V3144

1999 Dodge Intrepid
into a 30° Right Angled Barrier
TRC Test Number: 990511-2

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Section 1.0

Purpose and Test Procedure

Purpose and Test Summary

This 30 mph 30° right angled barrier impact test has as the main objective to investigate both vehicle and occupant dynamics during a 30° right angled barrier test. A secondary objective is to gather information on depowered airbags.

This test was conducted with a 1999 Dodge Intrepid that impacted a 30° right angled barrier. The test vehicle contained two instrumented Hybrid III 50th percentile adult male dummies.

Section 2.0

30° Right Angled Barrier Impact Test Summary

Test Procedure

This test was conducted per VRTC personnel's instructions. Data was obtained relative to FMVSS 208, "Occupant Crash Protection," performance.

The test vehicle was instrumented with eight (8) accelerometers to measure longitudinal, lateral, and vertical axis accelerations and two (2) inductive pickup switches to measure the driver and passenger airbag fire times. The vehicle's specified impact velocity range was 47.5 to 49.1 kph. The vehicle impacted a 30° right angled barrier.

The test vehicle contained two (2) Hybrid III 50th percentile adult male anthropomorphic test devices (dummies). The dummies were positioned in the front outboard designated seating positions according to the FMVSS 208 laboratory seating procedure.

Both dummies were instrumented with head and chest accelerometers to measure longitudinal, lateral, and vertical accelerations; chest deflection potentiometers; left and right femur load cells to measure axial forces; and upper neck load cells to measure forces and moments.

The forty (40) data channels were digitally sampled at 12,500 samples per second and processed per Sections 11.13 through 11.15 of the Laboratory Test Procedure.

The crash event was recorded by one (1) real-time panning motion picture camera and thirteen (13) high-speed motion picture cameras. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera.

The vehicle and occupant data are summarized in Section 2.0. The FMVSS 208 data are presented in Section 3.0. The vehicle, occupant, and camera measurements are presented in Section 4.0. Appendix A contains the still photographic prints. Appendix B contains the dummy and vehicle data plots. Appendix C contains the miscellaneous test information.

Test Results Summary

This 30° right angled barrier test was conducted at TRC on May 11, 1999.

The test vehicle, a 1999 Dodge Intrepid, was equipped with airbags at the driver's and right front passenger's seating positions. The vehicle's test weight was 1735.8 kilograms. The vehicle's impact speed was 48.2 kph. The vehicle's maximum static crush was 378 millimeters.

The driver's 15-millisecond HIC was 53 and the 36-millisecond HIC was 102. The driver's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 34.4 g. The driver's chest deflection was 23.5 millimeters. The driver's left and right femur maximum compressive forces were 5183 N and 5624 N, respectively.

The right front passenger's 15-millisecond HIC was 234 and the 36-millisecond HIC was 267. The right front passenger's chest maximum resultant acceleration with three (3) milliseconds minimum duration was 34.7 g. The passenger's chest deflection was 6.0 millimeters. The right front passenger's left and right femur maximum compressive forces were 5180 N and 4702 N, respectively.

Data Acquisition Explanations

The front right brake caliper x-axis accelerometer, channel BCRXG1, exceeded its full scale value at approximately 52 milliseconds.

The driver airbag fire inductive pickup, channel ABSQ1, recorded invalid data throughout the event.

Table 1 Crash Test Summary

Test type:	30° right angled barrier impact
Test date:	05/11/99
Test time:	2353
Ambient temperature at impact area:	22° C
Vehicle year/make/ model/body style:	1999/Dodge/Intrepid/Sedan
Vehicle test weight:	1735.8 kg
Impact angle[1]:	30°
Impact velocity[2]:	
Primary:	48.2 kph
Secondary:	48.2 kph
Maximum static crush:	378 mm
Average rebound:	N/A
Number of cameras:	
Real-time:	1
High-speed:	12
Door opening data:	
Left-front:	Easy
Right-front:	Easy

[1] With respect to tow track centerline.
[2] Speed trap measurement (± .08 km/h accuracy)

Table 1 Crash Test Summary, Cont'd.

Dummies:	Driver #169	Passenger #168
Type:	Hybrid III 50th percentile adult male	Hybrid III 50th percentile adult male
Location:	Left front	Right front
Restraint:	Airbag	Airbag
Number of data channels:	15	15
Front seat data:		
Seat track failure:	None	None
Seat back failure:	None	None
Visible dummy contact points:		
Head:	Airbag,	Airbag,
	Rearview mirror,	Sunvisor,
	Passenger dummy	Driver dummy
Chest:	Airbag	Airbag
Abdomen:	None	None
Left knee:	Instrument panel	Instrument panel
Right knee:	Instrument panel	Instrument panel

Table 2 Test Vehicle Information

Vehicle year/make/ model/body style:	1999/Dodge/Intrepid/Sedan
Color:	Cranberry
VIN:	2B3HD46R8XH562840
Engine data:	
Placement:	Transverse
Cylinders:	6
Displacement:	2.7 liters
Transmission data:	_4_speed, ___manual, _X_automatic, ___overdrive
Final drive:	_X_fwd, ___rwd, ___4wd
Date vehicle received:	N/A
Odometer reading:	192 miles
Dealer's name and address:	Carriage Towne Chrysler Plymouth 2815 Stratford Rd. Delaware, OH 43015-2647

Accessories:

Power steering	Yes	Automatic transmission	Yes
Power brakes	Yes	Automatic speed control	Yes
Power seats	No	Tilting steering wheel	Yes
Power windows	Yes	Telescoping steering wheel	No
Tinted glass	No	Air conditioning	Yes
Radio	Yes	Anti-skid brake	Yes
Clock	Yes	Rear window defroster	Yes
Power door locks	Yes	Other:	None

Certification data from vehicle's label:

Vehicle manufactured by:		Chrysler Corporation
Date of manufacture:		09/98
VIN:		2B3HD46R8XH562840
GVWR:		4551 lb.
GAWR:	Front:	2595 lb.
	Rear:	2031 lb.

Table 2 Test Vehicle Information, Cont'd.

Size of tires on vehicle:	P205/70R15
Spare tire:	Space saver
Type of front seats:	Bucket

Tire & capacity data from vehicle's label:

Recommended tire size:	P205/70R15
Recommended cold tire pressure:	
Front:	32 psi
Rear:	32 psi
Designated Seating Capacity:	
Front	2
Rear	3
Total	5
Vehicle Cargo Weight:	1015 lb.

Test vehicle attitudes:

Delivered attitude:	LF:	732 mm	RF:	730 mm	LR:	745 mm	RR:	745 mm
Fully loaded attitude:	LF:	722 mm	RF:	719 mm	LR:	691 mm	RR:	690 mm
Pre-test attitude:	LF:	715 mm	RF:	720 mm	LR:	705 mm	RR:	703 mm
Post-test attitude:	LF:	700 mm	RF:	N/A	LR:	692 mm	RR:	721 mm

Table 2 Test Vehicle Information, Cont'd.

Weight of test vehicle as received (with maximum fluids):

Right front	493.1 kg	Right rear	272.6 kg
Left front	486.7 kg	Left rear	284.4 kg
Total front weight	979.8 kg	(63.8% of total vehicle weight)	
Total rear weight	557.0 kg	(36.2% of total vehicle weight)	
Total delivered weight	1536.8 kg		

Calculation of test vehicle's target test weight:

RCLW = Rated Cargo and Luggage Weight

UDW = Unloaded Delivered Weight (1536.8 kg)

DSC[1] = Designated Seating Capacity (5)

RCLW = 52.2 kg

Target test weight = UDW + RCLW + (2 Hybrid III Dummies x 75.7 kg per dummy)

Target test weight = 1536.8 + 52.2 + 151.4 = 1740.4 kg

Weight of test vehicle with required dummies:

Right front	513.9 kg	Right rear	353.8 kg
Left front	528.4 kg	Left rear	339.7 kg
Total front weight	1042.3 kg	(60.0% of total vehicle weight)	
Total rear weight	693.5 kg	(40.0% of total vehicle weight)	
Total test weight	1735.8 kg	(0.26% under target test weight)	

Weight of ballast secured in vehicle: N/A

Components removed to meet target test weight: Rear seat back, seat belts, rear tail lights

CG rearward of front wheel centerline: 1151 mm

Vehicle Wheelbase: 2880 mm

[1] From tire load label.

Table 3 Post-Impact Data

Test number:	990511-2
Test date:	05/11/99
Test time:	2353
Test type:	30° right angled barrier impact
Impact angle:	30°
Ambient temperature at impact area:	22° C
Temperature in occupant compartment:	21° C

Impact velocity:

Primary:	48.2 kph
Secondary	48.2 kph
Specified range:	47.5 to 49.1 kph

Distance from vehicle to barrier:

Entering velocity trap:	356 mm
Exiting velocity trap:	51 mm

Test vehicle static crush:

Overall length of test vehicle:

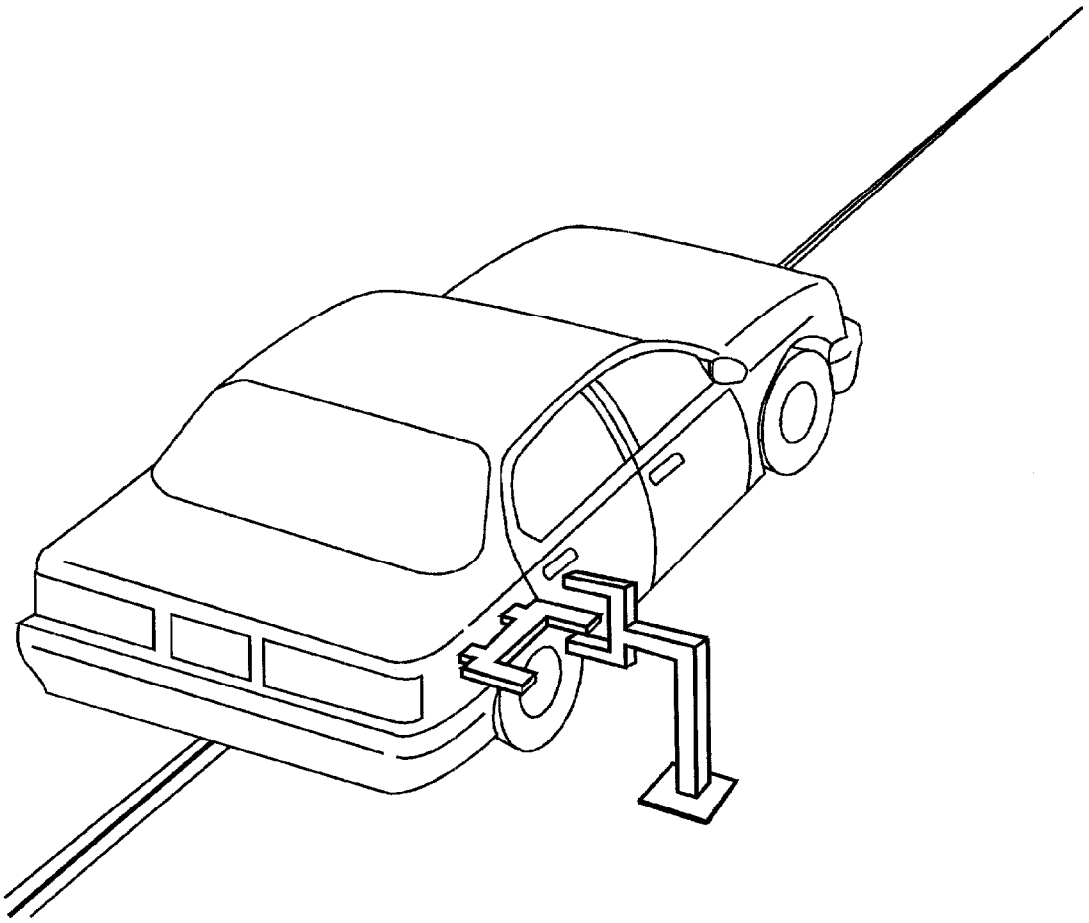
Pre-test:	L:	5000 mm	C: 5215 mm	R:	5005 mm
Post-test:	L:	4965 mm	C: 5000 mm	R:	4627 mm
Total crush:	L:	35 mm	C 215 mm	R:	378 mm
Average crush:	209 mm				

Test vehicle rebound from right angled barrier:

Distance from test vehicle to barrier:

Post-test:	L:	N/A	C: N/A	R:	N/A
Average rebound:	N/A				

Figure 1 Impact Velocity Measurement System

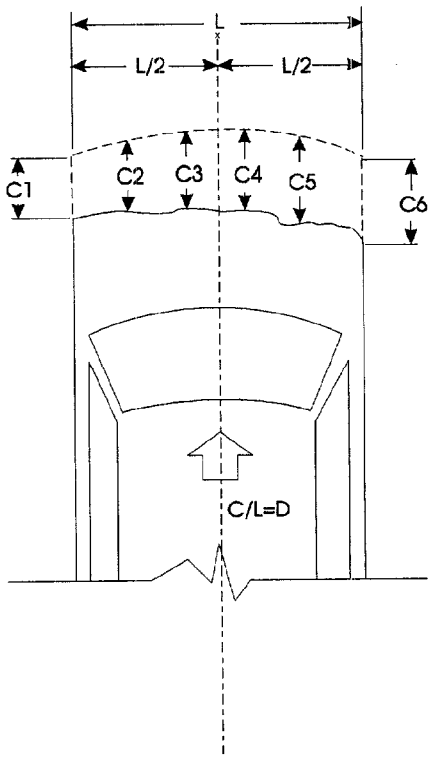


The final vane clears the final emitter/receiver pair 51 millimeters before impact.

The vanes have 305-millimeter spacing.

Figure 2 Accident Investigation Division Data for 30 mph Right Angled Barrier Impact

Test date:	05/11/99
Vehicle year/make/ model/body style:	1999/Dodge/Intrepid/Sedan
VIN:	2B3HD46R8XH562840
Build date:	09/98
Test weight:	1735.8 kg
Vehicle wheelbase:	2880 mm
Maximum width:	1905 mm
Front overhang:	1075 mm



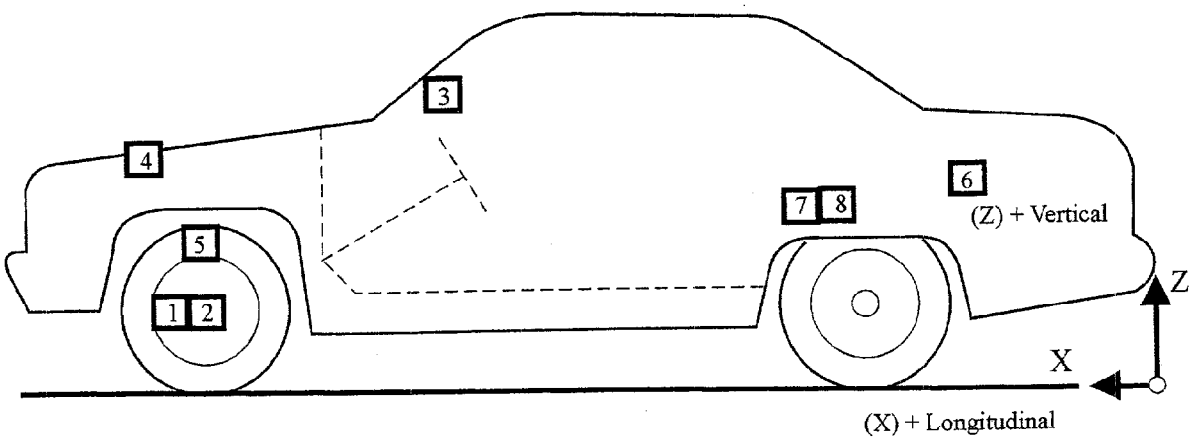
Collision Deformation Classification (CDC) Code: 12FDEW2

Crush depth measurements:	C1: 35 mm
	C2: 95 mm
	C3: 162 mm
	C4: 251 mm
	C5: 334 mm
	C6: 378 mm

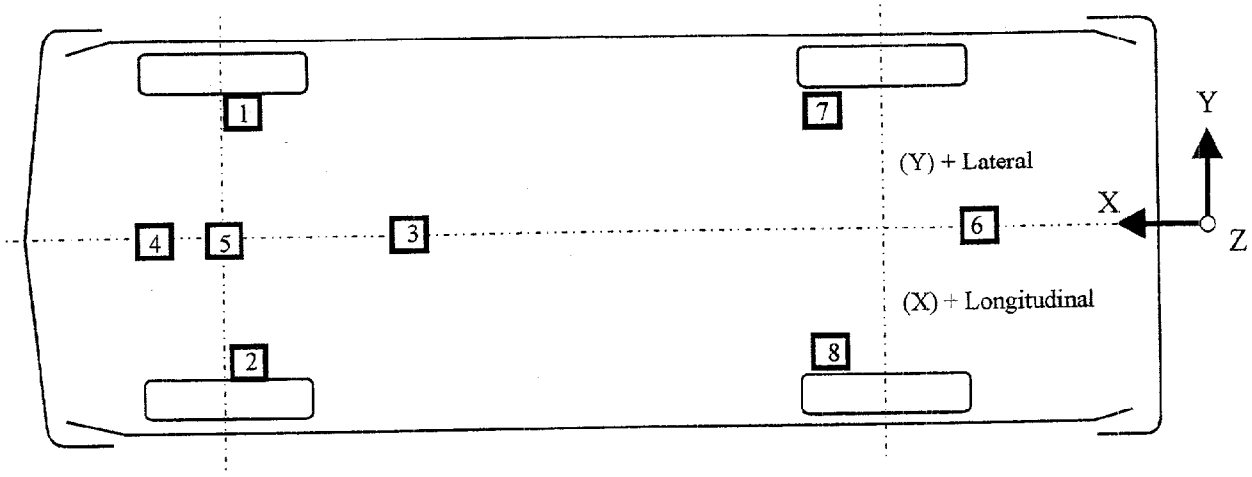
Midpoint of damage: D: Vehicle Longitudinal Centerline

Length of damaged region: L: 1525 mm

Figure 3 Vehicle Accelerometer Placement



Side View



Bottom View

Table 4 Vehicle Accelerometer Locations and Data Summary

TEST NUMBER: 990511-2 No. LOCATION		X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
1 LEFT BRAKE CALIPER	PRE	4215 mm	690 mm	300 mm				
	POST	4274 mm	695 mm	273 mm				
LONGITUDINAL					10.5 g	@ 69.0 ms	48.8 g	@ 51.7 ms
2 RIGHT BRAKE CALIPER	PRE	4215 mm	-690 mm	317 mm				
	POST	4192 mm	-720 mm	NA				
LONGITUDINAL[1]					84.0 g	@ 52.0 ms	48.6 g	@ 48.5 ms
3 INSTRUMENT PANEL CENTER	PRE	3455 mm	0 mm	880 mm				
	POST	3433 mm	0 mm	882 mm				
LONGITUDINAL					50.1 g	@ 99.1 ms	65.0 g	@ 103.4 ms
4 ENGINE TOP	PRE	4729 mm	-7 mm	740 mm				
	POST	4604 mm	90 mm	728 mm				
LONGITUDINAL					24.8 g	@ 56.8 ms	55.5 g	@ 41.4 ms
5 ENGINE BOTTOM	PRE	4505 mm	10 mm	180 mm				
	POST	4380 mm	90 mm	138 mm				
LONGITUDINAL					27.6 g	@ 60.9 ms	52.9 g	@ 41.7 ms

Table 4 Vehicle Accelerometer Locations and Data Summary, Cont'd.

TEST NUMBER: 990511-2 No. LOCATION		X	Y	Z	POSITIVE DIRECTION		NEGATIVE DIRECTION	
6 REAR VEHICLE CENTERLINE VERTICAL	PRE	245 mm	0 mm	655 mm				
	POST	245 mm	0 mm	655 mm	5.6 g	@ 88.6 ms	7.8 g	@ 50.4 ms
7 LEFT REAR SEAT LONGITUDINAL	PRE	2143 mm	645 mm	364 mm				
	POST	2127 mm	645 mm	360 mm	1.8 g	@ 113.4 ms	31.6 g	@ 67.4 ms
8 RIGHT REAR SEAT LONGITUDINAL	PRE	2139 mm	-651 mm	360 mm				
	POST	2144 mm	-651 mm	370 mm	0.6 g	@ 117.0 ms	23.9 g	@ 71.1 ms

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

[1]See DATA ACQUISITION EXPLANATIONS

Section 3.0

FMVSS 208 Data

Table 5 Dummy Injury Criteria

Maximum Acceleration

	Head				Chest		
	X	Y	Z	R	X	Y	Z
Driver	-28.3 g	-26.8 g	27.0 g	35.0 g	-34.6 g	-15.2 g	7.0 g
Passenger	-45.5 g	-55.7 g	-18.3 g	73.0 g	-33.6 g	-13.0 g	13.6 g

Maximum Femur Compressive Force

	Left Femur	Right Femur
Driver	5183 N	5624 N
Passenger	5180 N	4702 N

15-Millisecond Head Injury Criteria[1]

	HIC	Time t_1	Time t_2
Driver	53	91.2 ms	106.2 ms
Passenger	234	84.0 ms	99.0 ms

36-Millisecond Head Injury Criteria[1]

	HIC	Time t_1	Time t_2
Driver	102	77.9 ms	113.9 ms
Passenger	267	81.0 ms	102.1 ms

Chest Maximum Resultant Acceleration[2]

	Acceleration	Time t_1	Time t_2
Driver	34.4 g	89.4 ms	92.5 ms
Passenger	34.7 g	101.4 ms	104.4 ms

Maximum Chest Deflection

Driver	23.5 mm
Passenger	6.0 mm

[1] As defined in FMVSS No. 208
[2] Defined as equal to or exceeding 0.003 sec. duration

Dummy Kinematic Summary

Driver Dummy

Upon impact, the driver dummy translated forward on the seat impacting both knees into the instrument panel. The dummy's head and chest impacted the airbag. The dummy translated to the right as its torso rotated to the left and the dummy's head impacted the rearview mirror. As the dummy rotated, the dummy's left arm hit the seat back. As the dummy translated to the right, it impacted the passenger airbag. The driver dummy continued to translate to the right and contacted the passenger dummy's head. The driver dummy came to rest lying sideways across the lower body of the passenger dummy.

Right Front Passenger Dummy

Upon impact, the passenger dummy translated forward on the seat impacting both knees into the instrument panel. As the dummy continued forward, the top of the dummy's head hit the sun visor. The dummy's head and chest then impacted the airbag. The dummy's head rotated to the left as the neck bent leftward and rearward. As the dummy rebounded back into the seat it began to lean to the left, contacting the driver dummy. The dummy came to rest leaning to the left with the driver dummy resting across its lower body.

Section 4.0

Vehicle, Occupant, and Camera Measurements

Figure 4 Pre-test and Post-test Measurement Points

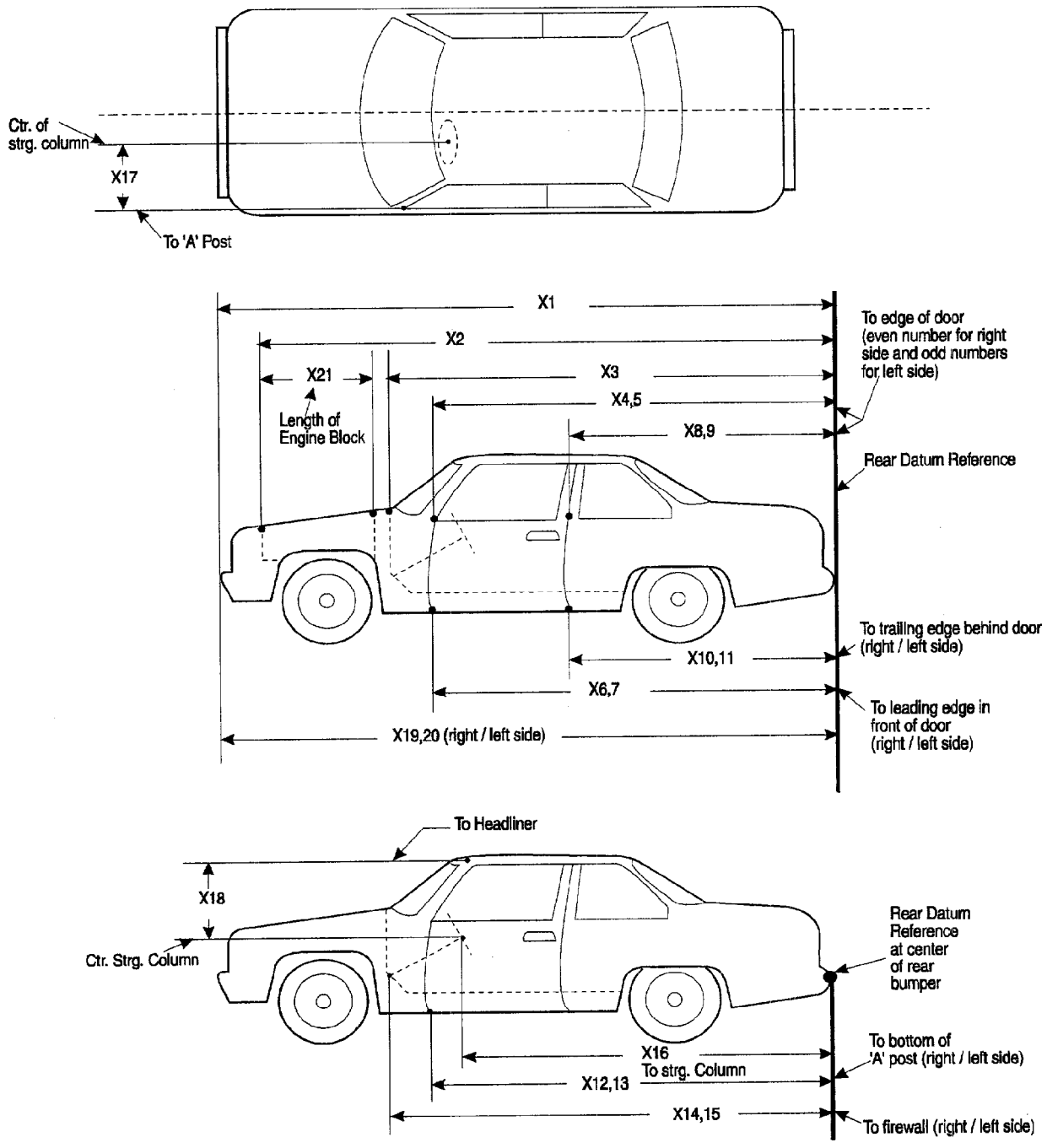


Table 6 Impacted Vehicle Measurements

Vehicle year/make/model/body style: 1999/Dodge/Intrepid/Sedan

Test Number: 990511-2

No.	Type of measurement	Pre-Test	Post-Test	Difference
X1	Total Length of Veh. at Centerline	5215	5000	215
X2	Rear Surface of Veh. to Front of Engine Block	4754	4630	124
X3	Rear Surface of Veh. to Firewall	4251	4226	25
X4	Rear Surface of Veh. to Upper Leading Edge of Right Door	3684	3680	4
X5	Rear Surface of Veh. to Upper Leading Edge of Left Door	3681	3670	11
X6	Rear Surface of Veh. to Lower Leading Edge of Right Door	3615	3610	5
X7	Rear Surface of Veh. to Lower Leading Edge of Left Door	3621	3616	5
X8	Rear Surface of Veh. to Upper Trailing Edge of Right Door	2598	2590	8
X9	Rear Surface of Veh. to Upper Trailing Edge of Left Door	2594	2585	9
X10	Rear Surface of Veh. to Lower Trailing Edge of Right Door	2588	2582	6
X11	Rear Surface of Veh. to Lower Trailing Edge of Left Door	2588	2582	6
X12	Rear Surface of Veh. to Bottom of " A " Post on Right Side	3638	3636	2
X13	Rear Surface of Veh. to Bottom of " A " Post on Left Side	3648	3640	8
X14	Rear Surface of Veh. to Firewall--Right Side	4133	4227	-94
X15	Rear Surface of Vehicle to Firewall --Left Side	4123	4247	-124
X16	Rear Surface of Veh. to Steering Wheel Center	3152	3154	-2
X17	Center of Steering Column to " A " Post	293	337	-44
X18	Center of Steering Column to Headliner	380	365	15
X19	Rear Surface of Veh. to Right Side of Front Bumper	5005	4627	378
X20	Rear Surface of Veh. to Left Side of Front Bumper	5000	4965	35
X21	Length of Engine Block	545	545	0

Figure 5 Vehicle Target Locations

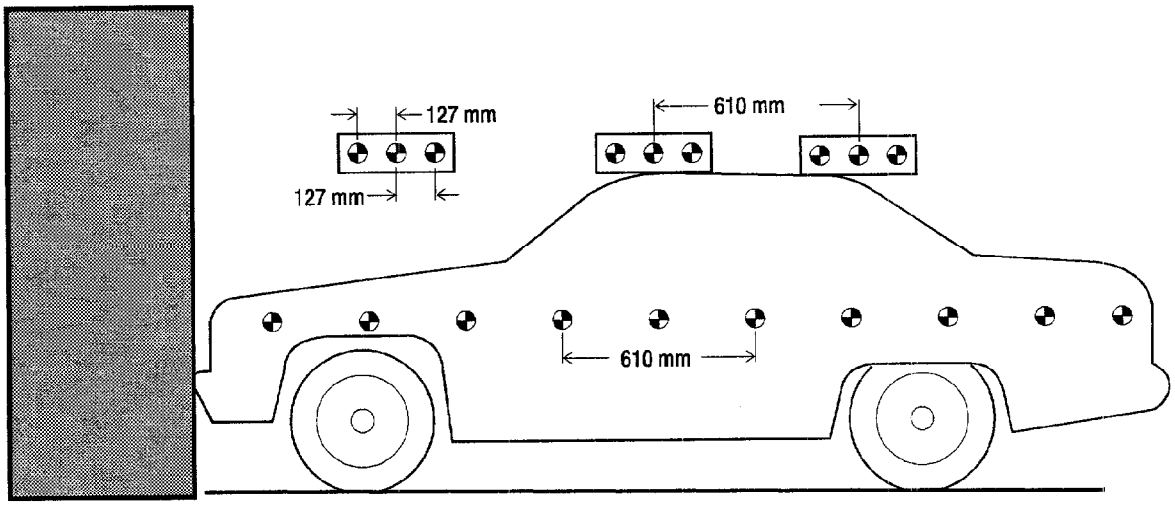


Figure 6 Dummy Measurement Locations for Front Seat Occupants

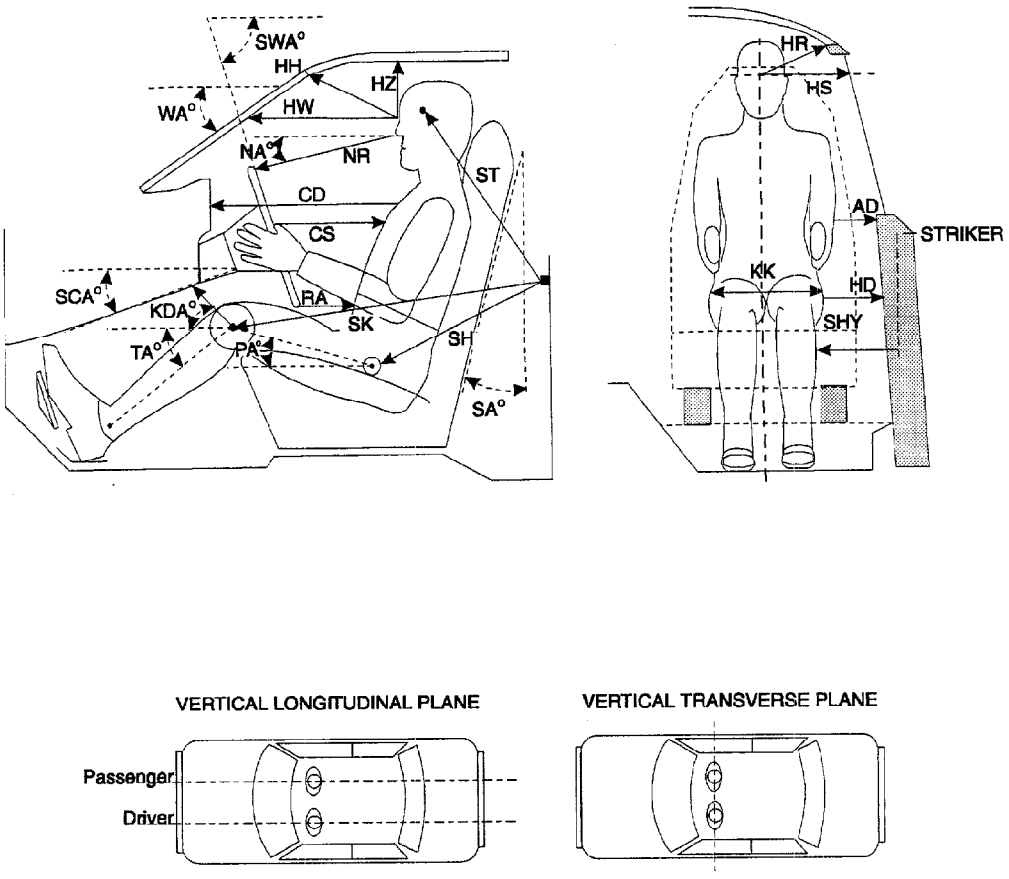


Table 7 Dummy Measurement Data For Front Seat Occupants

Designation	Type of Measurement	Driver (Serial #169)	Passenger (Serial #168)
WA	Windshield angle	21.7°	21.7°
SWA	Steering wheel angle	69.4°	N/A
SCA	Steering column angle	20.6°	N/A
SA	Seat back angle	24.0°	24.0°
HZ	Head to roof	177 mm	165 mm
HH	Head to header	353 mm	341 mm
HW	Head to windshield	640 mm	583 mm
HR	Head to side header	189 mm	187 mm
NR	Nose to rim	381 mm	N/A
NA	Nose to rim angle	12.2°	N/A
CD	Chest to dash	525 mm	573 mm
CS	Steering wheel to chest	296 mm	N/A
RA	Rim to abdomen	198 mm	N/A
KDL	Left knee to dash	157 mm	190 mm
KDR	Right knee to dash	156 mm	171 mm
KDA	Outboard knee to dash angle	19.4°	17.7°
PA	Pelvic angle	23.4°	23.5°
TA	Tibial angle	40.7°	39.4°
KK	Knee to knee	330 mm	270 mm
ST[1]	Striker to head	545 mm	537 mm
	Striker to head angle	-83.3°	-81.6°
SK	Striker to knee	572 mm	545 mm
	Striker to knee angle	-2.0°	-0.5°
SH[1]	Striker to H-point	230 mm	205 mm
	Striker to H-point angle	34.3°	37.7°
SHY	Striker to H-point (Y dir.)	287 mm	268 mm
HS	Head to side window	305 mm	316 mm
HD	H-point to door	211 mm	210 mm
AD	Arm to door	115 mm	127 mm

The seat back angle (SA°) is measured relative to vertical, all other angles are measured relative to horizontal.

[1] A negative angle indicates the measurement point was above the striker.

Figure 7 Camera Positions

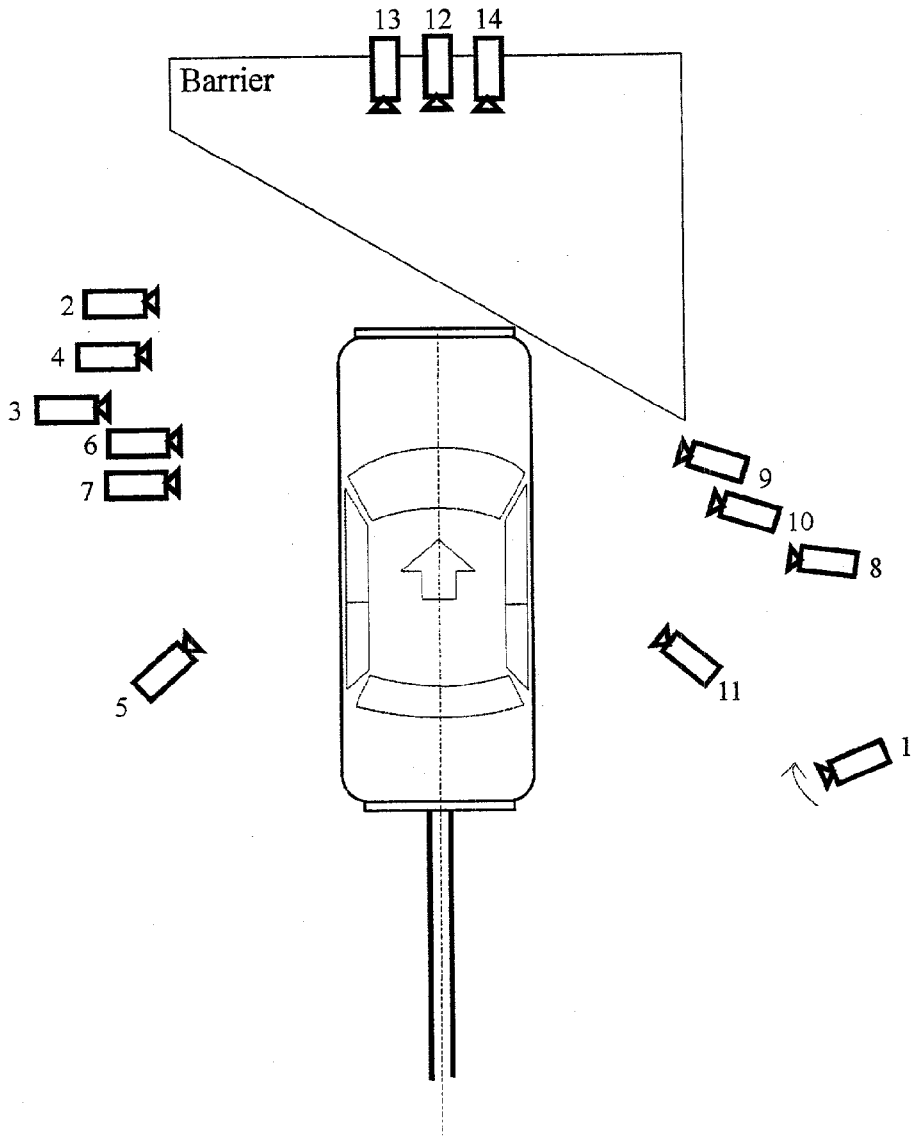


Table 8 Motion Picture Camera Locations

Vehicle year/make/model/body style: 1999/Dodge/Intrepid/Sedan

Test number: 990511-2

Camera Number	View	Camera Positions[1] X	Y	Z	Camera Angle[2]	Film Plane to Head Target	Camera Lens	Film Speed
1	Real-time panning	NA	NA	NA	NA	NA	16 mm	24 frames/s
2	Left vehicle crush	3556 mm	9296 mm	762 mm	NA	NA	13 mm	1002 frames/s
3	Left windshield intrusion	2794 mm	7772 mm	1067 mm	NA	NA	50 mm	1005 frames/s
4	Driver kinematics	5385 mm	1778 mm	1930 mm	NA	NA	25 mm	N/A[3]
5	Driver kinematics	3099 mm	8839 mm	1448 mm	NA	NA	25 mm	1005 frames/s
6	Steering column motion	5334 mm	8585 mm	2591 mm	NA	NA	25 mm	1000 frames/s
7	Steering column motion	5334 mm	8585 mm	1626 mm	NA	NA	25 mm	995 frames/s
8	Right overall	4013 mm	8534 mm	787 mm	NA	NA	13 mm	968 frames/s
9	Right windshield intrusion	2946 mm	7823 mm	1092 mm	NA	NA	50 mm	1008 frames/s
10	Passenger kinematics	5385 mm	2134 mm	1981 mm	NA	NA	25 mm	992 frames/s
11	Passenger kinematics	3251 mm	7620 mm	1473 mm	NA	NA	25 mm	1002 frames/s
12	Windshield front view	NA	NA	NA	NA	NA	13 mm	1000 frames/s
13	Driver - front view	NA	NA	NA	NA	NA	25 mm	998 frames/s
14	Passenger - front view	NA	NA	NA	NA	NA	25 mm	1002 frames/s

[1] +X: Film plane forward of barrier face
+Y: Film plane to left of monorail centerline
+Z: Film plane above ground level

[2] +Angle: Film plane angled upward from horizontal plane

[3] The camera did not run during the impact event.

Appendix A

Photographs

Figure A-1 Pre-Test Front View

Figure A-2 Post-Test Front View

Figure A-3 Pre-Test Left Side View

Figure A-4 Post-Test Left Side View

Figure A-5 Pre-Test Left Rear Three-Quarter View

Figure A-6 Post-Test Left Rear Three-Quarter View

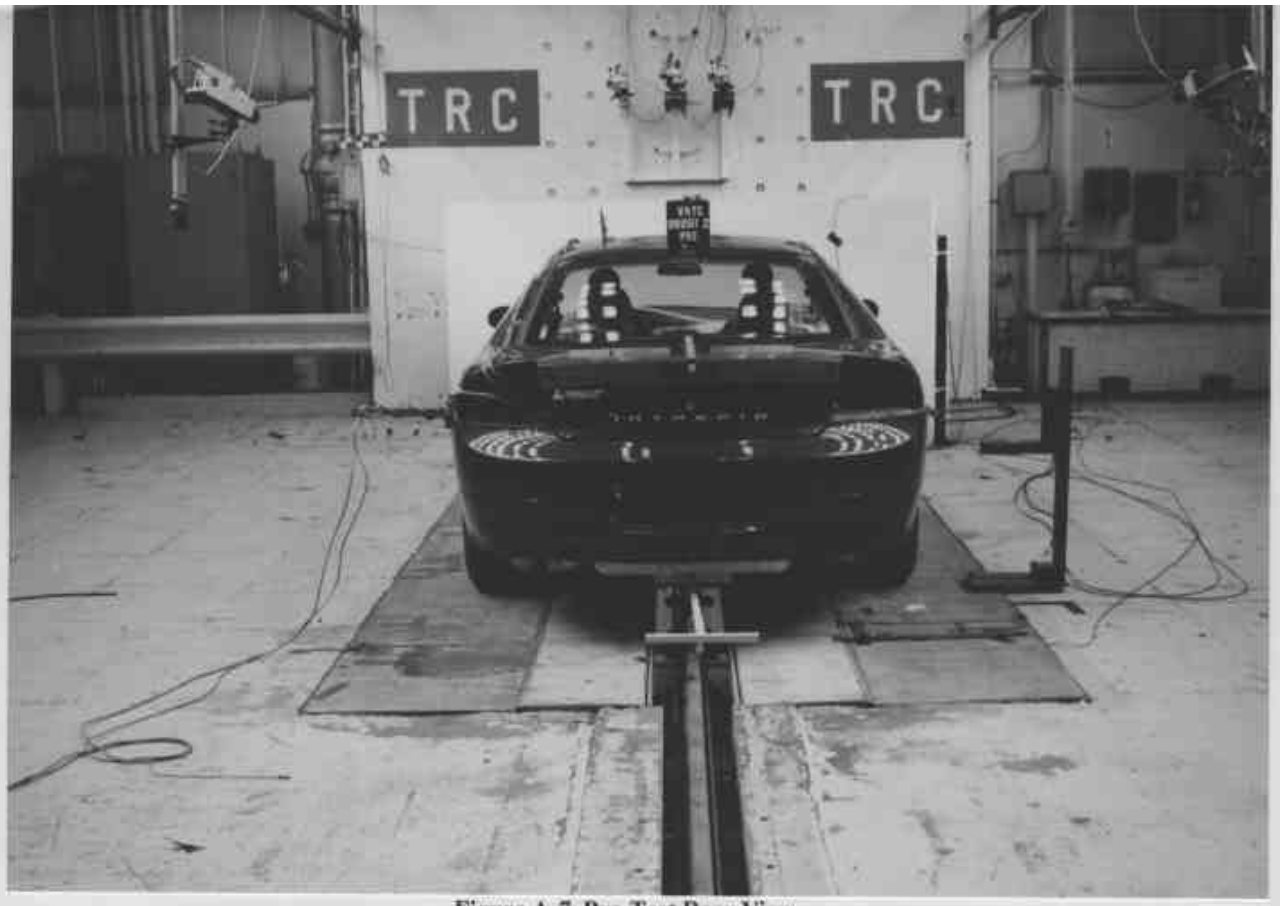


Figure A-7 Pre-Test Rear View

Figure A-8 Post-Test Rear View

Figure A-9 Pre-Test Right Side View

Figure A-10 Post-Test Right Side View

Figure A-11 Pre-Test Right Front Three-Quarter View

Figure A-12 Post-Test Right Front Three-Quarter View

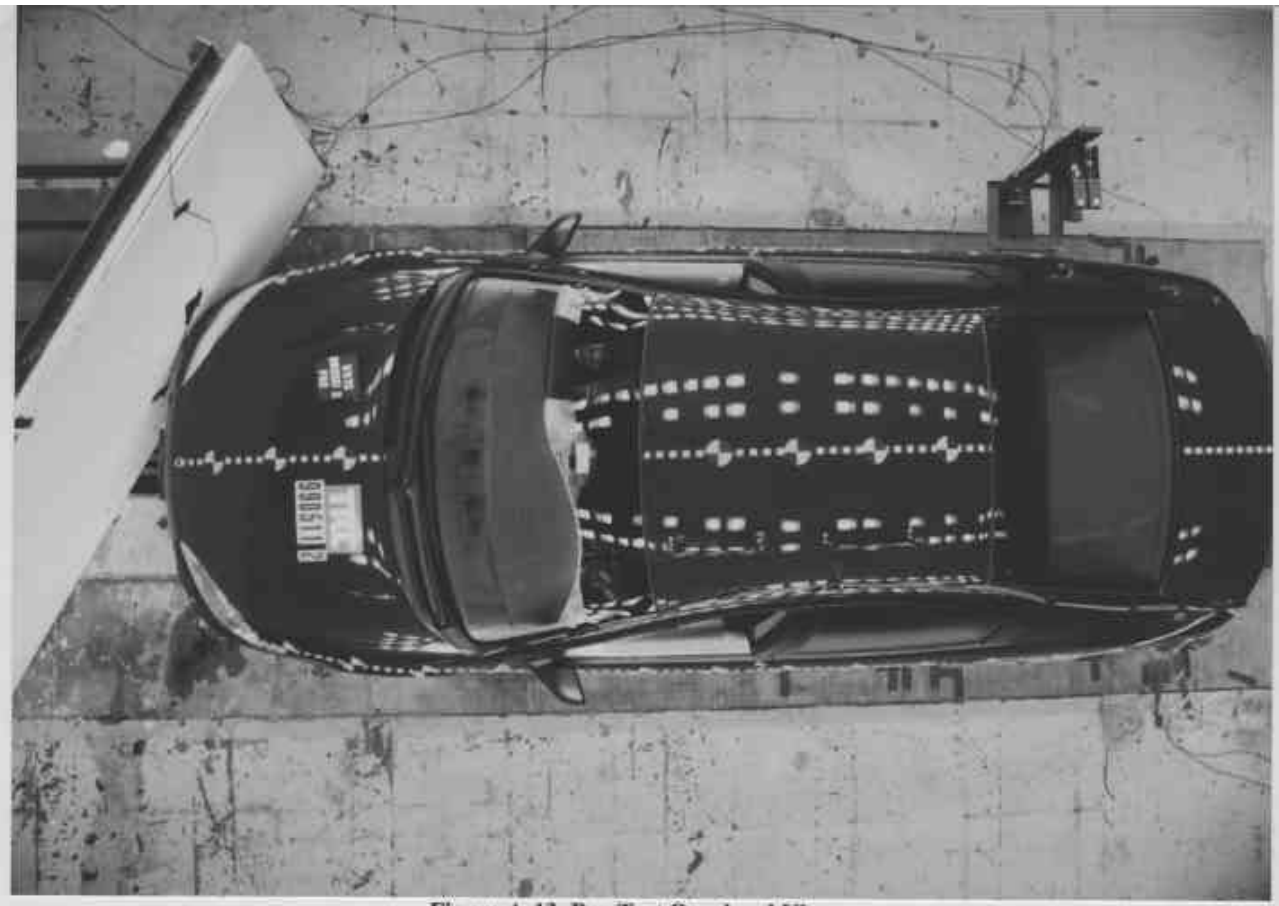


Figure A-13 Pre-Test Overhead View

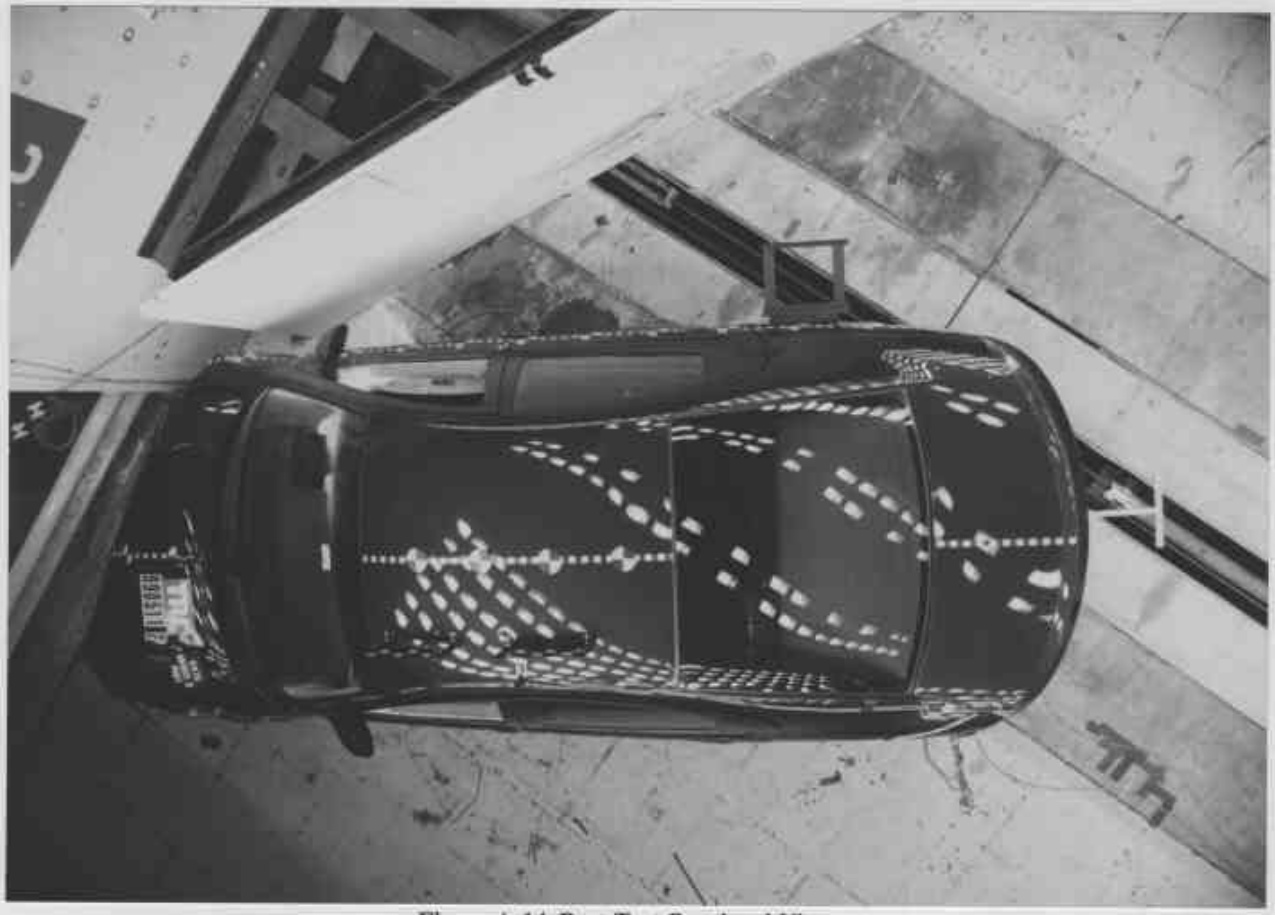


Figure A-14 Post-Test Overhead View

Figure A-15 Pre-Test Underbody - View 1

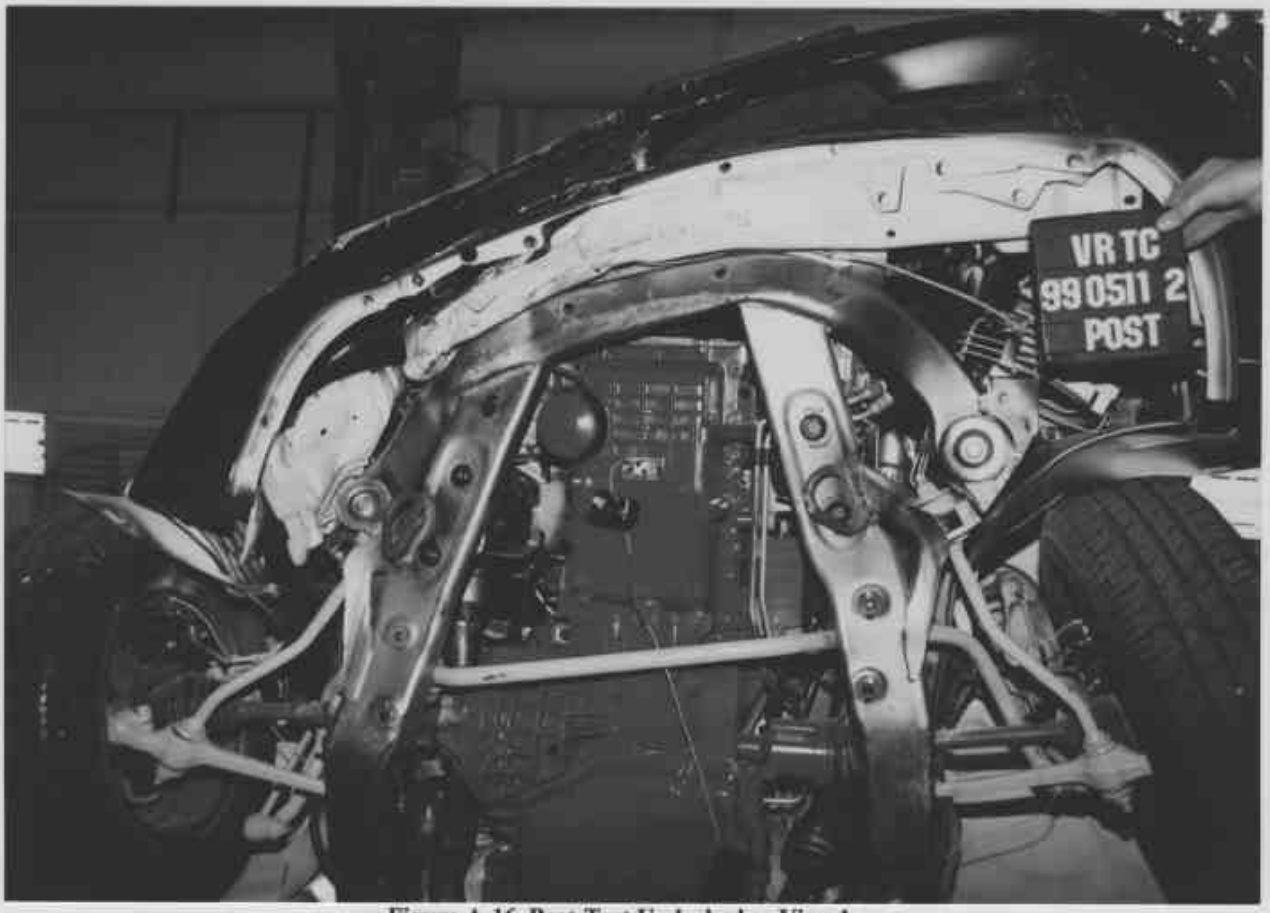


Figure A-16 Post-Test Underbody - View 1

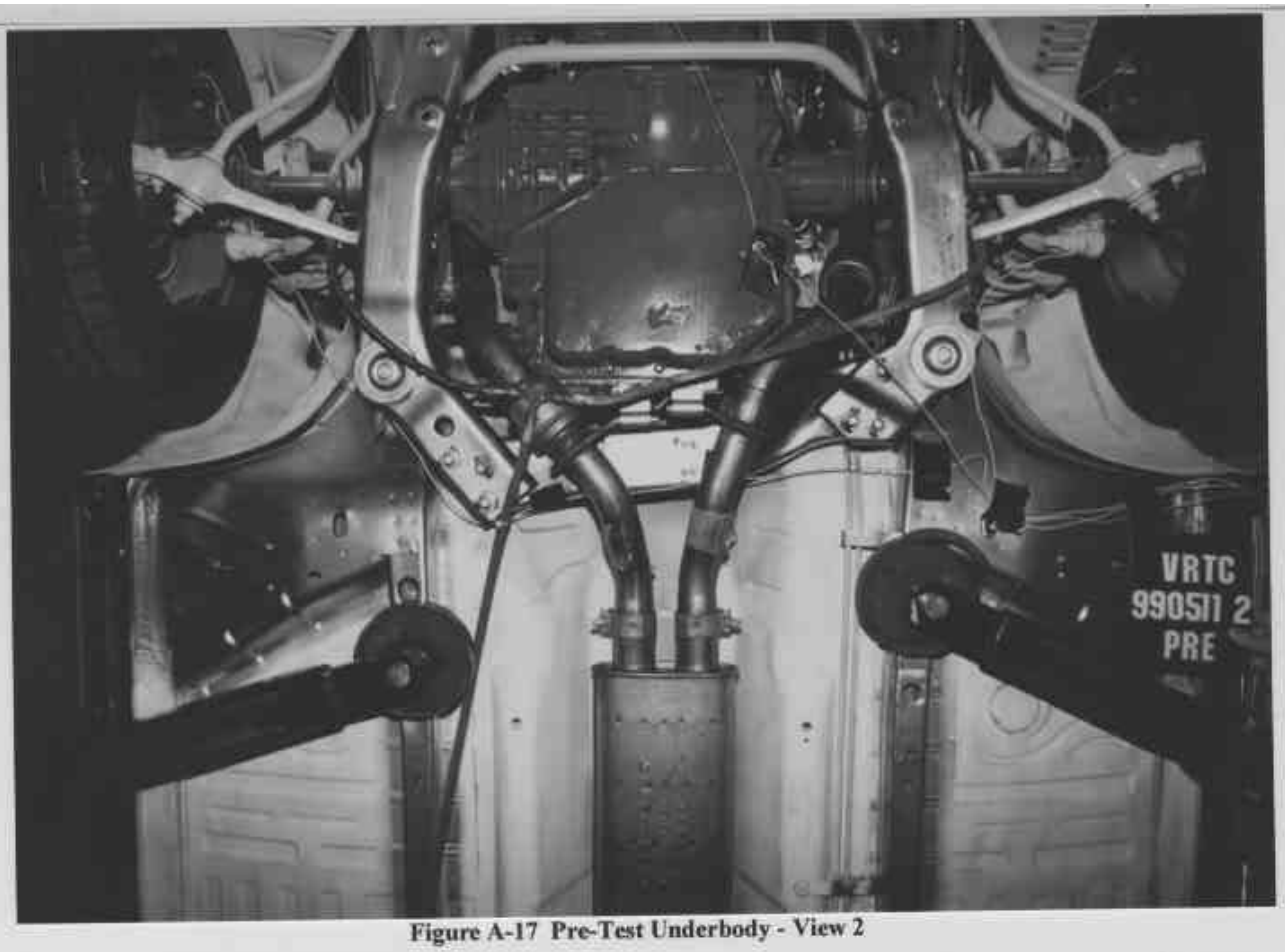


Figure A-17 Pre-Test Underbody - View 2

Figure A-18 Post-Test Underbody - View 2

Figure A-19 Pre-Test Underbody - View 3

Figure A-20 Post-Test Underbody - View 3

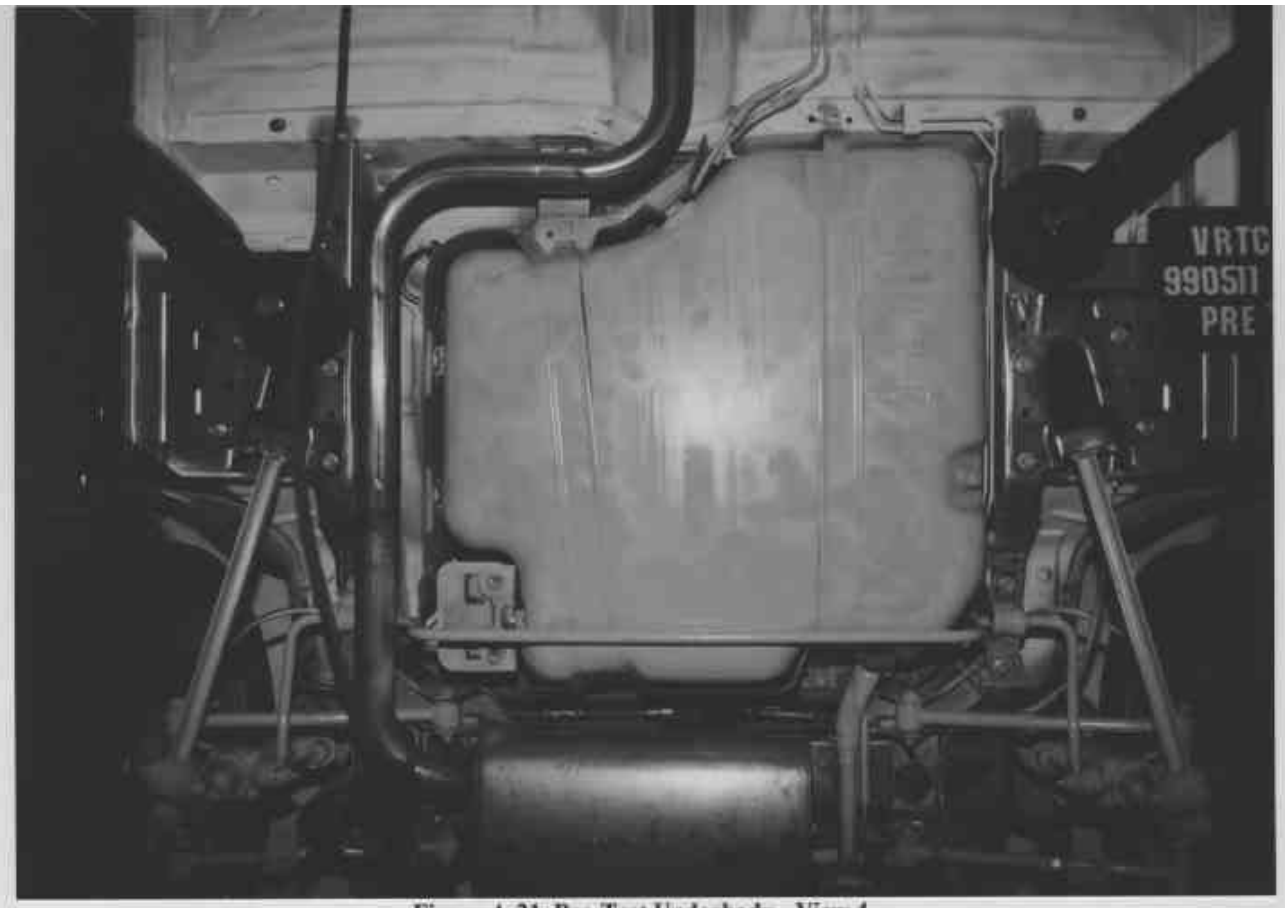


Figure A-21 Pre-Test Underbody - View 4

Figure A-22 Post-Test Underbody - View 4

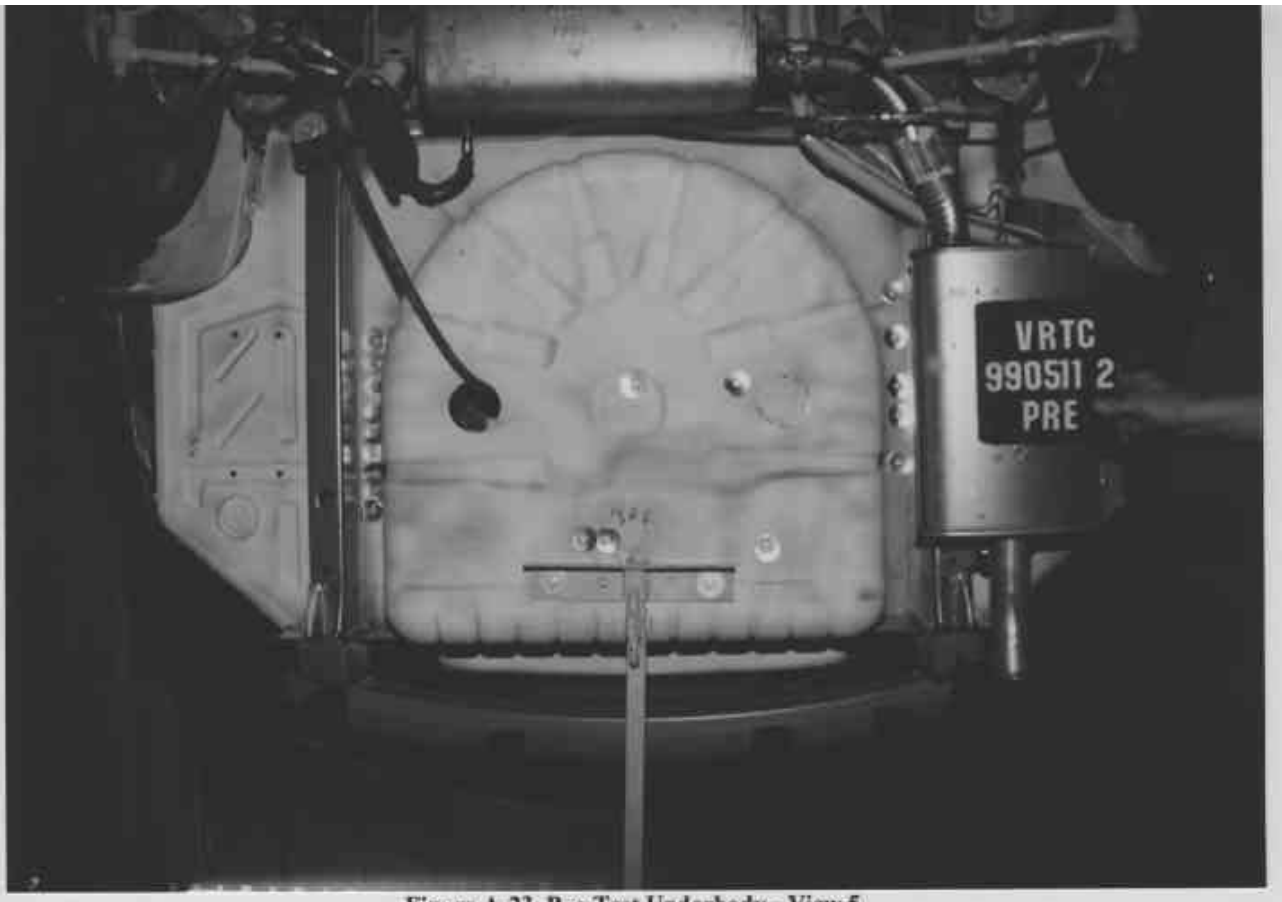


Figure A-23 Pre-Test Underbody - View 5

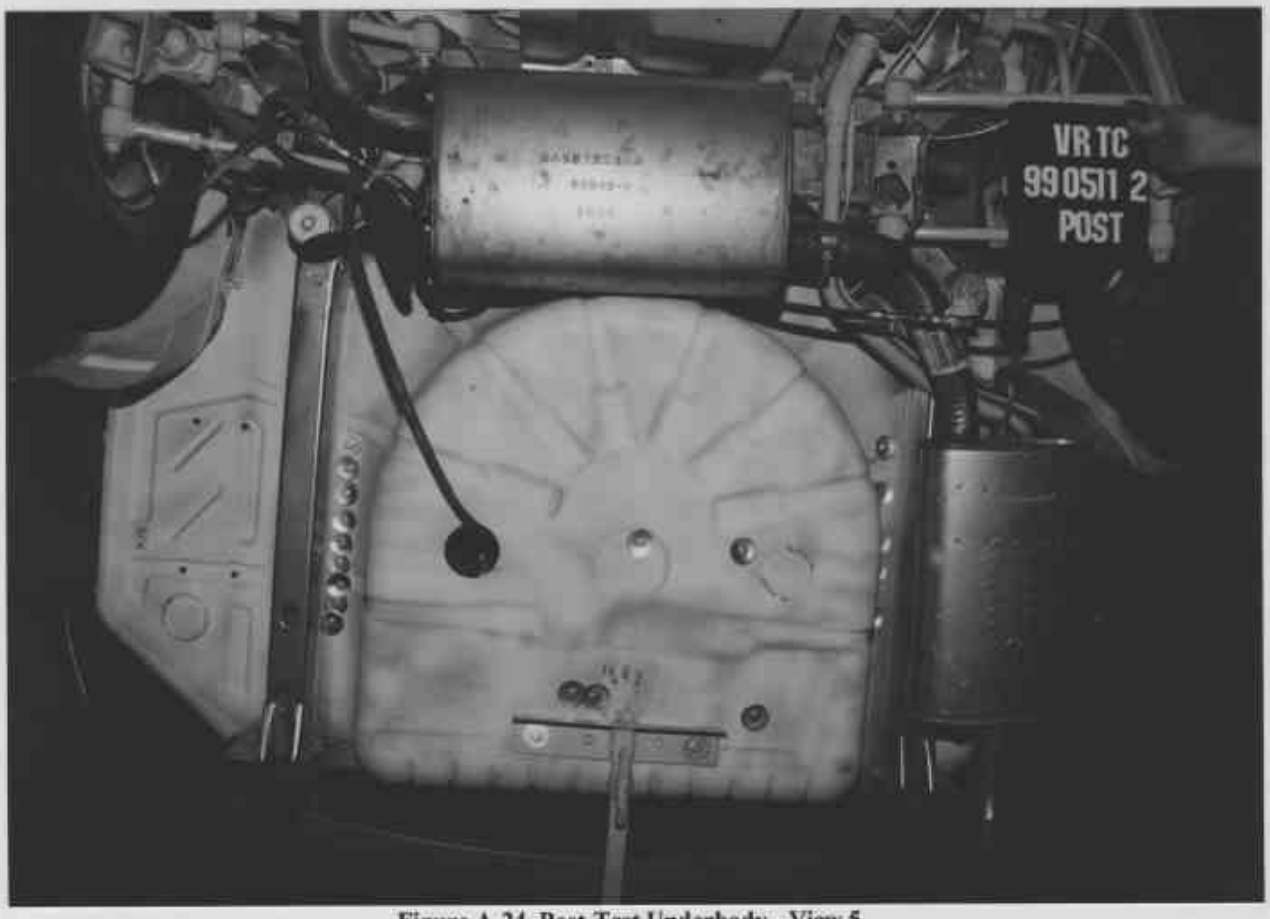


Figure A-24 Post-Test Underbody - View 5

Figure A-25 Pre-Test Engine Compartment View

Figure A-26 Post-Test Engine Compartment View

Figure A-27 Pre-Test Windshield - View 1

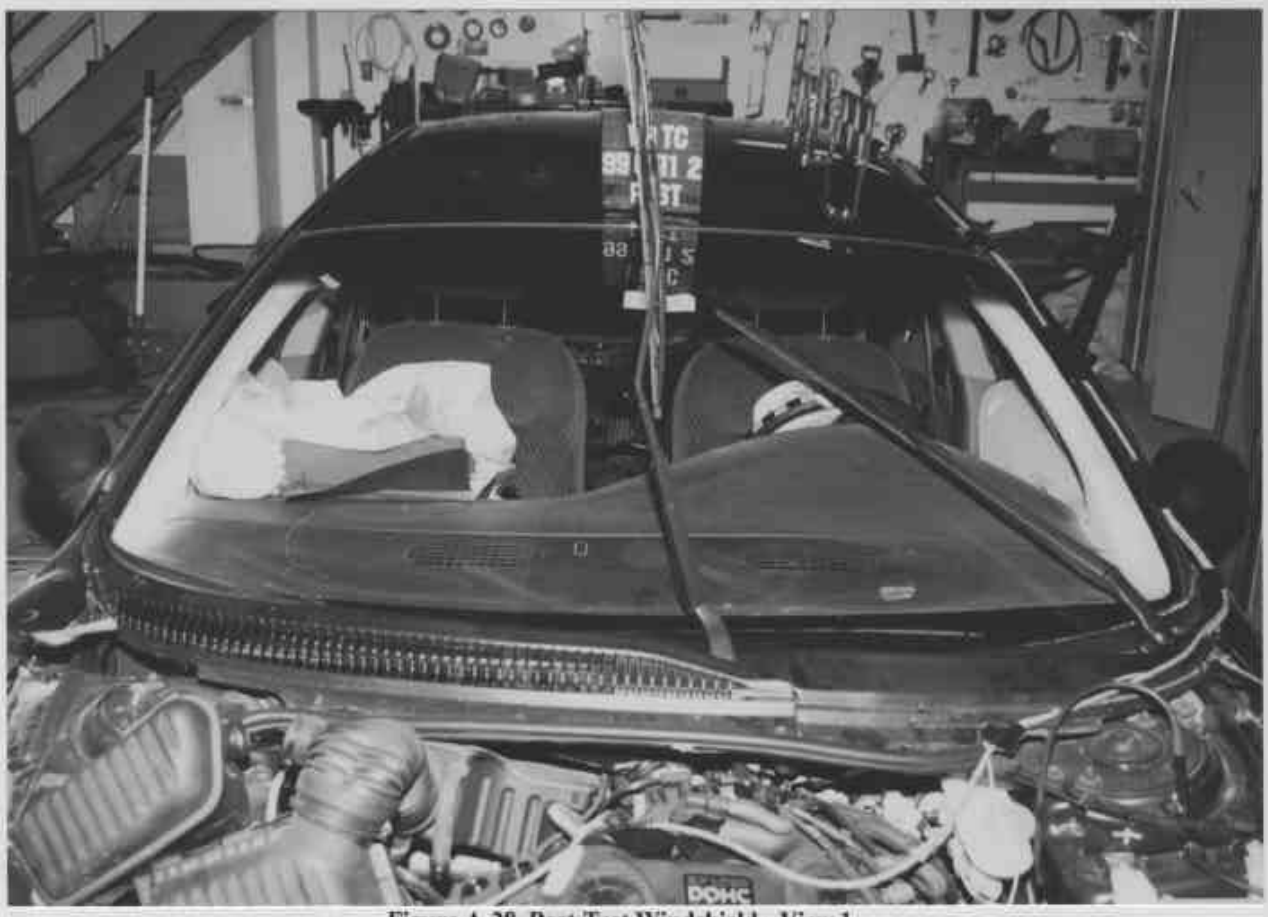


Figure A-28 Post-Test Windshield - View 1

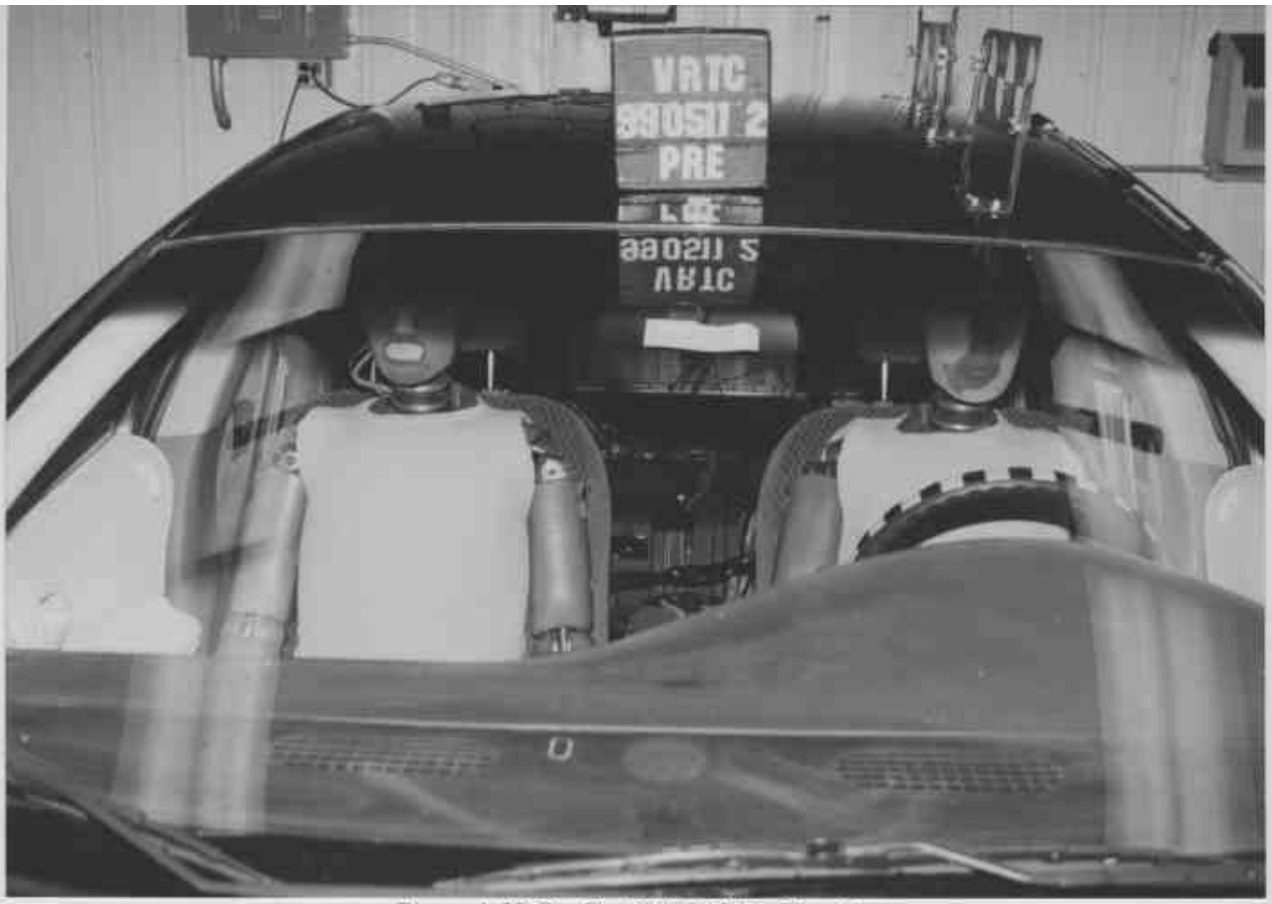


Figure A-29 Pre-Test Windshield - View 2

Figure A-30 Post-Test Windshield - View 2

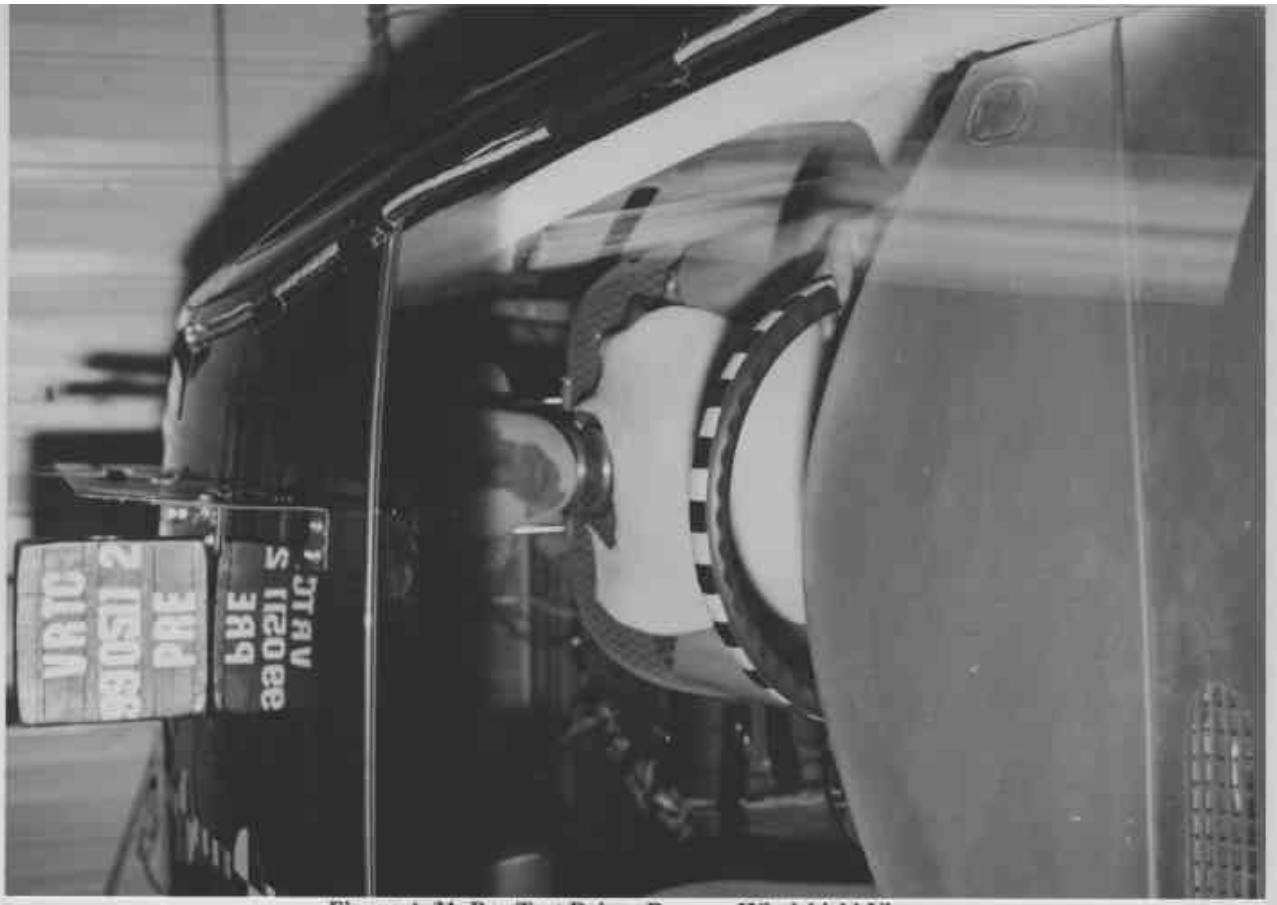


Figure A-31 Pre-Test Driver Dummy Windshield View

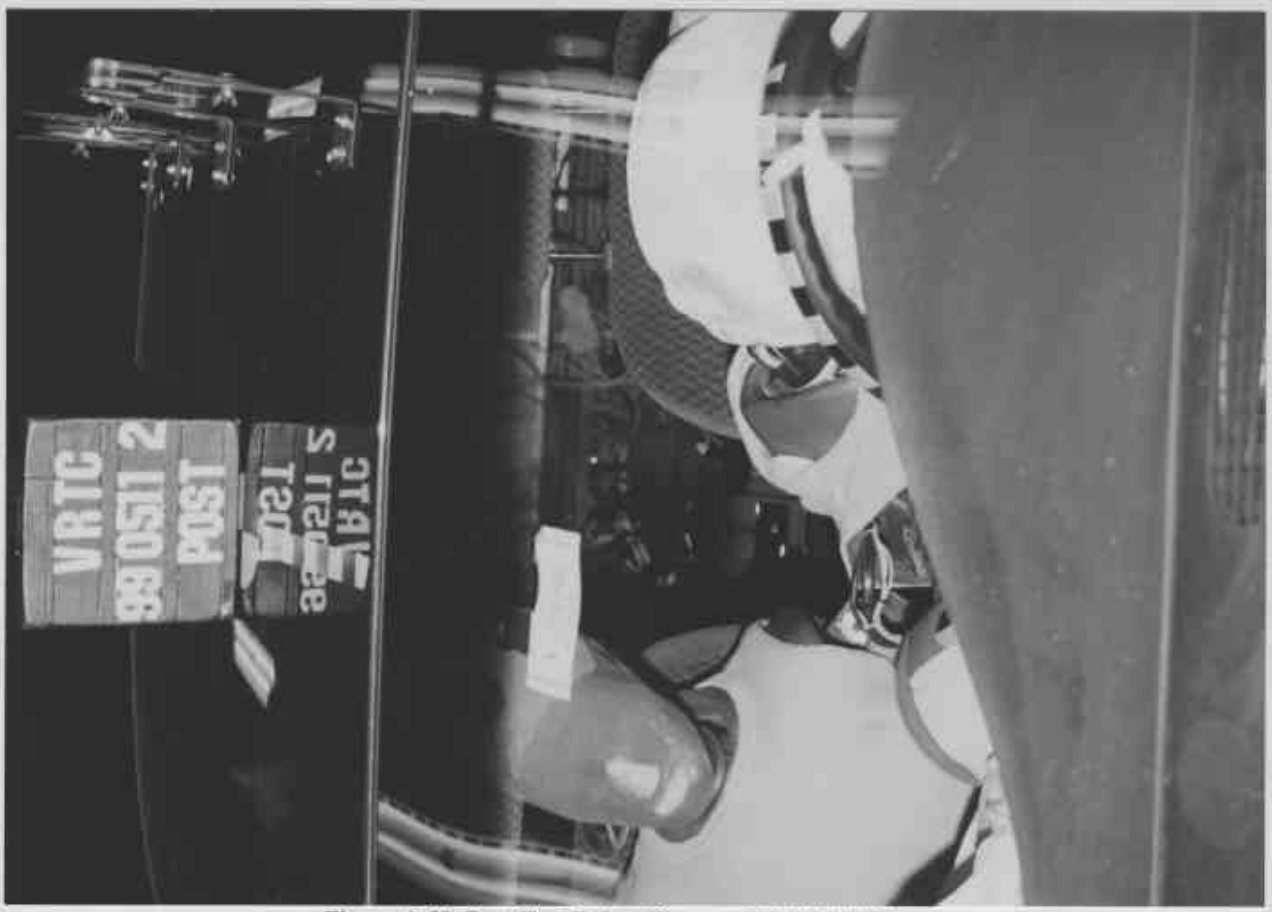


Figure A-32 Post-Test Driver Dummy Windshield View

Figure A-33 Pre-Test Passenger Dummy Windshield View

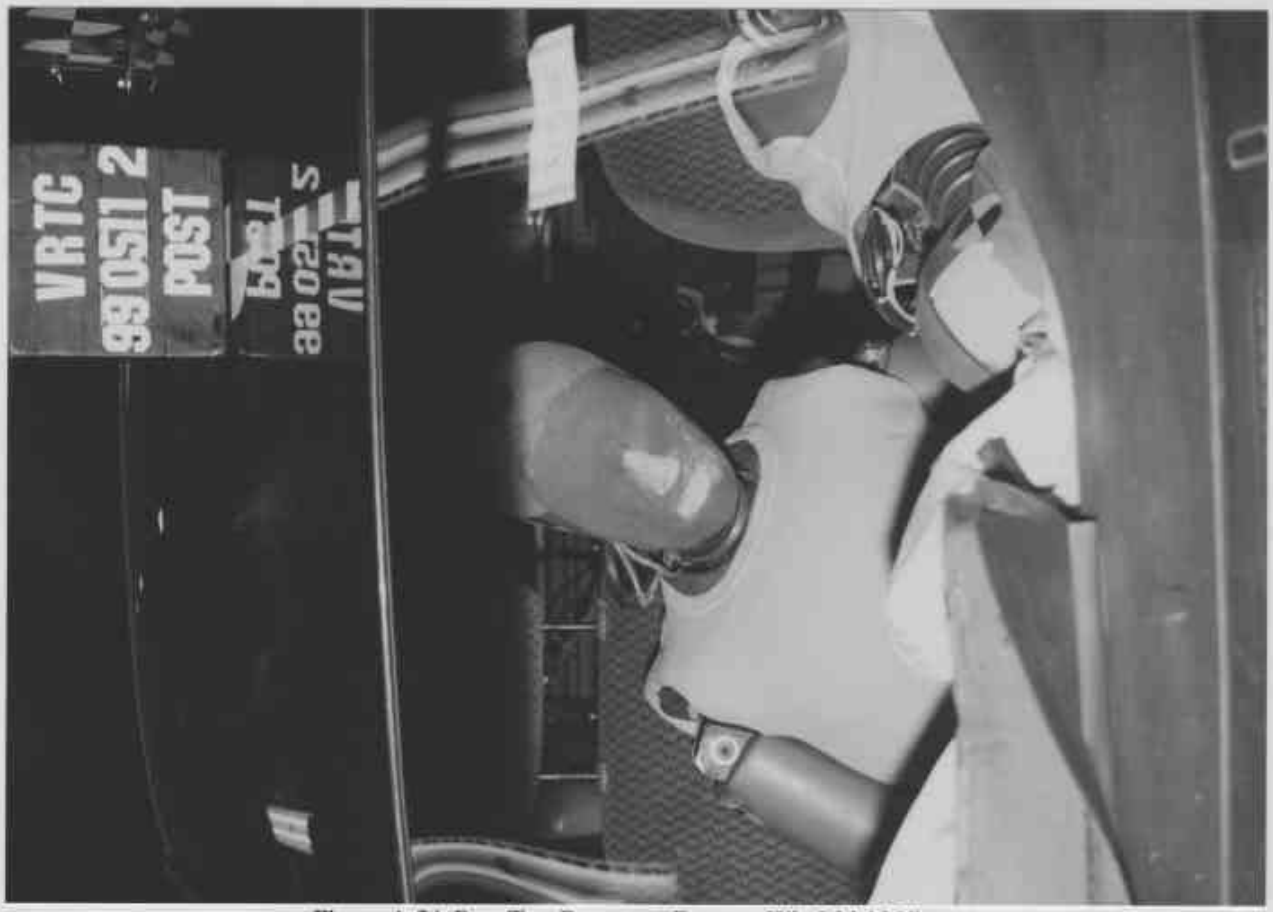


Figure A-34 Post-Test Passenger Dummy Windshield View

Figure A-35 Pre-Test Driver Dummy Position - View 1

Figure A-36 Post-Test Driver Dummy Position - View 1

Figure A-37 Pre-Test Driver Dummy Position -View 2

Figure A-38 Post-Test Driver Dummy Position - View 2

Figure A-39 Pre-Test Driver Dummy Position -View 3

Figure A-40 Post-Test Driver Dummy Position - View 3

Figure A-41 Pre-Test Passenger Dummy Position - View 1

Figure A-42 Post-Test Passenger Dummy Position - View 1

Figure A-43 Pre-Test Passenger Dummy Position - View 2

Figure A-44 Post-Test Passenger Dummy Position - View 2

Figure A-45 Pre-Test Passenger Dummy Position - View 3

Figure A-46 Post-Test Passenger Dummy Position - View 3

Figure A-47 Post-Test Driver Dummy View

Figure A-48 Post-Test Driver Dummy Head Contact - View 1

Figure A-49 Post-Test Driver Dummy Head Contact - View 2

Figure A-50 Post-Test Driver Dummy Knee Contact - View 1

Figure A-51 Post-Test Driver Dummy Knee Contact - View 2

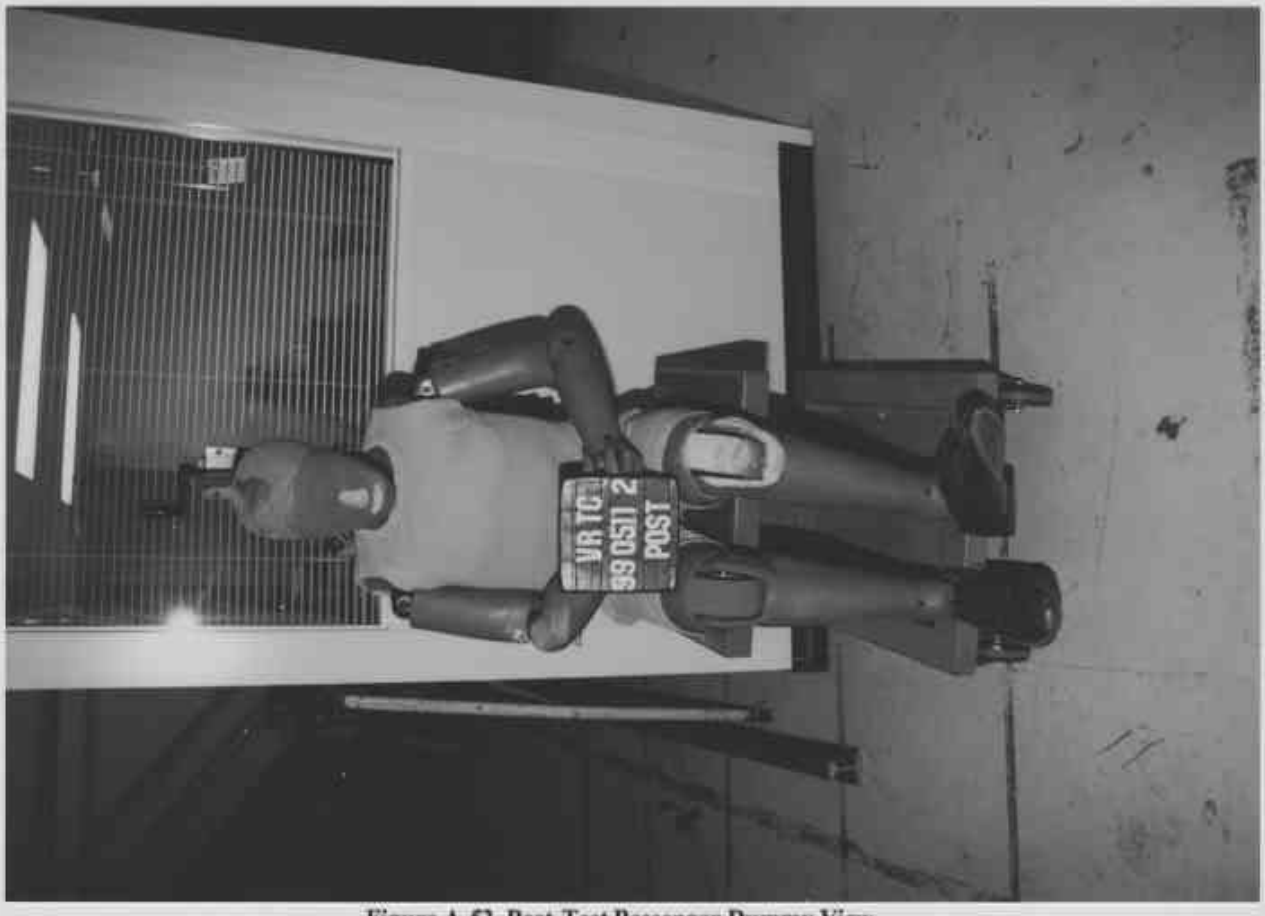


Figure A-52 Post-Test Passenger Dummy View

Figure A-53 Post-Test Passenger Dummy Head Contact - View 1

Figure A-54 Post-Test Passenger Dummy Head Contact - View 2

Figure A-55 Post-Test Passenger Dummy Knee Contact - View 1

Figure A-56 Post-Test Passenger Dummy Knee Contact - View 2

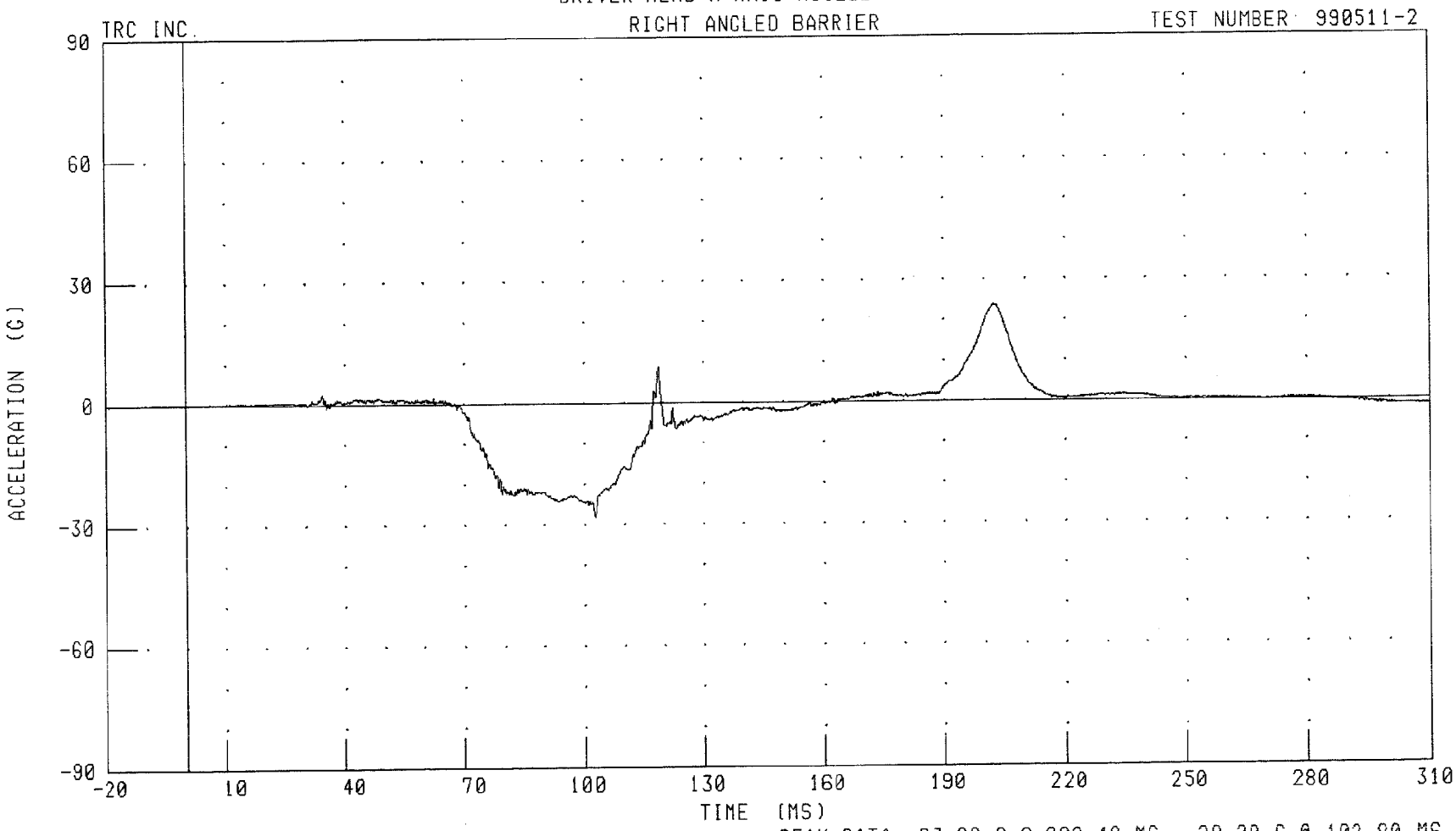
Figure A-57 Pre-Test Vehicle Certification Label View

Figure A-58 Pre-Test Vehicle Tire Information Label View

Appendix B

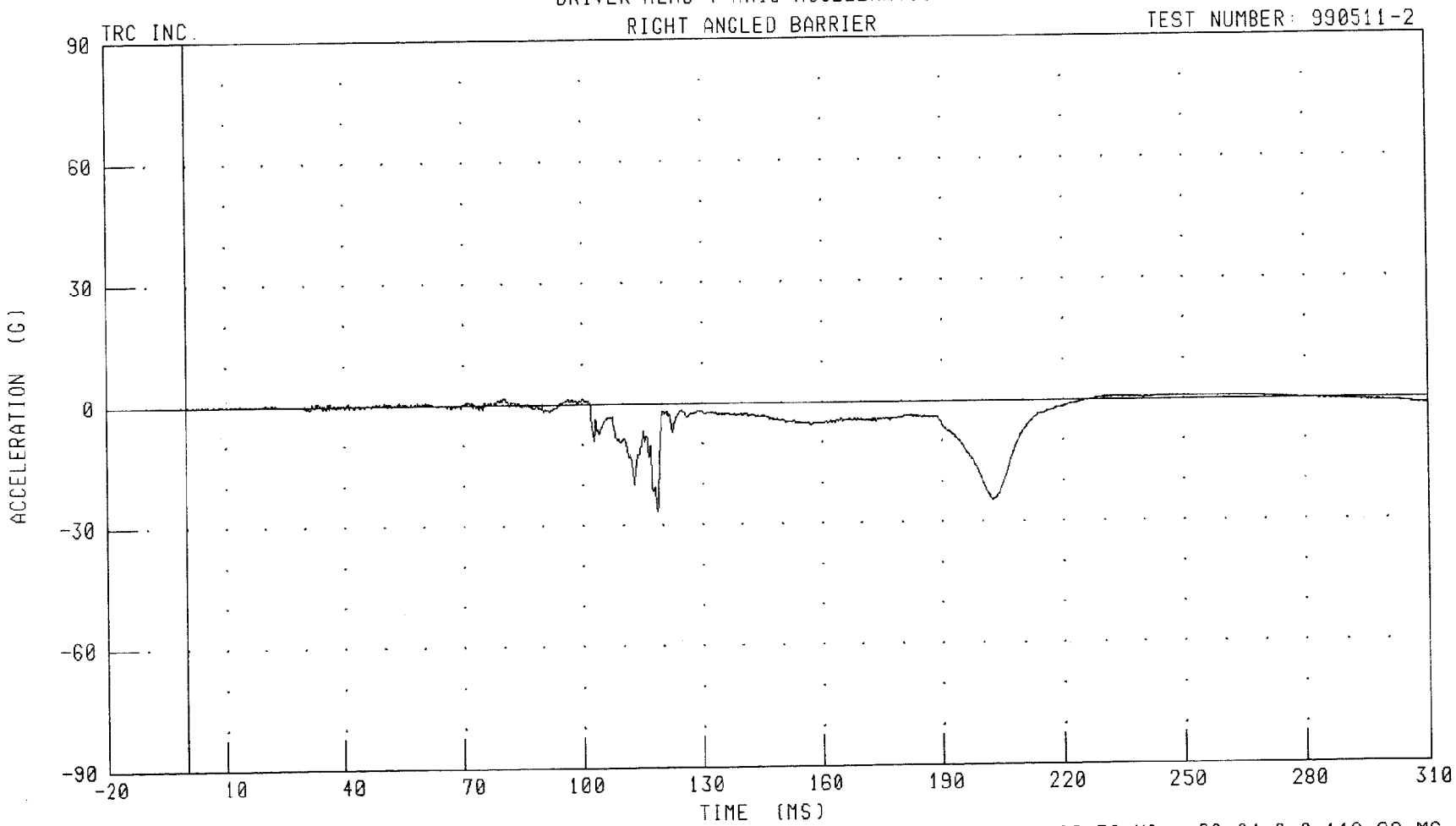
Data Plots

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER HEAD X-AXIS ACCELERATION
RIGHT ANGLED BARRIER



CHANNEL: HEDXG1 FILTER: CH. CLASS 1000
PEAK DATA: 23.80 G @ 202.48 MS; -28.29 G @ 102.80 MS

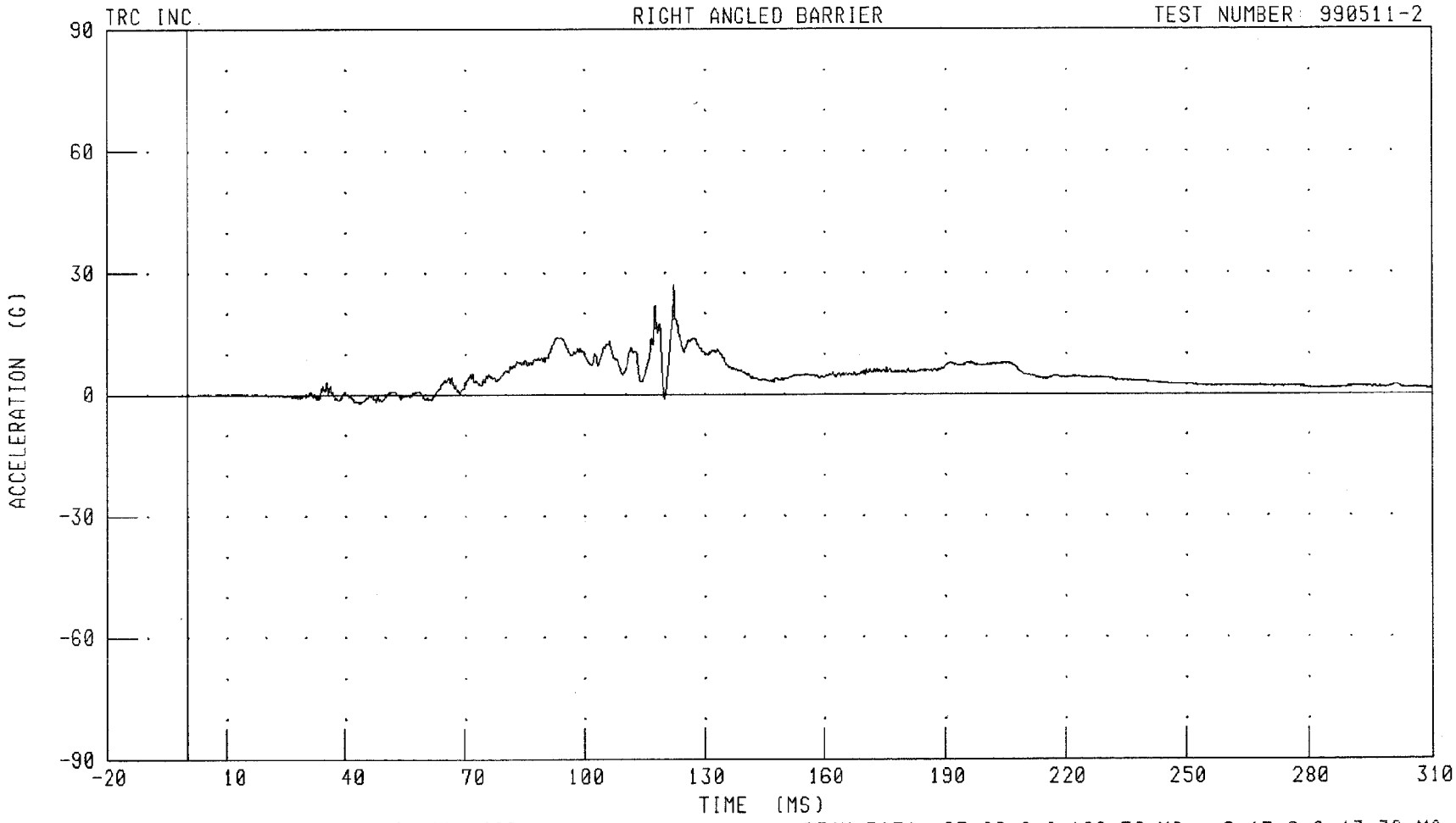
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER HEAD Y-AXIS ACCELERATION
RIGHT ANGLED BARRIER



CHANNEL: HEDYG1 FILTER: CH. CLASS 1000

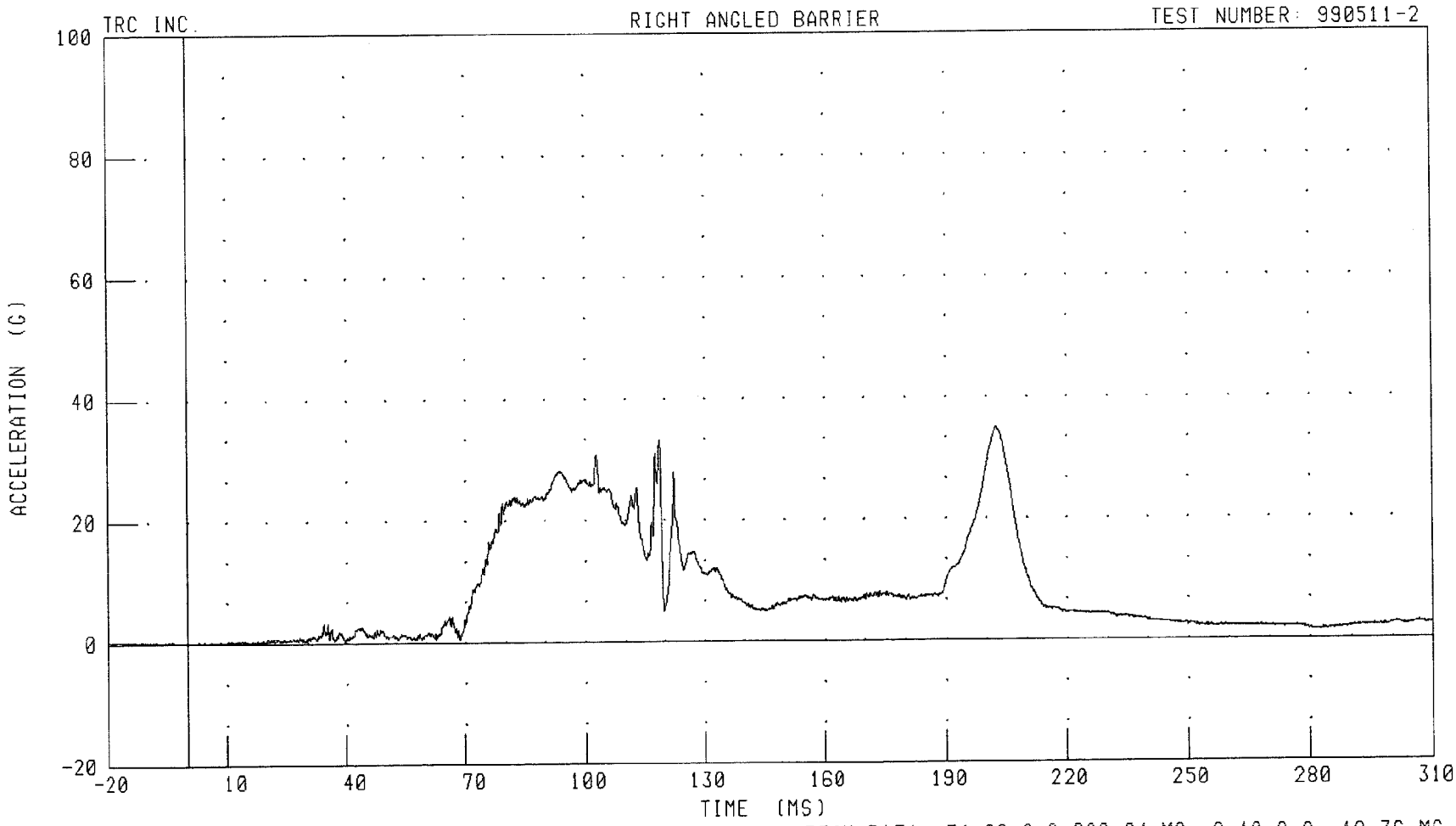
PEAK DATA: 1.73 G @ 80.72 MS; -26.84 G @ 118.88 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER HEAD Z-AXIS ACCELERATION



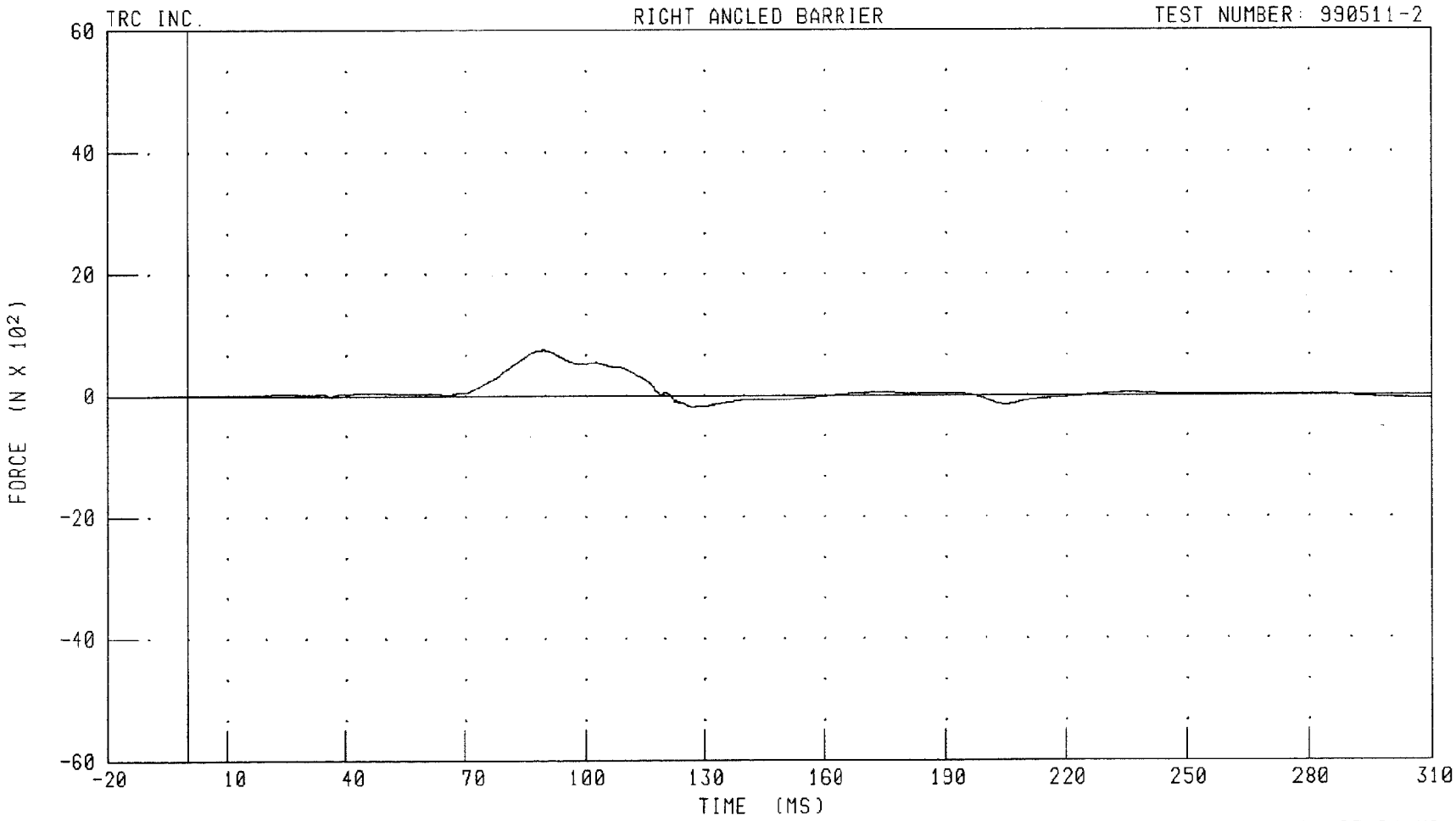
CHANNEL: HEDZG1 FILTER: CH. CLASS 1000 PEAK DATA: 27.00 G @ 122.56 MS; -2.17 G @ 43.36 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER HEAD RESULTANT ACCELERATION
RIGHT ANGLED BARRIER



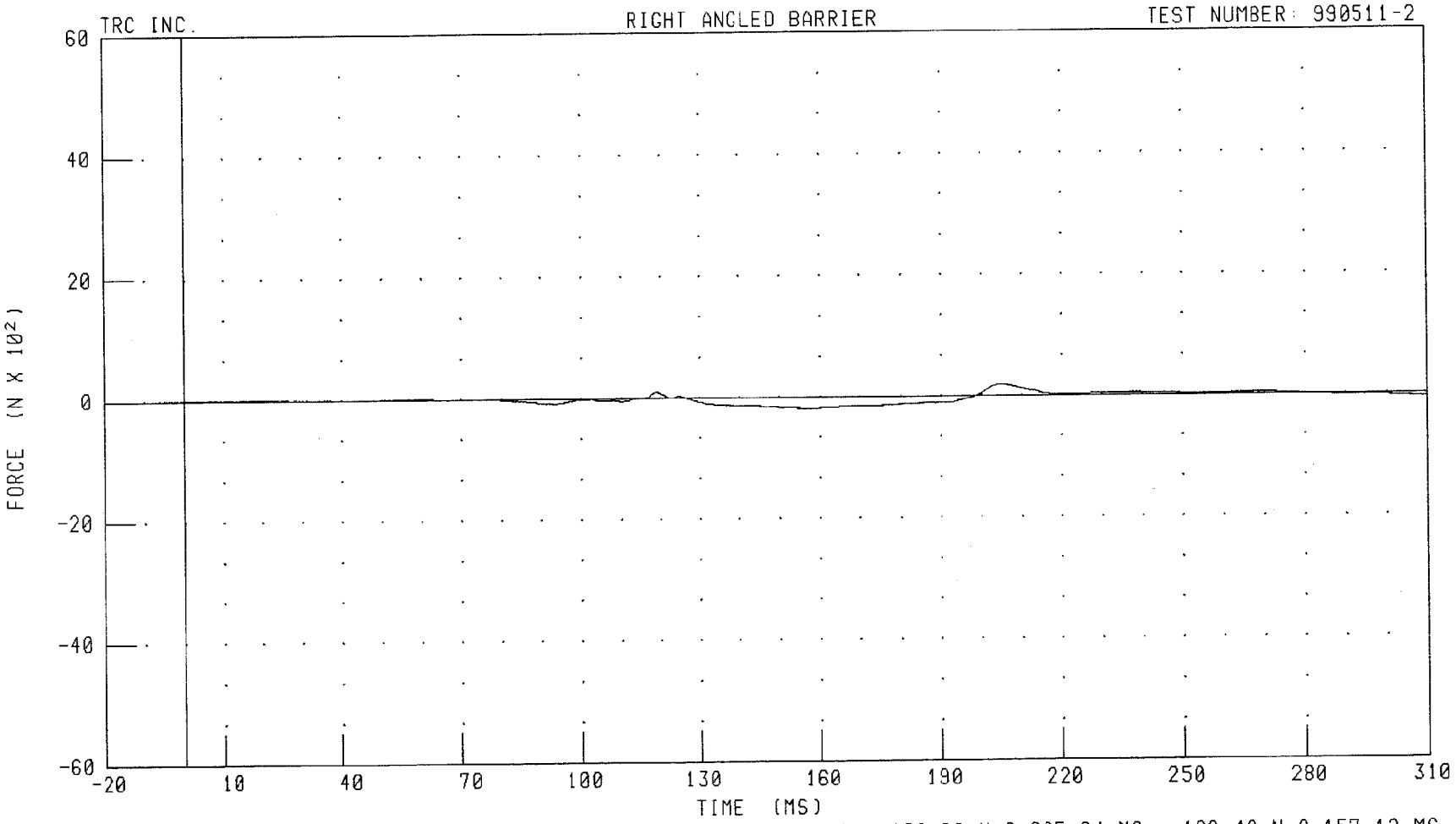
CHANNEL: HEDRG1 FILTER: CH. CLASS 1000 PEAK DATA: 34.99 G @ 202.64 MS; 0.10 G @ -19.36 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK X-AXIS SHEAR FORCE



CHANNEL: NEKXF1 FILTER: CH. CLASS 1000 PEAK DATA: 747.95 N @ 89.20 MS; -194.09 N @ 127.04 MS

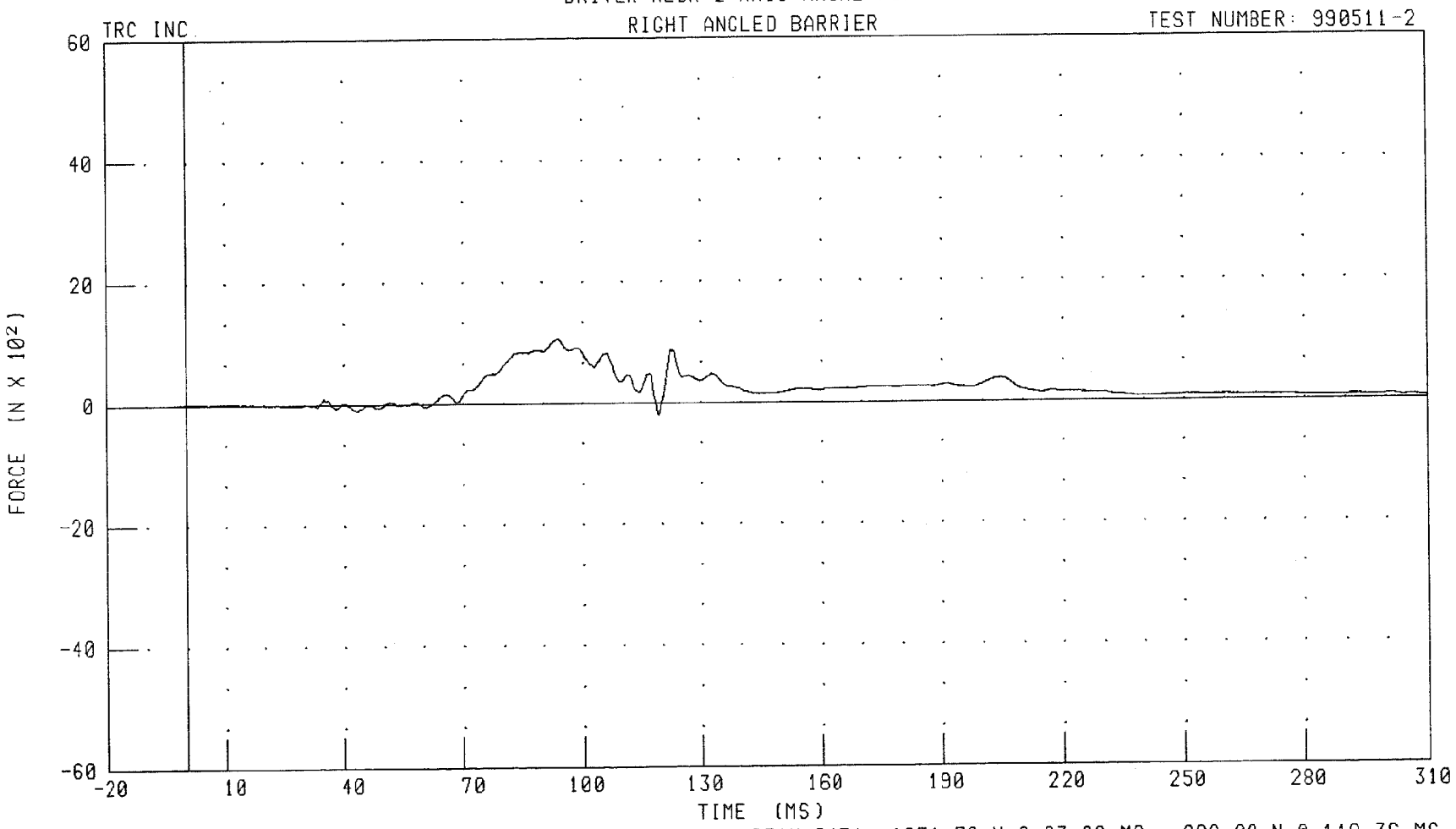
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK Y-AXIS SHEAR FORCE
RIGHT ANGLED BARRIER



CHANNEL: NEKYF1 FILTER: CH. CLASS 1000

PEAK DATA: 186.09 N @ 205.04 MS; -196.46 N @ 157.12 MS

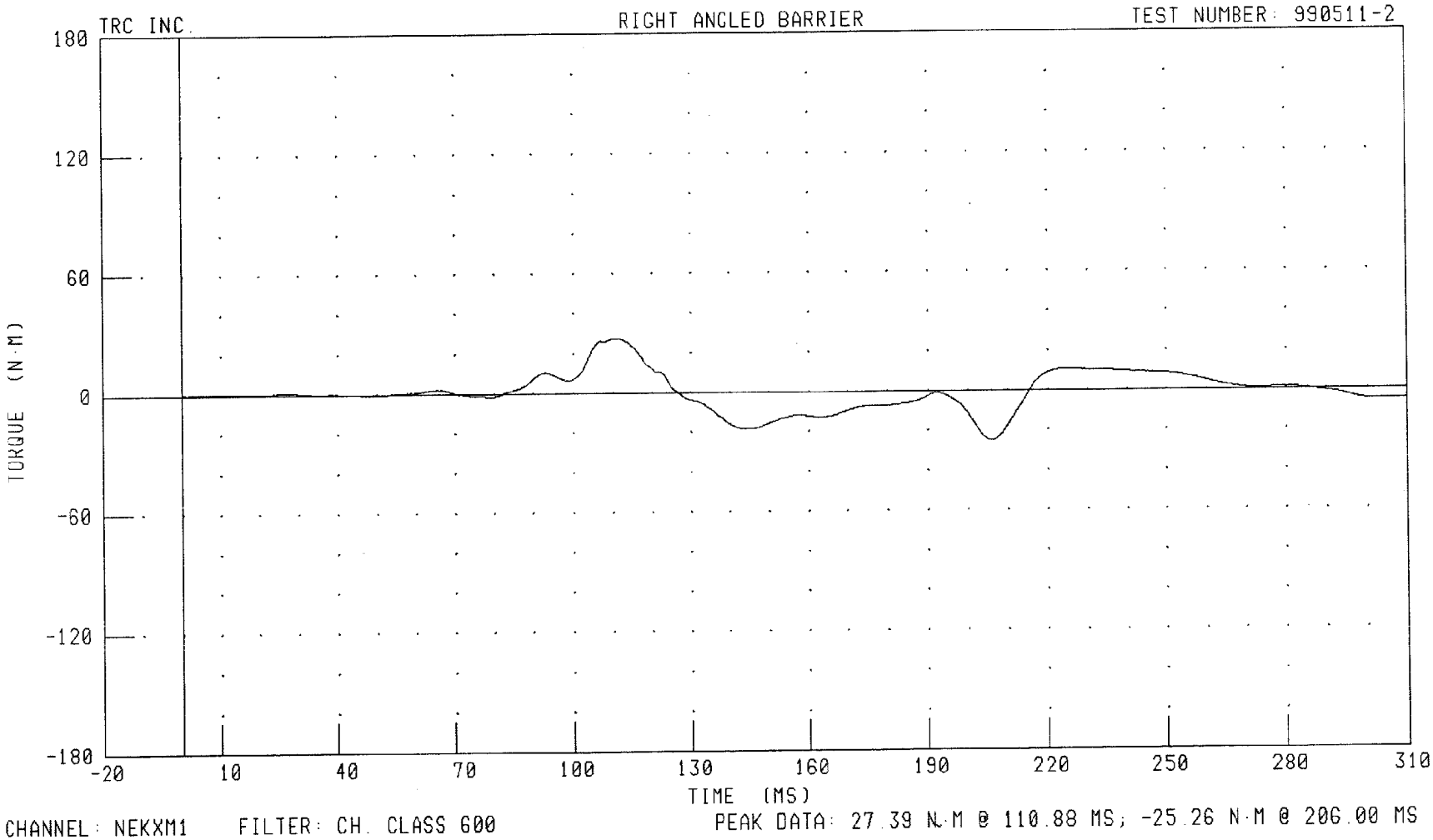
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK Z-AXIS AXIAL FORCE
RIGHT ANGLED BARRIER



CHANNEL: NEKZF1 FILTER: CH. CLASS 1000

PEAK DATA: 1051.76 N @ 93.68 MS; -206.08 N @ 119.36 MS

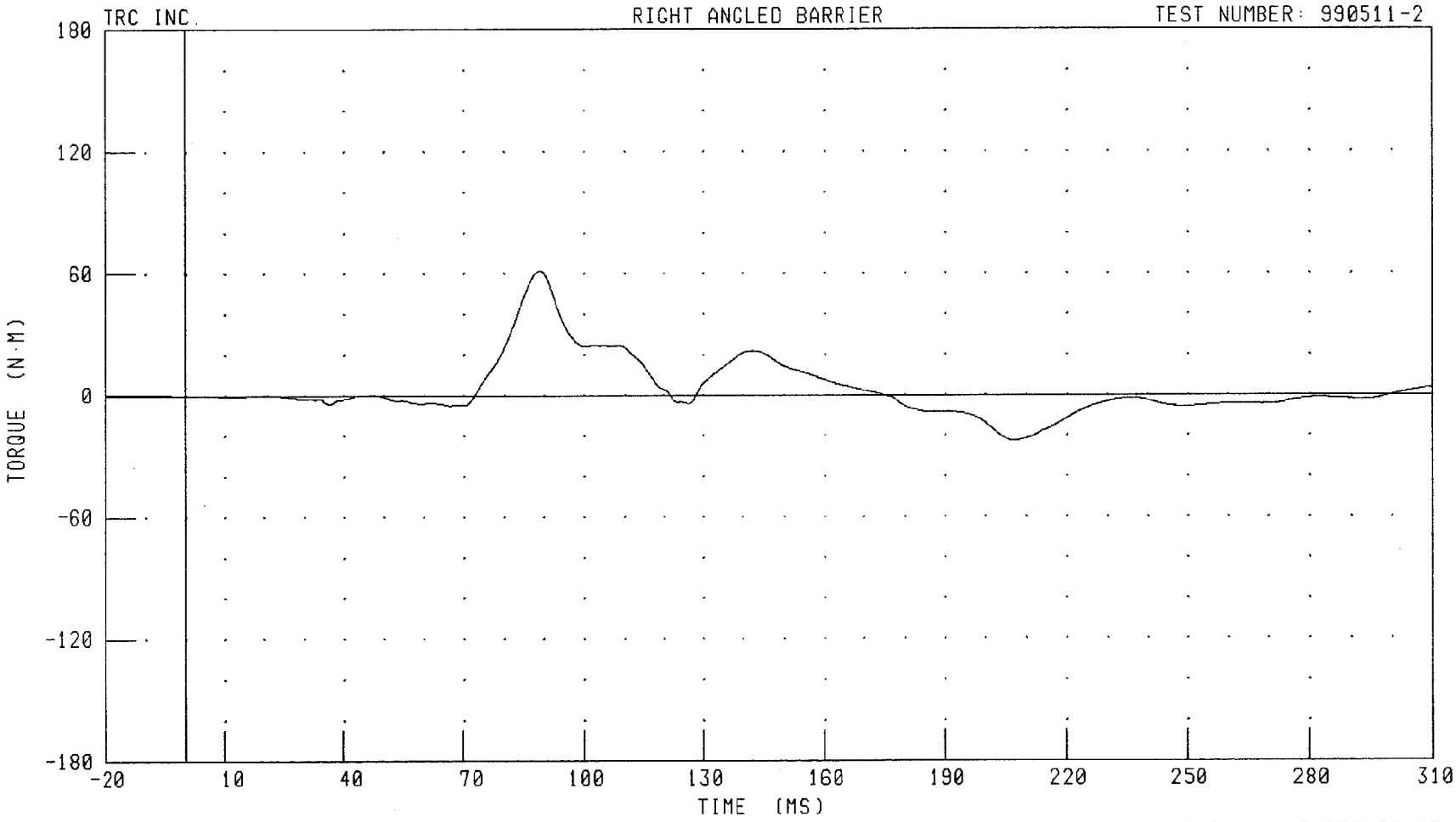
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK MOMENT ABOUT X AXIS



CHANNEL: NEKXM1 FILTER: CH. CLASS 600

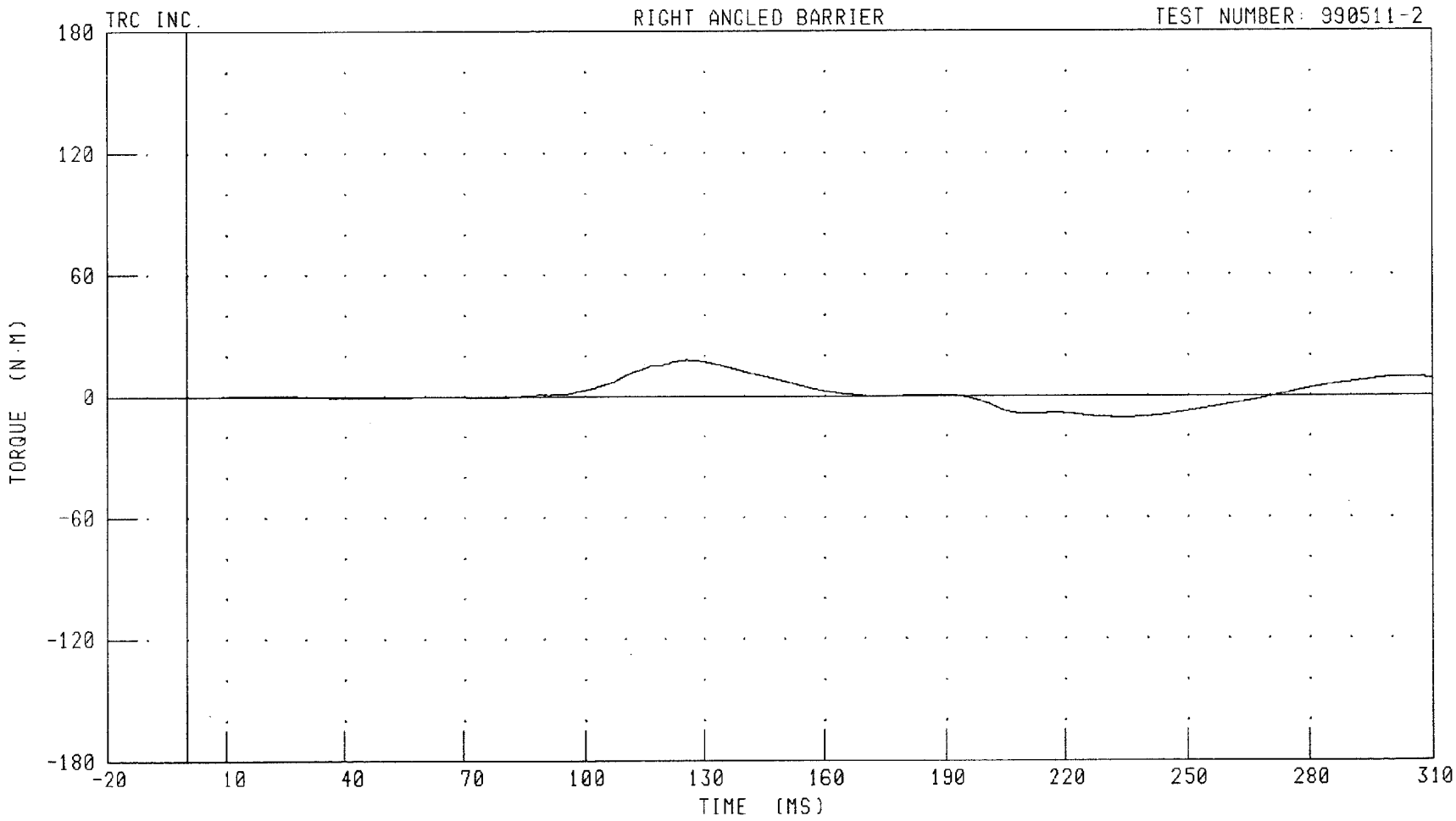
PEAK DATA: 27.39 N-M @ 110.88 MS; -25.26 N-M @ 206.00 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK MOMENT ABOUT Y AXIS



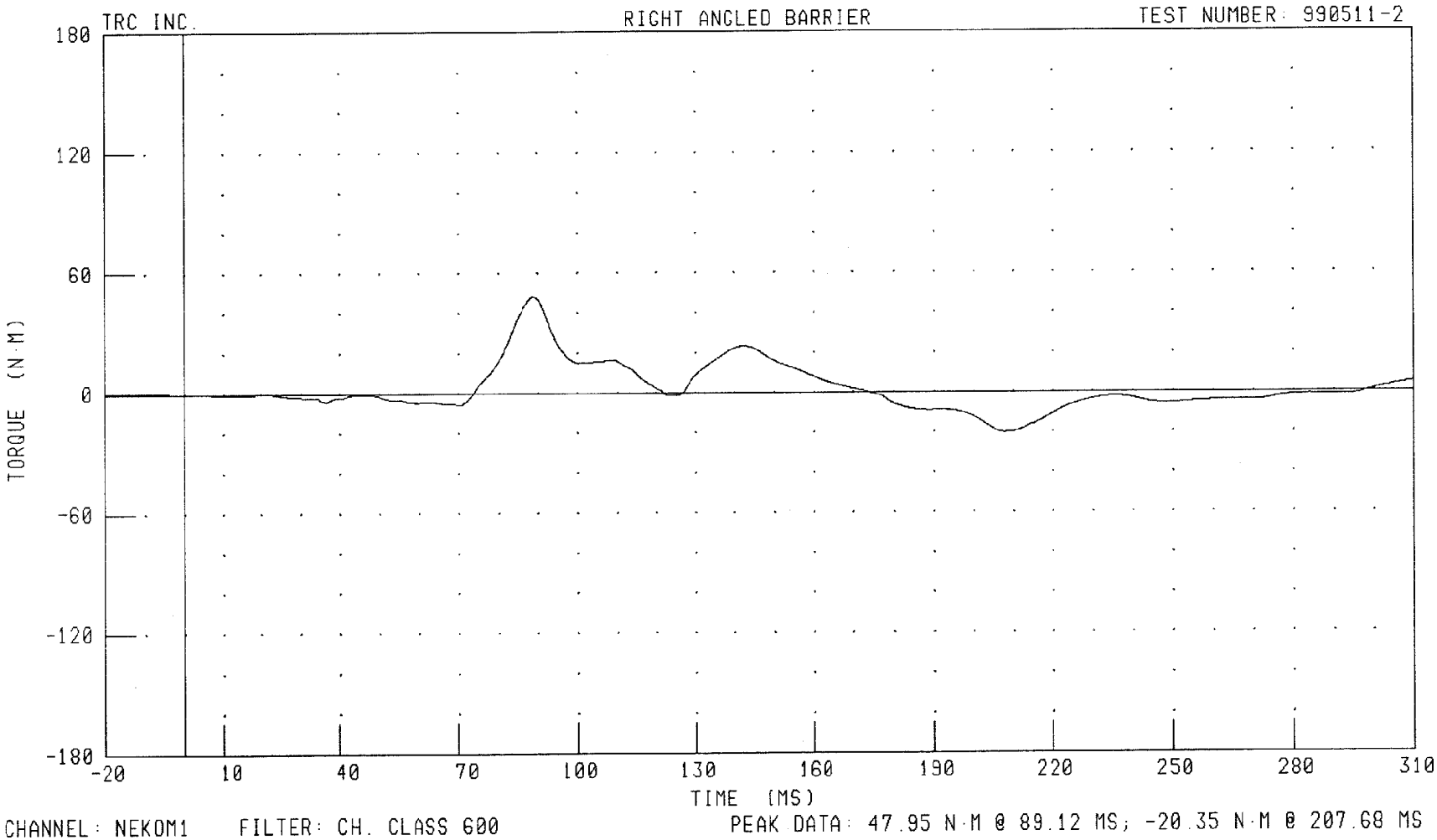
CHANNEL: NEKYM1 FILTER: CH. CLASS 600 PEAK DATA: 61.19 N-M @ 89.20 MS; -22.64 N-M @ 207.36 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK MOMENT ABOUT Z AXIS



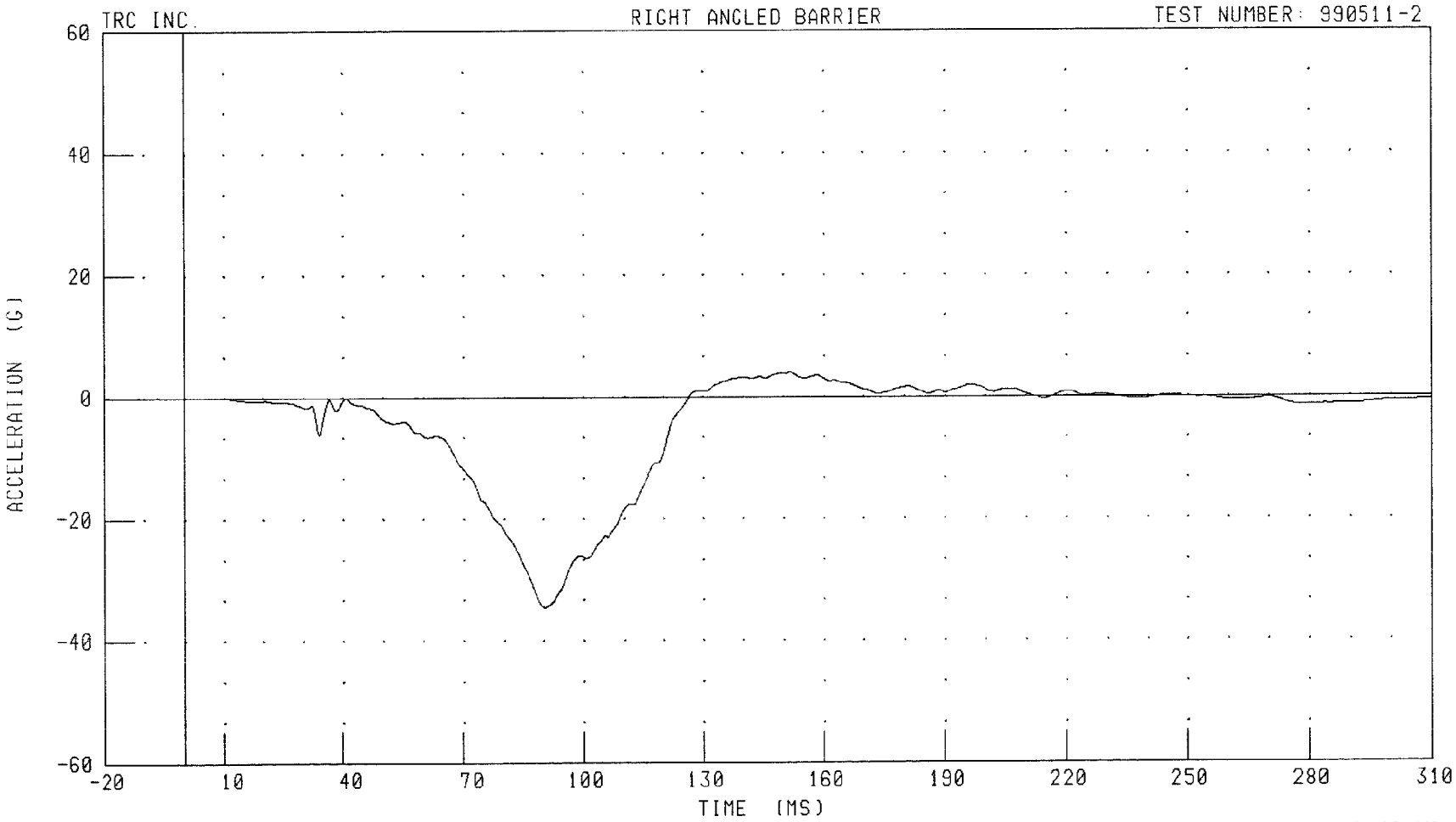
CHANNEL: NEKZM1 FILTER: CH. CLASS 600 PEAK DATA: 17.91 N-M @ 125.52 MS, -10.78 N-M @ 234.08 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER NECK OCCIPITAL CONDYLE



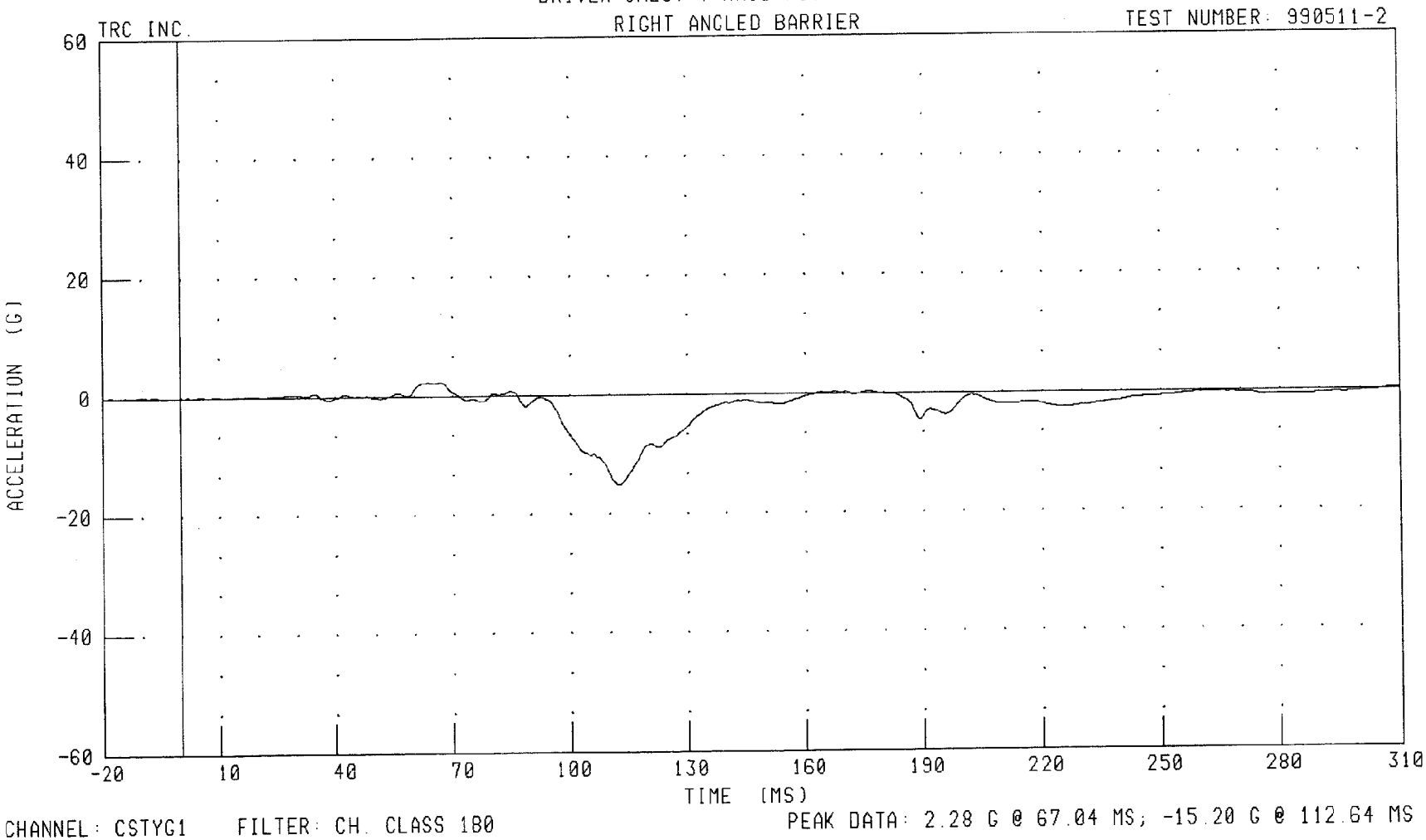
CHANNEL: NEKOM1 FILTER: CH. CLASS 600 PEAK DATA: 47.95 N-M @ 89.12 MS; -20.35 N-M @ 207.68 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER CHEST X-AXIS ACCELERATION



CHANNEL: CSTXG1 FILTER: CH. CLASS 180 PEAK DATA: 3.95 G @ 151 84 MS; -34.56 G @ 90.40 MS

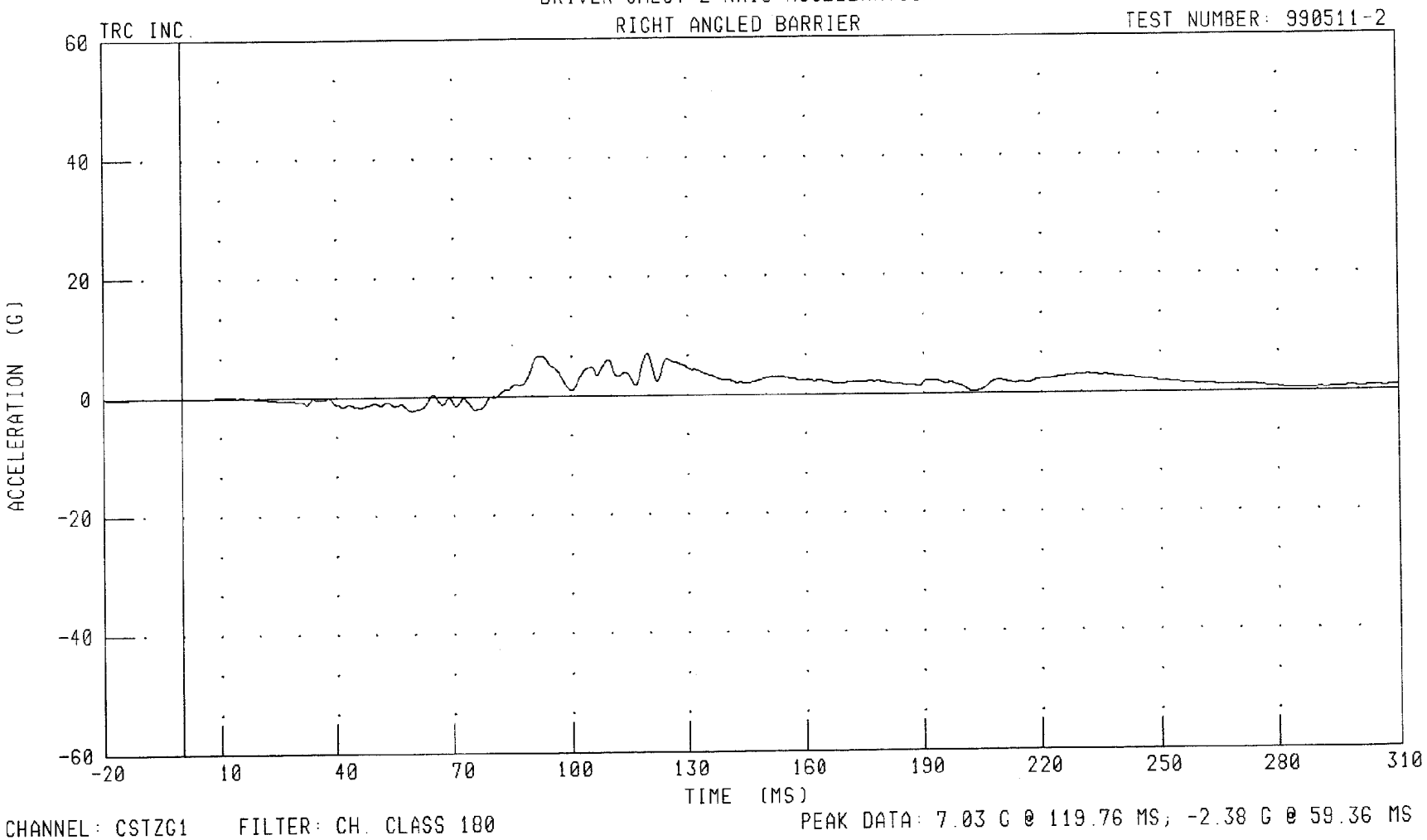
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER CHEST Y-AXIS ACCELERATION



CHANNEL: CSTYG1 FILTER: CH. CLASS 180

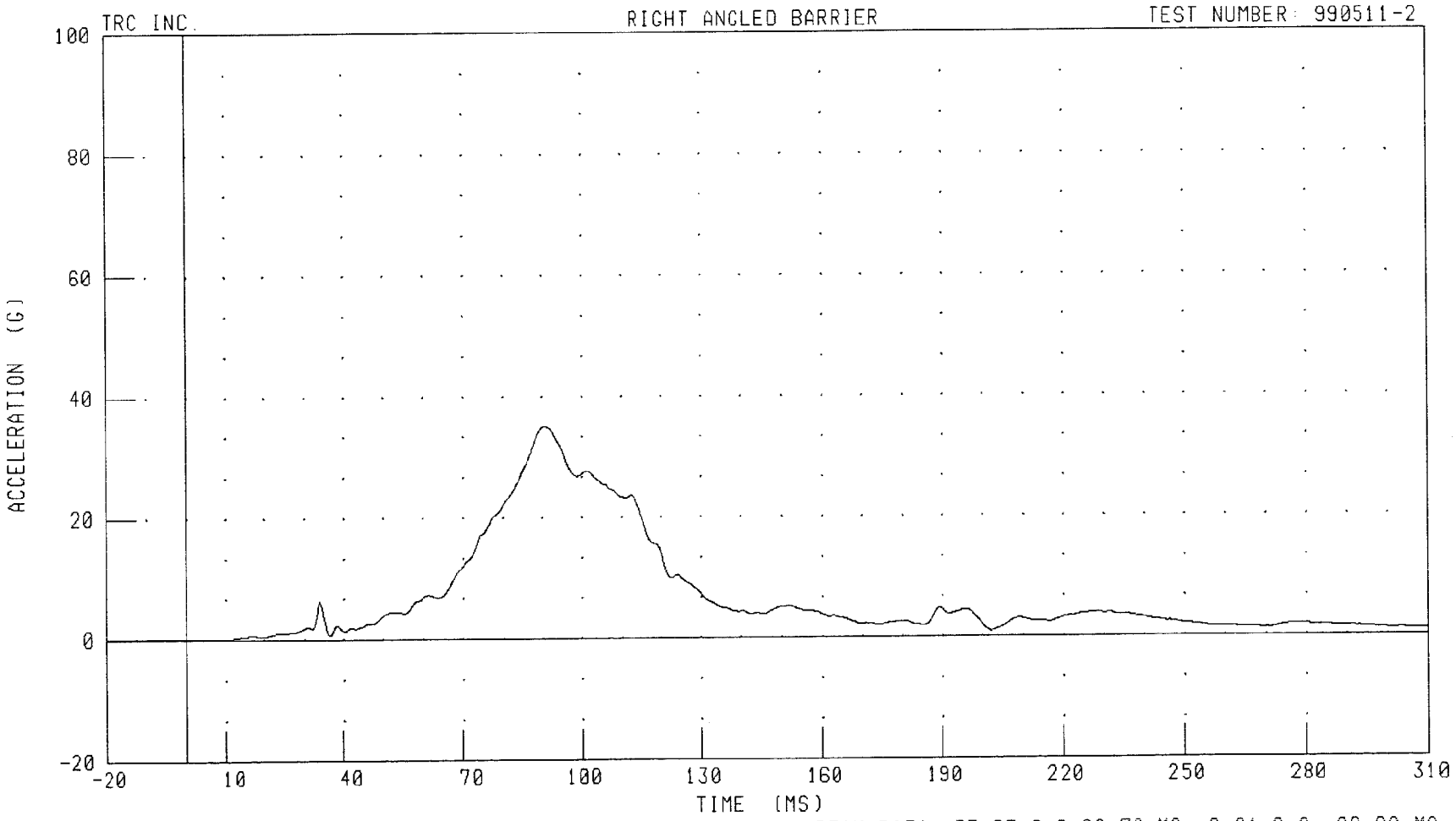
PEAK DATA: 2.28 G @ 67.04 MS; -15.20 G @ 112.64 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER CHEST Z-AXIS ACCELERATION



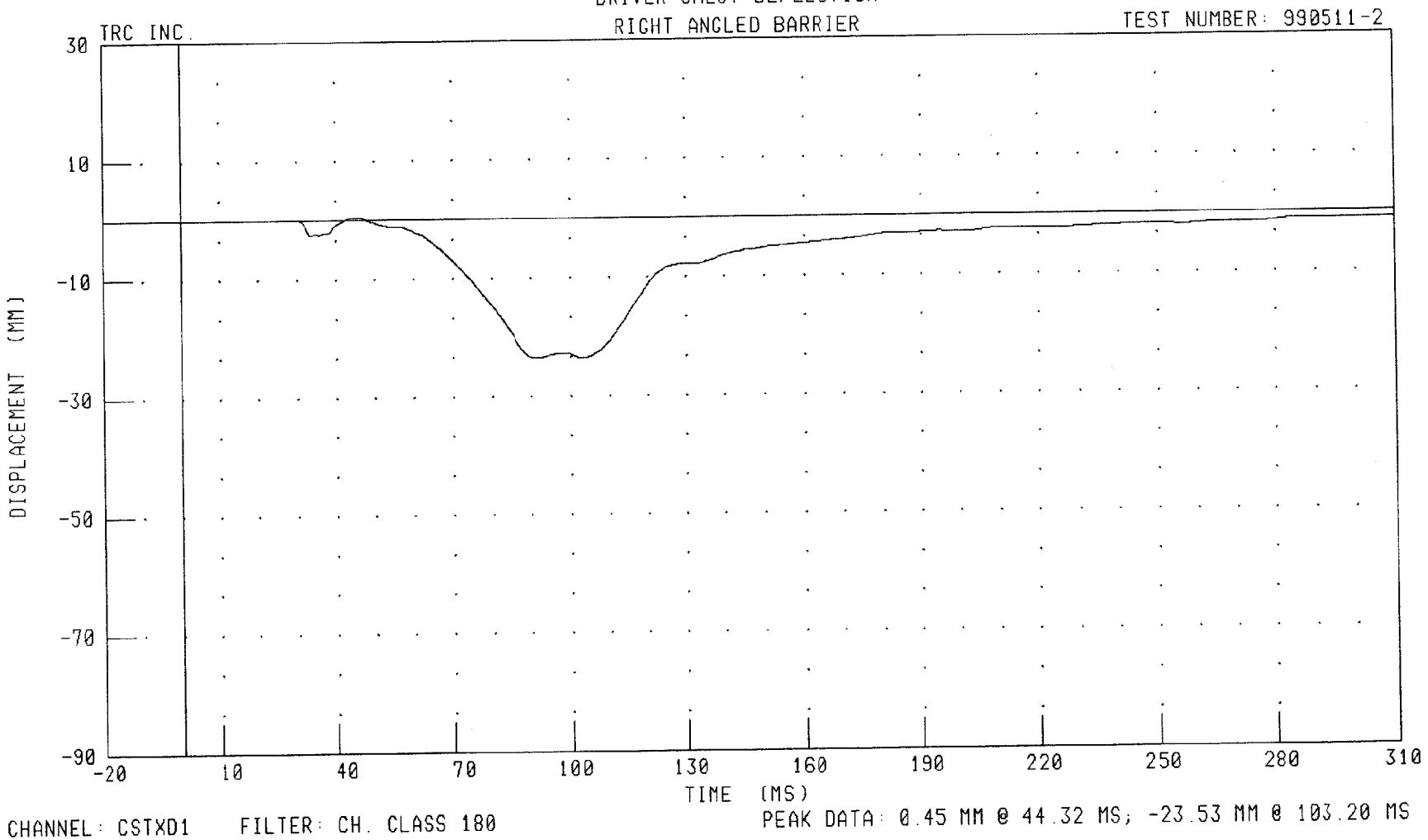
CHANNEL: CSTZG1 FILTER: CH. CLASS 180 PEAK DATA: 7.03 G @ 119.76 MS; -2.38 G @ 59.36 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER CHEST RESULTANT ACCELERATION



CHANNEL: CSTRG1 FILTER: CH. CLASS 180 PEAK DATA: 35.05 G @ 90.72 MS, 0.01 G @ -20.00 MS

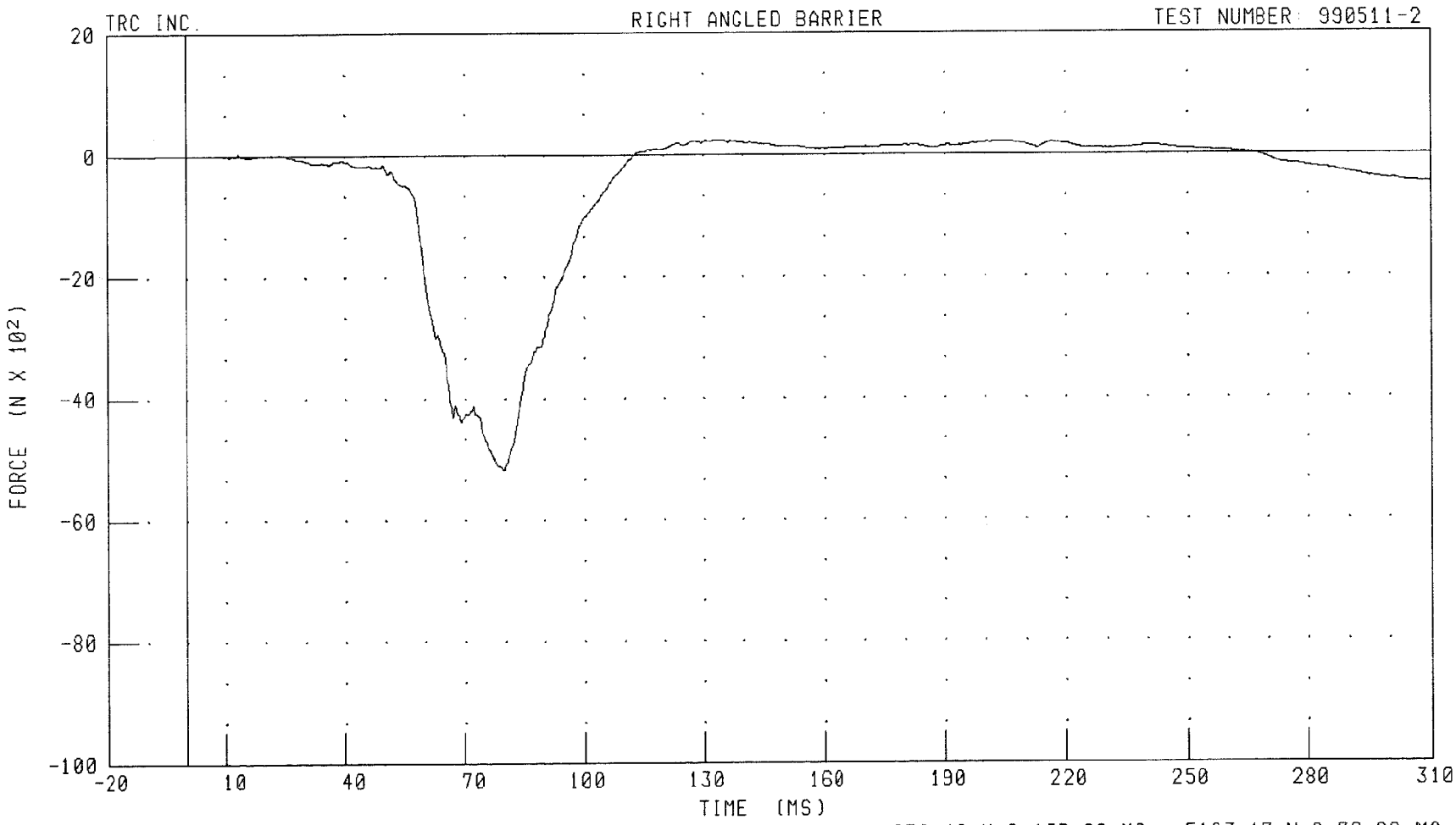
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER CHEST DEFLECTION
RIGHT ANGLED BARRIER



CHANNEL: CSTXD1 FILTER: CH. CLASS 180

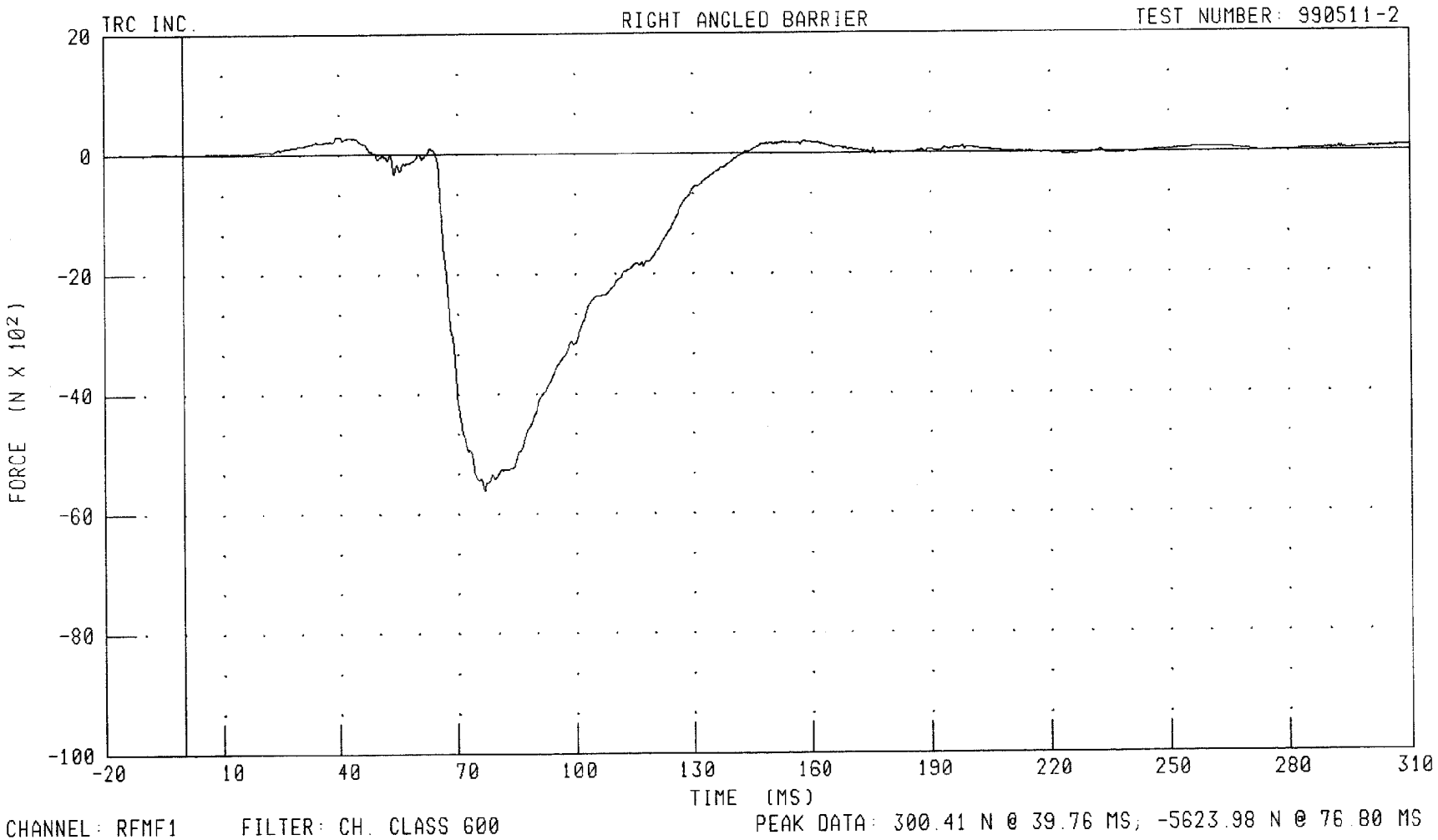
PEAK DATA: 0.45 MM @ 44.32 MS; -23.53 MM @ 103.20 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER LEFT FEMUR FORCE



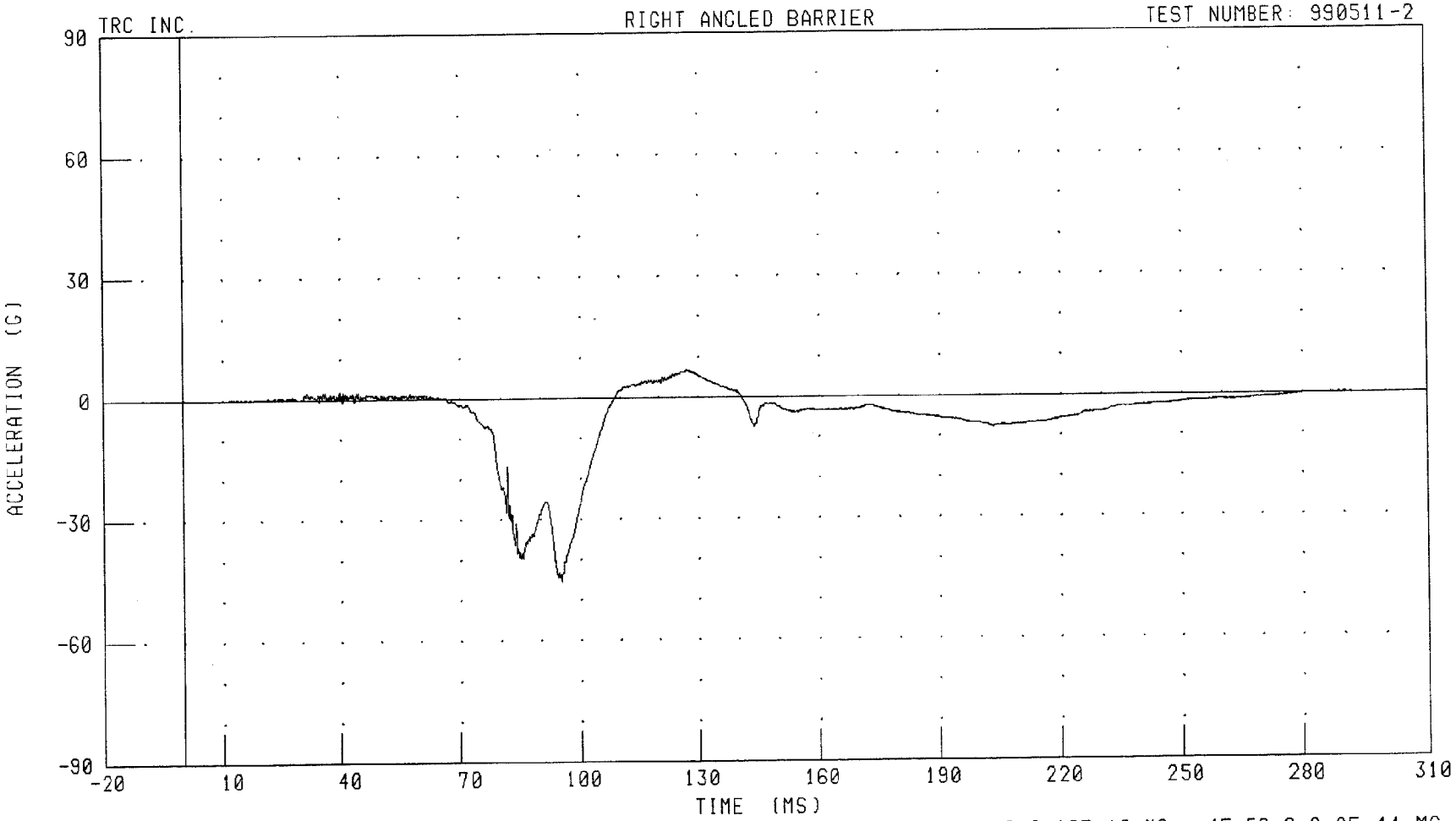
CHANNEL: LFMF1 FILTER: CH. CLASS 600 PEAK DATA: 250.46 N @ 133.60 MS, -5183.17 N @ 79.68 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER RIGHT FEMUR FORCE



CHANNEL: RFMF1 FILTER: CH. CLASS 600 PEAK DATA: 300.41 N @ 39.76 MS, -5623.98 N @ 76.80 MS

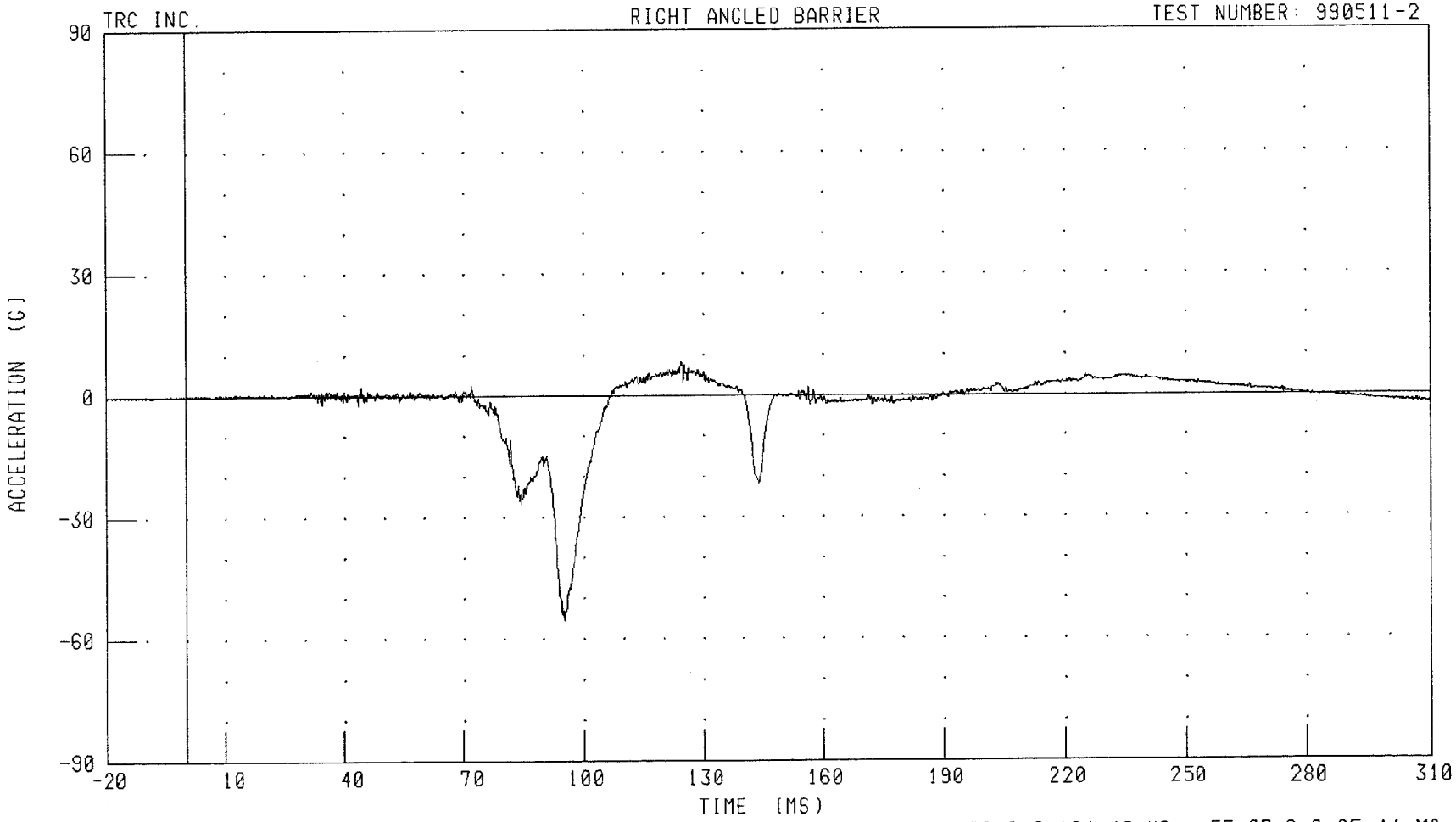
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER HEAD X-AXIS ACCELERATION



CHANNEL: HEDXG2 FILTER: CH. CLASS 1000

PEAK DATA: 6.63 G @ 127.12 MS; -45.52 G @ 95.44 MS

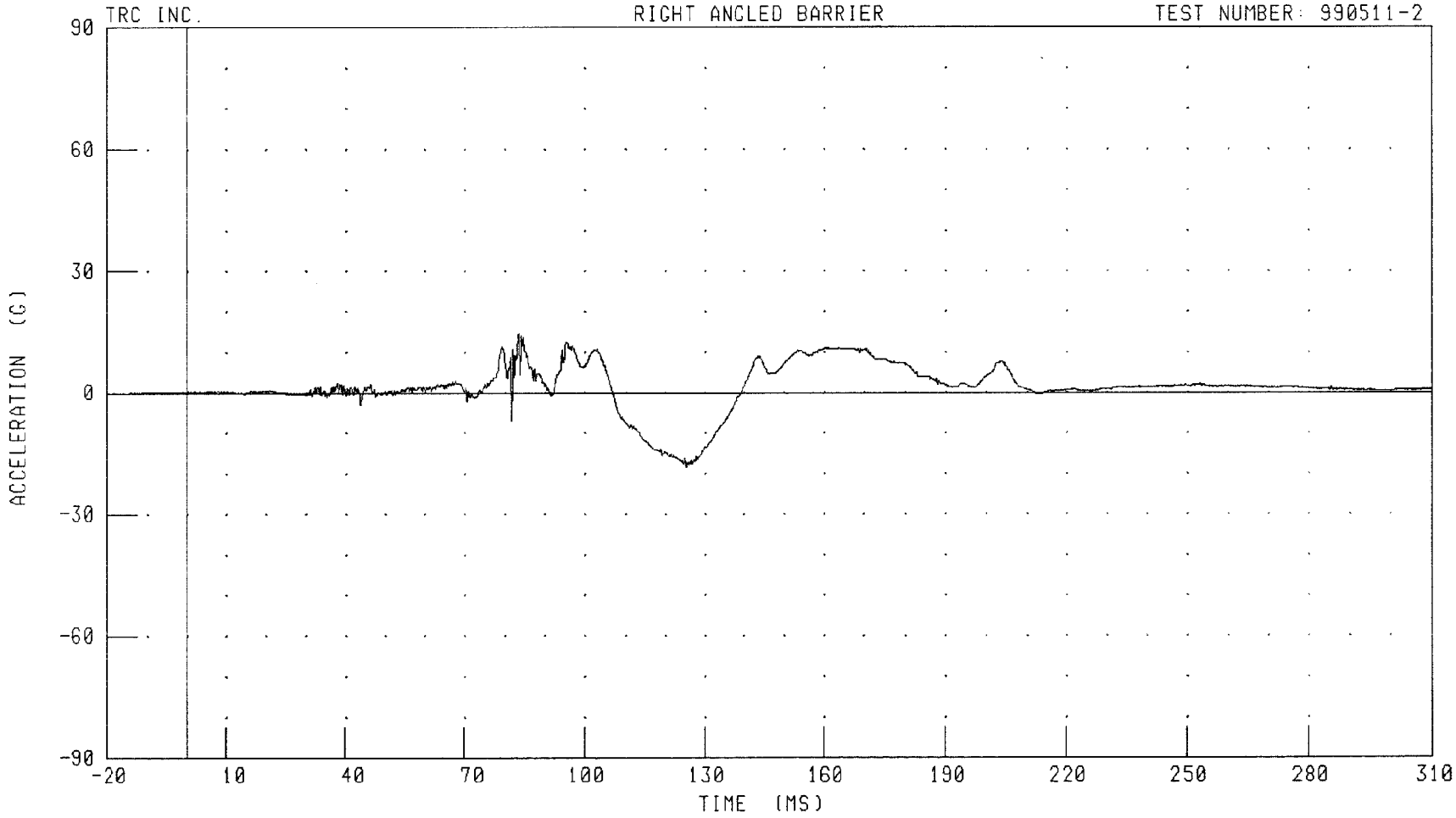
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER HEAD Y-AXIS ACCELERATION



CHANNEL: HEDYG2 FILTER: CH. CLASS 1000

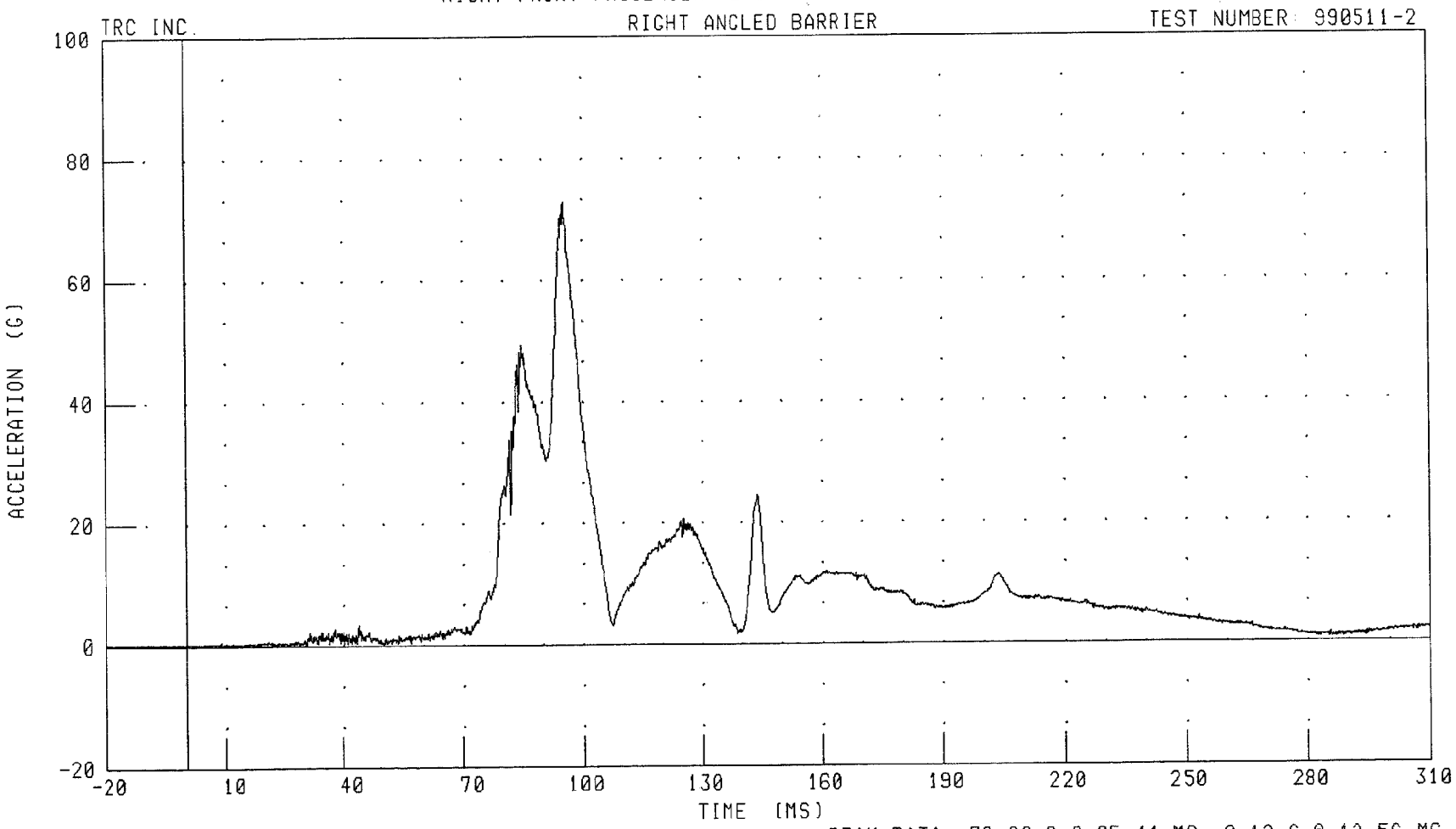
PEAK DATA: 8.28 G @ 124.48 MS; -55.67 G @ 95.44 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER HEAD Z-AXIS ACCELERATION



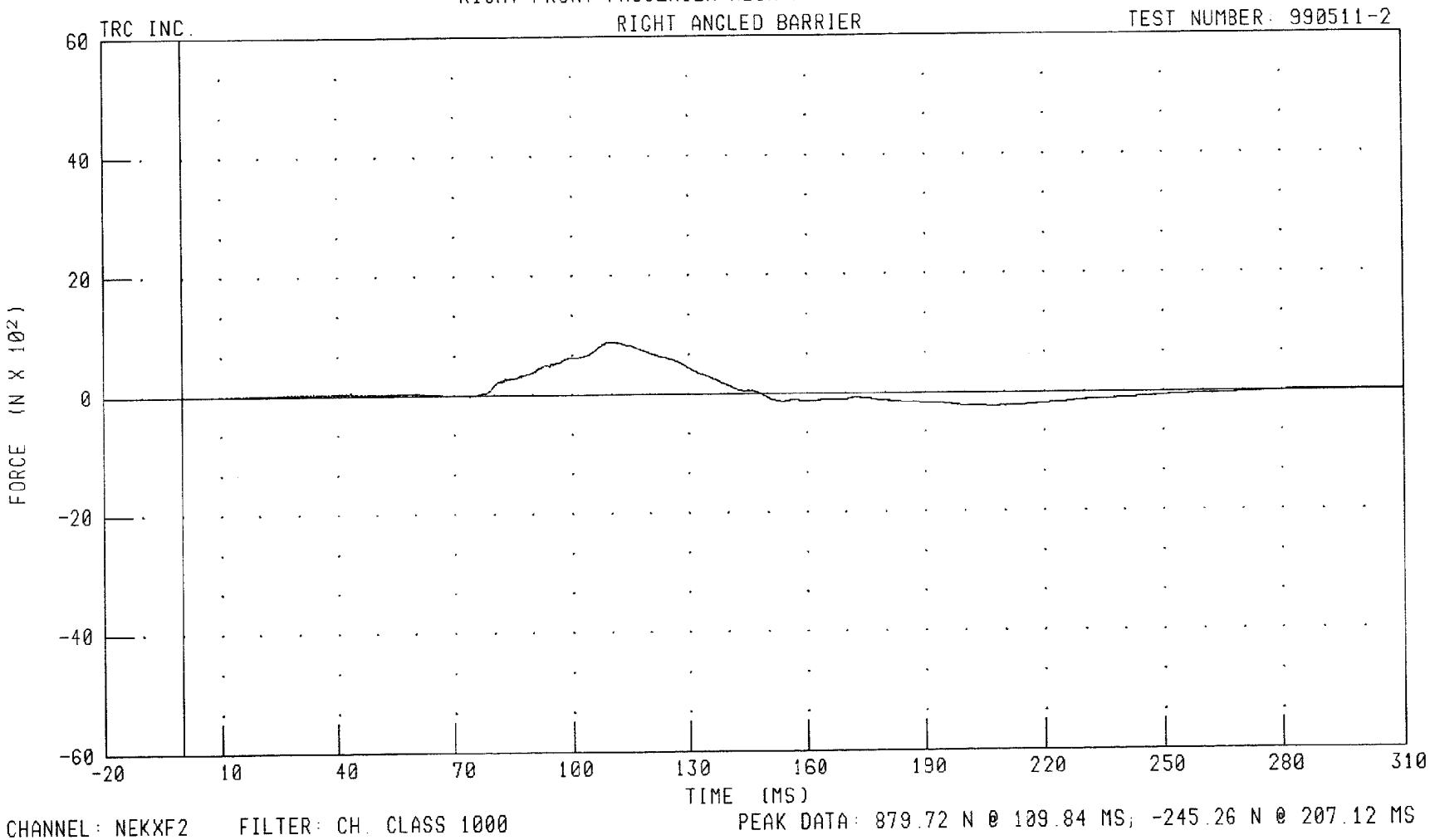
CHANNEL: HEDZG2 FILTER: CH. CLASS 1000 PEAK DATA: 14.61 G @ 83.52 MS; -18.30 G @ 125.36 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER HEAD RESULTANT ACCELERATION
RIGHT ANGLED BARRIER



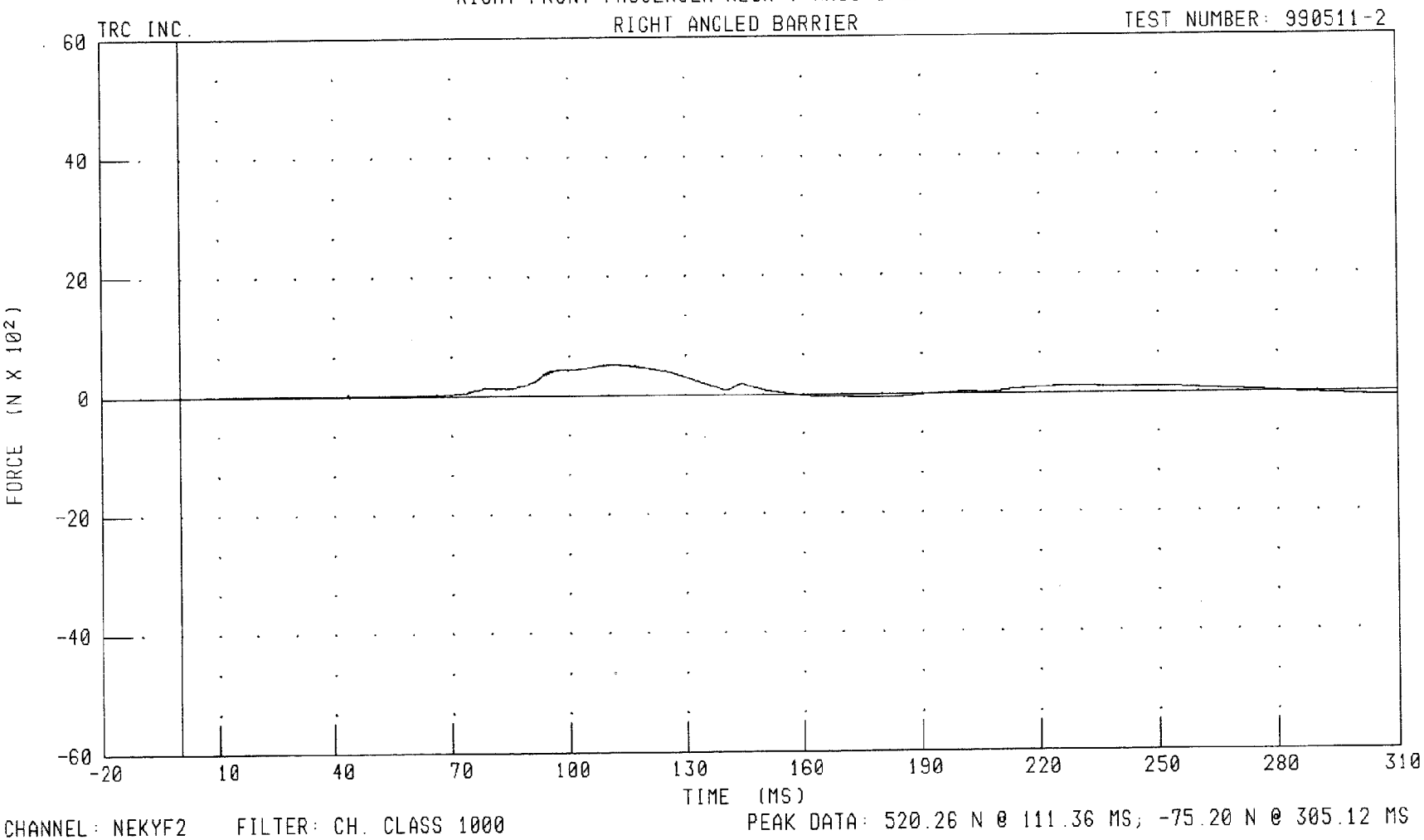
CHANNEL: HEDRG2 FILTER: CH. CLASS 1000 PEAK DATA: 72.98 G @ 95.44 MS; 0.12 G @ 12.56 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK X-AXIS SHEAR FORCE



CHANNEL: NEKXF2 FILTER: CH. CLASS 1000 PEAK DATA: 879.72 N @ 109.84 MS; -245.26 N @ 207.12 MS

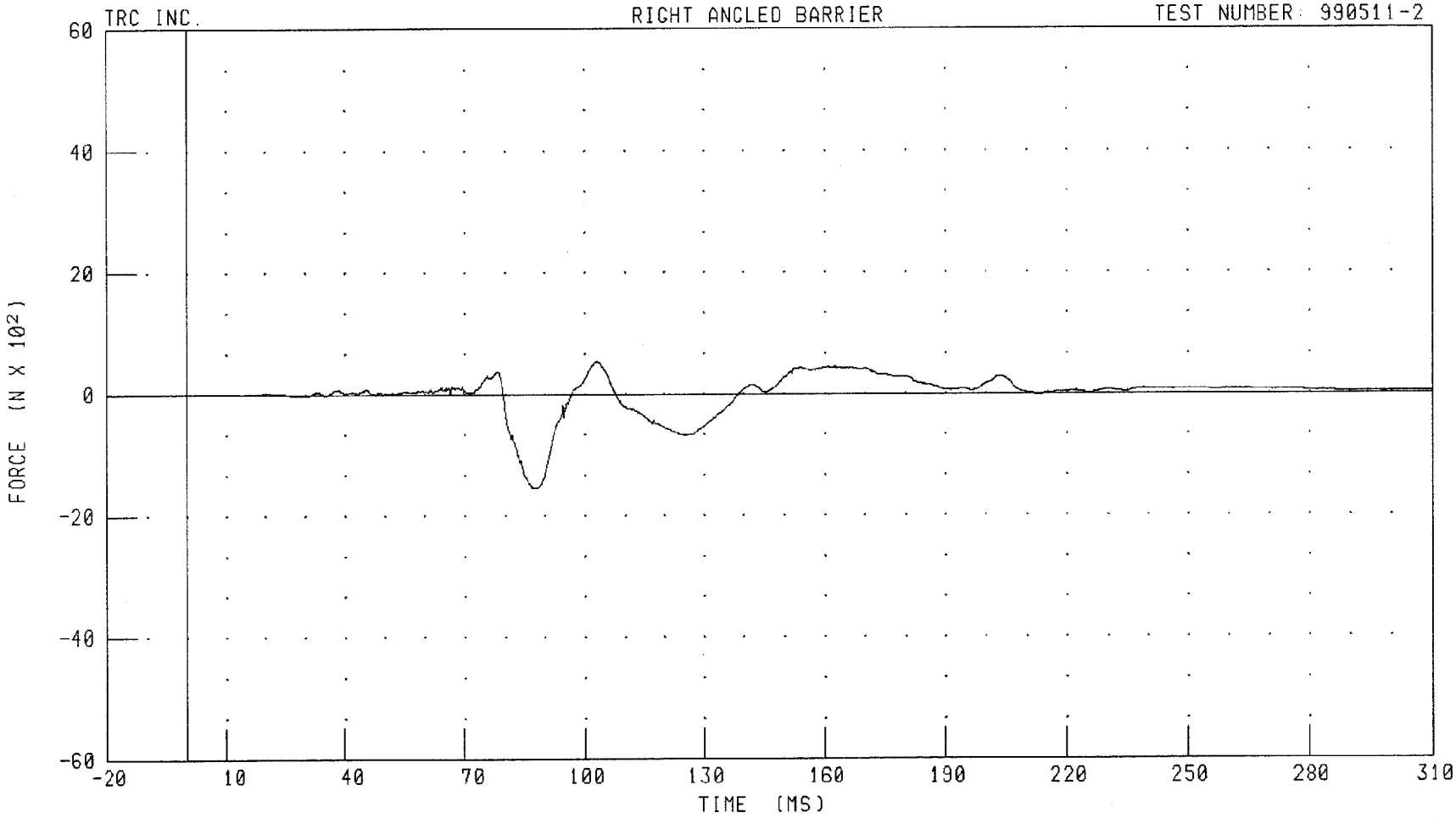
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK Y-AXIS SHEAR FORCE



CHANNEL: NEKYF2 FILTER: CH. CLASS 1000

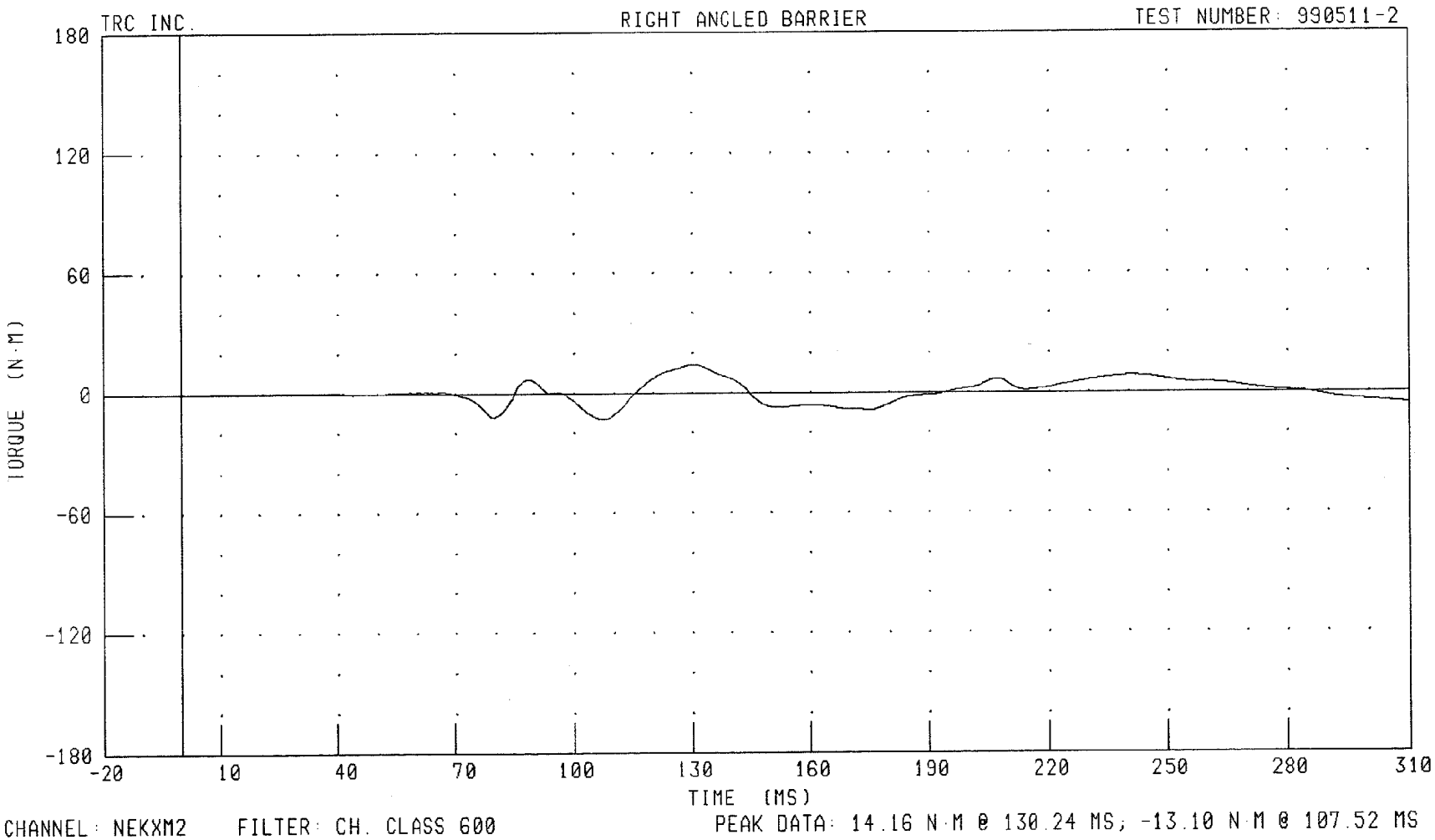
PEAK DATA: 520.26 N @ 111.36 MS; -75.20 N @ 305.12 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK Z-AXIS AXIAL FORCE



CHANNEL: NEKZF2 FILTER: CH. CLASS 1000 PEAK DATA: 528.77 N @ 102.88 MS; -1555.36 N @ 87.44 MS

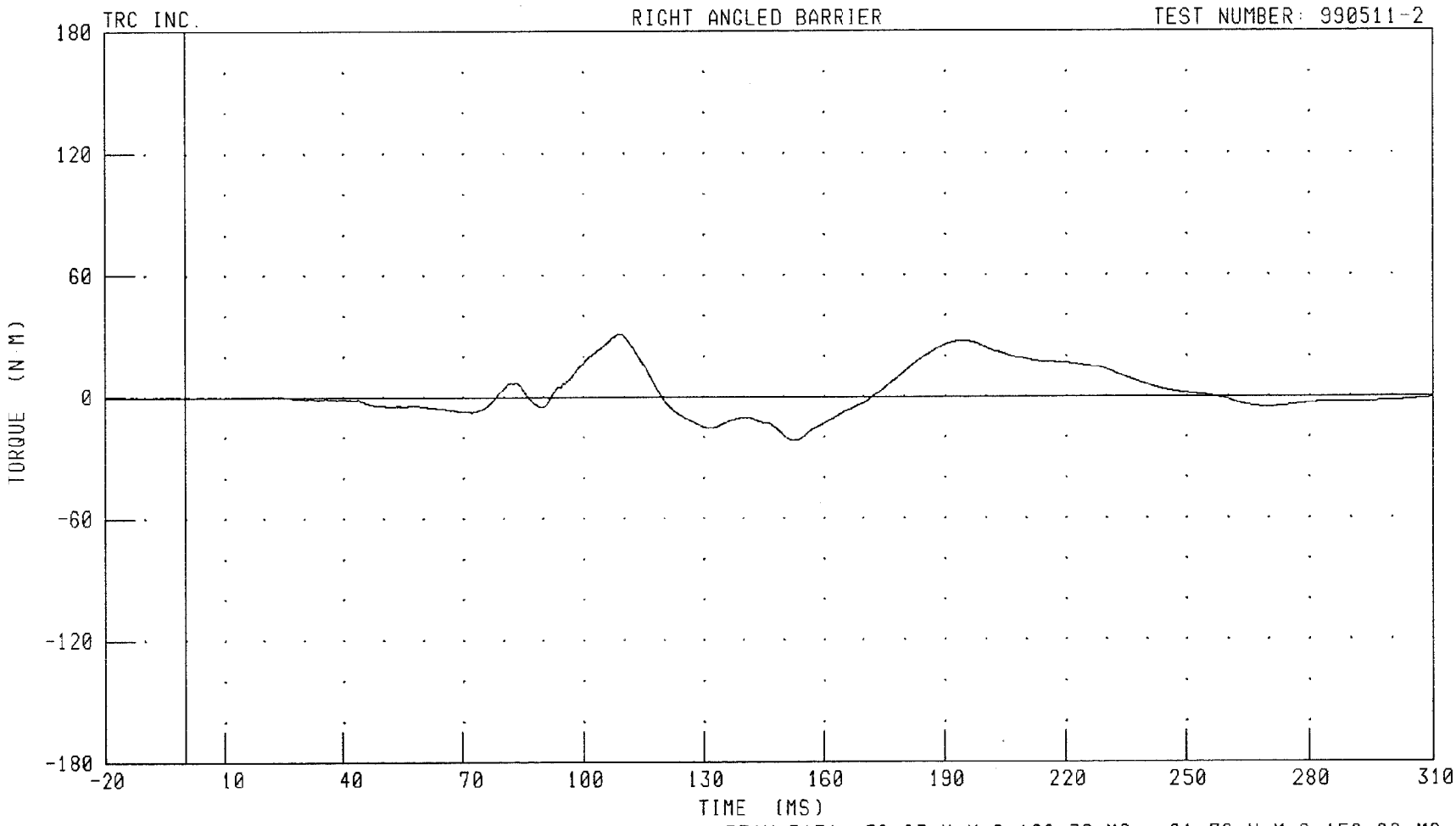
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK MOMENT ABOUT X AXIS



CHANNEL: NEKXM2 FILTER: CH. CLASS 600

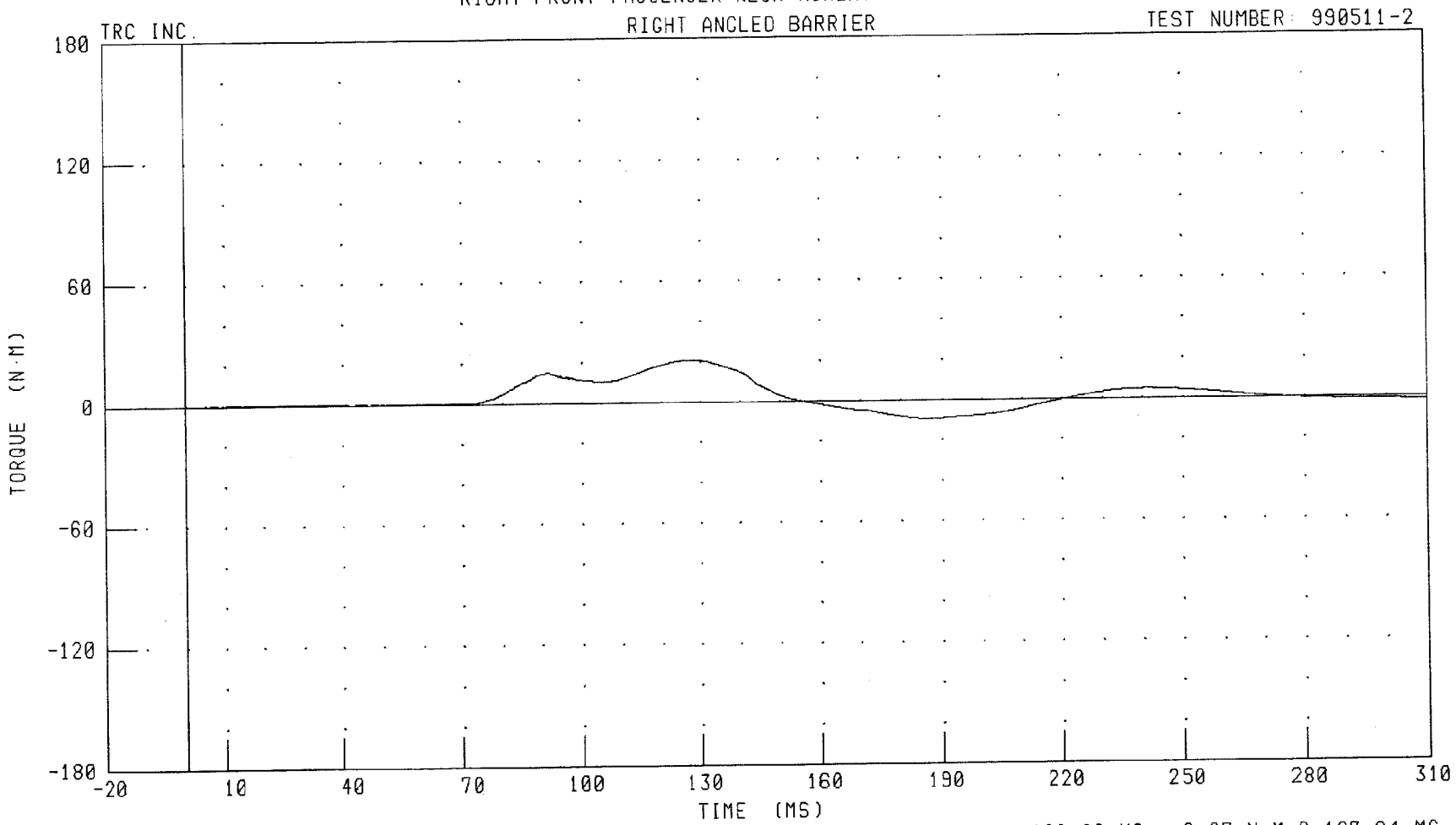
PEAK DATA: 14.16 N-M @ 130.24 MS; -13.10 N-M @ 107.52 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Y AXIS



CHANNEL: NEKYM2 FILTER: CH. CLASS 600 PEAK DATA: 30.93 N-M @ 109.36 MS; -21.76 N-M @ 152.80 MS

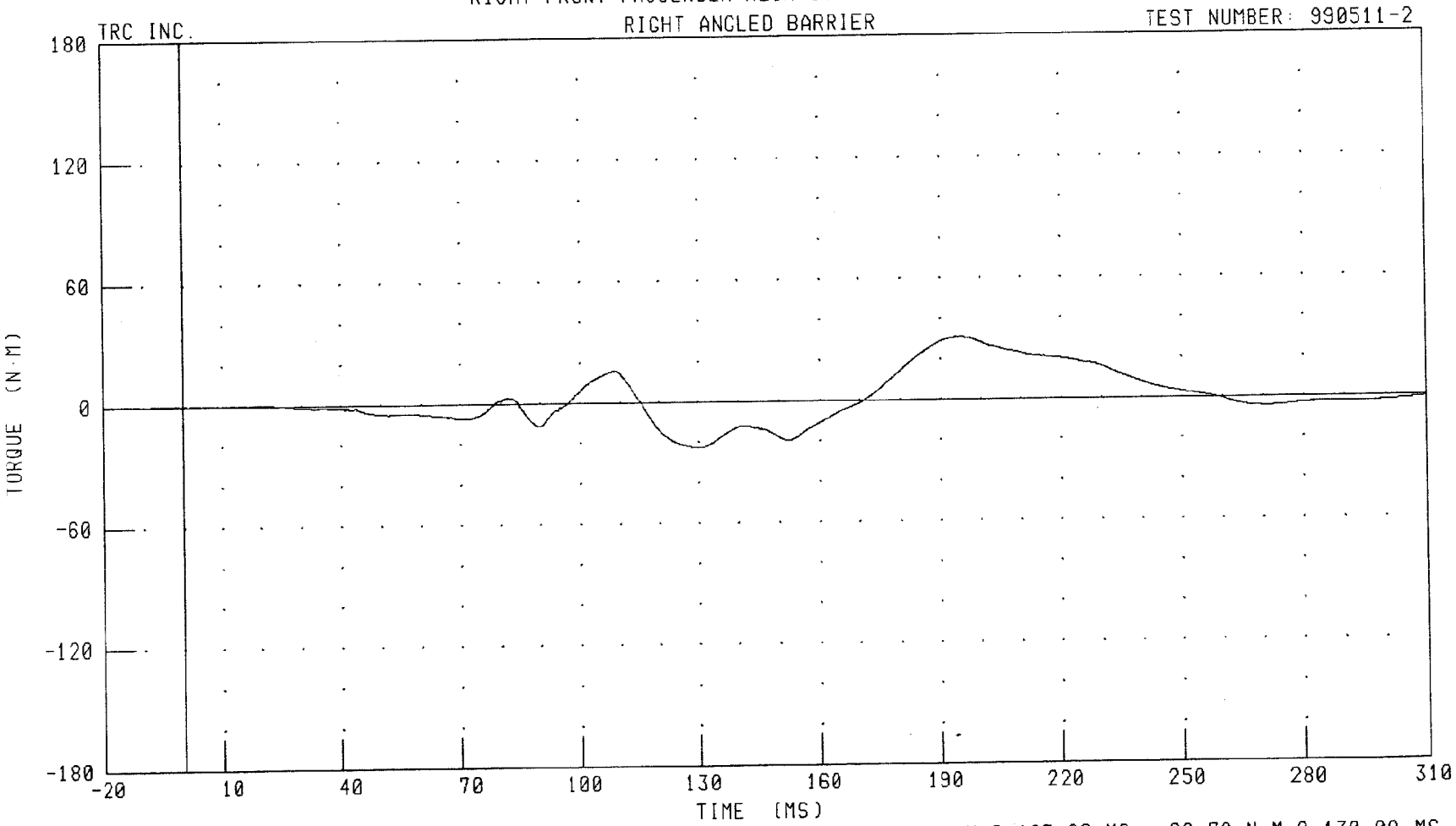
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK MOMENT ABOUT Z AXIS
RIGHT ANGLED BARRIER



CHANNEL: NEKZM2 FILTER: CH. CLASS 600

PEAK DATA: 20.75 N-M @ 128.96 MS; -9.27 N-M @ 187.84 MS

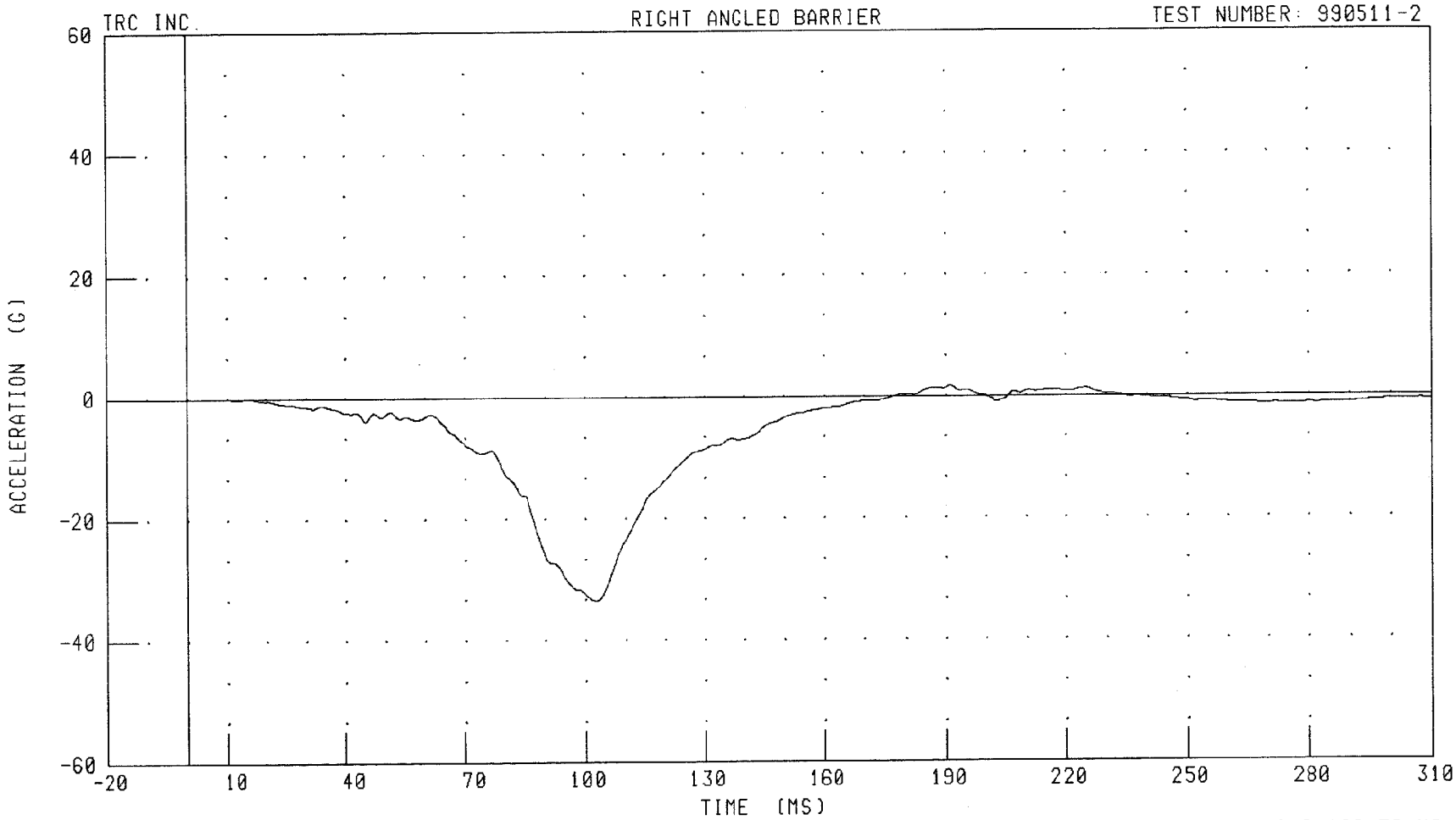
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER NECK OCCIPITAL CONDYLE
RIGHT ANGLED BARRIER



CHANNEL: NEKOM2 FILTER: CH. CLASS 600

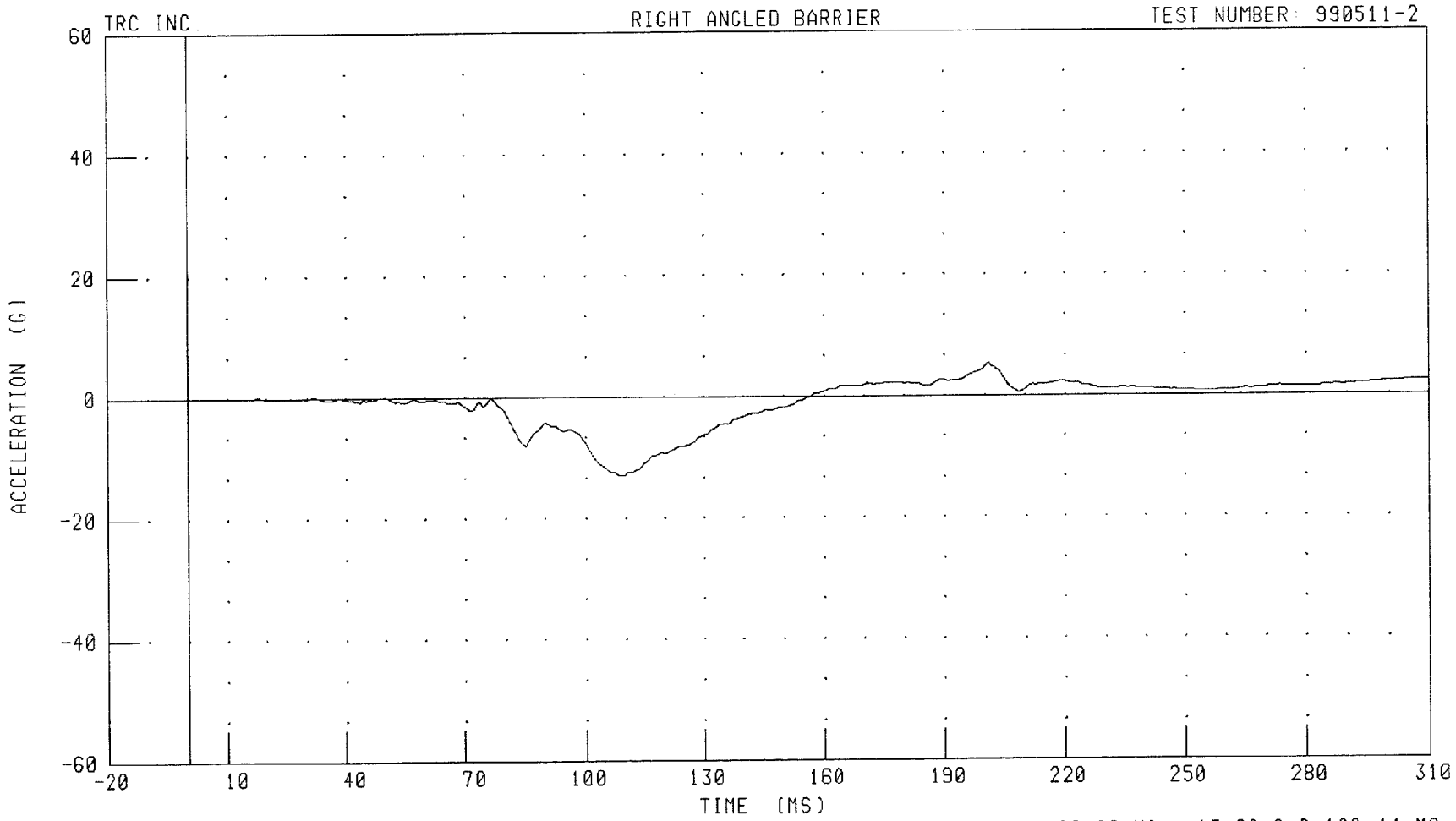
PEAK DATA: 30.74 N-M @ 195.20 MS; -22.70 N-M @ 130.08 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER CHEST X-AXIS ACCELERATION



CHANNEL: CSTXG2 FILTER: CH. CLASS 180 PEAK DATA: 1.62 G @ 191.36 MS; -33.55 G @ 102.72 MS

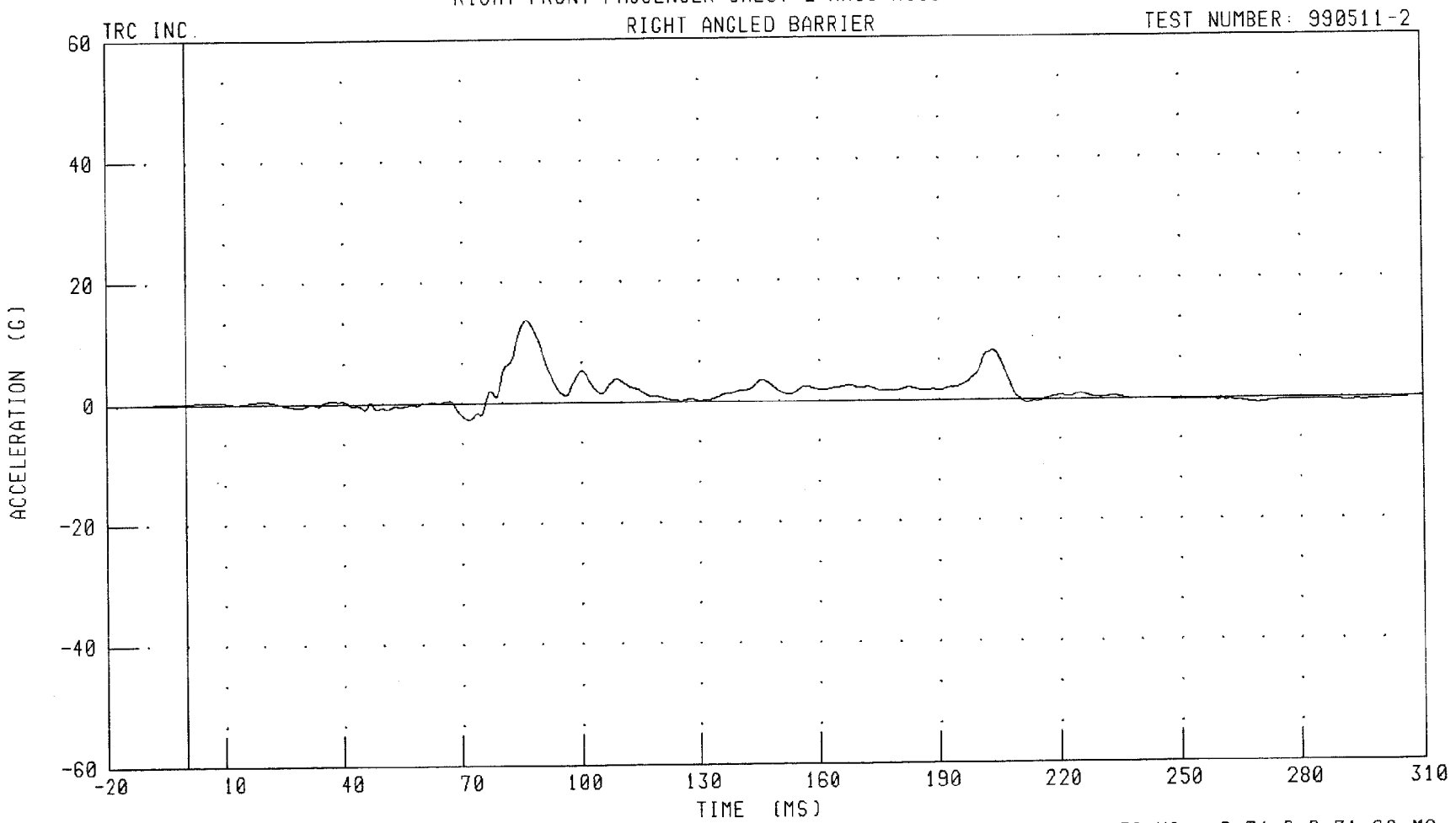
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER CHEST Y-AXIS ACCELERATION



CHANNEL: CSTYG2 FILTER: CH. CLASS 180

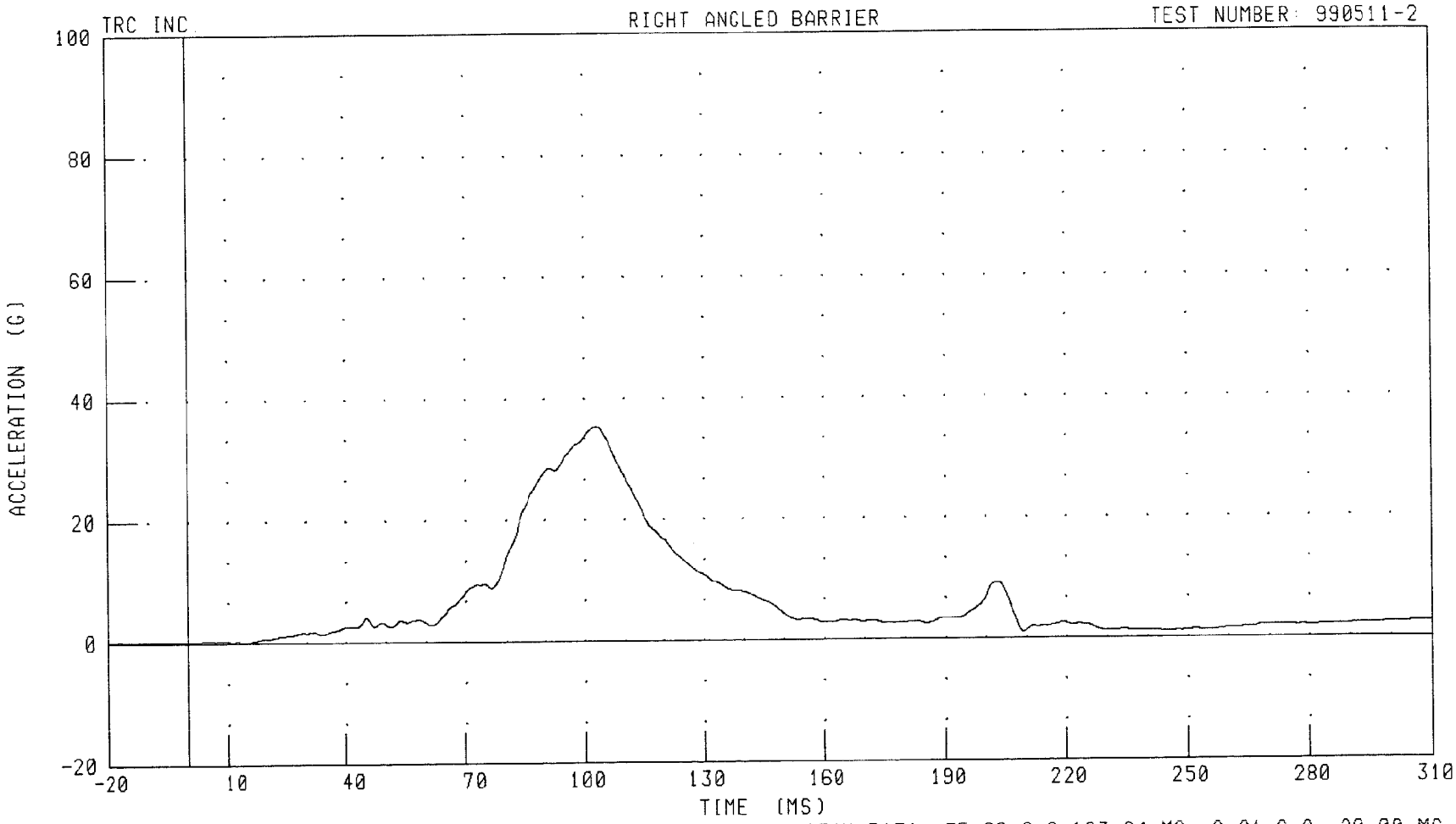
PEAK DATA: 5.30 G @ 200.96 MS; -13.02 G @ 109.44 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER CHEST Z-AXIS ACCELERATION



CHANNEL: CSTZG2 FILTER: CH. CLASS 180 PEAK DATA: 13.64 G @ 86.32 MS; -2.74 G @ 71.92 MS

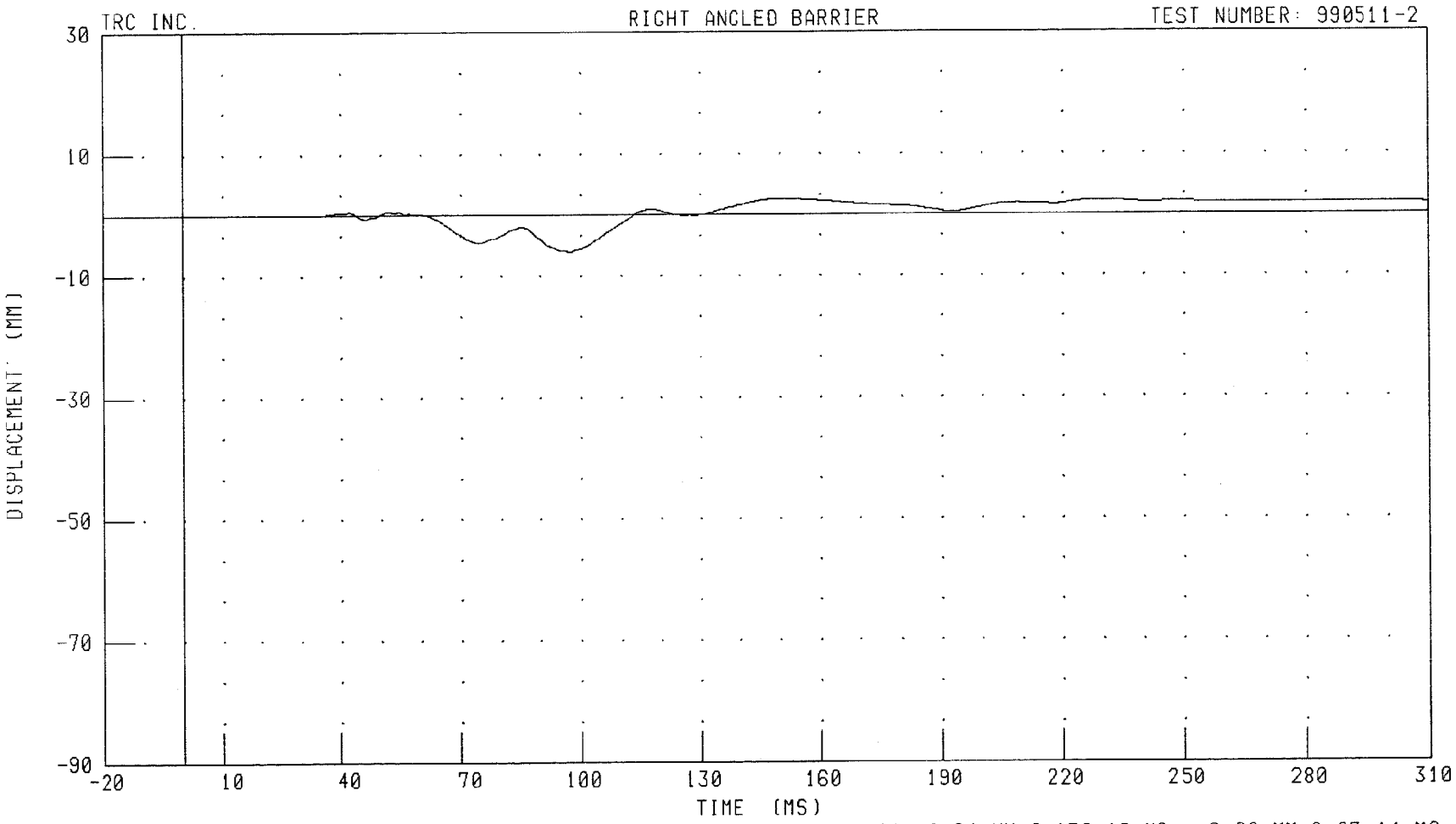
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER CHEST RESULTANT ACCELERATION
RIGHT ANGLED BARRIER



CHANNEL: CSTRG2 FILTER: CH. CLASS 180

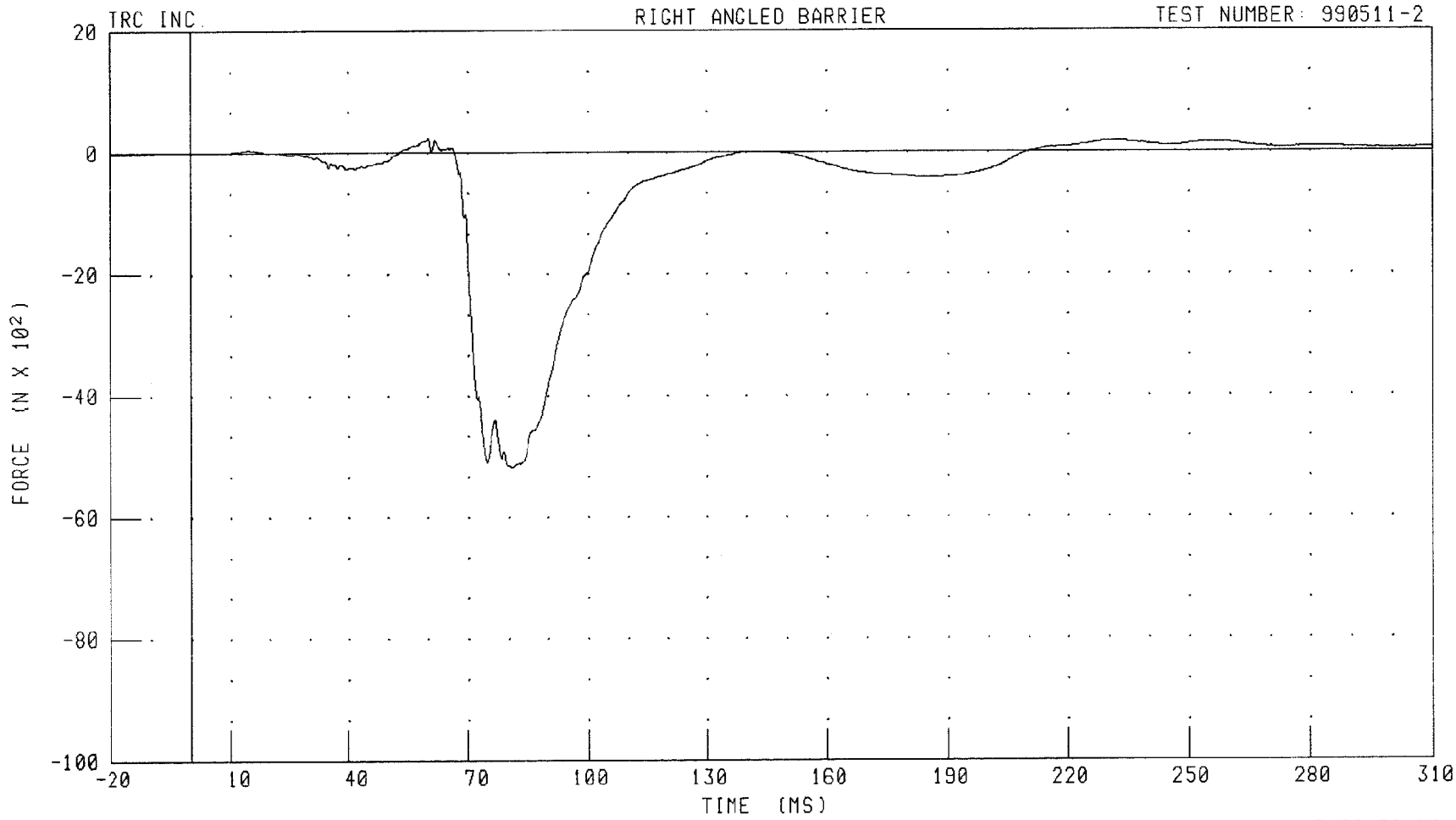
PEAK DATA: 35.29 G @ 103.04 MS; 0.01 G @ -20.00 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER CHEST DEFLECTION



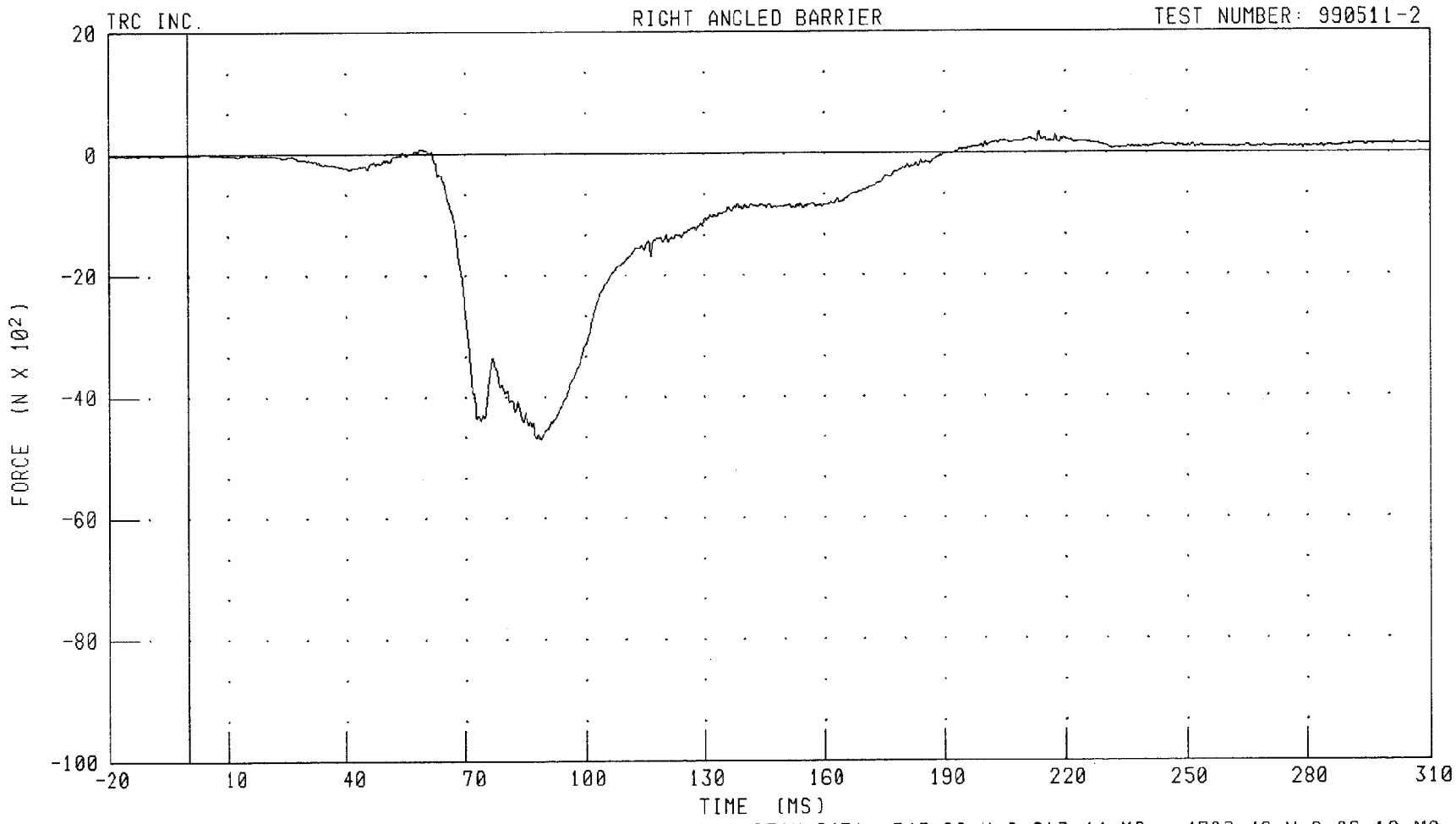
CHANNEL: CSTXD2 FILTER: CH. CLASS 180 PEAK DATA: 2.64 MM @ 150.16 MS; -6.02 MM @ 97.44 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER LEFT FEMUR FORCE



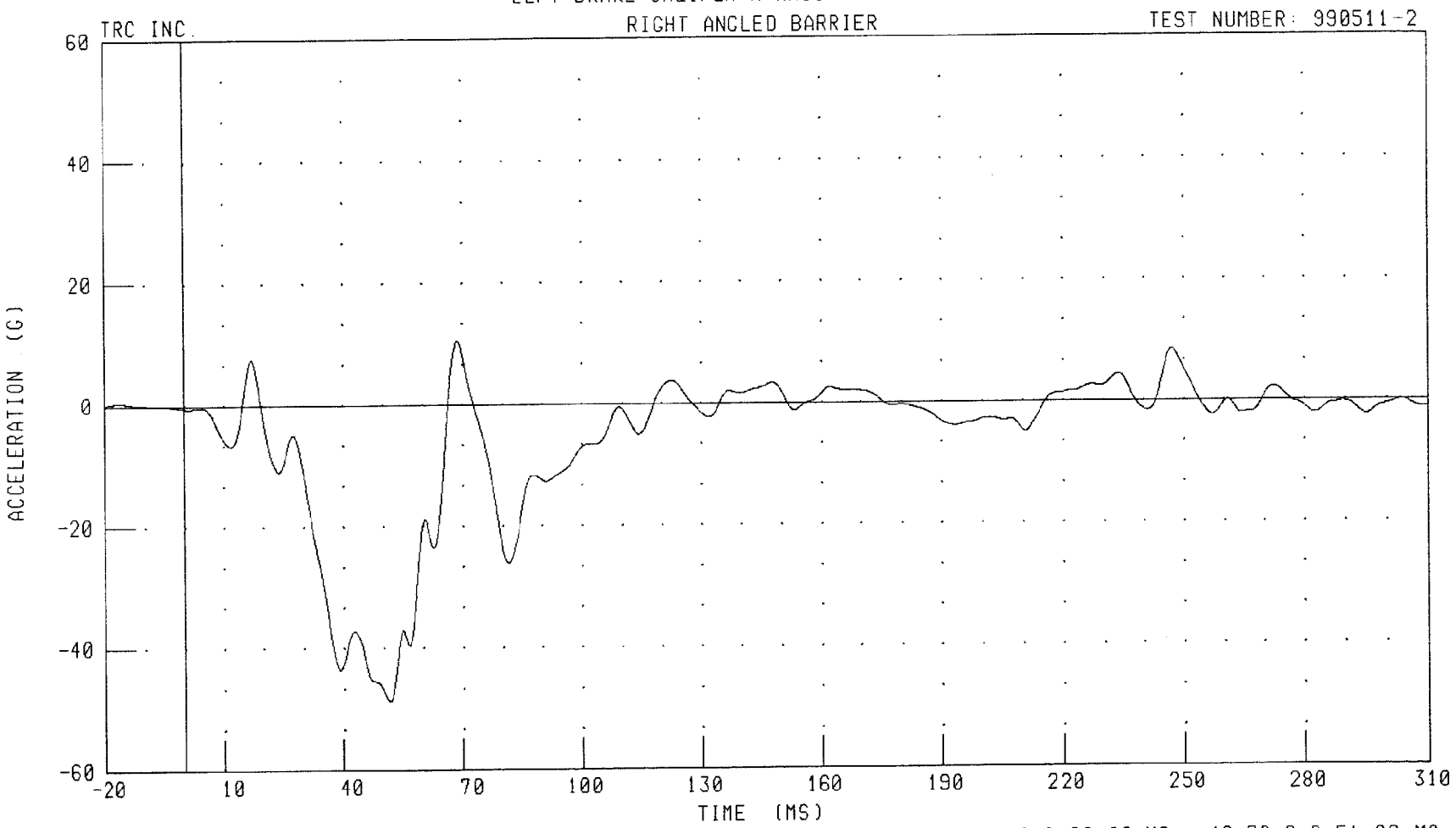
CHANNEL: LFMF2 FILTER: CH. CLASS 600 PEAK DATA: 240.00 N @ 60.40 MS; -5179.61 N @ 80.88 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT FRONT PASSENGER RIGHT FEMUR FORCE



CHANNEL: RFMF2 FILTER: CH. CLASS 600 PEAK DATA: 343.89 N @ 213.44 MS, -4702.40 N @ 89.12 MS

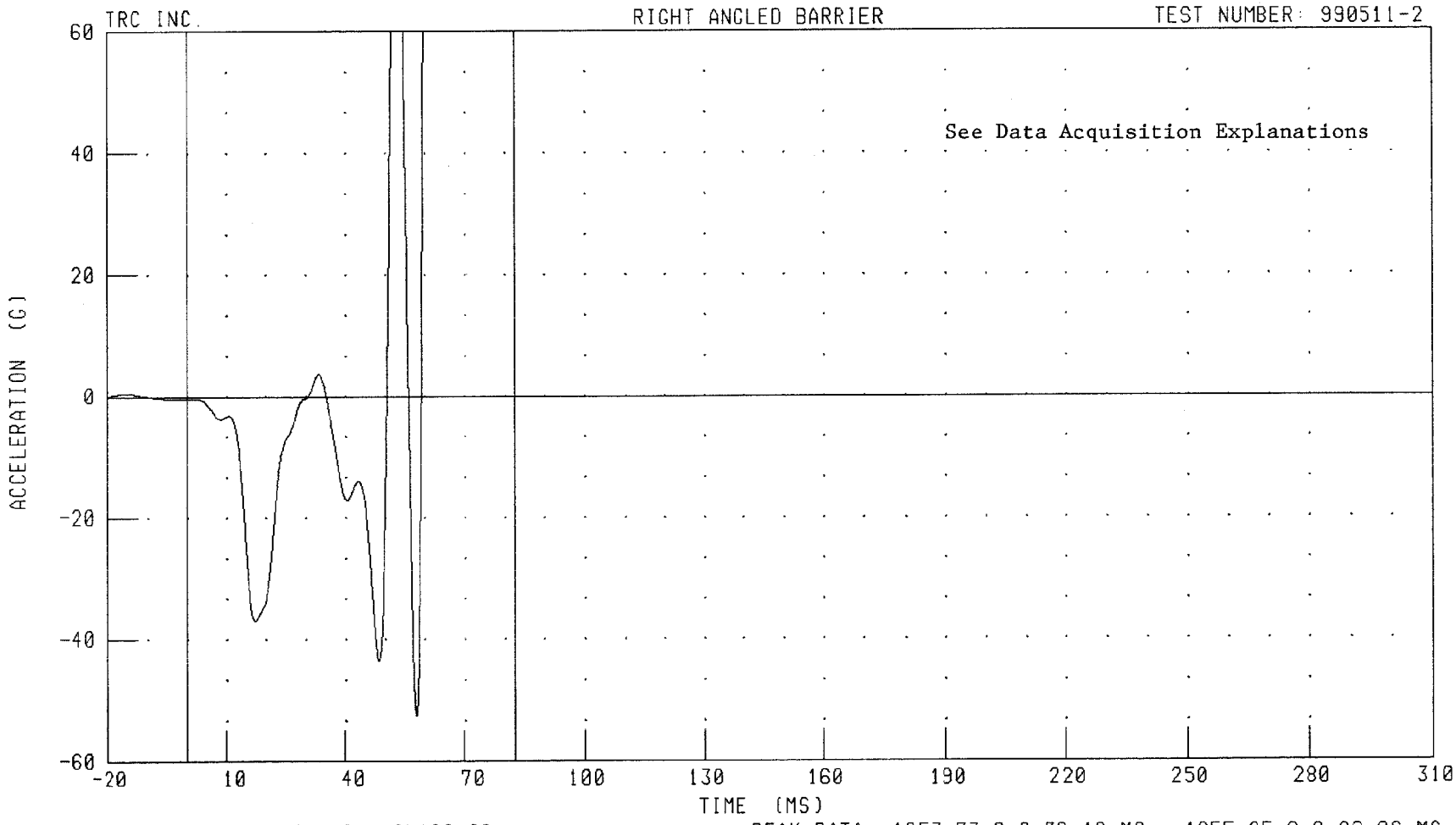
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
LEFT BRAKE CALIPER X-AXIS ACCELERATION



CHANNEL: BCLXG1 FILTER: CH. CLASS 60

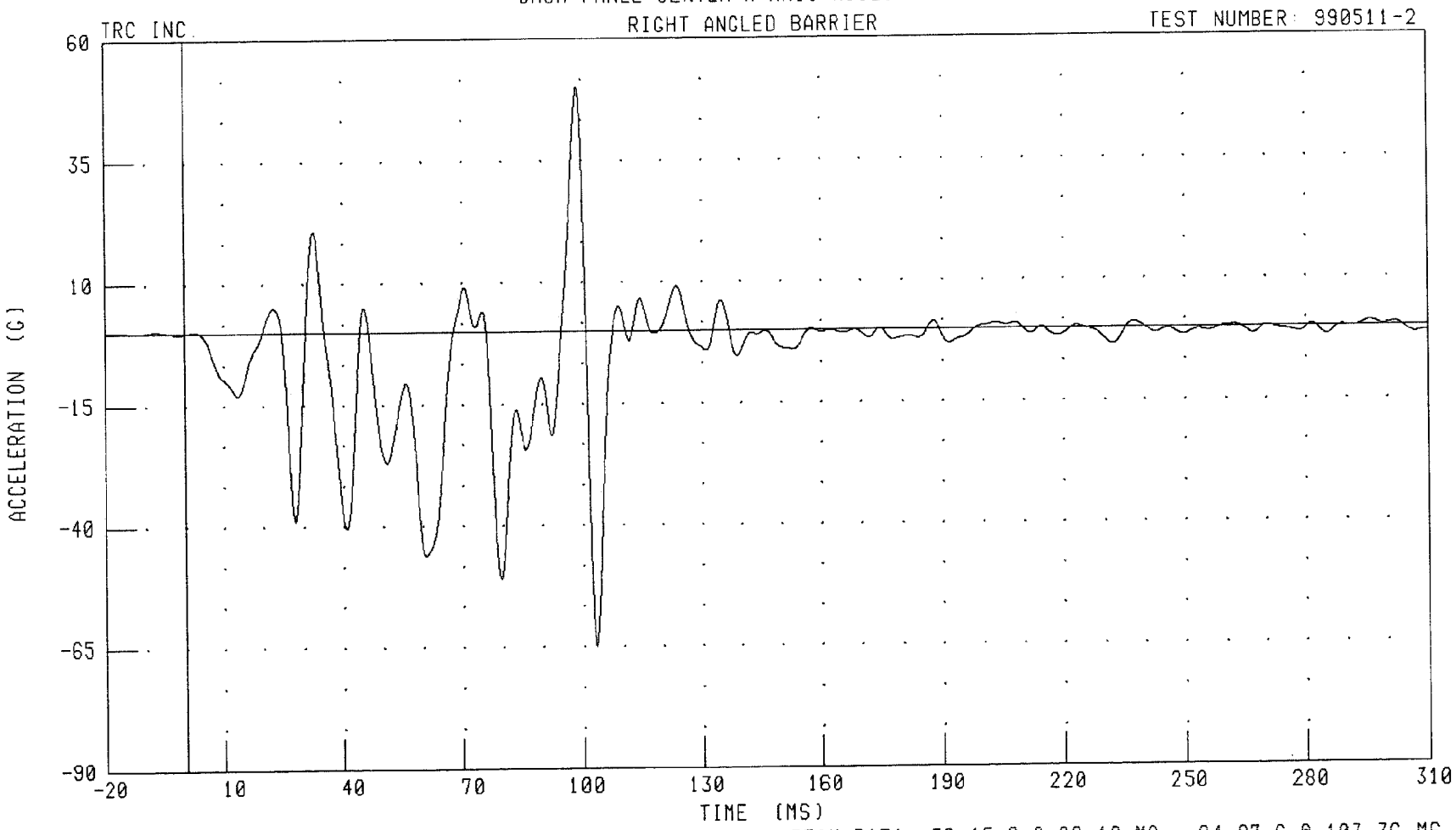
PEAK DATA: 10.50 G @ 68.96 MS; -48.76 G @ 51.68 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT BRAKE CALIPER X-AXIS ACCELERATION



CHANNEL: BCRXG1 FILTER: CH. CLASS 60 PEAK DATA: 1053.73 G @ 78.16 MS; -1055.85 G @ 86.96 MS

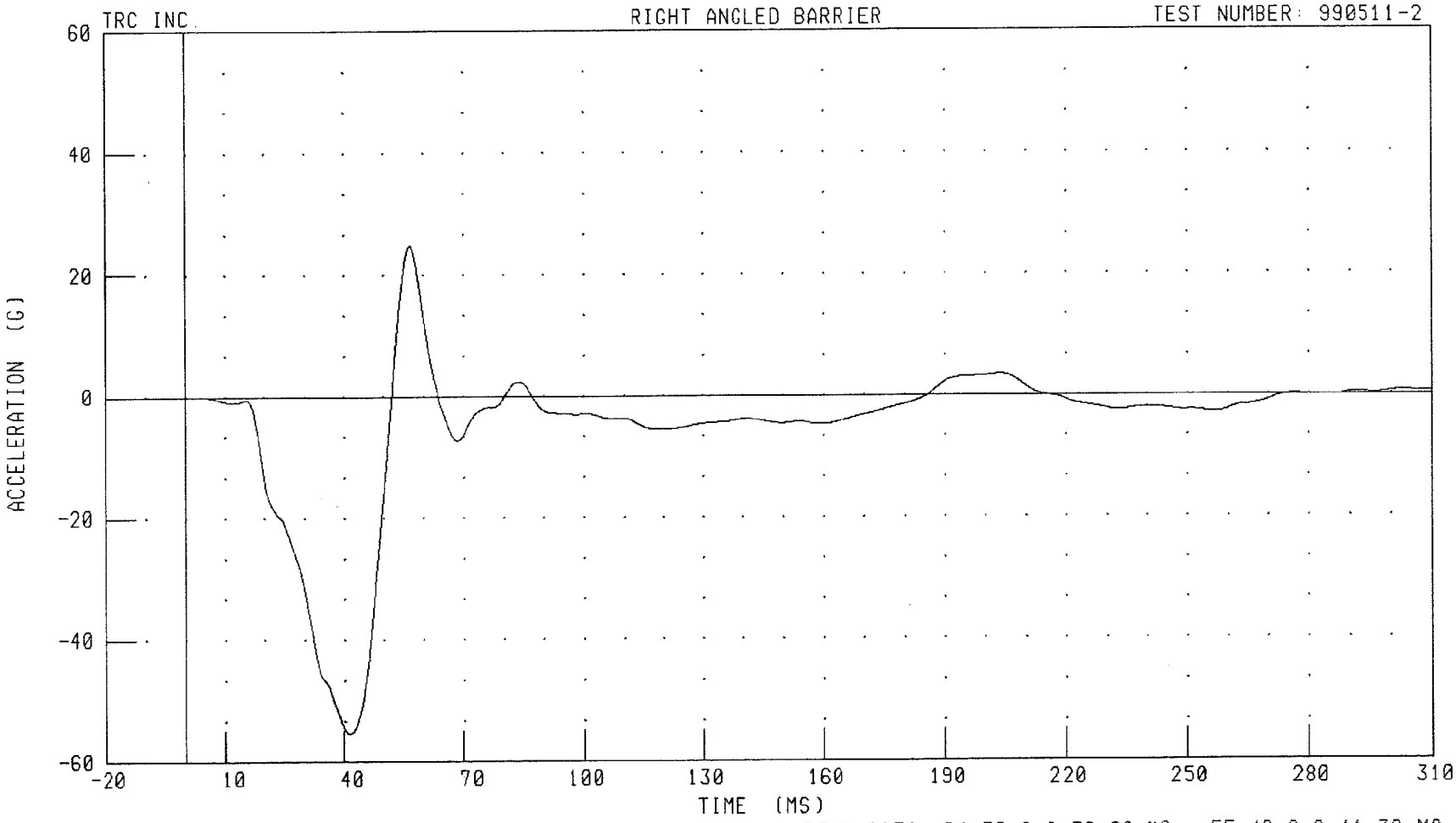
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DASH PANEL CENTER X-AXIS ACCELERATION
RIGHT ANGLED BARRIER



CHANNEL: DPCXG1 FILTER: CH. CLASS 60

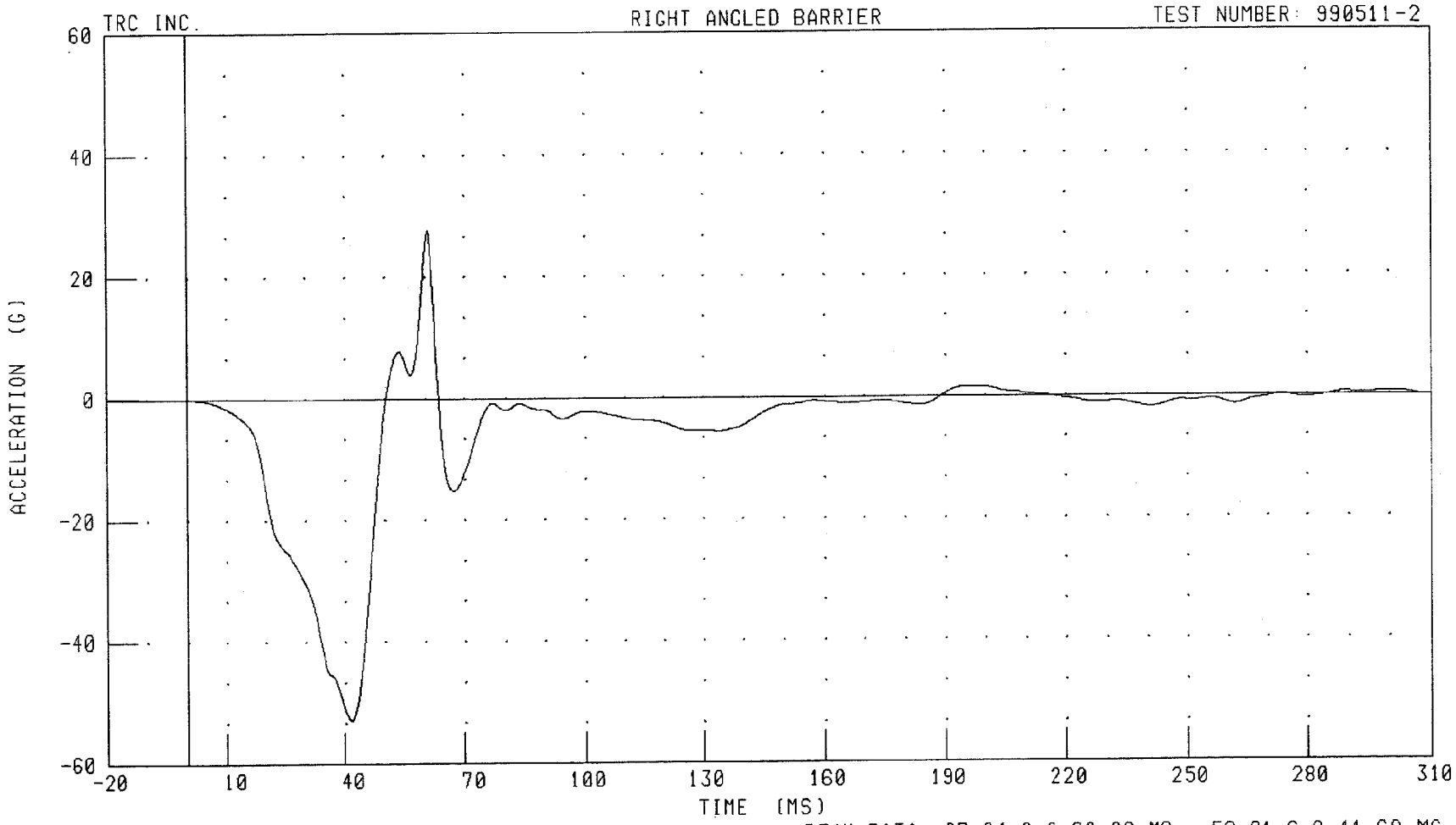
PEAK DATA: 50.15 G @ 99.12 MS; -64.97 G @ 103.36 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
ENGINE TOP X-AXIS ACCELERATION



CHANNEL: ENGXG1 FILTER: CH. CLASS 60 PEAK DATA: 24.79 G @ 56.80 MS; -55.46 G @ 41.36 MS

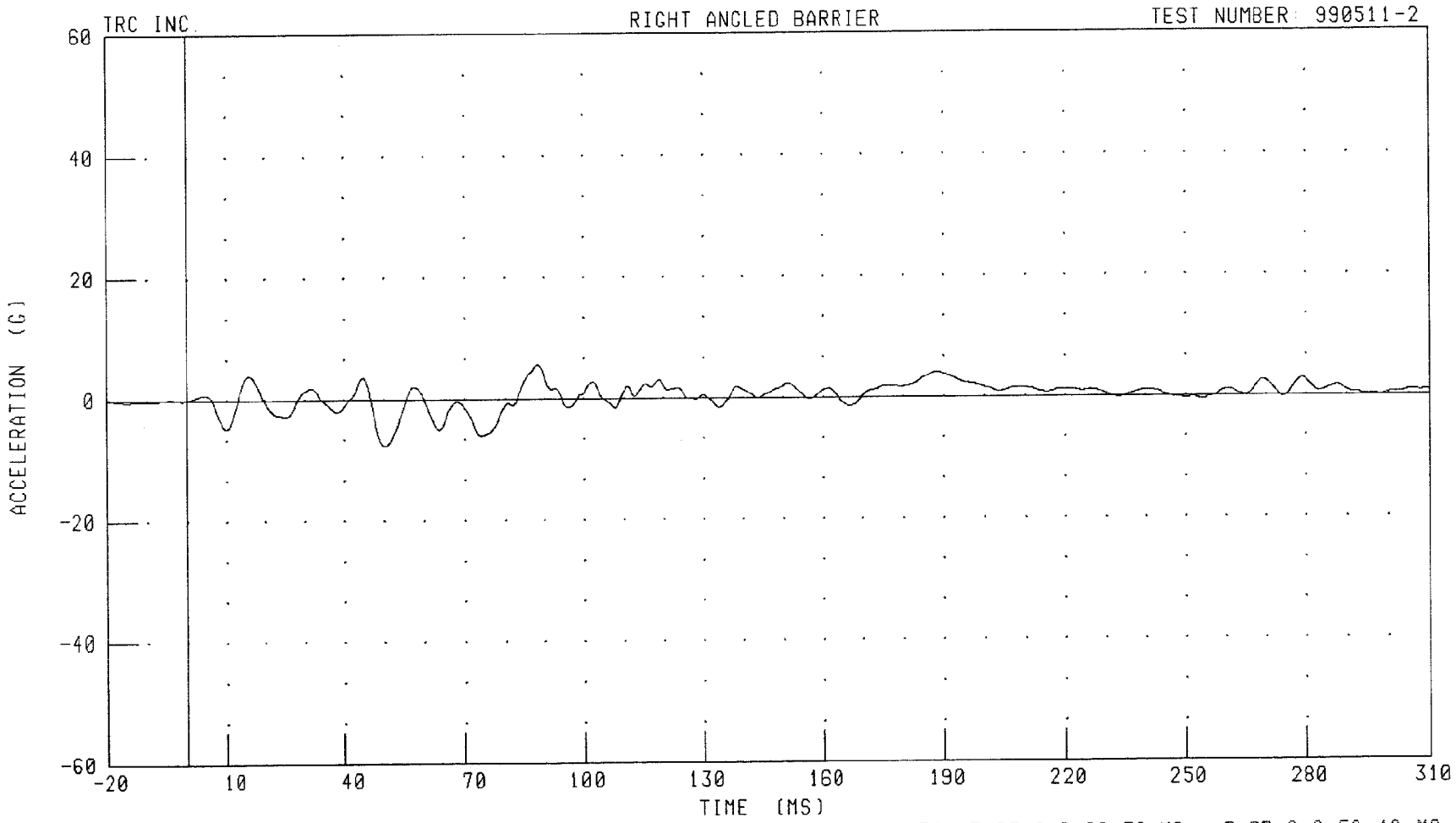
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
ENGINE BOTTOM X-AXIS ACCELERATION



CHANNEL: ENGXG2 FILTER: CH. CLASS 60

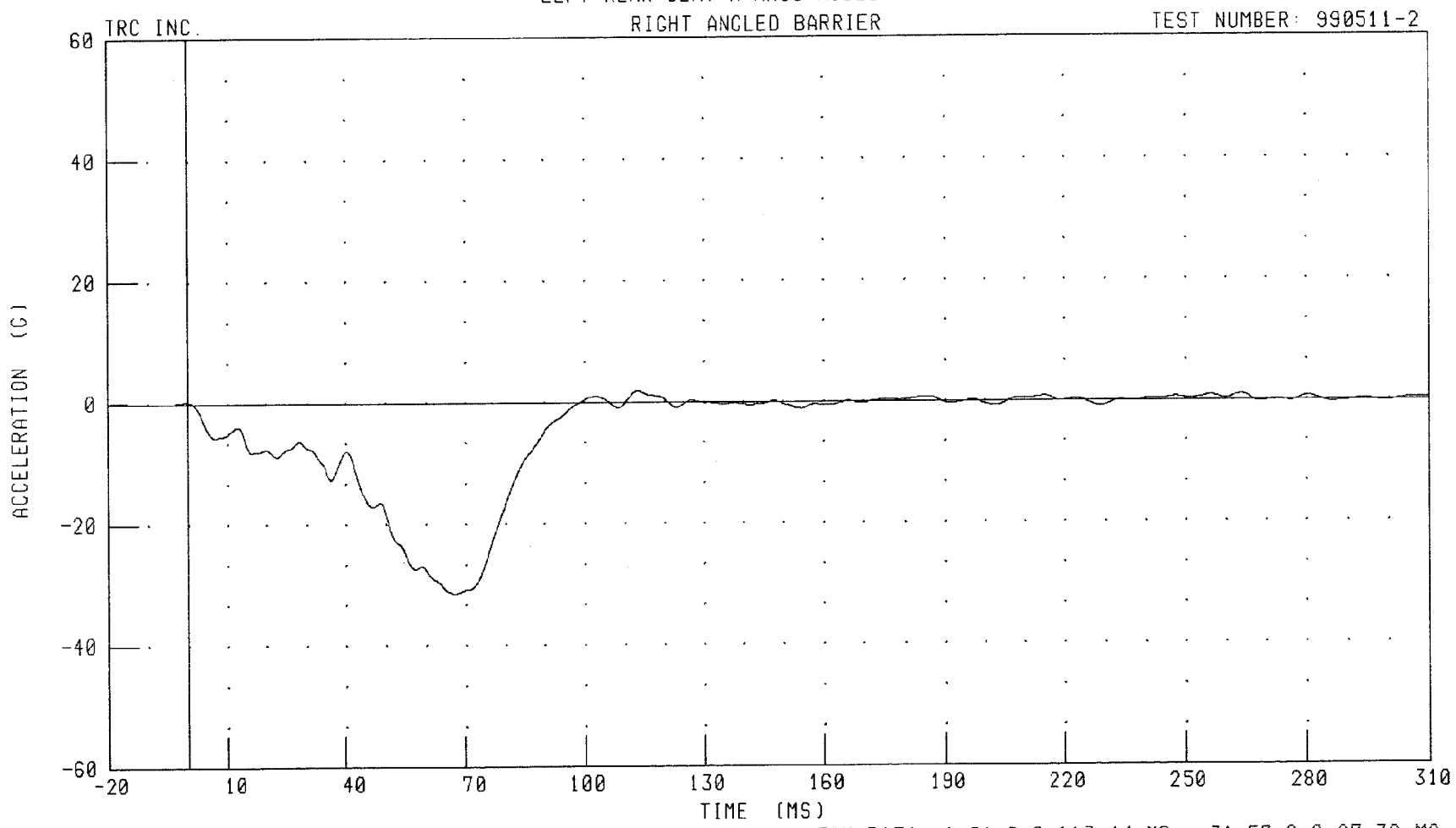
PEAK DATA: 27.64 G @ 60.88 MS; -52.91 G @ 41.68 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
VEHICLE REAR CENTER Z-AXIS ACCELERATION



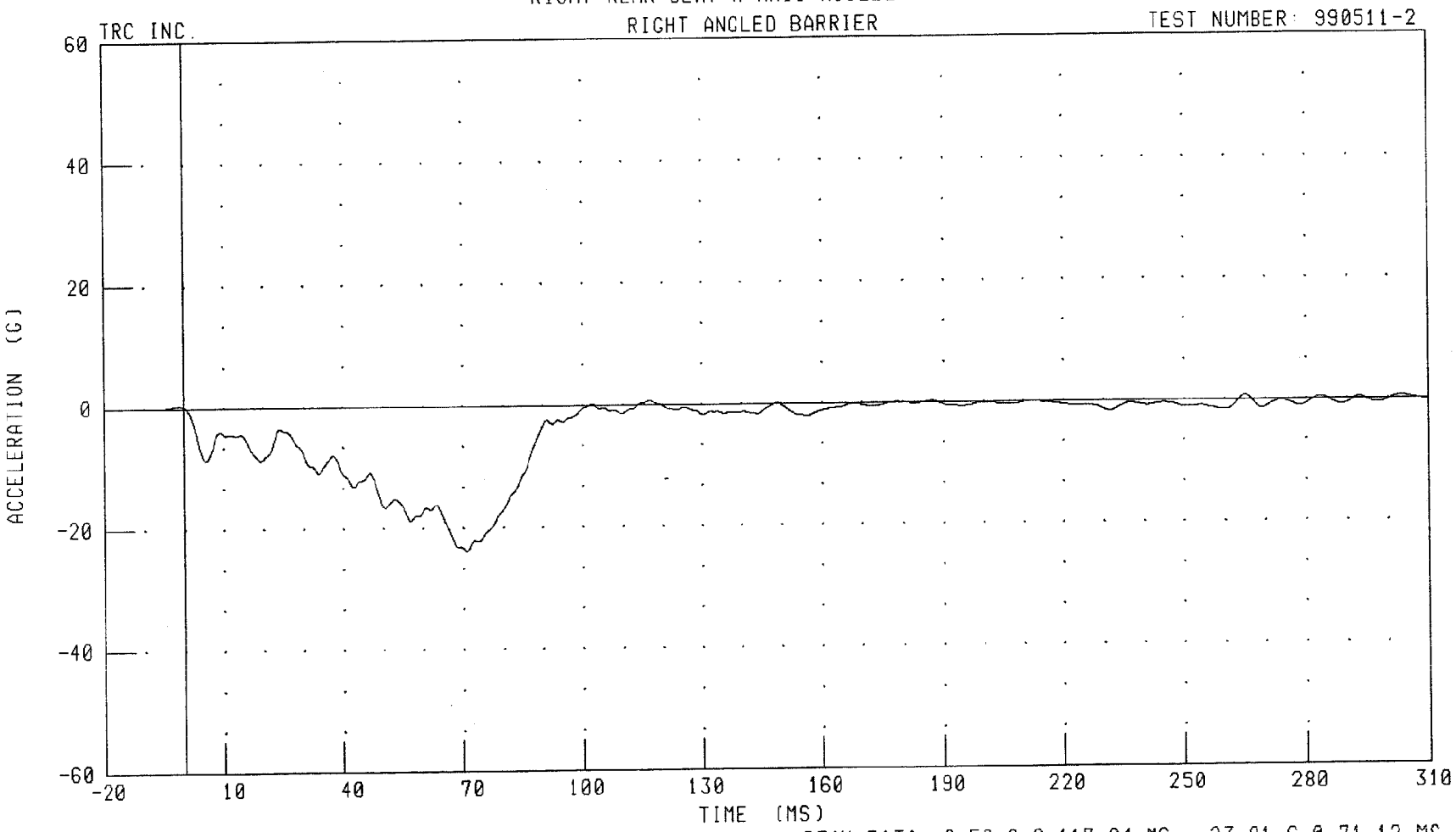
CHANNEL: RDKZG1 FILTER: CH. CLASS 60 PEAK DATA: 5.63 G @ 88.56 MS; -7.77 G @ 50.40 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
LEFT REAR SEAT X-AXIS ACCELERATION



CHANNEL: TLRXG1 FILTER: CH. CLASS 60 PEAK DATA: 1.81 G @ 113.44 MS; -31.57 G @ 67.36 MS

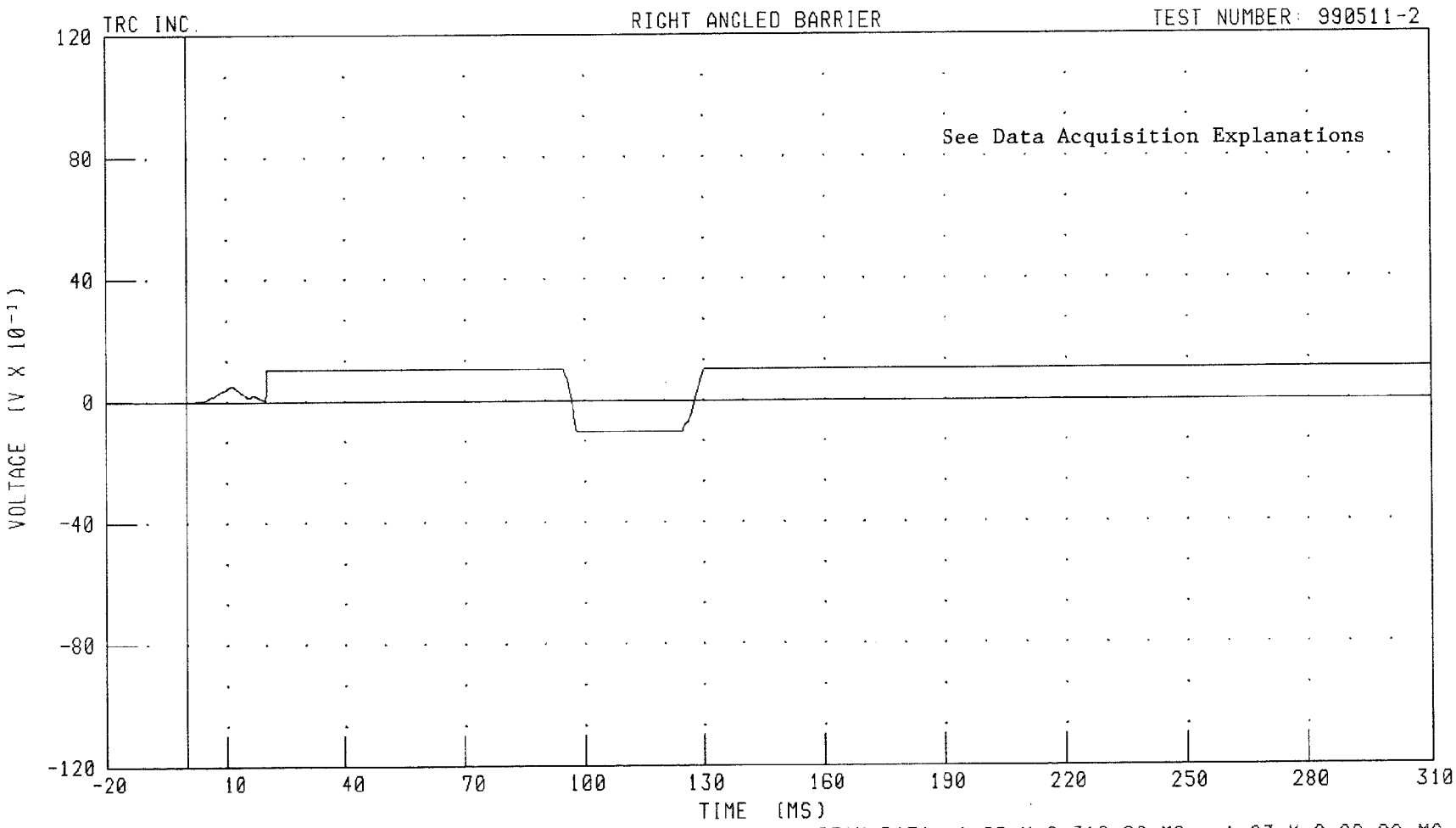
1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
RIGHT REAR SEAT X-AXIS ACCELERATION
RIGHT ANGLED BARRIER



CHANNEL: TRRXG1 FILTER: CH. CLASS 60

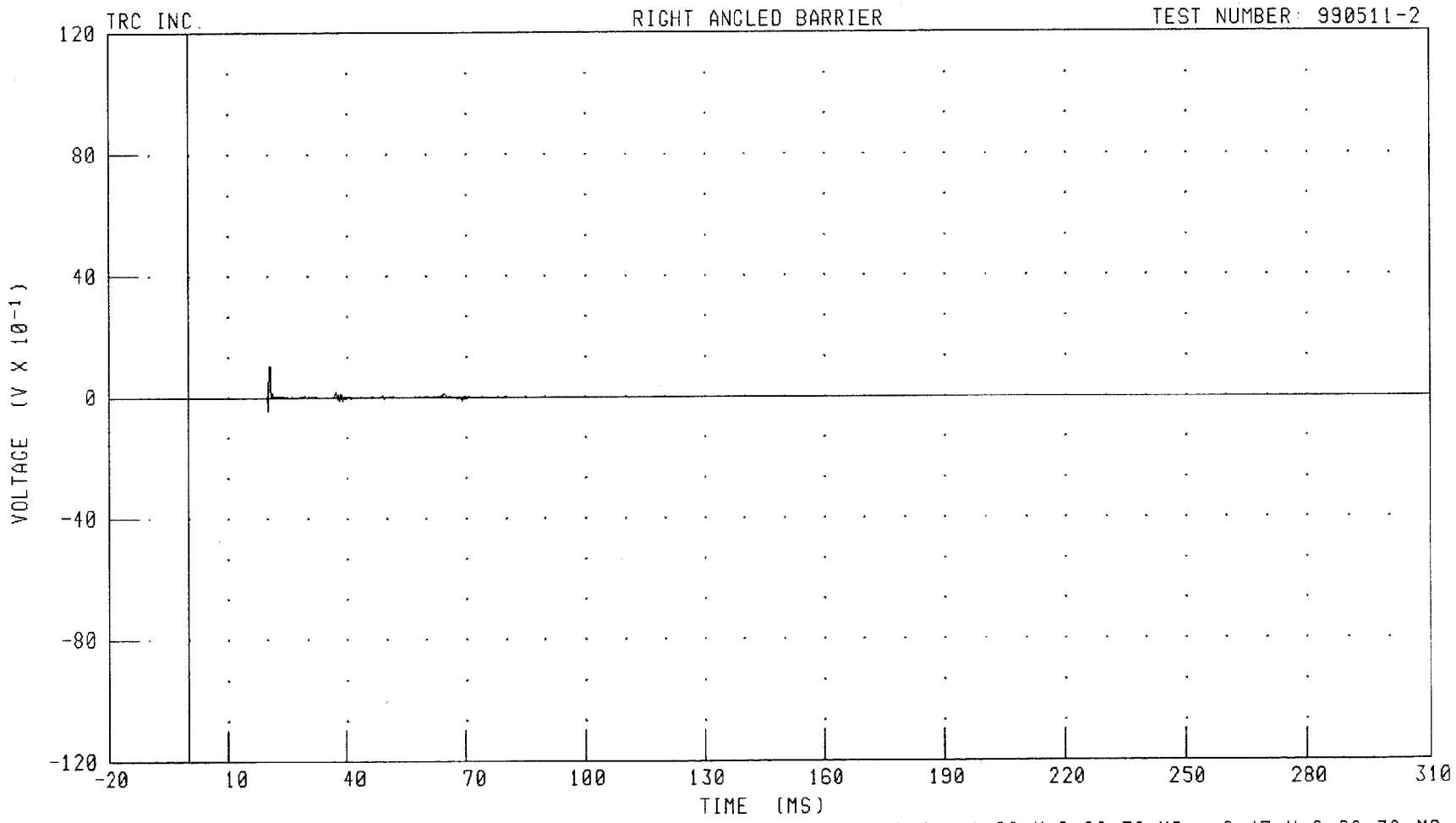
PEAK DATA: 0.59 G @ 117.04 MS; -23.91 G @ 71.12 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
DRIVER SIDE INDUCTIVE AIRBAG FIRE PICKUP



CHANNEL: ABSQ1 FILTER: CH. CLASS 1000 PEAK DATA: 1.02 V @ 310.00 MS; -1.03 V @ 98.08 MS

1999 DODGE INTREPID INTO 30 DEGREE RIGHT ANGLED BARRIER AT 30 MPH
PASSENGER SIDE INDUCTIVE AIRBAG FIRE PICKUP



CHANNEL: ABSQ2 FILTER: CH. CLASS 1000 PEAK DATA: 1.02 V @ 20.56 MS; -0.47 V @ 20.32 MS

Appendix C

Miscellaneous Test Information

Dummy Sign Convention

Accelerometers:	+X: Forward	
	+Y: Rightward	
	+Z: Downward	
Potentiometers:	+Chest longitudinal deflection:	Outward
Load cells:	+Femur force:	Tension
Neck load cells:	+X force:	Head rearward
	+Y force:	Head leftward
	+Z force:	Head upward (tension on neck)
	+X moment:	Left ear rotating toward left shoulder
	+Y moment:	Chin rotating toward chest
	+Z moment:	Chin rotating toward left shoulder

Filtering Data

J211 MAR95

Load Cell Barrier Forces Class 60

Vehicle Structural Accelerations Class 60

Occupant

Head Accelerometer Class 1000

Neck Class 60

Chest Accelerometer Class 180

Chest Deflection Class 180

Femur Force Class 600

Sternum Accelerometer Class 180

Lower Leg Class 600

Vehicle Instrumentation Placement

Test Number 990511-2

Number	Location	Axis	Manufacturer	Model	S/N	Orientation (+ Sensing)
1	Left Brake Caliper	X	Endevco	7264-2000T	J26945	Forward
2	Right Brake Caliper	X	Endevco	7264-2000T	J27949	Forward
3	Instrument Panel Center	X	Endevco	7264-2000T	J26879	Forward
4	Engine Top	X	Endevco	7264-2000T	J26944	Forward
5	Engine Bottom	X	Endevco	7264-2000T	J19577	Forward
6	Vehicle Rear Center	Z	Endevco	7264-2000T	J19976	Up
7	Left Rear Seat Crossmember	X	Endevco	7264-2000T	J27942	Forward
8	Right Rear Seat Crossmember	X	Endevco	7264-2000T	J25048	Forward
9	Driver Airbag	N/A	Fluke	Y8101A	IP1	N/A
10	Passenger Airbag	N/A	Fluke	Y8101A	IP2	N/A

Description Of Timing Marks On TRC High-Speed Film

All TRC high-speed cameras are equipped with red leds which put timing marks on the right edge of the film. TRC uses a single timing generator to generate the timing for all cameras. This allows the timing marks to be common to all cameras. The timing marks can be used to measure camera speed (frames per second) or to locate a point in time before or after the time-zero event.

The timing marks appear on the film as small red marks on the right edge of the film. Round marks are left by the Photo-Sonics and Stalex cameras while horizontal bars are left by the Hycam, Locam, and Fastax II cameras.

The timing generator puts out a pulse for every millisecond plus it generates additional pulses for hundredths and tenths of seconds. To explain this further, we can use an example of a camera running at 1000 frames per second.

1. Every frame will have **one** led appear in it. This indicates a *millisecond* pulse.

2. Every ten frames will have **two** leds appear in it. These indicate a *millisecond* pulse plus a *hundredth of a second* pulse.

3. Every one hundred frames will have **three** leds appear in it. These indicate a *millisecond* pulse, a *hundredth of a second* pulse, and a *tenth of a second* pulse.

TRANSDUCER INFORMATION

HYBRID III DUMMY SERIAL NO.: _169v_____; MFR.: _____; SEATING POSITION: __DR_____

PROJECT-SEGMENT NO.: _____096017 1315_____; ENGINEER: _____PG_____; TEST DATE: ____5-11-99_____

MNEMONIC PARAMETER BEING MEASURED	TYPE OF TRANSDUCER	MODEL NO.	SERIAL NO.	MFR.	SENSITIVITY	CAL DUE DATE	FULL SCALE (ENGR. UNITS) DESIRED	ACTUAL	DIRECTION OF POSITIVE POLARITY	CABLE NO.
HEDXG HAP	HEAD X-AXIS ACCEL.	7264	J21935	End.	.2409 mv/g at 10 volts	8-3-1999	400 g		Rear	J21935
HEDYG HLR	HEAD Y-AXIS ACCEL.	"	J23912	"	.2827 mv/g at 10 volts	"	400 g		Left	J23912
HEDZG HIS	HEAD Z-AXIS ACCEL.	"	J23810	"	.2826 mv/g at 10 volts	"	400 g		Up	J23810
NEKXF NFX*	NECK X-AXIS SHEAR FORCE	1716	0106	Dento n.	1.7167 MV/V @ 2000 LBS	8-3-1999	900 Kg 2,000 lbs. 9,000 N			FX
NEKYF NFY*	NECK Y-AXIS SHEAR FORCE	"	"	"	1.6802 MV/V @2000 LBS	"	900 Kg 2,000 lbs. 9,000 N			FY
NEKZF NFZ*	NECK Z-AXIS AXIAL FORCE	"	"	"	1.2943 MV/V @3000 LBS	"	1300 Kg 3,000 lbs. 13,500 N			FZ
NEKXM NMX*	NECK MOMENT ABOUT X AXIS	"	"	"	1.6148 MV/V @2500 IN- LBS	"	30 Kgm 200 ft·lbs 275 N·m			MX
NEKYM NMY*	NECK MOMENT ABOUT Y AXIS	"	"	"	1.6205 MV/V @2500 IN-LBS	"	30 Kgm 200 ft·lbs 275 N·m			MY
NEKZM NMZ*	NECK MOMENT ABOUT Z AXIS	"	"	"	2.2982 MV/V @2500 IN-LBS	"	30 Kgm 200 ft·lbs 275 N·m			MZ

TRANSDUCER INFORMATION

HYBRID III DUMMY SERIAL NO.: _169v_____; MFR.: _____; SEATING POSITION: __DR_____

PROJECT-SEGMENT NO.: _____096017 1315_____; ENGINEER: _____PG_____; TEST DATE: ____5-11-99_____

MNEMONIC PARAMETER BEING MEASURED	TYPE OF TRANSDUCER	MODEL NO.	SERIAL NO.	MFR.	SENSITIVITY	CAL DUE DATE	FULL SCALE (ENGR. UNITS) DESIRED	ACTUAL	DIRECTION OF POSITIVE POLARITY
CSTXG CAP	CHEST X-AXIS ACCEL.	7264	J23914	End.	.2528 mv/g at 10 volts	8-3-1999	400 g		Forward
CSTYG CLR	CHEST Y-AXIS ACCEL.	"	J23808	"	.2843 mv/g at 10 volts	"	400 g		Left
CSTZG CIS	CHEST Z-AXIS ACCEL.	"	J23774	"	.2405 mv/g at 10 volts	"	400 g		Up
CSTXD CAPD	CHEST DEFLECTION	14CB1-2847	169	SERV	28.26 mv/v /in	8-3-1999	6 inch 150 mm		
PEVXG PAP	PELVIS X-AXIS ACCEL.						400 g		
PEVYG PLR	PELVIS Y-AXIS ACCEL.						400 g		
PEVZG PIS	PELVIS Z-AXIS ACCEL.						400 g		
LFMF LF	LEFT FEMUR FORCE	2430	96661	GSE	0.8816 mv/v at 3000 lbs.	8-3-1999	1300 Kg 3,000 lbs. 13,500 N		
RFMF RF	RIGHT FEMUR FORCE	"	96662	"	0.8605 mv/v at 3000 lbs.	"	1300 Kg 3,000 lbs. 13,500 N		

TRANSDUCER INFORMATION

HYBRID III DUMMY SERIAL NO.: _168v_____; MFR.: _____; SEATING POSITION: __PASS_____

PROJECT-SEGMENT NO.: _____096017 1315_____; ENGINEER: _____PG_____; TEST DATE: ____5-11-99_____

MNEMONIC PARAMETER BEING MEASURED	TYPE OF TRANSDUCER	MODEL NO.	SERIAL NO.	MFR.	SENSITIVITY	CAL DUE DATE	FULL SCALE (ENGR. UNITS) DESIRED	ACTUAL	DIRECTION OF POSITIVE POLARITY	CABLE NO.
HEDXG HAP	HEAD X-AXIS ACCEL.	7264	J19535	End.	.2649 mv/g at 10 volts	8-3-1999	400 g		Rear	J19535
HEDYG HLR	HEAD Y-AXIS ACCEL.	"	J19548	"	.2192 mv/g at 10 volts	"	400 g		Left	J19548
HEDZG HIS	HEAD Z-AXIS ACCEL.	"	J27913	"	.2527 mv/g at 10 volts	9-5-99	400 g		Up	J27913
NEKXF NFX*	NECK X-AXIS SHEAR FORCE	1716A	0853	Dento n.	1.7387 MV/V @ 2000 LBS	8-3-1999	900 Kg 2,000 lbs. 9,000 N			FX
NEKYF NFY*	NECK Y-AXIS SHEAR FORCE	"	"	"	1.6587 MV/V @2000 LBS	"	900 Kg 2,000 lbs. 9,000 N			FY
NEKZF NFZ*	NECK Z-AXIS AXIAL FORCE	"	"	"	1.2806 MV/V @3000 LBS	"	1300 Kg 3,000 lbs. 13,500 N			FZ
NEKXM NMX*	NECK MOMENT ABOUT X AXIS	"	"	"	1.6595 MV/V @2500 IN- LBS	"	30 Kgm 200 ft·lbs 275 N·m			MX
NEKYM NMY*	NECK MOMENT ABOUT Y AXIS	"	"	"	1.6596 MV/V @2500 IN-LBS	"	30 Kgm 200 ft·lbs 275 N·m			MY
NEKZM NMZ*	NECK MOMENT ABOUT Z AXIS	"	"	"	2.3663 MV/V @2500 IN-LBS	"	30 Kgm 200 ft·lbs 275 N·m			MZ

TRANSDUCER INFORMATION

HYBRID III DUMMY SERIAL NO.: _168v_____; MFR.: _____; SEATING POSITION: __PASS_____

PROJECT-SEGMENT NO.: _____096017 1315_____; ENGINEER: _____PG_____; TEST DATE: ____5-11-99_____

MNEMONIC PARAMETER BEING MEASURED	TYPE OF TRANSDUCER	MODEL NO.	SERIAL NO.	MFR.	SENSITIVITY	CAL DUE DATE	FULL SCALE (ENGR. UNITS) DESIRED	ACTUAL	DIRECTION OF POSITIVE POLARITY	CABLE NO.
CSTXG CAP	CHEST X-AXIS ACCEL.	7264	J20011	End.	.2324 mv/g at 10 volts	8-3-1999	400 g		Forward	J20011
CSTYG CLR	CHEST Y-AXIS ACCEL.	"	J20001	"	.2709 mv/g at 10 volts	"	400 g		Left	J20001
CSTZG CIS	CHEST Z-AXIS ACCEL.	"	J20438	"	.2313 mv/g at 10 volts	"	400 g		Up	J20438
CSTXD CAPD	CHEST DEFLECTION	14CB1-2847	168	SERV	27.89 mv/v /in	8-3-1999	6 inch 150 mm			168
PEVXG PAP	PELVIS X-AXIS ACCEL.						400 g			
PEVYG PLR	PELVIS Y-AXIS ACCEL.						400 g			
PEVZG PIS	PELVIS Z-AXIS ACCEL.						400 g			
LFMF LF	LEFT FEMUR FORCE	2430	726	DENT	0.9495 mv/v at 3000 lbs.	8-3-1999	1300 Kg 3,000 lbs. 13,500 N			726
RFMF RF	RIGHT FEMUR FORCE	"	741	"	0.9030 mv/v at 3000 lbs.	"	1300 Kg 3,000 lbs. 13,500 N			741