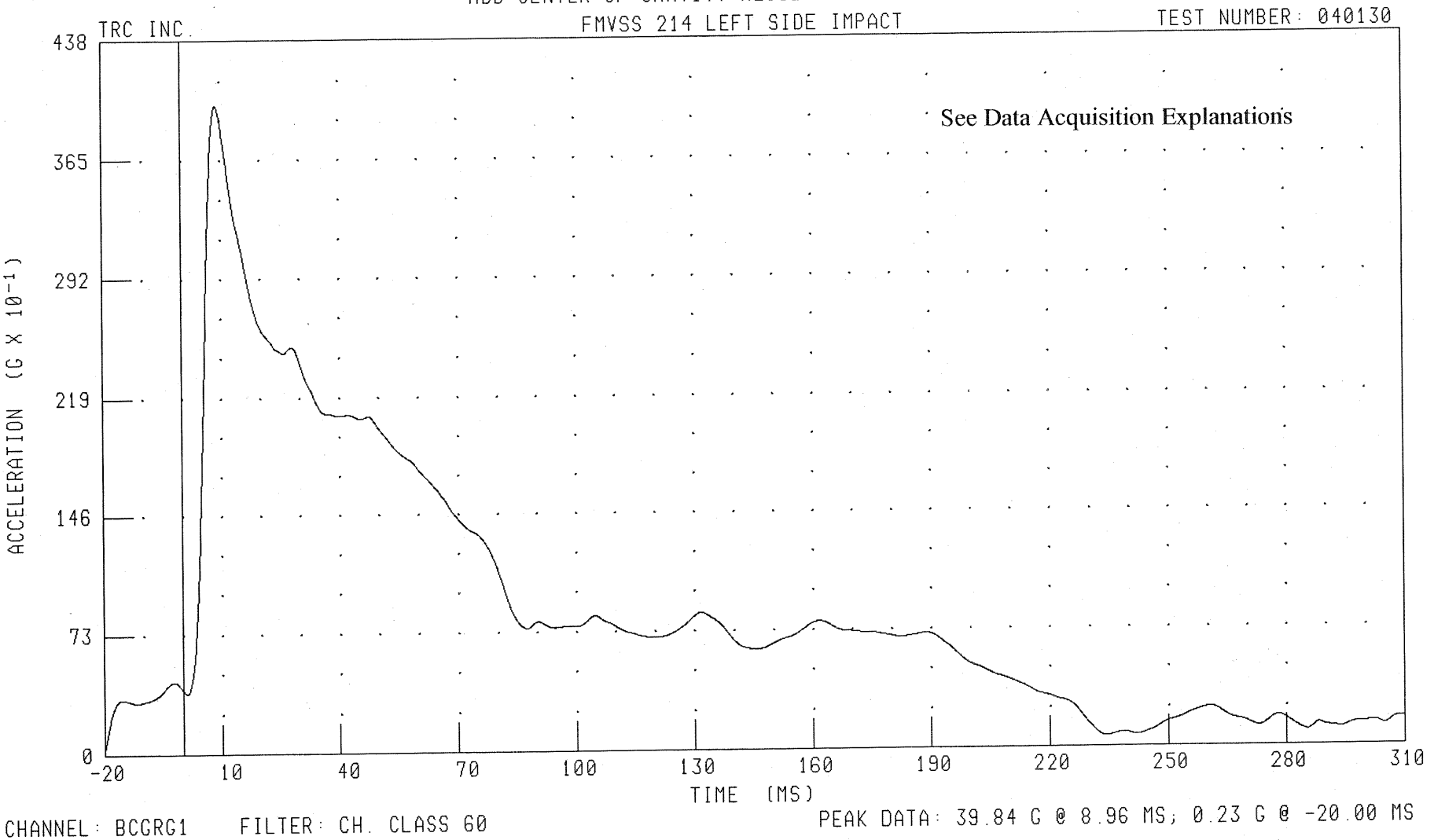
PEAK DATA: 1.54 KM/H @ 228.48 MS; -0.31 KM/H @ 35.44 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB CENTER OF GRAVITY RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT



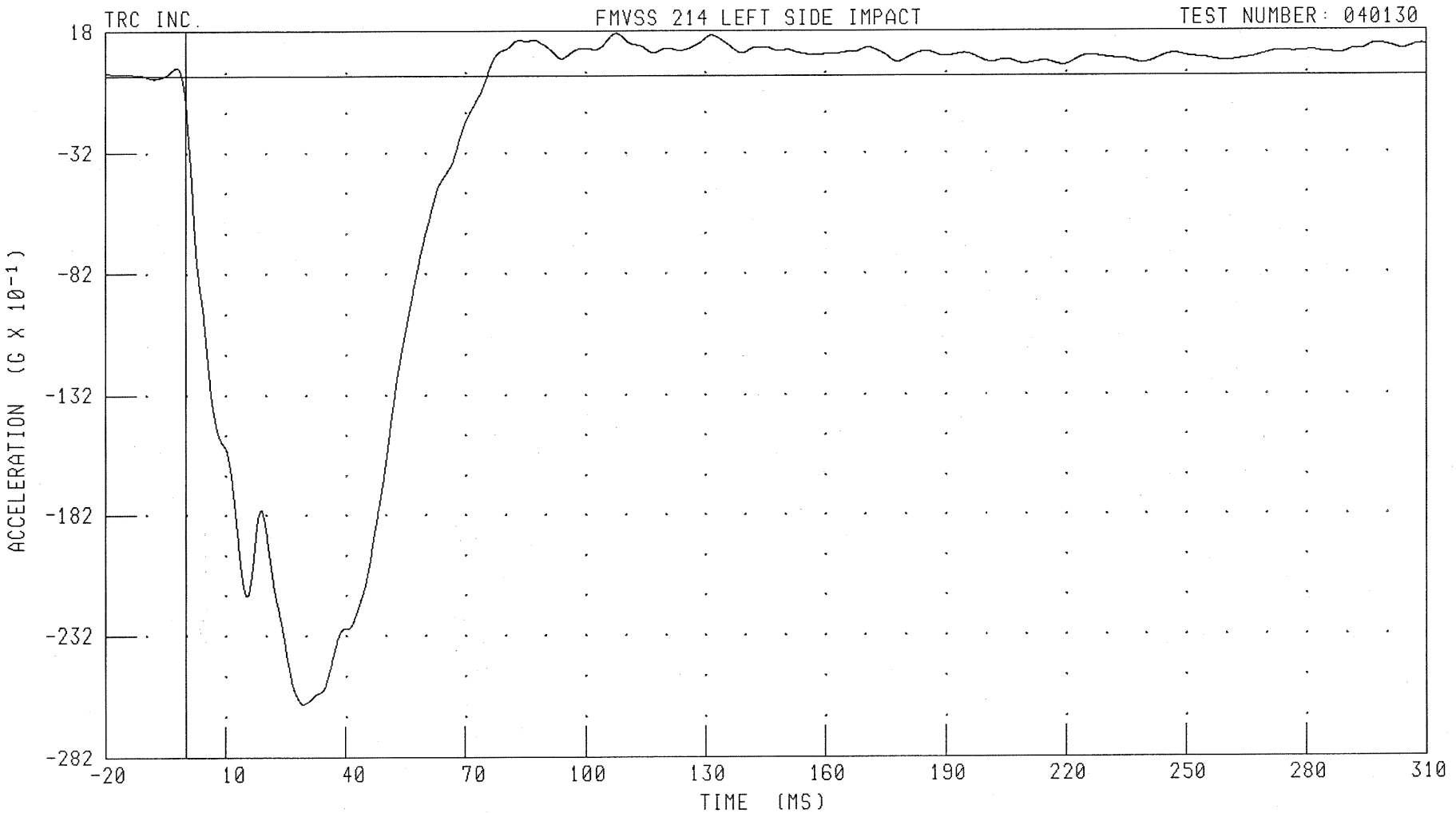
CHANNEL: BCGRG1 FILTER: CH. CLASS 60

PEAK DATA: 39.84 G @ 8.96 MS; 0.23 G @ -20.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB LEFT REAR X-AXIS ACCELERATION



CHANNEL: LRRXG1 FILTER: CH. CLASS 60 PEAK DATA: 1.71 G @ 107.76 MS; -26.04 G @ 29.28 MS

040130

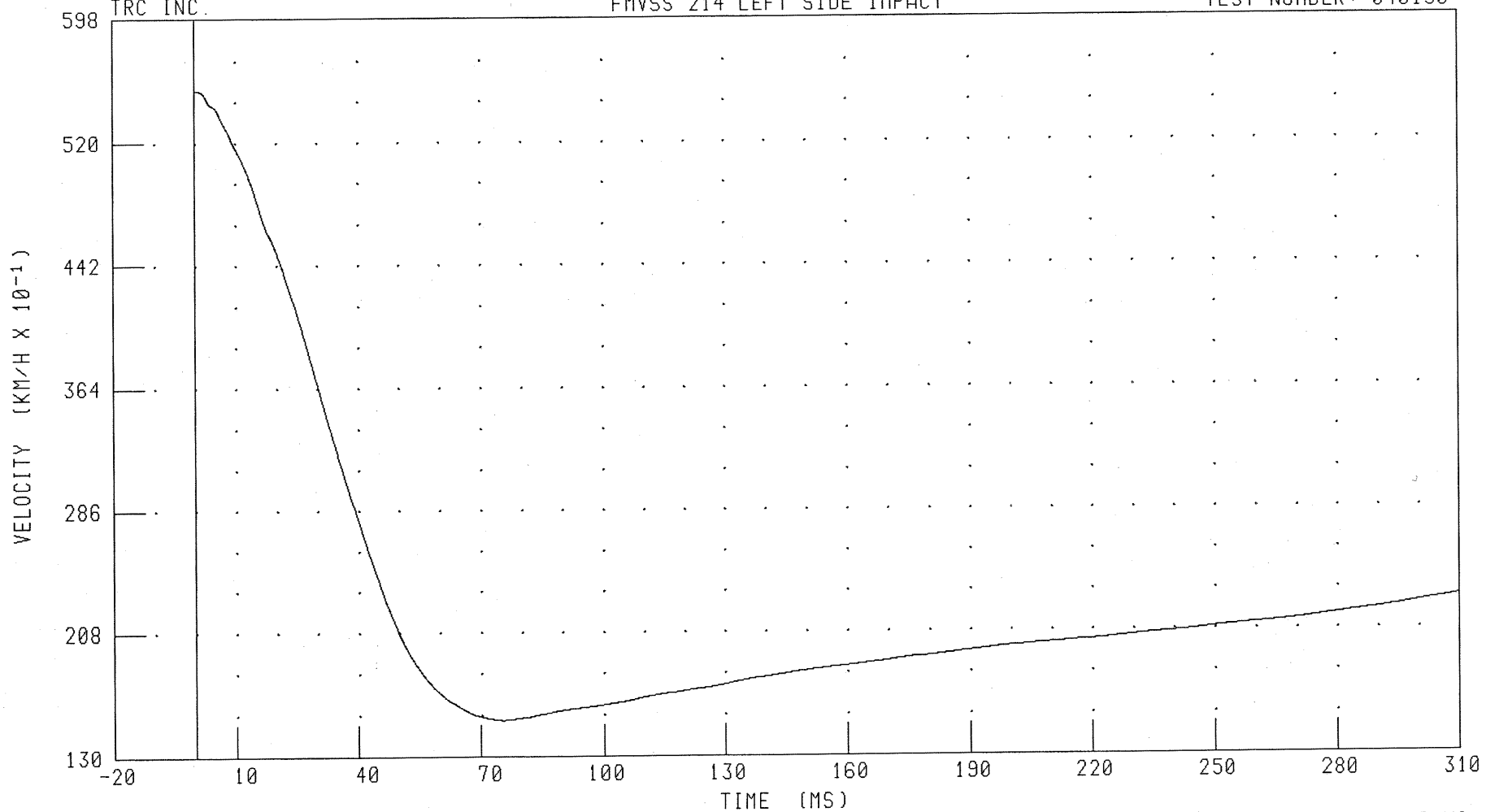
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB LEFT REAR X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TRC INC.

TEST NUMBER: 040130



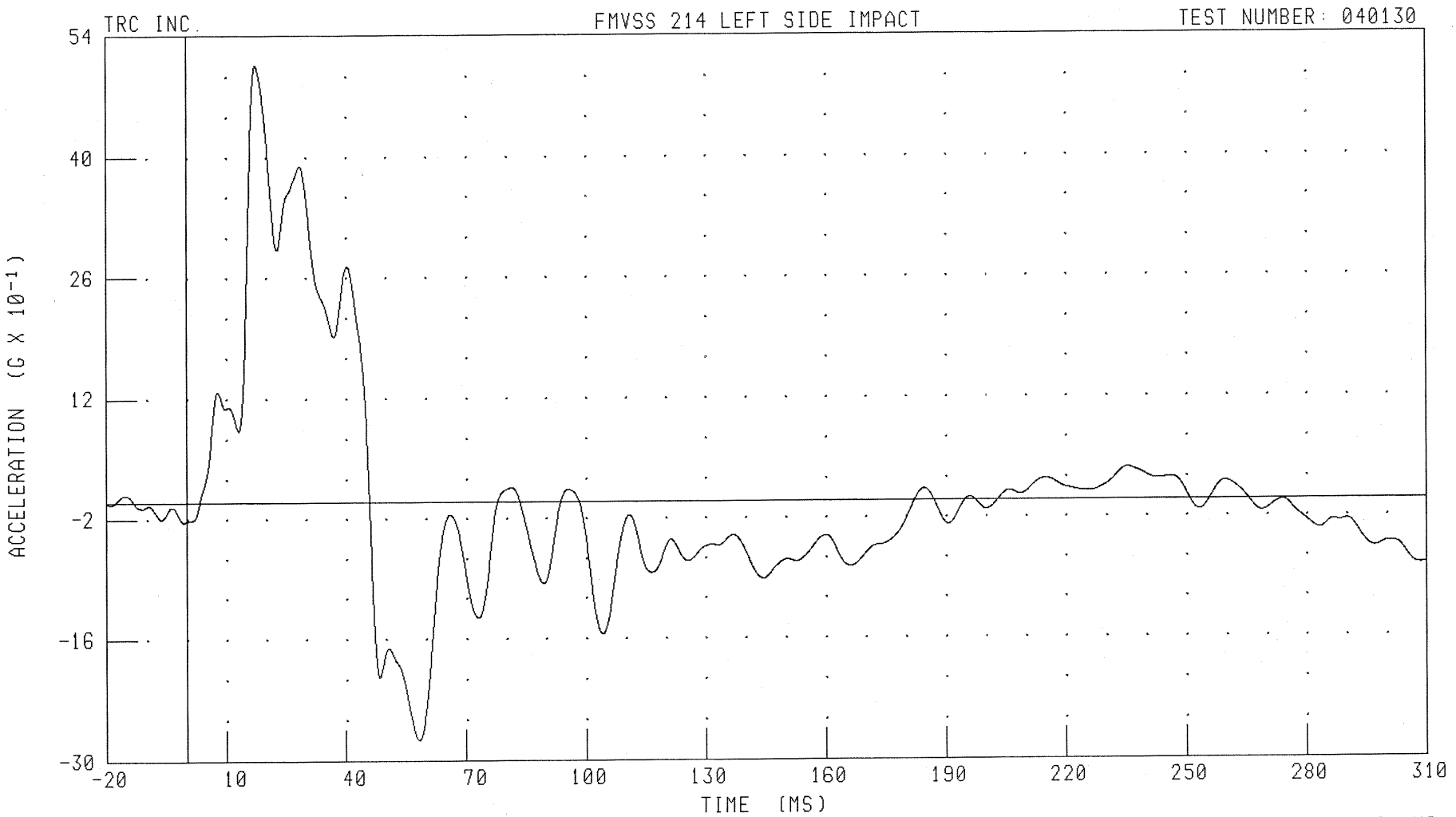
CHANNEL: LRRXV1 FILTER: CH. CLASS 180

PEAK DATA: 55.30 KM/H @ 0.16 MS; 15.26 KM/H @ 75.36 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB LEFT REAR Y-AXIS ACCELERATION



CHANNEL: LRRYG1 FILTER: CH. CLASS 60

PEAK DATA: 5.06 G @ 17.44 MS; -2.76 G @ 58.24 MS

040130

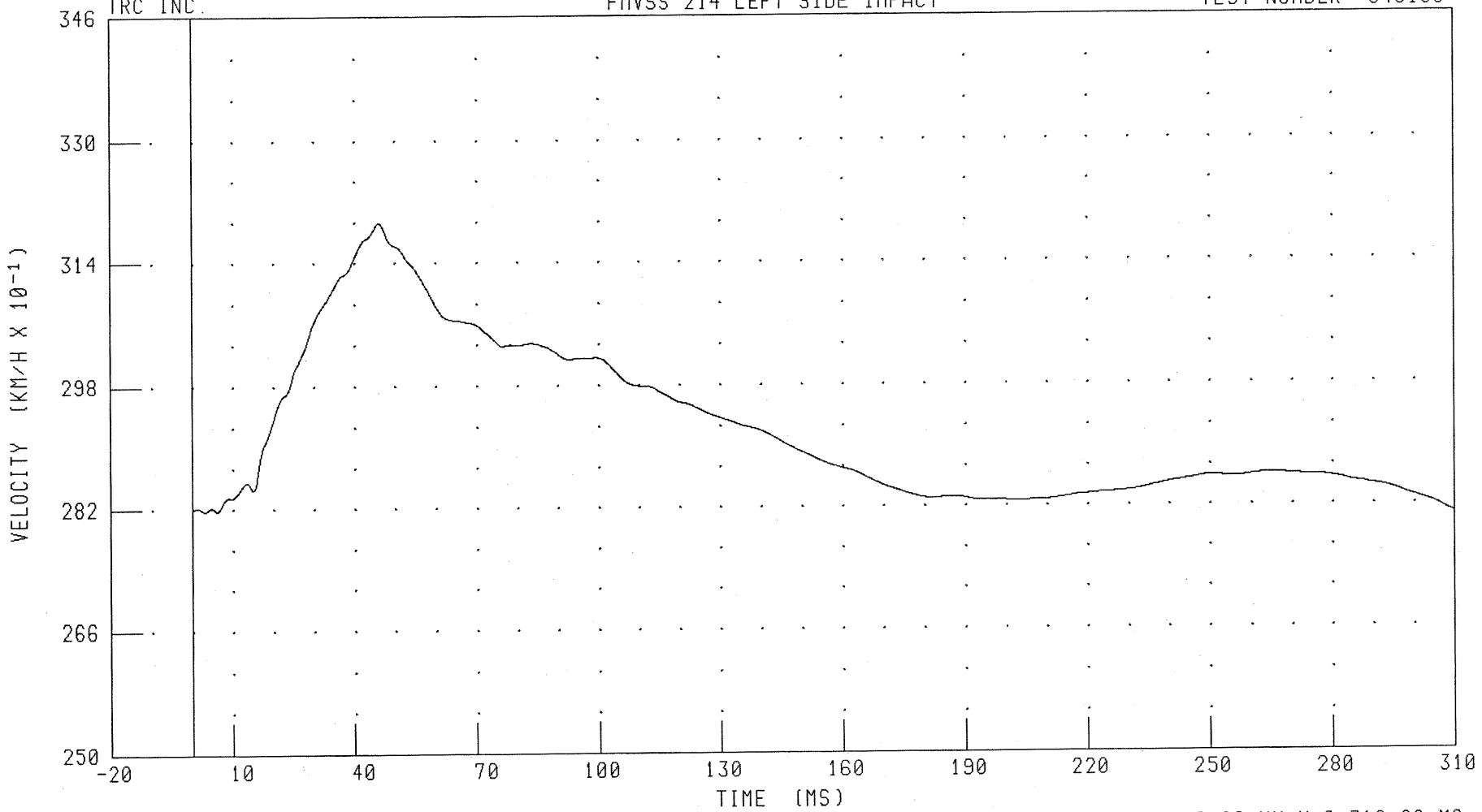
55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB LEFT REAR Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TRC INC.

TEST NUMBER: 040130



CHANNEL: LRRYV1 FILTER: CH. CLASS 180

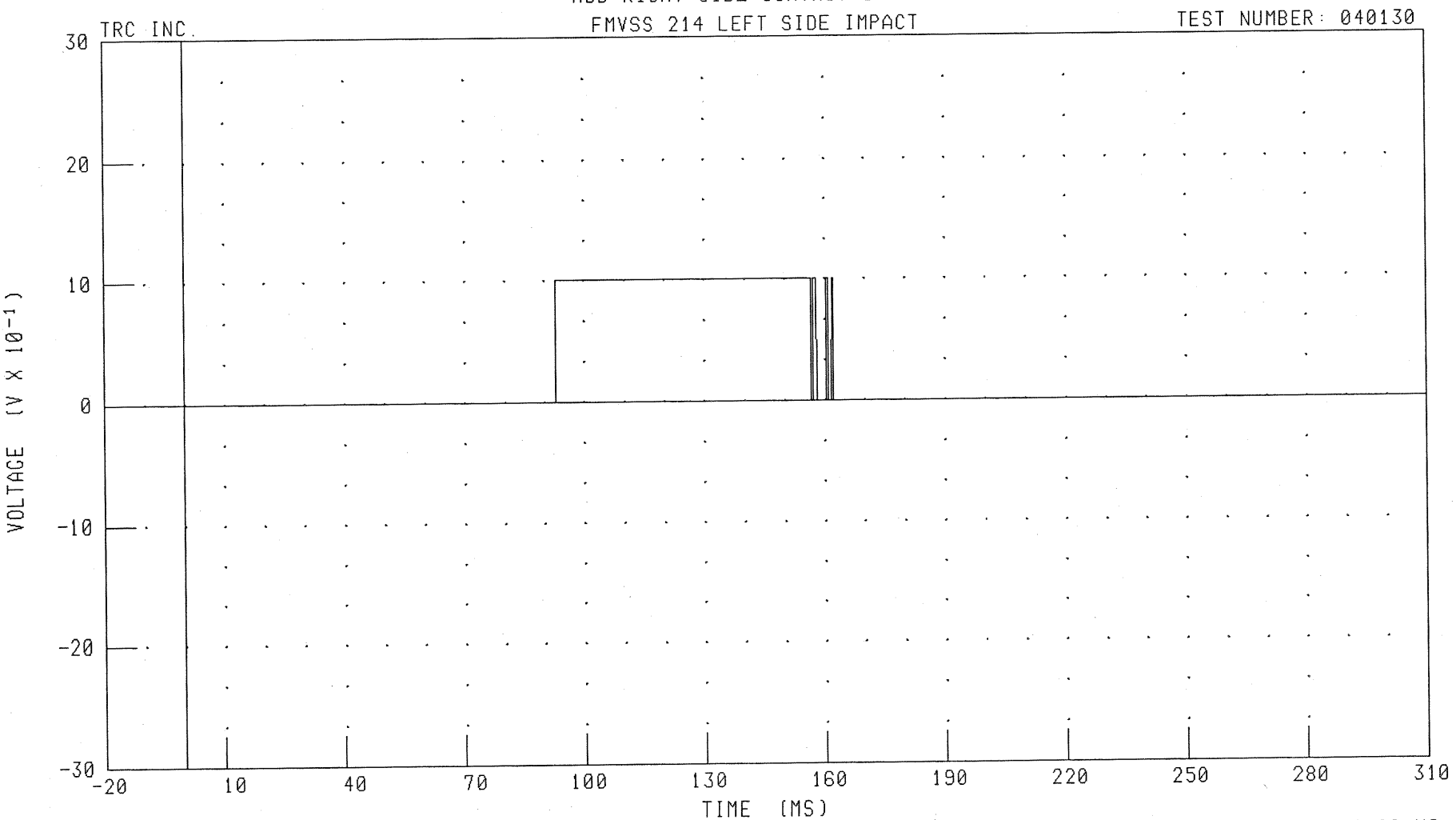
PEAK DATA: 31.92 KM/H @ 46.24 MS; 28.08 KM/H @ 310.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB RIGHT SIDE CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

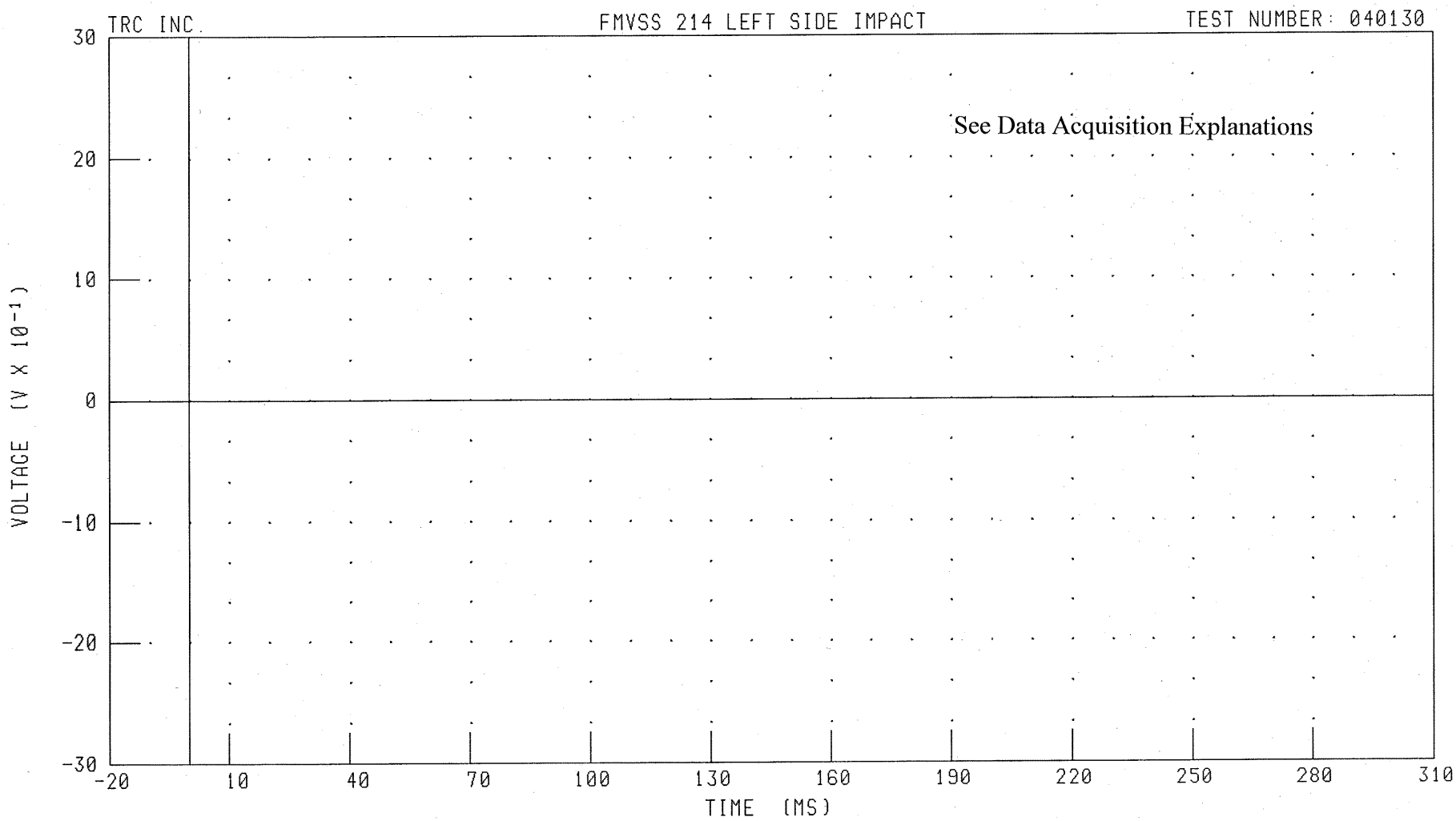


CHANNEL: MDBR1 FILTER: CH. CLASS 1000 PEAK DATA: 1.00 V @ 93.12 MS; 0.00 V @ -20.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

MDB LEFT SIDE CONTACT SWITCH



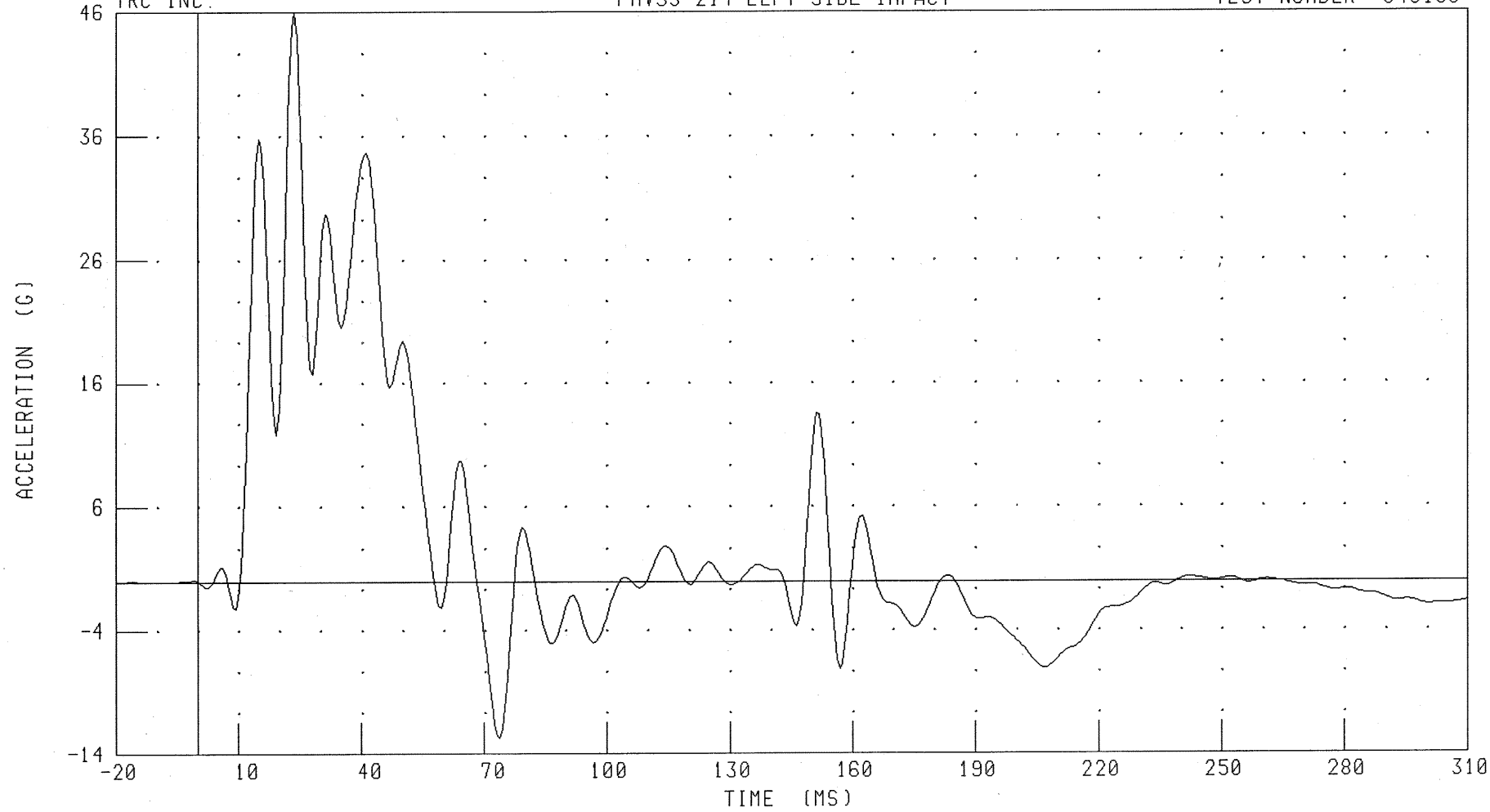
040130

Driver and Passenger Dummy Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER UPPER RIB Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



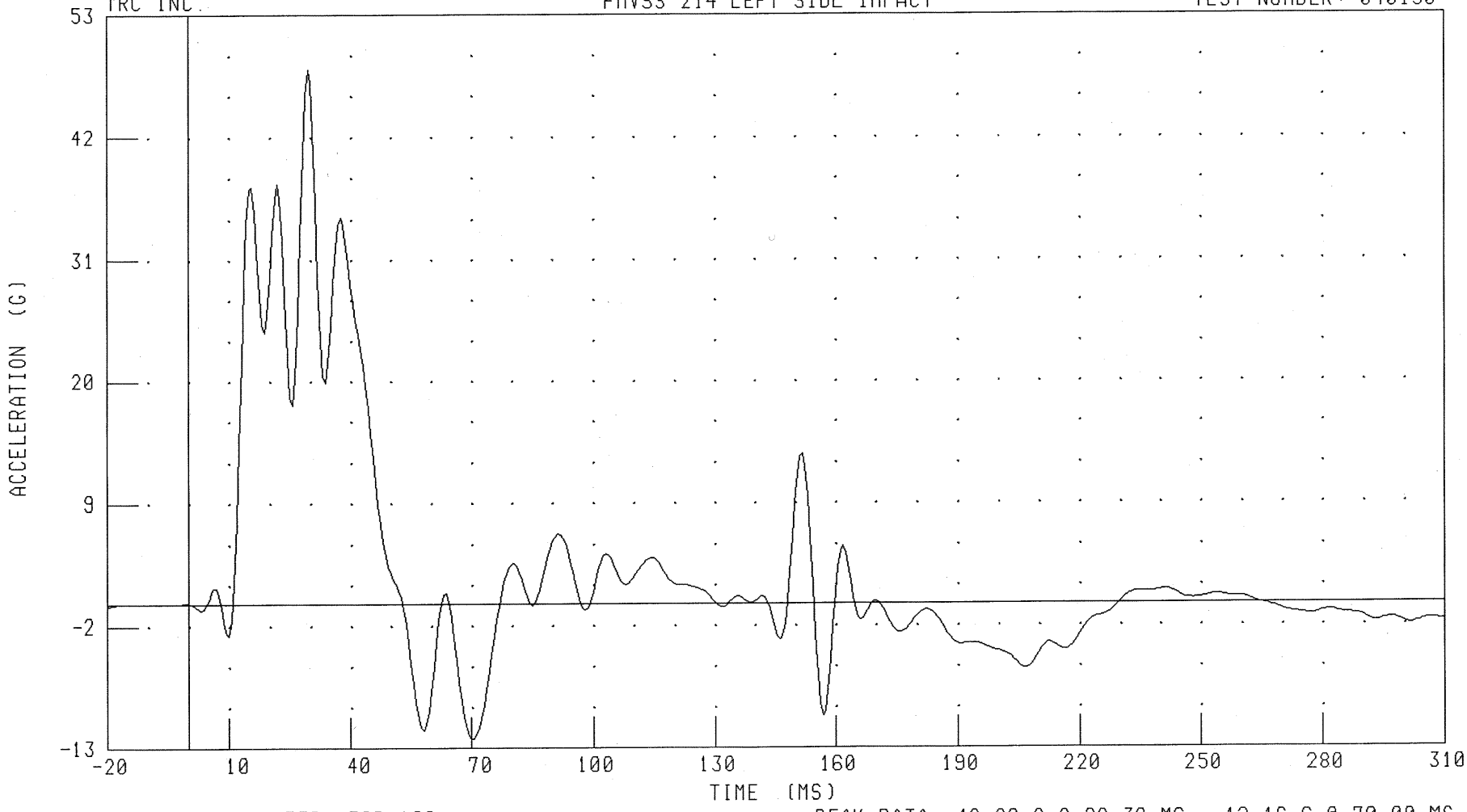
CHANNEL: LURYG1 FILTER: FIR 100 PEAK DATA: 46.01 G @ 23.75 MS; -12.75 G @ 73.75 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER RIB Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: LLRYG1 FILTER: FIR 100

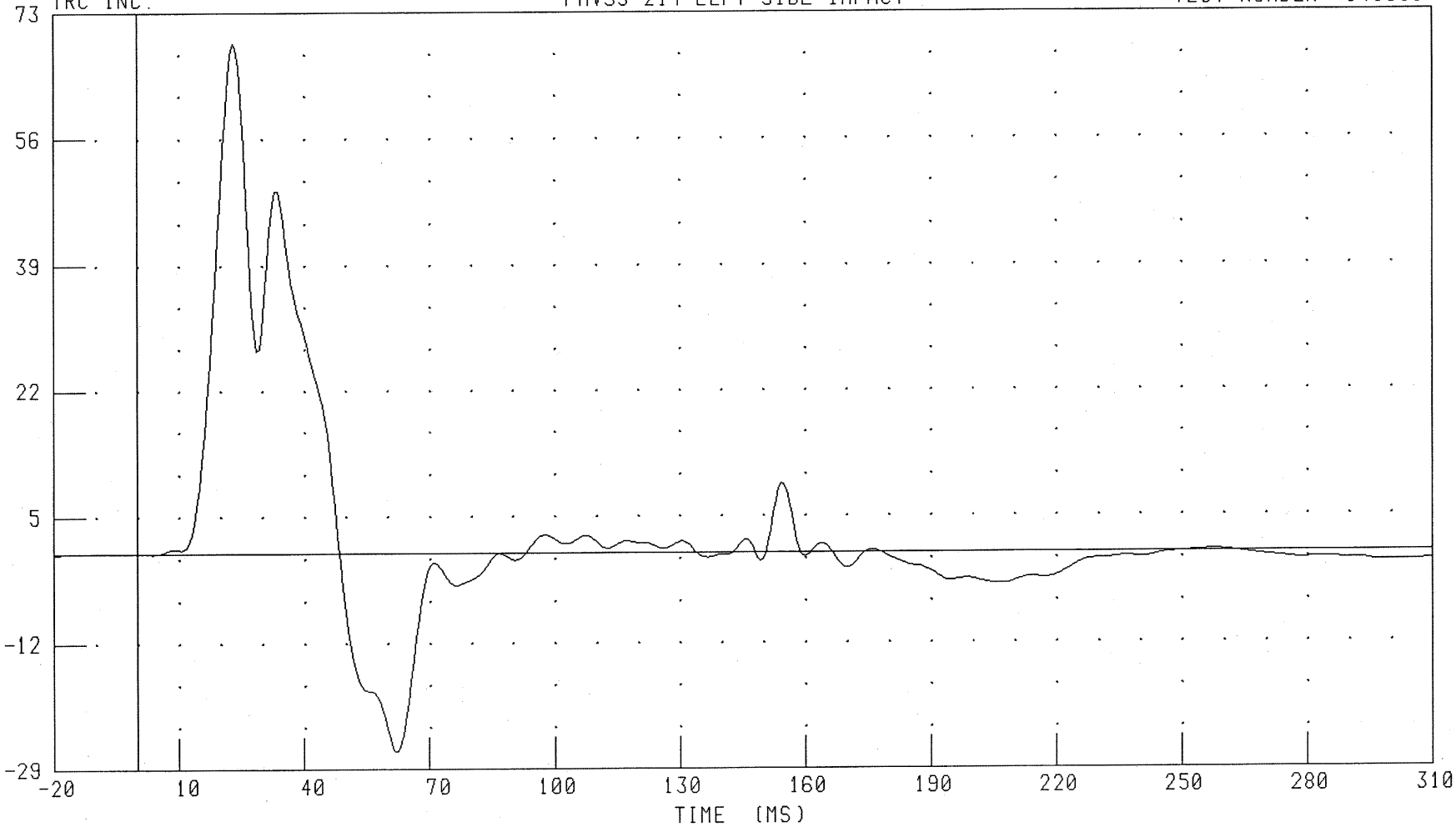
PEAK DATA: 48.06 G @ 29.38 MS; -12.16 G @ 70.00 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER SPINE Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



CHANNEL: T12YG1 FILTER: FIR 100

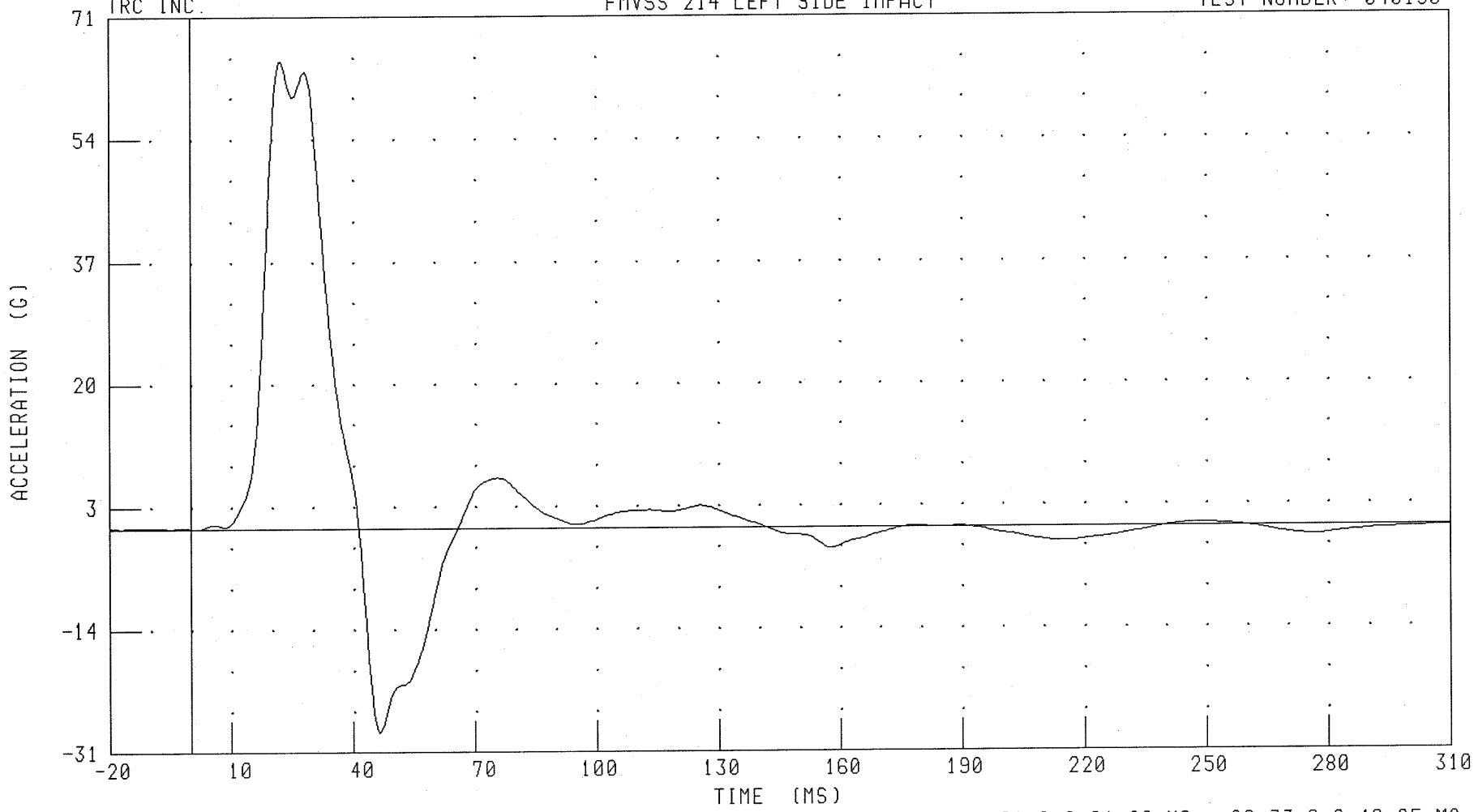
PEAK DATA: 68.84 G @ 23.13 MS; -26.55 G @ 61.87 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER PELVIS Y-AXIS ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130



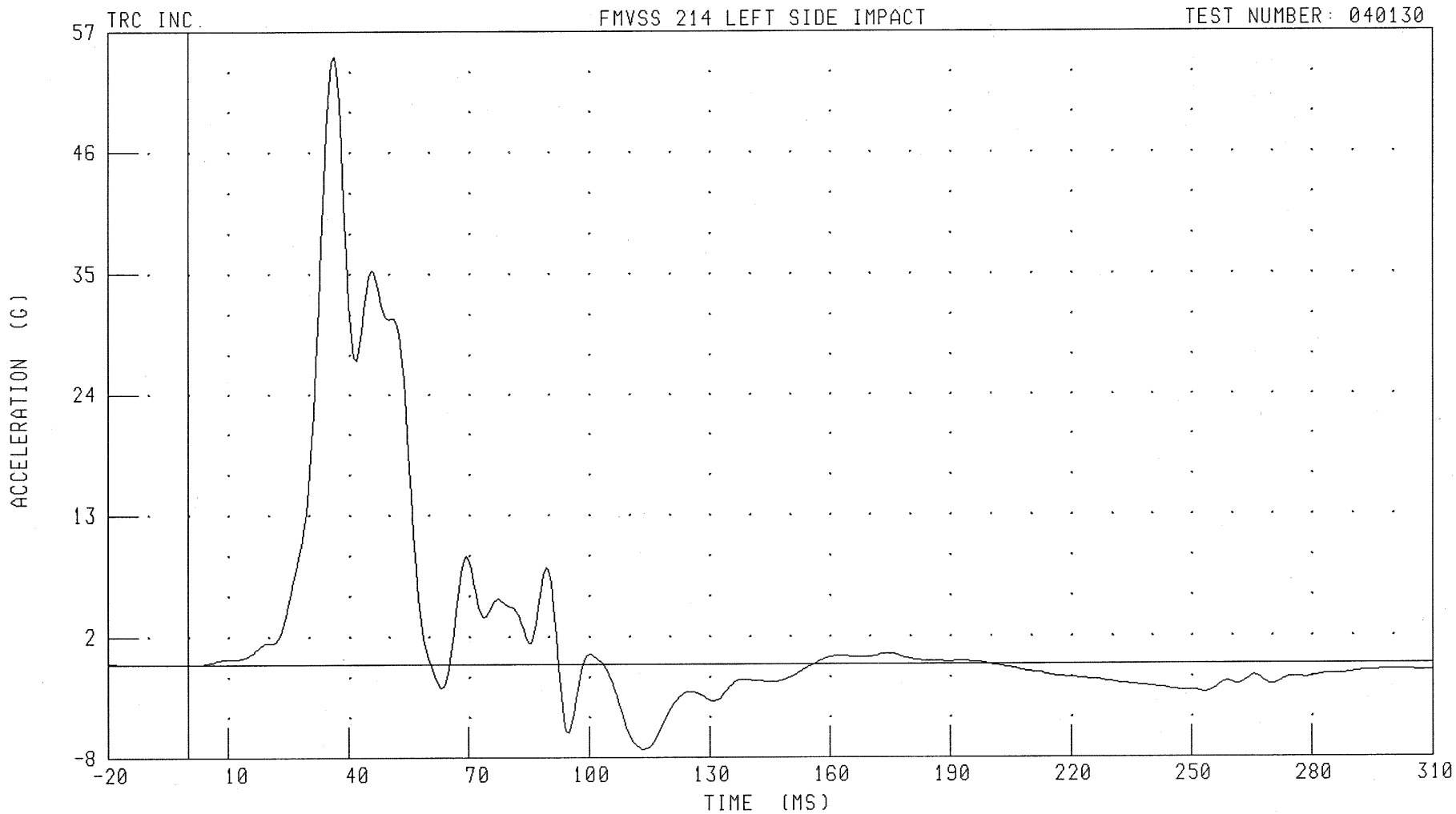
CHANNEL: PEVYG1 FILTER: FIR 100

PEAK DATA: 64.91 G @ 21.88 MS; -28.33 G @ 46.25 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION



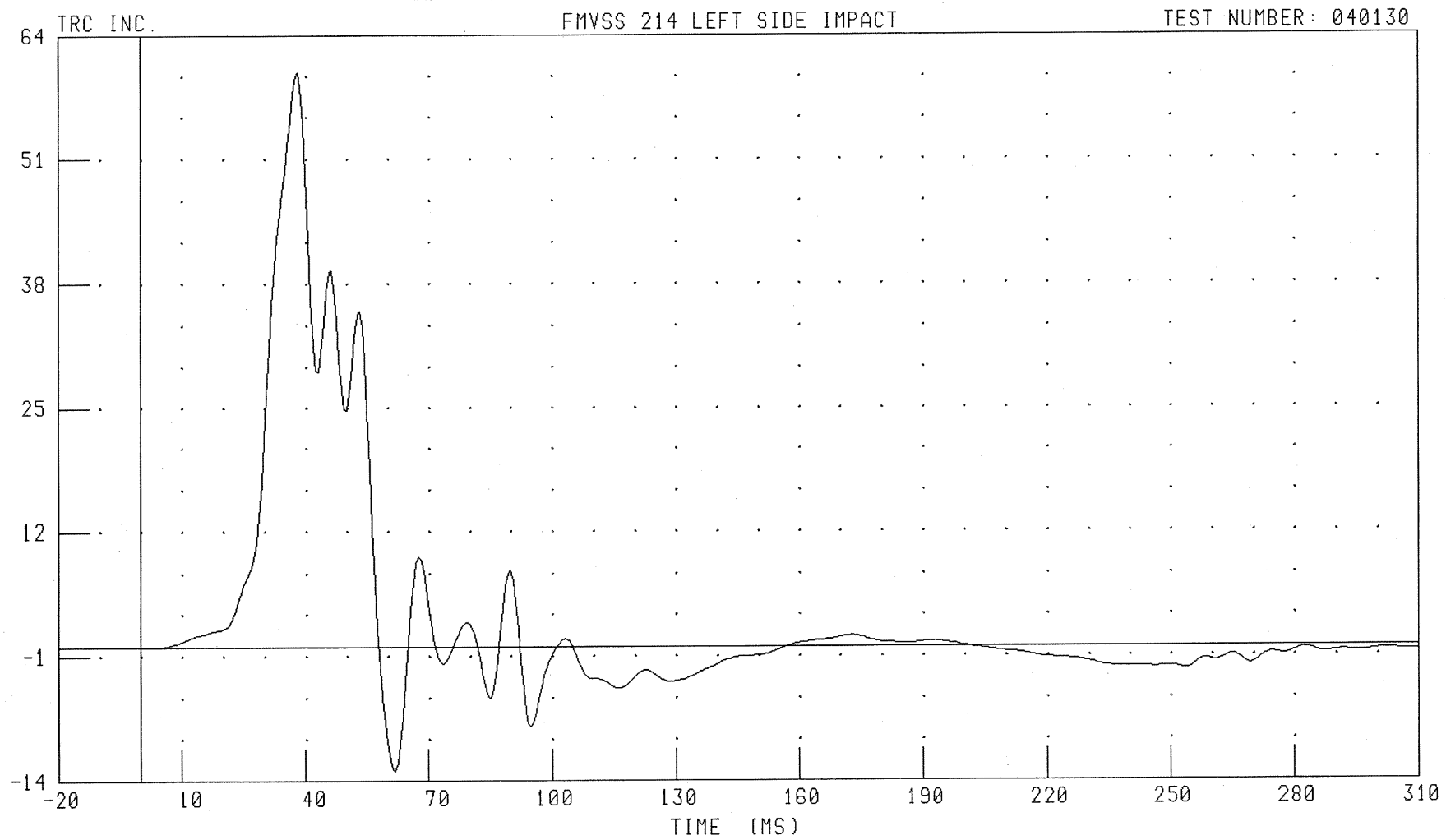
CHANNEL: LURYG4 FILTER: FIR 100

PEAK DATA: 55.23 G @ 36.25 MS; -7.75 G @ 113.75 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION



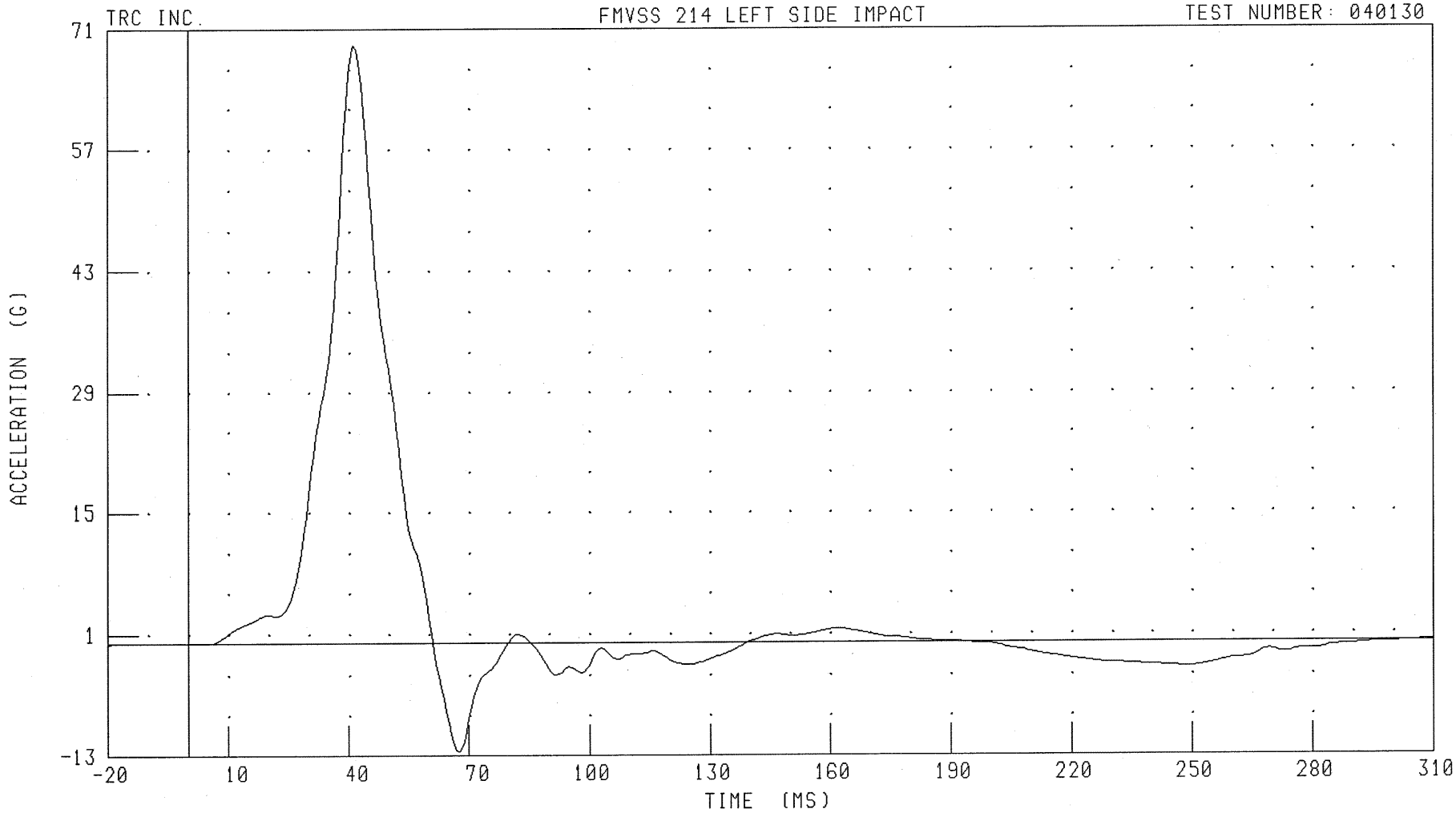
CHANNEL: LLRYG4 FILTER: FIR 100

PEAK DATA: 60.11 G @ 38.13 MS; -13.00 G @ 61.87 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION



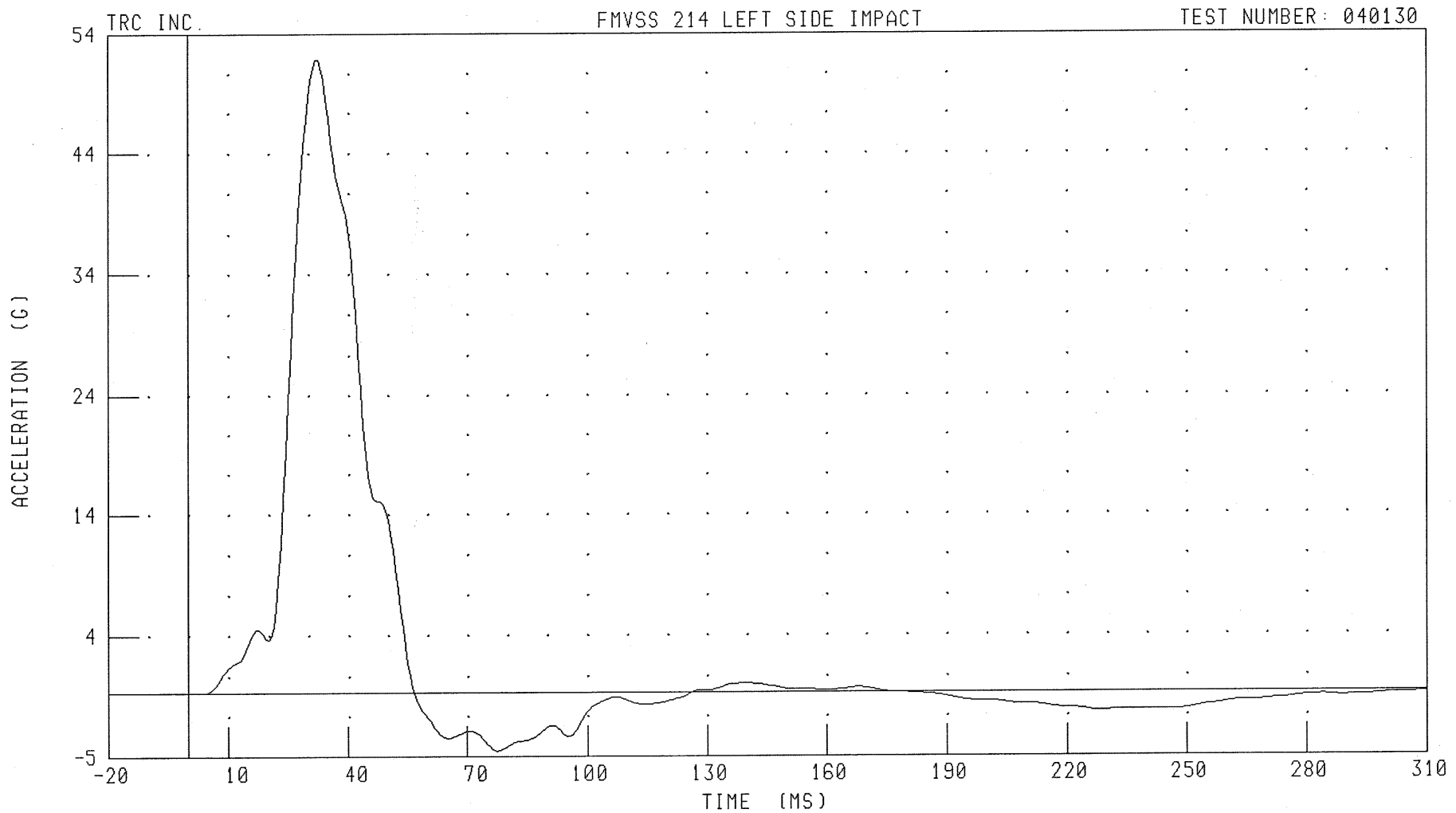
CHANNEL: T12YG4 FILTER: FIR 100

PEAK DATA: 69.07 G @ 41.25 MS; -12.59 G @ 67.50 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION



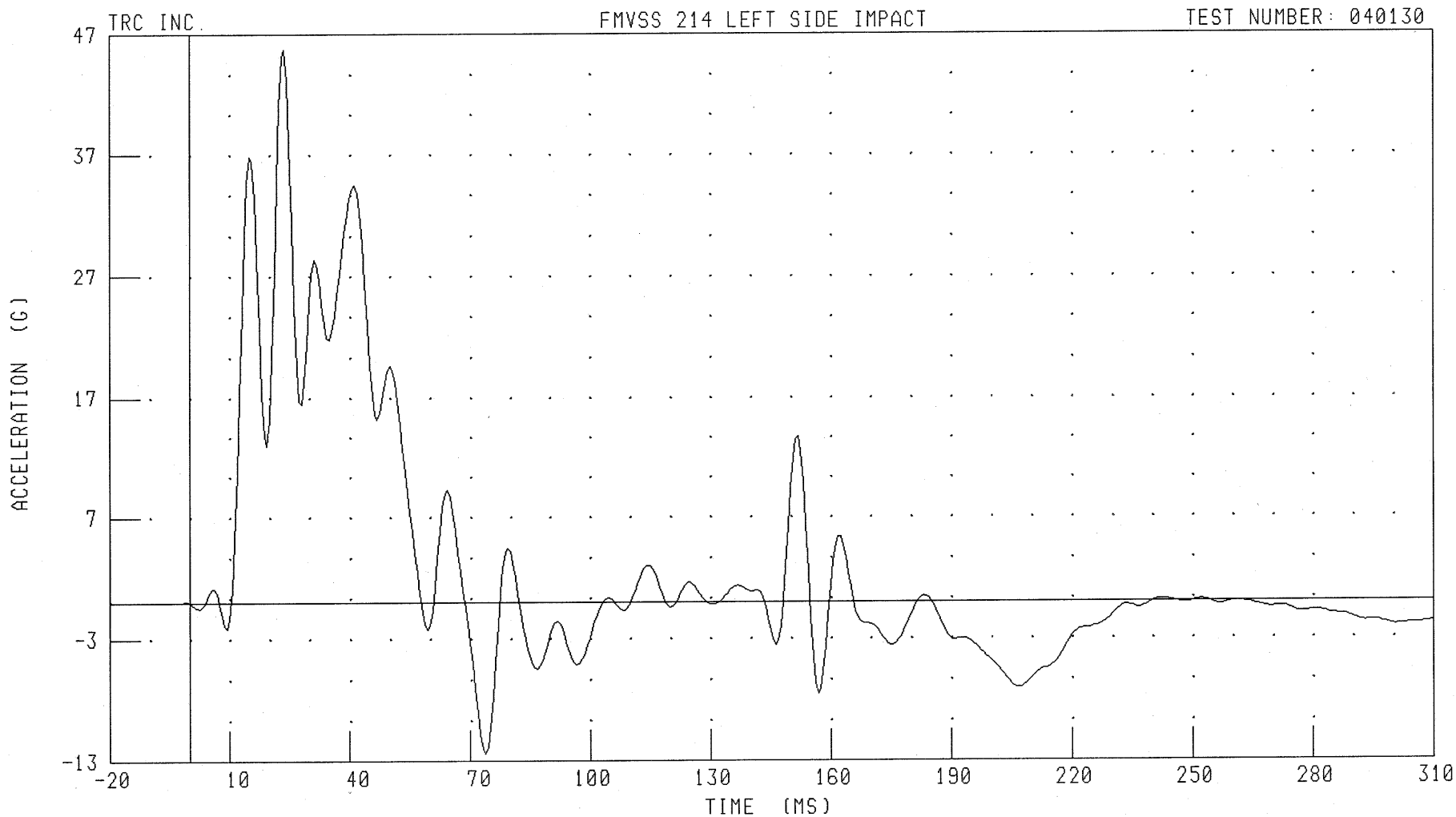
CHANNEL: PEVYG4 FILTER: FIR 100

PEAK DATA: 52.51 G @ 32.50 MS; -4.86 G @ 77.50 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION



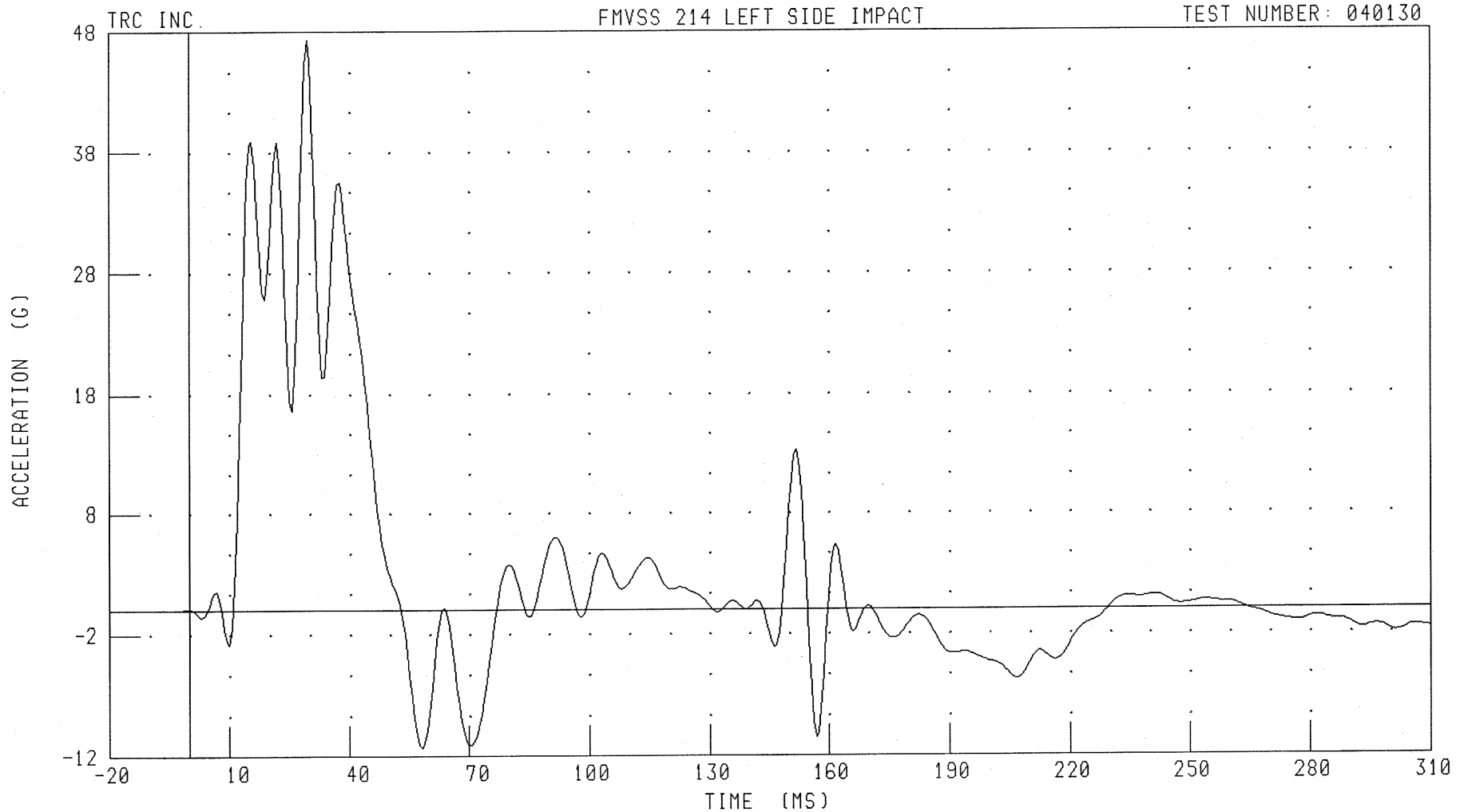
CHANNEL: LURYR1 FILTER: FIR 100

PEAK DATA: 45.77 G @ 23.75 MS; -12.40 G @ 73.75 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION



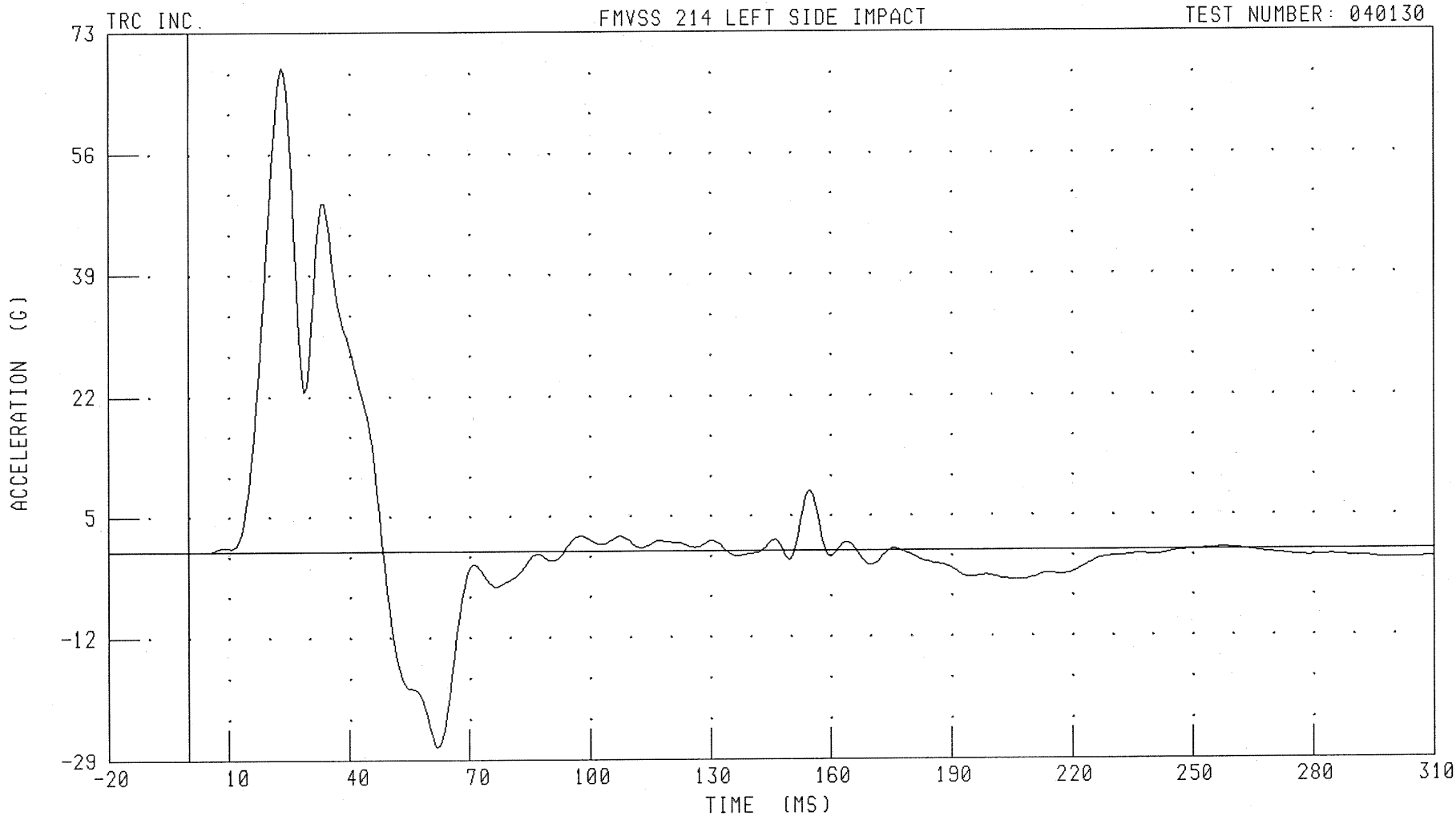
CHANNEL: LLRYR1 FILTER: FIR 100

PEAK DATA: 47.32 G @ 29.38 MS; -11.30 G @ 58.13 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION



CHANNEL: T12YR1 FILTER: FIR 100

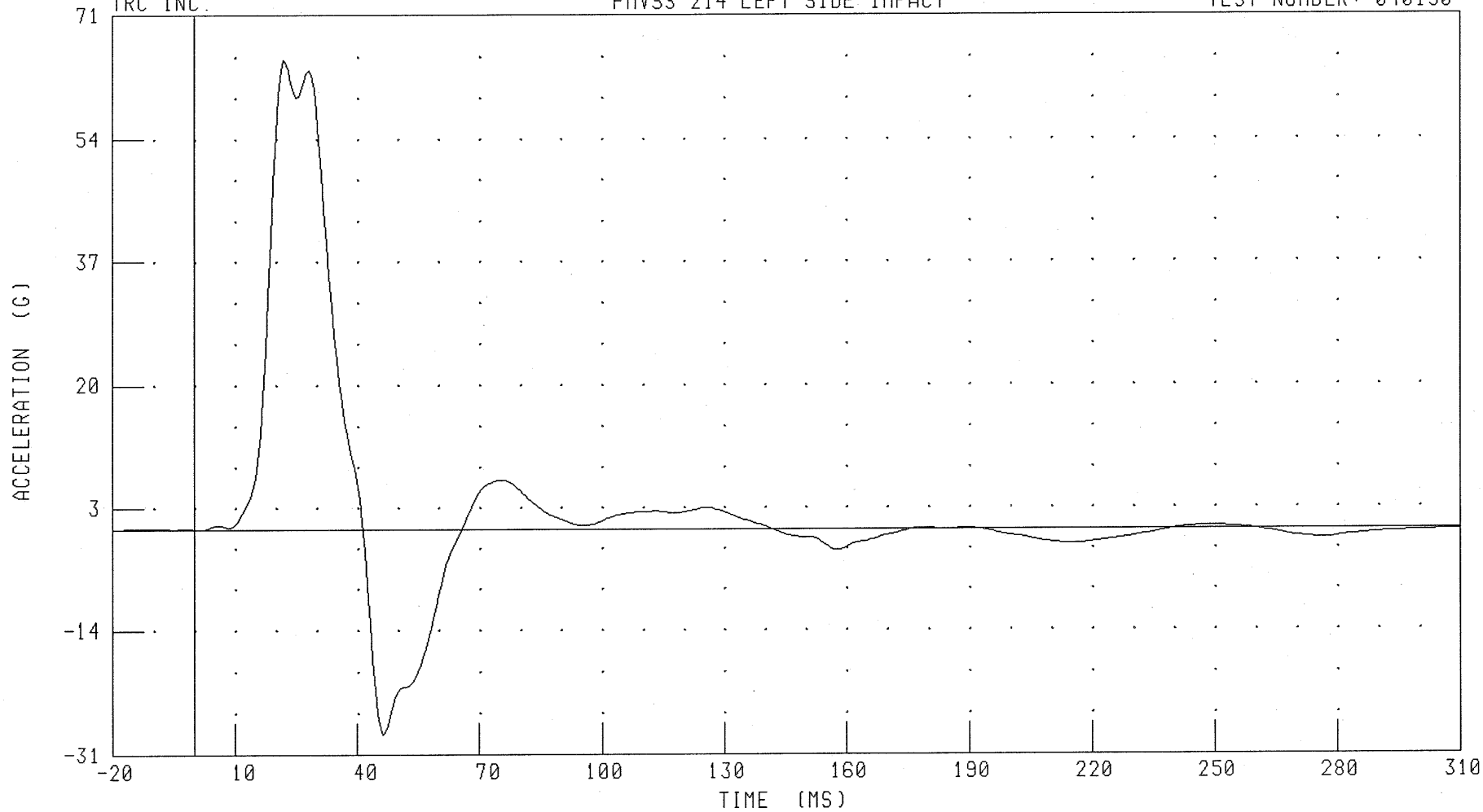
PEAK DATA: 68.09 G @ 23.13 MS; -27.10 G @ 61.87 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION

TRC INC. FMVSS 214 LEFT SIDE IMPACT TEST NUMBER: 040130

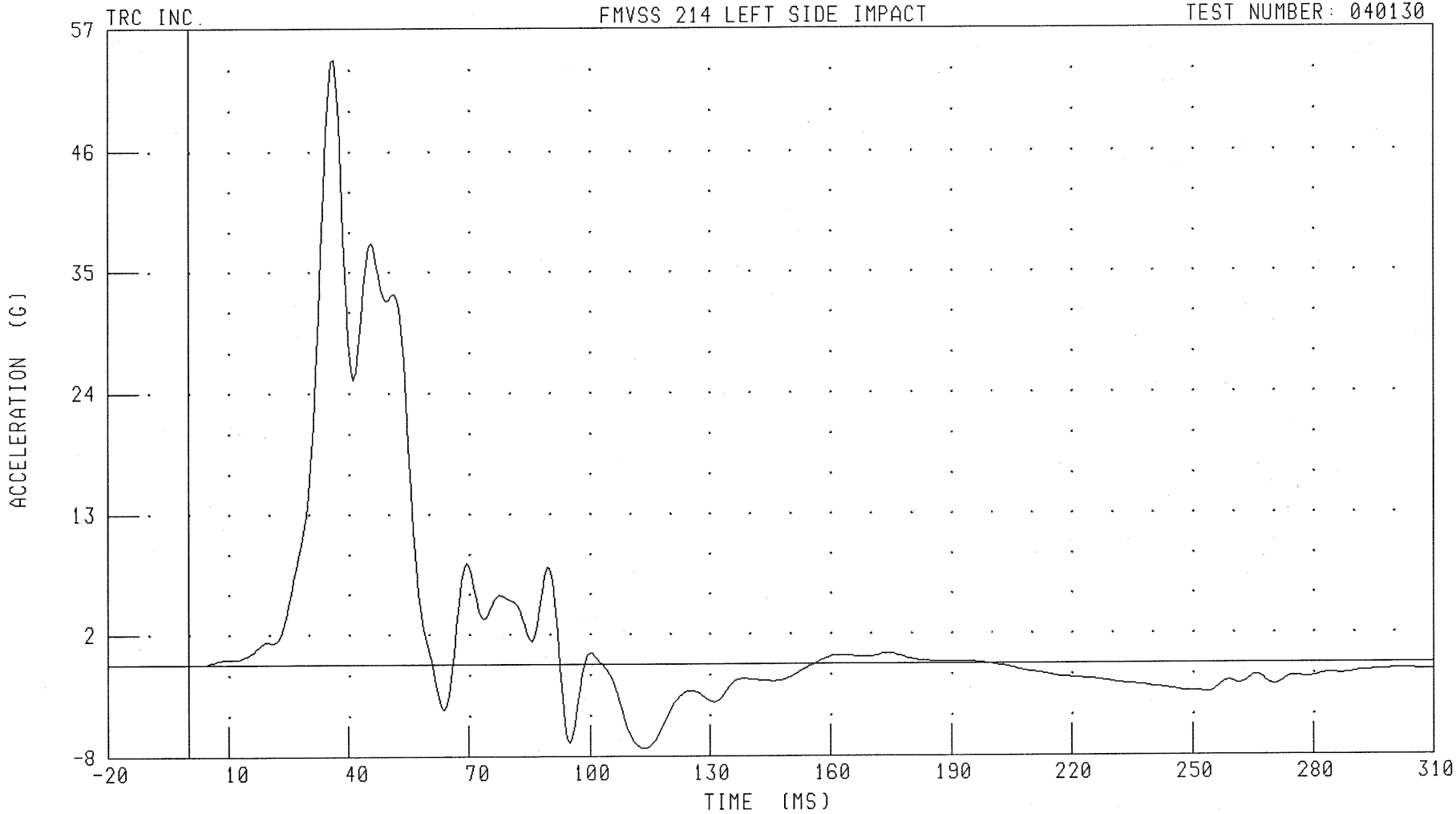


CHANNEL: PEVYR1 FILTER: FIR 100 PEAK DATA: 64.94 G @ 21.88 MS; -28.26 G @ 46.25 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION



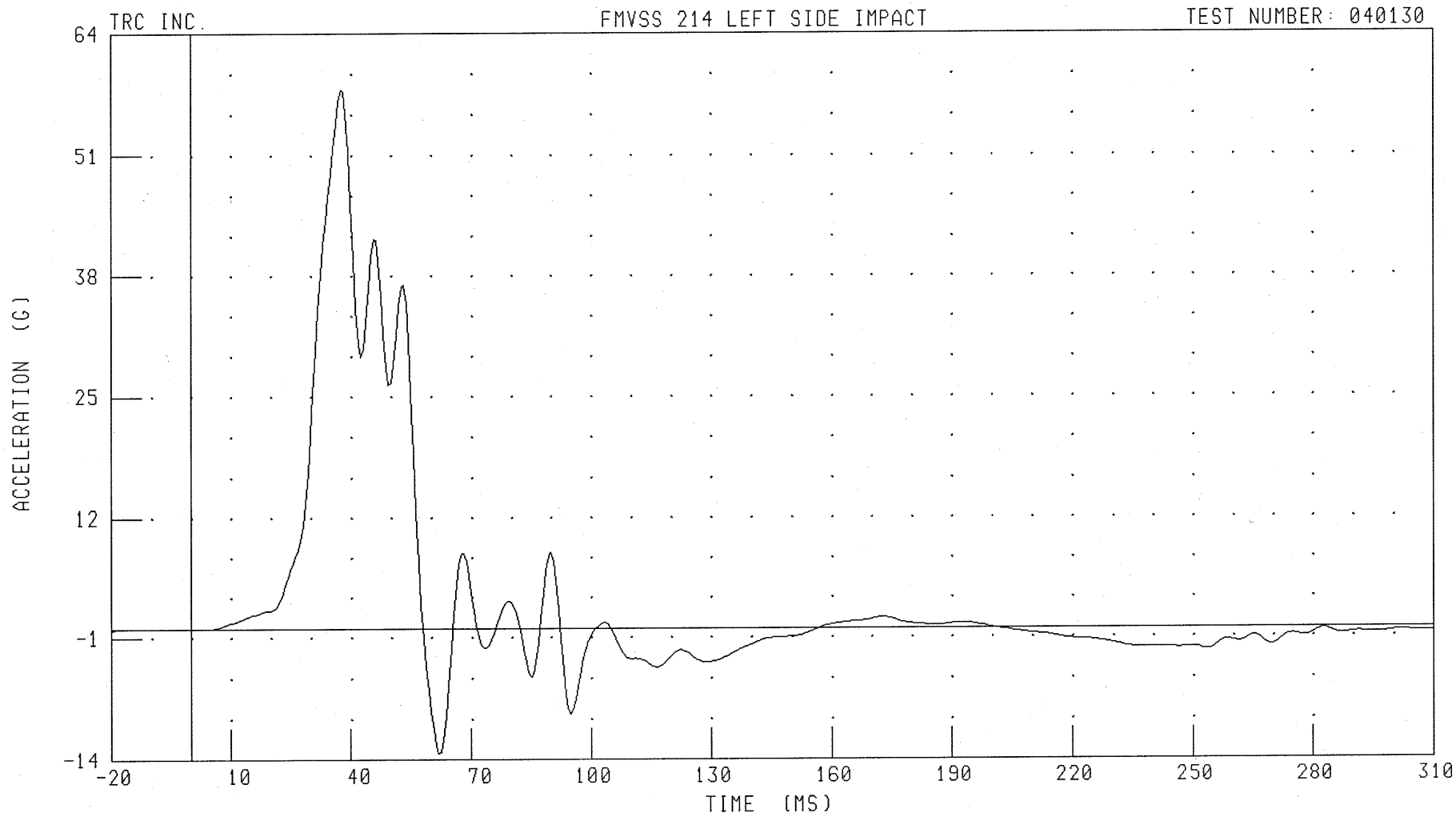
CHANNEL: LURYR4 FILTER: FIR 100

PEAK DATA: 54.95 G @ 36.25 MS; -7.56 G @ 113.75 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION



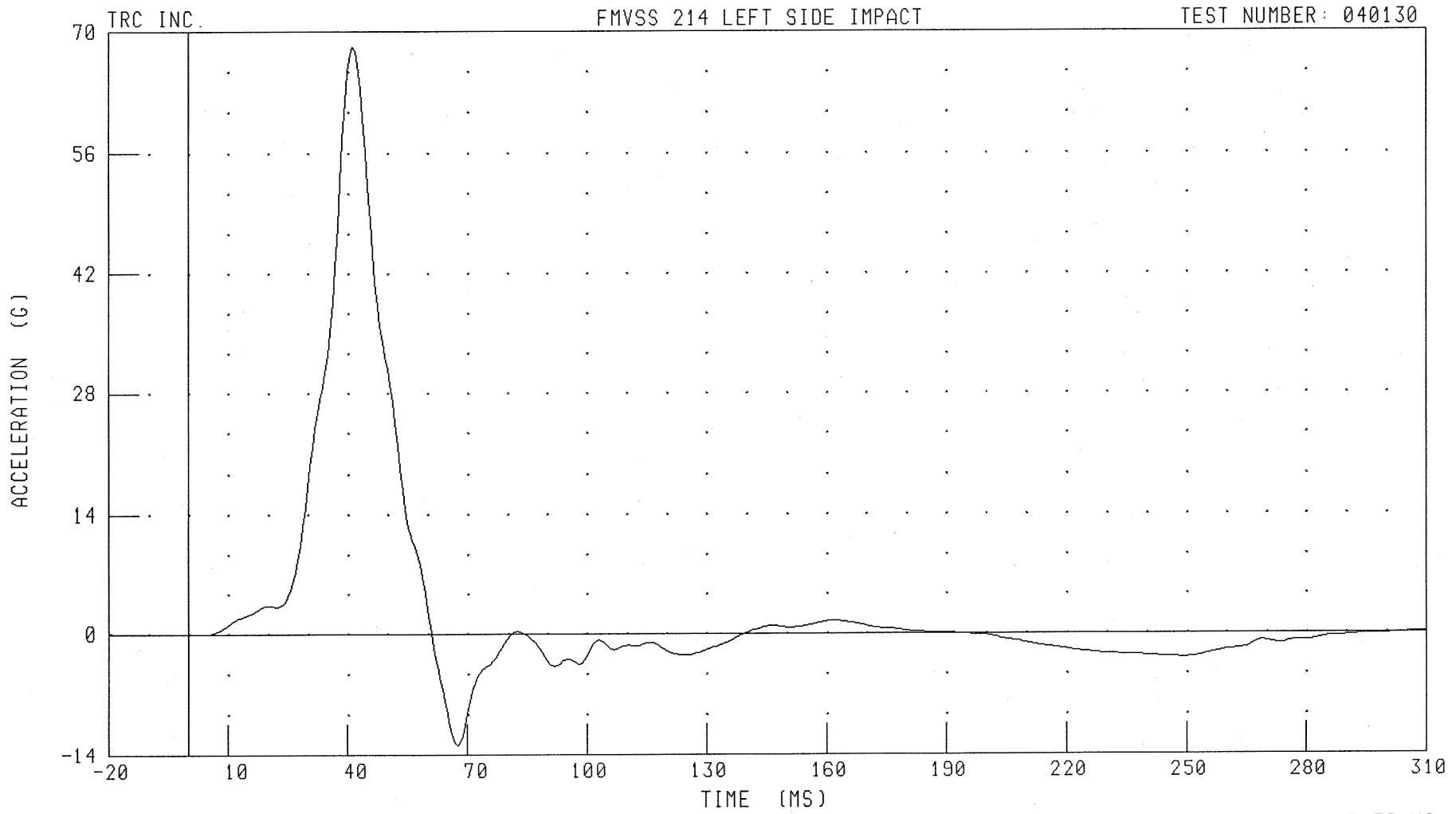
CHANNEL: LLRYR4 FILTER: FIR 100

PEAK DATA: 58.01 G @ 37.50 MS; -13.32 G @ 61.87 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION



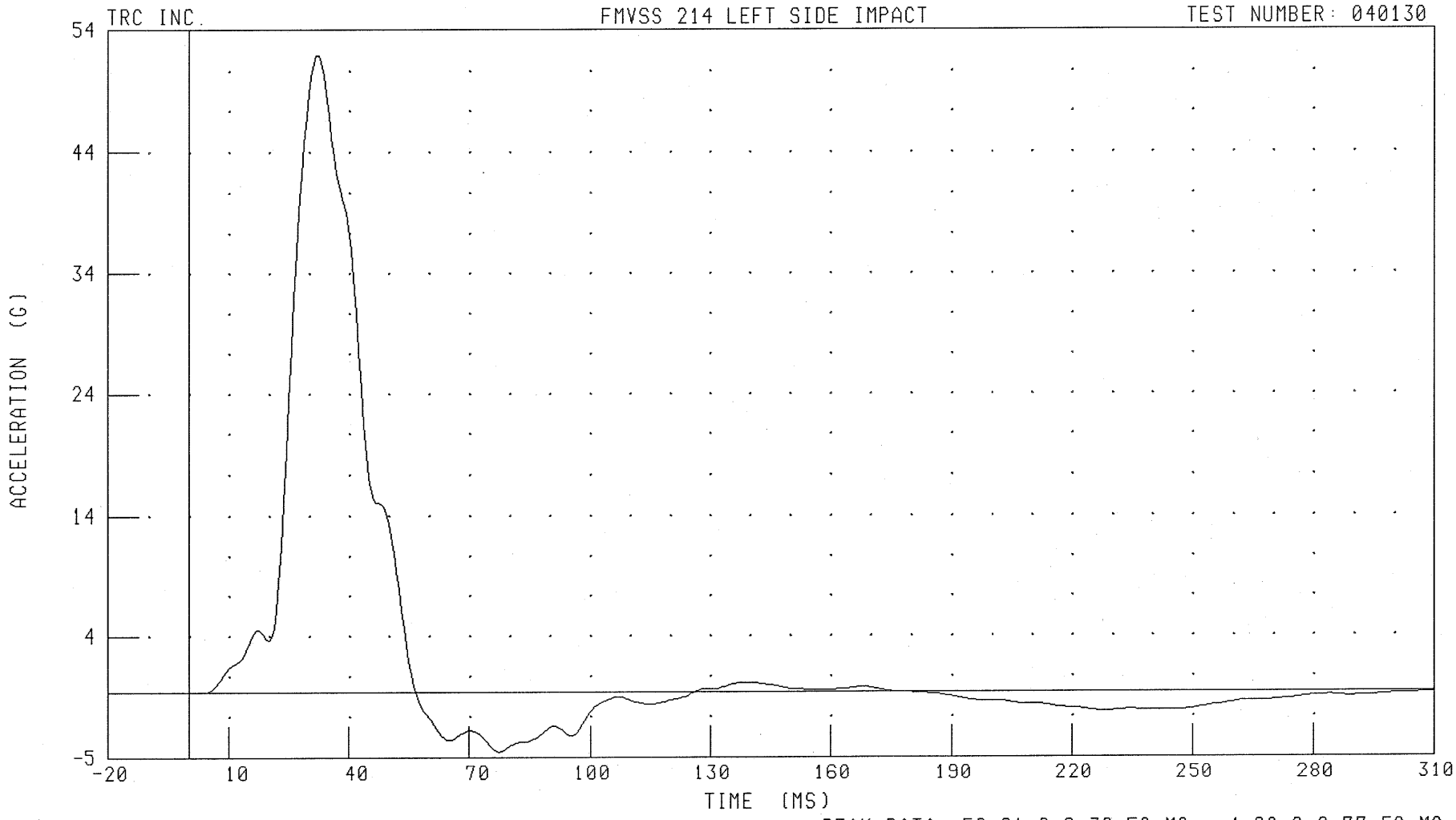
CHANNEL: T12YR4 FILTER: FIR 100

PEAK DATA: 68.30 G @ 41.25 MS; -12.89 G @ 67.50 MS

040130

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA RX8

LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION



CHANNEL: PEVYR4 FILTER: FIR 100

PEAK DATA: 52.61 G @ 32.50 MS; -4.86 G @ 77.50 MS

040130

Appendix C

SID HIII Configuration and Performance Verification Data

Summary

SID HIII Pre-Test and Post-Test Calibration

Configured For Left Side Impact

Date: 10/7/13-2/12/04 TRC Inc. Test Number: S/N055 & S/N059

Laboratory Technician: Sterling and Watters

Test Parameter	Specification	SID HIII 055		SID HIII 059	
		Pre-Test	Post-Test	Pre-Test	Post-Test
SH - Seated Height (mm)	889-909	909	909	907	905
RH - Rib Height (mm)	502-520	511	511	502	515
HP - Hip Pivot Height (mm)	99 ref	99.1	99.1	99.1	99.1
KH - Knee Pivot from Back Line (mm)	511-526	525	524	524	523
KV - Knee Pivot to Floor (mm)	490-505	492	493	492	491
HW - Hip Width (mm)	356-391	366	356	369	364
Thorax Impacts					
Temperature (°C)	18.9-25.5	21.7	22.2	21.1	22.1
Relative Humidity (%)	10-70	31	33	22	31
Probe Speed (m/s)	4.27-4.33	4.31	4.31	4.29	4.27
Upper Rib (g's)	37-46	38.3	39.2	41.2	43.3
Lower Rib (g's)	37-46	37.2	38.3	38.6	41.1
Lower Spine (g's)	15-22	17.0	16.8	22.0	21.6
Pelvis Impacts					
Temperature (°C)	18.9-25.5	21.1	22.2	21.0	21.9
Relative Humidity (%)	10-70	22	33	24	29
Probe Speed (m/s)	4.27-4.33	4.31	4.32	4.28	4.27
Pelvis (g's)	40-60	44.6	42.2	44.4	45.9

Calibration Test Results

Pre-Test

SID HIII: 055

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Lumbar Flexion Test:	The dummy did not meet the lumbar flexion test requirements for 40° of flexion.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was tested on September 15, 2003 for a previous calibration series.

Transportation Research Center Inc.
SID/HIII Dummy
External Dimensions
Serial No. 055 Calibration No. 09

Test Parameter	Dimension	Specification	Results	Pass	
Seated Height	SH	889.0 - 909.3 mm	909 mm	Yes	
Rib Height	RH	501.7 - 520.7 mm	511 mm	Yes	
Hip Pivot Height	HP	99.1 REF mm	99.1 mm		
Rib From Backline	RD	228.6 - 241.3 mm	223 mm	No	*
Knee Pivot From Backline	KH	510.5 - 525.8 mm	525 mm	Yes	
Knee Pivot From Floor	KV	490.2 - 505.5 mm	492 mm	Yes	
Hip Width	HW	355.6 - 391.2 mm	366 mm	Yes	
Top Rib Width From C\L	RW-1	165.1 - 180.3 mm	171 mm	Yes	
Bottom Rib Width From C\L	RW-2	165.1 - 180.3 mm	172 mm	Yes	
Difference Between Top & Bottom Rib Width from C\L		<= 2.5 mm	1.0 mm	Yes	

* Test Does Not Meet Specifications

Technician

Approved

Transportation Research Center Inc.

572M Left Left Lateral Head Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Peak Resultant Acceleration	115 - 150 g	132.3 g	Yes
Peak Longitutinal Acceleration	15 g Max	7.8 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician

Approved

10.07.2003 07:05:10 609

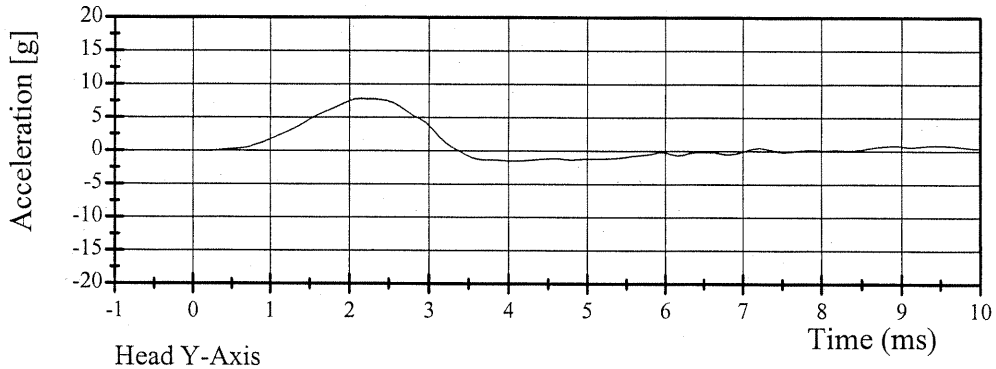
Transportation Research Center Inc.

572M Left Left Lateral Head Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

Head X-Axis

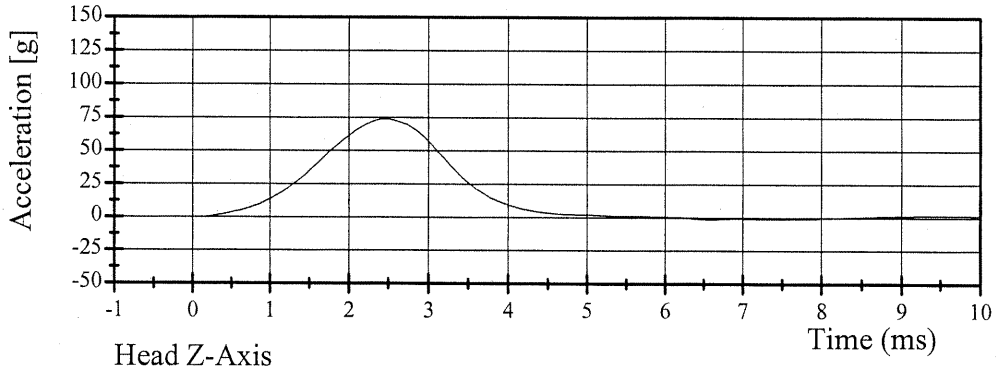


Filter Class: 1000

Max: 7.8 g at 2.2 ms

Min: -1.5 g at 4.1 ms

Head Y-Axis

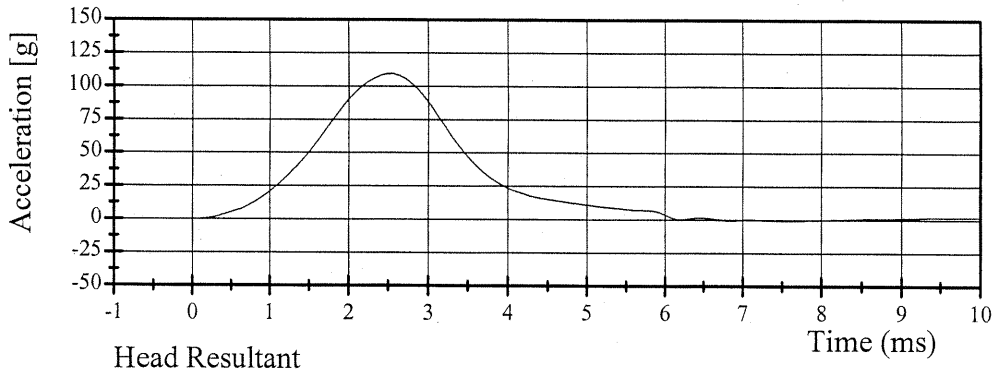


Filter Class: 1000

Max: 74.0 g at 2.5 ms

Min: -1.2 g at 6.6 ms

Head Z-Axis

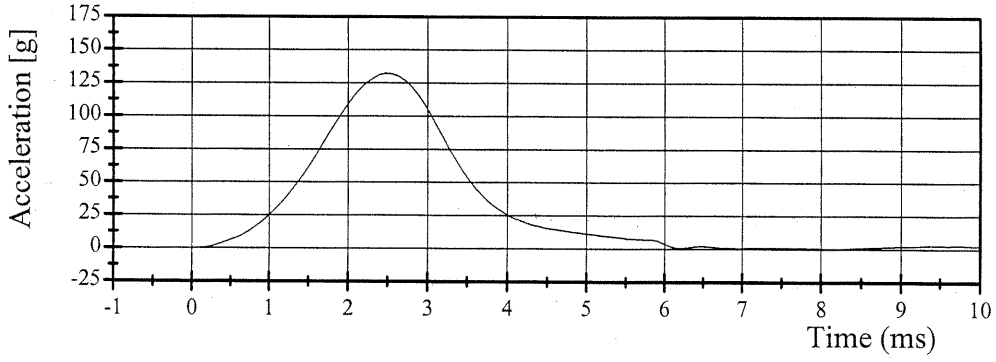


Filter Class: 1000

Max: 109.6 g at 2.6 ms

Min: -0.5 g at 7.6 ms

Head Resultant



Filter Class: 1000

Max: 132.3 g at 2.5 ms

Min: 0.0 g at 2.9 ms

10.07.2003 07:05:11 609

Transportation Research Center Inc.

572M Left Lateral Neck Test

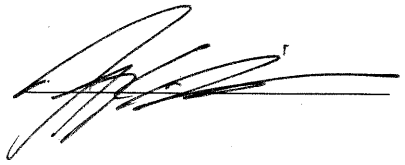
SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

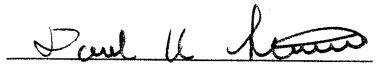
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.06 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.32 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.66 m/s	Yes
30 ms	5.73 - 7.64 m/s	6.65 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.19 - 7.33 m/s	Yes
Peak D Plane Rotation	66 - 82 °	70.6 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	59.8 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	83.43 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	54.56 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	11.04 ms	Yes

Comments:

Technician



Approved



10.07.2003 07:28:54 500

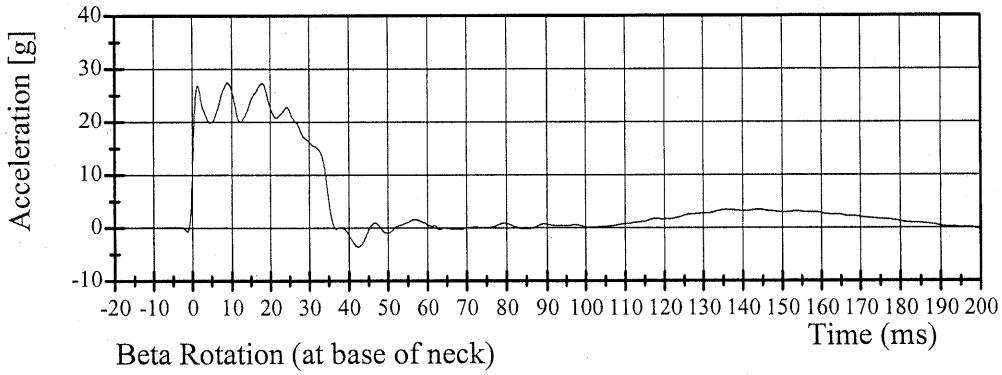
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

Pendulum Deceleration

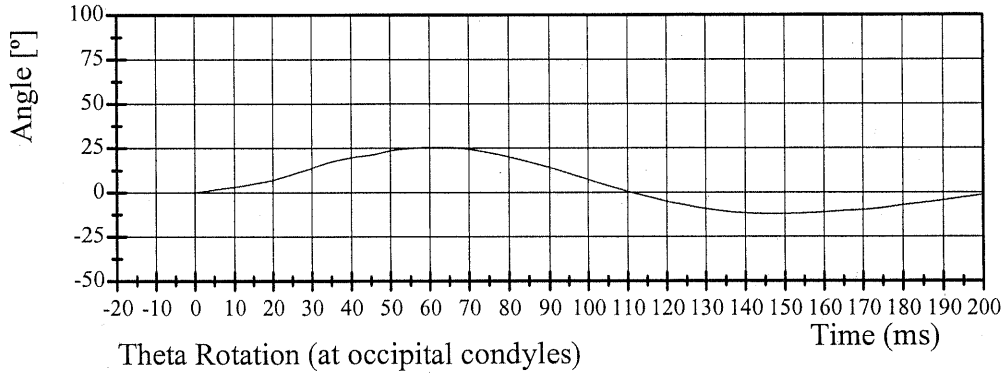


Filter Class: 180

Max: 27.5 g at 9.0 ms

Min: -3.6 g at 42.5 ms

Beta Rotation (at base of neck)

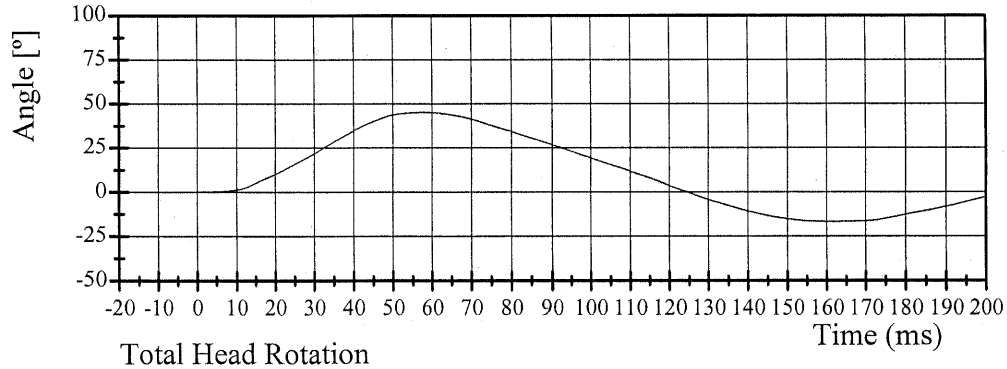


Filter Class: 60

Max: 25.5 ° at 61.8 ms

Min: -12.3 ° at 147.6 ms

Theta Rotation (at occipital condyles)

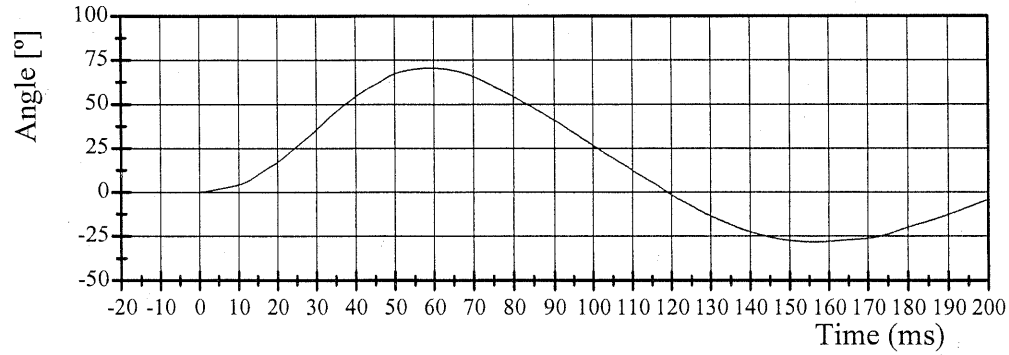


Filter Class: 60

Max: 45.2 ° at 57.7 ms

Min: -16.7 ° at 160.9 ms

Total Head Rotation



Filter Class: 60

Max: 70.6 ° at 59.2 ms

Min: -28.2 ° at 156.6 ms

10.07.2003 07:28:55 500

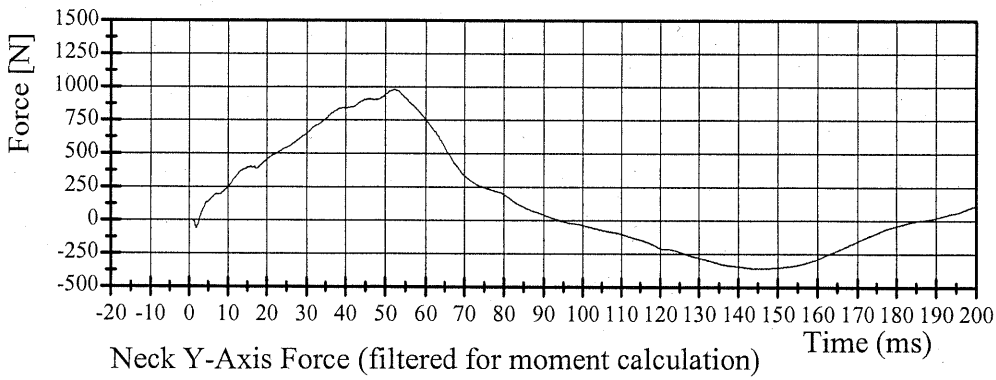
Transportation Research Center Inc.

572M Left Lateral Neck

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

Neck Y-Axis Force

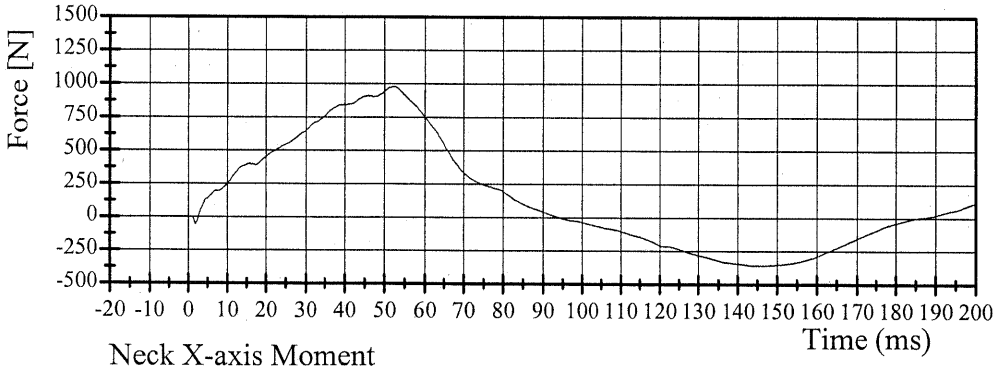


Filter Class: CFC 1000

Max: 979.9 N at 52.2 ms

Min: -358.2 N at 146.6 ms

Neck Y-Axis Force (filtered for moment calculation)

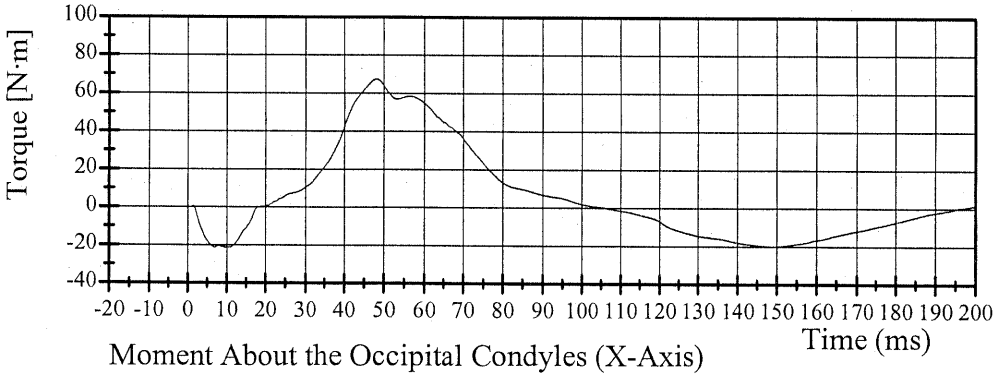


Filter Class: CFC 600

Max: 979.5 N·m at 52.2 ms

Min: -357.8 N·m at 146.7 m

Neck X-axis Moment

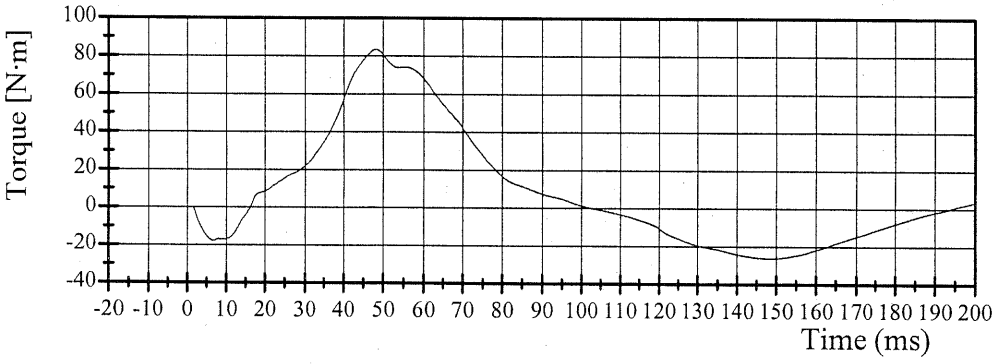


Filter Class: CFC 600

Max: 67.3 N·m at 48.2 ms

Min: -21.2 N·m at 9.9 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 83.4 ° at 48.2 ms

Min: -26.3 ° at 148.4 ms

10.07.2003 07:28:57 500

Transportation Research Center Inc.

572F Thorax Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.7 C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.31 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	38.3 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	37.2 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	17.0 g	Yes

Comments:

Technician

Approved

10.07.2003 07:34:05 1147

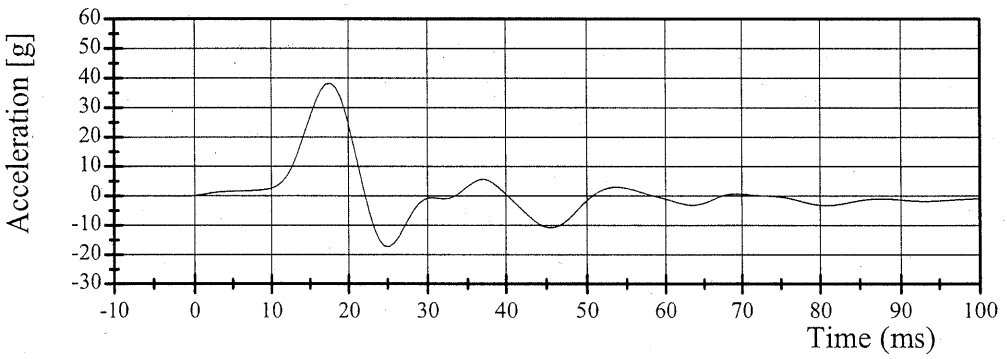
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/06/2003

Upper Rib Bar Acceleration

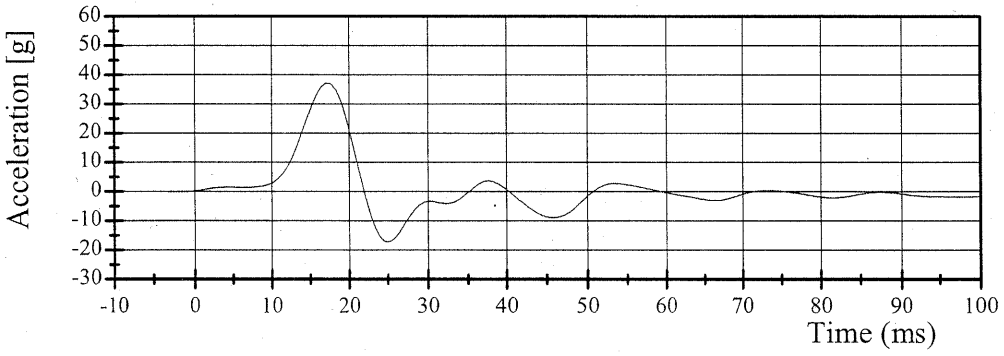


Filter Class: FIR 100

Max: 38.3 g at 17.7 ms

Min: -17.3 g at 25.2 ms

Lower Rib Bar Acceleration

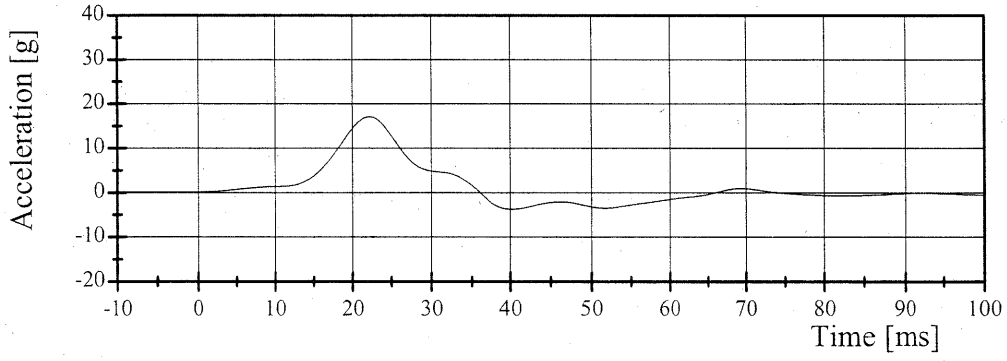


Filter Class: FIR 100

Max: 37.2 g at 17.1 ms

Min: -17.2 g at 25.1 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 17.1 g at 22.1 ms

Min: -3.8 g at 40.2 ms

03.19.2004 09:28:57 1147

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY 15-SEP-03

TRC INC. 572F SN055 DAMPER TEST CAL07

TEST NUMBERS: DP05507A,DP05507B,DP05507C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	65.0 %
VELOCITY	FORCE	667 - 925 N	806 N
2.74 M/S	DISPLACEMENT	29.7 - 34.5 MM	29.8 MM
VELOCITY	FORCE	1706 - 2072 N	1858 N
4.24 M/S	DISPLACEMENT	31.6 - 37.2 MM	32.8 MM
VELOCITY	FORCE	4116 - 4880 N	4562 N
6.38 M/S	DISPLACEMENT	33.5 - 39.8 MM	36.0 MM

DAMPER SETTING = 6.5

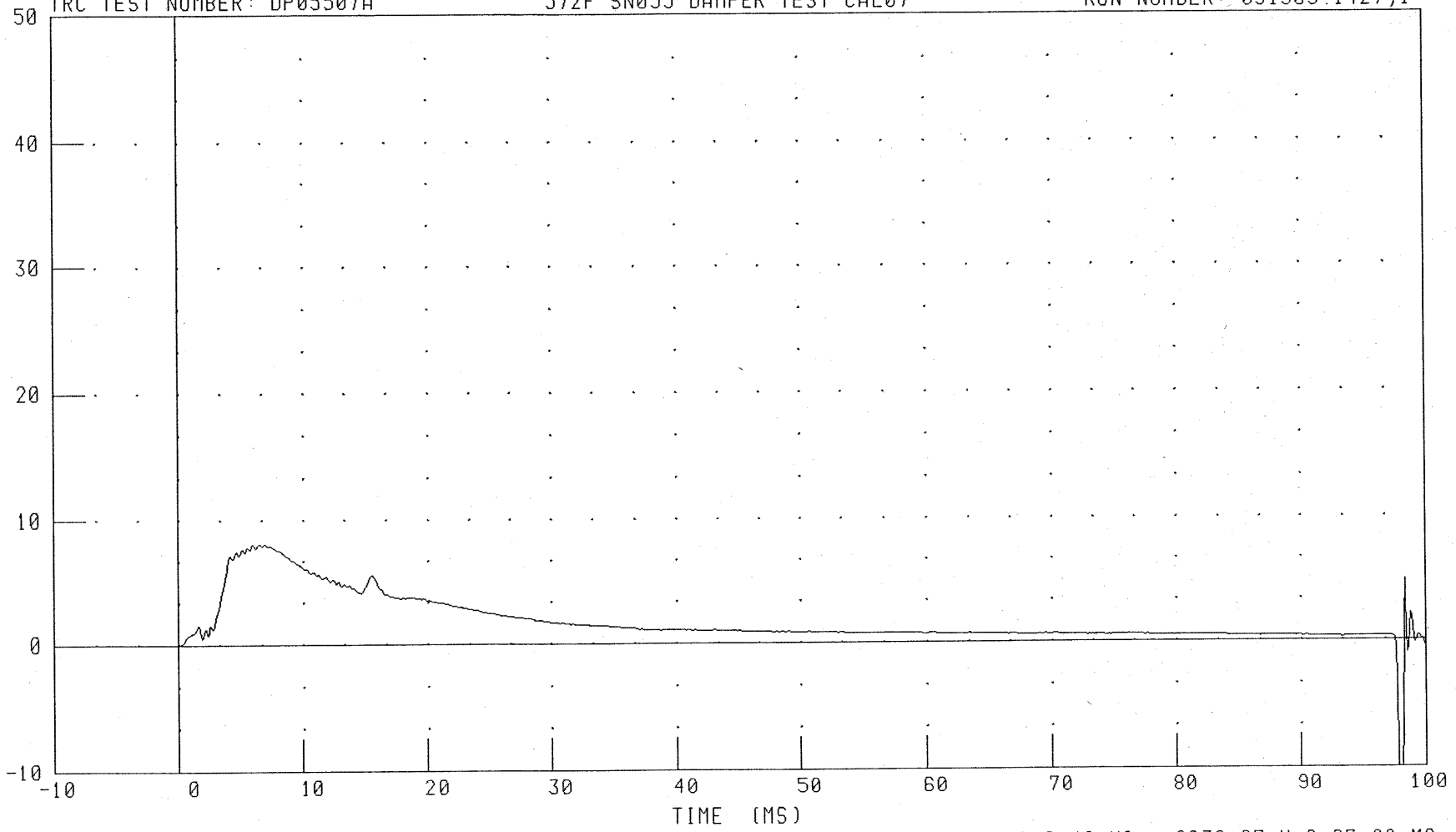
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 091503.1426;1

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

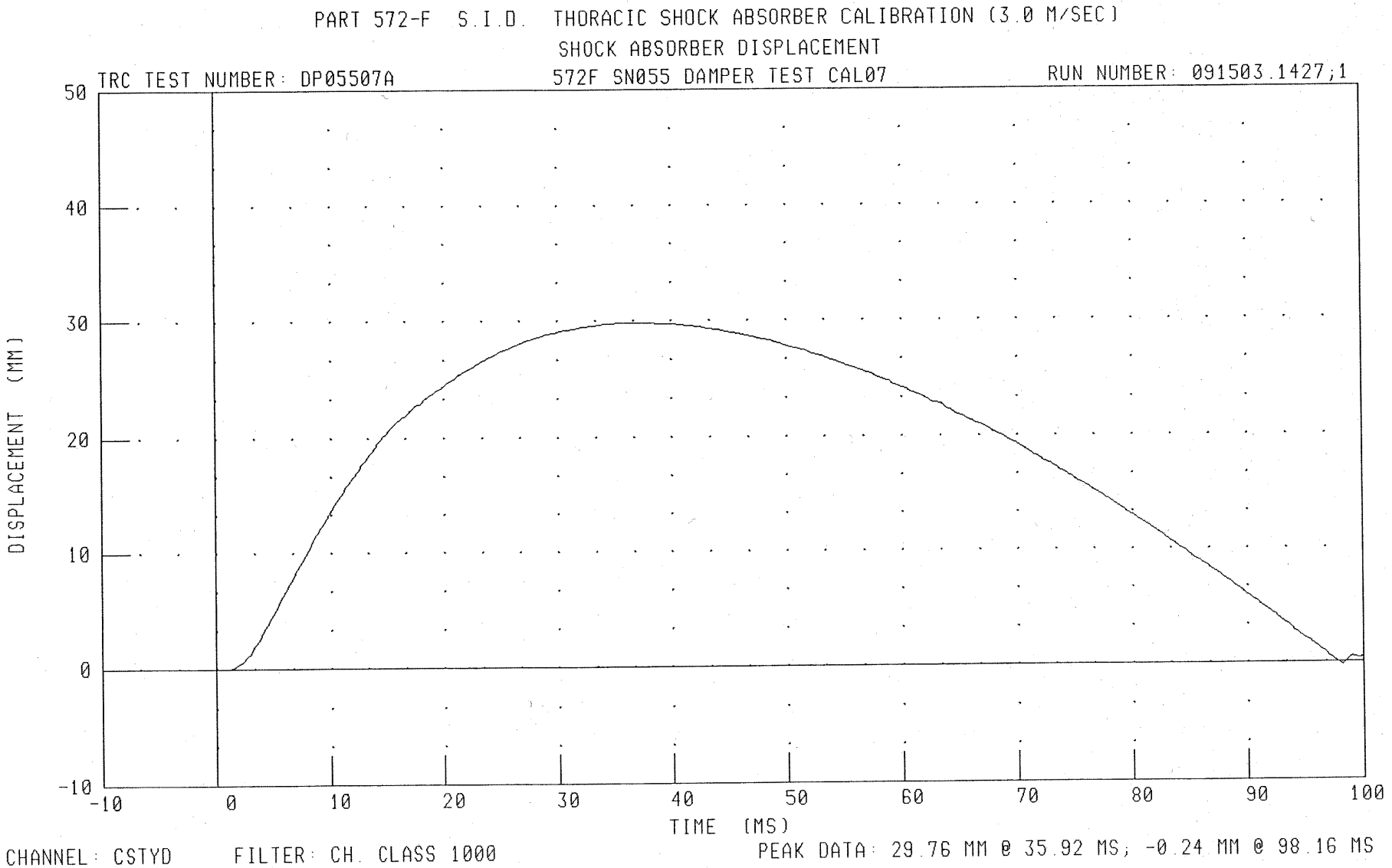
SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05507A 572F SN055 DAMPER TEST CAL07 RUN NUMBER: 091503.1427;1



CHANNEL: DAMPF FILTER: CH. CLASS 1000 PEAK DATA: 805.97 N @ 6.48 MS; -2638.27 N @ 97.92 MS

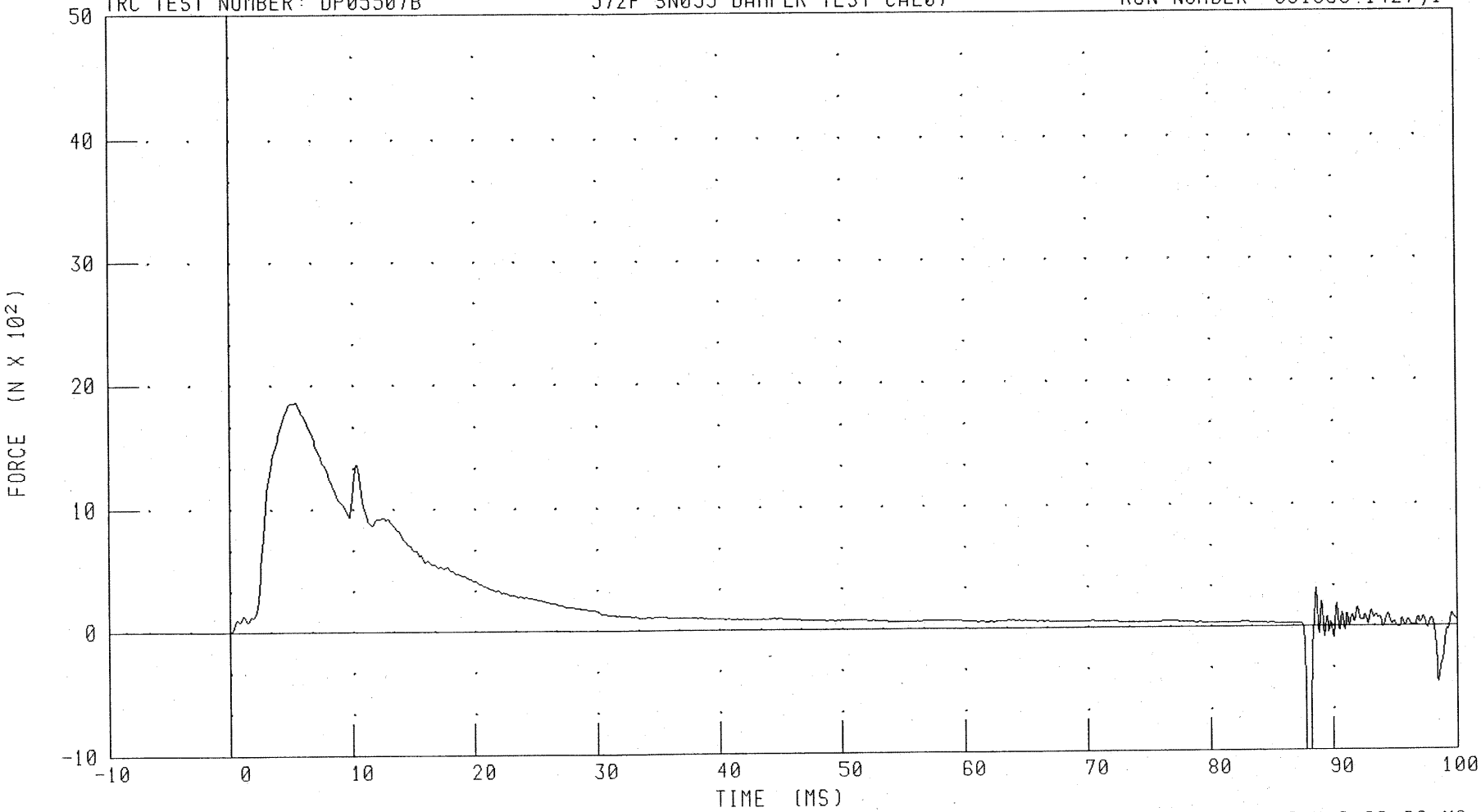
040130


PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)
SHOCK ABSORBER DISPLACEMENT
TRC TEST NUMBER: DP05507A
572F SN055 DAMPER TEST CAL07
RUN NUMBER: 091503.1427;1
DISPLACEMENT (MM)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: CSTYD
FILTER: CH. CLASS 1000
PEAK DATA: 29.76 MM @ 35.92 MS; -0.24 MM @ 98.16 MS

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05507B 572F SN055 DAMPER TEST CAL07 RUN NUMBER: 091503.1427;1



CHANNEL: DAMPF FILTER: CH. CLASS 1000

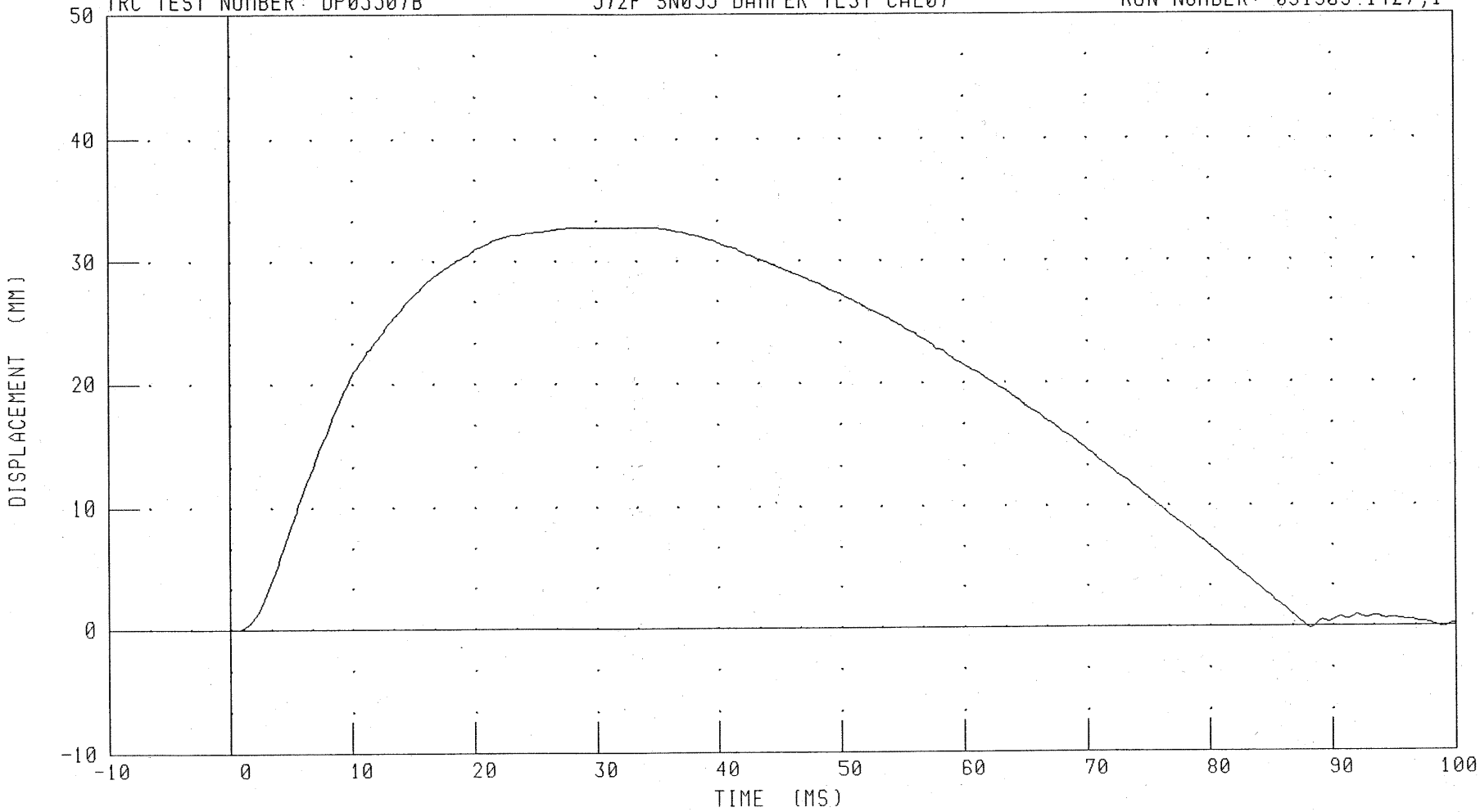
PEAK DATA: 1857.92 N @ 5.36 MS; -2558.33 N @ 88.00 MS

040130

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP05507B 572F SN055 DAMPER TEST CAL07 RUN NUMBER: 091503.1427;1

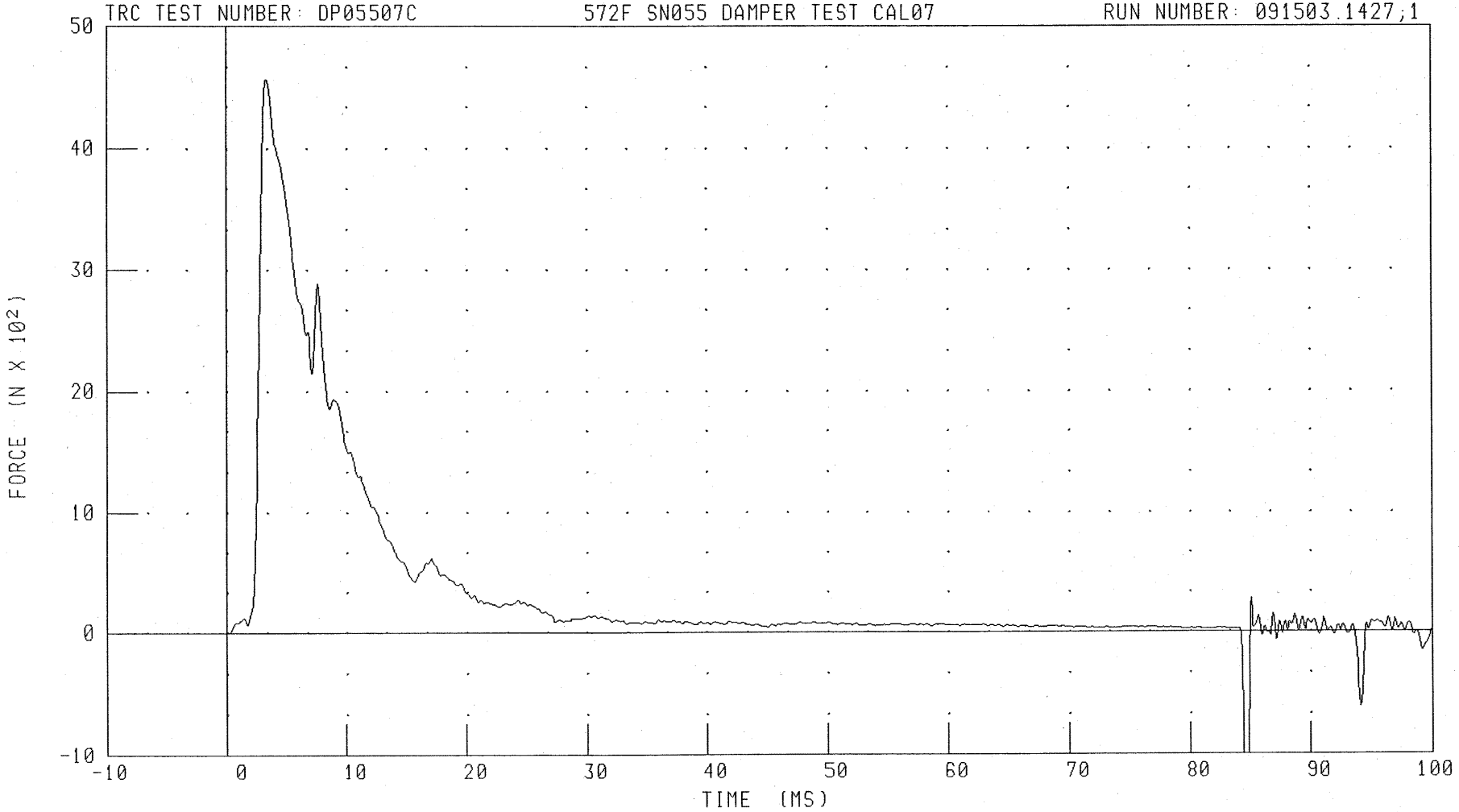


CHANNEL: CSTYD FILTER: CH. CLASS 1000 PEAK DATA: 32.77 MM @ 31.20 MS; -0.23 MM @ 88.24 MS

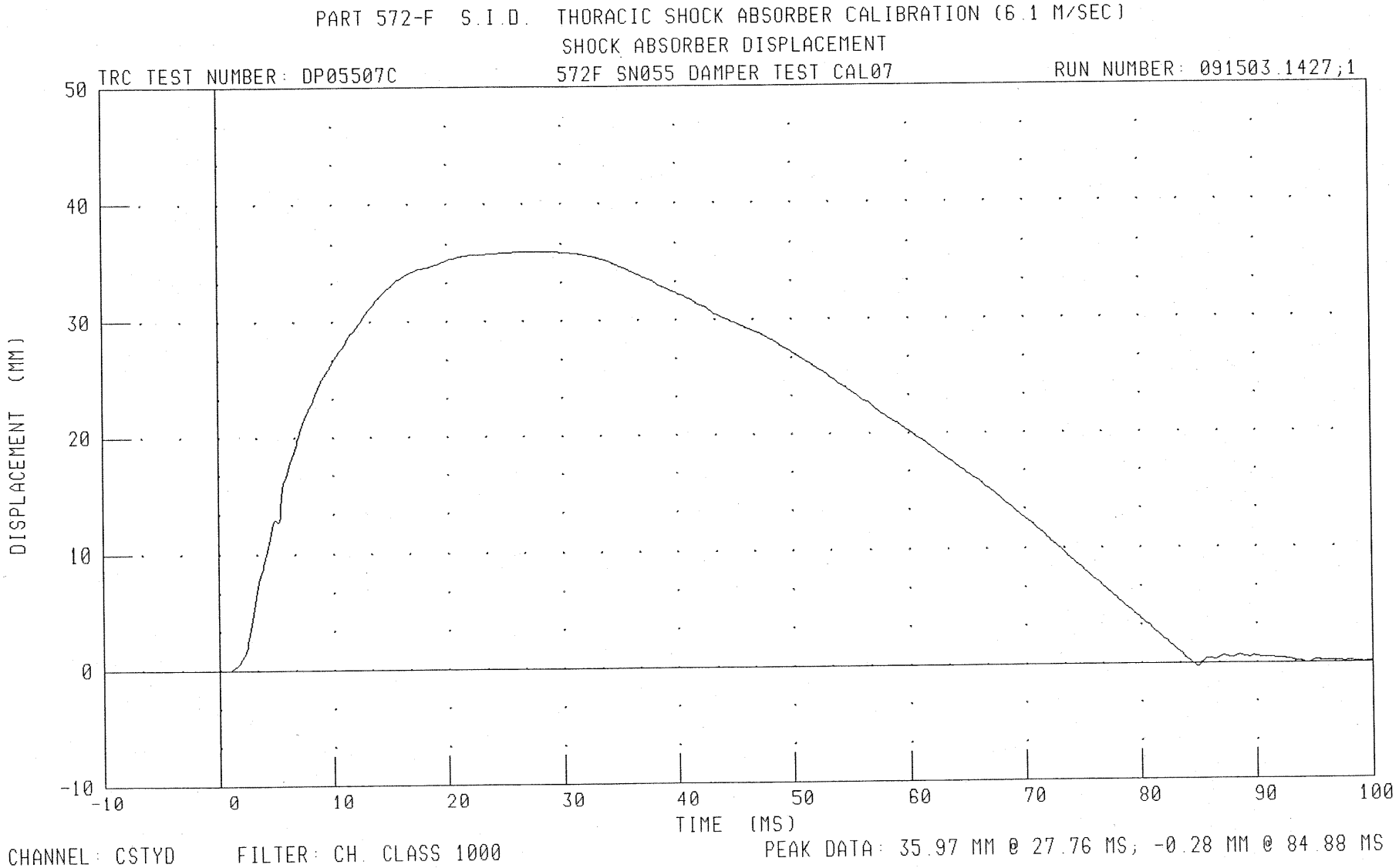
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05507C 572F SN055 DAMPER TEST CAL07 RUN NUMBER: 091503.1427;1



CHANNEL: DAMPF FILTER: CH. CLASS 1000 PEAK DATA: 4562.46 N @ 3.28 MS; -2683.85 N @ 84.72 MS


PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)
SHOCK ABSORBER DISPLACEMENT
TRC TEST NUMBER: DP05507C
572F SN055 DAMPER TEST CAL07
RUN NUMBER: 091503.1427;1
DISPLACEMENT (MM)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: CSTYD
FILTER: CH. CLASS 1000
PEAK DATA: 35.97 MM @ 27.76 MS; -0.28 MM @ 84.88 MS

Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	6.8 - 7.9 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

10.07.2003 07:48:49 8

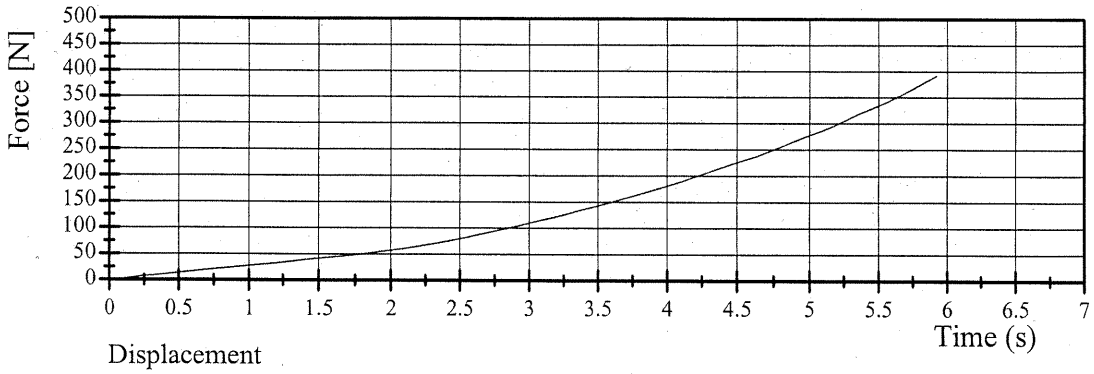
Transportation Research Center Inc.

572B Abdomen Compression Test

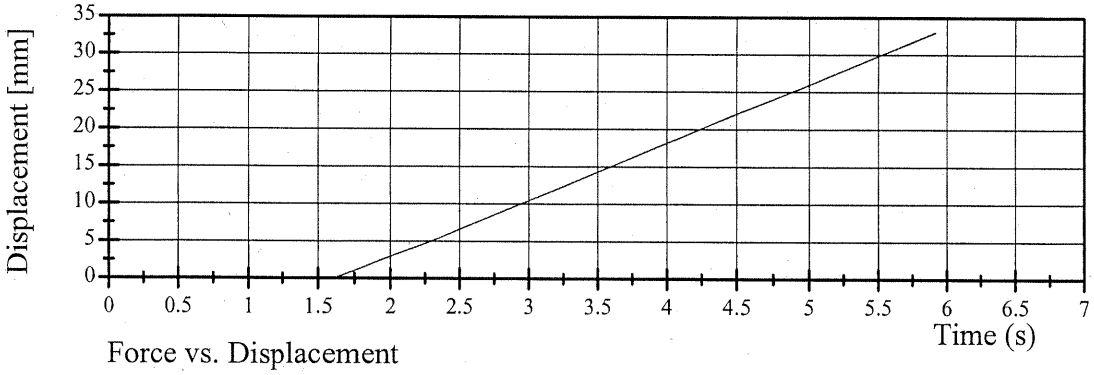
SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/07/2003

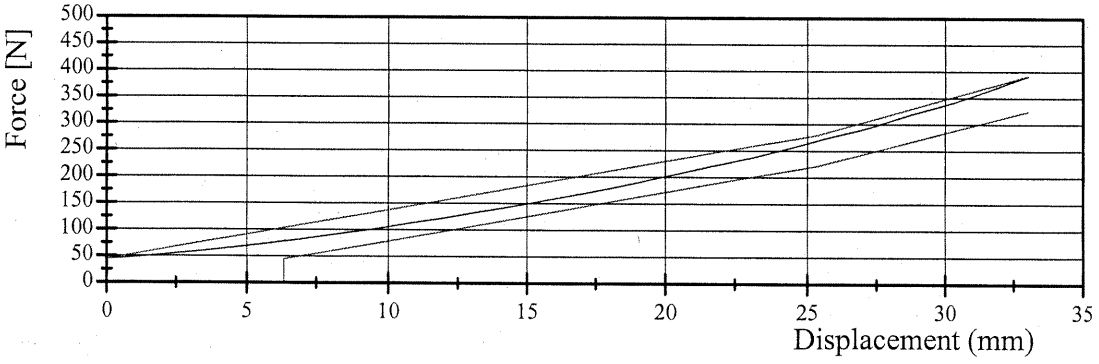
Force



Displacement



Force vs. Displacement



10.07.2003 07:48:50 8

TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

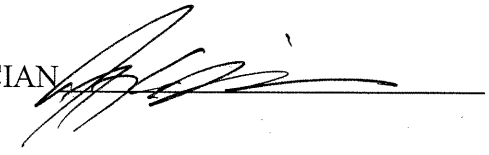
SID HIII

CAL DATE: 07-Oct-03

TRC, INC. TEST NO: LF05509 SID/HIII SN 055 TORSO FLEX CAL 09

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.1 °C
RELATIVE HUMIDITY	10 – 70 %	30 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	133.4 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	164.6 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	200.2 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	5°

TEST MEETS SPECIFICATIONS

TECHNICIAN 

Transportation Research Center Inc.

572F Pelvis Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.1 C	Yes
Relative Humidity	10 - 70 %	22 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.31 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	44.6 g	Yes
Time Above 20 g	3 - 7 ms	6.00 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician

Approved

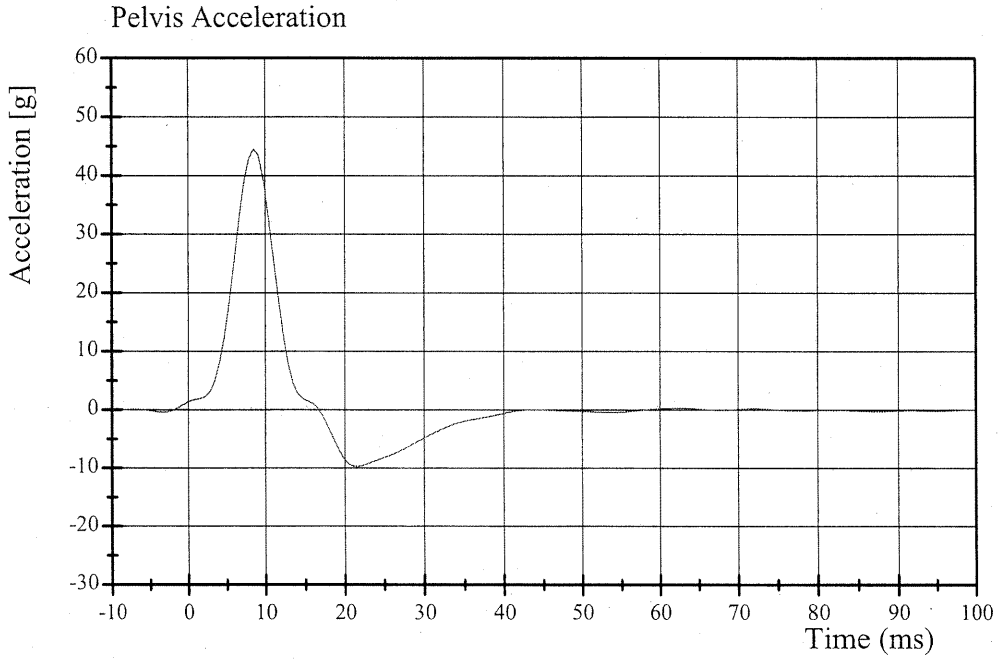
10.07.2003 07:33:05 1152

Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 055 Calibration No. 09 - 1

Test Date 10/06/2003



Filter Class: FIR 100

Max: 44.6 g at 8.5 ms

Min: -9.7 g at 21.6 ms

03.19.2004 09:23:00 1153

Calibration Test Results

Pre-Test

SID HIII: 059

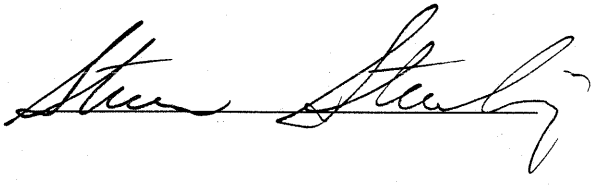
Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was tested on September 11, 2003 for a previous calibration series.

Transportation Research Center Inc.
572M SID/HIII Dummy
External Dimensions
Serial No. 059 Calibration No. 04
Date: 01-28-04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	907 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	502 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Knee Pivot From Backline	KH	510.5 - 525.8 mm	524 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	492 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	369 mm	Yes
Top Rib Width From C\L	RW-1	165.1 - 180.3 mm	177 mm	Yes
Bottom Rib Width From C\L	RW-2	165.1 - 180.3 mm	178 mm	Yes
Difference Between Top & Bottom Rib Width from C\L		<= 2.5 mm	1.0 mm	Yes

Technician



Approved



TRC

Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/27/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Peak Resultant Acceleration	120 - 150 g	147.4 g	Yes
Peak Longitutinal Acceleration	15 g Max	6.7 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician

Approved

01.27.2004 16:54:52 614

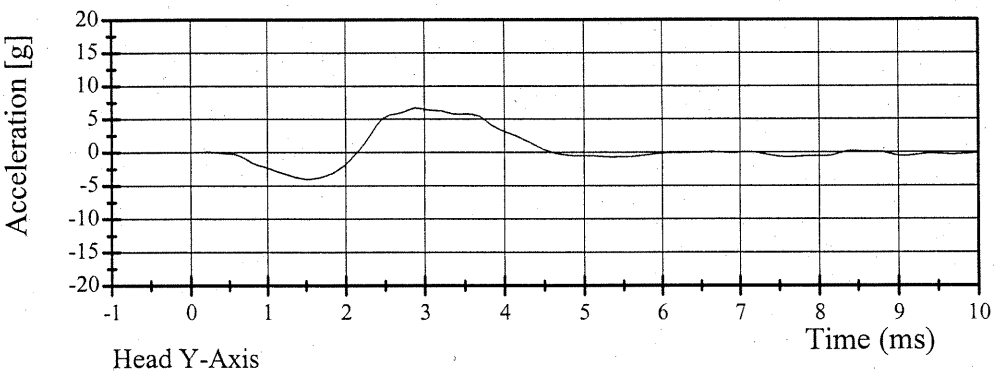
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/27/2004

Head X-Axis

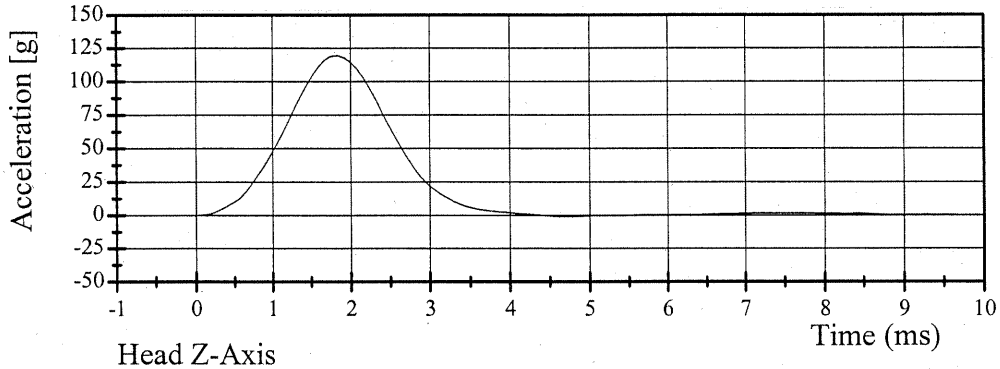


Filter Class: 1000

Max: 6.7 g at 2.9 ms

Min: -4.0 g at 1.5 ms

Head Y-Axis

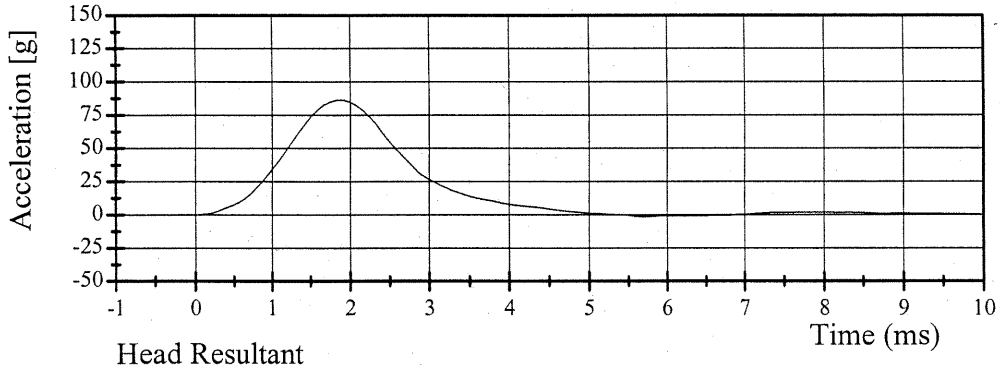


Filter Class: 1000

Max: 119.5 g at 1.8 ms

Min: -1.0 g at 4.7 ms

Head Z-Axis

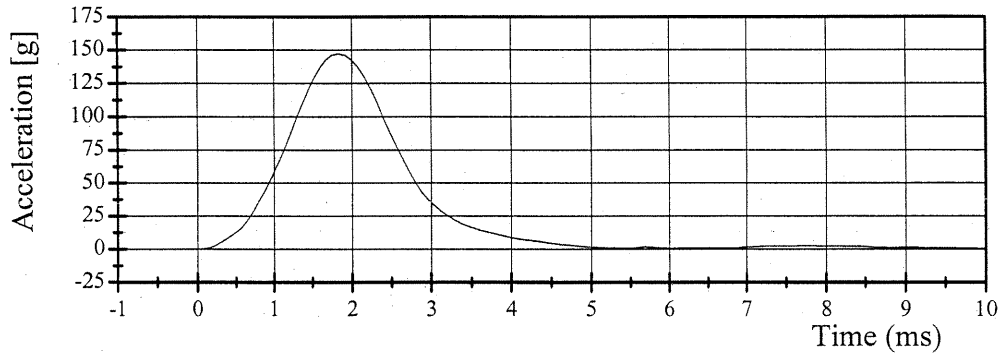


Filter Class: 1000

Max: 86.2 g at 1.8 ms

Min: -1.5 g at 5.7 ms

Head Resultant



Filter Class: 1000

Max: 147.4 g at 1.8 ms

Min: 0.0 g at 0.9 ms

01.27.2004 16:54:53 614

Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/27/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.26 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.60 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.58 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.17 - 7.32 m/s	Yes
Peak D Plane Rotation	66 - 82 °	71.6 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	60.7 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	78.6 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	58.4 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	10.6 ms	Yes

Comments:

Technician

V. J. Watts

Approved

Paul K Kumm

01.27.2004 19:10:25 519

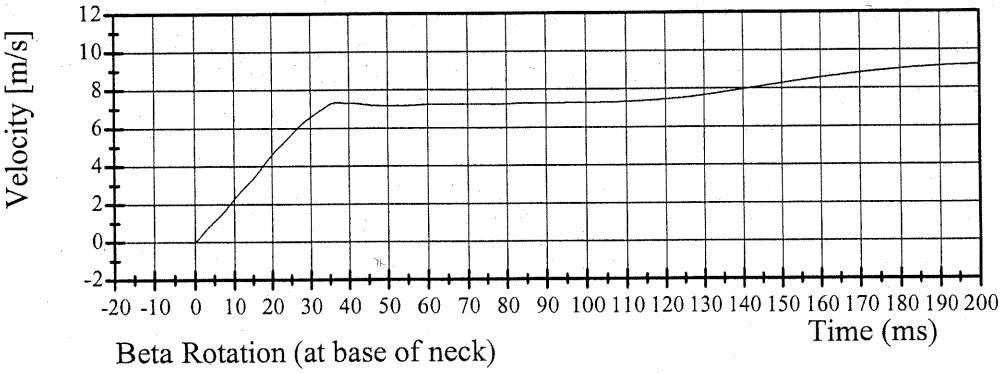
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/27/2004

Integrated Pendulum Velocity

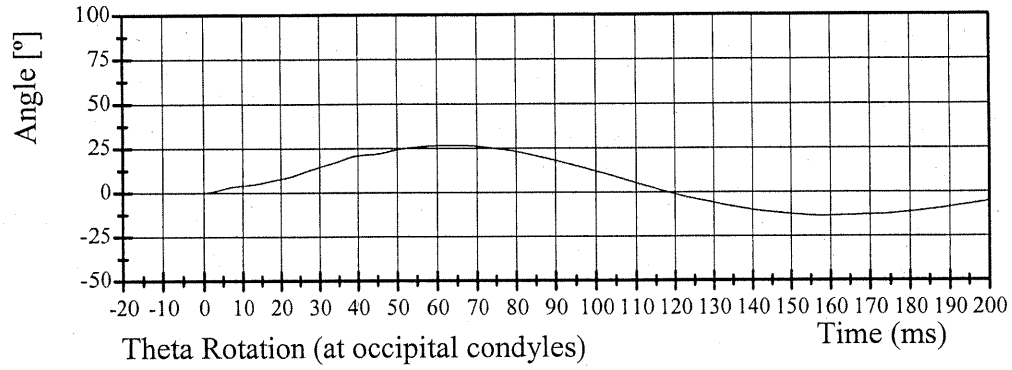


Filter Class: 180

Max: 9.7 m/s at 958.5 ms

Min: -0.0 m/s at -0.7 ms

Beta Rotation (at base of neck)

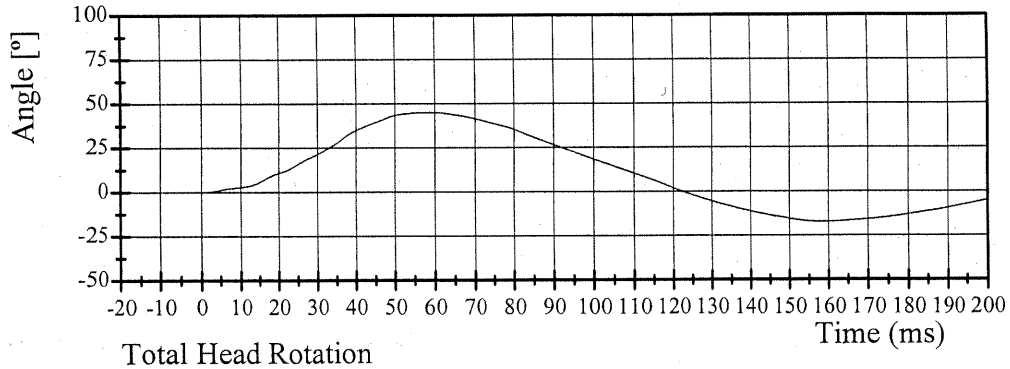


Filter Class: 60

Max: 26.7 ° at 63.9 ms

Min: -13.6 ° at 158.1 ms

Theta Rotation (at occipital condyles)

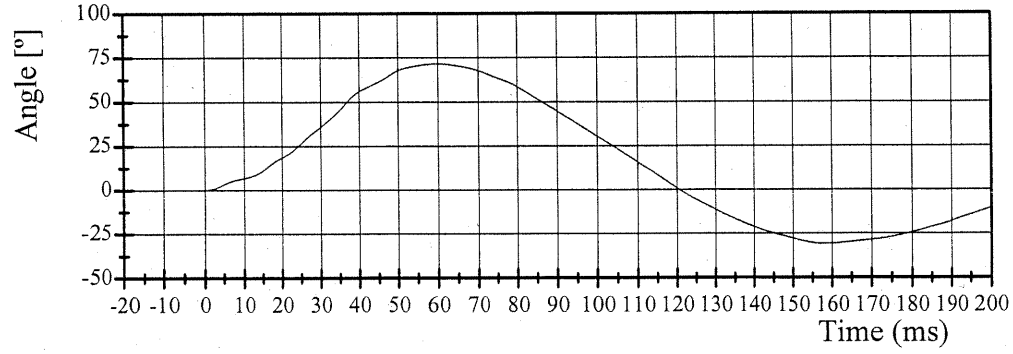


Filter Class: 60

Max: 45.1 ° at 58.5 ms

Min: -17.2 ° at 159.0 ms

Total Head Rotation



Filter Class: 60

Max: 71.6 ° at 60.0 ms

Min: -30.8 ° at 158.5 ms

01.27.2004 19:10:26 519

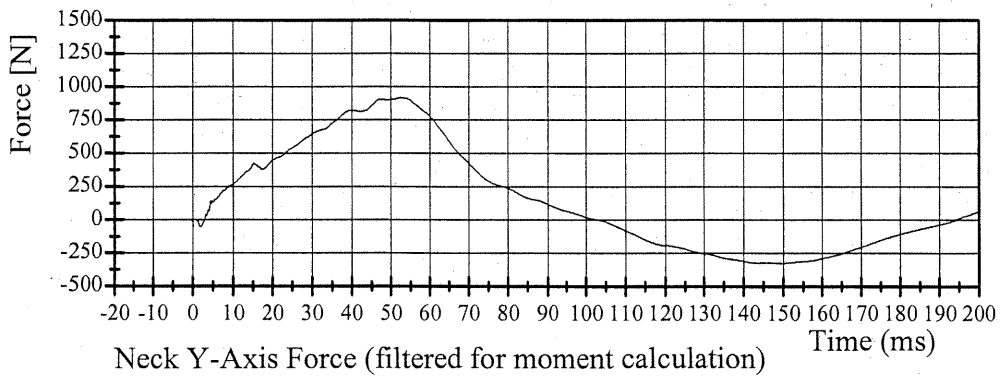
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/27/2004

Neck Y-Axis Force

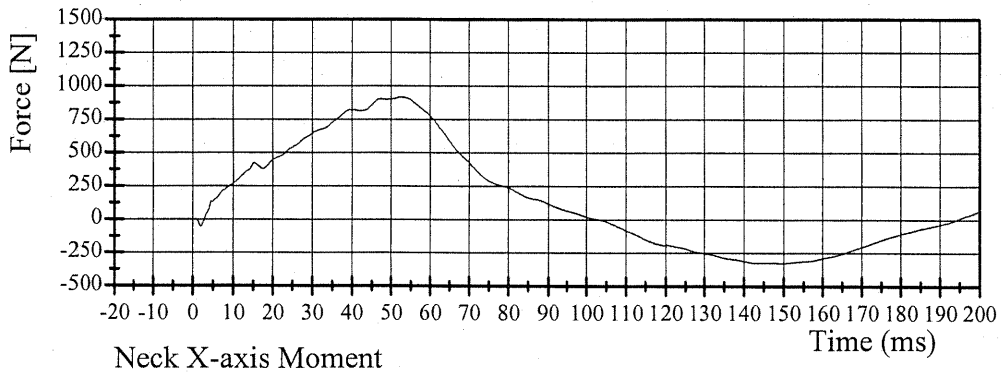


Filter Class: CFC 1000

Max: 917 N at 52.4 ms

Min: -326 N at 149.7 ms

Neck Y-Axis Force (filtered for moment calculation)

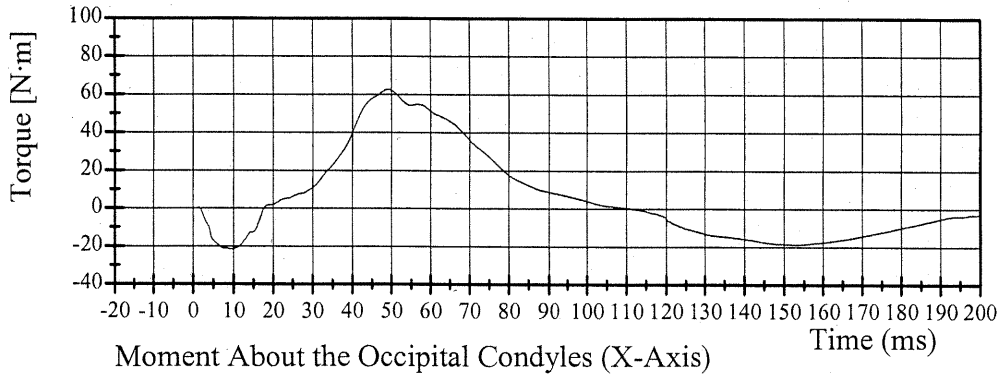


Filter Class: CFC 600

Max: 917 N·m at 52.5 ms

Min: -326 N·m at 149.8 ms

Neck X-axis Moment

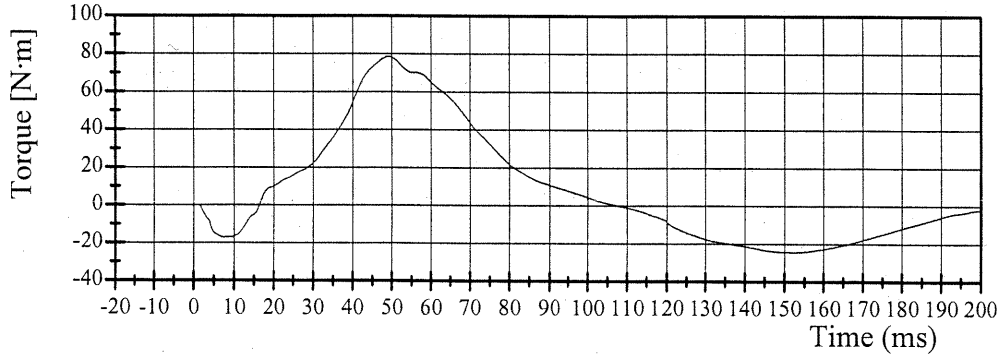


Filter Class: CFC 600

Max: 62.6 N·m at 49.3 ms

Min: -21.5 N·m at 9.5 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 78.6 ° at 49.4 ms

Min: -24.3 ° at 152.6 ms

01.27.2004 19:10:28 519

Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 059 Calibration No. 04 - 3

Test Date 01/27/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	6.8 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

01.27.2004 14:49:20 1501

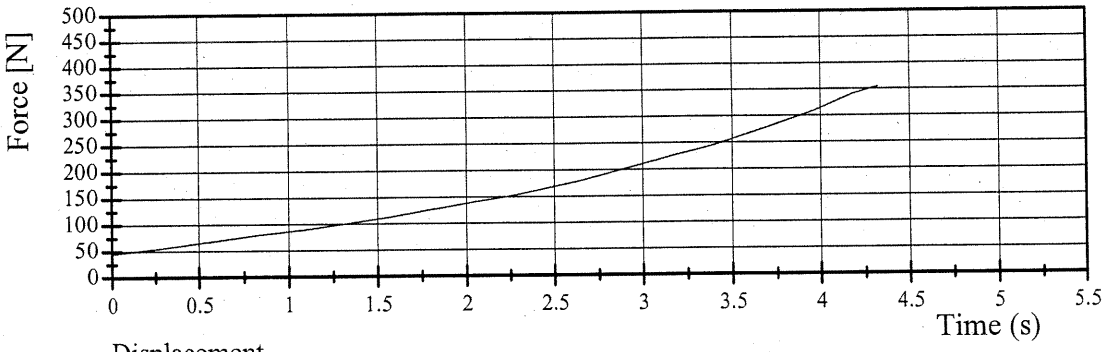
Transportation Research Center Inc.

572B Abdomen Compression Test

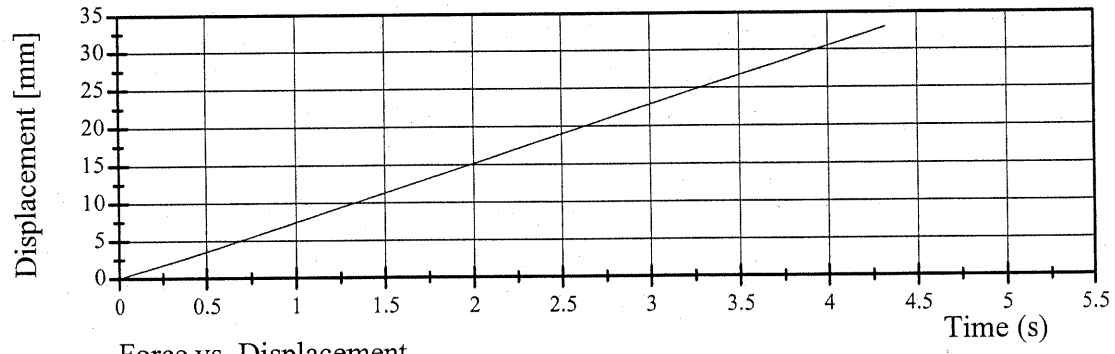
SID HIII Serial No. 059 Calibration No. 04 - 3

Test Date 01/27/2004

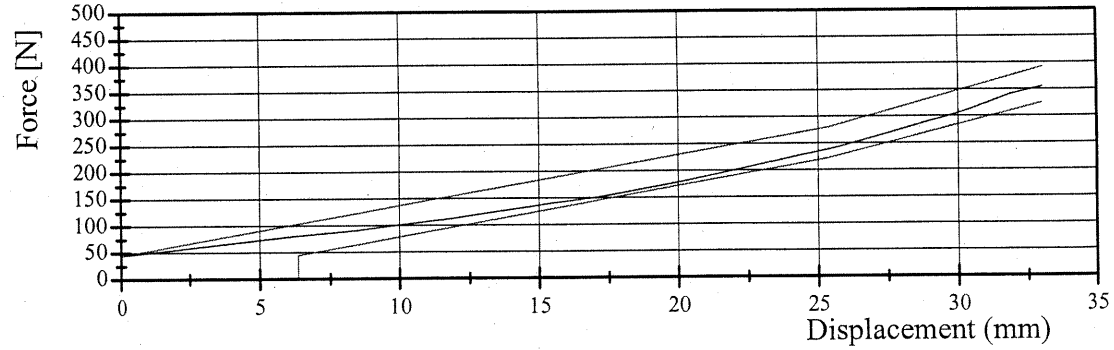
Force



Displacement



Force vs. Displacement



01.27.2004 14:49:21 1501

TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID HIII

CAL DATE: 27-Jan-04

TRC, INC. TEST NO: LF05904B SID/HIII SN 059 TORSO FLEX CAL 04

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.7 °C
RELATIVE HUMIDITY	10 – 70 %	29 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	128 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	160 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	231 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	4.3 °

TEST MEETS SPECIFICATIONS

TECHNICIAN V. J. Walter

Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 059 Calibration No. 04 - 3

Test Date 01/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.1 C	Yes
Relative Humidity	10 - 70 %	22 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.29 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	41.2 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	38.6 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	22.0 g	Yes

Comments:

Technician

Approved

01.28.2004 18:23:19 1126

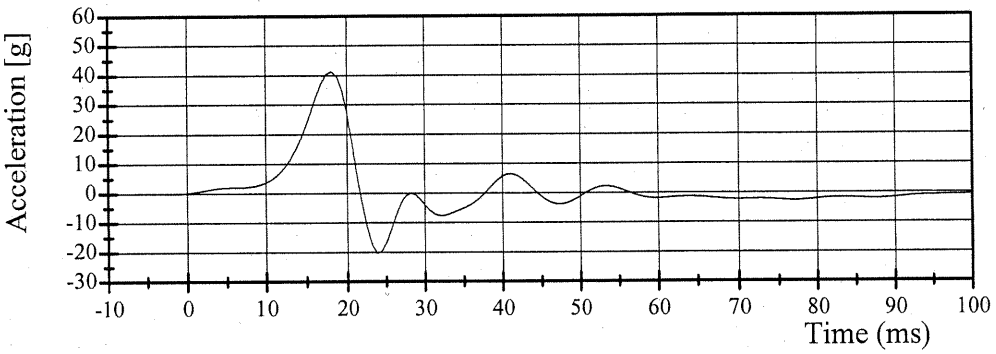
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 059 Calibration No. 04 - 3

Test Date 01/28/2004

Upper Rib Bar Acceleration

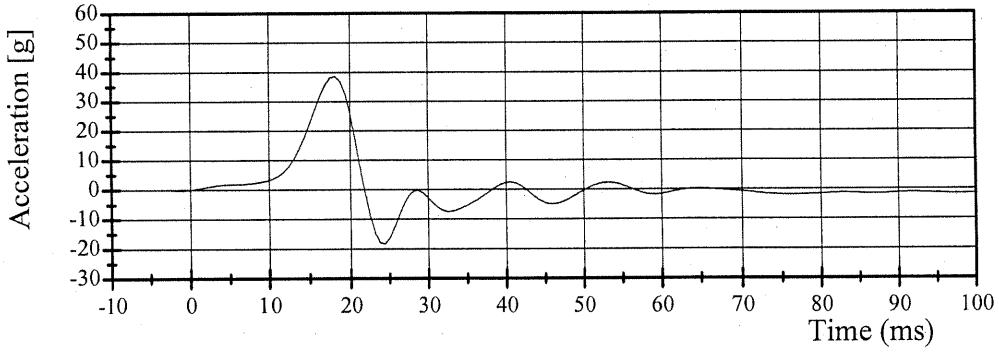


Filter Class: FIR 100

Max: 41.2 g at 18.1 ms

Min: -20.3 g at 23.8 ms

Lower Rib Bar Acceleration

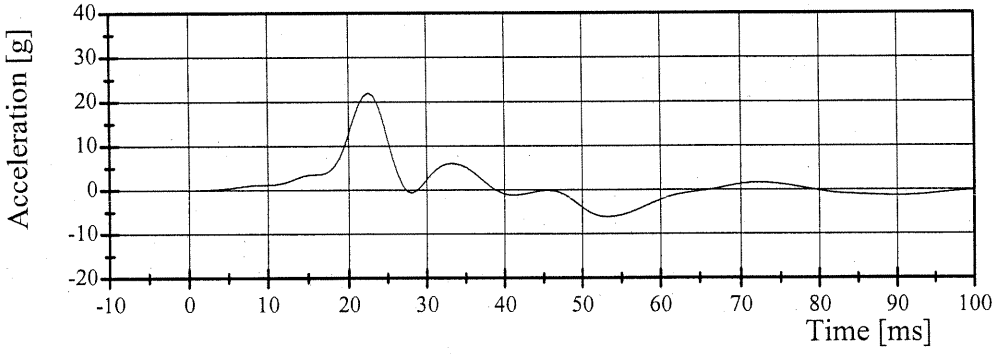


Filter Class: FIR 100

Max: 38.6 g at 18.1 ms

Min: -18.3 g at 24.3 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 22.0 g at 22.5 ms

Min: -6.1 g at 53.1 ms

01.28.2004 18:23:20 1126

Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/28/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.0 C	Yes
Relative Humidity	10 - 70 %	24 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.28 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	44.4 g	Yes
Time Above 20 g	3 - 7 ms	6.16 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician

Approved

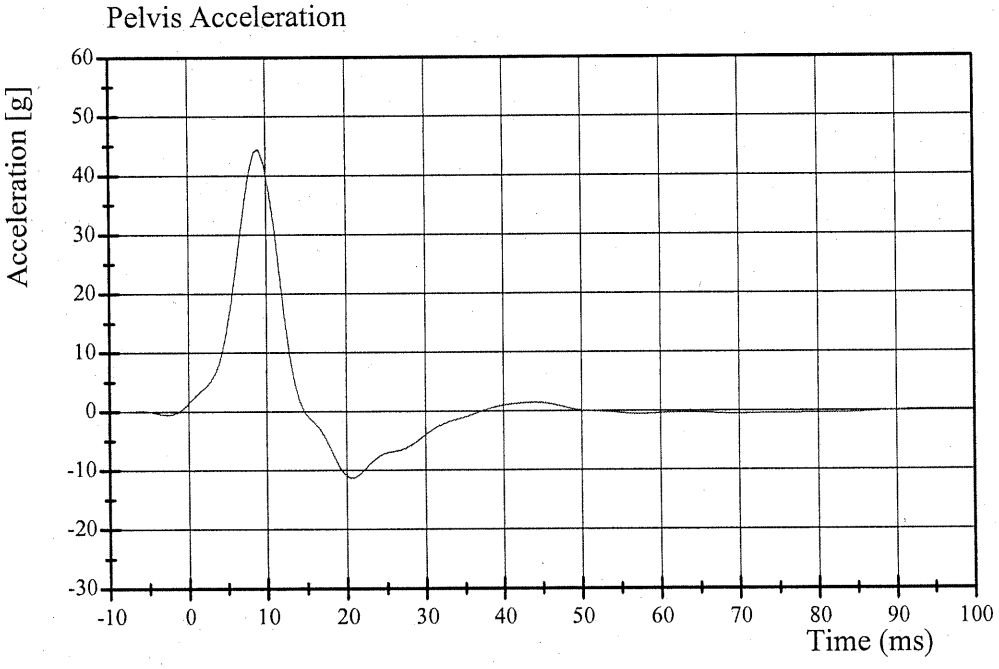
01.28.2004 15:52:26 1184

Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 04 - 1

Test Date 01/28/2004



Filter Class: FIR 100

Max: 44.4 g at 9.1 ms

Min: -11.3 g at 20.4 ms

01.28.2004 15:52:27 1184

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY 11-SEP-03

TRC INC. 572F SN059 DAMPER TEST CAL01

TEST NUMBERS: DP05901A,DP05901B,DP05901C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	65.0 %
VELOCITY	FORCE	667 - 925 N	749 N
2.75 M/S	DISPLACEMENT	29.7 - 34.5 MM	29.9 MM
VELOCITY	FORCE	1733 - 2100 N	1802 N
4.26 M/S	DISPLACEMENT	31.6 - 37.2 MM	32.7 MM
VELOCITY	FORCE	3703 - 4402 N	3922 N
6.07 M/S	DISPLACEMENT	33.3 - 39.5 MM	35.9 MM

DAMPER SETTING = 5.5

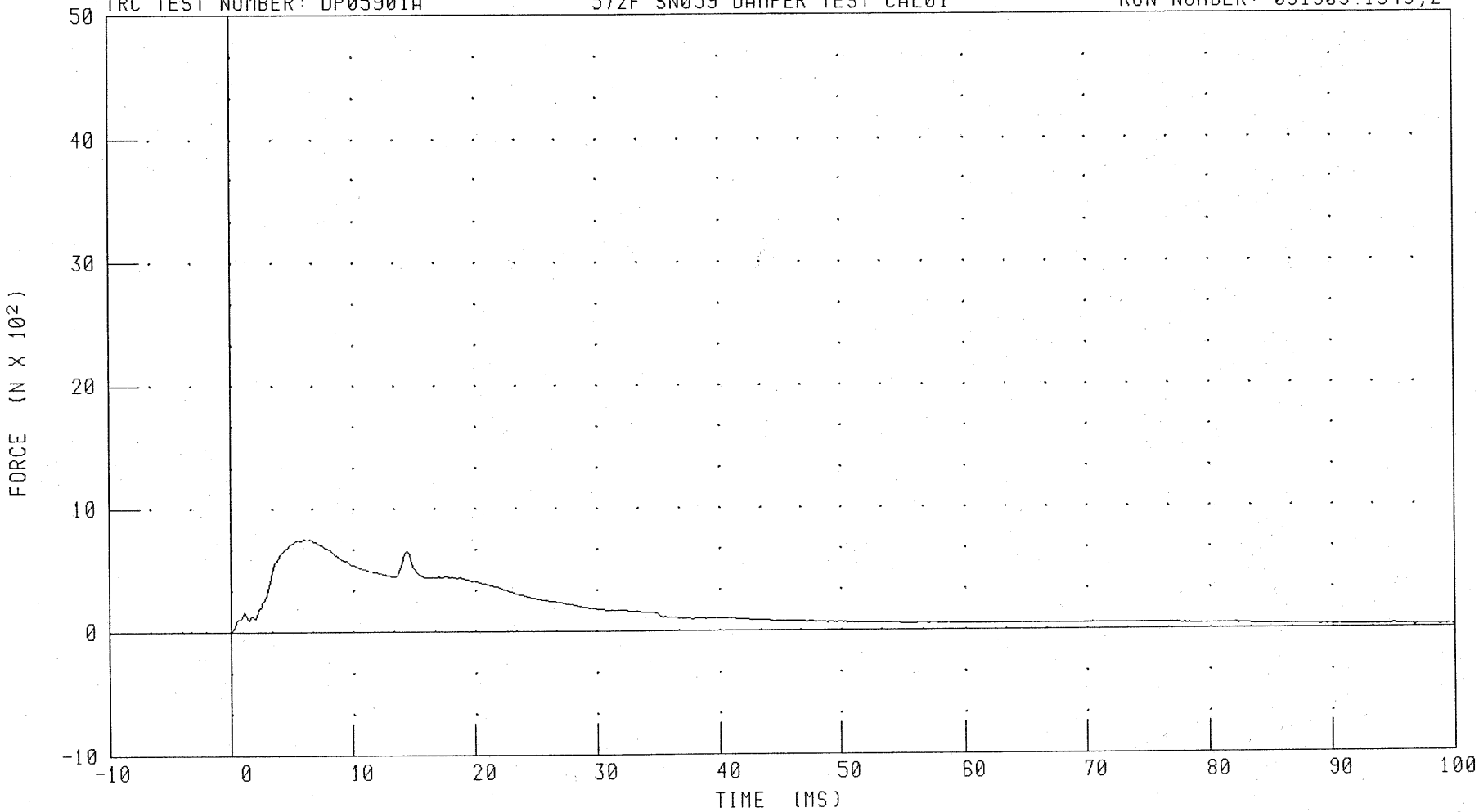
TEST MEETS SPECIFICATIONS

TECHNICIAN _____ RUN NUMBER: 091503.1343;2

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

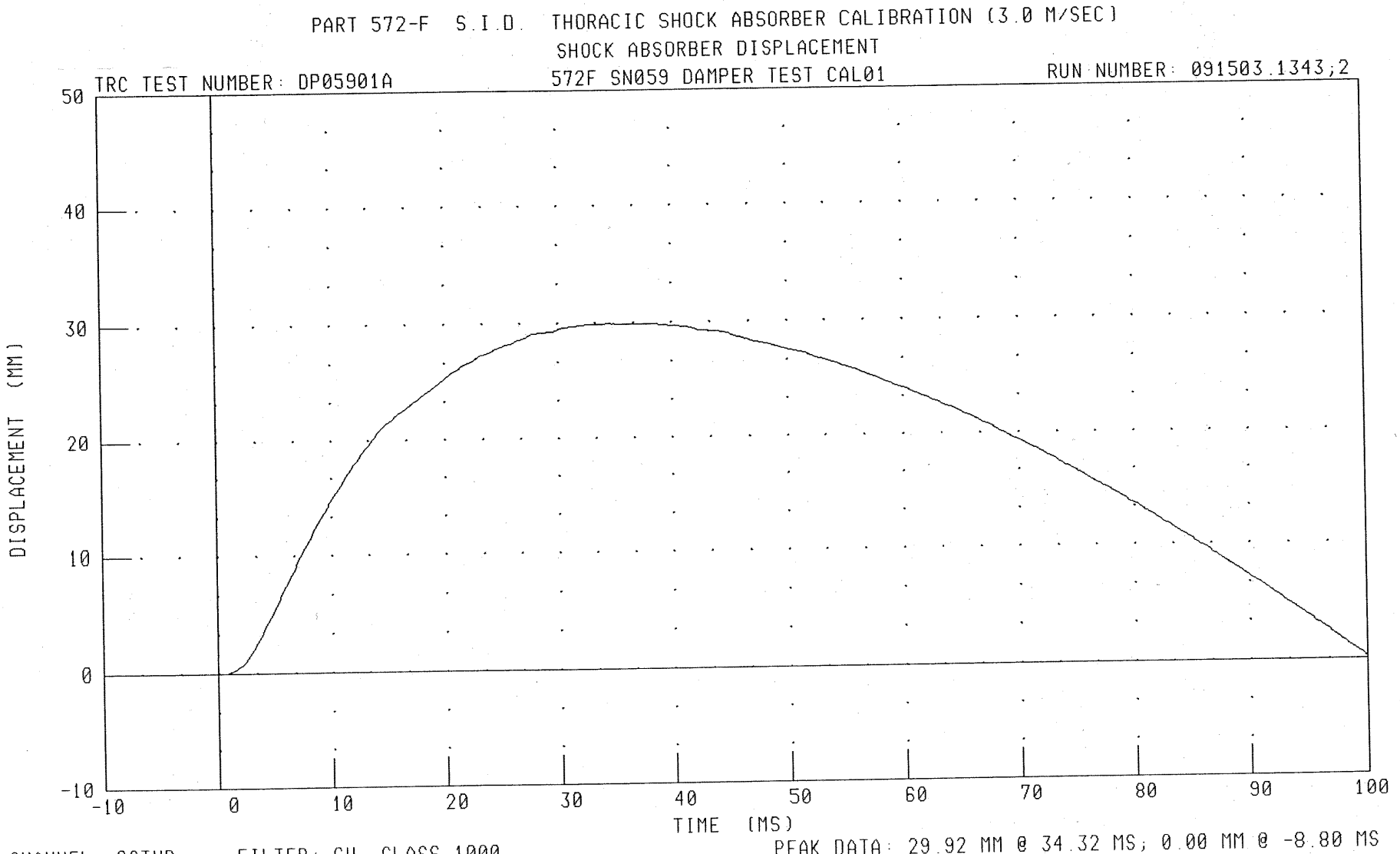
SHOCK ABSORBER RESISTIVE FORCE

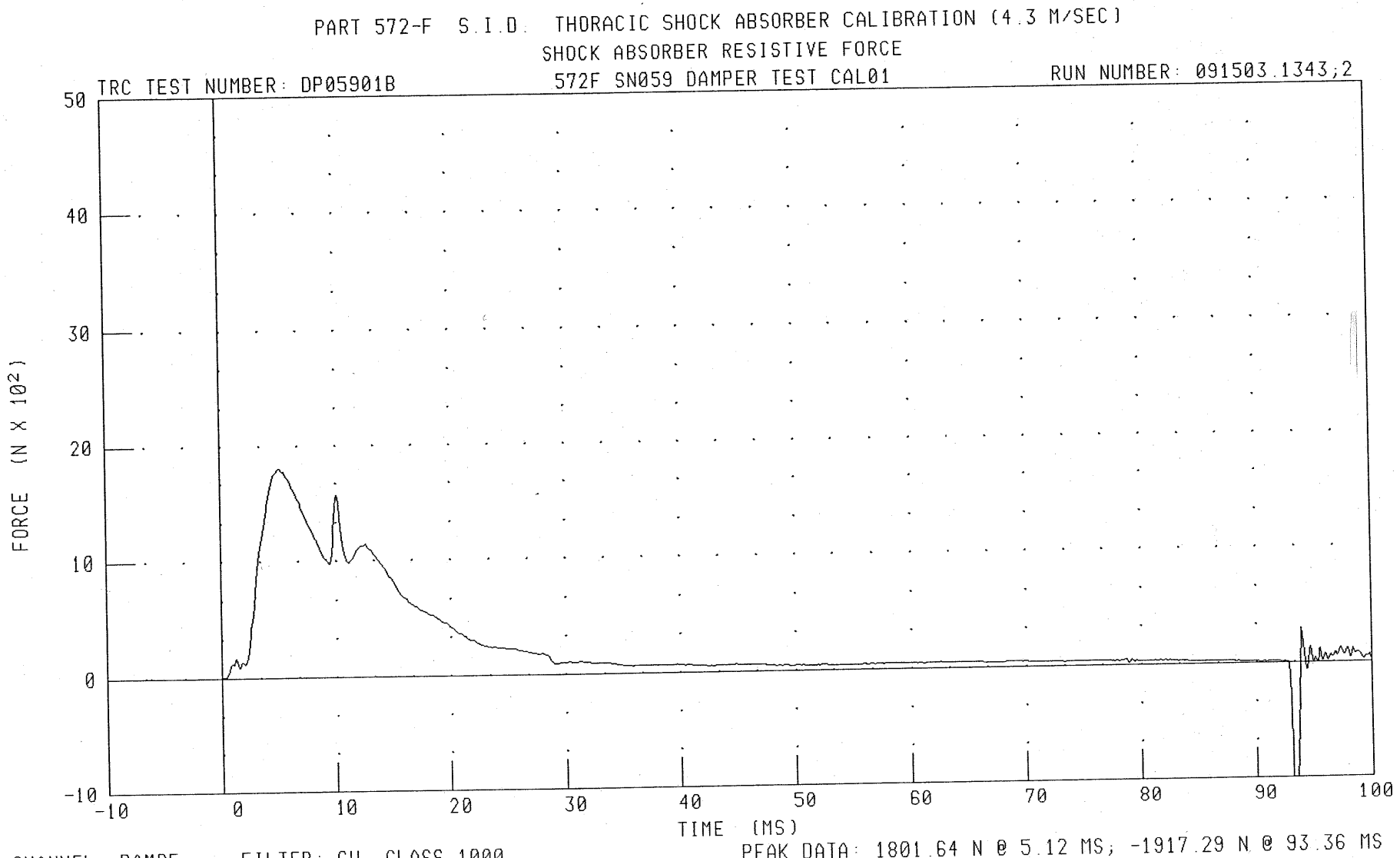
TRC TEST NUMBER: DP05901A 572F SN059 DAMPER TEST CAL01 RUN NUMBER: 091503.1343;2



CHANNEL: DAMPF FILTER: CH. CLASS 1000 PEAK DATA: 748.99 N @ 6.00 MS; -2.13 N @ -9.04 MS

040130

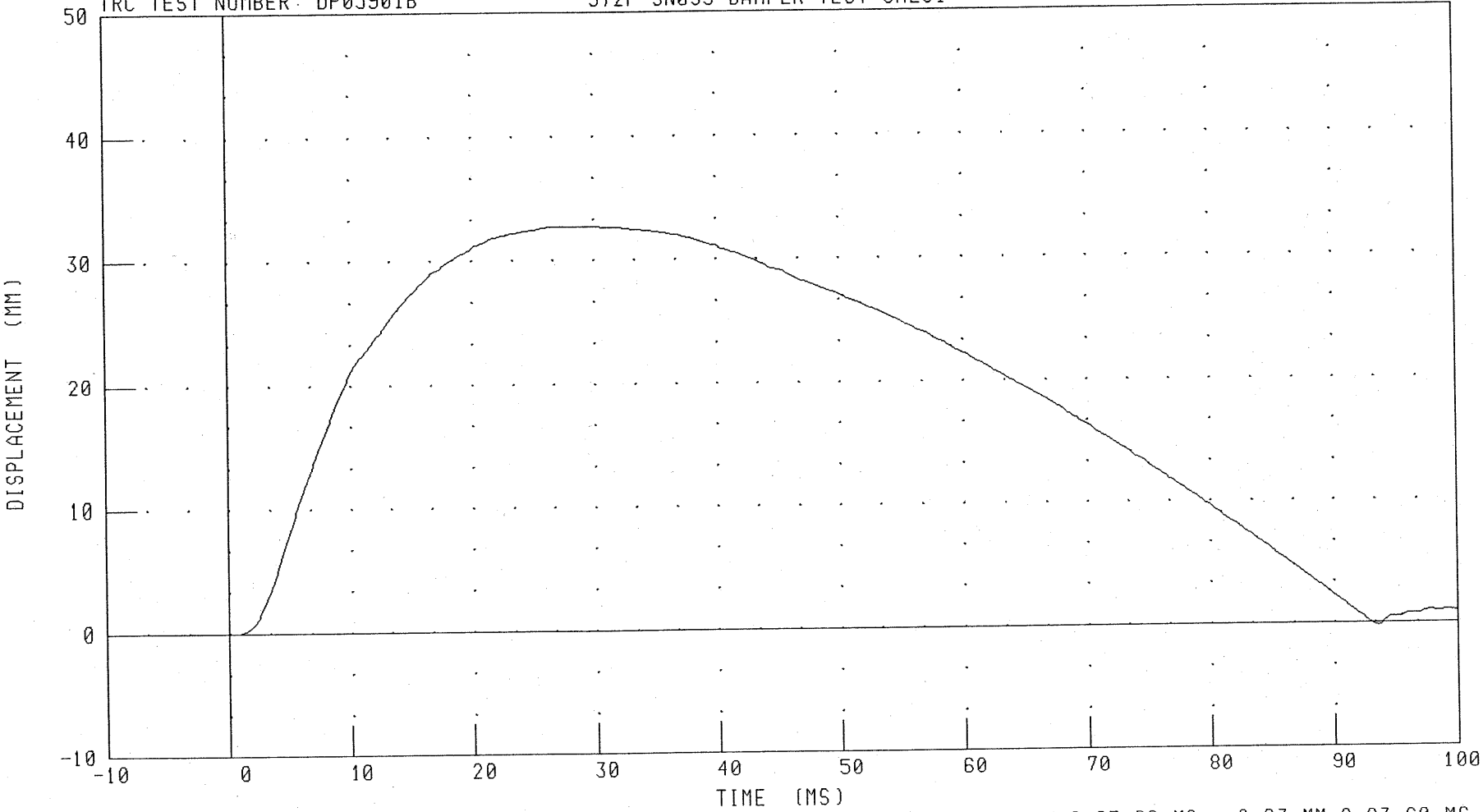

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)
SHOCK ABSORBER DISPLACEMENT
TRC TEST NUMBER: DP05901A
572F SN059 DAMPER TEST CAL01
RUN NUMBER: 091503.1343;2
DISPLACEMENT (MM)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: CSTYD
FILTER: CH. CLASS 1000
PEAK DATA: 29.92 MM @ 34.32 MS; 0.00 MM @ -8.80 MS


PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)
SHOCK ABSORBER RESISTIVE FORCE
TRC TEST NUMBER: DP05901B
572F SN059 DAMPER TEST CAL01
RUN NUMBER: 091503.1343;2
FORCE (N X 10²)
50
40
30
20
10
0
-10
-10
0
10
20
30
40
50
60
70
80
90
100
TIME (MS)
CHANNEL: DAMPF
FILTER: CH. CLASS 1000
PEAK DATA: 1801.64 N @ 5.12 MS; -1917.29 N @ 93.36 MS

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP05901B 572F SN059 DAMPER TEST CAL01 RUN NUMBER: 091503.1343;2



CHANNEL: CSTYD FILTER: CH. CLASS 1000 PEAK DATA: 32.68 MM @ 27.68 MS; -0.23 MM @ 93.60 MS

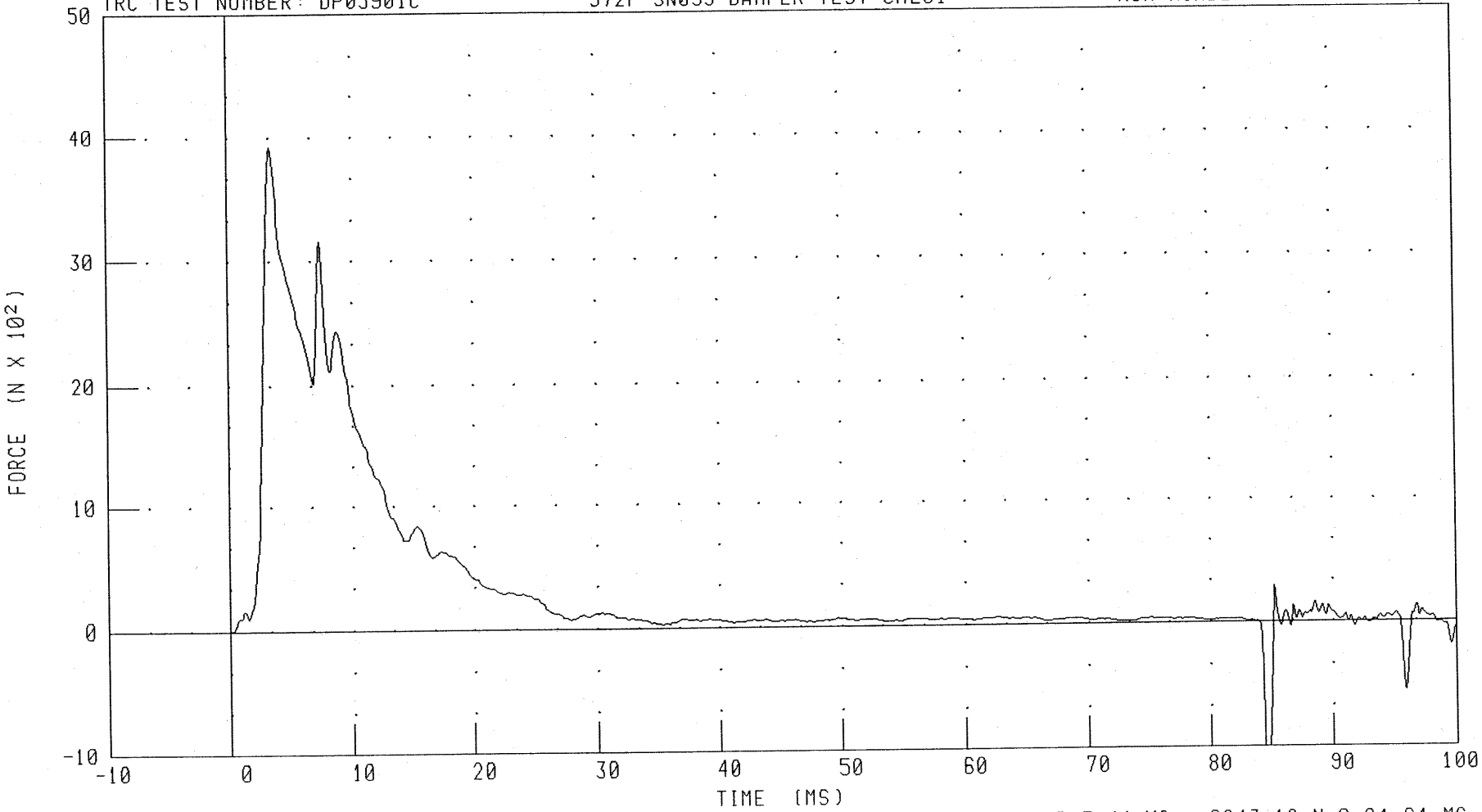
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP05901C

572F SN059 DAMPER TEST CAL01

RUN NUMBER: 091503.1343;2



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 3922.19 N @ 3.44 MS; -2043.18 N @ 84.64 MS

040130

PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP05901C 572F SN059 DAMPER TEST CAL01 RUN NUMBER: 091503.1343;2



CHANNEL: CSTYD FILTER: CH. CLASS 1000 PEAK DATA: 35.88 MM @ 26.08 MS; -0.25 MM @ 84.88 MS

Calibration Test Results

Post-Test

SID HIII: 055

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head passed all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was not tested at this time.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.
SID/HIII Dummy
External Dimensions
Serial No. 055 Calibration No. 10
Date: 2/9/04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	909 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	511 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Knee Pivot From Backline	KH	510.5 - 525.8 mm	524 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	493 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	356 mm	Yes
Top Rib Width From C\L	RW-1	165.1 - 180.3 mm	173 mm	Yes
Bottom Rib Width From C\L	RW-2	165.1 - 180.3 mm	173 mm	Yes
Difference Between Top & Bottom Rib Width from C\L		<= 2.5 mm	0.0 mm	Yes

Technician

Approved

Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Peak Resultant Acceleration	120 - 150 g	136.6 g	Yes
Peak Longitutinal Acceleration	15 g Max	7.1 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician

Approved

02.09.2004 11:38:17 610

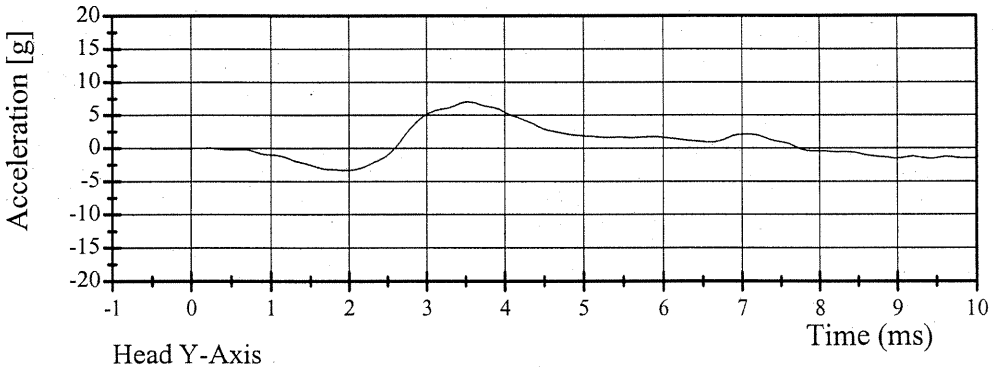
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

Head X-Axis

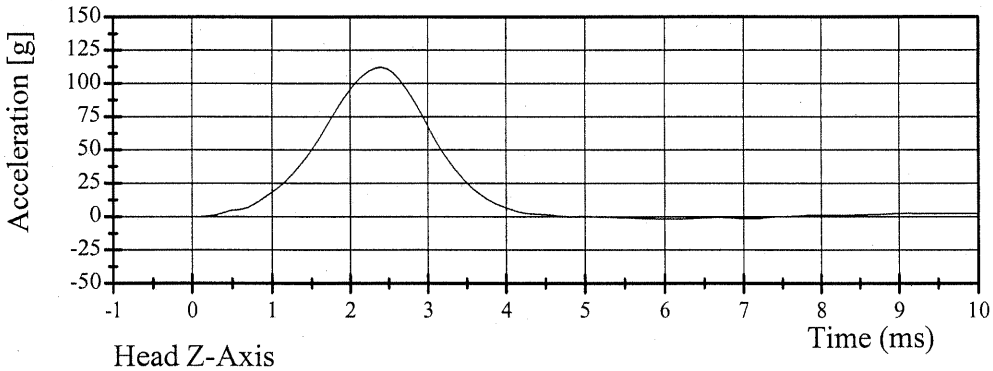


Filter Class: 1000

Max: 7.1 g at 3.5 ms

Min: -3.3 g at 2.0 ms

Head Y-Axis

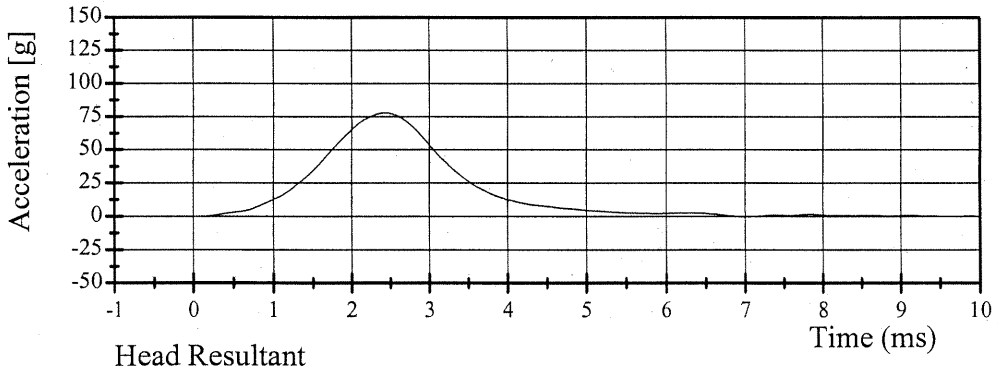


Filter Class: 1000

Max: 112.2 g at 2.4 ms

Min: -1.8 g at 6.1 ms

Head Z-Axis

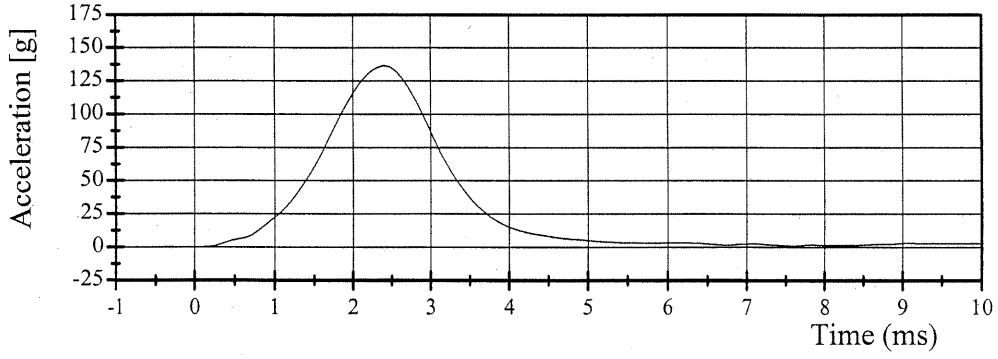


Filter Class: 1000

Max: 77.9 g at 2.4 ms

Min: -0.3 g at 7.0 ms

Head Resultant



Filter Class: 1000

Max: 136.6 g at 2.4 ms

Min: 0.0 g at 5.4 ms

02.09.2004 11:38:18 610

Transportation Research Center Inc.

572M Left Lateral Neck Test

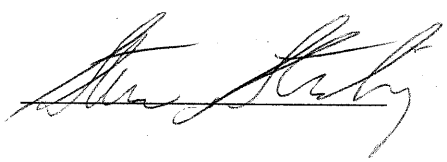
SID HIII Serial No. 055 Calibration No. 10 - 2

Test Date 02/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	22.2 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.06 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.22 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.50 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.51 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.19 - 7.34 m/s	Yes
Peak D Plane Rotation	66 - 82 °	71.2 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	59.1 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	86.2 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	56.3 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	11.4 ms	Yes

Comments:

Technician



Approved

02.09.2004 16:45:16 518

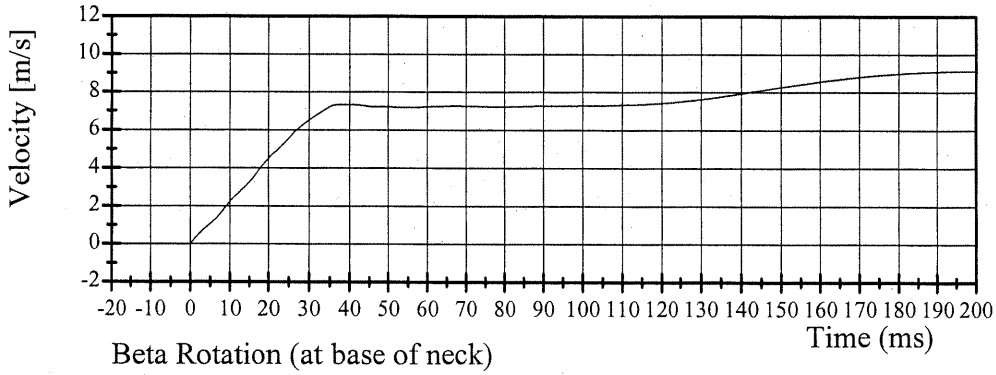
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 055 Calibration No. 10 - 2

Test Date 02/09/2004

Integrated Pendulum Velocity

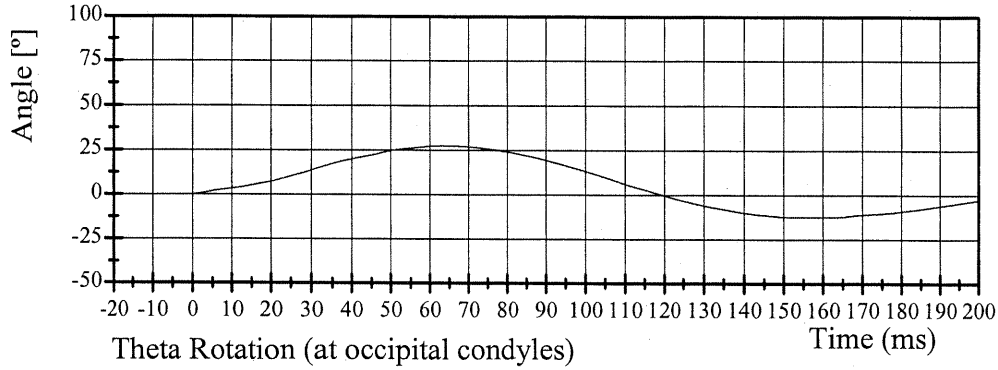


Filter Class: 180

Max: 9.3 m/s at 958.6 ms

Min: -0.0 m/s at -0.9 ms

Beta Rotation (at base of neck)

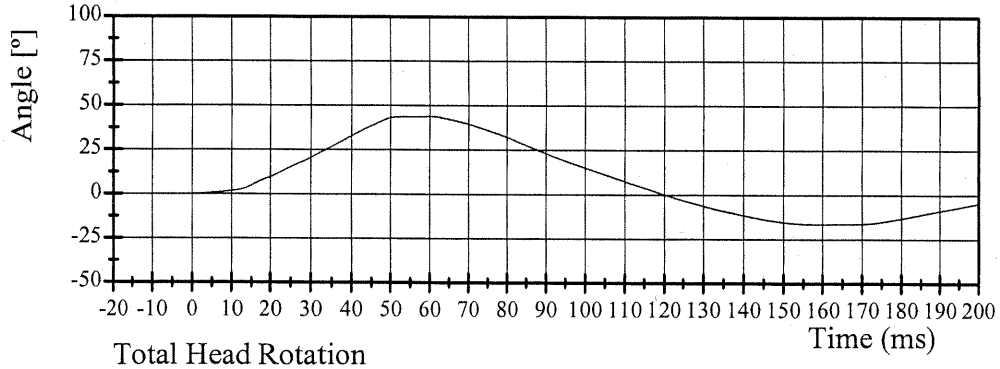


Filter Class: 60

Max: 27.5 ° at 63.3 ms

Min: -12.3 ° at 153.7 ms

Theta Rotation (at occipital condyles)

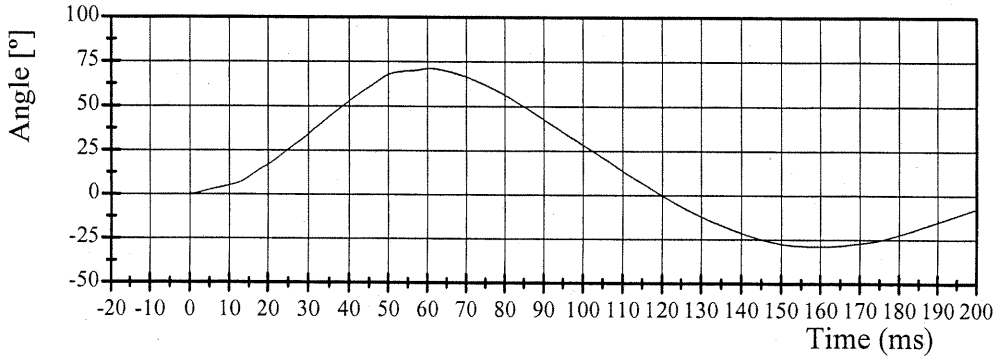


Filter Class: 60

Max: 44.0 ° at 60.3 ms

Min: -16.4 ° at 159.2 ms

Total Head Rotation



Filter Class: 60

Max: 71.2 ° at 60.9 ms

Min: -28.6 ° at 159.4 ms

02.09.2004 16:45:17 518

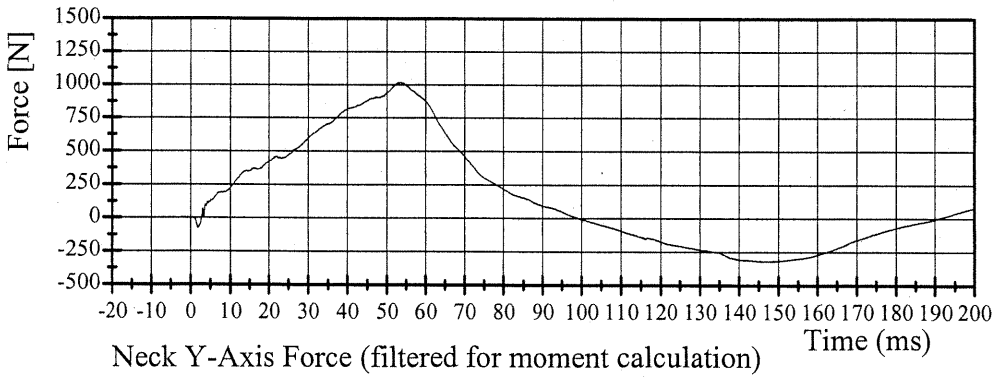
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 055 Calibration No. 10 - 2

Test Date 02/09/2004

Neck Y-Axis Force

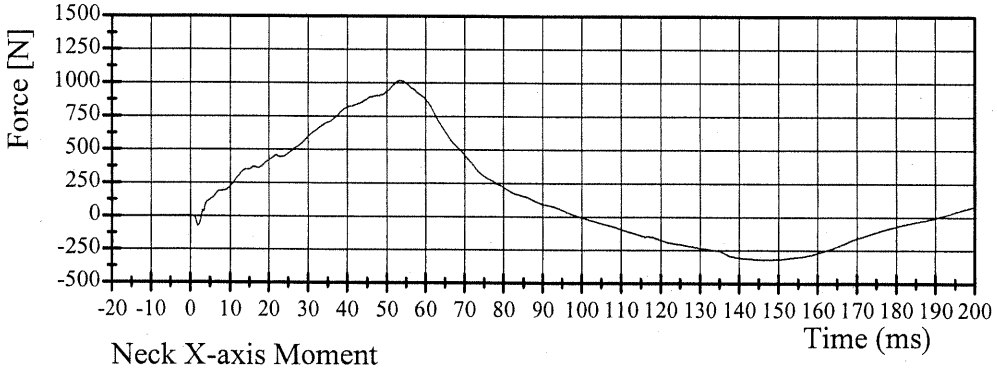


Filter Class: CFC 1000

Max: 1017 N at 53.4 ms

Min: -319 N at 147.8 ms

Neck Y-Axis Force (filtered for moment calculation)

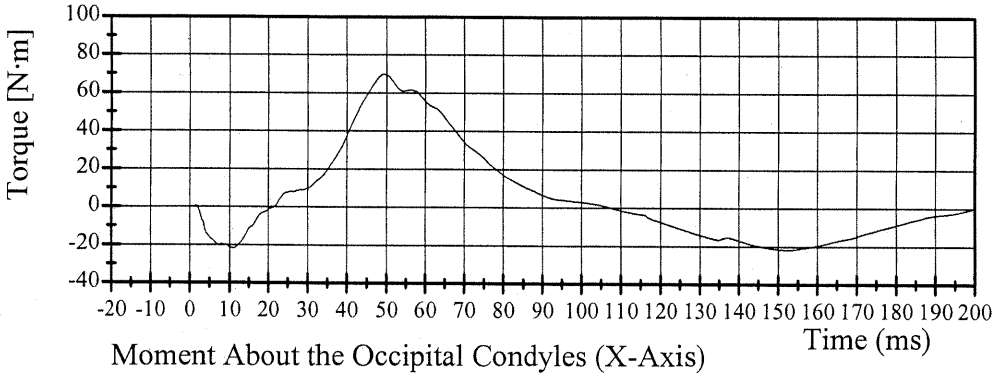


Filter Class: CFC 600

Max: 1016 N·m at 53.4 ms

Min: -318 N·m at 147.8 ms

Neck X-axis Moment

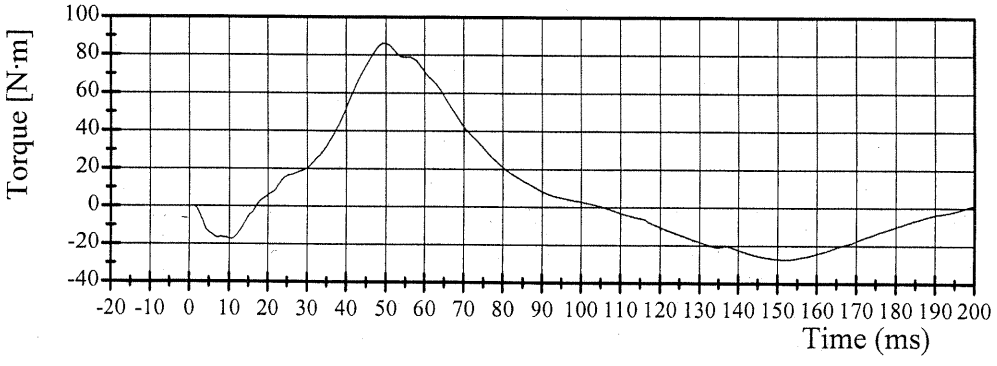


Filter Class: CFC 600

Max: 69.9 N·m at 49.3 ms

Min: -21.8 N·m at 152.3 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 86.2 ° at 49.5 ms

Min: -27.3 ° at 152.2 ms

02.09.2004 16:45:18 518

Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 055 Calibration No. 10 - 7

Test Date 02/06/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	22.1 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.1 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

02.06.2004 18:39:33 1971

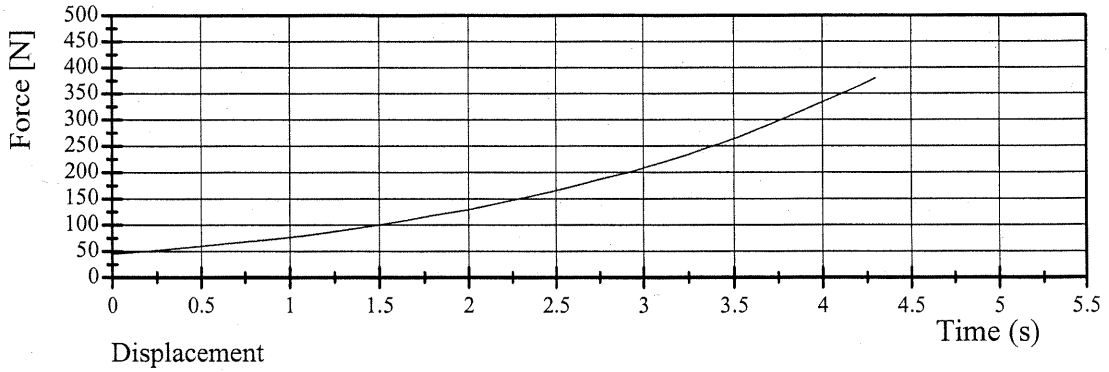
Transportation Research Center Inc.

572B Abdomen Compression Test

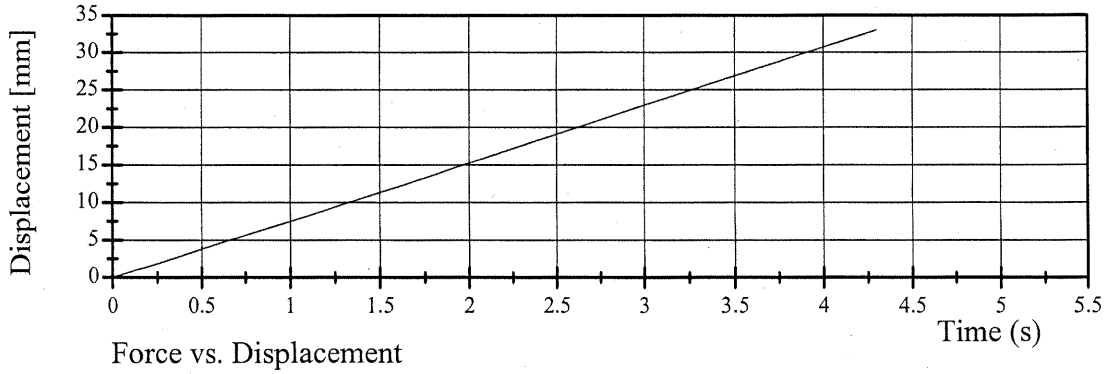
SID HIII Serial No. 055 Calibration No. 10 - 7

Test Date 02/06/2004

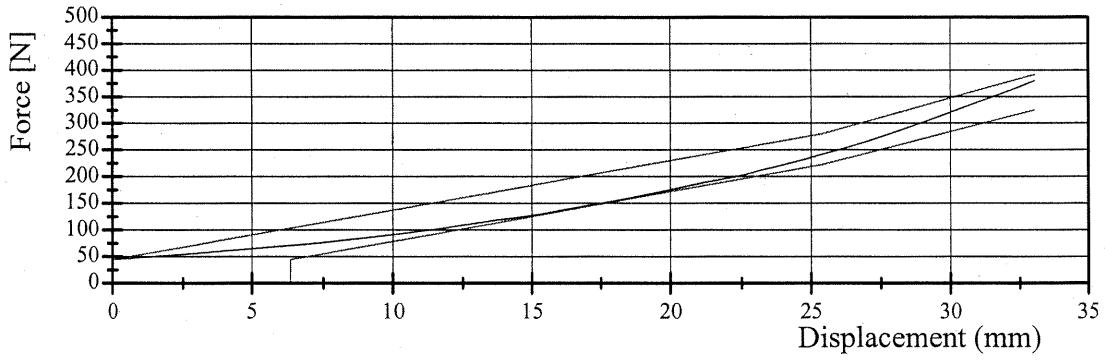
Force



Displacement



Force vs. Displacement



02.06.2004 18:39:33 1971

TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID/HIII

CAL DATE: 09-Feb-04

TRC, INC. **TEST NO: 055C10TF6** **572M SN 055 TORSO FLEX CAL 10**

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.9 °C
RELATIVE HUMIDITY	10 – 70 %	32 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	142.3 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	160.1 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	220.2 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	1.0 °

TEST MEETS SPECIFICATIONS

TECHNICIAN 

Transportation Research Center Inc.

572F Left Thorax Test

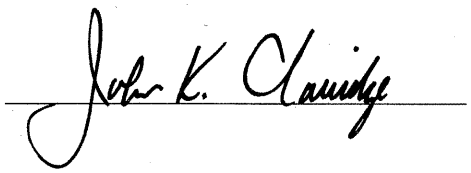
SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

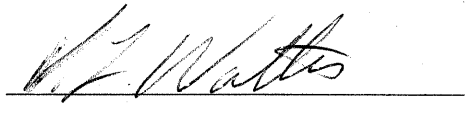
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.2 C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.31 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	39.2 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	38.3 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	16.8 g	Yes

Comments:

Technician



Approved



03.19.2004 09:16:23 1211

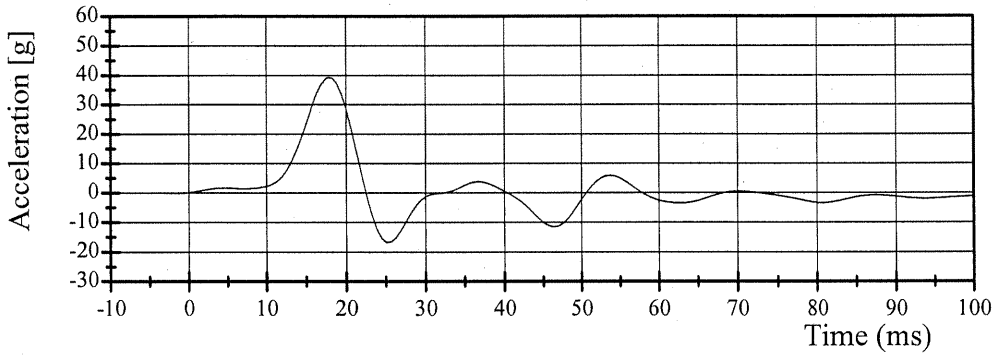
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

Upper Rib Bar Acceleration

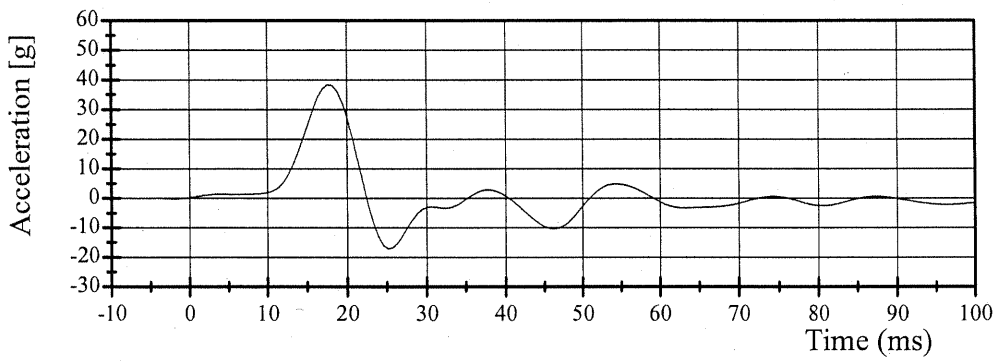


Filter Class: FIR 100

Max: 39.2 g at 18.2 ms

Min: -16.8 g at 25.1 ms

Lower Rib Bar Acceleration

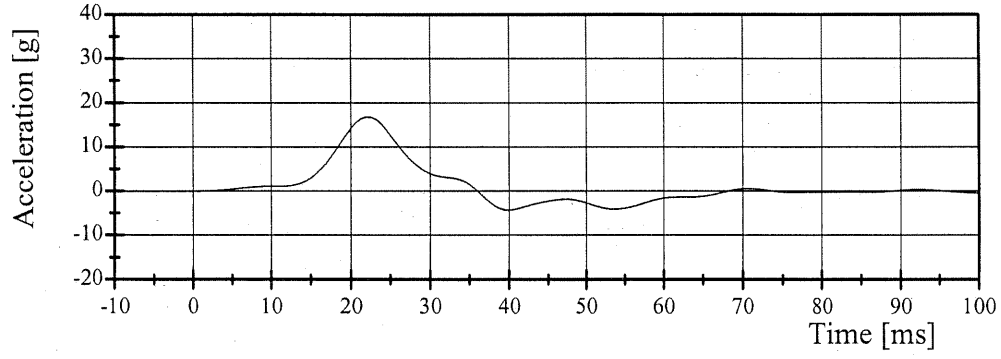


Filter Class: FIR 100

Max: 38.3 g at 17.6 ms

Min: -17.1 g at 25.1 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 16.8 g at 22.0 ms

Min: -4.3 g at 40.1 ms

02.09.2004 18:07:24 1211

Transportation Research Center Inc.

572F Left Pelvis Test

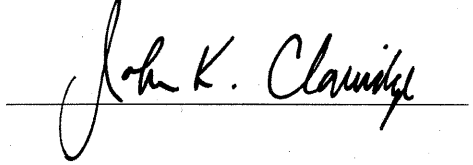
SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.2 C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.32 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	42.2 g	Yes
Time Above 20 g	3 - 7 ms	6.08 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



03.19.2004 09:13:58 1150

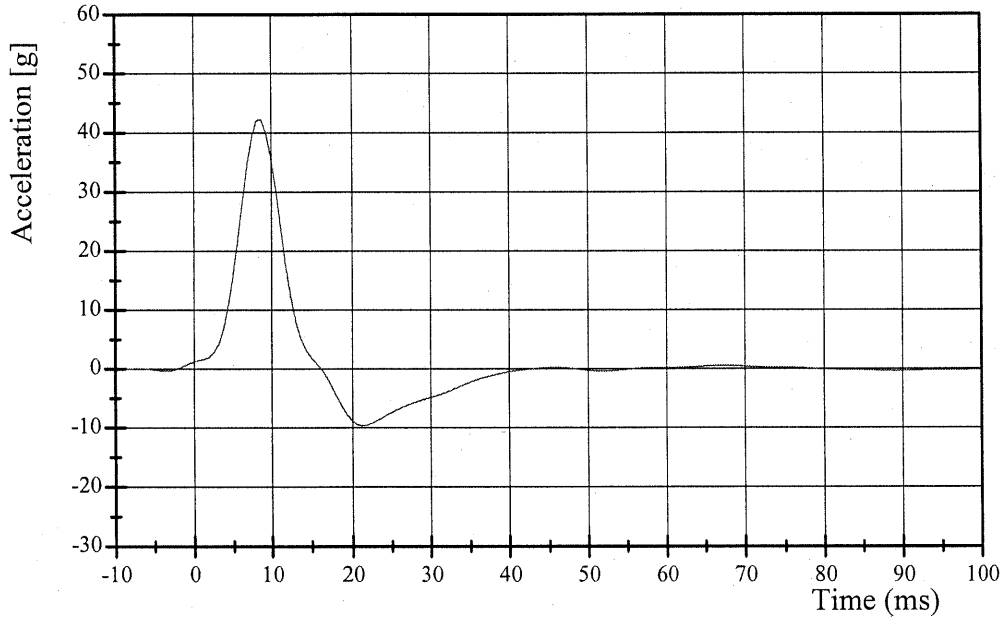
Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

Pelvis Acceleration



Filter Class: FIR 100

Max: 42.2 g at 8.6 ms

Min: -9.7 g at 21.2 ms

02.09.2004 17:59:27 1150

Calibration Test Results

Post-Test

SID HIII: 059

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Head Drop Test:	The head did not pass all lateral drop test requirements.
Lateral Neck Test:	The neck passed all impact test requirements.
Lateral Thorax Impact Test:	The thorax passed all impact test requirements.
Thoracic Shock Absorber Test:	The thoracic shock absorber was not tested at this time.
Lumbar Flexion Test:	The dummy met the lumbar flexion test requirements.
Abdominal Compression Test:	The abdomen met the compression test requirements.
Pelvis Impact Test:	The lateral pelvis passed all impact test requirements.

Transportation Research Center Inc.
SID/HIII Dummy
External Dimensions
Serial No. 059 Calibration No. 05
Date: 2/12/04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	905 mm	Yes
Rib Height	RH	501.7 - 520.7 mm	515 mm	Yes
Hip Pivot Height	HP	99.1 REF mm	99.1 mm	
Knee Pivot From Backline	KH	510.5 - 525.8 mm	523 mm	Yes
Knee Pivot From Floor	KV	490.2 - 505.5 mm	491 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	364 mm	Yes
Top Rib Width From C\L	RW-1	165.1 - 180.3 mm	173 mm	Yes
Bottom Rib Width From C\L	RW-2	165.1 - 180.3 mm	171 mm	Yes
Difference Between Top & Bottom Rib Width from C\L		<= 2.5 mm	2.0 mm	Yes

Technician

Approved

Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 05 - 1

Test Date 02/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	22.2 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Peak Resultant Acceleration	120 - 150 g	151.5 g	No
Peak Longitutinal Acceleration	15 g Max	7.8 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician

Approved

02.09.2004 16:53:58 615

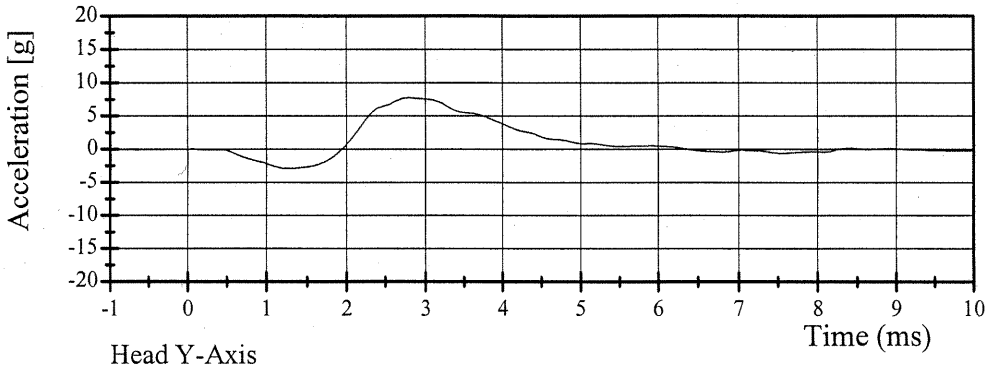
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 059 Calibration No. 05 - 1

Test Date 02/09/2004

Head X-Axis

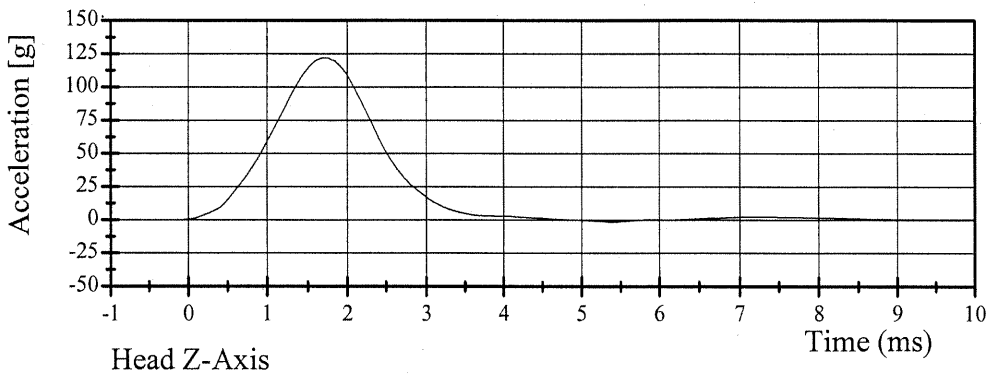


Filter Class: 1000

Max: 7.8 g at 2.8 ms

Min: -2.9 g at 1.3 ms

Head Y-Axis

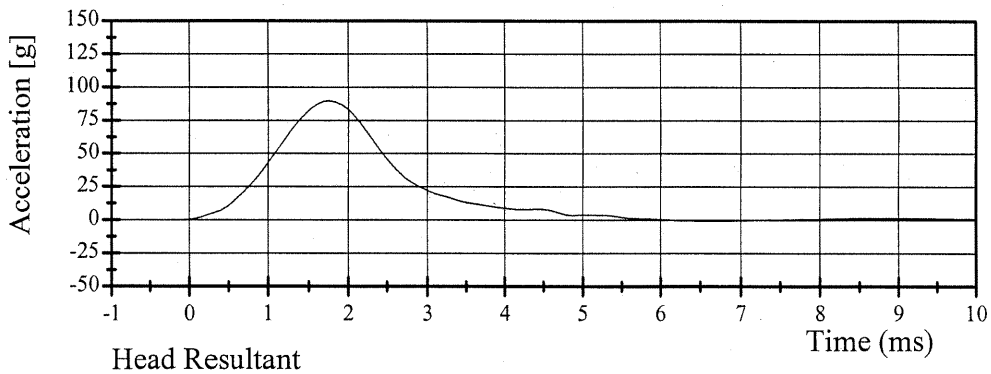


Filter Class: 1000

Max: 122.0 g at 1.7 ms

Min: -1.3 g at 5.4 ms

Head Z-Axis

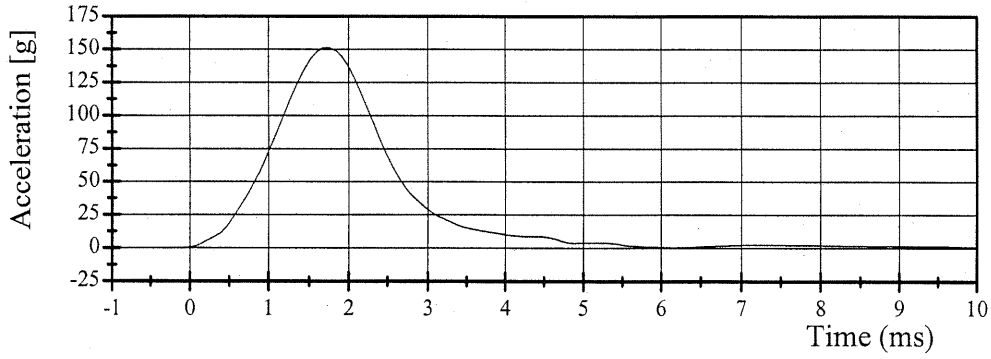


Filter Class: 1000

Max: 89.9 g at 1.8 ms

Min: -0.7 g at 6.6 ms

Head Resultant



Filter Class: 1000

Max: 151.5 g at 1.8 ms

Min: 0.0 g at 3.0 ms

02.09.2004 16:53:59 615

Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/11/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.01 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.36 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.67 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.69 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.17 - 7.29 m/s	Yes
Peak D Plane Rotation	66 - 82 °	76.4 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	60.2 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	83.6 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	59.4 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	13.6 ms	Yes

Comments:

Technician

Approved

02.11.2004 14:00:52 517

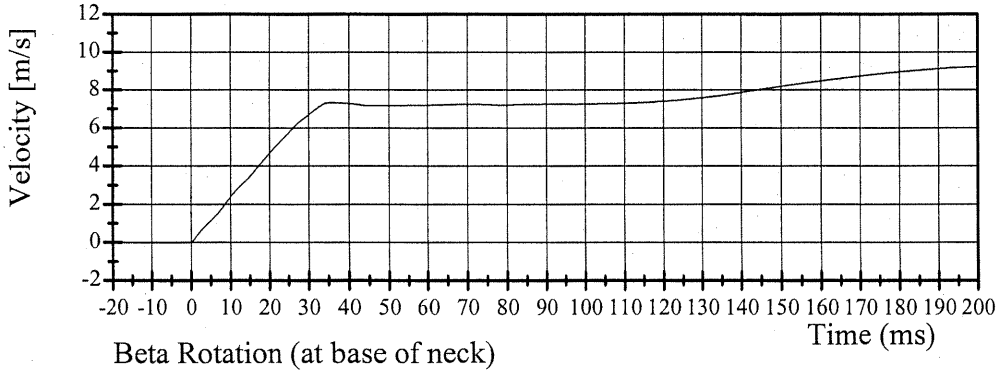
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/11/2004

Integrated Pendulum Velocity

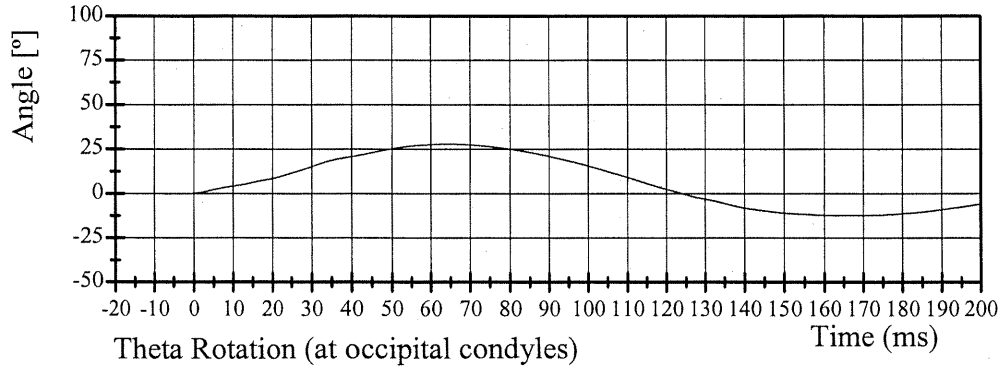


Filter Class: 180

Max: 9.6 m/s at 958.6 ms

Min: -0.0 m/s at -0.7 ms

Beta Rotation (at base of neck)

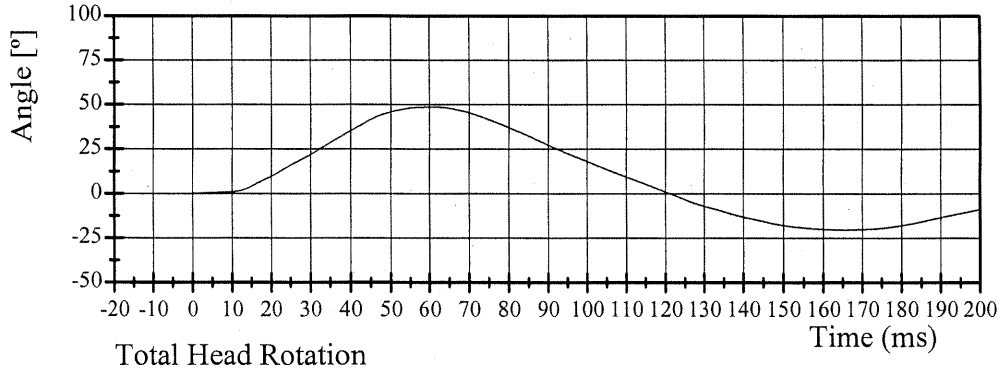


Filter Class: 60

Max: 27.9 ° at 64.3 ms

Min: -12.3 ° at 165.4 ms

Theta Rotation (at occipital condyles)

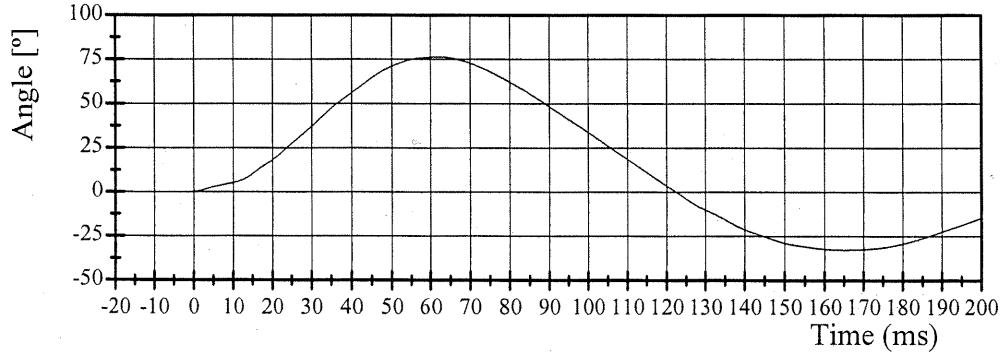


Filter Class: 60

Max: 48.6 ° at 61.0 ms

Min: -20.3 ° at 165.5 ms

Total Head Rotation



Filter Class: 60

Max: 76.4 ° at 62.3 ms

Min: -32.7 ° at 165.5 ms

02.11.2004 14:00:53 517

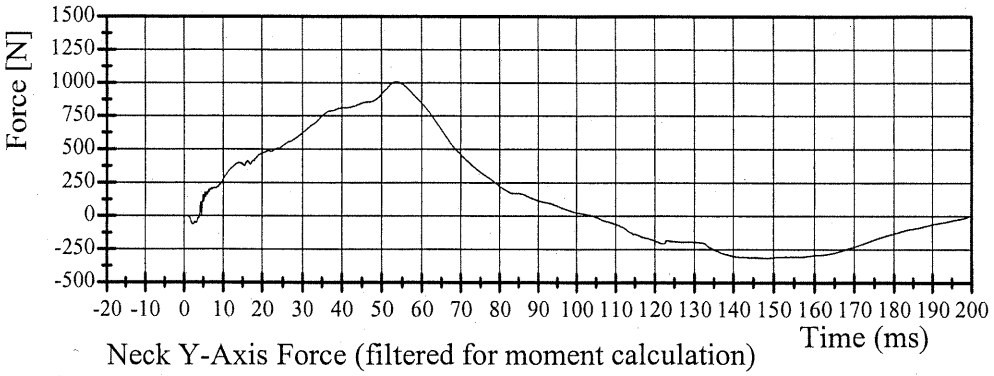
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/11/2004

Neck Y-Axis Force

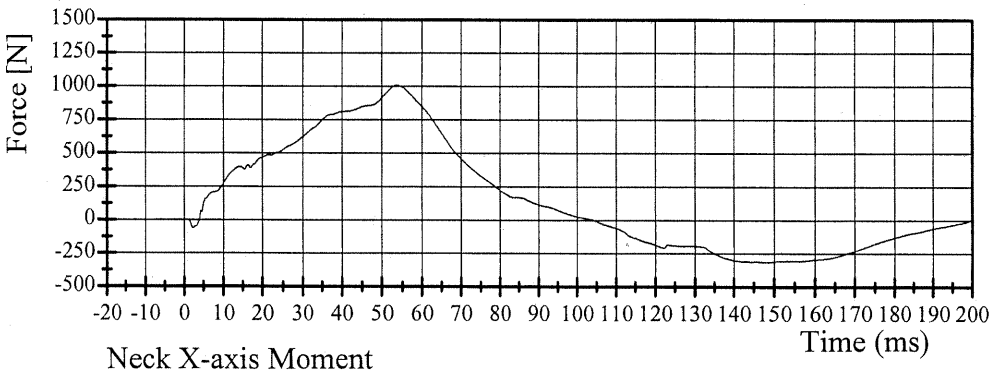


Filter Class: CFC 1000

Max: 1006 N at 53.3 ms

Min: -315 N at 148.3 ms

Neck Y-Axis Force (filtered for moment calculation)

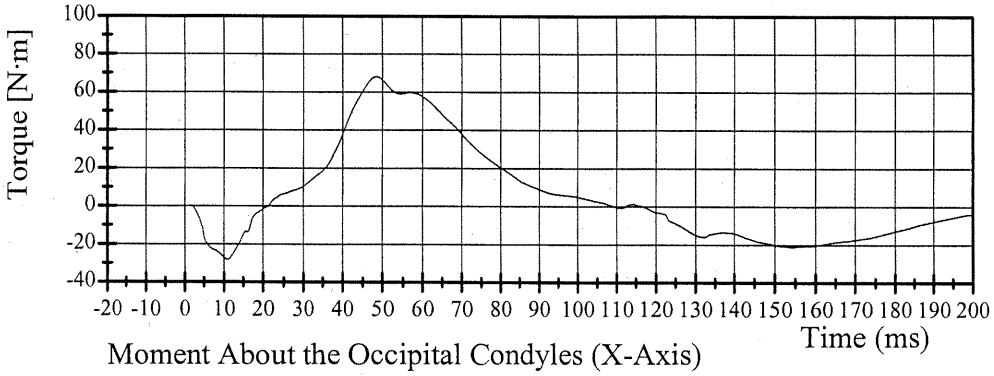


Filter Class: CFC 600

Max: 1006 N·m at 53.5 ms

Min: -314 N·m at 148.2 ms

Neck X-axis Moment

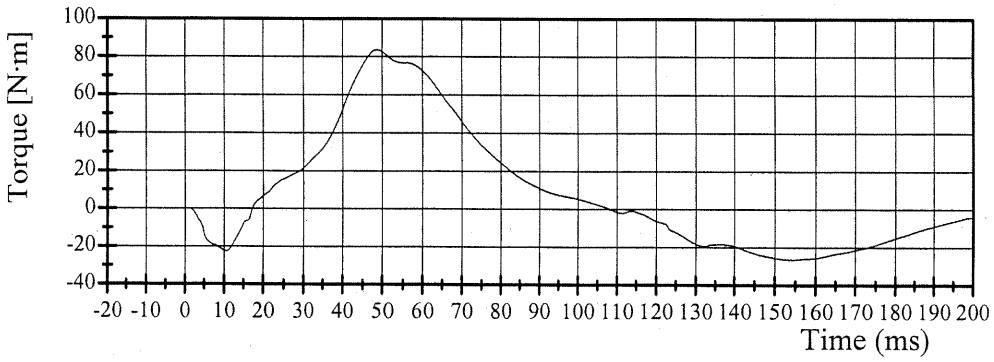


Filter Class: CFC 600

Max: 68.1 N·m at 48.5 ms

Min: -28.0 N·m at 11.0 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 83.6 ° at 48.7 ms

Min: -26.4 ° at 153.9 ms

02.11.2004 14:00:54 517

Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/09/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	6.5 - 8.0 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

Approved

02.09.2004 17:03:37 1806

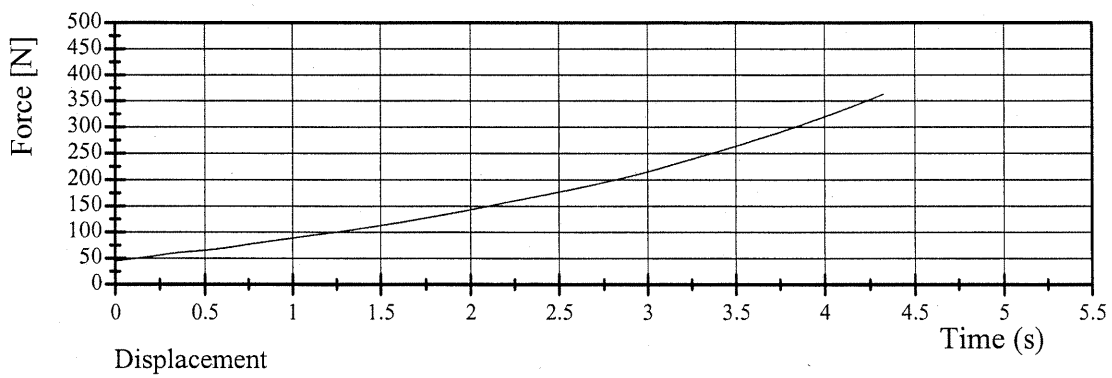
Transportation Research Center Inc.

572B Abdomen Compression Test

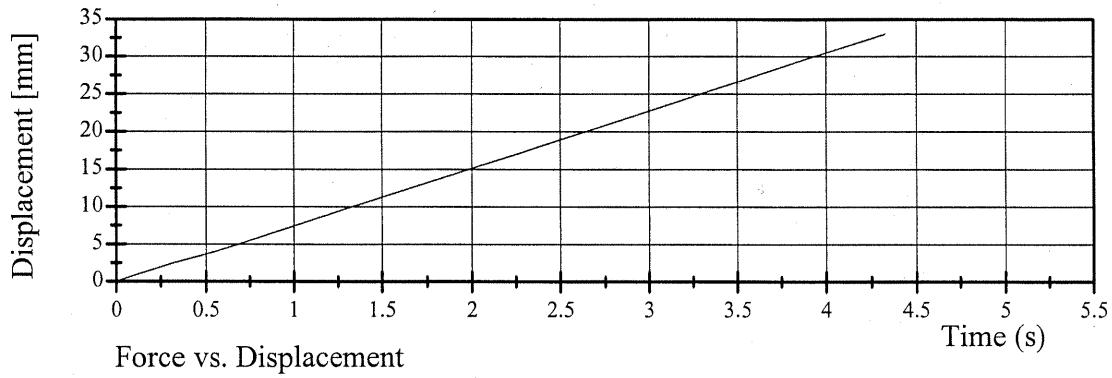
SID HIII Serial No. 059 Calibration No. 05 - 2

Test Date 02/09/2004

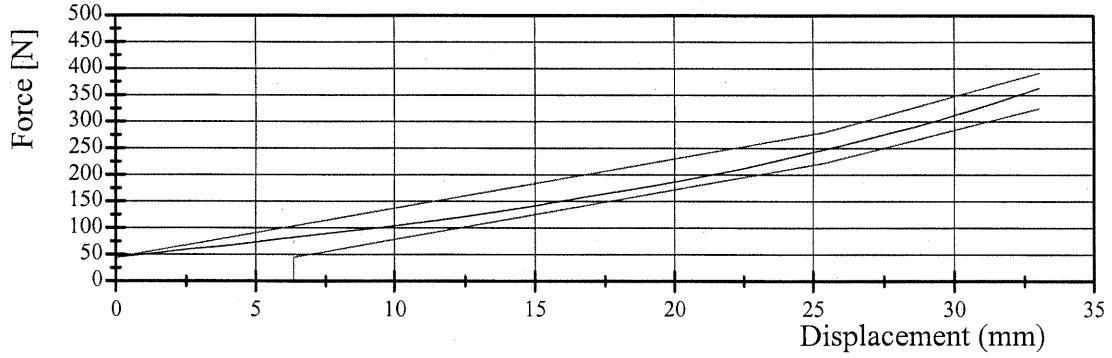
Force



Displacement



Force vs. Displacement



02.09.2004 17:03:38 1806

TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

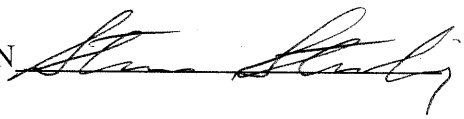
SID HIII

CAL DATE: 11-Feb-04

TRC, INC. TEST NO: LF05905-3 572M SN 059 TORSO FLEX CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.3 °C
RELATIVE HUMIDITY	10 – 70 %	26 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	137.9 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	195.7 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	258.0 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	2.8 °

TEST MEETS SPECIFICATIONS

TECHNICIAN 

Transportation Research Center Inc.

572F Left Thorax Test

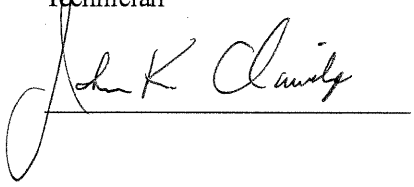
SID HIII Serial No. 059 Calibration No. 05 - 4

Test Date 02/12/2004

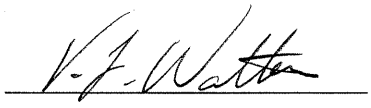
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.1 C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.27 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	43.3 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	41.1 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	21.6 g	Yes

Comments:

Technician



Approved



02.12.2004 15:56:41 1145

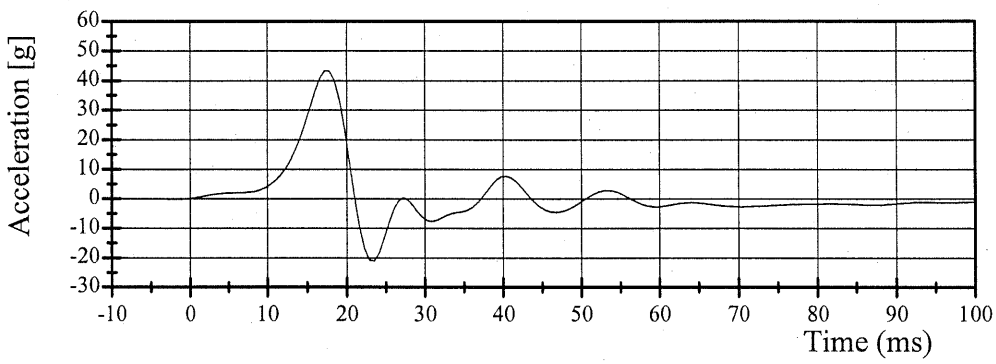
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 059 Calibration No. 05 - 4

Test Date 02/12/2004

Upper Rib Bar Acceleration

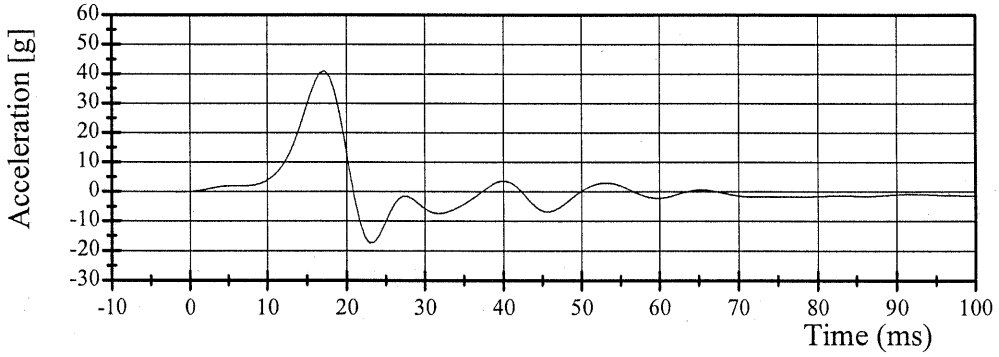


Filter Class: FIR 100

Max: 43.3 g at 17.3 ms

Min: -21.0 g at 23.4 ms

Lower Rib Bar Acceleration

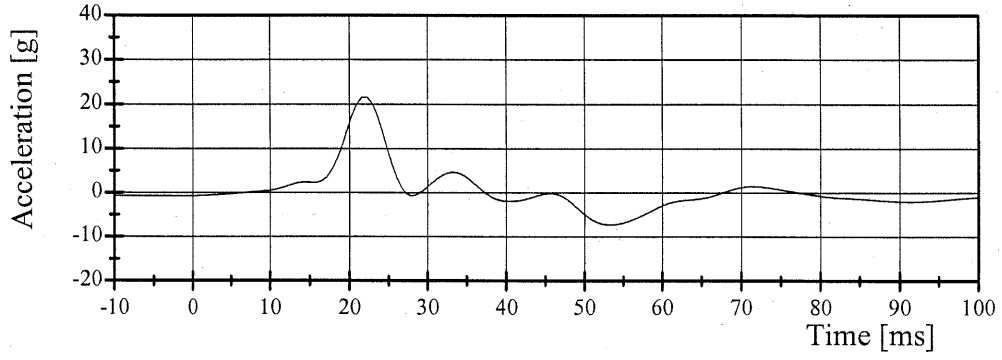


Filter Class: FIR 100

Max: 41.1 g at 17.2 ms

Min: -17.3 g at 22.9 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 21.6 g at 22.2 ms

Min: -7.3 g at 53.4 ms

02.12.2004 15:56:42 1145

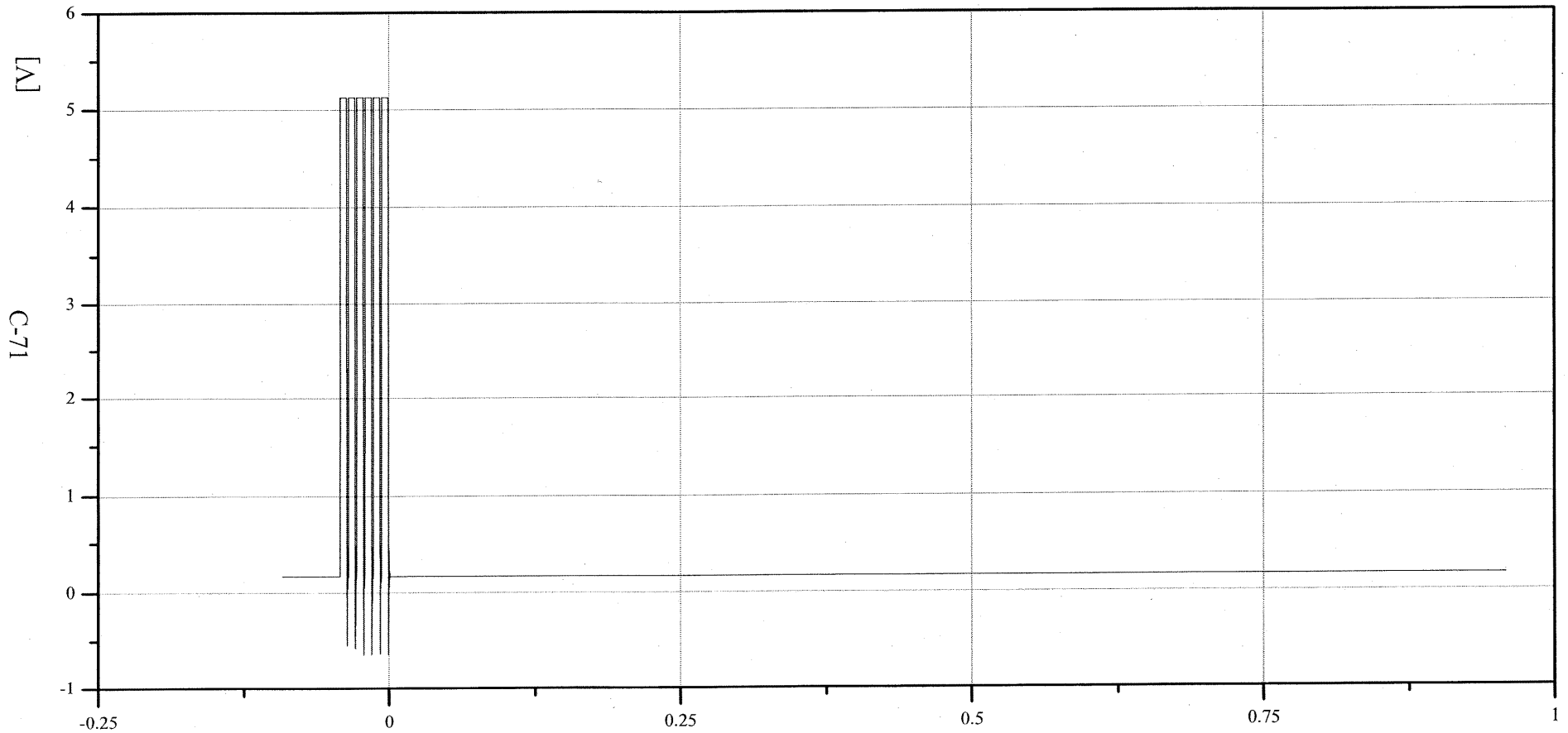
Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004
Time: 15:48:32

Test Lab: DCL
Customer: NHTSA
Test: Cal 05 Thorax-4

PENXV



<Min Value>
-0.64 V at -0.00 Sec

<Max Value>
5.12 V at -0.04 Sec

040130

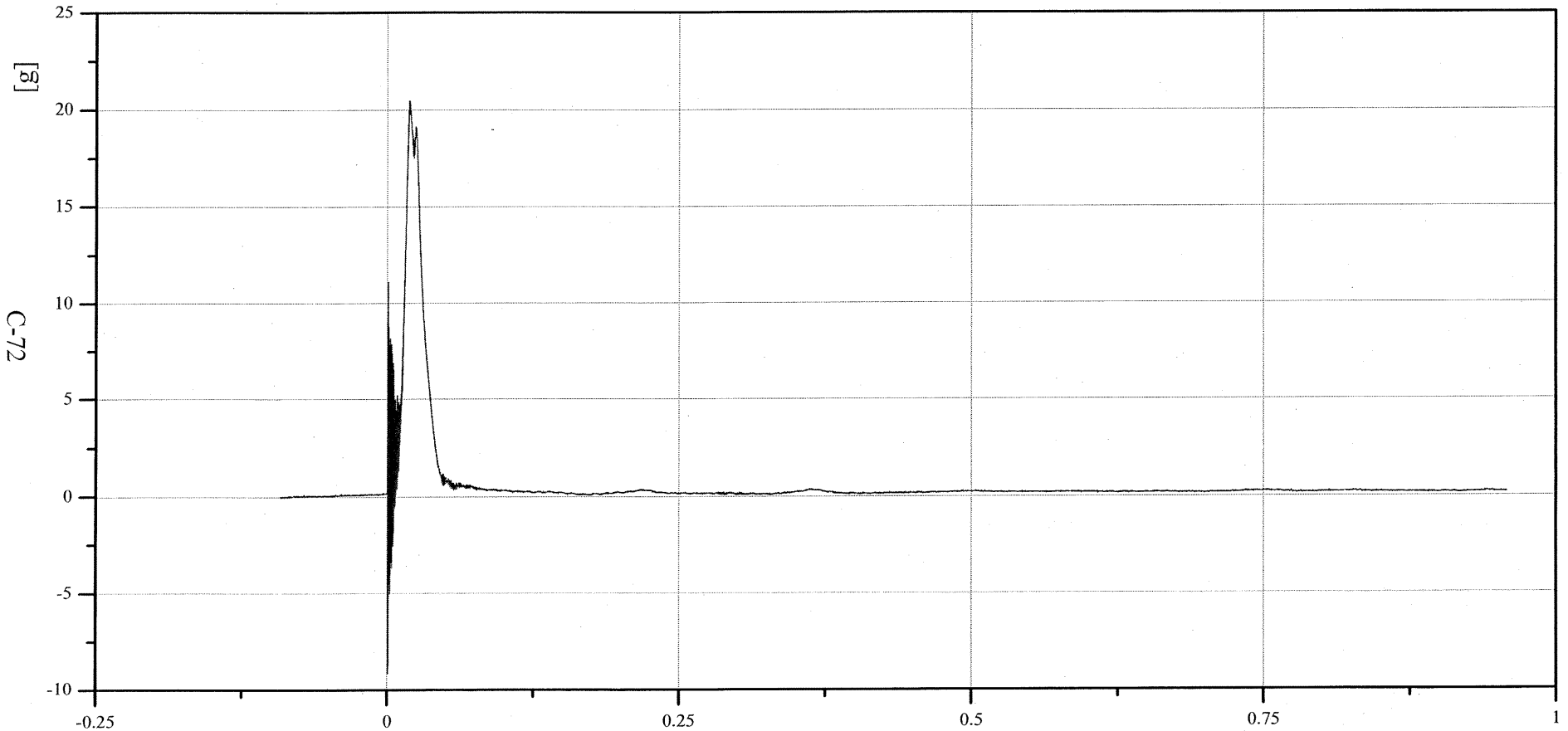
Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004
Time: 15:48:32

Test Lab: DCL
Customer: NHTSA
Test: Cal 05 Thorax-4

PENXG



<Min Value>
-9.17 g at 0.00 Sec

<Max Value>
20.46 g at 0.02 Sec

040130

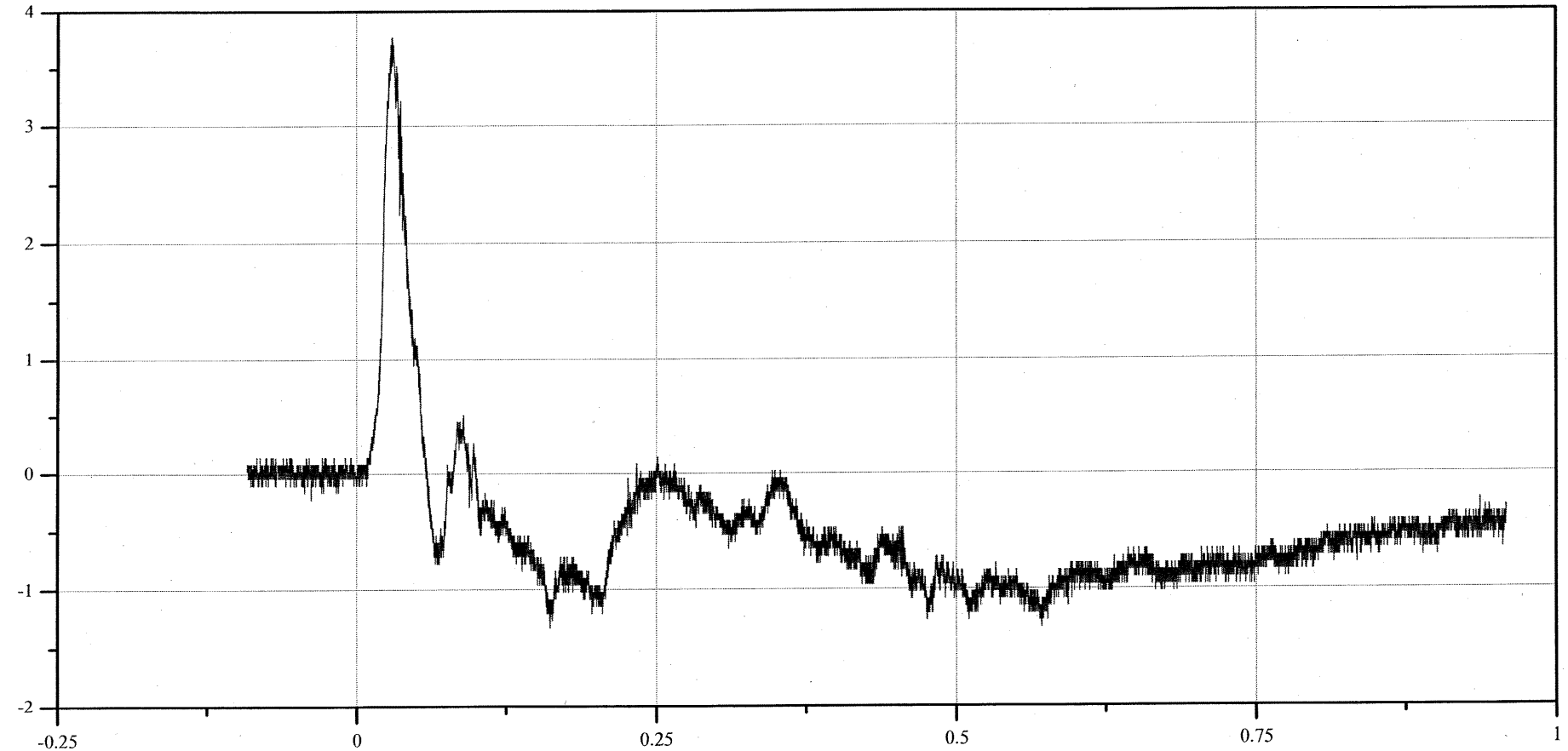
Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004
Time: 15:48:32

Test Lab: DCL
Customer: NHTSA
Test: Cal 05 Thorax-4

PEVYG



<Min Value>
-1.33 g at 0.16 Sec

<Max Value>
3.77 g at 0.03 Sec

040130

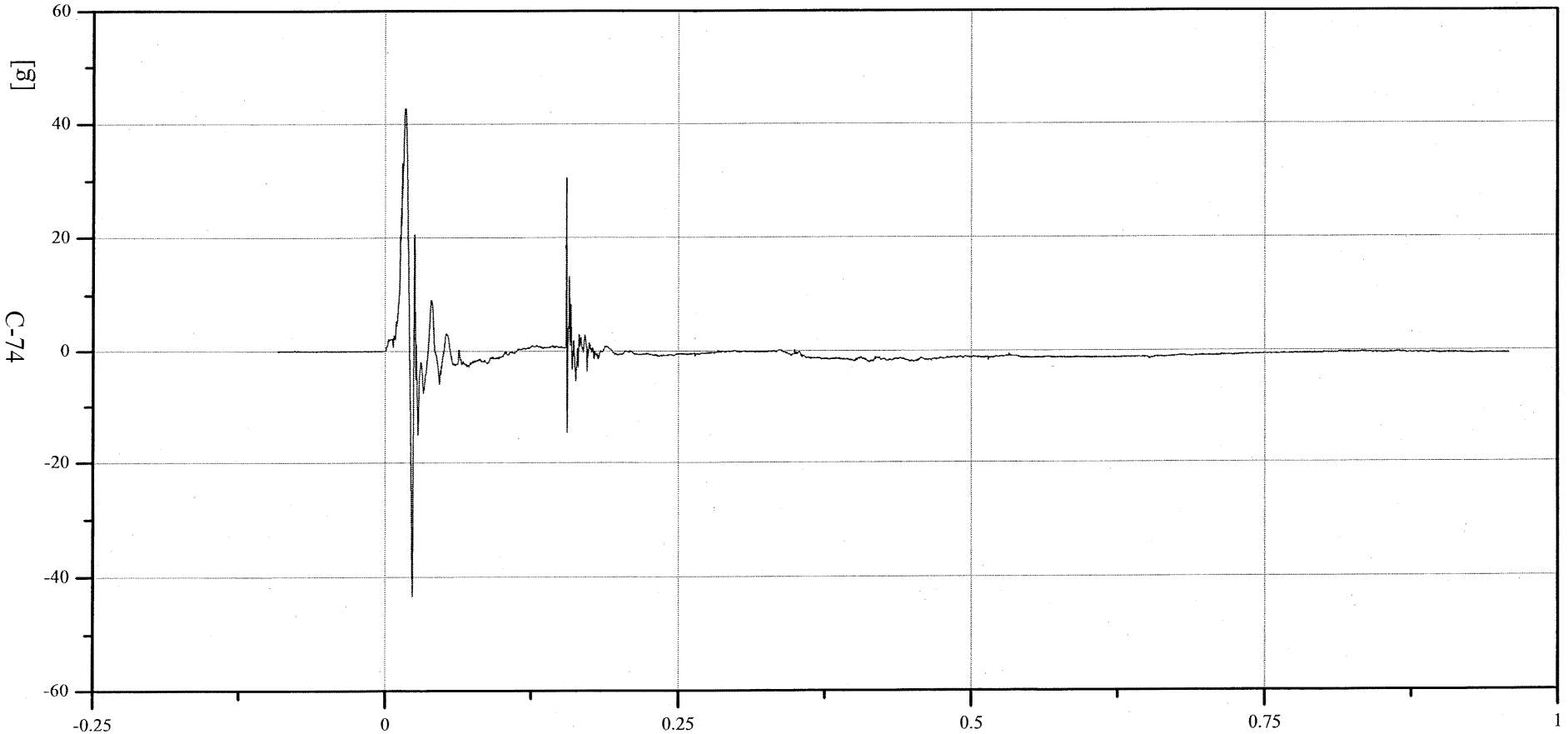
Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004
Time: 15:48:32

Test Lab: DCL
Customer: NHTSA
Test: Cal 05 Thorax-4

URYG



<Min Value>
-43.35 g at 0.02 Sec

<Max Value>
42.73 g at 0.02 Sec

040130

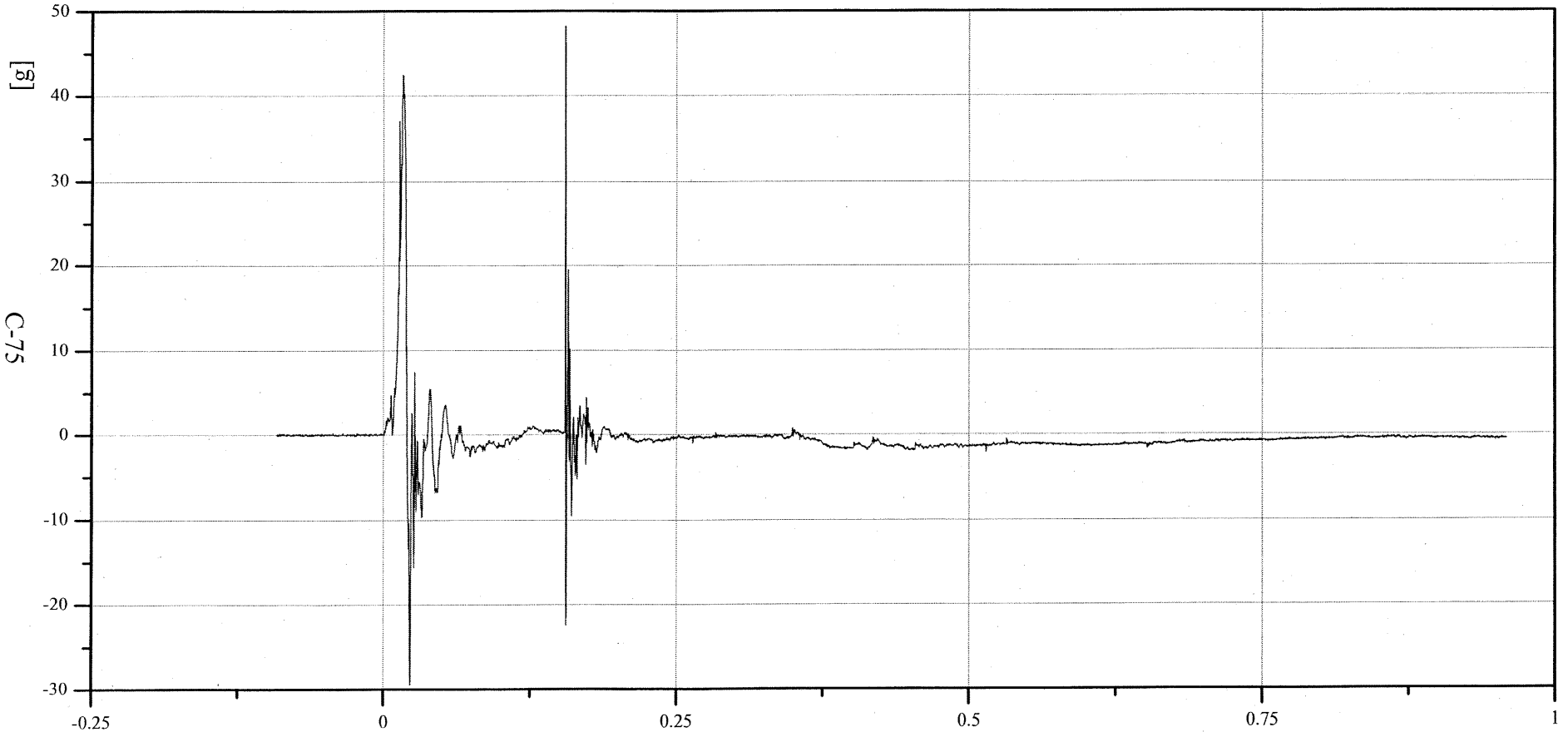
Transportation Research Center, Inc.

Dummy: 059 Raw Plots

Date: 02/12/2004
Time: 15:48:32

Test Lab: DCL
Customer: NHTSA
Test: Cal 05 Thorax-4

LRYG



<Min Value>
-29.51 g at 0.02 Sec

<Max Value>
48.22 g at 0.16 Sec

040130

Transportation Research Center, Inc.

Dummy: 059 Raw Plots

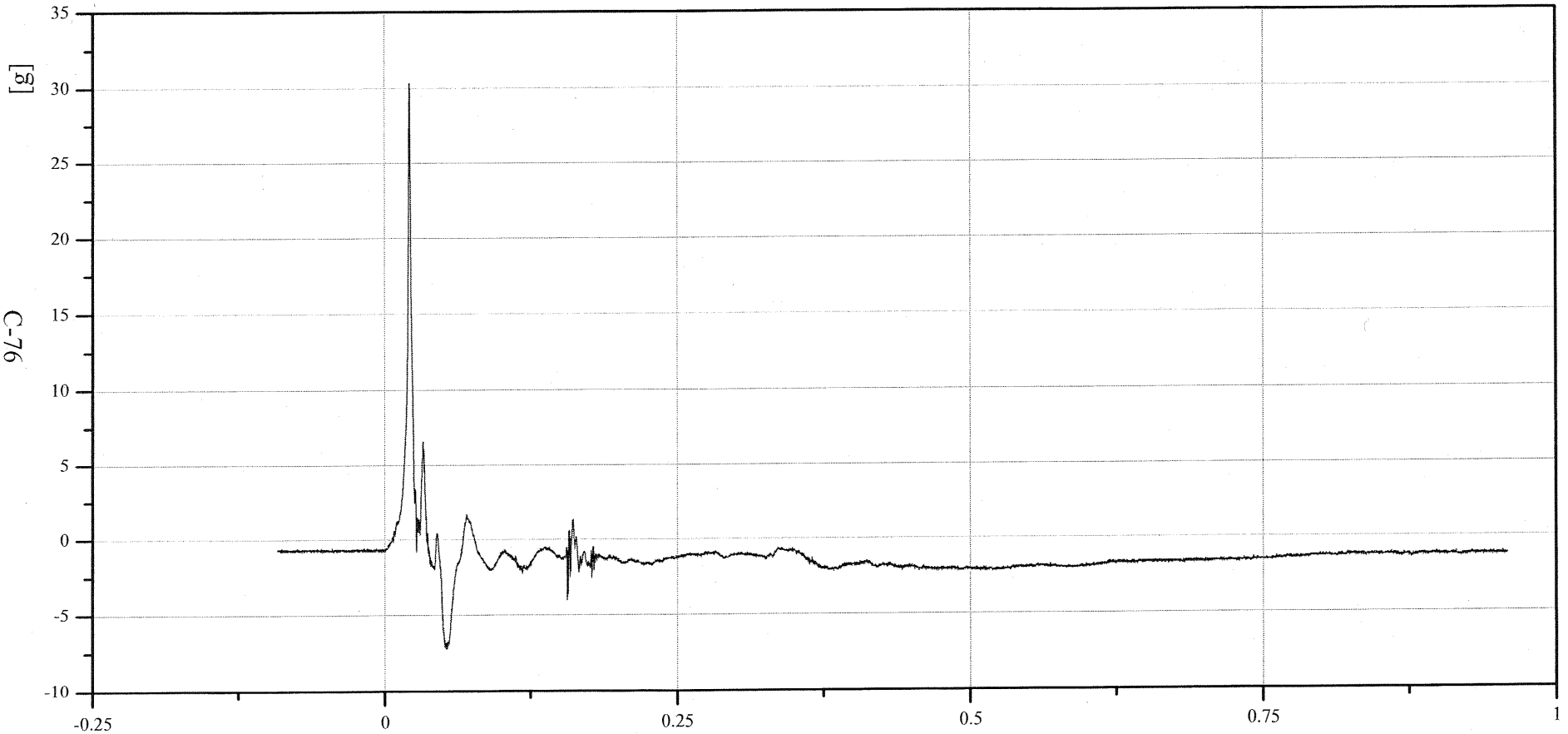
Date: 02/12/2004
Time: 15:48:32

Test Lab: DCL

Customer: NHTSA

Test: Cal 05 Thorax-4

T12YG



C-76

040130

<Min Value>
-7.25 g at 0.05 Sec

<Max Value>
30.33 g at 0.02 Sec

Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 05 - 1

Test Date 02/11/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.9 C	Yes
Relative Humidity	10 - 70 %	29 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.27 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	45.9 g	Yes
Time Above 20 g	3 - 7 ms	6.00 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician

John K. Cleary

Approved

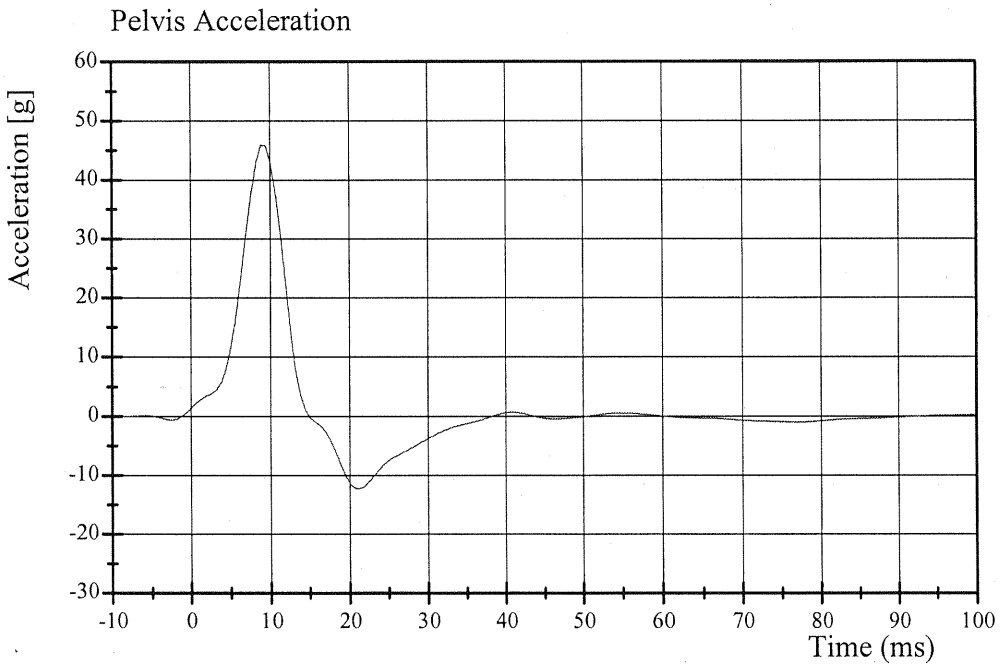
03.19.2004 09:00:49 1172

Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 059 Calibration No. 05 - 1

Test Date 02/11/2004



Filter Class: FIR 100

Max: 45.9 g at 8.9 ms

Min: -12.2 g at 21.3 ms

02.11.2004 18:01:13 1172

Type: SID HIII S/N: 055 Mfr: ASTC Test Date: 01/30/04

Proj./Seg. No.: 20020455-2020 Test Eng.: Walter Dudek

ITEM	PRE-USE	
HEAD:		
Head Ballast Condition	X	
Accel. Mount Bolts and Cables	X	
Skull Cap Bolts	X	
Head Skin Condition	X	
Accel. Cable Exit (left or right)	(Left) N/A	(Right)
NECK:		
Rubber Condition and Separation From End Caps	X	
THORAX: Left side configuration		
Stacked Shoulder Foams and Bolts	X	
* Rib Cage Spring and Support Assembly	X	
* Rib Cage Bolts	X	
* Damper Rear Attachment Ring, Pivot Pins, and Bracket	X	
* Location and Adjustment of Chest Pot Bracket and Collars	X	
* Chest Pot Rod End Nuts and Eyebolt	X	
Arm Foam Orientation	X	
Thorax/Lumbar Spine Bolts	X	
PELVIS:		
Tightness and Alignment of H-Point Tool Insert	X	
* Hips Range of Motion and 1-2g Adjustment (before calibration only)	X	
Upper Femur Bolt Adjustment and Position	X	
Check Spine Kits (Yellow tape = Kits/No tape = No kits)	(With) X	(Without)
LEGS AND FEET:		
Femur Load Cell Bolts (30 ft/lbs)	X	
Breakaway Femur Bolts	X	
Knee Joint Function and Range of Motion	X	
Leg Skin Condition and Position	X	
Ankle Range of Motion	X	
Foot Condition	X	
OTHER:		
Cleanliness	X	
Target Position	X	
Clothes	X	
Shoes	X	
Knee & Ankle One G Joint Adjustments	X	

Inspection Completed By: J. Clarridge Date: 01/20/04

Type: SID HIII S/N: 059 Mfr: ASTC Test Date: 01/30/04

Proj./Seg. No.: 20020455-2020 Test Eng.: Walter Dudek

ITEM	PRE-USE	
HEAD:		
Head Ballast Condition	X	
Accel. Mount Bolts and Cables	X	
Skull Cap Bolts	X	
Head Skin Condition	X	
Accel. Cable Exit (left or right)	(Left) N/A	(Right)
NECK:		
Rubber Condition and Separation From End Caps	X	
THORAX: Left side configuration		
Stacked Shoulder Foams and Bolts	X	
* Rib Cage Spring and Support Assembly	X	
* Rib Cage Bolts	X	
* Damper Rear Attachment Ring, Pivot Pins, and Bracket	X	
* Location and Adjustment of Chest Pot Bracket and Collars	X	
* Chest Pot Rod End Nuts and Eyebolt	X	
Arm Foam Orientation	X	
Thorax/Lumbar Spine Bolts	X	
PELVIS:		
Tightness and Alignment of H-Point Tool Insert	X	
* Hips Range of Motion and 1-2g Adjustment (before calibration only)	X	
Upper Femur Bolt Adjustment and Position	X	
Check Spine Kits (Yellow tape = Kits/No tape = No kits)	(With) X	(Without)
LEGS AND FEET:		
Femur Load Cell Bolts (40 ft/lbs)	X	
Breakaway Femur Bolts (5-6 ft/lbs)	X	
Knee Joint Function and Range of Motion	X	
Leg Skin Condition and Position	X	
Ankle Range of Motion	X	
Foot Condition	X	
OTHER:		
Cleanliness	X	
Target Position	X	
Clothes	X	
Shoes	X	
Knee & Ankle One G Joint Adjustments	X	

Inspection Completed By: J. Clarridge Date: 01/28/04

Type: SID HIII S/N: 055 Mfr: ASTC Test Date: 01/30/04

Proj./Seg. No.: 20020330-2030 Test Eng.: Walter Dudek

ITEM	POST-USE
HEAD:	
Head Skin Condition	X
Head Ballast Condition	X
NECK:	
Rubber Condition and Separation From End Caps	X
THORAX: Left side configuration	
Jacket Condition	X
Arm Foam Condition	X
Damper and Chest Pot Movement and Condition	X
Rib Cage Spring and Support Assembly Condition	X
Rib Wrap Condition	X
Abdomen condition	X
Thorax/Lumbar Spine Bolts	X
Lumbar Spine Condition and Separation From End Caps	X
PELVIS:	
Illiac Crest bone	X
Flesh Condition	X
Hip Range of Motion	X
LEGS AND FEET:	
Knee Skins and Castings Condition	X
Leg Skin Condition	X
Foot Condition	X
Knee Joint Range of Motion	X
Ankle Range of Motion	X

NOTES: No damage to report.

Inspection Completed By: J. Clarridge Date: 02/03/04

Type: SID HIII S/N: 059 Mfr: ASTC Test Date: 01/30/04

Proj./Seg. No.: 20020330-2030 Test Eng.: Walter Dudek

ITEM	POST-USE
HEAD:	
Head Skin Condition	X
Head Ballast Condition	X
NECK:	
Rubber Condition and Separation From End Caps	X
THORAX: Left side configuration	
Jacket Condition	X
Arm Foam Condition	*
Damper and Chest Pot Movement and Condition	X
Rib Cage Spring and Support Assembly Condition	X
Rib Wrap Condition	X
Abdomen condition	X
Thorax/Lumbar Spine Bolts	X
Lumbar Spine Condition and Separation From End Caps	X
PELVIS:	
Illiac Crest bone	X
Flesh Condition	X
Hip Range of Motion	X
LEGS AND FEET:	
Knee Skins and Castings Condition	X
Leg Skin Condition	X
Foot Condition	X
Knee Joint Range of Motion	X
Ankle Range of Motion	X

NOTES: Left arm foam - long cut on bottom, not deep.

No other damage found.

Inspection Completed By: J. Clarridge Date: 02/03/04

Appendix D

Test Equipment List and Calibration Information

Sign Convention
SAE J211 MAR95

Accelerometers:	+X: Forward	
	+Y: Rightward	
	+Z: Downward	
Potentiometers:	+Chest longitudinal deflection:	Outward
	+Chest lateral deflection:	Rightward
	+Seat belt displacement:	Outward
	+Seat belt extension:	Elongation
	+Knee slider displacement:	Distance between femur and tibia increased (in relation to a seated dummy)
Rotation potentiometers:		
	+About the X-axis:	Left foot-eversion
		Right foot-inversion
	+About the Y-axis:	Left/right foot-dorsiflexion
	+About the Z-axis:	Left foot-internal
		Right foot-external
Load cells:	+Femur force:	Tension
	+Seat belt force:	Tension
	+Barrier force:	Tension
Neck load cells:	+X force:	Head pushed rearward
	+Y force:	Head pushed leftward
	+Z force:	Head pulled upward (tension on neck)
	+X moment:	Left ear rotating toward left shoulder
	+Y moment:	Chin rotating toward chest
	+Z moment:	Chin rotating toward left shoulder
Tibia load cells:	+X force:	Ankle forward, knee rearward
	+Y force:	Ankle rightward, knee leftward
	+Z force:	Tension
	+X moment:	Bottom of tibia moving leftward
	+Y moment:	Bottom of tibia moving rearward

Sign Convention, Cont'd.
SAE J211 MAR95

Lumbar load cells:	+X force:	Chest rearward, pelvis forward
	+Y force:	Chest leftward, pelvis rightward
	+Z force:	Chest upward, pelvis downward
	+X moment:	Left shoulder toward left hip
	+Y moment:	Sternum toward front of legs
	+Z moment:	Right shoulder forward, left shoulder rearward

Frequency Response Classes
SAE J211 MAR95

Typical Test Measurements	Channel Class
Vehicle Structural Accelerations for use in:	
Total vehicle comparison	60
Collision simulation input	60
Component analysis	600
Integration for velocity or displacement	180
Barrier Face Forces	60
Belt Restraint System Loads	60
Anthropomorphic Test Device	
Head accelerations (linear and angular)	1000
Neck	
Forces	1000
Moments	600
Thorax	
Spine accelerations	180
Rib accelerations	1000
Sternum accelerations	1000
Deflections	600
Lumbar	
Forces	1000
Moments	1000
Pelvis	
Accelerations	1000
Forces	1000
Moments	1000
Femur/Knee/Tibia/Ankle	
Forces	600
Moments	600
Displacements	180
Sled Accelerations	60
Steering Column Loads	600
Head Form Accelerations	1000

The direction column on the following sheets describes the transducer output as mounted and wired in the test location. The polarity column indicates whether a polarity change occurred during data acquisition to conform to J211 MAR95. See Report Sign Convention sheet for description of data output as presented in the report: occasionally channels have been adjusted in post-acquisition processing to conform to J211 MAR95.

Channel Report

1/30/2004 7:39:22 AM

Name of Test 040130 **System** MINIDAU **Name of DAU** DAU6

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
6001	P25298	HEDXG1	Head Accel X	Rwd	801.41499	g	-	9/16/2003	OK	055n	Endevco	7264C-2K-2-180
6002	P25061	HEDYG1	Head Accel Y	Lft	807.76208	g	-	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6003	P25261	HEDZG1	Head Accel Z	Up	803.12465	g	-	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6004	P25067	HEDXR1	Head Accel X Red	Rwd	803.43972	g	-	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6005	P24511	HEDYR1	Head Accel Y Red	Lt	789.83092	g	-	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6006	P25063	HEDZR1	Head Accel Z Red	Up	806.42620	g	-	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6007	1716-0534-FX	NEKXF1	Neck Force X	Hd	8890.8019	N	-	9/9/2003	OK	055n	Denton	1716
6008	1716-0534-FY	NEKYF1	Neck Force Y	Hd	8885.0977	N	+	9/9/2003	OK	055n	Denton	1716
6009	1716-0534-FZ	NEKZF1	Neck Force Z	Hd	13357.627	N	+	9/9/2003	OK	055n	Denton	1716
6010	1716-0534-MX	NEKXM1	Neck Moment X	Rt Ear	282.37048	N·m	-	9/9/2003	OK	055n	Denton	1716
6011	1716-0534-MY	NEKYM1	Neck Moment Y	Chn	282.42609	N·m	+	9/9/2003	OK	055n	Denton	1716
6012	1716-0534-MZ	NEKZM1	Neck Moment Z	Chn	282.48456	N·m	+	9/9/2003	OK	055n	Denton	1716
6013	P25068	LURYG1	Left Upper Rib Y	Rgt	794.82124	g	+	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6014	P25069	LURYR1	Left Upper Rib Red Y	Rgt	808.28492	g	+	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6015	P25305	LLRYG1	Left Lower Rib Y	Rgt	802.92314	g	+	8/22/2003	OK	055n	Endevco	7264C-2K-2-180
6016	P25395	LLRYR1	Left Lower Rib Red Y	Rgt	806.45161	g	+	8/25/2003	OK	055n	Endevco	7264C-2K-2-180
6017	P24393	T12YG1	Lower Spine Y	Lft	402.81973	g	-	9/9/2003	OK	055n	Endevco	7264C-2K-2-180
6018	P24627	T12YR1	Lower Spine Red Y	Lft	402.18373	g	-	8/25/2003	OK	055n	Endevco	7264C-2K-2-180
6019	P25397	PEVYG1	Pelvis Accel Y	Lft	398.38157	g	-	8/25/2003	OK	055n	Endevco	7264C-2K-2-180
6020	P25231	PEVYR1	Pelvis Accel Red Y	Lft	399.27631	g	-	9/9/2003	OK	055n	Endevco	7264C-2K-2-180
6021	P21712	HEDXG4	Head Accel X	Rwd	808.59128	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
6022	P22733	HEDYG4	Head Accel Y	Lft	799.37548	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
6024	P21625	HEDZG4	Head Accel Z	Up	806.14686	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
6025	P25076	HEDXR4	Head Accel X Red	Rwd	794.38962	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
6026	P16213	HEDYR4	Head Accel Y Red	Lt	807.39268	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
6027	P18941	HEDZR4	Head Accel Z Red	Up	811.60339	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
6028	1716A-1532-FX	NEKXF4	Neck Force X	Hd	8910.4831	N	-	9/9/2003	OK	059n	Denton	1716A
6029	1716A-1532-FY	NEKYF4	Neck Force Y	Hd	8903.5686	N	+	9/9/2003	OK	059n	Denton	1716A
6030	1716A-1532-FZ	NEKZF4	Neck Force Z	Hd	13353.823	N	+	9/9/2003	OK	059n	Denton	1716A
6031	1716A-1532-MX	NEKXM4	Neck Moment X	Rt Ear	282.57842	N·m	-	9/9/2003	OK	059n	Denton	1716A
6032	1716A-1532-MY	NEKYM4	Neck Moment Y	Chn	282.17998	N·m	+	9/9/2003	OK	059n	Denton	1716A

Channel Report

1/30/2004 7:39:23 AM

Name of Test 040130 **System** MINIDAU **Name of DAU** DAU7

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
7001	1716A-1532-MZ	NEKZM4	Neck Moment Z	Chn	282.95095	N·m	+	9/9/2003	OK	059n	Denton	1716A
7002	P27355	LURYG4	Left Upper Rib Y	Rgt	792.44698	g	+	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7003	P27178	LURYR4	Left Upper Rib Red Y	Rgt	798.55262	g	+	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7004	P29214	LLRYG4	Left Lower Rib Y	Rgt	803.51537	g	+	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7005	P25389	LLRYR4	Left Lower Rib Red Y	Rgt	796.13129	g	+	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7006	P27211	T12YG4	Lower Spine Y	Lft	399.22027	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7007	P29206	T12YR4	Lower Spine Red Y	Lft	397.99138	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7008	P27228	PEVYG4	Pelvis Accel Y	Lft	402.61384	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7009	P27230	PEVYR4	Pelvis Accel Red Y	Lft	398.85329	g	-	9/9/2003	OK	059n	Endevco	7264C-2K-2-180
7010	P27172	RFSXG1	RGT SIDE SILL FRNT ST X	FWD	399.50062	g	+	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7011	P28083	RFSYG1	RGT SIDE SILL FRNT ST Y	LT	1002.1334	g	-	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7012	P28110	RFSZG1	RGT SIDE SILL FRNT ST Z	UP	402.99094	g	-	1/14/2004	OK	-1	Endevco	7264C-2K-2-180
7013	P30026	RRSXG1	RGT SIDE SILL RR ST X	FWD	402.37021	g	+	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7014	P29884	RRSYG1	RGT SIDE SILL RR ST Y	LT	1012.8585	g	-	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7015	P24668	RRSZG1	RGT SIDE SILL RR ST Z	UP	399.03359	g	-	1/6/2004	OK	-1	Endevco	7264C-2K-2-180
7016	P28338	RDKXG1	RR FLRPAN ABV AXLE X	FWD	979.90430	g	+	1/15/2004	OK	-1	Endevco	7264C-2K-2-180
7017	P28081	RDKYG1	RR FLRPAN ABV AXLE Y	RT	1013.4399	g	+	1/16/2004	OK	-1	Endevco	7264C-2K-2-180
7018	P27095	RDKZG1	RR FLRPAN ABV AXLE Z	UP	1010.8189	g	-	1/20/2004	OK	-1	Endevco	7264C-2K-2-180
7019	P28921	LRSYG1	LFT SIDE SILL RR ST Y	LT	993.11414	g	-	1/6/2004	OK	-1	Endevco	7264C-2K-2-180
7020	P28092	LFSYG1	LFT SIDE SILL FRNT ST Y	LT	993.17194	g	-	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7021	P29549	RRTYG1	RGT RR OCP COMP Y	RT	1533.3013	g	+	11/12/2003	OK	-1	Endevco	7264C-2K-2-180
7022	P30341	LLBYG1	LFT LOWER B-POST Y	LT	1463.7353	g	-	12/8/2003	OK	-1	Endevco	7264C-2K-2-180
7023	P30441	LUBYG1	LFT MID B-POST Y	LT	1465.9985	g	-	11/12/2003	OK	-1	Endevco	7264C-2K-2-180
7024	P28894	LLAYG1	LFT LOWER A-POST Y	RT	1535.4625	g	+	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7025	P28891	LUAYG1	LFT MID A-POST Y	RT	1545.3338	g	+	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
7026	P24671	LFTYG1	LFT FRNT ST TRK Y	RT	1467.8899	g	+	12/24/2003	OK	-1	Endevco	7264C-2K-2-180
7027	P29199	LRTYG1	LFT RR ST TR Y	LT	1462.5228	g	-	1/15/2004	OK	-1	Endevco	7264C-2K-2-180
7028	P29247	VCGXG1	VEH C/G X	FWD	1018.7838	g	+	1/13/2004	OK	-1	Endevco	7264C-2K-2-180
7029	P28311	VCGYG1	VEH C/G Y	LT	993.78881	g	-	1/13/2004	OK	-1	Endevco	7264C-2K-2-180
7030	P29352	VCGZG1	VEH C/G Z	UP	990.06071	g	-	1/13/2004	OK	-1	Endevco	7264C-2K-2-180

Channel Report

1/30/2004 7:39:23 AM

Name of Test 040130 **System** MINIDAU **Name of DAU** DAUB

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.		Group	Mfg.	Model
0001	EVENT	EVENT	EVENT		5.12	V	+	11/8/2003	OK	-1	TRC	Event
0002	P29187	BCGXG1	MDB CG X-AXIS	FWD	597.14025	g	+	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
0003	P29821	BCGYG1	MDB CG Y-AXIS	LT	595.34883	g	-	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
0004	P29888	BCGZG1	MDB CG Z-AXIS	UP	599.81255	g	-	1/23/2004	OK	-1	Endevco	7264C-2K-2-180
0005	P30308	LRRXG1	MDB LT RR X-AXIS	FWD	598.64136	g	+	11/26/2003	OK	-1	Endevco	7264C-2K-2-180
0006	P29875	LRRYG1	MDB LT RR Y-AXIS	LT	592.72979	g	-	12/22/2003	OK	-1	Endevco	7264C-2K-2-180

Digital and System Channel Report

2004-01-30 11:18:26

Name of Test 040130 **System** MINIDAU **Name of DAU** DAU6 **descriptio**

enabled	Channel	Short Name	Type	Data File	Module Type
Yes	6501	DIG6	dig0	DAT66501	KM3710 Controller

bit position	bit	short	long	descriptio
MSB = bit 15	0			
bit 14	0			
bit 13	1	SHLET4	PASSENGER SHOULDER CONTACT SWI	
bit 12	1	PEVET4	PASSENGER PELVIS CONTACT SWITC	
bit 11	0			
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			

Digital and System Channel Report

2004-01-30 11:18:27

Name of Test 040130 **System** MINIDAU **Name of DAU** DAUB **descriptio**

enabled	Channel	Short Name	Type	Data File	Module Type
Yes	0501	DIGB	dig0	DATB0501	KM3710 Controller

bit position	bit	short	long	descriptio
MSB = bit 15	1	MDBR1	MDB RT SIDE CONTACT SWITCH	
bit 14	1	MDBL1	MDB LT SIDE CONTACT SWITCH	
bit 13	0			
bit 12	0			
bit 11	0			
bit 10	0			
bit 09	0			
bit 08	0			
bit 07	0			
bit 06	0			
bit 05	0			
bit 04	0			
bit 03	0			
bit 02	0			
bit 01	0			
LSB = bit 00	0			

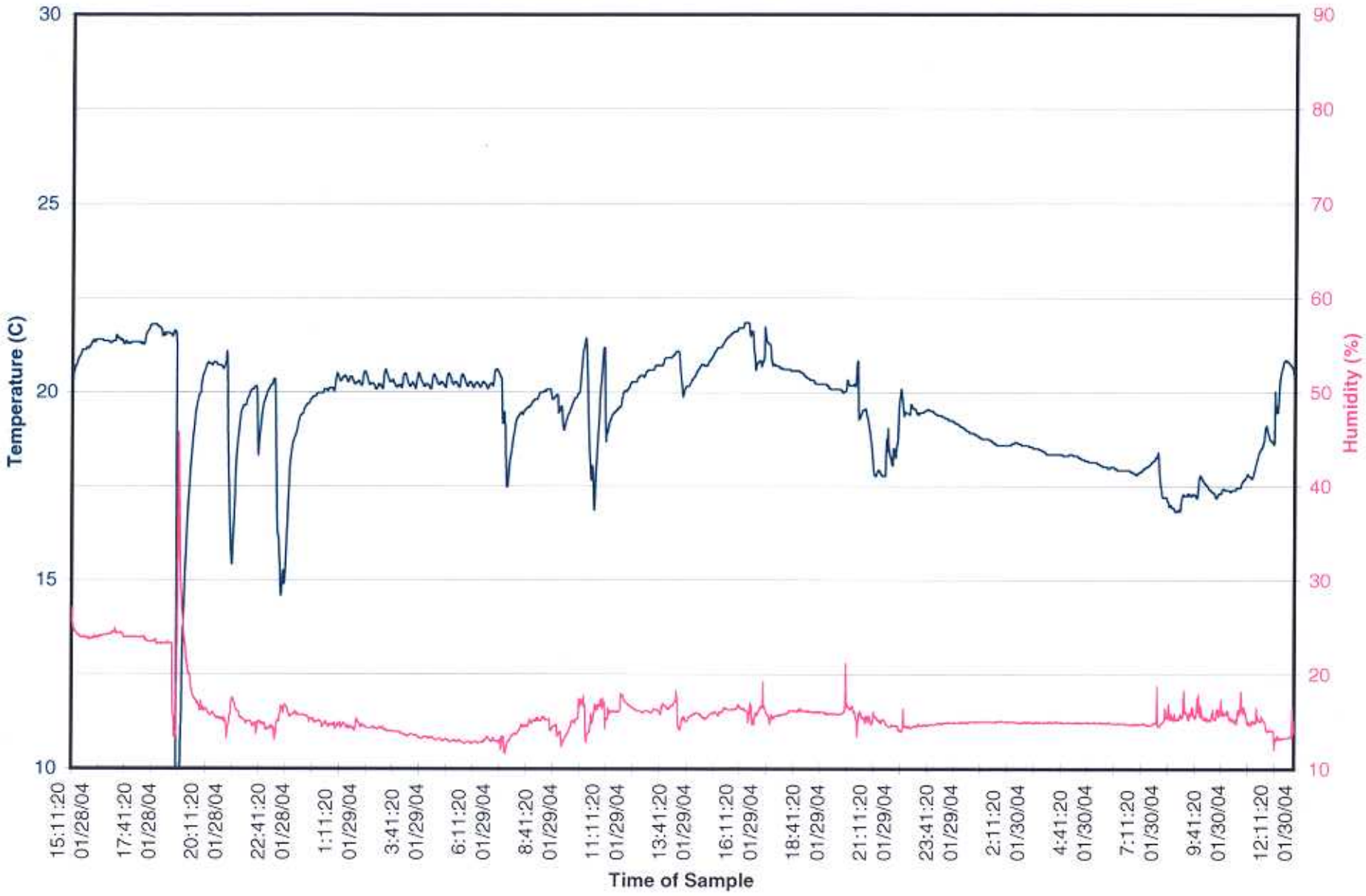
Dummy 055n **Type** SID/HIII **Descriptio** NHTSA - 055n SID-LEFT IMP. CONFIG. w/RED ACCELS ICAL'd 8-22-03(DKS

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264C-2K-2-18	P25298	Endevco	0.02203	g	2000	9/16/2003	Rwd	1
HEDYG	Head Accel Y	7264C-2K-2-18	P25061	Endevco	0.01811	g	2000	8/22/2003	Lft	1
HEDZG	Head Accel Z	7264C-2K-2-18	P25261	Endevco	0.01723	g	2000	8/22/2003	Up	1
HEDXR	Head Accel X Red	7264C-2K-2-18	P25067	Endevco	0.01634	g	2000	8/22/2003	Rwd	1
HEDYR	Head Accel Y Red	7264C-2K-2-18	P24511	Endevco	0.01752	g	2000	8/22/2003	Lt	1
HEDZR	Head Accel Z Red	7264C-2K-2-18	P25063	Endevco	0.01814	g	2000	8/22/2003	Up	1
NEKXF	Neck Force X	1716	1716-0534-FX	Denton	0.000193247	N	8896.4	9/9/2003	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716	1716-0534-FY	Denton	0.000181781	N	8896.4	9/9/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716	1716-0534-FZ	Denton	0.000087114	N	13344.6	9/9/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716	1716-0534-MX	Denton	0.00588708	N·	282.5	9/9/2003	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716	1716-0534-MY	Denton	0.005773451	N·	282.5	9/9/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	1716	1716-0534-MZ	Denton	0.00839115	N·	282.5	9/9/2003	Chn to Lt Shld	0
LURYG	Left Upper Rib Y	7264C-2K-2-18	P25068	Endevco	0.01741	g	2000	8/22/2003	Rgt	0
LURYR	Left Upper Rib Red Y	7264C-2K-2-18	P25069	Endevco	0.01712	g	2000	8/22/2003	Rgt	0
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P25305	Endevco	0.02057	g	2000	8/22/2003	Rgt	0
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P25395	Endevco	0.02048	g	2000	8/25/2003	Rgt	0
T12YG	Lower Spine Y	7264C-2K-2-18	P24393	Endevco	0.01986	g	2000	9/9/2003	Lft	1
T12YR	Lower Spine Red Y	7264C-2K-2-18	P24627	Endevco	0.01845	g	2000	8/25/2003	Lft	1
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P25397	Endevco	0.01836	g	2000	8/25/2003	Lft	1
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P25231	Endevco	0.01781	g	2000	9/9/2003	Lft	1

Dummy 059n **Type** SID/HIII **Descriptio** NHTSA - 059n SID-LEFT IMP. CONFIG. w/RED ACCELS ICAL'd 9-9-03(DKS

Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/		Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264C-2K-2-18	P21712	Endevco	0.01583	g	2000	9/9/2003	Rwd	1
HEDYG	Head Accel Y	7264C-2K-2-18	P22733	Endevco	0.0183	g	2000	9/9/2003	Lft	1
HEDZG	Head Accel Z	7264C-2K-2-18	P21625	Endevco	0.01868	g	2000	9/9/2003	Up	1
HEDXR	Head Accel X Red	7264C-2K-2-18	P25076	Endevco	0.01572	g	2000	9/9/2003	Rwd	1
HEDYR	Head Accel Y Red	7264C-2K-2-18	P16213	Endevco	0.01626	g	2000	9/9/2003	Lt	1
HEDZR	Head Accel Z Red	7264C-2K-2-18	P18941	Endevco	0.02035	g	2000	9/9/2003	Up	1
NEKXF	Neck Force X	1716A	1716A-1532-FX	Denton	0.000194123	N	8896.4	9/9/2003	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-1532-FY	Denton	0.000184311	N	8896.4	9/9/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-1532-FZ	Denton	0.00009756	N	13344.6	9/9/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-1532-MX	Denton	0.005979823	N·	282.5	9/9/2003	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-1532-MY	Denton	0.005929558	N·	282.5	9/9/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-1532-MZ	Denton	0.008416283	N·	282.5	9/9/2003	Chn to Lt Shld	0
LURYG	Left Upper Rib Y	7264C-2K-2-18	P27355	Endevco	0.02485	g	2000	9/9/2003	Rgt	0
LURYR	Left Upper Rib Red Y	7264C-2K-2-18	P27178	Endevco	0.01781	g	2000	9/9/2003	Rgt	0
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P29214	Endevco	0.02655	g	2000	9/9/2003	Rgt	0
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P25389	Endevco	0.01649	g	2000	9/9/2003	Rgt	0
T12YG	Lower Spine Y	7264C-2K-2-18	P27211	Endevco	0.0171	g	2000	9/9/2003	Lft	1
T12YR	Lower Spine Red Y	7264C-2K-2-18	P29206	Endevco	0.02042	g	2000	9/9/2003	Lft	1
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P27228	Endevco	0.03437	g	2000	9/9/2003	Lft	1
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P27230	Endevco	0.01808	g	2000	9/9/2003	Lft	1

FMVSS 214 LEFT SIDE IMPACT / 040130



PLASCORE

SIDE IMPACTOR BARRIER CERTIFICATION

Date: December 2, 2003

To: Transportation Research
Ship & Rec Bldg 50
10820 St. Route 347
East Liberty, OH 43319-0367

PURCHASE ORDER INFORMATION

Customer P.O. Number:	027358
Work Order Number:	19171
Quantity:	01 piece

CORE INFORMATION

Core Type:	PCGA-1/4-5.2-P-3003-T
Measured Cell Size:	0.250 inches
Measured Density:	5.2 pcf
Unit Number:	114B1003

This is to certify that the aluminum honeycomb core supplied, under the unit number provided, meets the crush requirements of 232 – 250 psi as per DWG# DSL-1285.

QA Plascore Accept 001

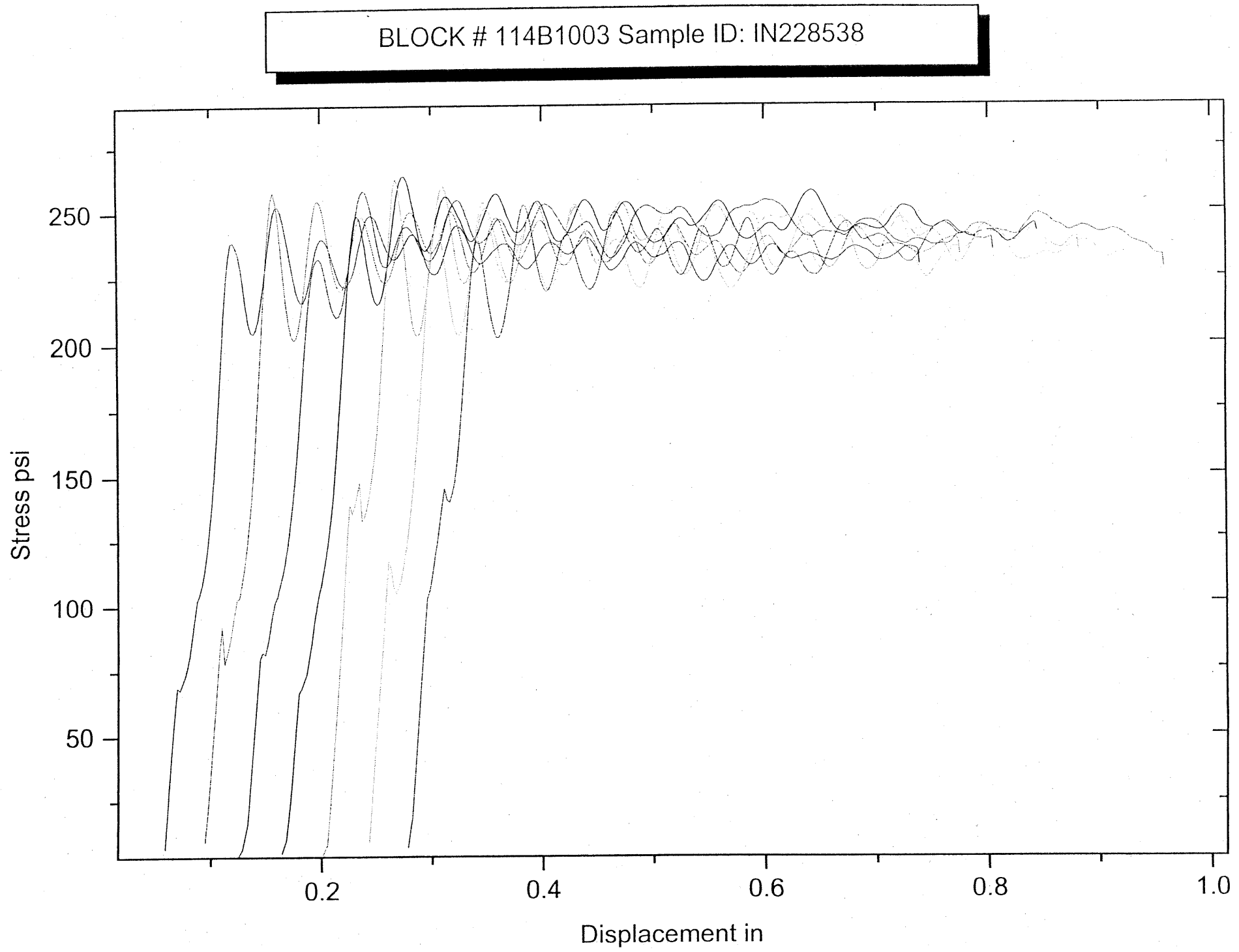
Quality Control Representative
Karl D. Zwaanstra

PLASCORE

Crush Data
232 - 250 psi per DWG # DSL-1285

Block Number: **114B1003**

Specimen Number	Zone 1	Zone 2	Zone 3
1	234.38	232.22	233.14
2	236.30	235.50	236.32
3	245.08	245.90	241.05
4	246.67	245.23	245.18
5	241.88	239.44	238.87
6	237.10	237.91	236.21
7	233.26	239.88	243.77


BLOCK # 114B1003 Sample ID: IN228538
Stress psi
250
200
150
100
50
0.2
0.4
0.6
0.8
1.0
Displacement in

040130

PLASCORE

SIDE IMPACTOR BARRIER CERTIFICATION

Date: December 2, 2003

To: Transportation Research
Ship & Rec Bldg 50
10820 St. Route 347
East Liberty, OH 43319-0367

PURCHASE ORDER INFORMATION

Customer P.O. Number: 027358
Work Order Number: 19171
Quantity: 01 piece

CORE INFORMATION

Core Type: PAMG-3/8-1.6-001-P-5052-T
Measured Cell Size: 0.375 inches
Measured Density: 1.6 pcf

Unit Number: 015A1103

This is to certify that the aluminum honeycomb core supplied, under the unit number provided, meets the crush requirements of 45 psi +/- 2.5 psi as per DWG# DSL-1285.

QA Plascore Accept 001

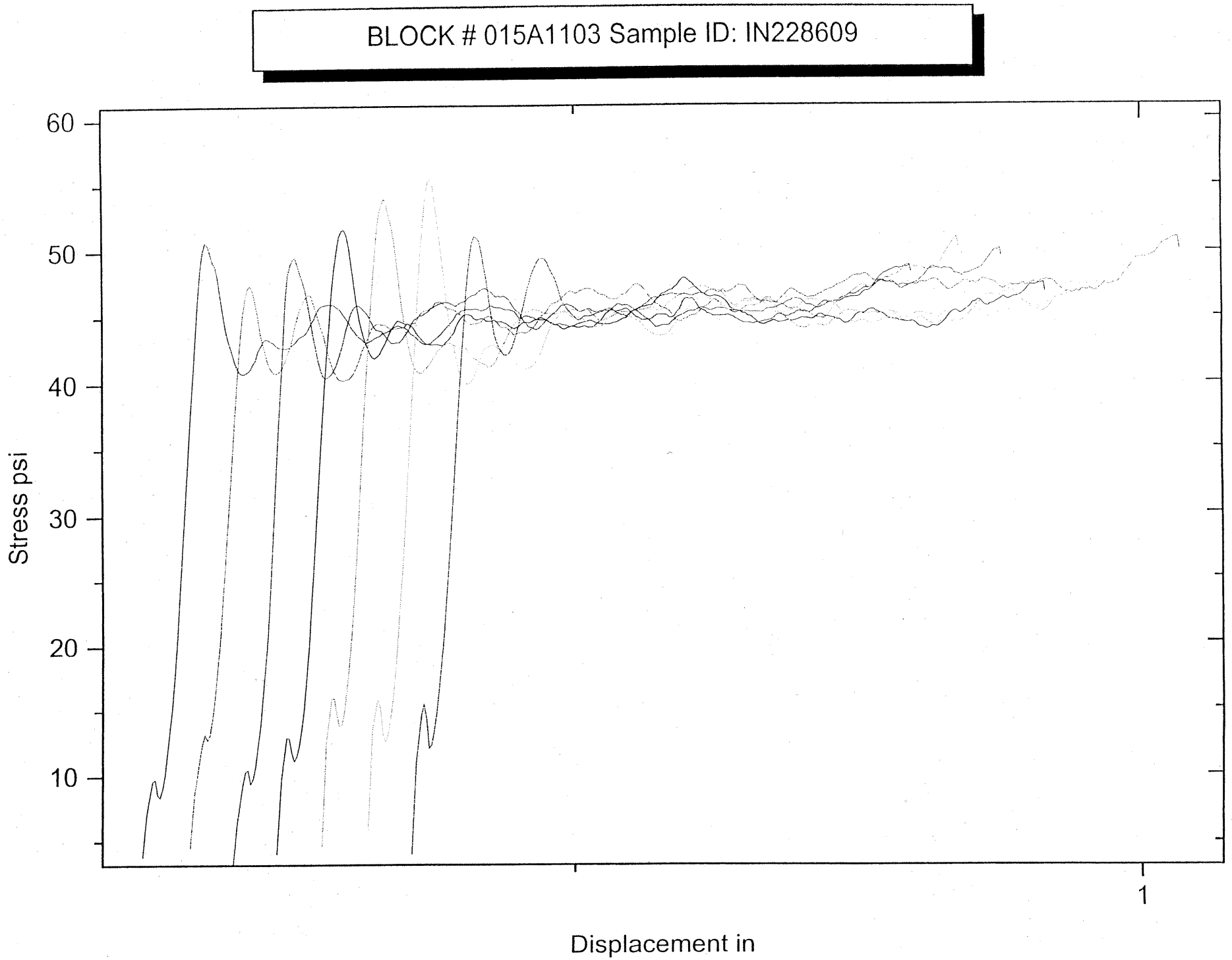
Quality Control Representative
Karl D. Zwaanstra

PLASCORE

Crush Data
45 psi +/- 2.5 psi per DWG # DSL-1285

Block Number: **015A1103**

Specimen Number	Zone 1	Zone 2	Zone 3
1	44.94	45.10	45.15
2	45.60	45.76	46.04
3	45.15	45.60	47.22
4	45.81	44.90	44.69
5	46.16	44.86	45.49
6	45.64	45.11	45.54
7	46.78	47.43	47.15


BLOCK # 015A1103 Sample ID: IN228609
60
50
40
30
20
10
Stress psi
1
Displacement in