

Report Number: 214-TRC-03-015

Safety Compliance Testing For FMVSS 214

Side Impact Protection

Indicant

Mazda Motor Corporation

2004 Mazda 3 4-door

NHTSA Number: C45402

Transportation Research Center Inc.

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Test Date: February 10, 2004

Final Report: February 26, 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)

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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 3 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 February 10, 2004. The impact velocity of the Moving Deformable Barrier (MDB) was 62.0 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 283 mm at Level 2. The test or target vehicle's performance is given below (with FIR filter): <table border="0"> <thead> <tr> <th></th> <th><u>Front SID HIII</u></th> <th></th> <th><u>Rear SID HIII</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td><u>91.2</u></td> <td>g's</td> <td><u>82.3</u></td> <td>g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td><u>87.0</u></td> <td>g's</td> <td><u>101.7</u></td> <td>g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td><u>90.6</u></td> <td>g's</td> <td><u>78.8</u></td> <td>g's</td> </tr> <tr> <td>Thoracic Trauma Index, (TTI):</td> <td><u>90.9</u></td> <td>g's</td> <td><u>90.3</u></td> <td>g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td><u>75.2</u></td> <td>g's</td> <td><u>80.2</u></td> <td>g's</td> </tr> </tbody> </table> The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did open during side impact event.				<u>Front SID HIII</u>		<u>Rear SID HIII</u>		Left Upper Rib Acceleration:	<u>91.2</u>	g's	<u>82.3</u>	g's	Left Lower Rib Acceleration:	<u>87.0</u>	g's	<u>101.7</u>	g's	Lower Spine Acceleration:	<u>90.6</u>	g's	<u>78.8</u>	g's	Thoracic Trauma Index, (TTI):	<u>90.9</u>	g's	<u>90.3</u>	g's	Pelvis Acceleration (PEV):	<u>75.2</u>	g's	<u>80.2</u>	g's
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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 3 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 3 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 62.0 km/h (38.5 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 February 10, 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 (T₁₂) 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-two (72) 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)	90.9	90.3
PEV (g)	75.2	80.2

Head Injury Criteria (HIC)

Injury Criteria	Front SID HIII	Rear SID HIII
HIC	544	429
t_1 (ms)	50.56	41.92
t_2 (ms)	86.56	62.08
Average Acceleration $t_1 - t_2$ (g)	46.9	53.8

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)	-672	250
Neck Y-axis Force (N)	1082	-633
Neck Z-axis Force (N)	2169	-1259
Moment About X-axis (Nm) ¹	73.2	-118.1
Moment About Y-axis (Nm)	-28.5	-31.9
Moment About Z-axis (Nm)	20.3	10.9

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

Data Acquisition Explanations

The vehicle's left middle A-post Y-axis acceleration channel, LMAYG1, exceeded full-scale at approximately 12 milliseconds and recorded no valid data after that. The velocity was also affected.

The vehicle's left lower B-post Y-axis acceleration channel, LLBYG1, recorded questionable data after 5 milliseconds. The velocity was also affected.

The vehicle's left front seat track Y-axis acceleration channel, LFTYG1, recorded questionable data after 9 milliseconds. The velocity was also affected.

Section 3

Summary of Test Results

Data Sheet 1

General Test Vehicle Parameter Data

Test Vehicle Information:

Vehicle Year/Make/Model: 2004 Mazda 3
Vehicle Body Style/Color: 4-door/Silver VIN: JM1BK12FX41101590
Vehicle NHTSA No.: C45402 Build Date: 10/03
Engine Data: 4 Cylinders; CID; 2.0 Liters; cc
Placement: X Longitudinal; or - Lateral; or - Horizontal
Transmission: 4 Speed; - Manual; X Automatic; X Overdrive
Final Drive: - RWD; X FWD; - Four-Wheel Drive
Odometer Reading: 70 miles
Options: X A/C; X Power steering; X Pwr. brakes; - Power windows

Data From Vehicle's Tire Placard:

Tire Pressure (at capacity)* 230 kPa Front; 230 kPa Rear
Recommended Tire Size: P195/65R15
Tires on Test Vehicle: P195/65R15 Manufacturer: Toyo, Proxes A18

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; 0 3rd seat; 5 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 = 385 kg (A)
No. of Occupants x 68.04 kg. = 340 kg (B)
Vehicle Cargo Capacity (A-B) = 45 kg

Test Vehicle Delivered Weight With Maximum Fluids:

Left Front	=	<u>392.5</u> kg	Left Rear	=	<u>243.0</u> kg
Right Front	=	<u>391.5</u> kg	Right Rear	=	<u>240.0</u> kg
Total Front	=	<u>784.0</u> kg	Total Rear	=	<u>483.0</u> kg
Front % of Total Weight	=	<u>61.9</u> %	Rear % of Total Weight	=	<u>38.1</u> %
Total Weight	=	<u>1267.0</u> 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 = 1267.0 kg (A)

Maximum Cargo Carrying Capacity of Test Vehicle = 45.0 kg (B)

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

Test Vehicle Target Weight: = 1480.0 kg (A+B+C)

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

Left Front = 441.0 kg Left Rear = 342.0 kg

Right Front = 396.0 kg Right Rear = 301.5 kg

Total Front = 837.0 kg Total Rear = 643.5 kg

Front % of Total Weight = 56.5 % Rear % of Total Weight = 43.5 %

Total Weight = 1480.5 kg

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

Left Front = 437.8 kg Left Rear = 309.0 kg

Right Front = 423.6 kg Right Rear = 300.8 kg

Total Front = 861.4 kg Total Rear = 609.8 kg

Front % of Total Weight = 58.6 % Rear % of Total Weight = 41.4 %

Total Weight = 1471.2 kg

Test Vehicle Attitude (all dimensions in millimeters):

As Delivered	Fully Loaded	Ready For Test
Right Front <u>687</u>	Right Front <u>670</u>	Right Front <u>671</u>
Left Front <u>686</u>	Left Front <u>657</u>	Left Front <u>665</u>
Right Rear <u>697</u>	Right Rear <u>657</u>	Right Rear <u>662</u>
Left Rear <u>694</u>	Left Rear <u>642</u>	Left Rear <u>649</u>

Test Vehicle Wheelbase: 2640 mm

C.G. = 1093 mm rearward of front wheel centerline

Total Vehicle Length:

Right Side = 4220 mm

Left Side = 4220 mm

Centerline = 4530 mm

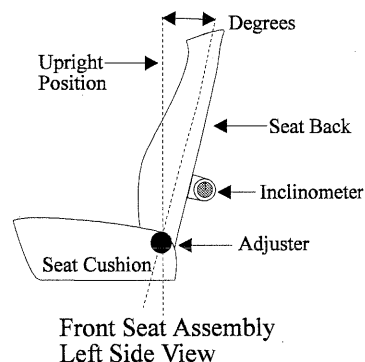
Data Sheet 1 (continued)

General Test Vehicle Parameter Data

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

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: 13th latch position rearward from the most forward latch position

Total Length of Fore/Aft Adjustment Travel: 250 mm

Total Number of Adjustment Positions or Detents: 26

Front Seat Back Adjustment Position: Adjusted to 14.5° measured at the headrest pole

Seat Back Torso Angle: 14.4 degrees

Second Position Seat Placement: Fixed

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

Seat Back Adjustment Position: N/A

Adjustable Steering Column Position: Adjusted to 23.1° from vertical

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.

Amount of Stoddard Solvent In Fuel Tank:

54.9 liters (fuel tank usable capacity)

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

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

Wheelbase = 2640 millimeters

Intended impact point is 380 millimeters rearward of front axle centerline
(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 382 millimeters rearward of front axle centerline

Data Sheet 2

Test Vehicle Summary of Results

Vehicle Year/Make/Model: 2004/Mazda/3

Body Style: 4-door

VIN: JM1BK12FX41101590

NHTSA No.: C45402

Build Date: 10/03

Test Date: 02/10/04

Vehicle Overall Length = 4530 mm

Overall Width = 1755 mm

Vehicle Test Weight (Pre-Test):

Left Front = 437.8 kg Left Rear = 309.0 kg

Right Front = 423.6 kg Right Rear = 300.8 kg

Total Front = 861.4 kg Total Rear = 609.8 kg

Total Weight = 1471.2 kg

Wheelbase = 2640 mm

Longitudinal C.G. From Center Of Front Axle = 1093 mm

Impact Angle With Respect To Impactor = 90 degrees

Impact Point:

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

Actual Impact Point is 1 mm up from nominal impact point (Vertical)

Maximum Exterior Static Crush:

1. Level 1 (240 mm above ground) = 79 mm

2. Level 2 (530 mm above ground) = 283 mm

3. Level 3 (615 mm above ground) = 269 mm

4. Level 4 (910 mm above ground) = 189 mm

5. Level 5 (1400 mm above ground) = 113 mm

Maximum Post-Test Intrusion = 283 mm

Occupants:

Front Passenger

Rear Passenger

Dummy Identification 906

055

Restraints Used 3-point seat belt

3-point seat belt

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:

Cellbond, DF731

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 = 1099 mm

MDB Weight:

Left Front = 417.2 kg Left Rear = 259.4 kg

Right Front = 368.6 kg Right Rear = 319.2 kg

Total Front = 785.8 kg Total Rear = 578.6 kg

Total MDB Weight = 1364.4 kg

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

Impact Speed = 62.0 km/h

Maximum Static Crush of Honeycomb Impact Face:

1. Row A at Center of Bumper Level = 215 millimeters

2. Row B at Top of Bumper Level = 108 millimeters

3. Row C at Mid Level = 115 millimeters

4. Row D at Top of Stack Level = 134 millimeters

Instrumentation:

Number of MDB Data Channels = 5

Data Sheet 4

Post-Test Observations

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Visible Dummy Contact Points:

	<u>Left Front SID HIII</u>	<u>Left Rear SID HIII</u>
Head:	<u>Door panel, head restraint</u>	<u>Headliner, side header</u>
Upper Torso:	<u>Door panel</u>	<u>Door panel</u>
Lower Torso:	<u>Door panel</u>	<u>Door</u>
Left Knee:	<u>Door panel</u>	<u>Door</u>
Right Knee:	<u>None</u>	<u>None</u>

Door Opening:

	<u>Left Side</u>	<u>Right Side</u>
Front:	<u>Jammed & latched</u>	<u>Easy</u>
Rear:	<u>Jammed & latched</u>	<u>Easy</u>

MDB Distance From Target Impact Point:

Vertical: 1 mm up from target

Horizontal: 2 mm right from target

Arm Rest Locations:

Front: 236 mm below the bottom of the window

Rear: 253 mm below the bottom of the window

Seat Movement:

Front: None

Rear: None

Glazing Damage:

Windshield: Broken along top of driver A-pillar

Window: Driver and passenger shattered

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 3 4-door

NHTSA No.: C45402

TEST NUMBER: 040210

DRIVER DUMMY SERIAL NUMBER: 906

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

HEAD ACCELERATION

LONGITUDINAL	1.8 g	@ 224.4 ms	41.4 g	@ 80.5 ms
LATERAL	95.7 g	@ 80.6 ms	6.7 g	@ 34.6 ms
VERTICAL	52.9 g	@ 56.7 ms	6.7 g	@ 82.2 ms
RESULTANT	104.3 g	@ 80.6 ms		
HIC 36	544	from 50.6 to 86.6 ms		

HEAD REDUNDANT ACCELERATION

LONGITUDINAL	1.9 g	@ 226.2 ms	40.8 g	@ 80.6 ms
LATERAL	97.3 g	@ 80.6 ms	6.3 g	@ 35.2 ms
VERTICAL	56.0 g	@ 56.6 ms	7.0 g	@ 82.2 ms
RESULTANT	105.6 g	@ 80.6 ms		
HIC 36	596	from 50.2 to 86.2 ms		

NECK FORCE

X-AXIS SHEAR	79.7 N	@ 245.8 ms	672.0 N	@ 83.4 ms
Y-AXIS SHEAR	1081.7 N	@ 82.4 ms	270.8 N	@ 35.2 ms
Z-AXIS AXIAL	2169.2 N	@ 56.9 ms	18.7 N	@ 302.2 ms

NECK MOMENT

ABOUT X-AXIS	61.9 N-m	@ 75.9 ms	70.6 N-m	@ 43.0 ms
ABOUT Y-AXIS	11.5 N-m	@ 300.1 ms	28.5 N-m	@ 52.2 ms
ABOUT Z-AXIS	20.3 N-m	@ 78.1 ms	11.6 N-m	@ 42.4 ms
OCCIPITAL COND	73.2 N-m	@ 76.0 ms	65.7 N-m	@ 43.2 ms

LEFT UPPER RIB ACCELERATION

LATERAL (P)	91.2 g	@ 31.3 ms	15.7 g	@ 75.6 ms
LATERAL (R)	92.7 g	@ 30.6 ms	15.7 g	@ 76.3 ms

LEFT LOWER RIB ACCELERATION

LATERAL (P)	87.0 g	@ 30.6 ms	13.3 g	@ 73.1 ms
LATERAL (R)	89.2 g	@ 30.6 ms	12.4 g	@ 86.9 ms
TTI d (P)	90.9			
TTI d (R)	91.3			

LOWER SPINE ACCELERATION

LATERAL (P)	90.6 g	@ 34.4 ms	19.3 g	@ 67.5 ms
LATERAL (R)	89.9 g	@ 34.4 ms	19.3 g	@ 66.9 ms

PELVIS ACCELERATION

LATERAL (P)	75.2 g	@ 29.4 ms	9.5 g	@ 97.5 ms
LATERAL (R)	75.0 g	@ 29.4 ms	9.4 g	@ 97.5 ms

POSITIVE DIRECTION

LONGITUDINAL: FORWARD
LATERAL: RIGHTWARD
VERTICAL: DOWNWARD

NEGATIVE DIRECTION

LONGITUDINAL: REARWARD
LATERAL: LEFTWARD
VERTICAL: UPWARD

Data Sheet 5 (Continued)

SID HIII Instrumentation Data

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

TEST NUMBER: 040210

PASSENGER DUMMY SERIAL NUMBER: 055
POSITIVE DIRECTION NEGATIVE DIRECTION

HEAD ACCELERATION

LONGITUDINAL	3.2 g	@ 45.6 ms	14.4 g	@ 52.2 ms
LATERAL	83.7 g	@ 48.6 ms	6.5 g	@ 65.8 ms
VERTICAL	16.0 g	@ 39.0 ms	35.3 g	@ 60.0 ms
RESULTANT	84.4 g	@ 48.6 ms		
HIC 36	429 from 41.9 to 62.1 ms			

HEAD REDUNDANT ACCELERATION

LONGITUDINAL	3.4 g	@ 45.6 ms	14.1 g	@ 51.9 ms
LATERAL	84.3 g	@ 48.7 ms	6.7 g	@ 65.8 ms
VERTICAL	15.8 g	@ 38.9 ms	35.2 g	@ 60.0 ms
RESULTANT	85.1 g	@ 48.7 ms		
HIC 36	431 from 41.9 to 62.0 ms			

NECK FORCE

X-AXIS SHEAR	249.8 N	@ 61.3 ms	130.8 N	@ 96.7 ms
Y-AXIS SHEAR	220.0 N	@ 48.3 ms	632.8 N	@ 69.4 ms
Z-AXIS AXIAL	861.2 N	@ 45.1 ms	1258.9 N	@ 61.1 ms

NECK MOMENT

ABOUT X-AXIS	16.8 N-m	@ 146.4 ms	118.0 N-m	@ 51.8 ms
ABOUT Y-AXIS	21.7 N-m	@ 114.2 ms	31.9 N-m	@ 57.8 ms
ABOUT Z-AXIS	10.9 N-m	@ 87.0 ms	9.2 N-m	@ 237.5 ms
OCCIPITAL COND	17.4 N-m	@ 146.3 ms	118.1 N-m	@ 52.2 ms

LEFT UPPER RIB ACCELERATION

LATERAL (P)	82.3 g	@ 37.5 ms	4.8 g	@ 156.3 ms
LATERAL (R)	81.4 g	@ 37.5 ms	4.7 g	@ 156.9 ms

LEFT LOWER RIB ACCELERATION

LATERAL (P)	101.7 g	@ 35.6 ms	7.6 g	@ 66.3 ms
LATERAL (R)	100.4 g	@ 35.6 ms	9.7 g	@ 66.3 ms
TTI d (P)	90.3			
TTI d (R)	89.1			

LOWER SPINE ACCELERATION

LATERAL (P)	78.8 g	@ 41.9 ms	17.7 g	@ 70.6 ms
LATERAL (R)	77.8 g	@ 41.9 ms	17.7 g	@ 70.6 ms

PELVIS ACCELERATION

LATERAL (P)	80.2 g	@ 38.8 ms	6.2 g	@ 85.6 ms
LATERAL (R)	80.1 g	@ 38.8 ms	6.2 g	@ 86.3 ms

POSITIVE DIRECTION

LONGITUDINAL: FORWARD
LATERAL: RIGHTWARD
VERTICAL: DOWNWARD

NEGATIVE DIRECTION

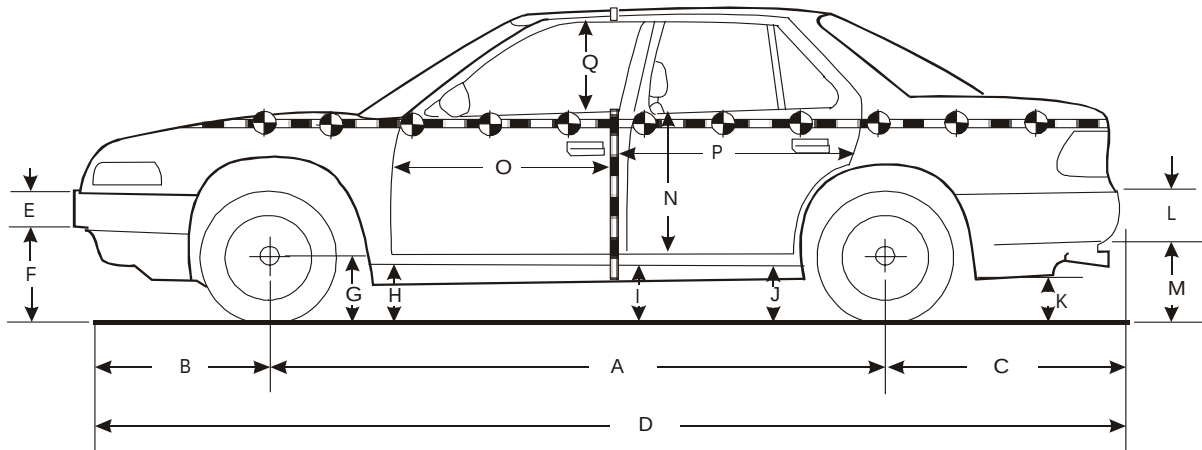
LONGITUDINAL: REARWARD
LATERAL: LEFTWARD
VERTICAL: UPWARD

Data Sheet 6

Vehicle Pre-Test And Post-Test Measurements

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



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	2640	2640	2623	17
B	922	922	868	54
C	968	968	968	0
D	4530	4530	4501	29
E	162	162	162	0
F	410	387	397	-10
G	300	290	290	0
H	240	250	224	26
I	233	235	271	-36
J1	157	140	150	-10
J2	274	264	290	-26
K	305	305	294	11
L	170	170	170	0
M	454	454	449	5
N	760	760	707	53
O	760	760	710	50
P	1275	1275	1202	73
Q	405	405	357	48
R	4220	4220	4220	0
S	4220	4220	4186	34
T	1310	1310	1155	155

D = Length at centerline
T = Width at B-pillar

E&L = Bumper Thickness
J1 = To Pinch Weld

R = Right Side Length
J2 = To Sill

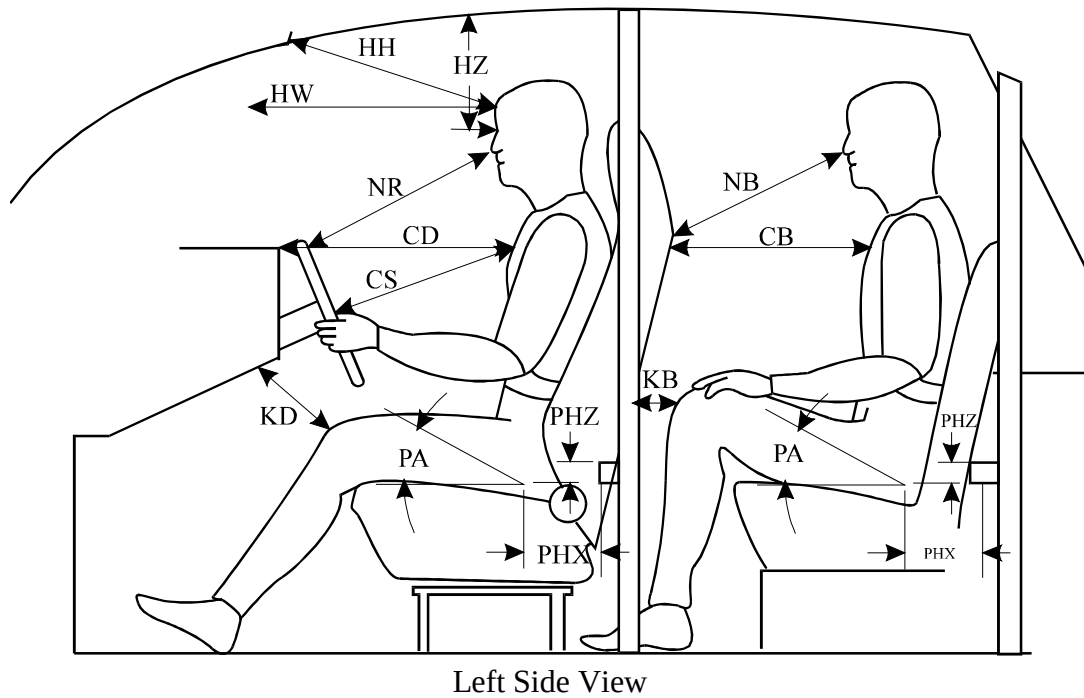
S = Left Side Length

Data Sheet 7

SID HIII Longitudinal Clearance Dimensions

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



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

Measurement	Driver SID HIII # 906	Left Rear Pass. SID HIII # 055
HH	404	N/A
HW	610	N/A
HZ	170	136
NR/NB	478	539
CD/CB	578	502
CS	370	N/A
KDL(KDA°)/KBL(KBA°)	86/(23.8°)	93/(25.0°)
KDR(KDA°)/KBR(KBA°)	90/(38.0°)	111/(25.2°)
PA°	23.3°	24.1°
PHX	222	198
PHZ	148	147

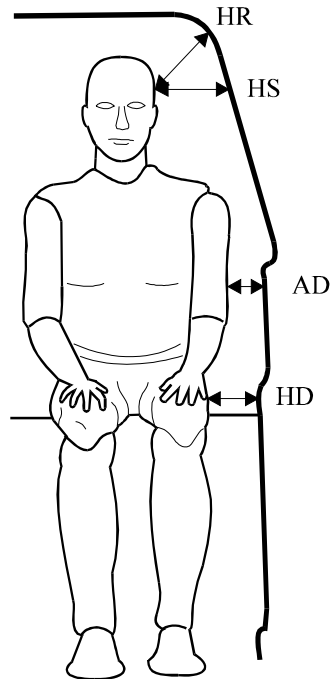
Note: 2-door vehicle shown. Rear dummy PHX and PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

Data Sheet 8

SID HIII Lateral Clearance Dimensions

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



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

Measurement	Driver SID HIII # 906	Left Rear Pass. SID HIII # 055
HR	196	197
HS	340	330
AD*	Lower: 126 Upper: 115	Lower: 93 Upper: 75
HD	136	138

* 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.

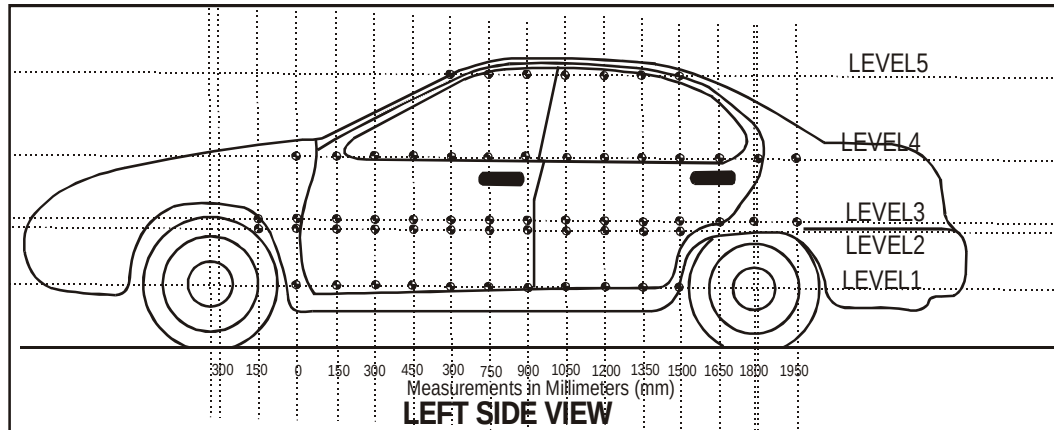
Upper measurement is taken laterally at center of the upper rib accelerometer height from the SID HIII arm segment to the closest part of the vehicle side.

Data Sheet 9

Vehicle Side Measurements

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



Level 5 - Window Top

Level 4 - Window Sill

Level 3 - Mid-Door

Level 2 - Occupant H-Point

Level 1 - Axle Centerline Height or Sill Top Height

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

Measurements along the vertical 750 mm line shown above:

Level 5 @ Window Top	=	<u>1400</u>	mm
Level 4 @ Window Sill	=	<u>910</u>	mm
Level 3 @ Mid Door	=	<u>615</u>	mm
Level 2 @ Occupant H-Point	=	<u>530</u>	mm
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>240</u>	mm

Data Sheet 10

Vehicle Exterior Crush Profiles - All Levels

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Location	Height		(mm) From Impact Point													
			-1200	-1050	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750
Level 1 Side Sill	240	Pre	---	---	---	---	---	---	---	---	694	693	695	694	697	693
		Post	---	---	---	---	---	---	---	---	701	699	740	746	755	764
		Crush	---	---	---	---	---	---	---	---	7	6	45	52	58	71
Level 2 H-Point	530	Pre	---	---	709	664	---	---	---	---	645	657	653	652	652	652
		Post	---	---	702	659	---	---	---	---	651	818	865	888	900	907
		Crush	---	---	-7	-5	---	---	---	---	6	161	212	236	248	255
Level 3 Mid-Door	615	Pre	---	---	717	674	643	---	---	640	646	650	650	648	647	648
		Post	---	---	710	668	640	---	---	643	660	800	858	879	880	872
		Crush	---	---	-7	-6	-3	---	---	3	14	150	208	231	233	224
Level 4 Window Sill	910	Pre	---	---	---	752	733	723	716	713	711	705	700	698	697	695
		Post	---	---	---	746	730	721	727	723	732	766	805	828	854	854
		Crush	---	---	---	-6	-3	-2	11	10	21	61	105	130	157	159
Level 5 Window Top	1400	Pre	---	---	---	---	---	---	---	---	---	---	---	---	---	955
		Post	---	---	---	---	---	---	---	---	---	---	---	---	---	970
		Crush	---	---	---	---	---	---	---	---	---	---	---	---	---	15

Data Sheet 10 (Continued)

Vehicle Exterior Crush Profiles - All Levels

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Location	Height		(mm) From Impact Point												
			900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700
Level 1 Side Sill	240	Pre	693	694	690	690	691	690	694	---	---	---	---	---	---
		Post	770	772	769	760	739	714	681	---	---	---	---	---	---
		Crush	77	78	79	70	48	24	-13	---	---	---	---	---	---
Level 2 H-Point	530	Pre	650	652	647	643	647	647	645	640	---	---	---	652	682
		Post	906	905	930	897	872	848	803	655	---	---	---	---	---
		Crush	256	253	283	254	225	201	158	15	---	---	---	---	---
Level 3 Mid-Door	615	Pre	645	644	645	638	637	646	642	639	---	---	---	652	685
		Post	861	856	914	879	875	860	838	717	---	---	---	---	---
		Crush	216	212	269	241	238	214	196	78	---	---	---	---	---
Level 4 Window Sill	910	Pre	693	690	687	680	681	682	685	685	690	694	699	707	722
		Post	863	869	858	869	857	836	784	711	665	710	708	705	711
		Crush	170	179	171	189	176	154	99	26	-25	16	9	-2	-11
Level 5 Window Top	1400	Pre	933	921	920	903	905	910	925	946	---	---	---	---	---
		Post	959	968	985	1016	983	954	942	946	---	---	---	---	---
		Crush	26	47	65	113	78	44	17	0	---	---	---	---	---

¹ Fascia was removed to achieve test weight.

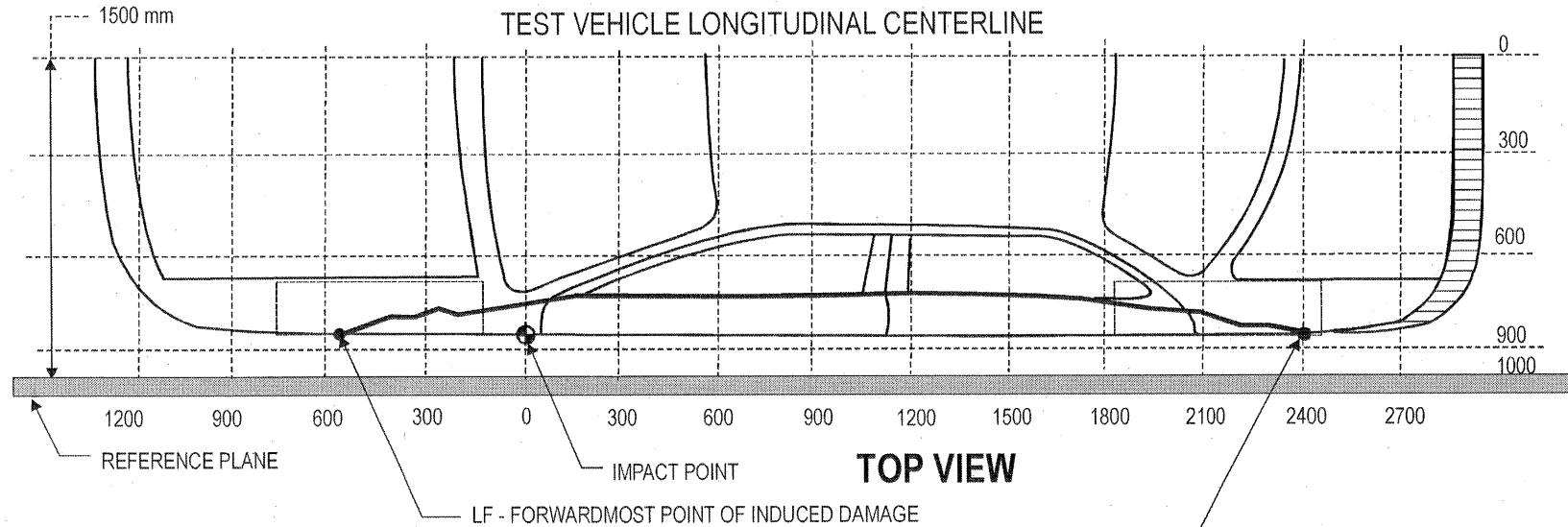
Data Sheet 11

Vehicle Damage Profile Distances

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

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 = 0 mm (Level 4)	732	711	21
5: 450 mm (Level 2)	888	652	236
4: 900 mm (Level 2)	906	650	256
3: 1200 mm (Level 2)	930	647	283
2: 1650 mm (Level 3)	860	646	214
1: LR = 1950 mm (Level 3)	717	639	78

Full length of induced damage was 1950 mm.

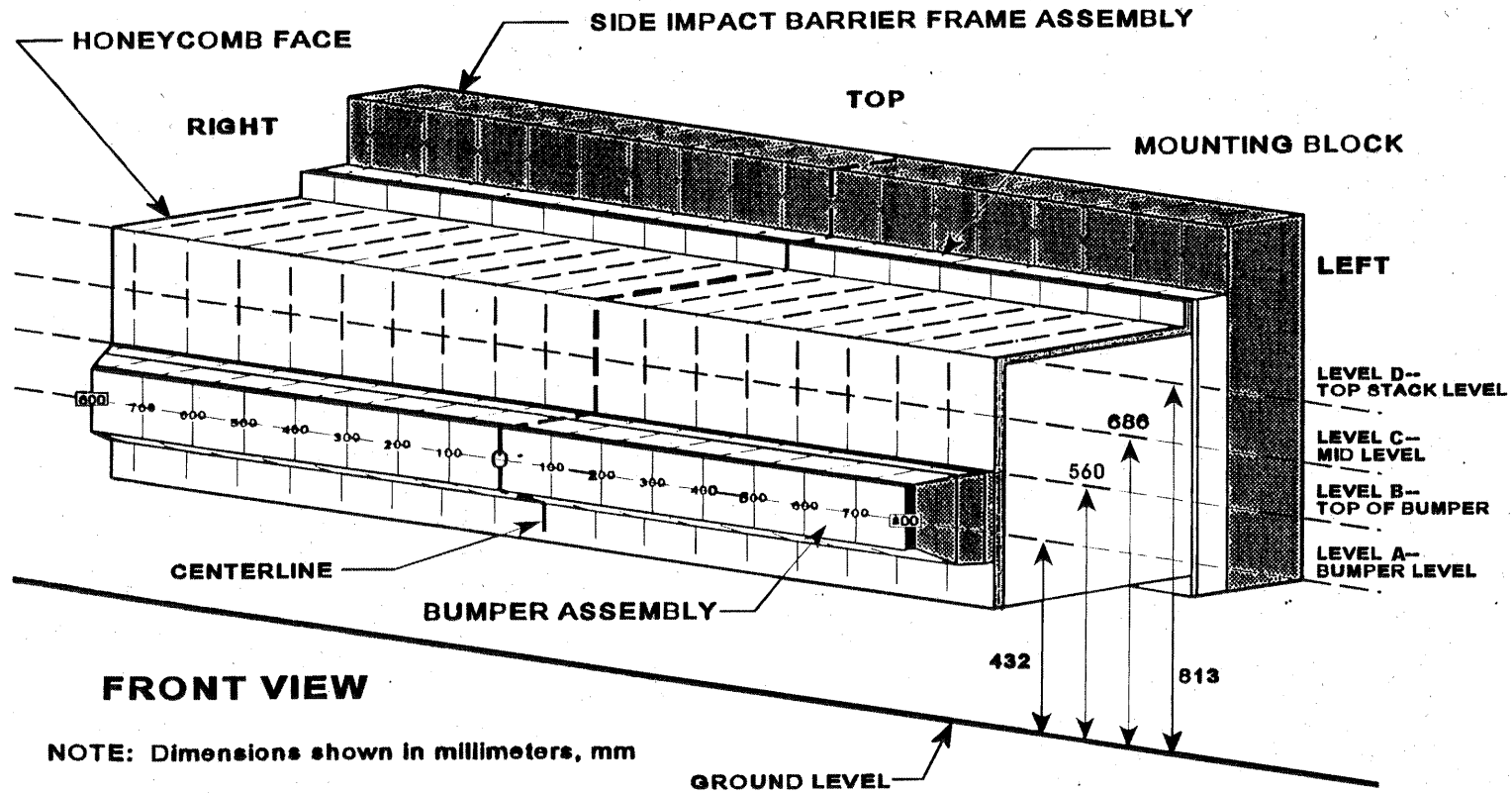
Data Sheet 12

Exterior Static Crush For Impactor Face

(Grid as looking at MDB from front)

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



Data Sheet 12 (Continued)
Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

		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	813	N/A	-1	6	0	-8	-27	-49	-42	-28	-21	-21	-20	-26	-30	-57	-88	-134	
Mid Level Level C	686	-41	-16	-6	-8	-11	-26	-42	-38	-22	-16	-13	-14	-16	-21	-32	-62	-115	
Top Bumper Level - Level B	560	-67	-63	-56	-52	-52	-42	-39	-39	-40	-42	-44	-48	-51	-56	-63	-79	-108	
Mid Bumper Level - Level A	432	-215	-208	-185	-159	-138	-125	-116	-119	-122	-123	-126	-129	-131	-134	-139	-149	-160	

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

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

Deformable Barrier Face Profile

NHTSA No.: C45402

Level D - Top Stack

Pre-Test

Index	Xmm	Ymm	Zmm
1	-380	798	-39
2	-380	699	-40
3	-380	599	-40
4	-380	499	-40
5	-380	399	-40
6	-382	300	-41
7	-381	199	-41
8	-381	99	-41
9	-381	-1	-41
10	-382	-101	-42
11	-382	-201	-42
12	-382	-301	-42
13	-383	-401	-42
14	-383	-501	-43
15	-383	-601	-43
16	-383	-701	-43
17	-385	-802	-43

Post-Test

Index	Xmm	Ymm	Zmm
1	N/A	N/A	N/A
2	-378	670	-89
3	-385	571	-89
4	-380	471	-89
5	-372	372	-88
6	-355	273	-86
7	-332	177	-85
8	-339	77	-83
9	-353	-22	-81
10	-361	-121	-75
11	-362	-221	-73
12	-362	-320	-70
13	-356	-419	-64
14	-353	-517	-57
15	-326	-613	-55
16	-296	-707	-49
17	-251	-794	-48

Difference

Index	Xmm	Ymm	Zmm
1	N/A	N/A	N/A
2	-1	29	49
3	6	28	49
4	0	28	49
5	-8	28	48
6	-27	26	46
7	-49	22	44
8	-42	22	42
9	-28	21	39
10	-21	20	33
11	-21	20	31
12	-20	19	28
13	-26	17	21
14	-30	16	15
15	-57	12	12
16	-88	6	7
17	-134	-7	5

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C45402

Level C - Mid Level

Pre-Test

Index	Xmm	Ymm	Zmm
18	-380	800	-168
19	-380	700	-167
20	-380	599	-168
21	-381	499	-168
22	-381	400	-168
23	-381	299	-169
24	-382	199	-169
25	-382	100	-170
26	-382	0	-170
27	-383	-101	-170
28	-383	-200	-171
29	-383	-300	-171
30	-383	-401	-171
31	-383	-500	-171
32	-384	-601	-171
33	-384	-700	-172
34	-384	-801	-171

Post-Test

Index	Xmm	Ymm	Zmm
18	-339	764	-215
19	-364	669	-216
20	-374	570	-217
21	-373	470	-216
22	-370	370	-215
23	-355	272	-214
24	-340	173	-212
25	-344	72	-209
26	-360	-26	-204
27	-367	-126	-201
28	-370	-226	-197
29	-369	-326	-193
30	-367	-427	-188
31	-362	-526	-183
32	-352	-626	-178
33	-322	-721	-174
34	-269	-803	-174

Difference

Index	Xmm	Ymm	Zmm
18	-41	36	47
19	-16	31	49
20	-6	29	49
21	-8	29	48
22	-11	29	47
23	-26	27	46
24	-42	27	43
25	-38	27	39
26	-22	26	34
27	-16	26	31
28	-13	26	26
29	-14	26	22
30	-16	26	17
31	-21	26	12
32	-32	25	6
33	-62	20	2
34	-115	3	3

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C45402

Level B - Top of Bumper
Pre-Test

Index	Xmm	Ymm	Zmm
35	-380	799	-292
36	-381	700	-293
37	-381	600	-293
38	-381	500	-293
39	-382	400	-293
40	-381	300	-294
41	-382	200	-294
42	-382	100	-294
43	-383	0	-294
44	-383	-100	-295
45	-383	-200	-295
46	-384	-301	-295
47	-384	-400	-296
48	-384	-500	-296
49	-385	-600	-296
50	-385	-700	-296
51	-385	-800	-296

Post-Test

Index	Xmm	Ymm	Zmm
35	-314	768	-315
36	-319	668	-313
37	-325	569	-318
38	-330	460	-326
39	-330	366	-332
40	-340	269	-334
41	-343	169	-333
42	-343	69	-328
43	-343	-32	-323
44	-341	-131	-319
45	-340	-231	-313
46	-337	-331	-307
47	-333	-432	-302
48	-328	-531	-298
49	-321	-631	-294
50	-306	-730	-286
51	-277	-819	-287

Difference

Index	Xmm	Ymm	Zmm
35	-67	32	23
36	-63	32	20
37	-56	31	26
38	-52	39	33
39	-52	33	39
40	-42	31	41
41	-39	31	39
42	-39	31	34
43	-40	31	29
44	-42	31	25
45	-44	31	18
46	-48	30	13
47	-51	31	7
48	-56	31	3
49	-63	31	-2
50	-79	30	-10
51	-108	19	-9

Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

Deformable Barrier Face Profile Cont'd.

NHTSA No.: C45402

Level A - Mid Bumper

Pre-Test

Index	Xmm	Ymm	Zmm
52	-473	801	-421
53	-485	704	-421
54	-485	603	-421
55	-485	503	-421
56	-486	403	-421
57	-486	303	-421
58	-486	204	-422
59	-487	104	-422
60	-487	3	-423
61	-487	-97	-422
62	-488	-197	-423
63	-488	-297	-423
64	-488	-397	-423
65	-489	-497	-423
66	-489	-598	-423
67	-489	-698	-423
68	-477	-795	-422

Post-Test

Index	Xmm	Ymm	Zmm
52	-258	757	-435
53	-277	661	-435
54	-300	564	-436
55	-327	468	-444
56	-348	370	-450
57	-361	270	-453
58	-371	171	-454
59	-368	71	-454
60	-365	-30	-453
61	-365	-129	-452
62	-361	-230	-452
63	-359	-330	-451
64	-357	-430	-450
65	-355	-531	-450
66	-350	-631	-447
67	-340	-730	-442
68	-317	-826	-434

Difference

Index	Xmm	Ymm	Zmm
52	-215	44	14
53	-208	43	14
54	-185	40	14
55	-159	36	23
56	-138	33	29
57	-125	33	31
58	-116	32	32
59	-119	33	32
60	-122	33	31
61	-123	32	30
62	-126	33	29
63	-129	33	28
64	-131	33	27
65	-134	34	27
66	-139	33	24
67	-149	33	20
68	-160	31	11

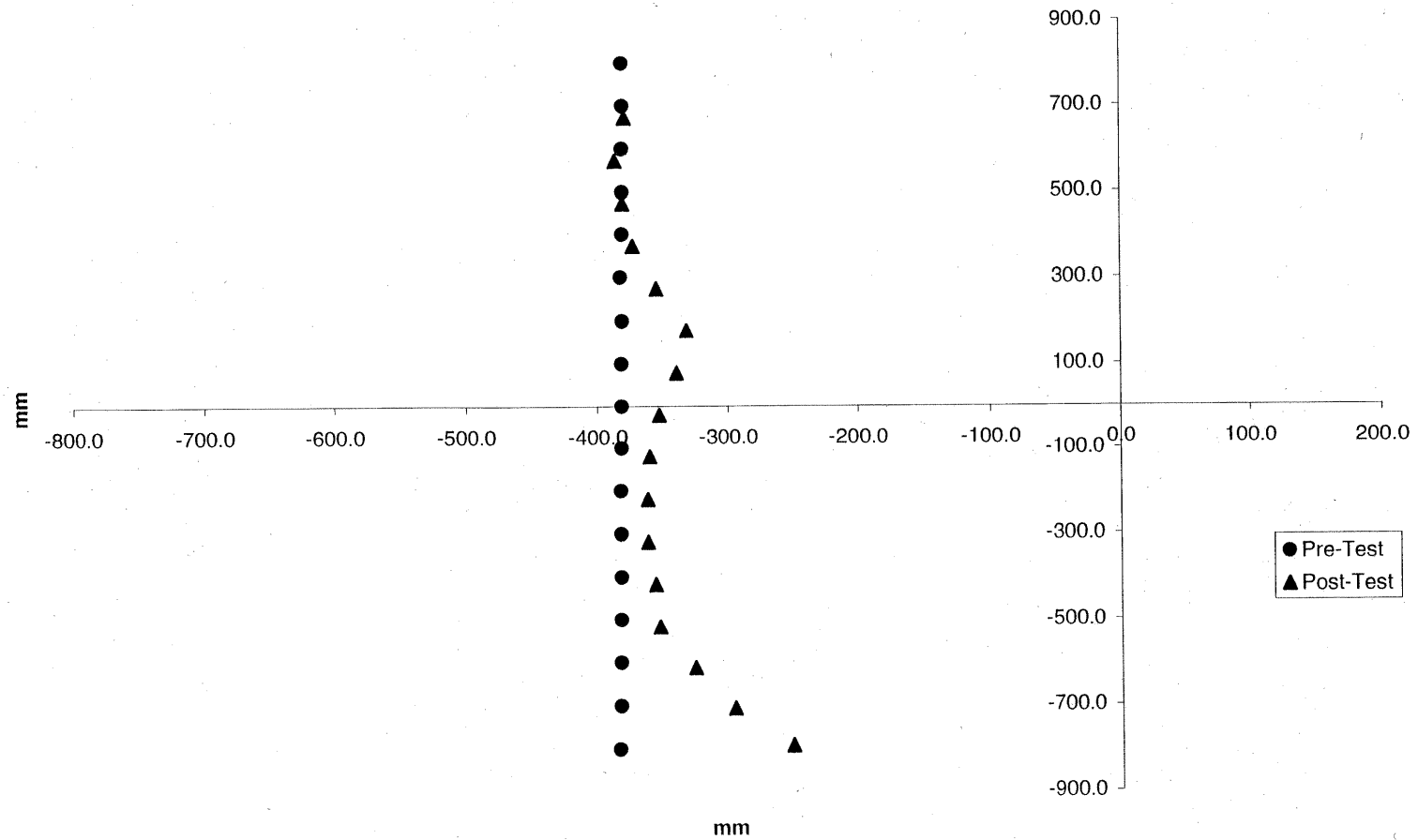
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Level D - Deformable Barrier Face Profile 1-17



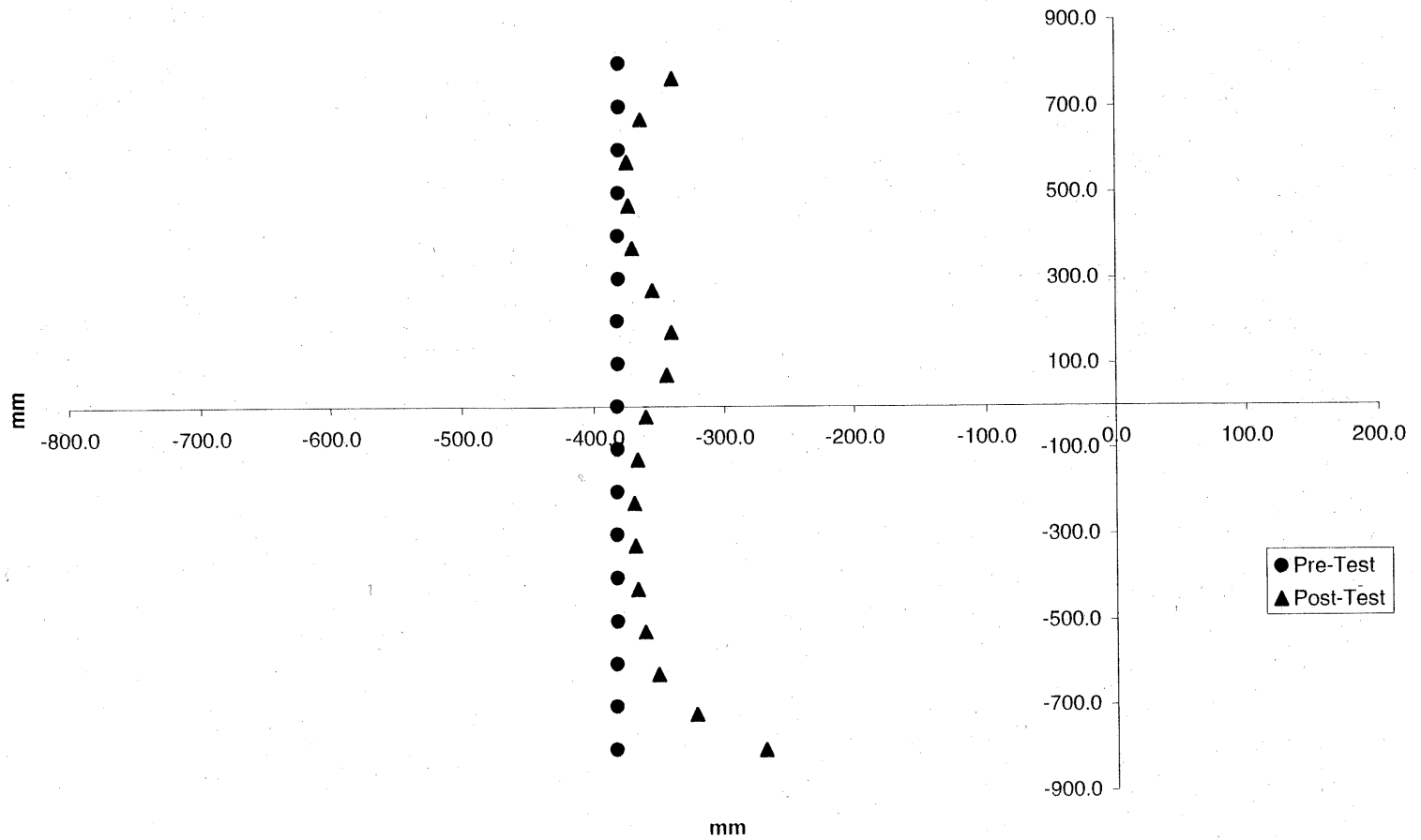
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Level C - Deformable Barrier Face Profile 18-34



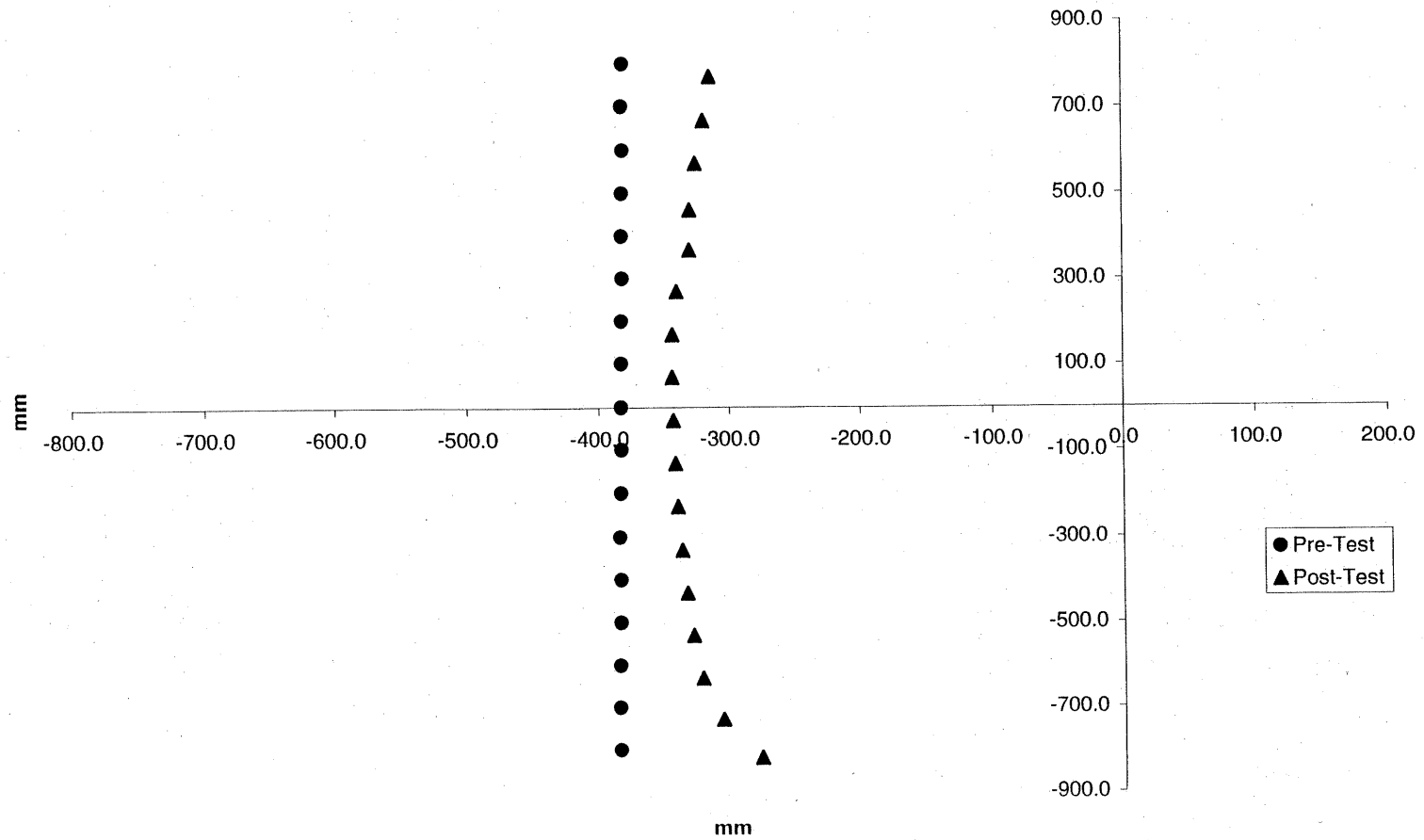
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Level B - Deformable Barrier Face Profile 35-51



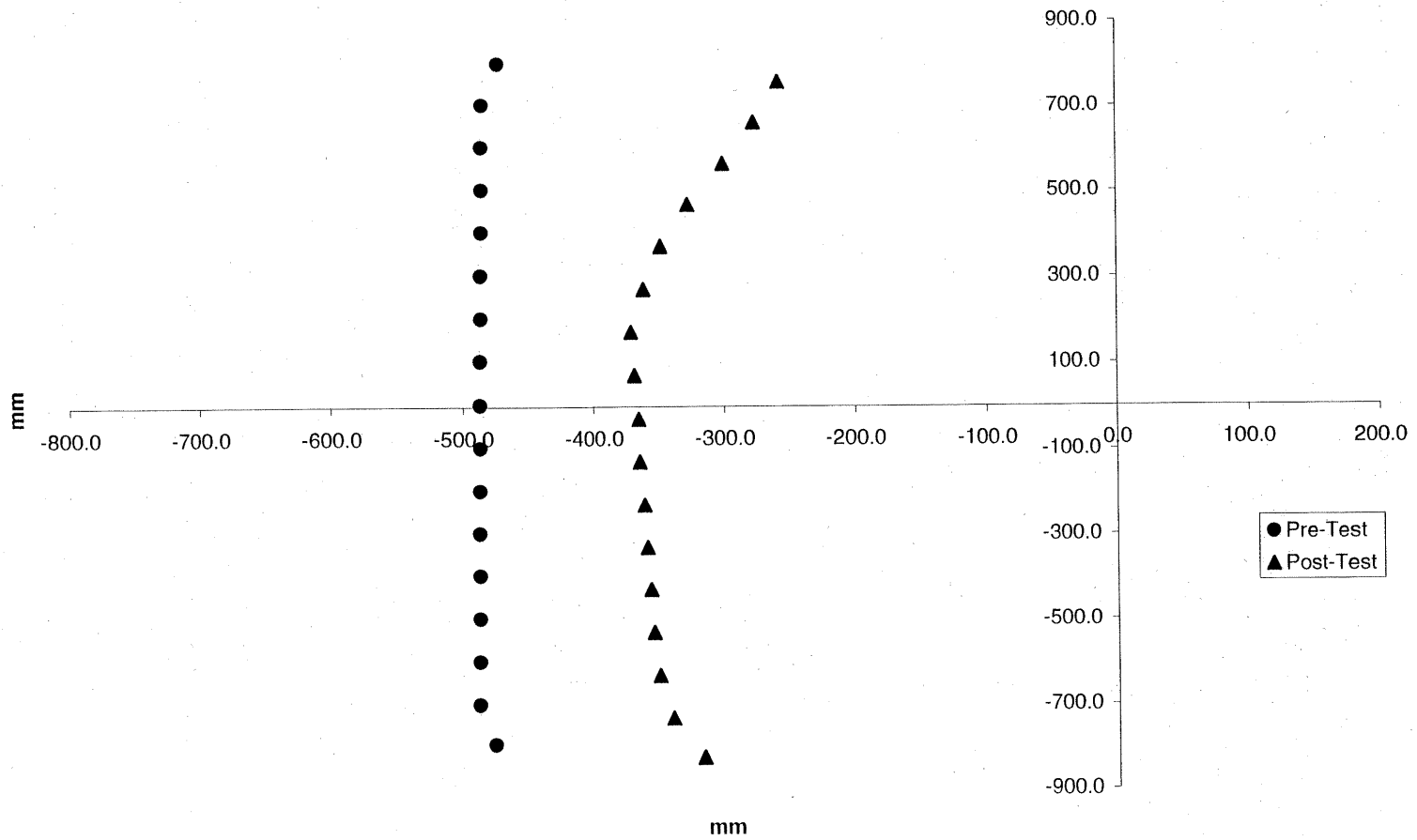
Data Sheet 12 (Continued)

Exterior Static Crush For Impactor Face

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

Level A - Deformable Barrier Face Profile 52-68

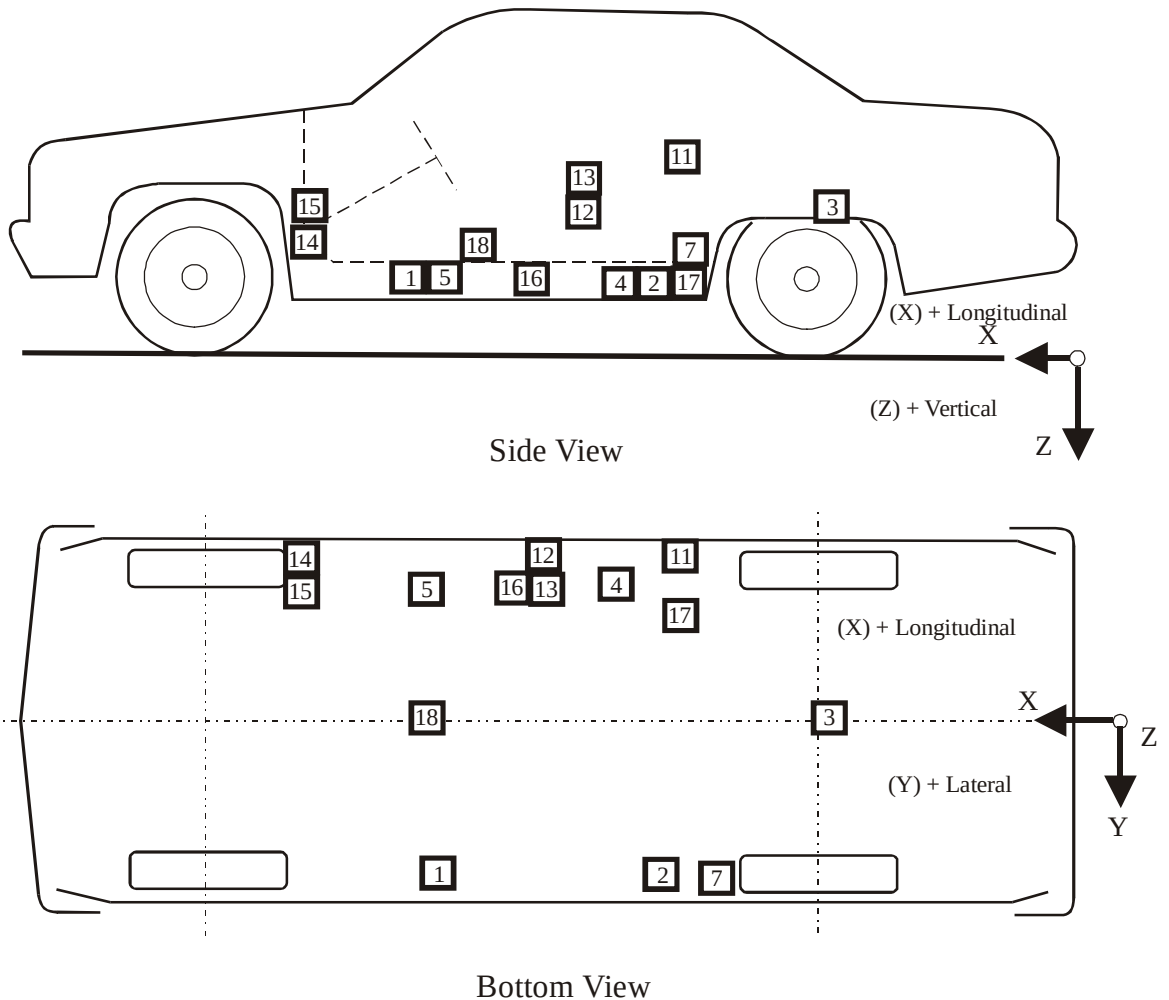


Data Sheet 13

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



- 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 SummaryVehicle: 2004 Mazda 3 4-doorNHTSA No.: C45402

TEST NUMBER: 040210

No. LOCATION

X

Y

Z

POSITIVE
DIRECTIONNEGATIVE
DIRECTION

1	RIGHT SIDE SILL AT FRONT SEAT	2835 mm	675 mm	-269 mm				
	LONGITUDINAL				7.8 g	@ 29.8 ms	6.3 g	@ 10.6 ms
	LATERAL				25.0 g	@ 9.1 ms	3.0 g	@ 143.2 ms
	VERTICAL				5.1 g	@ 31.4 ms	8.5 g	@ 9.5 ms
	RESULTANT				26.8 g	@ 9.4 ms		
2	RIGHT SIDE SILL AT REAR SEAT	1835 mm	675 mm	-234 mm				
	LONGITUDINAL				9.5 g	@ 30.2 ms	6.2 g	@ 10.5 ms
	LATERAL				29.7 g	@ 7.5 ms	2.8 g	@ 99.4 ms
	VERTICAL				7.4 g	@ 32.6 ms	6.2 g	@ 16.6 ms
	RESULTANT				30.1 g	@ 7.5 ms		
3	REAR FLOORPAN ABOVE AXLE	1060 mm	60 mm	-426 mm				
	LONGITUDINAL				17.0 g	@ 297.5 ms	20.1 g	@ 64.8 ms
	LATERAL				68.8 g	@ 297.5 ms	9.8 g	@ 65.8 ms
	VERTICAL				24.1 g	@ 69.4 ms	43.8 g	@ 297.5 ms
	RESULTANT				83.3 g	@ 297.5 ms		
4	LEFT SIDE SILL AT REAR SEAT	1876 mm	-675 mm	-252 mm				
	LATERAL				113.4 g	@ 5.0 ms	34.5 g	@ 10.2 ms

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data SummaryVehicle: 2004 Mazda 3 4-doorNHTSA No.: C45402

TEST NUMBER: 040210

No. LOCATION

X

Y

Z

POSITIVE
DIRECTIONNEGATIVE
DIRECTION

5 LEFT SIDE SILL AT FRONT SEAT LATERAL	2885 mm	-675 mm	-270 mm	91.4 g	@	4.7 ms	47.3 g	@	12.2 ms
7 RIGHT REAR OCCUPANT COMPARTMENT LATERAL	1775 mm	575 mm	-239 mm	29.4 g	@	7.0 ms	2.5 g	@	96.1 ms
12 LEFT LOWER B-POST LATERAL ¹	1960 mm	-720 mm	-490 mm	68.9 g	@	3.3 ms	76.6 g	@	14.6 ms
13 LEFT MIDDLE B-POST LATERAL	1940 mm	-690 mm	-850 mm	136.4 g	@	5.7 ms	57.8 g	@	14.4 ms
14 LEFT LOWER A-POST LATERAL	3015 mm	-745 mm	-390 mm	121.8 g	@	3.7 ms	88.7 g	@	12.8 ms
15 LEFT MIDDLE A-POST LATERAL ¹	3035 mm	-745 mm	-580 mm	---	---	---	---	---	---
16 LEFT FRONT SEAT TRACK LATERAL ¹	2307 mm	-560 mm	-340 mm	51.8 g	@	9.5 ms	105.8 g	@	16.0 ms
17 LEFT REAR SEAT TRACK LATERAL	1463 mm	-530 mm	-350 mm	32.8 g	@	5.9 ms	2.6 g	@	96.8 ms

Data Sheet 13 (Continued)

Test Vehicle Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

TEST NUMBER: 040210

No. LOCATION

X

Y

Z

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

18 VEHICLE CENTER OF GRAVITY	2442 mm	-10 mm	-420 mm				
LONGITUDINAL				5.3 g	@ 26.0 ms	14.2 g	@ 29.4 ms
LATERAL				94.2 g	@ 21.4 ms	66.1 g	@ 28.2 ms
VERTICAL				32.7 g	@ 25.7 ms	23.9 g	@ 21.0 ms
RESULTANT				97.5 g	@ 21.4 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.

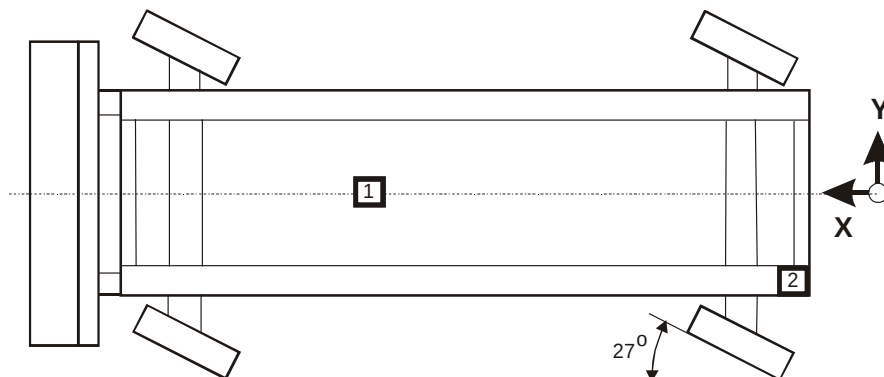
¹ See DATA ACQUISITION EXPLANATIONS on page 2-3

Data Sheet 14

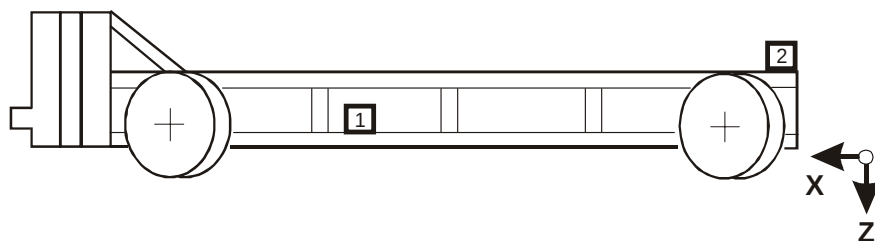
MDB Accelerometer Locations and Data Summary

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



TOP VIEW



SIDE VIEW

Accel. No.	Location	Coordinates (millimeters)			Positive Direction		Negative Direction	
		X*	Y*	Z*	Max. (g)	Time (ms)	Max. (g)	Time (ms)
1	MDB Center of Gravity	1855	0	-520				
	Longitudinal X				2.2	106.0	19.7	40.0
	Lateral Y				6.5	61.2	8.2	45.4
	Vertical Z				4.5	58.2	5.9	103.6
	Resultant R				20.6	45.0		
2	Rear Frame Member	412	-677	-625				
	Longitudinal X				2.6	88.4	23.7	45.2
	Lateral Y				3.1	45.5	2.2	151.3

*Reference: X = Rear Bumper (+ Forward)

Y = Vehicle Centerline (+ To Right)

Z = Ground Level (+ Down)

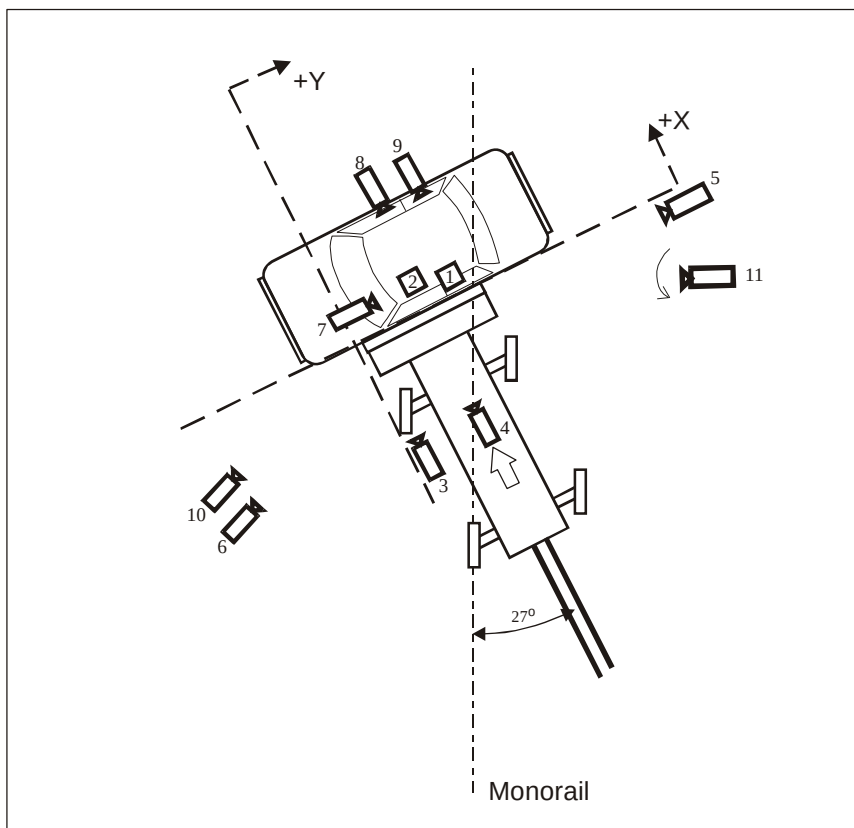
All measurements accurate to within ± 3 mm.

Data Sheet 15

High-Speed Camera Locations and Data Summary

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402



Impact
Area

Camera Number	Location	Location, mm			Angle (deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Overhead wide	250	2150	-5750	-77.5	25	1025
2	Overhead tight	370	1800	-5750	-85.5	8.5	450
3	Onboard MDB left side	-1750	-40	-720	-0.1	13	1025
4	Onboard MDB center	-2480	830	-1353	-5.5	25	1017
5	Right side of MDB	-380	11950	-1020	0.5	13	1007
6	Left side of MDB	-2520	-5240	-1100	0.0	13	990
7	Onboard vehicle front	530	-600	-1220	-5.0	8	1017
8	Onboard side front door	1600	700	-1100	-6.1	8	1005
9	Onboard side rear door	1600	1640	-1140	-10.9	8	1005
10	Digital overall event	-2830	-4960	-990	-2.8	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

Section 5

Vehicle Fuel System Integrity

Data Sheet 16

FMVSS 301 Fuel System Integrity Data

NHTSA No.: C45402

Test Date: 02/10/04

Vehicle Year/Make/Model/Body Style: 2004 Mazda 3 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)
☒ Side Impact Moving Deformable Barrier (38.5
mph) contacting the Driver's side

Fuel Spillage Measurement:

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

Actual	Maximum Allowed
0 g	28 g
0 g	142 g
0 g	28 g/1 minute

Solvent Spillage Details :

None

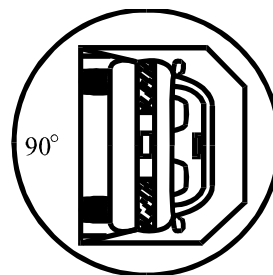
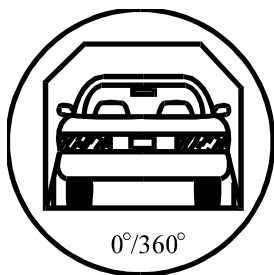
Data Sheet 17

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

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):

None

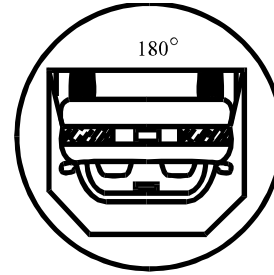
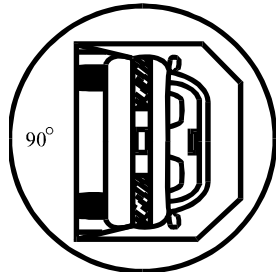
Data Sheet 17 (Continued)

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

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):

None

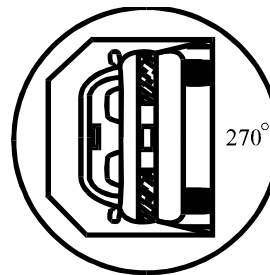
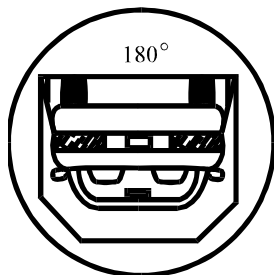
Data Sheet 17 (Continued)

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

180 - 270 Degrees



1. Determination of Solvent Collection Time Period:

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

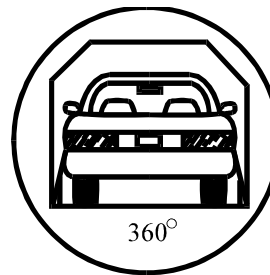
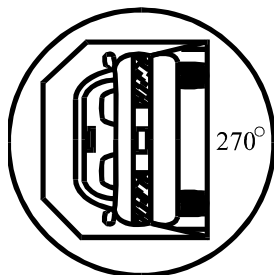
Data Sheet 17 (Continued)

FMVSS 301 Rollover Data

Vehicle: 2004 Mazda 3 4-door

NHTSA No.: C45402

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

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Figure A-1 Pre-Test Front View of Test Vehicle
A-4

040210



Figure A-2 Post-Test Front View of Test Vehicle
A-5

040210



Figure A-3 Pre-Test Impacted Side View of Test Vehicle
A-6

040210



Figure A-4 Post-Test Impacted Side View of Test Vehicle
A-7

040210



Figure A-5 Pre-Test Rear View of Test Vehicle
A-8

040210



Figure A-6 Post-Test Rear View of Test Vehicle

A-9

040210

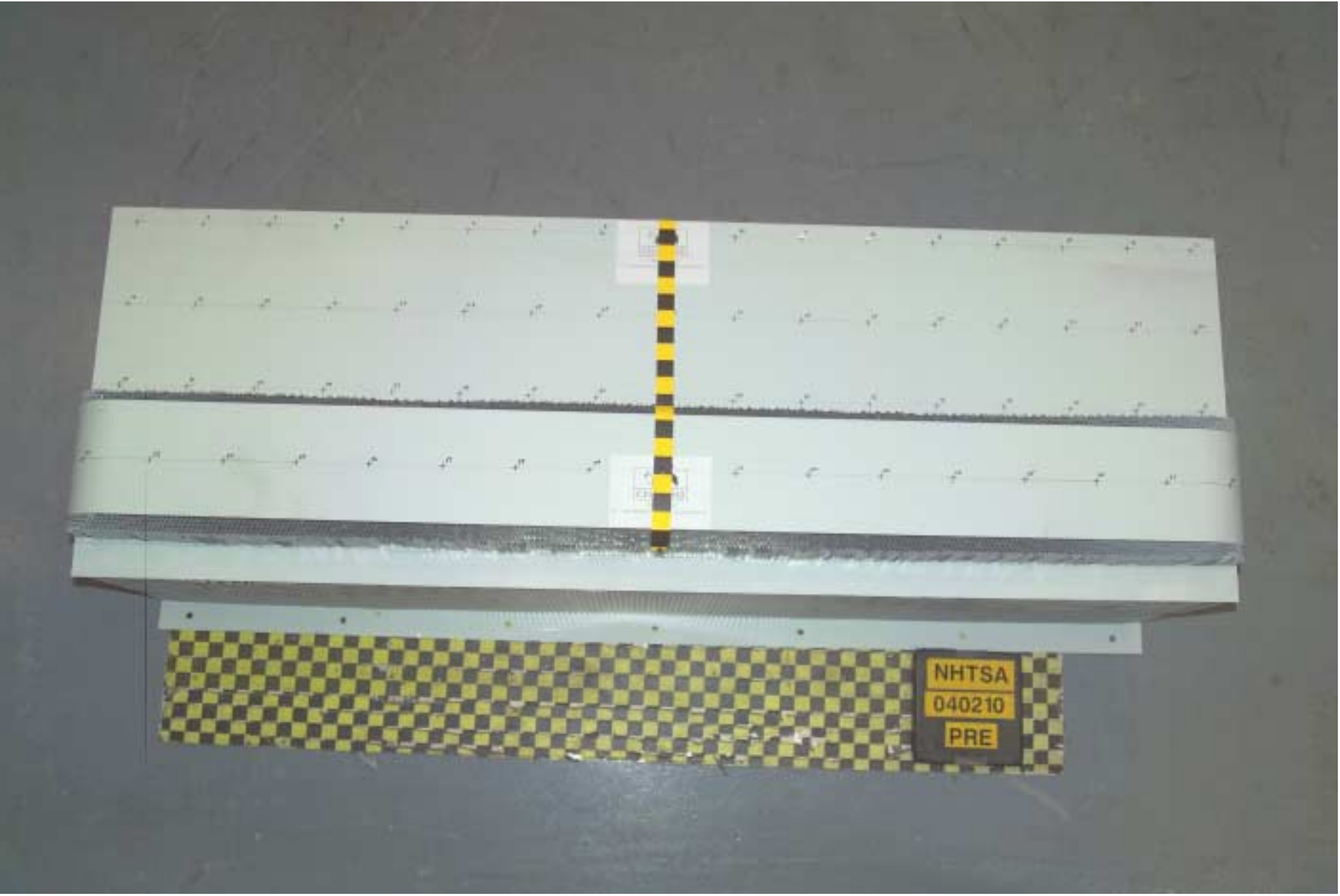


Figure A-7 Pre-Test Frontal View of Impactor Face
A-10

040210



Figure A-8 Post-Test Frontal View of Impactor Face
A-11

040210



Figure A-9 Pre-Test Left Side View of Impactor Face

A-12

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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
A-15**

040210

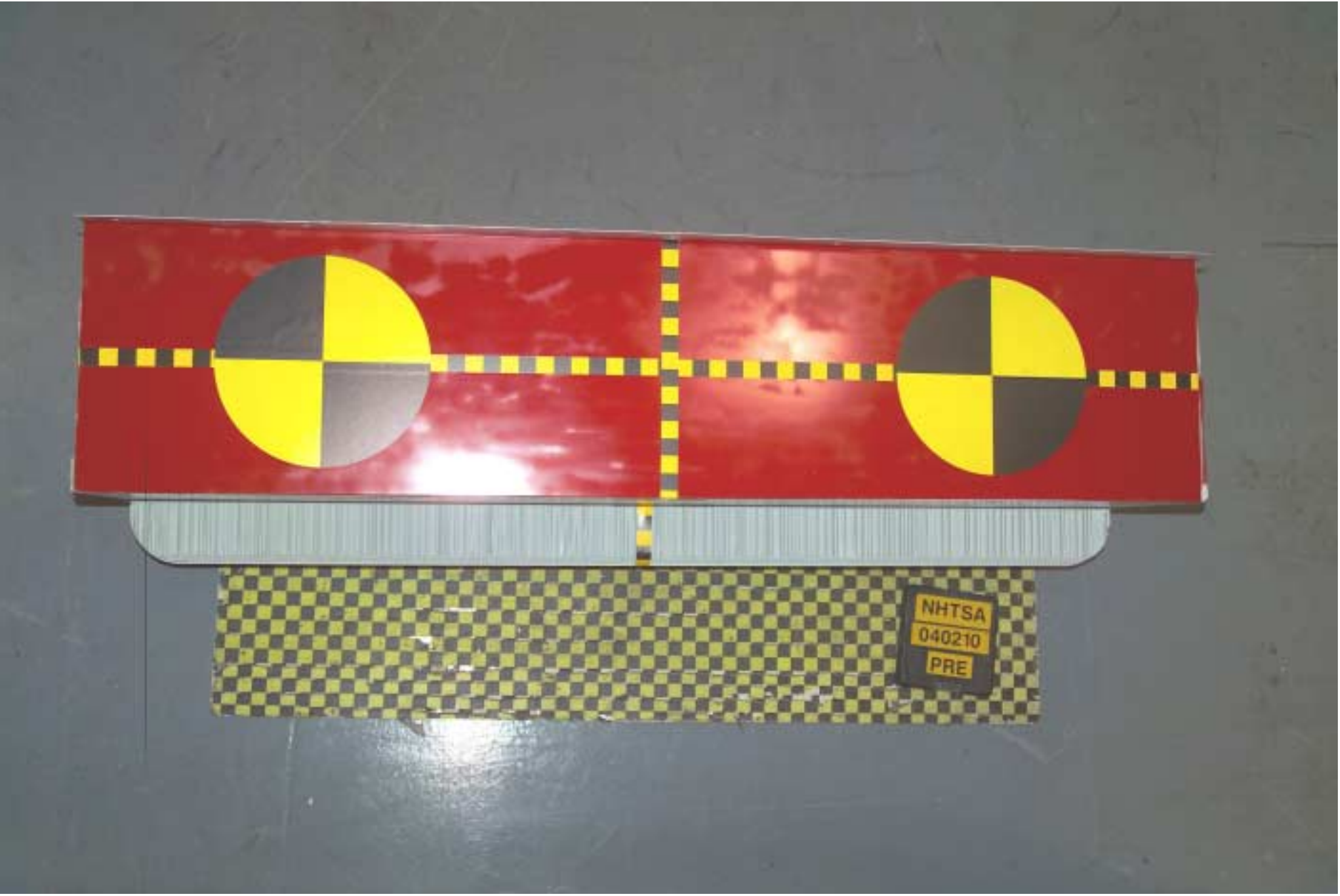


Figure A-13 Pre-Test Top View of Impactor Face
A-16

040210



Figure A-14 Post-Test Top View of Impactor Face
A-17

040210

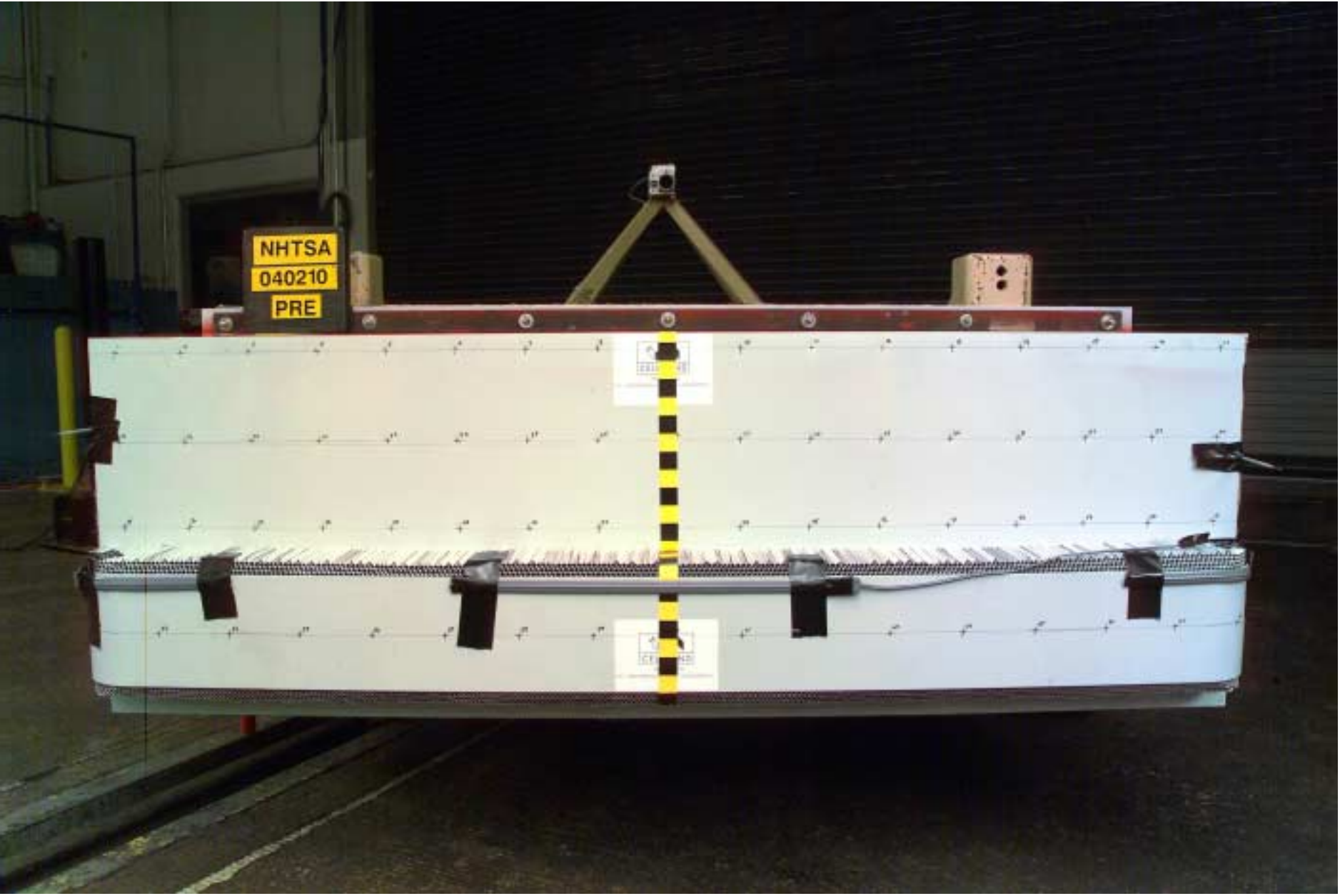


Figure A-15 Pre-Test View of MDB Showing Contact Switches in Place

A-18

040210



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

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

A-23

040210



Figure A-21 Pre-Test Left View of Front SID HIII
A-24

040210



Figure A-22 Pre-Test Left View of Front SID HIII and Belt Position
A-25

040210



Figure A-23 Pre-Test Left View of Front SID HIII and Door Clearance



Figure A-24 Post-Test Left View of Front SID Hill and Door Clearance
A-27



Figure A-25 Pre-Test Left of Rear SID HIII and Belt Position
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040210



Figure A-26 Pre-Test View of Rear SID HIII and Door Clearance



Figure A-27 Post-Test Left View of Rear SID HIII
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Figure A-28 Pre-Test Interior of Front Door

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Figure A-29 Post-Test Interior of Front Door Showing SID HIII Impact Locations



Figure A-30 Post-Test Front SID HIII Contact
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Figure A-31 Pre-Test Interior of Rear Panel

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Figure A-32 Post-Test Interior of Rear Panel Showing SID HIII Impact Locations



Figure A-33 Post-Test Rear SID HIII Contact - View 1
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Figure A-34 Post-Test Rear SID HIII Contact - View 2
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Figure A-35 Pre-Test Left Side View of MDB With Impactor Face in Position

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Figure A-36 Pre-Test Primary Impact Point View
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Figure A-37 Post-Test Primary Impact Point View
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Figure A-38 Pre-Test Right Side View of MDB with Impactor Face in Position

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Figure A-39 Pre-Test Secondary Impact Point View
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Figure A-40 Post-Test Secondary Impact Point View
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MFD. BY MAZDA MOTOR CORPORATION

DATE	GVWR/PNBV		GAWR/PNBE FRT		GAWR/PNBE RR
10/03	3794 LB		2037 LB		1757 LB
	1721 KG		924 KG		797 KG

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

JM1BK12FX41101590 TYPE: PASSENGER



BODY COLOR CODE; 22V

MADE IN JAPAN

Figure A-41 Vehicle Certification Label View

A-44

040210

VEHICLE CAPACITY WEIGHT (BN8PA)
CAPACITÉ PORTEUSE DU VÉHICULE 385kg(850lbs)

SEATING CAPACITY FRONT SEAT 2
NOMBRE DE PLACES SIÈGE AVANT 2
REAR SEAT . . . 3
SIÈGE ARRIÈRE 5
TOTAL 5

TIRE INFLATION PRESSURE PRESSION DE GONFLAGE DES PNEUS kPa(kgf/cm²)(p.s.i.,lb/po²)		
TIRE SIZE TAILLE DES PNEUS	FRONT/AV.	REAR/AR.
P195/65R15 89H	230(2.3)(33)	230(2.3)(33)
P205/55R16 89H	220(2.2)(32)	220(2.2)(32)

Figure A-42 Vehicle Recommended Tire Pressure Label View



Figure A-43 Impact Event
A-46



Figure A-44 Pre-Test Fuel Cap
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040210



Figure A-45 Post-Test Fuel Cap
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Figure A-46 FMVSS 301 Rollover View at 90°
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Figure A-47 FMVSS 301 Rollover View at 180°
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040210

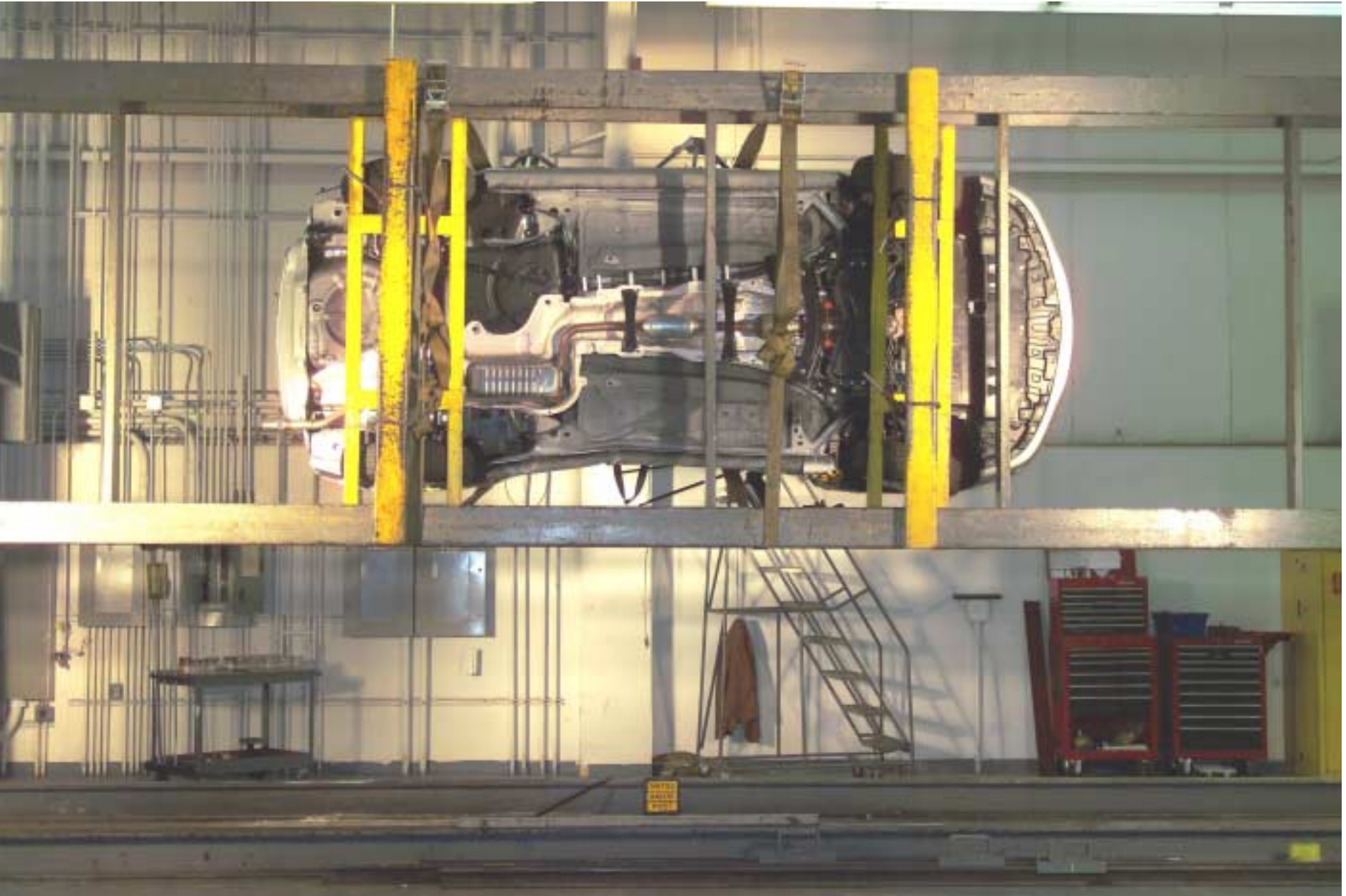


Figure A-48 FMVSS 301 Rollover View at 270°
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Figure A-49 FMVSS 301 Rollover View at 360°
A-52

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

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4	Driver Head Y-Axis Velocity	B-14
5	Driver Head Z-Axis Acceleration	B-15
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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
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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
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22	Driver Pelvis Y-Axis Velocity	B-32
23	Driver Shoulder Contact Switch	B-33
24	Driver Pelvis Contact Switch	B-34

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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

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34	Left Rear Passenger Neck Z-Axis Axial Force	B-44
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39	Left Rear Passenger Upper Rib Y-Axis Acceleration	B-49
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43	Left Rear Passenger Lower Spine Y-Axis Acceleration	B-53
44	Left Rear Passenger Lower Spine Y-Axis Velocity	B-54
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47	Left Rear Passenger Shoulder Contact Switch	B-57
48	Left Rear Passenger Pelvis Contact Switch	B-58

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Driver and Passenger Dummy Redundant Instrumentation Plots

Acceleration Data - Filter Class 1000 - Redundant

Integration Data - Filter Class 180 - Redundant

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67	Left Rear Passenger Head Y-Axis Redundant Velocity	B-78
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72	Left Rear Passenger Upper Rib Y-Axis Redundant Velocity	B-83

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Driver and Passenger Dummy Redundant Instrumentation Plots (Continued)

Acceleration Data - Filter Class 1000 - Redundant

Integration Data - Filter Class 180 - Redundant

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
73	Left Rear Passenger Lower Rib Y-Axis Redundant Acceleration	B-84
74	Left Rear Passenger Lower Rib Y-Axis Redundant Velocity	B-85
75	Left Rear Passenger Lower Spine Y-Axis Redundant Acceleration	B-86
76	Left Rear Passenger Lower Spine Y-Axis Redundant Velocity	B-87
77	Left Rear Passenger Pelvis Y-Axis Redundant Acceleration	B-88
78	Left Rear Passenger Pelvis Y-Axis Redundant Velocity	B-89

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Test Vehicle Instrumentation Plots
Acceleration Data - Filter Class 60
Integration Data - Filter Class 180

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79	Right Side Sill at Front Seat X-Axis Acceleration	B-91
80	Right Side Sill at Front Seat X-Axis Velocity	B-92
81	Right Side Sill at Front Seat Y-Axis Acceleration	B-93
82	Right Side Sill at Front Seat Y-Axis Velocity	B-94
83	Right Side Sill at Front Seat Z-Axis Acceleration	B-95
84	Right Side Sill at Front Seat Z-Axis Velocity	B-96
85	Right Side Sill at Front Seat Resultant Acceleration	B-97
86	Right Side Sill at Rear Seat X-Axis Acceleration	B-98
87	Right Side Sill at Rear Seat X-Axis Velocity	B-99
88	Right Side Sill at Rear Seat Y-Axis Acceleration	B-100
89	Right Side Sill at Rear Seat Y-Axis Velocity	B-101
90	Right Side Sill at Rear Seat Z-Axis Acceleration	B-102
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92	Right Side Sill at Rear Seat Resultant Acceleration	B-104
93	Rear Floorpan Above Axle X-Axis Acceleration	B-105
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96	Rear Floorpan Above Axle Y-Axis Velocity	B-108
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99	Rear Floorpan Above Axle Resultant Acceleration	B-111
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101	Left Side Sill at Front Seat Y-Axis Velocity	B-113
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Test Vehicle Instrumentation Plots (Continued)
Acceleration Data - Filter Class 60
Integration Data - Filter Class 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
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104	Left Side Sill at Rear Seat Y-Axis Velocity	B-116
105	Left Side Sill at Rear Seat Y-Axis Displacement	B-117
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107	Right Rear Occupant Compartment Y-Axis Velocity	B-119
108	Right Rear Occupant Compartment Y-Axis Displacement	B-120
109	Left Lower A-Post Y-Axis Acceleration	B-121
110	Left Lower A-Post Y-Axis Velocity	B-122
111	Left Middle A-Post Y-Axis Acceleration	B-123
112	Left Middle A-Post Y-Axis Velocity	B-124
113	Left Lower B-Post Y-Axis Acceleration	B-125
114	Left Lower B-Post Y-Axis Velocity	B-126
115	Left Middle B-Post Y-Axis Acceleration	B-127
116	Left Middle B-Post Y-Axis Velocity	B-128
117	Left Front Seat Track Y-Axis Acceleration	B-129
118	Left Front Seat Track Y-Axis Velocity	B-130
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120	Left Rear Seat Track Y-Axis Velocity	B-132
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122	Vehicle Center of Gravity X-Axis Velocity	B-134
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124	Vehicle Center of Gravity Y-Axis Velocity	B-136
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127	Vehicle Center of Gravity Resultant Acceleration	B-139

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 MDB Instrumentation Plots
 Acceleration Data - Filter Class 60
 Integration Data - Filter Class 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
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129	MDB Center of Gravity X-Axis Velocity	B-142
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131	MDB Center of Gravity Y-Axis Velocity	B-144
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134	MDB Center of Gravity Resultant Acceleration	B-147
135	MDB Left Rear X-Axis Acceleration	B-148
136	MDB Left Rear X-Axis Velocity	B-149
137	MDB Left Rear Y-Axis Acceleration	B-150
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139	MDB Right Side Contact Switch	B-152
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Driver and Passenger Dummy Instrumentation Plots
Acceleration Data - FIR Filtered

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143	Driver Lower Spine Y-Axis Acceleration	B-157
144	Driver Pelvis Y-Axis Acceleration	B-158
145	Left Rear Passenger Upper Rib Y-Axis Acceleration	B-159
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155	Left Rear Passenger Lower Spine Y-Axis Redundant Acceleration	B-169
156	Left Rear Passenger Pelvis Y-Axis Redundant Acceleration	B-170

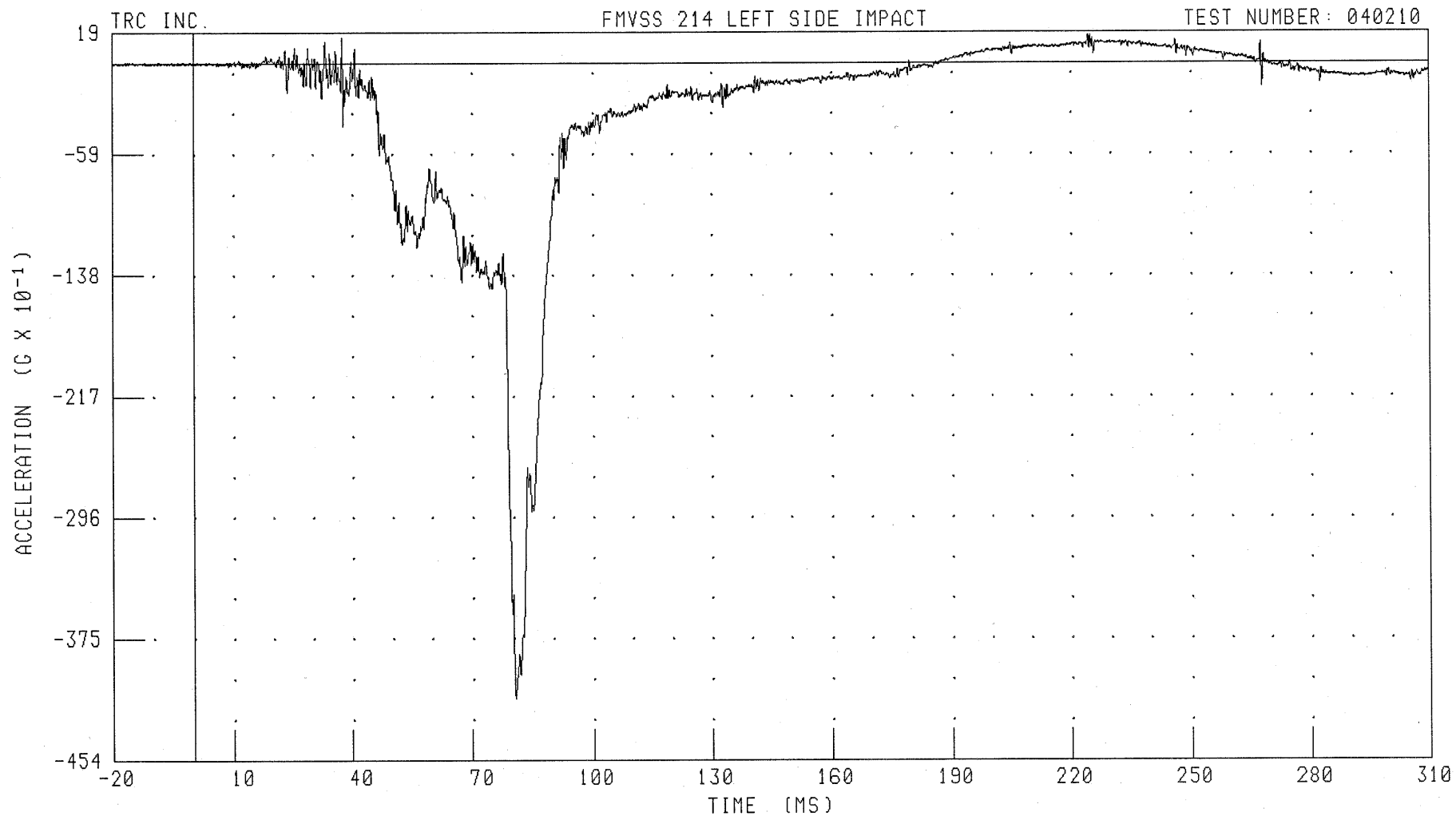
Driver and Passenger Dummy Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXG1 FILTER: CH. CLASS 1000

PEAK DATA: 1.84 G @ 224.40 MS; -41.38 G @ 80.48 MS

B-11

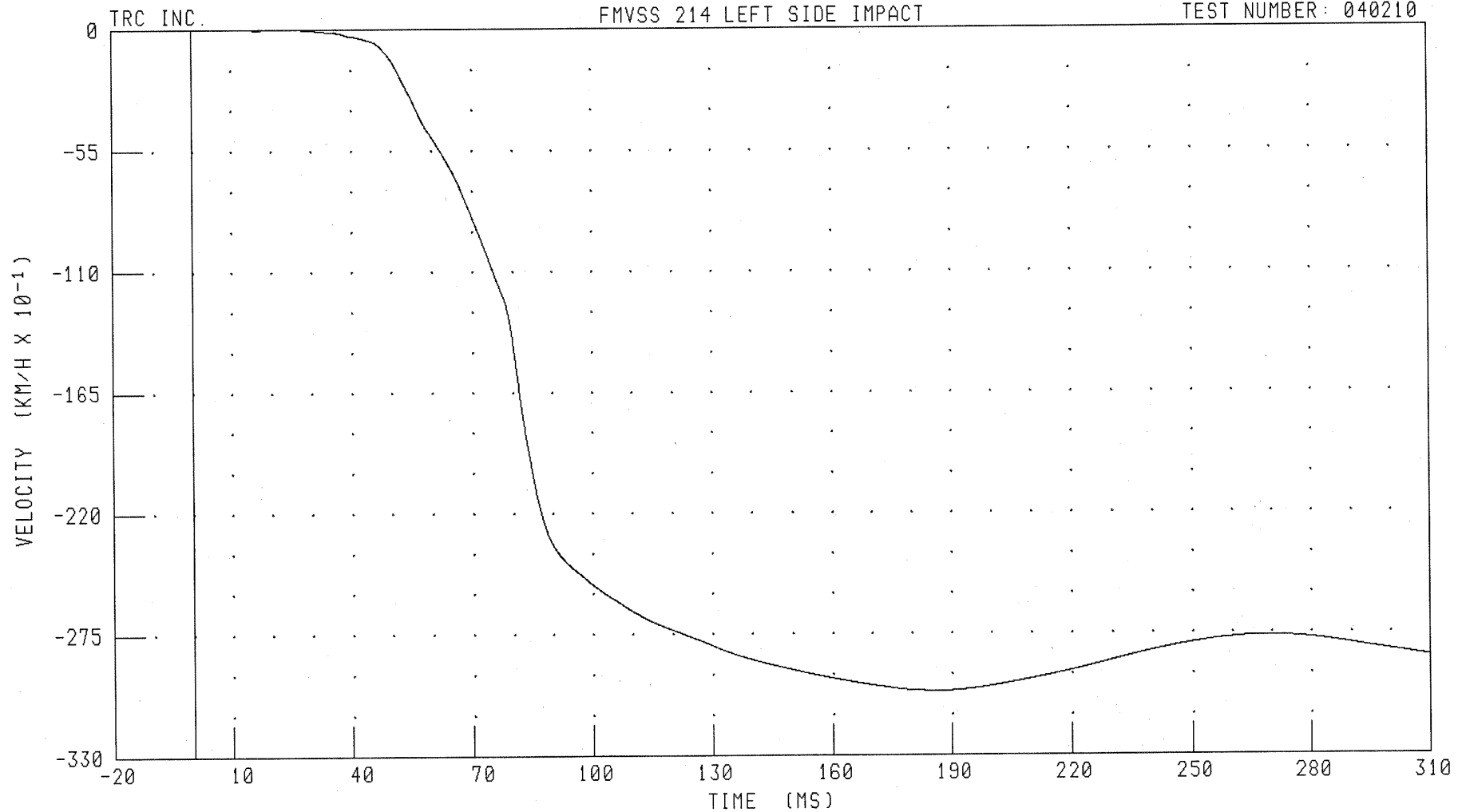
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.02 KM/H @ 23.12 MS; -30.11 KM/H @ 186.80 MS

B-12

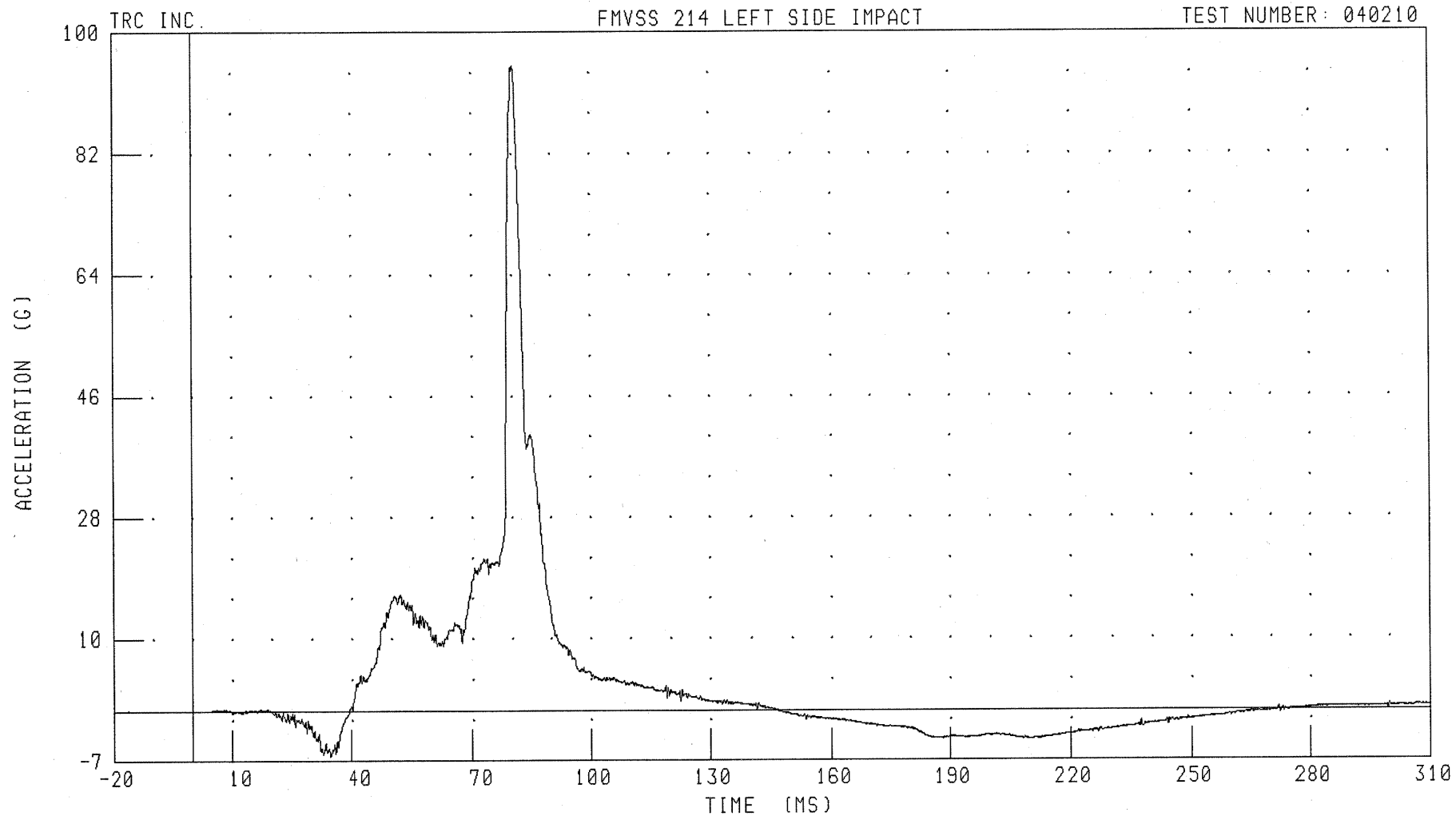
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYG1 FILTER: CH. CLASS 1000

PEAK DATA: 95.71 G @ 80.56 MS; -6.71 G @ 34.64 MS

B-13

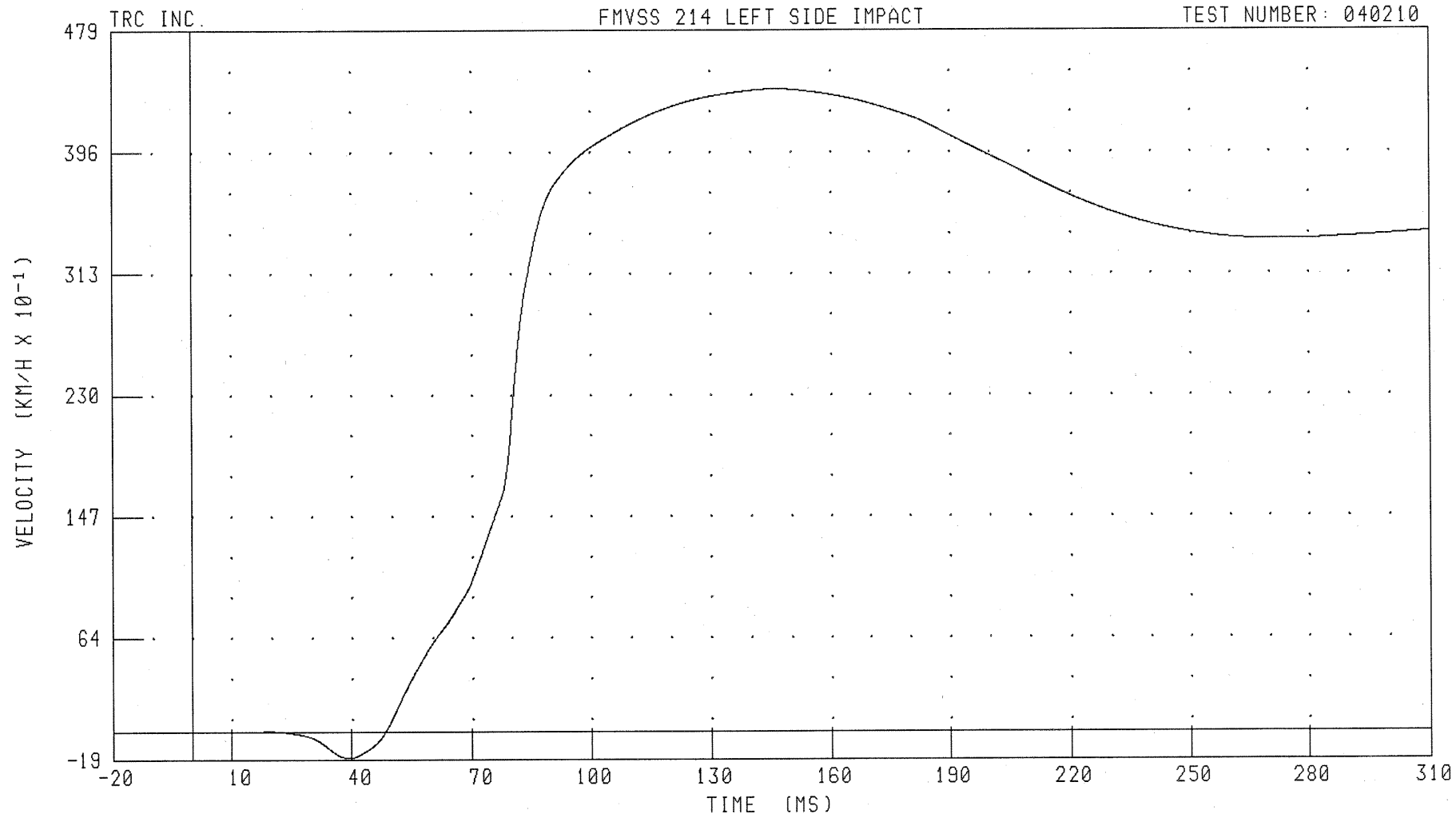
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER). INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYV1 FILTER: CH. CLASS 180

PEAK DATA: 43.90 KM/H @ 146.40 MS; -1.77 KM/H @ 39.52 MS

B-14

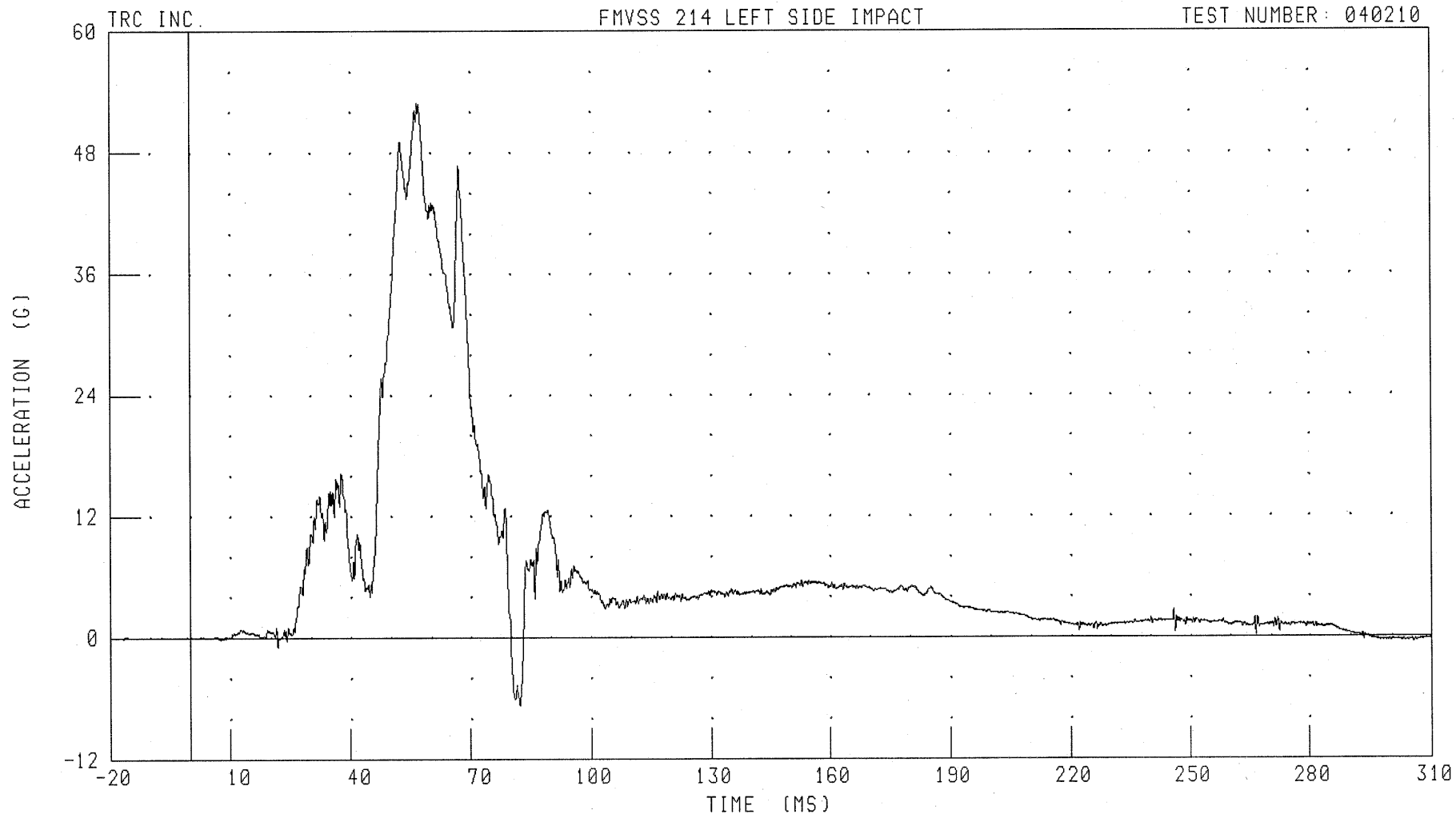
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZG1 FILTER: CH. CLASS 1000

PEAK DATA: 52.87 G @ 56.72 MS, -6.73 G @ 82.24 MS

B-15

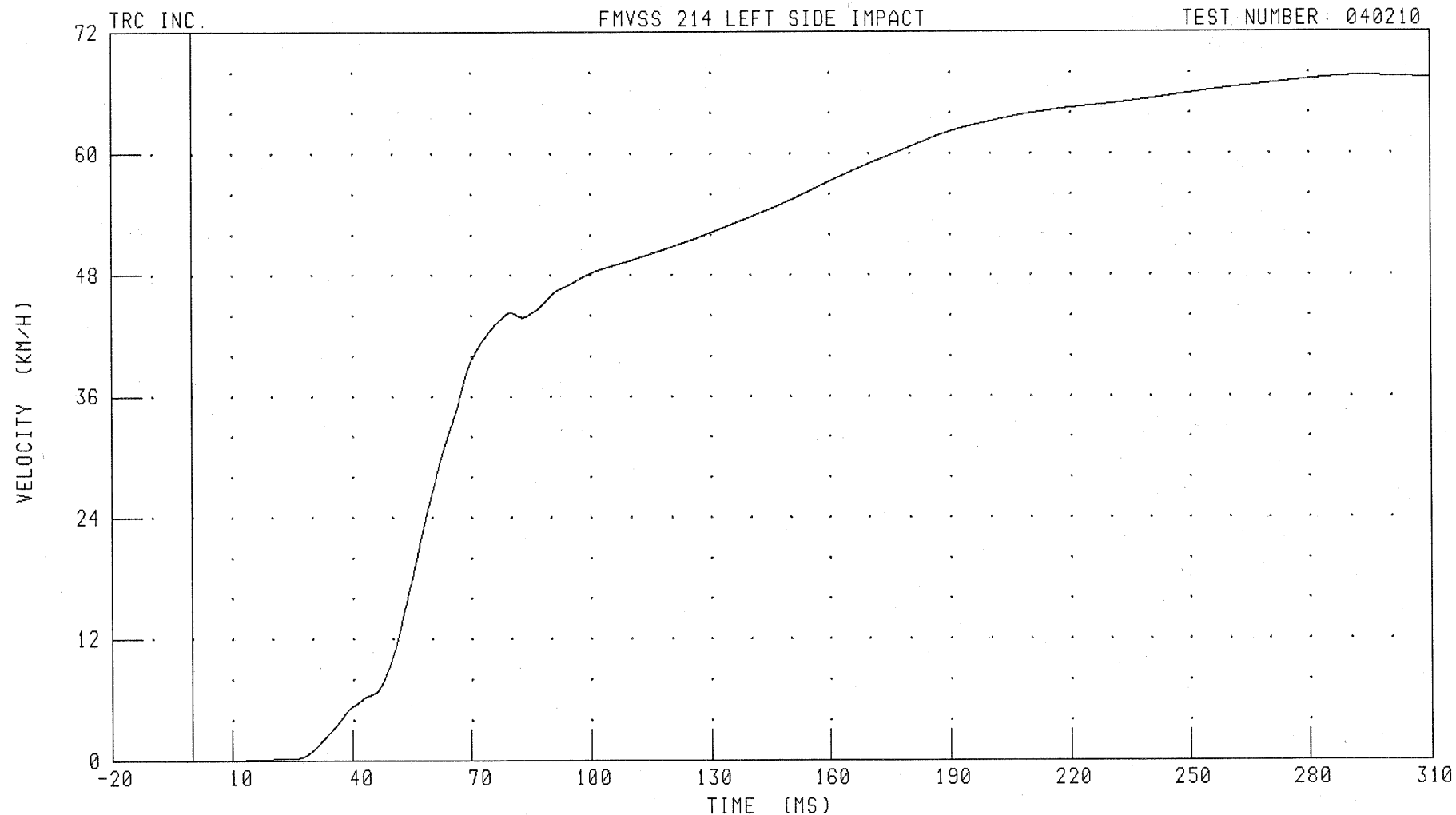
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZV1 FILTER: CH. CLASS 180

PEAK DATA: 67.63 KM/H @ 294.08 MS; 0.00 KM/H @ 9.28 MS

B-16

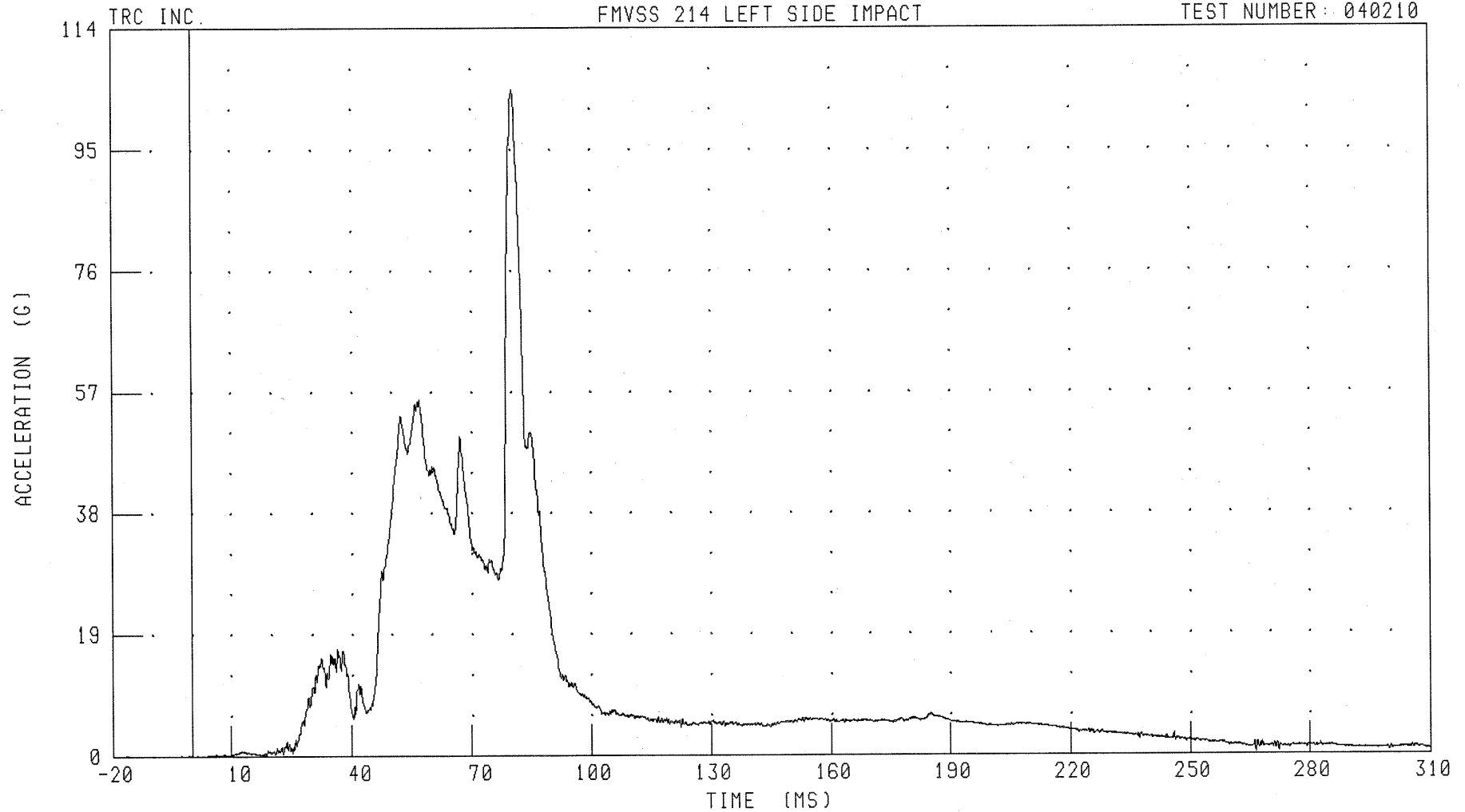
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDRG1 FILTER: CH. CLASS 1000

PEAK DATA: 104.32 G @ 80.56 MS; 0.01 G @ -19.76 MS

B-17

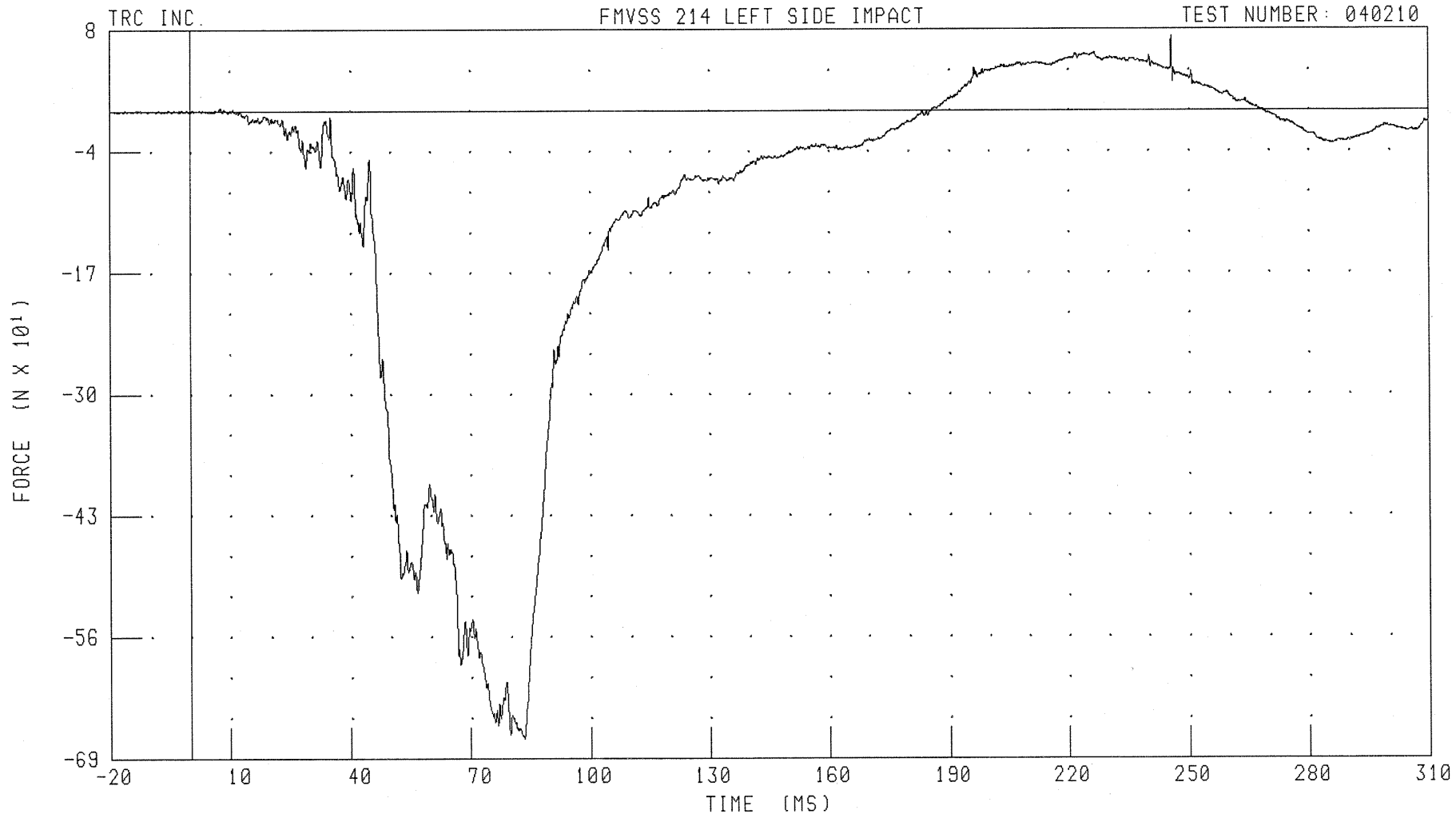
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER NECK X-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKXF1 FILTER: CH. CLASS 1000

B-18

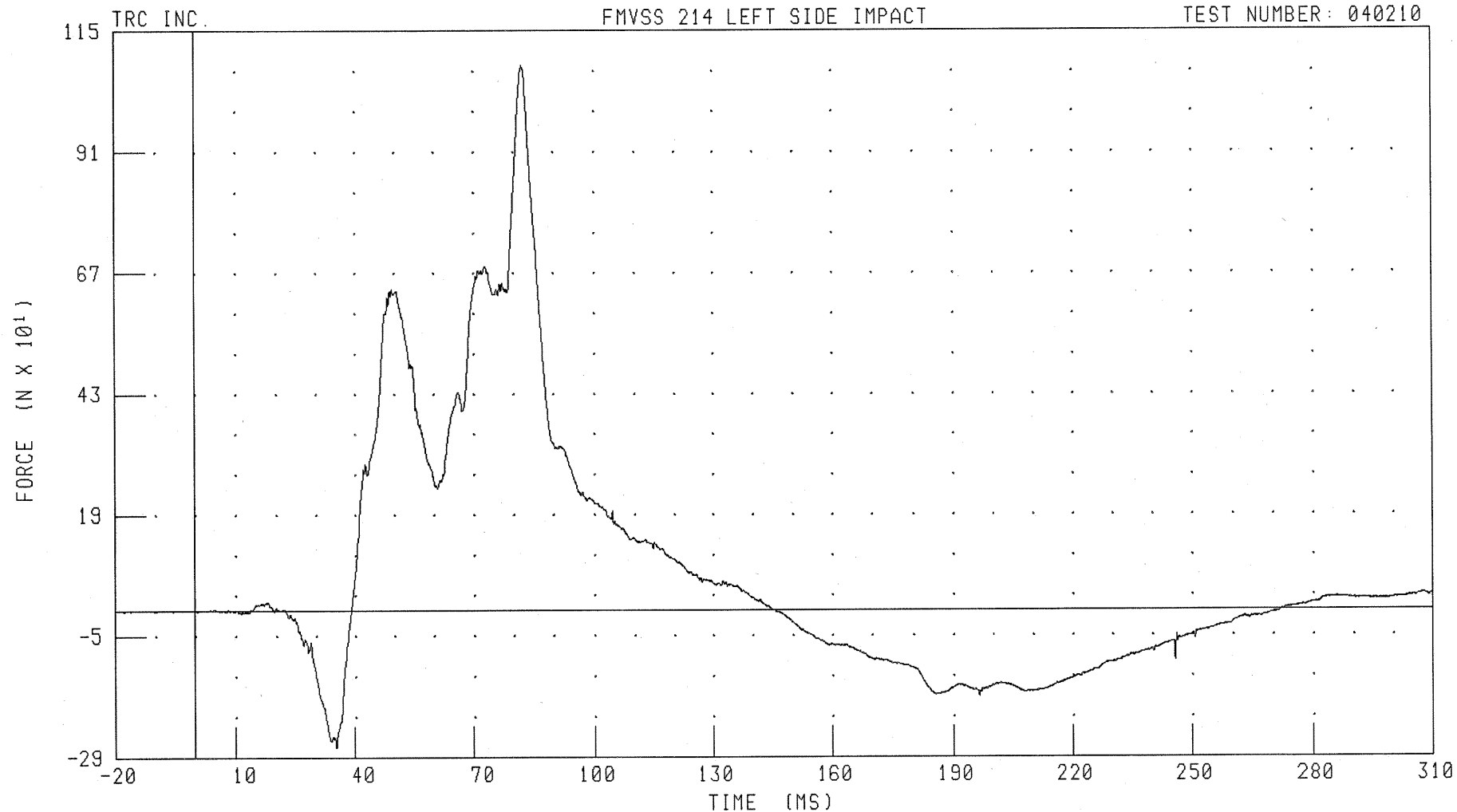
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER NECK Y-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKYF1

FILTER: CH. CLASS 1000

PEAK DATA: 1081.66 N @ 82.40 MS; -270.80 N @ 35.20 MS

B-19

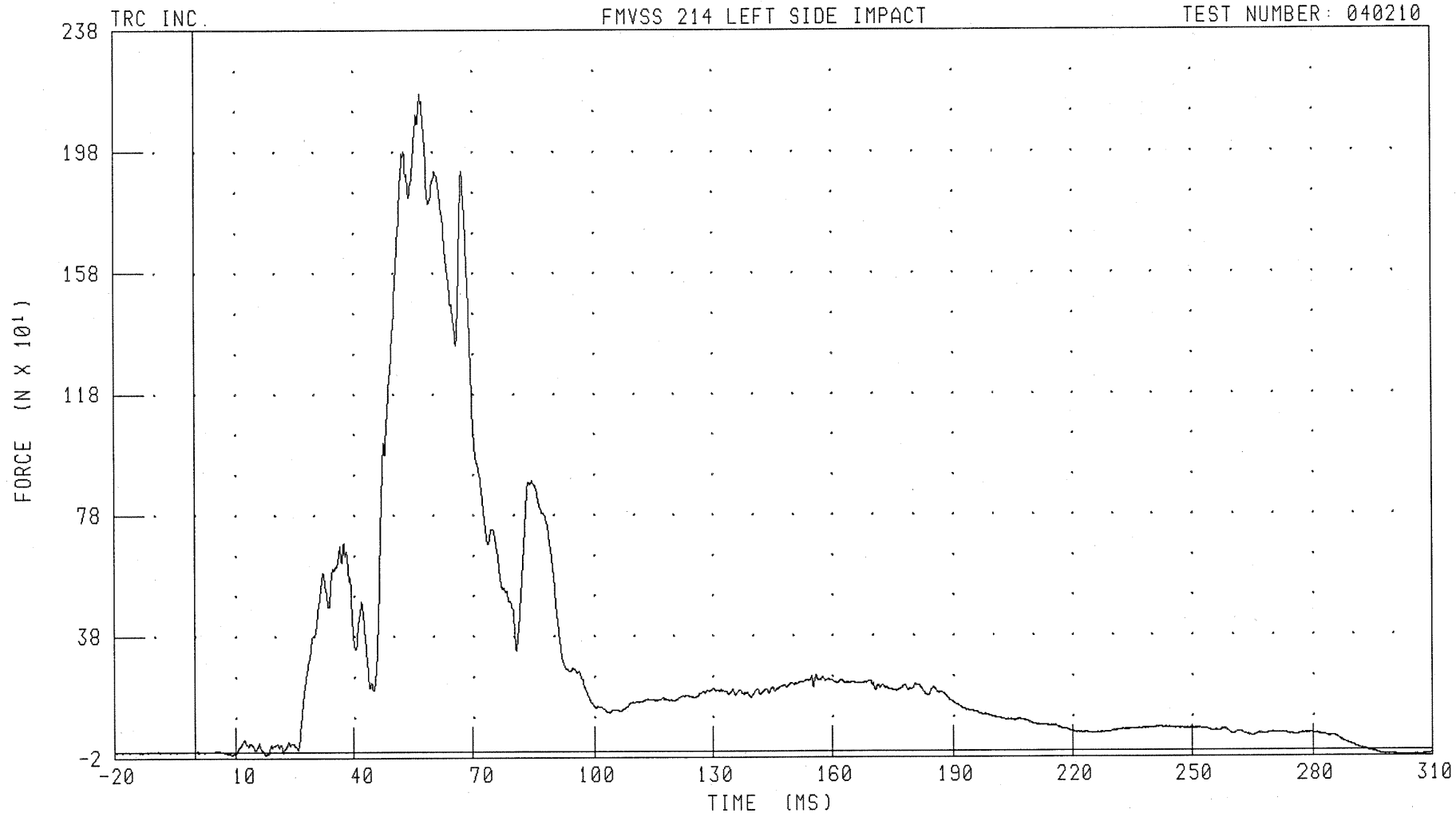
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER NECK Z-AXIS AXIAL FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKZF1

FILTER: CH. CLASS 1000

PEAK DATA: 2169.23 N @ 56.88 MS; -18.68 N @ 302.16 MS

B-20

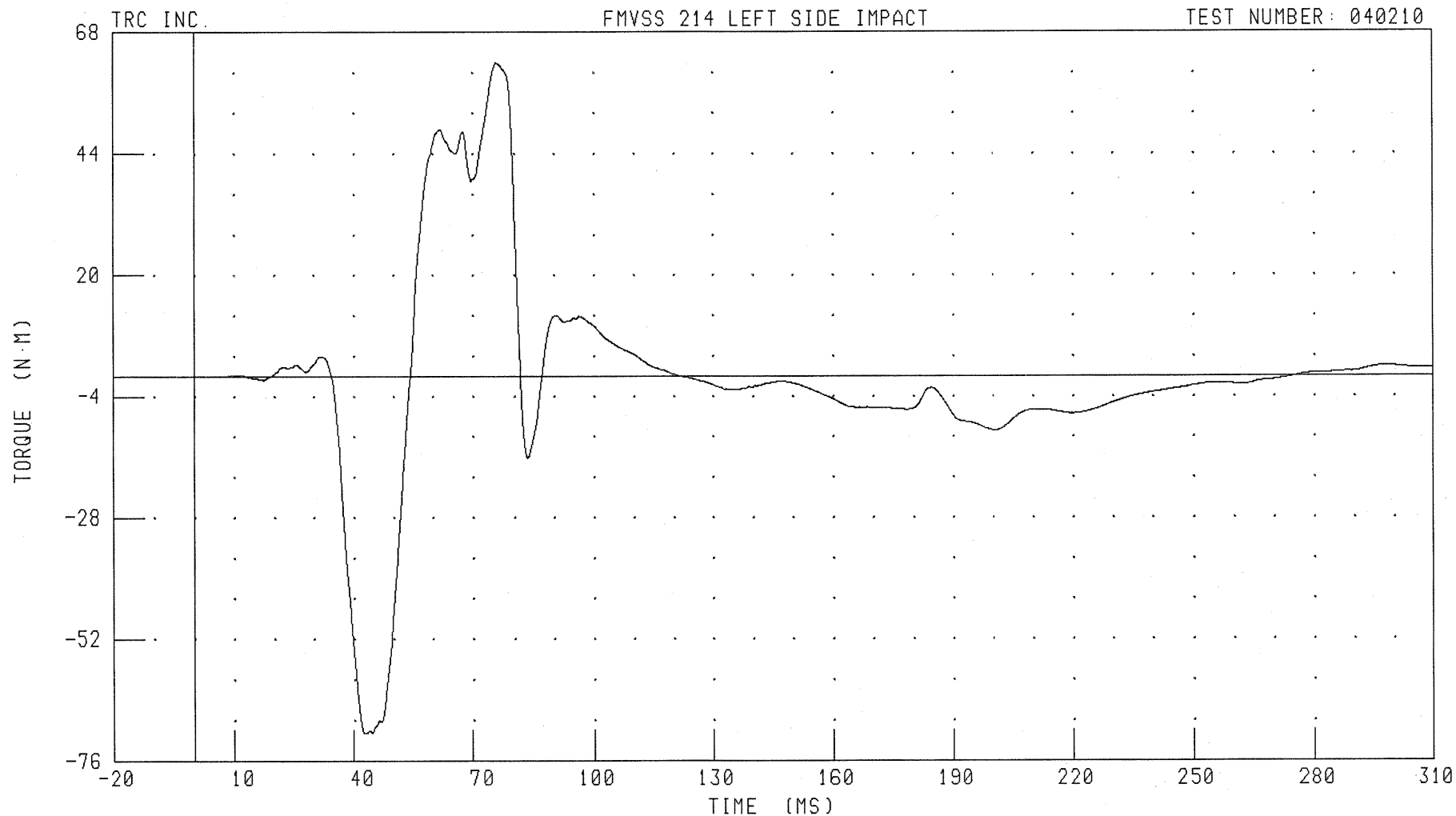
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER NECK MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKXM1 FILTER: CH. CLASS 600

PEAK DATA: 61.91 N·M @ 75.92 MS; -70.59 N·M @ 42.96 MS

B-21

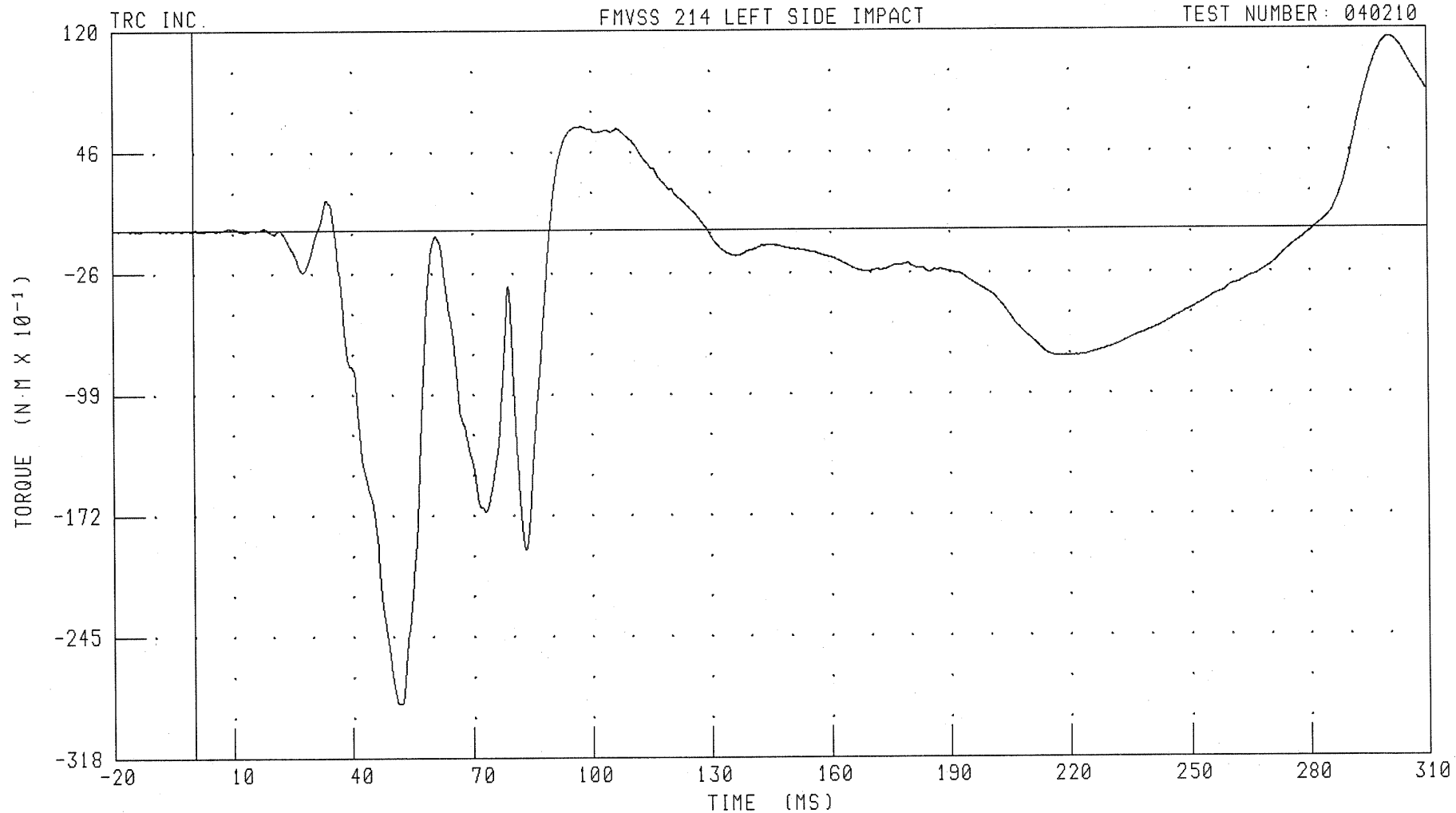
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER NECK MOMENT ABOUT Y AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKYM1 FILTER: CH. CLASS 600

PEAK DATA: 11.47 N·M @ 300.08 MS; -28.55 N·M @ 52.24 MS

B-22

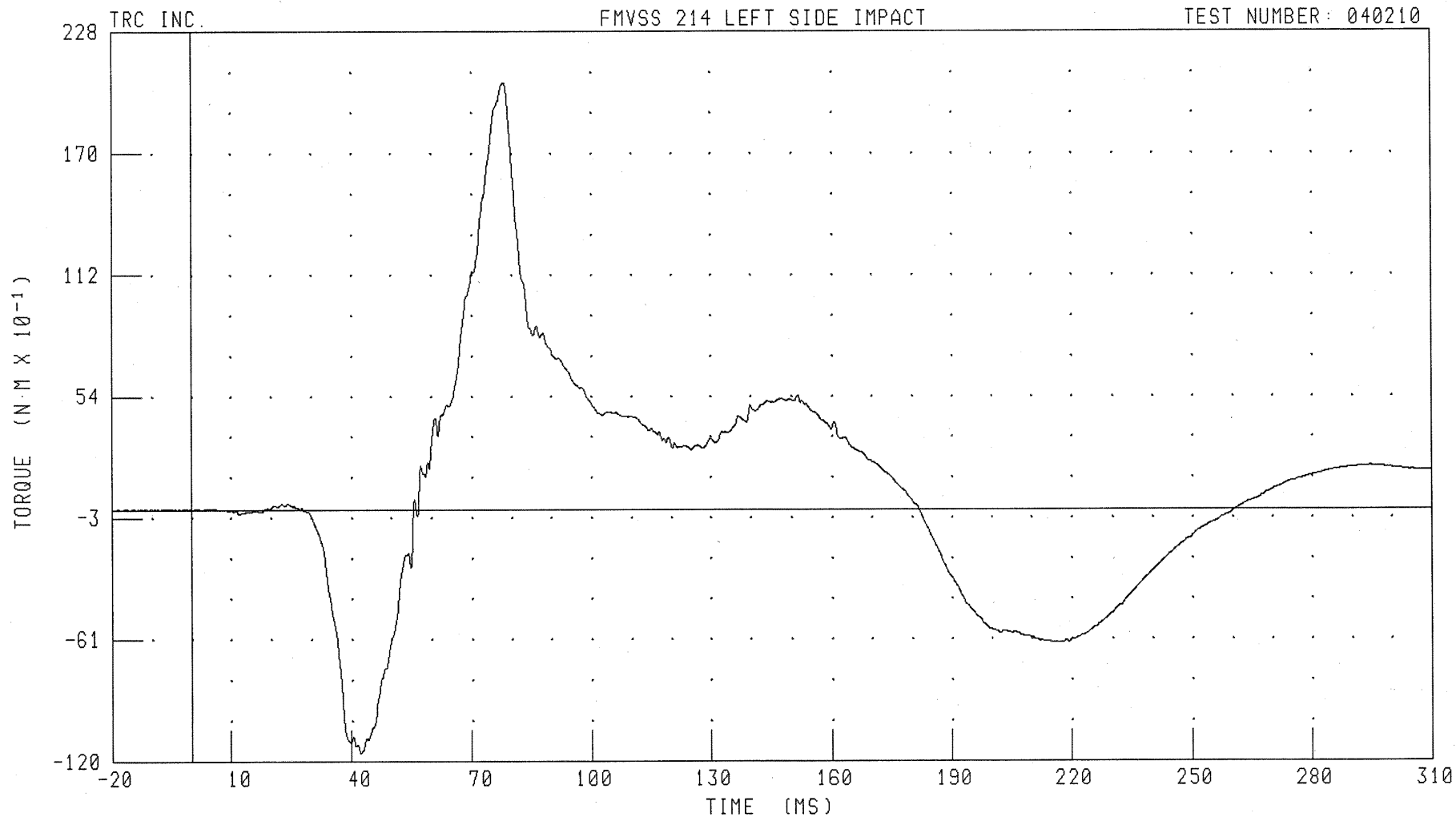
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER NECK MOMENT ABOUT Z AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKZM1 FILTER: CH. CLASS 600

PEAK DATA: 20.34 N·M @ 78.08 MS; -11.63 N·M @ 42.40 MS

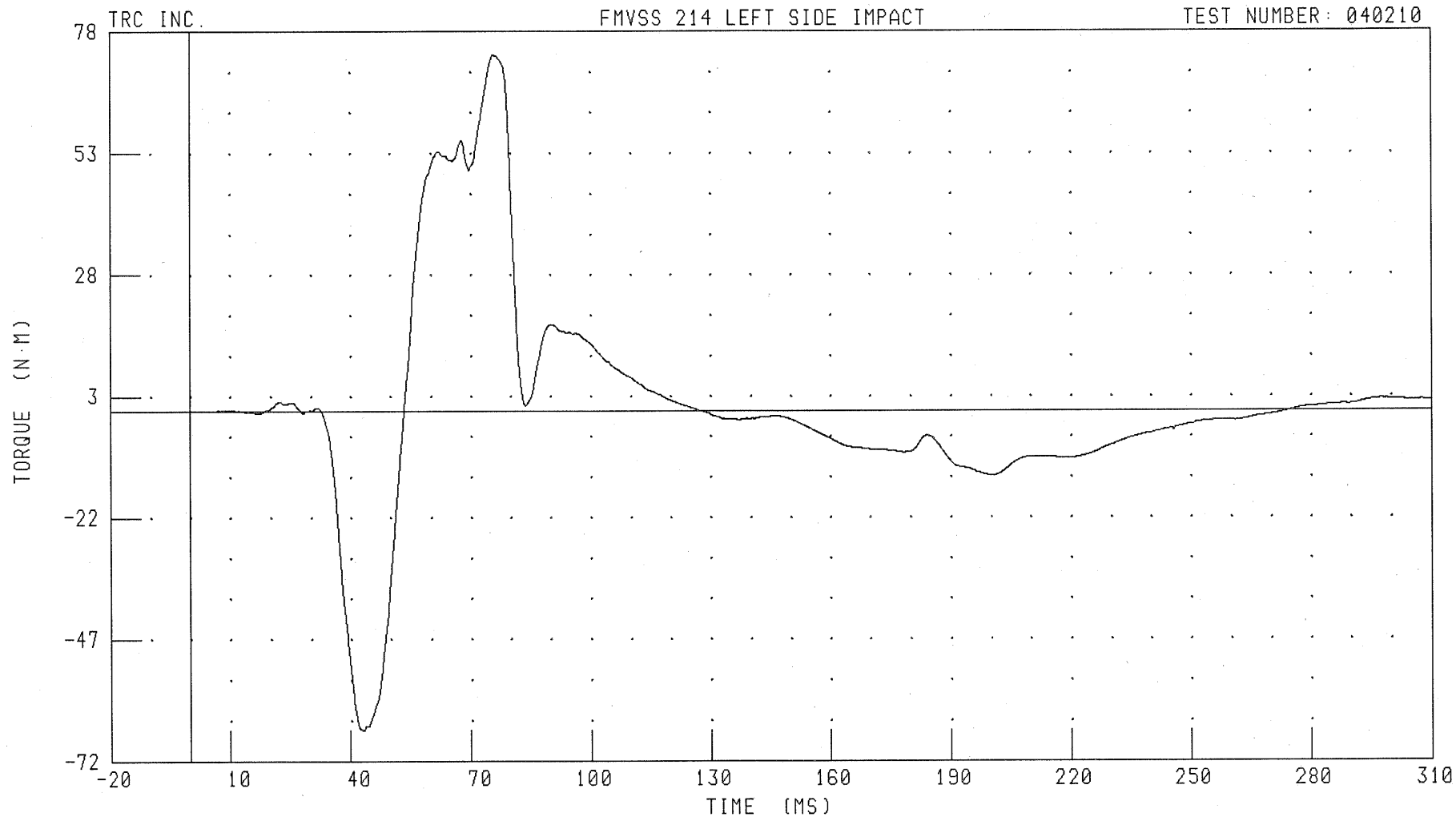
B-23

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER NECK OCCIPITAL CONDYLE MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NK0XM1

FILTER: CH. CLASS 600

PEAK DATA: 73.20 N·M @ 76.00 MS; -65.74 N·M @ 43.20 MS

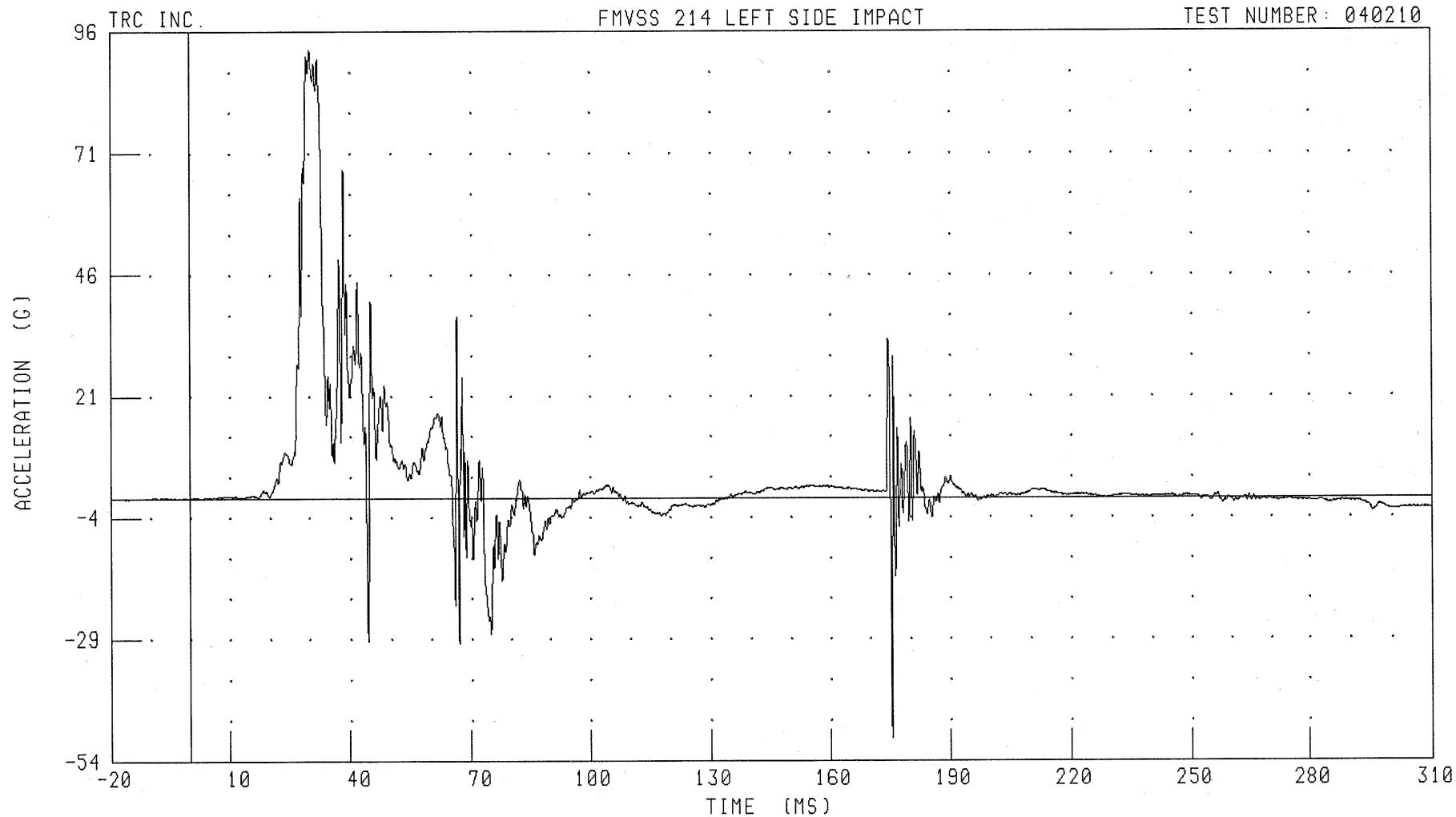
B-24

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYG1 FILTER: CH. CLASS 1000

PEAK DATA: 92.33 G @ 30.32 MS; -49.26 G @ 175.44 MS

B-25

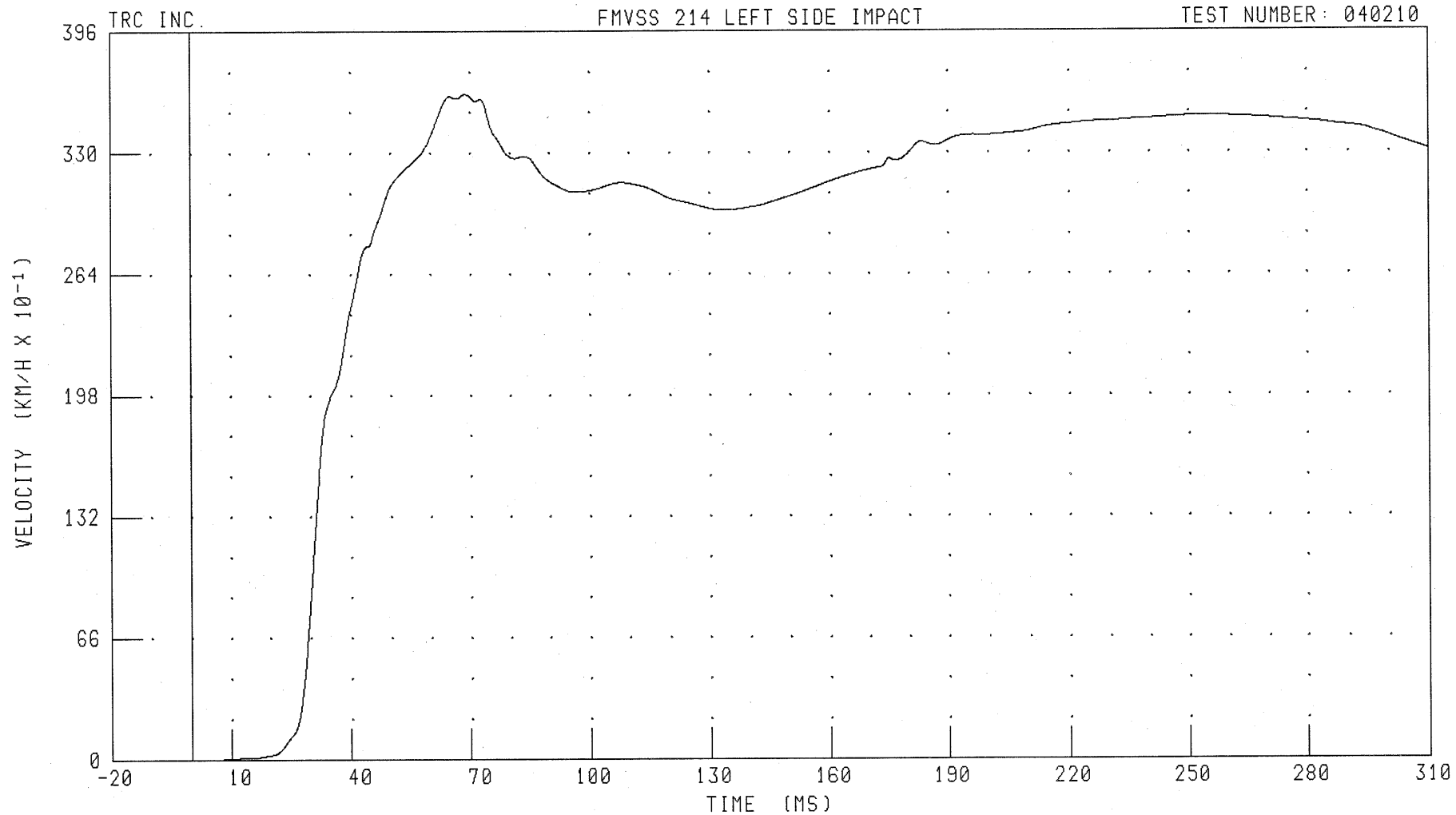
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER UPPER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYV1 FILTER: CH. CLASS 180

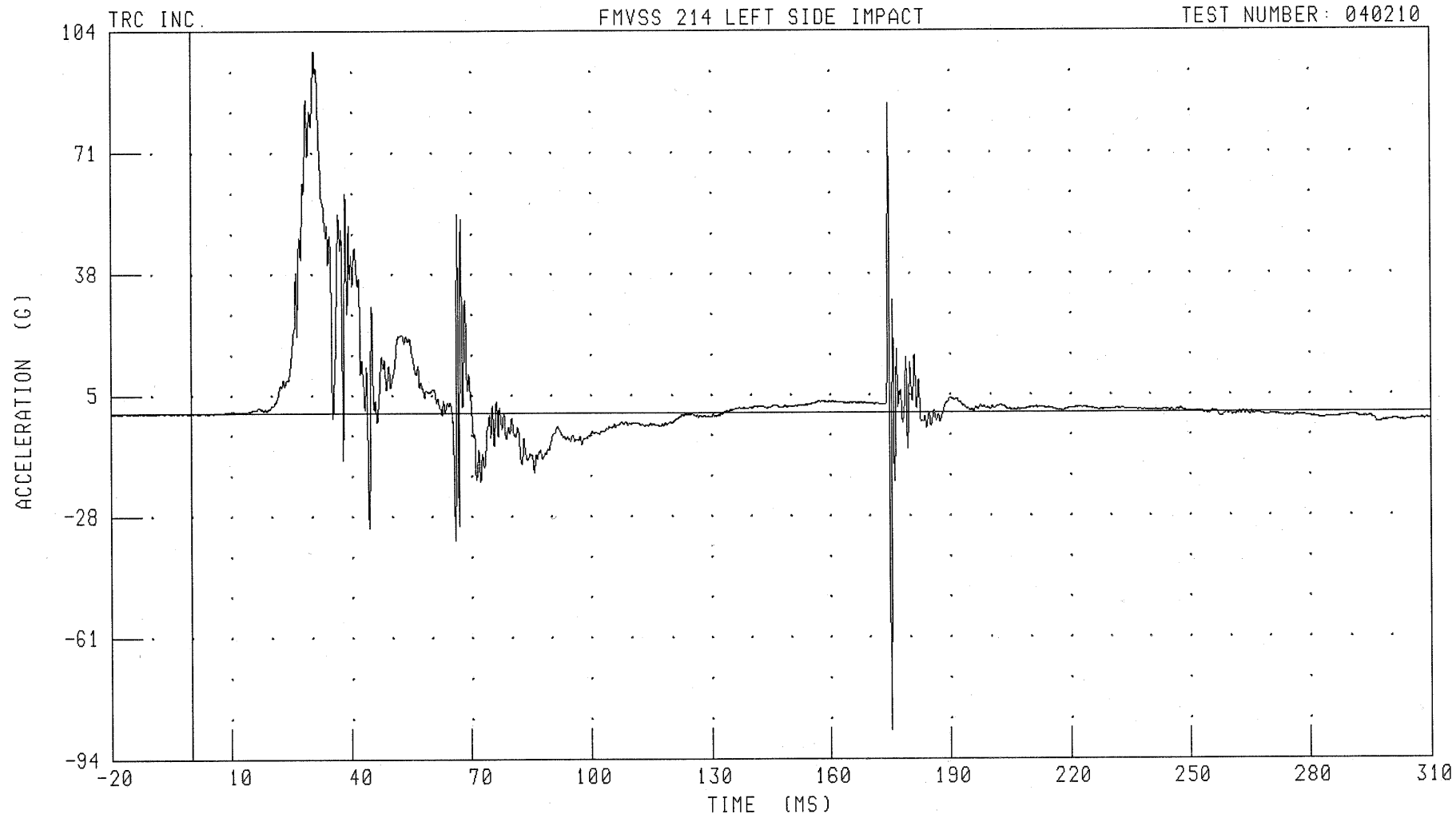
PEAK DATA: 36.18 KM/H @ 68.96 MS; 0.00 KM/H @ 0.00 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYG1 FILTER: CH. CLASS 1000

PEAK DATA: 98.48 G @ 30.64 MS; -86.17 G @ 175.28 MS

B-27

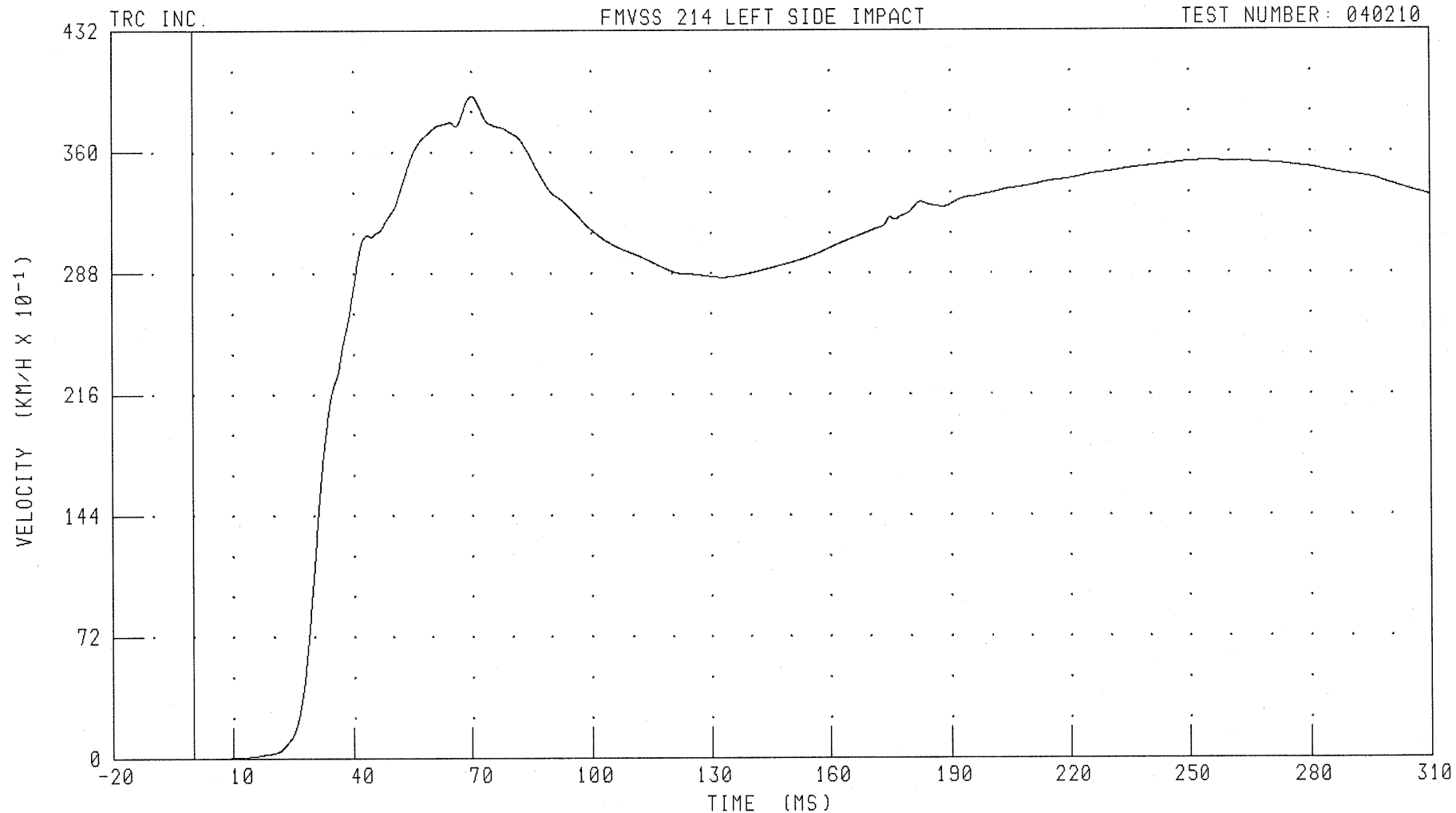
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYV1 FILTER: CH. CLASS 180

PEAK DATA: 39.32 KM/H @ 70.24 MS; 0.00 KM/H @ 0.00 MS

B-28

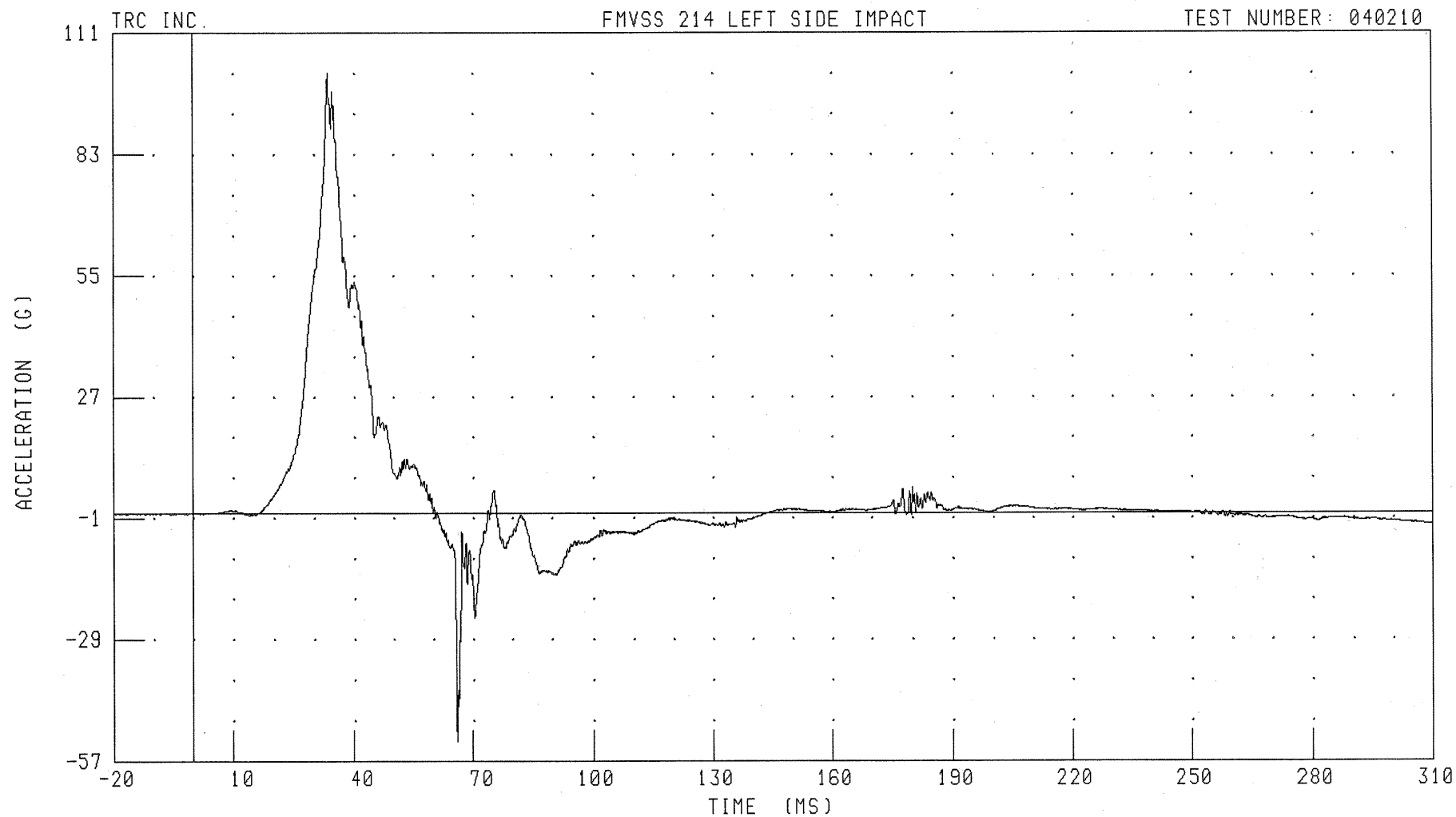
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YG1 FILTER: CH. CLASS 1000

PEAK DATA: 101.84 G @ 33.52 MS; -52.43 G @ 66.00 MS

B-29

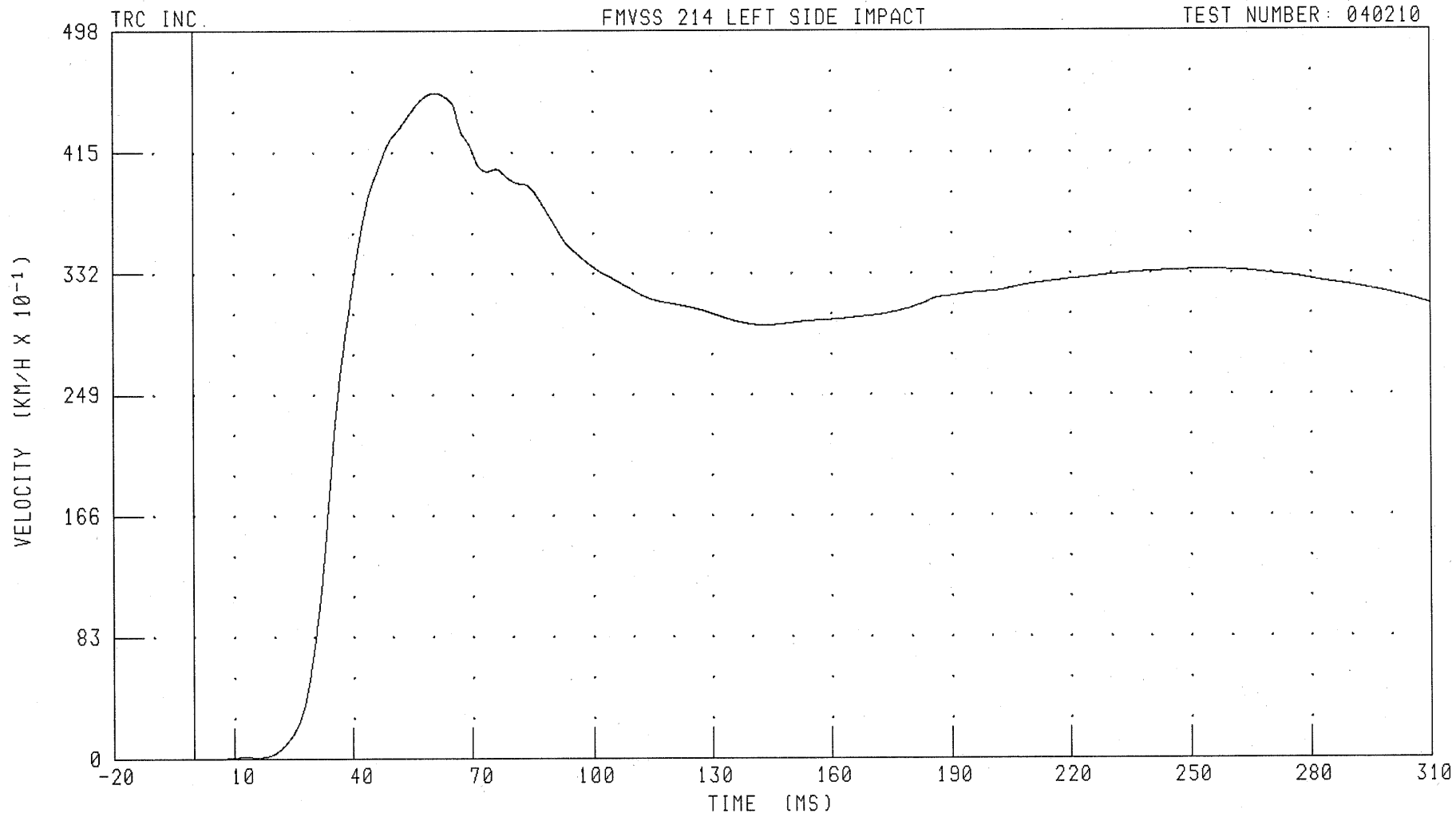
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER SPINE Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YV1 FILTER: CH. CLASS 180

PEAK DATA: 45.55 KM/H @ 60.64 MS; 0.00 KM/H @ 0.00 MS

B-30

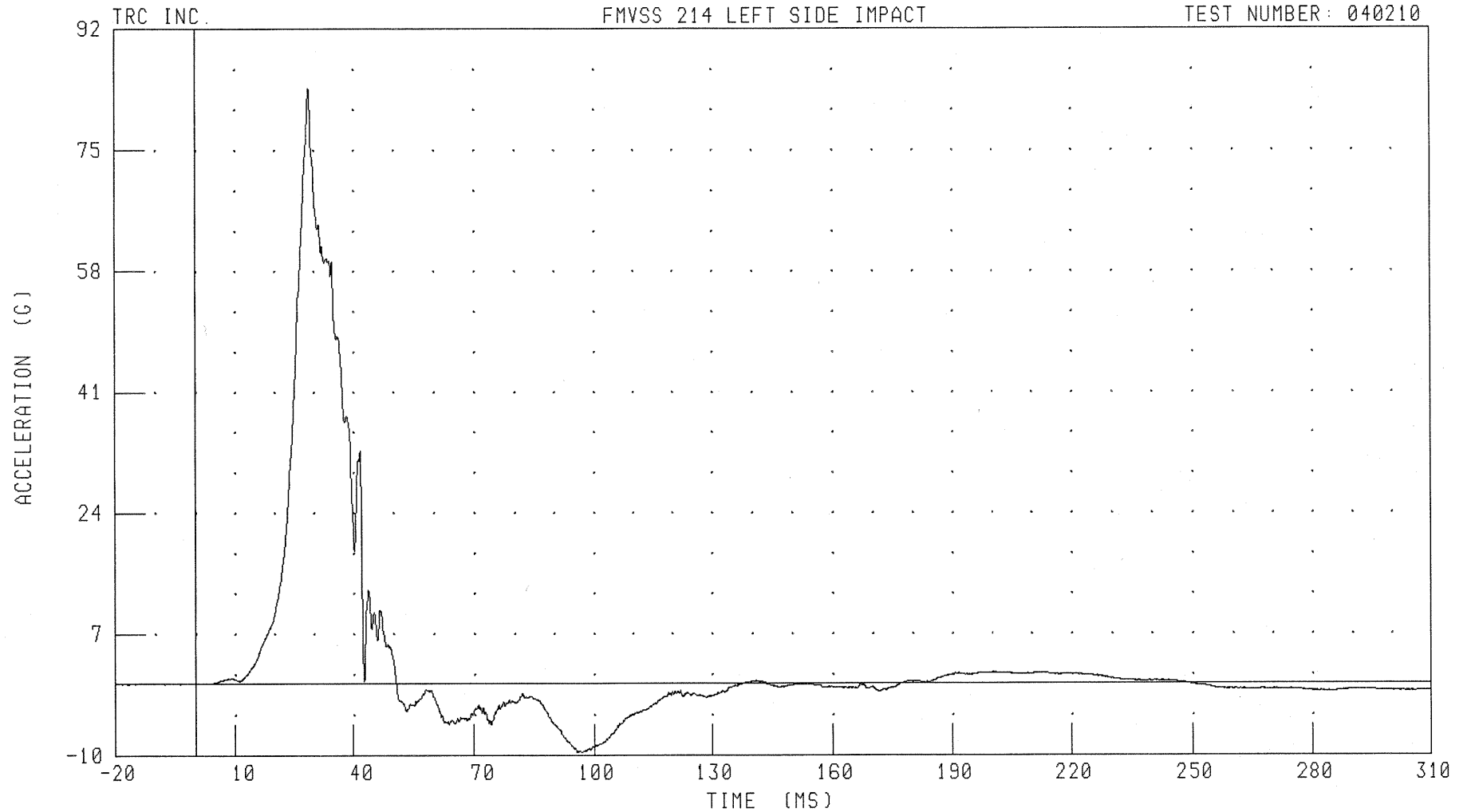
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



B-31

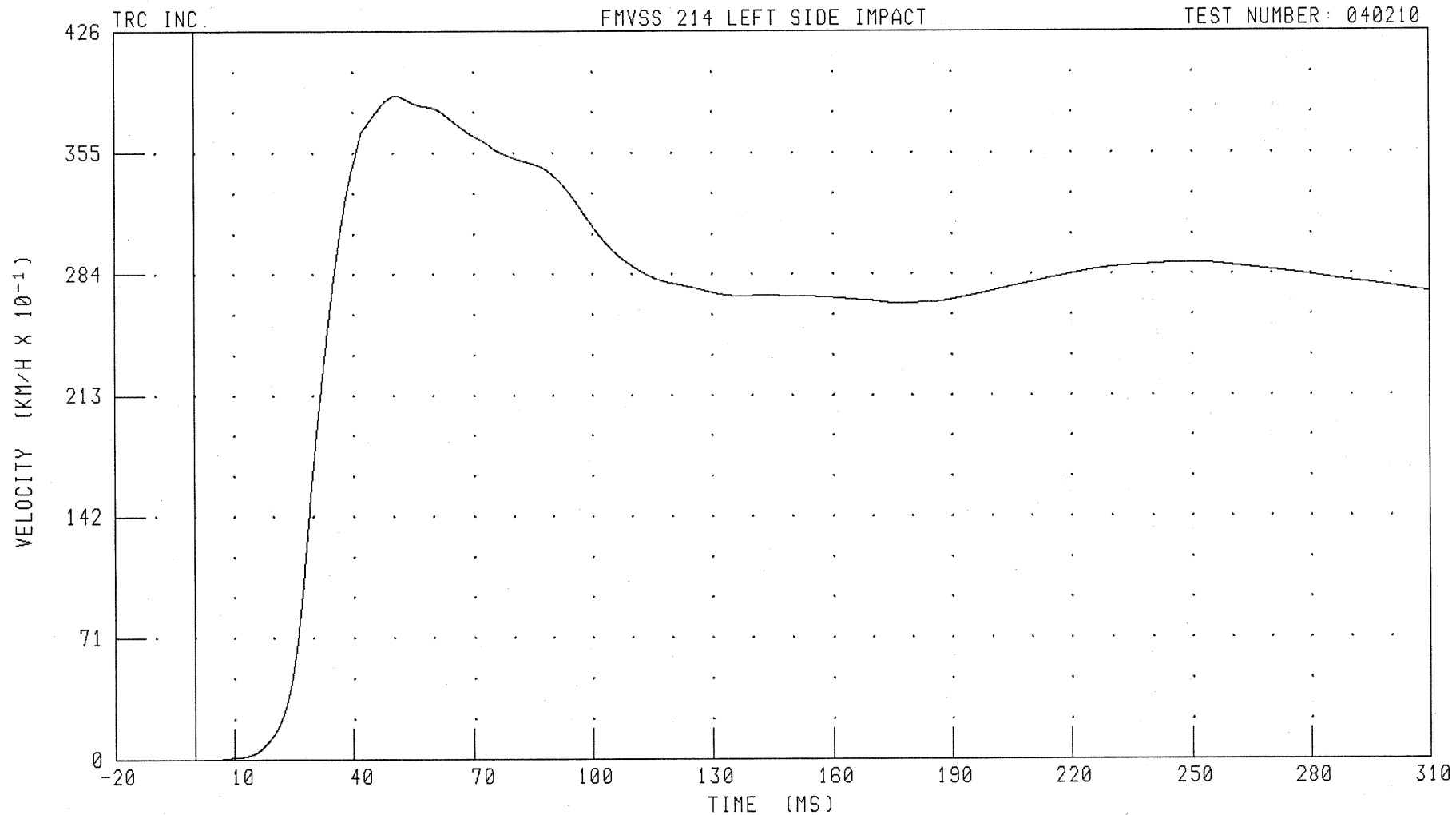
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER PELVIS Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYV1 FILTER: CH. CLASS 180

PEAK DATA: 38.85 KM/H @ 50.72 MS; 0.00 KM/H @ 0.00 MS

B-32

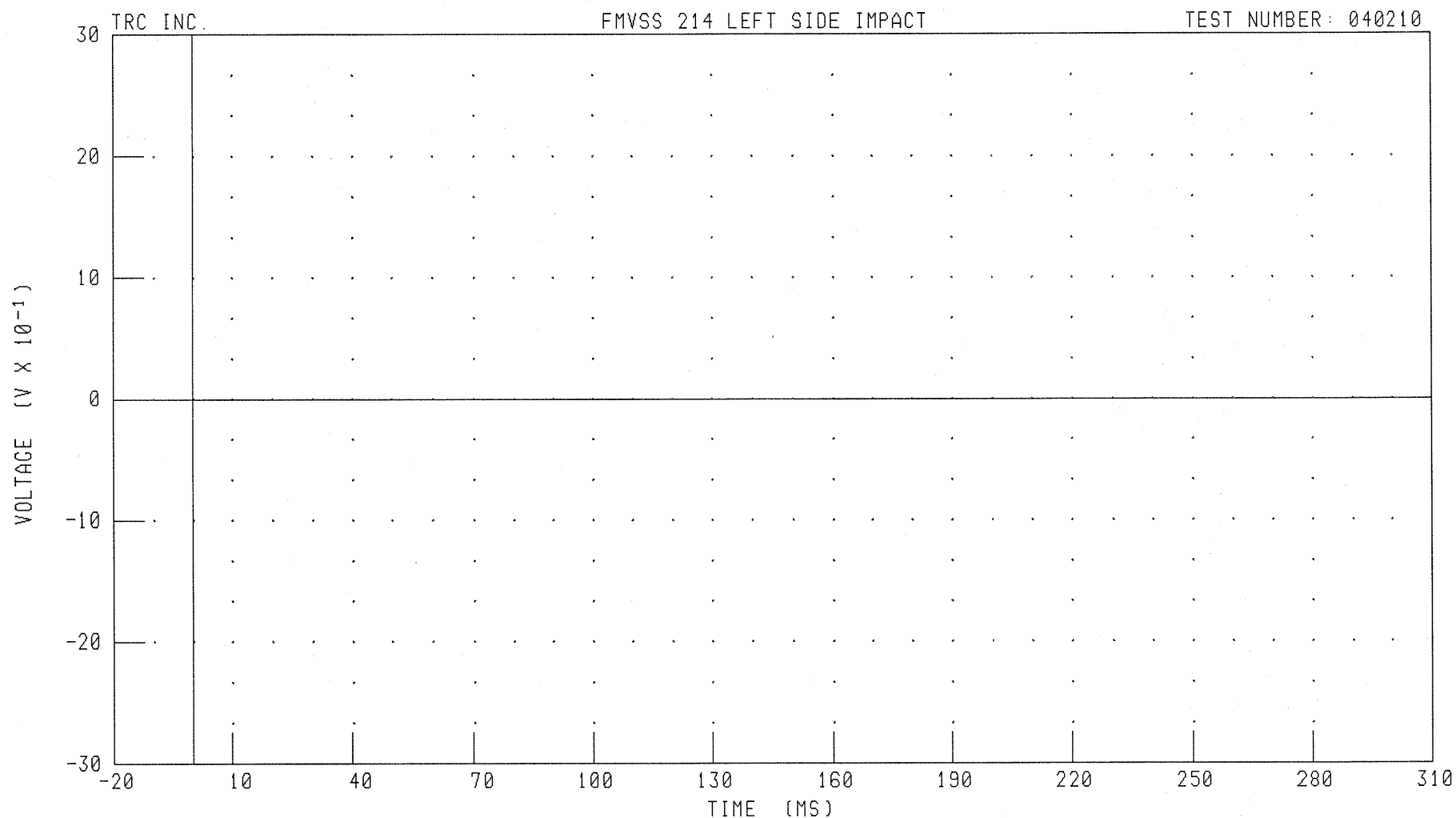
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER SHOULDER CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: SHLET1

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; 0.00 V @ -20.00 MS

B-33

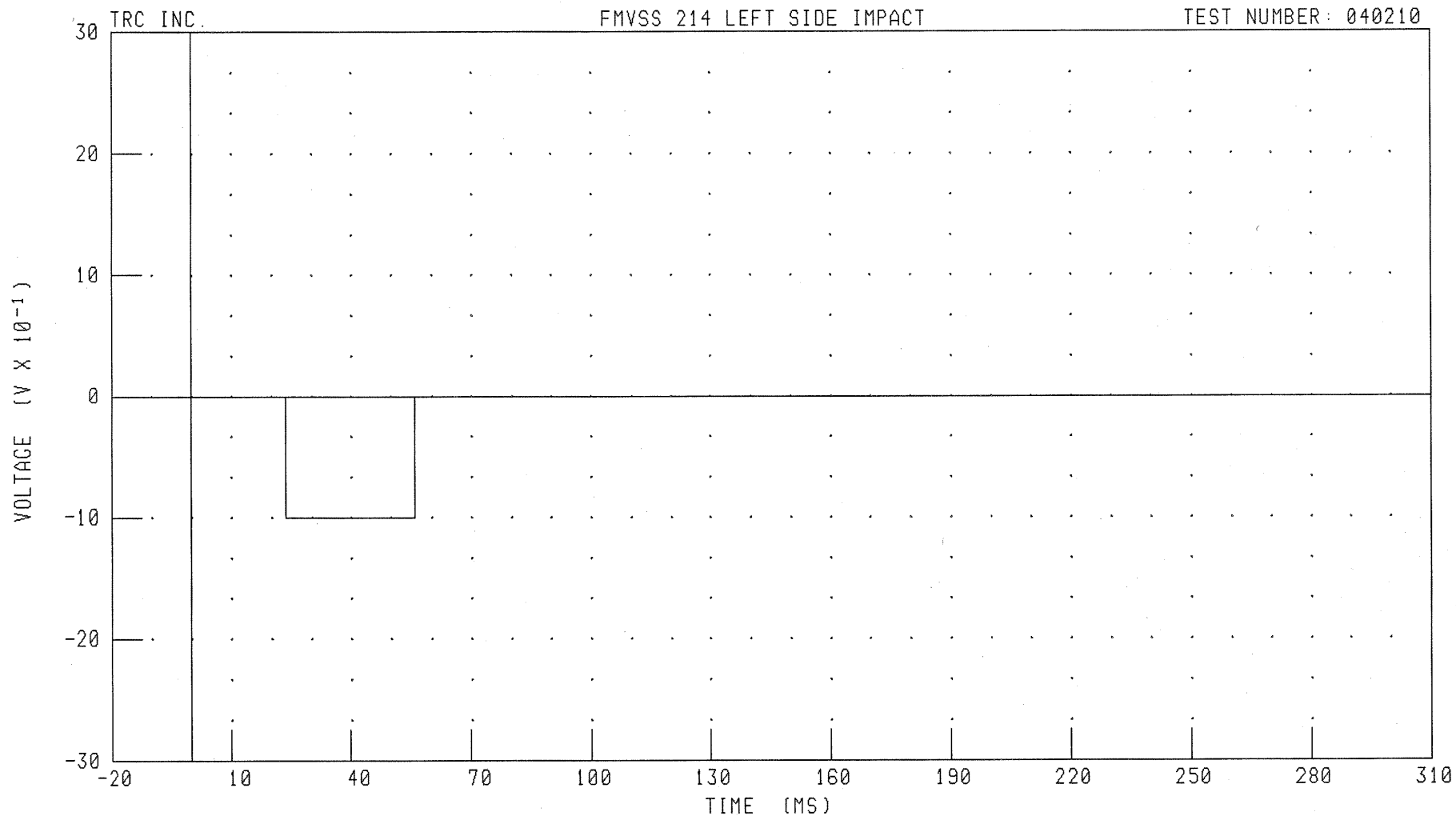
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER PELVIS CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVET1 FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; -1.00 V @ 23.76 MS

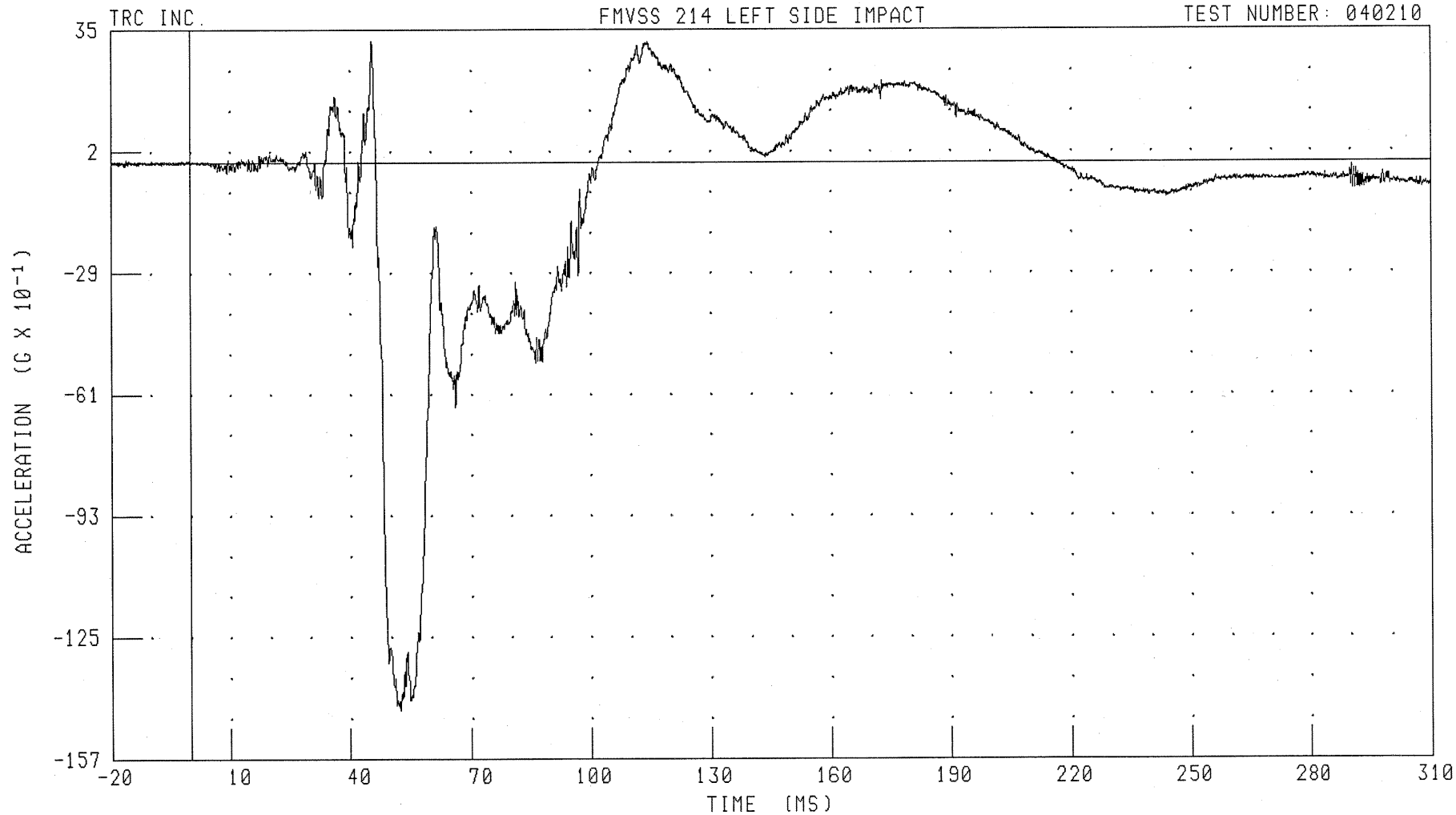
B-34

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXG4 FILTER: CH. CLASS 1000

PEAK DATA: 3.21 G @ 45.60 MS; -14.43 G @ 52.24 MS

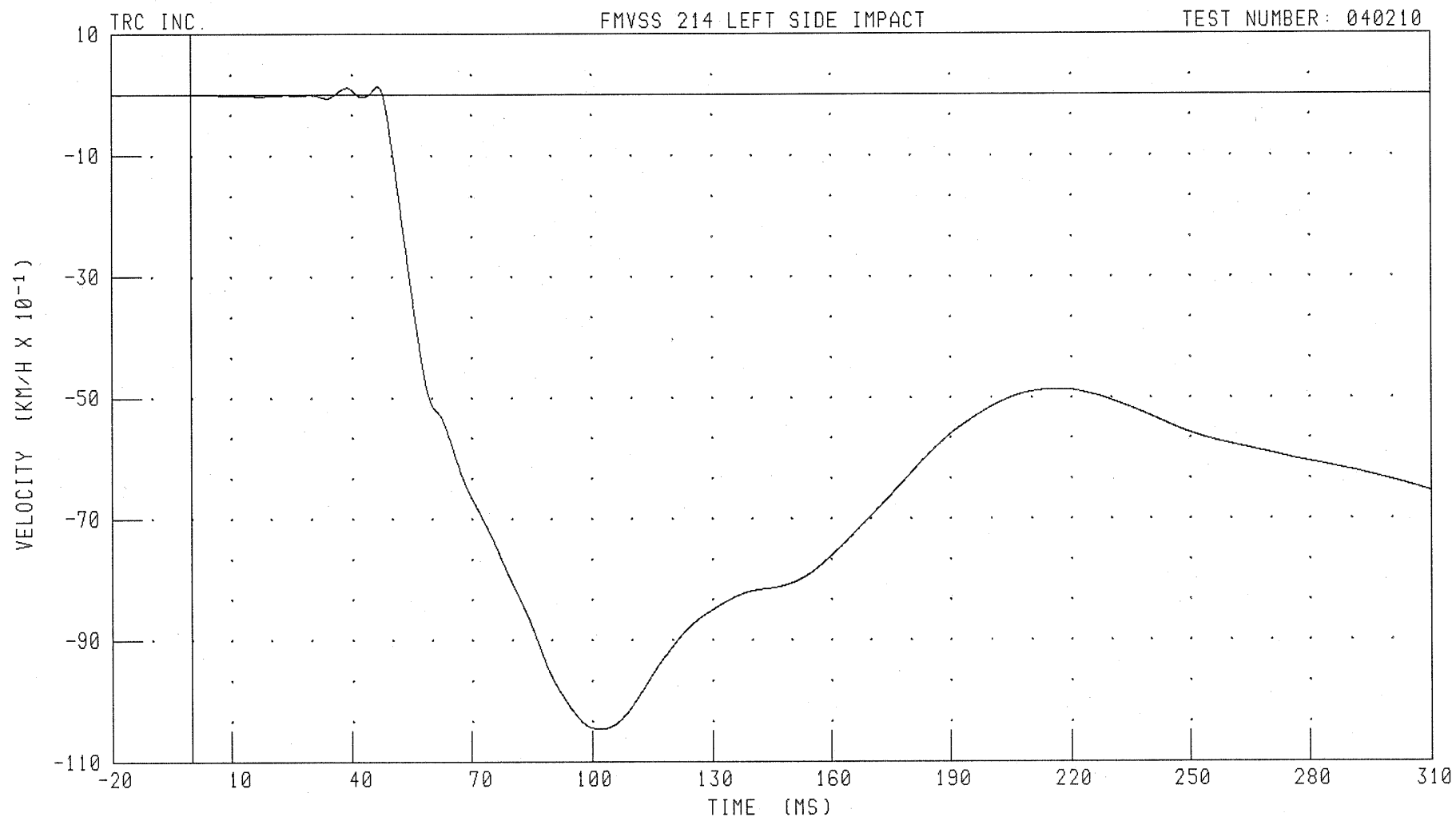
B-35

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXV4 FILTER: CH. CLASS 180

PEAK DATA: 0.14 KM/H @ 46.56 MS; -10.47 KM/H @ 102.32 MS

B-36

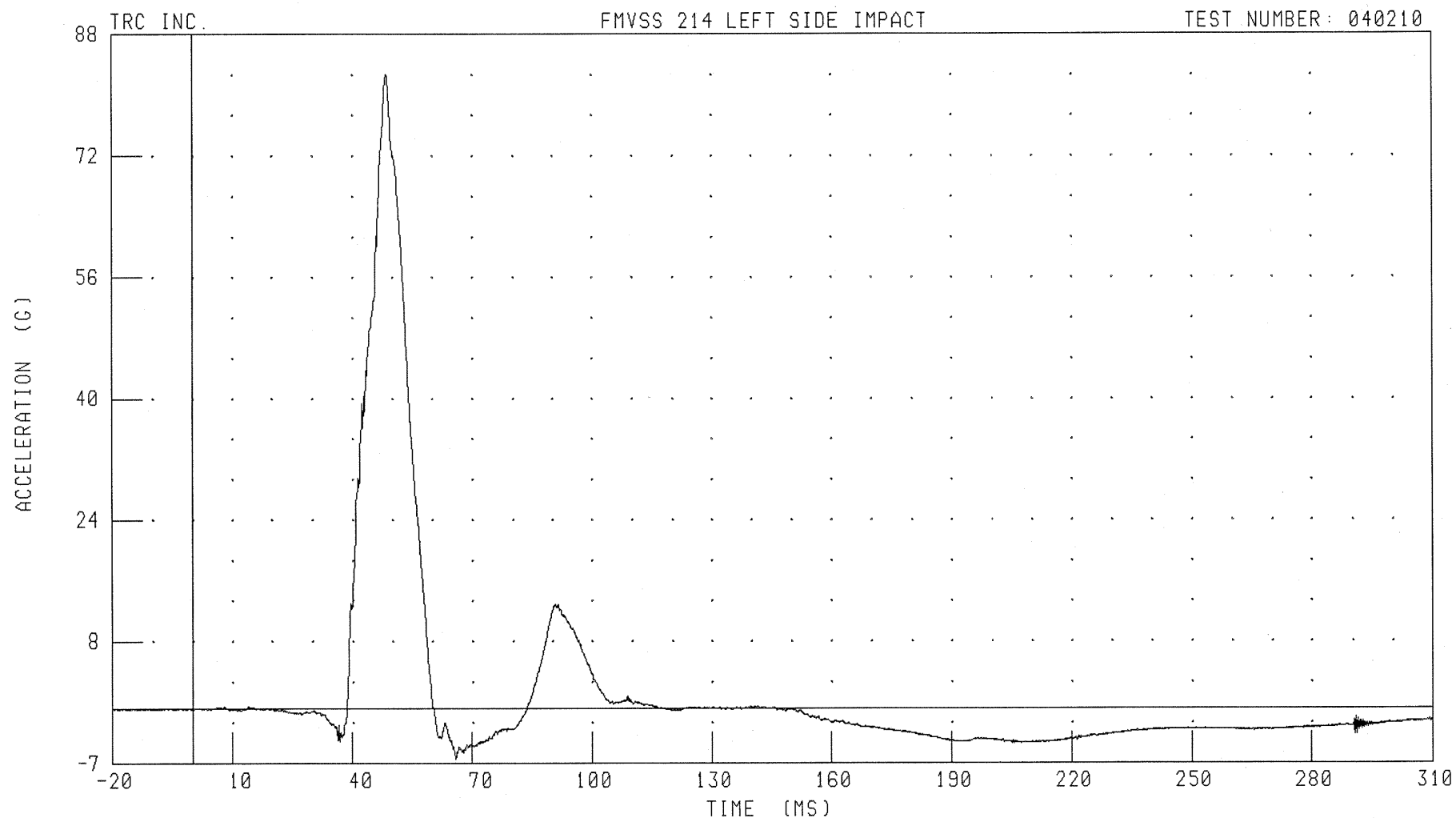
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER HEAD Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYG4 FILTER: CH. CLASS 1000

PEAK DATA: 83.70 G @ 48.64 MS; -6.53 G @ 65.84 MS

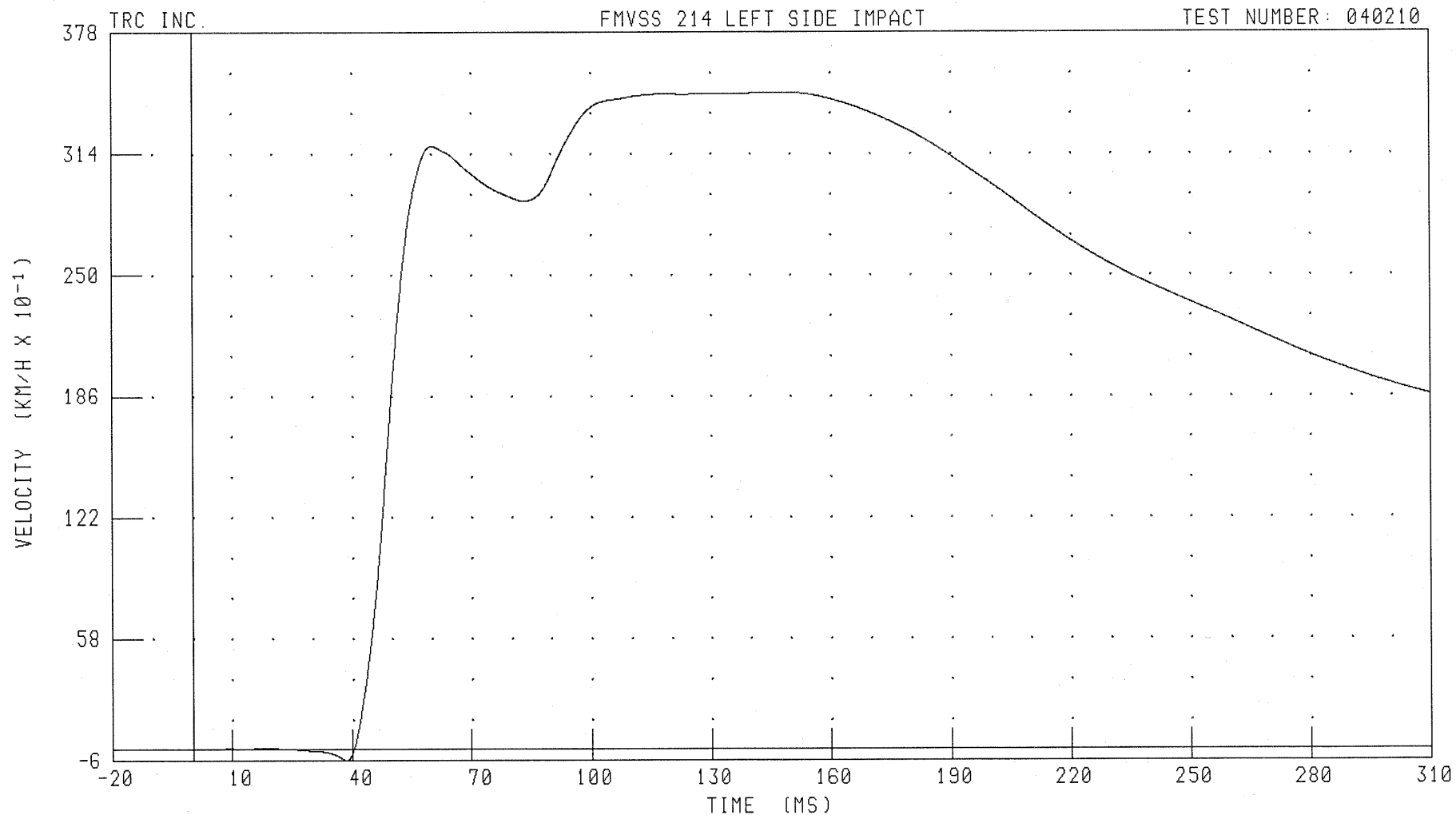
B-37

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYV4 FILTER: CH. CLASS 180

PEAK DATA: 34.62 KM/H @ 146.40 MS; -0.60 KM/H @ 38.48 MS

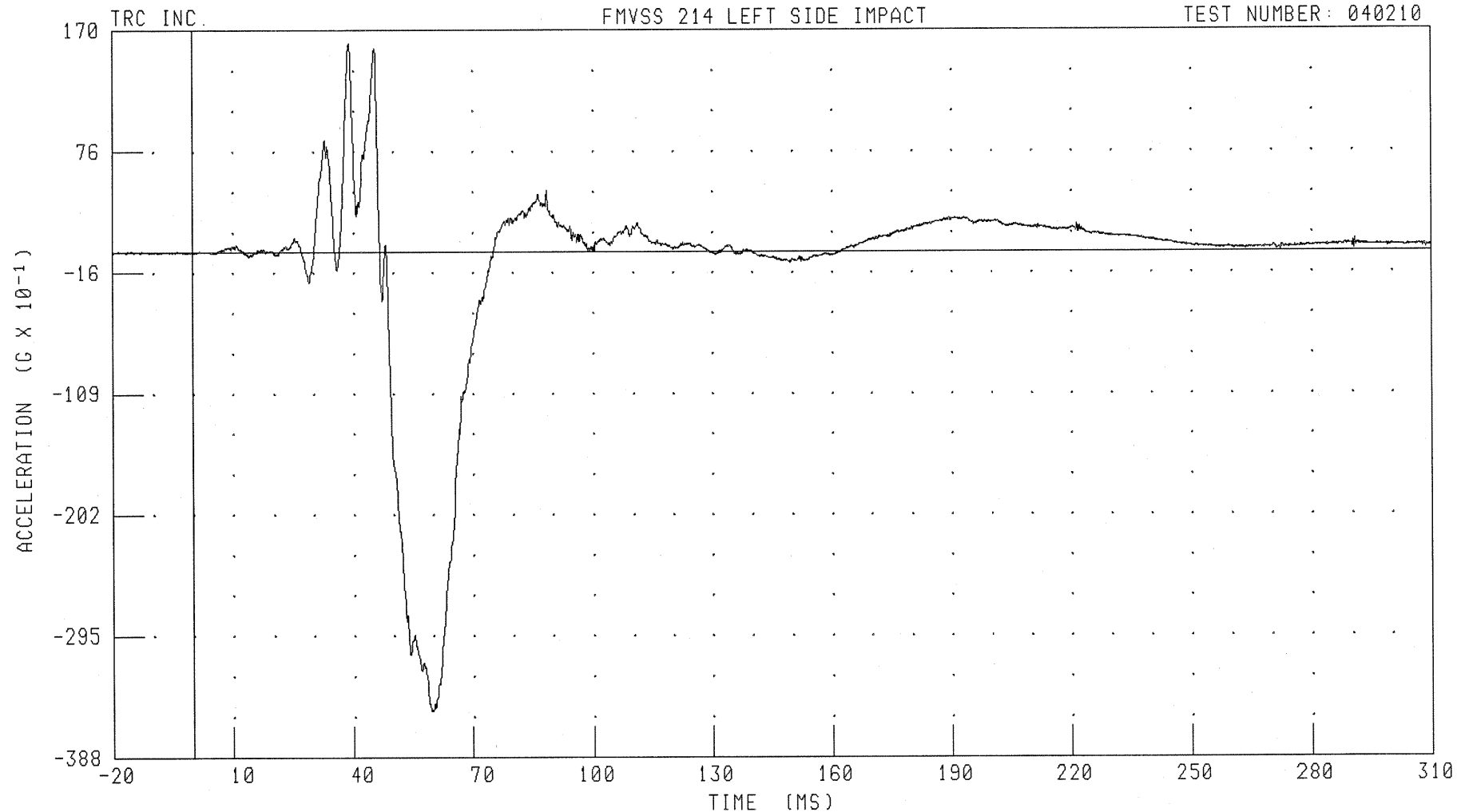
B-38

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZG4 FILTER: CH. CLASS 1000

PEAK DATA: 15.96 G @ 39.04 MS; -35.29 G @ 60.00 MS

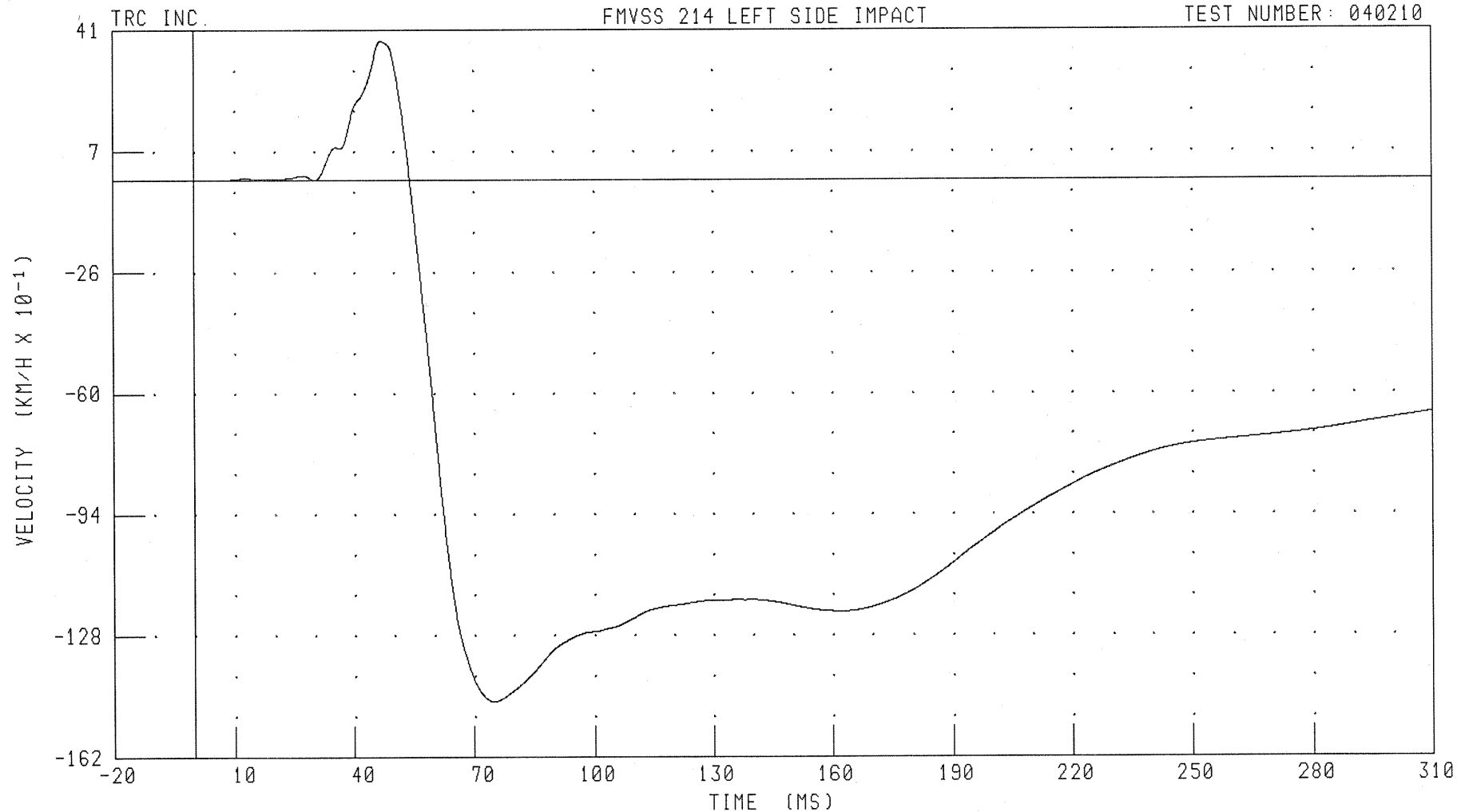
B-39

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZV4 FILTER: CH. CLASS 180

PEAK DATA: 3.90 KM/H @ 46.88 MS; -14.66 KM/H @ 75.20 MS

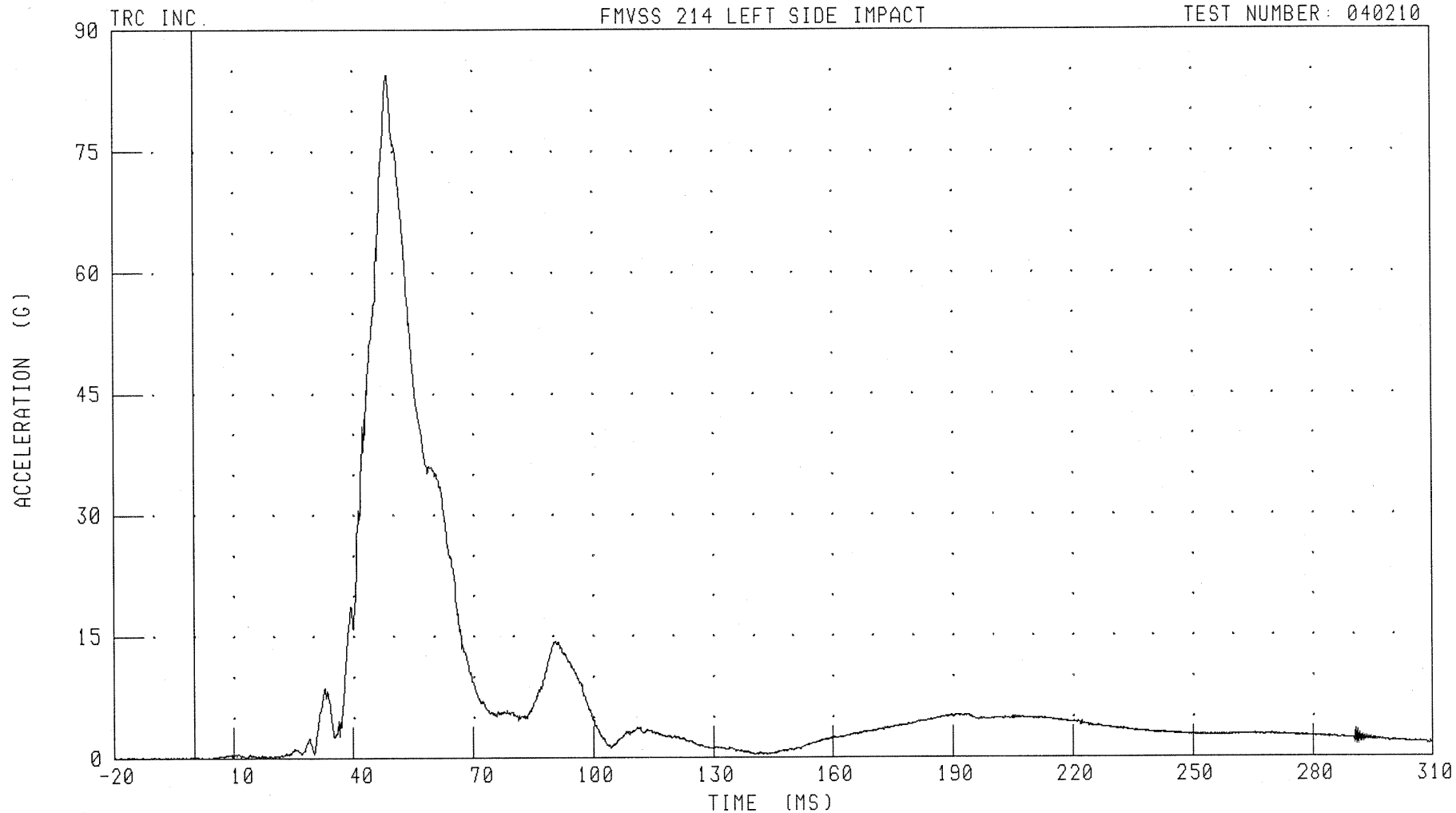
B-40

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDRG4 FILTER: CH. CLASS 1000

PEAK DATA: 84.44 G @ 48.64 MS; 0.01 G @ -18.96 MS

B-41

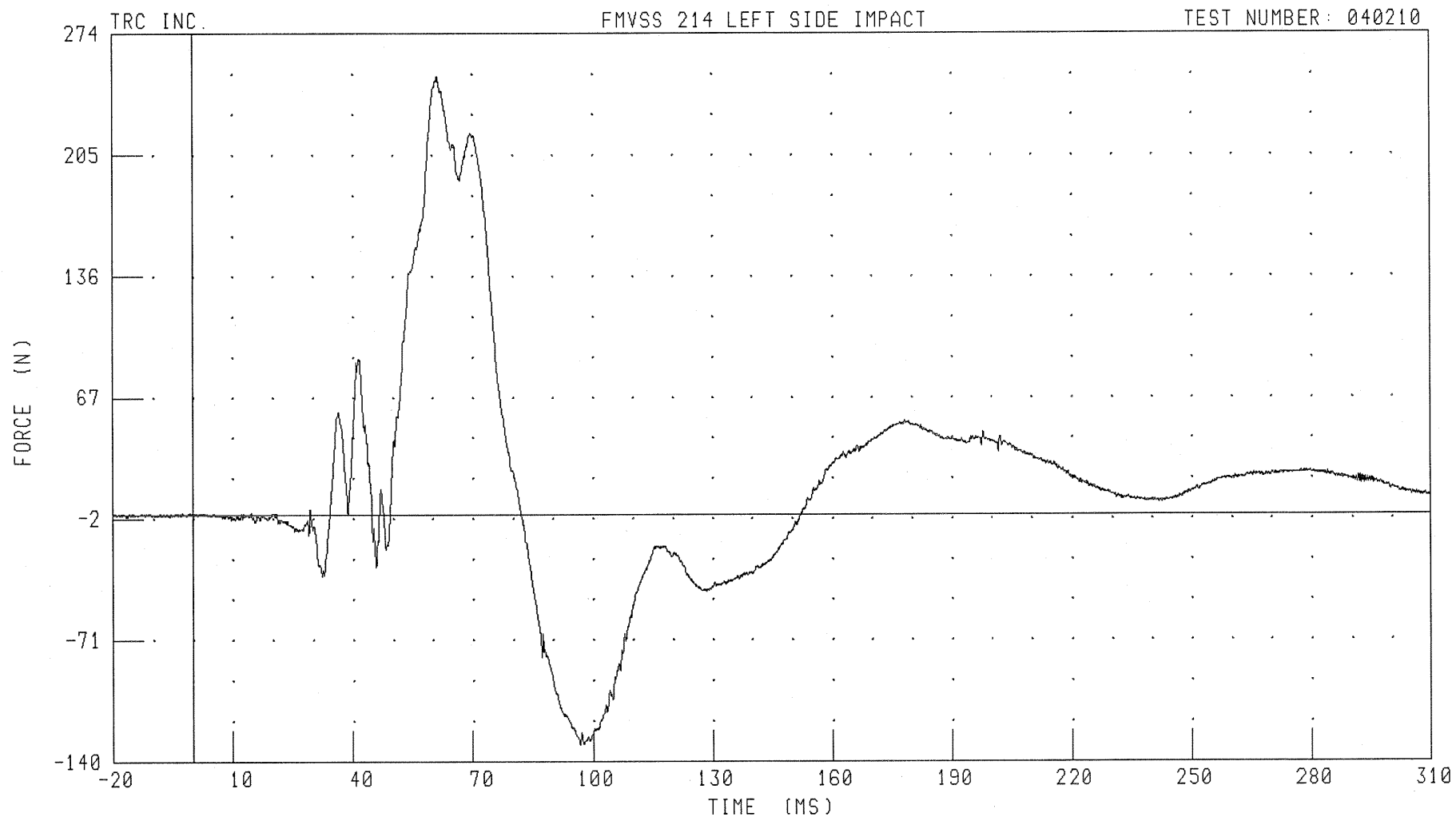
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER NECK X-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKXF4 FILTER: CH. CLASS 1000

PEAK DATA: 249.85 N @ 61.28 MS; -130.82 N @ 96.72 MS

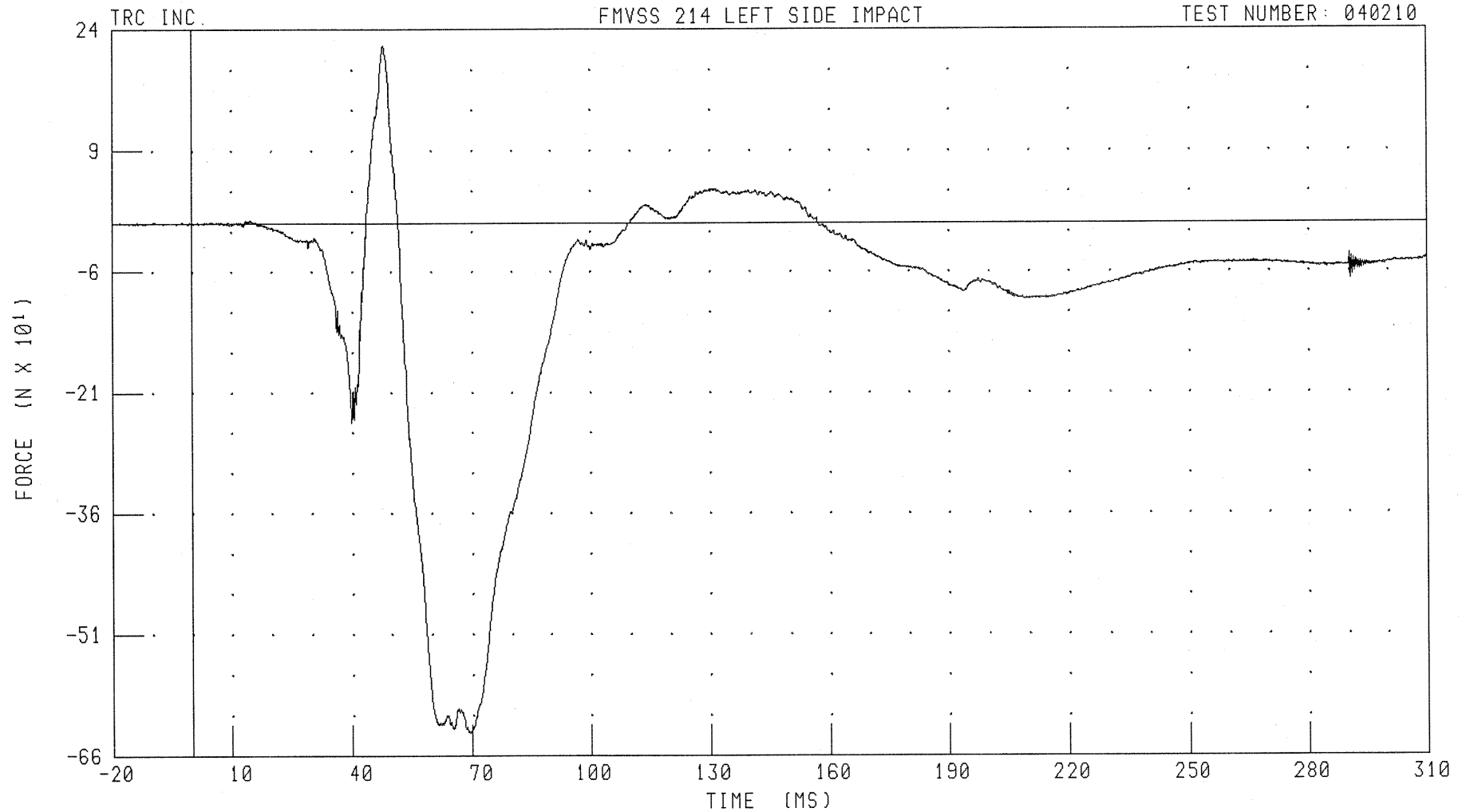
B-42

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER NECK Y-AXIS SHEAR FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKYF4 FILTER: CH. CLASS 1000

PEAK DATA: 219.98 N @ 48.32 MS; -632.79 N @ 69.44 MS

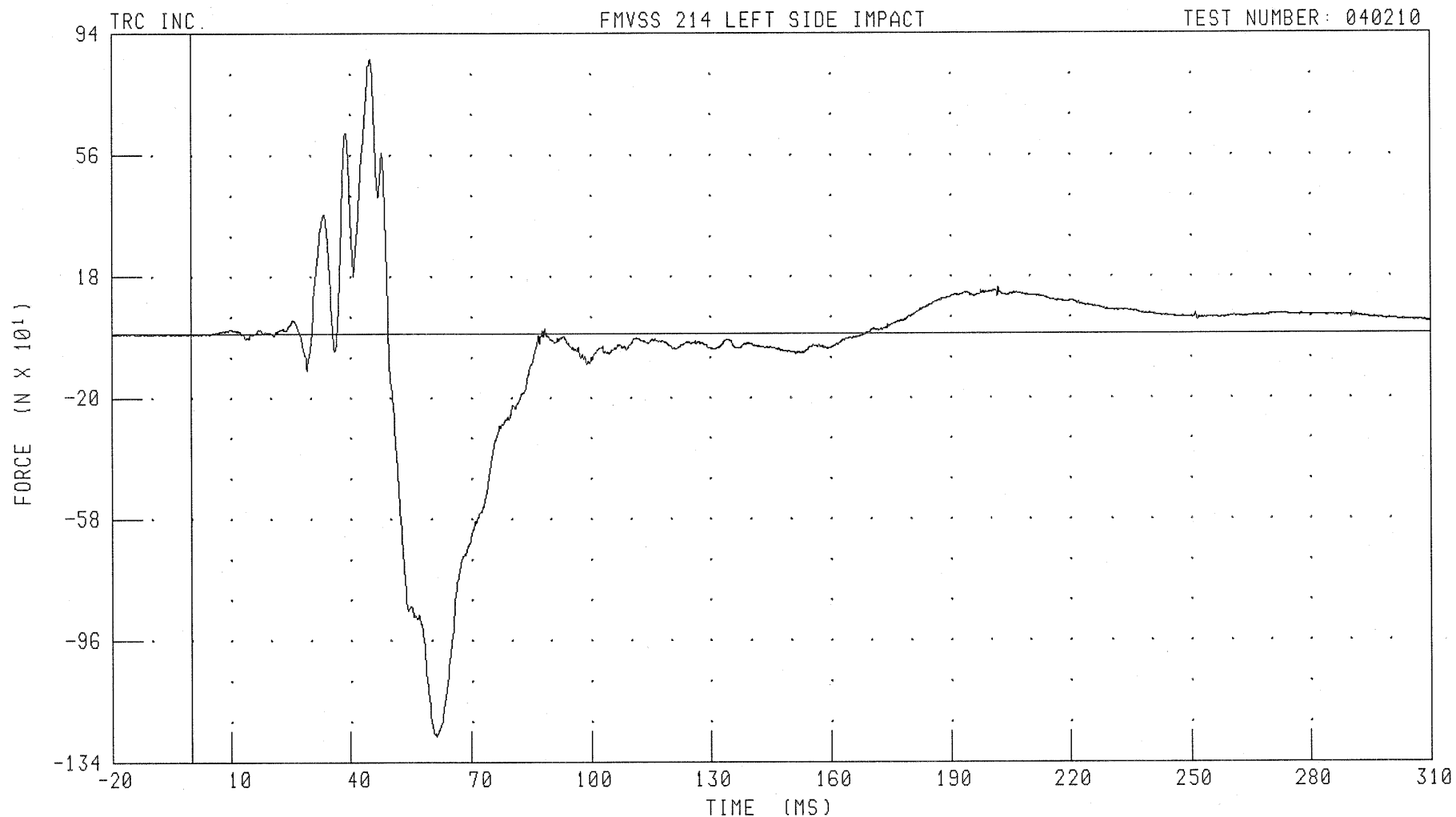
B-43

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER NECK Z-AXIS AXIAL FORCE

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKZF4 FILTER: CH. CLASS 1000

PEAK DATA: 861.22 N @ 45.12 MS; -1258.92 N @ 61.12 MS

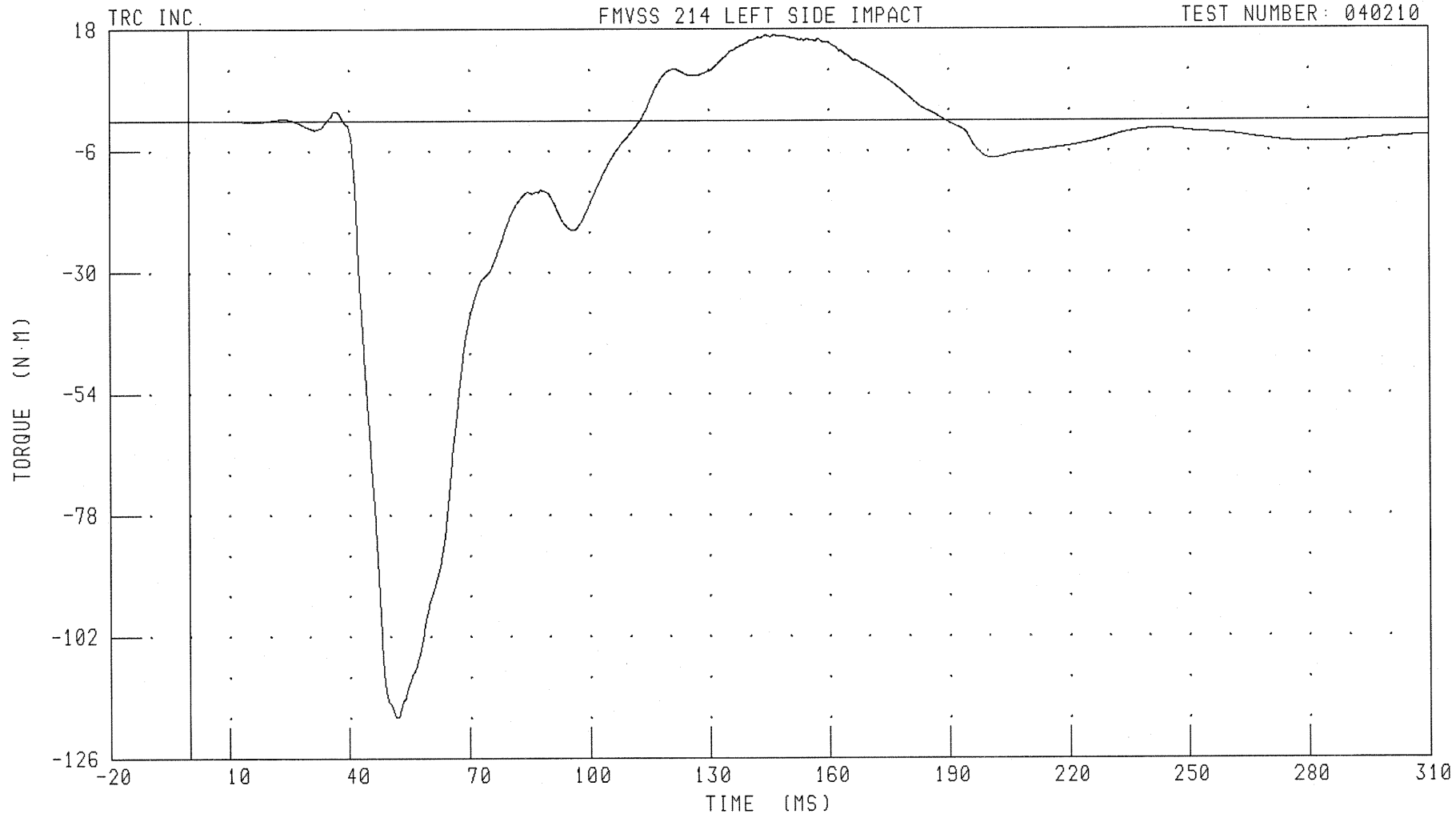
B-44

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER NECK MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKXM4

FILTER: CH. CLASS 600

PEAK DATA: 16.79 N·M @ 146.40 MS; -117.95 N·M @ 51.76 MS

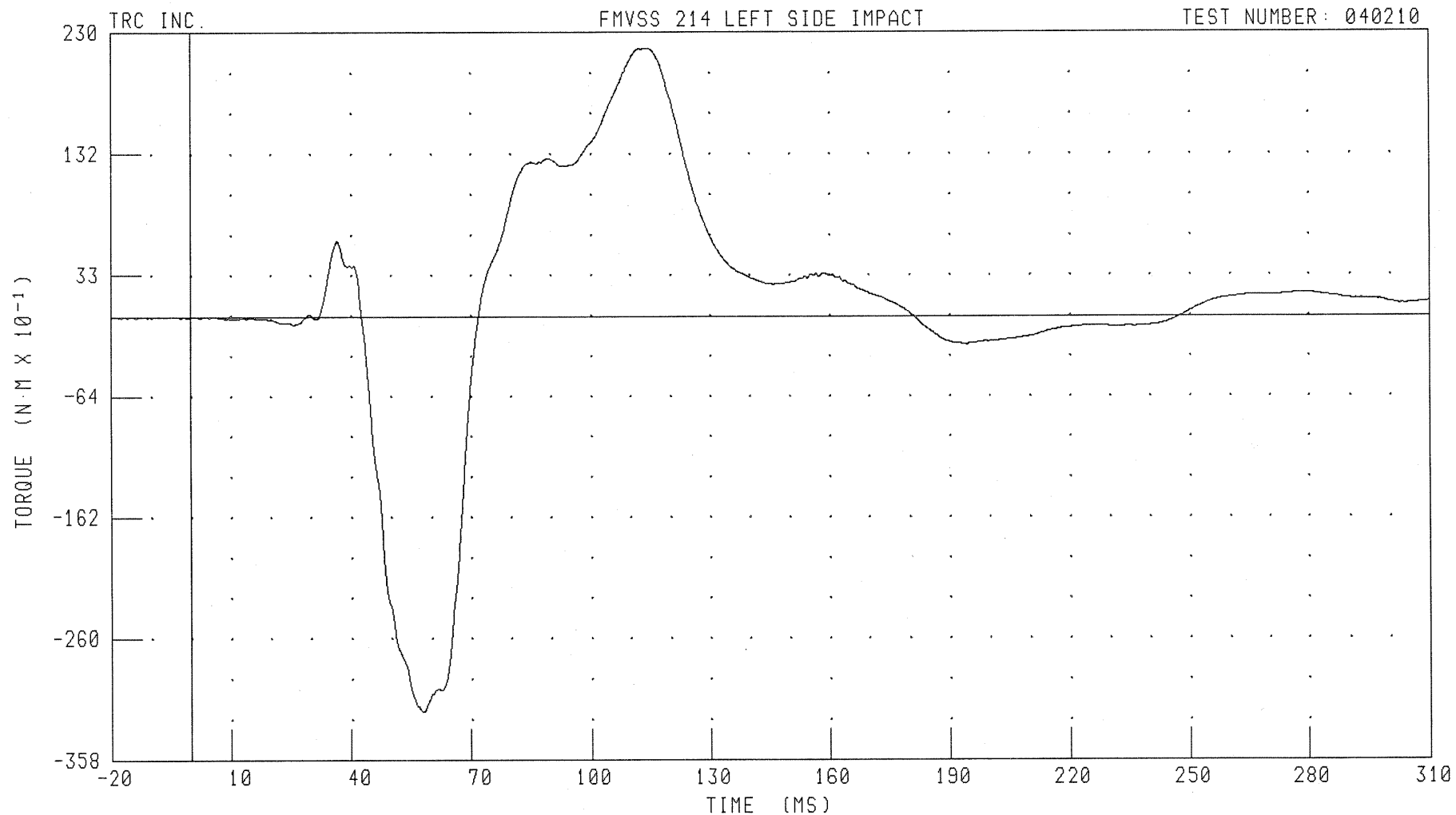
B-45

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER NECK MOMENT ABOUT Y AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



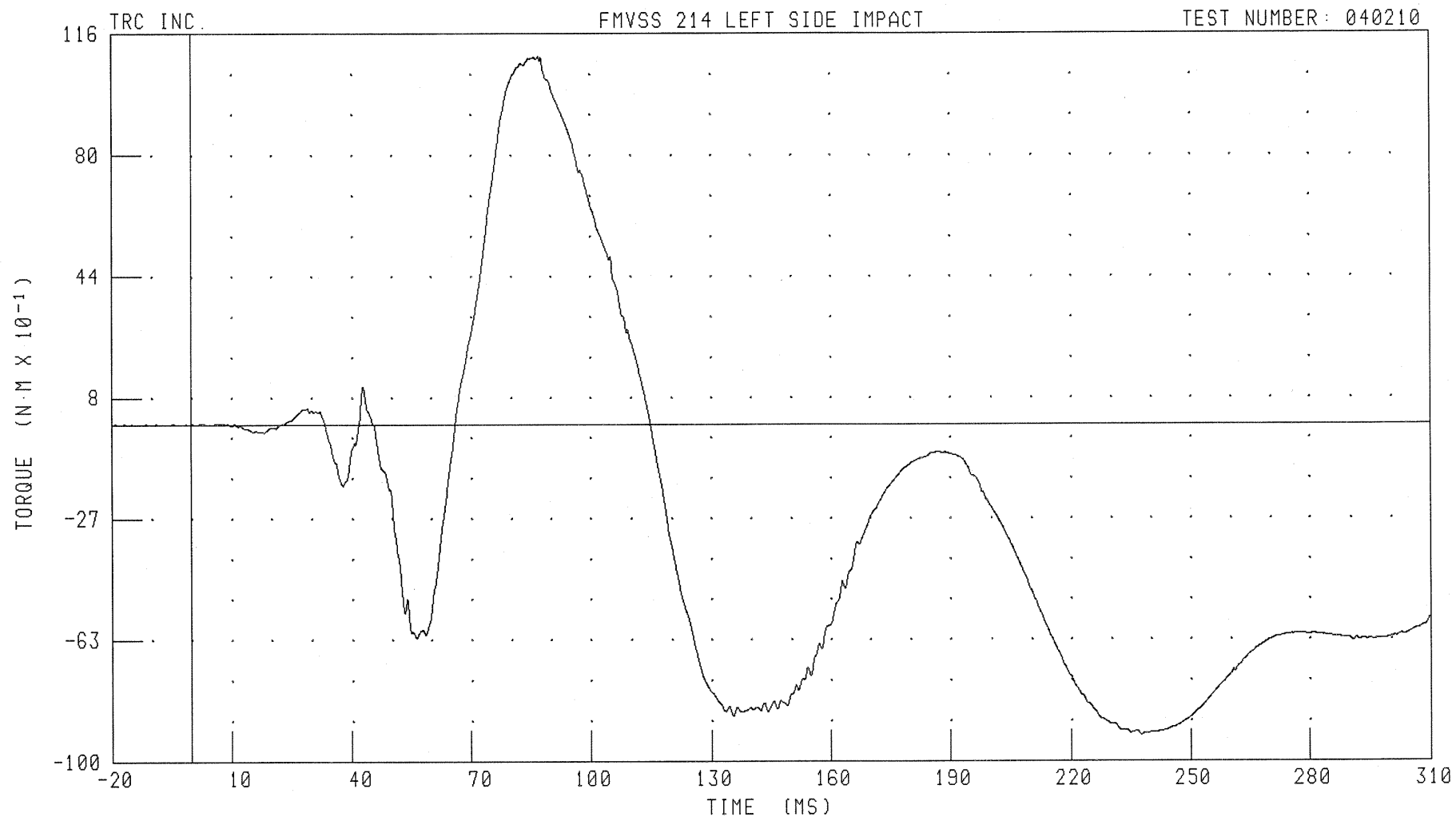
CHANNEL: NEKYM4 FILTER: CH. CLASS 600

PEAK DATA: 21.70 N·M @ 114.24 MS; -31.91 N·M @ 57.84 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER NECK MOMENT ABOUT Z AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NEKZM4 FILTER: CH. CLASS 600

PEAK DATA: 10.93 N·M @ 87.04 MS; -9.23 N·M @ 237.52 MS

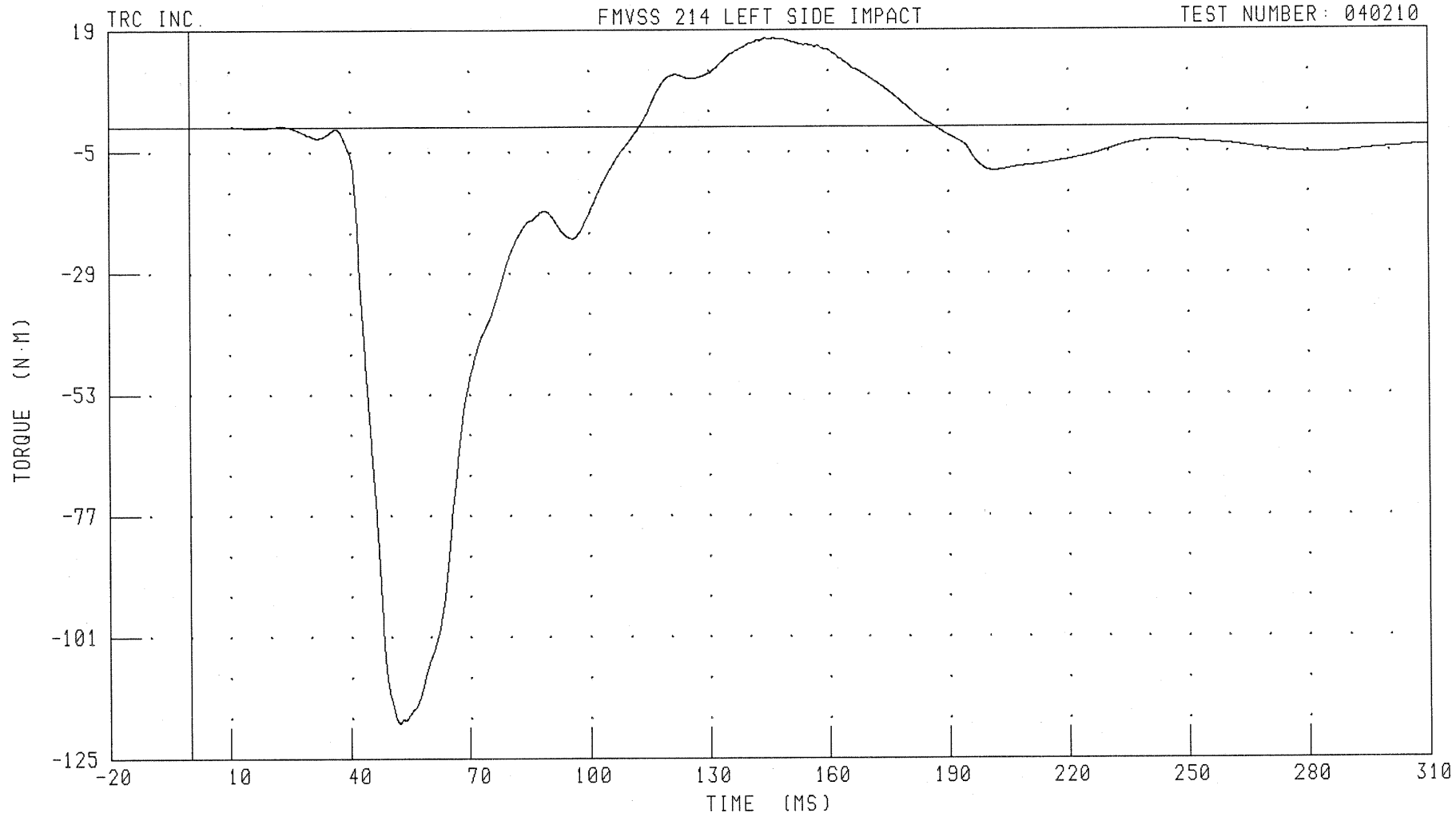
B-47

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER NECK OCCIPITAL CONDYLE MOMENT ABOUT X AXIS

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: NK0XM4

FILTER: CH. CLASS 600

PEAK DATA: 17.37 N·M @ 146.32 MS; -118.05 N·M @ 52.24 MS

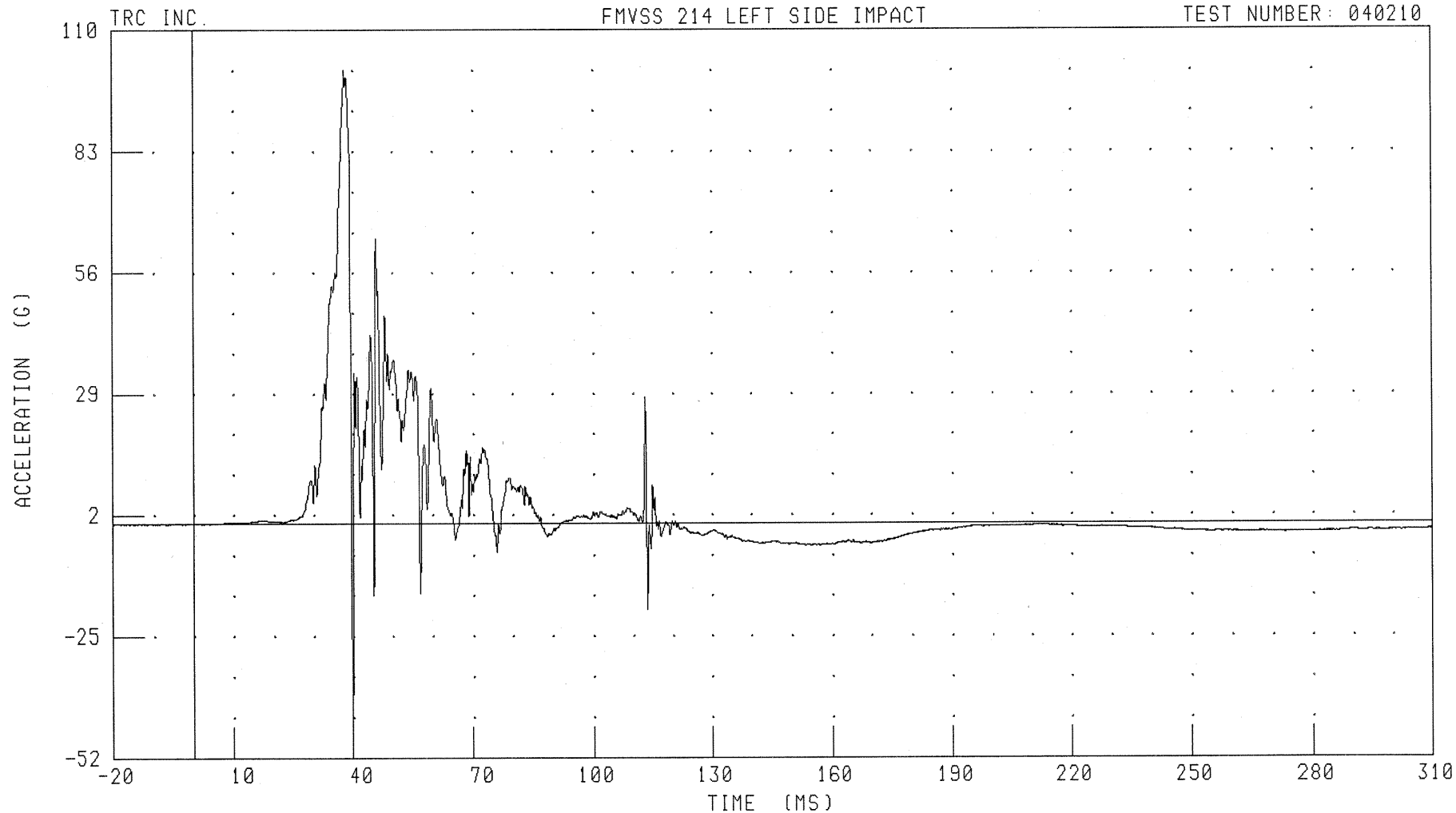
B-48

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYG4

FILTER: CH. CLASS 1000

PEAK DATA: 101.09 G @ 37.92 MS; -48.18 G @ 39.92 MS

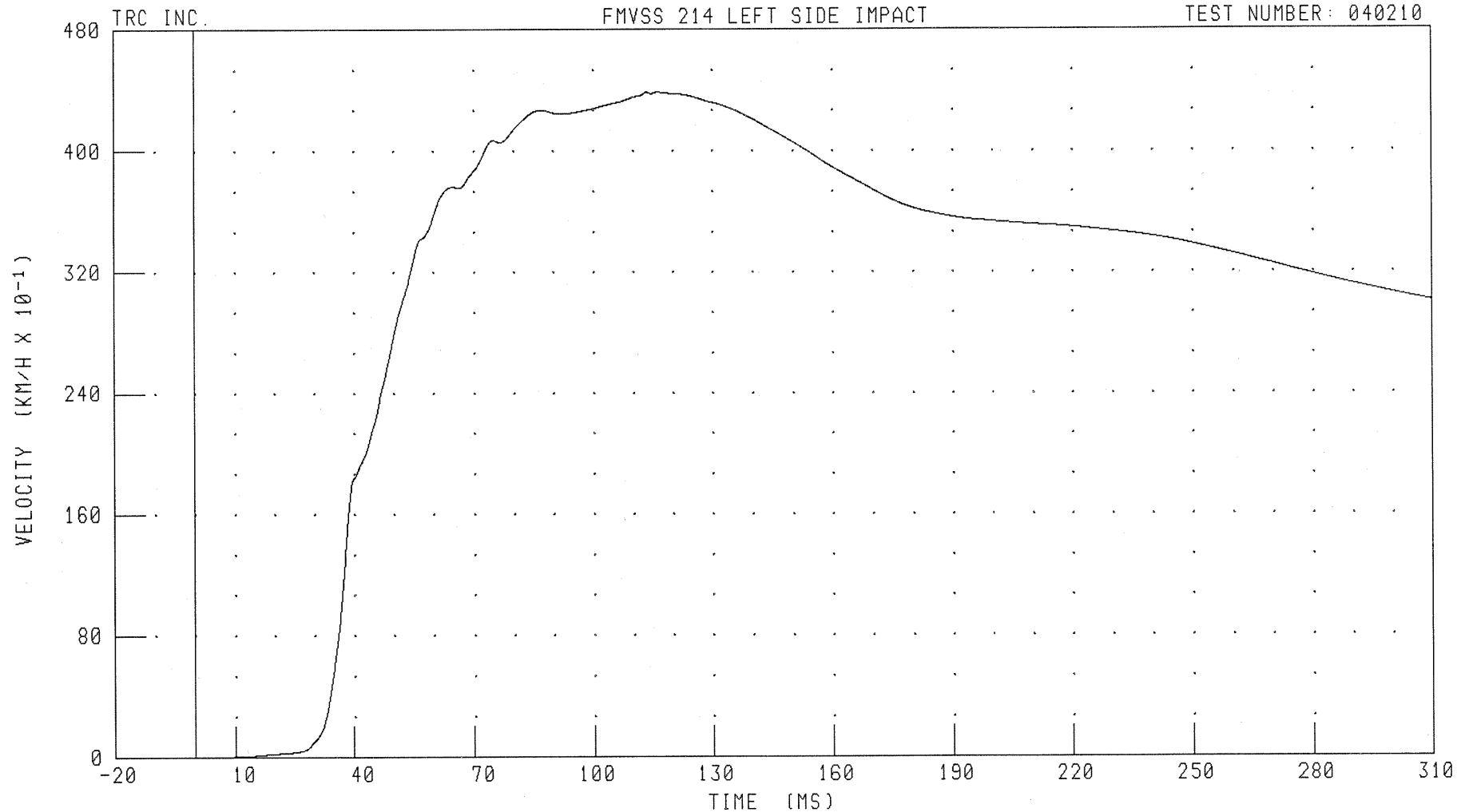
B-49

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER UPPER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYV4 FILTER: CH. CLASS 180

PEAK DATA: 43.87 KM/H @ 116.32 MS; 0.00 KM/H @ 0.00 MS

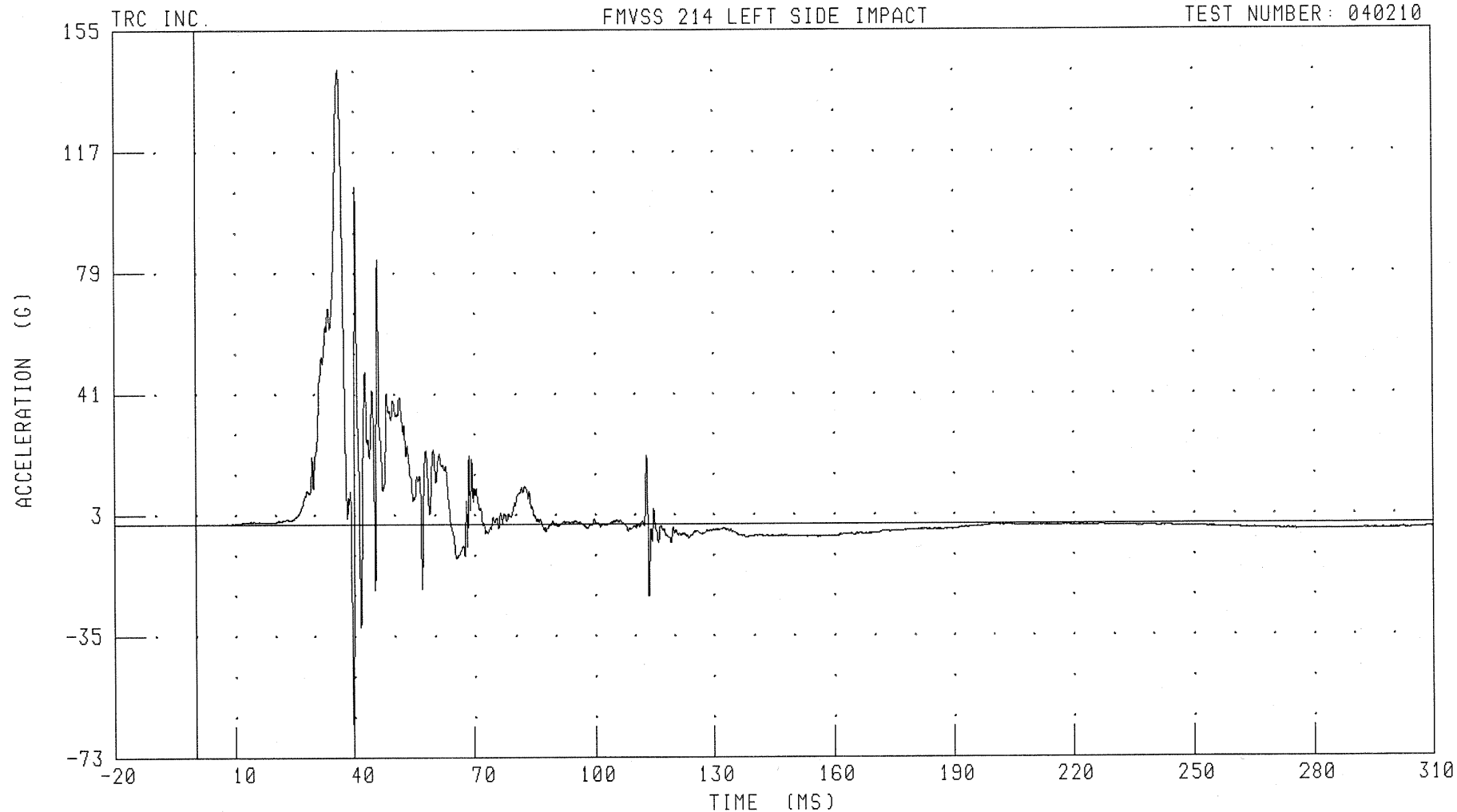
B-50

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYG4 FILTER: CH. CLASS 1000

PEAK DATA: 142.75 G @ 36.32 MS; -66.97 G @ 39.84 MS

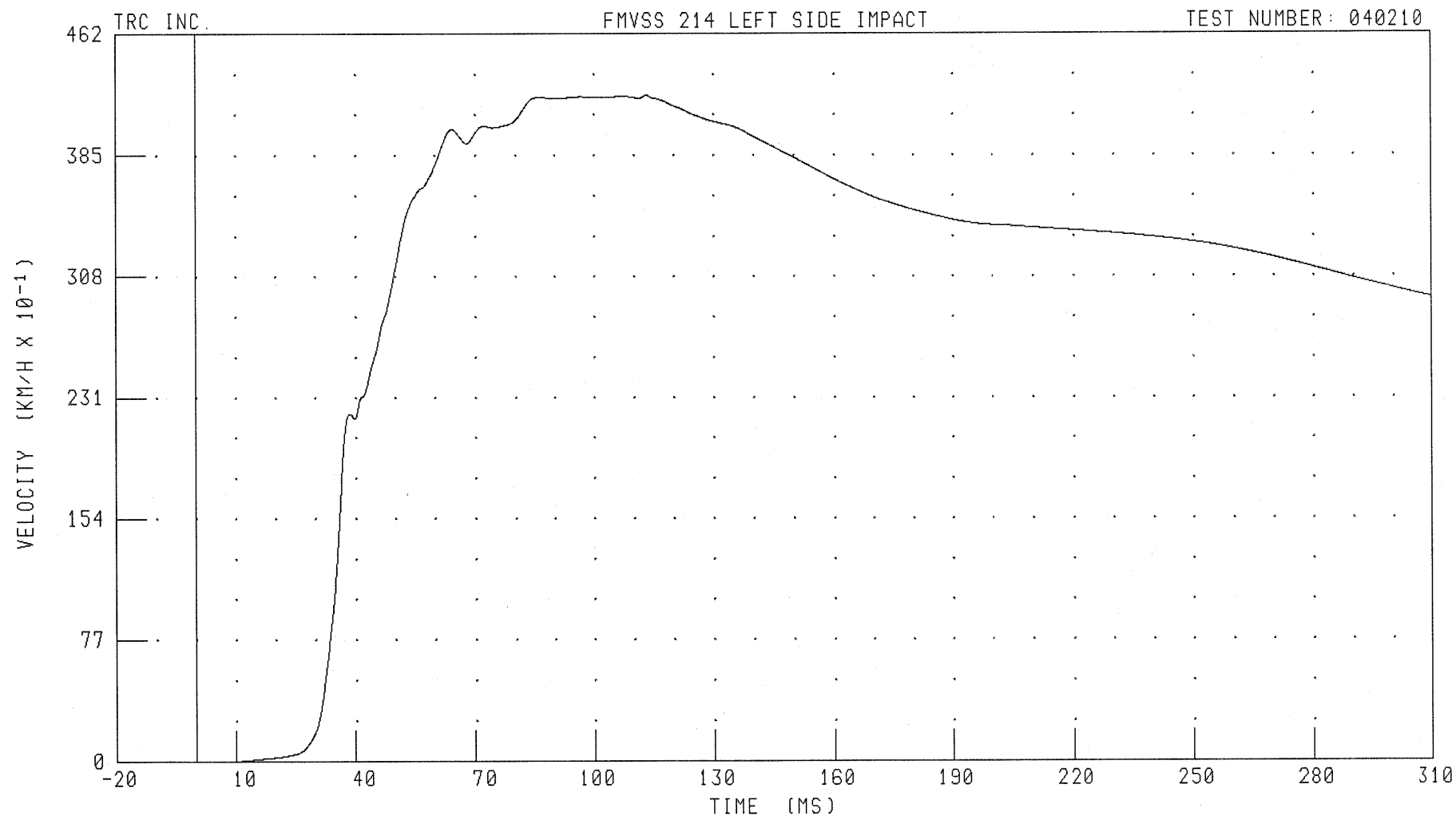
B-51

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER RIB Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYV4 FILTER: CH. CLASS 180

PEAK DATA: 42.32 KM/H @ 113.44 MS; 0.00 KM/H @ 1.20 MS

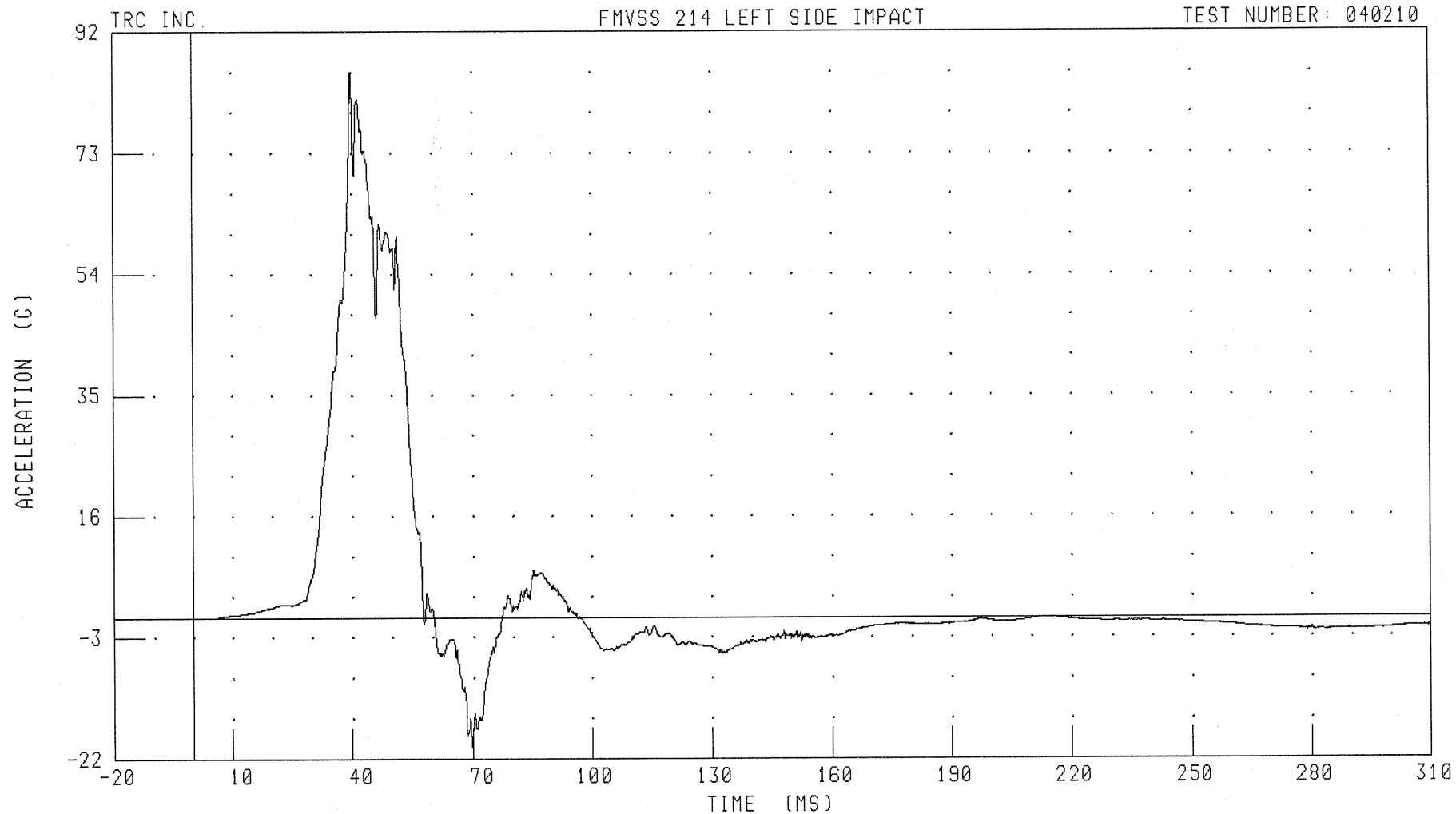
B-52

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YG4 FILTER: CH. CLASS 1000

PEAK DATA: 85.71 G @ 40.08 MS; -20.17 G @ 69.68 MS

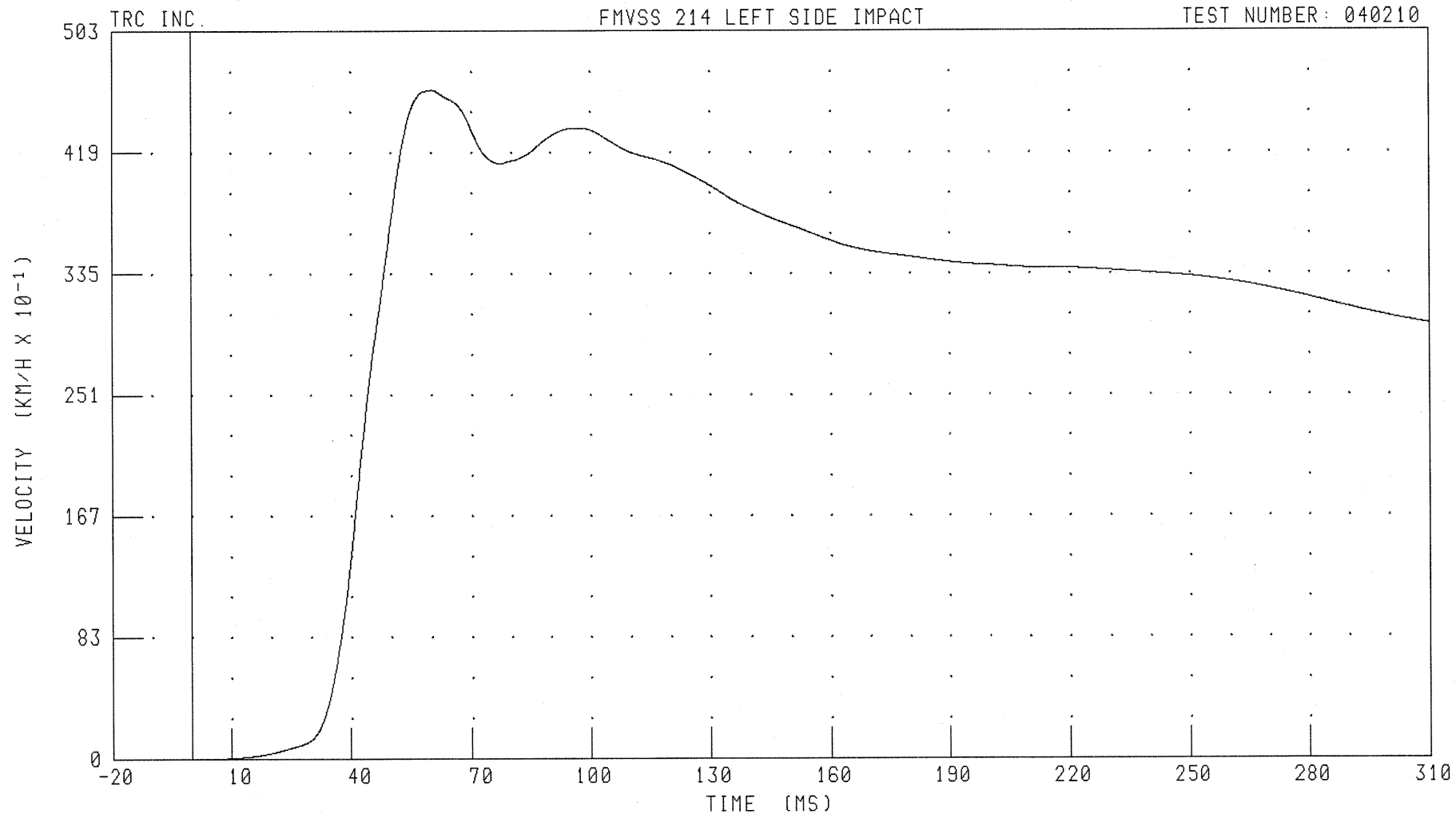
B-53

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER SPINE Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YV4 FILTER: CH. CLASS 180

PEAK DATA: 46.33 KM/H @ 60.24 MS; 0.00 KM/H @ 0.00 MS

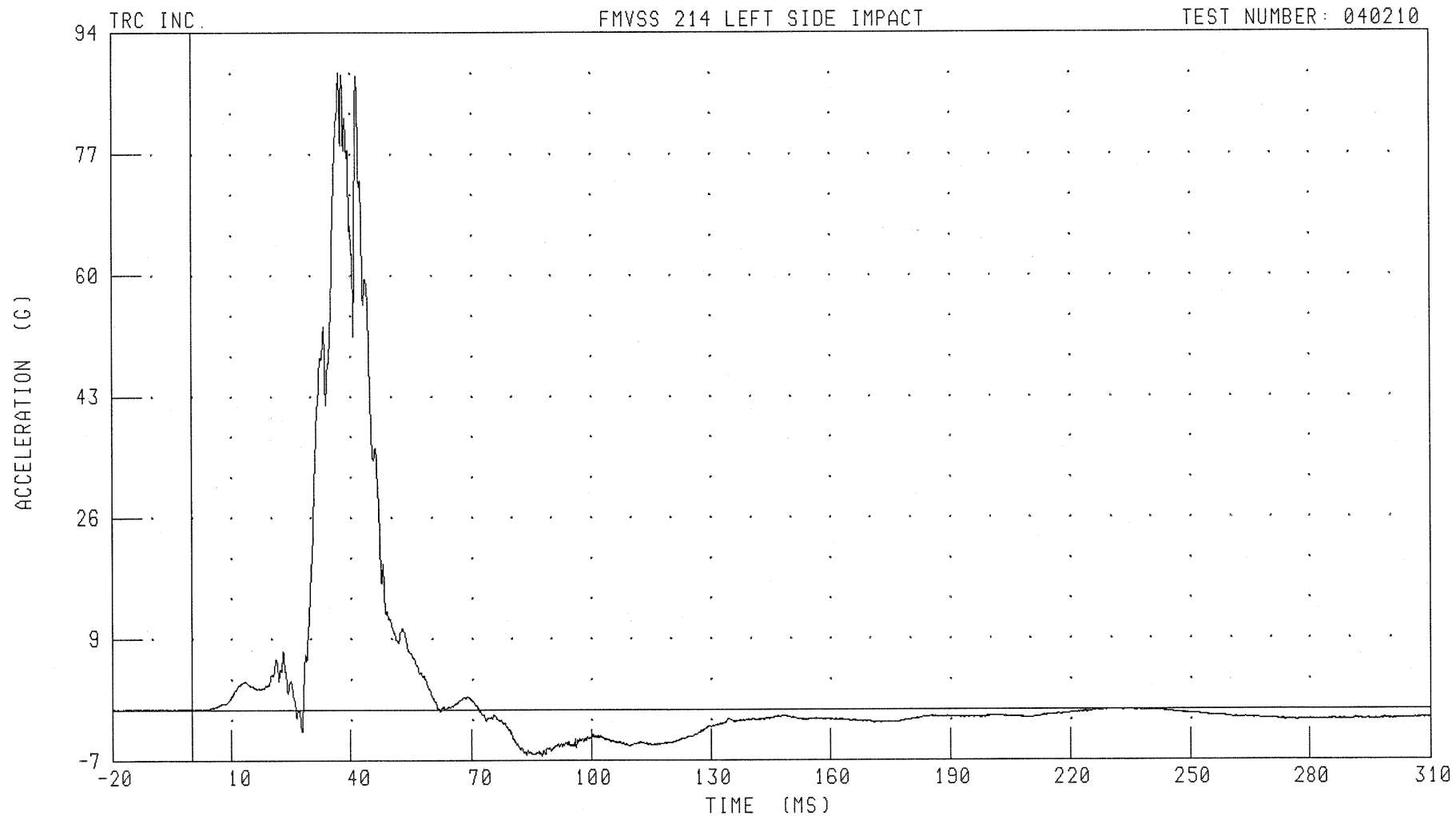
B-54

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYG4 FILTER: CH. CLASS 1000

PEAK DATA: 89.33 G @ 37.36 MS; -6.47 G @ 87.76 MS

B-55

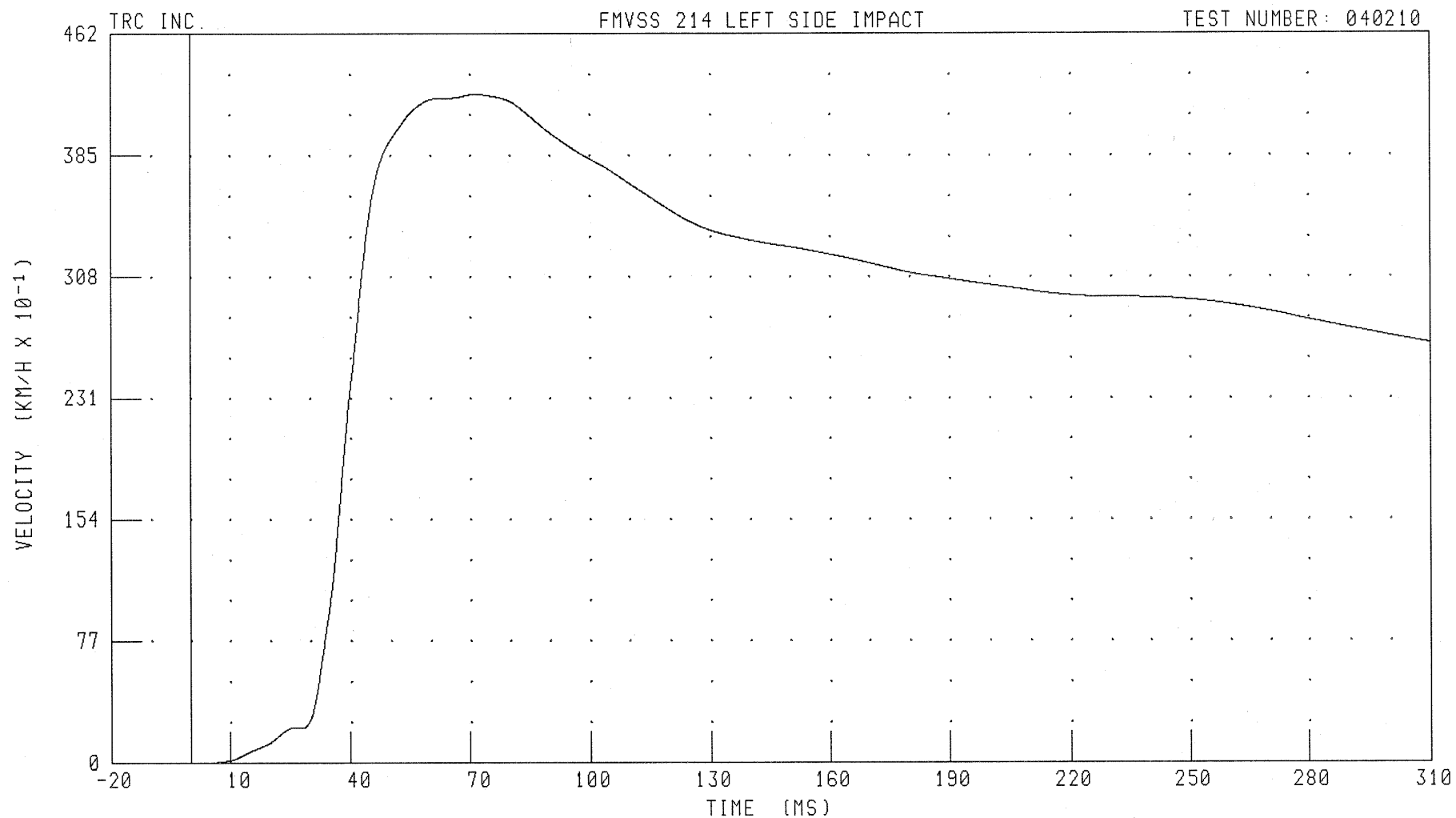
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER PELVIS Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYV4 FILTER: CH. CLASS 180

PEAK DATA: 42.38 KM/H @ 71.76 MS; 0.00 KM/H @ 0.00 MS

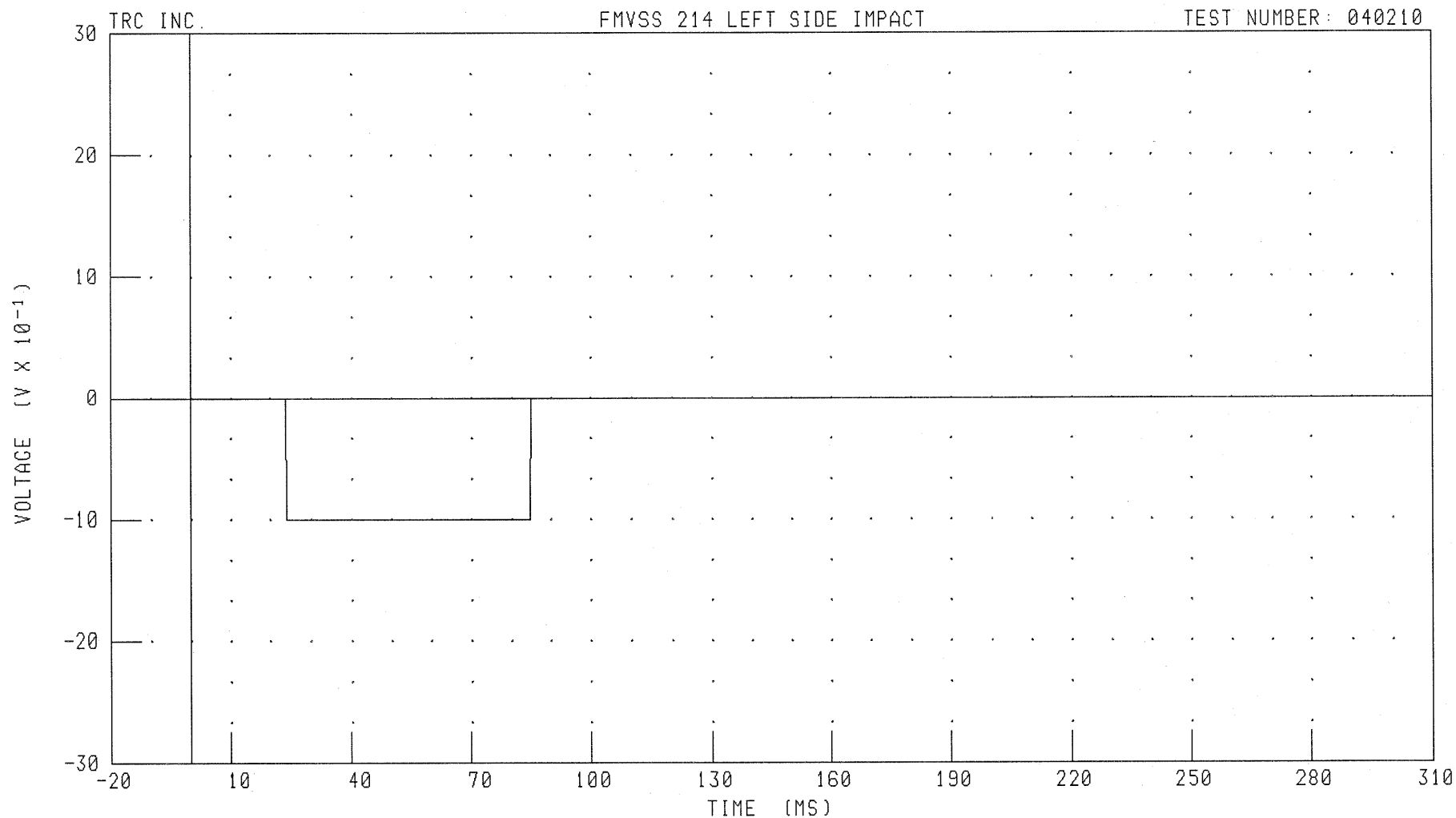
B-56

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER SHOULDER CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: SHLET4 FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; -1.00 V @ 24.08 MS

B-57

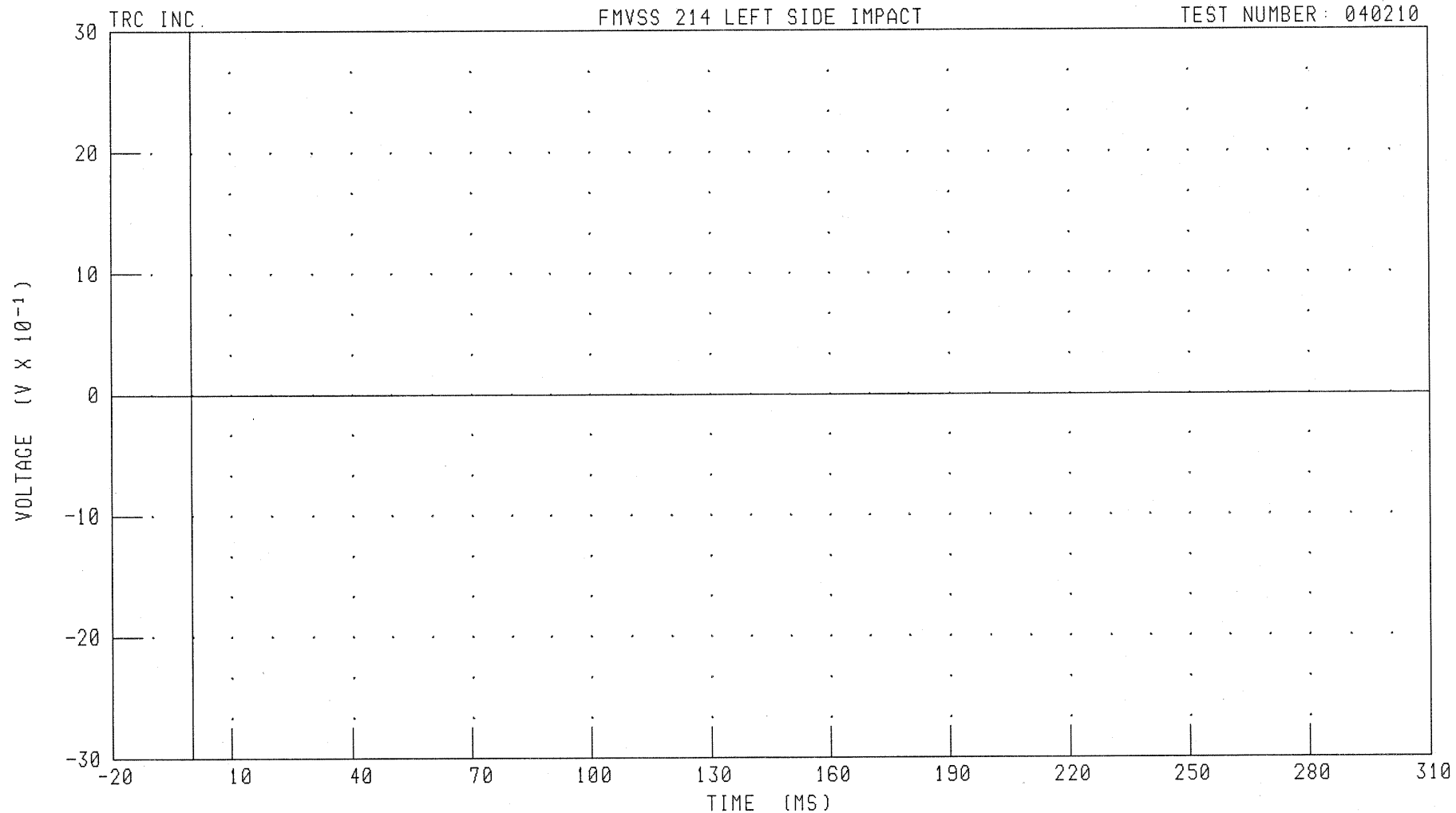
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER PELVIS CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVET4

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; 0.00 V @ -20.00 MS

B-58

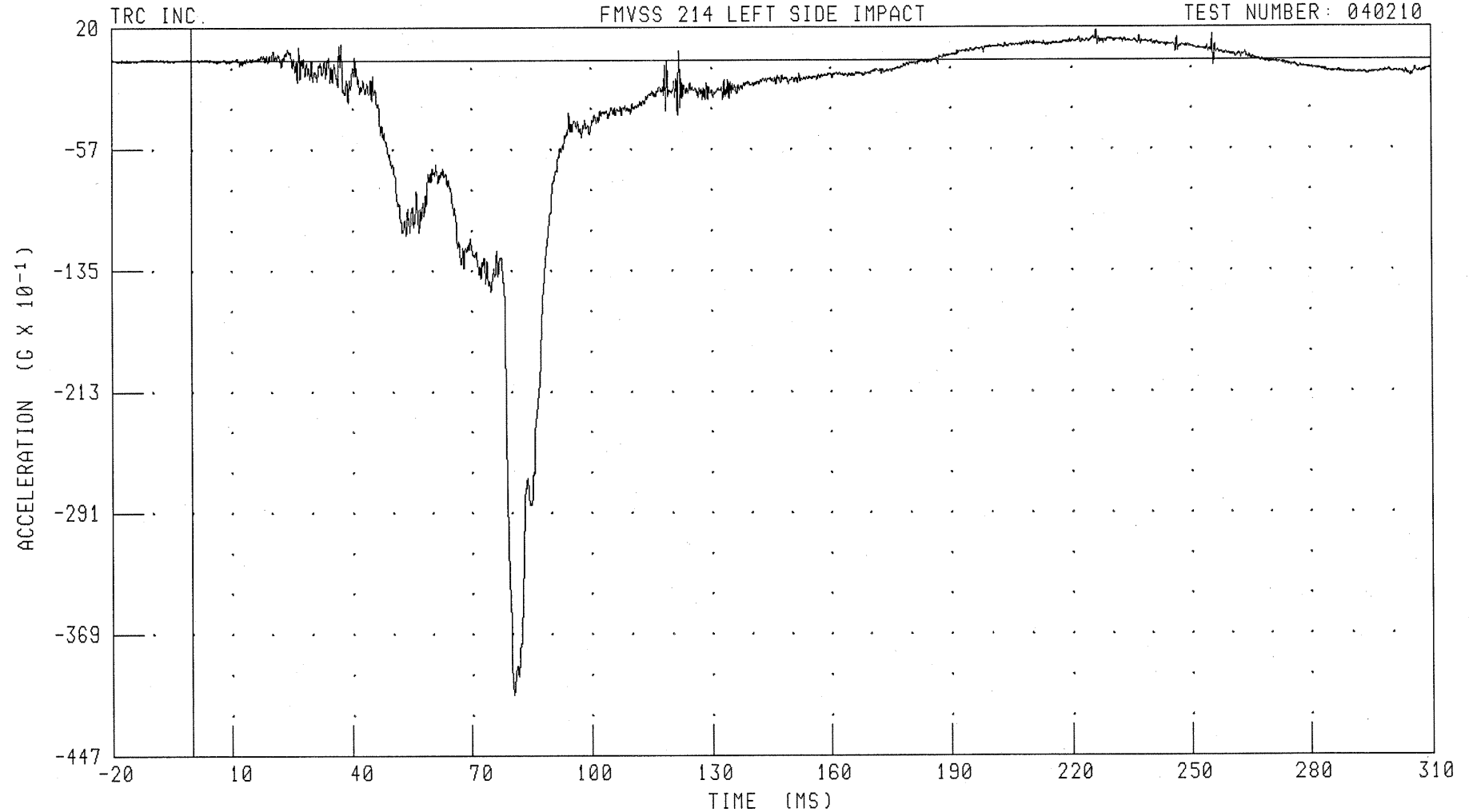
040210

Driver and Passenger Dummy Redundant Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER HEAD X-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXR1 FILTER: CH. CLASS 1000

PEAK DATA: 1.92 G @ 226.24 MS; -40.79 G @ 80.56 MS

B-60

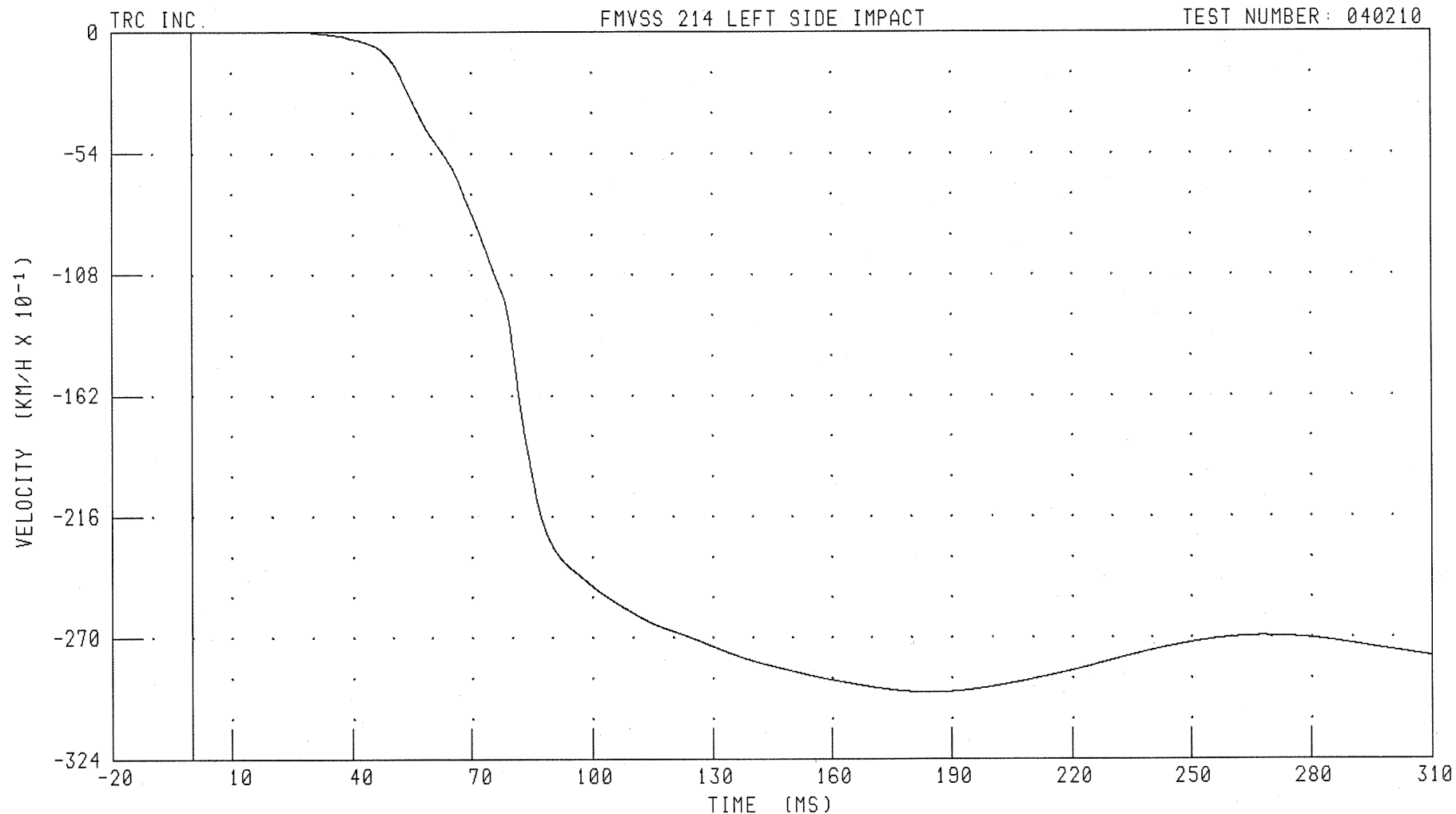
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD X-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXVI FILTER: CH. CLASS 180

PEAK DATA: 0.06 KM/H @ 25.28 MS; -29.44 KM/H @ 186.08 MS

B-61

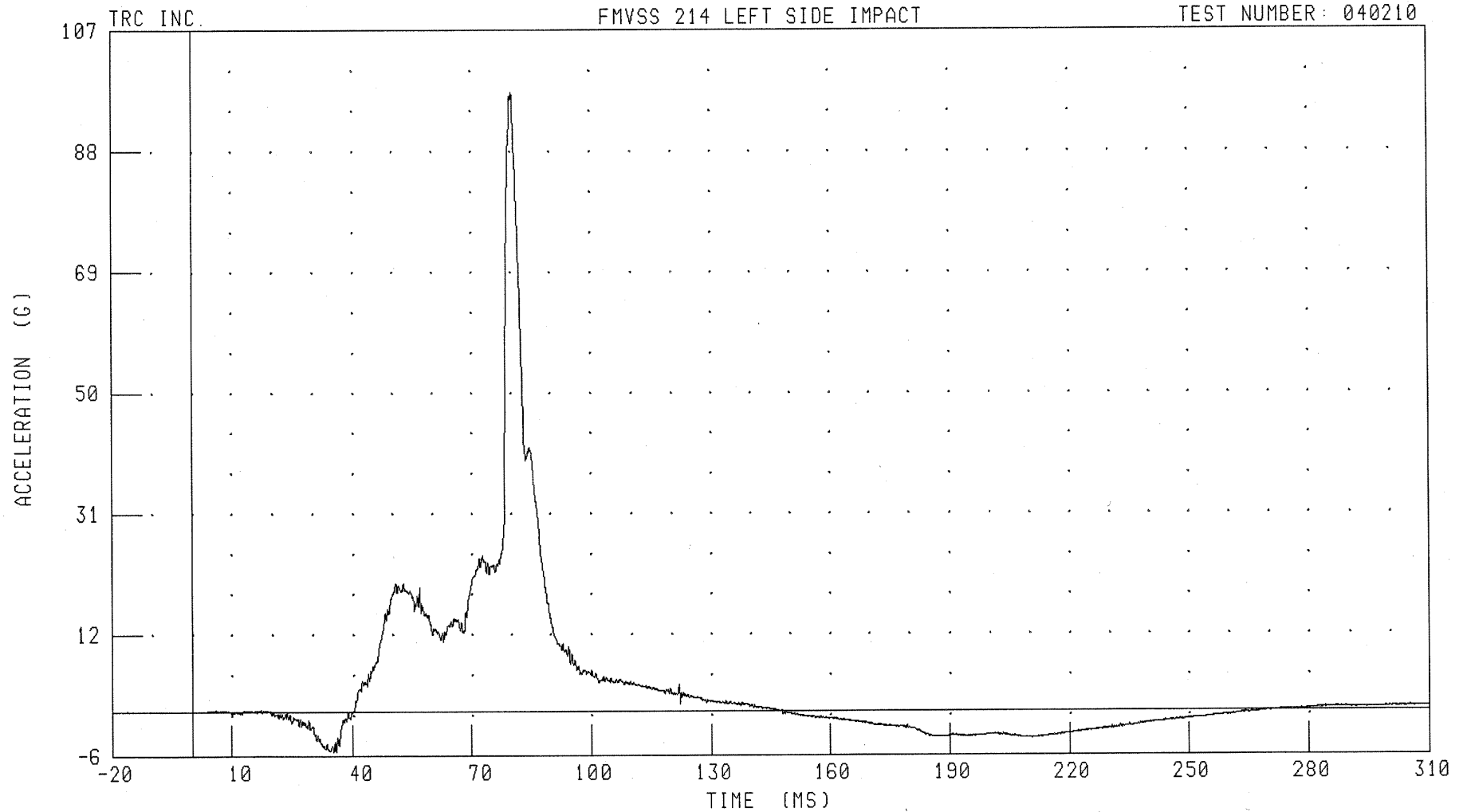
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYR1 FILTER: CH. CLASS 1000

PEAK DATA: 97.31 G @ 80.64 MS; -6.34 G @ 35.20 MS

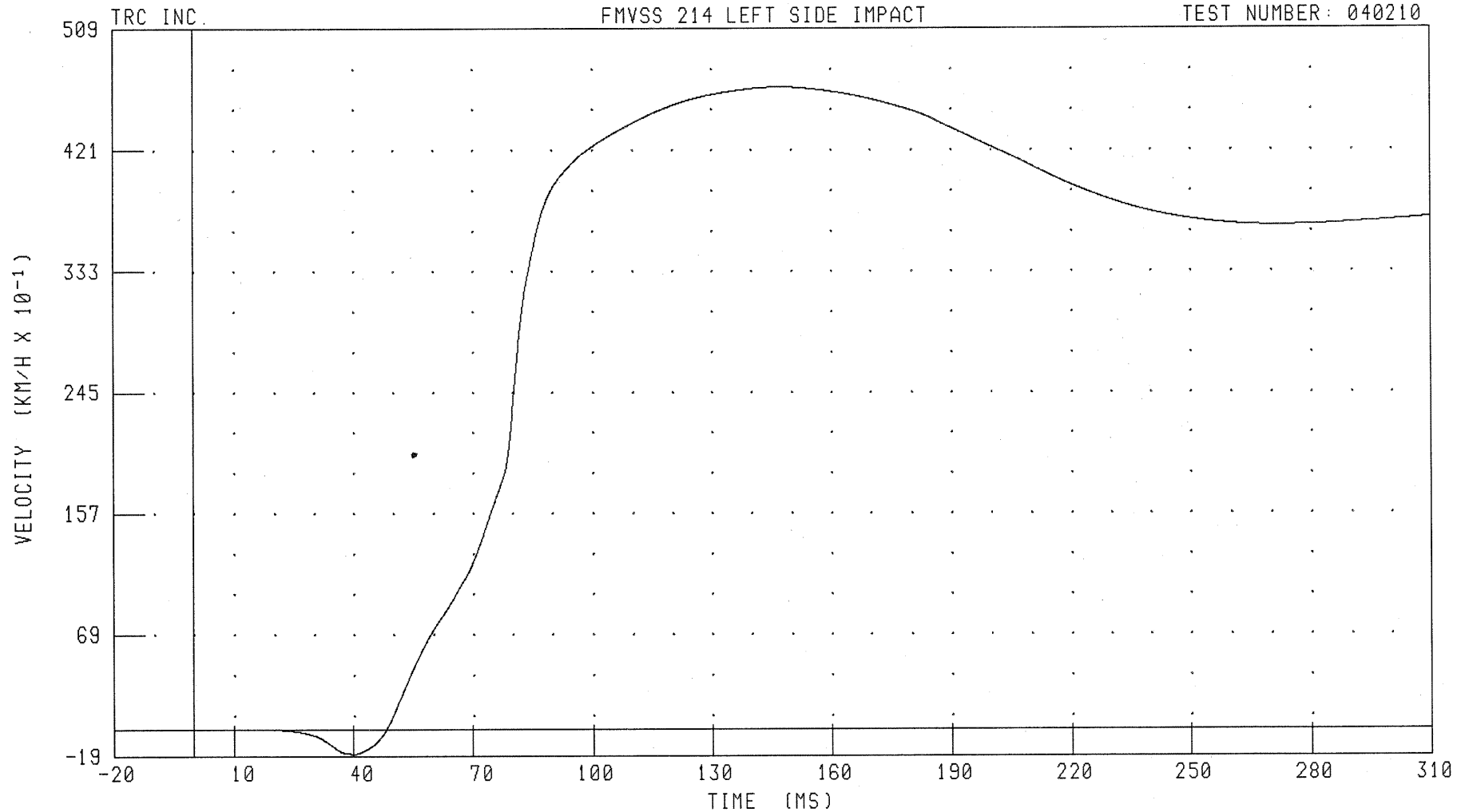
B-62

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER HEAD Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYVI FILTER: CH. CLASS 180

PEAK DATA: 46.66 KM/H @ 147.60 MS; -1.74 KM/H @ 40.00 MS

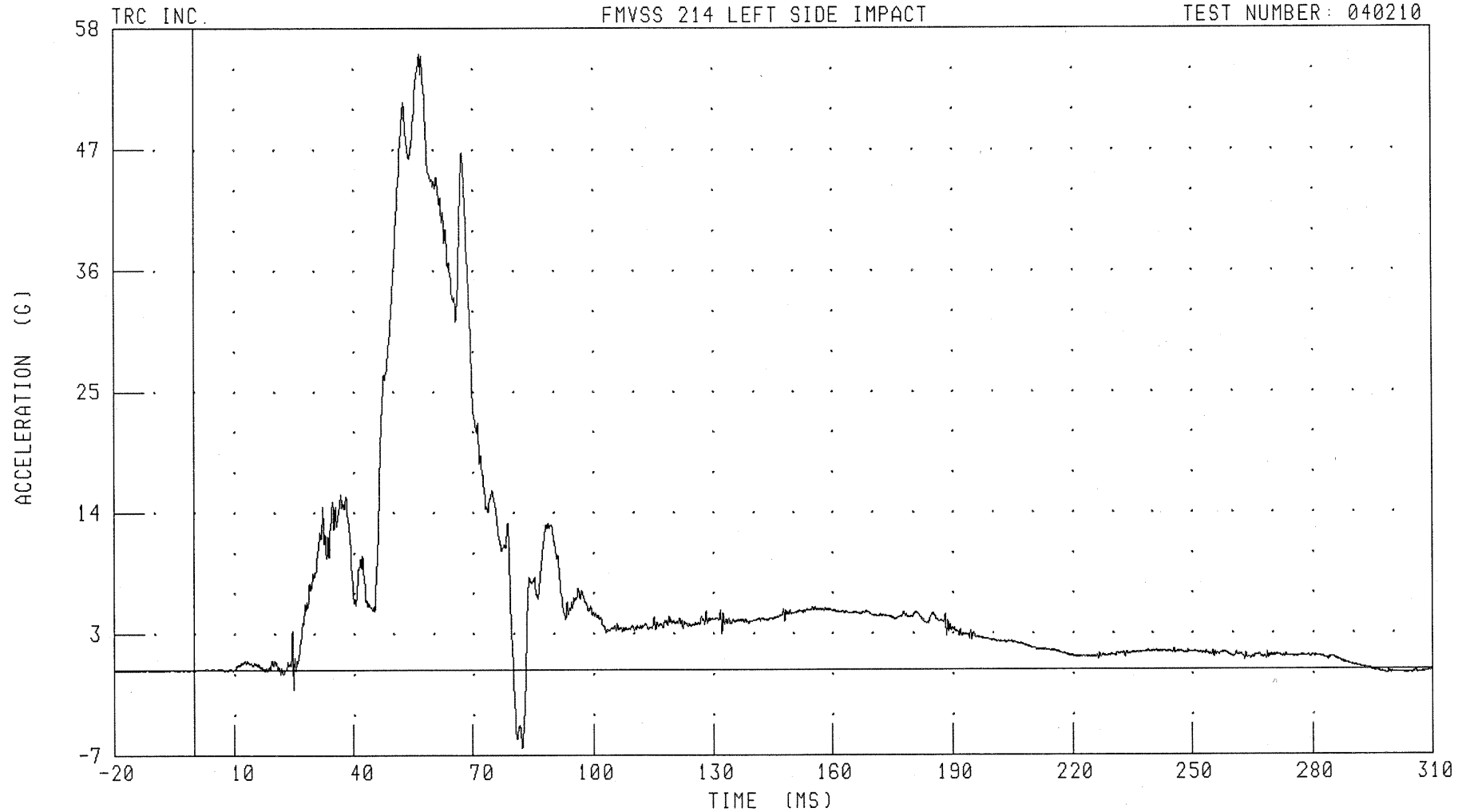
B-63

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER HEAD Z-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZR1 FILTER: CH. CLASS 1000

PEAK DATA: 55.96 G @ 56.56 MS; -7.05 G @ 82.16 MS

B-64

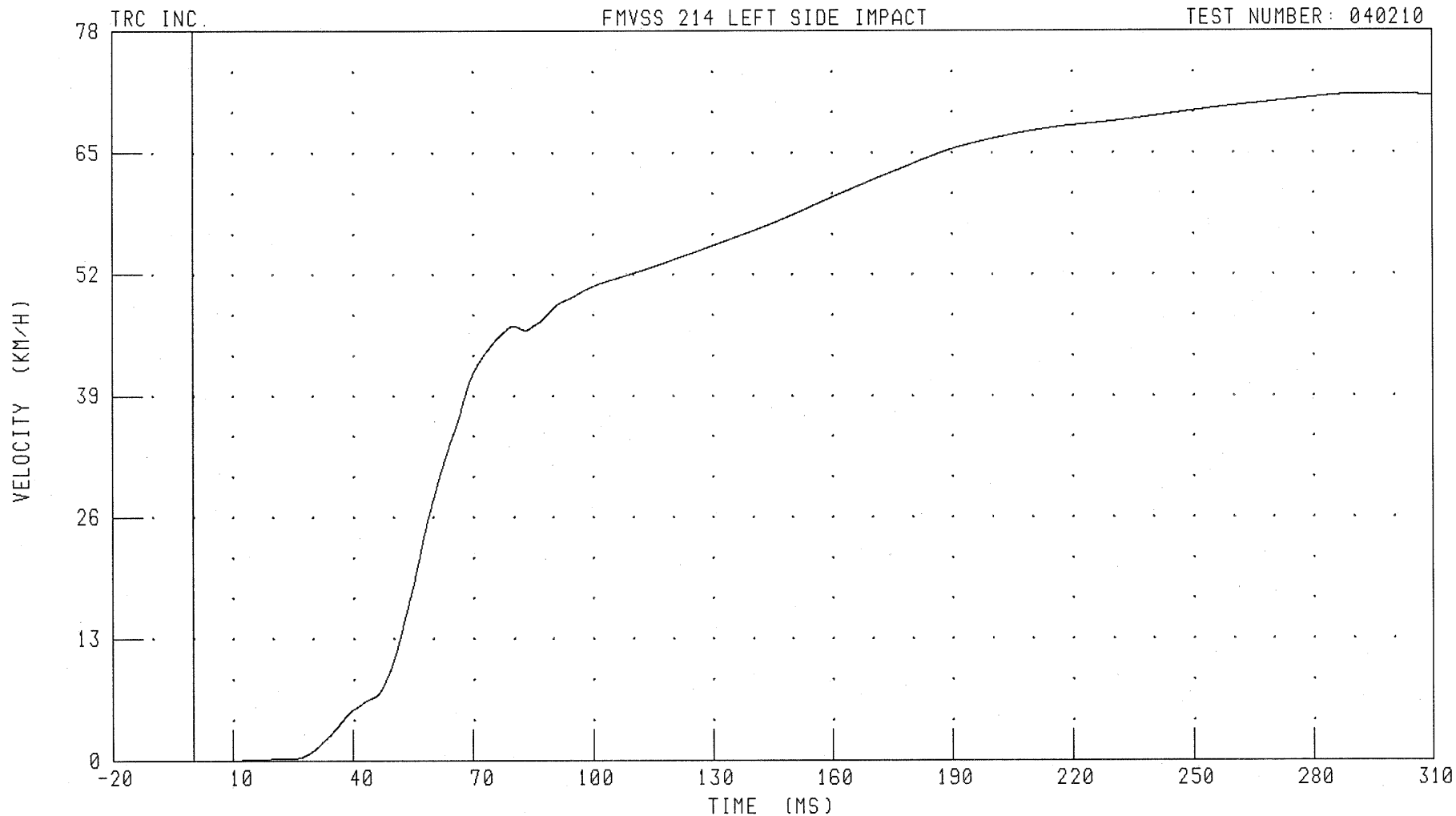
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD Z-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZVI FILTER: CH. CLASS 180

PEAK DATA: 71.24 KM/H @ 294.72 MS; 0.00 KM/H @ 0.64 MS

B-65

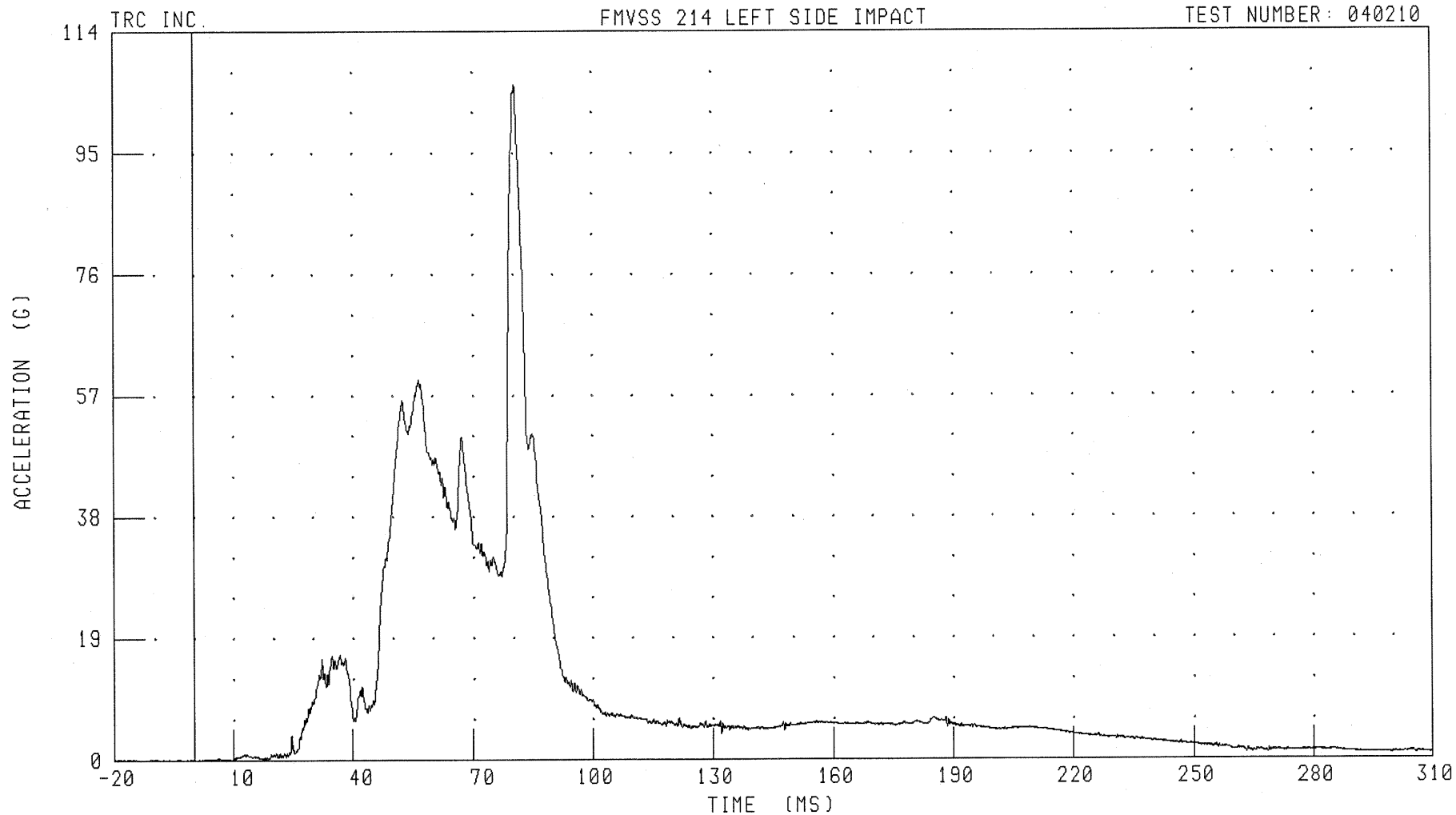
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER HEAD RESULTANT REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDRR1 FILTER: CH. CLASS 1000

PEAK DATA: 105.64 G @ 80.64 MS; 0.02 G @ -15.68 MS

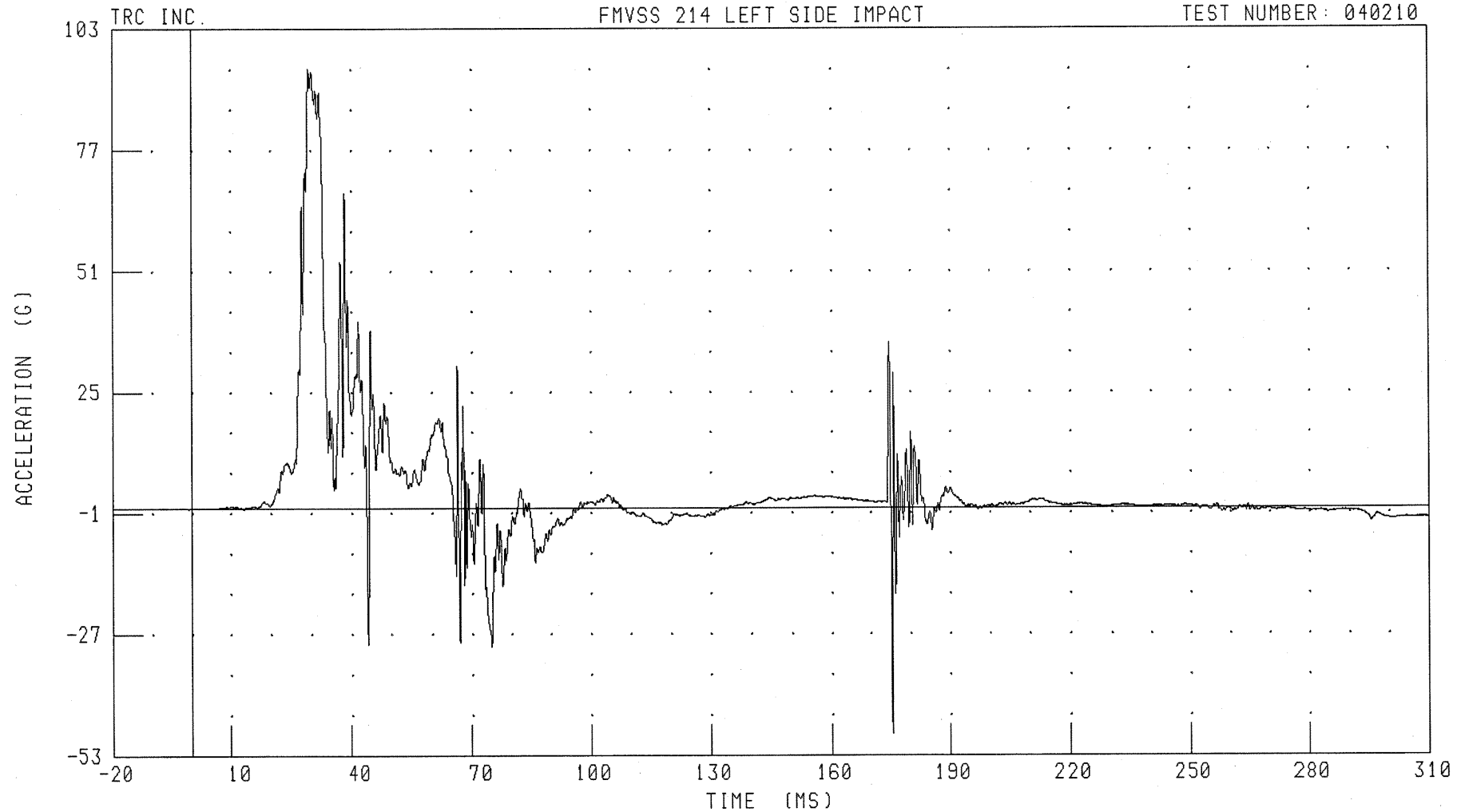
B-66

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYR1 FILTER: CH. CLASS 1000

PEAK DATA: 94.42 G @ 29.60 MS; -48.49 G @ 175.44 MS

B-67

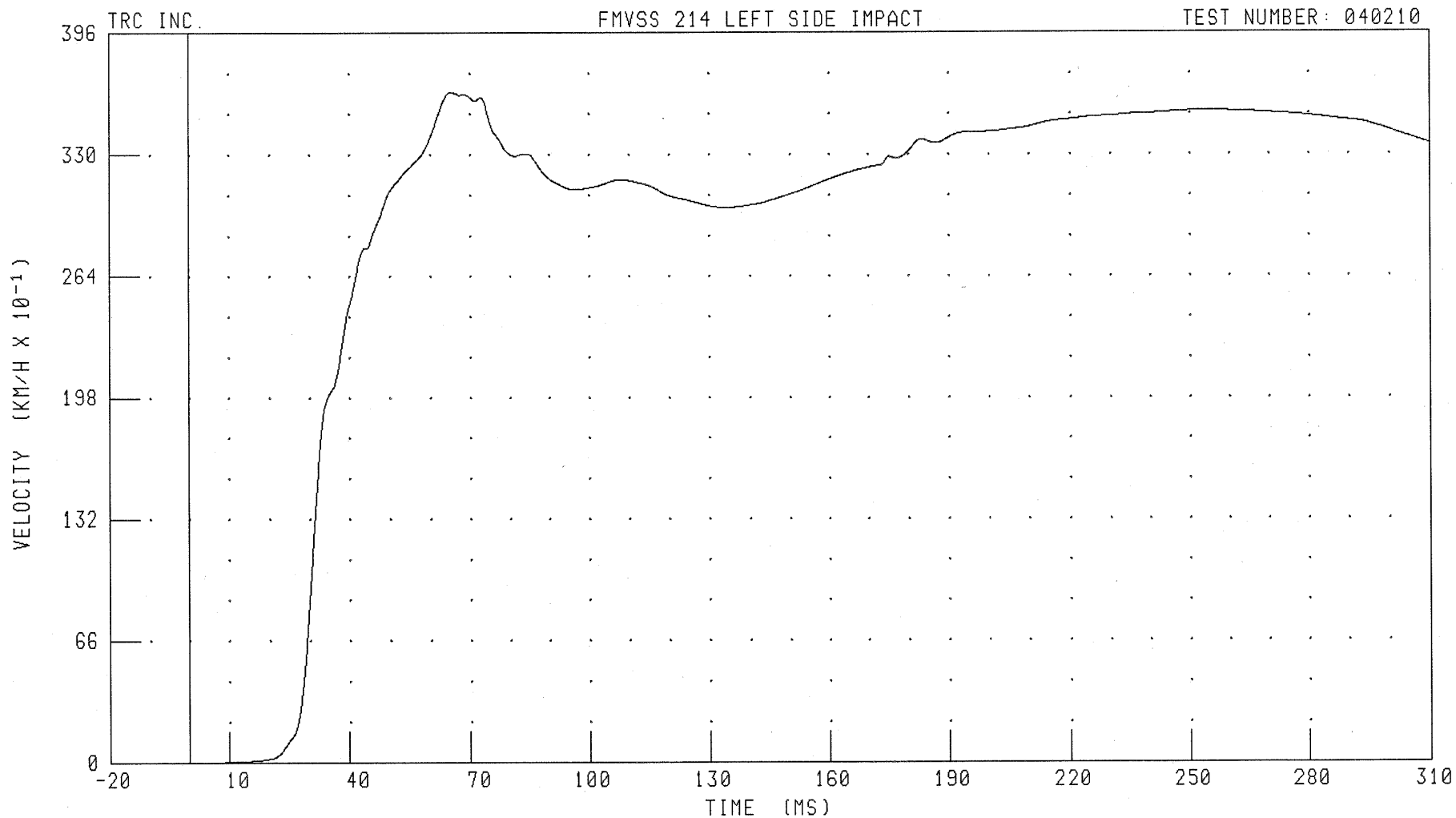
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER UPPER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYVI

FILTER: CH. CLASS 180

PEAK DATA: 36.40 KM/H @ 65.28 MS; 0.00 KM/H @ 0.08 MS

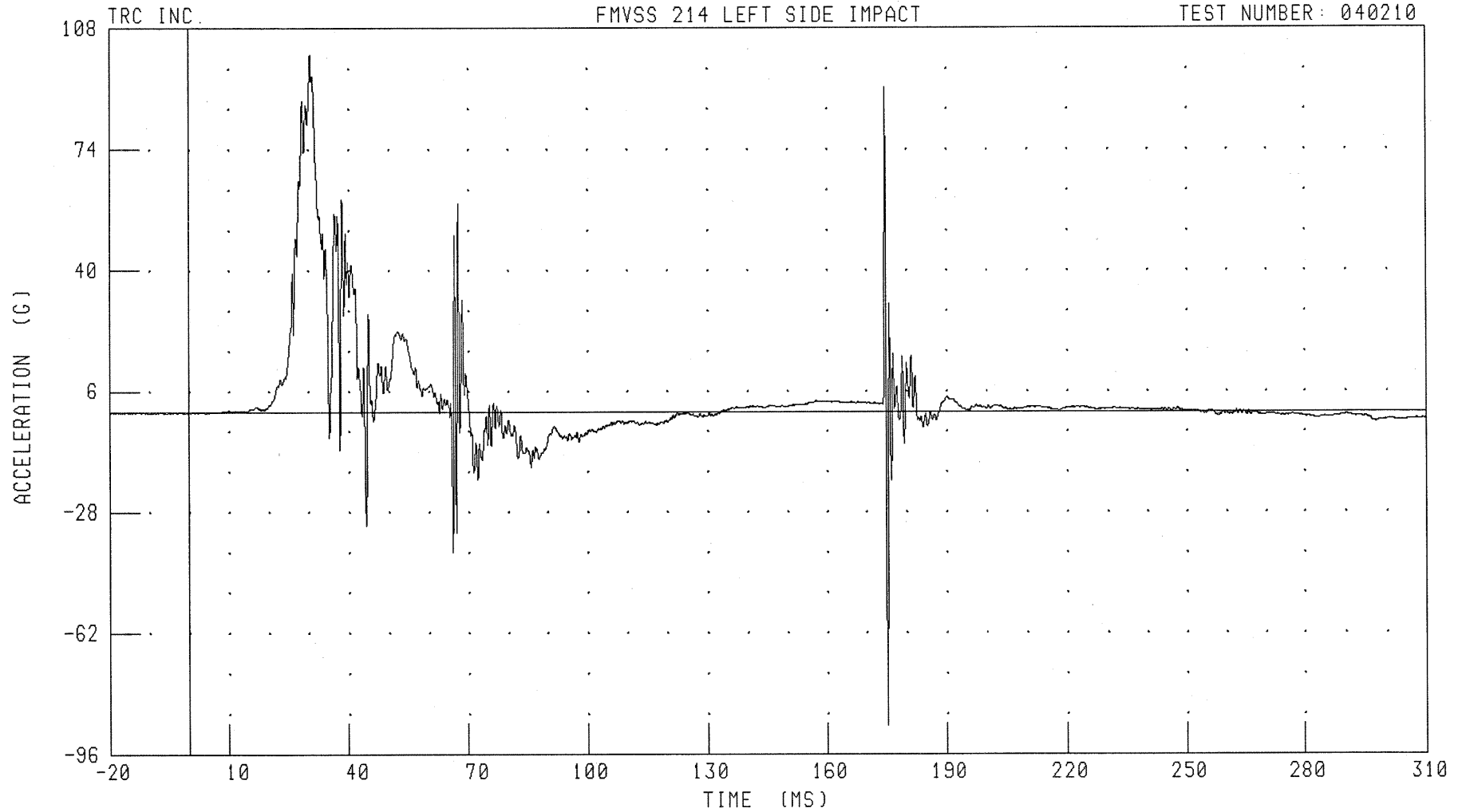
B-68

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYR1 FILTER: CH. CLASS 1000

PEAK DATA: 100.47 G @ 30.64 MS; -88.01 G @ 175.28 MS

B-69

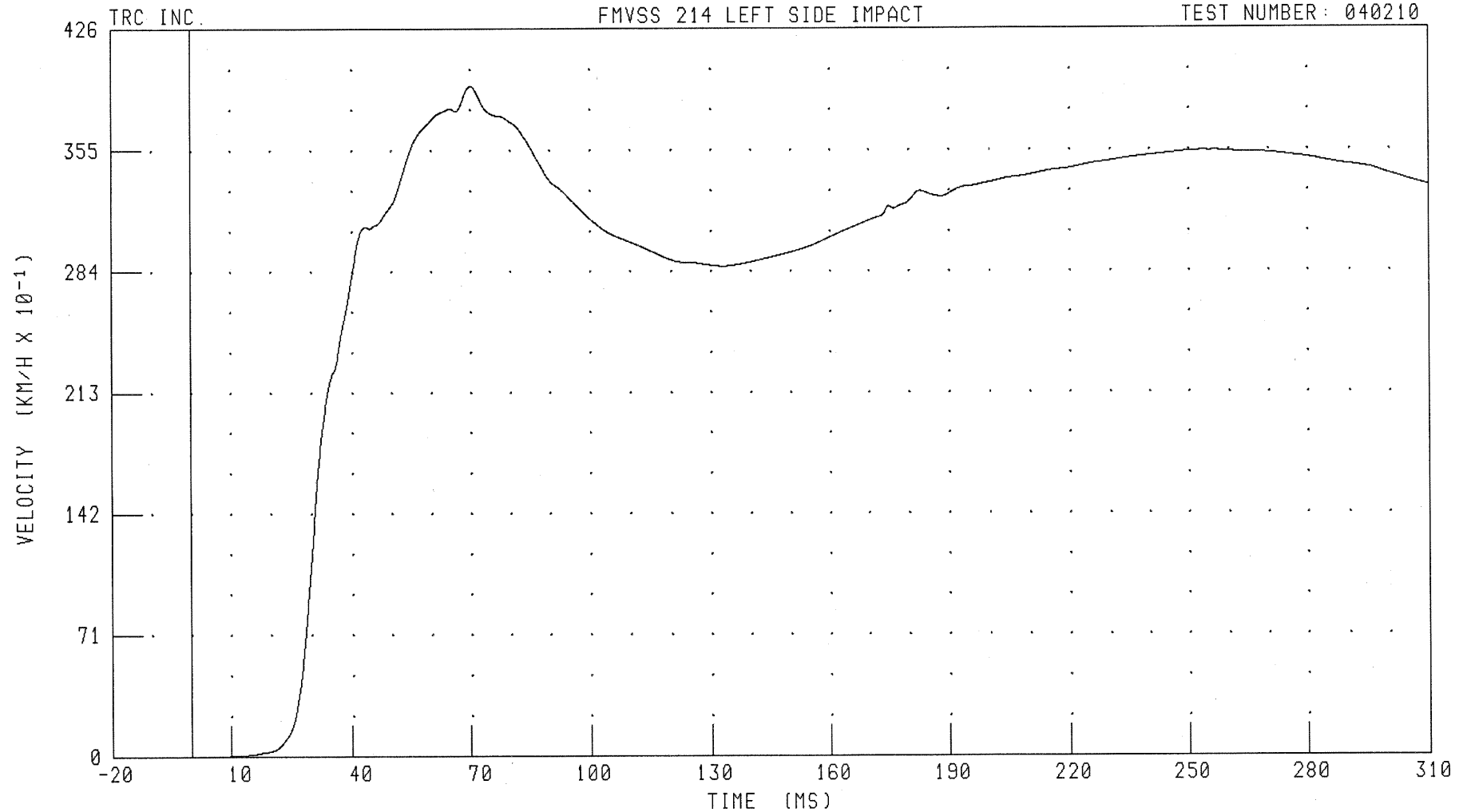
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYVI FILTER: CH. CLASS 180

PEAK DATA: 39.26 KM/H @ 70.32 MS; 0.00 KM/H @ 0.24 MS

B-70

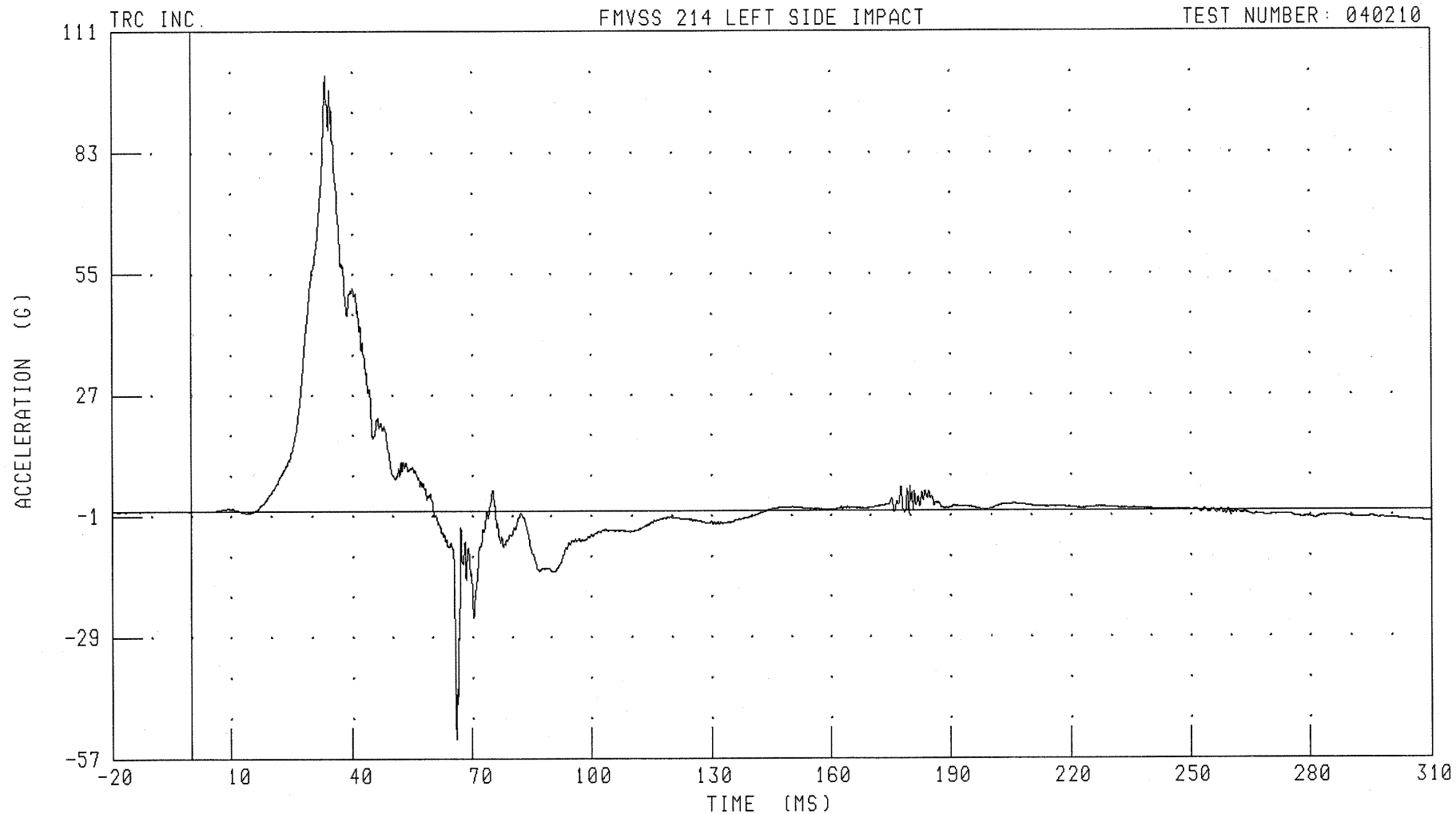
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YR1 FILTER: CH. CLASS 1000

PEAK DATA: 100.96 G @ 33.52 MS; -52.48 G @ 66.00 MS

B-71

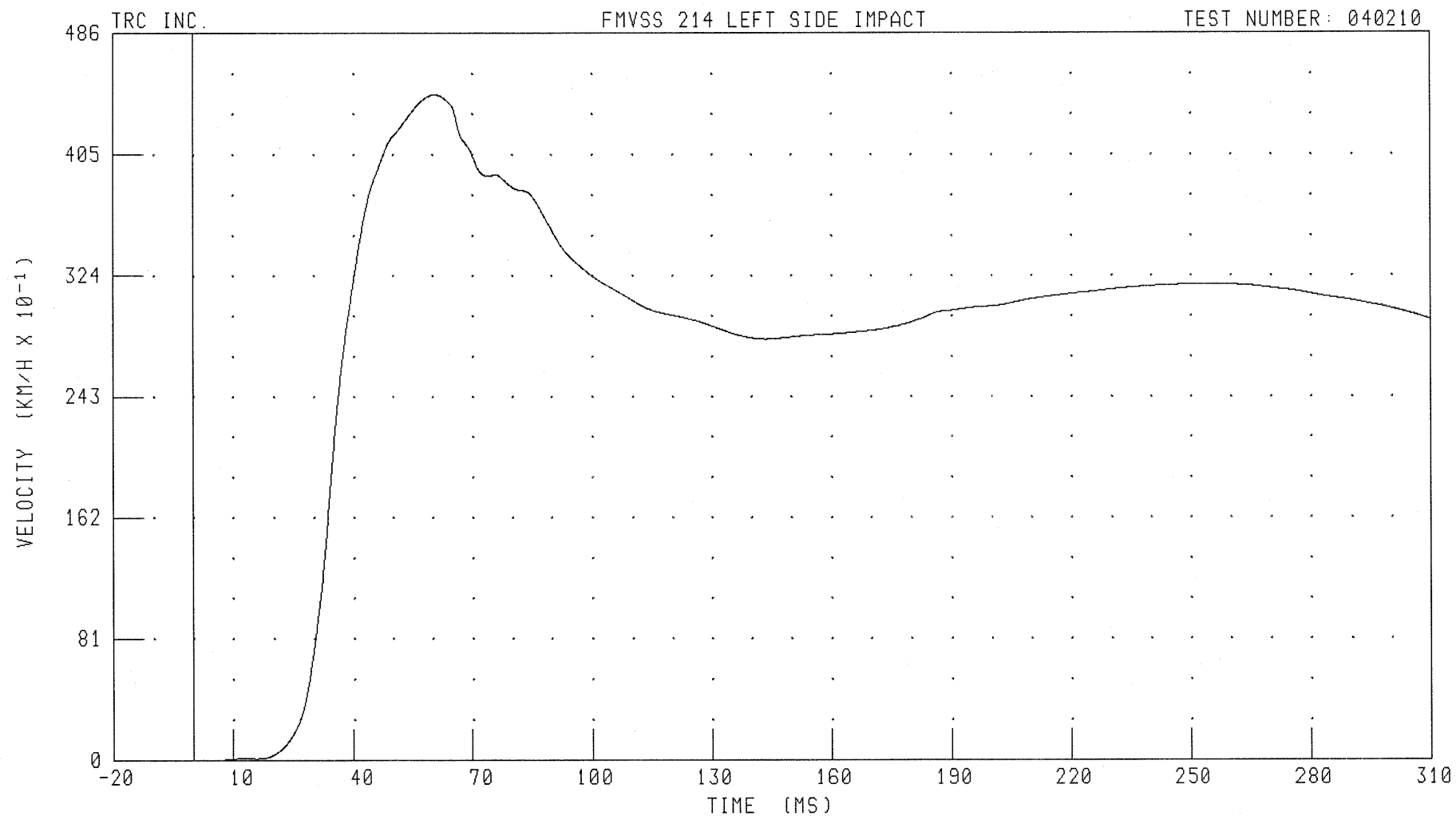
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YVI FILTER: CH. CLASS 180

PEAK DATA: 44.51 KM/H @ 60.64 MS; 0.00 KM/H @ 0.00 MS

B-72

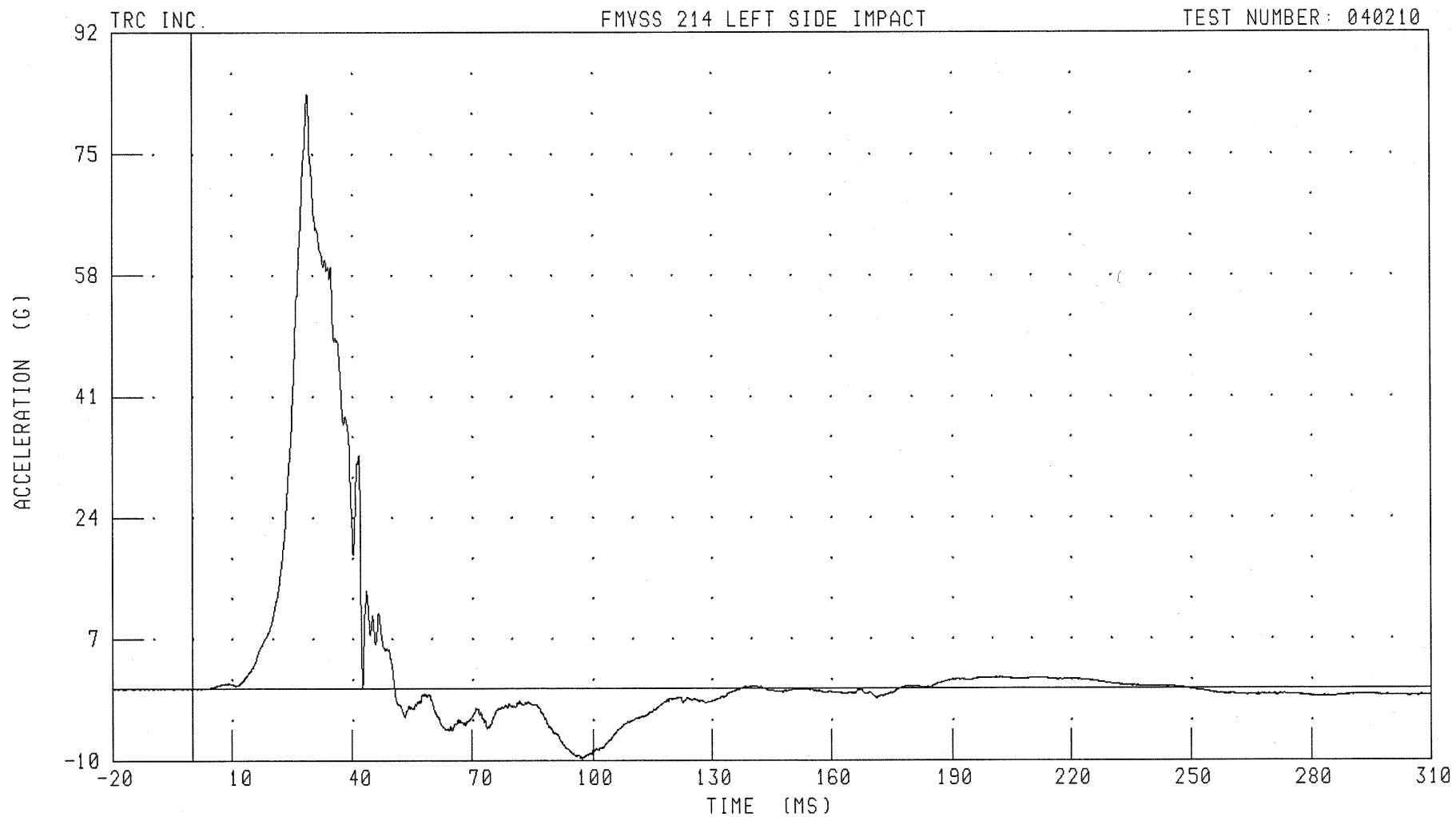
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYR1 FILTER: CH. CLASS 1000

PEAK DATA: 83.42 G @ 28.80 MS; -9.81 G @ 97.36 MS

B-73

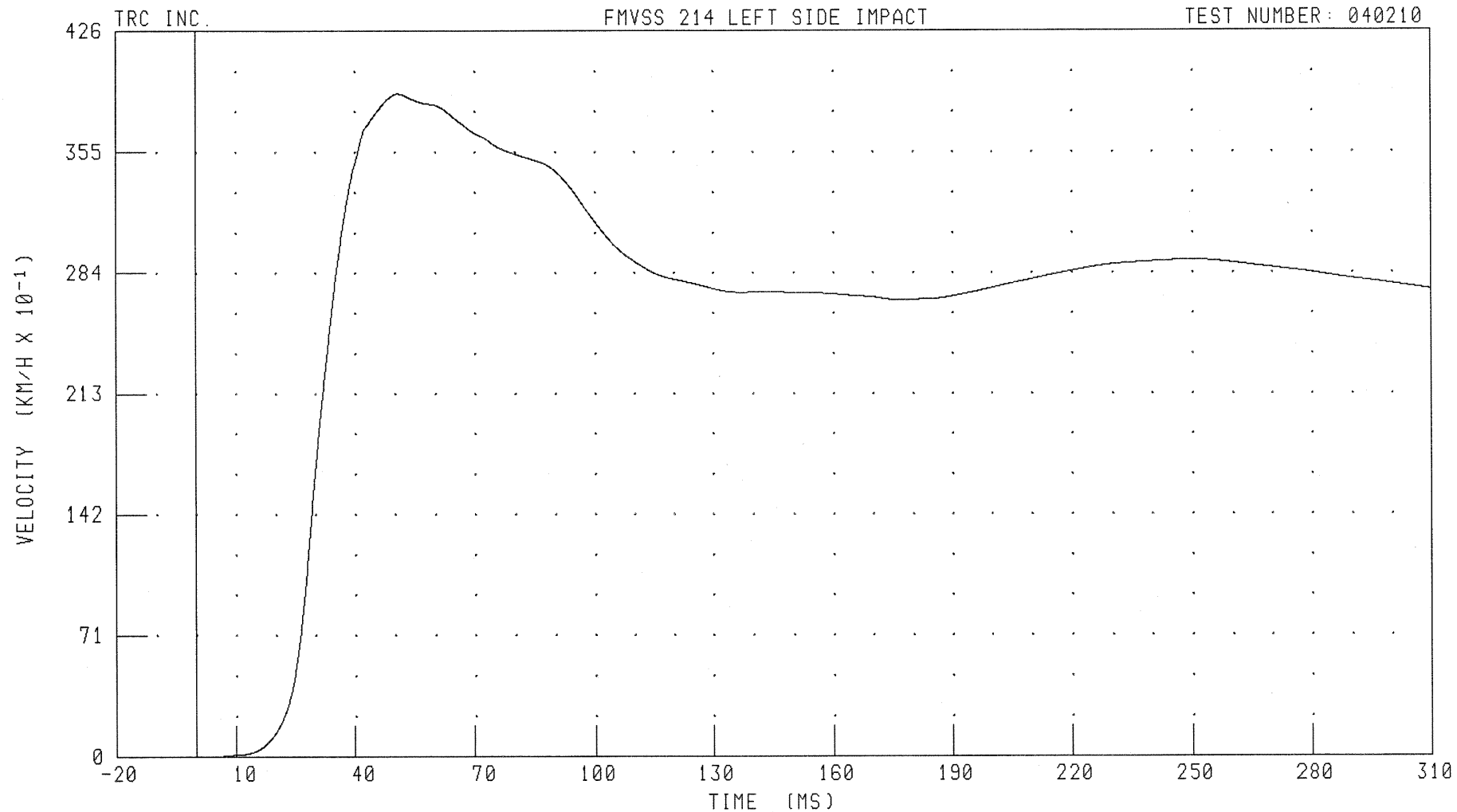
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER PELVIS Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYVI FILTER: CH. CLASS 180

PEAK DATA: 38.93 KM/H @ 50.80 MS; 0.00 KM/H @ 0.00 MS

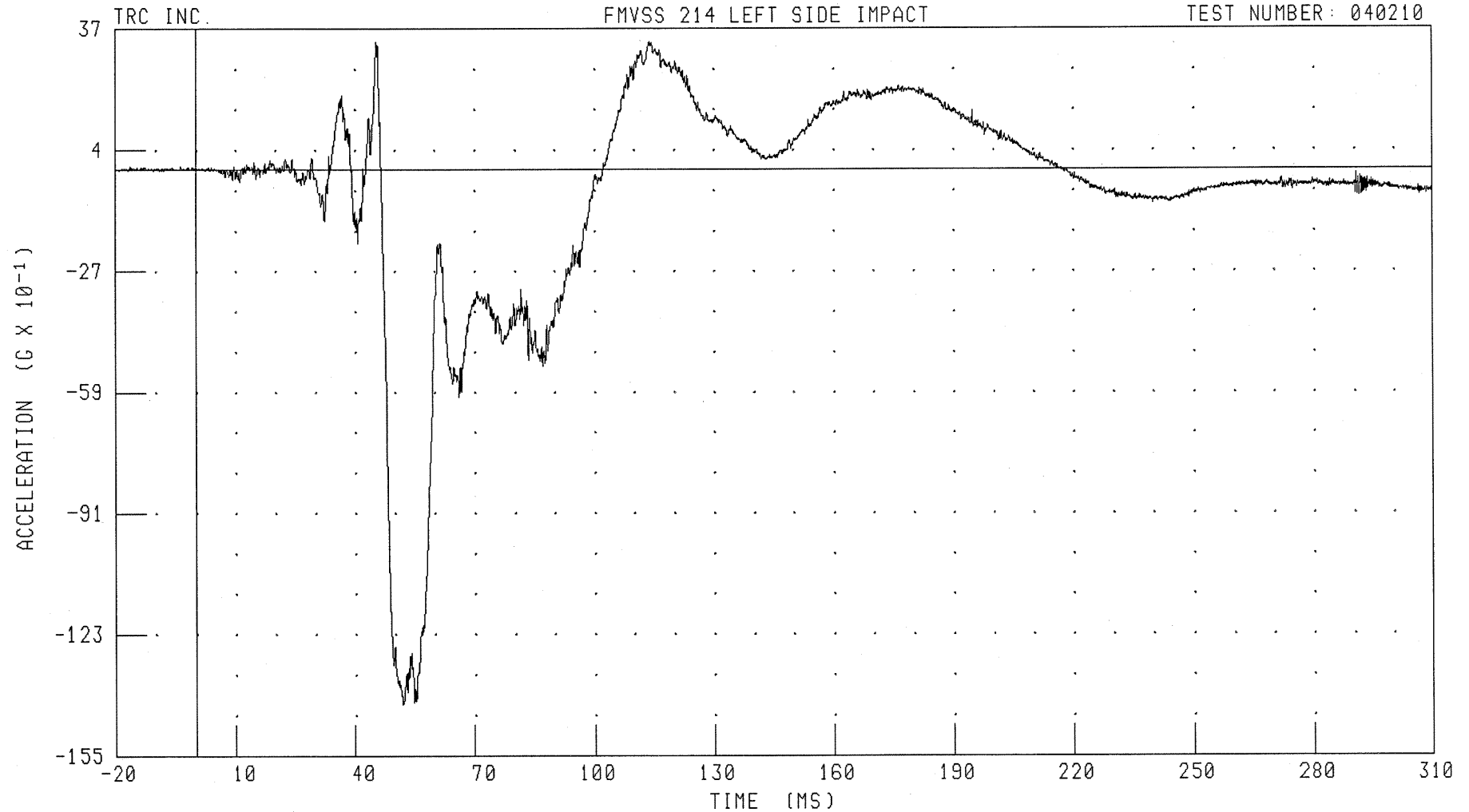
B-74

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD X-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXR4 FILTER: CH. CLASS 1000

PEAK DATA: 3.37 G @ 45.60 MS; -14.14 G @ 51.92 MS

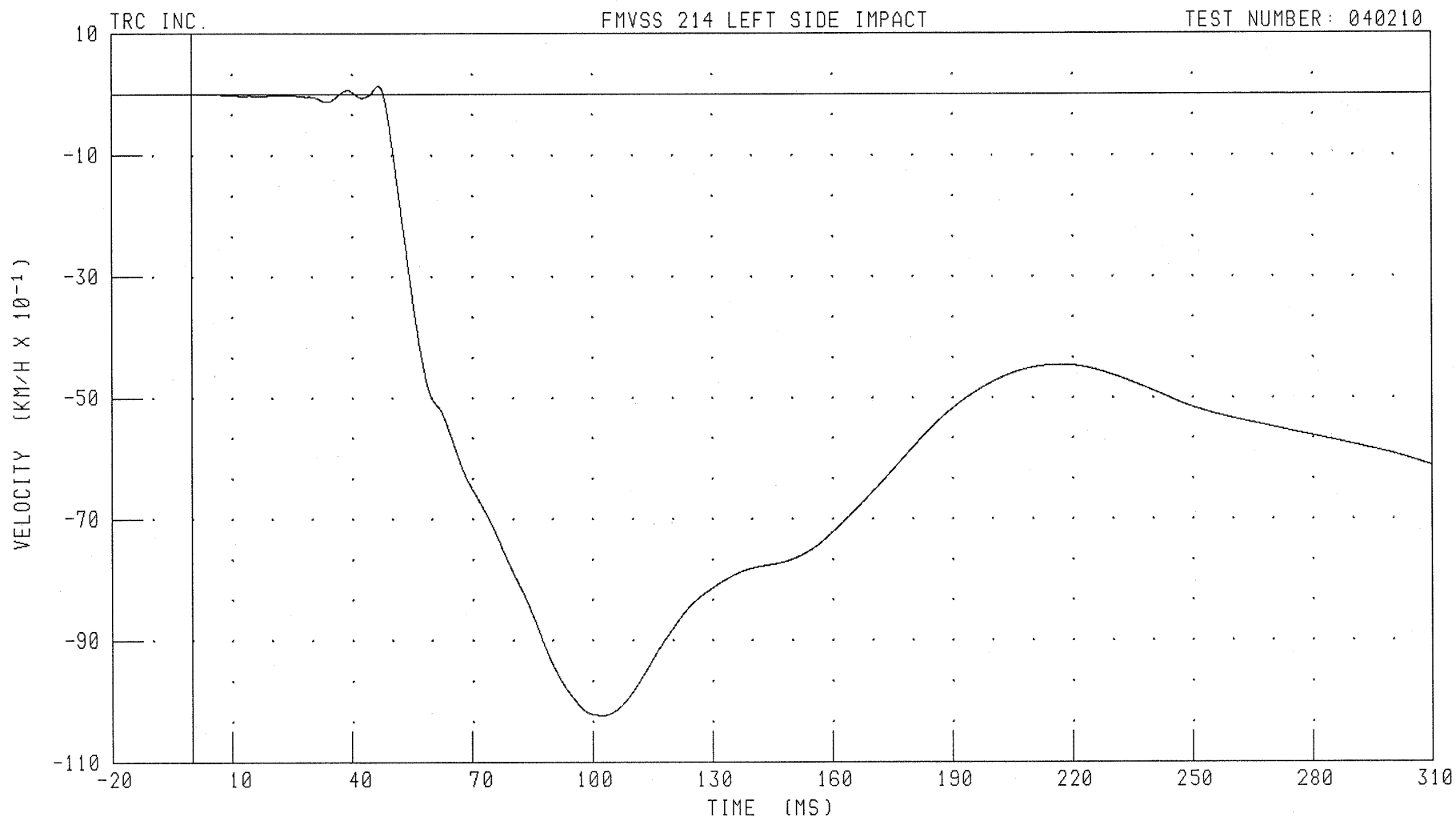
B-75

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD X-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDXVJ

FILTER: CH. CLASS 180

PEAK DATA: 0.14 KM/H @ 46.72 MS; -10.24 KM/H @ 102.48 MS

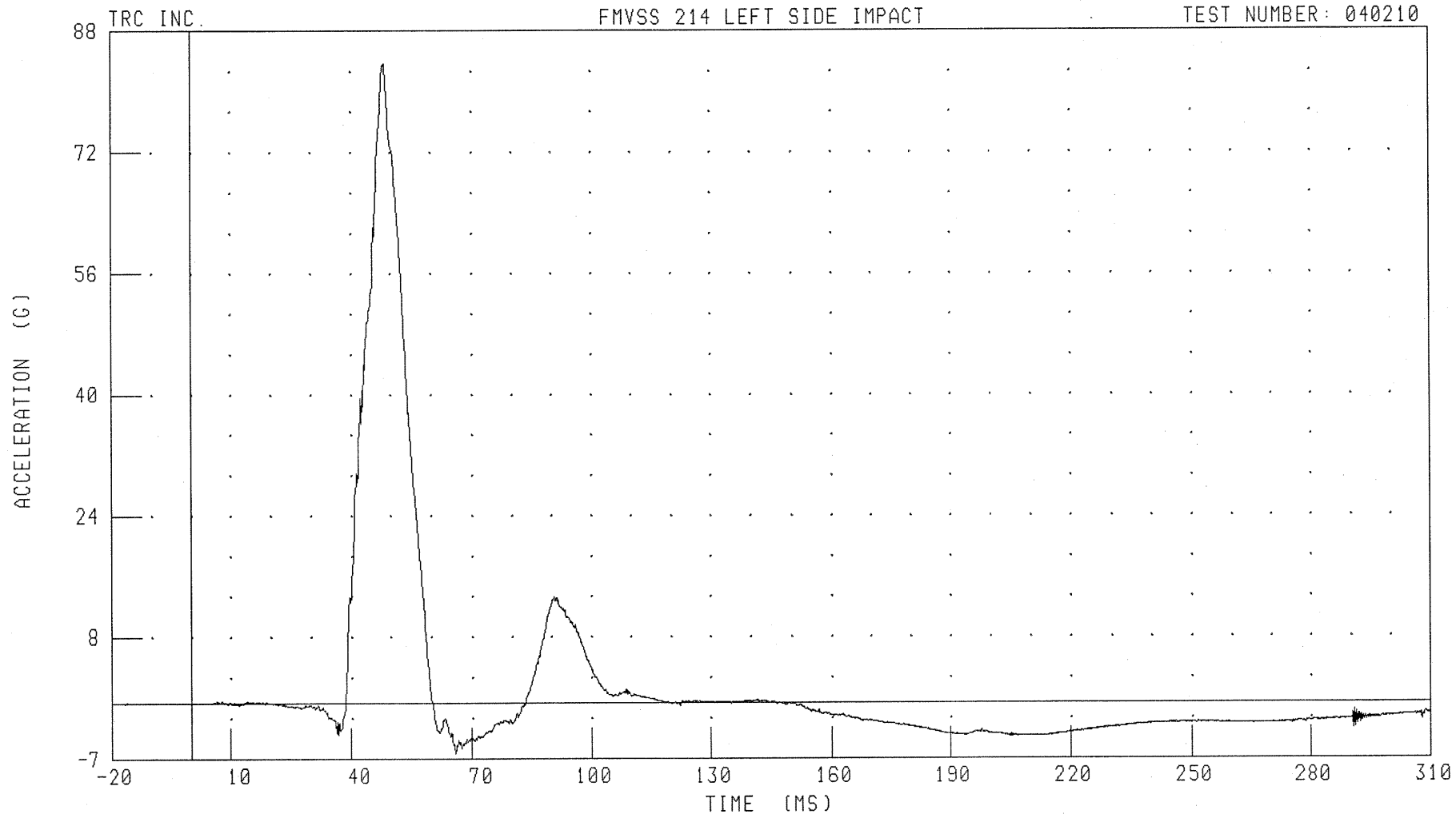
B-76

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYR4 FILTER: CH. CLASS 1000

PEAK DATA: 84.34 G @ 48.72 MS; -6.65 G @ 65.84 MS

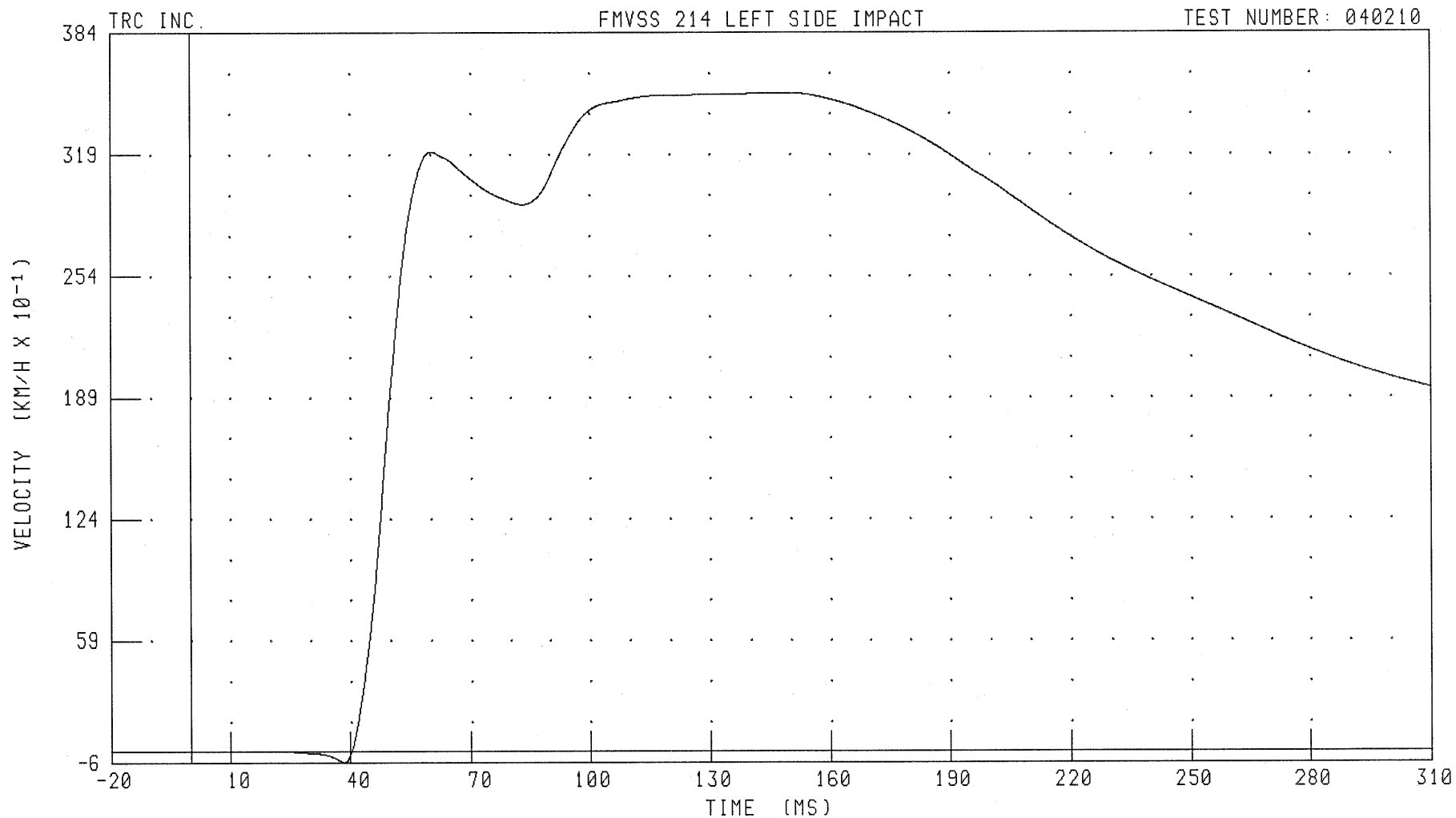
B-77

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDYVJ FILTER: CH. CLASS 180

PEAK DATA: 35.18 KM/H @ 146.24 MS; -0.58 KM/H @ 38.48 MS

B-78

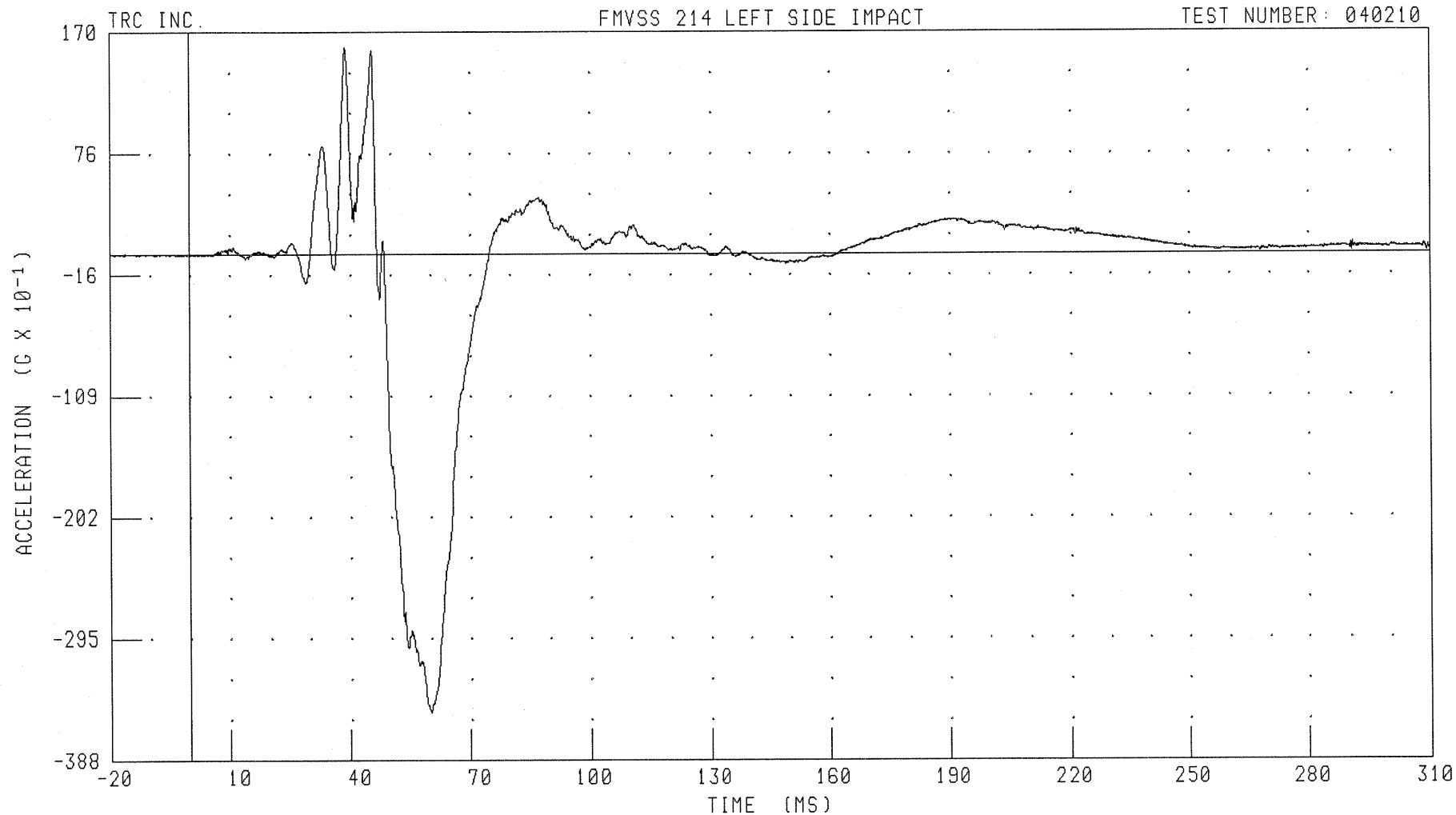
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER HEAD Z-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZR4 FILTER: CH. CLASS 1000

PEAK DATA: 15.84 G @ 38.88 MS; -35.15 G @ 60.00 MS

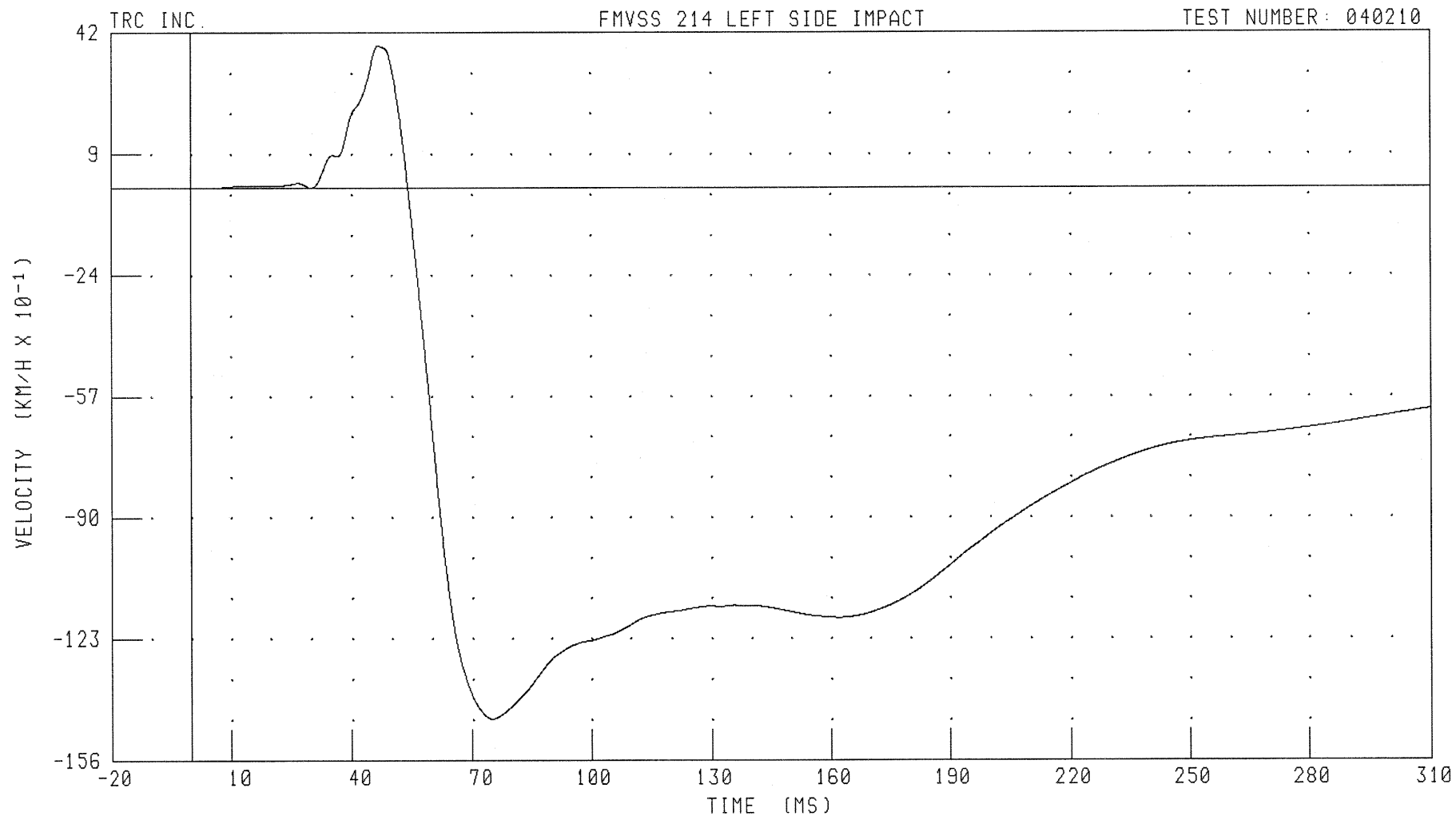
B-79

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD Z-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDZVJ FILTER: CH. CLASS 180

PEAK DATA: 3.85 KM/H @ 46.88 MS; -14.48 KM/H @ 75.04 MS

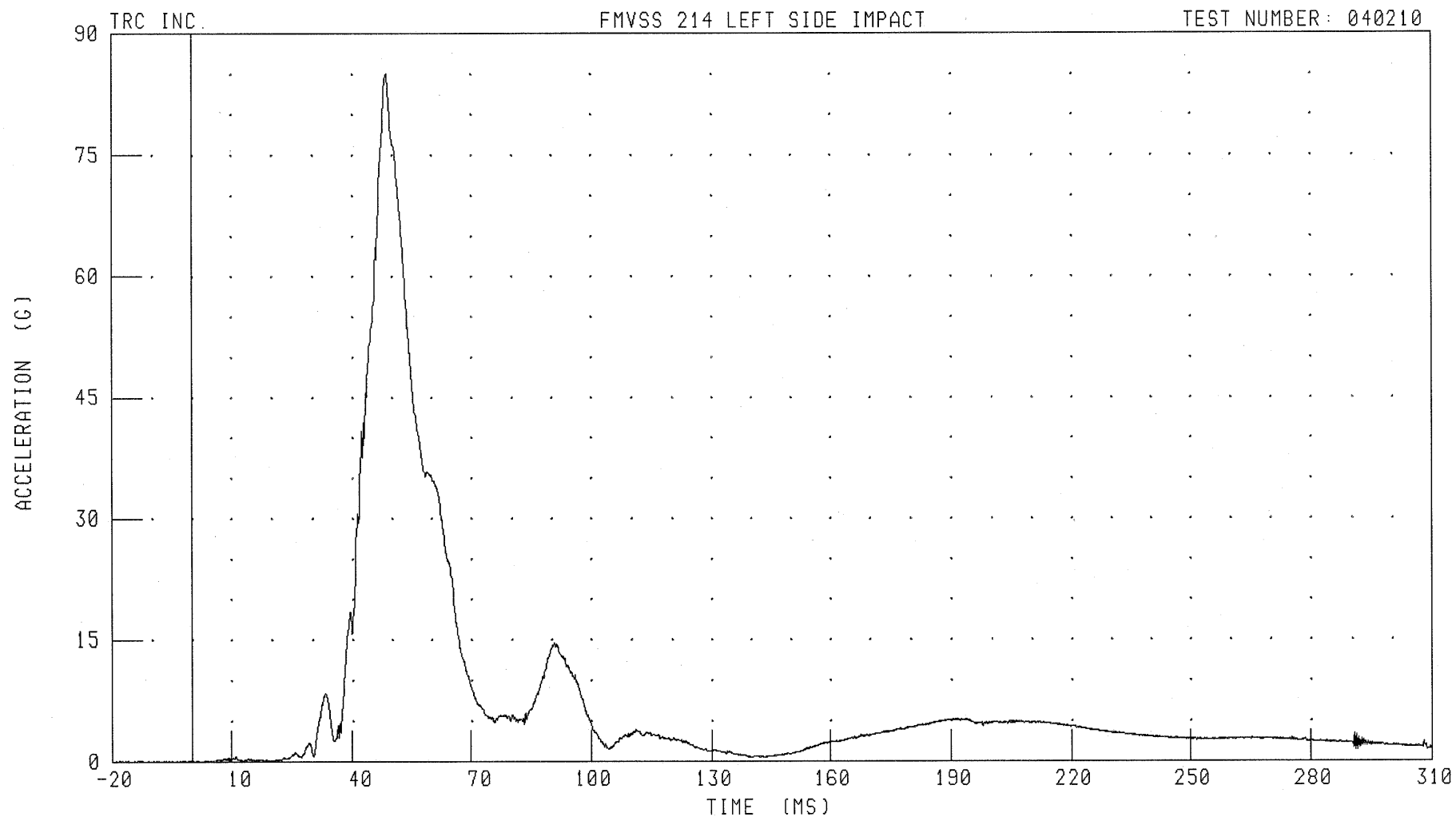
B-80

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER HEAD RESULTANT REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: HEDRR4 FILTER: CH. CLASS 1000

PEAK DATA: 85.08 G @ 48.72 MS; 0.01 G @ -19.92 MS

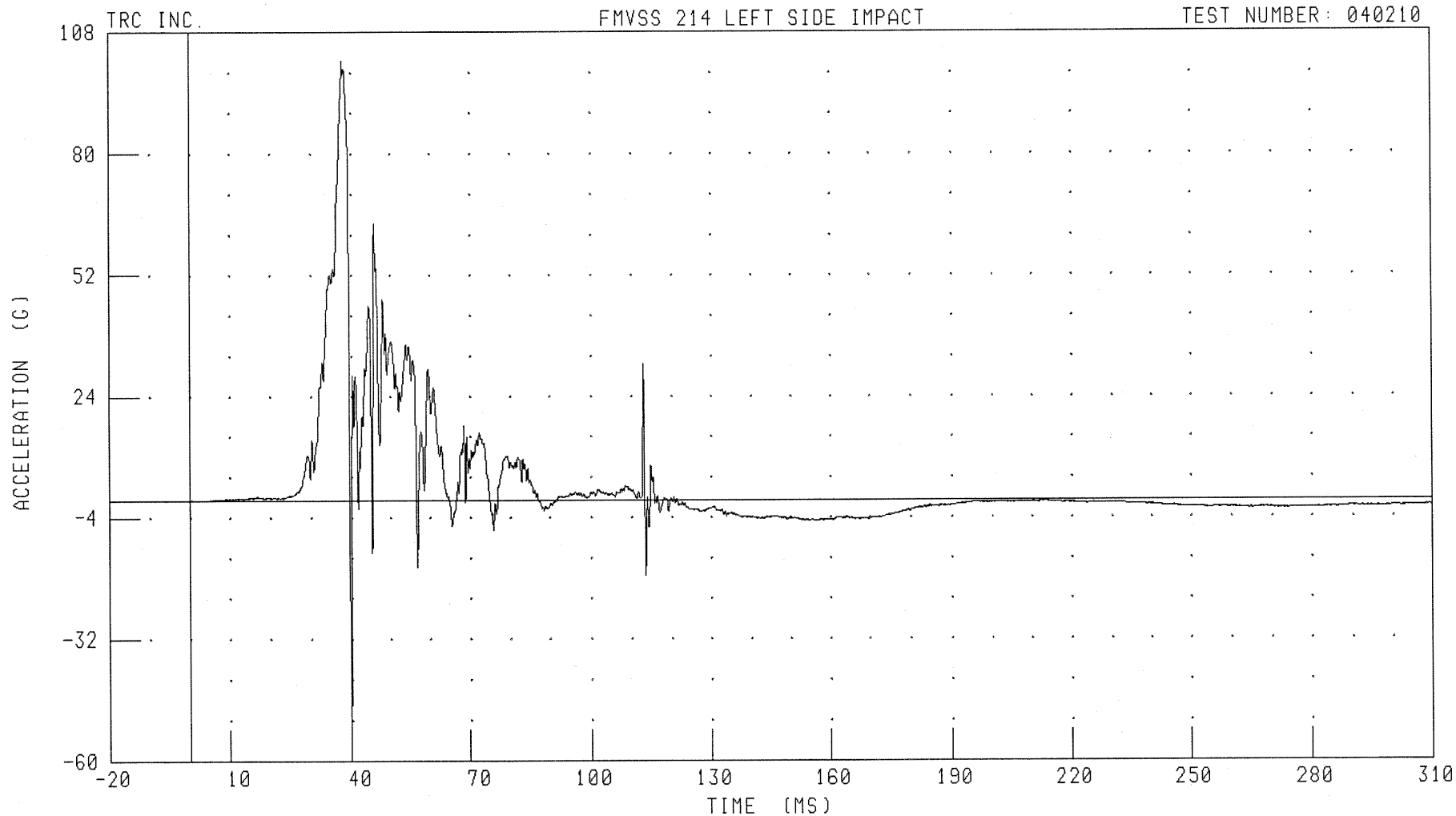
B-81

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYR4 FILTER: CH. CLASS 1000

PEAK DATA: 101.44 G @ 37.92 MS; -54.95 G @ 40.00 MS

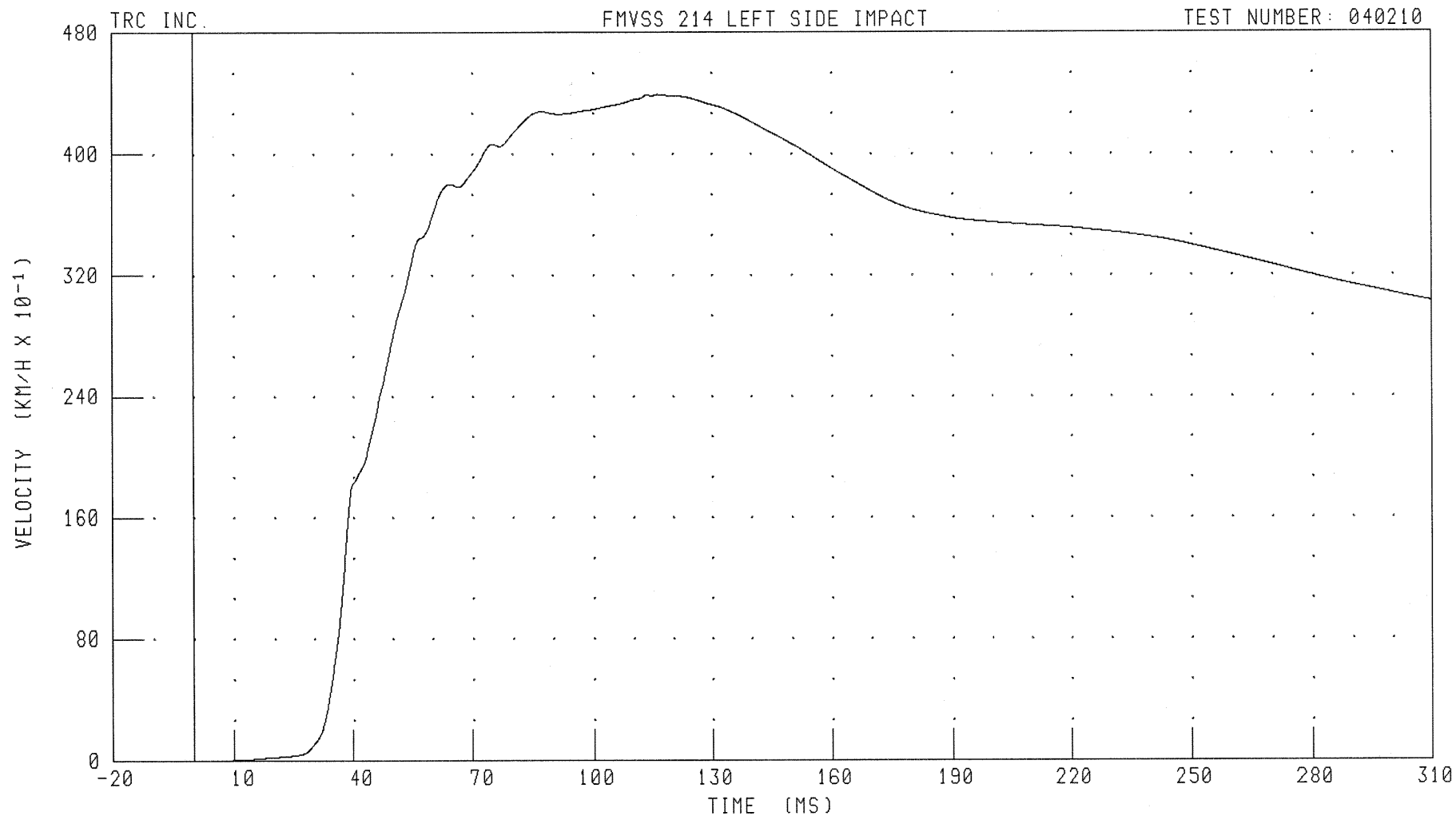
B-82

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYVJ FILTER: CH. CLASS 180

PEAK DATA: 43.92 KM/H @ 116.40 MS; 0.00 KM/H @ 1.52 MS

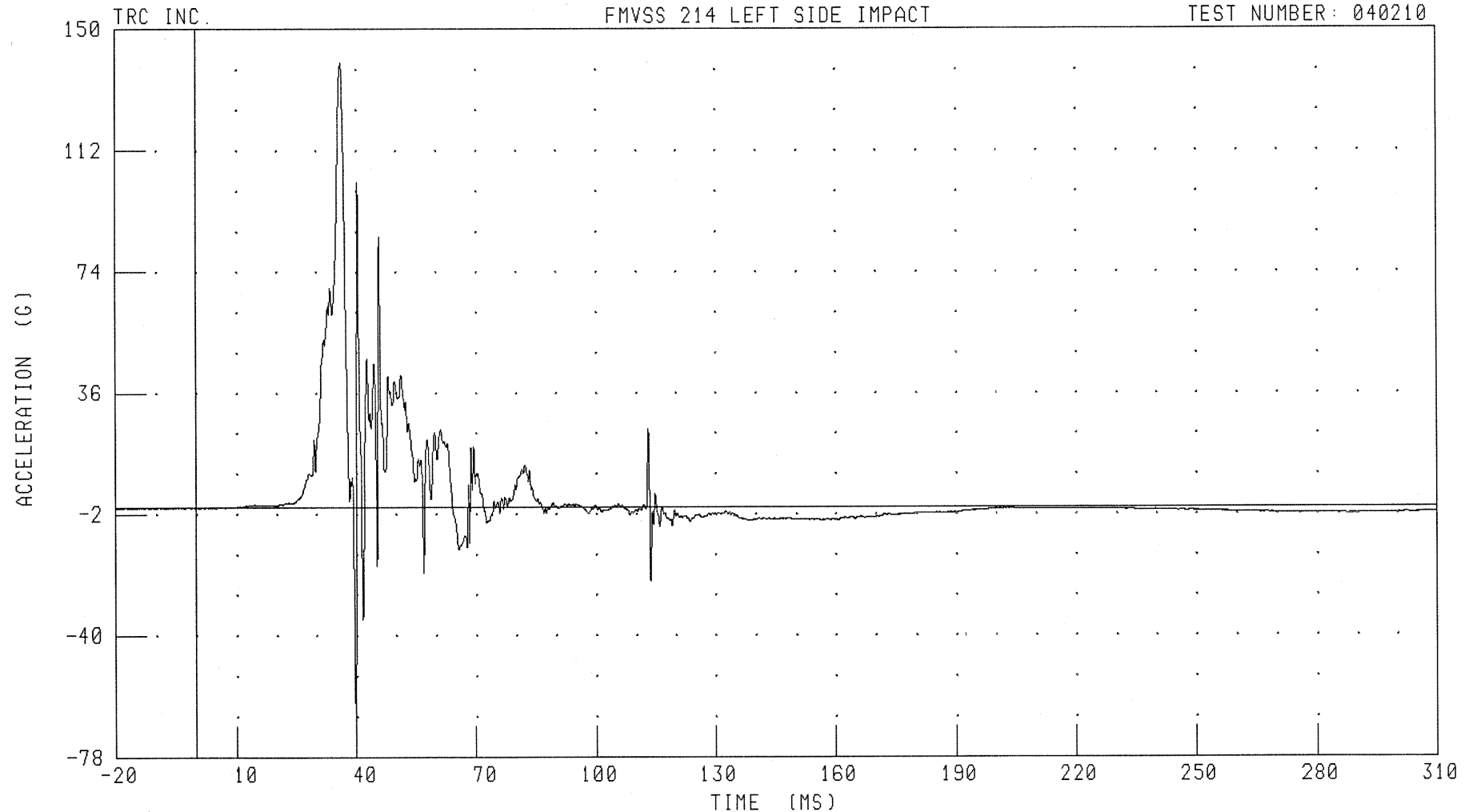
B-83

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYR4 FILTER: CH. CLASS 1000

PEAK DATA: 139.60 G @ 36.32 MS; -71.42 G @ 39.92 MS

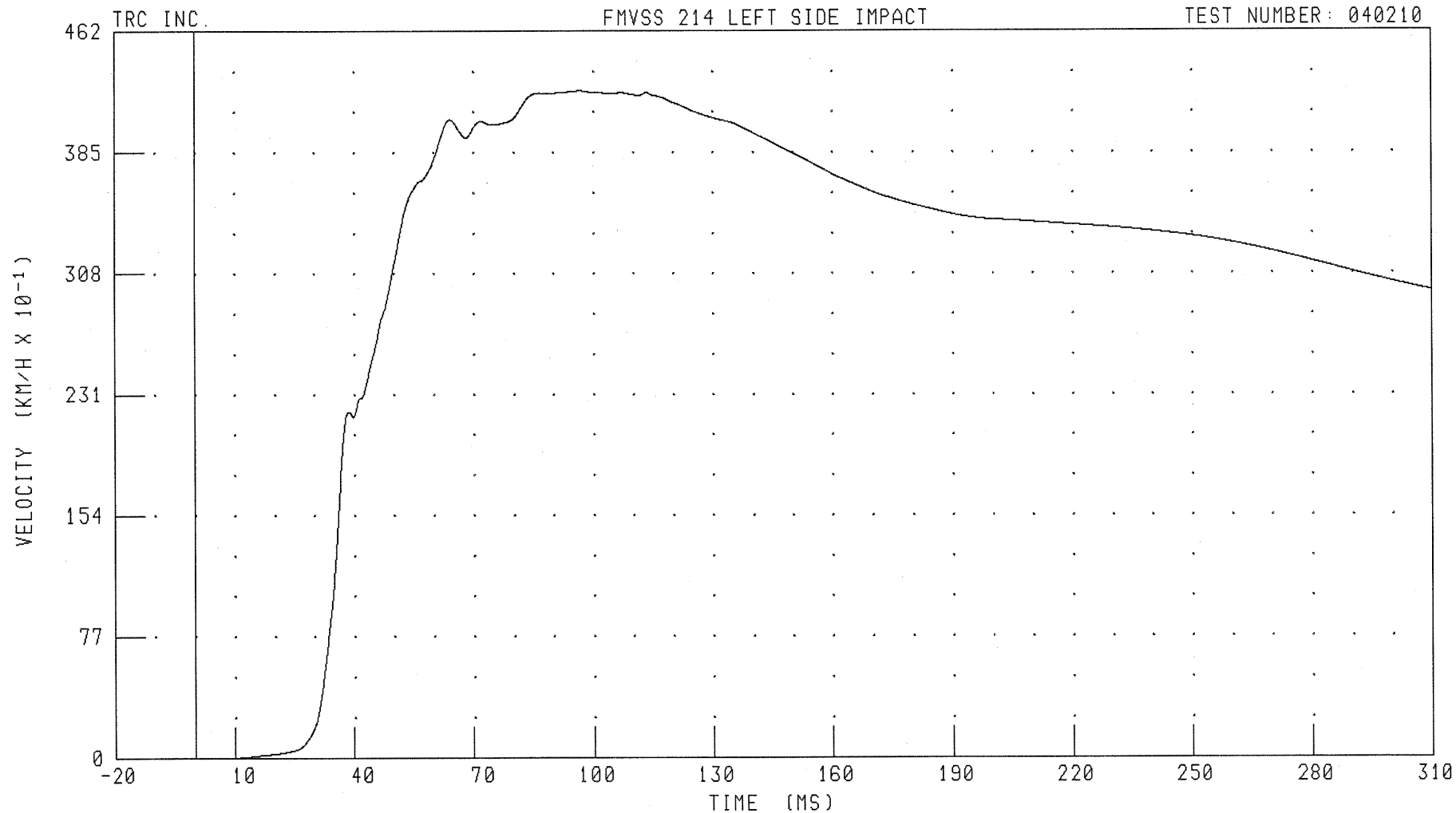
B-84

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYVJ FILTER: CH. CLASS 180

PEAK DATA: 42.41 KM/H @ 96.64 MS; 0.00 KM/H @ 0.00 MS

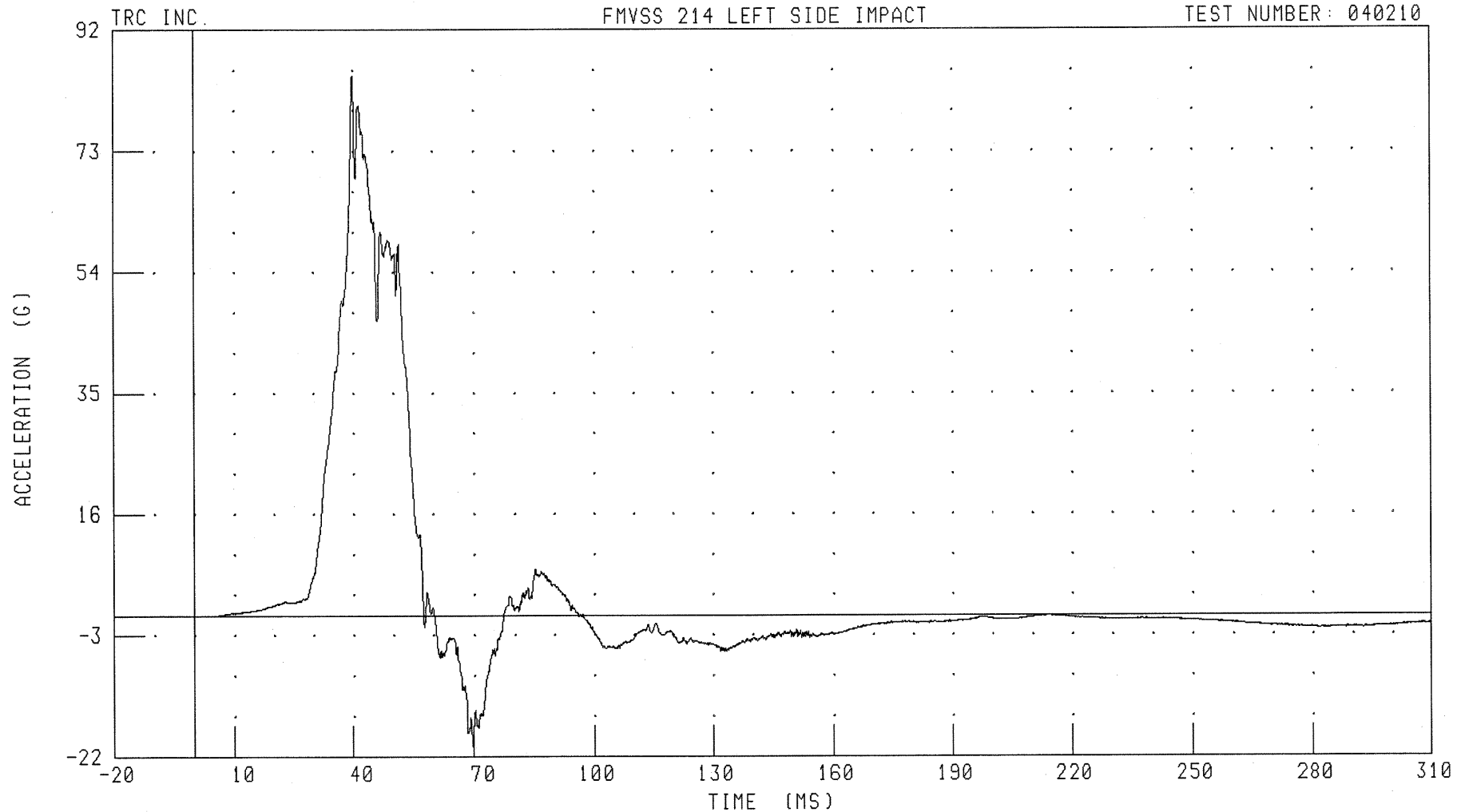
B-85

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YR4

FILTER: CH. CLASS 1000

PEAK DATA: 84.86 G @ 40.08 MS; -20.36 G @ 69.68 MS

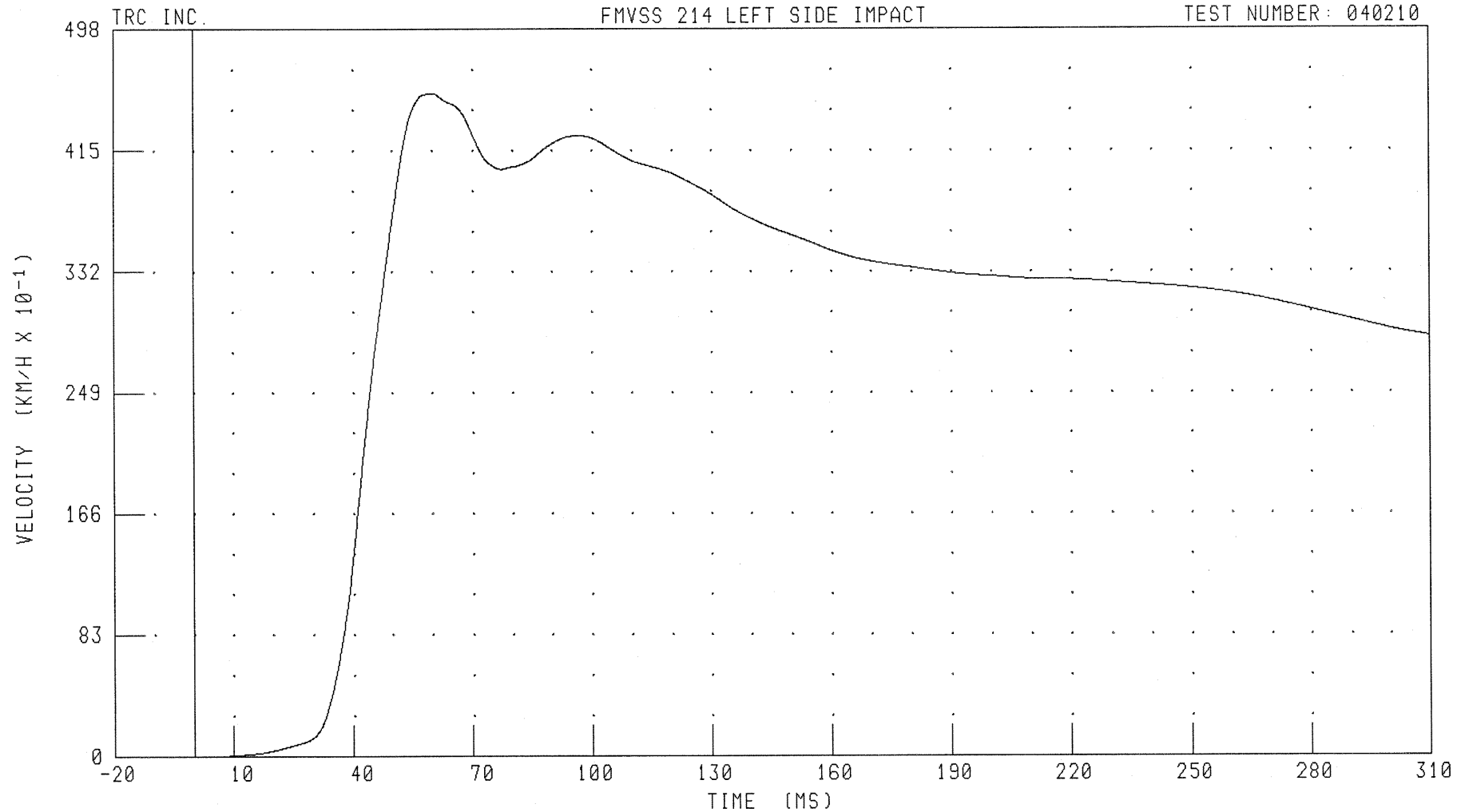
B-86

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YVJ

FILTER: CH. CLASS 180

PEAK DATA: 45.42 KM/H @ 60.16 MS; 0.00 KM/H @ 0.00 MS

B-87

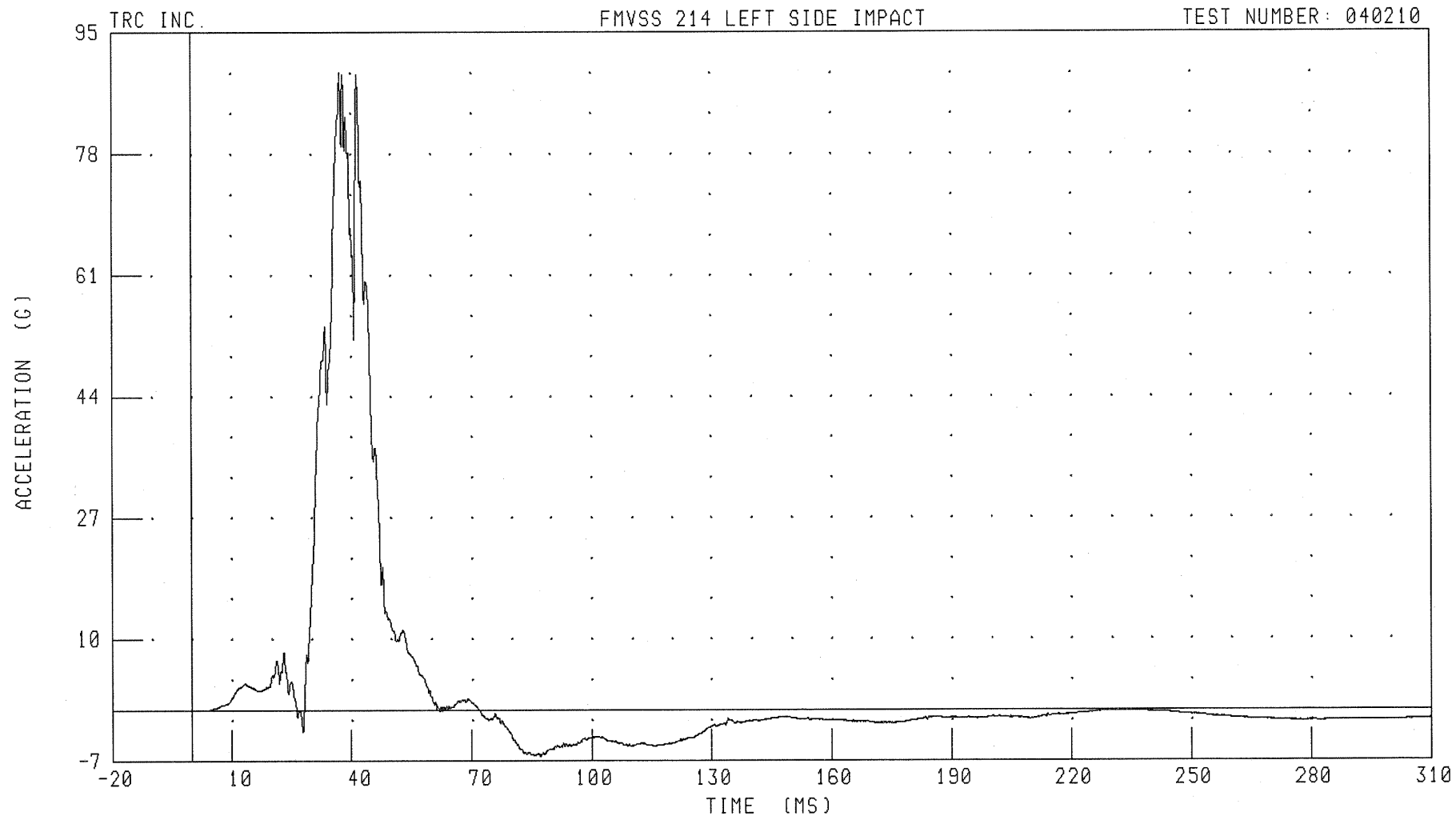
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYR4 FILTER: CH. CLASS 1000

PEAK DATA: 89.39 G @ 37.36 MS; -6.39 G @ 87.20 MS

B-88

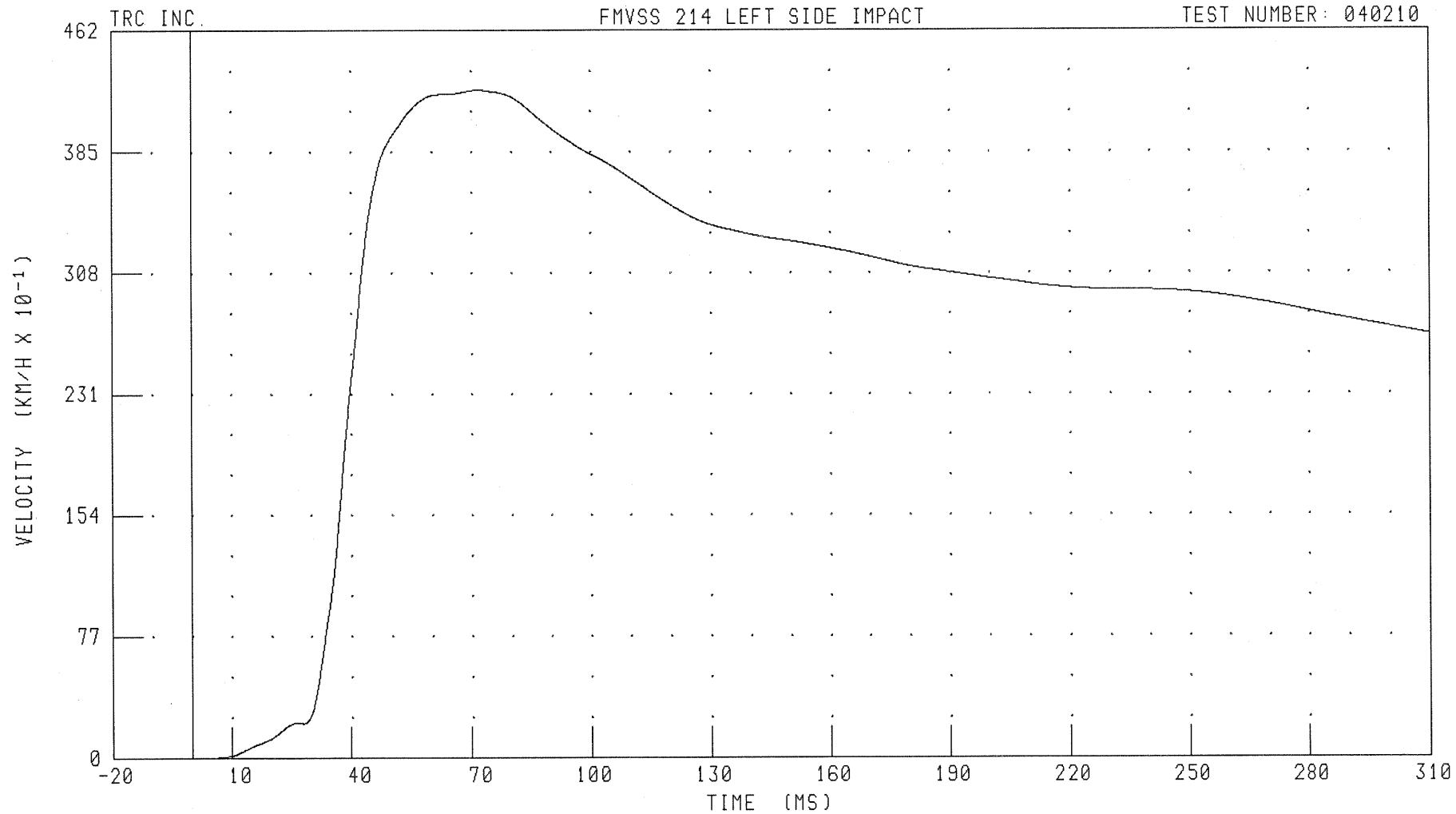
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYVJ

FILTER: CH. CLASS 180

PEAK DATA: 42.43 KM/H @ 71.92 MS; 0.00 KM/H @ 0.00 MS

B-89

040210

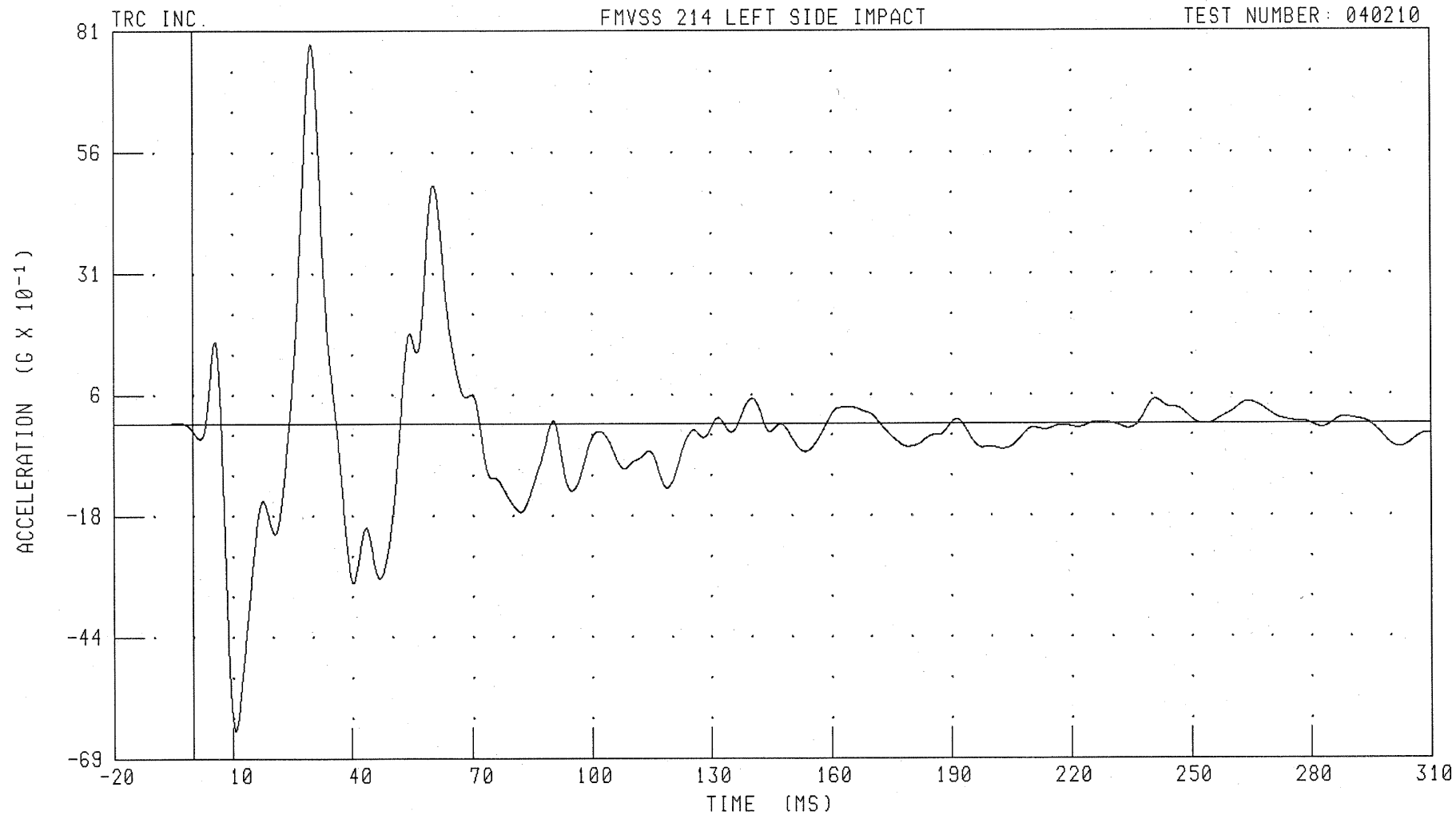
Test Vehicle Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT FRONT SEAT X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSXG1

FILTER: CH. CLASS 60

PEAK DATA: 7.82 G @ 29.84 MS; -6.33 G @ 10.64 MS

B-91

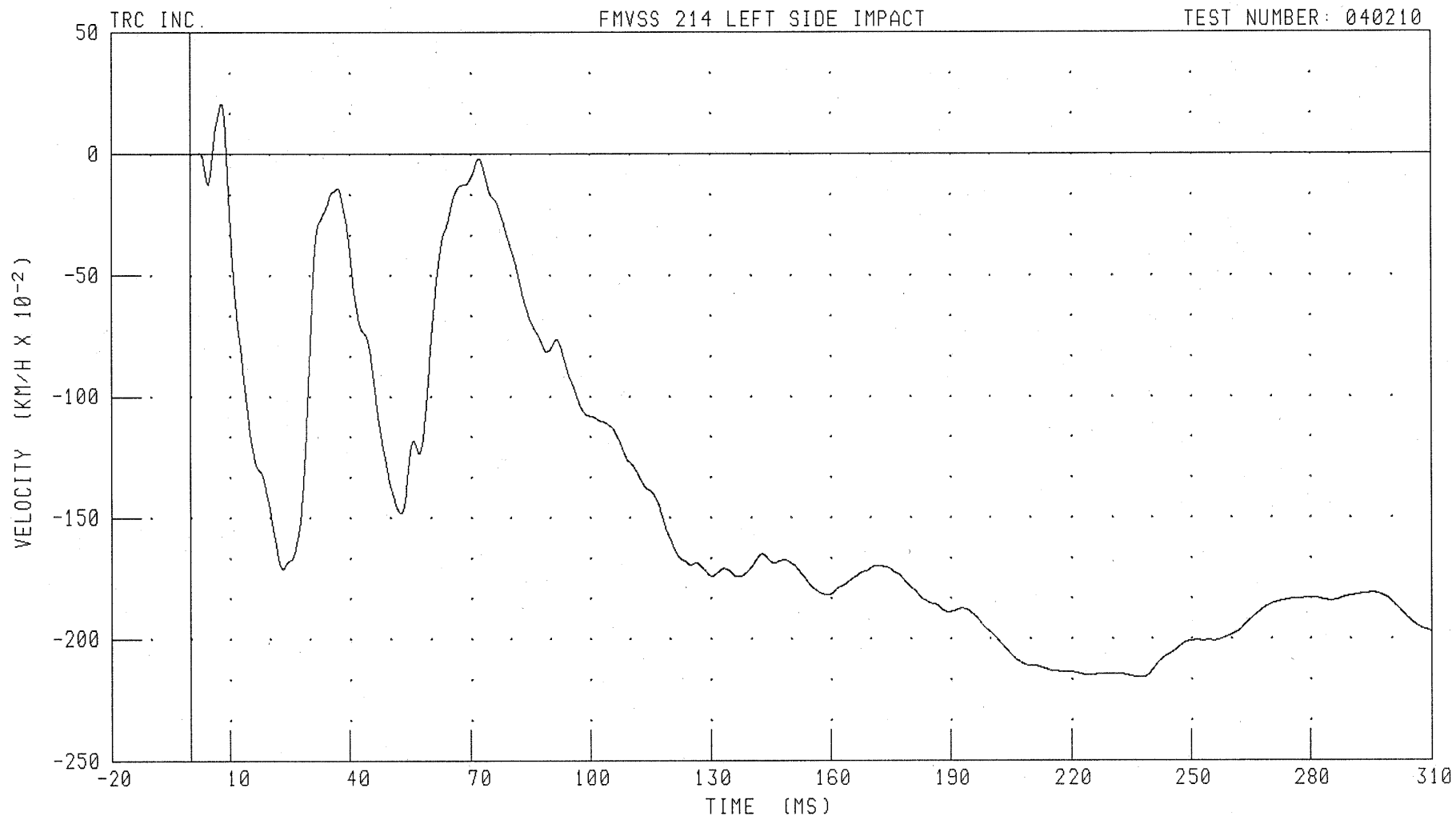
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT FRONT SEAT X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.21 KM/H @ 7.92 MS; -2.16 KM/H @ 237.68 MS

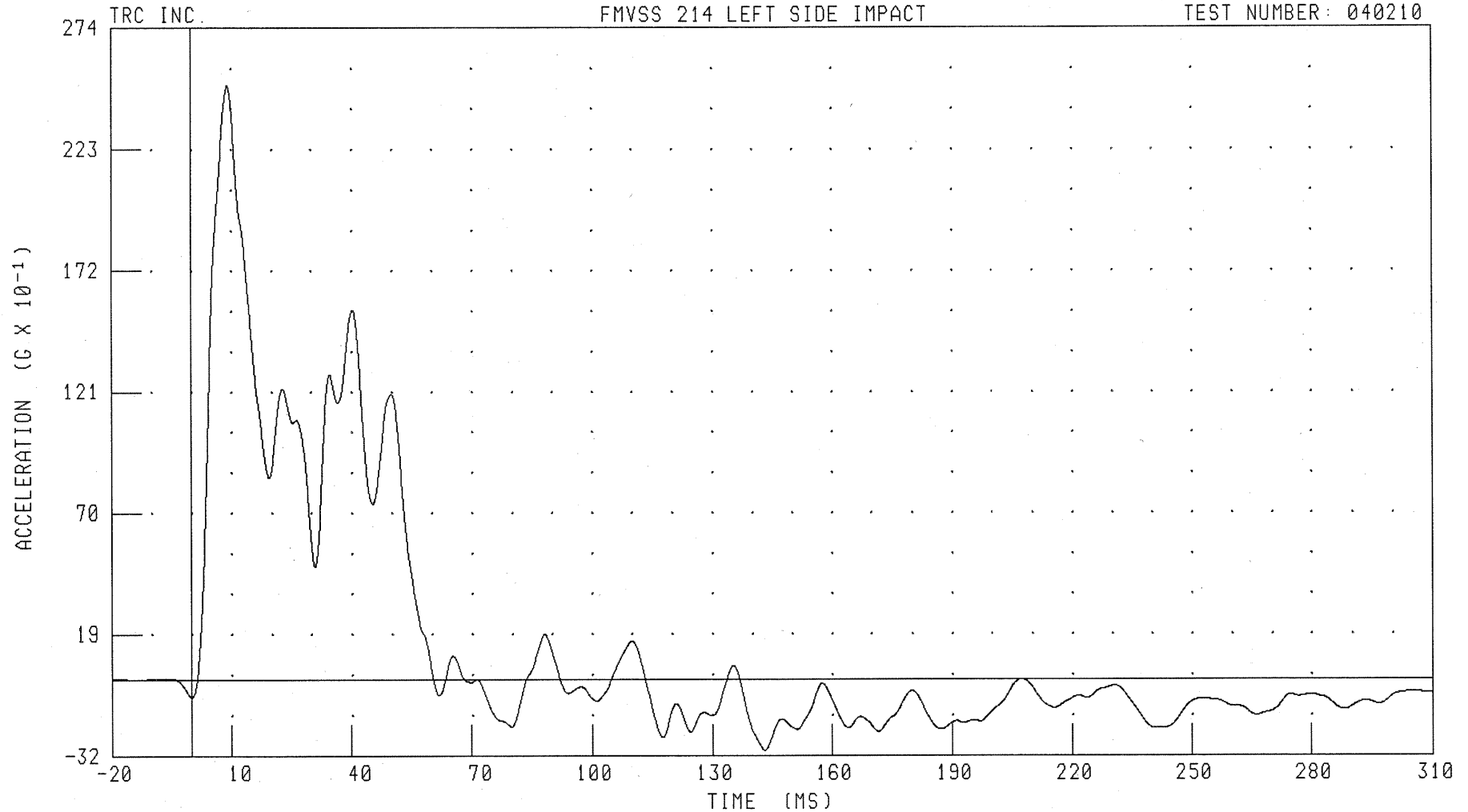
B-92

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSYG1

FILTER: CH. CLASS 60

PEAK DATA: 24.98 G @ 9.12 MS; -2.98 G @ 143.20 MS

B-93

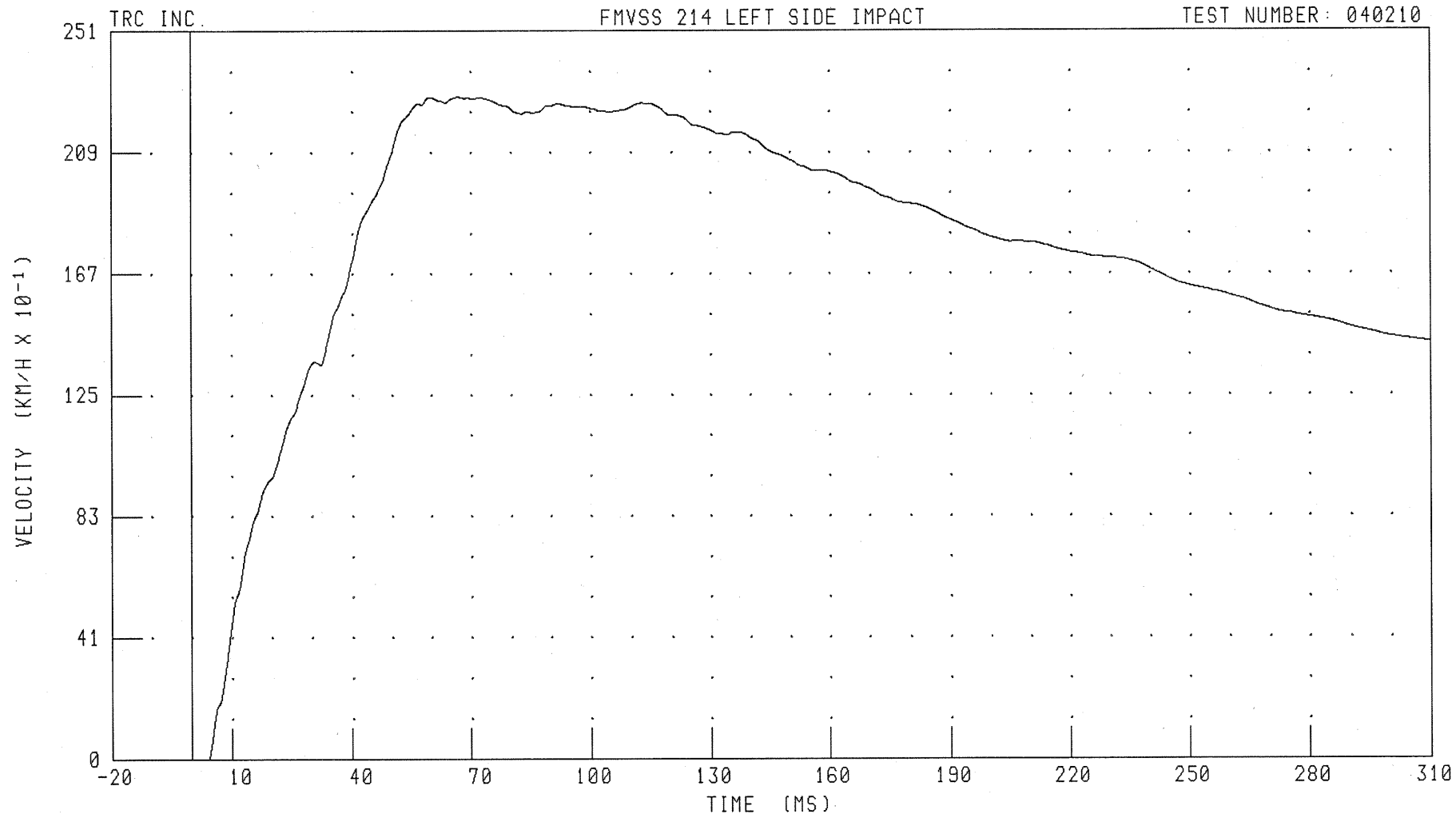
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSYV1

FILTER: CH. CLASS 180

PEAK DATA: 22.93 KM/H @ 66.88 MS; -0.05 KM/H @ 3.68 MS

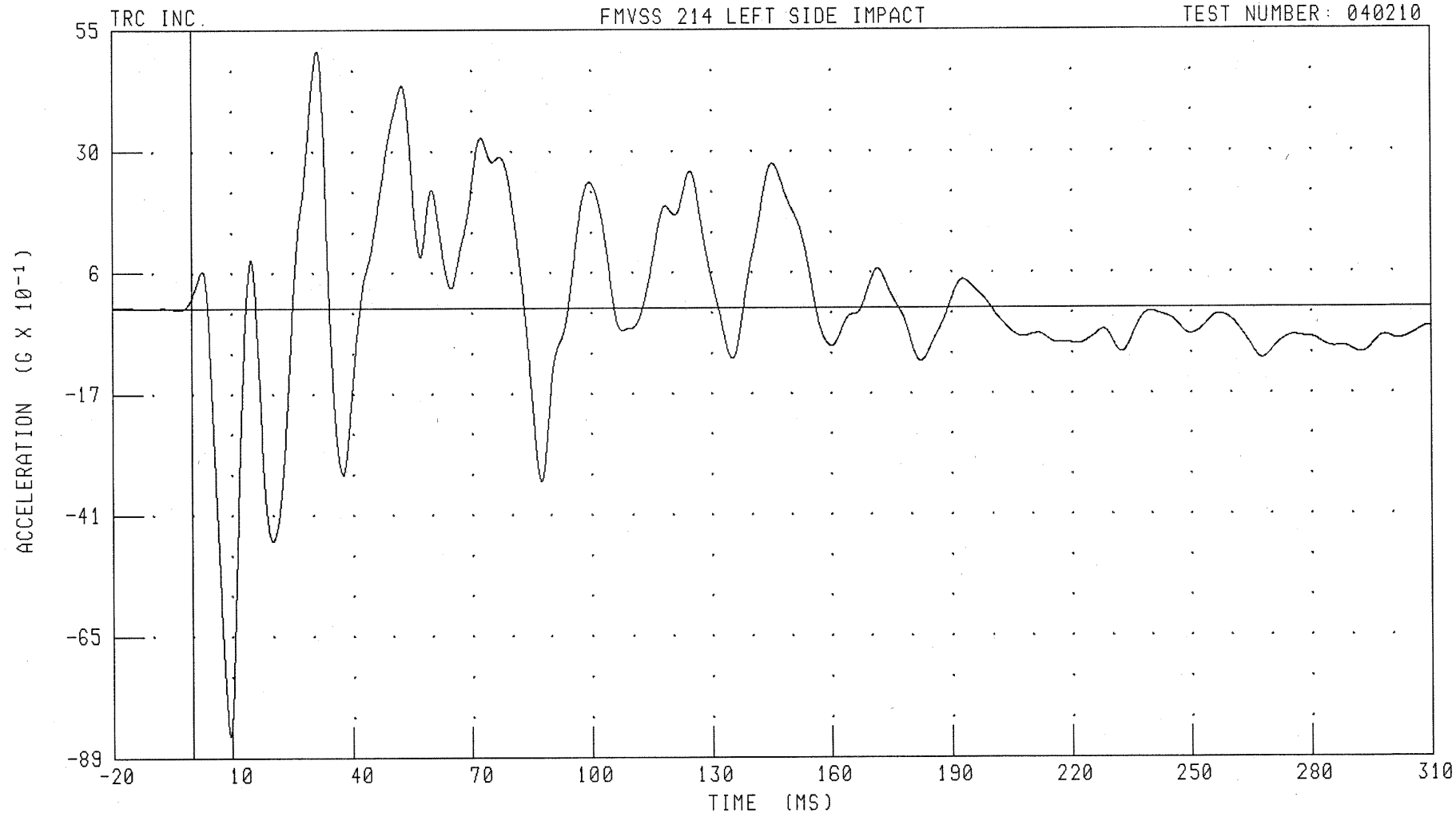
B-94

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSZG1

FILTER: CH. CLASS 60

PEAK DATA: 5.08 G @ 31.36 MS; -8.47 G @ 9.52 MS

B-95

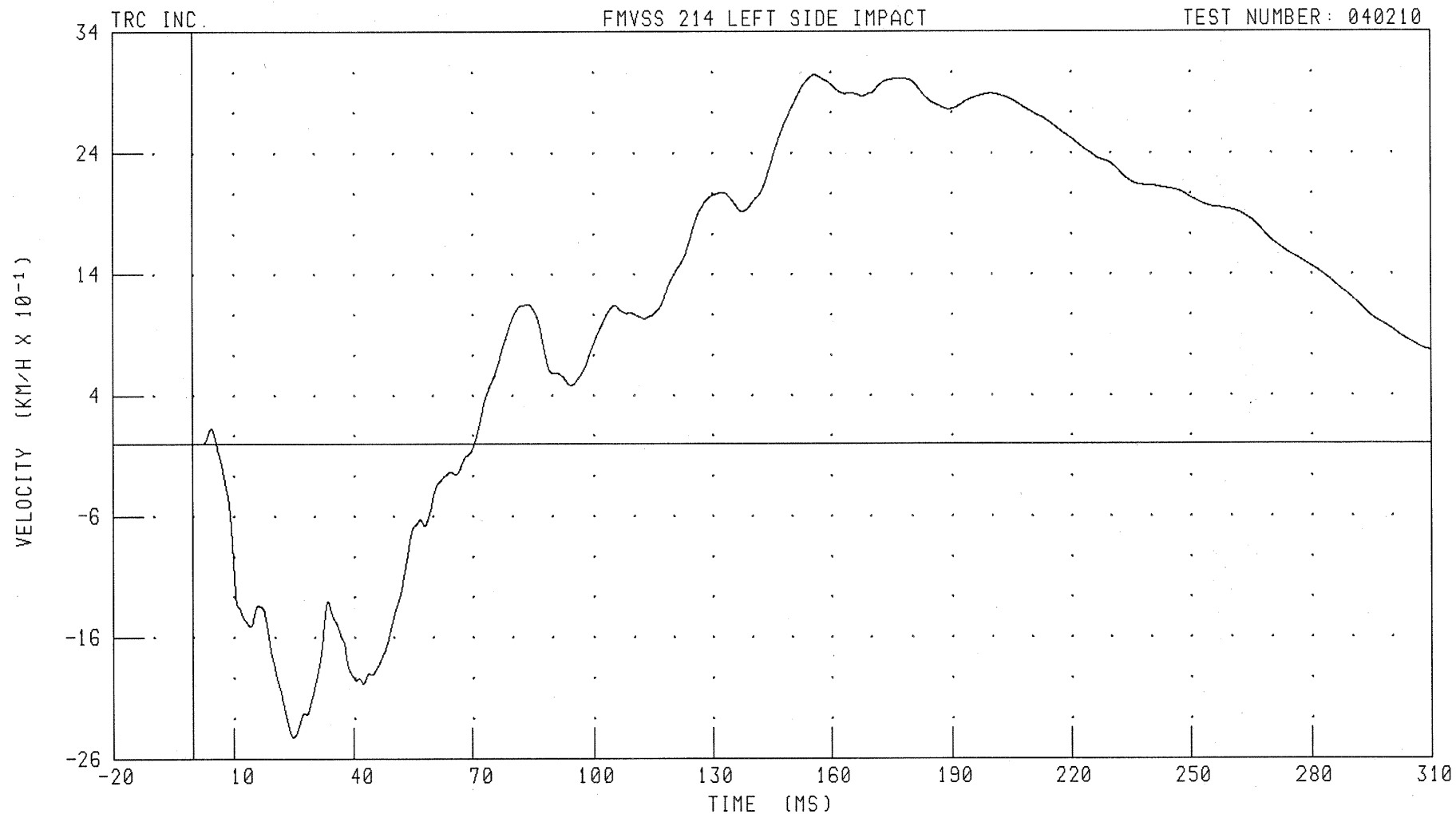
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT FRONT SEAT Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSZV1

FILTER: CH. CLASS 180

PEAK DATA: 3.04 KM/H @ 156.08 MS; -2.42 KM/H @ 24.64 MS

B-96

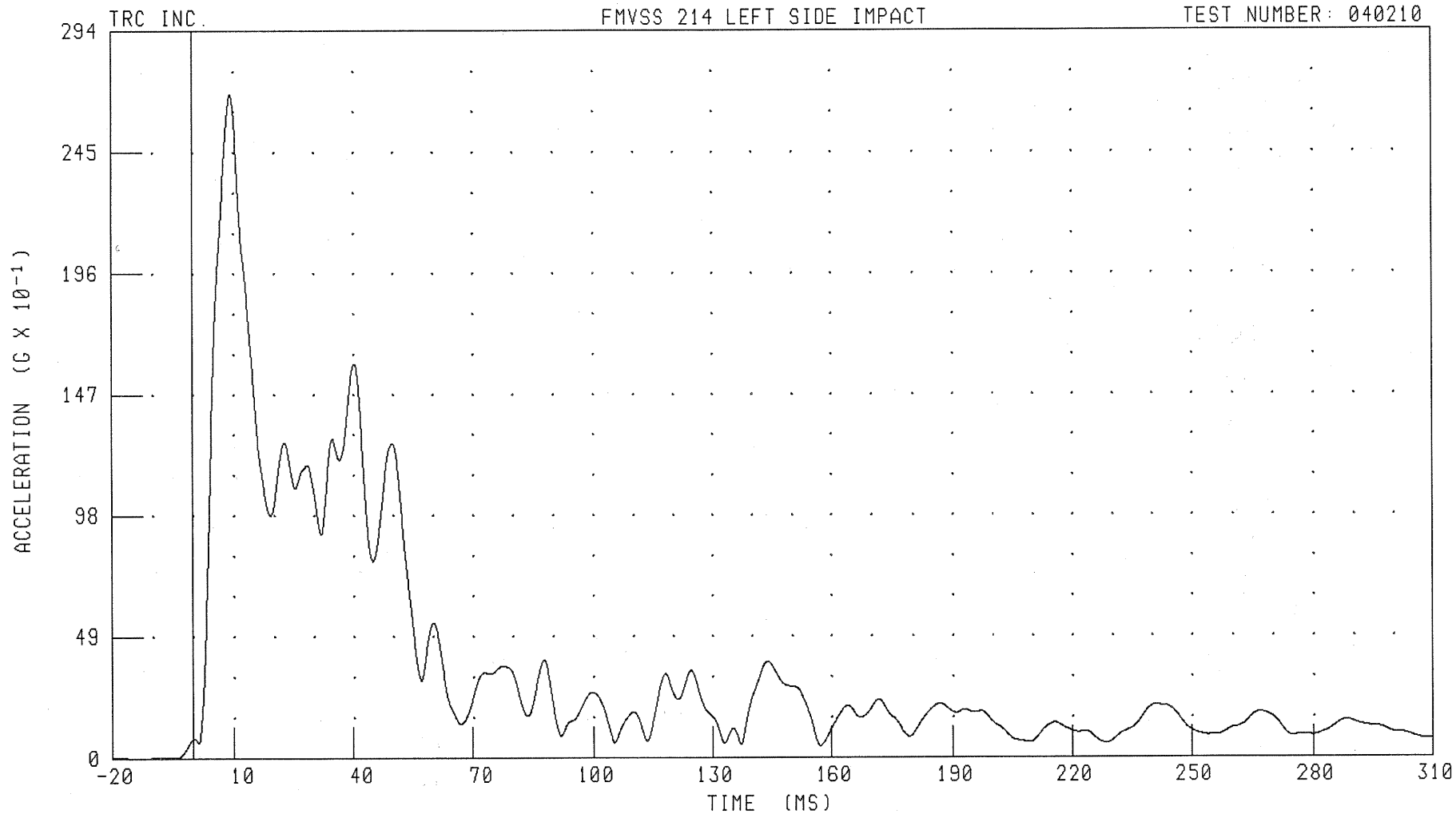
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RFSRG1

FILTER: CH. CLASS 60

PEAK DATA: 26.82 G @ 9.36 MS; 0.01 G @ -12.88 MS

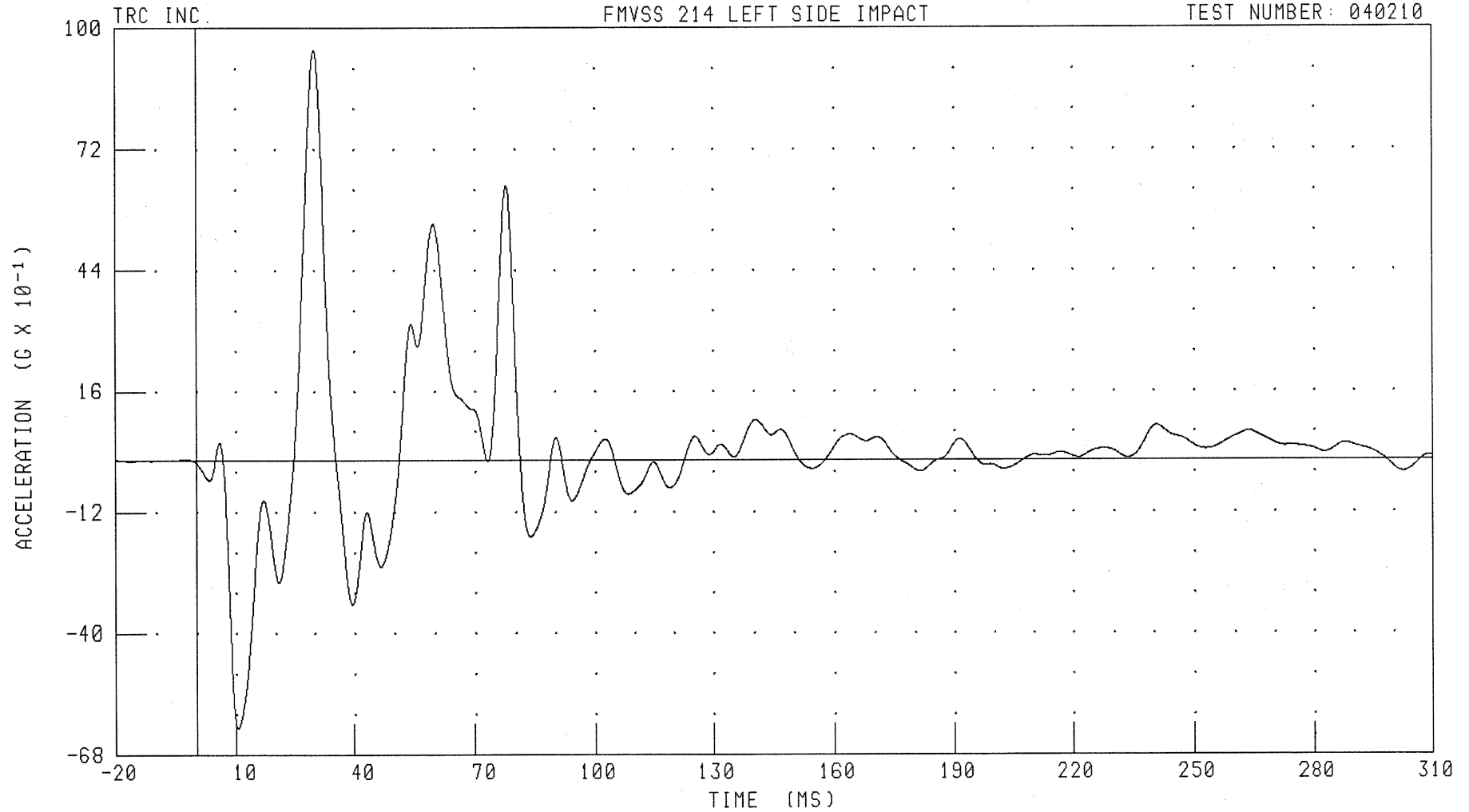
B-97

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT SIDE SILL AT REAR SEAT X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRSXG1 FILTER: CH. CLASS 60

PEAK DATA: 9.48 G @ 30.16 MS; -6.20 G @ 10.48 MS

B-98

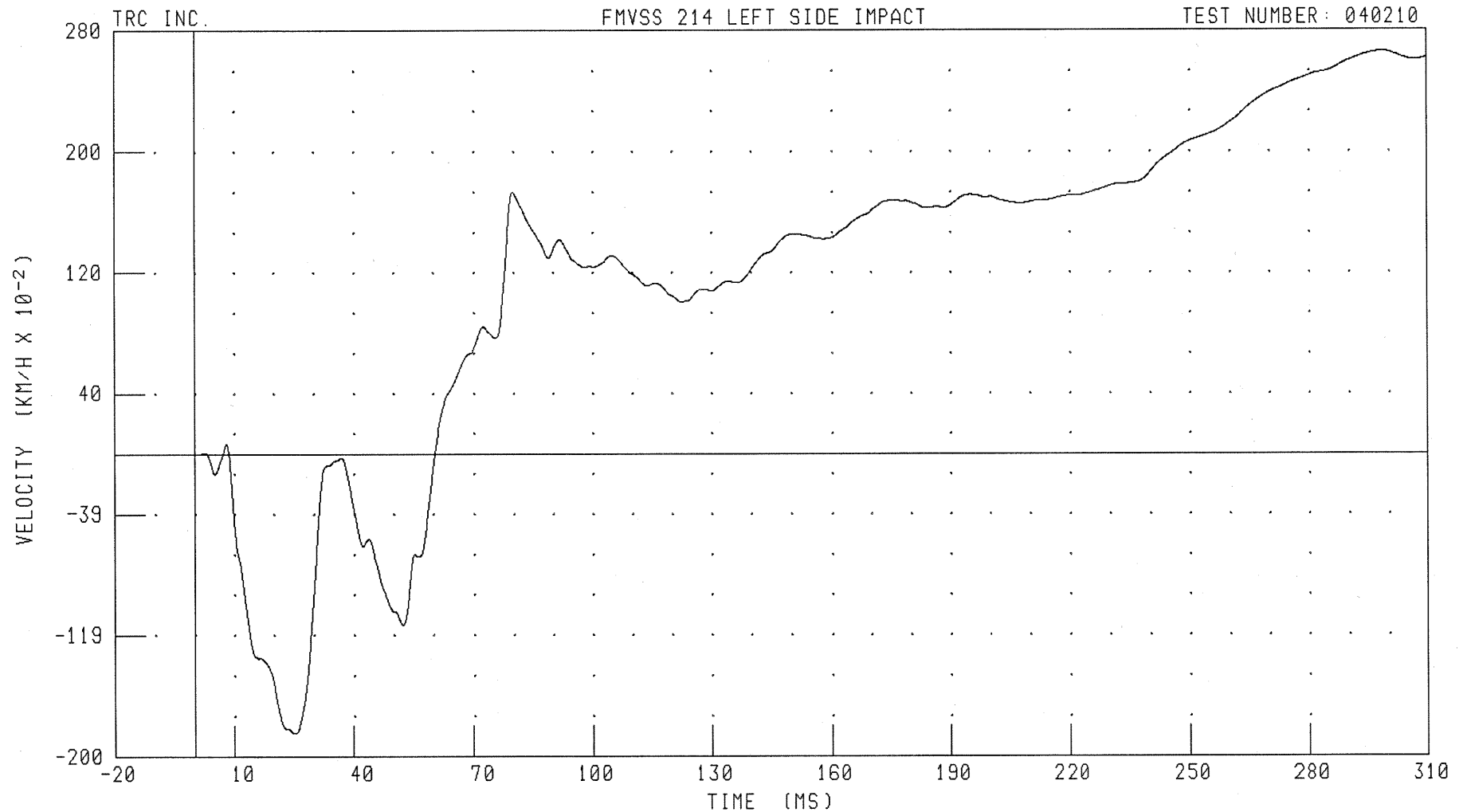
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT REAR SEAT X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRSXV1

FILTER: CH. CLASS 180

PEAK DATA: 2.66 KM/H @ 298.40 MS; -1.85 KM/H @ 25.28 MS

B-99

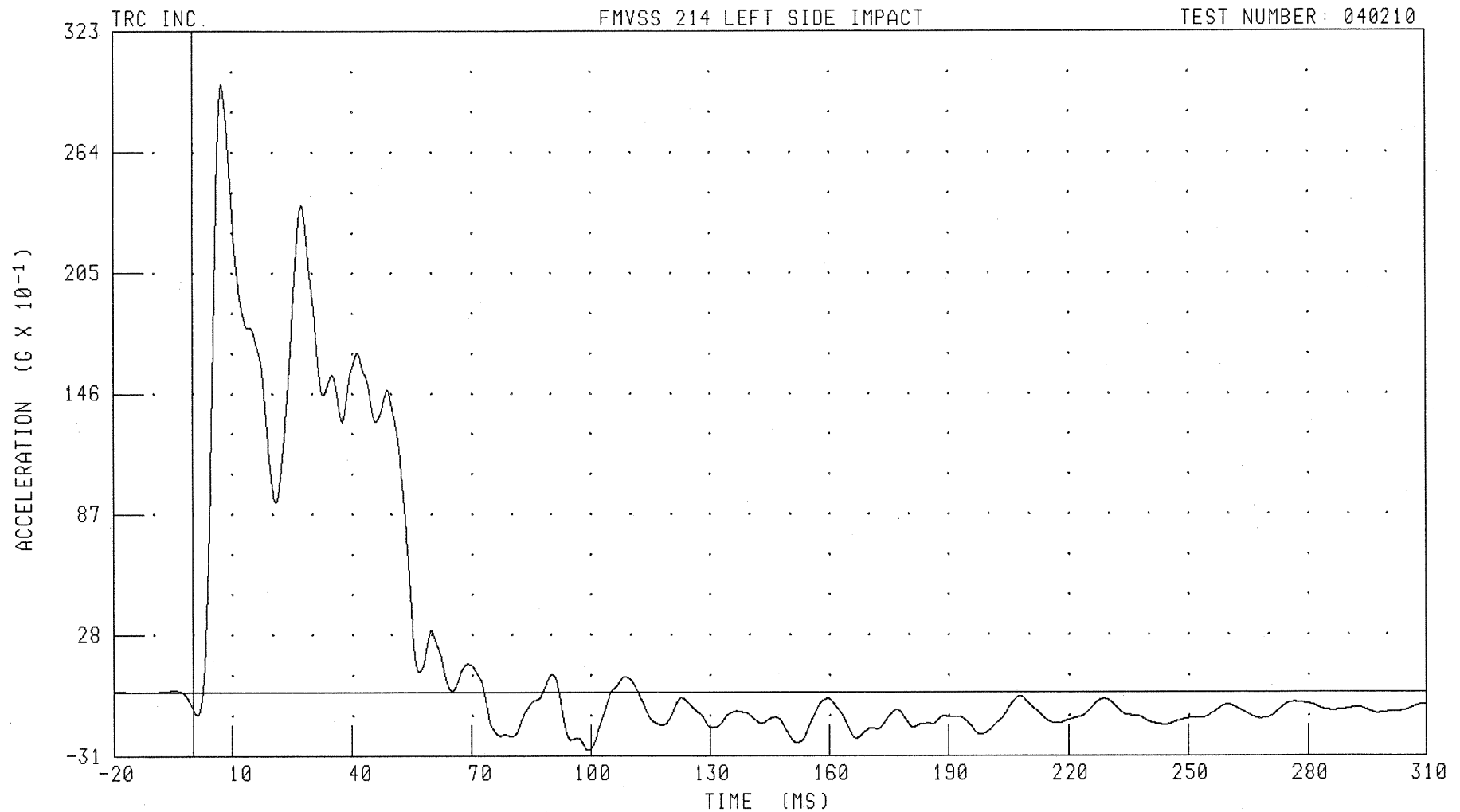
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



B-100

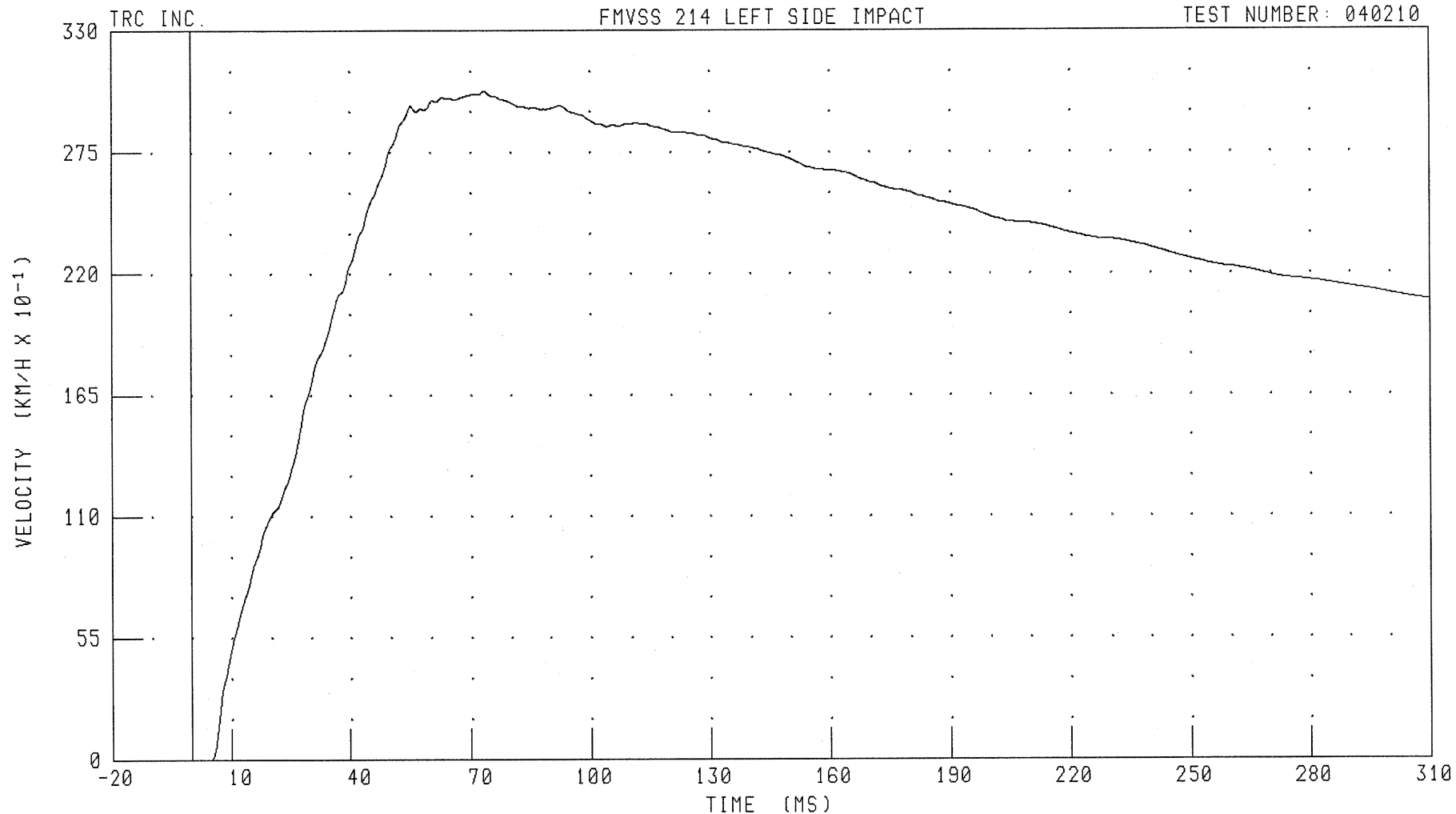
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRSYV1

FILTER: CH. CLASS 180

PEAK DATA: 30.26 KM/H @ 73.52 MS; -0.04 KM/H @ 4.56 MS

B-101

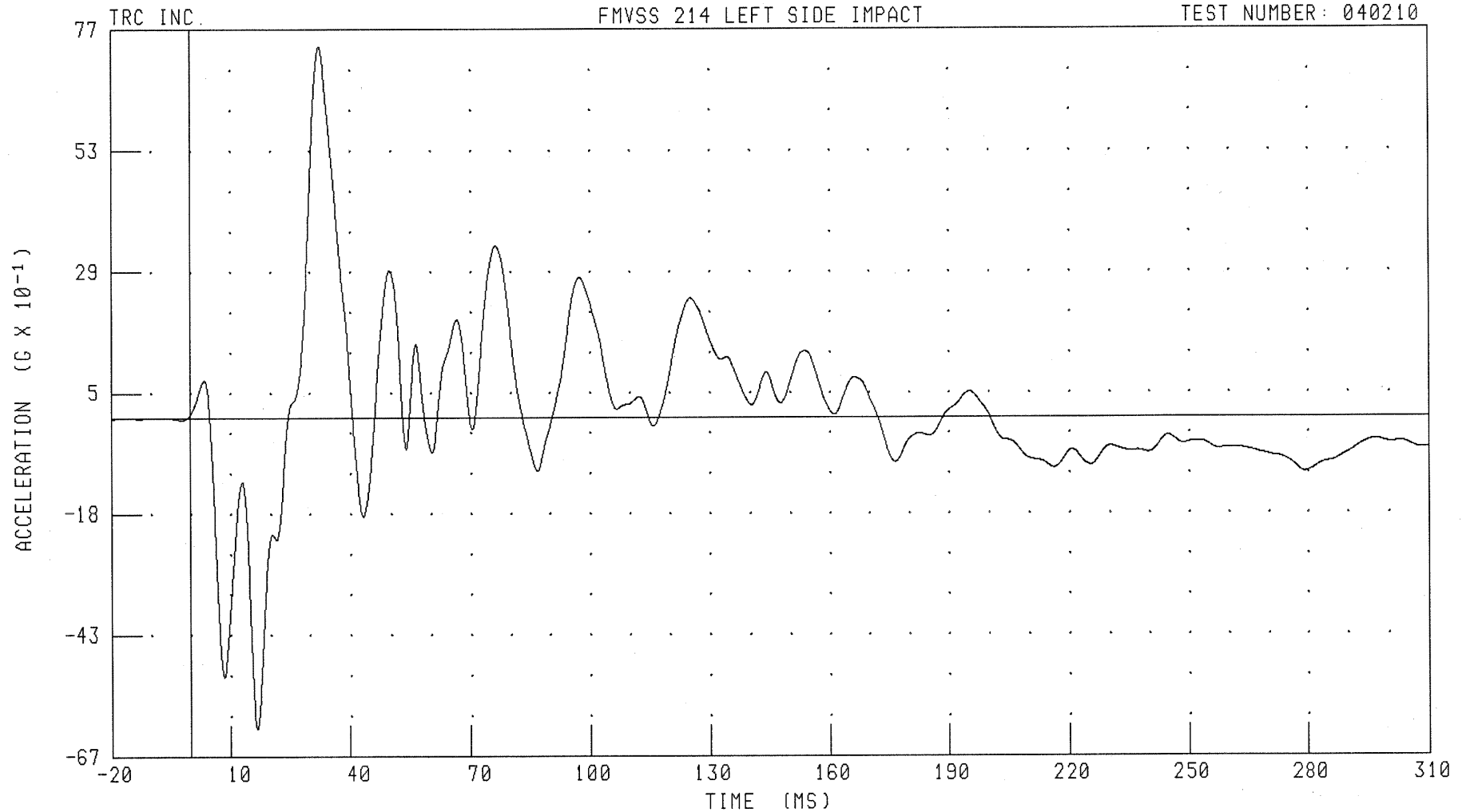
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT REAR SEAT Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRSZG1

FILTER: CH. CLASS 60

PEAK DATA: 7.37 G @ 32.64 MS; -6.15 G @ 16.64 MS

B-102

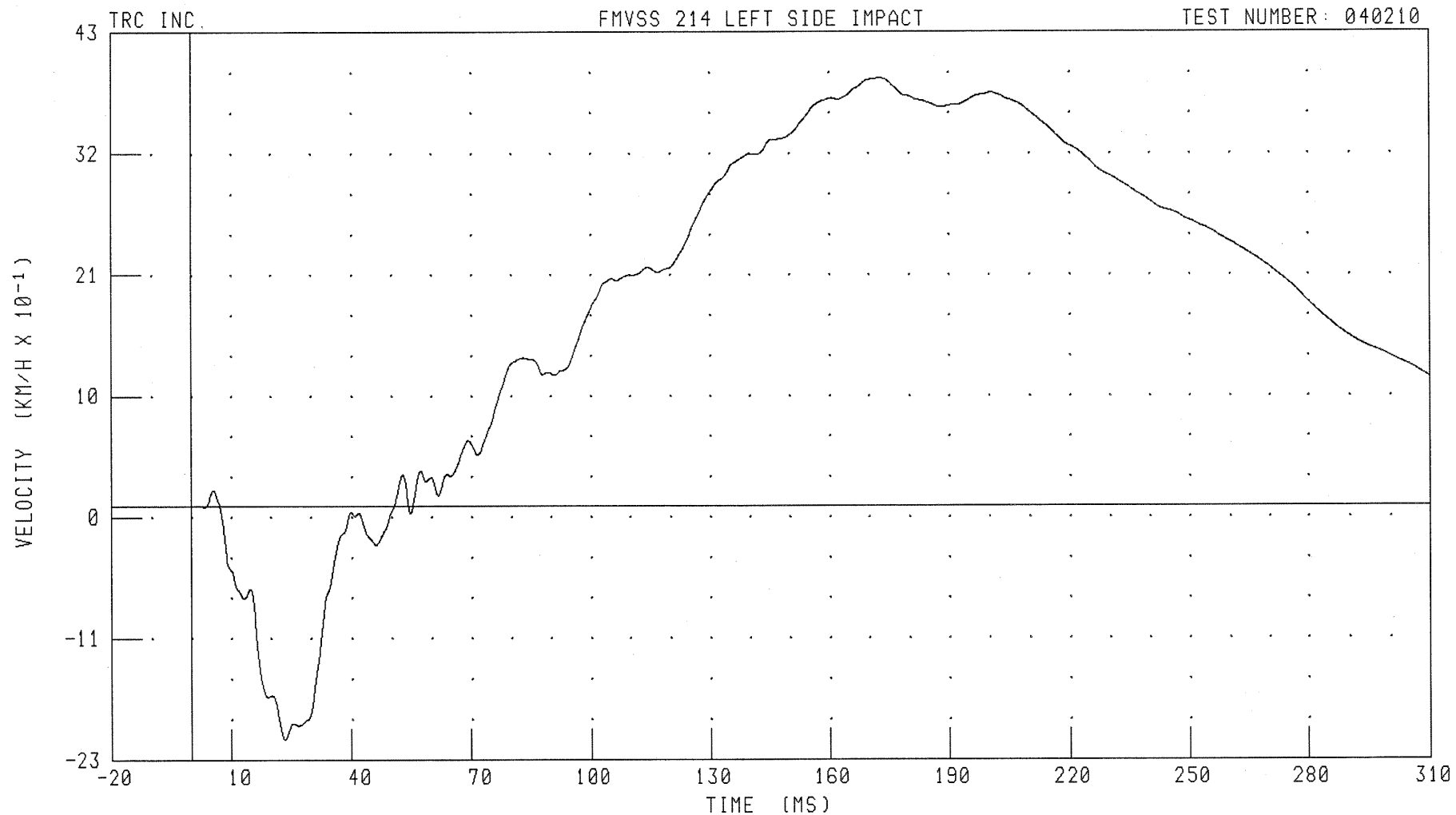
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

RIGHT SIDE SILL AT REAR SEAT Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRSZV1

FILTER: CH. CLASS 180

PEAK DATA: 3.88 KM/H @ 172.80 MS; -2.12 KM/H @ 23.52 MS

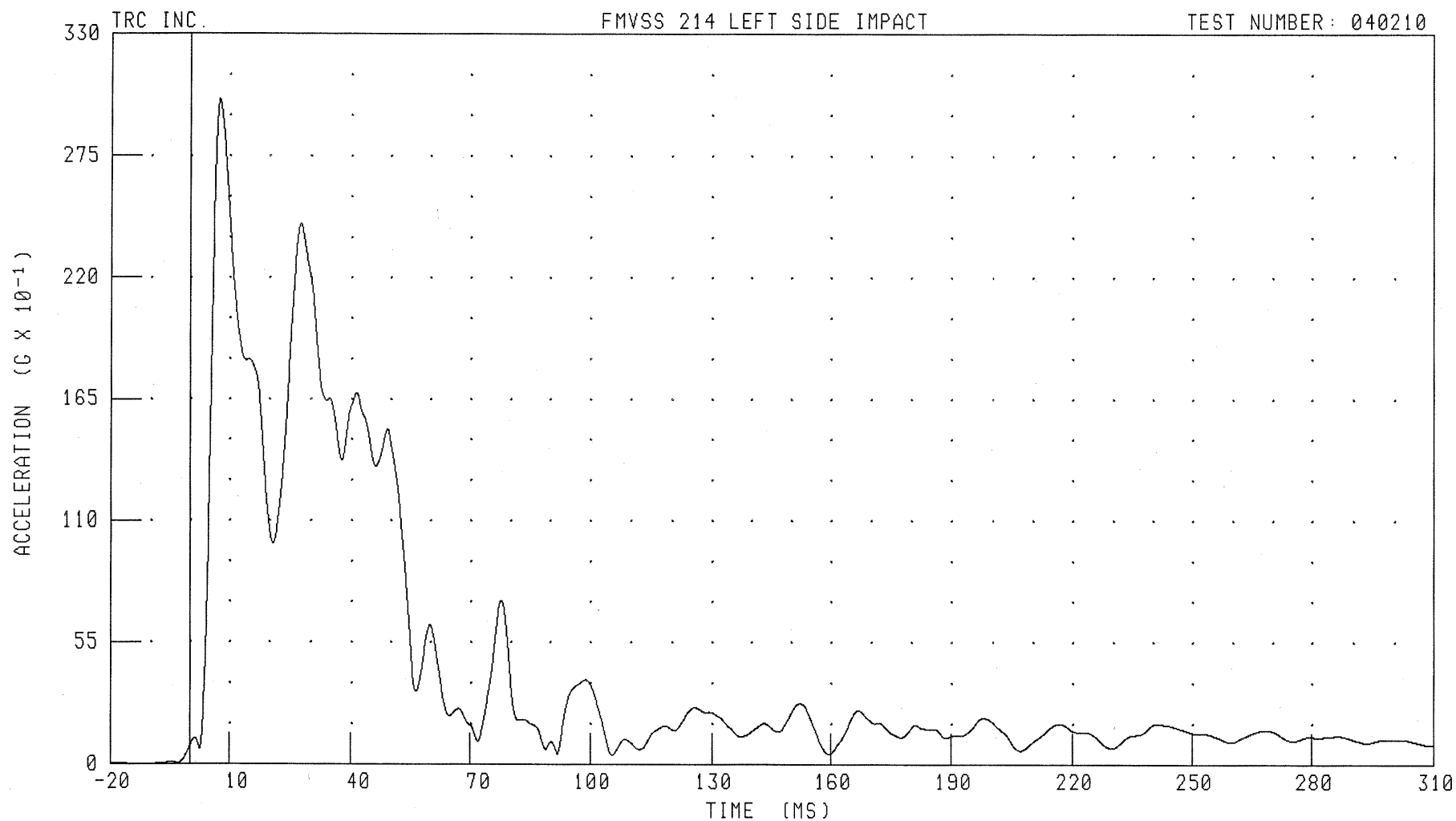
B-103

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRSRG1 FILTER: CH. CLASS 60

PEAK DATA: 30.06 G @ 7.52 MS; 0.01 G @ -14.24 MS

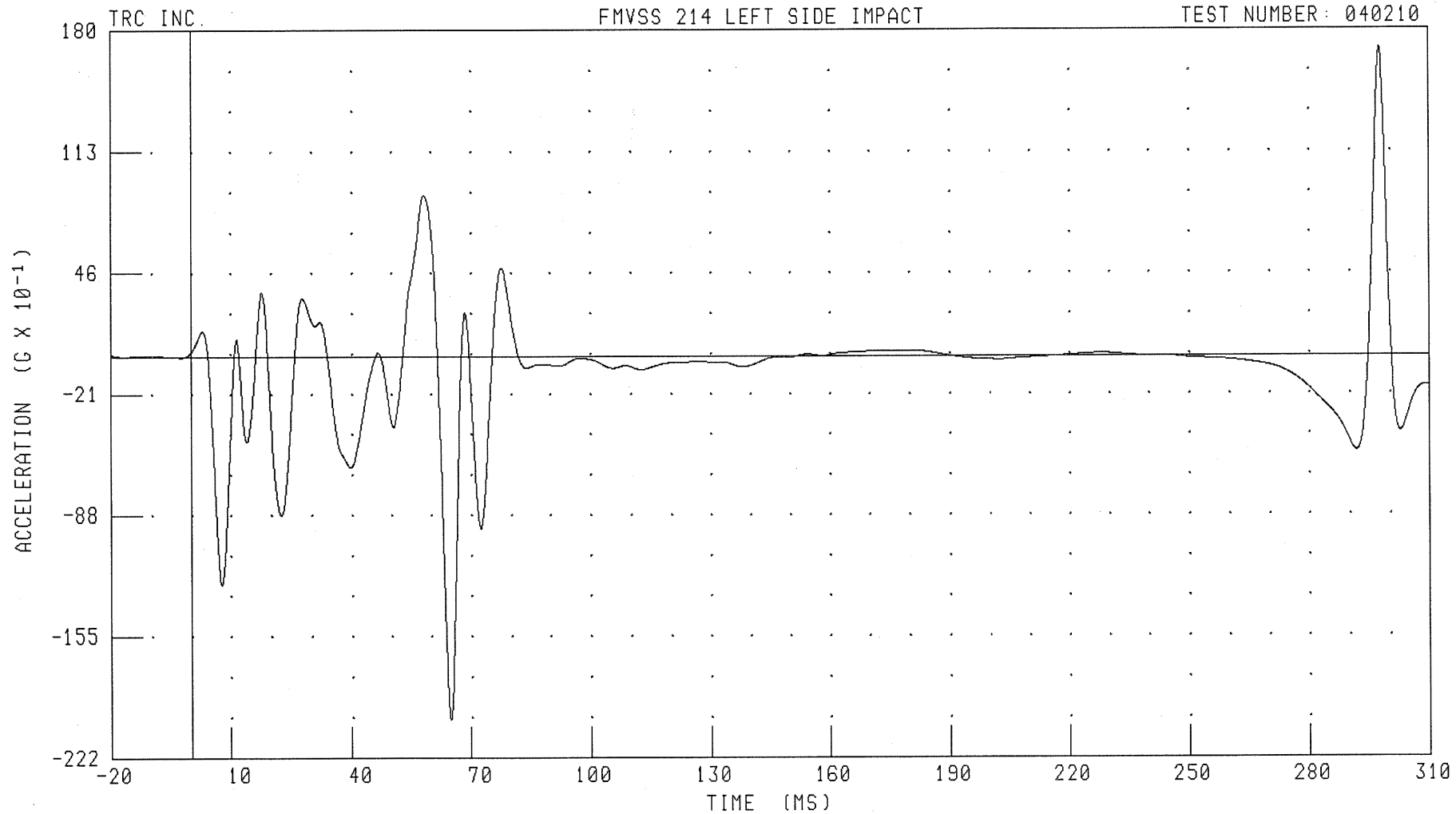
B-104

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
REAR FLOORPAN ABOVE AXLE X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKXG1 FILTER: CH. CLASS 60

PEAK DATA: 16.98 G @ 297.52 MS; -20.10 G @ 64.80 MS

B-105

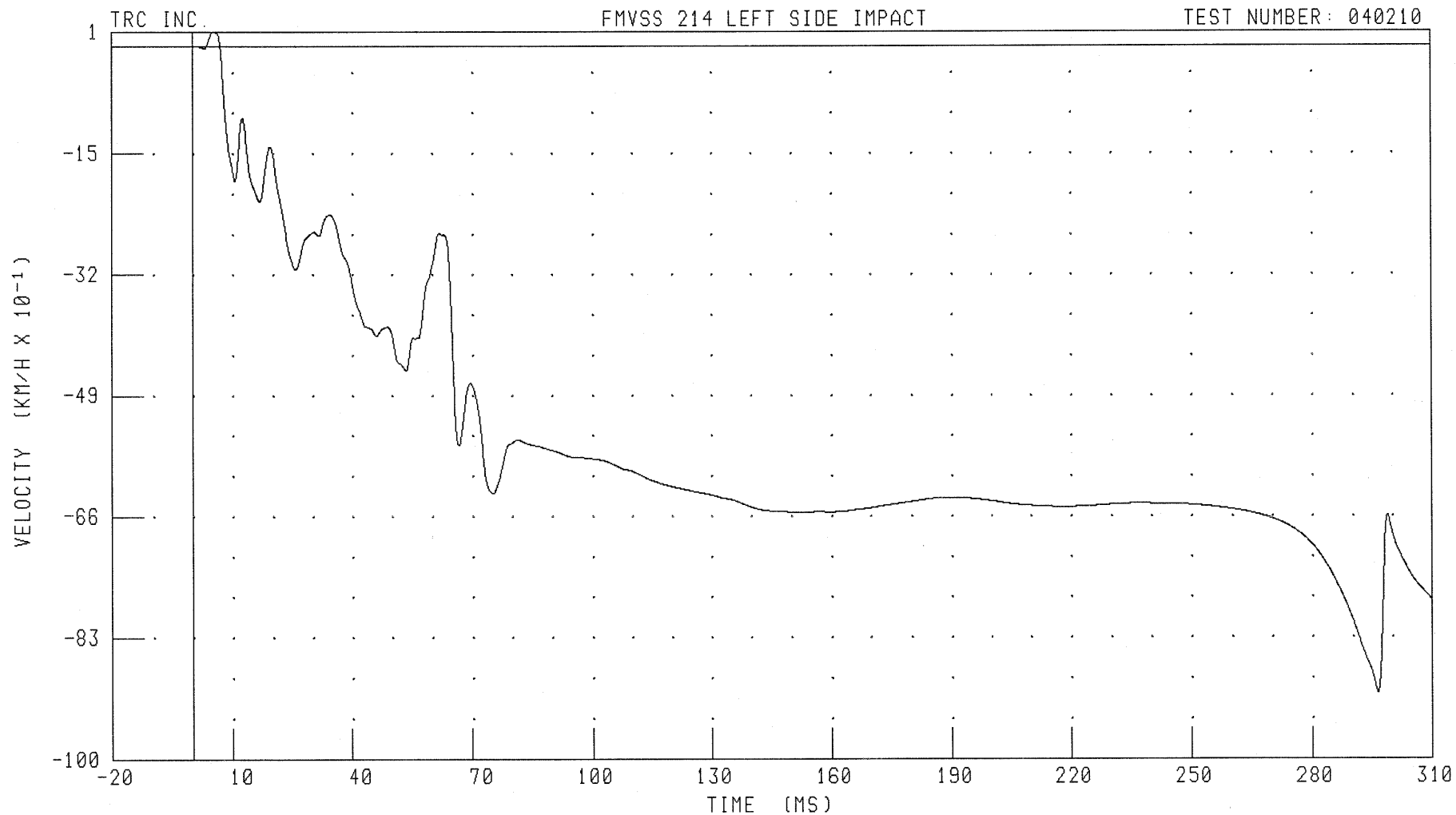
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

REAR FLOORPAN ABOVE AXLE X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKXV1

FILTER: CH. CLASS 180

PEAK DATA: 0.21 KM/H @ 5.28 MS; -9.08 KM/H @ 296.32 MS

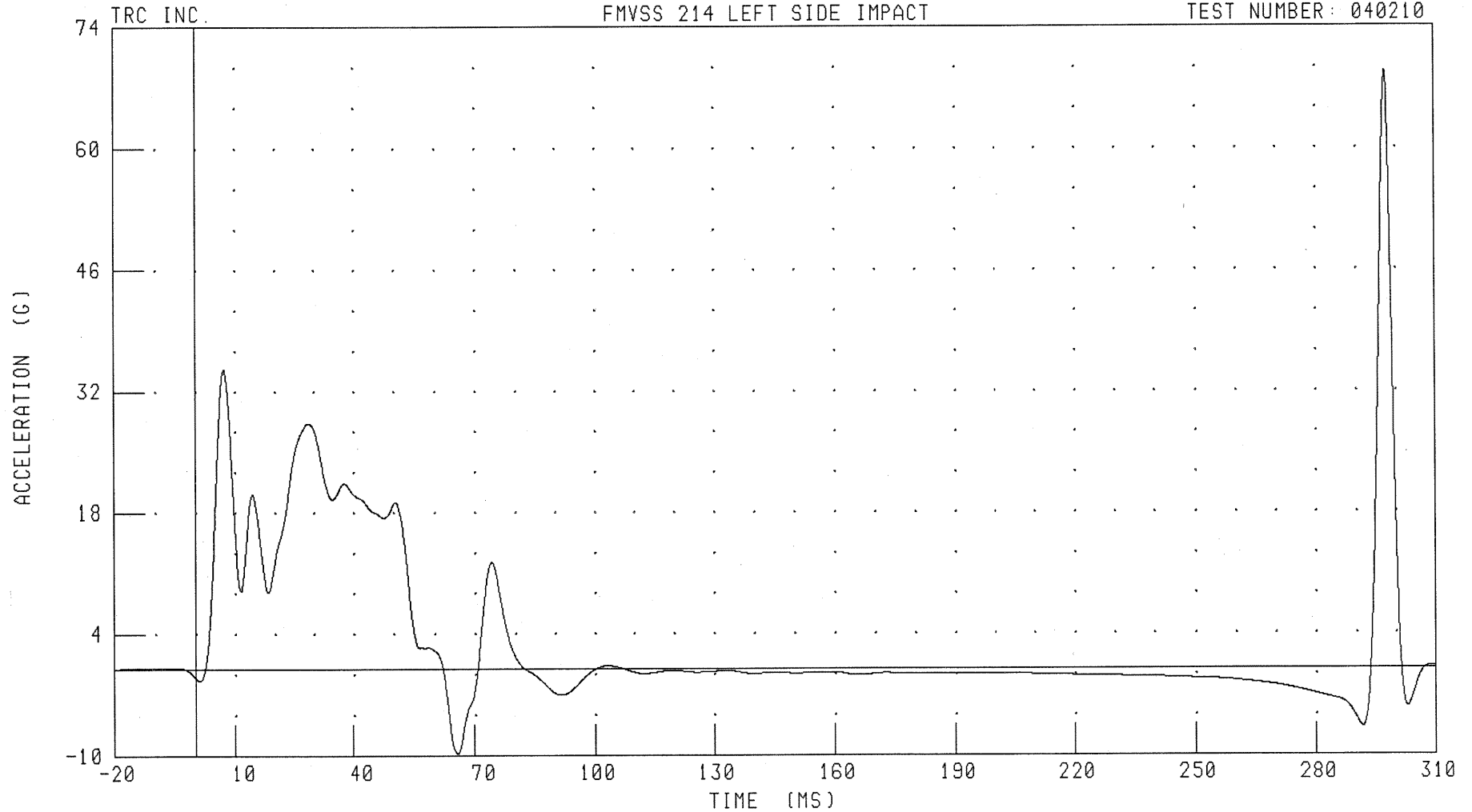
B-106

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
REAR FLOORPAN ABOVE AXLE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKYG1 FILTER: CH. CLASS 60

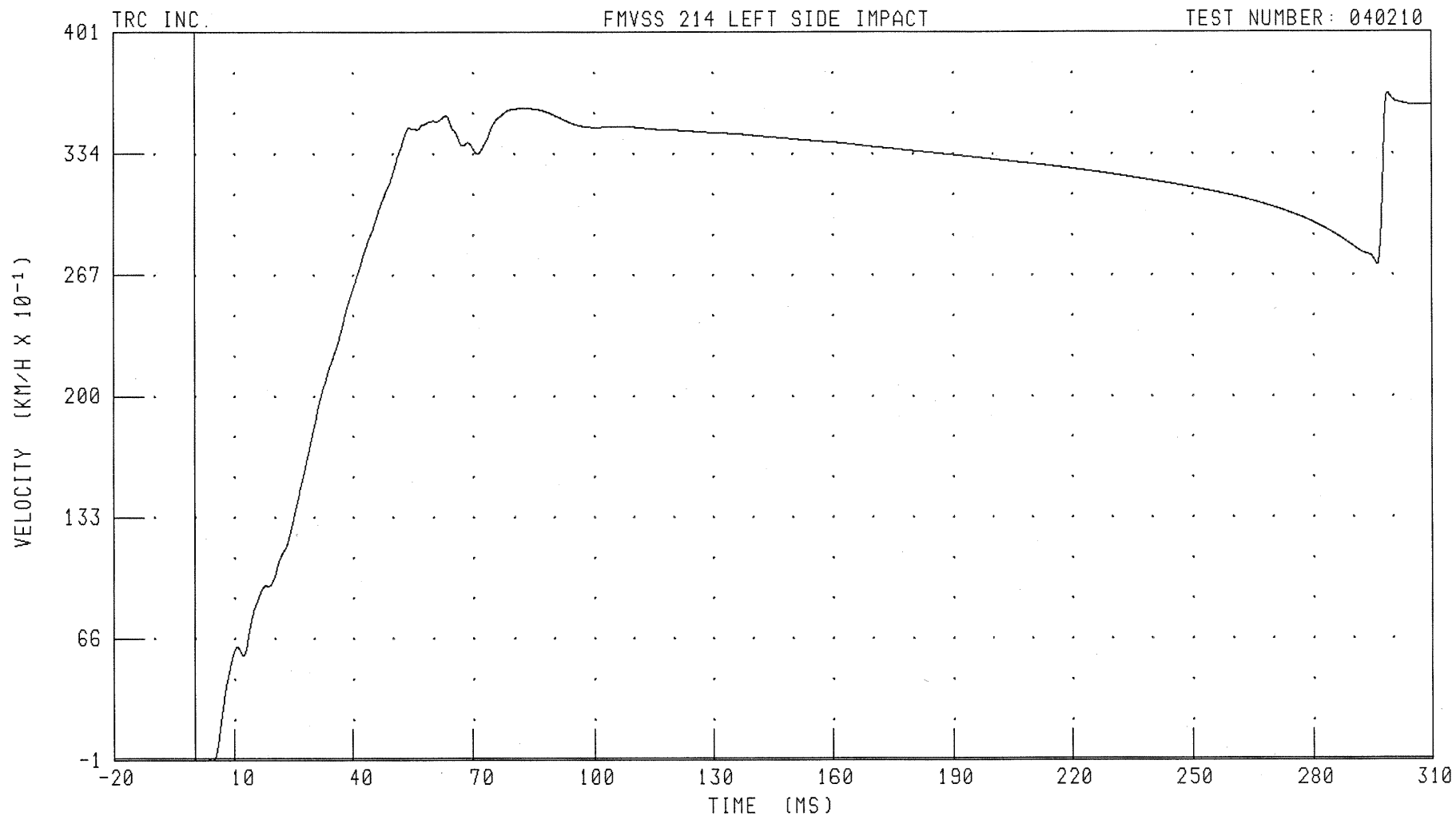
PEAK DATA: 68.79 G @ 297.52 MS; -9.80 G @ 65.76 MS

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

REAR FLOORPAN ABOVE AXLE Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKYV1 FILTER: CH. CLASS 180

PEAK DATA: 36.72 KM/H @ 298.96 MS; -0.13 KM/H @ 4.48 MS

B-108

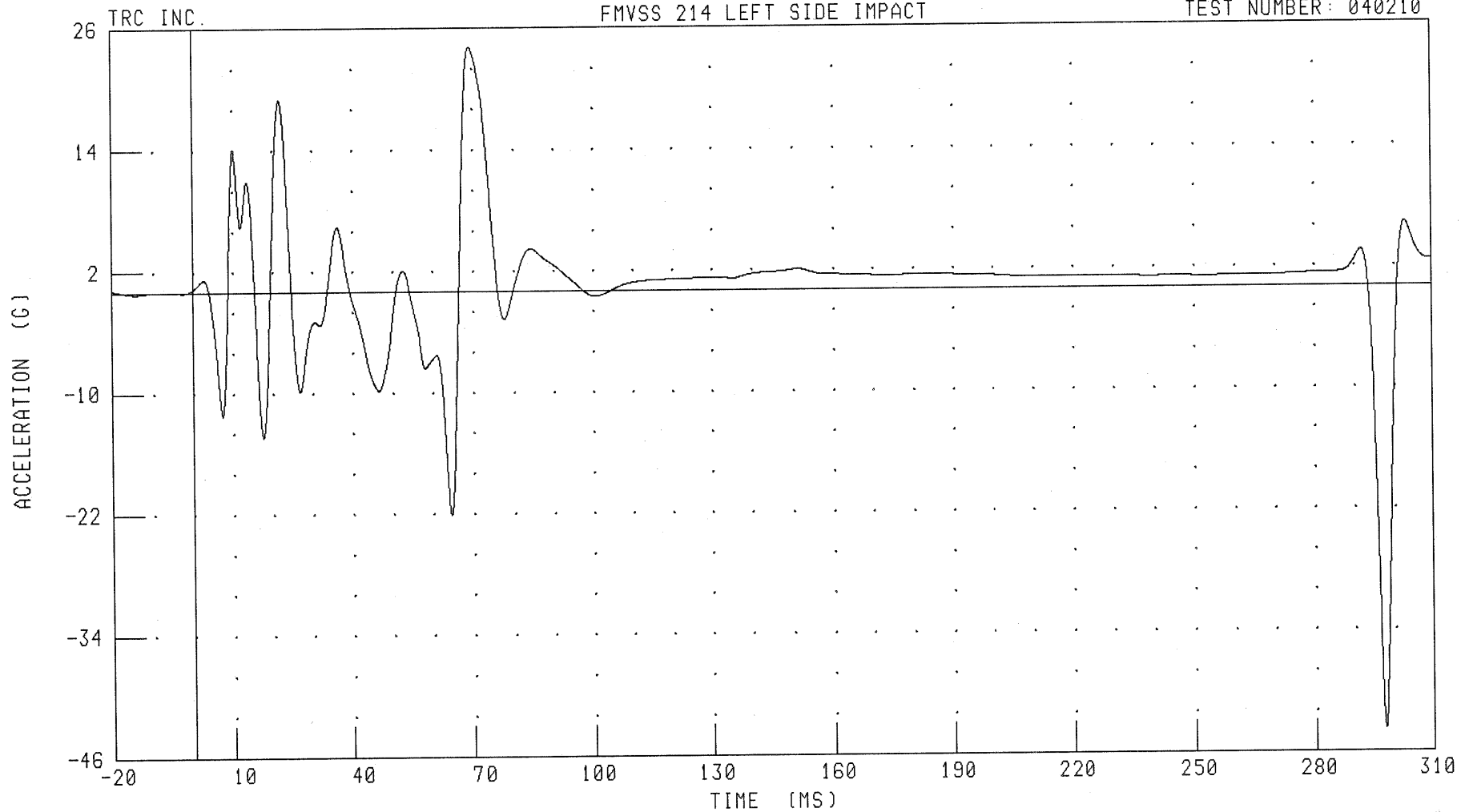
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

REAR FLOORPAN ABOVE AXLE Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKZG1

FILTER: CH. CLASS 60

PEAK DATA: 24.10 G @ 69.44 MS; -43.77 G @ 297.52 MS

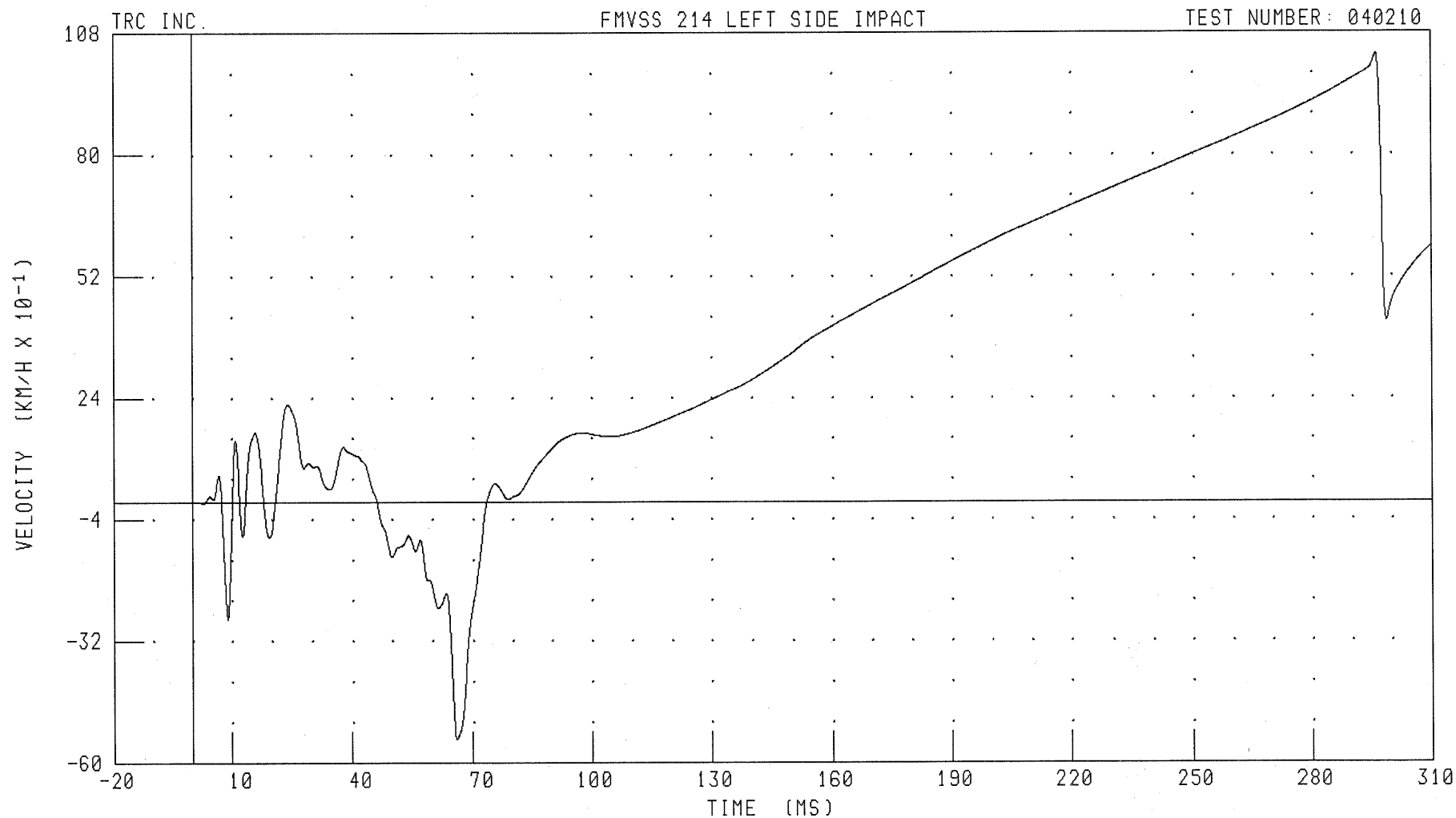
B-109

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
REAR FLOORPAN ABOVE AXLE Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKZV1

FILTER: CH. CLASS 180

PEAK DATA: 10.30 KM/H @ 296.16 MS; -5.47 KM/H @ 66.00 MS

B-110

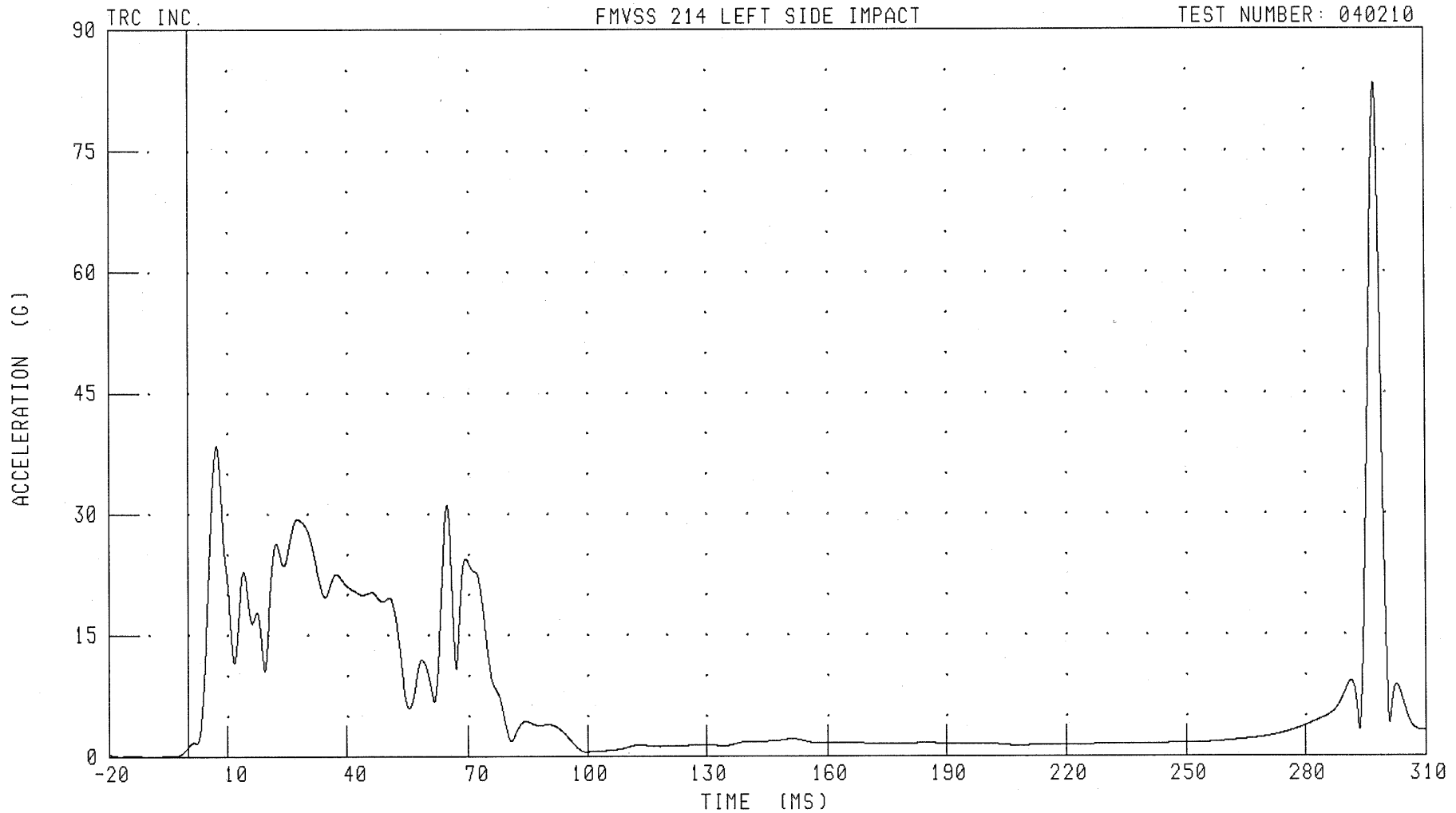
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RDKRG1 FILTER: CH. CLASS 60

PEAK DATA: 83.29 G @ 297.52 MS; 0.01 G @ -17.28 MS

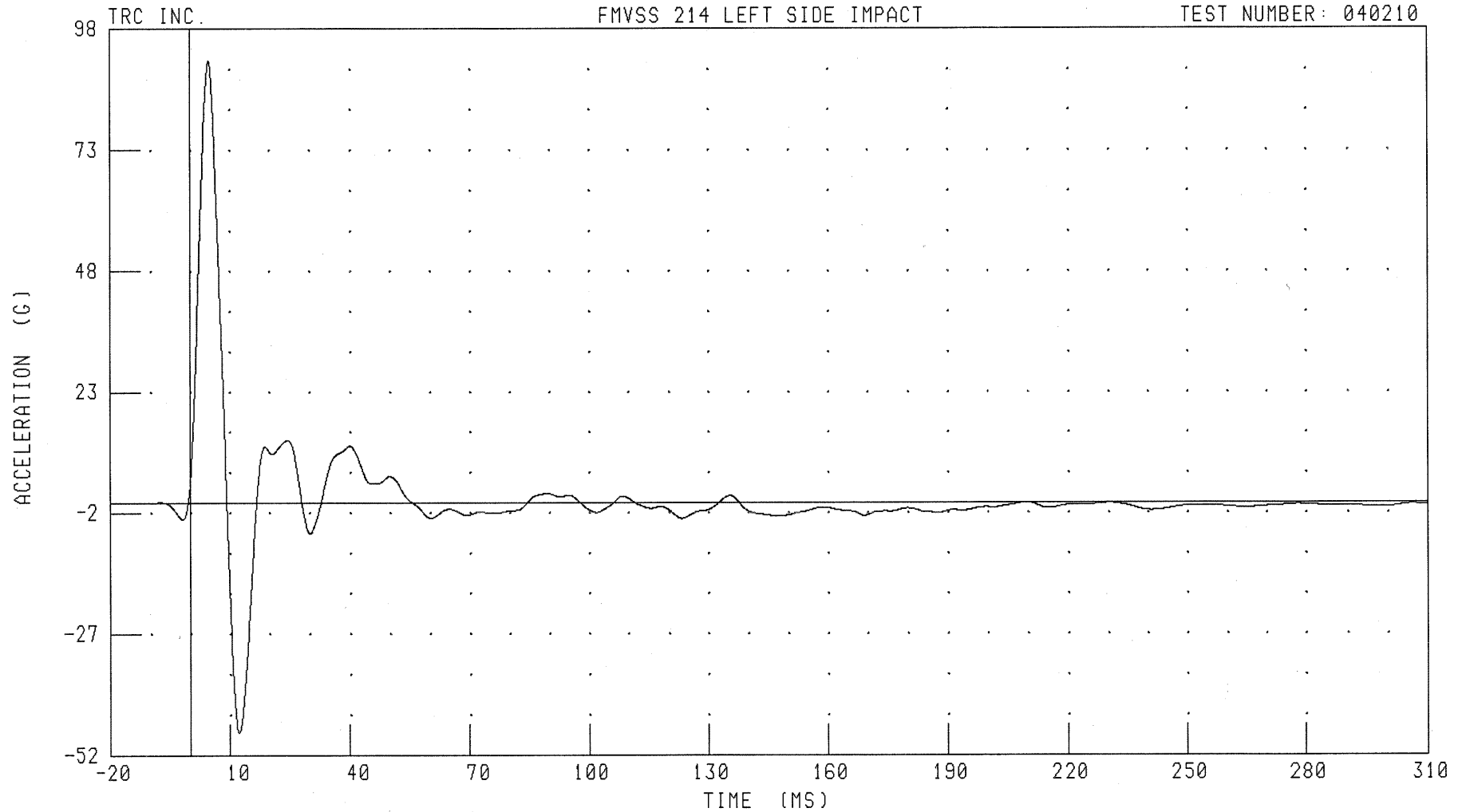
B-111

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LFSYG1 FILTER: CH. CLASS 60

PEAK DATA: 91.44 G @ 4.72 MS; -47.33 G @ 12.24 MS

B-112

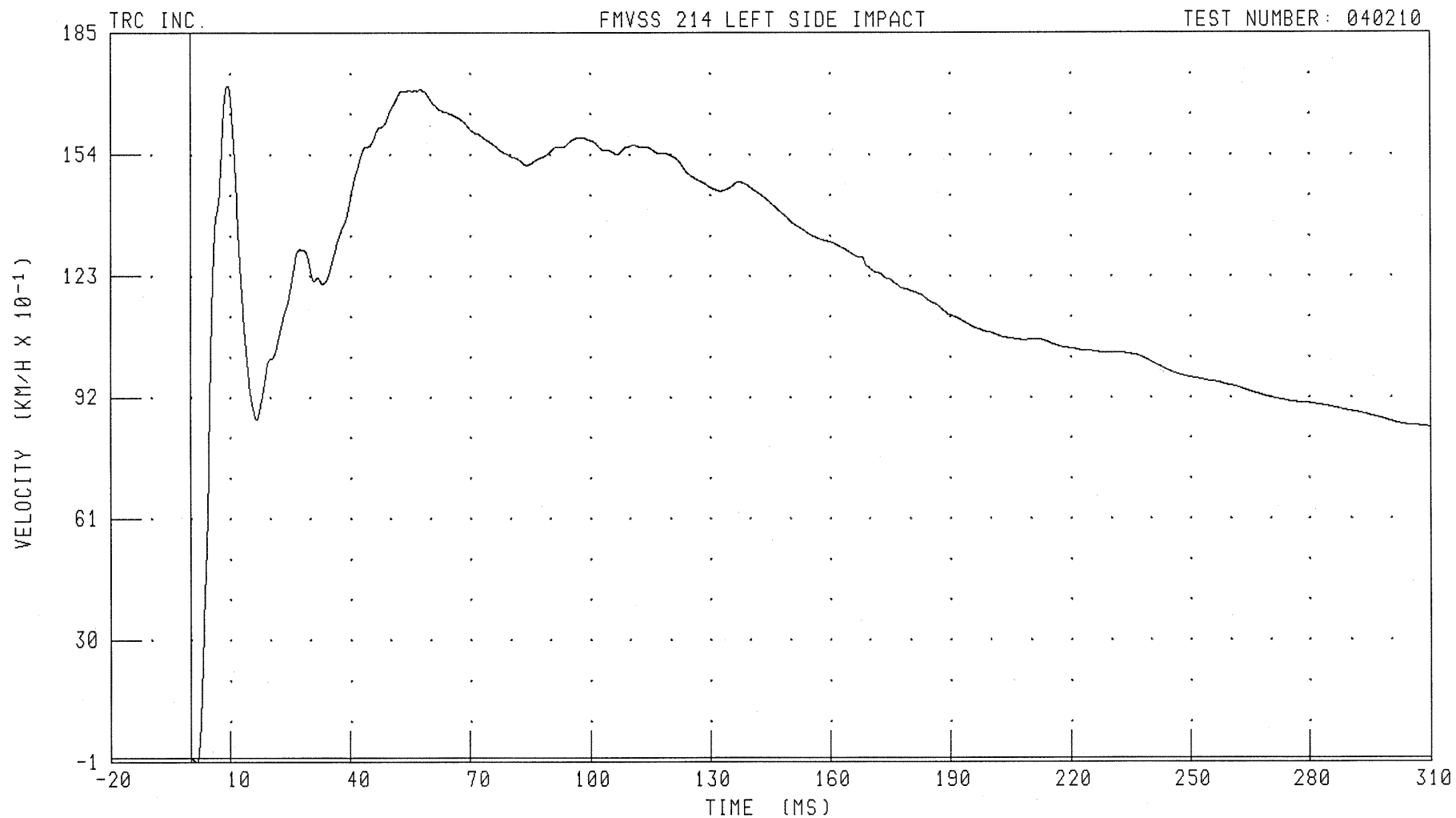
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LFSYV1 FILTER: CH. CLASS 180

PEAK DATA: 17.15 KM/H @ 9.44 MS; -0.13 KM/H @ 1.44 MS

B-113

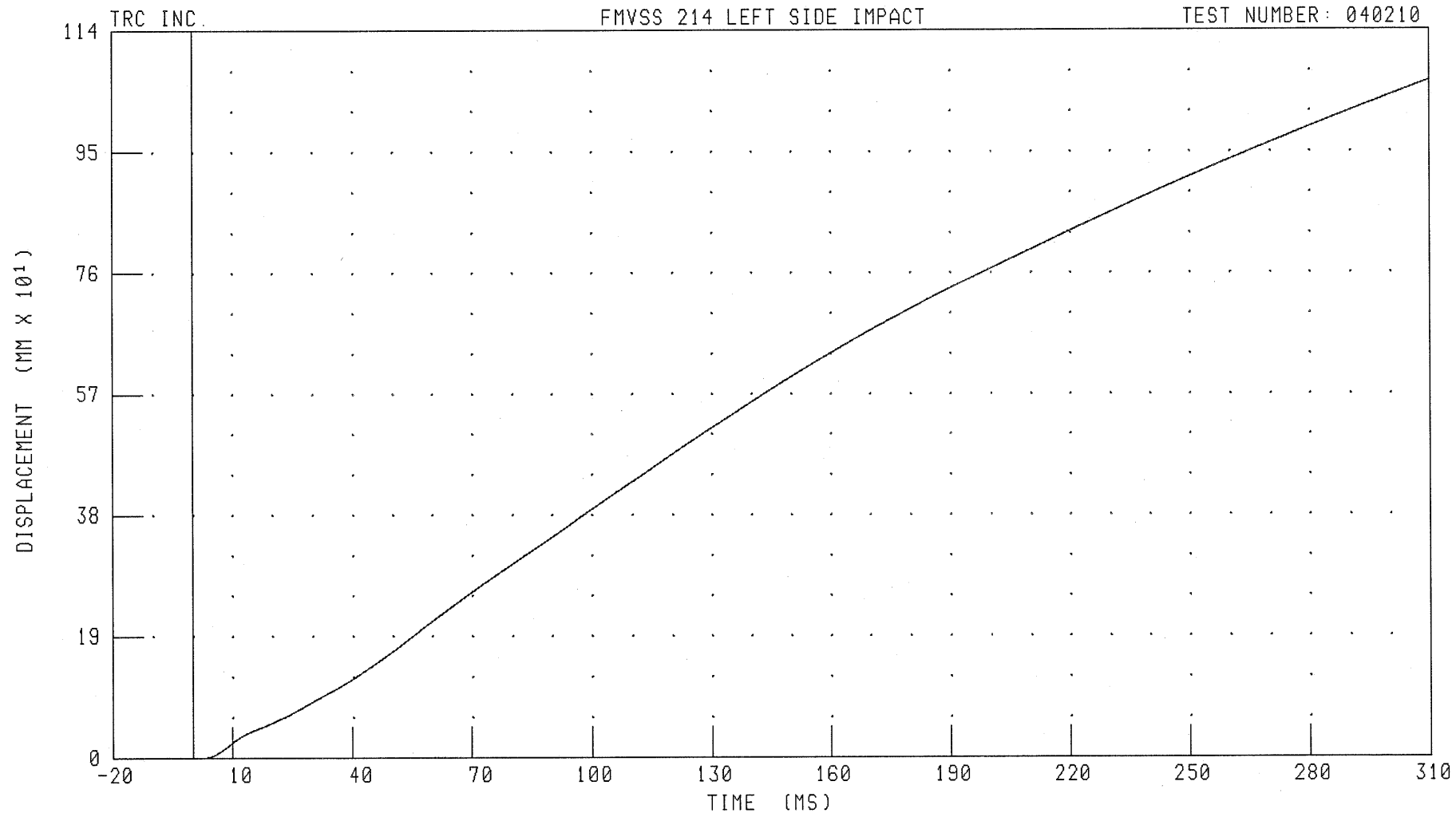
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT SIDE SILL AT FRONT SEAT Y-AXIS DISPLACEMENT

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LFSYD1

FILTER: CH. CLASS 180

PEAK DATA: 1061.01 MM @ 310.00 MS; -0.04 MM @ 1.92 MS

B-114

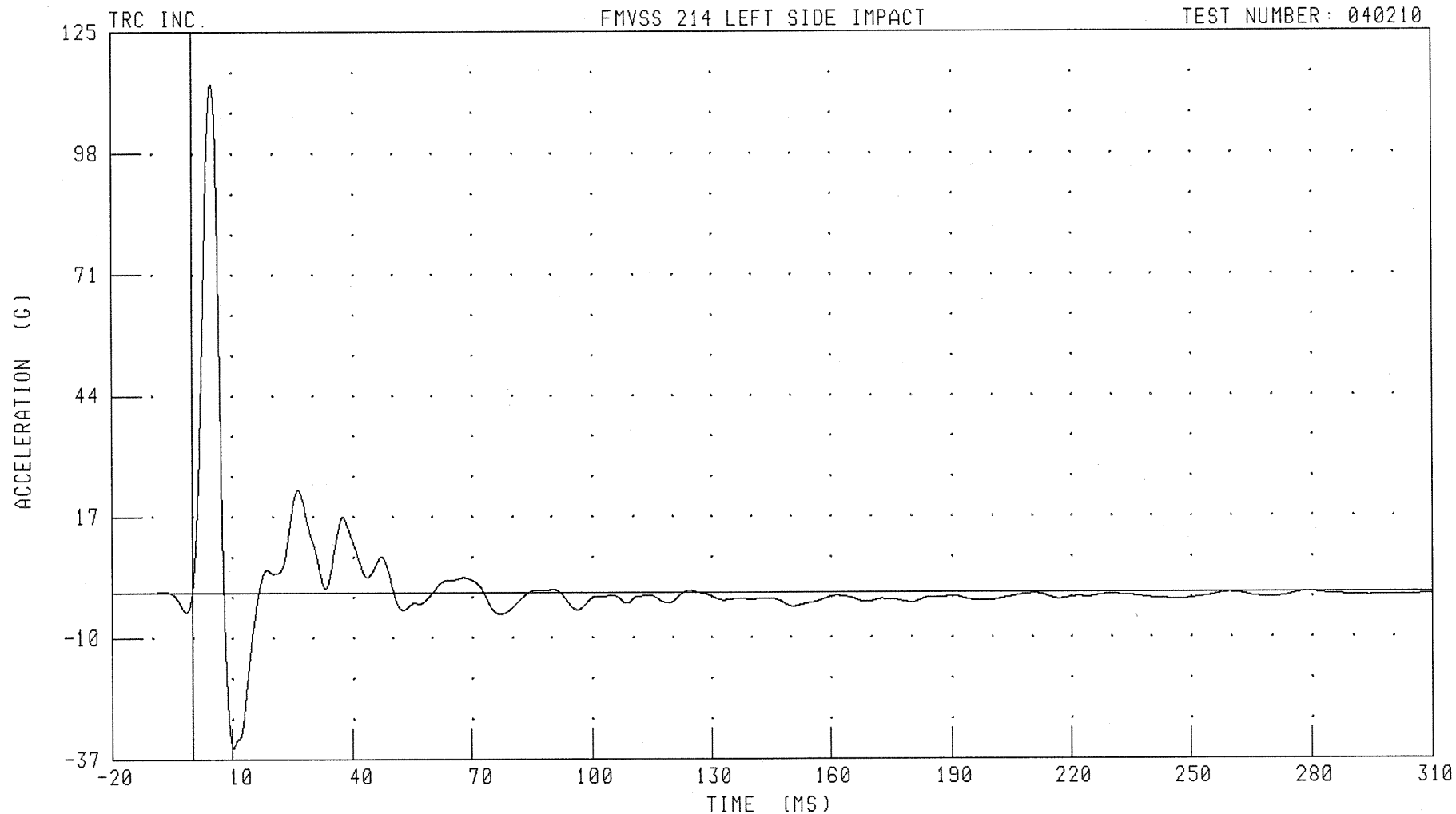
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRSYG1

FILTER: CH. CLASS 60

PEAK DATA: 113.41 G @ 4.96 MS; -34.46 G @ 10.24 MS

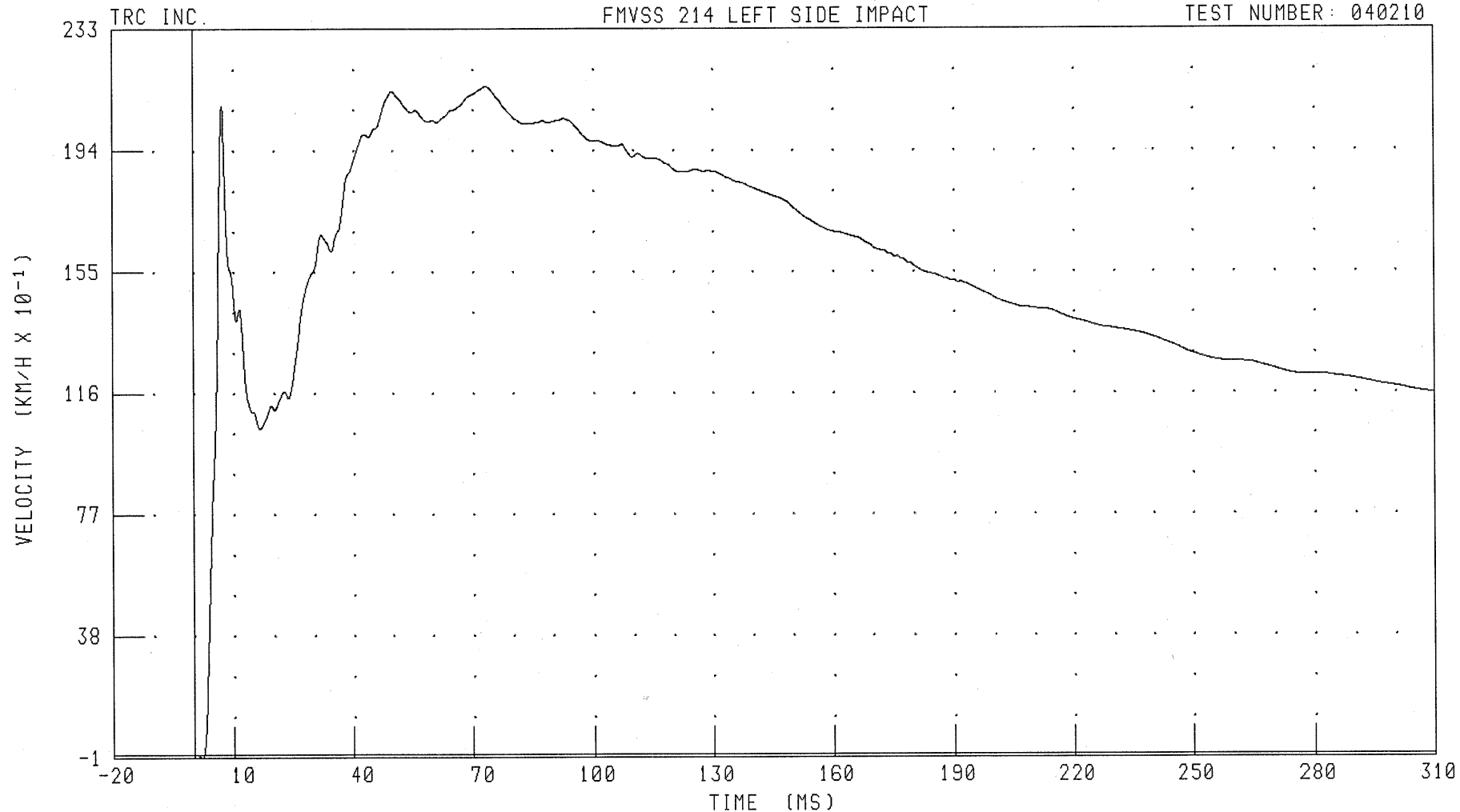
B-115

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRSYV1 FILTER: CH. CLASS 180

PEAK DATA: 21.46 KM/H @ 73.36 MS; -0.14 KM/H @ 2.00 MS

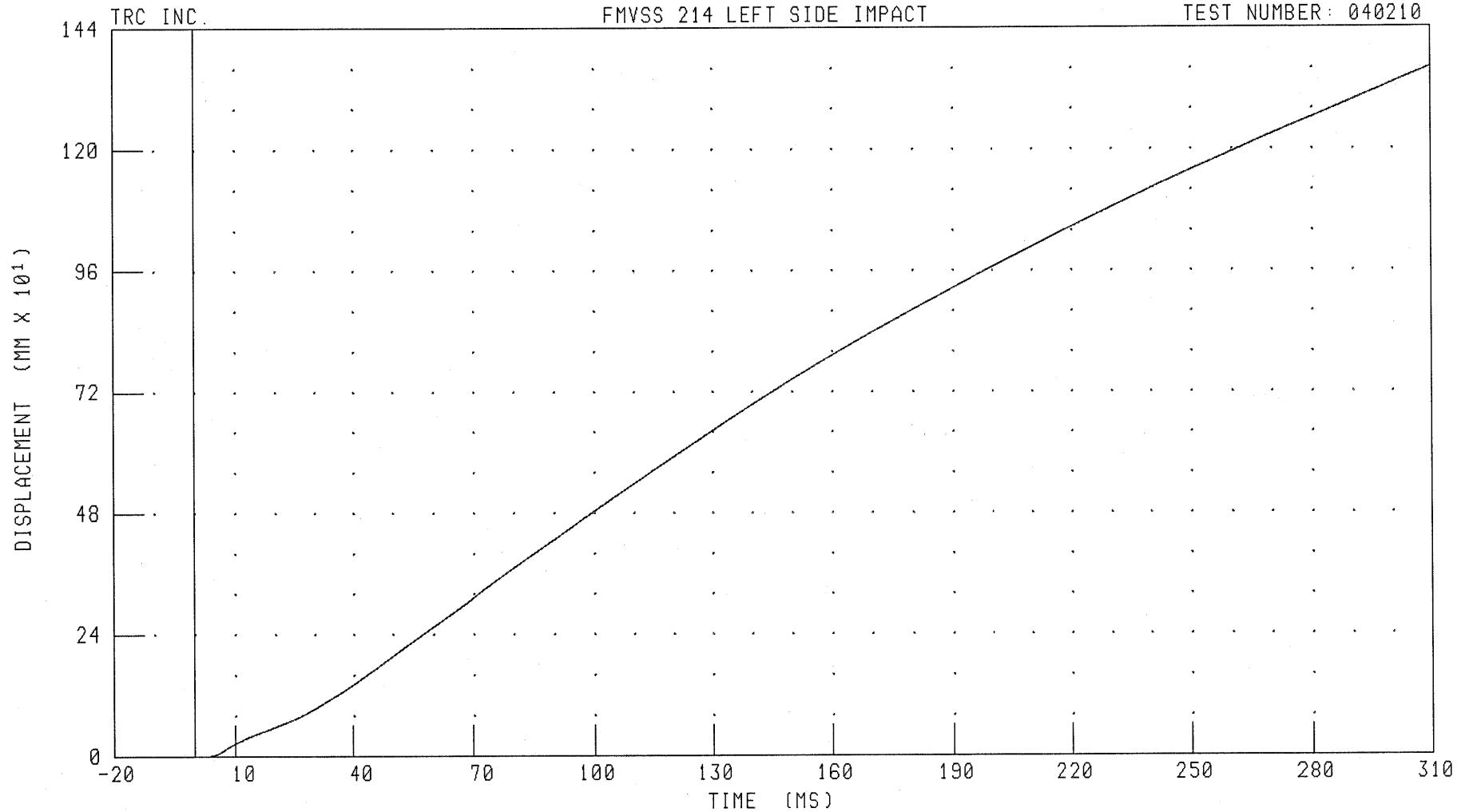
B-116

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT SIDE SILL AT REAR SEAT Y-AXIS DISPLACEMENT

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRSYD1

FILTER: CH. CLASS 180

PEAK DATA: 1361.55 MM @ 310.00 MS; -0.04 MM @ 2.48 MS

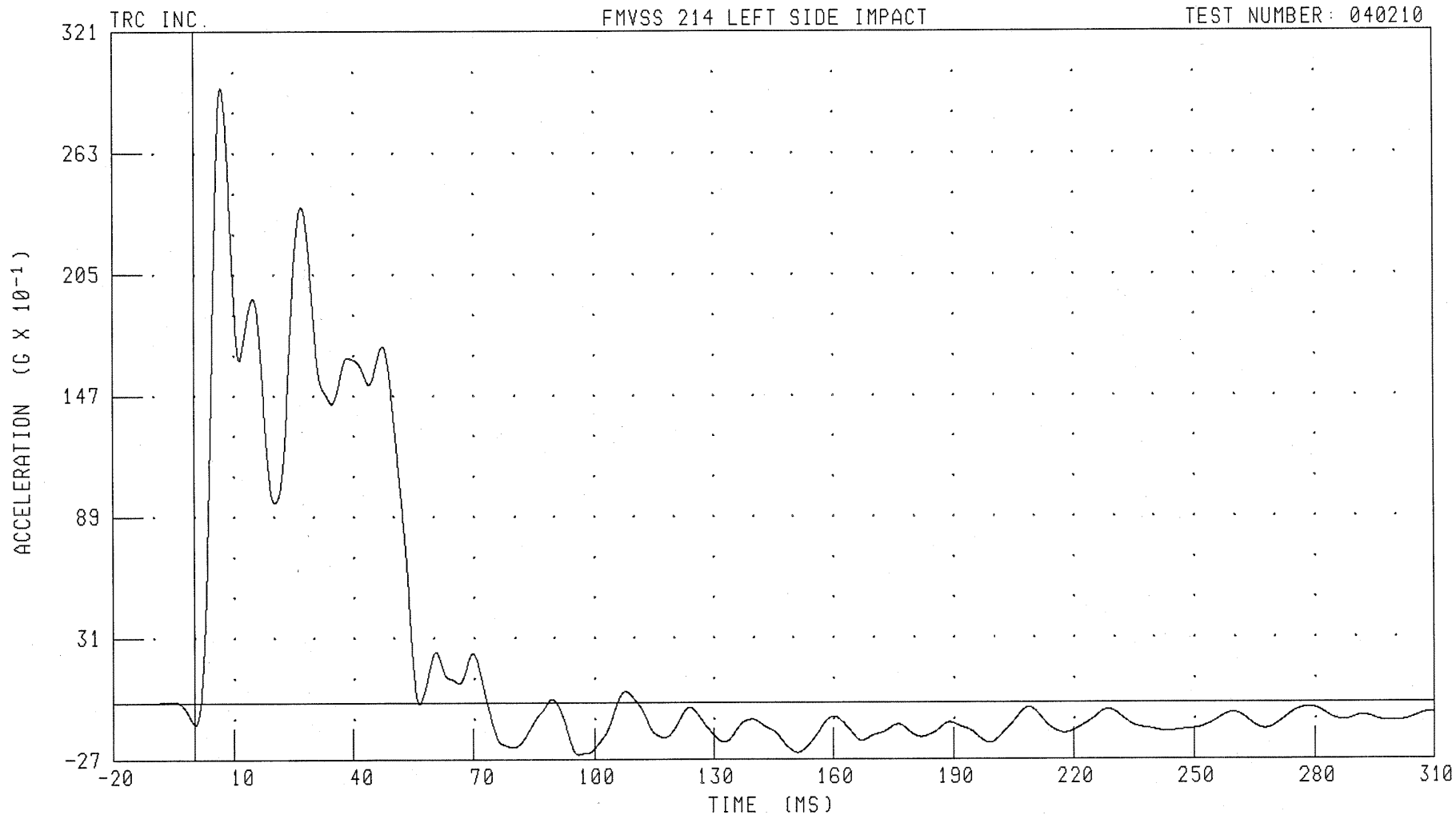
B-117

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRTYG1 FILTER: CH. CLASS 60

PEAK DATA: 29.40 G @ 6.96 MS; -2.48 G @ 96.08 MS

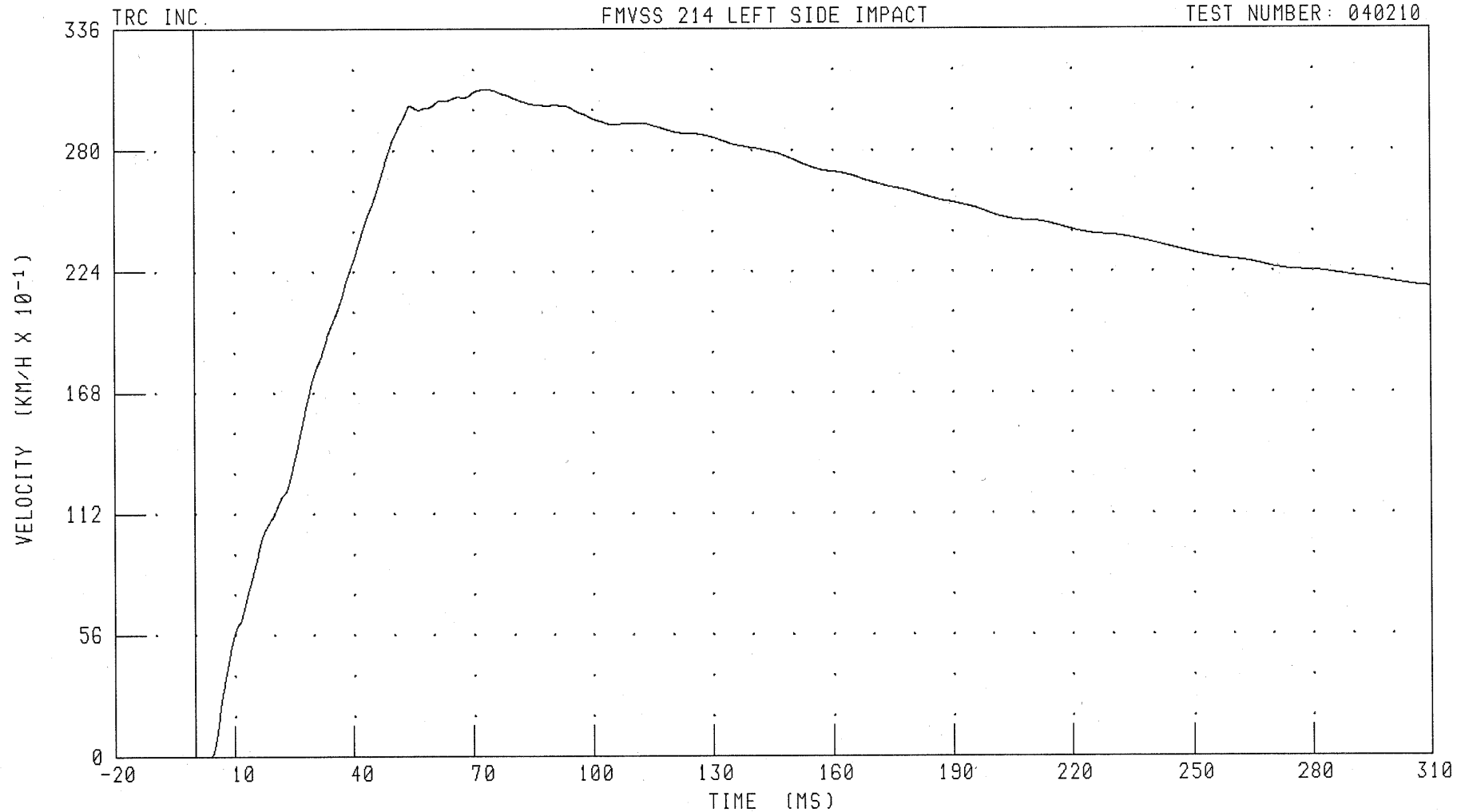
B-118

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRTYV1

FILTER: CH. CLASS 180

PEAK DATA: 30.80 KM/H @ 73.12 MS; -0.02 KM/H @ 3.36 MS

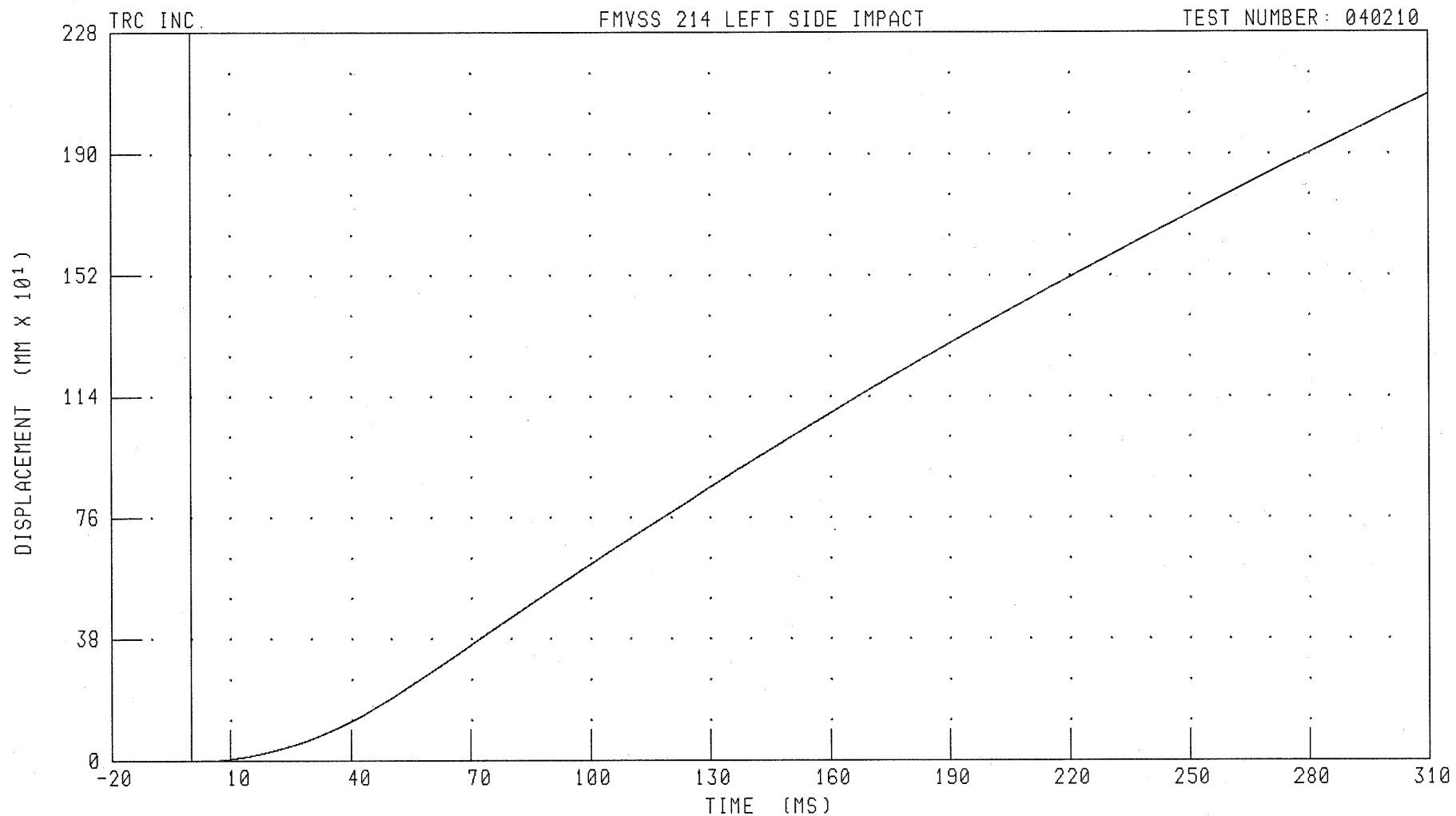
B-119

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS DISPLACEMENT

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: RRTYD1

FILTER: CH. CLASS 180

PEAK DATA: 2086.04 MM @ 310.00 MS; 0.00 MM @ 3.76 MS

B-120

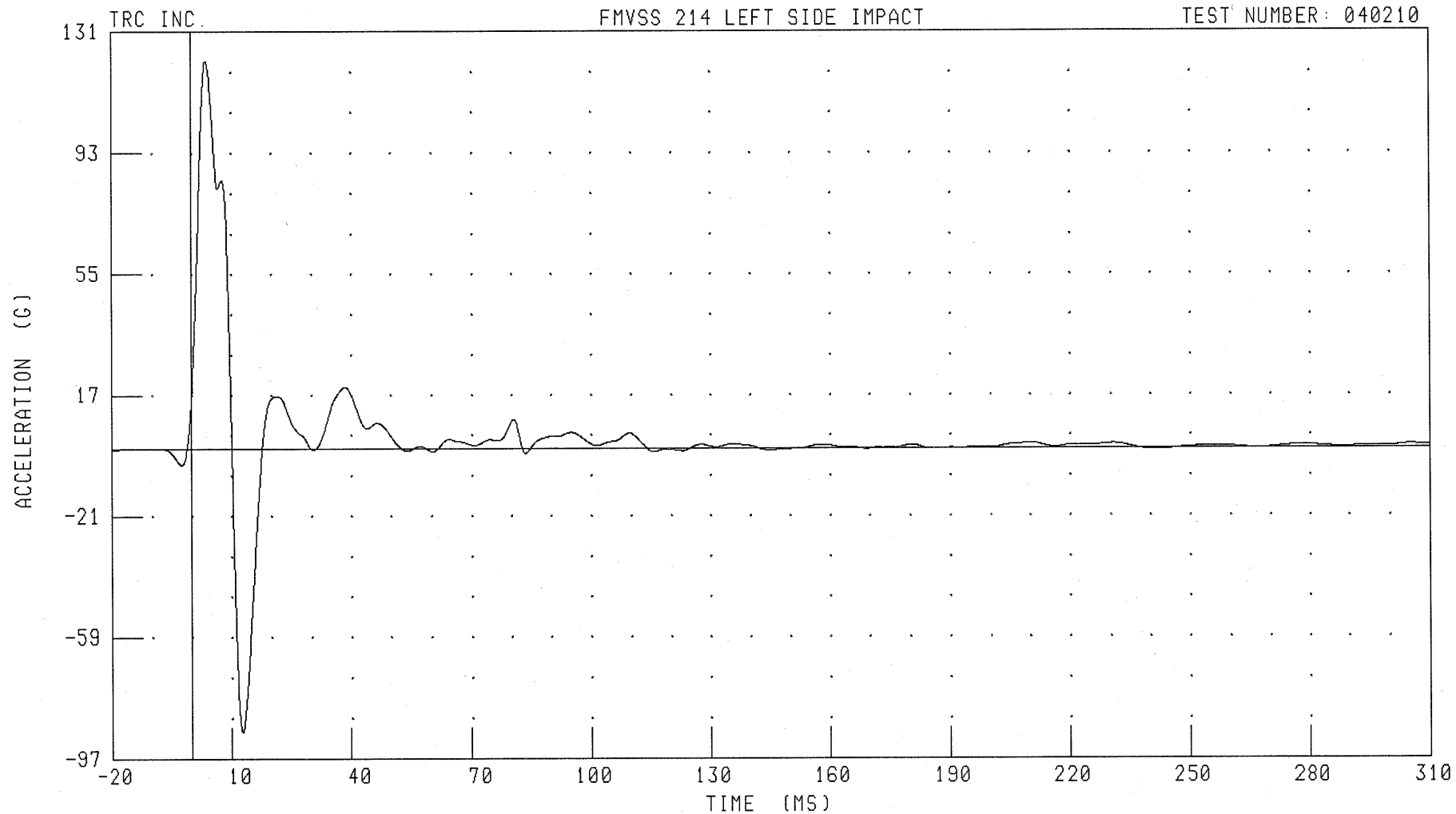
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT LOWER A-POST Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLAYG1 FILTER: CH. CLASS 60

PEAK DATA: 121.83 G @ 3.68 MS; -88.72 G @ 12.80 MS

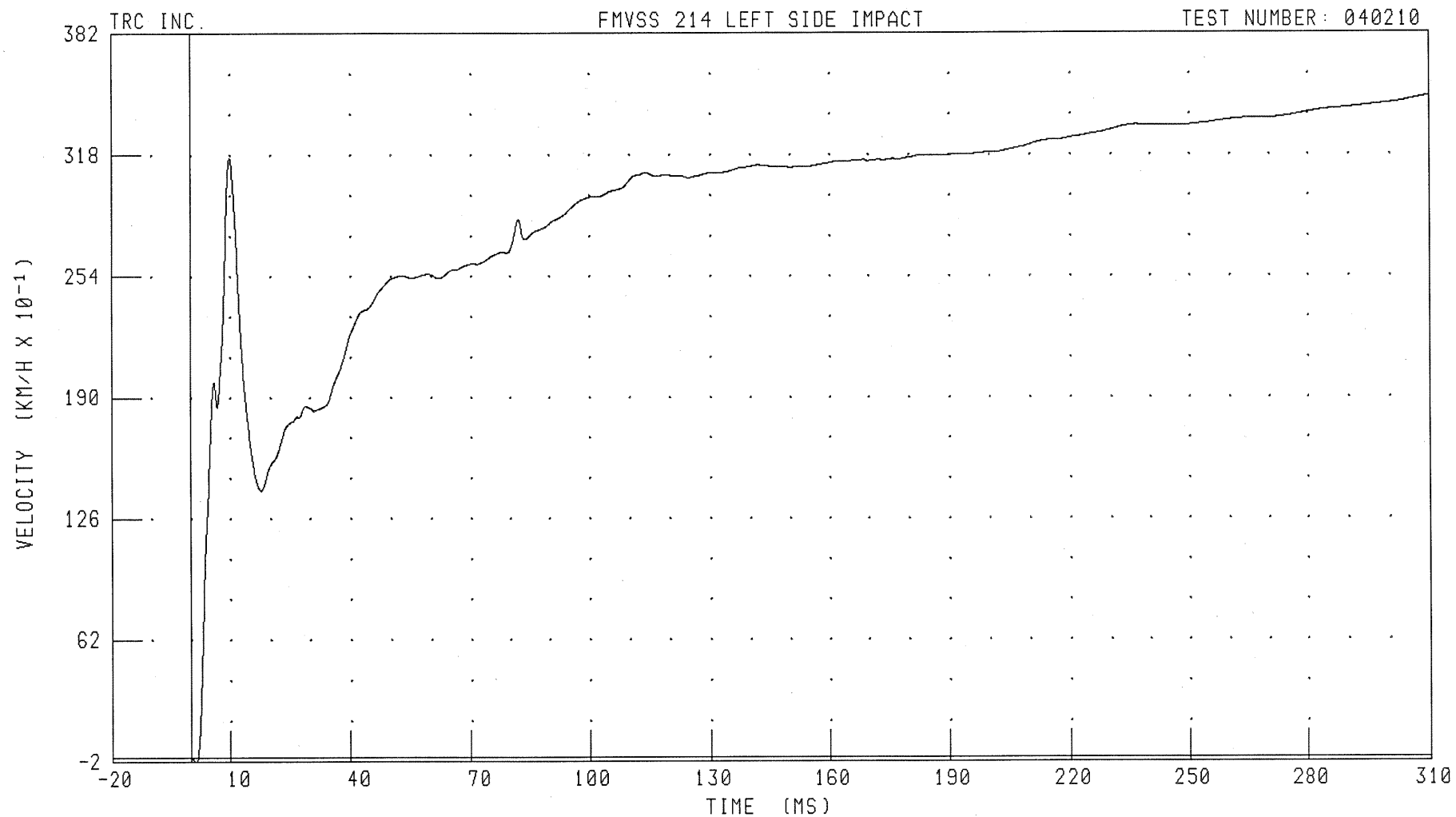
B-121

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT LOWER A-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLAYV1 FILTER: CH. CLASS 180

PEAK DATA: 34.88 KM/H @ 310.00 MS; -0.23 KM/H @ 1.28 MS

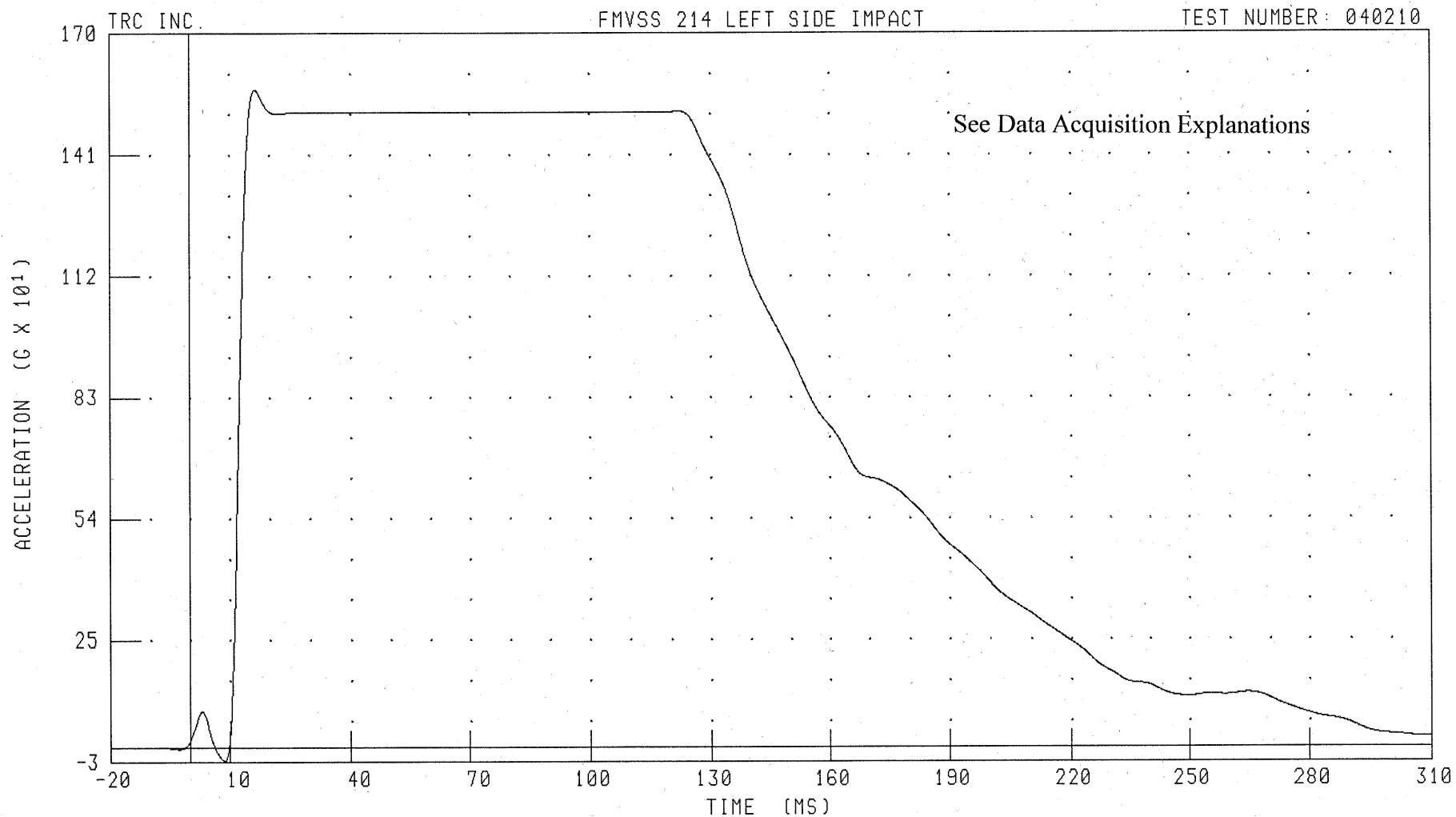
B-122

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT MIDDLE A-POST Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LMAYG1 FILTER: CH. CLASS 60

PEAK DATA: 1571.76 G @ 16.48 MS; -31.69 G @ 8.64 MS

B-123

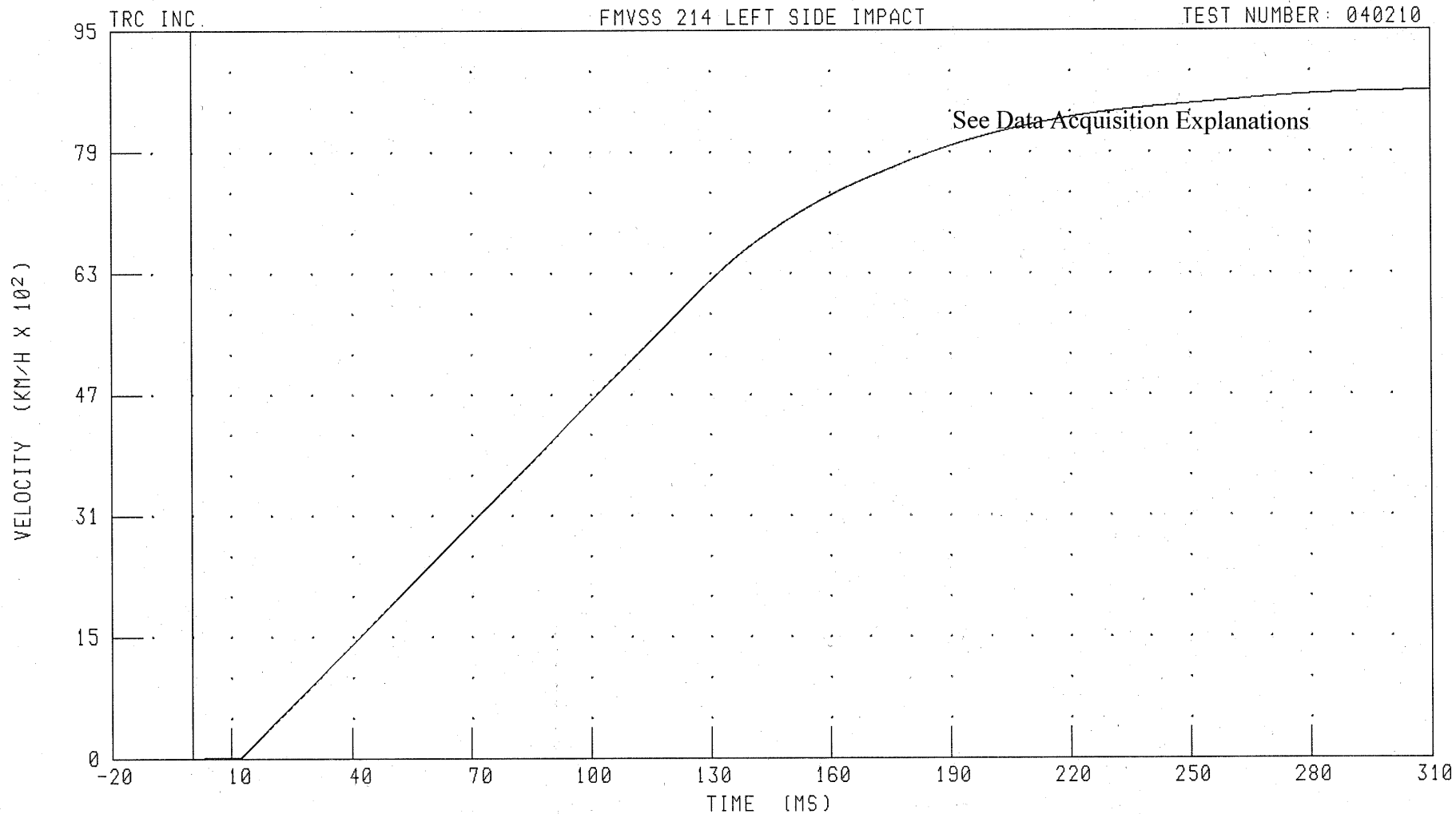
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT MIDDLE A-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LMAYV1 FILTER: CH. CLASS 180

PEAK DATA: 8803.32 KM/H @ 310.00 MS; -0.16 KM/H @ 1.20 MS

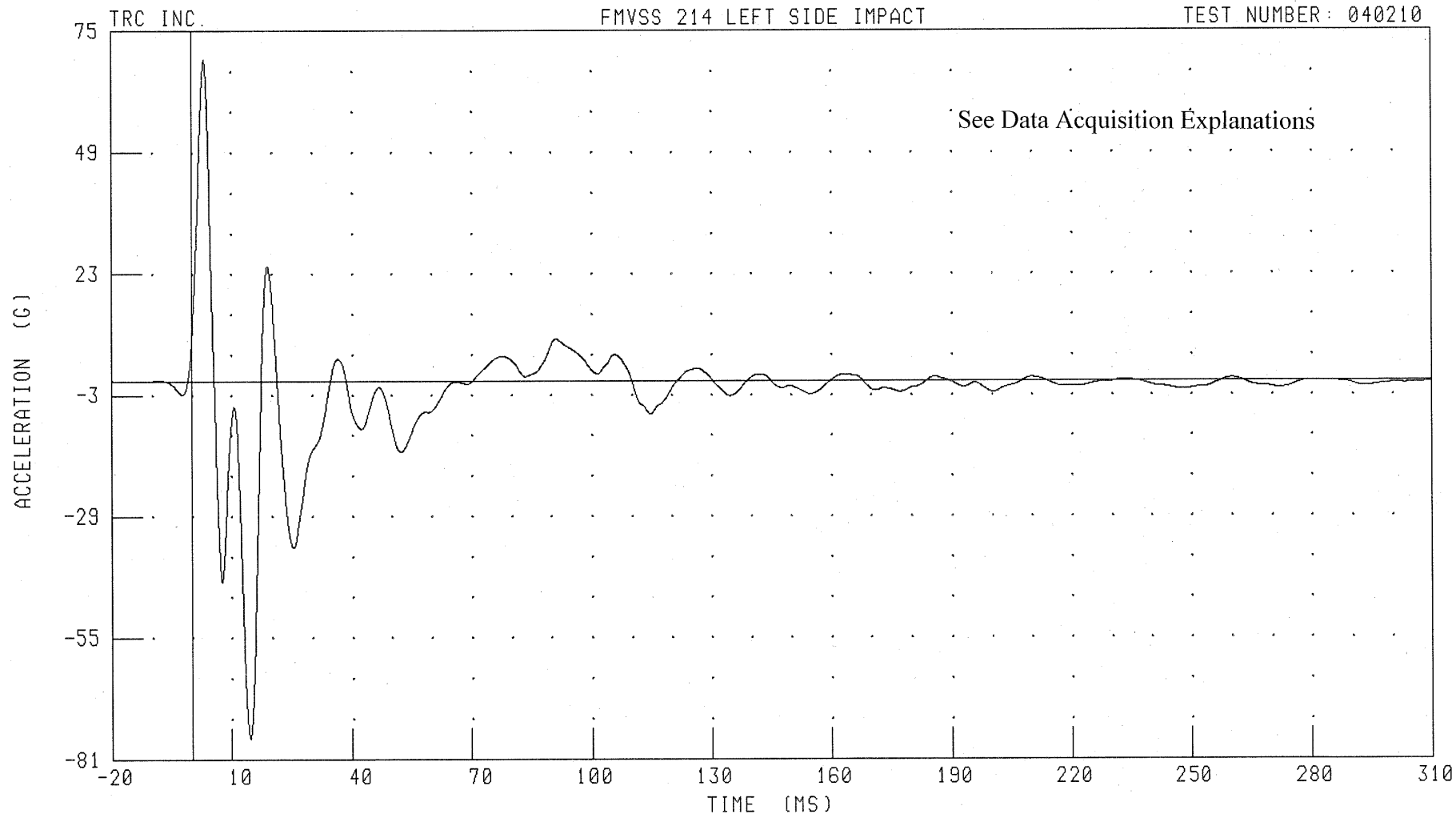
B-124

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT LOWER B-POST Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLBYG1

FILTER: CH. CLASS 60

PEAK DATA: 68.86 G @ 3.28 MS; -76.60 G @ 14.64 MS

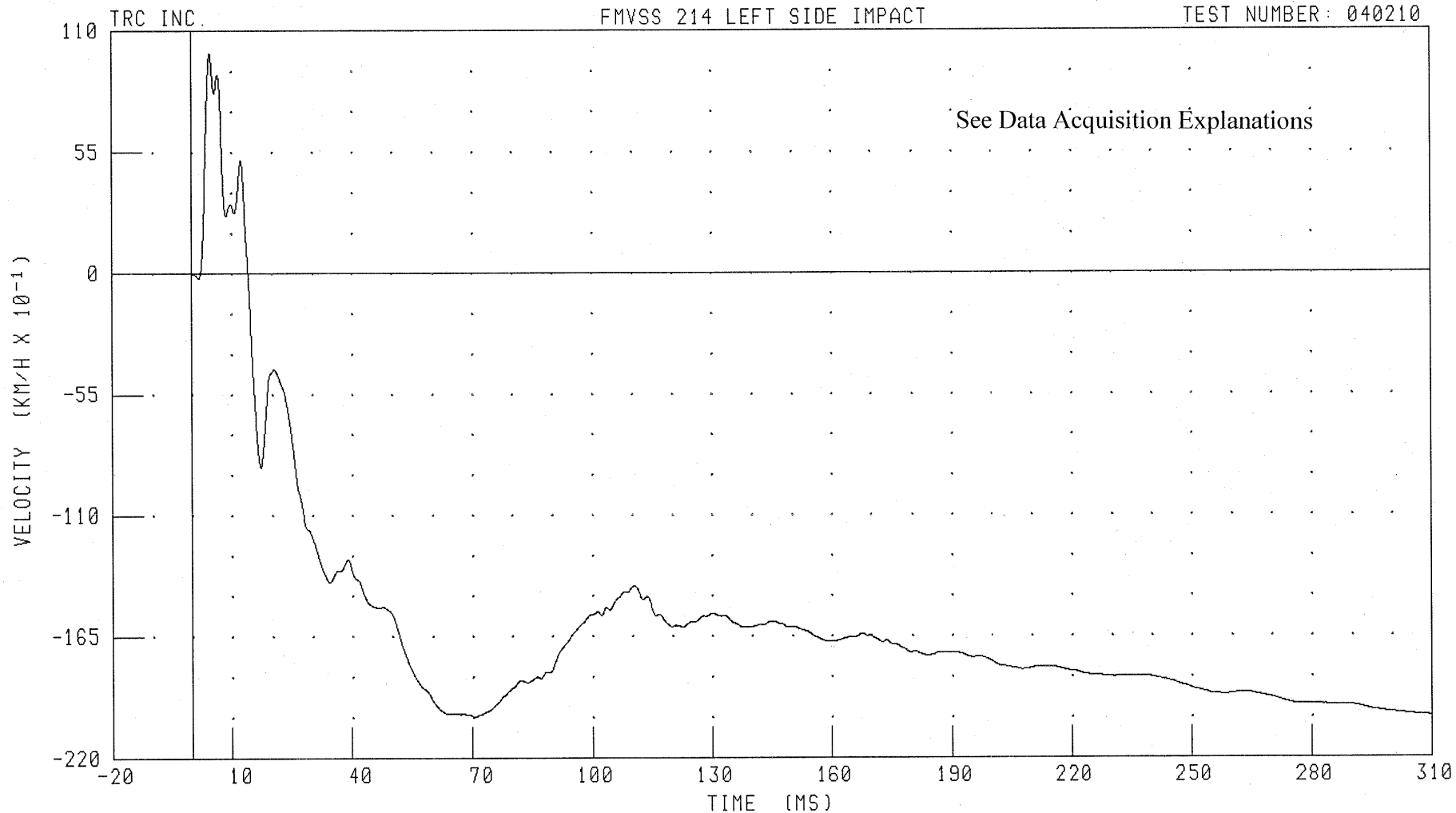
B-125

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT LOWER B-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLBYV1

FILTER: CH. CLASS 180

PEAK DATA: 10.00 KM/H @ 4.72 MS; -20.16 KM/H @ 70.64 MS

B-126

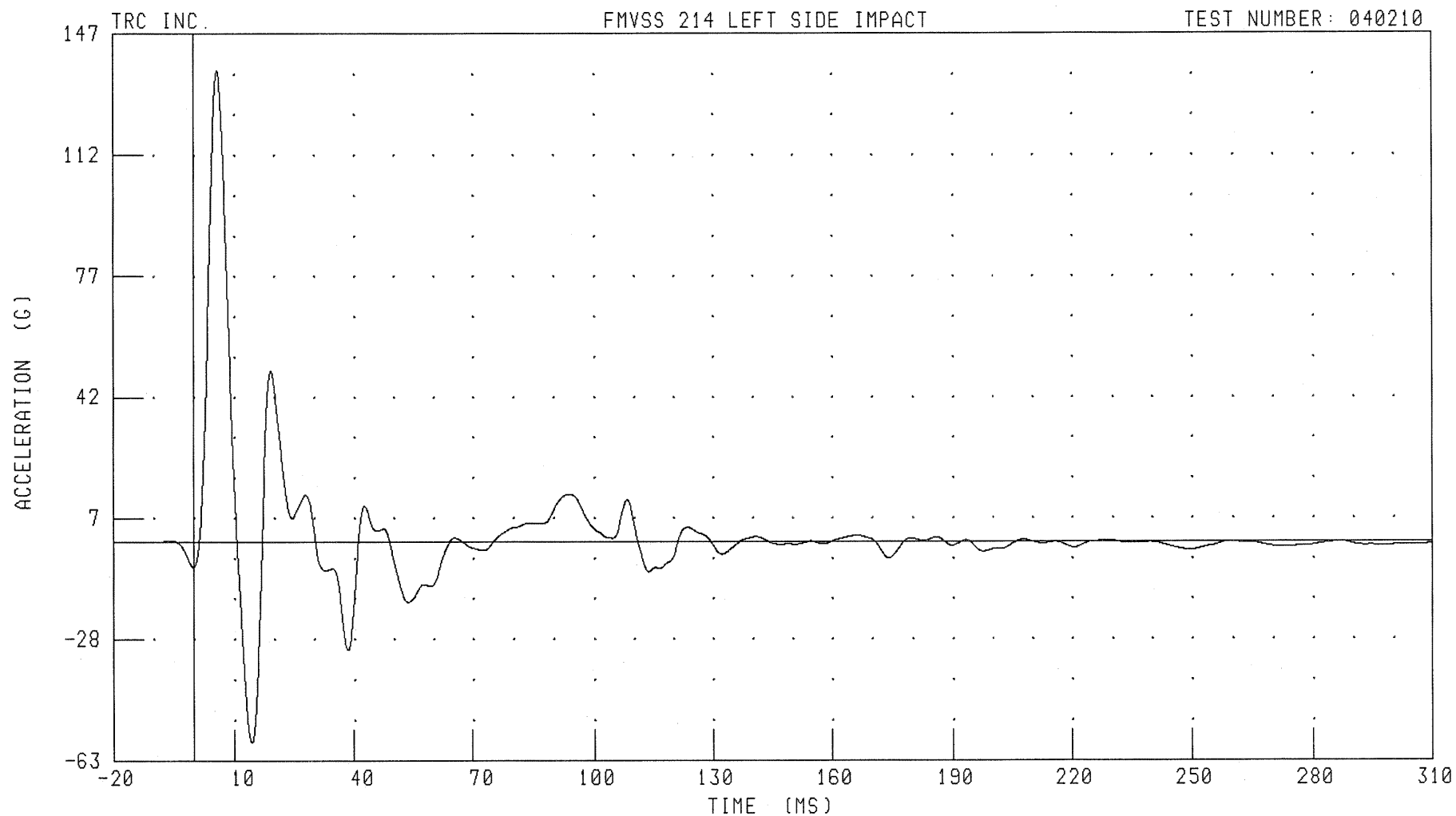
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT MIDDLE B-POST Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LM BYG1 FILTER: CH. CLASS 60

PEAK DATA: 136.37 G @ 5.68 MS; -57.81 G @ 14.40 MS

B-127

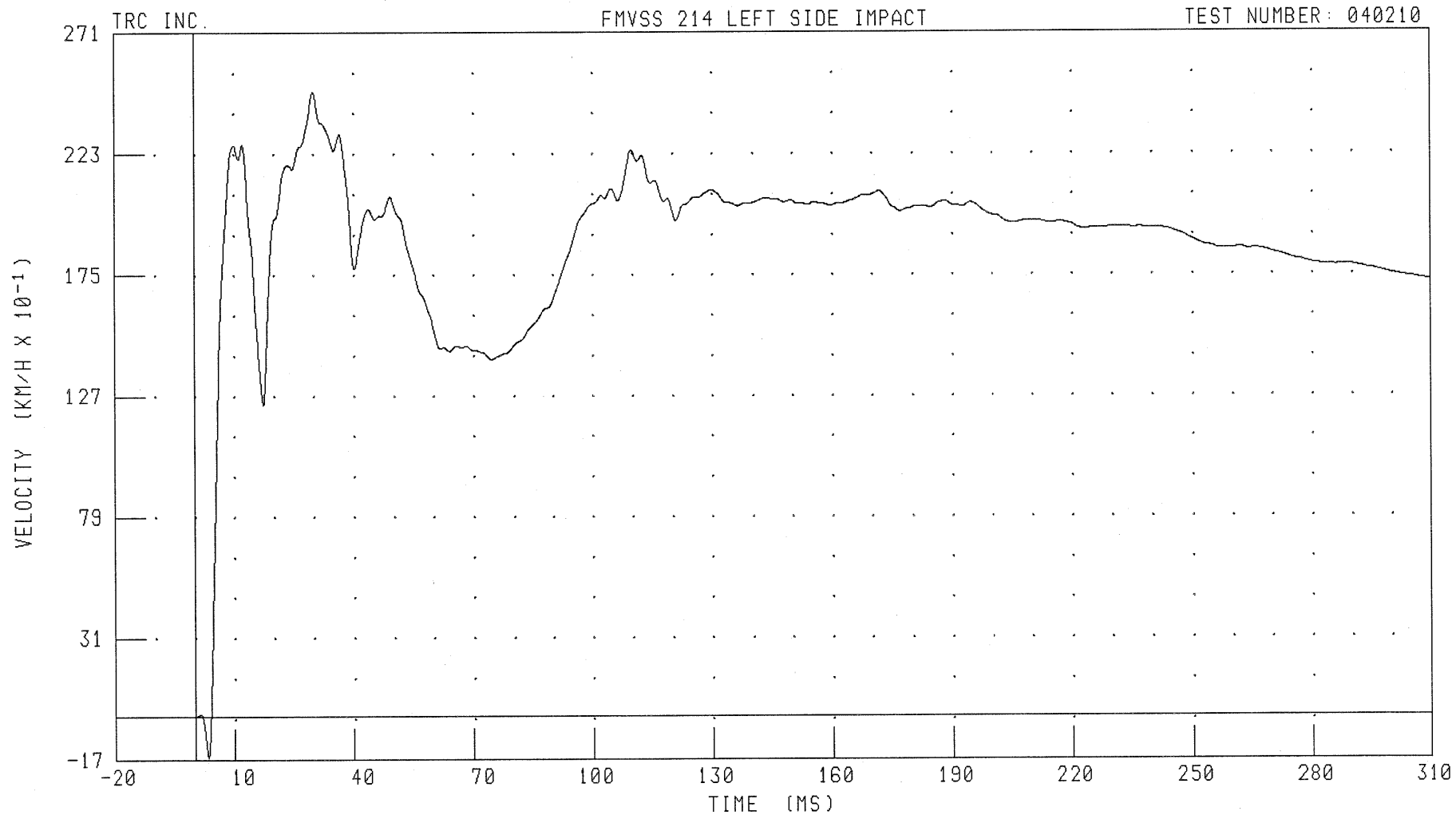
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT MIDDLE B-POST Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LMBYV1 FILTER: CH. CLASS 180

PEAK DATA: 24.76 KM/H @ 30.16 MS; -1.63 KM/H @ 3.28 MS

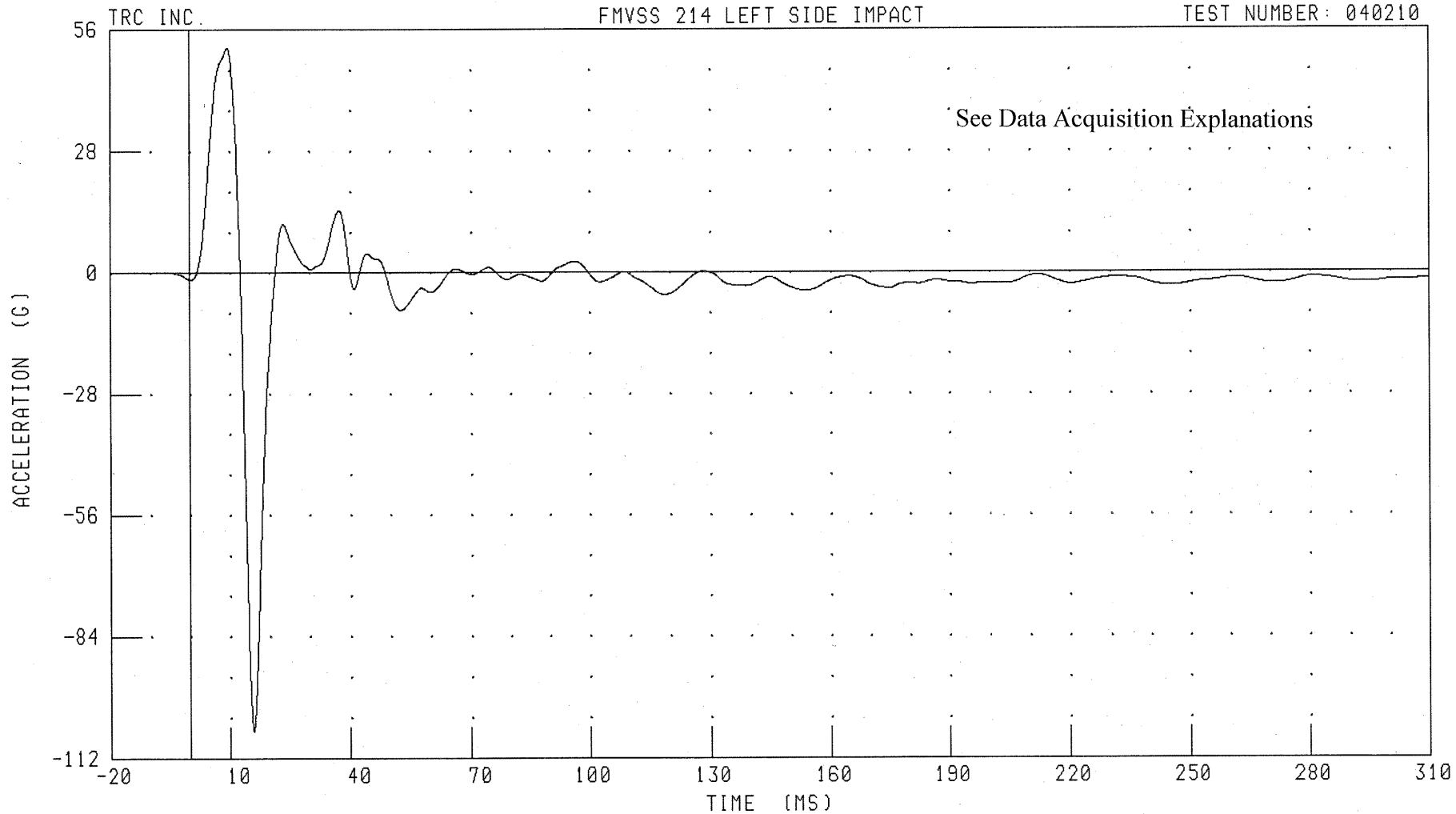
B-128

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT FRONT SEAT TRACK Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LFTYG1

FILTER: CH. CLASS 60

PEAK DATA: 51.79 G @ 9.52 MS; -105.82 G @ 16.00 MS

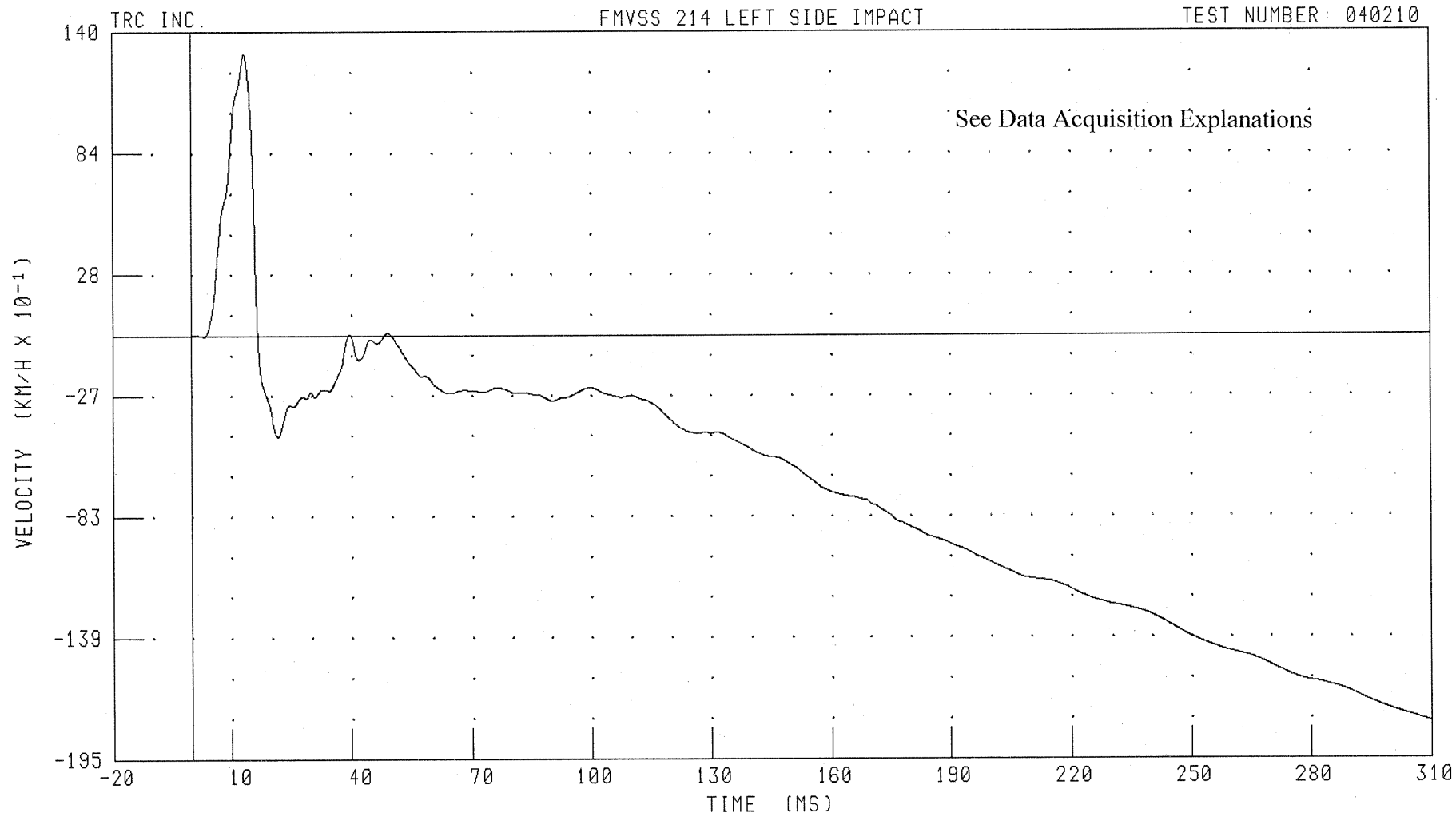
B-129

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT FRONT SEAT TRACK Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LFTYV1 FILTER: CH. CLASS 180

PEAK DATA: 12.99 KM/H @ 13.44 MS; -17.90 KM/H @ 310.00 MS

B-130

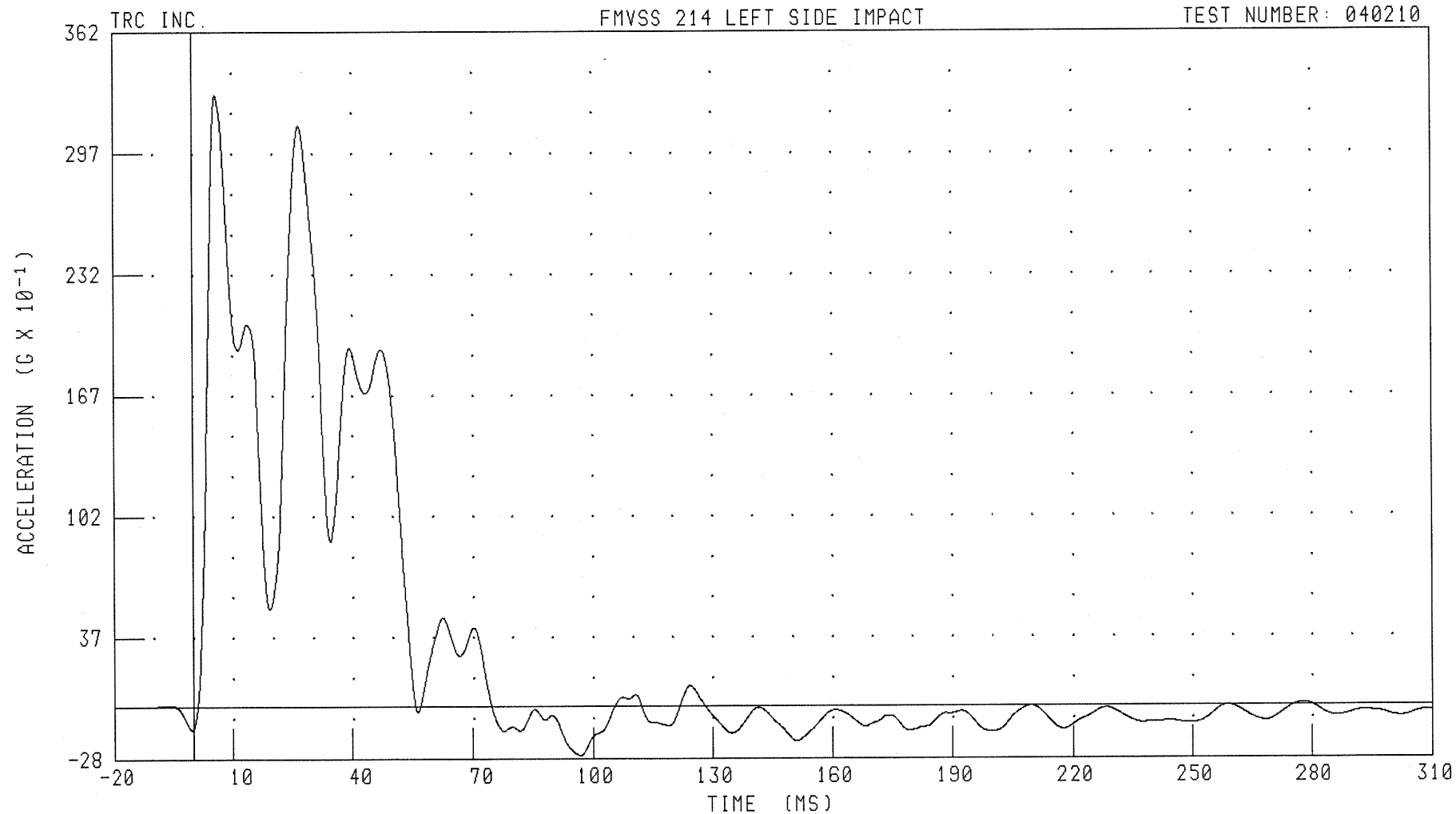
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR SEAT TRACK Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRTYG1 FILTER: CH. CLASS 60

PEAK DATA: 32.84 G @ 5.92 MS; -2.63 G @ 96.80 MS

B-131

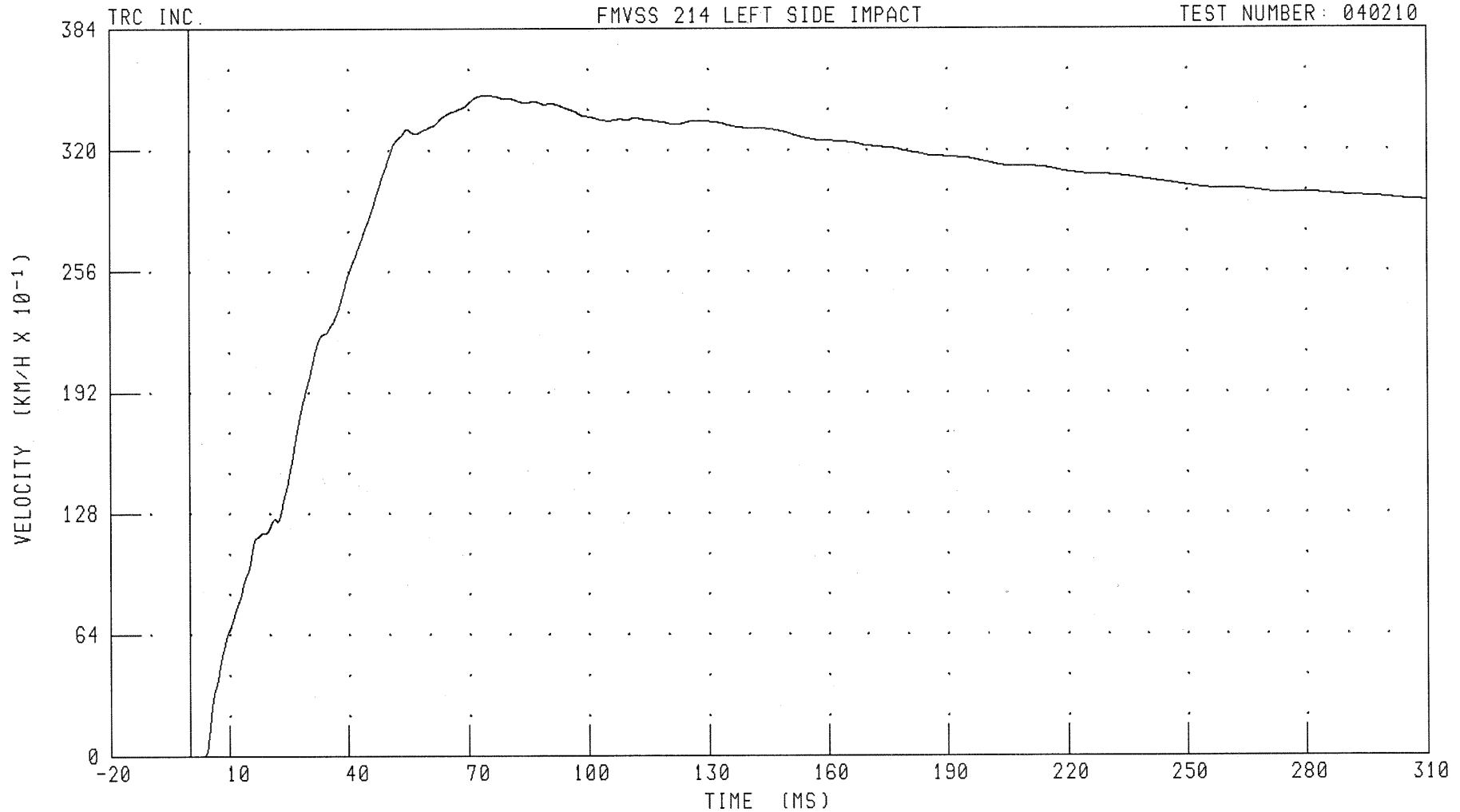
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR SEAT TRACK Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRTYV1

FILTER: CH. CLASS 180

PEAK DATA: 34.90 KM/H @ 74.56 MS; -0.02 KM/H @ 3.36 MS

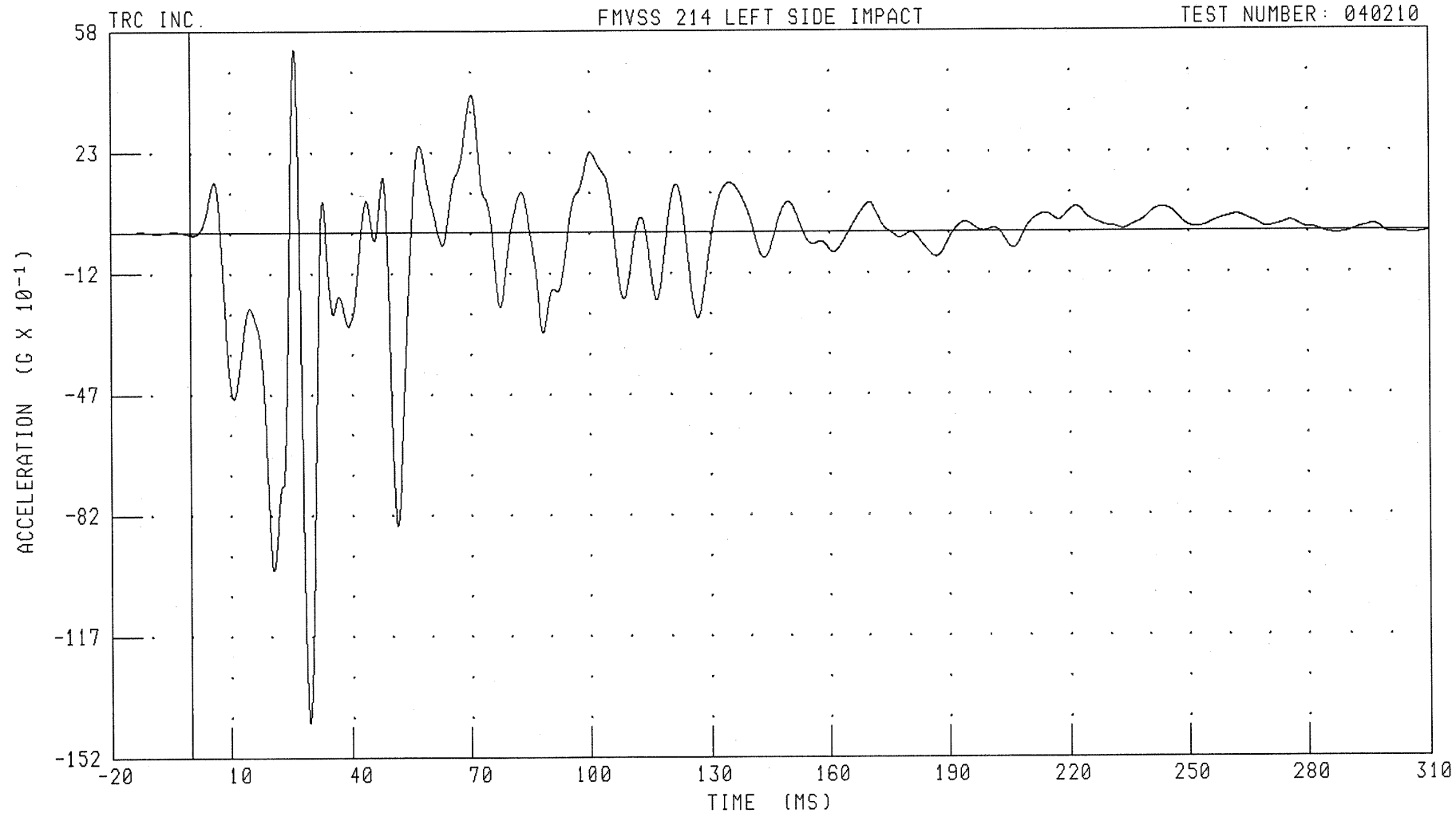
B-132

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGXG1 FILTER: CH. CLASS 60

PEAK DATA: 5.28 G @ 26.00 MS; -14.18 G @ 29.44 MS

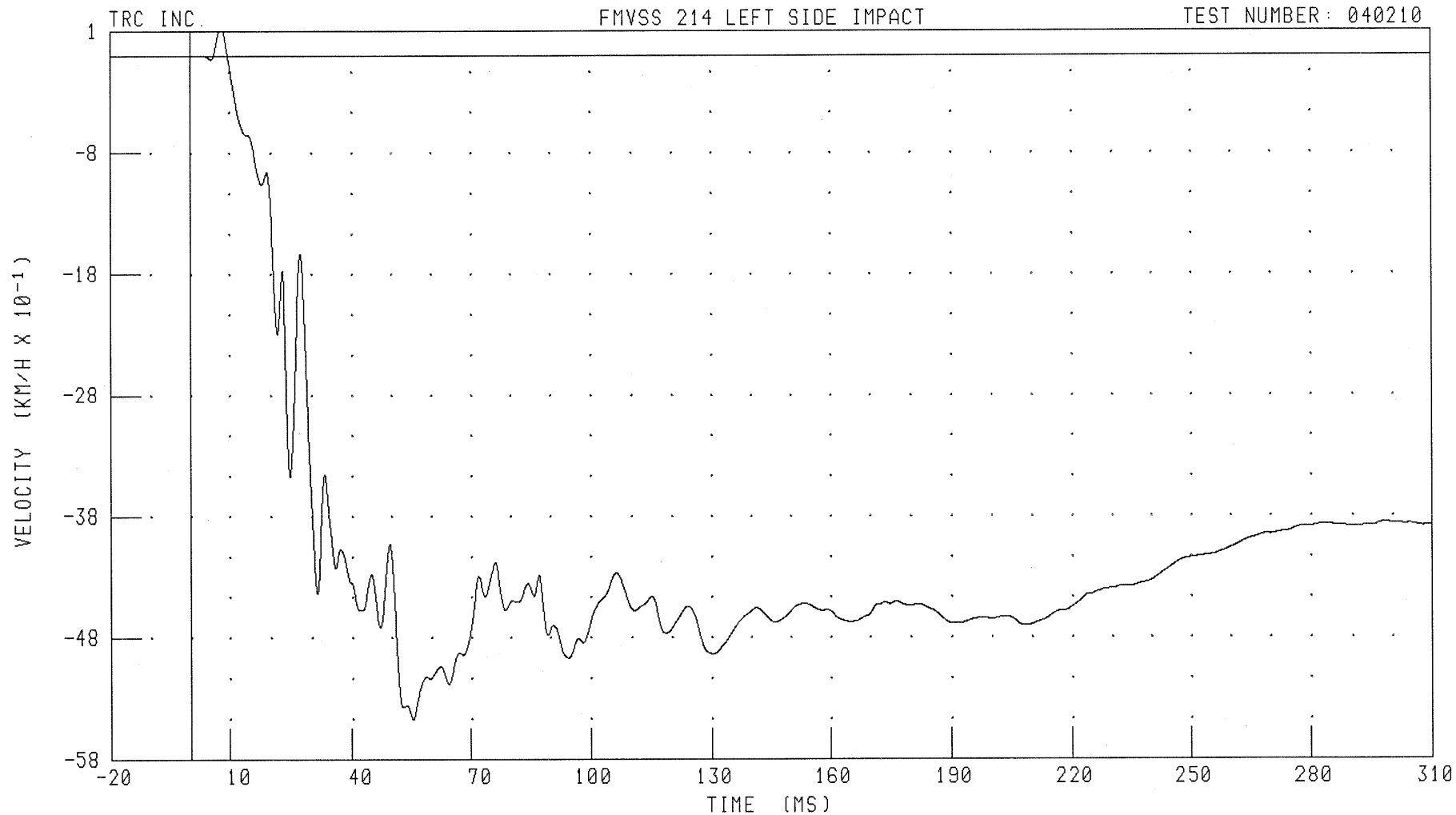
B-133

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGXV1 FILTER: CH. CLASS 180

PEAK DATA: 0.24 KM/H @ 7.92 MS; -5.47 KM/H @ 55.36 MS

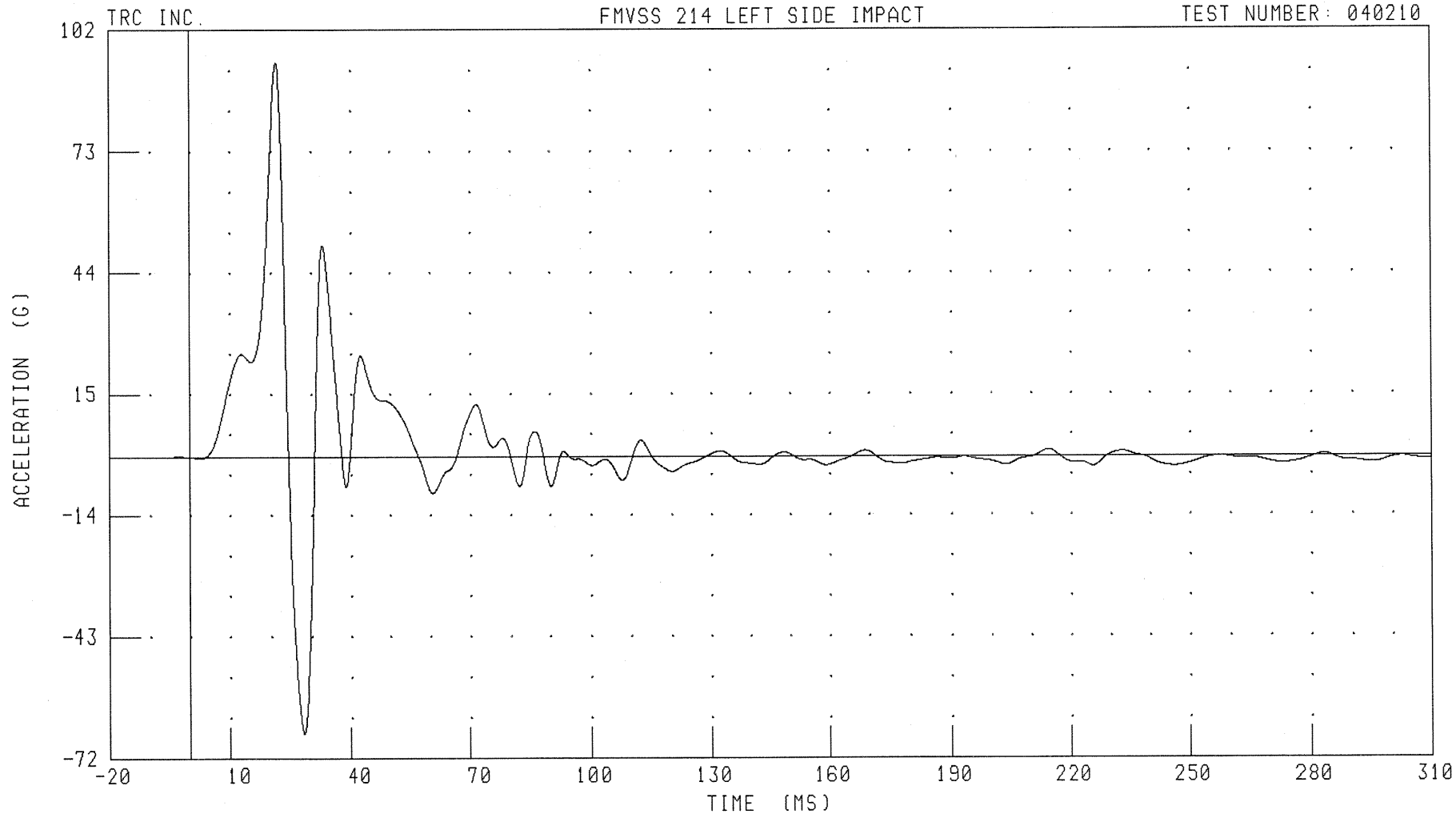
B-134

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGYG1

FILTER: CH. CLASS 60

PEAK DATA: 94.21 G @ 21.44 MS; -66.06 G @ 28.16 MS

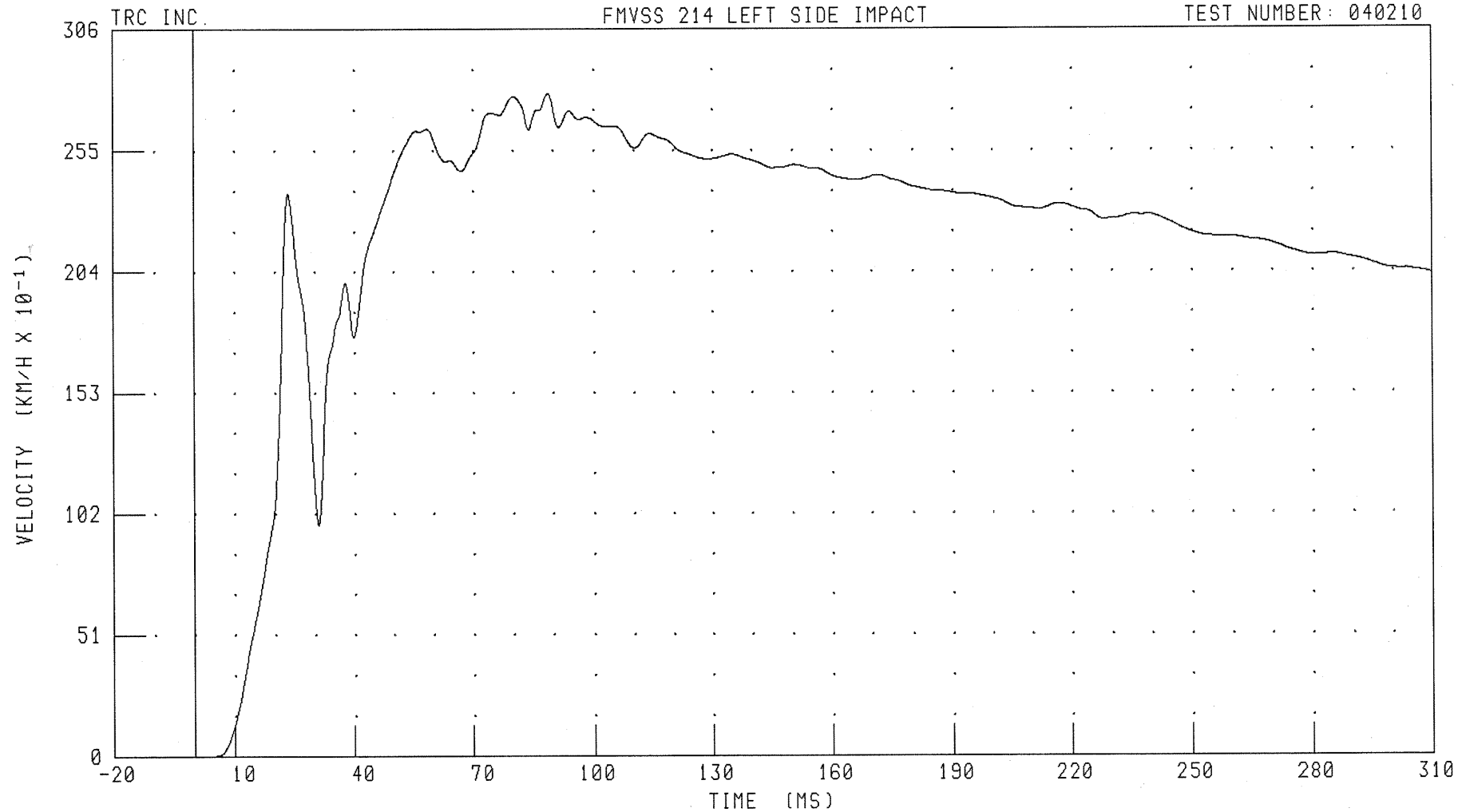
B-135

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGYV1 FILTER: CH. CLASS 180

PEAK DATA: 27.90 KM/H @ 88.88 MS; 0.00 KM/H @ 0.00 MS

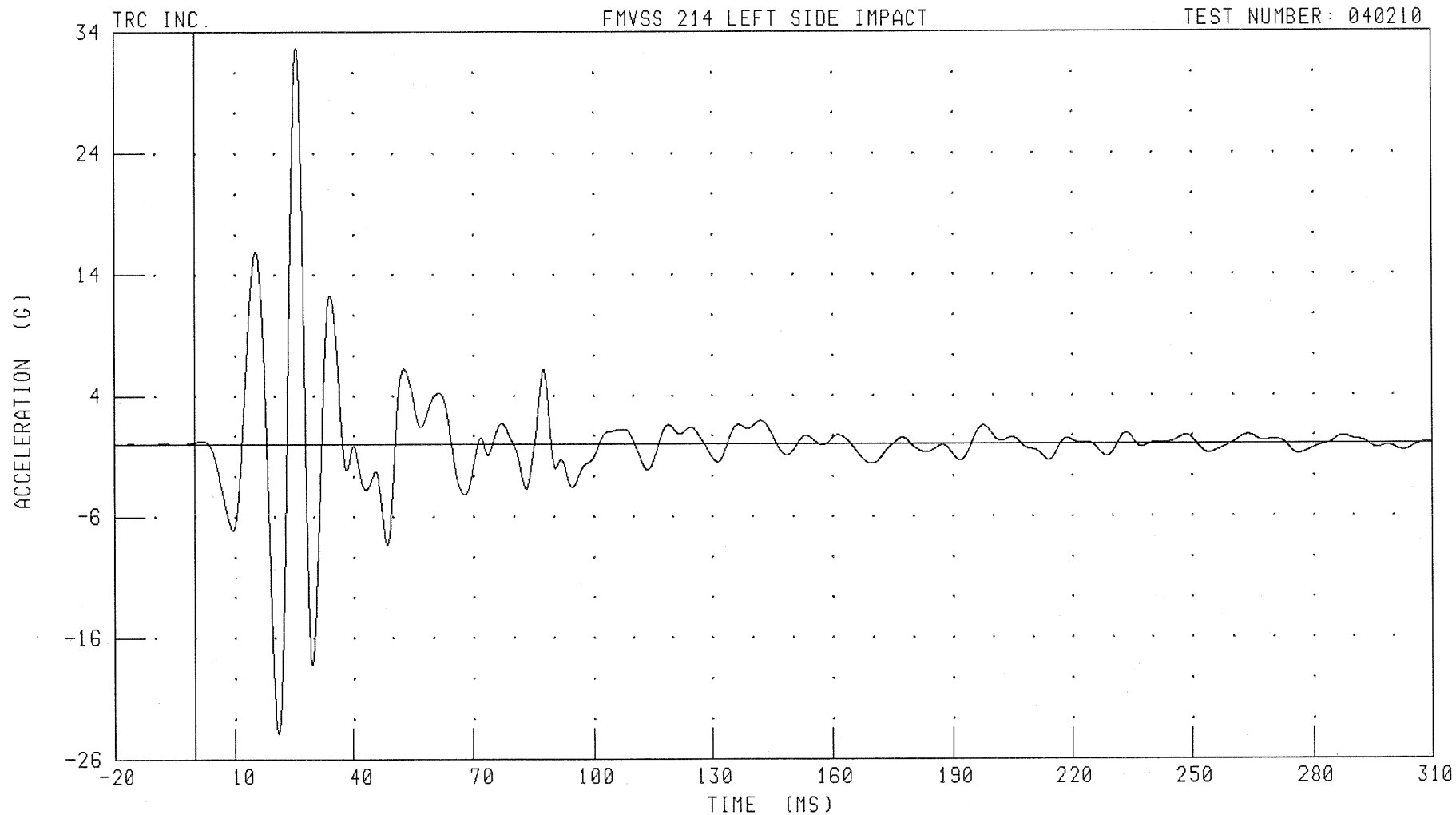
B-136

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGZG1 FILTER: CH. CLASS 60

PEAK DATA: 32.70 G @ 25.68 MS; -23.86 G @ 21.04 MS

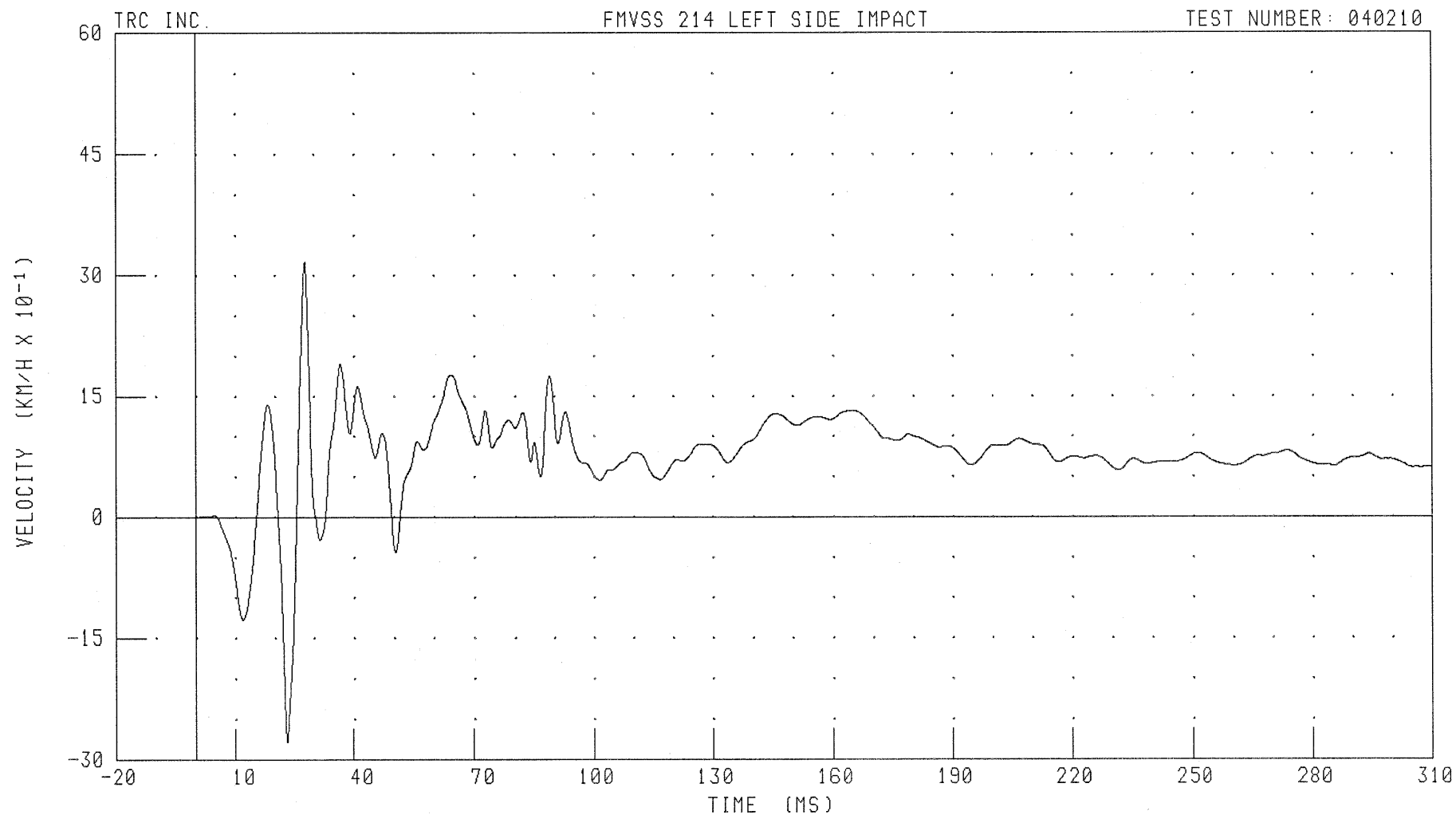
B-137

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGZV1 FILTER: CH. CLASS 180

PEAK DATA: 3.18 KM/H @ 27.84 MS; -2.79 KM/H @ 23.28 MS

B-138

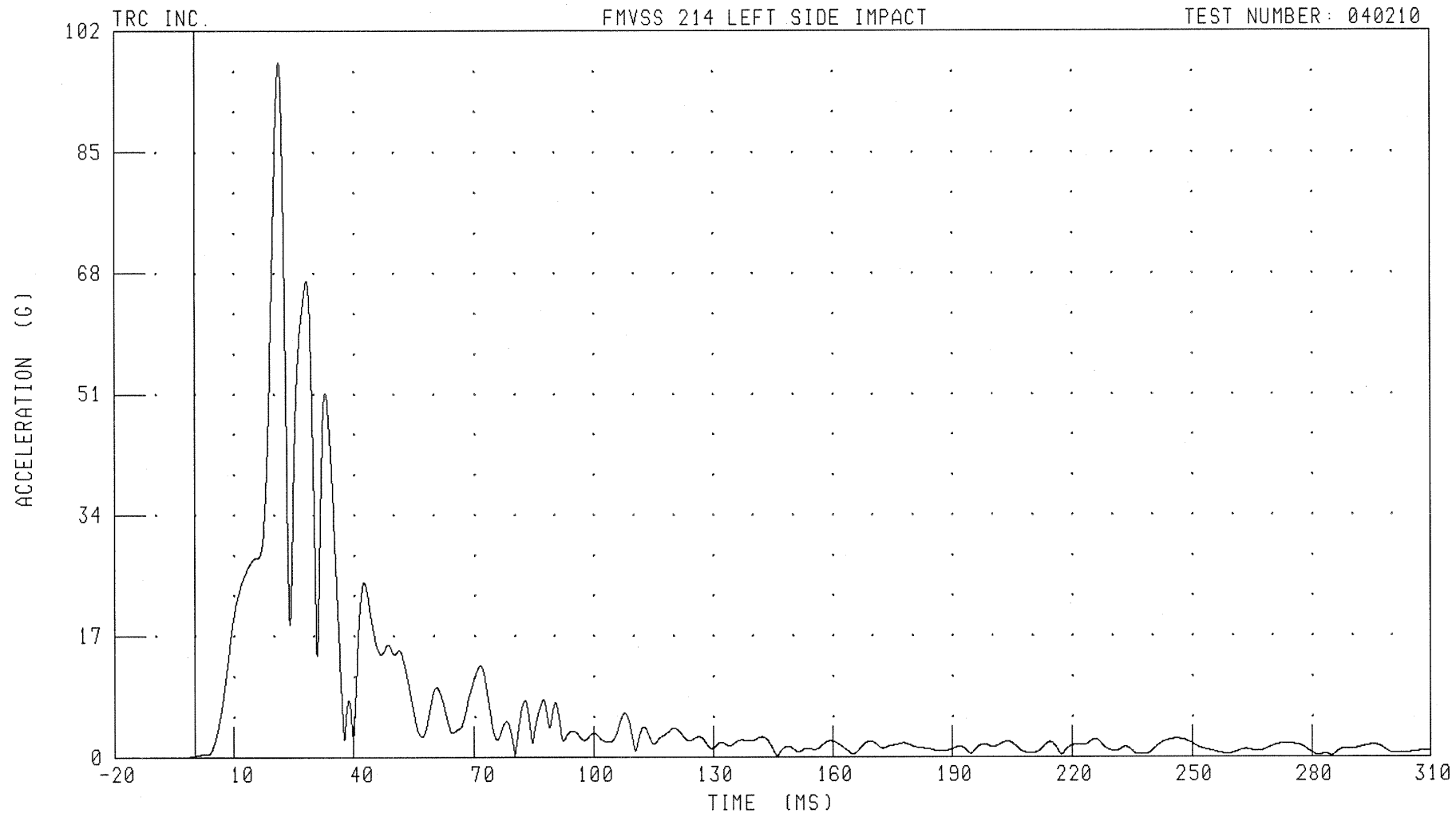
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: VCGRG1

FILTER: CH. CLASS 60

PEAK DATA: 97.54 G @ 21.36 MS; 0.01 G @ -14.16 MS

B-139

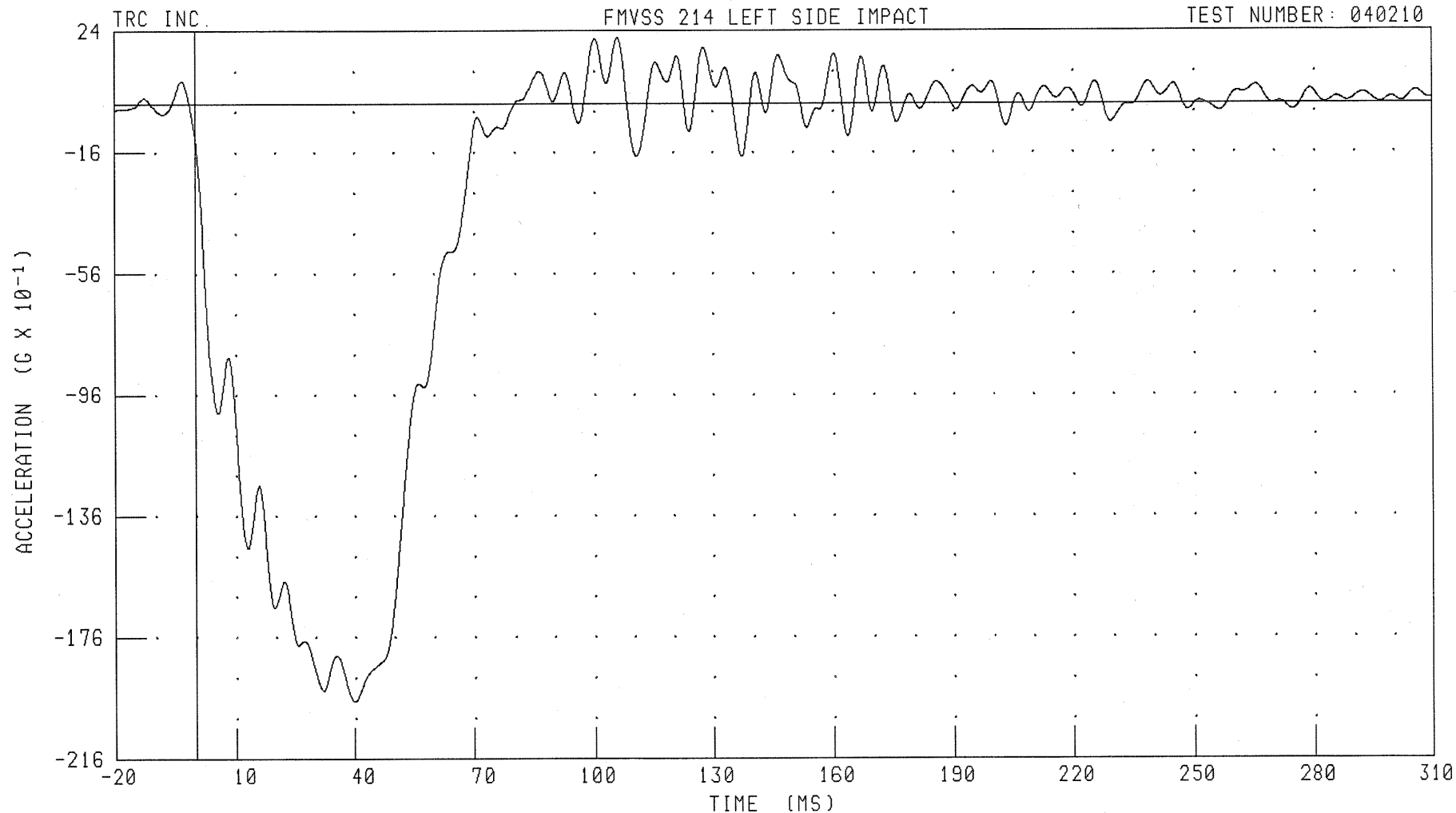
040210

MDB Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
MDB CENTER OF GRAVITY X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGXG1 FILTER: CH. CLASS 60

PEAK DATA: 2.18 G @ 106.00 MS, -19.72 G @ 40.00 MS

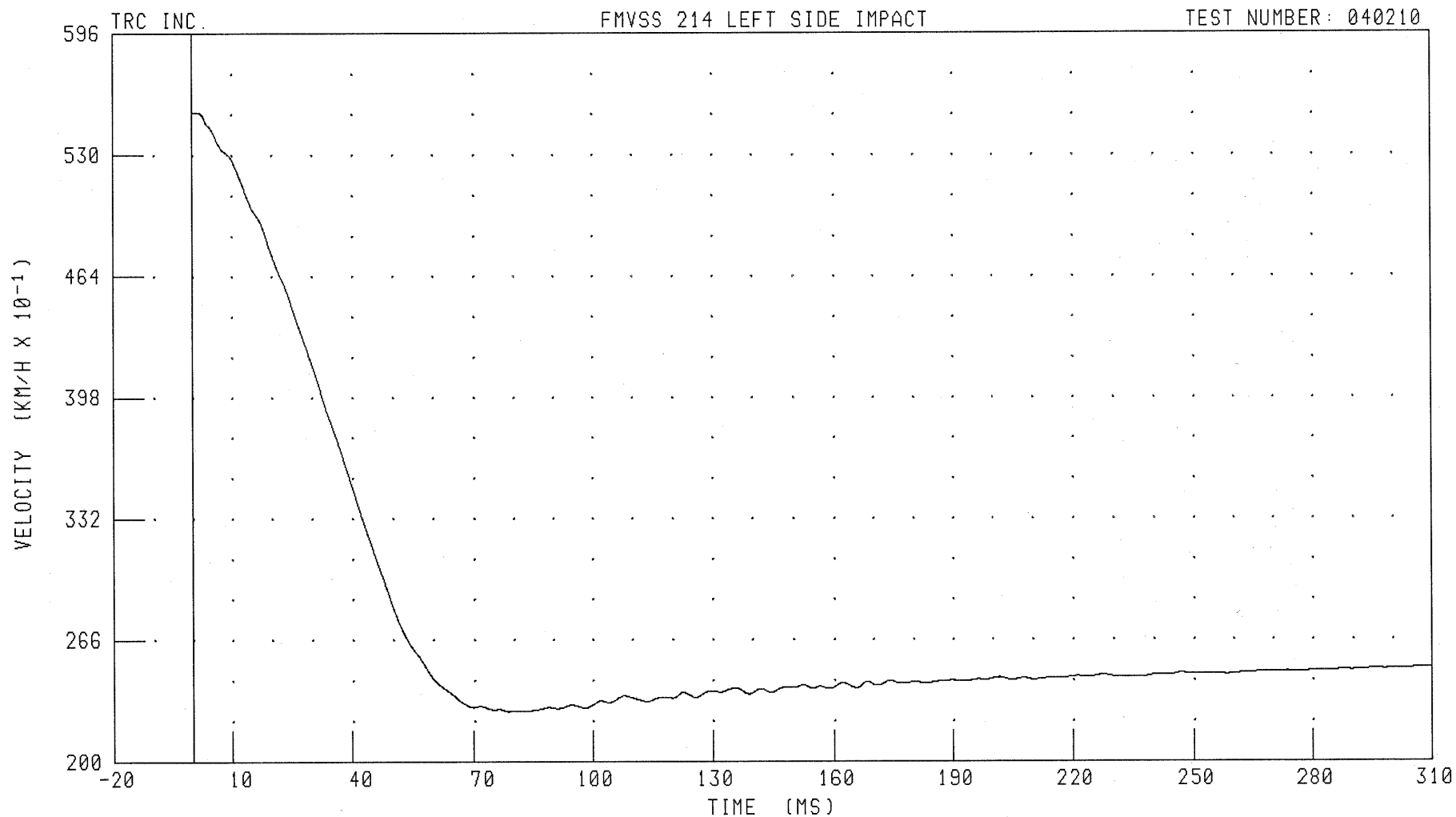
B-141

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
MDB CENTER OF GRAVITY X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGXV1 FILTER: CH. CLASS 180

PEAK DATA: 55.30 KM/H @ 1.44 MS; 22.70 KM/H @ 78.72 MS

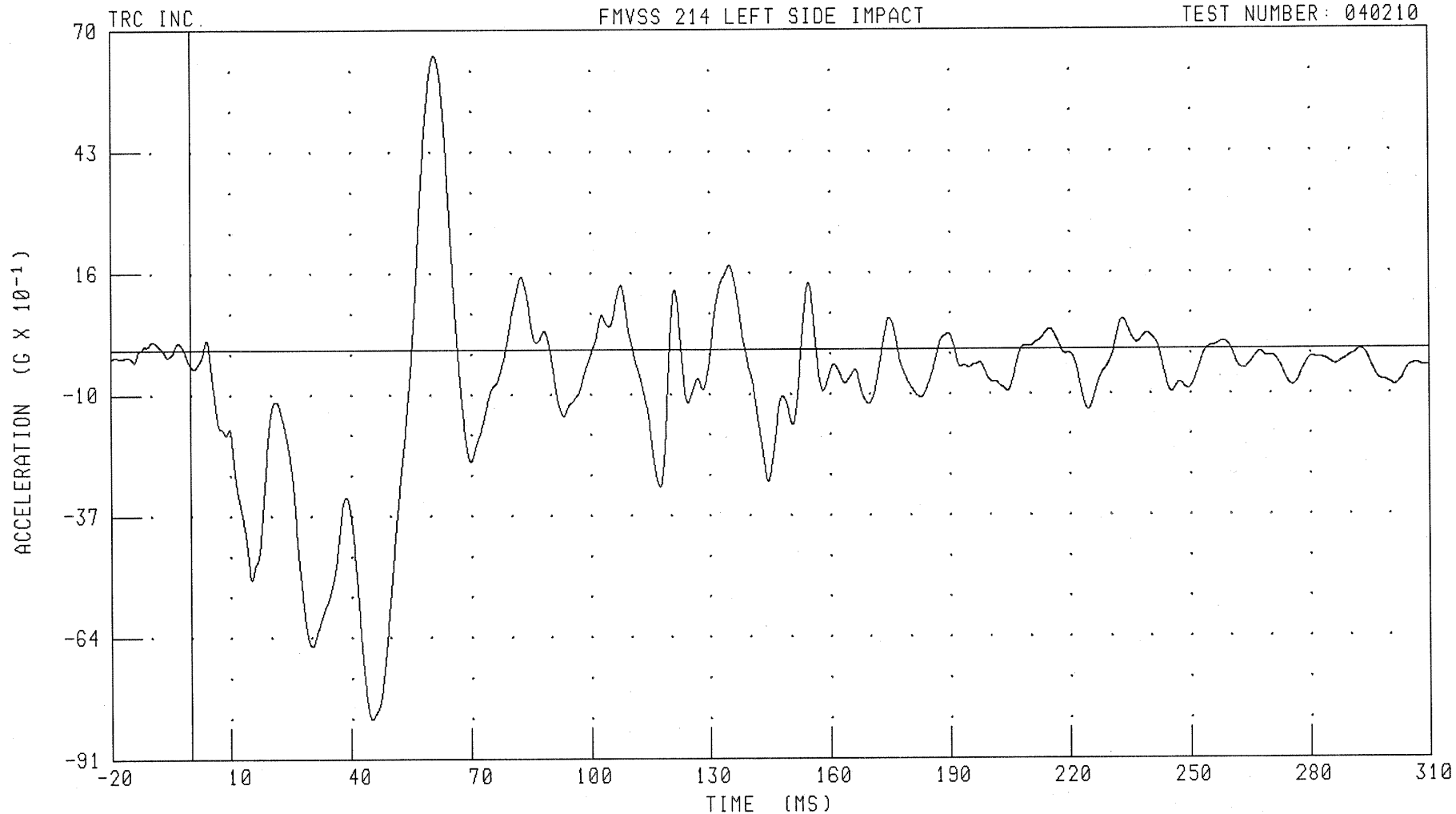
B-142

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
MDB CENTER OF GRAVITY Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGYG1

FILTER: CH. CLASS 60

PEAK DATA: 6.53 G @ 61.20 MS; -8.22 G @ 45.36 MS

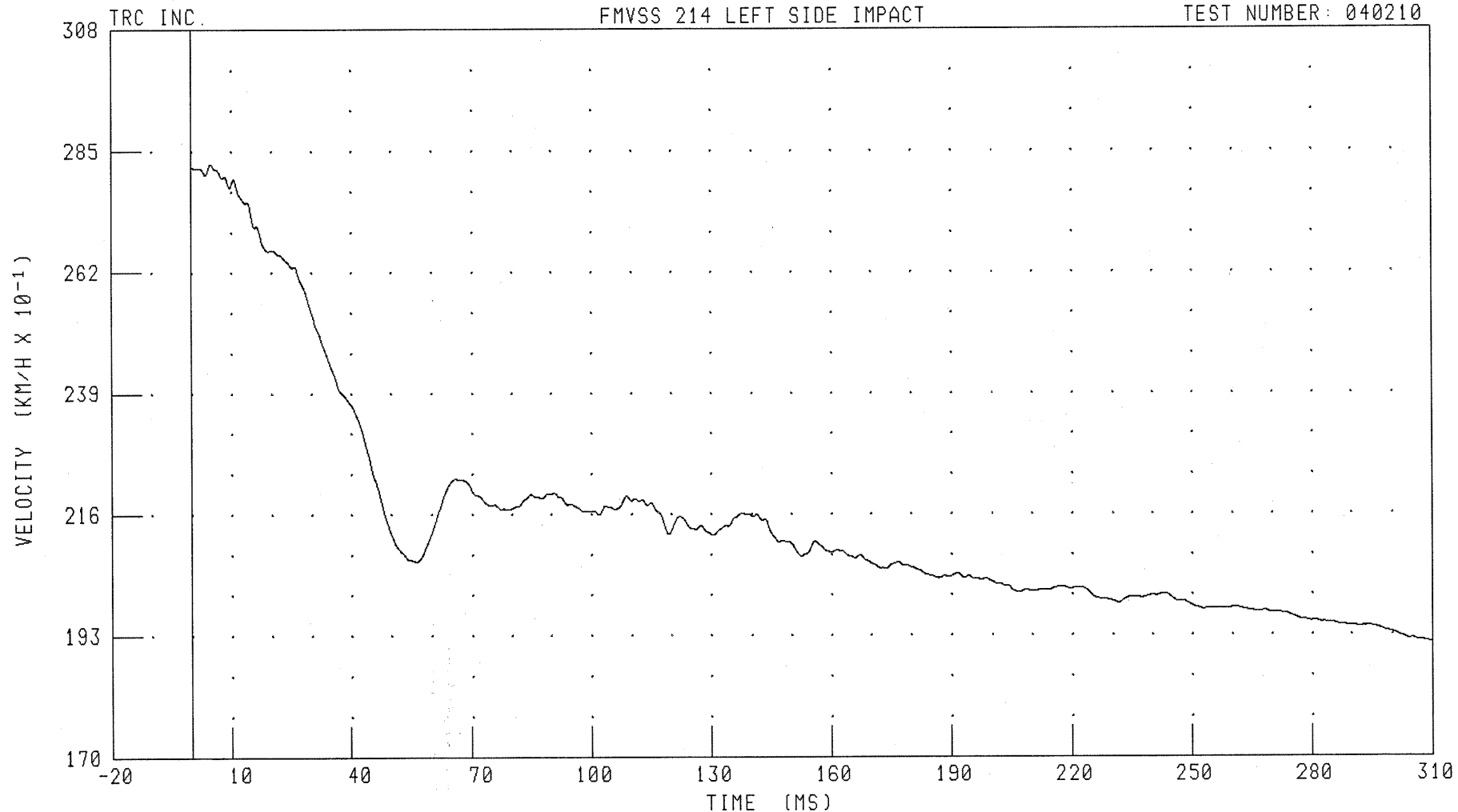
B-143

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
MDB CENTER OF GRAVITY Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGYV1 FILTER: CH. CLASS 180

PEAK DATA: 28.26 KM/H @ 4.96 MS; 19.16 KM/H @ 310.00 MS

B-144

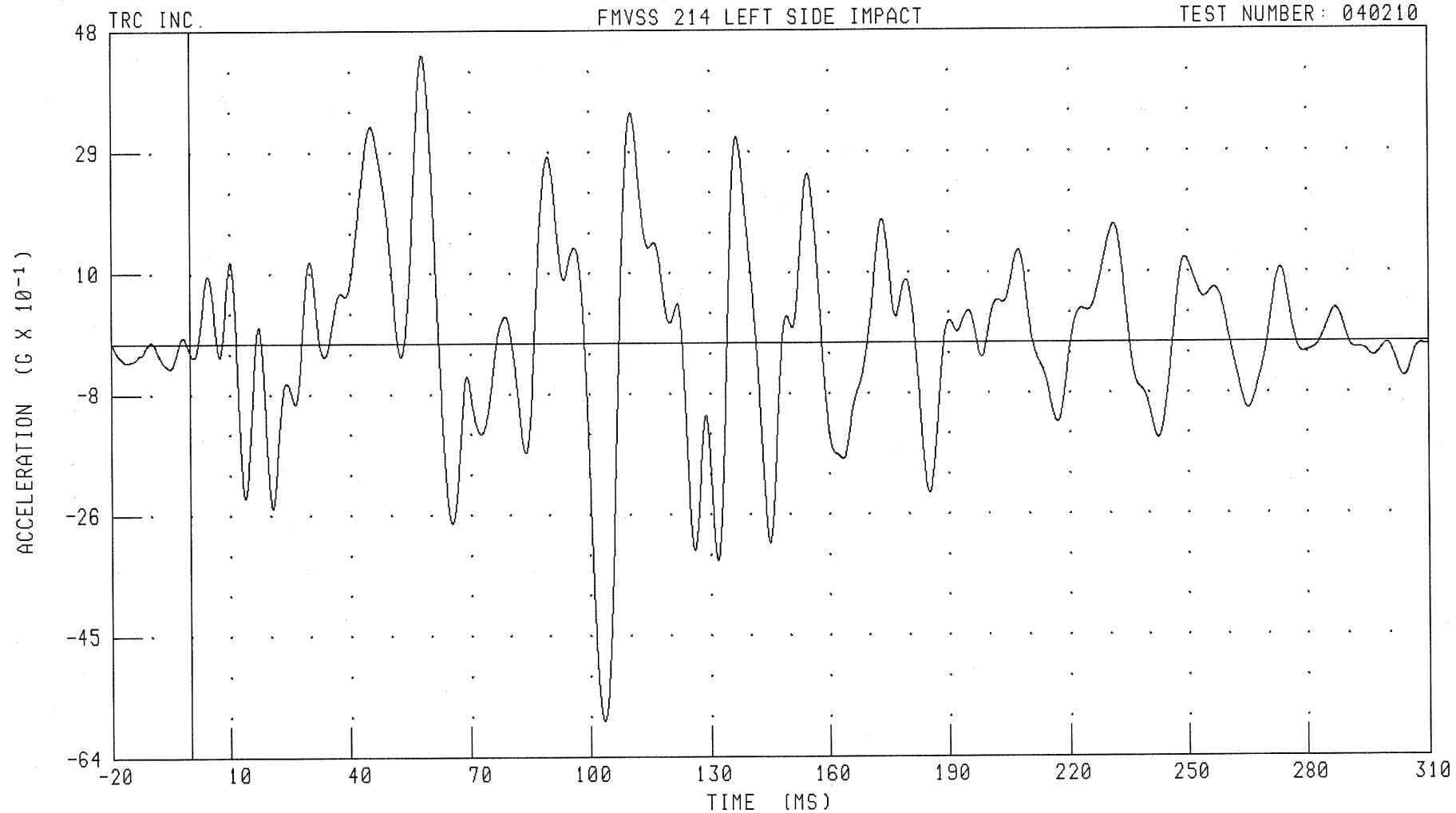
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB CENTER OF GRAVITY Z-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGZG1

FILTER: CH. CLASS 60

PEAK DATA: 4.52 G @ 58.16 MS; -5.94 G @ 103.60 MS

B-145

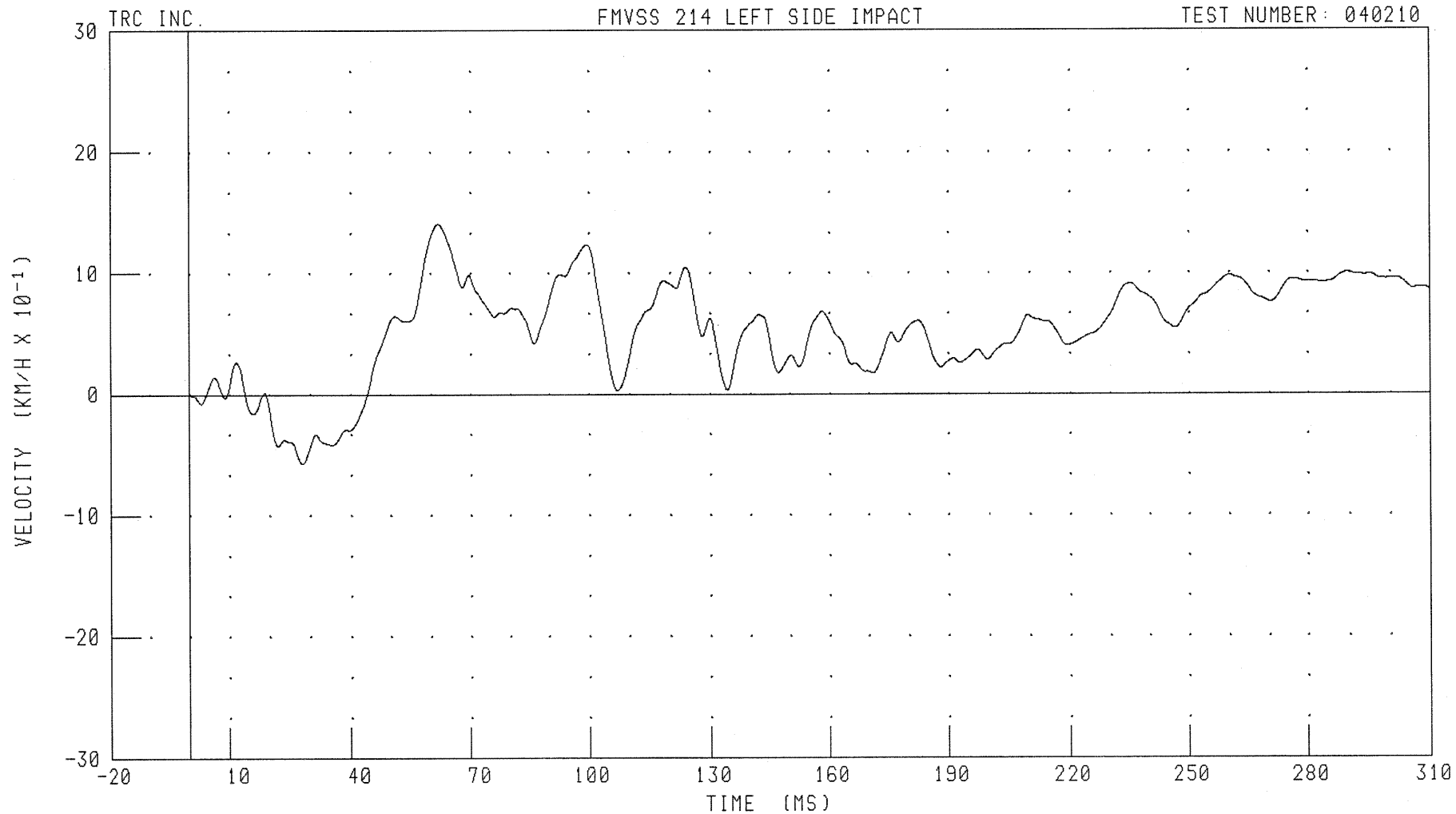
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB CENTER OF GRAVITY Z-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGZV1 FILTER: CH. CLASS 180

PEAK DATA: 1.41 KM/H @ 62.00 MS; -0.57 KM/H @ 28.24 MS

B-146

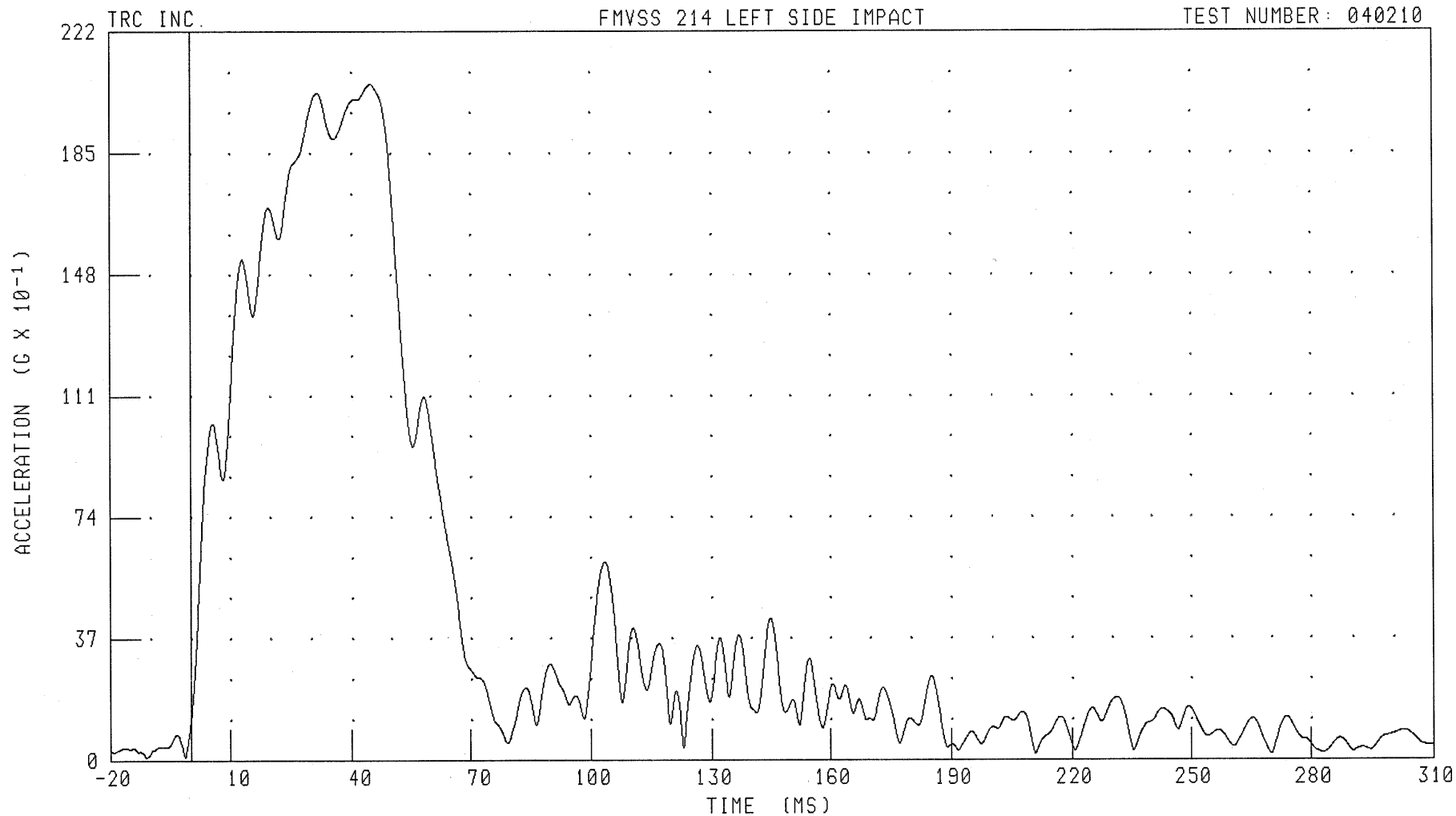
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB CENTER OF GRAVITY RESULTANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: BCGRG1

FILTER: CH. CLASS 60

PEAK DATA: 20.62 G @ 45.04 MS; 0.09 G @ -1.44 MS

B-147

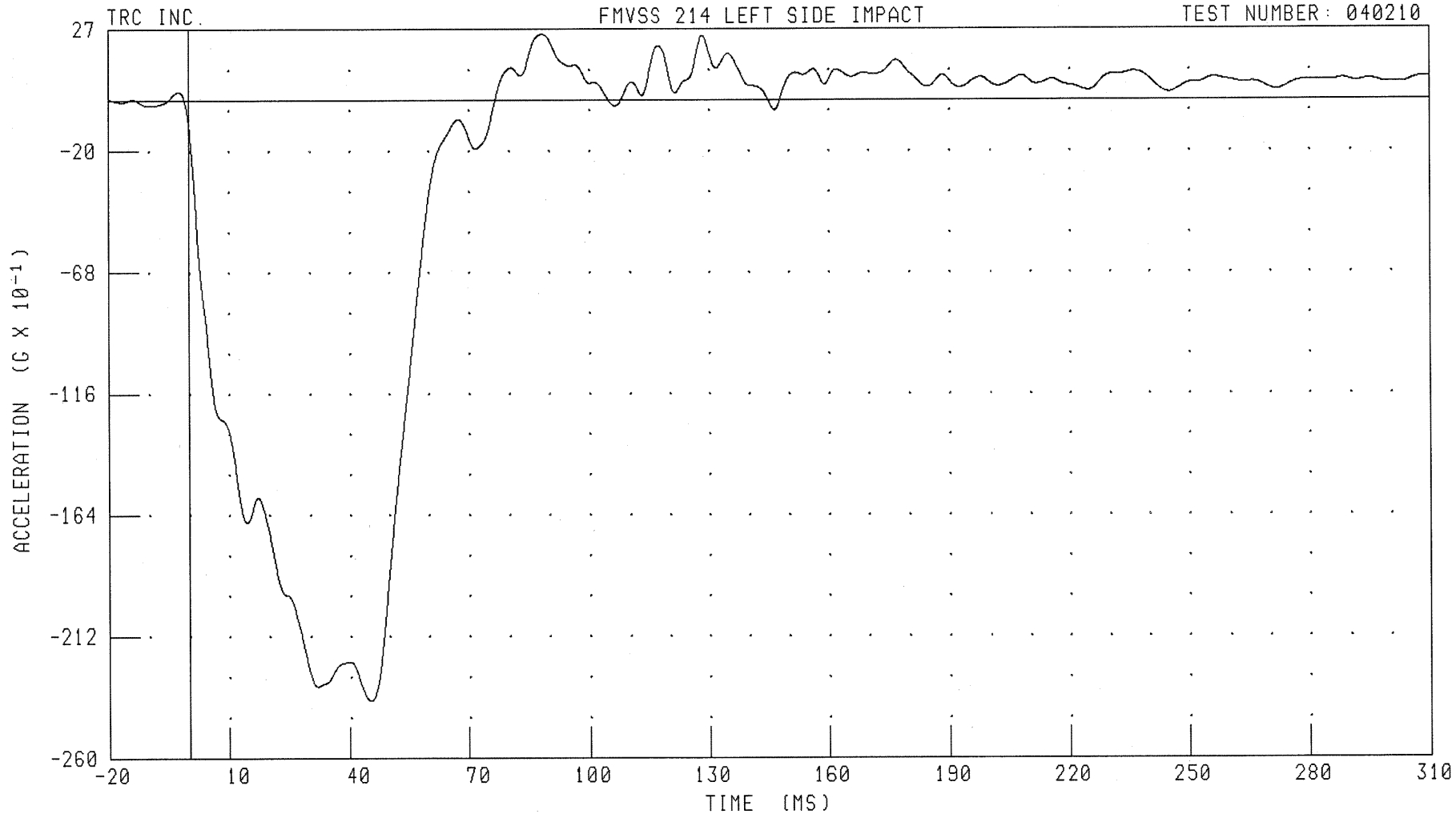
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MOB LEFT REAR X-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRRXG1

FILTER: CH. CLASS 60

PEAK DATA: 2.59 G @ 88.40 MS; -23.74 G @ 45.20 MS

B-148

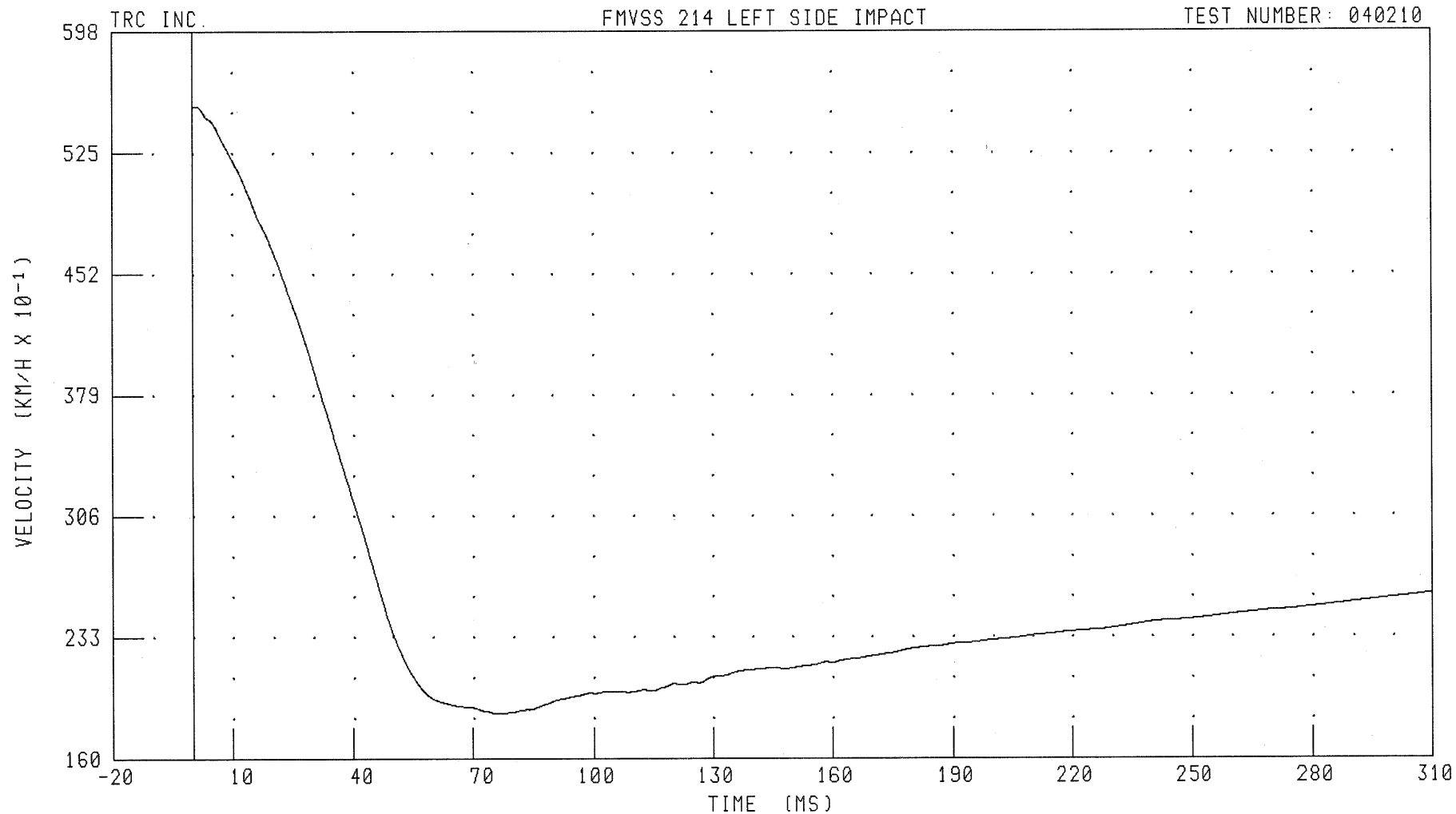
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB LEFT REAR X-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRRXV1 FILTER: CH. CLASS 180

PEAK DATA: 55.32 KM/H @ 0.96 MS; 18.68 KM/H @ 76.00 MS

B-149

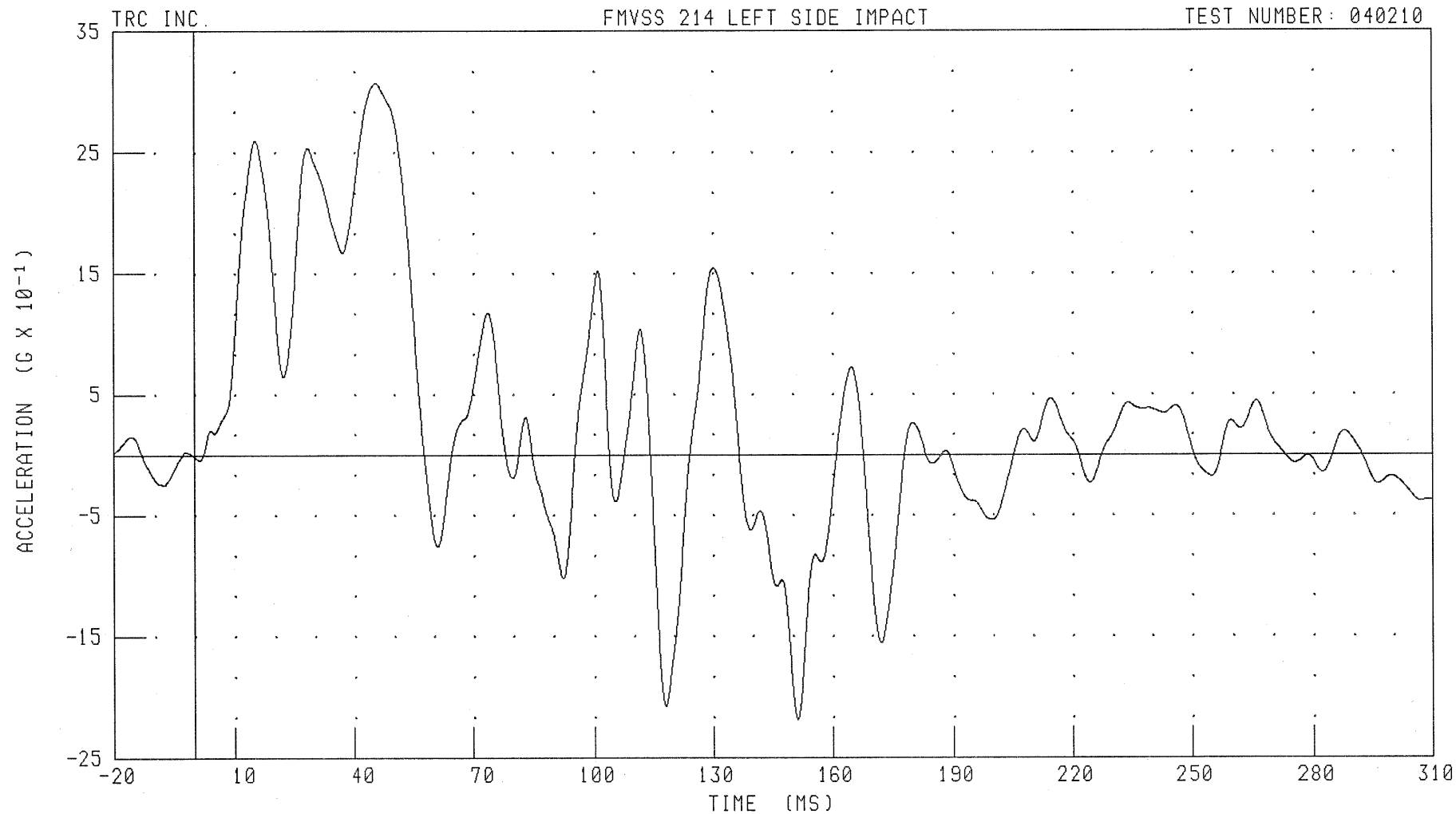
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB LEFT REAR Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRRYG1

FILTER: CH. CLASS 60

PEAK DATA: 3.07 G @ 45.52 MS; -2.19 G @ 151.28 MS

B-150

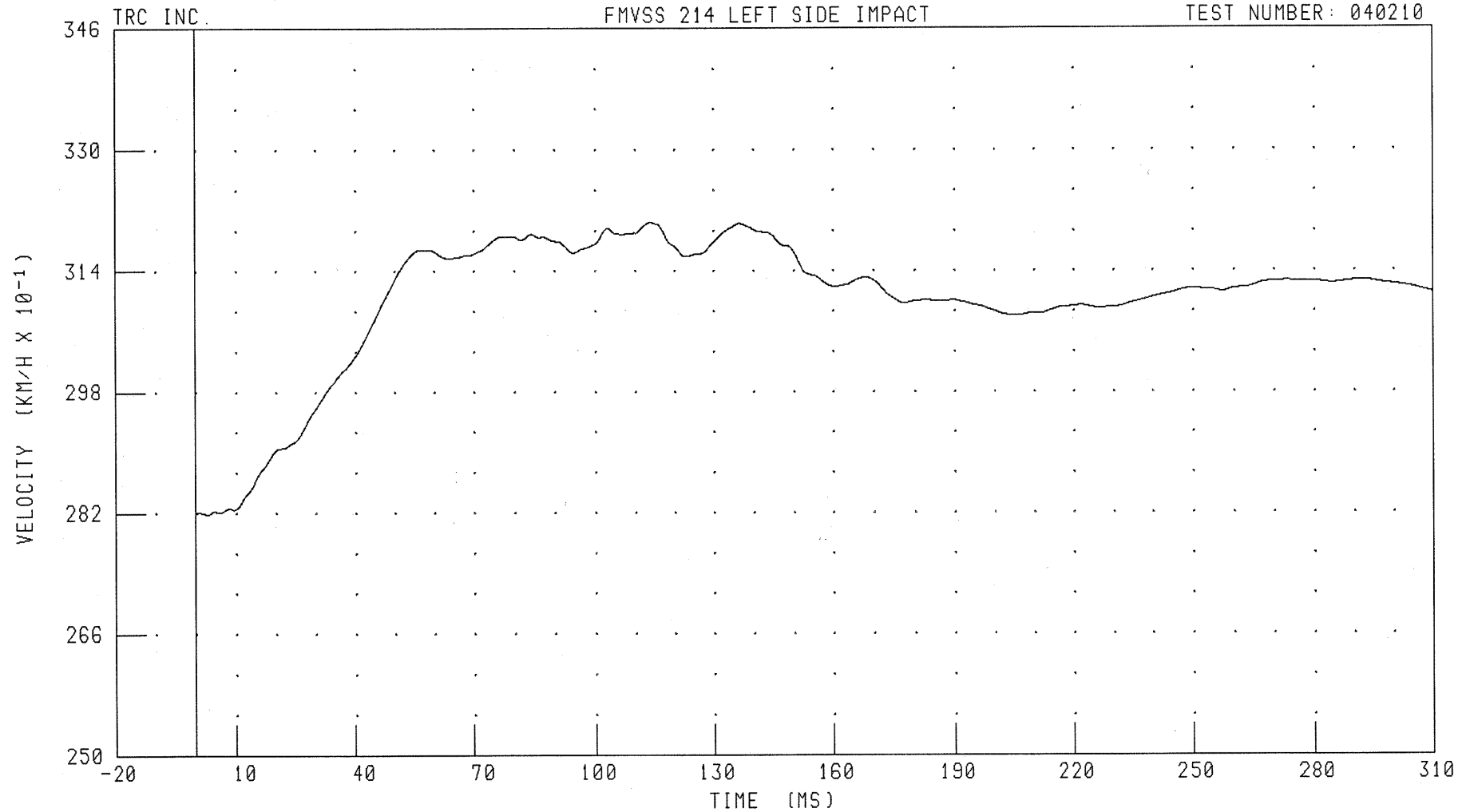
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB LEFT REAR Y-AXIS VELOCITY

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LRRYV1 FILTER: CH. CLASS 180

PEAK DATA: 32.04 KM/H @ 114.00 MS; 28.18 KM/H @ 2.88 MS

B-151

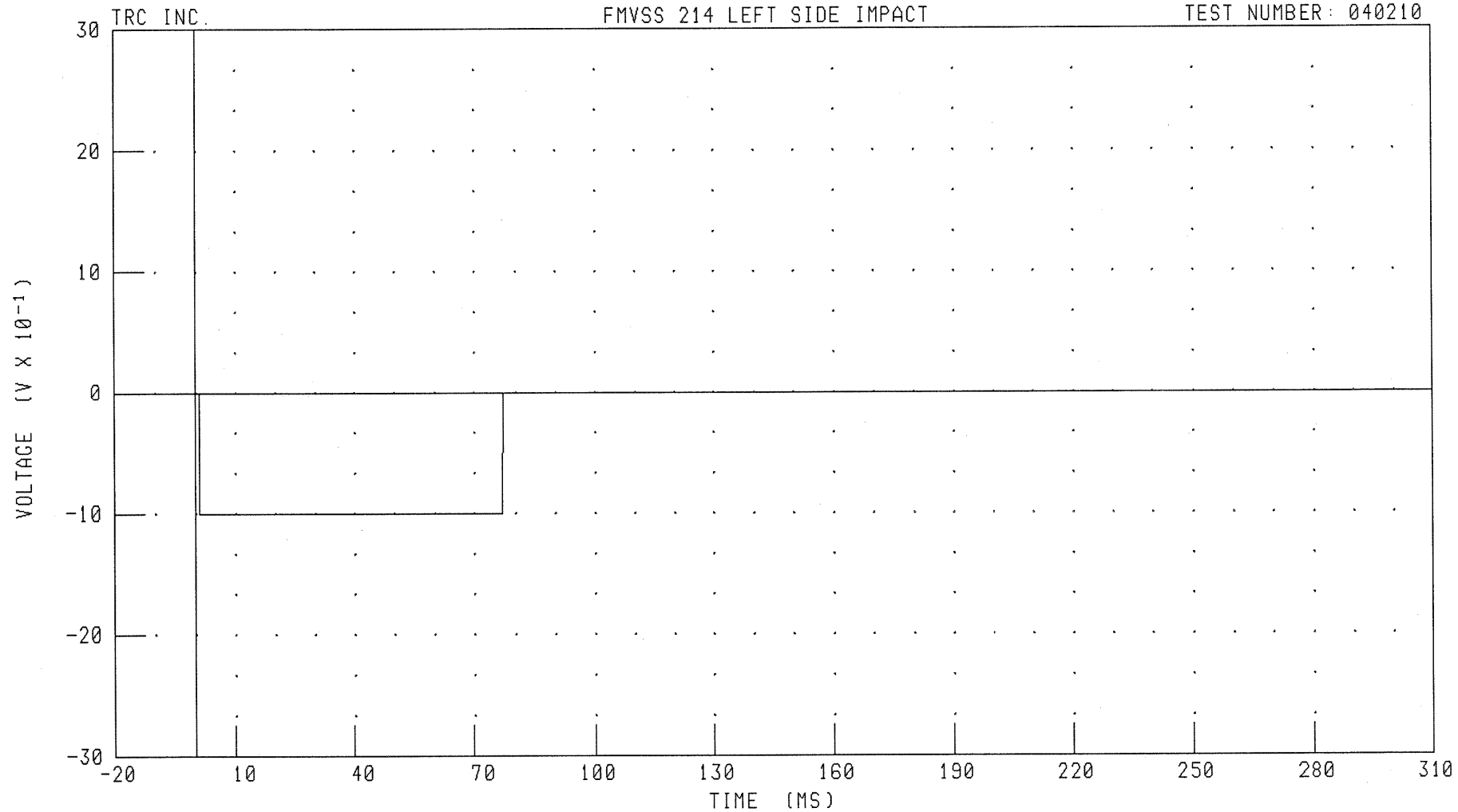
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB RIGHT SIDE CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: MDBR1

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; -1.00 V @ 1.04 MS

B-152

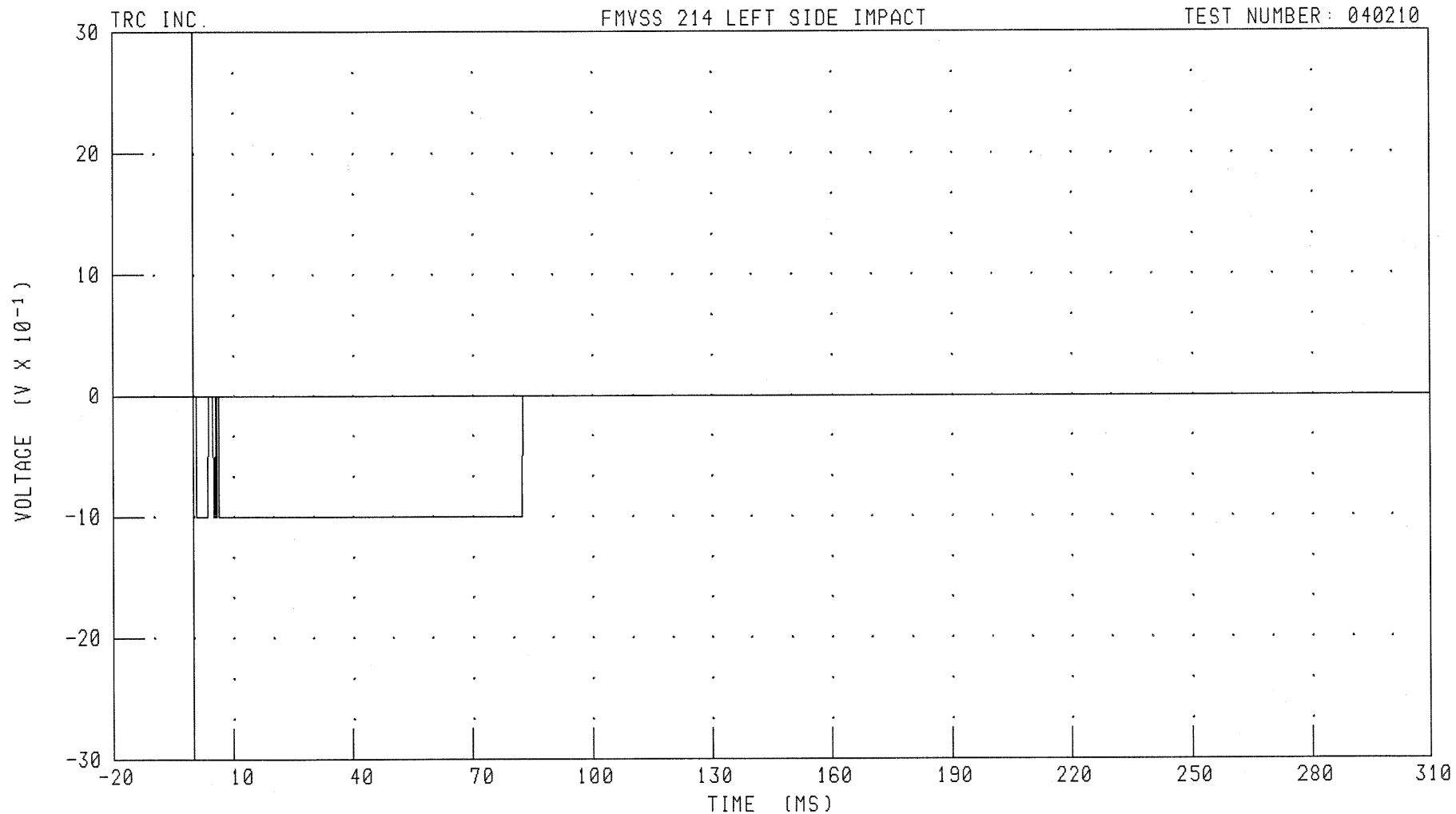
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

MDB LEFT SIDE CONTACT SWITCH

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: MDBL1

FILTER: CH. CLASS 1000

PEAK DATA: 0.00 V @ 310.00 MS; -1.00 V @ 0.80 MS

B-153

040210

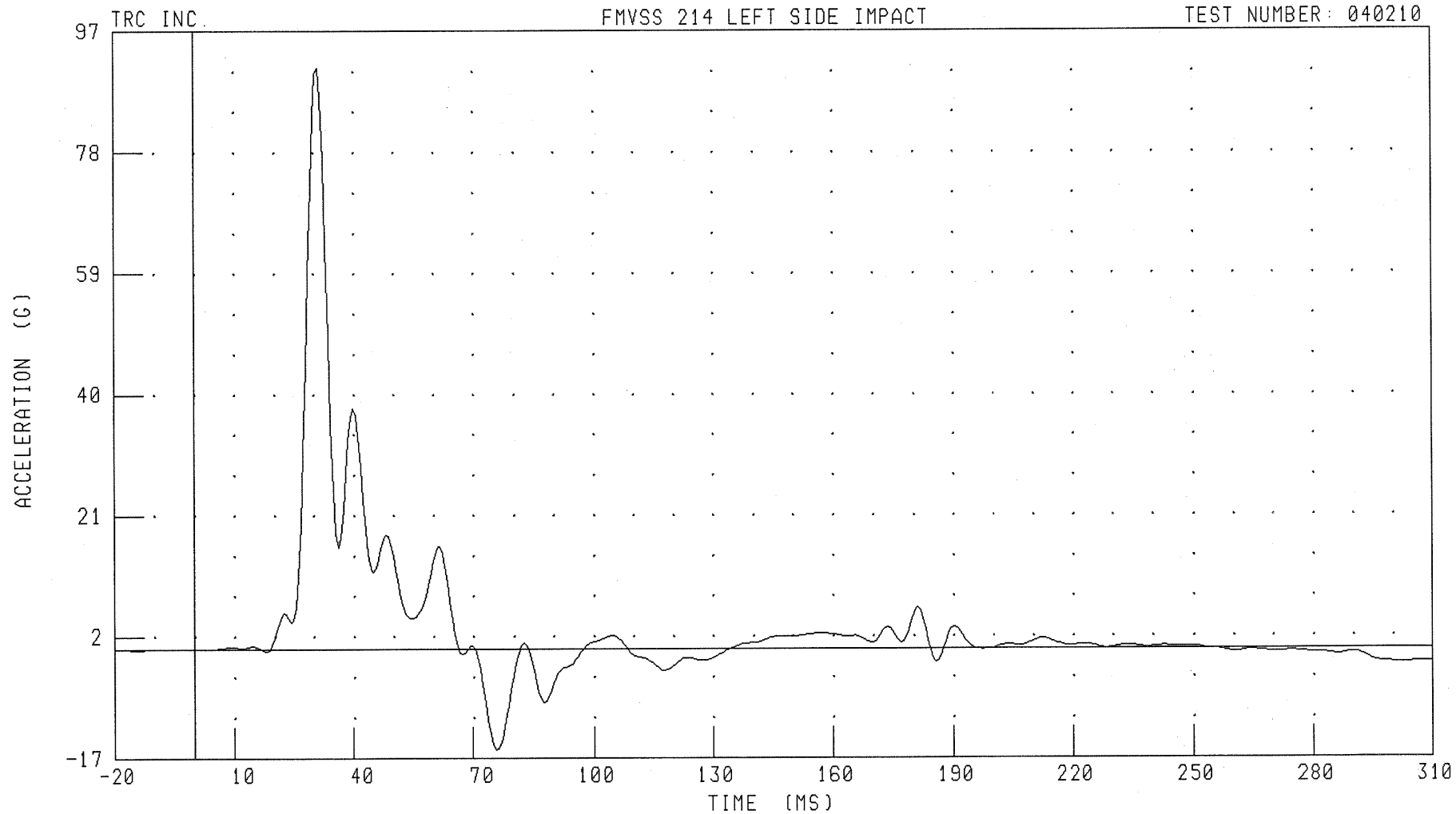
Driver and Passenger Dummy Instrumentation Plots

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYG1 FILTER: FIR 100

PEAK DATA: 91.20 G @ 31.25 MS; -15.70 G @ 75.62 MS

B-155

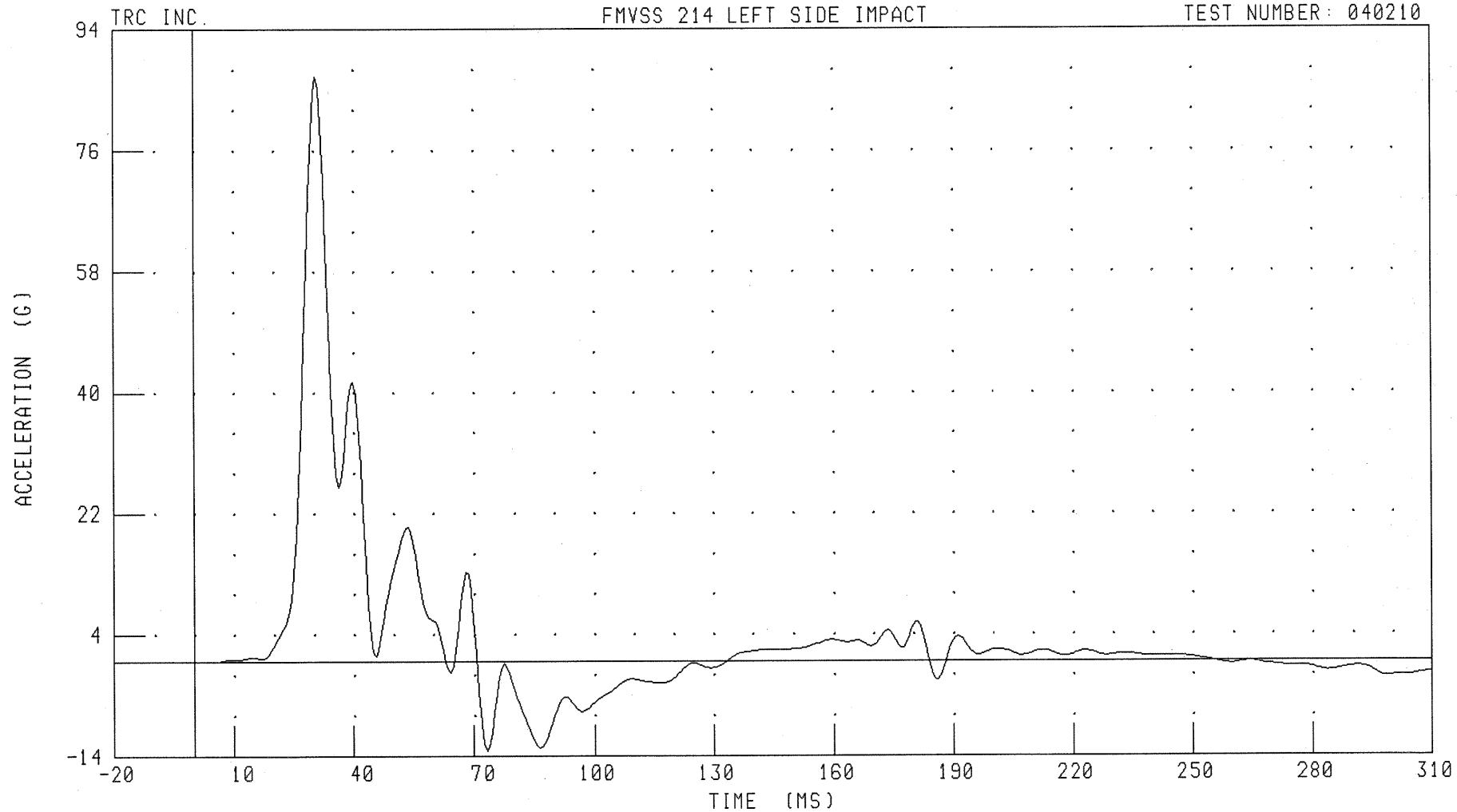
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYG1 FILTER: FIR 100

PEAK DATA: 87.05 G @ 30.62 MS; -13.31 G @ 73.13 MS

B-156

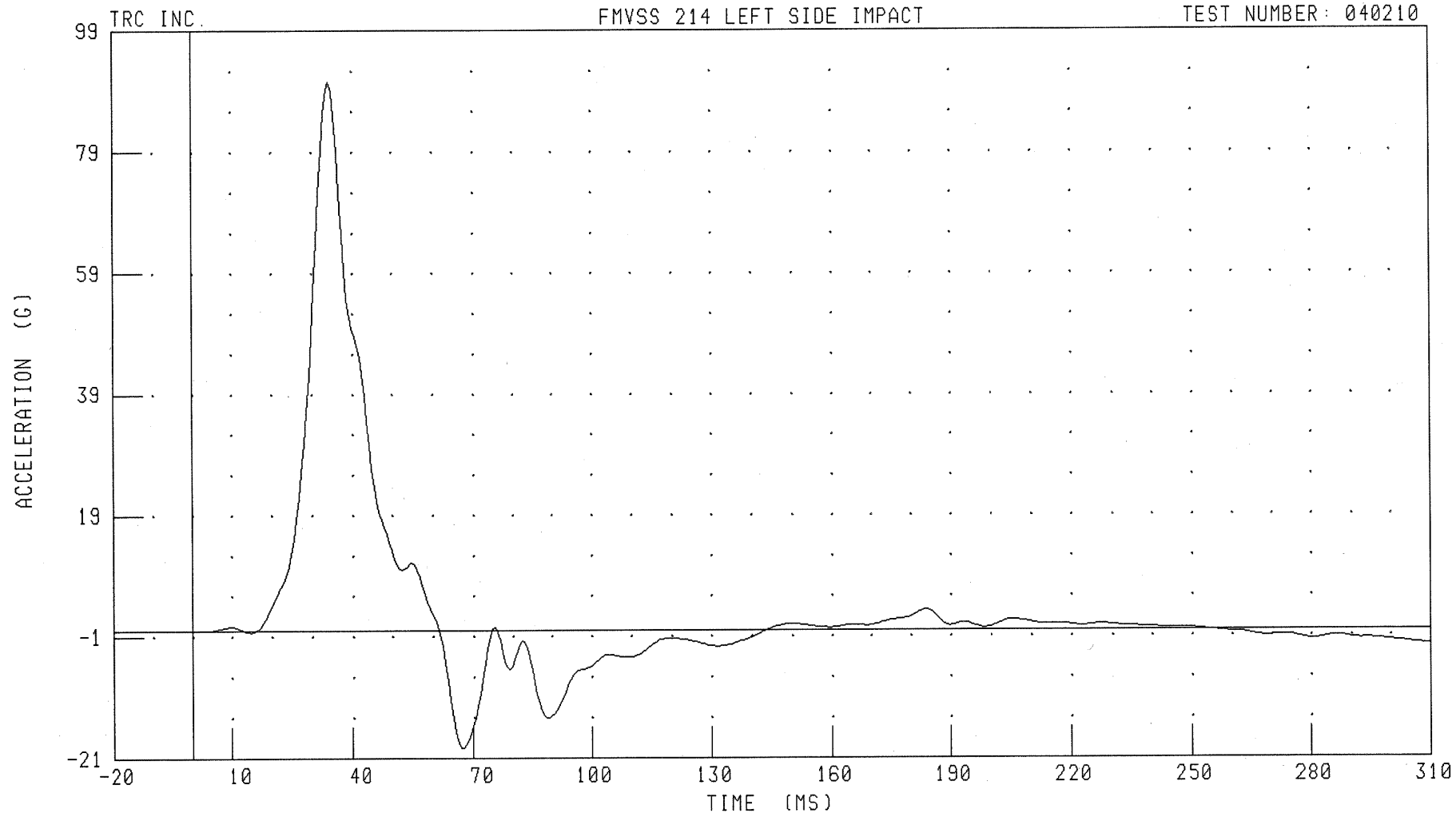
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YG1 FILTER: FIR 100

PEAK DATA: 90.63 G @ 34.38 MS; -19.33 G @ 67.50 MS

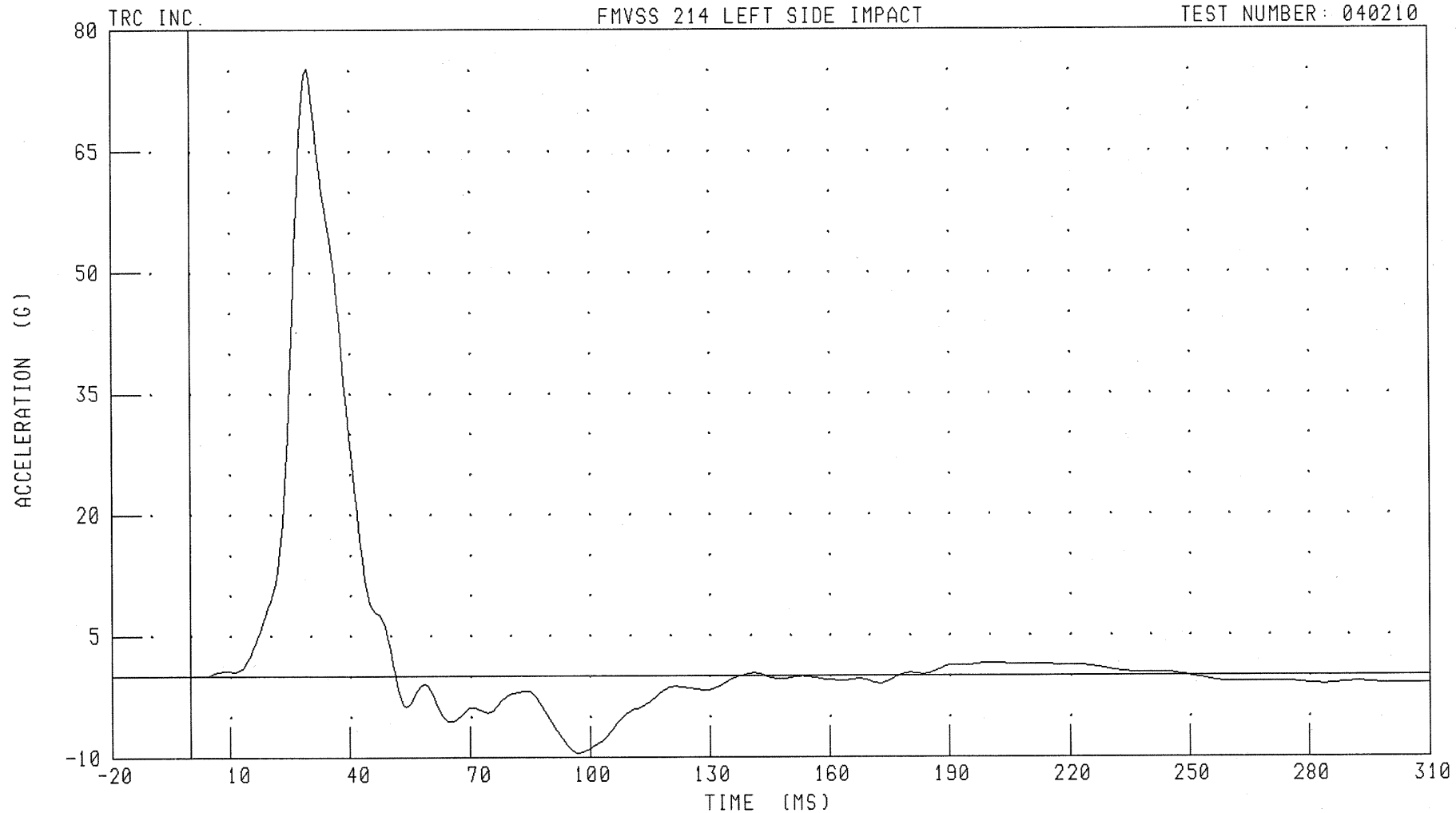
B-157

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYG1

FILTER: FIR 100

PEAK DATA: 75.16 G @ 29.38 MS; -9.46 G @ 97.50 MS

B-158

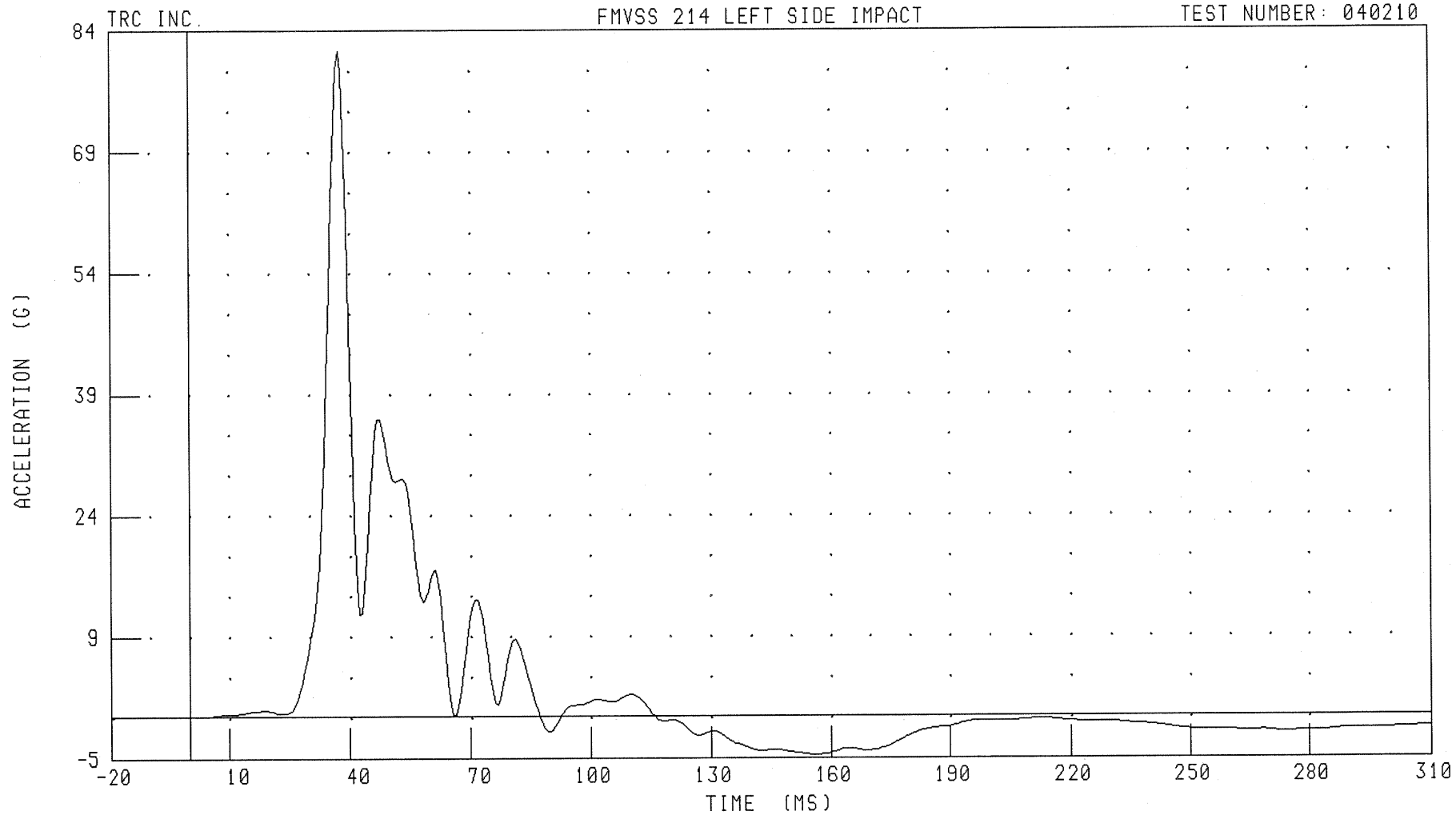
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYG4 FILTER: FIR 100

PEAK DATA: 82.28 G @ 37.50 MS; -4.80 G @ 156.25 MS

B-159

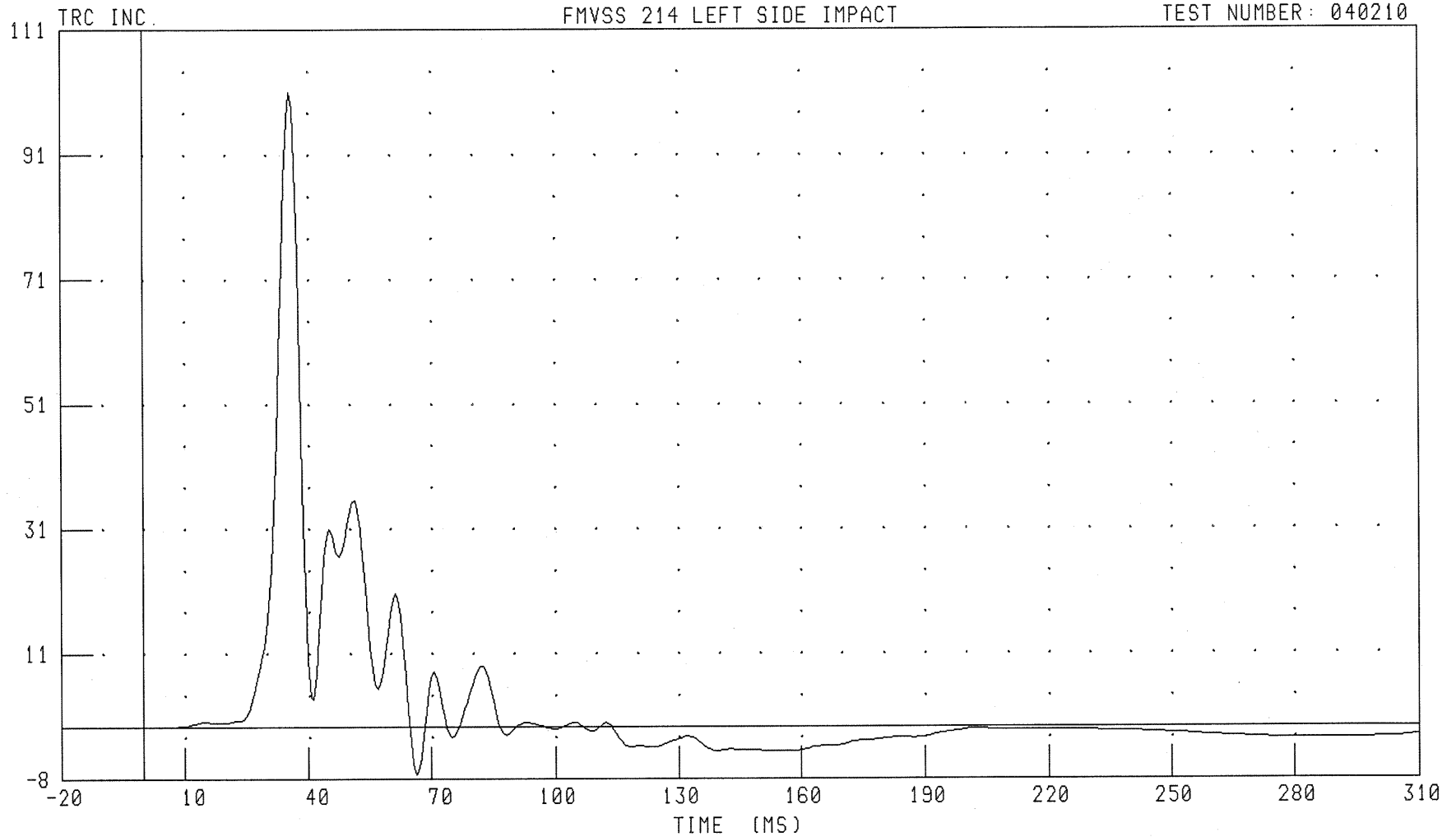
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYG4 FILTER: FIR 100

PEAK DATA: 101.72 G @ 35.63 MS; -7.59 G @ 66.25 MS

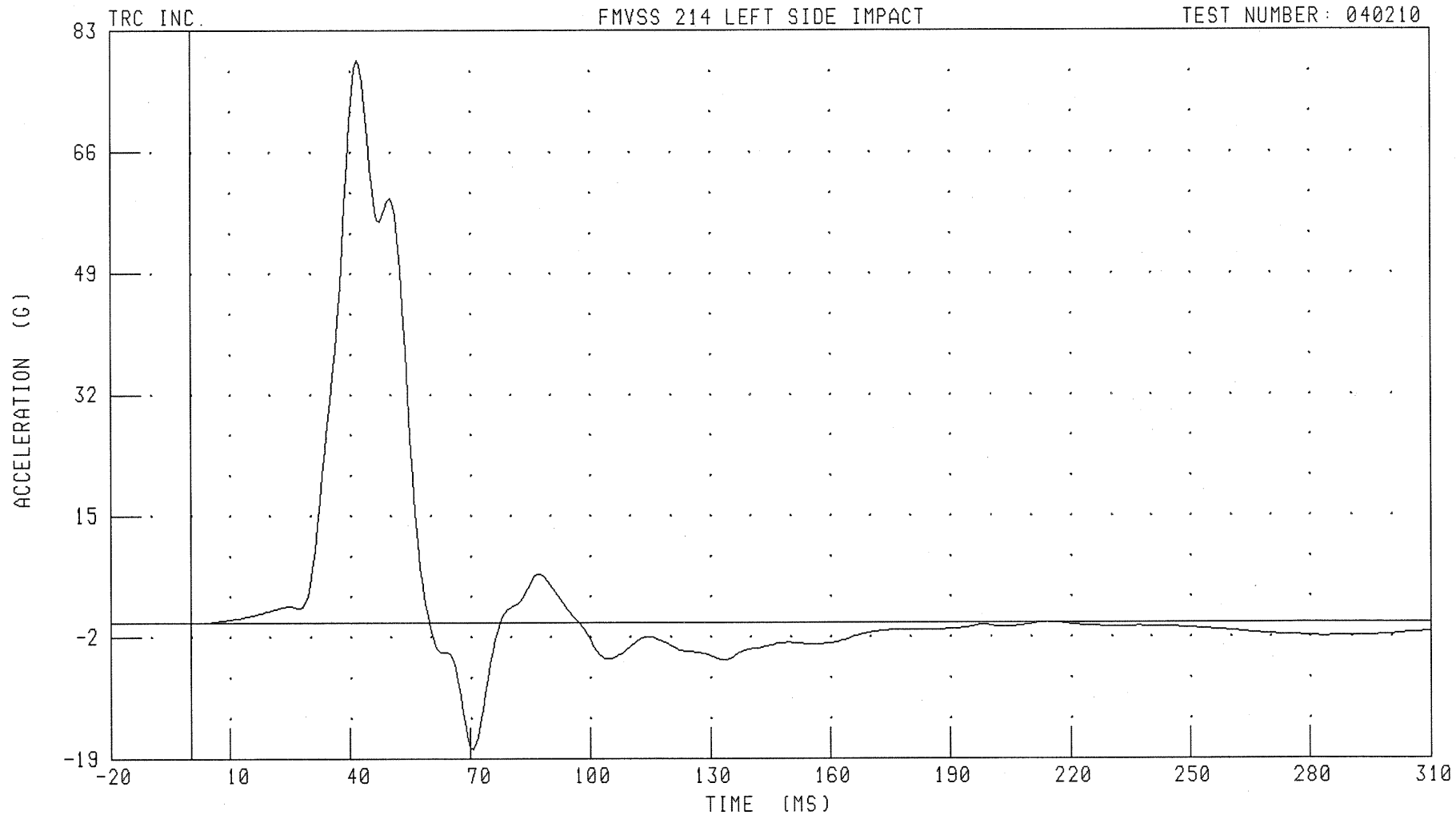
B-160

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YG4 FILTER: FIR 100

PEAK DATA: 78.85 G @ 41.87 MS; -17.72 G @ 70.63 MS

B-161

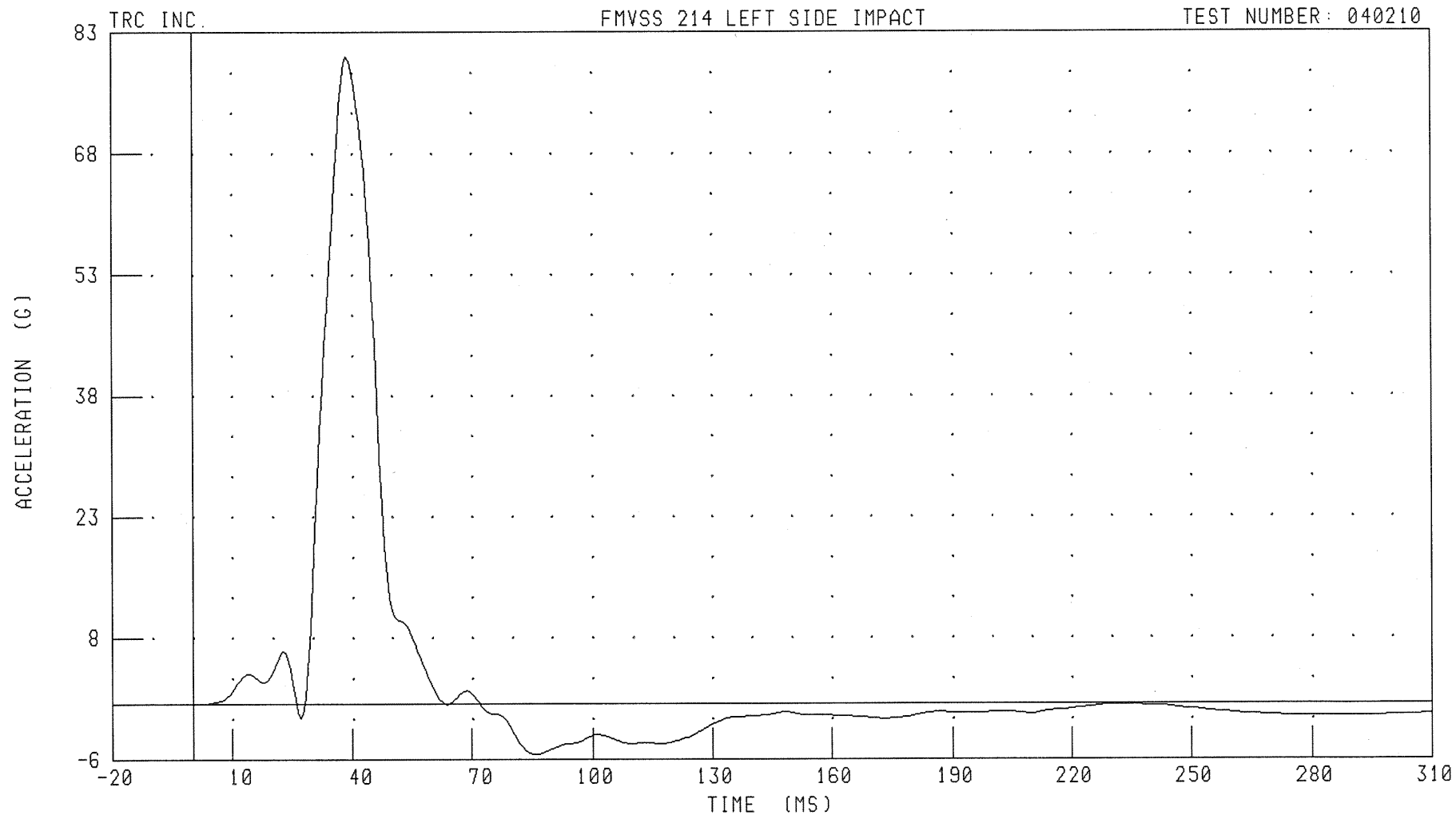
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYG4 FILTER: FIR 100

PEAK DATA: 80.16 G @ 38.75 MS; -6.21 G @ 85.63 MS

B-162

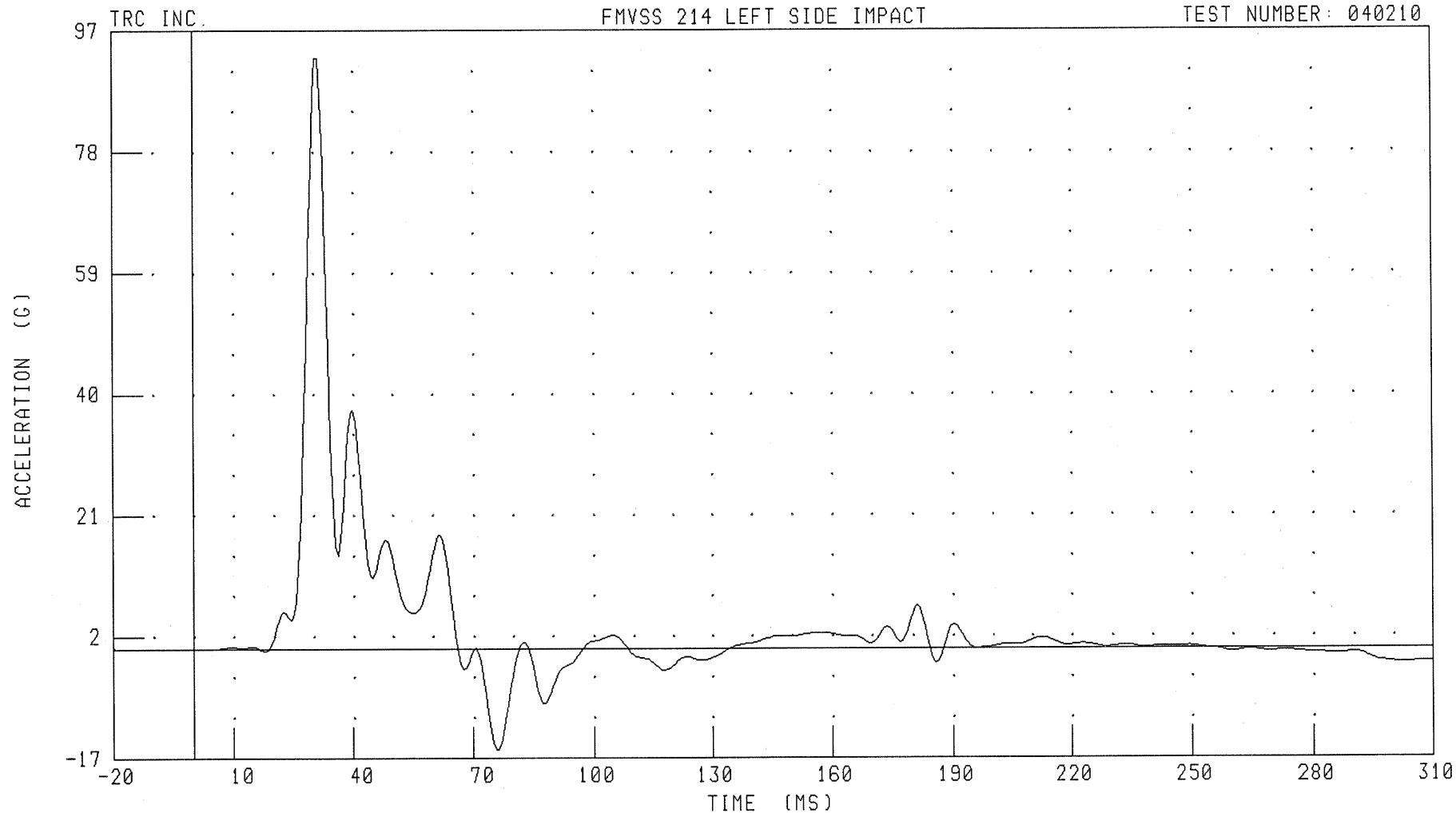
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYR1

FILTER: FIR 100

PEAK DATA: 92.69 G @ 30.62 MS; -15.72 G @ 76.25 MS

B-163

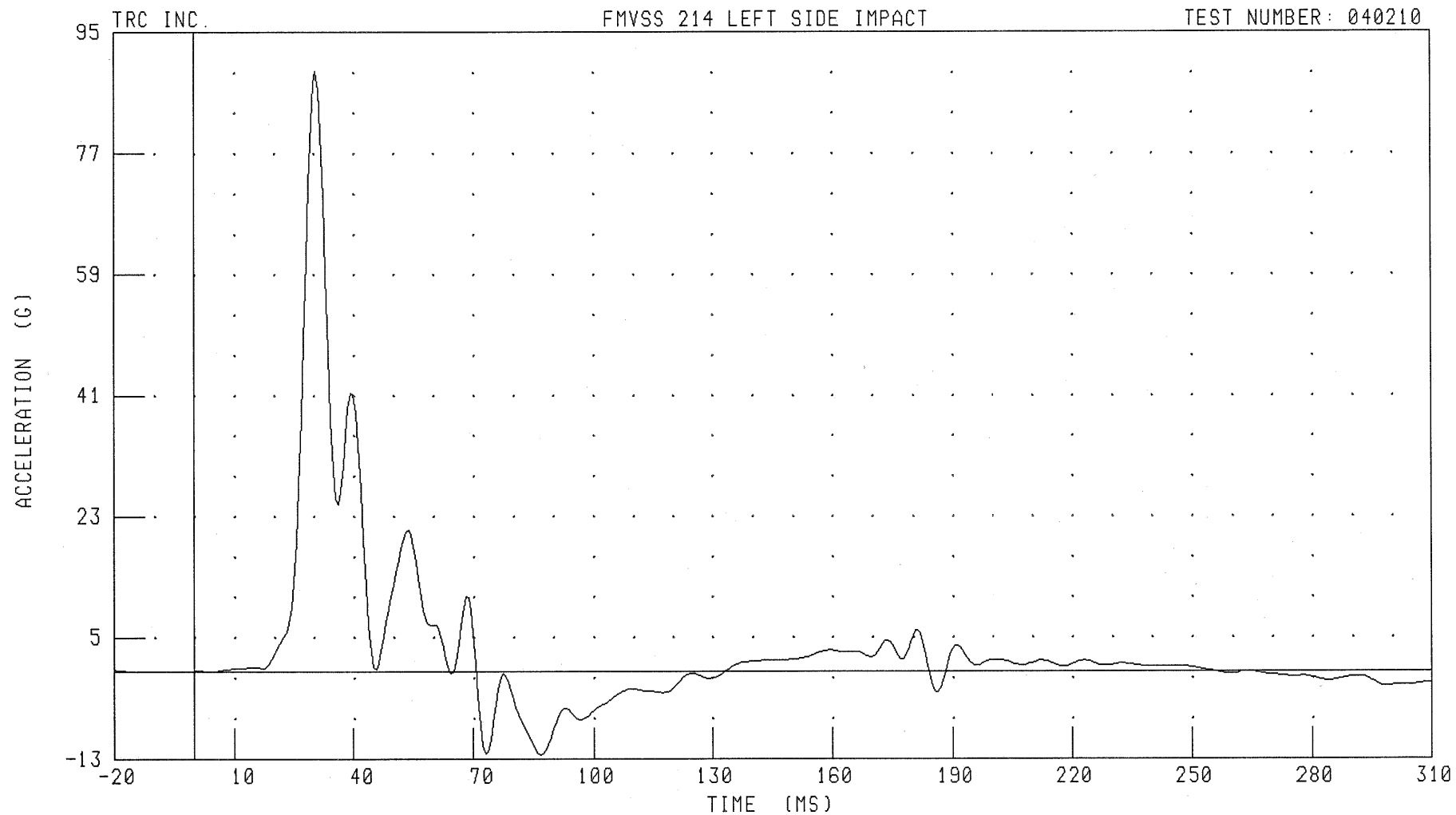
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYR1 FILTER: FIR 100

PEAK DATA: 89.18 G @ 30.62 MS; -12.36 G @ 86.88 MS

B-164

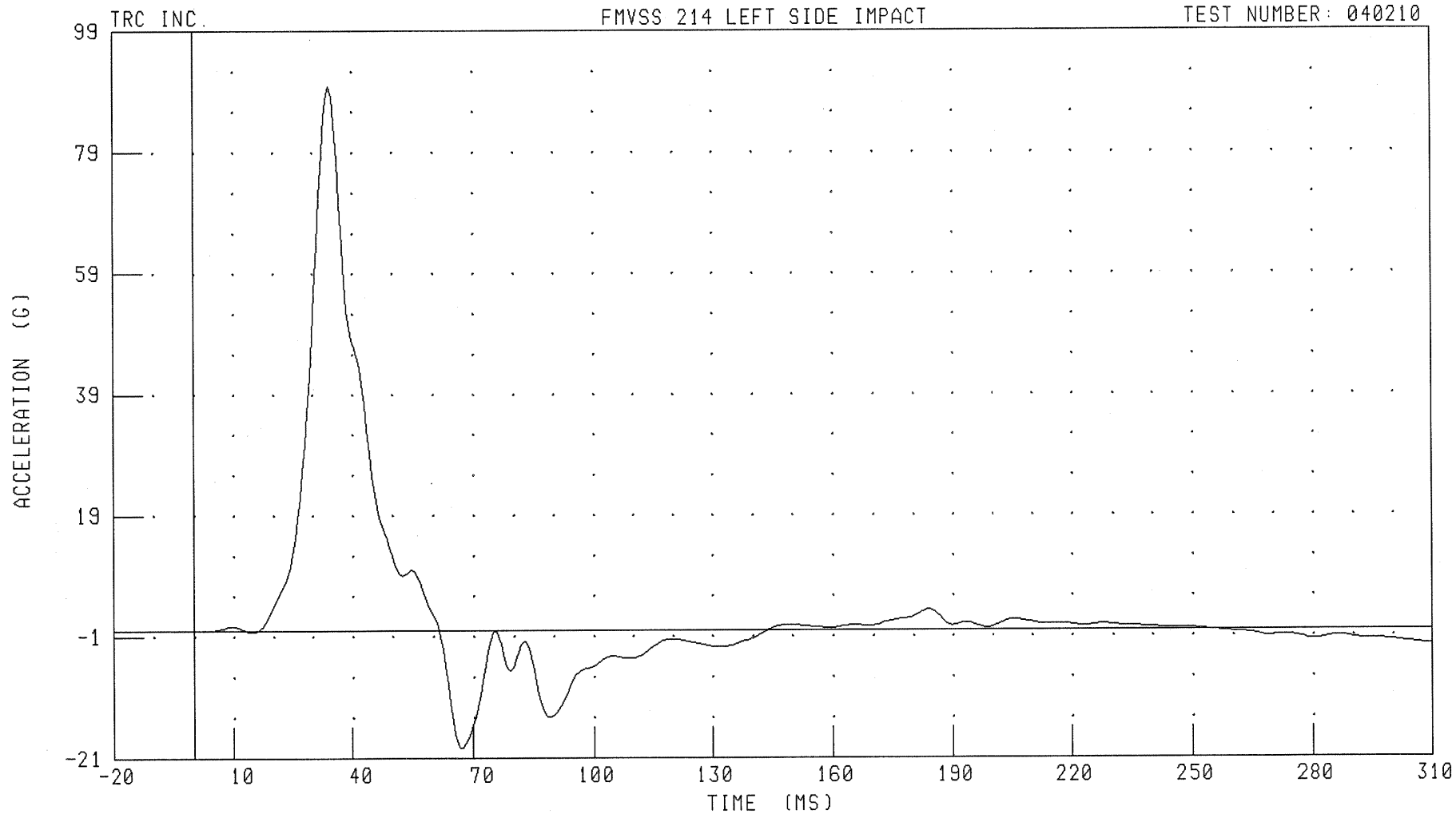
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YR1 FILTER: FIR 100

PEAK DATA: 89.87 G @ 34.38 MS; -19.31 G @ 66.87 MS

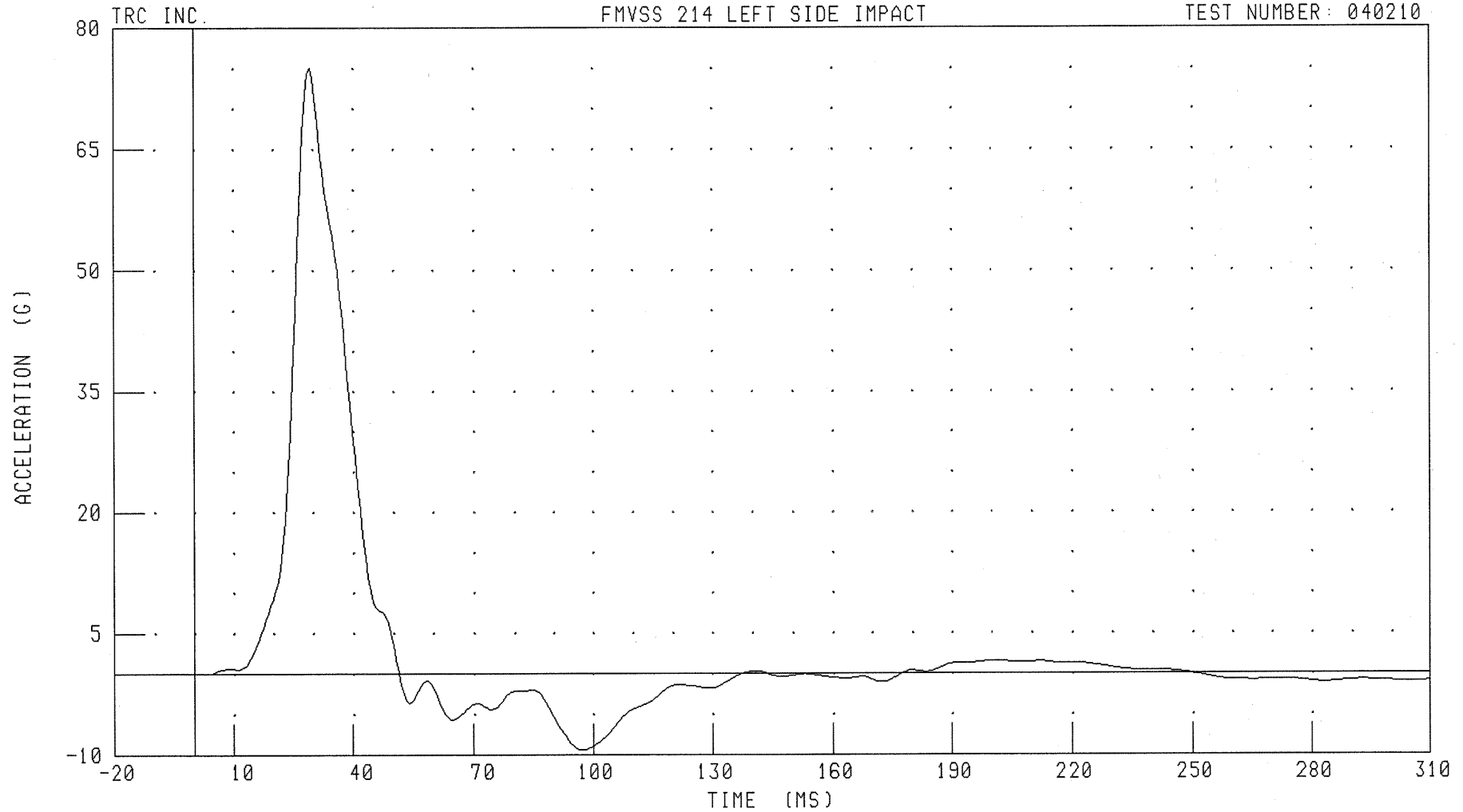
B-165

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYR1 FILTER: FIR 100

PEAK DATA: 75.03 G @ 29.38 MS; -9.44 G @ 97.50 MS

B-166

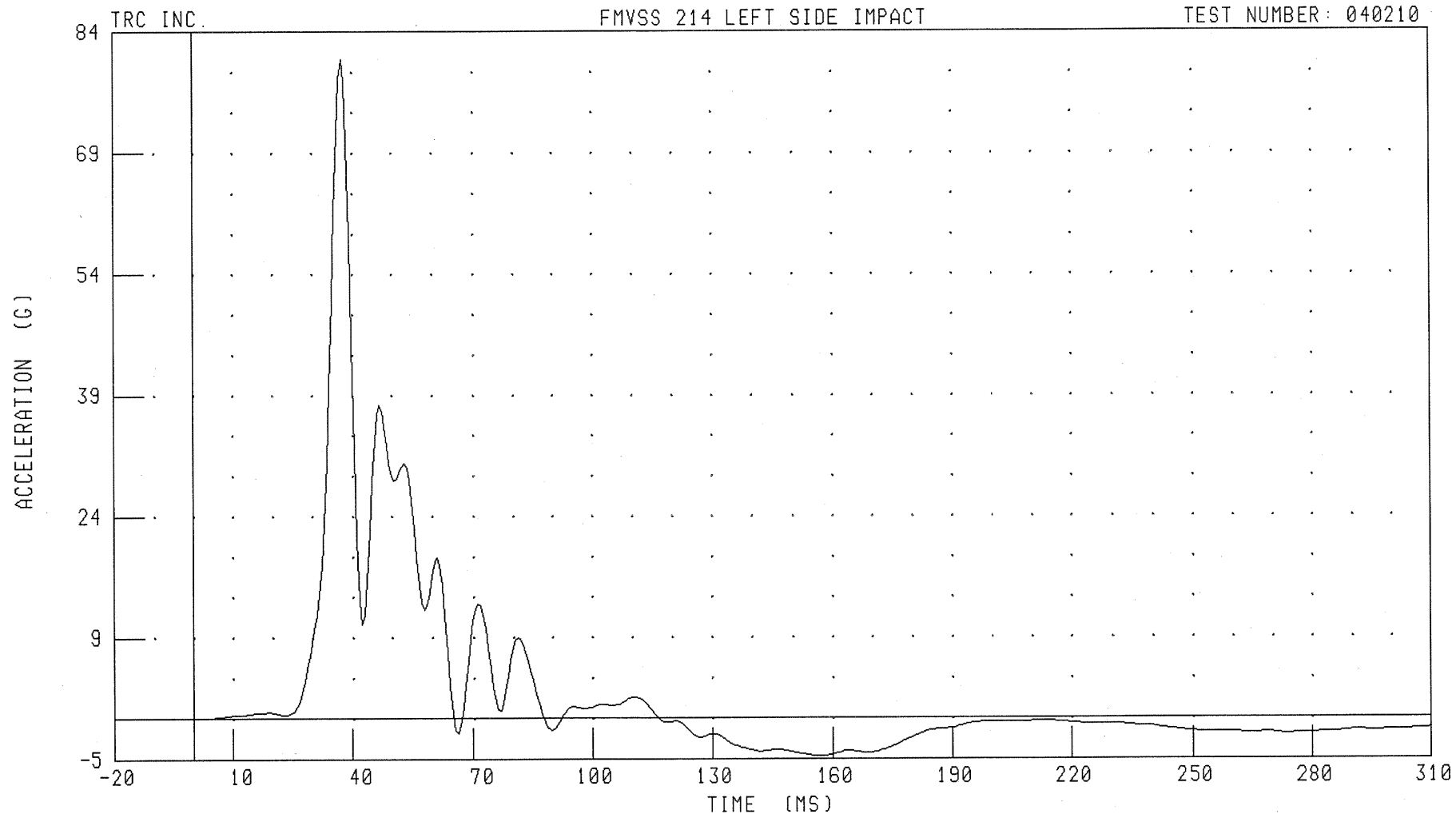
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LURYR4 FILTER: FIR 100

PEAK DATA: 81.44 G @ 37.50 MS; -4.72 G @ 156.88 MS

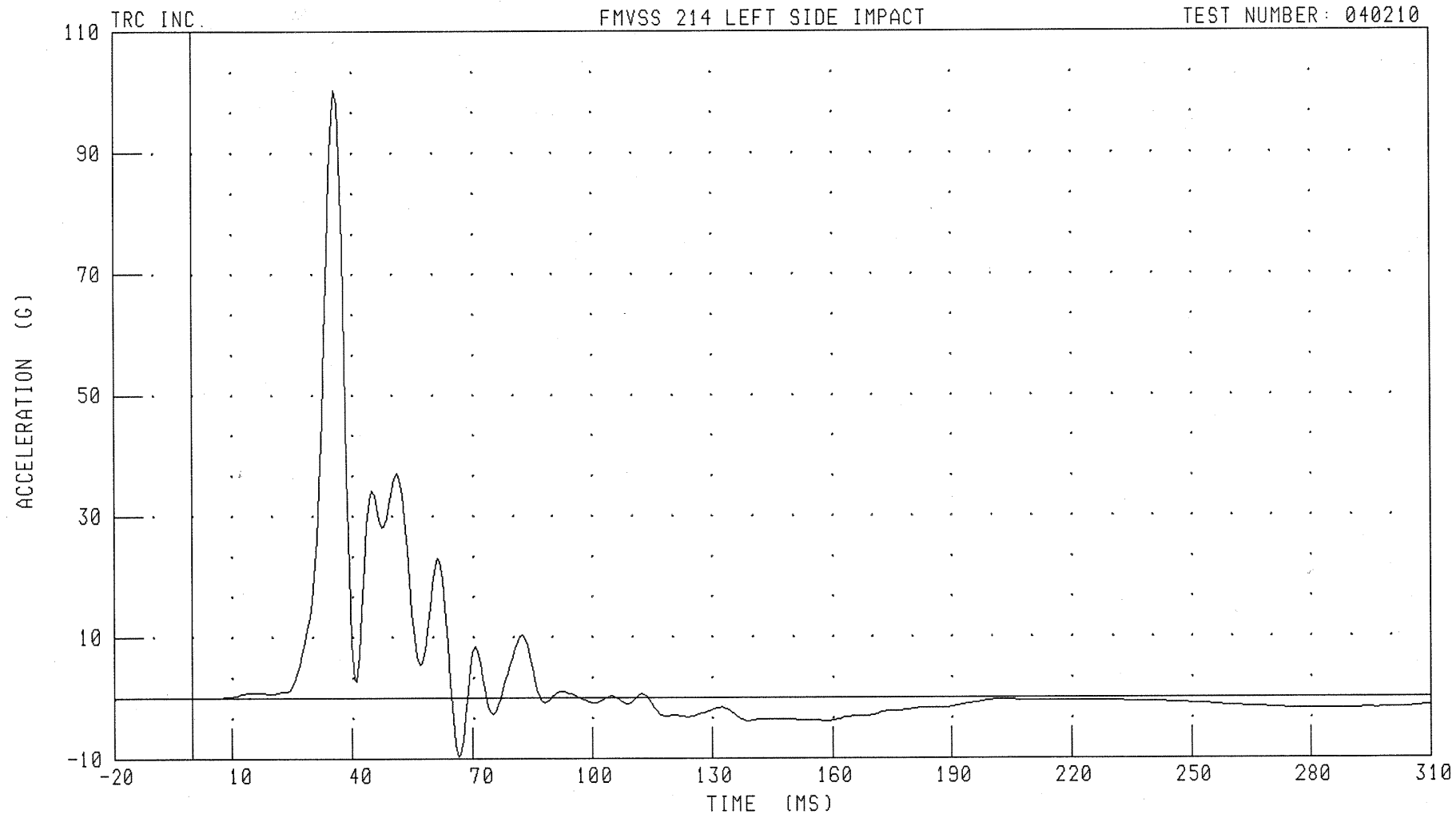
B-167

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: LLRYR4

FILTER: FIR 100

PEAK DATA: 100.41 G @ 35.63 MS; -9.67 G @ 66.25 MS

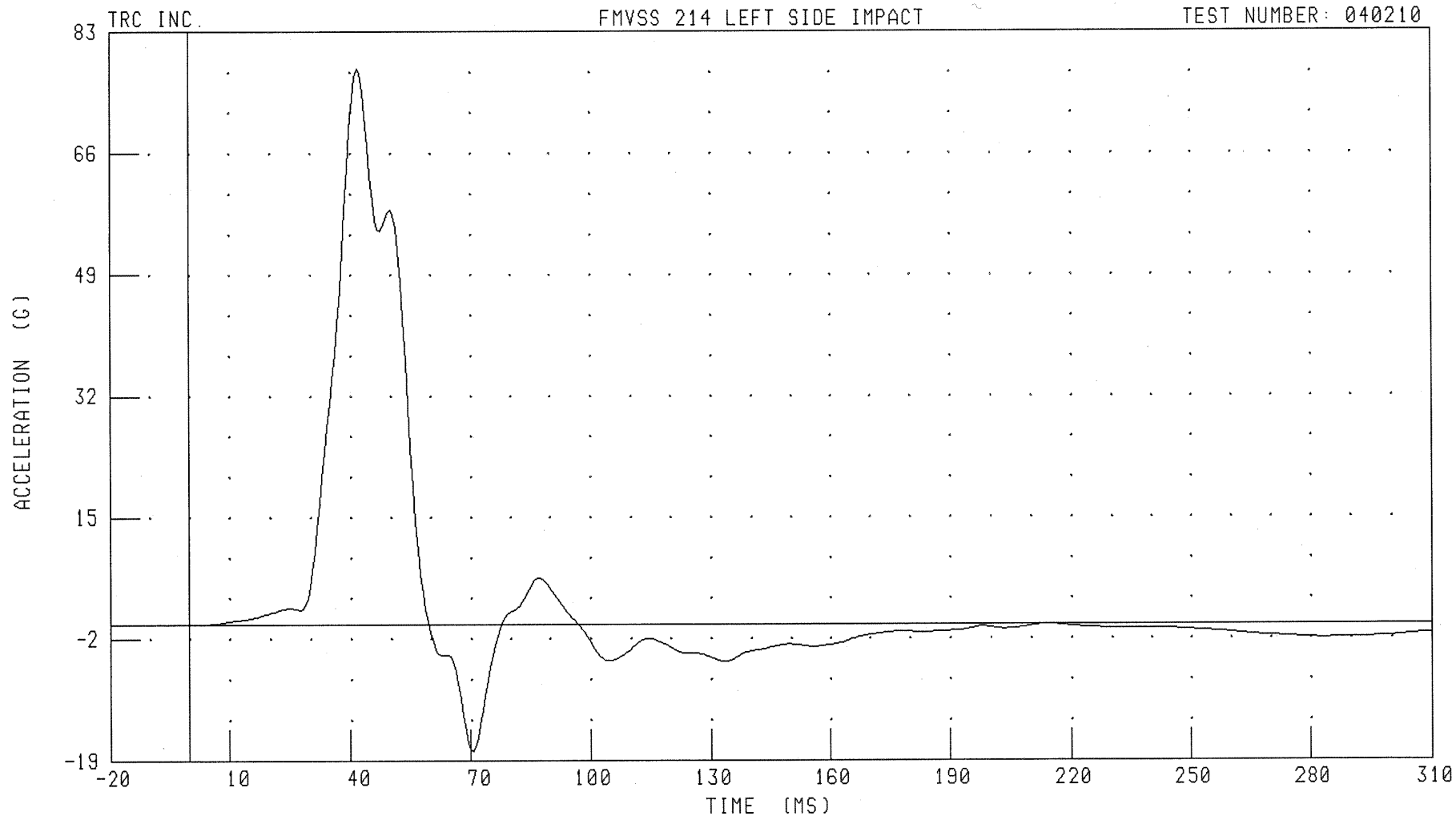
B-168

040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: T12YR4 FILTER: FIR 100

PEAK DATA: 77.78 G @ 41.87 MS; -17.69 G @ 70.63 MS

B-169

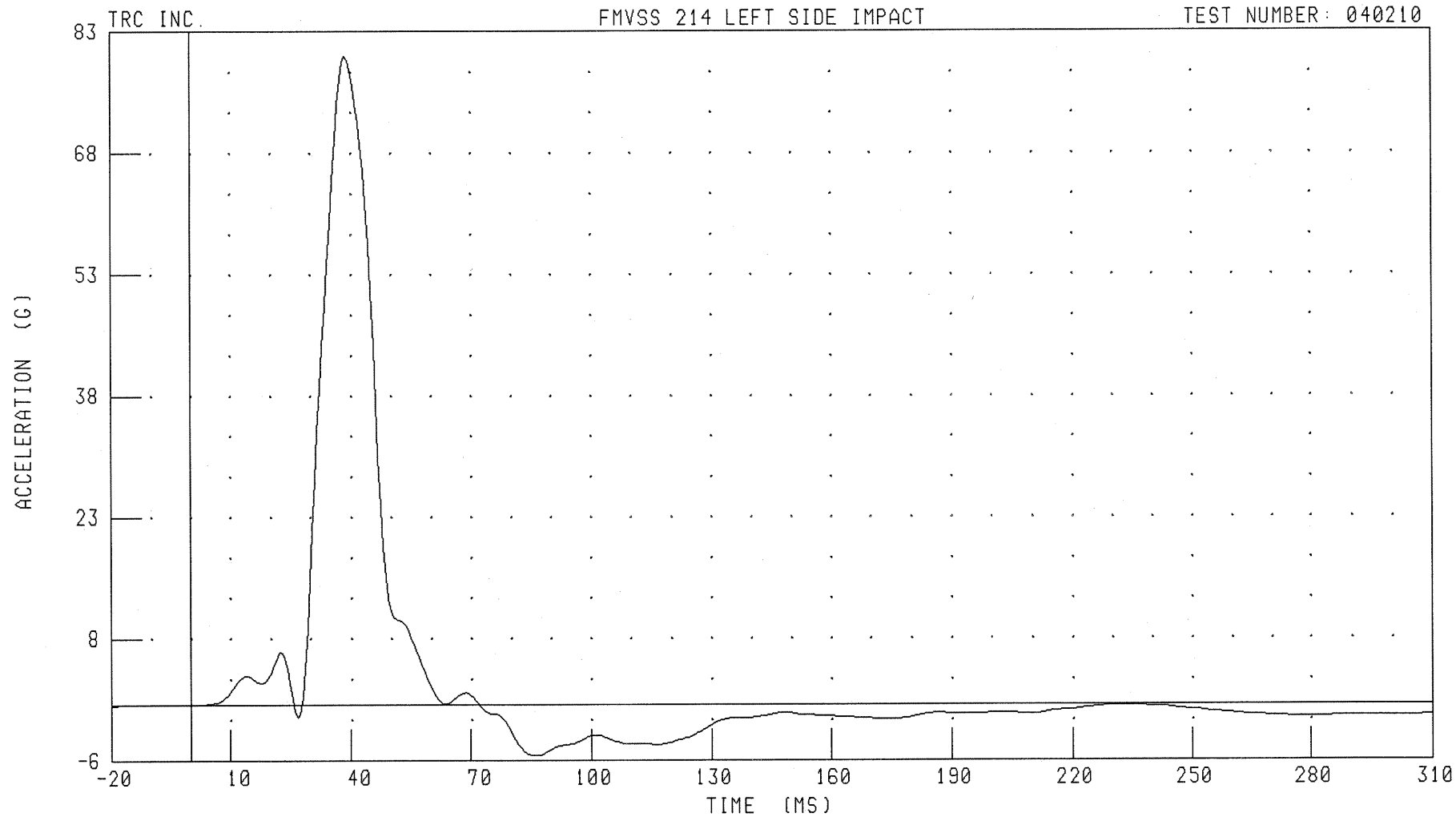
040210

55/28 KPH 90 DEGREE SIDE IMPACT (MOVING DEFORMABLE BARRIER) INTO LEFT SIDE OF 2004 MAZDA 3

LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION

FMVSS 214 LEFT SIDE IMPACT

TEST NUMBER: 040210



CHANNEL: PEVYR4

FILTER: FIR 100

PEAK DATA: 80.14 G @ 38.75 MS; -6.23 G @ 86.25 MS

B-170

040210

Appendix C

SID HIII Configuration and Performance Verification Data

Summary
SID HIII Pre-Test and Post-Test Calibration
Configured For Left Side Impact

Date: 01/27/04-02/24/04 TRC Inc. Test Number: S/N906 & S/N 055
Laboratory Technician: Sterling and Watters

Test Parameter	Specification	SID HIII 906		SID HIII 055	
		Pre-Test	Post-Test	Pre-Test	Post-Test
SH - Seated Height (mm)	889-909	894	N/A ¹	909	N/A ¹
RH - Rib Height (mm)	502-520	502	N/A ¹	511	N/A ¹
HP - Hip Pivot Height (mm)	99 ref	99.1	N/A ¹	99.1	N/A ¹
KH - Knee Pivot from Back Line (mm)	511-526	524	N/A ¹	524	N/A ¹
KV - Knee Pivot to Floor (mm)	490-505	491	N/A ¹	493	N/A ¹
HW - Hip Width (mm)	356-391	375	N/A ¹	356	N/A ¹
Thorax Impacts					
Temperature (°C)	18.9-25.5	21.6	21.8	22.2	20.2
Relative Humidity (%)	10-70	30	25	33	32
Probe Speed (m/s)	4.27-4.33	4.32	4.28	4.31	4.29
Upper Rib (g's)	37-46	43.3	43.3	39.2	40.7
Lower Rib (g's)	37-46	42.6	44.0	38.3	39.6
Lower Spine (g's)	15-22	19.4	18.3	16.8	17.9
Pelvis Impacts					
Temperature (°C)	18.9-25.5	21.1	21.8	22.2	21.5
Relative Humidity (%)	10-70	26	25	33	34
Probe Speed (m/s)	4.27-4.33	4.29	4.28	4.32	4.32
Pelvis (g's)	40-60	45.5	53.3	42.2	40.9

¹ Post-test external measurements were not recorded.

Calibration Test Results

Pre-Test

SID HIII: 906

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 not tested at this time.

Transportation Research Center Inc.

SID/HIII Dummy

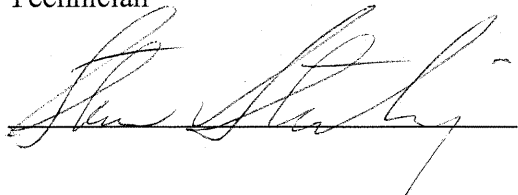
External Dimensions

Serial No. 906 Calibration No. 05

Date: 2/2/04

Test Parameter	Dimension	Specification	Results	Pass
Seated Height	SH	889.0 - 909.3 mm	894 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	491 mm	Yes
Hip Width	HW	355.6 - 391.2 mm	375 mm	Yes
Top Rib Width From C/L	RW-1	165.1 - 180.3 mm	178 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	0.0 mm	Yes

Technician



Approved



Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 01/27/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	28 %	Yes
Peak Resultant Acceleration	120 - 150 g	127.9 g	Yes
Peak Longitudinal Acceleration	15 g Max	5.2 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician

V. J. Watten

Approved

David R. Kerner

02.02.2004 17:04:40 608



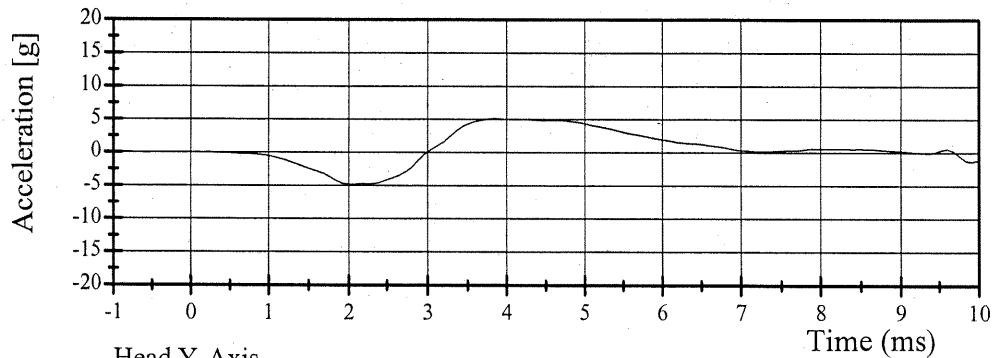
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 01/27/2004

Head X-Axis

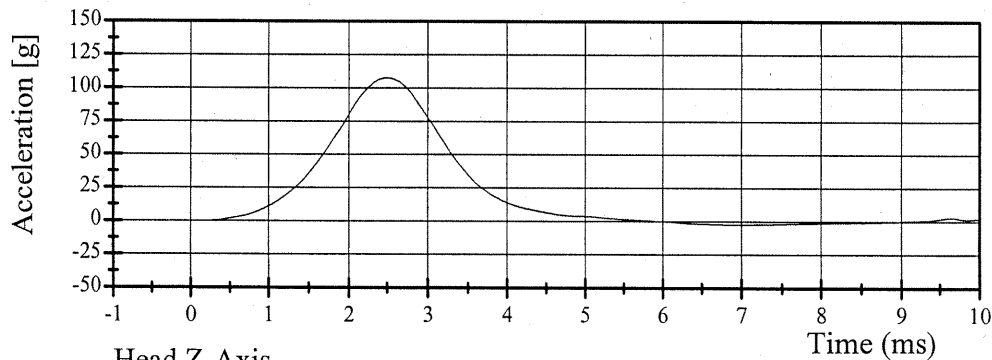


Filter Class: 1000

Max: 5.2 g at 3.8 ms

Min: -4.8 g at 2.0 ms

Head Y-Axis

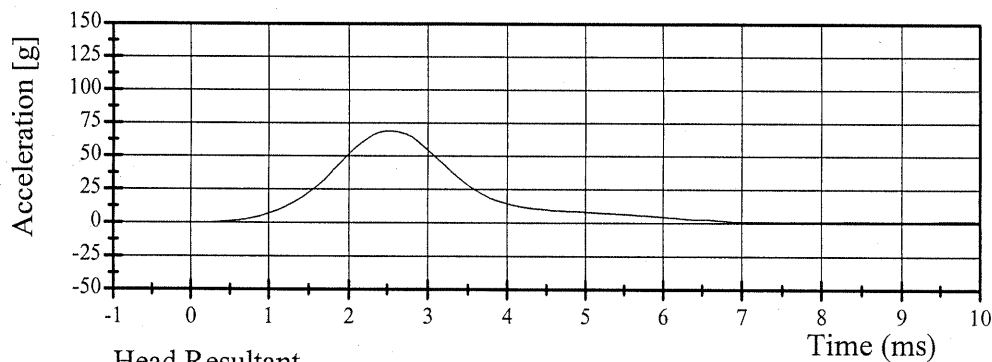


Filter Class: 1000

Max: 107.6 g at 2.5 ms

Min: -2.6 g at 6.9 ms

Head Z-Axis

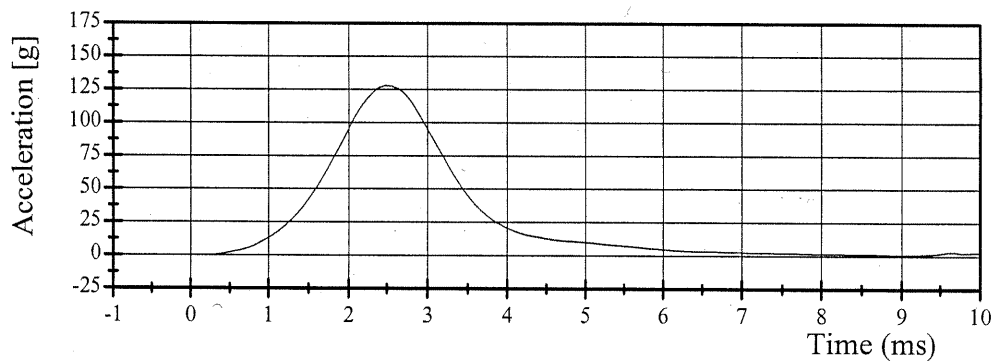


Filter Class: 1000

Max: 69.1 g at 2.6 ms

Min: -0.0 g at 0.0 ms

Head Resultant



Filter Class: 1000

Max: 127.9 g at 2.5 ms

Min: 0.0 g at 8.2 ms

Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 01/27/2004

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	28 %	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	2.16 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.38 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.09 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.07 - 7.33 m/s	Yes
Peak D Plane Rotation	66 - 82 °	72.0 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	61.9 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	73.4 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	50.5 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	4.4 ms	Yes

Comments:

Technician

V. J. Walker

Approved

David A. Hines

01.27.2004 21:08:44 514



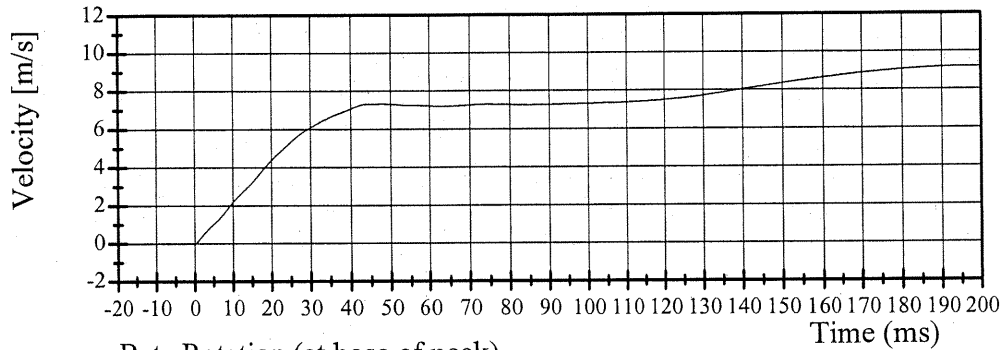
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 01/27/2004

Integrated Pendulum Velocity

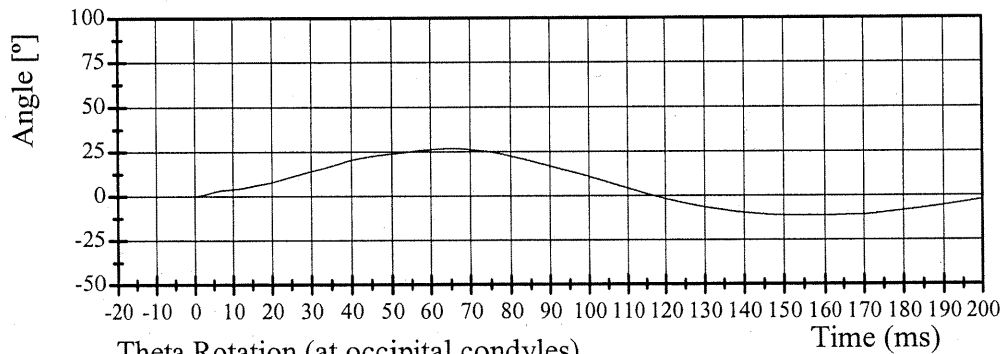


Filter Class: 180

Max: 9.6 m/s at 958.9 ms

Min: -0.0 m/s at -0.6 ms

Beta Rotation (at base of neck)

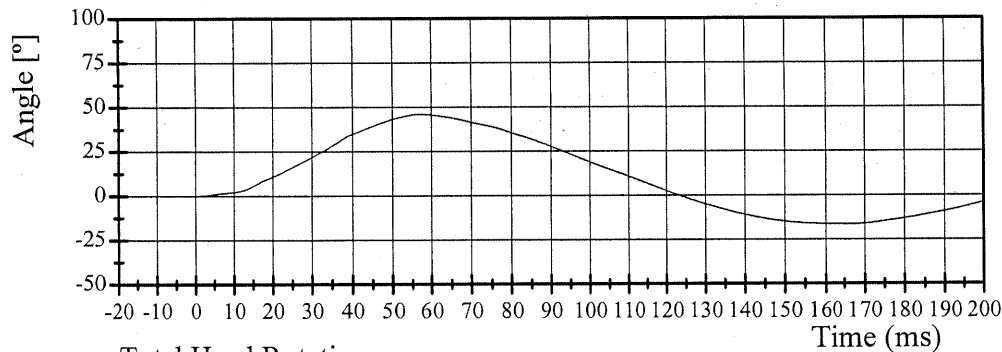


Filter Class: 60

Max: 26.9 ° at 65.4 ms

Min: -11.2 ° at 159.0 ms

Theta Rotation (at occipital condyles)

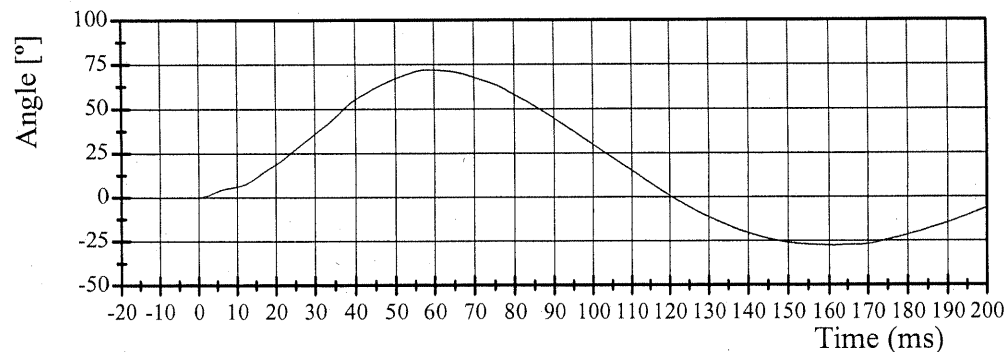


Filter Class: 60

Max: 46.1 ° at 57.2 ms

Min: -16.3 ° at 163.6 ms

Total Head Rotation



Filter Class: 60

Max: 72.0 ° at 58.8 ms

Min: -27.5 ° at 161.2 ms

01.27.2004 21:08:45 514



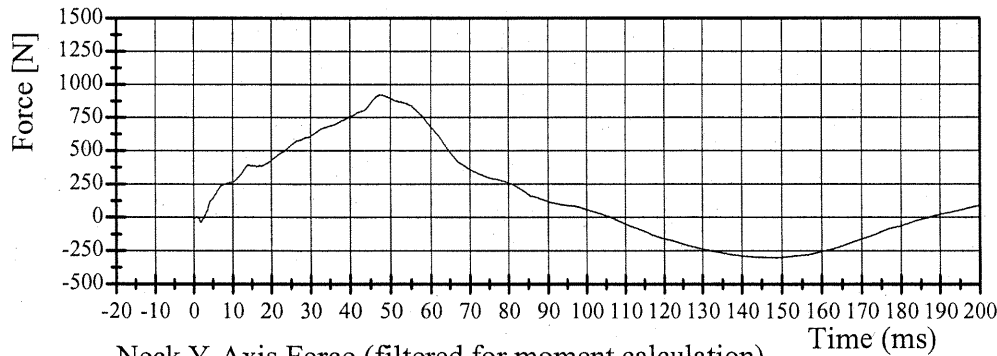
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 01/27/2004

Neck Y-Axis Force

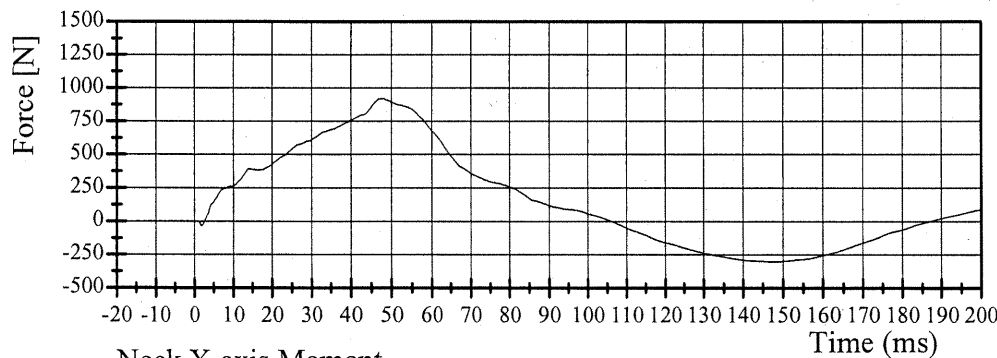


Filter Class: CFC 1000

Max: 920 N at 47.8 ms

Min: -302 N at 148.6 ms

Neck Y-Axis Force (filtered for moment calculation)

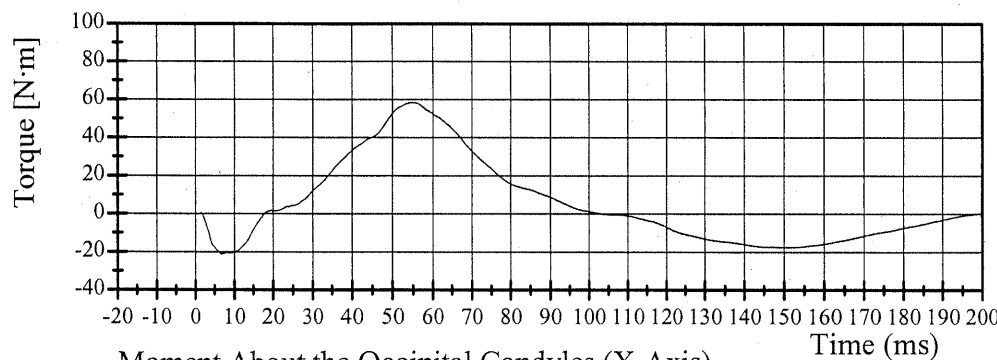


Filter Class: CFC 600

Max: 920 N·m at 47.7 ms

Min: -301 N·m at 148.6 ms

Neck X-axis Moment

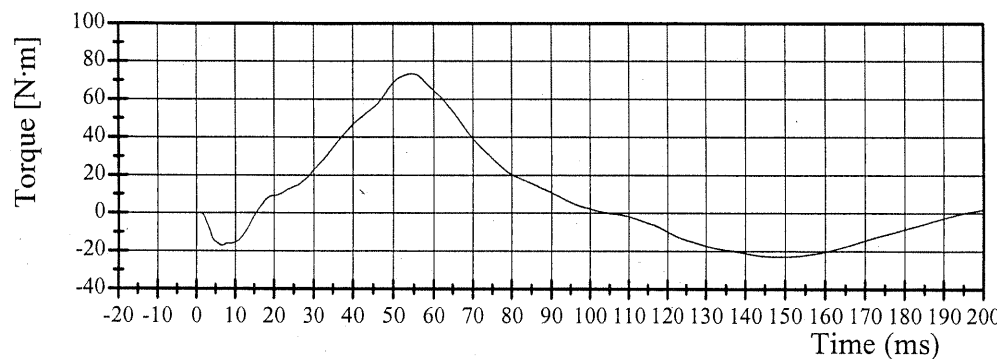


Filter Class: CFC 600

Max: 58.4 N·m at 54.9 ms

Min: -21.1 N·m at 6.9 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 73.4 ° at 54.4 ms

Min: -22.8 ° at 148.6 ms

Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 906 Calibration No. 05 - 8

Test Date 01/30/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	21 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	6.6 - 8.1 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician

John K. Clunidge

Approved

V. J. Watters

01.30.2004 13:25:36 1599

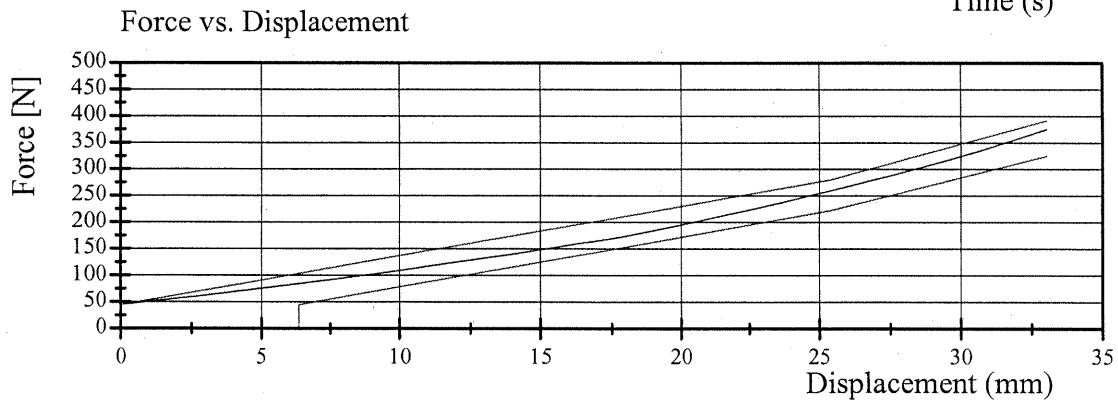
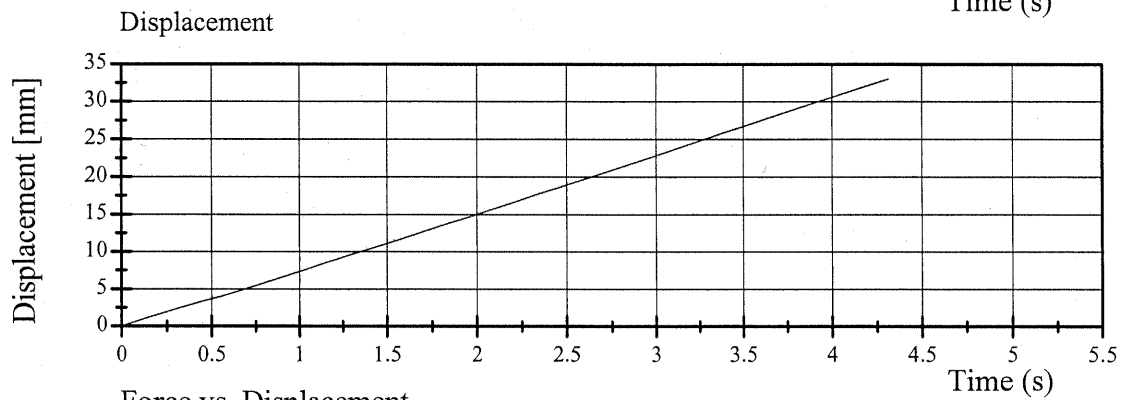
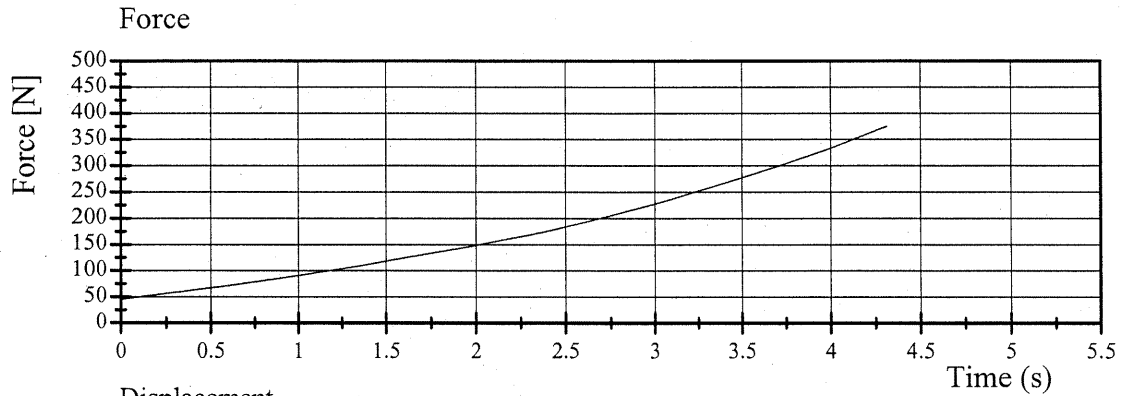


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 906 Calibration No. 05 - 8

Test Date 01/30/2004



01.30.2004 13:25:37 1599



TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID/HIII

CAL DATE: 02-Feb-04

TRC, INC.

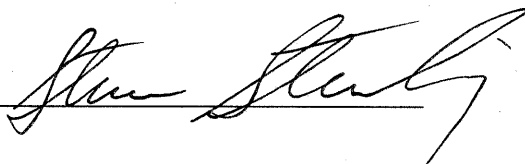
TEST NO: LF90605E

572M SN 906 TORSO FLEX CAL 05

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.0 °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	115.7 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	177.9 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	258.0 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	9.9 °

TEST MEETS SPECIFICATIONS

TECHNICIAN



Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 05 - 3

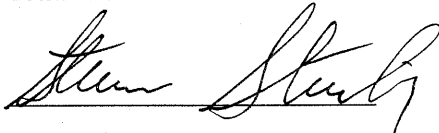
Test Date 02/03/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.6 C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.32 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	43.3 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	42.6 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	19.4 g	Yes

Comments:

Pre-test calibration. New impact side shoulder foam installed.

Technician



Approved



02.03.2004 09:15:20 1236



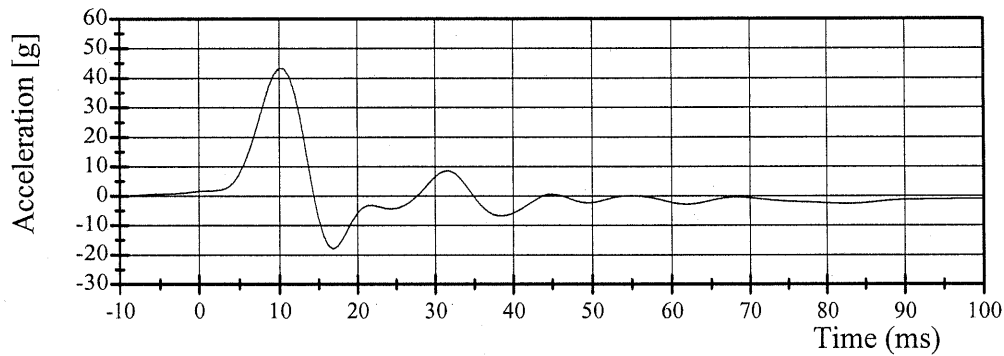
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 05 - 3

Test Date 02/03/2004

Upper Rib Bar Acceleration

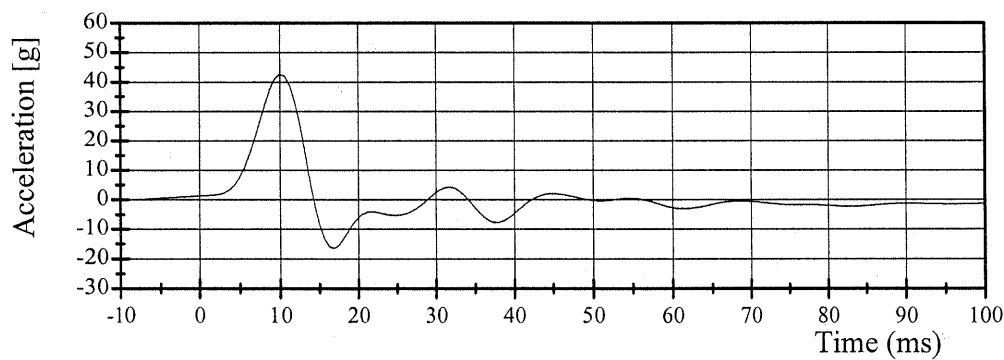


Filter Class: FIR 100

Max: 43.3 g at 10.0 ms

Min: -17.9 g at 16.8 ms

Lower Rib Bar Acceleration

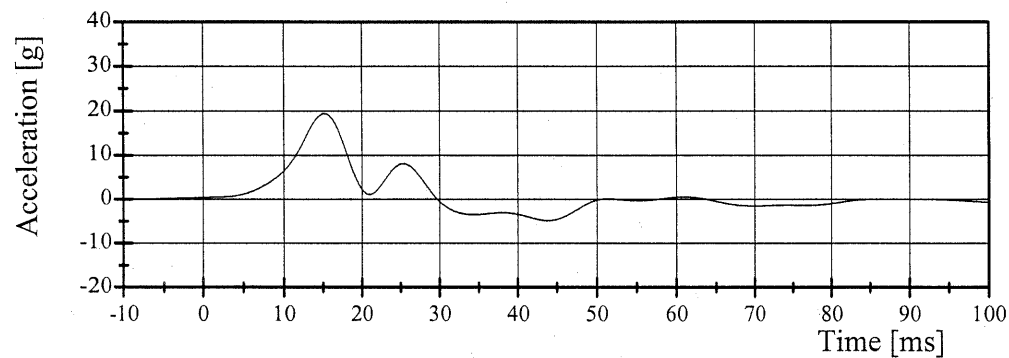


Filter Class: FIR 100

Max: 42.6 g at 10.0 ms

Min: -16.5 g at 16.8 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 19.4 g at 15.0 ms

Min: -4.8 g at 43.8 ms

Transportation Research Center Inc.

572F Left Pelvis Test

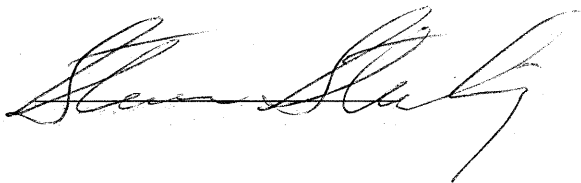
SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 02/02/2004

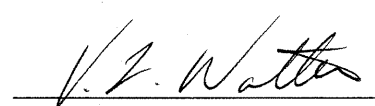
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.1 C	Yes
Relative Humidity	10 - 70 %	26 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.29 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	45.5 g	Yes
Time Above 20 g	3 - 7 ms	5.92 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.02.2004 14:23:04 1165

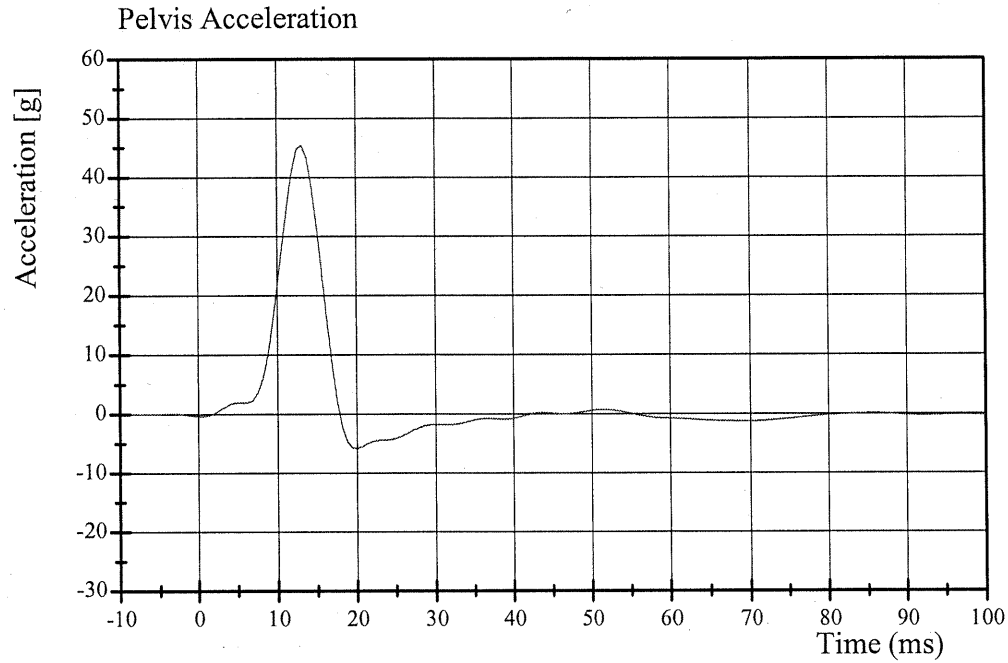


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 906 Calibration No. 05 - 1

Test Date 02/02/2004



Filter Class: FIR 100

Max: 45.5 g at 13.1 ms

Min: -5.9 g at 20.0 ms

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 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 15, 2003 for a previous calibration series.

Transportation Research Center Inc.

SID/HIII Dummy

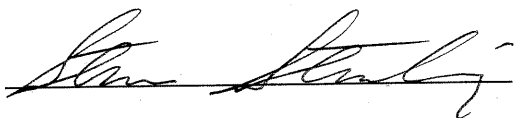
External Dimensions

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

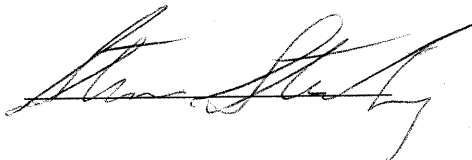
SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

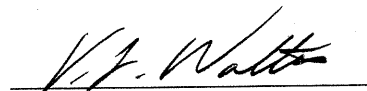
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Peak Resultant Acceleration	120 - 150 g	136.6 g	Yes
Peak Longitudinal Acceleration	15 g Max	7.1 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician



Approved



02.09.2004 11:38:17 610

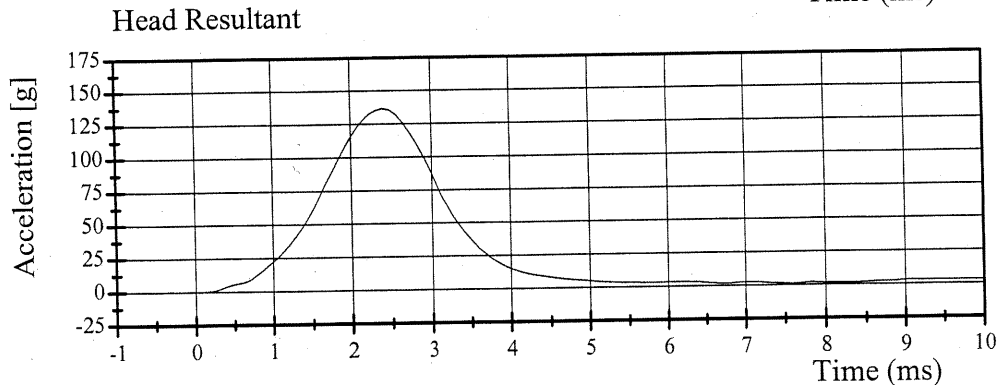
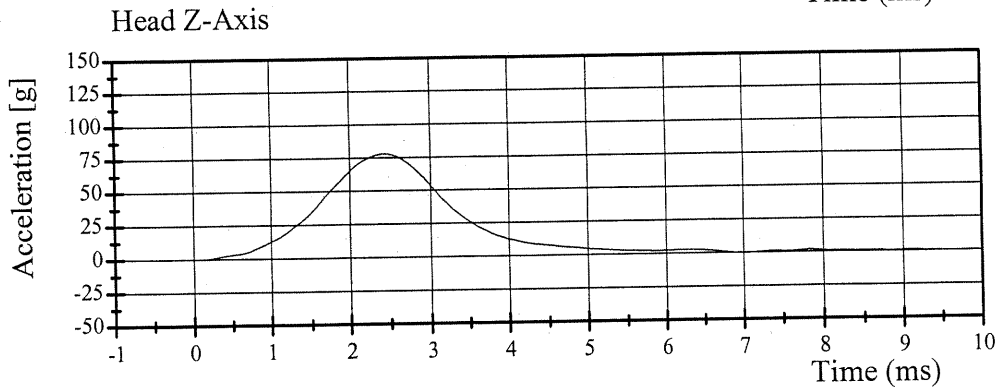
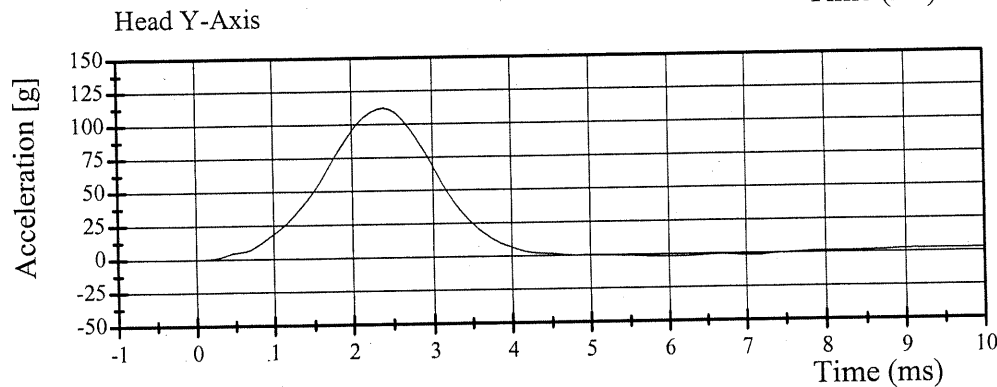
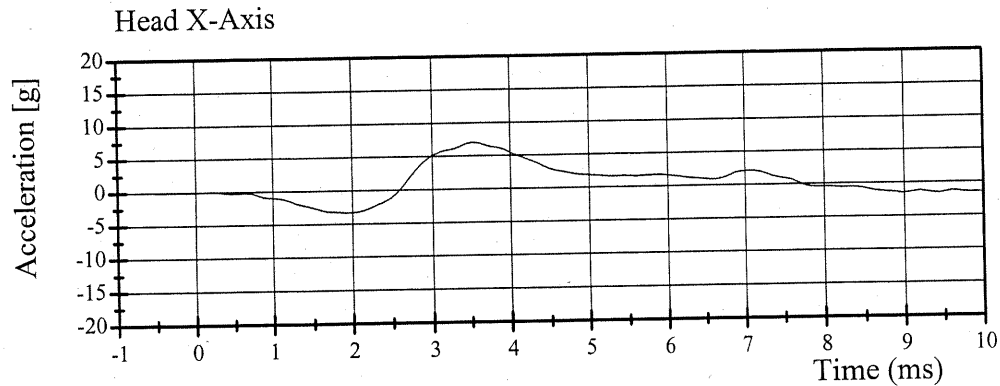


Transportation Research Center Inc.

572M Left Lateral Head Test

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

Test Date 02/09/2004



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

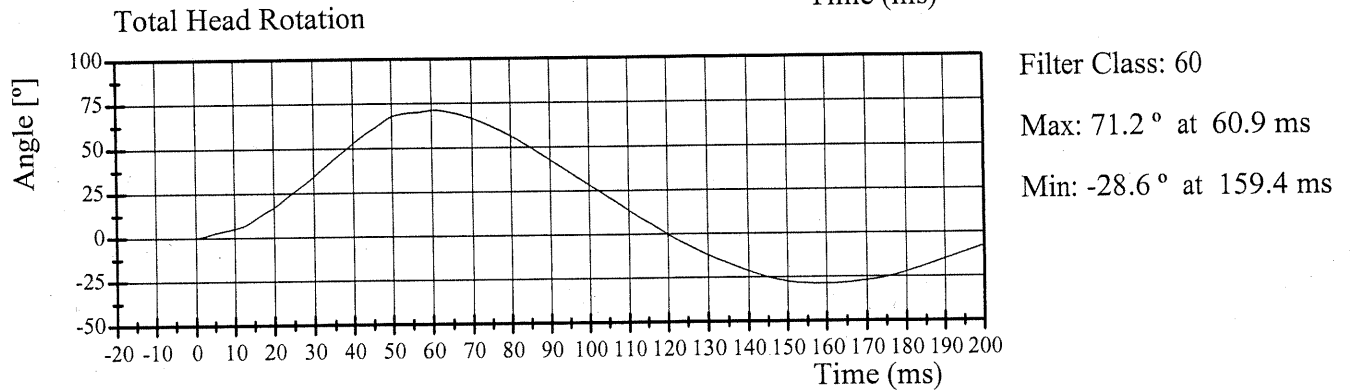
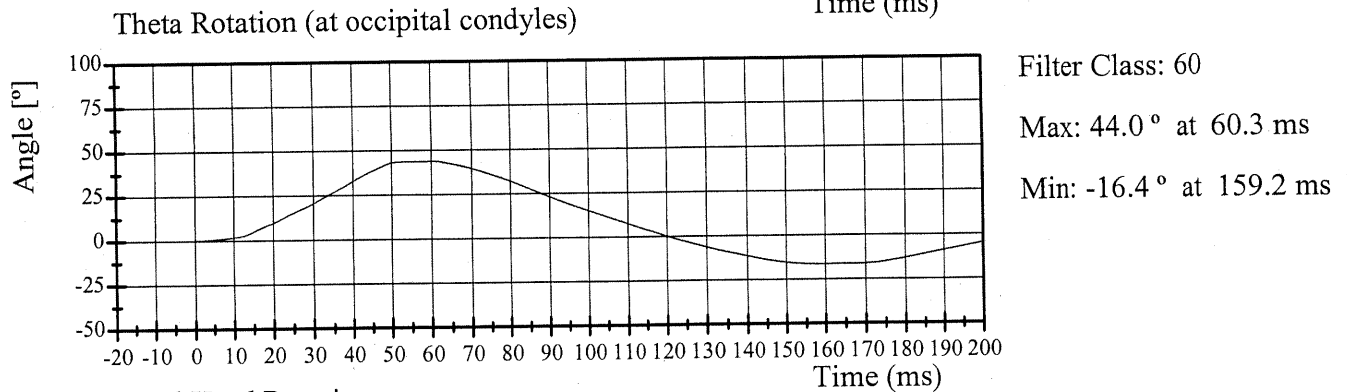
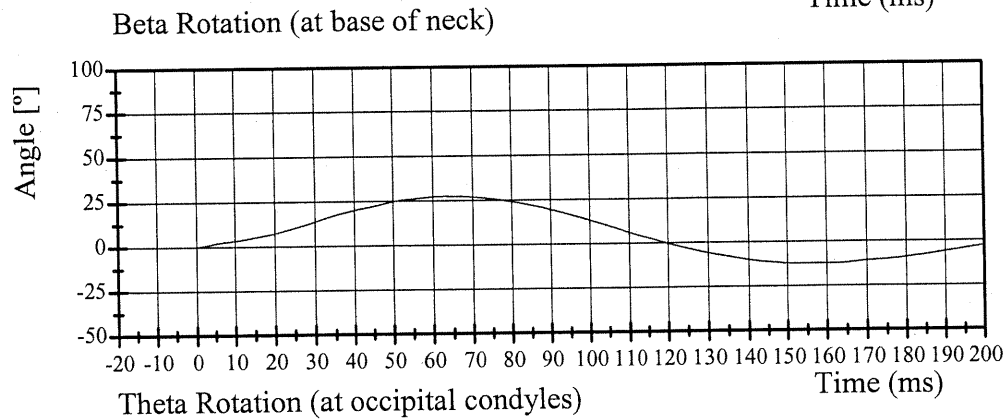
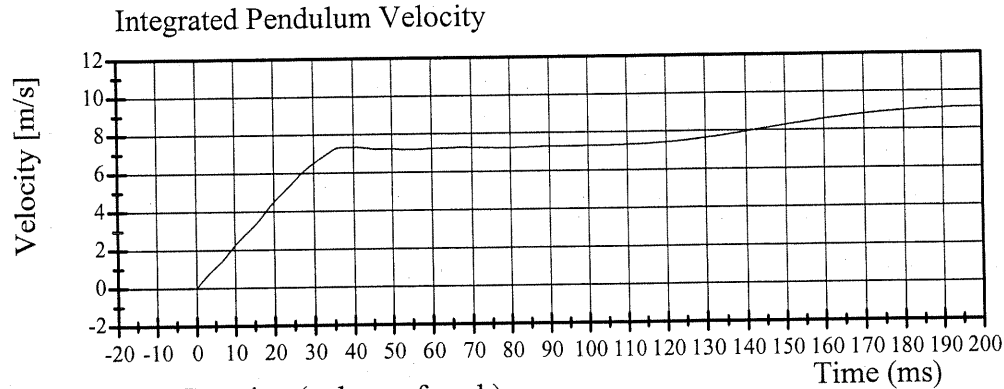


Transportation Research Center Inc.

572M Left Lateral Neck Test

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

Test Date 02/09/2004



02.09.2004 16:45:17 518



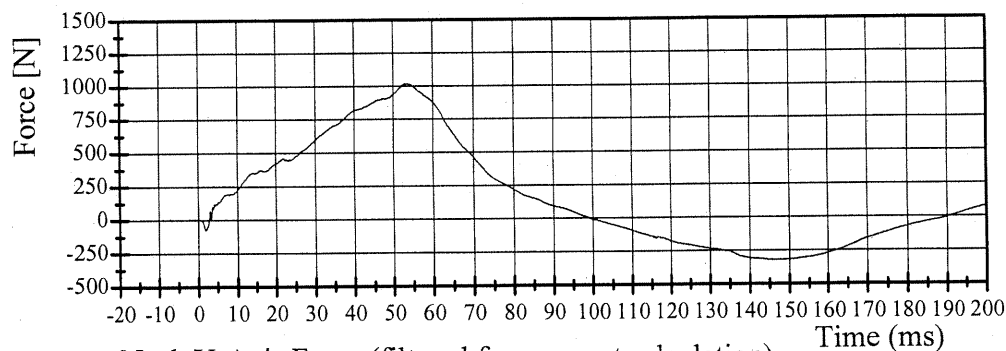
Transportation Research Center Inc.

572M Left Lateral Neck Test

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

Test Date 02/09/2004

Neck Y-Axis Force

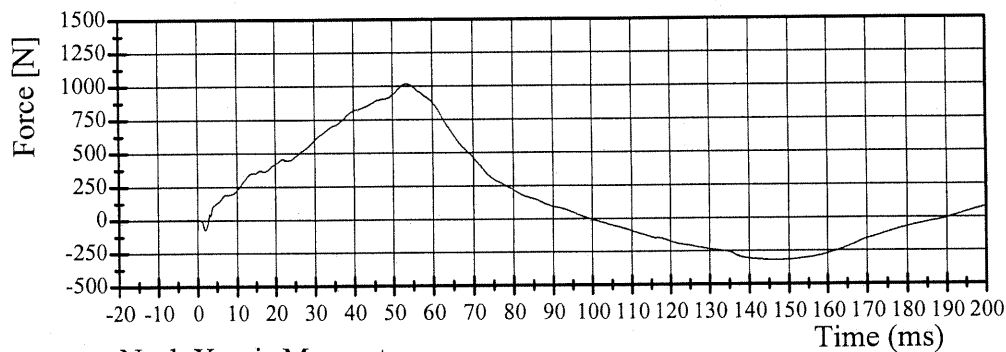


Filter Class: CFC 1000

Max: 1017 N at 53.4 ms

Min: -319 N at 147.8 ms

Neck Y-Axis Force (filtered for moment calculation)

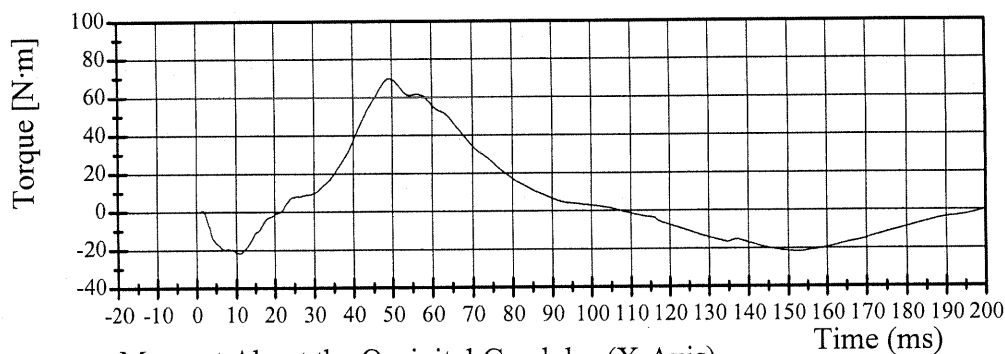


Filter Class: CFC 600

Max: 1016 N at 53.4 ms

Min: -318 N at 147.8 ms

Neck X-axis Moment

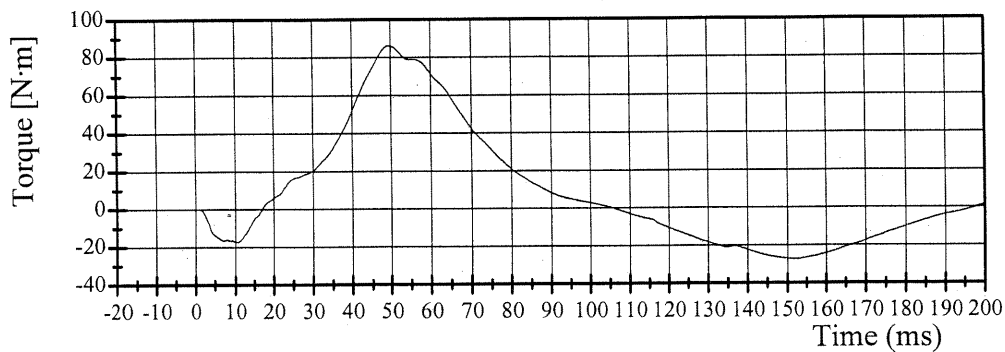


Filter Class: CFC 600

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.

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	4.21 - 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



02.09.2004 18:07:23 1211



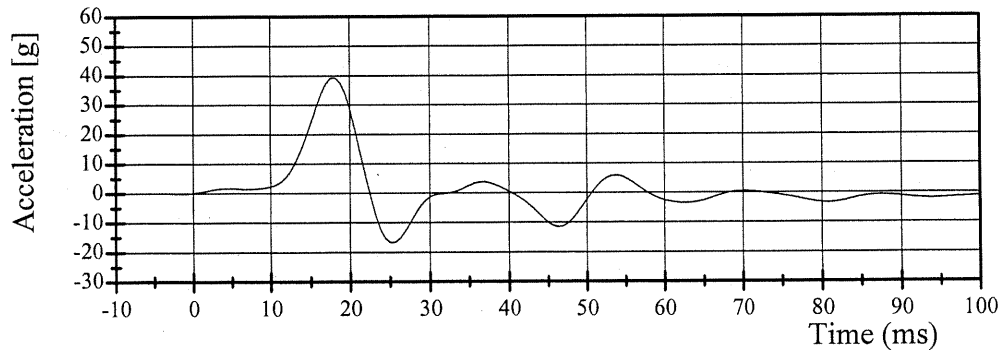
Transportation Research Center Inc.

572F Left Thorax Test

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

Test Date 02/09/2004

Upper Rib Bar Acceleration

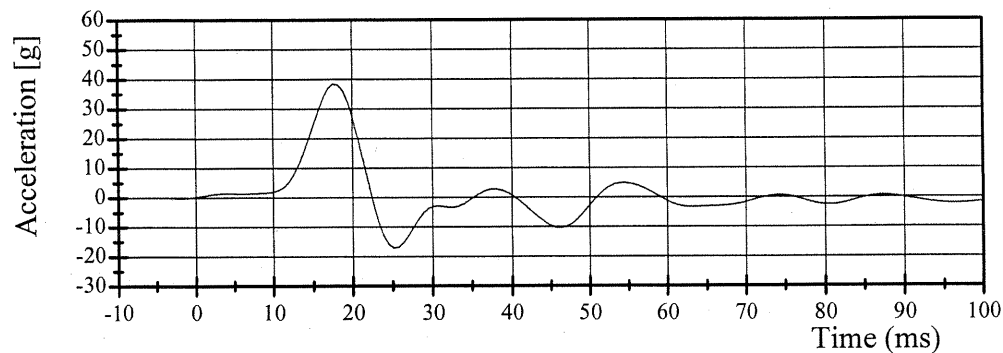


Filter Class: FIR 100

Max: 39.2 g at 18.2 ms

Min: -16.8 g at 25.1 ms

Lower Rib Bar Acceleration

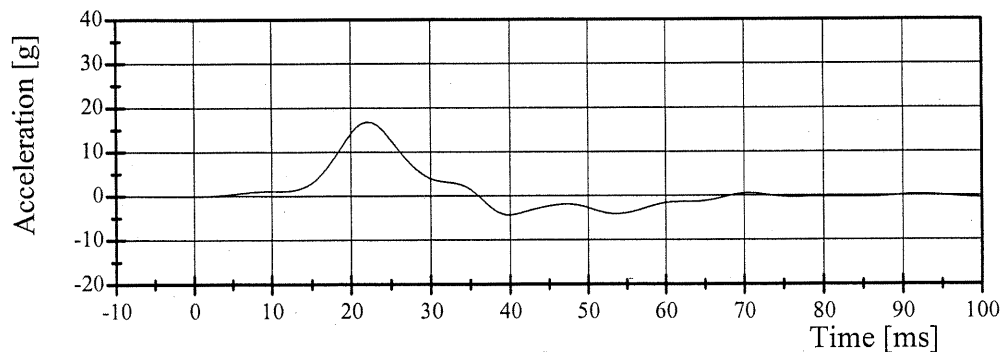


Filter Class: FIR 100

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.

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

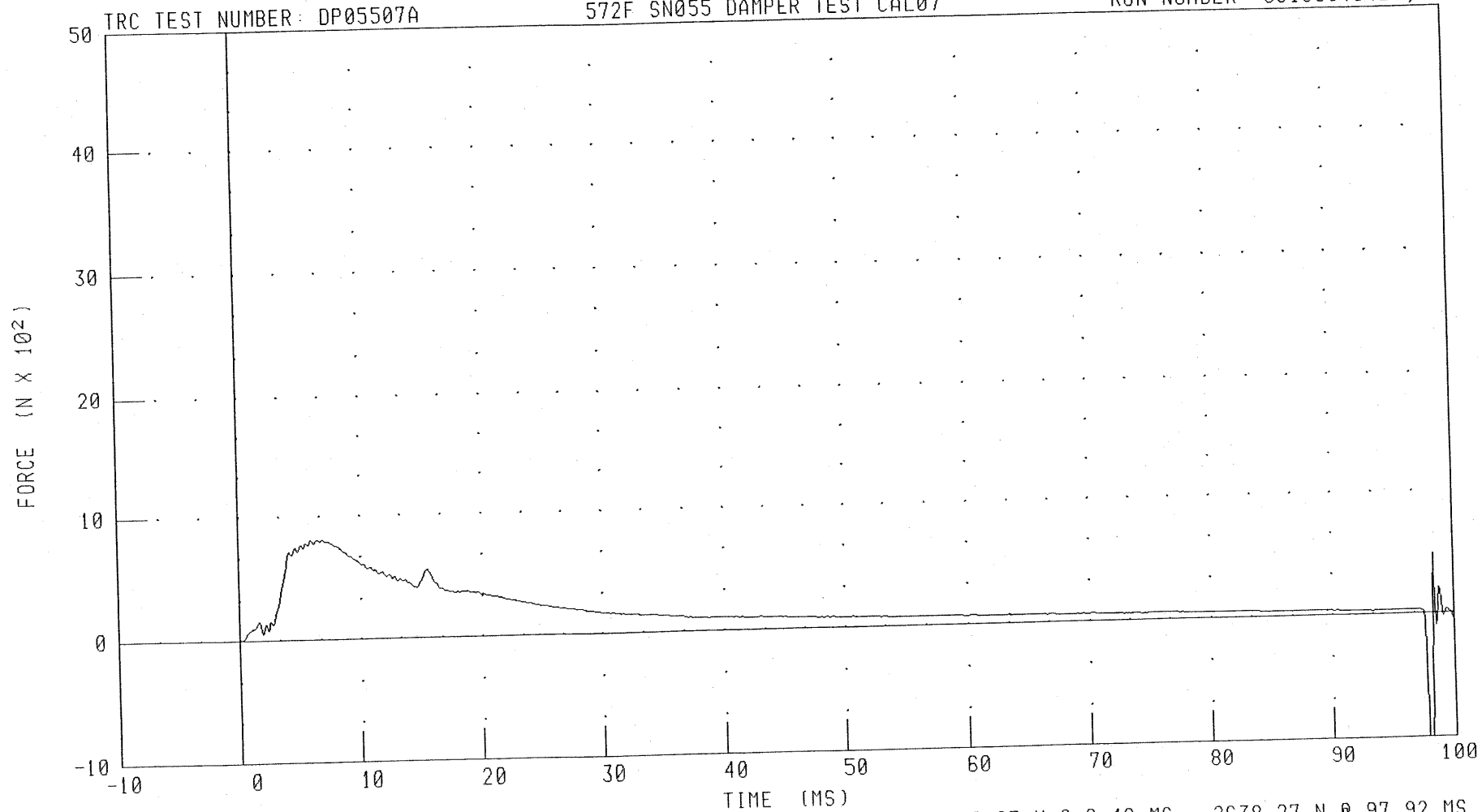
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

572F SN055 DAMPER TEST CAL07

RUN NUMBER: 091503.1427;1

TRC TEST NUMBER: DP05507A



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 805.97 N @ 6.48 MS; -2638.27 N @ 97.92 MS

C-27

040210

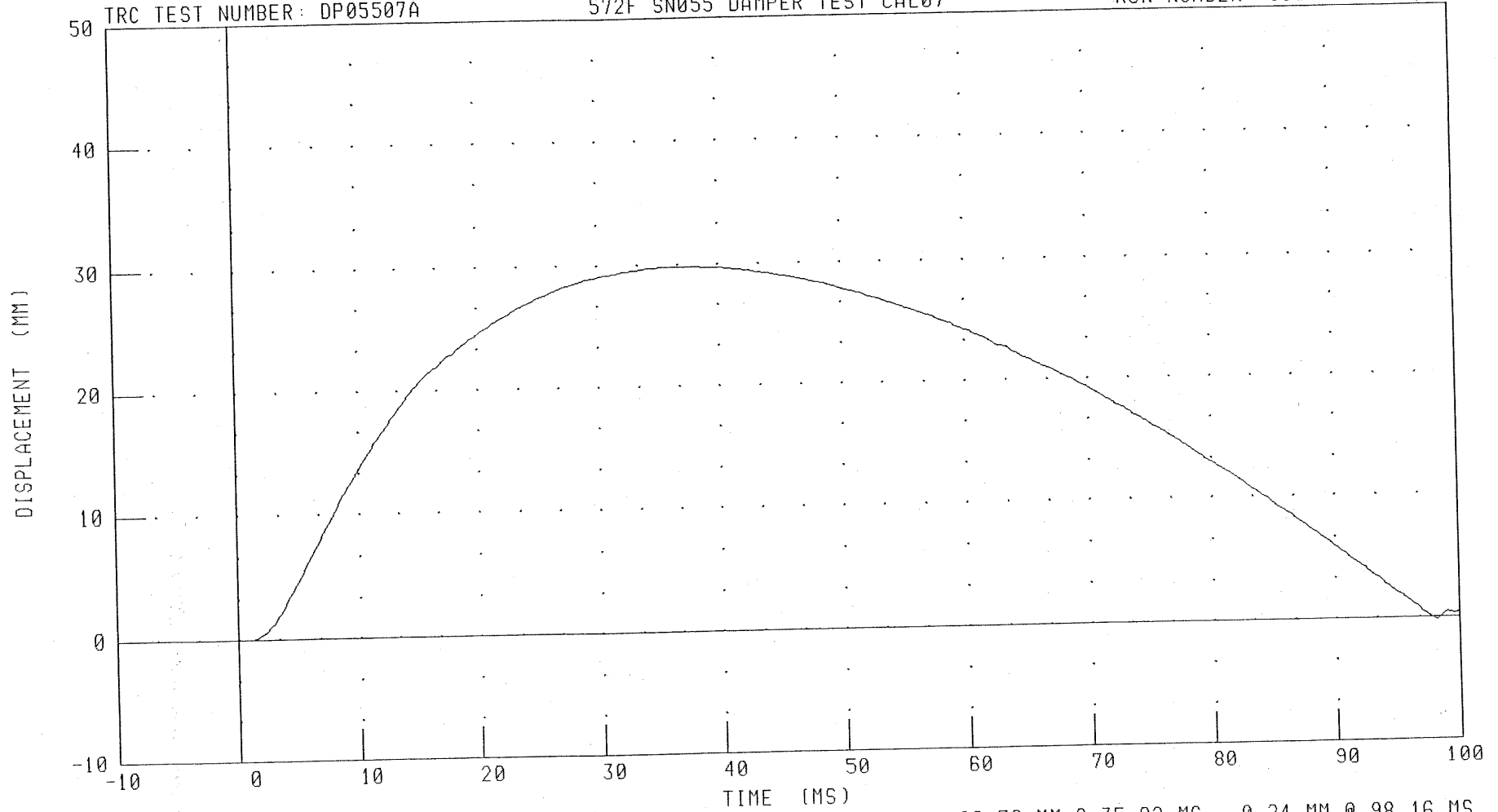
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN055 DAMPER TEST CAL07

RUN NUMBER: 091503.1427;1

TRC TEST NUMBER: DP05507A



CHANNEL: CSTYD

FILTER: CH CLASS 1000

PEAK DATA: 29.76 MM @ 35.92 MS; -0.24 MM @ 98.16 MS

C-28

040210

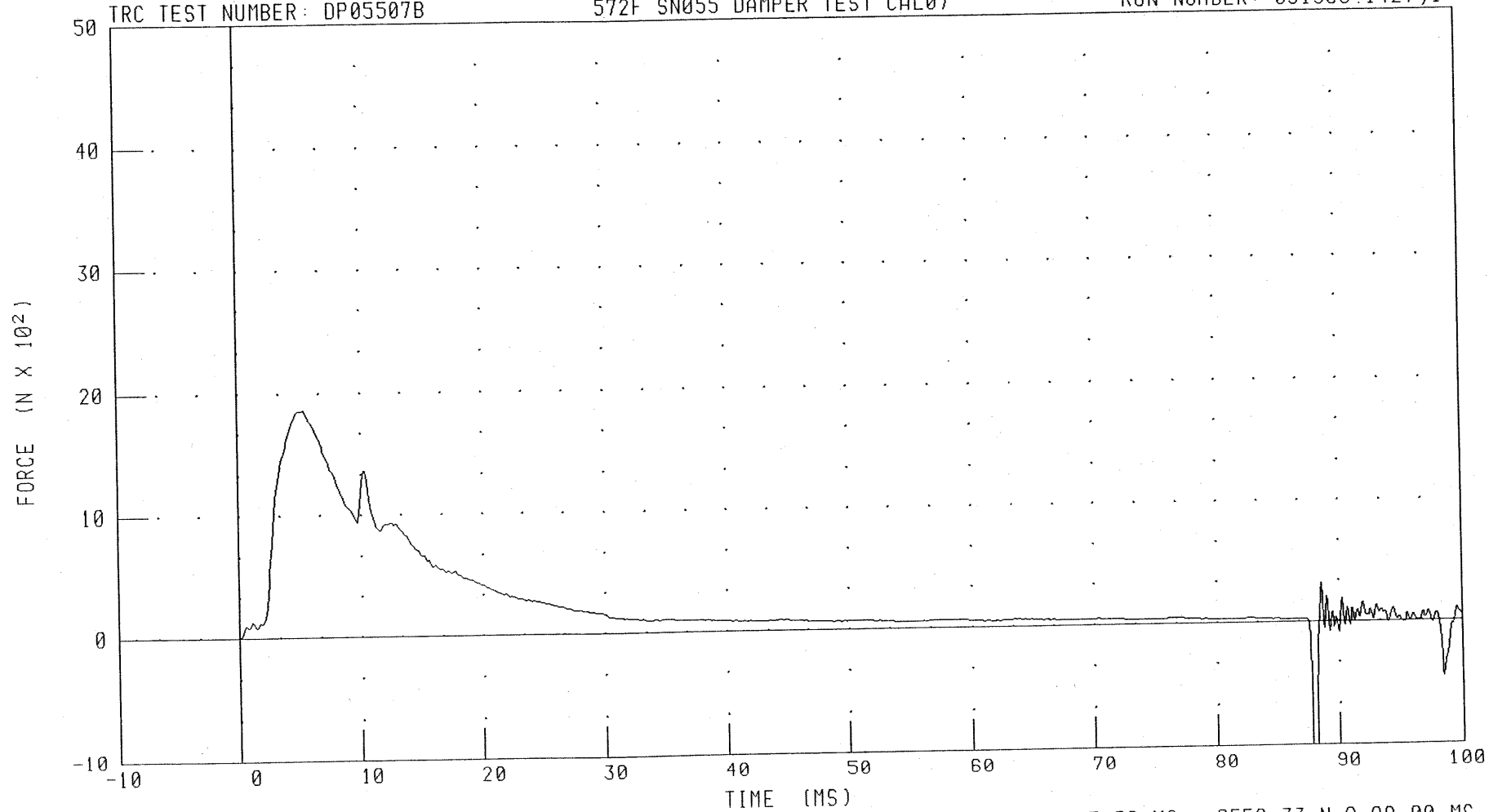
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

572F SN055 DAMPER TEST CAL07

RUN NUMBER: 091503.1427;1

TRC TEST NUMBER: DP05507B



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

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

C-29

040210

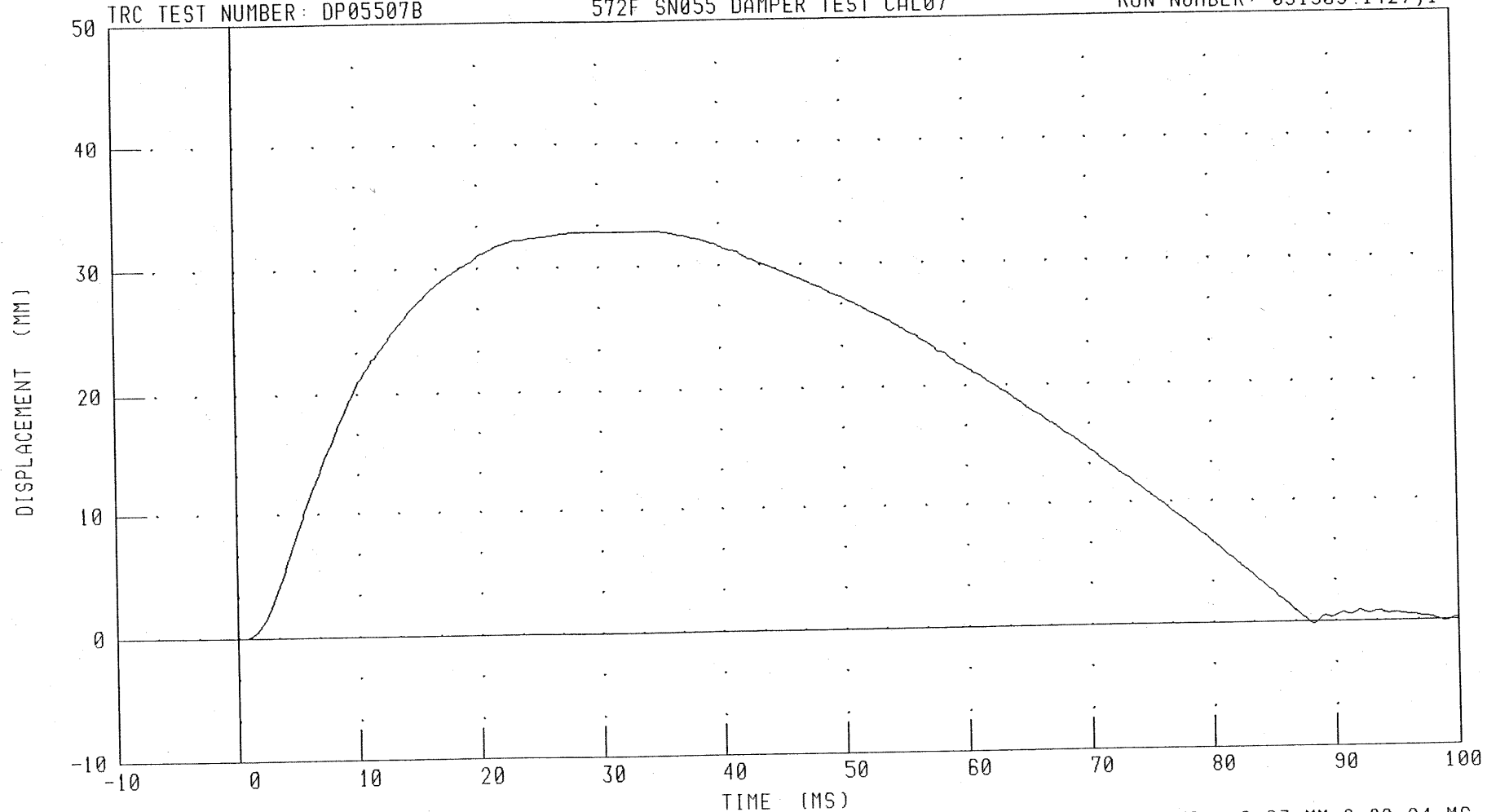
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN055 DAMPER TEST CAL07

RUN NUMBER: 091503.1427;1

TRC TEST NUMBER: DP05507B



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 32.77 MM @ 31.20 MS; -0.23 MM @ 88.24 MS

C-30

040210

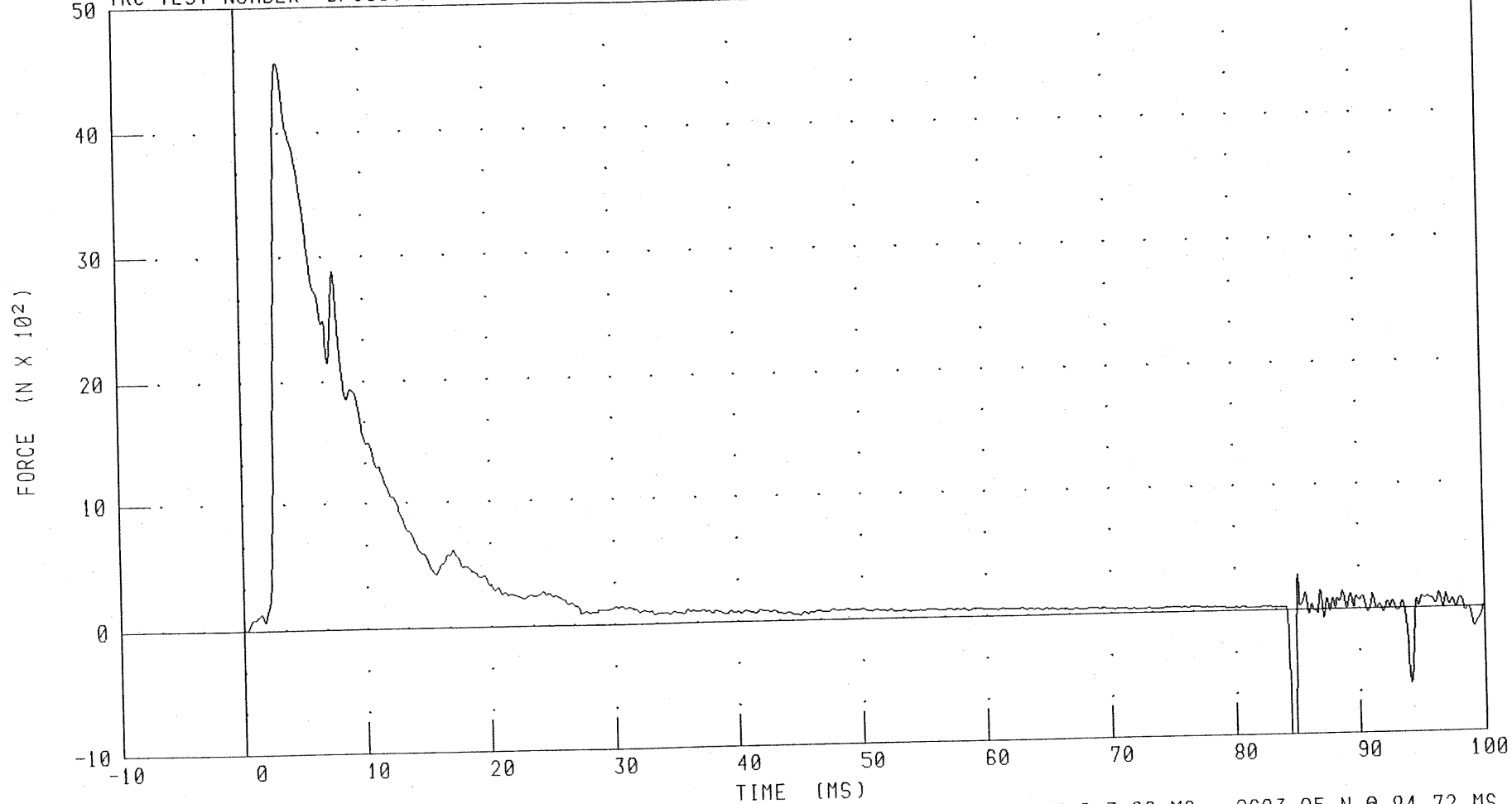
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

572F SN055 DAMPER TEST CAL07

RUN NUMBER: 091503.1427;1

TRC TEST NUMBER: DP05507C



CHANNEL: DAMPF

FILTER: CH. CLASS 1000

PEAK DATA: 4562.46 N @ 3.28 MS; -2683.85 N @ 84.72 MS

C-31

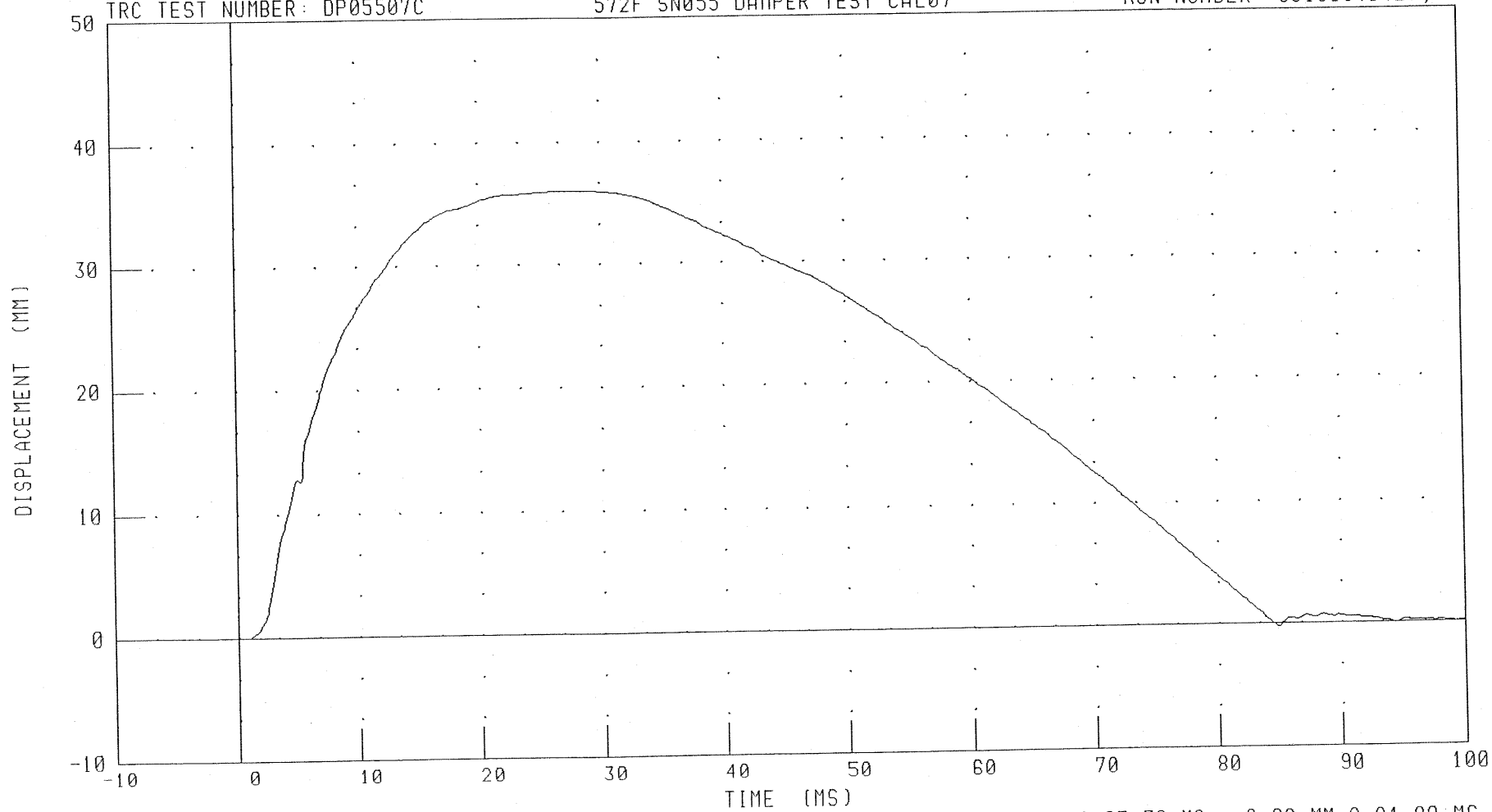
040210

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

SHOCK ABSORBER DISPLACEMENT
572F SN055 DAMPER TEST CAL07

RUN NUMBER: 091503.1427;1

TRC TEST NUMBER: DP05507C



CHANNEL: CSTYD

FILTER: CH. CLASS 1000

PEAK DATA: 35.97 MM @ 27.76 MS; -0.28 MM @ 84.88 MS

C-32

040210

Transportation Research Center Inc.

572B Abdomen Compression Test

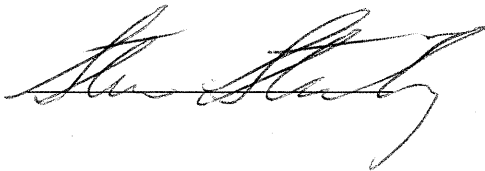
SID HIII Serial No. 055 Calibration No. 10 - 7

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

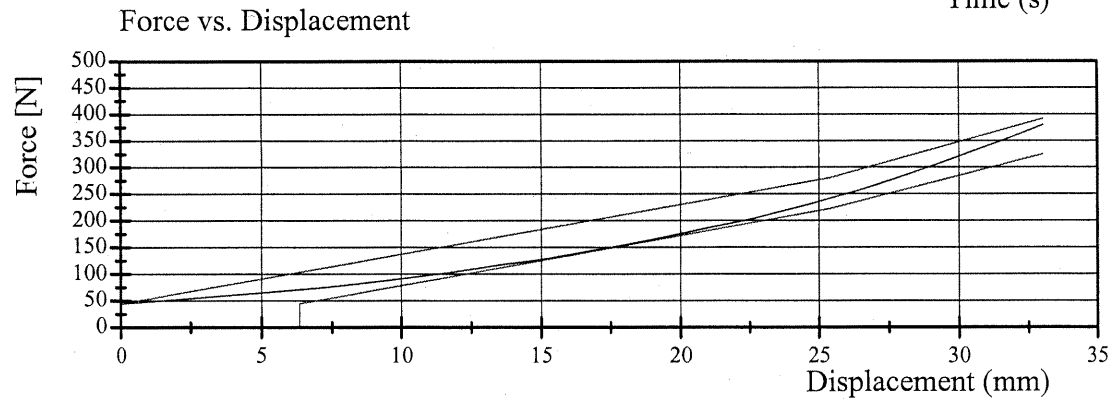
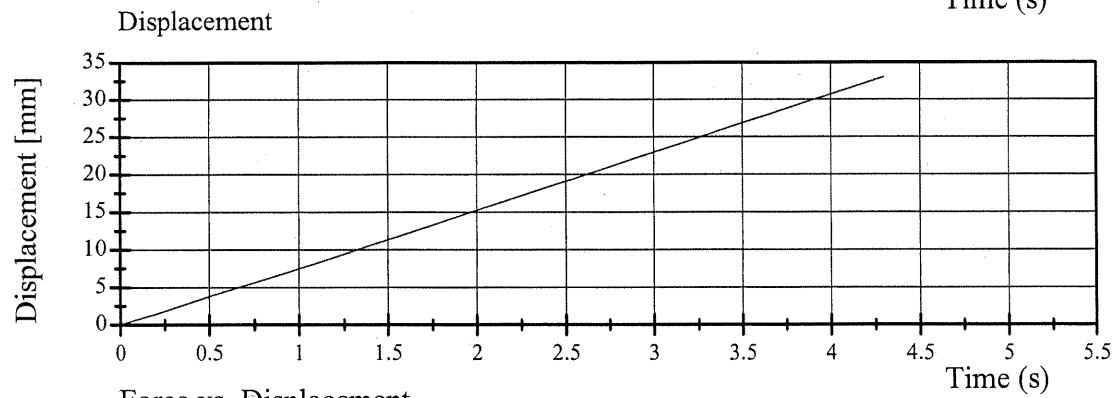
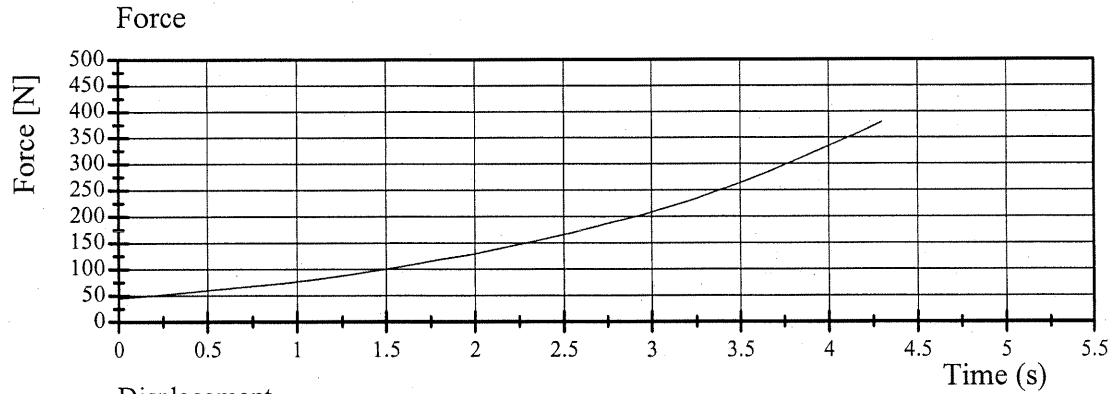


Transportation Research Center Inc.

572B Abdomen Compression Test

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

Test Date 02/06/2004



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 V.J. Walter

Transportation Research Center Inc.

572F Left Pelvis Test

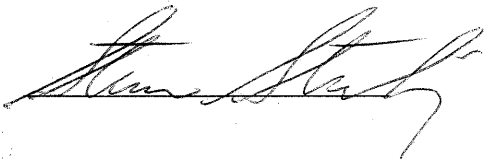
SID HIII Serial No. 055 Calibration No. 10 - 1

Test Date 02/09/2004

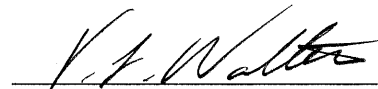
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.2 C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Pendulum Velocity	4.21 - 4.33 m/sec	4.32 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	42.2 g	Yes
Time Above 20 g	3 - 7 ms	6.08 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.09.2004 17:59:27 1150

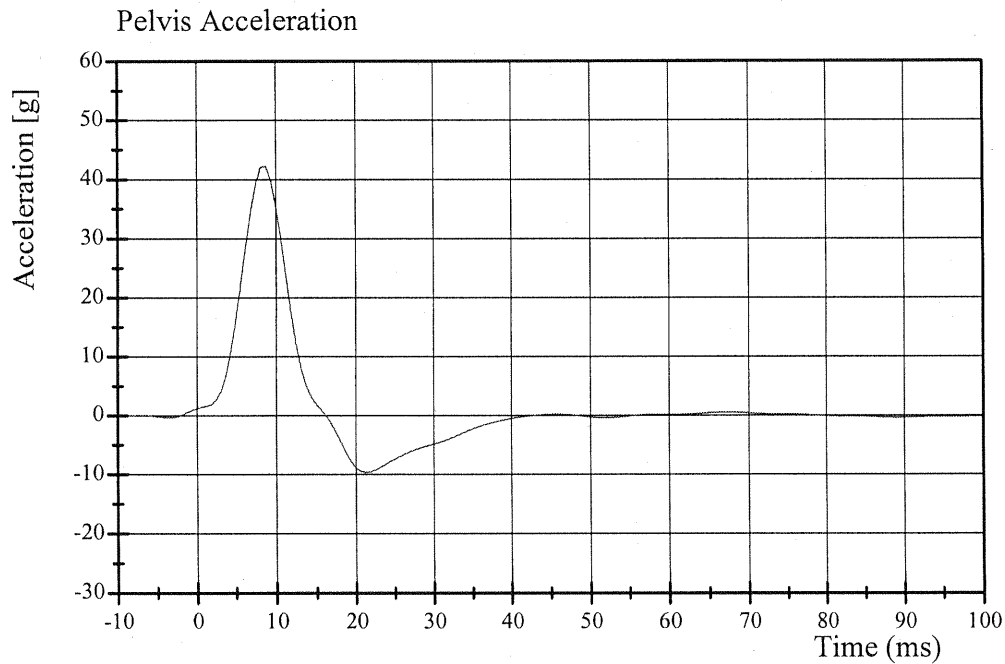


Transportation Research Center Inc.

572F Left Pelvis Test

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

Test Date 02/09/2004



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: 906

Configured for Left Side Impact

External Dimensions:	External dimensions were not recorded post-test.
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.

572M Left Lateral Head Test

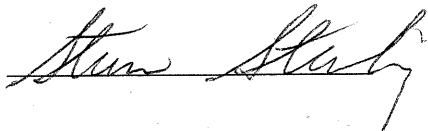
SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

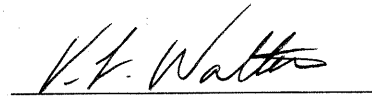
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	23 %	Yes
Peak Resultant Acceleration	120 - 150 g	128.7 g	Yes
Peak Longitudinal Acceleration	15 g Max	6.2 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician



Approved



02.17.2004 12:39:33 610



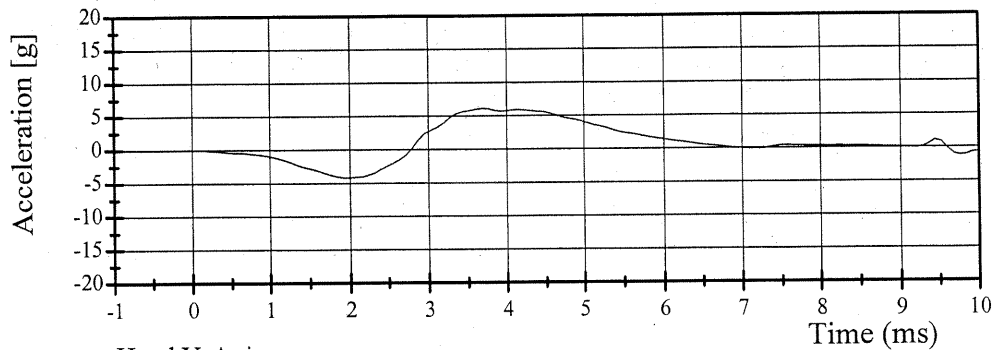
Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Head X-Axis

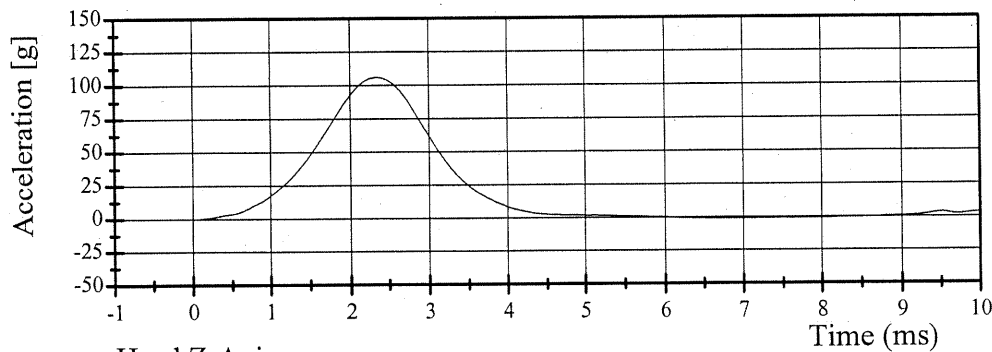


Filter Class: 1000

Max: 6.2 g at 3.7 ms

Min: -4.2 g at 1.9 ms

Head Y-Axis

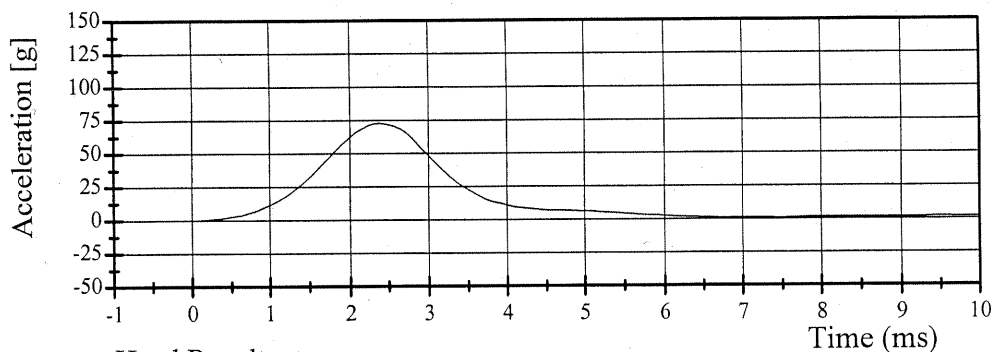


Filter Class: 1000

Max: 106.1 g at 2.3 ms

Min: -1.0 g at 6.6 ms

Head Z-Axis

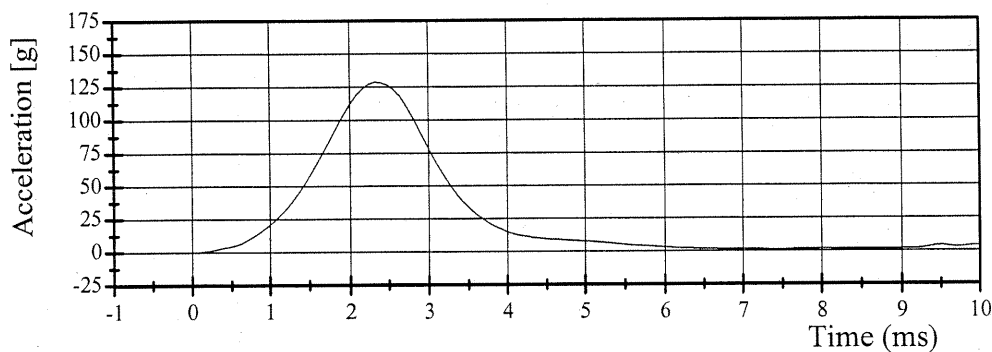


Filter Class: 1000

Max: 72.9 g at 2.4 ms

Min: -0.0 g at 0.0 ms

Head Resultant



Filter Class: 1000

Max: 128.7 g at 2.3 ms

Min: 0.0 g at 3.0 ms

02.17.2004 12:39:34 610



Transportation Research Center Inc.

572M Left Lateral Neck Test

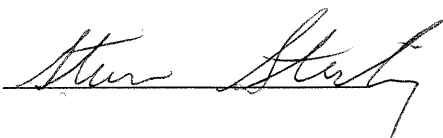
SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

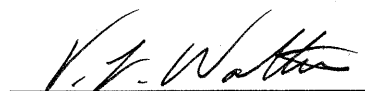
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	24 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.06 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.18 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.37 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.21 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.20 - 7.33 m/s	Yes
Peak D Plane Rotation	66 - 82 °	71.6 °	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	73.4 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	55.4 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	8.3 ms	Yes

Comments:

Technician



Approved



02.17.2004 15:37:43 515

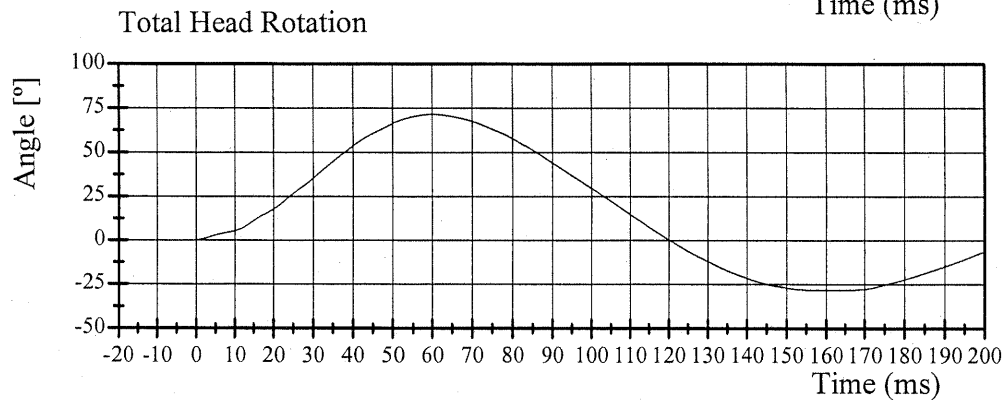
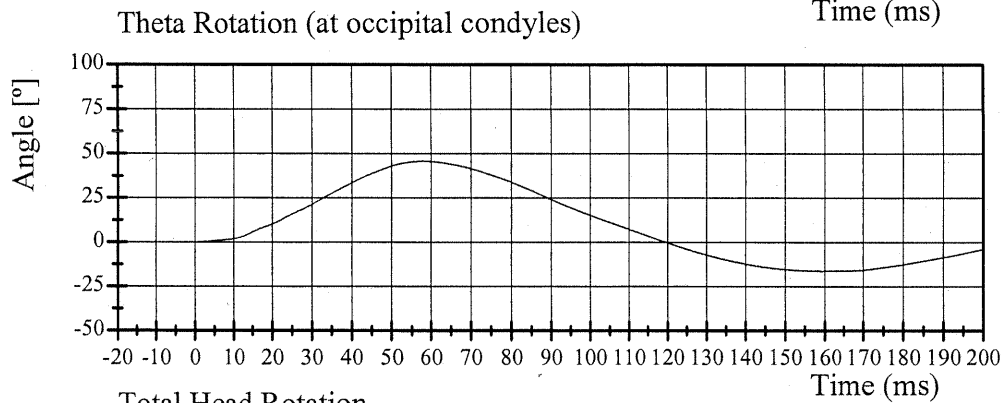
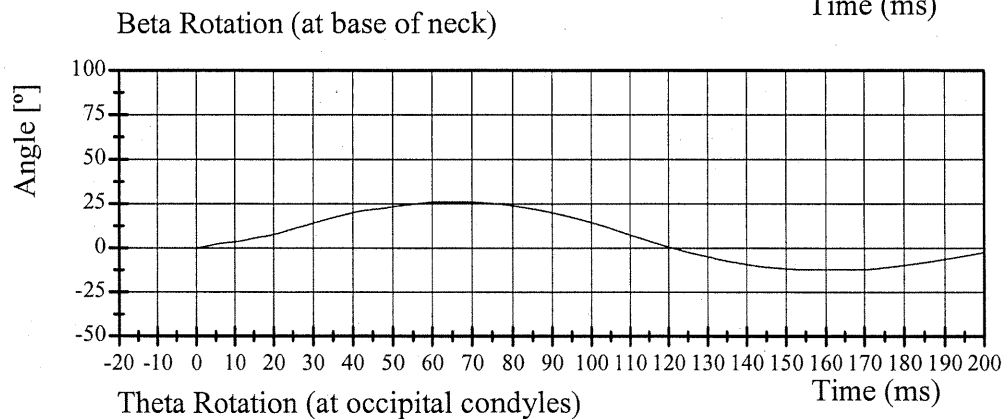
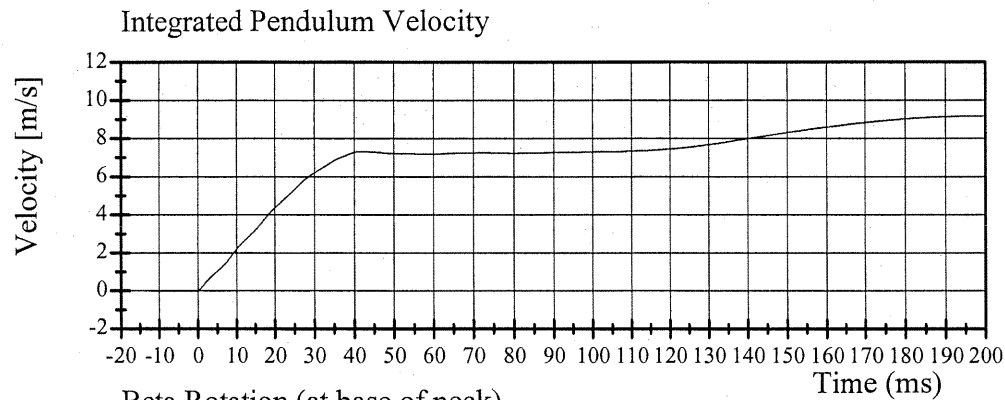


Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004



02.17.2004 15:37:44 515



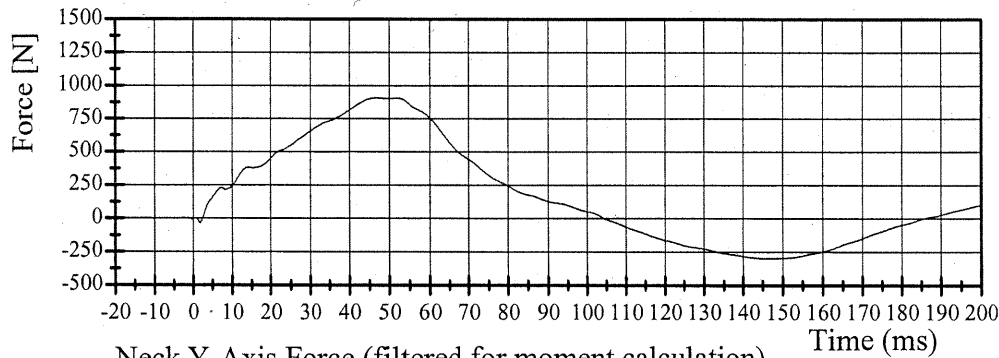
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Neck Y-Axis Force

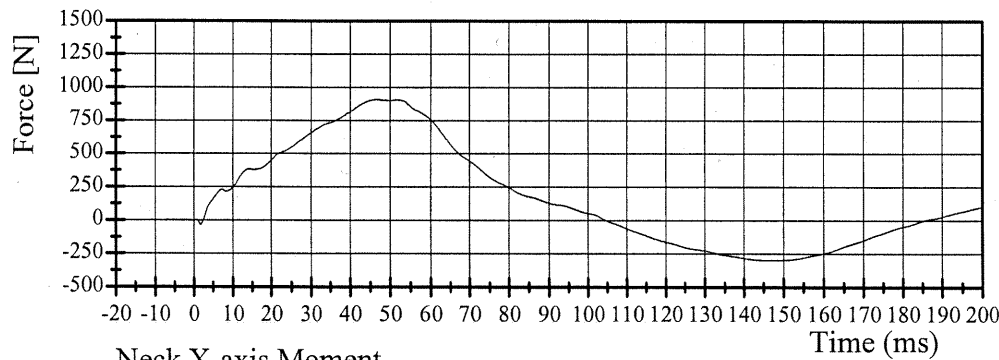


Filter Class: CFC 1000

Max: 909 N at 46.6 ms

Min: -298 N at 146.1 ms

Neck Y-Axis Force (filtered for moment calculation)

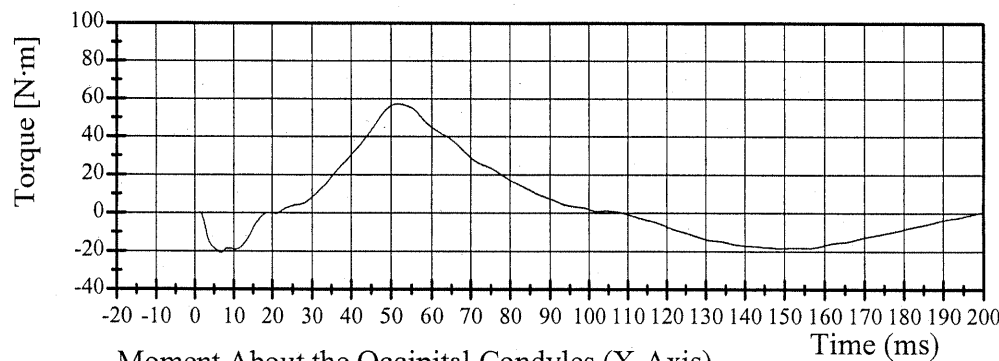


Filter Class: CFC 600

Max: 909 N·m at 46.6 ms

Min: -298 N·m at 146.1 ms

Neck X-axis Moment

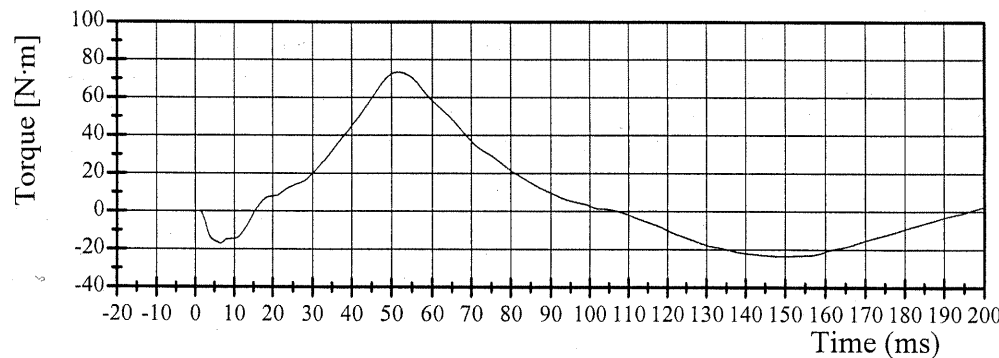


Filter Class: CFC 600

Max: 57.3 N·m at 51.8 ms

Min: -20.8 N·m at 6.6 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 73.4 ° at 51.8 ms

Min: -23.6 ° at 149.4 ms

Transportation Research Center Inc.

572B Abdomen Compression Test

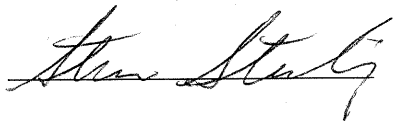
SID HIII Serial No. 906 Calibration No. 06 - 3

Test Date 02/16/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	21 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.4 - 7.9 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician



Approved



02.16.2004 16:03:51 1691

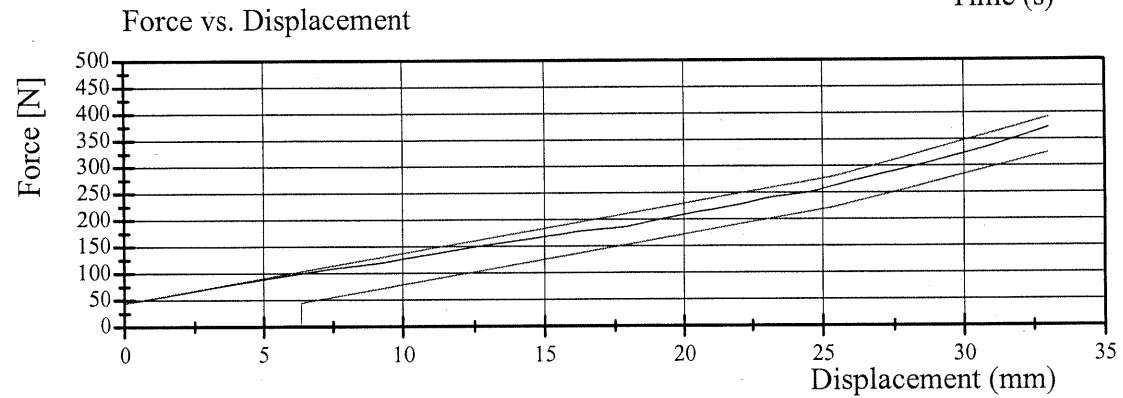
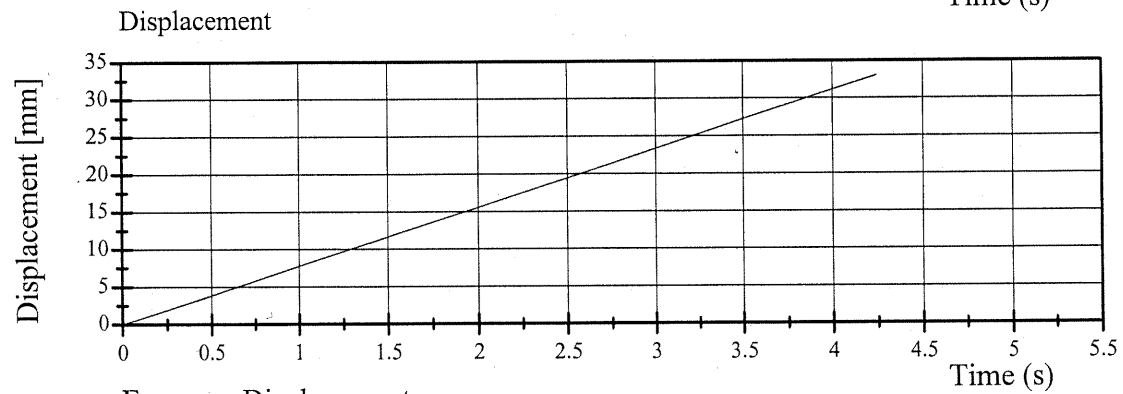
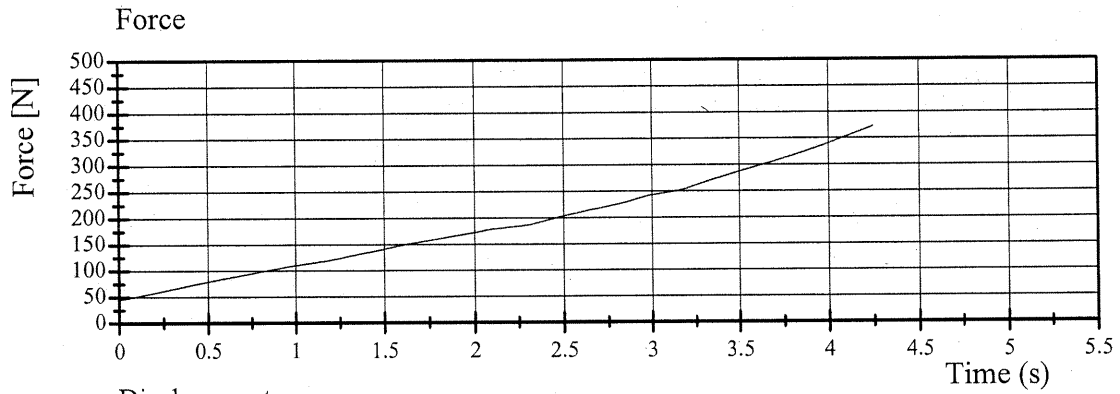


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 906 Calibration No. 06 - 3

Test Date 02/16/2004



02.16.2004 16:03:52 1691



TRANSPORTATION RESEARCH CENTER INC.

PART 572B LUMBAR FLEXION TEST

SID/HIII

CAL DATE: 17-Feb-04

TRC, INC.

TEST NO: LF90606-3

572M SN 906 TORSO FLEX CAL 06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 – 25.6° C	21.1 °C
RELATIVE HUMIDITY	10 – 70 %	23 %
FORCE AT 0 DEG. FLEXION	-27 – 27 N	0 N
FORCE AT 20 DEG OF FLEXION	98 – 151 N	106.8 N
FORCE AT 30 DEG OF FLEXION	151 – 205 N	160.1 N
FORCE AT 40 DEG OF FLEXION	205 – 258 N	222.4 N
NET RETURN ANGLE AFTER 3 MINUTES	< 12 °	3 °

TEST MEETS SPECIFICATIONS

TECHNICIAN V. F. Walter

Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.8 C	Yes
Relative Humidity	10 - 70 %	25 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.28 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	43.3 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	44.0 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	18.3 g	Yes

Comments:

Technician



Approved



02.17.2004 17:04:02 1149



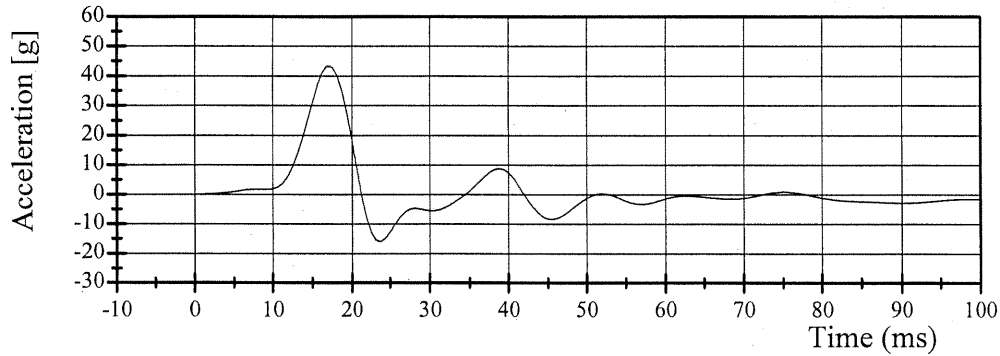
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

Upper Rib Bar Acceleration

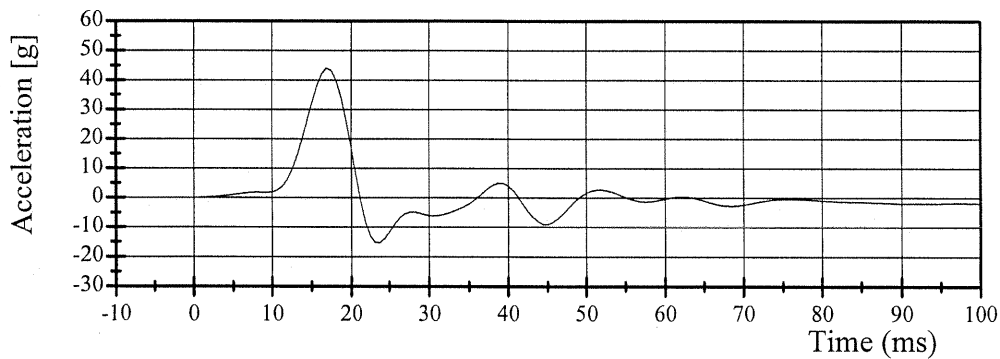


Filter Class: FIR 100

Max: 43.3 g at 17.0 ms

Min: -16.0 g at 23.8 ms

Lower Rib Bar Acceleration

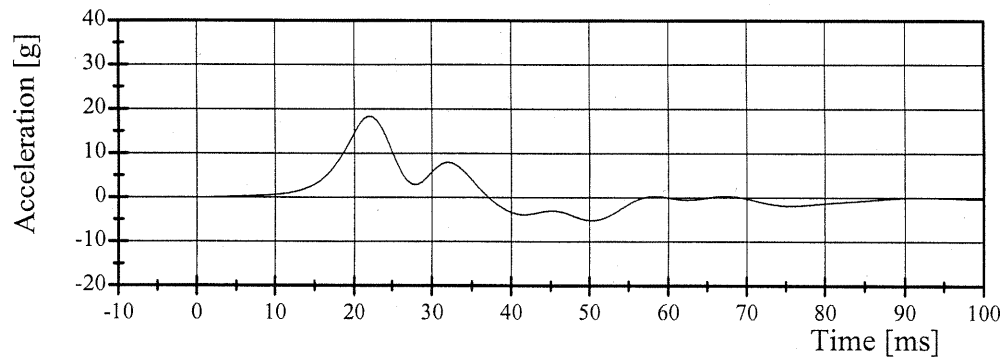


Filter Class: FIR 100

Max: 44.0 g at 17.0 ms

Min: -15.2 g at 23.8 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 18.3 g at 21.9 ms

Min: -5.2 g at 50.1 ms

Transportation Research Center Inc.

572F Left Pelvis Test

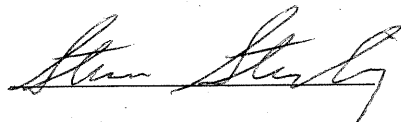
SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004

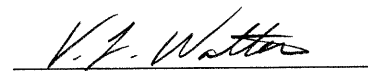
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.8 C	Yes
Relative Humidity	10 - 70 %	25 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.28 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	53.3 g	Yes
Time Above 20 g	3 - 7 ms	5.76 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.17.2004 16:53:15 1170

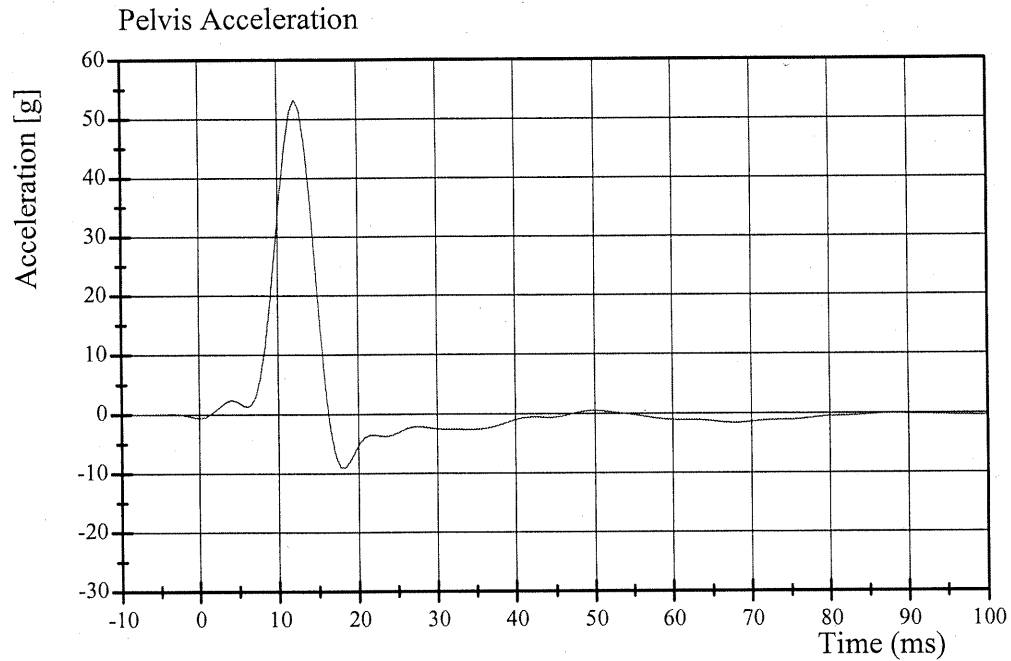


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 906 Calibration No. 06 - 1

Test Date 02/17/2004



Filter Class: FIR 100

Max: 53.3 g at 12.1 ms

Min: -9.0 g at 18.3 ms

02.17.2004 16:53:16 1170



Calibration Test Results

Post-Test

SID HIII: 055

Configured for Left Side Impact

External Dimensions:	External dimensions were not recorded post-test.
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.

572M Left Lateral Head Test

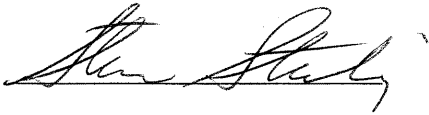
SID HIII Serial No. 055 Calibration No. 11 - 1

Test Date 02/17/2004

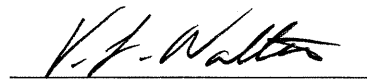
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	24 %	Yes
Peak Resultant Acceleration	120 - 150 g	133.0 g	Yes
Peak Longitudinal Acceleration	15 g Max	7.4 g	Yes
Is Acceleration Curve Unimodal?	Yes	Yes	Yes

Comments:

Technician



Approved



02.17.2004 10:43:13 610

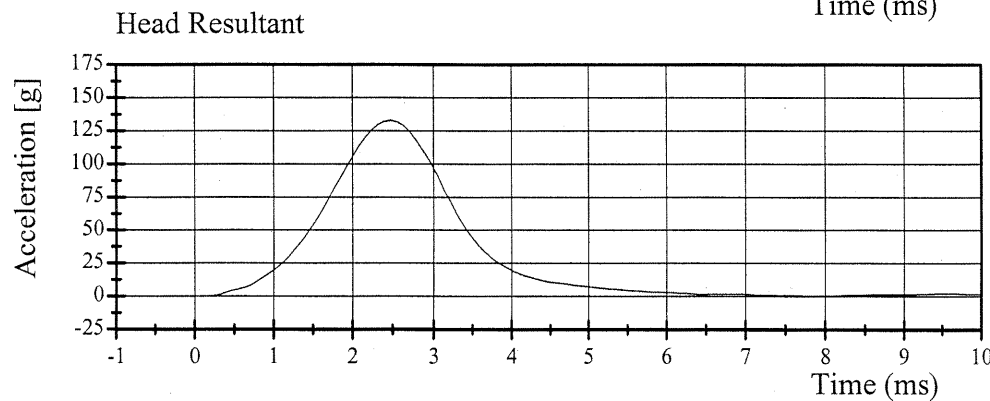
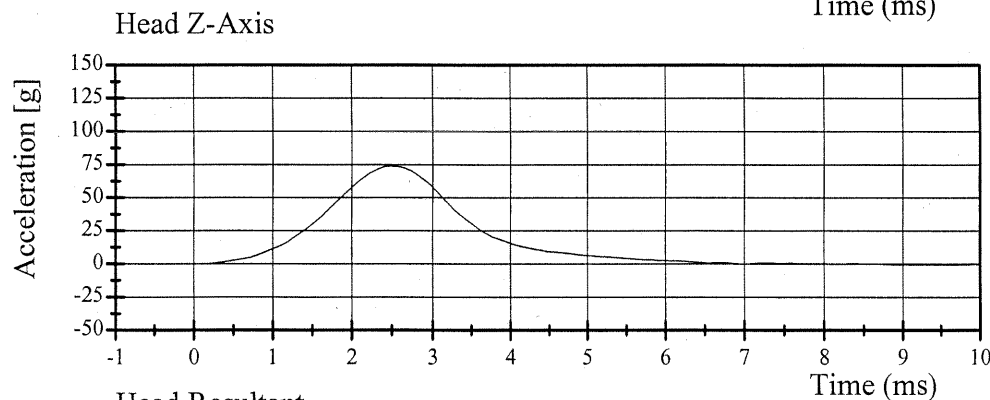
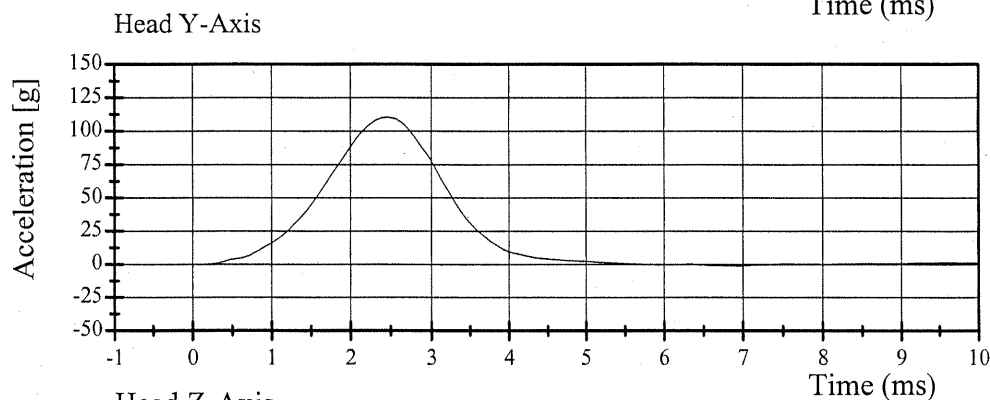
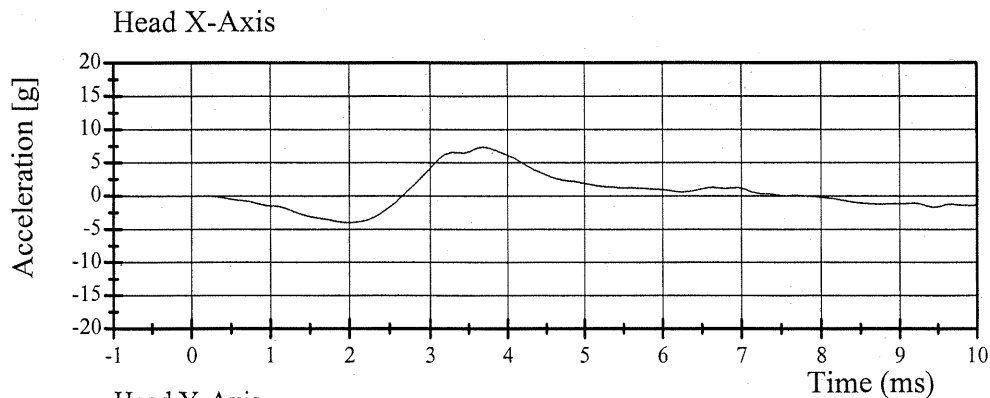


Transportation Research Center Inc.

572M Left Lateral Head Test

SID HIII Serial No. 055 Calibration No. 11 - 1

Test Date 02/17/2004



02.17.2004 10:43:14 610



Transportation Research Center Inc.

572M Left Lateral Neck Test

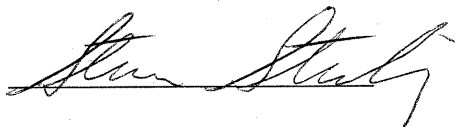
SID HIII Serial No. 055 Calibration No. 11 - 4

Test Date 02/17/2004

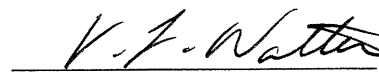
Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	24 %	Yes
Impact Velocity	6.89 - 7.13 m/s	7.06 m/s	Yes
Integrated Pendulum Velocity			
10 ms	1.96 - 2.55 m/s	2.04 m/s	Yes
20 ms	4.12 - 5.10 m/s	4.20 m/s	Yes
30 ms	5.73 - 7.01 m/s	6.07 m/s	Yes
40 - 70 ms	6.27 - 7.64 m/s	7.17 - 7.32 m/s	Yes
Peak D Plane Rotation	66 - 82 °	69.5 °	Yes
Rotation Decay Time To 0° From Peak Angle	58 - 67 °	59.9 °	Yes
Peak Moment About Occipital Condyles	73.0 - 88.0 N·m	83.0 N·m	Yes
Moment Decay Time To 0 N·m From Peak Moment	49 - 64 ms	53.0 ms	Yes
Time Between Peak Rotation and Peak Moment	2 - 16 ms	8.6 ms	Yes

Comments:

Technician



Approved



02.17.2004 15:01:58 506



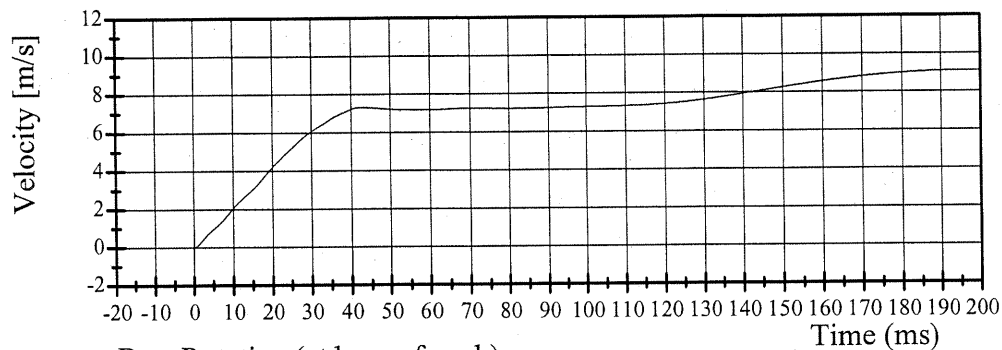
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 055 Calibration No. 11 - 4

Test Date 02/17/2004

Integrated Pendulum Velocity

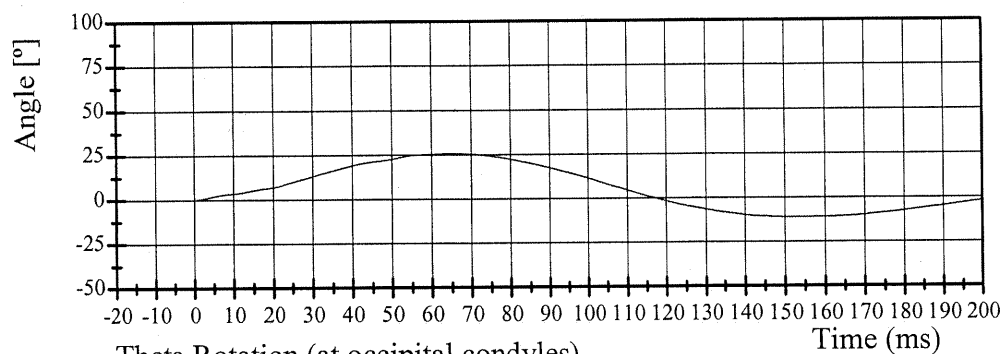


Filter Class: 180

Max: 9.4 m/s at 959.5 ms

Min: -0.0 m/s at -31.4 ms

Beta Rotation (at base of neck)

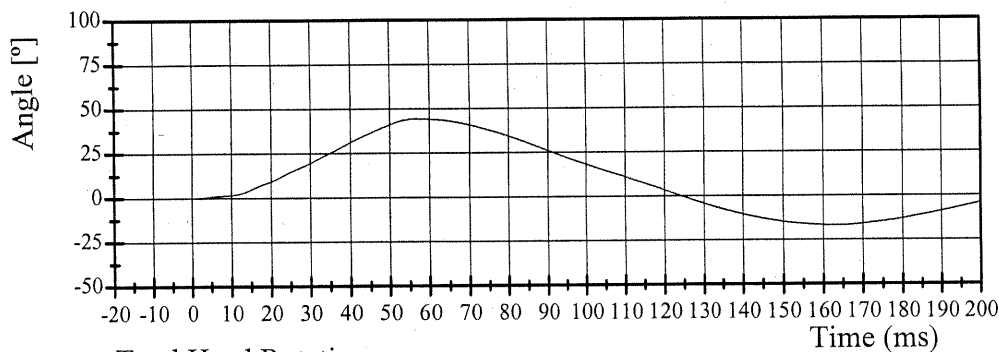


Filter Class: 60

Max: 25.7 ° at 65.0 ms

Min: -11.0 ° at 152.6 ms

Theta Rotation (at occipital condyles)

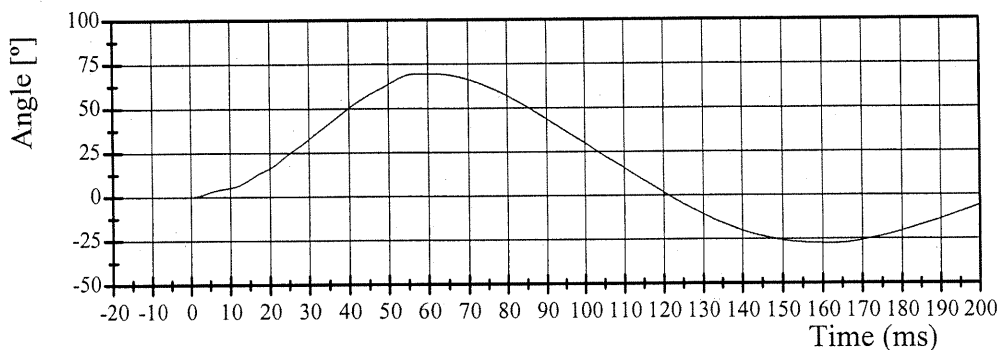


Filter Class: 60

Max: 44.4 ° at 56.6 ms

Min: -16.8 ° at 163.5 ms

Total Head Rotation



Filter Class: 60

Max: 69.5 ° at 61.4 ms

Min: -27.5 ° at 162.3 ms

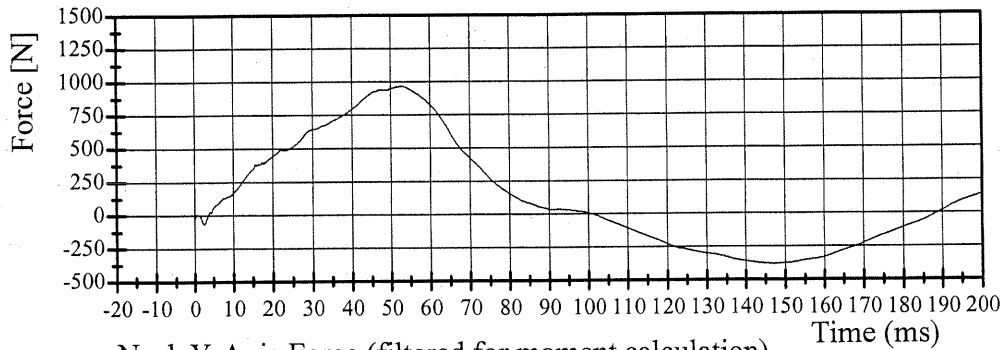
Transportation Research Center Inc.

572M Left Lateral Neck Test

SID HIII Serial No. 055 Calibration No. 11 - 4

Test Date 02/17/2004

Neck Y-Axis Force

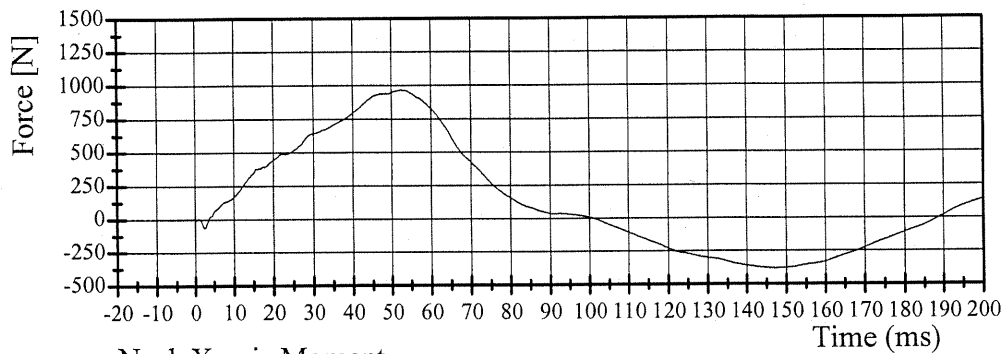


Filter Class: CFC 1000

Max: 968 N at 52.5 ms

Min: -381 N at 147.3 ms

Neck Y-Axis Force (filtered for moment calculation)

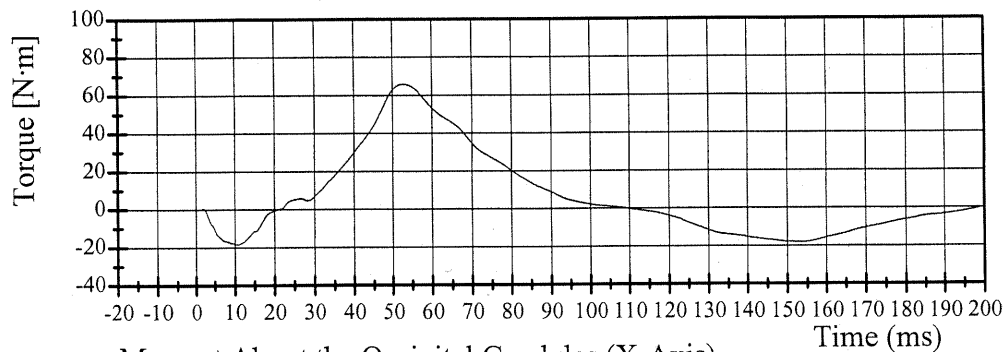


Filter Class: CFC 600

Max: 966 N at 52.6 ms

Min: -380 N at 147.1 ms

Neck X-axis Moment

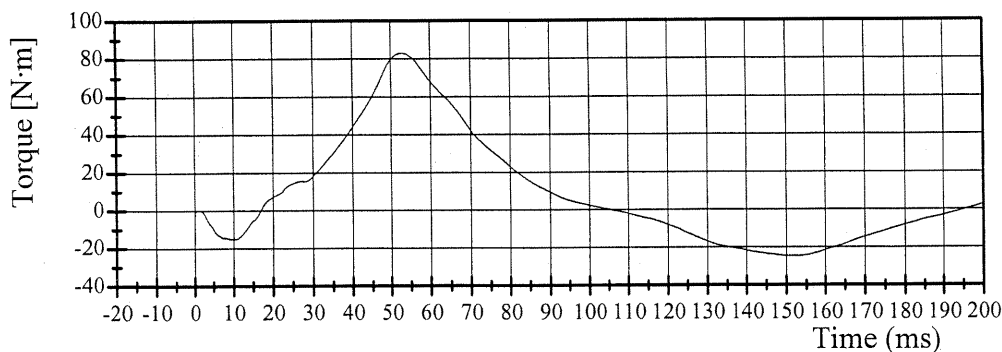


Filter Class: CFC 600

Max: 65.8 N·m at 52.8 ms

Min: -18.4 N·m at 10.9 ms

Moment About the Occipital Condyles (X-Axis)



Filter Class: 600

Max: 83.0 ° at 52.8 ms

Min: -24.6 ° at 152.2 ms

Transportation Research Center Inc.

572B Abdomen Compression Test

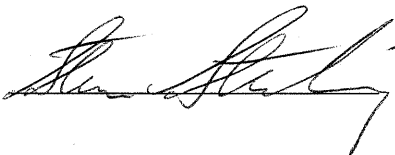
SID HIII Serial No. 055 Calibration No. 11 - 6

Test Date 02/17/2004

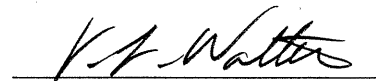
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	25 %	Yes
Displacement Rate	6.35 - 8.89 mm/s	7.7 - 7.9 mm/s	Yes
Data Within Required Corridor	Yes	Yes	Yes

Comments:

Technician



Approved



02.17.2004 17:30:20 1593

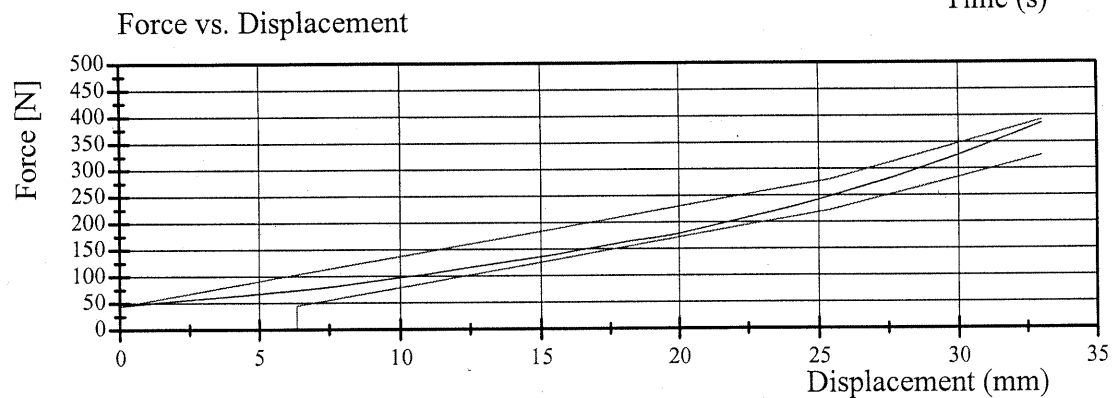
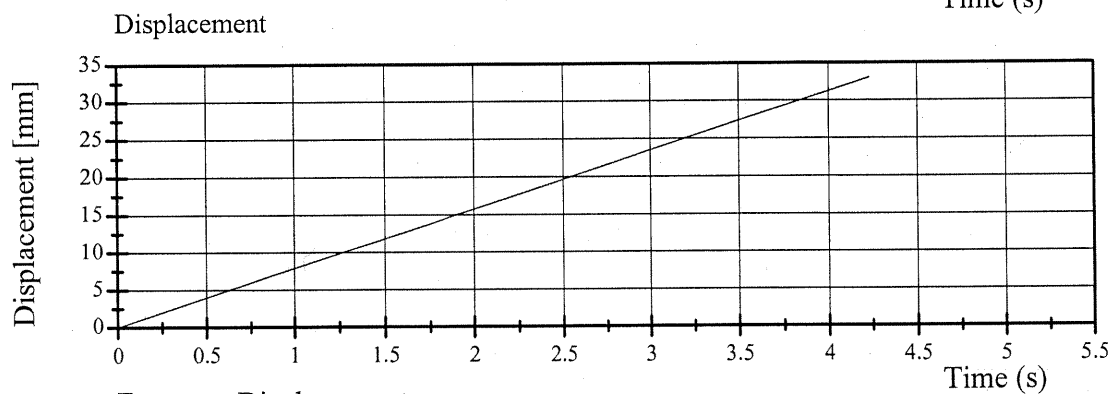
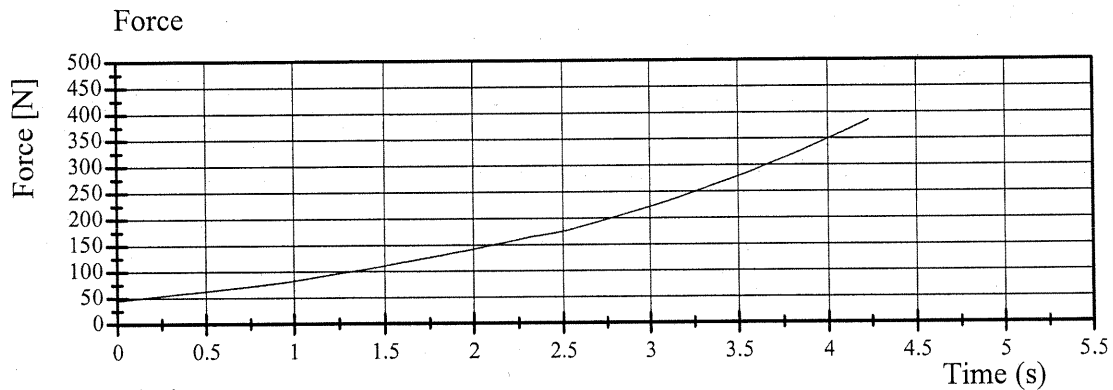


Transportation Research Center Inc.

572B Abdomen Compression Test

SID HIII Serial No. 055 Calibration No. 11 - 6

Test Date 02/17/2004



02.17.2004 17:30:21 1593



Transportation Research Center Inc.

572F Left Thorax Test

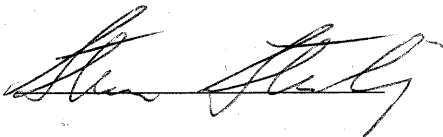
SID HIII Serial No. 055 Calibration No. 11 - 1

Test Date 02/19/2004

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	22.2 C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.29 m/sec	Yes
Upper Rib Bar Peak Acceleration	37 - 46 g	40.7 g	Yes
Lower Rib Bar Peak Acceleration	37 - 46 g	39.6 g	Yes
Lower Thoracic Spine (T12) Peak Acceleration	15 - 22 g	17.9 g	Yes

Comments:

Technician



Approved



02.19.2004 09:19:47 1171



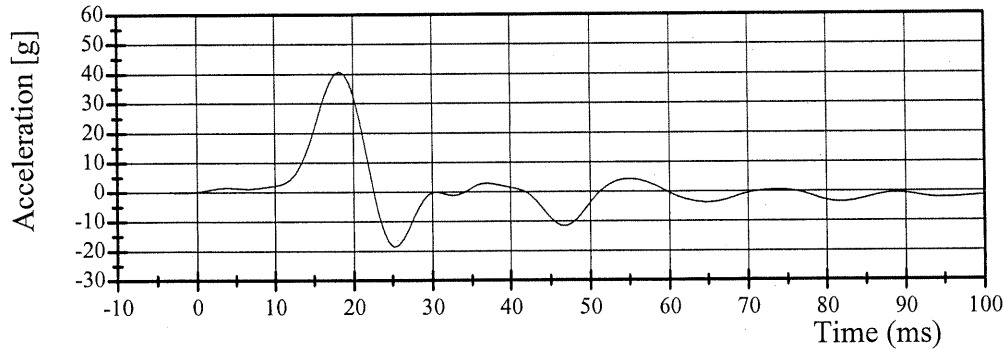
Transportation Research Center Inc.

572F Left Thorax Test

SID HIII Serial No. 055 Calibration No. 11 - 1

Test Date 02/19/2004

Upper Rib Bar Acceleration

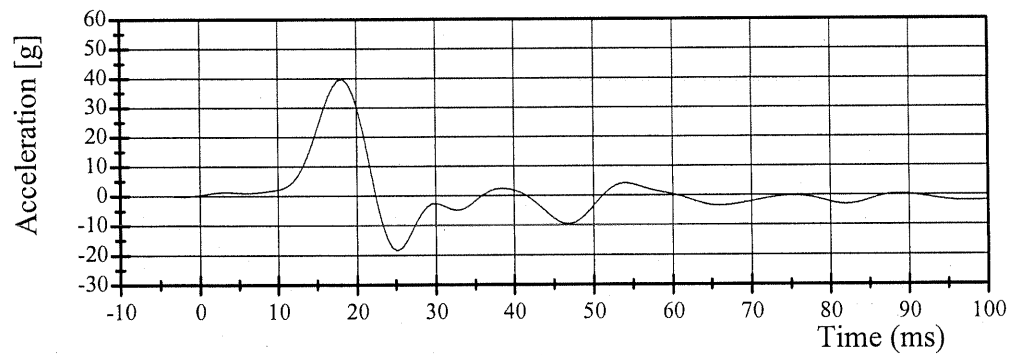


Filter Class: FIR 100

Max: 40.7 g at 18.2 ms

Min: -18.6 g at 25.2 ms

Lower Rib Bar Acceleration

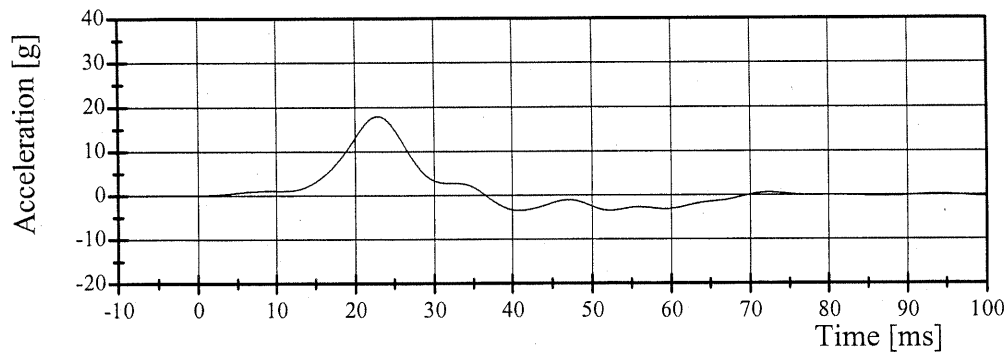


Filter Class: FIR 100

Max: 39.6 g at 18.2 ms

Min: -18.5 g at 25.1 ms

Lower Thoracic Spine (T12) Acceleration



Filter Class: FIR 100

Max: 17.9 g at 22.7 ms

Min: -3.5 g at 52.1 ms

Transportation Research Center Inc.

572F Left Pelvis Test

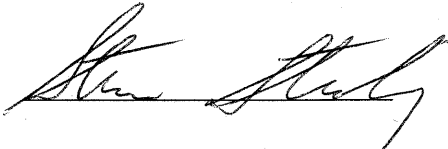
SID HIII Serial No. 055 Calibration No. 11 - 2

Test Date 02/19/2004

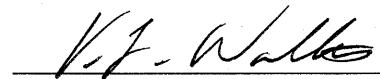
Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.5 C	21.5 C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Pendulum Velocity	4.27 - 4.33 m/sec	4.32 m/sec	Yes
Pelvis Peak Acceleration	40 - 60 g	40.9 g	Yes
Time Above 20 g	3 - 7 ms	6.32 ms	Yes
Unimodal requirement for pelvis acceleration	Yes	Yes	Yes

Comments:

Technician



Approved



02.19.2004 11:16:15 1202

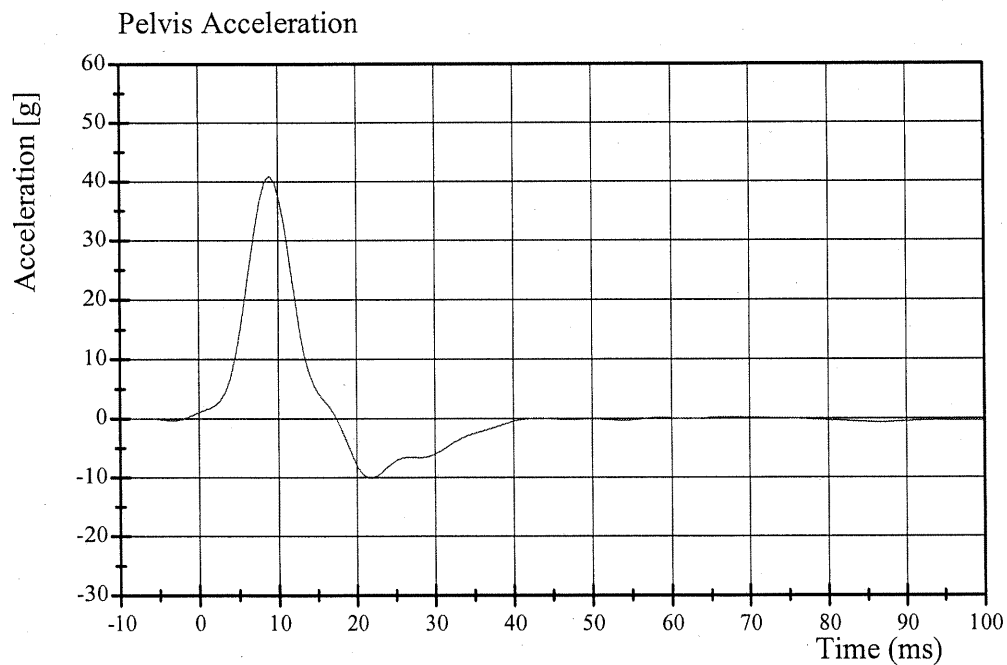


Transportation Research Center Inc.

572F Left Pelvis Test

SID HIII Serial No. 055 Calibration No. 11 - 2

Test Date 02/19/2004



Filter Class: FIR 100

Max: 40.9 g at 8.9 ms

Min: -10.1 g at 22.0 ms

Type: SID HIII S/N: 906 Mfr: UNK Test Date: 02/10/04Proj./Seg. No.: 20020455-2040 Test Eng.: Walter D. 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: 02/09/04

Type: SID HIII S/N: 055 Mfr: ASTC Test Date: 02/10/04Proj./Seg. No.: 20020455-2040 Test Eng.: Walter D. 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: 02/09/04

Transportation Research Center Inc.

SID HIII Post-Use Inspection

Type: SID HIII S/N: 906 Mfr: UNK Test Date: 02/10/04

Proj./Seg. No.: 20020455-2040 Test Eng.: Walter D. 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:	
Iliac 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	*
Ankle Range of Motion	X

NOTES: Right break away joint jammed. Joint had no washer. Installed same

Inspection Completed By: D. Stewart

Date: 02/16/04

Transportation Research Center Inc.

SID HIII Post-Use Inspection

Type: SID HIII S/N: 055 Mfr: ASTC Test Date: 02/10/04

Proj./Seg. No.: 20020455-2040 Test Eng.: Walter D. 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:	
Iliac 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

Inspection Completed By: D. Stewart

Date: 02/16/04

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

<u>Typical Test Measurements</u>	<u>Channel Class</u>
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

2/10/2004 7:54:49 AM

Name of Test 040210

System MINIDAU

Name of DAU DAU6

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range		Pol.	Cal.	Group	Mfg.	Model	
6001	EVENT	EVENT	EVENT		5.12	V	+	11/8/2003	OK	-1	TRC	Event
6002	P30027	BCGXG1	MDB CG X-AXIS	FWD	606.49853	g	+	12/22/2003	OK	-1	Endevco	7264C-2K-2-180
6003	P29849	BCGYG1	MDB CG Y-AXIS	LT	602.95589	g	-	12/22/2003	OK	-1	Endevco	7264C-2K-2-180
6004	P28856	BCGZG1	MDB CG Z-AXIS	UP	592.69549	g	-	1/12/2004	OK	-1	Endevco	7264C-2K-2-180
6005	P30158	LRRXG1	MDB LT RR X-AXIS	FWD	609.11773	g	+	12/17/2003	OK	-1	Endevco	7264C-2K-2-180
6006	P28892	LRRYG1	MDB LT RR Y-AXIS	LT	592.86706	g	-	12/17/2003	OK	-1	Endevco	7264C-2K-2-180

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040210

Channel Report

2/10/2004 7:54:49 AM

Name of Test 040210

System MINIDAU

Name of DAU DAUB

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
0001	J26885	HEDXG1	Head Accel X	Rwd	803.17505 g	-	9/9/2003	OK 906n	Endevco	7264-2000TZ
0002	J26864	HEDYG1	Head Accel Y	Lft	790.78244 g	-	9/9/2003	OK 906n	Endevco	7264-2000TZ
0003	J27950	HEDZG1	Head Accel Z	Up	791.95668 g	-	9/9/2003	OK 906n	Endevco	7264-2000TZ
0004	J27271	HEDXR1	Head Accel X Red	Rwd	799.75007 g	-	9/9/2003	OK 906n	Endevco	7264-2000TZ
0005	J27283	HEDYR1	Head Accel Y Red	Lt	809.00012 g	-	9/9/2003	OK 906n	Endevco	7264-2000TZ
0006	J26980	HEDZR1	Head Accel Z Red	Up	789.53861 g	-	9/9/2003	OK 906n	Endevco	7264-2000TZ
0007	1716A-1535-FX	NEKXF1	Neck Force X	Hd	8891.7885 N	-	9/9/2003	OK 906n	Denton	1716A
0008	1716A-1535-FY	NEKYF1	Neck Force Y	Hd	8908.0907 N	+	9/9/2003	OK 906n	Denton	1716A
0009	1716A-1535-FZ	NEKZF1	Neck Force Z	Hd	13363.156 N	+	9/9/2003	OK 906n	Denton	1716A
0010	1716A-1535-MX	NEKXM1	Neck Moment X	Rt Ear	282.72169 N·m	-	9/9/2003	OK 906n	Denton	1716A
0011	1716A-1535-MY	NEKYM1	Neck Moment Y	Chn	282.57318 N·m	+	9/9/2003	OK 906n	Denton	1716A
0012	1716A-1535-MZ	NEKZM1	Neck Moment Z	Chn	283.00597 N·m	+	9/9/2003	OK 906n	Denton	1716A
0013	P27850	LURYG1	Left Upper Rib Y	Rgt	792.32435 g	+	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0014	P25374	LURYR1	Left Upper Rib Red Y	Rgt	799.23822 g	+	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0015	P29211	LLRYG1	Left Lower Rib Y	Rgt	787.98325 g	+	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0016	P25075	LLRYR1	Left Lower Rib Red Y	Rgt	797.20976 g	+	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0017	P21635	T12YG1	Lower Spine Y	Lft	397.33043 g	-	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0018	P24564	T12YR1	Lower Spine Red Y	Lft	397.12087 g	-	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0019	P21652	PEVYG1	Pelvis Accel Y	Lft	397.45998 g	-	9/9/2003	OK 906n	Endevco	7264C-2K-2-180
0020	P25318	PEVYR1	Pelvis Accel Red Y	Lft	402.78171 g	-	9/15/2003	OK 906n	Endevco	7264C-2K-2-180
0021	P25298	HEDXG4	Head Accel X	Rwd	801.41499 g	-	9/16/2003	OK 055n	Endevco	7264C-2K-2-180
0022	P25061	HEDYG4	Head Accel Y	Lft	807.76208 g	-	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0023	P25261	HEDZG4	Head Accel Z	Up	803.12465 g	-	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0024	P25067	HEDXR4	Head Accel X Red	Rwd	803.43972 g	-	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0025	P24511	HEDYR4	Head Accel Y Red	Lt	789.83092 g	-	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0026	P25063	HEDZR4	Head Accel Z Red	Up	806.42620 g	-	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0027	1716-0534-FX	NEKXF4	Neck Force X	Hd	8890.8019 N	-	9/9/2003	OK 055n	Denton	1716
0028	1716-0534-FY	NEKYF4	Neck Force Y	Hd	8885.0977 N	+	9/9/2003	OK 055n	Denton	1716
0029	1716-0534-FZ	NEKZF4	Neck Force Z	Hd	13357.627 N	+	9/9/2003	OK 055n	Denton	1716
0030	1716-0534-MX	NEKXM4	Neck Moment X	Rt Ear	282.37048 N·m	-	9/9/2003	OK 055n	Denton	1716
0031	1716-0534-MY	NEKYM4	Neck Moment Y	Chn	282.42609 N·m	+	9/9/2003	OK 055n	Denton	1716
0032	1716-0534-MZ	NEKZM4	Neck Moment Z	Chn	282.48456 N·m	+	9/9/2003	OK 055n	Denton	1716

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040210

Channel Report

2/10/2004 7:54:50 AM

Name of Test 040210

System MINIDAU

Name of DAU DAUC

Chan.#	Sensor #	Mnemonic	Description	Dir.	Range	Pol.	Cal.	Group	Mfg.	Model
0001	P25068	LURYG4	Left Upper Rib Y	Rgt	794.82124 g	+	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0002	P25069	LURYR4	Left Upper Rib Red Y	Rgt	808.28492 g	+	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0003	P25305	LLRYG4	Left Lower Rib Y	Rgt	802.92314 g	+	8/22/2003	OK 055n	Endevco	7264C-2K-2-180
0004	P25395	LLRYR4	Left Lower Rib Red Y	Rgt	806.45161 g	+	8/25/2003	OK 055n	Endevco	7264C-2K-2-180
0005	P24393	T12YG4	Lower Spine Y	Lft	402.81973 g	-	9/9/2003	OK 055n	Endevco	7264C-2K-2-180
0006	P24627	T12YR4	Lower Spine Red Y	Lft	402.18373 g	-	8/25/2003	OK 055n	Endevco	7264C-2K-2-180
0007	P25397	PEVYG4	Pelvis Accel Y	Lft	398.38157 g	-	8/25/2003	OK 055n	Endevco	7264C-2K-2-180
0008	P25231	PEVYR4	Pelvis Accel Red Y	Lft	399.27631 g	-	9/9/2003	OK 055n	Endevco	7264C-2K-2-180
0009	P29974	RFSXG1	RGT SIDE SILL FRNT ST X	FWD	403.34016 g	+	1/14/2004	OK -1	Endevco	7264C-2K-2-180
0010	P27508	RFSYG1	RGT SIDE SILL FRNT ST Y	LT	1010.0213 g	-	1/8/2004	OK -1	Endevco	7264C-2K-2-180
0011	P25042	RFSZG1	RGT SIDE SILL FRNT ST Z	UP	400.40040 g	-	1/16/2004	OK -1	Endevco	7264C-2K-2-180
0012	P29898	RRSXG1	RGT SIDE SILL RR ST X	FWD	397.41679 g	+	1/23/2004	OK -1	Endevco	7264C-2K-2-180
0013	P30401	RRSYG1	RGT SIDE SILL RR ST Y	LT	987.57811 g	-	1/14/2004	OK -1	Endevco	7264C-2K-2-180
0014	P29811	RRSZG1	RGT SIDE SILL RR ST Z	UP	396.85307 g	-	1/23/2004	OK -1	Endevco	7264C-2K-2-180
0015	P27172	RDKXG1	RR FLRPAN ABV AXLE X	FWD	1009.2647 g	+	1/23/2004	OK -1	Endevco	7264C-2K-2-180
0016	P28110	RDKYG1	RR FLRPAN ABV AXLE Y	RT	1007.4773 g	+	1/14/2004	OK -1	Endevco	7264C-2K-2-180
0017	P28083	RDKZG1	RR FLRPAN ABV AXLE Z	UP	1002.1334 g	-	1/23/2004	OK -1	Endevco	7264C-2K-2-180
0018	P28324	LRSYG1	LFT SIDE SILL RR ST Y	RT	984.46392 g	+	12/16/2003	OK -1	Endevco	7264C-2K-2-180
0019	P27337	LFSYG1	LFT SIDE SILL FRNT ST Y	RT	990.80793 g	+	1/14/2004	OK -1	Endevco	7264C-2K-2-180
0020	P28938	RRTYG1	RGT RR OCP COMP Y	LT	1476.3552 g	-	12/15/2003	OK -1	Endevco	7264C-2K-2-180
0021	P28623	LLBYG1	LFT LOWER B-POST Y	RT	1529.9566 g	+	11/26/2003	OK -1	Endevco	7264C-2K-2-180
0022	P27976	LUBYG1	LFT MID B-POST Y	RT	1521.9976 g	+	2/3/2004	OK -1	Endevco	7264C-2K-2-180
0023	P29180	LLAYG1	LFT LOWER A-POST Y	LT	1483.6279 g	-	2/6/2004	OK -1	Endevco	7264C-2K-2-180
0024	P23816	LUAYG1	LFT MID A-POST Y	LT	1517.4866 g	-	2/6/2004	OK -1	Endevco	7264C-2K-2-180
0025	P27965	LFTYG1	LFT FRNT ST TRK Y	RT	1473.8054 g	+	1/12/2004	OK -1	Endevco	7264C-2K-2-180
0026	P29861	LRTYG1	LFT RR ST TR Y	LT	1515.7346 g	-	2/6/2004	OK -1	Endevco	7264C-2K-2-180
0027	P29477	VCGXG1	VEH C/G X	FWD	997.54510 g	+	1/23/2004	OK -1	Endevco	7264C-2K-2-180
0028	P29903	VCGYG1	VEH C/G Y	LT	992.24806 g	-	1/23/2004	OK -1	Endevco	7264C-2K-2-180
0029	P29629	VCGZG1	VEH C/G Z	UP	995.95393 g	-	1/23/2004	OK -1	Endevco	7264C-2K-2-180

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040210

Digital and System Channel Report

2004-02-10 07:54:16

Name of Test	040210	System	MINIDAU	Name of DAU	DAU6	descriptio
enable	Channel	Short Name	Type	Data File	Module Type	
Yes	6501	DIG6	dig0	DAT66501	KM3710 Controller	

bit position	bit	short	long	descriptio
MSB = bit 15	1	MDBR1	MDB RT SIDE CONTACT	U
bit 14	1	MDBL1	MDB LT SIDE CONTACT	T
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			

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040210

Digital and System Channel Report

2004-02-10 07:54:16

Name of Test 040210

System MINIDAU

Name of DAU DAUB descriptio

enable 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	SHLET1	DRIVER SHOULDER CONTACT	
bit 14	1	PEVET1	DRIVER PELVIS CONTACT	
bit 13	1	SHLET4	RR/L SHOULDER CONTACT	
bit 12	1	PEVET4	RR/L PELVIS CONTACT	
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			

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040210

Dummy 906n Type SID/HIII Descriptio NHTSA - 906n 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	7264-2000TZ	J26885	Endevco	0.02361 g	2000	9/9/2003	Rwd	1
HEDYG	Head Accel Y	7264-2000TZ	J26864	Endevco	0.02398 g	2000	9/9/2003	Lft	1
HEDZG	Head Accel Z	7264-2000TZ	J27950	Endevco	0.02586 g	2000	9/9/2003	Up	1
HEDXR	Head Accel X Red	7264-2000TZ	J27271	Endevco	0.03201 g	2000	9/9/2003	Rwd	1
HEDYR	Head Accel Y Red	7264-2000TZ	J27283	Endevco	0.02344 g	2000	9/9/2003	Lt	1
HEDZR	Head Accel Z Red	7264-2000TZ	J26980	Endevco	0.03088 g	2000	9/9/2003	Up	1
NEKXF	Neck Force X	1716A	1716A-1535-FX	Denton	0.000186952 N	8896.4	9/9/2003	Hd Fd,Cst Rr	1
NEKYF	Neck Force Y	1716A	1716A-1535-FY	Denton	0.000179612 N	8896.4	9/9/2003	Hd Lt,Cst Rt	0
NEKZF	Neck Force Z	1716A	1716A-1535-FZ	Denton	0.000093678 N	13344.6	9/9/2003	Hd Up,Cst Dn	0
NEKXM	Neck Moment X	1716A	1716A-1535-MX	Denton	0.005785841 N	282.5	9/9/2003	Rt Ear to Rt Shld	1
NEKYM	Neck Moment Y	1716A	1716A-1535-MY	Denton	0.00568 N	282.5	9/9/2003	Chn to Strnm	0
NEKZM	Neck Moment Z	1716A	1716A-1535-MZ	Denton	0.008186195 N	282.5	9/9/2003	Chn to Lt Shld	0
LURYG	Left Upper Rib Y	7264C-2K-2-18	P27850	Endevco	0.01795 g	2000	9/9/2003	Rgt	0
LURYR	Left Upper Rib Red Y	7264C-2K-2-18	P25374	Endevco	0.02209 g	2000	9/9/2003	Rgt	0
LLRYG	Left Lower Rib Y	7264C-2K-2-18	P29211	Endevco	0.02096 g	2000	9/9/2003	Rgt	0
LLRYR	Left Lower Rib Red Y	7264C-2K-2-18	P25075	Endevco	0.01784 g	2000	9/9/2003	Rgt	0
T12YG	Lower Spine Y	7264C-2K-2-18	P21635	Endevco	0.01895 g	2000	9/9/2003	Lft	1
T12YR	Lower Spine Red Y	7264C-2K-2-18	P24564	Endevco	0.01896 g	2000	9/9/2003	Lft	1
PEVYG	Pelvis Accel Y	7264C-2K-2-18	P21652	Endevco	0.02221 g	2000	9/9/2003	Lft	1
PEVYR	Pelvis Accel Red Y	7264C-2K-2-18	P25318	Endevco	0.01926 g	2000	9/15/2003	Lft	1

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040210

Wednesday, February 11, 906n
2004

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

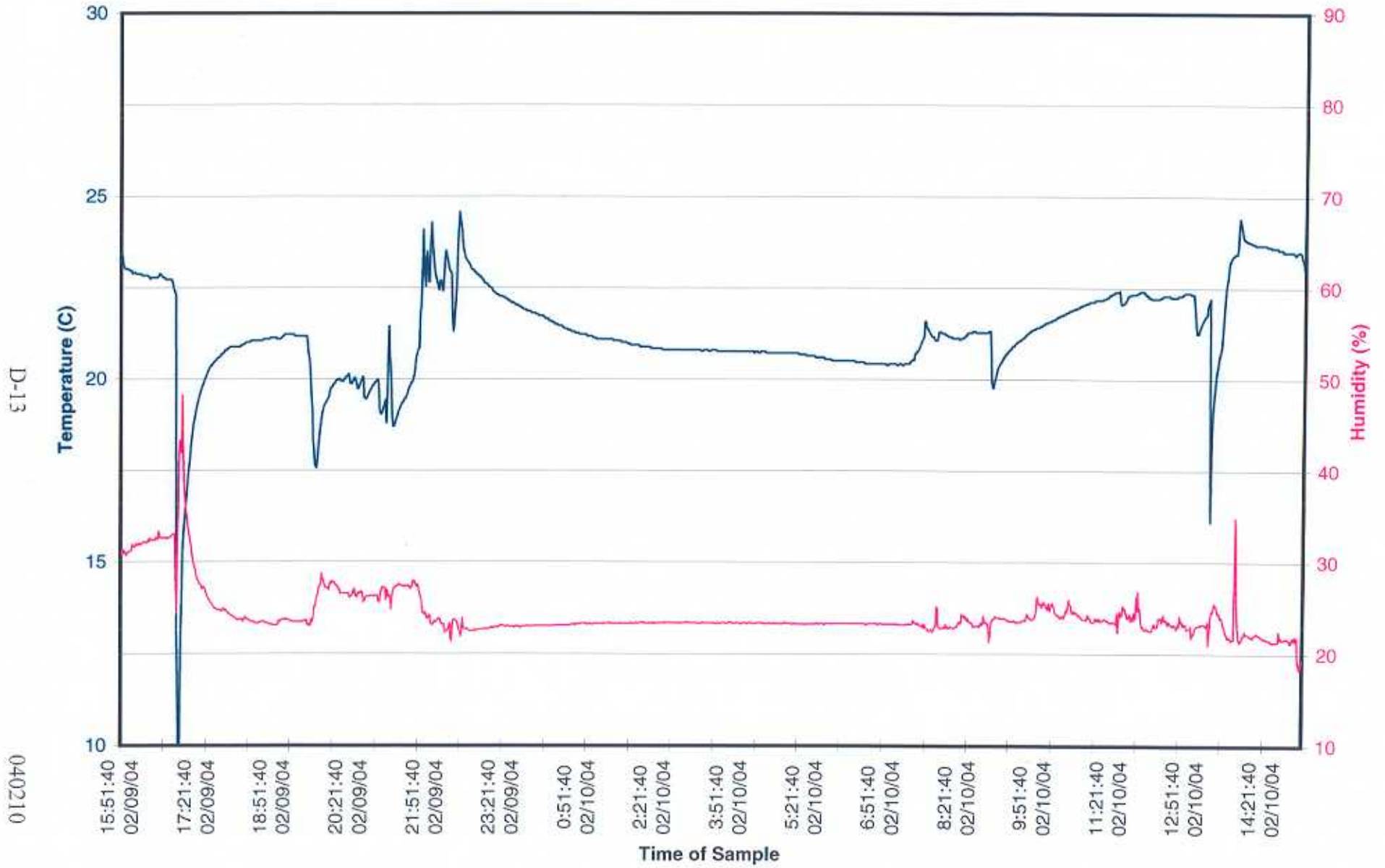
Chsnam	Location	Model	Name	Manufacturer	Sens./mV/V/	Fullscal	Caldat	Pos Output	Flip
HEDXG	Head Accel X	7264C-2K-2-18	P25298	Endevco	0.02203 g	2000	9/16/2003	Rwd	1
HEDYG	Head Accel Y	7264C-2K-2-18	P25061	Endevco	0.01811 g	2000	8/22/2003	Lft	1
HEDZG	Head Accel Z	7264C-2K-2-18	P25261	Endevco	0.01723 g	2000	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

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040210

Wednesday, February 11, 055n
2004

FMVSS 214 LEFT SIDE IMPACT / 040210





CERTIFICATE OF CONFORMITY

Certificate No. 15092
Serial No. DF 731

Cellbond Composites Ltd
5 Stukeley Business Centre
Blackstone Road
Huntingdon
Cambridgeshire
PE29 6EF
United Kingdom

Product Description	FMVSS 214 - 1750x740x550mm Spec with 1.6 3/8 5052 Painted Grey
Cellbond Part No.	70NHTSAISUS G

telephone
+44 (0) 1480 435302
telefax
+44 (0) 1480 450181
email
sales@cellbond.com
website
www.cellbond.com

	Test Results	GR No.	Blk No.
1	21677-84	P110373-B00	N/A
2	21693-00	P103448-01	N/A

Declaration.

The above moving deformable barrier has been manufactured in accordance with the provisions of FMVSS 214.

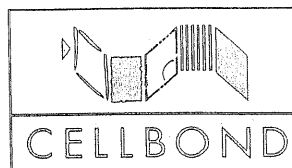
Additional Information...

company registration
England 1944904

registered office
5 Stukeley Business Centre
Blackstone Road
Huntingdon
Cambridgeshire
PE29 6EF

Cellbond Offices
United Kingdom
Germany
United States of America





NHTSA DEFORMABLE SIDE IMPACT BARRIER
ALUMINIUM HONEYCOMB CERTIFICATION
STATIC TEST RESULTS

BUMPER

Core: 5.2 1/4 3003

Required Crush Strength
230 PSI to 260 PSI

Test No: 21693-00

GR No: P103448-01

Block No: N/A

	Crush Strength (PSI)			RESULT
	0.25 to 0.38	0.38 to 0.52	0.52 to 0.65	
Sample* 1	255.12	253.87	252.84	PASS
Sample 2	256.17	250.95	251.19	PASS
Sample 3	253.33	248.84	248.56	PASS
Sample 4	255.96	248.29	247.91	PASS
Sample 5	255.09	254.34	250.19	PASS
Sample 6	259.06	257.32	255.79	PASS
Sample 7	244.57	240.82	238.66	PASS
Sample 8	257.65	252.22	252.27	PASS

Seven out of the eight samples must fulfil the crush strength
requirement in order to pass the block certification

*Sample size and location as per R94.

RESULT: PASSED

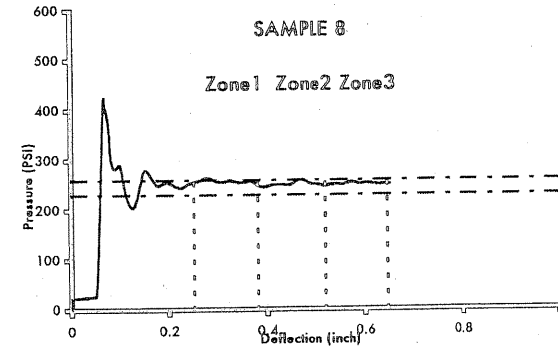
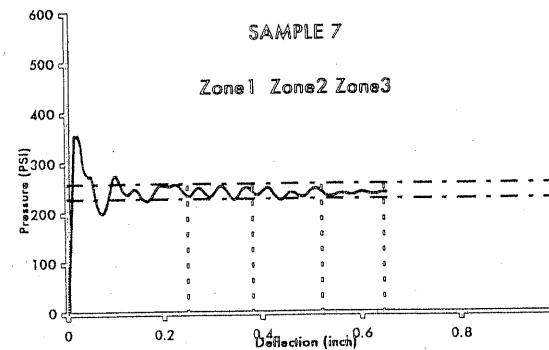
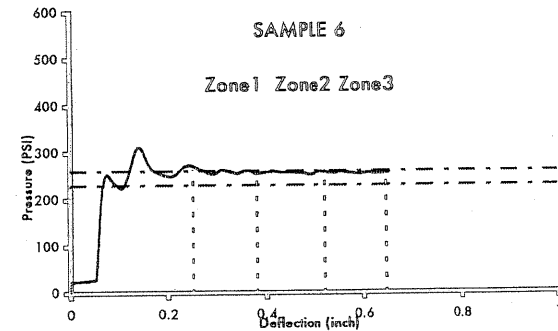
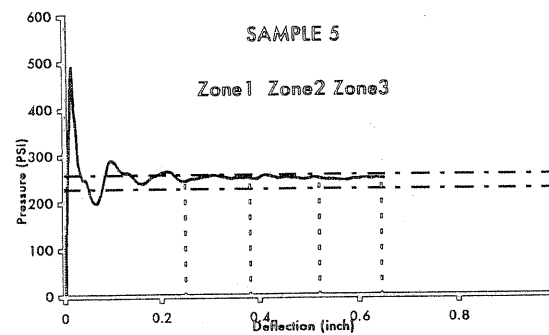
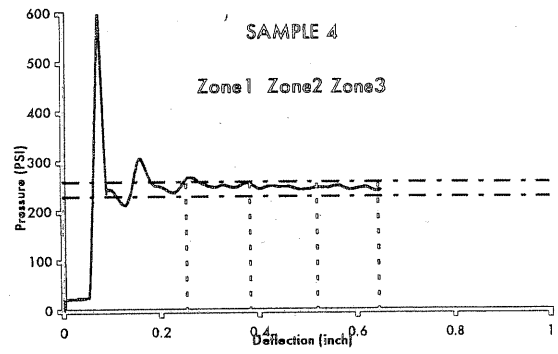
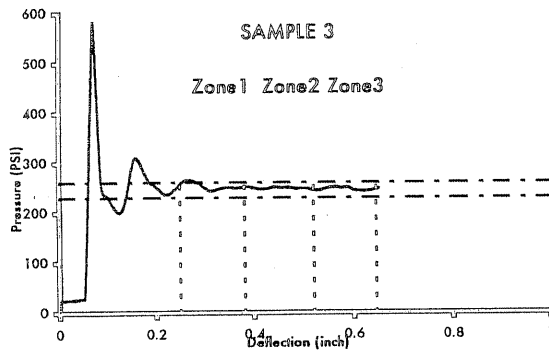
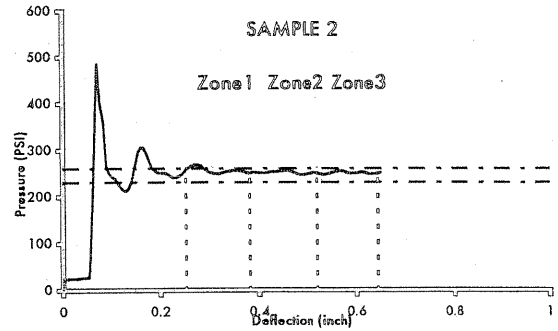
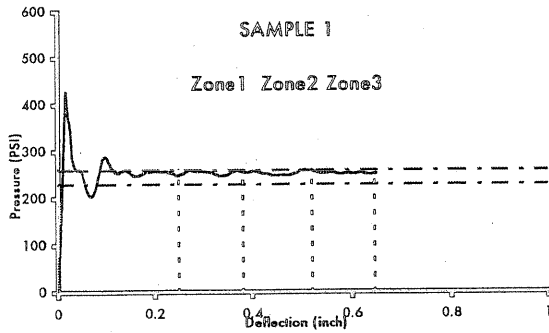
NHTSA DEFORMABLE SIDE IMPACT BARRIER BUMPER

Honeycomb Type: 5.2 1/4 3003
Higher Acceptable Crush Strength Limit: 260 PSI
Lower Acceptable Crush Strength Limit: 230 PSI

Section 1: 0.25 - 0.38 inch
Section 2: 0.38 - 0.52 inch
Section 3: 0.52 - 0.65 inch
Speed: 0.25 inch/min
Block No: N/A

Test No: 21693-00

GR No: P103448-01





NHTSA DEFORMABLE SIDE IMPACT BARRIER
ALUMINIUM HONEYCOMB CERTIFICATION
STATIC TEST RESULTS

MAIN BLOCK
Core: 1.6 3/8 5052

Required Crush Strength
42.5 PSI to 47.5 PSI

Test No: 21677-84

GR No: P110373-B00
Block No: N/A

	Crush Strength (PSI)			RESULT
	0.25 to 0.38 inch	0.38 to 0.52 inch	0.52 to 0.65 inch	
Sample* 1	44.853	44.955	44.714	PASS
Sample 2	45.757	45.959	46.036	PASS
Sample 3	46.027	45.653	45.878	PASS
Sample 4	44.808	44.820	44.564	PASS
Sample 5	45.655	45.226	44.773	PASS
Sample 6	45.777	46.355	45.333	PASS
Sample 7	45.279	45.124	44.829	PASS
Sample 8	46.609	45.972	45.573	PASS

Seven out of the eight samples must fulfil the crush strength
requirement in order to pass the block certification

*Sample size and location as per R94.

RESULT: PASSED

NHTSA DEFORMABLE SIDE IMPACT BARRIER
MAIN BLOCK

Honeycomb Type: 1.6 3/8 5052
Higher Acceptable Crush Strength Limit: 47.5 PSI
Lower Acceptable Crush Strength Limit: 42.5 PSI

Section 1: 0.25 - 0.38 inch
Section 2: 0.38 - 0.52 inch
Section 3: 0.52 - 0.65 inch
Speed: 0.25 inch/min
Block No: N/A

Test No: 21677-84

GR No: P110373-B00

