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REPORT NUMBER: NCAP-TRC-98-004

**NEW CAR ASSESSMENT PROGRAM
"SIDE IMPACT TESTING"**

**1999 FORD EXPLORER
4-DOOR SPORT UTILITY**

NHTSA NUMBER: MX0201

TRANSPORTATION RESEARCH CENTER INC.

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February 18, 1999

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

Office of Crashworthiness Standards

400 Seventh Street, S. W.

Room No. 5313 NPS-10

Washington, DC 20590

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16. Abstract This 55/28 km/h 90° Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 1999 Ford Explorer 4-Door Sport Utility in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure Side NCAP for the generation of consumer information on vehicle side crash protection. This test was conducted at Transportation Research Center Inc. in East Liberty, Ohio, on February 18, 1999. The impact velocity of the Moving Deformable Barrier (MDB) was 61.7 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 23° C. The target vehicle's post-test maximum crush was 353 mm at Level 3. The test or target vehicle's performance is given below: <table border="0"> <thead> <tr> <th></th> <th><u>Front SID</u></th> <th></th> <th><u>Rear SID</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td><u>48</u></td> <td>g's</td> <td><u>37</u></td> <td>g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td><u>44</u></td> <td>g's</td> <td><u>44</u></td> <td>g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td><u>35</u></td> <td>g's</td> <td><u>33</u></td> <td>g's</td> </tr> <tr> <td>Thoracic Trauma Index, (TTI):</td> <td><u>41</u></td> <td>g's</td> <td><u>39</u></td> <td>g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td><u>50</u></td> <td>g's</td> <td><u>52</u></td> <td>g's</td> </tr> </tbody> </table> The door on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite door did not open during the side impact event.				<u>Front SID</u>		<u>Rear SID</u>		Left Upper Rib Acceleration:	<u>48</u>	g's	<u>37</u>	g's	Left Lower Rib Acceleration:	<u>44</u>	g's	<u>44</u>	g's	Lower Spine Acceleration:	<u>35</u>	g's	<u>33</u>	g's	Thoracic Trauma Index, (TTI):	<u>41</u>	g's	<u>39</u>	g's	Pelvis Acceleration (PEV):	<u>50</u>	g's	<u>52</u>	g's
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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	2.54	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.96	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.76	cubic meters	m ³
TEMPERATURE (exact)				
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

* 1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Mon. Publ. 286, Units of Weights and Measures, Price \$2.35, SO Catalog No. C13.10-286.

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
mi	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
AREA				
cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.5	acres	ac
MASS (weight)				
g	grams	0.036	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	st
VOLUME				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³
TEMPERATURE (exact)				
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F

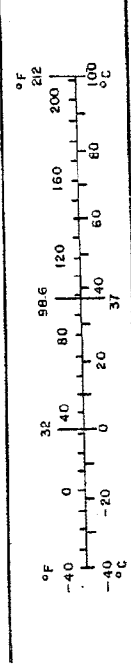


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SECTION 1

PURPOSE AND TEST PROCEDURE

This side impact test is part of the FY 98 New Car Assessment Program Side Impact Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-98-C-12001. The purpose of this test was to generate comparative side impact performance in a 1999 Ford Explorer 4-Door Sport Utility. The test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated July 1997.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 1999 Ford Explorer 4-Door Sport Utility was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 61.7 km/h (38.3 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 18, 1999. Pre- and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SIDs) are included in Appendix A.

Two restrained Side Impact Dummies (SIDs) were placed in the driver (Pos. #1) and the left rear passenger (Pos. #4) designated seating positions according to the instructions specified in the OCWS Side Impact Laboratory Test Procedure which is dated July 1997. The SIDs were certified prior to this test. The side impact test was documented by one real-time camera and 12 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SIDs were instrumented with the following accelerometers:

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

A summary of the side impact dummy (SID) configuration and verification test data can be found in Appendix C. A total of 65 channels of data were recorded. Appendix B contains the vehicle, MDB, and dummy response data traces.

The following table summarizes the results of the test.

Injury Criteria	Front SID	Rear SID
TTI (g)	41	39
PEV (g)	50	52

Data Acquisition Explanations

The left side sill at front seat track Y-axis data channel, LFSYG1, lost data between approximately 20 to 78 milliseconds. This also affected the velocity and displacement calculations.

The left side sill at rear seat track Y-axis data channel, LRSYG1, lost data at approximately 19 milliseconds. This also affected the velocity and displacement calculations.

The right rear occupant compartment Y-axis data channel, RRTYG1, lost data at approximately 10 milliseconds. This also affected the velocity and displacement calculations.

The left front door upper centerline Y-axis data channel, LFUYG1, recorded data spikes at 13 and 14 milliseconds. This affected the velocity and displacement calculations.

The rear seat track Y-axis data channel, LRTYG1, recorded a data spike at 30 milliseconds. This affected the velocity and displacement calculations.

SECTION 3

VEHICLE TEST DATA

DATA SHEET 1

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 1999 Ford Explorer 4-Door Sport Utility
 Vehicle Body Color: Orange VIN: 1FMDU34X9XZA09859
 Vehicle NHTSA No.: MX0201 Month & Year of Manufacture: 10/98
 Engine Data: 6 Cylinders; - CID; 4.0 Liters; - cc
 Engine Placement: X Longitudinal; or - Lateral
 Transmission: 5 Speed; - Manual; X Automatic; - Overdrive
 Final Drive: - Rear Wheel Drive; - Front Wheel Drive; X Four-Wheel
 Odometer Reading: 129 km
 Options: X A/C; X Power steering; X Pwr. brakes; X Pwr. windows

DATA FROM TIRE PLACARD

Tire Pressure* (at capacity); 179 kPa FRONT
179 kPa REAR
 Recommended Tire Size: P235/75R15 SL
 Tires on Test Vehicle: P235/75R15 Manufacturer: Firestone
 Vehicle Capacity Data:
 Number of Occupants: 2 Front; 3 Rear; - 3rd seat; 5 Total
 Type of Front Seats: X Bucket; - Bench; - 60/40 Split bench
 Type of Front Seat Back: - Fixed; X Adjustable with X Lever or - Knob
 Vehicle Max Capacity Loading = 513.0 kg (A)
 No. of Occupants x 68.04 kg. = 340.2 kg (B)
 Vehicle Cargo Capacity = 172.8 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front	=	<u>515.7</u>	kg	Left Rear	=	<u>469.5</u>	kg
Right Front	=	<u>513.5</u>	kg	Right Rear	=	<u>413.2</u>	kg
TOTAL FRONT	=	<u>1,029.2</u>	kg	TOTAL REAR	=	<u>882.7</u>	kg
% of Total Weight	=	<u>53.8</u>	%	% of Total Weight	=	<u>46.2</u>	%
TOTAL WEIGHT	=	<u>1,911.9</u>	kg				

* Tire pressure used in test.

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight With Max. Fluids = 1,911.5 kg (A)
 Maximum Cargo Carrying Capacity Of Test Vehicle = 172.8 kg (B)
 Weight Of Instrumented Side Impact Dummies (1 Or 2 X 79.0 kg) = 158.0 kg (C)
 TEST VEHICLE TARGET WEIGHT: = 2,242.3 kg (A+B+C)

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

Left Front	=	<u>591.9</u>	kg	Left Rear	=	<u>617.8</u>	kg
Right Front	=	<u>492.1</u>	kg	Right Rear	=	<u>517.6</u>	kg
TOTAL FRONT	=	<u>1,084.0</u>	kg	TOTAL REAR	=	<u>1,135.4</u>	kg
% of Total Weight	=	<u>48.8</u>	%	% of Total Weight	=	<u>51.2</u>	%
TOTAL WEIGHT	=	<u>2,219.4</u>	kg				

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

Left Front	=	<u>523.4</u>	kg	Left Rear	=	<u>536.6</u>	kg
Right Front	=	<u>587.9</u>	kg	Right Rear	=	<u>551.6</u>	kg
TOTAL FRONT	=	<u>1,111.3</u>	kg	TOTAL REAR	=	<u>1,088.2</u>	kg
% of Total Weight	=	<u>50.5</u>	%	% of Total Weight	=	<u>49.5</u>	%
TOTAL WEIGHT	=	<u>2,199.5</u>	kg				

TEST VEHICLE ATTITUDE (ALL DIMENSIONS IN MILLIMETERS):

AS DELIVERED:

Left Front 835 Right Front 839 Left Rear 818 Right Rear 822

FULLY LOADED:

Left Front 830 Right Front 858 Left Rear 762 Right Rear 795

READY FOR TEST:

Left Front 832 Right Front 828 Left Rear 783 Right Rear 796

TEST VEHICLE WHEELBASE: 2,835 millimeters

C.G. = 1,402.6 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side = 4,590 millimeters
 Left Side = 4,612 millimeters
 Centerline = 4,828 millimeters

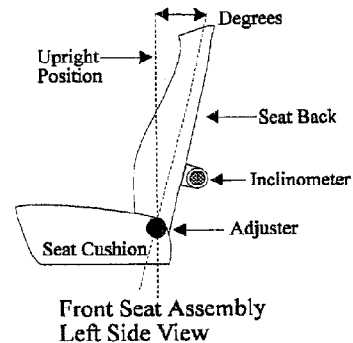
DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

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: Mid position

Total Length Of Adjustment Travel: 245 millimeters

Total Number Of Adjustment Positions Or Detents: 15

FRONT SEAT BACK ADJUSTMENT POSITION: Measured relative to rocker sill at 13" above back pivot point on rear outboard seat frame, avoiding measuring on reinforcement plate.

Seat Back Torso Angle: 15.5 degrees

SECOND POSITION SEAT:

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

Seat Back Adjustment Position: N/A

ADJUSTABLE STEERING COLUMN POSITION: Mid-position

WINDOW POSITIONS: Left Front: Closed Left Rear: Closed
Right Front: Open Right Rear: N/A

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:

78.7 liters (fuel tank usable capacity)

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

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

Wheelbase = 2,835 millimeters

Impact point is 477.5 millimeters rearward of front axle centerline
(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 475.5 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 1999 Ford Explorer
 Body Style: 4-Door Sport Utility VIN: 1FMDU34X9XZA09859
 NHTSA No.: MX0201 Test Date: February 18, 1999
 Overall Length = 4,857 millimeters; Overall Width = 1,783 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front	=	<u>523.4</u>	kg	Left Rear	=	<u>536.6</u>	kg
Right Front	=	<u>587.9</u>	kg	Right Rear	=	<u>551.6</u>	kg
TOTAL FRONT	=	<u>1,111.3</u>	kg	TOTAL REAR	=	<u>1,088.2</u>	kg
TOTAL WEIGHT	=	<u>2,199.5</u>	kg				
Wheelbase	=	<u>2,835</u>	millimeters				
Longitudinal C.G. From Center Of Front Axle	=	<u>1,402.6</u>	millimeters				
Impact Angle With Respect To Impactor	=	<u>90</u>	degrees				

ACTUAL IMPACT POINT:

Actual Impact Point is 2 mm forward of nominal impact ref. line (Lateral)
 Actual Impact Point is 5 mm above nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (	<u>390</u>	mm above ground)	=	<u>273</u>	millimeters
2. LEVEL 2 (	<u>787</u>	mm above ground)	=	<u>345</u>	millimeters
3. LEVEL 3 (	<u>756</u>	mm above ground)	=	<u>353</u>	millimeters
4. LEVEL 4 (	<u>1085</u>	mm above ground)	=	<u>273</u>	millimeters
5. LEVEL 5 (	<u>1685</u>	mm above ground)	=	<u>77</u>	millimeters

Maximum Post-Test Intrusion = 353 millimeters

OCCUPANTS:

	<u>Front Passenger:</u>	<u>Rear Passenger:</u>
Dummy Identification	<u>051</u>	<u>052</u>
Restraints Used	<u>3-point active seat belt</u>	<u>3-point active seat belt</u>

INSTRUMENTATION:

Number Of Vehicle Data Channels:	=	<u>26</u>
Number Of Cameras:	Onboard	= <u>3</u>
	Offboard	= <u>10</u>
	TOTAL	= <u>13</u>

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore, Inc.: 012C1098, 013C1098, 027A1098, 029B1098

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to the left

MDB DETAILS:

Overall Width of Framework Carriage = 1,251 millimeters

Overall Length of Mdb (Incl. honeycomb impact face) = 4,115 millimeters

Wheelbase of Framework Carriage = 2,591 millimeters

Tread of Framework Carriage (Front & Rear) = 1,880 millimeters

C.G. Location Rearward of Front Axle = 1,082 millimeters

MDB WEIGHT:

Left Front = 396.0 kg Left Rear = 311.1 kg

Right Front = 412.8 kg Right Rear = 269.0 kg

TOTAL FRONT = 808.8 kg TOTAL REAR = 580.1 kg

TOTAL MDB WEIGHT = 1,388.9 kg

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

Impact Speed = 61.7 km/h

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level = 135.5 millimeters

2. Row B at Top of Bumper Level = 117.5 millimeters

3. Row C at Mid Level = 126.2 millimeters

4. Row D at Top of Stack Level = 177.9 millimeters

INSTRUMENTATION:

Number of MDB Data Channels = 5

DATA SHEET 4

POST-TEST OBSERVATIONS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID</u>	<u>LEFT REAR SID</u>
Head:	<u>Side airbag</u>	<u>C-pillar</u>
Upper Torso:	<u>Door</u>	<u>Door</u>
Lower Torso:	<u>Door</u>	<u>Door</u>
Left Knee:	<u>Door</u>	<u>Door</u>
Right Knee:	<u>N/A</u>	<u>N/A</u>

DOOR OPENING:

	<u>LEFT DOOR</u>	<u>RIGHT DOOR</u>
Front:	<u>Tools</u>	<u>Easy</u>
Rear:	<u>Tools</u>	<u>Easy</u>

MDB DISTANCE FROM TARGET IMPACT POINT:

Vertical: 5 mm above target

Horizontal: 2 mm forward of target

ARM REST LOCATIONS:

Front: 143 mm below the bottom of the window

Rear: 153 mm below the bottom of the window

SEAT MOVEMENT:

Front: Seat was pushed against center console

Rear: None

GLAZING DAMAGE:

Windshield: It cracked on the driver's side.

Window: Left driver window did not crack; left rear passenger window shattered at impact

PILLAR PERFORMANCE:

None

SILL SEPARATION:

None

OTHER NOTABLE IMPACT EFFECTS:

The passenger frontal airbags did deploy.

DATA SHEET 4 (continued)

POST-TEST OBSERVATIONS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

AIRBAG DEPLOYMENT STATUS:

	<u>DRIVER</u>	<u>RIGHT REAR PASSENGER</u>
Frontal:	<u>Yes</u>	<u>N/A</u>
Side:	<u>Yes</u>	<u>N/A</u>

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

TEST NUMBER: 990218-1

DRIVER DUMMY SERIAL NUMBER: 051

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

LEFT UPPER RIB ACCELERATION

LATERAL (P)	47.7 g	@ 55.0 ms	20.6 g	@ 25.0 ms
LATERAL (R)	48.2 g	@ 55.0 ms	22.1 g	@ 25.0 ms

LEFT LOWER RIB ACCELERATION

LATERAL (P)	43.6 g	@ 53.7 ms	7.5 g	@ 30.0 ms
LATERAL (R)	43.3 g	@ 53.7 ms	5.8 g	@ 25.0 ms
TTI d (P)	41.1			
TTI d (R)	41.5			

LOWER SPINE ACCELERATION

LATERAL (P)	34.5 g	@ 41.9 ms	12.3 g	@ 20.0 ms
LATERAL (R)	34.8 g	@ 41.9 ms	12.4 g	@ 20.0 ms

PELVIS ACCELERATION

LATERAL (P)	49.9 g	@ 36.3 ms	9.4 g	@ 59.4 ms
LATERAL (R)	49.2 g	@ 36.3 ms	9.3 g	@ 59.4 ms

POSITIVE DIRECTION

LONGITUDINAL: REARWARD
LATERAL: RIGHTWARD
VERTICAL: UPWARD

NEGATIVE DIRECTION

LONGITUDINAL: FORWARD
LATERAL: LEFTWARD
VERTICAL: DOWNWARD

DATA SHEET 5

SID INSTRUMENTATION DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

TEST NUMBER: 990218-1

PASSENGER DUMMY SERIAL NUMBER: 052

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

LEFT UPPER RIB ACCELERATION

LATERAL (P)	36.8 g	@ 52.5 ms	6.7 g	@ 98.1 ms
LATERAL (R)	36.4 g	@ 52.5 ms	7.2 g	@ 98.1 ms

LEFT LOWER RIB ACCELERATION

LATERAL (P)	44.0 g	@ 40.6 ms	8.0 g	@ 101.9 ms
LATERAL (R)	43.8 g	@ 40.6 ms	7.9 g	@ 101.3 ms
TTI d (P)	38.6			
TTI d (R)	38.8			

LOWER SPINE ACCELERATION

LATERAL (P)	33.3 g	@ 44.4 ms	9.2 g	@ 103.8 ms
LATERAL (R)	33.7 g	@ 44.4 ms	9.2 g	@ 103.8 ms

PELVIS ACCELERATION

LATERAL (P)	52.1 g	@ 32.5 ms	11.5 g	@ 97.5 ms
LATERAL (R)	51.5 g	@ 32.5 ms	11.6 g	@ 97.5 ms

POSITIVE DIRECTION

LONGITUDINAL: REARWARD
LATERAL: RIGHTWARD
VERTICAL: UPWARD

NEGATIVE DIRECTION

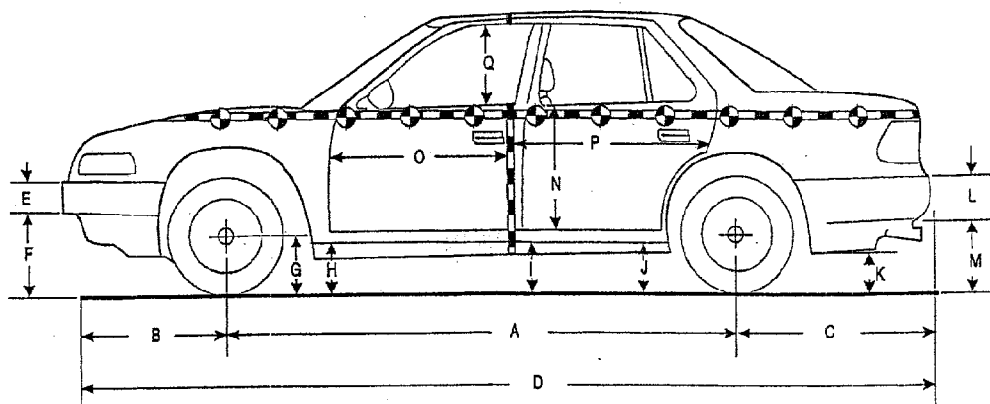
LONGITUDINAL: FORWARD
LATERAL: LEFTWARD
VERTICAL: DOWNWARD

DATA SHEET 6

VEHICLE PRE- AND POST-TEST MEASUREMENTS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



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	2842	2842	2811	31
B	888	888	935	-47
C	1093	1093	1100	-7
D	4828	4828	4846	-18
E	330	330	330	0
F	415	398	353	45
G	335	340	343	-3
H	375	355	293	62
I	380	350	309	41
J1	351	320	307	13
J2	380	348	387	-39
K	400	360	348	12
L	150	150	150	0
M	487	450	451	-1
N	730	730	650	80
O	725	725	720	5
P	1259	1259	1190	69
Q	480	480	485	-5
R	4590	4590	4610	-20
S	4612	4612	4610	2
T	1207	1207	1149	58

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

E&L = Bumper Thickness
J1 = To Pinch Weld

R = Right Side Length
J2 = To Sill

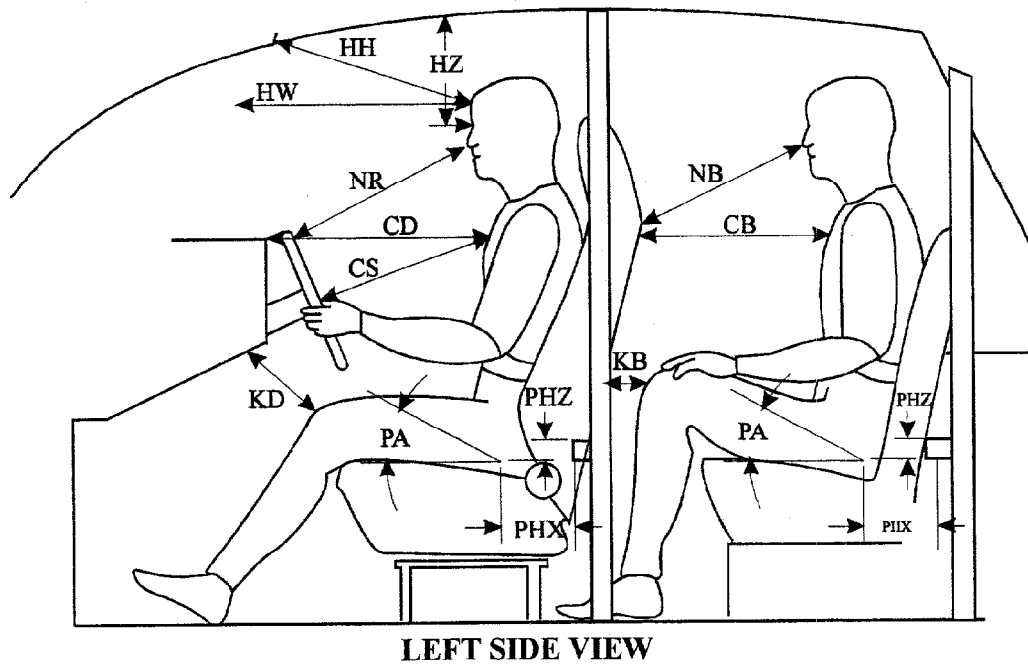
S = Left Side Length

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



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

	DRIVER ID #051	LEFT REAR PASS. ID#052
HH	330	N/A
HW	449	N/A
HZ	185	197
NR/NB	310	759
CD/CB	440	670
CS	243	N/A
KDL(KDA°)/KBL(KDA°)	126/30.8°	239/28.3°
KDR(KBA°)/KBR(KBA°)	122/24.5°	243/26.4°
PA°	22.3°	24.7°
PHX	251	268
PHZ	87	108

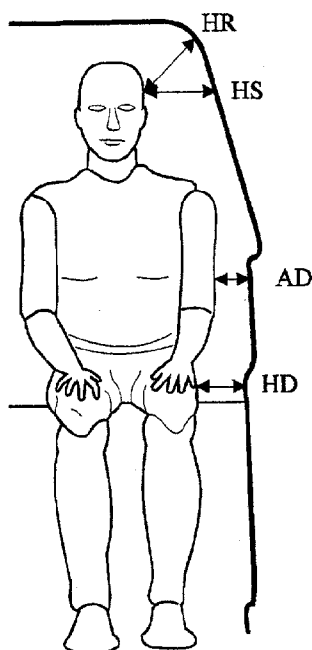
Note: 2-door vehicle shown. Rear dummy PHX and PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.
There was not a seating position for the rear passenger.

DATA SHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



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

	DRIVER ID #051	PASSENGER ID #052
HR	173	150
HS	251	204
AD*	LOWER: 100 UPPER: 99	LOWER: 52 UPPER: 55
HD	125	70

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

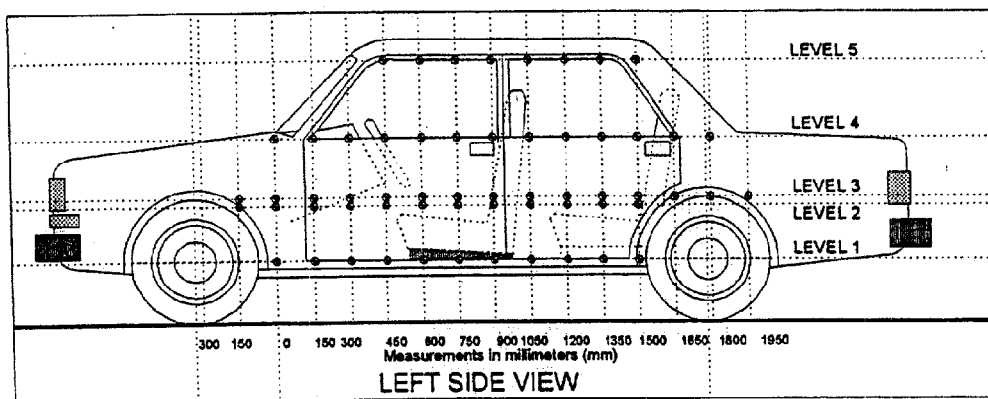
Upper measurement is taken laterally at center of the upper rib accelerometer height from the SID arm segment to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



- 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>1,685</u>	millimeters
Level 4 @ Window Sill	=	<u>1,085</u>	millimeters
Level 3 @ Mid Door	=	<u>756</u>	millimeters
Level 2 @ Occupant H-Point	=	<u>787</u>	millimeters
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>390</u>	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

NHTSA No.: MX0201

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

Location	Height	(mm) From Impact Point														
		-1200	-1050	-900	-750	-600	-450	-300	-150	0	150	300	450	600	750	
Level 1 Side Sill	Pre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	404	446	448	454	453	450	
	Post	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	582	637	721	714	682	675	
	Crush	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	178	191	273	260	229	225	
Level 2 H-Point	Pre	N/A	431	400	363	N/A	N/A	N/A	333	374	370	366	360	359	355	
	Post	N/A	457	439	413	N/A	N/A	N/A	459	505	546	601	625	633	651	
	Crush	N/A	26	39	50	N/A	N/A	N/A	126	131	176	235	265	274	296	
Level 3 Mid-Door	Pre	N/A	429	383	N/A	N/A	N/A	N/A	336	374	367	366	363	356	355	
	Post	N/A	456	421	N/A	N/A	N/A	N/A	459	521	556	628	643	656	672	
	Crush	N/A	27	38	N/A	N/A	N/A	N/A	123	147	189	262	280	300	317	
Level 4 Window Sill	Pre	N/A	N/A	N/A	448	435	421	418	405	404	398	392	390	387	388	
	Post	N/A	N/A	N/A	484	462	465	465	469	474	472	484	494	492	511	
	Crush	N/A	N/A	N/A	36	27	44	47	64	70	74	92	104	105	123	
Level 5 Window Top	Pre	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	619	
	Post	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	667	
	Crush	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48	

DATA SHEET 10 (continued)
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

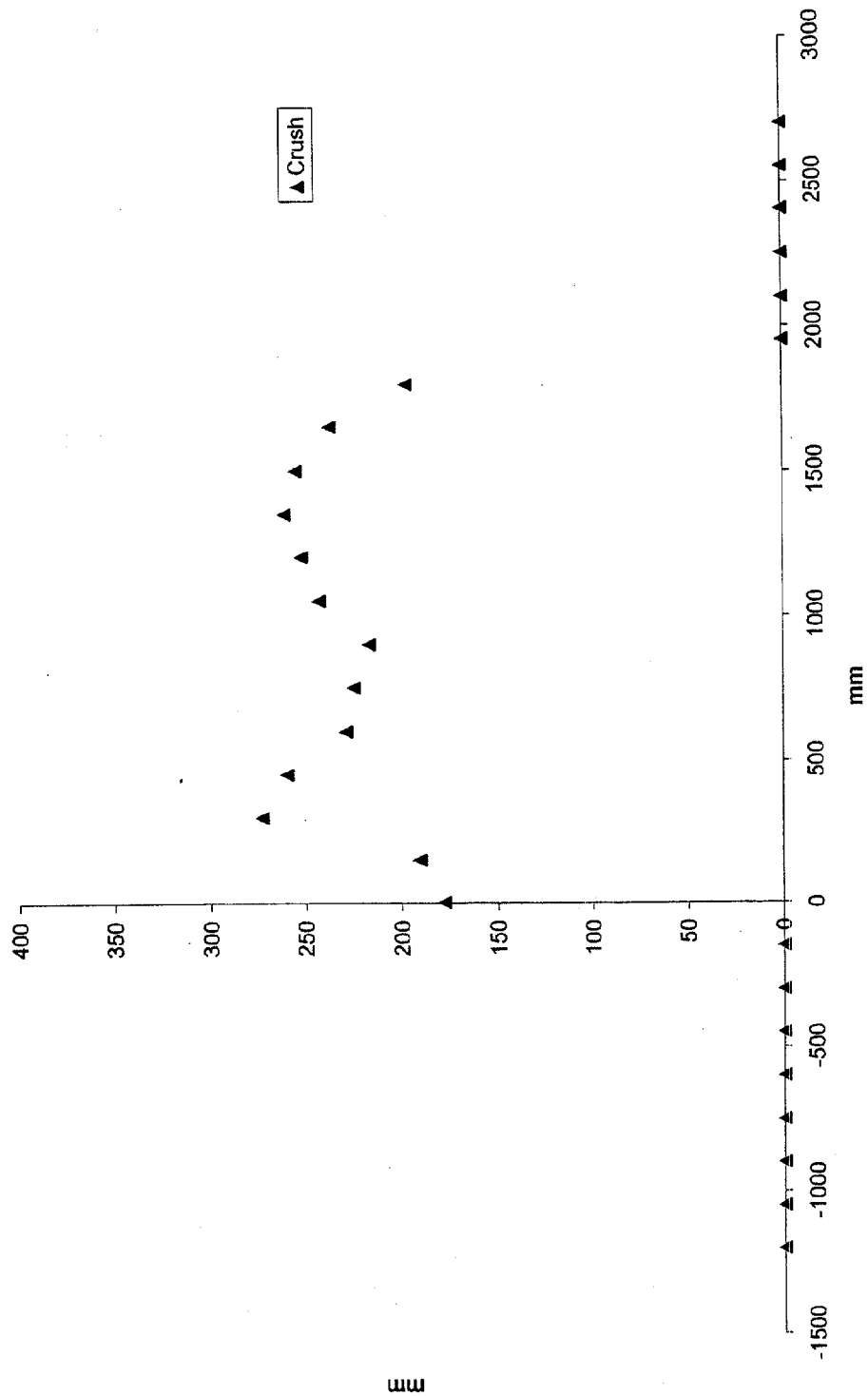
Location	Height	(mm) From Impact Point														
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700		
Level 1 Side Sill	Pre	455	449	448	445	445	449	428	N/A	N/A	N/A	N/A	N/A	N/A		
	Post	672	692	700	706	700	686	625	N/A	N/A	N/A	N/A	N/A	N/A		
	Crush	217	243	252	261	255	237	197	N/A	N/A	N/A	N/A	N/A	N/A		
Level 2 H-Point	Pre	354	351	352	350	352	353	353	322	310	N/A	N/A	N/A	N/A	328	
	Post	669	675	669	695	677	645	595	484	433	N/A	N/A	N/A	N/A	377	
	Crush	315	324	317	345	325	292	242	162	123	N/A	N/A	N/A	N/A	49	
Level 3 Mid-Door	Pre	354	350	351	349	351	353	351	333	N/A	N/A	N/A	N/A	318	333	
	Post	682	681	682	702	691	662	626	482	N/A	N/A	N/A	N/A	382	382	
	Crush	328	331	331	353	340	309	275	149	N/A	N/A	N/A	N/A	64	49	
Level 4 Window Sill	Pre	384	380	380	380	380	383	380	380	378	378	378	380	386	386	
	Post	551	572	646	653	600	651	510	477	642	456	444	435	422	422	
	Crush	167	192	266	273	220	268	130	97	264	78	66	55	36	36	
Level 5 Window Top	Pre	612	605	612	608	607	608	612	612	612	610	608	625	630	630	
	Post	665	682	669	653	645	653	646	643	643	632	627	622	632	632	
	Crush	53	77	57	45	38	45	34	31	31	22	19	-3	2	2	

DATA SHEET 1c (continued)
VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

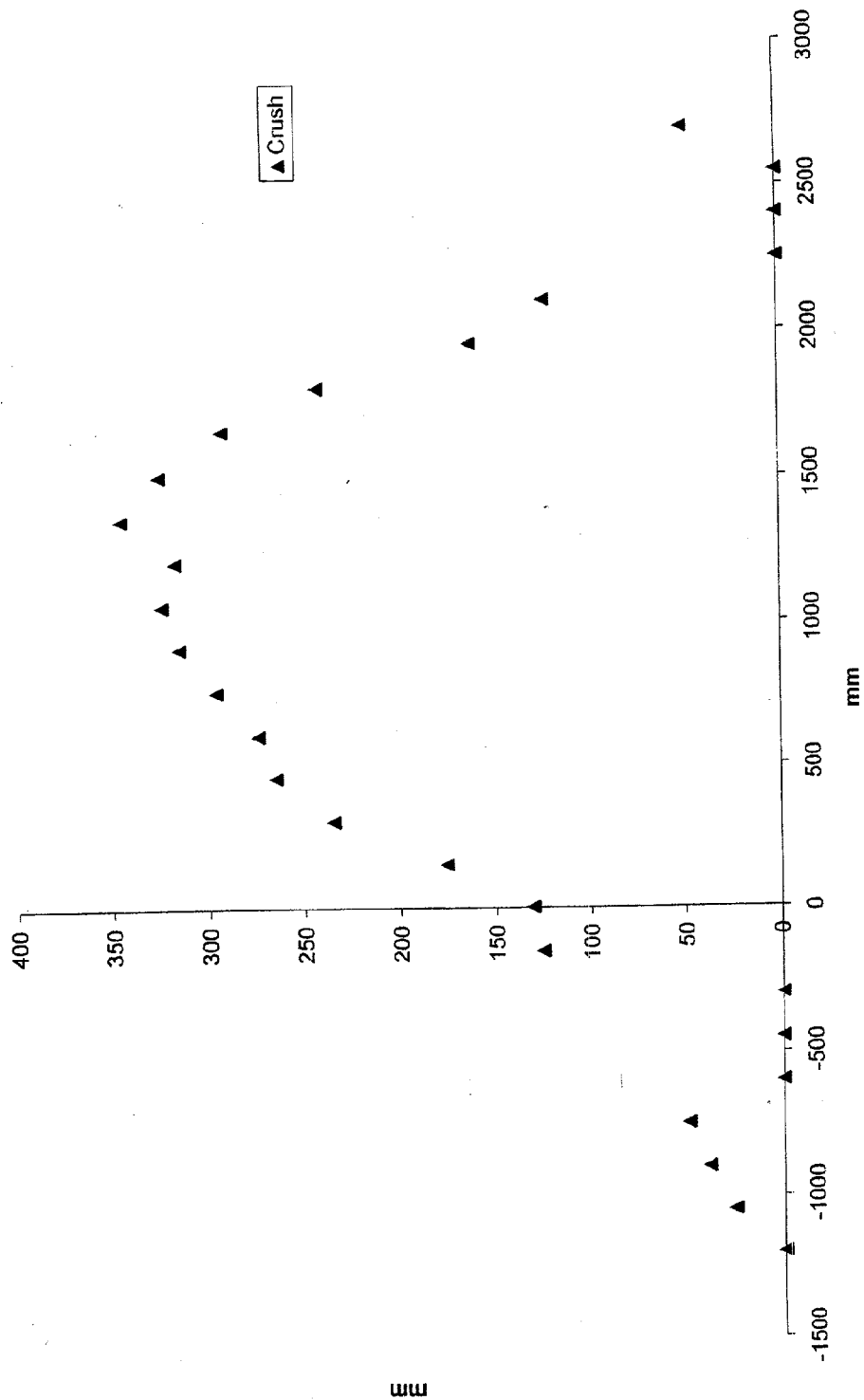
Side Profile Level 1 390 mm Above Ground



DATA SHEET 10 (continued)
 VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

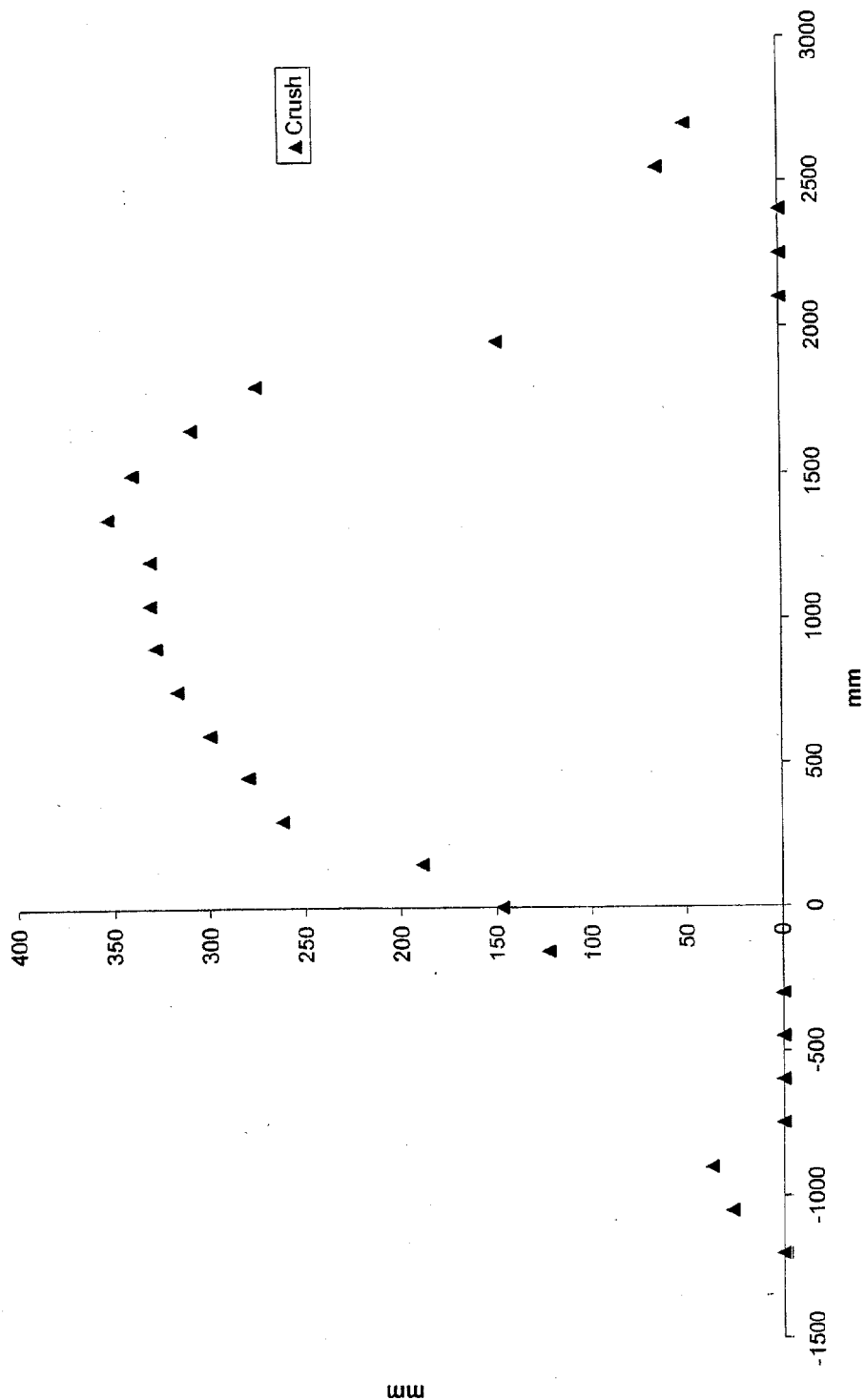
Side Profile Level 2 787 mm Above Ground



DATA SHEET 10 (continued)
 VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

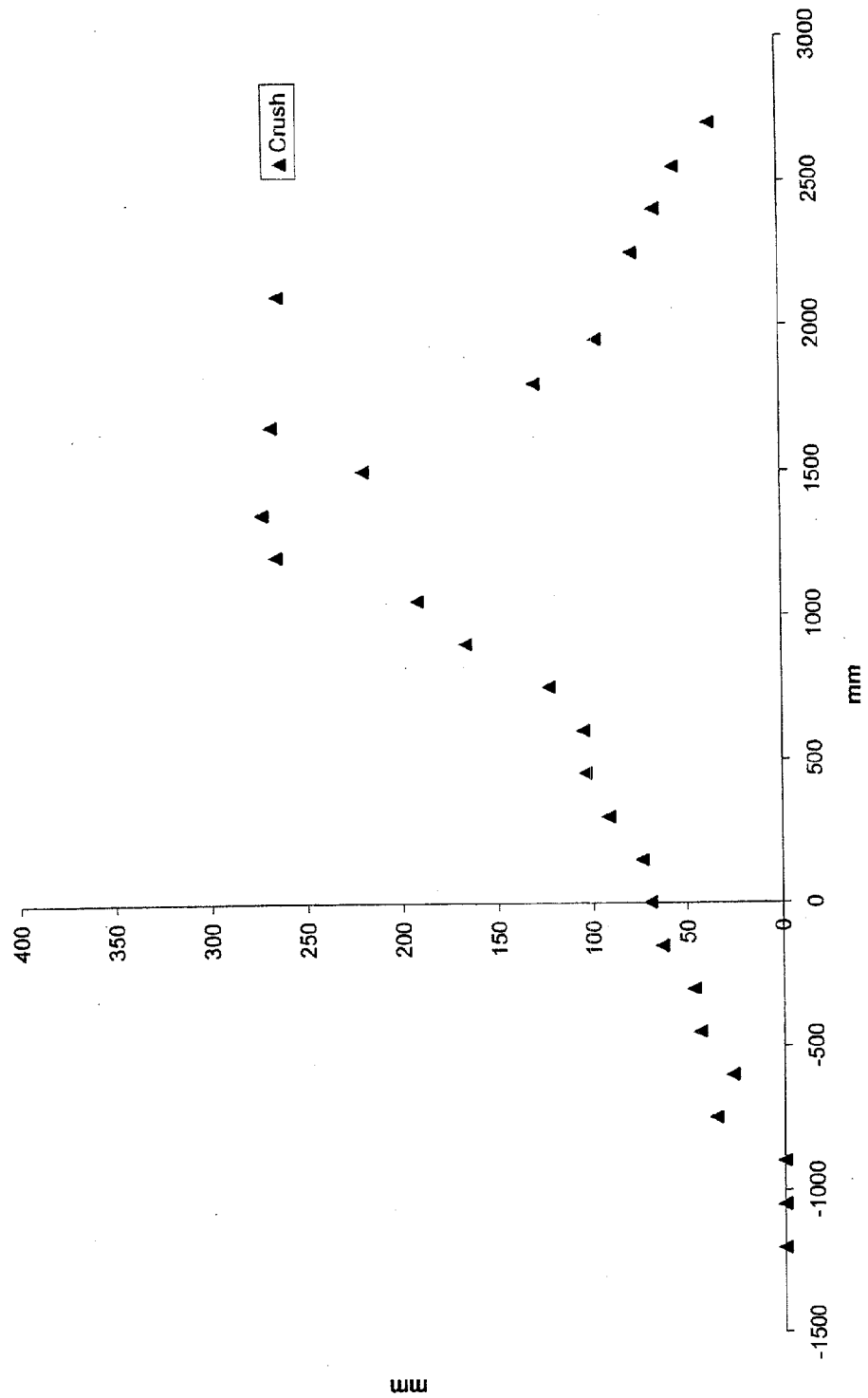
Side Profile Level 3 756 mm Above Ground



DATA SHEET 10 (continued)
 VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

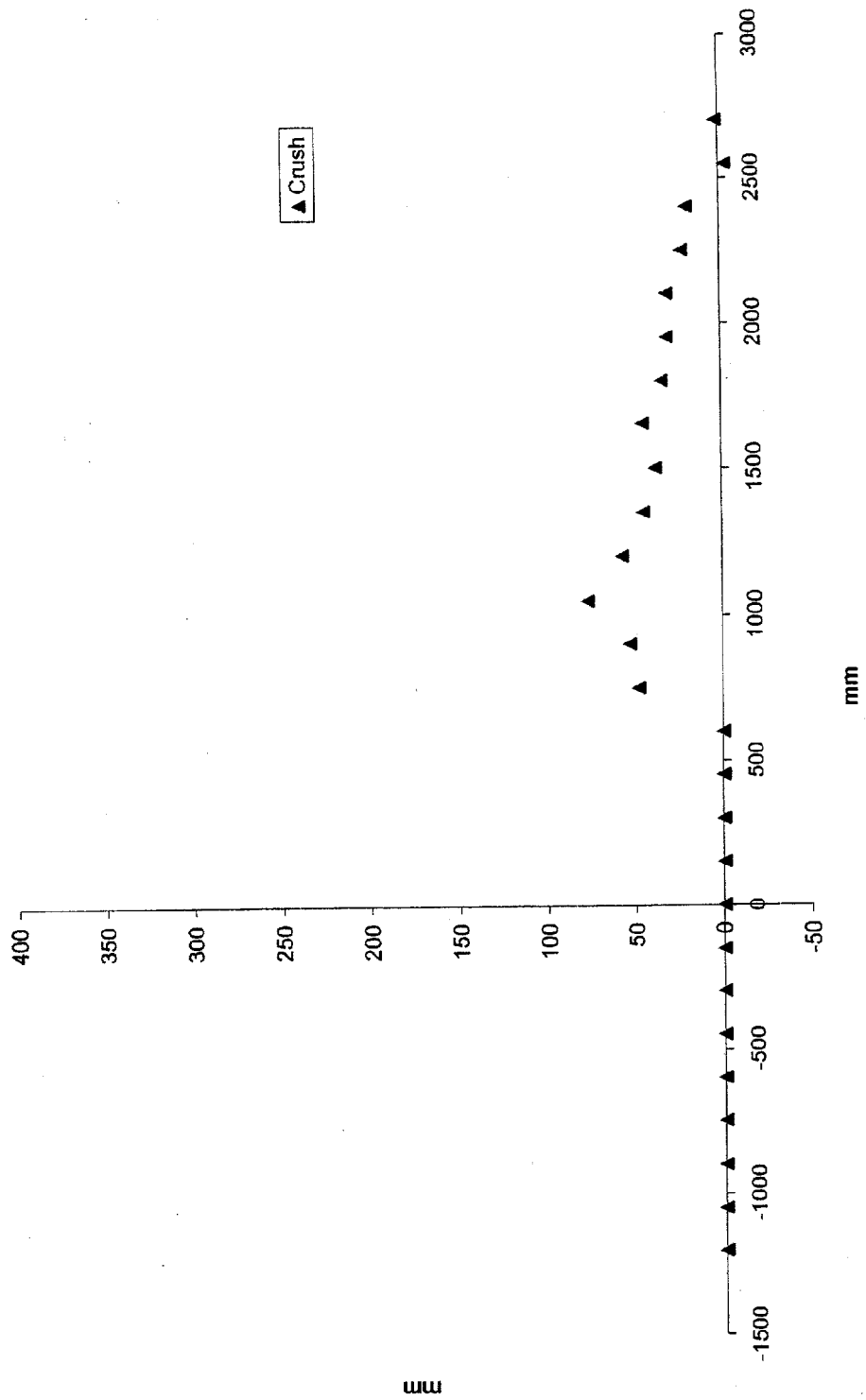
Side Profile Level 4 1085 mm Above Ground



DATA SHEET 10 (continued)
 VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

Side Profile Level 5 1685 mm Above Ground



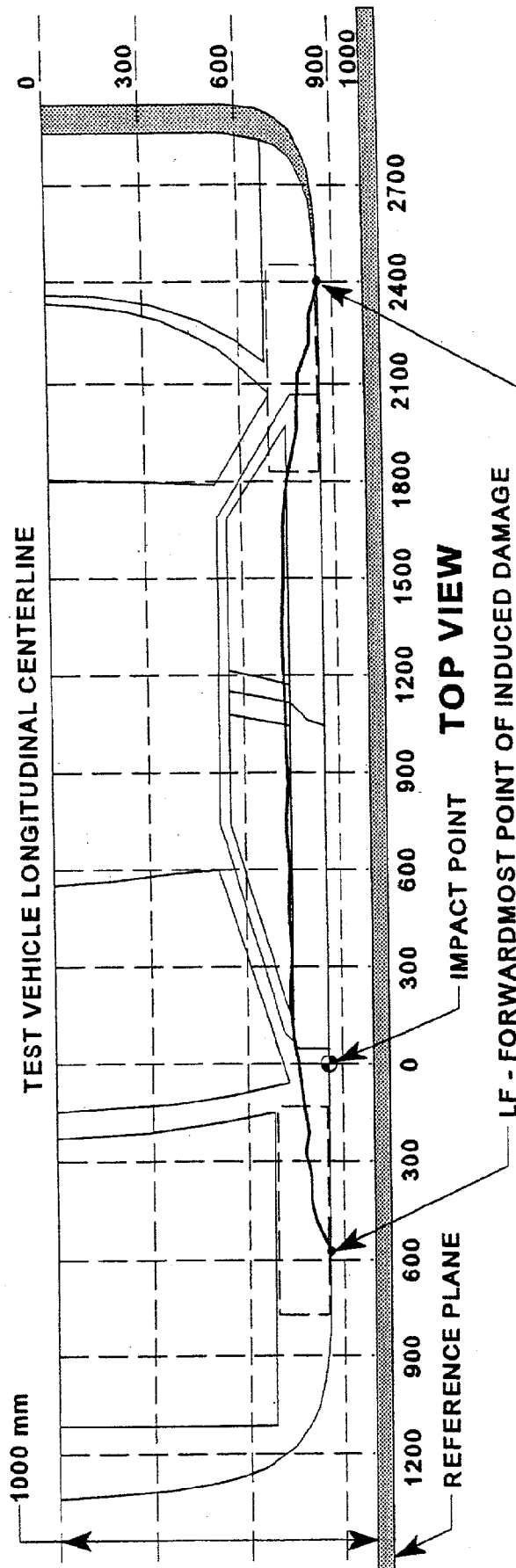
DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

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



MEASUREMENT CONVENTIONS:

Forward of the impact point (towards front of vehicle) is considered negative (-).

Rearward of the impact point (toward rearend of vehicle) is considered positive (+).

DPD Measurements	Post-Test (mm)	Pre-Test (mm)	Static Crush (mm)
1 (LF = -1050 mm)	456	429	27
2 -300	N/A	N/A	N/A
3 450	643	363	280
4 1200	682	351	331
5 1950	482	333	149
6 (LR = 2700 mm)	382	333	49

DATA SHEET 12

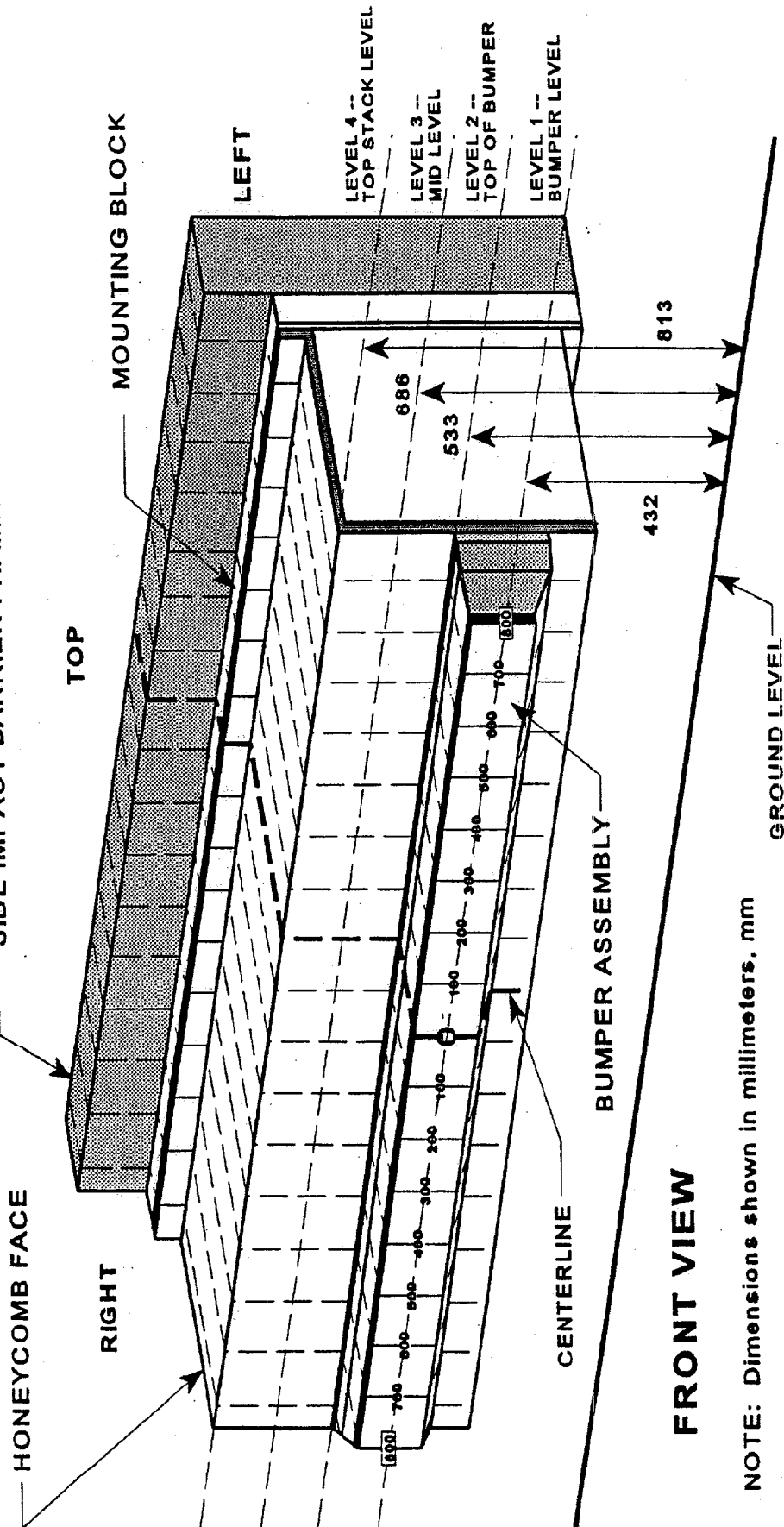
EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

(Grid as looking at MDB from front)

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

SIDE IMPACT BARRIER FRAME ASSEMBLY



FRONT VIEW

NOTE: Dimensions shown in millimeters, mm

DATA SHEET 12 (continued)

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

		Distance Right of Center (mm)										Distance Left of Center (mm)									
		800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800			
Location	Height At CL																				
Top Stack Level Level 4	810	150.7	105.8	69	44.3	41.1	66.5	73.4	54	61.9	72.1	66.7	74.2	93.1	94.8	109.1	139.1	177.9			
Mid Level Level 3	685	105.7	72.2	46.8	28.5	21.5	40	51	27.2	14.8	17.6	10.3	14.4	20.7	31.6	53.4	90.7	126.2			
Top Bumper Level Level 2	560	117.5	86.8	73.8	69.8	65.1	61.4	60.3	61.3	66.7	67.9	68.3	68.1	67.9	67.5	66.9	70.2	73.8			
Mid Bumper Level Level 1	432	135.5	113.4	93.8	87.3	84.4	83.6	83.9	81.9	80.9	80.8	81.1	80.1	79.8	80.2	80.1	84.2	89.6			

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

DATA SHEET 12 (continued)
EXTERIOR STATIC CRUSH FOR IMPACTOR FACE
Deformable Barrier Face Profile

NHTSA No.: MX0201

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

Pre-Test				Post-Test				Difference			
Index	Xmm	Ymm	Zmm	Index	Xmm	Ymm	Zmm	Index	Xmm	Ymm	Zmm
1	383.1	-798.0	256.7	1	232.4	-713.8	216.4	1	150.7	-84.2	40.3
2	382.7	-696.6	257.2	2	276.9	-623.1	219.4	2	105.8	-73.5	37.8
3	383.3	-597.6	256.6	3	314.3	-532.6	221.3	3	69.0	-65.0	35.3
4	383.5	-497.8	256.5	4	339.2	-434.4	219.7	4	44.3	-63.4	36.8
5	383.4	-398.5	255.6	5	342.3	-338.3	211.7	5	41.1	-60.2	43.9
6	383.0	-298.2	256.1	6	316.5	-246.8	211.0	6	66.5	-51.4	45.1
7	383.2	-198.1	256.2	7	309.8	-148.5	211.3	7	73.4	-49.6	44.9
8	383.9	-98.2	256.1	8	329.9	-51.8	216.4	8	54.0	-46.4	39.7
9	384.0	2.0	255.6	9	322.1	47.8	208.2	9	61.9	-45.8	47.4
10	384.0	101.4	255.1	10	311.9	145.1	201.1	10	72.1	-43.7	54.0
11	383.1	202.8	255.8	11	316.4	244.2	207.9	11	66.7	-41.4	47.9
12	382.6	302.9	255.5	12	308.4	343.4	208.8	12	74.2	-40.5	46.7
13	383.2	402.4	255.8	13	290.1	439.7	203.5	13	93.1	-37.3	52.3
14	383.3	501.9	255.4	14	288.5	538.5	210.4	14	94.8	-36.6	45.0
15	383.0	602.6	255.3	15	273.9	637.3	215.3	15	109.1	-34.7	40.0
16	382.7	702.5	255.3	16	243.6	731.3	211.3	16	139.1	-28.8	44.0
17	383.1	802.6	255.4	17	205.2	821.7	203.2	17	177.9	-19.1	52.2
18	382.2	-798.2	124.8	18	276.5	-730.1	101.9	18	105.7	-68.1	22.9
19	381.8	-699.6	125.5	19	309.6	-637.5	103.5	19	72.2	-62.1	22.0
20	381.8	-598.1	125.7	20	335.0	-539.3	100.0	20	46.8	-58.8	25.7
21	382.6	-496.9	125.7	21	354.1	-440.7	96.7	21	28.5	-56.2	29.0
22	382.7	-397.8	125.3	22	361.2	-341.5	90.5	22	21.5	-56.3	34.8
23	383.2	-296.7	125.1	23	343.2	-244.1	83.8	23	40.0	-52.6	41.3
24	383.1	-198.2	126.1	24	332.1	-147.4	83.5	24	51.0	-50.8	42.6
25	382.9	-97.6	126.0	25	355.7	-50.2	87.9	25	27.2	-47.4	38.1
26	382.9	2.7	125.3	26	368.1	47.7	92.7	26	14.8	-45.0	32.6
27	383.2	102.3	125.7	27	365.6	149.7	90.2	27	17.6	-47.4	35.5
28	382.6	202.6	125.9	28	372.3	250.3	94.6	28	10.3	-47.7	31.3
29	383.0	301.7	126.4	29	368.6	350.2	98.2	29	14.4	-48.5	28.2
30	382.6	401.9	126.1	30	361.9	450.5	100.0	30	20.7	-48.6	26.1
31	383.0	502.6	126.2	31	351.4	551.6	101.3	31	31.6	-49.0	24.9
32	382.8	602.3	126.6	32	329.4	649.4	100.8	32	53.4	-47.1	25.8

DATA SHEET 12 (continued)

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 1999 Ford Explorer 4-Door Sport Utility Deformable Barrier Face Profile Cont'd.

NHTSA No.: MX0201

Pre-Test			
Index	Xmm	Ymm	Zmm
33	383.2	701.8	127.3
34	382.8	802.4	126.5
35	384.5	-798.6	-27.9
36	384.3	-704.2	-28.0
37	385.5	-600.9	-28.2
38	384.4	-497.9	-28.7
39	384.9	-398.9	-27.6
40	384.6	-294.8	-28.5
41	384.4	-198.2	-28.5
42	385.7	-99.0	-29.4
43	384.6	3.1	-28.4
44	385.8	100.4	-29.0
45	384.9	201.2	-29.0
46	386.0	299.6	-29.7
47	385.2	399.9	-29.2
48	385.1	503.5	-29.9
49	385.8	601.6	-29.8
50	387.0	700.6	-32.2
51	386.2	800.3	-29.2
52	474.1	-796.7	-129.1
53	485.3	-697.4	-130.2
54	485.2	-597.5	-129.8
55	486.8	-497.5	-127.9
56	486.2	-396.8	-130.5
57	486.4	-296.8	-130.6
58	486.5	-197.3	-131.2
59	486.0	-98.5	-131.5
60	485.8	2.5	-131.6
61	485.8	102.5	-130.8
62	486.1	202.8	-131.2
63	485.7	303.0	-132.4
64	485.5	403.4	-132.2

Post-Test			
Index	Xmm	Ymm	Zmm
33	292.5	741.0	94.1
34	256.6	844.8	89.5
35	267.0	-756.4	-33.4
36	297.5	-654.1	-36.0
37	311.7	-547.8	-37.4
38	314.6	-446.3	-40.0
39	319.8	-338.1	-42.4
40	323.2	-263.4	-44.7
41	324.1	-154.9	-47.9
42	324.4	-55.7	-45.0
43	317.9	44.4	-41.0
44	317.9	130.5	-39.3
45	316.6	251.7	-41.4
46	317.9	350.1	-42.3
47	317.3	450.5	-41.9
48	317.6	554.4	-42.7
49	318.9	650.8	-43.0
50	316.8	751.2	-45.1
51	312.4	850.4	-43.9
52	338.6	-740.6	-144.8
53	371.9	-644.9	-148.7
54	391.4	-547.2	-150.7
55	399.5	-447.9	-152.1
56	401.8	-346.3	-151.7
57	402.8	-247.9	-151.8
58	402.6	-146.9	-154.0
59	404.1	-48.7	-153.7
60	404.9	52.9	-153.8
61	405.0	151.7	-154.4
62	405.0	252.0	-155.1
63	405.6	352.5	-156.6
64	405.7	453.0	-155.9

Difference			
Index	Xmm	Ymm	Zmm
33	90.7	-39.2	33.2
34	126.2	-42.4	37.0
35	117.5	-42.2	5.5
36	86.8	-50.1	8.0
37	73.8	-53.1	9.2
38	69.8	-51.6	11.3
39	65.1	-60.8	14.8
40	61.4	-31.4	16.2
41	60.3	-43.3	19.4
42	61.3	-43.3	15.6
43	66.7	-41.3	12.6
44	67.9	-30.1	10.3
45	68.3	-50.5	12.4
46	68.1	-50.5	12.6
47	67.9	-50.6	12.7
48	67.5	-50.9	12.8
49	66.9	-49.2	13.2
50	70.2	-50.6	12.9
51	73.8	-50.1	14.7
52	135.5	-56.1	15.7
53	113.4	-52.5	18.5
54	93.8	-50.3	20.9
55	87.3	-49.6	24.2
56	84.4	-50.5	21.2
57	83.6	-48.9	21.2
58	83.9	-50.4	22.8
59	81.9	-49.8	22.2
60	80.9	-50.4	22.2
61	80.8	-49.2	23.6
62	81.1	-49.2	23.9
63	80.1	-49.5	24.2
64	79.8	-49.6	23.7

DATA SHEET 12 (continued)

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 1999 Ford Explorer 4-Door Sport Utility Deformable Barrier Face Profile Cont'd. NHTSA No.: MX0201

Index	Pre-Test		
	Xmm	Ymm	Zmm
65	485.6	503.1	-132.6
66	485.3	603.6	-132.8
67	485.0	702.7	-133.4
68	473.9	803.3	-133.7

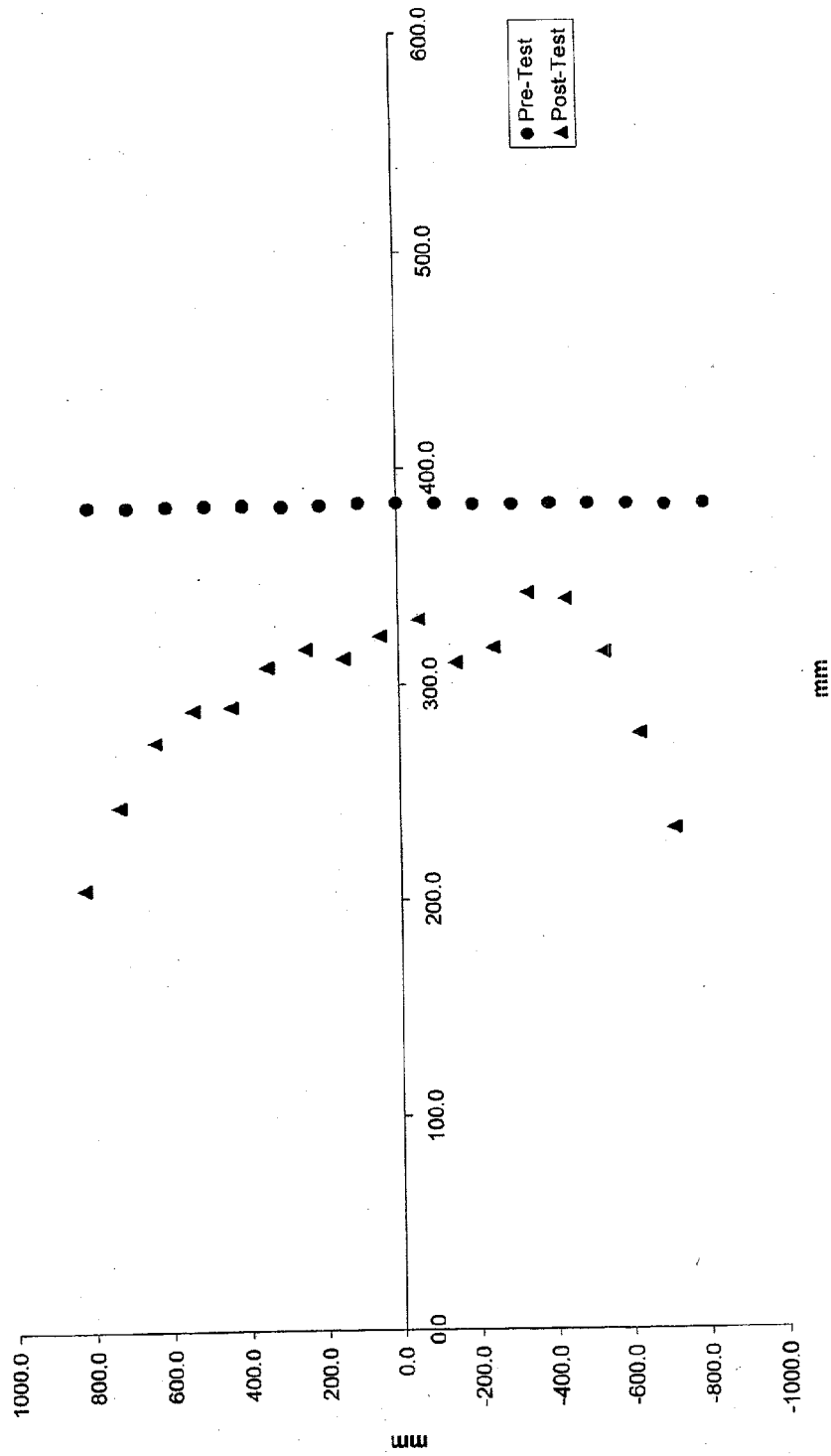
Index	Post-Test		
	Xmm	Ymm	Zmm
65	405.4	552.4	-156.2
66	405.2	653.1	-156.0
67	400.8	752.5	-155.6
68	384.3	852.0	-155.8

Index	Difference		
	Xmm	Ymm	Zmm
65	80.2	-49.3	23.6
66	80.1	-49.5	23.2
67	84.2	-49.8	22.2
68	89.6	-48.7	22.1

DATA SHEET 12 (continued)
EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

Deformable Barrier Face Profile 1-17

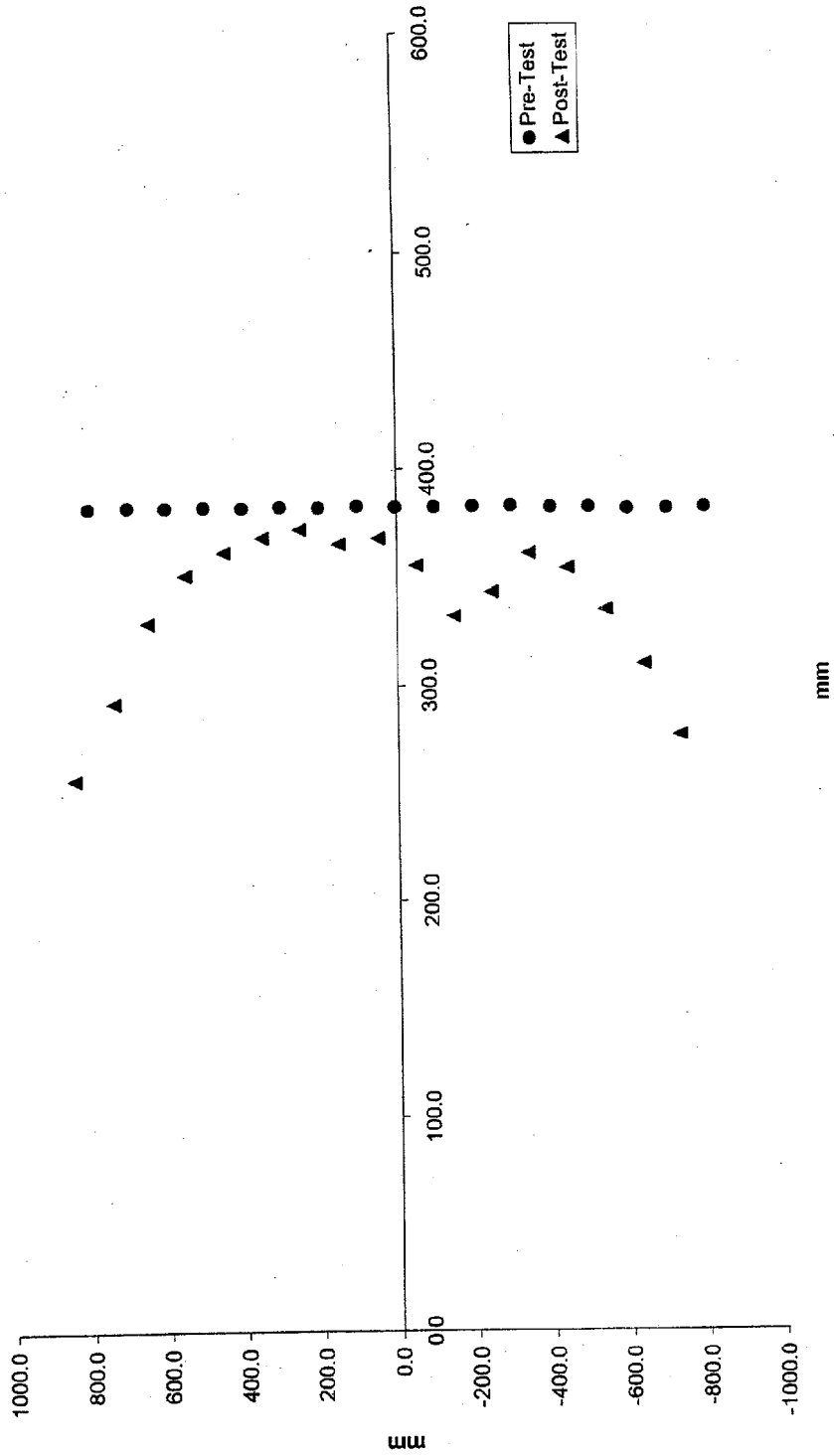


DATA SHEET 12 (continued)
EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

Deformable Barrier Crush Profile 18-34

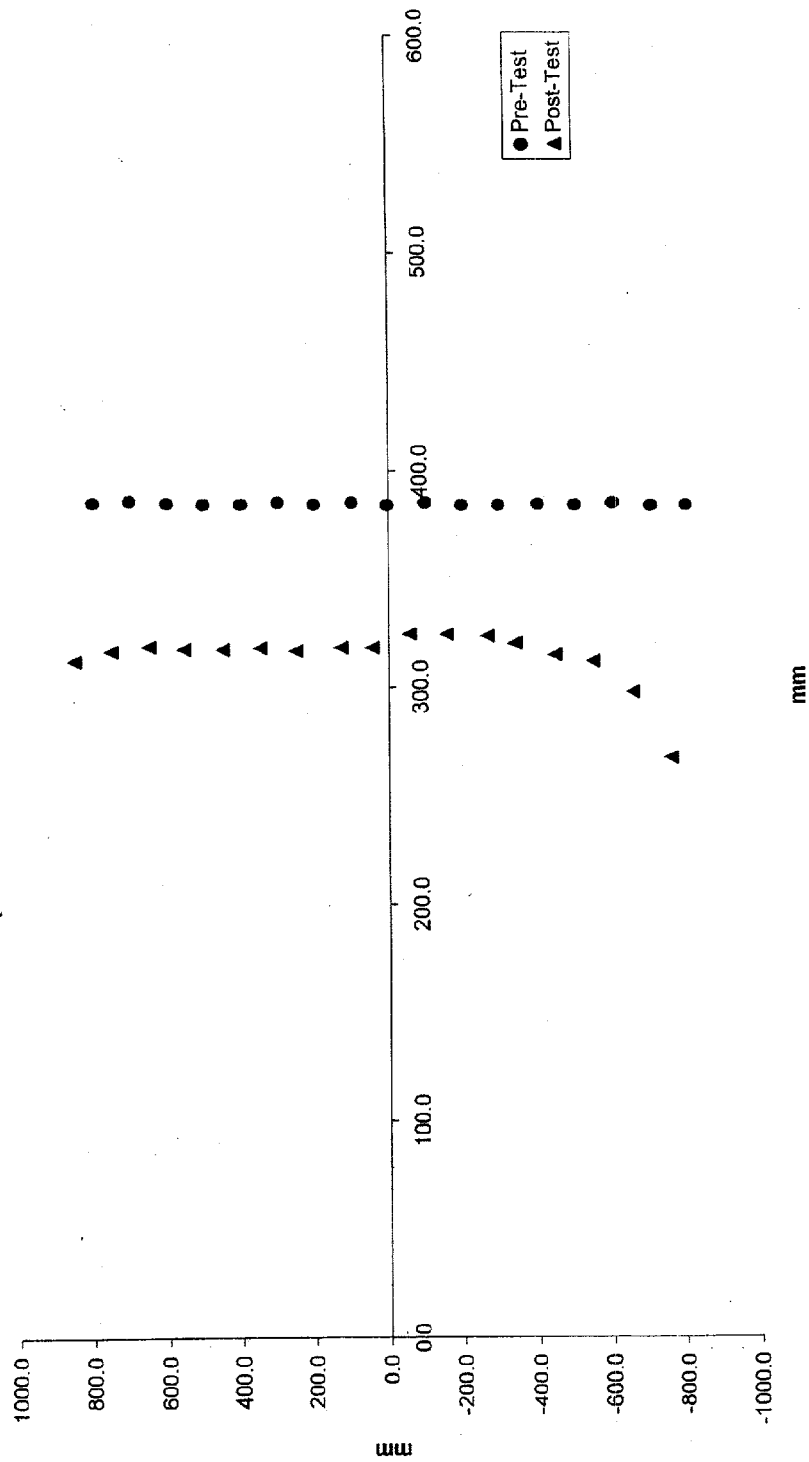


DATA SHEET 12 (continued)
EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

NHTSA No.: MX0201

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

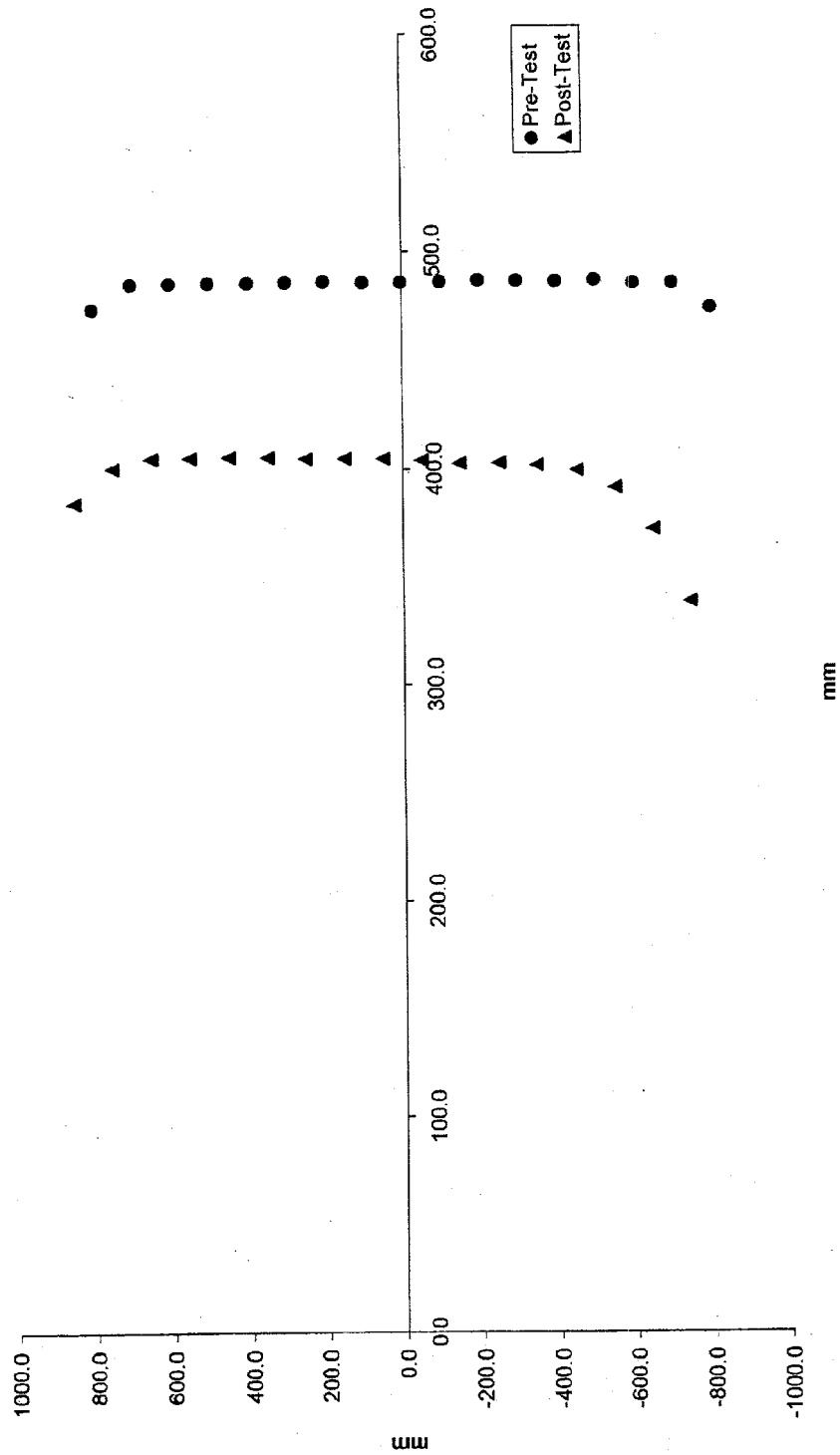
Deformable Barrier Face Profile 35-51



DATA SHEET 12 (continued)
 EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

Deformable Barrier Face Profile 52-68

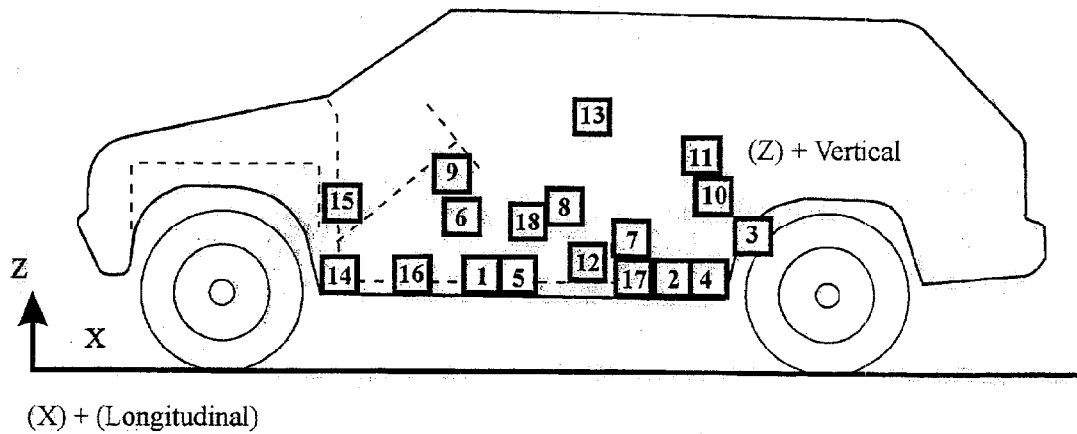


DATA SHEET 13

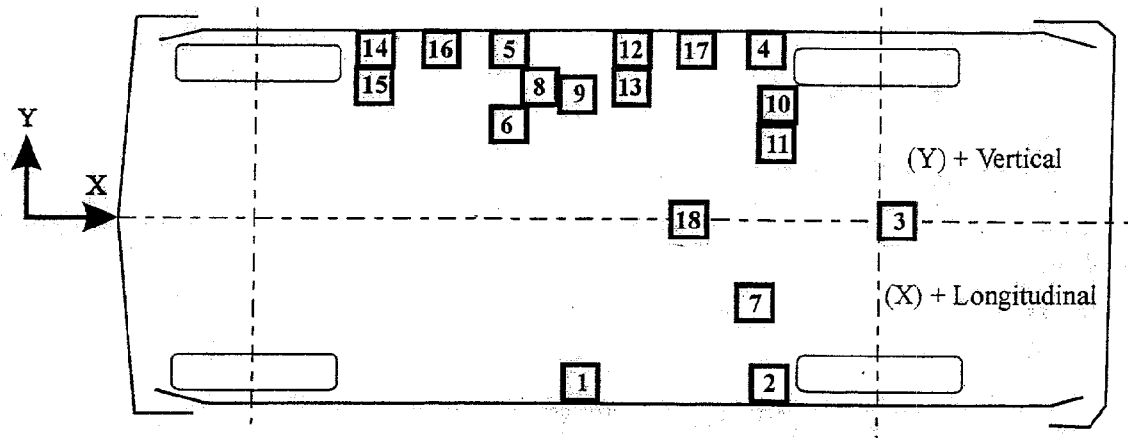
TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



Side View



Bottom View

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

DATA SHEET 13 (continued)

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

TEST NUMBER: 990218-1

No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
1 RIGHT SIDE SILL	PRE 3033 in	-560 in	524 in		
AT FRONT SEAT	POST 3042 in	-511 in	495 in		
LONGITUDINAL			12.2 g	@ 6.9 ms	@ 51.7 ms
LATERAL			25.5 g	@ 16.1 ms	@ 173.8 ms
VERTICAL			18.0 g	@ 11.1 ms	@ 6.5 ms
RESULTANT			26.2 g	@ 24.2 ms	
2 RIGHT SIDE SILL	PRE 2770 in	-550 in	490 in		
AT REAR SEAT	POST 1992 in	-501 in	461 in		
LONGITUDINAL			10.1 g	@ 6.5 ms	@ 49.8 ms
LATERAL			38.9 g	@ 6.5 ms	@ 12.1 ms
VERTICAL			16.4 g	@ 19.1 ms	@ 59.0 ms
RESULTANT			40.7 g	@ 6.6 ms	
3 REAR FLOORPAN	PRE 1181 in	0 in	687 in		
ABOVE AXLE	POST 1181 in	0 in	693 in		
LONGITUDINAL			6.5 g	@ 12.4 ms	@ 126.8 ms
LATERAL			32.1 g	@ 6.7 ms	@ 0.0 ms
VERTICAL			19.5 g	@ 14.6 ms	@ 28.4 ms
RESULTANT			32.7 g	@ 6.5 ms	
4 LEFT SIDE SILL	PRE 2000 in	615 in	487 in		
AT REAR SEAT	POST 1964 in	499 in	NA		
LATERAL ¹			---	---	---

DATA SHEET 13 (continued)

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

TEST NUMBER: 990218-1
No. LOCATION

POSITIVE
DIRECTION

NEGATIVE
DIRECTION

	X	Y	Z			
5 LEFT SIDE SILL	PRE 3135 in	585 in	518 in			
AT FRONT SEAT	POST 3069 in	462 in	NA			
LATERAL ¹				152.3 g	@ 6.3 ms	5.0 g @ 0.0 ms
6 LEFT FRONT DOOR	PRE 2862 in	723 in	764 in			
ON CENTERLINE	POST 2727 in	591 in	NA			
LATERAL				326.3 g	@ 11.2 ms	120.7 g @ 15.8 ms
7 RIGHT REAR OCCUPANT	PRE 2000 in	620 in	455 in			
COMPARTMENT	POST 1801 in	562 in	500 in			
LATERAL ¹				---	---	---
8 LEFT FRONT DOOR	PRE 2509 in	723 in	764 in			
MIDREAR	POST 2373 in	543 in	NA			
LATERAL				159.8 g	@ 7.1 ms	116.5 g @ 12.6 ms
9 LEFT FRONT DOOR	PRE 2862 in	723 in	1055 in			
UPPER CENTERLINE	POST 2724 in	653 in	NA			
LATERAL				84.6 g	@ 9.1 ms	55.8 g @ 14.6 ms

DATA SHEET 13 (continued)

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility NHTSA No.: MX0201

TEST NUMBER: No. LOCATION	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
990218-1					
10 LEFT REAR DOOR	PRE 1619 in	735 in	792 in		
MIDREAR	POST 1525 in	601 in	NA		
LATERAL				132.4 g @ 14.3 ms	109.1 g @ 10.6 ms
11 LEFT REAR DOOR	PRE 1864 in	735 in	1066 in		
UPPER CENTERLINE	POST 1836 in	630 in	NA		
LATERAL				130.4 g @ 11.8 ms	60.0 g @ 21.4 ms
12 LOWER B-POST	PRE 2450 in	710 in	570 in		
LATERAL	POST 2251 in	545 in	NA		
				186.5 g @ 5.4 ms	40.8 g @ 16.2 ms
13 MIDDLE B-POST	PRE 2395 in	700 in	834 in		
LATERAL	POST 2280 in	520 in	NA		
				184.0 g @ 6.8 ms	53.1 g @ 19.1 ms
14 LOWER A-POST	PRE 3220 in	752 in	730 in		
LATERAL	POST 3244 in	582 in	NA		
				105.9 g @ 5.5 ms	29.6 g @ 20.2 ms

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility
NHTSA No.: MX0201

TEST NUMBER: 990218-1	X	Y	Z	POSITIVE DIRECTION	NEGATIVE DIRECTION
No. LOCATION					
15 MIDDLE A-POST	PRE 3215 in	752 in	1048 in		
	POST 3244 in	681 in	NA		
LATERAL				51.5 g @ 7.6 ms	7.3 g @ 2.2 ms
16 FRONT SEAT TRACK	PRE 2685 in	630 in	515 in		
	POST 2695 in	541 in	NA		
LATERAL				110.3 g @ 9.9 ms	49.1 g @ 23.9 ms
17 LEFT SIDE REAR SEAT TRACK AT H-POINT	PRE 1728 in	696 in	521 in		
LATERAL	POST 1611 in	600 in	NA		
				108.7 g @ 6.4 ms	100.4 g @ 25.3 ms
18 VEHICLE CENTER OF GRAVITY	PRE 3400 in	0 in	565 in		
	POST 2622 in	0 in	610 in		
LONGITUDINAL				23.1 g @ 6.9 ms	18.6 g @ 14.6 ms
LATERAL				39.1 g @ 23.7 ms	10.3 g @ 11.0 ms
VERTICAL				55.8 g @ 19.8 ms	23.9 g @ 13.8 ms
RESULTANT				68.5 g @ 19.8 ms	

REFERENCE: X: + FORWARD FROM REAR BUMPER
Y: + LEFTWARD FROM VEHICLE CENTERLINE
Z: + UPWARD FROM GROUND LEVEL

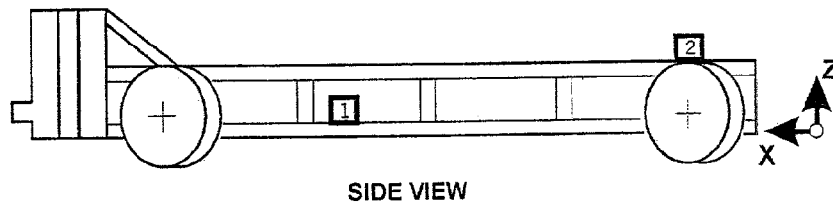
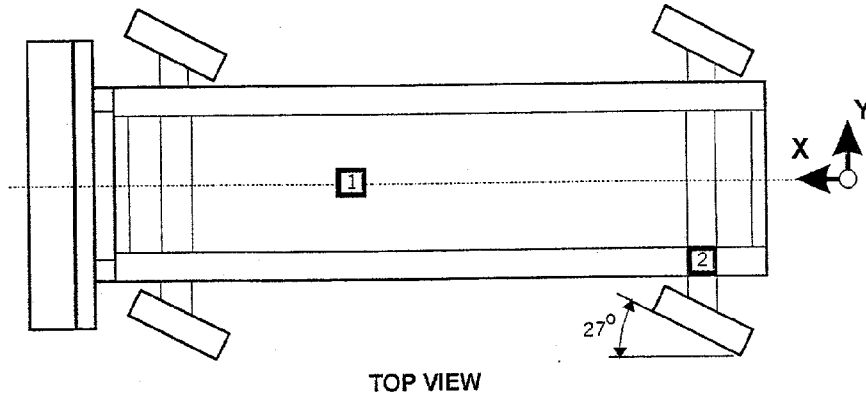
1 See DATA ACQUISITION EXPLANATIONS

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



Accel. No.	Location	Coordinates (millimeters)			Positive Direction		Negative Direction	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity	1850	0	498				
	Longitudinal X				43.0	46.1	7.8	124.1
	Lateral Y				3.9	60.9	8.2	16.6
	Vertical Z				7.6	124.4	9.4	45.6
	Resultant R				44.0	46.0		
2	Rear Frame Member	385	-635	610				
	Longitudinal X				25.6	34.4	2.3	118.7
	Lateral Y				5.2	13.7	4.2	66.6

*Reference: X=Rear Bumper (+ Forward)

Y=Vehicle Centerline (+ To Right)

Z=Ground Level (+ Up)

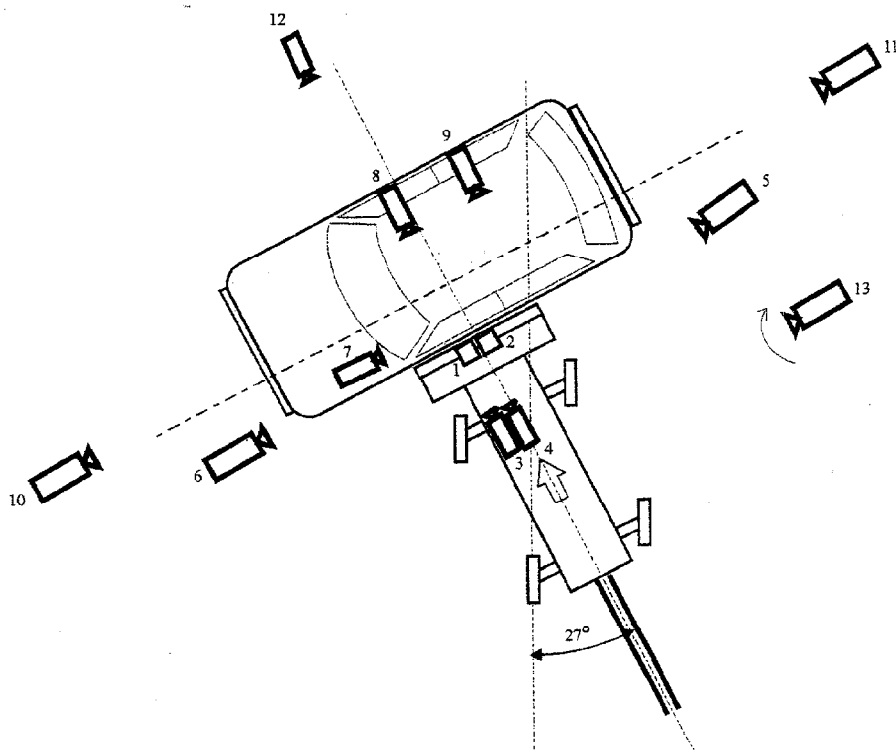
All measurements accurate to within ± 3 mm.

DATA SHEET 15

HIGH-SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201



Camera Number	Location	Location, mm			Lens (mm)	Speed (fps)
		X	Y	Z		
1	Overhead wide	1,142	1,811	10,866	13	1000
2	Overhead tight	1,142	1,378	10,866	25	995
3	Onboard MDB left side	0	1829	787	25	968
4	Onboard MDB center	914	8	1372	13	953
5	Right side	-4521	-533	1054	13	1002
6	Left side	N/A ¹	381	1054	13	1018
7	Onboard vehicle front	-508	-457	1524	8	995
8	Onboard side front door	813	1676	1207	8	1002
9	Onboard side rear door	1638	1600	1232	8	1005
10	Front wide	7468	8992	1092	8	468
11	Rear wide	12624	940	1562	8	515
12	Right side wide	876	15799	1067	13	512
13	Real-time Panning					24

+X: Rearward from impact point

+Y: Toward right from impact point

+Z: Upward from ground level

¹ Measurement not recorded.

SECTION 5

VEHICLE FUEL SYSTEM INTEGRITY

DATA SHEET 16

FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA NO.: MX0201

TEST DATE: February 18, 1999

Vehicle Mfgr./Make/Model : 1999 Ford Explorer 4-Door Sport Utility

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
(61.15 km/h) contacting the driver 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 min.

SOLVENT SPILLAGE DETAILS :

N/A

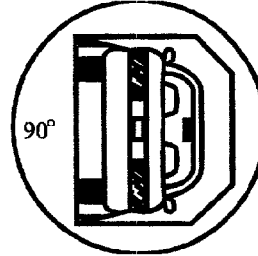
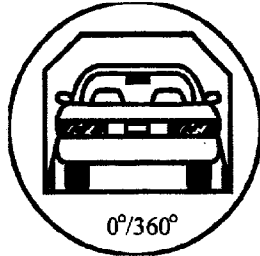
DATA SHEET 17

ROLLOVER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

0 - 90 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE :

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

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

IV. SOLVENT SPILLAGE LOCATION(S):

None

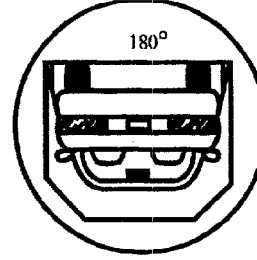
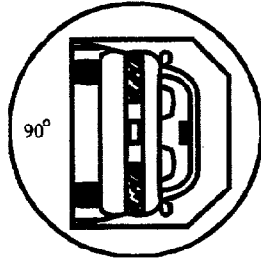
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

90 - 180 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

Rollover Fixture 90° Rotation Time 1 minutes 2 seconds

(Spec. Range = 1 to 3 minutes)

FMVSS 301 Position Hold Time + 5 minutes 0 seconds

TOTAL 6 minutes 2 seconds

Next whole minute interval 7 minutes

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE :

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

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

IV. SOLVENT SPILLAGE LOCATION(S):

None

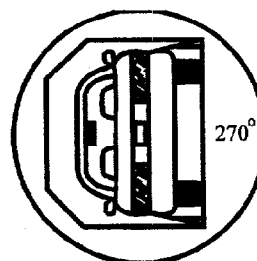
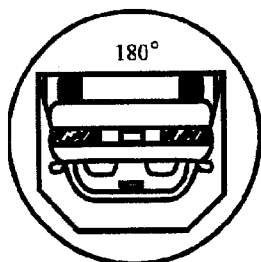
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

180 - 270 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE :

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

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

IV. SOLVENT SPILLAGE LOCATION(S):

None

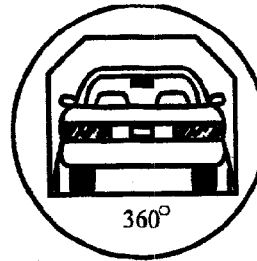
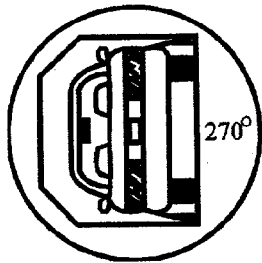
DATA SHEET 17 (continued)

ROLLOVER DATA

Vehicle: 1999 Ford Explorer 4-Door Sport Utility

NHTSA No.: MX0201

270 - 360 Degrees



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD :

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

II. FMVSS 301 REQUIREMENTS :

(1) Time Period

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

(2) Maximum Allowable Solvent Spillage

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

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE :

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

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

IV. SOLVENT SPILLAGE LOCATION(S):

None

Appendix A

Photographs

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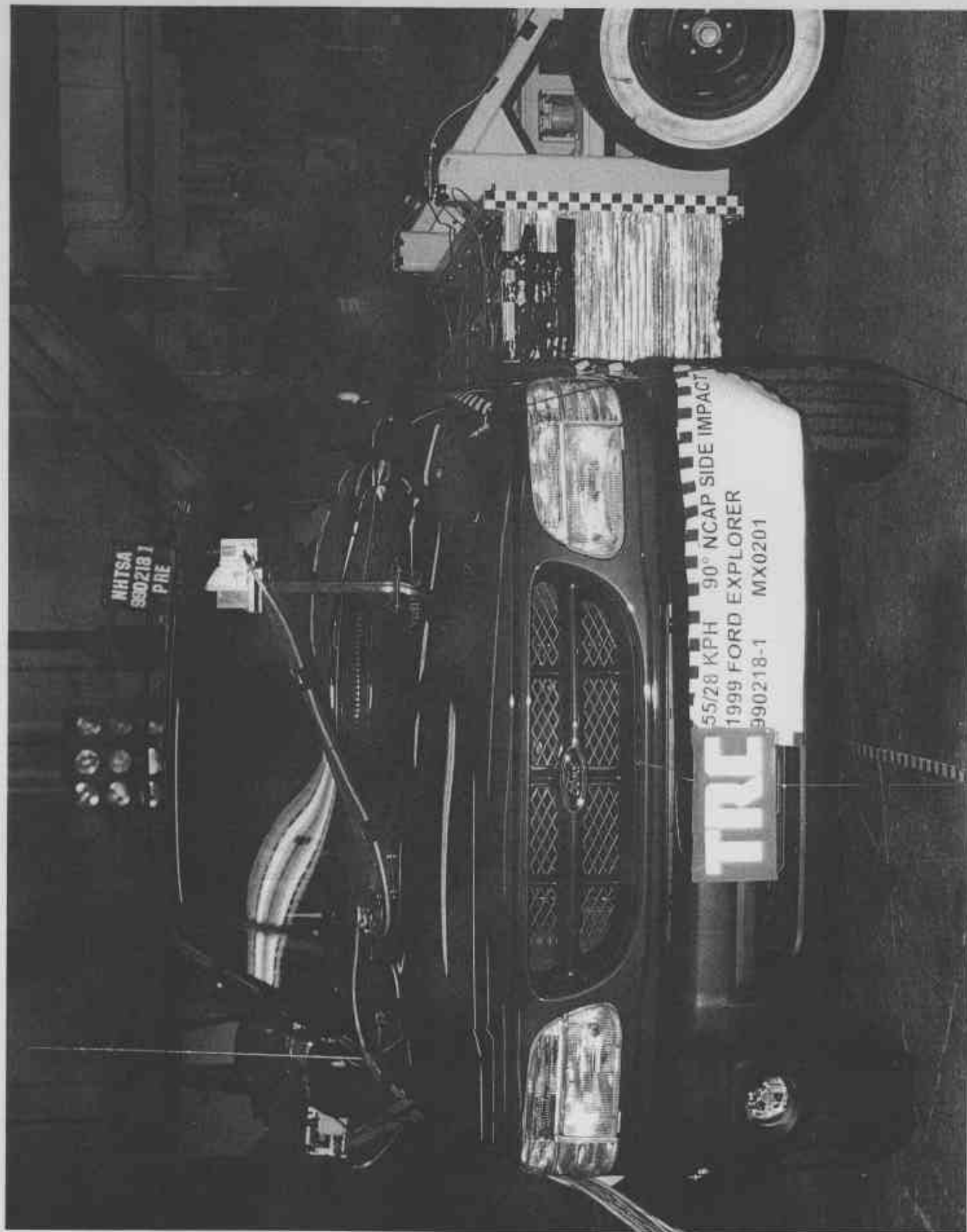


Figure A-1 Pre-Test Front View of Test Vehicle
A-4

990218



Figure A-2 Post-Test Front View of Test Vehicle - View 1
A-5

990218

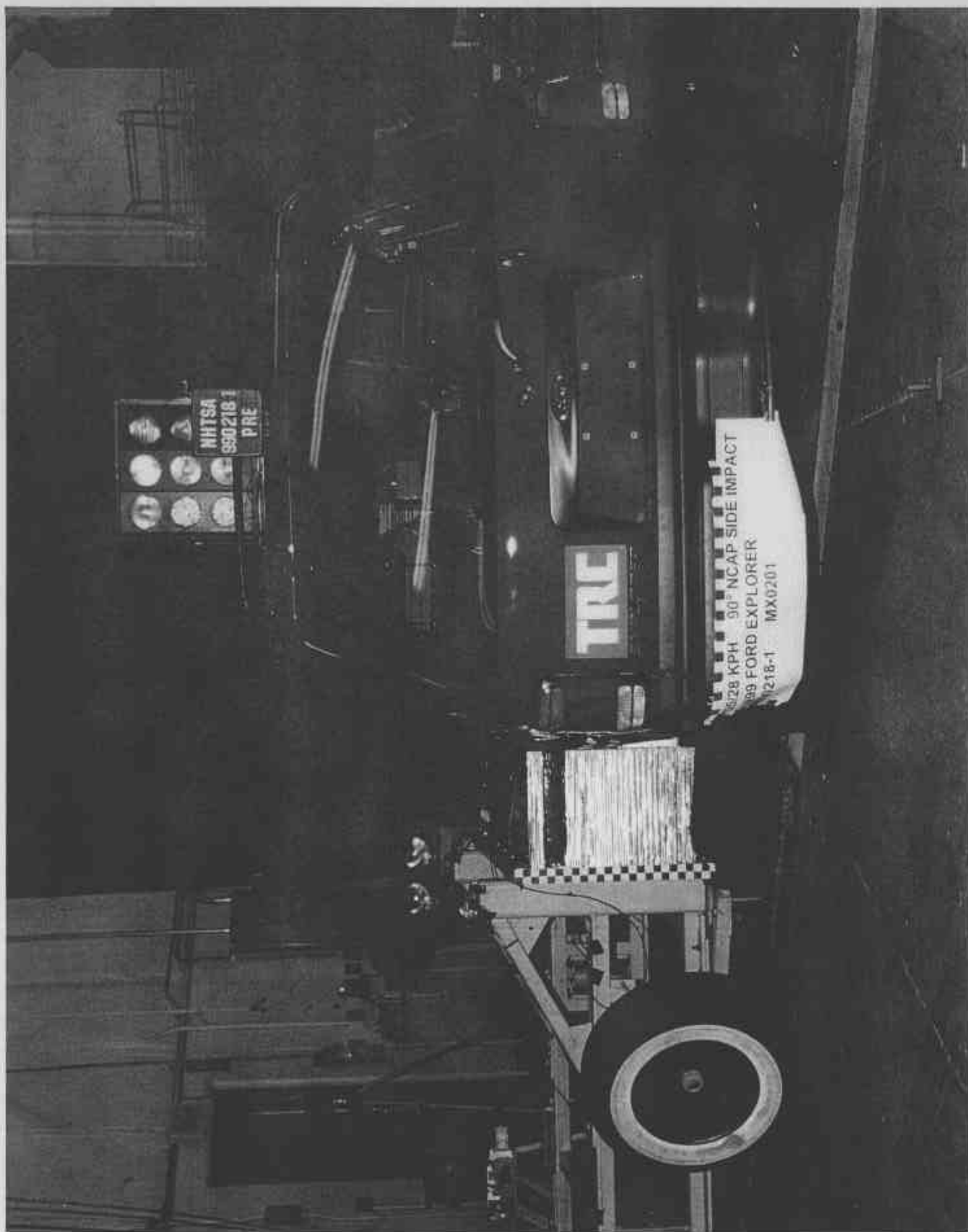


Figure A-3 Pre-Test Rear View of Test Vehicle
A-6

990218



Figure A-4 Post-Test Rear View of Test Vehicle

A-7

990218

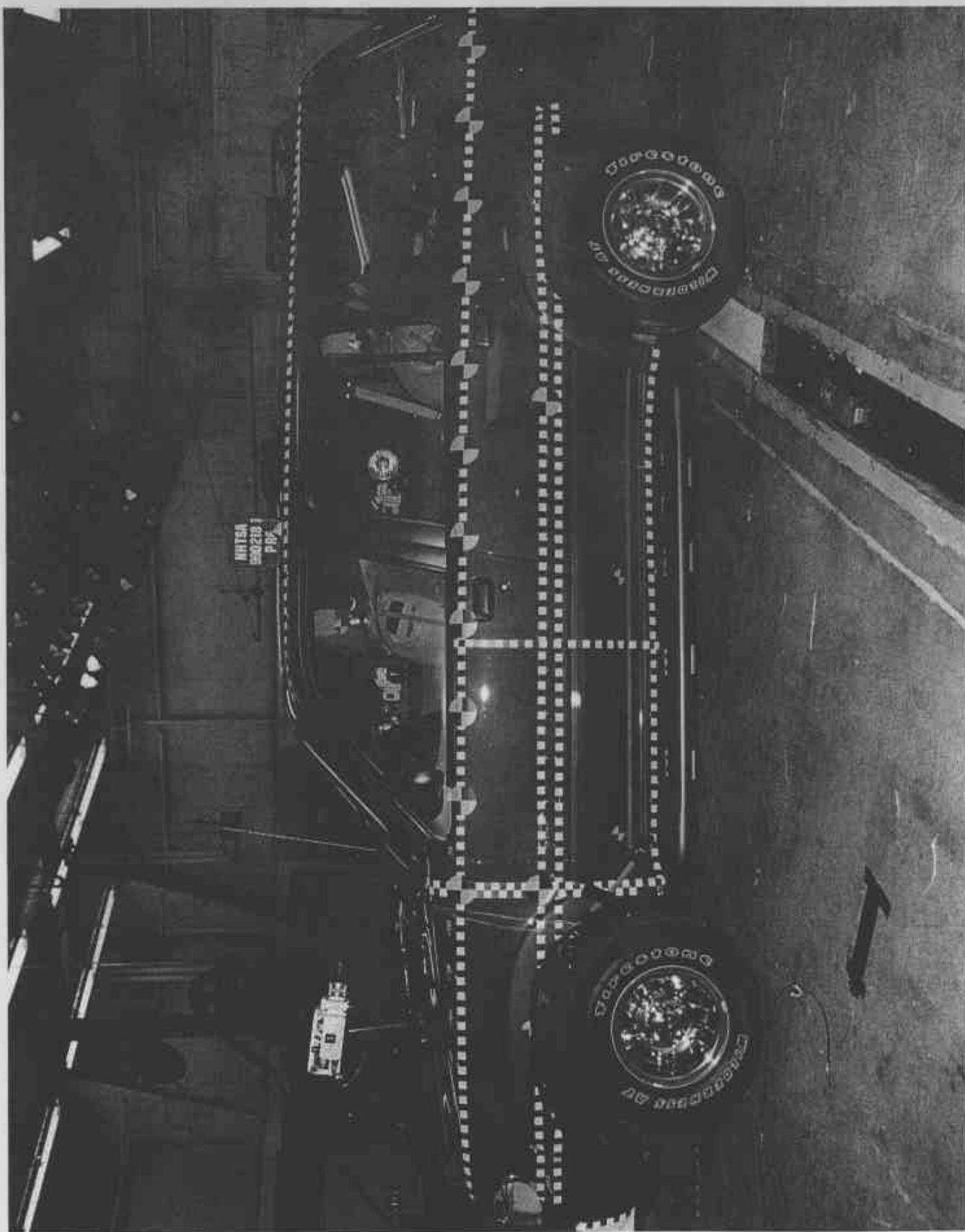


Figure A-5 Pre-Test Impacted Side View of Test Vehicle
A-8

990218

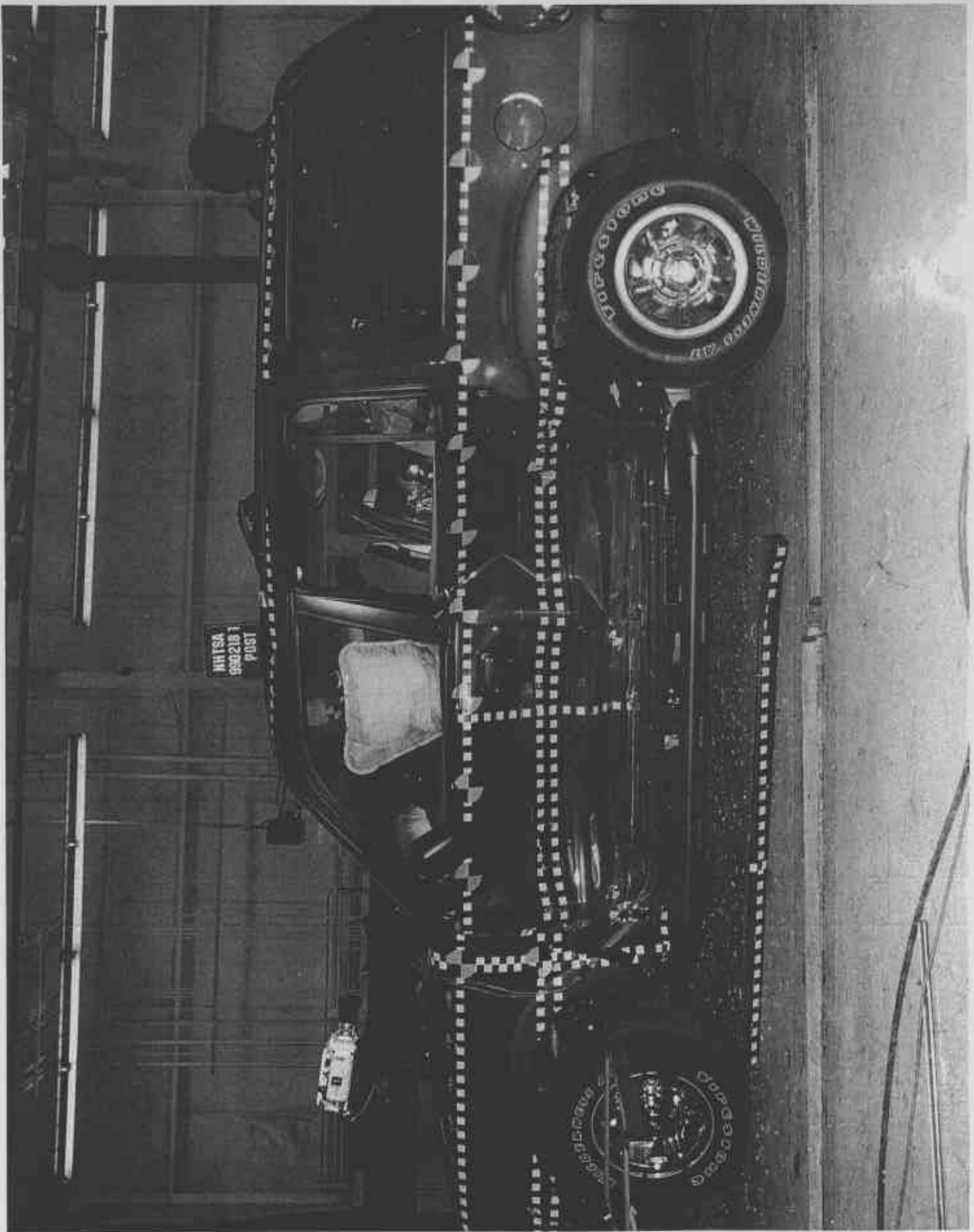


Figure A-6 Post-Test Impacted Side View of Test Vehicle
A-9

990218

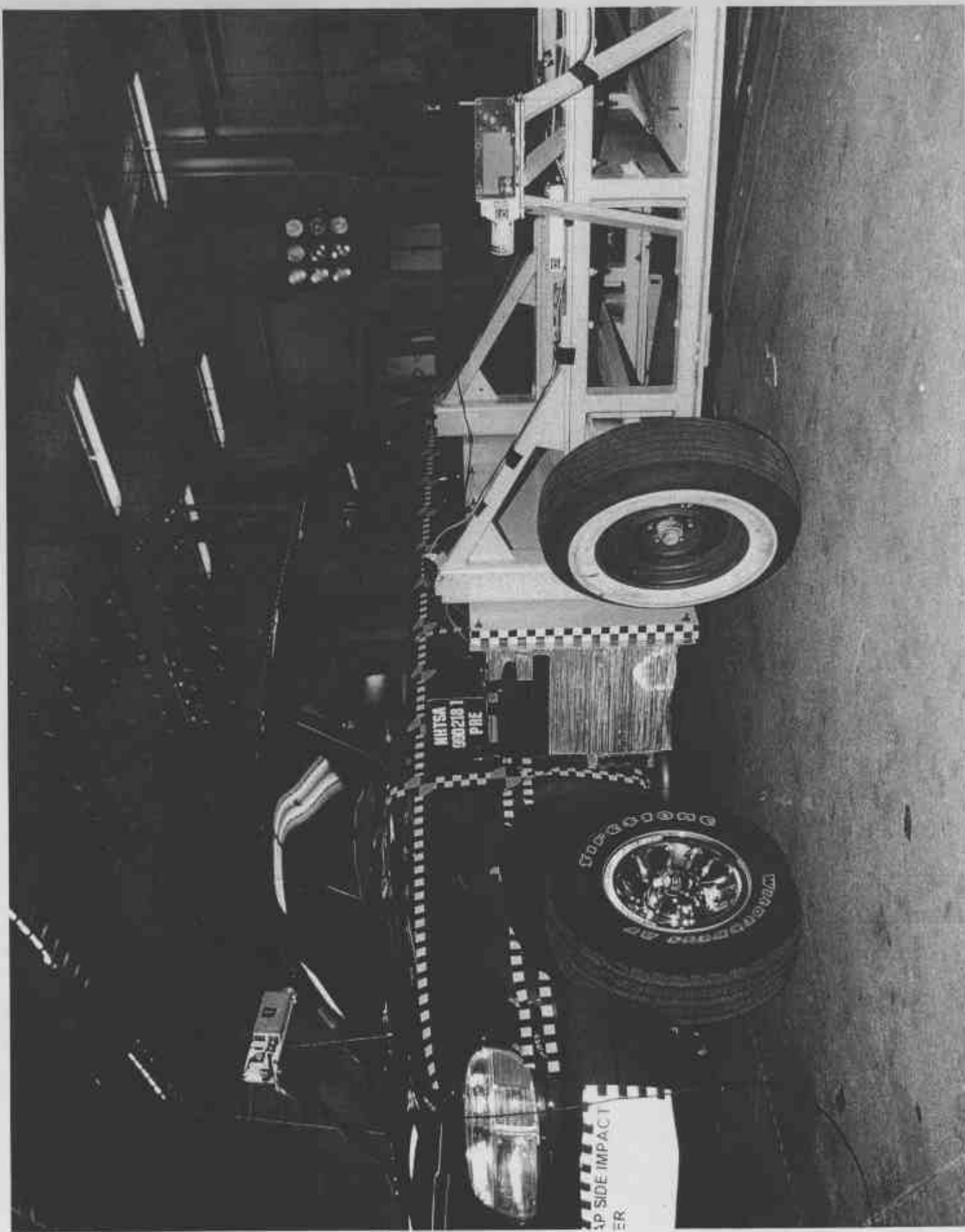


Figure A-7 Pre-Test Left Front Three-Quarter View of Test Vehicle

A-10

990218

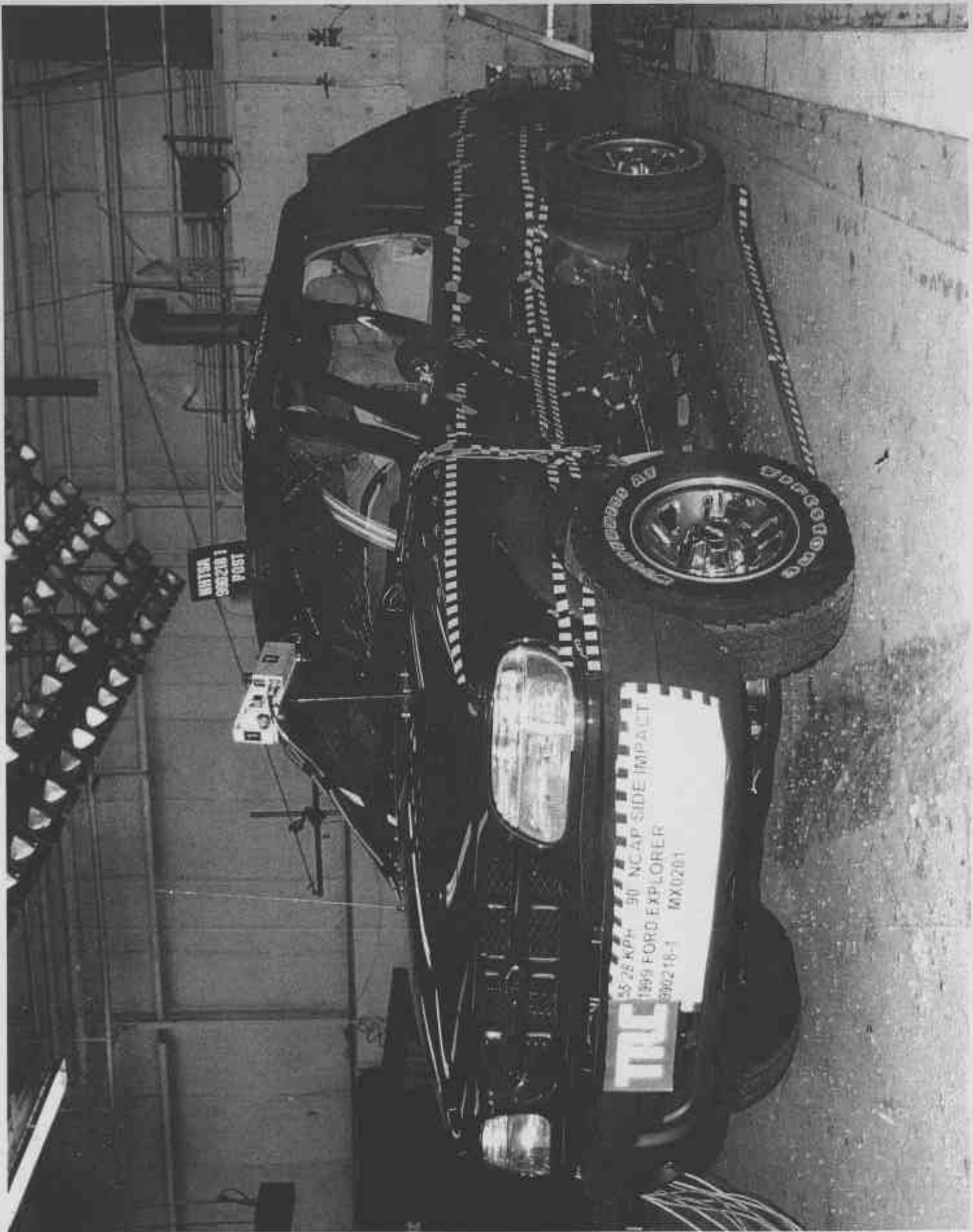


Figure A-8 Post-Test Left Front Three-Quarter View of Test Vehicle

A-11

990218

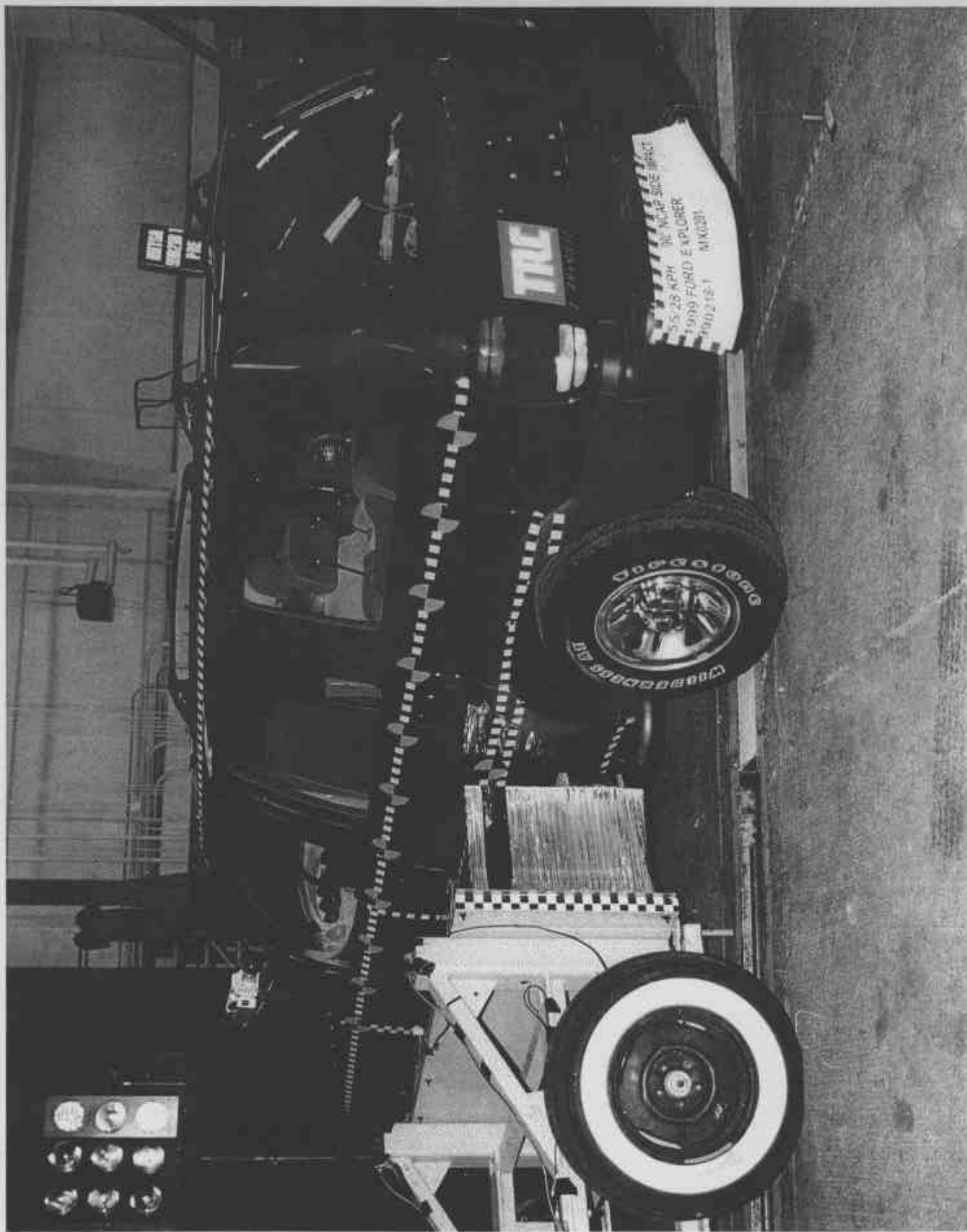


Figure A-9 Pre-Test Left Rear Three-Quarter View of Test Vehicle

A-12

990218



Figure A-10 Post-Test Left Rear Three-Quarter View of Test Vehicle

A-13

990218

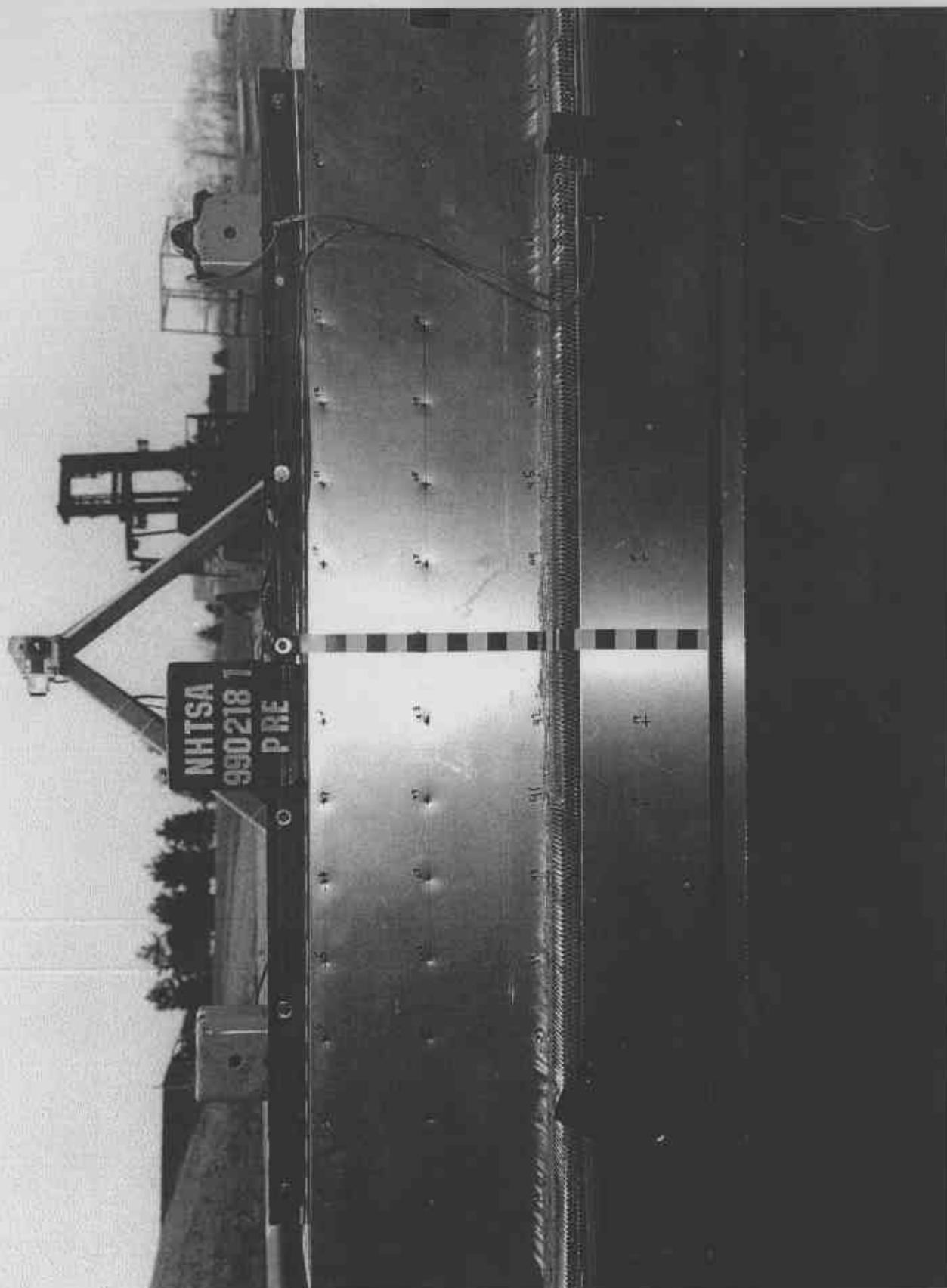


Figure A-11 Pre-Test Frontal View of Impactor Face
A-14

990218

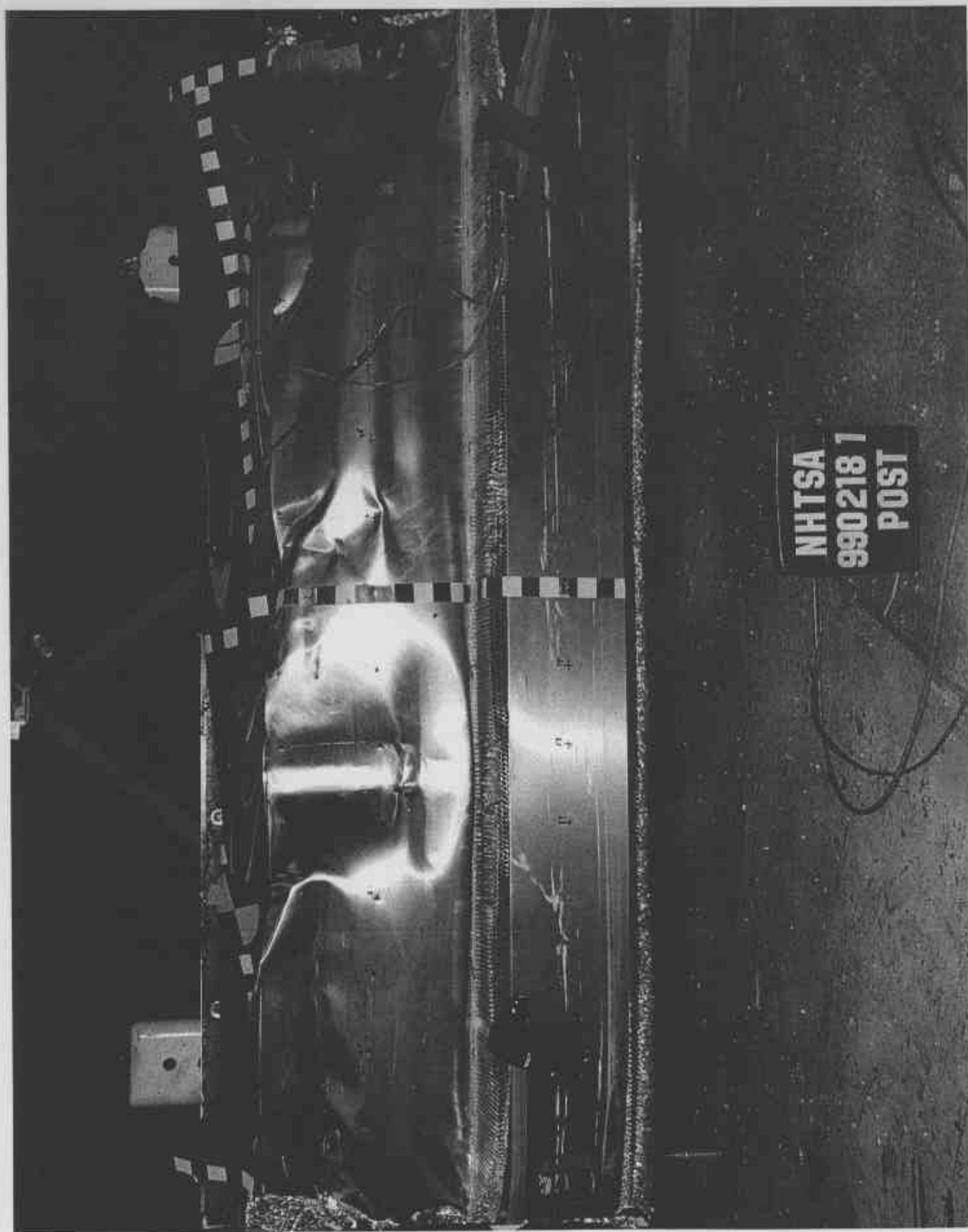


Figure A-12 Post-Test Frontal View of Impactor Face
A-15

990218

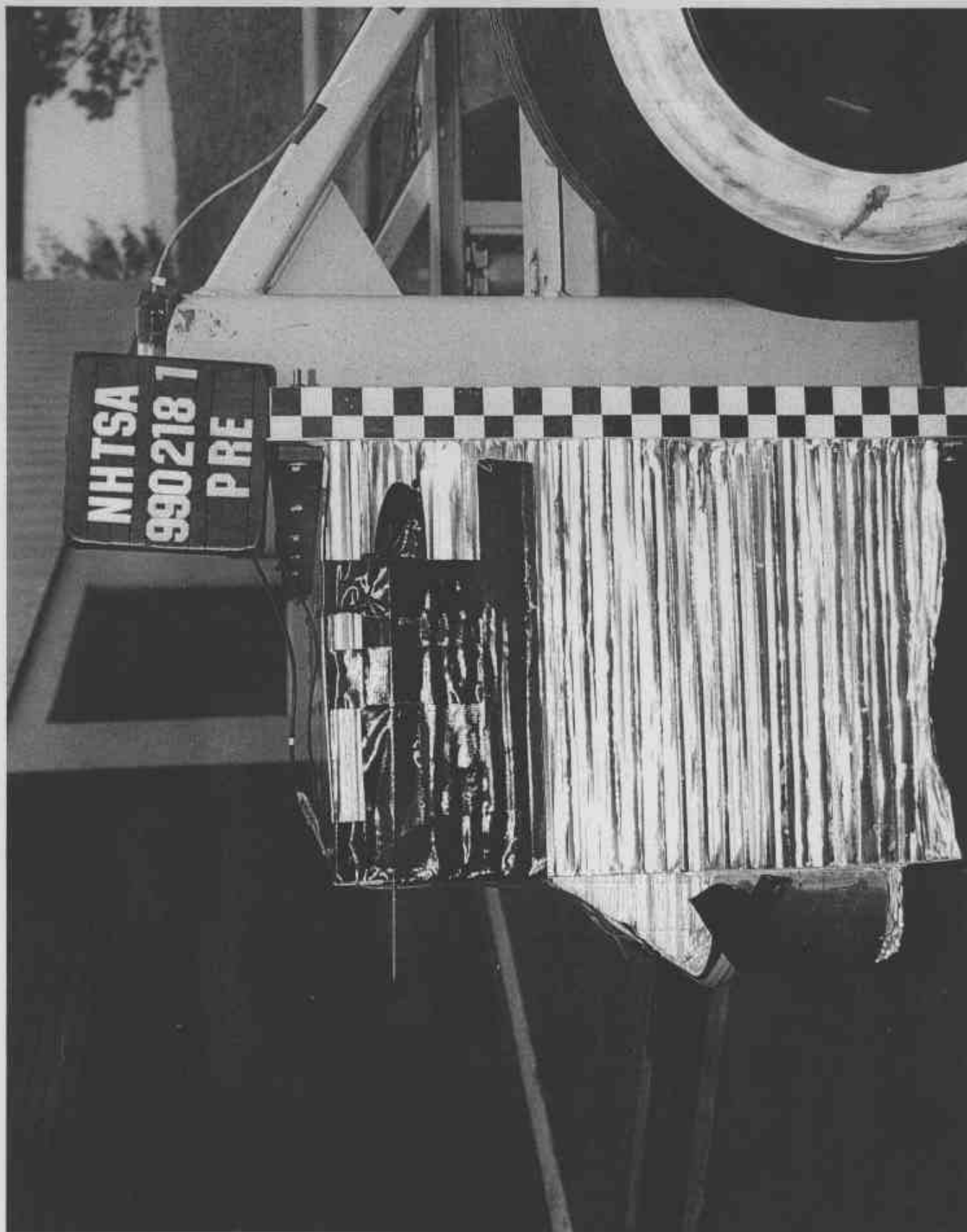


Figure A-13 Pre-Test Left Side View of Impactor Face
A-16

990218



Figure A-14 Post-Test Left Side View of Impactor Face
A-17

990218

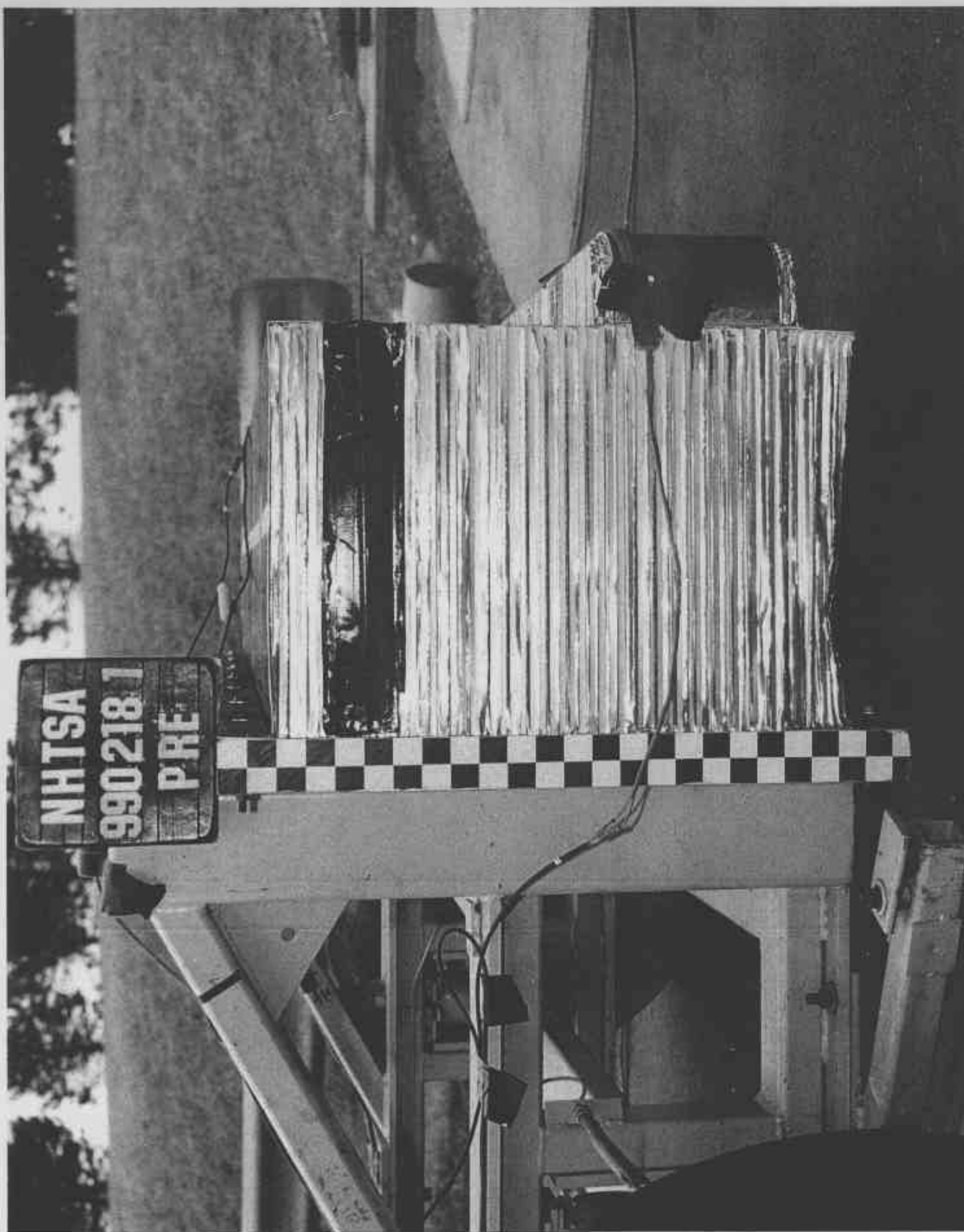


Figure A-15 Pre-Test Right Side View of Impactor Face
A-18

990218



Figure A-16 Post-Test Right Side View of Impactor Face
A-19

990218

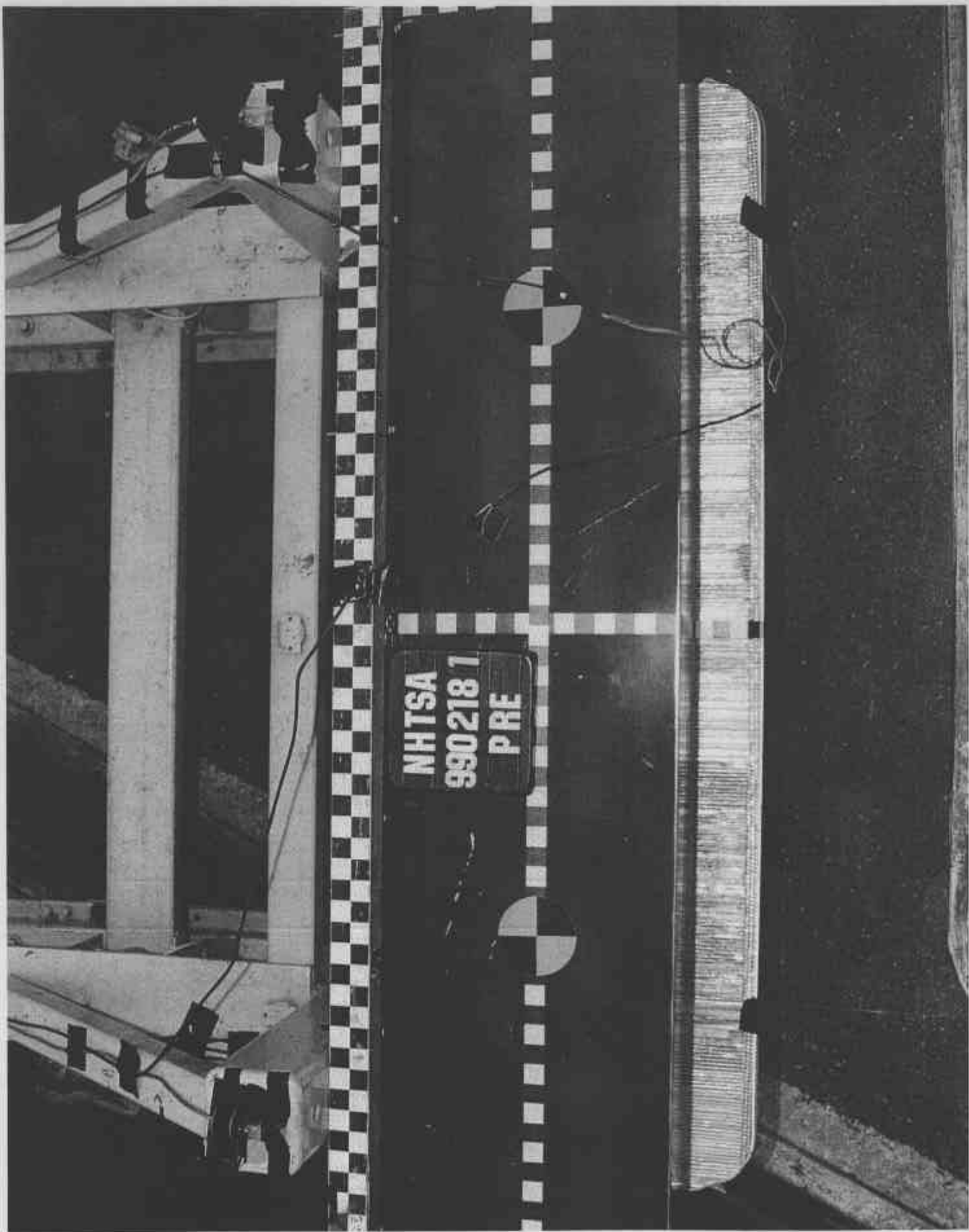


Figure A-17 Pre-Test Top View of Impactor Face
A-20

990218

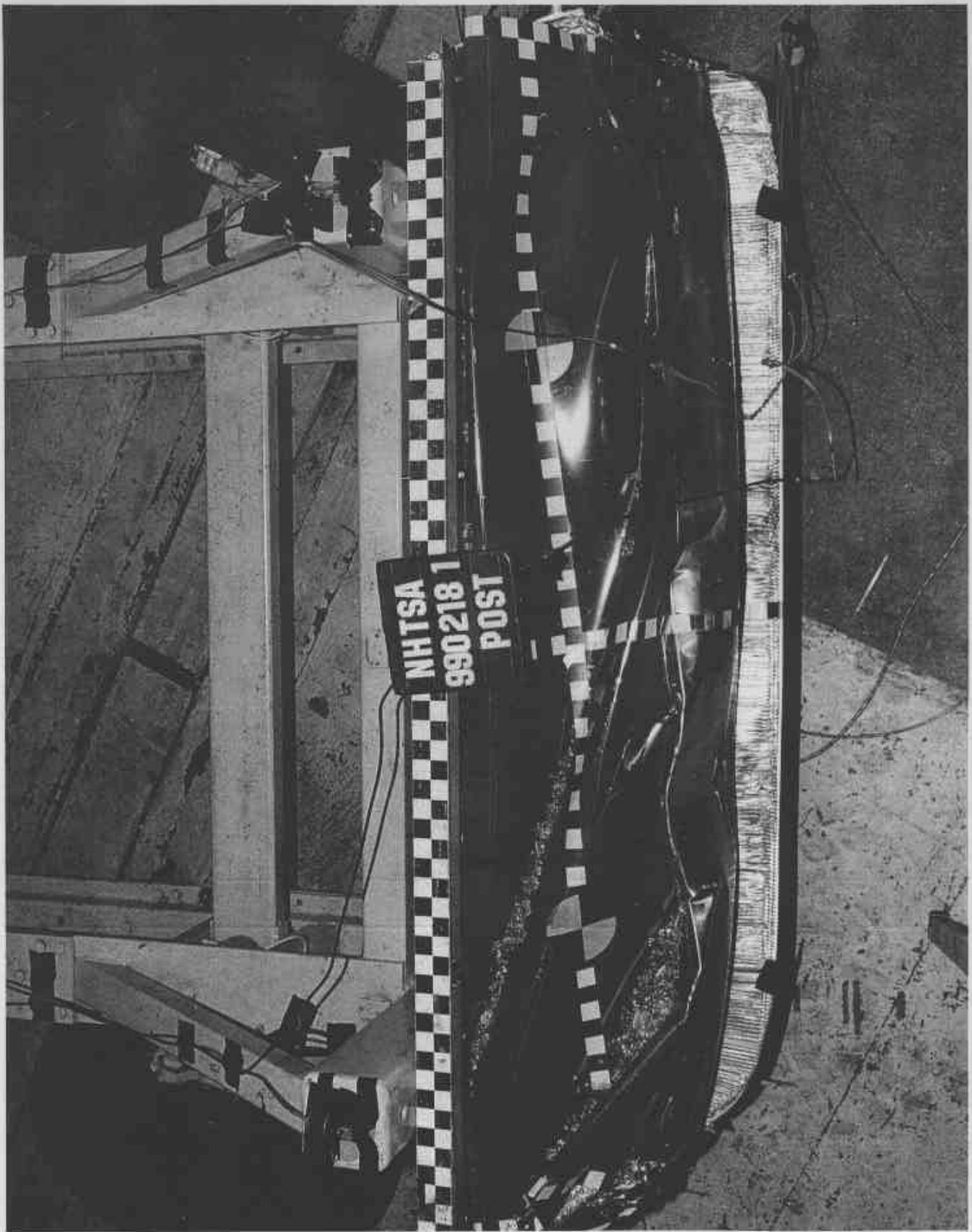


Figure A-18 Post-Test Top View of Impactor Face
A-21

990218



Figure A-19 Pre-Test Overhead View of MDB Aligned with Vehicle

A-22

990218



Figure A-20 Pre-Test Left Occupant Compartment View of Front SID

A-23

990218



Figure A-21 Post-Test Left Occupant Compartment View of Front SID

A-24

990218



Figure A-22 Pre-Test Left Occupant Compartment View of Rear SID

A-25

990218

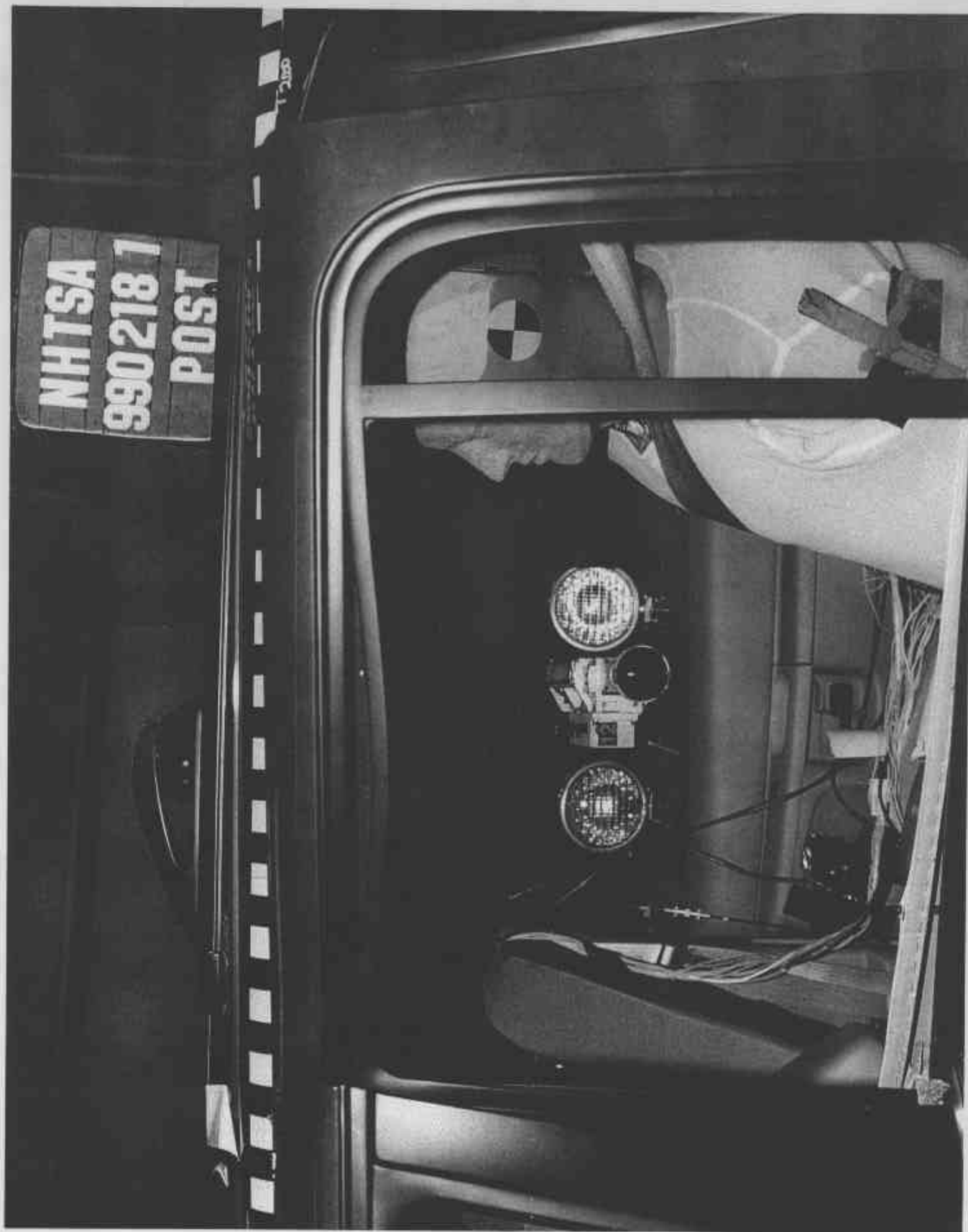


Figure A-23 Post-Test Left Occupant Compartment View of Rear SID

A-26

990218



Figure A-24 Pre-Test Right Occupant Compartment View of Front SID

A-27

990218

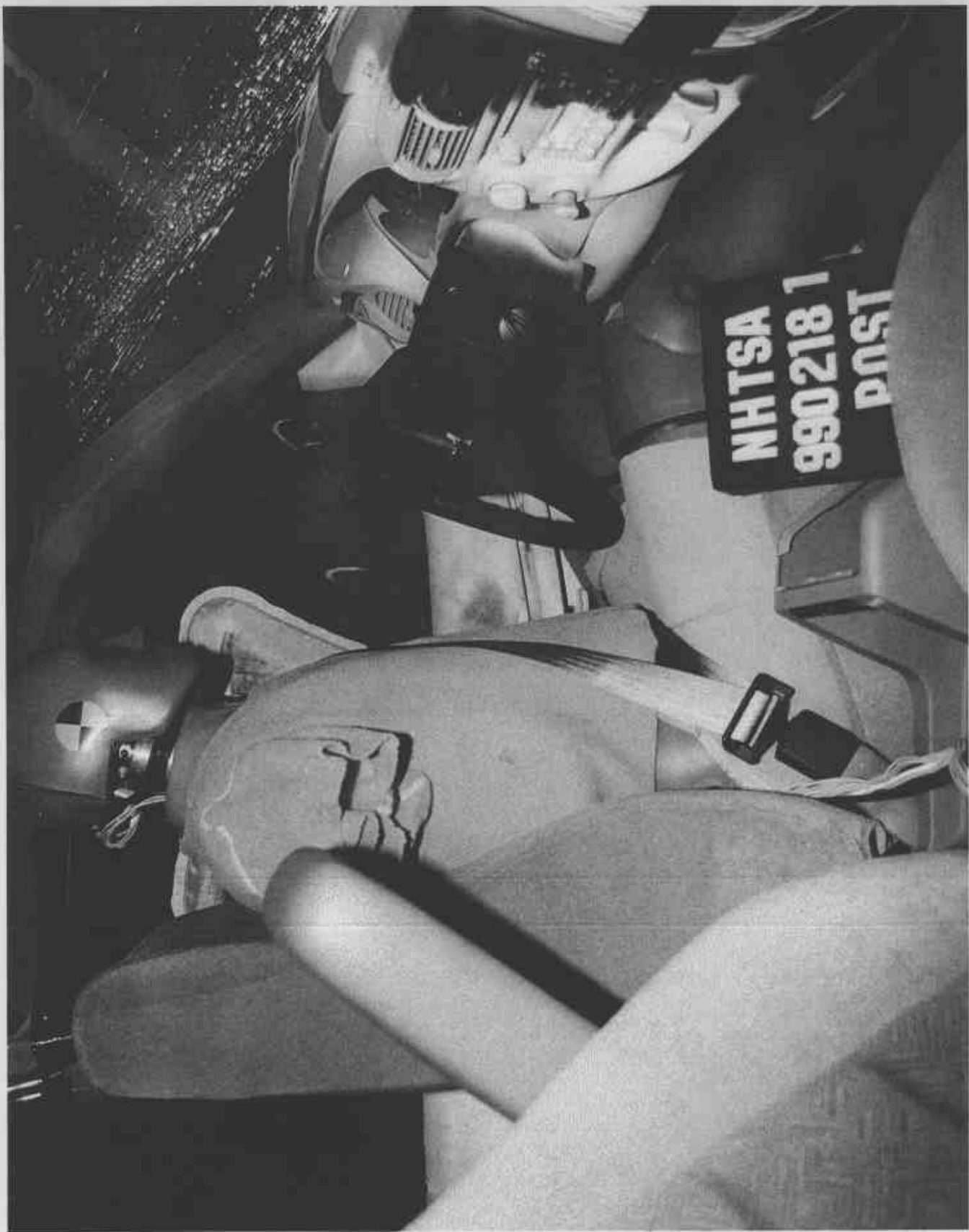


Figure A-25 Post-Test Right Occupant Compartment View of Front SID

A-28

990218



Figure A-26 Pre-Test Right Occupant Compartment View of Rear SID

A-29

990218

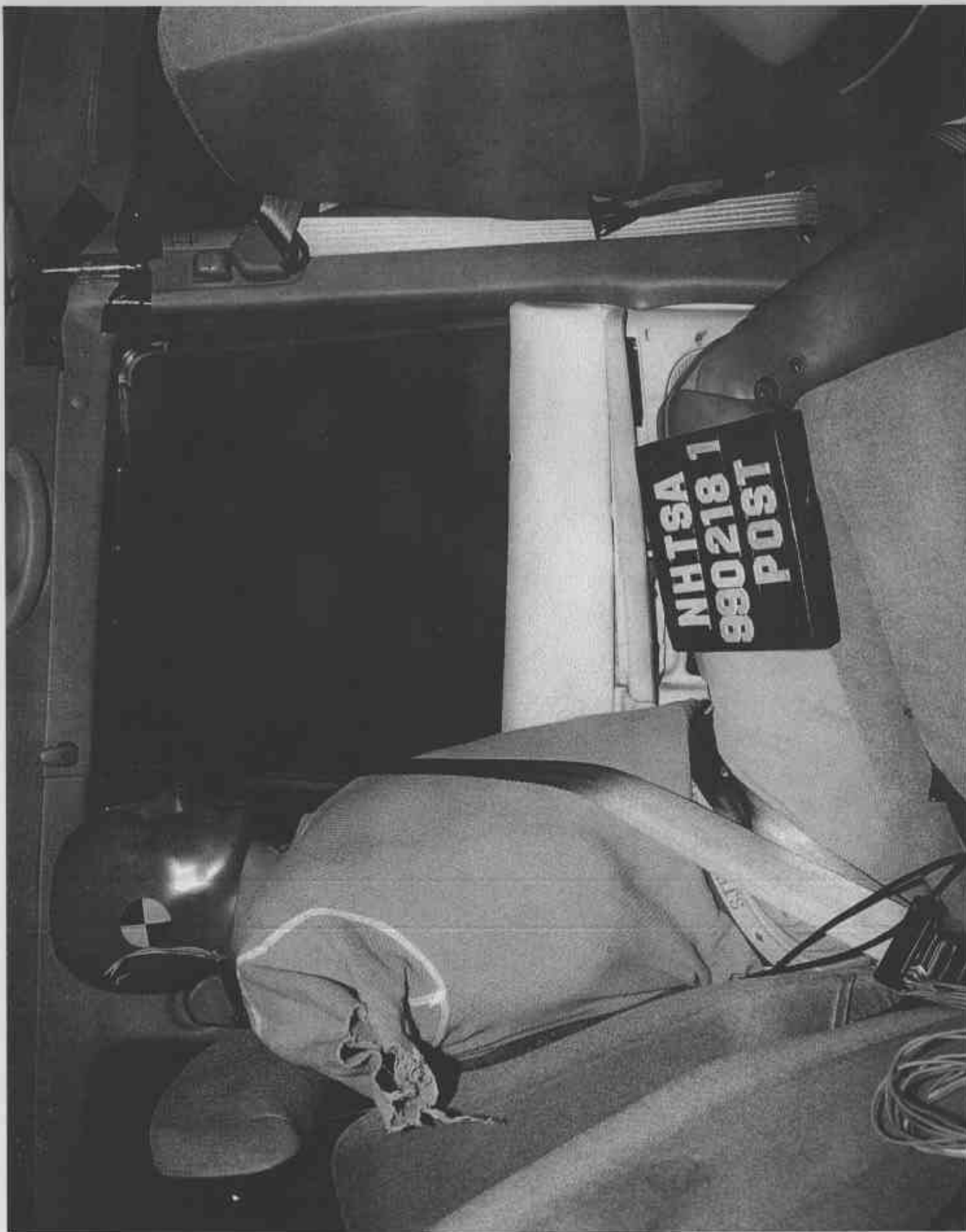


Figure A-27 Post-Test Right Occupant Compartment View of Rear SID

A-30

990218

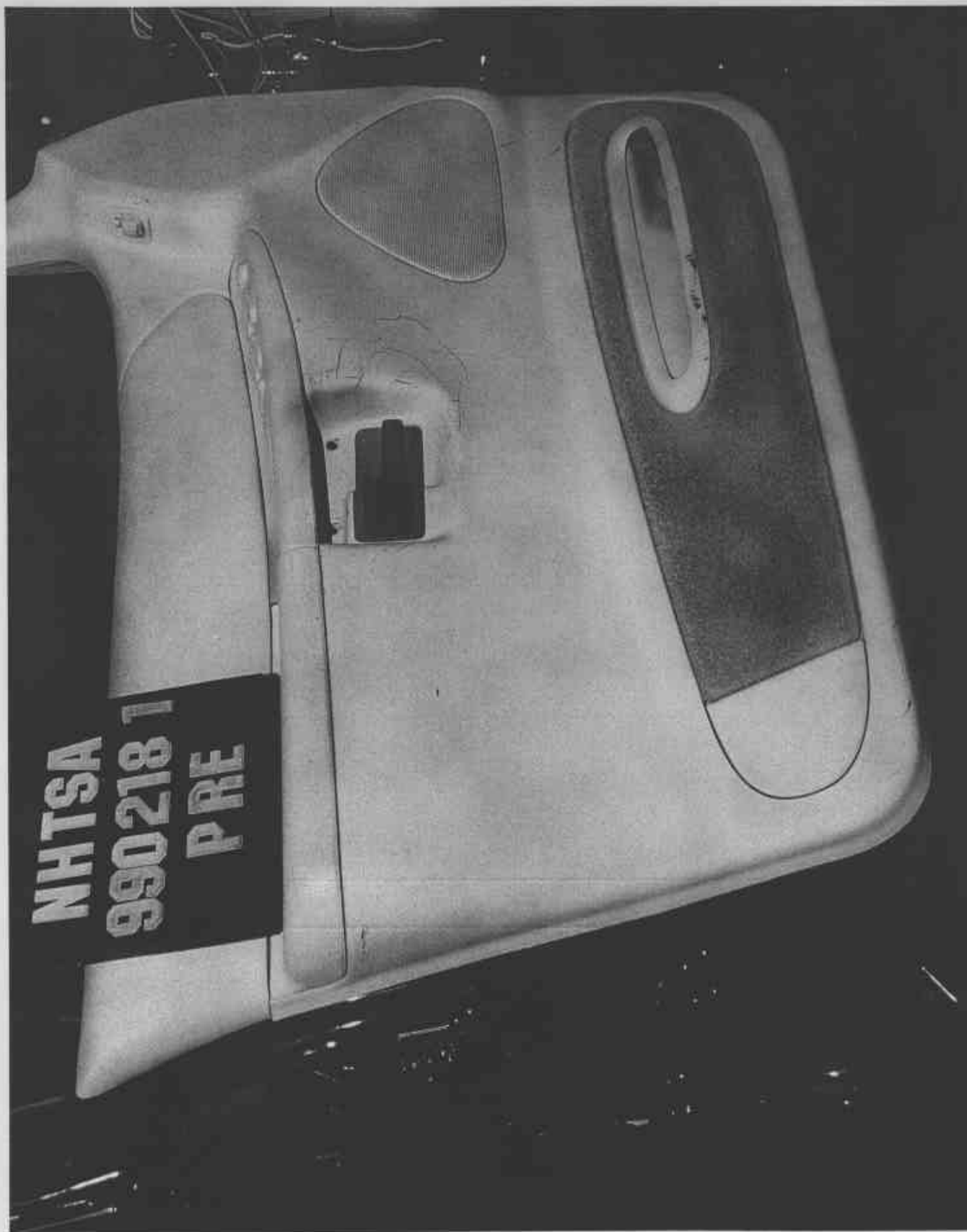


Figure A-28 Pre-Test Interior of Front Door

A-31

990218

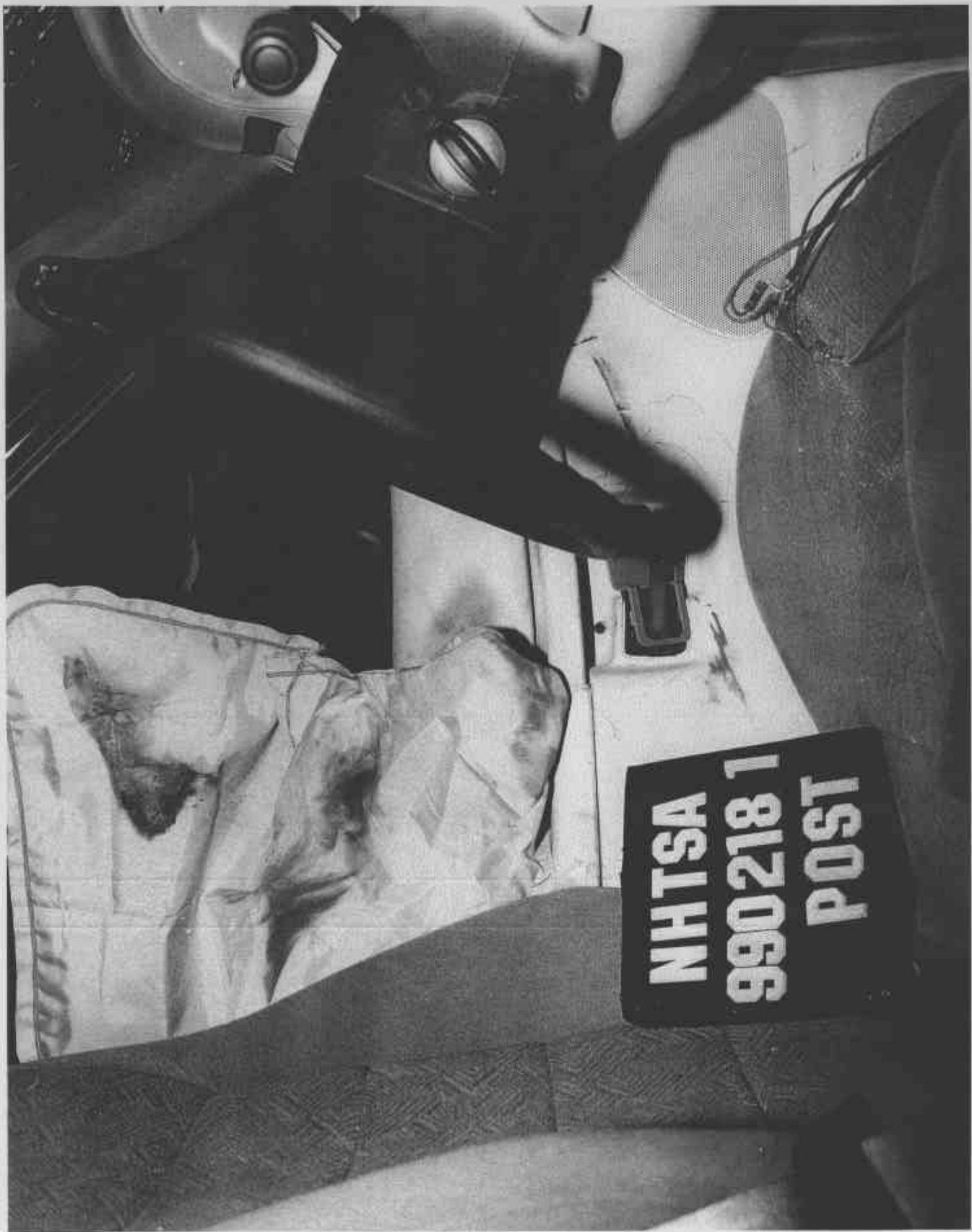


Figure A-29 Post-Test Interior of Front Door Showing SID Impact Locations
A-32 990218

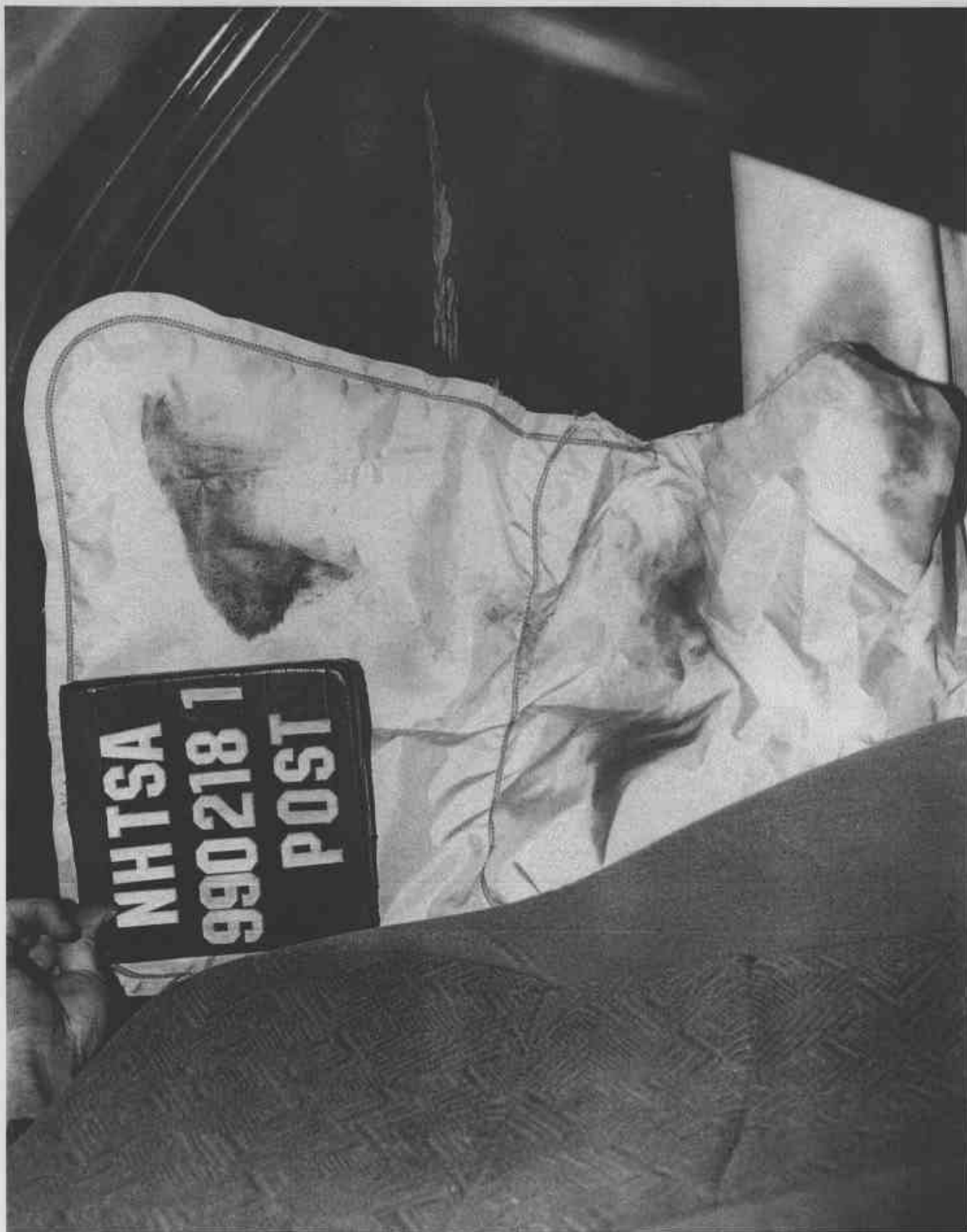


Figure A-30 Post-Test Front Side Airbag Showing SID Impact Locations



Figure A-31 Post-Test Front SID Impact Locations
A-34

990218

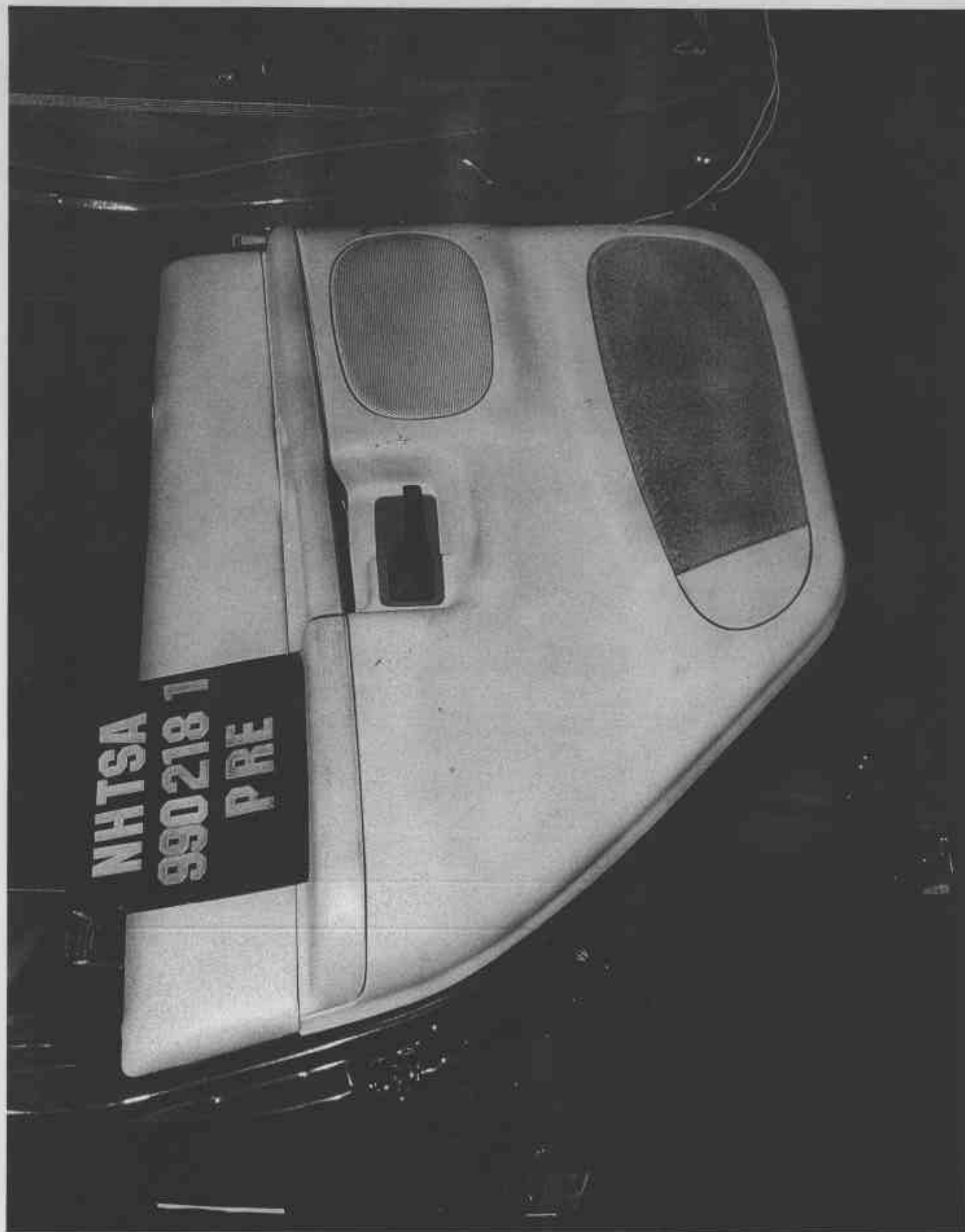


Figure A-32 Pre-Test Interior of Rear Door
A-35

990218

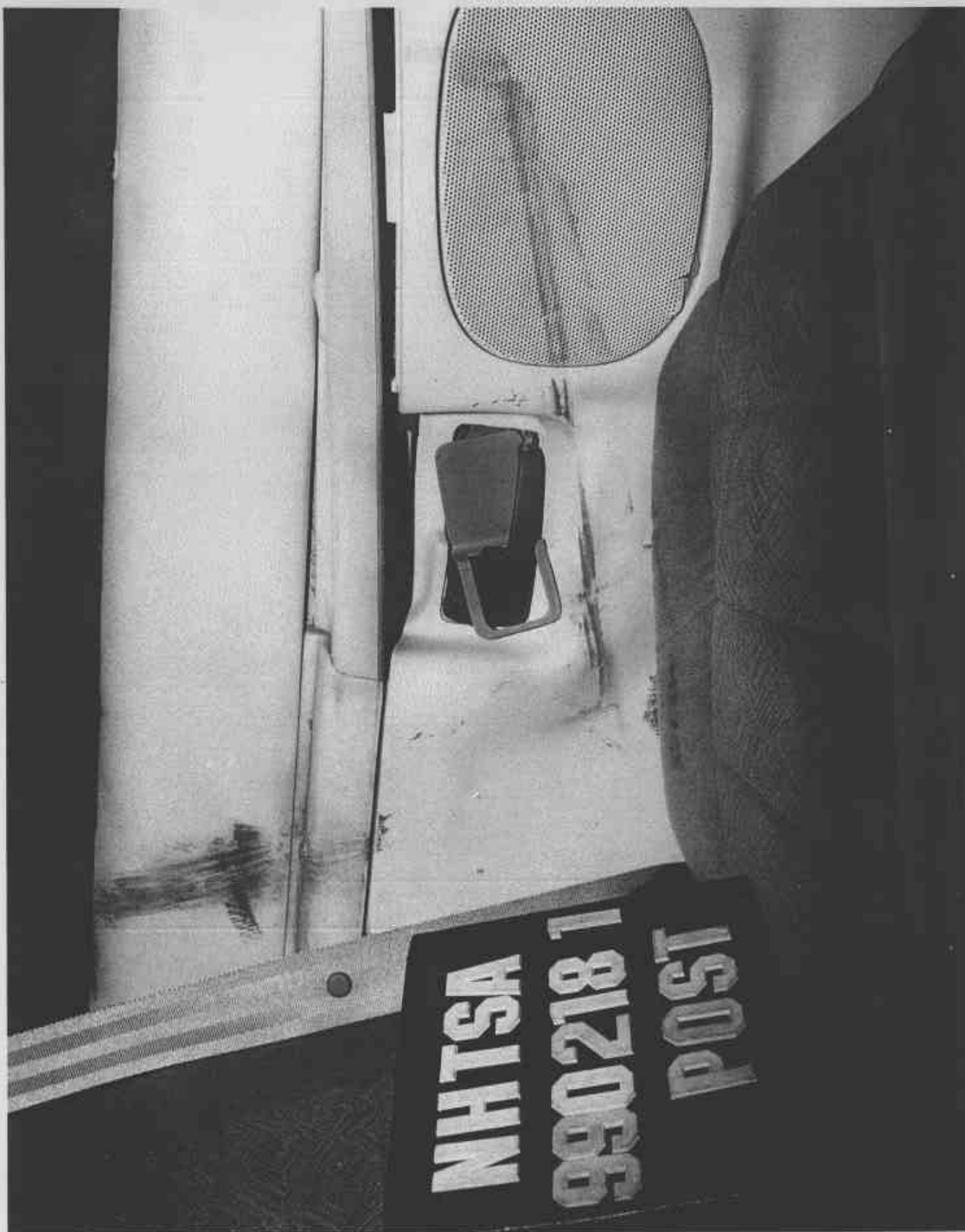


Figure A-33 Post-Test Interior of Rear Door Showing SID Impact Locations
A-36 990218



Figure A-34 Post-Test Rear SID Impact Location
A-37

990218

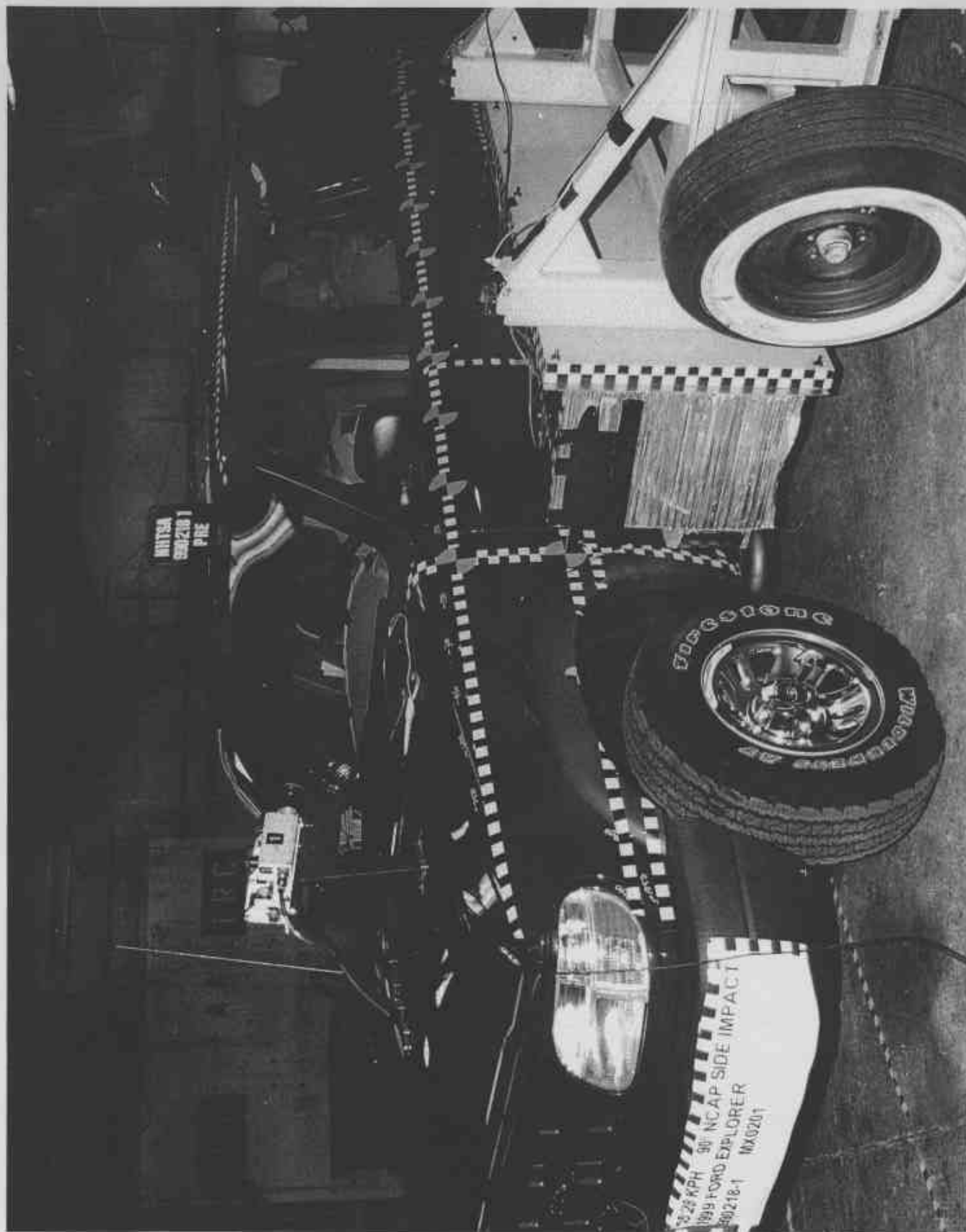


Figure A-35 Pre-Test Left Side View of MDB with Impactor Face in Position
A-38 990218

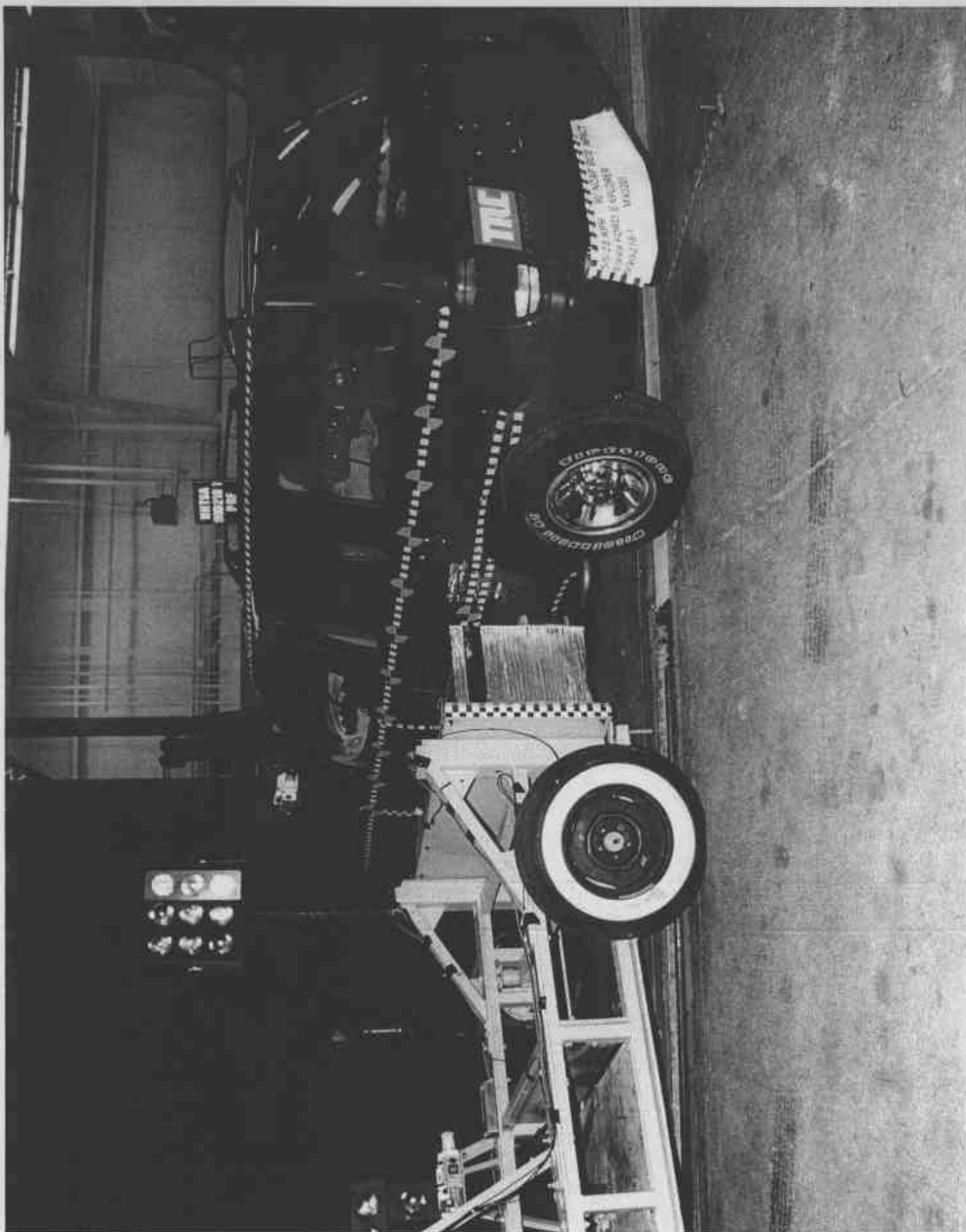


Figure A-36 Pre-Test Right Side View of MDB with Impactor Face in Position
A-39 990218



Figure A-37 Pre-Test Close-Up View of Primary Impact Point Target

A-40

990218

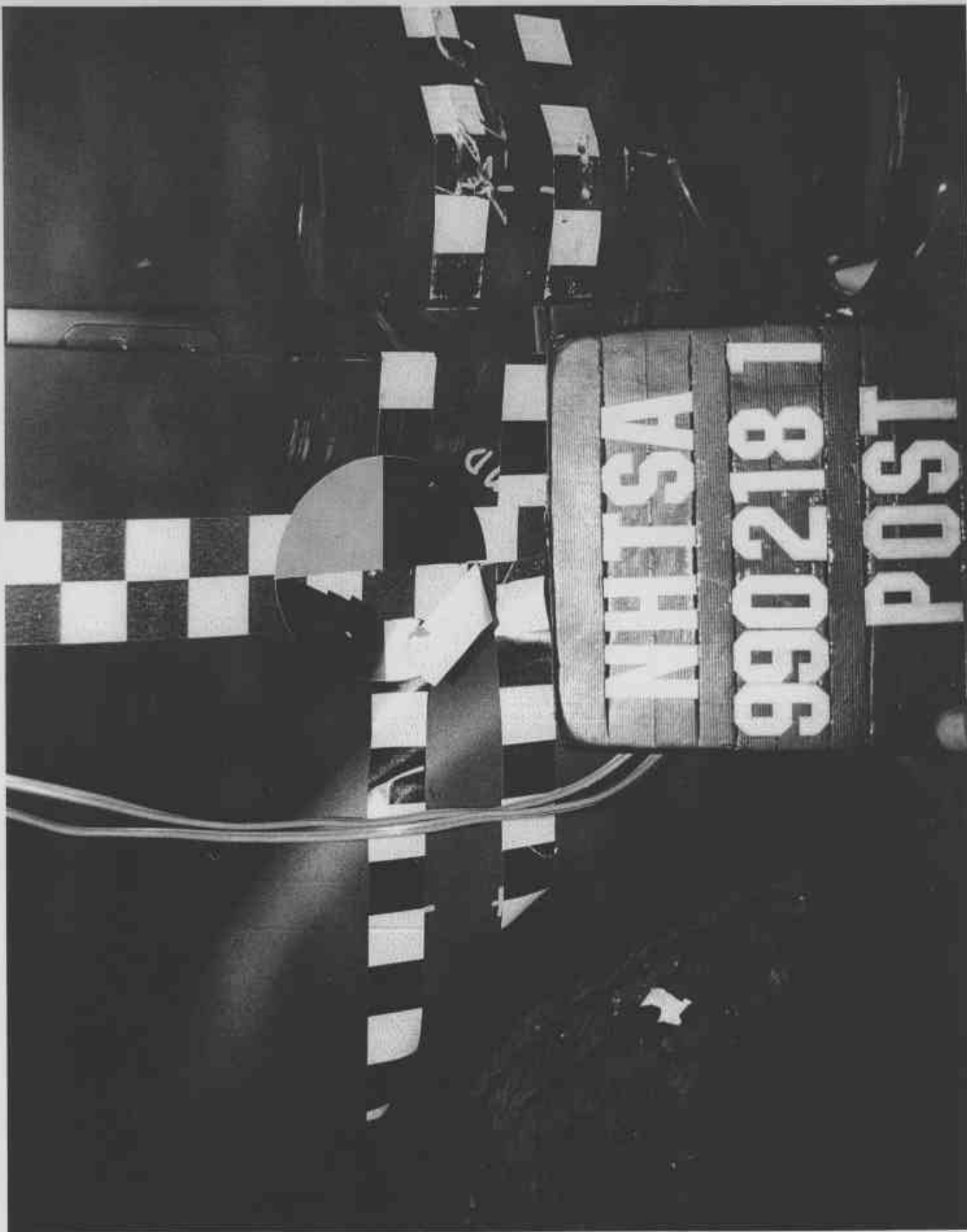


Figure A-38 Post-Test Close-Up View of Primary Impact Point Target

A-41

990218



Figure A-39 Pre-Test Close-Up View of Secondary Impact Point Target
A-42 990218

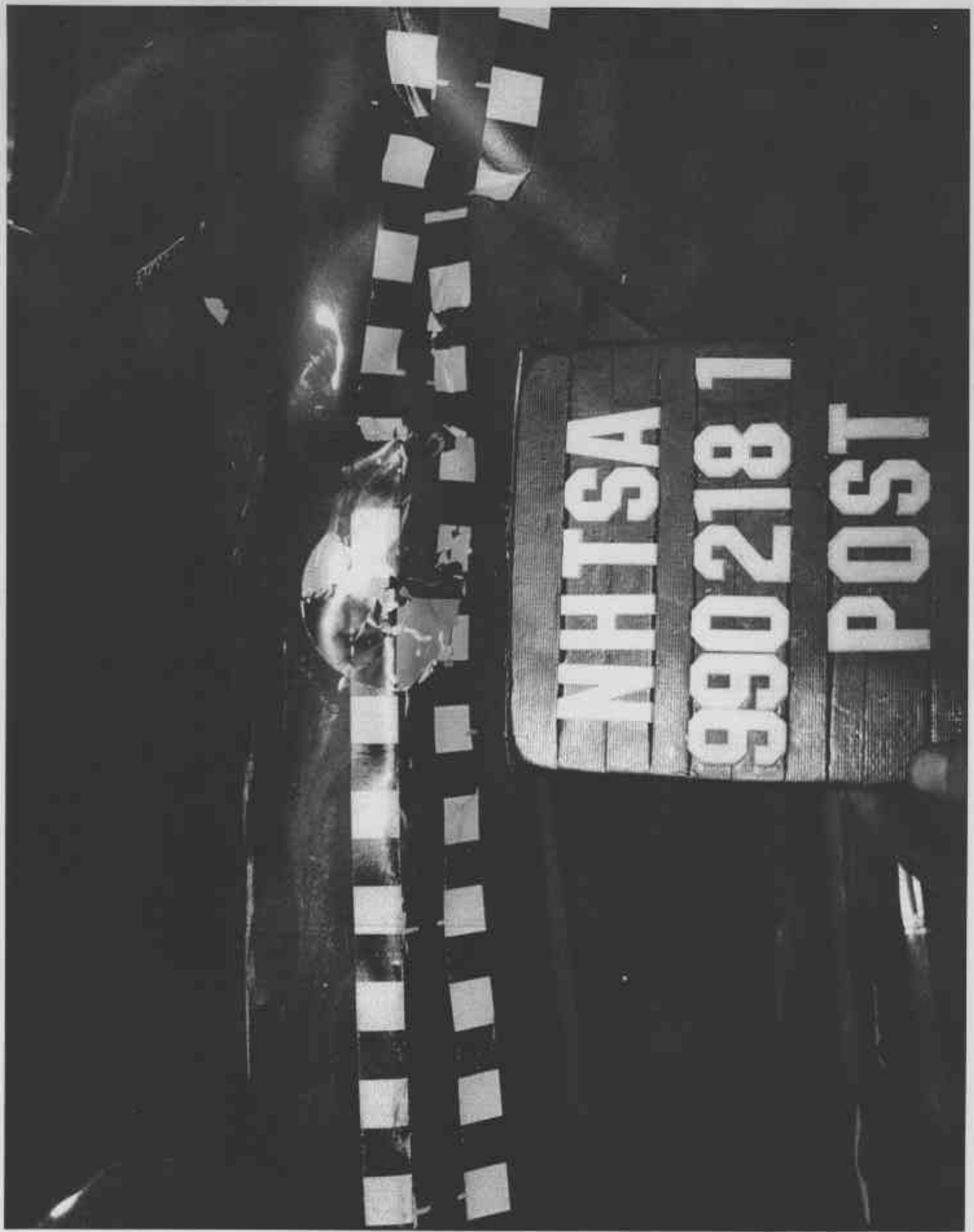


Figure A-40 Post-Test Close-Up View of Secondary Impact Point Target

A-43

990218

MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: 10/98

FRONT GAWR: 2710LB

1229KG

P235/75R15SL

15X7.0J

AT 179 kPa/26

WITH

TIRES

RIMS

PSI COLD

1338KG

P235/75R15SL

15X7.0J

AT 179 kPa/26

WITH

TIRES

RIMS

PSI COLD

GVWR: 5340LB / 2422KG

REAR GAWR: 2950LB

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

VIN: 1FMDU34N9X7A09859

F0139

F0189

Figure A-41 Pre-Test Vehicle Certification Label View
A-44

990218

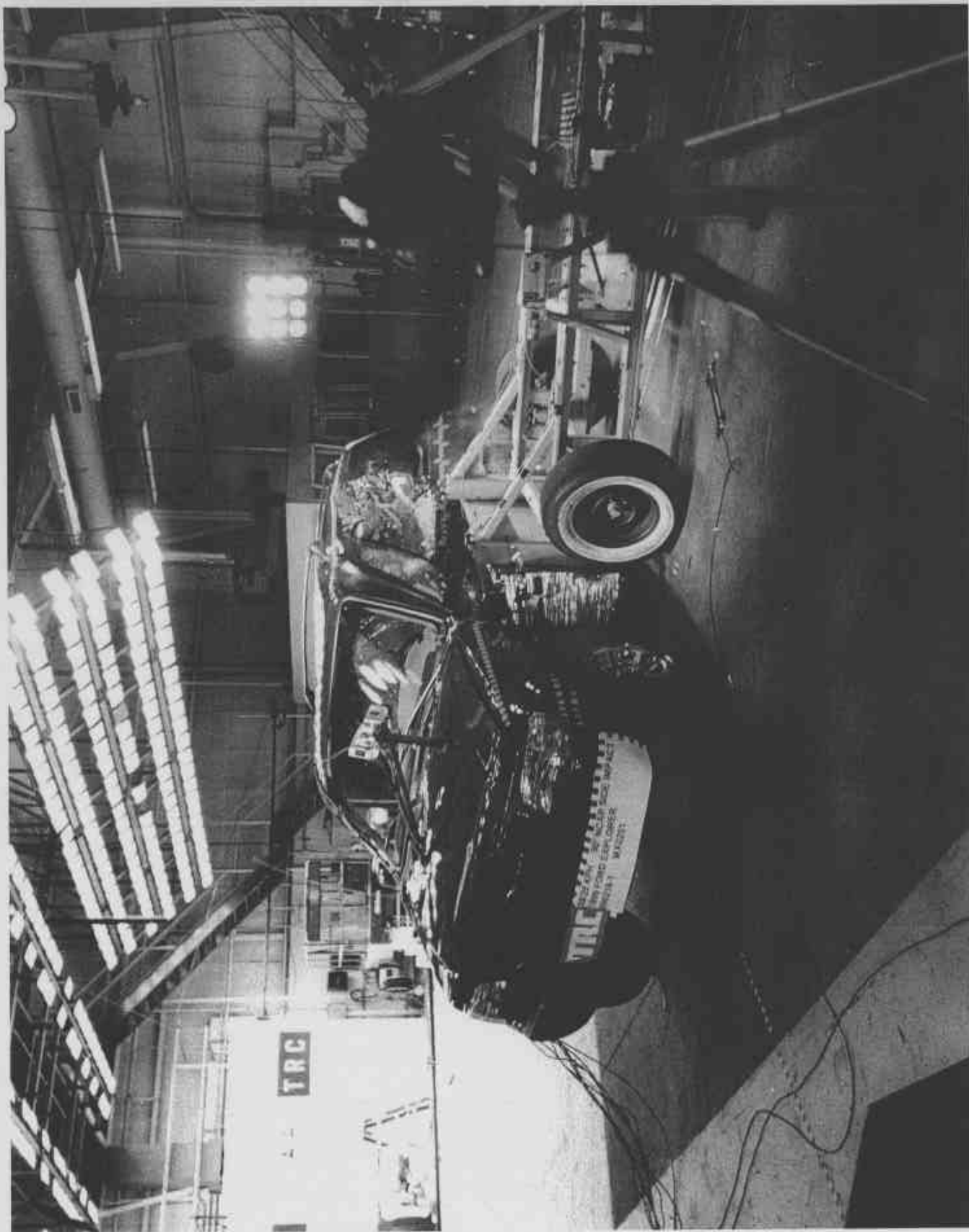


Figure A-42 Impact Event
A-45

990218



Figure A-43 Pre-Test Fuel Filler Cap
A-46

990218



Figure A-44 Post-Test Fuel Filler Cap
A-47

990218

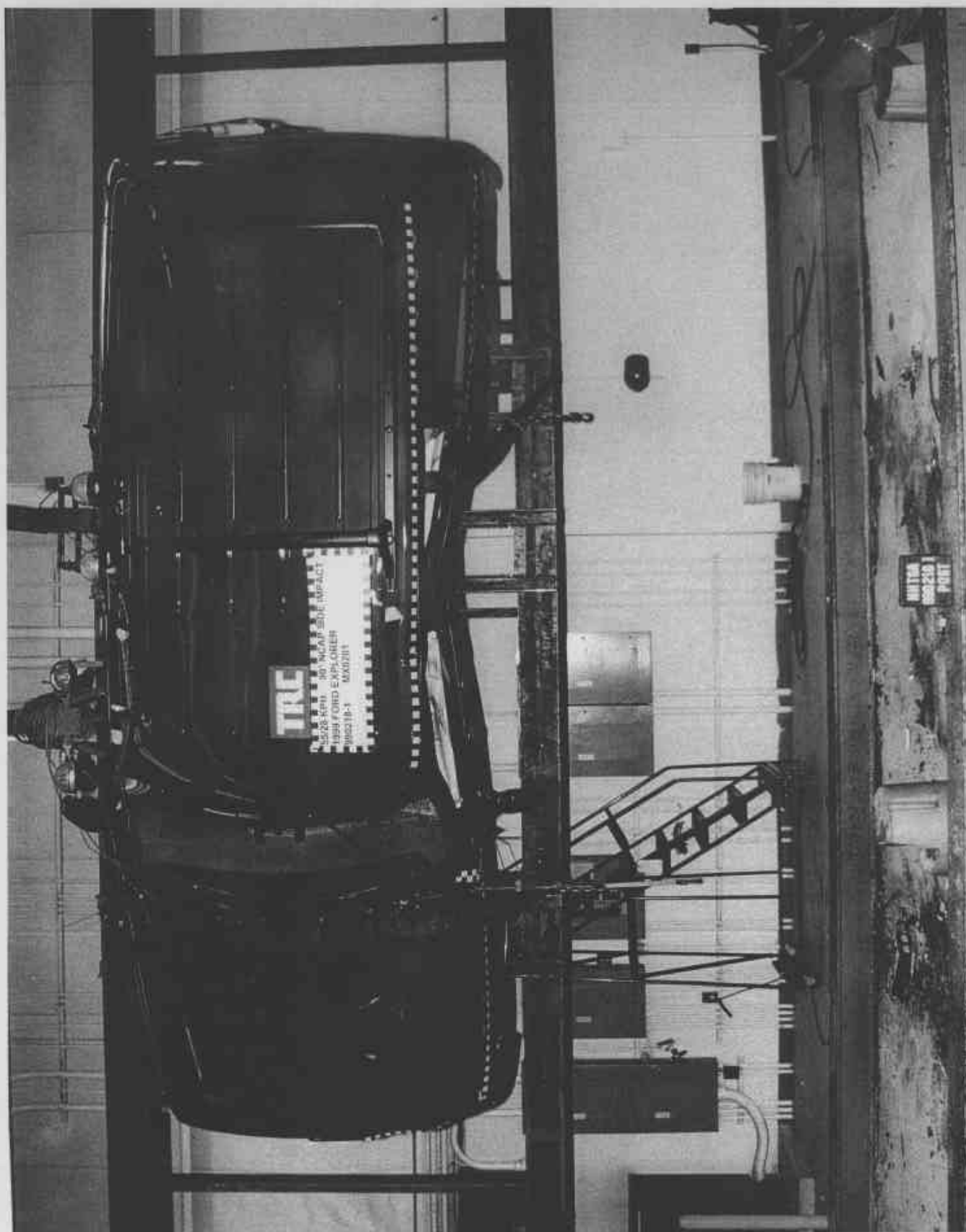


Figure A-45 FMVSS 301 Fuel System Integrity Rollover - 90°

A-48

990218

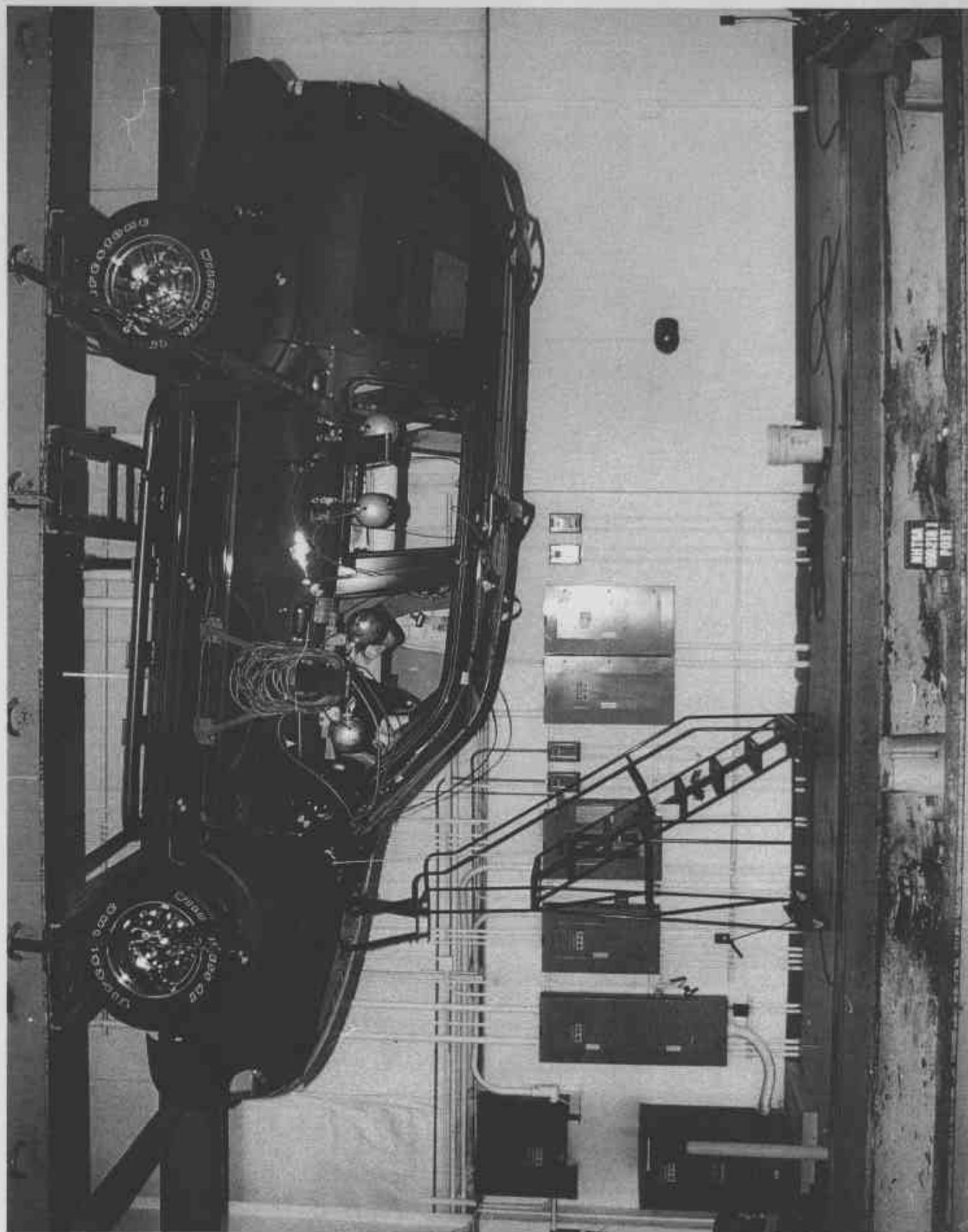


Figure A-46 FMVSS 301 Fuel System Integrity Rollover - 180°

A-49

990218

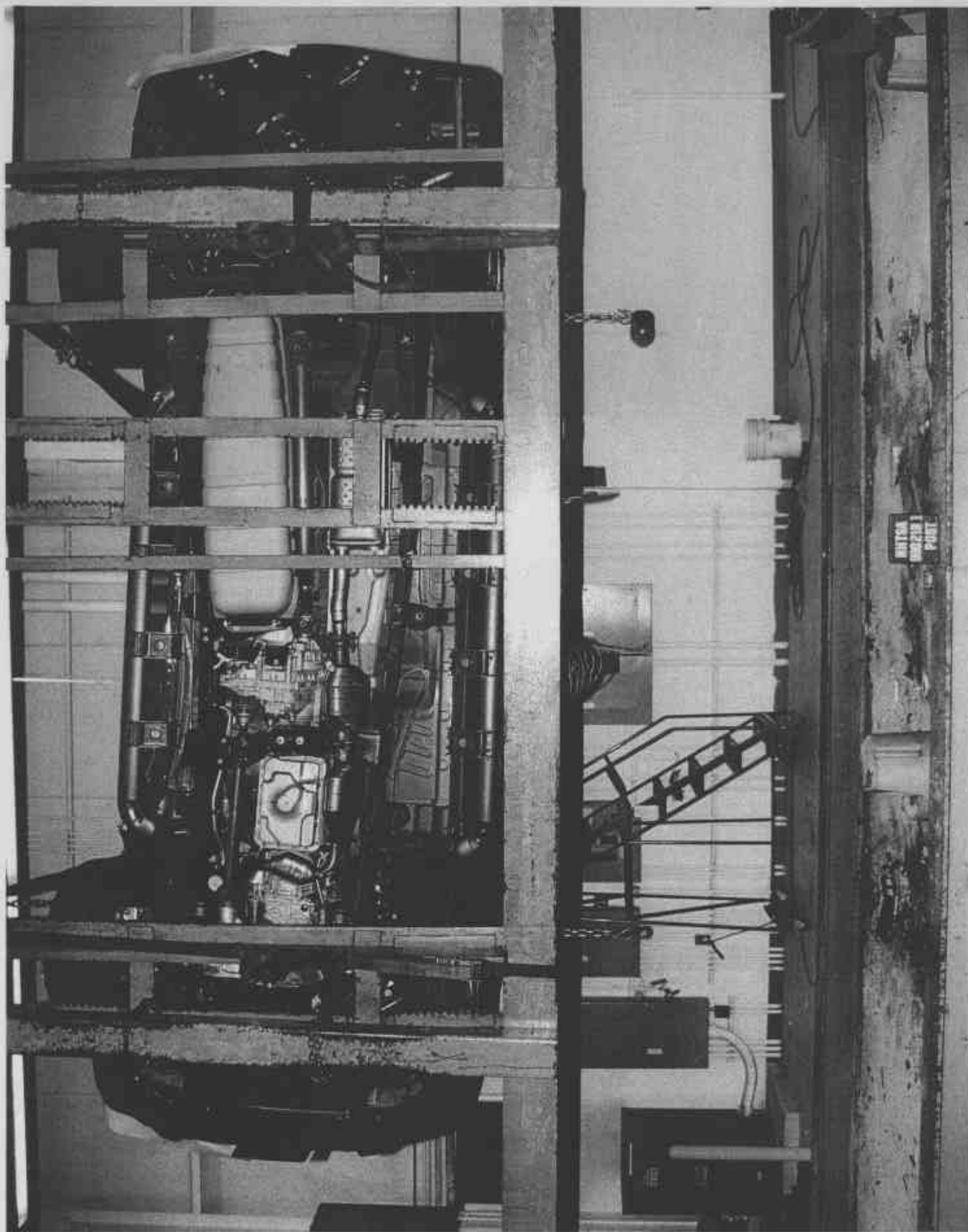


Figure A-47 FMVSS 301 Fuel System Integrity Rollover - 270°

A-50

990218

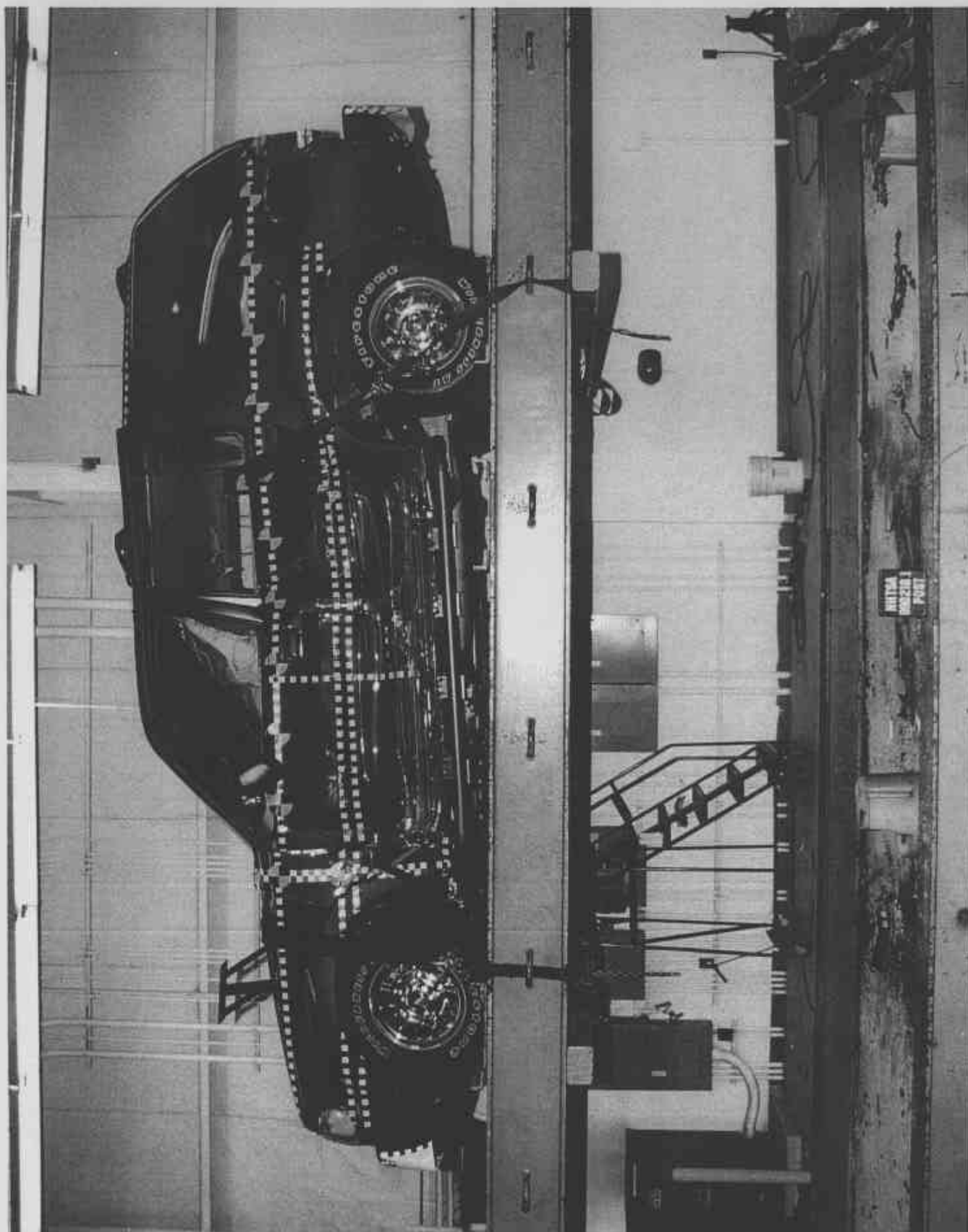


Figure A-48 FMVSS 301 Fuel System Integrity Rollover - 360°

A-51

990218

Appendix B

Data Plots

Table of Data Plots

Driver and Passenger Dummy Instrumentation Plots

Acceleration Data - Filter Class 1000

Integration Data - Filter Class 1000

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2	DRIVER HEAD X-AXIS VELOCITY	B-8
3	DRIVER HEAD Y-AXIS ACCELERATION	B-9
4	DRIVER HEAD Y-AXIS VELOCITY	B-10
5	DRIVER HEAD Z-AXIS ACCELERATION	B-11
6	DRIVER HEAD Z-AXIS VELOCITY	B-12
7	DRIVER HEAD RESULTANT	B-13
8	DRIVER NECK X-AXIS FORCE	B-14
9	DRIVER NECK Y-AXIS FORCE	B-15
10	DRIVER NECK Z-AXIS FORCE	B-16
11	DRIVER NECK X-AXIS MOMENT	B-17
12	DRIVER NECK Y-AXIS MOMENT	B-18
13	DRIVER NECK Z-AXIS MOMENT	B-19
14	DRIVER UPPER RIB Y-AXIS ACCELERATION	B-20
15	DRIVER UPPER RIB Y-AXIS VELOCITY	B-21
16	DRIVER LOWER RIB Y-AXIS ACCELERATION	B-22
17	DRIVER LOWER RIB Y-AXIS VELOCITY	B-23
18	DRIVER LOWER SPINE Y-AXIS ACCELERATION	B-24
19	DRIVER LOWER SPINE Y-AXIS VELOCITY	B-25
20	DRIVER LOWER SPINE Y-AXIS ACCELERATION (FILTER CLASS 180)	B-26
21	DRIVER LOWER SPINE Y-AXIS VELOCITY (FILTER CLASS 180)	B-27
22	DRIVER PELVIS Y-AXIS ACCELERATION	B-28
23	DRIVER PELVIS Y-AXIS VELOCITY	B-29
24	PASSENGER HEAD X-AXIS ACCELERATION	B-30
25	PASSENGER HEAD X-AXIS VELOCITY	B-31
26	PASSENGER HEAD Y-AXIS ACCELERATION	B-32
27	PASSENGER HEAD Y-AXIS VELOCITY	B-33
28	PASSENGER HEAD Z-AXIS ACCELERATION	B-34
29	PASSENGER HEAD Z-AXIS VELOCITY	B-35
30	PASSENGER HEAD RESULTANT	B-36
37	PASSENGER UPPER RIB Y-AXIS ACCELERATION	B-43
38	PASSENGER UPPER RIB Y-AXIS VELOCITY	B-44
39	PASSENGER LOWER RIB Y-AXIS ACCELERATION	B-45
40	PASSENGER LOWER RIB Y-AXIS VELOCITY	B-46
41	PASSENGER LOWER SPINE Y-AXIS ACCELERATION	B-47
42	PASSENGER LOWER SPINE Y-AXIS VELOCITY	B-48
43	PASSENGER LOWER SPINE Y-AXIS ACCELERATION (FILTER CLASS 180)	B-49
44	PASSENGER LOWER SPINE Y-AXIS VELOCITY (FILTER CLASS 180)	B-50
45	PASSENGER PELVIS Y-AXIS ACCELERATION	B-51
46	PASSENGER PELVIS Y-AXIS VELOCITY	B-52

Test Vehicle Instrumentation Plots

Acceleration Data - Filter Class 60

Integration Data - Filter Class 180

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47	RIGHT SIDE SILL AT FRONT SEAT X-AXIS ACCELERATION	B-54
48	RIGHT SIDE SILL AT FRONT SEAT X-AXIS VELOCITY	B-55
49	RIGHT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION	B-56
50	RIGHT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY	B-57
51	RIGHT SIDE SILL AT FRONT SEAT Z-AXIS ACCELERATION	B-58
52	RIGHT SIDE SILL AT FRONT SEAT Z-AXIS VELOCITY	B-59
53	RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION	B-60
54	RIGHT SIDE SILL AT REAR SEAT X-AXIS ACCELERATION	B-61
55	RIGHT SIDE SILL AT REAR SEAT X-AXIS VELOCITY	B-62
56	RIGHT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION	B-63
57	RIGHT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY	B-64
58	RIGHT SIDE SILL AT REAR SEAT Z-AXIS ACCELERATION	B-65
59	RIGHT SIDE SILL AT REAR SEAT Z-AXIS VELOCITY	B-66
60	RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION	B-67
61	REAR FLOORPAN ABOVE AXLE X-AXIS ACCELERATION	B-68
62	REAR FLOORPAN ABOVE AXLE X-AXIS VELOCITY	B-69
63	REAR FLOORPAN ABOVE AXLE Y-AXIS ACCELERATION	B-70
64	REAR FLOORPAN ABOVE AXLE Y-AXIS VELOCITY	B-71
65	REAR FLOORPAN ABOVE AXLE Z-AXIS ACCELERATION	B-72
66	REAR FLOORPAN ABOVE AXLE Z-AXIS VELOCITY	B-73
67	REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION	B-74
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69	LEFT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY	B-76
70	LEFT SIDE SILL AT FRONT SEAT Y-AXIS DISPLACEMENT	B-77
71	LEFT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION	B-78
72	LEFT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY	B-79
73	LEFT SIDE SILL AT REAR SEAT Y-AXIS DISPLACEMENT	B-80
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75	LEFT FRONT DOOR ON CENTERLINE Y-AXIS VELOCITY	B-82
76	LEFT FRONT DOOR ON CENTERLINE Y-AXIS DISPLACEMENT	B-83
77	RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS ACCELERATION	B-84
78	RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS VELOCITY	B-85
79	RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS DISPLACEMENT	B-86
80	MID-REAR OF LEFT FRONT DOOR Y-AXIS ACCELERATION	B-87
81	MID-REAR OF LEFT FRONT DOOR Y-AXIS VELOCITY	B-88
82	MID-REAR OF LEFT FRONT DOOR Y-AXIS DISPLACEMENT	B-89
83	LEFT FRONT DOOR UPPER CENTERLINE Y-AXIS ACCELERATION	B-90
84	LEFT FRONT DOOR UPPER CENTERLINE Y-AXIS VELOCITY	B-91
85	LEFT FRONT DOOR UPPER CENTERLINE Y-AXIS DISPLACEMENT	B-92
86	MID REAR OF LEFT REAR DOOR Y-AXIS ACCELERATION	B-93
87	MID REAR OF LEFT REAR DOOR Y-AXIS VELOCITY	B-94
88	MID REAR OF LEFT REAR DOOR Y-AXIS DISPLACEMENT	B-95
89	LEFT REAR DOOR UPPER CENTERLINE Y-AXIS ACCELERATION	B-96
90	LEFT REAR DOOR UPPER CENTERLINE Y-AXIS VELOCITY	B-97
91	LEFT REAR DOOR UPPER CENTERLINE Y-AXIS DISPLACEMENT	B-98
92	LOWER A-POST Y-AXIS ACCELERATION	B-99
93	LOWER A-POST Y-AXIS VELOCITY	B-100

94	MIDDLE A-POST Y-AXIS ACCELERATION	B-101
95	MIDDLE A-POST Y-AXIS VELOCITY	B-102
96	LOWER B-POST Y-AXIS ACCELERATION	B-103
97	LOWER B-POST Y-AXIS VELOCITY	B-104
98	MIDDLE B-POST Y-AXIS ACCELERATION	B-105
99	MIDDLE B-POST Y-AXIS VELOCITY	B-106
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102	REAR SEAT TRACK Y-AXIS ACCELERATION	B-109
103	REAR SEAT TRACK Y-AXIS VELOCITY	B-110
104	VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION	B-111
105	VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY	B-112
106	VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION	B-113
107	VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY	B-114
108	VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION	B-115
109	VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY	B-116
110	VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION	B-117

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Acceleration Data - Filter Class 60

Integration Data - Filter Class 180

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112	MDB CENTER OF GRAVITY X-AXIS VELOCITY	B-120
113	MDB CENTER OF GRAVITY Y-AXIS ACCELERATION	B-121
114	MDB CENTER OF GRAVITY Y-AXIS VELOCITY	B-122
115	MDB CENTER OF GRAVITY Z-AXIS ACCELERATION	B-123
116	MDB CENTER OF GRAVITY Z-AXIS VELOCITY	B-124
117	MDB CENTER OF GRAVITY RESULTANT ACCELERATION	B-125
118	MDB REAR X-AXIS ACCELERATION	B-126
119	MDB REAR X-AXIS VELOCITY	B-127
120	MDB REAR Y-AXIS ACCELERATION	B-128
121	MDB REAR Y-AXIS VELOCITY	B-129
122	MDB RIGHT CONTACT SWITCH	B-130
123	MDB LEFT CONTACT SWITCH	B-131

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Acceleration Data - FIR Filtered

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124	DRIVER UPPER RIB Y-AXIS ACCELERATION	B-133
125	DRIVER UPPER RIB Y-AXIS VELOCITY	B-134
126	DRIVER LOWER RIB Y-AXIS ACCELERATION	B-135
127	DRIVER LOWER RIB Y-AXIS VELOCITY	B-136
128	DRIVER LOWER SPINE Y-AXIS ACCELERATION	B-137
129	DRIVER LOWER SPINE Y-AXIS VELOCITY	B-138
130	DRIVER PELVIS Y-AXIS ACCELERATION	B-139
131	DRIVER PELVIS Y-AXIS VELOCITY	B-140
132	PASSENGER UPPER RIB Y-AXIS ACCELERATION	B-141
133	PASSENGER UPPER RIB Y-AXIS VELOCITY	B-142
134	PASSENGER LOWER RIB Y-AXIS ACCELERATION	B-143

135	PASSENGER LOWER RIB Y-AXIS VELOCITY	B-144
136	PASSENGER LOWER SPINE Y-AXIS ACCELERATION	B-145
137	PASSENGER LOWER SPINE Y-AXIS VELOCITY	B-146
138	PASSENGER PELVIS Y-AXIS ACCELERATION	B-147
139	PASSENGER PELVIS Y-AXIS VELOCITY	B-148

Driver and Passenger Dummy Instrumentation Plots
Acceleration Data - FIR Filtered - Redundant

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
140	DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION	B-150
141	DRIVER UPPER RIB Y-AXIS REDUNDANT VELOCITY	B-151
142	DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION	B-152
143	DRIVER LOWER RIB Y-AXIS REDUNDANT VELOCITY	B-153
144	DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION	B-154
145	DRIVER LOWER SPINE Y-AXIS REDUNDANT VELOCITY	B-155
146	DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION	B-156
147	DRIVER PELVIS Y-AXIS REDUNDANT VELOCITY	B-157
148	PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION	B-158
149	PASSENGER UPPER RIB Y-AXIS REDUNDANT VELOCITY	B-159
150	PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION	B-160
151	PASSENGER LOWER RIB Y-AXIS REDUNDANT VELOCITY	B-161
152	PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION	B-162
153	PASSENGER LOWER SPINE Y-AXIS REDUNDANT VELOCITY	B-163
154	PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION	B-164
155	PASSENGER PELVIS Y-AXIS REDUNDANT VELOCITY	B-165

Driver and Passenger Dummy Contact Switches

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
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157	DRIVER PELVIS CONTACT SWITCH	B-168
158	PASSENGER SHOULDER CONTACT SWITCH	B-169
159	PASSENGER PELVIS CONTACT SWITCH	B-170

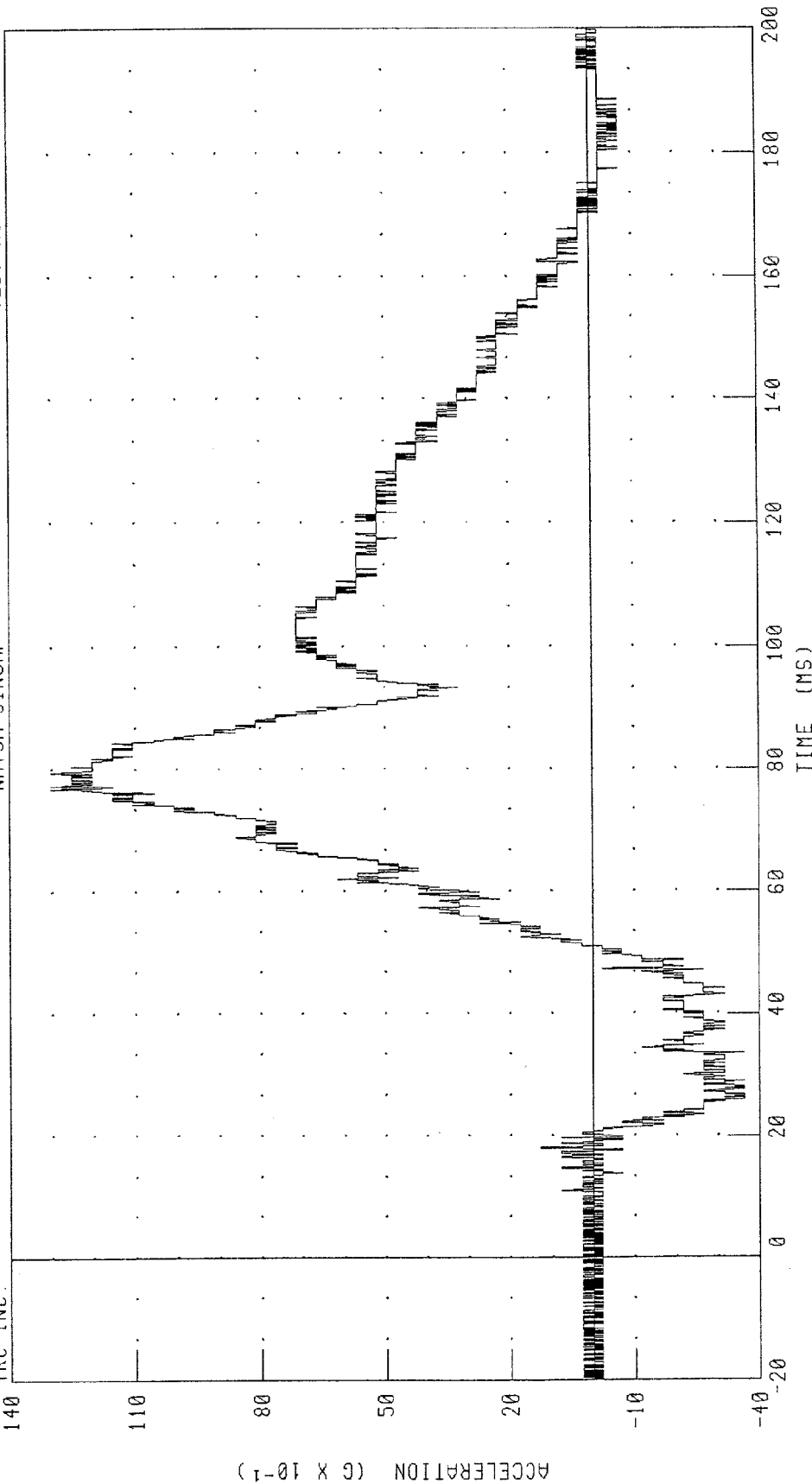
Driver and Passenger Dummy Instrumentation Plots
Acceleration Data - Filter Class 1000
Integration Data - Filter Class 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER HEAD X-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



CHANNEL: HEDXC1 FILTER: CH. CLASS 1000

PEAK DATA: 13.01 G @ 76.88 MS; -3.64 G @ 25.92 MS

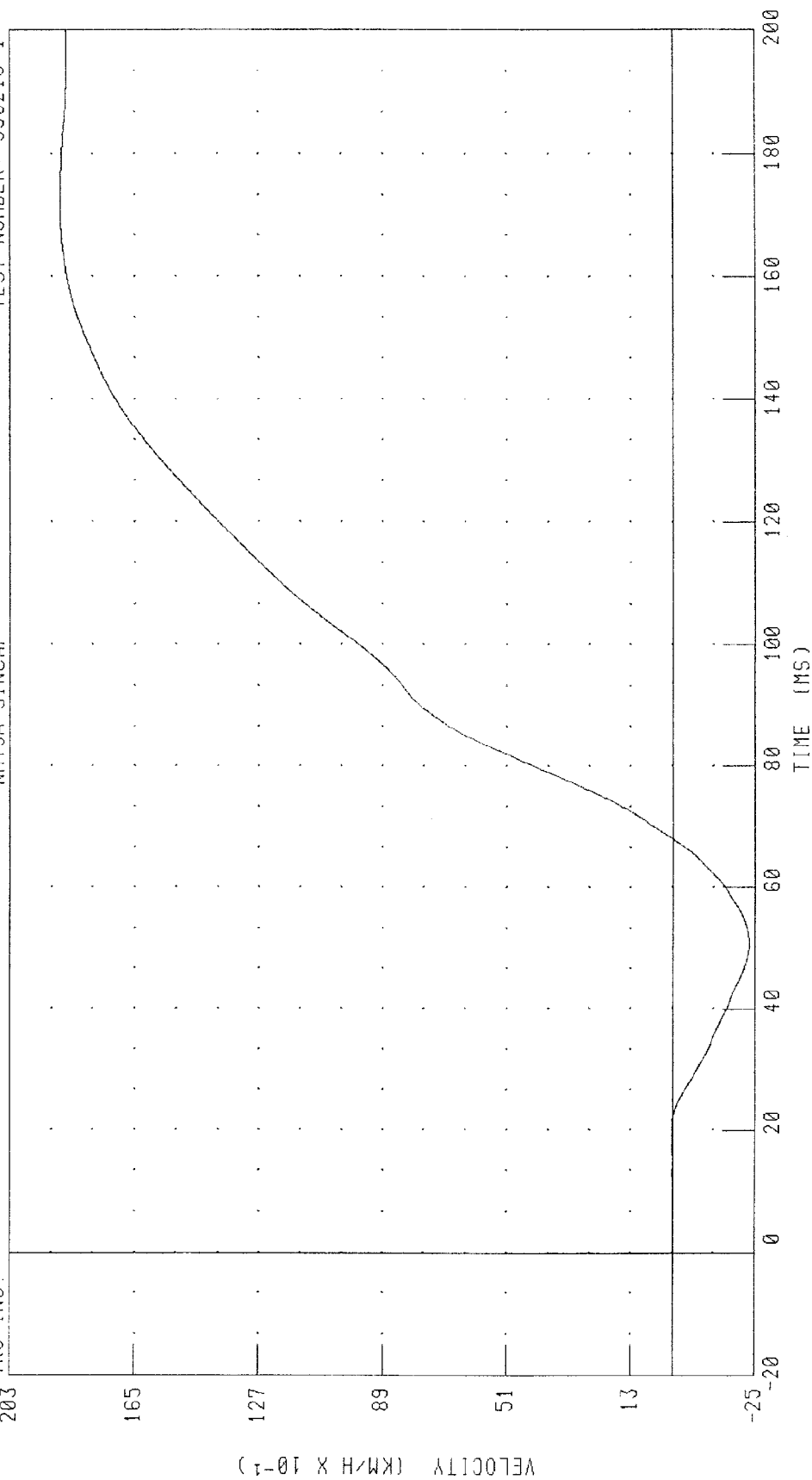
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

DRIVER HEAD X-AXIS VELOCITY

TRC INC.

NHTSA SINCAP

TEST NUMBER: 990218-1



CHANNEL: HEDXVI FILTER: CH. CLASS 180

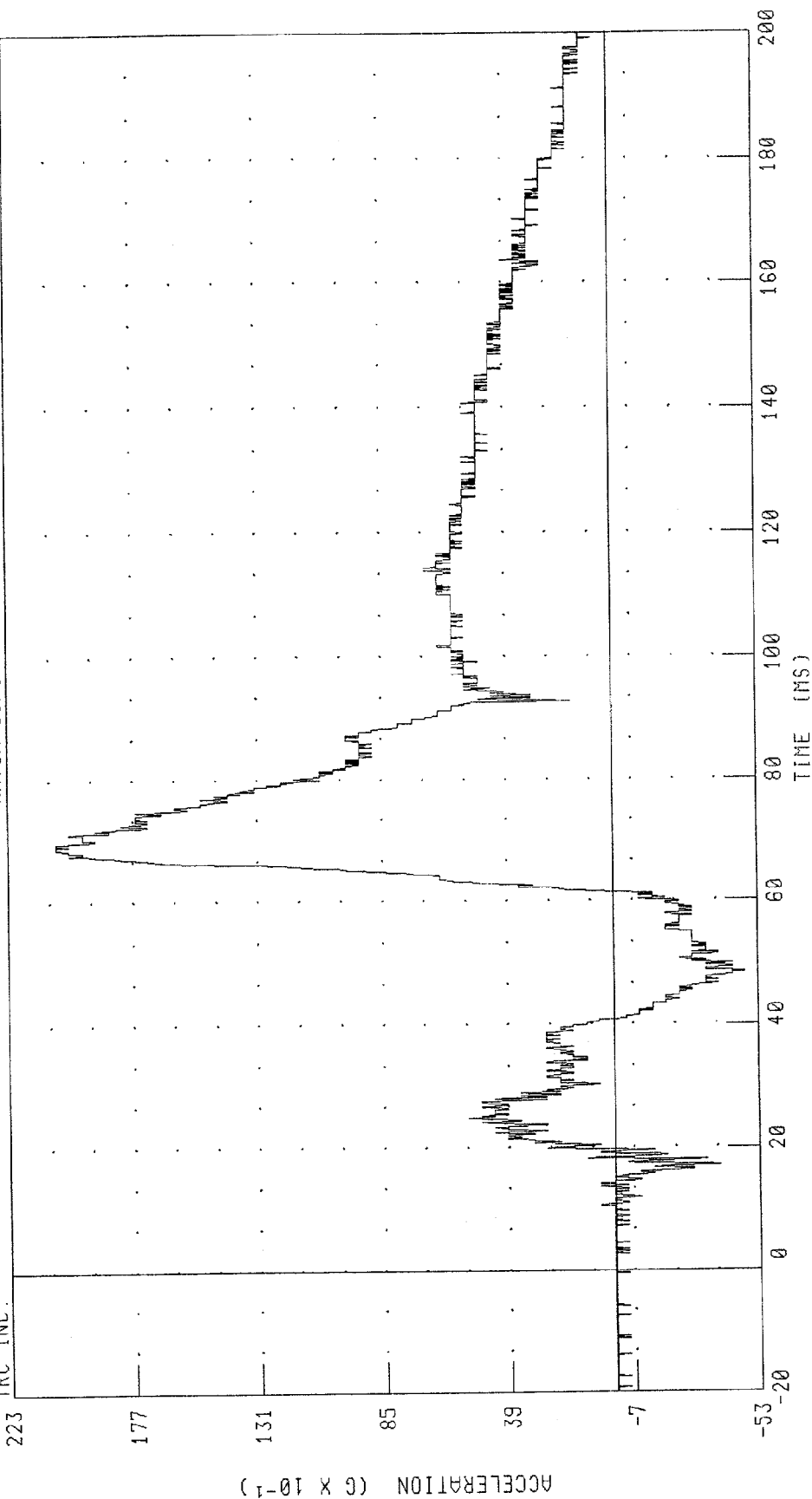
PEAK DATA: 18.77 KM/H @ 172.72 MS, -2.34 KM/H @ 50.88 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER HEAD Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 20.53 G @ 68.80 MS, -4.85 G @ 48.40 MS

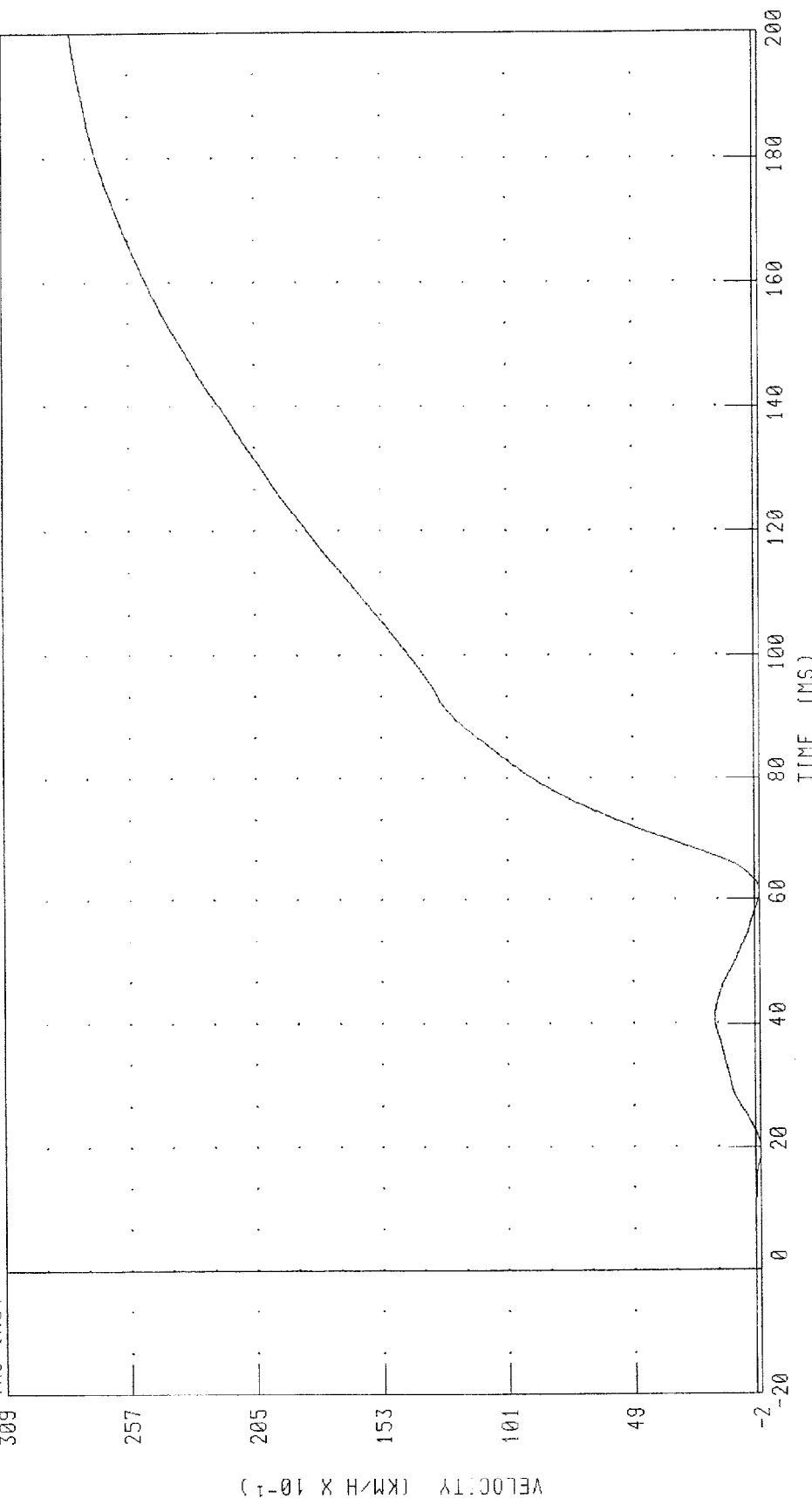
CHANNEL: HEDYG1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER HEAD Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.

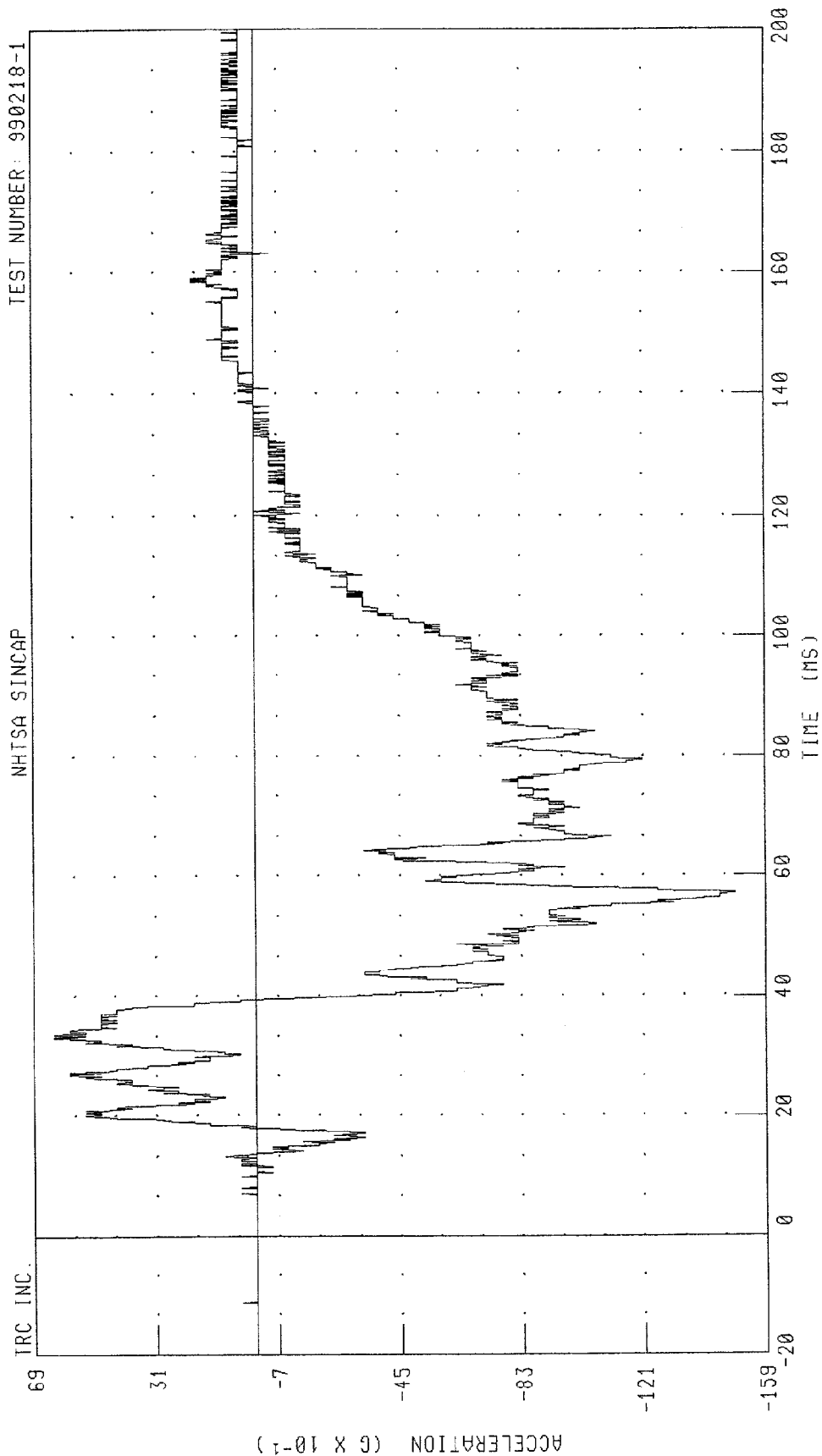


PEAK DATA: 28.19 KM/H @ 200.00 MS; -0.24 KM/H @ 19.52 MS

FILTER: CH. CLASS 180

CHANNEL: HEDYVI

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER HEAD Z-AXIS ACCELERATION



PEAK DATA: 6.28 G @ 33.20 MS; -14.97 G @ 56.96 MS

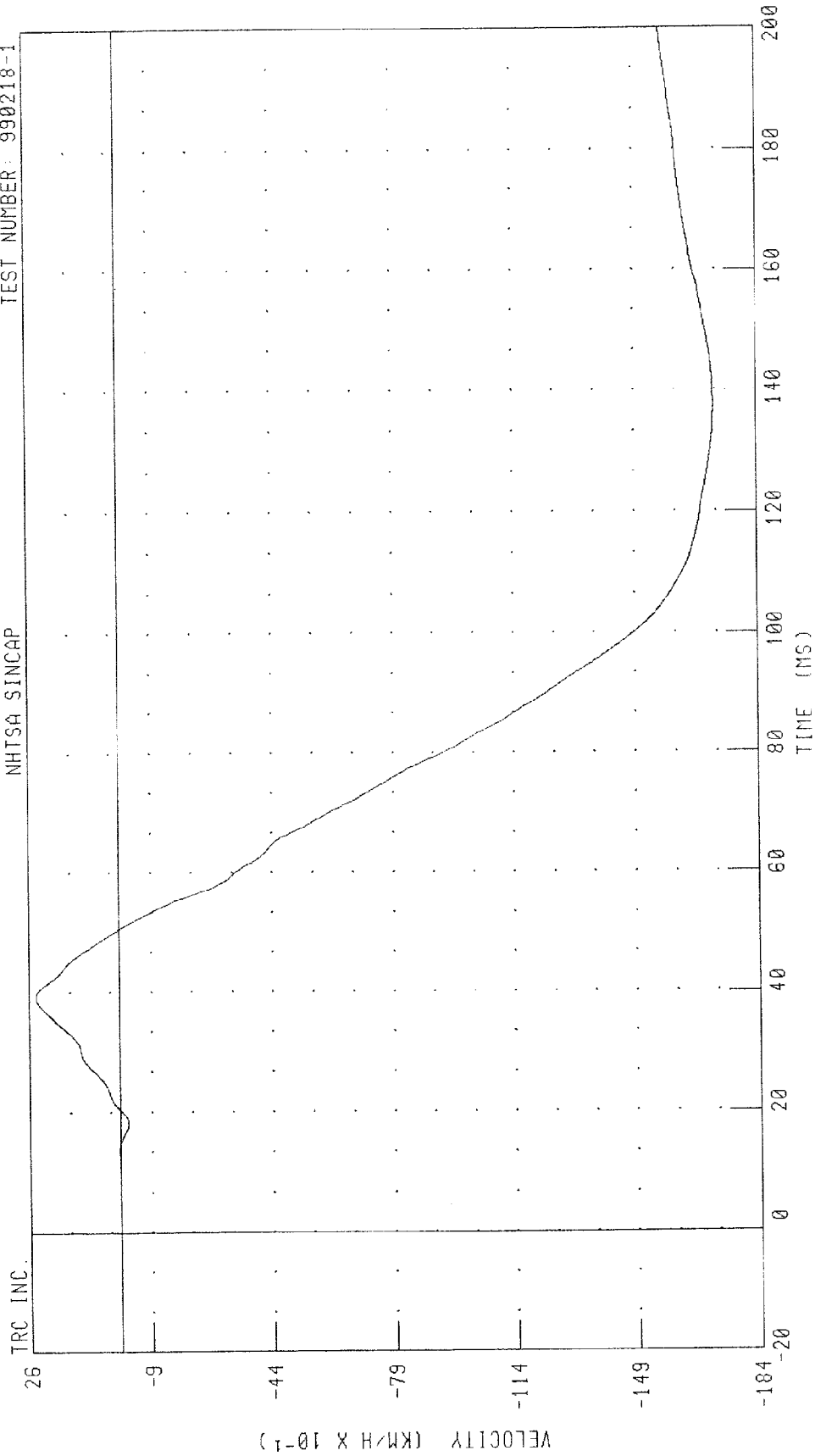
CHANNEL: HEDZG1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

DRIVER HEAD Z-AXIS VELOCITY

NHTSA SINCAP

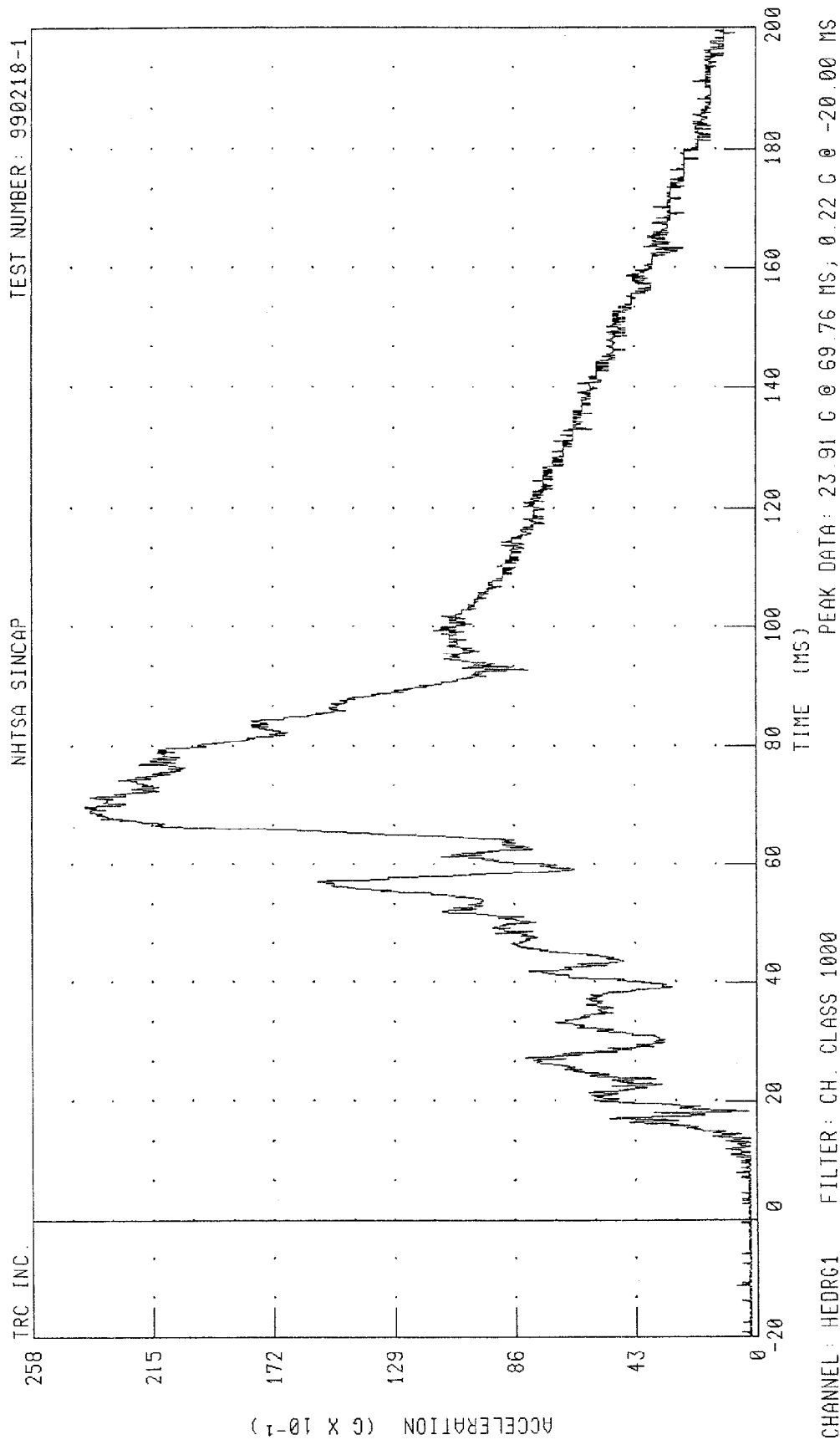
TEST NUMBER: 990218-1



PEAK DATA: 2.41 KM/H @ 39.36 MS; -17.18 KM/H @ 137.76 MS

CHANNEL: HDZVI FILTER: CH. CLASS 180

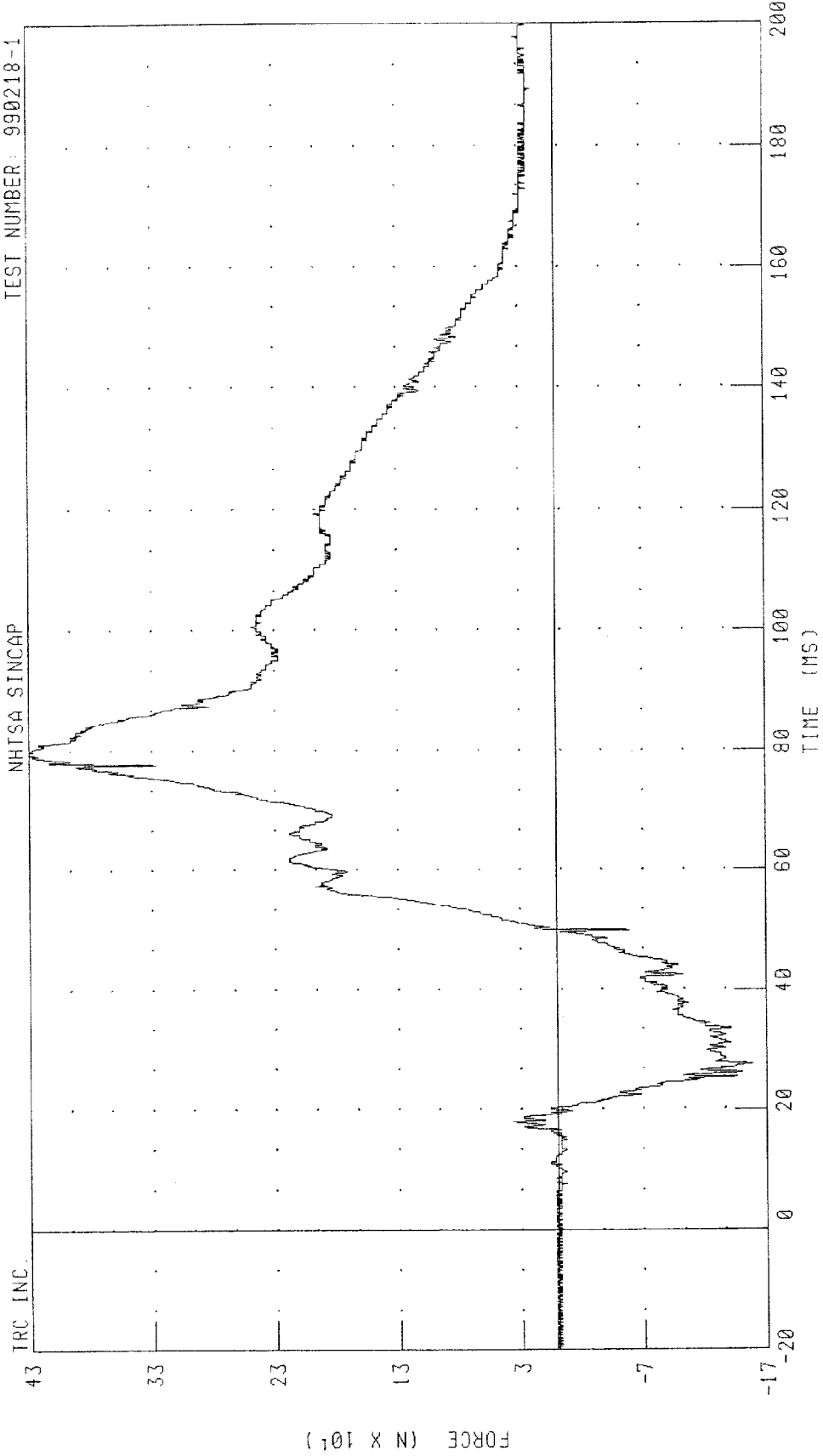
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER HEAD RESULTANT



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER NECK X-AXIS SHEAR FORCE

TEST NUMBER: 990218-1

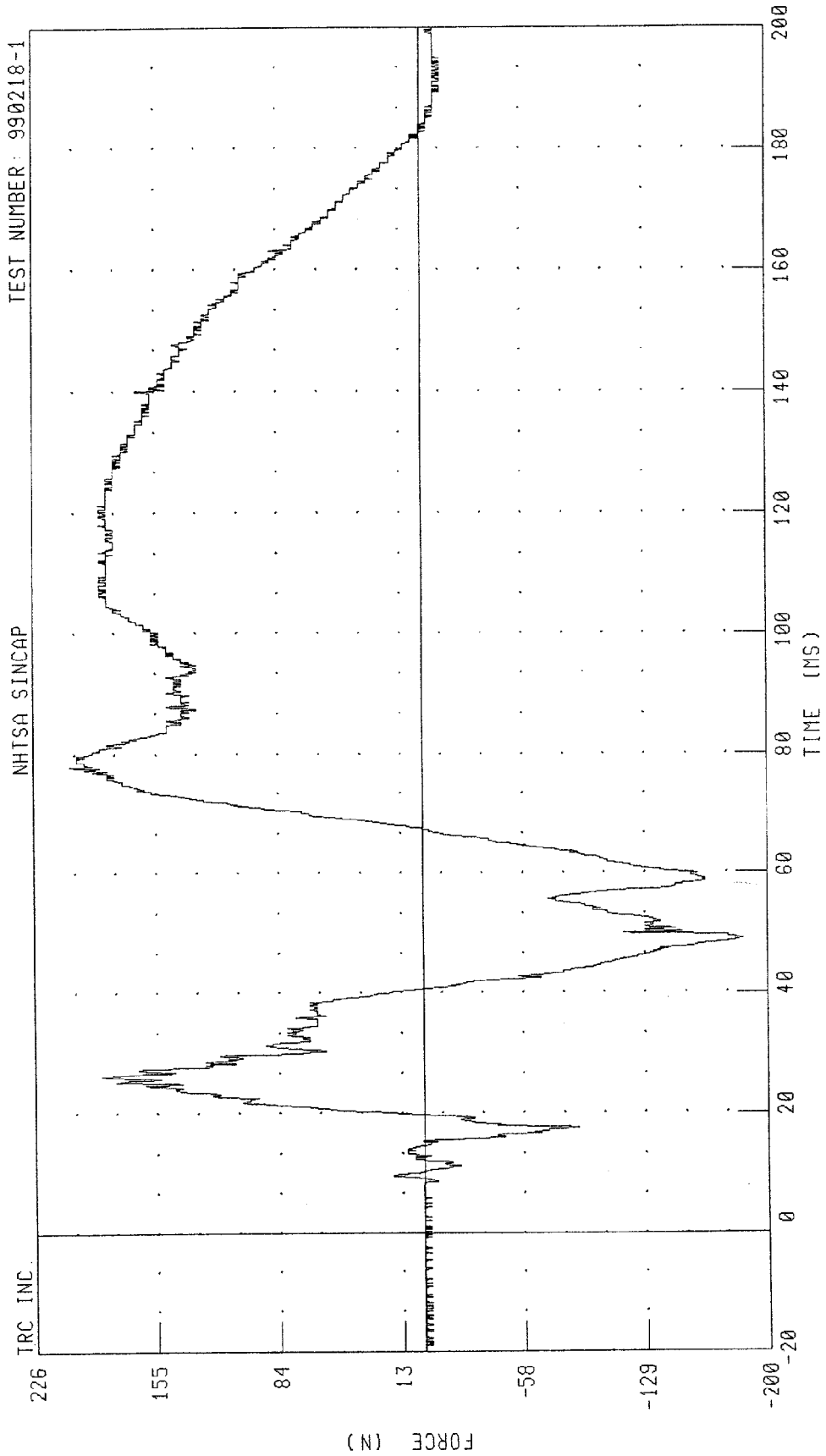
NHTSA SINCAP



PEAK DATA: 431.38 N @ 79.44 MS, -158.99 N @ 27.44 MS

CHANNEL: NEKXF1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER NECK Y-AXIS SHEAR FORCE



PEAK DATA: 205.16 N @ 77.84 MS; -185.79 N @ 49.04 MS

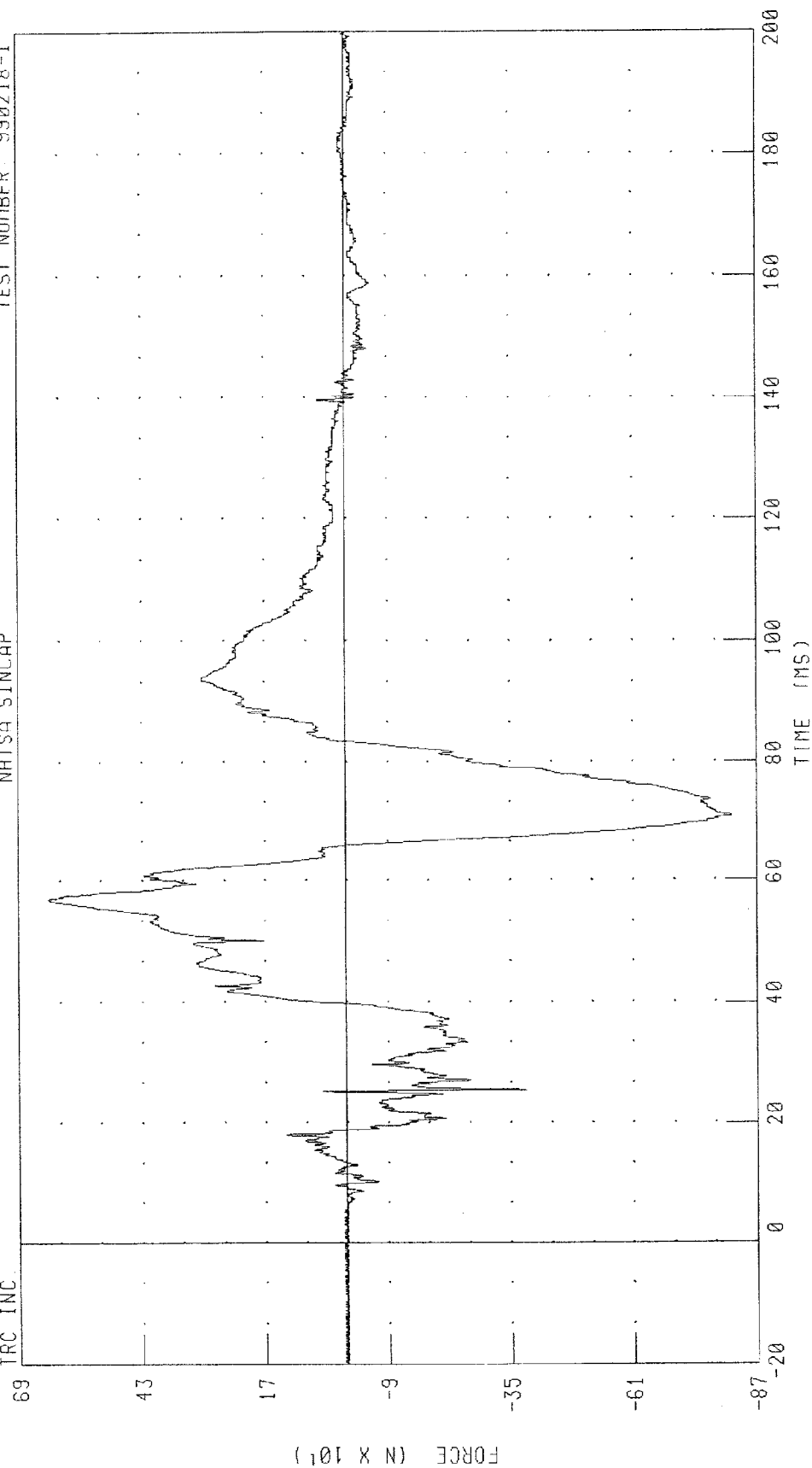
CHANNEL: NEKYF1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER NECK Z-AXIS SHEAR FORCE

TEST NUMBER: 990218-1

NHTSA SINCAP

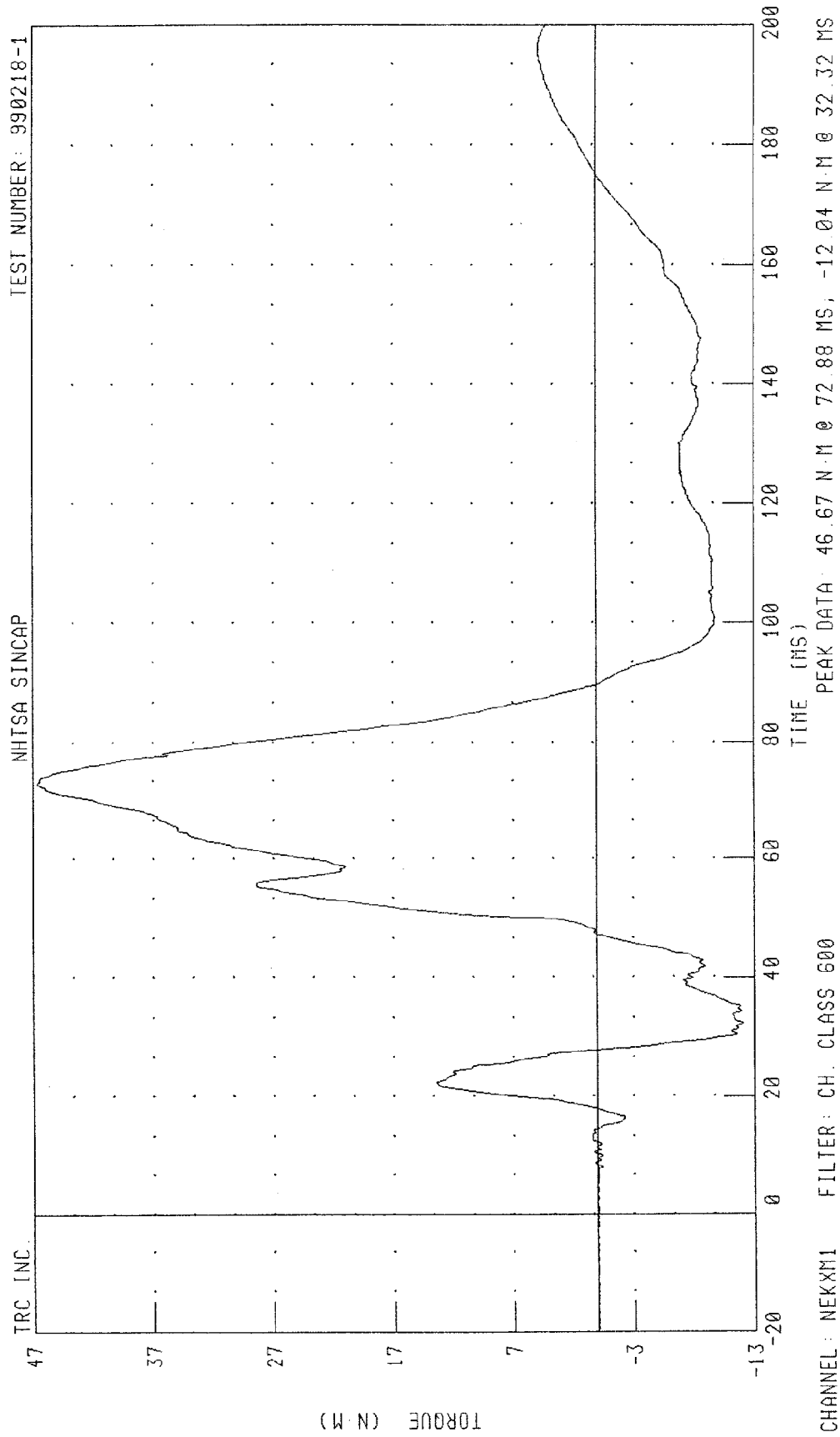
TRC INC.



PEAK DATA: 629.09 N @ 56.96 MS, -817.93 N @ 70.96 MS

CHANNEL: NEKZF1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER NECK MOMENT ABOUT X-AXIS

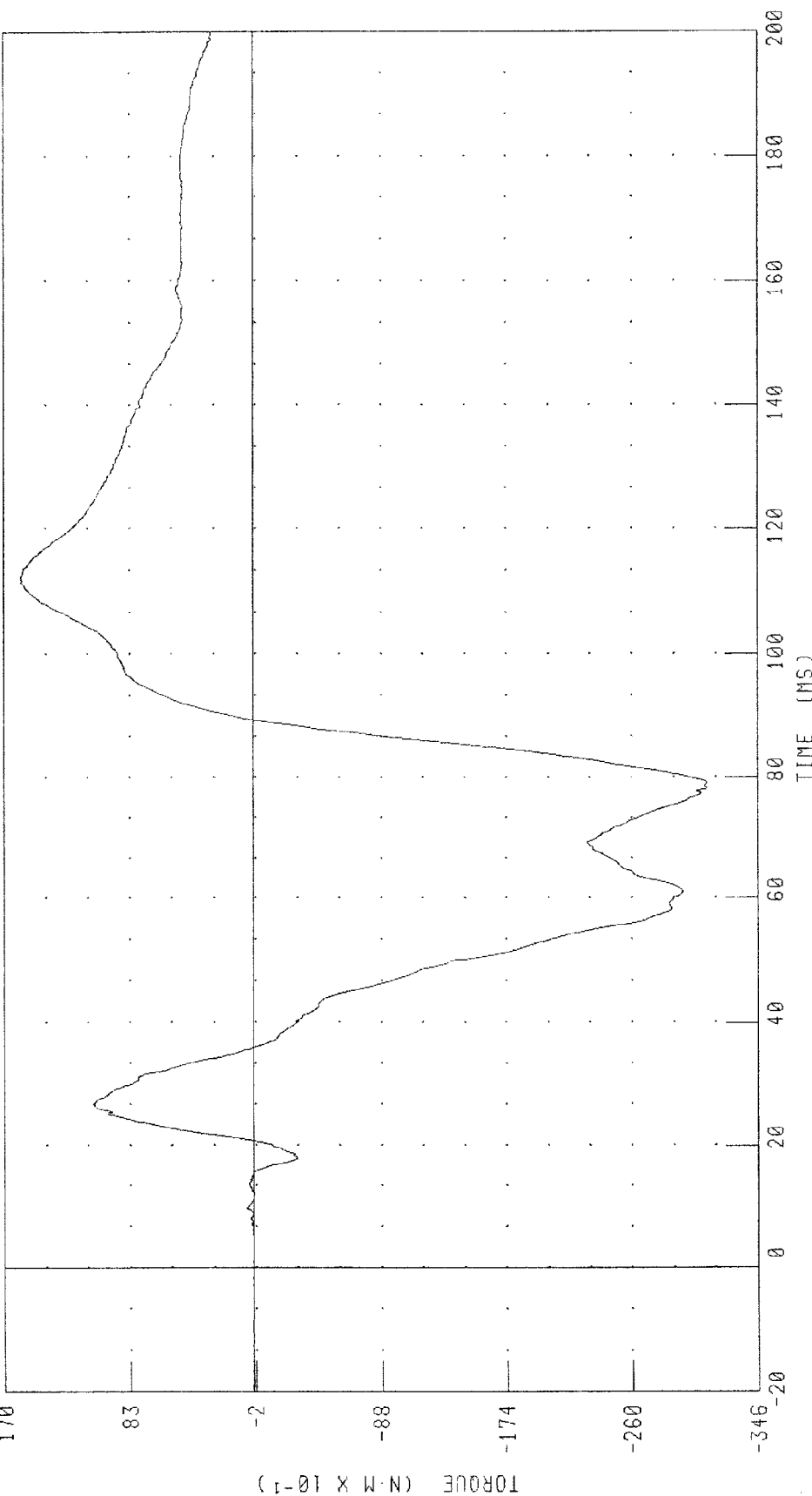


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER NECK MOMENT ABOUT Y-AXIS

TEST NUMBER: 990218-1

NHTSA SINCAP

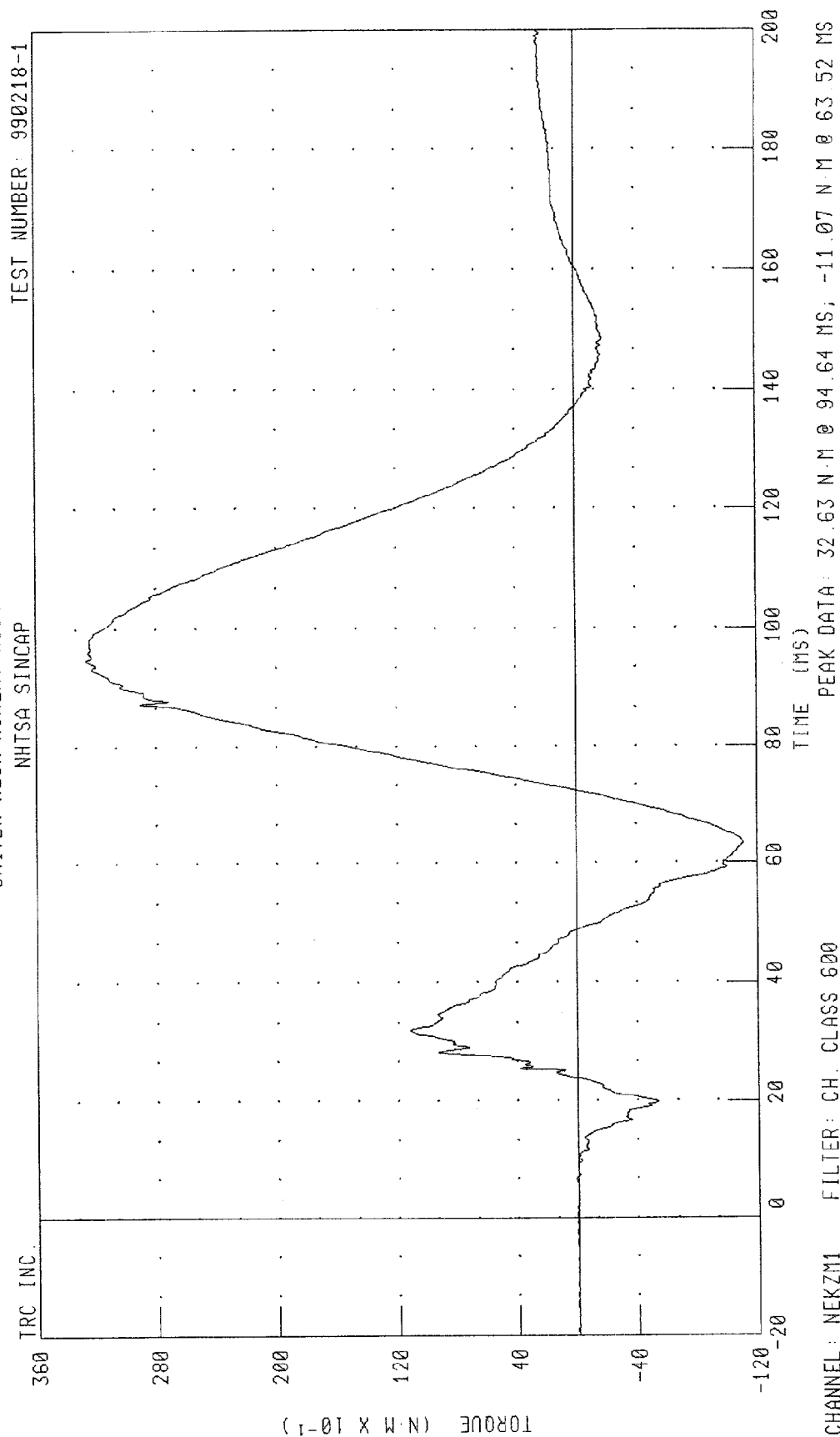
TRC INC.



PEAK DATA: 15.86 N-M @ 112.24 MS, -31 11 N-M @ 78.24 MS

CHANNEL: NEKYM1 FILTER: CH. CLASS 600

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER NECK MOMENT ABOUT Z-AXIS

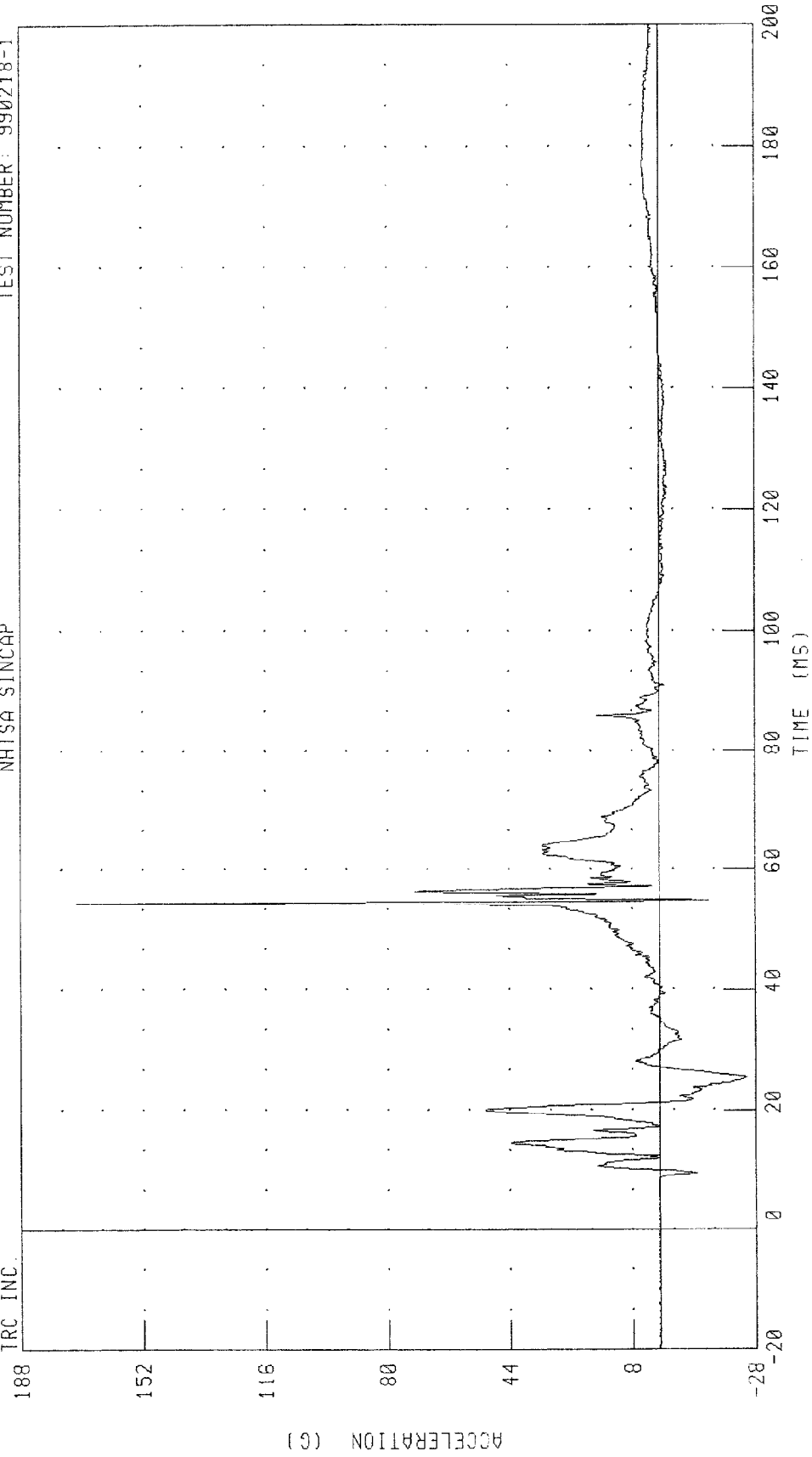


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER UPPER RIB Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 171.66 G @ 54.40 MS, -25.74 G @ 25.36 MS

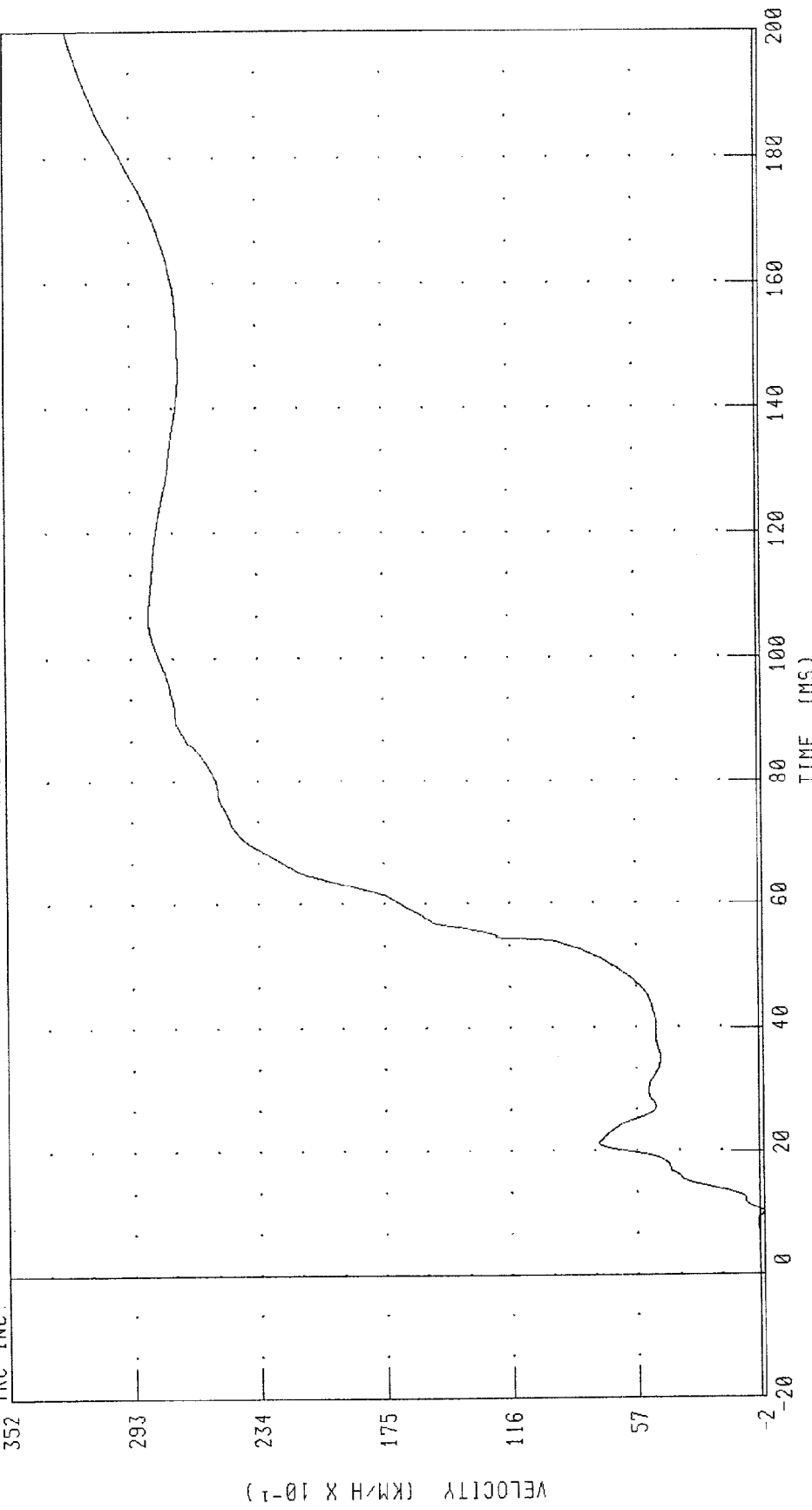
CHANNEL: LURYG1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1993 FORD EXPLORER
 DRIVER UPPER RIB Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

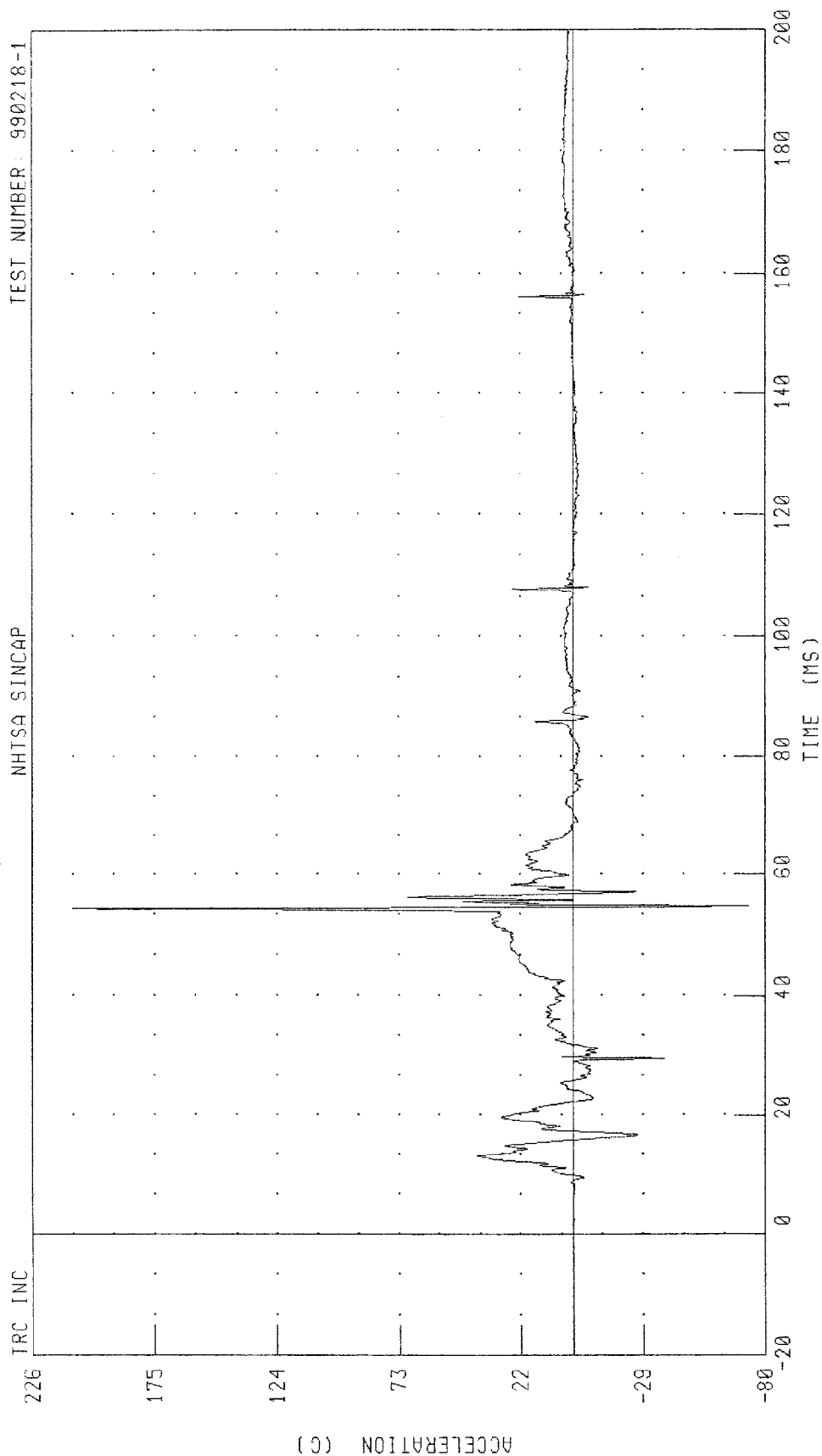
TRC INC.



PEAK DATA: 32.28 KM/H @ 200.00 MS; -0.20 KM/H @ 10.00 MS

CHANNEL: LURYU1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER LOWER RIB Y-AXIS ACCELERATION

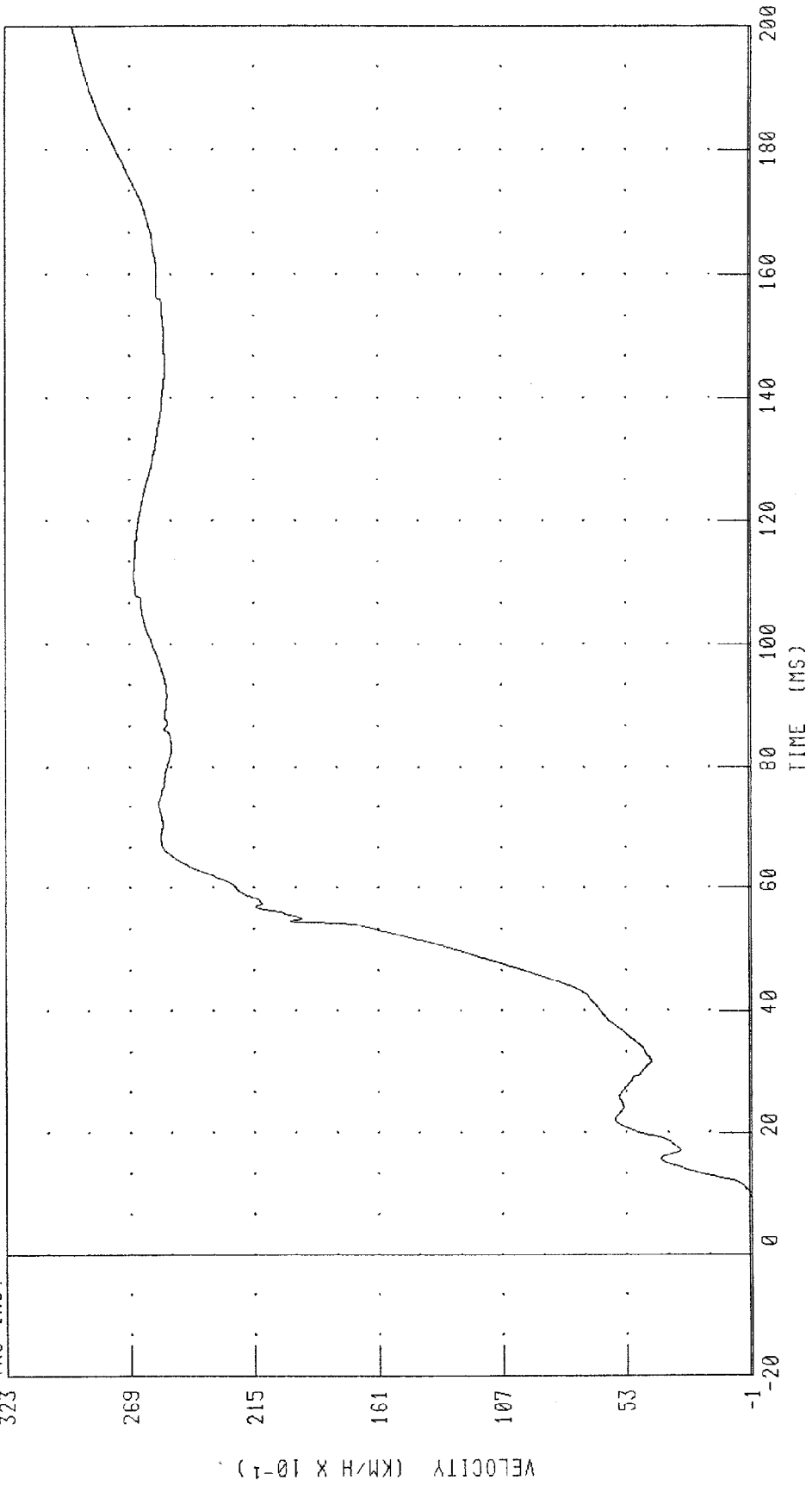


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER RIB Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 29.40 KM/H @ 200.00 MS; -0.09 KM/H @ 9.92 MS

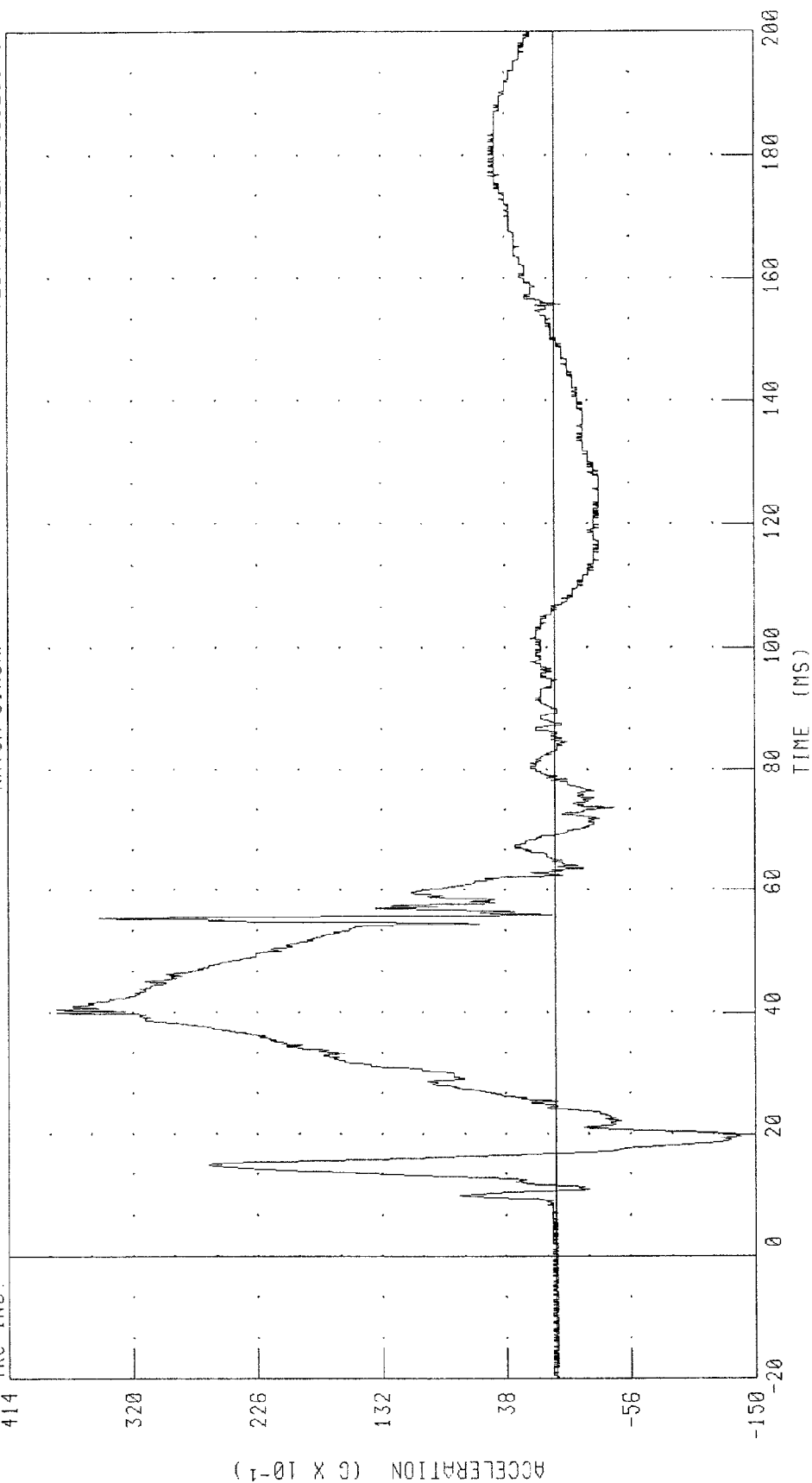
CHANNEL: LLRYU1 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER LOWER SPINE Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

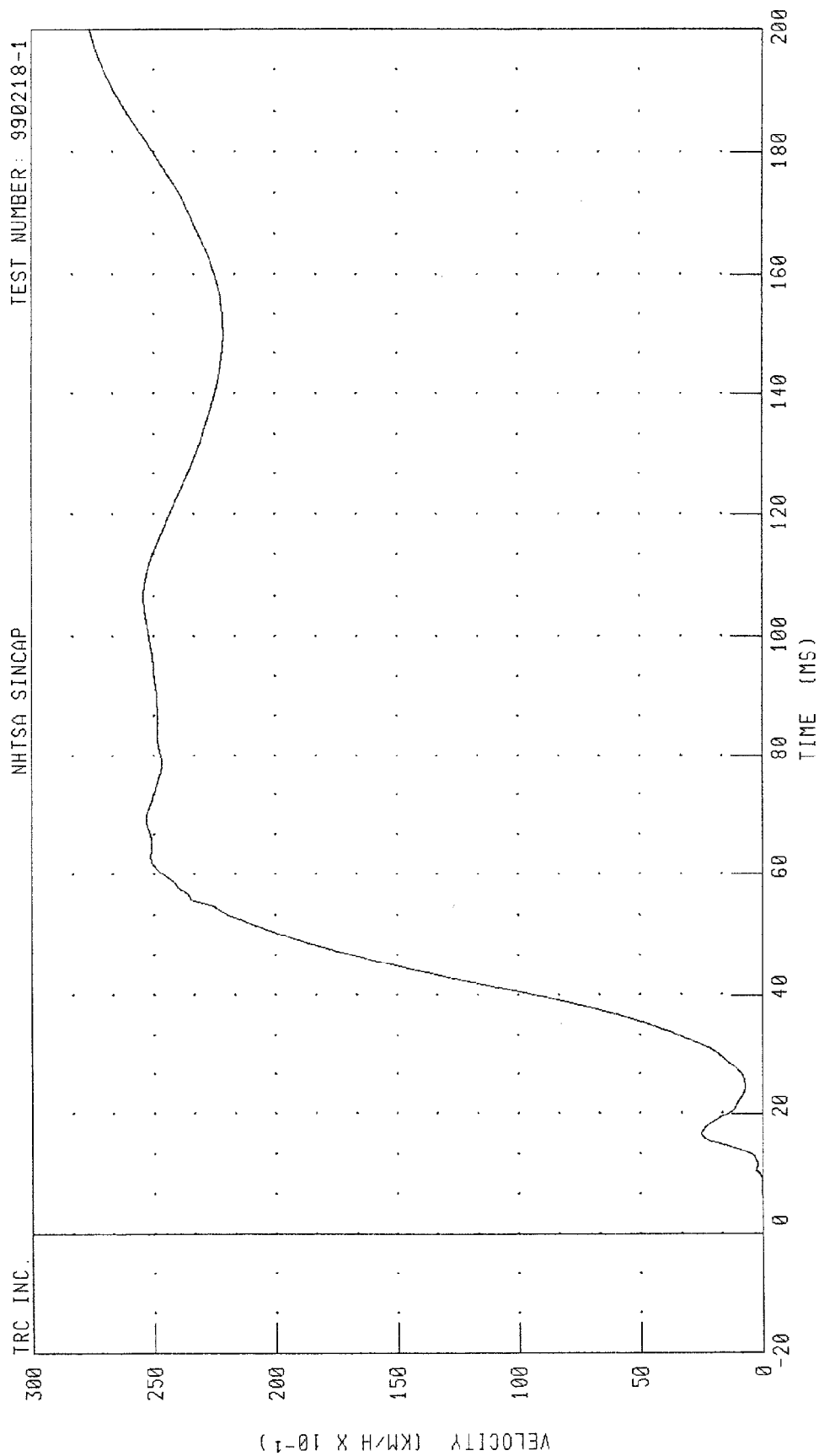
TRC INC.



PEAK DATA: 37.75 G @ 40.08 MS, -13.95 G @ 19.52 MS

CHANNEL: T12YC1 FILTER: CH. CLASS 1000

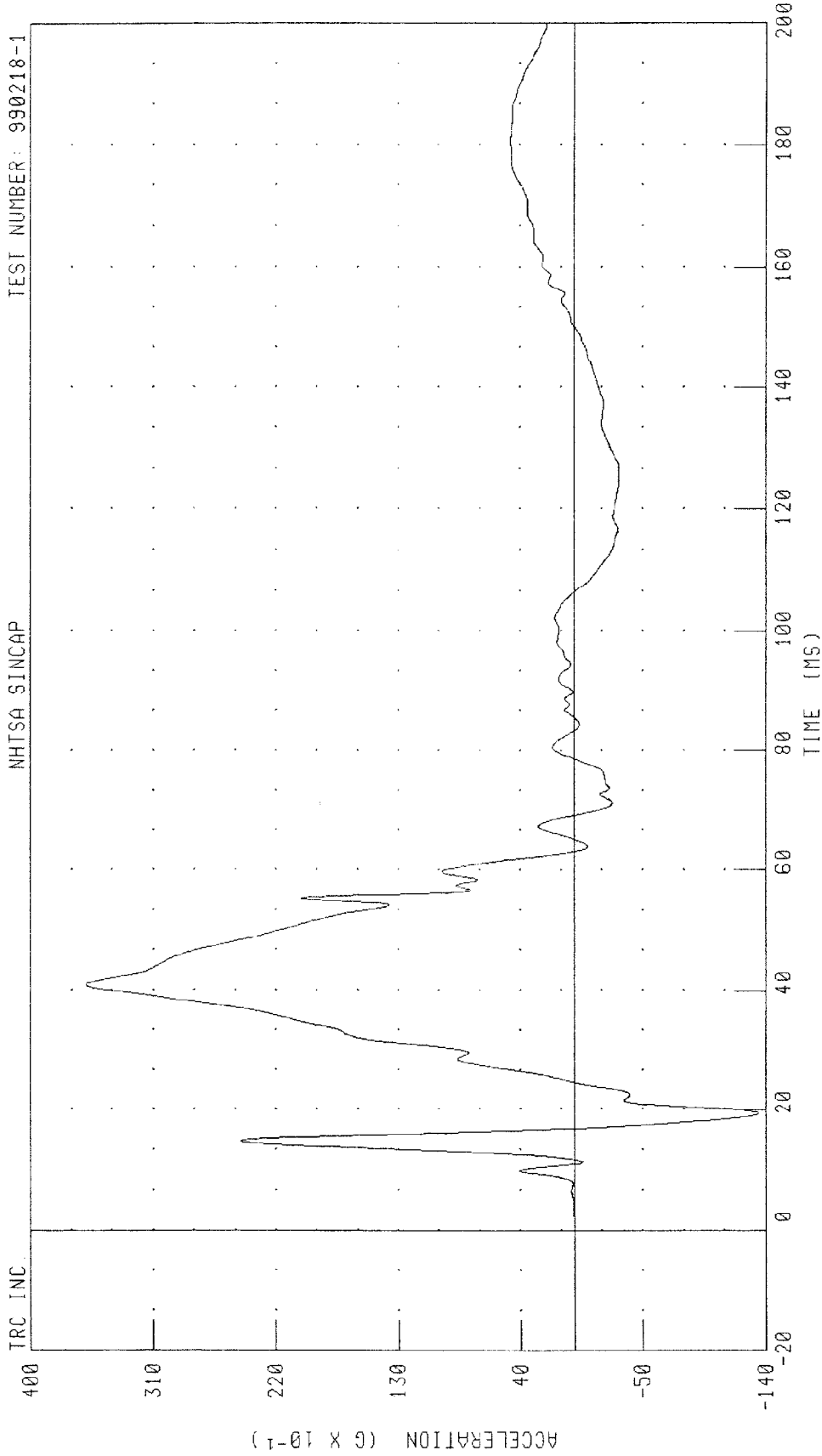
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER SPINE Y-AXIS VELOCITY



PEAK DATA: 27.66 KM/H @ 200.00 MS, 0.00 KM/H @ 0.24 MS

CHANNEL: T12YU1 FILTER: CH. CLASS 1000

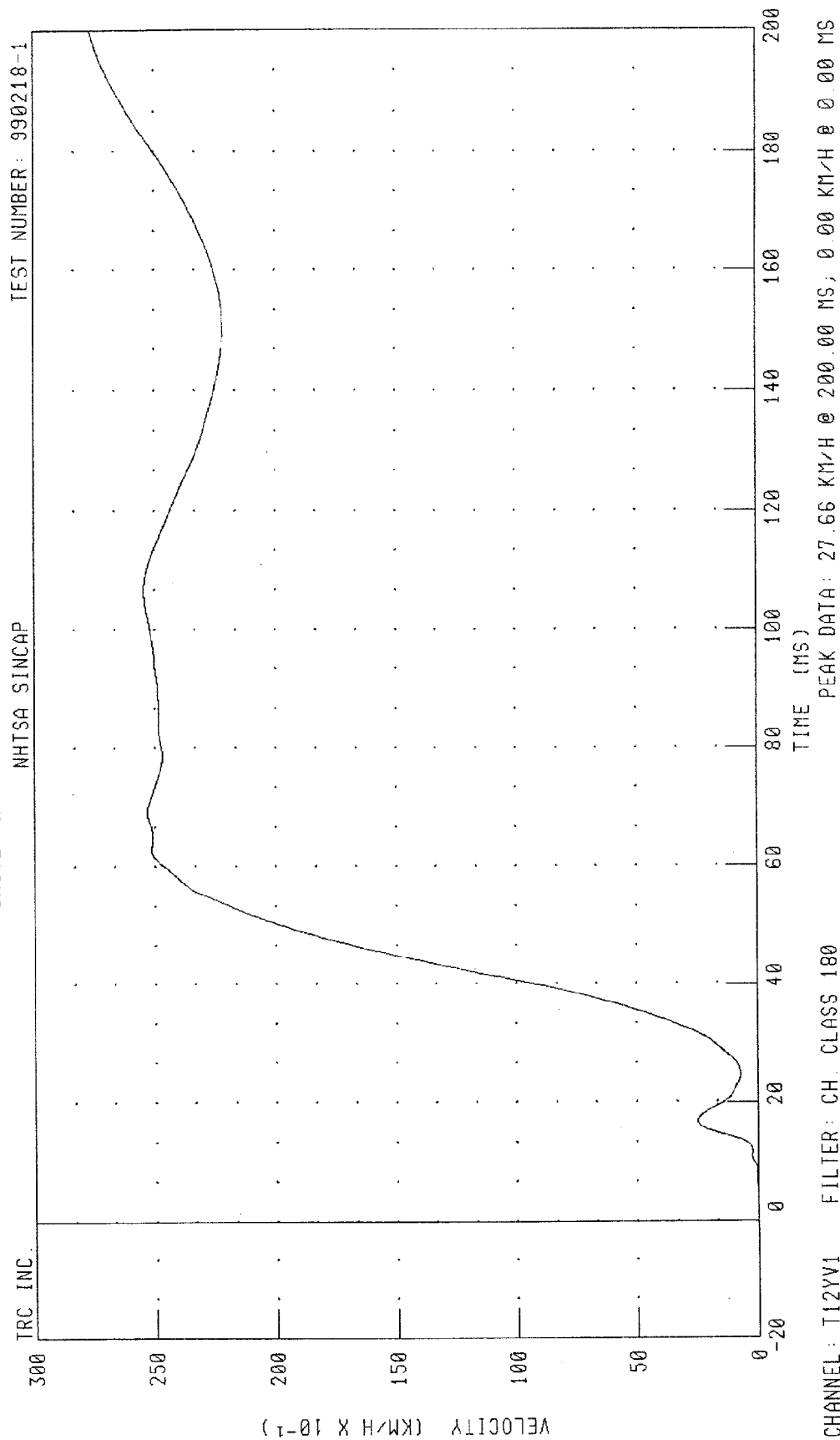
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER SPINE Y-AXIS ACCELERATION



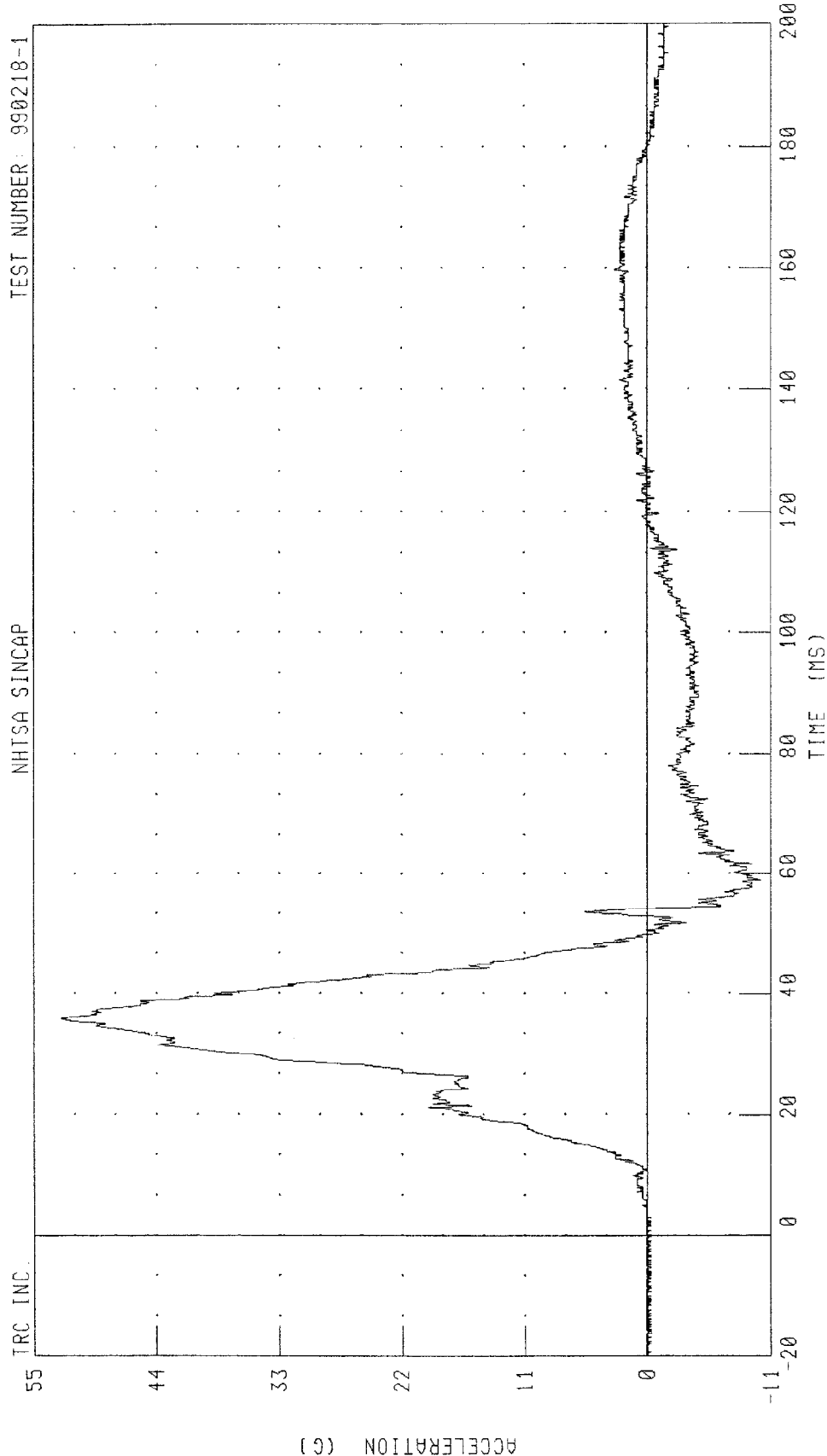
PEAK DATA: 35.90 G @ 41.04 MS; -13.48 G @ 19.36 MS

CHANNEL: T12Y61 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER SPINE Y-AXIS VELOCITY



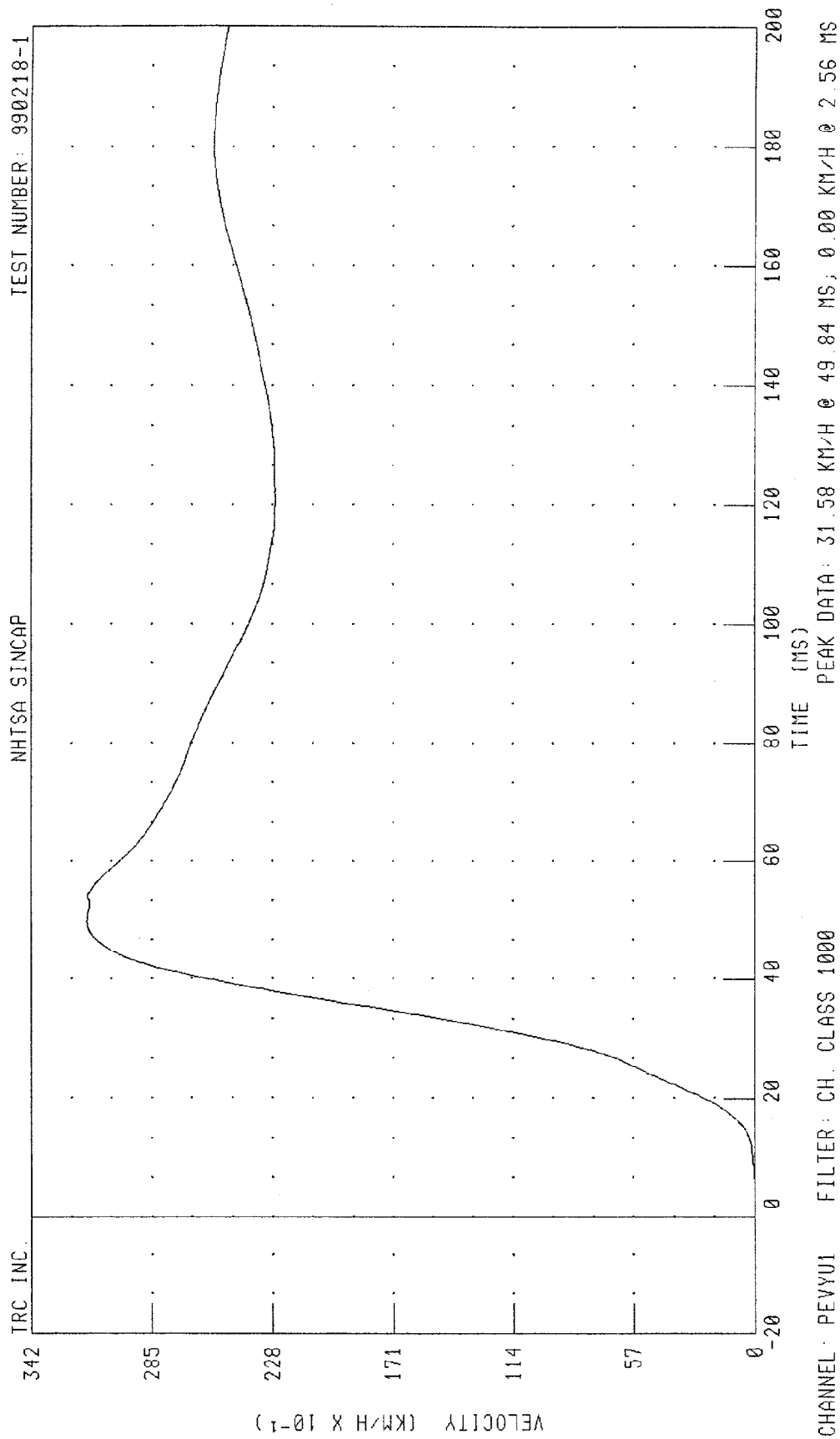
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER PELVIS Y-AXIS ACCELERATION



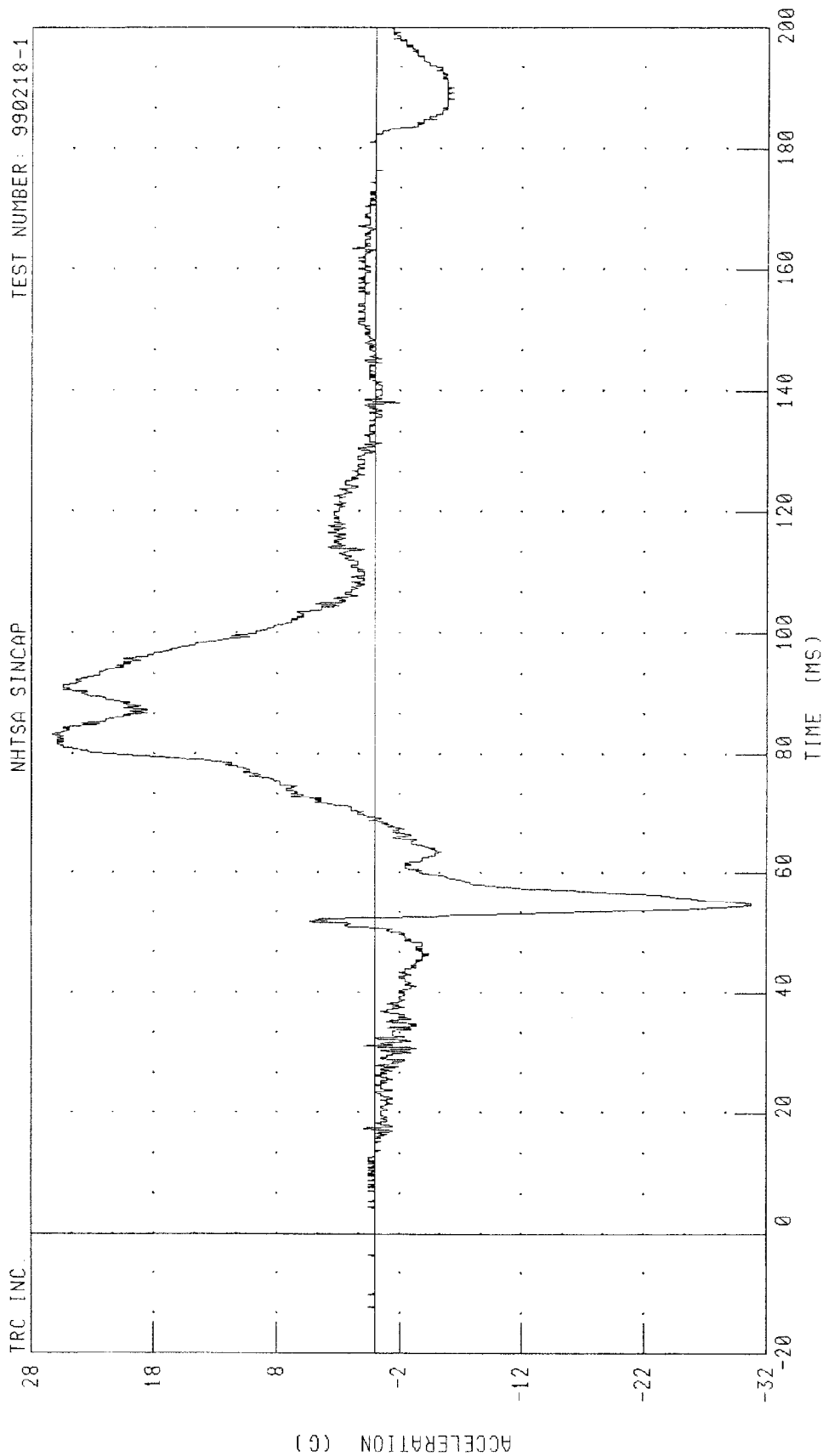
PEAK DATA: 52.51 G @ 35.76 MS, -10.07 G @ 59.12 MS

CHANNEL: PEVY61 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER PELVIS Y-AXIS VELOCITY



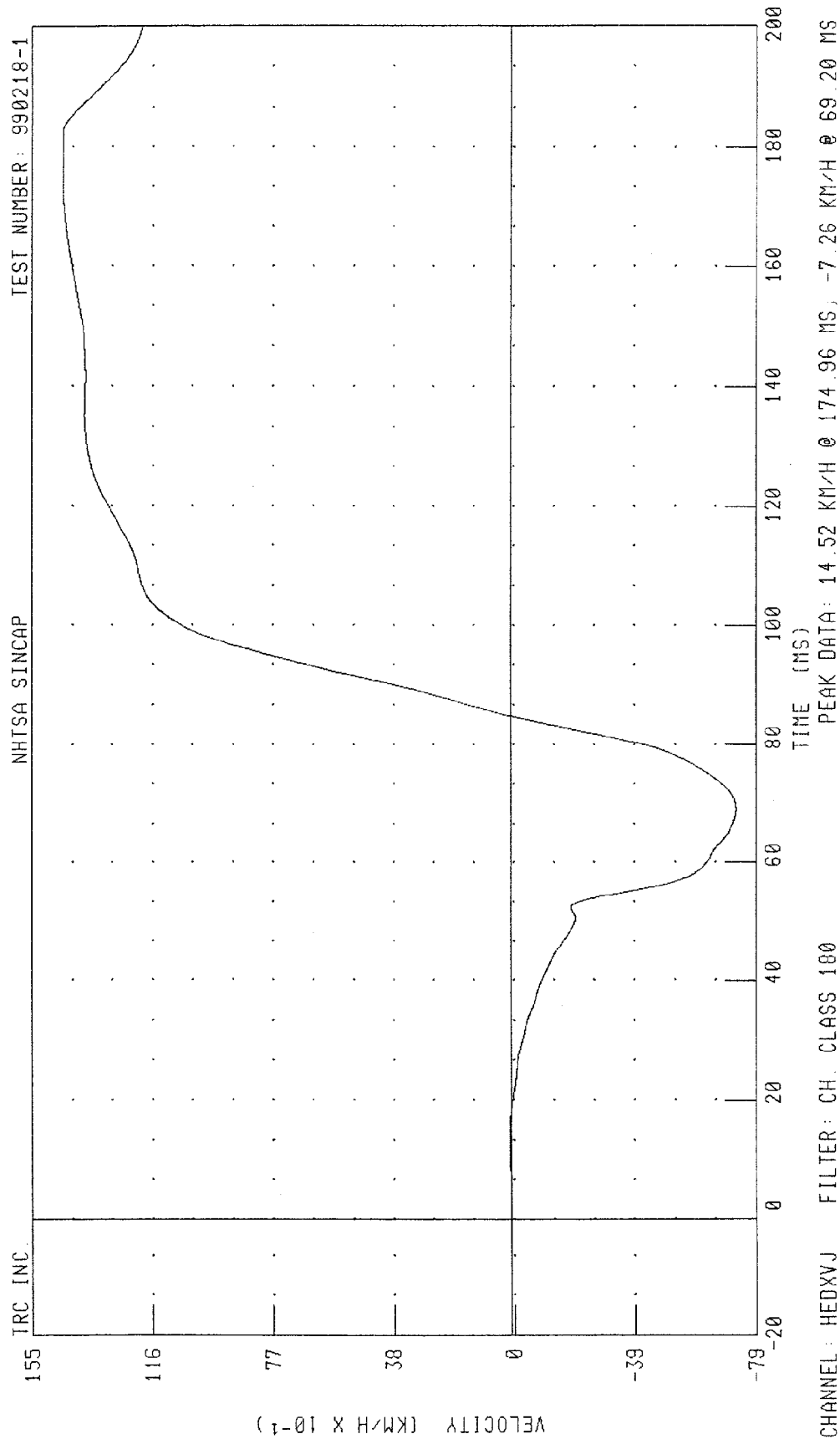
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD X-AXIS ACCELERATION



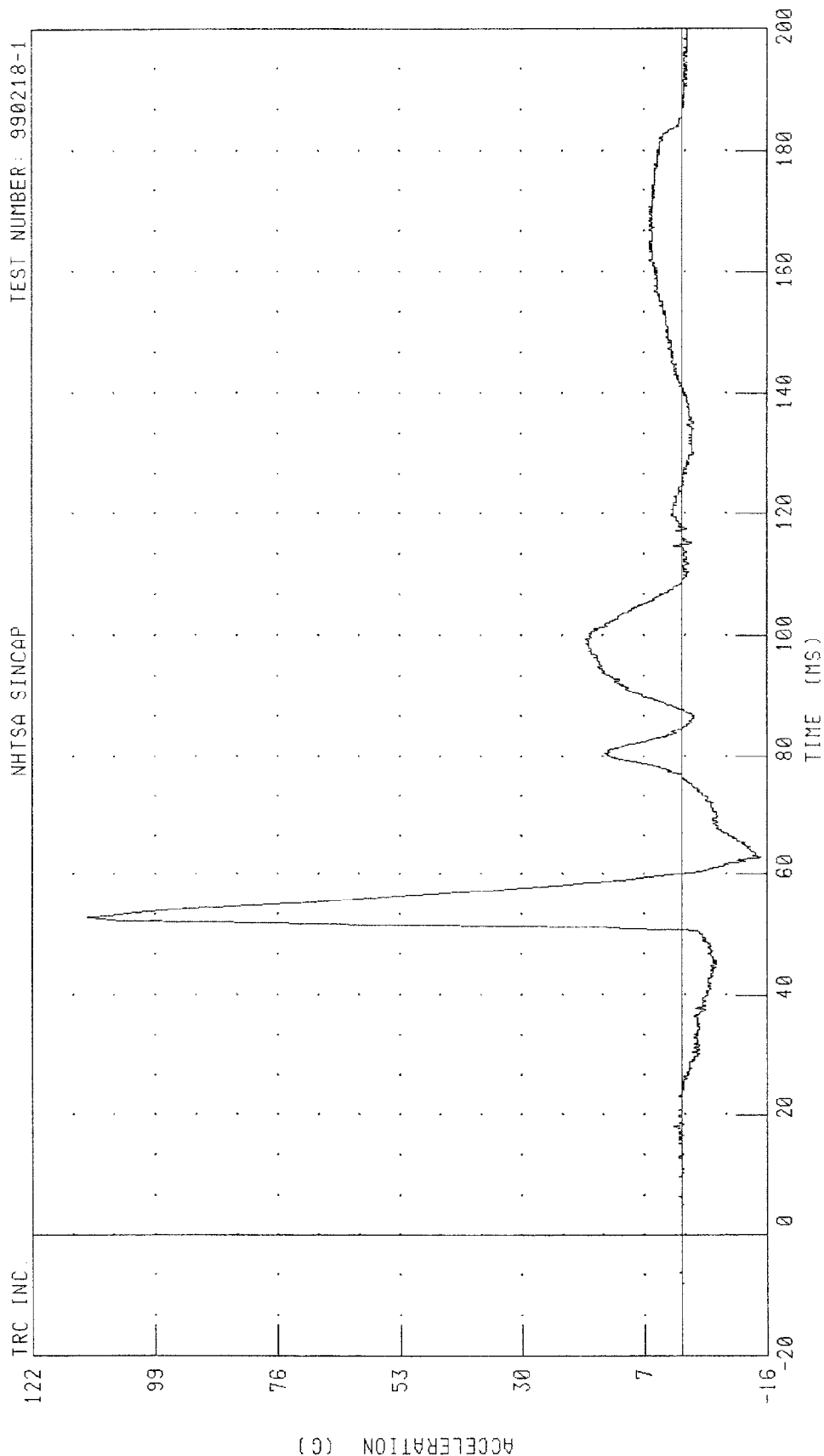
PEAK DATA: 26.36 G @ 83.20 MS, -30.78 G @ 54.48 MS

CHANNEL: HEDXC4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD X-AXIS VELOCITY



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD Y-AXIS ACCELERATION



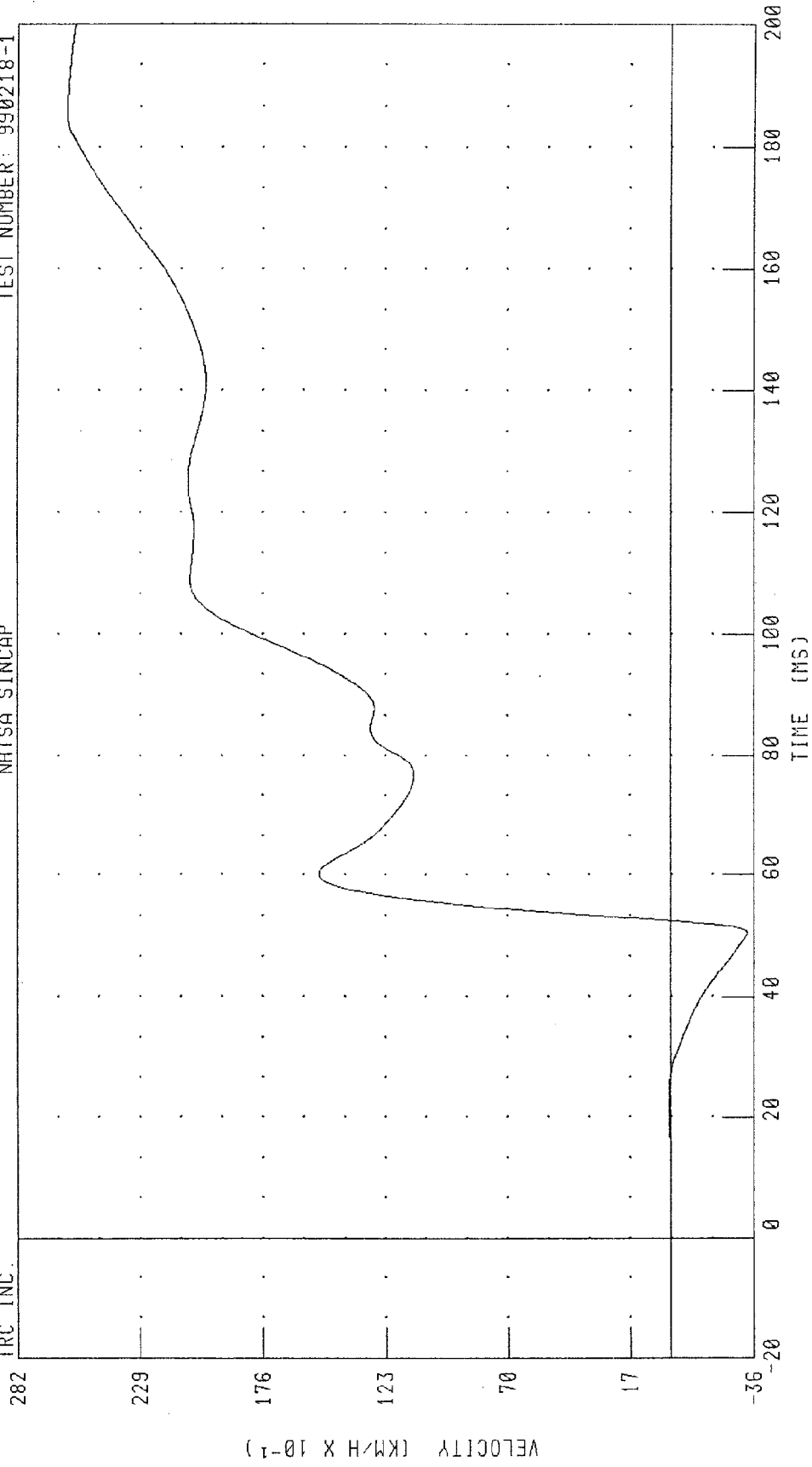
CHANNEL: HEDYC4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

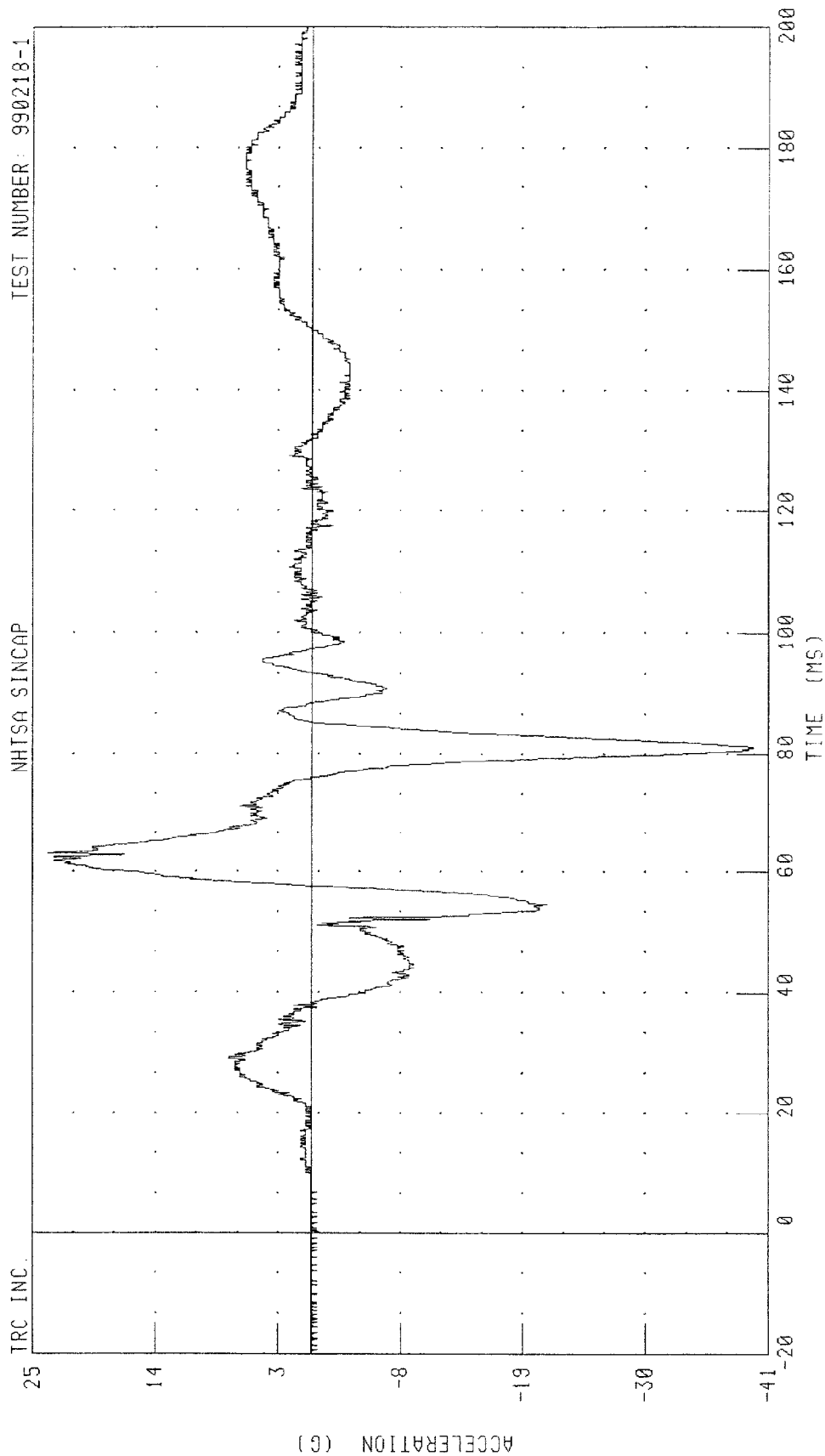
TRC INC.



PEAK DATA: 26.05 KM/H @ 186.08 MS, -3.34 KM/H @ 50.48 MS

CHANNEL: HEDYVJ FILTER: CH. CLASS 180

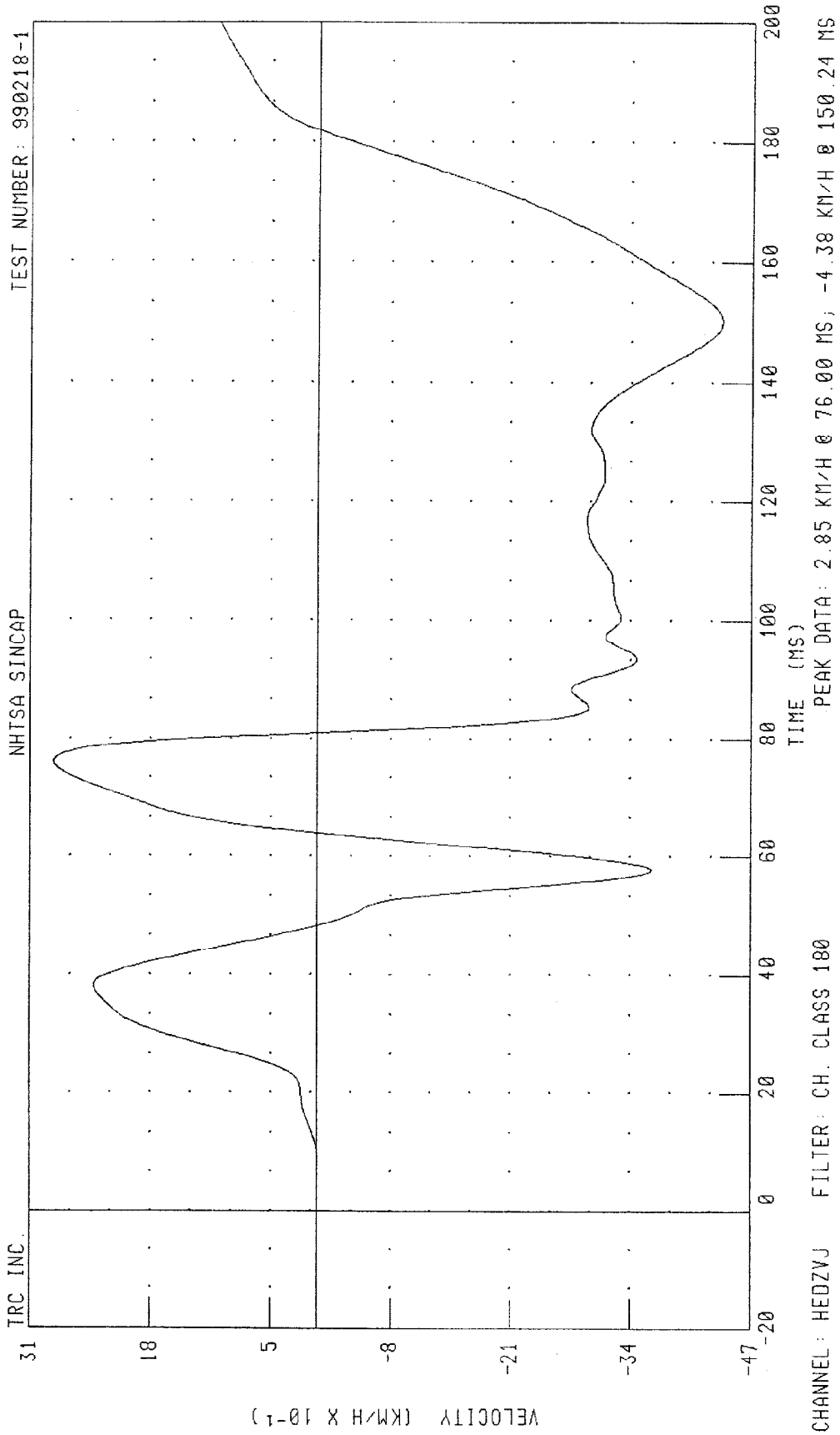
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD Z-AXIS ACCELERATION



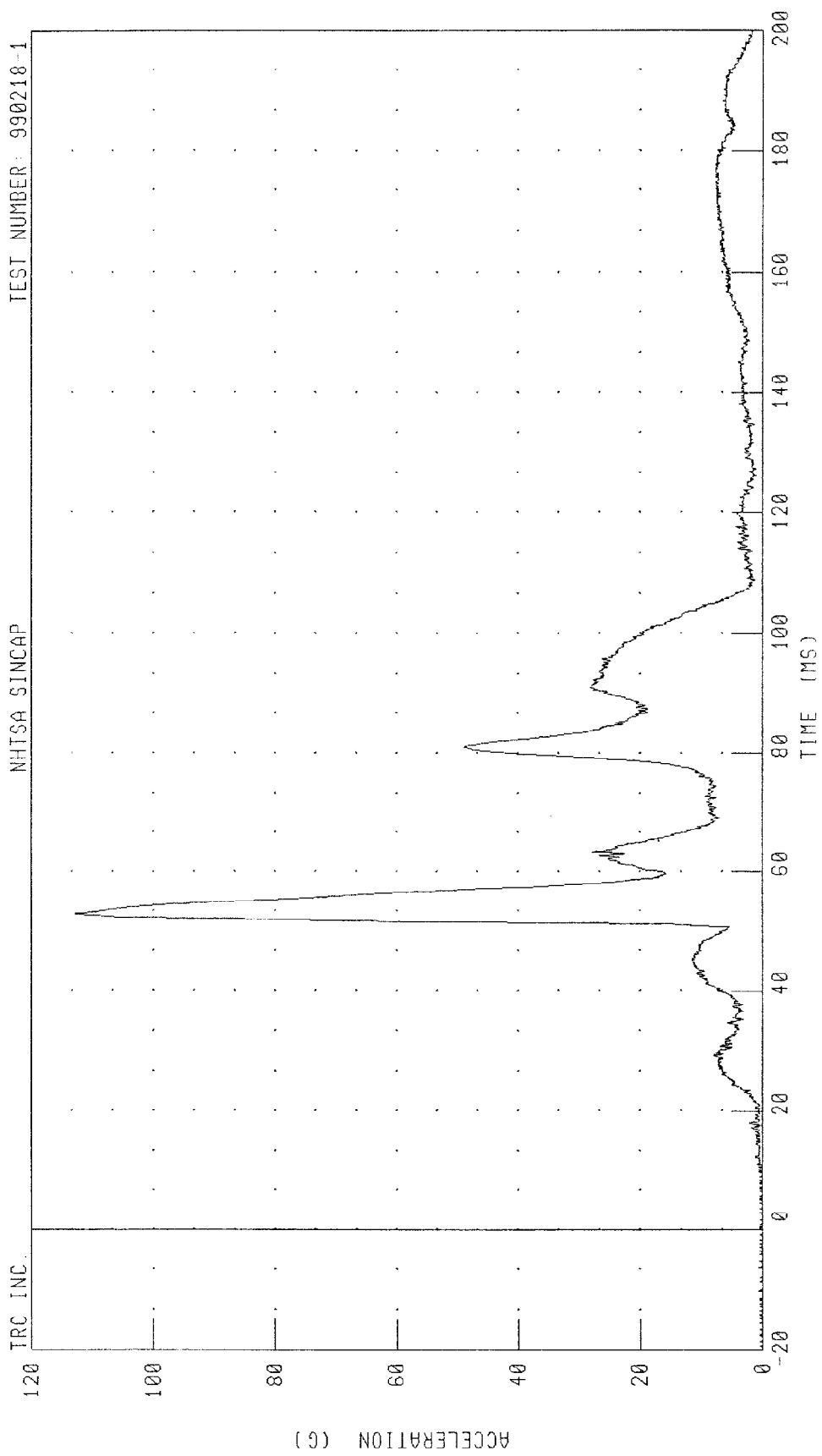
PEAK DATA: 23.58 G @ 63.20 MS; -39.68 G @ 81.12 MS

CHANNEL: HEDZG4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD Z-AXIS VELOCITY



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER HEAD RESULTANT



Left Rear Passenger's Neck X-Axis Force, NEKXF4, Was Not Recorded
(neck axis load cells were not used)

Left Rear Passenger's Neck Y-Axis Force, NEKYF4, Was Not Recorded
(neck axis load cells were not used)

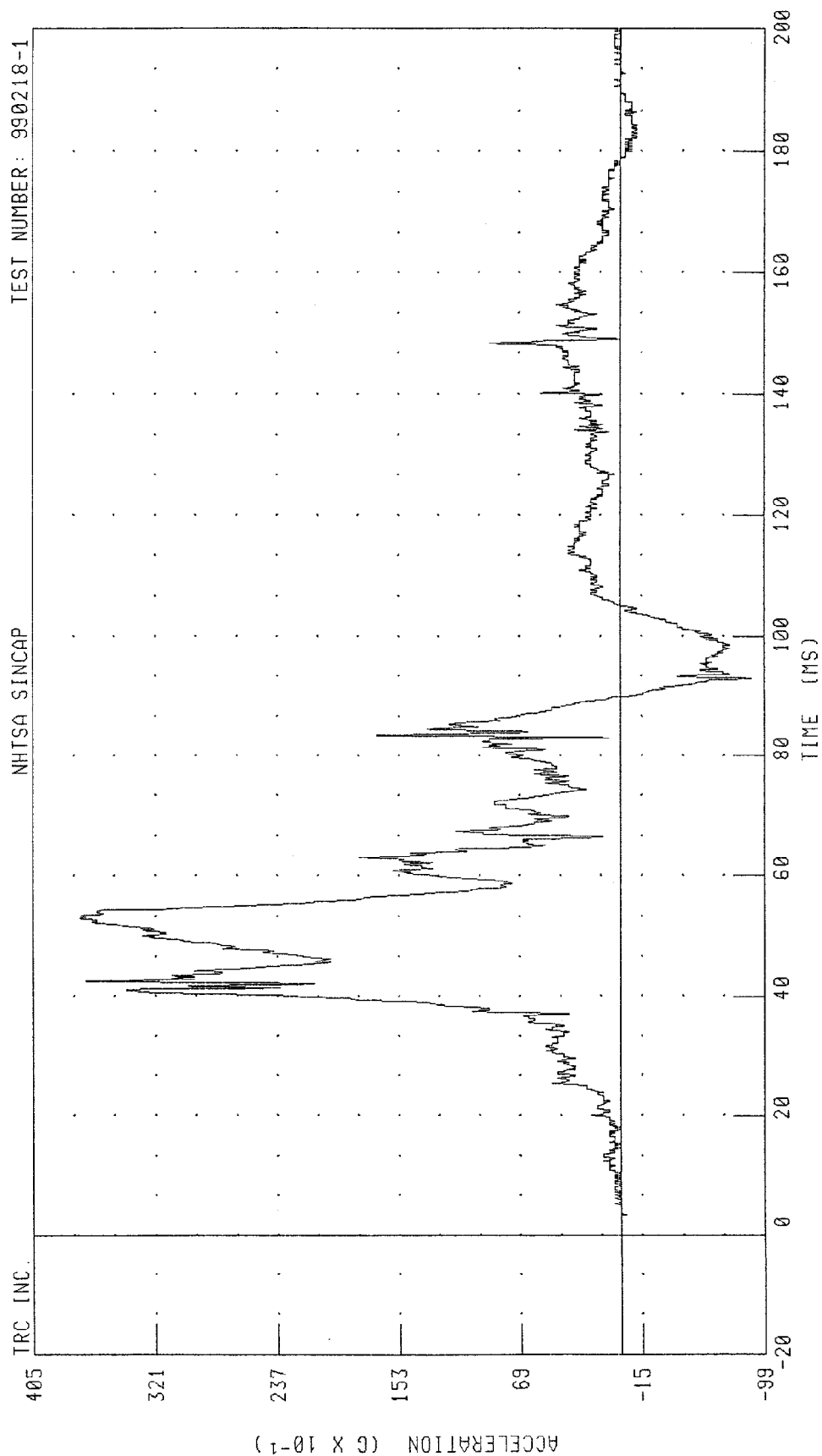
Left Rear Passenger's Neck Z-Axis Force, NEKZF4, Was Not Recorded
(neck axis load cells were not used)

Left Rear Passenger's Neck X-Axis Moment, NEKXM4, Was Not Recorded
(6 axis neck load cells were not used)

Left Rear Passenger's Neck Y-Axis Moment, NEKYM4, Was Not Recorded
(6 axis neck load cells were not used)

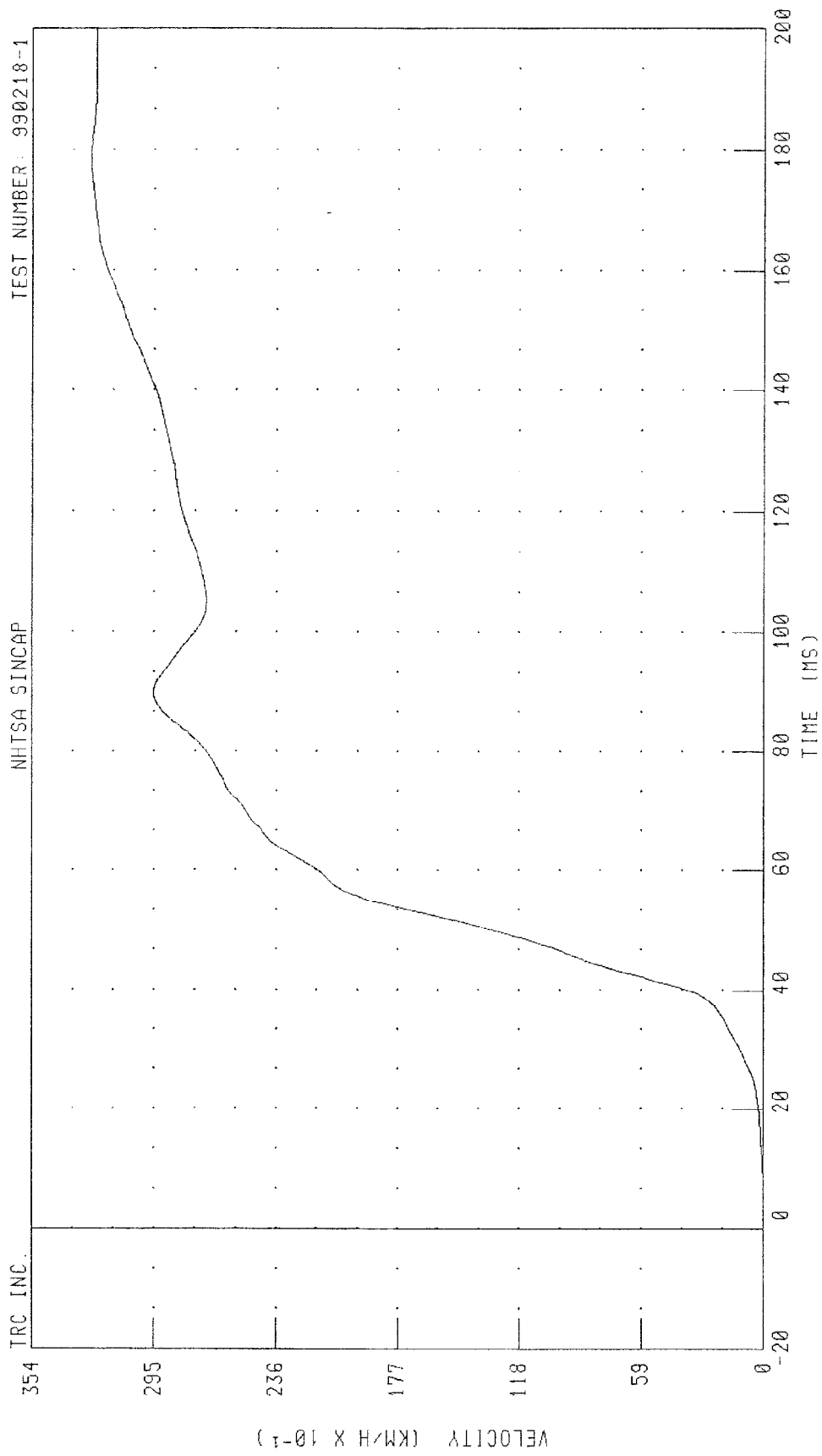
Left Rear Passenger's Neck Z-Axis Moment, NEKZM4, Was Not Recorded
(6 axis neck load cells were not used)

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION



CHANNEL: LURYG4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER UPPER RIB Y-AXIS VELOCITY



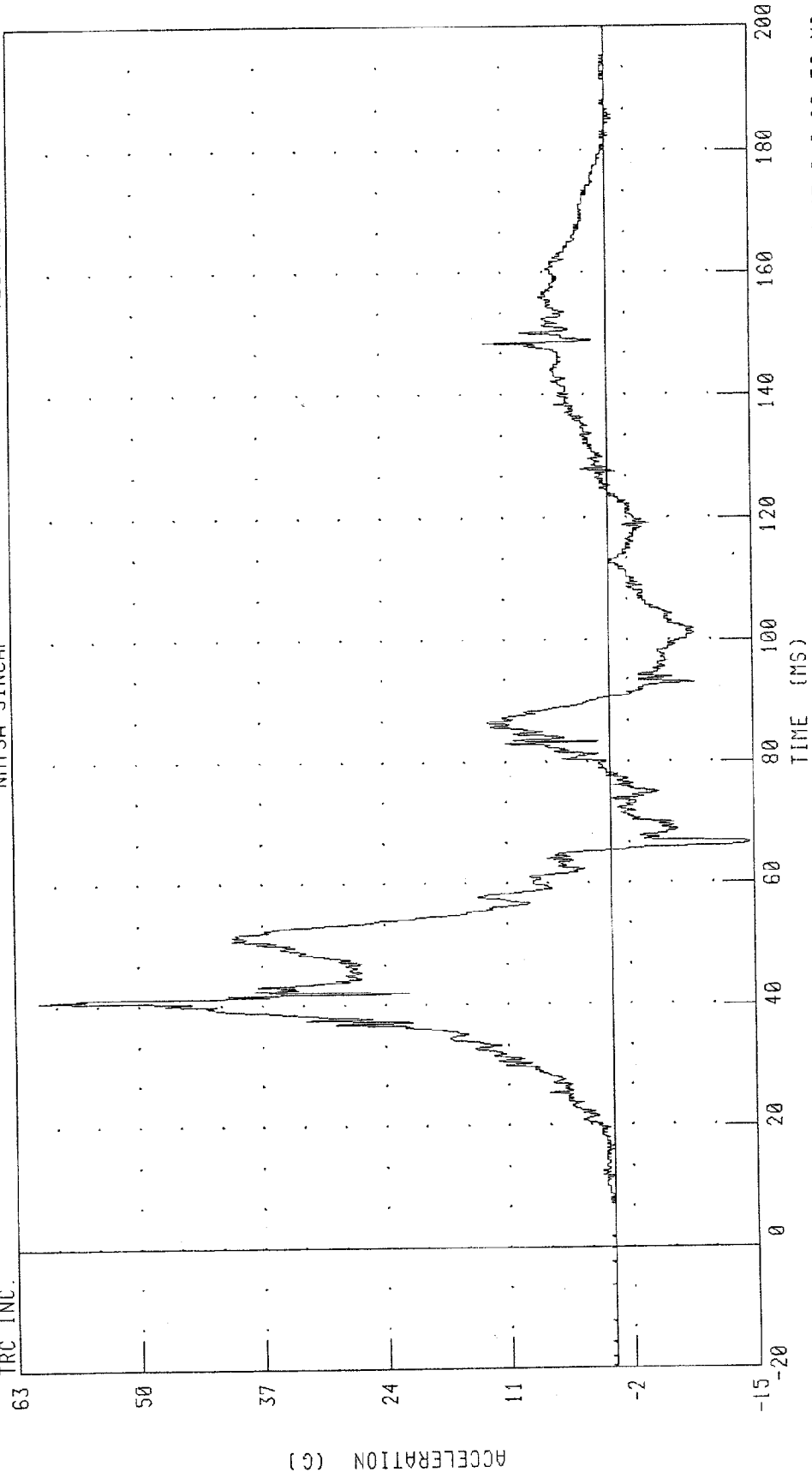
CHANNEL: LURVU4 FILTER: CH. CLASS 1000 PEAK DATA: 32.57 KM/H @ 178.48 MS; 0.00 KM/H @ 5.28 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

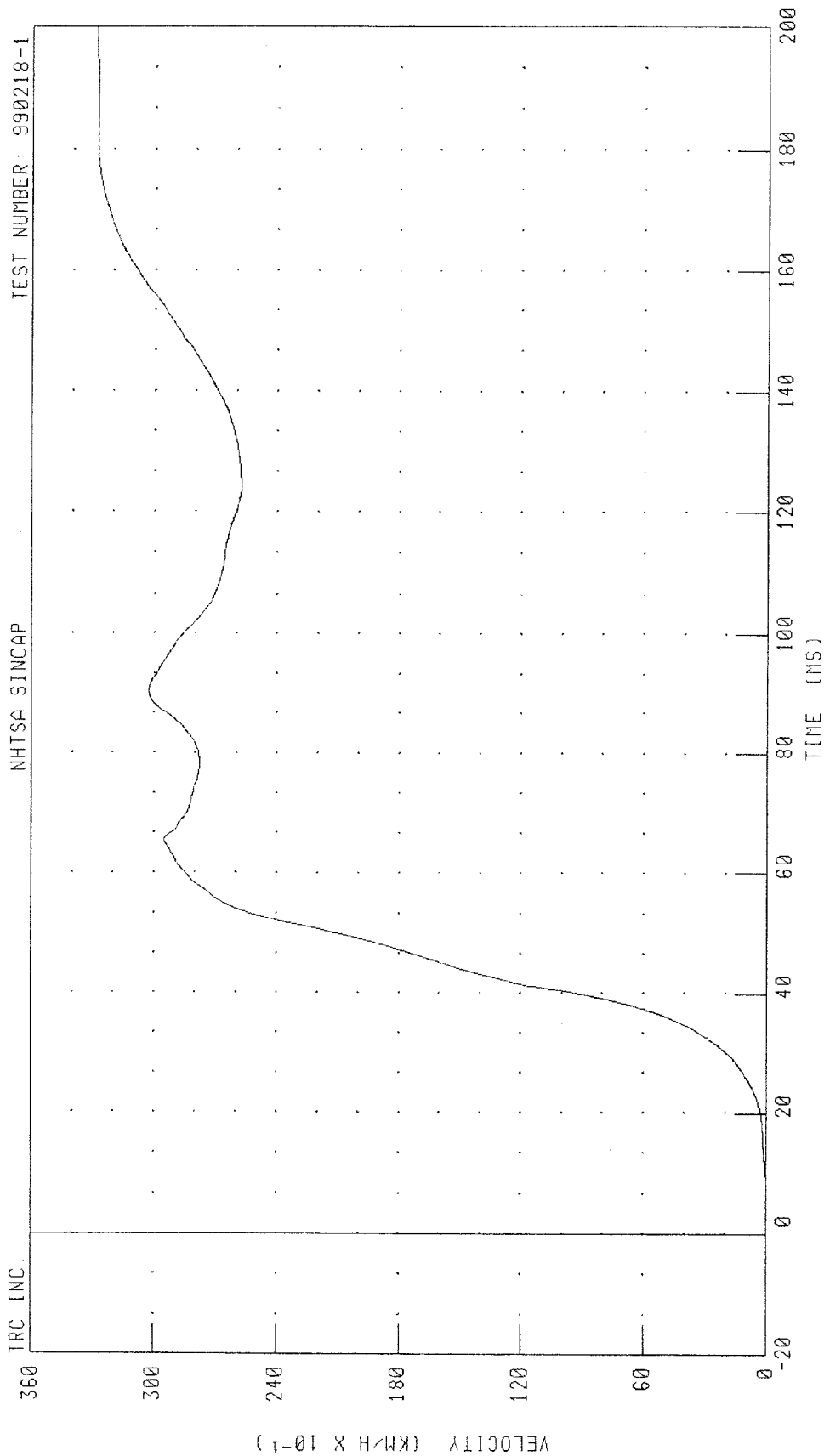
TRC INC.



PEAK DATA: 60.47 G @ 40.80 MS; -14.45 G @ 66.56 MS

CHANNEL: LLRYG4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 LEFT REAR PASSENGER LOWER RIB Y-AXIS VELOCITY



PEAK DATA: 32.84 KM/H @ 199.76 MS, 0.00 KM/H @ 7.04 MS

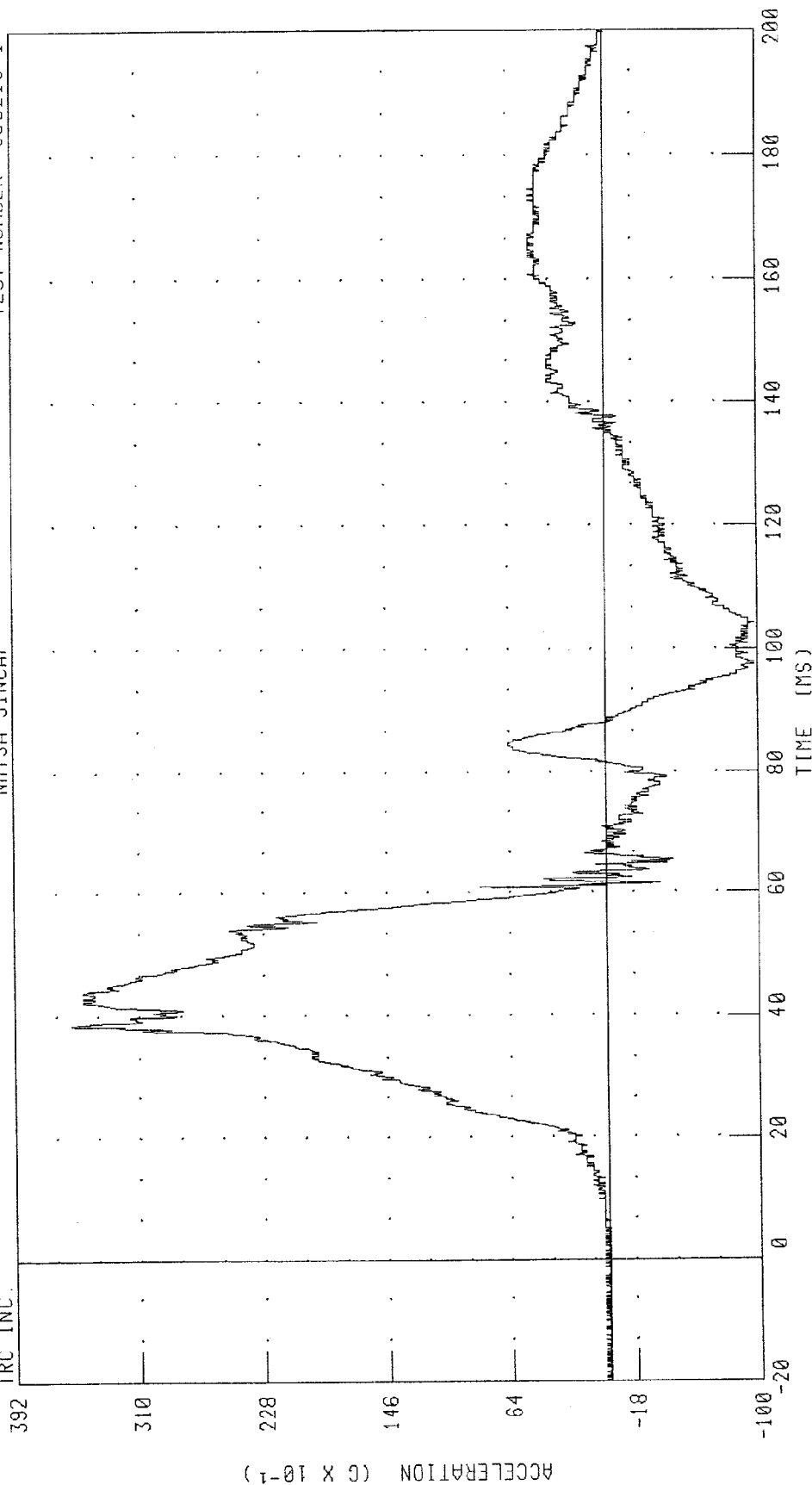
CHANNEL: LLRYU4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

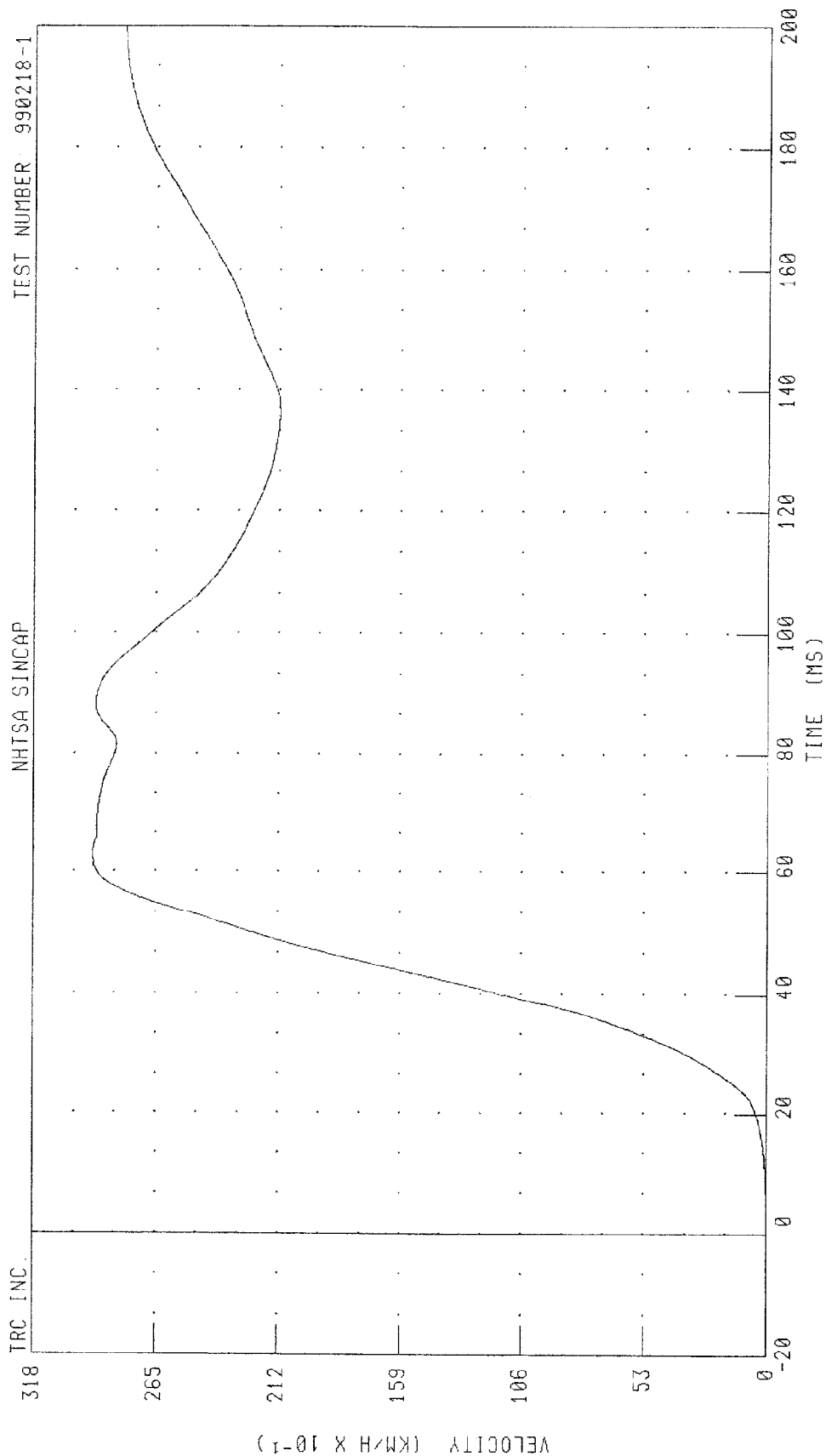
TRC INC.



CHANNEL: T12YC4 FILTER: CH. CLASS 1000

PEAK DATA: 35.46 G @ 38.56 MS, -9.77 G @ 97.52 MS

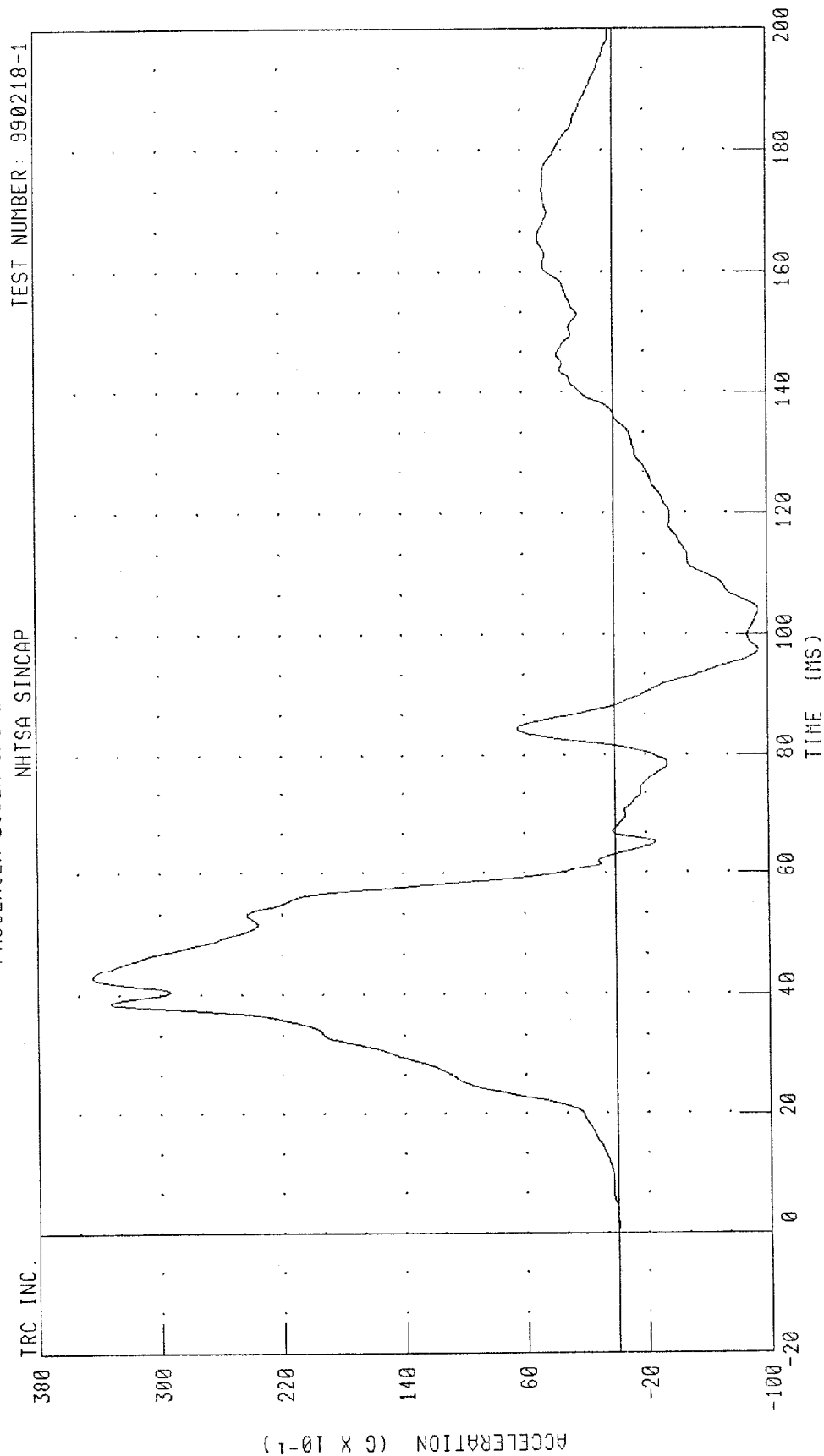
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER SPINE Y-AXIS VELOCITY



CHANNEL: T12YU4 FILTER: CH. CLASS 1000

PEAK DATA: 29.22 KM/H @ 63.60 MS; 0.00 KM/H @ 2.00 MS

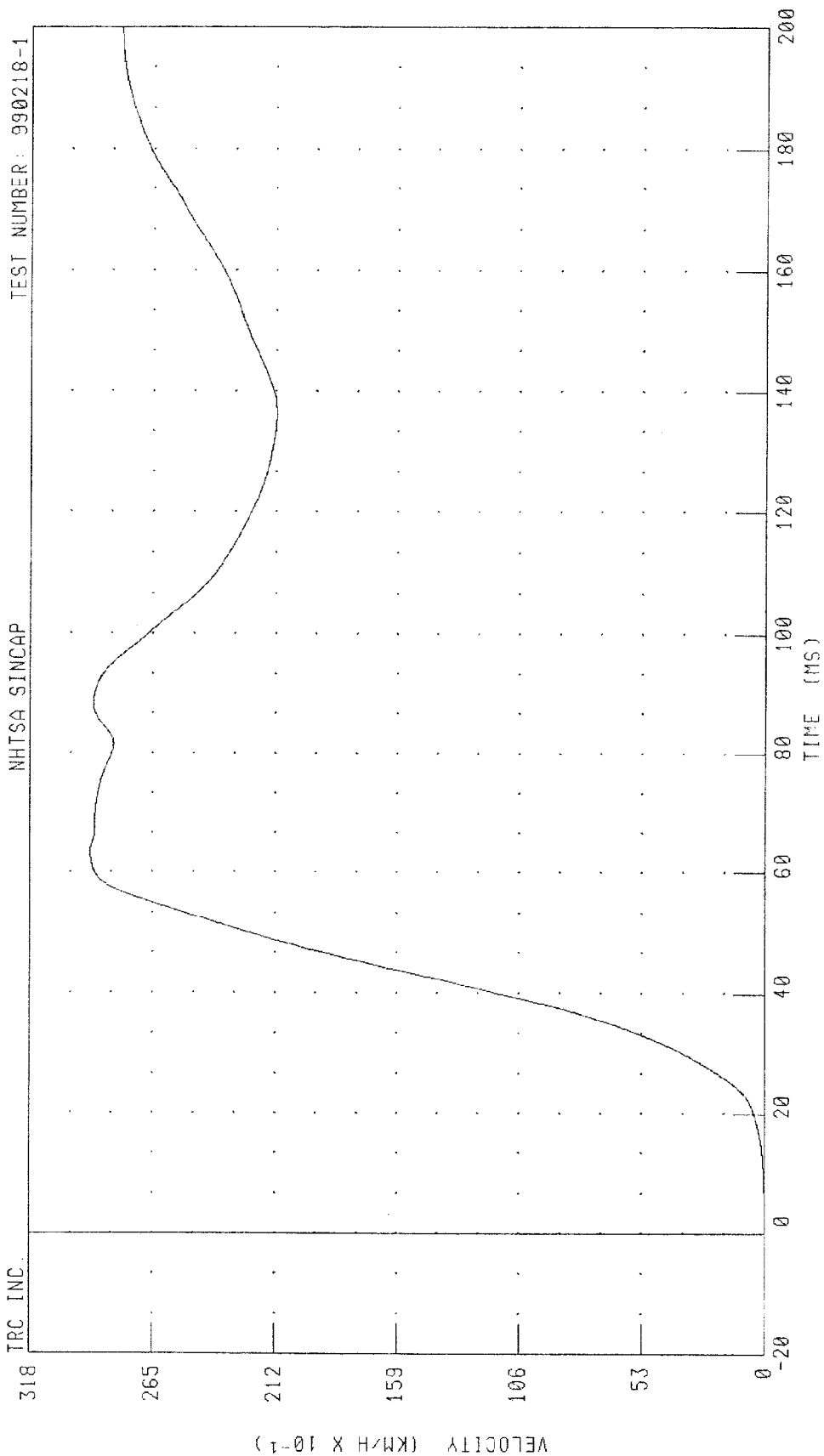
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER LOWER SPINE Y-AXIS ACCELERATION



PEAK DATA: 34.42 G @ 42.96 MS; -9.41 G @ 104.08 MS

CHANNEL: T12YG4 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER LOWER SPINE Y-AXIS VELOCITY



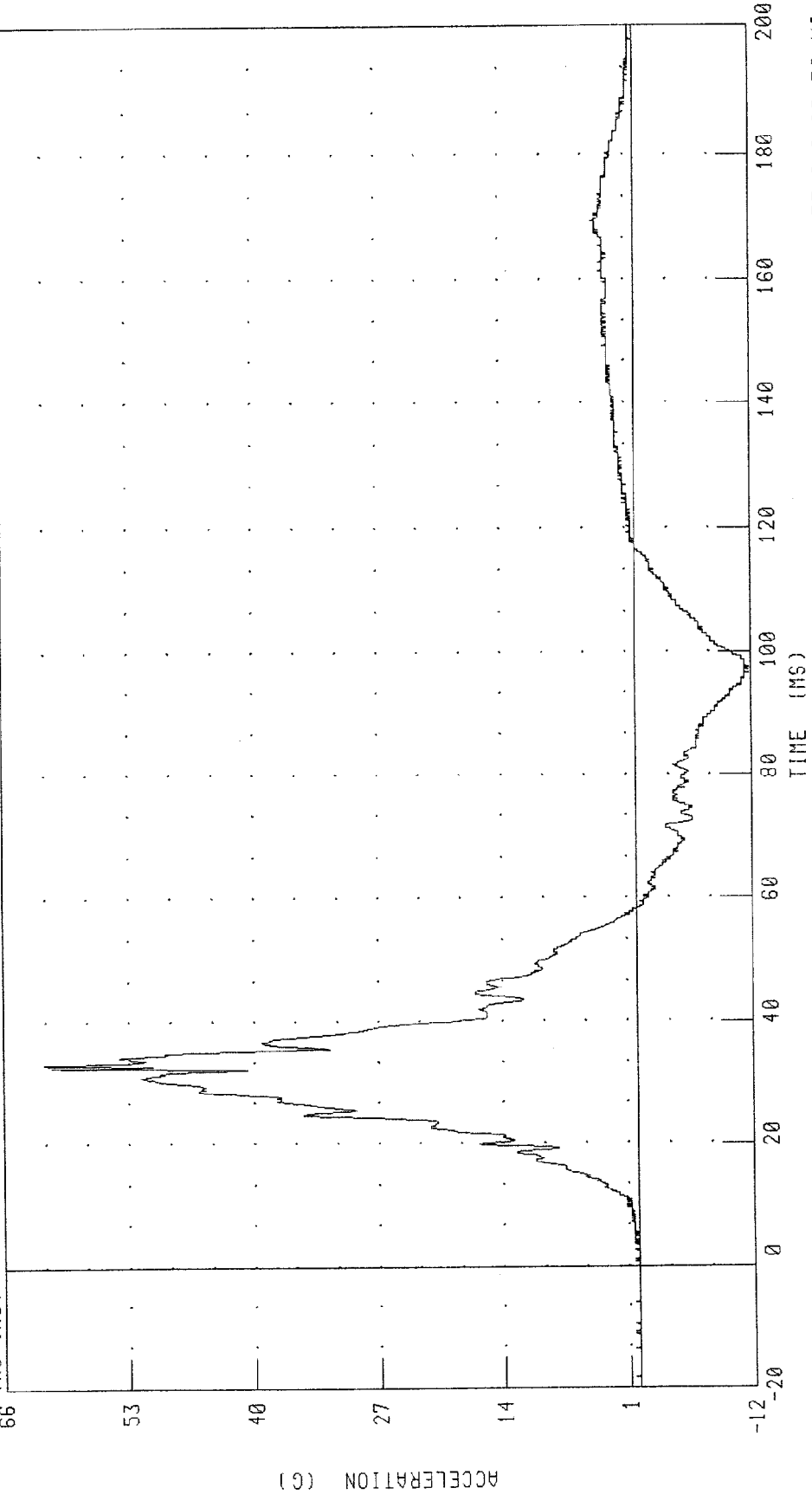
CHANNEL: T12YV4 FILTER: CH. CLASS 180 PEAK DATA: 29.21 KM/H @ 63.36 MS, 0.00 KM/H @ 2.00 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

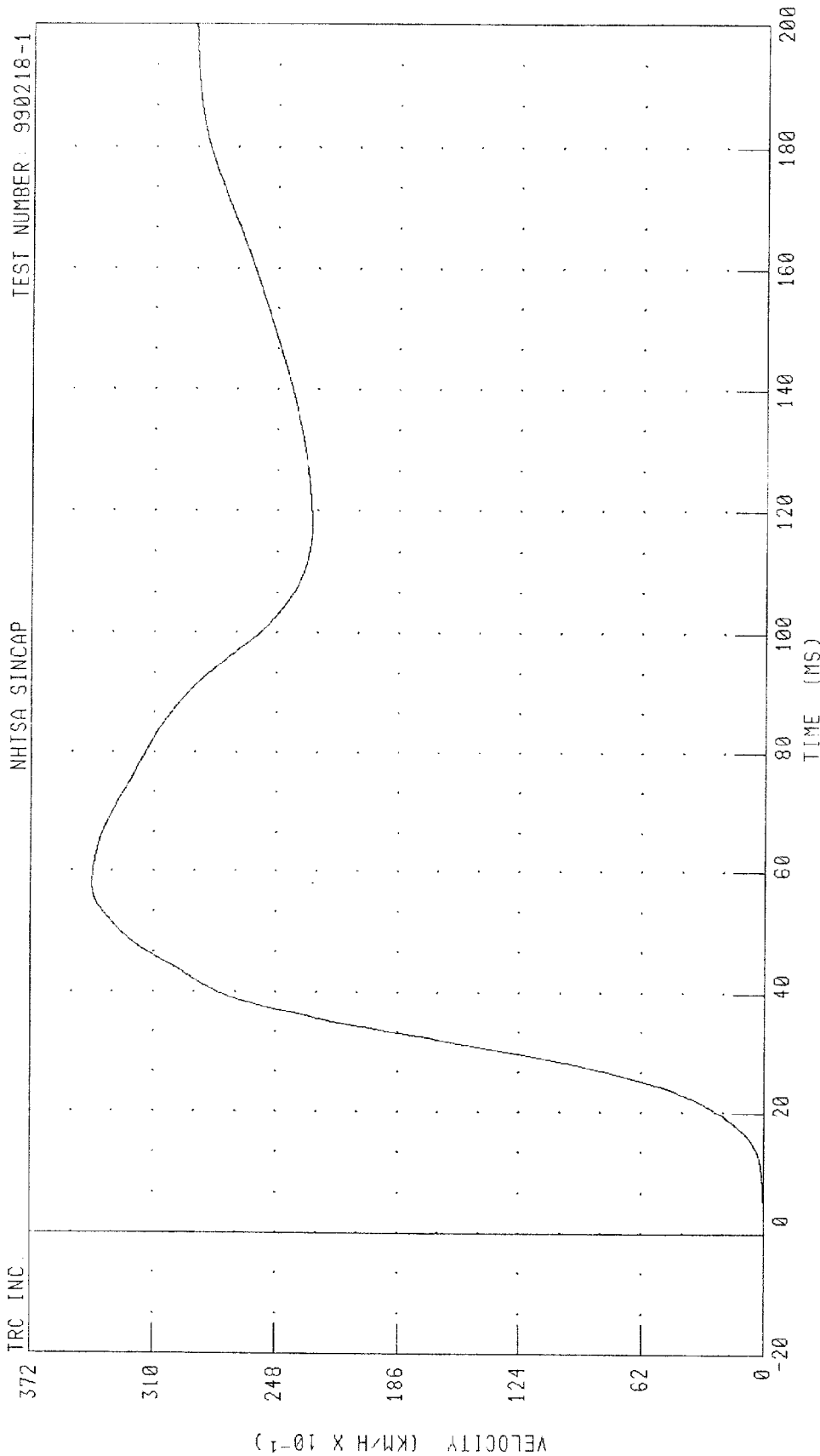
TRC INC.



PEAK DATA: 61.87 G @ 33.12 MS; -11.75 G @ 96.56 MS

CHANNEL: PEVYG4 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER PELVIS Y-AXIS VELOCITY



CHANNEL: PEVYU4 FILTER: CH. CLASS 1000

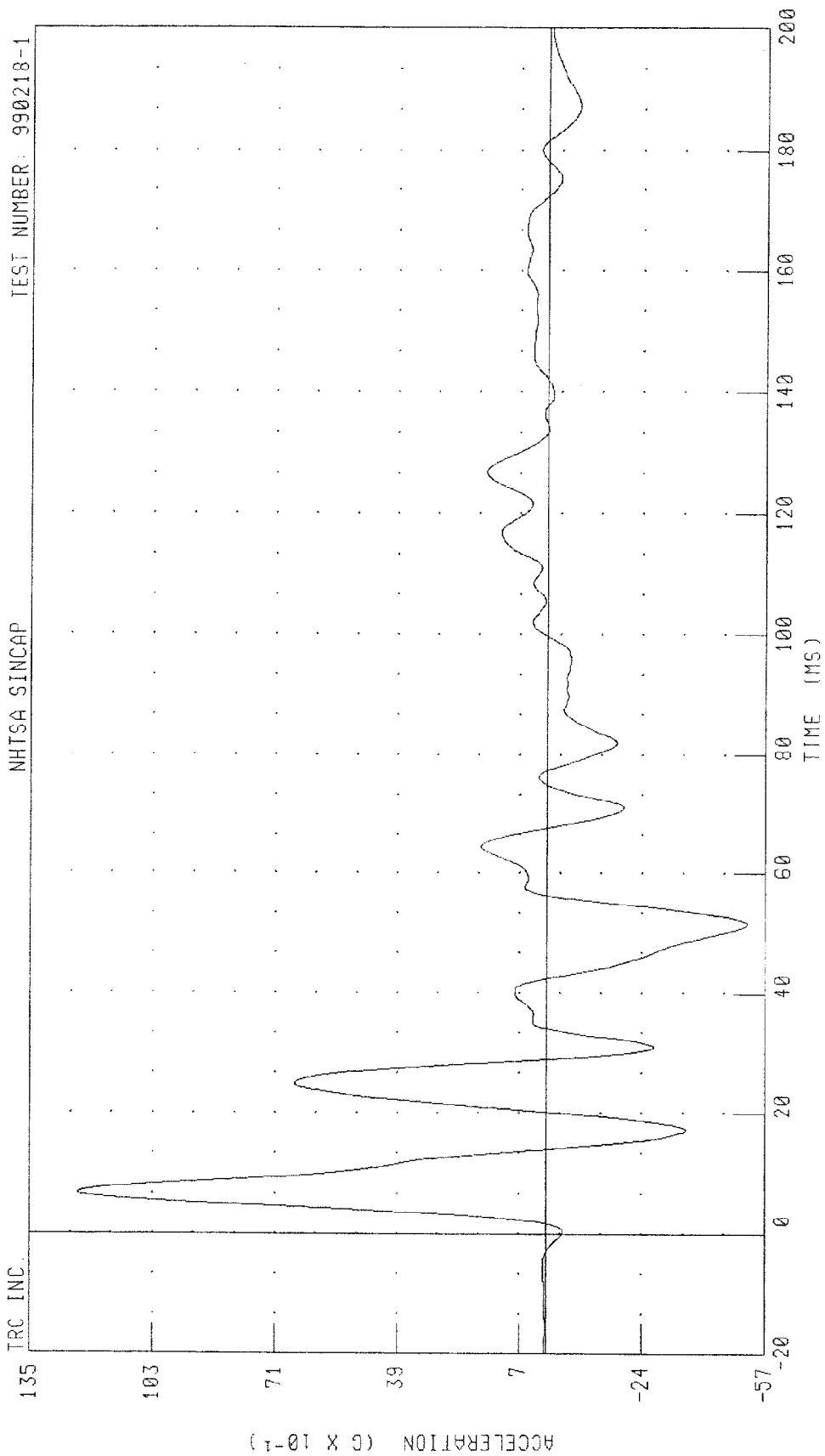
PEAK DATA: 34.11 KM/H @ 58.24 MS; 0.00 KM/H @ 0.00 MS

Test Vehicle Instrumentation Plots

Acceleration Data - Filter Class 60

Integration Data - Filter Class 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT FRONT SEAT X-AXIS ACCELERATION



CHANNEL: RFSX01 FILTER: CH. CLASS 60

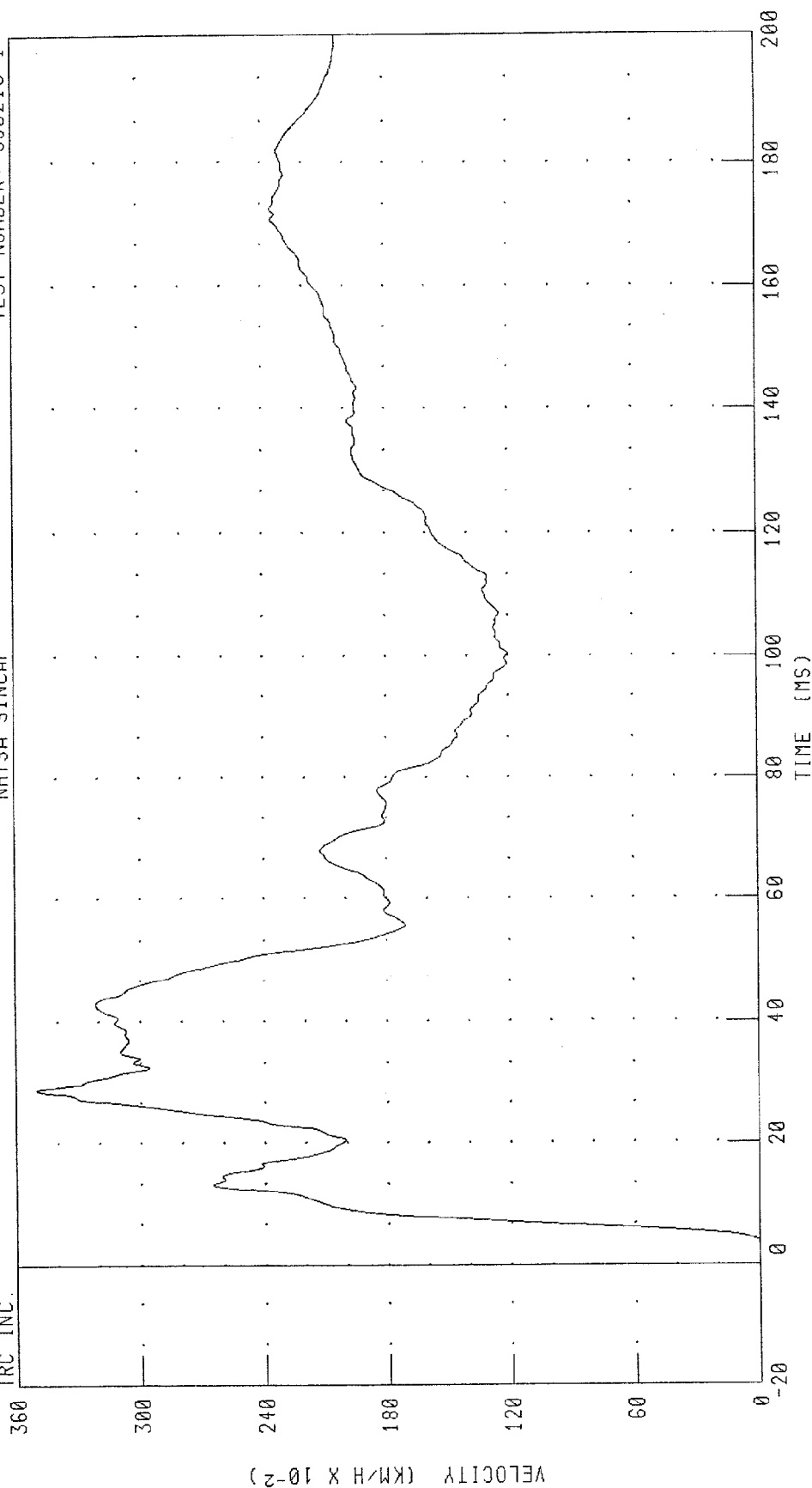
PEAK DATA: 12.24 G @ 6.88 MS, -5.25 G @ 51.68 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT FRONT SEAT X-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

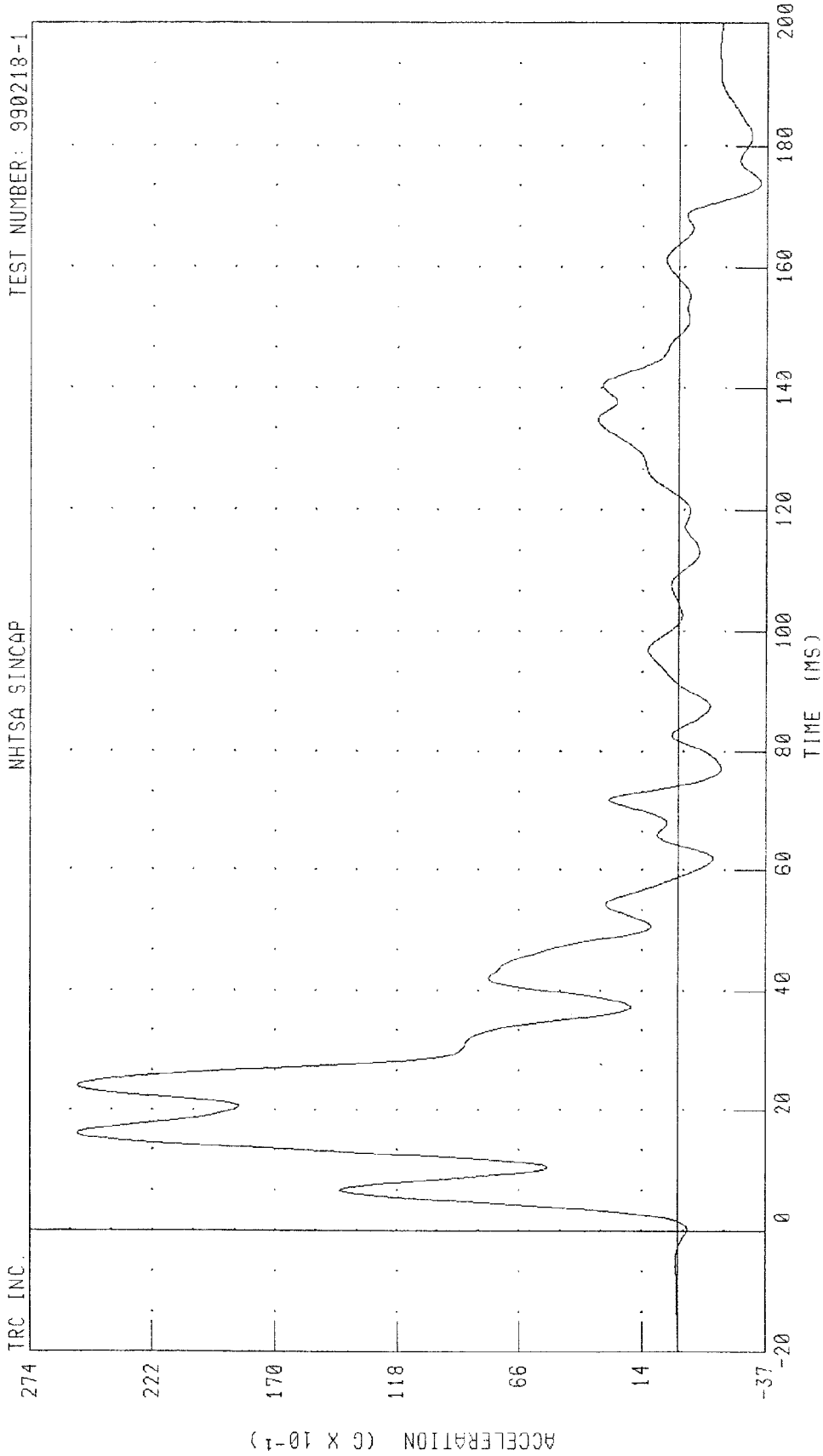
TRC INC.



PEAK DATA: 3.50 KM/H @ 28.88 MS; -0.01 KM/H @ 3.12 MS

CHANNEL: RFSXV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION



CHANNEL: RFSYG1 FILTER: CH. CLASS 60

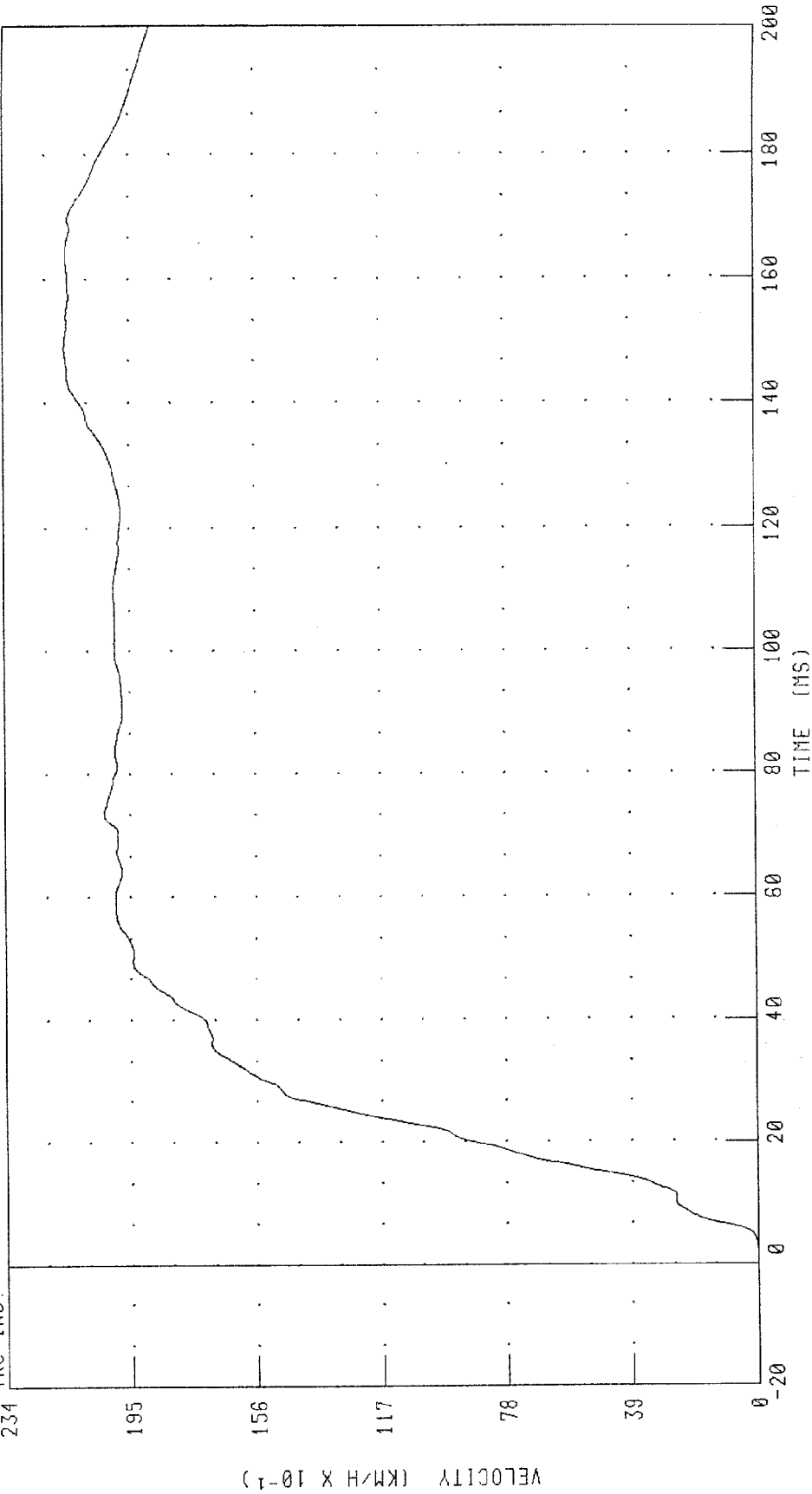
PEAK DATA: 25.46 G @ 16.08 MS; -3.44 G @ 173.76 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

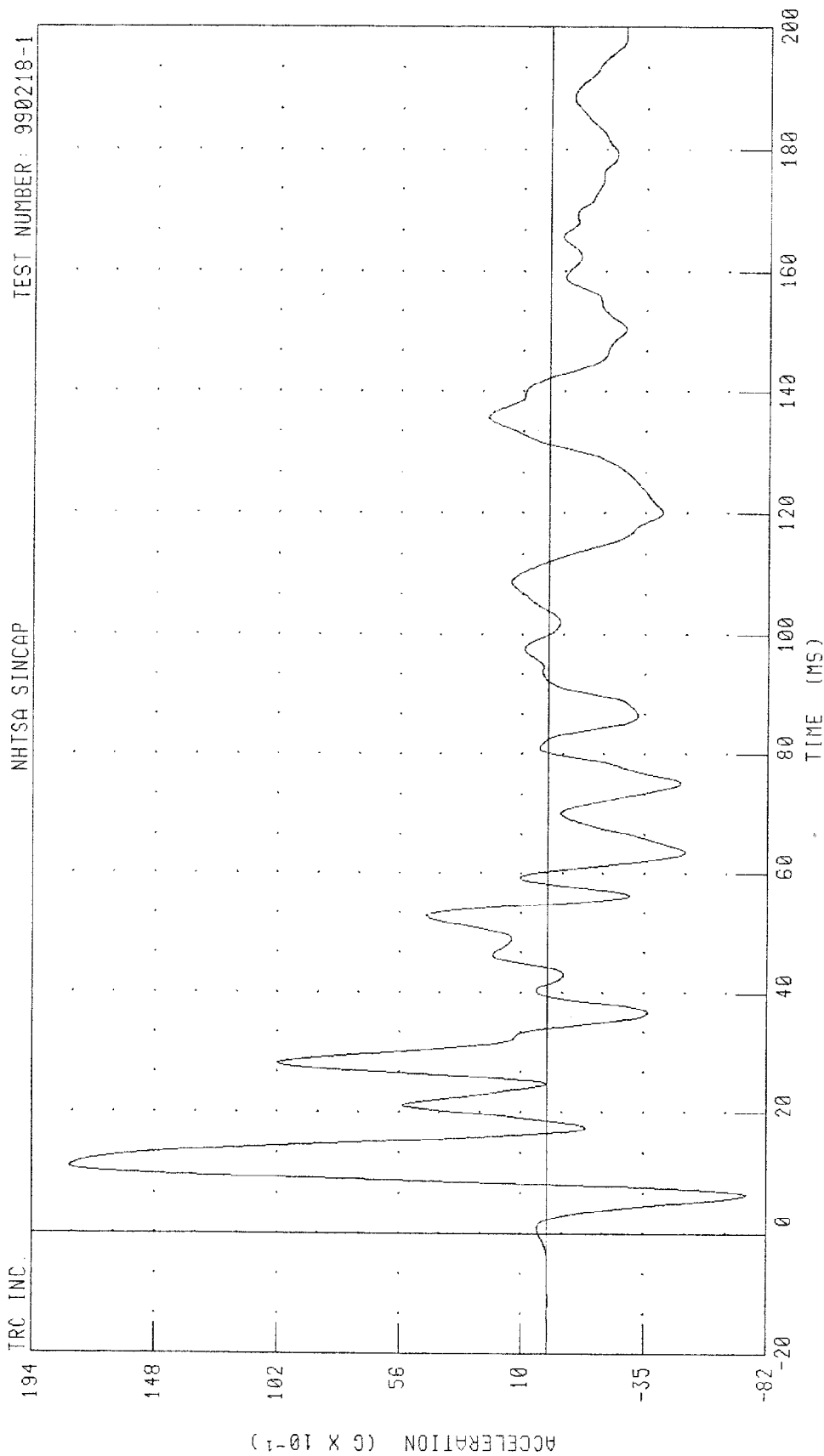
TRC INC.



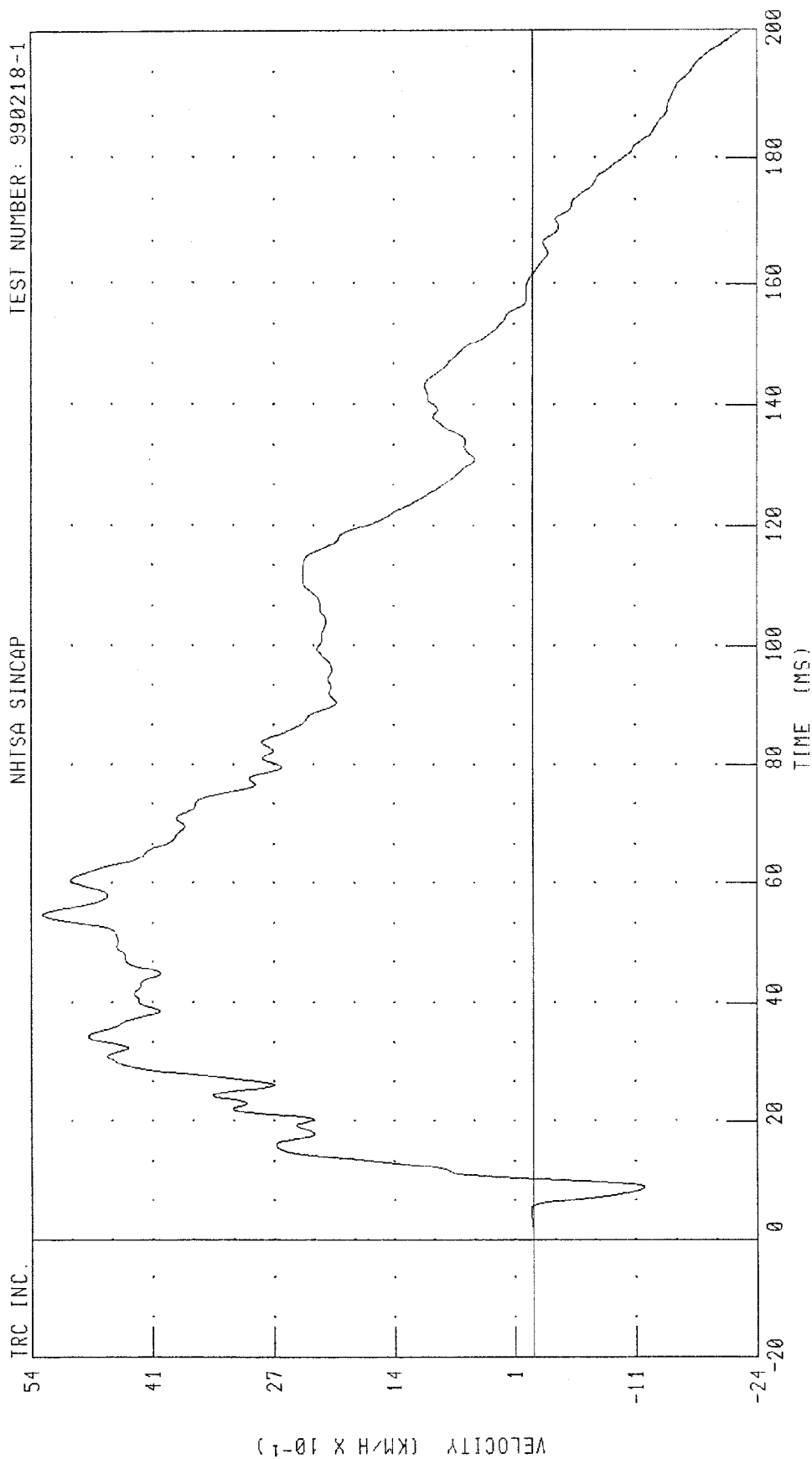
PEAK DATA: 21.51 KM/H @ 148.72 MS; 0.00 KM/H @ 0.00 MS

CHANNEL: RFSYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS ACCELERATION



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT FRONT SEAT Z-AXIS VELOCITY



CHANNEL: RFSZV1 FILTER: CH. CLASS 180

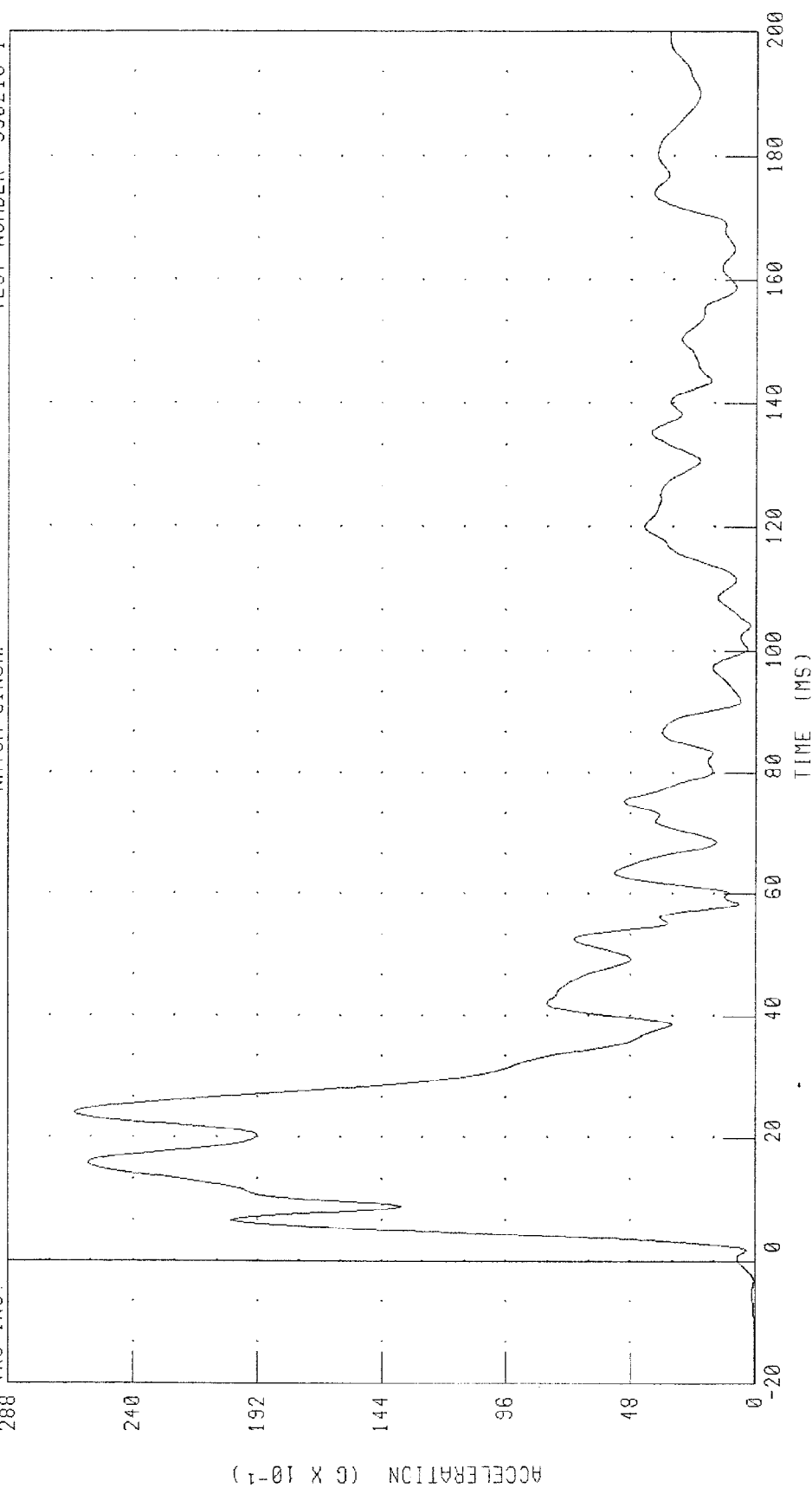
PEAK DATA: 5.28 KM/H @ 54.72 MS, -2.24 KM/H @ 200.00 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 26 24 G @ 24.24 MS, 0 03 G @ -14.48 MS

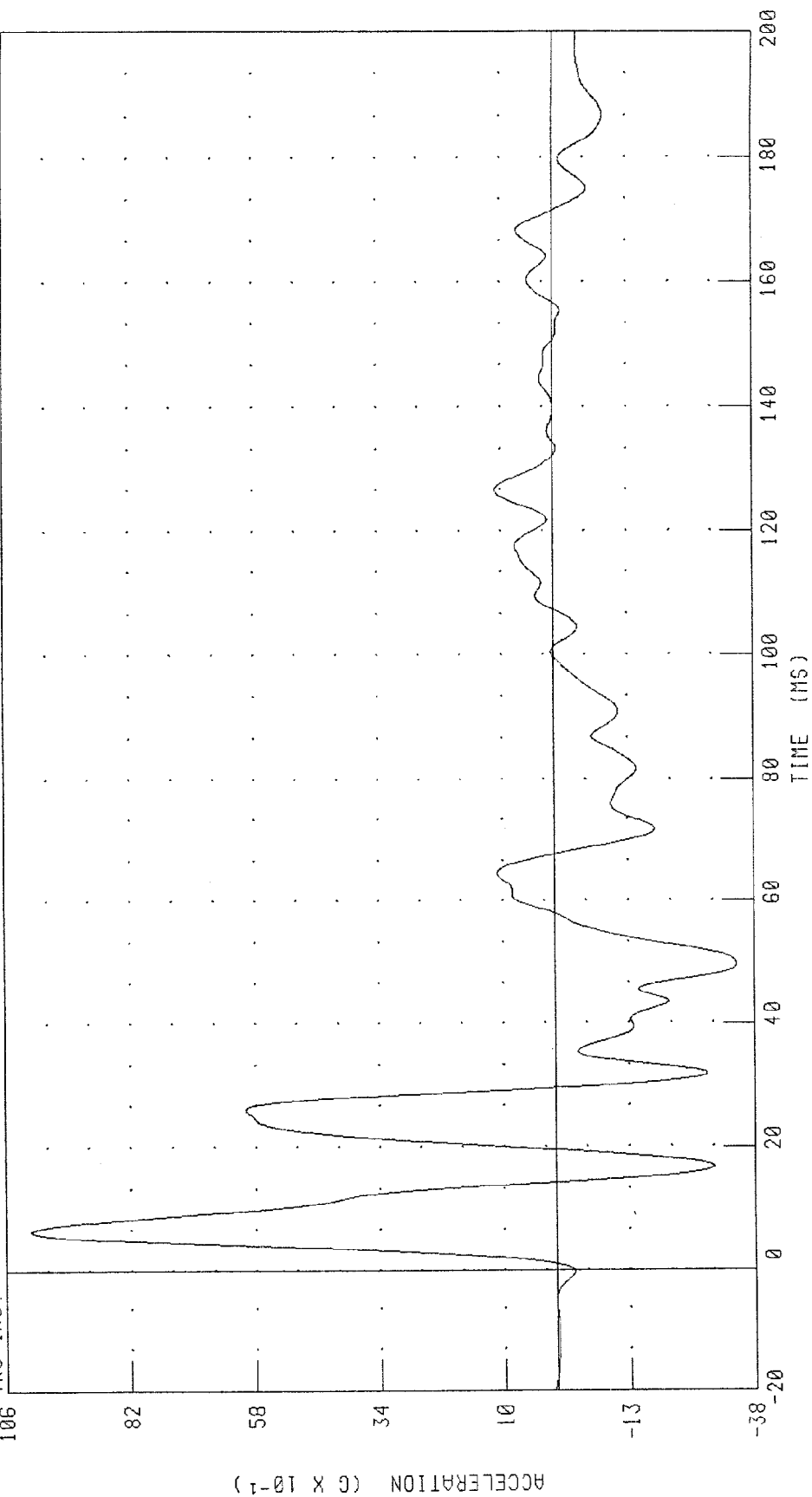
CHANNEL: RFSRG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT REAR SEAT X-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

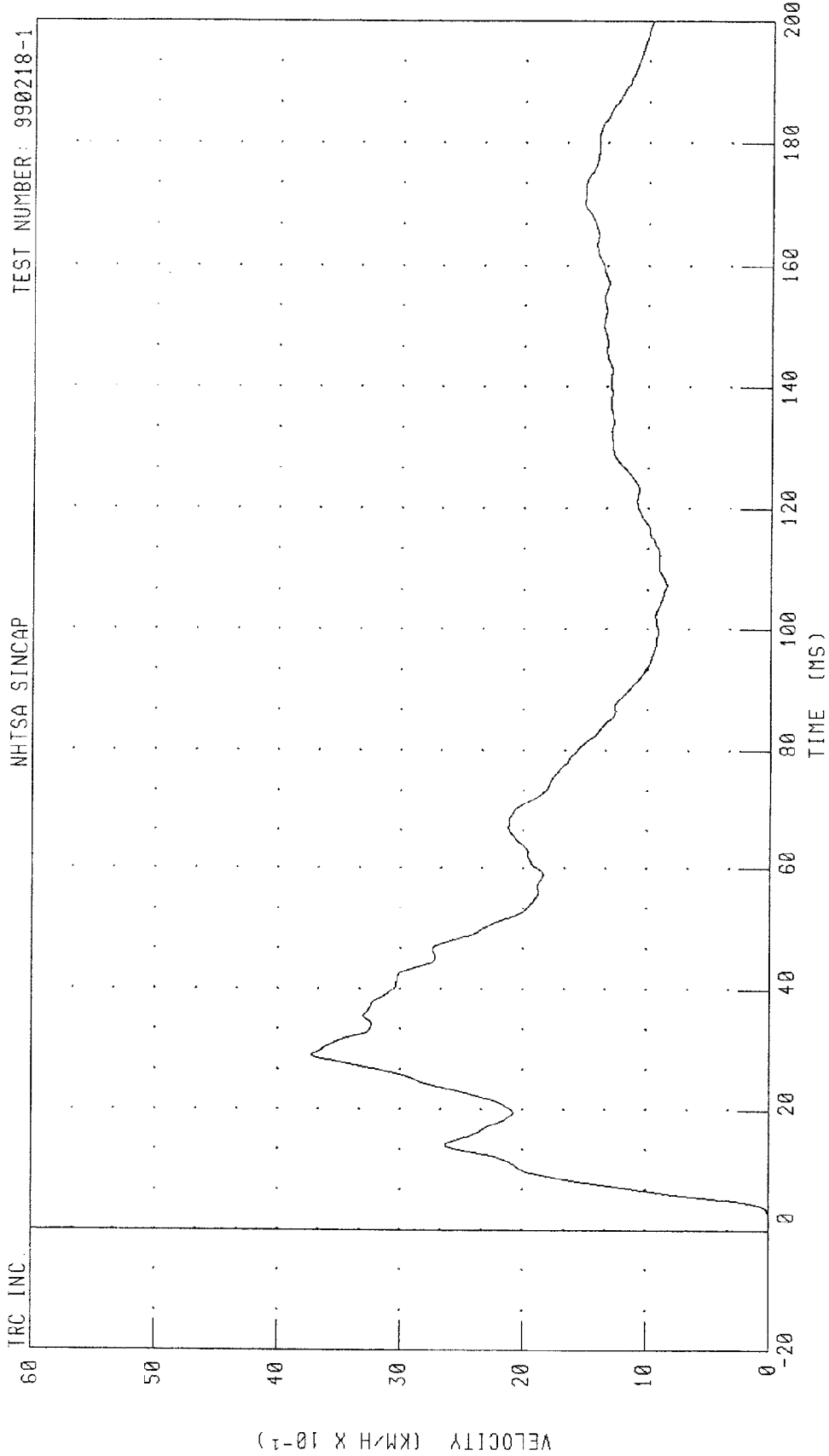
TRC INC.



PEAK DATA: 10.11 G @ 6.48 MS, -3.46 G @ 49.76 MS

CHANNEL: RRSXC1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT REAR SEAT X-AXIS VELOCITY



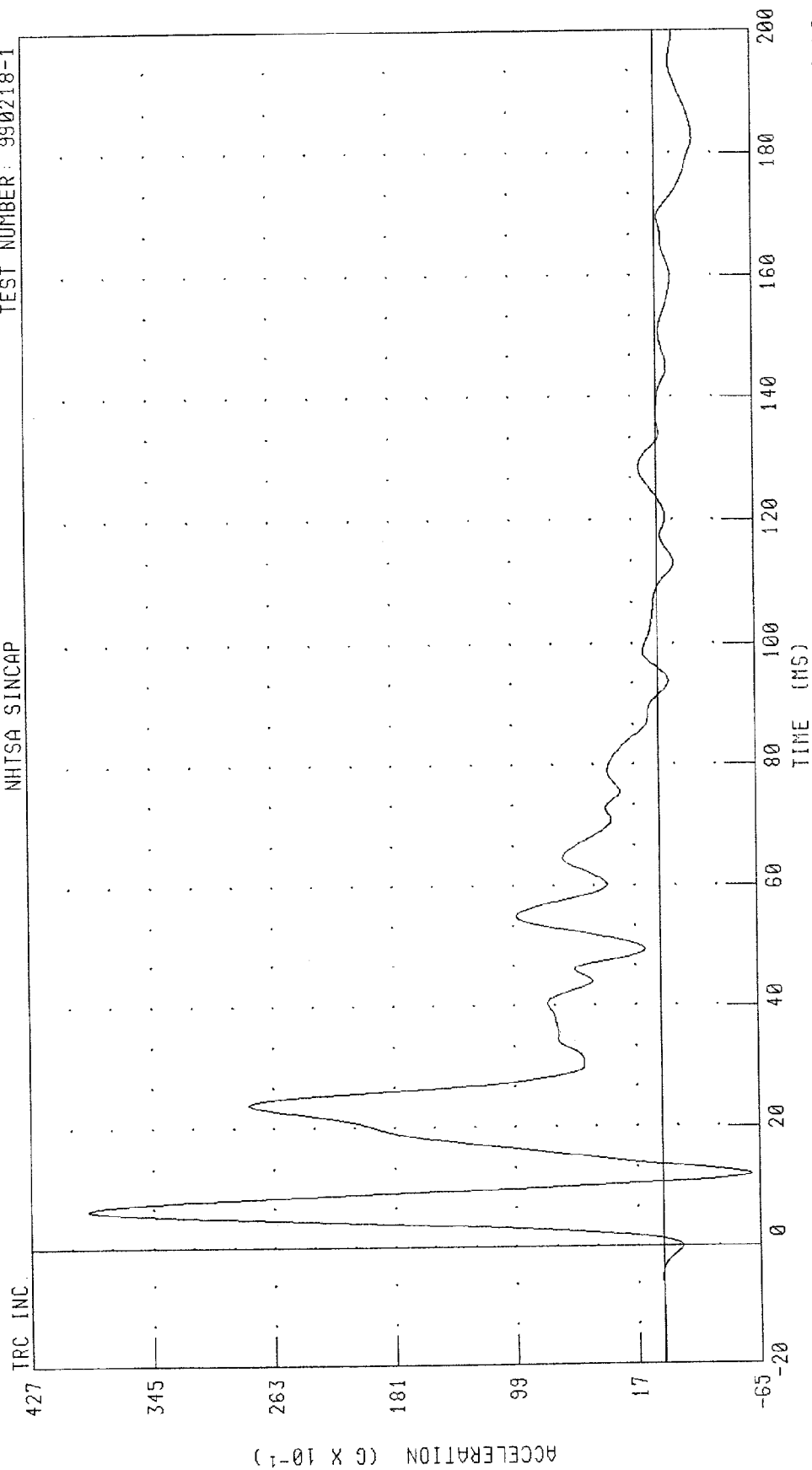
CHANNEL: RRSXV1 FILTER: CH. CLASS 180

PEAK DATA: 3.72 KM/H @ 29.04 MS, 0.00 KM/H @ 2.16 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 RIGHT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

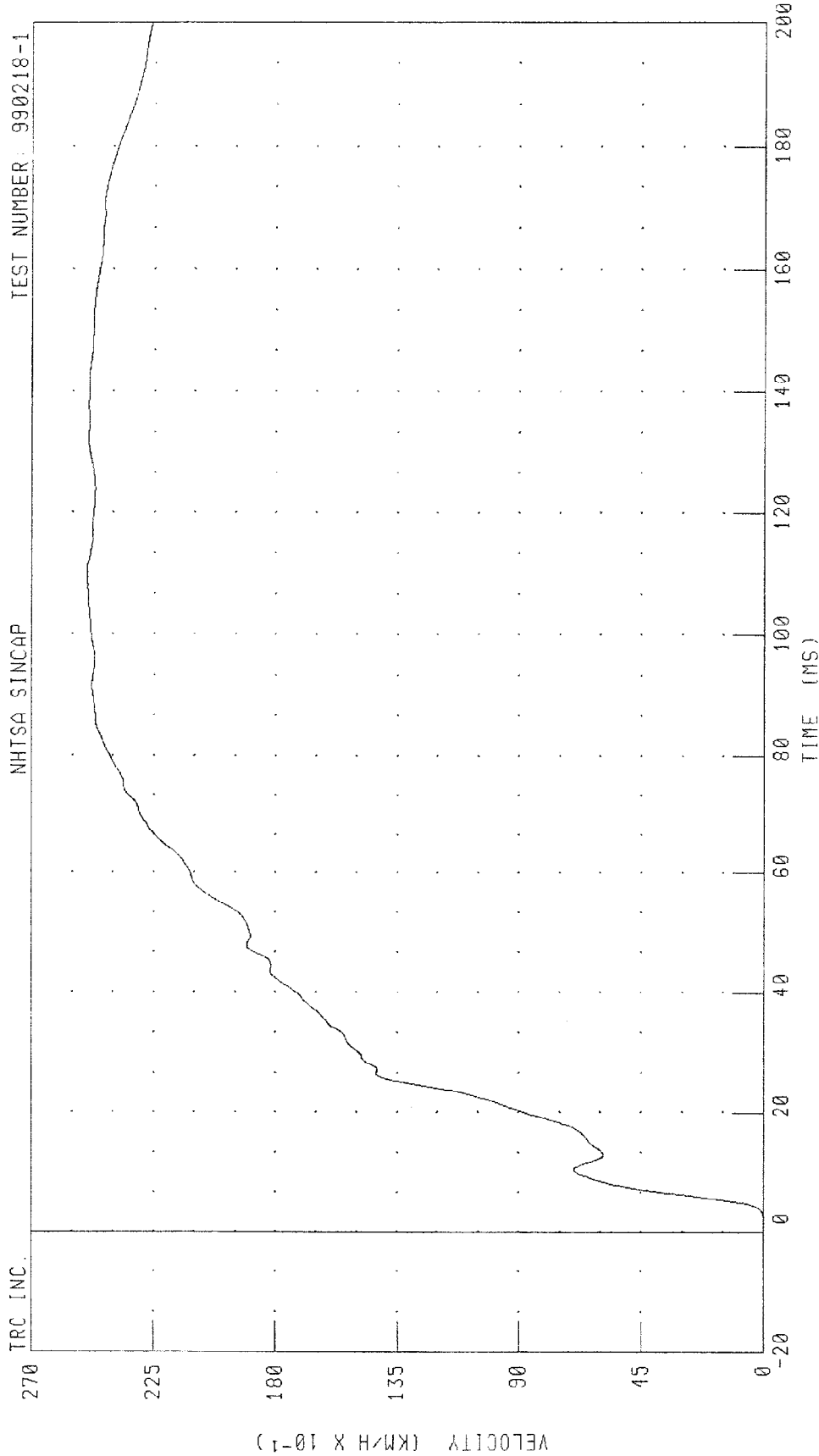
NHTSA SINCAP



PEAK DATA: 38.86 G @ 6.48 MS, -5.95 G @ 12.08 MS

CHANNEL: RRSYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 RIGHT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY



PEAK DATA: 24.95 KM/H @ 110.96 MS, 0.00 KM/H @ 0.00 MS

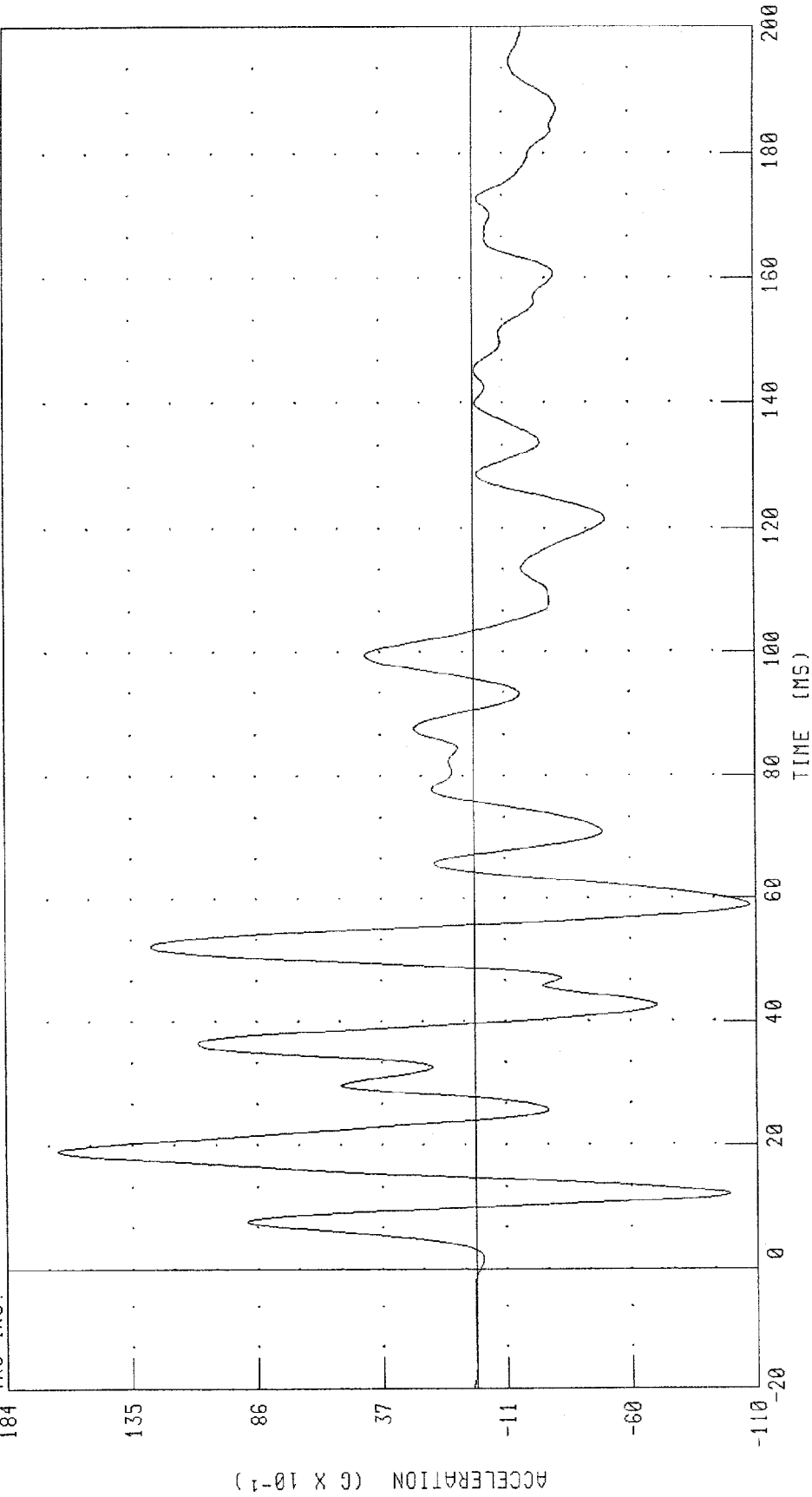
CHANNEL: RRSV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT REAR SEAT Z-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

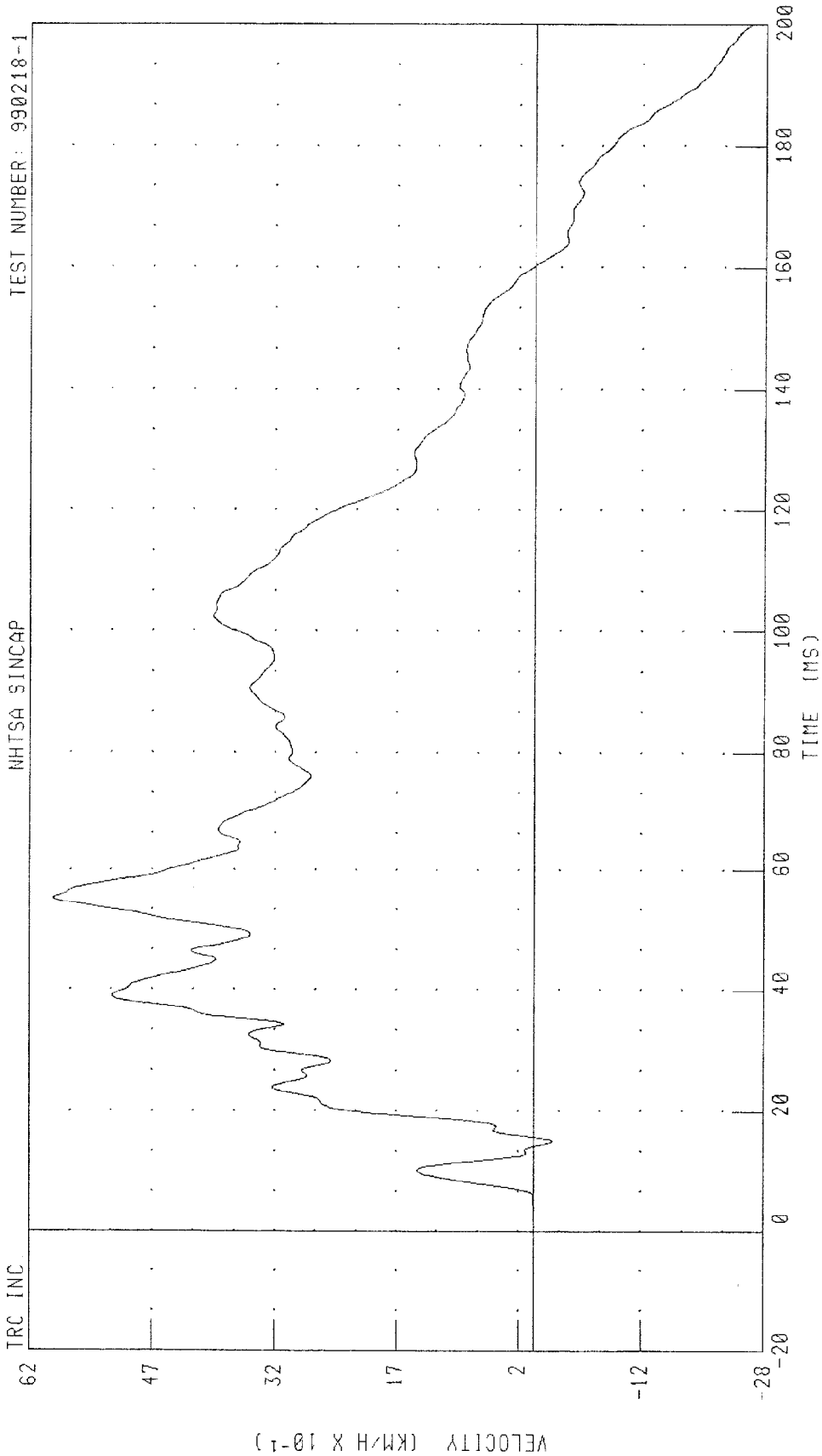
TRC INC.



PEAK DATA: 16.40 G @ 19.12 MS; -10.78 G @ 58.96 MS

CHANNEL: RRSZG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 RIGHT SIDE SILL AT REAR SEAT Z-AXIS VELOCITY



CHANNEL: RRSZV1 FILTER: CH CLASS 180

PEAK DATA: 5.91 KM/H @ 55.36 MS; -2.63 KM/H @ 200.00 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.

444

370

ACCELERATION ($G \times 10^{-1}$)

296

222

148

74

0

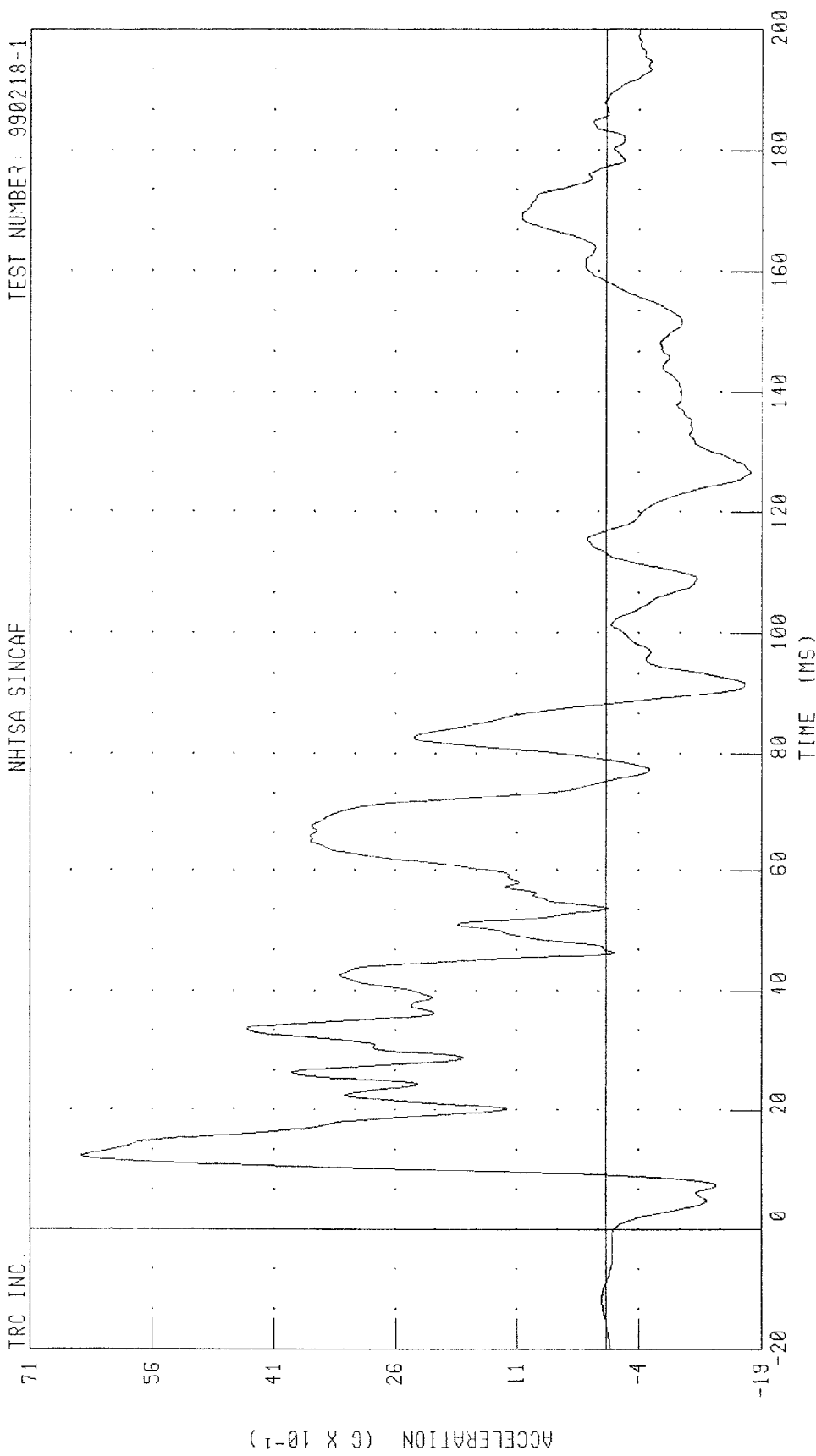
-20

TIME (MS)

CHANNEL: RRSRG1 FILTER: CH. CLASS 60

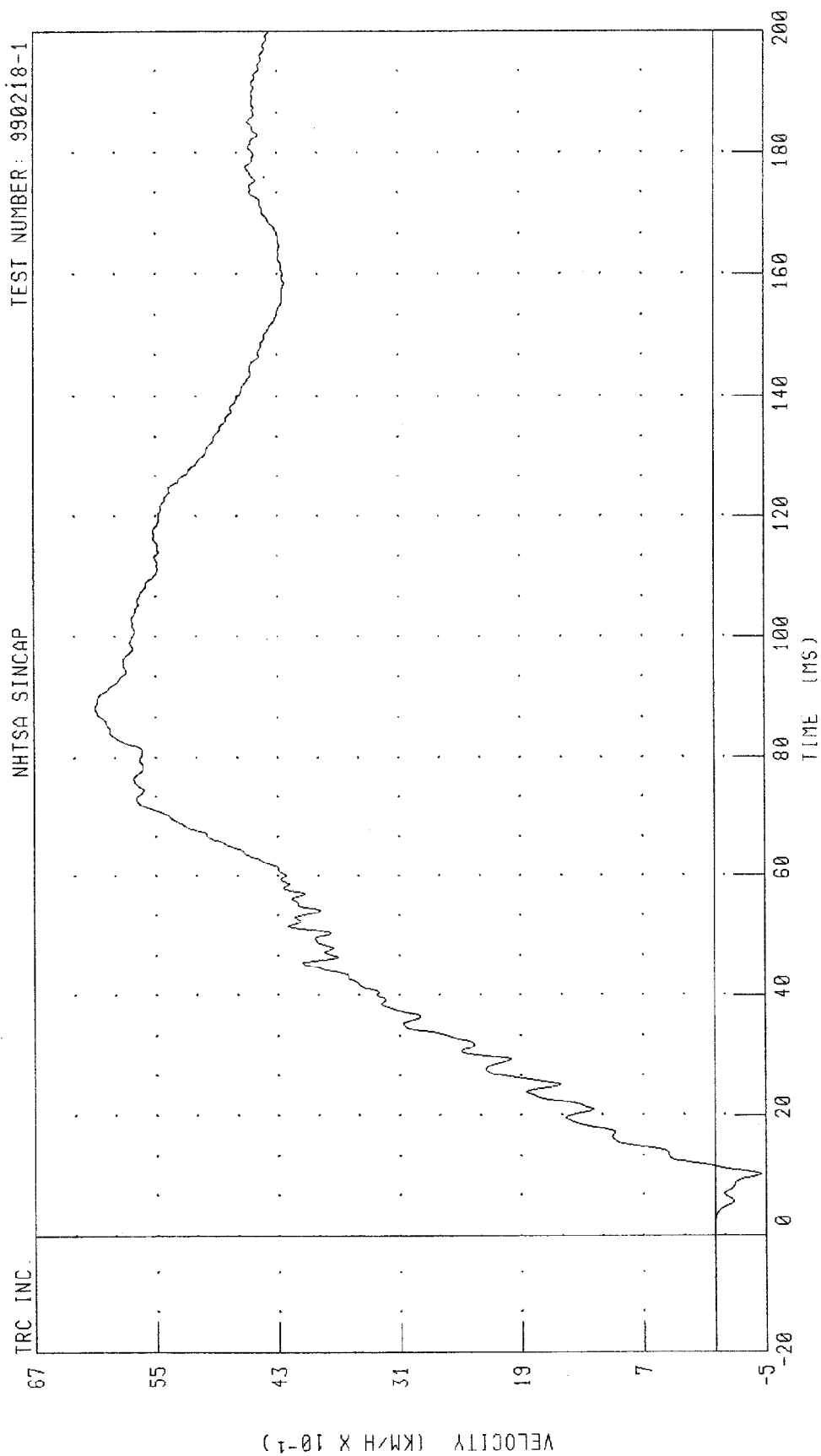
PEAK DATA: 40.74 G @ 6.56 MS; 0.04 G @ -4.16 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
REAR FLOORPAN ABOVE AXLE X-AXIS ACCELERATION



CHANNEL: RUKXG1 FILTER: CH CLASS 60

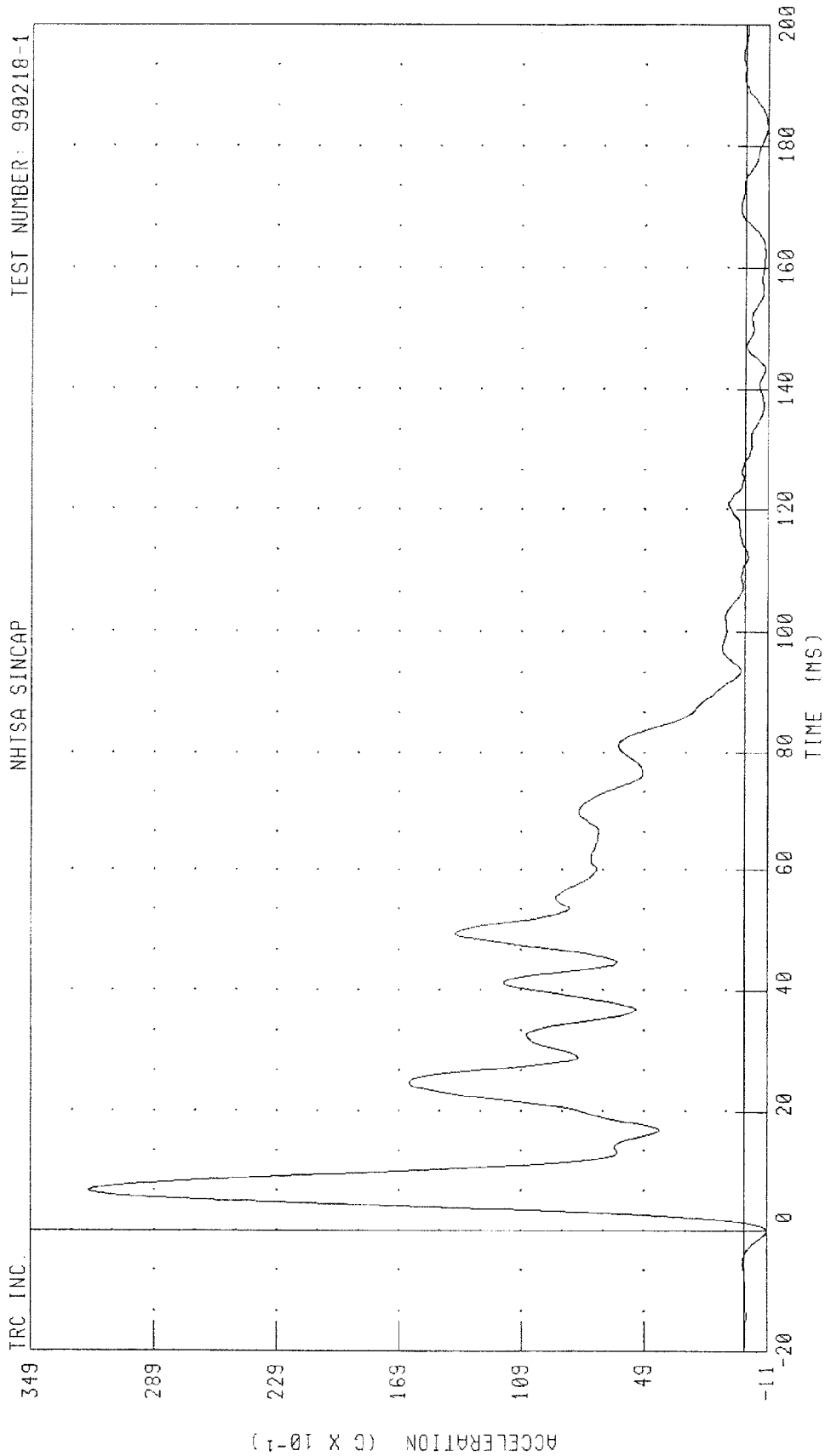
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 REAR FLOORPAN ABOVE AXLE X-AXIS VELOCITY



PEAK DATA: 6.09 KM/H @ 88.24 MS; -0.46 KM/H @ 10.16 MS

CHANNEL: RDKXV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 REAR FLOORPAN ABOVE AXLE Y-AXIS ACCELERATION



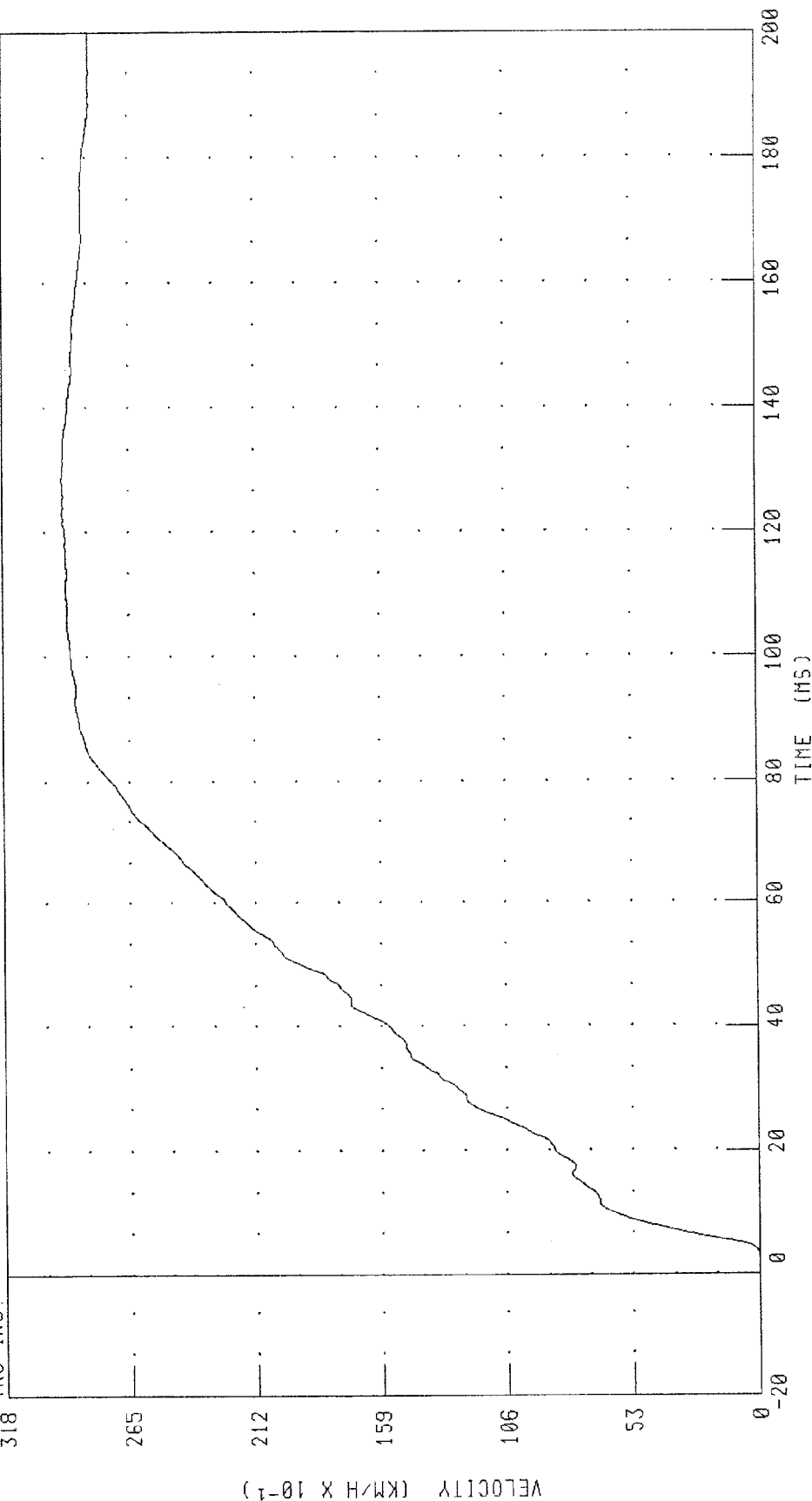
CHANNEL: RDKYC1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 REAR FLOORPAN ABOVE AXLE Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

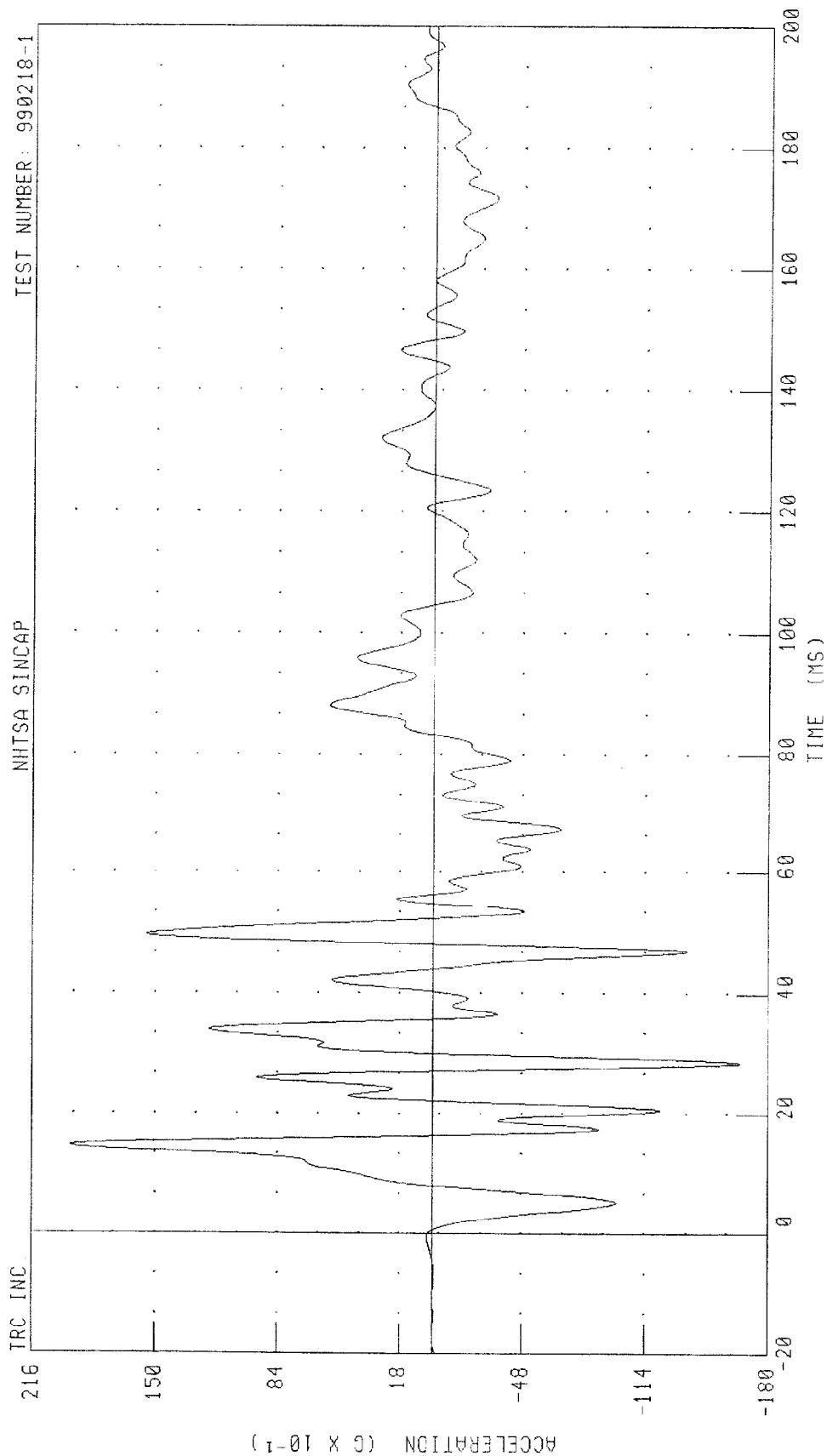
TRC INC.



PEAK DATA: 29.33 KM/H @ 128.40 MS, 0.00 KM/H @ 2.40 MS

CHANNEL: RDKV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 REAR FLOORPAN ABOVE AXLE Z-AXIS ACCELERATION



PEAK DATA: 19.52 G @ 14.64 MS; -16.52 G @ 28.40 MS

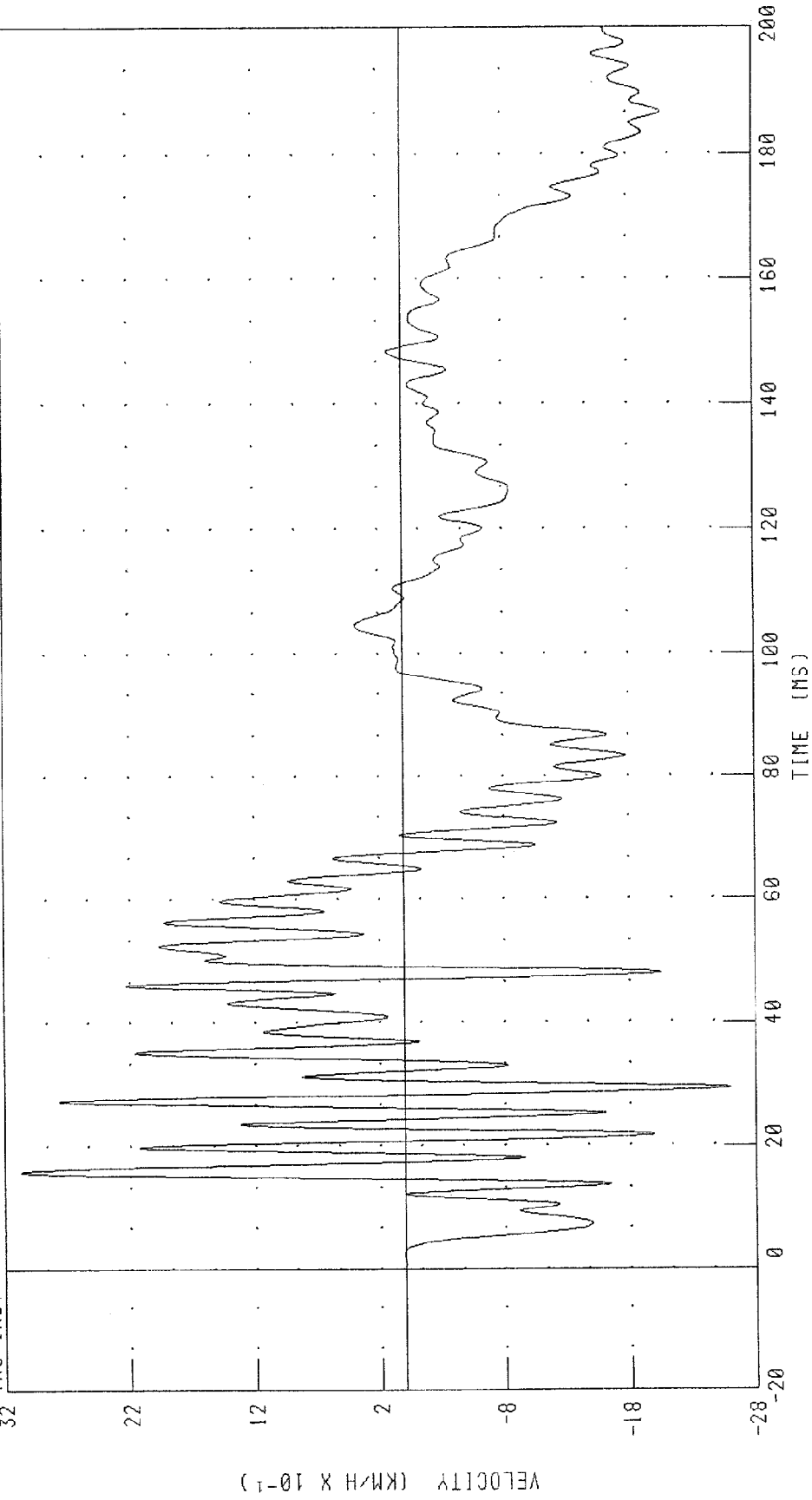
CHANNEL: ROKZG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 REAR FLOORPAN ABOVE AXLE Z-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 3.08 KM/H @ 15.92 MS; -2.60 KM/H @ 29.36 MS

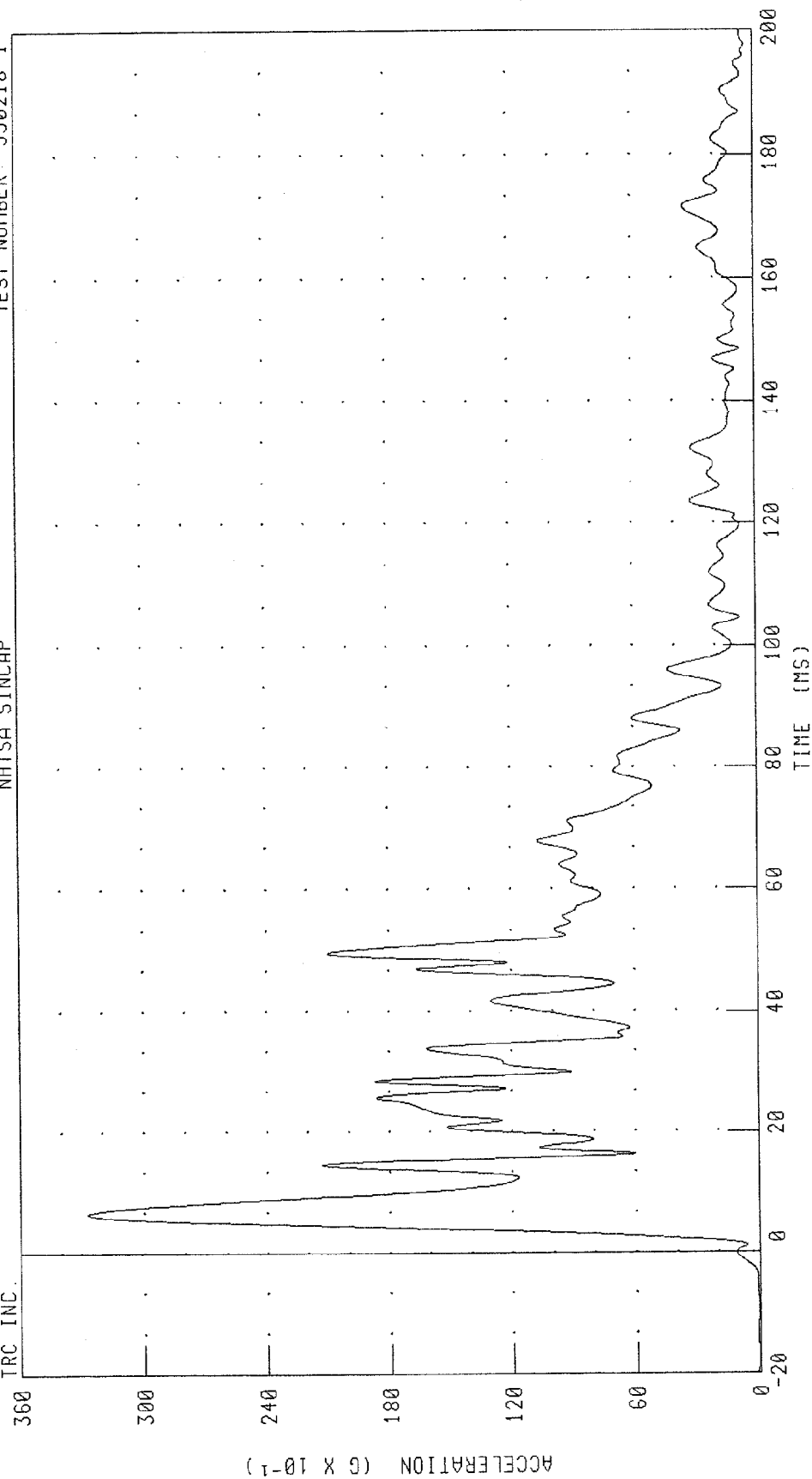
CHANNEL: RDKZV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 32.75 G @ 6.48 MS; 0.05 G @ -8.32 MS

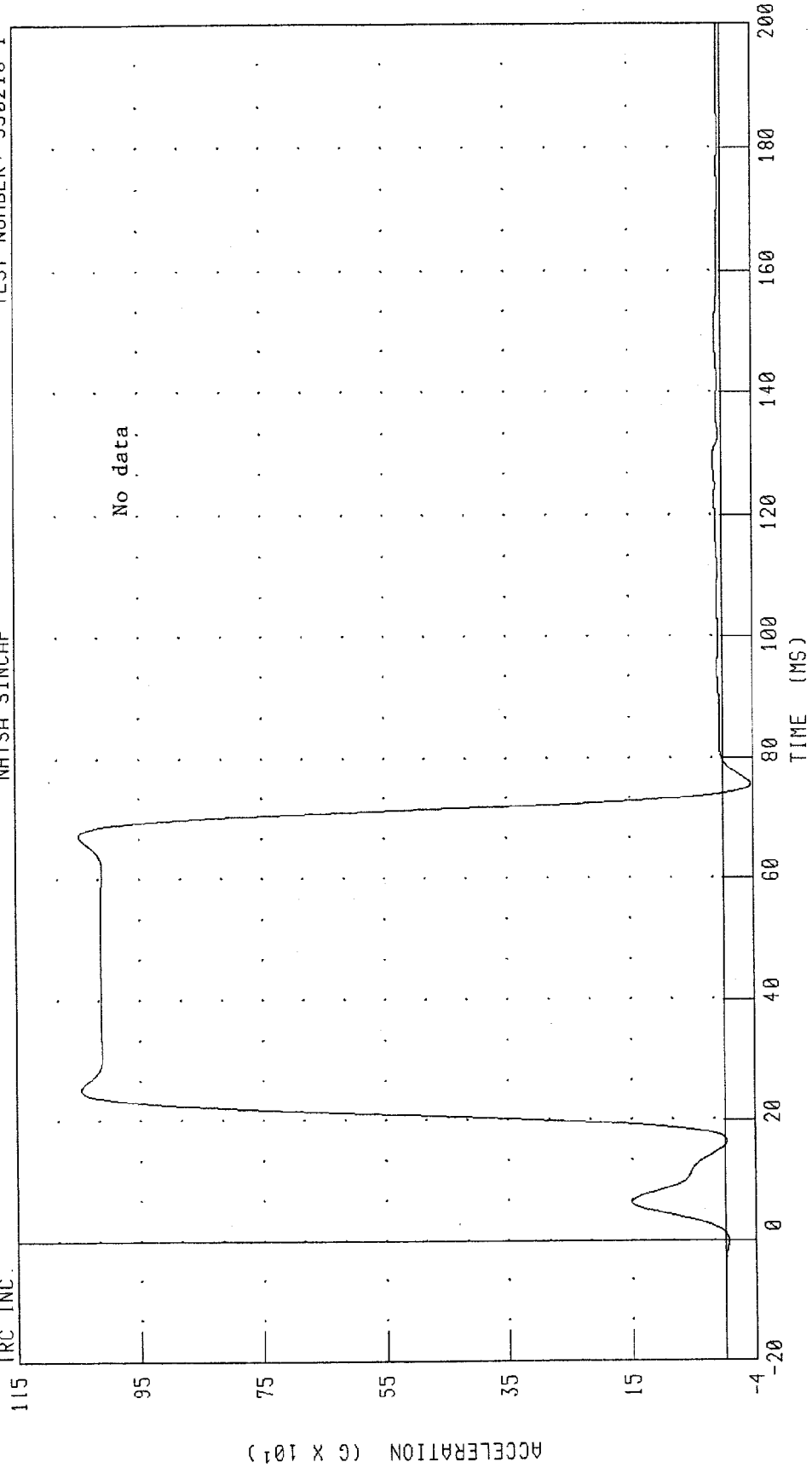
CHANNEL: RDKRC1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT SIDE SILL AT FRONT SEAT Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 1048.66 G @ 67.28 MS; -45.14 G @ 75.60 MS

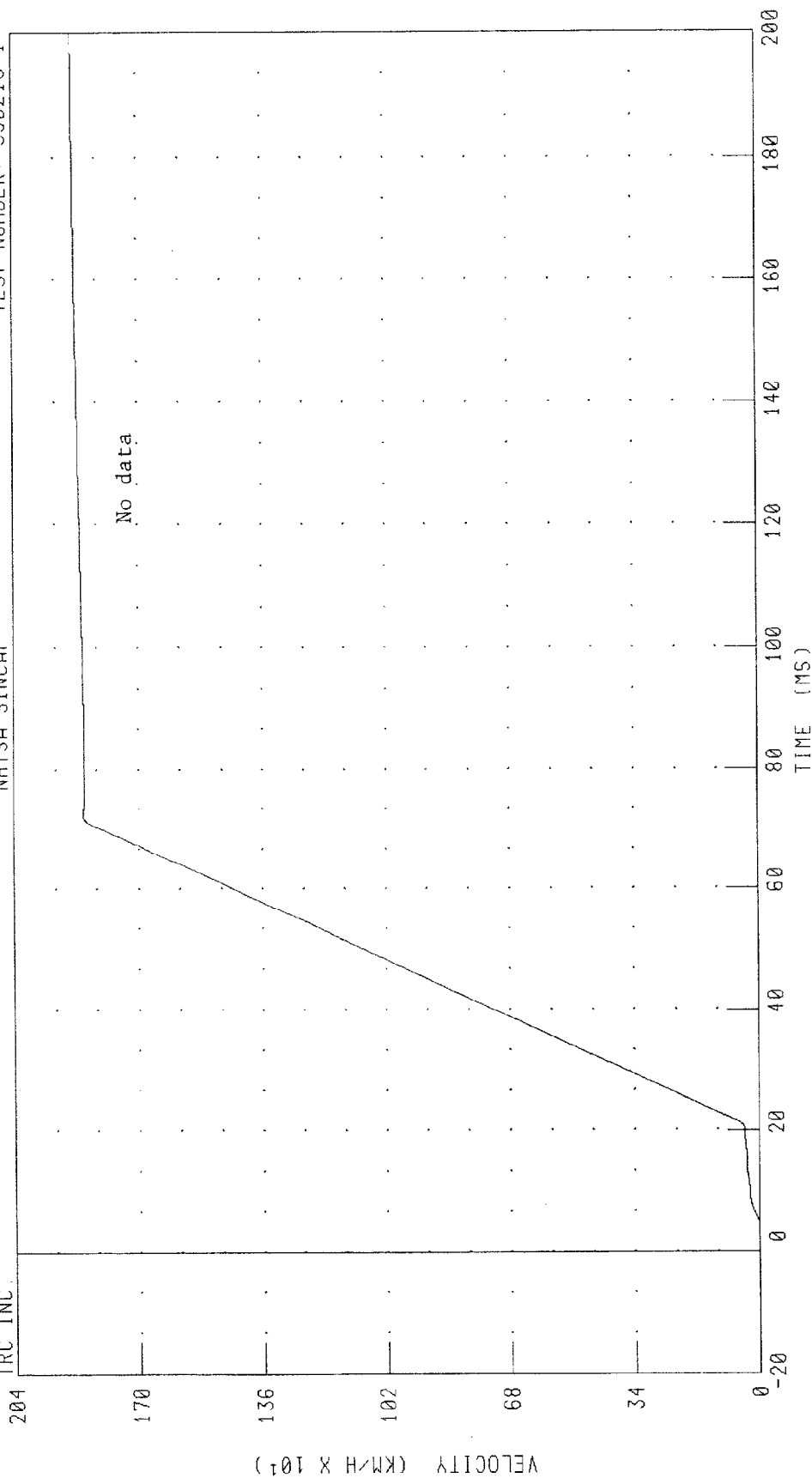
CHANNEL: LFSYC1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT SIDE SILL AT FRONT SEAT Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

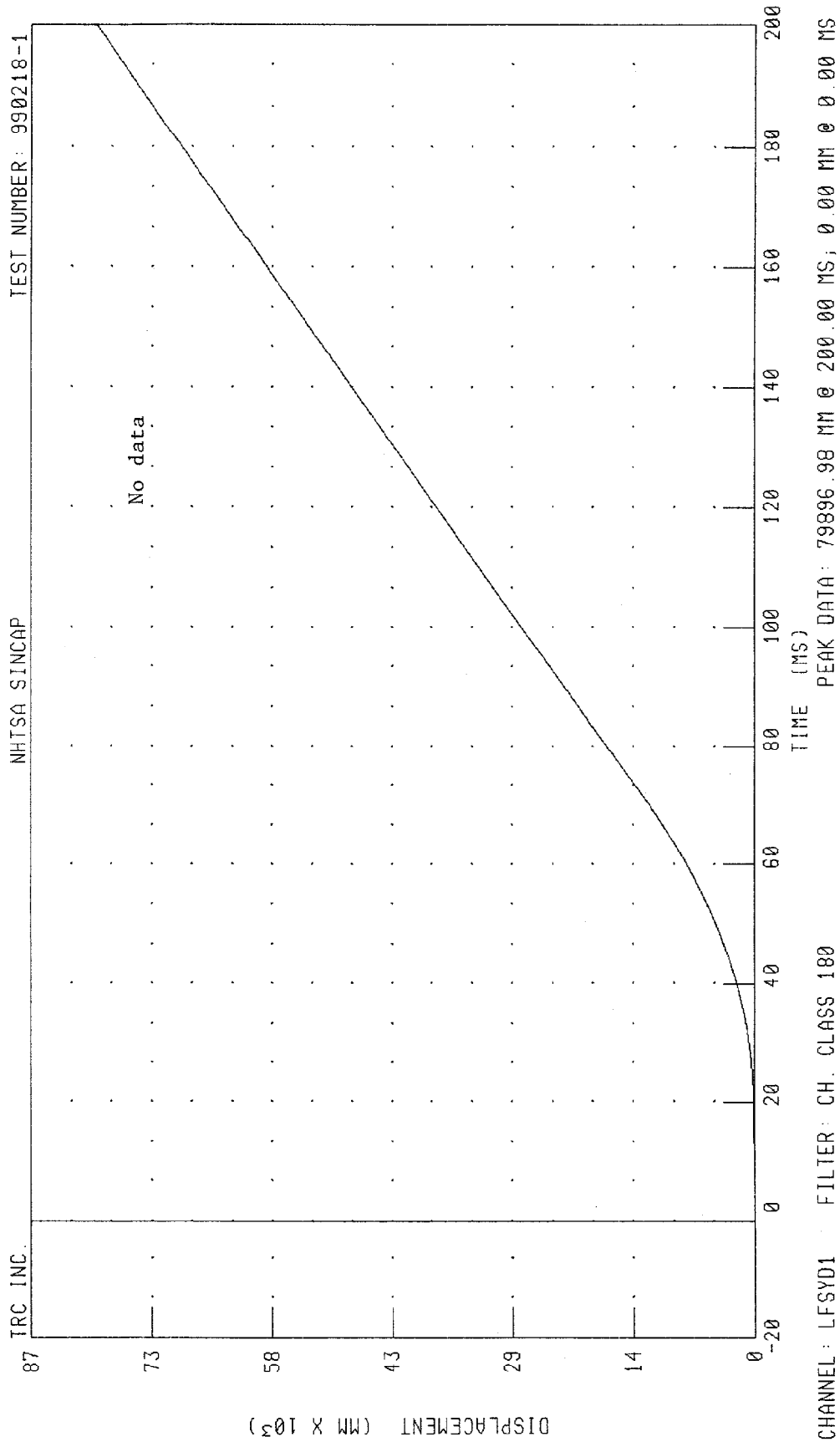
TRC INC.



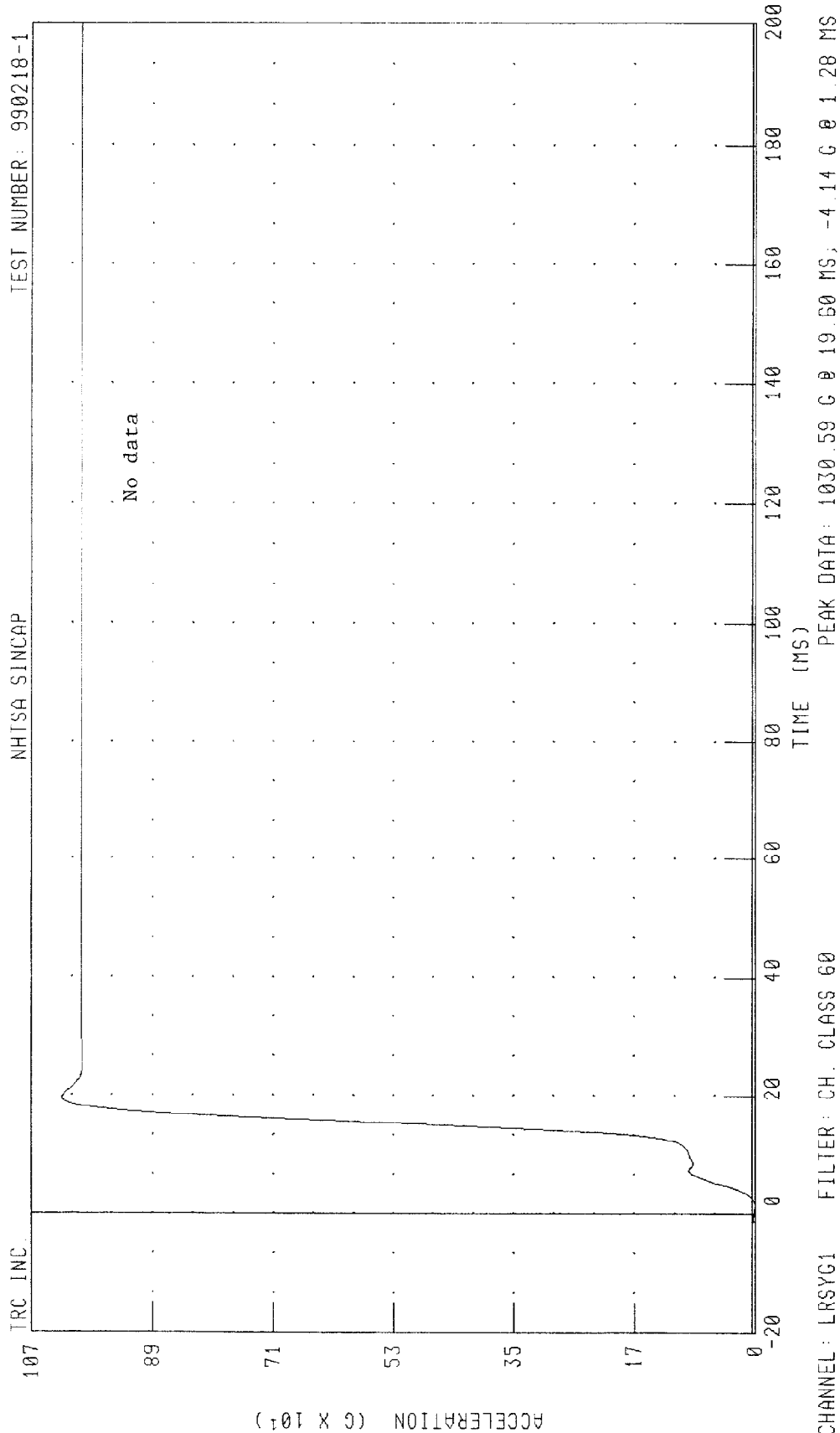
PEAK DATA: 1878.92 KM/H @ 200.00 MS; 0.00 KM/H @ 0.00 MS

CHANNEL: LFSYV1 FILTER: CH. CLASS 180

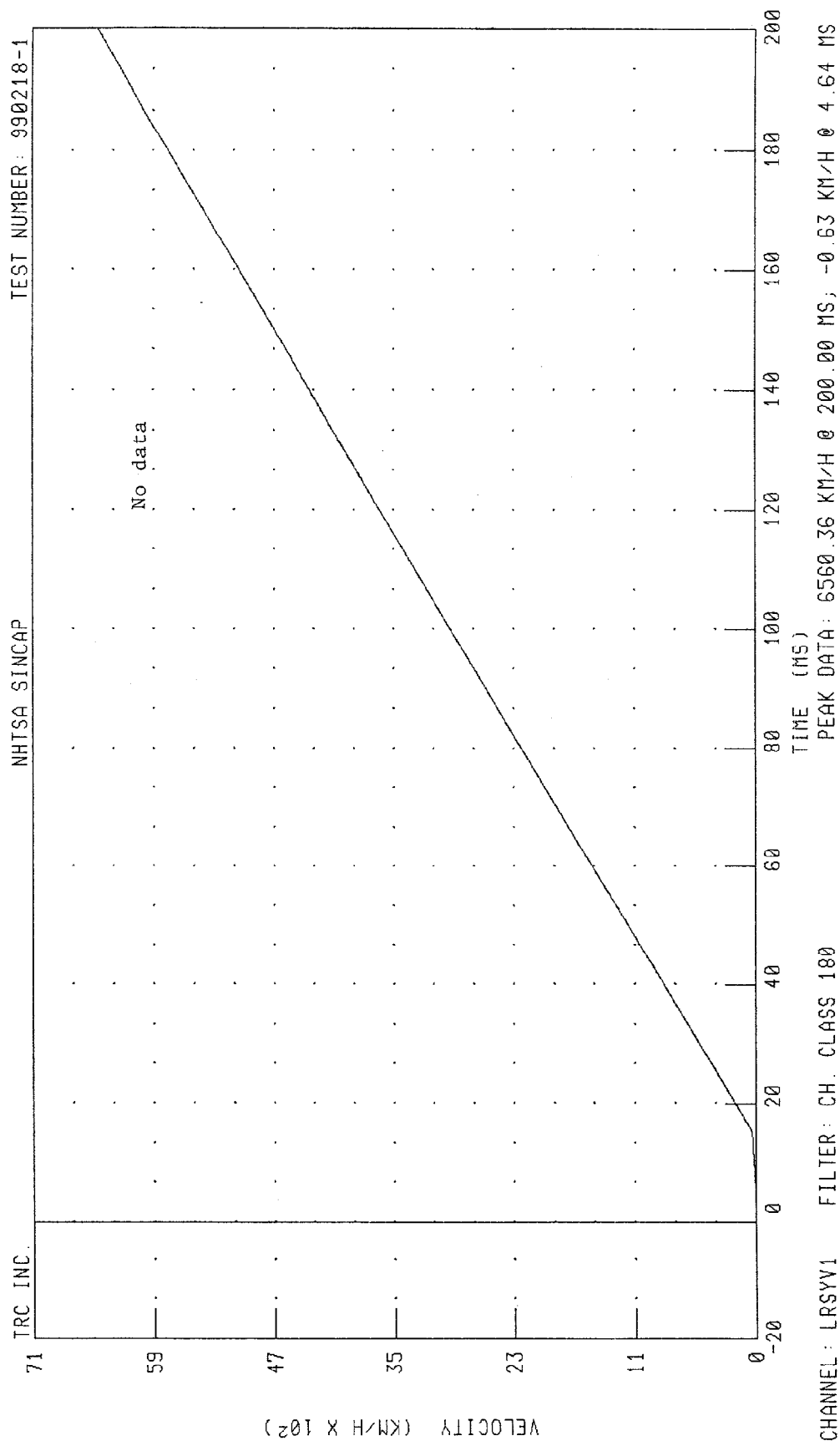
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT SIDE SILL AT FRONT SEAT Y-AXIS DISPLACEMENT



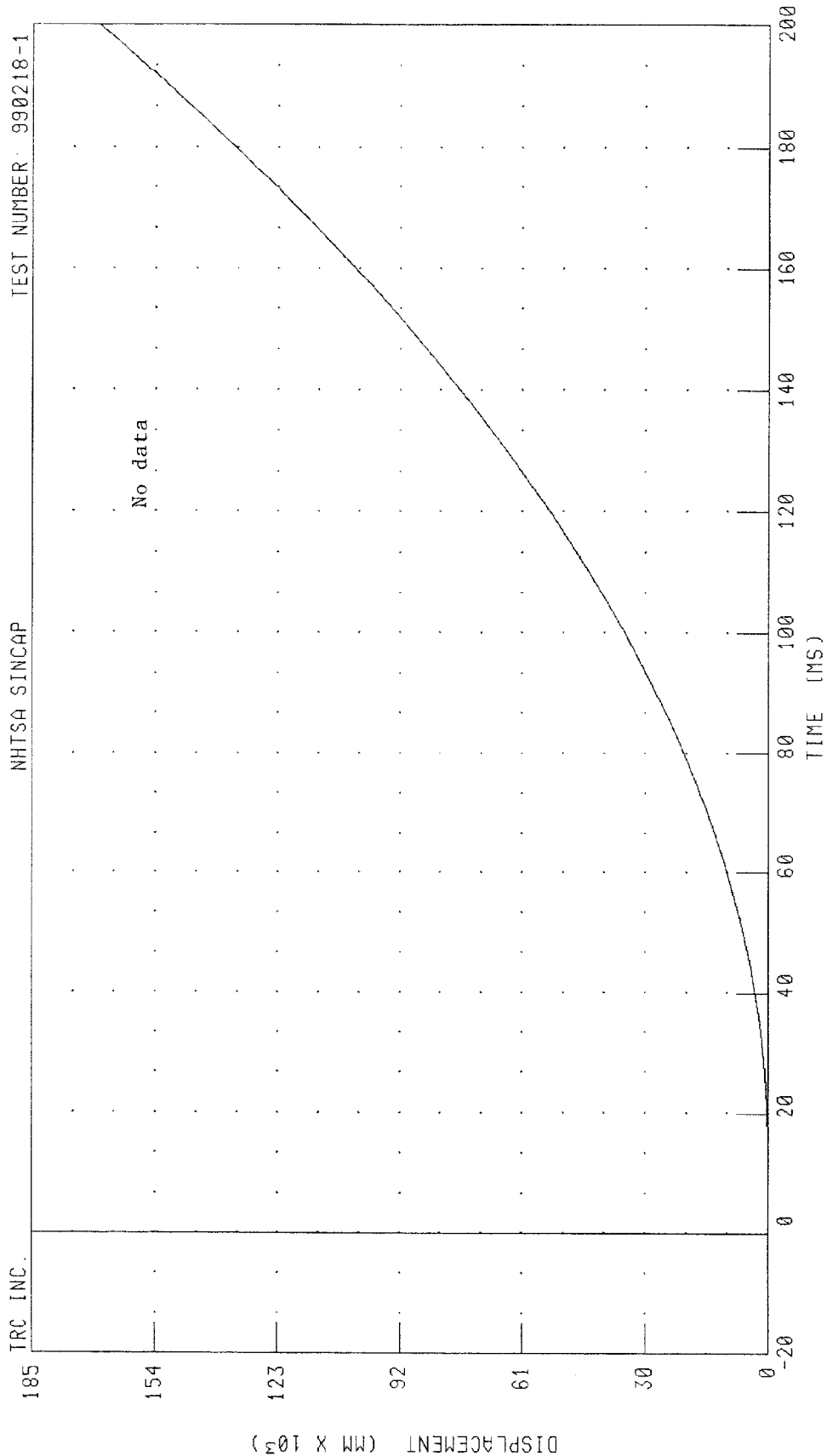
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT SIDE SILL AT REAR SEAT Y-AXIS ACCELERATION



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT SIDE SILL AT REAR SEAT Y-AXIS VELOCITY



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT SIDE SILL AT REAR SEAT Y-AXIS DISPLACEMENT

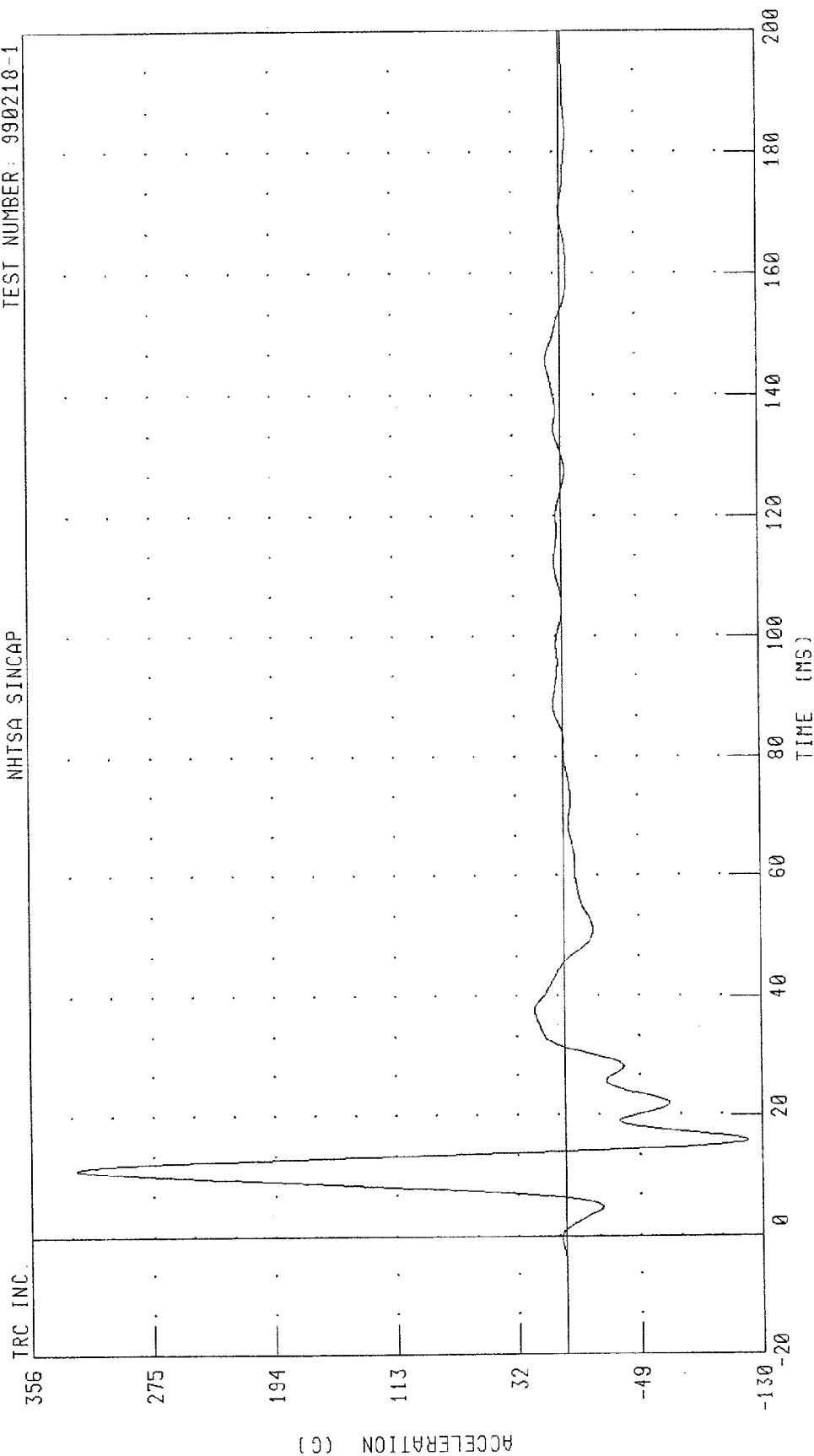


CHANNEL: LRSYD1 FILTER: CH. CLASS 180 PEAK DATA: 169289.50 MM @ 200.00 MS; -0.16 MM @ 5.20 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT FRONT DOOR ON CENTERLINE Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP



PEAK DATA: 326.29 G @ 11.20 MS; -120.70 G @ 15.76 MS

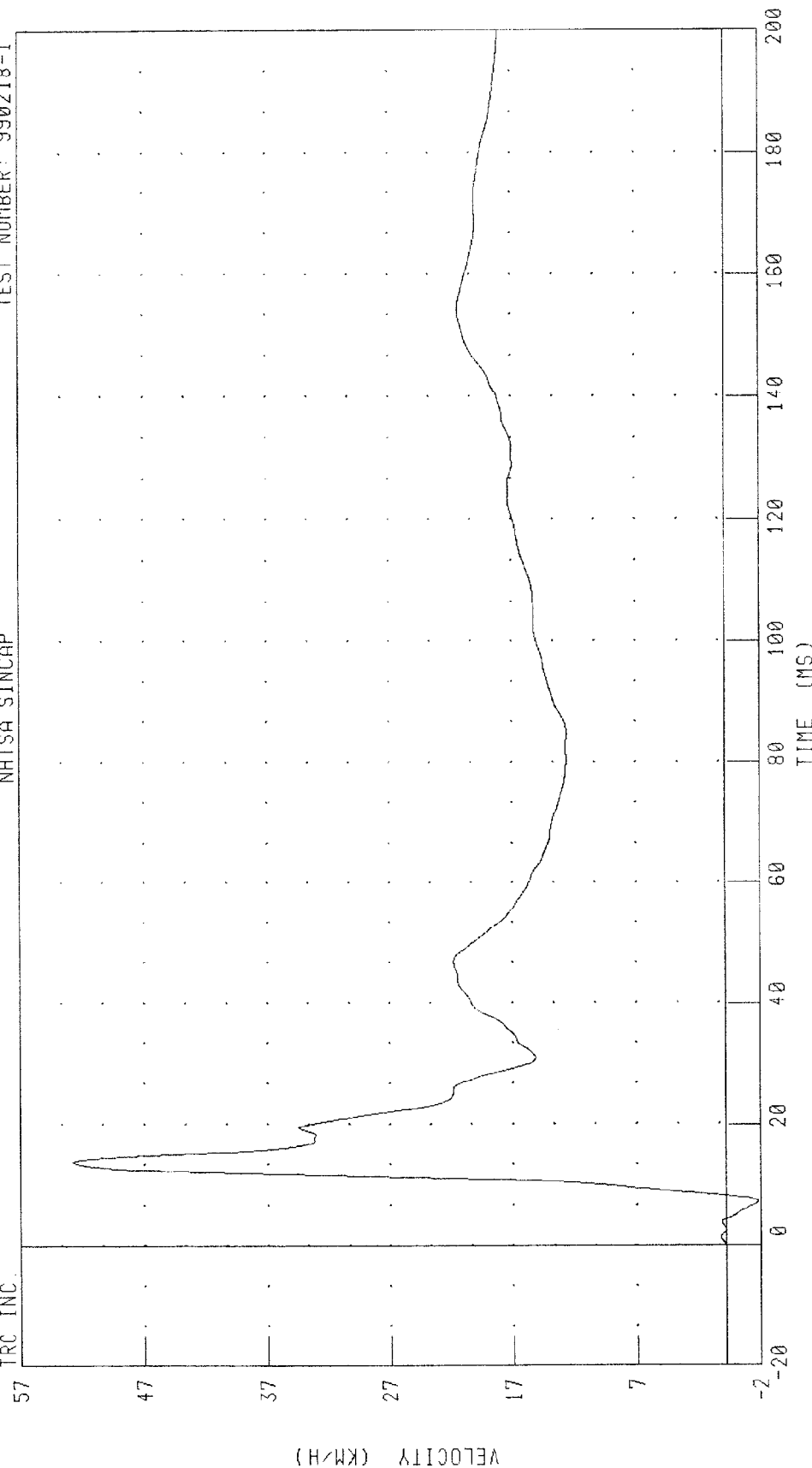
CHANNEL: LFCYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT FRONT DOOR ON CENTERLINE Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

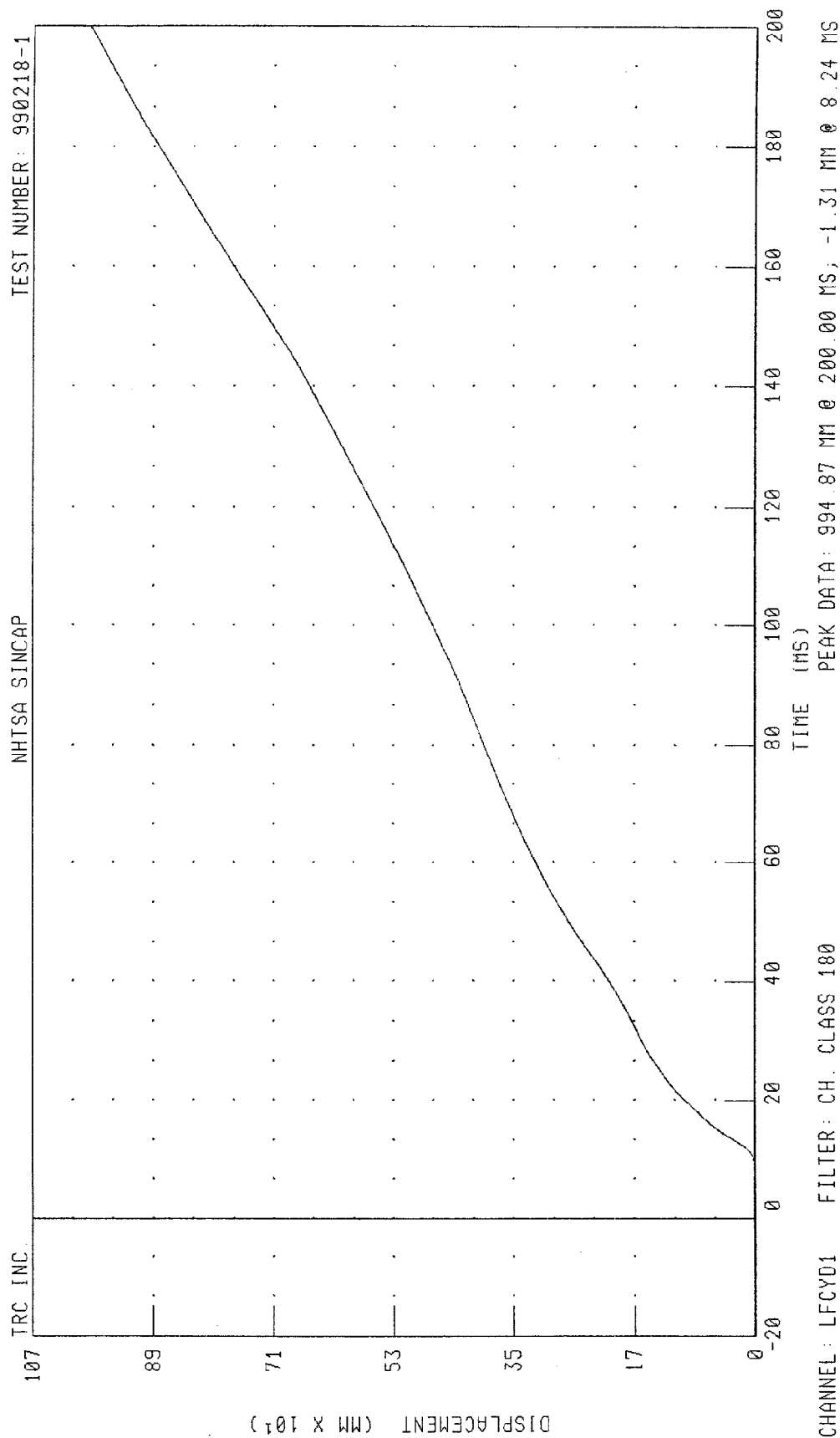
TRC INC.



PEAK DATA: 52.99 KM/H @ 13.84 MS; -2.56 KM/H @ 7.28 MS

CHANNEL: LFCYV1 FILTER: CH. CLASS 180

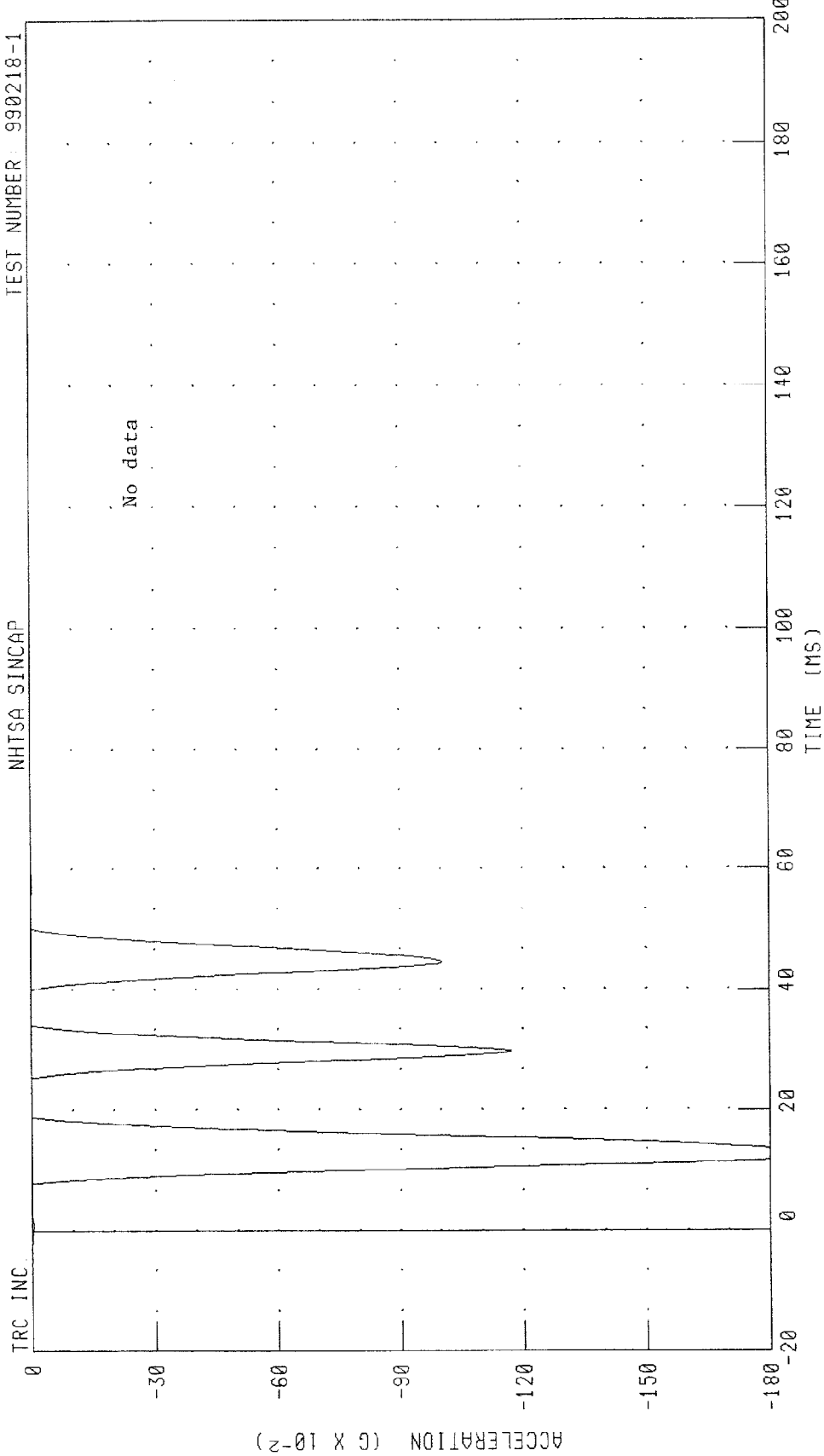
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT FRONT DOOR ON CENTERLINE Y-AXIS DISPLACEMENT



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

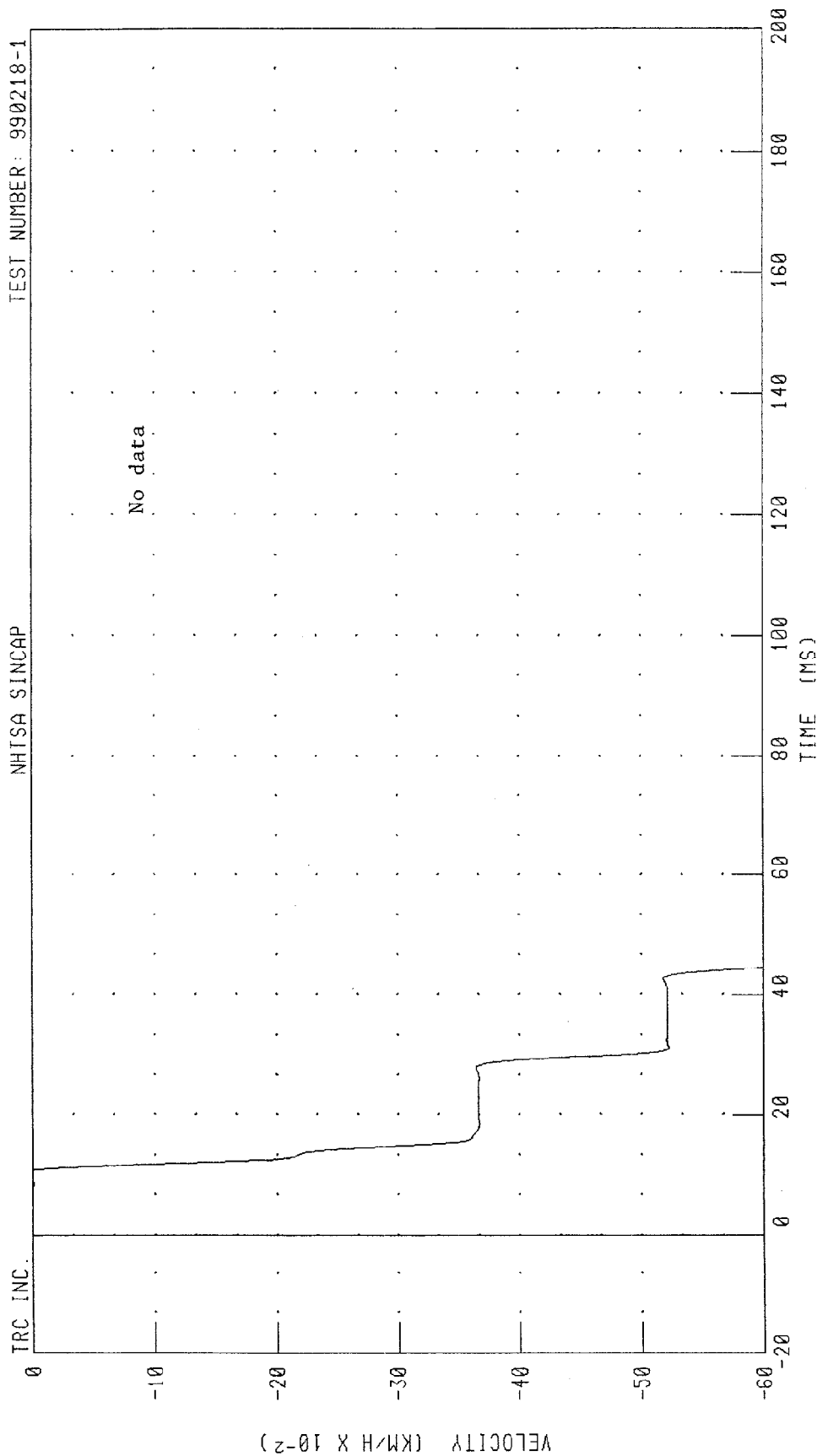
NHTSA SINCAP



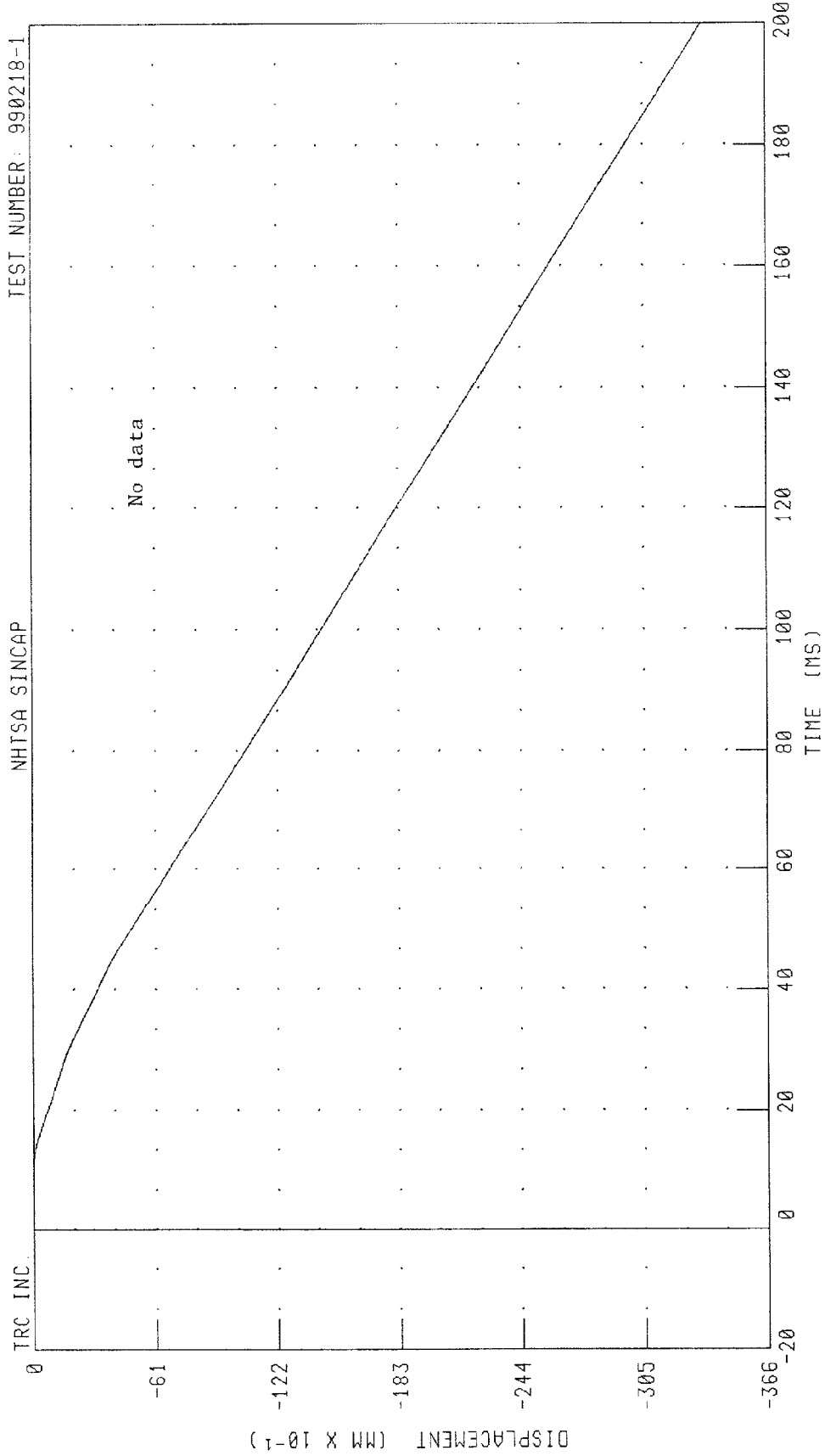
PEAK DATA: 0.08 G @ 6.48 MS, -1.97 G @ 12.32 MS

CHANNEL: RRTYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS VELOCITY



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
RIGHT REAR OCCUPANT COMPARTMENT Y-AXIS DISPLACEMENT



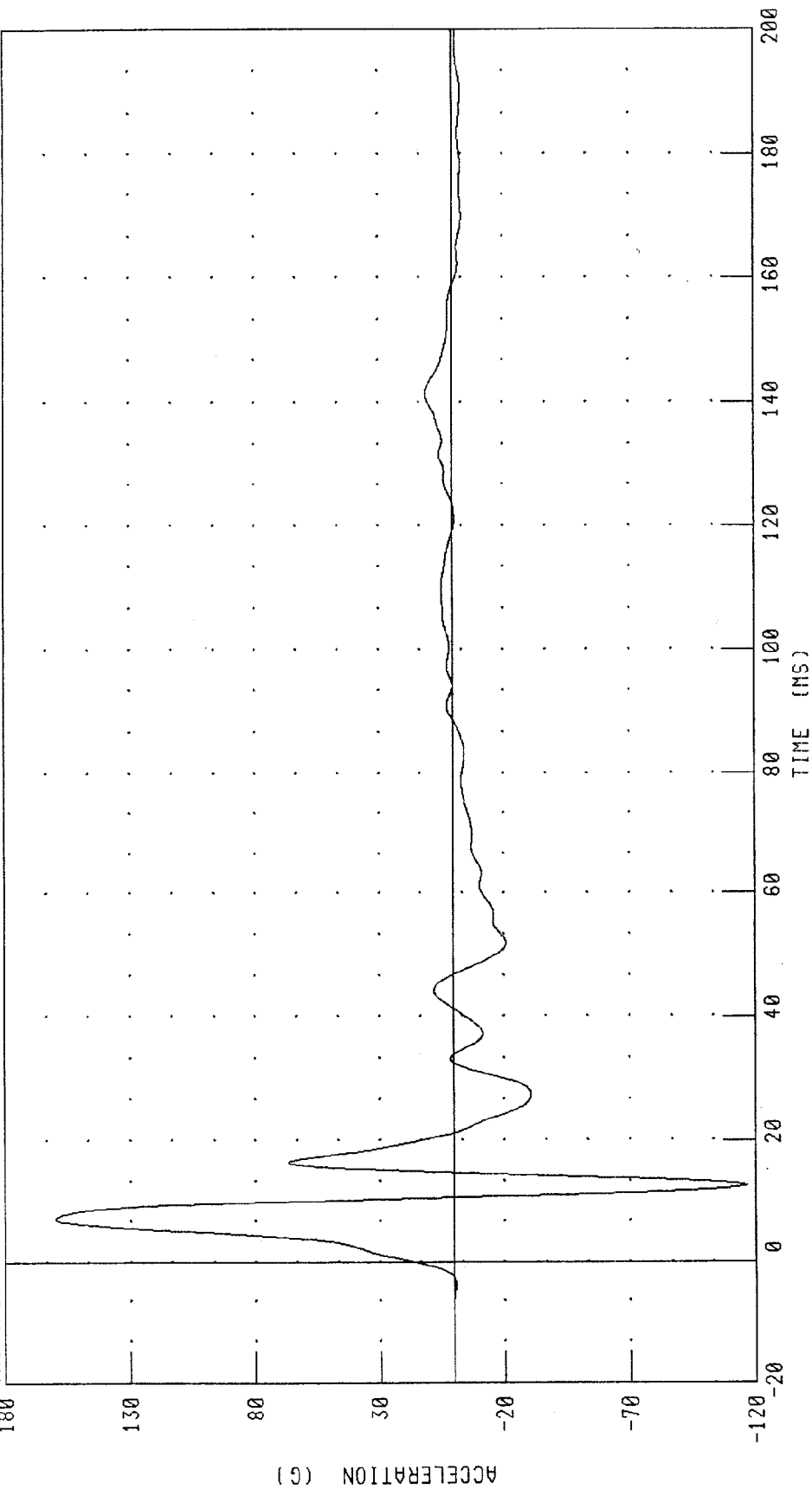
CHANNEL: RRTYD1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MID-REAR OF LEFT FRONT DOOR Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



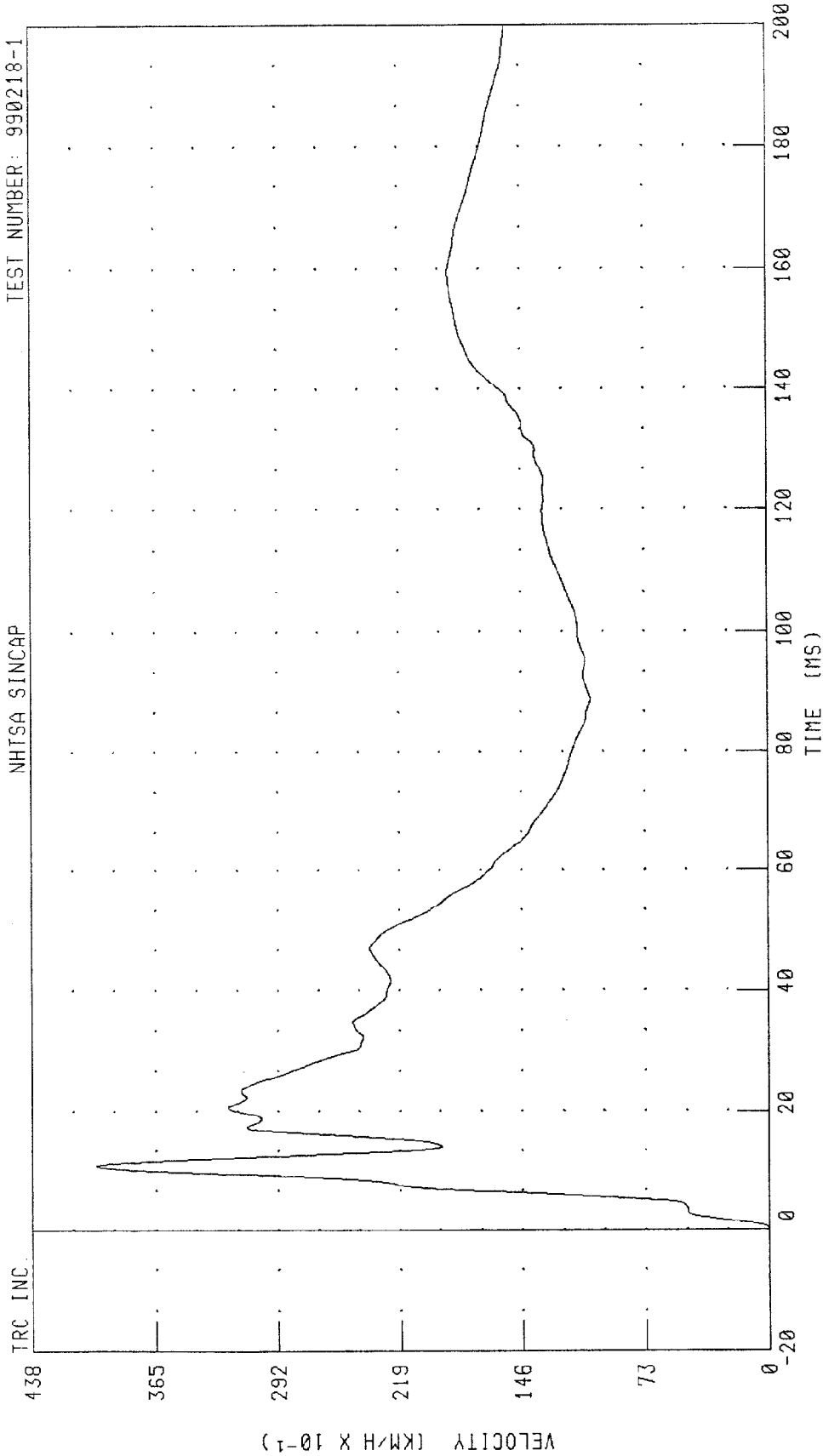
PEAK DATA: 159.84 G @ 7.12 MS; -116.49 G @ 12.64 MS

CHANNEL: LFMV01 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MID-REAR OF LEFT FRONT DOOR Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP



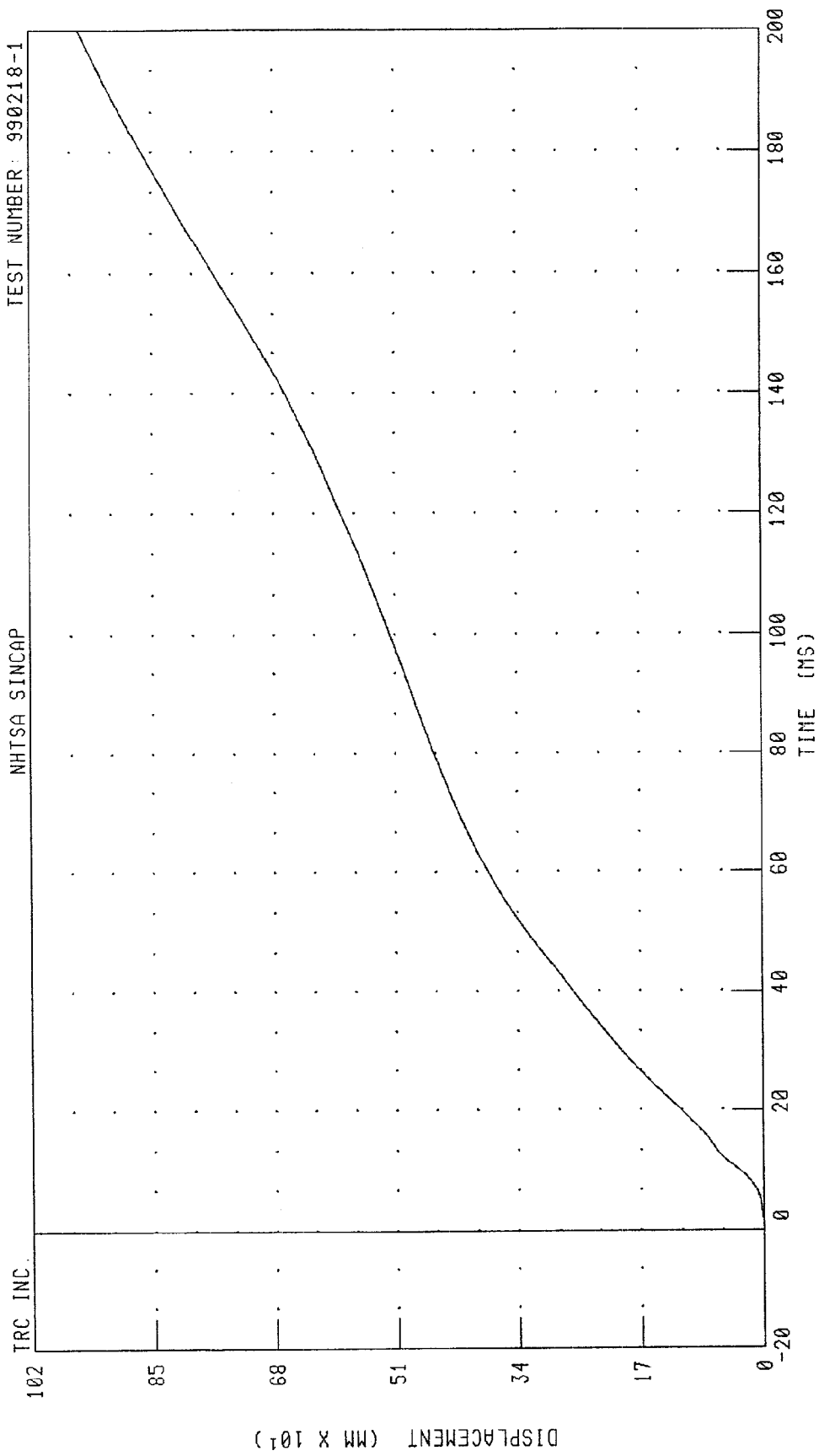
PEAK DATA: 40.03 KM/H @ 10.88 MS; 0.00 KM/H @ 0.00 MS

CHANNEL: LFMYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MID-REAR OF LEFT FRONT DOOR Y-AXIS DISPLACEMENT

TEST NUMBER: 990218-1

NHTSA SINCAP



PEAK DATA: 952.85 MM @ 200.00 MS; 0.00 MM @ 0.00 MS

FILTER: CH. CLASS 180

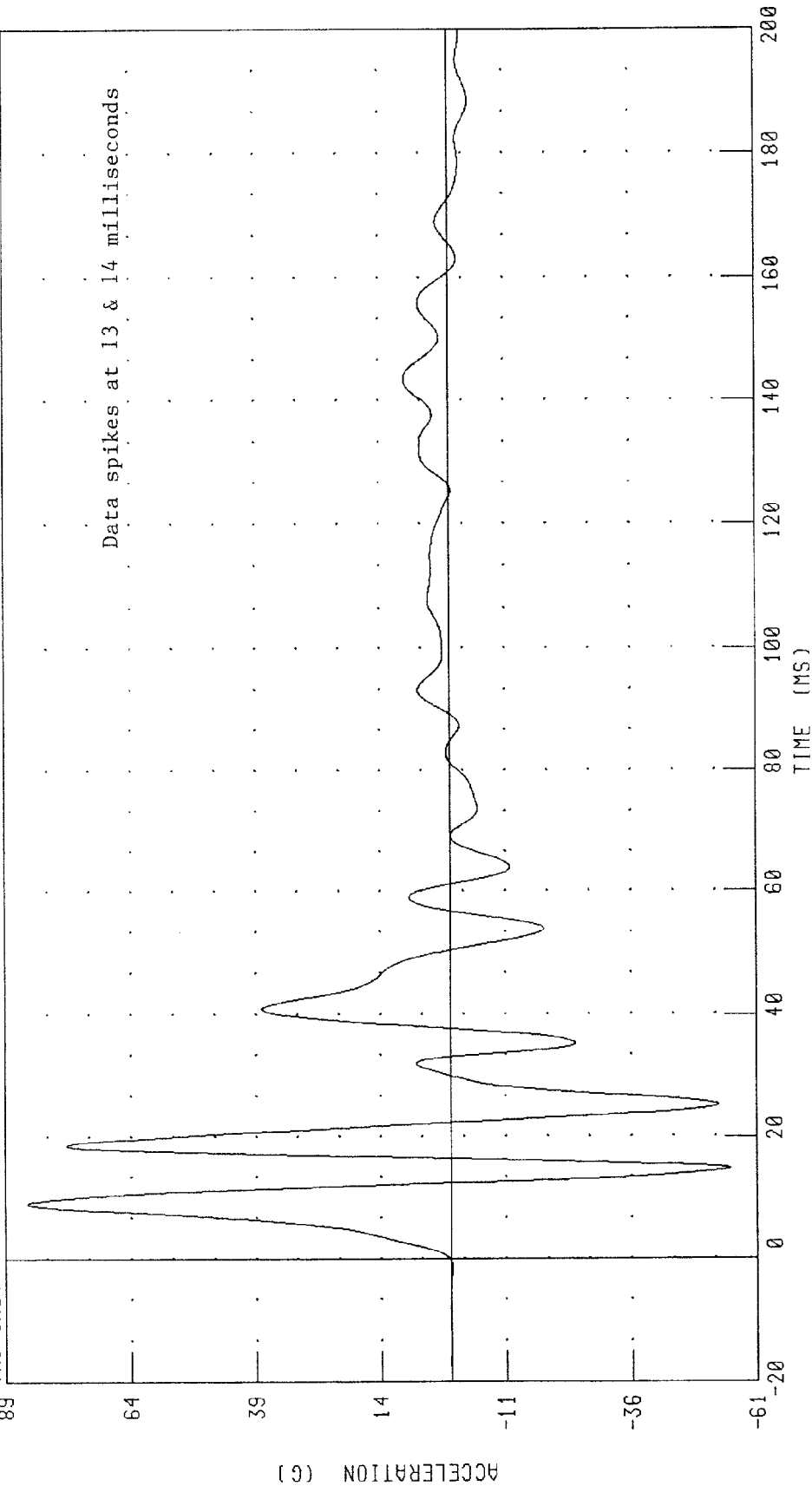
CHANNEL: LFHYD1

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT FRONT DOOR UPPER CENTERLINE Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

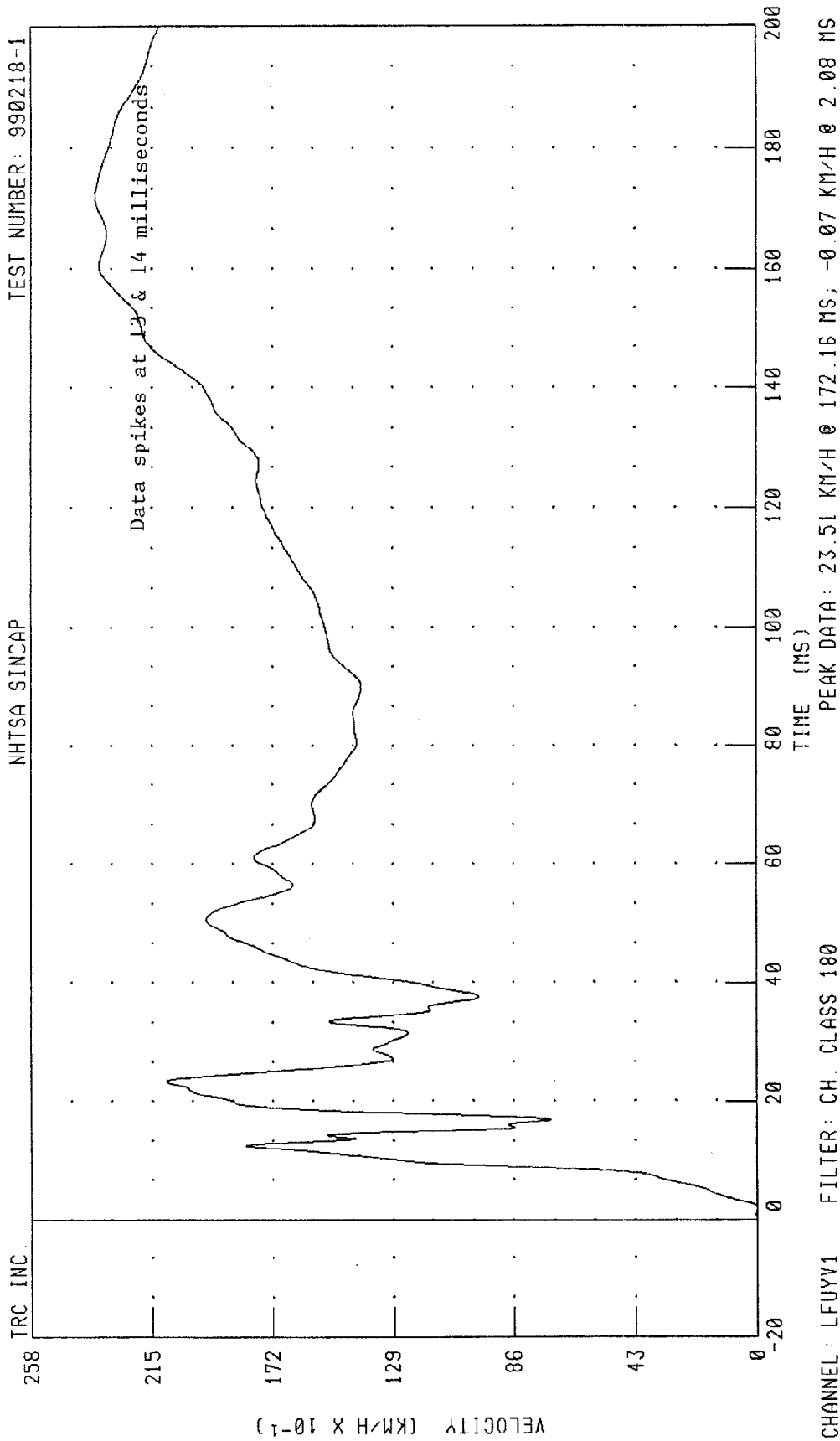
TRC INC.



PEAK DATA: 84.63 G @ 9.12 MS, -55.78 G @ 14.64 MS

CHANNEL: LFUYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT FRONT DOOR UPPER CENTERLINE Y-AXIS VELOCITY

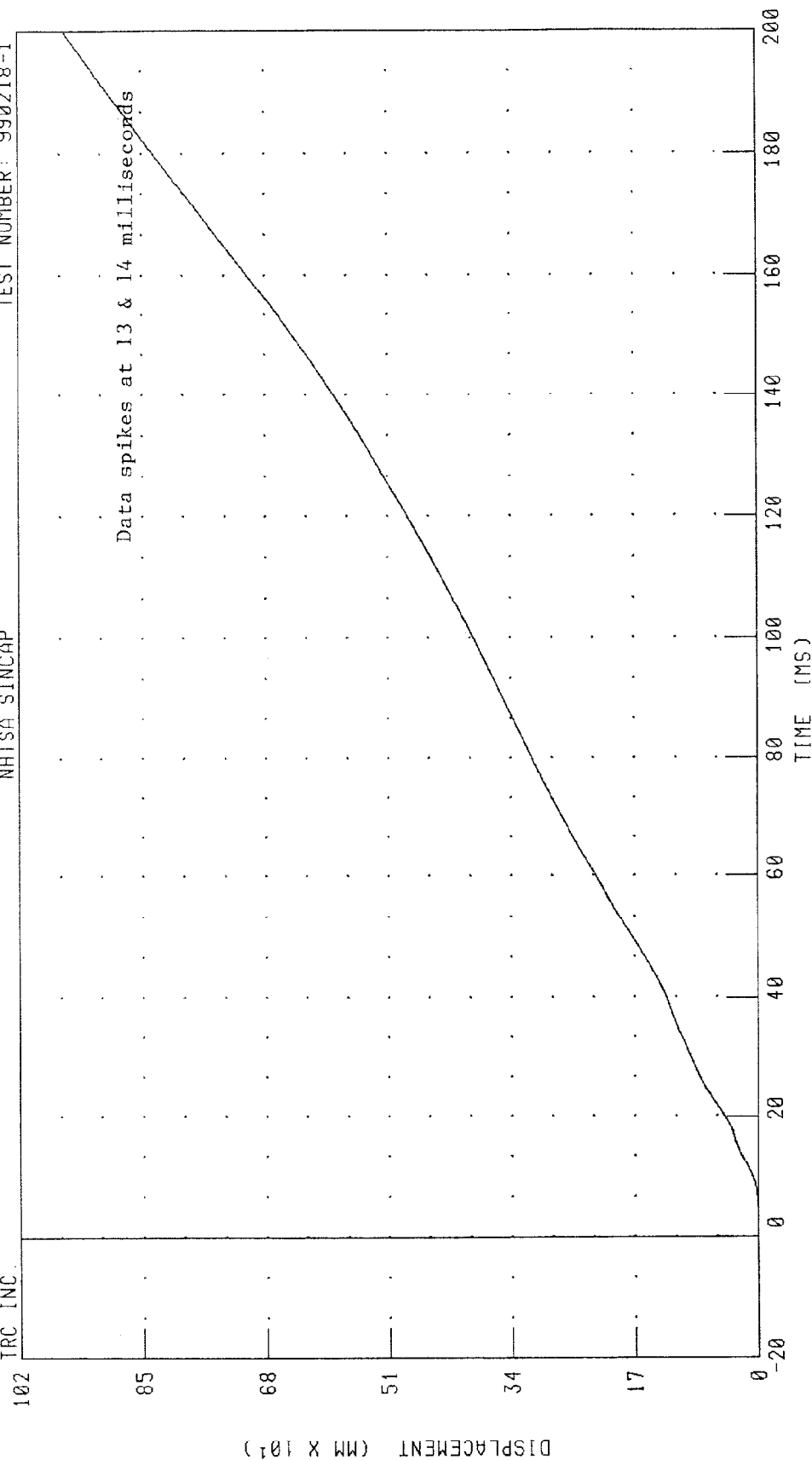


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT FRONT DOOR UPPER CENTERLINE Y-AXIS DISPLACEMENT

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 957.24 MM @ 200.00 MS, -0.01 MM @ 2.48 MS

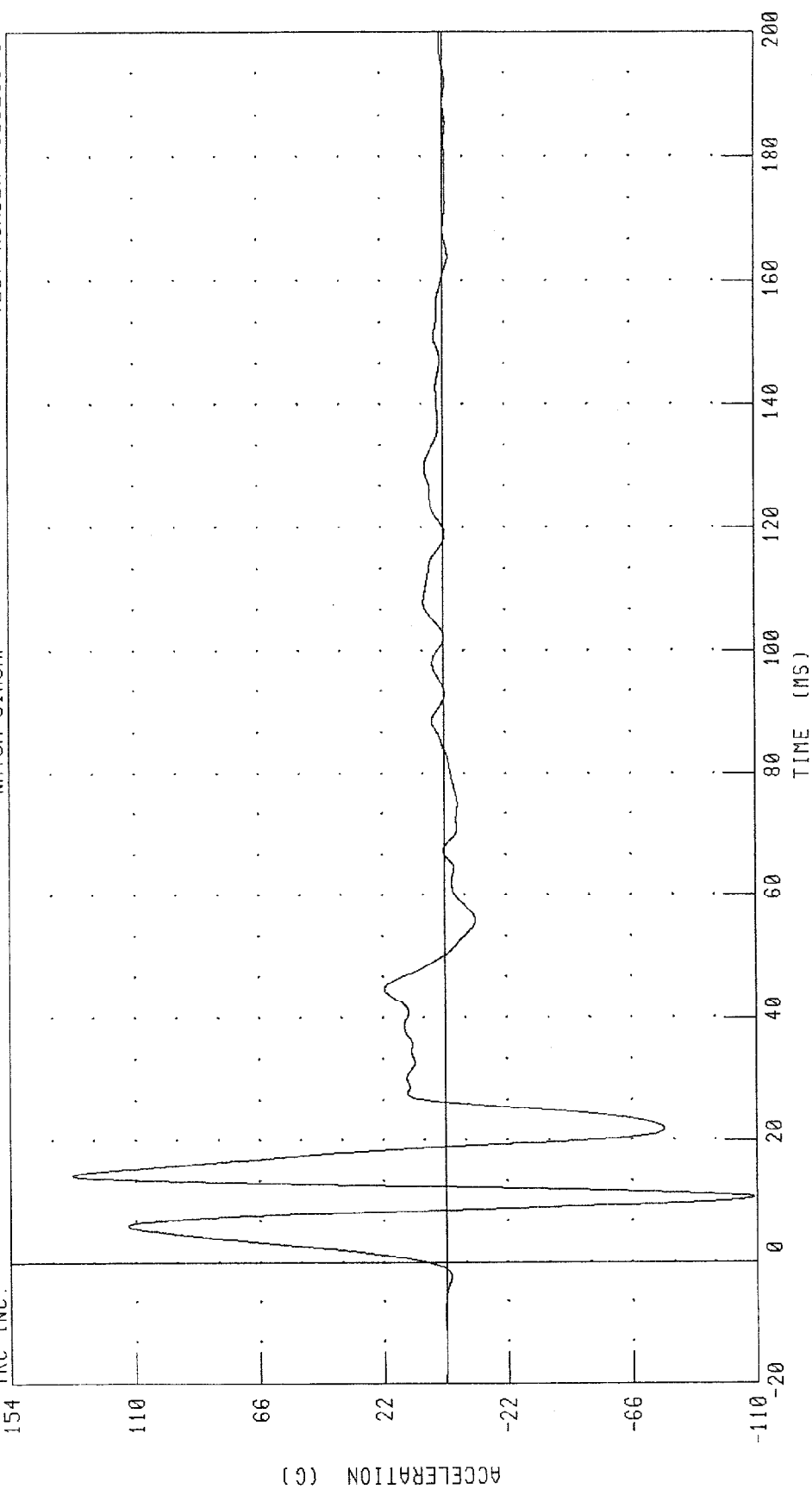
CHANNEL: LFUYD1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR DOOR MIDREAR Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



CHANNEL: LRMYG1 FILTER: CH. CLASS 60

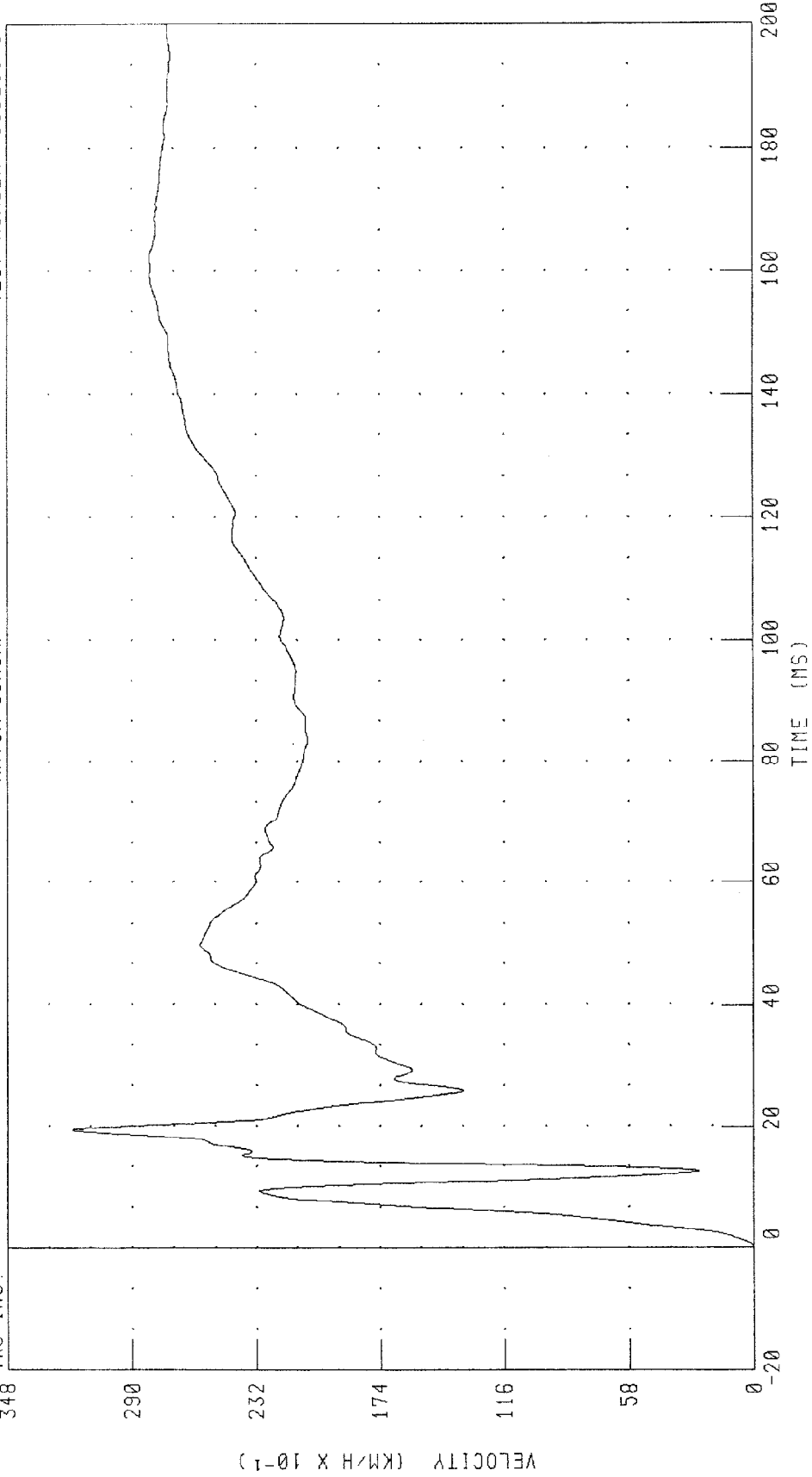
PEAK DATA: 132.42 G @ 14.32 MS; -109.08 G @ 10.64 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR DOOR MIDREAR Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 31.77 KM/H @ 19.44 MS; 0.00 KM/H @ 0.00 MS

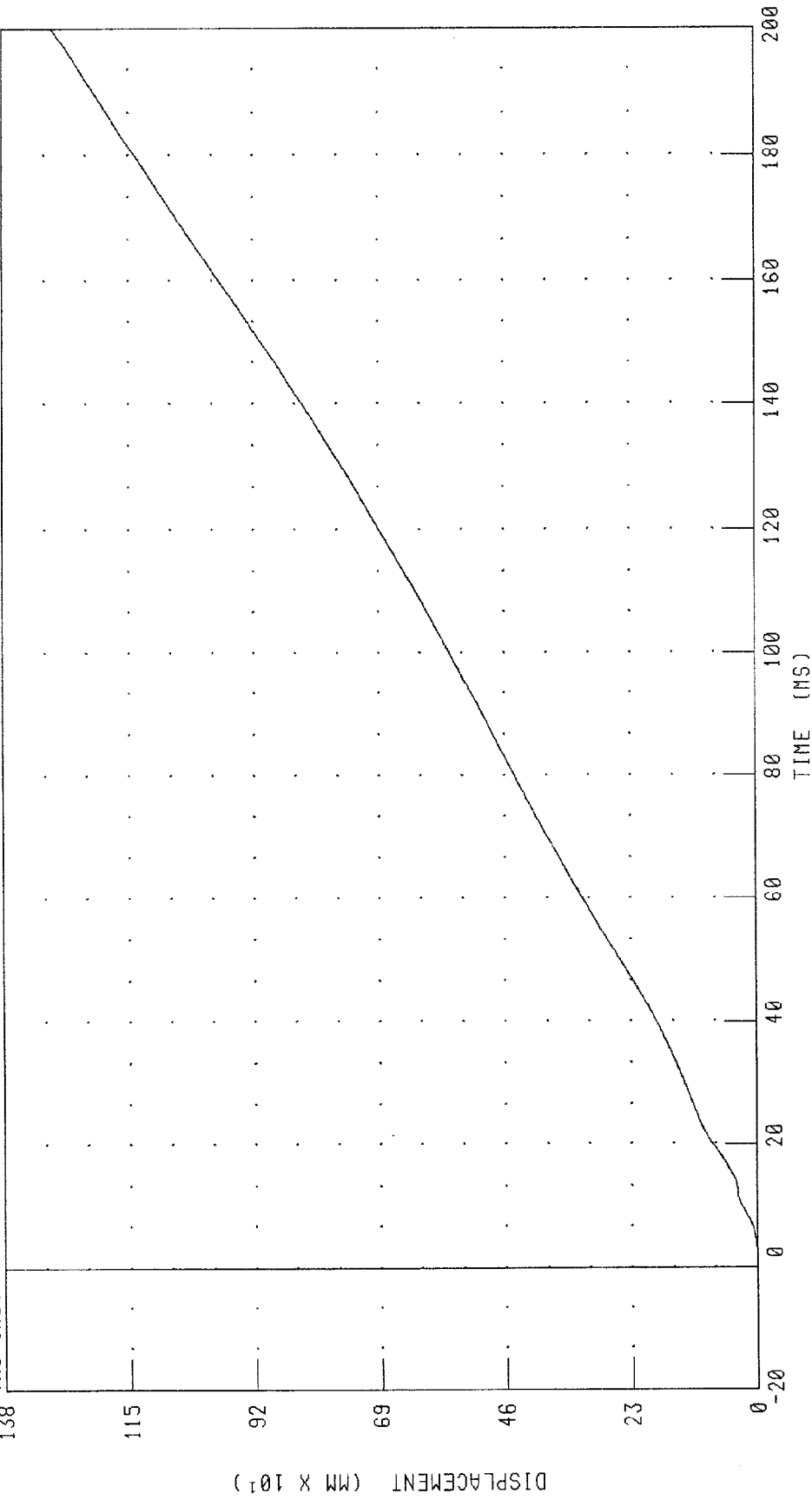
CHANNEL: LRMYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR DOOR MIDREAR Y-AXIS DISPLACEMENT

NHTSA SINCAP

TEST NUMBER: 990218-1

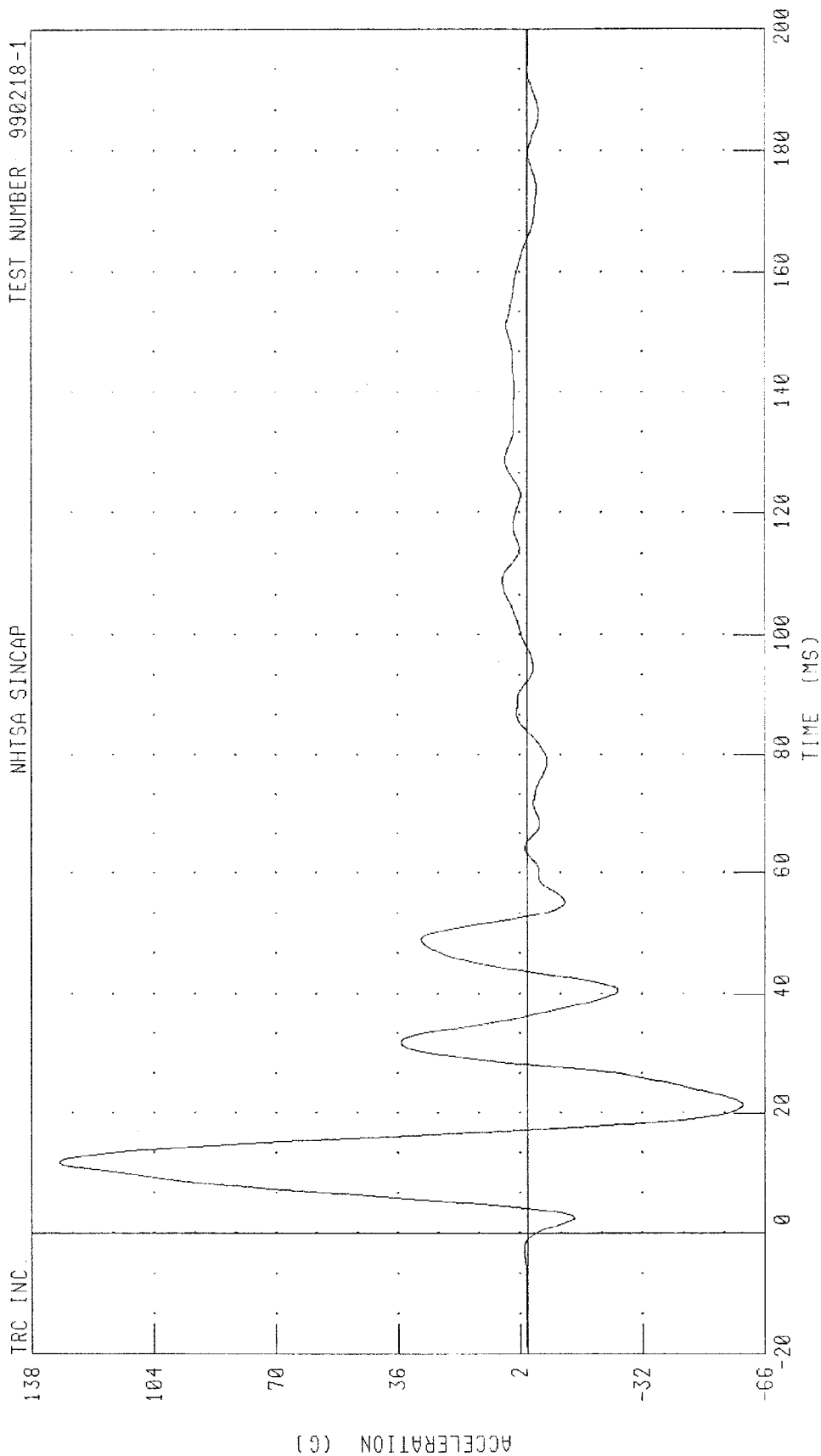
TRC INC.



CHANNEL: LRNYD1 FILTER: CH1 CLASS 180

PEAK DATA: 1289.81 MM @ 200.00 MS; 0.00 MM @ 0.00 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR DOOR UPPER CENTERLINE Y-AXIS ACCELERATION



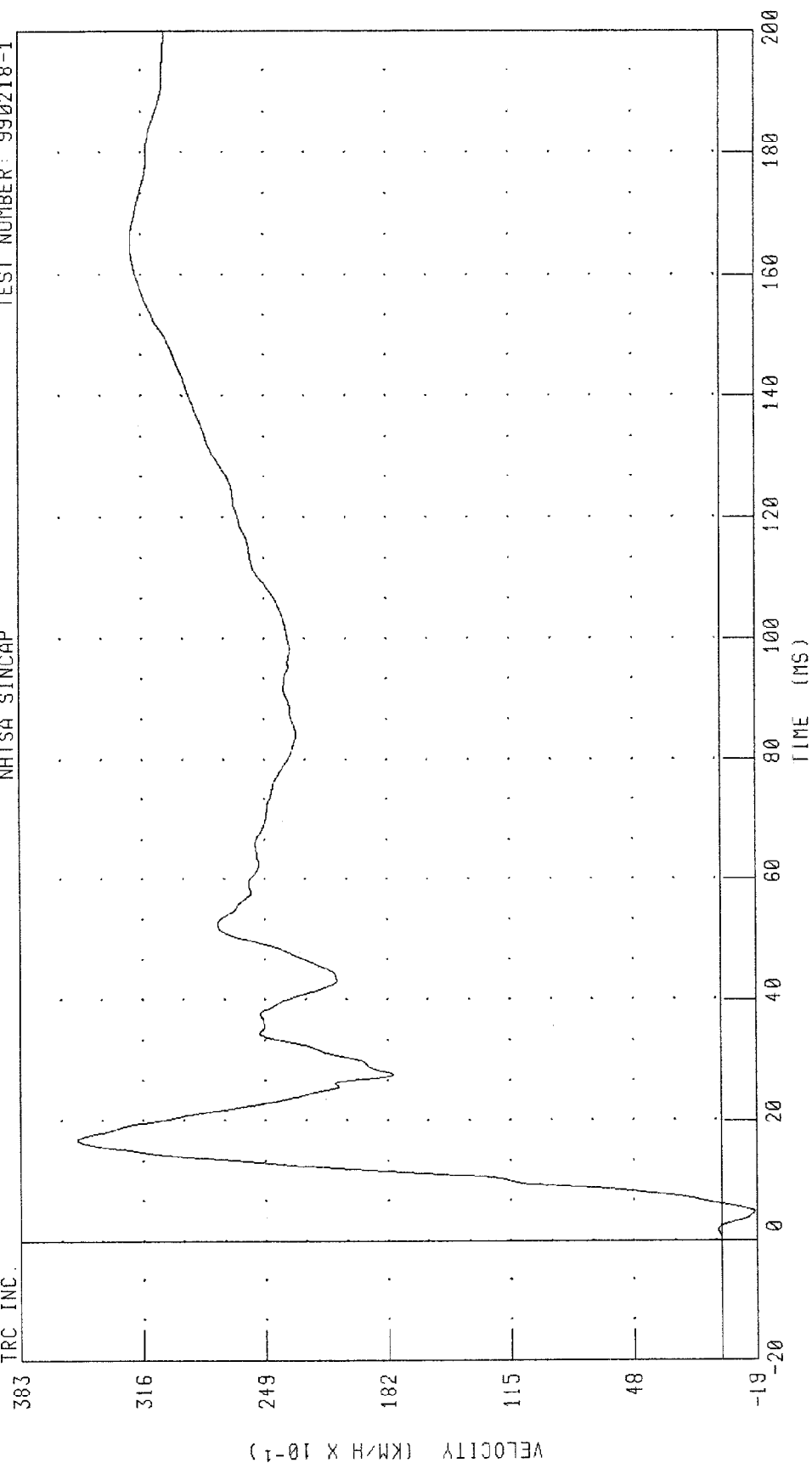
CHANNEL: LRUYG1 FILTER: CH. CLASS 60 PEAK DATA: 130.37 G @ 11.84 MS; -60.01 G @ 21.44 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR DOOR UPPER CENTERLINE Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 35.20 KM/H @ 16.88 MS; -1 78 KM/H @ 4.72 MS

CHANNEL: LRUW1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR DOOR UPPER CENTERLINE Y-AXIS DISPLACEMENT

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.

155

129

103

77

51

25

0

DISPLACEMENT (CM X 10⁴)

TIME (MS)

200

180

160

140

120

100

80

60

40

20

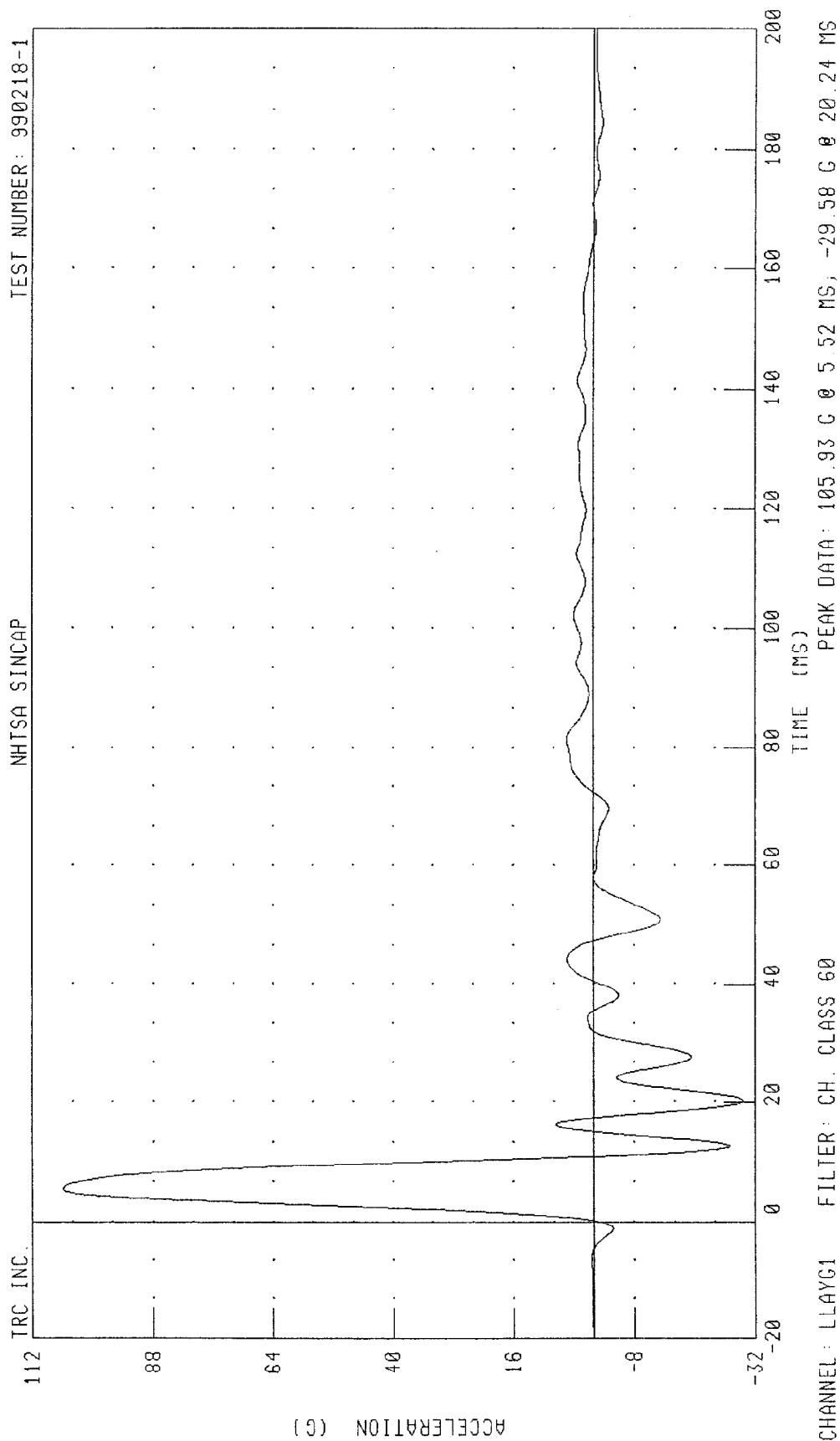
0

PEAK DATA: 1424.59 MM @ 200.00 MS, -1.05 MM @ 6.00 MS

FILTER: CH. CLASS 180

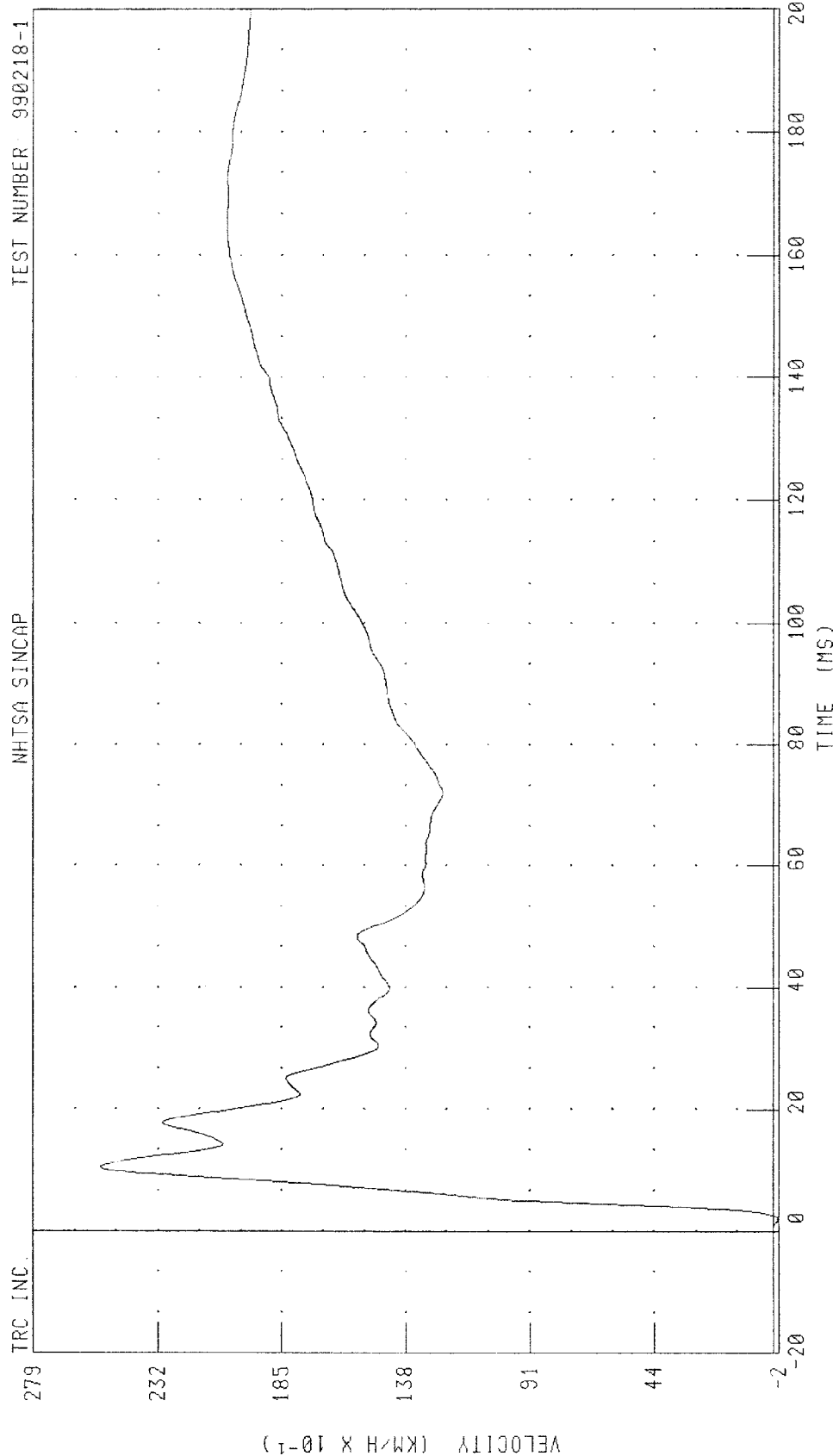
CHANNEL: LRUYD1

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT LOWER A-POST Y-AXIS ACCELERATION



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT LOWER A-POST Y-AXIS VELOCITY

TRC INC. NHTSA SINCAP TEST NUMBER 990218-1



PEAK DATA: 25 46 KM/H @ 10.48 MS, -0.19 KM/H @ 2.00 MS

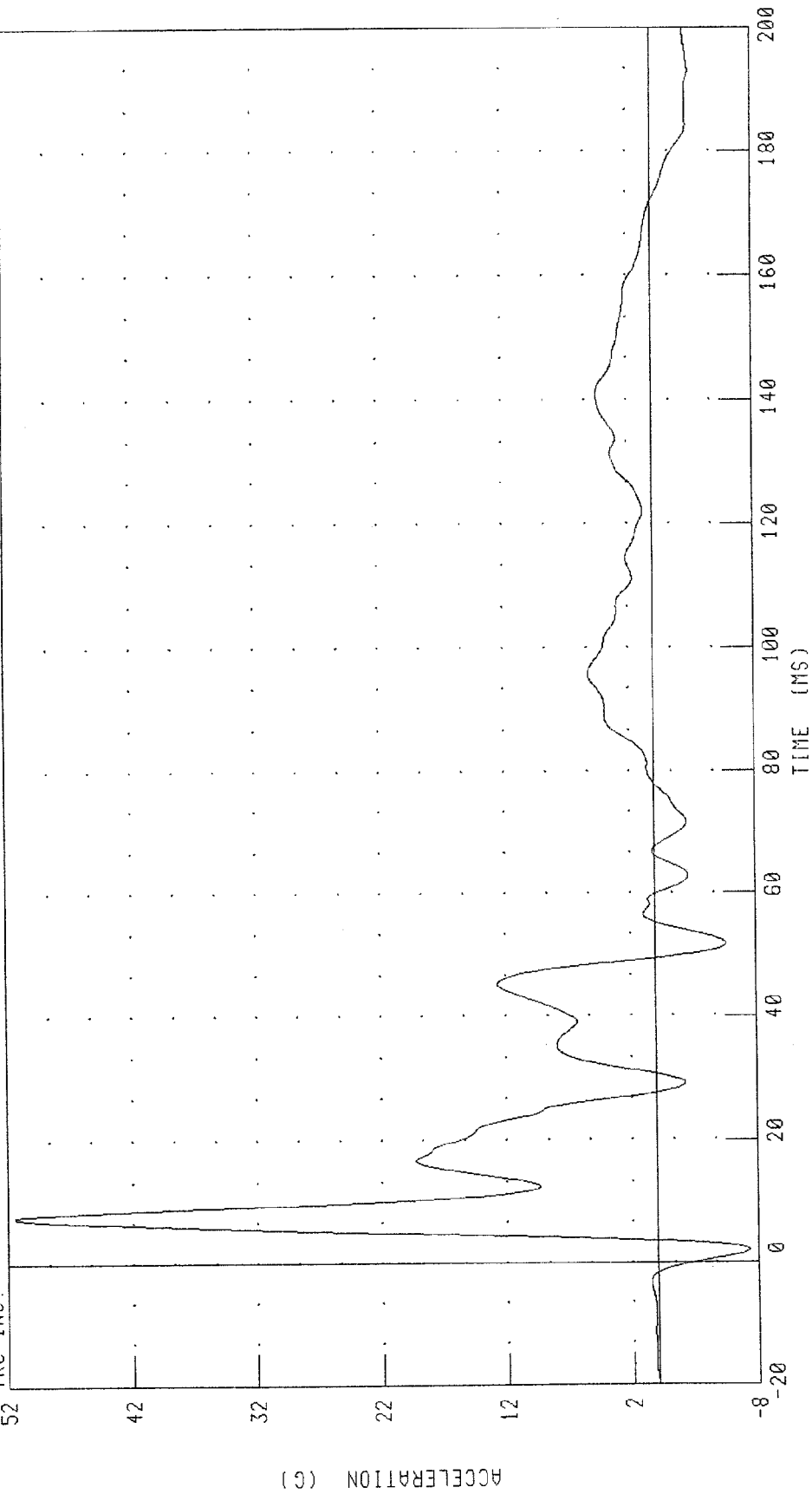
CHANNEL: L1AYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT MIDDLE A-POST Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 51.46 G @ 7.60 MS, -7.32 G @ 2.16 MS

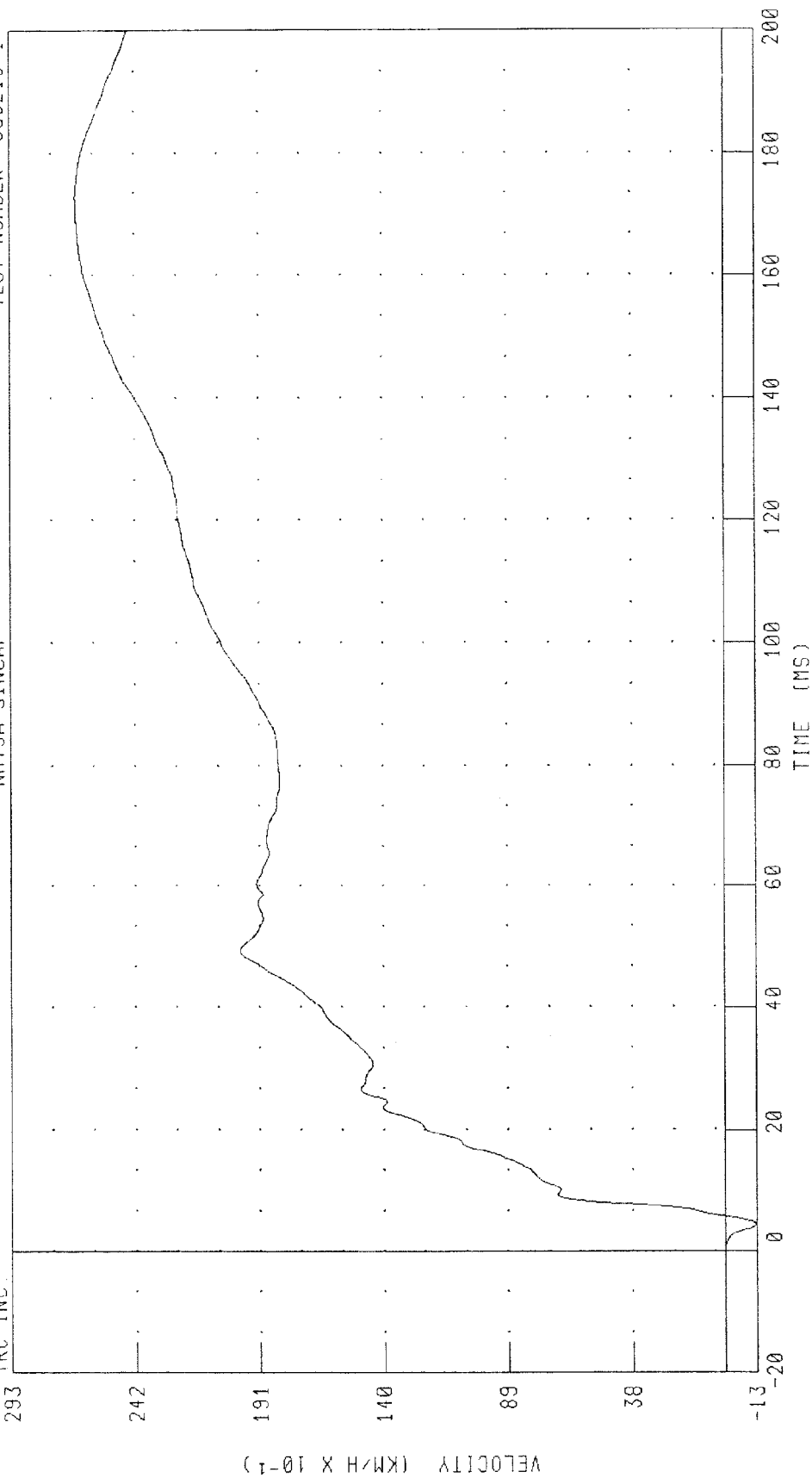
CHANNEL: LMAYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT MIDDLE A-POST Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

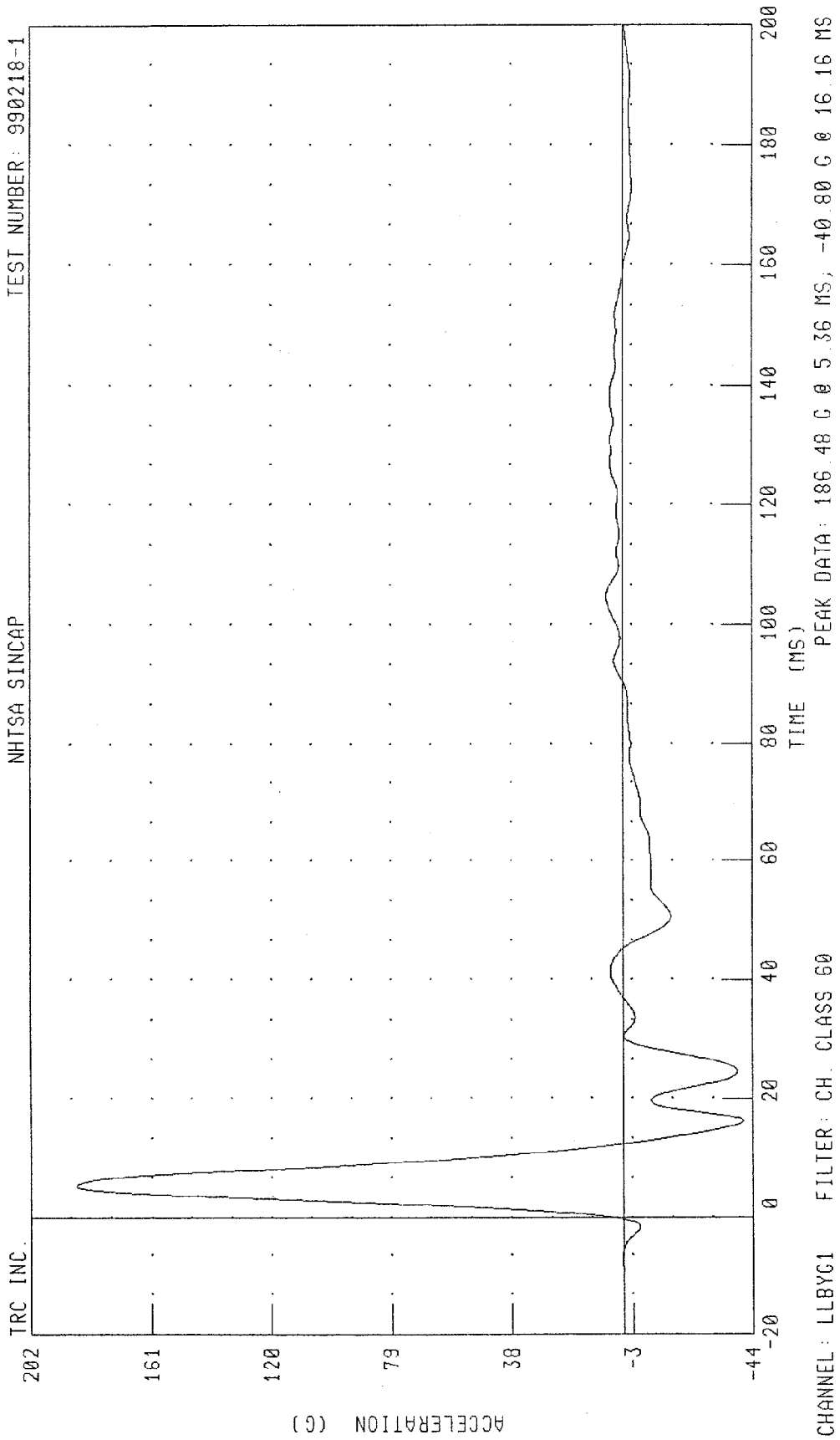
TRC INC.



PEAK DATA: 26.61 KM/H @ 172.72 MS, -1.27 KM/H @ 4.48 MS

CHANNEL: LMAYV1 FILTER: CH. CLASS 180

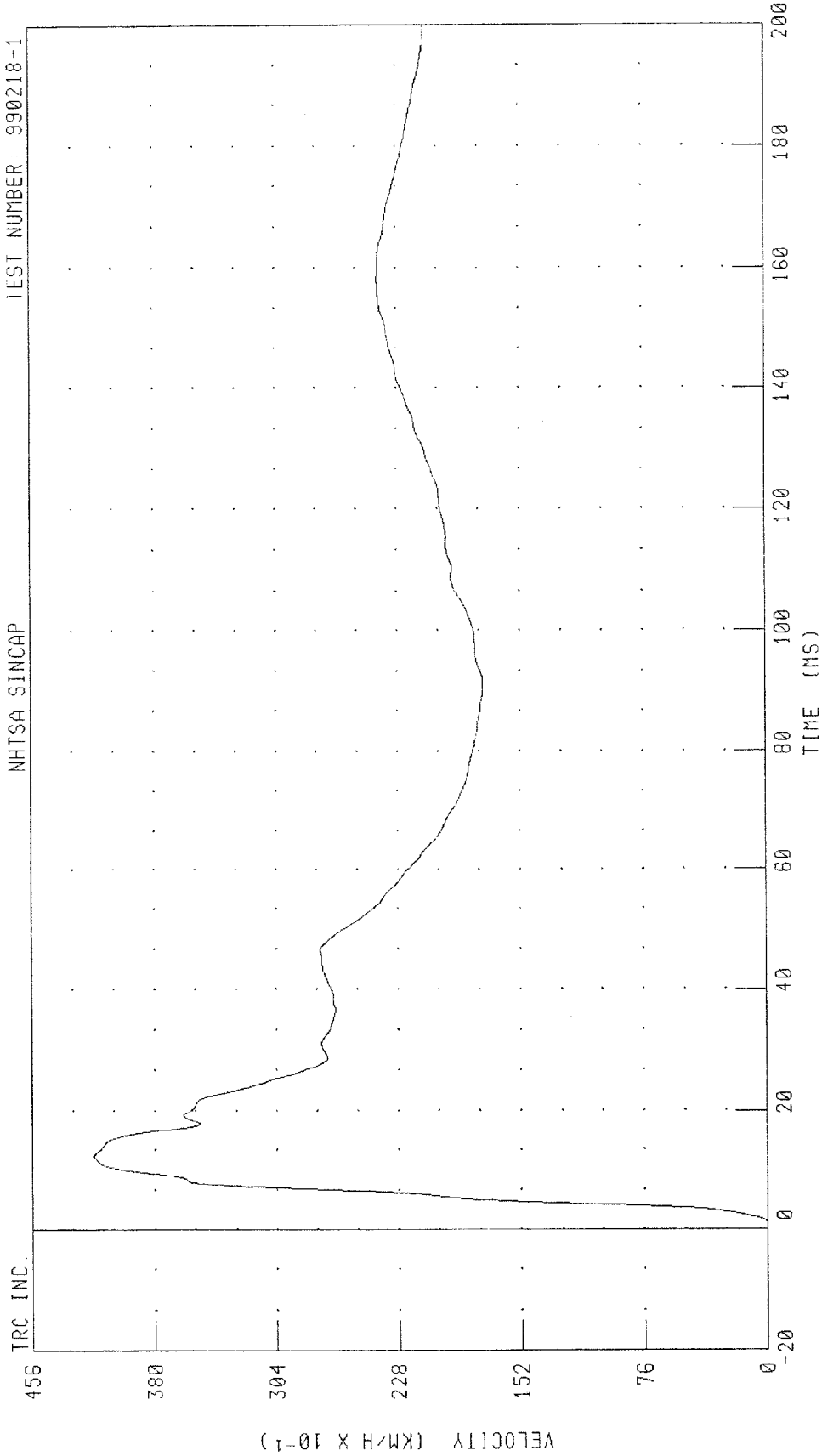
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LOWER B-POST Y-AXIS ACCELERATION



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LOWER B-POST Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP



PEAK DATA: 41.79 KM/H @ 12.32 MS; -0.03 KM/H @ 0.80 MS

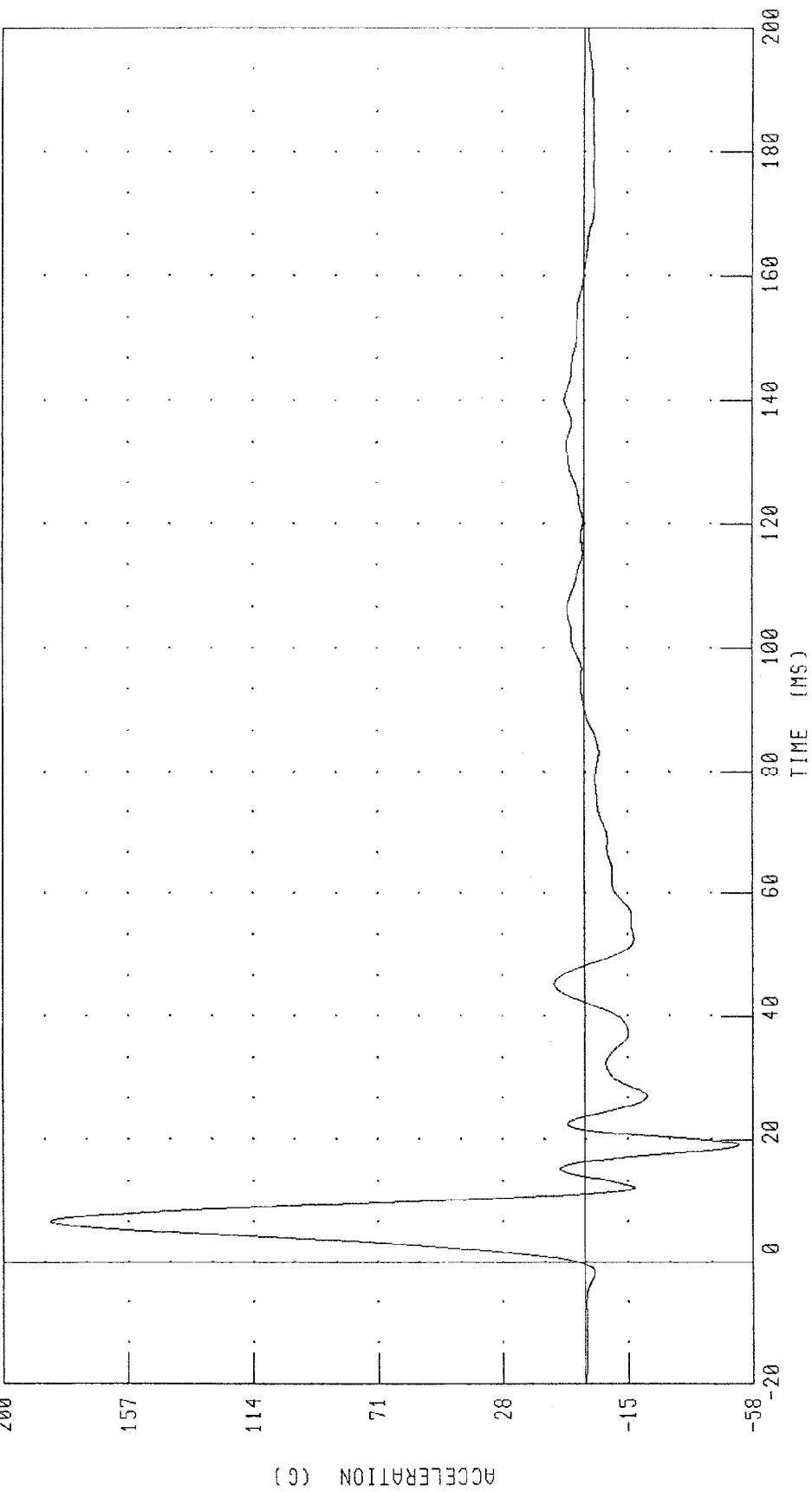
CHANNEL: LLBYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MIDDLE B-POST Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 183.96 G @ 6.80 MS, -53.13 G @ 19.12 MS

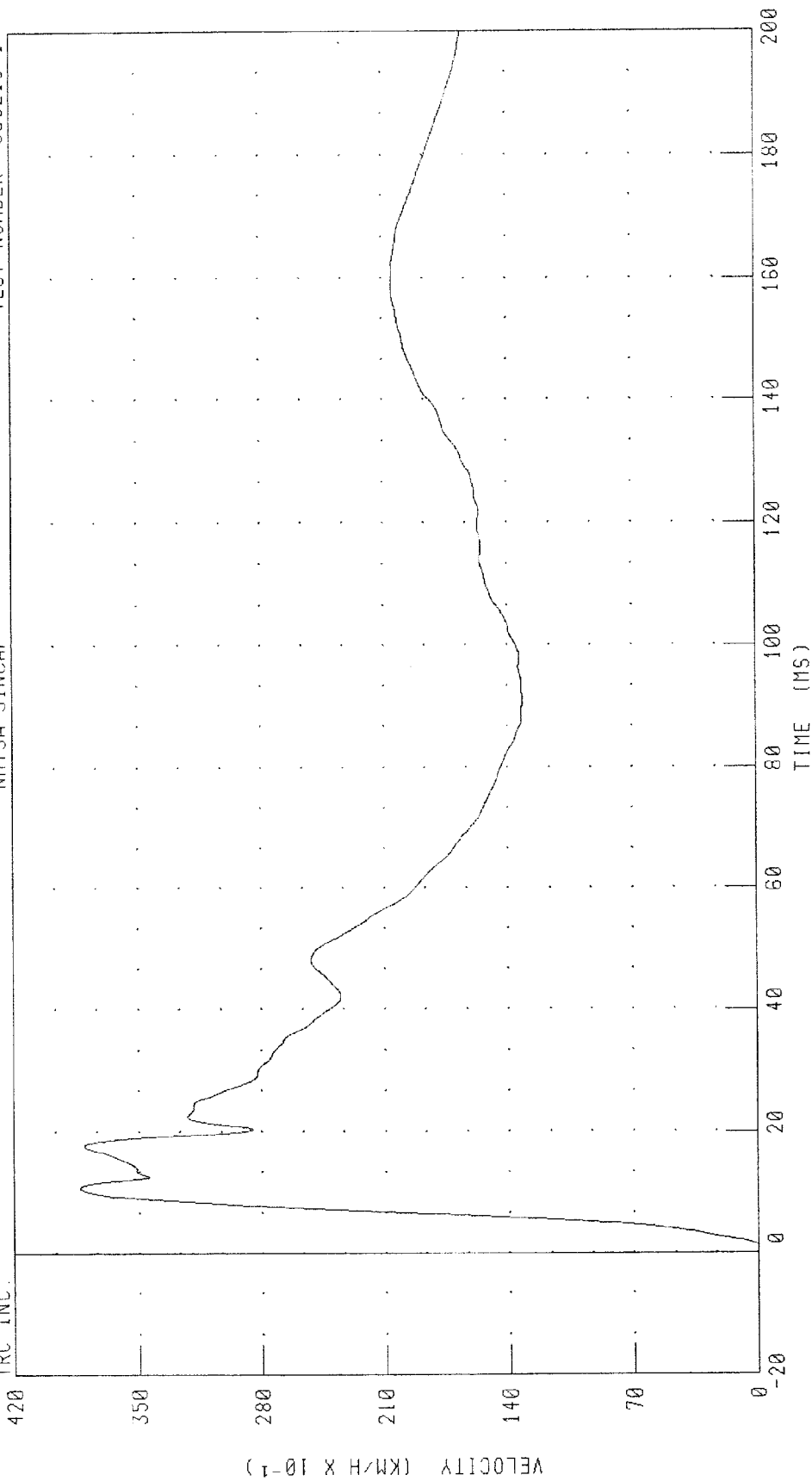
CHANNEL: LMBYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MIDDLE B-POST Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 38.30 KM/H @ 10.88 MS, -0.05 KM/H @ 0.80 MS

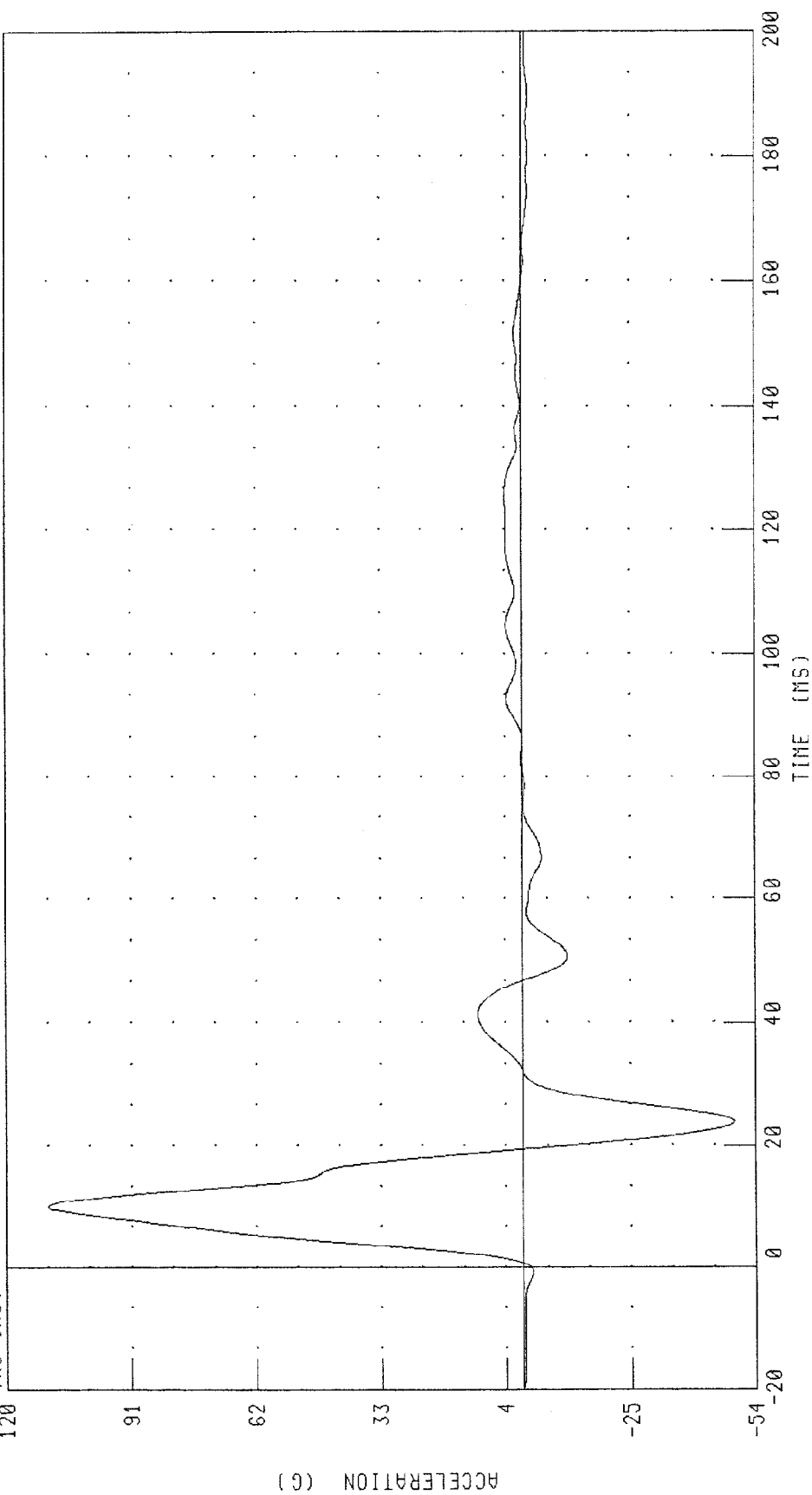
CHANNEL: LMBYV1 FILTER: CH CLASS 190

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
FRONT SEAT TRACK Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

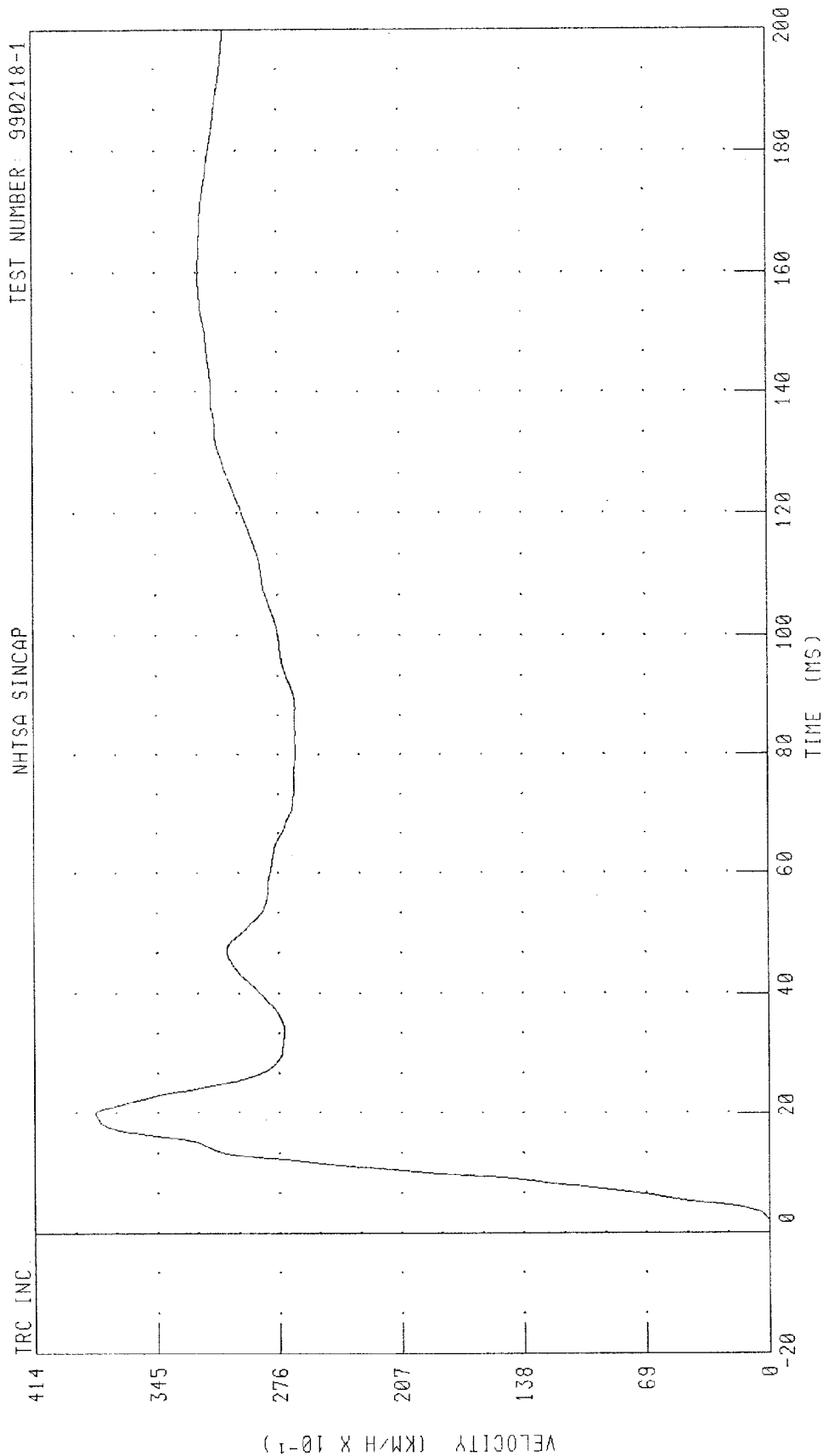
TRC INC.



PEAK DATA: 110.31 G @ 9.92 MS, -49.11 G @ 23.92 MS

CHANNEL: LFTY01 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
FRONT SEAT TRACK Y-AXIS VELOCITY



CHANNEL: LFTYV1 FILTER: CH. CLASS 180 PEAK DATA: 38.02 KM/H @ 20.00 MS; -0.02 KM/H @ 1.20 MS

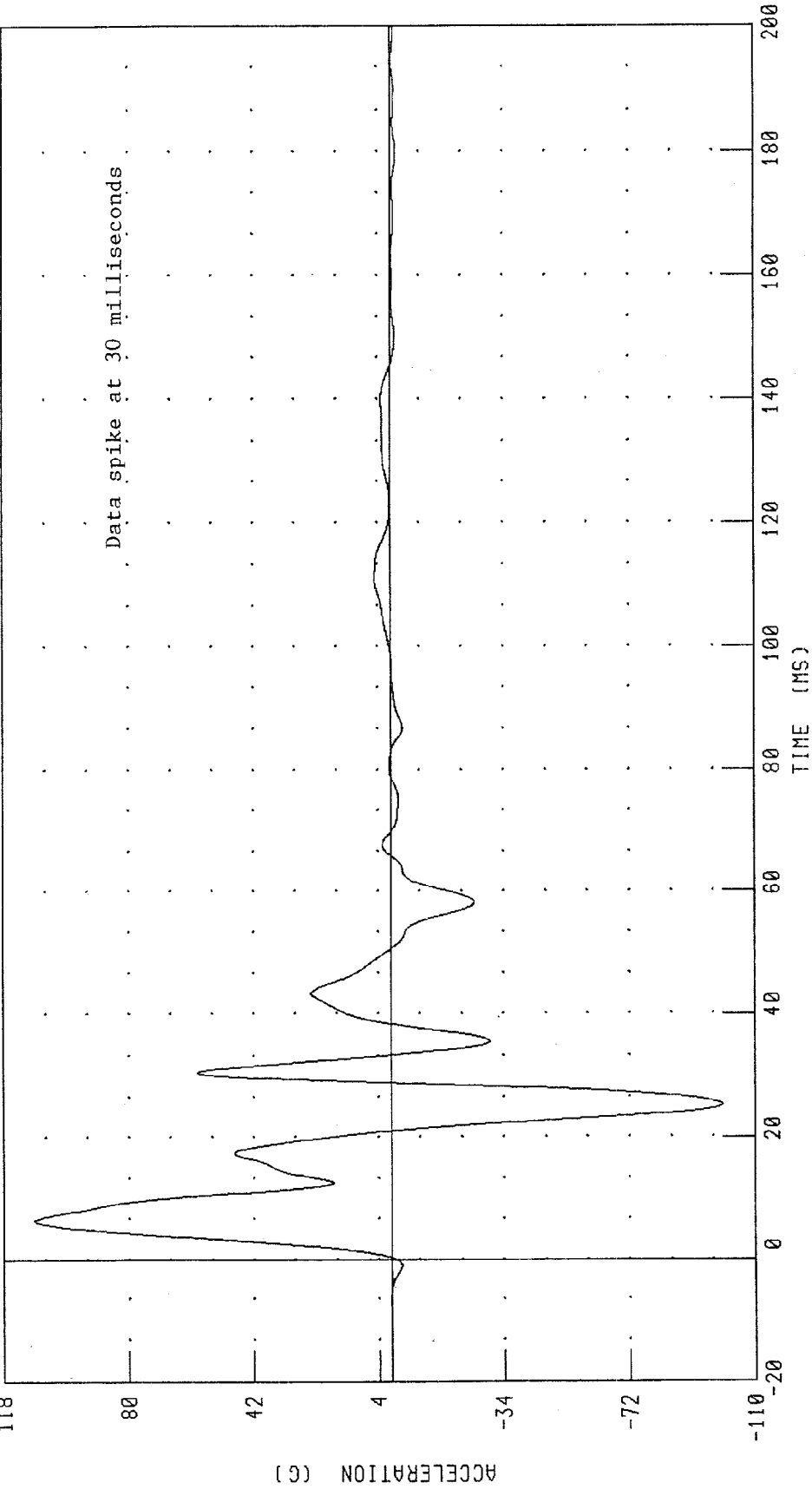
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

REAR SEAT TRACK Y-AXIS ACCELERATION

TRC INC.

NHTSA SINCAP

TEST NUMBER: 990218-1



PEAK DATA: 108.72 G @ 6.40 MS, -100.38 G @ 25.28 MS

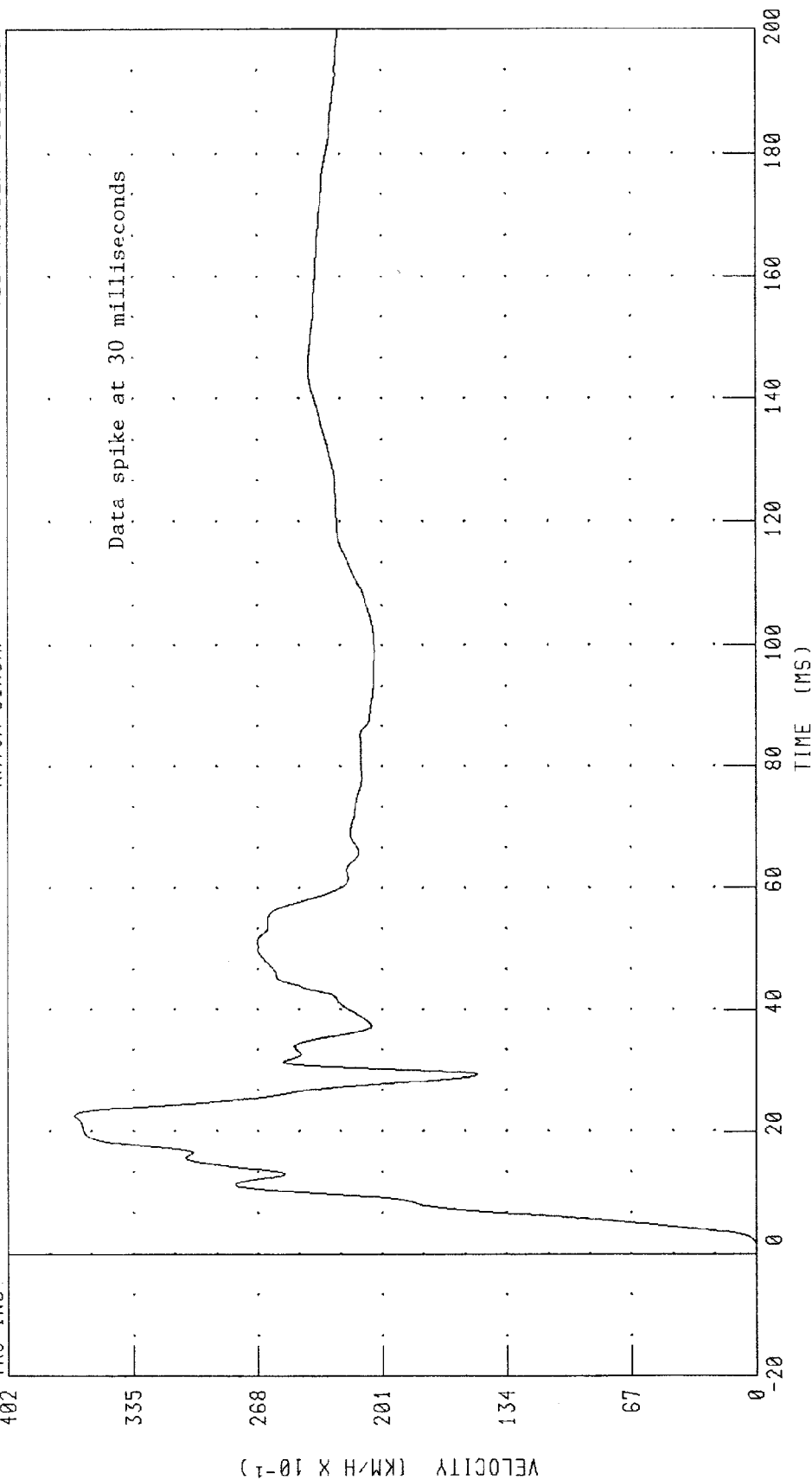
CHANNEL: LRTYG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 REAR SEAT TRACK Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

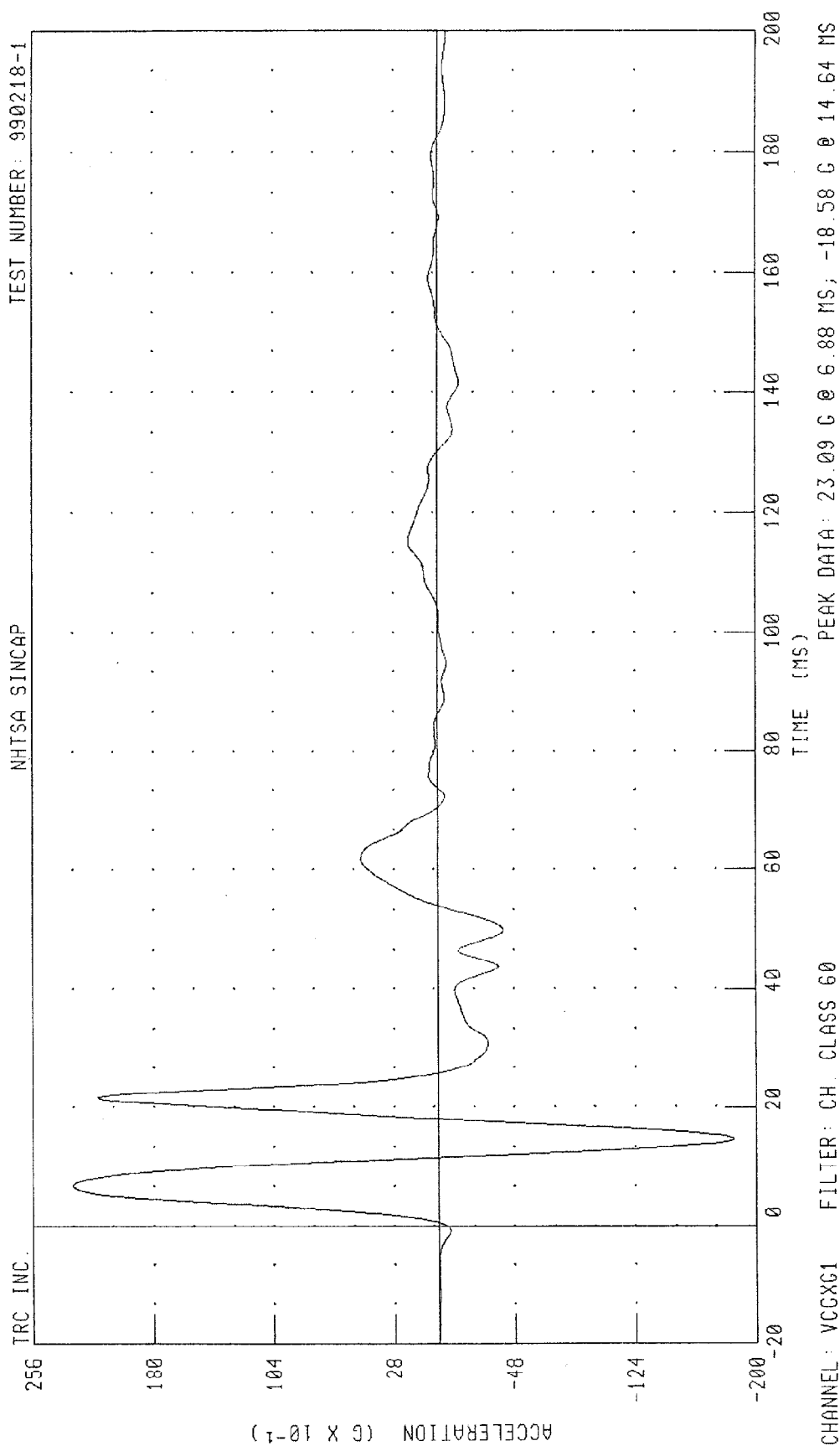
TRC INC.



PEAK DATA: 36.62 KM/H @ 22.72 MS, -0.02 KM/H @ 1.04 MS

CHANNEL: LRTYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY X-AXIS ACCELERATION

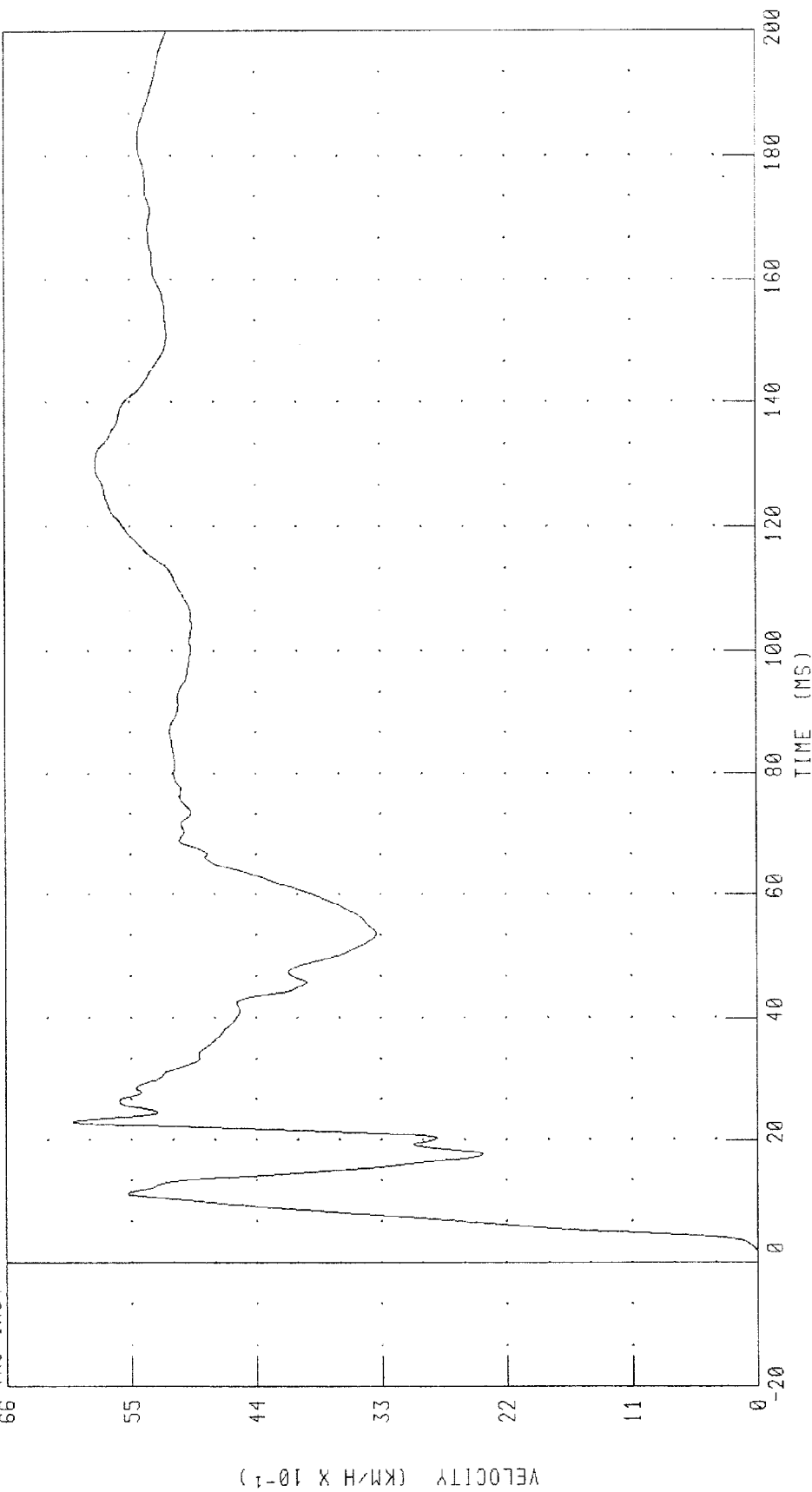


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

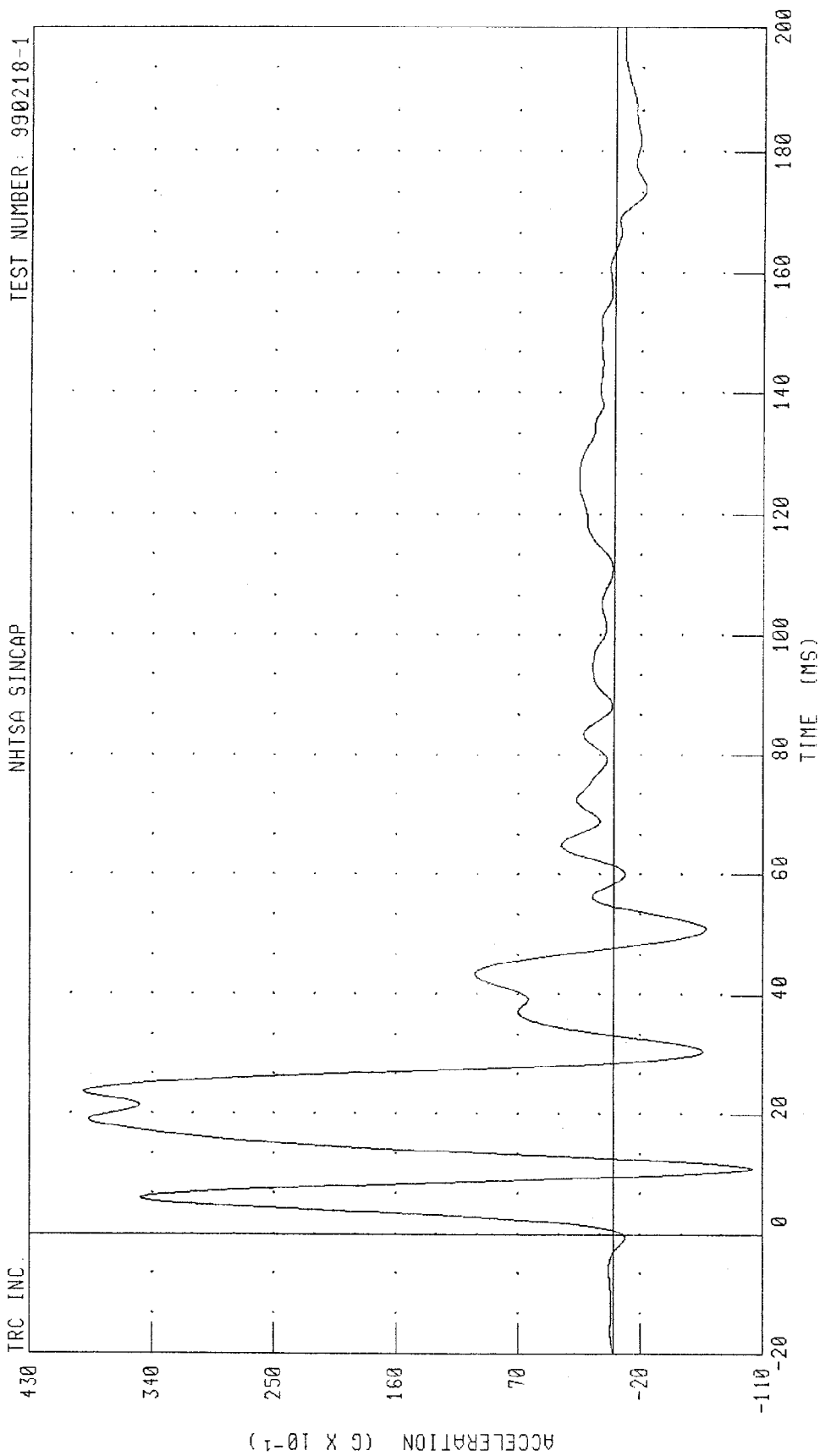
TRC INC.



PEAK DATA: 6.02 KM/H @ 23.12 MS, -0.01 KM/H @ 1.36 MS

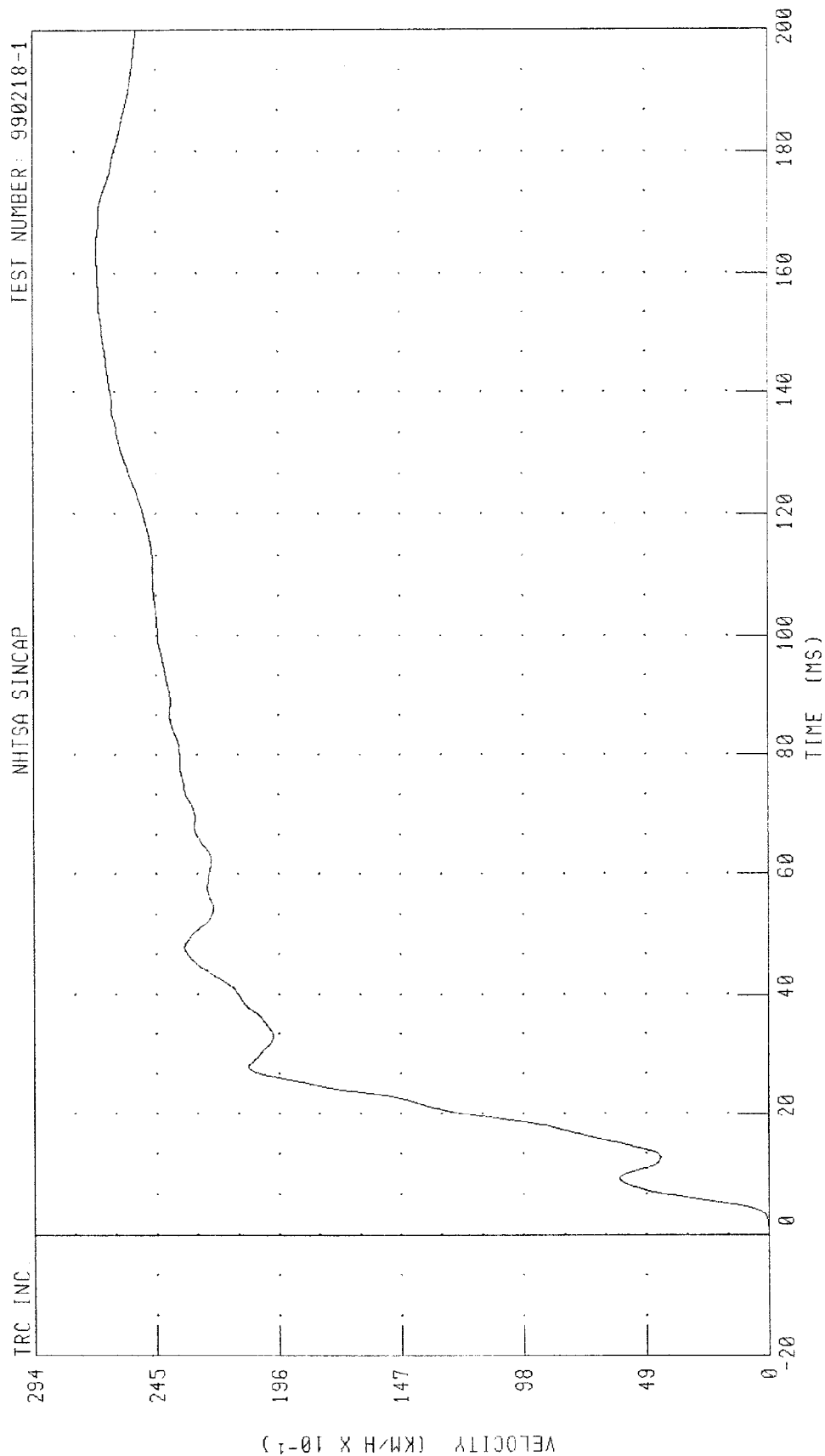
CHANNEL: VCGXV1 FILTER: CH CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY Y-AXIS ACCELERATION



CHANNEL: VCCYC1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY Y-AXIS VELOCITY



PEAK DATA: 26.88 KM/H @ 162.32 MS; 0.00 KM/H @ 0.00 MS

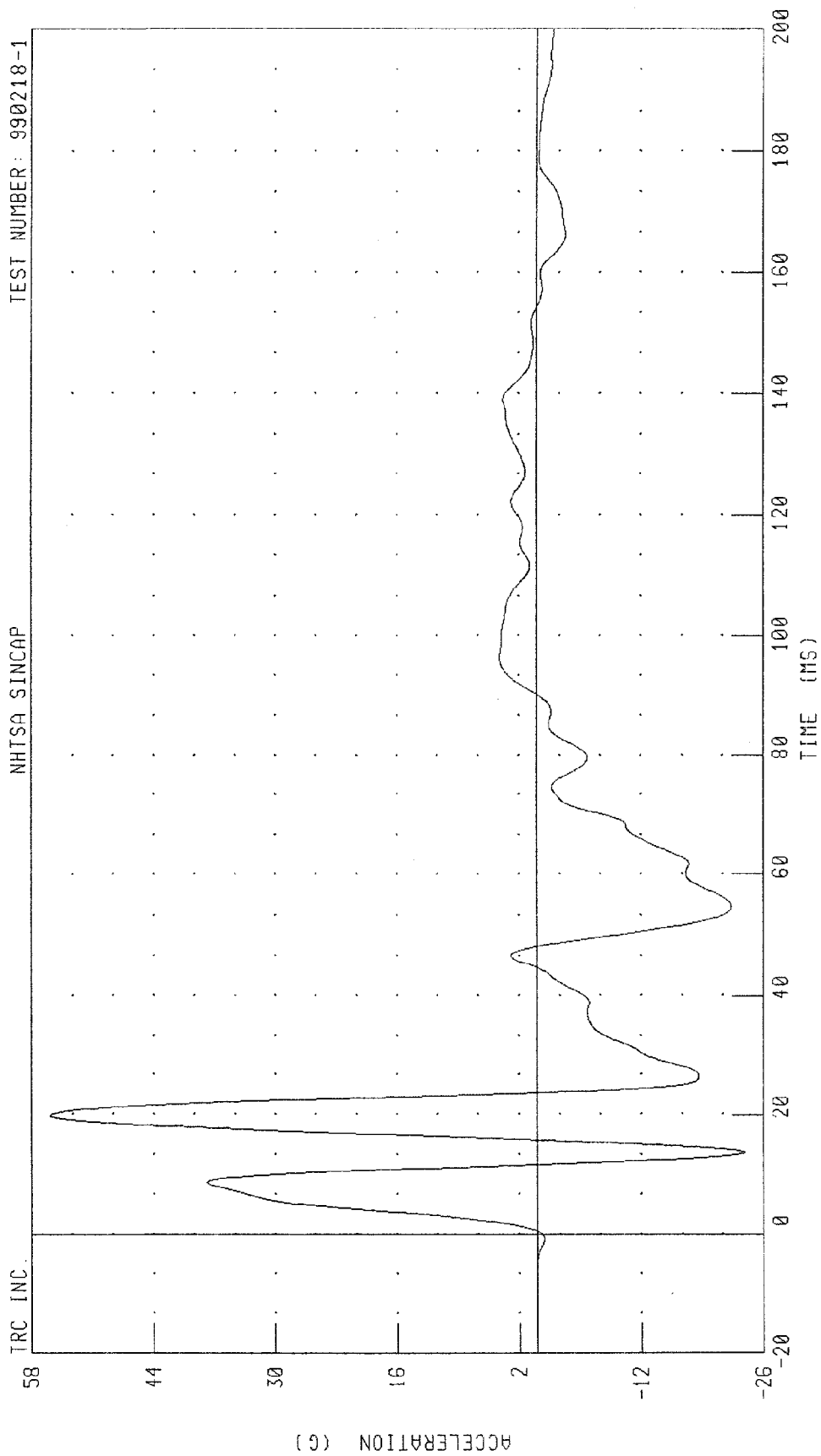
CHANNEL: VCCYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 990218-1

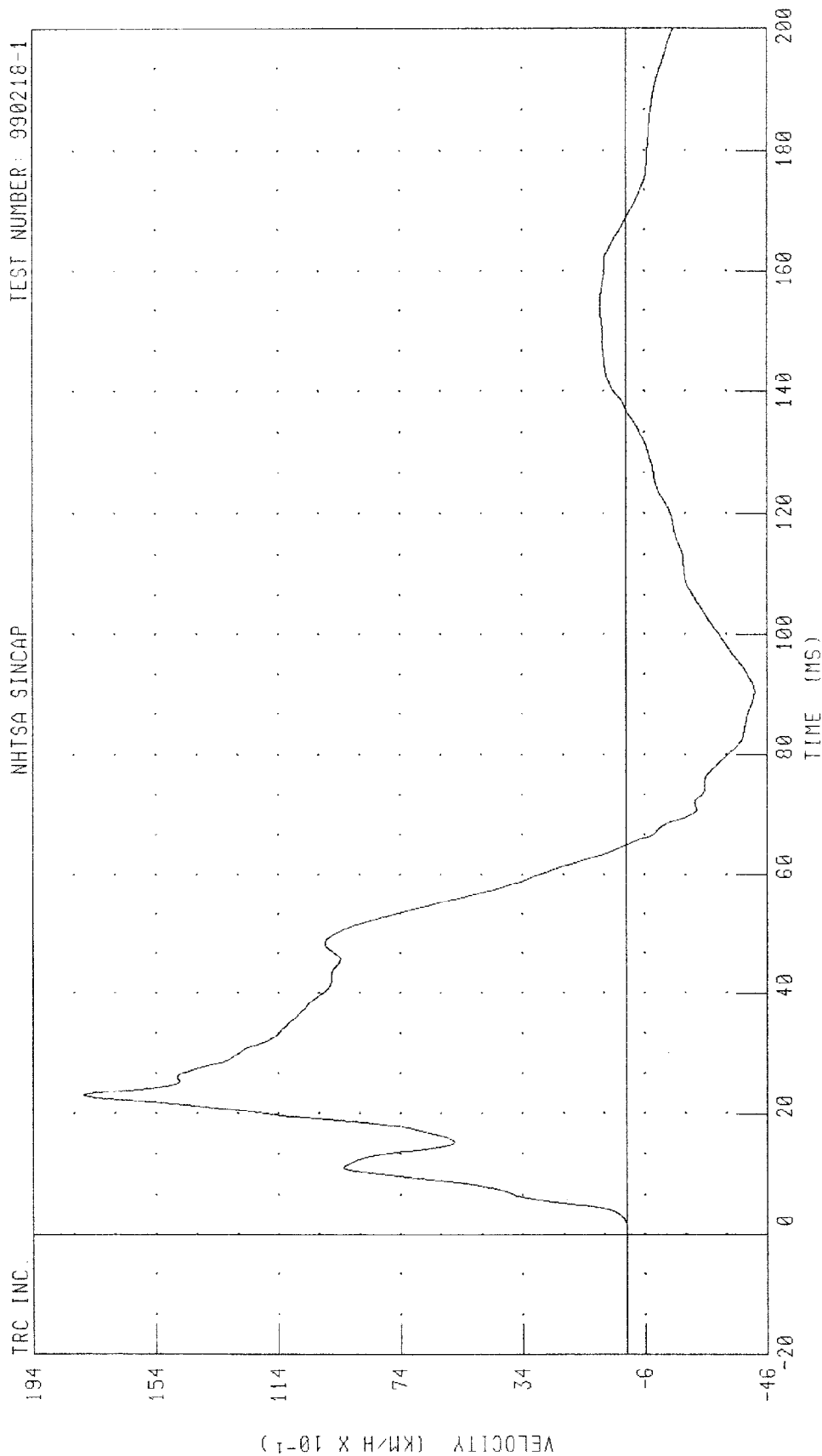
NHTSA SINCAP

TRC INC.



CHANNEL: VCCZG1 FILTER: CH. CLASS 60

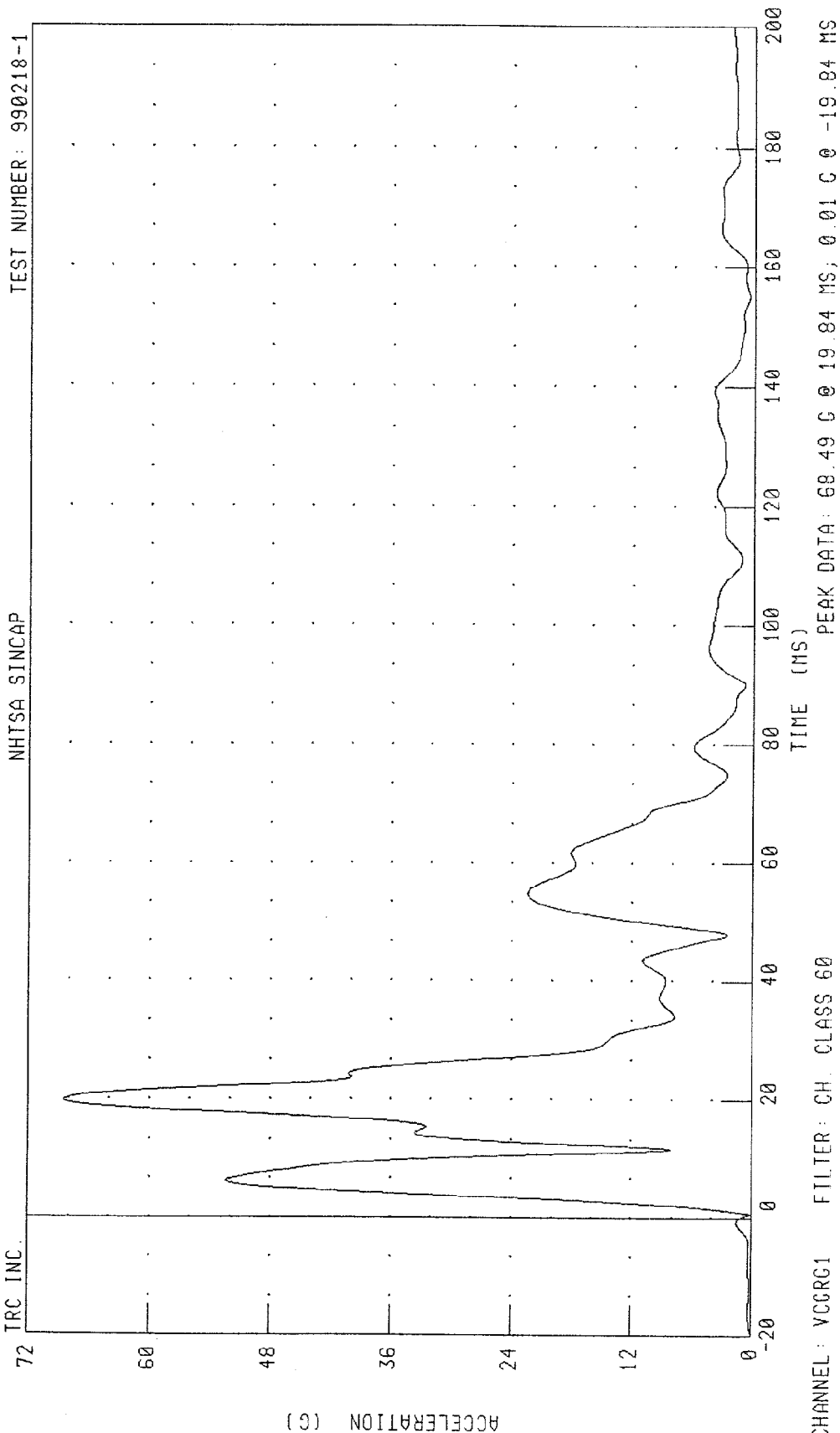
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY Z-AXIS VELOCITY



CHANNEL: VCOZV1 FILTER: CH. CLASS 180

PEAK DATA: 17.75 KM/H @ 23.28 MS, -4.19 KM/H @ 90.48 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION



MDB Instrumentation Plots

Acceleration Data - Filter Class 60

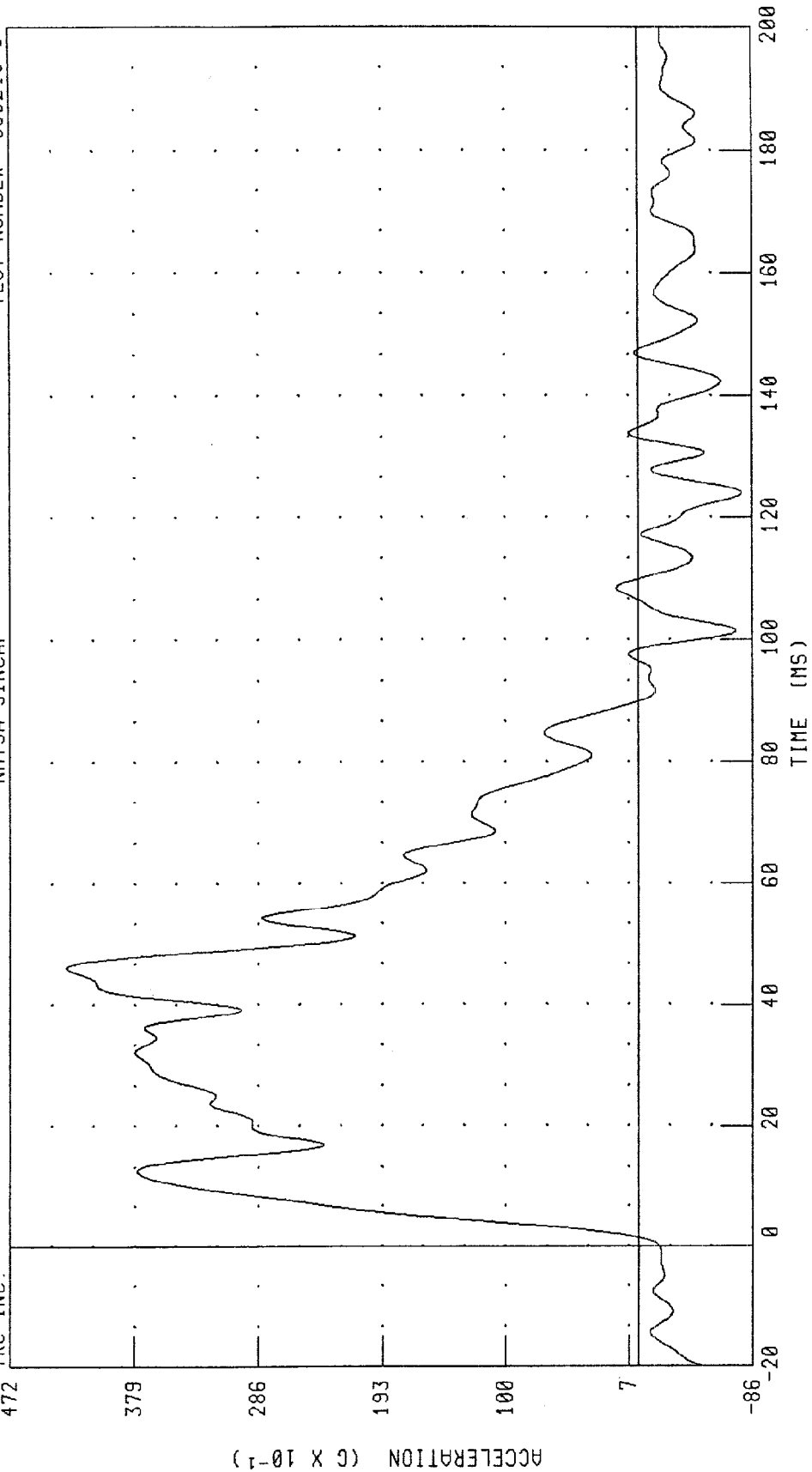
Integration Data - Filter Class 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 MOVING DEFORMABLE BARRIER CENTER OF GRAVITY X-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



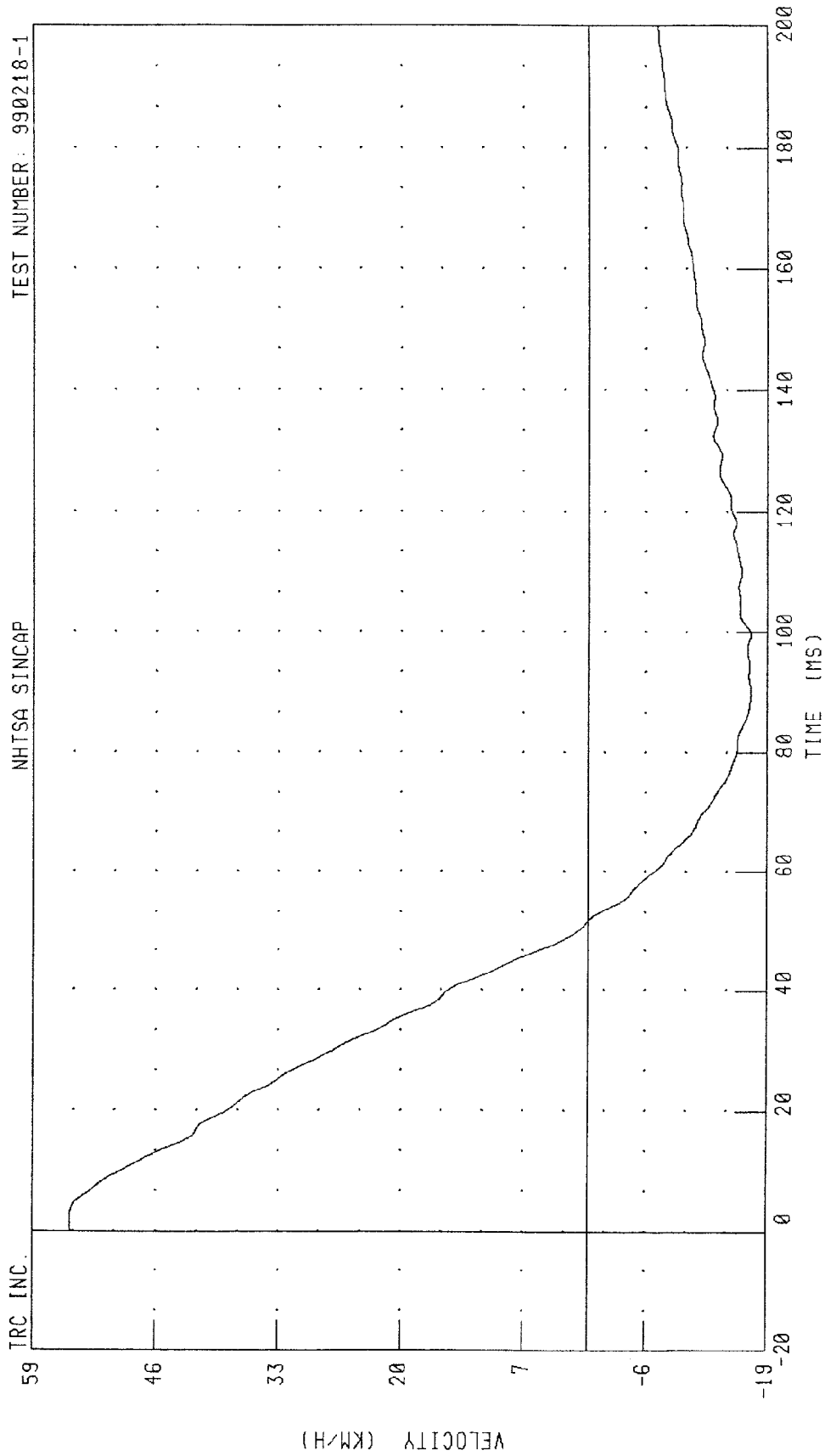
PEAK DATA: 43.04 G @ 46.08 MS; -7.84 G @ 124.08 MS

CHANNEL: BCCXG1 FILTER: CH. CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 MOVING DEFORMABLE BARRIER CENTER OF GRAVITY X-AXIS VELOCITY

TEST NUMBER: 990218-1

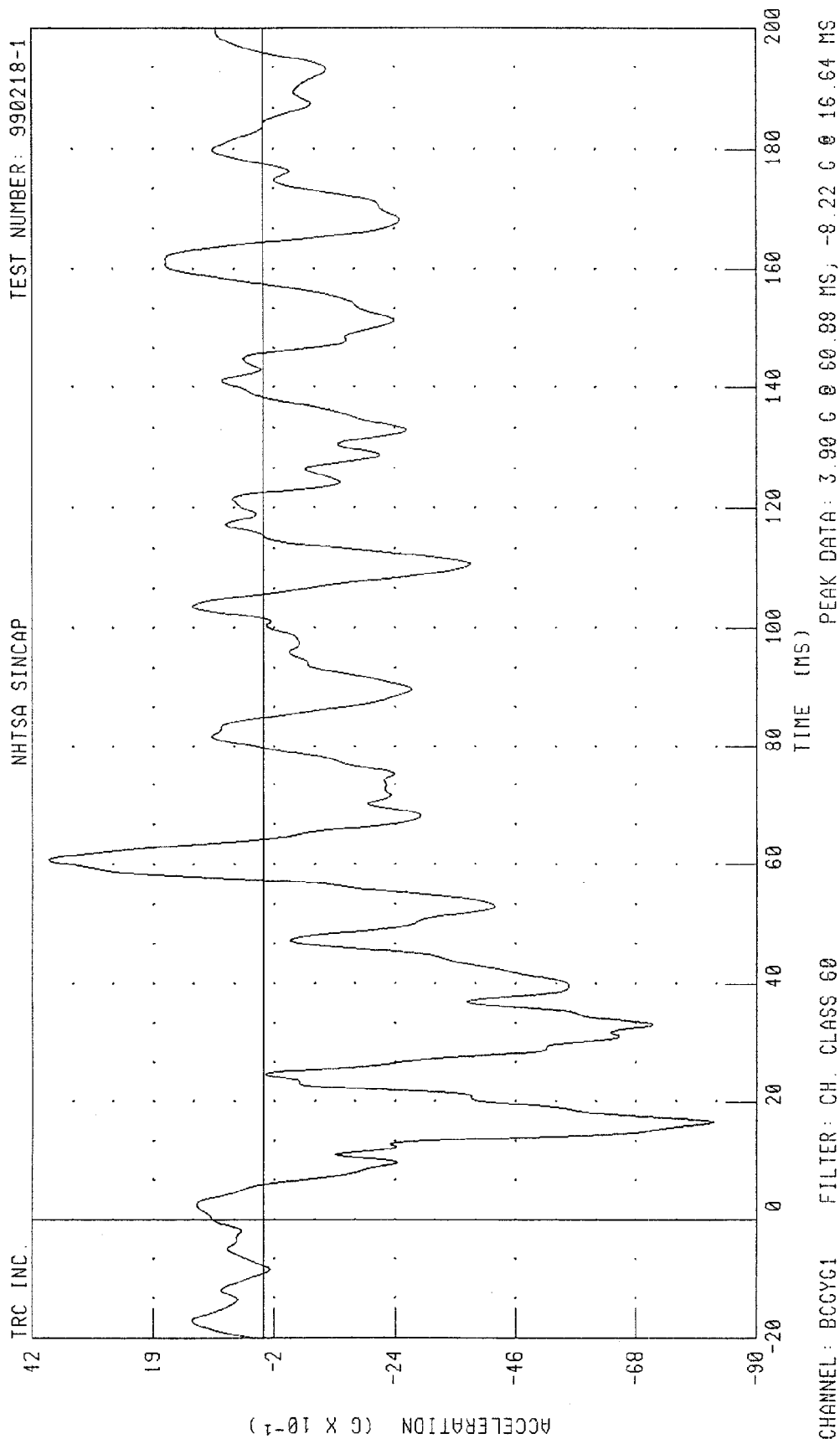
NHTSA SINCAP



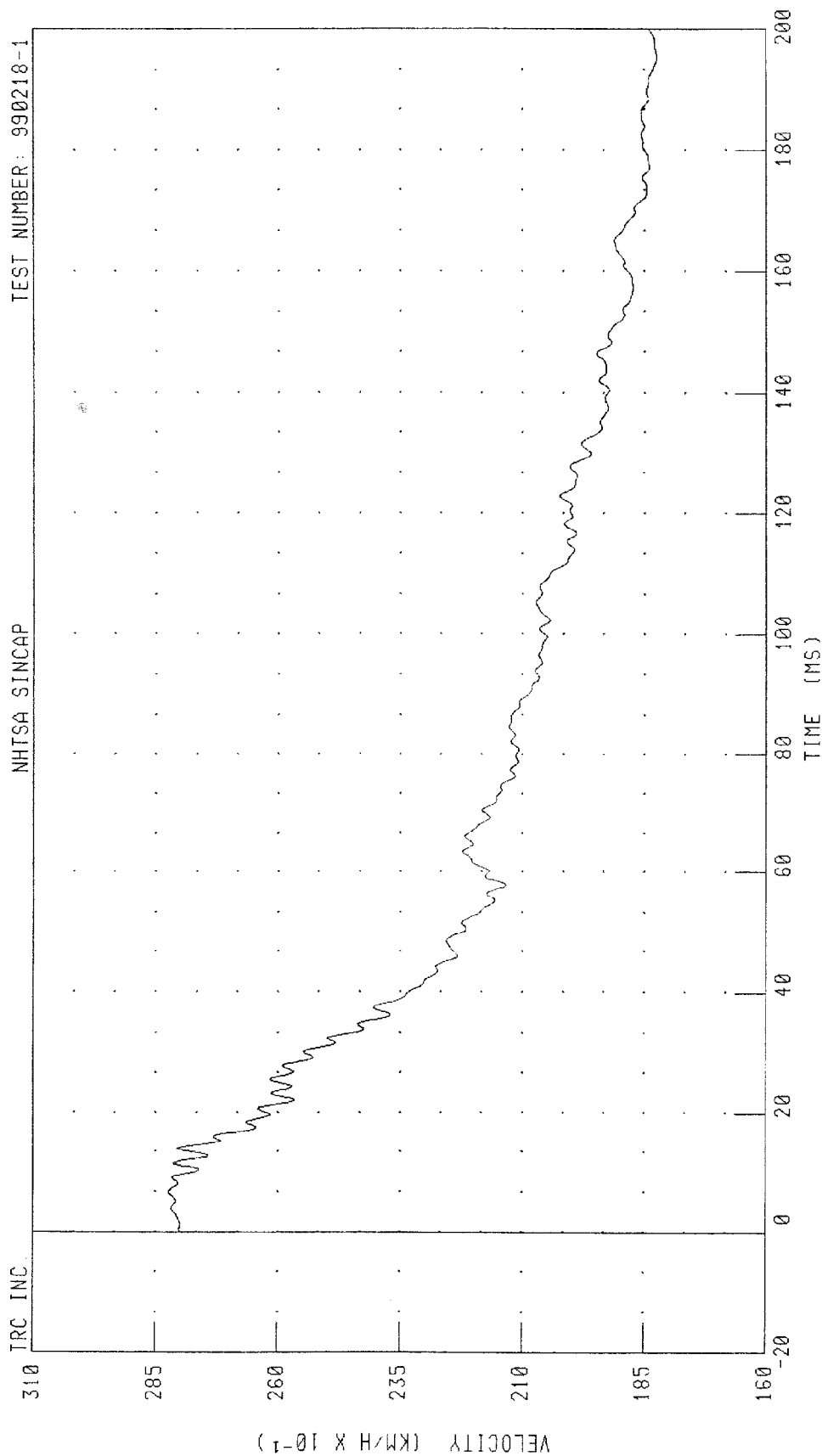
CHANNEL: BCCXV1 FILTER: CH. CLASS 180

PEAK DATA: 55.09 KM/H @ 2.00 MS; -17.27 KM/H @ 99.60 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER CENTER OF GRAVITY Y-AXIS ACCELERATION



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER CENTER OF GRAVITY Y-AXIS VELOCITY



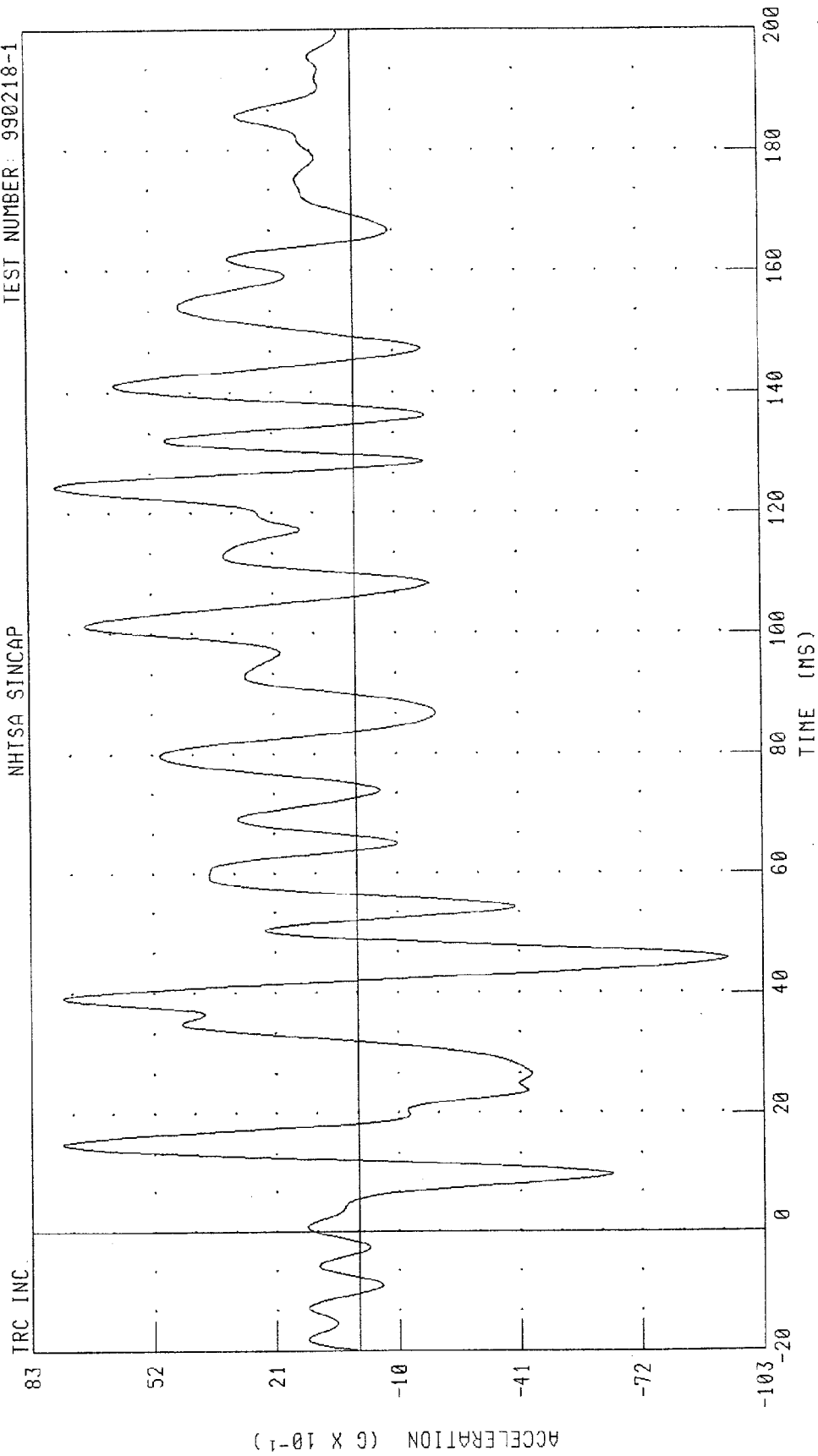
CHANNEL: BCCYV1 FILTER: CH. CLASS 180

PEAK DATA: 28.24 KM/H @ 6.64 MS; 18.24 KM/H @ 195.36 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 MOVING DEFORMABLE BARRIER CENTER OF GRAVITY Z-AXIS ACCELERATION

TEST NUMBER: 990218-1

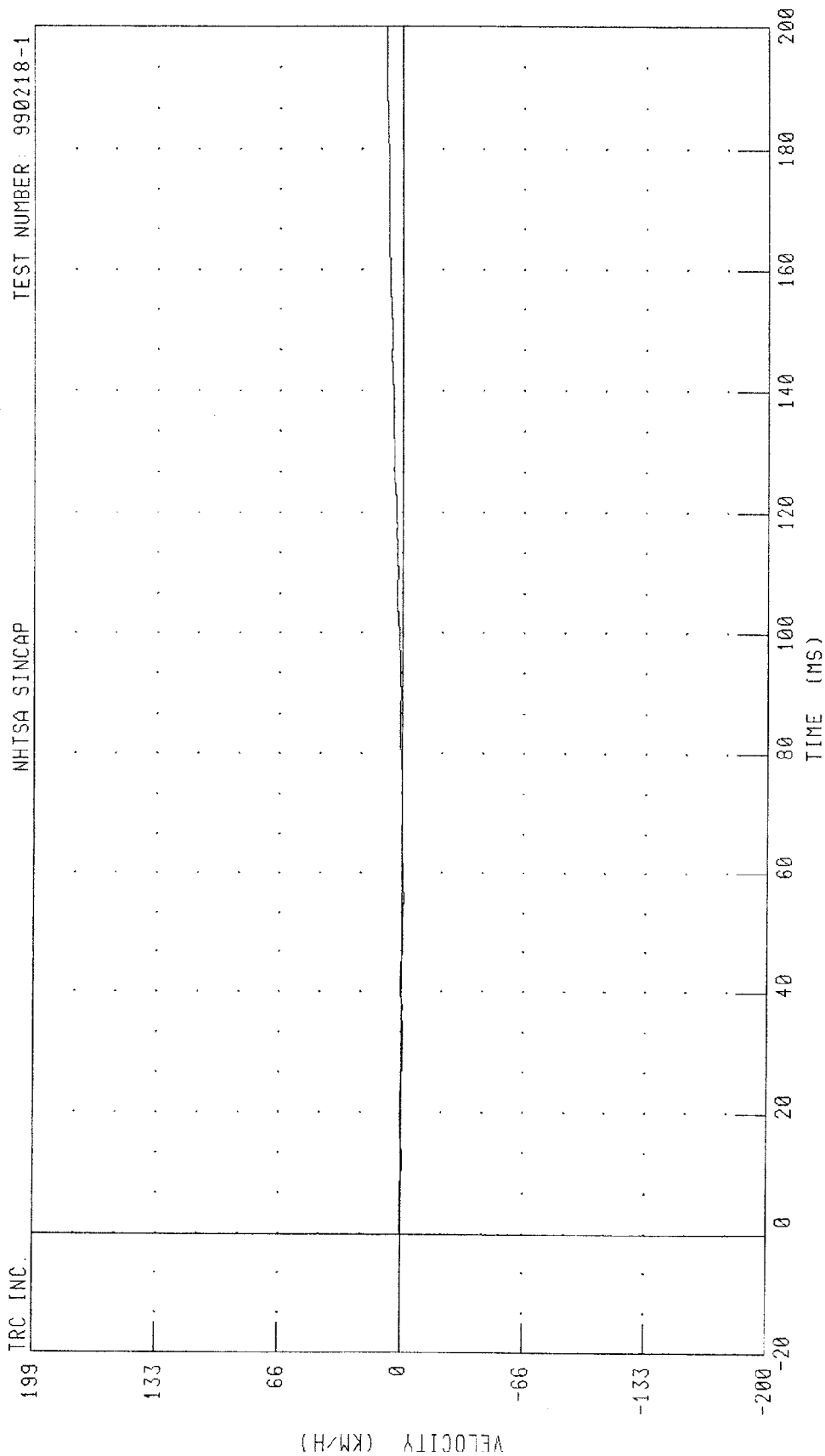
NHTSA SINCAP



PEAK DATA: 7.61 G @ 124.40 MS, -9.41 G @ 45.60 MS

CHANNEL: BCGZG1 FILTER: CH CLASS 60

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 MOVING DEFORMABLE BARRIER CENTER OF GRAVITY Z-AXIS VELOCITY



PEAK DATA: 8.27 KM/H @ 198.08 MS, -1.25 KM/H @ 55.60 MS

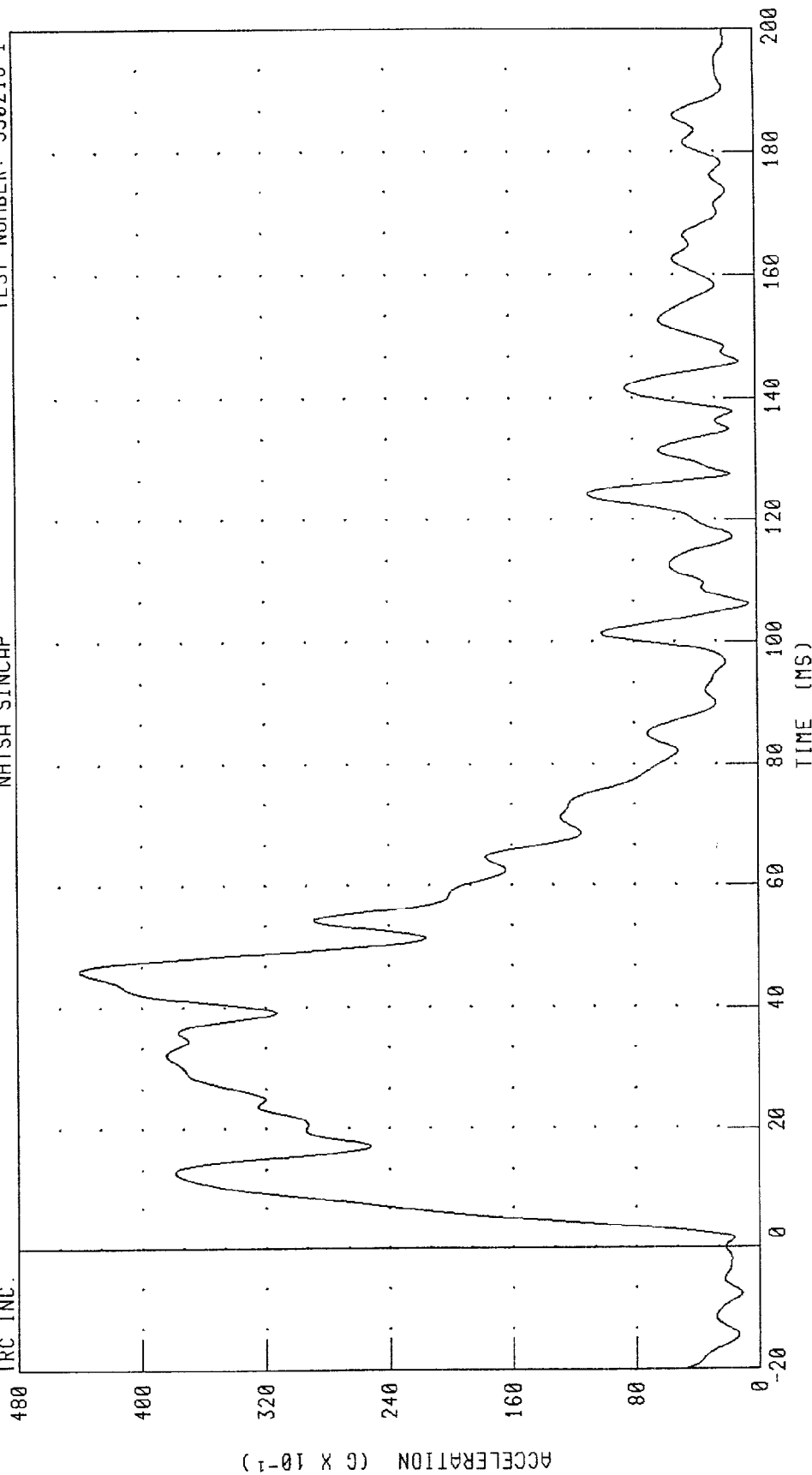
CHANNEL: BCGZV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER CENTER OF GRAVITY RESULTANT ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



CHANNEL: BCCRG1 FILTER: CH. CLASS 60

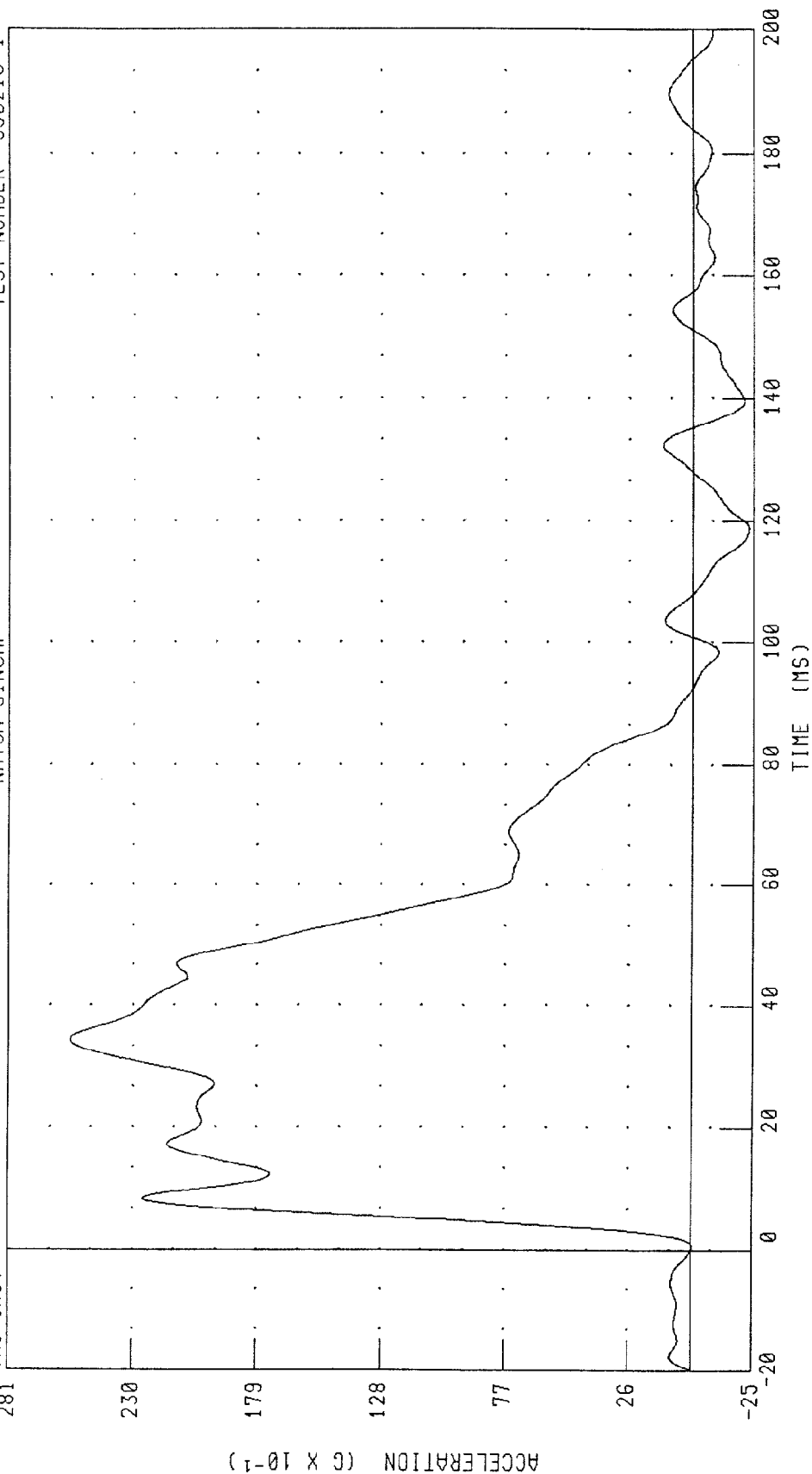
PEAK DATA: 44.03 G @ 46.00 MS, 0.54 G @ 106.16 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER REAR X-AXIS ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

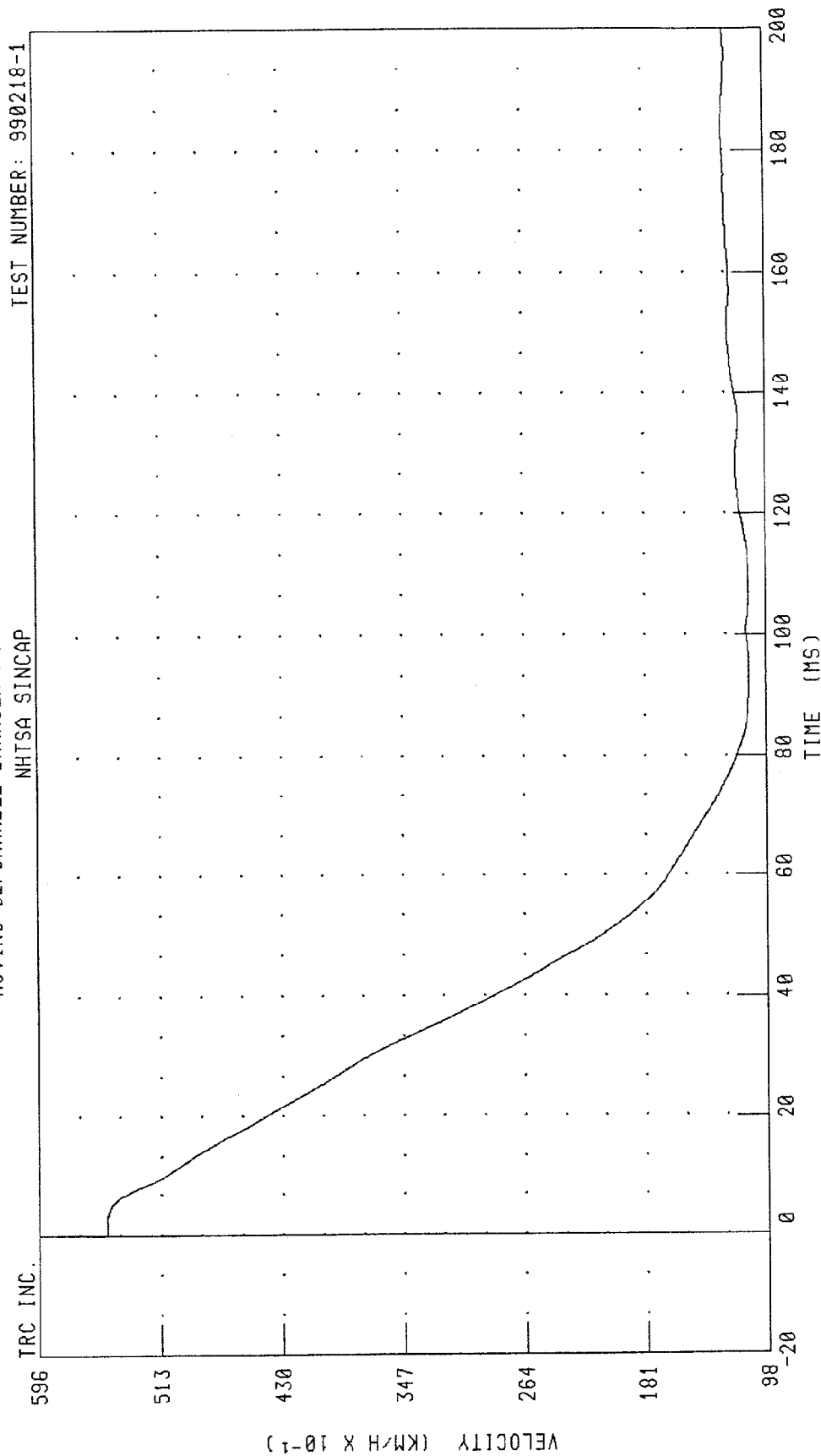
TRC INC.



CHANNEL: LRRXG1 FILTER: CH. CLASS 60

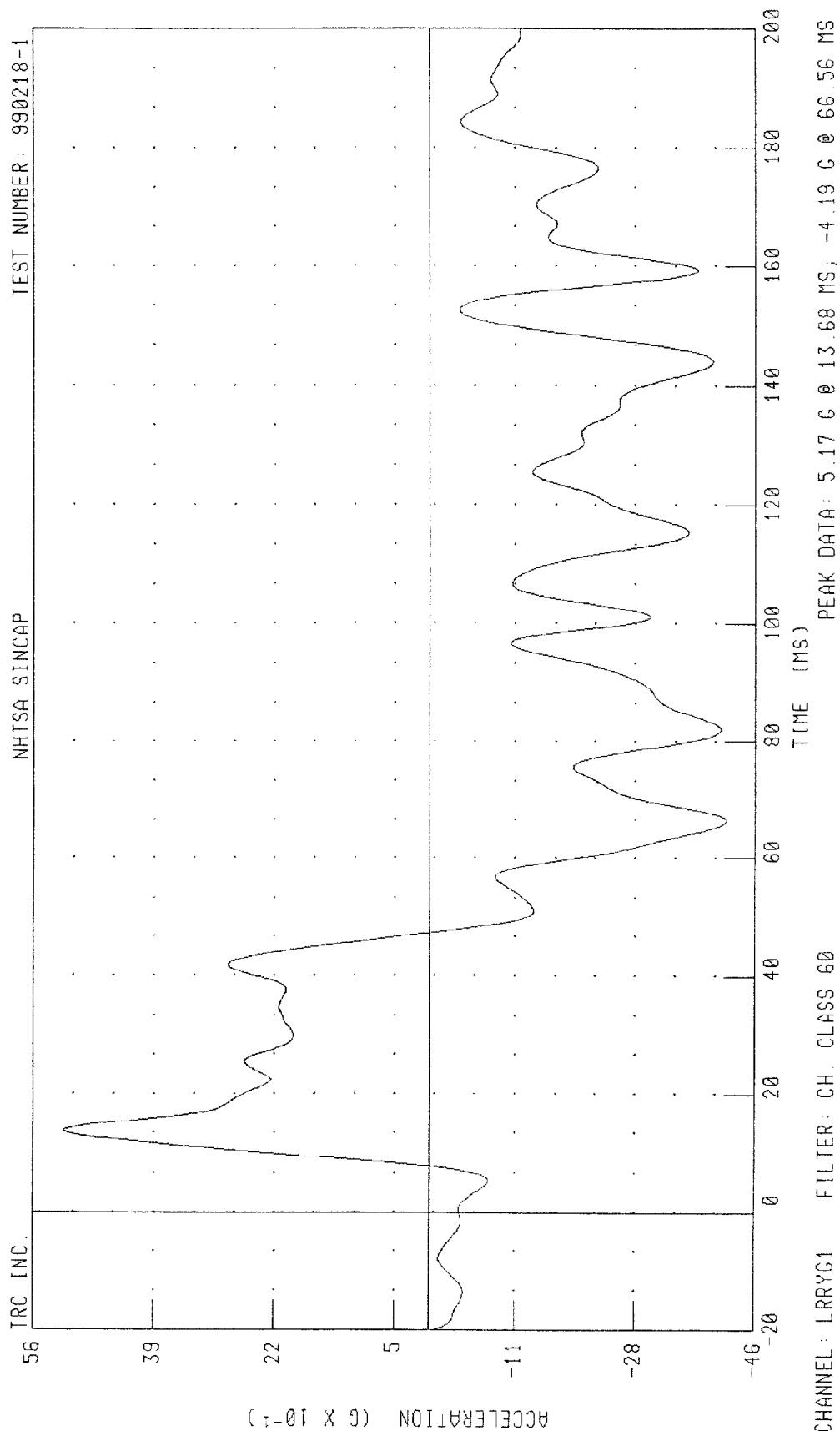
PEAK DATA: 25.56 G @ 34.40 MS, -2.31 G @ 118.72 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER REAR X-AXIS VELOCITY

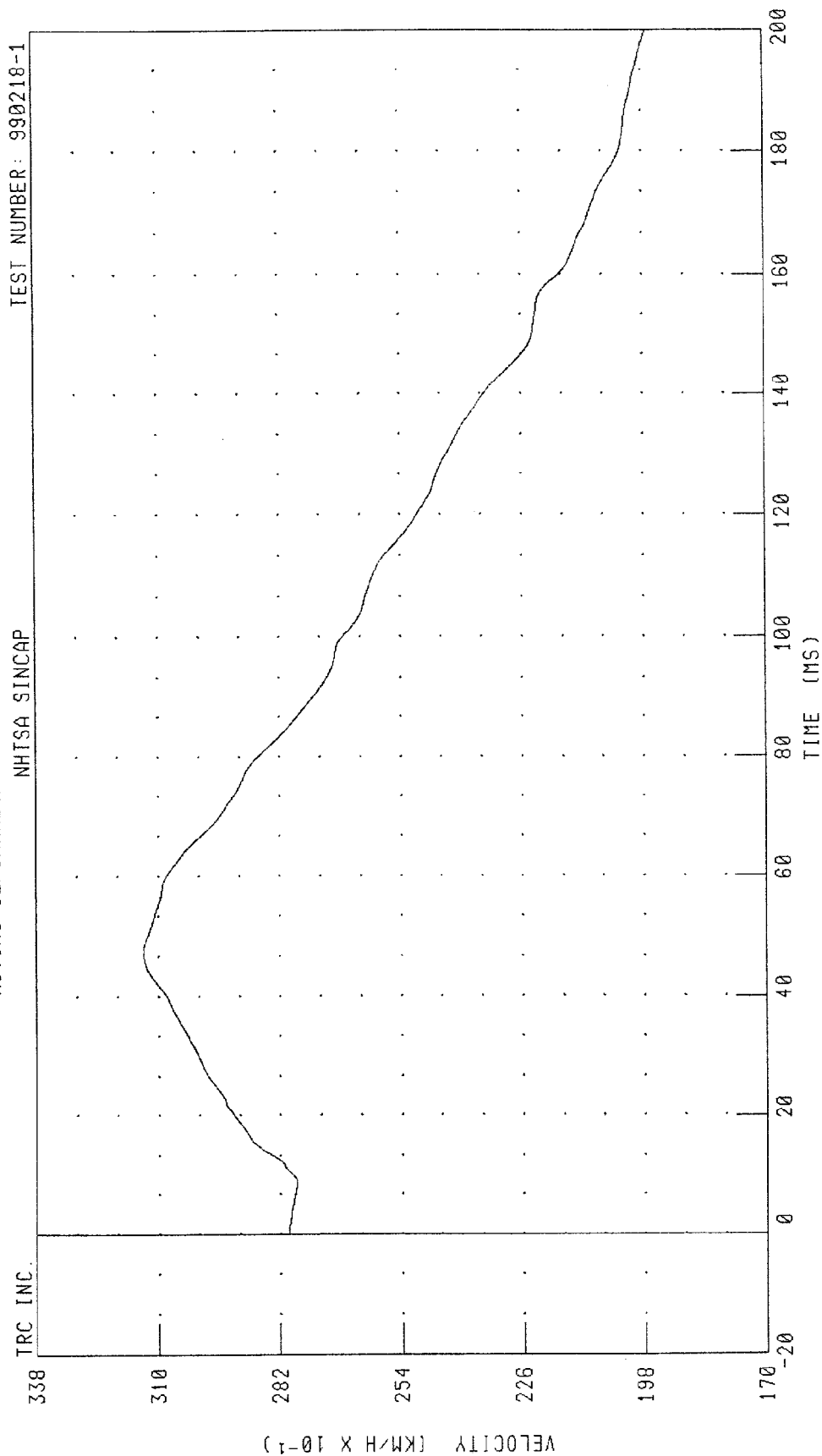


CHANNEL: LRRXY1 FILTER: CH. CLASS 180 PEAK DATA: 55.00 KM/H @ 0.00 MS; 10.97 KM/H @ 106.88 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER REAR Y-AXIS ACCELERATION



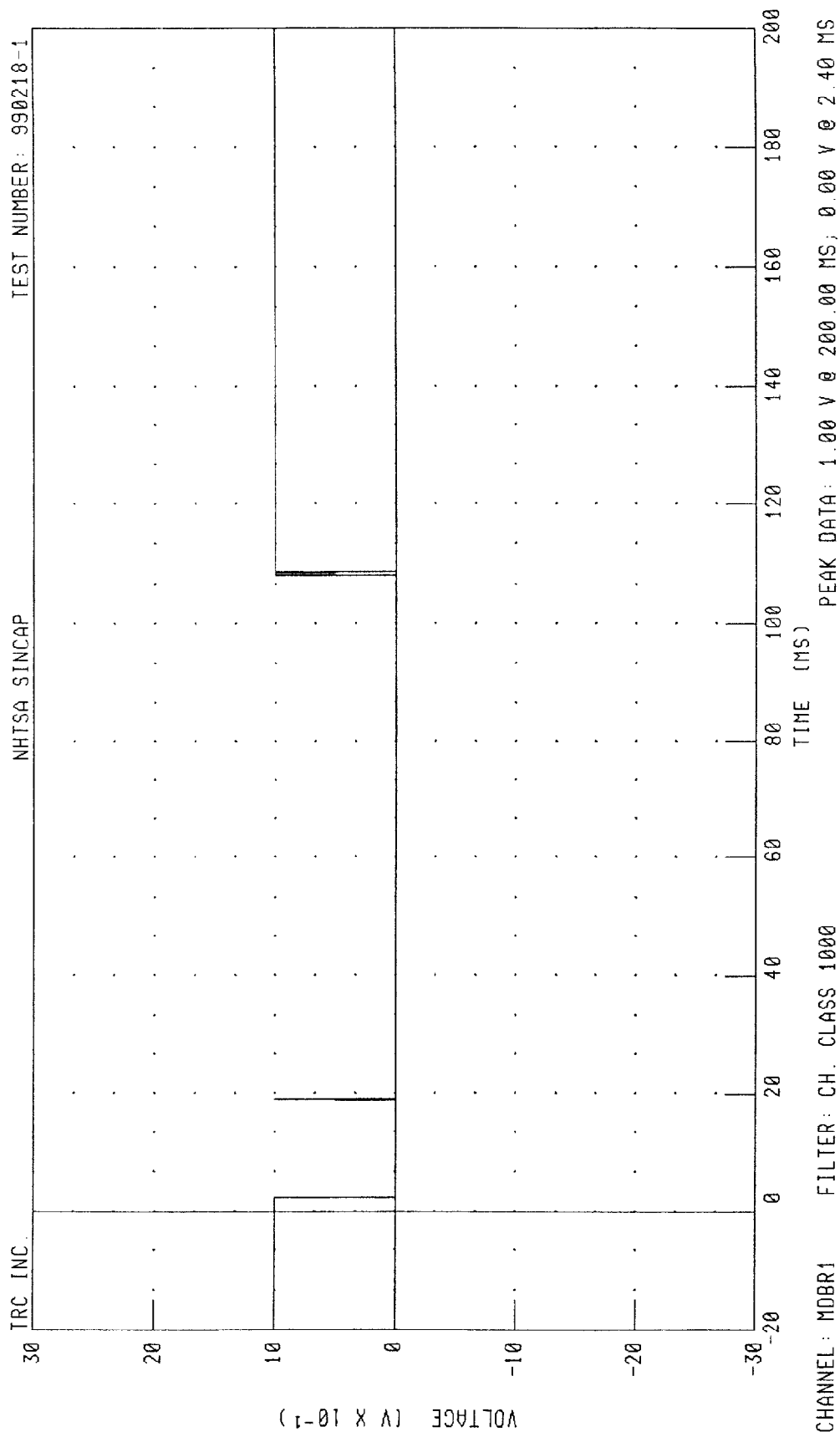
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
MOVING DEFORMABLE BARRIER REAR Y-AXIS VELOCITY



PEAK DATA: 31.35 KM/H @ 47.60 MS; 19.68 KM/H @ 200.00 MS

CHANNEL: LRRYV1 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 MDB RIGHT CONTACT SWITCH



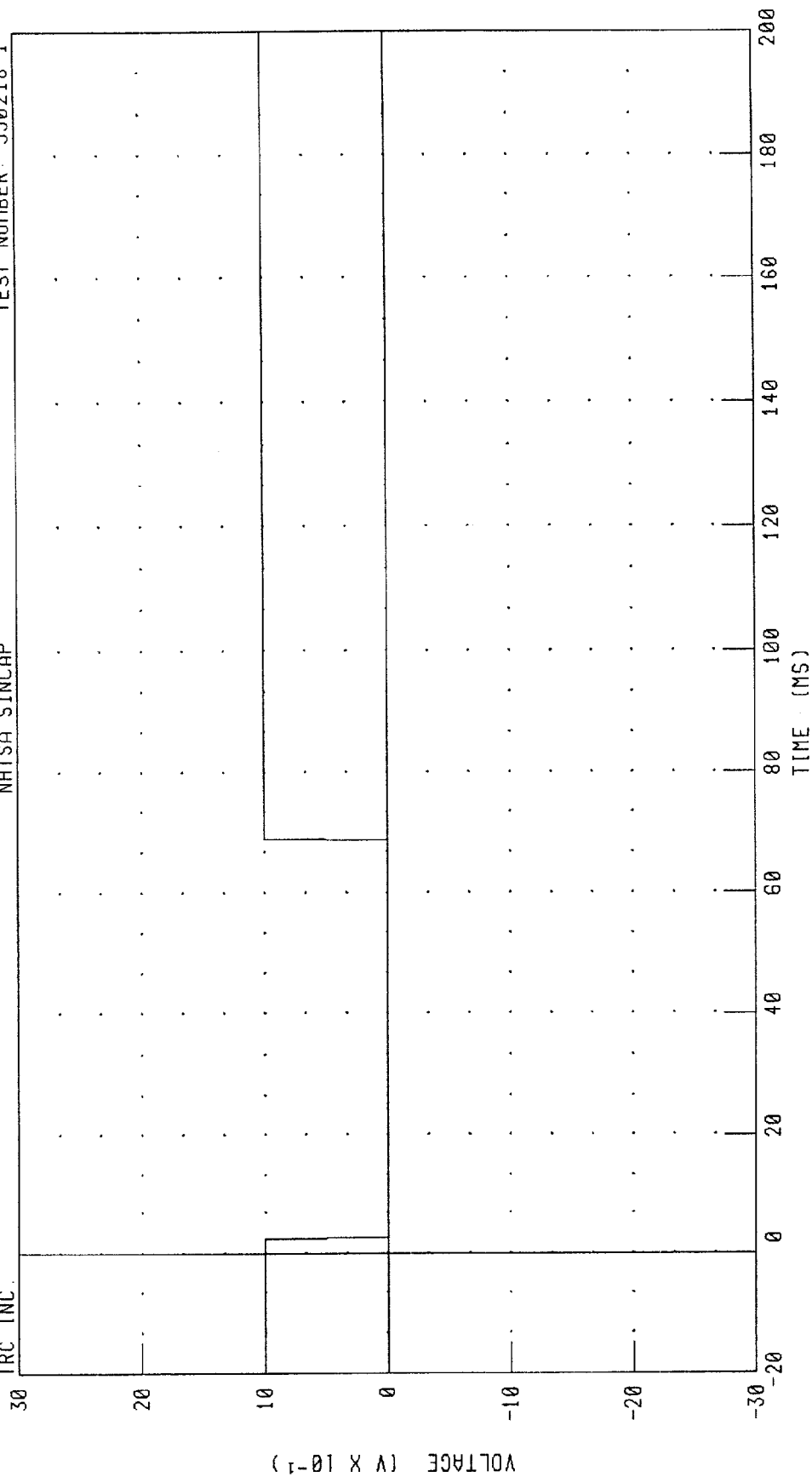
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

MDB LEFT CONTACT SWITCH

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



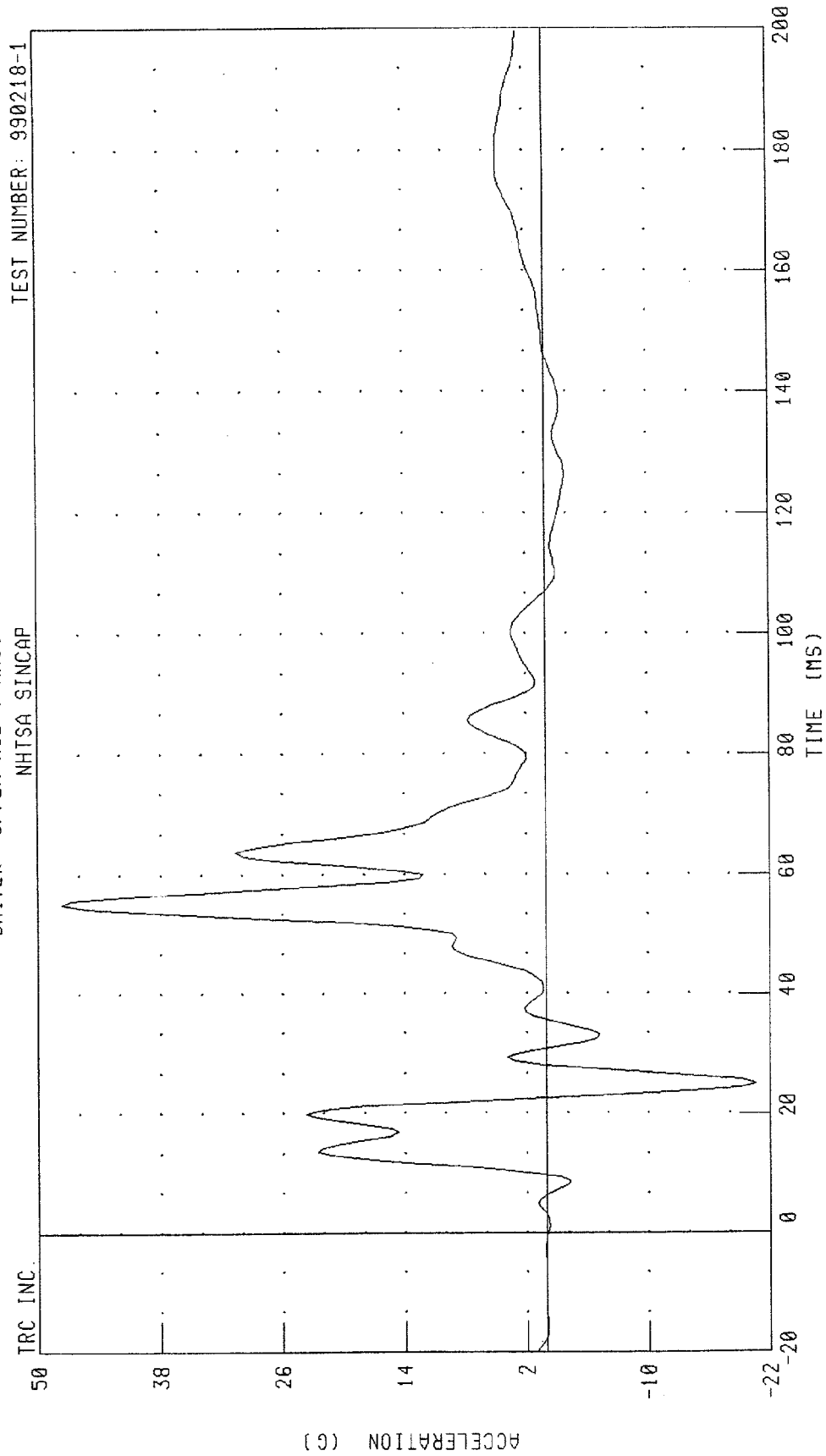
PEAK DATA: 1.00 V @ 200.00 MS; 0.00 V @ 2.48 MS

CHANNEL: MDBL1 FILTER: CH. CLASS 1000

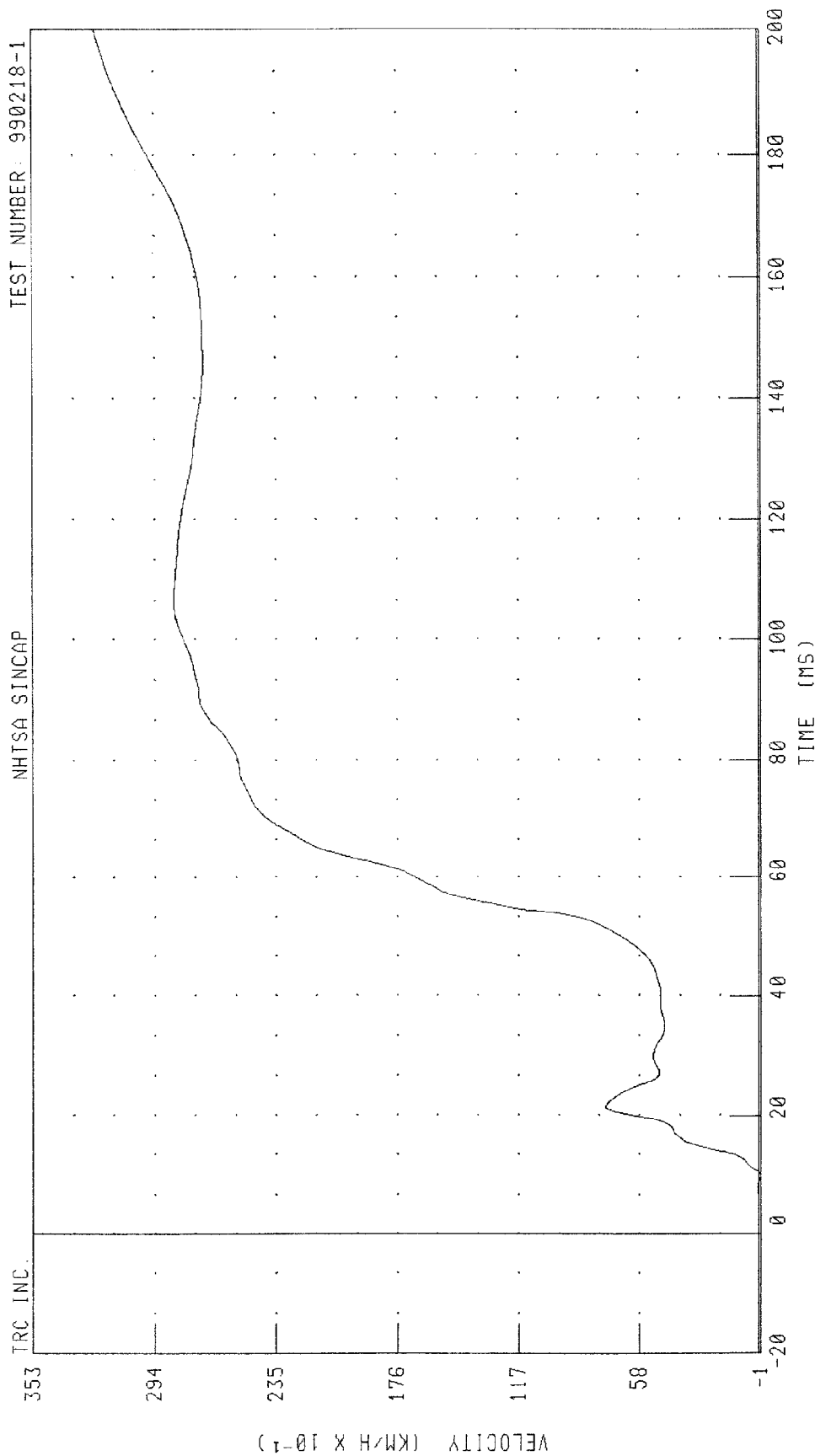
Driver and Passenger Dummy Instrumentation Plots

Acceleration Data - FIR Filtered

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER UPPER RIB Y-AXIS ACCELERATION

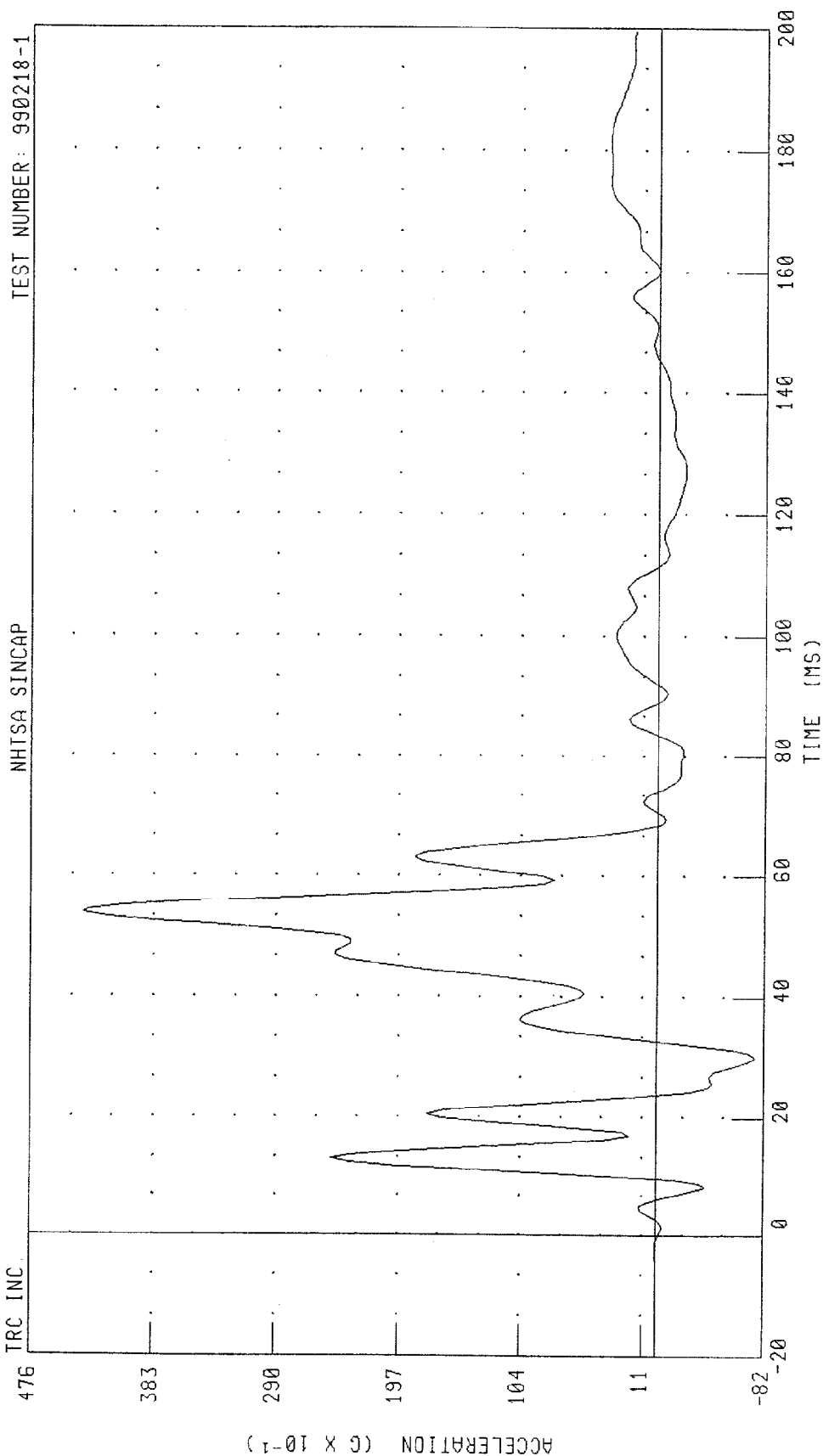


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER UPPER RIB Y-AXIS VELOCITY



CHANNEL: LURYV1 FILTER: CH. CLASS 180 PEAK DATA: 32 28 KM/H @ 200 00 MS; -0.12 KM/H @ 9 84 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER RIB Y-AXIS ACCELERATION



PEAK DATA: 43.61 G @ 53.75 MS, -7.52 G @ 30.00 MS

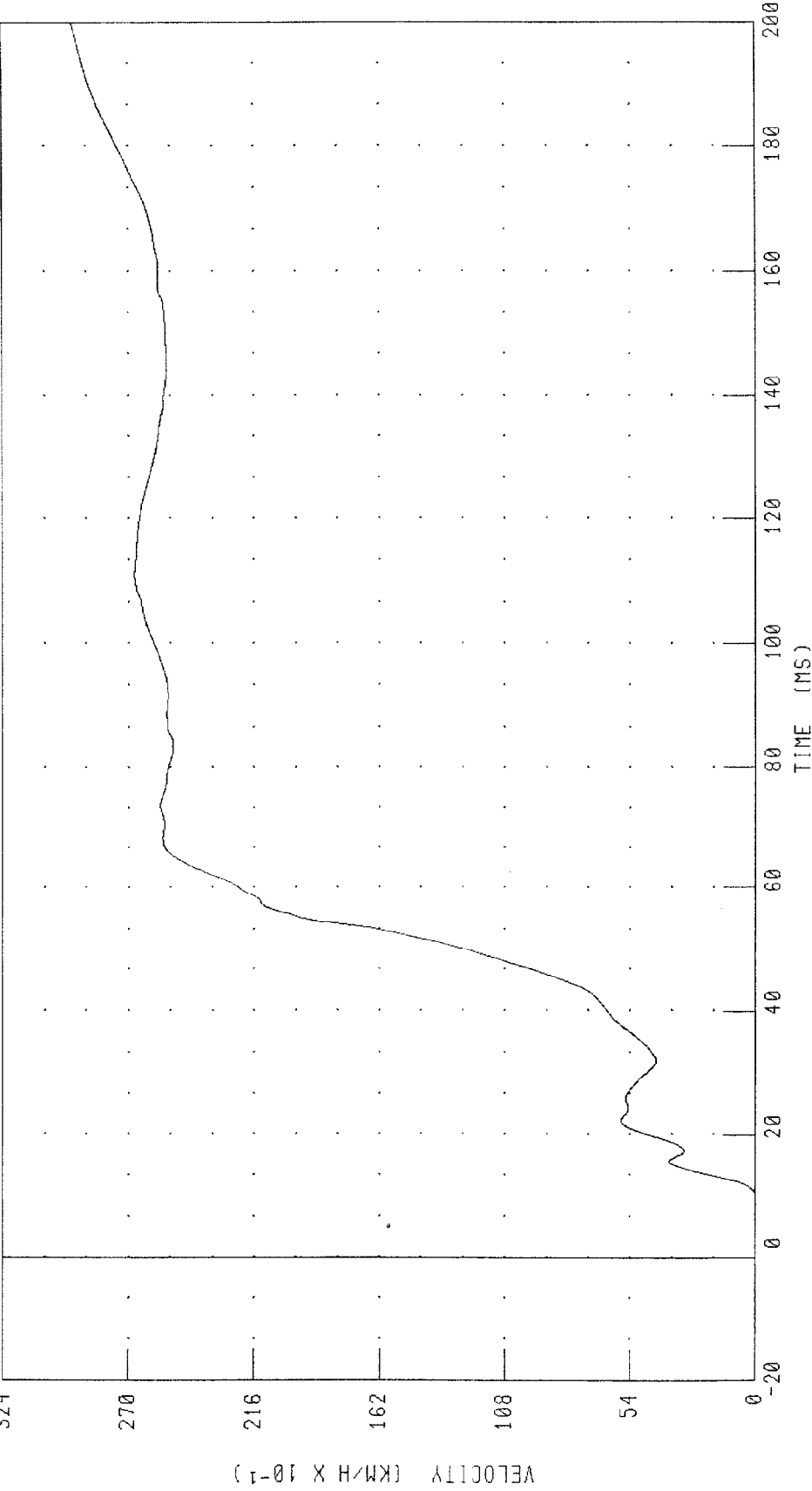
CHANNEL: LLRYG1 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER RIB Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

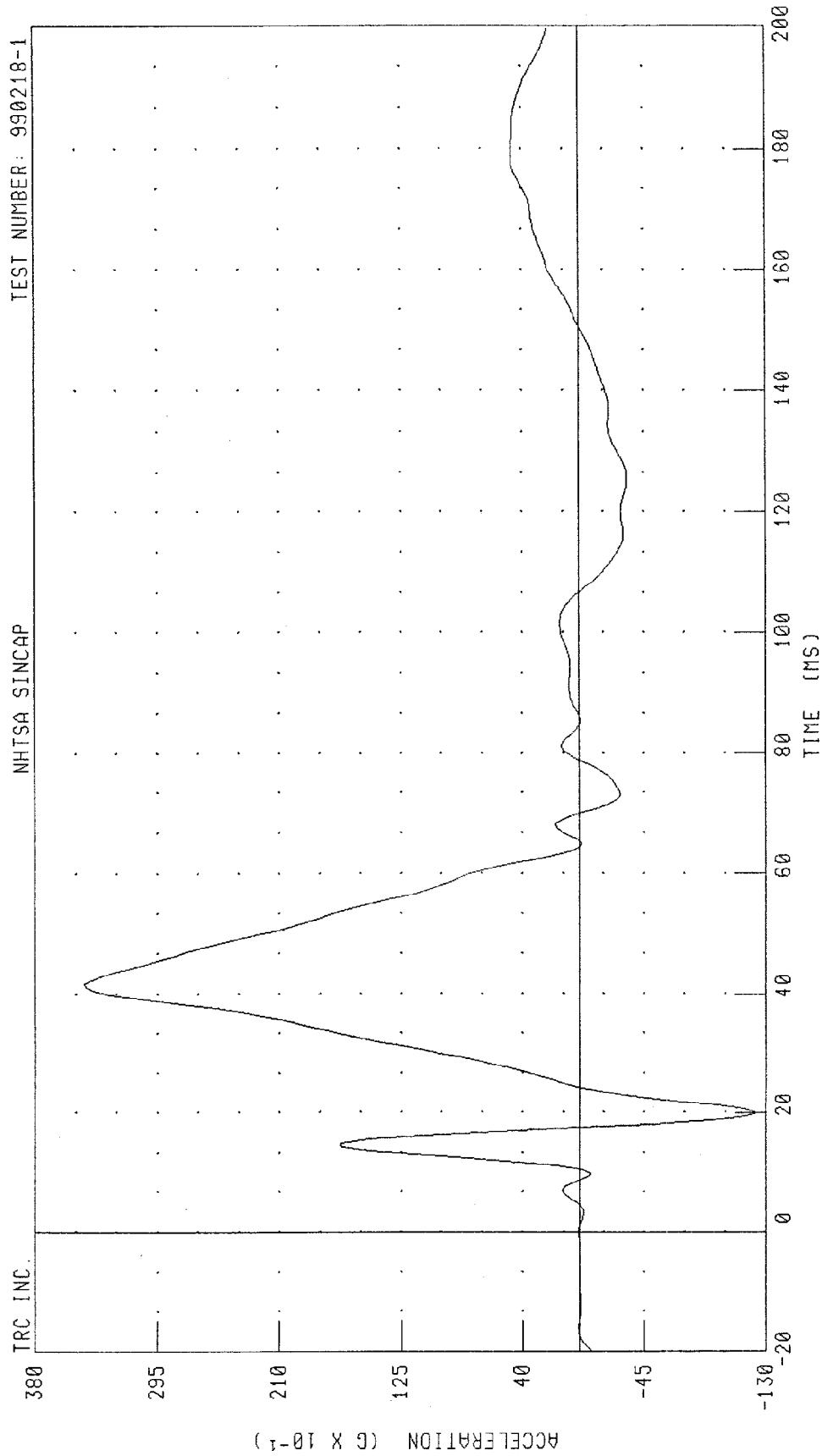
TRC INC.



PEAK DATA: 29 40 KM/H @ 200.00 MS; -0 06 KM/H @ 9 76 MS

CHANNEL: LLRYV1 FILTER: CH CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER SPINE Y-AXIS ACCELERATION



PEAK DATA: 34.54 G @ 41.87 MS, -12.34 G @ 20.00 MS

CHANNEL: T12YC1 FILTER: FIR 100

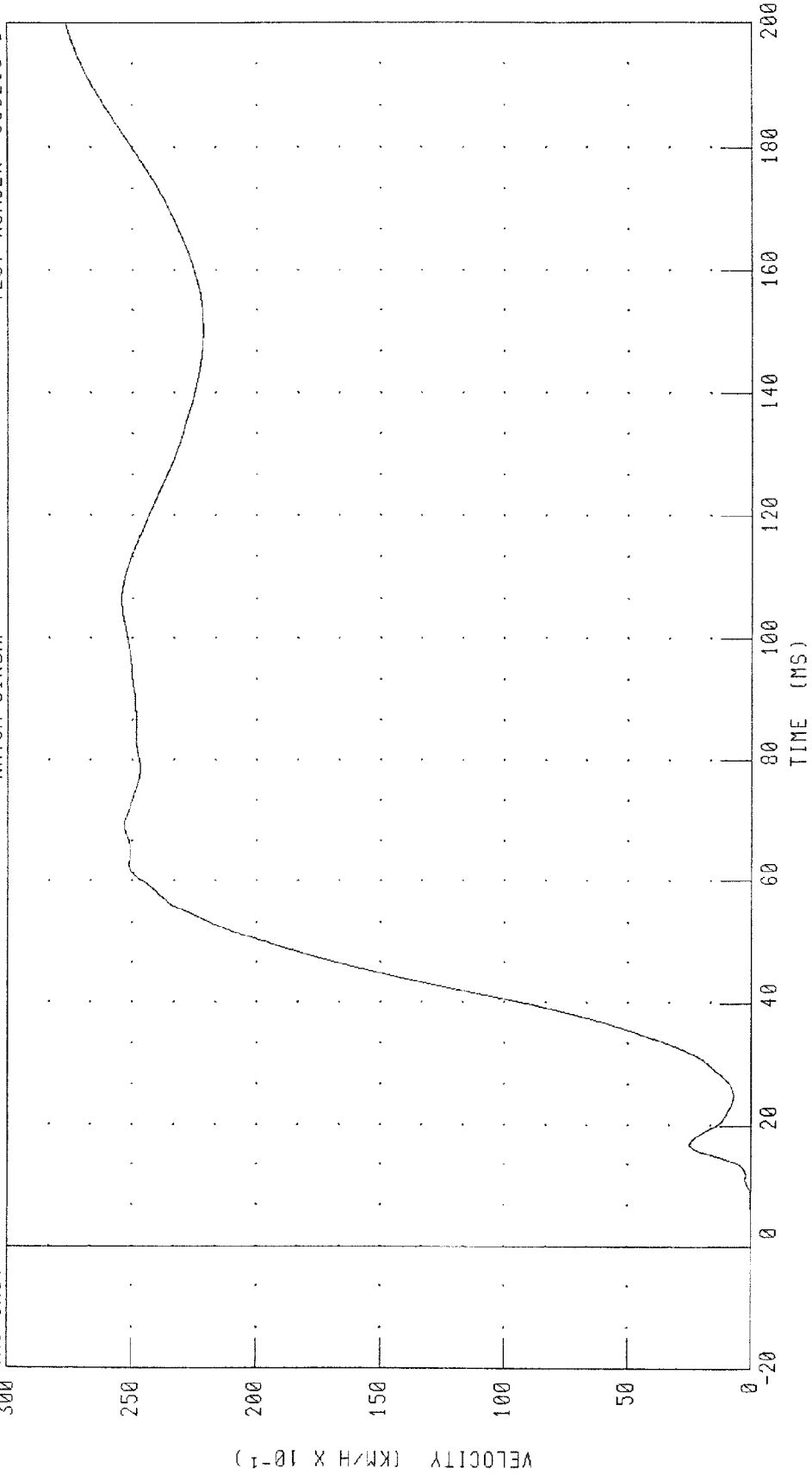
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

DRIVER LOWER SPINE Y-AXIS VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

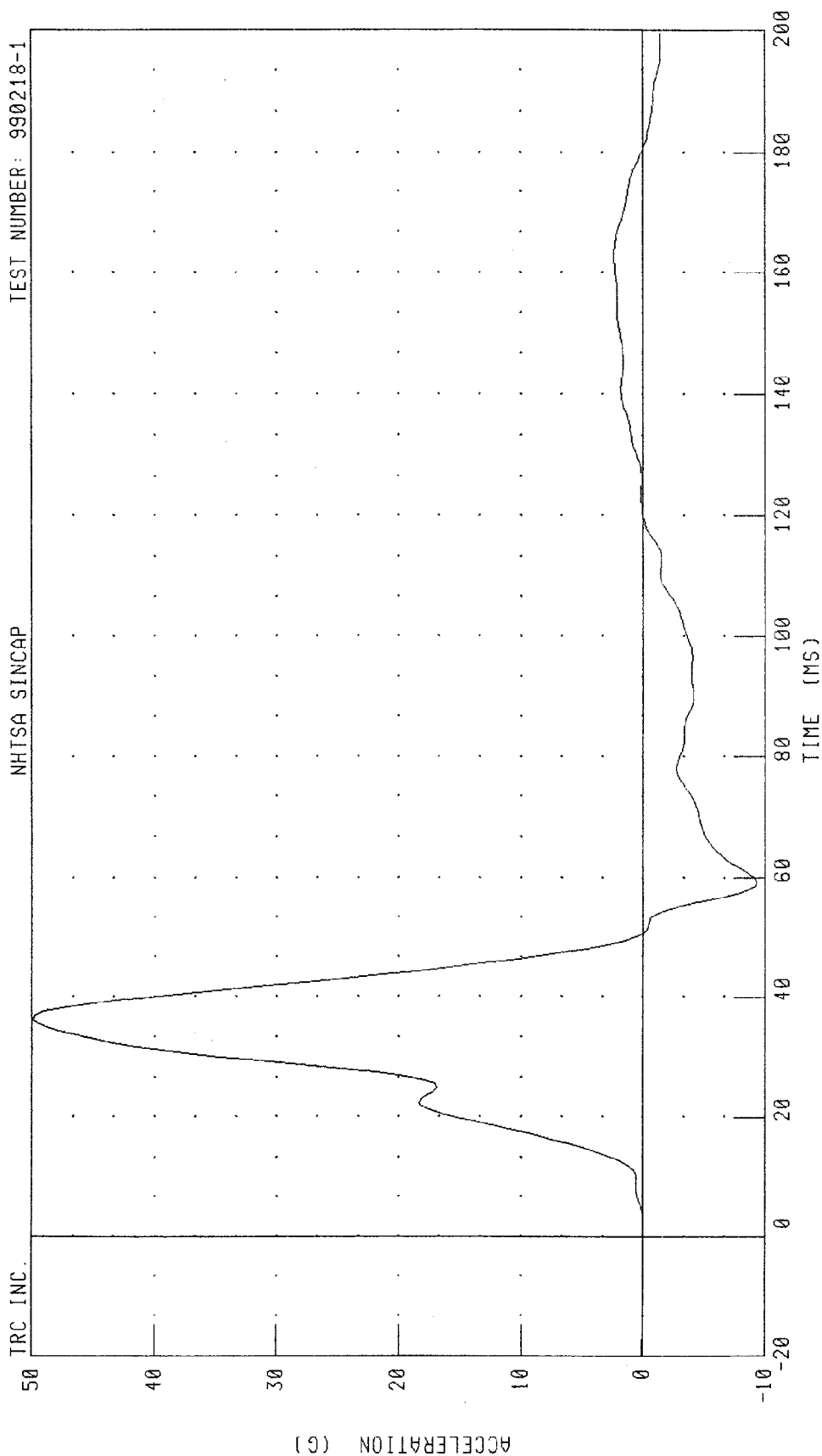
TRC INC.



PEAK DATA: 27 66 KM/H @ 200.00 MS; 0 00 KM/H @ 0.00 MS

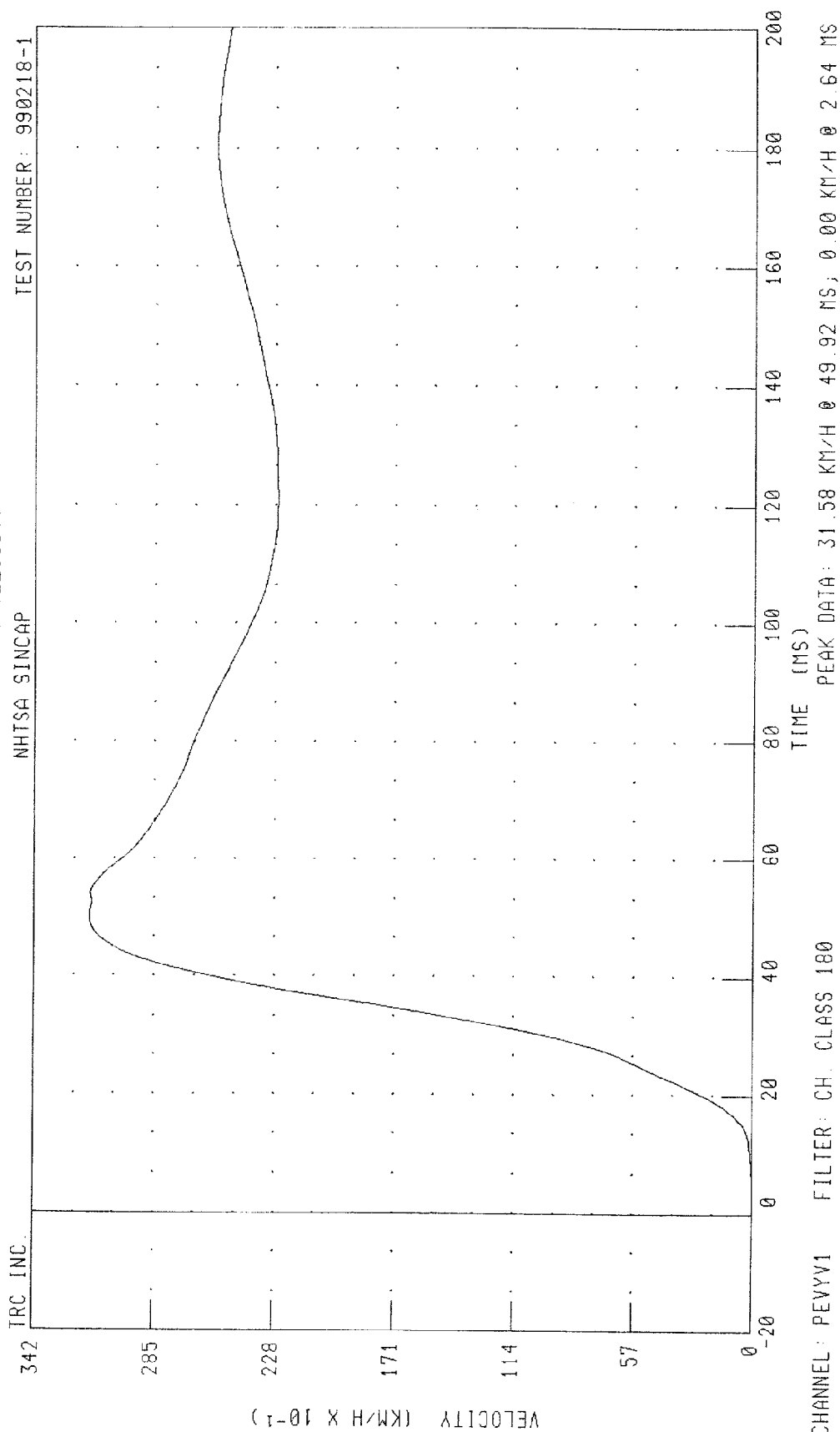
CHANNEL: T12YV1 FILTER CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER PELVIS Y-AXIS ACCELERATION

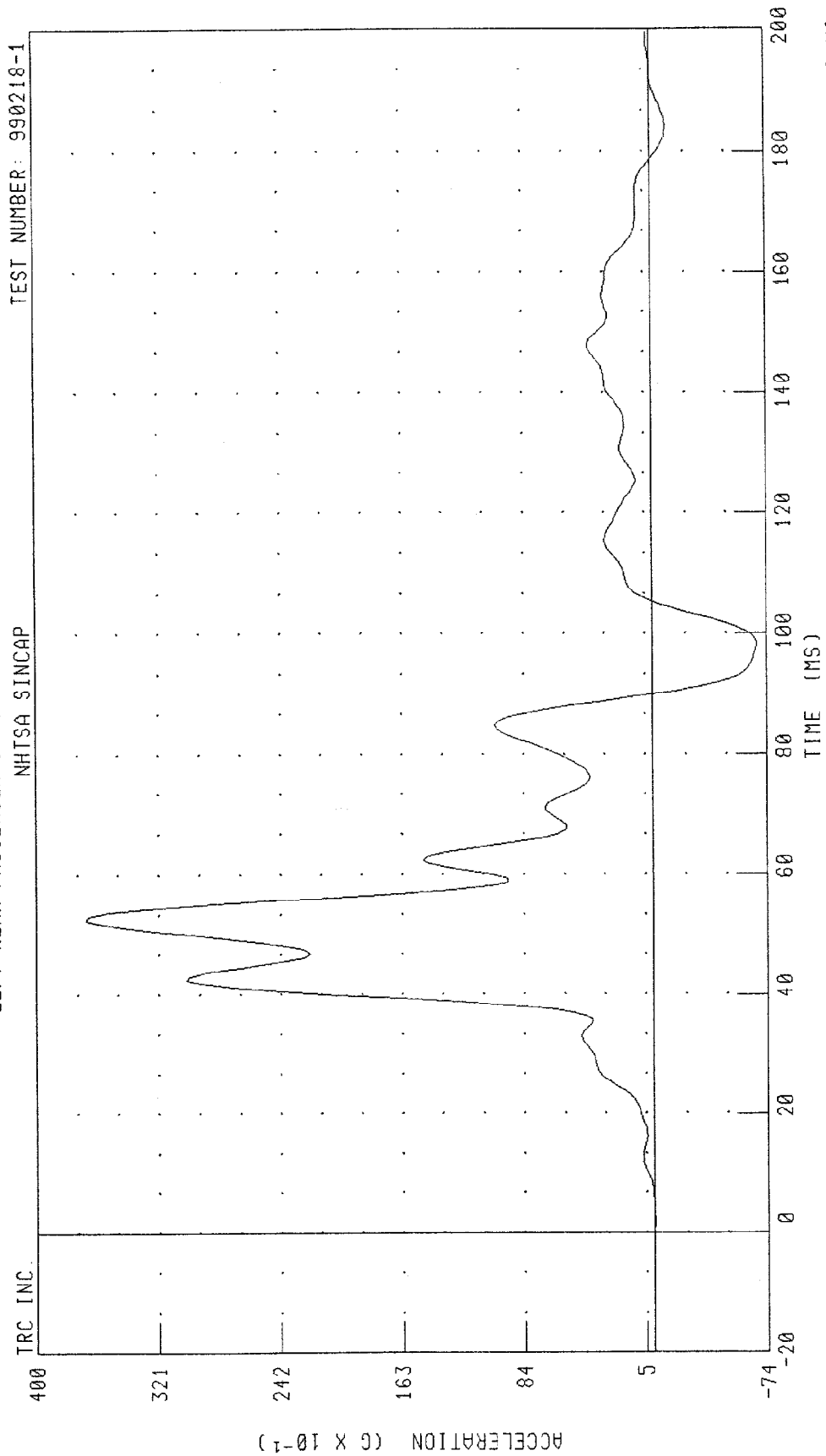


CHANNEL: PEVYG1 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER PELVIS Y-AXIS VELOCITY



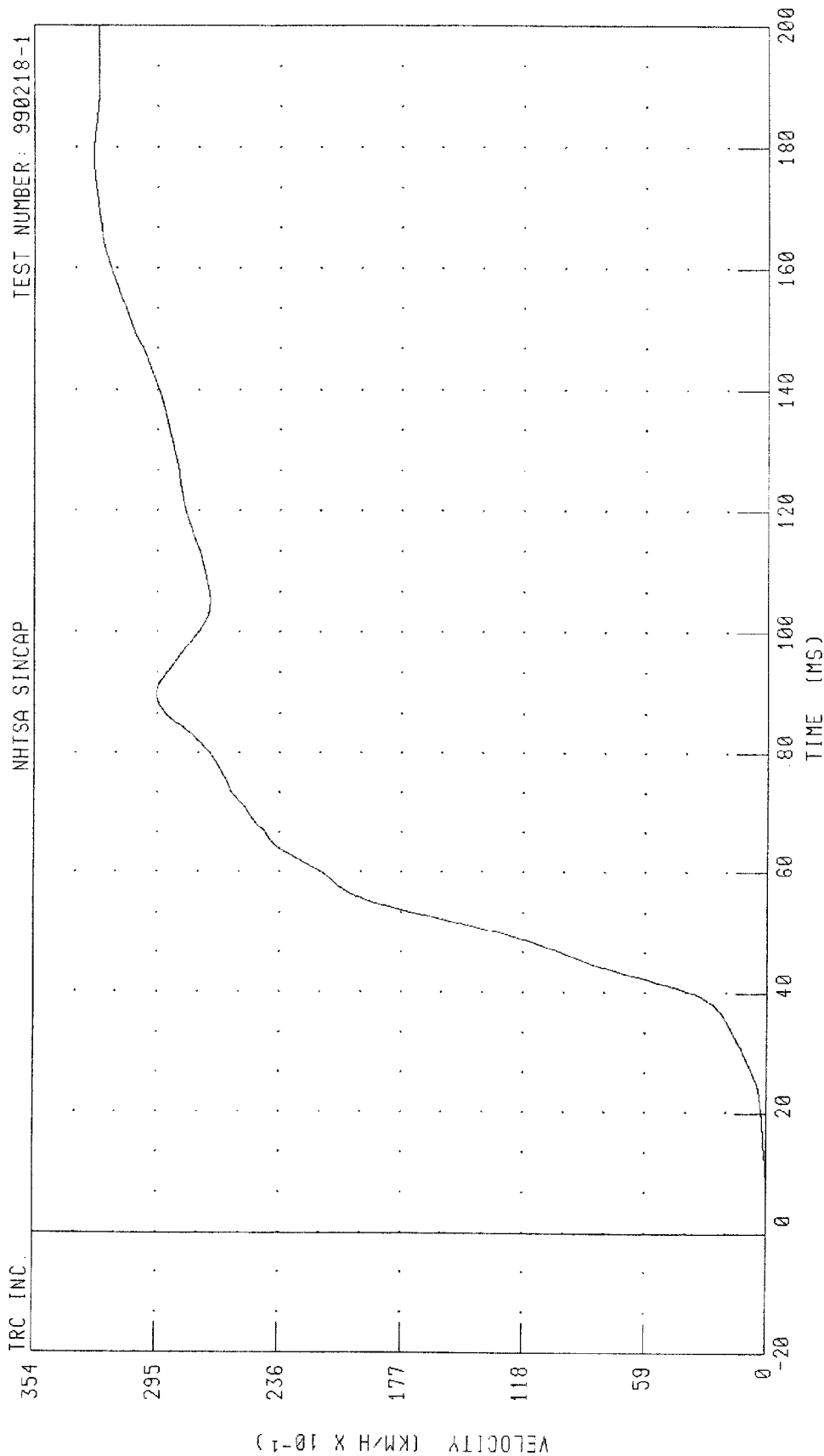
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER UPPER RIB Y-AXIS ACCELERATION



PEAK DATA: 36.82 G @ 52.50 MS; -6.75 G @ 98.12 MS

CHANNEL: LURYC4 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 LEFT REAR PASSENGER UPPER RIB Y-AXIS VELOCITY



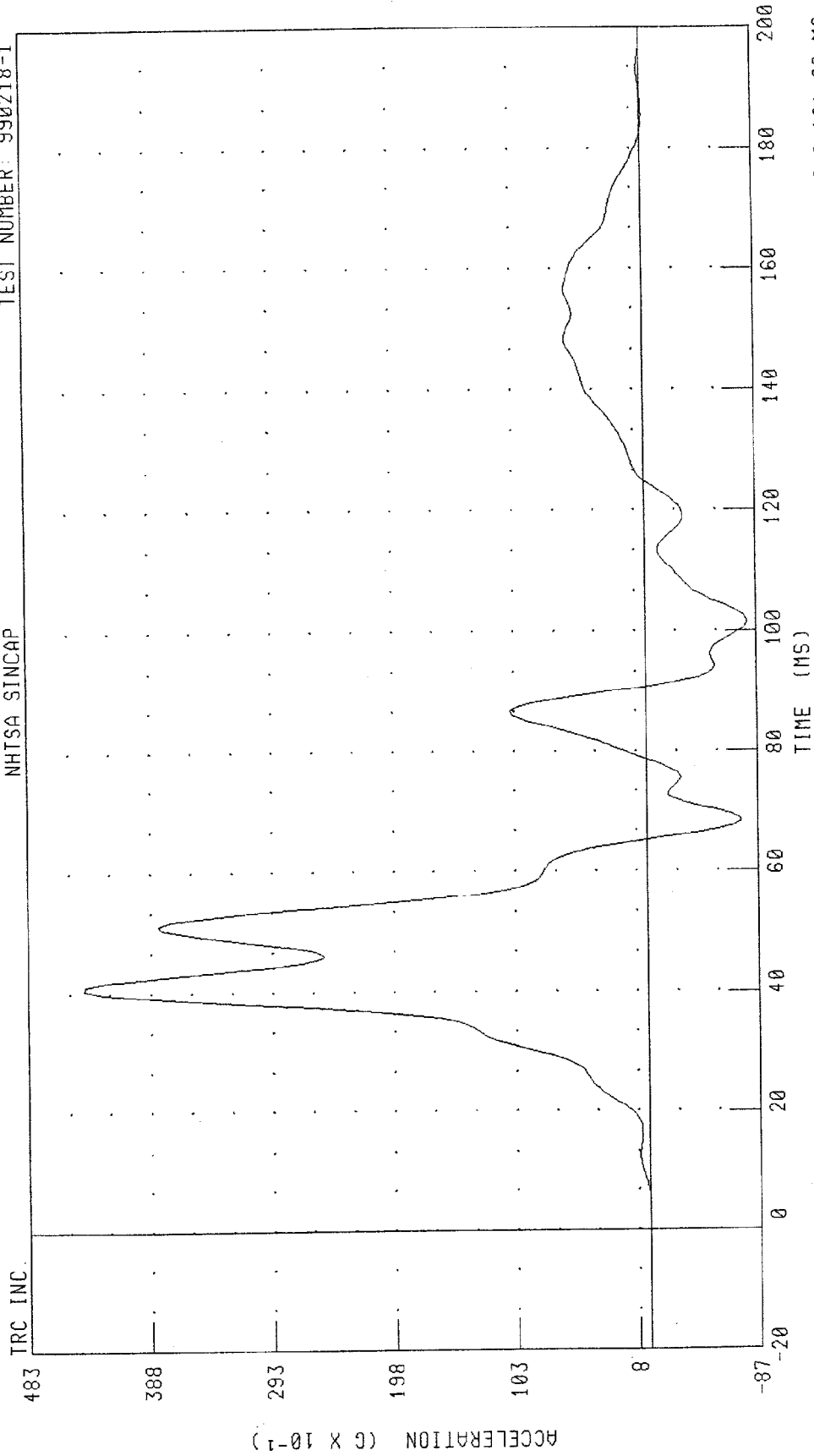
PEAK DATA: 32.57 KM/H @ 178.48 MS; 0.00 KM/H @ 4.56 MS

CHANNEL: LURYV4 FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER RIB Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

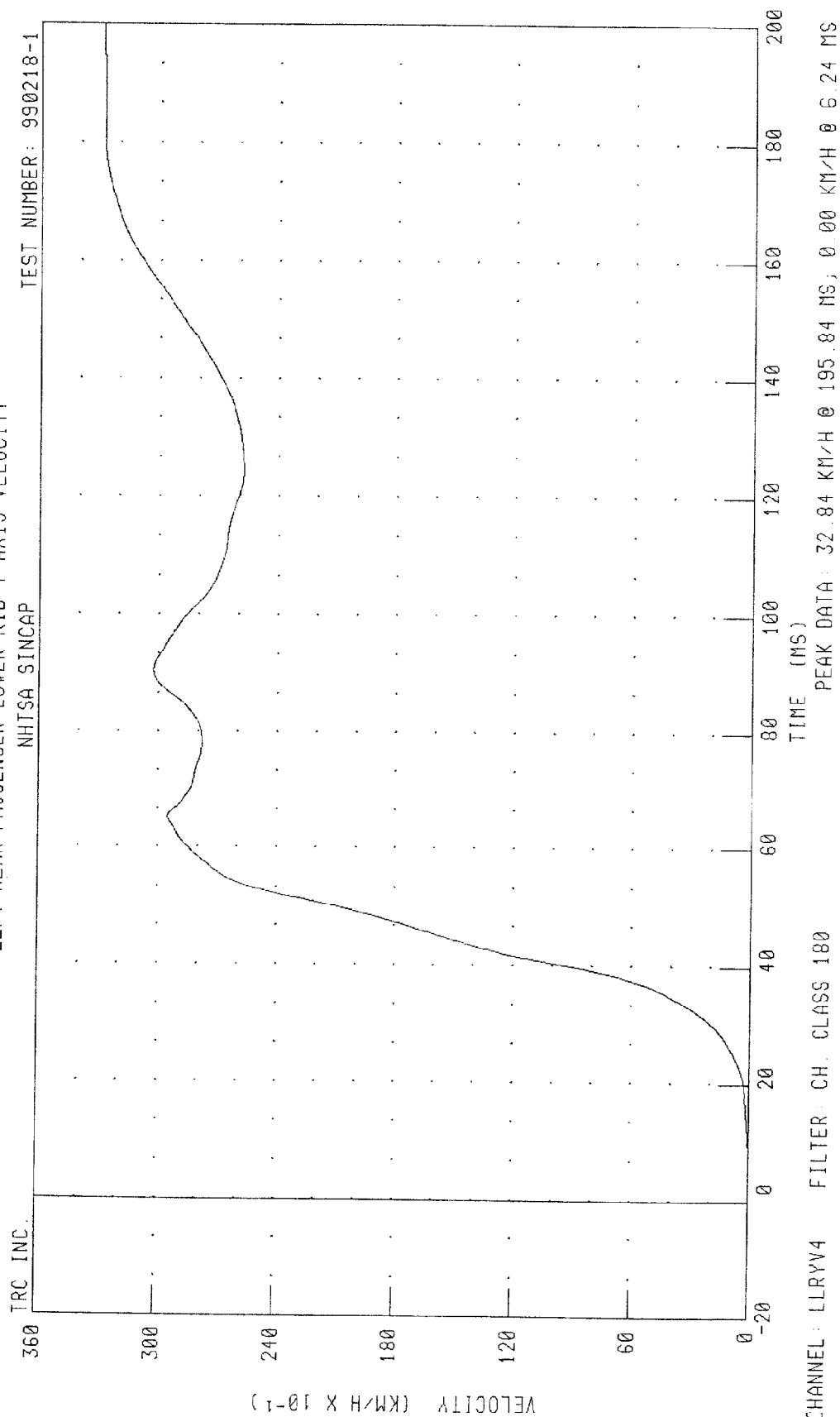
NHTSA SINCAP



PEAK DATA: 43.97 G @ 40.63 MS; -7.98 G @ 101.88 MS

CHANNEL: LLRYC4 FILTER: FIR 100

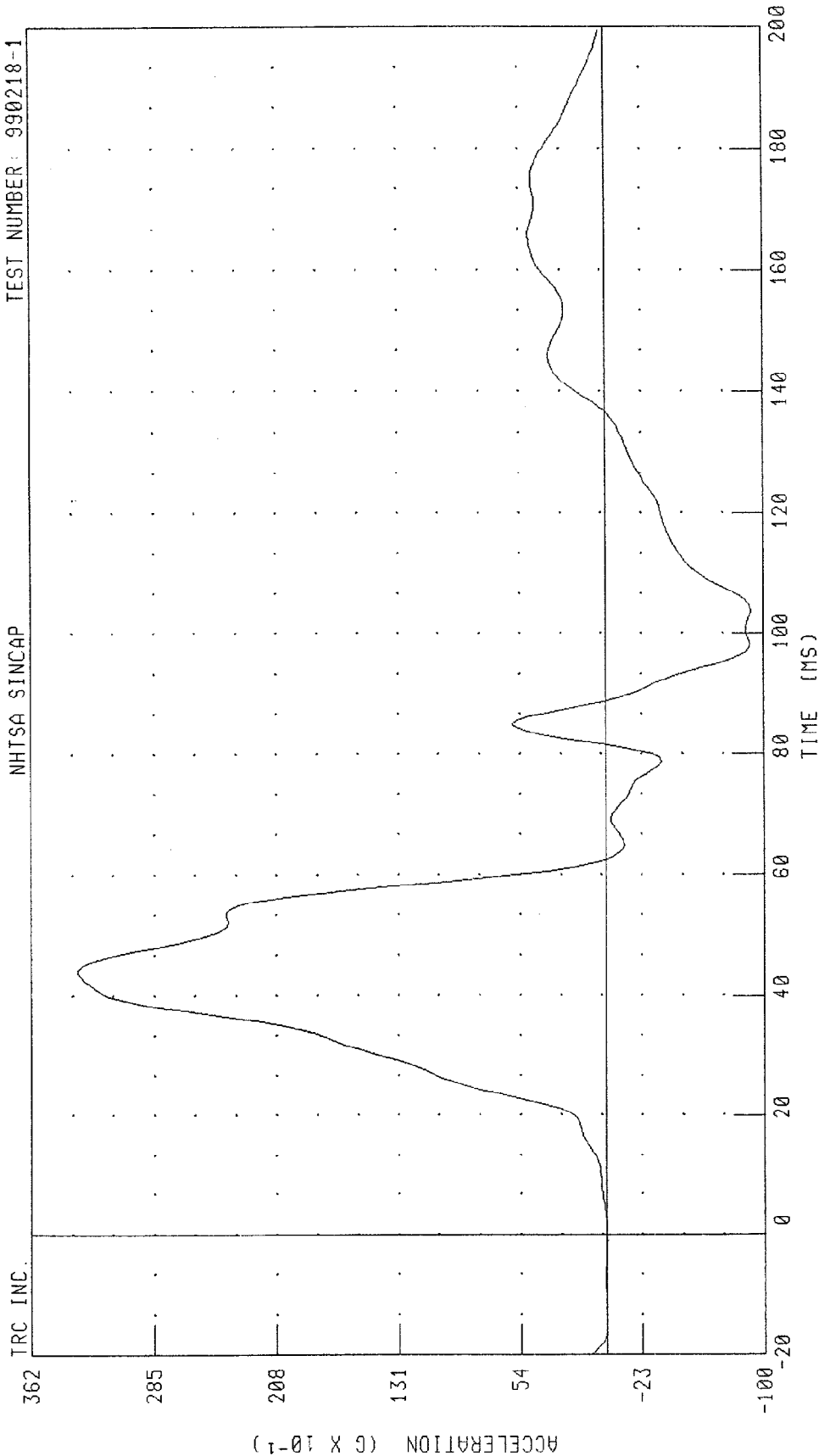
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER RIB Y-AXIS VELOCITY



MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER SPINE Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

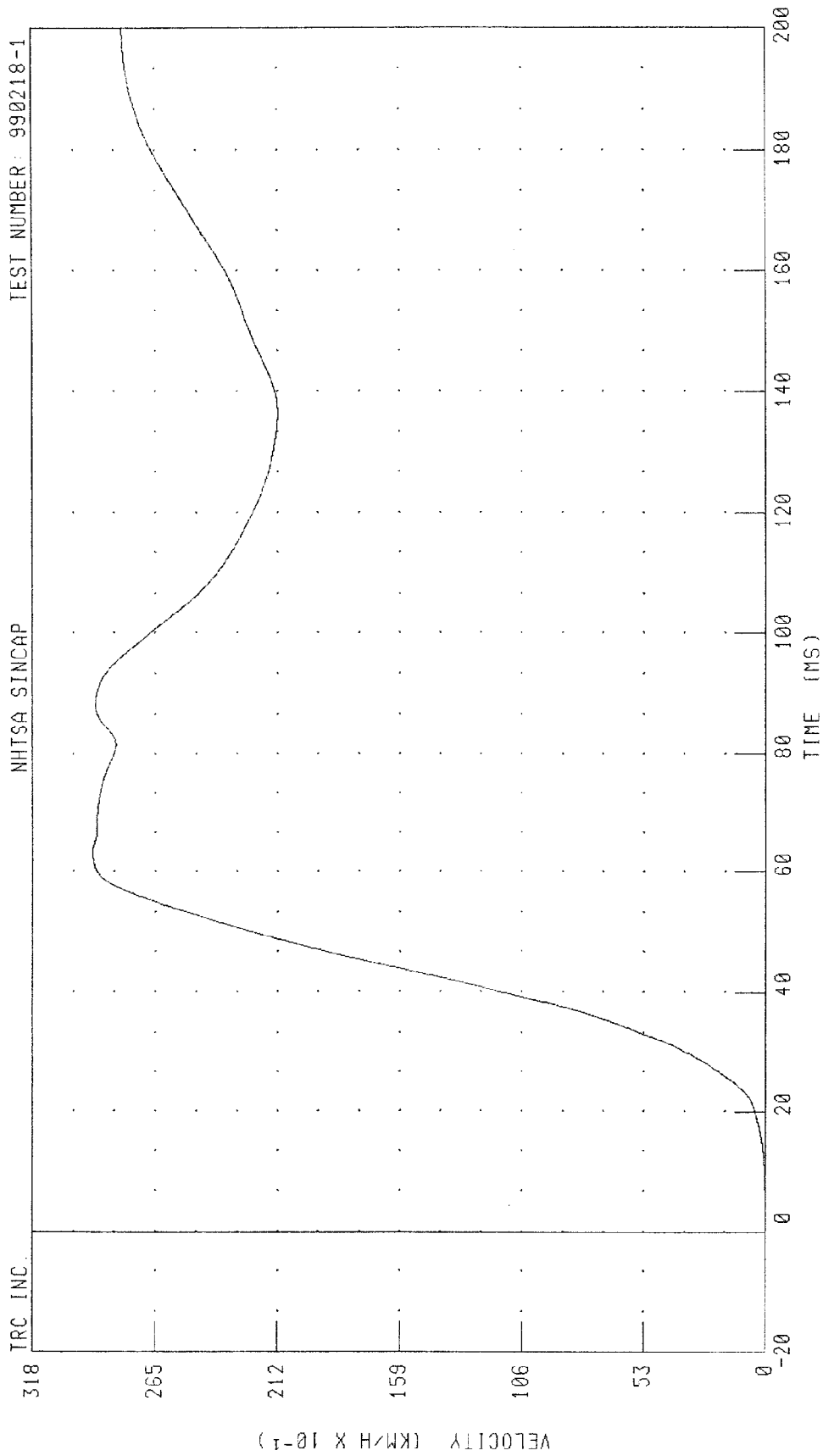
NHTSA SINCAP



PEAK DATA: 33.26 G @ 44.38 MS, -9.20 G @ 103.75 MS

CHANNEL: T12Y64 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 LEFT REAR PASSENGER LOWER SPINE Y-AXIS VELOCITY



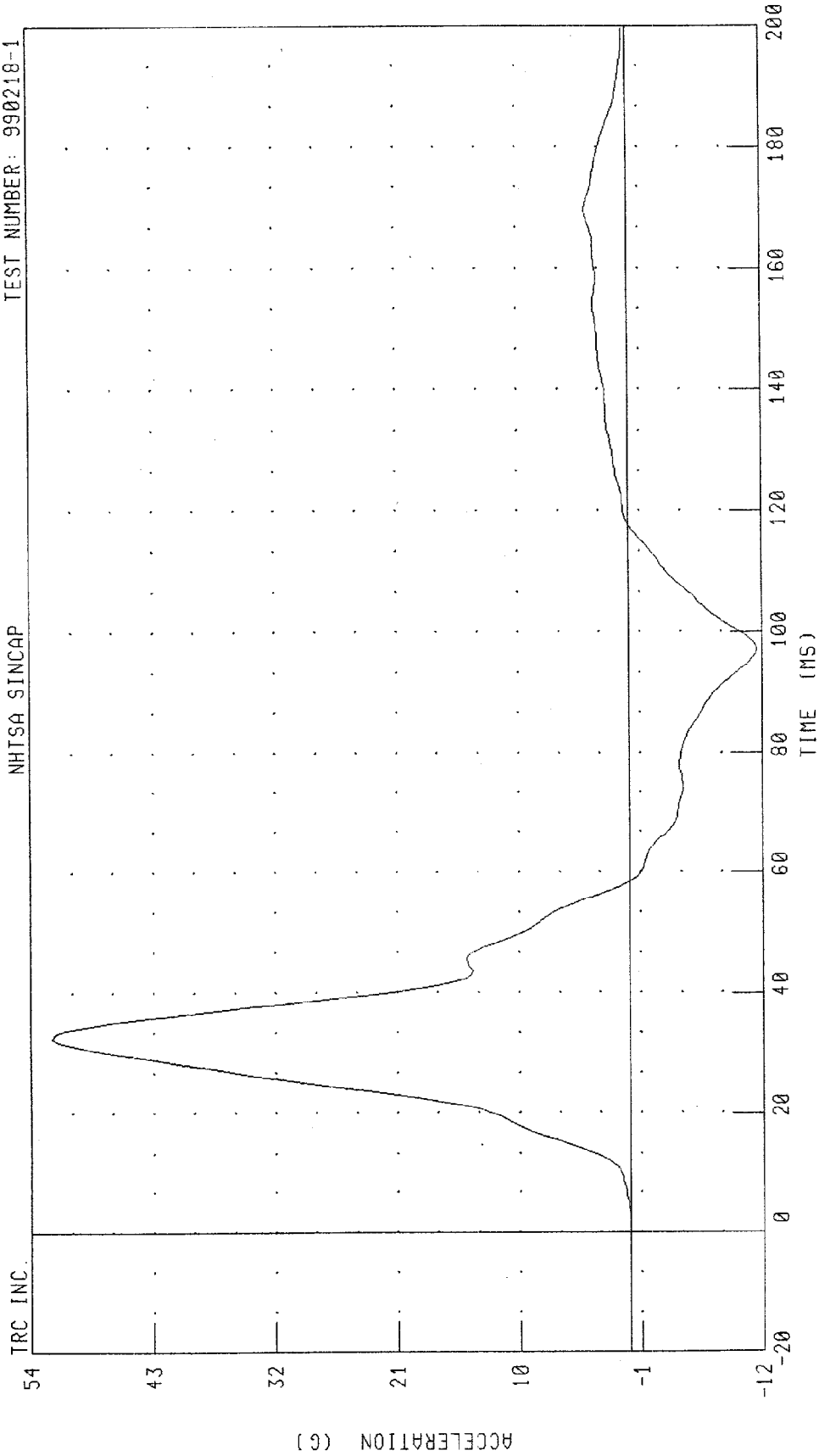
PEAK DATA: 29.21 KM/H @ 63.36 MS; 0.00 KM/H @ 2.00 MS

CHANNEL: T12YV4 FILTER: CH CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER PELVIS Y-AXIS ACCELERATION

TEST NUMBER: 990218-1

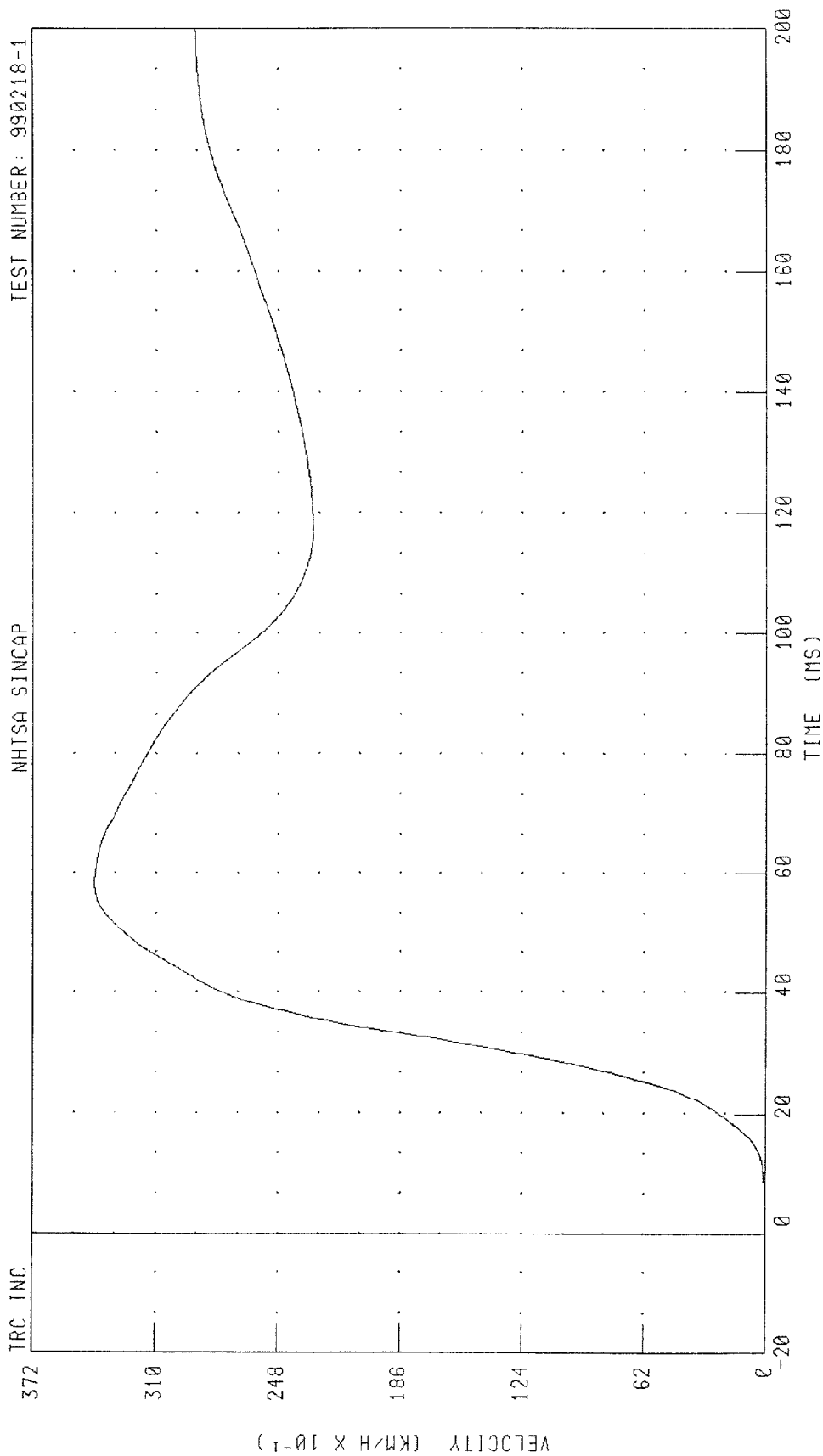
NHTSA SINCAP



PEAK DATA: 52.12 G @ 32.50 MS; -11.53 G @ 97.50 MS

CHANNEL: PEVYG4 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER PELVIS Y-AXIS VELOCITY

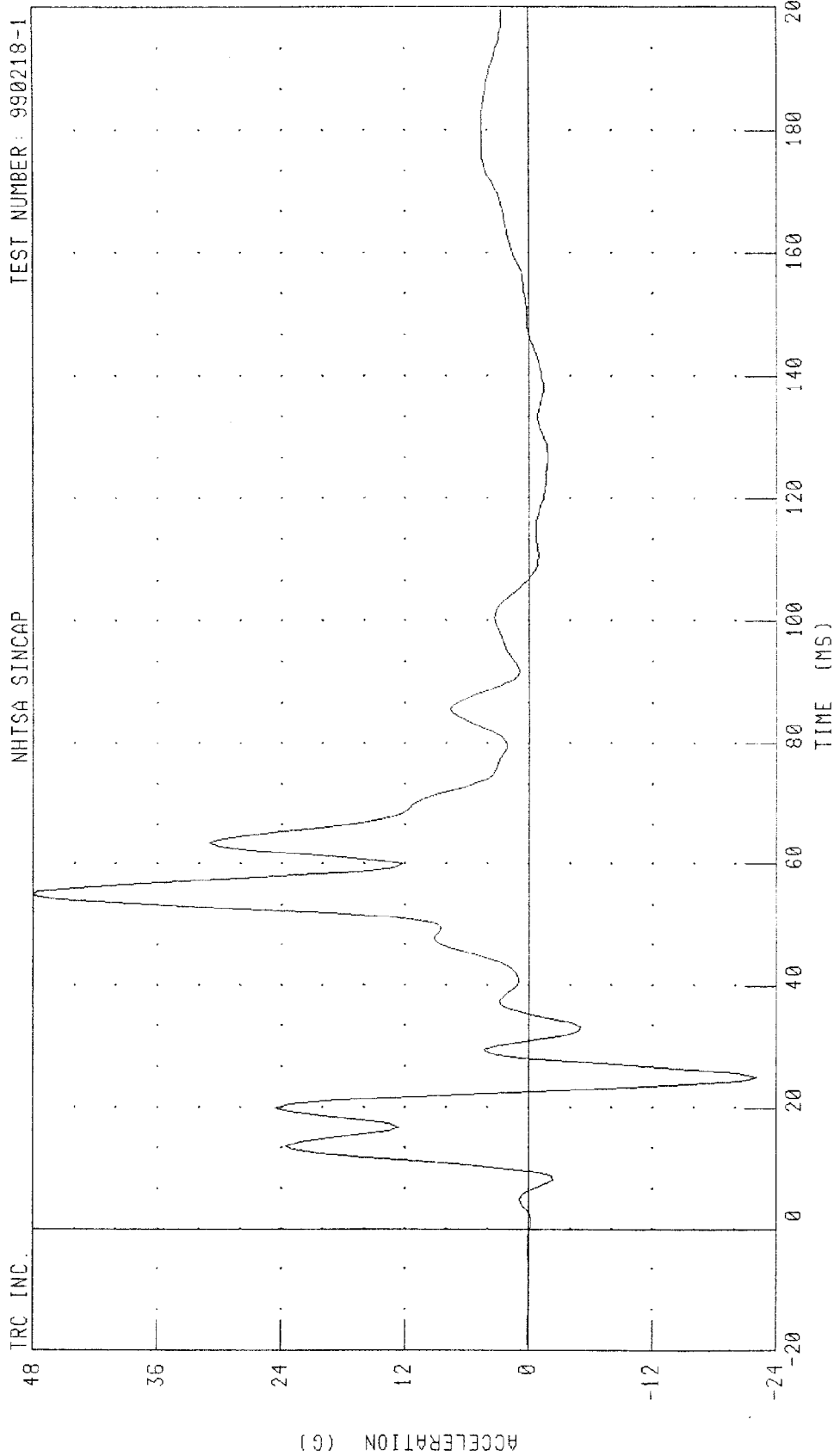


CHANNEL: PEVYV4 FILTER: CH. CLASS 180

PEAK DATA: 34.11 KM/H @ 58.24 MS, 0.00 KM/H @ 0.00 MS

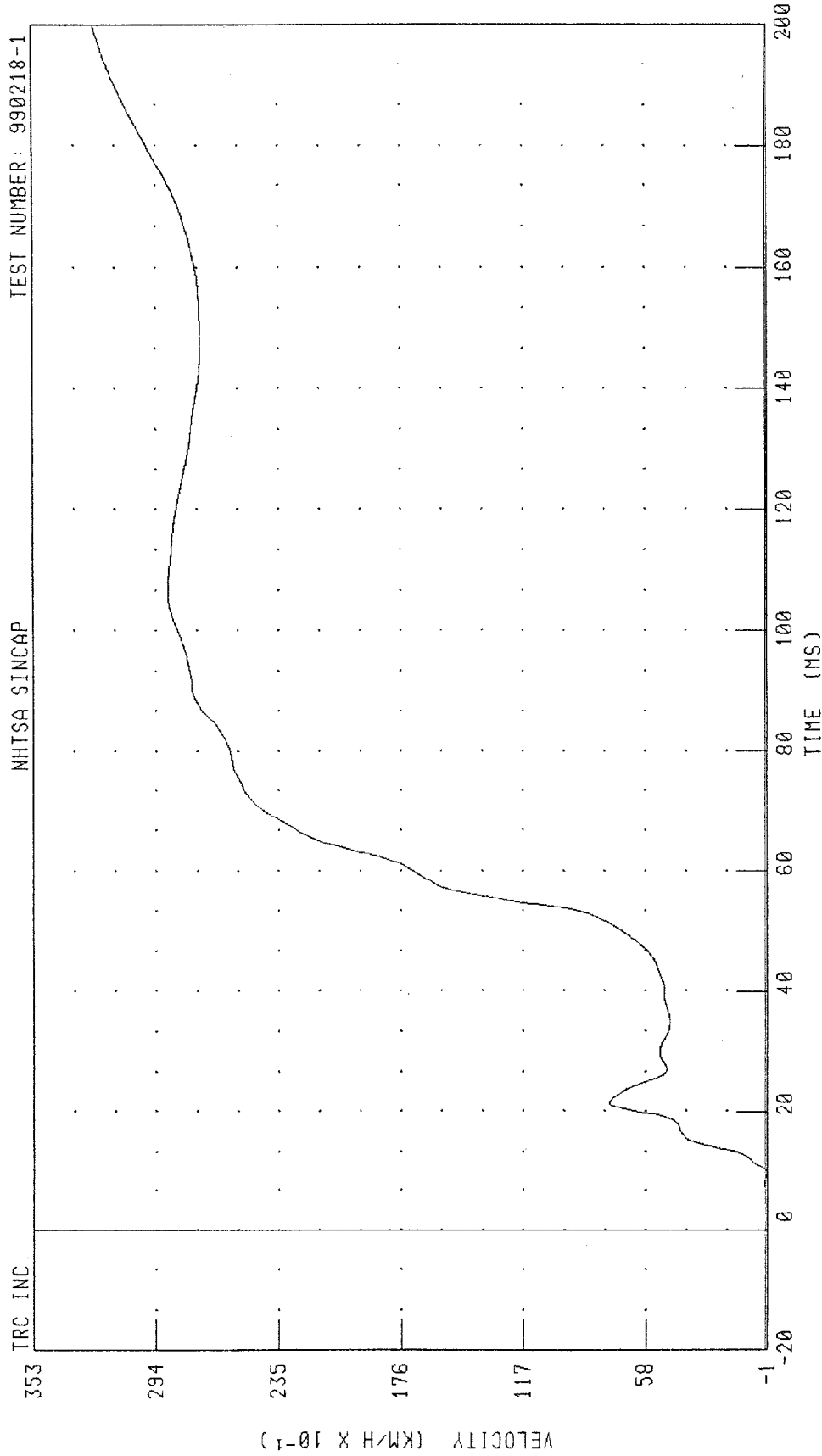
Driver and Passenger Dummy Instrumentation Plots
Acceleration Data - FIR Filtered - Redundant

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER UPPER RIB Y-AXIS REDUNDANT ACCELERATION



CHANNEL: LURYR1 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER UPPER RIB Y-AXIS REDUNDANT VELOCITY



PEAK DATA: 32.40 KM/H @ 200.00 MS; -0.12 KM/H @ 9.76 MS

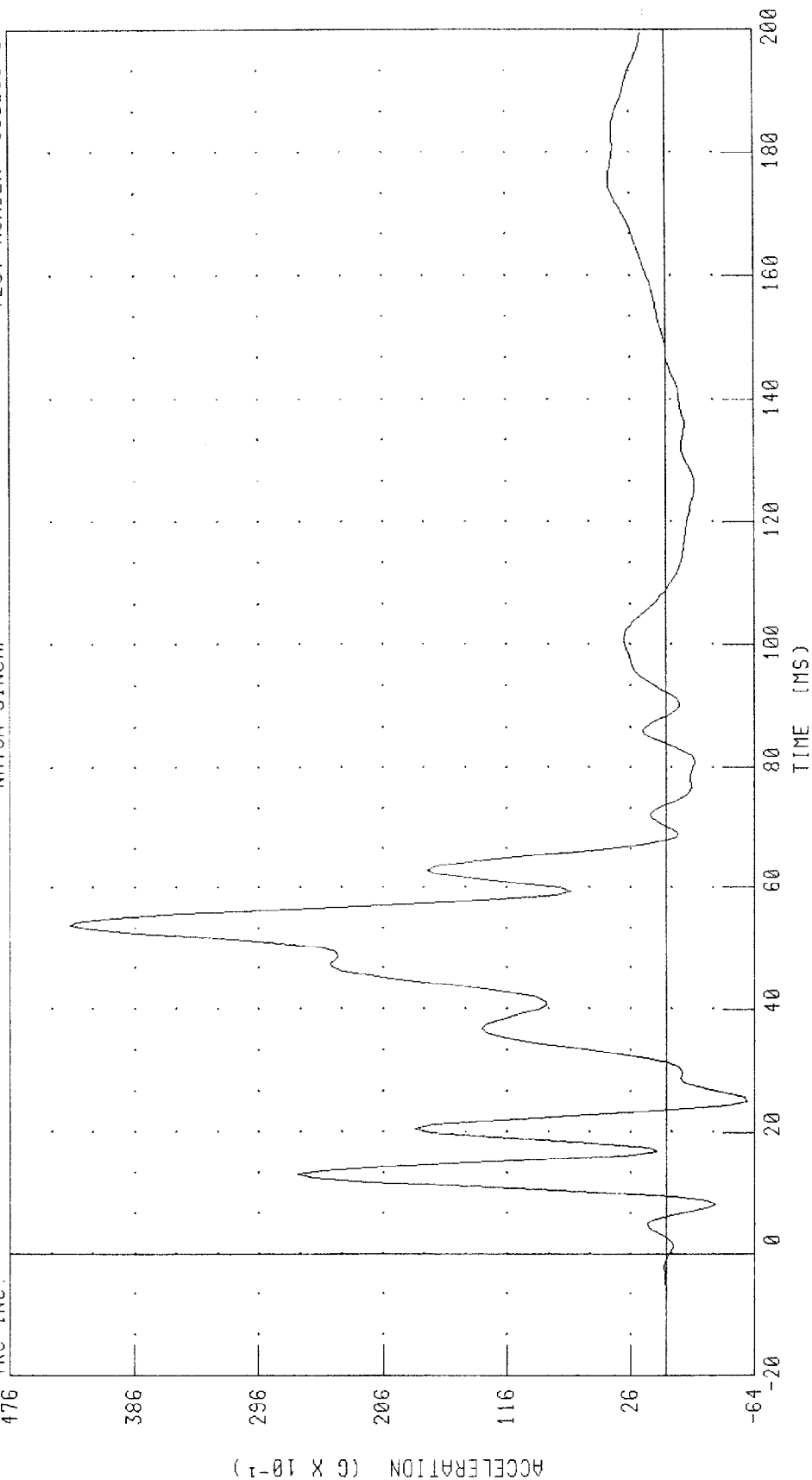
CHANNEL: LURYVI FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER RIB Y-AXIS REDUNDANT ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

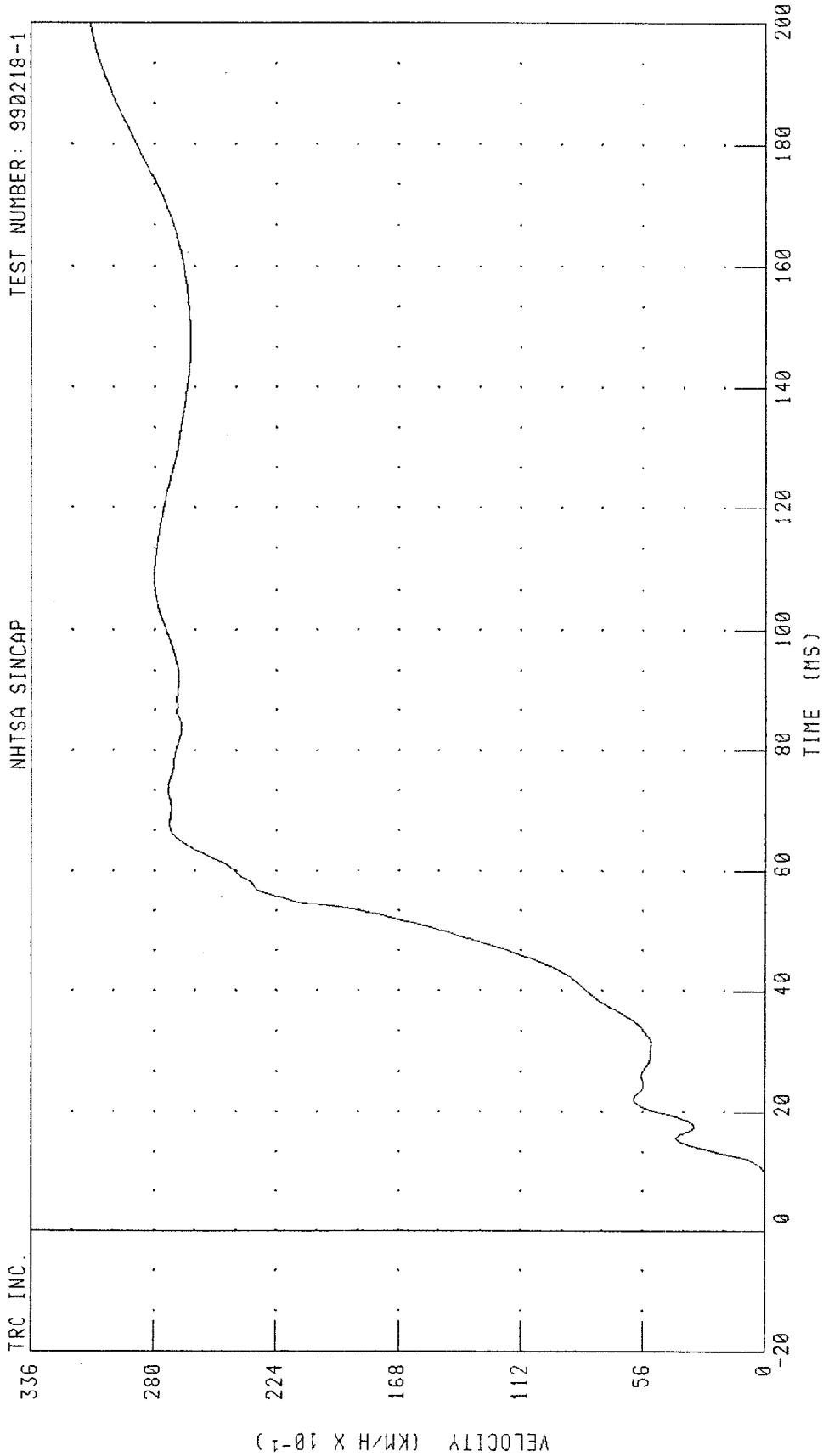
TRC INC.



CHANNEL: L1RYR1 FILTER: FIR 100

PEAK DATA: 43 30 G @ 53.75 MS, -5 85 G @ 25.00 MS

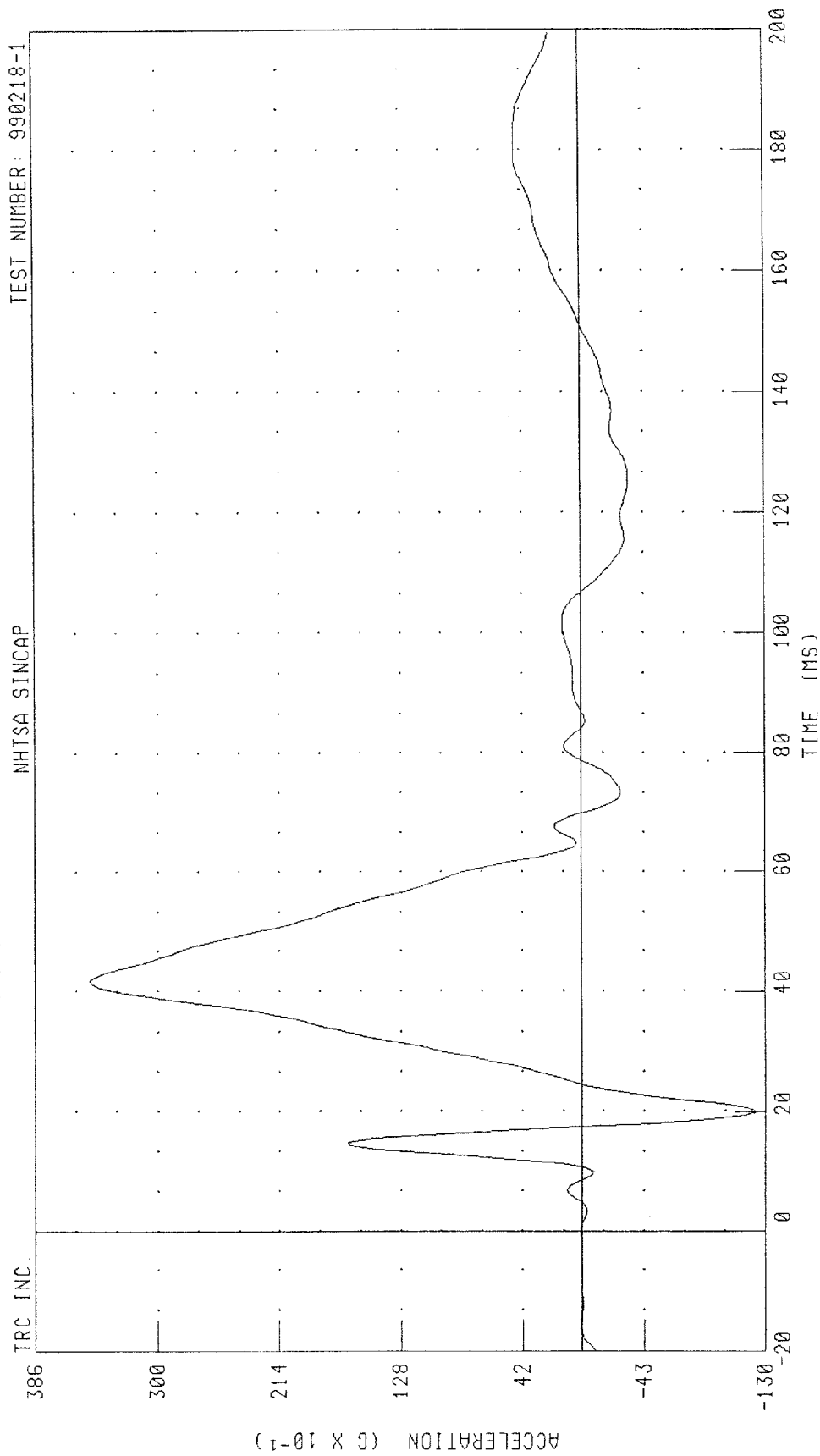
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER RIB Y-AXIS REDUNDANT VELOCITY



PEAK DATA: 30.94 KM/H @ 200.00 MS, -0.02 KM/H @ 9.36 MS

CHANNEL: LLRYVI FILTER: CH. CLASS 180

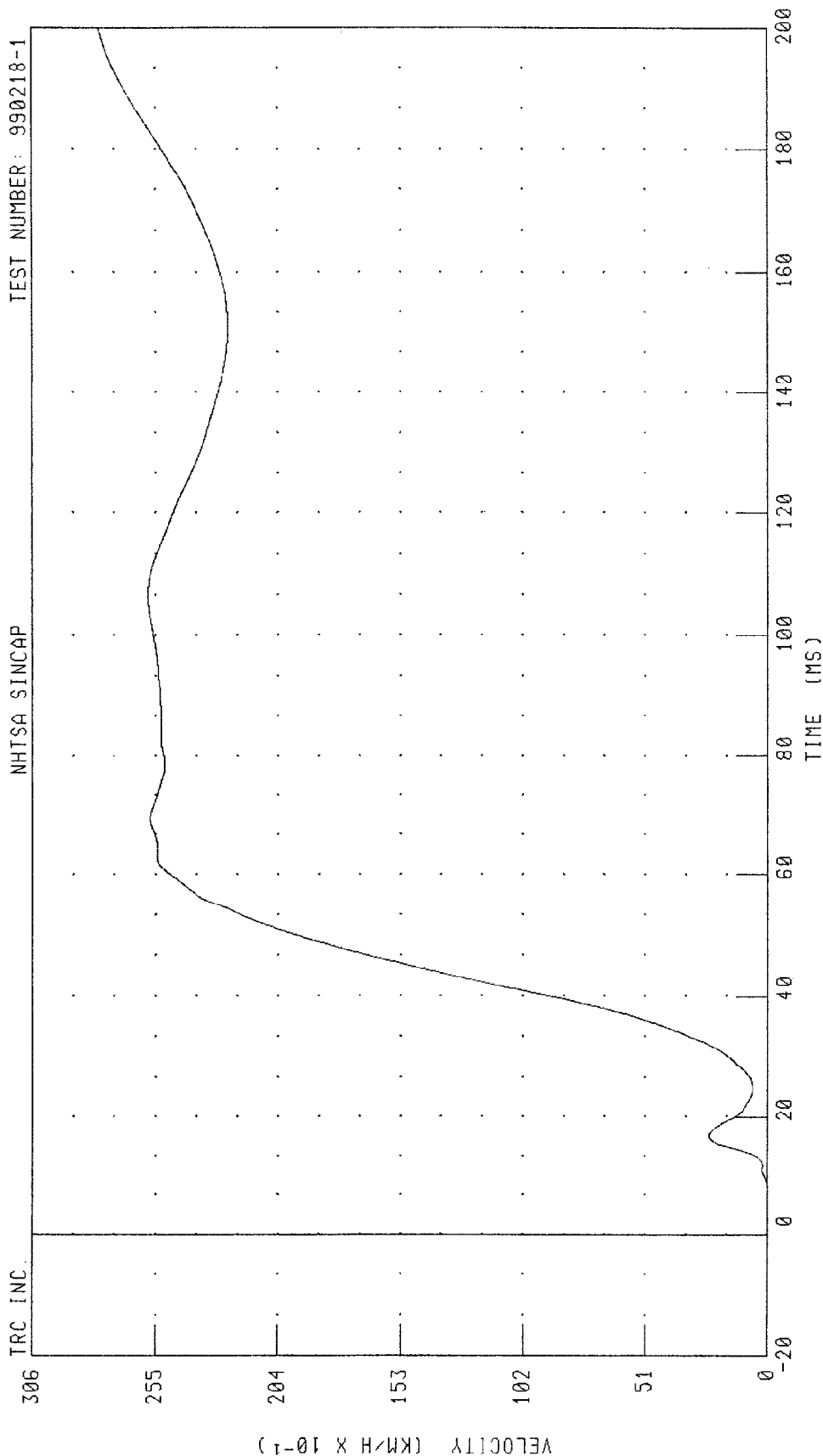
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION



PEAK DATA: 34.75 G @ 41.87 MS; -12.41 G @ 20.00 MS

CHANNEL: T12YR1 FILTER: FIR 100

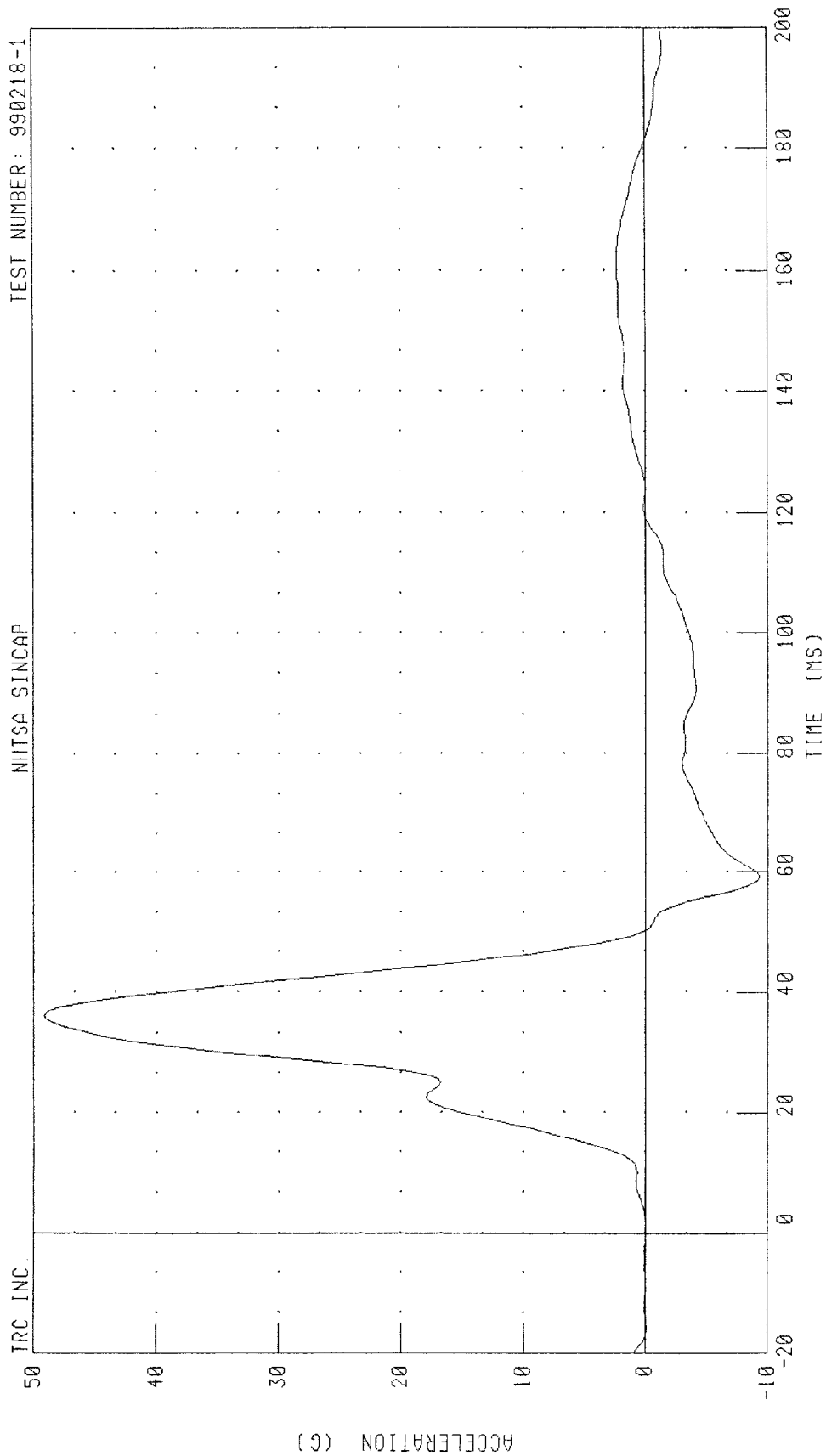
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER LOWER SPINE Y-AXIS REDUNDANT VELOCITY



PEAK DATA: 27.83 KM/H @ 200.00 MS, 0.00 KM/H @ 0.96 MS

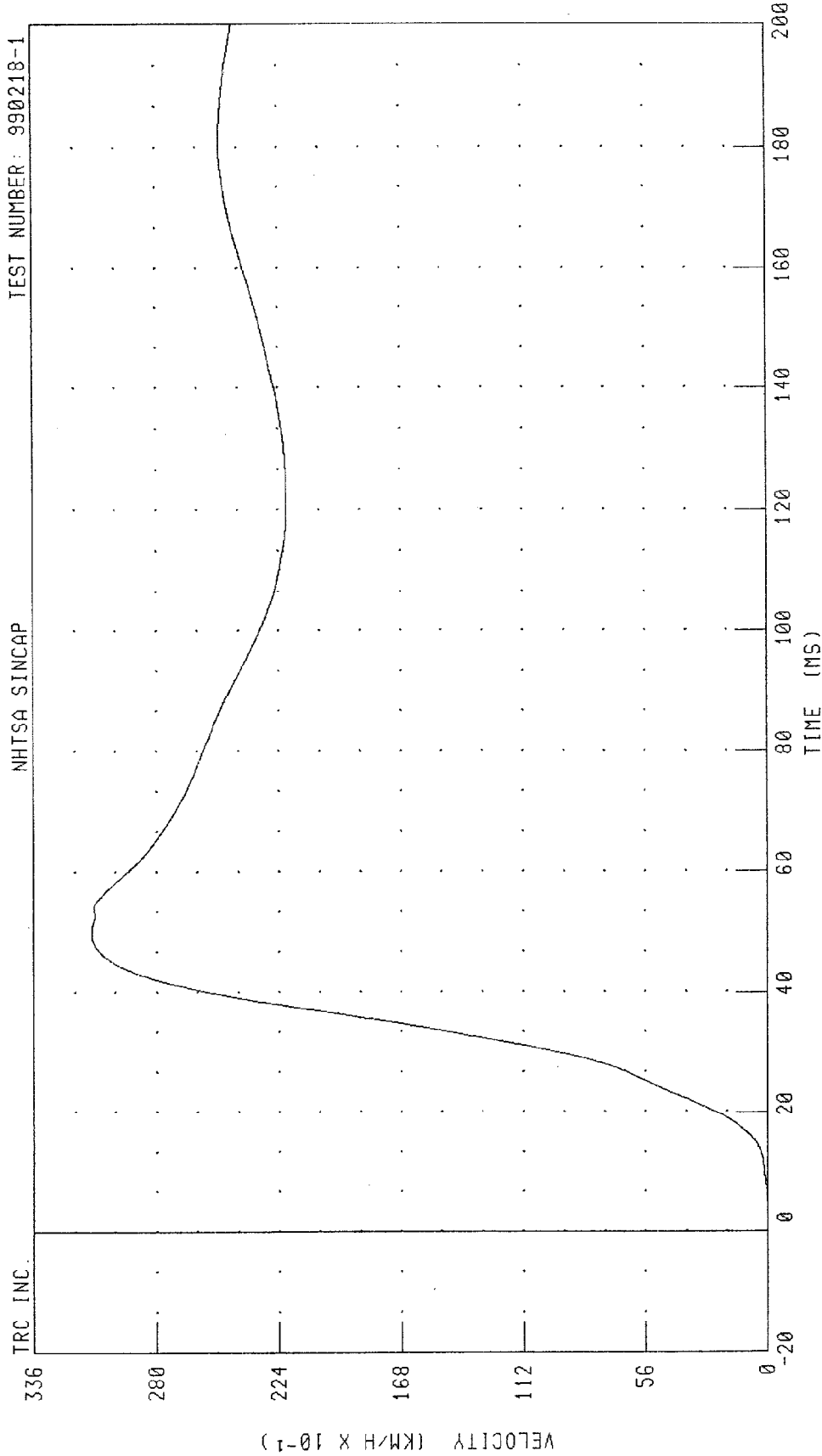
CHANNEL: T12YVI FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER PELVIS Y-AXIS REDUNDANT ACCELERATION



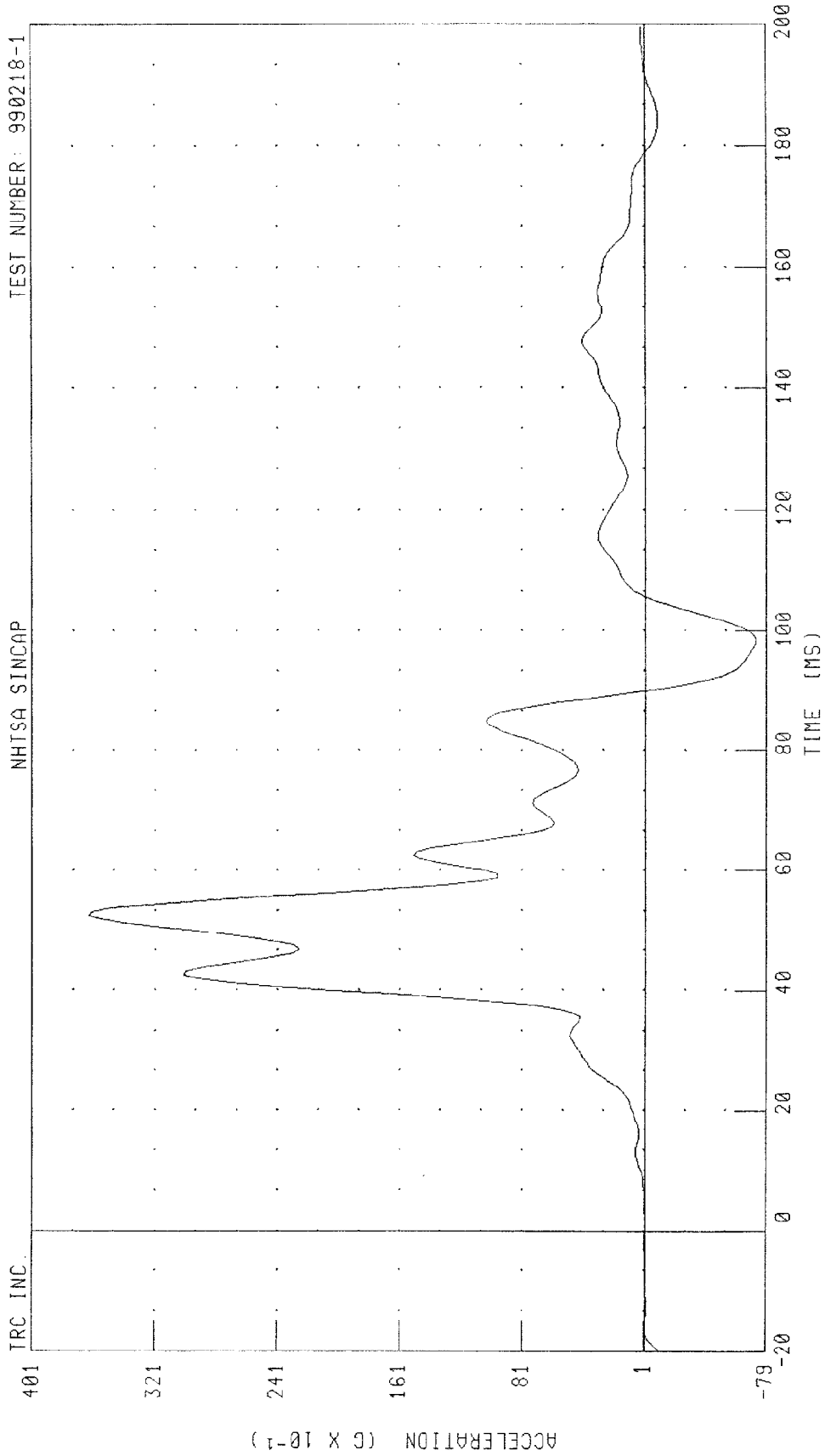
CHANNEL: PEVYR1 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
DRIVER PELVIS Y-AXIS REDUNDANT VELOCITY



CHANNEL: PEVYVI FILTER: CH. CLASS 180 PEAK DATA: 30.98 KM/H @ 49.92 MS; 0.00 KM/H @ 1.76 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT ACCELERATION



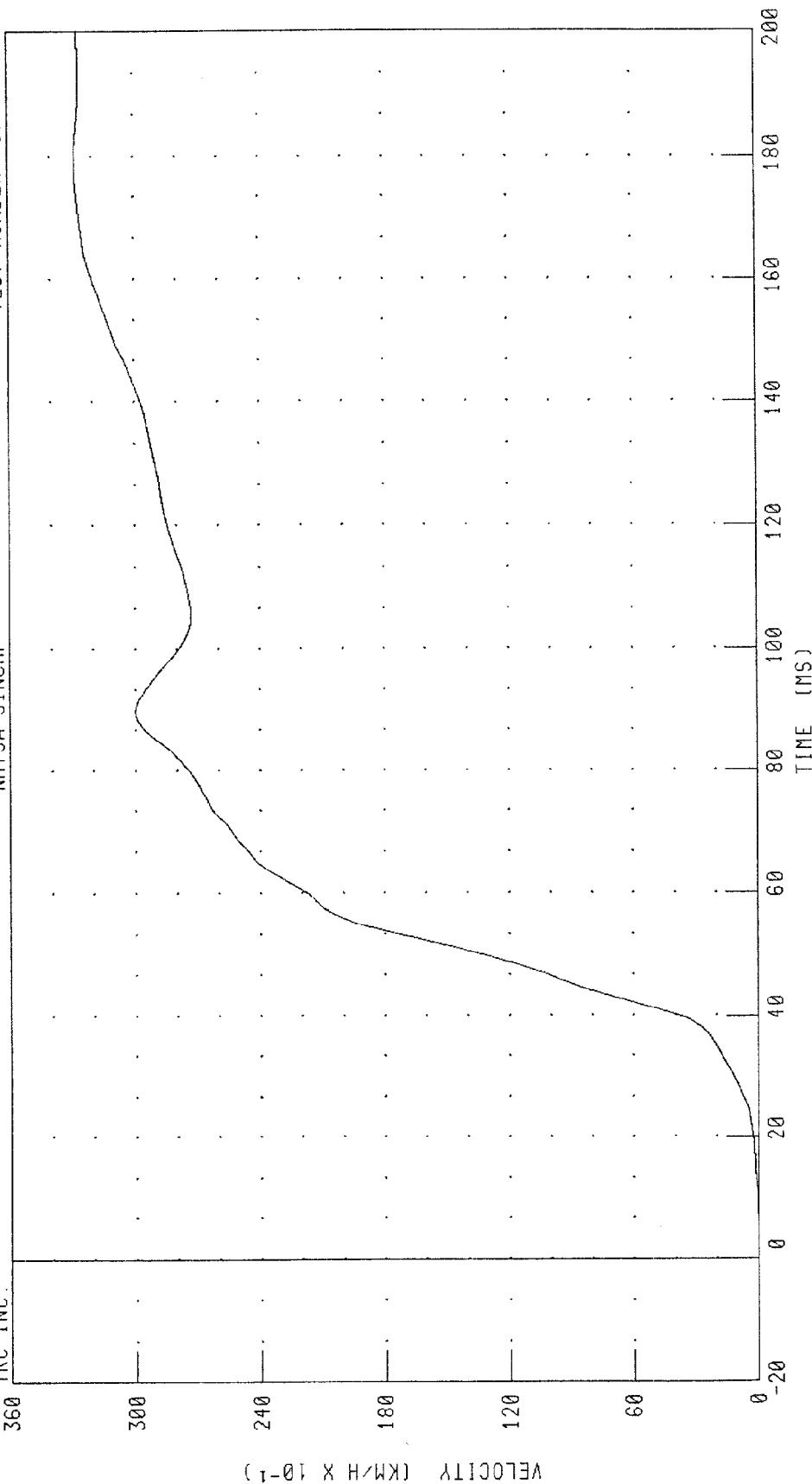
CHANNEL: LURYR4 FILTER: FIR 100

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER UPPER RIB Y-AXIS REDUNDANT VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

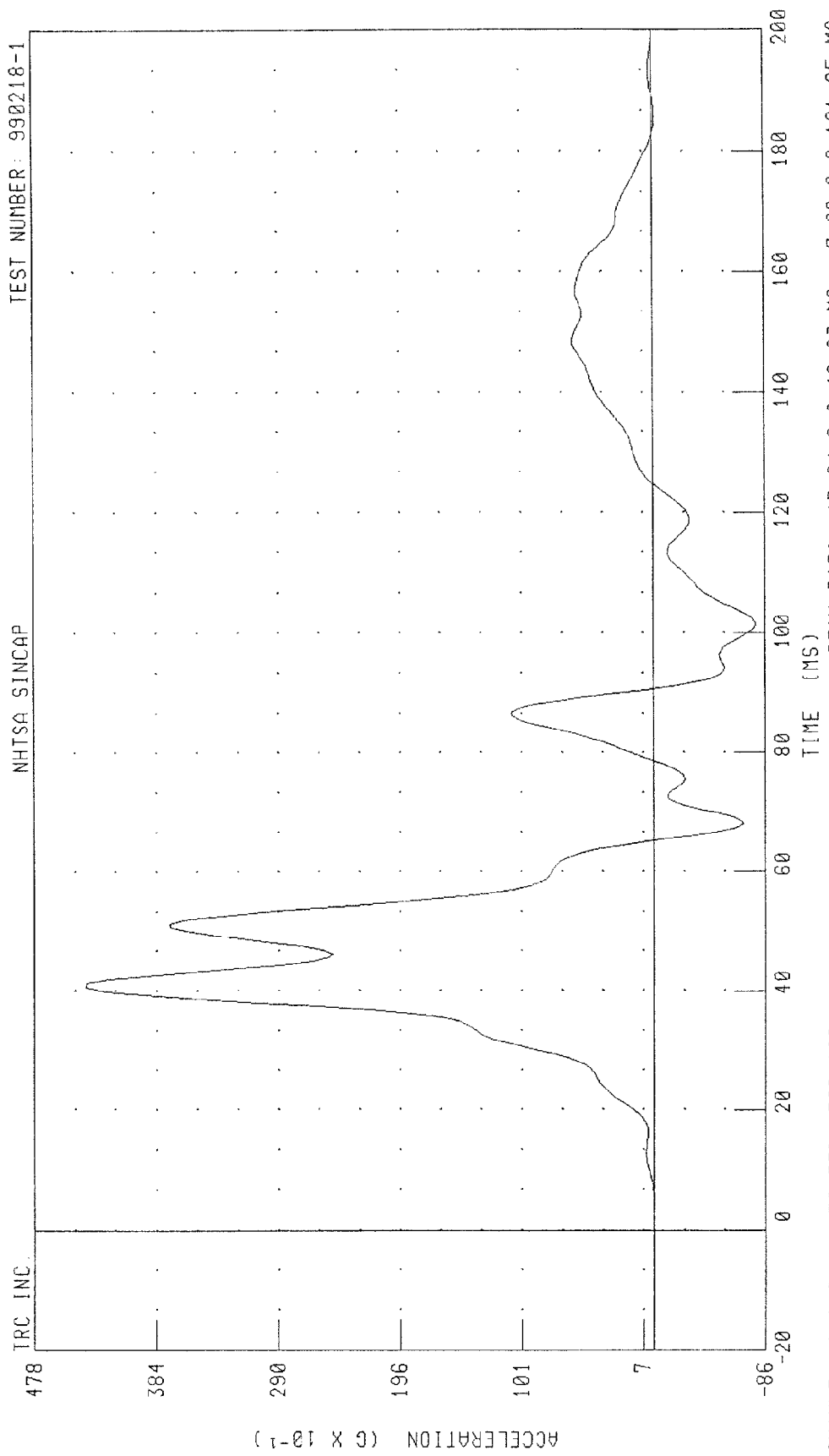
TRC INC.



PEAK DATA: 32.83 KM/H @ 178.64 MS; 0 00 KN/H @ 0 00 MS

CHANNEL: LURYVJ FILTER: CH CLASS 180

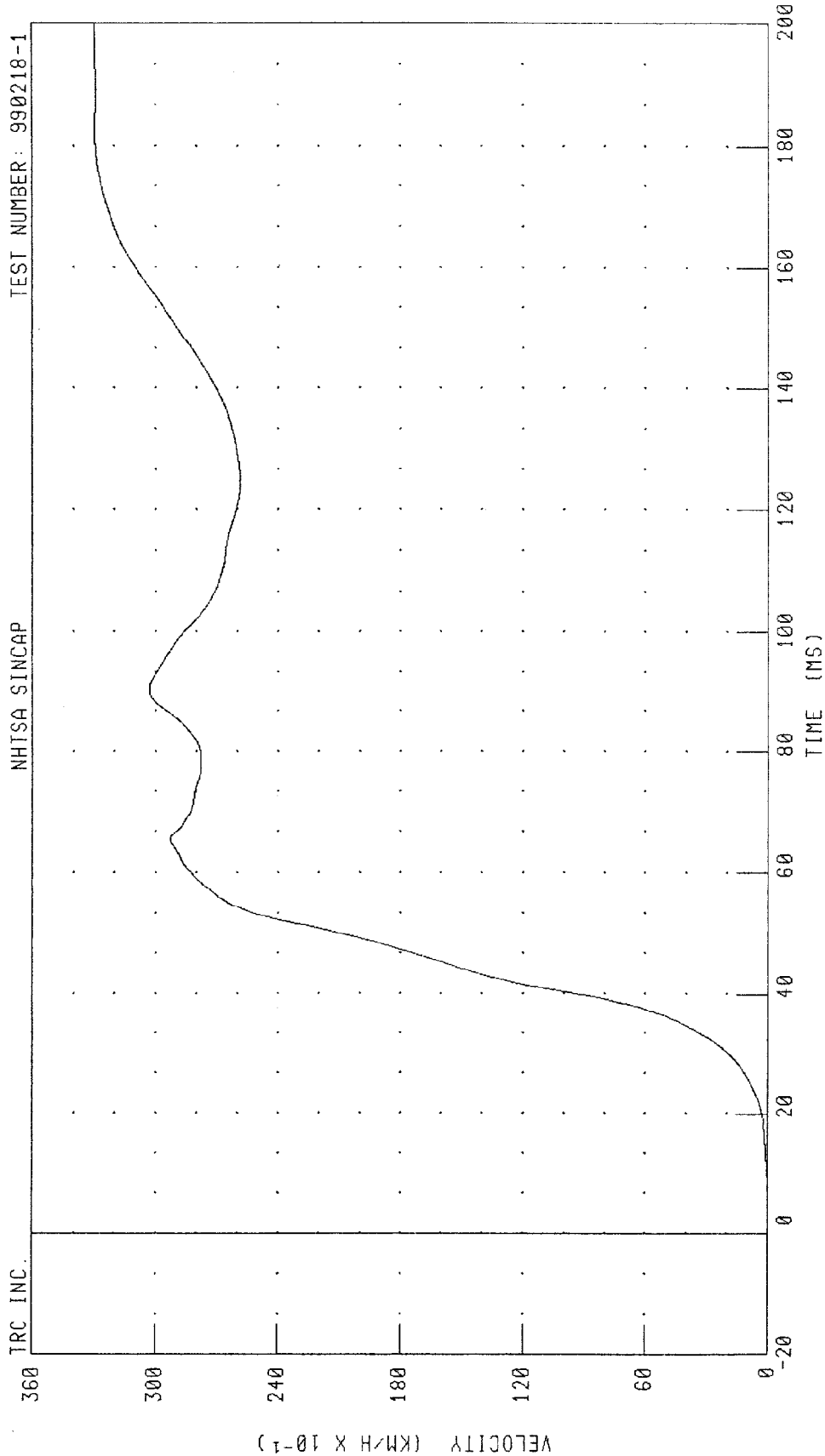
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT ACCELERATION



PEAK DATA: 43.84 G @ 40.63 MS; -7.86 G @ 101.25 MS

CHANNEL: LLRYR4 FILTER: FIR 100

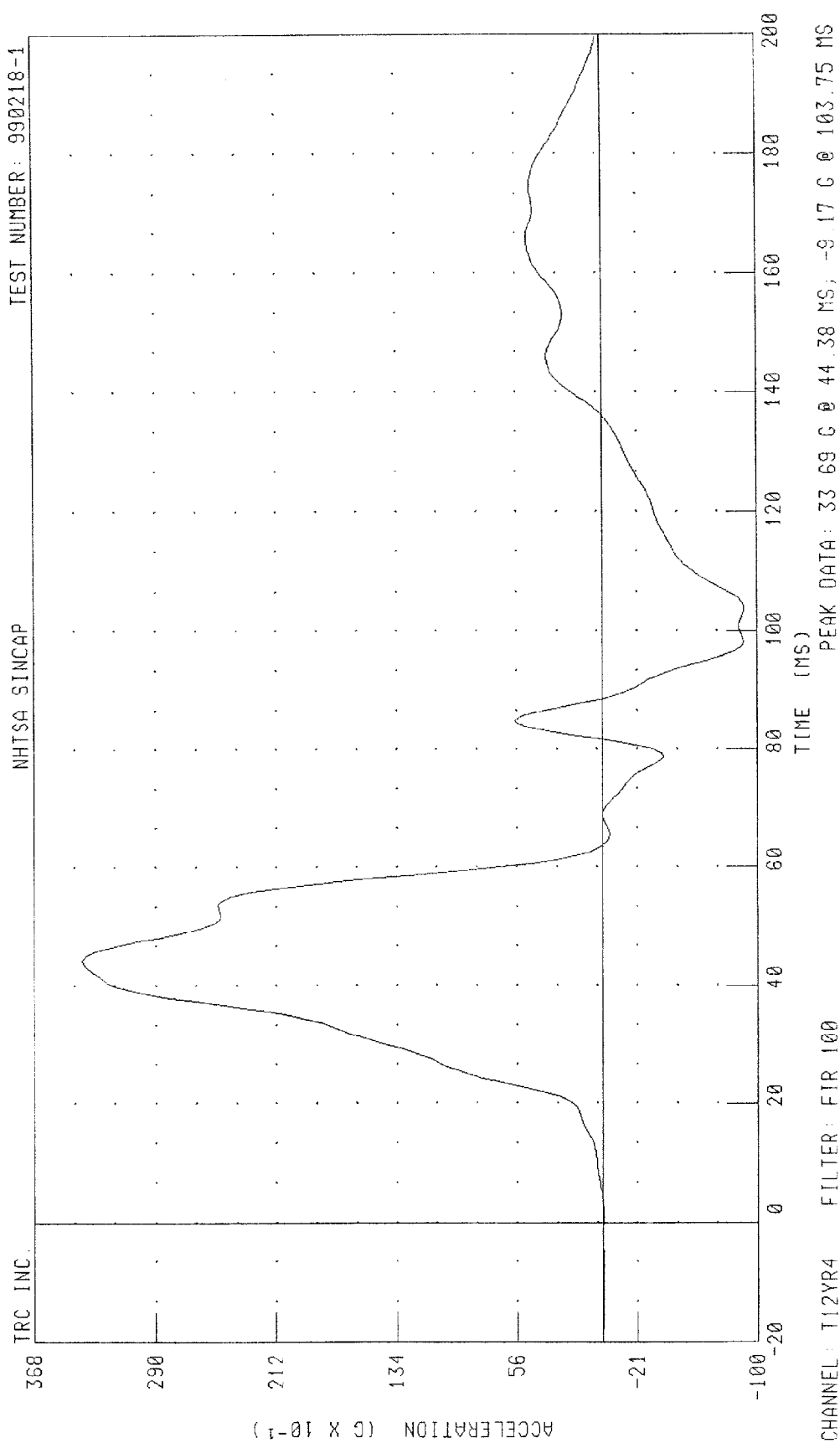
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER RIB Y-AXIS REDUNDANT VELOCITY



CHANNEL: LLYVJ FILTER: CH. CLASS 180

PEAK DATA: 32.97 KM/H @ 198.48 MS, 0.00 KM/H @ 0.00 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT ACCELERATION

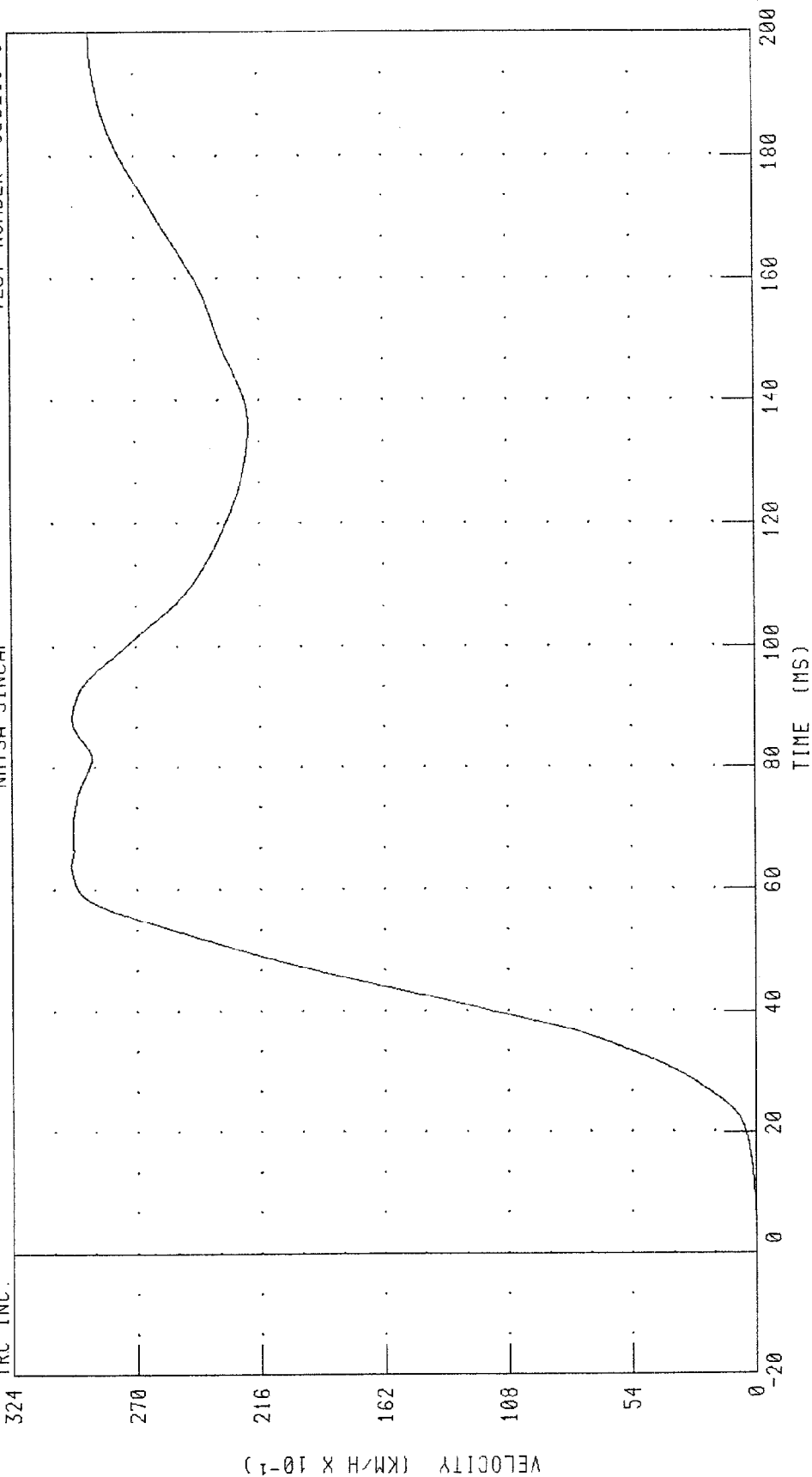


MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER LOWER SPINE Y-AXIS REDUNDANT VELOCITY

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 29.84 KM/H @ 63.84 MS; 0.00 KM/H @ 1.28 MS

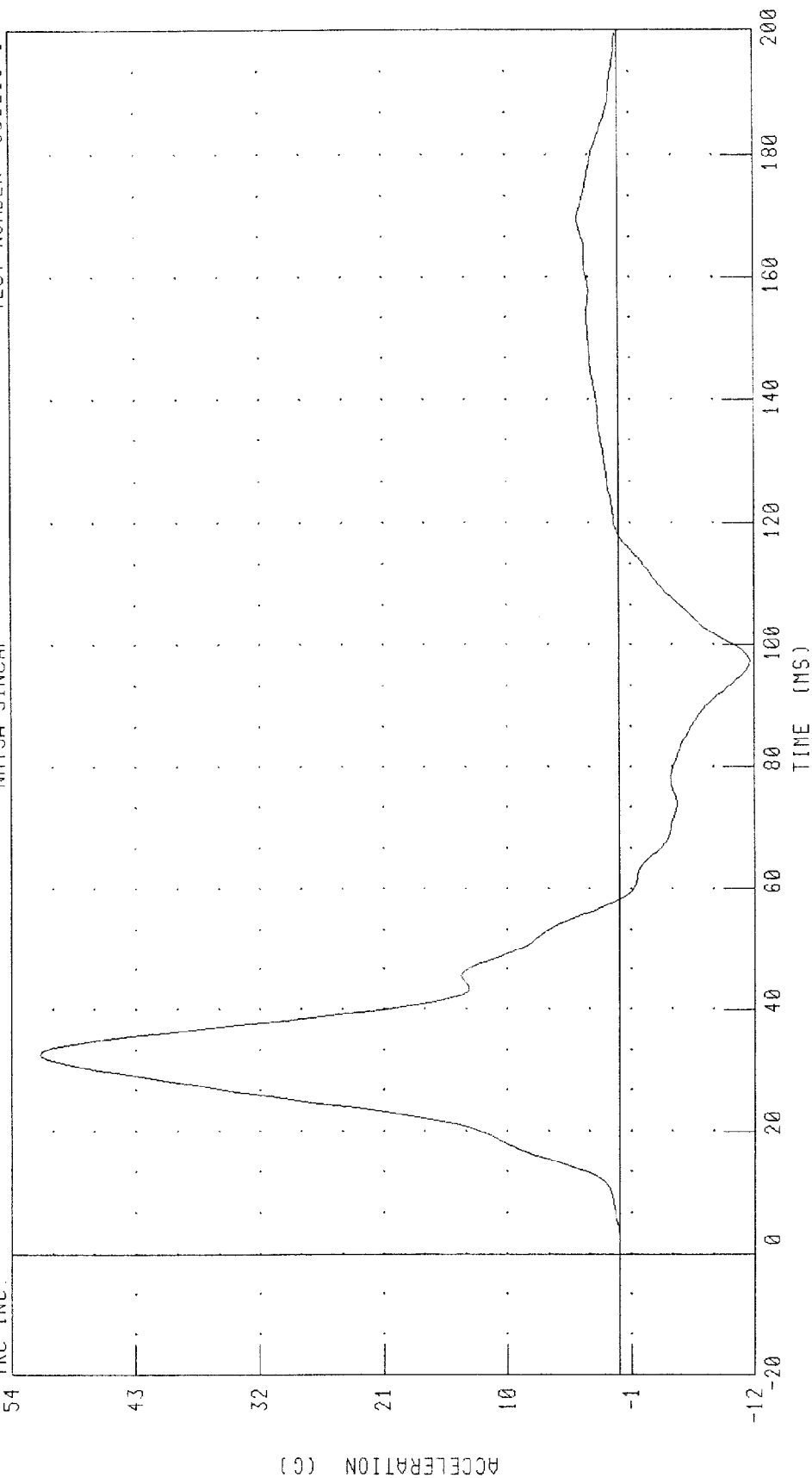
CHANNEL: T12YVJ FILTER: CH. CLASS 180

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT ACCELERATION

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



CHANNEL: PEVYR4 FILTER: FIR 100

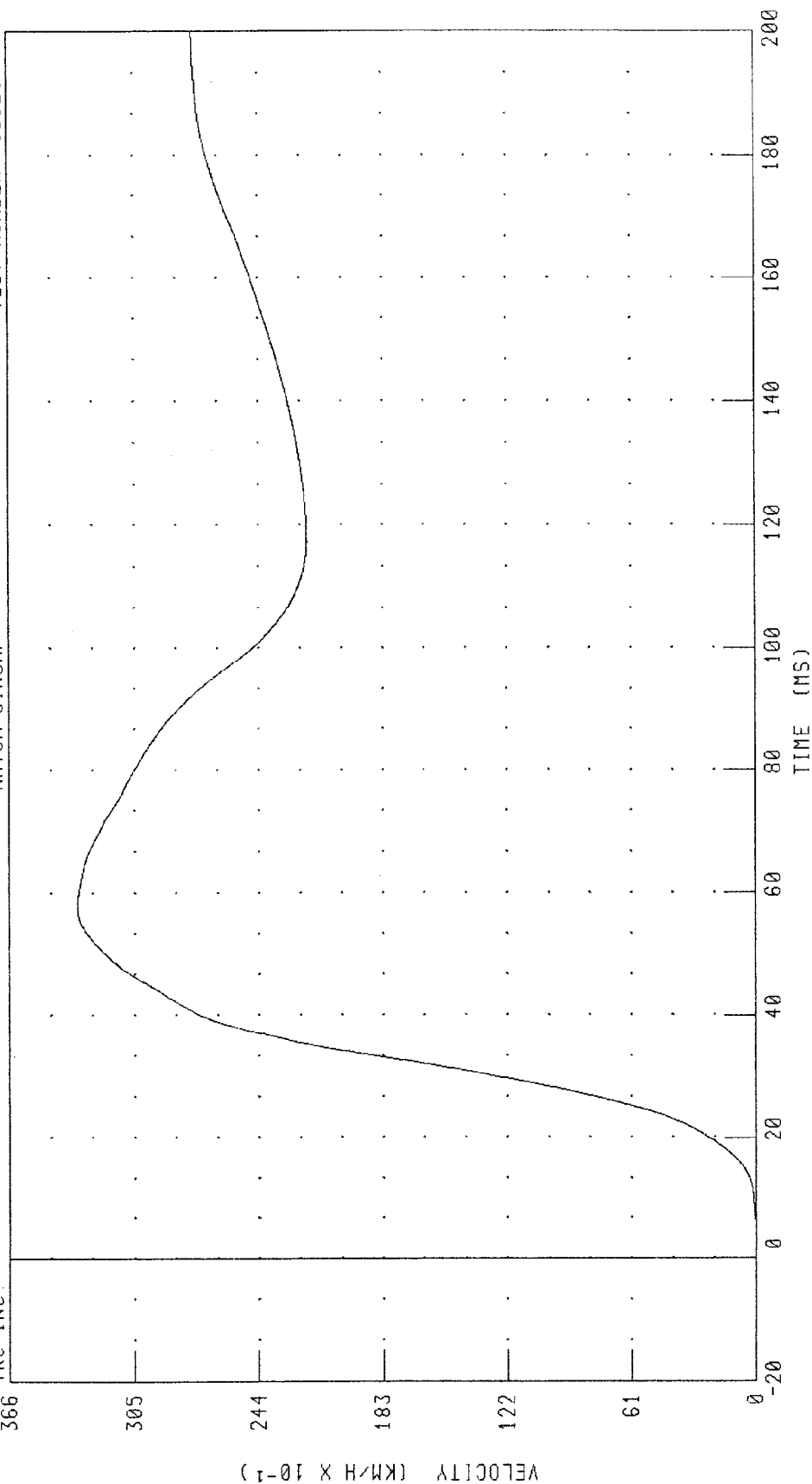
PEAK DATA: 51.54 G @ 32.50 MS, -11.60 G @ 97.50 MS

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
LEFT REAR PASSENGER PELVIS Y-AXIS REDUNDANT VELOCITY

TEST NUMBER: 990218-1

NHTSA STINCAP

TRC INC.



PEAK DATA: 33.27 KM/H @ 58.00 MS; 0.00 KM/H @ 2.32 MS

CHANNEL: PEYVJ FILTER: CH. CLASS 180

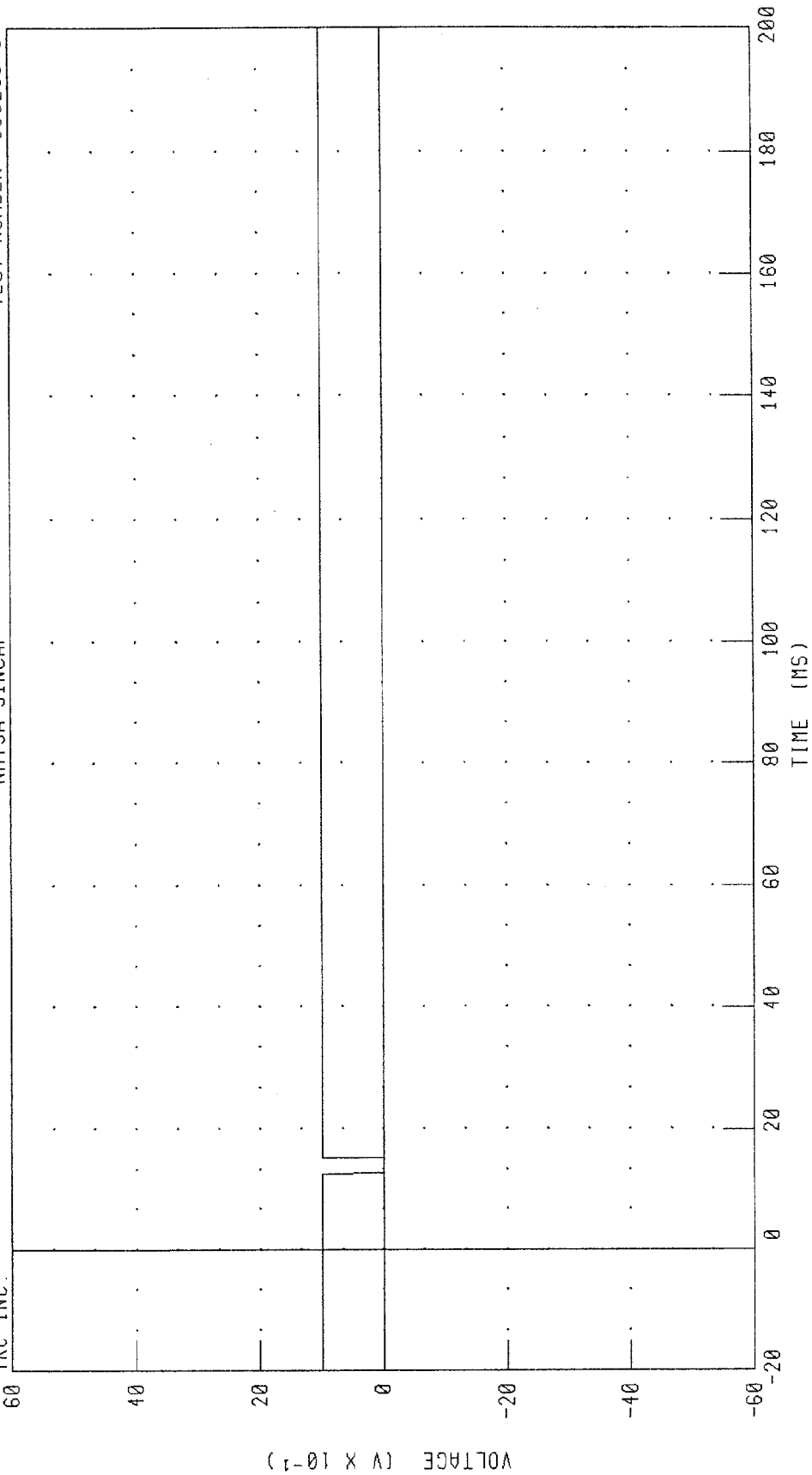
Driver and Passenger Dummy Contact Switches

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
 DRIVER SHOULDER CONTACT SWITCH

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 1.00 V @ 200.00 MS, 0.00 V @ 12.80 MS

FILTER: CH. CLASS 1000

CHANNEL: SHLD1

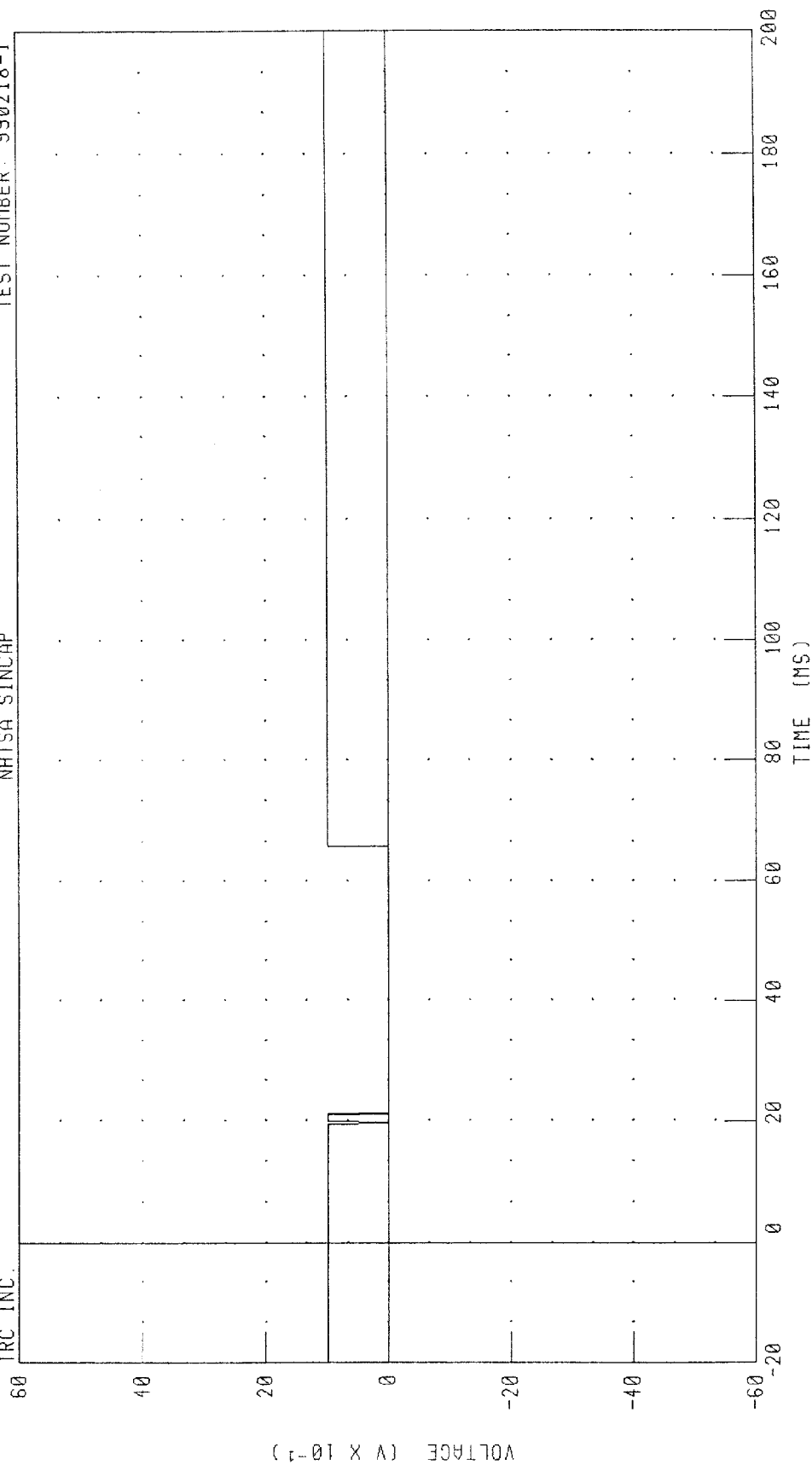
MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

DRIVER PELVIS CONTACT SWITCH

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 1.00 V @ 200.00 MS; 0.00 V @ 19.52 MS

FILTER: CH. CLASS 1000

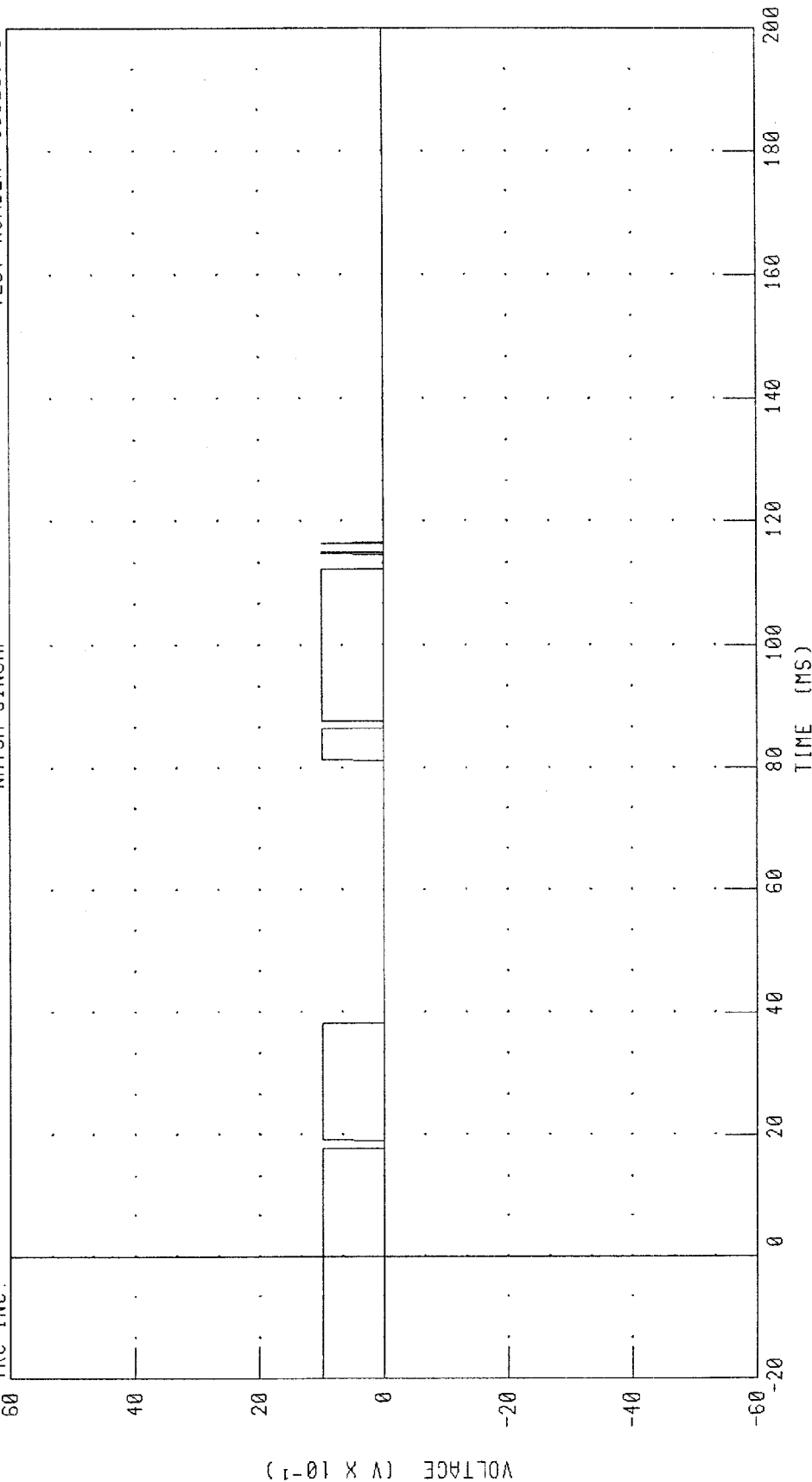
CHANNEL: PEV1

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER
PASSENGER SHOULDER CONTACT SWITCH

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC.



PEAK DATA: 1.00 V @ -20.00 MS; 0.00 V @ 17.92 MS

CHANNEL: SHLD2 FILTER: CH. CLASS 1000

MOVING DEFORMABLE BARRIER INTO LEFT SIDE OF 1999 FORD EXPLORER

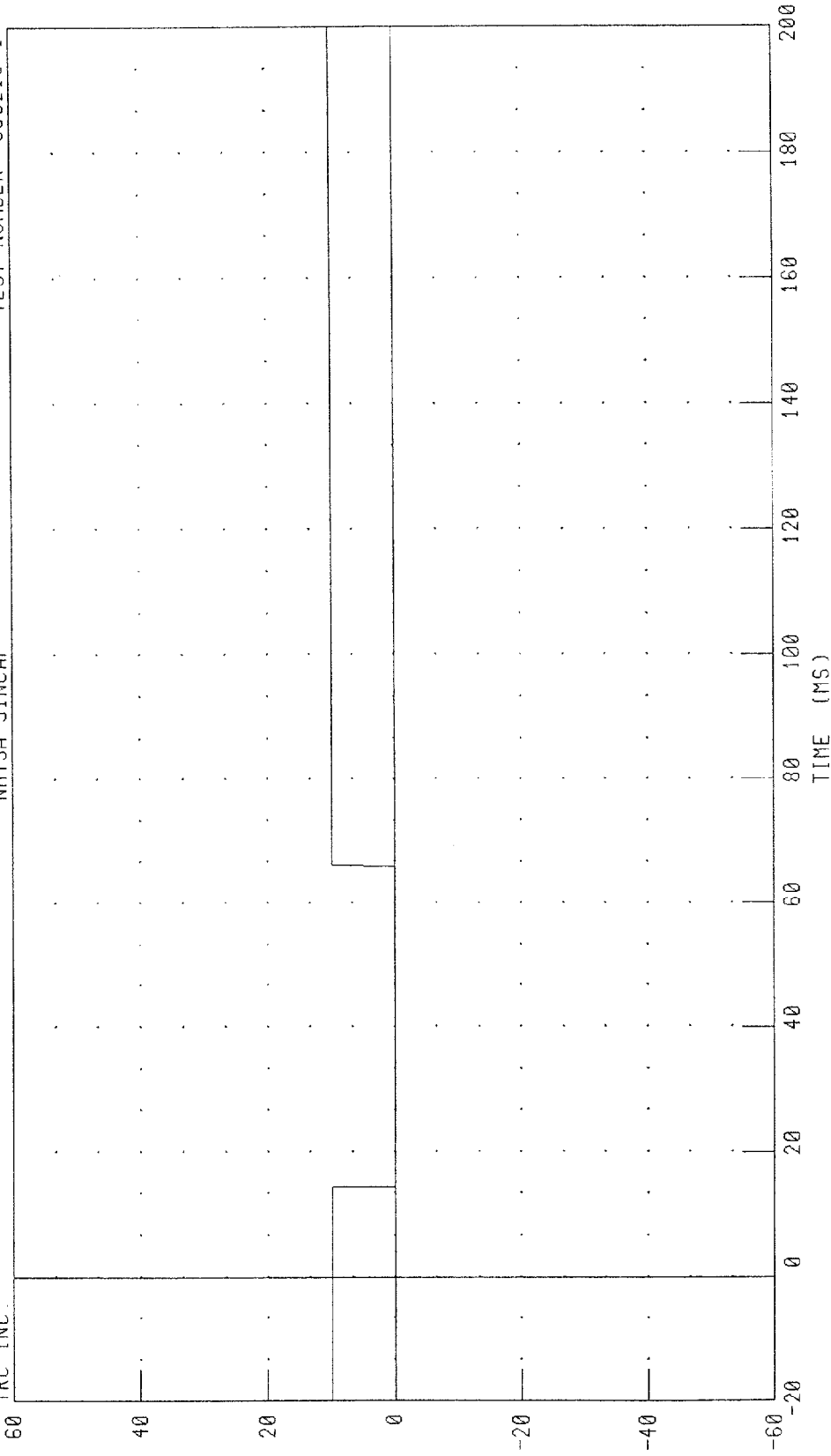
PASSENGER PELVIS CONTACT SWITCH

TEST NUMBER: 990218-1

NHTSA SINCAP

TRC INC

VOLTAGE (V X 10⁻¹)



PEAK DATA: 1.00 V @ 200.00 MS; 0.00 V @ 14.40 MS

FILTER: CH. CLASS 1000

CHANNEL: PEV2

APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID PRE-TEST AND POST-TEST CALIBRATION
CONFIGURED FOR LEFT SIDE IMPACT

Date: 02/02/99 & 03/15/99 TRC sequential test number: ED5113 & ED5114
Laboratory Technician: B. Crabtree; K. Watkins

Test Parameter	Specification	SID 051		SID 052	
		Pre-	Post-	Pre-	Post-
		Test	Test	Test	Test
SH - seated height (mm)	889-909	904.2	902.2	899.2	901.2
RH - Rib Height (mm)	502-520	508.0	508.0	508.0	510.0
HP - Hip Pivot Height (mm)	99 ref	99.1	100.1	99.1	100.1
RD - Rib from Back Line (mm)	229-241	233.7	233.7	236.2	236.2
KV - Knee Pivot from Back Line (mm)	511-526	520.7	518.8	518.2	517.6
SW - Knee Pivot to Floor (mm)	490-505	492.8	491.6	495.3	495.3
HW - Hip Width (mm)	356-391	363.2	363.2	368.3	368.3
THORAX IMPACTS					
Temperature (°C)	18.9-25.5	21.1	21.1	21.1	21.7
Relative Humidity (%)	10-70	22	22	22	22
Probe Speed (m/s)	4.27-4.33	4.33	4.30	4.30	4.31
Upper Rib (g's)	37-46	37.7	40.4	41.8	42.1
Lower Rib (g's)	37-46	38.6	41.1	40.6	40.6
Lower Spine (g's)	15-22	19.7	19.6	19.1	19.2
PELVIS IMPACTS					
Temperature (°C)	18.9-25.5	21.1	21.1	21.1	21.7
Relative Humidity (%)	10-70	22	22	22	22
Probe Speed (m/s)*	4.27-4.33	4.31	4.29	4.29	4.29
Pelvis (g's)*	40-60	57.4	51.7	47.9	55.4

Calibration Test Results

Pre-Test

SID: 051

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Thorax Impact Test:	The lateral thorax passed all impact test requirements.
Pelvis Impact Tests:	The lateral pelvis passed all impact test requirements.
Thorax Shock Absorbers:	The thorax passed all shock absorber requirements.

TRANSPORTATION RESEARCH CENTER INC.
 SIDE IMPACT DUMMY
 EXTERNAL DIMENSIONS
 LEFT SIDE CONFIGURATION
 SN SN051 VECTOR

02-FEB-99

TRC INC. TEST NO: ED5113 572F SN051 EXT.DIMENSION CAL13

DIMENSIONS WITH CHEST JACKET INSTALLED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
	TEMPERATURE		21.1 DEG. C
	RELATIVE HUMIDITY		22.0 %
SH	SEATED HEIGHT	889 - 909 MM	904.2 MM
HP	HIP PIVOT HEIGHT	99 MM REF.	99.1 MM
KH	KNEE PIVOT FROM BACKLINE	511 - 526 MM	520.7 MM
KV	KNEE PIVOT FROM FLOOR	490 - 506 MM	492.8 MM
HW	HIP WIDTH	356 - 391 MM	363.2 MM
DIMENSIONS WITH CHEST JACKET REMOVED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
RH	RIB HEIGHT	501 - 520 MM	508.0 MM
RD	RIB FROM BACKLINE	229 - 241 MM	233.7 MM
RW-1	TOP RIB WIDTH FROM C/L	165. - 180 MM	177.8 MM
RW-2	BOTTOM RIB WIDTH FROM C/L	165 - 180 MM	177.8 MM
	DIFFERENCE BETWEEN TOP & BOTTOM RIB WIDTH FROM C/L	≤ 2.5 MM	0.0 MM

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

By [Signature]

RUN NUMBER: 020399.1052

TRANSPORTATION RESEARCH CENTER INC.

LATERAL HEAD DROP TEST

BIOSID DUMMY

15-FEB-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO. HDL5113

H3/SID SN051 HEAD DROP CAL13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.6 deg. C	21.11 deg. C
RELATIVE HUMIDITY	10 - 70 %	22.00 %
PEAK RESULTANT ACCELERATION	120 - 150 G	142.51 G
PEAK LONGITUDINAL ACCELERATION	15 G MAX	-9.39 G
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN

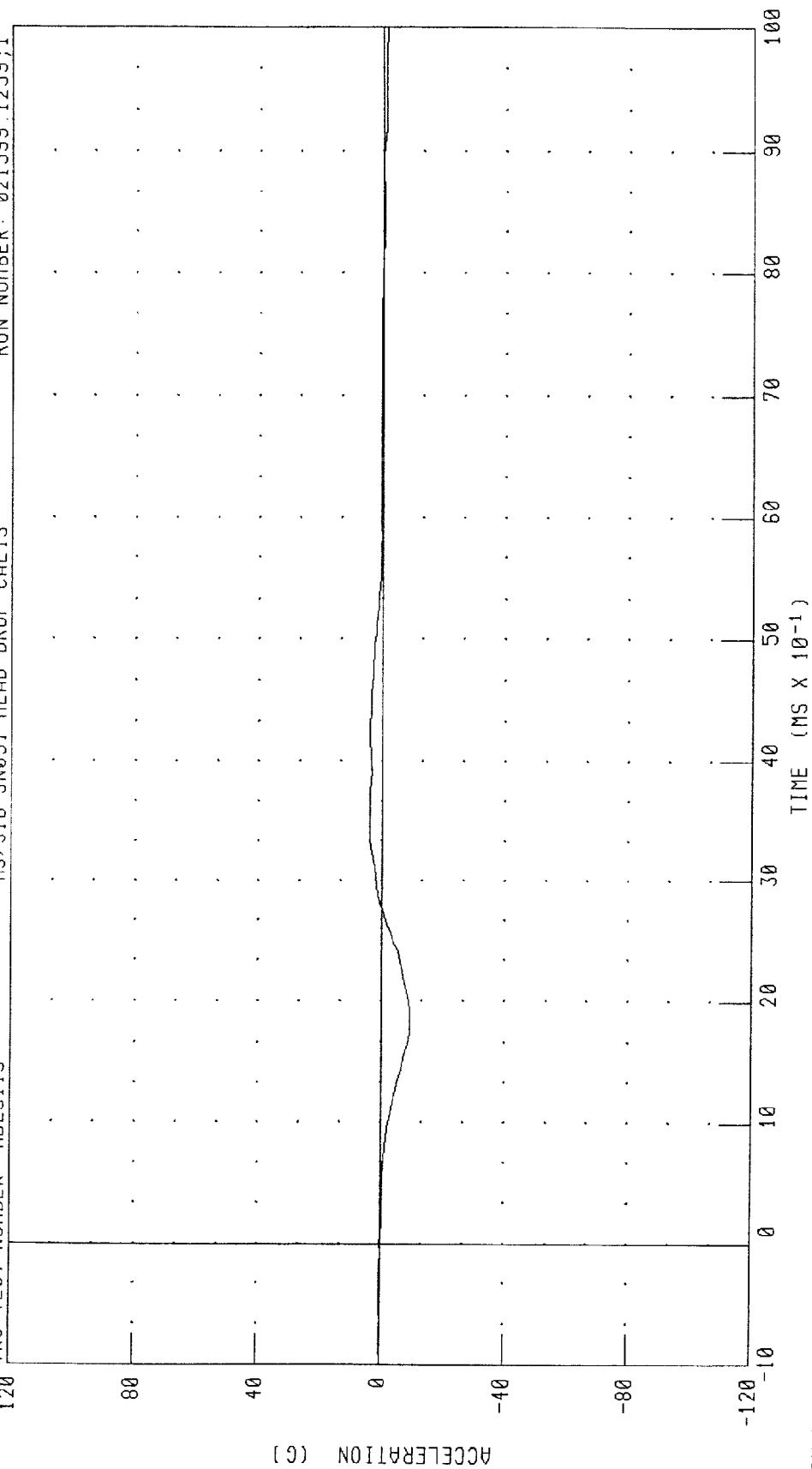
Ry Calt

RUN NUMBER: 021599.1257;1

BIOSID DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION X AXIS

TRC TEST NUMBER: HDL5113 H3/SID SN051 HEAD DROP CAL13 RUN NUMBER: 021599.1259;1



CHANNEL: HEDXC FILTER: CH. CLASS 1000

PEAK DATA: 4.00 G @ 3.44 MS; -9.39 G @ 1.76 MS

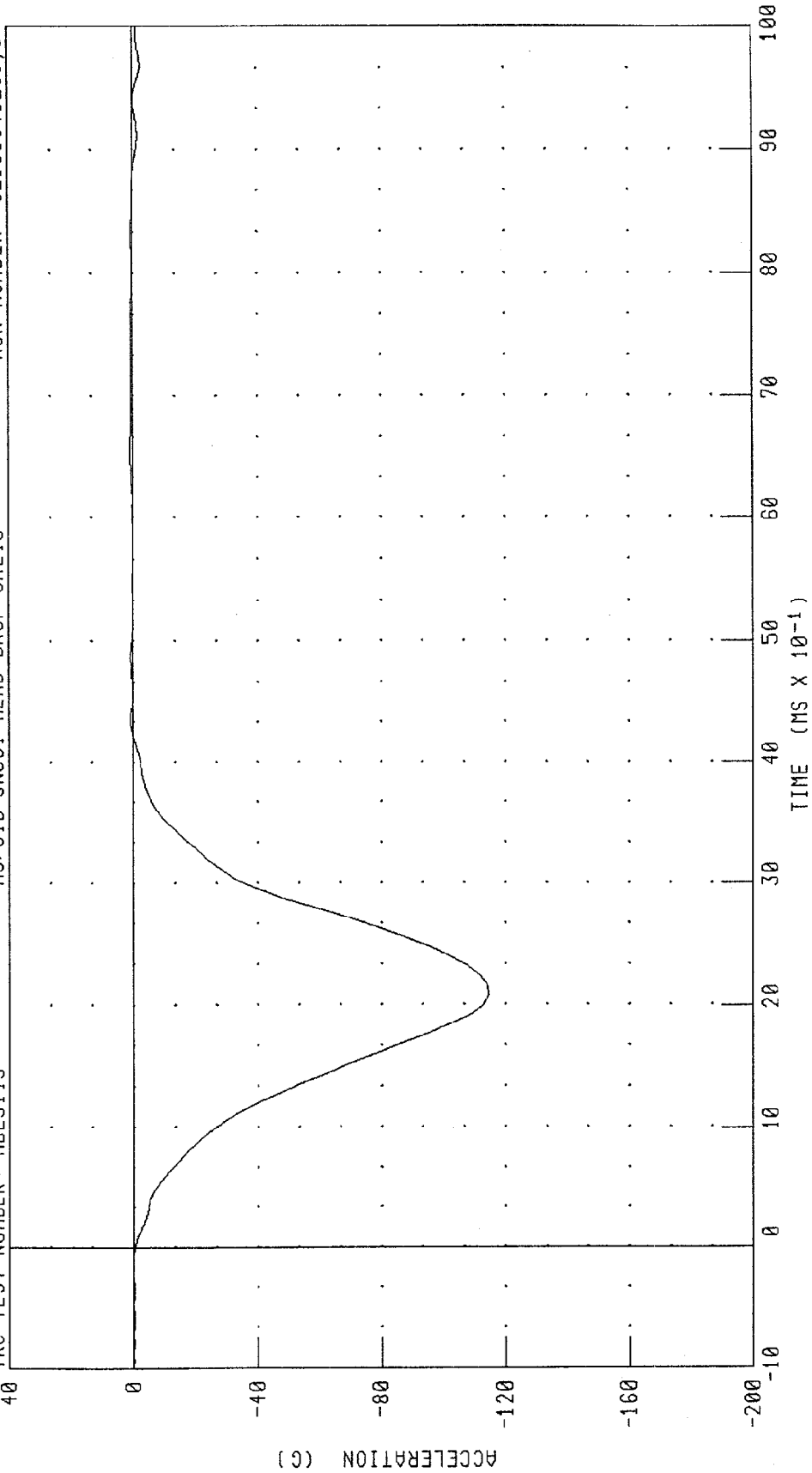
BIOSID DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Y AXIS

TRC TEST NUMBER: HDL5113

H3/SID SN051 HEAD DROP CAL13

RUN NUMBER: 021599.1259,1



PEAK DATA: 1.03 G @ 4.32 MS; -114.67 G @ 2.08 MS

CHANNEL: HEDYC FILTER: CH. CLASS 1000

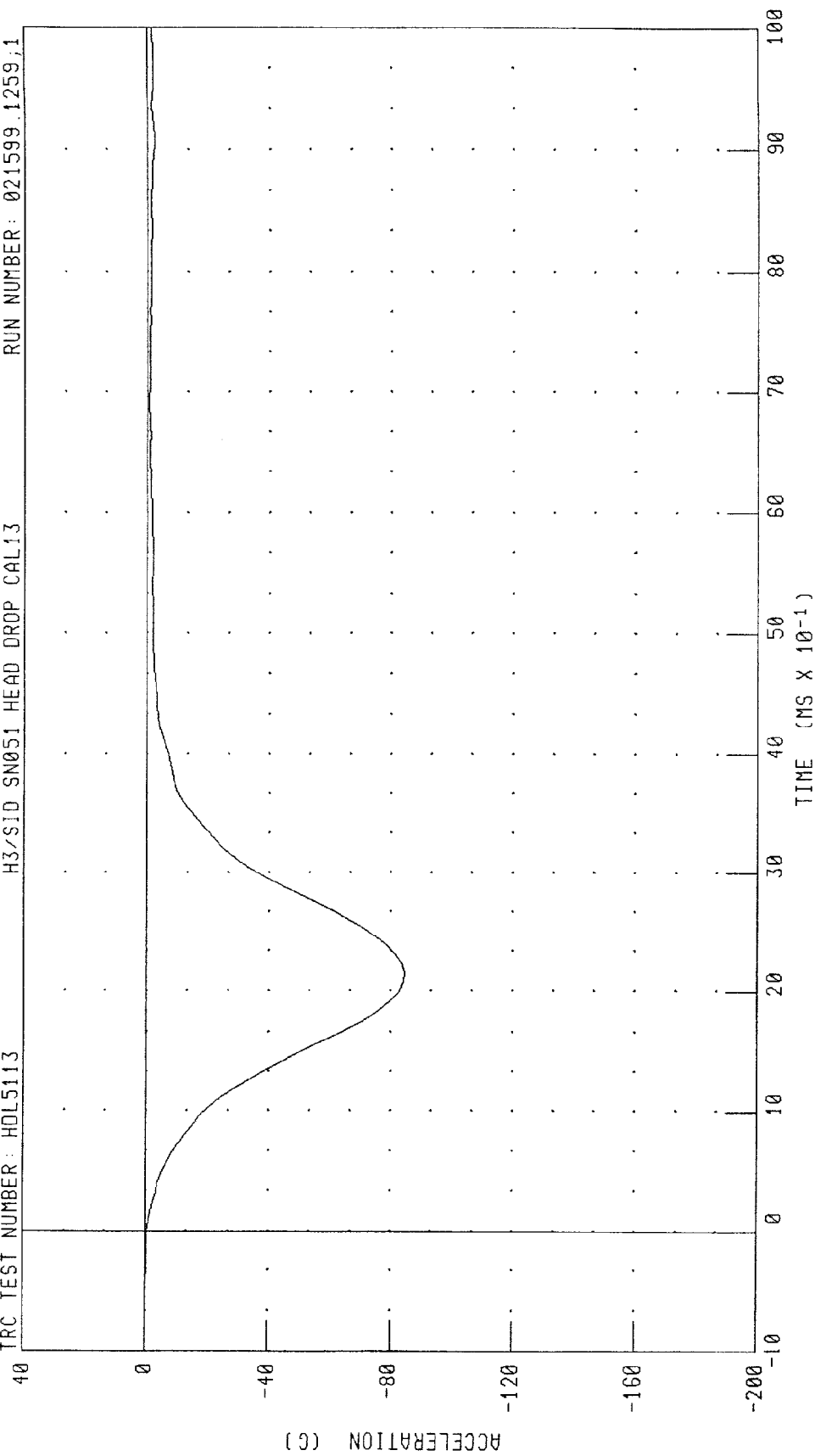
BIOSID DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD ACCELERATION Z AXIS

TRC TEST NUMBER: HDL5113

H3/SID SN051 HEAD DROP CAL13

RUN NUMBER: 021599.1259;1



CHANNEL: HEDZG FILTER: CH. CLASS 1000

PEAK DATA:

0.00 G @ -0.96 MS; -84.60 G @ 2.16 MS

BIOSID DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

HEAD RESULTANT ACCELERATION

TRC TEST NUMBER: HD15113

H3/SID SN051 HEAD DROP CAL13

RUN NUMBER: 021599.1259;1

200

160

120

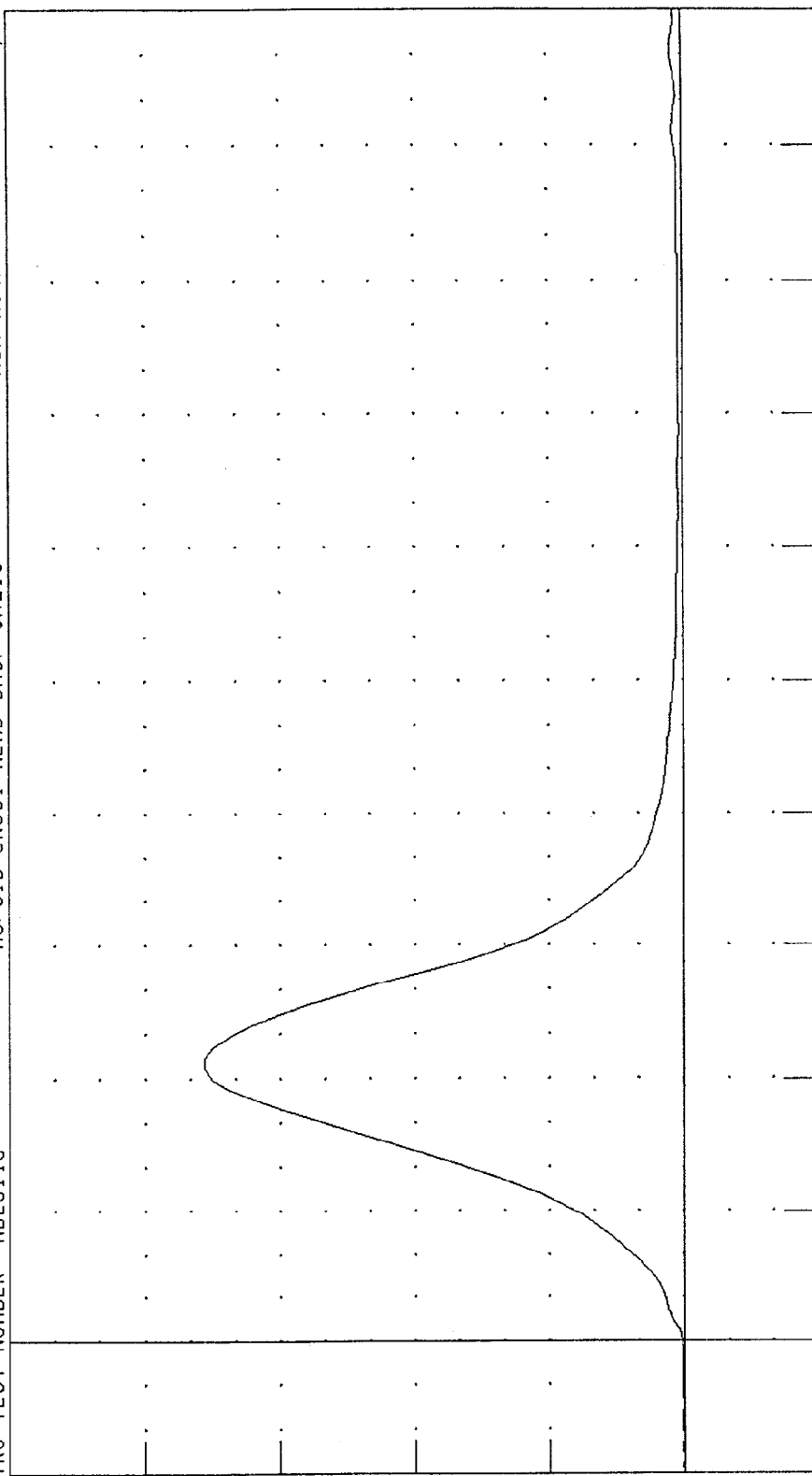
80

40

0

-40

ACCELERATION (G)



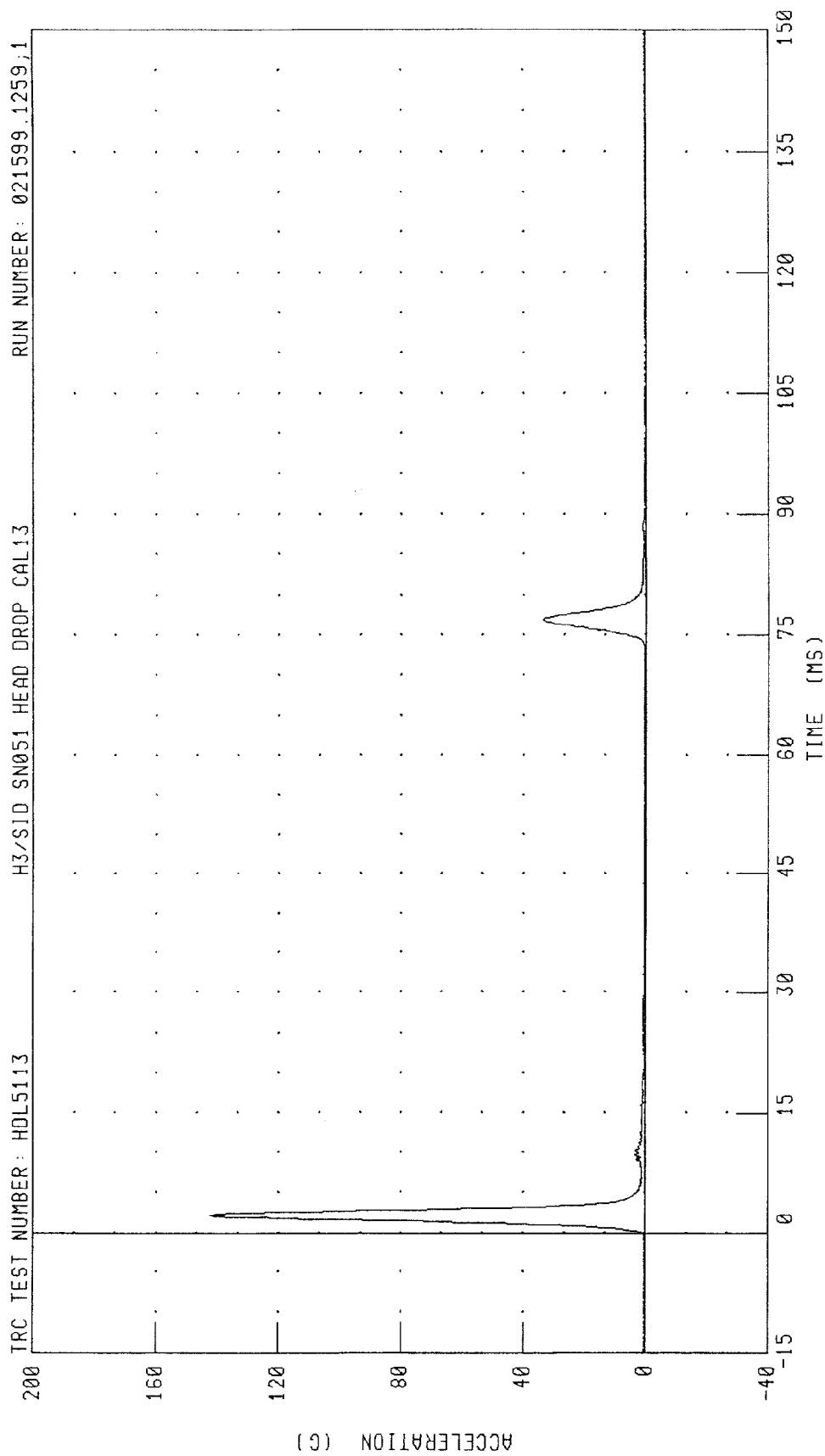
TIME (MS X 10⁻¹)

PEAK DATA: 142.51 G @ 2.08 MS; 0.07 G @ -0.88 MS

CHANNEL: HEDRC FILTER: CH. CLASS 1000

BIOSID DUMMY CALIBRATION -- 35 DEGREE LEFT LATERAL HEAD DROP

CHECK PLOT - HEAD RESULTANT ACCELERATION



CHANNEL: HEDRC FILTER: CH. CLASS 1000

TRANSPORTATION RESEARCH CENTER INC.

LATERAL NECK TEST

BIOSID DUMMY

16-FEB-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO. NFL5113C

H3/SID SN051 NECK LEFT CAL13

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		20.6 - 22.2 deg. C	21.11 deg. C
RELATIVE HUMIDITY		10 - 70 %	22.00 %
IMPACT VELOCITY		6.89 - 7.13 M/S	7.06 M/S
INTEGRATED VELOCITY	10 MS	1.96 - 2.55 M/S	2.31 M/S
	20 MS	4.12 - 5.10 M/S	4.83 M/S
	30 MS	5.73 - 7.01 M/S	7.01 M/S
	40 - 70 MS	6.27 - 7.64 M/S	7.13- 7.21 M/S
MAXIMUM MIDSAGGITAL PLANE ROTATION		64 - 78 deg.	67.38 deg.
ROTATION ANGLE DECAY TIME FROM PEAK TO ZERO		50 - 70 MS	55.76 MS
MAXIMUM MOMENT ABOUT OCCIPITAL CONDYLE		-108.5 / -88.2 NM	-89.04 NM
POSITIVE MOMENT DECAY TIME FROM PEAK TO ZERO		40 - 60 MS	49.52 MS
TIME OF MAXIMUM ROTATION AFTER MAXIMUM MOMENT		0 - 20 MS	12.80 MS

TEST MEETS SPECIFICATIONS

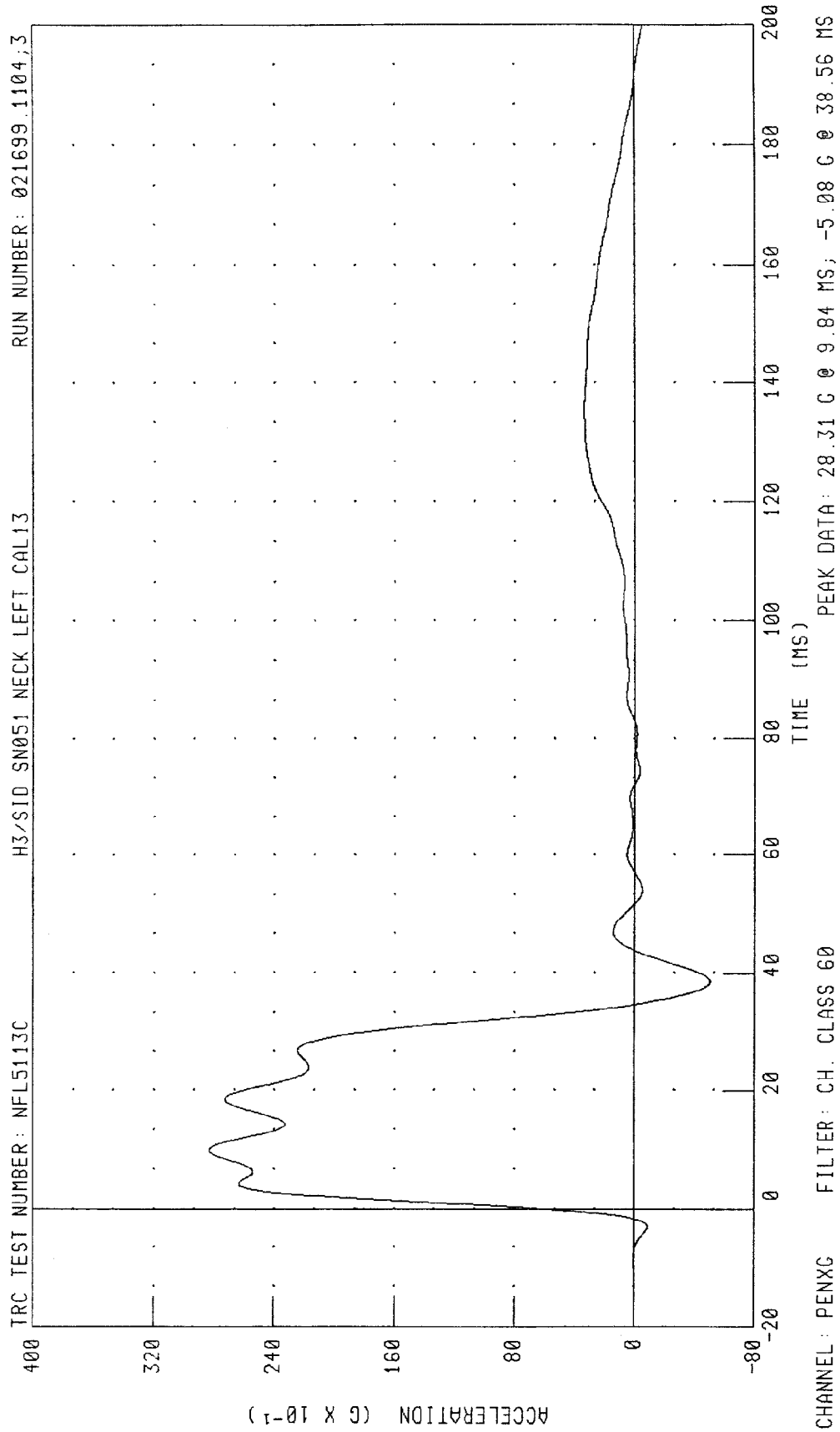
TECHNICIAN

By C. Whit

RUN NUMBER: 021699.1103;3

BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

PENDULUM DECELERATION



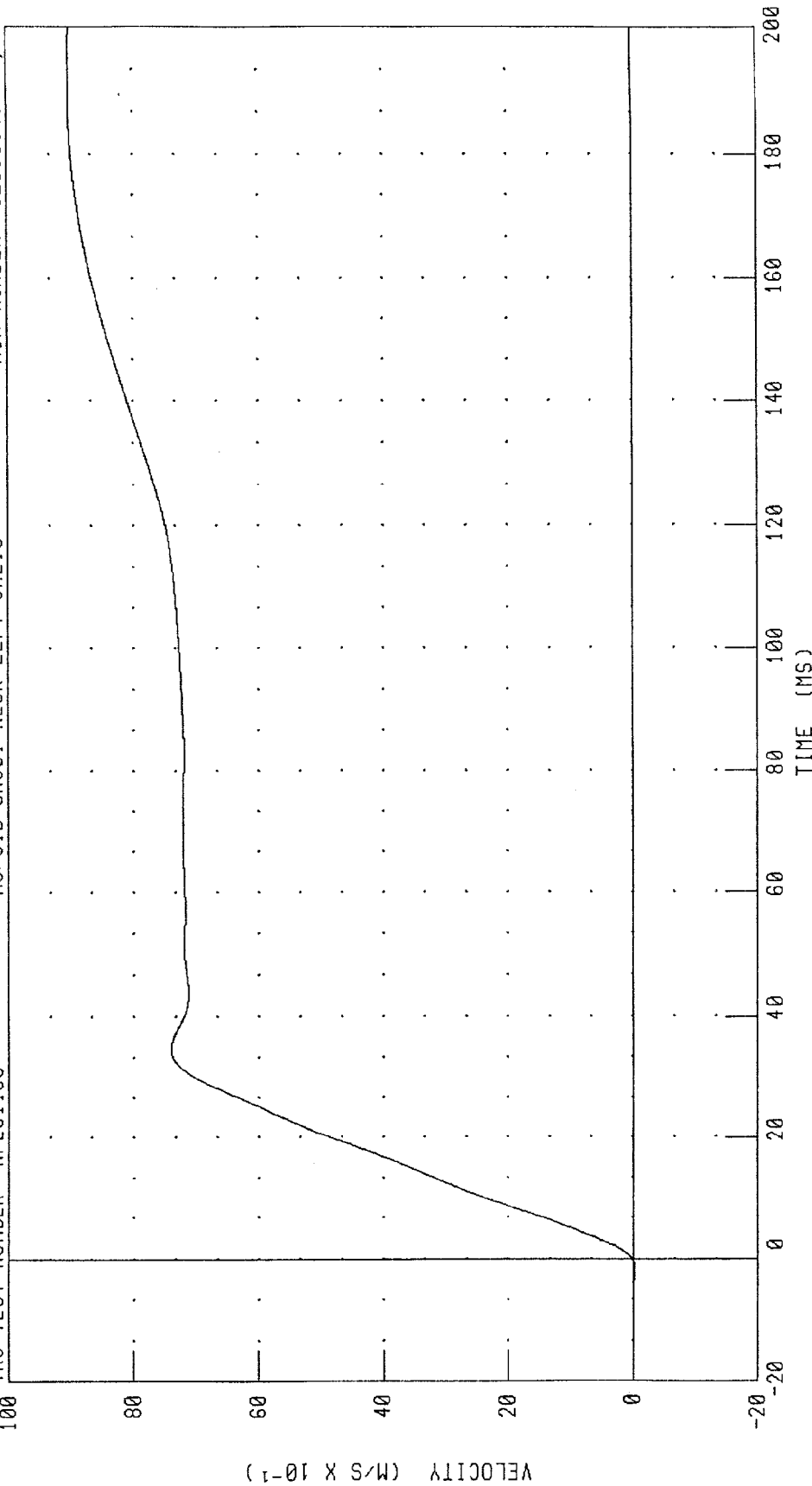
BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

INTEGRATED PENDULUM VELOCITY

TRC TEST NUMBER: NFL5113C

H3/SID SN051 NECK LEFT CAL13

RUN NUMBER: 021699.1104,3



CHANNEL: PENXVI FILTER: CH. CLASS 60

PEAK DATA: 9.03 M/S @ 191.36 MS; -0.03 M/S @ -1.76 MS

BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

ROTATION ABOUT BASE OF NECK

TRC TEST NUMBER: NFL5113C

H3/SID SN051 NECK LEFT CAL13

RUN NUMBER: 021699.1104,3

120

90

60

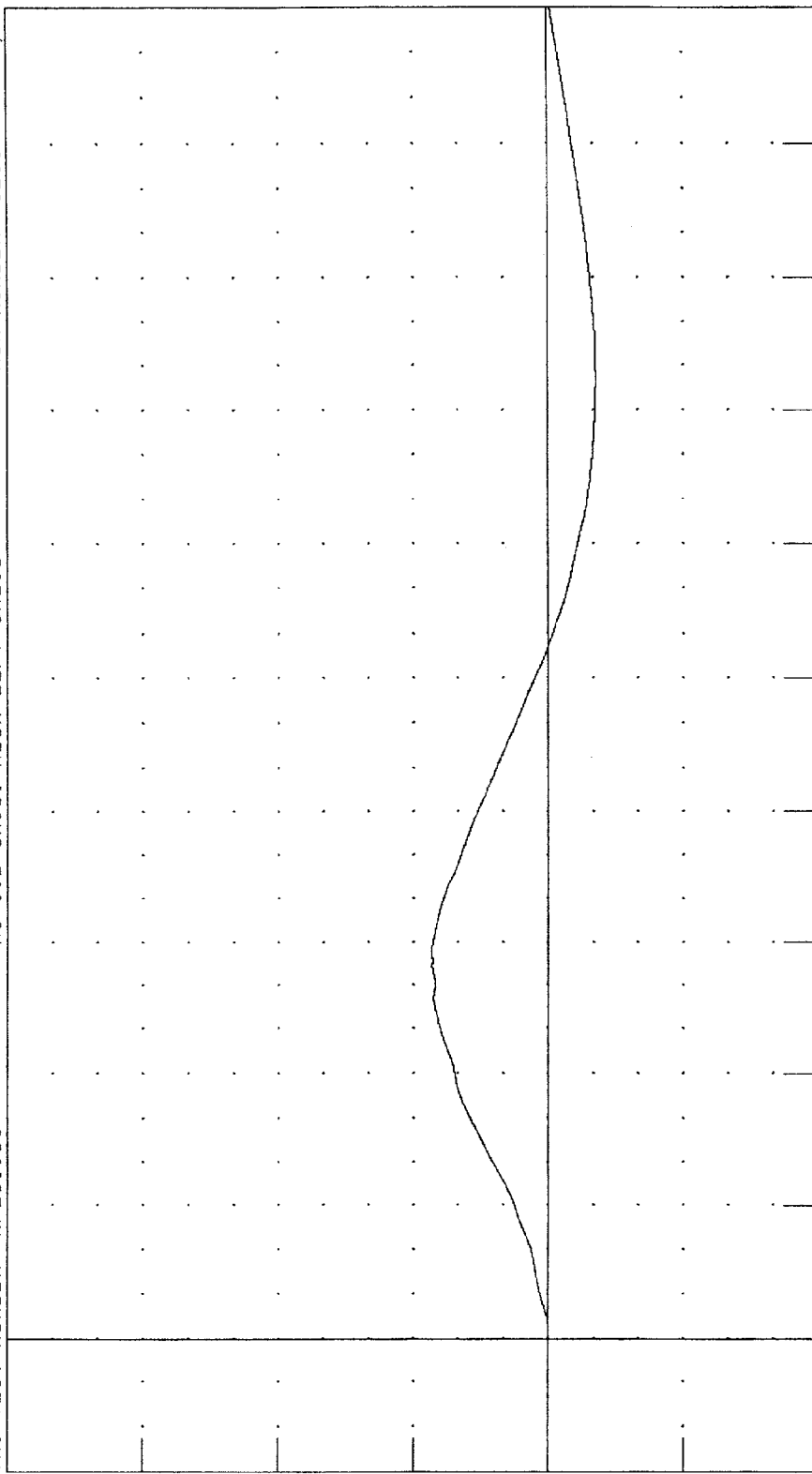
30

0

-30

-60

ANGLE (°)



TIME (MS)

CHANNEL: BETA

FILTER: CH. CLASS 180

PEAK DATA: 25.74 ° @ 58.56 MS, -10.63 ° @ 144.56 MS

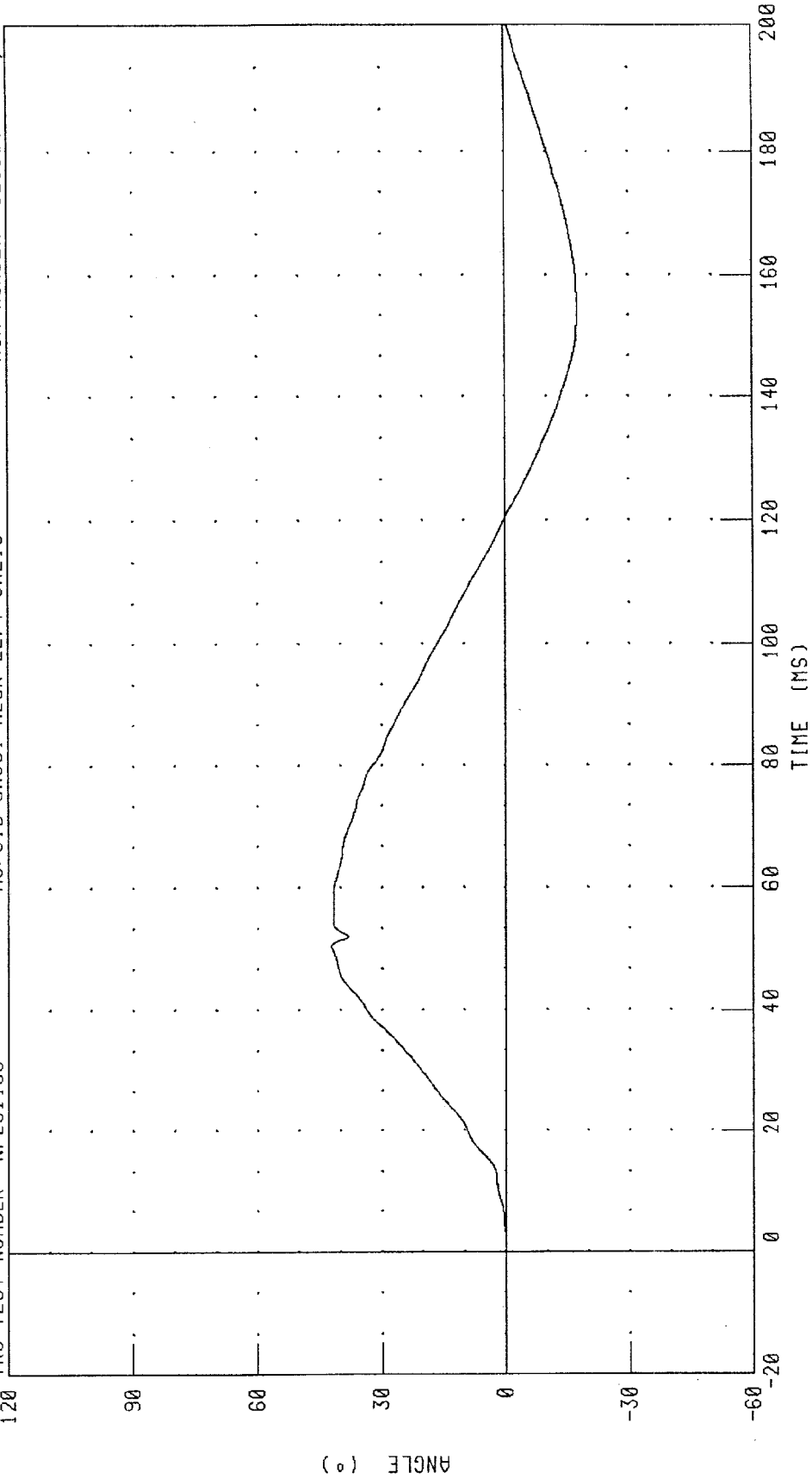
BIOSID DUMMY CALIBRATION --- LEFT LATERAL NECK TEST

ROTATION ABOUT OCCIPITAL CONDYLE

TRC TEST NUMBER: NFL5113C

H3/SID SN051 NECK LEFT CAL13

RUN NUMBER: 021699.1104;3

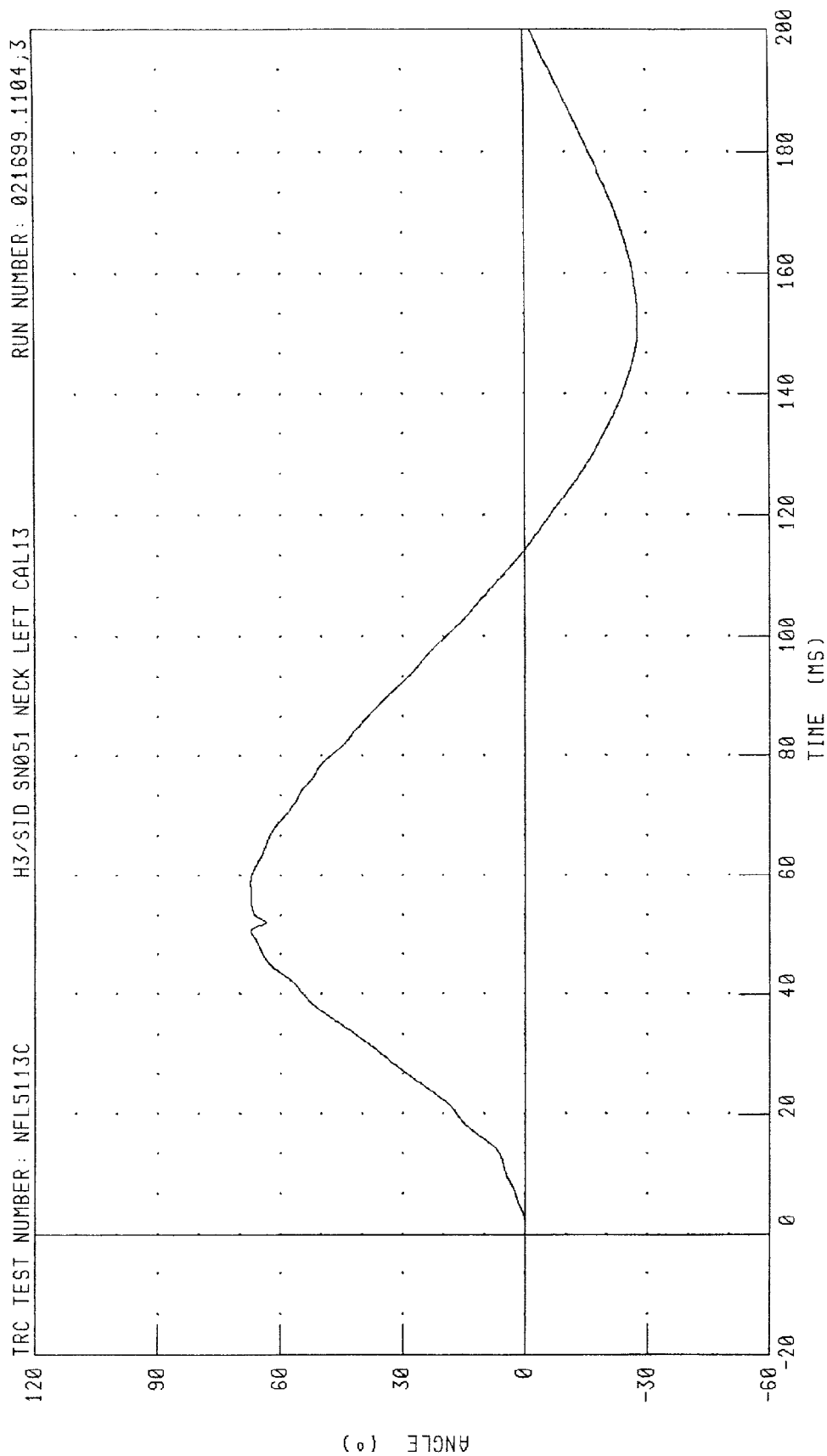


PEAK DATA: 42.01 ° @ 50.48 MS; -17.59 ° @ 154.24 MS

CHANNEL: THETA FILTER: CH. CLASS 180

BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

TOTAL ROTATION



CHANNEL: TOTAN FILTER: CH. CLASS 180

PEAK DATA: 67.38 ° @ 58.56 MS, -27.89 ° @ 151.20 MS

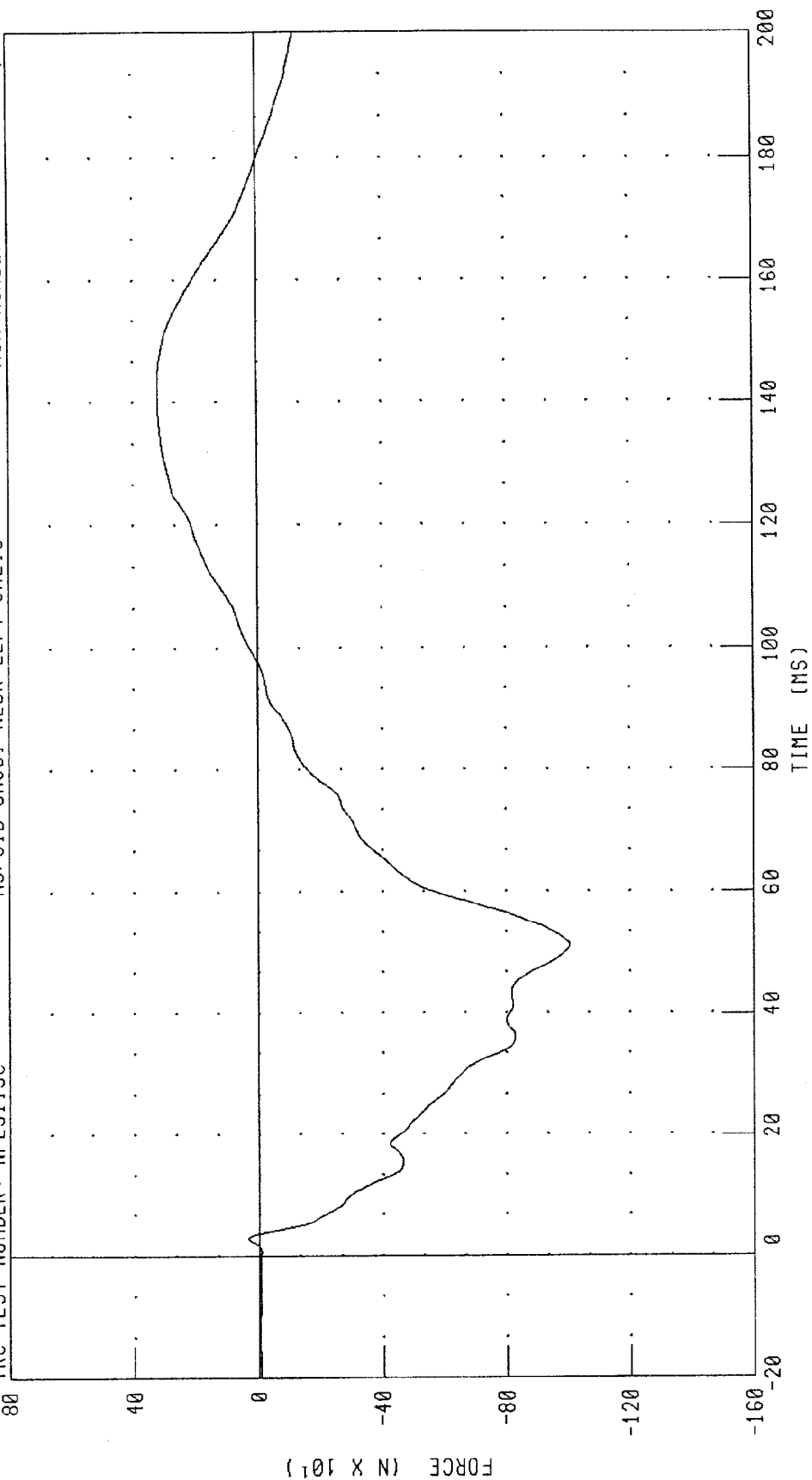
BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK FORCE Y AXIS

TRC TEST NUMBER: NFL5113C

H3/SID SN051 NECK LEFT CAL13

RUN NUMBER: 021699.1104,3



PEAK DATA: 321.60 N @ 141.92 MS; -1005.60 N @ 51.20 MS

CHANNEL: NEKYF FILTER: CH. CLASS 180

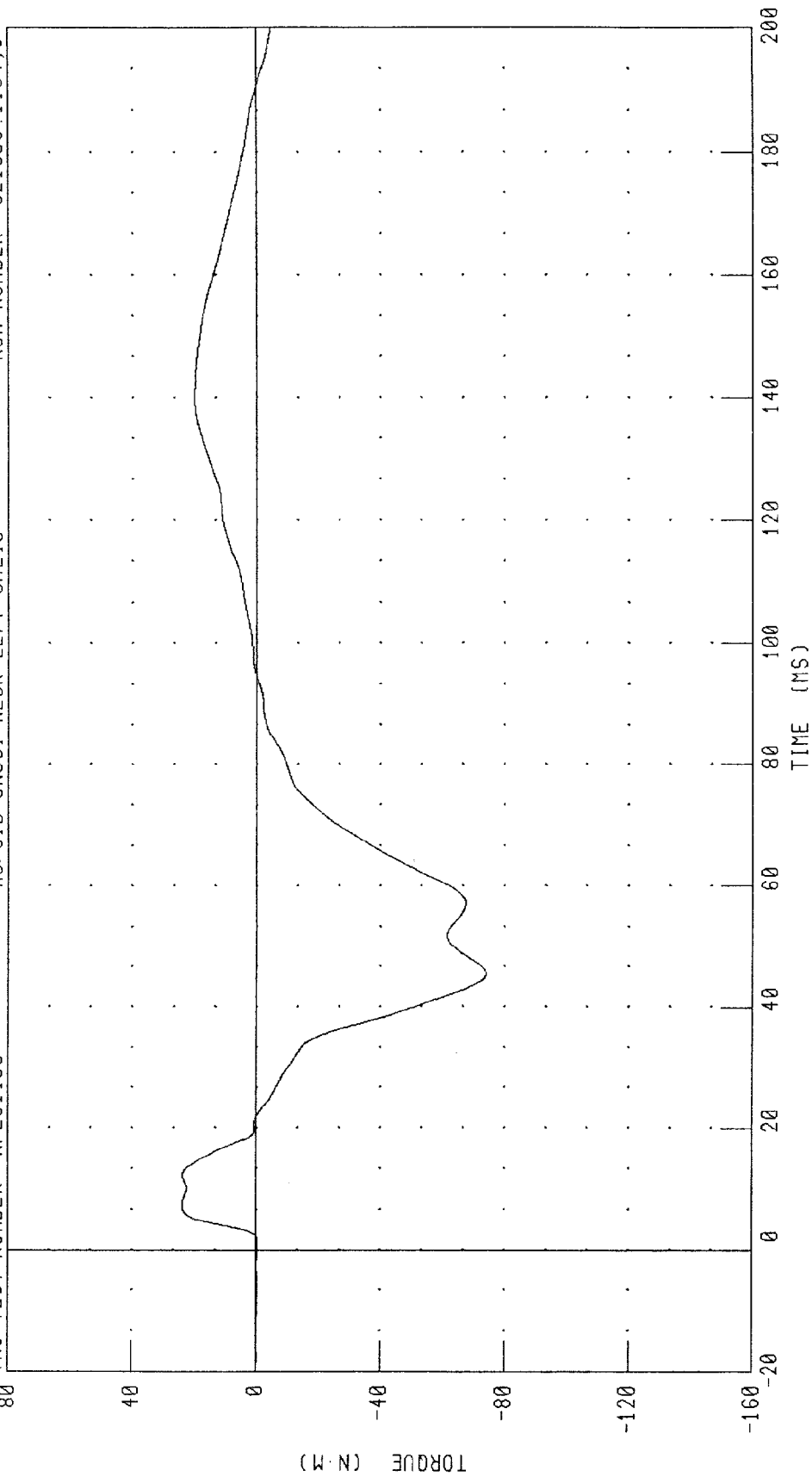
BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

NECK MOMENT X AXIS

TRC TEST NUMBER: NFL5113C

H3/SID SN051 NECK LEFT CAL13

RUN NUMBER: 021699.1104,3

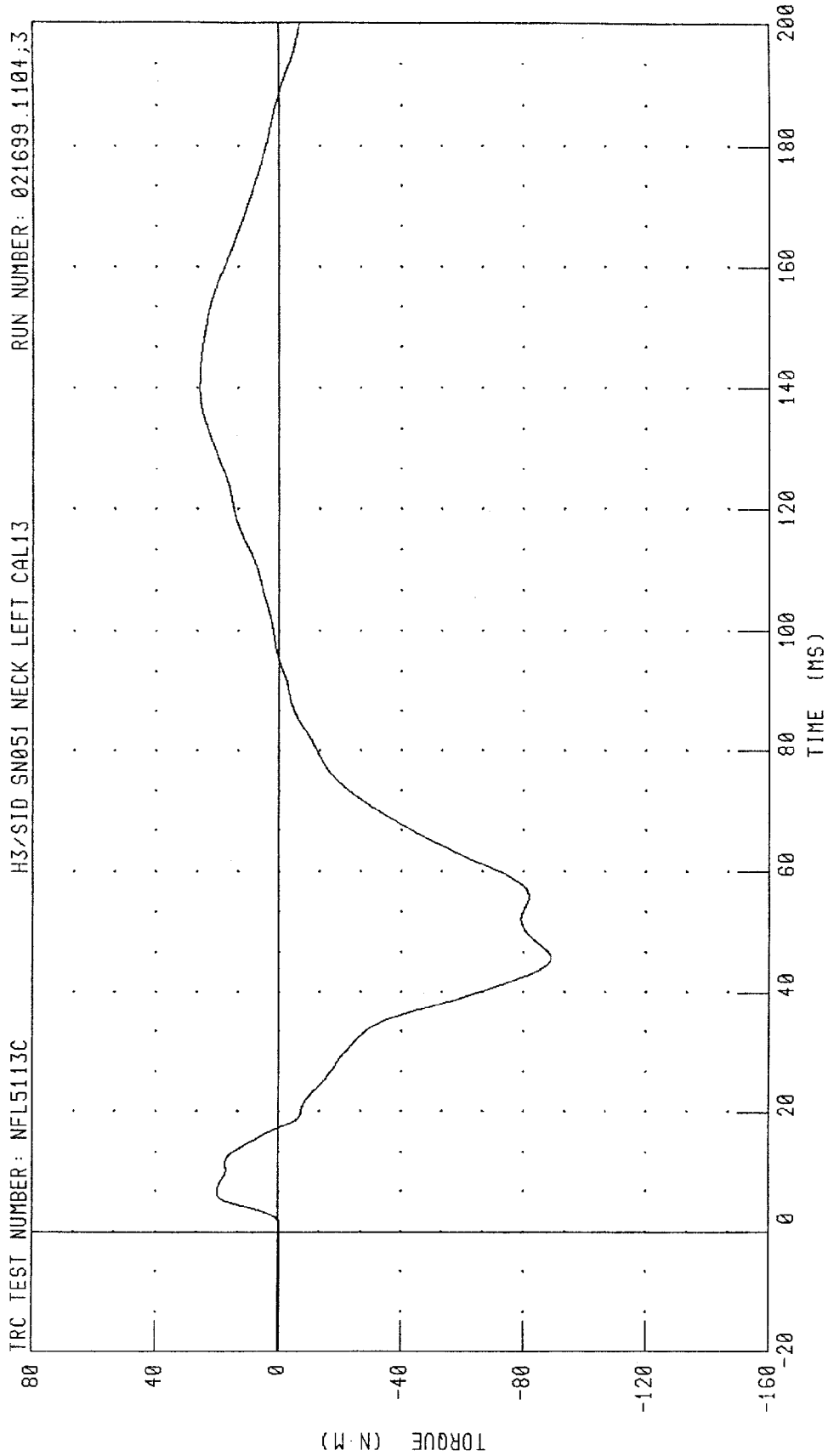


CHANNEL: NEKX11 FILTER: CH. CLASS 180

PEAK DATA: 23.92 N·M @ 7.44 MS; -74.01 N·M @ 45.52 MS

BIOSID DUMMY CALIBRATION -- LEFT LATERAL NECK TEST

TOTAL MOMENT ABOUT OCCIPITAL CONDYLE



PEAK DATA: 25.74 N-M @ 140.16 MS; -89.04 N-M @ 45.76 MS

CHANNEL: NEKOM FILTER: CH. CLASS 180

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

SIDE IMPACT DUMMY

03-FEB-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO: STL5113A

572F SN51 LEFT THORAX CAL13

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.33 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	-37.7 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	-38.6 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	-19.7 G

TEST MEETS SPECIFICATIONS

TECHNICIAN Kevin Watkins

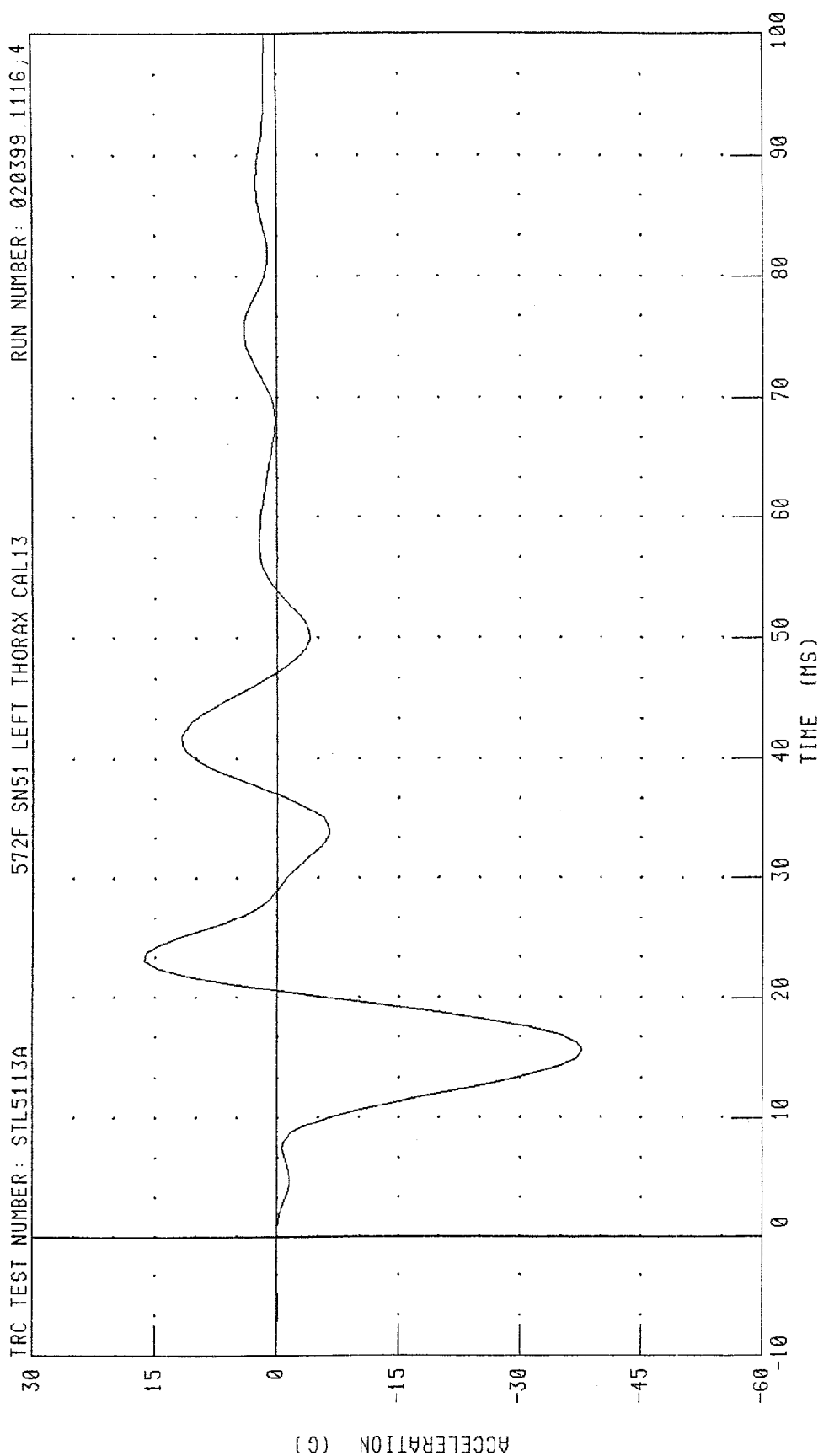
RUN NUMBER: 020399.1115;4

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
 LEFT UPPER RIB ACCELERATION Y AXIS

TRC TEST NUMBER: STL5113A

572F SN51 LEFT THORAX CAL13

RUN NUMBER: 020399.1116,4



PEAK DATA: 16.29 G @ 23.13 MS; -37.68 G @ 15.63 MS

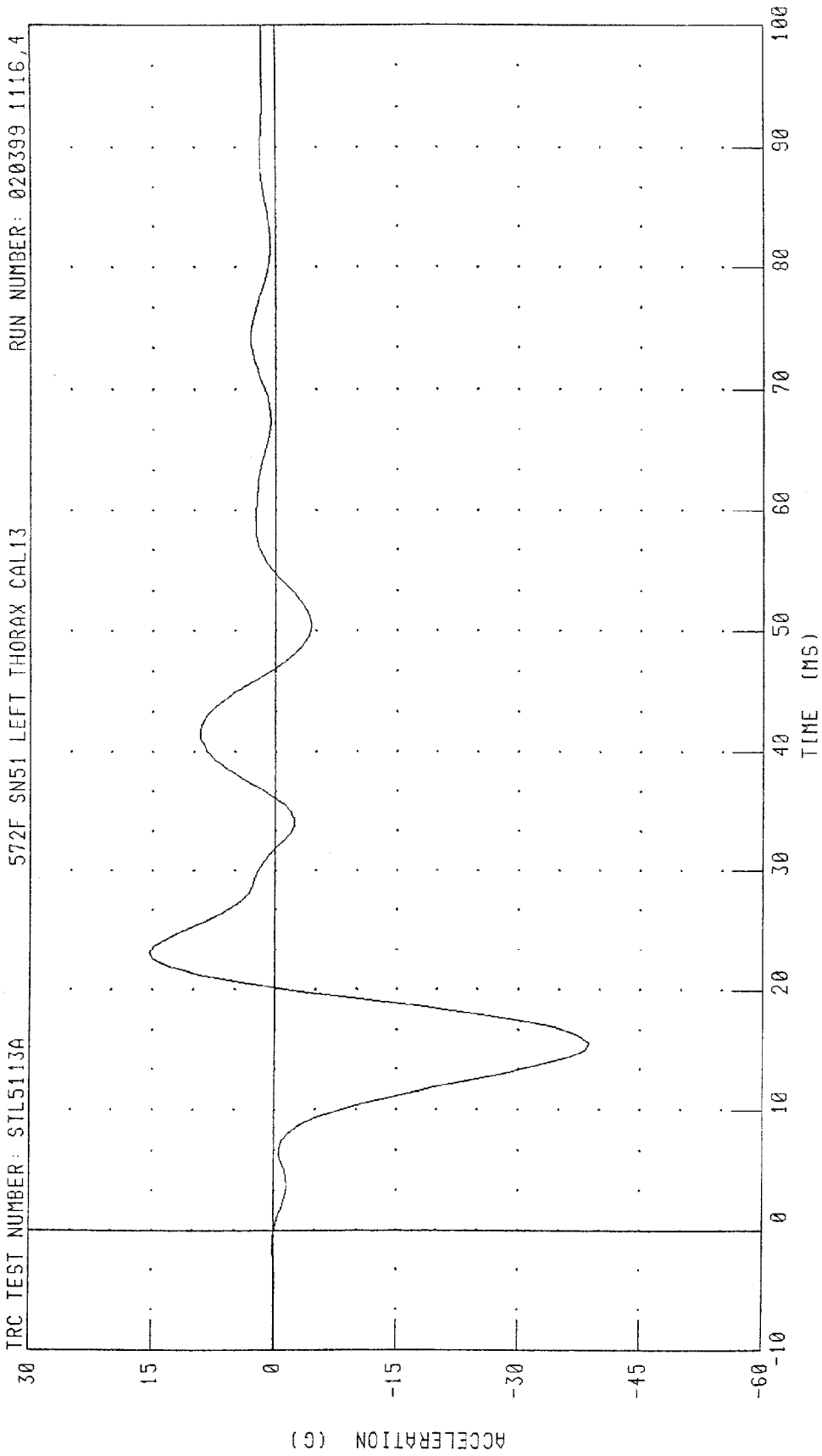
FILTER: FIR 100

CHANNEL: LURYG

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS

TRC TEST NUMBER: STL5113A 572F SN51 LEFT THORAX CAL13 RUN NUMBER: 020399 1116,4



CHANNEL: LLRYG FILTER: FIR 100

PEAK DATA: 15.44 G @ 23.13 MS; -38.64 G @ 15.63 MS

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LOWER SPINE ACCELERATION Y AXIS

572F SN51 LEFT THORAX CAL13

TRC TEST NUMBER: STL5113A

20

10

0

-10

-20

-30

-40

ACCELERATION (G)

0

10

20

30

40

50

60

70

80

90

100

TIME (MS)

PEAK DATA: 5.73 G @ 38.13 MS, -19.69 G @ 20.00 MS

CHANNEL: T12YG FILTER: FIR 100

RUN NUMBER: 020399.1116,4

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY

03-FEB-99

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: SPL5113

572F SN 51 LEFT PELVIS CAL13

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.31 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	-57.4 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	5.8 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN

Kevin Watkins

RUN NUMBER: 020399.1108;1

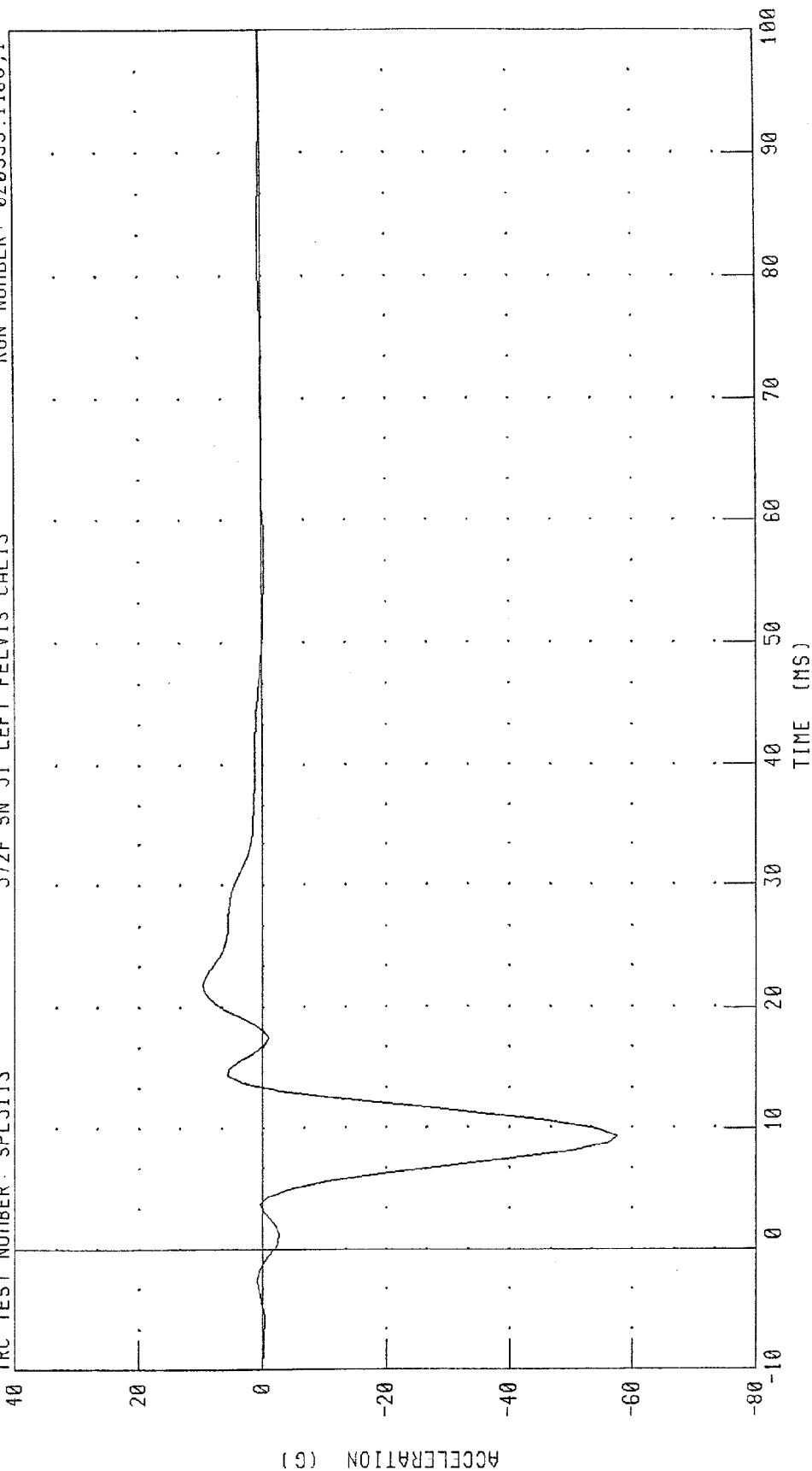
PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

572F SN 51 LEFT PELVIS CAL13

TRC TEST NUMBER: SPL5113

RUN NUMBER: 020399.1108.1



PEAK DATA: 9.69 C @ 21.88 MS, -57.44 C @ 9.37 MS

CHANNEL: PEVYG FILTER: FIR 100

TRANSPORTATION RESEARCH CENTER INC.

ABDOMEN COMPRESSION TEST

PART 572B

03-FEB-99

TRC INC.

TEST NO: ABD5113B

ABDOMIN COMPRESSION TEST SN51

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
DEFLECTION RATE	6.4 - 8.9 MM/S	7.74 MM/S
FORCE AT 0.00 MM DISP.	44.48 N	44.48 N
FORCE AT 12.7 MM DISP.	102.30 - 160.13 N	123.26 N
FORCE AT 19.1 MM DISP.	160.13 - 222.40 N	183.91 N
FORCE AT 25.4 MM DISP.	222.40 - 280.22 N	260.70 N
FORCE AT 33.0 MM DISP.	324.70 - 391.42 N	377.59 N

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

B. J. Calt

RUN NUMBER: 020399.0810;1

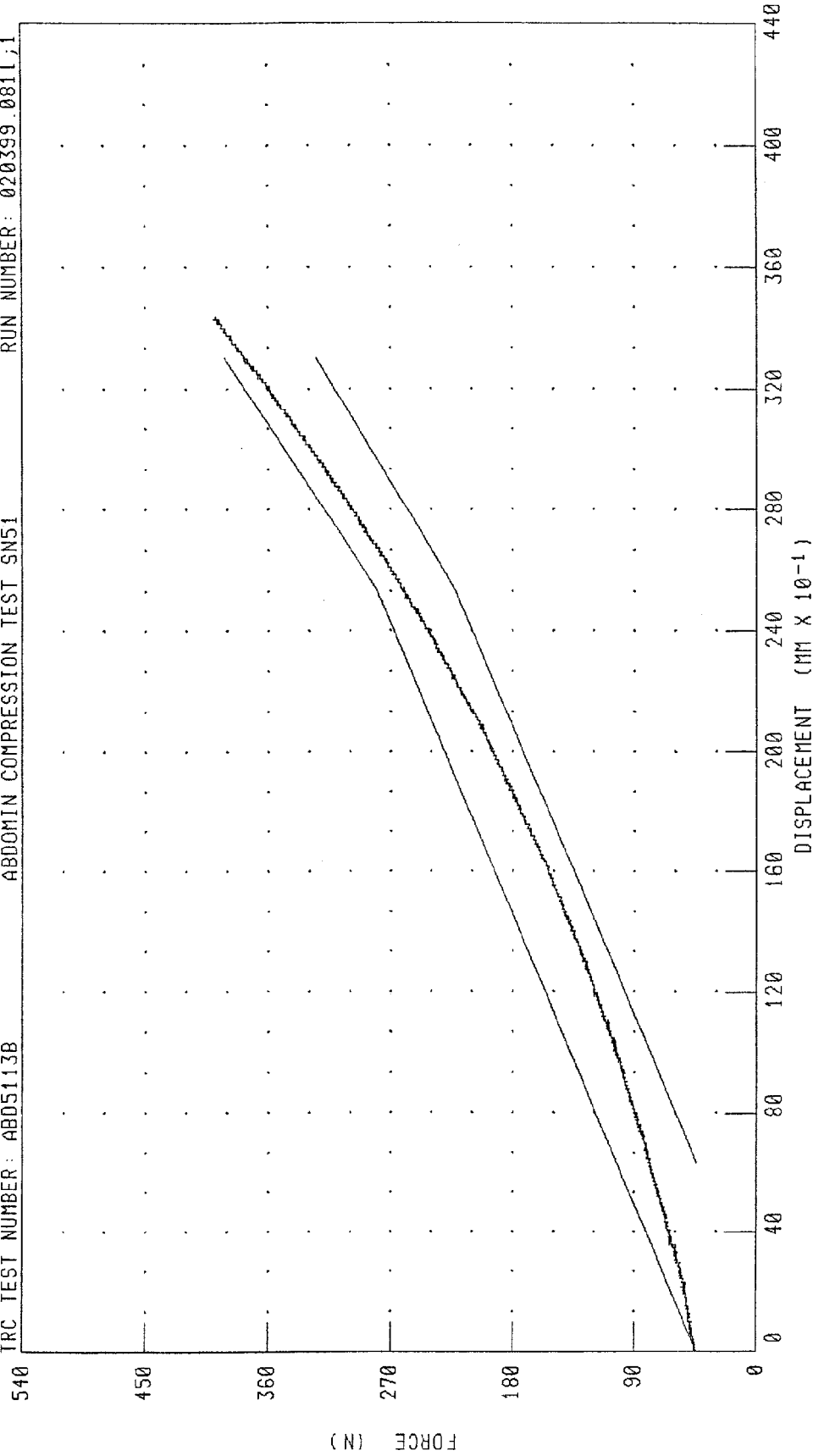
PART 572-B HYBRID II ABDOMEN CALIBRATION

ABDOMEN FORCE VS DISPLACEMENT

ABDOMIN COMPRESSION TEST SN51

RUN NUMBER: 020399.0811;1

TRC TEST NUMBER: ABD5113B



PEAK DATA: 34.39 MM 0 4.41 S; -0.13 MM 0 0.00 S
399.60 N 0 4.41 S; 44.02 N 0 0.00 S

FILTER: CH: CLASS 1000
CH: CLASS 1000

CHANNEL: ABXD
ABXF

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

PART 572F

02-FEB-99

TRC INC. TEST NO: LF5113

572F SNO51 LUMBAR FLEX. CAL13

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
FORCE AT 0 DEG. FLEXION	-26.69 - +26.69 N	0.00 N
FORCE AT 20 DEG. FLEXION	97.86 - 151.24 N	124.54 N
FORCE AT 30 DEG. FLEXION	151.24 - 204.62 N	195.71 N
FORCE AT 40 DEG. FLEXION	204.62 - 258.00 N	249.09 N
NET RETURN ANGLE	< 12 DEG.	0.00 DEG.

DUMMY MEETS SPECIFICATIONS

TECHNICIAN By Cult

RUN NUMBER: 020399.1035

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

18-JAN-99

TRC INC.

572F SN51 DAMPER TEST CAL11

TEST NUMBERS: DP5111A,DP5111B,DP5111C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	20.0 %
VELOCITY	FORCE	838 - 1125 N	916 N
3.06 M/S	DISPLACEMENT	30.2 - 35.2 MM	31.6 MM
VELOCITY	FORCE	1733 - 2100 N	1833 N
4.27 M/S	DISPLACEMENT	31.6 - 37.2 MM	34.8 MM
VELOCITY	FORCE	3784 - 4495 N	4149 N
6.12 M/S	DISPLACEMENT	33.3 - 39.6 MM	37.7 MM

DAMPER SETTING = 6.0

TEST MEETS SPECIFICATIONS

TECHNICIAN By Calt

RUN NUMBER: 011899.1111;1

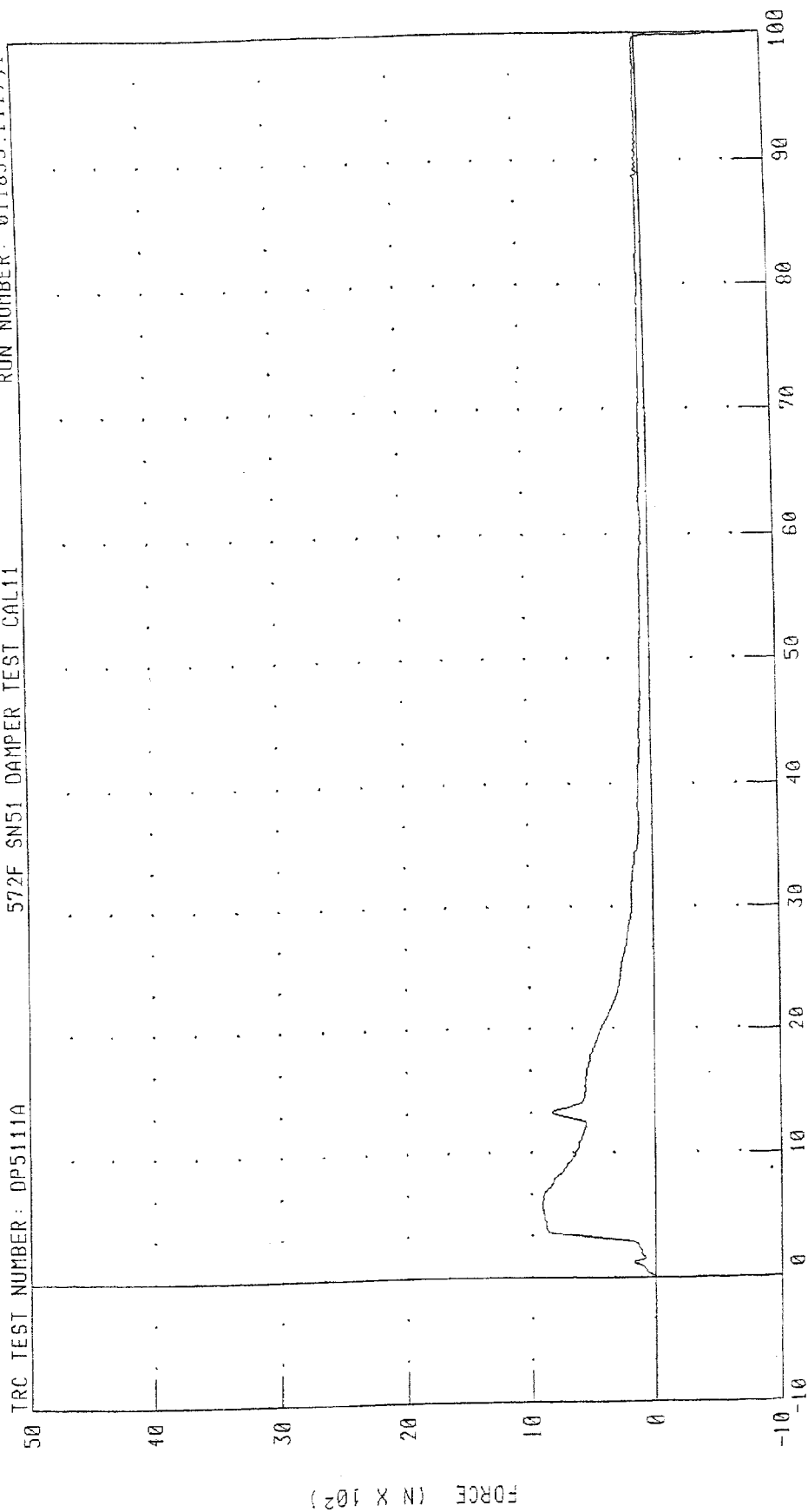
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5111A

572F SN51 DAMPER TEST CAL11

RUN NUMBER: 011899.1117;1



PEAK DATA: 916.34 N @ 5.68 MS; -1450.68 N @ 100.00 MS

CHANNEL: DAMPF FILTER: CH. CLASS 1000

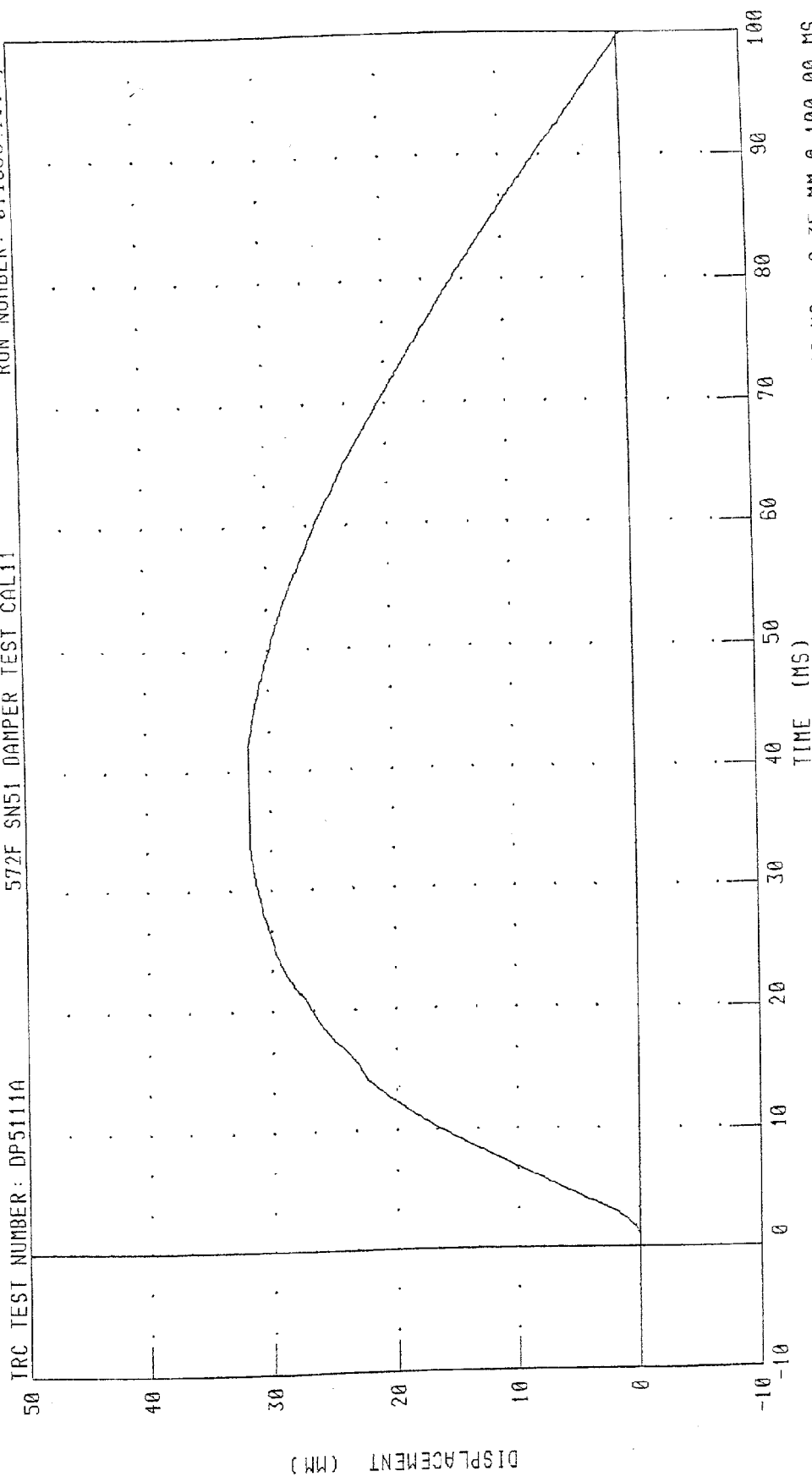
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN51 DAMPER TEST CAL11

RUN NUMBER: 011899.1117.1

TRC TEST NUMBER: DP5111A



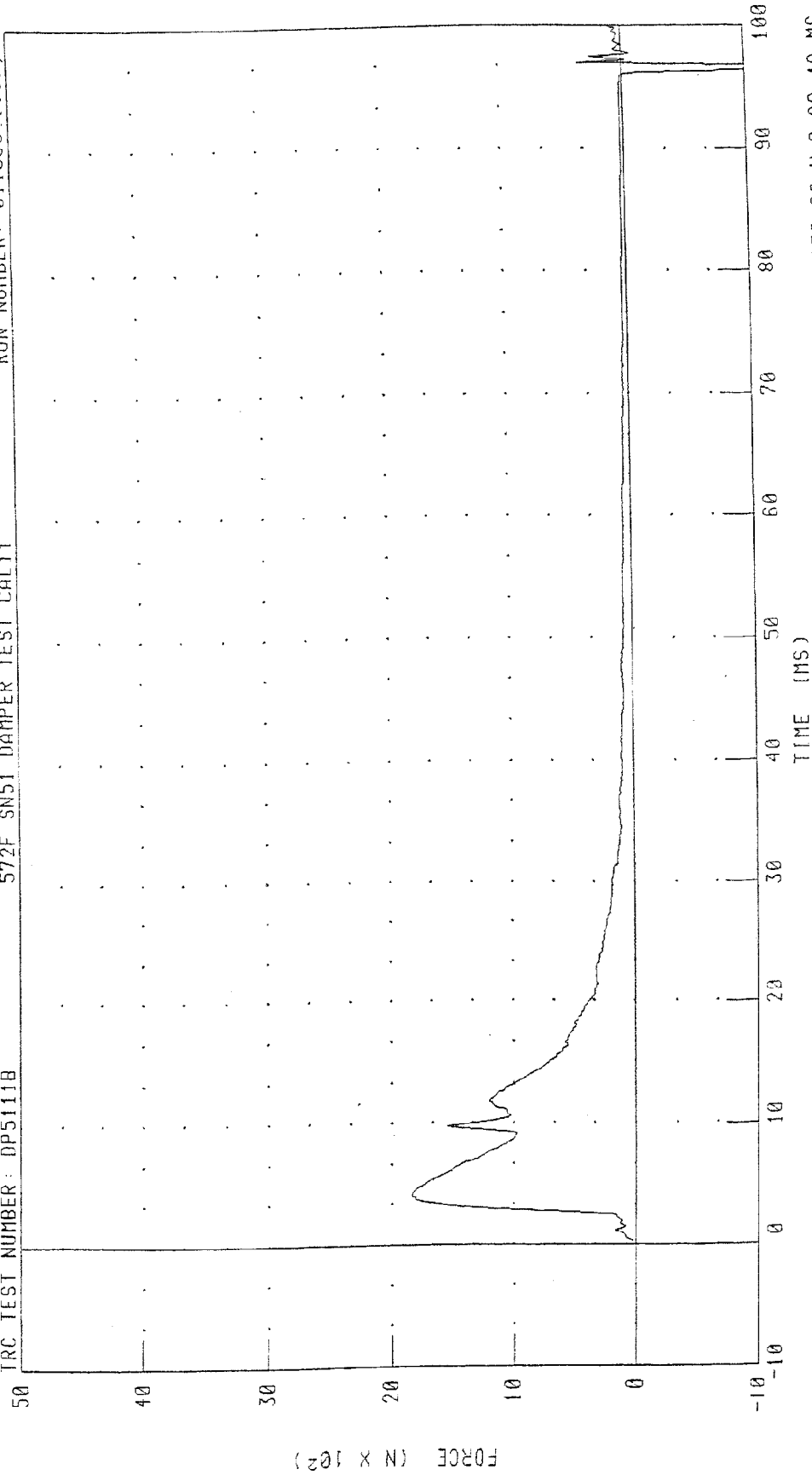
CHANNEL: CSTYD FILTER: CH. CLASS 1000

PEAK DATA: 31.65 MM @ 34.80 MS; -0.35 MM @ 100.00 MS

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

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5111B 572F SN51 DAMPER TEST CAL11 RUN NUMBER: 011899.1118.2



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 1832.88 N @ 4.16 MS; -2350.29 N @ 96.48 MS

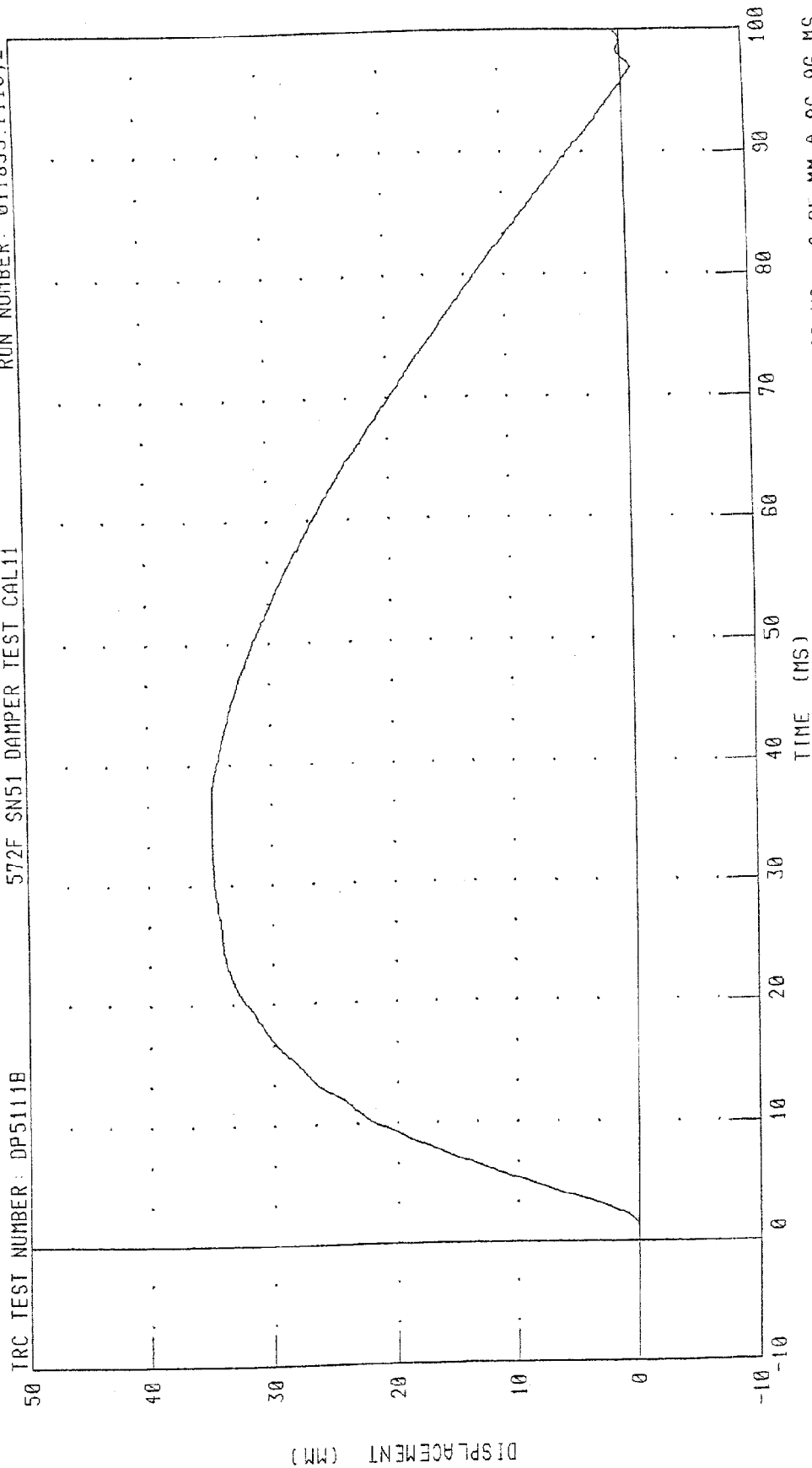
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN51 DAMPER TEST CAL11

RUN NUMBER: 011899.1118;2

TRC TEST NUMBER: DP5111B



CHANNEL: CSTYD FILTER: CH. CLASS 1000
PEAK DATA: 34.81 MM @ 32.96 MS; -0.85 MM @ 96.96 MS

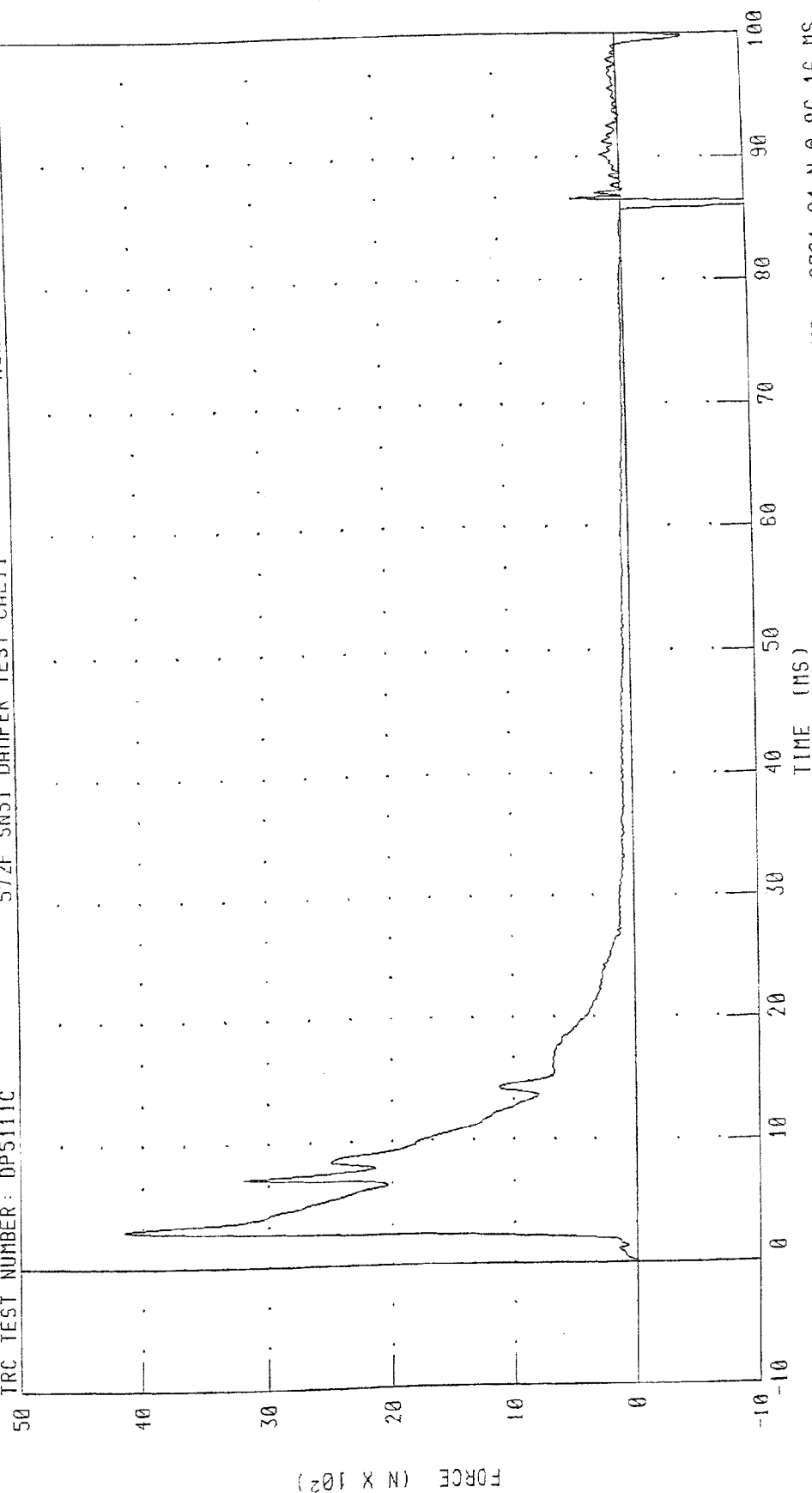
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

RUN NUMBER: 011899.1119.4

TRC TEST NUMBER: DPS111C

572F SN51 DAMPER TEST CAL11



TIME (MS)

PEAK DATA: 4149.11 N @ 3.04 MS; -2721.84 N @ 86.16 MS

CHANNEL: DAMPF FILTER: CH. CLASS 1000

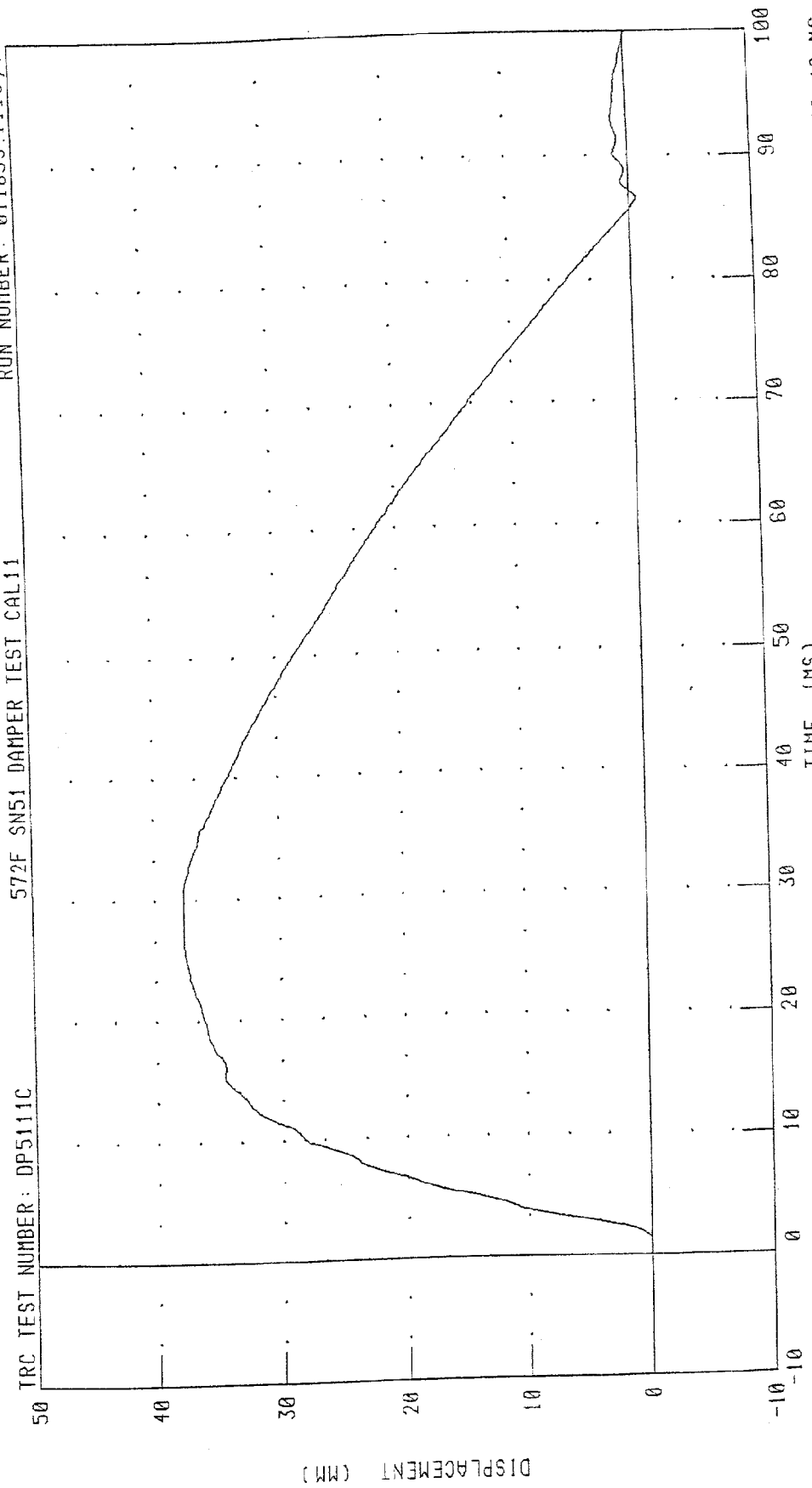
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP5111C

572F SN51 DAMPER TEST CAL11

RUN NUMBER: 011899.1119;4



PEAK DATA: 37.66 MM @ 26.72 MS; -0.60 MM @ 86.48 MS

CHANNEL: CSTYD FILTER: CH. CLASS 1000

Calibration Test Results

Pre-Test

SID: 052

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Thorax Impact Test:	The lateral thorax passed all impact test requirements.
Pelvis Impact Tests:	The lateral pelvis passed all impact test requirements.
Thorax Shock Absorbers:	The thorax passed all shock absorber requirements.

TRANSPORTATION RESEARCH CENTER INC.
SIDE IMPACT DUMMY
EXTERNAL DIMENSIONS
LEFT SIDE CONFIGURATION
SN SN052 VECTOR

02-FEB-99

TRC INC. TEST NO: ED5212 572F SN052 EXT.DIMENSION CAL12

DIMENSIONS WITH CHEST JACKET INSTALLED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
	TEMPERATURE		21.1 DEG. C
	RELATIVE HUMIDITY		22.0 %
SH	SEATED HEIGHT	889 - 909 MM	899.2 MM
HP	HIP PIVOT HEIGHT	99 MM REF.	99.1 MM
KH	KNEE PIVOT FROM BACKLINE	511 - 526 MM	518.2 MM
KV	KNEE PIVOT FROM FLOOR	490 - 506 MM	495.3 MM
HW	HIP WIDTH	356 - 391 MM	368.3 MM
DIMENSIONS WITH CHEST JACKET REMOVED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
RH	RIB HEIGHT	501 - 520 MM	508.0 MM
RD	RIB FROM BACKLINE	229 - 241 MM	236.2 MM
RW-1	TOP RIB WIDTH FROM C/L	165. - 180 MM	175.3 MM
RW-2	BOTTOM RIB WIDTH FROM C/L	165 - 180 MM	175.3 MM
	DIFFERENCE BETWEEN TOP & BOTTOM RIB WIDTH FROM C/L	≤ 2.5 MM	0.0 MM

DUMMY MEETS SPECIFICATIONS

TECHNICIAN By Carl

RUN NUMBER: 020399.1045

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

SIDE IMPACT DUMMY

03-FEB-99

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: STL5212

572F SN52 LEFT THORAX CAL12

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.30 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	-41.8 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	-40.6 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	-19.1 G

TEST MEETS SPECIFICATIONS

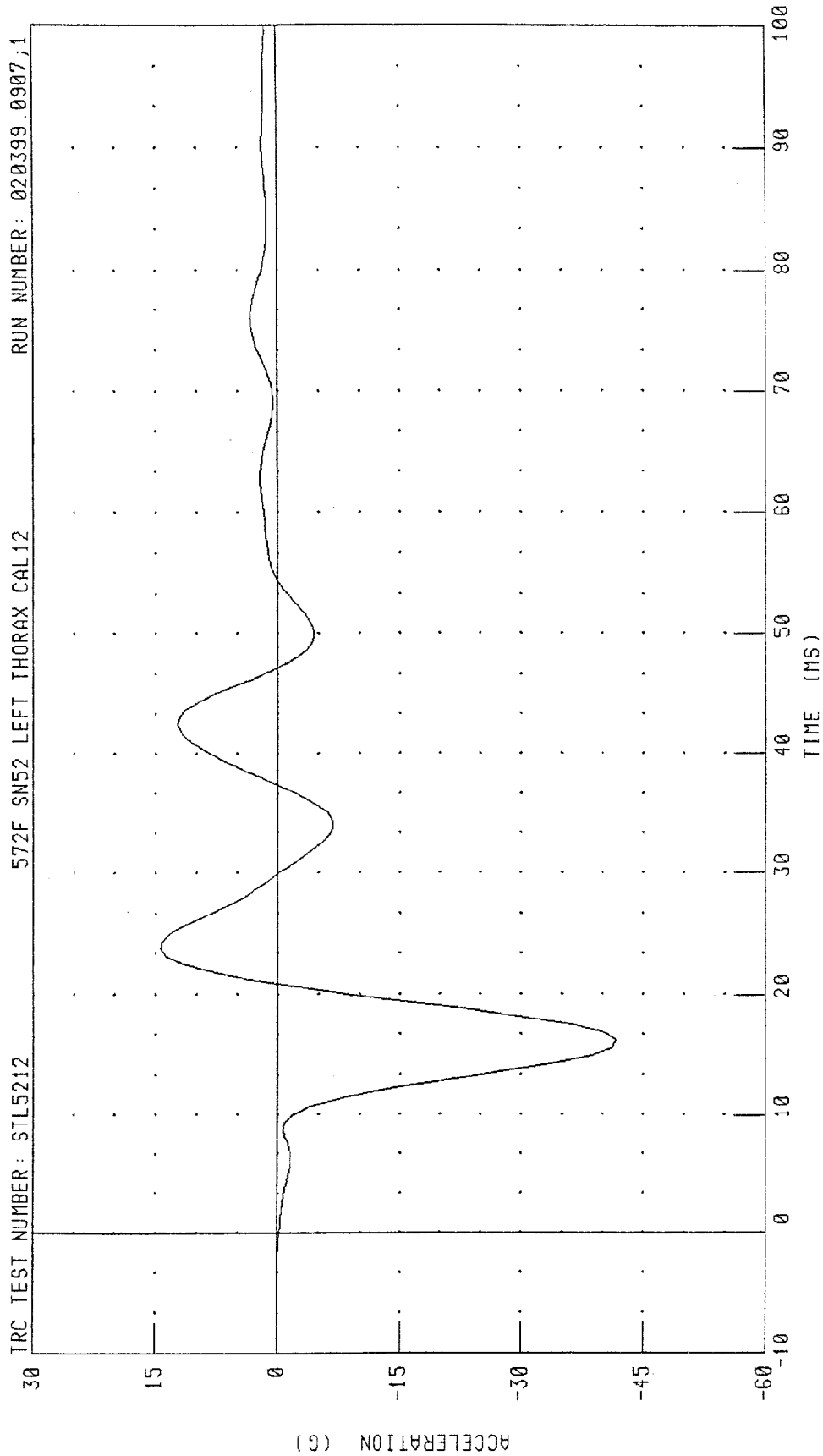
TECHNICIAN

B. Calt

RUN NUMBER: 020399.0907;1

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT UPPER RIB ACCELERATION Y AXIS

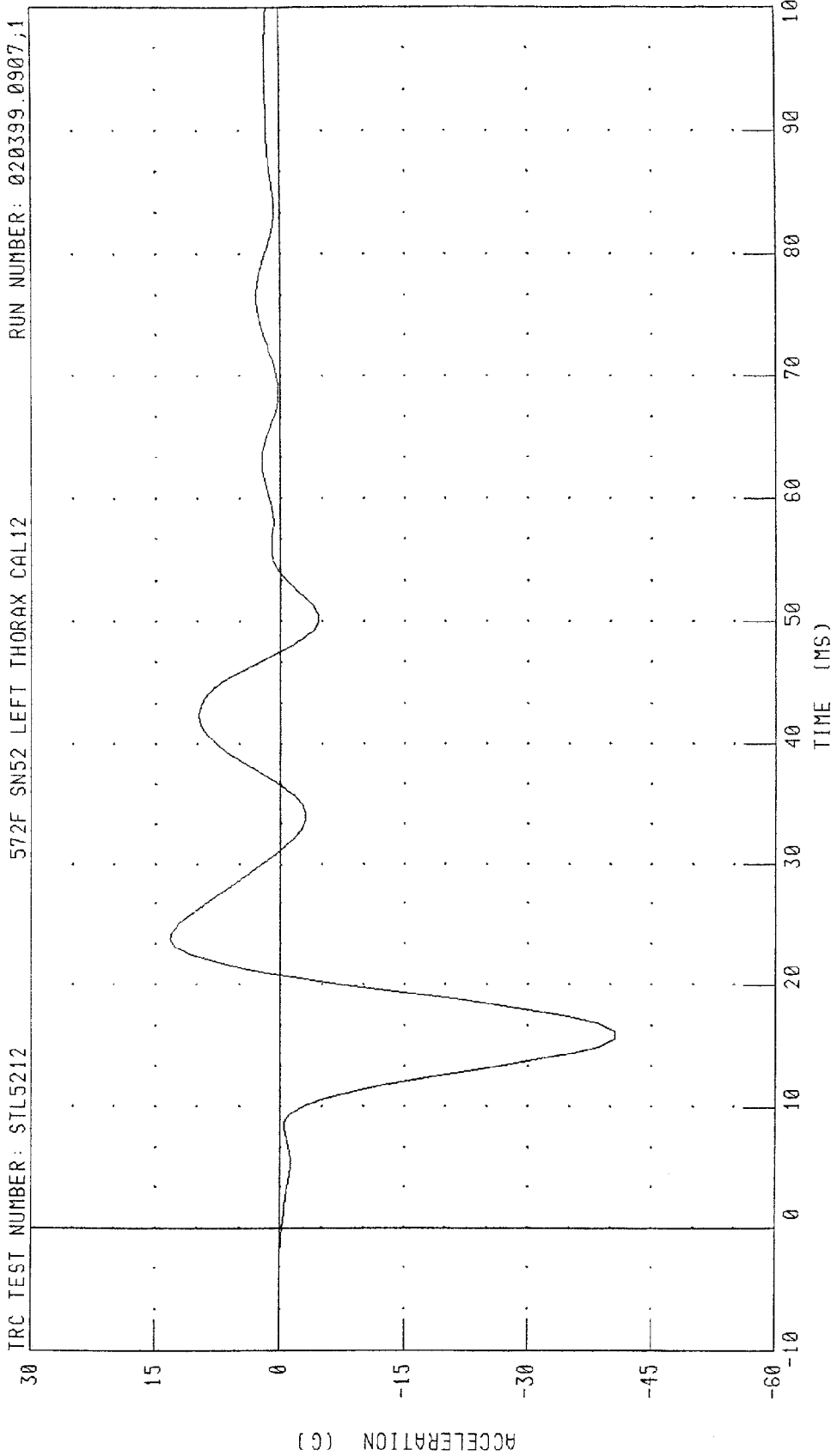


PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS

572F SN52 LEFT THORAX CAL12 RUN NUMBER: 020399.0907;1

TRC TEST NUMBER: STL5212



PEAK DATA: 13.23 G @ 23.75 MS; -40.65 G @ 15.63 MS

CHANNEL: LLRYG FILTER: FIR 100

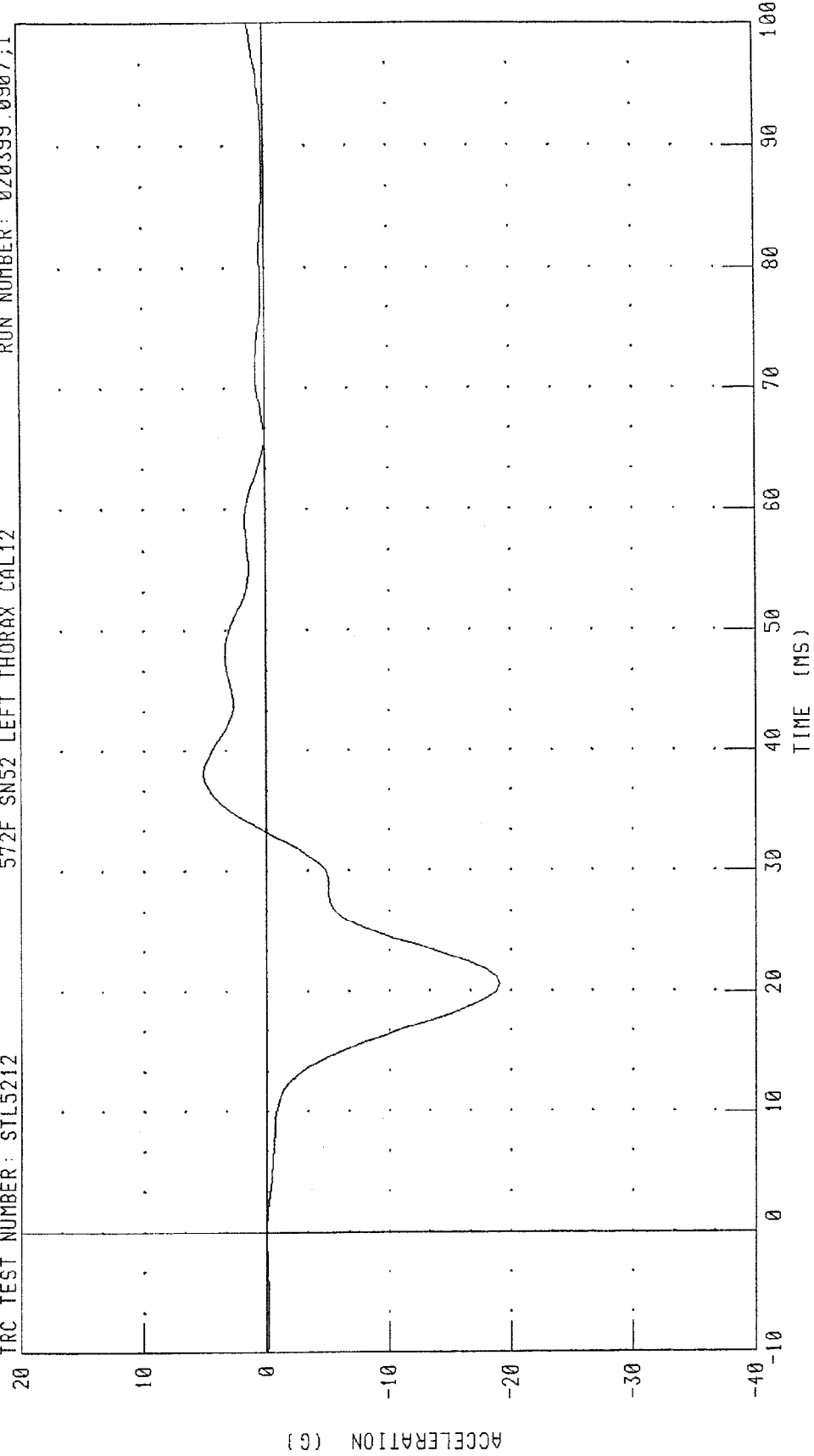
PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LOWER SPINE ACCELERATION Y AXIS

TRC TEST NUMBER: STL5212

572F SN52 LEFT THORAX CAL12

RUN NUMBER: 020399.0907;1



PEAK DATA: 5.10 G @ 38.13 MS; -19.06 G @ 20.62 MS

CHANNEL: T12YG FILTER: FIR 100

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY

03-FEB-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO: SPL5212

572F SN052 LEFT PELVIS CAL12

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.29 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	-47.9 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	5.9 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN

Ry cult

RUN NUMBER: 020399.0853;1

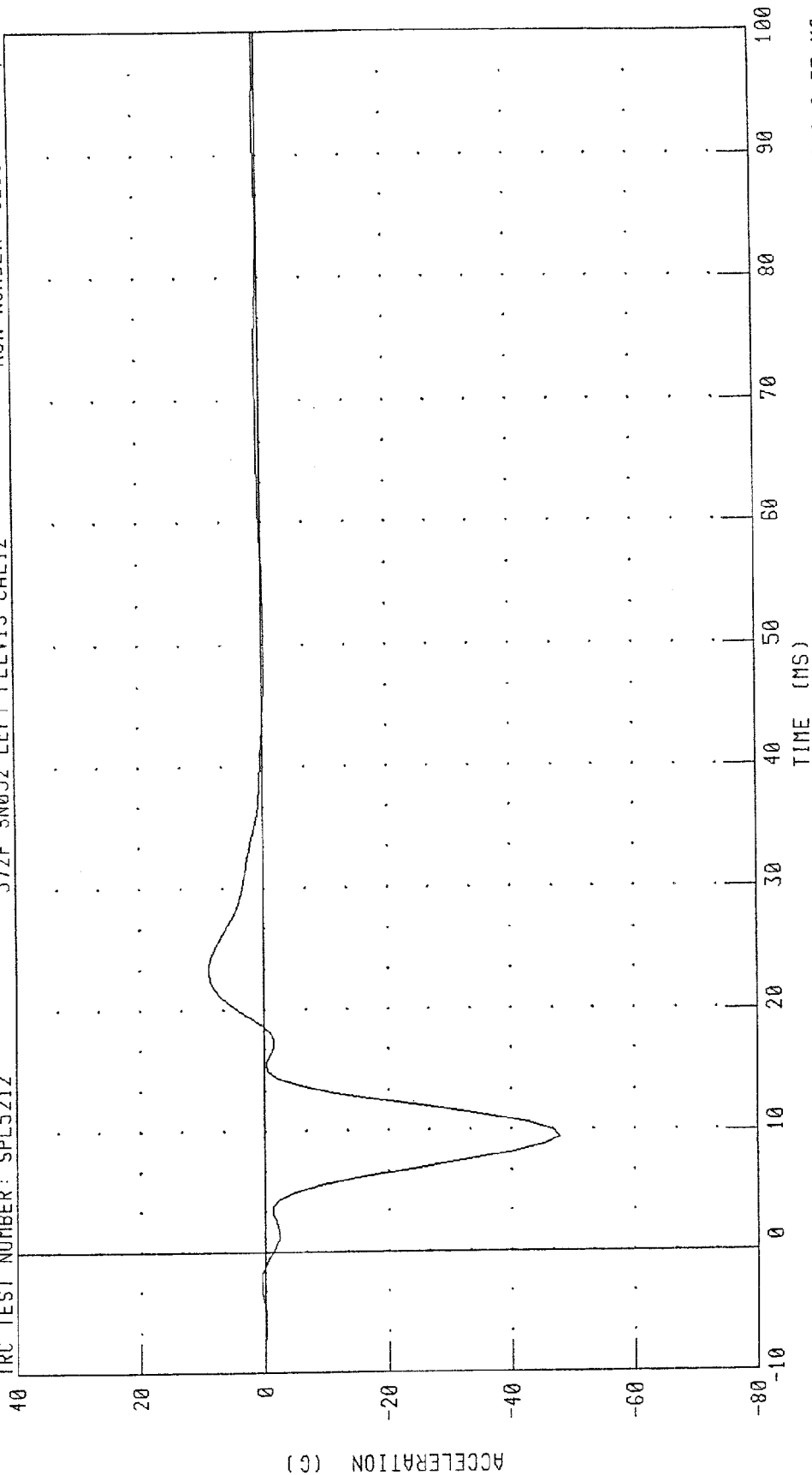
PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

572F SN052 LEFT PELVIS CAL12

RUN NUMBER: 020399.0853;1

TRC TEST NUMBER: SPL5212



CHANNEL: PEVYG FILTER: FIR 100

PEAK DATA: 8.93 G @ 23.13 MS; -47.89 G @ 9.37 MS

TRANSPORTATION RESEARCH CENTER INC.

ABDOMEN COMPRESSION TEST

PART 572B

02-FEB-99

TRC INC.

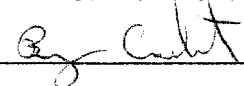
TEST NO: ABD5212A

ABDOMIN COMPRESSION TEST SN52

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
DEFLECTION RATE	6.4 - 8.9 MM/S	7.79 MM/S
FORCE AT 0.00 MM DISP.	44.48 N	44.48 N
FORCE AT 12.7 MM DISP.	102.30 - 160.13 N	116.90 N
FORCE AT 19.1 MM DISP.	160.13 - 222.40 N	171.19 N
FORCE AT 25.4 MM DISP.	222.40 - 280.22 N	247.49 N
FORCE AT 33.0 MM DISP.	324.70 - 391.42 N	354.12 N

DUMMY MEETS SPECIFICATIONS

TECHNICIAN



RUN NUMBER: 020299.1437;1

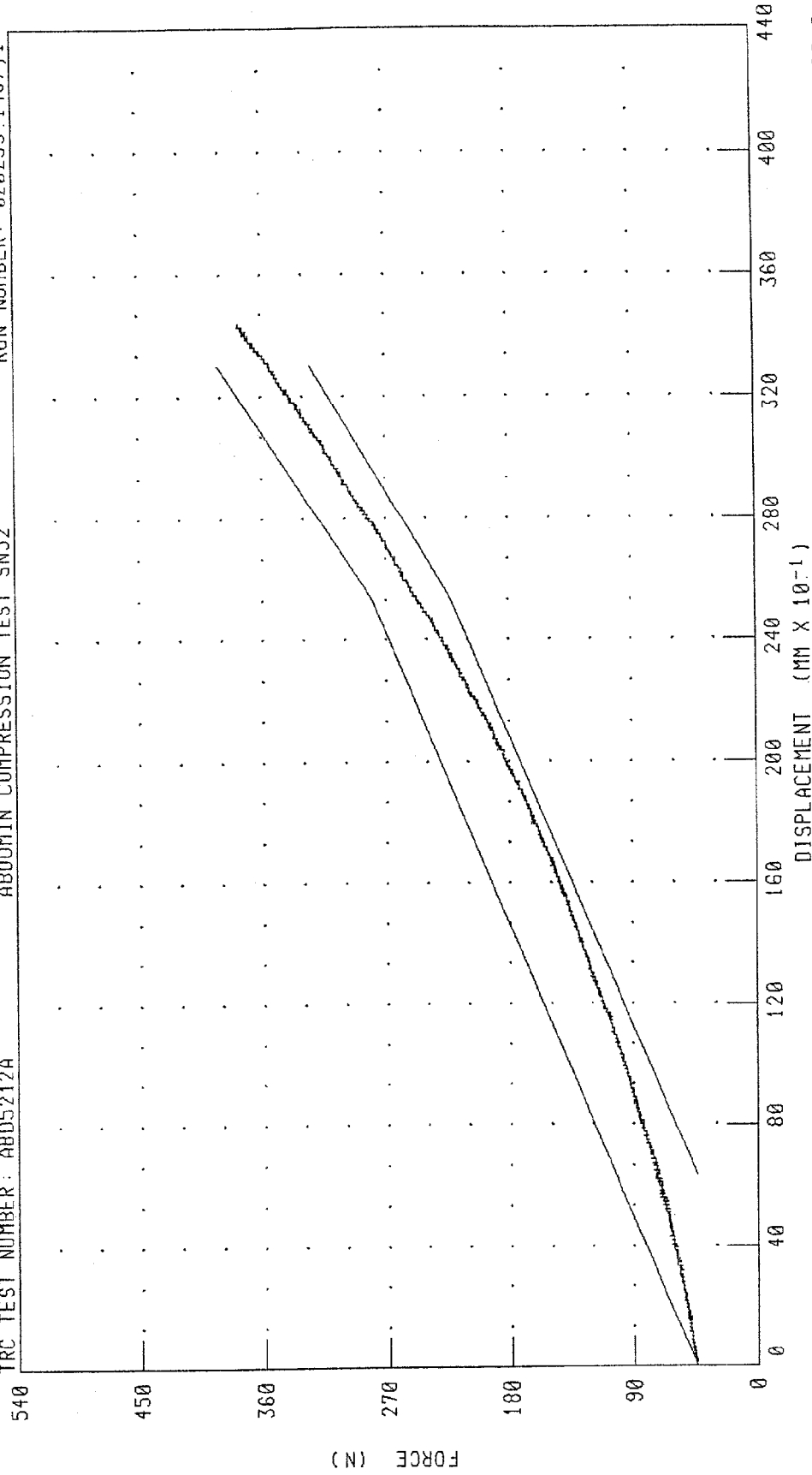
PART 572-B HYBRID II ABDOMEN CALIBRATION

ABDOMEN FORCE VS DISPLACEMENT

ABDOMIN COMPRESSION TEST SN52

TRC TEST NUMBER: ABD5212A

RUN NUMBER: 020299.1437.1



CHANNEL: ABXD
ABXF

FILTER: CH: CLASS 1000
CH: CLASS 1000

PEAK DATA: 34.39 MM @ 4.40 S; 0.00 MM @ 0.00 S
377.11 N @ 4.39 S; 44.02 N @ 0.00 S

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

PART 572F

02-FEB-99

TRC INC. TEST NO: LF5212

572F SN052 LUMBAR FLEX. CAL12

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
FORCE AT 0 DEG. FLEXION	-26.69 - +26.69 N	0.00 N
FORCE AT 20 DEG. FLEXION	97.86 - 151.24 N	137.89 N
FORCE AT 30 DEG. FLEXION	151.24 - 204.62 N	191.26 N
FORCE AT 40 DEG. FLEXION	204.62 - 258.00 N	222.40 N
NET RETURN ANGLE	< 12 DEG.	4.60 DEG.

DUMMY MEETS SPECIFICATIONS

TECHNICIAN By cult

RUN NUMBER: 020399.1038

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

26-JAN-99

TRC INC.

572F SN52 DAMPER TEST CAL11

TEST NUMBERS: DP5211A,DP5211B,DP5211C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	20.0 %
VELOCITY	FORCE	838 - 1125 N	1011 N
3.05 M/S	DISPLACEMENT	30.2 - 35.2 MM	32.8 MM
VELOCITY	FORCE	1733 - 2100 N	1857 N
4.28 M/S	DISPLACEMENT	31.6 - 37.2 MM	35.0 MM
VELOCITY	FORCE	3824 - 4542 N	4433 N
6.14 M/S	DISPLACEMENT	33.3 - 39.6 MM	37.0 MM

DAMPER SETTING = 9.0

TEST MEETS SPECIFICATIONS

TECHNICIAN Bj Calt

RUN NUMBER: 012699.0849;1

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

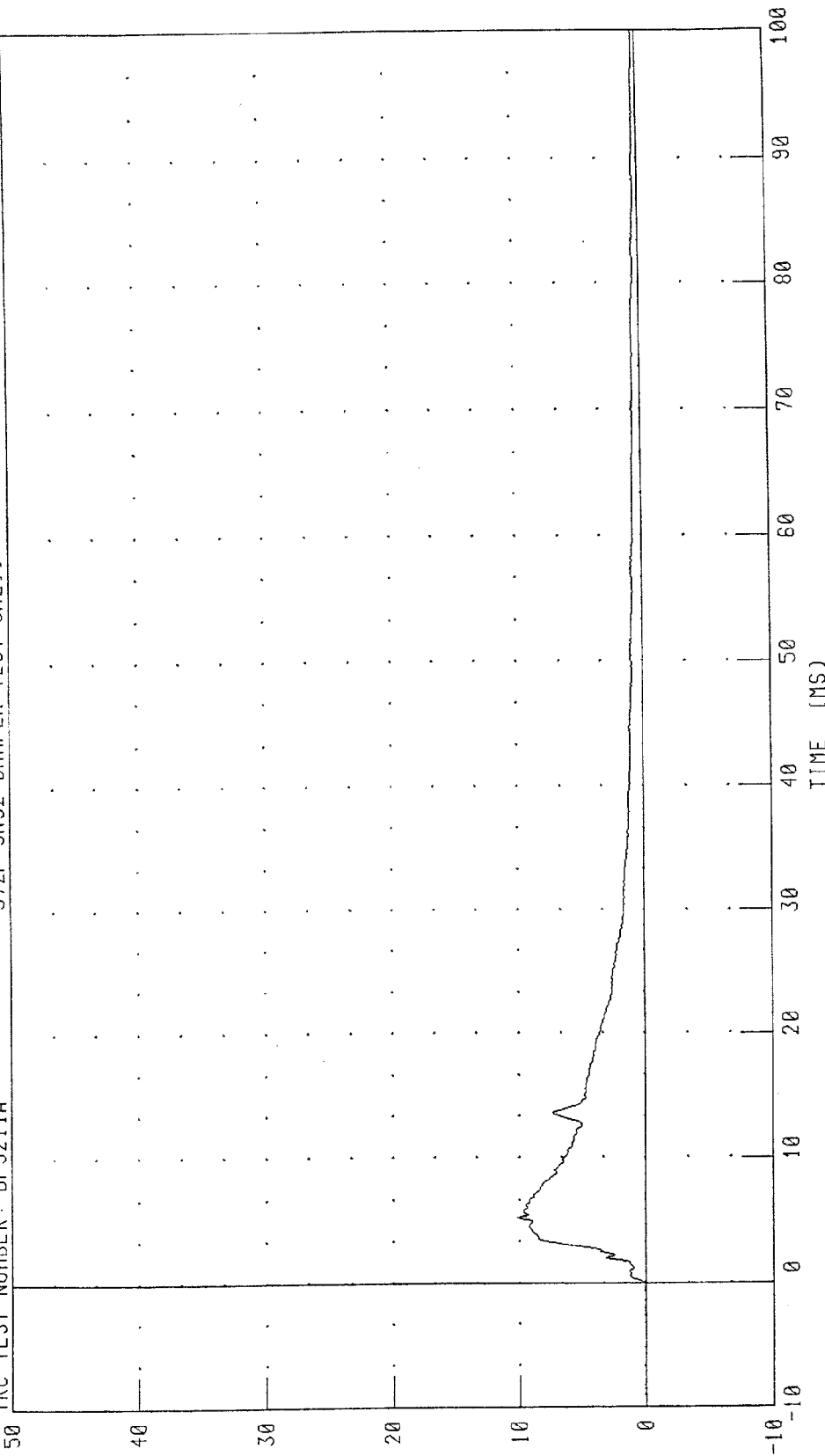
SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5211A

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699.0850;1

FORCE (N X 10²)



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 1010.99 N @ 5.20 MS; -0.59 N @ -9.92 MS

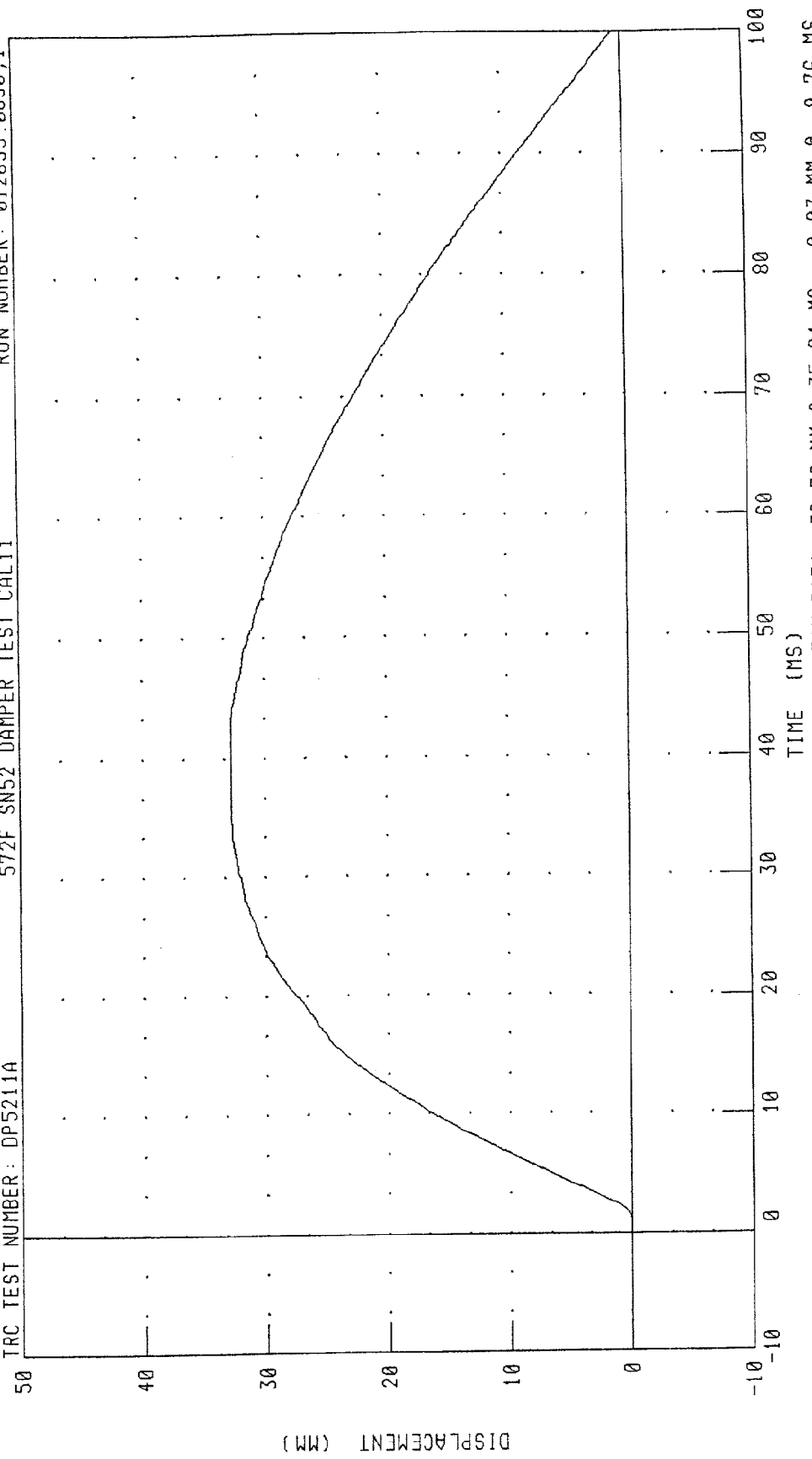
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP5211A

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699.0850.1



CHANNEL: CSTYD FILTER: CH. CLASS 1000

PEAK DATA: 32.78 MM @ 35.04 MS; -0.03 MM @ -9.76 MS

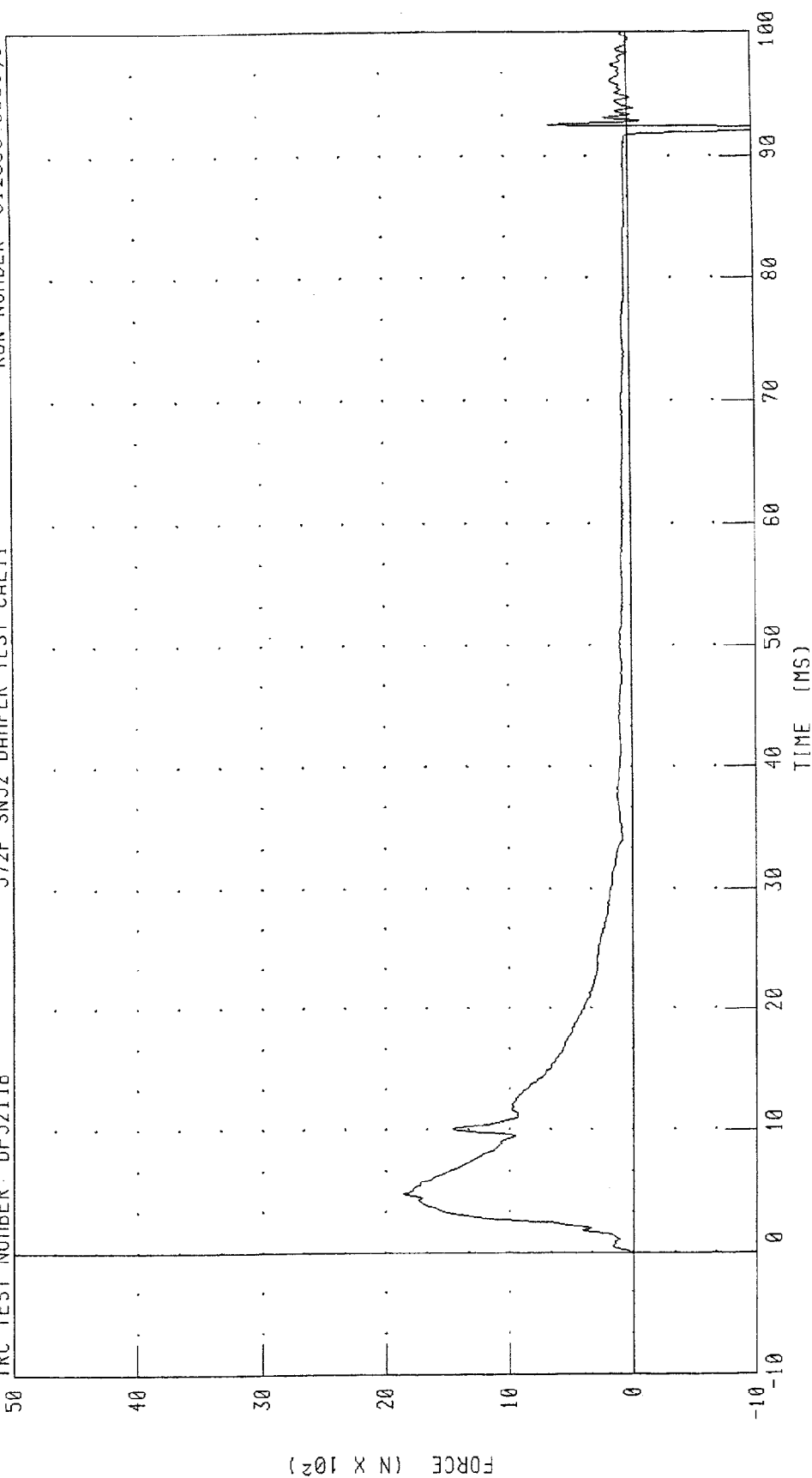
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5211B

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699 0851;1



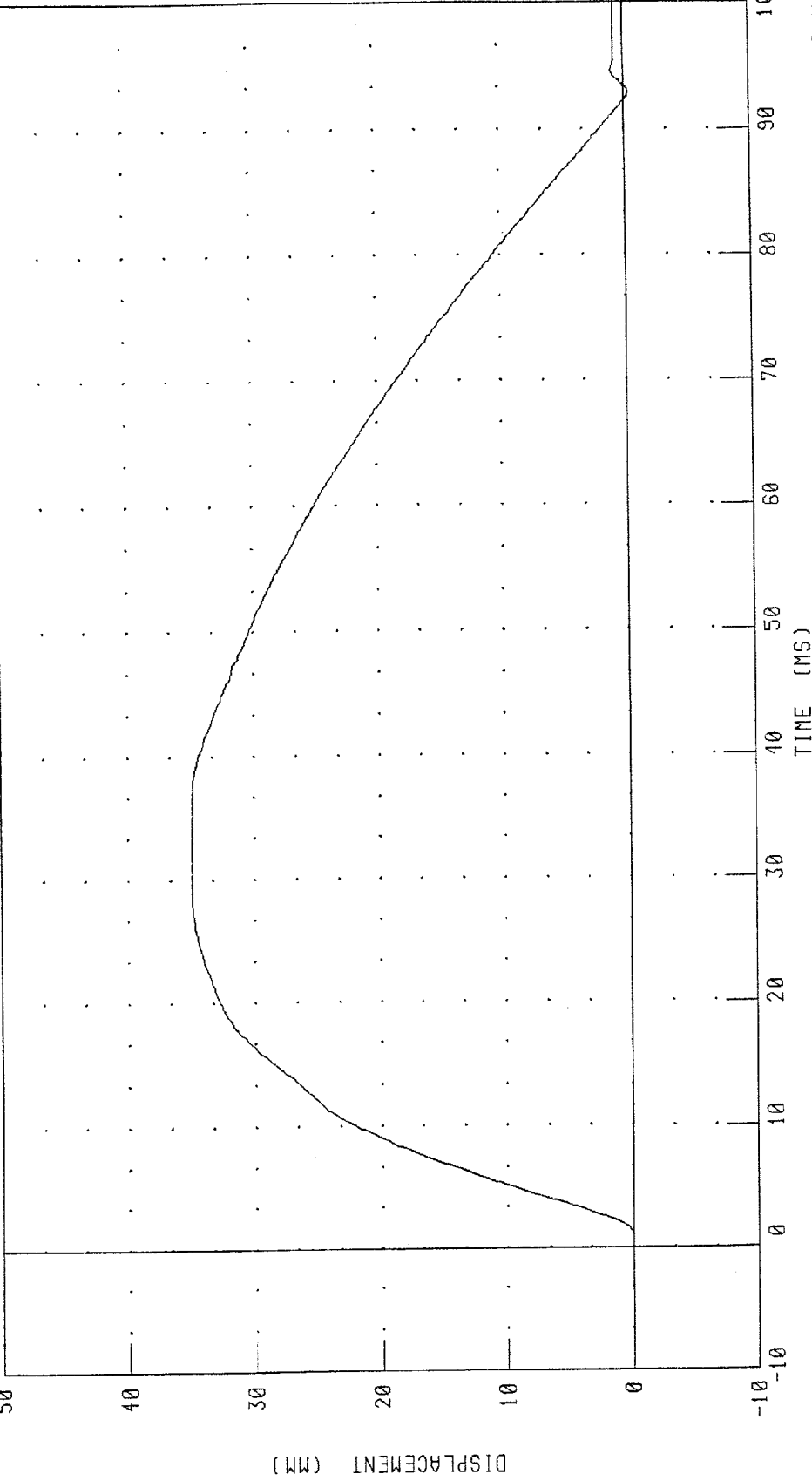
CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 1857.15 N @ 4.80 MS, -2594.80 N @ 92.24 MS

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

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP5211B 572F SN52 DAMPER TEST CAL11 RUN NUMBER: 012699.0851;1



CHANNEL: CSTYD FILTER: CH. CLASS 1000

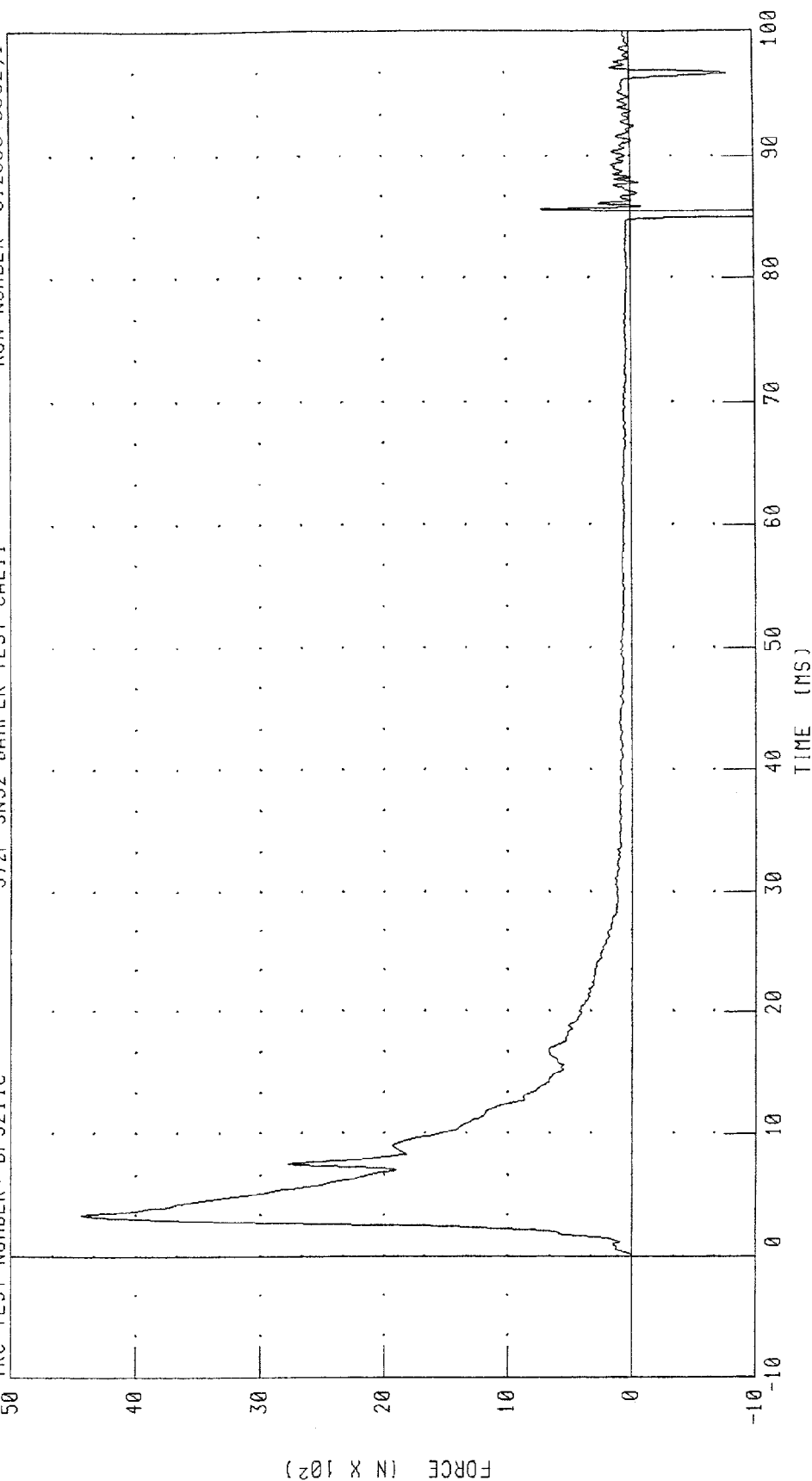
PEAK DATA: 34.95 MM @ 28.32 MS; -0.35 MM @ 92.80 MS

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

TRC TEST NUMBER: DP5211C

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699 0852,1



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 4432.57 N @ 3.36 MS; -3019.92 N @ 85.28 MS

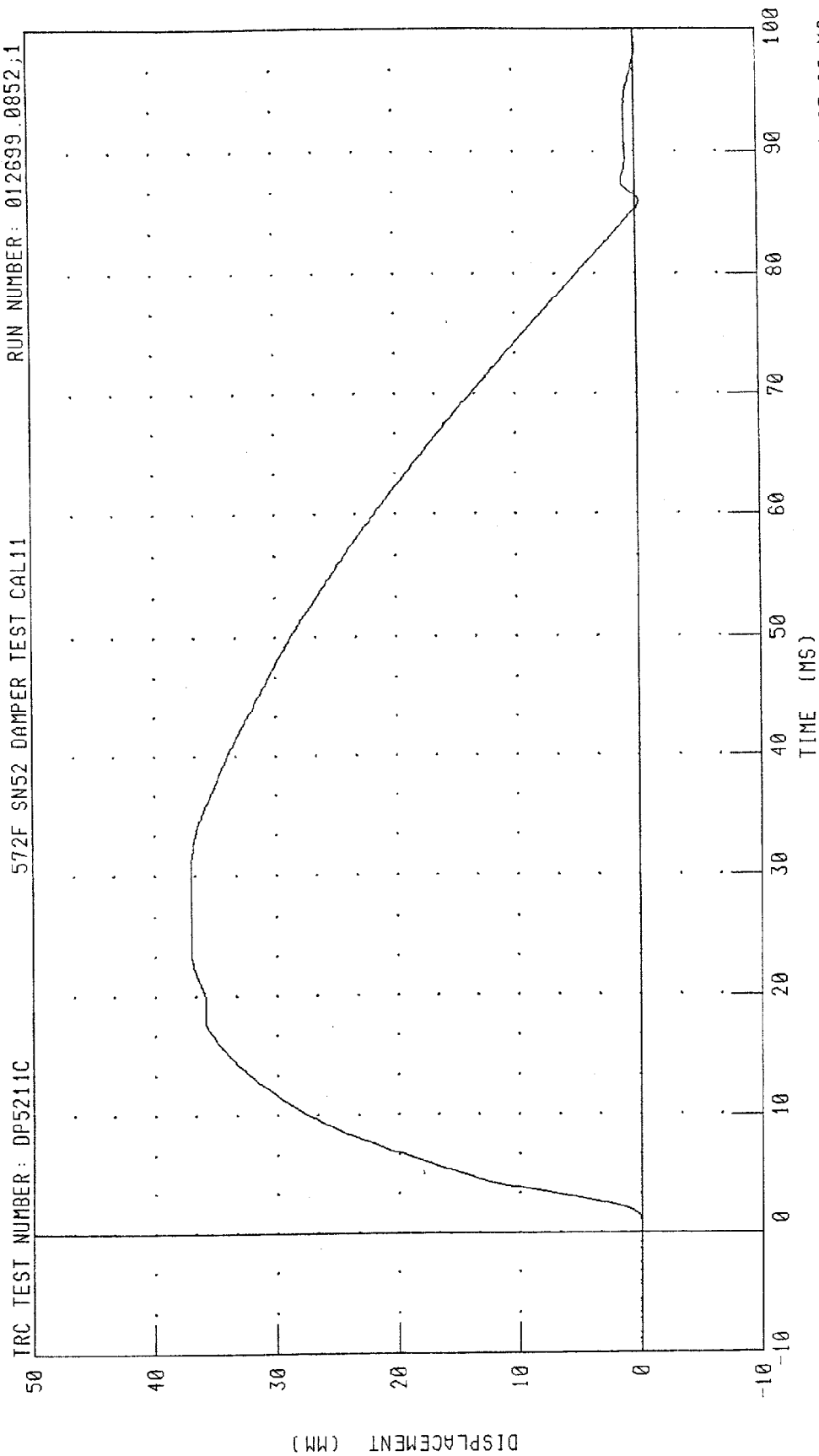
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 N/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN52 DAMPER TEST CAL11

TRC TEST NUMBER: DP5211C

RUN NUMBER: 012639 0852;1



PEAK DATA: 37.01 MM @ 24.08 MS; -0.35 MM @ 85.92 MS

CHANNEL: CSTYD FILTER: CH. CLASS 1000

Calibration Test Results

Post-Test

SID: 051

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Thorax Impact Test:	The lateral thorax passed all impact test requirements.
Pelvis Impact Tests:	The lateral pelvis passed all impact test requirements.
Thorax Shock Absorbers:	The thorax passed all shock absorber requirements.

TRANSPORTATION RESEARCH CENTER INC.
SIDE IMPACT DUMMY
EXTERNAL DIMENSIONS
LEFT SIDE CONFIGURATION
SN SNO51 VECTOR

15-MAR-99

TRC INC. TEST NO: ED5114 572F SNO51 EXT.DIMENSION CAL14

DIMENSIONS WITH CHEST JACKET INSTALLED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
	TEMPERATURE		21.1 DEG. C
	RELATIVE HUMIDITY		22.0 %
SH	SEATED HEIGHT	889 - 909 MM	902.2 MM
HP	HIP PIVOT HEIGHT	99 MM REF.	100.1 MM
KH	KNEE PIVOT FROM BACKLINE	511 - 526 MM	518.8 MM
KV	KNEE PIVOT FROM FLOOR	490 - 506 MM	491.6 MM
HW	HIP WIDTH	356 - 391 MM	363.2 MM
DIMENSIONS WITH CHEST JACKET REMOVED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
RH	RIB HEIGHT	501 - 520 MM	508.0 MM
RD	RIB FROM BACKLINE	229 - 241 MM	233.7 MM
RW-1	TOP RIB WIDTH FROM C/L	165. - 180 MM	177.8 MM
RW-2	BOTTOM RIB WIDTH FROM C/L	165 - 180 MM	177.8 MM
	DIFFERENCE BETWEEN TOP & BOTTOM RIB WIDTH FROM C/L	≤ 2.5 MM	0.0 MM

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

Bj Calt

RUN NUMBER: 020399.1052

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

SIDE IMPACT DUMMY

15-MAR-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO: STL5114

572F SN51 LEFT THORAX CAL14

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.30 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	-40.4 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	-41.1 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	-19.6 G

TEST MEETS SPECIFICATIONS

TECHNICIAN

B. C. L. T.

RUN NUMBER: 031599.1347;1

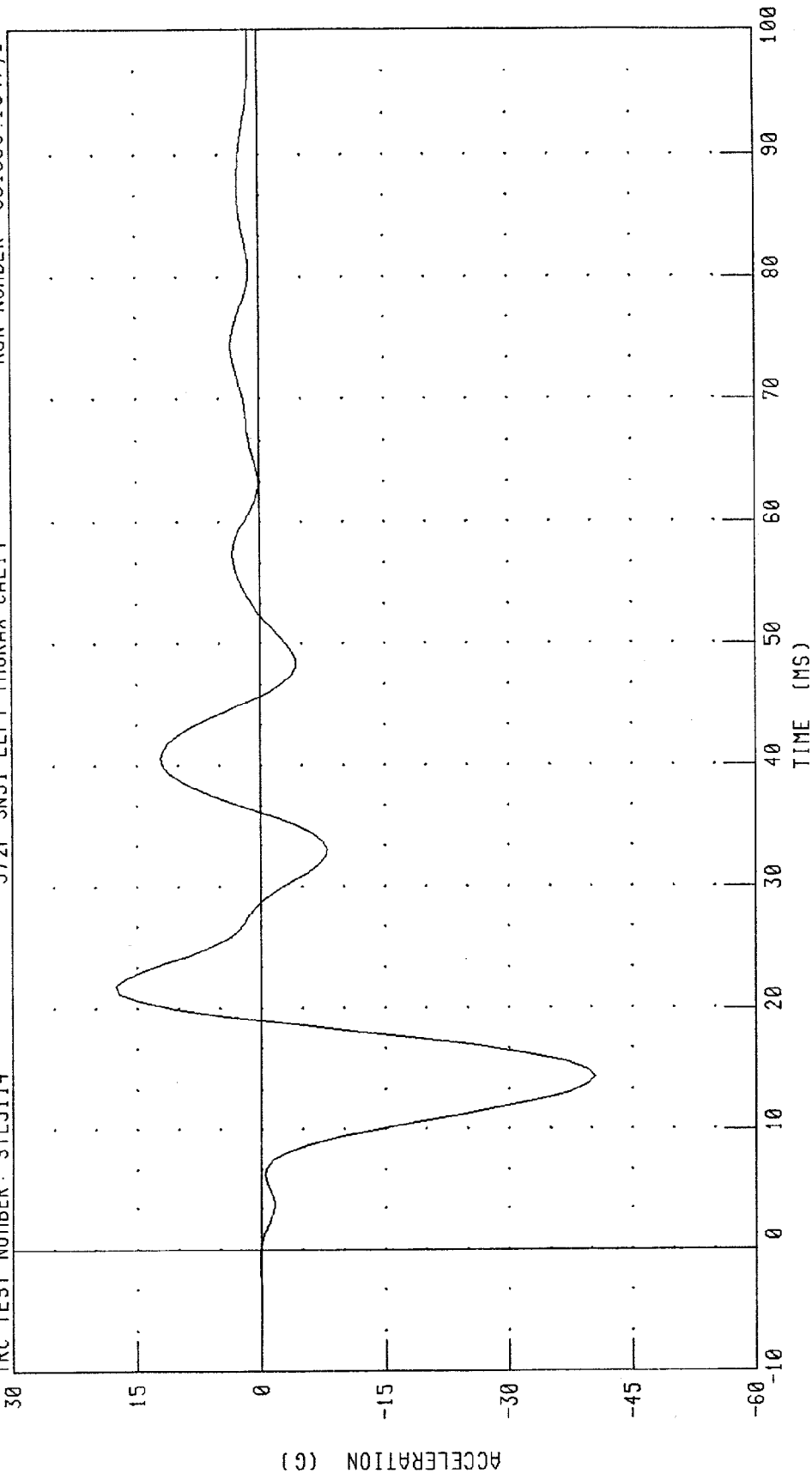
PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT UPPER RIB ACCELERATION Y AXIS

TRC TEST NUMBER: STL5114

572F SN51 LEFT THORAX CAL14

RUN NUMBER: 031599.1347;1

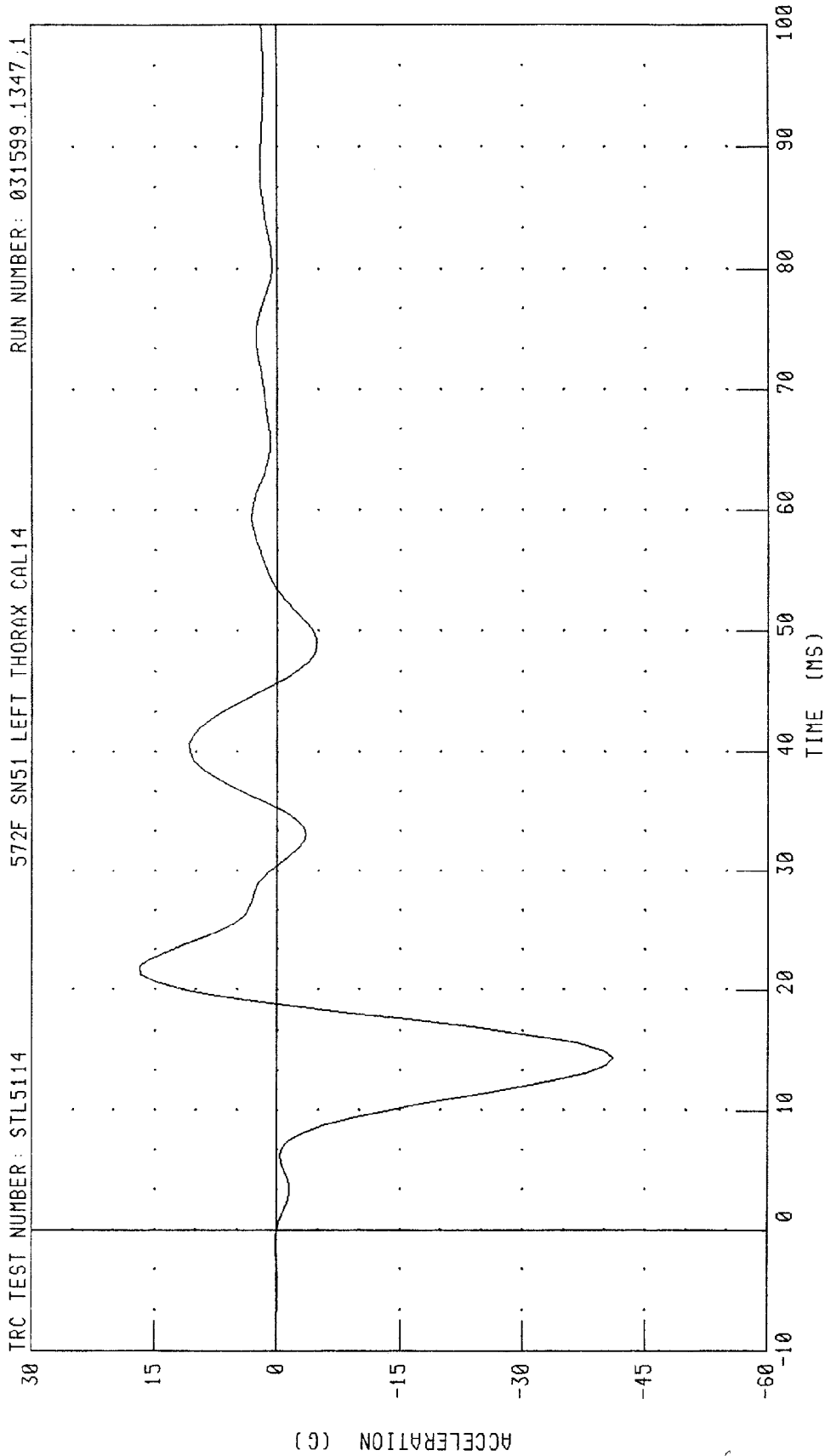


CHANNEL: LURYG FILTER: FIR 100

PEAK DATA: 17.59 G @ 21.88 MS; -40.40 G @ 14.37 MS

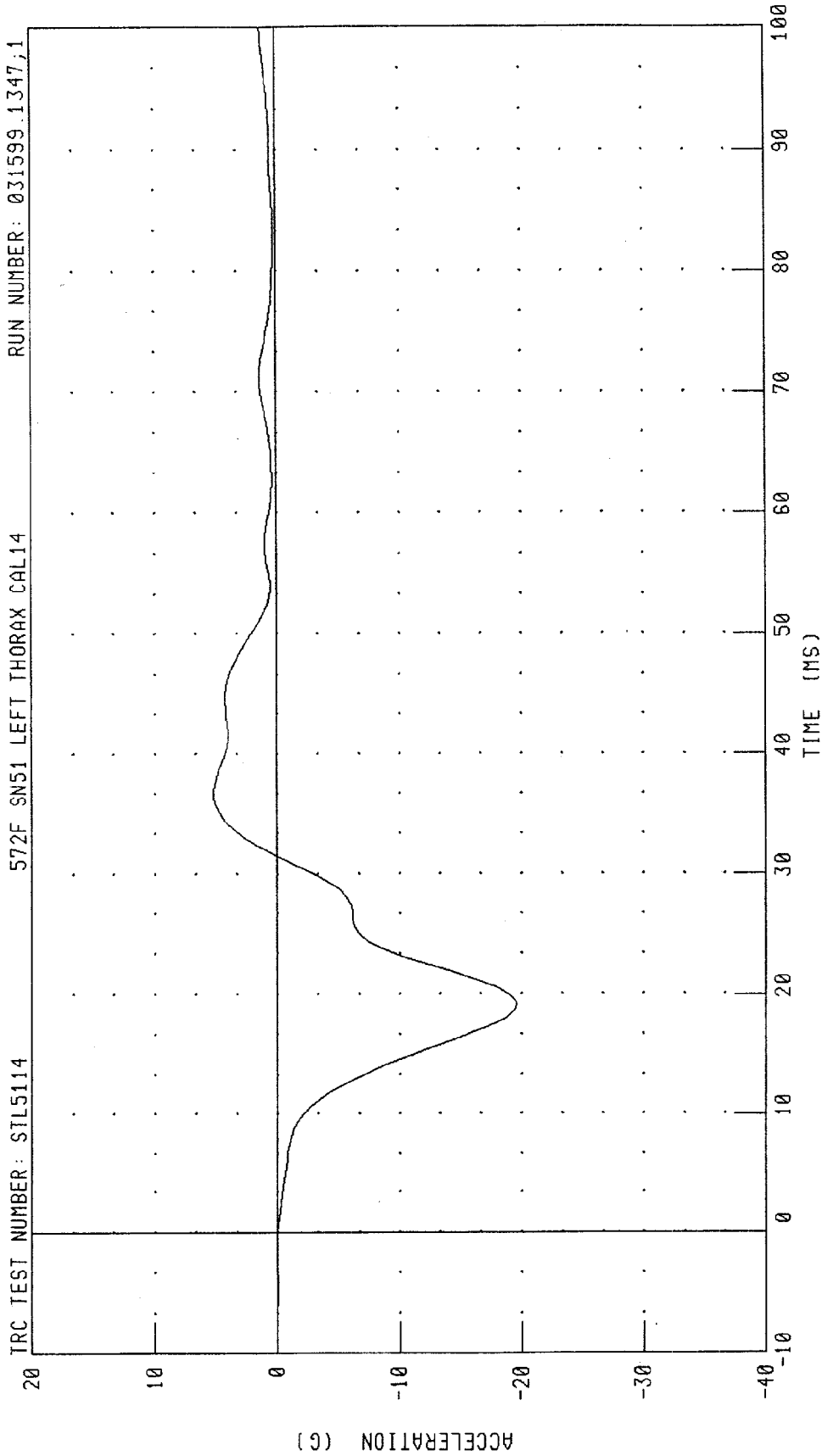
PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS



PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LOWER SPINE ACCELERATION Y AXIS



TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY

15-MAR-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO: SPL5114

572F SN 51 LEFT PELVIS CAL14

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.29 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	-51.7 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	5.9 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

TEST MEETS SPECIFICATIONS

TECHNICIAN

B. Calt

RUN NUMBER: 031599.1351;1

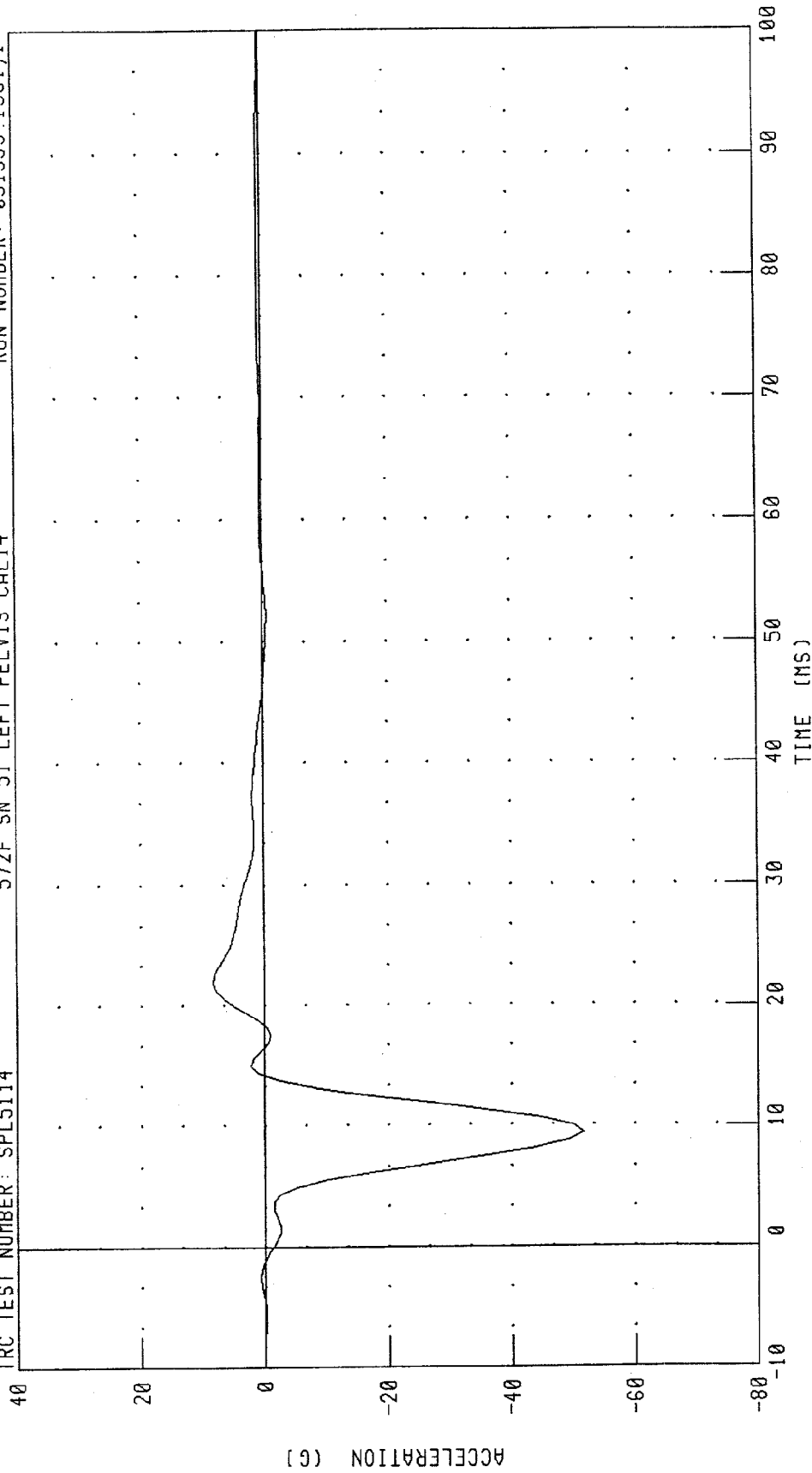
PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

TRC TEST NUMBER: SPL5114

572F SN 51 LEFT PELVIS CAL14

RUN NUMBER: 031599.1351,1



PEAK DATA: 8.31 G @ 21.88 MS; -51.69 G @ 9.37 MS

CHANNEL: PEVYC FILTER: FIR 100

TRANSPORTATION RESEARCH CENTER INC.

LUMBAR FLEXION TEST

PART 572B

15-MAR-99

TRC INC. TEST NO: LF5114

572E SN051 LUMBAR FLEX. CAL14

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
FORCE AT 0 DEG. FLEXION	-26.69 - +26.69 N	0.00 N
FORCE AT 20 DEG. FLEXION	97.86 - 151.24 N	111.20 N
FORCE AT 30 DEG. FLEXION	151.24 - 204.62 N	164.58 N
FORCE AT 40 DEG. FLEXION	204.62 - 258.00 N	213.50 N
NET RETURN ANGLE	< 12 DEG.	4.00 DEG.

DUMMY MEETS SPECIFICATIONS

TECHNICIAN By Calt

RUN NUMBER: 031599.1051

TRANSPORTATION RESEARCH CENTER INC.

ABDOMEN COMPRESSION TEST

PART 572B

15-MAR-99

TRC INC.

TEST NO: ABD5114A

ABDOMIN COMPRESSION TEST SN51

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
DEFLECTION RATE	6.4 - 8.9 MM/S	7.82 MM/S
FORCE AT 0.00 MM DISP.	44.48 N	44.48 N
FORCE AT 12.7 MM DISP.	102.30 - 160.13 N	118.88 N
FORCE AT 19.1 MM DISP.	160.13 - 222.40 N	175.62 N
FORCE AT 25.4 MM DISP.	222.40 - 280.22 N	248.99 N
FORCE AT 33.0 MM DISP.	324.70 - 391.42 N	362.46 N

DUMMY MEETS SPECIFICATIONS

TECHNICIAN

Ray Calt

RUN NUMBER: 031599.1119;1

PART 572-B HYBRID I I ABDOMEN CALIBRATION

ABDOMEN FORCE VS DISPLACEMENT

ABDOMEN COMPRESSION TEST SN51

RUN NUMBER: 031599.1120;1

TRC TEST NUMBER: ABD5114A

540

450

360

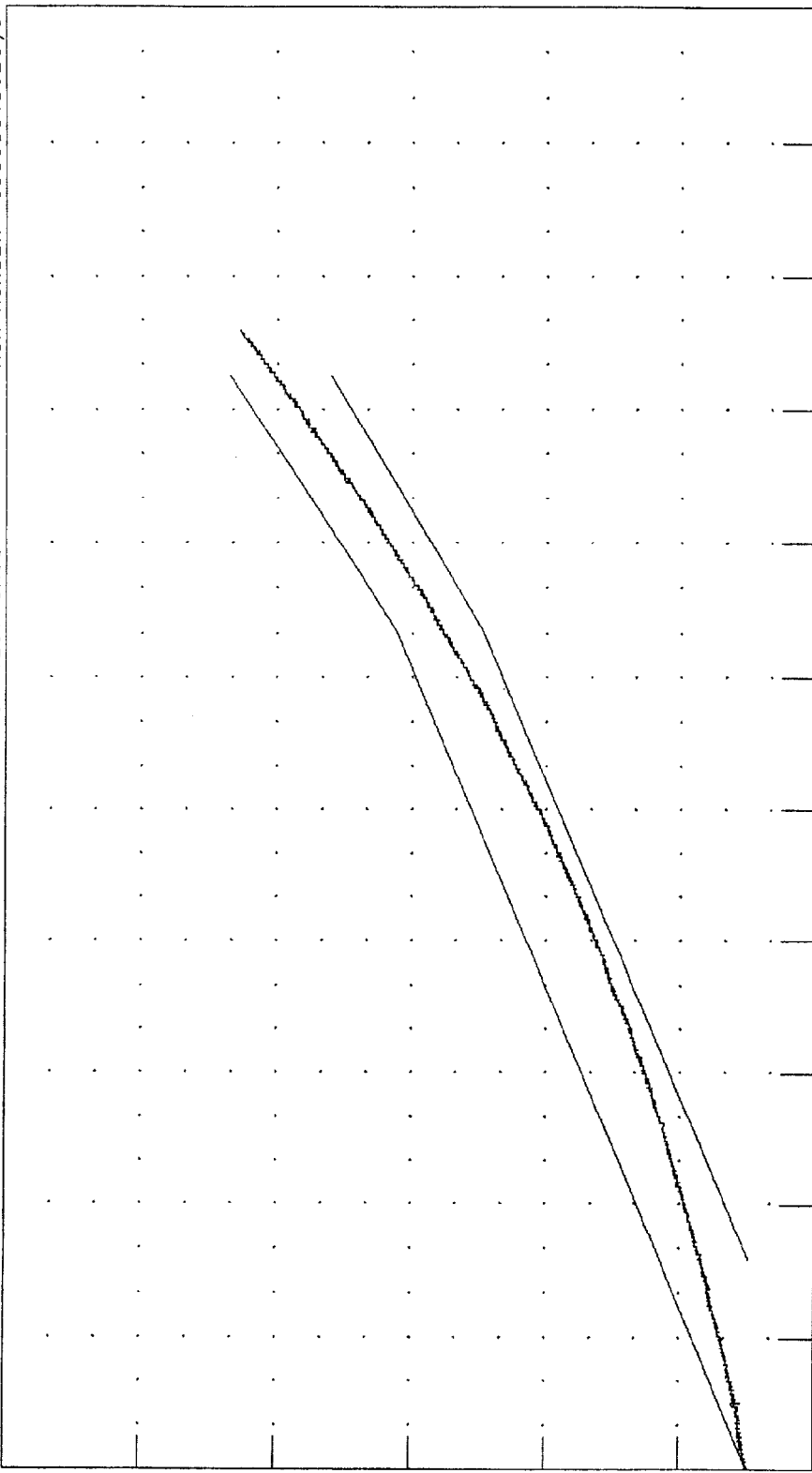
270

180

90

0

FORCE (N)



DISPLACEMENT (MM X 10⁻¹)

FILTER: CH. CLASS 1000
CH. CLASS 1000

CHANNEL: ABXD
ABXF

PEAK DATA: 34.39 MM @ 4.39 S; 0.00 MM @ 0.00 S
384.47 N @ 4.39 S; 43.56 N @ 0.00 S

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

15-MAR-99

TRC INC.

572F SN51 DAMPER TEST CAL14

TEST NUMBERS: DP5114A,DP5114B,DP5114C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	22.0 %
VELOCITY	FORCE	856 - 1146 N	940 N
3.07 M/S	DISPLACEMENT	30.2 - 35.2 MM	32.1 MM
VELOCITY	FORCE	1733 - 2100 N	1836 N
4.28 M/S	DISPLACEMENT	31.6 - 37.2 MM	35.8 MM
VELOCITY	FORCE	3784 - 4495 N	4164 N
6.12 M/S	DISPLACEMENT	33.3 - 39.6 MM	39.4 MM

DAMPER SETTING = 6.0

TEST MEETS SPECIFICATIONS

TECHNICIAN

By Cult

RUN NUMBER: 031599.1238;1

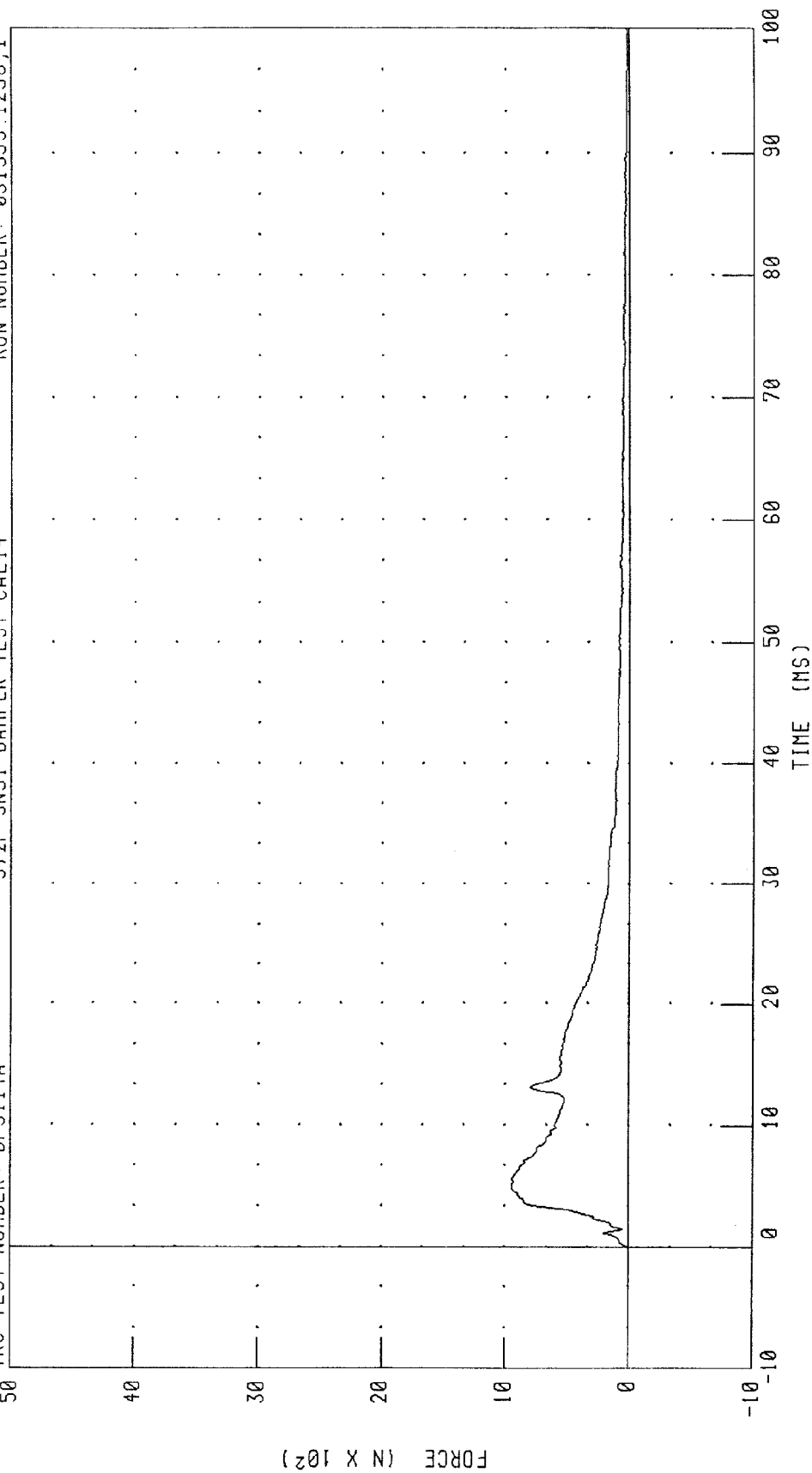
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5114A

572F SN51 DAMPER TEST CAL14

RUN NUMBER: 031599.1238,1



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 940.44 N @ 5.52 MS; -2.73 N @ -9.68 MS

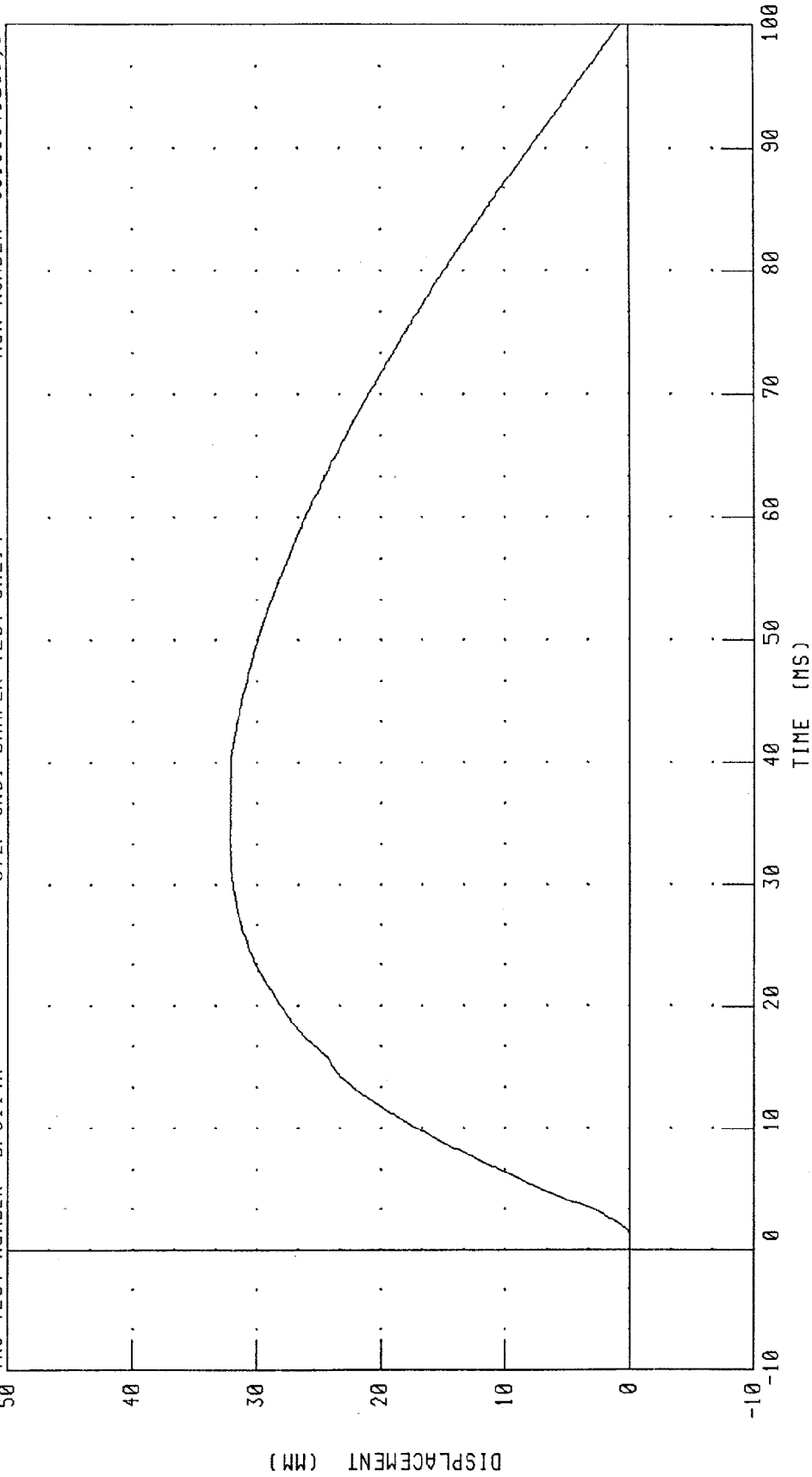
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN51 DAMPER TEST CAL14

TRC TEST NUMBER: DP5114A

RUN NUMBER: 031599.1238.1



PEAK DATA: 32.12 MM @ 32.48 MS; -0.04 MM @ -8.00 MS

CHANNEL: CSTYD FILTER: CH. CLASS 1000

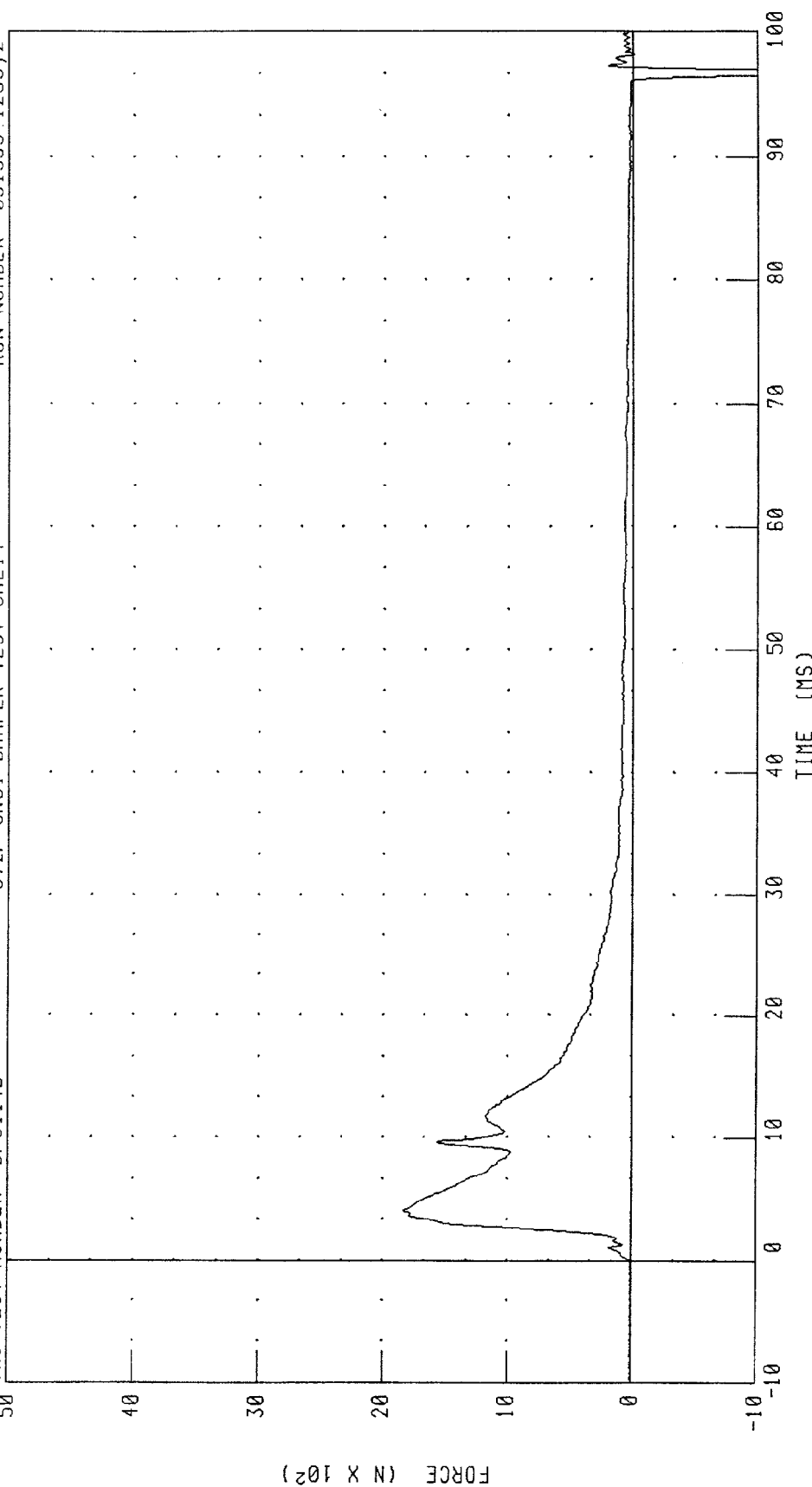
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5114B

572F SN51 DAMPER TEST CAL14

RUN NUMBER: 031599.1239;2



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 1836.24 N @ 4.08 MS; -1550.37 N @ 96.72 MS

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

SHOCK ABSORBER DISPLACEMENT

572F SN51 DAMPER TEST CAL14

TRC TEST NUMBER: DP5114B

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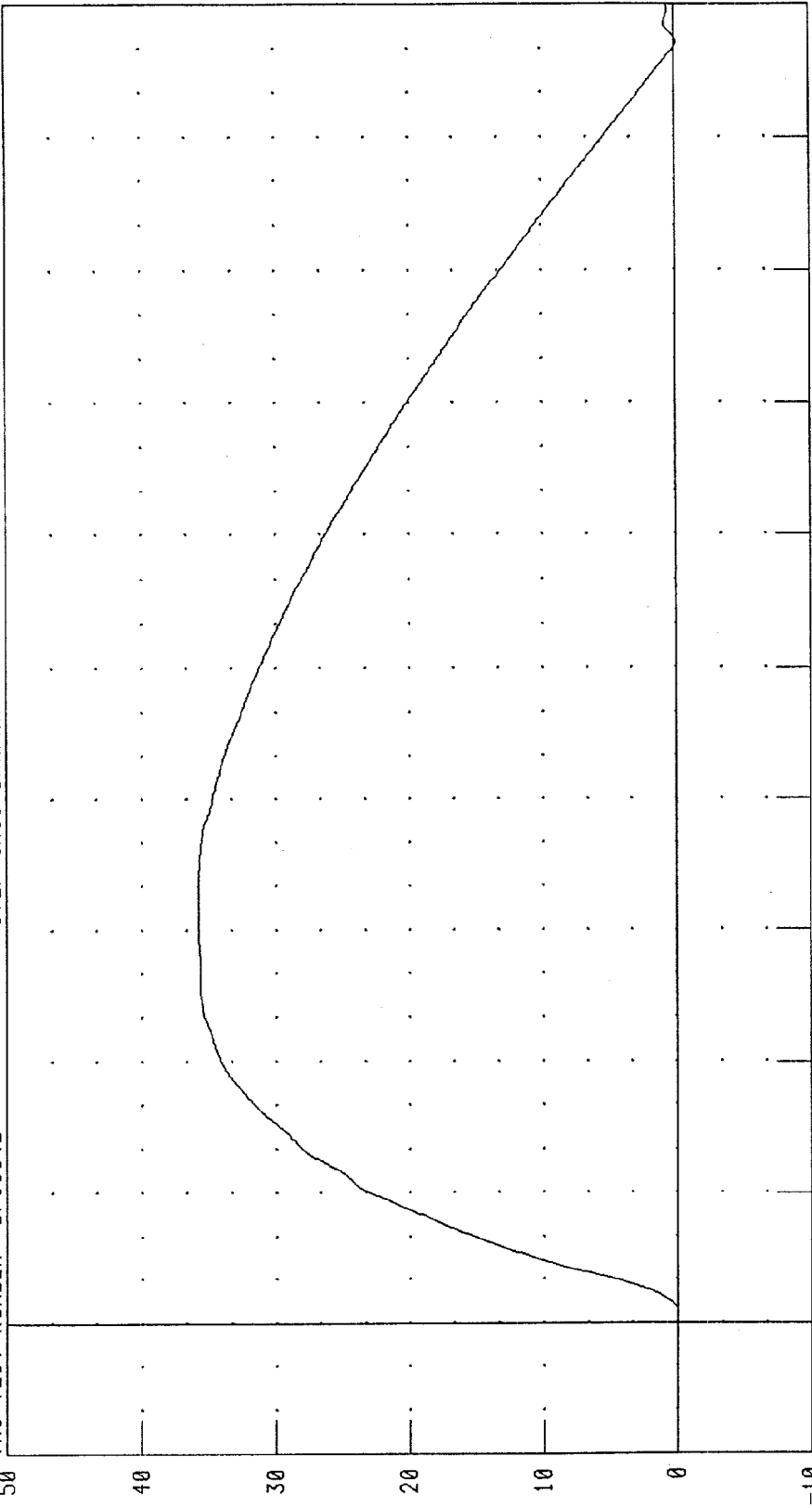
30

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-10



100

90

80

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-10

TIME (MS)

PEAK DATA: 35.82 MM @ 29.44 MS, -0.22 MM @ 97.20 MS

CHANNEL: CSTYD

FILTER: CH. CLASS 1000

990218

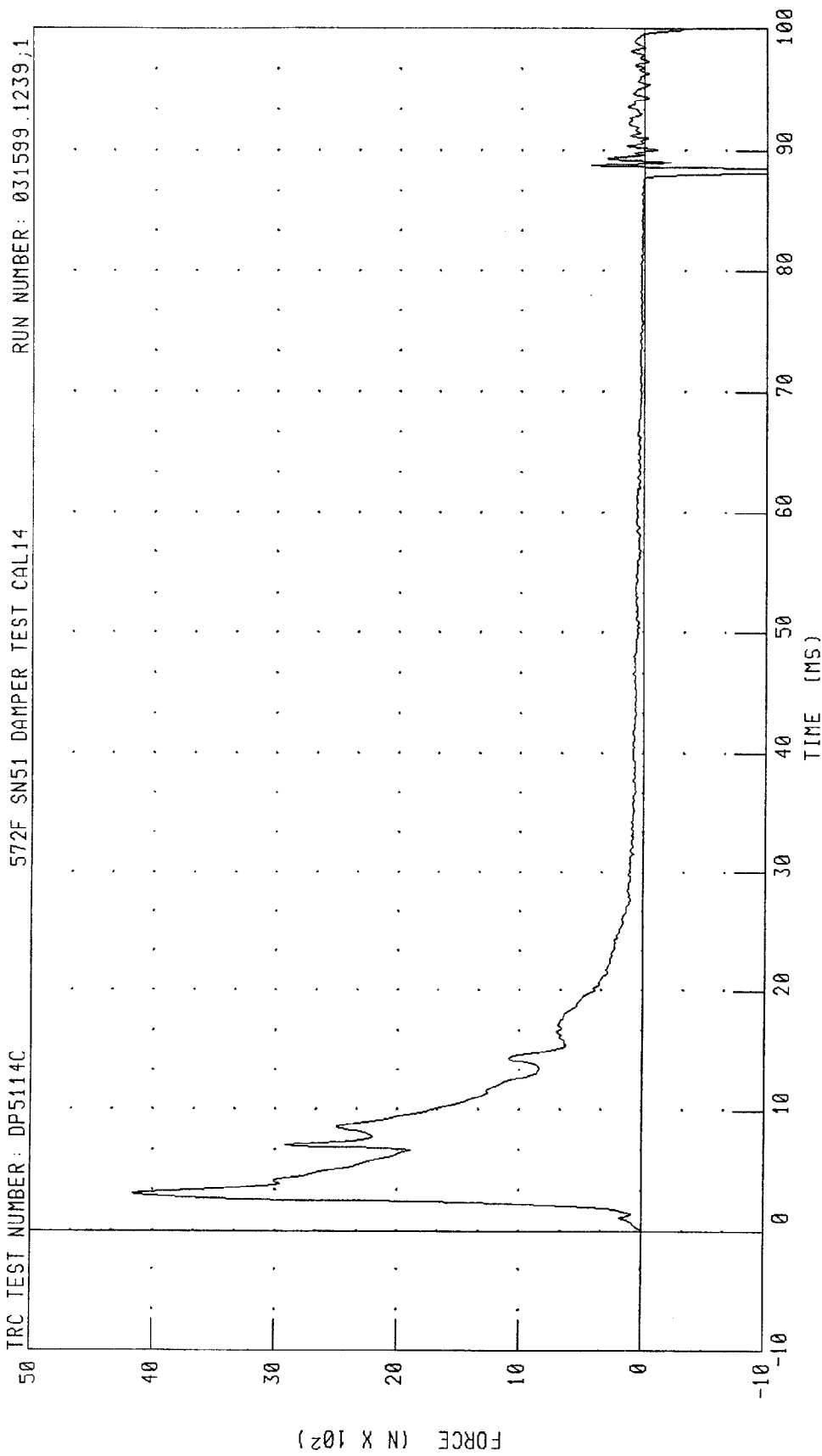
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5114C

572F SN51 DAMPER TEST CAL14

RUN NUMBER: 031599.1239;1



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 4164.39 N @ 3.12 MS, -2164.12 N @ 88.32 MS

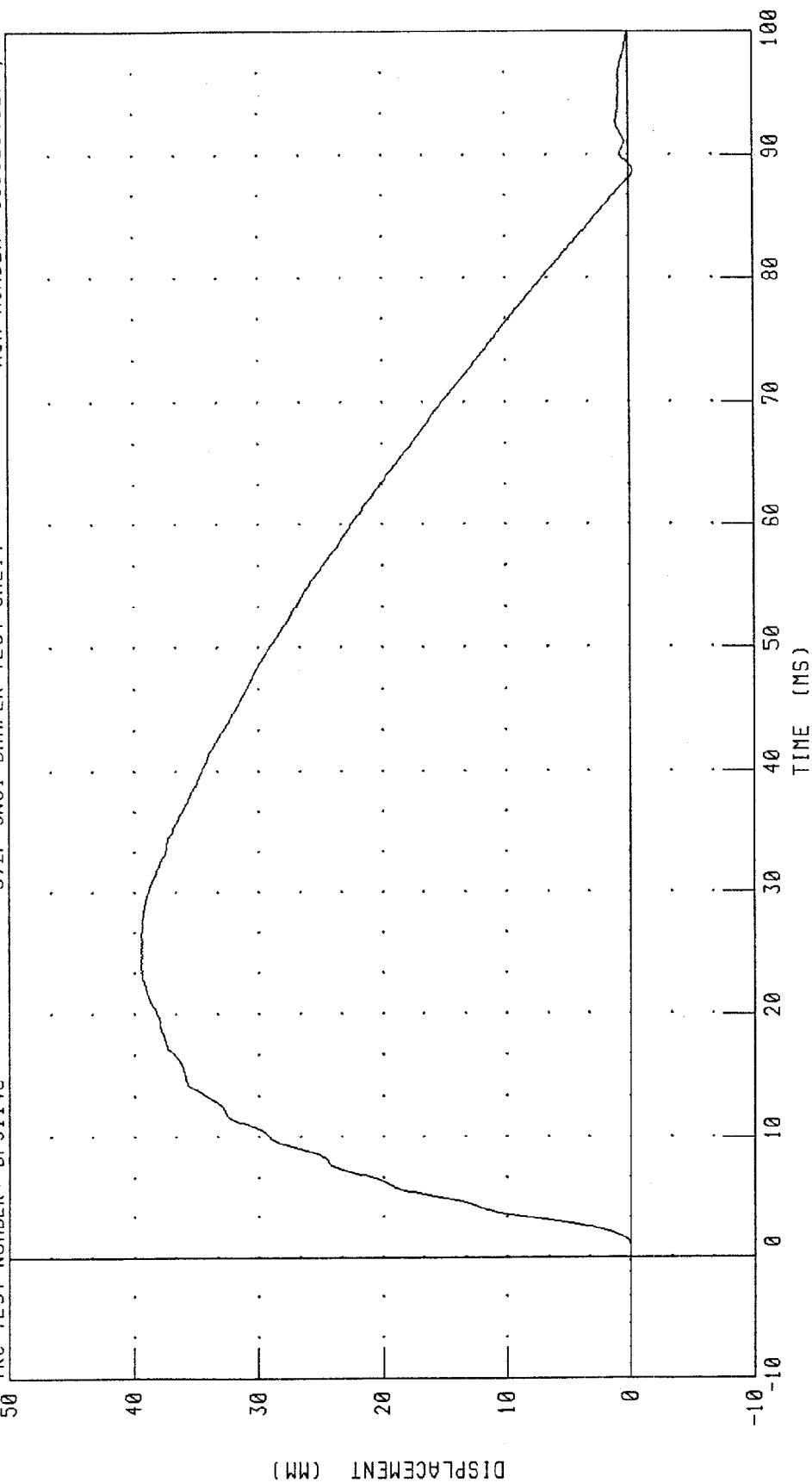
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER DISPLACEMENT

572F SN51 DAMPER TEST CAL14

TRC TEST NUMBER: DP5114C

RUN NUMBER: 031599.1239;1



CHANNEL: CSTYD FILTER: CH. CLASS 1000

PEAK DATA: 39.42 MM @ 23.44 MS; -0.39 MM @ 88.72 MS

Calibration Test Results

Post-Test

SID: 052

Configured for Left Side Impact

External Dimensions:	The dummy passed all external dimension requirements.
Lateral Thorax Impact Test:	The lateral thorax passed all impact test requirements.
Pelvis Impact Tests:	The lateral pelvis passed all impact test requirements.
Thorax Shock Absorbers:	The thorax passed all shock absorber requirements.

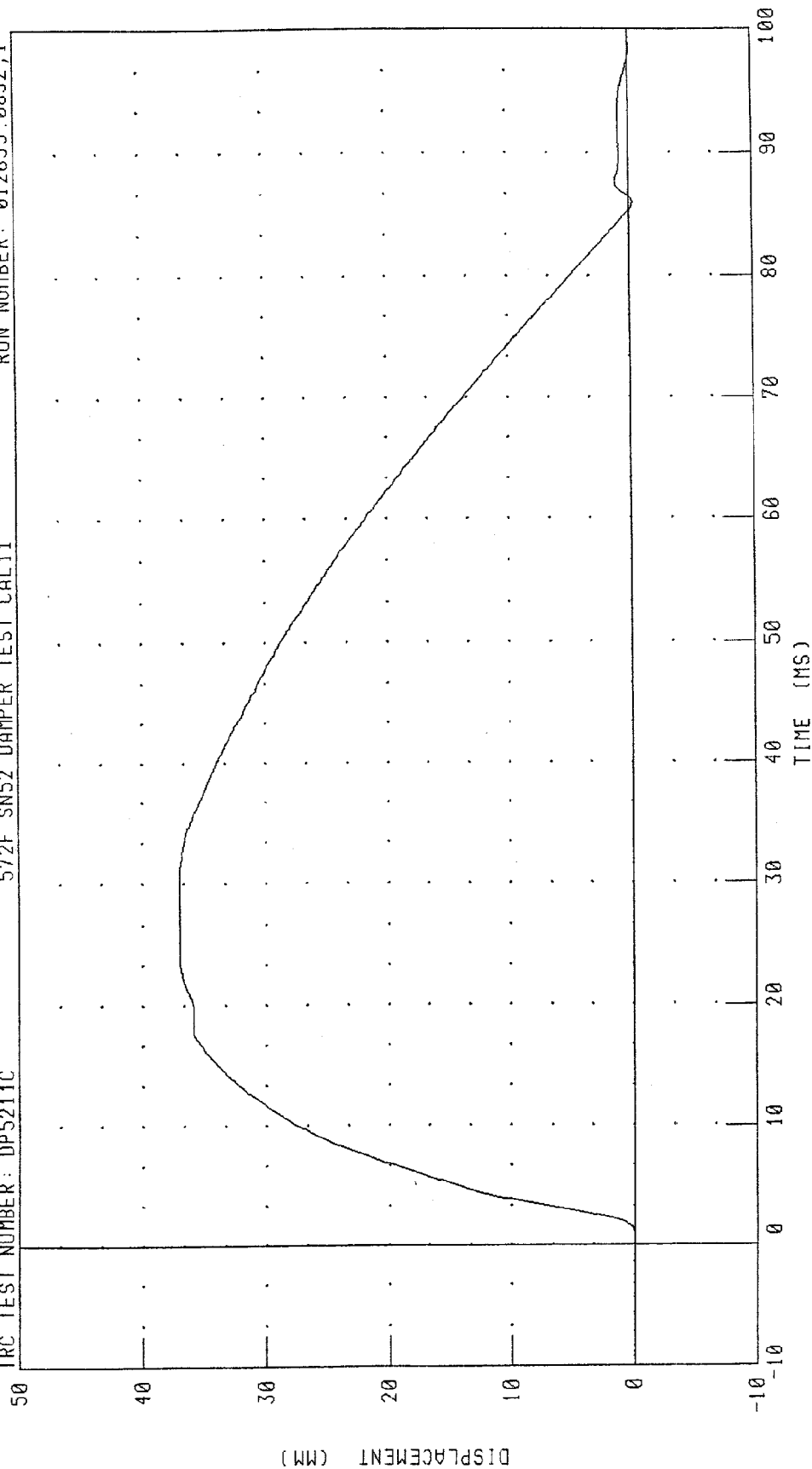
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 N/SEC)

SHOCK ABSORBER DISPLACEMENT

TRC TEST NUMBER: DP5211C

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699.0852;1



CHANNEL: CSTYD FILTER: CH. CLASS 1000

PEAK DATA: 37.01 MM @ 24.08 MS, -0.35 MM @ 85.92 MS

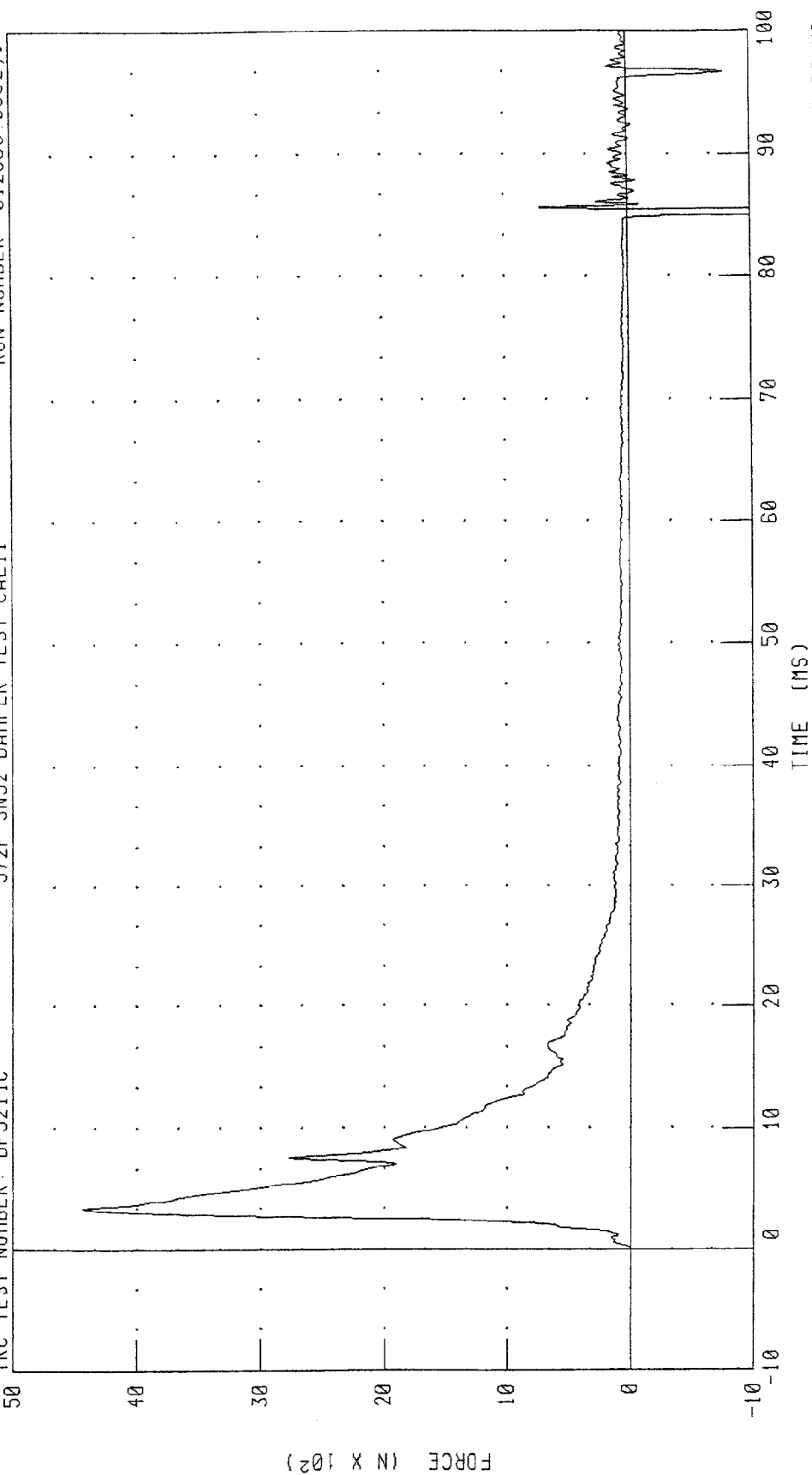
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (6.1 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5211C

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699 0052.11



CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 4432.57 N @ 3.36 MS; -3019.92 N @ 85.28 MS

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

SHOCK ABSORBER DISPLACEMENT

572F SN52 DAMPER TEST CAL11

TRC TEST NUMBER: DP5211B

50

DISPLACEMENT (MM)

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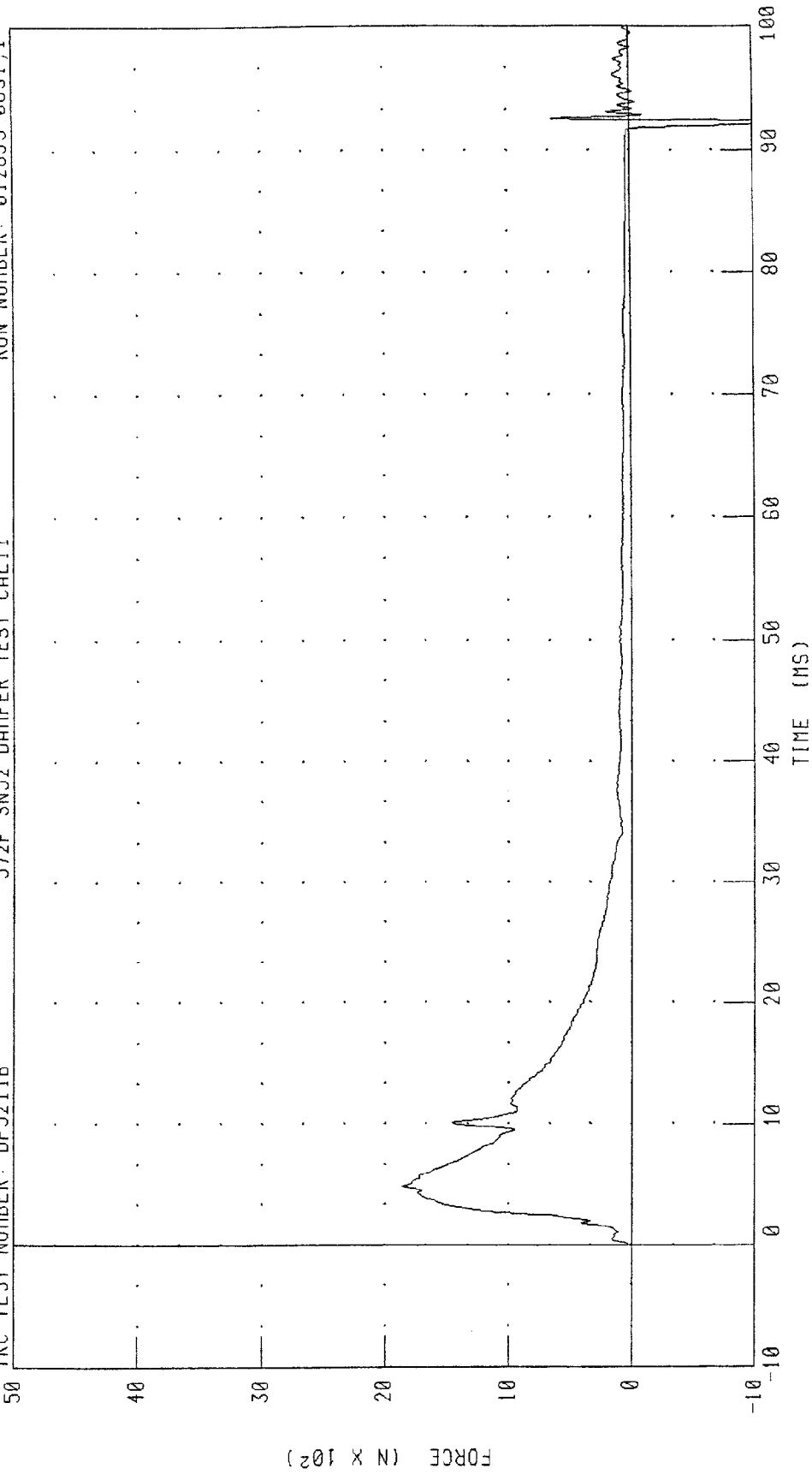
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (4.3 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5211B

572F SN52 DAMPER TEST CALI1

RUN NUMBER: 012699 0851;1



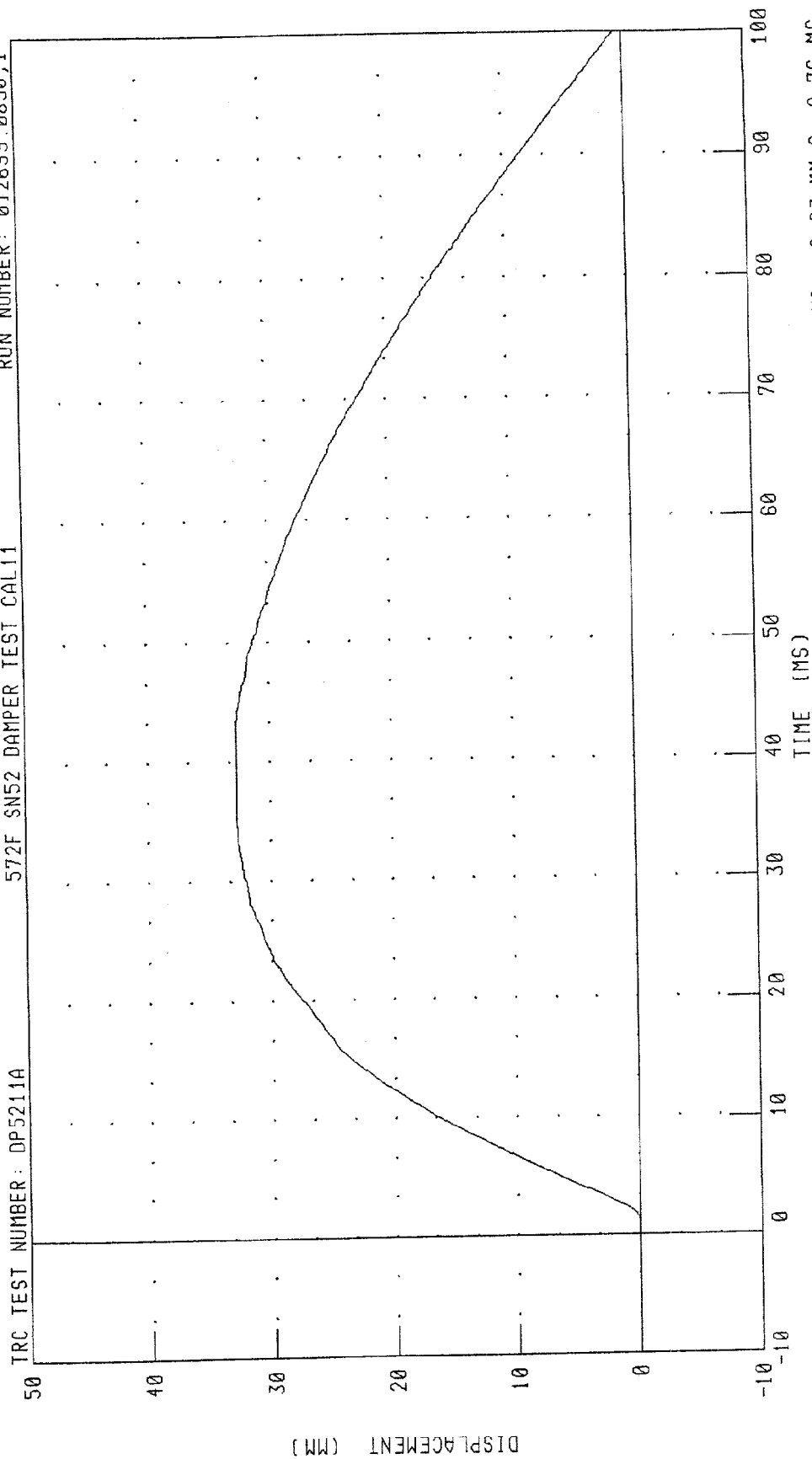
CHANNEL: DAMPF FILTER: CH. CLASS 1000

PEAK DATA: 1857.15 N @ 4.80 MS; -2594.80 N @ 92.24 MS

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

SHOCK ABSORBER DISPLACEMENT

572F SN52 DAMPER TEST CAL11 RUN NUMBER: 012699.0850;1



CHANNEL: CSTYD FILTER: CH. CLASS 1000

PEAK DATA: 32.78 MM @ 35.04 MS; -0.03 MM @ -9.76 MS

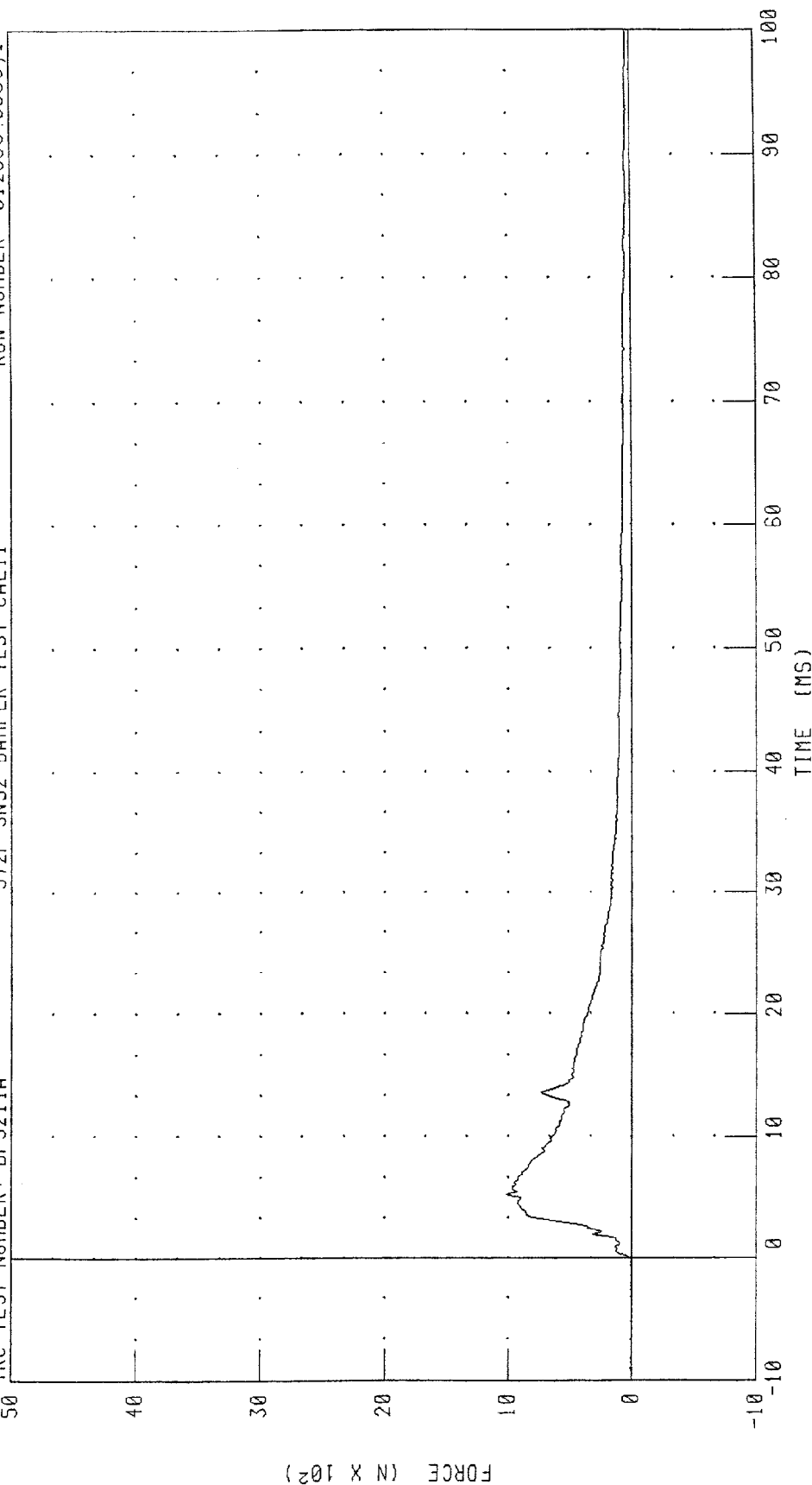
PART 572-F S.I.D. THORACIC SHOCK ABSORBER CALIBRATION (3.0 M/SEC)

SHOCK ABSORBER RESISTIVE FORCE

TRC TEST NUMBER: DP5211A

572F SN52 DAMPER TEST CAL11

RUN NUMBER: 012699.0850;1



PEAK DATA: 1010.99 N @ 5.20 MS; -0.59 N @ -9.92 MS

CHANNEL: DAMPF FILTER: CH. CLASS 1000

TRANSPORTATION RESEARCH CENTER INC.

THORACIC SHOCK ABSORBER TESTS

SIDE IMPACT DUMMY

26-JAN-99

TRC INC.

572F SN52 DAMPER TEST CAL11

TEST NUMBERS: DP5211A, DP5211B, DP5211C

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE		18.9 - 25.5 C	21.1 DEG. C
RELATIVE HUMIDITY		10 - 70 %	20.0 %
VELOCITY	FORCE	838 - 1125 N	1011 N
3.05 M/S	DISPLACEMENT	30.2 - 35.2 MM	32.8 MM
VELOCITY	FORCE	1733 - 2100 N	1857 N
4.28 M/S	DISPLACEMENT	31.6 - 37.2 MM	35.0 MM
VELOCITY	FORCE	3824 - 4542 N	4433 N
6.14 M/S	DISPLACEMENT	33.3 - 39.6 MM	37.0 MM

DAMPER SETTING = 9.0

TEST MEETS SPECIFICATIONS

TECHNICIAN

By Calt

RUN NUMBER: 012699.0849;1

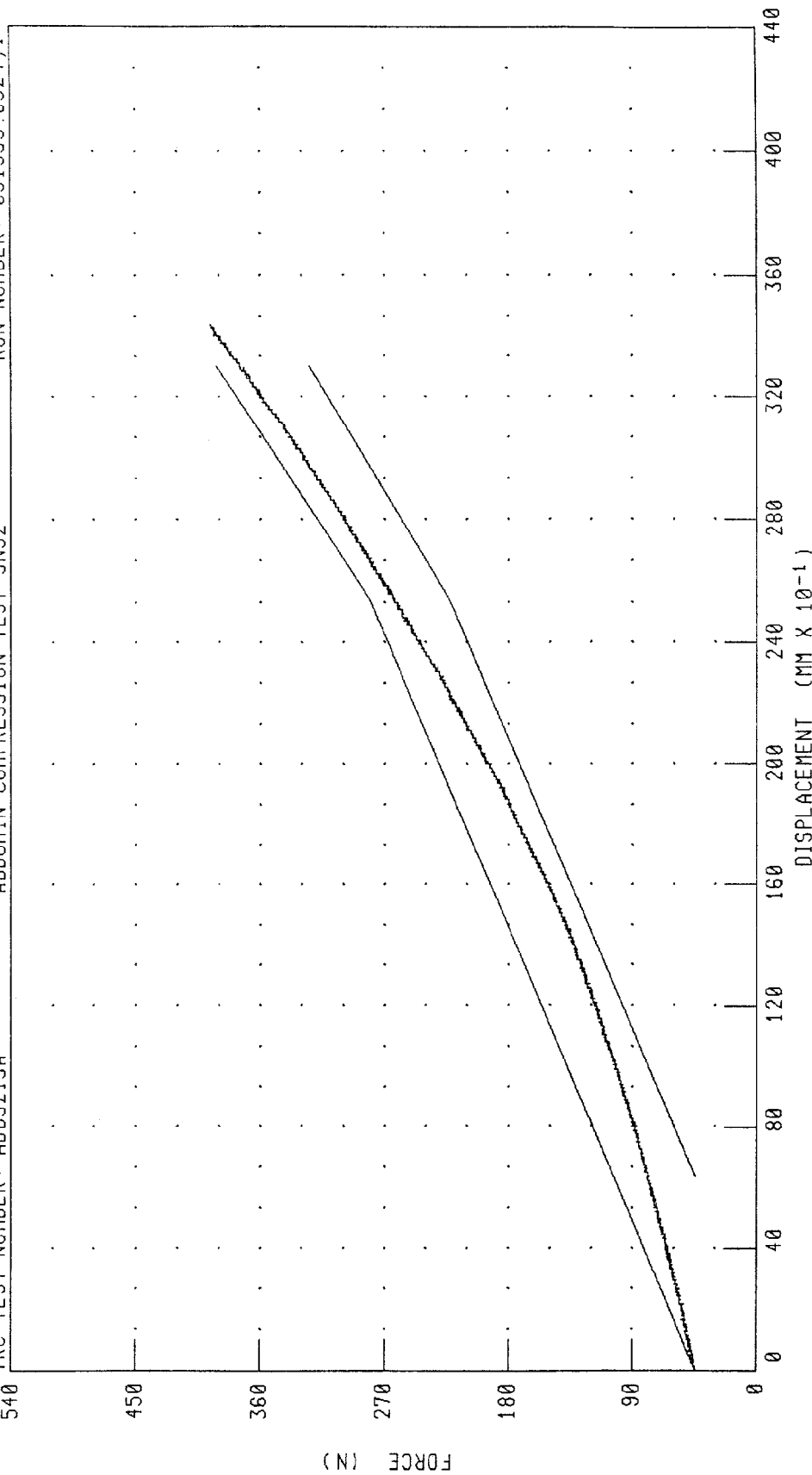
PART 572-B HYBRID II ABDOMEN CALIBRATION

ABDOMEN FORCE VS DISPLACEMENT

ABDOMIN COMPRESSION TEST SNS2

RUN NUMBER: 031599.0924;1

TRC TEST NUMBER: ABD5213A



PEAK DATA: 34.39 MM 0 4.39 S; 395.73 N 0 4.39 S; 44.06 MM 0 0.00 S

FILTER: CH. CLASS 1000
CH. CLASS 1000

CHANNEL: ABXD
ABXF

TRANSPORTATION RESEARCH CENTER INC.

ABDOMEN COMPRESSION TEST

PART 572B

15-MAR-99

TRC INC.

TEST NO: ABD5213A

ABDOMIN COMPRESSION TEST SN52

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.0 C
RELATIVE HUMIDITY	10 - 70 %	22 %
DEFLECTION RATE	6.4 - 8.9 MM/S	7.77 MM/S
FORCE AT 0.00 MM DISP.	44.48 N	44.48 N
FORCE AT 12.7 MM DISP.	102.30 - 160.13 N	122.81 N
FORCE AT 19.1 MM DISP.	160.13 - 222.40 N	182.97 N
FORCE AT 25.4 MM DISP.	222.40 - 280.22 N	262.69 N
FORCE AT 33.0 MM DISP.	324.70 - 391.42 N	374.70 N

DUMMY MEETS SPECIFICATIONS

TECHNICIAN By celt

RUN NUMBER: 031599.0923;1

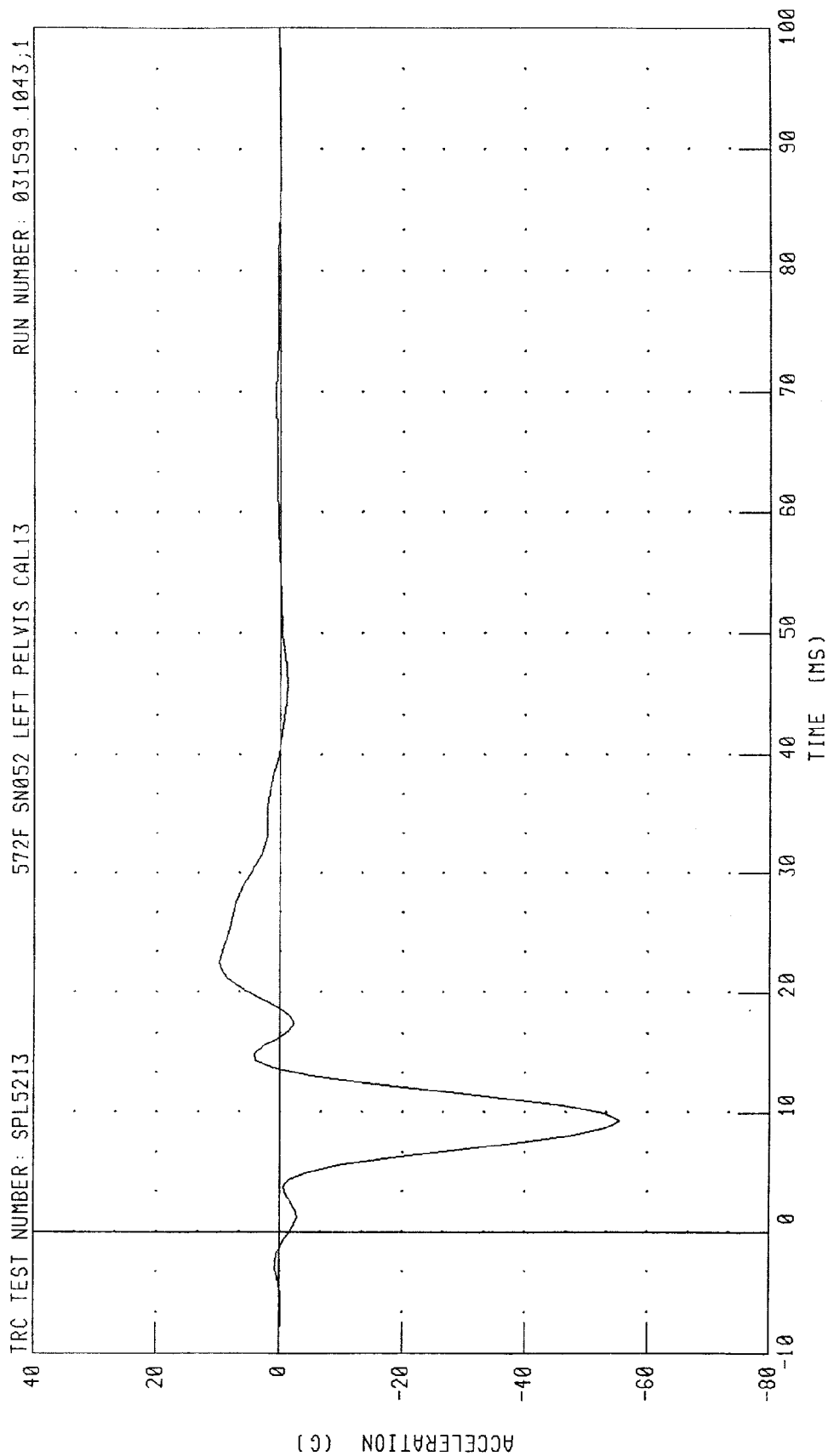
PART 572-F S.I.D. PELVIS CALIBRATION - (LEFT SIDE IMPACT)

PELVIS ACCELERATION Y AXIS

TRC TEST NUMBER: SPL5213

572F SN052 LEFT PELVIS CAL13

RUN NUMBER: 031599.1043,1



CHANNEL: PEVYC FILTER: FIR 100

PEAK DATA: 9.83 G @ 22.50 MS; -55.43 G @ 9.37 MS

TRANSPORTATION RESEARCH CENTER INC.

LATERAL PELVIS IMPACT TEST

SIDE IMPACT DUMMY

15-MAR-99

LEFT SIDE CONFIGURATION

TRC INC. TEST NO: SPL5213

572F SN052 LEFT PELVIS CAL13

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.29 M/S
PEAK PELVIC ACCELERATION	40 - 60 G	-55.4 G
TIME ABOVE 20 G LEVEL	3 - 7 MS	5.8 MS
IS ACCELERATION CURVE UNIMODAL?	YES	YES

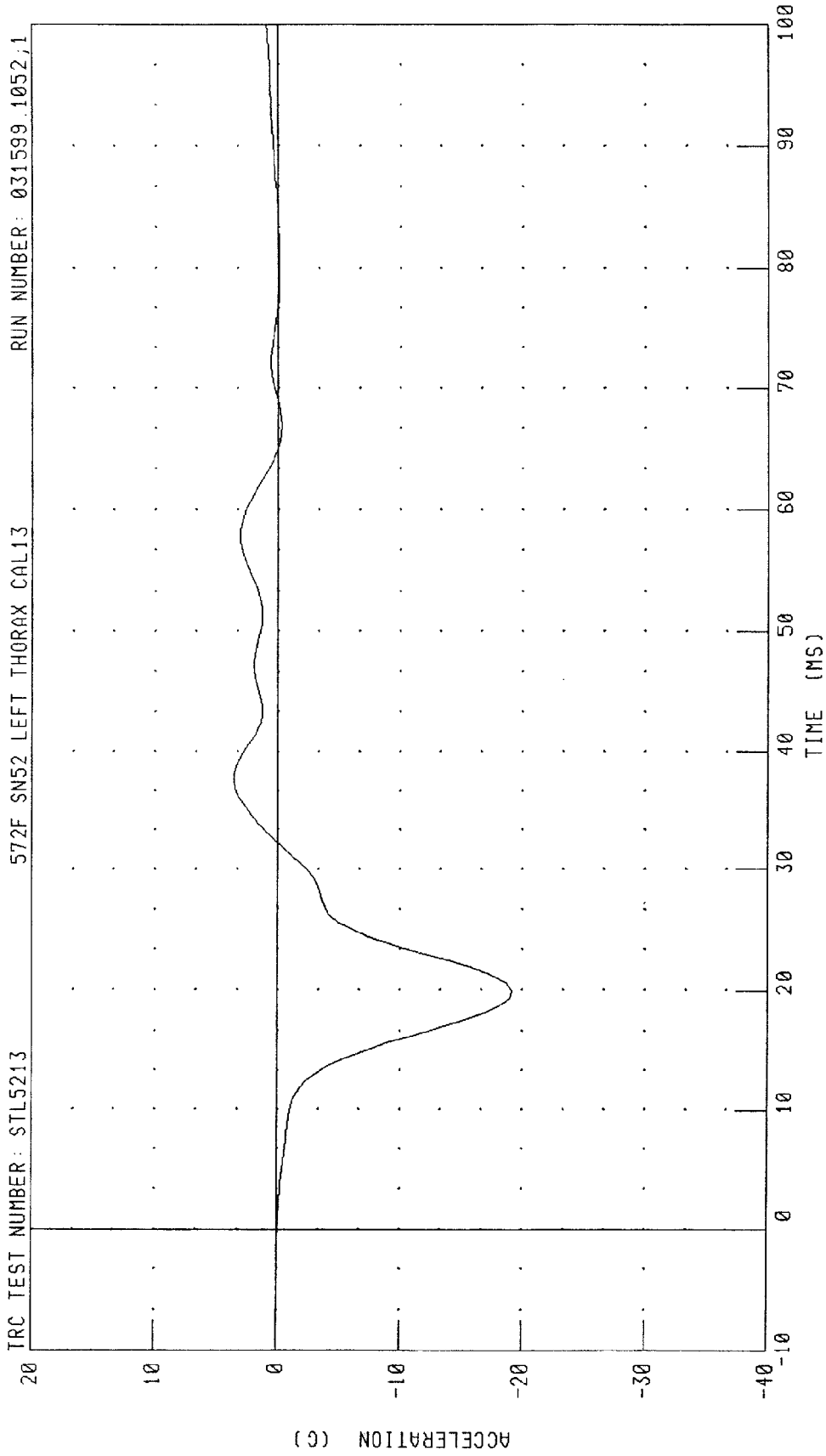
TEST MEETS SPECIFICATIONS

TECHNICIAN B. Calt

RUN NUMBER: 031599.1042;1

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LOWER SPINE ACCELERATION Y AXIS



CHANNEL: T12YC FILTER: FIR 100

PEAK DATA: 3.61 G @ 37.50 MS; -19.17 G @ 20.00 MS

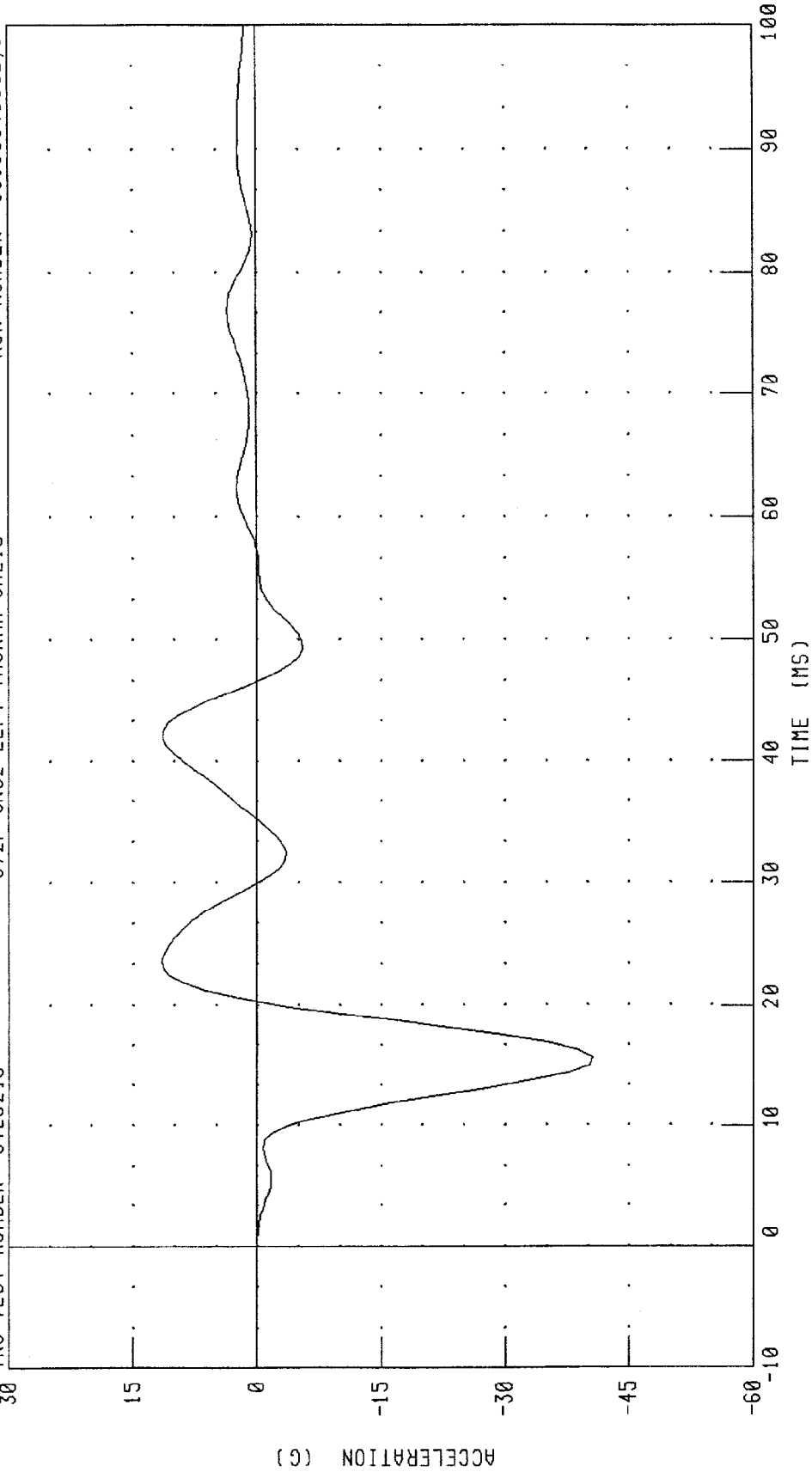
PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)

LEFT LOWER RIB ACCELERATION Y AXIS

TRC TEST NUMBER: STL5213

572F SN52 LEFT THORAX CAL13

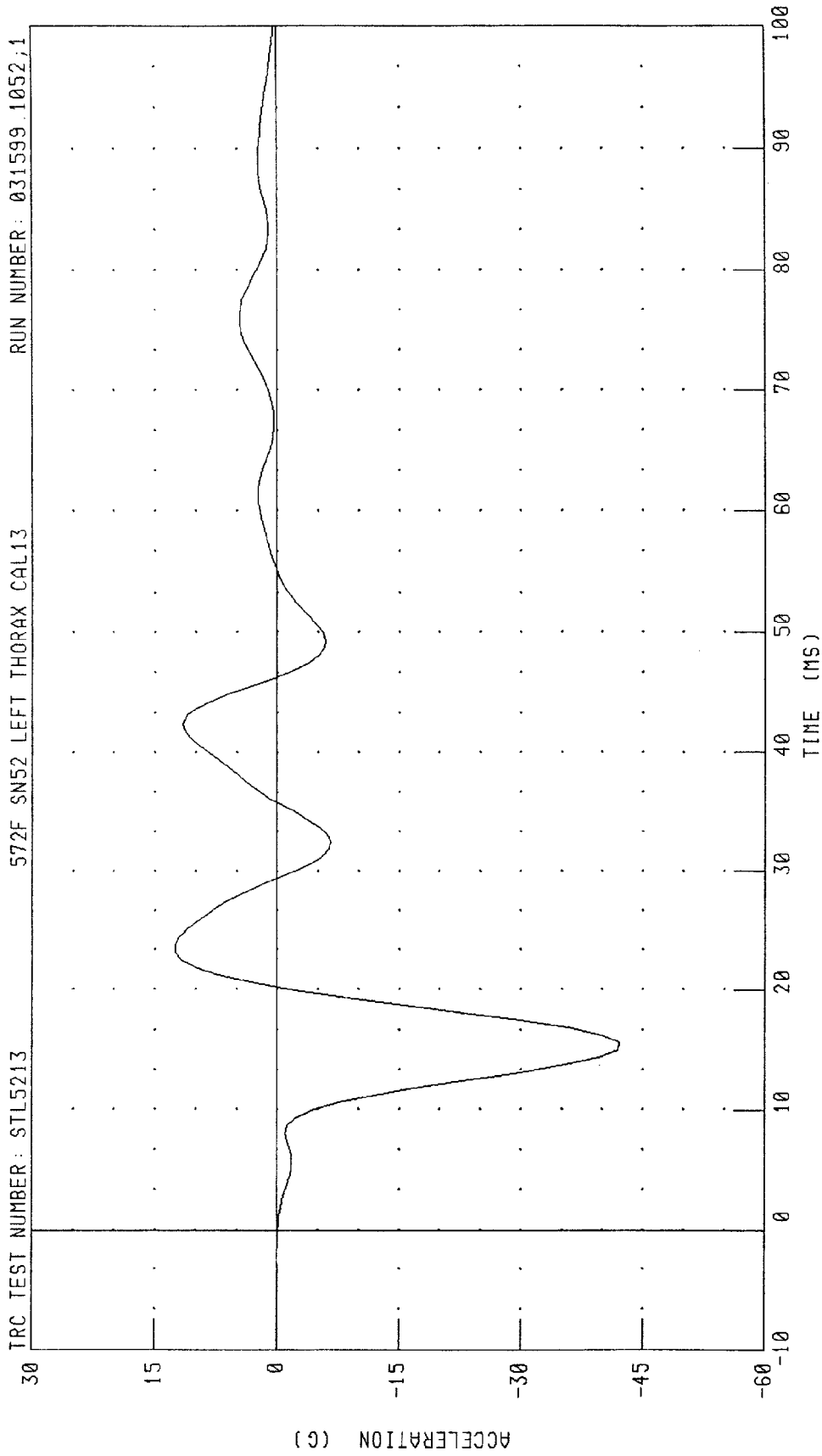
RUN NUMBER: 031599.1052;1



CHANNEL: LLRYC FILTER: FIR 100

PEAK DATA: 11.48 G @ 23.75 MS; -40.60 G @ 15.63 MS

PART 572-F S.I.D. THORAX CALIBRATION - (LEFT SIDE IMPACT)
LEFT UPPER RIB ACCELERATION Y AXIS



CHANNEL: LURYG FILTER: FIR 100

PEAK DATA: 12.47 C @ 23.13 MS; -42.09 C @ 15.63 MS

TRANSPORTATION RESEARCH CENTER INC.

LATERAL THORAX IMPACT TEST

SIDE IMPACT DUMMY

15-MAR-99

LEFT SIDE CONFIGURATION

TRC INC.

TEST NO: STL5213

572F SN52 LEFT THORAX CAL13

TEST PARAMETER	SPECIFICATION (ABSOLUTE VALUE)	TEST RESULTS
TEMPERATURE	18.9 - 25.5 C	21.7 DEG. C
RELATIVE HUMIDITY	10 - 70 %	22.0 %
PENDULUM VELOCITY	4.27 - 4.33 M/S	4.31 M/S
PEAK ACCELERATION: UPPER RIB BAR	37 - 46 G	-42.1 G
PEAK ACCELERATION: LOWER RIB BAR	37 - 46 G	-40.6 G
PEAK ACCELERATION: LOWER THORACIC SPINE	15 - 22 G	-19.2 G

TEST MEETS SPECIFICATIONS

TECHNICIAN

B. Calt

RUN NUMBER: 031599.1052;1

TRANSPORTATION RESEARCH CENTER INC.
 SIDE IMPACT DUMMY
 EXTERNAL DIMENSIONS
 LEFT SIDE CONFIGURATION
 SN SN052 VECTOR

15-MAR-99

TRC INC. TEST NO: ED5213 572F SN052 EXT.DIMENSION CAL13

DIMENSIONS WITH CHEST JACKET INSTALLED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
	TEMPERATURE		21.1 DEG. C
	RELATIVE HUMIDITY		22.0 %
SH	SEATED HEIGHT	889 - 909 MM	901.2 MM
HP	HIP PIVOT HEIGHT	99 MM REF.	100.1 MM
KH	KNEE PIVOT FROM BACKLINE	511 - 526 MM	517.6 MM
KV	KNEE PIVOT FROM FLOOR	490 - 506 MM	495.3 MM
HW	HIP WIDTH	356 - 391 MM	368.3 MM
DIMENSIONS WITH CHEST JACKET REMOVED			
SYMB	DESCRIPTION	SPECIFICATION	TEST RESULTS
RH	RIB HEIGHT	501 - 520 MM	510.0 MM
RD	RIB FROM BACKLINE	229 - 241 MM	236.2 MM
RW-1	TOP RIB WIDTH FROM C/L	165. - 180 MM	174.2 MM
RW-2	BOTTOM RIB WIDTH FROM C/L	165 - 180 MM	174.2 MM
	DIFFERENCE BETWEEN TOP & BOTTOM RIB WIDTH FROM C/L	≤ 2.5 MM	0.0 MM

DUMMY MEETS SPECIFICATIONS

TECHNICIAN B. elt

RUN NUMBER: 020399.1045

APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

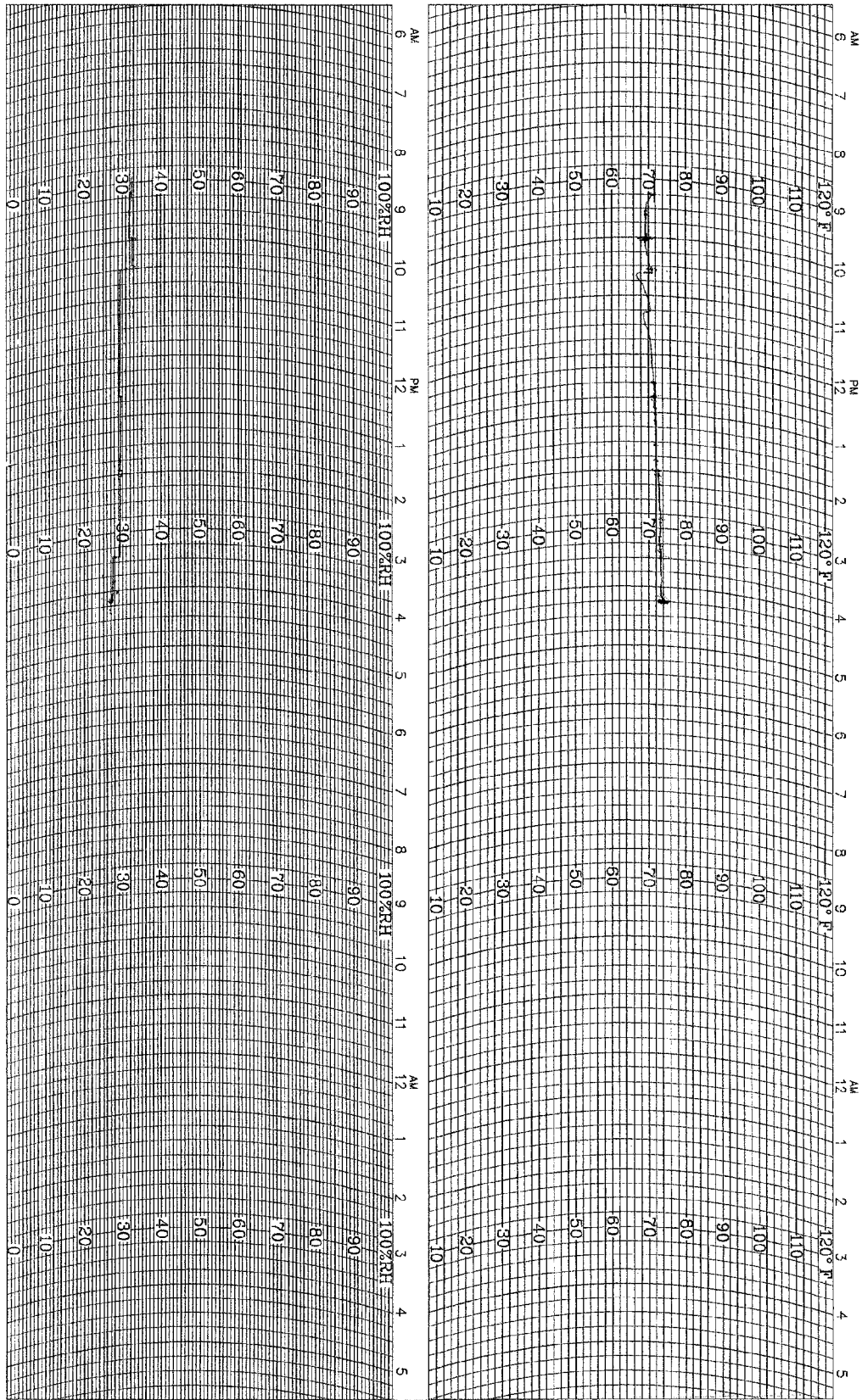
SID INSTRUMENTATION

	REAR SID NO.: 051		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
Head X	J26499	Endevco	01/99
Head Y	J26491	Endevco	01/99
Head Z	J26498	Endevco	01/99
Neck Force X	858-FX	Denton	02/99
Neck Force Y	858-FY	Denton	02/99
Neck Force Z	858-FZ	Denton	02/99
Neck Moment X	858-MX	Denton	02/99
Neck Moment Y	858-MY	Denton	02/99
Neck Moment Z	858-MZ	Denton	02/99
Upper Rib	J22075	Endevco	11/98
Lower Rib	J22047	Endevco	11/98
Lower Spine	J15372	Endevco	11/98
Pelvis	J22197	Endevco	11/98
Upper Rib Redundant	J20184	Endevco	11/98
Lower Rib Redundant	J22046	Endevco	11/98
Lower Spine Redundant	J20024	Endevco	11/98
Pelvis Redundant	J20387	Endevco	11/98

	DRIVER SID NO.: 052		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
Head X	J19976	Endevco	01/99
Head Y	J21941	Endevco	01/99
Head Z	J21532	Endevco	01/99
Upper Rib	J20148	Endevco	11/98
Lower Rib	J18811	Endevco	11/98
Lower Spine	J19303	Endevco	11/98
Pelvis	J20243	Endevco	11/98
Upper Rib Redundant	J20005	Endevco	11/98
Lower Rib Redundant	J20561	Endevco	11/98
Lower Spine Redundant	J20025	Endevco	11/98
Pelvis Redundant	J20462	Endevco	11/98

VEHICLE AND MDB INSTRUMENTATION

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
Right Front Sill (X)	J21533	Endevco	10/98
Right Front Sill (Y)	J23021	Endevco	12/98
Right Front Sill (Z)	J23899	Endevco	11/98
Right Rear Sill (X)	J19629	Endevco	10/98
Right Rear Sill (Y)	J22021	Endevco	08/98
Right Rear Sill (Z)	J21666	Endevco	10/98
Rear Floorpan Above Axle (X)	ANA55	Endevco	02/99
Rear Floorpan Above Axle (Y)	J21854	Endevco	10/98
Rear Floorpan Above Axle (Z)	J23839	Endevco	01/99
Left Rear Sill (Y)	J26500	Endevco	02/99
Left Front Sill (Y)	J25015	Endevco	10/98
Left Front Door Centerline	J26492	Endevco	02/99
Right Rear Seat Occupant Comp. (Y)	J21499	Endevco	12/98
Left Front Door Mid-Rear	J22836	Endevco	02/99
Left Front Door Upper Centerline	J22740	Endevco	02/99
Left Rear Door Mid-Rear	J22674	Endevco	01/99
Left Rear Door Upper Centerline	J26515	Endevco	01/99
Lower Left B-Pillar (Y)	J26484	Endevco	01/99
Middle Left B-Pillar (Y)	J25023	Endevco	10/98
Lower Left A-Pillar (Y)	96G01-Z11	Entran	04/98
Middle Left A-Pillar (Y)	J22706	Endevco	02/99
Front Seat Track (Y)	J25410	Endevco	12/98
Rear Seat Track (Y)	J26495	Endevco	01/99
Vehicle CG (X)	J21757	Endevco	10/98
Vehicle CG (Y)	J19577	Endevco	11/98
Vehicle CG (Z)	J21986	Endevco	12/98
MDB CG (X)	J25527	Endevco	12/98
MDB CG (Y)	J25048	Endevco	10/98
MDB CG (Z)	J22660	Endevco	02/99
MDB Rear Frame Member (X)	J26511	Endevco	01/99
MDB Rear Frame Member (Y)	J22657	Endevco	02/99



WeatherMeasure
WEATHERtronic
 Division of QUALIMETRICS, Inc.
 P.O. BOX 41039
 SACRAMENTO, CA 95841
 PHONE: (916) 923-0055

HYGROTHERMOGRAPH
 1 DAY

CHART NO. M699123
 C311-D-HF
 ECN 2717
 6-9-87

STATION 1st test DATE ON 2-18-99 DATE OFF _____